



# SAR TEST REPORT

**Applicant**      Xiaomi Communications Co., Ltd.  
**FCC ID**          2AFZZ3QL  
**Product**        Mobile Phone  
**Brand**            Redmi  
**Model**           220333QL  
**Report No.**     R2111A1057-S1  
**Issue Date**     January 29, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **IEEE 1528- 2013, ANSI C95.1: 1992, IEEE C95.1: 1991**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

*Fangying Wei*

*Prepared by: Fangying Wei*

*Guangchang Fan*

*Approved by: Guangchang Fan*

**TA Technology (Shanghai) Co., Ltd.**

*No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China*

*TEL: +86-021-50791141/2/3*

*FAX: +86-021-50791141/2/3-8000*



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# 1 Test Laboratory

## 1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

## 1.2 Test facility

### **FCC (Designation number: CN1179, Test Firm Registration Number: 446626)**

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

### **A2LA (Certificate Number: 3857.01)**

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

## 1.3 Testing Location

Company: TA Technology (Shanghai) Co., Ltd.  
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China  
City: Shanghai  
Post code: 201201  
Country: P. R. China  
Contact: Fan Guangchang  
Telephone: +86-021-50791141/2/3  
Fax: +86-021-50791141/2/3-8000  
Website: <http://www.ta-shanghai.com>  
E-mail: [fanguangchang@ta-shanghai.com](mailto:fanguangchang@ta-shanghai.com)



## 1.4 Laboratory Environment

|                                                                                                                                                                                                 |                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Temperature                                                                                                                                                                                     | Min. = 18°C, Max. = 25 °C |
| Relative humidity                                                                                                                                                                               | Min. = 30%, Max. = 70%    |
| Ground system resistance                                                                                                                                                                        | < 0.5                     |
| Ambient noise is checked and found very low and in compliance with requirement of standards.<br>Reflection of surrounding objects is minimized and in compliance with requirement of standards. |                           |

## 2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for the EUT are as follows:

Table 1: Highest Reported SAR

| Mode          | Highest Reported SAR (W/kg) |             |                           |
|---------------|-----------------------------|-------------|---------------------------|
|               | 1g SAR Head                 | 1g SAR Body | Product Specific 10-g SAR |
| GSM 850       | 0.76                        | 0.56        | NA                        |
| GSM 1900      | 0.70                        | <b>1.08</b> | NA                        |
| WCDMA Band II | 0.70                        | 0.78        | 1.97                      |
| WCDMA Band IV | 0.74                        | 0.88        | <b>2.00</b>               |
| WCDMA Band V  | 0.79                        | 0.39        | NA                        |
| LTE FDD 2     | 0.67                        | 0.79        | 1.77                      |
| LTE FDD 4     | <b>0.84</b>                 | 0.92        | 1.64                      |
| LTE FDD 5     | 0.60                        | 0.39        | NA                        |
| LTE FDD 7     | <b>0.84</b>                 | 1.03        | 1.40                      |
| LTE FDD 12    | 0.67                        | 0.34        | NA                        |
| LTE FDD 13    | 0.36                        | 0.27        | NA                        |
| LTE FDD 17    | 0.55                        | 0.31        | NA                        |
| LTE FDD 26    | 0.62                        | 0.39        | NA                        |
| LTE TDD 38    | 0.58                        | 0.75        | NA                        |
| LTE TDD 41    | 0.54                        | 0.66        | NA                        |
| LTE FDD 66    | 0.60                        | 0.86        | 1.61                      |
| Wi-Fi (2.4G)  | 0.57                        | 0.44        | NA                        |
| Wi-Fi (5G)    | 0.50                        | 0.58        | 1.64                      |
| BT            | 0.15                        | NA          | NA                        |

Date of Testing:(Original )December 30, 2021~January 11, 2022

(Variant) January 12, 2022~ January 18, 2022

Date of Sample Received: December 27, 2021

Note: 1. The device is in compliance with SAR for Uncontrolled Environment /General Population exposure limits (1.6 W/kg and 4.0 W/kg) specified in ANSI C95.1: 1992/IEEE C95.1: 1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013.

2. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.

Table 2: Highest Simultaneous Transmission SAR

| Exposure Configuration                                                                     | 1g SAR Head | 1g SAR Body | Product Specific 10-g SAR |
|--------------------------------------------------------------------------------------------|-------------|-------------|---------------------------|
| Highest Simultaneous Transmission SAR (W/kg)                                               | 1.57        | 1.41        | 3.79                      |
| Note: The detail for simultaneous transmission consideration is described in chapter 10.4. |             |             |                           |

**220333QL (Report No.: R2111A1057-S1) is a variant model of 220333QNY (Report No.: R2111A1060-S1). Test values duplicated from Original for variant. There is only retest LTE Band 12/13/17/26/41/66 for variant, and tested with worst case of Original for other band in this report.**

**Tested band refer to the following table.**

| Band          | Original | Variant                                 |
|---------------|----------|-----------------------------------------|
| GSM 850       | Pass     | Only tested with worst case of Original |
| GSM 1900      | Pass     | Only tested with worst case of Original |
| WCDMA Band II | Pass     | Only tested with worst case of Original |
| WCDMA Band IV | Pass     | Only tested with worst case of Original |
| WCDMA Band V  | Pass     | Only tested with worst case of Original |
| LTE FDD 2     | Pass     | Only tested with worst case of Original |
| LTE FDD 4     | Pass     | Only tested with worst case of Original |
| LTE FDD 5     | Pass     | Only tested with worst case of Original |
| LTE FDD 7     | Pass     | Only tested with worst case of Original |
| LTE FDD 12    | Pass     | Retest                                  |
| LTE FDD 13    | Pass     | Retest                                  |
| LTE FDD 17    | Pass     | Retest                                  |
| LTE FDD 26    | Pass     | Retest                                  |
| LTE TDD 38    | Pass     | Only tested with worst case of Original |
| LTE TDD 41    | Pass     | Retest                                  |
| LTE FDD 66    | Pass     | Retest                                  |
| Wi-Fi (2.4G)  | Pass     | Only tested with worst case of Original |
| Wi-Fi (5G)    | Pass     | Only tested with worst case of Original |
| BT            | Pass     | Only tested with worst case of Original |

### 3 Description of Equipment under Test

#### Client Information

|                      |                                                                                               |
|----------------------|-----------------------------------------------------------------------------------------------|
| Applicant            | Xiaomi Communications Co., Ltd.                                                               |
| Applicant address    | #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085 |
| Manufacturer         | Xiaomi Communications Co., Ltd.                                                               |
| Manufacturer address | #019, 9th Floor, Building 6, 33 Xi'erqi Middle Road, Haidian District, Beijing, China, 100085 |

#### General Technologies

|                                                                                                             |                                                                                                                                                  |                                                    |
|-------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Application Purpose                                                                                         | Original Grant                                                                                                                                   |                                                    |
| EUT Stage                                                                                                   | Identical Prototype                                                                                                                              |                                                    |
| Model                                                                                                       | 220333QL                                                                                                                                         |                                                    |
| IMEI                                                                                                        | Original<br>(220333QNY)                                                                                                                          | IMEI 1: 862390060032382<br>IMEI 2: 862390060032390 |
|                                                                                                             | Variant<br>(220333QL)                                                                                                                            | IMEI 1: 860223060031066<br>IMEI 2: 860223060031074 |
| Hardware Version                                                                                            | P1.1                                                                                                                                             |                                                    |
| Software Version                                                                                            | MIUI13                                                                                                                                           |                                                    |
| Antenna Type                                                                                                | PIFA Antenna for WWAN<br>Fixed Internal Antenna for Bluetooth/ Wi-Fi                                                                             |                                                    |
| Device Class                                                                                                | B                                                                                                                                                |                                                    |
| Wi-Fi Hotspot                                                                                               | Wi-Fi 2.4G<br>Wi-Fi 5G U-NII-1&U-NII-3                                                                                                           |                                                    |
| Power Class                                                                                                 | GSM 850: 4<br>GSM 1900: 1<br>UMTS Band II/IV/V: 3<br>LTE FDD 2/4/5/7/12/13/17/26/66: 3<br>LTE TDD 38/41: 3                                       |                                                    |
| Power Level                                                                                                 | GSM 850: level 5<br>GSM 1900: level 0<br>UMTS Band II/IV/V: all up bits<br>LTE FDD 2/4/5/7/12/13/17/26/66: max power<br>LTE TDD 38/41: max power |                                                    |
| Note: The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant. |                                                                                                                                                  |                                                    |



## Wireless Technology and Frequency Range

| Wireless Technology |                                                                                                                        | Modulation                                    | Operating mode                                                                                                                                                                                                         | Tx (MHz)                   |
|---------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| GSM                 | 850                                                                                                                    | Voice(GMSK)<br>GPRS(GMSK)<br>EGPRS(GMSK,8PSK) | <input type="checkbox"/> Multi-slot Class:8-1UP<br><input type="checkbox"/> Multi-slot Class:10-2UP<br><input checked="" type="checkbox"/> Multi-slot Class:12-4UP<br><input type="checkbox"/> Multi-slot Class:33-4UP | 824 ~ 849                  |
|                     | 1900                                                                                                                   |                                               | 1850 ~ 1910                                                                                                                                                                                                            |                            |
|                     | Does this device support DTM (Dual Transfer Mode)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |                                               |                                                                                                                                                                                                                        |                            |
| UMTS                | Band II                                                                                                                | QPSK                                          | HSDPA UE Category:24<br>HSUPA UE Category:6                                                                                                                                                                            | 1850 ~ 1910                |
|                     | Band IV                                                                                                                |                                               |                                                                                                                                                                                                                        | 1710 ~ 1755                |
|                     | Band V                                                                                                                 |                                               |                                                                                                                                                                                                                        | 824 ~ 849                  |
| LTE                 | FDD 2                                                                                                                  | QPSK, 16QAM,<br>64QAM                         | Category 5                                                                                                                                                                                                             | 1850 ~ 1910                |
|                     | FDD 4                                                                                                                  |                                               |                                                                                                                                                                                                                        | 1710 ~ 1755                |
|                     | FDD 5                                                                                                                  |                                               |                                                                                                                                                                                                                        | 824 ~ 849                  |
|                     | FDD 7                                                                                                                  |                                               |                                                                                                                                                                                                                        | 2500 ~ 2570                |
|                     | FDD 12                                                                                                                 |                                               |                                                                                                                                                                                                                        | 699 ~ 716                  |
|                     | FDD 13                                                                                                                 |                                               |                                                                                                                                                                                                                        | 777~787                    |
|                     | FDD 17                                                                                                                 |                                               |                                                                                                                                                                                                                        | 704 ~ 716                  |
|                     | FDD 26                                                                                                                 |                                               |                                                                                                                                                                                                                        | 814 ~ 849                  |
|                     | TDD 38                                                                                                                 |                                               |                                                                                                                                                                                                                        | 2570 ~ 2620                |
|                     | TDD 41                                                                                                                 |                                               |                                                                                                                                                                                                                        | 2496 ~ 2690                |
|                     | FDD 66                                                                                                                 |                                               |                                                                                                                                                                                                                        | 1710~1780                  |
|                     | Does this device support SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No       |                                               |                                                                                                                                                                                                                        |                            |
| BT                  | 2.4G                                                                                                                   | Version 5.0BR/EDR + LE                        |                                                                                                                                                                                                                        | 2402 ~2480                 |
| Wi-Fi               | 2.4G                                                                                                                   | DSSS,OFDM                                     | 802.11b/g/n HT20                                                                                                                                                                                                       | 2412 ~ 2462                |
|                     | 5G                                                                                                                     | OFDM                                          | 802.11a/n HT20/ HT40/<br>ac VHT20/VHT40/VHT80                                                                                                                                                                          | 5150 ~ 5350<br>5470 ~ 5850 |
|                     | Does this device support MIMO <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                      |                                               |                                                                                                                                                                                                                        |                            |



## 4 Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE 1528- 2013, ANSI C95.1: 1992, IEEE C95.1: 1991, the following FCC Published RF exposure KDB procedures:

IEC 62209-1

### Reference Standards

KDB 248227 D01 802.11Wi-Fi SAR v02r02

KDB 447498 D01 General RF Exposure Guidance v06

KDB 648474 D04 Handset SAR v01r03

KDB 690783 D01 SAR Listings on Grants v01r03

KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04

KDB 865664 D02 RF Exposure Reporting v01r02

KDB 941225 D01 3G SAR Procedures v03r01

KDB 941225 D05 SAR for LTE Devices v02r05

KDB 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02

KDB 941225 D06 Hotspot Mode v02r01

## 5 Operational Conditions during Test

### 5.1 Test Positions

#### 5.1.1 Against Phantom Head

Measurements were made in “cheek” and “tilt” positions on both the left hand and right hand sides of the phantom.

The positions used in the measurements were according to IEEE 1528 - 2013 "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques".

#### 5.1.2 Body Worn Configuration

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations.

Per FCC KDB Publication 648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is  $> 1.2 \text{ W/kg}$ , the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

### 5.1.3 Phablet SAR test considerations

For smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, that can provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets and support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance.

- a) The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
- b) The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at  $\leq 25$  mm from that surface or edge, in direct contact with a flat phantom, for product specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB Publication 865664 D01 to address interactive hand use exposure conditions. The 1-g SAR at 5 mm for UMPC mini-tablets is not required. When hotspot mode applies, product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold. The normal tablet procedures in KDB Publication 616217 are required when the overall diagonal dimension of the device is > 20.0 cm. Hotspot mode SAR is not required when normal tablet procedures are applied. Product specific 10-g SAR is also not required for the front surface of larger form factor full size tablets. The more conservative normal tablet SAR results can be used to support phablet mode product specific 10-g SAR.
- c) The simultaneous transmission operating configurations applicable to voice and data transmissions for both phone and mini-tablet modes must be taken into consideration separately for 1-g and 10-g SAR to determine the simultaneous transmission SAR test exclusion and measurement requirements for the relevant wireless modes and exposure conditions.

## 5.2 Measurement Variability

Per FCC KDB Publication 865664 D01, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

- 1) When the original highest measured SAR is  $\geq 0.80$  W/kg, the measurement was repeated once.
- 2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was  $> 1.20$  or when the original or repeated measurement was  $\geq 1.45$  W/kg ( $\sim 10\%$  from the 1-g SAR limit).
- 3) A third repeated measurement was performed only if the original, first or second repeated measurement was  $\geq 1.5$  W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ .
- 4) Repeated measurements are not required when the original highest measured SAR is  $< 0.80$  W/kg

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

## 5.3 Test Configuration

### 5.3.1 GSM Test Configuration

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot. The allowed power reduction in the multi-slot configuration is as following:

Output power of reductions:

**Table 3: The allowed power reduction in the multi-slot configuration**

| Number of timeslots in uplink assignment | Permissible nominal reduction of maximum output power (dB) |
|------------------------------------------|------------------------------------------------------------|
| 1                                        | 0                                                          |
| 2                                        | 0 to 3,0                                                   |
| 3                                        | 1,8 to 4,8                                                 |
| 4                                        | 3,0 to 6,0                                                 |

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. GSM voice and GPRS data use GMSK, which is a constant amplitude modulation with minimal peak to average power difference within the time-slot burst. For EDGE, GMSK is used for MCS 1 – MCS 4 and 8-PSK is used for MCS 5 – MCS 9; where 8-PSK has an inherently higher peak-to-average power ratio. The GMSK and 8-PSK EDGE configurations are considered separately for SAR compliance. The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance. The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode.

### 5.3.2 UMTS Test Configuration

#### 5.3.2.1 3G SAR Test Reduction Procedure

The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations modes according to output power, exposure conditions and device operating capabilities. Maximum output power is verified by applying the applicable versions of 3GPP TS 34.121.

#### 5.3.2.2 Head SAR

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest SAR configuration in 12.2 kbps RMC for head exposure.

### 5.3.2.3 Body-worn accessory SAR

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the EUT with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When more than 2 DPDCHn are supported by the EUT, it may be necessary to configure additional DPDCHn using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC

### 5.3.2.4 Release 5 HSDPA Test Configuration

The 3G SAR test reduction procedure is applied to HSDPA body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures in the “Release 5 HSDPA Data Devices” section of this document, for the highest SAR body-worn accessory exposure configuration in 12.2 kbps RMC. EUT with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

HSDPA should be configured according to the UE category of a test device. The number of HSDSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors ( $\beta_c$ ,  $\beta_d$ ), and HS-DPCCH power offset parameters ( $\Delta_{ACK}$ ,  $\Delta_{NACK}$ ,  $\Delta_{CQI}$ ) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

**Table 4: Subtests for UMTS Release 5 HSDPA**

| Sub-set                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | $\beta_c$         | $\beta_d$         | $\beta_d$<br>(SF) | $\beta_c/\beta_d$ | $\beta_{hs}$<br>(note 1, note 2) | CM(dB)<br>(note 3) | MPR(dB) |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|----------------------------------|--------------------|---------|
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2/15              | 15/15             | 64                | 2/15              | 4/15                             | 0.0                | 0.0     |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 12/15<br>(note 4) | 15/15<br>(note 4) | 64                | 12/15<br>(note 4) | 24/15                            | 1.0                | 0.0     |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15/15             | 8/15              | 64                | 15/8              | 30/15                            | 1.5                | 0.5     |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 15/15             | 4/15              | 64                | 15/4              | 30/15                            | 1.5                | 0.5     |
| <p>Note 1: <math>\Delta_{ACK}</math>, <math>\Delta_{NACK}</math> and <math>\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c</math></p> <p>Note 2: CM=1 for <math>\beta_c/\beta_d = 12/15</math>, <math>\beta_{hs}/\beta_c = 24/15</math>.</p> <p>Note 3: For subtest 2 the <math>\beta_c/\beta_d</math> ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TFC1, TF1) to <math>\beta_c = 11/15</math> and <math>\beta_d = 15/15</math>.</p> |                   |                   |                   |                   |                                  |                    |         |

### 5.3.2.5 Release 6 HSUPA Test Configuration

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the “Release 6 HSPA Data Devices” section of this document, for the highest body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn accessory measurements is tested for next to the ear head exposure.

Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the  $\beta$  values indicated in Table 2 and other applicable procedures described in the ‘WCDMA EUT’ and ‘Release 5 HSDPA Data Devices’ sections of this document

**Table 5: Sub-Test 5 Setup for Release 6 HSUPA**

| Sub-set | $\beta_c$            | $\beta_d$            | $\beta_d$ (SF) | $\beta_c/\beta_d$    | $\beta_{hs}^{(1)}$ | $\beta_{ec}$ | $\beta_{ed}$                                   | $\beta_{ed}$ (SF) | $\beta_{ed}$ (codes) | CM <sup>(2)</sup> (dB) | MPR (dB) | AG <sup>(4)</sup> Index | E-TFCI |
|---------|----------------------|----------------------|----------------|----------------------|--------------------|--------------|------------------------------------------------|-------------------|----------------------|------------------------|----------|-------------------------|--------|
| 1       | 11/15 <sup>(3)</sup> | 15/15 <sup>(3)</sup> | 64             | 11/15 <sup>(3)</sup> | 22/15              | 209/225      | 1039/225                                       | 4                 | 1                    | 1.0                    | 0.0      | 20                      | 75     |
| 2       | 6/15                 | 15/15                | 64             | 6/15                 | 12/15              | 12/15        | 94/75                                          | 4                 | 1                    | 3.0                    | 2.0      | 12                      | 67     |
| 3       | 15/15                | 9/15                 | 64             | 15/9                 | 30/15              | 30/15        | $\beta_{ed1}$ : 47/15<br>$\beta_{ed2}$ : 47/15 | 4                 | 2                    | 2.0                    | 1.0      | 15                      | 92     |
| 4       | 2/15                 | 15/15                | 64             | 2/15                 | 4/15               | 2/15         | 56/75                                          | 4                 | 1                    | 3.0                    | 2.0      | 17                      | 71     |
| 5       | 15/15 <sup>(4)</sup> | 15/15 <sup>(4)</sup> | 64             | 15/15 <sup>(4)</sup> | 30/15              | 24/15        | 134/15                                         | 4                 | 1                    | 1.0                    | 0.0      | 21                      | 81     |

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$ .

Note 2: CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{hs}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the  $\beta_c/\beta_d$  ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 10/15$  and  $\beta_d = 15/15$ .

Note 4: For subtest 5 the  $\beta_c/\beta_d$  ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 14/15$  and  $\beta_d = 15/15$ .

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Figure 5.1g.

Note 6:  $\beta_{ed}$  cannot be set directly; it is set by Absolute Grant Value.

**Table 6: HSUPA UE category**

| UE E-DCH Category | Maximum E-DCH Codes Transmitted | Number of HARQ Processes | E-DCHTTI (ms) | Minimum Spreading Factor | Maximum E-DCH Transport Block Bits | Max Rate (Mbps) |
|-------------------|---------------------------------|--------------------------|---------------|--------------------------|------------------------------------|-----------------|
| 1                 | 1                               | 4                        | 10            | 4                        | 7110                               | 0.7296          |
| 2                 | 2                               | 8                        | 2             | 4                        | 2798                               | 1.4592          |
|                   | 2                               | 4                        | 10            | 4                        | 14484                              |                 |
| 3                 | 2                               | 4                        | 10            | 4                        | 14484                              | 1.4592          |
| 4                 | 2                               | 8                        | 2             | 2                        | 5772                               | 2.9185          |
|                   | 2                               | 4                        | 10            | 2                        | 20000                              | 2.00            |



|                                                                                                                                                                                                                  |   |   |    |                  |       |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|----|------------------|-------|------|
| 5                                                                                                                                                                                                                | 2 | 4 | 10 | 2                | 20000 | 2.00 |
| 6<br>(No DPDCH)                                                                                                                                                                                                  | 4 | 8 | 2  | 2 SF2 & 2        | 11484 | 5.76 |
|                                                                                                                                                                                                                  | 4 | 4 | 10 | SF4              | 20000 | 2.00 |
| 7<br>(No DPDCH)                                                                                                                                                                                                  | 4 | 8 | 2  | 2 SF2 & 2<br>SF4 | 22996 | ?    |
|                                                                                                                                                                                                                  | 4 | 4 | 10 |                  | 20000 | ?    |
| NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4.<br>UE Categories 1 to 6 supports QPSK only. UE Category 7 supports QPSK and 16QAM.<br>(TS25.306-7.3.0) |   |   |    |                  |       |      |

### 5.3.2.6 HSPA and DC-HSDPA Test Configuration

SAR test exclusion may apply to 3GPP Rel. 6 HSPA and Rel. 8 DC-HSDPA. When SAR measurement is required for HSPA or DC-HSDPA, a KDB inquiry is required to confirm that the wireless mode configurations in the test setup have remained stable throughout the SAR measurements. Without prior KDB confirmation to determine the SAR results are acceptable, a PAG is required for equipment approval.

SAR test exclusion for HSPA and DC-HSDPA is determined according to the following:

1) The HSPA procedures are applied to configure 3GPP Rel. 6 HSPA devices in the required sub-test mode(s) to determine SAR test exclusion.

2) SAR is required for Rel. 6 HSPA; otherwise, the 3G SAR test reduction procedure is applied to (uplink) HSPA+ with 12.2 kbps RMC as the primary mode.

3) SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

4) Regardless of whether a PBA is required, the following information must be verified and included in the SAR report for devices supporting HSPA or DC-HSDPA:

a) The output power measurement results and applicable release version(s) of 3GPP TS 34.121.

Power measurement difficulties due to test equipment setup or availability must be resolved between the grantee and its test lab.

b) The power measurement results are in agreement with the individual device implementation and specifications. When Enhanced MPR (E-MPR) applies, the normal MPR targets may be modified according to the Cubic Metric (CM) measured by the device, which must be taken into consideration.

c) The UE category, operating parameters, such as the  $\beta$  and  $\Delta$  values used to configure the device for testing, power setback procedures described in 3GPP TS 34.121 for the power measurements, and HSPA/HSPA+ channel conditions (active and stable) for the entire duration of the measurement according to the required E-TFCI and AG index values.

5) When SAR measurement is required, the test configurations, procedures and power measurement results must be clearly described to confirm that the required test parameters are used, including E-TFCI and AG index stability and output power conditions.

**Table 7: HS-DSCH UE category**

| HS-DSCH category      | Maximum number of HS-DSCH codes received | Minimum inter-TTI interval | Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI<br>NOTE 1 | Total number of soft channel bits | Supported modulations without MIMO operation or dual cell operation | Supported modulations with MIMO operation and without dual cell operation | Supported modulations with dual cell operation     |
|-----------------------|------------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------|
| Category 1            | 5                                        | 3                          | 7298                                                                                          | 19200                             | QPSK, 16QAM                                                         | Not applicable (MIMO not supported)                                       | Not applicable (dual cell operation not supported) |
| Category 2            | 5                                        | 3                          | 7298                                                                                          | 28800                             |                                                                     |                                                                           |                                                    |
| Category 3            | 5                                        | 2                          | 7298                                                                                          | 28800                             |                                                                     |                                                                           |                                                    |
| Category 4            | 5                                        | 2                          | 7298                                                                                          | 38400                             |                                                                     |                                                                           |                                                    |
| Category 5            | 5                                        | 1                          | 7298                                                                                          | 57600                             |                                                                     |                                                                           |                                                    |
| Category 6            | 5                                        | 1                          | 7298                                                                                          | 67200                             |                                                                     |                                                                           |                                                    |
| Category 7            | 10                                       | 1                          | 14411                                                                                         | 115200                            |                                                                     |                                                                           |                                                    |
| Category 8            | 10                                       | 1                          | 14411                                                                                         | 134400                            |                                                                     |                                                                           |                                                    |
| Category 9            | 15                                       | 1                          | 20251                                                                                         | 172800                            |                                                                     |                                                                           |                                                    |
| Category 10           | 15                                       | 1                          | 27952                                                                                         | 172800                            |                                                                     |                                                                           |                                                    |
| Category 11           | 5                                        | 2                          | 3630                                                                                          | 14400                             | QPSK                                                                |                                                                           |                                                    |
| Category 12           | 5                                        | 1                          | 3630                                                                                          | 28800                             |                                                                     |                                                                           |                                                    |
| Category 13           | 15                                       | 1                          | 35280                                                                                         | 259200                            | QPSK, 16QAM, 64QAM                                                  |                                                                           |                                                    |
| Category 14           | 15                                       | 1                          | 42192                                                                                         | 259200                            |                                                                     |                                                                           |                                                    |
| Category 15           | 15                                       | 1                          | 23370                                                                                         | 345600                            | QPSK, 16QAM                                                         |                                                                           |                                                    |
| Category 16           | 15                                       | 1                          | 27952                                                                                         | 345600                            | QPSK, 16QAM                                                         |                                                                           |                                                    |
| Category 17<br>NOTE 2 | 15                                       | 1                          | 35280                                                                                         | 259200                            | QPSK, 16QAM, 64QAM                                                  | —                                                                         |                                                    |
|                       |                                          |                            | 23370                                                                                         | 345600                            | —                                                                   | QPSK, 16QAM                                                               |                                                    |
| Category 18<br>NOTE 3 | 15                                       | 1                          | 42192                                                                                         | 259200                            | QPSK, 16QAM, 64QAM                                                  | —                                                                         |                                                    |
|                       |                                          |                            | 27952                                                                                         | 345600                            | —                                                                   | QPSK, 16QAM                                                               |                                                    |
| Category 19           | 15                                       | 1                          | 35280                                                                                         | 518400                            | QPSK, 16QAM, 64QAM                                                  |                                                                           |                                                    |
| Category 20           | 15                                       | 1                          | 42192                                                                                         | 518400                            | QPSK, 16QAM, 64QAM                                                  |                                                                           |                                                    |
| Category 21           | 15                                       | 1                          | 23370                                                                                         | 345600                            | —                                                                   | —                                                                         | QPSK, 16QAM                                        |
| Category 22           | 15                                       | 1                          | 27952                                                                                         | 345600                            |                                                                     |                                                                           | QPSK, 16QAM, 64QAM                                 |
| Category 23           | 15                                       | 1                          | 35280                                                                                         | 518400                            |                                                                     |                                                                           | QPSK, 16QAM, 64QAM                                 |
| Category 24           | 15                                       | 1                          | 42192                                                                                         | 518400                            |                                                                     |                                                                           | QPSK, 16QAM, 64QAM                                 |

### 5.3.3 LTE Test Configuration

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR. The R&S CMW500 was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI (transmit time interval) supported by the device in each LTE configuration.

#### A) Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

#### B) MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to

3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

### C) A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

### D) Largest channel bandwidth standalone SAR test requirements

#### 1) QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is  $\leq 0.8$  W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is  $> 1.45$  W/kg, SAR is required for all three RB offset configurations for that required test channel.

#### 2) QPSK with 50% RB allocation

The procedures required for 1 RB allocation in 1) are applied to measure the SAR for QPSK with 50% RB allocation.

#### 3) QPSK with 100% RB allocation

For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100% RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are  $\leq 0.8$  W/kg. Otherwise, SAR is measured for the highest output power channel and if the reported SAR is  $> 1.45$  W/kg, the remaining required test channels must also be tested.

#### 4) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is  $> \frac{1}{2}$  dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is  $> 1.45$  W/kg.

### E) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is  $> \frac{1}{2}$  dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is  $> 1.45$  W/kg.

### 5.3.4 Additional requirements for TDD LTE specification

For Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

TDD LTE Band supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table: Uplink-downlink configurations for uplink-downlink configurations and Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS) for Special subframe configurations.

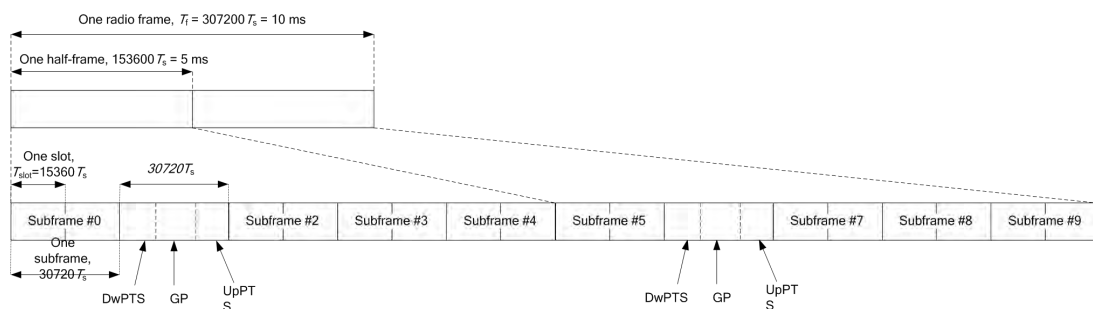


Figure 1: Frame structure type 2

**Table 8: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)**

| Special subframe configuration | Normal cyclic prefix in downlink |                                |                                  | Extended cyclic prefix in downlink |                                |                                  |
|--------------------------------|----------------------------------|--------------------------------|----------------------------------|------------------------------------|--------------------------------|----------------------------------|
|                                | DwPTS                            | UpPTS                          |                                  | DwPTS                              | UpPTS                          |                                  |
|                                |                                  | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |                                    | Normal cyclic prefix in uplink | Extended cyclic prefix in uplink |
| 0                              | $6592 \cdot T_s$                 | $2192 \cdot T_s$               | $2560 \cdot T_s$                 | $7680 \cdot T_s$                   | $2192 \cdot T_s$               | $2560 \cdot T_s$                 |
| 1                              | $19760 \cdot T_s$                |                                |                                  | $20480 \cdot T_s$                  |                                |                                  |
| 2                              | $21952 \cdot T_s$                |                                |                                  | $23040 \cdot T_s$                  |                                |                                  |
| 3                              | $24144 \cdot T_s$                |                                |                                  | $25600 \cdot T_s$                  |                                |                                  |
| 4                              | $26336 \cdot T_s$                |                                |                                  | $7680 \cdot T_s$                   | $4384 \cdot T_s$               | $5120 \cdot T_s$                 |
| 5                              | $6592 \cdot T_s$                 | $4384 \cdot T_s$               | $5120 \cdot T_s$                 | $20480 \cdot T_s$                  |                                |                                  |
| 6                              | $19760 \cdot T_s$                |                                |                                  | $23040 \cdot T_s$                  |                                |                                  |
| 7                              | $21952 \cdot T_s$                |                                |                                  | $12800 \cdot T_s$                  |                                |                                  |
| 8                              | $24144 \cdot T_s$                |                                |                                  | -                                  | -                              | -                                |
| 9                              | $13168 \cdot T_s$                |                                |                                  | -                                  | -                              | -                                |

**Table 9: Uplink-downlink configurations**

| Uplink-downlink configuration | Downlink-to-Uplink Switch-point periodicity | Subframe number |   |   |   |   |   |   |   |   |   |
|-------------------------------|---------------------------------------------|-----------------|---|---|---|---|---|---|---|---|---|
|                               |                                             | 0               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 0                             | 5 ms                                        | D               | S | U | U | U | D | S | U | U | U |
| 1                             | 5 ms                                        | D               | S | U | U | D | D | S | U | U | D |
| 2                             | 5 ms                                        | D               | S | U | D | D | D | S | U | D | D |
| 3                             | 10 ms                                       | D               | S | U | U | U | D | D | D | D | D |
| 4                             | 10 ms                                       | D               | S | U | U | D | D | D | D | D | D |
| 5                             | 10 ms                                       | D               | S | U | D | D | D | D | D | D | D |
| 6                             | 5 ms                                        | D               | S | U | U | U | D | S | U | U | D |

According to Figure 1, one radio frame is configured by 10 subframes, which consist of Uplink-subframe, Downlink-subframe and Special subframe. For TDD-LTE, the Duty Cycle should be calculated on Uplink-subframes and Special subframes, due to Special subframe containing both Uplink transmissions. So for one radio frame, Duty Cycle can be calculated with formula as below. The count of Uplink subframes are according to Table: Uplink-downlink configurations:

$$\text{Duty cycle} = (30720Ts \cdot \text{Ups} + \text{Uplink Component} \cdot \text{Specials}) / (307200Ts)$$

About the uplink component of Special subframes, we can figure out by Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS):

$$\text{Uplink Component} = \text{UpPTS}$$

In conclusion, for the TDD LTE Band, Duty Cycle can be calculated with formula as below. All these sets are ok when we test, or we can set as below.

$$\text{Duty cycle} = [(30720Ts \cdot \text{Ups}) + \text{UpPTS} \cdot \text{Specials}] / (307200Ts)$$

And we can get different Duty cycles under different configurations:

| Uplink-downlink configuration | Subframe number |   |   | Configuration of special subframe |                   |                                  |                   |                                    |                   |                                  |                   |
|-------------------------------|-----------------|---|---|-----------------------------------|-------------------|----------------------------------|-------------------|------------------------------------|-------------------|----------------------------------|-------------------|
|                               |                 |   |   | Normal cyclic prefix in downlink  |                   |                                  |                   | Extended cyclic prefix in downlink |                   |                                  |                   |
|                               |                 |   |   | Normal cyclic prefix in uplink    |                   | Extended cyclic prefix in uplink |                   | Normal cyclic prefix in uplink     |                   | Extended cyclic prefix in uplink |                   |
|                               | D               | S | U | configuration 0~4                 | configuration 5~9 | configuration 0~4                | configuration 5~9 | configuration 0~3                  | configuration 4~7 | configuration 0~3                | configuration 4~7 |
| 0                             | 2               | 2 | 6 | 61.43%                            | 62.85%            | 61.67%                           | 63.33%            | 61.43%                             | 62.85%            | 61.67%                           | 63.33%            |
| 1                             | 4               | 2 | 4 | 41.43%                            | 42.85%            | 41.67%                           | 43.33%            | 41.43%                             | 42.85%            | 41.67%                           | 43.33%            |
| 2                             | 6               | 2 | 2 | 21.43%                            | 22.85%            | 21.67%                           | 23.33%            | 21.43%                             | 22.85%            | 21.67%                           | 23.33%            |
| 3                             | 6               | 1 | 3 | 30.71%                            | 31.43%            | 30.83%                           | 31.67%            | 30.71%                             | 31.43%            | 30.83%                           | 31.67%            |
| 4                             | 7               | 1 | 2 | 20.71%                            | 21.43%            | 20.83%                           | 21.67%            | 20.71%                             | 21.43%            | 20.83%                           | 21.67%            |
| 5                             | 8               | 1 | 1 | 10.71%                            | 11.43%            | 10.83%                           | 11.67%            | 10.71%                             | 11.43%            | 10.83%                           | 11.67%            |
| 6                             | 8               | 2 | 5 | 51.43%                            | 52.85%            | 51.67%                           | 53.33%            | 51.43%                             | 52.85%            | 51.67%                           | 53.33%            |

SAR test Plan: For TDD LTE, SAR should be tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7 for Frame structure type

The screenshot shows the 'LTE Signaling - Configuration' window. The 'Physical Cell Setup' section is highlighted with a red box. Within this section, the 'TDD' sub-section is also highlighted with a red box. The 'TDD' sub-section includes the following settings:

- Use Carrier Specific: ☐ (unchecked)
- Uplink Downlink Configurat...: 0 (highlighted with a red circle)
- Subframe Number: 0 1 2 3 4 5 6 7 8 9
- Direction: Down arrow (0), S (1), Up arrow (2), Up arrow (3), Up arrow (4), Down arrow (5), S (6), Up arrow (7), Up arrow (8), Up arrow (9)
- Special Subframe: 7 (highlighted with a red circle)

On the right side of the window, there is a sidebar with the following items:

- LTE
- LTE 1 TX Meas.
- LTE 1 RX Meas.
- Go to...
- Routing
- LTE Signaling ON (highlighted with a red box)
- Config ...

### 5.3.5 Wi-Fi Test Configuration

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; These are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the *initial test position(s)* by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The *initial test position(s)* is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the *reported SAR* for the *initial test position* is:

- $\leq 0.4$  W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the *initial test position* to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the *reported SAR* is  $\leq 0.8$  W/kg or all required test positions are tested.
  - ✧ For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
  - ✧ When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported SAR* is  $> 0.8$  W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported SAR* is  $\leq 1.2$  W/kg or all required test channels are considered.
  - ✧ The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.

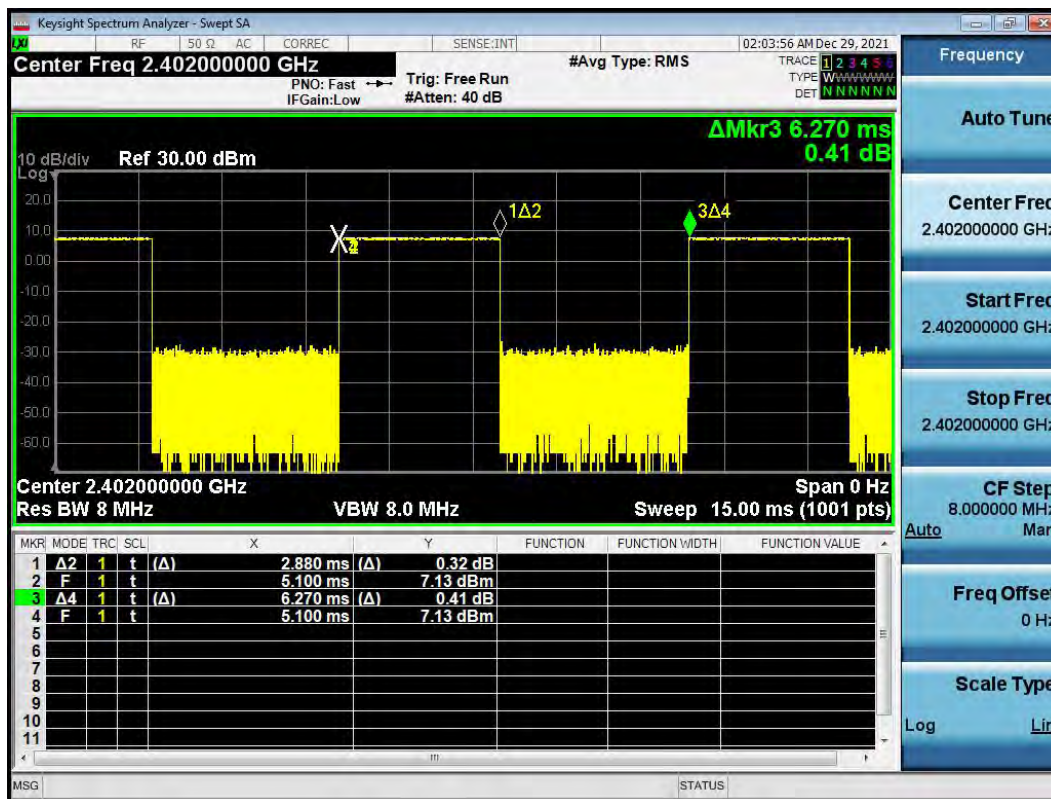
To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

### 5.3.6 BT Test Configuration

For BT SAR testing, BT engineering testing software installed on the EUT can provide continuous transmitting RF signal with maximum output power. And the CBT control the EUT operating with hopping off and data rate set for DH5.

The SAR measurement takes full account of the BT duty cycle and is reflected in the report, and the duty factor of the device is as follow:



Note: Duty factor= Ton (ms)/ T(on+off) (ms)=2.880/6.270=45.9%

### 5.3.7 Proximity sensor Configuration

Due to the operating configurations and exposure conditions required by the device, the proximity sensor is used to indicate when the device is held close to a user's body exposure condition. It utilizes the proximity sensor to reduce the output power in specific wireless and operating modes of Low Antenna and Upper Antenna to ensure SAR compliance. It is also set an output power leveled to the lowest one to make sure that in any case of SAR sensor hardware failure, the SAR requirements can still be satisfied.

The following tables summarize the key power reduction information for proximity sensor. The test procedures be applied to determine proximity sensor triggering distances, and sensor coverage for normal and tilt positions. To ensure all production units are compliant, it is generally necessary to reduce the triggering distance determined from the triggering tests by 1 mm, or more if it is necessary, and use the smallest distance for movements to and from the phantom, minus 1 mm, as the sensor triggering distance for determining the SAR measurement distance.

| Low Antenna |               |                                                |                            |             |
|-------------|---------------|------------------------------------------------|----------------------------|-------------|
| Band        | Test position | Sensor Trigger Distance range (DUT to Phantom) | Power reduction amount(dB) | Power level |
| UMTS B2     | Back side     | 0mm≤distance≤22mm                              | 4.5                        | DSI-4       |
|             |               | 22mm<distance                                  | 0                          | DSI-2       |
|             | Front side    | 0mm≤distance≤17mm                              | 4.5                        | DSI-4       |
|             |               | 17mm<distance                                  | 0                          | DSI-2       |
|             | Left edge     | /                                              | 0                          | DSI-2       |
|             | Right edge    | /                                              | 0                          | DSI-2       |
|             | Top edge      | /                                              | 0                          | DSI-2       |
|             | Bottom Edge   | 0mm≤distance≤24mm                              | 4.5                        | DSI-4       |
|             |               | 24mm<distance                                  | 0                          | DSI-2       |
| UMTS B4     | Back side     | 0mm≤distance≤22mm                              | 3                          | DSI-4       |
|             |               | 22mm<distance                                  | 0                          | DSI-2       |
|             | Front side    | 0mm≤distance≤17mm                              | 3                          | DSI-4       |
|             |               | 17mm<distance                                  | 0                          | DSI-2       |
|             | Left edge     | /                                              | 0                          | DSI-2       |
|             | Right edge    | /                                              | 0                          | DSI-2       |
|             | Top edge      | /                                              | 0                          | DSI-2       |
|             | Bottom Edge   | 0mm≤distance≤24mm                              | 3                          | DSI-4       |
|             |               | 24mm<distance                                  | 0                          | DSI-2       |
| UMTS B5     | Back side     | 0mm≤distance≤22mm                              | 1                          | DSI-4       |
|             |               | 22mm<distance                                  | 0                          | DSI-2       |



|  |        |             |                   |     |       |
|--|--------|-------------|-------------------|-----|-------|
|  |        | Front side  | 0mm≤distance≤17mm | 1   | DSI-4 |
|  |        |             | 17mm<distance     | 0   | DSI-2 |
|  |        | Left edge   | /                 | 0   | DSI-2 |
|  |        | Right edge  | /                 | 0   | DSI-2 |
|  |        | Top edge    | /                 | 0   | DSI-2 |
|  |        | Bottom Edge | 0mm≤distance≤24mm | 1   | DSI-4 |
|  |        |             | 24mm<distance     | 0   | DSI-2 |
|  | LTE B2 | Back side   | 0mm≤distance≤22mm | 4.5 | DSI-4 |
|  |        |             | 22mm<distance     | 0   | DSI-2 |
|  |        | Front side  | 0mm≤distance≤17mm | 4.5 | DSI-4 |
|  |        |             | 17mm<distance     | 0   | DSI-2 |
|  |        | Left edge   | /                 | 0   | DSI-2 |
|  |        | Right edge  | /                 | 0   | DSI-2 |
|  |        | Top edge    | /                 | 0   | DSI-2 |
|  |        | Bottom Edge | 0mm≤distance≤24mm | 4.5 | DSI-4 |
|  |        |             | 24mm<distance     | 0   | DSI-2 |
|  | LTE B4 | Back side   | 0mm≤distance≤22mm | 3   | DSI-4 |
|  |        |             | 22mm<distance     | 0   | DSI-2 |
|  |        | Front side  | 0mm≤distance≤17mm | 3   | DSI-4 |
|  |        |             | 17mm<distance     | 0   | DSI-2 |
|  |        | Left edge   | /                 | 0   | DSI-2 |
|  |        | Right edge  | /                 | 0   | DSI-2 |
|  |        | Top edge    | /                 | 0   | DSI-2 |
|  |        | Bottom Edge | 0mm≤distance≤24mm | 3   | DSI-4 |
|  |        |             | 24mm<distance     | 0   | DSI-2 |
|  | LTE B5 | Back side   | 0mm≤distance≤22mm | 0.5 | DSI-4 |
|  |        |             | 22mm<distance     | 0   | DSI-2 |
|  |        | Front side  | 0mm≤distance≤17mm | 0.5 | DSI-4 |
|  |        |             | 17mm<distance     | 0   | DSI-2 |
|  |        | Left edge   | /                 | 0   | DSI-2 |
|  |        | Right edge  | /                 | 0   | DSI-2 |
|  |        | Top edge    | /                 | 0   | DSI-2 |
|  |        | Bottom Edge | 0mm≤distance≤24mm | 0.5 | DSI-4 |
|  |        |             | 24mm<distance     | 0   | DSI-2 |
|  | LTE B7 | Back side   | 0mm≤distance≤22mm | 6   | DSI-4 |
|  |        |             | 22mm<distance     | 0   | DSI-2 |



|  |         |             |                   |     |       |
|--|---------|-------------|-------------------|-----|-------|
|  |         | Front side  | 0mm≤distance≤17mm | 6   | DSI-4 |
|  |         |             | 17mm<distance     | 0   | DSI-2 |
|  |         | Left edge   | /                 | 0   | DSI-2 |
|  |         | Right edge  | /                 | 0   | DSI-2 |
|  |         | Top edge    | /                 | 0   | DSI-2 |
|  |         | Bottom Edge | 0mm≤distance≤24mm | 6   | DSI-4 |
|  |         |             | 24mm<distance     | 0   | DSI-2 |
|  | LTE B12 | Back side   | 0mm≤distance≤22mm | 1.5 | DSI-4 |
|  |         |             | 22mm<distance     | 0   | DSI-2 |
|  |         | Front side  | 0mm≤distance≤17mm | 1.5 | DSI-4 |
|  |         |             | 17mm<distance     | 0   | DSI-2 |
|  |         | Left edge   | /                 | 0   | DSI-2 |
|  |         | Right edge  | /                 | 0   | DSI-2 |
|  |         | Top edge    | /                 | 0   | DSI-2 |
|  |         | Bottom Edge | 0mm≤distance≤24mm | 1.5 | DSI-4 |
|  |         |             | 24mm<distance     | 0   | DSI-2 |
|  | LTE B17 | Back side   | 0mm≤distance≤22mm | 1.5 | DSI-4 |
|  |         |             | 22mm<distance     | 0   | DSI-2 |
|  |         | Front side  | 0mm≤distance≤17mm | 1.5 | DSI-4 |
|  |         |             | 17mm<distance     | 0   | DSI-2 |
|  |         | Left edge   | /                 | 0   | DSI-2 |
|  |         | Right edge  | /                 | 0   | DSI-2 |
|  |         | Top edge    | /                 | 0   | DSI-2 |
|  |         | Bottom Edge | 0mm≤distance≤24mm | 1.5 | DSI-4 |
|  |         |             | 24mm<distance     | 0   | DSI-2 |
|  | LTE B38 | Back side   | 0mm≤distance≤22mm | 2   | DSI-4 |
|  |         |             | 22mm<distance     | 0   | DSI-2 |
|  |         | Front side  | 0mm≤distance≤17mm | 2   | DSI-4 |
|  |         |             | 17mm<distance     | 0   | DSI-2 |
|  |         | Left edge   | /                 | 0   | DSI-2 |
|  |         | Right edge  | /                 | 0   | DSI-2 |
|  |         | Top edge    | /                 | 0   | DSI-2 |
|  |         | Bottom Edge | 0mm≤distance≤24mm | 2   | DSI-4 |
|  |         |             | 24mm<distance     | 0   | DSI-2 |
|  | LTE B41 | Back side   | 0mm≤distance≤22mm | 1.5 | DSI-4 |
|  |         |             | 22mm<distance     | 0   | DSI-2 |



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|-----------------|---------------|------------------------------------------------|----------------------------|-------------|
|                 | Front side    | 0mm≤distance≤17mm                              | 1.5                        | DSI-4       |
|                 |               | 17mm<distance                                  | 0                          | DSI-2       |
|                 | Left edge     | /                                              | 0                          | DSI-2       |
|                 | Right edge    | /                                              | 0                          | DSI-2       |
|                 | Top edge      | /                                              | 0                          | DSI-2       |
|                 | Bottom Edge   | 0mm≤distance≤24mm                              | 1.5                        | DSI-4       |
|                 |               | 24mm<distance                                  | 0                          | DSI-2       |
|                 | LTE B66       | Back side                                      | 0mm≤distance≤22mm          | 3           |
| 22mm<distance   |               |                                                | 0                          | DSI-2       |
| Front side      |               | 0mm≤distance≤17mm                              | 3                          | DSI-4       |
|                 |               | 17mm<distance                                  | 0                          | DSI-2       |
| Left edge       |               | /                                              | 0                          | DSI-2       |
| Right edge      |               | /                                              | 0                          | DSI-2       |
| Top edge        |               | /                                              | 0                          | DSI-2       |
| Bottom Edge     |               | 0mm≤distance≤24mm                              | 3                          | DSI-4       |
|                 |               | 24mm<distance                                  | 0                          | DSI-2       |
| Upper Antenna   |               |                                                |                            |             |
| Band            | Test position | Sensor Trigger Distance range (DUT to Phantom) | Power reduction amount(dB) | Power level |
| GSM 1900        | Back side     | 0mm≤distance≤18mm                              | 3.5                        | DSI-4       |
|                 |               | 18mm<distance                                  | 0                          | DSI-2       |
|                 | Front side    | 0mm≤distance≤11mm                              | 3.5                        | DSI-4       |
|                 |               | 11mm<distance                                  | 0                          | DSI-2       |
|                 | Left edge     | /                                              | 0                          | DSI-2       |
|                 | Right edge    | /                                              | 0                          | DSI-2       |
|                 | Top edge      | 0mm≤distance≤18mm                              | 3.5                        | DSI-4       |
|                 |               | 18mm<distance                                  | 0                          | DSI-2       |
|                 | Bottom edge   | /                                              | 0                          | DSI-2       |
| WCDMA B2        | Back side     | 0mm≤distance≤18mm                              | 6.5                        | DSI-4       |
|                 |               | 18mm<distance                                  | 0                          | DSI-2       |
|                 | Front side    | 0mm≤distance≤11mm                              | 6.5                        | DSI-4       |
|                 |               | 11mm<distance                                  | 0                          | DSI-2       |
|                 | Left edge     | /                                              | 0                          | DSI-2       |
|                 | Right edge    | /                                              | 0                          | DSI-2       |
|                 | Top edge      | 0mm≤distance≤18mm                              | 6.5                        | DSI-4       |



|          |             |                   |     |       |
|----------|-------------|-------------------|-----|-------|
|          |             | 18mm<distance     | 0   | DSI-2 |
|          | Bottom edge | /                 | 0   | DSI-2 |
| WCDMA B4 | Back side   | 0mm≤distance≤18mm | 5   | DSI-4 |
|          |             | 18mm<distance     | 0   | DSI-2 |
|          | Front side  | 0mm≤distance≤11mm | 5   | DSI-4 |
|          |             | 11mm<distance     | 0   | DSI-2 |
|          | Left edge   | /                 | 0   | DSI-2 |
|          | Right edge  | /                 | 0   | DSI-2 |
|          | Top edge    | 0mm≤distance≤18mm | 5   | DSI-4 |
|          |             | 18mm<distance     | 0   | DSI-2 |
|          | Bottom edge | /                 | 0   | DSI-2 |
| WCDMA B5 | Back side   | 0mm≤distance≤18mm | 1   | DSI-4 |
|          |             | 18mm<distance     | 0   | DSI-2 |
|          | Front side  | 0mm≤distance≤11mm | 1   | DSI-4 |
|          |             | 11mm<distance     | 0   | DSI-2 |
|          | Left edge   | /                 | 0   | DSI-2 |
|          | Right edge  | /                 | 0   | DSI-2 |
|          | Top edge    | 0mm≤distance≤18mm | 1   | DSI-4 |
|          |             | 18mm<distance     | 0   | DSI-2 |
|          | Bottom edge | /                 | 0   | DSI-2 |
| LTE B2   | Back side   | 0mm≤distance≤18mm | 5.5 | DSI-4 |
|          |             | 18mm<distance     | 0   | DSI-2 |
|          | Front side  | 0mm≤distance≤11mm | 5.5 | DSI-4 |
|          |             | 11mm<distance     | 0   | DSI-2 |
|          | Left edge   | /                 | 0   | DSI-2 |
|          | Right edge  | /                 | 0   | DSI-2 |
|          | Top edge    | 0mm≤distance≤18mm | 5.5 | DSI-4 |
|          |             | 18mm<distance     | 0   | DSI-2 |
|          | Bottom edge | /                 | 0   | DSI-2 |
| LTE B4   | Back side   | 0mm≤distance≤18mm | 3.5 | DSI-4 |
|          |             | 18mm<distance     | 0   | DSI-2 |
|          | Front side  | 0mm≤distance≤11mm | 3.5 | DSI-4 |
|          |             | 11mm<distance     | 0   | DSI-2 |
|          | Left edge   | /                 | 0   | DSI-2 |
|          | Right edge  | /                 | 0   | DSI-2 |
|          |             |                   |     |       |



|         |             |                   |     |       |
|---------|-------------|-------------------|-----|-------|
|         | Top edge    | 0mm≤distance≤18mm | 3.5 | DSI-4 |
|         |             | 18mm<distance     | 0   | DSI-2 |
|         | Bottom edge | /                 | 0   | DSI-2 |
| LTE B5  | Back side   | 0mm≤distance≤18mm | 0.5 | DSI-4 |
|         |             | 18mm<distance     | 0   | DSI-2 |
|         | Front side  | 0mm≤distance≤11mm | 0.5 | DSI-4 |
|         |             | 11mm<distance     | 0   | DSI-2 |
|         | Left edge   | /                 | 0   | DSI-2 |
|         | Right edge  | /                 | 0   | DSI-2 |
|         | Top edge    | 0mm≤distance≤18mm | 0.5 | DSI-4 |
|         |             | 18mm<distance     | 0   | DSI-2 |
|         | Bottom edge | /                 | 0   | DSI-2 |
|         |             |                   |     |       |
| LTE B7  | Back side   | 0mm≤distance≤18mm | 3.5 | DSI-4 |
|         |             | 18mm<distance     | 0   | DSI-2 |
|         | Front side  | 0mm≤distance≤11mm | 3.5 | DSI-4 |
|         |             | 11mm<distance     | 0   | DSI-2 |
|         | Left edge   | /                 | 0   | DSI-2 |
|         | Right edge  | /                 | 0   | DSI-2 |
|         | Top edge    | 0mm≤distance≤18mm | 3.5 | DSI-4 |
|         |             | 18mm<distance     | 0   | DSI-2 |
|         | Bottom edge | /                 | 0   | DSI-2 |
|         |             |                   |     |       |
| LTE B17 | Back side   | 0mm≤distance≤18mm | 1   | DSI-4 |
|         |             | 18mm<distance     | 0   | DSI-2 |
|         | Front side  | 0mm≤distance≤11mm | 1   | DSI-4 |
|         |             | 11mm<distance     | 0   | DSI-2 |
|         | Left edge   | /                 | 0   | DSI-2 |
|         | Right edge  | /                 | 0   | DSI-2 |
|         | Top edge    | 0mm≤distance≤18mm | 1   | DSI-4 |
|         |             | 18mm<distance     | 0   | DSI-2 |
|         | Bottom edge | /                 | 0   | DSI-2 |
|         |             |                   |     |       |
| LTE B38 | Back side   | 0mm≤distance≤18mm | 0.5 | DSI-4 |
|         |             | 18mm<distance     | 0   | DSI-2 |
|         | Front side  | 0mm≤distance≤11mm | 0.5 | DSI-4 |
|         |             | 11mm<distance     | 0   | DSI-2 |



|         |             |                                                    |     |       |
|---------|-------------|----------------------------------------------------|-----|-------|
|         | Left edge   | /                                                  | 0   | DSI-2 |
|         | Right edge  | /                                                  | 0   | DSI-2 |
|         | Top edge    | $0\text{mm} \leq \text{distance} \leq 18\text{mm}$ | 0.5 | DSI-4 |
|         |             | $18\text{mm} < \text{distance}$                    | 0   | DSI-2 |
|         | Bottom edge | /                                                  | 0   | DSI-2 |
| LTE B41 | Back side   | $0\text{mm} \leq \text{distance} \leq 18\text{mm}$ | 0.5 | DSI-4 |
|         |             | $18\text{mm} < \text{distance}$                    | 0   | DSI-2 |
|         | Front side  | $0\text{mm} \leq \text{distance} \leq 11\text{mm}$ | 0.5 | DSI-4 |
|         |             | $11\text{mm} < \text{distance}$                    | 0   | DSI-2 |
|         | Left edge   | /                                                  | 0   | DSI-2 |
|         | Right edge  | /                                                  | 0   | DSI-2 |
|         | Top edge    | $0\text{mm} \leq \text{distance} \leq 18\text{mm}$ | 0.5 | DSI-4 |
|         |             | $18\text{mm} < \text{distance}$                    | 0   | DSI-2 |
|         | Bottom edge | /                                                  | 0   | DSI-2 |
| LTE B66 | Back side   | $0\text{mm} \leq \text{distance} \leq 18\text{mm}$ | 4.5 | DSI-4 |
|         |             | $18\text{mm} < \text{distance}$                    | 0   | DSI-2 |
|         | Front side  | $0\text{mm} \leq \text{distance} \leq 11\text{mm}$ | 4.5 | DSI-4 |
|         |             | $11\text{mm} < \text{distance}$                    | 0   | DSI-2 |
|         | Left edge   | /                                                  | 0   | DSI-2 |
|         | Right edge  | /                                                  | 0   | DSI-2 |
|         | Top edge    | $0\text{mm} \leq \text{distance} \leq 18\text{mm}$ | 4.5 | DSI-4 |
|         |             | $18\text{mm} < \text{distance}$                    | 0   | DSI-2 |
|         | Bottom edge | /                                                  | 0   | DSI-2 |

## Note:

To ensure all production units are compliant, the smallest separation distance determined by the sensor triggering and sensor coverage for normal and tilt positions for all usage conditions and applicable sides, minus 1 mm, must be used as the test separation distance for additional SAR testing of each higher power stage.

For the other sides or other frequency bands of the device, SAR is still tested at the maximum full power level with sensor off.

## Procedures for determining proximity sensor triggering distances

The device was tested by the test lab to determine the proximity sensor triggering distances for the backside, top side and bottom edge of the device. To ensure all production units are compliant, the smallest separation distance determined by the sensor triggering minus 1 mm, must be used as the test separation distance for SAR testing.

The Proximity sensor triggering distance measurement method are as below:



Picture : Proximity sensor triggering distances assessment (Back/front side)



Picture : Proximity sensor triggering distances assessment (Top/Bottom edge)

**Table: Summary of Trigger Distances for Low Antenna :**

| Band     | Trigger distance-<br>Back Side |                                   | Trigger distance-<br>Front Side |                                   | Trigger distance-<br>Bottom Edge |                                   |
|----------|--------------------------------|-----------------------------------|---------------------------------|-----------------------------------|----------------------------------|-----------------------------------|
|          | Moving<br>toward<br>Phantom    | Moving<br>away<br>from<br>Phantom | Moving<br>toward<br>Phantom     | Moving<br>away<br>from<br>Phantom | Moving<br>toward<br>Phantom      | Moving<br>away<br>from<br>Phantom |
| WCDMA B2 | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| WCDMA B4 | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| WCDMA B5 | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| LTE B2   | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| LTE B4   | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| LTE B5   | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| LTE B7   | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| LTE B12  | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| LTE B17  | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| LTE B38  | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| LTE B41  | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |
| LTE B66  | 22                             | 22                                | 17                              | 17                                | 24                               | 24                                |

**Table: Summary of Trigger Distances for Upper Antenna :**

| Band     | Trigger distance-<br>Back Side |                                   | Trigger distance-<br>Front Side |                                   | Trigger distance-<br>Top Edge |                                   |
|----------|--------------------------------|-----------------------------------|---------------------------------|-----------------------------------|-------------------------------|-----------------------------------|
|          | Moving<br>toward<br>Phantom    | Moving<br>away<br>from<br>Phantom | Moving<br>toward<br>Phantom     | Moving<br>away<br>from<br>Phantom | Moving<br>toward<br>Phantom   | Moving<br>away<br>from<br>Phantom |
| GSM 1900 | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| WCDMA B2 | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| WCDMA B4 | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| WCDMA B5 | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| LTE B2   | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| LTE B4   | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| LTE B5   | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| LTE B7   | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| LTE B17  | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| LTE B38  | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| LTE B41  | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |
| LTE B66  | 18                             | 18                                | 11                              | 11                                | 18                            | 18                                |



Table: Full Power and Reduced power (Moving toward phantom)

[illegible][illegible][illegible][illegible][illegible]

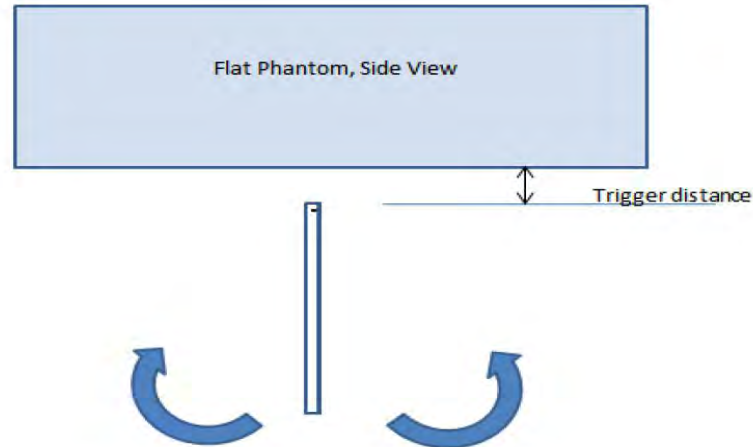
[illegible]

### Procedures for determining device tilt angle influences to proximity sensor triggering

The DUT was positioned directly below the flat phantom at the minimum measured trigger distance with Bottom Edge and Top Edge parallel to the base of the flat phantom for each band.

The EUT was rotated about Bottom Edge and Top Edge for angles up to  $\pm 45^\circ$ . If the output power increased during the rotation the DUT was moved 1mm toward the phantom and the rotation repeated. This procedure was repeated until the power remained reduced for all angles up to  $\pm 45^\circ$ .

The proximity sensor triggering tilt angle measurement methods are as below:



**Table: Summary of Tablet Tilt Angle Influence to Proximity Sensor Triggering (Bottom/Top edge)**

| Band(MHz) | Position    | Minimum trigger distance at which power reduction was maintained over $\pm 45^\circ$ | Power Reduction Status |      |      |      |     |    |    |     |     |     |     |
|-----------|-------------|--------------------------------------------------------------------------------------|------------------------|------|------|------|-----|----|----|-----|-----|-----|-----|
|           |             |                                                                                      | -45°                   | -35° | -25° | -15° | -5° | 0° | 5° | 15° | 25° | 35° | 45° |
| WCDMA B2  | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| WCDMA B4  | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| WCDMA B5  | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B2    | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B4    | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B5    | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B7    | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B12   | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B17   | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B38   | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B41   | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B66   | Bottom edge | 24mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| GSM 1900  | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| WCDMA B2  | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| WCDMA B4  | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| WCDMA B5  | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B2    | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B4    | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B5    | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B7    | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B17   | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B38   | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |
| LTE B41   | Top edge    | 18mm                                                                                 | on                     | on   | on   | on   | on  | on | on | on  | on  | on  | on  |

**Conclusion:** It can be ensured that the proximity sensor can be valid triggered for the DUT tilt coverage exposure condition.



### Summary additional SAR test Plan for Proximity sensor power reduction

For Body SAR compliance, the device uses proximity sensor power reduction for some frequency bands of Low Antenna and test positions. To ensure all production units are compliant, the smallest separation distance determined by the sensor triggering and sensor coverage for normal and tilt positions for each applicable side and top triggering conditions, minus 1 mm, is used as the test separation distance for SAR testing. These SAR tests are included in addition to the SAR tests for the device touching the SAR phantom with reduced power.

| Low Antenna              |             |                              | Power Reduction Level Amount (dBm) |         |         |         |         |        |        |        |        |         |         |         |         |         |
|--------------------------|-------------|------------------------------|------------------------------------|---------|---------|---------|---------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| Power Reduction Scenario | Power Level | Receiver/Sensor Mode         | GSM850                             | GSM1900 | UMTS B2 | UMTS B4 | UMTS B5 | LTE B2 | LTE B4 | LTE B5 | LTE B7 | LTE B12 | LTE B17 | LTE B38 | LTE B41 | LTE B66 |
| Full power               | Full power  | Receiver off+Sensor off      | 33.00                              | 30.50   | 25.00   | 24.00   | 25.00   | 25.00  | 24.00  | 25.00  | 24.00  | 25.50   | 25.50   | 24.50   | 24.00   | 24.00   |
|                          |             | DSI1 Receiver on             | 0.00                               | 0.00    | 1.00    | 0.00    | 1.00    | 0.00   | 0.00   | 0.50   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
|                          |             | DSI2 Receiver off+Sensor off | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
|                          |             | DSI4 Receiver off+Sensor on  | 0.00                               | 0.00    | 4.50    | 3.00    | 1.00    | 4.50   | 3.00   | 0.50   | 6.00   | 1.50    | 1.50    | 2.00    | 1.50    | 3.00    |
| Standalone               | Standalone  | DSI1 Receiver on             | 0.00                               | 0.00    | 1.00    | 0.00    | 1.00    | 0.00   | 0.00   | 0.50   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
|                          |             | DSI2 Receiver off+Sensor off | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
|                          |             | DSI4 Receiver off+Sensor on  | 0.00                               | 0.00    | 4.50    | 3.00    | 1.00    | 4.50   | 3.00   | 0.50   | 6.00   | 1.50    | 1.50    | 2.00    | 1.50    | 3.00    |
|                          |             | DSI1 Receiver on             | 0.00                               | 0.00    | 1.00    | 0.00    | 1.00    | 0.00   | 0.00   | 0.50   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
| Simultaneous             | Wi-Fi on    | DSI2 Receiver off+Sensor off | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
|                          |             | DSI4 Receiver off+Sensor on  | 0.00                               | 0.00    | 4.50    | 3.00    | 1.00    | 4.50   | 3.00   | 0.50   | 6.00   | 1.50    | 1.50    | 2.00    | 1.50    | 3.00    |
|                          |             | DSI1 Receiver on             | 0.00                               | 0.00    | 1.00    | 0.00    | 1.00    | 0.00   | 0.00   | 0.50   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
|                          |             | DSI2 Receiver off+Sensor off | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |

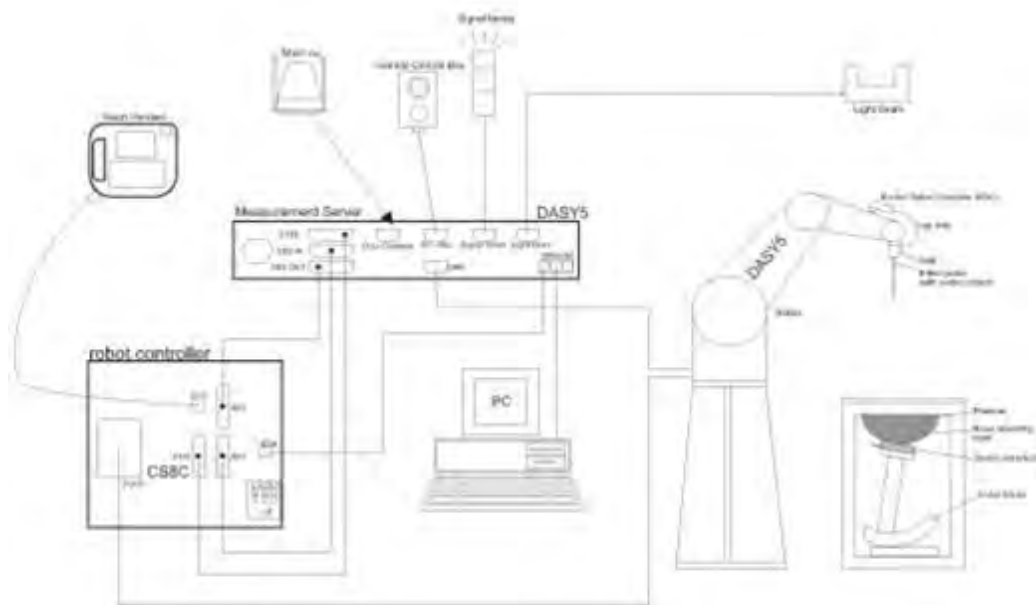
| Upper Antenna            |             |                              | Power Reduction Level Amount (dBm) |         |         |         |         |        |        |        |        |         |         |         |         |         |
|--------------------------|-------------|------------------------------|------------------------------------|---------|---------|---------|---------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| Power Reduction Scenario | Power Level | Receiver/Sensor Mode         | GSM850                             | GSM1900 | UMTS B2 | UMTS B4 | UMTS B5 | LTE B2 | LTE B4 | LTE B5 | LTE B7 | LTE B12 | LTE B17 | LTE B38 | LTE B41 | LTE B66 |
| Full power               | Full power  | Receiver off+Sensor off      | 33.50                              | 30.50   | 25.00   | 24.00   | 25.00   | 25.00  | 23.00  | 25.00  | 24.00  | 25.50   | 25.50   | 24.50   | 24.00   | 24.00   |
|                          |             | DSI1 Receiver on             | 1.00                               | 4.00    | 5.50    | 7.00    | 1.00    | 7.00   | 6.50   | 2.50   | 6.00   | 1.00    | 1.00    | 4.50    | 4.50    | 7.00    |
|                          |             | DSI2 Receiver off+Sensor off | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
|                          |             | DSI4 Receiver off+Sensor on  | 0.00                               | 3.50    | 6.50    | 5.00    | 1.00    | 5.50   | 3.50   | 0.50   | 3.50   | 0.00    | 1.00    | 0.50    | 0.50    | 4.50    |
| Standalone               | Standalone  | DSI1 Receiver on             | 1.00                               | 4.00    | 5.50    | 7.00    | 1.00    | 7.00   | 6.50   | 2.50   | 6.00   | 1.00    | 1.00    | 4.50    | 4.50    | 7.00    |
|                          |             | DSI2 Receiver off+Sensor off | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
|                          |             | DSI4 Receiver off+Sensor on  | 0.00                               | 3.50    | 6.50    | 5.00    | 1.00    | 5.50   | 3.50   | 0.50   | 3.50   | 0.00    | 1.00    | 0.50    | 0.50    | 4.50    |
|                          |             | DSI1 Receiver on             | 1.00                               | 4.00    | 5.50    | 7.00    | 1.00    | 7.00   | 6.50   | 2.50   | 6.00   | 1.00    | 1.00    | 4.50    | 4.50    | 7.00    |
| Simultaneous             | Wi-Fi on    | DSI2 Receiver off+Sensor off | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |
|                          |             | DSI4 Receiver off+Sensor on  | 0.00                               | 3.50    | 6.50    | 5.00    | 1.00    | 5.50   | 3.50   | 0.50   | 3.50   | 0.00    | 1.00    | 0.50    | 0.50    | 4.50    |
|                          |             | DSI1 Receiver on             | 1.00                               | 4.00    | 5.50    | 7.00    | 1.00    | 7.00   | 6.50   | 2.50   | 6.00   | 1.00    | 1.00    | 4.50    | 4.50    | 7.00    |
|                          |             | DSI2 Receiver off+Sensor off | 0.00                               | 0.00    | 0.00    | 0.00    | 0.00    | 0.00   | 0.00   | 0.00   | 0.00   | 0.00    | 0.00    | 0.00    | 0.00    | 0.00    |

| Wi-Fi Antenna              |               | Power Reduction Level Amount (dBm) |               |                    |             |                  |                  |                        |                        |
|----------------------------|---------------|------------------------------------|---------------|--------------------|-------------|------------------|------------------|------------------------|------------------------|
| Power Reduction Scenario   | Receiver Mode | WiFi 2.4G 11b                      | WiFi 2.4G 11g | WiFi 2.4G 11n HT20 | WiFi 5G 11a | WiFi 5G 11n HT20 | WiFi 5G 11n HT40 | WiFi 5G 802.11ac-VHT20 | WiFi 5G 802.11ac-VHT40 |
| Full power                 | off           | 18.50                              | 16.50         | 15.50              | 16.50       | 16.50            | 14.50            | 16.50                  | 16.50                  |
|                            | on            | 2.00                               | 0.00          | 0.00               | 1.00        | 1.00             | 0.00             | 1.00                   | 1.00                   |
| Standalone                 | off           | 0.00                               | 0.00          | 0.00               | 0.00        | 0.00             | 0.00             | 0.00                   | 0.00                   |
|                            | on            | 2.00                               | 0.00          | 0.00               | 1.00        | 1.00             | 0.00             | 1.00                   | 1.00                   |
| Simultaneous with 2G&3G&4G | off           | 0.00                               | 0.00          | 0.00               | 0.00        | 0.00             | 0.00             | 0.00                   | 0.00                   |
|                            | on            | 0.00                               | 0.00          | 0.00               | 0.00        | 0.00             | 0.00             | 0.00                   | 0.00                   |

## 6 SAR Measurements System Configuration

## 6.1 SAR Measurement Set-up

The DASY system for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

## 6.2 DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

### EX3DV4 Probe Specification

|               |                                                                                                                                                                                                            |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Construction  | Symmetrical design with triangular core<br>Built-in shielding against static charges<br>PEEK enclosure material (resistant to organic solvents, e.g., DGBE)                                                |
| Calibration   | ISO/IEC 17025 calibration<br>service available                                                                                                                                                             |
| Frequency     | 10 MHz to > 6 GHz<br>Linearity: $\pm 0.2$ dB<br>(30 MHz to 6 GHz)                                                                                                                                          |
| Directivity   | $\pm 0.3$ dB in HSL (rotation around probe axis) $\pm 0.5$ dB in tissue material (rotation normal to probe axis)                                                                                           |
| Dynamic Range | 10 $\mu$ W/g to > 100 mW/g Linearity: $\pm 0.2$ dB (noise: typically < 1 $\mu$ W/g)                                                                                                                        |
| Dimensions    | Overall length: 330 mm (Tip: 20 mm)<br>Tip diameter: 2.5 mm (Body: 12 mm)<br>Typical distance from probe tip to dipole centers: 1 mm                                                                       |
| Application   | High precision dosimetric measurements in any exposure Scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%. |



### E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than  $\pm 10\%$ . The spherical isotropy was evaluated and found to be better than  $\pm 0.25$ dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies below 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$\text{SAR} = C \Delta T / \Delta t$$

Where:  $\Delta t$  = Exposure time (30 seconds),  
 $C$  = Heat capacity of tissue (brain or muscle),  
 $\Delta T$  = Temperature increase due to RF exposure.

Or

$$\text{SAR} = I E I^2 \sigma / \rho$$

Where:  $\sigma$  = Simulated tissue conductivity,  
 $\rho$  = Tissue density (kg/m<sup>3</sup>).

## 6.3 SAR Measurement Procedure

### Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

### Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

|                                                                                                        | ≤3 GHz                                                                                                                                                                                                                                                            | > 3 GHz                                            |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface | 5 ± 1 mm                                                                                                                                                                                                                                                          | $\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm |
| Maximum probe angle from probe axis to phantom surface normal at the measurement location              | 30° ± 1°                                                                                                                                                                                                                                                          | 20° ± 1°                                           |
| Maximum area scan spatial resolution:<br>ΔxArea, ΔyArea                                                | ≤ 2 GHz: ≤ 15 mm<br>2 – 3 GHz: ≤ 12 mm                                                                                                                                                                                                                            | 3 – 4 GHz: ≤ 12 mm<br>4 – 6 GHz: ≤ 10 mm           |
|                                                                                                        | When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device. |                                                    |

## Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

|                                                                                                                                                                                                                                                                            |                                           |                                                                                             | ≤3GHz                               | > 3 GHz                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------------------------|
| Maximum zoom scan spatial resolution: $\Delta x_{\text{zoom}} \Delta y_{\text{zoom}}$                                                                                                                                                                                      |                                           |                                                                                             | ≤2GHz: ≤8mm<br>2 – 3GHz: ≤5mm*      | 3 – 4GHz: ≤5mm*<br>4 – 6GHz: ≤4mm*                    |
| Maximum zoom scan spatial resolution, normal to phantom surface                                                                                                                                                                                                            | Uniform grid: $\Delta z_{\text{zoom}}(n)$ |                                                                                             | ≤5mm                                | 3 – 4GHz: ≤4mm<br>4 – 5GHz: ≤3mm<br>5 – 6GHz: ≤2mm    |
|                                                                                                                                                                                                                                                                            | Graded grid                               | $\Delta z_{\text{zoom}}(1)$ : between 1 <sup>st</sup> two points closest to phantom surface | ≤4mm                                | 3 – 4GHz: ≤3mm<br>4 – 5GHz: ≤2.5mm<br>5 – 6GHz: ≤2mm  |
|                                                                                                                                                                                                                                                                            |                                           | $\Delta z_{\text{zoom}}(n>1)$ : between subsequent points                                   | ≤1.5• $\Delta z_{\text{zoom}}(n-1)$ |                                                       |
| Minimum zoom scan volume                                                                                                                                                                                                                                                   | X, y, z                                   |                                                                                             | ≥30mm                               | 3 – 4GHz: ≥28mm<br>4 – 5GHz: ≥25mm<br>5 – 6GHz: ≥22mm |
| Note: $\delta$ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.                                                                                                                          |                                           |                                                                                             |                                     |                                                       |
| * When zoom scan is required and the <u>reported</u> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4W/kg, ≤8mm, ≤7mm and ≤5mm zoom scan resolution may be applied, respectively, for 2GHz to 3GHz, 3GHz to 4GHz and 4GHz to 6GHz. |                                           |                                                                                             |                                     |                                                       |

## Volume Scan Procedures

The volume scan is used to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

## Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.



## 7 Test Equipment

| Name of Equipment                   | Manufacturer    | Type/Model        | Serial Number | Last Cal.  | Cal. Due Date |
|-------------------------------------|-----------------|-------------------|---------------|------------|---------------|
| Network analyzer                    | Agilent         | E5071B            | MY42404014    | 2021-05-15 | 2022-05-14    |
| Dielectric Probe Kit                | Agilent         | 85070E            | US44020115    | /          | /             |
| Power meter                         | Agilent         | E4417A            | GB41291714    | 2021-05-15 | 2022-05-14    |
| Power sensor                        | Agilent         | N8481H            | MY50350004    | 2021-05-15 | 2022-05-14    |
| Power sensor                        | Agilent         | E9327A            | US40441622    | 2021-05-15 | 2022-05-14    |
| Dual directional coupler            | Agilent         | 778D-012          | 50519         | /          | /             |
| Dual directional coupler            | Agilent         | 777D              | 50146         | /          | /             |
| Dual directional coupler            | UCL             | UCL-DDC0<br>56G-S | 20010600118   | /          | /             |
| Amplifier                           | INDEXSAR        | TPA-005060<br>G01 | 13030502      | 2021-05-15 | 2022-05-14    |
| Wireless communication tester       | Anritsu         | MT8820C           | 6201342015    | 2021-12-12 | 2022-12-11    |
| Wireless communication tester       | Key sight       | E5515C            | MY48360988    | 2021-12-12 | 2022-12-11    |
| Wideband radio communication tester | R&S             | CMW 500           | 113645        | 2021-05-15 | 2022-05-14    |
| Base Station Simulator              | R&S             | CMW270            | 100673        | 2021-05-15 | 2022-05-14    |
| E-field Probe                       | SPEAG           | EX3DV4            | 7628          | 2021-02-16 | 2022-02-15    |
| DAE                                 | SPEAG           | DAE4              | 1648          | 2021-05-17 | 2022-05-16    |
| E-field Probe                       | SPEAG           | EX3DV4            | 3677          | 2021-08-12 | 2022-08-11    |
| DAE                                 | SPEAG           | DAE4              | 1317          | 2021-02-23 | 2022-02-22    |
| Validation Kit 750MHz               | SPEAG           | D750V3            | 1045          | 2020-08-28 | 2023-08-27    |
| Validation Kit 835MHz               | SPEAG           | D835V2            | 4d020         | 2020-08-28 | 2023-08-27    |
| Validation Kit 1750MHz              | SPEAG           | D1750V2           | 1033          | 2020-02-25 | 2023-02-24    |
| Validation Kit 1900MHz              | SPEAG           | D1900V2           | 5d060         | 2020-08-27 | 2023-08-26    |
| Validation Kit 2450MHz              | SPEAG           | D2450V2           | 786           | 2020-08-27 | 2023-08-26    |
| Validation Kit 2600MHz              | SPEAG           | D2600V2           | 1025          | 2021-04-23 | 2024-04-22    |
| Validation Kit 5GHz                 | SPEAG           | D5GHzV2           | 1151          | 2020-02-27 | 2023-02-26    |
| Temperature Probe                   | Tianjin jinming | JM222             | 381           | 2021-05-15 | 2022-05-14    |
| Software for Tissue                 | Agilent         | 85070             | /             | /          | /             |
| <b>SAR Lab 1</b>                    |                 |                   |               |            |               |
| Twin SAM Phantom                    | SPEAG           | SAM1              | 1667          | /          | /             |
| Twin SAM Phantom                    | SPEAG           | SAM2              | 1666          | /          | /             |
| Hygrothermograph                    | Anymetr         | HTC - 1           | TY2020A003    | 2021-05-15 | 2022-05-14    |
| TX90 XL                             | SPEAG           | Staubli           | /             | /          | /             |



|                   |         |                    |              |            |            |
|-------------------|---------|--------------------|--------------|------------|------------|
|                   |         | TX90 XL            |              |            |            |
| Software for Test | SPEAG   | DASY52             | 52.10.4.1527 | /          | /          |
| <b>SAR Lab 2</b>  |         |                    |              |            |            |
| Twin SAM Phantom  | SPEAG   | SAM1               | 1534         | /          | /          |
| Twin SAM Phantom  | SPEAG   | SAM2               | 1524         | /          | /          |
| Hygrothermograph  | Anymetr | HTC - 1            | TY2020A001   | 2021-05-15 | 2022-05-14 |
| TX90 XL           | SPEAG   | Staubli<br>TX90 XL | /            | /          | /          |
| Software for Test | SPEAG   | DASY52             | 52.10.4.1527 | /          | /          |

## 8 Tissue Dielectric Parameter Measurements & System Verification

### 8.1 Tissue Verification

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within  $\pm 2^\circ\text{C}$  of the temperature when the tissue parameters are characterized. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 24 hours of use; or earlier if the dielectric parameters can become out of tolerance.

#### Target values

| Frequency (MHz) | Water (%) | Salt (%)                       | Sugar (%) | Glycol (%) | Preventol (%) | Cellulose (%) | $\epsilon_r$ | $\sigma(\text{s/m})$ |
|-----------------|-----------|--------------------------------|-----------|------------|---------------|---------------|--------------|----------------------|
| 750             | 41.448    | 1.452                          | 56        | 0          | 0.100         | 1.000         | 41.9         | 0.89                 |
| 835             | 41.45     | 1.45                           | 56        | 0          | 0.1           | 1.0           | 41.5         | 0.90                 |
| 1750            | 55.24     | 0.31                           | 0         | 44.45      | 0             | 0             | 40.1         | 1.37                 |
| 1900            | 55.242    | 0.306                          | 0         | 44.452     | 0             | 0             | 40.0         | 1.40                 |
| 2450            | 62.7      | 0.5                            | 0         | 36.8       | 0             | 0             | 39.2         | 1.80                 |
| 2600            | 55.242    | 0.306                          | 0         | 44.452     | 0             | 0             | 39.0         | 1.96                 |
| Frequency (MHz) | Water (%) | Diethylenglycol monohexylether |           |            | Triton X-100  |               | $\epsilon_r$ | $\sigma(\text{s/m})$ |
| 5250            | 65.53     | 17.24                          |           |            | 17.23         |               | 35.9         | 4.71                 |
| 5600            | 65.53     | 17.24                          |           |            | 17.23         |               | 35.5         | 5.07                 |
| 5750            | 65.53     | 17.24                          |           |            | 17.23         |               | 35.4         | 5.22                 |

**Measurements results****Original**

| Frequency<br>(MHz)                                                                                                                                               | Test Date  | Temp<br>℃ | Measured Dielectric<br>Parameters |                | Target Dielectric<br>Parameters |                | Limit<br>(Within ±5%)   |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|-----------------------------------|----------------|---------------------------------|----------------|-------------------------|---------------------|
|                                                                                                                                                                  |            |           | $\epsilon_r$                      | $\sigma$ (s/m) | $\epsilon_r$                    | $\sigma$ (s/m) | Dev<br>$\epsilon_r$ (%) | Dev<br>$\sigma$ (%) |
| 835                                                                                                                                                              | 2021/12/30 | 21.5      | 41.5                              | 0.89           | 41.5                            | 0.90           | 0.00                    | -1.11               |
|                                                                                                                                                                  | 2021/12/31 | 21.5      | 41.1                              | 0.87           | 41.5                            | 0.90           | -0.96                   | -3.33               |
| 1750                                                                                                                                                             | 2022/1/1   | 21.5      | 40.5                              | 1.35           | 40.1                            | 1.37           | 1.00                    | -1.46               |
|                                                                                                                                                                  | 2022/1/2   | 21.5      | 40.2                              | 1.34           | 40.1                            | 1.37           | 0.25                    | -2.19               |
| 1900                                                                                                                                                             | 2022/1/4   | 21.5      | 40.3                              | 1.41           | 40.0                            | 1.40           | 0.75                    | 0.71                |
|                                                                                                                                                                  | 2022/1/5   | 21.5      | 40.2                              | 1.42           | 40.0                            | 1.40           | 0.50                    | 1.43                |
| 2450                                                                                                                                                             | 2022/1/1   | 21.5      | 38.4                              | 1.82           | 39.2                            | 1.80           | -2.04                   | 1.11                |
|                                                                                                                                                                  | 2022/1/3   | 21.5      | 38.6                              | 1.84           | 39.2                            | 1.80           | -1.53                   | 2.22                |
| 2600                                                                                                                                                             | 2022/1/4   | 21.5      | 38.1                              | 2.01           | 39.0                            | 1.96           | -2.31                   | 2.55                |
|                                                                                                                                                                  | 2022/1/5   | 21.5      | 38.4                              | 1.96           | 39.0                            | 1.96           | -1.54                   | 0.00                |
|                                                                                                                                                                  | 2022/1/6   | 21.5      | 38.5                              | 1.96           | 39.0                            | 1.96           | -1.28                   | 0.00                |
|                                                                                                                                                                  | 2022/1/7   | 21.5      | 38.1                              | 2.02           | 39.0                            | 1.96           | -2.31                   | 3.06                |
|                                                                                                                                                                  | 2022/1/8   | 21.5      | 38.4                              | 1.97           | 39.0                            | 1.96           | -1.54                   | 0.51                |
|                                                                                                                                                                  | 2022/1/9   | 21.5      | 38.6                              | 1.96           | 39.0                            | 1.96           | -1.03                   | 0.00                |
| 5250                                                                                                                                                             | 2022/1/6   | 21.5      | 35.5                              | 4.82           | 35.9                            | 4.71           | -1.11                   | 2.34                |
| 5600                                                                                                                                                             | 2022/1/10  | 21.5      | 34.2                              | 5.21           | 35.5                            | 5.07           | -3.66                   | 2.76                |
| 5750                                                                                                                                                             | 2022/1/11  | 21.5      | 34.6                              | 5.22           | 35.4                            | 5.22           | -2.26                   | 0.00                |
| Note: The depth of tissue-equivalent liquid in a phantom must be $\geq 15.0$ cm for SAR measurements $\leq 3$ GHz and $\geq 10.0$ cm for measurements $> 3$ GHz. |            |           |                                   |                |                                 |                |                         |                     |



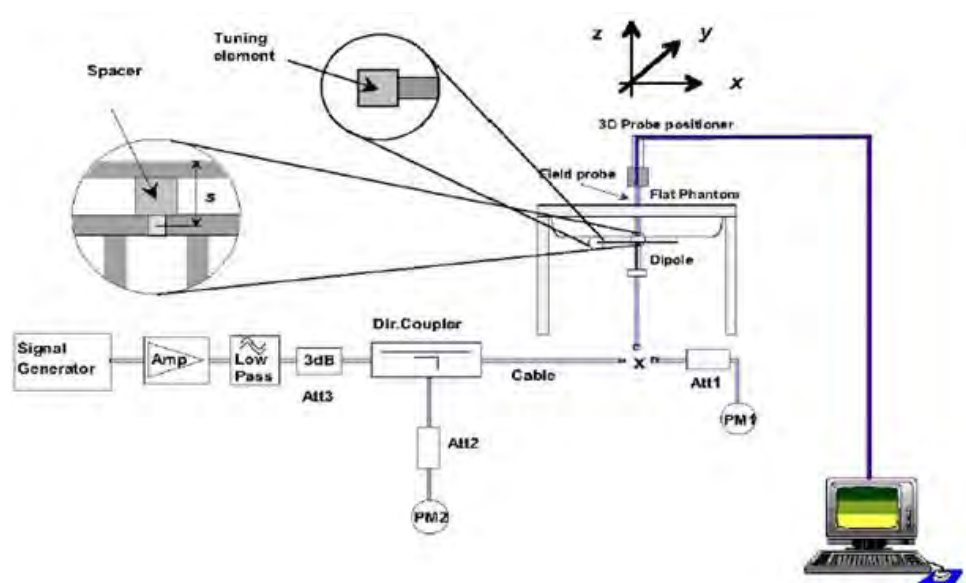
## Variant

| Frequency<br>(MHz)                                                                                                                                               | Test Date | Temp<br>℃ | Measured Dielectric<br>Parameters |                | Target Dielectric<br>Parameters |                | Limit<br>(Within ±5%)   |                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|-----------------------------------|----------------|---------------------------------|----------------|-------------------------|---------------------|
|                                                                                                                                                                  |           |           | $\epsilon_r$                      | $\sigma$ (s/m) | $\epsilon_r$                    | $\sigma$ (s/m) | Dev<br>$\epsilon_r$ (%) | Dev<br>$\sigma$ (%) |
| 750                                                                                                                                                              | 2022/1/12 | 21.5      | 42.2                              | 0.85           | 41.9                            | 0.89           | 0.72                    | -4.49               |
|                                                                                                                                                                  | 2022/1/13 | 21.5      | 42.0                              | 0.87           | 41.9                            | 0.89           | 0.24                    | -2.25               |
|                                                                                                                                                                  | 2022/1/15 | 21.5      | 42.3                              | 0.88           | 41.9                            | 0.89           | 0.95                    | -1.12               |
| 835                                                                                                                                                              | 2022/1/16 | 21.5      | 41.4                              | 0.88           | 41.5                            | 0.90           | -0.24                   | -2.22               |
| 1750                                                                                                                                                             | 2022/1/17 | 21.5      | 39.3                              | 1.37           | 40.1                            | 1.37           | -2.00                   | 0.00                |
| 1900                                                                                                                                                             | 2022/1/17 | 21.5      | 40.5                              | 1.34           | 40.0                            | 1.40           | 1.25                    | -4.29               |
| 2450                                                                                                                                                             | 2022/1/17 | 21.5      | 38.7                              | 1.81           | 39.2                            | 1.80           | -1.28                   | 0.56                |
| 2600                                                                                                                                                             | 2022/1/14 | 21.5      | 38.5                              | 1.95           | 39.0                            | 1.96           | -1.28                   | -0.51               |
| 5250                                                                                                                                                             | 2022/1/18 | 21.5      | 36.7                              | 5.32           | 35.9                            | 4.71           | 2.23                    | 12.95               |
| 5600                                                                                                                                                             | 2022/1/18 | 21.5      | 36.8                              | 5.28           | 35.5                            | 5.07           | 3.66                    | 4.14                |
| 5750                                                                                                                                                             | 2022/1/18 | 21.5      | 35.6                              | 5.14           | 35.4                            | 5.22           | 0.56                    | -1.53               |
| Note: The depth of tissue-equivalent liquid in a phantom must be $\geq 15.0$ cm for SAR measurements $\leq 3$ GHz and $\geq 10.0$ cm for measurements $> 3$ GHz. |           |           |                                   |                |                                 |                |                         |                     |

## 8.2 System Performance Check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured using the dielectric probe kit and the network analyzer. A system check measurement for every day was made following the determination of the dielectric parameters of the Tissue simulates, using the dipole validation kit. The dipole antenna was placed under the flat section of the twin SAM phantom.

System check is performed regularly on all frequency bands where tests are performed with the DASY system.



Picture 1 System Performance Check setup



Picture 2 Setup Photo

**Justification for Extended SAR Dipole Calibrations**

Usage of SAR dipoles calibrated less than 3 years ago but more than 1 year ago were confirmed in maintaining return loss ( $< -20$  dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB 865664 D01:

| Dipole                                  |                | Date of Measurement | Return Loss(dB) | $\Delta$ % | Impedance ( $\Omega$ ) | $\Delta\Omega$ |
|-----------------------------------------|----------------|---------------------|-----------------|------------|------------------------|----------------|
| Dipole D750V2<br>SN: 1045               | Head<br>Liquid | 8/28/2020           | -26.6           | /          | 54.3                   | /              |
|                                         |                | 8/27/2021           | -26.2           | 1.5        | 53.9                   | 0.4            |
| Dipole D835V2<br>SN: 4d020              | Head<br>Liquid | 8/28/2020           | -26.2           | /          | 54.8                   | /              |
|                                         |                | 8/27/2021           | -26.5           | -1.1       | 55.2                   | -0.4           |
| Dipole D1750V2<br>SN: 1033              | Head<br>Liquid | 2/25/2020           | -38.3           | /          | 48.8                   | /              |
|                                         |                | 2/26/2021           | -40.0           | -1.7       | 49.9                   | 1.1            |
| Dipole D1900V2<br>SN: 5d060             | Head<br>Liquid | 8/27/2020           | -23.3           | /          | 52.5                   | /              |
|                                         |                | 8/26/2021           | -23.0           | 1.3        | 51.9                   | 0.6            |
| Dipole D2450V2<br>SN: 786               | Head<br>Liquid | 8/27/2020           | -26.9           | /          | 54.5                   | /              |
|                                         |                | 8/26/2021           | -27.1           | -0.7       | 53.8                   | 0.7            |
| Dipole D5GHzV2<br>SN: 1151<br>(5250MHz) | Head<br>Liquid | 2/27/2020           | -23.4           | /          | 52.4                   | /              |
|                                         |                | 2/26/2021           | -23.8           | -0.4       | 50.0                   | -2.4           |
| Dipole D5GHzV2<br>SN: 1151<br>(5600MHz) | Head<br>Liquid | 2/27/2020           | -22.6           | /          | 57.0                   | /              |
|                                         |                | 2/26/2021           | -21.5           | 1.1        | 55.6                   | -1.4           |
| Dipole D5GHzV2<br>SN: 1151<br>(5750MHz) | Head<br>Liquid | 2/27/2020           | -25.0           | /          | 55.9                   | /              |
|                                         |                | 2/26/2021           | -26.8           | -1.8       | 52.5                   | -3.4           |

**System Check results****Original**

| Frequency (MHz)                                                                               | Test Date  | Temp °C | 250mW Measured SAR <sub>1g</sub> (W/kg) | 1W Normalized SAR <sub>1g</sub> (W/kg) | 1W Target SAR <sub>1g</sub> (W/kg) | Δ % (Limit ±10%) | Plot No. |
|-----------------------------------------------------------------------------------------------|------------|---------|-----------------------------------------|----------------------------------------|------------------------------------|------------------|----------|
| 835                                                                                           | 2021/12/30 | 21.5    | 2.44                                    | 9.76                                   | 9.65                               | 1.14             | 1        |
|                                                                                               | 2021/12/31 | 21.5    | 2.46                                    | 9.84                                   | 9.65                               | 1.97             | 2        |
| 1750                                                                                          | 2022/1/1   | 21.5    | 8.95                                    | 35.80                                  | 35.90                              | -0.28            | 3        |
|                                                                                               | 2022/1/2   | 21.5    | 9.11                                    | 36.44                                  | 35.90                              | 1.50             | 4        |
| 1900                                                                                          | 2022/1/4   | 21.5    | 9.88                                    | 39.52                                  | 39.50                              | 0.05             | 5        |
|                                                                                               | 2022/1/5   | 21.5    | 9.85                                    | 39.40                                  | 39.50                              | -0.25            | 6        |
| 2450                                                                                          | 2022/1/1   | 21.5    | 13.20                                   | 52.80                                  | 52.30                              | 0.96             | 7        |
|                                                                                               | 2022/1/3   | 21.5    | 13.70                                   | 54.80                                  | 52.30                              | 4.78             | 7        |
| 2600                                                                                          | 2022/1/4   | 21.5    | 13.90                                   | 55.60                                  | 56.10                              | -0.89            | 8        |
|                                                                                               | 2022/1/5   | 21.5    | 13.88                                   | 55.52                                  | 56.10                              | -1.03            | 9        |
|                                                                                               | 2022/1/6   | 21.5    | 13.94                                   | 55.76                                  | 56.10                              | -0.61            | 10       |
|                                                                                               | 2022/1/7   | 21.5    | 13.90                                   | 55.60                                  | 56.10                              | -0.89            | 11       |
|                                                                                               | 2022/1/8   | 21.5    | 13.94                                   | 55.76                                  | 56.10                              | -0.61            | 7        |
|                                                                                               | 2022/1/9   | 21.5    | 13.88                                   | 55.52                                  | 56.10                              | -1.03            | 7        |
| Frequency (MHz)                                                                               | Test Date  | Temp °C | 100mW Measured SAR <sub>1g</sub> (W/kg) | 1W Normalized SAR <sub>1g</sub> (W/kg) | 1W Target SAR <sub>1g</sub> (W/kg) | Δ % (Limit ±10%) | Plot No. |
| 5250                                                                                          | 2022/1/6   | 21.5    | 7.87                                    | 78.70                                  | 78.00                              | 0.90             | 12       |
| 5600                                                                                          | 2022/1/10  | 21.5    | 7.67                                    | 76.70                                  | 80.50                              | -4.72            | 13       |
| 5750                                                                                          | 2022/1/11  | 21.5    | 7.66                                    | 76.60                                  | 77.40                              | -1.03            | 14       |
| Note: Target Values used derive from the calibration certificate Data Storage and Evaluation. |            |         |                                         |                                        |                                    |                  |          |

# Variant

| Frequency (MHz)                                                                               | Test Date | Temp °C | 250mW Measured SAR <sub>1g</sub> (W/kg) | 1W Normalized SAR <sub>1g</sub> (W/kg) | 1W Target SAR <sub>1g</sub> (W/kg) | Δ % (Limit ±10%) | Plot No. |
|-----------------------------------------------------------------------------------------------|-----------|---------|-----------------------------------------|----------------------------------------|------------------------------------|------------------|----------|
| 750                                                                                           | 2022/1/12 | 21.5    | 2.13                                    | 8.52                                   | 8.37                               | 1.79             | 1        |
|                                                                                               | 2022/1/13 | 21.5    | 2.10                                    | 8.40                                   | 8.37                               | 0.36             | 2        |
|                                                                                               | 2022/1/15 | 21.5    | 2.12                                    | 8.48                                   | 8.37                               | 1.31             | 3        |
| 835                                                                                           | 2022/1/16 | 21.5    | 2.54                                    | 10.16                                  | 9.65                               | 5.28             | 2        |
| 1750                                                                                          | 2022/1/17 | 21.5    | 8.92                                    | 35.68                                  | 35.90                              | -0.61            | 3        |
| 1900                                                                                          | 2022/1/17 | 21.5    | 10.50                                   | 42.00                                  | 39.50                              | 6.33             | 5        |
| 2450                                                                                          | 2022/1/17 | 21.5    | 13.20                                   | 52.80                                  | 52.30                              | 0.96             | 7        |
| 2600                                                                                          | 2022/1/14 | 21.5    | 13.90                                   | 55.60                                  | 56.10                              | -0.89            | 8        |
| Frequency (MHz)                                                                               | Test Date | Temp °C | 100mW Measured SAR <sub>1g</sub> (W/kg) | 1W Normalized SAR <sub>1g</sub> (W/kg) | 1W Target SAR <sub>1g</sub> (W/kg) | Δ % (Limit ±10%) | Plot No. |
| 5250                                                                                          | 2022/1/18 | 21.5    | 7.46                                    | 74.60                                  | 78.00                              | -4.36            | 12       |
| 5600                                                                                          | 2022/1/18 | 21.5    | 8.04                                    | 80.40                                  | 80.50                              | -0.12            | 13       |
| 5750                                                                                          | 2022/1/18 | 21.5    | 7.15                                    | 71.50                                  | 77.40                              | -7.62            | 14       |
| Note: Target Values used derive from the calibration certificate Data Storage and Evaluation. |           |         |                                         |                                        |                                    |                  |          |

### 8.3 SAR System Validation

Per FCC KDB 865664 D02v01, SAR system verification is required to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles are used with the required tissue-equivalent media for system validation, according to the procedures outlined in FCC KDB 865664 D01 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point must be validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status, measurement frequencies, SAR probes, calibrated signal type(s) and tissue dielectric parameters has been included.

| Frequency [MHz] | Date      | Probe SN | Probe Type | Probe Cal Point |      | PERM (Er) | COND ( $\Sigma$ ) | CW Validation |                 |                | Mod. Validation |             |      |
|-----------------|-----------|----------|------------|-----------------|------|-----------|-------------------|---------------|-----------------|----------------|-----------------|-------------|------|
|                 |           |          |            |                 |      |           |                   | Sensitivity   | Probe Linearity | Probe Isotropy | Mod. Type       | Duty Factor | PAR  |
| 750             | 8/12/2021 | 3677     | EX3DV4     | 750             | Head | 42.81     | 0.85              | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| 835             | 8/12/2021 | 3677     | EX3DV4     | 835             | Head | 42.22     | 0.90              | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| 1750            | 8/12/2021 | 3677     | EX3DV4     | 1750            | Head | 39.91     | 1.32              | PASS          | PASS            | PASS           | NA              | N/A         | N/A  |
| 1900            | 8/12/2021 | 3677     | EX3DV4     | 1900            | Head | 39.43     | 1.42              | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| 2450            | 8/12/2021 | 3677     | EX3DV4     | 2450            | Head | 38.19     | 1.83              | PASS          | PASS            | PASS           | OFDM            | PASS        | PASS |
| 2600            | 8/12/2021 | 3677     | EX3DV4     | 2600            | Head | 37.60     | 1.99              | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| 5250            | 8/12/2021 | 3677     | EX3DV4     | 5250            | Head | 35.36     | 4.83              | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| 5600            | 8/12/2021 | 3677     | EX3DV4     | 5600            | Head | 34.43     | 5.29              | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| 5750            | 8/12/2021 | 3677     | EX3DV4     | 5750            | Head | 34.07     | 5.47              | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664D01v01 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5dB), such as OFDM according to KDB 865664.

## 9 Normal and Maximum Output Power

KDB 447498 D01 at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

### 9.1 GSM Mode

#### Low Antenna

| GSM 850<br>Full power& DSI 1&<br>DSI 2& DSI 4 |            | Burst-Averaged output power(dBm) |                        |               |               | Division<br>Factors | Frame-Averaged output power(dBm) |                        |               |               |
|-----------------------------------------------|------------|----------------------------------|------------------------|---------------|---------------|---------------------|----------------------------------|------------------------|---------------|---------------|
|                                               |            | Tune-up                          | Channel/Frequency(MHz) |               |               |                     | Tune-up                          | Channel/Frequency(MHz) |               |               |
|                                               |            | MAX                              | 128<br>/824.2          | 190<br>/836.6 | 251<br>/848.8 |                     | MAX                              | 128<br>/824.2          | 190<br>/836.6 | 251<br>/848.8 |
| GSM                                           | CS         | 33.50                            | 32.40                  | 32.60         | 32.57         | 9.03                | 24.47                            | 23.37                  | 23.57         | 23.54         |
| GPRS/<br>EGPRS<br>(GMSK)                      | 1 Tx Slot  | 33.50                            | 32.09                  | 32.74         | 32.40         | 9.03                | 24.47                            | 23.06                  | 23.71         | 23.37         |
|                                               | 2 Tx Slots | 32.00                            | 30.15                  | 30.60         | 30.71         | 6.02                | <b>25.98</b>                     | 24.13                  | 24.58         | 24.69         |
|                                               | 3 Tx Slots | 29.50                            | 27.77                  | 28.10         | 28.13         | 4.26                | 25.24                            | 23.51                  | 23.84         | 23.87         |
|                                               | 4 Tx Slots | 27.50                            | 25.56                  | 25.81         | 25.95         | 3.01                | 24.49                            | 22.55                  | 22.80         | 22.94         |
| EGPRS<br>(8PSK)                               | 1 Tx Slot  | 28.00                            | 26.52                  | 26.51         | 26.71         | 9.03                | 18.97                            | 17.49                  | 17.48         | 17.68         |
|                                               | 2 Tx Slots | 26.50                            | 24.89                  | 25.32         | 25.40         | 6.02                | 20.48                            | 18.87                  | 19.30         | 19.38         |
|                                               | 3 Tx Slots | 24.50                            | 22.76                  | 23.21         | 23.20         | 4.26                | 20.24                            | 18.50                  | 18.95         | 18.94         |
|                                               | 4 Tx Slots | 23.50                            | 21.72                  | 22.19         | 22.19         | 3.01                | 20.49                            | 18.71                  | 19.18         | 19.18         |

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 850 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above.

| GSM 1900<br>Full power& DSI 1&<br>DSI 2& DSI 4 |            | Burst-Averaged output power(dBm) |                        |              |                | Division<br>Factors | Frame-Averaged output power(dBm) |                        |              |                |
|------------------------------------------------|------------|----------------------------------|------------------------|--------------|----------------|---------------------|----------------------------------|------------------------|--------------|----------------|
|                                                |            | Tune-up                          | Channel/Frequency(MHz) |              |                |                     | Tune-up                          | Channel/Frequency(MHz) |              |                |
|                                                |            | MAX                              | 512<br>/1850.2         | 661<br>/1880 | 810<br>/1909.8 |                     | MAX                              | 512<br>/1850.2         | 661<br>/1880 | 810<br>/1909.8 |
| GSM                                            | CS         | 30.50                            | 29.26                  | 29.29        | 29.25          | 9.03                | 21.47                            | 20.23                  | 20.26        | 20.22          |
| GPRS/<br>EGPRS<br>(GMSK)                       | 1 Tx Slot  | 30.50                            | 29.12                  | 29.28        | 29.25          | 9.03                | 21.47                            | 20.09                  | 20.25        | 20.22          |
|                                                | 2 Tx Slots | 29.00                            | 27.41                  | 27.60        | 27.62          | 6.02                | <b>22.98</b>                     | 21.39                  | 21.58        | 21.60          |
|                                                | 3 Tx Slots | 27.00                            | 25.25                  | 25.38        | 25.43          | 4.26                | 22.74                            | 20.99                  | 21.12        | 21.17          |
|                                                | 4 Tx Slots | 25.00                            | 23.16                  | 23.22        | 23.25          | 3.01                | 21.99                            | 20.15                  | 20.21        | 20.24          |
| EGPRS<br>(8PSK)                                | 1 Tx Slot  | 27.00                            | 25.48                  | 25.60        | 25.55          | 9.03                | 17.97                            | 16.45                  | 16.57        | 16.52          |
|                                                | 2 Tx Slots | 25.50                            | 24.06                  | 24.38        | 24.30          | 6.02                | 19.48                            | 18.04                  | 18.36        | 18.28          |
|                                                | 3 Tx Slots | 23.50                            | 22.11                  | 22.82        | 22.35          | 4.26                | 19.24                            | 17.85                  | 18.56        | 18.09          |
|                                                | 4 Tx Slots | 22.50                            | 21.01                  | 21.08        | 21.44          | 3.01                | 19.49                            | 18.00                  | 18.07        | 18.43          |

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 1900 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above.



## Upper Antenna

| GSM 850<br>DSI 1         |            | Burst-Averaged output power(dBm) |                        |               |               | Division<br>Factors | Frame-Averaged output power(dBm) |                        |               |               |
|--------------------------|------------|----------------------------------|------------------------|---------------|---------------|---------------------|----------------------------------|------------------------|---------------|---------------|
|                          |            | Tune-up                          | Channel/Frequency(MHz) |               |               |                     | Tune-up                          | Channel/Frequency(MHz) |               |               |
|                          |            | MAX                              | 128<br>/824.2          | 190<br>/836.6 | 251<br>/848.8 |                     | MAX                              | 128<br>/824.2          | 190<br>/836.6 | 251<br>/848.8 |
| GSM                      | CS         | 32.50                            | 31.58                  | 31.54         | 31.82         | 9.03                | 23.47                            | 22.55                  | 22.51         | 22.79         |
| GPRS/<br>EGPRS<br>(GMSK) | 1 Tx Slot  | 32.50                            | 31.32                  | 31.63         | 31.61         | 9.03                | 23.47                            | 22.29                  | 22.60         | 22.58         |
|                          | 2 Tx Slots | 31.00                            | 29.35                  | 29.64         | 29.63         | 6.02                | <b>24.98</b>                     | 23.33                  | 23.62         | 23.61         |
|                          | 3 Tx Slots | 28.50                            | 26.72                  | 27.08         | 27.10         | 4.26                | 24.24                            | 22.46                  | 22.82         | 22.84         |
|                          | 4 Tx Slots | 26.00                            | 25.15                  | 25.34         | 25.43         | 3.01                | 22.99                            | 22.14                  | 22.33         | 22.42         |
| EGPRS<br>(8PSK)          | 1 Tx Slot  | 28.00                            | 25.86                  | 26.15         | 26.37         | 9.03                | 18.97                            | 16.83                  | 17.12         | 17.34         |
|                          | 2 Tx Slots | 26.50                            | 24.56                  | 24.86         | 25.12         | 6.02                | 20.48                            | 18.54                  | 18.84         | 19.10         |
|                          | 3 Tx Slots | 24.50                            | 22.38                  | 22.03         | 22.46         | 4.26                | 20.24                            | 18.12                  | 17.77         | 18.20         |
|                          | 4 Tx Slots | 23.50                            | 21.76                  | 21.56         | 22.03         | 3.01                | 20.49                            | 18.75                  | 18.55         | 19.02         |

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 850 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above.

| GSM 850<br>Full power& DSI 2&<br>DSI 4 |            | Burst-Averaged output power(dBm) |                        |               |               | Division<br>Factors | Frame-Averaged output power(dBm) |                        |               |               |
|----------------------------------------|------------|----------------------------------|------------------------|---------------|---------------|---------------------|----------------------------------|------------------------|---------------|---------------|
|                                        |            | Tune-up                          | Channel/Frequency(MHz) |               |               |                     | Tune-up                          | Channel/Frequency(MHz) |               |               |
|                                        |            | MAX                              | 128<br>/824.2          | 190<br>/836.6 | 251<br>/848.8 |                     | MAX                              | 128<br>/824.2          | 190<br>/836.6 | 251<br>/848.8 |
| GSM                                    | CS         | 33.50                            | 32.12                  | 32.38         | 32.27         | 9.03                | 24.47                            | 23.09                  | 23.35         | 23.24         |
| GPRS/<br>EGPRS<br>(GMSK)               | 1 Tx Slot  | 33.50                            | 31.78                  | 32.34         | 32.06         | 9.03                | 24.47                            | 22.75                  | 23.31         | 23.03         |
|                                        | 2 Tx Slots | 32.00                            | 30.03                  | 30.35         | 30.27         | 6.02                | <b>25.98</b>                     | 24.01                  | 24.33         | 24.25         |
|                                        | 3 Tx Slots | 29.50                            | 27.58                  | 27.83         | 27.81         | 4.26                | 25.24                            | 23.32                  | 23.57         | 23.55         |
|                                        | 4 Tx Slots | 27.00                            | 25.30                  | 25.56         | 25.72         | 3.01                | 23.99                            | 22.29                  | 22.55         | 22.71         |
| EGPRS<br>(8PSK)                        | 1 Tx Slot  | 28.00                            | 25.86                  | 26.15         | 26.37         | 9.03                | 18.97                            | 16.83                  | 17.12         | 17.34         |
|                                        | 2 Tx Slots | 26.50                            | 24.56                  | 24.86         | 25.12         | 6.02                | 20.48                            | 18.54                  | 18.84         | 19.10         |
|                                        | 3 Tx Slots | 24.50                            | 22.38                  | 22.03         | 22.46         | 4.26                | 20.24                            | 18.12                  | 17.77         | 18.20         |
|                                        | 4 Tx Slots | 23.50                            | 21.76                  | 21.56         | 22.03         | 3.01                | 20.49                            | 18.75                  | 18.55         | 19.02         |

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 850 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above.

| GSM 1900<br>DSI 1        |            | Burst-Averaged output power(dBm) |                        |              |                | Division<br>Factors | Frame-Averaged output power(dBm) |                        |              |                |
|--------------------------|------------|----------------------------------|------------------------|--------------|----------------|---------------------|----------------------------------|------------------------|--------------|----------------|
|                          |            | Tune-up                          | Channel/Frequency(MHz) |              |                |                     | Tune-up                          | Channel/Frequency(MHz) |              |                |
|                          |            | MAX                              | 512<br>/1850.2         | 661<br>/1880 | 810<br>/1909.8 |                     | MAX                              | 512<br>/1850.2         | 661<br>/1880 | 810<br>/1909.8 |
| GSM                      | CS         | 26.50                            | 25.23                  | 25.33        | 25.46          | 9.03                | 17.47                            | 16.20                  | 16.30        | 16.43          |
| GPRS/<br>EGPRS<br>(GMSK) | 1 Tx Slot  | 26.50                            | 25.22                  | 25.46        | 25.50          | 9.03                | 17.47                            | 16.19                  | 16.43        | 16.47          |
|                          | 2 Tx Slots | 25.00                            | 23.66                  | 23.92        | 23.96          | 6.02                | 18.98                            | 17.64                  | 17.90        | 17.94          |
|                          | 3 Tx Slots | 23.00                            | 21.50                  | 21.75        | 21.80          | 4.26                | 18.74                            | 17.24                  | 17.49        | 17.54          |
|                          | 4 Tx Slots | 22.00                            | 20.56                  | 20.75        | 20.82          | 3.01                | <b>18.99</b>                     | 17.55                  | 17.74        | 17.81          |
| EGPRS<br>(8PSK)          | 1 Tx Slot  | 26.50                            | 25.21                  | 25.92        | 25.85          | 9.03                | 17.47                            | 16.18                  | 16.89        | 16.82          |
|                          | 2 Tx Slots | 25.00                            | 23.38                  | 24.06        | 24.13          | 6.02                | 18.98                            | 17.36                  | 18.04        | 18.11          |
|                          | 3 Tx Slots | 23.00                            | 21.56                  | 22.23        | 21.97          | 4.26                | 18.74                            | 17.30                  | 17.97        | 17.71          |
|                          | 4 Tx Slots | 22.00                            | 20.47                  | 20.82        | 20.48          | 3.01                | 18.99                            | 17.46                  | 17.81        | 17.47          |

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 1900 GMSK (GPRS) mode with 4 time slots for Max power, based on the output power measurements above.

| GSM 1900<br>Full power& DSI 2 |            | Burst-Averaged output power(dBm) |                        |              |                | Division<br>Factors | Frame-Averaged output power(dBm) |                        |              |                |
|-------------------------------|------------|----------------------------------|------------------------|--------------|----------------|---------------------|----------------------------------|------------------------|--------------|----------------|
|                               |            | Tune-up                          | Channel/Frequency(MHz) |              |                |                     | Tune-up                          | Channel/Frequency(MHz) |              |                |
|                               |            | MAX                              | 512<br>/1850.2         | 661<br>/1880 | 810<br>/1909.8 |                     | MAX                              | 512<br>/1850.2         | 661<br>/1880 | 810<br>/1909.8 |
| GSM                           | CS         | 30.50                            | 28.94                  | 29.00        | 29.12          | 9.03                | 21.47                            | 19.91                  | 19.97        | 20.09          |
| GPRS/<br>EGPRS<br>(GMSK)      | 1 Tx Slot  | 30.50                            | 28.90                  | 29.25        | 29.15          | 9.03                | 21.47                            | 19.87                  | 20.22        | 20.12          |
|                               | 2 Tx Slots | 29.00                            | 27.17                  | 27.58        | 27.53          | 6.02                | <b>22.98</b>                     | 21.15                  | 21.56        | 21.51          |
|                               | 3 Tx Slots | 27.00                            | 25.05                  | 25.34        | 25.35          | 4.26                | 22.74                            | 20.79                  | 21.08        | 21.09          |
|                               | 4 Tx Slots | 25.00                            | 23.01                  | 23.20        | 23.24          | 3.01                | 21.99                            | 20.00                  | 20.19        | 20.23          |
| EGPRS<br>(8PSK)               | 1 Tx Slot  | 27.00                            | 25.33                  | 25.76        | 25.69          | 9.03                | 17.97                            | 16.30                  | 16.73        | 16.66          |
|                               | 2 Tx Slots | 25.50                            | 23.79                  | 24.15        | 24.47          | 6.02                | 19.48                            | 17.77                  | 18.13        | 18.45          |
|                               | 3 Tx Slots | 23.50                            | 21.76                  | 22.62        | 22.23          | 4.26                | 19.24                            | 17.50                  | 18.36        | 17.97          |
|                               | 4 Tx Slots | 22.50                            | 20.58                  | 21.13        | 21.33          | 3.01                | 19.49                            | 17.57                  | 18.12        | 18.32          |

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 1900 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above.



| GSM 1900<br>DSI 4        |            | Burst-Averaged output power(dBm) |                        |              |                | Division<br>Factors | Frame-Averaged output power(dBm) |                       |              |                |
|--------------------------|------------|----------------------------------|------------------------|--------------|----------------|---------------------|----------------------------------|-----------------------|--------------|----------------|
|                          |            | Tune-up                          | Channel/Frequency(MHz) |              |                |                     | Tune-up                          | Channel/Frenqucy(MHz) |              |                |
|                          |            | MAX                              | 512<br>/1850.2         | 661<br>/1880 | 810<br>/1909.8 |                     | MAX                              | 512<br>/1850.2        | 661<br>/1880 | 810<br>/1909.8 |
| GSM                      | CS         | 27.00                            | 25.86                  | 25.92        | 25.94          | 9.03                | 17.97                            | 16.83                 | 16.89        | 16.91          |
| GPRS/<br>EGPRS<br>(GMSK) | 1 Tx Slot  | 27.00                            | 25.78                  | 25.98        | 25.84          | 9.03                | 17.97                            | 16.75                 | 16.95        | 16.81          |
|                          | 2 Tx Slots | 25.50                            | 24.20                  | 24.43        | 24.35          | 6.02                | 19.48                            | 18.18                 | 18.41        | 18.33          |
|                          | 3 Tx Slots | 23.50                            | 22.03                  | 22.25        | 22.33          | 4.26                | 19.24                            | 17.77                 | 17.99        | 18.07          |
|                          | 4 Tx Slots | 22.50                            | 20.97                  | 21.14        | 21.23          | 3.01                | <b>19.49</b>                     | 17.96                 | 18.13        | 18.22          |
| EGPRS<br>(8PSK)          | 1 Tx Slot  | 27.00                            | 25.45                  | 25.93        | 25.55          | 9.03                | 17.97                            | 16.42                 | 16.90        | 16.52          |
|                          | 2 Tx Slots | 25.50                            | 24.78                  | 24.38        | 24.97          | 6.02                | 19.48                            | 18.76                 | 18.36        | 18.95          |
|                          | 3 Tx Slots | 23.50                            | 22.47                  | 22.52        | 22.65          | 4.26                | 19.24                            | 18.21                 | 18.26        | 18.39          |
|                          | 4 Tx Slots | 22.50                            | 21.36                  | 21.34        | 21.14          | 3.01                | 19.49                            | 18.35                 | 18.33        | 18.13          |

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 1900 GMSK (GPRS) mode with 4 time slots for Max power, based on the output power measurements above.

## 9.2 WCDMA Mode

The following tests were completed according to the test requirements outlined in the 3GPP TS34.121 specification.

### Low Antenna

| WCDMA          |          | Band II(dBm)<br>DSI 1 |       |        |         | Band IV(dBm)<br>DSI 1 |        |        |         | Band V(dBm)<br>DSI 1&DSI 4 |       |       |         |
|----------------|----------|-----------------------|-------|--------|---------|-----------------------|--------|--------|---------|----------------------------|-------|-------|---------|
| Tx Channel     |          | 9262                  | 9400  | 9538   | Tune-up | 1312                  | 1413   | 1513   | Tune-up | 4132                       | 4183  | 4233  | Tune-up |
| Frequency(MHz) |          | 1852.4                | 1880  | 1907.6 | Limit   | 1712.4                | 1732.6 | 1752.6 | Limit   | 826.4                      | 836.6 | 846.6 | Limit   |
| RMC            | 12.2kbps | <b>23.34</b>          | 23.07 | 23.13  | 24.00   | <b>23.01</b>          | 22.88  | 22.92  | 24.00   | <b>23.57</b>               | 23.47 | 23.45 | 24.00   |
| AMR            | 12.2kbps | 23.22                 | 22.93 | 23.03  | 24.00   | 23.15                 | 22.82  | 22.96  | 24.00   | 23.69                      | 23.47 | 23.41 | 24.00   |
| HSDPA          | Sub 1    | 22.30                 | 22.01 | 22.05  | 22.50   | 22.03                 | 22.02  | 21.92  | 22.50   | 22.49                      | 22.47 | 22.57 | 23.00   |
|                | Sub 2    | 22.40                 | 22.23 | 21.99  | 22.50   | 21.95                 | 21.96  | 21.90  | 22.50   | 22.43                      | 22.43 | 22.51 | 23.00   |
|                | Sub 3    | 21.68                 | 21.63 | 21.59  | 22.50   | 21.63                 | 21.32  | 21.40  | 22.50   | 22.13                      | 21.95 | 21.85 | 22.50   |
|                | Sub 4    | 21.76                 | 21.55 | 21.65  | 22.50   | 21.65                 | 21.38  | 21.32  | 22.50   | 22.09                      | 22.09 | 21.81 | 22.50   |
| HSUPA          | Sub 1    | 22.32                 | 22.03 | 22.11  | 23.00   | 21.93                 | 22.04  | 22.06  | 23.00   | 22.47                      | 22.47 | 22.33 | 22.50   |
|                | Sub 2    | 20.40                 | 20.13 | 20.15  | 21.00   | 19.85                 | 20.00  | 20.00  | 21.00   | 20.73                      | 20.41 | 20.41 | 21.00   |
|                | Sub 3    | 21.30                 | 21.13 | 21.05  | 22.00   | 21.17                 | 20.72  | 20.78  | 22.00   | 21.63                      | 21.47 | 21.53 | 22.00   |
|                | Sub 4    | 20.22                 | 19.99 | 20.21  | 21.00   | 20.09                 | 19.94  | 19.82  | 21.00   | 20.49                      | 20.35 | 20.45 | 21.00   |
|                | Sub 5    | 22.32                 | 22.11 | 22.21  | 22.50   | 22.15                 | 21.90  | 21.92  | 22.50   | 22.47                      | 22.37 | 22.41 | 22.50   |
| DC-HSDPA       | Sub 1    | 22.26                 | 21.91 | 22.23  | 22.50   | 21.85                 | 21.92  | 21.80  | 22.50   | 22.65                      | 22.33 | 22.47 | 23.00   |
|                | Sub 2    | 22.46                 | 22.01 | 22.15  | 22.50   | 22.05                 | 21.88  | 22.04  | 22.50   | 22.49                      | 22.47 | 22.53 | 23.00   |
|                | Sub 3    | 21.84                 | 21.55 | 21.69  | 22.50   | 21.55                 | 21.44  | 21.30  | 22.50   | 21.91                      | 22.07 | 21.89 | 22.50   |
|                | Sub 4    | 21.76                 | 21.53 | 21.75  | 22.50   | 21.55                 | 21.44  | 21.40  | 22.50   | 21.95                      | 22.13 | 21.91 | 22.50   |

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".



| WCDMA                                                                                                                      |          | Band II(dBm)<br>Full power& DSI 2 |       |        |         | Band IV(dBm)<br>Full power& DSI 2 |              |        |         | Band V(dBm)<br>Full power& DSI 2 |       |       |         |
|----------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------|-------|--------|---------|-----------------------------------|--------------|--------|---------|----------------------------------|-------|-------|---------|
| Tx Channel                                                                                                                 |          | 9262                              | 9400  | 9538   | Tune-up | 1312                              | 1413         | 1513   | Tune-up | 4132                             | 4183  | 4233  | Tune-up |
| Frequency(MHz)                                                                                                             |          | 1852.4                            | 1880  | 1907.6 | Limit   | 1712.4                            | 1732.6       | 1752.6 | Limit   | 826.4                            | 836.6 | 846.6 | Limit   |
| RMC                                                                                                                        | 12.2kbps | <b>24.32</b>                      | 24.12 | 24.21  | 25.00   | 23.12                             | <b>23.20</b> | 23.19  | 24.00   | <b>24.55</b>                     | 24.50 | 24.49 | 25.00   |
| AMR                                                                                                                        | 12.2kbps | 24.30                             | 24.08 | 24.07  | 25.00   | 23.14                             | 23.36        | 23.13  | 24.00   | 24.45                            | 24.40 | 24.53 | 25.00   |
| HSDPA                                                                                                                      | Sub 1    | 23.18                             | 23.06 | 23.05  | 23.50   | 22.22                             | 22.30        | 22.19  | 22.50   | 23.59                            | 23.40 | 23.51 | 24.00   |
|                                                                                                                            | Sub 2    | 23.42                             | 23.08 | 23.09  | 23.50   | 22.16                             | 22.10        | 22.33  | 22.50   | 23.55                            | 23.52 | 23.49 | 24.00   |
|                                                                                                                            | Sub 3    | 22.86                             | 22.66 | 22.65  | 23.50   | 21.72                             | 21.60        | 21.57  | 22.50   | 23.13                            | 23.16 | 23.07 | 23.50   |
|                                                                                                                            | Sub 4    | 22.66                             | 22.52 | 22.73  | 23.50   | 21.70                             | 21.54        | 21.83  | 22.50   | 23.13                            | 22.88 | 22.85 | 23.50   |
| HSUPA                                                                                                                      | Sub 1    | 23.22                             | 23.14 | 23.27  | 24.00   | 22.20                             | 22.06        | 22.29  | 23.00   | 23.43                            | 23.52 | 23.65 | 24.00   |
|                                                                                                                            | Sub 2    | 21.30                             | 21.08 | 21.11  | 22.00   | 20.10                             | 20.06        | 20.29  | 21.00   | 21.49                            | 21.66 | 21.51 | 22.00   |
|                                                                                                                            | Sub 3    | 22.34                             | 22.26 | 22.27  | 23.00   | 21.26                             | 21.14        | 21.07  | 22.00   | 22.63                            | 22.56 | 22.45 | 23.00   |
|                                                                                                                            | Sub 4    | 21.44                             | 21.10 | 21.13  | 22.00   | 20.08                             | 20.10        | 20.21  | 21.00   | 21.41                            | 21.38 | 21.49 | 22.00   |
|                                                                                                                            | Sub 5    | 23.22                             | 23.14 | 23.19  | 23.50   | 22.02                             | 22.16        | 22.31  | 22.50   | 23.71                            | 23.56 | 23.47 | 24.00   |
| DC-HSDPA                                                                                                                   | Sub 1    | 23.46                             | 23.18 | 23.21  | 23.50   | 22.22                             | 22.12        | 22.25  | 22.50   | 23.63                            | 23.50 | 23.55 | 24.00   |
|                                                                                                                            | Sub 2    | 23.32                             | 23.22 | 23.13  | 23.50   | 22.10                             | 22.30        | 22.13  | 22.50   | 23.51                            | 23.56 | 23.35 | 24.00   |
|                                                                                                                            | Sub 3    | 22.96                             | 22.64 | 22.73  | 23.50   | 21.78                             | 21.56        | 21.79  | 22.50   | 22.99                            | 22.98 | 22.91 | 23.50   |
|                                                                                                                            | Sub 4    | 22.80                             | 22.52 | 22.67  | 23.50   | 21.72                             | 21.84        | 21.71  | 22.50   | 23.09                            | 22.96 | 22.83 | 23.50   |
| Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". |          |                                   |       |        |         |                                   |              |        |         |                                  |       |       |         |



| WCDMA                                                                                                                      |          | Band II(dBm)<br>DSI 4 |       |        |         | Band IV(dBm)<br>DSI 4 |              |        |         |
|----------------------------------------------------------------------------------------------------------------------------|----------|-----------------------|-------|--------|---------|-----------------------|--------------|--------|---------|
| Tx Channel                                                                                                                 |          | 9262                  | 9400  | 9538   | Tune-up | 1312                  | 1413         | 1513   | Tune-u  |
| Frequency(MHz)                                                                                                             |          | 1852.4                | 1880  | 1907.6 | Limit   | 1712.4                | 1732.6       | 1752.6 | p Limit |
| RMC                                                                                                                        | 12.2kbps | <b>19.72</b>          | 19.55 | 19.71  | 20.50   | 20.14                 | <b>20.20</b> | 20.12  | 21.00   |
| AMR                                                                                                                        | 12.2kbps | 19.64                 | 19.39 | 19.55  | 20.50   | 20.20                 | 20.30        | 20.22  | 21.00   |
| HSDPA                                                                                                                      | Sub 1    | 18.88                 | 18.61 | 18.73  | 19.00   | 19.14                 | 19.08        | 19.24  | 19.50   |
|                                                                                                                            | Sub 2    | 18.86                 | 18.49 | 18.71  | 19.00   | 19.30                 | 19.18        | 18.98  | 19.50   |
|                                                                                                                            | Sub 3    | 18.26                 | 18.05 | 18.37  | 19.00   | 18.66                 | 18.72        | 18.64  | 19.50   |
|                                                                                                                            | Sub 4    | 18.22                 | 18.17 | 18.27  | 19.00   | 18.74                 | 18.66        | 18.48  | 19.50   |
| HSUPA                                                                                                                      | Sub 1    | 18.84                 | 18.67 | 18.55  | 19.50   | 19.28                 | 19.16        | 19.04  | 20.00   |
|                                                                                                                            | Sub 2    | 16.58                 | 16.45 | 16.65  | 17.50   | 17.12                 | 17.22        | 17.16  | 18.00   |
|                                                                                                                            | Sub 3    | 17.62                 | 17.69 | 17.79  | 18.50   | 18.12                 | 18.18        | 18.14  | 19.00   |
|                                                                                                                            | Sub 4    | 16.88                 | 16.55 | 16.73  | 17.50   | 17.16                 | 17.04        | 17.08  | 18.00   |
|                                                                                                                            | Sub 5    | 18.88                 | 18.41 | 18.77  | 19.00   | 18.98                 | 19.08        | 19.12  | 19.50   |
| DC-HSDPA                                                                                                                   | Sub 1    | 18.72                 | 18.57 | 18.71  | 19.00   | 19.16                 | 19.20        | 19.24  | 19.50   |
|                                                                                                                            | Sub 2    | 18.78                 | 18.69 | 18.65  | 19.00   | 19.28                 | 19.24        | 19.06  | 19.50   |
|                                                                                                                            | Sub 3    | 18.18                 | 18.01 | 18.33  | 19.00   | 18.80                 | 18.74        | 18.78  | 19.50   |
|                                                                                                                            | Sub 4    | 18.38                 | 18.13 | 18.31  | 19.00   | 18.72                 | 18.80        | 18.68  | 19.50   |
| Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". |          |                       |       |        |         |                       |              |        |         |

**Upper Antenna**

| WCDMA          |          | Band II(dBm)<br>DSI 1 |       |              |         | Band IV(dBm)<br>DSI 1 |              |        |         | Band V(dBm)<br>DSI 1&DSI 4 |       |       |         |
|----------------|----------|-----------------------|-------|--------------|---------|-----------------------|--------------|--------|---------|----------------------------|-------|-------|---------|
| Tx Channel     |          | 9262                  | 9400  | 9538         | Tune-up | 1312                  | 1413         | 1513   | Tune-up | 4132                       | 4183  | 4233  | Tune-up |
| Frequency(MHz) |          | 1852.4                | 1880  | 1907.6       | Limit   | 1712.4                | 1732.6       | 1752.6 | Limit   | 826.4                      | 836.6 | 846.6 | Limit   |
| RMC            | 12.2kbps | 18.81                 | 18.67 | <b>18.83</b> | 19.50   | 16.33                 | <b>16.34</b> | 16.23  | 17.00   | <b>23.42</b>               | 23.37 | 23.41 | 24.00   |
| AMR            | 12.2kbps | 18.67                 | 18.81 | 18.99        | 19.50   | 16.37                 | 16.20        | 16.23  | 17.00   | 23.26                      | 23.47 | 23.41 | 24.00   |
| HSDPA          | Sub 1    | 17.75                 | 17.77 | 17.69        | 18.00   | 15.47                 | 15.36        | 15.31  | 15.50   | 22.58                      | 22.23 | 22.39 | 23.00   |
|                | Sub 2    | 17.81                 | 17.65 | 17.69        | 18.00   | 15.21                 | 15.50        | 15.11  | 15.50   | 22.38                      | 22.53 | 22.43 | 23.00   |
|                | Sub 3    | 17.35                 | 17.03 | 17.47        | 18.00   | 14.87                 | 14.72        | 14.57  | 15.50   | 22.00                      | 21.79 | 21.95 | 22.50   |
|                | Sub 4    | 17.29                 | 17.23 | 17.19        | 18.00   | 14.67                 | 14.82        | 14.85  | 15.50   | 21.96                      | 21.99 | 21.75 | 22.50   |
| HSUPA          | Sub 1    | 17.77                 | 17.53 | 17.75        | 18.50   | 15.17                 | 15.40        | 15.21  | 16.00   | 22.44                      | 22.37 | 22.25 | 22.50   |
|                | Sub 2    | 15.75                 | 15.71 | 15.69        | 16.50   | 13.27                 | 13.18        | 13.21  | 14.00   | 20.46                      | 20.45 | 20.49 | 21.00   |
|                | Sub 3    | 16.93                 | 16.51 | 16.79        | 17.50   | 14.27                 | 14.22        | 14.31  | 15.00   | 21.46                      | 21.25 | 21.45 | 22.00   |
|                | Sub 4    | 15.91                 | 15.75 | 15.87        | 16.50   | 13.29                 | 13.30        | 13.13  | 14.00   | 20.48                      | 20.33 | 20.53 | 21.00   |
|                | Sub 5    | 17.67                 | 17.63 | 17.71        | 18.00   | 15.27                 | 15.38        | 15.19  | 15.50   | 22.35                      | 22.43 | 22.38 | 22.50   |
| DC-HSDPA       | Sub 1    | 17.69                 | 17.53 | 17.77        | 18.00   | 15.35                 | 15.38        | 15.35  | 15.50   | 22.54                      | 22.31 | 22.27 | 23.00   |
|                | Sub 2    | 17.95                 | 17.51 | 17.67        | 18.00   | 15.49                 | 15.36        | 15.25  | 15.50   | 22.26                      | 22.35 | 22.37 | 23.00   |
|                | Sub 3    | 17.27                 | 17.03 | 17.33        | 18.00   | 14.81                 | 14.98        | 14.87  | 15.50   | 21.98                      | 21.73 | 21.81 | 22.50   |
|                | Sub 4    | 17.21                 | 17.09 | 17.43        | 18.00   | 14.85                 | 14.68        | 14.75  | 15.50   | 21.84                      | 21.75 | 22.05 | 22.50   |

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".



| WCDMA          |          | Band II(dBm)<br>Full power& DSI 2 |       |        |         | Band IV(dBm)<br>Full power& DSI 2 |        |        |         | Band V(dBm)<br>Full power& DSI 2 |       |       |         |
|----------------|----------|-----------------------------------|-------|--------|---------|-----------------------------------|--------|--------|---------|----------------------------------|-------|-------|---------|
| Tx Channel     |          | 9262                              | 9400  | 9538   | Tune-up | 1312                              | 1413   | 1513   | Tune-up | 4132                             | 4183  | 4233  | Tune-up |
| Frequency(MHz) |          | 1852.4                            | 1880  | 1907.6 | Limit   | 1712.4                            | 1732.6 | 1752.6 | Limit   | 826.4                            | 836.6 | 846.6 | Limit   |
| RMC            | 12.2kbps | <b>24.35</b>                      | 24.22 | 24.31  | 25.00   | <b>23.06</b>                      | 23.03  | 23.03  | 24.00   | <b>24.53</b>                     | 24.51 | 24.48 | 25.00   |
| AMR            | 12.2kbps | 23.92                             | 23.94 | 23.85  | 25.00   | 22.98                             | 22.93  | 23.19  | 24.00   | 24.37                            | 24.51 | 24.32 | 25.00   |
| HSDPA          | Sub 1    | 23.18                             | 22.94 | 22.89  | 23.50   | 22.16                             | 21.93  | 22.13  | 22.50   | 23.53                            | 23.51 | 23.60 | 24.00   |
|                | Sub 2    | 23.04                             | 22.88 | 22.99  | 23.50   | 22.10                             | 22.09  | 22.15  | 22.50   | 23.51                            | 23.55 | 23.44 | 24.00   |
|                | Sub 3    | 22.54                             | 22.38 | 22.61  | 23.50   | 21.62                             | 21.65  | 21.49  | 22.50   | 23.19                            | 23.15 | 22.98 | 23.50   |
|                | Sub 4    | 22.68                             | 22.18 | 22.59  | 23.50   | 21.52                             | 21.65  | 21.53  | 22.50   | 22.97                            | 22.99 | 23.10 | 23.50   |
| HSUPA          | Sub 1    | 23.08                             | 22.96 | 22.93  | 24.00   | 22.10                             | 22.19  | 22.17  | 23.00   | 23.57                            | 23.51 | 23.48 | 24.00   |
|                | Sub 2    | 20.88                             | 20.84 | 20.89  | 22.00   | 20.20                             | 19.91  | 19.95  | 21.00   | 21.69                            | 21.45 | 21.38 | 22.00   |
|                | Sub 3    | 21.98                             | 21.94 | 21.85  | 23.00   | 21.18                             | 20.93  | 20.89  | 22.00   | 22.45                            | 22.47 | 22.54 | 23.00   |
|                | Sub 4    | 20.88                             | 20.78 | 21.03  | 22.00   | 20.00                             | 20.11  | 20.01  | 21.00   | 21.59                            | 21.35 | 21.46 | 22.00   |
|                | Sub 5    | 22.86                             | 22.94 | 22.95  | 23.50   | 22.12                             | 22.15  | 22.19  | 22.50   | 23.69                            | 23.57 | 23.32 | 24.00   |
| DC-HSDPA       | Sub 1    | 23.02                             | 22.72 | 22.81  | 23.50   | 22.04                             | 22.03  | 22.11  | 22.50   | 23.51                            | 23.53 | 23.60 | 24.00   |
|                | Sub 2    | 22.92                             | 22.84 | 23.13  | 23.50   | 22.16                             | 22.09  | 22.15  | 22.50   | 23.61                            | 23.65 | 23.60 | 24.00   |
|                | Sub 3    | 22.40                             | 22.26 | 22.61  | 23.50   | 21.72                             | 21.69  | 21.69  | 22.50   | 23.01                            | 22.85 | 22.92 | 23.50   |
|                | Sub 4    | 22.36                             | 22.22 | 22.35  | 23.50   | 21.40                             | 21.43  | 21.67  | 22.50   | 22.87                            | 23.11 | 22.86 | 23.50   |

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

| WCDMA                                                                                                                      |          | Band II(dBm)<br>DSI 4 |       |              |         | Band IV(dBm)<br>DSI 4 |              |              |         |
|----------------------------------------------------------------------------------------------------------------------------|----------|-----------------------|-------|--------------|---------|-----------------------|--------------|--------------|---------|
| Tx Channel                                                                                                                 |          | 9262                  | 9400  | 9538         | Tune-up | 1312                  | 1413         | 1513         | Tune-up |
| Frequency(MHz)                                                                                                             |          | 1852.4                | 1880  | 1907.6       | Limit   | 1712.4                | 1732.6       | 1752.6       | Limit   |
| RMC                                                                                                                        | 12.2kbps | 17.84                 | 17.78 | <b>17.86</b> | 18.50   | 18.19                 | <b>18.23</b> | <b>18.23</b> | 19.00   |
| AMR                                                                                                                        | 12.2kbps | 18.00                 | 17.64 | 17.74        | 18.50   | 18.31                 | 18.35        | 18.15        | 19.00   |
| HSDPA                                                                                                                      | Sub 1    | 16.72                 | 16.82 | 16.94        | 17.00   | 17.19                 | 17.33        | 17.07        | 17.50   |
|                                                                                                                            | Sub 2    | 16.80                 | 16.82 | 16.84        | 17.00   | 17.25                 | 17.23        | 17.27        | 17.50   |
|                                                                                                                            | Sub 3    | 16.32                 | 16.32 | 16.28        | 17.00   | 16.55                 | 16.69        | 16.75        | 17.50   |
|                                                                                                                            | Sub 4    | 16.50                 | 16.14 | 16.52        | 17.00   | 16.79                 | 16.57        | 16.77        | 17.50   |
| HSUPA                                                                                                                      | Sub 1    | 16.90                 | 16.88 | 16.76        | 17.50   | 17.13                 | 17.27        | 17.13        | 18.00   |
|                                                                                                                            | Sub 2    | 14.96                 | 14.72 | 15.02        | 15.50   | 15.29                 | 15.27        | 15.35        | 16.00   |
|                                                                                                                            | Sub 3    | 15.78                 | 15.70 | 15.80        | 16.50   | 16.27                 | 16.21        | 16.17        | 17.00   |
|                                                                                                                            | Sub 4    | 14.74                 | 14.92 | 14.98        | 15.50   | 15.35                 | 15.25        | 15.33        | 16.00   |
|                                                                                                                            | Sub 5    | 16.70                 | 16.86 | 16.80        | 17.00   | 17.25                 | 17.33        | 17.19        | 17.50   |
| DC-HSDPA                                                                                                                   | Sub 1    | 16.78                 | 16.66 | 16.86        | 17.00   | 17.07                 | 17.35        | 17.25        | 17.50   |
|                                                                                                                            | Sub 2    | 16.84                 | 16.68 | 16.96        | 17.00   | 17.03                 | 17.07        | 17.37        | 17.50   |
|                                                                                                                            | Sub 3    | 16.34                 | 16.12 | 16.26        | 17.00   | 16.59                 | 16.87        | 16.57        | 17.50   |
|                                                                                                                            | Sub 4    | 16.44                 | 16.32 | 16.40        | 17.00   | 16.57                 | 16.65        | 16.73        | 17.50   |
| Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". |          |                       |       |              |         |                       |              |              |         |

### 9.3 LTE Mode

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3**

| Modulation | Channel bandwidth / Transmission bandwidth (N <sub>RB</sub> ) |         |       |        |        |        | MPR (dB) |
|------------|---------------------------------------------------------------|---------|-------|--------|--------|--------|----------|
|            | 1.4 MHz                                                       | 3.0 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz |          |
| QPSK       | > 5                                                           | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 1      |
| 16 QAM     | ≤ 5                                                           | ≤ 4     | ≤ 8   | ≤ 12   | ≤ 16   | ≤ 18   | ≤ 1      |
| 16 QAM     | > 5                                                           | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 2      |

**Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3**

| Modulation | Channel bandwidth / Transmission bandwidth (N <sub>RB</sub> ) |         |       |        |        |        | MPR (dB) |
|------------|---------------------------------------------------------------|---------|-------|--------|--------|--------|----------|
|            | 1.4 MHz                                                       | 3.0 MHz | 5 MHz | 10 MHz | 15 MHz | 20 MHz |          |
| QPSK       | > 5                                                           | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 1      |
| 16 QAM     | ≤ 5                                                           | ≤ 4     | ≤ 8   | ≤ 12   | ≤ 16   | ≤ 18   | ≤ 1      |
| 16 QAM     | > 5                                                           | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 2      |
| 64 QAM     | ≤ 5                                                           | ≤ 4     | ≤ 8   | ≤ 12   | ≤ 16   | ≤ 18   | ≤ 2      |
| 64 QAM     | > 5                                                           | > 4     | > 8   | > 12   | > 16   | > 18   | ≤ 3      |

#### Low Antenna

| LTE FDD Band 2<br>Full power&DSI 1&DSI 2 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|------------------------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth                                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                                          |            |         |           | 18607/1850.7            | 18900/1880 | 19193/1909.3 |                  |
| 1.4MHz                                   | QPSK       | 1       | 0         | 23.83                   | 23.87      | 23.91        | 25.00            |
|                                          |            | 1       | 2         | 24.20                   | 24.03      | 24.26        | 25.00            |
|                                          |            | 1       | 5         | 23.59                   | 23.49      | 23.87        | 25.00            |
|                                          |            | 3       | 0         | 23.83                   | 23.36      | 23.88        | 25.00            |
|                                          |            | 3       | 2         | 23.89                   | 23.45      | 23.79        | 25.00            |
|                                          |            | 3       | 3         | 23.79                   | 23.33      | 23.63        | 25.00            |
|                                          |            | 6       | 0         | 23.17                   | 22.73      | 22.94        | 24.00            |
|                                          | 16QAM      | 1       | 0         | 23.12                   | 22.86      | 22.94        | 24.00            |
|                                          |            | 1       | 2         | 23.10                   | 22.92      | 23.09        | 24.00            |
|                                          |            | 1       | 5         | 22.89                   | 23.17      | 22.87        | 24.00            |
|                                          |            | 3       | 0         | 23.21                   | 22.48      | 22.97        | 24.00            |
|                                          |            | 3       | 2         | 23.19                   | 22.84      | 23.02        | 24.00            |
|                                          |            | 3       | 3         | 22.85                   | 22.52      | 22.92        | 24.00            |
|                                          |            | 6       | 0         | 22.03                   | 21.66      | 21.94        | 23.00            |
|                                          | 64QAM      | 1       | 0         | 21.45                   | 21.73      | 21.47        | 23.00            |
|                                          |            | 1       | 2         | 21.81                   | 21.91      | 21.78        | 23.00            |
|                                          |            | 1       | 5         | 21.42                   | 21.58      | 21.45        | 23.00            |



|           |            | 3       | 0         | 21.99                   | 21.72      | 21.78        | 23.00         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 3       | 2         | 21.89                   | 21.97      | 22.05        | 23.00         |
|           |            | 3       | 3         | 21.67                   | 21.81      | 21.76        | 23.00         |
|           |            | 6       | 0         | 21.04                   | 20.92      | 20.81        | 22.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18615/1851.5            | 18900/1880 | 19185/1908.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 23.85                   | 23.91      | 23.94        | 25.00         |
|           |            | 1       | 7         | 24.18                   | 24.06      | 24.30        | 25.00         |
|           |            | 1       | 14        | 23.62                   | 23.54      | 23.91        | 25.00         |
|           |            | 8       | 0         | 23.16                   | 22.71      | 23.24        | 24.00         |
|           |            | 8       | 4         | 23.24                   | 22.78      | 23.14        | 24.00         |
|           |            | 8       | 7         | 23.12                   | 22.67      | 22.96        | 24.00         |
|           |            | 15      | 0         | 23.17                   | 22.77      | 22.97        | 24.00         |
|           | 16QAM      | 1       | 0         | 23.15                   | 22.88      | 22.97        | 24.00         |
|           |            | 1       | 7         | 23.13                   | 22.92      | 23.13        | 24.00         |
|           |            | 1       | 14        | 22.91                   | 23.21      | 22.90        | 24.00         |
|           |            | 8       | 0         | 22.32                   | 21.61      | 22.09        | 23.00         |
|           |            | 8       | 4         | 22.30                   | 21.97      | 22.14        | 23.00         |
|           |            | 8       | 7         | 21.95                   | 21.64      | 22.05        | 23.00         |
|           |            | 15      | 0         | 22.06                   | 21.70      | 21.97        | 23.00         |
|           | 64QAM      | 1       | 0         | 21.48                   | 21.75      | 21.50        | 23.00         |
|           |            | 1       | 7         | 21.84                   | 21.91      | 21.80        | 23.00         |
|           |            | 1       | 14        | 21.44                   | 21.57      | 21.48        | 23.00         |
|           |            | 8       | 0         | 21.10                   | 20.85      | 20.90        | 22.00         |
|           |            | 8       | 4         | 21.00                   | 21.10      | 21.17        | 22.00         |
|           |            | 8       | 7         | 20.77                   | 20.93      | 20.89        | 22.00         |
|           |            | 15      | 0         | 21.07                   | 20.96      | 20.84        | 22.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18625/1852.5            | 18900/1880 | 19175/1907.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 23.82                   | 23.89      | 23.90        | 25.00         |
|           |            | 1       | 13        | 24.16                   | 24.02      | 24.27        | 25.00         |
|           |            | 1       | 24        | 23.59                   | 23.49      | 23.87        | 25.00         |
|           |            | 12      | 0         | 23.13                   | 22.66      | 23.20        | 24.00         |
|           |            | 12      | 6         | 23.22                   | 22.74      | 23.09        | 24.00         |
|           |            | 12      | 13        | 23.10                   | 22.65      | 22.92        | 24.00         |
|           |            | 25      | 0         | 23.17                   | 22.76      | 22.95        | 24.00         |
|           | 16QAM      | 1       | 0         | 23.12                   | 22.84      | 22.94        | 24.00         |
|           |            | 1       | 13        | 23.10                   | 22.90      | 23.10        | 24.00         |
|           |            | 1       | 24        | 22.88                   | 23.19      | 22.86        | 24.00         |
|           |            | 12      | 0         | 22.30                   | 21.57      | 22.06        | 23.00         |
|           |            | 12      | 6         | 22.27                   | 21.92      | 22.10        | 23.00         |
|           |            | 12      | 13        | 21.92                   | 21.59      | 22.01        | 23.00         |
|           |            | 25      | 0         | 22.04                   | 21.66      | 21.92        | 23.00         |



|           | 64QAM      | 1       | 0         | 21.45                   | 21.75      | 21.47        | 23.00         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 1       | 13        | 21.81                   | 21.93      | 21.77        | 23.00         |
|           |            | 1       | 24        | 21.45                   | 21.55      | 21.44        | 23.00         |
|           |            | 12      | 0         | 21.08                   | 20.81      | 20.91        | 22.00         |
|           |            | 12      | 6         | 20.97                   | 21.05      | 21.13        | 22.00         |
|           |            | 12      | 13        | 20.74                   | 20.88      | 20.85        | 22.00         |
|           |            | 25      | 0         | 21.05                   | 20.92      | 20.79        | 22.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18650/1855              | 18900/1880 | 19150/1905   |               |
| 10MHz     | QPSK       | 1       | 0         | 23.84                   | 23.90      | 23.93        | 25.00         |
|           |            | 1       | 25        | 24.19                   | 24.07      | 24.31        | 25.00         |
|           |            | 1       | 49        | 23.61                   | 23.53      | 23.90        | 25.00         |
|           |            | 25      | 0         | 23.16                   | 22.71      | 23.24        | 24.00         |
|           |            | 25      | 13        | 23.25                   | 22.79      | 23.13        | 24.00         |
|           |            | 25      | 25        | 23.12                   | 22.69      | 22.97        | 24.00         |
|           |            | 50      | 0         | 23.21                   | 22.78      | 22.99        | 24.00         |
|           | 16QAM      | 1       | 0         | 23.14                   | 22.87      | 22.96        | 24.00         |
|           |            | 1       | 25        | 23.13                   | 22.94      | 23.13        | 24.00         |
|           |            | 1       | 49        | 22.91                   | 23.21      | 22.89        | 24.00         |
|           |            | 25      | 0         | 22.33                   | 21.62      | 22.10        | 23.00         |
|           |            | 25      | 13        | 22.29                   | 21.96      | 22.13        | 23.00         |
|           |            | 25      | 25        | 21.95                   | 21.64      | 22.05        | 23.00         |
|           |            | 50      | 0         | 22.07                   | 21.71      | 21.96        | 23.00         |
|           | 64QAM      | 1       | 0         | 21.47                   | 21.74      | 21.49        | 23.00         |
|           |            | 1       | 25        | 21.84                   | 21.93      | 21.80        | 23.00         |
|           |            | 1       | 49        | 21.44                   | 21.57      | 21.47        | 23.00         |
|           |            | 25      | 0         | 21.11                   | 20.86      | 20.91        | 22.00         |
|           |            | 25      | 13        | 20.99                   | 21.09      | 21.16        | 22.00         |
|           |            | 25      | 25        | 20.77                   | 20.93      | 20.89        | 22.00         |
|           |            | 50      | 0         | 21.08                   | 20.97      | 20.83        | 22.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18675/1857.5            | 18900/1880 | 19125/1902.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 23.83                   | 23.86      | 23.91        | 25.00         |
|           |            | 1       | 38        | 24.17                   | 24.06      | 24.28        | 25.00         |
|           |            | 1       | 74        | 23.58                   | 23.48      | 23.86        | 25.00         |
|           |            | 36      | 0         | 23.14                   | 22.67      | 23.21        | 24.00         |
|           |            | 36      | 18        | 23.22                   | 22.74      | 23.09        | 24.00         |
|           |            | 36      | 39        | 23.09                   | 22.66      | 22.93        | 24.00         |
|           |            | 75      | 0         | 23.19                   | 22.74      | 22.94        | 24.00         |
|           | 16QAM      | 1       | 0         | 23.09                   | 22.85      | 22.94        | 24.00         |
|           |            | 1       | 38        | 23.11                   | 22.91      | 23.11        | 24.00         |
|           |            | 1       | 74        | 22.88                   | 23.17      | 22.86        | 24.00         |
|           |            | 36      | 0         | 22.30                   | 21.60      | 22.07        | 23.00         |



|           |            | 36      | 18        | 22.26                   | 21.91        | 22.09        | 23.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 36      | 39        | 21.93                   | 21.60        | 22.02        | 23.00         |
|           |            | 75      | 0         | 22.04                   | 21.66        | 21.92        | 23.00         |
|           | 64QAM      | 1       | 0         | 21.42                   | 21.72        | 21.47        | 23.00         |
|           |            | 1       | 38        | 21.82                   | 21.90        | 21.78        | 23.00         |
|           |            | 1       | 74        | 21.45                   | 21.56        | 21.48        | 23.00         |
|           |            | 36      | 0         | 21.10                   | 20.88        | 20.92        | 22.00         |
|           |            | 36      | 18        | 20.97                   | 21.06        | 21.15        | 22.00         |
|           |            | 36      | 39        | 20.75                   | 20.89        | 20.86        | 22.00         |
|           |            | 75      | 0         | 21.05                   | 20.92        | 20.79        | 22.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 18700/1860              | 18900/1880   | 19100/1900   |               |
| 20MHz     | QPSK       | 1       | 0         | 23.80                   | 23.82        | 23.88        | 25.00         |
|           |            | 1       | 50        | <b>24.16</b>            | <b>24.02</b> | <b>24.26</b> | 25.00         |
|           |            | 1       | 99        | 23.56                   | 23.47        | 23.83        | 25.00         |
|           |            | 50      | 0         | 23.11                   | 22.62        | <b>23.17</b> | 24.00         |
|           |            | 50      | 25        | <b>23.20</b>            | <b>22.70</b> | 23.06        | 24.00         |
|           |            | 50      | 50        | 23.06                   | 22.61        | 22.89        | 24.00         |
|           |            | 100     | 0         | <b>23.16</b>            | 22.69        | 22.90        | 24.00         |
|           | 16QAM      | 1       | 0         | 23.06                   | 22.81        | 22.89        | 24.00         |
|           |            | 1       | 50        | 23.07                   | 22.89        | 23.07        | 24.00         |
|           |            | 1       | 99        | 22.86                   | 23.14        | 22.84        | 24.00         |
|           |            | 50      | 0         | 22.27                   | 21.56        | 22.04        | 23.00         |
|           |            | 50      | 25        | 22.23                   | 21.89        | 22.06        | 23.00         |
|           |            | 50      | 50        | 21.90                   | 21.55        | 21.98        | 23.00         |
|           |            | 100     | 0         | 22.02                   | 21.62        | 21.89        | 23.00         |
|           | 64QAM      | 1       | 0         | 21.40                   | 21.68        | 21.42        | 23.00         |
|           |            | 1       | 50        | 21.78                   | 21.88        | 21.74        | 23.00         |
|           |            | 1       | 99        | 21.39                   | 21.50        | 21.42        | 23.00         |
|           |            | 50      | 0         | 21.05                   | 20.80        | 20.85        | 22.00         |
|           |            | 50      | 25        | 20.93                   | 21.02        | 21.09        | 22.00         |
|           |            | 50      | 50        | 20.72                   | 20.84        | 20.82        | 22.00         |
|           |            | 100     | 0         | 21.03                   | 20.88        | 20.76        | 22.00         |

| LTE FDD Band 2<br>DSI 4 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                         |            |         |           | 18607/1850.7            | 18900/1880 | 19193/1909.3 |                  |
| 1.4MHz                  | QPSK       | 1       | 0         | 19.63                   | 19.58      | 18.90        | 20.50            |
|                         |            | 1       | 2         | 19.69                   | 19.54      | 19.71        | 20.50            |
|                         |            | 1       | 5         | 19.29                   | 19.28      | 19.33        | 20.50            |
|                         |            | 3       | 0         | 20.02                   | 19.30      | 19.77        | 20.50            |
|                         |            | 3       | 2         | 19.56                   | 19.23      | 19.55        | 20.50            |



|           |            | 3       | 3         | 19.45                   | 19.20      | 19.46        | 20.50         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 6       | 0         | 19.52                   | 19.24      | 19.55        | 20.50         |
|           | 16QAM      | 1       | 0         | 19.72                   | 19.69      | 19.70        | 20.50         |
|           |            | 1       | 2         | 19.74                   | 19.42      | 19.92        | 20.50         |
|           |            | 1       | 5         | 19.32                   | 19.40      | 19.28        | 20.50         |
|           |            | 3       | 0         | 19.71                   | 19.37      | 19.67        | 20.50         |
|           |            | 3       | 2         | 19.58                   | 19.23      | 19.70        | 20.50         |
|           |            | 3       | 3         | 19.37                   | 19.20      | 19.48        | 20.50         |
|           |            | 6       | 0         | 19.45                   | 19.23      | 19.52        | 20.50         |
|           | 64QAM      | 1       | 0         | 19.33                   | 19.38      | 19.36        | 20.50         |
|           |            | 1       | 2         | 19.53                   | 19.59      | 19.54        | 20.50         |
|           |            | 1       | 5         | 19.12                   | 19.09      | 19.14        | 20.50         |
|           |            | 3       | 0         | 19.78                   | 19.67      | 19.72        | 20.50         |
|           |            | 3       | 2         | 19.53                   | 19.67      | 19.75        | 20.50         |
|           |            | 3       | 3         | 19.37                   | 19.53      | 19.49        | 20.50         |
|           |            | 6       | 0         | 19.50                   | 19.48      | 19.54        | 20.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18615/1851.5            | 18900/1880 | 19185/1908.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 19.60                   | 19.54      | 18.87        | 20.50         |
|           |            | 1       | 7         | 19.68                   | 19.50      | 19.69        | 20.50         |
|           |            | 1       | 14        | 19.27                   | 19.27      | 19.30        | 20.50         |
|           |            | 8       | 0         | 19.99                   | 19.25      | 19.73        | 20.50         |
|           |            | 8       | 4         | 19.54                   | 19.19      | 19.52        | 20.50         |
|           |            | 8       | 7         | 19.42                   | 19.15      | 19.42        | 20.50         |
|           |            | 15      | 0         | 19.49                   | 19.19      | 19.51        | 20.50         |
|           | 16QAM      | 1       | 0         | 19.72                   | 19.65      | 19.65        | 20.50         |
|           |            | 1       | 7         | 19.70                   | 19.40      | 19.88        | 20.50         |
|           |            | 1       | 14        | 19.30                   | 19.37      | 19.26        | 20.50         |
|           |            | 8       | 0         | 19.68                   | 19.33      | 19.64        | 20.50         |
|           |            | 8       | 4         | 19.55                   | 19.21      | 19.67        | 20.50         |
|           |            | 8       | 7         | 19.34                   | 19.15      | 19.44        | 20.50         |
|           |            | 15      | 0         | 19.43                   | 19.19      | 19.49        | 20.50         |
|           | 64QAM      | 1       | 0         | 19.31                   | 19.34      | 19.31        | 20.50         |
|           |            | 1       | 7         | 19.49                   | 19.57      | 19.50        | 20.50         |
|           |            | 1       | 14        | 19.06                   | 19.03      | 19.08        | 20.50         |
|           |            | 8       | 0         | 19.73                   | 19.59      | 19.65        | 20.50         |
|           |            | 8       | 4         | 19.49                   | 19.63      | 19.69        | 20.50         |
|           |            | 8       | 7         | 19.34                   | 19.48      | 19.45        | 20.50         |
|           |            | 15      | 0         | 19.48                   | 19.44      | 19.51        | 20.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18625/1852.5            | 18900/1880 | 19175/1907.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 19.57                   | 19.52      | 18.83        | 20.50         |
|           |            | 1       | 13        | 19.66                   | 19.46      | 19.66        | 20.50         |



|           |            | 1       | 24        | 19.24                   | 19.22      | 19.26      | 20.50         |
|-----------|------------|---------|-----------|-------------------------|------------|------------|---------------|
|           |            | 12      | 0         | 19.96                   | 19.20      | 19.69      | 20.50         |
|           |            | 12      | 6         | 19.52                   | 19.15      | 19.47      | 20.50         |
|           |            | 12      | 13        | 19.40                   | 19.13      | 19.38      | 20.50         |
|           |            | 25      | 0         | 19.49                   | 19.18      | 19.49      | 20.50         |
|           | 16QAM      | 1       | 0         | 19.69                   | 19.61      | 19.62      | 20.50         |
|           |            | 1       | 13        | 19.67                   | 19.38      | 19.85      | 20.50         |
|           |            | 1       | 24        | 19.27                   | 19.35      | 19.22      | 20.50         |
|           |            | 12      | 0         | 19.66                   | 19.29      | 19.61      | 20.50         |
|           |            | 12      | 6         | 19.52                   | 19.16      | 19.63      | 20.50         |
|           |            | 12      | 13        | 19.31                   | 19.10      | 19.40      | 20.50         |
|           |            | 25      | 0         | 19.41                   | 19.15      | 19.44      | 20.50         |
|           | 64QAM      | 1       | 0         | 19.28                   | 19.34      | 19.28      | 20.50         |
|           |            | 1       | 13        | 19.46                   | 19.59      | 19.47      | 20.50         |
|           |            | 1       | 24        | 19.07                   | 19.01      | 19.04      | 20.50         |
|           |            | 12      | 0         | 19.71                   | 19.55      | 19.66      | 20.50         |
|           |            | 12      | 6         | 19.46                   | 19.58      | 19.65      | 20.50         |
|           |            | 12      | 13        | 19.31                   | 19.43      | 19.41      | 20.50         |
|           |            | 25      | 0         | 19.46                   | 19.40      | 19.46      | 20.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |            | Tune-up Limit |
|           |            |         |           | 18650/1855              | 18900/1880 | 19150/1905 |               |
| 10MHz     | QPSK       | 1       | 0         | 19.59                   | 19.53      | 18.86      | 20.50         |
|           |            | 1       | 25        | 19.69                   | 19.51      | 19.70      | 20.50         |
|           |            | 1       | 49        | 19.26                   | 19.26      | 19.29      | 20.50         |
|           |            | 25      | 0         | 19.99                   | 19.25      | 19.73      | 20.50         |
|           |            | 25      | 13        | 19.55                   | 19.20      | 19.51      | 20.50         |
|           |            | 25      | 25        | 19.42                   | 19.17      | 19.43      | 20.50         |
|           |            | 50      | 0         | 19.53                   | 19.20      | 19.53      | 20.50         |
|           | 16QAM      | 1       | 0         | 19.71                   | 19.64      | 19.64      | 20.50         |
|           |            | 1       | 25        | 19.70                   | 19.42      | 19.88      | 20.50         |
|           |            | 1       | 49        | 19.30                   | 19.37      | 19.25      | 20.50         |
|           |            | 25      | 0         | 19.69                   | 19.34      | 19.65      | 20.50         |
|           |            | 25      | 13        | 19.54                   | 19.20      | 19.66      | 20.50         |
|           |            | 25      | 25        | 19.34                   | 19.15      | 19.44      | 20.50         |
|           |            | 50      | 0         | 19.44                   | 19.20      | 19.48      | 20.50         |
|           | 64QAM      | 1       | 0         | 19.30                   | 19.33      | 19.30      | 20.50         |
|           |            | 1       | 25        | 19.49                   | 19.59      | 19.50      | 20.50         |
|           |            | 1       | 49        | 19.06                   | 19.03      | 19.07      | 20.50         |
|           |            | 25      | 0         | 19.74                   | 19.60      | 19.66      | 20.50         |
|           |            | 25      | 13        | 19.48                   | 19.62      | 19.68      | 20.50         |
|           |            | 25      | 25        | 19.34                   | 19.48      | 19.45      | 20.50         |
|           |            | 50      | 0         | 19.49                   | 19.45      | 19.50      | 20.50         |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            |         |           | 18675/1857.5            | 18900/1880   | 19125/1902.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 19.58                   | 19.49        | 18.84        | 20.50         |
|           |            | 1       | 38        | 19.67                   | 19.50        | 19.67        | 20.50         |
|           |            | 1       | 74        | 19.23                   | 19.21        | 19.25        | 20.50         |
|           |            | 36      | 0         | 19.97                   | 19.21        | 19.70        | 20.50         |
|           |            | 36      | 18        | 19.52                   | 19.15        | 19.47        | 20.50         |
|           |            | 36      | 39        | 19.39                   | 19.14        | 19.39        | 20.50         |
|           |            | 75      | 0         | 19.51                   | 19.16        | 19.48        | 20.50         |
|           | 16QAM      | 1       | 0         | 19.66                   | 19.62        | 19.62        | 20.50         |
|           |            | 1       | 38        | 19.68                   | 19.39        | 19.86        | 20.50         |
|           |            | 1       | 74        | 19.27                   | 19.33        | 19.22        | 20.50         |
|           |            | 36      | 0         | 19.66                   | 19.32        | 19.62        | 20.50         |
|           |            | 36      | 18        | 19.51                   | 19.15        | 19.62        | 20.50         |
|           |            | 36      | 39        | 19.32                   | 19.11        | 19.41        | 20.50         |
|           |            | 75      | 0         | 19.41                   | 19.15        | 19.44        | 20.50         |
|           | 64QAM      | 1       | 0         | 19.25                   | 19.31        | 19.28        | 20.50         |
|           |            | 1       | 38        | 19.47                   | 19.56        | 19.48        | 20.50         |
|           |            | 1       | 74        | 19.07                   | 19.02        | 19.08        | 20.50         |
|           |            | 36      | 0         | 19.73                   | 19.62        | 19.67        | 20.50         |
|           |            | 36      | 18        | 19.46                   | 19.59        | 19.67        | 20.50         |
|           |            | 36      | 39        | 19.32                   | 19.44        | 19.42        | 20.50         |
|           |            | 75      | 0         | 19.46                   | 19.40        | 19.46        | 20.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 18700/1860              | 18900/1880   | 19100/1900   |               |
| 20MHz     | QPSK       | 1       | 0         | 19.55                   | 19.45        | 18.81        | 20.50         |
|           |            | 1       | 50        | <b>19.66</b>            | <b>19.46</b> | <b>19.65</b> | 20.50         |
|           |            | 1       | 99        | 19.21                   | 19.20        | 19.22        | 20.50         |
|           |            | 50      | 0         | <b>19.94</b>            | <b>19.16</b> | <b>19.66</b> | 20.50         |
|           |            | 50      | 25        | 19.50                   | 19.11        | 19.44        | 20.50         |
|           |            | 50      | 50        | 19.36                   | 19.09        | 19.35        | 20.50         |
|           |            | 100     | 0         | <b>19.48</b>            | 19.11        | 19.44        | 20.50         |
|           | 16QAM      | 1       | 0         | 19.58                   | 19.58        | 19.57        | 20.50         |
|           |            | 1       | 50        | 19.64                   | 19.37        | 19.82        | 20.50         |
|           |            | 1       | 99        | 19.25                   | 19.30        | 19.20        | 20.50         |
|           |            | 50      | 0         | 19.63                   | 19.28        | 19.59        | 20.50         |
|           |            | 50      | 25        | 19.48                   | 19.13        | 19.59        | 20.50         |
|           |            | 50      | 50        | 19.29                   | 19.06        | 19.37        | 20.50         |
|           |            | 100     | 0         | 19.39                   | 19.11        | 19.41        | 20.50         |
|           | 64QAM      | 1       | 0         | 19.23                   | 19.27        | 19.23        | 20.50         |
|           |            | 1       | 50        | 19.43                   | 19.54        | 19.44        | 20.50         |
|           |            | 1       | 99        | 19.01                   | 18.96        | 19.02        | 20.50         |
|           |            | 50      | 0         | 19.68                   | 19.54        | 19.60        | 20.50         |



|  |  |     |    |       |       |       |       |
|--|--|-----|----|-------|-------|-------|-------|
|  |  | 50  | 25 | 19.42 | 19.55 | 19.61 | 20.50 |
|  |  | 50  | 50 | 19.29 | 19.39 | 19.38 | 20.50 |
|  |  | 100 | 0  | 19.44 | 19.36 | 19.43 | 20.50 |

| LTE FDD Band 4<br>Full power&DSI 1&DSI 2 |            |         |           | Conducted Power(dBm)    |              |              | Tune-up<br>Limit |
|------------------------------------------|------------|---------|-----------|-------------------------|--------------|--------------|------------------|
| Bandwidth                                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              |                  |
|                                          |            |         |           | 19957/1710.7            | 20175/1732.5 | 20393/1754.3 |                  |
| 1.4MHz                                   | QPSK       | 1       | 0         | 23.03                   | 23.10        | 23.04        | 24.00            |
|                                          |            | 1       | 2         | 23.54                   | 23.19        | 23.37        | 24.00            |
|                                          |            | 1       | 5         | 22.99                   | 22.65        | 22.76        | 24.00            |
|                                          |            | 3       | 0         | 23.03                   | 22.69        | 22.94        | 24.00            |
|                                          |            | 3       | 2         | 22.89                   | 22.69        | 22.73        | 24.00            |
|                                          |            | 3       | 3         | 22.79                   | 22.63        | 22.56        | 24.00            |
|                                          |            | 6       | 0         | 21.94                   | 21.77        | 21.74        | 23.00            |
|                                          | 16QAM      | 1       | 0         | 21.93                   | 21.99        | 21.96        | 23.00            |
|                                          |            | 1       | 2         | 21.91                   | 22.02        | 21.84        | 23.00            |
|                                          |            | 1       | 5         | 21.59                   | 21.71        | 21.61        | 23.00            |
|                                          |            | 3       | 0         | 21.87                   | 21.64        | 21.85        | 23.00            |
|                                          |            | 3       | 2         | 21.94                   | 21.71        | 21.78        | 23.00            |
|                                          |            | 3       | 3         | 21.79                   | 21.68        | 21.53        | 23.00            |
|                                          |            | 6       | 0         | 20.89                   | 20.72        | 20.73        | 22.00            |
|                                          | 64QAM      | 1       | 0         | 20.91                   | 20.98        | 21.11        | 22.00            |
|                                          |            | 1       | 2         | 21.52                   | 21.23        | 21.40        | 22.00            |
|                                          |            | 1       | 5         | 20.70                   | 20.67        | 20.71        | 22.00            |
|                                          |            | 3       | 0         | 20.89                   | 20.73        | 20.83        | 22.00            |
|                                          |            | 3       | 2         | 20.80                   | 20.81        | 20.71        | 22.00            |
|                                          |            | 3       | 3         | 20.65                   | 20.67        | 20.59        | 22.00            |
|                                          |            | 6       | 0         | 19.85                   | 19.71        | 19.73        | 21.00            |
| Bandwidth                                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up<br>Limit |
|                                          |            |         |           | 19965/1711.5            | 20175/1732.5 | 20385/1753.5 |                  |
| 3MHz                                     | QPSK       | 1       | 0         | 23.05                   | 23.14        | 23.07        | 24.00            |
|                                          |            | 1       | 7         | 23.42                   | 23.22        | 23.41        | 24.00            |
|                                          |            | 1       | 14        | 23.02                   | 22.70        | 22.80        | 24.00            |
|                                          |            | 8       | 0         | 22.13                   | 21.81        | 22.07        | 23.00            |
|                                          |            | 8       | 4         | 22.01                   | 21.79        | 21.85        | 23.00            |
|                                          |            | 8       | 7         | 21.89                   | 21.74        | 21.66        | 23.00            |
|                                          |            | 15      | 0         | 21.94                   | 21.81        | 21.77        | 23.00            |
|                                          | 16QAM      | 1       | 0         | 21.96                   | 22.01        | 21.99        | 23.00            |
|                                          |            | 1       | 7         | 21.94                   | 22.02        | 21.88        | 23.00            |
|                                          |            | 1       | 14        | 21.61                   | 21.75        | 21.64        | 23.00            |
|                                          |            | 8       | 0         | 20.98                   | 20.77        | 20.97        | 22.00            |
|                                          |            | 8       | 4         | 21.05                   | 20.84        | 20.90        | 22.00            |



|           |            | 8       | 7         | 20.89                   | 20.80        | 20.66        | 22.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 15      | 0         | 20.92                   | 20.76        | 20.76        | 22.00         |
|           | 64QAM      | 1       | 0         | 20.94                   | 21.00        | 21.14        | 22.00         |
|           |            | 1       | 7         | 21.55                   | 21.23        | 21.42        | 22.00         |
|           |            | 1       | 14        | 20.72                   | 20.66        | 20.74        | 22.00         |
|           |            | 8       | 0         | 20.00                   | 19.86        | 19.95        | 21.00         |
|           |            | 8       | 4         | 19.91                   | 19.94        | 19.83        | 21.00         |
|           |            | 8       | 7         | 19.75                   | 19.79        | 19.72        | 21.00         |
|           |            | 15      | 0         | 19.88                   | 19.75        | 19.76        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 19975/1712.5            | 20175/1732.5 | 20375/1752.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 23.02                   | 23.12        | 23.03        | 24.00         |
|           |            | 1       | 13        | 23.50                   | 23.18        | 23.38        | 24.00         |
|           |            | 1       | 24        | 22.99                   | 22.65        | 22.76        | 24.00         |
|           |            | 12      | 0         | 22.10                   | 21.76        | 22.03        | 23.00         |
|           |            | 12      | 6         | 21.99                   | 21.75        | 21.80        | 23.00         |
|           |            | 12      | 13        | 21.87                   | 21.72        | 21.62        | 23.00         |
|           |            | 25      | 0         | 21.94                   | 21.80        | 21.75        | 23.00         |
|           | 16QAM      | 1       | 0         | 21.93                   | 21.97        | 21.96        | 23.00         |
|           |            | 1       | 13        | 21.91                   | 22.00        | 21.85        | 23.00         |
|           |            | 1       | 24        | 21.58                   | 21.73        | 21.60        | 23.00         |
|           |            | 12      | 0         | 20.96                   | 20.73        | 20.94        | 22.00         |
|           |            | 12      | 6         | 21.02                   | 20.79        | 20.86        | 22.00         |
|           |            | 12      | 13        | 20.86                   | 20.75        | 20.62        | 22.00         |
|           |            | 25      | 0         | 20.90                   | 20.72        | 20.71        | 22.00         |
|           | 64QAM      | 1       | 0         | 20.91                   | 21.00        | 21.11        | 22.00         |
|           |            | 1       | 13        | 21.52                   | 21.25        | 21.39        | 22.00         |
|           |            | 1       | 24        | 20.73                   | 20.64        | 20.70        | 22.00         |
|           |            | 12      | 0         | 19.98                   | 19.82        | 19.96        | 21.00         |
|           |            | 12      | 6         | 19.88                   | 19.89        | 19.79        | 21.00         |
|           |            | 12      | 13        | 19.72                   | 19.74        | 19.68        | 21.00         |
|           |            | 25      | 0         | 19.86                   | 19.71        | 19.71        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20000/1715              | 20175/1732.5 | 20350/1750   |               |
| 10MHz     | QPSK       | 1       | 0         | 23.04                   | 23.13        | 23.06        | 24.00         |
|           |            | 1       | 25        | 23.33                   | 23.23        | 23.42        | 24.00         |
|           |            | 1       | 49        | 23.01                   | 22.69        | 22.79        | 24.00         |
|           |            | 25      | 0         | 22.13                   | 21.81        | 22.07        | 23.00         |
|           |            | 25      | 13        | 22.02                   | 21.80        | 21.84        | 23.00         |
|           |            | 25      | 25        | 21.89                   | 21.76        | 21.67        | 23.00         |
|           |            | 50      | 0         | 21.98                   | 21.82        | 21.79        | 23.00         |
|           | 16QAM      | 1       | 0         | 21.95                   | 22.00        | 21.98        | 23.00         |
|           |            | 1       | 25        | 21.94                   | 22.04        | 21.88        | 23.00         |



|           |            | 1       | 49        | 21.61                   | 21.75        | 21.63        | 23.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 25      | 0         | 20.99                   | 20.78        | 20.98        | 22.00         |
|           |            | 25      | 13        | 21.04                   | 20.83        | 20.89        | 22.00         |
|           |            | 25      | 25        | 20.89                   | 20.80        | 20.66        | 22.00         |
|           |            | 50      | 0         | 20.93                   | 20.77        | 20.75        | 22.00         |
|           | 64QAM      | 1       | 0         | 20.93                   | 20.99        | 21.13        | 22.00         |
|           |            | 1       | 25        | 21.55                   | 21.25        | 21.42        | 22.00         |
|           |            | 1       | 49        | 20.72                   | 20.66        | 20.73        | 22.00         |
|           |            | 25      | 0         | 20.01                   | 19.87        | 19.96        | 21.00         |
|           |            | 25      | 13        | 19.90                   | 19.93        | 19.82        | 21.00         |
|           |            | 25      | 25        | 19.75                   | 19.79        | 19.72        | 21.00         |
|           |            | 50      | 0         | 19.89                   | 19.76        | 19.75        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20025/1717.5            | 20175/1732.5 | 20325/1747.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 23.03                   | 23.09        | 23.04        | 24.00         |
|           |            | 1       | 38        | 23.41                   | 23.22        | 23.39        | 24.00         |
|           |            | 1       | 74        | 22.98                   | 22.64        | 22.75        | 24.00         |
|           |            | 36      | 0         | 22.11                   | 21.77        | 22.04        | 23.00         |
|           |            | 36      | 18        | 21.99                   | 21.75        | 21.80        | 23.00         |
|           |            | 36      | 39        | 21.86                   | 21.73        | 21.63        | 23.00         |
|           |            | 75      | 0         | 21.96                   | 21.78        | 21.74        | 23.00         |
|           | 16QAM      | 1       | 0         | 21.90                   | 21.98        | 21.96        | 23.00         |
|           |            | 1       | 38        | 21.92                   | 22.01        | 21.86        | 23.00         |
|           |            | 1       | 74        | 21.58                   | 21.71        | 21.60        | 23.00         |
|           |            | 36      | 0         | 20.96                   | 20.76        | 20.95        | 22.00         |
|           |            | 36      | 18        | 21.01                   | 20.78        | 20.85        | 22.00         |
|           |            | 36      | 39        | 20.87                   | 20.76        | 20.63        | 22.00         |
|           |            | 75      | 0         | 20.90                   | 20.72        | 20.71        | 22.00         |
|           | 64QAM      | 1       | 0         | 20.88                   | 20.97        | 21.11        | 22.00         |
|           |            | 1       | 38        | 21.53                   | 21.22        | 21.40        | 22.00         |
|           |            | 1       | 74        | 20.73                   | 20.65        | 20.74        | 22.00         |
|           |            | 36      | 0         | 20.00                   | 19.89        | 19.97        | 21.00         |
|           |            | 36      | 18        | 19.88                   | 19.90        | 19.81        | 21.00         |
|           |            | 36      | 39        | 19.73                   | 19.75        | 19.69        | 21.00         |
|           |            | 75      | 0         | 19.86                   | 19.71        | 19.71        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20050/1720              | 20175/1732.5 | 20300/1745   |               |
| 20MHz     | QPSK       | 1       | 0         | 23.00                   | 23.05        | 23.01        | 24.00         |
|           |            | 1       | 50        | <b>23.35</b>            | <b>23.18</b> | <b>23.32</b> | 24.00         |
|           |            | 1       | 99        | 22.96                   | 22.63        | 22.72        | 24.00         |
|           |            | 50      | 0         | <b>22.08</b>            | <b>21.72</b> | <b>22.00</b> | 23.00         |
|           |            | 50      | 25        | 21.97                   | 21.71        | 21.77        | 23.00         |
|           |            | 50      | 50        | 21.83                   | 21.68        | 21.59        | 23.00         |



|  |       |     |    |              |       |       |       |
|--|-------|-----|----|--------------|-------|-------|-------|
|  | 16QAM | 100 | 0  | <b>21.93</b> | 21.73 | 21.70 | 23.00 |
|  |       | 1   | 0  | 21.71        | 21.94 | 21.91 | 23.00 |
|  |       | 1   | 50 | 21.88        | 21.99 | 21.82 | 23.00 |
|  |       | 1   | 99 | 21.56        | 21.68 | 21.58 | 23.00 |
|  |       | 50  | 0  | 20.93        | 20.72 | 20.92 | 22.00 |
|  |       | 50  | 25 | 20.98        | 20.76 | 20.82 | 22.00 |
|  |       | 50  | 50 | 20.84        | 20.71 | 20.59 | 22.00 |
|  |       | 100 | 0  | 20.88        | 20.68 | 20.68 | 22.00 |
|  | 64QAM | 1   | 0  | 20.86        | 20.93 | 21.06 | 22.00 |
|  |       | 1   | 50 | 21.49        | 21.20 | 21.36 | 22.00 |
|  |       | 1   | 99 | 20.67        | 20.59 | 20.68 | 22.00 |
|  |       | 50  | 0  | 19.95        | 19.81 | 19.90 | 21.00 |
|  |       | 50  | 25 | 19.84        | 19.86 | 19.75 | 21.00 |
|  |       | 50  | 50 | 19.70        | 19.70 | 19.65 | 21.00 |
|  |       | 100 | 0  | 19.84        | 19.67 | 19.68 | 21.00 |

| LTE FDD Band 4<br>DSI 4 |            |         |           | Conducted Power(dBm)    |              |              | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|--------------|--------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              |                  |
|                         |            |         |           | 19957/1710.7            | 20175/1732.5 | 20393/1754.3 |                  |
| 1.4MHz                  | QPSK       | 1       | 0         | 20.45                   | 20.42        | 20.58        | 21.00            |
|                         |            | 1       | 2         | 20.66                   | 20.35        | 20.78        | 21.00            |
|                         |            | 1       | 5         | 20.29                   | 20.16        | 20.21        | 21.00            |
|                         |            | 3       | 0         | 20.62                   | 20.23        | 20.73        | 21.00            |
|                         |            | 3       | 2         | 20.43                   | 20.11        | 20.45        | 21.00            |
|                         |            | 3       | 3         | 20.32                   | 19.93        | 20.10        | 21.00            |
|                         |            | 6       | 0         | 20.34                   | 20.10        | 20.35        | 21.00            |
|                         | 16QAM      | 1       | 0         | 20.50                   | 20.75        | 20.55        | 21.00            |
|                         |            | 1       | 2         | 20.48                   | 20.35        | 20.64        | 21.00            |
|                         |            | 1       | 5         | 19.76                   | 19.87        | 19.85        | 21.00            |
|                         |            | 3       | 0         | 20.50                   | 20.07        | 20.64        | 21.00            |
|                         |            | 3       | 2         | 20.50                   | 20.19        | 20.42        | 21.00            |
|                         |            | 3       | 3         | 20.30                   | 20.04        | 20.17        | 21.00            |
|                         |            | 6       | 0         | 20.35                   | 20.03        | 20.29        | 21.00            |
|                         | 64QAM      | 1       | 0         | 20.45                   | 20.61        | 20.79        | 21.00            |
|                         |            | 1       | 2         | 20.94                   | 20.94        | 20.84        | 21.00            |
|                         |            | 1       | 5         | 20.37                   | 20.37        | 20.11        | 21.00            |
|                         |            | 3       | 0         | 20.68                   | 20.51        | 20.66        | 21.00            |
|                         |            | 3       | 2         | 20.50                   | 20.55        | 20.49        | 21.00            |
|                         |            | 3       | 3         | 20.29                   | 20.36        | 20.08        | 21.00            |
|                         |            | 6       | 0         | 20.45                   | 20.40        | 20.32        | 21.00            |
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up<br>Limit |
|                         |            |         |           | 19965/1711.5            | 20175/1732.5 | 20385/1753.5 |                  |



| 3MHz      | QPSK       | 1       | 0         | 20.43                   | 20.35        | 20.56        | 21.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 7         | 20.66                   | 20.35        | 20.77        | 21.00         |
|           |            | 1       | 14        | 20.26                   | 20.14        | 20.17        | 21.00         |
|           |            | 8       | 0         | 20.60                   | 20.19        | 20.70        | 21.00         |
|           |            | 8       | 4         | 20.41                   | 20.07        | 20.42        | 21.00         |
|           |            | 8       | 7         | 20.28                   | 19.89        | 20.07        | 21.00         |
|           |            | 15      | 0         | 20.33                   | 20.03        | 20.30        | 21.00         |
|           | 16QAM      | 1       | 0         | 20.47                   | 20.72        | 20.50        | 21.00         |
|           |            | 1       | 7         | 20.45                   | 20.34        | 20.61        | 21.00         |
|           |            | 1       | 14        | 19.74                   | 19.82        | 19.83        | 21.00         |
|           |            | 8       | 0         | 20.47                   | 20.06        | 20.62        | 21.00         |
|           |            | 8       | 4         | 20.46                   | 20.16        | 20.38        | 21.00         |
|           |            | 8       | 7         | 20.28                   | 20.00        | 20.14        | 21.00         |
|           |            | 15      | 0         | 20.33                   | 19.99        | 20.26        | 21.00         |
|           | 64QAM      | 1       | 0         | 20.40                   | 20.54        | 20.74        | 21.00         |
|           |            | 1       | 7         | 20.91                   | 20.89        | 20.81        | 21.00         |
|           |            | 1       | 14        | 20.31                   | 20.32        | 20.09        | 21.00         |
|           |            | 8       | 0         | 20.65                   | 20.50        | 20.60        | 21.00         |
|           |            | 8       | 4         | 20.46                   | 20.52        | 20.45        | 21.00         |
|           |            | 8       | 7         | 20.27                   | 20.32        | 20.05        | 21.00         |
|           |            | 15      | 0         | 20.43                   | 20.36        | 20.29        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 19975/1712.5            | 20175/1732.5 | 20375/1752.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 20.40                   | 20.33        | 20.52        | 21.00         |
|           |            | 1       | 13        | 20.64                   | 20.31        | 20.74        | 21.00         |
|           |            | 1       | 24        | 20.23                   | 20.09        | 20.13        | 21.00         |
|           |            | 12      | 0         | 20.57                   | 20.14        | 20.66        | 21.00         |
|           |            | 12      | 6         | 20.39                   | 20.03        | 20.37        | 21.00         |
|           |            | 12      | 13        | 20.26                   | 19.87        | 20.03        | 21.00         |
|           |            | 25      | 0         | 20.33                   | 20.02        | 20.28        | 21.00         |
|           | 16QAM      | 1       | 0         | 20.44                   | 20.68        | 20.47        | 21.00         |
|           |            | 1       | 13        | 20.42                   | 20.32        | 20.58        | 21.00         |
|           |            | 1       | 24        | 19.71                   | 19.80        | 19.79        | 21.00         |
|           |            | 12      | 0         | 20.45                   | 20.02        | 20.59        | 21.00         |
|           |            | 12      | 6         | 20.43                   | 20.11        | 20.34        | 21.00         |
|           |            | 12      | 13        | 20.25                   | 19.95        | 20.10        | 21.00         |
|           |            | 25      | 0         | 20.31                   | 19.95        | 20.21        | 21.00         |
|           | 64QAM      | 1       | 0         | 20.37                   | 20.54        | 20.71        | 21.00         |
|           |            | 1       | 13        | 20.88                   | 20.91        | 20.78        | 21.00         |
|           |            | 1       | 24        | 20.32                   | 20.30        | 20.05        | 21.00         |
|           |            | 12      | 0         | 20.63                   | 20.46        | 20.61        | 21.00         |
|           |            | 12      | 6         | 20.43                   | 20.47        | 20.41        | 21.00         |
|           |            | 12      | 13        | 20.24                   | 20.27        | 20.01        | 21.00         |



| Bandwidth | Modulation | 25      | 0         | 20.41                   | 20.32        | 20.24        | 21.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20000/1715              | 20175/1732.5 | 20350/1750   |               |
| 10MHz     | QPSK       | 1       | 0         | 20.42                   | 20.34        | 20.55        | 21.00         |
|           |            | 1       | 25        | 20.67                   | 20.36        | 20.78        | 21.00         |
|           |            | 1       | 49        | 20.25                   | 20.13        | 20.16        | 21.00         |
|           |            | 25      | 0         | 20.60                   | 20.19        | 20.70        | 21.00         |
|           |            | 25      | 13        | 20.42                   | 20.08        | 20.41        | 21.00         |
|           |            | 25      | 25        | 20.28                   | 19.91        | 20.08        | 21.00         |
|           |            | 50      | 0         | 20.37                   | 20.04        | 20.32        | 21.00         |
|           | 16QAM      | 1       | 0         | 20.46                   | 20.71        | 20.49        | 21.00         |
|           |            | 1       | 25        | 20.45                   | 20.36        | 20.61        | 21.00         |
|           |            | 1       | 49        | 19.74                   | 19.82        | 19.82        | 21.00         |
|           |            | 25      | 0         | 20.48                   | 20.07        | 20.63        | 21.00         |
|           |            | 25      | 13        | 20.45                   | 20.15        | 20.37        | 21.00         |
|           |            | 25      | 25        | 20.28                   | 20.00        | 20.14        | 21.00         |
|           |            | 50      | 0         | 20.34                   | 20.00        | 20.25        | 21.00         |
|           | 64QAM      | 1       | 0         | 20.39                   | 20.53        | 20.73        | 21.00         |
|           |            | 1       | 25        | 20.91                   | 20.91        | 20.81        | 21.00         |
|           |            | 1       | 49        | 20.31                   | 20.32        | 20.08        | 21.00         |
|           |            | 25      | 0         | 20.66                   | 20.51        | 20.61        | 21.00         |
|           |            | 25      | 13        | 20.45                   | 20.51        | 20.44        | 21.00         |
|           |            | 25      | 25        | 20.27                   | 20.32        | 20.05        | 21.00         |
|           |            | 50      | 0         | 20.44                   | 20.37        | 20.28        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20025/1717.5            | 20175/1732.5 | 20325/1747.5 |               |
|           |            |         |           |                         |              |              |               |
| 15MHz     | QPSK       | 1       | 0         | 20.41                   | 20.30        | 20.53        | 21.00         |
|           |            | 1       | 38        | 20.65                   | 20.35        | 20.75        | 21.00         |
|           |            | 1       | 74        | 20.22                   | 20.08        | 20.12        | 21.00         |
|           |            | 36      | 0         | 20.58                   | 20.15        | 20.67        | 21.00         |
|           |            | 36      | 18        | 20.39                   | 20.03        | 20.37        | 21.00         |
|           |            | 36      | 39        | 20.25                   | 19.88        | 20.04        | 21.00         |
|           |            | 75      | 0         | 20.35                   | 20.00        | 20.27        | 21.00         |
|           | 16QAM      | 1       | 0         | 20.41                   | 20.69        | 20.47        | 21.00         |
|           |            | 1       | 38        | 20.43                   | 20.33        | 20.59        | 21.00         |
|           |            | 1       | 74        | 19.71                   | 19.78        | 19.79        | 21.00         |
|           |            | 36      | 0         | 20.45                   | 20.05        | 20.60        | 21.00         |
|           |            | 36      | 18        | 20.42                   | 20.10        | 20.33        | 21.00         |
|           |            | 36      | 39        | 20.26                   | 19.96        | 20.11        | 21.00         |
|           |            | 75      | 0         | 20.31                   | 19.95        | 20.21        | 21.00         |
|           | 64QAM      | 1       | 0         | 20.34                   | 20.51        | 20.71        | 21.00         |
|           |            | 1       | 38        | 20.89                   | 20.88        | 20.79        | 21.00         |
|           |            | 1       | 74        | 20.32                   | 20.31        | 20.09        | 21.00         |



|           |            | 36      | 0         | 20.65                   | 20.53        | 20.62        | 21.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 36      | 18        | 20.43                   | 20.48        | 20.43        | 21.00         |
|           |            | 36      | 39        | 20.25                   | 20.28        | 20.02        | 21.00         |
|           |            | 75      | 0         | 20.41                   | 20.32        | 20.24        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20050/1720              | 20175/1732.5 | 20300/1745   |               |
| 20MHz     | QPSK       | 1       | 0         | 20.38                   | 20.26        | 20.50        | 21.00         |
|           |            | 1       | 50        | <b>20.64</b>            | <b>20.31</b> | <b>20.73</b> | 21.00         |
|           |            | 1       | 99        | 20.20                   | 20.07        | 20.09        | 21.00         |
|           |            | 50      | 0         | <b>20.55</b>            | <b>20.10</b> | <b>20.63</b> | 21.00         |
|           |            | 50      | 25        | 20.37                   | 19.99        | 20.34        | 21.00         |
|           |            | 50      | 50        | 20.22                   | 19.83        | 20.00        | 21.00         |
|           |            | 100     | 0         | <b>20.32</b>            | 19.95        | 20.23        | 21.00         |
|           | 16QAM      | 1       | 0         | 20.14                   | 20.65        | 20.42        | 21.00         |
|           |            | 1       | 50        | 20.39                   | 20.31        | 20.55        | 21.00         |
|           |            | 1       | 99        | 19.69                   | 19.75        | 19.77        | 21.00         |
|           |            | 50      | 0         | 20.42                   | 20.01        | 20.57        | 21.00         |
|           |            | 50      | 25        | 20.39                   | 20.08        | 20.30        | 21.00         |
|           |            | 50      | 50        | 20.23                   | 19.91        | 20.07        | 21.00         |
|           |            | 100     | 0         | 20.29                   | 19.91        | 20.18        | 21.00         |
|           | 64QAM      | 1       | 0         | 20.32                   | 20.47        | 20.66        | 21.00         |
|           |            | 1       | 50        | 20.85                   | 20.86        | 20.75        | 21.00         |
|           |            | 1       | 99        | 20.26                   | 20.25        | 20.03        | 21.00         |
|           |            | 50      | 0         | 20.60                   | 20.45        | 20.55        | 21.00         |
|           |            | 50      | 25        | 20.39                   | 20.44        | 20.37        | 21.00         |
|           |            | 50      | 50        | 20.22                   | 20.23        | 19.98        | 21.00         |
|           |            | 100     | 0         | 20.39                   | 20.28        | 20.21        | 21.00         |

| LTE FDD Band 5<br>DSI 1&DSI 4 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|-------------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth                     | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                               |            |         |           | 20407/824.7             | 20525/836.5 | 20643/848.3 |                  |
| 1.4MHz                        | QPSK       | 1       | 0         | 23.59                   | 23.59       | 23.49       | 24.50            |
|                               |            | 1       | 2         | 23.63                   | 23.87       | 23.78       | 24.50            |
|                               |            | 1       | 5         | 23.34                   | 23.58       | 23.55       | 24.50            |
|                               |            | 3       | 0         | 24.08                   | 23.87       | 23.95       | 24.50            |
|                               |            | 3       | 2         | 24.05                   | 24.06       | 23.94       | 24.50            |
|                               |            | 3       | 3         | 23.95                   | 23.99       | 23.80       | 24.50            |
|                               |            | 6       | 0         | 23.04                   | 23.02       | 22.93       | 23.50            |
|                               | 16QAM      | 1       | 0         | 23.02                   | 23.04       | 22.92       | 23.50            |
|                               |            | 1       | 2         | 23.00                   | 23.17       | 22.93       | 23.50            |
|                               |            | 1       | 5         | 22.64                   | 22.75       | 22.60       | 23.50            |
|                               |            | 3       | 0         | 22.78                   | 23.07       | 22.81       | 23.50            |



|           |            | 3       | 2         | 23.10                   | 23.22       | 22.89       | 23.50         |
|-----------|------------|---------|-----------|-------------------------|-------------|-------------|---------------|
|           |            | 3       | 3         | 22.98                   | 23.09       | 22.79       | 23.50         |
|           |            | 6       | 0         | 22.05                   | 22.12       | 22.04       | 22.50         |
|           | 64QAM      | 1       | 0         | 21.88                   | 21.83       | 21.83       | 22.50         |
|           |            | 1       | 2         | 22.06                   | 21.84       | 22.21       | 22.50         |
|           |            | 1       | 5         | 21.93                   | 21.85       | 21.79       | 22.50         |
|           |            | 3       | 0         | 21.96                   | 21.86       | 21.95       | 22.50         |
|           |            | 3       | 2         | 21.95                   | 22.10       | 22.06       | 22.50         |
|           |            | 3       | 3         | 21.76                   | 22.07       | 22.00       | 22.50         |
|           |            | 6       | 0         | 20.95                   | 21.02       | 20.83       | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 20415/825.5             | 20525/836.5 | 20635/847.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 23.61                   | 23.63       | 23.52       | 24.50         |
|           |            | 1       | 7         | 23.61                   | 23.90       | 23.82       | 24.50         |
|           |            | 1       | 14        | 23.37                   | 23.63       | 23.59       | 24.50         |
|           |            | 8       | 0         | 23.18                   | 22.99       | 23.08       | 23.50         |
|           |            | 8       | 4         | 23.17                   | 23.16       | 23.06       | 23.50         |
|           |            | 8       | 7         | 23.05                   | 23.10       | 22.90       | 23.50         |
|           |            | 15      | 0         | 23.04                   | 23.06       | 22.96       | 23.50         |
|           | 16QAM      | 1       | 0         | 23.05                   | 23.06       | 22.95       | 23.50         |
|           |            | 1       | 7         | 23.03                   | 23.17       | 22.97       | 23.50         |
|           |            | 1       | 14        | 22.66                   | 22.79       | 22.63       | 23.50         |
|           |            | 8       | 0         | 21.89                   | 22.20       | 21.93       | 22.50         |
|           |            | 8       | 4         | 22.21                   | 22.35       | 22.01       | 22.50         |
|           |            | 8       | 7         | 22.08                   | 22.21       | 21.92       | 22.50         |
|           |            | 15      | 0         | 22.08                   | 22.16       | 22.07       | 22.50         |
|           | 64QAM      | 1       | 0         | 21.91                   | 21.85       | 21.86       | 22.50         |
|           |            | 1       | 7         | 22.09                   | 21.84       | 22.23       | 22.50         |
|           |            | 1       | 14        | 21.95                   | 21.84       | 21.82       | 22.50         |
|           |            | 8       | 0         | 21.07                   | 20.99       | 21.07       | 21.50         |
|           |            | 8       | 4         | 21.06                   | 21.23       | 21.18       | 21.50         |
|           |            | 8       | 7         | 20.86                   | 21.19       | 21.13       | 21.50         |
|           |            | 15      | 0         | 20.98                   | 21.06       | 20.86       | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 20425/826.5             | 20525/836.5 | 20625/846.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 23.59                   | 23.58       | 23.49       | 24.50         |
|           |            | 1       | 13        | 23.60                   | 23.90       | 23.80       | 24.50         |
|           |            | 1       | 24        | 23.33                   | 23.57       | 23.54       | 24.50         |
|           |            | 12      | 0         | 23.16                   | 22.95       | 23.05       | 23.50         |
|           |            | 12      | 6         | 23.15                   | 23.12       | 23.01       | 23.50         |
|           |            | 12      | 13        | 23.02                   | 23.09       | 22.87       | 23.50         |
|           |            | 25      | 0         | 23.06                   | 23.03       | 22.93       | 23.50         |
|           | 16QAM      | 1       | 0         | 22.99                   | 23.03       | 22.92       | 23.50         |



|           |            | 1       | 13        | 23.01                   | 23.16        | 22.95        | 23.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 24        | 22.63                   | 22.75        | 22.59        | 23.50         |
|           |            | 12      | 0         | 21.87                   | 22.19        | 21.91        | 22.50         |
|           |            | 12      | 6         | 22.17                   | 22.29        | 21.96        | 22.50         |
|           |            | 12      | 13        | 22.06                   | 22.17        | 21.89        | 22.50         |
|           |            | 25      | 0         | 22.06                   | 22.12        | 22.02        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.85                   | 21.82        | 21.83        | 22.50         |
|           |            | 1       | 13        | 22.07                   | 21.83        | 22.21        | 22.50         |
|           |            | 1       | 24        | 21.96                   | 21.83        | 21.82        | 22.50         |
|           |            | 12      | 0         | 21.07                   | 21.02        | 21.09        | 21.50         |
|           |            | 12      | 6         | 21.03                   | 21.19        | 21.16        | 21.50         |
|           |            | 12      | 13        | 20.84                   | 21.15        | 21.10        | 21.50         |
|           |            | 25      | 0         | 20.96                   | 21.02        | 20.81        | 21.50         |
|           |            |         |           |                         |              |              |               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20450/829               | 20525/836.5  | 20600/844    |               |
| 10MHz     | QPSK       | 1       | 0         | 23.56                   | 23.54        | 23.46        | 24.50         |
|           |            | 1       | 25        | <b>23.59</b>            | <b>23.86</b> | <b>23.78</b> | 24.50         |
|           |            | 1       | 49        | 23.31                   | 23.56        | 23.51        | 24.50         |
|           |            | 25      | 0         | <b>23.13</b>            | 22.90        | <b>23.01</b> | 23.50         |
|           |            | 25      | 13        | <b>23.13</b>            | <b>23.08</b> | 22.98        | 23.50         |
|           |            | 25      | 25        | 22.99                   | 23.04        | 22.83        | 23.50         |
|           |            | 50      | 0         | <b>23.03</b>            | 22.98        | 22.89        | 23.50         |
|           |            |         |           |                         |              |              |               |
|           | 16QAM      | 1       | 0         | 22.92                   | 22.99        | 22.87        | 23.50         |
|           |            | 1       | 25        | 22.97                   | 23.14        | 22.91        | 23.50         |
|           |            | 1       | 49        | 22.61                   | 22.72        | 22.57        | 23.50         |
|           |            | 25      | 0         | 21.84                   | 22.15        | 21.88        | 22.50         |
|           |            | 25      | 13        | 22.14                   | 22.27        | 21.93        | 22.50         |
|           |            | 25      | 25        | 22.03                   | 22.12        | 21.85        | 22.50         |
|           |            | 50      | 0         | 22.04                   | 22.08        | 21.99        | 22.50         |
|           |            |         |           |                         |              |              |               |
|           | 64QAM      | 1       | 0         | 21.83                   | 21.78        | 21.78        | 22.50         |
|           |            | 1       | 25        | 22.03                   | 21.81        | 22.17        | 22.50         |
|           |            | 1       | 49        | 21.90                   | 21.77        | 21.76        | 22.50         |
|           |            | 25      | 0         | 21.02                   | 20.94        | 21.02        | 21.50         |
|           |            | 25      | 13        | 20.99                   | 21.15        | 21.10        | 21.50         |
|           |            | 25      | 25        | 20.81                   | 21.10        | 21.06        | 21.50         |
|           |            | 50      | 0         | 20.94                   | 20.98        | 20.78        | 21.50         |
|           |            |         |           |                         |              |              |               |

| LTE FDD Band 5<br>Full power&DSI 2 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|------------------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth                          | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                                    |            |         |           | 20407/824.7             | 20525/836.5 | 20643/848.3 |                  |
| 1.4MHz                             | QPSK       | 1       | 0         | 23.87                   | 24.07       | 23.69       | 25.00            |
|                                    |            | 1       | 2         | 24.31                   | 24.12       | 24.04       | 25.00            |



|           |            | 1       | 5         | 23.99                   | 24.03       | 23.67       | 25.00         |
|-----------|------------|---------|-----------|-------------------------|-------------|-------------|---------------|
|           |            | 3       | 0         | 23.95                   | 23.87       | 23.69       | 25.00         |
|           |            | 3       | 2         | 23.93                   | 23.97       | 23.70       | 25.00         |
|           |            | 3       | 3         | 23.83                   | 23.82       | 23.53       | 25.00         |
|           |            | 6       | 0         | 22.81                   | 22.96       | 22.70       | 23.50         |
|           | 16QAM      | 1       | 0         | 22.70                   | 22.71       | 22.61       | 23.50         |
|           |            | 1       | 2         | 22.68                   | 22.67       | 22.51       | 23.50         |
|           |            | 1       | 5         | 22.49                   | 22.51       | 22.28       | 23.50         |
|           |            | 3       | 0         | 22.84                   | 22.81       | 22.60       | 23.50         |
|           |            | 3       | 2         | 22.68                   | 22.97       | 22.87       | 23.50         |
|           |            | 3       | 3         | 22.67                   | 22.85       | 22.75       | 23.50         |
|           |            | 6       | 0         | 21.60                   | 22.12       | 21.79       | 22.50         |
|           | 64QAM      | 1       | 0         | 21.82                   | 21.62       | 21.38       | 22.50         |
|           |            | 1       | 2         | 22.06                   | 21.88       | 21.61       | 22.50         |
|           |            | 1       | 5         | 21.45                   | 21.69       | 21.54       | 22.50         |
|           |            | 3       | 0         | 21.81                   | 21.80       | 21.79       | 22.50         |
|           |            | 3       | 2         | 21.94                   | 21.81       | 21.81       | 22.50         |
|           |            | 3       | 3         | 21.57                   | 21.93       | 21.52       | 22.50         |
|           |            | 6       | 0         | 20.75                   | 20.64       | 20.78       | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 20415/825.5             | 20525/836.5 | 20635/847.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 23.88                   | 24.10       | 23.71       | 25.00         |
|           |            | 1       | 7         | 24.30                   | 24.16       | 24.09       | 25.00         |
|           |            | 1       | 14        | 24.01                   | 24.07       | 23.70       | 25.00         |
|           |            | 8       | 0         | 23.05                   | 22.99       | 22.82       | 23.50         |
|           |            | 8       | 4         | 23.06                   | 23.08       | 22.81       | 23.50         |
|           |            | 8       | 7         | 22.93                   | 22.95       | 22.64       | 23.50         |
|           |            | 15      | 0         | 22.85                   | 23.01       | 22.75       | 23.50         |
|           | 16QAM      | 1       | 0         | 22.72                   | 22.72       | 22.63       | 23.50         |
|           |            | 1       | 7         | 22.71                   | 22.69       | 22.55       | 23.50         |
|           |            | 1       | 14        | 22.51                   | 22.55       | 22.30       | 23.50         |
|           |            | 8       | 0         | 21.96                   | 21.95       | 21.73       | 22.50         |
|           |            | 8       | 4         | 21.78                   | 22.09       | 21.98       | 22.50         |
|           |            | 8       | 7         | 21.77                   | 21.97       | 21.88       | 22.50         |
|           |            | 15      | 0         | 21.64                   | 22.17       | 21.81       | 22.50         |
|           | 64QAM      | 1       | 0         | 21.84                   | 21.63       | 21.40       | 22.50         |
|           |            | 1       | 7         | 22.09                   | 21.90       | 21.63       | 22.50         |
|           |            | 1       | 14        | 21.47                   | 21.68       | 21.56       | 22.50         |
|           |            | 8       | 0         | 20.93                   | 20.94       | 20.92       | 21.50         |
|           |            | 8       | 4         | 21.04                   | 20.93       | 20.92       | 21.50         |
|           |            | 8       | 7         | 20.67                   | 21.05       | 20.65       | 21.50         |
|           |            | 15      | 0         | 20.79                   | 20.69       | 20.80       | 21.50         |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            |         |           | 20425/826.5             | 20525/836.5  | 20625/846.5  |               |
| 5MHz      | QPSK       | 1       | 0         | 23.87                   | 24.06        | 23.69        | 25.00         |
|           |            | 1       | 13        | 24.28                   | 24.15        | 24.06        | 25.00         |
|           |            | 1       | 24        | 23.98                   | 24.02        | 23.66        | 25.00         |
|           |            | 12      | 0         | 23.03                   | 22.95        | 22.79        | 23.50         |
|           |            | 12      | 6         | 23.03                   | 23.03        | 22.77        | 23.50         |
|           |            | 12      | 13        | 22.90                   | 22.92        | 22.60        | 23.50         |
|           |            | 25      | 0         | 22.83                   | 22.97        | 22.70        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.67                   | 22.70        | 22.61        | 23.50         |
|           |            | 1       | 13        | 22.69                   | 22.66        | 22.53        | 23.50         |
|           |            | 1       | 24        | 22.48                   | 22.51        | 22.27        | 23.50         |
|           |            | 12      | 0         | 21.93                   | 21.93        | 21.70        | 22.50         |
|           |            | 12      | 6         | 21.75                   | 22.04        | 21.94        | 22.50         |
|           |            | 12      | 13        | 21.75                   | 21.93        | 21.85        | 22.50         |
|           |            | 25      | 0         | 21.61                   | 22.12        | 21.77        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.79                   | 21.61        | 21.38        | 22.50         |
|           |            | 1       | 13        | 22.07                   | 21.87        | 21.61        | 22.50         |
|           |            | 1       | 24        | 21.48                   | 21.67        | 21.57        | 22.50         |
|           |            | 12      | 0         | 20.92                   | 20.96        | 20.93        | 21.50         |
|           |            | 12      | 6         | 21.02                   | 20.90        | 20.91        | 21.50         |
|           |            | 12      | 13        | 20.65                   | 21.01        | 20.62        | 21.50         |
|           |            | 25      | 0         | 20.76                   | 20.64        | 20.76        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20450/829               | 20525/836.5  | 20600/844    |               |
| 10MHz     | QPSK       | 1       | 0         | 23.84                   | 24.02        | 23.66        | 25.00         |
|           |            | 1       | 25        | <b>24.27</b>            | <b>24.11</b> | <b>24.04</b> | 25.00         |
|           |            | 1       | 49        | 23.96                   | 24.01        | 23.63        | 25.00         |
|           |            | 25      | 0         | 23.00                   | 22.90        | <b>22.75</b> | 23.50         |
|           |            | 25      | 13        | <b>23.01</b>            | <b>22.99</b> | 22.74        | 23.50         |
|           |            | 25      | 25        | 22.87                   | 22.87        | 22.56        | 23.50         |
|           |            | 50      | 0         | 22.80                   | <b>22.92</b> | 22.66        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.68                   | 22.66        | 22.56        | 23.50         |
|           |            | 1       | 25        | 22.65                   | 22.64        | 22.49        | 23.50         |
|           |            | 1       | 49        | 22.46                   | 22.48        | 22.25        | 23.50         |
|           |            | 25      | 0         | 21.90                   | 21.89        | 21.67        | 22.50         |
|           |            | 25      | 13        | 21.72                   | 22.02        | 21.91        | 22.50         |
|           |            | 25      | 25        | 21.72                   | 21.88        | 21.81        | 22.50         |
|           |            | 50      | 0         | 21.59                   | 22.08        | 21.74        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.77                   | 21.57        | 21.33        | 22.50         |
|           |            | 1       | 25        | 22.03                   | 21.85        | 21.57        | 22.50         |
|           |            | 1       | 49        | 21.42                   | 21.61        | 21.51        | 22.50         |
|           |            | 25      | 0         | 20.87                   | 20.88        | 20.86        | 21.50         |



|  |  |    |    |       |       |       |       |
|--|--|----|----|-------|-------|-------|-------|
|  |  | 25 | 13 | 20.98 | 20.86 | 20.85 | 21.50 |
|  |  | 25 | 25 | 20.62 | 20.96 | 20.58 | 21.50 |
|  |  | 50 | 0  | 20.74 | 20.60 | 20.73 | 21.50 |

| LTE FDD Band 7<br>Full power& DSI 1& DSI 2 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|--------------------------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth                                  | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                                            |            |         |           | 20775/2502.5            | 21100/2535 | 21425/2567.5 |                  |
| 5MHz                                       | QPSK       | 1       | 0         | 22.44                   | 22.54      | 22.91        | 24.00            |
|                                            |            | 1       | 13        | 22.84                   | 22.84      | 22.87        | 24.00            |
|                                            |            | 1       | 24        | 22.20                   | 22.35      | 22.26        | 24.00            |
|                                            |            | 12      | 0         | 21.63                   | 21.62      | 21.42        | 23.00            |
|                                            |            | 12      | 6         | 21.25                   | 21.88      | 21.38        | 23.00            |
|                                            |            | 12      | 13        | 21.16                   | 21.63      | 21.17        | 23.00            |
|                                            |            | 25      | 0         | 21.27                   | 21.51      | 21.28        | 23.00            |
|                                            | 16QAM      | 1       | 0         | 21.33                   | 21.34      | 21.05        | 23.00            |
|                                            |            | 1       | 13        | 21.31                   | 21.77      | 21.20        | 23.00            |
|                                            |            | 1       | 24        | 21.03                   | 21.22      | 21.10        | 23.00            |
|                                            |            | 12      | 0         | 20.36                   | 20.33      | 20.26        | 22.00            |
|                                            |            | 12      | 6         | 20.23                   | 20.66      | 20.16        | 22.00            |
|                                            |            | 12      | 13        | 20.10                   | 20.38      | 20.15        | 22.00            |
|                                            |            | 25      | 0         | 20.19                   | 20.48      | 20.22        | 22.00            |
|                                            | 64QAM      | 1       | 0         | 20.29                   | 20.14      | 20.40        | 22.00            |
|                                            |            | 1       | 13        | 20.77                   | 20.87      | 20.84        | 22.00            |
|                                            |            | 1       | 24        | 20.04                   | 20.09      | 20.15        | 22.00            |
|                                            |            | 12      | 0         | 19.24                   | 19.22      | 19.19        | 21.00            |
|                                            |            | 12      | 6         | 19.03                   | 19.27      | 19.07        | 21.00            |
|                                            |            | 12      | 13        | 19.08                   | 19.15      | 19.02        | 21.00            |
|                                            |            | 25      | 0         | 19.10                   | 19.07      | 19.07        | 21.00            |
| Bandwidth                                  | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up<br>Limit |
|                                            |            |         |           | 20800/2505              | 21100/2535 | 21400/2565   |                  |
| 10MHz                                      | QPSK       | 1       | 0         | 22.46                   | 22.55      | 22.94        | 24.00            |
|                                            |            | 1       | 25        | 22.87                   | 22.89      | 22.91        | 24.00            |
|                                            |            | 1       | 49        | 22.22                   | 22.39      | 22.29        | 24.00            |
|                                            |            | 25      | 0         | 21.66                   | 21.67      | 21.46        | 23.00            |
|                                            |            | 25      | 13        | 21.28                   | 21.93      | 21.42        | 23.00            |
|                                            |            | 25      | 25        | 21.18                   | 21.67      | 21.22        | 23.00            |
|                                            |            | 50      | 0         | 21.31                   | 21.53      | 21.32        | 23.00            |
|                                            | 16QAM      | 1       | 0         | 21.35                   | 21.37      | 21.02        | 23.00            |
|                                            |            | 1       | 25        | 21.34                   | 21.81      | 21.23        | 23.00            |
|                                            |            | 1       | 49        | 21.02                   | 21.24      | 21.11        | 23.00            |
|                                            |            | 25      | 0         | 20.39                   | 20.38      | 20.30        | 22.00            |
|                                            |            | 25      | 13        | 20.25                   | 20.70      | 20.19        | 22.00            |



|           |            | 25      | 25        | 20.13                   | 20.43        | 20.19        | 22.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 50      | 0         | 20.22                   | 20.53        | 20.26        | 22.00         |
|           | 64QAM      | 1       | 0         | 20.31                   | 20.13        | 20.42        | 22.00         |
|           |            | 1       | 25        | 20.80                   | 20.87        | 20.87        | 22.00         |
|           |            | 1       | 49        | 20.03                   | 20.11        | 20.18        | 22.00         |
|           |            | 25      | 0         | 19.27                   | 19.27        | 19.19        | 21.00         |
|           |            | 25      | 13        | 19.05                   | 19.31        | 19.10        | 21.00         |
|           |            | 25      | 25        | 19.11                   | 19.20        | 19.06        | 21.00         |
|           |            | 50      | 0         | 19.13                   | 19.12        | 19.11        | 21.00         |
|           |            |         |           |                         |              |              |               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20825/2507.5            | 21100/2535   | 21375/2562.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 22.45                   | 22.51        | 22.92        | 24.00         |
|           |            | 1       | 38        | 22.85                   | 22.88        | 22.88        | 24.00         |
|           |            | 1       | 74        | 22.19                   | 22.34        | 22.25        | 24.00         |
|           |            | 36      | 0         | 21.64                   | 21.63        | 21.43        | 23.00         |
|           |            | 36      | 18        | 21.25                   | 21.88        | 21.38        | 23.00         |
|           |            | 36      | 39        | 21.15                   | 21.64        | 21.18        | 23.00         |
|           |            | 75      | 0         | 21.29                   | 21.49        | 21.27        | 23.00         |
|           |            |         |           |                         |              |              |               |
|           | 16QAM      | 1       | 0         | 21.30                   | 21.35        | 21.02        | 23.00         |
|           |            | 1       | 38        | 21.32                   | 21.78        | 21.21        | 23.00         |
|           |            | 1       | 74        | 21.06                   | 21.20        | 21.09        | 23.00         |
|           |            | 36      | 0         | 20.36                   | 20.36        | 20.27        | 22.00         |
|           |            | 36      | 18        | 20.22                   | 20.65        | 20.15        | 22.00         |
|           |            | 36      | 39        | 20.11                   | 20.39        | 20.16        | 22.00         |
|           |            | 75      | 0         | 20.19                   | 20.48        | 20.22        | 22.00         |
|           |            |         |           |                         |              |              |               |
|           | 64QAM      | 1       | 0         | 20.26                   | 20.11        | 20.40        | 22.00         |
|           |            | 1       | 38        | 20.78                   | 20.84        | 20.85        | 22.00         |
|           |            | 1       | 74        | 20.04                   | 20.10        | 20.19        | 22.00         |
|           |            | 36      | 0         | 19.26                   | 19.29        | 19.20        | 21.00         |
|           |            | 36      | 18        | 19.03                   | 19.28        | 19.09        | 21.00         |
|           |            | 36      | 39        | 19.09                   | 19.16        | 19.03        | 21.00         |
|           |            | 75      | 0         | 19.10                   | 19.07        | 19.07        | 21.00         |
|           |            |         |           |                         |              |              |               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20850/2510              | 21100/2535   | 21350/2560   |               |
| 20MHz     | QPSK       | 1       | 0         | 22.42                   | 22.47        | <b>22.89</b> | 24.00         |
|           |            | 1       | 50        | <b>22.84</b>            | <b>22.84</b> | 22.86        | 24.00         |
|           |            | 1       | 99        | 22.17                   | 22.33        | 22.22        | 24.00         |
|           |            | 50      | 0         | <b>21.61</b>            | 21.58        | <b>21.39</b> | 23.00         |
|           |            | 50      | 25        | 21.23                   | <b>21.84</b> | 21.35        | 23.00         |
|           |            | 50      | 50        | 21.12                   | 21.59        | 21.14        | 23.00         |
|           |            | 100     | 0         | 21.26                   | <b>21.44</b> | 21.23        | 23.00         |
|           |            |         |           |                         |              |              |               |
|           | 16QAM      | 1       | 0         | 21.06                   | 21.31        | 21.10        | 23.00         |
|           |            | 1       | 50        | 21.28                   | 21.76        | 21.17        | 23.00         |



|  |       |     |    |       |       |       |       |
|--|-------|-----|----|-------|-------|-------|-------|
|  |       | 1   | 99 | 21.06 | 21.17 | 21.05 | 23.00 |
|  |       | 50  | 0  | 20.33 | 20.32 | 20.24 | 22.00 |
|  |       | 50  | 25 | 20.19 | 20.63 | 20.12 | 22.00 |
|  |       | 50  | 50 | 20.08 | 20.34 | 20.12 | 22.00 |
|  |       | 100 | 0  | 20.17 | 20.44 | 20.19 | 22.00 |
|  | 64QAM | 1   | 0  | 20.24 | 20.07 | 20.35 | 22.00 |
|  |       | 1   | 50 | 20.74 | 20.82 | 20.81 | 22.00 |
|  |       | 1   | 99 | 20.06 | 20.04 | 20.13 | 22.00 |
|  |       | 50  | 0  | 19.21 | 19.21 | 19.13 | 21.00 |
|  |       | 50  | 25 | 19.05 | 19.24 | 19.03 | 21.00 |
|  |       | 50  | 50 | 19.06 | 19.11 | 19.03 | 21.00 |
|  |       | 100 | 0  | 19.08 | 19.03 | 19.04 | 21.00 |

| LTE FDD Band 7<br>DSI 4 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                         |            |         |           | 20775/2502.5            | 21100/2535 | 21425/2567.5 |                  |
| 5MHz                    | QPSK       | 1       | 0         | 16.75                   | 16.64      | 16.50        | 18.00            |
|                         |            | 1       | 13        | 16.91                   | 16.78      | 17.23        | 18.00            |
|                         |            | 1       | 24        | 16.44                   | 16.41      | 16.43        | 18.00            |
|                         |            | 12      | 0         | 16.86                   | 16.53      | 16.78        | 18.00            |
|                         |            | 12      | 6         | 16.50                   | 16.54      | 16.60        | 18.00            |
|                         |            | 12      | 13        | 16.47                   | 16.53      | 16.50        | 18.00            |
|                         |            | 25      | 0         | 16.54                   | 16.59      | 16.58        | 18.00            |
|                         | 16QAM      | 1       | 0         | 16.54                   | 16.31      | 16.26        | 18.00            |
|                         |            | 1       | 13        | 16.52                   | 16.63      | 16.62        | 18.00            |
|                         |            | 1       | 24        | 16.08                   | 16.02      | 16.04        | 18.00            |
|                         |            | 12      | 0         | 16.80                   | 16.19      | 16.68        | 18.00            |
|                         |            | 12      | 6         | 16.55                   | 16.35      | 16.57        | 18.00            |
|                         |            | 12      | 13        | 16.46                   | 16.37      | 16.56        | 18.00            |
|                         |            | 25      | 0         | 16.59                   | 16.43      | 16.40        | 18.00            |
|                         | 64QAM      | 1       | 0         | 16.28                   | 16.16      | 16.08        | 18.00            |
|                         |            | 1       | 13        | 16.34                   | 16.36      | 16.16        | 18.00            |
|                         |            | 1       | 24        | 16.14                   | 16.00      | 16.17        | 18.00            |
|                         |            | 12      | 0         | 16.78                   | 16.61      | 16.68        | 18.00            |
|                         |            | 12      | 6         | 16.65                   | 16.71      | 16.70        | 18.00            |
|                         |            | 12      | 13        | 16.55                   | 16.58      | 16.60        | 18.00            |
|                         |            | 25      | 0         | 16.58                   | 16.61      | 16.49        | 18.00            |
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up<br>Limit |
|                         |            |         |           | 20800/2505              | 21100/2535 | 21400/2565   |                  |
| 10MHz                   | QPSK       | 1       | 0         | 16.77                   | 16.65      | 16.53        | 18.00            |
|                         |            | 1       | 25        | 16.94                   | 16.83      | 17.27        | 18.00            |
|                         |            | 1       | 49        | 16.46                   | 16.45      | 16.46        | 18.00            |



|           |            | 25      | 0         | 16.89                   | 16.58      | 16.82        | 18.00         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 25      | 13        | 16.53                   | 16.59      | 16.64        | 18.00         |
|           |            | 25      | 25        | 16.49                   | 16.57      | 16.55        | 18.00         |
|           |            | 50      | 0         | 16.58                   | 16.61      | 16.62        | 18.00         |
|           | 16QAM      | 1       | 0         | 16.56                   | 16.34      | 16.28        | 18.00         |
|           |            | 1       | 25        | 16.55                   | 16.67      | 16.65        | 18.00         |
|           |            | 1       | 49        | 16.11                   | 16.10      | 16.07        | 18.00         |
|           |            | 25      | 0         | 16.83                   | 16.24      | 16.72        | 18.00         |
|           |            | 25      | 13        | 16.57                   | 16.39      | 16.60        | 18.00         |
|           |            | 25      | 25        | 16.49                   | 16.42      | 16.60        | 18.00         |
|           |            | 50      | 0         | 16.62                   | 16.48      | 16.44        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.30                   | 16.15      | 16.10        | 18.00         |
|           |            | 1       | 25        | 16.37                   | 16.36      | 16.19        | 18.00         |
|           |            | 1       | 49        | 16.13                   | 16.02      | 16.20        | 18.00         |
|           |            | 25      | 0         | 16.81                   | 16.66      | 16.68        | 18.00         |
|           |            | 25      | 13        | 16.67                   | 16.75      | 16.73        | 18.00         |
|           |            | 25      | 25        | 16.58                   | 16.63      | 16.64        | 18.00         |
|           |            | 50      | 0         | 16.61                   | 16.66      | 16.53        | 18.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 20825/2507.5            | 21100/2535 | 21375/2562.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 16.76                   | 16.61      | 16.51        | 18.00         |
|           |            | 1       | 38        | 16.92                   | 16.82      | 17.24        | 18.00         |
|           |            | 1       | 74        | 16.43                   | 16.40      | 16.42        | 18.00         |
|           |            | 36      | 0         | 16.87                   | 16.54      | 16.79        | 18.00         |
|           |            | 36      | 18        | 16.50                   | 16.54      | 16.60        | 18.00         |
|           |            | 36      | 39        | 16.46                   | 16.54      | 16.51        | 18.00         |
|           |            | 75      | 0         | 16.56                   | 16.57      | 16.57        | 18.00         |
|           | 16QAM      | 1       | 0         | 16.51                   | 16.32      | 16.26        | 18.00         |
|           |            | 1       | 38        | 16.53                   | 16.64      | 16.63        | 18.00         |
|           |            | 1       | 74        | 16.08                   | 16.03      | 16.04        | 18.00         |
|           |            | 36      | 0         | 16.80                   | 16.22      | 16.69        | 18.00         |
|           |            | 36      | 18        | 16.54                   | 16.34      | 16.56        | 18.00         |
|           |            | 36      | 39        | 16.47                   | 16.38      | 16.57        | 18.00         |
|           |            | 75      | 0         | 16.59                   | 16.43      | 16.40        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.25                   | 16.13      | 16.08        | 18.00         |
|           |            | 1       | 38        | 16.35                   | 16.33      | 16.17        | 18.00         |
|           |            | 1       | 74        | 16.14                   | 16.01      | 16.21        | 18.00         |
|           |            | 36      | 0         | 16.80                   | 16.68      | 16.69        | 18.00         |
|           |            | 36      | 18        | 16.65                   | 16.72      | 16.72        | 18.00         |
|           |            | 36      | 39        | 16.56                   | 16.59      | 16.61        | 18.00         |
|           |            | 75      | 0         | 16.58                   | 16.61      | 16.49        | 18.00         |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            |         |           | 20850/2510              | 21100/2535   | 21350/2560   |               |
| 20MHz     | QPSK       | 1       | 0         | 16.73                   | 16.57        | 16.48        | 18.00         |
|           |            | 1       | 50        | <b>16.91</b>            | <b>16.78</b> | <b>17.22</b> | 18.00         |
|           |            | 1       | 99        | 16.41                   | 16.39        | 16.39        | 18.00         |
|           |            | 50      | 0         | <b>16.84</b>            | 16.49        | <b>16.75</b> | 18.00         |
|           |            | 50      | 25        | 16.48                   | <b>16.50</b> | 16.57        | 18.00         |
|           |            | 50      | 50        | 16.43                   | 16.49        | 16.47        | 18.00         |
|           |            | 100     | 0         | <b>16.53</b>            | 16.52        | <b>16.53</b> | 18.00         |
|           | 16QAM      | 1       | 0         | 16.13                   | 16.28        | 16.21        | 18.00         |
|           |            | 1       | 50        | 16.49                   | 16.62        | 16.59        | 18.00         |
|           |            | 1       | 99        | 16.06                   | 16.09        | 16.02        | 18.00         |
|           |            | 50      | 0         | 16.77                   | 16.18        | 16.66        | 18.00         |
|           |            | 50      | 25        | 16.51                   | 16.32        | 16.53        | 18.00         |
|           |            | 50      | 50        | 16.44                   | 16.33        | 16.53        | 18.00         |
|           |            | 100     | 0         | 16.57                   | 16.39        | 16.37        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.23                   | 16.09        | 16.03        | 18.00         |
|           |            | 1       | 50        | 16.31                   | 16.31        | 16.13        | 18.00         |
|           |            | 1       | 99        | 16.08                   | 16.03        | 16.15        | 18.00         |
|           |            | 50      | 0         | 16.75                   | 16.60        | 16.62        | 18.00         |
|           |            | 50      | 25        | 16.61                   | 16.68        | 16.66        | 18.00         |
|           |            | 50      | 50        | 16.53                   | 16.54        | 16.57        | 18.00         |
|           |            | 100     | 0         | 16.56                   | 16.57        | 16.46        | 18.00         |

| LTE FDD Band 12<br>Full Power&DSI 1&DSI 2 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|-------------------------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth                                 | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                                           |            |         |           | 23017/699.7             | 23095/707.5 | 23173/715.3 |                  |
| 1.4MHz                                    | QPSK       | 1       | 0         | 24.45                   | 24.62       | 24.38       | 25.50            |
|                                           |            | 1       | 2         | 24.57                   | 24.82       | 24.68       | 25.50            |
|                                           |            | 1       | 5         | 24.44                   | 24.60       | 24.37       | 25.50            |
|                                           |            | 3       | 0         | 24.50                   | 24.50       | 24.56       | 25.50            |
|                                           |            | 3       | 2         | 24.45                   | 24.59       | 24.42       | 25.50            |
|                                           |            | 3       | 3         | 24.31                   | 24.39       | 24.49       | 25.50            |
|                                           |            | 6       | 0         | 23.45                   | 23.45       | 23.46       | 24.50            |
|                                           | 16QAM      | 1       | 0         | 23.41                   | 23.50       | 23.40       | 24.50            |
|                                           |            | 1       | 2         | 23.40                   | 23.36       | 23.41       | 24.50            |
|                                           |            | 1       | 5         | 23.65                   | 23.65       | 23.65       | 24.50            |
|                                           |            | 3       | 0         | 23.35                   | 23.32       | 23.35       | 24.50            |
|                                           |            | 3       | 2         | 23.25                   | 23.22       | 23.25       | 24.50            |
|                                           |            | 3       | 3         | 23.31                   | 23.33       | 23.34       | 24.50            |
|                                           |            | 6       | 0         | 22.41                   | 22.43       | 22.43       | 23.50            |
|                                           | 64QAM      | 1       | 0         | 22.59                   | 22.53       | 22.56       | 23.50            |



|           |            | 1       | 2         | 22.66                   | 22.62       | 22.67       | 23.50         |
|-----------|------------|---------|-----------|-------------------------|-------------|-------------|---------------|
|           |            | 1       | 5         | 22.89                   | 22.85       | 22.89       | 23.50         |
|           |            | 3       | 0         | 22.77                   | 22.74       | 22.79       | 23.50         |
|           |            | 3       | 2         | 22.85                   | 22.82       | 22.86       | 23.50         |
|           |            | 3       | 3         | 22.54                   | 22.56       | 22.57       | 23.50         |
|           |            | 6       | 0         | 21.66                   | 21.68       | 21.68       | 22.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 23025/700.5             | 23095/707.5 | 23165/714.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 24.43                   | 24.61       | 24.35       | 25.50         |
|           |            | 1       | 7         | 24.54                   | 24.77       | 24.64       | 25.50         |
|           |            | 1       | 14        | 24.42                   | 24.56       | 24.34       | 25.50         |
|           |            | 8       | 0         | 23.47                   | 23.45       | 23.52       | 24.50         |
|           |            | 8       | 4         | 23.42                   | 23.54       | 23.38       | 24.50         |
|           |            | 8       | 7         | 23.29                   | 23.35       | 23.44       | 24.50         |
|           |            | 15      | 0         | 23.41                   | 23.43       | 23.42       | 24.50         |
|           | 16QAM      | 1       | 0         | 23.39                   | 23.47       | 23.38       | 24.50         |
|           |            | 1       | 7         | 23.37                   | 23.32       | 23.38       | 24.50         |
|           |            | 1       | 14        | 23.62                   | 23.63       | 23.62       | 24.50         |
|           |            | 8       | 0         | 22.32                   | 22.27       | 22.31       | 23.50         |
|           |            | 8       | 4         | 22.23                   | 22.18       | 22.22       | 23.50         |
|           |            | 8       | 7         | 22.28                   | 22.28       | 22.30       | 23.50         |
|           |            | 15      | 0         | 22.38                   | 22.38       | 22.39       | 23.50         |
|           | 64QAM      | 1       | 0         | 22.57                   | 22.54       | 22.54       | 23.50         |
|           |            | 1       | 7         | 22.63                   | 22.62       | 22.64       | 23.50         |
|           |            | 1       | 14        | 22.90                   | 22.83       | 22.86       | 23.50         |
|           |            | 8       | 0         | 21.74                   | 21.69       | 21.79       | 22.50         |
|           |            | 8       | 4         | 21.83                   | 21.78       | 21.83       | 22.50         |
|           |            | 8       | 7         | 21.51                   | 21.51       | 21.53       | 22.50         |
|           |            | 15      | 0         | 21.63                   | 21.63       | 21.64       | 22.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 23035/701.5             | 23095/707.5 | 23155/713.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 24.46                   | 24.63       | 24.39       | 25.50         |
|           |            | 1       | 13        | 24.56                   | 24.81       | 24.67       | 25.50         |
|           |            | 1       | 24        | 24.45                   | 24.61       | 24.38       | 25.50         |
|           |            | 12      | 0         | 23.50                   | 23.50       | 23.56       | 24.50         |
|           |            | 12      | 6         | 23.44                   | 23.58       | 23.43       | 24.50         |
|           |            | 12      | 13        | 23.31                   | 23.37       | 23.48       | 24.50         |
|           |            | 25      | 0         | 23.41                   | 23.44       | 23.44       | 24.50         |
|           | 16QAM      | 1       | 0         | 23.42                   | 23.51       | 23.41       | 24.50         |
|           |            | 1       | 13        | 23.40                   | 23.34       | 23.41       | 24.50         |
|           |            | 1       | 24        | 23.65                   | 23.65       | 23.66       | 24.50         |
|           |            | 12      | 0         | 22.34                   | 22.31       | 22.34       | 23.50         |
|           |            | 12      | 6         | 22.26                   | 22.23       | 22.26       | 23.50         |



|           |            | 12      | 13        | 22.31                   | 22.33        | 22.34        | 23.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 25      | 0         | 22.40                   | 22.42        | 22.44        | 23.50         |
|           | 64QAM      | 1       | 0         | 22.60                   | 22.54        | 22.57        | 23.50         |
|           |            | 1       | 13        | 22.66                   | 22.60        | 22.67        | 23.50         |
|           |            | 1       | 24        | 22.89                   | 22.85        | 22.90        | 23.50         |
|           |            | 12      | 0         | 21.76                   | 21.73        | 21.78        | 22.50         |
|           |            | 12      | 6         | 21.86                   | 21.83        | 21.87        | 22.50         |
|           |            | 12      | 13        | 21.54                   | 21.56        | 21.57        | 22.50         |
|           |            | 25      | 0         | 21.65                   | 21.67        | 21.69        | 22.50         |
|           |            |         |           |                         |              |              |               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 23060/704               | 23095/707.5  | 23130/711    |               |
| 10MHz     | QPSK       | 1       | 0         | 24.41                   | 24.54        | 24.33        | 25.50         |
|           |            | 1       | 25        | <b>24.54</b>            | <b>24.77</b> | <b>24.63</b> | 25.50         |
|           |            | 1       | 49        | 24.39                   | 24.54        | 24.30        | 25.50         |
|           |            | 25      | 0         | <b>23.45</b>            | 23.41        | <b>23.49</b> | 24.50         |
|           |            | 25      | 13        | 23.40                   | <b>23.50</b> | 23.35        | 24.50         |
|           |            | 25      | 25        | 23.25                   | 23.31        | 23.41        | 24.50         |
|           |            | 50      | 0         | <b>23.40</b>            | 23.36        | 23.37        | 24.50         |
|           | 16QAM      | 1       | 0         | 23.36                   | 23.44        | 23.33        | 24.50         |
|           |            | 1       | 25        | 23.34                   | 23.31        | 23.35        | 24.50         |
|           |            | 1       | 49        | 23.60                   | 23.58        | 23.60        | 24.50         |
|           |            | 25      | 0         | 22.29                   | 22.26        | 22.29        | 23.50         |
|           |            | 25      | 13        | 22.19                   | 22.15        | 22.18        | 23.50         |
|           |            | 25      | 25        | 22.26                   | 22.24        | 22.27        | 23.50         |
|           |            | 50      | 0         | 22.36                   | 22.34        | 22.36        | 23.50         |
|           | 64QAM      | 1       | 0         | 22.52                   | 22.47        | 22.49        | 23.50         |
|           |            | 1       | 25        | 22.60                   | 22.57        | 22.61        | 23.50         |
|           |            | 1       | 49        | 22.84                   | 22.78        | 22.84        | 23.50         |
|           |            | 25      | 0         | 21.71                   | 21.68        | 21.73        | 22.50         |
|           |            | 25      | 13        | 21.79                   | 21.75        | 21.79        | 22.50         |
|           |            | 25      | 25        | 21.49                   | 21.47        | 21.50        | 22.50         |
|           |            | 50      | 0         | 21.61                   | 21.59        | 21.61        | 22.50         |

| LTE FDD Band 12<br>DSI 4 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|--------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                          |            |         |           | 23017/699.7             | 23095/707.5 | 23173/715.3 |                  |
| 1.4MHz                   | QPSK       | 1       | 0         | 22.96                   | 23.08       | 23.03       | 24.00            |
|                          |            | 1       | 2         | 23.73                   | 23.36       | 23.76       | 24.00            |
|                          |            | 1       | 5         | 23.17                   | 23.20       | 22.95       | 24.00            |
|                          |            | 3       | 0         | 22.94                   | 23.00       | 22.99       | 24.00            |
|                          |            | 3       | 2         | 22.97                   | 22.99       | 23.03       | 24.00            |
|                          |            | 3       | 3         | 23.12                   | 23.03       | 23.06       | 24.00            |



|           | 16QAM      | 6       | 0         | 23.00                   | 23.10       | 23.15       | 24.50         |
|-----------|------------|---------|-----------|-------------------------|-------------|-------------|---------------|
|           |            | 1       | 0         | 22.70                   | 22.69       | 22.72       | 24.50         |
|           |            | 1       | 2         | 22.92                   | 22.86       | 22.88       | 24.50         |
|           |            | 1       | 5         | 22.78                   | 22.75       | 22.80       | 24.50         |
|           |            | 3       | 0         | 22.64                   | 22.60       | 22.62       | 24.50         |
|           |            | 3       | 2         | 22.57                   | 22.54       | 22.58       | 24.50         |
|           |            | 3       | 3         | 22.74                   | 22.68       | 22.69       | 24.50         |
|           |            | 6       | 0         | 22.65                   | 22.62       | 22.67       | 23.50         |
|           | 64QAM      | 1       | 0         | 22.41                   | 22.39       | 22.42       | 23.50         |
|           |            | 1       | 2         | 23.16                   | 23.11       | 23.13       | 23.50         |
|           |            | 1       | 5         | 22.53                   | 22.51       | 22.56       | 23.50         |
|           |            | 3       | 0         | 21.59                   | 21.55       | 21.57       | 23.50         |
|           |            | 3       | 2         | 21.69                   | 21.64       | 21.68       | 23.50         |
|           |            | 3       | 3         | 21.72                   | 21.69       | 21.70       | 23.50         |
|           |            | 6       | 0         | 21.59                   | 21.52       | 21.57       | 22.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 23025/700.5             | 23095/707.5 | 23165/714.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 22.96                   | 23.07       | 23.03       | 24.00         |
|           |            | 1       | 7         | 23.72                   | 23.38       | 23.78       | 24.00         |
|           |            | 1       | 14        | 23.16                   | 23.19       | 22.94       | 24.00         |
|           |            | 8       | 0         | 22.96                   | 23.03       | 23.03       | 24.50         |
|           |            | 8       | 4         | 22.98                   | 23.03       | 23.04       | 24.50         |
|           |            | 8       | 7         | 23.13                   | 23.07       | 23.07       | 24.50         |
|           |            | 15      | 0         | 23.03                   | 23.11       | 23.15       | 24.50         |
|           | 16QAM      | 1       | 0         | 22.67                   | 22.68       | 22.72       | 24.50         |
|           |            | 1       | 7         | 22.93                   | 22.87       | 22.90       | 24.50         |
|           |            | 1       | 14        | 22.77                   | 22.75       | 22.79       | 24.50         |
|           |            | 8       | 0         | 22.67                   | 22.63       | 22.63       | 23.50         |
|           |            | 8       | 4         | 22.58                   | 22.55       | 22.59       | 23.50         |
|           |            | 8       | 7         | 22.76                   | 22.70       | 22.73       | 23.50         |
|           |            | 15      | 0         | 22.66                   | 22.62       | 22.65       | 23.50         |
|           | 64QAM      | 1       | 0         | 22.38                   | 22.38       | 22.42       | 23.50         |
|           |            | 1       | 7         | 23.17                   | 23.12       | 23.15       | 23.50         |
|           |            | 1       | 14        | 22.52                   | 22.51       | 22.55       | 23.50         |
|           |            | 8       | 0         | 21.62                   | 21.58       | 21.58       | 22.50         |
|           |            | 8       | 4         | 21.70                   | 21.65       | 21.69       | 22.50         |
|           |            | 8       | 7         | 21.74                   | 21.71       | 21.74       | 22.50         |
|           |            | 15      | 0         | 21.59                   | 21.54       | 21.57       | 22.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 23035/701.5             | 23095/707.5 | 23155/713.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 22.95                   | 23.10       | 23.02       | 24.00         |
|           |            | 1       | 13        | 23.71                   | 23.34       | 23.77       | 24.00         |
|           |            | 1       | 24        | 23.17                   | 23.20       | 22.95       | 24.00         |



|           |            | 12      | 0         | 22.95                   | 23.02        | 23.02        | 24.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 12      | 6         | 22.98                   | 23.03        | 23.04        | 24.50         |
|           |            | 12      | 13        | 23.14                   | 23.06        | 23.06        | 24.50         |
|           |            | 25      | 0         | 23.00                   | 23.13        | 23.16        | 24.50         |
|           | 16QAM      | 1       | 0         | 22.70                   | 22.67        | 22.72        | 24.50         |
|           |            | 1       | 13        | 22.92                   | 22.86        | 22.89        | 24.50         |
|           |            | 1       | 24        | 22.77                   | 22.77        | 22.79        | 24.50         |
|           |            | 12      | 0         | 22.67                   | 22.60        | 22.62        | 23.50         |
|           |            | 12      | 6         | 22.59                   | 22.56        | 22.60        | 23.50         |
|           |            | 12      | 13        | 22.75                   | 22.69        | 22.72        | 23.50         |
|           |            | 25      | 0         | 22.66                   | 22.62        | 22.65        | 23.50         |
|           | 64QAM      | 1       | 0         | 22.41                   | 22.37        | 22.42        | 23.50         |
|           |            | 1       | 13        | 23.16                   | 23.11        | 23.14        | 23.50         |
|           |            | 1       | 24        | 22.52                   | 22.53        | 22.55        | 23.50         |
|           |            | 12      | 0         | 21.62                   | 21.55        | 21.57        | 22.50         |
|           |            | 12      | 6         | 21.71                   | 21.66        | 21.70        | 22.50         |
|           |            | 12      | 13        | 21.73                   | 21.70        | 21.73        | 22.50         |
|           |            | 25      | 0         | 21.59                   | 21.54        | 21.57        | 22.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 23060/704               | 23095/707.5  | 23130/711    |               |
| 10MHz     | QPSK       | 1       | 0         | 22.93                   | 23.03        | 23.00        | 24.00         |
|           |            | 1       | 25        | <b>23.71</b>            | <b>23.34</b> | <b>23.76</b> | 24.00         |
|           |            | 1       | 49        | 23.14                   | 23.18        | 22.91        | 24.00         |
|           |            | 25      | 0         | 22.93                   | 22.98        | 22.99        | 24.50         |
|           |            | 25      | 13        | 22.96                   | 22.99        | 23.01        | 24.50         |
|           |            | 25      | 25        | <b>23.10</b>            | <b>23.02</b> | <b>23.03</b> | 24.50         |
|           |            | 50      | 0         | 23.00                   | 23.06        | <b>23.11</b> | 24.50         |
|           | 16QAM      | 1       | 0         | 22.65                   | 22.64        | 22.67        | 24.50         |
|           |            | 1       | 25        | 22.89                   | 22.85        | 22.86        | 24.50         |
|           |            | 1       | 49        | 22.75                   | 22.72        | 22.77        | 24.50         |
|           |            | 25      | 0         | 22.64                   | 22.59        | 22.60        | 23.50         |
|           |            | 25      | 13        | 22.55                   | 22.53        | 22.56        | 23.50         |
|           |            | 25      | 25        | 22.73                   | 22.65        | 22.69        | 23.50         |
|           |            | 50      | 0         | 22.64                   | 22.58        | 22.62        | 23.50         |
|           | 64QAM      | 1       | 0         | 22.36                   | 22.34        | 22.37        | 23.50         |
|           |            | 1       | 25        | 23.13                   | 23.10        | 23.11        | 23.50         |
|           |            | 1       | 49        | 22.50                   | 22.48        | 22.53        | 23.50         |
|           |            | 25      | 0         | 21.59                   | 21.54        | 21.55        | 22.50         |
|           |            | 25      | 13        | 21.67                   | 21.63        | 21.66        | 22.50         |
|           |            | 25      | 25        | 21.71                   | 21.66        | 21.70        | 22.50         |
|           |            | 50      | 0         | 21.57                   | 21.50        | 21.54        | 22.50         |



| LTE FDD Band 13<br>Full Power&DSI 1&DSI 2&DSI 4 |            |         |           | Conducted Power(dBm)    |              |             | Tune-up<br>Limit |
|-------------------------------------------------|------------|---------|-----------|-------------------------|--------------|-------------|------------------|
| Bandwidth                                       | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |             |                  |
|                                                 |            |         |           | 23205/779.5             | 23230/782    | 23255/784.5 |                  |
| 5MHz                                            | QPSK       | 1       | 0         | 23.17                   | 23.15        | 23.12       | 24.50            |
|                                                 |            | 1       | 13        | 23.43                   | 23.39        | 23.43       | 24.50            |
|                                                 |            | 1       | 24        | 23.33                   | 23.28        | 23.27       | 24.50            |
|                                                 |            | 12      | 0         | 22.37                   | 22.32        | 22.33       | 23.50            |
|                                                 |            | 12      | 6         | 22.20                   | 22.16        | 22.16       | 23.50            |
|                                                 |            | 12      | 13        | 22.17                   | 22.15        | 22.16       | 23.50            |
|                                                 |            | 25      | 0         | 22.26                   | 22.25        | 22.23       | 23.50            |
|                                                 | 16QAM      | 1       | 0         | 21.98                   | 21.94        | 21.95       | 23.50            |
|                                                 |            | 1       | 13        | 22.14                   | 22.12        | 22.13       | 23.50            |
|                                                 |            | 1       | 24        | 22.17                   | 22.15        | 22.13       | 23.50            |
|                                                 |            | 12      | 0         | 21.23                   | 21.19        | 21.22       | 22.50            |
|                                                 |            | 12      | 6         | 21.14                   | 21.09        | 21.08       | 22.50            |
|                                                 |            | 12      | 13        | 21.23                   | 21.18        | 21.19       | 22.50            |
|                                                 |            | 25      | 0         | 21.28                   | 21.24        | 21.24       | 22.50            |
|                                                 | 64QAM      | 1       | 0         | 20.66                   | 20.62        | 20.63       | 22.50            |
|                                                 |            | 1       | 13        | 21.24                   | 21.22        | 21.23       | 22.50            |
|                                                 |            | 1       | 24        | 20.70                   | 20.68        | 20.66       | 22.50            |
|                                                 |            | 12      | 0         | 20.15                   | 20.11        | 20.14       | 21.50            |
|                                                 |            | 12      | 6         | 20.19                   | 20.14        | 20.13       | 21.50            |
|                                                 |            | 12      | 13        | 20.28                   | 20.23        | 20.24       | 21.50            |
|                                                 |            | 25      | 0         | 20.33                   | 20.29        | 20.29       | 21.50            |
| Bandwidth                                       | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |             | Tune-up<br>Limit |
|                                                 |            |         |           | /                       | 23230/782    | /           |                  |
| 10MHz                                           | QPSK       | 1       | 0         | /                       | 23.08        | /           | 24.50            |
|                                                 |            | 1       | 25        | /                       | <b>23.39</b> | /           | 24.50            |
|                                                 |            | 1       | 49        | /                       | 23.26        | /           | 24.50            |
|                                                 |            | 25      | 0         | /                       | <b>22.28</b> | /           | 23.50            |
|                                                 |            | 25      | 13        | /                       | 22.12        | /           | 23.50            |
|                                                 |            | 25      | 25        | /                       | 22.11        | /           | 23.50            |
|                                                 |            | 50      | 0         | /                       | <b>22.18</b> | /           | 23.50            |
|                                                 | 16QAM      | 1       | 0         | /                       | 21.91        | /           | 23.50            |
|                                                 |            | 1       | 25        | /                       | 22.11        | /           | 23.50            |
|                                                 |            | 1       | 49        | /                       | 22.10        | /           | 23.50            |
|                                                 |            | 25      | 0         | /                       | 21.18        | /           | 22.50            |
|                                                 |            | 25      | 13        | /                       | 21.06        | /           | 22.50            |
|                                                 |            | 25      | 25        | /                       | 21.14        | /           | 22.50            |
|                                                 |            | 50      | 0         | /                       | 21.20        | /           | 22.50            |
|                                                 | 64QAM      | 1       | 0         | /                       | 20.59        | /           | 22.50            |
| 1                                               |            | 25      | /         | 21.21                   | /            | 22.50       |                  |



|  |  |    |    |   |       |   |       |
|--|--|----|----|---|-------|---|-------|
|  |  | 1  | 49 | / | 20.63 | / | 22.50 |
|  |  | 25 | 0  | / | 20.10 | / | 21.50 |
|  |  | 25 | 13 | / | 20.11 | / | 21.50 |
|  |  | 25 | 25 | / | 20.19 | / | 21.50 |
|  |  | 50 | 0  | / | 20.25 | / | 21.50 |

| LTE FDD Band 17<br>Full Power&DSI 1&DSI 2 |            |         |           | Conducted Power(dBm)    |           |             | Tune-up<br>Limit |
|-------------------------------------------|------------|---------|-----------|-------------------------|-----------|-------------|------------------|
| Bandwidth                                 | Modulation | RB size | RB offset | Channel/Frequency (MHz) |           |             |                  |
|                                           |            |         |           | 23755/706.5             | 23790/710 | 23825/713.5 |                  |
| 5MHz                                      | QPSK       | 1       | 0         | 24.46                   | 24.41     | 24.29       | 25.50            |
|                                           |            | 1       | 13        | 24.63                   | 24.58     | 24.62       | 25.50            |
|                                           |            | 1       | 24        | 24.48                   | 24.34     | 24.32       | 25.50            |
|                                           |            | 12      | 0         | 23.43                   | 23.43     | 23.34       | 24.50            |
|                                           |            | 12      | 6         | 23.47                   | 23.45     | 23.41       | 24.50            |
|                                           |            | 12      | 13        | 23.45                   | 23.44     | 23.39       | 24.50            |
|                                           |            | 25      | 0         | 23.36                   | 23.39     | 23.37       | 24.50            |
|                                           | 16QAM      | 1       | 0         | 23.24                   | 23.57     | 23.64       | 24.50            |
|                                           |            | 1       | 13        | 23.22                   | 23.18     | 23.26       | 24.50            |
|                                           |            | 1       | 24        | 23.17                   | 23.14     | 23.20       | 24.50            |
|                                           |            | 12      | 0         | 22.32                   | 22.31     | 22.37       | 23.50            |
|                                           |            | 12      | 6         | 22.64                   | 22.62     | 22.69       | 23.50            |
|                                           |            | 12      | 13        | 22.31                   | 22.31     | 22.38       | 23.50            |
|                                           |            | 25      | 0         | 22.43                   | 22.43     | 22.52       | 23.50            |
|                                           | 64QAM      | 1       | 0         | 22.29                   | 22.21     | 22.28       | 23.50            |
|                                           |            | 1       | 13        | 22.37                   | 22.29     | 22.37       | 23.50            |
|                                           |            | 1       | 24        | 22.21                   | 22.18     | 22.24       | 23.50            |
|                                           |            | 12      | 0         | 21.16                   | 21.15     | 21.21       | 22.50            |
|                                           |            | 12      | 6         | 21.43                   | 21.41     | 21.48       | 22.50            |
|                                           |            | 12      | 13        | 21.27                   | 21.27     | 21.34       | 22.50            |
|                                           |            | 25      | 0         | 21.30                   | 21.30     | 21.39       | 22.50            |
| Bandwidth                                 | Modulation | RB size | RB offset | Channel/Frequency (MHz) |           |             | Tune-up<br>Limit |
|                                           |            |         |           | 23780/709               | 23790/710 | 23800/711   |                  |
| 10MHz                                     | QPSK       | 1       | 0         | 24.41                   | 24.32     | 24.23       | 25.50            |
|                                           |            | 1       | 25        | 24.61                   | 24.54     | 24.58       | 25.50            |
|                                           |            | 1       | 49        | 24.42                   | 24.27     | 24.24       | 25.50            |
|                                           |            | 25      | 0         | 23.38                   | 23.34     | 23.27       | 24.50            |
|                                           |            | 25      | 13        | 23.43                   | 23.37     | 23.33       | 24.50            |
|                                           |            | 25      | 25        | 23.39                   | 23.38     | 23.32       | 24.50            |
|                                           |            | 50      | 0         | 23.35                   | 23.31     | 23.30       | 24.50            |
|                                           | 16QAM      | 1       | 0         | 23.53                   | 23.50     | 23.56       | 24.50            |
|                                           |            | 1       | 25        | 23.16                   | 23.15     | 23.20       | 24.50            |
| 1                                         |            | 49      | 23.12     | 23.07                   | 23.14     | 24.50       |                  |



|  |       |    |    |       |       |       |       |
|--|-------|----|----|-------|-------|-------|-------|
|  |       | 25 | 0  | 22.27 | 22.26 | 22.32 | 23.50 |
|  |       | 25 | 13 | 22.57 | 22.54 | 22.61 | 23.50 |
|  |       | 25 | 25 | 22.26 | 22.22 | 22.31 | 23.50 |
|  |       | 50 | 0  | 22.39 | 22.35 | 22.44 | 23.50 |
|  | 64QAM | 1  | 0  | 22.21 | 22.14 | 22.20 | 23.50 |
|  |       | 1  | 25 | 22.31 | 22.26 | 22.31 | 23.50 |
|  |       | 1  | 49 | 22.16 | 22.11 | 22.18 | 23.50 |
|  |       | 25 | 0  | 21.11 | 21.10 | 21.16 | 22.50 |
|  |       | 25 | 13 | 21.36 | 21.33 | 21.40 | 22.50 |
|  |       | 25 | 25 | 21.22 | 21.18 | 21.27 | 22.50 |
|  |       | 50 | 0  | 21.26 | 21.22 | 21.31 | 22.50 |

| LTE FDD Band 17<br>DSI 4 |            |         |           | Conducted Power(dBm)    |           |             | Tune-up<br>Limit |
|--------------------------|------------|---------|-----------|-------------------------|-----------|-------------|------------------|
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |           |             |                  |
|                          |            |         |           | 23755/706.5             | 23790/710 | 23825/713.5 |                  |
| 5MHz                     | QPSK       | 1       | 0         | 22.89                   | 22.76     | 22.62       | 24.00            |
|                          |            | 1       | 13        | 23.02                   | 23.18     | 22.96       | 24.00            |
|                          |            | 1       | 24        | 22.82                   | 22.90     | 22.89       | 24.00            |
|                          |            | 12      | 0         | 22.87                   | 22.74     | 22.82       | 24.50            |
|                          |            | 12      | 6         | 22.78                   | 22.89     | 22.75       | 24.50            |
|                          |            | 12      | 13        | 22.80                   | 22.81     | 22.80       | 24.50            |
|                          |            | 25      | 0         | 22.84                   | 22.80     | 22.79       | 24.50            |
|                          | 16QAM      | 1       | 0         | 22.99                   | 22.93     | 22.99       | 24.50            |
|                          |            | 1       | 13        | 23.01                   | 22.93     | 22.98       | 24.50            |
|                          |            | 1       | 24        | 22.84                   | 22.80     | 22.82       | 24.50            |
|                          |            | 12      | 0         | 22.36                   | 22.32     | 22.31       | 23.50            |
|                          |            | 12      | 6         | 22.41                   | 22.33     | 22.36       | 23.50            |
|                          |            | 12      | 13        | 22.25                   | 22.22     | 22.22       | 23.50            |
|                          |            | 25      | 0         | 22.41                   | 22.39     | 22.39       | 23.50            |
|                          | 64QAM      | 1       | 0         | 22.31                   | 22.25     | 22.31       | 23.50            |
|                          |            | 1       | 13        | 22.35                   | 22.27     | 22.32       | 23.50            |
|                          |            | 1       | 24        | 22.40                   | 22.36     | 22.38       | 23.50            |
|                          |            | 12      | 0         | 21.06                   | 21.02     | 21.01       | 22.50            |
|                          |            | 12      | 6         | 21.11                   | 21.03     | 21.06       | 22.50            |
|                          |            | 12      | 13        | 21.19                   | 21.16     | 21.16       | 22.50            |
|                          |            | 25      | 0         | 21.21                   | 21.19     | 21.20       | 22.50            |
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |           |             | Tune-up<br>Limit |
|                          |            |         |           | 23780/709               | 23790/710 | 23800/711   |                  |
| 10MHz                    | QPSK       | 1       | 0         | 22.86                   | 22.72     | 22.59       | 24.00            |
|                          |            | 1       | 25        | 23.01                   | 23.14     | 22.94       | 24.00            |
|                          |            | 1       | 49        | 22.80                   | 22.89     | 22.86       | 24.00            |
|                          |            | 25      | 0         | 22.84                   | 22.69     | 22.78       | 24.50            |



|  |       |    |    |              |              |       |       |
|--|-------|----|----|--------------|--------------|-------|-------|
|  |       | 25 | 13 | 22.76        | <b>22.85</b> | 22.72 | 24.50 |
|  |       | 25 | 25 | 22.77        | 22.76        | 22.76 | 24.50 |
|  |       | 50 | 0  | <b>22.81</b> | 22.75        | 22.75 | 24.50 |
|  | 16QAM | 1  | 0  | 22.97        | 22.89        | 22.94 | 24.50 |
|  |       | 1  | 25 | 22.97        | 22.91        | 22.94 | 24.50 |
|  |       | 1  | 49 | 22.82        | 22.77        | 22.80 | 24.50 |
|  |       | 25 | 0  | 22.33        | 22.28        | 22.28 | 23.50 |
|  |       | 25 | 13 | 22.38        | 22.31        | 22.33 | 23.50 |
|  |       | 25 | 25 | 22.22        | 22.17        | 22.18 | 23.50 |
|  |       | 50 | 0  | 22.39        | 22.35        | 22.36 | 23.50 |
|  | 64QAM | 1  | 0  | 22.29        | 22.21        | 22.26 | 23.50 |
|  |       | 1  | 25 | 22.31        | 22.25        | 22.28 | 23.50 |
|  |       | 1  | 49 | 22.38        | 22.33        | 22.36 | 23.50 |
|  |       | 25 | 0  | 21.03        | 20.98        | 20.98 | 22.50 |
|  |       | 25 | 13 | 21.08        | 21.01        | 21.03 | 22.50 |
|  |       | 25 | 25 | 21.16        | 21.11        | 21.12 | 22.50 |
|  |       | 50 | 0  | 21.19        | 21.15        | 21.17 | 22.50 |

| LTE FDD Band 26<br>Full Power&DSI 1&DSI 2&DSI 4 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|-------------------------------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth                                       | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                                                 |            |         |           | 26697/814.7             | 26865/831.5 | 27033/848.3 |                  |
| 1.4MHz                                          | QPSK       | 1       | 0         | 23.24                   | 23.42       | 23.17       | 24.50            |
|                                                 |            | 1       | 2         | 23.39                   | 23.44       | 23.31       | 24.50            |
|                                                 |            | 1       | 5         | 23.41                   | 23.47       | 23.29       | 24.50            |
|                                                 |            | 3       | 0         | 23.14                   | 23.23       | 23.19       | 24.50            |
|                                                 |            | 3       | 2         | 23.09                   | 23.29       | 23.14       | 24.50            |
|                                                 |            | 3       | 3         | 23.12                   | 23.14       | 23.12       | 24.50            |
|                                                 |            | 6       | 0         | 22.20                   | 22.26       | 22.25       | 23.50            |
|                                                 | 16QAM      | 1       | 0         | 22.42                   | 22.50       | 22.35       | 23.50            |
|                                                 |            | 1       | 2         | 22.40                   | 22.44       | 22.33       | 23.50            |
|                                                 |            | 1       | 5         | 22.63                   | 22.71       | 22.58       | 23.50            |
|                                                 |            | 3       | 0         | 22.10                   | 22.15       | 22.04       | 23.50            |
|                                                 |            | 3       | 2         | 22.20                   | 22.27       | 22.13       | 23.50            |
|                                                 |            | 3       | 3         | 22.07                   | 22.16       | 22.01       | 23.50            |
|                                                 |            | 6       | 0         | 21.38                   | 21.48       | 21.38       | 22.50            |
|                                                 | 64QAM      | 1       | 0         | 21.39                   | 21.47       | 21.31       | 22.50            |
|                                                 |            | 1       | 2         | 21.30                   | 21.36       | 21.25       | 22.50            |
|                                                 |            | 1       | 5         | 21.48                   | 21.59       | 21.43       | 22.50            |
|                                                 |            | 3       | 0         | 21.31                   | 21.34       | 21.25       | 22.50            |
|                                                 |            | 3       | 2         | 21.38                   | 21.45       | 21.31       | 22.50            |
|                                                 |            | 3       | 3         | 21.53                   | 21.62       | 21.47       | 22.50            |
|                                                 |            | 6       | 0         | 20.45                   | 20.56       | 20.45       | 21.50            |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|-------------|-------------|---------------|
|           |            |         |           | 26705/815.5             | 26865/831.5 | 27025/847.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 23.26                   | 23.46       | 23.20       | 24.50         |
|           |            | 1       | 7         | 23.37                   | 23.47       | 23.35       | 24.50         |
|           |            | 1       | 14        | 23.44                   | 23.52       | 23.33       | 24.50         |
|           |            | 8       | 0         | 22.24                   | 22.35       | 22.32       | 23.50         |
|           |            | 8       | 4         | 22.21                   | 22.39       | 22.26       | 23.50         |
|           |            | 8       | 7         | 22.22                   | 22.25       | 22.22       | 23.50         |
|           |            | 15      | 0         | 22.20                   | 22.30       | 22.28       | 23.50         |
|           | 16QAM      | 1       | 0         | 22.45                   | 22.52       | 22.38       | 23.50         |
|           |            | 1       | 7         | 22.43                   | 22.44       | 22.37       | 23.50         |
|           |            | 1       | 14        | 22.65                   | 22.75       | 22.61       | 23.50         |
|           |            | 8       | 0         | 21.21                   | 21.28       | 21.16       | 22.50         |
|           |            | 8       | 4         | 21.31                   | 21.40       | 21.25       | 22.50         |
|           |            | 8       | 7         | 21.17                   | 21.28       | 21.14       | 22.50         |
|           |            | 15      | 0         | 21.41                   | 21.52       | 21.41       | 22.50         |
|           | 64QAM      | 1       | 0         | 21.42                   | 21.49       | 21.34       | 22.50         |
|           |            | 1       | 7         | 21.33                   | 21.36       | 21.27       | 22.50         |
|           |            | 1       | 14        | 21.50                   | 21.58       | 21.46       | 22.50         |
|           |            | 8       | 0         | 20.42                   | 20.47       | 20.37       | 21.50         |
|           |            | 8       | 4         | 20.49                   | 20.58       | 20.43       | 21.50         |
|           |            | 8       | 7         | 20.63                   | 20.74       | 20.60       | 21.50         |
|           |            | 15      | 0         | 20.48                   | 20.60       | 20.48       | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 26715/816.5             | 26865/831.5 | 27015/846.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 23.23                   | 23.44       | 23.16       | 24.50         |
|           |            | 1       | 13        | 23.35                   | 23.43       | 23.32       | 24.50         |
|           |            | 1       | 24        | 23.41                   | 23.47       | 23.29       | 24.50         |
|           |            | 12      | 0         | 22.21                   | 22.30       | 22.28       | 23.50         |
|           |            | 12      | 6         | 22.19                   | 22.35       | 22.21       | 23.50         |
|           |            | 12      | 13        | 22.20                   | 22.23       | 22.18       | 23.50         |
|           |            | 25      | 0         | 22.20                   | 22.29       | 22.26       | 23.50         |
|           | 16QAM      | 1       | 0         | 22.42                   | 22.48       | 22.35       | 23.50         |
|           |            | 1       | 13        | 22.40                   | 22.42       | 22.34       | 23.50         |
|           |            | 1       | 24        | 22.62                   | 22.73       | 22.57       | 23.50         |
|           |            | 12      | 0         | 21.19                   | 21.24       | 21.13       | 22.50         |
|           |            | 12      | 6         | 21.28                   | 21.35       | 21.21       | 22.50         |
|           |            | 12      | 13        | 21.14                   | 21.23       | 21.10       | 22.50         |
|           |            | 25      | 0         | 21.39                   | 21.48       | 21.36       | 22.50         |
|           | 64QAM      | 1       | 0         | 21.39                   | 21.49       | 21.31       | 22.50         |
|           |            | 1       | 13        | 21.30                   | 21.38       | 21.24       | 22.50         |
|           |            | 1       | 24        | 21.51                   | 21.56       | 21.42       | 22.50         |
|           |            | 12      | 0         | 20.40                   | 20.43       | 20.38       | 21.50         |



|           |            | 12      | 6         | 20.46                   | 20.53        | 20.39        | 21.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 12      | 13        | 20.60                   | 20.69        | 20.56        | 21.50         |
|           |            | 25      | 0         | 20.46                   | 20.56        | 20.43        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 26750/820               | 26865/831.5  | 26990/844    |               |
| 10MHz     | QPSK       | 1       | 0         | 23.24                   | 23.41        | 23.17        | 24.50         |
|           |            | 1       | 25        | 23.36                   | 23.47        | 23.33        | 24.50         |
|           |            | 1       | 49        | 23.40                   | 23.46        | 23.28        | 24.50         |
|           |            | 25      | 0         | 22.22                   | 22.31        | 22.29        | 23.50         |
|           |            | 25      | 13        | 22.19                   | 22.35        | 22.21        | 23.50         |
|           |            | 25      | 25        | 22.19                   | 22.24        | 22.19        | 23.50         |
|           |            | 50      | 0         | 22.22                   | 22.27        | 22.25        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.39                   | 22.49        | 22.35        | 23.50         |
|           |            | 1       | 25        | 22.41                   | 22.43        | 22.35        | 23.50         |
|           |            | 1       | 49        | 22.62                   | 22.71        | 22.57        | 23.50         |
|           |            | 25      | 0         | 21.19                   | 21.27        | 21.14        | 22.50         |
|           |            | 25      | 13        | 21.27                   | 21.34        | 21.20        | 22.50         |
|           |            | 25      | 25        | 21.15                   | 21.24        | 21.11        | 22.50         |
|           |            | 50      | 0         | 21.39                   | 21.48        | 21.36        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.36                   | 21.46        | 21.31        | 22.50         |
|           |            | 1       | 25        | 21.31                   | 21.35        | 21.25        | 22.50         |
|           |            | 1       | 49        | 21.51                   | 21.57        | 21.46        | 22.50         |
|           |            | 25      | 0         | 20.42                   | 20.50        | 20.39        | 21.50         |
|           |            | 25      | 13        | 20.46                   | 20.54        | 20.41        | 21.50         |
|           |            | 25      | 25        | 20.61                   | 20.70        | 20.57        | 21.50         |
|           |            | 50      | 0         | 20.46                   | 20.56        | 20.43        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 26775/822.5             | 26865/831.5  | 26965/841.5  |               |
| 15MHz     | QPSK       | 1       | 0         | 23.21                   | 23.37        | 23.14        | 24.50         |
|           |            | 1       | 38        | 23.35                   | 23.43        | <b>23.31</b> | 24.50         |
|           |            | 1       | 74        | <b>23.38</b>            | <b>23.45</b> | 23.25        | 24.50         |
|           |            | 36      | 0         | <b>22.19</b>            | 22.26        | <b>22.25</b> | 23.50         |
|           |            | 36      | 18        | 22.17                   | <b>22.31</b> | 22.18        | 23.50         |
|           |            | 36      | 39        | 22.16                   | 22.19        | 22.15        | 23.50         |
|           |            | 75      | 0         | 22.19                   | <b>22.22</b> | 22.21        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.39                   | 22.45        | 22.30        | 23.50         |
|           |            | 1       | 38        | 22.37                   | 22.41        | 22.31        | 23.50         |
|           |            | 1       | 74        | 22.60                   | 22.68        | 22.55        | 23.50         |
|           |            | 36      | 0         | 21.16                   | 21.23        | 21.11        | 22.50         |
|           |            | 36      | 18        | 21.24                   | 21.32        | 21.17        | 22.50         |
|           |            | 36      | 39        | 21.12                   | 21.19        | 21.07        | 22.50         |
|           |            | 75      | 0         | 21.37                   | 21.44        | 21.33        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.34                   | 21.42        | 21.26        | 22.50         |



|  |  |    |    |       |       |       |       |
|--|--|----|----|-------|-------|-------|-------|
|  |  | 1  | 38 | 21.27 | 21.33 | 21.21 | 22.50 |
|  |  | 1  | 74 | 21.45 | 21.51 | 21.40 | 22.50 |
|  |  | 36 | 0  | 20.37 | 20.42 | 20.32 | 21.50 |
|  |  | 36 | 18 | 20.42 | 20.50 | 20.35 | 21.50 |
|  |  | 36 | 39 | 20.58 | 20.65 | 20.53 | 21.50 |
|  |  | 75 | 0  | 20.44 | 20.52 | 20.40 | 21.50 |

| LTE TDD Band 38<br>Full power& DSI 1& DSI 2 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|---------------------------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth                                   | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                                             |            |         |           | 37775/2572.5            | 38000/2595 | 38225/2617.5 |                  |
| 5MHz                                        | QPSK       | 1       | 0         | 23.17                   | 23.08      | 23.12        | 24.50            |
|                                             |            | 1       | 13        | 23.65                   | 23.32      | 23.63        | 24.50            |
|                                             |            | 1       | 24        | 23.13                   | 23.03      | 23.25        | 24.50            |
|                                             |            | 12      | 0         | 22.30                   | 22.05      | 22.33        | 23.50            |
|                                             |            | 12      | 6         | 22.02                   | 22.15      | 22.08        | 23.50            |
|                                             |            | 12      | 13        | 21.97                   | 22.14      | 21.83        | 23.50            |
|                                             |            | 25      | 0         | 21.93                   | 22.19      | 21.93        | 23.50            |
|                                             | 16QAM      | 1       | 0         | 22.24                   | 22.29      | 22.20        | 23.50            |
|                                             |            | 1       | 13        | 22.22                   | 21.87      | 22.32        | 23.50            |
|                                             |            | 1       | 24        | 22.01                   | 22.39      | 21.83        | 23.50            |
|                                             |            | 12      | 0         | 21.15                   | 20.91      | 21.09        | 22.50            |
|                                             |            | 12      | 6         | 21.09                   | 21.13      | 21.05        | 22.50            |
|                                             |            | 12      | 13        | 20.94                   | 21.16      | 20.83        | 22.50            |
|                                             |            | 25      | 0         | 20.97                   | 21.08      | 20.99        | 22.50            |
|                                             | 64QAM      | 1       | 0         | 20.98                   | 20.99      | 21.10        | 22.50            |
|                                             |            | 1       | 13        | 21.21                   | 21.28      | 21.23        | 22.50            |
|                                             |            | 1       | 24        | 21.08                   | 21.04      | 20.91        | 22.50            |
|                                             |            | 12      | 0         | 20.20                   | 20.20      | 20.17        | 21.50            |
|                                             |            | 12      | 6         | 20.09                   | 20.14      | 20.14        | 21.50            |
|                                             |            | 12      | 13        | 20.00                   | 19.98      | 19.85        | 21.50            |
|                                             |            | 25      | 0         | 20.07                   | 19.99      | 20.13        | 21.50            |
| Bandwidth                                   | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up<br>Limit |
|                                             |            |         |           | 37800/2575              | 38000/2595 | 38200/2615   |                  |
| 10MHz                                       | QPSK       | 1       | 0         | 23.19                   | 23.09      | 23.15        | 24.50            |
|                                             |            | 1       | 25        | 23.68                   | 23.37      | 23.67        | 24.50            |
|                                             |            | 1       | 49        | 23.15                   | 23.07      | 23.28        | 24.50            |
|                                             |            | 25      | 0         | 22.33                   | 22.10      | 22.37        | 23.50            |
|                                             |            | 25      | 13        | 22.05                   | 22.20      | 22.12        | 23.50            |
|                                             |            | 25      | 25        | 21.99                   | 22.18      | 21.88        | 23.50            |
|                                             |            | 50      | 0         | 21.97                   | 22.21      | 21.97        | 23.50            |
|                                             | 16QAM      | 1       | 0         | 22.26                   | 22.32      | 22.22        | 23.50            |
|                                             |            | 1       | 25        | 22.25                   | 21.91      | 22.35        | 23.50            |



|           |            | 1       | 49        | 22.04                   | 22.41        | 21.86        | 23.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 25      | 0         | 21.18                   | 20.96        | 21.13        | 22.50         |
|           |            | 25      | 13        | 21.11                   | 21.17        | 21.08        | 22.50         |
|           |            | 25      | 25        | 20.97                   | 21.21        | 20.87        | 22.50         |
|           |            | 50      | 0         | 21.00                   | 21.13        | 21.03        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.00                   | 20.98        | 21.12        | 22.50         |
|           |            | 1       | 25        | 21.24                   | 21.28        | 21.26        | 22.50         |
|           |            | 1       | 49        | 21.07                   | 21.06        | 20.94        | 22.50         |
|           |            | 25      | 0         | 20.23                   | 20.25        | 20.17        | 21.50         |
|           |            | 25      | 13        | 20.11                   | 20.18        | 20.17        | 21.50         |
|           |            | 25      | 25        | 20.03                   | 20.03        | 19.89        | 21.50         |
|           |            | 50      | 0         | 20.10                   | 20.04        | 20.17        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 37825/2577.5            | 38000/2595   | 38175/2612.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 23.18                   | 23.05        | 23.13        | 24.50         |
|           |            | 1       | 38        | 23.66                   | 23.36        | 23.64        | 24.50         |
|           |            | 1       | 74        | 23.12                   | 23.02        | 23.24        | 24.50         |
|           |            | 36      | 0         | 22.31                   | 22.06        | 22.34        | 23.50         |
|           |            | 36      | 18        | 22.02                   | 22.15        | 22.08        | 23.50         |
|           |            | 36      | 39        | 21.96                   | 22.15        | 21.84        | 23.50         |
|           |            | 75      | 0         | 21.95                   | 22.17        | 21.92        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.21                   | 22.30        | 22.20        | 23.50         |
|           |            | 1       | 38        | 22.23                   | 21.88        | 22.33        | 23.50         |
|           |            | 1       | 74        | 22.01                   | 22.37        | 21.83        | 23.50         |
|           |            | 36      | 0         | 21.15                   | 20.94        | 21.10        | 22.50         |
|           |            | 36      | 18        | 21.08                   | 21.12        | 21.04        | 22.50         |
|           |            | 36      | 39        | 20.95                   | 21.17        | 20.84        | 22.50         |
|           |            | 75      | 0         | 20.97                   | 21.08        | 20.99        | 22.50         |
|           | 64QAM      | 1       | 0         | 20.95                   | 20.96        | 21.10        | 22.50         |
|           |            | 1       | 38        | 21.22                   | 21.25        | 21.24        | 22.50         |
|           |            | 1       | 74        | 21.08                   | 21.05        | 20.95        | 22.50         |
|           |            | 36      | 0         | 20.22                   | 20.27        | 20.18        | 21.50         |
|           |            | 36      | 18        | 20.09                   | 20.15        | 20.16        | 21.50         |
|           |            | 36      | 39        | 20.01                   | 19.99        | 19.86        | 21.50         |
|           |            | 75      | 0         | 20.07                   | 19.99        | 20.13        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 37850/2580              | 38000/2595   | 38150/2610   |               |
| 20MHz     | QPSK       | 1       | 0         | 23.15                   | 23.01        | 23.10        | 24.50         |
|           |            | 1       | 50        | <b>23.65</b>            | <b>23.32</b> | <b>23.62</b> | 24.50         |
|           |            | 1       | 99        | 23.10                   | 23.01        | 23.21        | 24.50         |
|           |            | 50      | 0         | <b>22.28</b>            | 22.01        | <b>22.30</b> | 23.50         |
|           |            | 50      | 25        | 22.00                   | <b>22.11</b> | 22.05        | 23.50         |
|           |            | 50      | 50        | 21.93                   | 22.10        | 21.80        | 23.50         |



|  |       |     |    |       |              |       |       |
|--|-------|-----|----|-------|--------------|-------|-------|
|  | 16QAM | 100 | 0  | 21.92 | <b>22.12</b> | 21.88 | 23.50 |
|  |       | 1   | 0  | 22.11 | 22.26        | 22.15 | 23.50 |
|  |       | 1   | 50 | 22.19 | 21.86        | 22.29 | 23.50 |
|  |       | 1   | 99 | 21.99 | 22.34        | 21.81 | 23.50 |
|  |       | 50  | 0  | 21.12 | 20.90        | 21.07 | 22.50 |
|  |       | 50  | 25 | 21.05 | 21.10        | 21.01 | 22.50 |
|  |       | 50  | 50 | 20.92 | 21.12        | 20.80 | 22.50 |
|  |       | 100 | 0  | 20.95 | 21.04        | 20.96 | 22.50 |
|  | 64QAM | 1   | 0  | 20.93 | 20.92        | 21.05 | 22.50 |
|  |       | 1   | 50 | 21.18 | 21.23        | 21.20 | 22.50 |
|  |       | 1   | 99 | 21.02 | 20.99        | 20.89 | 22.50 |
|  |       | 50  | 0  | 20.17 | 20.19        | 20.11 | 21.50 |
|  |       | 50  | 25 | 20.05 | 20.11        | 20.10 | 21.50 |
|  |       | 50  | 50 | 19.98 | 19.94        | 19.82 | 21.50 |
|  |       | 100 | 0  | 20.05 | 19.95        | 20.10 | 21.50 |

| LTE TDD Band 38<br>DSI 4 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|--------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                          |            |         |           | 37775/2572.5            | 38000/2595 | 38225/2617.5 |                  |
| 5MHz                     | QPSK       | 1       | 0         | 21.19                   | 21.36      | 21.10        | 22.50            |
|                          |            | 1       | 13        | 21.24                   | 21.22      | 21.23        | 22.50            |
|                          |            | 1       | 24        | 21.20                   | 21.28      | 21.17        | 22.50            |
|                          |            | 12      | 0         | 20.72                   | 21.00      | 20.74        | 22.50            |
|                          |            | 12      | 6         | 20.97                   | 20.97      | 20.69        | 22.50            |
|                          |            | 12      | 13        | 20.93                   | 20.97      | 20.76        | 22.50            |
|                          |            | 25      | 0         | 20.95                   | 20.95      | 20.95        | 22.50            |
|                          | 16QAM      | 1       | 0         | 20.87                   | 20.86      | 20.81        | 22.50            |
|                          |            | 1       | 13        | 20.85                   | 20.69      | 20.98        | 22.50            |
|                          |            | 1       | 24        | 20.57                   | 20.86      | 20.61        | 22.50            |
|                          |            | 12      | 0         | 20.95                   | 20.79      | 20.95        | 22.50            |
|                          |            | 12      | 6         | 20.93                   | 20.88      | 20.91        | 22.50            |
|                          |            | 12      | 13        | 20.77                   | 20.88      | 20.55        | 22.50            |
|                          |            | 25      | 0         | 20.79                   | 20.90      | 20.73        | 22.50            |
|                          | 64QAM      | 1       | 0         | 21.13                   | 21.12      | 21.15        | 22.50            |
|                          |            | 1       | 13        | 21.45                   | 21.40      | 21.38        | 22.50            |
|                          |            | 1       | 24        | 21.18                   | 21.22      | 21.05        | 22.50            |
|                          |            | 12      | 0         | 20.58                   | 20.59      | 20.57        | 21.50            |
|                          |            | 12      | 6         | 20.50                   | 20.51      | 20.54        | 21.50            |
|                          |            | 12      | 13        | 20.39                   | 20.42      | 20.31        | 21.50            |
|                          |            | 25      | 0         | 20.47                   | 20.54      | 20.49        | 21.50            |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            |         |           | 37800/2575              | 38000/2595 | 38200/2615   |               |
| 10MHz     | QPSK       | 1       | 0         | 21.21                   | 21.37      | 21.13        | 22.50         |
|           |            | 1       | 25        | 21.27                   | 21.27      | 21.27        | 22.50         |
|           |            | 1       | 49        | 21.22                   | 21.32      | 21.20        | 22.50         |
|           |            | 25      | 0         | 20.75                   | 21.05      | 20.78        | 22.50         |
|           |            | 25      | 13        | 21.00                   | 21.02      | 20.73        | 22.50         |
|           |            | 25      | 25        | 20.95                   | 21.01      | 20.81        | 22.50         |
|           |            | 50      | 0         | 20.99                   | 20.97      | 20.99        | 22.50         |
|           | 16QAM      | 1       | 0         | 20.89                   | 20.89      | 20.83        | 22.50         |
|           |            | 1       | 25        | 20.88                   | 20.73      | 21.01        | 22.50         |
|           |            | 1       | 49        | 20.60                   | 20.88      | 20.64        | 22.50         |
|           |            | 25      | 0         | 20.98                   | 20.84      | 20.99        | 22.50         |
|           |            | 25      | 13        | 20.95                   | 20.92      | 20.94        | 22.50         |
|           |            | 25      | 25        | 20.80                   | 20.93      | 20.59        | 22.50         |
|           |            | 50      | 0         | 20.82                   | 20.95      | 20.77        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.15                   | 21.11      | 21.17        | 22.50         |
|           |            | 1       | 25        | 21.48                   | 21.40      | 21.41        | 22.50         |
|           |            | 1       | 49        | 21.17                   | 21.24      | 21.08        | 22.50         |
|           |            | 25      | 0         | 20.61                   | 20.64      | 20.57        | 21.50         |
|           |            | 25      | 13        | 20.52                   | 20.55      | 20.57        | 21.50         |
|           |            | 25      | 25        | 20.42                   | 20.47      | 20.35        | 21.50         |
|           |            | 50      | 0         | 20.50                   | 20.59      | 20.53        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 37825/2577.5            | 38000/2595 | 38175/2612.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 21.20                   | 21.33      | 21.11        | 22.50         |
|           |            | 1       | 38        | 21.25                   | 21.26      | 21.24        | 22.50         |
|           |            | 1       | 74        | 21.19                   | 21.27      | 21.16        | 22.50         |
|           |            | 36      | 0         | 20.73                   | 21.01      | 20.75        | 22.50         |
|           |            | 36      | 18        | 20.97                   | 20.97      | 20.69        | 22.50         |
|           |            | 36      | 39        | 20.92                   | 20.98      | 20.77        | 22.50         |
|           |            | 75      | 0         | 20.97                   | 20.93      | 20.94        | 22.50         |
|           | 16QAM      | 1       | 0         | 20.84                   | 20.87      | 20.81        | 22.50         |
|           |            | 1       | 38        | 20.86                   | 20.70      | 20.99        | 22.50         |
|           |            | 1       | 74        | 20.57                   | 20.84      | 20.61        | 22.50         |
|           |            | 36      | 0         | 20.95                   | 20.82      | 20.96        | 22.50         |
|           |            | 36      | 18        | 20.92                   | 20.87      | 20.90        | 22.50         |
|           |            | 36      | 39        | 20.78                   | 20.89      | 20.56        | 22.50         |
|           |            | 75      | 0         | 20.79                   | 20.90      | 20.73        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.10                   | 21.09      | 21.15        | 22.50         |
|           |            | 1       | 38        | 21.46                   | 21.37      | 21.39        | 22.50         |
|           |            | 1       | 74        | 21.18                   | 21.23      | 21.09        | 22.50         |
|           |            | 36      | 0         | 20.60                   | 20.66      | 20.58        | 21.50         |



|           |            | 36      | 18        | 20.50                   | 20.52        | 20.56        | 21.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 36      | 39        | 20.40                   | 20.43        | 20.32        | 21.50         |
|           |            | 75      | 0         | 20.47                   | 20.54        | 20.49        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 37850/2580              | 38000/2595   | 38150/2610   |               |
| 20MHz     | QPSK       | 1       | 0         | 21.17                   | <b>21.29</b> | 21.08        | 22.50         |
|           |            | 1       | 50        | <b>21.24</b>            | 21.22        | <b>21.22</b> | 22.50         |
|           |            | 1       | 99        | 21.17                   | 21.26        | 21.13        | 22.50         |
|           |            | 50      | 0         | 20.70                   | <b>20.96</b> | 20.71        | 22.50         |
|           |            | 50      | 25        | <b>20.95</b>            | 20.93        | 20.66        | 22.50         |
|           |            | 50      | 50        | 20.89                   | 20.93        | <b>20.73</b> | 22.50         |
|           |            | 100     | 0         | <b>20.94</b>            | 20.88        | 20.90        | 22.50         |
|           | 16QAM      | 1       | 0         | 20.70                   | 20.83        | 20.76        | 22.50         |
|           |            | 1       | 50        | 20.82                   | 20.68        | 20.95        | 22.50         |
|           |            | 1       | 99        | 20.55                   | 20.81        | 20.59        | 22.50         |
|           |            | 50      | 0         | 20.92                   | 20.78        | 20.93        | 22.50         |
|           |            | 50      | 25        | 20.89                   | 20.85        | 20.87        | 22.50         |
|           |            | 50      | 50        | 20.75                   | 20.84        | 20.52        | 22.50         |
|           |            | 100     | 0         | 20.77                   | 20.86        | 20.70        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.08                   | 21.05        | 21.10        | 22.50         |
|           |            | 1       | 50        | 21.42                   | 21.35        | 21.35        | 22.50         |
|           |            | 1       | 99        | 21.12                   | 21.17        | 21.03        | 22.50         |
|           |            | 50      | 0         | 20.55                   | 20.58        | 20.51        | 21.50         |
|           |            | 50      | 25        | 20.46                   | 20.48        | 20.50        | 21.50         |
|           |            | 50      | 50        | 20.37                   | 20.38        | 20.28        | 21.50         |
|           |            | 100     | 0         | 20.45                   | 20.50        | 20.46        | 21.50         |

| LTE TDD Band 41<br>Full power& DSI 2 |            |         |           | Conducted Power(dBm)    |                  |                |                  |                  | Tune-up<br>Limit |
|--------------------------------------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|------------------|------------------|
| Bandwidth                            | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  |                  |
|                                      |            |         |           | 39675/<br>2498.5        | 40148/<br>2545.8 | 40620/<br>2593 | 41093/<br>2640.3 | 41565/<br>2687.5 |                  |
| 5MHz                                 | QPSK       | 1       | 0         | 22.61                   | 22.42            | 22.08          | 22.57            | 22.36            | 24.00            |
|                                      |            | 1       | 13        | 22.56                   | 22.57            | 22.42          | 22.57            | 22.53            | 24.00            |
|                                      |            | 1       | 24        | 22.26                   | 22.15            | 22.21          | 22.28            | 22.07            | 24.00            |
|                                      |            | 12      | 0         | 21.32                   | 21.72            | 21.82          | 21.35            | 21.65            | 23.00            |
|                                      |            | 12      | 6         | 21.59                   | 21.79            | 21.84          | 21.61            | 21.71            | 23.00            |
|                                      |            | 12      | 13        | 21.58                   | 21.57            | 21.81          | 21.61            | 21.50            | 23.00            |
|                                      |            | 25      | 0         | 21.54                   | 21.63            | 21.80          | 21.57            | 21.56            | 23.00            |
|                                      | 16QAM      | 1       | 0         | 21.70                   | 21.61            | 21.89          | 21.74            | 21.53            | 23.00            |
|                                      |            | 1       | 13        | 21.68                   | 21.71            | 22.19          | 21.72            | 21.65            | 23.00            |
|                                      |            | 1       | 24        | 21.40                   | 21.25            | 21.89          | 21.42            | 21.19            | 23.00            |
|                                      |            | 12      | 0         | 20.29                   | 20.32            | 21.40          | 20.32            | 20.27            | 22.00            |
|                                      |            |         |           |                         |                  |                |                  |                  |                  |



|           | 64QAM      | 12      | 6         | 20.58                   | 20.85        | 21.40      | 20.61        | 20.77        | 22.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|------------|--------------|--------------|---------------|
|           |            | 12      | 13        | 20.42                   | 20.71        | 21.32      | 20.45        | 20.64        | 22.00         |
|           |            | 25      | 0         | 20.42                   | 20.79        | 21.39      | 20.44        | 20.71        | 22.00         |
|           |            | 1       | 0         | 20.24                   | 20.60        | 20.37      | 20.26        | 20.52        | 22.00         |
|           |            | 1       | 13        | 20.54                   | 20.94        | 20.56      | 20.58        | 20.88        | 22.00         |
|           |            | 1       | 24        | 20.22                   | 20.32        | 20.36      | 20.28        | 20.26        | 22.00         |
|           |            | 12      | 0         | 19.20                   | 19.57        | 19.59      | 19.25        | 19.52        | 21.00         |
|           |            | 12      | 6         | 19.62                   | 19.85        | 19.77      | 19.66        | 19.77        | 21.00         |
|           |            | 12      | 13        | 19.56                   | 19.64        | 19.57      | 19.59        | 19.57        | 21.00         |
|           |            | 25      | 0         | 19.32                   | 19.45        | 19.76      | 19.34        | 19.37        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |            |              |              | Tune-up Limit |
|           |            |         |           | 39700/2501              | 40160/2547   | 40620/2593 | 41080/2639   | 41540/2685   |               |
| 10MHz     | QPSK       | 1       | 0         | 22.63                   | 22.43        | 22.11      | 22.59        | 22.37        | 24.00         |
|           |            | 1       | 25        | 22.59                   | 22.62        | 22.46      | 22.60        | 22.58        | 24.00         |
|           |            | 1       | 49        | 22.28                   | 22.19        | 22.24      | 22.30        | 22.11        | 24.00         |
|           |            | 25      | 0         | 21.35                   | 21.77        | 21.86      | 21.38        | 21.70        | 23.00         |
|           |            | 25      | 13        | 21.62                   | 21.84        | 21.88      | 21.64        | 21.76        | 23.00         |
|           |            | 25      | 25        | 21.60                   | 21.61        | 21.86      | 21.63        | 21.54        | 23.00         |
|           |            | 50      | 0         | 21.58                   | 21.65        | 21.84      | 21.61        | 21.58        | 23.00         |
|           | 16QAM      | 1       | 0         | 21.72                   | 21.64        | 21.91      | 21.76        | 21.56        | 23.00         |
|           |            | 1       | 25        | 21.71                   | 21.75        | 22.22      | 21.75        | 21.69        | 23.00         |
|           |            | 1       | 49        | 21.43                   | 21.27        | 21.92      | 21.45        | 21.21        | 23.00         |
|           |            | 25      | 0         | 20.32                   | 20.37        | 21.44      | 20.35        | 20.32        | 22.00         |
|           |            | 25      | 13        | 20.60                   | 20.89        | 21.43      | 20.63        | 20.81        | 22.00         |
|           |            | 25      | 25        | 20.45                   | 20.76        | 21.36      | 20.48        | 20.69        | 22.00         |
|           |            | 50      | 0         | 20.45                   | 20.84        | 21.43      | 20.47        | 20.76        | 22.00         |
|           | 64QAM      | 1       | 0         | 20.26                   | 20.59        | 20.39      | 20.28        | 20.51        | 22.00         |
|           |            | 1       | 25        | 20.57                   | 20.94        | 20.59      | 20.61        | 20.88        | 22.00         |
|           |            | 1       | 49        | 20.21                   | 20.34        | 20.39      | 20.27        | 20.28        | 22.00         |
|           |            | 25      | 0         | 19.23                   | 19.62        | 19.59      | 19.28        | 19.57        | 21.00         |
|           |            | 25      | 13        | 19.64                   | 19.89        | 19.80      | 19.68        | 19.81        | 21.00         |
|           |            | 25      | 25        | 19.59                   | 19.69        | 19.61      | 19.62        | 19.62        | 21.00         |
|           |            | 50      | 0         | 19.35                   | 19.50        | 19.80      | 19.37        | 19.42        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |            |              |              | Tune-up Limit |
|           |            |         |           | 39725/2503.5            | 40173/2548.3 | 40620/2593 | 41068/2637.8 | 41515/2682.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 22.62                   | 22.39        | 22.09      | 22.58        | 22.33        | 24.00         |
|           |            | 1       | 38        | 22.57                   | 22.61        | 22.43      | 22.58        | 22.57        | 24.00         |
|           |            | 1       | 74        | 22.25                   | 22.14        | 22.20      | 22.27        | 22.06        | 24.00         |
|           |            | 36      | 0         | 21.33                   | 21.73        | 21.83      | 21.36        | 21.66        | 23.00         |
|           |            | 36      | 18        | 21.59                   | 21.79        | 21.84      | 21.61        | 21.71        | 23.00         |
|           |            | 36      | 39        | 21.57                   | 21.58        | 21.82      | 21.60        | 21.51        | 23.00         |



|           | 16QAM      | 75      | 0         | 21.56                   | 21.61            | 21.79          | 21.59            | 21.54          | 23.00               |
|-----------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|----------------|---------------------|
|           |            | 1       | 0         | 21.67                   | 21.62            | 21.89          | 21.71            | 21.54          | 23.00               |
|           |            | 1       | 38        | 21.69                   | 21.72            | 22.20          | 21.73            | 21.66          | 23.00               |
|           |            | 1       | 74        | 21.40                   | 21.23            | 21.89          | 21.42            | 21.17          | 23.00               |
|           |            | 36      | 0         | 20.29                   | 20.35            | 21.41          | 20.32            | 20.30          | 22.00               |
|           |            | 36      | 18        | 20.57                   | 20.84            | 21.39          | 20.60            | 20.76          | 22.00               |
|           |            | 36      | 39        | 20.43                   | 20.72            | 21.33          | 20.46            | 20.65          | 22.00               |
|           |            | 75      | 0         | 20.42                   | 20.79            | 21.39          | 20.44            | 20.71          | 22.00               |
|           | 64QAM      | 1       | 0         | 20.21                   | 20.57            | 20.37          | 20.23            | 20.49          | 22.00               |
|           |            | 1       | 38        | 20.55                   | 20.91            | 20.57          | 20.59            | 20.85          | 22.00               |
|           |            | 1       | 74        | 20.22                   | 20.33            | 20.40          | 20.28            | 20.27          | 22.00               |
|           |            | 36      | 0         | 19.22                   | 19.64            | 19.60          | 19.27            | 19.59          | 21.00               |
|           |            | 36      | 18        | 19.62                   | 19.86            | 19.79          | 19.66            | 19.78          | 21.00               |
|           |            | 36      | 39        | 19.57                   | 19.65            | 19.58          | 19.60            | 19.58          | 21.00               |
|           |            | 75      | 0         | 19.32                   | 19.45            | 19.76          | 19.34            | 19.37          | 21.00               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                | Tune-up Limit (dBm) |
|           |            |         |           | 39750/<br>2506          | 40185/<br>2549.5 | 40620/<br>2593 | 41055/<br>2636.5 | 41490/<br>2680 |                     |
| 20MHz     | QPSK       | 1       | 0         | <b>22.59</b>            | 22.35            | 22.06          | 22.55            | 22.29          | 24.00               |
|           |            | 1       | 50        | 22.56                   | <b>22.57</b>     | <b>22.41</b>   | <b>22.57</b>     | <b>22.53</b>   | 24.00               |
|           |            | 1       | 99        | 22.23                   | 22.13            | 22.17          | 22.25            | 22.05          | 24.00               |
|           |            | 50      | 0         | 21.30                   | 21.68            | 21.79          | 21.33            | 21.61          | 23.00               |
|           |            | 50      | 25        | <b>21.57</b>            | <b>21.85</b>     | <b>21.81</b>   | <b>21.59</b>     | <b>21.67</b>   | 23.00               |
|           |            | 50      | 50        | 21.54                   | 21.53            | 21.78          | 21.57            | 21.46          | 23.00               |
|           |            | 100     | 0         | 21.53                   | 21.56            | <b>21.75</b>   | 21.56            | <b>21.49</b>   | 23.00               |
|           | 16QAM      | 1       | 0         | 21.56                   | 21.58            | 21.84          | 21.67            | 21.50          | 23.00               |
|           |            | 1       | 50        | 21.65                   | 21.70            | 22.16          | 21.69            | 21.64          | 23.00               |
|           |            | 1       | 99        | 21.38                   | 21.20            | 21.87          | 21.40            | 21.14          | 23.00               |
|           |            | 50      | 0         | 20.26                   | 20.31            | 21.38          | 20.29            | 20.26          | 22.00               |
|           |            | 50      | 25        | 20.54                   | 20.82            | 21.36          | 20.57            | 20.74          | 22.00               |
|           |            | 50      | 50        | 20.40                   | 20.67            | 21.29          | 20.43            | 20.60          | 22.00               |
|           |            | 100     | 0         | 20.40                   | 20.75            | 21.36          | 20.42            | 20.67          | 22.00               |
|           | 64QAM      | 1       | 0         | 20.19                   | 20.53            | 20.32          | 20.21            | 20.45          | 22.00               |
|           |            | 1       | 50        | 20.51                   | 20.89            | 20.53          | 20.55            | 20.83          | 22.00               |
|           |            | 1       | 99        | 20.16                   | 20.27            | 20.34          | 20.22            | 20.21          | 22.00               |
|           |            | 50      | 0         | 19.17                   | 19.56            | 19.53          | 19.22            | 19.51          | 21.00               |
|           |            | 50      | 25        | 19.58                   | 19.82            | 19.73          | 19.62            | 19.74          | 21.00               |
|           |            | 50      | 50        | 19.54                   | 19.60            | 19.54          | 19.57            | 19.53          | 21.00               |
|           |            | 100     | 0         | 19.30                   | 19.41            | 19.73          | 19.32            | 19.33          | 21.00               |



| LTE TDD Band 41<br>DSI4 |            |         |           | Conducted Power(dBm)    |                  |                |                  |                  | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|------------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  |                  |
|                         |            |         |           | 39675/<br>2498.5        | 40148/<br>2545.8 | 40620/<br>2593 | 41093/<br>2640.3 | 41565/<br>2687.5 |                  |
| 5MHz                    | QPSK       | 1       | 0         | 21.31                   | 21.45            | 21.24          | 21.29            | 21.54            | 22.50            |
|                         |            | 1       | 13        | 21.49                   | 21.53            | 21.44          | 21.48            | 21.64            | 22.50            |
|                         |            | 1       | 24        | 21.34                   | 21.40            | 21.45          | 21.51            | 21.27            | 22.50            |
|                         |            | 12      | 0         | 20.96                   | 21.07            | 21.51          | 21.57            | 21.15            | 22.50            |
|                         |            | 12      | 6         | 21.12                   | 21.22            | 21.37          | 21.43            | 21.31            | 22.50            |
|                         |            | 12      | 13        | 20.97                   | 21.03            | 21.31          | 21.40            | 20.98            | 22.50            |
|                         |            | 25      | 0         | 20.97                   | 21.11            | 21.39          | 21.44            | 21.17            | 22.50            |
|                         | 16QAM      | 1       | 0         | 21.20                   | 21.19            | 21.57          | 21.86            | 21.26            | 22.50            |
|                         |            | 1       | 13        | 21.18                   | 21.19            | 21.78          | 21.84            | 21.31            | 22.50            |
|                         |            | 1       | 24        | 21.04                   | 21.14            | 21.53          | 21.58            | 20.96            | 22.50            |
|                         |            | 12      | 0         | 20.27                   | 20.30            | 20.59          | 20.66            | 20.39            | 21.50            |
|                         |            | 12      | 6         | 20.57                   | 20.64            | 20.55          | 20.62            | 20.74            | 21.50            |
|                         |            | 12      | 13        | 20.55                   | 20.66            | 20.58          | 20.64            | 20.60            | 21.50            |
|                         |            | 25      | 0         | 20.35                   | 20.45            | 20.54          | 20.60            | 20.57            | 21.50            |
|                         | 64QAM      | 1       | 0         | 20.43                   | 20.52            | 20.73          | 20.80            | 20.31            | 22.00            |
|                         |            | 1       | 13        | 20.58                   | 20.63            | 20.70          | 20.76            | 20.73            | 22.00            |
|                         |            | 1       | 24        | 20.42                   | 20.48            | 20.63          | 20.72            | 20.43            | 22.00            |
|                         |            | 12      | 0         | 19.26                   | 19.29            | 19.61          | 19.64            | 19.52            | 21.00            |
|                         |            | 12      | 6         | 19.68                   | 19.75            | 19.81          | 19.88            | 19.83            | 21.00            |
|                         |            | 12      | 13        | 19.60                   | 19.71            | 19.57          | 19.63            | 19.67            | 21.00            |
|                         |            | 25      | 0         | 19.56                   | 19.66            | 19.65          | 19.71            | 19.75            | 21.00            |
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  | Tune-up<br>Limit |
|                         |            |         |           | 39700/2501              | 40160/2547       | 40620/<br>2593 | 41080/<br>2639   | 41540/<br>2685   |                  |
| 10MHz                   | QPSK       | 1       | 0         | 21.33                   | 21.46            | 21.27          | 21.31            | 21.55            | 22.50            |
|                         |            | 1       | 25        | 21.52                   | 21.58            | 21.48          | 21.51            | 21.69            | 22.50            |
|                         |            | 1       | 49        | 21.36                   | 21.44            | 21.48          | 21.53            | 21.31            | 22.50            |
|                         |            | 25      | 0         | 20.99                   | 21.12            | 21.55          | 21.60            | 21.20            | 22.50            |
|                         |            | 25      | 13        | 21.15                   | 21.27            | 21.41          | 21.46            | 21.36            | 22.50            |
|                         |            | 25      | 25        | 20.99                   | 21.07            | 21.36          | 21.42            | 21.02            | 22.50            |
|                         |            | 50      | 0         | 21.01                   | 21.13            | 21.43          | 21.48            | 21.19            | 22.50            |
|                         | 16QAM      | 1       | 0         | 21.22                   | 21.22            | 21.59          | 21.88            | 21.29            | 22.50            |
|                         |            | 1       | 25        | 21.21                   | 21.23            | 21.81          | 21.87            | 21.35            | 22.50            |
|                         |            | 1       | 49        | 21.07                   | 21.16            | 21.56          | 21.61            | 20.98            | 22.50            |
|                         |            | 25      | 0         | 20.30                   | 20.35            | 20.63          | 20.69            | 20.44            | 21.50            |
|                         |            | 25      | 13        | 20.59                   | 20.68            | 20.58          | 20.64            | 20.78            | 21.50            |
|                         |            | 25      | 25        | 20.58                   | 20.71            | 20.62          | 20.67            | 20.65            | 21.50            |
|                         |            | 50      | 0         | 20.38                   | 20.50            | 20.58          | 20.63            | 20.62            | 21.50            |



|           | 64QAM      | 1       | 0         | 20.45                   | 20.51            | 20.75          | 20.82            | 20.30            | 22.00               |
|-----------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|------------------|---------------------|
|           |            | 1       | 25        | 20.61                   | 20.63            | 20.73          | 20.79            | 20.73            | 22.00               |
|           |            | 1       | 49        | 20.41                   | 20.50            | 20.66          | 20.71            | 20.45            | 22.00               |
|           |            | 25      | 0         | 19.29                   | 19.34            | 19.61          | 19.67            | 19.57            | 21.00               |
|           |            | 25      | 13        | 19.70                   | 19.79            | 19.84          | 19.90            | 19.87            | 21.00               |
|           |            | 25      | 25        | 19.63                   | 19.76            | 19.61          | 19.66            | 19.72            | 21.00               |
|           |            | 50      | 0         | 19.59                   | 19.71            | 19.69          | 19.74            | 19.80            | 21.00               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  | Tune-up Limit       |
|           |            |         |           | 39725/<br>2503.5        | 40173/<br>2548.3 | 40620<br>/2593 | 41068/<br>2637.8 | 41515/<br>2682.5 |                     |
| 15MHz     | QPSK       | 1       | 0         | 21.32                   | 21.42            | 21.25          | 21.30            | 21.51            | 22.50               |
|           |            | 1       | 38        | 21.50                   | 21.57            | 21.45          | 21.49            | 21.68            | 22.50               |
|           |            | 1       | 74        | 21.33                   | 21.39            | 21.44          | 21.50            | 21.26            | 22.50               |
|           |            | 36      | 0         | 20.97                   | 21.08            | 21.52          | 21.58            | 21.16            | 22.50               |
|           |            | 36      | 18        | 21.12                   | 21.22            | 21.37          | 21.43            | 21.31            | 22.50               |
|           |            | 36      | 39        | 20.96                   | 21.04            | 21.32          | 21.39            | 20.99            | 22.50               |
|           |            | 75      | 0         | 20.99                   | 21.09            | 21.38          | 21.46            | 21.15            | 22.50               |
|           | 16QAM      | 1       | 0         | 21.17                   | 21.20            | 21.57          | 21.83            | 21.27            | 22.50               |
|           |            | 1       | 38        | 21.19                   | 21.20            | 21.79          | 21.85            | 21.32            | 22.50               |
|           |            | 1       | 74        | 21.04                   | 21.12            | 21.53          | 21.58            | 20.94            | 22.50               |
|           |            | 36      | 0         | 20.27                   | 20.33            | 20.60          | 20.66            | 20.42            | 21.50               |
|           |            | 36      | 18        | 20.56                   | 20.63            | 20.54          | 20.61            | 20.73            | 21.50               |
|           |            | 36      | 39        | 20.56                   | 20.67            | 20.59          | 20.65            | 20.61            | 21.50               |
|           |            | 75      | 0         | 20.35                   | 20.45            | 20.54          | 20.60            | 20.57            | 21.50               |
|           | 64QAM      | 1       | 0         | 20.40                   | 20.49            | 20.73          | 20.77            | 20.28            | 22.00               |
|           |            | 1       | 38        | 20.59                   | 20.60            | 20.71          | 20.77            | 20.70            | 22.00               |
|           |            | 1       | 74        | 20.42                   | 20.49            | 20.67          | 20.72            | 20.44            | 22.00               |
|           |            | 36      | 0         | 19.28                   | 19.36            | 19.62          | 19.66            | 19.59            | 21.00               |
|           |            | 36      | 18        | 19.68                   | 19.76            | 19.83          | 19.88            | 19.84            | 21.00               |
|           |            | 36      | 39        | 19.61                   | 19.72            | 19.58          | 19.64            | 19.68            | 21.00               |
|           |            | 75      | 0         | 19.56                   | 19.66            | 19.65          | 19.71            | 19.75            | 21.00               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  | Tune-up Limit (dBm) |
|           |            |         |           | 39750/<br>2506          | 40185/<br>2549.5 | 40620/<br>2593 | 41055/<br>2636.5 | 41490/<br>2680   |                     |
| 20MHz     | QPSK       | 1       | 0         | 21.29                   | 21.38            | 21.22          | 21.27            | 21.47            | 22.50               |
|           |            | 1       | 50        | <b>21.49</b>            | <b>21.53</b>     | <b>21.43</b>   | <b>21.48</b>     | <b>21.64</b>     | 22.50               |
|           |            | 1       | 99        | 21.31                   | 21.38            | 21.41          | <b>21.48</b>     | 21.25            | 22.50               |
|           |            | 50      | 0         | 20.94                   | 21.03            | <b>21.48</b>   | <b>21.55</b>     | 21.11            | 22.50               |
|           |            | 50      | 25        | <b>21.10</b>            | <b>21.18</b>     | 21.34          | 21.41            | <b>21.27</b>     | 22.50               |
|           |            | 50      | 50        | 20.93                   | 20.99            | 21.28          | 21.36            | 20.94            | 22.50               |
|           |            | 100     | 0         | 20.96                   | 21.04            | 21.34          | <b>21.43</b>     | <b>21.10</b>     | 22.50               |
|           | 16QAM      | 1       | 0         | 21.09                   | 21.16            | 21.52          | 21.59            | 21.23            | 22.50               |
|           |            | 1       | 50        | 21.15                   | 21.18            | 21.75          | 21.81            | 21.30            | 22.50               |



|  |       |     |    |       |       |       |       |       |       |
|--|-------|-----|----|-------|-------|-------|-------|-------|-------|
|  |       | 1   | 99 | 21.02 | 21.09 | 21.51 | 21.56 | 20.91 | 22.50 |
|  |       | 50  | 0  | 20.24 | 20.29 | 20.57 | 20.63 | 20.38 | 21.50 |
|  |       | 50  | 25 | 20.53 | 20.61 | 20.51 | 20.58 | 20.71 | 21.50 |
|  |       | 50  | 50 | 20.53 | 20.62 | 20.55 | 20.62 | 20.56 | 21.50 |
|  |       | 100 | 0  | 20.33 | 20.41 | 20.51 | 20.58 | 20.53 | 21.50 |
|  | 64QAM | 1   | 0  | 20.38 | 20.45 | 20.68 | 20.75 | 20.24 | 22.00 |
|  |       | 1   | 50 | 20.55 | 20.58 | 20.67 | 20.73 | 20.68 | 22.00 |
|  |       | 1   | 99 | 20.36 | 20.43 | 20.61 | 20.66 | 20.38 | 22.00 |
|  |       | 50  | 0  | 19.23 | 19.28 | 19.55 | 19.61 | 19.51 | 21.00 |
|  |       | 50  | 25 | 19.64 | 19.72 | 19.77 | 19.84 | 19.80 | 21.00 |
|  |       | 50  | 50 | 19.58 | 19.67 | 19.54 | 19.61 | 19.63 | 21.00 |
|  |       | 100 | 0  | 19.54 | 19.62 | 19.62 | 19.69 | 19.71 | 21.00 |

| LTE FDD Band 66<br>Full Power&DSI 1&DSI 2 |            |         |           | Conducted Power(dBm)    |                 |                   | Tune-up<br>Limit |
|-------------------------------------------|------------|---------|-----------|-------------------------|-----------------|-------------------|------------------|
| Bandwidth                                 | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   |                  |
|                                           |            |         |           | 131979/<br>1710.7       | 132322/<br>1745 | 132665/<br>1779.3 |                  |
| 1.4MHz                                    | QPSK       | 1       | 0         | 22.68                   | 22.90           | 22.58             | 24.00            |
|                                           |            | 1       | 2         | 23.14                   | 23.20           | 22.55             | 24.00            |
|                                           |            | 1       | 5         | 22.56                   | 22.96           | 22.58             | 24.00            |
|                                           |            | 3       | 0         | 21.40                   | 21.66           | 21.55             | 23.00            |
|                                           |            | 3       | 2         | 21.48                   | 21.69           | 21.50             | 23.00            |
|                                           |            | 3       | 3         | 21.42                   | 21.63           | 21.42             | 23.00            |
|                                           |            | 6       | 0         | 21.46                   | 21.71           | 21.65             | 23.00            |
|                                           | 16QAM      | 1       | 0         | 21.67                   | 21.62           | 21.70             | 23.00            |
|                                           |            | 1       | 2         | 21.61                   | 21.56           | 21.63             | 23.00            |
|                                           |            | 1       | 5         | 21.32                   | 21.30           | 21.36             | 23.00            |
|                                           |            | 3       | 0         | 20.61                   | 20.60           | 20.66             | 22.00            |
|                                           |            | 3       | 2         | 20.64                   | 20.59           | 20.68             | 22.00            |
|                                           |            | 3       | 3         | 20.53                   | 20.52           | 20.56             | 22.00            |
|                                           |            | 6       | 0         | 20.52                   | 20.52           | 20.61             | 22.00            |
|                                           | 64QAM      | 1       | 0         | 20.29                   | 20.24           | 20.32             | 22.00            |
|                                           |            | 1       | 2         | 21.11                   | 21.06           | 21.13             | 22.00            |
|                                           |            | 1       | 5         | 20.50                   | 20.48           | 20.54             | 22.00            |
|                                           |            | 3       | 0         | 19.60                   | 19.59           | 19.65             | 21.00            |
|                                           |            | 3       | 2         | 19.86                   | 19.81           | 19.90             | 21.00            |
|                                           |            | 3       | 3         | 19.63                   | 19.62           | 19.66             | 21.00            |
|                                           |            | 6       | 0         | 19.79                   | 19.76           | 19.85             | 21.00            |
| Bandwidth                                 | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up<br>Limit |
|                                           |            |         |           | 131987<br>1711.5        | 132322/<br>1745 | 132657/<br>1778.5 |                  |
| 3MHz                                      | QPSK       | 1       | 0         | 22.67                   | 22.92           | 22.57             | 24.00            |



|           |            | 1       | 7         | 23.12                   | 23.18           | 22.56             | 24.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-------------------|---------------|
|           |            | 1       | 14        | 22.56                   | 22.96           | 22.58             | 24.00         |
|           |            | 8       | 0         | 21.41                   | 21.68           | 21.58             | 23.00         |
|           |            | 8       | 4         | 21.49                   | 21.73           | 21.51             | 23.00         |
|           |            | 8       | 7         | 21.44                   | 21.66           | 21.42             | 23.00         |
|           |            | 15      | 0         | 21.47                   | 21.74           | 21.66             | 23.00         |
|           |            | 1       | 0         | 21.63                   | 21.60           | 21.70             | 23.00         |
|           | 16QAM      | 1       | 7         | 21.61                   | 21.56           | 21.64             | 23.00         |
|           |            | 1       | 14        | 21.31                   | 21.32           | 21.35             | 23.00         |
|           |            | 8       | 0         | 20.64                   | 20.60           | 20.66             | 22.00         |
|           |            | 8       | 4         | 20.66                   | 20.61           | 20.70             | 22.00         |
|           |            | 8       | 7         | 20.54                   | 20.53           | 20.59             | 22.00         |
|           |            | 15      | 0         | 20.53                   | 20.52           | 20.59             | 22.00         |
|           |            | 1       | 0         | 20.29                   | 20.26           | 20.32             | 22.00         |
|           | 64QAM      | 1       | 7         | 21.11                   | 21.10           | 21.14             | 22.00         |
|           |            | 1       | 14        | 20.53                   | 20.50           | 20.53             | 22.00         |
|           |            | 8       | 0         | 19.63                   | 19.59           | 19.69             | 21.00         |
|           |            | 8       | 4         | 19.88                   | 19.83           | 19.92             | 21.00         |
|           |            | 8       | 7         | 19.64                   | 19.63           | 19.69             | 21.00         |
|           |            | 15      | 0         | 19.79                   | 19.78           | 19.85             | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 131997/<br>1712.5       | 132322/<br>1745 | 132647/<br>1777.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 22.70                   | 22.94           | 22.61             | 24.00         |
|           |            | 1       | 13        | 23.14                   | 23.22           | 22.59             | 24.00         |
|           |            | 1       | 24        | 22.59                   | 23.01           | 22.62             | 24.00         |
|           |            | 12      | 0         | 21.44                   | 21.73           | 21.62             | 23.00         |
|           |            | 12      | 6         | 21.51                   | 21.77           | 21.56             | 23.00         |
|           |            | 12      | 13        | 21.46                   | 21.68           | 21.46             | 23.00         |
|           |            | 25      | 0         | 21.47                   | 21.75           | 21.68             | 23.00         |
|           | 16QAM      | 1       | 0         | 21.66                   | 21.64           | 21.73             | 23.00         |
|           |            | 1       | 13        | 21.64                   | 21.58           | 21.67             | 23.00         |
|           |            | 1       | 24        | 21.34                   | 21.34           | 21.39             | 23.00         |
|           |            | 12      | 0         | 20.66                   | 20.64           | 20.69             | 22.00         |
|           |            | 12      | 6         | 20.69                   | 20.66           | 20.74             | 22.00         |
|           |            | 12      | 13        | 20.57                   | 20.58           | 20.63             | 22.00         |
|           |            | 25      | 0         | 20.55                   | 20.56           | 20.64             | 22.00         |
|           | 64QAM      | 1       | 0         | 20.32                   | 20.26           | 20.35             | 22.00         |
|           |            | 1       | 13        | 21.14                   | 21.08           | 21.17             | 22.00         |
|           |            | 1       | 24        | 20.52                   | 20.52           | 20.57             | 22.00         |
|           |            | 12      | 0         | 19.65                   | 19.63           | 19.68             | 21.00         |
|           |            | 12      | 6         | 19.91                   | 19.88           | 19.96             | 21.00         |
|           |            | 12      | 13        | 19.67                   | 19.68           | 19.73             | 21.00         |



|           |            | 25      | 0         | 19.81                   | 19.82           | 19.90             | 21.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-------------------|---------------|
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132022/<br>1715         | 132322/<br>1745 | 132622/<br>1775   |               |
| 10MHz     | QPSK       | 1       | 0         | 22.68                   | 22.89           | 22.58             | 24.00         |
|           |            | 1       | 25        | 23.13                   | 23.22           | 22.57             | 24.00         |
|           |            | 1       | 49        | 22.55                   | 22.95           | 22.57             | 24.00         |
|           |            | 25      | 0         | 21.42                   | 21.69           | 21.59             | 23.00         |
|           |            | 25      | 13        | 21.49                   | 21.73           | 21.51             | 23.00         |
|           |            | 25      | 25        | 21.43                   | 21.67           | 21.43             | 23.00         |
|           |            | 50      | 0         | 21.49                   | 21.72           | 21.65             | 23.00         |
|           | 16QAM      | 1       | 0         | 21.60                   | 21.61           | 21.70             | 23.00         |
|           |            | 1       | 25        | 21.62                   | 21.57           | 21.65             | 23.00         |
|           |            | 1       | 49        | 21.31                   | 21.30           | 21.35             | 23.00         |
|           |            | 25      | 0         | 20.64                   | 20.63           | 20.67             | 22.00         |
|           |            | 25      | 13        | 20.65                   | 20.60           | 20.69             | 22.00         |
|           |            | 25      | 25        | 20.55                   | 20.54           | 20.60             | 22.00         |
|           |            | 50      | 0         | 20.53                   | 20.52           | 20.59             | 22.00         |
|           | 64QAM      | 1       | 0         | 20.26                   | 20.23           | 20.32             | 22.00         |
|           |            | 1       | 25        | 21.12                   | 21.07           | 21.15             | 22.00         |
|           |            | 1       | 49        | 20.53                   | 20.51           | 20.57             | 22.00         |
|           |            | 25      | 0         | 19.65                   | 19.66           | 19.70             | 21.00         |
|           |            | 25      | 13        | 19.88                   | 19.84           | 19.94             | 21.00         |
|           |            | 25      | 25        | 19.65                   | 19.64           | 19.70             | 21.00         |
|           |            | 50      | 0         | 19.79                   | 19.78           | 19.85             | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132047/<br>1717.5       | 132322/<br>1745 | 132597/<br>1772.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 22.69                   | 22.93           | 22.60             | 24.00         |
|           |            | 1       | 38        | 23.15                   | 23.23           | 22.60             | 24.00         |
|           |            | 1       | 74        | 22.58                   | 23.00           | 22.61             | 24.00         |
|           |            | 36      | 0         | 21.44                   | 21.73           | 21.62             | 23.00         |
|           |            | 36      | 18        | 21.52                   | 21.78           | 21.55             | 23.00         |
|           |            | 36      | 39        | 21.46                   | 21.70           | 21.47             | 23.00         |
|           |            | 75      | 0         | 21.51                   | 21.76           | 21.70             | 23.00         |
|           | 16QAM      | 1       | 0         | 21.65                   | 21.63           | 21.72             | 23.00         |
|           |            | 1       | 38        | 21.64                   | 21.60           | 21.67             | 23.00         |
|           |            | 1       | 74        | 21.34                   | 21.34           | 21.38             | 23.00         |
|           |            | 36      | 0         | 20.67                   | 20.65           | 20.70             | 22.00         |
|           |            | 36      | 18        | 20.68                   | 20.65           | 20.73             | 22.00         |
|           |            | 36      | 39        | 20.57                   | 20.58           | 20.63             | 22.00         |
|           |            | 75      | 0         | 20.56                   | 20.57           | 20.63             | 22.00         |
|           | 64QAM      | 1       | 0         | 20.31                   | 20.25           | 20.34             | 22.00         |



|           |            | 1       | 38        | 21.14                   | 21.10           | 21.17           | 22.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-----------------|---------------|
|           |            | 1       | 74        | 20.52                   | 20.52           | 20.56           | 22.00         |
|           |            | 36      | 0         | 19.66                   | 19.64           | 19.69           | 21.00         |
|           |            | 36      | 18        | 19.90                   | 19.87           | 19.95           | 21.00         |
|           |            | 36      | 39        | 19.67                   | 19.68           | 19.73           | 21.00         |
|           |            | 75      | 0         | 19.82                   | 19.83           | 19.89           | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                 | Tune-up Limit |
|           |            |         |           | 132072/<br>1720         | 132322/<br>1745 | 132572/<br>1770 |               |
| 20MHz     | QPSK       | 1       | 0         | 22.65                   | 22.85           | <b>22.55</b>    | 24.00         |
|           |            | 1       | 50        | <b>23.12</b>            | <b>23.18</b>    | <b>22.55</b>    | 24.00         |
|           |            | 1       | 99        | 22.53                   | 22.94           | 22.54           | 24.00         |
|           |            | 50      | 0         | 21.39                   | 21.64           | <b>21.55</b>    | 23.00         |
|           |            | 50      | 25        | <b>21.47</b>            | <b>21.69</b>    | 21.48           | 23.00         |
|           |            | 50      | 50        | 21.40                   | 21.62           | 21.39           | 23.00         |
|           |            | 100     | 0         | 21.46                   | <b>21.67</b>    | 21.61           | 23.00         |
|           | 16QAM      | 1       | 0         | 21.62                   | 21.57           | 21.65           | 23.00         |
|           |            | 1       | 50        | 21.58                   | 21.55           | 21.61           | 23.00         |
|           |            | 1       | 99        | 21.29                   | 21.27           | 21.33           | 23.00         |
|           |            | 50      | 0         | 20.61                   | 20.59           | 20.64           | 22.00         |
|           |            | 50      | 25        | 20.62                   | 20.58           | 20.66           | 22.00         |
|           |            | 50      | 50        | 20.52                   | 20.49           | 20.56           | 22.00         |
|           |            | 100     | 0         | 20.51                   | 20.48           | 20.56           | 22.00         |
|           | 64QAM      | 1       | 0         | 20.24                   | 20.19           | 20.27           | 22.00         |
|           |            | 1       | 50        | 21.08                   | 21.05           | 21.11           | 22.00         |
|           |            | 1       | 99        | 20.47                   | 20.45           | 20.51           | 22.00         |
|           |            | 50      | 0         | 19.60                   | 19.58           | 19.63           | 21.00         |
|           |            | 50      | 25        | 19.84                   | 19.80           | 19.88           | 21.00         |
|           |            | 50      | 50        | 19.62                   | 19.59           | 19.66           | 21.00         |
|           |            | 100     | 0         | 19.77                   | 19.74           | 19.82           | 21.00         |

| LTE FDD Band 66<br>DSI 4 |            |         |           | Conducted Power(dBm)    |                 |                   | Tune-up<br>Limit |
|--------------------------|------------|---------|-----------|-------------------------|-----------------|-------------------|------------------|
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   |                  |
|                          |            |         |           | 131979/<br>1710.7       | 132322/<br>1745 | 132665/<br>1779.3 |                  |
| 1.4MHz                   | QPSK       | 1       | 0         | 19.57                   | 19.82           | 19.83             | 21.00            |
|                          |            | 1       | 2         | 20.00                   | 20.45           | 19.65             | 21.00            |
|                          |            | 1       | 5         | 19.56                   | 20.17           | 19.48             | 21.00            |
|                          |            | 3       | 0         | 19.48                   | 19.64           | 19.59             | 21.00            |
|                          |            | 3       | 2         | 19.53                   | 19.61           | 19.48             | 21.00            |
|                          |            | 3       | 3         | 19.46                   | 19.65           | 19.52             | 21.00            |
|                          |            | 6       | 0         | 19.51                   | 19.63           | 19.73             | 21.00            |



|           | 16QAM      | 1       | 0         | 19.34                   | 19.39           | 19.39             | 21.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-------------------|---------------|
|           |            | 1       | 2         | 19.58                   | 19.59           | 19.61             | 21.00         |
|           |            | 1       | 5         | 19.56                   | 19.58           | 19.58             | 21.00         |
|           |            | 3       | 0         | 19.46                   | 19.49           | 19.51             | 21.00         |
|           |            | 3       | 2         | 19.47                   | 19.50           | 19.50             | 21.00         |
|           |            | 3       | 3         | 19.62                   | 19.67           | 19.65             | 21.00         |
|           |            | 6       | 0         | 19.46                   | 19.52           | 19.53             | 21.00         |
|           | 64QAM      | 1       | 0         | 19.78                   | 19.83           | 19.83             | 21.00         |
|           |            | 1       | 2         | 19.92                   | 19.93           | 19.95             | 21.00         |
|           |            | 1       | 5         | 19.69                   | 19.71           | 19.75             | 21.00         |
|           |            | 3       | 0         | 19.37                   | 19.44           | 19.46             | 21.00         |
|           |            | 3       | 2         | 19.54                   | 19.57           | 19.60             | 21.00         |
|           |            | 3       | 3         | 19.44                   | 19.49           | 19.47             | 21.00         |
|           |            | 6       | 0         | 19.49                   | 19.52           | 19.53             | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 131987<br>1711.5        | 132322/<br>1745 | 132657/<br>1778.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 19.59                   | 19.86           | 19.86             | 21.00         |
|           |            | 1       | 7         | 20.00                   | 20.47           | 19.69             | 21.00         |
|           |            | 1       | 14        | 19.59                   | 20.22           | 19.52             | 21.00         |
|           |            | 8       | 0         | 19.52                   | 19.71           | 19.66             | 21.00         |
|           |            | 8       | 4         | 19.56                   | 19.69           | 19.54             | 21.00         |
|           |            | 8       | 7         | 19.50                   | 19.70           | 19.56             | 21.00         |
|           |            | 15      | 0         | 19.53                   | 19.67           | 19.76             | 21.00         |
|           | 16QAM      | 1       | 0         | 19.37                   | 19.41           | 19.42             | 21.00         |
|           |            | 1       | 7         | 19.61                   | 19.61           | 19.65             | 21.00         |
|           |            | 1       | 14        | 19.58                   | 19.62           | 19.61             | 21.00         |
|           |            | 8       | 0         | 19.51                   | 19.53           | 19.54             | 21.00         |
|           |            | 8       | 4         | 19.52                   | 19.57           | 19.56             | 21.00         |
|           |            | 8       | 7         | 19.66                   | 19.73           | 19.72             | 21.00         |
|           |            | 15      | 0         | 19.49                   | 19.56           | 19.56             | 21.00         |
|           | 64QAM      | 1       | 0         | 19.81                   | 19.85           | 19.86             | 21.00         |
|           |            | 1       | 7         | 19.95                   | 19.95           | 19.99             | 21.00         |
|           |            | 1       | 14        | 19.71                   | 19.75           | 19.78             | 21.00         |
|           |            | 8       | 0         | 19.42                   | 19.48           | 19.49             | 21.00         |
|           |            | 8       | 4         | 19.59                   | 19.64           | 19.66             | 21.00         |
|           |            | 8       | 7         | 19.48                   | 19.55           | 19.54             | 21.00         |
|           |            | 15      | 0         | 19.51                   | 19.58           | 19.58             | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 131997/<br>1712.5       | 132322/<br>1745 | 132647/<br>1777.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 19.56                   | 19.84           | 19.82             | 21.00         |
|           |            | 1       | 13        | 19.98                   | 20.43           | 19.66             | 21.00         |



|           |            | 1       | 24        | 19.56                   | 20.17           | 19.48           | 21.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-----------------|---------------|
|           |            | 12      | 0         | 19.49                   | 19.66           | 19.62           | 21.00         |
|           |            | 12      | 6         | 19.54                   | 19.65           | 19.49           | 21.00         |
|           |            | 12      | 13        | 19.48                   | 19.68           | 19.52           | 21.00         |
|           |            | 25      | 0         | 19.51                   | 19.66           | 19.74           | 21.00         |
|           | 16QAM      | 1       | 0         | 19.34                   | 19.37           | 19.39           | 21.00         |
|           |            | 1       | 13        | 19.58                   | 19.59           | 19.62           | 21.00         |
|           |            | 1       | 24        | 19.55                   | 19.60           | 19.57           | 21.00         |
|           |            | 12      | 0         | 19.49                   | 19.49           | 19.51           | 21.00         |
|           |            | 12      | 6         | 19.49                   | 19.52           | 19.52           | 21.00         |
|           |            | 12      | 13        | 19.63                   | 19.68           | 19.68           | 21.00         |
|           |            | 25      | 0         | 19.47                   | 19.52           | 19.51           | 21.00         |
|           | 64QAM      | 1       | 0         | 19.78                   | 19.81           | 19.83           | 21.00         |
|           |            | 1       | 13        | 19.92                   | 19.93           | 19.96           | 21.00         |
|           |            | 1       | 24        | 19.68                   | 19.73           | 19.74           | 21.00         |
|           |            | 12      | 0         | 19.40                   | 19.44           | 19.46           | 21.00         |
|           |            | 12      | 6         | 19.56                   | 19.59           | 19.62           | 21.00         |
|           |            | 12      | 13        | 19.45                   | 19.50           | 19.50           | 21.00         |
|           |            | 25      | 0         | 19.49                   | 19.54           | 19.53           | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                 | Tune-up Limit |
|           |            |         |           | 132022/<br>1715         | 132322/<br>1745 | 132622/<br>1775 |               |
| 10MHz     | QPSK       | 1       | 0         | 19.57                   | 19.83           | 19.84           | 21.00         |
|           |            | 1       | 25        | 19.99                   | 20.47           | 19.68           | 21.00         |
|           |            | 1       | 49        | 19.57                   | 20.19           | 19.50           | 21.00         |
|           |            | 25      | 0         | 19.50                   | 19.70           | 19.64           | 21.00         |
|           |            | 25      | 13        | 19.56                   | 19.68           | 19.52           | 21.00         |
|           |            | 25      | 25        | 19.48                   | 19.68           | 19.56           | 21.00         |
|           |            | 50      | 0         | 19.51                   | 19.67           | 19.75           | 21.00         |
|           | 16QAM      | 1       | 0         | 19.33                   | 19.35           | 19.39           | 21.00         |
|           |            | 1       | 25        | 19.60                   | 19.62           | 19.60           | 21.00         |
|           |            | 1       | 49        | 19.56                   | 19.58           | 19.59           | 21.00         |
|           |            | 25      | 0         | 19.47                   | 19.53           | 19.52           | 21.00         |
|           |            | 25      | 13        | 19.48                   | 19.51           | 19.53           | 21.00         |
|           |            | 25      | 25        | 19.65                   | 19.72           | 19.67           | 21.00         |
|           |            | 50      | 0         | 19.46                   | 19.54           | 19.51           | 21.00         |
|           | 64QAM      | 1       | 0         | 19.78                   | 19.80           | 19.84           | 21.00         |
|           |            | 1       | 25        | 19.94                   | 19.95           | 19.96           | 21.00         |
|           |            | 1       | 49        | 19.68                   | 19.70           | 19.75           | 21.00         |
|           |            | 25      | 0         | 19.42                   | 19.48           | 19.45           | 21.00         |
|           |            | 25      | 13        | 19.54                   | 19.60           | 19.61           | 21.00         |
|           |            | 25      | 25        | 19.46                   | 19.51           | 19.53           | 21.00         |
|           |            | 50      | 0         | 19.51                   | 19.57           | 19.54           | 21.00         |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|-----------------|-------------------|---------------|
|           |            |         |           | 132047/<br>1717.5       | 132322/<br>1745 | 132597/<br>1772.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 19.57                   | 19.81           | 19.83             | 21.00         |
|           |            | 1       | 38        | 19.99                   | 20.47           | 19.67             | 21.00         |
|           |            | 1       | 74        | 19.55                   | 20.16           | 19.47             | 21.00         |
|           |            | 36      | 0         | 19.50                   | 19.67           | 19.63             | 21.00         |
|           |            | 36      | 18        | 19.54                   | 19.65           | 19.49             | 21.00         |
|           |            | 36      | 39        | 19.47                   | 19.69           | 19.53             | 21.00         |
|           |            | 75      | 0         | 19.54                   | 19.64           | 19.73             | 21.00         |
|           | 16QAM      | 1       | 0         | 19.31                   | 19.38           | 19.39             | 21.00         |
|           |            | 1       | 38        | 19.59                   | 19.60           | 19.63             | 21.00         |
|           |            | 1       | 74        | 19.55                   | 19.58           | 19.57             | 21.00         |
|           |            | 36      | 0         | 19.49                   | 19.52           | 19.52             | 21.00         |
|           |            | 36      | 18        | 19.48                   | 19.51           | 19.51             | 21.00         |
|           |            | 36      | 39        | 19.64                   | 19.69           | 19.69             | 21.00         |
|           |            | 75      | 0         | 19.47                   | 19.52           | 19.51             | 21.00         |
|           | 64QAM      | 1       | 0         | 19.75                   | 19.82           | 19.83             | 21.00         |
|           |            | 1       | 38        | 19.93                   | 19.94           | 19.97             | 21.00         |
|           |            | 1       | 74        | 19.68                   | 19.71           | 19.74             | 21.00         |
|           |            | 36      | 0         | 19.40                   | 19.47           | 19.47             | 21.00         |
|           |            | 36      | 18        | 19.55                   | 19.58           | 19.61             | 21.00         |
|           |            | 36      | 39        | 19.46                   | 19.51           | 19.51             | 21.00         |
|           |            | 75      | 0         | 19.49                   | 19.54           | 19.53             | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132072/<br>1720         | 132322/<br>1745 | 132572/<br>1770   |               |
| 20MHz     | QPSK       | 1       | 0         | 19.54                   | 19.77           | <b>19.80</b>      | 21.00         |
|           |            | 1       | 50        | <b>19.98</b>            | <b>20.43</b>    | 19.65             | 21.00         |
|           |            | 1       | 99        | 19.53                   | 20.15           | 19.44             | 21.00         |
|           |            | 50      | 0         | 19.47                   | 19.62           | <b>19.59</b>      | 21.00         |
|           |            | 50      | 25        | <b>19.52</b>            | 19.61           | 19.46             | 21.00         |
|           |            | 50      | 50        | 19.44                   | <b>19.64</b>    | 19.49             | 21.00         |
|           |            | 100     | 0         | 19.51                   | 19.59           | <b>19.69</b>      | 21.00         |
|           | 16QAM      | 1       | 0         | 19.29                   | 19.34           | 19.34             | 21.00         |
|           |            | 1       | 50        | 19.55                   | 19.58           | 19.59             | 21.00         |
|           |            | 1       | 99        | 19.53                   | 19.55           | 19.55             | 21.00         |
|           |            | 50      | 0         | 19.46                   | 19.48           | 19.49             | 21.00         |
|           |            | 50      | 25        | 19.45                   | 19.49           | 19.48             | 21.00         |
|           |            | 50      | 50        | 19.61                   | 19.64           | 19.65             | 21.00         |
|           |            | 100     | 0         | 19.45                   | 19.48           | 19.48             | 21.00         |
|           | 64QAM      | 1       | 0         | 19.73                   | 19.78           | 19.78             | 21.00         |
|           |            | 1       | 50        | 19.89                   | 19.92           | 19.93             | 21.00         |



|  |  |     |    |       |       |       |       |
|--|--|-----|----|-------|-------|-------|-------|
|  |  | 1   | 99 | 19.66 | 19.68 | 19.72 | 21.00 |
|  |  | 50  | 0  | 19.37 | 19.43 | 19.44 | 21.00 |
|  |  | 50  | 25 | 19.52 | 19.56 | 19.58 | 21.00 |
|  |  | 50  | 50 | 19.43 | 19.46 | 19.47 | 21.00 |
|  |  | 100 | 0  | 19.47 | 19.50 | 19.50 | 21.00 |



## Upper Antenna

| LTE FDD Band 2<br>DSI 1 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                         |            |         |           | 18607/1850.7            | 18900/1880 | 19193/1909.3 |                  |
| 1.4MHz                  | QPSK       | 1       | 0         | 17.28                   | 17.10      | 17.00        | 18.00            |
|                         |            | 1       | 2         | 17.27                   | 17.26      | 17.32        | 18.00            |
|                         |            | 1       | 5         | 16.99                   | 16.83      | 16.84        | 18.00            |
|                         |            | 3       | 0         | 17.09                   | 17.12      | 17.12        | 18.00            |
|                         |            | 3       | 2         | 16.91                   | 17.05      | 16.87        | 18.00            |
|                         |            | 3       | 3         | 16.73                   | 16.97      | 16.62        | 18.00            |
|                         |            | 6       | 0         | 16.80                   | 17.11      | 16.78        | 18.00            |
|                         | 16QAM      | 1       | 0         | 16.93                   | 17.07      | 16.88        | 18.00            |
|                         |            | 1       | 2         | 16.95                   | 17.05      | 16.80        | 18.00            |
|                         |            | 1       | 5         | 16.46                   | 16.78      | 16.29        | 18.00            |
|                         |            | 3       | 0         | 16.91                   | 17.00      | 16.98        | 18.00            |
|                         |            | 3       | 2         | 16.96                   | 17.02      | 16.81        | 18.00            |
|                         |            | 3       | 3         | 16.66                   | 16.96      | 16.58        | 18.00            |
|                         |            | 6       | 0         | 16.77                   | 16.88      | 16.78        | 18.00            |
|                         | 64QAM      | 1       | 0         | 16.65                   | 16.77      | 16.66        | 18.00            |
|                         |            | 1       | 2         | 16.66                   | 16.69      | 16.76        | 18.00            |
|                         |            | 1       | 5         | 16.29                   | 16.39      | 16.32        | 18.00            |
|                         |            | 3       | 0         | 17.04                   | 16.87      | 17.09        | 18.00            |
|                         |            | 3       | 2         | 17.01                   | 16.95      | 16.90        | 18.00            |
|                         |            | 3       | 3         | 16.66                   | 16.88      | 16.62        | 18.00            |
|                         |            | 6       | 0         | 16.80                   | 16.76      | 16.85        | 18.00            |
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up<br>Limit |
|                         |            |         |           | 18615/1851.5            | 18900/1880 | 19185/1908.5 |                  |
| 3MHz                    | QPSK       | 1       | 0         | 17.25                   | 17.06      | 16.97        | 18.00            |
|                         |            | 1       | 7         | 17.26                   | 17.22      | 17.30        | 18.00            |
|                         |            | 1       | 14        | 16.97                   | 16.82      | 16.81        | 18.00            |
|                         |            | 8       | 0         | 17.06                   | 17.07      | 17.08        | 18.00            |
|                         |            | 8       | 4         | 16.89                   | 17.01      | 16.84        | 18.00            |
|                         |            | 8       | 7         | 16.70                   | 16.92      | 16.58        | 18.00            |
|                         |            | 15      | 0         | 16.77                   | 17.06      | 16.74        | 18.00            |
|                         | 16QAM      | 1       | 0         | 16.93                   | 17.03      | 16.83        | 18.00            |
|                         |            | 1       | 7         | 16.91                   | 17.03      | 16.76        | 18.00            |
|                         |            | 1       | 14        | 16.44                   | 16.75      | 16.27        | 18.00            |
|                         |            | 8       | 0         | 16.88                   | 16.96      | 16.95        | 18.00            |
|                         |            | 8       | 4         | 16.93                   | 17.00      | 16.78        | 18.00            |
|                         |            | 8       | 7         | 16.63                   | 16.91      | 16.54        | 18.00            |
|                         |            | 15      | 0         | 16.75                   | 16.84      | 16.75        | 18.00            |



|           | 64QAM      | 1       | 0         | 16.63                   | 16.73      | 16.61        | 18.00         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 1       | 7         | 16.62                   | 16.67      | 16.72        | 18.00         |
|           |            | 1       | 14        | 16.23                   | 16.33      | 16.26        | 18.00         |
|           |            | 8       | 0         | 16.99                   | 16.79      | 17.02        | 18.00         |
|           |            | 8       | 4         | 16.97                   | 16.91      | 16.84        | 18.00         |
|           |            | 8       | 7         | 16.63                   | 16.83      | 16.58        | 18.00         |
|           |            | 15      | 0         | 16.78                   | 16.72      | 16.82        | 18.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18625/1852.5            | 18900/1880 | 19175/1907.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 17.22                   | 17.04      | 16.93        | 18.00         |
|           |            | 1       | 13        | 17.24                   | 17.18      | 17.27        | 18.00         |
|           |            | 1       | 24        | 16.94                   | 16.77      | 16.77        | 18.00         |
|           |            | 12      | 0         | 17.03                   | 17.02      | 17.04        | 18.00         |
|           |            | 12      | 6         | 16.87                   | 16.97      | 16.79        | 18.00         |
|           |            | 12      | 13        | 16.68                   | 16.90      | 16.54        | 18.00         |
|           |            | 25      | 0         | 16.77                   | 17.05      | 16.72        | 18.00         |
|           | 16QAM      | 1       | 0         | 16.90                   | 16.99      | 16.80        | 18.00         |
|           |            | 1       | 13        | 16.88                   | 17.01      | 16.73        | 18.00         |
|           |            | 1       | 24        | 16.41                   | 16.73      | 16.23        | 18.00         |
|           |            | 12      | 0         | 16.86                   | 16.92      | 16.92        | 18.00         |
|           |            | 12      | 6         | 16.90                   | 16.95      | 16.74        | 18.00         |
|           |            | 12      | 13        | 16.60                   | 16.86      | 16.50        | 18.00         |
|           |            | 25      | 0         | 16.73                   | 16.80      | 16.70        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.60                   | 16.73      | 16.58        | 18.00         |
|           |            | 1       | 13        | 16.59                   | 16.69      | 16.69        | 18.00         |
|           |            | 1       | 24        | 16.24                   | 16.31      | 16.22        | 18.00         |
|           |            | 12      | 0         | 16.97                   | 16.75      | 17.03        | 18.00         |
|           |            | 12      | 6         | 16.94                   | 16.86      | 16.80        | 18.00         |
|           |            | 12      | 13        | 16.60                   | 16.78      | 16.54        | 18.00         |
|           |            | 25      | 0         | 16.76                   | 16.68      | 16.77        | 18.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18650/1855              | 18900/1880 | 19150/1905   |               |
| 10MHz     | QPSK       | 1       | 0         | 17.24                   | 17.05      | 16.96        | 18.00         |
|           |            | 1       | 25        | 17.27                   | 17.23      | 17.31        | 18.00         |
|           |            | 1       | 49        | 16.96                   | 16.81      | 16.80        | 18.00         |
|           |            | 25      | 0         | 17.06                   | 17.07      | 17.08        | 18.00         |
|           |            | 25      | 13        | 16.90                   | 17.02      | 16.83        | 18.00         |
|           |            | 25      | 25        | 16.70                   | 16.94      | 16.59        | 18.00         |
|           |            | 50      | 0         | 16.81                   | 17.07      | 16.76        | 18.00         |
|           | 16QAM      | 1       | 0         | 16.92                   | 17.02      | 16.82        | 18.00         |
|           |            | 1       | 25        | 16.91                   | 17.05      | 16.76        | 18.00         |
|           |            | 1       | 49        | 16.44                   | 16.75      | 16.26        | 18.00         |
|           |            | 25      | 0         | 16.89                   | 16.97      | 16.96        | 18.00         |



|           |            | 25      | 13        | 16.92                   | 16.99        | 16.77        | 18.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 25      | 25        | 16.63                   | 16.91        | 16.54        | 18.00         |
|           |            | 50      | 0         | 16.76                   | 16.85        | 16.74        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.62                   | 16.72        | 16.60        | 18.00         |
|           |            | 1       | 25        | 16.62                   | 16.69        | 16.72        | 18.00         |
|           |            | 1       | 49        | 16.23                   | 16.33        | 16.25        | 18.00         |
|           |            | 25      | 0         | 17.00                   | 16.80        | 17.03        | 18.00         |
|           |            | 25      | 13        | 16.96                   | 16.90        | 16.83        | 18.00         |
|           |            | 25      | 25        | 16.63                   | 16.83        | 16.58        | 18.00         |
|           |            | 50      | 0         | 16.79                   | 16.73        | 16.81        | 18.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 18675/1857.5            | 18900/1880   | 19125/1902.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 17.23                   | 17.01        | 16.94        | 18.00         |
|           |            | 1       | 38        | 17.25                   | 17.22        | 17.28        | 18.00         |
|           |            | 1       | 74        | 16.93                   | 16.76        | 16.76        | 18.00         |
|           |            | 36      | 0         | 17.04                   | 17.03        | 17.05        | 18.00         |
|           |            | 36      | 18        | 16.87                   | 16.97        | 16.79        | 18.00         |
|           |            | 36      | 39        | 16.67                   | 16.91        | 16.55        | 18.00         |
|           |            | 75      | 0         | 16.79                   | 17.03        | 16.71        | 18.00         |
|           | 16QAM      | 1       | 0         | 16.87                   | 17.00        | 16.80        | 18.00         |
|           |            | 1       | 38        | 16.89                   | 17.02        | 16.74        | 18.00         |
|           |            | 1       | 74        | 16.41                   | 16.71        | 16.23        | 18.00         |
|           |            | 36      | 0         | 16.86                   | 16.95        | 16.93        | 18.00         |
|           |            | 36      | 18        | 16.89                   | 16.94        | 16.73        | 18.00         |
|           |            | 36      | 39        | 16.61                   | 16.87        | 16.51        | 18.00         |
|           |            | 75      | 0         | 16.73                   | 16.80        | 16.70        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.57                   | 16.70        | 16.58        | 18.00         |
|           |            | 1       | 38        | 16.60                   | 16.66        | 16.70        | 18.00         |
|           |            | 1       | 74        | 16.24                   | 16.32        | 16.26        | 18.00         |
|           |            | 36      | 0         | 16.99                   | 16.82        | 17.04        | 18.00         |
|           |            | 36      | 18        | 16.94                   | 16.87        | 16.82        | 18.00         |
|           |            | 36      | 39        | 16.61                   | 16.79        | 16.55        | 18.00         |
|           |            | 75      | 0         | 16.76                   | 16.68        | 16.77        | 18.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 18700/1860              | 18900/1880   | 19100/1900   |               |
| 20MHz     | QPSK       | 1       | 0         | 17.20                   | 16.97        | 16.91        | 18.00         |
|           |            | 1       | 50        | <b>17.24</b>            | <b>17.18</b> | <b>17.26</b> | 18.00         |
|           |            | 1       | 99        | 16.91                   | 16.75        | 16.73        | 18.00         |
|           |            | 50      | 0         | <b>17.01</b>            | <b>16.98</b> | <b>17.01</b> | 18.00         |
|           |            | 50      | 25        | 16.85                   | 16.93        | 16.76        | 18.00         |
|           |            | 50      | 50        | 16.64                   | 16.86        | 16.51        | 18.00         |
|           |            | 100     | 0         | 16.76                   | <b>16.98</b> | 16.67        | 18.00         |
|           | 16QAM      | 1       | 0         | 16.85                   | 16.96        | 16.75        | 18.00         |



|  |       |     |    |       |       |       |       |
|--|-------|-----|----|-------|-------|-------|-------|
|  |       | 1   | 50 | 16.85 | 17.00 | 16.70 | 18.00 |
|  |       | 1   | 99 | 16.39 | 16.68 | 16.21 | 18.00 |
|  |       | 50  | 0  | 16.83 | 16.91 | 16.90 | 18.00 |
|  |       | 50  | 25 | 16.86 | 16.92 | 16.70 | 18.00 |
|  |       | 50  | 50 | 16.58 | 16.82 | 16.47 | 18.00 |
|  |       | 100 | 0  | 16.71 | 16.76 | 16.67 | 18.00 |
|  | 64QAM | 1   | 0  | 16.55 | 16.66 | 16.53 | 18.00 |
|  |       | 1   | 50 | 16.56 | 16.64 | 16.66 | 18.00 |
|  |       | 1   | 99 | 16.18 | 16.26 | 16.20 | 18.00 |
|  |       | 50  | 0  | 16.94 | 16.74 | 16.97 | 18.00 |
|  |       | 50  | 25 | 16.90 | 16.83 | 16.76 | 18.00 |
|  |       | 50  | 50 | 16.58 | 16.74 | 16.51 | 18.00 |
|  |       | 100 | 0  | 16.74 | 16.64 | 16.74 | 18.00 |

| LTE FDD Band 2<br>Full power& DSI 2 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|-------------------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth                           | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                                     |            |         |           | 18607/1850.7            | 18900/1880 | 19193/1909.3 |                  |
| 1.4MHz                              | QPSK       | 1       | 0         | 24.28                   | 24.25      | 24.03        | 25.00            |
|                                     |            | 1       | 2         | 24.44                   | 24.29      | 24.08        | 25.00            |
|                                     |            | 1       | 5         | 24.19                   | 24.01      | 24.11        | 25.00            |
|                                     |            | 3       | 0         | 23.95                   | 23.81      | 23.77        | 25.00            |
|                                     |            | 3       | 2         | 23.73                   | 23.73      | 23.59        | 25.00            |
|                                     |            | 3       | 3         | 23.51                   | 23.63      | 23.40        | 25.00            |
|                                     |            | 6       | 0         | 22.64                   | 22.69      | 22.59        | 24.00            |
|                                     | 16QAM      | 1       | 0         | 22.74                   | 22.63      | 22.72        | 24.00            |
|                                     |            | 1       | 2         | 22.72                   | 22.76      | 22.78        | 24.00            |
|                                     |            | 1       | 5         | 22.51                   | 22.81      | 22.41        | 24.00            |
|                                     |            | 3       | 0         | 22.76                   | 22.66      | 22.70        | 24.00            |
|                                     |            | 3       | 2         | 22.73                   | 22.80      | 22.56        | 24.00            |
|                                     |            | 3       | 3         | 22.46                   | 22.74      | 22.43        | 24.00            |
|                                     |            | 6       | 0         | 21.56                   | 21.73      | 21.72        | 23.00            |
|                                     | 64QAM      | 1       | 0         | 22.85                   | 22.81      | 22.86        | 23.00            |
|                                     |            | 1       | 2         | 22.72                   | 22.67      | 22.66        | 23.00            |
|                                     |            | 1       | 5         | 22.56                   | 22.77      | 22.44        | 23.00            |
|                                     |            | 3       | 0         | 22.71                   | 22.54      | 22.74        | 23.00            |
|                                     |            | 3       | 2         | 22.69                   | 22.71      | 22.89        | 23.00            |
|                                     |            | 3       | 3         | 22.48                   | 22.56      | 22.47        | 23.00            |
|                                     |            | 6       | 0         | 21.70                   | 21.64      | 21.74        | 22.00            |
| Bandwidth                           | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up<br>Limit |
|                                     |            |         |           | 18615/1851.5            | 18900/1880 | 19185/1908.5 |                  |
| 3MHz                                | QPSK       | 1       | 0         | 24.30                   | 24.29      | 24.06        | 25.00            |
|                                     |            | 1       | 7         | 24.42                   | 24.32      | 24.12        | 25.00            |



|           |            | 1       | 14        | 24.22                   | 24.06      | 24.15        | 25.00         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 8       | 0         | 23.05                   | 22.93      | 22.90        | 24.00         |
|           |            | 8       | 4         | 22.85                   | 22.83      | 22.71        | 24.00         |
|           |            | 8       | 7         | 22.61                   | 22.74      | 22.50        | 24.00         |
|           |            | 15      | 0         | 22.64                   | 22.73      | 22.62        | 24.00         |
|           | 16QAM      | 1       | 0         | 22.77                   | 22.65      | 22.75        | 24.00         |
|           |            | 1       | 7         | 22.75                   | 22.76      | 22.82        | 24.00         |
|           |            | 1       | 14        | 22.53                   | 22.85      | 22.44        | 24.00         |
|           |            | 8       | 0         | 21.87                   | 21.79      | 21.82        | 23.00         |
|           |            | 8       | 4         | 21.84                   | 21.93      | 21.68        | 23.00         |
|           |            | 8       | 7         | 21.56                   | 21.86      | 21.56        | 23.00         |
|           |            | 15      | 0         | 21.59                   | 21.77      | 21.75        | 23.00         |
|           | 64QAM      | 1       | 0         | 22.88                   | 22.83      | 22.89        | 23.00         |
|           |            | 1       | 7         | 22.75                   | 22.67      | 22.68        | 23.00         |
|           |            | 1       | 14        | 22.58                   | 22.76      | 22.47        | 23.00         |
|           |            | 8       | 0         | 21.82                   | 21.67      | 21.86        | 22.00         |
|           |            | 8       | 4         | 21.80                   | 21.84      | 21.89        | 22.00         |
|           |            | 8       | 7         | 21.58                   | 21.68      | 21.60        | 22.00         |
|           |            | 15      | 0         | 21.73                   | 21.68      | 21.77        | 22.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18625/1852.5            | 18900/1880 | 19175/1907.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 24.27                   | 24.27      | 24.02        | 25.00         |
|           |            | 1       | 13        | 24.40                   | 24.28      | 24.09        | 25.00         |
|           |            | 1       | 24        | 24.19                   | 24.01      | 24.11        | 25.00         |
|           |            | 12      | 0         | 23.02                   | 22.88      | 22.86        | 24.00         |
|           |            | 12      | 6         | 22.83                   | 22.79      | 22.66        | 24.00         |
|           |            | 12      | 13        | 22.59                   | 22.72      | 22.46        | 24.00         |
|           |            | 25      | 0         | 22.64                   | 22.72      | 22.60        | 24.00         |
|           | 16QAM      | 1       | 0         | 22.74                   | 22.61      | 22.72        | 24.00         |
|           |            | 1       | 13        | 22.72                   | 22.74      | 22.79        | 24.00         |
|           |            | 1       | 24        | 22.50                   | 22.83      | 22.40        | 24.00         |
|           |            | 12      | 0         | 21.85                   | 21.75      | 21.79        | 23.00         |
|           |            | 12      | 6         | 21.81                   | 21.88      | 21.64        | 23.00         |
|           |            | 12      | 13        | 21.53                   | 21.81      | 21.52        | 23.00         |
|           |            | 25      | 0         | 21.57                   | 21.73      | 21.70        | 23.00         |
|           | 64QAM      | 1       | 0         | 22.85                   | 22.83      | 22.86        | 23.00         |
|           |            | 1       | 13        | 22.72                   | 22.69      | 22.65        | 23.00         |
|           |            | 1       | 24        | 22.59                   | 22.74      | 22.43        | 23.00         |
|           |            | 12      | 0         | 21.80                   | 21.63      | 21.87        | 22.00         |
|           |            | 12      | 6         | 21.77                   | 21.79      | 21.86        | 22.00         |
|           |            | 12      | 13        | 21.55                   | 21.63      | 21.56        | 22.00         |
|           |            | 25      | 0         | 21.71                   | 21.64      | 21.72        | 22.00         |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            |         |           | 18650/1855              | 18900/1880 | 19150/1905   |               |
| 10MHz     | QPSK       | 1       | 0         | 24.29                   | 24.28      | 24.05        | 25.00         |
|           |            | 1       | 25        | 24.43                   | 24.33      | 24.13        | 25.00         |
|           |            | 1       | 49        | 24.21                   | 24.05      | 24.14        | 25.00         |
|           |            | 25      | 0         | 23.05                   | 22.93      | 22.90        | 24.00         |
|           |            | 25      | 13        | 22.86                   | 22.84      | 22.70        | 24.00         |
|           |            | 25      | 25        | 22.61                   | 22.76      | 22.51        | 24.00         |
|           |            | 50      | 0         | 22.68                   | 22.74      | 22.64        | 24.00         |
|           | 16QAM      | 1       | 0         | 22.76                   | 22.64      | 22.74        | 24.00         |
|           |            | 1       | 25        | 22.75                   | 22.78      | 22.82        | 24.00         |
|           |            | 1       | 49        | 22.53                   | 22.85      | 22.43        | 24.00         |
|           |            | 25      | 0         | 21.88                   | 21.80      | 21.83        | 23.00         |
|           |            | 25      | 13        | 21.83                   | 21.92      | 21.67        | 23.00         |
|           |            | 25      | 25        | 21.56                   | 21.86      | 21.56        | 23.00         |
|           |            | 50      | 0         | 21.60                   | 21.78      | 21.74        | 23.00         |
|           | 64QAM      | 1       | 0         | 22.87                   | 22.82      | 22.88        | 23.00         |
|           |            | 1       | 25        | 22.75                   | 22.69      | 22.68        | 23.00         |
|           |            | 1       | 49        | 22.58                   | 22.76      | 22.46        | 23.00         |
|           |            | 25      | 0         | 21.83                   | 21.68      | 21.87        | 22.00         |
|           |            | 25      | 13        | 21.79                   | 21.83      | 21.80        | 22.00         |
|           |            | 25      | 25        | 21.58                   | 21.68      | 21.60        | 22.00         |
|           |            | 50      | 0         | 21.74                   | 21.69      | 21.76        | 22.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18675/1857.5            | 18900/1880 | 19125/1902.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 24.28                   | 24.24      | 24.03        | 25.00         |
|           |            | 1       | 38        | 24.41                   | 24.32      | 24.10        | 25.00         |
|           |            | 1       | 74        | 24.18                   | 24.00      | 24.10        | 25.00         |
|           |            | 36      | 0         | 23.03                   | 22.89      | 22.87        | 24.00         |
|           |            | 36      | 18        | 22.83                   | 22.79      | 22.66        | 24.00         |
|           |            | 36      | 39        | 22.58                   | 22.73      | 22.47        | 24.00         |
|           |            | 75      | 0         | 22.66                   | 22.70      | 22.59        | 24.00         |
|           | 16QAM      | 1       | 0         | 22.71                   | 22.62      | 22.72        | 24.00         |
|           |            | 1       | 38        | 22.73                   | 22.75      | 22.80        | 24.00         |
|           |            | 1       | 74        | 22.50                   | 22.81      | 22.40        | 24.00         |
|           |            | 36      | 0         | 21.85                   | 21.78      | 21.80        | 23.00         |
|           |            | 36      | 18        | 21.80                   | 21.87      | 21.63        | 23.00         |
|           |            | 36      | 39        | 21.54                   | 21.82      | 21.53        | 23.00         |
|           |            | 75      | 0         | 21.57                   | 21.73      | 21.70        | 23.00         |
|           | 64QAM      | 1       | 0         | 22.82                   | 22.80      | 22.86        | 23.00         |
|           |            | 1       | 38        | 22.73                   | 22.66      | 22.66        | 23.00         |
|           |            | 1       | 74        | 22.59                   | 22.75      | 22.47        | 23.00         |
|           |            | 36      | 0         | 21.82                   | 21.70      | 21.88        | 22.00         |



|           |            | 36      | 18        | 21.77                   | 21.80        | 21.85        | 22.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 36      | 39        | 21.56                   | 21.64        | 21.57        | 22.00         |
|           |            | 75      | 0         | 21.71                   | 21.64        | 21.72        | 22.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 18700/1860              | 18900/1880   | 19100/1900   |               |
| 20MHz     | QPSK       | 1       | 0         | 24.25                   | 24.20        | 24.00        | 25.00         |
|           |            | 1       | 50        | <b>24.40</b>            | <b>24.28</b> | <b>24.08</b> | 25.00         |
|           |            | 1       | 99        | 24.16                   | 23.99        | 24.07        | 25.00         |
|           |            | 50      | 0         | <b>23.00</b>            | <b>22.84</b> | <b>22.83</b> | 24.00         |
|           |            | 50      | 25        | 22.81                   | 22.75        | 22.63        | 24.00         |
|           |            | 50      | 50        | 22.55                   | 22.68        | 22.43        | 24.00         |
|           |            | 100     | 0         | 22.63                   | <b>22.65</b> | 22.55        | 24.00         |
|           | 16QAM      | 1       | 0         | 22.70                   | 22.58        | 22.67        | 24.00         |
|           |            | 1       | 50        | 22.69                   | 22.73        | 22.76        | 24.00         |
|           |            | 1       | 99        | 22.48                   | 22.78        | 22.38        | 24.00         |
|           |            | 50      | 0         | 21.82                   | 21.74        | 21.77        | 23.00         |
|           |            | 50      | 25        | 21.77                   | 21.85        | 21.60        | 23.00         |
|           |            | 50      | 50        | 21.51                   | 21.77        | 21.49        | 23.00         |
|           |            | 100     | 0         | 21.55                   | 21.69        | 21.67        | 23.00         |
|           | 64QAM      | 1       | 0         | 22.80                   | 22.76        | 22.81        | 23.00         |
|           |            | 1       | 50        | 22.69                   | 22.64        | 22.62        | 23.00         |
|           |            | 1       | 99        | 22.53                   | 22.69        | 22.41        | 23.00         |
|           |            | 50      | 0         | 21.77                   | 21.62        | 21.81        | 22.00         |
|           |            | 50      | 25        | 21.73                   | 21.76        | 21.90        | 22.00         |
|           |            | 50      | 50        | 21.53                   | 21.59        | 21.53        | 22.00         |
|           |            | 100     | 0         | 21.69                   | 21.60        | 21.69        | 22.00         |

| LTE FDD Band 2<br>DSI 4 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                         |            |         |           | 18607/1850.7            | 18900/1880 | 19193/1909.3 |                  |
| 1.4MHz                  | QPSK       | 1       | 0         | 18.57                   | 18.62      | 18.56        | 19.50            |
|                         |            | 1       | 2         | 18.37                   | 18.83      | 18.48        | 19.50            |
|                         |            | 1       | 5         | 18.36                   | 18.41      | 18.43        | 19.50            |
|                         |            | 3       | 0         | 18.45                   | 18.46      | 18.13        | 19.50            |
|                         |            | 3       | 2         | 18.15                   | 18.76      | 18.07        | 19.50            |
|                         |            | 3       | 3         | 18.02                   | 18.33      | 18.18        | 19.50            |
|                         |            | 6       | 0         | 18.10                   | 18.31      | 18.11        | 19.50            |
|                         | 16QAM      | 1       | 0         | 18.42                   | 18.29      | 18.21        | 19.50            |
|                         |            | 1       | 2         | 18.44                   | 18.50      | 18.15        | 19.50            |
|                         |            | 1       | 5         | 18.46                   | 18.30      | 18.19        | 19.50            |
|                         |            | 3       | 0         | 18.37                   | 18.34      | 18.24        | 19.50            |
|                         |            | 3       | 2         | 18.31                   | 18.49      | 18.23        | 19.50            |



|           |            | 3       | 3         | 17.96                   | 18.36      | 17.92        | 19.50         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 6       | 0         | 18.02                   | 18.44      | 18.10        | 19.50         |
|           | 64QAM      | 1       | 0         | 17.75                   | 18.34      | 18.11        | 19.50         |
|           |            | 1       | 2         | 18.18                   | 18.16      | 18.14        | 19.50         |
|           |            | 1       | 5         | 18.34                   | 18.31      | 18.11        | 19.50         |
|           |            | 3       | 0         | 18.26                   | 18.25      | 18.35        | 19.50         |
|           |            | 3       | 2         | 18.18                   | 18.27      | 18.20        | 19.50         |
|           |            | 3       | 3         | 17.98                   | 18.04      | 17.92        | 19.50         |
|           |            | 6       | 0         | 17.99                   | 18.12      | 18.13        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18615/1851.5            | 18900/1880 | 19185/1908.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 18.54                   | 18.58      | 18.53        | 19.50         |
|           |            | 1       | 7         | 18.36                   | 18.79      | 18.46        | 19.50         |
|           |            | 1       | 14        | 18.34                   | 18.40      | 18.40        | 19.50         |
|           |            | 8       | 0         | 18.42                   | 18.41      | 18.09        | 19.50         |
|           |            | 8       | 4         | 18.13                   | 18.72      | 18.04        | 19.50         |
|           |            | 8       | 7         | 17.99                   | 18.28      | 18.14        | 19.50         |
|           |            | 15      | 0         | 18.07                   | 18.26      | 18.07        | 19.50         |
|           | 16QAM      | 1       | 0         | 18.42                   | 18.25      | 18.16        | 19.50         |
|           |            | 1       | 7         | 18.40                   | 18.48      | 18.11        | 19.50         |
|           |            | 1       | 14        | 18.44                   | 18.27      | 18.17        | 19.50         |
|           |            | 8       | 0         | 18.34                   | 18.30      | 18.21        | 19.50         |
|           |            | 8       | 4         | 18.28                   | 18.47      | 18.20        | 19.50         |
|           |            | 8       | 7         | 17.93                   | 18.31      | 17.88        | 19.50         |
|           |            | 15      | 0         | 18.00                   | 18.40      | 18.07        | 19.50         |
|           | 64QAM      | 1       | 0         | 17.73                   | 18.30      | 18.06        | 19.50         |
|           |            | 1       | 7         | 18.14                   | 18.14      | 18.10        | 19.50         |
|           |            | 1       | 14        | 18.28                   | 18.25      | 18.05        | 19.50         |
|           |            | 8       | 0         | 18.21                   | 18.17      | 18.28        | 19.50         |
|           |            | 8       | 4         | 18.14                   | 18.23      | 18.14        | 19.50         |
|           |            | 8       | 7         | 17.95                   | 17.99      | 17.88        | 19.50         |
|           |            | 15      | 0         | 17.97                   | 18.08      | 18.10        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18625/1852.5            | 18900/1880 | 19175/1907.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 18.51                   | 18.56      | 18.49        | 19.50         |
|           |            | 1       | 13        | 18.34                   | 18.75      | 18.43        | 19.50         |
|           |            | 1       | 24        | 18.31                   | 18.35      | 18.36        | 19.50         |
|           |            | 12      | 0         | 18.39                   | 18.36      | 18.05        | 19.50         |
|           |            | 12      | 6         | 18.11                   | 18.68      | 17.99        | 19.50         |
|           |            | 12      | 13        | 17.97                   | 18.26      | 18.10        | 19.50         |
|           |            | 25      | 0         | 18.07                   | 18.25      | 18.05        | 19.50         |
|           | 16QAM      | 1       | 0         | 18.39                   | 18.21      | 18.13        | 19.50         |
|           |            | 1       | 13        | 18.37                   | 18.46      | 18.08        | 19.50         |



|           |            | 1       | 24        | 18.41                   | 18.25      | 18.13        | 19.50         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 12      | 0         | 18.32                   | 18.26      | 18.18        | 19.50         |
|           |            | 12      | 6         | 18.25                   | 18.42      | 18.16        | 19.50         |
|           |            | 12      | 13        | 17.90                   | 18.26      | 17.84        | 19.50         |
|           |            | 25      | 0         | 17.98                   | 18.36      | 18.02        | 19.50         |
|           | 64QAM      | 1       | 0         | 17.70                   | 18.30      | 18.03        | 19.50         |
|           |            | 1       | 13        | 18.11                   | 18.16      | 18.07        | 19.50         |
|           |            | 1       | 24        | 18.29                   | 18.23      | 18.01        | 19.50         |
|           |            | 12      | 0         | 18.19                   | 18.13      | 18.29        | 19.50         |
|           |            | 12      | 6         | 18.11                   | 18.18      | 18.10        | 19.50         |
|           |            | 12      | 13        | 17.92                   | 17.94      | 17.84        | 19.50         |
|           |            | 25      | 0         | 17.95                   | 18.04      | 18.05        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18650/1855              | 18900/1880 | 19150/1905   |               |
| 10MHz     | QPSK       | 1       | 0         | 18.53                   | 18.57      | 18.52        | 19.50         |
|           |            | 1       | 25        | 18.37                   | 18.80      | 18.47        | 19.50         |
|           |            | 1       | 49        | 18.33                   | 18.39      | 18.39        | 19.50         |
|           |            | 25      | 0         | 18.42                   | 18.41      | 18.09        | 19.50         |
|           |            | 25      | 13        | 18.14                   | 18.73      | 18.03        | 19.50         |
|           |            | 25      | 25        | 17.99                   | 18.30      | 18.15        | 19.50         |
|           |            | 50      | 0         | 18.11                   | 18.27      | 18.09        | 19.50         |
|           | 16QAM      | 1       | 0         | 18.41                   | 18.24      | 18.15        | 19.50         |
|           |            | 1       | 25        | 18.40                   | 18.50      | 18.11        | 19.50         |
|           |            | 1       | 49        | 18.44                   | 18.27      | 18.16        | 19.50         |
|           |            | 25      | 0         | 18.35                   | 18.31      | 18.22        | 19.50         |
|           |            | 25      | 13        | 18.27                   | 18.46      | 18.19        | 19.50         |
|           |            | 25      | 25        | 17.93                   | 18.31      | 17.88        | 19.50         |
|           |            | 50      | 0         | 18.01                   | 18.41      | 18.06        | 19.50         |
|           | 64QAM      | 1       | 0         | 17.72                   | 18.29      | 18.05        | 19.50         |
|           |            | 1       | 25        | 18.14                   | 18.16      | 18.10        | 19.50         |
|           |            | 1       | 49        | 18.28                   | 18.25      | 18.04        | 19.50         |
|           |            | 25      | 0         | 18.22                   | 18.18      | 18.29        | 19.50         |
|           |            | 25      | 13        | 18.13                   | 18.22      | 18.13        | 19.50         |
|           |            | 25      | 25        | 17.95                   | 17.99      | 17.88        | 19.50         |
|           |            | 50      | 0         | 17.98                   | 18.09      | 18.09        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 18675/1857.5            | 18900/1880 | 19125/1902.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 18.52                   | 18.53      | 18.50        | 19.50         |
|           |            | 1       | 38        | 18.35                   | 18.79      | 18.44        | 19.50         |
|           |            | 1       | 74        | 18.30                   | 18.34      | 18.35        | 19.50         |
|           |            | 36      | 0         | 18.40                   | 18.37      | 18.06        | 19.50         |
|           |            | 36      | 18        | 18.11                   | 18.68      | 17.99        | 19.50         |
|           |            | 36      | 39        | 17.96                   | 18.27      | 18.11        | 19.50         |



|           | 16QAM      | 75      | 0         | 18.09                   | 18.23        | 18.04        | 19.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 0         | 18.36                   | 18.22        | 18.13        | 19.50         |
|           |            | 1       | 38        | 18.38                   | 18.47        | 18.09        | 19.50         |
|           |            | 1       | 74        | 18.41                   | 18.23        | 18.13        | 19.50         |
|           |            | 36      | 0         | 18.32                   | 18.29        | 18.19        | 19.50         |
|           |            | 36      | 18        | 18.24                   | 18.41        | 18.15        | 19.50         |
|           |            | 36      | 39        | 17.91                   | 18.27        | 17.85        | 19.50         |
|           |            | 75      | 0         | 17.98                   | 18.36        | 18.02        | 19.50         |
|           | 64QAM      | 1       | 0         | 17.67                   | 18.27        | 18.03        | 19.50         |
|           |            | 1       | 38        | 18.12                   | 18.13        | 18.08        | 19.50         |
|           |            | 1       | 74        | 18.29                   | 18.24        | 18.05        | 19.50         |
|           |            | 36      | 0         | 18.21                   | 18.20        | 18.30        | 19.50         |
|           |            | 36      | 18        | 18.11                   | 18.19        | 18.12        | 19.50         |
|           |            | 36      | 39        | 17.93                   | 17.95        | 17.85        | 19.50         |
|           |            | 75      | 0         | 17.95                   | 18.04        | 18.05        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 18700/1860              | 18900/1880   | 19100/1900   |               |
| 20MHz     | QPSK       | 1       | 0         | <b>18.49</b>            | 18.49        | <b>18.47</b> | 19.50         |
|           |            | 1       | 50        | 18.34                   | <b>18.75</b> | 18.42        | 19.50         |
|           |            | 1       | 99        | 18.28                   | 18.33        | 18.32        | 19.50         |
|           |            | 50      | 0         | <b>18.37</b>            | 18.32        | 18.02        | 19.50         |
|           |            | 50      | 25        | 18.09                   | <b>18.64</b> | 17.96        | 19.50         |
|           |            | 50      | 50        | 17.93                   | 18.22        | <b>18.07</b> | 19.50         |
|           |            | 100     | 0         | 18.06                   | <b>18.18</b> | 18.00        | 19.50         |
|           | 16QAM      | 1       | 0         | 18.19                   | 18.18        | 18.08        | 19.50         |
|           |            | 1       | 50        | 18.34                   | 18.45        | 18.05        | 19.50         |
|           |            | 1       | 99        | 18.39                   | 18.20        | 18.11        | 19.50         |
|           |            | 50      | 0         | 18.29                   | 18.25        | 18.16        | 19.50         |
|           |            | 50      | 25        | 18.21                   | 18.39        | 18.12        | 19.50         |
|           |            | 50      | 50        | 17.88                   | 18.22        | 17.81        | 19.50         |
|           |            | 100     | 0         | 17.96                   | 18.32        | 17.99        | 19.50         |
|           | 64QAM      | 1       | 0         | 17.65                   | 18.23        | 17.98        | 19.50         |
|           |            | 1       | 50        | 18.08                   | 18.11        | 18.04        | 19.50         |
|           |            | 1       | 99        | 18.23                   | 18.18        | 17.99        | 19.50         |
|           |            | 50      | 0         | 18.16                   | 18.12        | 18.23        | 19.50         |
|           |            | 50      | 25        | 18.07                   | 18.15        | 18.06        | 19.50         |
|           |            | 50      | 50        | 17.90                   | 17.90        | 17.81        | 19.50         |
|           |            | 100     | 0         | 17.93                   | 18.00        | 18.02        | 19.50         |

| LTE FDD Band 4<br>DSI 1 |            |         |           | Conducted Power(dBm)    |              |              | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|--------------|--------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              |                  |
|                         |            |         |           | 19957/1710.7            | 20175/1732.5 | 20393/1754.3 |                  |
| 1.4MHz                  | QPSK       | 1       | 0         | 15.73                   | 15.91        | 15.84        | 16.50            |
|                         |            | 1       | 2         | 16.12                   | 16.15        | 16.07        | 16.50            |
|                         |            | 1       | 5         | 15.80                   | 15.65        | 15.63        | 16.50            |
|                         |            | 3       | 0         | 15.78                   | 15.74        | 15.86        | 16.50            |
|                         |            | 3       | 2         | 15.64                   | 15.64        | 15.56        | 16.50            |
|                         |            | 3       | 3         | 15.50                   | 15.60        | 15.57        | 16.50            |
|                         |            | 6       | 0         | 15.42                   | 15.65        | 15.65        | 16.50            |
|                         | 16QAM      | 1       | 0         | 15.85                   | 15.36        | 15.41        | 16.50            |
|                         |            | 1       | 2         | 15.87                   | 15.77        | 15.79        | 16.50            |
|                         |            | 1       | 5         | 15.45                   | 15.63        | 15.53        | 16.50            |
|                         |            | 3       | 0         | 15.65                   | 15.71        | 15.68        | 16.50            |
|                         |            | 3       | 2         | 15.72                   | 15.61        | 15.78        | 16.50            |
|                         |            | 3       | 3         | 15.55                   | 15.60        | 15.42        | 16.50            |
|                         |            | 6       | 0         | 15.66                   | 15.64        | 15.52        | 16.50            |
|                         | 64QAM      | 1       | 0         | 15.92                   | 15.62        | 15.84        | 16.50            |
|                         |            | 1       | 2         | 16.22                   | 15.81        | 15.92        | 16.50            |
|                         |            | 1       | 5         | 15.73                   | 15.22        | 15.54        | 16.50            |
|                         |            | 3       | 0         | 15.67                   | 15.79        | 16.12        | 16.50            |
|                         |            | 3       | 2         | 15.74                   | 15.63        | 15.84        | 16.50            |
|                         |            | 3       | 3         | 15.60                   | 15.58        | 15.28        | 16.50            |
|                         |            | 6       | 0         | 15.61                   | 15.65        | 15.41        | 16.50            |
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up<br>Limit |
|                         |            |         |           | 19965/1711.5            | 20175/1732.5 | 20385/1753.5 |                  |
| 3MHz                    | QPSK       | 1       | 0         | 15.70                   | 15.87        | 15.81        | 16.50            |
|                         |            | 1       | 7         | 16.11                   | 16.11        | 16.05        | 16.50            |
|                         |            | 1       | 14        | 15.78                   | 15.64        | 15.60        | 16.50            |
|                         |            | 8       | 0         | 15.75                   | 15.69        | 15.82        | 16.50            |
|                         |            | 8       | 4         | 15.62                   | 15.60        | 15.53        | 16.50            |
|                         |            | 8       | 7         | 15.47                   | 15.55        | 15.53        | 16.50            |
|                         |            | 15      | 0         | 15.39                   | 15.60        | 15.61        | 16.50            |
|                         | 16QAM      | 1       | 0         | 15.85                   | 15.32        | 15.36        | 16.50            |
|                         |            | 1       | 7         | 15.83                   | 15.75        | 15.75        | 16.50            |
|                         |            | 1       | 14        | 15.43                   | 15.60        | 15.51        | 16.50            |
|                         |            | 8       | 0         | 15.62                   | 15.67        | 15.65        | 16.50            |
|                         |            | 8       | 4         | 15.69                   | 15.59        | 15.75        | 16.50            |
|                         |            | 8       | 7         | 15.52                   | 15.55        | 15.38        | 16.50            |
|                         |            | 15      | 0         | 15.64                   | 15.60        | 15.49        | 16.50            |
|                         | 64QAM      | 1       | 0         | 15.90                   | 15.58        | 15.79        | 16.50            |



|           |            | 1       | 7         | 16.18                   | 15.79        | 15.88        | 16.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 14        | 15.67                   | 15.16        | 15.48        | 16.50         |
|           |            | 8       | 0         | 15.62                   | 15.71        | 16.05        | 16.50         |
|           |            | 8       | 4         | 15.70                   | 15.59        | 15.78        | 16.50         |
|           |            | 8       | 7         | 15.57                   | 15.53        | 15.24        | 16.50         |
|           |            | 15      | 0         | 15.59                   | 15.61        | 15.38        | 16.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 19975/1712.5            | 20175/1732.5 | 20375/1752.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 15.67                   | 15.85        | 15.77        | 16.50         |
|           |            | 1       | 13        | 16.09                   | 16.07        | 16.02        | 16.50         |
|           |            | 1       | 24        | 15.75                   | 15.59        | 15.56        | 16.50         |
|           |            | 12      | 0         | 15.72                   | 15.64        | 15.78        | 16.50         |
|           |            | 12      | 6         | 15.60                   | 15.56        | 15.48        | 16.50         |
|           |            | 12      | 13        | 15.45                   | 15.53        | 15.49        | 16.50         |
|           |            | 25      | 0         | 15.39                   | 15.59        | 15.59        | 16.50         |
|           | 16QAM      | 1       | 0         | 15.82                   | 15.28        | 15.33        | 16.50         |
|           |            | 1       | 13        | 15.80                   | 15.73        | 15.72        | 16.50         |
|           |            | 1       | 24        | 15.40                   | 15.58        | 15.47        | 16.50         |
|           |            | 12      | 0         | 15.60                   | 15.63        | 15.62        | 16.50         |
|           |            | 12      | 6         | 15.66                   | 15.54        | 15.71        | 16.50         |
|           |            | 12      | 13        | 15.49                   | 15.50        | 15.34        | 16.50         |
|           |            | 25      | 0         | 15.62                   | 15.56        | 15.44        | 16.50         |
|           | 64QAM      | 1       | 0         | 15.87                   | 15.58        | 15.76        | 16.50         |
|           |            | 1       | 13        | 16.15                   | 15.81        | 15.85        | 16.50         |
|           |            | 1       | 24        | 15.68                   | 15.14        | 15.44        | 16.50         |
|           |            | 12      | 0         | 15.60                   | 15.67        | 16.06        | 16.50         |
|           |            | 12      | 6         | 15.67                   | 15.54        | 15.74        | 16.50         |
|           |            | 12      | 13        | 15.54                   | 15.48        | 15.20        | 16.50         |
|           |            | 25      | 0         | 15.57                   | 15.57        | 15.33        | 16.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20000/1715              | 20175/1732.5 | 20350/1750   |               |
| 10MHz     | QPSK       | 1       | 0         | 15.69                   | 15.86        | 15.80        | 16.50         |
|           |            | 1       | 25        | 16.12                   | 16.12        | 16.06        | 16.50         |
|           |            | 1       | 49        | 15.77                   | 15.63        | 15.59        | 16.50         |
|           |            | 25      | 0         | 15.75                   | 15.69        | 15.82        | 16.50         |
|           |            | 25      | 13        | 15.63                   | 15.61        | 15.52        | 16.50         |
|           |            | 25      | 25        | 15.47                   | 15.57        | 15.54        | 16.50         |
|           |            | 50      | 0         | 15.43                   | 15.61        | 15.63        | 16.50         |
|           | 16QAM      | 1       | 0         | 15.84                   | 15.31        | 15.35        | 16.50         |
|           |            | 1       | 25        | 15.83                   | 15.77        | 15.75        | 16.50         |
|           |            | 1       | 49        | 15.43                   | 15.60        | 15.50        | 16.50         |
|           |            | 25      | 0         | 15.63                   | 15.68        | 15.66        | 16.50         |
|           |            | 25      | 13        | 15.68                   | 15.58        | 15.74        | 16.50         |



|           |            | 25      | 25        | 15.52                   | 15.55        | 15.38        | 16.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 50      | 0         | 15.65                   | 15.61        | 15.48        | 16.50         |
|           | 64QAM      | 1       | 0         | 15.89                   | 15.57        | 15.78        | 16.50         |
|           |            | 1       | 25        | 16.18                   | 15.81        | 15.88        | 16.50         |
|           |            | 1       | 49        | 15.67                   | 15.16        | 15.47        | 16.50         |
|           |            | 25      | 0         | 15.63                   | 15.72        | 16.06        | 16.50         |
|           |            | 25      | 13        | 15.69                   | 15.58        | 15.77        | 16.50         |
|           |            | 25      | 25        | 15.57                   | 15.53        | 15.24        | 16.50         |
|           |            | 50      | 0         | 15.60                   | 15.62        | 15.37        | 16.50         |
|           |            |         |           |                         |              |              |               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20025/1717.5            | 20175/1732.5 | 20325/1747.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 15.68                   | 15.82        | 15.78        | 16.50         |
|           |            | 1       | 38        | 16.10                   | 16.11        | 16.03        | 16.50         |
|           |            | 1       | 74        | 15.74                   | 15.58        | 15.55        | 16.50         |
|           |            | 36      | 0         | 15.73                   | 15.65        | 15.79        | 16.50         |
|           |            | 36      | 18        | 15.60                   | 15.56        | 15.48        | 16.50         |
|           |            | 36      | 39        | 15.44                   | 15.54        | 15.50        | 16.50         |
|           |            | 75      | 0         | 15.41                   | 15.57        | 15.58        | 16.50         |
|           | 16QAM      | 1       | 0         | 15.79                   | 15.29        | 15.33        | 16.50         |
|           |            | 1       | 38        | 15.81                   | 15.74        | 15.73        | 16.50         |
|           |            | 1       | 74        | 15.40                   | 15.56        | 15.47        | 16.50         |
|           |            | 36      | 0         | 15.60                   | 15.66        | 15.63        | 16.50         |
|           |            | 36      | 18        | 15.65                   | 15.53        | 15.70        | 16.50         |
|           |            | 36      | 39        | 15.50                   | 15.51        | 15.35        | 16.50         |
|           |            | 75      | 0         | 15.62                   | 15.56        | 15.44        | 16.50         |
|           | 64QAM      | 1       | 0         | 15.84                   | 15.55        | 15.76        | 16.50         |
|           |            | 1       | 38        | 16.16                   | 15.78        | 15.86        | 16.50         |
|           |            | 1       | 74        | 15.68                   | 15.15        | 15.48        | 16.50         |
|           |            | 36      | 0         | 15.62                   | 15.74        | 16.07        | 16.50         |
|           |            | 36      | 18        | 15.67                   | 15.55        | 15.76        | 16.50         |
|           |            | 36      | 39        | 15.55                   | 15.49        | 15.21        | 16.50         |
|           |            | 75      | 0         | 15.57                   | 15.57        | 15.33        | 16.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20050/1720              | 20175/1732.5 | 20300/1745   |               |
| 20MHz     | QPSK       | 1       | 0         | 15.65                   | 15.78        | 15.75        | 16.50         |
|           |            | 1       | 50        | <b>16.19</b>            | <b>16.07</b> | <b>16.01</b> | 16.50         |
|           |            | 1       | 99        | 15.72                   | 15.57        | 15.52        | 16.50         |
|           |            | 50      | 0         | <b>15.70</b>            | <b>15.60</b> | <b>15.95</b> | 16.50         |
|           |            | 50      | 25        | 15.58                   | 15.52        | 15.45        | 16.50         |
|           |            | 50      | 50        | 15.41                   | 15.49        | 15.46        | 16.50         |
|           |            | 100     | 0         | 15.38                   | 15.52        | <b>15.54</b> | 16.50         |
|           | 16QAM      | 1       | 0         | 15.29                   | 15.25        | 15.28        | 16.50         |
|           |            | 1       | 50        | 15.77                   | 15.72        | 15.69        | 16.50         |



|  |       |     |    |       |       |       |       |
|--|-------|-----|----|-------|-------|-------|-------|
|  |       | 1   | 99 | 15.38 | 15.53 | 15.45 | 16.50 |
|  |       | 50  | 0  | 15.57 | 15.62 | 15.60 | 16.50 |
|  |       | 50  | 25 | 15.62 | 15.51 | 15.67 | 16.50 |
|  |       | 50  | 50 | 15.47 | 15.46 | 15.31 | 16.50 |
|  |       | 100 | 0  | 15.60 | 15.52 | 15.41 | 16.50 |
|  | 64QAM | 1   | 0  | 15.82 | 15.51 | 15.71 | 16.50 |
|  |       | 1   | 50 | 16.12 | 15.76 | 15.82 | 16.50 |
|  |       | 1   | 99 | 15.62 | 15.09 | 15.42 | 16.50 |
|  |       | 50  | 0  | 15.57 | 15.66 | 16.00 | 16.50 |
|  |       | 50  | 25 | 15.63 | 15.51 | 15.70 | 16.50 |
|  |       | 50  | 50 | 15.52 | 15.44 | 15.17 | 16.50 |
|  |       | 100 | 0  | 15.55 | 15.53 | 15.30 | 16.50 |

| LTE FDD Band 4<br>Full power&DSI 2 |            |         |           | Conducted Power(dBm)    |              |              | Tune-up<br>Limit |
|------------------------------------|------------|---------|-----------|-------------------------|--------------|--------------|------------------|
| Bandwidth                          | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              |                  |
|                                    |            |         |           | 19957/1710.7            | 20175/1732.5 | 20393/1754.3 |                  |
| 1.4MHz                             | QPSK       | 1       | 0         | 22.50                   | 22.46        | 22.58        | 23.00            |
|                                    |            | 1       | 2         | 22.58                   | 22.73        | 22.50        | 23.00            |
|                                    |            | 1       | 5         | 22.22                   | 22.15        | 22.26        | 23.00            |
|                                    |            | 3       | 0         | 22.09                   | 22.17        | 22.09        | 23.00            |
|                                    |            | 3       | 2         | 21.95                   | 22.07        | 21.90        | 23.00            |
|                                    |            | 3       | 3         | 21.96                   | 22.10        | 21.94        | 23.00            |
|                                    |            | 6       | 0         | 21.84                   | 22.13        | 21.93        | 23.00            |
|                                    | 16QAM      | 1       | 0         | 22.12                   | 22.14        | 22.06        | 23.00            |
|                                    |            | 1       | 2         | 22.14                   | 22.19        | 21.92        | 23.00            |
|                                    |            | 1       | 5         | 21.93                   | 22.07        | 21.83        | 23.00            |
|                                    |            | 3       | 0         | 21.16                   | 21.13        | 21.10        | 22.00            |
|                                    |            | 3       | 2         | 21.17                   | 21.15        | 21.24        | 22.00            |
|                                    |            | 3       | 3         | 21.10                   | 21.19        | 21.17        | 22.00            |
|                                    |            | 6       | 0         | 21.19                   | 21.15        | 21.17        | 22.00            |
|                                    | 64QAM      | 1       | 0         | 21.15                   | 21.31        | 21.99        | 22.00            |
|                                    |            | 1       | 2         | 21.36                   | 21.10        | 21.13        | 22.00            |
|                                    |            | 1       | 5         | 21.16                   | 21.14        | 21.18        | 22.00            |
|                                    |            | 3       | 0         | 21.29                   | 21.16        | 21.12        | 22.00            |
|                                    |            | 3       | 2         | 21.25                   | 21.11        | 21.07        | 22.00            |
|                                    |            | 3       | 3         | 20.93                   | 20.99        | 21.03        | 22.00            |
|                                    |            | 6       | 0         | 20.05                   | 20.12        | 20.19        | 21.00            |
| Bandwidth                          | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up<br>Limit |
|                                    |            |         |           | 19965/1711.5            | 20175/1732.5 | 20385/1753.5 |                  |
| 3MHz                               | QPSK       | 1       | 0         | 22.47                   | 22.42        | 22.55        | 23.00            |
|                                    |            | 1       | 7         | 22.57                   | 22.69        | 22.48        | 23.00            |
|                                    |            | 1       | 14        | 22.20                   | 22.14        | 22.23        | 23.00            |



|           |            | 8       | 0         | 22.06                   | 22.12        | 22.05        | 23.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 8       | 4         | 21.93                   | 22.03        | 21.87        | 23.00         |
|           |            | 8       | 7         | 21.93                   | 22.05        | 21.90        | 23.00         |
|           |            | 15      | 0         | 21.81                   | 22.08        | 21.89        | 23.00         |
|           | 16QAM      | 1       | 0         | 22.12                   | 22.10        | 22.01        | 23.00         |
|           |            | 1       | 7         | 22.10                   | 22.17        | 21.88        | 23.00         |
|           |            | 1       | 14        | 21.91                   | 22.04        | 21.81        | 23.00         |
|           |            | 8       | 0         | 21.13                   | 21.09        | 21.07        | 22.00         |
|           |            | 8       | 4         | 21.14                   | 21.13        | 21.21        | 22.00         |
|           |            | 8       | 7         | 21.07                   | 21.14        | 21.13        | 22.00         |
|           |            | 15      | 0         | 21.17                   | 21.11        | 21.14        | 22.00         |
|           | 64QAM      | 1       | 0         | 21.13                   | 21.27        | 21.94        | 22.00         |
|           |            | 1       | 7         | 21.32                   | 21.08        | 21.09        | 22.00         |
|           |            | 1       | 14        | 21.10                   | 21.08        | 21.12        | 22.00         |
|           |            | 8       | 0         | 20.24                   | 20.08        | 20.05        | 21.00         |
|           |            | 8       | 4         | 20.21                   | 20.07        | 20.01        | 21.00         |
|           |            | 8       | 7         | 19.90                   | 19.94        | 19.99        | 21.00         |
|           |            | 15      | 0         | 20.03                   | 20.08        | 20.16        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 19975/1712.5            | 20175/1732.5 | 20375/1752.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 22.44                   | 22.40        | 22.51        | 23.00         |
|           |            | 1       | 13        | 22.55                   | 22.65        | 22.45        | 23.00         |
|           |            | 1       | 24        | 22.17                   | 22.09        | 22.19        | 23.00         |
|           |            | 12      | 0         | 22.03                   | 22.07        | 22.01        | 23.00         |
|           |            | 12      | 6         | 21.91                   | 21.99        | 21.82        | 23.00         |
|           |            | 12      | 13        | 21.91                   | 22.03        | 21.86        | 23.00         |
|           |            | 25      | 0         | 21.81                   | 22.07        | 21.87        | 23.00         |
|           | 16QAM      | 1       | 0         | 22.09                   | 22.06        | 21.98        | 23.00         |
|           |            | 1       | 13        | 22.07                   | 22.15        | 21.85        | 23.00         |
|           |            | 1       | 24        | 21.88                   | 22.02        | 21.77        | 23.00         |
|           |            | 12      | 0         | 21.11                   | 21.05        | 21.04        | 22.00         |
|           |            | 12      | 6         | 21.11                   | 21.08        | 21.17        | 22.00         |
|           |            | 12      | 13        | 21.04                   | 21.09        | 21.09        | 22.00         |
|           |            | 25      | 0         | 21.15                   | 21.07        | 21.09        | 22.00         |
|           | 64QAM      | 1       | 0         | 21.10                   | 21.27        | 21.91        | 22.00         |
|           |            | 1       | 13        | 21.29                   | 21.10        | 21.06        | 22.00         |
|           |            | 1       | 24        | 21.11                   | 21.06        | 21.08        | 22.00         |
|           |            | 12      | 0         | 20.22                   | 20.04        | 20.06        | 21.00         |
|           |            | 12      | 6         | 20.18                   | 20.02        | 19.97        | 21.00         |
|           |            | 12      | 13        | 19.87                   | 19.89        | 19.95        | 21.00         |
|           |            | 25      | 0         | 20.01                   | 20.04        | 20.11        | 21.00         |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            |         |           | 20000/1715              | 20175/1732.5 | 20350/1750   |               |
| 10MHz     | QPSK       | 1       | 0         | 22.46                   | 22.41        | 22.54        | 23.00         |
|           |            | 1       | 25        | 22.58                   | 22.70        | 22.49        | 23.00         |
|           |            | 1       | 49        | 22.19                   | 22.13        | 22.22        | 23.00         |
|           |            | 25      | 0         | 22.06                   | 22.12        | 22.05        | 23.00         |
|           |            | 25      | 13        | 21.94                   | 22.04        | 21.86        | 23.00         |
|           |            | 25      | 25        | 21.93                   | 22.07        | 21.91        | 23.00         |
|           |            | 50      | 0         | 21.85                   | 22.09        | 21.91        | 23.00         |
|           | 16QAM      | 1       | 0         | 22.11                   | 22.09        | 22.00        | 23.00         |
|           |            | 1       | 25        | 22.10                   | 22.19        | 21.88        | 23.00         |
|           |            | 1       | 49        | 21.91                   | 22.04        | 21.80        | 23.00         |
|           |            | 25      | 0         | 21.14                   | 21.10        | 21.08        | 22.00         |
|           |            | 25      | 13        | 21.13                   | 21.12        | 21.20        | 22.00         |
|           |            | 25      | 25        | 21.07                   | 21.14        | 21.13        | 22.00         |
|           |            | 50      | 0         | 21.18                   | 21.12        | 21.13        | 22.00         |
|           | 64QAM      | 1       | 0         | 21.12                   | 21.26        | 21.93        | 22.00         |
|           |            | 1       | 25        | 21.32                   | 21.10        | 21.09        | 22.00         |
|           |            | 1       | 49        | 21.10                   | 21.08        | 21.11        | 22.00         |
|           |            | 25      | 0         | 20.25                   | 20.09        | 20.06        | 21.00         |
|           |            | 25      | 13        | 20.20                   | 20.06        | 20.00        | 21.00         |
|           |            | 25      | 25        | 19.90                   | 19.94        | 19.99        | 21.00         |
|           |            | 50      | 0         | 20.04                   | 20.09        | 20.15        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20025/1717.5            | 20175/1732.5 | 20325/1747.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 22.45                   | 22.37        | 22.52        | 23.00         |
|           |            | 1       | 38        | 22.56                   | 22.69        | 22.46        | 23.00         |
|           |            | 1       | 74        | 22.16                   | 22.08        | 22.18        | 23.00         |
|           |            | 36      | 0         | 22.04                   | 22.08        | 22.02        | 23.00         |
|           |            | 36      | 18        | 21.91                   | 21.99        | 21.82        | 23.00         |
|           |            | 36      | 39        | 21.90                   | 22.04        | 21.87        | 23.00         |
|           |            | 75      | 0         | 21.83                   | 22.05        | 21.86        | 23.00         |
|           | 16QAM      | 1       | 0         | 22.06                   | 22.07        | 21.98        | 23.00         |
|           |            | 1       | 38        | 22.08                   | 22.16        | 21.86        | 23.00         |
|           |            | 1       | 74        | 21.88                   | 22.00        | 21.77        | 23.00         |
|           |            | 36      | 0         | 21.11                   | 21.08        | 21.05        | 22.00         |
|           |            | 36      | 18        | 21.10                   | 21.07        | 21.16        | 22.00         |
|           |            | 36      | 39        | 21.05                   | 21.10        | 21.10        | 22.00         |
|           |            | 75      | 0         | 21.15                   | 21.07        | 21.09        | 22.00         |
|           | 64QAM      | 1       | 0         | 21.07                   | 21.24        | 21.91        | 22.00         |
|           |            | 1       | 38        | 21.30                   | 21.07        | 21.07        | 22.00         |
|           |            | 1       | 74        | 21.11                   | 21.07        | 21.12        | 22.00         |
|           |            | 36      | 0         | 20.24                   | 20.11        | 20.07        | 21.00         |



|           |            | 36      | 18        | 20.18                   | 20.03        | 19.99        | 21.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 36      | 39        | 19.88                   | 19.90        | 19.96        | 21.00         |
|           |            | 75      | 0         | 20.01                   | 20.04        | 20.11        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20050/1720              | 20175/1732.5 | 20300/1745   |               |
| 20MHz     | QPSK       | 1       | 0         | 22.42                   | 22.33        | <b>22.49</b> | 23.00         |
|           |            | 1       | 50        | <b>22.55</b>            | <b>22.65</b> | 22.44        | 23.00         |
|           |            | 1       | 99        | 22.14                   | 22.07        | 22.15        | 23.00         |
|           |            | 50      | 0         | <b>22.03</b>            | <b>22.03</b> | <b>21.98</b> | 23.00         |
|           |            | 50      | 25        | 21.89                   | 21.95        | 21.79        | 23.00         |
|           |            | 50      | 50        | 21.87                   | 21.99        | 21.83        | 23.00         |
|           |            | 100     | 0         | 21.80                   | <b>22.00</b> | 21.82        | 23.00         |
|           | 16QAM      | 1       | 0         | 21.90                   | 22.03        | 21.93        | 23.00         |
|           |            | 1       | 50        | 22.04                   | 22.14        | 21.82        | 23.00         |
|           |            | 1       | 99        | 21.86                   | 21.97        | 21.75        | 23.00         |
|           |            | 50      | 0         | 21.08                   | 21.04        | 21.02        | 22.00         |
|           |            | 50      | 25        | 21.07                   | 21.05        | 21.13        | 22.00         |
|           |            | 50      | 50        | 21.02                   | 21.05        | 21.06        | 22.00         |
|           |            | 100     | 0         | 21.13                   | 21.03        | 21.06        | 22.00         |
|           | 64QAM      | 1       | 0         | 21.05                   | 21.20        | 21.86        | 22.00         |
|           |            | 1       | 50        | 21.26                   | 21.05        | 21.03        | 22.00         |
|           |            | 1       | 99        | 21.05                   | 21.01        | 21.06        | 22.00         |
|           |            | 50      | 0         | 20.19                   | 20.03        | 20.00        | 21.00         |
|           |            | 50      | 25        | 20.14                   | 19.99        | 19.93        | 21.00         |
|           |            | 50      | 50        | 19.85                   | 19.85        | 19.92        | 21.00         |
|           |            | 100     | 0         | 19.99                   | 20.00        | 20.08        | 21.00         |

| LTE FDD Band 4<br>DSI 4 |            |         |           | Conducted Power(dBm)    |              |              | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|--------------|--------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              |                  |
|                         |            |         |           | 19957/1710.7            | 20175/1732.5 | 20393/1754.3 |                  |
| 1.4MHz                  | QPSK       | 1       | 0         | 18.88                   | 18.95        | 18.98        | 19.50            |
|                         |            | 1       | 2         | 18.85                   | 19.02        | 18.93        | 19.50            |
|                         |            | 1       | 5         | 18.79                   | 18.71        | 18.61        | 19.50            |
|                         |            | 3       | 0         | 18.77                   | 18.85        | 18.86        | 19.50            |
|                         |            | 3       | 2         | 18.64                   | 18.70        | 18.62        | 19.50            |
|                         |            | 3       | 3         | 18.53                   | 18.46        | 18.39        | 19.50            |
|                         |            | 6       | 0         | 18.57                   | 18.80        | 18.52        | 19.50            |
|                         | 16QAM      | 1       | 0         | 18.54                   | 18.29        | 18.80        | 19.50            |
|                         |            | 1       | 2         | 18.56                   | 18.99        | 18.22        | 19.50            |
|                         |            | 1       | 5         | 18.49                   | 18.56        | 18.39        | 19.50            |
|                         |            | 3       | 0         | 18.61                   | 18.81        | 18.64        | 19.50            |
|                         |            | 3       | 2         | 18.79                   | 18.76        | 18.53        | 19.50            |



|           |            | 3       | 3         | 18.55                   | 18.55        | 18.32        | 19.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 6       | 0         | 18.56                   | 18.58        | 18.37        | 19.50         |
|           | 64QAM      | 1       | 0         | 18.77                   | 18.76        | 18.94        | 19.50         |
|           |            | 1       | 2         | 19.04                   | 18.78        | 18.63        | 19.50         |
|           |            | 1       | 5         | 18.78                   | 18.55        | 18.45        | 19.50         |
|           |            | 3       | 0         | 18.92                   | 18.70        | 18.72        | 19.50         |
|           |            | 3       | 2         | 18.76                   | 18.55        | 18.53        | 19.50         |
|           |            | 3       | 3         | 18.56                   | 18.54        | 18.44        | 19.50         |
|           |            | 6       | 0         | 18.59                   | 18.63        | 18.32        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 19965/1711.5            | 20175/1732.5 | 20385/1753.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 18.85                   | 18.91        | 18.95        | 19.50         |
|           |            | 1       | 7         | 18.84                   | 18.98        | 18.91        | 19.50         |
|           |            | 1       | 14        | 18.77                   | 18.70        | 18.58        | 19.50         |
|           |            | 8       | 0         | 18.74                   | 18.80        | 18.82        | 19.50         |
|           |            | 8       | 4         | 18.62                   | 18.66        | 18.59        | 19.50         |
|           |            | 8       | 7         | 18.50                   | 18.41        | 18.35        | 19.50         |
|           |            | 15      | 0         | 18.54                   | 18.75        | 18.48        | 19.50         |
|           | 16QAM      | 1       | 0         | 18.54                   | 18.25        | 18.75        | 19.50         |
|           |            | 1       | 7         | 18.52                   | 18.97        | 18.18        | 19.50         |
|           |            | 1       | 14        | 18.47                   | 18.53        | 18.37        | 19.50         |
|           |            | 8       | 0         | 18.58                   | 18.77        | 18.61        | 19.50         |
|           |            | 8       | 4         | 18.76                   | 18.74        | 18.50        | 19.50         |
|           |            | 8       | 7         | 18.52                   | 18.50        | 18.28        | 19.50         |
|           |            | 15      | 0         | 18.54                   | 18.54        | 18.34        | 19.50         |
|           | 64QAM      | 1       | 0         | 18.75                   | 18.72        | 18.89        | 19.50         |
|           |            | 1       | 7         | 19.00                   | 18.76        | 18.59        | 19.50         |
|           |            | 1       | 14        | 18.72                   | 18.49        | 18.39        | 19.50         |
|           |            | 8       | 0         | 18.87                   | 18.62        | 18.65        | 19.50         |
|           |            | 8       | 4         | 18.72                   | 18.51        | 18.47        | 19.50         |
|           |            | 8       | 7         | 18.53                   | 18.49        | 18.40        | 19.50         |
|           |            | 15      | 0         | 18.57                   | 18.59        | 18.29        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 19975/1712.5            | 20175/1732.5 | 20375/1752.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 18.82                   | 18.89        | 18.91        | 19.50         |
|           |            | 1       | 13        | 18.82                   | 18.94        | 18.88        | 19.50         |
|           |            | 1       | 24        | 18.74                   | 18.65        | 18.54        | 19.50         |
|           |            | 12      | 0         | 18.71                   | 18.75        | 18.78        | 19.50         |
|           |            | 12      | 6         | 18.60                   | 18.62        | 18.54        | 19.50         |
|           |            | 12      | 13        | 18.48                   | 18.39        | 18.31        | 19.50         |
|           |            | 25      | 0         | 18.54                   | 18.74        | 18.46        | 19.50         |
|           | 16QAM      | 1       | 0         | 18.51                   | 18.21        | 18.72        | 19.50         |
|           |            | 1       | 13        | 18.49                   | 18.95        | 18.15        | 19.50         |



|           |            | 1       | 24        | 18.44                   | 18.51        | 18.33        | 19.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 12      | 0         | 18.56                   | 18.73        | 18.58        | 19.50         |
|           |            | 12      | 6         | 18.73                   | 18.69        | 18.46        | 19.50         |
|           |            | 12      | 13        | 18.49                   | 18.45        | 18.24        | 19.50         |
|           |            | 25      | 0         | 18.52                   | 18.50        | 18.29        | 19.50         |
|           | 64QAM      | 1       | 0         | 18.72                   | 18.72        | 18.86        | 19.50         |
|           |            | 1       | 13        | 18.97                   | 18.78        | 18.56        | 19.50         |
|           |            | 1       | 24        | 18.73                   | 18.47        | 18.35        | 19.50         |
|           |            | 12      | 0         | 18.85                   | 18.58        | 18.66        | 19.50         |
|           |            | 12      | 6         | 18.69                   | 18.46        | 18.43        | 19.50         |
|           |            | 12      | 13        | 18.50                   | 18.44        | 18.36        | 19.50         |
|           |            | 25      | 0         | 18.55                   | 18.55        | 18.24        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20000/1715              | 20175/1732.5 | 20350/1750   |               |
| 10MHz     | QPSK       | 1       | 0         | 18.84                   | 18.90        | 18.94        | 19.50         |
|           |            | 1       | 25        | 18.85                   | 18.99        | 18.92        | 19.50         |
|           |            | 1       | 49        | 18.76                   | 18.69        | 18.57        | 19.50         |
|           |            | 25      | 0         | 18.74                   | 18.80        | 18.82        | 19.50         |
|           |            | 25      | 13        | 18.63                   | 18.67        | 18.58        | 19.50         |
|           |            | 25      | 25        | 18.50                   | 18.43        | 18.36        | 19.50         |
|           |            | 50      | 0         | 18.58                   | 18.76        | 18.50        | 19.50         |
|           | 16QAM      | 1       | 0         | 18.53                   | 18.24        | 18.74        | 19.50         |
|           |            | 1       | 25        | 18.52                   | 18.99        | 18.18        | 19.50         |
|           |            | 1       | 49        | 18.47                   | 18.53        | 18.36        | 19.50         |
|           |            | 25      | 0         | 18.59                   | 18.78        | 18.62        | 19.50         |
|           |            | 25      | 13        | 18.75                   | 18.73        | 18.49        | 19.50         |
|           |            | 25      | 25        | 18.52                   | 18.50        | 18.28        | 19.50         |
|           |            | 50      | 0         | 18.55                   | 18.55        | 18.33        | 19.50         |
|           | 64QAM      | 1       | 0         | 18.74                   | 18.71        | 18.88        | 19.50         |
|           |            | 1       | 25        | 19.00                   | 18.78        | 18.59        | 19.50         |
|           |            | 1       | 49        | 18.72                   | 18.49        | 18.38        | 19.50         |
|           |            | 25      | 0         | 18.88                   | 18.63        | 18.66        | 19.50         |
|           |            | 25      | 13        | 18.71                   | 18.50        | 18.46        | 19.50         |
|           |            | 25      | 25        | 18.53                   | 18.49        | 18.40        | 19.50         |
|           |            | 50      | 0         | 18.58                   | 18.60        | 18.28        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20025/1717.5            | 20175/1732.5 | 20325/1747.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 18.83                   | 18.86        | 18.92        | 19.50         |
|           |            | 1       | 38        | 18.83                   | 18.98        | 18.89        | 19.50         |
|           |            | 1       | 74        | 18.73                   | 18.64        | 18.53        | 19.50         |
|           |            | 36      | 0         | 18.72                   | 18.76        | 18.79        | 19.50         |
|           |            | 36      | 18        | 18.60                   | 18.62        | 18.54        | 19.50         |
|           |            | 36      | 39        | 18.47                   | 18.40        | 18.32        | 19.50         |



|           | 16QAM      | 75      | 0         | 18.56                   | 18.72        | 18.45        | 19.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 0         | 18.48                   | 18.22        | 18.72        | 19.50         |
|           |            | 1       | 38        | 18.50                   | 18.96        | 18.16        | 19.50         |
|           |            | 1       | 74        | 18.44                   | 18.49        | 18.33        | 19.50         |
|           |            | 36      | 0         | 18.56                   | 18.76        | 18.59        | 19.50         |
|           |            | 36      | 18        | 18.72                   | 18.68        | 18.45        | 19.50         |
|           |            | 36      | 39        | 18.50                   | 18.46        | 18.25        | 19.50         |
|           |            | 75      | 0         | 18.52                   | 18.50        | 18.29        | 19.50         |
|           | 64QAM      | 1       | 0         | 18.69                   | 18.69        | 18.86        | 19.50         |
|           |            | 1       | 38        | 18.98                   | 18.75        | 18.57        | 19.50         |
|           |            | 1       | 74        | 18.73                   | 18.48        | 18.39        | 19.50         |
|           |            | 36      | 0         | 18.87                   | 18.65        | 18.67        | 19.50         |
|           |            | 36      | 18        | 18.69                   | 18.47        | 18.45        | 19.50         |
|           |            | 36      | 39        | 18.51                   | 18.45        | 18.37        | 19.50         |
|           |            | 75      | 0         | 18.55                   | 18.55        | 18.24        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20050/1720              | 20175/1732.5 | 20300/1745   |               |
| 20MHz     | QPSK       | 1       | 0         | 18.80                   | 18.82        | <b>18.89</b> | 19.50         |
|           |            | 1       | 50        | <b>18.82</b>            | <b>18.94</b> | 18.87        | 19.50         |
|           |            | 1       | 99        | 18.71                   | 18.63        | 18.50        | 19.50         |
|           |            | 50      | 0         | <b>18.69</b>            | <b>18.71</b> | <b>18.75</b> | 19.50         |
|           |            | 50      | 25        | 18.58                   | 18.58        | 18.51        | 19.50         |
|           |            | 50      | 50        | 18.44                   | 18.35        | 18.28        | 19.50         |
|           |            | 100     | 0         | 18.53                   | <b>18.67</b> | 18.41        | 19.50         |
|           | 16QAM      | 1       | 0         | 18.51                   | 18.18        | 18.67        | 19.50         |
|           |            | 1       | 50        | 18.46                   | 18.94        | 18.12        | 19.50         |
|           |            | 1       | 99        | 18.42                   | 18.46        | 18.31        | 19.50         |
|           |            | 50      | 0         | 18.53                   | 18.72        | 18.56        | 19.50         |
|           |            | 50      | 25        | 18.69                   | 18.66        | 18.42        | 19.50         |
|           |            | 50      | 50        | 18.47                   | 18.41        | 18.21        | 19.50         |
|           |            | 100     | 0         | 18.50                   | 18.46        | 18.26        | 19.50         |
|           | 64QAM      | 1       | 0         | 18.67                   | 18.65        | 18.81        | 19.50         |
|           |            | 1       | 50        | 18.94                   | 18.73        | 18.53        | 19.50         |
|           |            | 1       | 99        | 18.67                   | 18.42        | 18.33        | 19.50         |
|           |            | 50      | 0         | 18.82                   | 18.57        | 18.60        | 19.50         |
|           |            | 50      | 25        | 18.65                   | 18.43        | 18.39        | 19.50         |
|           |            | 50      | 50        | 18.48                   | 18.40        | 18.33        | 19.50         |
|           |            | 100     | 0         | 18.53                   | 18.51        | 18.21        | 19.50         |



| LTE FDD Band 5<br>DSI 1 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                         |            |         |           | 20407/824.7             | 20525/836.5 | 20643/848.3 |                  |
| 1.4MHz                  | QPSK       | 1       | 0         | 21.50                   | 21.65       | 21.37       | 22.50            |
|                         |            | 1       | 2         | 21.77                   | 21.90       | 21.77       | 22.50            |
|                         |            | 1       | 5         | 21.50                   | 21.43       | 21.62       | 22.50            |
|                         |            | 3       | 0         | 21.44                   | 21.60       | 21.52       | 22.50            |
|                         |            | 3       | 2         | 21.54                   | 21.52       | 21.50       | 22.50            |
|                         |            | 3       | 3         | 21.50                   | 21.49       | 21.39       | 22.50            |
|                         |            | 6       | 0         | 21.36                   | 21.50       | 21.47       | 22.50            |
|                         | 16QAM      | 1       | 0         | 21.63                   | 21.49       | 21.75       | 22.50            |
|                         |            | 1       | 2         | 21.61                   | 21.50       | 21.64       | 22.50            |
|                         |            | 1       | 5         | 21.63                   | 21.54       | 21.71       | 22.50            |
|                         |            | 3       | 0         | 21.59                   | 21.49       | 21.64       | 22.50            |
|                         |            | 3       | 2         | 21.68                   | 21.58       | 21.77       | 22.50            |
|                         |            | 3       | 3         | 21.73                   | 21.66       | 21.84       | 22.50            |
|                         |            | 6       | 0         | 21.61                   | 21.60       | 21.73       | 22.50            |
|                         | 64QAM      | 1       | 0         | 21.68                   | 21.52       | 21.75       | 22.50            |
|                         |            | 1       | 2         | 21.64                   | 21.49       | 21.67       | 22.50            |
|                         |            | 1       | 5         | 21.65                   | 21.57       | 21.73       | 22.50            |
|                         |            | 3       | 0         | 21.65                   | 21.52       | 21.72       | 22.50            |
|                         |            | 3       | 2         | 21.61                   | 21.51       | 21.64       | 22.50            |
|                         |            | 3       | 3         | 21.66                   | 21.55       | 21.69       | 22.50            |
|                         |            | 6       | 0         | 20.77                   | 20.73       | 20.89       | 21.50            |
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up<br>Limit |
|                         |            |         |           | 20415/825.5             | 20525/836.5 | 20635/847.5 |                  |
| 3MHz                    | QPSK       | 1       | 0         | 21.49                   | 21.64       | 21.36       | 22.50            |
|                         |            | 1       | 7         | 21.78                   | 21.91       | 21.78       | 22.50            |
|                         |            | 1       | 14        | 21.49                   | 21.42       | 21.61       | 22.50            |
|                         |            | 8       | 0         | 21.44                   | 21.60       | 21.52       | 22.50            |
|                         |            | 8       | 4         | 21.55                   | 21.53       | 21.49       | 22.50            |
|                         |            | 8       | 7         | 21.50                   | 21.51       | 21.40       | 22.50            |
|                         |            | 15      | 0         | 21.40                   | 21.51       | 21.49       | 22.50            |
|                         | 16QAM      | 1       | 0         | 21.62                   | 21.48       | 21.74       | 22.50            |
|                         |            | 1       | 7         | 21.61                   | 21.52       | 21.64       | 22.50            |
|                         |            | 1       | 14        | 21.63                   | 21.54       | 21.70       | 22.50            |
|                         |            | 8       | 0         | 21.60                   | 21.50       | 21.65       | 22.50            |
|                         |            | 8       | 4         | 21.67                   | 21.57       | 21.76       | 22.50            |
|                         |            | 8       | 7         | 21.73                   | 21.66       | 21.84       | 22.50            |
|                         |            | 15      | 0         | 21.62                   | 21.61       | 21.72       | 22.50            |
|                         | 64QAM      | 1       | 0         | 21.67                   | 21.51       | 21.74       | 22.50            |



|           |            | 1       | 7         | 21.64                   | 21.51        | 21.67        | 22.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 14        | 21.65                   | 21.57        | 21.72        | 22.50         |
|           |            | 8       | 0         | 20.51                   | 20.41        | 20.56        | 21.50         |
|           |            | 8       | 4         | 20.76                   | 20.63        | 20.85        | 21.50         |
|           |            | 8       | 7         | 20.75                   | 20.69        | 20.86        | 21.50         |
|           |            | 15      | 0         | 20.78                   | 20.74        | 20.88        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20425/826.5             | 20525/836.5  | 20625/846.5  |               |
| 5MHz      | QPSK       | 1       | 0         | 21.48                   | 21.60        | 21.34        | 22.50         |
|           |            | 1       | 13        | 21.76                   | 21.90        | 21.75        | 22.50         |
|           |            | 1       | 24        | 21.46                   | 21.37        | 21.57        | 22.50         |
|           |            | 12      | 0         | 21.42                   | 21.56        | 21.49        | 22.50         |
|           |            | 12      | 6         | 21.52                   | 21.48        | 21.45        | 22.50         |
|           |            | 12      | 13        | 21.47                   | 21.48        | 21.36        | 22.50         |
|           |            | 25      | 0         | 21.38                   | 21.47        | 21.44        | 22.50         |
|           | 16QAM      | 1       | 0         | 21.57                   | 21.46        | 21.72        | 22.50         |
|           |            | 1       | 13        | 21.59                   | 21.49        | 21.62        | 22.50         |
|           |            | 1       | 24        | 21.60                   | 21.50        | 21.67        | 22.50         |
|           |            | 12      | 0         | 21.57                   | 21.48        | 21.62        | 22.50         |
|           |            | 12      | 6         | 21.64                   | 21.52        | 21.72        | 22.50         |
|           |            | 12      | 13        | 21.71                   | 21.62        | 21.81        | 22.50         |
|           |            | 25      | 0         | 21.59                   | 21.56        | 21.68        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.62                   | 21.49        | 21.72        | 22.50         |
|           |            | 1       | 13        | 21.62                   | 21.48        | 21.65        | 22.50         |
|           |            | 1       | 24        | 21.66                   | 21.56        | 21.73        | 22.50         |
|           |            | 12      | 0         | 20.50                   | 20.43        | 20.57        | 21.50         |
|           |            | 12      | 6         | 20.74                   | 20.60        | 20.84        | 21.50         |
|           |            | 12      | 13        | 20.73                   | 20.65        | 20.83        | 21.50         |
|           |            | 25      | 0         | 20.75                   | 20.69        | 20.84        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20450/829               | 20525/836.5  | 20600/844    |               |
| 10MHz     | QPSK       | 1       | 0         | 21.45                   | 21.56        | 21.31        | 22.50         |
|           |            | 1       | 25        | <b>21.75</b>            | <b>21.86</b> | <b>21.73</b> | 22.50         |
|           |            | 1       | 49        | 21.44                   | 21.36        | 21.54        | 22.50         |
|           |            | 1       | 0         | 21.39                   | <b>21.51</b> | <b>21.45</b> | 22.50         |
|           |            | 1       | 13        | <b>21.50</b>            | 21.44        | 21.42        | 22.50         |
|           |            | 1       | 25        | 21.44                   | 21.43        | 21.32        | 22.50         |
|           |            | 1       | 0         | 21.35                   | <b>21.42</b> | 21.40        | 22.50         |
|           | 16QAM      | 12      | 0         | 21.60                   | 21.42        | 21.67        | 22.50         |
|           |            | 12      | 25        | 21.55                   | 21.47        | 21.58        | 22.50         |
|           |            | 12      | 49        | 21.58                   | 21.47        | 21.65        | 22.50         |
|           |            | 25      | 0         | 21.54                   | 21.44        | 21.59        | 22.50         |
|           |            | 1       | 13        | 21.61                   | 21.50        | 21.69        | 22.50         |



|  |       |    |    |       |       |       |       |
|--|-------|----|----|-------|-------|-------|-------|
|  |       | 25 | 25 | 21.68 | 21.57 | 21.77 | 22.50 |
|  |       | 50 | 0  | 21.57 | 21.52 | 21.65 | 22.50 |
|  | 64QAM | 1  | 0  | 21.60 | 21.45 | 21.67 | 22.50 |
|  |       | 1  | 25 | 21.58 | 21.46 | 21.61 | 22.50 |
|  |       | 1  | 49 | 21.60 | 21.50 | 21.67 | 22.50 |
|  |       | 25 | 0  | 20.45 | 20.35 | 20.50 | 21.50 |
|  |       | 25 | 13 | 20.70 | 20.56 | 20.78 | 21.50 |
|  |       | 25 | 25 | 20.70 | 20.60 | 20.79 | 21.50 |
|  |       | 50 | 0  | 20.73 | 20.65 | 20.81 | 21.50 |

| LTE FDD Band 5<br>DSI 4 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                         |            |         |           | 20407/824.7             | 20525/836.5 | 20643/848.3 |                  |
| 1.4MHz                  | QPSK       | 1       | 0         | 23.85                   | 23.83       | 23.68       | 24.50            |
|                         |            | 1       | 2         | 23.90                   | 24.07       | 23.79       | 24.50            |
|                         |            | 1       | 5         | 23.66                   | 23.70       | 23.76       | 24.50            |
|                         |            | 3       | 0         | 23.85                   | 24.26       | 23.83       | 24.50            |
|                         |            | 3       | 2         | 23.85                   | 24.16       | 23.87       | 24.50            |
|                         |            | 3       | 3         | 23.78                   | 24.17       | 23.72       | 24.50            |
|                         |            | 6       | 0         | 22.78                   | 23.18       | 22.80       | 23.50            |
|                         | 16QAM      | 1       | 0         | 23.07                   | 23.15       | 23.07       | 23.50            |
|                         |            | 1       | 2         | 23.05                   | 22.97       | 22.86       | 23.50            |
|                         |            | 1       | 5         | 22.79                   | 23.12       | 22.87       | 23.50            |
|                         |            | 3       | 0         | 22.86                   | 22.98       | 22.67       | 23.50            |
|                         |            | 3       | 2         | 22.92                   | 23.38       | 22.87       | 23.50            |
|                         |            | 3       | 3         | 22.83                   | 23.18       | 22.64       | 23.50            |
|                         |            | 6       | 0         | 21.94                   | 22.26       | 21.68       | 22.50            |
|                         | 64QAM      | 1       | 0         | 22.13                   | 22.16       | 22.05       | 22.50            |
|                         |            | 1       | 2         | 22.42                   | 22.32       | 22.21       | 22.50            |
|                         |            | 1       | 5         | 22.05                   | 22.09       | 21.97       | 22.50            |
|                         |            | 3       | 0         | 21.98                   | 21.95       | 21.69       | 22.50            |
|                         |            | 3       | 2         | 22.04                   | 21.85       | 21.86       | 22.50            |
|                         |            | 3       | 3         | 21.75                   | 21.67       | 21.74       | 22.50            |
|                         |            | 6       | 0         | 20.79                   | 21.07       | 20.78       | 21.50            |
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up<br>Limit |
|                         |            |         |           | 20415/825.5             | 20525/836.5 | 20635/847.5 |                  |
| 3MHz                    | QPSK       | 1       | 0         | 23.86                   | 23.86       | 23.70       | 24.50            |
|                         |            | 1       | 7         | 23.89                   | 24.11       | 23.84       | 24.50            |
|                         |            | 1       | 14        | 23.68                   | 23.74       | 23.79       | 24.50            |
|                         |            | 8       | 0         | 22.95                   | 23.38       | 22.96       | 23.50            |
|                         |            | 8       | 4         | 22.98                   | 23.27       | 22.98       | 23.50            |
|                         |            | 8       | 7         | 22.88                   | 23.30       | 22.83       | 23.50            |



|           | 16QAM      | 15      | 0         | 22.82                   | 23.23        | 22.85        | 23.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 0         | 23.09                   | 23.16        | 23.09        | 23.50         |
|           |            | 1       | 7         | 23.08                   | 22.99        | 22.90        | 23.50         |
|           |            | 1       | 14        | 22.81                   | 23.16        | 22.89        | 23.50         |
|           |            | 8       | 0         | 21.98                   | 22.12        | 21.80        | 22.50         |
|           |            | 8       | 4         | 22.02                   | 22.50        | 21.98        | 22.50         |
|           |            | 8       | 7         | 21.93                   | 22.30        | 21.77        | 22.50         |
|           |            | 15      | 0         | 21.98                   | 22.31        | 21.70        | 22.50         |
|           | 64QAM      | 1       | 0         | 22.15                   | 22.17        | 22.07        | 22.50         |
|           |            | 1       | 7         | 22.45                   | 22.34        | 22.23        | 22.50         |
|           |            | 1       | 14        | 22.07                   | 22.08        | 21.99        | 22.50         |
|           |            | 8       | 0         | 21.10                   | 21.09        | 20.82        | 21.50         |
|           |            | 8       | 4         | 21.14                   | 20.97        | 20.97        | 21.50         |
|           |            | 8       | 7         | 20.85                   | 20.79        | 20.87        | 21.50         |
|           |            | 15      | 0         | 20.83                   | 21.12        | 20.80        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20425/826.5             | 20525/836.5  | 20625/846.5  |               |
| 5MHz      | QPSK       | 1       | 0         | 23.85                   | 23.82        | 23.68        | 24.50         |
|           |            | 1       | 13        | 23.87                   | 24.10        | 23.81        | 24.50         |
|           |            | 1       | 24        | 23.65                   | 23.69        | 23.75        | 24.50         |
|           |            | 12      | 0         | 22.93                   | 23.34        | 22.93        | 23.50         |
|           |            | 12      | 6         | 22.95                   | 23.22        | 22.94        | 23.50         |
|           |            | 12      | 13        | 22.85                   | 23.27        | 22.79        | 23.50         |
|           |            | 25      | 0         | 22.80                   | 23.19        | 22.80        | 23.50         |
|           | 16QAM      | 1       | 0         | 23.04                   | 23.14        | 23.07        | 23.50         |
|           |            | 1       | 13        | 23.06                   | 22.96        | 22.88        | 23.50         |
|           |            | 1       | 24        | 22.78                   | 23.12        | 22.86        | 23.50         |
|           |            | 12      | 0         | 21.95                   | 22.10        | 21.77        | 22.50         |
|           |            | 12      | 6         | 21.99                   | 22.45        | 21.94        | 22.50         |
|           |            | 12      | 13        | 21.91                   | 22.26        | 21.74        | 22.50         |
|           |            | 25      | 0         | 21.95                   | 22.26        | 21.66        | 22.50         |
|           | 64QAM      | 1       | 0         | 22.10                   | 22.15        | 22.05        | 22.50         |
|           |            | 1       | 13        | 22.43                   | 22.31        | 22.21        | 22.50         |
|           |            | 1       | 24        | 22.08                   | 22.07        | 22.00        | 22.50         |
|           |            | 12      | 0         | 21.09                   | 21.11        | 20.83        | 21.50         |
|           |            | 12      | 6         | 21.12                   | 20.94        | 20.96        | 21.50         |
|           |            | 12      | 13        | 20.83                   | 20.75        | 20.84        | 21.50         |
|           |            | 25      | 0         | 20.80                   | 21.07        | 20.76        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20450/829               | 20525/836.5  | 20600/844    |               |
| 10MHz     | QPSK       | 1       | 0         | 23.82                   | 23.78        | 23.65        | 24.50         |
|           |            | 1       | 25        | <b>23.86</b>            | <b>24.06</b> | <b>23.79</b> | 24.50         |
|           |            | 1       | 49        | 23.63                   | 23.68        | 23.72        | 24.50         |



|  |       |    |    |              |              |              |       |
|--|-------|----|----|--------------|--------------|--------------|-------|
|  |       | 25 | 0  | 22.90        | <b>23.29</b> | 22.89        | 23.50 |
|  |       | 25 | 13 | <b>22.93</b> | 23.18        | <b>22.91</b> | 23.50 |
|  |       | 25 | 25 | 22.82        | 23.22        | 22.75        | 23.50 |
|  |       | 50 | 0  | 22.77        | <b>23.14</b> | 22.76        | 23.50 |
|  | 16QAM | 1  | 0  | 22.92        | 23.10        | 23.02        | 23.50 |
|  |       | 1  | 25 | 23.02        | 22.94        | 22.84        | 23.50 |
|  |       | 1  | 49 | 22.76        | 23.09        | 22.84        | 23.50 |
|  |       | 25 | 0  | 21.92        | 22.06        | 21.74        | 22.50 |
|  |       | 25 | 13 | 21.96        | 22.43        | 21.91        | 22.50 |
|  |       | 25 | 25 | 21.88        | 22.21        | 21.70        | 22.50 |
|  |       | 50 | 0  | 21.93        | 22.22        | 21.63        | 22.50 |
|  | 64QAM | 1  | 0  | 22.08        | 22.11        | 22.00        | 22.50 |
|  |       | 1  | 25 | 22.39        | 22.29        | 22.17        | 22.50 |
|  |       | 1  | 49 | 22.02        | 22.01        | 21.94        | 22.50 |
|  |       | 25 | 0  | 21.04        | 21.03        | 20.76        | 21.50 |
|  |       | 25 | 13 | 21.08        | 20.90        | 20.90        | 21.50 |
|  |       | 25 | 25 | 20.80        | 20.70        | 20.80        | 21.50 |
|  |       | 50 | 0  | 20.78        | 21.03        | 20.73        | 21.50 |

| LTE FDD Band 5<br>Full Power&DSI 2 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|------------------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth                          | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                                    |            |         |           | 20407/824.7             | 20525/836.5 | 20643/848.3 |                  |
| 1.4MHz                             | QPSK       | 1       | 0         | 24.15                   | 24.24       | 24.04       | 25.00            |
|                                    |            | 1       | 2         | 24.49                   | 24.19       | 24.08       | 25.00            |
|                                    |            | 1       | 5         | 23.99                   | 24.11       | 24.21       | 25.00            |
|                                    |            | 3       | 0         | 24.08                   | 23.99       | 23.88       | 25.00            |
|                                    |            | 3       | 2         | 23.95                   | 24.22       | 23.88       | 25.00            |
|                                    |            | 3       | 3         | 23.84                   | 23.94       | 23.75       | 25.00            |
|                                    |            | 6       | 0         | 23.03                   | 23.03       | 22.84       | 23.50            |
|                                    | 16QAM      | 1       | 0         | 23.25                   | 22.64       | 23.08       | 23.50            |
|                                    |            | 1       | 2         | 23.23                   | 23.28       | 22.95       | 23.50            |
|                                    |            | 1       | 5         | 22.95                   | 22.71       | 22.85       | 23.50            |
|                                    |            | 3       | 0         | 23.18                   | 23.01       | 22.80       | 23.50            |
|                                    |            | 3       | 2         | 23.31                   | 23.21       | 23.09       | 23.50            |
|                                    |            | 3       | 3         | 23.03                   | 23.10       | 22.96       | 23.50            |
|                                    |            | 6       | 0         | 21.98                   | 22.16       | 21.84       | 22.50            |
|                                    | 64QAM      | 1       | 0         | 21.99                   | 21.74       | 22.08       | 22.50            |
|                                    |            | 1       | 2         | 22.47                   | 22.29       | 22.10       | 22.50            |
|                                    |            | 1       | 5         | 22.13                   | 22.11       | 22.04       | 22.50            |
|                                    |            | 3       | 0         | 22.02                   | 22.04       | 21.81       | 22.50            |
|                                    |            | 3       | 2         | 22.05                   | 21.92       | 22.01       | 22.50            |
|                                    |            | 3       | 3         | 21.75                   | 21.80       | 21.87       | 22.50            |



| Bandwidth | Modulation | 6       | 0         | 20.94                   | 20.93       | 20.94       | 21.50         |
|-----------|------------|---------|-----------|-------------------------|-------------|-------------|---------------|
|           |            | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 20415/825.5             | 20525/836.5 | 20635/847.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 24.16                   | 24.27       | 24.06       | 25.00         |
|           |            | 1       | 7         | 24.48                   | 24.23       | 24.13       | 25.00         |
|           |            | 1       | 14        | 24.01                   | 24.15       | 24.24       | 25.00         |
|           |            | 8       | 0         | 23.18                   | 23.11       | 23.01       | 23.50         |
|           |            | 8       | 4         | 23.08                   | 23.33       | 22.99       | 23.50         |
|           |            | 8       | 7         | 22.94                   | 23.07       | 22.86       | 23.50         |
|           |            | 15      | 0         | 23.07                   | 23.08       | 22.89       | 23.50         |
|           | 16QAM      | 1       | 0         | 23.27                   | 22.65       | 23.10       | 23.50         |
|           |            | 1       | 7         | 23.26                   | 23.30       | 22.99       | 23.50         |
|           |            | 1       | 14        | 22.97                   | 22.75       | 22.87       | 23.50         |
|           |            | 8       | 0         | 22.30                   | 22.15       | 21.93       | 22.50         |
|           |            | 8       | 4         | 22.41                   | 22.33       | 22.20       | 22.50         |
|           |            | 8       | 7         | 22.13                   | 22.22       | 22.09       | 22.50         |
|           |            | 15      | 0         | 22.02                   | 22.21       | 21.86       | 22.50         |
|           | 64QAM      | 1       | 0         | 22.01                   | 21.75       | 22.10       | 22.50         |
|           |            | 1       | 7         | 22.50                   | 22.31       | 22.12       | 22.50         |
|           |            | 1       | 14        | 22.15                   | 22.10       | 22.06       | 22.50         |
|           |            | 8       | 0         | 21.14                   | 21.18       | 20.94       | 21.50         |
|           |            | 8       | 4         | 21.15                   | 21.04       | 21.12       | 21.50         |
|           |            | 8       | 7         | 20.85                   | 20.92       | 21.00       | 21.50         |
|           |            | 15      | 0         | 20.98                   | 20.98       | 20.96       | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 20425/826.5             | 20525/836.5 | 20625/846.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 24.15                   | 24.23       | 24.04       | 25.00         |
|           |            | 1       | 13        | 24.46                   | 24.22       | 24.10       | 25.00         |
|           |            | 1       | 24        | 23.98                   | 24.10       | 24.20       | 25.00         |
|           |            | 12      | 0         | 23.16                   | 23.07       | 22.98       | 23.50         |
|           |            | 12      | 6         | 23.05                   | 23.28       | 22.95       | 23.50         |
|           |            | 12      | 13        | 22.91                   | 23.04       | 22.82       | 23.50         |
|           |            | 25      | 0         | 23.05                   | 23.04       | 22.84       | 23.50         |
|           | 16QAM      | 1       | 0         | 23.22                   | 22.63       | 23.08       | 23.50         |
|           |            | 1       | 13        | 23.24                   | 23.27       | 22.97       | 23.50         |
|           |            | 1       | 24        | 22.94                   | 22.71       | 22.84       | 23.50         |
|           |            | 12      | 0         | 22.27                   | 22.13       | 21.90       | 22.50         |
|           |            | 12      | 6         | 22.38                   | 22.28       | 22.16       | 22.50         |
|           |            | 12      | 13        | 22.11                   | 22.18       | 22.06       | 22.50         |
|           |            | 25      | 0         | 21.99                   | 22.16       | 21.82       | 22.50         |
|           | 64QAM      | 1       | 0         | 21.96                   | 21.73       | 22.08       | 22.50         |
|           |            | 1       | 13        | 22.48                   | 22.28       | 22.10       | 22.50         |
|           |            | 1       | 24        | 22.16                   | 22.09       | 22.07       | 22.50         |



|           |            | 12      | 0         | 21.13                   | 21.20        | 20.95        | 21.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 12      | 6         | 21.13                   | 21.01        | 21.11        | 21.50         |
|           |            | 12      | 13        | 20.83                   | 20.88        | 20.97        | 21.50         |
|           |            | 25      | 0         | 20.95                   | 20.93        | 20.92        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20450/829               | 20525/836.5  | 20600/844    |               |
| 10MHz     | QPSK       | 1       | 0         | 24.12                   | <b>24.19</b> | 24.01        | 25.00         |
|           |            | 1       | 25        | <b>24.45</b>            | 24.18        | 24.08        | 25.00         |
|           |            | 1       | 49        | 23.96                   | 24.09        | <b>24.17</b> | 25.00         |
|           |            | 25      | 0         | <b>23.13</b>            | 23.02        | <b>22.94</b> | 23.50         |
|           |            | 25      | 13        | 23.03                   | <b>23.24</b> | 22.92        | 23.50         |
|           |            | 25      | 25        | 22.88                   | 22.99        | 22.78        | 23.50         |
|           |            | 50      | 0         | <b>23.02</b>            | 22.99        | 22.80        | 23.50         |
|           | 16QAM      | 1       | 0         | 23.06                   | 22.59        | 23.03        | 23.50         |
|           |            | 1       | 25        | 23.20                   | 23.25        | 22.93        | 23.50         |
|           |            | 1       | 49        | 22.92                   | 22.68        | 22.82        | 23.50         |
|           |            | 25      | 0         | 22.24                   | 22.09        | 21.87        | 22.50         |
|           |            | 25      | 13        | 22.35                   | 22.26        | 22.13        | 22.50         |
|           |            | 25      | 25        | 22.08                   | 22.13        | 22.02        | 22.50         |
|           |            | 50      | 0         | 21.97                   | 22.12        | 21.79        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.94                   | 21.69        | 22.03        | 22.50         |
|           |            | 1       | 25        | 22.44                   | 22.26        | 22.06        | 22.50         |
|           |            | 1       | 49        | 22.10                   | 22.03        | 22.01        | 22.50         |
|           |            | 25      | 0         | 21.08                   | 21.12        | 20.88        | 21.50         |
|           |            | 25      | 13        | 21.09                   | 20.97        | 21.05        | 21.50         |
|           |            | 25      | 25        | 20.80                   | 20.83        | 20.93        | 21.50         |
|           |            | 50      | 0         | 20.93                   | 20.89        | 20.89        | 21.50         |

| LTE FDD Band 7<br>DSI 1 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                         |            |         |           | 20775/2502.5            | 21100/2535 | 21425/2567.5 |                  |
| 5MHz                    | QPSK       | 1       | 0         | 16.82                   | 16.74      | 16.86        | 18.00            |
|                         |            | 1       | 13        | 16.81                   | 17.25      | 16.88        | 18.00            |
|                         |            | 1       | 24        | 16.81                   | 16.63      | 16.85        | 18.00            |
|                         |            | 12      | 0         | 16.68                   | 16.75      | 16.58        | 18.00            |
|                         |            | 12      | 6         | 16.31                   | 16.66      | 16.49        | 18.00            |
|                         |            | 12      | 13        | 16.26                   | 16.63      | 16.22        | 18.00            |
|                         |            | 25      | 0         | 16.29                   | 16.48      | 16.35        | 18.00            |
|                         | 16QAM      | 1       | 0         | 16.49                   | 16.67      | 16.82        | 18.00            |
|                         |            | 1       | 13        | 16.47                   | 16.38      | 16.44        | 18.00            |
|                         |            | 1       | 24        | 16.55                   | 16.45      | 16.75        | 18.00            |
|                         |            | 12      | 0         | 16.50                   | 16.73      | 16.53        | 18.00            |



|           |            | 12      | 6         | 16.19                   | 16.72      | 16.43        | 18.00         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 12      | 13        | 16.09                   | 16.81      | 16.22        | 18.00         |
|           |            | 25      | 0         | 16.19                   | 16.57      | 16.28        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.92                   | 16.94      | 17.06        | 18.00         |
|           |            | 1       | 13        | 16.78                   | 17.04      | 16.75        | 18.00         |
|           |            | 1       | 24        | 17.00                   | 16.80      | 16.93        | 18.00         |
|           |            | 12      | 0         | 16.66                   | 16.51      | 16.50        | 18.00         |
|           |            | 12      | 6         | 16.28                   | 16.48      | 16.36        | 18.00         |
|           |            | 12      | 13        | 16.21                   | 16.37      | 16.25        | 18.00         |
|           |            | 25      | 0         | 16.22                   | 16.24      | 16.37        | 18.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 20800/2505              | 21100/2535 | 21400/2565   |               |
| 10MHz     | QPSK       | 1       | 0         | 16.84                   | 16.75      | 16.89        | 18.00         |
|           |            | 1       | 25        | 16.84                   | 17.30      | 16.92        | 18.00         |
|           |            | 1       | 49        | 16.83                   | 16.67      | 16.88        | 18.00         |
|           |            | 25      | 0         | 16.71                   | 16.80      | 16.62        | 18.00         |
|           |            | 25      | 13        | 16.34                   | 16.71      | 16.53        | 18.00         |
|           |            | 25      | 25        | 16.28                   | 16.67      | 16.27        | 18.00         |
|           |            | 50      | 0         | 16.33                   | 16.50      | 16.39        | 18.00         |
|           | 16QAM      | 1       | 0         | 16.51                   | 16.70      | 16.84        | 18.00         |
|           |            | 1       | 25        | 16.50                   | 16.42      | 16.47        | 18.00         |
|           |            | 1       | 49        | 16.58                   | 16.47      | 16.78        | 18.00         |
|           |            | 25      | 0         | 16.53                   | 16.78      | 16.57        | 18.00         |
|           |            | 25      | 13        | 16.21                   | 16.76      | 16.46        | 18.00         |
|           |            | 25      | 25        | 16.12                   | 16.86      | 16.26        | 18.00         |
|           |            | 50      | 0         | 16.22                   | 16.62      | 16.32        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.94                   | 16.93      | 17.08        | 18.00         |
|           |            | 1       | 25        | 16.81                   | 17.04      | 16.78        | 18.00         |
|           |            | 1       | 49        | 16.99                   | 16.82      | 16.96        | 18.00         |
|           |            | 25      | 0         | 16.69                   | 16.56      | 16.50        | 18.00         |
|           |            | 25      | 13        | 16.30                   | 16.52      | 16.39        | 18.00         |
|           |            | 25      | 25        | 16.24                   | 16.42      | 16.29        | 18.00         |
|           |            | 50      | 0         | 16.25                   | 16.29      | 16.41        | 18.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 20825/2507.5            | 21100/2535 | 21375/2562.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 16.83                   | 16.71      | 16.87        | 18.00         |
|           |            | 1       | 38        | 16.82                   | 17.29      | 16.89        | 18.00         |
|           |            | 1       | 74        | 16.80                   | 16.62      | 16.84        | 18.00         |
|           |            | 36      | 0         | 16.69                   | 16.76      | 16.59        | 18.00         |
|           |            | 36      | 18        | 16.31                   | 16.66      | 16.49        | 18.00         |
|           |            | 36      | 39        | 16.25                   | 16.64      | 16.23        | 18.00         |
|           |            | 75      | 0         | 16.31                   | 16.46      | 16.34        | 18.00         |
|           | 16QAM      | 1       | 0         | 16.46                   | 16.68      | 16.82        | 18.00         |



|           |            | 1       | 38        | 16.48                   | 16.39        | 16.45        | 18.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 74        | 16.55                   | 16.43        | 16.75        | 18.00         |
|           |            | 36      | 0         | 16.50                   | 16.76        | 16.54        | 18.00         |
|           |            | 36      | 18        | 16.18                   | 16.71        | 16.42        | 18.00         |
|           |            | 36      | 39        | 16.10                   | 16.82        | 16.23        | 18.00         |
|           |            | 75      | 0         | 16.19                   | 16.57        | 16.28        | 18.00         |
|           |            | 75      | 0         | 16.19                   | 16.57        | 16.28        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.89                   | 16.91        | 17.06        | 18.00         |
|           |            | 1       | 38        | 16.79                   | 17.01        | 16.76        | 18.00         |
|           |            | 1       | 74        | 17.00                   | 16.81        | 16.97        | 18.00         |
|           |            | 36      | 0         | 16.68                   | 16.58        | 16.51        | 18.00         |
|           |            | 36      | 18        | 16.28                   | 16.49        | 16.38        | 18.00         |
|           |            | 36      | 39        | 16.22                   | 16.38        | 16.26        | 18.00         |
|           |            | 75      | 0         | 16.22                   | 16.24        | 16.37        | 18.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20850/2510              | 21100/2535   | 21350/2560   |               |
| 20MHz     | QPSK       | 1       | 0         | 16.80                   | 16.67        | 16.84        | 18.00         |
|           |            | 1       | 50        | <b>16.81</b>            | <b>17.25</b> | <b>16.87</b> | 18.00         |
|           |            | 1       | 99        | 16.78                   | 16.61        | 16.81        | 18.00         |
|           |            | 50      | 0         | <b>16.66</b>            | <b>16.71</b> | <b>16.55</b> | 18.00         |
|           |            | 50      | 25        | 16.29                   | 16.62        | 16.46        | 18.00         |
|           |            | 50      | 50        | 16.22                   | 16.59        | 16.19        | 18.00         |
|           |            | 100     | 0         | 16.28                   | <b>16.41</b> | 16.30        | 18.00         |
|           |            | 100     | 0         | 16.28                   | <b>16.41</b> | 16.30        | 18.00         |
|           | 16QAM      | 1       | 0         | 16.66                   | 16.64        | 16.77        | 18.00         |
|           |            | 1       | 50        | 16.44                   | 16.37        | 16.41        | 18.00         |
|           |            | 1       | 99        | 16.53                   | 16.40        | 16.73        | 18.00         |
|           |            | 50      | 0         | 16.47                   | 16.72        | 16.51        | 18.00         |
|           |            | 50      | 25        | 16.15                   | 16.69        | 16.39        | 18.00         |
|           |            | 50      | 50        | 16.07                   | 16.77        | 16.19        | 18.00         |
|           |            | 100     | 0         | 16.17                   | 16.53        | 16.25        | 18.00         |
|           |            | 100     | 0         | 16.17                   | 16.53        | 16.25        | 18.00         |
|           | 64QAM      | 1       | 0         | 16.87                   | 16.87        | 17.01        | 18.00         |
|           |            | 1       | 50        | 16.75                   | 16.99        | 16.72        | 18.00         |
|           |            | 1       | 99        | 16.94                   | 16.75        | 16.91        | 18.00         |
|           |            | 50      | 0         | 16.63                   | 16.50        | 16.44        | 18.00         |
|           |            | 50      | 25        | 16.24                   | 16.45        | 16.32        | 18.00         |
|           |            | 50      | 50        | 16.19                   | 16.33        | 16.22        | 18.00         |
|           |            | 100     | 0         | 16.20                   | 16.20        | 16.34        | 18.00         |
|           |            | 100     | 0         | 16.20                   | 16.20        | 16.34        | 18.00         |

| LTE FDD Band 7<br>Full Power&DSI 2 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|------------------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth                          | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                                    |            |         |           | 20775/2502.5            | 21100/2535 | 21425/2567.5 |                  |
| 5MHz                               | QPSK       | 1       | 0         | 22.78                   | 22.95      | 22.89        | 24.00            |
|                                    |            | 1       | 13        | 22.98                   | 22.60      | 22.99        | 24.00            |



|           |            | 1       | 24        | 22.85                   | 22.45      | 22.80      | 24.00         |
|-----------|------------|---------|-----------|-------------------------|------------|------------|---------------|
|           |            | 12      | 0         | 21.59                   | 21.49      | 21.57      | 23.00         |
|           |            | 12      | 6         | 21.38                   | 21.70      | 21.47      | 23.00         |
|           |            | 12      | 13        | 21.31                   | 21.47      | 21.21      | 23.00         |
|           |            | 25      | 0         | 21.31                   | 21.41      | 21.37      | 23.00         |
|           | 16QAM      | 1       | 0         | 21.49                   | 21.49      | 22.03      | 23.00         |
|           |            | 1       | 13        | 21.47                   | 21.68      | 21.38      | 23.00         |
|           |            | 1       | 24        | 21.29                   | 21.27      | 21.52      | 23.00         |
|           |            | 12      | 0         | 20.40                   | 20.31      | 20.18      | 22.00         |
|           |            | 12      | 6         | 20.36                   | 20.57      | 20.07      | 22.00         |
|           |            | 12      | 13        | 20.23                   | 20.46      | 20.25      | 22.00         |
|           |            | 25      | 0         | 20.22                   | 20.36      | 20.37      | 22.00         |
|           | 64QAM      | 1       | 0         | 20.70                   | 20.74      | 20.83      | 22.00         |
|           |            | 1       | 13        | 20.67                   | 20.91      | 20.89      | 22.00         |
|           |            | 1       | 24        | 20.60                   | 20.81      | 20.39      | 22.00         |
|           |            | 12      | 0         | 19.33                   | 19.28      | 19.36      | 21.00         |
|           |            | 12      | 6         | 19.16                   | 19.28      | 19.18      | 21.00         |
|           |            | 12      | 13        | 19.18                   | 19.20      | 19.04      | 21.00         |
|           |            | 25      | 0         | 19.24                   | 19.18      | 19.25      | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |            | Tune-up Limit |
|           |            |         |           | 20800/2505              | 21100/2535 | 21400/2565 |               |
| 10MHz     | QPSK       | 1       | 0         | 22.80                   | 22.96      | 22.92      | 24.00         |
|           |            | 1       | 25        | 23.01                   | 22.65      | 23.03      | 24.00         |
|           |            | 1       | 49        | 22.87                   | 22.49      | 22.83      | 24.00         |
|           |            | 25      | 0         | 21.62                   | 21.54      | 21.61      | 23.00         |
|           |            | 25      | 13        | 21.41                   | 21.75      | 21.51      | 23.00         |
|           |            | 25      | 25        | 21.33                   | 21.51      | 21.26      | 23.00         |
|           |            | 50      | 0         | 21.35                   | 21.43      | 21.41      | 23.00         |
|           | 16QAM      | 1       | 0         | 21.51                   | 21.52      | 22.05      | 23.00         |
|           |            | 1       | 25        | 21.50                   | 21.72      | 21.41      | 23.00         |
|           |            | 1       | 49        | 21.32                   | 21.29      | 21.55      | 23.00         |
|           |            | 25      | 0         | 20.43                   | 20.36      | 20.22      | 22.00         |
|           |            | 25      | 13        | 20.38                   | 20.61      | 20.10      | 22.00         |
|           |            | 25      | 25        | 20.26                   | 20.51      | 20.29      | 22.00         |
|           |            | 50      | 0         | 20.25                   | 20.41      | 20.41      | 22.00         |
|           | 64QAM      | 1       | 0         | 20.72                   | 20.73      | 20.85      | 22.00         |
|           |            | 1       | 25        | 20.70                   | 20.91      | 20.92      | 22.00         |
|           |            | 1       | 49        | 20.59                   | 20.83      | 20.42      | 22.00         |
|           |            | 25      | 0         | 19.36                   | 19.33      | 19.36      | 21.00         |
|           |            | 25      | 13        | 19.18                   | 19.32      | 19.21      | 21.00         |
|           |            | 25      | 25        | 19.21                   | 19.25      | 19.08      | 21.00         |
|           |            | 50      | 0         | 19.27                   | 19.23      | 19.29      | 21.00         |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            |         |           | 20825/2507.5            | 21100/2535   | 21375/2562.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 22.79                   | 22.92        | 22.90        | 24.00         |
|           |            | 1       | 38        | 22.99                   | 22.64        | 23.00        | 24.00         |
|           |            | 1       | 74        | 22.84                   | 22.44        | 22.79        | 24.00         |
|           |            | 36      | 0         | 21.60                   | 21.50        | 21.58        | 23.00         |
|           |            | 36      | 18        | 21.38                   | 21.70        | 21.47        | 23.00         |
|           |            | 36      | 39        | 21.30                   | 21.48        | 21.22        | 23.00         |
|           |            | 75      | 0         | 21.33                   | 21.39        | 21.36        | 23.00         |
|           | 16QAM      | 1       | 0         | 21.46                   | 21.50        | 22.03        | 23.00         |
|           |            | 1       | 38        | 21.48                   | 21.69        | 21.39        | 23.00         |
|           |            | 1       | 74        | 21.29                   | 21.25        | 21.52        | 23.00         |
|           |            | 36      | 0         | 20.40                   | 20.34        | 20.19        | 22.00         |
|           |            | 36      | 18        | 20.35                   | 20.56        | 20.06        | 22.00         |
|           |            | 36      | 39        | 20.24                   | 20.47        | 20.26        | 22.00         |
|           |            | 75      | 0         | 20.22                   | 20.36        | 20.37        | 22.00         |
|           | 64QAM      | 1       | 0         | 20.67                   | 20.71        | 20.83        | 22.00         |
|           |            | 1       | 38        | 20.68                   | 20.88        | 20.90        | 22.00         |
|           |            | 1       | 74        | 20.60                   | 20.82        | 20.43        | 22.00         |
|           |            | 36      | 0         | 19.35                   | 19.35        | 19.37        | 21.00         |
|           |            | 36      | 18        | 19.16                   | 19.29        | 19.20        | 21.00         |
|           |            | 36      | 39        | 19.19                   | 19.21        | 19.05        | 21.00         |
|           |            | 75      | 0         | 19.24                   | 19.18        | 19.25        | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20850/2510              | 21100/2535   | 21350/2560   |               |
| 20MHz     | QPSK       | 1       | 0         | 22.76                   | <b>22.88</b> | 22.87        | 24.00         |
|           |            | 1       | 50        | <b>22.98</b>            | 22.60        | <b>22.98</b> | 24.00         |
|           |            | 1       | 99        | 22.82                   | 22.43        | 22.76        | 24.00         |
|           |            | 50      | 0         | <b>21.57</b>            | 21.45        | <b>21.54</b> | 23.00         |
|           |            | 50      | 25        | 21.36                   | <b>21.66</b> | 21.44        | 23.00         |
|           |            | 50      | 50        | 21.27                   | 21.43        | 21.18        | 23.00         |
|           |            | 100     | 0         | 21.30                   | <b>21.34</b> | 21.32        | 23.00         |
|           | 16QAM      | 1       | 0         | 21.75                   | 21.46        | 21.98        | 23.00         |
|           |            | 1       | 50        | 21.44                   | 21.67        | 21.35        | 23.00         |
|           |            | 1       | 99        | 21.27                   | 21.22        | 21.50        | 23.00         |
|           |            | 50      | 0         | 20.37                   | 20.30        | 20.16        | 22.00         |
|           |            | 50      | 25        | 20.32                   | 20.54        | 20.03        | 22.00         |
|           |            | 50      | 50        | 20.21                   | 20.42        | 20.22        | 22.00         |
|           |            | 100     | 0         | 20.20                   | 20.32        | 20.34        | 22.00         |
|           | 64QAM      | 1       | 0         | 20.65                   | 20.67        | 20.78        | 22.00         |
|           |            | 1       | 50        | 20.64                   | 20.86        | 20.86        | 22.00         |
|           |            | 1       | 99        | 20.54                   | 20.76        | 20.37        | 22.00         |
|           |            | 50      | 0         | 19.30                   | 19.27        | 19.30        | 21.00         |



|  |  |     |    |       |       |       |       |
|--|--|-----|----|-------|-------|-------|-------|
|  |  | 50  | 25 | 19.12 | 19.25 | 19.14 | 21.00 |
|  |  | 50  | 50 | 19.16 | 19.16 | 19.01 | 21.00 |
|  |  | 100 | 0  | 19.22 | 19.14 | 19.22 | 21.00 |

| LTE FDD Band 7<br>DSI 4 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                         |            |         |           | 20775/2502.5            | 21100/2535 | 21425/2567.5 |                  |
| 5MHz                    | QPSK       | 1       | 0         | 19.15                   | 19.08      | 18.87        | 20.50            |
|                         |            | 1       | 13        | 19.35                   | 19.12      | 19.21        | 20.50            |
|                         |            | 1       | 24        | 18.86                   | 18.78      | 18.94        | 20.50            |
|                         |            | 12      | 0         | 19.11                   | 18.87      | 19.07        | 20.50            |
|                         |            | 12      | 6         | 18.96                   | 18.82      | 18.97        | 20.50            |
|                         |            | 12      | 13        | 18.66                   | 18.78      | 18.69        | 20.50            |
|                         |            | 25      | 0         | 18.56                   | 18.90      | 18.94        | 20.50            |
|                         | 16QAM      | 1       | 0         | 18.74                   | 18.73      | 18.55        | 20.50            |
|                         |            | 1       | 13        | 18.72                   | 18.57      | 18.70        | 20.50            |
|                         |            | 1       | 24        | 18.56                   | 18.67      | 18.58        | 20.50            |
|                         |            | 12      | 0         | 18.91                   | 18.86      | 18.73        | 20.50            |
|                         |            | 12      | 6         | 18.69                   | 18.85      | 18.62        | 20.50            |
|                         |            | 12      | 13        | 18.60                   | 18.74      | 18.58        | 20.50            |
|                         |            | 25      | 0         | 18.64                   | 18.78      | 18.62        | 20.50            |
|                         | 64QAM      | 1       | 0         | 18.68                   | 18.71      | 18.69        | 20.50            |
|                         |            | 1       | 13        | 18.78                   | 18.82      | 18.79        | 20.50            |
|                         |            | 1       | 24        | 18.69                   | 18.59      | 18.65        | 20.50            |
|                         |            | 12      | 0         | 18.17                   | 18.08      | 18.11        | 20.50            |
|                         |            | 12      | 6         | 18.20                   | 18.23      | 18.17        | 20.50            |
|                         |            | 12      | 13        | 18.12                   | 18.27      | 18.17        | 20.50            |
|                         |            | 25      | 0         | 18.20                   | 18.17      | 18.32        | 20.50            |
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up<br>Limit |
|                         |            |         |           | 20800/2505              | 21100/2535 | 21400/2565   |                  |
| 10MHz                   | QPSK       | 1       | 0         | 19.17                   | 19.09      | 18.90        | 20.50            |
|                         |            | 1       | 25        | 19.38                   | 19.17      | 19.25        | 20.50            |
|                         |            | 1       | 49        | 18.88                   | 18.82      | 18.97        | 20.50            |
|                         |            | 25      | 0         | 19.14                   | 18.92      | 19.11        | 20.50            |
|                         |            | 25      | 13        | 18.99                   | 18.87      | 19.01        | 20.50            |
|                         |            | 25      | 25        | 18.68                   | 18.82      | 18.74        | 20.50            |
|                         |            | 50      | 0         | 18.60                   | 18.92      | 18.98        | 20.50            |
|                         | 16QAM      | 1       | 0         | 18.76                   | 18.76      | 18.57        | 20.50            |
|                         |            | 1       | 25        | 18.75                   | 18.61      | 18.73        | 20.50            |
|                         |            | 1       | 49        | 18.59                   | 18.69      | 18.61        | 20.50            |
|                         |            | 25      | 0         | 18.94                   | 18.91      | 18.77        | 20.50            |
|                         |            | 25      | 13        | 18.71                   | 18.89      | 18.65        | 20.50            |



|           |            | 25      | 25        | 18.63                   | 18.79        | 18.62        | 20.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 50      | 0         | 18.67                   | 18.83        | 18.66        | 20.50         |
|           | 64QAM      | 1       | 0         | 18.70                   | 18.70        | 18.71        | 20.50         |
|           |            | 1       | 25        | 18.81                   | 18.82        | 18.82        | 20.50         |
|           |            | 1       | 49        | 18.68                   | 18.61        | 18.68        | 20.50         |
|           |            | 25      | 0         | 18.20                   | 18.13        | 18.11        | 20.50         |
|           |            | 25      | 13        | 18.22                   | 18.27        | 18.20        | 20.50         |
|           |            | 25      | 25        | 18.15                   | 18.32        | 18.21        | 20.50         |
|           |            | 50      | 0         | 18.23                   | 18.22        | 18.36        | 20.50         |
|           |            |         |           |                         |              |              |               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20825/2507.5            | 21100/2535   | 21375/2562.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 19.16                   | 19.05        | 18.88        | 20.50         |
|           |            | 1       | 38        | 19.36                   | 19.16        | 19.22        | 20.50         |
|           |            | 1       | 74        | 18.85                   | 18.77        | 18.93        | 20.50         |
|           |            | 36      | 0         | 19.12                   | 18.88        | 19.08        | 20.50         |
|           |            | 36      | 18        | 18.96                   | 18.82        | 18.97        | 20.50         |
|           |            | 36      | 39        | 18.65                   | 18.79        | 18.70        | 20.50         |
|           |            | 75      | 0         | 18.58                   | 18.88        | 18.93        | 20.50         |
|           |            |         |           |                         |              |              |               |
|           | 16QAM      | 1       | 0         | 18.71                   | 18.74        | 18.55        | 20.50         |
|           |            | 1       | 38        | 18.73                   | 18.58        | 18.71        | 20.50         |
|           |            | 1       | 74        | 18.56                   | 18.65        | 18.58        | 20.50         |
|           |            | 36      | 0         | 18.91                   | 18.89        | 18.74        | 20.50         |
|           |            | 36      | 18        | 18.68                   | 18.84        | 18.61        | 20.50         |
|           |            | 36      | 39        | 18.61                   | 18.75        | 18.59        | 20.50         |
|           |            | 75      | 0         | 18.64                   | 18.78        | 18.62        | 20.50         |
|           |            |         |           |                         |              |              |               |
|           | 64QAM      | 1       | 0         | 18.65                   | 18.68        | 18.69        | 20.50         |
|           |            | 1       | 38        | 18.79                   | 18.79        | 18.80        | 20.50         |
|           |            | 1       | 74        | 18.69                   | 18.60        | 18.69        | 20.50         |
|           |            | 36      | 0         | 18.19                   | 18.15        | 18.12        | 20.50         |
|           |            | 36      | 18        | 18.20                   | 18.24        | 18.19        | 20.50         |
|           |            | 36      | 39        | 18.13                   | 18.28        | 18.18        | 20.50         |
|           |            | 75      | 0         | 18.20                   | 18.17        | 18.32        | 20.50         |
|           |            |         |           |                         |              |              |               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 20850/2510              | 21100/2535   | 21350/2560   |               |
| 20MHz     | QPSK       | 1       | 0         | 19.13                   | 19.01        | 18.85        | 20.50         |
|           |            | 1       | 50        | <b>19.35</b>            | <b>19.12</b> | <b>19.20</b> | 20.50         |
|           |            | 1       | 99        | 18.83                   | 18.76        | 18.90        | 20.50         |
|           |            | 50      | 0         | <b>19.09</b>            | <b>18.83</b> | <b>19.04</b> | 20.50         |
|           |            | 50      | 25        | 18.94                   | 18.78        | 18.94        | 20.50         |
|           |            | 50      | 50        | 18.62                   | 18.74        | 18.66        | 20.50         |
|           |            | 100     | 0         | 18.55                   | 18.83        | <b>18.89</b> | 20.50         |
|           |            |         |           |                         |              |              |               |
|           | 16QAM      | 1       | 0         | 18.55                   | 18.70        | 18.53        | 20.50         |
|           |            | 1       | 50        | 18.69                   | 18.56        | 18.67        | 20.50         |



|  |       |     |    |       |       |       |       |
|--|-------|-----|----|-------|-------|-------|-------|
|  |       | 1   | 99 | 18.54 | 18.62 | 18.56 | 20.50 |
|  |       | 50  | 0  | 18.88 | 18.85 | 18.71 | 20.50 |
|  |       | 50  | 25 | 18.65 | 18.82 | 18.58 | 20.50 |
|  |       | 50  | 50 | 18.58 | 18.70 | 18.55 | 20.50 |
|  |       | 100 | 0  | 18.62 | 18.74 | 18.59 | 20.50 |
|  | 64QAM | 1   | 0  | 18.63 | 18.64 | 18.64 | 20.50 |
|  |       | 1   | 50 | 18.75 | 18.77 | 18.76 | 20.50 |
|  |       | 1   | 99 | 18.63 | 18.54 | 18.63 | 20.50 |
|  |       | 50  | 0  | 18.14 | 18.07 | 18.05 | 20.50 |
|  |       | 50  | 25 | 18.16 | 18.20 | 18.13 | 20.50 |
|  |       | 50  | 50 | 18.10 | 18.23 | 18.14 | 20.50 |
|  |       | 100 | 0  | 18.18 | 18.13 | 18.29 | 20.50 |

| LTE FDD Band 12<br>DSI 1 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|--------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                          |            |         |           | 23017/699.7             | 23095/707.5 | 23173/715.3 |                  |
| 1.4MHz                   | QPSK       | 1       | 0         | 23.45                   | 23.66       | 23.41       | 24.50            |
|                          |            | 1       | 2         | 24.14                   | 23.92       | 24.20       | 24.50            |
|                          |            | 1       | 5         | 23.61                   | 23.54       | 23.48       | 24.50            |
|                          |            | 3       | 0         | 23.30                   | 23.46       | 23.54       | 24.50            |
|                          |            | 3       | 2         | 23.40                   | 23.35       | 23.45       | 24.50            |
|                          |            | 3       | 3         | 23.51                   | 23.40       | 23.48       | 24.50            |
|                          |            | 6       | 0         | 23.38                   | 23.41       | 23.40       | 24.50            |
|                          | 16QAM      | 1       | 0         | 23.45                   | 23.51       | 23.60       | 24.50            |
|                          |            | 1       | 2         | 23.43                   | 23.37       | 23.45       | 24.50            |
|                          |            | 1       | 5         | 23.57                   | 23.55       | 23.60       | 24.50            |
|                          |            | 3       | 0         | 22.26                   | 22.26       | 22.30       | 23.50            |
|                          |            | 3       | 2         | 22.61                   | 22.58       | 22.67       | 23.50            |
|                          |            | 3       | 3         | 22.41                   | 22.43       | 22.49       | 23.50            |
|                          |            | 6       | 0         | 22.41                   | 22.43       | 22.50       | 23.50            |
|                          | 64QAM      | 1       | 0         | 22.28                   | 22.22       | 22.31       | 23.50            |
|                          |            | 1       | 2         | 22.38                   | 22.28       | 22.36       | 23.50            |
|                          |            | 1       | 5         | 21.78                   | 21.75       | 21.81       | 23.50            |
|                          |            | 3       | 0         | 22.18                   | 22.20       | 22.24       | 23.50            |
|                          |            | 3       | 2         | 22.48                   | 22.46       | 22.56       | 23.50            |
|                          |            | 3       | 3         | 22.14                   | 22.16       | 22.22       | 23.50            |
|                          |            | 6       | 0         | 21.33                   | 21.35       | 21.42       | 22.50            |
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up<br>Limit |
|                          |            |         |           | 23025/700.5             | 23095/707.5 | 23165/714.5 |                  |
| 3MHz                     | QPSK       | 1       | 0         | 23.40                   | 23.57       | 23.35       | 24.50            |
|                          |            | 1       | 7         | 24.12                   | 23.88       | 24.16       | 24.50            |
|                          |            | 1       | 14        | 23.55                   | 23.47       | 23.40       | 24.50            |



|           |            | 8       | 0         | 23.25                   | 23.37       | 23.47       | 24.50         |
|-----------|------------|---------|-----------|-------------------------|-------------|-------------|---------------|
|           |            | 8       | 4         | 23.36                   | 23.27       | 23.37       | 24.50         |
|           |            | 8       | 7         | 23.45                   | 23.34       | 23.41       | 24.50         |
|           |            | 15      | 0         | 23.37                   | 23.33       | 23.33       | 24.50         |
|           | 16QAM      | 1       | 0         | 23.35                   | 23.44       | 23.52       | 24.50         |
|           |            | 1       | 7         | 23.37                   | 23.34       | 23.39       | 24.50         |
|           |            | 1       | 14        | 23.52                   | 23.48       | 23.54       | 24.50         |
|           |            | 8       | 0         | 22.21                   | 22.21       | 22.25       | 23.50         |
|           |            | 8       | 4         | 22.54                   | 22.50       | 22.59       | 23.50         |
|           |            | 8       | 7         | 22.36                   | 22.34       | 22.42       | 23.50         |
|           |            | 15      | 0         | 22.37                   | 22.35       | 22.42       | 23.50         |
|           | 64QAM      | 1       | 0         | 22.20                   | 22.15       | 22.23       | 23.50         |
|           |            | 1       | 7         | 22.32                   | 22.25       | 22.30       | 23.50         |
|           |            | 1       | 14        | 21.73                   | 21.68       | 21.75       | 23.50         |
|           |            | 8       | 0         | 21.13                   | 21.15       | 21.19       | 22.50         |
|           |            | 8       | 4         | 21.41                   | 21.38       | 21.48       | 22.50         |
|           |            | 8       | 7         | 21.09                   | 21.07       | 21.15       | 22.50         |
|           |            | 15      | 0         | 21.29                   | 21.27       | 21.34       | 22.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 23035/701.5             | 23095/707.5 | 23155/713.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 23.39                   | 23.60       | 23.34       | 24.50         |
|           |            | 1       | 13        | 24.11                   | 23.84       | 24.15       | 24.50         |
|           |            | 1       | 24        | 23.56                   | 23.48       | 23.41       | 24.50         |
|           |            | 12      | 0         | 23.24                   | 23.36       | 23.46       | 24.50         |
|           |            | 12      | 6         | 23.36                   | 23.27       | 23.37       | 24.50         |
|           |            | 12      | 13        | 23.46                   | 23.33       | 23.40       | 24.50         |
|           |            | 25      | 0         | 23.35                   | 23.35       | 23.34       | 24.50         |
|           | 16QAM      | 1       | 0         | 23.38                   | 23.43       | 23.52       | 24.50         |
|           |            | 1       | 13        | 23.36                   | 23.33       | 23.38       | 24.50         |
|           |            | 1       | 24        | 23.52                   | 23.50       | 23.54       | 24.50         |
|           |            | 12      | 0         | 22.21                   | 22.18       | 22.24       | 23.50         |
|           |            | 12      | 6         | 22.55                   | 22.51       | 22.60       | 23.50         |
|           |            | 12      | 13        | 22.35                   | 22.33       | 22.41       | 23.50         |
|           |            | 25      | 0         | 22.37                   | 22.35       | 22.42       | 23.50         |
|           | 64QAM      | 1       | 0         | 22.23                   | 22.18       | 22.23       | 23.50         |
|           |            | 1       | 13        | 22.31                   | 22.28       | 22.29       | 23.50         |
|           |            | 1       | 24        | 21.73                   | 21.67       | 21.71       | 23.50         |
|           |            | 12      | 0         | 21.11                   | 21.08       | 21.18       | 22.50         |
|           |            | 12      | 6         | 21.41                   | 21.37       | 21.46       | 22.50         |
|           |            | 12      | 13        | 21.08                   | 21.06       | 21.14       | 22.50         |
|           |            | 25      | 0         | 21.29                   | 21.27       | 21.34       | 22.50         |



| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            |         |           | 23060/704               | 23095/707.5  | 23130/711    |               |
| 10MHz     | QPSK       | 1       | 0         | 23.37                   | 23.53        | 23.32        | 24.50         |
|           |            | 1       | 25        | <b>24.11</b>            | <b>23.84</b> | <b>24.14</b> | 24.50         |
|           |            | 1       | 49        | 23.53                   | 23.46        | 23.37        | 24.50         |
|           |            | 25      | 0         | 23.22                   | <b>23.32</b> | <b>23.43</b> | 24.50         |
|           |            | 25      | 13        | 23.34                   | 23.23        | 23.34        | 24.50         |
|           |            | 25      | 25        | <b>23.42</b>            | 23.29        | 23.37        | 24.50         |
|           |            | 50      | 0         | <b>23.34</b>            | 23.28        | 23.29        | 24.50         |
|           | 16QAM      | 1       | 0         | 23.43                   | 23.40        | 23.47        | 24.50         |
|           |            | 1       | 25        | 23.33                   | 23.32        | 23.35        | 24.50         |
|           |            | 1       | 49        | 23.50                   | 23.45        | 23.52        | 24.50         |
|           |            | 25      | 0         | 22.18                   | 22.17        | 22.22        | 23.50         |
|           |            | 25      | 13        | 22.51                   | 22.48        | 22.56        | 23.50         |
|           |            | 25      | 25        | 22.33                   | 22.29        | 22.38        | 23.50         |
|           |            | 50      | 0         | 22.35                   | 22.31        | 22.39        | 23.50         |
|           | 64QAM      | 1       | 0         | 22.18                   | 22.11        | 22.18        | 23.50         |
|           |            | 1       | 25        | 22.28                   | 22.23        | 22.26        | 23.50         |
|           |            | 1       | 49        | 21.67                   | 21.62        | 21.69        | 23.50         |
|           |            | 25      | 0         | 21.08                   | 21.07        | 21.12        | 22.50         |
|           |            | 25      | 13        | 21.37                   | 21.34        | 21.42        | 22.50         |
|           |            | 25      | 25        | 21.06                   | 21.02        | 21.11        | 22.50         |
|           |            | 50      | 0         | 21.27                   | 21.23        | 21.31        | 22.50         |

| LTE FDD Band 12<br>Full Power&DSI 2&DSI 4 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|-------------------------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth                                 | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                                           |            |         |           | 23017/699.7             | 23095/707.5 | 23173/715.3 |                  |
| 1.4MHz                                    | QPSK       | 1       | 0         | 24.53                   | 24.75       | 24.65       | 25.50            |
|                                           |            | 1       | 2         | 24.60                   | 24.66       | 25.10       | 25.50            |
|                                           |            | 1       | 5         | 24.74                   | 24.73       | 24.75       | 25.50            |
|                                           |            | 3       | 0         | 24.54                   | 24.50       | 24.50       | 25.50            |
|                                           |            | 3       | 2         | 24.50                   | 24.52       | 24.55       | 25.50            |
|                                           |            | 3       | 3         | 24.48                   | 24.41       | 24.50       | 25.50            |
|                                           |            | 6       | 0         | 23.46                   | 23.48       | 23.41       | 24.50            |
|                                           | 16QAM      | 1       | 0         | 23.65                   | 23.21       | 23.29       | 24.50            |
|                                           |            | 1       | 2         | 23.64                   | 23.58       | 23.67       | 24.50            |
|                                           |            | 1       | 5         | 23.26                   | 23.27       | 23.31       | 24.50            |
|                                           |            | 3       | 0         | 23.56                   | 23.52       | 23.58       | 24.50            |
|                                           |            | 3       | 2         | 23.61                   | 23.61       | 23.68       | 24.50            |
|                                           |            | 3       | 3         | 23.63                   | 23.66       | 23.71       | 24.50            |
|                                           |            | 6       | 0         | 22.57                   | 22.61       | 22.68       | 23.50            |
|                                           | 64QAM      | 1       | 0         | 22.29                   | 22.23       | 22.31       | 23.50            |



|           |            | 1       | 2         | 22.39                   | 22.33       | 22.42       | 23.50         |
|-----------|------------|---------|-----------|-------------------------|-------------|-------------|---------------|
|           |            | 1       | 5         | 22.43                   | 22.41       | 22.45       | 23.50         |
|           |            | 3       | 0         | 22.53                   | 22.45       | 22.51       | 23.50         |
|           |            | 3       | 2         | 22.60                   | 22.58       | 22.65       | 23.50         |
|           |            | 3       | 3         | 22.56                   | 22.59       | 22.64       | 23.50         |
|           |            | 6       | 0         | 21.48                   | 21.52       | 21.59       | 22.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 23025/700.5             | 23095/707.5 | 23165/714.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 24.49                   | 24.67       | 24.60       | 25.50         |
|           |            | 1       | 7         | 24.57                   | 24.61       | 25.05       | 25.50         |
|           |            | 1       | 14        | 24.69                   | 24.67       | 24.68       | 25.50         |
|           |            | 8       | 0         | 23.49                   | 23.41       | 23.43       | 24.50         |
|           |            | 8       | 4         | 23.45                   | 23.43       | 23.48       | 24.50         |
|           |            | 8       | 7         | 23.42                   | 23.33       | 23.42       | 24.50         |
|           |            | 15      | 0         | 23.41                   | 23.39       | 23.32       | 24.50         |
|           | 16QAM      | 1       | 0         | 23.60                   | 23.15       | 23.22       | 24.50         |
|           |            | 1       | 7         | 23.58                   | 23.53       | 23.61       | 24.50         |
|           |            | 1       | 14        | 23.21                   | 23.20       | 23.26       | 24.50         |
|           |            | 8       | 0         | 22.50                   | 22.46       | 22.52       | 23.50         |
|           |            | 8       | 4         | 22.55                   | 22.54       | 22.61       | 23.50         |
|           |            | 8       | 7         | 22.58                   | 22.57       | 22.64       | 23.50         |
|           |            | 15      | 0         | 22.52                   | 22.52       | 22.61       | 23.50         |
|           | 64QAM      | 1       | 0         | 22.22                   | 22.17       | 22.24       | 23.50         |
|           |            | 1       | 7         | 22.33                   | 22.28       | 22.36       | 23.50         |
|           |            | 1       | 14        | 22.38                   | 22.34       | 22.40       | 23.50         |
|           |            | 8       | 0         | 21.47                   | 21.39       | 21.45       | 22.50         |
|           |            | 8       | 4         | 21.54                   | 21.51       | 21.58       | 22.50         |
|           |            | 8       | 7         | 21.51                   | 21.50       | 21.57       | 22.50         |
|           |            | 15      | 0         | 21.43                   | 21.43       | 21.52       | 22.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 23035/701.5             | 23095/707.5 | 23155/713.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 24.46                   | 24.65       | 24.56       | 25.50         |
|           |            | 1       | 13        | 24.55                   | 24.57       | 25.02       | 25.50         |
|           |            | 1       | 24        | 24.66                   | 24.62       | 24.64       | 25.50         |
|           |            | 12      | 0         | 23.46                   | 23.36       | 23.39       | 24.50         |
|           |            | 12      | 6         | 23.43                   | 23.39       | 23.43       | 24.50         |
|           |            | 12      | 13        | 23.40                   | 23.31       | 23.38       | 24.50         |
|           |            | 25      | 0         | 23.41                   | 23.38       | 23.30       | 24.50         |
|           | 16QAM      | 1       | 0         | 23.57                   | 23.11       | 23.19       | 24.50         |
|           |            | 1       | 13        | 23.55                   | 23.51       | 23.58       | 24.50         |
|           |            | 1       | 24        | 23.18                   | 23.18       | 23.22       | 24.50         |
|           |            | 12      | 0         | 22.48                   | 22.42       | 22.49       | 23.50         |
|           |            | 12      | 6         | 22.52                   | 22.49       | 22.57       | 23.50         |



|           |            | 12      | 13        | 22.55                   | 22.52        | 22.60        | 23.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 25      | 0         | 22.50                   | 22.48        | 22.56        | 23.50         |
|           | 64QAM      | 1       | 0         | 22.19                   | 22.17        | 22.21        | 23.50         |
|           |            | 1       | 13        | 22.30                   | 22.30        | 22.33        | 23.50         |
|           |            | 1       | 24        | 22.39                   | 22.32        | 22.36        | 23.50         |
|           |            | 12      | 0         | 21.45                   | 21.35        | 21.46        | 22.50         |
|           |            | 12      | 6         | 21.51                   | 21.46        | 21.54        | 22.50         |
|           |            | 12      | 13        | 21.48                   | 21.45        | 21.53        | 22.50         |
|           |            | 25      | 0         | 21.41                   | 21.39        | 21.47        | 22.50         |
|           |            |         |           |                         |              |              |               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 23060/704               | 23095/707.5  | 23130/711    |               |
| 10MHz     | QPSK       | 1       | 0         | 24.44                   | 24.58        | 24.54        | 25.50         |
|           |            | 1       | 25        | 24.55                   | 24.57        | <b>25.01</b> | 25.50         |
|           |            | 1       | 49        | <b>24.63</b>            | <b>24.60</b> | 24.60        | 25.50         |
|           |            | 25      | 0         | <b>23.44</b>            | 23.32        | 23.36        | 24.50         |
|           |            | 25      | 13        | 23.41                   | <b>23.35</b> | <b>23.40</b> | 24.50         |
|           |            | 25      | 25        | 23.36                   | 23.27        | 23.35        | 24.50         |
|           |            | 50      | 0         | <b>23.40</b>            | 23.31        | 23.25        | 24.50         |
|           | 16QAM      | 1       | 0         | 23.12                   | 23.08        | 23.14        | 24.50         |
|           |            | 1       | 25        | 23.52                   | 23.50        | 23.55        | 24.50         |
|           |            | 1       | 49        | 23.16                   | 23.13        | 23.20        | 24.50         |
|           |            | 25      | 0         | 22.45                   | 22.41        | 22.47        | 23.50         |
|           |            | 25      | 13        | 22.48                   | 22.46        | 22.53        | 23.50         |
|           |            | 25      | 25        | 22.53                   | 22.48        | 22.57        | 23.50         |
|           |            | 50      | 0         | 22.48                   | 22.44        | 22.53        | 23.50         |
|           | 64QAM      | 1       | 0         | 22.14                   | 22.10        | 22.16        | 23.50         |
|           |            | 1       | 25        | 22.27                   | 22.25        | 22.30        | 23.50         |
|           |            | 1       | 49        | 22.33                   | 22.27        | 22.34        | 23.50         |
|           |            | 25      | 0         | 21.42                   | 21.34        | 21.40        | 22.50         |
|           |            | 25      | 13        | 21.47                   | 21.43        | 21.50        | 22.50         |
|           |            | 25      | 25        | 21.46                   | 21.41        | 21.50        | 22.50         |
|           |            | 50      | 0         | 21.39                   | 21.35        | 21.44        | 22.50         |

| LTE FDD Band 13<br>Full Power&DSI 1&DSI 2&DSI 4 |            |         |           | Conducted Power(dBm)    |           |             | Tune-up<br>Limit |
|-------------------------------------------------|------------|---------|-----------|-------------------------|-----------|-------------|------------------|
| Bandwidth                                       | Modulation | RB size | RB offset | Channel/Frequency (MHz) |           |             |                  |
|                                                 |            |         |           | 23205/779.5             | 23230/782 | 23255/784.5 |                  |
| 5MHz                                            | QPSK       | 1       | 0         | 23.22                   | 23.11     | 23.23       | 24.50            |
|                                                 |            | 1       | 13        | 23.40                   | 23.28     | 23.24       | 24.50            |
|                                                 |            | 1       | 24        | 23.56                   | 23.43     | 23.44       | 24.50            |
|                                                 |            | 12      | 0         | 22.48                   | 22.36     | 23.41       | 23.50            |
|                                                 |            | 12      | 6         | 22.34                   | 22.21     | 23.35       | 23.50            |
|                                                 |            | 12      | 13        | 22.38                   | 22.25     | 22.38       | 23.50            |



|           | 16QAM      | 25      | 0         | 22.48                   | 22.36        | 22.35 | 23.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|-------|---------------|
|           |            | 1       | 0         | 22.45                   | 22.30        | 22.41 | 23.50         |
|           |            | 1       | 13        | 22.44                   | 22.32        | 22.34 | 23.50         |
|           |            | 1       | 24        | 22.51                   | 22.38        | 22.48 | 23.50         |
|           |            | 12      | 0         | 21.54                   | 21.41        | 21.45 | 22.50         |
|           |            | 12      | 6         | 21.63                   | 21.50        | 21.60 | 22.50         |
|           |            | 12      | 13        | 21.66                   | 21.54        | 21.61 | 22.50         |
|           |            | 25      | 0         | 21.30                   | 21.17        | 21.20 | 22.50         |
|           | 64QAM      | 1       | 0         | 20.87                   | 20.72        | 20.78 | 22.50         |
|           |            | 1       | 13        | 21.32                   | 21.20        | 21.23 | 22.50         |
|           |            | 1       | 24        | 21.92                   | 21.83        | 21.79 | 22.50         |
|           |            | 12      | 0         | 20.43                   | 20.32        | 20.30 | 21.50         |
|           |            | 12      | 6         | 20.59                   | 20.47        | 20.51 | 21.50         |
|           |            | 12      | 13        | 20.53                   | 20.41        | 20.33 | 21.50         |
|           |            | 25      | 0         | 20.59                   | 20.46        | 20.54 | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |       | Tune-up Limit |
|           |            |         |           | /                       | 23230/782    | /     |               |
| 10MHz     | QPSK       | 1       | 0         | /                       | 23.08        | /     | 24.50         |
|           |            | 1       | 25        | /                       | 23.27        | /     | 24.50         |
|           |            | 1       | 49        | /                       | <b>23.41</b> | /     | 24.50         |
|           |            | 25      | 0         | /                       | <b>22.33</b> | /     | 23.50         |
|           |            | 25      | 13        | /                       | 22.19        | /     | 23.50         |
|           |            | 25      | 25        | /                       | 22.22        | /     | 23.50         |
|           |            | 50      | 0         | /                       | <b>22.33</b> | /     | 23.50         |
|           | 16QAM      | 1       | 0         | /                       | 22.26        | /     | 23.50         |
|           |            | 1       | 25        | /                       | 22.28        | /     | 23.50         |
|           |            | 1       | 49        | /                       | 22.36        | /     | 23.50         |
|           |            | 25      | 0         | /                       | 21.38        | /     | 22.50         |
|           |            | 25      | 13        | /                       | 21.47        | /     | 22.50         |
|           |            | 25      | 25        | /                       | 21.51        | /     | 22.50         |
|           |            | 50      | 0         | /                       | 21.15        | /     | 22.50         |
|           | 64QAM      | 1       | 0         | /                       | 20.70        | /     | 22.50         |
|           |            | 1       | 25        | /                       | 21.16        | /     | 22.50         |
|           |            | 1       | 49        | /                       | 21.77        | /     | 22.50         |
|           |            | 25      | 0         | /                       | 20.27        | /     | 21.50         |
|           |            | 25      | 13        | /                       | 20.43        | /     | 21.50         |
|           |            | 25      | 25        | /                       | 20.38        | /     | 21.50         |
|           |            | 50      | 0         | /                       | 20.44        | /     | 21.50         |



| LTE FDD Band 17<br>DSI 1&DSI 4 |            |         |           | Conducted Power(dBm)    |           |             | Tune-up<br>Limit |
|--------------------------------|------------|---------|-----------|-------------------------|-----------|-------------|------------------|
| Bandwidth                      | Modulation | RB size | RB offset | Channel/Frequency (MHz) |           |             |                  |
|                                |            |         |           | 23755/706.5             | 23790/710 | 23825/713.5 |                  |
| 5MHz                           | QPSK       | 1       | 0         | 23.71                   | 23.52     | 23.60       | 24.50            |
|                                |            | 1       | 13        | 24.22                   | 23.91     | 23.99       | 24.50            |
|                                |            | 1       | 24        | 23.83                   | 23.62     | 23.56       | 24.50            |
|                                |            | 12      | 0         | 23.82                   | 23.55     | 23.59       | 24.50            |
|                                |            | 12      | 6         | 23.78                   | 23.70     | 23.66       | 24.50            |
|                                |            | 12      | 13        | 23.55                   | 23.68     | 23.60       | 24.50            |
|                                |            | 25      | 0         | 23.63                   | 23.62     | 23.57       | 24.50            |
|                                | 16QAM      | 1       | 0         | 23.36                   | 23.05     | 23.10       | 24.50            |
|                                |            | 1       | 13        | 23.35                   | 23.30     | 23.33       | 24.50            |
|                                |            | 1       | 24        | 23.36                   | 23.35     | 23.36       | 24.50            |
|                                |            | 12      | 0         | 22.55                   | 22.50     | 22.54       | 23.50            |
|                                |            | 12      | 6         | 22.83                   | 22.82     | 22.84       | 23.50            |
|                                |            | 12      | 13        | 22.60                   | 22.56     | 22.59       | 23.50            |
|                                |            | 25      | 0         | 22.60                   | 22.58     | 22.60       | 23.50            |
|                                | 64QAM      | 1       | 0         | 22.32                   | 22.29     | 22.34       | 23.50            |
|                                |            | 1       | 13        | 22.43                   | 22.39     | 22.42       | 23.50            |
|                                |            | 1       | 24        | 22.42                   | 22.42     | 22.43       | 23.50            |
|                                |            | 12      | 0         | 21.48                   | 21.43     | 21.47       | 22.50            |
|                                |            | 12      | 6         | 21.61                   | 21.58     | 21.60       | 22.50            |
|                                |            | 12      | 13        | 21.63                   | 21.62     | 21.65       | 22.50            |
|                                |            | 25      | 0         | 21.52                   | 21.49     | 21.51       | 22.50            |
| Bandwidth                      | Modulation | RB size | RB offset | Channel/Frequency (MHz) |           |             | Tune-up<br>Limit |
|                                |            |         |           | 23780/709               | 23790/710 | 23800/711   |                  |
| 10MHz                          | QPSK       | 1       | 0         | 23.67                   | 23.44     | 23.55       | 24.50            |
|                                |            | 1       | 25        | 24.19                   | 23.86     | 23.94       | 24.50            |
|                                |            | 1       | 49        | 23.78                   | 23.56     | 23.49       | 24.50            |
|                                |            | 25      | 0         | 23.77                   | 23.46     | 23.52       | 24.50            |
|                                |            | 25      | 13        | 23.73                   | 23.61     | 23.59       | 24.50            |
|                                |            | 25      | 25        | 23.49                   | 23.60     | 23.52       | 24.50            |
|                                |            | 50      | 0         | 23.58                   | 23.53     | 23.48       | 24.50            |
|                                | 16QAM      | 1       | 0         | 23.00                   | 22.99     | 23.03       | 24.50            |
|                                |            | 1       | 25        | 23.29                   | 23.25     | 23.27       | 24.50            |
|                                |            | 1       | 49        | 23.31                   | 23.28     | 23.31       | 24.50            |
|                                |            | 25      | 0         | 22.49                   | 22.44     | 22.48       | 23.50            |
|                                |            | 25      | 13        | 22.77                   | 22.75     | 22.77       | 23.50            |
|                                |            | 25      | 25        | 22.55                   | 22.47     | 22.52       | 23.50            |
|                                |            | 50      | 0         | 22.55                   | 22.49     | 22.53       | 23.50            |
|                                | 64QAM      | 1       | 0         | 22.25                   | 22.23     | 22.27       | 23.50            |
|                                |            | 1       | 25        | 22.37                   | 22.34     | 22.36       | 23.50            |



|  |  |    |    |       |       |       |       |
|--|--|----|----|-------|-------|-------|-------|
|  |  | 1  | 49 | 22.37 | 22.35 | 22.38 | 23.50 |
|  |  | 25 | 0  | 21.42 | 21.37 | 21.41 | 22.50 |
|  |  | 25 | 13 | 21.55 | 21.51 | 21.53 | 22.50 |
|  |  | 25 | 25 | 21.58 | 21.53 | 21.58 | 22.50 |
|  |  | 50 | 0  | 21.47 | 21.40 | 21.44 | 22.50 |

| LTE FDD Band 17<br>Full Power&DSI 2 |            |         |           | Conducted Power(dBm)    |           |             | Tune-up<br>Limit |
|-------------------------------------|------------|---------|-----------|-------------------------|-----------|-------------|------------------|
| Bandwidth                           | Modulation | RB size | RB offset | Channel/Frequency (MHz) |           |             |                  |
|                                     |            |         |           | 23755/706.5             | 23790/710 | 23825/713.5 |                  |
| 5MHz                                | QPSK       | 1       | 0         | 24.76                   | 24.65     | 24.68       | 25.50            |
|                                     |            | 1       | 13        | 25.24                   | 25.38     | 25.27       | 25.50            |
|                                     |            | 1       | 24        | 24.79                   | 24.59     | 24.72       | 25.50            |
|                                     |            | 12      | 0         | 23.76                   | 23.57     | 23.71       | 24.50            |
|                                     |            | 12      | 6         | 23.77                   | 23.58     | 23.61       | 24.50            |
|                                     |            | 12      | 13        | 23.65                   | 23.54     | 23.58       | 24.50            |
|                                     |            | 25      | 0         | 23.60                   | 23.68     | 23.60       | 24.50            |
|                                     | 16QAM      | 1       | 0         | 23.56                   | 23.55     | 23.59       | 24.50            |
|                                     |            | 1       | 13        | 23.55                   | 23.51     | 23.53       | 24.50            |
|                                     |            | 1       | 24        | 23.35                   | 23.30     | 23.33       | 24.50            |
|                                     |            | 12      | 0         | 22.62                   | 22.57     | 22.58       | 23.50            |
|                                     |            | 12      | 6         | 22.87                   | 22.80     | 22.83       | 23.50            |
|                                     |            | 12      | 13        | 22.54                   | 22.49     | 22.51       | 23.50            |
|                                     |            | 25      | 0         | 22.62                   | 22.58     | 22.60       | 23.50            |
|                                     | 64QAM      | 1       | 0         | 22.44                   | 22.36     | 22.40       | 23.50            |
|                                     |            | 1       | 13        | 22.64                   | 22.60     | 22.62       | 23.50            |
|                                     |            | 1       | 24        | 22.22                   | 22.17     | 22.20       | 23.50            |
|                                     |            | 12      | 0         | 21.52                   | 21.47     | 21.48       | 22.50            |
|                                     |            | 12      | 6         | 21.77                   | 21.70     | 21.73       | 22.50            |
|                                     |            | 12      | 13        | 21.73                   | 21.68     | 21.70       | 22.50            |
|                                     |            | 25      | 0         | 21.60                   | 21.56     | 21.58       | 22.50            |
| Bandwidth                           | Modulation | RB size | RB offset | Channel/Frequency (MHz) |           |             | Tune-up<br>Limit |
|                                     |            |         |           | 23780/709               | 23790/710 | 23800/711   |                  |
| 10MHz                               | QPSK       | 1       | 0         | 24.72                   | 24.57     | 24.63       | 25.50            |
|                                     |            | 1       | 25        | 25.21                   | 25.33     | 25.22       | 25.50            |
|                                     |            | 1       | 49        | 24.74                   | 24.53     | 24.65       | 25.50            |
|                                     |            | 25      | 0         | 23.71                   | 23.48     | 23.64       | 24.50            |
|                                     |            | 25      | 13        | 23.72                   | 23.49     | 23.54       | 24.50            |
|                                     |            | 25      | 25        | 23.59                   | 23.46     | 23.50       | 24.50            |
|                                     |            | 50      | 0         | 23.55                   | 23.59     | 23.51       | 24.50            |
|                                     | 16QAM      | 1       | 0         | 23.56                   | 23.49     | 23.52       | 24.50            |
|                                     |            | 1       | 25        | 23.49                   | 23.46     | 23.47       | 24.50            |
|                                     |            | 1       | 49        | 23.30                   | 23.23     | 23.28       | 24.50            |



|  |       |    |    |       |       |       |       |
|--|-------|----|----|-------|-------|-------|-------|
|  |       | 25 | 0  | 22.56 | 22.51 | 22.52 | 23.50 |
|  |       | 25 | 13 | 22.81 | 22.73 | 22.76 | 23.50 |
|  |       | 25 | 25 | 22.49 | 22.40 | 22.44 | 23.50 |
|  |       | 50 | 0  | 22.57 | 22.49 | 22.53 | 23.50 |
|  | 64QAM | 1  | 0  | 22.37 | 22.30 | 22.33 | 23.50 |
|  |       | 1  | 25 | 22.58 | 22.55 | 22.56 | 23.50 |
|  |       | 1  | 49 | 22.17 | 22.10 | 22.15 | 23.50 |
|  |       | 25 | 0  | 21.46 | 21.41 | 21.42 | 22.50 |
|  |       | 25 | 13 | 21.71 | 21.63 | 21.66 | 22.50 |
|  |       | 25 | 25 | 21.68 | 21.59 | 21.63 | 22.50 |
|  |       | 50 | 0  | 21.55 | 21.47 | 21.51 | 22.50 |

| LTE FDD Band 26<br>Full Power&DSI 1&DSI 2&DSI 4 |            |         |           | Conducted Power(dBm)    |             |             | Tune-up<br>Limit |
|-------------------------------------------------|------------|---------|-----------|-------------------------|-------------|-------------|------------------|
| Bandwidth                                       | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             |                  |
|                                                 |            |         |           | 26697/814.7             | 26865/831.5 | 27033/848.3 |                  |
| 1.4MHz                                          | QPSK       | 1       | 0         | 23.58                   | 23.78       | 23.81       | 24.50            |
|                                                 |            | 1       | 2         | 23.66                   | 23.85       | 23.59       | 24.50            |
|                                                 |            | 1       | 5         | 23.79                   | 23.84       | 23.67       | 24.50            |
|                                                 |            | 3       | 0         | 23.54                   | 23.59       | 23.28       | 24.50            |
|                                                 |            | 3       | 2         | 23.37                   | 23.53       | 23.41       | 24.50            |
|                                                 |            | 3       | 3         | 23.50                   | 23.44       | 23.38       | 24.50            |
|                                                 |            | 6       | 0         | 22.45                   | 22.56       | 22.40       | 23.50            |
|                                                 | 16QAM      | 1       | 0         | 22.73                   | 22.64       | 22.76       | 23.50            |
|                                                 |            | 1       | 2         | 22.71                   | 22.69       | 22.70       | 23.50            |
|                                                 |            | 1       | 5         | 22.46                   | 22.40       | 22.48       | 23.50            |
|                                                 |            | 3       | 0         | 22.50                   | 22.43       | 22.53       | 23.50            |
|                                                 |            | 3       | 2         | 22.62                   | 22.57       | 22.66       | 23.50            |
|                                                 |            | 3       | 3         | 22.45                   | 22.41       | 22.48       | 23.50            |
|                                                 |            | 6       | 0         | 21.43                   | 21.45       | 21.54       | 22.50            |
|                                                 | 64QAM      | 1       | 0         | 21.72                   | 21.40       | 21.75       | 22.50            |
|                                                 |            | 1       | 2         | 21.68                   | 21.62       | 21.70       | 22.50            |
|                                                 |            | 1       | 5         | 21.70                   | 21.70       | 21.75       | 22.50            |
|                                                 |            | 3       | 0         | 21.45                   | 21.38       | 21.45       | 22.50            |
|                                                 |            | 3       | 2         | 21.56                   | 21.48       | 21.59       | 22.50            |
|                                                 |            | 3       | 3         | 21.60                   | 21.57       | 21.63       | 22.50            |
|                                                 |            | 6       | 0         | 20.59                   | 20.58       | 20.67       | 21.50            |
| Bandwidth                                       | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up<br>Limit |
|                                                 |            |         |           | 26705/815.5             | 26865/831.5 | 27025/847.5 |                  |
| 3MHz                                            | QPSK       | 1       | 0         | 23.57                   | 23.80       | 23.80       | 24.50            |
|                                                 |            | 1       | 7         | 23.62                   | 23.84       | 23.60       | 24.50            |
|                                                 |            | 1       | 14        | 23.79                   | 23.84       | 23.67       | 24.50            |
|                                                 |            | 8       | 0         | 22.61                   | 22.66       | 22.37       | 23.50            |



|           |            | 8       | 4         | 22.47                   | 22.59       | 22.48       | 23.50         |
|-----------|------------|---------|-----------|-------------------------|-------------|-------------|---------------|
|           |            | 8       | 7         | 22.58                   | 22.53       | 22.44       | 23.50         |
|           |            | 15      | 0         | 22.45                   | 22.59       | 22.41       | 23.50         |
|           | 16QAM      | 1       | 0         | 22.73                   | 22.62       | 22.76       | 23.50         |
|           |            | 1       | 7         | 22.71                   | 22.67       | 22.71       | 23.50         |
|           |            | 1       | 14        | 22.45                   | 22.42       | 22.47       | 23.50         |
|           |            | 8       | 0         | 21.59                   | 21.52       | 21.62       | 22.50         |
|           |            | 8       | 4         | 21.70                   | 21.65       | 21.74       | 22.50         |
|           |            | 8       | 7         | 21.52                   | 21.48       | 21.57       | 22.50         |
|           |            | 15      | 0         | 21.44                   | 21.45       | 21.52       | 22.50         |
|           | 64QAM      | 1       | 0         | 21.72                   | 21.42       | 21.75       | 22.50         |
|           |            | 1       | 7         | 21.68                   | 21.64       | 21.69       | 22.50         |
|           |            | 1       | 14        | 21.73                   | 21.67       | 21.74       | 22.50         |
|           |            | 8       | 0         | 20.54                   | 20.47       | 20.58       | 21.50         |
|           |            | 8       | 4         | 20.64                   | 20.56       | 20.67       | 21.50         |
|           |            | 8       | 7         | 20.67                   | 20.64       | 20.72       | 21.50         |
|           |            | 15      | 0         | 20.60                   | 20.58       | 20.65       | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 26715/816.5             | 26865/831.5 | 27015/846.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 23.59                   | 23.81       | 23.83       | 24.50         |
|           |            | 1       | 13        | 23.65                   | 23.89       | 23.64       | 24.50         |
|           |            | 1       | 24        | 23.81                   | 23.88       | 23.70       | 24.50         |
|           |            | 12      | 0         | 22.64                   | 22.71       | 22.41       | 23.50         |
|           |            | 12      | 6         | 22.50                   | 22.64       | 22.52       | 23.50         |
|           |            | 12      | 13        | 22.60                   | 22.57       | 22.49       | 23.50         |
|           |            | 25      | 0         | 22.49                   | 22.61       | 22.45       | 23.50         |
|           | 16QAM      | 1       | 0         | 22.75                   | 22.65       | 22.78       | 23.50         |
|           |            | 1       | 13        | 22.74                   | 22.71       | 22.74       | 23.50         |
|           |            | 1       | 24        | 22.48                   | 22.44       | 22.50       | 23.50         |
|           |            | 12      | 0         | 21.62                   | 21.57       | 21.66       | 22.50         |
|           |            | 12      | 6         | 21.72                   | 21.69       | 21.77       | 22.50         |
|           |            | 12      | 13        | 21.55                   | 21.53       | 21.61       | 22.50         |
|           |            | 25      | 0         | 21.47                   | 21.50       | 21.56       | 22.50         |
|           | 64QAM      | 1       | 0         | 21.74                   | 21.41       | 21.77       | 22.50         |
|           |            | 1       | 13        | 21.71                   | 21.64       | 21.72       | 22.50         |
|           |            | 1       | 24        | 21.72                   | 21.69       | 21.77       | 22.50         |
|           |            | 12      | 0         | 20.57                   | 20.52       | 20.58       | 21.50         |
|           |            | 12      | 6         | 20.66                   | 20.60       | 20.70       | 21.50         |
|           |            | 12      | 13        | 20.70                   | 20.69       | 20.76       | 21.50         |
|           |            | 25      | 0         | 20.63                   | 20.63       | 20.69       | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |             | Tune-up Limit |
|           |            |         |           | 26750/820               | 26865/831.5 | 26990/844   |               |
| 10MHz     | QPSK       | 1       | 0         | 23.58                   | 23.77       | 23.81       | 24.50         |



|           |            | 1       | 25        | 23.63                   | 23.88        | 23.61        | 24.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 49        | 23.78                   | 23.83        | 23.66        | 24.50         |
|           |            | 25      | 0         | 22.62                   | 22.67        | 22.38        | 23.50         |
|           |            | 25      | 13        | 22.47                   | 22.59        | 22.48        | 23.50         |
|           |            | 25      | 25        | 22.57                   | 22.54        | 22.45        | 23.50         |
|           |            | 50      | 0         | 22.47                   | 22.57        | 22.40        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.70                   | 22.63        | 22.76        | 23.50         |
|           |            | 1       | 25        | 22.72                   | 22.68        | 22.72        | 23.50         |
|           |            | 1       | 49        | 22.45                   | 22.40        | 22.47        | 23.50         |
|           |            | 25      | 0         | 21.59                   | 21.55        | 21.63        | 22.50         |
|           |            | 25      | 13        | 21.69                   | 21.64        | 21.73        | 22.50         |
|           |            | 25      | 25        | 21.53                   | 21.49        | 21.58        | 22.50         |
|           |            | 50      | 0         | 21.44                   | 21.45        | 21.52        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.69                   | 21.39        | 21.75        | 22.50         |
|           |            | 1       | 25        | 21.69                   | 21.61        | 21.70        | 22.50         |
|           |            | 1       | 49        | 21.73                   | 21.68        | 21.78        | 22.50         |
|           |            | 25      | 0         | 20.56                   | 20.54        | 20.59        | 21.50         |
|           |            | 25      | 13        | 20.64                   | 20.57        | 20.69        | 21.50         |
|           |            | 25      | 25        | 20.68                   | 20.65        | 20.73        | 21.50         |
|           |            | 50      | 0         | 20.60                   | 20.58        | 20.65        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 26775/822.5             | 26865/831.5  | 26965/841.5  |               |
| 15MHz     | QPSK       | 1       | 0         | 23.55                   | 23.73        | <b>23.78</b> | 24.50         |
|           |            | 1       | 38        | 23.62                   | <b>23.84</b> | 23.59        | 24.50         |
|           |            | 1       | 74        | <b>23.76</b>            | 23.82        | 23.63        | 24.50         |
|           |            | 36      | 0         | <b>22.59</b>            | <b>22.62</b> | 22.34        | 23.50         |
|           |            | 36      | 18        | 22.45                   | 22.55        | <b>22.45</b> | 23.50         |
|           |            | 36      | 39        | 22.54                   | 22.49        | 22.41        | 23.50         |
|           |            | 75      | 0         | 22.44                   | <b>22.52</b> | 22.36        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.64                   | 22.59        | 22.71        | 23.50         |
|           |            | 1       | 38        | 22.68                   | 22.66        | 22.68        | 23.50         |
|           |            | 1       | 74        | 22.43                   | 22.37        | 22.45        | 23.50         |
|           |            | 36      | 0         | 21.56                   | 21.51        | 21.60        | 22.50         |
|           |            | 36      | 18        | 21.66                   | 21.62        | 21.70        | 22.50         |
|           |            | 36      | 39        | 21.50                   | 21.44        | 21.54        | 22.50         |
|           |            | 75      | 0         | 21.42                   | 21.41        | 21.49        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.67                   | 21.35        | 21.70        | 22.50         |
|           |            | 1       | 38        | 21.65                   | 21.59        | 21.66        | 22.50         |
|           |            | 1       | 74        | 21.67                   | 21.62        | 21.72        | 22.50         |
|           |            | 36      | 0         | 20.51                   | 20.46        | 20.52        | 21.50         |
|           |            | 36      | 18        | 20.60                   | 20.53        | 20.63        | 21.50         |
|           |            | 36      | 39        | 20.65                   | 20.60        | 20.69        | 21.50         |
|           |            | 75      | 0         | 20.58                   | 20.54        | 20.62        | 21.50         |



| LTE TDD Band 38<br>DSI 1 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|--------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                          |            |         |           | 37775/2572.5            | 38000/2595 | 38225/2617.5 |                  |
| 5MHz                     | QPSK       | 1       | 0         | 19.46                   | 19.02      | 19.03        | 20.00            |
|                          |            | 1       | 13        | 19.02                   | 18.84      | 19.21        | 20.00            |
|                          |            | 1       | 24        | 19.24                   | 18.99      | 19.21        | 20.00            |
|                          |            | 12      | 0         | 18.92                   | 18.88      | 18.82        | 20.00            |
|                          |            | 12      | 6         | 18.57                   | 18.88      | 18.63        | 20.00            |
|                          |            | 12      | 13        | 18.49                   | 18.98      | 18.54        | 20.00            |
|                          |            | 25      | 0         | 18.47                   | 18.89      | 18.53        | 20.00            |
|                          | 16QAM      | 1       | 0         | 18.57                   | 18.28      | 18.88        | 20.00            |
|                          |            | 1       | 13        | 18.55                   | 18.46      | 18.77        | 20.00            |
|                          |            | 1       | 24        | 18.73                   | 18.30      | 18.44        | 20.00            |
|                          |            | 12      | 0         | 18.65                   | 18.75      | 18.64        | 20.00            |
|                          |            | 12      | 6         | 18.59                   | 18.90      | 18.62        | 20.00            |
|                          |            | 12      | 13        | 18.47                   | 18.78      | 18.55        | 20.00            |
|                          |            | 25      | 0         | 18.47                   | 18.82      | 18.54        | 20.00            |
|                          | 64QAM      | 1       | 0         | 18.68                   | 18.69      | 18.72        | 20.00            |
|                          |            | 1       | 13        | 18.52                   | 18.67      | 18.73        | 20.00            |
|                          |            | 1       | 24        | 18.70                   | 18.63      | 18.71        | 20.00            |
|                          |            | 12      | 0         | 18.64                   | 18.65      | 18.71        | 20.00            |
|                          |            | 12      | 6         | 18.60                   | 18.61      | 18.64        | 20.00            |
|                          |            | 12      | 13        | 18.50                   | 18.48      | 18.66        | 20.00            |
|                          |            | 25      | 0         | 18.59                   | 18.61      | 18.55        | 20.00            |
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up<br>Limit |
|                          |            |         |           | 37800/2575              | 38000/2595 | 38200/2615   |                  |
| 10MHz                    | QPSK       | 1       | 0         | 19.48                   | 19.03      | 19.06        | 20.00            |
|                          |            | 1       | 25        | 19.05                   | 18.89      | 19.25        | 20.00            |
|                          |            | 1       | 49        | 19.26                   | 19.03      | 19.24        | 20.00            |
|                          |            | 25      | 0         | 18.95                   | 18.93      | 18.86        | 20.00            |
|                          |            | 25      | 13        | 18.60                   | 18.93      | 18.67        | 20.00            |
|                          |            | 25      | 25        | 18.51                   | 19.02      | 18.59        | 20.00            |
|                          |            | 50      | 0         | 18.51                   | 18.91      | 18.57        | 20.00            |
|                          | 16QAM      | 1       | 0         | 18.59                   | 18.31      | 18.90        | 20.00            |
|                          |            | 1       | 25        | 18.58                   | 18.50      | 18.80        | 20.00            |
|                          |            | 1       | 49        | 18.76                   | 18.32      | 18.47        | 20.00            |
|                          |            | 25      | 0         | 18.68                   | 18.80      | 18.68        | 20.00            |
|                          |            | 25      | 13        | 18.61                   | 18.94      | 18.65        | 20.00            |
|                          |            | 25      | 25        | 18.50                   | 18.83      | 18.59        | 20.00            |
|                          |            | 50      | 0         | 18.50                   | 18.87      | 18.58        | 20.00            |
|                          | 64QAM      | 1       | 0         | 18.70                   | 18.68      | 18.74        | 20.00            |



|           |            | 1       | 25        | 18.55                   | 18.67        | 18.76        | 20.00         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 49        | 18.69                   | 18.65        | 18.74        | 20.00         |
|           |            | 25      | 0         | 18.67                   | 18.70        | 18.71        | 20.00         |
|           |            | 25      | 13        | 18.62                   | 18.65        | 18.67        | 20.00         |
|           |            | 25      | 25        | 18.53                   | 18.53        | 18.70        | 20.00         |
|           |            | 50      | 0         | 18.62                   | 18.66        | 18.59        | 20.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 37825/2577.5            | 38000/2595   | 38175/2612.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 19.47                   | 18.99        | 19.04        | 20.00         |
|           |            | 1       | 38        | 19.03                   | 18.88        | 19.22        | 20.00         |
|           |            | 1       | 74        | 19.23                   | 18.98        | 19.20        | 20.00         |
|           |            | 36      | 0         | 18.93                   | 18.89        | 18.83        | 20.00         |
|           |            | 36      | 18        | 18.57                   | 18.88        | 18.63        | 20.00         |
|           |            | 36      | 39        | 18.48                   | 18.99        | 18.55        | 20.00         |
|           |            | 75      | 0         | 18.49                   | 18.87        | 18.52        | 20.00         |
|           | 16QAM      | 1       | 0         | 18.54                   | 18.29        | 18.88        | 20.00         |
|           |            | 1       | 38        | 18.56                   | 18.47        | 18.78        | 20.00         |
|           |            | 1       | 74        | 18.73                   | 18.28        | 18.44        | 20.00         |
|           |            | 36      | 0         | 18.65                   | 18.78        | 18.65        | 20.00         |
|           |            | 36      | 18        | 18.58                   | 18.89        | 18.61        | 20.00         |
|           |            | 36      | 39        | 18.48                   | 18.79        | 18.56        | 20.00         |
|           |            | 75      | 0         | 18.47                   | 18.82        | 18.54        | 20.00         |
|           | 64QAM      | 1       | 0         | 18.65                   | 18.66        | 18.72        | 20.00         |
|           |            | 1       | 38        | 18.53                   | 18.64        | 18.74        | 20.00         |
|           |            | 1       | 74        | 18.70                   | 18.64        | 18.75        | 20.00         |
|           |            | 36      | 0         | 18.66                   | 18.72        | 18.72        | 20.00         |
|           |            | 36      | 18        | 18.60                   | 18.62        | 18.66        | 20.00         |
|           |            | 36      | 39        | 18.51                   | 18.49        | 18.67        | 20.00         |
|           |            | 75      | 0         | 18.59                   | 18.61        | 18.55        | 20.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 37850/2580              | 38000/2595   | 38150/2610   |               |
| 20MHz     | QPSK       | 1       | 0         | <b>19.44</b>            | 18.95        | 19.01        | 20.00         |
|           |            | 1       | 50        | 19.02                   | 18.84        | <b>19.20</b> | 20.00         |
|           |            | 1       | 99        | 19.21                   | <b>18.97</b> | 19.17        | 20.00         |
|           |            | 50      | 0         | <b>18.90</b>            | 18.84        | <b>18.79</b> | 20.00         |
|           |            | 50      | 25        | 18.55                   | 18.84        | 18.60        | 20.00         |
|           |            | 50      | 50        | 18.45                   | <b>18.94</b> | 18.51        | 20.00         |
|           |            | 100     | 0         | 18.46                   | <b>18.82</b> | 18.48        | 20.00         |
|           | 16QAM      | 1       | 0         | 18.72                   | 18.25        | 18.83        | 20.00         |



|  |       |     |    |       |       |       |       |
|--|-------|-----|----|-------|-------|-------|-------|
|  |       | 1   | 50 | 18.52 | 18.45 | 18.74 | 20.00 |
|  |       | 1   | 99 | 18.71 | 18.25 | 18.42 | 20.00 |
|  |       | 50  | 0  | 18.62 | 18.74 | 18.62 | 20.00 |
|  |       | 50  | 25 | 18.55 | 18.87 | 18.58 | 20.00 |
|  |       | 50  | 50 | 18.45 | 18.74 | 18.52 | 20.00 |
|  |       | 100 | 0  | 18.45 | 18.78 | 18.51 | 20.00 |
|  | 64QAM | 1   | 0  | 18.63 | 18.62 | 18.67 | 20.00 |
|  |       | 1   | 50 | 18.49 | 18.62 | 18.70 | 20.00 |
|  |       | 1   | 99 | 18.64 | 18.58 | 18.69 | 20.00 |
|  |       | 50  | 0  | 18.61 | 18.64 | 18.65 | 20.00 |
|  |       | 50  | 25 | 18.56 | 18.58 | 18.60 | 20.00 |
|  |       | 50  | 50 | 18.48 | 18.44 | 18.63 | 20.00 |
|  |       | 100 | 0  | 18.57 | 18.57 | 18.52 | 20.00 |

| LTE TDD Band 38<br>Full Powe&DSI 2 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|------------------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth                          | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                                    |            |         |           | 37775/2572.5            | 38000/2595 | 38225/2617.5 |                  |
| 5MHz                               | QPSK       | 1       | 0         | 23.40                   | 23.11      | 23.12        | 24.50            |
|                                    |            | 1       | 13        | 23.60                   | 23.14      | 23.51        | 24.50            |
|                                    |            | 1       | 24        | 23.14                   | 23.15      | 23.27        | 24.50            |
|                                    |            | 12      | 0         | 22.25                   | 22.12      | 22.25        | 23.50            |
|                                    |            | 12      | 6         | 22.21                   | 22.19      | 22.23        | 23.50            |
|                                    |            | 12      | 13        | 22.11                   | 22.20      | 22.06        | 23.50            |
|                                    |            | 25      | 0         | 22.12                   | 22.21      | 22.16        | 23.50            |
|                                    | 16QAM      | 1       | 0         | 22.53                   | 22.15      | 22.62        | 23.50            |
|                                    |            | 1       | 13        | 22.51                   | 22.12      | 22.45        | 23.50            |
|                                    |            | 1       | 24        | 22.27                   | 22.07      | 22.14        | 23.50            |
|                                    |            | 12      | 0         | 21.26                   | 21.04      | 21.30        | 22.50            |
|                                    |            | 12      | 6         | 21.18                   | 21.06      | 21.30        | 22.50            |
|                                    |            | 12      | 13        | 21.43                   | 21.15      | 21.41        | 22.50            |
|                                    |            | 25      | 0         | 21.52                   | 21.20      | 21.58        | 22.50            |
|                                    | 64QAM      | 1       | 0         | 21.36                   | 21.41      | 21.46        | 22.50            |
|                                    |            | 1       | 13        | 21.26                   | 21.44      | 21.35        | 22.50            |
|                                    |            | 1       | 24        | 21.31                   | 21.39      | 21.31        | 22.50            |
|                                    |            | 12      | 0         | 20.37                   | 20.36      | 20.42        | 21.50            |
|                                    |            | 12      | 6         | 20.23                   | 20.28      | 20.31        | 21.50            |
|                                    |            | 12      | 13        | 20.12                   | 20.16      | 20.15        | 21.50            |
|                                    |            | 25      | 0         | 20.14                   | 20.36      | 20.08        | 21.50            |
| Bandwidth                          | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up<br>Limit |
|                                    |            |         |           | 37800/2575              | 38000/2595 | 38200/2615   |                  |
| 10MHz                              | QPSK       | 1       | 0         | 23.42                   | 23.12      | 23.15        | 24.50            |
|                                    |            | 1       | 25        | 23.63                   | 23.19      | 23.55        | 24.50            |



|           |            | 1       | 49        | 23.16                   | 23.19      | 23.30        | 24.50         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 25      | 0         | 22.28                   | 22.17      | 22.29        | 23.50         |
|           |            | 25      | 13        | 22.24                   | 22.24      | 22.27        | 23.50         |
|           |            | 25      | 25        | 22.13                   | 22.24      | 22.11        | 23.50         |
|           |            | 50      | 0         | 22.16                   | 22.23      | 22.20        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.55                   | 22.18      | 22.64        | 23.50         |
|           |            | 1       | 25        | 22.54                   | 22.16      | 22.48        | 23.50         |
|           |            | 1       | 49        | 22.30                   | 22.09      | 22.17        | 23.50         |
|           |            | 25      | 0         | 21.29                   | 21.09      | 21.34        | 22.50         |
|           |            | 25      | 13        | 21.20                   | 21.10      | 21.33        | 22.50         |
|           |            | 25      | 25        | 21.46                   | 21.20      | 21.45        | 22.50         |
|           |            | 50      | 0         | 21.55                   | 21.25      | 21.62        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.38                   | 21.40      | 21.48        | 22.50         |
|           |            | 1       | 25        | 21.29                   | 21.44      | 21.38        | 22.50         |
|           |            | 1       | 49        | 21.30                   | 21.41      | 21.34        | 22.50         |
|           |            | 25      | 0         | 20.40                   | 20.41      | 20.42        | 21.50         |
|           |            | 25      | 13        | 20.25                   | 20.32      | 20.34        | 21.50         |
|           |            | 25      | 25        | 20.15                   | 20.21      | 20.19        | 21.50         |
|           |            | 50      | 0         | 20.17                   | 20.41      | 20.12        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 37825/2577.5            | 38000/2595 | 38175/2612.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 23.41                   | 23.08      | 23.13        | 24.50         |
|           |            | 1       | 38        | 23.61                   | 23.18      | 23.52        | 24.50         |
|           |            | 1       | 74        | 23.13                   | 23.14      | 23.26        | 24.50         |
|           |            | 36      | 0         | 22.26                   | 22.13      | 22.26        | 23.50         |
|           |            | 36      | 18        | 22.21                   | 22.19      | 22.23        | 23.50         |
|           |            | 36      | 39        | 22.10                   | 22.21      | 22.07        | 23.50         |
|           |            | 75      | 0         | 22.14                   | 22.19      | 22.15        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.50                   | 22.16      | 22.62        | 23.50         |
|           |            | 1       | 38        | 22.52                   | 22.13      | 22.46        | 23.50         |
|           |            | 1       | 74        | 22.27                   | 22.05      | 22.14        | 23.50         |
|           |            | 36      | 0         | 21.26                   | 21.07      | 21.31        | 22.50         |
|           |            | 36      | 18        | 21.17                   | 21.05      | 21.29        | 22.50         |
|           |            | 36      | 39        | 21.44                   | 21.16      | 21.42        | 22.50         |
|           |            | 75      | 0         | 21.52                   | 21.20      | 21.58        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.33                   | 21.38      | 21.46        | 22.50         |
|           |            | 1       | 38        | 21.27                   | 21.41      | 21.36        | 22.50         |
|           |            | 1       | 74        | 21.31                   | 21.40      | 21.35        | 22.50         |
|           |            | 36      | 0         | 20.39                   | 20.43      | 20.43        | 21.50         |
|           |            | 36      | 18        | 20.23                   | 20.29      | 20.33        | 21.50         |
|           |            | 36      | 39        | 20.13                   | 20.17      | 20.16        | 21.50         |
|           |            | 75      | 0         | 20.14                   | 20.36      | 20.08        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up       |



|       |       |     |    | 37850/2580   | 38000/2595   | 38150/2610   | Limit |
|-------|-------|-----|----|--------------|--------------|--------------|-------|
| 20MHz | QPSK  | 1   | 0  | 23.38        | 23.04        | 23.10        | 24.50 |
|       |       | 1   | 50 | <b>23.60</b> | <b>23.14</b> | <b>23.50</b> | 24.50 |
|       |       | 1   | 99 | 23.11        | 23.13        | 23.23        | 24.50 |
|       |       | 50  | 0  | <b>22.23</b> | 22.08        | <b>22.22</b> | 23.50 |
|       |       | 50  | 25 | 22.19        | 22.15        | 22.20        | 23.50 |
|       |       | 50  | 50 | 22.07        | <b>22.16</b> | 22.03        | 23.50 |
|       |       | 100 | 0  | 22.11        | <b>22.14</b> | 22.11        | 23.50 |
|       | 16QAM | 1   | 0  | 22.40        | 22.12        | 22.57        | 23.50 |
|       |       | 1   | 50 | 22.48        | 22.11        | 22.42        | 23.50 |
|       |       | 1   | 99 | 22.25        | 22.02        | 22.12        | 23.50 |
|       |       | 50  | 0  | 21.23        | 21.03        | 21.28        | 22.50 |
|       |       | 50  | 25 | 21.14        | 21.03        | 21.26        | 22.50 |
|       |       | 50  | 50 | 21.41        | 21.11        | 21.38        | 22.50 |
|       |       | 100 | 0  | 21.50        | 21.16        | 21.55        | 22.50 |
|       | 64QAM | 1   | 0  | 21.31        | 21.34        | 21.41        | 22.50 |
|       |       | 1   | 50 | 21.23        | 21.39        | 21.32        | 22.50 |
|       |       | 1   | 99 | 21.25        | 21.34        | 21.29        | 22.50 |
|       |       | 50  | 0  | 20.34        | 20.35        | 20.36        | 21.50 |
|       |       | 50  | 25 | 20.19        | 20.25        | 20.27        | 21.50 |
|       |       | 50  | 50 | 20.10        | 20.12        | 20.12        | 21.50 |
|       |       | 100 | 0  | 20.12        | 20.32        | 20.05        | 21.50 |

| LTE TDD Band 38<br>DSI 4 |            |         |           | Conducted Power(dBm)    |            |              | Tune-up<br>Limit |
|--------------------------|------------|---------|-----------|-------------------------|------------|--------------|------------------|
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              |                  |
|                          |            |         |           | 37775/2572.5            | 38000/2595 | 38225/2617.5 |                  |
| 5MHz                     | QPSK       | 1       | 0         | 23.21                   | 23.04      | 23.18        | 24.00            |
|                          |            | 1       | 13        | 23.40                   | 22.91      | 23.30        | 24.00            |
|                          |            | 1       | 24        | 23.21                   | 22.92      | 23.20        | 24.00            |
|                          |            | 12      | 0         | 22.58                   | 22.28      | 22.50        | 23.50            |
|                          |            | 12      | 6         | 22.20                   | 22.34      | 22.23        | 23.50            |
|                          |            | 12      | 13        | 22.09                   | 22.33      | 22.15        | 23.50            |
|                          |            | 25      | 0         | 22.13                   | 22.42      | 22.16        | 23.50            |
|                          | 16QAM      | 1       | 0         | 22.44                   | 22.15      | 22.41        | 23.50            |
|                          |            | 1       | 13        | 22.42                   | 22.13      | 22.38        | 23.50            |
|                          |            | 1       | 24        | 22.29                   | 22.08      | 22.13        | 23.50            |
|                          |            | 12      | 0         | 21.31                   | 21.23      | 21.27        | 22.50            |
|                          |            | 12      | 6         | 21.11                   | 21.24      | 21.18        | 22.50            |
|                          |            | 12      | 13        | 21.24                   | 21.33      | 21.06        | 22.50            |
|                          |            | 25      | 0         | 21.09                   | 21.36      | 21.10        | 22.50            |
|                          | 64QAM      | 1       | 0         | 21.33                   | 21.35      | 21.39        | 22.50            |
|                          |            | 1       | 13        | 21.42                   | 21.40      | 21.31        | 22.50            |



|           |            | 1       | 24        | 21.39                   | 21.39      | 21.23        | 22.50         |
|-----------|------------|---------|-----------|-------------------------|------------|--------------|---------------|
|           |            | 12      | 0         | 20.38                   | 20.38      | 20.40        | 21.50         |
|           |            | 12      | 6         | 20.22                   | 20.30      | 20.30        | 21.50         |
|           |            | 12      | 13        | 20.12                   | 20.13      | 20.06        | 21.50         |
|           |            | 25      | 0         | 20.04                   | 20.36      | 20.06        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 37800/2575              | 38000/2595 | 38200/2615   |               |
| 10MHz     | QPSK       | 1       | 0         | 23.23                   | 23.05      | 23.21        | 24.00         |
|           |            | 1       | 25        | 23.43                   | 22.96      | 23.34        | 24.00         |
|           |            | 1       | 49        | 23.23                   | 22.96      | 23.23        | 24.00         |
|           |            | 25      | 0         | 22.61                   | 22.33      | 22.54        | 23.50         |
|           |            | 25      | 13        | 22.23                   | 22.39      | 22.27        | 23.50         |
|           |            | 25      | 25        | 22.11                   | 22.37      | 22.20        | 23.50         |
|           |            | 50      | 0         | 22.17                   | 22.44      | 22.20        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.46                   | 22.18      | 22.43        | 23.50         |
|           |            | 1       | 25        | 22.45                   | 22.17      | 22.41        | 23.50         |
|           |            | 1       | 49        | 22.32                   | 22.10      | 22.16        | 23.50         |
|           |            | 25      | 0         | 21.34                   | 21.28      | 21.31        | 22.50         |
|           |            | 25      | 13        | 21.13                   | 21.28      | 21.21        | 22.50         |
|           |            | 25      | 25        | 21.27                   | 21.38      | 21.10        | 22.50         |
|           |            | 50      | 0         | 21.12                   | 21.41      | 21.14        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.35                   | 21.34      | 21.41        | 22.50         |
|           |            | 1       | 25        | 21.45                   | 21.40      | 21.34        | 22.50         |
|           |            | 1       | 49        | 21.38                   | 21.41      | 21.26        | 22.50         |
|           |            | 25      | 0         | 20.41                   | 20.43      | 20.40        | 21.50         |
|           |            | 25      | 13        | 20.24                   | 20.34      | 20.33        | 21.50         |
|           |            | 25      | 25        | 20.15                   | 20.18      | 20.10        | 21.50         |
|           |            | 50      | 0         | 20.07                   | 20.41      | 20.10        | 21.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |            |              | Tune-up Limit |
|           |            |         |           | 37825/2577.5            | 38000/2595 | 38175/2612.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 23.22                   | 23.01      | 23.19        | 24.00         |
|           |            | 1       | 38        | 23.41                   | 22.95      | 23.31        | 24.00         |
|           |            | 1       | 74        | 23.20                   | 22.91      | 23.19        | 24.00         |
|           |            | 36      | 0         | 22.59                   | 22.29      | 22.51        | 23.50         |
|           |            | 36      | 18        | 22.20                   | 22.34      | 22.23        | 23.50         |
|           |            | 36      | 39        | 22.08                   | 22.34      | 22.16        | 23.50         |
|           |            | 75      | 0         | 22.15                   | 22.40      | 22.15        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.41                   | 22.16      | 22.41        | 23.50         |
|           |            | 1       | 38        | 22.43                   | 22.14      | 22.39        | 23.50         |
|           |            | 1       | 74        | 22.29                   | 22.06      | 22.13        | 23.50         |
|           |            | 36      | 0         | 21.31                   | 21.26      | 21.28        | 22.50         |
|           |            | 36      | 18        | 21.10                   | 21.23      | 21.17        | 22.50         |
|           |            | 36      | 39        | 21.25                   | 21.34      | 21.07        | 22.50         |



|           | 64QAM      | 75      | 0         | 21.09                   | 21.36        | 21.10        | 22.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|--------------|---------------|
|           |            | 1       | 0         | 21.30                   | 21.32        | 21.39        | 22.50         |
|           |            | 1       | 38        | 21.43                   | 21.37        | 21.32        | 22.50         |
|           |            | 1       | 74        | 21.39                   | 21.40        | 21.27        | 22.50         |
|           |            | 36      | 0         | 20.40                   | 20.45        | 20.41        | 21.50         |
|           |            | 36      | 18        | 20.22                   | 20.31        | 20.32        | 21.50         |
|           |            | 36      | 39        | 20.13                   | 20.14        | 20.07        | 21.50         |
|           |            | 75      | 0         | 20.04                   | 20.36        | 20.06        | 21.50         |
|           |            |         |           |                         |              |              |               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |              | Tune-up Limit |
|           |            |         |           | 37850/2580              | 38000/2595   | 38150/2610   |               |
| 20MHz     | QPSK       | 1       | 0         | 23.19                   | <b>22.97</b> | 23.16        | 24.00         |
|           |            | 1       | 50        | <b>23.40</b>            | 22.91        | <b>23.29</b> | 24.00         |
|           |            | 1       | 99        | 23.18                   | 22.90        | 23.16        | 24.00         |
|           |            | 50      | 0         | <b>22.56</b>            | 22.24        | <b>22.47</b> | 23.50         |
|           |            | 50      | 25        | 22.18                   | <b>22.30</b> | 22.20        | 23.50         |
|           |            | 50      | 50        | 22.05                   | 22.29        | 22.12        | 23.50         |
|           |            | 100     | 0         | 22.12                   | <b>22.35</b> | 22.11        | 23.50         |
|           | 16QAM      | 1       | 0         | 22.45                   | 22.12        | 22.36        | 23.50         |
|           |            | 1       | 50        | 22.39                   | 22.12        | 22.35        | 23.50         |
|           |            | 1       | 99        | 22.27                   | 22.03        | 22.11        | 23.50         |
|           |            | 50      | 0         | 21.28                   | 21.22        | 21.25        | 22.50         |
|           |            | 50      | 25        | 21.07                   | 21.21        | 21.14        | 22.50         |
|           |            | 50      | 50        | 21.22                   | 21.29        | 21.03        | 22.50         |
|           |            | 100     | 0         | 21.07                   | 21.32        | 21.07        | 22.50         |
|           | 64QAM      | 1       | 0         | 21.28                   | 21.28        | 21.34        | 22.50         |
|           |            | 1       | 50        | 21.39                   | 21.35        | 21.28        | 22.50         |
|           |            | 1       | 99        | 21.33                   | 21.34        | 21.21        | 22.50         |
|           |            | 50      | 0         | 20.35                   | 20.37        | 20.34        | 21.50         |
|           |            | 50      | 25        | 20.18                   | 20.27        | 20.26        | 21.50         |
|           |            | 50      | 50        | 20.10                   | 20.09        | 20.03        | 21.50         |
|           |            | 100     | 0         | 20.02                   | 20.32        | 20.03        | 21.50         |

| LTE TDD Band 41<br>DSI1 |            |         |           | Conducted Power(dBm)    |                  |                |                  |                  | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|------------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  |                  |
|                         |            |         |           | 39675/<br>2498.5        | 40148/<br>2545.8 | 40620/<br>2593 | 41093/<br>2640.3 | 41565/<br>2687.5 |                  |
| 5MHz                    | QPSK       | 1       | 0         | 18.77                   | 18.67            | 18.58          | 18.60            | 18.87            | 19.50            |
|                         |            | 1       | 13        | 18.97                   | 18.78            | 18.75          | 18.74            | 19.13            | 19.50            |
|                         |            | 1       | 24        | 18.64                   | 18.77            | 18.78          | 18.80            | 18.47            | 19.50            |
|                         |            | 12      | 0         | 18.30                   | 18.64            | 18.70          | 18.64            | 18.51            | 19.50            |
|                         |            | 12      | 6         | 18.37                   | 18.70            | 18.71          | 18.66            | 18.66            | 19.50            |
|                         |            | 12      | 13        | 18.29                   | 18.69            | 18.63          | 18.68            | 18.36            | 19.50            |



|           | 16QAM      | 25      | 0         | 18.31                   | 18.83        | 18.76      | 18.73        | 18.46        | 19.50         |
|-----------|------------|---------|-----------|-------------------------|--------------|------------|--------------|--------------|---------------|
|           |            | 1       | 0         | 18.44                   | 18.12        | 18.10      | 18.42        | 18.48        | 19.50         |
|           |            | 1       | 13        | 18.42                   | 18.37        | 18.37      | 18.40        | 18.65        | 19.50         |
|           |            | 1       | 24        | 18.09                   | 18.15        | 18.09      | 18.11        | 18.14        | 19.50         |
|           |            | 12      | 0         | 18.23                   | 18.55        | 18.52      | 18.56        | 18.36        | 19.50         |
|           |            | 12      | 6         | 18.43                   | 18.67        | 18.66      | 18.70        | 18.63        | 19.50         |
|           |            | 12      | 13        | 18.28                   | 18.80        | 18.74      | 18.75        | 18.38        | 19.50         |
|           |            | 25      | 0         | 18.28                   | 18.77        | 18.72      | 18.73        | 18.43        | 19.50         |
|           | 64QAM      | 1       | 0         | 18.17                   | 18.27        | 18.21      | 18.26        | 18.32        | 19.50         |
|           |            | 1       | 13        | 18.29                   | 18.45        | 18.41      | 18.44        | 18.54        | 19.50         |
|           |            | 1       | 24        | 18.18                   | 18.23        | 18.14      | 18.24        | 18.29        | 19.50         |
|           |            | 12      | 0         | 18.17                   | 18.62        | 18.59      | 18.59        | 18.32        | 19.50         |
|           |            | 12      | 6         | 18.46                   | 18.85        | 18.82      | 18.86        | 18.56        | 19.50         |
|           |            | 12      | 13        | 18.33                   | 18.58        | 18.52      | 18.53        | 18.30        | 19.50         |
|           |            | 25      | 0         | 18.34                   | 18.68        | 18.63      | 18.64        | 18.36        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |            |              |              | Tune-up Limit |
|           |            |         |           | 39700/2501              | 40160/2547   | 40620/2593 | 41080/2639   | 41540/2685   |               |
| 10MHz     | QPSK       | 1       | 0         | 18.79                   | 18.68        | 18.61      | 18.62        | 18.88        | 19.50         |
|           |            | 1       | 25        | 19.00                   | 18.83        | 18.79      | 18.77        | 19.18        | 19.50         |
|           |            | 1       | 49        | 18.66                   | 18.81        | 18.81      | 18.82        | 18.51        | 19.50         |
|           |            | 25      | 0         | 18.33                   | 18.69        | 18.74      | 18.67        | 18.56        | 19.50         |
|           |            | 25      | 13        | 18.40                   | 18.75        | 18.75      | 18.69        | 18.71        | 19.50         |
|           |            | 25      | 25        | 18.31                   | 18.73        | 18.68      | 18.70        | 18.40        | 19.50         |
|           |            | 50      | 0         | 18.35                   | 18.85        | 18.80      | 18.77        | 18.48        | 19.50         |
|           | 16QAM      | 1       | 0         | 18.46                   | 18.15        | 18.12      | 18.44        | 18.51        | 19.50         |
|           |            | 1       | 25        | 18.45                   | 18.41        | 18.40      | 18.43        | 18.69        | 19.50         |
|           |            | 1       | 49        | 18.12                   | 18.17        | 18.12      | 18.14        | 18.16        | 19.50         |
|           |            | 25      | 0         | 18.26                   | 18.60        | 18.56      | 18.59        | 18.41        | 19.50         |
|           |            | 25      | 13        | 18.45                   | 18.71        | 18.69      | 18.72        | 18.67        | 19.50         |
|           |            | 25      | 25        | 18.31                   | 18.85        | 18.78      | 18.78        | 18.43        | 19.50         |
|           |            | 50      | 0         | 18.31                   | 18.82        | 18.76      | 18.76        | 18.48        | 19.50         |
|           | 64QAM      | 1       | 0         | 18.19                   | 18.26        | 18.23      | 18.28        | 18.31        | 19.50         |
|           |            | 1       | 25        | 18.32                   | 18.45        | 18.44      | 18.47        | 18.54        | 19.50         |
|           |            | 1       | 49        | 18.17                   | 18.25        | 18.17      | 18.23        | 18.31        | 19.50         |
|           |            | 25      | 0         | 18.20                   | 18.67        | 18.59      | 18.62        | 18.37        | 19.50         |
|           |            | 25      | 13        | 18.48                   | 18.89        | 18.85      | 18.88        | 18.60        | 19.50         |
|           |            | 25      | 25        | 18.36                   | 18.63        | 18.56      | 18.56        | 18.35        | 19.50         |
|           |            | 50      | 0         | 18.37                   | 18.73        | 18.67      | 18.67        | 18.41        | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |              |            |              |              | Tune-up Limit |
|           |            |         |           | 39725/2503.5            | 40173/2548.3 | 40620/2593 | 41068/2637.8 | 41515/2682.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 18.78                   | 18.64        | 18.59      | 18.61        | 18.84        | 19.50         |



|           |            | 1       | 38        | 18.98                   | 18.82            | 18.76          | 18.75            | 19.17          | 19.50               |
|-----------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|----------------|---------------------|
|           |            | 1       | 74        | 18.63                   | 18.76            | 18.77          | 18.79            | 18.46          | 19.50               |
|           |            | 36      | 0         | 18.31                   | 18.65            | 18.71          | 18.65            | 18.52          | 19.50               |
|           |            | 36      | 18        | 18.37                   | 18.70            | 18.71          | 18.66            | 18.66          | 19.50               |
|           |            | 36      | 39        | 18.28                   | 18.70            | 18.64          | 18.67            | 18.37          | 19.50               |
|           |            | 75      | 0         | 18.33                   | 18.81            | 18.75          | 18.75            | 18.44          | 19.50               |
|           |            | 1       | 0         | 18.41                   | 18.13            | 18.10          | 18.39            | 18.49          | 19.50               |
|           | 16QAM      | 1       | 38        | 18.43                   | 18.38            | 18.38          | 18.41            | 18.66          | 19.50               |
|           |            | 1       | 74        | 18.09                   | 18.13            | 18.09          | 18.11            | 18.12          | 19.50               |
|           |            | 36      | 0         | 18.23                   | 18.58            | 18.53          | 18.56            | 18.39          | 19.50               |
|           |            | 36      | 18        | 18.42                   | 18.66            | 18.65          | 18.69            | 18.62          | 19.50               |
|           |            | 36      | 39        | 18.29                   | 18.81            | 18.75          | 18.76            | 18.39          | 19.50               |
|           |            | 75      | 0         | 18.28                   | 18.77            | 18.72          | 18.73            | 18.43          | 19.50               |
|           |            | 1       | 0         | 18.14                   | 18.24            | 18.21          | 18.23            | 18.29          | 19.50               |
|           | 64QAM      | 1       | 38        | 18.30                   | 18.42            | 18.42          | 18.45            | 18.51          | 19.50               |
|           |            | 1       | 74        | 18.18                   | 18.24            | 18.18          | 18.24            | 18.30          | 19.50               |
|           |            | 36      | 0         | 18.19                   | 18.69            | 18.60          | 18.61            | 18.39          | 19.50               |
|           |            | 36      | 18        | 18.46                   | 18.86            | 18.84          | 18.86            | 18.57          | 19.50               |
|           |            | 36      | 39        | 18.34                   | 18.59            | 18.53          | 18.54            | 18.31          | 19.50               |
|           |            | 75      | 0         | 18.34                   | 18.68            | 18.63          | 18.64            | 18.36          | 19.50               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                | Tune-up Limit (dBm) |
|           |            |         |           | 39750/<br>2506          | 40185/<br>2549.5 | 40620/<br>2593 | 41055/<br>2636.5 | 41490/<br>2680 |                     |
| 20MHz     | QPSK       | 1       | 0         | 18.75                   | 18.60            | 18.56          | 18.58            | 18.80          | 19.50               |
|           |            | 1       | 50        | <b>18.97</b>            | <b>18.78</b>     | <b>18.74</b>   | 18.74            | <b>19.13</b>   | 19.50               |
|           |            | 1       | 99        | 18.61                   | 18.75            | <b>18.74</b>   | <b>18.77</b>     | 18.45          | 19.50               |
|           |            | 50      | 0         | 18.28                   | 18.60            | 18.67          | 18.62            | 18.47          | 19.50               |
|           |            | 50      | 25        | <b>18.35</b>            | <b>18.66</b>     | <b>18.68</b>   | <b>18.64</b>     | <b>18.62</b>   | 19.50               |
|           |            | 50      | 50        | 18.25                   | 18.65            | 18.60          | <b>18.64</b>     | 18.32          | 19.50               |
|           |            | 100     | 0         | 18.30                   | <b>18.76</b>     | 18.71          | 18.72            | <b>18.39</b>   | 19.50               |
|           | 16QAM      | 1       | 0         | 18.02                   | 18.09            | 18.05          | 18.39            | 18.45          | 19.50               |
|           |            | 1       | 50        | 18.39                   | 18.36            | 18.34          | 18.37            | 18.64          | 19.50               |
|           |            | 1       | 99        | 18.07                   | 18.10            | 18.07          | 18.09            | 18.09          | 19.50               |
|           |            | 50      | 0         | 18.20                   | 18.54            | 18.50          | 18.53            | 18.35          | 19.50               |
|           |            | 50      | 25        | 18.39                   | 18.64            | 18.62          | 18.66            | 18.60          | 19.50               |
|           |            | 50      | 50        | 18.26                   | 18.76            | 18.71          | 18.73            | 18.34          | 19.50               |
|           |            | 100     | 0         | 18.26                   | 18.73            | 18.69          | 18.71            | 18.39          | 19.50               |
|           | 64QAM      | 1       | 0         | 18.12                   | 18.20            | 18.16          | 18.21            | 18.25          | 19.50               |
|           |            | 1       | 50        | 18.26                   | 18.40            | 18.38          | 18.41            | 18.49          | 19.50               |
|           |            | 1       | 99        | 18.12                   | 18.18            | 18.12          | 18.18            | 18.24          | 19.50               |
|           |            | 50      | 0         | 18.14                   | 18.61            | 18.53          | 18.56            | 18.31          | 19.50               |
|           |            | 50      | 25        | 18.42                   | 18.82            | 18.78          | 18.82            | 18.53          | 19.50               |
|           |            | 50      | 50        | 18.31                   | 18.54            | 18.49          | 18.51            | 18.26          | 19.50               |



|  |  |     |   |       |       |       |       |       |       |
|--|--|-----|---|-------|-------|-------|-------|-------|-------|
|  |  | 100 | 0 | 18.32 | 18.64 | 18.60 | 18.62 | 18.32 | 19.50 |
|--|--|-----|---|-------|-------|-------|-------|-------|-------|



| LTE TDD Band 41<br>Full power&DSI2 |            |         |           | Conducted Power(dBm)    |                  |                |                  |                  | Tune-up<br>Limit |
|------------------------------------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|------------------|------------------|
| Bandwidth                          | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  |                  |
|                                    |            |         |           | 39675/<br>2498.5        | 40148/<br>2545.8 | 40620/<br>2593 | 41093/<br>2640.3 | 41565/<br>2687.5 |                  |
| 5MHz                               | QPSK       | 1       | 0         | 22.69                   | 22.92            | 22.82          | 22.73            | 22.98            | 24.00            |
|                                    |            | 1       | 13        | 23.06                   | 23.16            | 23.15          | 23.10            | 23.21            | 24.00            |
|                                    |            | 1       | 24        | 22.96                   | 23.07            | 23.03          | 22.97            | 22.76            | 24.00            |
|                                    |            | 12      | 0         | 22.11                   | 22.19            | 22.13          | 22.16            | 22.21            | 23.00            |
|                                    |            | 12      | 6         | 22.21                   | 22.32            | 22.27          | 22.25            | 22.30            | 23.00            |
|                                    |            | 12      | 13        | 22.12                   | 22.04            | 21.97          | 22.17            | 22.11            | 23.00            |
|                                    |            | 25      | 0         | 22.13                   | 22.14            | 22.11          | 22.18            | 22.22            | 23.00            |
|                                    | 16QAM      | 1       | 0         | 22.20                   | 21.69            | 22.24          | 22.22            | 22.37            | 23.00            |
|                                    |            | 1       | 13        | 22.18                   | 21.65            | 21.61          | 22.20            | 22.43            | 23.00            |
|                                    |            | 1       | 24        | 21.85                   | 21.79            | 21.71          | 21.88            | 21.77            | 23.00            |
|                                    |            | 12      | 0         | 20.68                   | 20.98            | 20.94          | 20.72            | 20.93            | 22.00            |
|                                    |            | 12      | 6         | 20.95                   | 21.04            | 20.98          | 20.97            | 21.36            | 22.00            |
|                                    |            | 12      | 13        | 20.98                   | 20.97            | 20.91          | 21.03            | 21.10            | 22.00            |
|                                    |            | 25      | 0         | 21.03                   | 20.97            | 20.92          | 21.07            | 21.14            | 22.00            |
|                                    | 64QAM      | 1       | 0         | 20.80                   | 21.24            | 21.14          | 20.84            | 21.15            | 22.00            |
|                                    |            | 1       | 13        | 21.03                   | 21.35            | 21.27          | 21.05            | 21.31            | 22.00            |
|                                    |            | 1       | 24        | 20.74                   | 21.09            | 21.01          | 20.80            | 20.80            | 22.00            |
|                                    |            | 12      | 0         | 19.95                   | 20.27            | 20.27          | 20.03            | 20.15            | 21.00            |
|                                    |            | 12      | 6         | 20.17                   | 20.49            | 20.43          | 20.21            | 20.38            | 21.00            |
|                                    |            | 12      | 13        | 20.07                   | 20.26            | 20.20          | 20.12            | 20.23            | 21.00            |
|                                    |            | 25      | 0         | 20.12                   | 20.45            | 20.40          | 20.16            | 20.32            | 21.00            |
| Bandwidth                          | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  | Tune-up<br>Limit |
|                                    |            |         |           | 39700/2501              | 40160/2547       | 40620/<br>2593 | 41080/<br>2639   | 41540/<br>2685   |                  |
| 10MHz                              | QPSK       | 1       | 0         | 22.71                   | 22.93            | 22.85          | 22.75            | 22.99            | 24.00            |
|                                    |            | 1       | 25        | 23.09                   | 23.21            | 23.19          | 23.13            | 23.26            | 24.00            |
|                                    |            | 1       | 49        | 22.98                   | 23.11            | 23.06          | 22.99            | 22.80            | 24.00            |
|                                    |            | 25      | 0         | 22.14                   | 22.24            | 22.17          | 22.19            | 22.26            | 23.00            |
|                                    |            | 25      | 13        | 22.24                   | 22.37            | 22.31          | 22.28            | 22.35            | 23.00            |
|                                    |            | 25      | 25        | 22.14                   | 22.08            | 22.02          | 22.19            | 22.15            | 23.00            |
|                                    |            | 50      | 0         | 22.17                   | 22.16            | 22.15          | 22.22            | 22.24            | 23.00            |
|                                    | 16QAM      | 1       | 0         | 22.22                   | 21.72            | 22.26          | 22.24            | 22.40            | 23.00            |
|                                    |            | 1       | 25        | 22.21                   | 21.69            | 21.64          | 22.23            | 22.47            | 23.00            |
|                                    |            | 1       | 49        | 21.88                   | 21.81            | 21.74          | 21.91            | 21.79            | 23.00            |
|                                    |            | 25      | 0         | 20.71                   | 21.03            | 20.98          | 20.75            | 20.98            | 22.00            |
|                                    |            | 25      | 13        | 20.97                   | 21.08            | 21.01          | 20.99            | 21.40            | 22.00            |
|                                    |            | 25      | 25        | 21.01                   | 21.02            | 20.95          | 21.06            | 21.15            | 22.00            |
|                                    |            | 50      | 0         | 21.06                   | 21.02            | 20.96          | 21.10            | 21.19            | 22.00            |



|           | 64QAM      | 1       | 0         | 20.82                   | 21.23            | 21.16          | 20.86            | 21.14            | 22.00               |
|-----------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|------------------|---------------------|
|           |            | 1       | 25        | 21.06                   | 21.35            | 21.30          | 21.08            | 21.31            | 22.00               |
|           |            | 1       | 49        | 20.73                   | 21.11            | 21.04          | 20.79            | 20.82            | 22.00               |
|           |            | 25      | 0         | 19.98                   | 20.32            | 20.27          | 20.06            | 20.20            | 21.00               |
|           |            | 25      | 13        | 20.19                   | 20.53            | 20.46          | 20.23            | 20.42            | 21.00               |
|           |            | 25      | 25        | 20.10                   | 20.31            | 20.24          | 20.15            | 20.28            | 21.00               |
|           |            | 50      | 0         | 20.15                   | 20.50            | 20.44          | 20.19            | 20.37            | 21.00               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  | Tune-up Limit       |
|           |            |         |           | 39725/<br>2503.5        | 40173/<br>2548.3 | 40620<br>/2593 | 41068/<br>2637.8 | 41515/<br>2682.5 |                     |
| 15MHz     | QPSK       | 1       | 0         | 22.70                   | 22.89            | 22.83          | 22.74            | 22.95            | 24.00               |
|           |            | 1       | 38        | 23.07                   | 23.20            | 23.16          | 23.11            | 23.25            | 24.00               |
|           |            | 1       | 74        | 22.95                   | 23.06            | 23.02          | 22.96            | 22.75            | 24.00               |
|           |            | 36      | 0         | 22.12                   | 22.20            | 22.14          | 22.17            | 22.22            | 23.00               |
|           |            | 36      | 18        | 22.21                   | 22.32            | 22.27          | 22.25            | 22.30            | 23.00               |
|           |            | 36      | 39        | 22.11                   | 22.05            | 21.98          | 22.16            | 22.12            | 23.00               |
|           |            | 75      | 0         | 22.15                   | 22.12            | 22.10          | 22.20            | 22.20            | 23.00               |
|           | 16QAM      | 1       | 0         | 22.17                   | 21.70            | 22.24          | 22.19            | 22.38            | 23.00               |
|           |            | 1       | 38        | 22.19                   | 21.66            | 21.62          | 22.21            | 22.44            | 23.00               |
|           |            | 1       | 74        | 21.85                   | 21.77            | 21.71          | 21.88            | 21.75            | 23.00               |
|           |            | 36      | 0         | 20.68                   | 21.01            | 20.95          | 20.72            | 20.96            | 22.00               |
|           |            | 36      | 18        | 20.94                   | 21.03            | 20.97          | 20.96            | 21.35            | 22.00               |
|           |            | 36      | 39        | 20.99                   | 20.98            | 20.92          | 21.04            | 21.11            | 22.00               |
|           |            | 75      | 0         | 21.03                   | 20.97            | 20.92          | 21.07            | 21.14            | 22.00               |
|           | 64QAM      | 1       | 0         | 20.77                   | 21.21            | 21.14          | 20.81            | 21.12            | 22.00               |
|           |            | 1       | 38        | 21.04                   | 21.32            | 21.28          | 21.06            | 21.28            | 22.00               |
|           |            | 1       | 74        | 20.74                   | 21.10            | 21.05          | 20.80            | 20.81            | 22.00               |
|           |            | 36      | 0         | 19.97                   | 20.34            | 20.28          | 20.05            | 20.22            | 21.00               |
|           |            | 36      | 18        | 20.17                   | 20.50            | 20.45          | 20.21            | 20.39            | 21.00               |
|           |            | 36      | 39        | 20.08                   | 20.27            | 20.21          | 20.13            | 20.24            | 21.00               |
|           |            | 75      | 0         | 20.12                   | 20.45            | 20.40          | 20.16            | 20.32            | 21.00               |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  | Tune-up Limit (dBm) |
|           |            |         |           | 39750/<br>2506          | 40185/<br>2549.5 | 40620/<br>2593 | 41055/<br>2636.5 | 41490/<br>2680   |                     |
| 20MHz     | QPSK       | 1       | 0         | 22.67                   | 22.85            | 22.80          | 22.71            | 22.91            | 24.00               |
|           |            | 1       | 50        | <b>23.06</b>            | <b>23.16</b>     | <b>23.14</b>   | <b>23.10</b>     | <b>23.21</b>     | 24.00               |
|           |            | 1       | 99        | 22.93                   | 23.05            | 22.99          | 22.94            | 22.74            | 24.00               |
|           |            | 50      | 0         | 22.09                   | 22.15            | 22.10          | 22.14            | 22.17            | 23.00               |
|           |            | 50      | 25        | <b>22.19</b>            | <b>22.28</b>     | <b>22.24</b>   | <b>22.23</b>     | <b>22.26</b>     | 23.00               |
|           |            | 50      | 50        | 22.08                   | 22.00            | 21.94          | 22.13            | 22.07            | 23.00               |
|           |            | 100     | 0         | 22.12                   | 22.07            | 22.06          | <b>22.17</b>     | <b>22.15</b>     | 23.00               |
|           | 16QAM      | 1       | 0         | 22.02                   | 21.66            | 22.19          | 22.06            | 22.34            | 23.00               |
|           |            | 1       | 50        | 22.15                   | 21.64            | 21.58          | 22.17            | 22.42            | 23.00               |



|  |       |     |    |       |       |       |       |       |       |
|--|-------|-----|----|-------|-------|-------|-------|-------|-------|
|  |       | 1   | 99 | 21.83 | 21.74 | 21.69 | 21.86 | 21.72 | 23.00 |
|  |       | 50  | 0  | 20.65 | 20.97 | 20.92 | 20.69 | 20.92 | 22.00 |
|  |       | 50  | 25 | 20.91 | 21.01 | 20.94 | 20.93 | 21.33 | 22.00 |
|  |       | 50  | 50 | 20.96 | 20.93 | 20.88 | 21.01 | 21.06 | 22.00 |
|  |       | 100 | 0  | 21.01 | 20.93 | 20.89 | 21.05 | 21.10 | 22.00 |
|  | 64QAM | 1   | 0  | 20.75 | 21.17 | 21.09 | 20.79 | 21.08 | 22.00 |
|  |       | 1   | 50 | 21.00 | 21.30 | 21.24 | 21.02 | 21.26 | 22.00 |
|  |       | 1   | 99 | 20.68 | 21.04 | 20.99 | 20.74 | 20.75 | 22.00 |
|  |       | 50  | 0  | 19.92 | 20.26 | 20.21 | 20.00 | 20.14 | 21.00 |
|  |       | 50  | 25 | 20.13 | 20.46 | 20.39 | 20.17 | 20.35 | 21.00 |
|  |       | 50  | 50 | 20.05 | 20.22 | 20.17 | 20.10 | 20.19 | 21.00 |
|  |       | 100 | 0  | 20.10 | 20.41 | 20.37 | 20.14 | 20.28 | 21.00 |

| LTE TDD Band 41<br>DSI4 |            |         |           | Conducted Power(dBm)    |                  |                |                  |                  | Tune-up<br>Limit |
|-------------------------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|------------------|------------------|
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  |                  |
|                         |            |         |           | 39675/<br>2498.5        | 40148/<br>2545.8 | 40620/<br>2593 | 41093/<br>2640.3 | 41565/<br>2687.5 |                  |
| 5MHz                    | QPSK       | 1       | 0         | 22.80                   | 22.92            | 22.38          | 22.45            | 22.78            | 23.50            |
|                         |            | 1       | 13        | 22.91                   | 23.16            | 22.56          | 22.55            | 22.95            | 23.50            |
|                         |            | 1       | 24        | 22.59                   | 23.07            | 22.50          | 22.51            | 22.56            | 23.50            |
|                         |            | 12      | 0         | 21.70                   | 22.19            | 22.13          | 22.16            | 21.97            | 23.00            |
|                         |            | 12      | 6         | 21.79                   | 22.32            | 22.12          | 22.15            | 22.08            | 23.00            |
|                         |            | 12      | 13        | 21.69                   | 22.04            | 22.03          | 22.08            | 21.81            | 23.00            |
|                         |            | 25      | 0         | 21.73                   | 22.14            | 22.14          | 22.17            | 21.87            | 23.00            |
|                         | 16QAM      | 1       | 0         | 22.22                   | 21.69            | 21.86          | 22.05            | 22.28            | 23.00            |
|                         |            | 1       | 13        | 22.20                   | 21.65            | 22.02          | 22.03            | 22.41            | 23.00            |
|                         |            | 1       | 24        | 21.75                   | 21.79            | 21.84          | 21.89            | 21.65            | 23.00            |
|                         |            | 12      | 0         | 20.55                   | 20.98            | 21.09          | 21.11            | 20.84            | 22.00            |
|                         |            | 12      | 6         | 20.84                   | 21.04            | 21.29          | 21.32            | 21.38            | 22.00            |
|                         |            | 12      | 13        | 20.76                   | 20.97            | 21.27          | 21.30            | 21.03            | 22.00            |
|                         |            | 25      | 0         | 20.83                   | 20.97            | 21.36          | 21.39            | 21.01            | 22.00            |
|                         | 64QAM      | 1       | 0         | 20.68                   | 21.24            | 20.99          | 21.06            | 21.05            | 22.00            |
|                         |            | 1       | 13        | 20.97                   | 21.35            | 21.43          | 21.48            | 21.24            | 22.00            |
|                         |            | 1       | 24        | 20.78                   | 21.09            | 21.03          | 21.12            | 20.69            | 22.00            |
|                         |            | 12      | 0         | 19.86                   | 20.27            | 20.12          | 20.10            | 20.00            | 21.00            |
|                         |            | 12      | 6         | 20.09                   | 20.49            | 20.26          | 20.29            | 20.27            | 21.00            |
|                         |            | 12      | 13        | 19.89                   | 20.26            | 20.09          | 20.12            | 20.10            | 21.00            |
|                         |            | 25      | 0         | 19.92                   | 20.45            | 20.29          | 20.32            | 20.03            | 21.00            |
| Bandwidth               | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  | Tune-up<br>Limit |
|                         |            |         |           | 39700/2501              | 40160/2547       | 40620/<br>2593 | 41080/<br>2639   | 41540/<br>2685   |                  |
| 10MHz                   | QPSK       | 1       | 0         | 22.82                   | 22.93            | 22.41          | 22.47            | 22.79            | 23.50            |



|           |            | 1       | 25        | 22.94                   | 23.21            | 22.60          | 22.58            | 23.00            | 23.50         |
|-----------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|------------------|---------------|
|           |            | 1       | 49        | 22.61                   | 23.11            | 22.53          | 22.53            | 22.60            | 23.50         |
|           |            | 25      | 0         | 21.73                   | 22.24            | 22.17          | 22.19            | 22.02            | 23.00         |
|           |            | 25      | 13        | 21.82                   | 22.37            | 22.16          | 22.18            | 22.13            | 23.00         |
|           |            | 25      | 25        | 21.71                   | 22.08            | 22.08          | 22.10            | 21.85            | 23.00         |
|           |            | 50      | 0         | 21.77                   | 22.16            | 22.18          | 22.21            | 21.89            | 23.00         |
|           |            | 1       | 0         | 22.24                   | 21.72            | 21.88          | 22.07            | 22.31            | 23.00         |
|           | 16QAM      | 1       | 25        | 22.23                   | 21.69            | 22.05          | 22.06            | 22.45            | 23.00         |
|           |            | 1       | 49        | 21.78                   | 21.81            | 21.87          | 21.92            | 21.67            | 23.00         |
|           |            | 25      | 0         | 20.58                   | 21.03            | 21.13          | 21.14            | 20.89            | 22.00         |
|           |            | 25      | 13        | 20.86                   | 21.08            | 21.32          | 21.34            | 21.42            | 22.00         |
|           |            | 25      | 25        | 20.79                   | 21.02            | 21.31          | 21.33            | 21.08            | 22.00         |
|           |            | 50      | 0         | 20.86                   | 21.02            | 21.40          | 21.42            | 21.06            | 22.00         |
|           |            | 1       | 0         | 20.70                   | 21.23            | 21.01          | 21.08            | 21.04            | 22.00         |
|           | 64QAM      | 1       | 25        | 21.00                   | 21.35            | 21.46          | 21.51            | 21.24            | 22.00         |
|           |            | 1       | 49        | 20.77                   | 21.11            | 21.06          | 21.11            | 20.71            | 22.00         |
|           |            | 25      | 0         | 19.89                   | 20.32            | 20.12          | 20.13            | 20.05            | 21.00         |
|           |            | 25      | 13        | 20.11                   | 20.53            | 20.29          | 20.31            | 20.31            | 21.00         |
|           |            | 25      | 25        | 19.92                   | 20.31            | 20.13          | 20.15            | 20.15            | 21.00         |
|           |            | 50      | 0         | 19.95                   | 20.50            | 20.33          | 20.35            | 20.08            | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                  | Tune-up Limit |
|           |            |         |           | 39725/<br>2503.5        | 40173/<br>2548.3 | 40620<br>/2593 | 41068/<br>2637.8 | 41515/<br>2682.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 22.81                   | 22.89            | 22.39          | 22.46            | 22.75            | 23.50         |
|           |            | 1       | 38        | 22.92                   | 23.20            | 22.57          | 22.56            | 22.99            | 23.50         |
|           |            | 1       | 74        | 22.58                   | 23.06            | 22.49          | 22.50            | 22.55            | 23.50         |
|           |            | 36      | 0         | 21.71                   | 22.20            | 22.14          | 22.17            | 21.98            | 23.00         |
|           |            | 36      | 18        | 21.79                   | 22.32            | 22.12          | 22.15            | 22.08            | 23.00         |
|           |            | 36      | 39        | 21.68                   | 22.05            | 22.04          | 22.07            | 21.82            | 23.00         |
|           |            | 75      | 0         | 21.75                   | 22.12            | 22.13          | 22.19            | 21.85            | 23.00         |
|           | 16QAM      | 1       | 0         | 22.19                   | 21.70            | 21.86          | 22.02            | 22.29            | 23.00         |
|           |            | 1       | 38        | 22.21                   | 21.66            | 22.03          | 22.04            | 22.42            | 23.00         |
|           |            | 1       | 74        | 21.75                   | 21.77            | 21.84          | 21.89            | 21.63            | 23.00         |
|           |            | 36      | 0         | 20.55                   | 21.01            | 21.10          | 21.11            | 20.87            | 22.00         |
|           |            | 36      | 18        | 20.83                   | 21.03            | 21.28          | 21.31            | 21.37            | 22.00         |
|           |            | 36      | 39        | 20.77                   | 20.98            | 21.28          | 21.31            | 21.04            | 22.00         |
|           |            | 75      | 0         | 20.83                   | 20.97            | 21.36          | 21.39            | 21.01            | 22.00         |
|           | 64QAM      | 1       | 0         | 20.65                   | 21.21            | 20.99          | 21.03            | 21.02            | 22.00         |
|           |            | 1       | 38        | 20.98                   | 21.32            | 21.44          | 21.49            | 21.21            | 22.00         |
|           |            | 1       | 74        | 20.78                   | 21.10            | 21.07          | 21.12            | 20.70            | 22.00         |
|           |            | 36      | 0         | 19.88                   | 20.34            | 20.13          | 20.12            | 20.07            | 21.00         |
|           |            | 36      | 18        | 20.09                   | 20.50            | 20.28          | 20.29            | 20.28            | 21.00         |
|           |            | 36      | 39        | 19.90                   | 20.27            | 20.10          | 20.13            | 20.11            | 21.00         |



|           |            | 75      | 0         | 19.92                   | 20.45            | 20.29          | 20.32            | 20.03          | 21.00               |
|-----------|------------|---------|-----------|-------------------------|------------------|----------------|------------------|----------------|---------------------|
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                  |                |                  |                | Tune-up Limit (dBm) |
|           |            |         |           | 39750/<br>2506          | 40185/<br>2549.5 | 40620/<br>2593 | 41055/<br>2636.5 | 41490/<br>2680 |                     |
| 20MHz     | QPSK       | 1       | 0         | 22.78                   | 22.85            | 22.36          | 22.43            | 22.71          | 23.50               |
|           |            | 1       | 50        | <b>22.91</b>            | <b>23.16</b>     | <b>22.55</b>   | <b>22.55</b>     | <b>22.95</b>   | 23.50               |
|           |            | 1       | 99        | 22.56                   | 23.05            | 22.46          | 22.48            | 22.54          | 23.50               |
|           |            | 50      | 0         | 21.68                   | 22.15            | <b>22.10</b>   | <b>22.14</b>     | 21.93          | 23.00               |
|           |            | 50      | 25        | <b>21.77</b>            | <b>22.28</b>     | 22.09          | 22.13            | <b>22.04</b>   | 23.00               |
|           |            | 50      | 50        | 21.65                   | 22.00            | 22.00          | 22.04            | 21.77          | 23.00               |
|           |            | 100     | 0         | 21.72                   | 22.07            | 22.09          | <b>22.16</b>     | <b>21.80</b>   | 23.00               |
|           | 16QAM      | 1       | 0         | 22.00                   | 21.66            | 21.81          | 21.84            | 22.25          | 23.00               |
|           |            | 1       | 50        | 22.17                   | 21.64            | 21.99          | 22.00            | 22.40          | 23.00               |
|           |            | 1       | 99        | 21.73                   | 21.74            | 21.82          | 21.87            | 21.60          | 23.00               |
|           |            | 50      | 0         | 20.52                   | 20.97            | 21.07          | 21.08            | 20.83          | 22.00               |
|           |            | 50      | 25        | 20.80                   | 21.01            | 21.25          | 21.28            | 21.35          | 22.00               |
|           |            | 50      | 50        | 20.74                   | 20.93            | 21.24          | 21.28            | 20.99          | 22.00               |
|           |            | 100     | 0         | 20.81                   | 20.93            | 21.33          | 21.37            | 20.97          | 22.00               |
|           | 64QAM      | 1       | 0         | 20.63                   | 21.17            | 20.94          | 21.01            | 20.98          | 22.00               |
|           |            | 1       | 50        | 20.94                   | 21.30            | 21.40          | 21.45            | 21.19          | 22.00               |
|           |            | 1       | 99        | 20.72                   | 21.04            | 21.01          | 21.06            | 20.64          | 22.00               |
|           |            | 50      | 0         | 19.83                   | 20.26            | 20.06          | 20.07            | 19.99          | 21.00               |
|           |            | 50      | 25        | 20.05                   | 20.46            | 20.22          | 20.25            | 20.24          | 21.00               |
|           |            | 50      | 50        | 19.87                   | 20.22            | 20.06          | 20.10            | 20.06          | 21.00               |
|           |            | 100     | 0         | 19.90                   | 20.41            | 20.26          | 20.30            | 19.99          | 21.00               |

| LTE FDD Band 66<br>DSI 1 |            |         |           | Conducted Power(dBm)    |                 |                   | Tune-up<br>Limit |
|--------------------------|------------|---------|-----------|-------------------------|-----------------|-------------------|------------------|
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   |                  |
|                          |            |         |           | 131979/<br>1710.7       | 132322/<br>1745 | 132665/<br>1779.3 |                  |
| 1.4MHz                   | QPSK       | 1       | 0         | 15.93                   | 16.05           | 16.16             | 17.00            |
|                          |            | 1       | 2         | 16.13                   | 16.50           | 16.05             | 17.00            |
|                          |            | 1       | 5         | 15.92                   | 16.01           | 15.79             | 17.00            |
|                          |            | 3       | 0         | 15.86                   | 15.93           | 16.02             | 17.00            |
|                          |            | 3       | 2         | 15.85                   | 15.95           | 15.80             | 17.00            |
|                          |            | 3       | 3         | 15.99                   | 16.00           | 15.77             | 17.00            |
|                          |            | 6       | 0         | 15.90                   | 15.99           | 15.92             | 17.00            |
|                          | 16QAM      | 1       | 0         | 16.17                   | 16.10           | 16.15             | 17.00            |
|                          |            | 1       | 2         | 15.88                   | 15.80           | 15.85             | 17.00            |
|                          |            | 1       | 5         | 16.13                   | 16.08           | 16.10             | 17.00            |
|                          |            | 3       | 0         | 16.06                   | 16.01           | 16.05             | 17.00            |
|                          |            | 3       | 2         | 16.19                   | 16.11           | 16.15             | 17.00            |



|           |            | 3       | 3         | 16.16                   | 16.11           | 16.12             | 17.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-------------------|---------------|
|           |            | 6       | 0         | 16.06                   | 16.02           | 16.06             | 17.00         |
|           | 64QAM      | 1       | 0         | 15.73                   | 15.66           | 15.71             | 17.00         |
|           |            | 1       | 2         | 16.69                   | 16.61           | 16.66             | 17.00         |
|           |            | 1       | 5         | 15.89                   | 15.84           | 15.90             | 17.00         |
|           |            | 3       | 0         | 16.12                   | 16.07           | 16.15             | 17.00         |
|           |            | 3       | 2         | 15.99                   | 15.91           | 15.98             | 17.00         |
|           |            | 3       | 3         | 16.22                   | 16.17           | 16.18             | 17.00         |
|           |            | 6       | 0         | 16.12                   | 16.05           | 16.09             | 17.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 131987<br>1711.5        | 132322/<br>1745 | 132657/<br>1778.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 15.93                   | 16.06           | 16.17             | 17.00         |
|           |            | 1       | 7         | 16.12                   | 16.52           | 16.08             | 17.00         |
|           |            | 1       | 14        | 15.93                   | 16.03           | 15.81             | 17.00         |
|           |            | 8       | 0         | 15.88                   | 15.99           | 16.07             | 17.00         |
|           |            | 8       | 4         | 15.88                   | 16.02           | 15.84             | 17.00         |
|           |            | 8       | 7         | 16.01                   | 16.03           | 15.81             | 17.00         |
|           |            | 15      | 0         | 15.90                   | 16.03           | 15.94             | 17.00         |
|           | 16QAM      | 1       | 0         | 16.16                   | 16.06           | 16.15             | 17.00         |
|           |            | 1       | 7         | 15.90                   | 15.83           | 15.84             | 17.00         |
|           |            | 1       | 14        | 16.13                   | 16.08           | 16.11             | 17.00         |
|           |            | 8       | 0         | 16.07                   | 16.05           | 16.06             | 17.00         |
|           |            | 8       | 4         | 16.20                   | 16.12           | 16.18             | 17.00         |
|           |            | 8       | 7         | 16.19                   | 16.16           | 16.14             | 17.00         |
|           |            | 15      | 0         | 16.06                   | 16.04           | 16.04             | 17.00         |
|           | 64QAM      | 1       | 0         | 15.73                   | 15.63           | 15.72             | 17.00         |
|           |            | 1       | 7         | 16.71                   | 16.63           | 16.67             | 17.00         |
|           |            | 1       | 14        | 15.88                   | 15.83           | 15.90             | 17.00         |
|           |            | 8       | 0         | 16.17                   | 16.11           | 16.14             | 17.00         |
|           |            | 8       | 4         | 15.99                   | 15.94           | 15.99             | 17.00         |
|           |            | 8       | 7         | 16.24                   | 16.19           | 16.24             | 17.00         |
|           |            | 15      | 0         | 16.14                   | 16.10           | 16.10             | 17.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 131997/<br>1712.5       | 132322/<br>1745 | 132647/<br>1777.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 15.93                   | 16.04           | 16.16             | 17.00         |
|           |            | 1       | 13        | 16.12                   | 16.52           | 16.07             | 17.00         |
|           |            | 1       | 24        | 15.91                   | 16.00           | 15.78             | 17.00         |
|           |            | 12      | 0         | 15.88                   | 15.96           | 16.06             | 17.00         |
|           |            | 12      | 6         | 15.86                   | 15.99           | 15.81             | 17.00         |
|           |            | 12      | 13        | 16.00                   | 16.04           | 15.78             | 17.00         |
|           |            | 25      | 0         | 15.93                   | 16.00           | 15.92             | 17.00         |



|           | 16QAM      | 1       | 0         | 16.14                   | 16.09           | 16.15             | 17.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-------------------|---------------|
|           |            | 1       | 13        | 15.89                   | 15.81           | 15.87             | 17.00         |
|           |            | 1       | 24        | 16.12                   | 16.08           | 16.09             | 17.00         |
|           |            | 12      | 0         | 16.09                   | 16.04           | 16.06             | 17.00         |
|           |            | 12      | 6         | 16.20                   | 16.12           | 16.16             | 17.00         |
|           |            | 12      | 13        | 16.18                   | 16.13           | 16.16             | 17.00         |
|           |            | 25      | 0         | 16.07                   | 16.02           | 16.04             | 17.00         |
|           | 64QAM      | 1       | 0         | 15.70                   | 15.65           | 15.71             | 17.00         |
|           |            | 1       | 13        | 16.70                   | 16.62           | 16.68             | 17.00         |
|           |            | 1       | 24        | 15.88                   | 15.84           | 15.89             | 17.00         |
|           |            | 12      | 0         | 16.15                   | 16.10           | 16.16             | 17.00         |
|           |            | 12      | 6         | 16.00                   | 15.92           | 15.99             | 17.00         |
|           |            | 12      | 13        | 16.24                   | 16.19           | 16.22             | 17.00         |
|           |            | 25      | 0         | 16.12                   | 16.07           | 16.09             | 17.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132022/<br>1715         | 132322/<br>1745 | 132622/<br>1775   |               |
| 10MHz     | QPSK       | 1       | 0         | 15.92                   | 16.07           | 16.15             | 17.00         |
|           |            | 1       | 25        | 16.11                   | 16.48           | 16.06             | 17.00         |
|           |            | 1       | 49        | 15.92                   | 16.01           | 15.79             | 17.00         |
|           |            | 25      | 0         | 15.87                   | 15.95           | 16.05             | 17.00         |
|           |            | 25      | 13        | 15.86                   | 15.99           | 15.81             | 17.00         |
|           |            | 25      | 25        | 16.01                   | 16.03           | 15.77             | 17.00         |
|           |            | 50      | 0         | 15.90                   | 16.02           | 15.93             | 17.00         |
|           | 16QAM      | 1       | 0         | 16.17                   | 16.08           | 16.15             | 17.00         |
|           |            | 1       | 25        | 15.88                   | 15.80           | 15.86             | 17.00         |
|           |            | 1       | 49        | 16.12                   | 16.10           | 16.09             | 17.00         |
|           |            | 25      | 0         | 16.09                   | 16.01           | 16.05             | 17.00         |
|           |            | 25      | 13        | 16.21                   | 16.13           | 16.17             | 17.00         |
|           |            | 25      | 25        | 16.17                   | 16.12           | 16.15             | 17.00         |
|           |            | 50      | 0         | 16.07                   | 16.02           | 16.04             | 17.00         |
|           | 64QAM      | 1       | 0         | 15.73                   | 15.64           | 15.71             | 17.00         |
|           |            | 1       | 25        | 16.69                   | 16.61           | 16.67             | 17.00         |
|           |            | 1       | 49        | 15.88                   | 15.86           | 15.89             | 17.00         |
|           |            | 25      | 0         | 16.15                   | 16.07           | 16.15             | 17.00         |
|           |            | 25      | 13        | 16.01                   | 15.93           | 16.00             | 17.00         |
|           |            | 25      | 25        | 16.23                   | 16.18           | 16.21             | 17.00         |
|           |            | 50      | 0         | 16.12                   | 16.07           | 16.09             | 17.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132047/<br>1717.5       | 132322/<br>1745 | 132597/<br>1772.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 15.95                   | 16.09           | 16.19             | 17.00         |
|           |            | 1       | 38        | 16.13                   | 16.52           | 16.09             | 17.00         |



|           |            | 1       | 74        | 15.95                   | 16.06           | 15.83           | 17.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-----------------|---------------|
|           |            | 36      | 0         | 15.90                   | 16.00           | 16.09           | 17.00         |
|           |            | 36      | 18        | 15.88                   | 16.03           | 15.86           | 17.00         |
|           |            | 36      | 39        | 16.03                   | 16.05           | 15.81           | 17.00         |
|           |            | 75      | 0         | 15.92                   | 16.03           | 15.95           | 17.00         |
|           | 16QAM      | 1       | 0         | 16.20                   | 16.12           | 16.18           | 17.00         |
|           |            | 1       | 38        | 15.91                   | 15.82           | 15.89           | 17.00         |
|           |            | 1       | 74        | 16.15                   | 16.12           | 16.13           | 17.00         |
|           |            | 36      | 0         | 16.11                   | 16.05           | 16.08           | 17.00         |
|           |            | 36      | 18        | 16.24                   | 16.18           | 16.21           | 17.00         |
|           |            | 36      | 39        | 16.20                   | 16.17           | 16.19           | 17.00         |
|           |            | 75      | 0         | 16.09                   | 16.06           | 16.09           | 17.00         |
|           | 64QAM      | 1       | 0         | 15.76                   | 15.68           | 15.74           | 17.00         |
|           |            | 1       | 38        | 16.72                   | 16.63           | 16.70           | 17.00         |
|           |            | 1       | 74        | 15.91                   | 15.88           | 15.93           | 17.00         |
|           |            | 36      | 0         | 16.17                   | 16.11           | 16.18           | 17.00         |
|           |            | 36      | 18        | 16.04                   | 15.98           | 16.04           | 17.00         |
|           |            | 36      | 39        | 16.26                   | 16.23           | 16.25           | 17.00         |
|           |            | 75      | 0         | 16.14                   | 16.11           | 16.14           | 17.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                 | Tune-up Limit |
|           |            |         |           | 132072/<br>1720         | 132322/<br>1745 | 132572/<br>1770 |               |
| 20MHz     | QPSK       | 1       | 0         | 15.90                   | 16.00           | <b>16.13</b>    | 17.00         |
|           |            | 1       | 50        | <b>16.11</b>            | <b>16.48</b>    | 16.05           | 17.00         |
|           |            | 1       | 99        | 15.89                   | 15.99           | 15.75           | 17.00         |
|           |            | 50      | 0         | 15.85                   | 15.91           | <b>16.02</b>    | 17.00         |
|           |            | 50      | 25        | 15.84                   | 15.95           | 15.78           | 17.00         |
|           |            | 50      | 50        | <b>15.97</b>            | <b>15.99</b>    | 15.74           | 17.00         |
|           |            | 100     | 0         | 15.90                   | <b>15.95</b>    | 15.88           | 17.00         |
|           | 16QAM      | 1       | 0         | 16.12                   | 16.05           | 16.10           | 17.00         |
|           |            | 1       | 50        | 15.85                   | 15.79           | 15.83           | 17.00         |
|           |            | 1       | 99        | 16.10                   | 16.05           | 16.07           | 17.00         |
|           |            | 50      | 0         | 16.06                   | 16.00           | 16.03           | 17.00         |
|           |            | 50      | 25        | 16.17                   | 16.10           | 16.13           | 17.00         |
|           |            | 50      | 50        | 16.15                   | 16.08           | 16.12           | 17.00         |
|           |            | 100     | 0         | 16.05                   | 15.98           | 16.01           | 17.00         |
|           | 64QAM      | 1       | 0         | 15.68                   | 15.61           | 15.66           | 17.00         |
|           |            | 1       | 50        | 16.66                   | 16.60           | 16.64           | 17.00         |
|           |            | 1       | 99        | 15.86                   | 15.81           | 15.87           | 17.00         |
|           |            | 50      | 0         | 16.12                   | 16.06           | 16.13           | 17.00         |
|           |            | 50      | 25        | 15.97                   | 15.90           | 15.96           | 17.00         |
|           |            | 50      | 50        | 16.21                   | 16.14           | 16.18           | 17.00         |
|           |            | 100     | 0         | 16.10                   | 16.03           | 16.06           | 17.00         |



| LTE FDD Band 66<br>Full Power&DSI 2 |            |         |           | Conducted Power(dBm)    |                 |                   | Tune-up<br>Limit |
|-------------------------------------|------------|---------|-----------|-------------------------|-----------------|-------------------|------------------|
| Bandwidth                           | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   |                  |
|                                     |            |         |           | 131979/<br>1710.7       | 132322/<br>1745 | 132665/<br>1779.3 |                  |
| 1.4MHz                              | QPSK       | 1       | 0         | 22.87                   | 23.32           | 23.00             | 24.00            |
|                                     |            | 1       | 2         | 23.14                   | 23.52           | 23.19             | 24.00            |
|                                     |            | 1       | 5         | 23.03                   | 23.46           | 23.06             | 24.00            |
|                                     |            | 3       | 0         | 21.70                   | 22.02           | 21.78             | 23.00            |
|                                     |            | 3       | 2         | 21.80                   | 21.98           | 21.64             | 23.00            |
|                                     |            | 3       | 3         | 21.72                   | 21.96           | 21.74             | 23.00            |
|                                     |            | 6       | 0         | 21.79                   | 21.98           | 21.83             | 23.00            |
|                                     | 16QAM      | 1       | 0         | 21.86                   | 21.86           | 21.81             | 23.00            |
|                                     |            | 1       | 2         | 21.89                   | 21.86           | 21.84             | 23.00            |
|                                     |            | 1       | 5         | 21.49                   | 21.49           | 21.47             | 23.00            |
|                                     |            | 3       | 0         | 20.73                   | 20.73           | 20.72             | 22.00            |
|                                     |            | 3       | 2         | 20.73                   | 20.73           | 20.70             | 22.00            |
|                                     |            | 3       | 3         | 20.72                   | 20.73           | 20.67             | 22.00            |
|                                     |            | 6       | 0         | 20.74                   | 20.77           | 20.75             | 22.00            |
|                                     | 64QAM      | 1       | 0         | 20.62                   | 20.62           | 20.57             | 22.00            |
|                                     |            | 1       | 2         | 20.66                   | 20.63           | 20.61             | 22.00            |
|                                     |            | 1       | 5         | 20.20                   | 20.20           | 20.18             | 22.00            |
|                                     |            | 3       | 0         | 19.62                   | 19.62           | 19.61             | 21.00            |
|                                     |            | 3       | 2         | 19.61                   | 19.61           | 19.58             | 21.00            |
|                                     |            | 3       | 3         | 19.68                   | 19.69           | 19.63             | 21.00            |
|                                     |            | 6       | 0         | 19.79                   | 19.79           | 19.77             | 21.00            |
| Bandwidth                           | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up<br>Limit |
|                                     |            |         |           | 131987<br>1711.5        | 132322/<br>1745 | 132657/<br>1778.5 |                  |
| 3MHz                                | QPSK       | 1       | 0         | 22.87                   | 23.31           | 23.00             | 24.00            |
|                                     |            | 1       | 7         | 23.13                   | 23.54           | 23.21             | 24.00            |
|                                     |            | 1       | 14        | 23.02                   | 23.45           | 23.05             | 24.00            |
|                                     |            | 8       | 0         | 21.72                   | 22.05           | 21.82             | 23.00            |
|                                     |            | 8       | 4         | 21.81                   | 22.02           | 21.65             | 23.00            |
|                                     |            | 8       | 7         | 21.73                   | 22.00           | 21.75             | 23.00            |
|                                     |            | 15      | 0         | 21.82                   | 21.99           | 21.83             | 23.00            |
|                                     | 16QAM      | 1       | 0         | 21.83                   | 21.85           | 21.81             | 23.00            |
|                                     |            | 1       | 7         | 21.90                   | 21.87           | 21.86             | 23.00            |
|                                     |            | 1       | 14        | 21.48                   | 21.49           | 21.46             | 23.00            |
|                                     |            | 8       | 0         | 20.76                   | 20.76           | 20.73             | 22.00            |
|                                     |            | 8       | 4         | 20.74                   | 20.74           | 20.71             | 22.00            |
| 8                                   |            | 7       | 20.74     | 20.75                   | 20.71           | 22.00             |                  |



|           | 64QAM      | 15      | 0         | 20.75                   | 20.77           | 20.73             | 22.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-------------------|---------------|
|           |            | 1       | 0         | 20.59                   | 20.61           | 20.57             | 22.00         |
|           |            | 1       | 7         | 20.67                   | 20.64           | 20.63             | 22.00         |
|           |            | 1       | 14        | 20.19                   | 20.20           | 20.17             | 22.00         |
|           |            | 8       | 0         | 19.65                   | 19.65           | 19.62             | 21.00         |
|           |            | 8       | 4         | 19.62                   | 19.62           | 19.59             | 21.00         |
|           |            | 8       | 7         | 19.70                   | 19.71           | 19.67             | 21.00         |
|           |            | 15      | 0         | 19.79                   | 19.81           | 19.77             | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 131997/<br>1712.5       | 132322/<br>1745 | 132647/<br>1777.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 22.87                   | 23.33           | 23.01             | 24.00         |
|           |            | 1       | 13        | 23.13                   | 23.54           | 23.22             | 24.00         |
|           |            | 1       | 24        | 23.04                   | 23.48           | 23.08             | 24.00         |
|           |            | 12      | 0         | 21.72                   | 22.08           | 21.83             | 23.00         |
|           |            | 12      | 6         | 21.83                   | 22.05           | 21.68             | 23.00         |
|           |            | 12      | 13        | 21.74                   | 21.99           | 21.78             | 23.00         |
|           |            | 25      | 0         | 21.79                   | 22.02           | 21.85             | 23.00         |
|           | 16QAM      | 1       | 0         | 21.85                   | 21.82           | 21.81             | 23.00         |
|           |            | 1       | 13        | 21.91                   | 21.89           | 21.83             | 23.00         |
|           |            | 1       | 24        | 21.49                   | 21.49           | 21.48             | 23.00         |
|           |            | 12      | 0         | 20.74                   | 20.77           | 20.73             | 22.00         |
|           |            | 12      | 6         | 20.74                   | 20.74           | 20.73             | 22.00         |
|           |            | 12      | 13        | 20.75                   | 20.78           | 20.69             | 22.00         |
|           |            | 25      | 0         | 20.74                   | 20.79           | 20.73             | 22.00         |
|           | 64QAM      | 1       | 0         | 20.62                   | 20.59           | 20.58             | 22.00         |
|           |            | 1       | 13        | 20.68                   | 20.65           | 20.62             | 22.00         |
|           |            | 1       | 24        | 20.19                   | 20.19           | 20.18             | 22.00         |
|           |            | 12      | 0         | 19.67                   | 19.66           | 19.60             | 21.00         |
|           |            | 12      | 6         | 19.61                   | 19.64           | 19.59             | 21.00         |
|           |            | 12      | 13        | 19.70                   | 19.71           | 19.69             | 21.00         |
|           |            | 25      | 0         | 19.81                   | 19.84           | 19.78             | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132022/<br>1715         | 132322/<br>1745 | 132622/<br>1775   |               |
| 10MHz     | QPSK       | 1       | 0         | 22.86                   | 23.34           | 22.99             | 24.00         |
|           |            | 1       | 25        | 23.12                   | 23.50           | 23.20             | 24.00         |
|           |            | 1       | 49        | 23.03                   | 23.46           | 23.06             | 24.00         |
|           |            | 25      | 0         | 21.71                   | 22.04           | 21.81             | 23.00         |
|           |            | 25      | 13        | 21.81                   | 22.02           | 21.65             | 23.00         |
|           |            | 25      | 25        | 21.74                   | 21.99           | 21.74             | 23.00         |
|           |            | 50      | 0         | 21.79                   | 22.01           | 21.84             | 23.00         |
|           | 16QAM      | 1       | 0         | 21.86                   | 21.84           | 21.81             | 23.00         |



|           |            | 1       | 25        | 21.89                   | 21.86           | 21.85             | 23.00         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-------------------|---------------|
|           |            | 1       | 49        | 21.48                   | 21.51           | 21.46             | 23.00         |
|           |            | 25      | 0         | 20.76                   | 20.73           | 20.72             | 22.00         |
|           |            | 25      | 13        | 20.75                   | 20.75           | 20.72             | 22.00         |
|           |            | 25      | 25        | 20.73                   | 20.74           | 20.70             | 22.00         |
|           |            | 50      | 0         | 20.75                   | 20.77           | 20.73             | 22.00         |
|           |            | 1       | 0         | 20.62                   | 20.60           | 20.57             | 22.00         |
|           | 64QAM      | 1       | 25        | 20.66                   | 20.63           | 20.62             | 22.00         |
|           |            | 1       | 49        | 20.19                   | 20.22           | 20.17             | 22.00         |
|           |            | 25      | 0         | 19.65                   | 19.62           | 19.61             | 21.00         |
|           |            | 25      | 13        | 19.63                   | 19.63           | 19.60             | 21.00         |
|           |            | 25      | 25        | 19.69                   | 19.70           | 19.66             | 21.00         |
|           |            | 50      | 0         | 19.79                   | 19.81           | 19.77             | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132047/<br>1717.5       | 132322/<br>1745 | 132597/<br>1772.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 22.89                   | 23.36           | 23.03             | 24.00         |
|           |            | 1       | 38        | 23.14                   | 23.53           | 23.23             | 24.00         |
|           |            | 1       | 74        | 23.06                   | 23.51           | 23.10             | 24.00         |
|           |            | 36      | 0         | 21.74                   | 22.09           | 21.85             | 23.00         |
|           |            | 36      | 18        | 21.83                   | 22.06           | 21.70             | 23.00         |
|           |            | 36      | 39        | 21.76                   | 22.01           | 21.78             | 23.00         |
|           |            | 75      | 0         | 21.81                   | 22.02           | 21.86             | 23.00         |
|           | 16QAM      | 1       | 0         | 21.89                   | 21.88           | 21.84             | 23.00         |
|           |            | 1       | 38        | 21.92                   | 21.88           | 21.88             | 23.00         |
|           |            | 1       | 74        | 21.51                   | 21.53           | 21.50             | 23.00         |
|           |            | 36      | 0         | 20.78                   | 20.77           | 20.75             | 22.00         |
|           |            | 36      | 18        | 20.78                   | 20.80           | 20.76             | 22.00         |
|           |            | 36      | 39        | 20.76                   | 20.79           | 20.74             | 22.00         |
|           |            | 75      | 0         | 20.77                   | 20.81           | 20.78             | 22.00         |
|           | 64QAM      | 1       | 0         | 20.65                   | 20.64           | 20.60             | 22.00         |
|           |            | 1       | 38        | 20.69                   | 20.65           | 20.65             | 22.00         |
|           |            | 1       | 74        | 20.22                   | 20.24           | 20.21             | 22.00         |
|           |            | 36      | 0         | 19.67                   | 19.66           | 19.64             | 21.00         |
|           |            | 36      | 18        | 19.66                   | 19.68           | 19.64             | 21.00         |
|           |            | 36      | 39        | 19.72                   | 19.75           | 19.70             | 21.00         |
|           |            | 75      | 0         | 19.81                   | 19.85           | 19.82             | 21.00         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132072/<br>1720         | 132322/<br>1745 | 132572/<br>1770   |               |
| 20MHz     | QPSK       | 1       | 0         | 22.84                   | 23.27           | 22.97             | 24.00         |
|           |            | 1       | 50        | 23.12                   | 23.50           | 23.19             | 24.00         |
|           |            | 1       | 99        | 23.00                   | 23.44           | 23.02             | 24.00         |



|  |       |     |    |              |              |              |       |
|--|-------|-----|----|--------------|--------------|--------------|-------|
|  |       | 50  | 0  | 21.69        | <b>22.00</b> | <b>21.78</b> | 23.00 |
|  |       | 50  | 25 | <b>21.79</b> | 21.98        | 21.62        | 23.00 |
|  |       | 50  | 50 | 21.70        | 21.95        | 21.71        | 23.00 |
|  |       | 100 | 0  | 21.79        | <b>21.94</b> | 21.79        | 23.00 |
|  | 16QAM | 1   | 0  | 21.81        | 21.81        | 21.76        | 23.00 |
|  |       | 1   | 50 | 21.86        | 21.85        | 21.82        | 23.00 |
|  |       | 1   | 99 | 21.46        | 21.46        | 21.44        | 23.00 |
|  |       | 50  | 0  | 20.73        | 20.72        | 20.70        | 22.00 |
|  |       | 50  | 25 | 20.71        | 20.72        | 20.68        | 22.00 |
|  |       | 50  | 50 | 20.71        | 20.70        | 20.67        | 22.00 |
|  |       | 100 | 0  | 20.73        | 20.73        | 20.70        | 22.00 |
|  | 64QAM | 1   | 0  | 20.57        | 20.57        | 20.52        | 22.00 |
|  |       | 1   | 50 | 20.63        | 20.62        | 20.59        | 22.00 |
|  |       | 1   | 99 | 20.17        | 20.17        | 20.15        | 22.00 |
|  |       | 50  | 0  | 19.62        | 19.61        | 19.59        | 21.00 |
|  |       | 50  | 25 | 19.59        | 19.60        | 19.56        | 21.00 |
|  |       | 50  | 50 | 19.67        | 19.66        | 19.63        | 21.00 |
|  |       | 100 | 0  | 19.77        | 19.77        | 19.74        | 21.00 |

| LTE FDD Band 66<br>DSI 4 |            |         |           | Conducted Power(dBm)    |                 |                   | Tune-up<br>Limit |
|--------------------------|------------|---------|-----------|-------------------------|-----------------|-------------------|------------------|
| Bandwidth                | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   |                  |
|                          |            |         |           | 131979/<br>1710.7       | 132322/<br>1745 | 132665/<br>1779.3 |                  |
| 1.4MHz                   | QPSK       | 1       | 0         | 18.39                   | 18.45           | 18.48             | 19.50            |
|                          |            | 1       | 2         | 18.60                   | 18.53           | 18.40             | 19.50            |
|                          |            | 1       | 5         | 18.27                   | 18.27           | 18.25             | 19.50            |
|                          |            | 3       | 0         | 18.44                   | 18.32           | 18.24             | 19.50            |
|                          |            | 3       | 2         | 18.31                   | 18.30           | 18.28             | 19.50            |
|                          |            | 3       | 3         | 18.27                   | 18.25           | 18.18             | 19.50            |
|                          |            | 6       | 0         | 18.29                   | 18.30           | 18.40             | 19.50            |
|                          | 16QAM      | 1       | 0         | 18.24                   | 18.20           | 18.22             | 19.50            |
|                          |            | 1       | 2         | 18.26                   | 18.19           | 18.24             | 19.50            |
|                          |            | 1       | 5         | 18.39                   | 18.36           | 18.38             | 19.50            |
|                          |            | 3       | 0         | 18.37                   | 18.37           | 18.41             | 19.50            |
|                          |            | 3       | 2         | 18.35                   | 18.31           | 18.35             | 19.50            |
|                          |            | 3       | 3         | 18.38                   | 18.36           | 18.36             | 19.50            |
|                          |            | 6       | 0         | 18.33                   | 18.35           | 18.38             | 19.50            |
|                          | 64QAM      | 1       | 0         | 18.01                   | 17.96           | 17.98             | 19.50            |
|                          |            | 1       | 2         | 18.78                   | 18.71           | 18.76             | 19.50            |
|                          |            | 1       | 5         | 18.39                   | 18.37           | 18.39             | 19.50            |
|                          |            | 3       | 0         | 18.40                   | 18.36           | 18.40             | 19.50            |
|                          |            | 3       | 2         | 18.41                   | 18.38           | 18.42             | 19.50            |



|           |            | 3       | 3         | 18.34                   | 18.33       | 18.33         | 19.50         |
|-----------|------------|---------|-----------|-------------------------|-------------|---------------|---------------|
|           |            | 6       | 0         | 18.31                   | 18.27       | 18.30         | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |               | Tune-up Limit |
|           |            |         |           | 131987/1711.5           | 132322/1745 | 132657/1778.5 |               |
| 3MHz      | QPSK       | 1       | 0         | 18.41                   | 18.49       | 18.51         | 19.50         |
|           |            | 1       | 7         | 18.60                   | 18.55       | 18.44         | 19.50         |
|           |            | 1       | 14        | 18.30                   | 18.32       | 18.29         | 19.50         |
|           |            | 8       | 0         | 18.48                   | 18.39       | 18.31         | 19.50         |
|           |            | 8       | 4         | 18.34                   | 18.38       | 18.34         | 19.50         |
|           |            | 8       | 7         | 18.31                   | 18.30       | 18.22         | 19.50         |
|           |            | 15      | 0         | 18.31                   | 18.34       | 18.43         | 19.50         |
|           | 16QAM      | 1       | 0         | 18.27                   | 18.22       | 18.25         | 19.50         |
|           |            | 1       | 7         | 18.29                   | 18.21       | 18.28         | 19.50         |
|           |            | 1       | 14        | 18.41                   | 18.40       | 18.41         | 19.50         |
|           |            | 8       | 0         | 18.42                   | 18.41       | 18.44         | 19.50         |
|           |            | 8       | 4         | 18.40                   | 18.38       | 18.41         | 19.50         |
|           |            | 8       | 7         | 18.42                   | 18.42       | 18.43         | 19.50         |
|           |            | 15      | 0         | 18.36                   | 18.39       | 18.41         | 19.50         |
|           | 64QAM      | 1       | 0         | 18.04                   | 17.98       | 18.01         | 19.50         |
|           |            | 1       | 7         | 18.81                   | 18.73       | 18.80         | 19.50         |
|           |            | 1       | 14        | 18.41                   | 18.41       | 18.42         | 19.50         |
|           |            | 8       | 0         | 18.45                   | 18.40       | 18.43         | 19.50         |
|           |            | 8       | 4         | 18.46                   | 18.45       | 18.48         | 19.50         |
|           |            | 8       | 7         | 18.38                   | 18.39       | 18.40         | 19.50         |
|           |            | 15      | 0         | 18.33                   | 18.33       | 18.35         | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |             |               | Tune-up Limit |
|           |            |         |           | 131997/1712.5           | 132322/1745 | 132647/1777.5 |               |
| 5MHz      | QPSK       | 1       | 0         | 18.38                   | 18.47       | 18.47         | 19.50         |
|           |            | 1       | 13        | 18.58                   | 18.51       | 18.41         | 19.50         |
|           |            | 1       | 24        | 18.27                   | 18.27       | 18.25         | 19.50         |
|           |            | 12      | 0         | 18.45                   | 18.34       | 18.27         | 19.50         |
|           |            | 12      | 6         | 18.32                   | 18.34       | 18.29         | 19.50         |
|           |            | 12      | 13        | 18.29                   | 18.28       | 18.18         | 19.50         |
|           |            | 25      | 0         | 18.29                   | 18.33       | 18.41         | 19.50         |
|           | 16QAM      | 1       | 0         | 18.24                   | 18.18       | 18.22         | 19.50         |
|           |            | 1       | 13        | 18.26                   | 18.19       | 18.25         | 19.50         |
|           |            | 1       | 24        | 18.38                   | 18.38       | 18.37         | 19.50         |
|           |            | 12      | 0         | 18.40                   | 18.37       | 18.41         | 19.50         |
|           |            | 12      | 6         | 18.37                   | 18.33       | 18.37         | 19.50         |
|           |            | 12      | 13        | 18.39                   | 18.37       | 18.39         | 19.50         |
|           |            | 25      | 0         | 18.34                   | 18.35       | 18.36         | 19.50         |



|           | 64QAM      | 1       | 0         | 18.01                   | 17.94           | 17.98             | 19.50         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-------------------|---------------|
|           |            | 1       | 13        | 18.78                   | 18.71           | 18.77             | 19.50         |
|           |            | 1       | 24        | 18.38                   | 18.39           | 18.38             | 19.50         |
|           |            | 12      | 0         | 18.43                   | 18.36           | 18.40             | 19.50         |
|           |            | 12      | 6         | 18.43                   | 18.40           | 18.44             | 19.50         |
|           |            | 12      | 13        | 18.35                   | 18.34           | 18.36             | 19.50         |
|           |            | 25      | 0         | 18.31                   | 18.29           | 18.30             | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132022/<br>1715         | 132322/<br>1745 | 132622/<br>1775   |               |
| 10MHz     | QPSK       | 1       | 0         | 18.39                   | 18.44           | 18.48             | 19.50         |
|           |            | 1       | 25        | 18.59                   | 18.55           | 18.42             | 19.50         |
|           |            | 1       | 49        | 18.26                   | 18.26           | 18.24             | 19.50         |
|           |            | 25      | 0         | 18.46                   | 18.35           | 18.28             | 19.50         |
|           |            | 25      | 13        | 18.32                   | 18.34           | 18.29             | 19.50         |
|           |            | 25      | 25        | 18.28                   | 18.29           | 18.19             | 19.50         |
|           |            | 50      | 0         | 18.32                   | 18.31           | 18.40             | 19.50         |
|           | 16QAM      | 1       | 0         | 18.21                   | 18.19           | 18.22             | 19.50         |
|           |            | 1       | 25        | 18.27                   | 18.20           | 18.26             | 19.50         |
|           |            | 1       | 49        | 18.38                   | 18.36           | 18.37             | 19.50         |
|           |            | 25      | 0         | 18.40                   | 18.40           | 18.42             | 19.50         |
|           |            | 25      | 13        | 18.36                   | 18.32           | 18.36             | 19.50         |
|           |            | 25      | 25        | 18.40                   | 18.38           | 18.40             | 19.50         |
|           |            | 50      | 0         | 18.34                   | 18.35           | 18.36             | 19.50         |
|           | 64QAM      | 1       | 0         | 17.98                   | 17.95           | 17.98             | 19.50         |
|           |            | 1       | 25        | 18.79                   | 18.72           | 18.78             | 19.50         |
|           |            | 1       | 49        | 18.38                   | 18.37           | 18.38             | 19.50         |
|           |            | 25      | 0         | 18.43                   | 18.39           | 18.41             | 19.50         |
|           |            | 25      | 13        | 18.42                   | 18.39           | 18.43             | 19.50         |
|           |            | 25      | 25        | 18.36                   | 18.35           | 18.37             | 19.50         |
|           |            | 50      | 0         | 18.31                   | 18.29           | 18.30             | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                   | Tune-up Limit |
|           |            |         |           | 132047/<br>1717.5       | 132322/<br>1745 | 132597/<br>1772.5 |               |
| 15MHz     | QPSK       | 1       | 0         | 18.39                   | 18.46           | 18.49             | 19.50         |
|           |            | 1       | 38        | 18.59                   | 18.55           | 18.43             | 19.50         |
|           |            | 1       | 74        | 18.28                   | 18.29           | 18.27             | 19.50         |
|           |            | 36      | 0         | 18.46                   | 18.38           | 18.29             | 19.50         |
|           |            | 36      | 18        | 18.34                   | 18.37           | 18.32             | 19.50         |
|           |            | 36      | 39        | 18.29                   | 18.28           | 18.22             | 19.50         |
|           |            | 75      | 0         | 18.29                   | 18.34           | 18.42             | 19.50         |
|           | 16QAM      | 1       | 0         | 18.23                   | 18.16           | 18.22             | 19.50         |
|           |            | 1       | 38        | 18.28                   | 18.22           | 18.23             | 19.50         |



|           |            | 1       | 74        | 18.39                   | 18.36           | 18.39           | 19.50         |
|-----------|------------|---------|-----------|-------------------------|-----------------|-----------------|---------------|
|           |            | 36      | 0         | 18.38                   | 18.41           | 18.42           | 19.50         |
|           |            | 36      | 18        | 18.36                   | 18.32           | 18.38           | 19.50         |
|           |            | 36      | 39        | 18.41                   | 18.41           | 18.38           | 19.50         |
|           |            | 75      | 0         | 18.33                   | 18.37           | 18.36           | 19.50         |
|           | 64QAM      | 1       | 0         | 18.01                   | 17.93           | 17.99           | 19.50         |
|           |            | 1       | 38        | 18.80                   | 18.73           | 18.77           | 19.50         |
|           |            | 1       | 74        | 18.38                   | 18.36           | 18.39           | 19.50         |
|           |            | 36      | 0         | 18.45                   | 18.40           | 18.39           | 19.50         |
|           |            | 36      | 18        | 18.41                   | 18.41           | 18.43           | 19.50         |
|           |            | 36      | 39        | 18.36                   | 18.35           | 18.39           | 19.50         |
|           |            | 75      | 0         | 18.33                   | 18.32           | 18.31           | 19.50         |
| Bandwidth | Modulation | RB size | RB offset | Channel/Frequency (MHz) |                 |                 | Tune-up Limit |
|           |            |         |           | 132072/<br>1720         | 132322/<br>1745 | 132572/<br>1770 |               |
| 20MHz     | QPSK       | 1       | 0         | 18.36                   | 18.40           | <b>18.45</b>    | 19.50         |
|           |            | 1       | 50        | <b>18.58</b>            | <b>18.51</b>    | 18.40           | 19.50         |
|           |            | 1       | 99        | 18.24                   | 18.25           | 18.21           | 19.50         |
|           |            | 50      | 0         | <b>18.43</b>            | <b>18.30</b>    | 18.24           | 19.50         |
|           |            | 50      | 25        | 18.30                   | <b>18.30</b>    | <b>18.26</b>    | 19.50         |
|           |            | 50      | 50        | 18.25                   | 18.24           | 18.15           | 19.50         |
|           |            | 100     | 0         | 18.29                   | 18.26           | <b>18.36</b>    | 19.50         |
|           | 16QAM      | 1       | 0         | 18.19                   | 18.15           | 18.17           | 19.50         |
|           |            | 1       | 50        | 18.23                   | 18.18           | 18.22           | 19.50         |
|           |            | 1       | 99        | 18.36                   | 18.33           | 18.35           | 19.50         |
|           |            | 50      | 0         | 18.37                   | 18.36           | 18.39           | 19.50         |
|           |            | 50      | 25        | 18.33                   | 18.30           | 18.33           | 19.50         |
|           |            | 50      | 50        | 18.37                   | 18.33           | 18.36           | 19.50         |
|           |            | 100     | 0         | 18.32                   | 18.31           | 18.33           | 19.50         |
|           | 64QAM      | 1       | 0         | 17.96                   | 17.91           | 17.93           | 19.50         |
|           |            | 1       | 50        | 18.75                   | 18.70           | 18.74           | 19.50         |
|           |            | 1       | 99        | 18.36                   | 18.34           | 18.36           | 19.50         |
|           |            | 50      | 0         | 18.40                   | 18.35           | 18.38           | 19.50         |
|           |            | 50      | 25        | 18.39                   | 18.37           | 18.40           | 19.50         |
|           |            | 50      | 50        | 18.33                   | 18.30           | 18.33           | 19.50         |
|           |            | 100     | 0         | 18.29                   | 18.25           | 18.27           | 19.50         |

## 9.4 WLAN Mode

| Wi-Fi 2.4G<br>receiver on | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|---------------------------|----------------------------|----------------------------|--------------|
|                           |                            | Tune-up                    | Meas.        |
| Mode                      |                            |                            |              |
| 802.11b<br>(1M)           | 1/2412                     | 16.50                      | <b>14.65</b> |
|                           | 6/2437                     | 16.50                      | 14.59        |
|                           | 11/2462                    | 16.50                      | 14.62        |
| 802.11g<br>(6M)           | 1/2412                     | 16.50                      | 14.62        |
|                           | 6/2437                     | 16.50                      | 14.38        |
|                           | 11/2462                    | 16.50                      | 14.63        |
| 802.11n-HT20<br>(MCS0)    | 1/2412                     | 15.50                      | 13.54        |
|                           | 6/2437                     | 15.50                      | 13.22        |
|                           | 11/2462                    | 15.50                      | 13.64        |

Note: Initial test configuration is 802.11b mode.

| Wi-Fi 2.4G<br>receiver off | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|----------------------------|----------------------------|----------------------------|--------------|
|                            |                            | Tune-up                    | Meas.        |
| Mode                       |                            |                            |              |
| 802.11b<br>(1M)            | 1/2412                     | 18.50                      | 16.63        |
|                            | 6/2437                     | 18.50                      | 16.53        |
|                            | 11/2462                    | 18.50                      | <b>16.74</b> |
| 802.11g<br>(6M)            | 1/2412                     | 16.50                      | 14.62        |
|                            | 6/2437                     | 16.50                      | 14.38        |
|                            | 11/2462                    | 16.50                      | 14.63        |
| 802.11n-HT20<br>(MCS0)     | 1/2412                     | 15.50                      | 13.54        |
|                            | 6/2437                     | 15.50                      | 13.22        |
|                            | 11/2462                    | 15.50                      | 13.64        |

Note: Initial test configuration is 802.11b mode.

| Wi-Fi 5G<br>(U-NII-1)<br>receiver on | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|--------------------------------------|----------------------------|----------------------------|--------------|
|                                      |                            | Tune-up                    | Meas.        |
| Mode                                 |                            |                            |              |
| 802.11a<br>(6M)                      | 36/5180                    | 15.50                      | 13.69        |
|                                      | 40/5200                    | 15.50                      | <b>13.76</b> |
|                                      | 48/5240                    | 15.50                      | 13.55        |
| 802.11n-HT20                         | 36/5180                    | 15.50                      | 13.59        |



|                          |         |       |       |
|--------------------------|---------|-------|-------|
| (MCS0)                   | 40/5200 | 15.50 | 13.49 |
|                          | 48/5240 | 15.50 | 13.05 |
| 802.11n-HT40<br>(MCS0)   | 38/5190 | 14.50 | 12.54 |
|                          | 46/5230 | 14.50 | 12.32 |
| 802.11ac-VHT20<br>(MCS0) | 36/5180 | 15.50 | 13.44 |
|                          | 40/5200 | 15.50 | 13.46 |
|                          | 48/5240 | 15.50 | 13.69 |
| 802.11ac-VHT40<br>(MCS0) | 38/5190 | 14.50 | 12.60 |
|                          | 46/5230 | 14.50 | 12.22 |
| 802.11ac-VHT80<br>(MCS0) | 42/5210 | 14.50 | 12.69 |

Note. Initial test configuration is 802.11a mode, since the highest maximum output power

| Wi-Fi 5G<br>(U-NII-2A)<br>receiver on<br>Mode | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|-----------------------------------------------|----------------------------|----------------------------|--------------|
|                                               |                            | Tune-up                    | Meas.        |
| 802.11a<br>(6M)                               | 52/5260                    | 15.50                      | 13.52        |
|                                               | 60/5300                    | 15.50                      | 13.57        |
|                                               | 64/5320                    | 15.50                      | <b>13.58</b> |
| 802.11n-HT20<br>(MCS0)                        | 52/5260                    | 15.50                      | 12.99        |
|                                               | 60/5300                    | 15.50                      | 13.28        |
|                                               | 64/5320                    | 15.50                      | 13.28        |
| 802.11n-HT40<br>(MCS0)                        | 54/5270                    | 14.50                      | 12.49        |
|                                               | 62/5310                    | 14.50                      | 12.80        |
| 802.11ac-HT20<br>(MCS0)                       | 52/5260                    | 15.50                      | 12.95        |
|                                               | 60/5300                    | 15.50                      | 13.26        |
|                                               | 64/5320                    | 15.50                      | 13.41        |
| 802.11ac-HT40<br>(MCS0)                       | 54/5270                    | 14.50                      | 12.41        |
|                                               | 62/5310                    | 14.50                      | 12.73        |
| 802.11ac-HT80<br>(MCS0)                       | 58/5290                    | 14.50                      | 12.98        |

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.

| Wi-Fi 5G<br>(U-NII-2C)<br>Receiver on<br>Mode | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|-----------------------------------------------|----------------------------|----------------------------|--------------|
|                                               |                            | Tune-up                    | Meas.        |
| 802.11a<br>(6M)                               | 100/5500                   | 15.50                      | 13.55        |
|                                               | 120/5600                   | 15.50                      | <b>14.08</b> |
|                                               | 132/5660                   | 15.50                      | 13.95        |



|                                                                                           |          |       |       |
|-------------------------------------------------------------------------------------------|----------|-------|-------|
|                                                                                           | 144/5720 | 15.50 | 13.57 |
| 802.11n-HT20<br>(MCS0)                                                                    | 100/5500 | 15.50 | 13.02 |
|                                                                                           | 120/5600 | 15.50 | 13.48 |
|                                                                                           | 132/5660 | 15.50 | 13.67 |
|                                                                                           | 144/5720 | 15.50 | 13.20 |
| 802.11n-HT40<br>(MCS0)                                                                    | 102/5510 | 14.50 | 12.17 |
|                                                                                           | 118/5590 | 14.50 | 12.53 |
|                                                                                           | 134/5670 | 14.50 | 12.66 |
|                                                                                           | 142/5710 | 14.50 | 12.43 |
| 802.11ac-HT20<br>(MCS0)                                                                   | 100/5500 | 15.50 | 13.18 |
|                                                                                           | 120/5600 | 15.50 | 13.68 |
|                                                                                           | 132/5660 | 15.50 | 13.57 |
|                                                                                           | 144/5720 | 15.50 | 13.16 |
| 802.11ac-HT40<br>(MCS0)                                                                   | 102/5510 | 14.50 | 12.13 |
|                                                                                           | 118/5590 | 14.50 | 12.53 |
|                                                                                           | 134/5670 | 14.50 | 12.61 |
|                                                                                           | 142/5710 | 14.50 | 12.41 |
| 802.11ac-HT80<br>(MCS0)                                                                   | 122/5610 | 14.50 | 13.04 |
|                                                                                           | 138/5690 | 14.50 | 13.00 |
| Note. Initial test configuration is 802.11a mode, since the highest maximum output power. |          |       |       |

| Wi-Fi 5G<br>(U-NII-3)<br>Receiver on<br>Mode                                              | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|-------------------------------------------------------------------------------------------|----------------------------|----------------------------|--------------|
|                                                                                           |                            | Tune-up                    | Meas.        |
| 802.11a<br>(6M)                                                                           | 149/5745                   | 13.50                      | 11.76        |
|                                                                                           | 157/5785                   | 13.50                      | 11.62        |
|                                                                                           | 165/5825                   | 14.50                      | 12.54        |
| 802.11n-HT20<br>(MCS0)                                                                    | 149/5745                   | 13.50                      | 11.60        |
|                                                                                           | 157/5785                   | 13.50                      | 11.46        |
|                                                                                           | 165/5825                   | 14.50                      | 12.37        |
| 802.11n-HT40<br>(MCS0)                                                                    | 151/5755                   | 13.50                      | 11.57        |
|                                                                                           | 159/5795                   | 13.50                      | 11.31        |
| 802.11ac-HT20<br>(MCS0)                                                                   | 149/5745                   | 13.50                      | 11.58        |
|                                                                                           | 157/5785                   | 13.50                      | 11.46        |
|                                                                                           | 165/5825                   | 14.50                      | 12.38        |
| 802.11ac-HT40<br>(MCS0)                                                                   | 151/5755                   | 13.50                      | 11.56        |
|                                                                                           | 159/5795                   | 13.50                      | 11.30        |
| 802.11ac-HT80<br>(MCS0)                                                                   | 155/5775                   | 14.50                      | <b>13.05</b> |
| Note. Initial test configuration is 802.11a mode, since the highest maximum output power. |                            |                            |              |



| Wi-Fi 5G<br>(U-NII-1)<br>receiver off | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|---------------------------------------|----------------------------|----------------------------|--------------|
|                                       |                            | Tune-up                    | Meas.        |
| Mode                                  |                            |                            |              |
| 802.11a<br>(6M)                       | 36/5180                    | 16.50                      | 14.62        |
|                                       | 40/5200                    | 16.50                      | <b>14.63</b> |
|                                       | 48/5240                    | 16.50                      | 14.55        |
| 802.11n-HT20<br>(MCS0)                | 36/5180                    | 16.50                      | 14.46        |
|                                       | 40/5200                    | 16.50                      | 14.44        |
|                                       | 48/5240                    | 16.50                      | 14.37        |
| 802.11n-HT40<br>(MCS0)                | 38/5190                    | 14.50                      | 12.54        |
|                                       | 46/5230                    | 14.50                      | 12.32        |
| 802.11ac-VHT20<br>(MCS0)              | 36/5180                    | 16.50                      | 14.12        |
|                                       | 40/5200                    | 16.50                      | 14.14        |
|                                       | 48/5240                    | 16.50                      | 14.07        |
| 802.11ac-VHT40<br>(MCS0)              | 38/5190                    | 14.50                      | 12.60        |
|                                       | 46/5230                    | 14.50                      | 12.22        |
| 802.11ac-VHT80<br>(MCS0)              | 42/5210                    | 14.50                      | 12.69        |

Note. Initial test configuration is 802.11a mode, since the highest maximum output power

| Wi-Fi 5G<br>(U-NII-2A)<br>receiver off | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|----------------------------------------|----------------------------|----------------------------|--------------|
|                                        |                            | Tune-up                    | Meas.        |
| Mode                                   |                            |                            |              |
| 802.11a<br>(6M)                        | 52/5260                    | 16.50                      | 14.53        |
|                                        | 60/5300                    | 16.50                      | 14.59        |
|                                        | 64/5320                    | 16.50                      | <b>14.62</b> |
| 802.11n-HT20<br>(MCS0)                 | 52/5260                    | 16.50                      | 14.06        |
|                                        | 60/5300                    | 16.50                      | 14.41        |
|                                        | 64/5320                    | 16.50                      | 14.43        |
| 802.11n-HT40<br>(MCS0)                 | 54/5270                    | 14.50                      | 12.49        |
|                                        | 62/5310                    | 14.50                      | 12.80        |
| 802.11ac-HT20<br>(MCS0)                | 52/5260                    | 16.50                      | 14.05        |
|                                        | 60/5300                    | 16.50                      | 14.38        |
|                                        | 64/5320                    | 16.50                      | 14.43        |
| 802.11ac-HT40<br>(MCS0)                | 54/5270                    | 14.50                      | 12.41        |
|                                        | 62/5310                    | 14.50                      | 12.73        |
| 802.11ac-HT80<br>(MCS0)                | 58/5290                    | 14.50                      | 12.98        |



Note. Initial test configuration is 802.11a mode, since the highest maximum output power.

| Wi-Fi 5G<br>(U-NII-2C)<br>receiver off<br>Mode | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|------------------------------------------------|----------------------------|----------------------------|--------------|
|                                                |                            | Tune-up                    | Meas.        |
| 802.11a<br>(6M)                                | 100/5500                   | 15.50                      | 13.55        |
|                                                | 120/5600                   | 15.50                      | <b>14.08</b> |
|                                                | 132/5660                   | 15.50                      | 13.95        |
|                                                | 144/5720                   | 15.50                      | 13.57        |
| 802.11n-HT20<br>(MCS0)                         | 100/5500                   | 15.50                      | 13.02        |
|                                                | 120/5600                   | 15.50                      | 13.48        |
|                                                | 132/5660                   | 15.50                      | 13.67        |
|                                                | 144/5720                   | 15.50                      | 13.20        |
| 802.11n-HT40<br>(MCS0)                         | 102/5510                   | 14.50                      | 12.17        |
|                                                | 118/5590                   | 14.50                      | 12.53        |
|                                                | 134/5670                   | 14.50                      | 12.66        |
|                                                | 142/5710                   | 14.50                      | 12.43        |
| 802.11ac-HT20<br>(MCS0)                        | 100/5500                   | 15.50                      | 13.18        |
|                                                | 120/5600                   | 15.50                      | 13.68        |
|                                                | 132/5660                   | 15.50                      | 13.57        |
|                                                | 144/5720                   | 15.50                      | 13.16        |
| 802.11ac-HT40<br>(MCS0)                        | 102/5510                   | 14.50                      | 12.13        |
|                                                | 118/5590                   | 14.50                      | 12.53        |
|                                                | 134/5670                   | 14.50                      | 12.61        |
|                                                | 142/5710                   | 14.50                      | 12.41        |
| 802.11ac-HT80<br>(MCS0)                        | 122/5610                   | 14.50                      | 13.04        |
|                                                | 138/5690                   | 14.50                      | 13.00        |

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.

| Wi-Fi 5G<br>(U-NII-3)<br>receiver off                                                     | Channel<br>/Frequency(MHz) | Maximum Output Power (dBm) |              |
|-------------------------------------------------------------------------------------------|----------------------------|----------------------------|--------------|
|                                                                                           |                            | Tune-up                    | Meas.        |
| Mode                                                                                      |                            |                            |              |
| 802.11a<br>(6M)                                                                           | 149/5745                   | 14.50                      | 12.68        |
|                                                                                           | 157/5785                   | 14.50                      | 12.57        |
|                                                                                           | 165/5825                   | 14.50                      | 12.54        |
| 802.11n-HT20<br>(MCS0)                                                                    | 149/5745                   | 14.50                      | 12.52        |
|                                                                                           | 157/5785                   | 14.50                      | 12.31        |
|                                                                                           | 165/5825                   | 14.50                      | 12.37        |
| 802.11n-HT40<br>(MCS0)                                                                    | 151/5755                   | 14.50                      | 12.55        |
|                                                                                           | 159/5795                   | 14.50                      | 12.22        |
| 802.11ac-HT20<br>(MCS0)                                                                   | 149/5745                   | 14.50                      | 12.64        |
|                                                                                           | 157/5785                   | 14.50                      | 12.47        |
|                                                                                           | 165/5825                   | 14.50                      | 12.38        |
| 802.11ac-HT40<br>(MCS0)                                                                   | 151/5755                   | 14.50                      | 12.72        |
|                                                                                           | 159/5795                   | 14.50                      | 12.69        |
| 802.11ac-HT80<br>(MCS0)                                                                   | 155/5775                   | 14.50                      | <b>13.05</b> |
| Note. Initial test configuration is 802.11a mode, since the highest maximum output power. |                            |                            |              |

## 9.5 Bluetooth Mode

| BT       | Conducted Power(dBm)   |                |                | Tune-up Limit<br>(dBm) |
|----------|------------------------|----------------|----------------|------------------------|
|          | Channel/Frequency(MHz) |                |                |                        |
|          | Ch 0/2402 MHz          | Ch 39/2441 MHz | Ch 78/2480 MHz |                        |
| GFSK     | 7.39                   | 7.53           | 7.95           | 9.50                   |
| π/4DQPSK | 4.34                   | 4.51           | 5.28           | 7.50                   |
| 8DPSK    | 2.93                   | 3.13           | 3.94           | 7.50                   |
| BLE      | Ch 0/2402 MHz          | Ch 19/2440 MHz | Ch 39/2480 MHz | Tune-up Limit<br>(dBm) |
| GFSK     | 0.84                   | 0.65           | 0.85           | 1.50                   |

## 10 Measured and Reported (Scaled) SAR Results

### 10.1 EUT Antenna Locations

The Detailed Antenna Locations refer to *Antenna Locations*.

| Overall (Length x Width): 167.18 mm x 76.87 mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |            |           |            |          |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|-----------|------------|----------|-------------|
| Overall Diagonal: 178 mm/Display Diagonal: 167mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |            |           |            |          |             |
| Distance of the Antenna to the EUT surface/edge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |            |           |            |          |             |
| Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Back Side | Front side | Left Edge | Right Edge | Top Edge | Bottom Edge |
| Low Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <25mm     | <25mm      | <25mm     | <25mm      | >25mm    | <25mm       |
| Upper Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <25mm     | <25mm      | <25mm     | >25mm      | <25mm    | >25mm       |
| BT/Wi-Fi Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <25mm     | <25mm      | >25mm     | <25mm      | <25mm    | >25mm       |
| Hotspot mode, Positions for SAR tests                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |            |           |            |          |             |
| Mode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Back Side | Front side | Left Edge | Right Edge | Top Edge | Bottom Edge |
| Low Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Yes       | Yes        | Yes       | Yes        | NA       | Yes         |
| Upper Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Yes       | Yes        | Yes       | NA         | Yes      | NA          |
| BT/Wi-Fi Antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes       | Yes        | NA        | Yes        | Yes      | NA          |
| <p>Note: 1. Per KDB 941225 D06, when the overall device length and width are <math>\geq 9\text{cm} \times 5\text{cm}</math>, the test distance is 10mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.</p> <p>2. For smart phones with an overall diagonal dimension is 178mm. Per KDB 648474 D04, for smart phones with a display diagonal dimension <math>&gt; 15.0\text{ cm}</math> or an overall diagonal dimension <math>&gt; 16.0\text{ cm}</math>, product specific 10-g SAR must be tested as a phablet to determine SAR compliance. For Phablet, Since hotspot mode 1-g <i>reported</i> SAR <math>&lt; 1.2\text{ W/kg}</math>, product specific 10-g SAR is no required.</p> <p>3. Per FCC KDB 447498 D01, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:</p> <p>a) <math>\leq 0.8\text{ W/kg}</math> or <math>2.0\text{ W/kg}</math>, for 1-g or 10-g respectively, when the transmission band is <math>\leq 100\text{MHz}</math></p> <p>b) <math>\leq 0.6\text{ W/kg}</math> or <math>1.5\text{ W/kg}</math>, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.</p> <p>c) <math>\leq 0.4\text{ W/kg}</math> or <math>1.0\text{ W/kg}</math>, for 1-g or 10-g respectively, when the transmission band is <math>\geq 200\text{ MHz}</math>.</p> <p>4. When the original highest measured SAR is <math>\geq 0.80\text{ W/kg}</math>, the measurement was repeated once.</p> <p>5. Per FCC KDB Publication 648474 D04, SAR was evaluated without a headset connected to the device. Since the reported SAR was <math>\leq 1.2\text{ W/kg}</math>, no additional SAR evaluations using a headset cable were required.</p> |           |            |           |            |          |             |

## 10.2 Standalone SAR test exclusion considerations

Per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for product specific 10-g SAR

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Per KDB 447498 D01, when the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

| Bluetooth                 | Distance (mm) | MAX Power (dBm) | Frequency (MHz) | Ratio | Evaluation |
|---------------------------|---------------|-----------------|-----------------|-------|------------|
| Head                      | 5             | 9.50            | 2480            | 2.81  | No         |
| Body-Worn                 | 10            | 9.50            | 2480            | 1.41  | No         |
| Hotspot SAR               | 10            | 9.50            | 2480            | 1.41  | No         |
| Product Specific 10-g SAR | 5             | 9.50            | 2480            | 2.81  | No         |



## 10.3 Measured SAR Results

Note: 1. The value with blue color is the maximum SAR Value of each test band.

2. For GSM, when multiple slots are used, SAR should be tested to account for the maximum source-based time-averaged output power.

3. For WCDMA, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq \frac{1}{4}$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.

4. For LTE, QPSK with 100% RB allocation, SAR is required when and the highest reported SAR for 1 RB and 50% RB allocation in are  $\geq 50\%$  limit (1g).

5. Hotspot (10mm) power level is same as body worn, the 10mm SAR value are more stringent than 15mm, so 10mm SAR value can cover body worn 15mm. In addition, for the 10mm front side of the upper antenna, we use the full power 10mm SAR value to participate in the simultaneous calculation (because it is more stringent than the SAR of the upper antenna front side DAS4 scene), so this product can meet SAR limit under strict conditions

### Head SAR

| Band                | Antenna       | Test Position        | Dist. (mm) | Mode | Power Reduction | RB | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/kg) | Power Drift (dB) | Scaling Factor | Report SAR1g (W/kg) | Plot No. |
|---------------------|---------------|----------------------|------------|------|-----------------|----|--------|-----------------|---------------|----------------------|-----------------------|------------------|----------------|---------------------|----------|
| GSM 850 (Original)  | Low Antenna   | Left cheek           | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 33.50         | 32.60                | 0.120                 | 0.052            | 1.23           | 0.148               | \        |
|                     |               | Left Tilt            | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 33.50         | 32.60                | 0.071                 | 0.160            | 1.23           | 0.087               | \        |
|                     |               | Right cheek          | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 33.50         | 32.60                | 0.028                 | 0.052            | 1.23           | 0.034               | \        |
|                     |               | Right Tilt           | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 33.50         | 32.60                | 0.016                 | 0.027            | 1.23           | 0.020               | \        |
|                     | Upper Antenna | Left cheek           | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 32.50         | 31.54                | 0.501                 | -0.020           | 1.25           | 0.625               | \        |
|                     |               | Left Tilt            | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 32.50         | 31.54                | 0.447                 | 0.010            | 1.25           | 0.558               | \        |
|                     |               | Right cheek          | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 32.50         | 31.54                | 0.606                 | -0.040           | 1.25           | 0.756               | \        |
|                     |               | Right Tilt           | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 32.50         | 31.54                | 0.520                 | -0.040           | 1.25           | 0.649               | \        |
|                     | Upper Antenna | Right cheek Battery2 | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 32.50         | 31.54                | 0.584                 | 0.019            | 1.25           | 0.728               | \        |
| GSM 850 (Variant)   | Upper Antenna | Right cheek          | 0          | GSM  | DS11            | -  | -      | 190/836.6       | 32.50         | 31.54                | 0.609                 | 0.040            | 1.25           | 0.760               | 43       |
| GSM 1900 (Original) | Low Antenna   | Left cheek           | 0          | GSM  | DS11            | -  | -      | 661/1880        | 30.50         | 29.29                | 0.093                 | 0.073            | 1.32           | 0.123               | \        |
|                     |               | Left Tilt            | 0          | GSM  | DS11            | -  | -      | 661/1880        | 30.50         | 29.29                | 0.061                 | 0.010            | 1.32           | 0.081               | \        |
|                     |               | Right cheek          | 0          | GSM  | DS11            | -  | -      | 661/1880        | 30.50         | 29.29                | 0.065                 | 0.034            | 1.32           | 0.086               | \        |
|                     |               | Right Tilt           | 0          | GSM  | DS11            | -  | -      | 661/1880        | 30.50         | 29.29                | 0.043                 | 0.000            | 1.32           | 0.057               | \        |
|                     | Upper Antenna | Left cheek           | 0          | GSM  | DS11            | -  | -      | 661/1880        | 26.50         | 25.33                | 0.304                 | 0.027            | 1.31           | 0.398               | \        |
|                     |               | Left Tilt            | 0          | GSM  | DS11            | -  | -      | 661/1880        | 26.50         | 25.33                | 0.345                 | 0.000            | 1.31           | 0.452               | \        |
|                     |               | Right cheek          | 0          | GSM  | DS11            | -  | -      | 661/1880        | 26.50         | 25.33                | 0.405                 | 0.033            | 1.31           | 0.530               | \        |
|                     |               | Right Tilt           | 0          | GSM  | DS11            | -  | -      | 661/1880        | 26.50         | 25.33                | 0.480                 | -0.040           | 1.31           | 0.628               | \        |
|                     | Upper Antenna | Right Tilt Battery2  | 0          | GSM  | DS11            | -  | -      | 661/1880        | 26.50         | 25.33                | 0.536                 | 0.060            | 1.31           | 0.702               | 43       |
| GSM                 | Upper         | Right Tilt           | 0          | GSM  | DS11            | -  | -      | 661/1880        | 26.50         | 25.33                | 0.384                 | 0.000            | 1.31           | 0.503               | \        |



|                           |                  |                         |   |           |      |     |    |             |       |       |       |        |      |       |    |
|---------------------------|------------------|-------------------------|---|-----------|------|-----|----|-------------|-------|-------|-------|--------|------|-------|----|
| 1900<br>(Variant)         | Antenna          | Battery2                |   |           |      |     |    |             |       |       |       |        |      |       |    |
| WCDMA<br>II<br>(Original) | Low              | Left cheek              | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 24.00 | 23.07 | 0.205 | 0.096  | 1.24 | 0.254 | \  |
|                           |                  | Left Tilt               | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 24.00 | 23.07 | 0.141 | 0.160  | 1.24 | 0.175 | \  |
|                           | Antenna          | Right cheek             | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 24.00 | 23.07 | 0.140 | 0.130  | 1.24 | 0.173 | \  |
|                           |                  | Right Tilt              | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 24.00 | 23.07 | 0.084 | 0.020  | 1.24 | 0.104 | \  |
|                           | Upper            | Left cheek              | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 19.50 | 18.67 | 0.386 | 0.020  | 1.21 | 0.467 | \  |
|                           |                  | Left Tilt               | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 19.50 | 18.67 | 0.430 | 0.040  | 1.21 | 0.521 | \  |
|                           | Antenna          | Right cheek             | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 19.50 | 18.67 | 0.490 | 0.031  | 1.21 | 0.593 | \  |
|                           |                  | Right Tilt              | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 19.50 | 18.67 | 0.581 | 0.010  | 1.21 | 0.703 | 43 |
|                           | Upper<br>Antenna | Right Tilt<br>Battery2  | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 19.50 | 18.67 | 0.495 | 0.028  | 1.21 | 0.599 | \  |
| WCDMA<br>II<br>(Variant)  | Upper<br>Antenna | Right Tilt              | 0 | RMC 12.2K | DSI1 | -   | -  | 9400/1880   | 19.50 | 18.67 | 0.478 | 0.050  | 1.21 | 0.579 | \  |
| WCDMA<br>IV<br>(Original) | Low              | Left cheek              | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 24.00 | 22.88 | 0.090 | 0.090  | 1.29 | 0.116 | \  |
|                           |                  | Left Tilt               | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 24.00 | 22.88 | 0.103 | 0.023  | 1.29 | 0.133 | \  |
|                           | Antenna          | Right cheek             | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 24.00 | 22.88 | 0.142 | -0.036 | 1.29 | 0.184 | \  |
|                           |                  | Right Tilt              | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 24.00 | 22.88 | 0.074 | 0.120  | 1.29 | 0.096 | \  |
|                           | Upper            | Left cheek              | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 17.00 | 16.34 | 0.413 | 0.130  | 1.16 | 0.481 | \  |
|                           |                  | Left Tilt               | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 17.00 | 16.34 | 0.472 | 0.180  | 1.16 | 0.549 | \  |
|                           | Antenna          | Right cheek             | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 17.00 | 16.34 | 0.537 | 0.000  | 1.16 | 0.625 | \  |
|                           |                  | Right Tilt              | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 17.00 | 16.34 | 0.623 | 0.050  | 1.16 | 0.725 | \  |
|                           | Upper<br>Antenna | Right Tilt<br>Battery2  | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 17.00 | 16.34 | 0.635 | 0.100  | 1.16 | 0.739 | 43 |
| WCDMA<br>IV<br>(Variant)  | Upper<br>Antenna | Right Tilt<br>Battery2  | 0 | RMC 12.2K | DSI1 | -   | -  | 1413/1732.6 | 17.00 | 16.34 | 0.483 | 0.010  | 1.16 | 0.562 | \  |
| WCDMA<br>V<br>(Original)  | Low              | Left cheek              | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.47 | 0.137 | 0.060  | 1.13 | 0.155 | \  |
|                           |                  | Left Tilt               | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.47 | 0.081 | 0.160  | 1.13 | 0.091 | \  |
|                           | Antenna          | Right cheek             | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.47 | 0.141 | 0.190  | 1.13 | 0.159 | \  |
|                           |                  | Right Tilt              | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.47 | 0.078 | 0.022  | 1.13 | 0.089 | \  |
|                           | Upper            | Left cheek              | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.37 | 0.507 | -0.030 | 1.16 | 0.586 | \  |
|                           |                  | Left Tilt               | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.37 | 0.492 | -0.020 | 1.16 | 0.569 | \  |
|                           | Antenna          | Right cheek             | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.37 | 0.681 | -0.070 | 1.16 | 0.787 | 43 |
|                           |                  | Right Tilt              | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.37 | 0.611 | 0.010  | 1.16 | 0.706 | \  |
|                           | Upper<br>Antenna | Right cheek<br>Battery2 | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.37 | 0.636 | 0.099  | 1.16 | 0.735 | \  |
| WCDMA<br>V<br>(Variant)   | Upper<br>Antenna | Right cheek             | 0 | RMC 12.2K | DSI1 | -   | -  | 4183/836.6  | 24.00 | 23.37 | 0.667 | 0.020  | 1.16 | 0.771 | \  |
| LTE<br>2                  | Low<br>Antenna   | Left cheek              | 0 | QPSK      | DSI1 | 1   | 50 | 19100/1900  | 25.00 | 24.26 | 0.255 | 0.136  | 1.19 | 0.302 | \  |
|                           |                  | Left cheek              | 0 | QPSK      | DSI1 | 50% | 25 | 18700/1860  | 24.00 | 23.20 | 0.146 | 0.131  | 1.20 | 0.176 | \  |



|                 |               |                     |   |      |      |      |    |              |       |       |       |        |      |       |    |
|-----------------|---------------|---------------------|---|------|------|------|----|--------------|-------|-------|-------|--------|------|-------|----|
| (Original)      |               | Left Tilt           | 0 | QPSK | DSI1 | 1    | 50 | 19100/1900   | 25.00 | 24.26 | 0.153 | 0.024  | 1.19 | 0.181 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 25 | 18700/1860   | 24.00 | 23.20 | 0.108 | 0.030  | 1.20 | 0.130 | \  |
|                 |               | Right cheek         | 0 | QPSK | DSI1 | 1    | 50 | 19100/1900   | 25.00 | 24.26 | 0.167 | 0.018  | 1.19 | 0.198 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 25 | 18700/1860   | 24.00 | 23.20 | 0.105 | 0.073  | 1.20 | 0.126 | \  |
|                 |               | Right Tilt          | 0 | QPSK | DSI1 | 1    | 50 | 19100/1900   | 25.00 | 24.26 | 0.113 | 0.018  | 1.19 | 0.134 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 25 | 18700/1860   | 24.00 | 23.20 | 0.076 | 0.016  | 1.20 | 0.091 | \  |
|                 | Antenna       | Left cheek          | 0 | QPSK | DSI1 | 1    | 50 | 19100/1900   | 18.00 | 17.26 | 0.407 | -0.010 | 1.19 | 0.483 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 19100/1900   | 18.00 | 17.01 | 0.422 | 0.046  | 1.26 | 0.530 | \  |
|                 |               | Left Tilt           | 0 | QPSK | DSI1 | 1    | 50 | 19100/1900   | 18.00 | 17.26 | 0.454 | 0.022  | 1.19 | 0.538 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 19100/1900   | 18.00 | 17.01 | 0.458 | -0.060 | 1.26 | 0.575 | \  |
|                 |               | Right cheek         | 0 | QPSK | DSI1 | 1    | 50 | 19100/1900   | 18.00 | 17.26 | 0.420 | 0.100  | 1.19 | 0.498 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 19100/1900   | 18.00 | 17.01 | 0.440 | 0.050  | 1.26 | 0.553 | \  |
|                 |               | Right Tilt          | 0 | QPSK | DSI1 | 1    | 50 | 19100/1900   | 18.00 | 17.26 | 0.444 | 0.110  | 1.19 | 0.526 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 19100/1900   | 18.00 | 17.01 | 0.474 | -0.132 | 1.26 | 0.595 | \  |
|                 | Upper Antenna | Right Tilt Battery2 | 0 | QPSK | DSI1 | 50%  | 0  | 19100/1900   | 18.00 | 17.01 | 0.531 | 0.010  | 1.26 | 0.667 | 43 |
| LTE 2 (Variant) | Upper Antenna | Right Tilt Battery2 | 0 | QPSK | DSI1 | 50%  | 0  | 19100/1900   | 18.00 | 17.01 | 0.288 | 0.050  | 1.26 | 0.362 | \  |
|                 |               |                     |   |      |      |      |    |              |       |       |       |        |      |       |    |
| (Original)      | Low Antenna   | Left cheek          | 0 | QPSK | DSI1 | 1    | 50 | 20050/1720   | 24.00 | 23.35 | 0.105 | 0.023  | 1.16 | 0.122 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 20050/1720   | 23.00 | 22.08 | 0.070 | 0.056  | 1.24 | 0.086 | \  |
|                 |               | Left Tilt           | 0 | QPSK | DSI1 | 1    | 50 | 20050/1720   | 24.00 | 23.35 | 0.093 | 0.000  | 1.16 | 0.108 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 20050/1720   | 23.00 | 22.08 | 0.069 | 0.190  | 1.24 | 0.085 | \  |
|                 |               | Right cheek         | 0 | QPSK | DSI1 | 1    | 50 | 20050/1720   | 24.00 | 23.35 | 0.103 | 0.030  | 1.16 | 0.120 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 20050/1720   | 23.00 | 22.08 | 0.074 | 0.046  | 1.24 | 0.092 | \  |
|                 |               | Right Tilt          | 0 | QPSK | DSI1 | 1    | 50 | 20050/1720   | 24.00 | 23.35 | 0.079 | 0.160  | 1.16 | 0.091 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 20050/1720   | 23.00 | 22.08 | 0.055 | 0.150  | 1.24 | 0.068 | \  |
|                 | Upper Antenna | Left cheek          | 0 | QPSK | DSI1 | 1    | 50 | 20175/1732.5 | 16.50 | 16.19 | 0.333 | 0.050  | 1.07 | 0.358 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 20300/1745   | 16.50 | 15.95 | 0.282 | 0.000  | 1.14 | 0.320 | \  |
|                 |               | Left Tilt           | 0 | QPSK | DSI1 | 1    | 50 | 20175/1732.5 | 16.50 | 16.19 | 0.344 | -0.180 | 1.07 | 0.369 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 20300/1745   | 16.50 | 15.95 | 0.327 | -0.090 | 1.14 | 0.371 | \  |
|                 |               | Right cheek         | 0 | QPSK | DSI1 | 1    | 50 | 20175/1732.5 | 16.50 | 16.19 | 0.579 | 0.023  | 1.07 | 0.622 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 20300/1745   | 16.50 | 15.95 | 0.564 | 0.030  | 1.14 | 0.640 | \  |
|                 |               | Right Tilt          | 0 | QPSK | DSI1 | 1    | 50 | 20175/1732.5 | 16.50 | 16.19 | 0.782 | 0.090  | 1.07 | 0.840 | 43 |
|                 |               |                     | 0 | QPSK | DSI1 | 1    | 50 | 20050/1720   | 16.50 | 16.07 | 0.735 | 0.012  | 1.10 | 0.811 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 1    | 50 | 20300/1745   | 16.50 | 16.01 | 0.748 | -0.030 | 1.12 | 0.837 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 50%  | 0  | 20300/1745   | 16.50 | 15.95 | 0.703 | 0.010  | 1.14 | 0.798 | \  |
|                 |               |                     | 0 | QPSK | DSI1 | 100% | 0  | 20300/1745   | 16.50 | 15.54 | 0.628 | 0.042  | 1.25 | 0.783 | \  |
|                 |               |                     |   |      |      |      |    |              |       |       |       |        |      |       |    |
|                 | Upper Antenna | Right Tilt SIM2     | 0 | QPSK | DSI1 | 1    | 50 | 20175/1732.5 | 16.50 | 16.19 | 0.758 | 0.040  | 1.07 | 0.814 | \  |
|                 | Upper Antenna | Right Tilt Battery2 | 0 | QPSK | DSI1 | 1    | 50 | 20175/1732.5 | 16.50 | 16.19 | 0.713 | -0.022 | 1.07 | 0.766 | \  |
|                 |               |                     |   |      |      |      |    |              |       |       |       |        |      |       |    |
| LTE             | Upper         | Right Tilt          | 0 | QPSK | DSI1 | 1    | 50 | 20175/1732.5 | 16.50 | 16.19 | 0.468 | 0.050  | 1.07 | 0.503 |    |



|                        |                  |                         |   |      |      |     |    |             |       |       |       |        |      |       |    |
|------------------------|------------------|-------------------------|---|------|------|-----|----|-------------|-------|-------|-------|--------|------|-------|----|
| 4<br>(Variant)         | Antenna          |                         |   |      |      |     |    |             |       |       |       |        |      |       |    |
| LTE<br>5<br>(Original) | Low<br>Antenna   | Left cheek              | 0 | QPSK | DSI1 | 1   | 25 | 20525/836.5 | 24.50 | 23.86 | 0.178 | 0.072  | 1.16 | 0.206 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 20450/829   | 23.50 | 23.13 | 0.140 | 0.015  | 1.09 | 0.152 | \  |
|                        |                  | Left Tilt               | 0 | QPSK | DSI1 | 1   | 25 | 20525/836.5 | 24.50 | 23.86 | 0.099 | 0.070  | 1.16 | 0.114 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 20450/829   | 23.50 | 23.13 | 0.068 | -0.010 | 1.09 | 0.074 | \  |
|                        |                  | Right cheek             | 0 | QPSK | DSI1 | 1   | 25 | 20525/836.5 | 24.50 | 23.86 | 0.178 | 0.036  | 1.16 | 0.206 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 20450/829   | 23.50 | 23.13 | 0.151 | -0.020 | 1.09 | 0.164 | \  |
|                        |                  | Right Tilt              | 0 | QPSK | DSI1 | 1   | 25 | 20525/836.5 | 24.50 | 23.86 | 0.090 | -0.050 | 1.16 | 0.105 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 20450/829   | 23.50 | 23.13 | 0.070 | -0.020 | 1.09 | 0.077 | \  |
|                        | Upper<br>Antenna | Left cheek              | 0 | QPSK | DSI1 | 1   | 25 | 20525/836.5 | 22.50 | 21.86 | 0.303 | -0.070 | 1.16 | 0.351 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 20525/836.5 | 22.50 | 21.51 | 0.328 | 0.011  | 1.26 | 0.412 | \  |
|                        |                  | Left Tilt               | 0 | QPSK | DSI1 | 1   | 25 | 20525/836.5 | 22.50 | 21.86 | 0.272 | -0.070 | 1.16 | 0.315 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 20525/836.5 | 22.50 | 21.51 | 0.291 | 0.030  | 1.26 | 0.366 | \  |
|                        |                  | Right cheek             | 0 | QPSK | DSI1 | 1   | 25 | 20525/836.5 | 22.50 | 21.86 | 0.482 | 0.070  | 1.16 | 0.559 | 43 |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 20525/836.5 | 22.50 | 21.51 | 0.469 | 0.051  | 1.26 | 0.589 | \  |
|                        |                  | Right Tilt              | 0 | QPSK | DSI1 | 1   | 25 | 20525/836.5 | 22.50 | 21.86 | 0.358 | 0.000  | 1.16 | 0.415 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 20525/836.5 | 22.50 | 21.51 | 0.341 | 0.022  | 1.26 | 0.428 | \  |
|                        | Upper<br>Antenna | Right cheek<br>Battery2 | 0 | QPSK | DSI1 | 50% | 0  | 20525/836.5 | 22.50 | 21.51 | 0.479 | 0.018  | 1.26 | 0.602 | \  |
| LTE<br>5<br>(Variant)  | Upper<br>Antenna | Right cheek<br>Battery2 | 0 | QPSK | DSI1 | 50% | 0  | 20525/836.5 | 22.50 | 21.51 | 0.374 | 0.050  | 1.26 | 0.470 | \  |
| LTE<br>7<br>(Original) | Low<br>Antenna   | Left cheek              | 0 | QPSK | DSI1 | 1   | 0  | 21350/2560  | 24.00 | 22.89 | 0.195 | -0.011 | 1.29 | 0.252 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 25 | 21100/2535  | 23.00 | 21.84 | 0.140 | 0.161  | 1.31 | 0.183 | \  |
|                        |                  | Left Tilt               | 0 | QPSK | DSI1 | 1   | 0  | 21350/2560  | 24.00 | 22.89 | 0.138 | 0.160  | 1.29 | 0.178 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 25 | 21100/2535  | 23.00 | 21.84 | 0.101 | 0.038  | 1.31 | 0.132 | \  |
|                        |                  | Right cheek             | 0 | QPSK | DSI1 | 1   | 0  | 21350/2560  | 24.00 | 22.89 | 0.096 | 0.032  | 1.29 | 0.124 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 25 | 21100/2535  | 23.00 | 21.84 | 0.078 | 0.029  | 1.31 | 0.102 | \  |
|                        |                  | Right Tilt              | 0 | QPSK | DSI1 | 1   | 0  | 21350/2560  | 24.00 | 22.89 | 0.204 | 0.040  | 1.29 | 0.263 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 25 | 21100/2535  | 23.00 | 21.84 | 0.161 | 0.091  | 1.31 | 0.210 | \  |
|                        | Upper<br>Antenna | Left cheek              | 0 | QPSK | DSI1 | 1   | 50 | 21100/2535  | 18.00 | 17.25 | 0.304 | 0.090  | 1.19 | 0.361 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 21100/2535  | 18.00 | 16.71 | 0.320 | 0.020  | 1.35 | 0.431 | \  |
|                        |                  | Left Tilt               | 0 | QPSK | DSI1 | 1   | 50 | 21100/2535  | 18.00 | 17.25 | 0.384 | 0.029  | 1.19 | 0.456 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 21100/2535  | 18.00 | 16.71 | 0.270 | 0.000  | 1.35 | 0.363 | \  |
|                        |                  | Right cheek             | 0 | QPSK | DSI1 | 1   | 50 | 21100/2535  | 18.00 | 17.25 | 0.504 | -0.180 | 1.19 | 0.599 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 21100/2535  | 18.00 | 16.71 | 0.464 | -0.010 | 1.35 | 0.624 | \  |
|                        |                  | Right Tilt              | 0 | QPSK | DSI1 | 1   | 50 | 21100/2535  | 18.00 | 17.25 | 0.492 | 0.090  | 1.19 | 0.585 | \  |
|                        |                  |                         | 0 | QPSK | DSI1 | 50% | 0  | 21100/2535  | 18.00 | 16.71 | 0.515 | -0.029 | 1.35 | 0.693 | \  |
|                        | Upper<br>Antenna | Right Tilt<br>Battery2  | 0 | QPSK | DSI1 | 50% | 0  | 21100/2535  | 18.00 | 16.71 | 0.539 | 0.060  | 1.35 | 0.725 | \  |
| LTE<br>7               | Upper<br>Antenna | Right Tilt<br>Battery2  | 0 | QPSK | DSI1 | 50% | 0  | 21100/2535  | 18.00 | 16.71 | 0.625 | -0.020 | 1.35 | 0.841 | 43 |



| (Variant)               |               |                      |   |      |      |     |    |            |       |       |       |        |      |       |    |
|-------------------------|---------------|----------------------|---|------|------|-----|----|------------|-------|-------|-------|--------|------|-------|----|
| LTE<br>38<br>(Original) | Antenna       | Left cheek           | 0 | QPSK | DSI1 | 1   | 50 | 37850/2580 | 24.50 | 23.65 | 0.107 | 0.038  | 1.22 | 0.130 | \  |
|                         |               |                      | 0 | QPSK | DSI1 | 50% | 0  | 38150/2610 | 23.50 | 22.30 | 0.089 | 0.042  | 1.32 | 0.117 | \  |
|                         |               | Left Tilt            | 0 | QPSK | DSI1 | 1   | 50 | 37850/2580 | 24.50 | 23.65 | 0.078 | 0.160  | 1.22 | 0.094 | \  |
|                         |               |                      | 0 | QPSK | DSI1 | 50% | 0  | 38150/2610 | 23.50 | 22.30 | 0.057 | 0.035  | 1.32 | 0.076 | \  |
|                         |               | Right cheek          | 0 | QPSK | DSI1 | 1   | 50 | 37850/2580 | 24.50 | 23.65 | 0.065 | 0.054  | 1.22 | 0.078 | \  |
|                         |               |                      | 0 | QPSK | DSI1 | 50% | 0  | 38150/2610 | 23.50 | 22.30 | 0.053 | 0.037  | 1.32 | 0.070 | \  |
|                         |               | Right Tilt           | 0 | QPSK | DSI1 | 1   | 50 | 37850/2580 | 24.50 | 23.65 | 0.089 | -0.020 | 1.22 | 0.108 | \  |
|                         |               |                      | 0 | QPSK | DSI1 | 50% | 0  | 38150/2610 | 23.50 | 22.30 | 0.074 | 0.050  | 1.32 | 0.098 | \  |
|                         | Antenna       | Left cheek           | 0 | QPSK | DSI1 | 1   | 0  | 37850/2580 | 20.00 | 19.44 | 0.271 | 0.000  | 1.14 | 0.308 | \  |
|                         |               |                      | 0 | QPSK | DSI1 | 50% | 50 | 38000/2595 | 20.00 | 18.94 | 0.228 | 0.030  | 1.28 | 0.291 | \  |
|                         |               | Left Tilt            | 0 | QPSK | DSI1 | 1   | 0  | 37850/2580 | 20.00 | 19.44 | 0.325 | -0.080 | 1.14 | 0.370 | \  |
|                         |               |                      | 0 | QPSK | DSI1 | 50% | 50 | 38000/2595 | 20.00 | 18.94 | 0.248 | 0.000  | 1.28 | 0.317 | \  |
|                         |               | Right cheek          | 0 | QPSK | DSI1 | 1   | 0  | 37850/2580 | 20.00 | 19.44 | 0.407 | 0.031  | 1.14 | 0.463 | \  |
|                         |               |                      | 0 | QPSK | DSI1 | 50% | 50 | 38000/2595 | 20.00 | 18.94 | 0.351 | 0.070  | 1.28 | 0.448 | \  |
|                         |               | Right Tilt           | 0 | QPSK | DSI1 | 1   | 0  | 37850/2580 | 20.00 | 19.44 | 0.387 | 0.070  | 1.14 | 0.440 | \  |
|                         |               |                      | 0 | QPSK | DSI1 | 50% | 50 | 38000/2595 | 20.00 | 18.94 | 0.352 | 0.040  | 1.28 | 0.449 | \  |
|                         | Upper Antenna | Right cheek Battery2 | 0 | QPSK | DSI1 | 1   | 0  | 37850/2580 | 20.00 | 19.44 | 0.402 | 0.032  | 1.14 | 0.457 | \  |
| LTE<br>38<br>(Variant)  | Upper Antenna | Right cheek          | 0 | QPSK | DSI1 | 1   | 0  | 37850/2580 | 20.00 | 19.44 | 0.506 | -0.010 | 1.14 | 0.576 | 43 |

| Band                   | Antenna | Test Position | Dist. (mm) | Mode | Power Reduction | RB  | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/kg) | Power Drift (dB) | Scaling Factor | Report SAR1g (W/kg) | Plot No. |
|------------------------|---------|---------------|------------|------|-----------------|-----|--------|-----------------|---------------|----------------------|-----------------------|------------------|----------------|---------------------|----------|
| LTE<br>12<br>(Variant) | Antenna | Left cheek    | 0          | QPSK | DSI1            | 1   | 25     | 23095/707.5     | 25.50         | 24.77                | 0.166                 | 0.000            | 1.18           | 0.196               | \        |
|                        |         |               | 0          | QPSK | DSI1            | 50% | 13     | 23095/707.5     | 24.50         | 23.50                | 0.115                 | 0.000            | 1.26           | 0.145               | \        |
|                        |         | Left Tilt     | 0          | QPSK | DSI1            | 1   | 25     | 23095/707.5     | 25.50         | 24.77                | 0.092                 | 0.010            | 1.18           | 0.109               | \        |
|                        |         |               | 0          | QPSK | DSI1            | 50% | 13     | 23095/707.5     | 24.50         | 23.50                | 0.068                 | 0.090            | 1.26           | 0.086               | \        |
|                        |         | Right cheek   | 0          | QPSK | DSI1            | 1   | 25     | 23095/707.5     | 25.50         | 24.77                | 0.215                 | 0.000            | 1.18           | 0.254               | \        |
|                        |         |               | 0          | QPSK | DSI1            | 50% | 13     | 23095/707.5     | 24.50         | 23.50                | 0.161                 | 0.000            | 1.26           | 0.203               | \        |
|                        |         | Right Tilt    | 0          | QPSK | DSI1            | 1   | 25     | 23095/707.5     | 25.50         | 24.77                | 0.111                 | -0.014           | 1.18           | 0.131               | \        |
|                        |         |               | 0          | QPSK | DSI1            | 50% | 13     | 23095/707.5     | 24.50         | 23.50                | 0.086                 | 0.021            | 1.26           | 0.108               | \        |
|                        | Antenna | Left cheek    | 0          | QPSK | DSI1            | 1   | 25     | 23130/711       | 25.50         | 25.01                | 0.323                 | 0.020            | 1.12           | 0.362               | \        |
|                        |         |               | 0          | QPSK | DSI1            | 50% | 0      | 23060/704       | 24.50         | 23.44                | 0.316                 | -0.020           | 1.28           | 0.403               | \        |
|                        |         | Left Tilt     | 0          | QPSK | DSI1            | 1   | 0      | 23095/707.5     | 25.50         | 25.01                | 0.277                 | -0.020           | 1.12           | 0.310               | \        |
|                        |         |               | 0          | QPSK | DSI1            | 50% | 0      | 23095/707.5     | 24.50         | 23.44                | 0.265                 | -0.074           | 1.28           | 0.338               | \        |
|                        |         | Right cheek   | 0          | QPSK | DSI1            | 1   | 0      | 23095/707.5     | 25.50         | 25.01                | 0.533                 | -0.050           | 1.12           | 0.597               | 43       |
|                        |         |               | 0          | QPSK | DSI1            | 50% | 0      | 23095/707.5     | 24.50         | 23.44                | 0.491                 | 0.020            | 1.28           | 0.626               | \        |
|                        |         | Right Tilt    | 0          | QPSK | DSI1            | 1   | 0      | 23095/707.5     | 25.50         | 25.01                | 0.486                 | 0.050            | 1.12           | 0.544               | \        |
|                        |         |               | 0          | QPSK | DSI1            | 50% | 0      | 23095/707.5     | 24.50         | 23.44                | 0.362                 | 0.010            | 1.28           | 0.462               | \        |
|                        | Upper   | Right cheek   | 0          | QPSK | DSI1            | 50% | 0      | 23095/707.5     | 24.50         | 23.44                | 0.524                 | 0.000            | 1.28           | 0.668               | \        |



|                        | Antenna       | Battery2            |   |      |      |     |    |             |       |       |       |        |      |       |    |
|------------------------|---------------|---------------------|---|------|------|-----|----|-------------|-------|-------|-------|--------|------|-------|----|
| LTE<br>13<br>(Variant) | Antenna       | Left cheek          | 0 | QPSK | DSI1 | 1   | 25 | 23230/782   | 24.50 | 23.39 | 0.115 | 0.010  | 1.29 | 0.148 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23230/782   | 23.50 | 22.28 | 0.071 | 0.012  | 1.32 | 0.094 | \  |
|                        |               | Left Tilt           | 0 | QPSK | DSI1 | 1   | 25 | 23230/782   | 24.50 | 23.39 | 0.056 | 0.110  | 1.29 | 0.072 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23230/782   | 23.50 | 22.28 | 0.043 | 0.070  | 1.32 | 0.057 | \  |
|                        |               | Right cheek         | 0 | QPSK | DSI1 | 1   | 25 | 23230/782   | 24.50 | 23.39 | 0.076 | -0.010 | 1.29 | 0.098 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23230/782   | 23.50 | 22.28 | 0.069 | 0.012  | 1.32 | 0.091 | \  |
|                        |               | Right Tilt          | 0 | QPSK | DSI1 | 1   | 25 | 23230/782   | 24.50 | 23.39 | 0.043 | -0.021 | 1.29 | 0.056 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23230/782   | 23.50 | 22.28 | 0.034 | -0.014 | 1.32 | 0.045 | \  |
|                        | Antenna       | Left cheek          | 0 | QPSK | DSI1 | 1   | 49 | 23230/782   | 24.50 | 23.41 | 0.188 | -0.060 | 1.29 | 0.242 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23230/782   | 23.50 | 22.33 | 0.135 | -0.050 | 1.31 | 0.177 | \  |
|                        |               | Left Tilt           | 0 | QPSK | DSI1 | 1   | 49 | 23230/782   | 24.50 | 23.41 | 0.166 | 0.050  | 1.29 | 0.213 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23230/782   | 23.50 | 22.33 | 0.138 | -0.040 | 1.31 | 0.181 | \  |
|                        |               | Right cheek         | 0 | QPSK | DSI1 | 1   | 49 | 23230/782   | 24.50 | 23.41 | 0.239 | 0.080  | 1.29 | 0.307 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23230/782   | 23.50 | 22.33 | 0.209 | -0.070 | 1.31 | 0.274 | \  |
|                        |               | Right Tilt          | 0 | QPSK | DSI1 | 1   | 49 | 23230/782   | 24.50 | 23.41 | 0.282 | 0.000  | 1.29 | 0.362 | 43 |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23230/782   | 23.50 | 22.33 | 0.225 | -0.050 | 1.31 | 0.295 | \  |
|                        | Upper Antenna | Right Tilt Battery2 | 0 | QPSK | DSI1 | 1   | 49 | 23230/782   | 24.50 | 23.41 | 0.279 | -0.090 | 1.29 | 0.359 | \  |
| LTE<br>17<br>(Variant) | Antenna       | Left cheek          | 0 | QPSK | DSI1 | 1   | 25 | 23780/709   | 25.50 | 24.61 | 0.176 | -0.180 | 1.23 | 0.216 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 13 | 23780/709   | 24.50 | 23.43 | 0.129 | 0.011  | 1.28 | 0.165 | \  |
|                        |               | Left Tilt           | 0 | QPSK | DSI1 | 1   | 25 | 23780/709   | 25.50 | 24.61 | 0.078 | 0.030  | 1.23 | 0.096 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 13 | 23780/709   | 24.50 | 23.43 | 0.062 | 0.090  | 1.28 | 0.079 | \  |
|                        |               | Right cheek         | 0 | QPSK | DSI1 | 1   | 25 | 23780/709   | 25.50 | 24.61 | 0.196 | -0.029 | 1.23 | 0.241 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 13 | 23780/709   | 24.50 | 23.43 | 0.137 | 0.034  | 1.28 | 0.175 | \  |
|                        |               | Right Tilt          | 0 | QPSK | DSI1 | 1   | 25 | 23780/709   | 25.50 | 24.61 | 0.079 | 0.012  | 1.23 | 0.097 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 13 | 23780/709   | 24.50 | 23.43 | 0.062 | 0.010  | 1.28 | 0.079 | \  |
|                        | Antenna       | Left cheek          | 0 | QPSK | DSI1 | 1   | 25 | 23780/709   | 24.50 | 24.19 | 0.485 | -0.031 | 1.07 | 0.521 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23780/709   | 24.50 | 23.77 | 0.443 | 0.130  | 1.18 | 0.524 | \  |
|                        |               | Left Tilt           | 0 | QPSK | DSI1 | 1   | 25 | 23780/709   | 24.50 | 24.19 | 0.412 | -0.040 | 1.07 | 0.442 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23780/709   | 24.50 | 23.77 | 0.389 | -0.020 | 1.18 | 0.460 | \  |
|                        |               | Right cheek         | 0 | QPSK | DSI1 | 1   | 25 | 23780/709   | 24.50 | 24.19 | 0.409 | 0.020  | 1.07 | 0.439 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23780/709   | 24.50 | 23.77 | 0.425 | 0.020  | 1.18 | 0.503 | \  |
|                        |               | Right Tilt          | 0 | QPSK | DSI1 | 1   | 25 | 23780/709   | 24.50 | 24.19 | 0.493 | -0.042 | 1.07 | 0.529 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 23780/709   | 24.50 | 23.77 | 0.438 | -0.050 | 1.18 | 0.518 | \  |
|                        | Upper Antenna | Right Tilt Battery2 | 0 | QPSK | DSI1 | 1   | 25 | 23780/709   | 24.50 | 24.19 | 0.512 | 0.048  | 1.07 | 0.550 | 43 |
| LTE<br>26<br>(Variant) | Antenna       | Left cheek          | 0 | QPSK | DSI1 | 1   | 47 | 26865/831.5 | 24.50 | 23.45 | 0.160 | 0.001  | 1.27 | 0.204 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 18 | 26865/831.5 | 23.50 | 22.31 | 0.127 | -0.020 | 1.32 | 0.167 | \  |
|                        |               | Left Tilt           | 0 | QPSK | DSI1 | 1   | 47 | 26865/831.5 | 24.50 | 23.45 | 0.107 | 0.020  | 1.27 | 0.136 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 18 | 26865/831.5 | 23.50 | 22.31 | 0.083 | 0.089  | 1.32 | 0.109 | \  |
|                        |               | Right cheek         | 0 | QPSK | DSI1 | 1   | 47 | 26865/831.5 | 24.50 | 23.45 | 0.163 | 0.020  | 1.27 | 0.208 | \  |
|                        |               |                     | 0 | QPSK | DSI1 | 50% | 18 | 26865/831.5 | 23.50 | 22.31 | 0.123 | 0.030  | 1.32 | 0.162 | \  |



|                        |                  |                        |   |      |      |     |    |              |       |       |       |        |      |       |    |
|------------------------|------------------|------------------------|---|------|------|-----|----|--------------|-------|-------|-------|--------|------|-------|----|
| LTE<br>41<br>(Variant) |                  | Right Tilt             | 0 | QPSK | DSI1 | 1   | 47 | 26865/831.5  | 24.50 | 23.45 | 0.082 | 0.050  | 1.27 | 0.104 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 18 | 26865/831.5  | 23.50 | 22.31 | 0.051 | 0.020  | 1.32 | 0.067 | \  |
|                        | Upper<br>Antenna | Left cheek             | 0 | QPSK | DSI1 | 1   | 38 | 26865/831.5  | 24.50 | 23.84 | 0.531 | 0.001  | 1.16 | 0.618 | 43 |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 0  | 26865/831.5  | 23.50 | 22.62 | 0.406 | 0.020  | 1.22 | 0.497 | \  |
|                        |                  | Left Tilt              | 0 | QPSK | DSI1 | 1   | 38 | 26865/831.5  | 24.50 | 23.84 | 0.474 | 0.030  | 1.16 | 0.552 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 0  | 26865/831.5  | 23.50 | 22.62 | 0.360 | 0.045  | 1.22 | 0.441 | \  |
|                        |                  | Right cheek            | 0 | QPSK | DSI1 | 1   | 38 | 26865/831.5  | 24.50 | 23.84 | 0.465 | 0.010  | 1.16 | 0.541 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 0  | 26865/831.5  | 23.50 | 22.62 | 0.378 | 0.040  | 1.22 | 0.463 | \  |
|                        |                  | Right Tilt             | 0 | QPSK | DSI1 | 1   | 38 | 26865/831.5  | 24.50 | 23.84 | 0.470 | 0.023  | 1.16 | 0.547 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 0  | 26865/831.5  | 23.50 | 22.62 | 0.360 | 0.051  | 1.22 | 0.441 | \  |
|                        | Upper<br>Antenna | Left cheek<br>Battery2 | 0 | QPSK | DSI1 | 1   | 38 | 26865/831.5  | 24.50 | 23.84 | 0.475 | 0.042  | 1.16 | 0.553 | \  |
| LTE<br>66<br>(Variant) | Low<br>Antenna   | Left cheek             | 0 | QPSK | DSI1 | 1   | 0  | 39750/2506   | 24.00 | 22.59 | 0.048 | 0.056  | 1.38 | 0.066 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 40185/2549.5 | 23.00 | 21.85 | 0.045 | 0.011  | 1.30 | 0.059 | \  |
|                        |                  | Left Tilt              | 0 | QPSK | DSI1 | 1   | 0  | 39750/2506   | 24.00 | 22.59 | 0.032 | -0.020 | 1.38 | 0.044 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 40185/2549.5 | 23.00 | 21.85 | 0.028 | 0.000  | 1.30 | 0.036 | \  |
|                        |                  | Right cheek            | 0 | QPSK | DSI1 | 1   | 0  | 39750/2506   | 24.00 | 22.59 | 0.022 | 0.020  | 1.38 | 0.030 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 40185/2549.5 | 23.00 | 21.85 | 0.021 | 0.060  | 1.30 | 0.027 | \  |
|                        |                  | Right Tilt             | 0 | QPSK | DSI1 | 1   | 0  | 39750/2506   | 24.00 | 22.59 | 0.031 | 0.100  | 1.38 | 0.043 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 40185/2549.5 | 23.00 | 21.85 | 0.027 | 0.042  | 1.30 | 0.035 | \  |
|                        | Upper<br>Antenna | Left cheek             | 0 | QPSK | DSI1 | 1   | 50 | 41490/2680   | 19.50 | 19.13 | 0.289 | 0.190  | 1.09 | 0.315 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 40620/2593   | 19.50 | 18.68 | 0.302 | 0.090  | 1.21 | 0.365 | \  |
|                        |                  | Left Tilt              | 0 | QPSK | DSI1 | 1   | 50 | 41490/2680   | 19.50 | 19.13 | 0.317 | 0.120  | 1.09 | 0.345 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 40620/2593   | 19.50 | 18.68 | 0.324 | 0.038  | 1.21 | 0.391 | \  |
|                        |                  | Right cheek            | 0 | QPSK | DSI1 | 1   | 50 | 41490/2680   | 19.50 | 19.13 | 0.343 | 0.044  | 1.09 | 0.374 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 40620/2593   | 19.50 | 18.68 | 0.382 | 0.080  | 1.21 | 0.461 | \  |
|                        |                  | Right Tilt             | 0 | QPSK | DSI1 | 1   | 50 | 41490/2680   | 19.50 | 19.13 | 0.418 | -0.010 | 1.09 | 0.455 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 40620/2593   | 19.50 | 18.68 | 0.448 | 0.040  | 1.21 | 0.541 | 43 |
|                        | Upper<br>Antenna | Right Tilt<br>Battery2 | 0 | QPSK | DSI1 | 50% | 25 | 40620/2593   | 19.50 | 18.68 | 0.426 | -0.090 | 1.21 | 0.515 | \  |
| LTE<br>66<br>(Variant) | Low<br>Antenna   | Left cheek             | 0 | QPSK | DSI1 | 1   | 50 | 132322/1745  | 24.00 | 23.18 | 0.100 | 0.050  | 1.21 | 0.121 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 132322/1745  | 23.00 | 21.69 | 0.077 | 0.085  | 1.35 | 0.104 | \  |
|                        |                  | Left Tilt              | 0 | QPSK | DSI1 | 1   | 50 | 132322/1745  | 24.00 | 23.18 | 0.082 | 0.050  | 1.21 | 0.099 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 132322/1745  | 23.00 | 21.69 | 0.063 | 0.065  | 1.35 | 0.085 | \  |
|                        |                  | Right cheek            | 0 | QPSK | DSI1 | 1   | 50 | 132322/1745  | 24.00 | 23.18 | 0.081 | 0.020  | 1.21 | 0.098 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 132322/1745  | 23.00 | 21.69 | 0.059 | 0.050  | 1.35 | 0.080 | \  |
|                        |                  | Right Tilt             | 0 | QPSK | DSI1 | 1   | 50 | 132322/1745  | 24.00 | 23.18 | 0.064 | 0.064  | 1.21 | 0.077 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 25 | 132322/1745  | 23.00 | 21.69 | 0.054 | 0.050  | 1.35 | 0.073 | \  |
|                        | Upper<br>Antenna | Left cheek             | 0 | QPSK | DSI1 | 1   | 50 | 132322/1745  | 17.00 | 16.48 | 0.384 | -0.031 | 1.13 | 0.433 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 0  | 132572/1770  | 17.00 | 16.02 | 0.210 | -0.020 | 1.25 | 0.263 | \  |
|                        |                  | Left Tilt              | 0 | QPSK | DSI1 | 1   | 50 | 132322/1745  | 17.00 | 16.48 | 0.307 | -0.080 | 1.13 | 0.346 | \  |
|                        |                  |                        | 0 | QPSK | DSI1 | 50% | 0  | 132572/1770  | 17.00 | 16.02 | 0.248 | -0.020 | 1.25 | 0.311 | \  |
|                        |                  | Right cheek            | 0 | QPSK | DSI1 | 1   | 50 | 132322/1745  | 17.00 | 16.48 | 0.418 | -0.010 | 1.13 | 0.471 | \  |



## SAR Test Report

Report No.: R2111A1057-S1

|  |               |                     |   |      |      |     |    |             |       |       |       |       |      |       |    |
|--|---------------|---------------------|---|------|------|-----|----|-------------|-------|-------|-------|-------|------|-------|----|
|  |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 132572/1770 | 17.00 | 16.02 | 0.338 | 0.060 | 1.25 | 0.424 | \  |
|  |               | Right Tilt          | 0 | QPSK | DSI1 | 1   | 50 | 132322/1745 | 17.00 | 16.48 | 0.531 | 0.058 | 1.13 | 0.599 | 43 |
|  |               |                     | 0 | QPSK | DSI1 | 50% | 0  | 132572/1770 | 17.00 | 16.02 | 0.465 | 0.060 | 1.25 | 0.583 | \  |
|  | Upper Antenna | Right Tilt Battery2 | 0 | QPSK | DSI1 | 1   | 50 | 132322/1745 | 17.00 | 16.48 | 0.448 | 0.023 | 1.13 | 0.505 | \  |

| Band                 | Antenna | Test Position       | Dist. (mm) | Mode           | Duty Cycle | Power Reduction | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/kg) | Power Drift (dB) | Scaling Factor | Report SAR1g (W/kg) | Plot No. |
|----------------------|---------|---------------------|------------|----------------|------------|-----------------|-----------------|---------------|----------------------|-----------------------|------------------|----------------|---------------------|----------|
| Wi-Fi 2.4G           | Wi-Fi   | Left cheek          | 0          | 802.11b        | 98.0%      | Receiver on     | 1/2412          | 16.50         | 14.65                | 0.365                 | 0.044            | 1.56           | 0.570               | 43       |
|                      |         | Left Tilt           | 0          | 802.11b        | 98.0%      | Receiver on     | 1/2412          | 16.50         | 14.65                | 0.289                 | 0.130            | 1.56           | 0.452               | \        |
|                      |         | Right cheek         | 0          | 802.11b        | 98.0%      | Receiver on     | 1/2412          | 16.50         | 14.65                | 0.174                 | -0.050           | 1.56           | 0.272               | \        |
|                      |         | Right Tilt          | 0          | 802.11b        | 98.0%      | Receiver on     | 1/2412          | 16.50         | 14.65                | 0.160                 | 0.024            | 1.56           | 0.250               | \        |
|                      |         | Left cheek Battery2 | 0          | 802.11b        | 98.0%      | Receiver on     | 1/2412          | 16.50         | 14.65                | 0.342                 | 0.022            | 1.56           | 0.534               | \        |
| Wi-Fi 2.4G (Variant) | Wi-Fi   | Left cheek          | 0          | 802.11b        | 98.0%      | Receiver on     | 1/2412          | 16.50         | 14.65                | 0.362                 | 0.140            | 1.56           | 0.566               | \        |
| U-NII-1 (Original)   | Wi-Fi   | Left cheek          | 0          | 802.11a        | 98.0%      | Receiver on     | 40/5200         | 15.50         | 13.76                | 0.329                 | 0.020            | 1.52           | 0.501               | \        |
|                      |         | Left Tilt           | 0          | 802.11a        | 98.0%      | Receiver on     | 40/5200         | 15.50         | 13.76                | 0.312                 | 0.010            | 1.52           | 0.475               | \        |
|                      |         | Right cheek         | 0          | 802.11a        | 98.0%      | Receiver on     | 40/5200         | 15.50         | 13.76                | 0.193                 | 0.040            | 1.52           | 0.294               | \        |
|                      |         | Right Tilt          | 0          | 802.11a        | 98.0%      | Receiver on     | 40/5200         | 15.50         | 13.76                | 0.209                 | 0.078            | 1.52           | 0.318               | \        |
|                      |         | Left cheek Battery2 | 0          | 802.11a        | 98.0%      | Receiver on     | 40/5200         | 15.50         | 13.76                | 0.306                 | -0.015           | 1.52           | 0.466               | \        |
| U-NII-1 (Variant)    | Wi-Fi   | Left cheek          | 0          | 802.11a        | 98.0%      | Receiver on     | 40/5200         | 15.50         | 13.76                | 0.198                 | 0.134            | 1.52           | 0.302               | \        |
| U-NII-2A (Original)  | Wi-Fi   | Left cheek          | 0          | 802.11a        | 98.0%      | Receiver on     | 64/5320         | 15.50         | 13.58                | 0.207                 | 0.190            | 1.59           | 0.329               | \        |
|                      |         | Left Tilt           | 0          | 802.11a        | 98.0%      | Receiver on     | 64/5320         | 15.50         | 13.58                | 0.255                 | 0.026            | 1.59           | 0.405               | \        |
|                      |         | Right cheek         | 0          | 802.11a        | 98.0%      | Receiver on     | 64/5320         | 15.50         | 13.58                | 0.188                 | 0.025            | 1.59           | 0.298               | \        |
|                      |         | Right Tilt          | 0          | 802.11a        | 98.0%      | Receiver on     | 64/5320         | 15.50         | 13.58                | 0.187                 | 0.037            | 1.59           | 0.297               | \        |
|                      |         | Left Tilt Battery2  | 0          | 802.11a        | 98.0%      | Receiver on     | 64/5320         | 15.50         | 13.58                | 0.186                 | 0.000            | 1.59           | 0.295               | \        |
| U-NII-2A (Variant)   | Wi-Fi   | Left Tilt           | 0          | 802.11a        | 98.0%      | Receiver on     | 64/5320         | 15.50         | 13.58                | 0.173                 | 0.083            | 1.59           | 0.275               | \        |
| U-NII-2C (Original)  | Wi-Fi   | Left cheek          | 0          | 802.11a        | 98.0%      | Receiver on     | 120/5600        | 15.50         | 14.08                | 0.240                 | 0.010            | 1.42           | 0.340               | \        |
|                      |         | Left Tilt           | 0          | 802.11a        | 98.0%      | Receiver on     | 120/5600        | 15.50         | 14.08                | 0.301                 | 0.020            | 1.42           | 0.426               | \        |
|                      |         | Right cheek         | 0          | 802.11a        | 98.0%      | Receiver on     | 120/5600        | 15.50         | 14.08                | 0.212                 | -0.016           | 1.42           | 0.300               | \        |
|                      |         | Right Tilt          | 0          | 802.11a        | 98.0%      | Receiver on     | 120/5600        | 15.50         | 14.08                | 0.286                 | 0.050            | 1.42           | 0.405               | \        |
|                      |         | Left Tilt Battery2  | 0          | 802.11a        | 98.0%      | Receiver on     | 120/5600        | 15.50         | 14.08                | 0.342                 | 0.038            | 1.42           | 0.484               | 43       |
| U-NII-2C (Variant)   | Wi-Fi   | Left Tilt Battery2  | 0          | 802.11a        | 98.0%      | Receiver on     | 120/5600        | 15.50         | 14.08                | 0.169                 | 0.063            | 1.42           | 0.239               | \        |
| U-NII-3              | Wi-Fi   | Left cheek          | 0          | 802.11ac-VHT80 | 90.0%      | Receiver on     | 155/5775        | 14.50         | 13.05                | 0.156                 | 0.096            | 1.55           | 0.242               | \        |



# SAR Test Report

Report No.: R2111A1057-S1

|                         |       |                        |   |                |       |             |          |       |       |       |       |      |       |   |
|-------------------------|-------|------------------------|---|----------------|-------|-------------|----------|-------|-------|-------|-------|------|-------|---|
| (Original)              |       | Left Tilt              | 0 | 802.11ac-VHT80 | 90.0% | Receiver on | 155/5775 | 14.50 | 13.05 | 0.182 | 0.111 | 1.55 | 0.282 | \ |
|                         |       | Right cheek            | 0 | 802.11ac-VHT80 | 90.0% | Receiver on | 155/5775 | 14.50 | 13.05 | 0.128 | 0.099 | 1.55 | 0.199 | \ |
|                         |       | Right Tilt             | 0 | 802.11ac-VHT80 | 90.0% | Receiver on | 155/5775 | 14.50 | 13.05 | 0.145 | 0.096 | 1.55 | 0.225 | \ |
|                         |       | Left Tilt<br>Battery2  | 0 | 802.11ac-VHT80 | 90.0% | Receiver on | 155/5775 | 14.50 | 13.05 | 0.197 | 0.032 | 1.55 | 0.306 | \ |
| U-NII-3<br>(Variant)    | Wi-Fi | Left Tilt<br>Battery2  | 0 | 802.11ac-VHT80 | 90.0% | Receiver on | 155/5775 | 14.50 | 13.05 | 0.092 | 0.086 | 1.55 | 0.143 | \ |
| Bluetooth<br>(Original) | BT    | Right Tilt             | 0 | DH5            | 46.0% | -           | 78/2480  | 9.50  | 7.95  | 0.047 | 0.043 | 3.11 | 0.146 | \ |
|                         | BT    | Right Tilt<br>Battery2 | 0 | DH5            | 46.0% | -           | 78/2480  | 9.50  | 7.95  | 0.043 | 0.000 | 3.11 | 0.134 | \ |
| Bluetooth<br>(Variant)  | BT    | Right Tilt             | 0 | DH5            | 46.0% | -           | 78/2480  | 9.50  | 7.95  | 0.043 | 0.016 | 3.11 | 0.134 | \ |

## Body SAR

| Band                   | Antenna       | Test Position         | Dist. (mm) | Mode           | Power Reduction | RB  | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/kg) | Power Drift (dB) | Scaling Factor | Report SAR1g (W/kg) | Plot No. |
|------------------------|---------------|-----------------------|------------|----------------|-----------------|-----|--------|-----------------|---------------|----------------------|-----------------------|------------------|----------------|---------------------|----------|
| GSM850<br>(Original)   | Low Antenna   | Back Side             | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 190/836.6       | 32.00         | 30.60                | 0.283                 | -0.170           | 1.38           | 0.391               | \        |
|                        |               | Back Side             | 10         | CS             | DSI4            | -   | -      | 190/836.6       | 33.50         | 32.60                | 0.295                 | 0.015            | 1.23           | 0.363               | \        |
|                        |               | Front Side            | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 190/836.6       | 32.00         | 30.60                | 0.164                 | 0.020            | 1.38           | 0.226               | \        |
|                        |               | Left Edge             | 10         | GPRS 2TX Slots | DSI2            | -   | -      | 190/836.6       | 32.00         | 30.60                | 0.000                 | 0.000            | 1.38           | 0.000               | \        |
|                        |               | Right Edge            | 10         | GPRS 2TX Slots | DSI2            | -   | -      | 190/836.6       | 32.00         | 30.60                | 0.059                 | 0.011            | 1.38           | 0.081               | \        |
|                        |               | Top Edge              | 10         | N/A            | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A                   | N/A              | N/A            | N/A                 | \        |
|                        |               | Bottom Edge           | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 190/836.6       | 32.00         | 30.60                | 0.193                 | 0.038            | 1.38           | 0.266               | \        |
|                        | Upper Antenna | Back Side             | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 190/836.6       | 32.00         | 30.35                | 0.324                 | 0.024            | 1.46           | 0.474               | \        |
|                        |               | Front Side            | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 190/836.6       | 32.00         | 30.35                | 0.118                 | 0.030            | 1.46           | 0.173               | \        |
|                        |               | Left Edge             | 10         | GPRS 2TX Slots | DSI2            | -   | -      | 190/836.6       | 32.00         | 30.35                | 0.092                 | 0.028            | 1.46           | 0.135               | \        |
|                        |               | Right Edge            | 10         | GPRS 2TX Slots | DSI2            | -   | -      | 190/836.6       | 32.00         | 30.35                | 0.065                 | 0.011            | 1.46           | 0.095               | \        |
|                        |               | Top Edge              | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 190/836.6       | 32.00         | 30.35                | 0.129                 | 0.031            | 1.46           | 0.189               | \        |
|                        |               | Bottom Edge           | 10         | N/A            | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A                   | N/A              | N/A            | N/A                 | \        |
|                        | Upper Antenna | Back Side<br>Battery2 | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 190/836.6       | 32.00         | 30.35                | 0.381                 | 0.048            | 1.46           | 0.557               | 43       |
| GSM850<br>(Variant)    | Upper Antenna | Back Side<br>Battery2 | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 190/836.6       | 32.00         | 30.35                | 0.153                 | -0.044           | 1.46           | 0.224               | \        |
| GSM 1900<br>(Original) | Low Antenna   | Back Side             | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 661/1880        | 29.00         | 27.60                | 0.571                 | 0.015            | 1.38           | 0.788               | \        |
|                        |               | Back Side             | 10         | CS             | DSI4            | -   | -      | 661/1880        | 30.50         | 29.29                | 0.378                 | 0.028            | 1.32           | 0.499               | \        |
|                        |               | Front Side            | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 661/1880        | 29.00         | 27.60                | 0.272                 | 0.000            | 1.38           | 0.375               | \        |
|                        |               | Left Edge             | 10         | GPRS 2TX Slots | DSI2            | -   | -      | 661/1880        | 29.00         | 27.60                | 0.159                 | -0.040           | 1.38           | 0.219               | \        |
|                        |               | Right Edge            | 10         | GPRS 2TX Slots | DSI2            | -   | -      | 661/1880        | 29.00         | 27.60                | 0.000                 | 0.000            | 1.38           | 0.000               | \        |
|                        |               | Top Edge              | 10         | N/A            | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A                   | N/A              | N/A            | N/A                 | \        |
|                        |               | Bottom Edge           | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 661/1880        | 29.00         | 27.60                | 0.712                 | 0.030            | 1.38           | 0.983               | \        |
|                        |               | Bottom Edge           | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 512/1850.2      | 29.00         | 27.41                | 0.658                 | 0.010            | 1.44           | 0.949               | \        |
|                        |               | Bottom Edge           | 10         | GPRS 2TX Slots | DSI4            | -   | -      | 810/1909.8      | 29.00         | 27.62                | 0.682                 | 0.022            | 1.37           | 0.937               | \        |



|                     |               |                      |    |                |      |     |     |             |       |       |       |        |      |       |    |
|---------------------|---------------|----------------------|----|----------------|------|-----|-----|-------------|-------|-------|-------|--------|------|-------|----|
|                     | Upper Antenna | Back Side            | 10 | GPRS 4TX Slots | DSI4 | -   | -   | 661/1880    | 22.50 | 21.14 | 0.196 | 0.052  | 1.37 | 0.268 | \  |
|                     |               | Front Side           | 10 | GPRS 4TX Slots | DSI4 | -   | -   | 661/1880    | 22.50 | 21.14 | 0.129 | 0.046  | 1.37 | 0.176 | \  |
|                     |               | Left Edge            | 10 | GPRS 2TX Slots | DSI2 | -   | -   | 661/1880    | 29.00 | 27.58 | 0.048 | 0.100  | 1.39 | 0.067 | \  |
|                     |               | Right Edge           | 10 | GPRS 2TX Slots | DSI2 | -   | -   | 661/1880    | 29.00 | 27.58 | 0.000 | 0.000  | 1.39 | 0.000 | \  |
|                     |               | Top Edge             | 10 | GPRS 4TX Slots | DSI4 | -   | -   | 661/1880    | 22.50 | 21.14 | 0.282 | 0.024  | 1.37 | 0.386 | \  |
|                     | Low Antenna   | Bottom Edge Battery2 | 10 | GPRS 2TX Slots | DSI4 | -   | -   | 661/1880    | 29.00 | 27.60 | 0.684 | -0.011 | 1.38 | 0.944 | \  |
| GSM 1900 (Variant)  | Low Antenna   | Bottom Edge          | 10 | GPRS 2TX Slots | DSI4 | -   | -   | 661/1880    | 29.00 | 27.60 | 0.781 | -0.130 | 1.38 | 1.078 | 43 |
| WCDMA II (Original) | Low Antenna   | Back Side            | 10 | RMC            | DSI4 | -   | -   | 9400/1880   | 20.50 | 19.55 | 0.501 | -0.030 | 1.24 | 0.624 | \  |
|                     |               | Front Side           | 10 | RMC            | DSI4 | -   | -   | 9400/1880   | 20.50 | 19.55 | 0.199 | 0.029  | 1.24 | 0.248 | \  |
|                     |               | Left Edge            | 10 | RMC            | DSI2 | -   | -   | 9400/1880   | 25.00 | 24.12 | 0.288 | 0.040  | 1.22 | 0.353 | \  |
|                     |               | Right Edge           | 10 | RMC            | DSI2 | -   | -   | 9400/1880   | 25.00 | 24.12 | 0.042 | -0.018 | 1.22 | 0.051 | \  |
|                     |               | Top Edge             | 10 | N/A            | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                     |               | Bottom Edge          | 10 | RMC            | DSI4 | -   | -   | 9400/1880   | 20.50 | 19.55 | 0.625 | 0.140  | 1.24 | 0.778 | 43 |
|                     | Upper Antenna | Back Side            | 10 | RMC            | DSI4 | -   | -   | 9400/1880   | 18.50 | 17.78 | 0.151 | 0.025  | 1.18 | 0.178 | \  |
|                     |               | Front Side           | 10 | RMC            | DSI4 | -   | -   | 9400/1880   | 18.50 | 17.78 | 0.100 | 0.039  | 1.18 | 0.118 | \  |
|                     |               | Left Edge            | 10 | RMC            | DSI2 | -   | -   | 9400/1880   | 25.00 | 24.22 | 0.094 | 0.022  | 1.20 | 0.112 | \  |
|                     |               | Right Edge           | 10 | RMC            | DSI2 | -   | -   | 9400/1880   | 25.00 | 24.22 | 0.045 | -0.080 | 1.20 | 0.054 | \  |
|                     |               | Top Edge             | 10 | RMC            | DSI4 | -   | -   | 9400/1880   | 18.50 | 17.78 | 0.209 | 0.019  | 1.18 | 0.247 | \  |
|                     | Low Antenna   | Bottom Edge Battery2 | 10 | RMC            | DSI4 | -   | -   | 9400/1880   | 20.50 | 19.55 | 0.614 | 0.032  | 1.24 | 0.764 | \  |
| WCDMA II (Variant)  | Low Antenna   | Bottom Edge          | 10 | RMC            | DSI4 | -   | -   | 9400/1880   | 20.50 | 19.55 | 0.487 | 0.021  | 1.24 | 0.606 | \  |
| WCDMA IV (Original) | Low Antenna   | Back Side            | 10 | RMC            | DSI4 | -   | -   | 1413/1732.6 | 21.00 | 20.20 | 0.563 | 0.031  | 1.20 | 0.677 | \  |
|                     |               | Front Side           | 10 | RMC            | DSI4 | -   | -   | 1413/1732.6 | 21.00 | 20.20 | 0.209 | 0.029  | 1.20 | 0.251 | \  |
|                     |               | Left Edge            | 10 | RMC            | DSI2 | -   | -   | 1413/1732.6 | 24.00 | 23.20 | 0.192 | -0.080 | 1.20 | 0.231 | \  |
|                     |               | Right Edge           | 10 | RMC            | DSI2 | -   | -   | 1413/1732.6 | 24.00 | 23.20 | 0.051 | 0.000  | 1.20 | 0.061 | \  |
|                     |               | Top Edge             | 10 | N/A            | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                     |               | Bottom Edge          | 10 | RMC            | DSI4 | -   | -   | 1413/1732.6 | 21.00 | 20.20 | 0.696 | 0.025  | 1.20 | 0.837 | \  |
|                     |               | Bottom Edge          | 10 | RMC            | DSI4 | -   | -   | 1312/1712.4 | 21.00 | 20.14 | 0.675 | 0.080  | 1.22 | 0.823 | \  |
|                     |               | Bottom Edge          | 10 | RMC            | DSI4 | -   | -   | 1513/1752.6 | 21.00 | 20.12 | 0.652 | 0.010  | 1.22 | 0.798 | \  |
|                     | Upper Antenna | Back Side            | 10 | RMC            | DSI4 | -   | -   | 1413/1732.6 | 19.00 | 18.23 | 0.436 | 0.013  | 1.19 | 0.521 | \  |
|                     |               | Front Side           | 10 | RMC            | DSI4 | -   | -   | 1413/1732.6 | 19.00 | 18.23 | 0.246 | 0.060  | 1.19 | 0.294 | \  |
|                     |               | Left Edge            | 10 | RMC            | DSI2 | -   | -   | 1413/1732.6 | 24.00 | 23.03 | 0.125 | 0.072  | 1.25 | 0.156 | \  |
|                     |               | Right Edge           | 10 | RMC            | DSI2 | -   | -   | 1413/1732.6 | 24.00 | 23.03 | 0.054 | -0.040 | 1.25 | 0.068 | \  |
|                     |               | Top Edge             | 10 | RMC            | DSI4 | -   | -   | 1413/1732.6 | 19.00 | 18.23 | 0.506 | 0.010  | 1.19 | 0.604 | \  |
|                     |               | Bottom Edge          | 10 | N/A            | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                     | Low Antenna   | Bottom Edge Battery2 | 10 | RMC            | DSI4 | -   | -   | 1413/1732.6 | 21.00 | 20.20 | 0.735 | 0.028  | 1.20 | 0.884 | 43 |
| WCDMA               | Low           | Bottom Edge          | 10 | RMC            | DSI4 | -   | -   | 1413/1732.6 | 21.00 | 20.20 | 0.555 | 0.020  | 1.20 | 0.667 | \  |



| IV<br>(Variant)          | Antenna          | Battery2              |    |      |      |     |     |            |       |       |       |        |      |          |
|--------------------------|------------------|-----------------------|----|------|------|-----|-----|------------|-------|-------|-------|--------|------|----------|
| WCDMA<br>V<br>(Original) | Low<br>Antenna   | Back Side             | 10 | RMC  | DSI4 | -   | -   | 4183/836.6 | 24.00 | 23.47 | 0.326 | 0.049  | 1.13 | 0.368 \  |
|                          |                  | Front Side            | 10 | RMC  | DSI4 | -   | -   | 4183/836.6 | 24.00 | 23.47 | 0.186 | 0.026  | 1.13 | 0.210 \  |
|                          |                  | Left Edge             | 10 | RMC  | DSI2 | -   | -   | 4183/836.6 | 25.00 | 24.50 | 0.000 | 0.081  | 1.12 | 0.000 \  |
|                          |                  | Right Edge            | 10 | RMC  | DSI2 | -   | -   | 4183/836.6 | 25.00 | 24.50 | 0.092 | 0.011  | 1.12 | 0.103 \  |
|                          |                  | Top Edge              | 10 | N/A  | N/A  | N/A | N/A | N/A        | N/A   | N/A   | N/A   | N/A    | N/A  | N/A \    |
|                          |                  | Bottom Edge           | 10 | RMC  | DSI4 | -   | -   | 4183/836.6 | 24.00 | 23.47 | 0.222 | 0.035  | 1.13 | 0.251 \  |
|                          | Upper<br>Antenna | Back Side             | 10 | RMC  | DSI4 | -   | -   | 4183/836.6 | 24.00 | 23.37 | 0.340 | 0.180  | 1.16 | 0.393 43 |
|                          |                  | Front Side            | 10 | RMC  | DSI4 | -   | -   | 4183/836.6 | 24.00 | 23.37 | 0.212 | 0.069  | 1.16 | 0.245 \  |
|                          |                  | Left Edge             | 10 | RMC  | DSI2 | -   | -   | 4183/836.6 | 25.00 | 24.51 | 0.150 | 0.024  | 1.12 | 0.168 \  |
|                          |                  | Right Edge            | 10 | RMC  | DSI2 | -   | -   | 4183/836.6 | 25.00 | 24.51 | 0.086 | 0.090  | 1.12 | 0.096 \  |
|                          |                  | Top Edge              | 10 | RMC  | DSI4 | -   | -   | 4183/836.6 | 24.00 | 23.37 | 0.223 | 0.012  | 1.16 | 0.258 \  |
|                          |                  | Bottom Edge           | 10 | N/A  | N/A  | N/A | N/A | N/A        | N/A   | N/A   | N/A   | N/A    | N/A  | N/A \    |
|                          | Upper<br>Antenna | Back Side<br>Battery2 | 10 | RMC  | DSI4 | -   | -   | 4183/836.6 | 24.00 | 23.37 | 0.298 | 0.030  | 1.16 | 0.345 \  |
| WCDMA<br>V<br>(Variant)  | Upper<br>Antenna | Back Side             | 10 | RMC  | DSI4 | -   | -   | 4183/836.6 | 24.00 | 23.37 | 0.325 | 0.054  | 1.16 | 0.376 \  |
| LTE 2<br>(Original)      | Low<br>Antenna   | Back Side             | 10 | QPSK | DSI4 | 1   | 50  | 18700/1860 | 20.50 | 19.66 | 0.452 | 0.012  | 1.21 | 0.548 \  |
|                          |                  |                       | 10 | QPSK | DSI4 | 50% | 0   | 18700/1860 | 20.50 | 19.94 | 0.442 | 0.038  | 1.14 | 0.503 \  |
|                          |                  | Front Side            | 10 | QPSK | DSI4 | 1   | 50  | 18700/1860 | 20.50 | 19.66 | 0.203 | -0.090 | 1.21 | 0.246 \  |
|                          |                  |                       | 10 | QPSK | DSI4 | 50% | 0   | 18700/1860 | 20.50 | 19.94 | 0.195 | 0.011  | 1.14 | 0.222 \  |
|                          |                  | Left Edge             | 10 | QPSK | DSI2 | 1   | 50  | 19100/1900 | 25.00 | 24.26 | 0.338 | 0.054  | 1.19 | 0.401 \  |
|                          |                  |                       | 10 | QPSK | DSI2 | 50% | 25  | 18700/1860 | 24.00 | 23.20 | 0.241 | 0.020  | 1.20 | 0.290 \  |
|                          |                  | Right Edge            | 10 | QPSK | DSI2 | 1   | 50  | 19100/1900 | 25.00 | 24.26 | 0.056 | 0.046  | 1.19 | 0.066 \  |
|                          |                  |                       | 10 | QPSK | DSI2 | 50% | 25  | 18700/1860 | 24.00 | 23.20 | 0.051 | 0.080  | 1.20 | 0.061 \  |
|                          |                  | Top Edge              | 10 | N/A  | N/A  | N/A | N/A | N/A        | N/A   | N/A   | N/A   | N/A    | N/A  | N/A \    |
|                          |                  |                       | 10 | N/A  | N/A  | N/A | N/A | N/A        | N/A   | N/A   | N/A   | N/A    | N/A  | N/A \    |
|                          |                  | Bottom Edge           | 10 | QPSK | DSI4 | 1   | 50  | 18700/1860 | 20.50 | 19.66 | 0.650 | 0.130  | 1.21 | 0.789 43 |
|                          |                  |                       | 10 | QPSK | DSI4 | 50% | 0   | 18700/1860 | 20.50 | 19.94 | 0.586 | 0.160  | 1.14 | 0.667 \  |
|                          | Upper<br>Antenna | Back Side             | 10 | QPSK | DSI4 | 1   | 50  | 18900/1880 | 19.50 | 18.75 | 0.185 | 0.030  | 1.19 | 0.220 \  |
|                          |                  |                       | 10 | QPSK | DSI4 | 50% | 25  | 18900/1880 | 19.50 | 18.64 | 0.191 | 0.069  | 1.22 | 0.233 \  |
|                          |                  | Front Side            | 10 | QPSK | DSI4 | 1   | 50  | 18900/1880 | 19.50 | 18.75 | 0.124 | 0.027  | 1.19 | 0.147 \  |
|                          |                  |                       | 10 | QPSK | DSI4 | 50% | 25  | 18900/1880 | 19.50 | 18.64 | 0.125 | 0.030  | 1.22 | 0.152 \  |
|                          |                  | Left Edge             | 10 | QPSK | DSI2 | 1   | 50  | 18700/1860 | 25.00 | 24.40 | 0.077 | 0.100  | 1.15 | 0.088 \  |
|                          |                  |                       | 10 | QPSK | DSI2 | 50% | 0   | 18700/1860 | 24.00 | 23.00 | 0.060 | 0.020  | 1.26 | 0.076 \  |
|                          |                  | Right Edge            | 10 | QPSK | DSI2 | 1   | 50  | 18700/1860 | 25.00 | 24.40 | 0.046 | 0.048  | 1.15 | 0.053 \  |
|                          |                  |                       | 10 | QPSK | DSI2 | 50% | 0   | 18700/1860 | 24.00 | 23.00 | 0.043 | 0.031  | 1.26 | 0.054 \  |
|                          |                  | Top Edge              | 10 | QPSK | DSI4 | 1   | 50  | 18900/1880 | 19.50 | 18.75 | 0.265 | -0.190 | 1.19 | 0.315 \  |
|                          |                  |                       | 10 | QPSK | DSI4 | 50% | 25  | 18900/1880 | 19.50 | 18.64 | 0.272 | 0.020  | 1.22 | 0.332 \  |
|                          |                  | Bottom Edge           | 10 | N/A  | N/A  | N/A | N/A | N/A        | N/A   | N/A   | N/A   | N/A    | N/A  | N/A \    |
|                          |                  |                       | 10 | N/A  | N/A  | N/A | N/A | N/A        | N/A   | N/A   | N/A   | N/A    | N/A  | N/A \    |



|                  |               |                      |    |      |      |     |     |              |       |       |       |        |      |       |    |
|------------------|---------------|----------------------|----|------|------|-----|-----|--------------|-------|-------|-------|--------|------|-------|----|
|                  | Low Antenna   | Bottom Edge Battery2 | 10 | QPSK | DSI4 | 1   | 50  | 18700/1860   | 20.50 | 19.66 | 0.621 | 0.022  | 1.21 | 0.754 | \  |
| LTE 2 (Variant)  | Low Antenna   | Bottom Edge          | 10 | QPSK | DSI4 | 1   | 50  | 18700/1860   | 20.50 | 19.66 | 0.465 | -0.010 | 1.21 | 0.564 | \  |
| LTE 4 (Original) | Low Antenna   | Back Side            | 10 | QPSK | DSI4 | 1   | 50  | 20300/1745   | 21.00 | 20.73 | 0.477 | 0.032  | 1.06 | 0.508 | \  |
|                  |               |                      | 10 | QPSK | DSI4 | 50% | 0   | 20300/1745   | 21.00 | 20.63 | 0.471 | 0.015  | 1.09 | 0.513 | \  |
|                  |               | Front Side           | 10 | QPSK | DSI4 | 1   | 50  | 20300/1745   | 21.00 | 20.73 | 0.219 | 0.060  | 1.06 | 0.233 | \  |
|                  |               |                      | 10 | QPSK | DSI4 | 50% | 0   | 20300/1745   | 21.00 | 20.63 | 0.224 | -0.020 | 1.09 | 0.244 | \  |
|                  |               | Left Edge            | 10 | QPSK | DSI2 | 1   | 50  | 20050/1720   | 24.00 | 23.35 | 0.181 | 0.017  | 1.16 | 0.210 | \  |
|                  |               |                      | 10 | QPSK | DSI2 | 50% | 0   | 20050/1720   | 23.00 | 22.08 | 0.139 | 0.040  | 1.24 | 0.172 | \  |
|                  |               | Right Edge           | 10 | QPSK | DSI2 | 1   | 50  | 20050/1720   | 24.00 | 23.35 | 0.052 | 0.015  | 1.16 | 0.060 | \  |
|                  |               |                      | 10 | QPSK | DSI2 | 50% | 0   | 20050/1720   | 23.00 | 22.08 | 0.048 | -0.060 | 1.24 | 0.059 | \  |
|                  |               | Top Edge             | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                  |               |                      | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                  |               | Bottom Edge          | 10 | QPSK | DSI4 | 1   | 50  | 20300/1745   | 21.00 | 20.73 | 0.645 | 0.038  | 1.06 | 0.686 | \  |
|                  |               |                      | 10 | QPSK | DSI4 | 50% | 0   | 20300/1745   | 21.00 | 20.63 | 0.714 | 0.050  | 1.09 | 0.777 | 43 |
|                  | Upper Antenna | Back Side            | 10 | QPSK | DSI4 | 1   | 50  | 20175/1732.5 | 19.50 | 18.94 | 0.432 | 0.016  | 1.14 | 0.491 | \  |
|                  |               |                      | 10 | QPSK | DSI4 | 50% | 0   | 20300/1745   | 19.50 | 18.75 | 0.403 | -0.047 | 1.19 | 0.479 | \  |
|                  |               | Front Side           | 10 | QPSK | DSI4 | 1   | 50  | 20175/1732.5 | 19.50 | 18.94 | 0.249 | 0.022  | 1.14 | 0.283 | \  |
|                  |               |                      | 10 | QPSK | DSI4 | 50% | 0   | 20300/1745   | 19.50 | 18.75 | 0.236 | 0.058  | 1.19 | 0.280 | \  |
|                  |               | Left Edge            | 10 | QPSK | DSI2 | 1   | 50  | 20175/1732.5 | 23.00 | 22.65 | 0.123 | 0.019  | 1.08 | 0.133 | \  |
|                  |               |                      | 10 | QPSK | DSI2 | 50% | 0   | 20050/1720   | 23.00 | 22.03 | 0.093 | -0.030 | 1.25 | 0.116 | \  |
|                  |               | Right Edge           | 10 | QPSK | DSI2 | 1   | 50  | 20175/1732.5 | 23.00 | 22.65 | 0.047 | 0.024  | 1.08 | 0.051 | \  |
|                  |               |                      | 10 | QPSK | DSI2 | 50% | 0   | 20050/1720   | 23.00 | 22.03 | 0.045 | 0.018  | 1.25 | 0.056 | \  |
|                  |               | Top Edge             | 10 | QPSK | DSI4 | 1   | 50  | 20175/1732.5 | 19.50 | 18.94 | 0.521 | 0.022  | 1.14 | 0.593 | \  |
|                  |               |                      | 10 | QPSK | DSI4 | 50% | 0   | 20300/1745   | 19.50 | 18.75 | 0.504 | 0.060  | 1.19 | 0.599 | \  |
|                  |               | Bottom Edge          | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                  |               |                      | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                  | Low Antenna   | Bottom Edge Battery2 | 10 | QPSK | DSI4 | 50% | 0   | 20300/1745   | 21.00 | 20.63 | 0.679 | -0.160 | 1.09 | 0.739 | \  |
| LTE 4 (Variant)  | Low Antenna   | Bottom Edge          | 10 | QPSK | DSI4 | 50% | 0   | 20300/1745   | 21.00 | 20.63 | 0.599 | 0.030  | 1.09 | 0.652 | \  |
| LTE 5 (Original) | Low Antenna   | Back Side            | 10 | QPSK | DSI4 | 1   | 25  | 20525/836.5  | 24.50 | 23.86 | 0.339 | 0.024  | 1.16 | 0.393 | 43 |
|                  |               |                      | 10 | QPSK | DSI4 | 50% | 0   | 20450/829    | 23.50 | 23.13 | 0.243 | 0.020  | 1.09 | 0.265 | \  |
|                  |               | Front Side           | 10 | QPSK | DSI4 | 1   | 25  | 20525/836.5  | 24.50 | 23.86 | 0.178 | -0.018 | 1.16 | 0.206 | \  |
|                  |               |                      | 10 | QPSK | DSI4 | 50% | 0   | 20450/829    | 23.50 | 23.13 | 0.148 | 0.024  | 1.09 | 0.161 | \  |
|                  |               | Left Edge            | 10 | QPSK | DSI2 | 1   | 25  | 20450/829    | 25.00 | 24.27 | 0.000 | 0.000  | 1.18 | 0.000 | \  |
|                  |               |                      | 10 | QPSK | DSI2 | 50% | 13  | 20450/829    | 23.50 | 23.01 | 0.000 | 0.000  | 1.12 | 0.000 | \  |
|                  |               | Right Edge           | 10 | QPSK | DSI2 | 1   | 25  | 20450/829    | 25.00 | 24.27 | 0.128 | 0.030  | 1.18 | 0.151 | \  |
|                  |               |                      | 10 | QPSK | DSI2 | 50% | 13  | 20450/829    | 23.50 | 23.01 | 0.081 | 0.047  | 1.12 | 0.091 | \  |
|                  |               | Top Edge             | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                  |               |                      | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                  |               | Bottom Edge          | 10 | QPSK | DSI4 | 1   | 25  | 20525/836.5  | 24.50 | 23.86 | 0.283 | 0.015  | 1.16 | 0.328 | \  |



|                  |               |                    |    |      |      |      |     |             |       |       |       |        |      |       |    |
|------------------|---------------|--------------------|----|------|------|------|-----|-------------|-------|-------|-------|--------|------|-------|----|
|                  | Upper Antenna |                    | 10 | QPSK | DSI4 | 50%  | 0   | 20450/829   | 23.50 | 23.13 | 0.218 | -0.029 | 1.09 | 0.237 | \  |
|                  |               | Back Side          | 10 | QPSK | DSI4 | 1    | 25  | 20525/836.5 | 24.50 | 24.06 | 0.287 | 0.060  | 1.11 | 0.318 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 20525/836.5 | 23.50 | 23.29 | 0.255 | 0.038  | 1.05 | 0.268 | \  |
|                  |               | Front Side         | 10 | QPSK | DSI4 | 1    | 25  | 20525/836.5 | 24.50 | 24.06 | 0.181 | 0.012  | 1.11 | 0.200 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 20525/836.5 | 23.50 | 23.29 | 0.155 | 0.040  | 1.05 | 0.163 | \  |
|                  |               | Left Edge          | 10 | QPSK | DSI2 | 1    | 25  | 20450/829   | 25.00 | 24.45 | 0.110 | 0.080  | 1.14 | 0.125 | \  |
|                  |               |                    | 10 | QPSK | DSI2 | 50%  | 13  | 20525/836.5 | 23.50 | 23.24 | 0.070 | 0.022  | 1.06 | 0.074 | \  |
|                  |               | Right Edge         | 10 | QPSK | DSI2 | 1    | 25  | 20450/829   | 25.00 | 24.45 | 0.094 | 0.038  | 1.14 | 0.107 | \  |
|                  |               |                    | 10 | QPSK | DSI2 | 50%  | 13  | 20525/836.5 | 23.50 | 23.24 | 0.067 | -0.100 | 1.06 | 0.071 | \  |
|                  |               | Top Edge           | 10 | QPSK | DSI4 | 1    | 25  | 20525/836.5 | 24.50 | 24.06 | 0.186 | 0.014  | 1.11 | 0.206 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 20525/836.5 | 23.50 | 23.29 | 0.140 | -0.039 | 1.05 | 0.147 | \  |
|                  |               | Bottom Edge        | 10 | N/A  | N/A  | N/A  | N/A | N/A         | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                  |               |                    | 10 | N/A  | N/A  | N/A  | N/A | N/A         | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
| LTE 5 (Variant)  | Low Antenna   | Back Side Battery2 | 10 | QPSK | DSI4 | 1    | 25  | 20525/836.5 | 24.50 | 23.86 | 0.315 | 0.017  | 1.16 | 0.365 | \  |
|                  | Low Antenna   | Back Side          | 10 | QPSK | DSI4 | 1    | 25  | 20525/836.5 | 24.50 | 23.86 | 0.205 | 0.010  | 1.16 | 0.238 | \  |
| LTE 7 (Original) | Low Antenna   | Back Side          | 10 | QPSK | DSI4 | 1    | 50  | 21350/2560  | 18.00 | 17.22 | 0.400 | 0.052  | 1.20 | 0.479 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 20850/2510  | 18.00 | 16.84 | 0.535 | -0.030 | 1.31 | 0.699 | \  |
|                  |               | Front Side         | 10 | QPSK | DSI4 | 1    | 50  | 21350/2560  | 18.00 | 17.22 | 0.222 | 0.010  | 1.20 | 0.266 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 20850/2510  | 18.00 | 16.84 | 0.321 | 0.018  | 1.31 | 0.419 | \  |
|                  |               | Left Edge          | 10 | QPSK | DSI2 | 1    | 0   | 21350/2560  | 24.00 | 22.89 | 0.218 | 0.037  | 1.29 | 0.281 | \  |
|                  |               |                    | 10 | QPSK | DSI2 | 50%  | 25  | 21100/2535  | 23.00 | 21.84 | 0.163 | -0.016 | 1.31 | 0.213 | \  |
|                  |               | Right Edge         | 10 | QPSK | DSI2 | 1    | 0   | 21350/2560  | 24.00 | 22.89 | 0.282 | 0.024  | 1.29 | 0.364 | \  |
|                  |               |                    | 10 | QPSK | DSI2 | 50%  | 25  | 21100/2535  | 23.00 | 21.84 | 0.244 | 0.050  | 1.31 | 0.319 | \  |
|                  |               | Top Edge           | 10 | N/A  | N/A  | N/A  | N/A | N/A         | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                  |               |                    | 10 | N/A  | N/A  | N/A  | N/A | N/A         | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                  |               | Bottom Edge        | 10 | QPSK | DSI4 | 1    | 50  | 21350/2560  | 18.00 | 17.22 | 0.731 | 0.020  | 1.20 | 0.875 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 1    | 50  | 20850/2510  | 18.00 | 16.91 | 0.752 | 0.018  | 1.29 | 0.967 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 1    | 50  | 21100/2535  | 18.00 | 16.78 | 0.684 | 0.000  | 1.32 | 0.906 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 20850/2510  | 18.00 | 16.84 | 0.785 | 0.057  | 1.31 | 1.025 | 43 |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 25  | 21100/2535  | 18.00 | 16.50 | 0.723 | 0.010  | 1.41 | 1.021 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 21350/2560  | 18.00 | 16.75 | 0.742 | -0.070 | 1.33 | 0.989 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 100% | 0   | 20850/2510  | 18.00 | 16.53 | 0.693 | 0.020  | 1.40 | 0.972 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 100% | 0   | 21100/2535  | 18.00 | 16.52 | 0.725 | -0.080 | 1.41 | 1.019 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 100% | 0   | 21350/2560  | 18.00 | 16.53 | 0.709 | 0.062  | 1.40 | 0.995 | \  |
|                  |               | Bottom Edge repeat | 10 | QPSK | DSI4 | 50%  | 0   | 20850/2510  | 18.00 | 16.84 | 0.779 | 0.000  | 1.31 | 1.018 | \  |
|                  | Upper Antenna | Back Side          | 10 | QPSK | DSI4 | 1    | 50  | 20850/2510  | 20.50 | 19.35 | 0.391 | 0.094  | 1.30 | 0.510 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 25  | 21100/2535  | 20.50 | 19.09 | 0.344 | -0.038 | 1.38 | 0.476 | \  |
|                  |               | Front Side         | 10 | QPSK | DSI4 | 1    | 50  | 20850/2510  | 20.50 | 19.35 | 0.203 | 0.022  | 1.30 | 0.265 | \  |
|                  |               |                    | 10 | QPSK | DSI4 | 50%  | 25  | 21100/2535  | 20.50 | 19.09 | 0.186 | 0.017  | 1.38 | 0.257 | \  |
|                  |               | Left Edge          | 10 | QPSK | DSI2 | 1    | 50  | 20850/2510  | 24.00 | 22.98 | 0.293 | -0.080 | 1.26 | 0.371 | \  |



|                       |                      |                      |                      |      |      |      |     |            |            |       |       |        |        |       |       |   |
|-----------------------|----------------------|----------------------|----------------------|------|------|------|-----|------------|------------|-------|-------|--------|--------|-------|-------|---|
|                       |                      |                      | 10                   | QPSK | DSI2 | 50%  | 25  | 21100/2535 | 23.00      | 21.66 | 0.257 | 0.042  | 1.36   | 0.350 | \     |   |
|                       |                      |                      | Right Edge           | 10   | QPSK | DSI2 | 1   | 50         | 20850/2510 | 24.00 | 22.98 | 0.075  | 0.061  | 1.26  | 0.095 | \ |
|                       |                      |                      |                      | 10   | QPSK | DSI2 | 50% | 25         | 21100/2535 | 23.00 | 21.66 | 0.063  | 0.010  | 1.36  | 0.086 | \ |
|                       |                      |                      | Top Edge             | 10   | QPSK | DSI4 | 1   | 50         | 20850/2510 | 20.50 | 19.35 | 0.282  | 0.032  | 1.30  | 0.367 | \ |
|                       |                      |                      |                      | 10   | QPSK | DSI4 | 50% | 25         | 21100/2535 | 20.50 | 19.09 | 0.334  | 0.080  | 1.38  | 0.462 | \ |
|                       |                      |                      | Bottom Edge          | 10   | N/A  | N/A  | N/A | N/A        | N/A        | N/A   | N/A   | N/A    | N/A    | N/A   | N/A   | \ |
|                       |                      | 10                   |                      | N/A  | N/A  | N/A  | N/A | N/A        | N/A        | N/A   | N/A   | N/A    | N/A    | N/A   | \     |   |
|                       |                      | Low Antenna          | Bottom Edge Battery2 | 10   | QPSK | DSI4 | 50% | 0          | 20850/2510 | 18.00 | 16.84 | 0.702  | 0.011  | 1.31  | 0.917 | \ |
|                       | Bottom Edge SIM2     |                      | 10                   | QPSK | DSI4 | 50%  | 0   | 20850/2510 | 18.00      | 16.84 | 0.713 | 0.030  | 1.31   | 0.931 | \     |   |
|                       | LTE 7 (Variant)      | Low Antenna          | Bottom Edge          | 10   | QPSK | DSI4 | 50% | 0          | 20850/2510 | 18.00 | 16.84 | 0.713  | -0.120 | 1.31  | 0.931 | \ |
| LTE 38 TDD (Original) | Low Antenna          | Back Side            | 10                   | QPSK | DSI4 | 1    | 0   | 38000/2595 | 22.50      | 21.29 | 0.367 | 0.027  | 1.32   | 0.485 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI4 | 50%  | 0   | 38000/2595 | 22.50      | 20.96 | 0.337 | 0.030  | 1.43   | 0.480 | \     |   |
|                       |                      | Front Side           | 10                   | QPSK | DSI4 | 1    | 0   | 38000/2595 | 22.50      | 21.29 | 0.219 | -0.014 | 1.32   | 0.289 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI4 | 50%  | 0   | 38000/2595 | 22.50      | 20.96 | 0.191 | 0.025  | 1.43   | 0.272 | \     |   |
|                       |                      | Left Edge            | 10                   | QPSK | DSI2 | 1    | 50  | 37850/2580 | 24.50      | 23.65 | 0.117 | 0.060  | 1.22   | 0.142 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI2 | 50%  | 0   | 38150/2610 | 23.50      | 22.30 | 0.100 | 0.011  | 1.32   | 0.132 | \     |   |
|                       |                      | Right Edge           | 10                   | QPSK | DSI2 | 1    | 50  | 37850/2580 | 24.50      | 23.65 | 0.124 | 0.120  | 1.22   | 0.151 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI2 | 50%  | 0   | 38150/2610 | 23.50      | 22.30 | 0.107 | -0.080 | 1.32   | 0.141 | \     |   |
|                       |                      | Top Edge             | 10                   | N/A  | N/A  | N/A  | N/A | N/A        | N/A        | N/A   | N/A   | N/A    | N/A    | N/A   | N/A   | \ |
|                       |                      |                      | 10                   | N/A  | N/A  | N/A  | N/A | N/A        | N/A        | N/A   | N/A   | N/A    | N/A    | N/A   | N/A   | \ |
|                       |                      | Bottom Edge          | 10                   | QPSK | DSI4 | 1    | 0   | 38000/2595 | 22.50      | 21.29 | 0.422 | 0.000  | 1.32   | 0.558 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI4 | 50%  | 0   | 38000/2595 | 22.50      | 20.96 | 0.466 | 0.021  | 1.43   | 0.664 | \     |   |
|                       | Upper Antenna        | Back Side            | 10                   | QPSK | DSI4 | 1    | 50  | 37850/2580 | 24.00      | 23.40 | 0.326 | 0.060  | 1.15   | 0.374 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI4 | 50%  | 0   | 37850/2580 | 23.50      | 22.56 | 0.313 | -0.018 | 1.24   | 0.389 | \     |   |
|                       |                      | Front Side           | 10                   | QPSK | DSI4 | 1    | 50  | 37850/2580 | 24.00      | 23.40 | 0.178 | 0.060  | 1.15   | 0.204 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI4 | 50%  | 0   | 37850/2580 | 23.50      | 22.56 | 0.184 | 0.058  | 1.24   | 0.228 | \     |   |
|                       |                      | Left Edge            | 10                   | QPSK | DSI2 | 1    | 50  | 37850/2580 | 24.50      | 23.60 | 0.229 | -0.049 | 1.23   | 0.282 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI2 | 50%  | 0   | 37850/2580 | 23.50      | 22.23 | 0.185 | 0.023  | 1.34   | 0.248 | \     |   |
|                       |                      | Right Edge           | 10                   | QPSK | DSI2 | 1    | 50  | 37850/2580 | 24.50      | 23.60 | 0.063 | 0.020  | 1.23   | 0.078 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI2 | 50%  | 0   | 37850/2580 | 23.50      | 22.23 | 0.046 | -0.015 | 1.34   | 0.062 | \     |   |
|                       |                      | Top Edge             | 10                   | QPSK | DSI4 | 1    | 50  | 37850/2580 | 24.00      | 23.40 | 0.370 | 0.042  | 1.15   | 0.425 | \     |   |
|                       |                      |                      | 10                   | QPSK | DSI4 | 50%  | 0   | 37850/2580 | 23.50      | 22.56 | 0.305 | 0.080  | 1.24   | 0.379 | \     |   |
|                       |                      | Bottom Edge          | 10                   | N/A  | N/A  | N/A  | N/A | N/A        | N/A        | N/A   | N/A   | N/A    | N/A    | N/A   | N/A   | \ |
|                       |                      |                      | 10                   | N/A  | N/A  | N/A  | N/A | N/A        | N/A        | N/A   | N/A   | N/A    | N/A    | N/A   | N/A   | \ |
|                       | Low Antenna          | Bottom Edge Battery2 | 10                   | QPSK | DSI4 | 50%  | 0   | 38000/2595 | 22.50      | 20.96 | 0.524 | -0.010 | 1.43   | 0.747 | 43    |   |
|                       | LTE 38 TDD (Variant) | Low Antenna          | Bottom Edge Battery2 | 10   | QPSK | DSI4 | 50% | 0          | 38000/2595 | 22.50 | 20.96 | 0.437  | 0.062  | 1.43  | 0.623 | \ |



| Band             | Antenna       | Test Position      | Dist. (mm) | Mode | Power Reduction | RB  | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/kg) | Power Drift (dB) | Scaling Factor | Report SAR1g (W/kg) | Plot No. |
|------------------|---------------|--------------------|------------|------|-----------------|-----|--------|-----------------|---------------|----------------------|-----------------------|------------------|----------------|---------------------|----------|
| LTE 12 (Variant) | Low Antenna   | Back Side          | 10         | QPSK | DSI4            | 1   | 25     | 23130/711       | 24.00         | 23.76                | 0.189                 | 0.023            | 1.06           | 0.200               | \        |
|                  |               |                    | 10         | QPSK | DSI4            | 50% | 25     | 23060/704       | 24.00         | 23.10                | 0.172                 | 0.019            | 1.23           | 0.212               | \        |
|                  |               | Front Side         | 10         | QPSK | DSI4            | 1   | 25     | 23130/711       | 24.00         | 23.76                | 0.172                 | 0.050            | 1.06           | 0.182               | \        |
|                  |               |                    | 10         | QPSK | DSI4            | 50% | 25     | 23060/704       | 24.00         | 23.10                | 0.123                 | -0.090           | 1.23           | 0.151               | \        |
|                  |               | Left Edge          | 10         | QPSK | DSI2            | 1   | 25     | 23095/707.5     | 25.50         | 24.77                | 0.060                 | 0.024            | 1.18           | 0.071               | \        |
|                  |               |                    | 10         | QPSK | DSI2            | 50% | 13     | 23095/707.5     | 24.50         | 23.50                | 0.063                 | 0.018            | 1.26           | 0.079               | \        |
|                  |               | Right Edge         | 10         | QPSK | DSI2            | 1   | 25     | 23095/707.5     | 25.50         | 24.77                | 0.137                 | 0.030            | 1.18           | 0.162               | \        |
|                  |               |                    | 10         | QPSK | DSI2            | 50% | 13     | 23095/707.5     | 24.50         | 23.50                | 0.107                 | 0.056            | 1.26           | 0.135               | \        |
|                  |               | Top Edge           | 10         | N/A  | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A                   | NA               | N/A            | N/A                 | \        |
|                  |               |                    | 10         | N/A  | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A                   | NA               | N/A            | N/A                 | \        |
|                  |               | Bottom Edge        | 10         | QPSK | DSI4            | 1   | 25     | 23130/711       | 24.00         | 23.76                | 0.120                 | 0.011            | 1.06           | 0.127               | \        |
|                  |               |                    | 10         | QPSK | DSI4            | 50% | 25     | 23060/704       | 24.00         | 23.10                | 0.098                 | 0.052            | 1.23           | 0.121               | \        |
|                  | Upper Antenna | Back Side          | 10         | QPSK | DSI4            | 1   | 25     | 23130/711       | 25.50         | 25.01                | 0.303                 | 0.028            | 1.12           | 0.339               | 43       |
|                  |               |                    | 10         | QPSK | DSI4            | 50% | 0      | 23060/704       | 24.50         | 23.44                | 0.184                 | 0.017            | 1.28           | 0.235               | \        |
|                  |               | Front Side         | 10         | QPSK | DSI4            | 1   | 25     | 23130/711       | 25.50         | 25.01                | 0.166                 | 0.128            | 1.12           | 0.186               | \        |
|                  |               |                    | 10         | QPSK | DSI4            | 50% | 0      | 23060/704       | 24.50         | 23.44                | 0.106                 | 0.080            | 1.28           | 0.135               | \        |
|                  |               | Left Edge          | 10         | QPSK | DSI2            | 1   | 25     | 23130/711       | 25.50         | 25.01                | 0.147                 | -0.029           | 1.12           | 0.165               | \        |
|                  |               |                    | 10         | QPSK | DSI2            | 50% | 0      | 23060/704       | 24.50         | 23.44                | 0.098                 | 0.032            | 1.28           | 0.125               | \        |
|                  |               | Right Edge         | 10         | QPSK | DSI2            | 1   | 25     | 23130/711       | 25.50         | 25.01                | 0.106                 | 0.060            | 1.12           | 0.119               | \        |
|                  |               |                    | 10         | QPSK | DSI2            | 50% | 0      | 23060/704       | 24.50         | 23.44                | 0.085                 | 0.021            | 1.28           | 0.108               | \        |
|                  |               | Top Edge           | 10         | QPSK | DSI4            | 1   | 25     | 23130/711       | 25.50         | 25.01                | 0.204                 | 0.000            | 1.12           | 0.228               | \        |
|                  |               |                    | 10         | QPSK | DSI4            | 50% | 0      | 23060/704       | 24.50         | 23.44                | 0.131                 | 0.016            | 1.28           | 0.167               | \        |
|                  |               | Bottom Edge        | 10         | N/A  | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A                   | NA               | N/A            | N/A                 | \        |
|                  |               |                    | 10         | N/A  | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A                   | NA               | N/A            | N/A                 | \        |
|                  | Upper Antenna | Back Side Battery2 | 10         | QPSK | DSI4            | 1   | 25     | 23130/711       | 25.50         | 25.01                | 0.264                 | 0.017            | 1.12           | 0.296               | \        |
| LTE 13 (Variant) | Low Antenna   | Back Side          | 10         | QPSK | DSI4            | 1   | 25     | 23230/782       | 24.50         | 23.39                | 0.211                 | -0.070           | 1.29           | 0.272               | 43       |
|                  |               |                    | 10         | QPSK | DSI4            | 50% | 0      | 23230/782       | 23.50         | 22.28                | 0.158                 | 0.023            | 1.32           | 0.209               | \        |
|                  |               | Front Side         | 10         | QPSK | DSI4            | 1   | 25     | 23230/782       | 24.50         | 23.39                | 0.141                 | 0.051            | 1.29           | 0.182               | \        |
|                  |               |                    | 10         | QPSK | DSI4            | 50% | 0      | 23230/782       | 23.50         | 22.28                | 0.112                 | 0.017            | 1.32           | 0.148               | \        |
|                  |               | Left Edge          | 10         | QPSK | DSI2            | 1   | 25     | 23230/782       | 24.50         | 23.39                | 0.046                 | 0.000            | 1.29           | 0.059               | \        |
|                  |               |                    | 10         | QPSK | DSI2            | 50% | 0      | 23230/782       | 23.50         | 22.28                | 0.039                 | -0.013           | 1.32           | 0.052               | \        |
|                  |               | Right Edge         | 10         | QPSK | DSI2            | 1   | 25     | 23230/782       | 24.50         | 23.39                | 0.087                 | 0.022            | 1.29           | 0.112               | \        |
|                  |               |                    | 10         | QPSK | DSI2            | 50% | 0      | 23230/782       | 23.50         | 22.28                | 0.064                 | -0.038           | 1.32           | 0.085               | \        |
|                  |               | Top Edge           | 10         | N/A  | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A                   | NA               | N/A            | N/A                 | \        |
|                  |               |                    | 10         | N/A  | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A                   | NA               | N/A            | N/A                 | \        |
|                  |               | Bottom Edge        | 10         | QPSK | DSI4            | 1   | 25     | 23230/782       | 24.50         | 23.39                | 0.176                 | 0.024            | 1.29           | 0.227               | \        |
|                  |               |                    | 10         | QPSK | DSI4            | 50% | 0      | 23230/782       | 23.50         | 22.28                | 0.131                 | 0.018            | 1.32           | 0.173               | \        |
|                  | Upper         | Back Side          | 10         | QPSK | DSI4            | 1   | 49     | 23230/782       | 24.50         | 23.41                | 0.150                 | 0.011            | 1.29           | 0.193               | \        |



|                     |               |                    |    |      |      |     |     |             |       |       |       |        |      |       |    |
|---------------------|---------------|--------------------|----|------|------|-----|-----|-------------|-------|-------|-------|--------|------|-------|----|
| LTE 17<br>(Variant) | Antenna       | Front Side         | 10 | QPSK | DSI4 | 50% | 0   | 23230/782   | 23.50 | 22.33 | 0.132 | 0.032  | 1.31 | 0.173 | \  |
|                     |               |                    | 10 | QPSK | DSI4 | 1   | 49  | 23230/782   | 24.50 | 23.41 | 0.105 | 0.060  | 1.29 | 0.135 | \  |
|                     |               | Left Edge          | 10 | QPSK | DSI4 | 50% | 0   | 23230/782   | 23.50 | 22.33 | 0.088 | 0.029  | 1.31 | 0.115 | \  |
|                     |               |                    | 10 | QPSK | DSI2 | 1   | 49  | 23230/782   | 24.50 | 23.41 | 0.070 | -0.018 | 1.29 | 0.090 | \  |
|                     |               | Right Edge         | 10 | QPSK | DSI2 | 50% | 0   | 23230/782   | 23.50 | 22.33 | 0.062 | -0.050 | 1.31 | 0.081 | \  |
|                     |               |                    | 10 | QPSK | DSI2 | 1   | 49  | 23230/782   | 24.50 | 23.41 | 0.094 | 0.037  | 1.29 | 0.121 | \  |
|                     |               | Top Edge           | 10 | QPSK | DSI2 | 50% | 0   | 23230/782   | 23.50 | 22.33 | 0.076 | 0.022  | 1.31 | 0.099 | \  |
|                     |               |                    | 10 | QPSK | DSI4 | 1   | 49  | 23230/782   | 24.50 | 23.41 | 0.149 | -0.042 | 1.29 | 0.192 | \  |
|                     |               | Bottom Edge        | 10 | QPSK | DSI4 | 50% | 0   | 23230/782   | 23.50 | 22.33 | 0.094 | 0.060  | 1.31 | 0.123 | \  |
|                     |               |                    | 10 | N/A  | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     | Low Antenna   | Back Side Battery2 | 10 | N/A  | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     |               |                    | 10 | N/A  | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
| LTE 26<br>(Variant) | Low Antenna   | Back Side          | 10 | QPSK | DSI4 | 1   | 25  | 23790/710   | 24.00 | 23.14 | 0.190 | 0.050  | 1.22 | 0.232 | \  |
|                     |               |                    | 10 | QPSK | DSI4 | 50% | 13  | 23790/710   | 24.50 | 22.85 | 0.178 | 0.022  | 1.46 | 0.260 | \  |
|                     |               | Front Side         | 10 | QPSK | DSI4 | 1   | 25  | 23790/710   | 24.00 | 23.14 | 0.192 | -0.080 | 1.22 | 0.234 | \  |
|                     |               |                    | 10 | QPSK | DSI4 | 50% | 13  | 23790/710   | 24.50 | 22.85 | 0.151 | 0.135  | 1.46 | 0.221 | \  |
|                     |               | Left Edge          | 10 | QPSK | DSI2 | 1   | 25  | 23780/709   | 25.50 | 24.61 | 0.051 | 0.060  | 1.23 | 0.063 | \  |
|                     |               |                    | 10 | QPSK | DSI2 | 50% | 13  | 23780/709   | 24.50 | 23.43 | 0.046 | 0.049  | 1.28 | 0.059 | \  |
|                     |               | Right Edge         | 10 | QPSK | DSI2 | 1   | 25  | 23780/709   | 25.50 | 24.61 | 0.082 | -0.099 | 1.23 | 0.101 | \  |
|                     |               |                    | 10 | QPSK | DSI2 | 50% | 13  | 23780/709   | 24.50 | 23.43 | 0.070 | 0.084  | 1.28 | 0.090 | \  |
|                     |               | Top Edge           | 10 | N/A  | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     |               |                    | 10 | N/A  | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     |               | Bottom Edge        | 10 | QPSK | DSI4 | 1   | 25  | 23790/710   | 24.00 | 23.14 | 0.142 | 0.032  | 1.22 | 0.173 | \  |
|                     |               |                    | 10 | QPSK | DSI4 | 50% | 13  | 23790/710   | 24.50 | 22.85 | 0.098 | 0.047  | 1.46 | 0.143 | \  |
|                     | Upper Antenna | Back Side          | 10 | QPSK | DSI4 | 1   | 25  | 23780/709   | 24.50 | 24.19 | 0.286 | -0.030 | 1.07 | 0.307 | 43 |
|                     |               |                    | 10 | QPSK | DSI4 | 50% | 0   | 23780/709   | 24.50 | 23.77 | 0.213 | 0.011  | 1.18 | 0.252 | \  |
|                     |               | Front Side         | 10 | QPSK | DSI4 | 1   | 25  | 23780/709   | 24.50 | 24.19 | 0.150 | 0.060  | 1.07 | 0.161 | \  |
|                     |               |                    | 10 | QPSK | DSI4 | 50% | 0   | 23780/709   | 24.50 | 23.77 | 0.177 | -0.080 | 1.18 | 0.209 | \  |
|                     |               | Left Edge          | 10 | QPSK | DSI2 | 1   | 25  | 23790/710   | 25.50 | 25.33 | 0.163 | 0.027  | 1.04 | 0.170 | \  |
|                     |               |                    | 10 | QPSK | DSI2 | 50% | 13  | 23780/709   | 24.50 | 23.72 | 0.089 | 0.030  | 1.20 | 0.107 | \  |
|                     |               | Right Edge         | 10 | QPSK | DSI2 | 1   | 25  | 23790/710   | 25.50 | 25.33 | 0.131 | 0.041  | 1.04 | 0.136 | \  |
|                     |               |                    | 10 | QPSK | DSI2 | 50% | 13  | 23780/709   | 24.50 | 23.72 | 0.083 | -0.019 | 1.20 | 0.099 | \  |
|                     |               | Top Edge           | 10 | QPSK | DSI4 | 1   | 25  | 23780/709   | 24.50 | 24.19 | 0.228 | 0.026  | 1.07 | 0.245 | \  |
|                     |               |                    | 10 | QPSK | DSI4 | 50% | 0   | 23780/709   | 24.50 | 23.77 | 0.151 | 0.040  | 1.18 | 0.179 | \  |
|                     |               | Bottom Edge        | 10 | N/A  | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     |               |                    | 10 | N/A  | N/A  | N/A | N/A | N/A         | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     | Upper Antenna | Back Side Battery2 | 10 | QPSK | DSI4 | 1   | 25  | 23780/709   | 24.50 | 24.19 | 0.265 | -0.080 | 1.07 | 0.285 | \  |
| LTE 26<br>(Variant) | Low Antenna   | Back Side          | 10 | QPSK | DSI4 | 1   | 74  | 26865/831.5 | 24.50 | 23.45 | 0.307 | -0.120 | 1.27 | 0.391 | 43 |
|                     |               |                    | 10 | QPSK | DSI4 | 50% | 18  | 26865/831.5 | 23.50 | 22.31 | 0.240 | 0.031  | 1.32 | 0.316 | \  |
|                     |               | Front Side         | 10 | QPSK | DSI4 | 1   | 74  | 26865/831.5 | 24.50 | 23.45 | 0.197 | 0.070  | 1.27 | 0.251 | \  |
|                     |               |                    | 10 | QPSK | DSI4 | 50% | 18  | 26865/831.5 | 23.50 | 22.31 | 0.141 | 0.028  | 1.32 | 0.185 | \  |



|                            |               |                    |    |      |      |      |     |              |       |       |       |        |      |       |    |
|----------------------------|---------------|--------------------|----|------|------|------|-----|--------------|-------|-------|-------|--------|------|-------|----|
| LTE 41<br>TDD<br>(Variant) | Antenna       | Left Edge          | 10 | QPSK | DSI2 | 1    | 74  | 26865/831.5  | 24.50 | 23.45 | 0.121 | 0.012  | 1.27 | 0.154 | \  |
|                            |               |                    | 10 | QPSK | DSI2 | 50%  | 18  | 26865/831.5  | 23.50 | 22.31 | 0.098 | -0.031 | 1.32 | 0.129 | \  |
|                            |               | Right Edge         | 10 | QPSK | DSI2 | 1    | 74  | 26865/831.5  | 24.50 | 23.45 | 0.213 | 0.030  | 1.27 | 0.271 | \  |
|                            |               |                    | 10 | QPSK | DSI2 | 50%  | 18  | 26865/831.5  | 23.50 | 22.31 | 0.165 | 0.067  | 1.32 | 0.217 | \  |
|                            |               | Top Edge           | 10 | N/A  | N/A  | N/A  | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                            |               |                    | 10 | N/A  | N/A  | N/A  | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                            |               | Bottom Edge        | 10 | QPSK | DSI4 | 1    | 74  | 26865/831.5  | 24.50 | 23.45 | 0.265 | 0.010  | 1.27 | 0.337 | \  |
|                            |               |                    | 10 | QPSK | DSI4 | 50%  | 18  | 26865/831.5  | 23.50 | 22.31 | 0.202 | 0.021  | 1.32 | 0.266 | \  |
|                            | Upper         | Back Side          | 10 | QPSK | DSI4 | 1    | 38  | 26865/831.5  | 24.50 | 23.84 | 0.306 | 0.067  | 1.16 | 0.356 | \  |
|                            |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 26865/831.5  | 23.50 | 22.62 | 0.224 | 0.180  | 1.22 | 0.274 | \  |
|                            |               | Front Side         | 10 | QPSK | DSI4 | 1    | 38  | 26865/831.5  | 24.50 | 23.84 | 0.182 | 0.091  | 1.16 | 0.212 | \  |
|                            |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 26865/831.5  | 23.50 | 22.62 | 0.141 | 0.025  | 1.22 | 0.173 | \  |
|                            |               | Left Edge          | 10 | QPSK | DSI2 | 1    | 38  | 26865/831.5  | 24.50 | 23.84 | 0.129 | 0.033  | 1.16 | 0.150 | \  |
|                            |               |                    | 10 | QPSK | DSI2 | 50%  | 0   | 26865/831.5  | 23.50 | 22.62 | 0.088 | 0.010  | 1.22 | 0.108 | \  |
|                            |               | Right Edge         | 10 | QPSK | DSI2 | 1    | 38  | 26865/831.5  | 24.50 | 23.84 | 0.092 | 0.170  | 1.16 | 0.107 | \  |
|                            |               |                    | 10 | QPSK | DSI2 | 50%  | 0   | 26865/831.5  | 23.50 | 22.62 | 0.064 | 0.160  | 1.22 | 0.078 | \  |
|                            |               | Top Edge           | 10 | QPSK | DSI4 | 1    | 38  | 26865/831.5  | 24.50 | 23.84 | 0.201 | 0.030  | 1.16 | 0.234 | \  |
|                            |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 26865/831.5  | 23.50 | 22.62 | 0.156 | 0.180  | 1.22 | 0.191 | \  |
|                            |               | Bottom Edge        | 10 | N/A  | N/A  | N/A  | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                            |               |                    | 10 | N/A  | N/A  | N/A  | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                            | Low Antenna   | Back Side Battery2 | 10 | QPSK | DSI4 | 100% | 74  | 26865/831.5  | 24.50 | 23.45 | 0.293 | 0.042  | 1.27 | 0.373 | \  |
| LTE 41<br>TDD<br>(Variant) | Low Antenna   | Back Side          | 10 | QPSK | DSI4 | 1    | 50  | 41490/2680   | 22.50 | 21.64 | 0.366 | 0.029  | 1.22 | 0.446 | \  |
|                            |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 41055/2636.5 | 22.50 | 21.55 | 0.332 | 0.020  | 1.24 | 0.413 | \  |
|                            |               | Front Side         | 10 | QPSK | DSI4 | 1    | 50  | 41490/2680   | 22.50 | 21.64 | 0.174 | 0.100  | 1.22 | 0.212 | \  |
|                            |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 41055/2636.5 | 22.50 | 21.55 | 0.162 | 0.070  | 1.24 | 0.202 | \  |
|                            |               | Left Edge          | 10 | QPSK | DSI2 | 1    | 0   | 39750/2506   | 24.00 | 22.59 | 0.135 | 0.173  | 1.38 | 0.187 | \  |
|                            |               |                    | 10 | QPSK | DSI2 | 50%  | 25  | 40185/2549.5 | 23.00 | 21.85 | 0.073 | 0.042  | 1.30 | 0.095 | \  |
|                            |               | Right Edge         | 10 | QPSK | DSI2 | 1    | 0   | 39750/2506   | 24.00 | 22.59 | 0.224 | 0.180  | 1.38 | 0.310 | \  |
|                            |               |                    | 10 | QPSK | DSI2 | 50%  | 25  | 40185/2549.5 | 23.00 | 21.85 | 0.142 | 0.049  | 1.30 | 0.185 | \  |
|                            |               | Top Edge           | 10 | N/A  | N/A  | N/A  | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                            |               |                    | 10 | N/A  | N/A  | N/A  | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                            |               | Bottom Edge        | 10 | QPSK | DSI4 | 1    | 50  | 41490/2680   | 22.50 | 21.64 | 0.259 | 0.031  | 1.22 | 0.316 | \  |
|                            |               |                    | 10 | QPSK | DSI4 | 50%  | 0   | 41055/2636.5 | 22.50 | 21.55 | 0.238 | 0.102  | 1.24 | 0.296 | \  |
|                            | Upper Antenna | Back Side          | 10 | QPSK | DSI4 | 1    | 50  | 40185/2549.5 | 23.50 | 23.16 | 0.589 | 0.034  | 1.08 | 0.637 | 43 |
|                            |               |                    | 10 | QPSK | DSI4 | 50%  | 25  | 40185/2549.5 | 23.00 | 22.28 | 0.426 | 0.024  | 1.18 | 0.503 | \  |
|                            |               | Front Side         | 10 | QPSK | DSI4 | 1    | 50  | 40185/2549.5 | 23.50 | 23.16 | 0.272 | 0.070  | 1.08 | 0.294 | \  |
|                            |               |                    | 10 | QPSK | DSI4 | 50%  | 25  | 40185/2549.5 | 23.00 | 22.28 | 0.237 | 0.099  | 1.18 | 0.280 | \  |
|                            |               | Left Edge          | 10 | QPSK | DSI2 | 1    | 50  | 41490/2680   | 24.00 | 23.21 | 0.196 | 0.090  | 1.20 | 0.235 | \  |
|                            |               |                    | 10 | QPSK | DSI2 | 50%  | 25  | 40185/2549.5 | 23.00 | 22.28 | 0.221 | 0.180  | 1.18 | 0.261 | \  |
|                            |               | Right Edge         | 10 | QPSK | DSI2 | 1    | 50  | 41490/2680   | 24.00 | 23.21 | 0.046 | 0.041  | 1.20 | 0.055 | \  |
|                            |               |                    | 10 | QPSK | DSI2 | 50%  | 25  | 40185/2549.5 | 23.00 | 22.28 | 0.047 | -0.049 | 1.18 | 0.055 | \  |
|                            |               | Top Edge           | 10 | QPSK | DSI4 | 1    | 50  | 40185/2549.5 | 23.50 | 23.16 | 0.343 | 0.010  | 1.08 | 0.371 | \  |



|                     |                  |                      |    |      |      |     |     |              |       |       |       |        |      |       |    |
|---------------------|------------------|----------------------|----|------|------|-----|-----|--------------|-------|-------|-------|--------|------|-------|----|
|                     |                  |                      | 10 | QPSK | DSI4 | 50% | 25  | 40185/2549.5 | 23.00 | 22.28 | 0.302 | 0.072  | 1.18 | 0.356 | \  |
|                     |                  |                      | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                     |                  | Bottom Edge          | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                     |                  | Back Side Battery2   | 10 | QPSK | DSI4 | 1   | 50  | 40185/2549.5 | 23.50 | 23.16 | 0.549 | 0.000  | 1.08 | 0.594 | \  |
| LTE 66<br>(Variant) | Low<br>Antenna   | Back Side            | 10 | QPSK | DSI4 | 1   | 50  | 132322/1745  | 21.00 | 20.43 | 0.416 | 0.032  | 1.14 | 0.474 | \  |
|                     |                  |                      | 10 | QPSK | DSI4 | 50% | 50  | 132322/1745  | 21.00 | 19.64 | 0.387 | -0.130 | 1.37 | 0.529 | \  |
|                     |                  | Front Side           | 10 | QPSK | DSI4 | 1   | 50  | 132322/1745  | 21.00 | 20.43 | 0.246 | -0.150 | 1.14 | 0.281 | \  |
|                     |                  |                      | 10 | QPSK | DSI4 | 50% | 50  | 132322/1745  | 21.00 | 19.64 | 0.193 | -0.040 | 1.37 | 0.264 | \  |
|                     |                  | Left Edge            | 10 | QPSK | DSI2 | 1   | 50  | 132322/1745  | 24.00 | 23.18 | 0.200 | -0.140 | 1.21 | 0.242 | \  |
|                     |                  |                      | 10 | QPSK | DSI2 | 50% | 25  | 132322/1745  | 23.00 | 21.69 | 0.152 | -0.010 | 1.35 | 0.206 | \  |
|                     |                  | Right Edge           | 10 | QPSK | DSI2 | 1   | 50  | 132322/1745  | 24.00 | 23.18 | 0.095 | 0.021  | 1.21 | 0.115 | \  |
|                     |                  |                      | 10 | QPSK | DSI2 | 50% | 25  | 132322/1745  | 23.00 | 21.69 | 0.105 | -0.021 | 1.35 | 0.142 | \  |
|                     |                  | Top Edge             | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     |                  |                      | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     |                  | Bottom Edge          | 10 | QPSK | DSI4 | 1   | 50  | 132322/1745  | 21.00 | 20.43 | 0.584 | 0.036  | 1.14 | 0.666 | \  |
|                     |                  |                      | 10 | QPSK | DSI4 | 50% | 50  | 132322/1745  | 21.00 | 19.64 | 0.631 | 0.120  | 1.37 | 0.863 | 43 |
|                     |                  |                      | 10 | QPSK | DSI4 | 50% | 50  | 132072/1720  | 21.00 | 19.52 | 0.592 | 0.028  | 1.41 | 0.832 | \  |
|                     |                  |                      | 10 | QPSK | DSI4 | 50% | 0   | 132572/1770  | 21.00 | 19.59 | 0.576 | 0.014  | 1.38 | 0.797 | \  |
|                     | Upper<br>Antenna | Back Side            | 10 | QPSK | DSI4 | 1   | 50  | 132072/1720  | 19.50 | 18.58 | 0.342 | 0.020  | 1.24 | 0.423 | \  |
|                     |                  |                      | 10 | QPSK | DSI4 | 50% | 0   | 132072/1720  | 19.50 | 18.43 | 0.316 | -0.150 | 1.28 | 0.404 | \  |
|                     |                  | Front Side           | 10 | QPSK | DSI4 | 1   | 50  | 132072/1720  | 19.50 | 18.58 | 0.328 | 0.020  | 1.24 | 0.405 | \  |
|                     |                  |                      | 10 | QPSK | DSI4 | 50% | 0   | 132072/1720  | 19.50 | 18.43 | 0.287 | -0.020 | 1.28 | 0.367 | \  |
|                     |                  | Left Edge            | 10 | QPSK | DSI2 | 1   | 50  | 132322/1745  | 24.00 | 23.50 | 0.089 | -0.055 | 1.12 | 0.100 | \  |
|                     |                  |                      | 10 | QPSK | DSI2 | 50% | 0   | 132322/1745  | 23.00 | 22.00 | 0.071 | -0.130 | 1.26 | 0.089 | \  |
|                     |                  | Right Edge           | 10 | QPSK | DSI2 | 1   | 50  | 132322/1745  | 24.00 | 23.50 | 0.028 | 0.032  | 1.12 | 0.031 | \  |
|                     |                  |                      | 10 | QPSK | DSI2 | 50% | 0   | 132322/1745  | 23.00 | 22.00 | 0.019 | 0.022  | 1.26 | 0.024 | \  |
|                     |                  | Top Edge             | 10 | QPSK | DSI4 | 1   | 50  | 132072/1720  | 19.50 | 18.58 | 0.464 | -0.093 | 1.24 | 0.573 | \  |
|                     |                  |                      | 10 | QPSK | DSI4 | 50% | 0   | 132072/1720  | 19.50 | 18.43 | 0.438 | 0.020  | 1.28 | 0.560 | \  |
|                     |                  | Bottom Edge          | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     |                  |                      | 10 | N/A  | N/A  | N/A | N/A | N/A          | N/A   | N/A   | N/A   | NA     | N/A  | N/A   | \  |
|                     | Low<br>Antenna   | Bottom Edge Battery2 | 10 | QPSK | DSI4 | 50% | 50  | 132322/1745  | 21.00 | 19.64 | 0.525 | 0.030  | 1.37 | 0.718 | \  |

| Band                        | Antenna | Test Position | Dist. (mm) | Mode    | Duty Cycle | Power Reduction | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/kg) | Power Drift (dB) | Scaling Factor | Report SAR1g (W/kg) | Plot No. |
|-----------------------------|---------|---------------|------------|---------|------------|-----------------|-----------------|---------------|----------------------|-----------------------|------------------|----------------|---------------------|----------|
| Wi-Fi<br>2.4G<br>(Original) | Wi-Fi   | Back Side     | 10         | 802.11b | 98.0%      | Receiver off    | 11/2462         | 18.50         | 16.74                | 0.215                 | 0.068            | 1.53           | 0.329               | \        |
|                             |         | Front Side    | 10         | 802.11b | 98.0%      | Receiver off    | 11/2462         | 18.50         | 16.74                | 0.135                 | -0.030           | 1.53           | 0.207               | \        |
|                             |         | Left Edge     | 10         | 802.11b | 98.0%      | Receiver off    | 11/2462         | 18.50         | 16.74                | 0.011                 | 0.023            | 1.53           | 0.017               | \        |
|                             |         | Right Edge    | 10         | 802.11b | 98.0%      | Receiver off    | 11/2462         | 18.50         | 16.74                | 0.158                 | 0.019            | 1.53           | 0.242               | \        |
|                             |         | Top Edge      | 10         | 802.11b | 98.0%      | Receiver off    | 11/2462         | 18.50         | 16.74                | 0.099                 | 0.024            | 1.53           | 0.151               | \        |
|                             |         | Bottom Edge   | 10         | N/A     | N/A        | N/A             | N/A             | N/A           | N/A                  | N/A                   | N/A              | N/A            | N/A                 | \        |



|                      |       |                    |    |                |       |              |          |       |       |       |        |      |       |    |
|----------------------|-------|--------------------|----|----------------|-------|--------------|----------|-------|-------|-------|--------|------|-------|----|
|                      |       | Back Side Battery2 | 10 | 802.11b        | 98.0% | Receiver off | 11/2462  | 18.50 | 16.74 | 0.284 | 0.010  | 1.53 | 0.435 | 43 |
| Wi-Fi 2.4G (Variant) | Wi-Fi | Back Side Battery2 | 10 | 802.11b        | 98.0% | Receiver off | 11/2462  | 18.50 | 16.74 | 0.237 | 0.051  | 1.53 | 0.363 | \  |
| U-NII-1 (Original)   | Wi-Fi | Back Side          | 10 | 802.11a        | 98.0% | Receiver off | 40/5200  | 16.50 | 14.63 | 0.219 | 0.027  | 1.57 | 0.344 | \  |
|                      |       | Front Side         | 10 | 802.11a        | 98.0% | Receiver off | 40/5200  | 16.50 | 14.63 | 0.093 | 0.015  | 1.57 | 0.146 | \  |
|                      |       | Left Edge          | 10 | 802.11a        | 98.0% | Receiver off | 40/5200  | 16.50 | 14.63 | 0.073 | 0.090  | 1.57 | 0.115 | \  |
|                      |       | Right Edge         | 10 | 802.11a        | 98.0% | Receiver off | 40/5200  | 16.50 | 14.63 | 0.238 | 0.120  | 1.57 | 0.374 | \  |
|                      |       | Top Edge           | 10 | 802.11a        | 98.0% | Receiver off | 40/5200  | 16.50 | 14.63 | 0.368 | 0.161  | 1.57 | 0.578 | 43 |
|                      |       | Bottom Edge        | 10 | N/A            | N/A   | N/A          | N/A      | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                      |       | Top Edge Battery2  | 10 | 802.11a        | 98.0% | Receiver off | 40/5200  | 16.50 | 14.63 | 0.289 | 0.024  | 1.57 | 0.454 | \  |
| U-NII-1 (Variant)    | Wi-Fi | Top Edge           | 10 | 802.11a        | 98.0% | Receiver off | 40/5200  | 16.50 | 14.63 | 0.283 | 0.181  | 1.57 | 0.444 | \  |
| U-NII-3 (Original)   | Wi-Fi | Back Side          | 10 | 802.11ac-VHT80 | 90.0% | Receiver off | 155/5775 | 14.50 | 13.05 | 0.248 | 0.065  | 1.55 | 0.385 | \  |
|                      |       | Front Side         | 10 | 802.11ac-VHT80 | 90.0% | Receiver off | 155/5775 | 14.50 | 13.05 | 0.046 | 0.099  | 1.55 | 0.071 | \  |
|                      |       | Left Edge          | 10 | 802.11ac-VHT80 | 90.0% | Receiver off | 155/5775 | 14.50 | 13.05 | 0.012 | -0.101 | 1.55 | 0.018 | \  |
|                      |       | Right Edge         | 10 | 802.11ac-VHT80 | 90.0% | Receiver off | 155/5775 | 14.50 | 13.05 | 0.161 | -0.060 | 1.55 | 0.250 | \  |
|                      |       | Top Edge           | 10 | 802.11ac-VHT80 | 90.0% | Receiver off | 155/5775 | 14.50 | 13.05 | 0.291 | 0.027  | 1.55 | 0.451 | \  |
|                      |       | Bottom Edge        | 10 | N/A            | N/A   | N/A          | N/A      | N/A   | N/A   | N/A   | N/A    | N/A  | N/A   | \  |
|                      |       | Top Edge Battery2  | 10 | 802.11ac-VHT80 | 90.0% | Receiver off | 155/5775 | 14.50 | 13.05 | 0.275 | 0.049  | 1.55 | 0.427 | \  |
| U-NII-3 (Variant)    | Wi-Fi | Top Edge           | 10 | 802.11ac-VHT80 | 90.0% | Receiver off | 155/5775 | 14.50 | 13.05 | 0.231 | 0.066  | 1.55 | 0.358 |    |

## Product-specific 10 g SAR Evaluation

| Band                | Antenna       | Test Position | Mode           | Power Reduction | RB | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/kg) | Scaling Factor | Report SAR1g (W/kg) | 0mm SAR |
|---------------------|---------------|---------------|----------------|-----------------|----|--------|-----------------|---------------|----------------------|-----------------------|----------------|---------------------|---------|
| GSM 1900 (Original) | Upper Antenna | Back Side     | GPRS 4TX Slots | DSI4            | -  | -      | 661/1880        | 25.00         | 22.50                | 0.268                 | 1.78           | 0.477               | NO      |
|                     |               | Front Side    | GPRS 4TX Slots | DSI4            | -  | -      | 661/1880        | 25.00         | 22.50                | 0.176                 | 1.78           | 0.314               | NO      |
|                     |               | Top Edge      | GPRS 4TX Slots | DSI4            | -  | -      | 661/1880        | 25.00         | 22.50                | 0.386                 | 1.78           | 0.686               | NO      |
| WCDMA II (Original) | Low Antenna   | Back Side     | RMC            | DSI4            | -  | -      | 9400/1880       | 25.00         | 20.50                | 0.624                 | 2.82           | 1.757               | YES     |
|                     |               | Front Side    | RMC            | DSI4            | -  | -      | 9400/1880       | 25.00         | 20.50                | 0.248                 | 2.82           | 0.698               | NO      |
|                     |               | Bottom Edge   | RMC            | DSI4            | -  | -      | 9400/1880       | 25.00         | 20.50                | 0.778                 | 2.82           | 2.192               | YES     |
|                     | Upper Antenna | Back Side     | RMC            | DSI4            | -  | -      | 9400/1880       | 25.00         | 18.50                | 0.178                 | 4.47           | 0.796               | NO      |
|                     |               | Front Side    | RMC            | DSI4            | -  | -      | 9400/1880       | 25.00         | 18.50                | 0.118                 | 4.47           | 0.527               | NO      |
|                     |               | Top Edge      | RMC            | DSI4            | -  | -      | 9400/1880       | 25.00         | 18.50                | 0.247                 | 4.47           | 1.102               | NO      |
|                     |               |               |                |                 |    |        |                 |               |                      |                       |                |                     |         |
| WCDMA IV (Original) | Low Antenna   | Back Side     | RMC            | DSI4            | -  | -      | 1413/1732.6     | 24.00         | 21.00                | 0.677                 | 2.00           | 1.351               | YES     |
|                     |               | Front Side    | RMC            | DSI4            | -  | -      | 1413/1732.6     | 24.00         | 21.00                | 0.251                 | 2.00           | 0.501               | NO      |
|                     |               | Bottom Edge   | RMC            | DSI4            | -  | -      | 1413/1732.6     | 24.00         | 21.00                | 0.837                 | 2.00           | 1.670               | YES     |
|                     | Upper         | Back Side     | RMC            | DSI4            | -  | -      | 1413/1732.6     | 24.00         | 19.00                | 0.521                 | 3.16           | 1.646               | YES     |



|                       |                  |             |      |      |     |    |              |       |       |       |      |       |     |
|-----------------------|------------------|-------------|------|------|-----|----|--------------|-------|-------|-------|------|-------|-----|
|                       | Antenna          | Front Side  | RMC  | DSI4 | -   | -  | 1413/1732.6  | 24.00 | 19.00 | 0.294 | 3.16 | 0.929 | NO  |
|                       |                  | Top Edge    | RMC  | DSI4 | -   | -  | 1413/1732.6  | 24.00 | 19.00 | 0.604 | 3.16 | 1.911 | YES |
| WCDMA V<br>(Original) | Low<br>Antenna   | Back Side   | RMC  | DSI4 | -   | -  | 4183/836.6   | 25.00 | 24.00 | 0.368 | 1.26 | 0.464 | NO  |
|                       |                  | Front Side  | RMC  | DSI4 | -   | -  | 4183/836.6   | 25.00 | 24.00 | 0.210 | 1.26 | 0.265 | NO  |
|                       |                  | Bottom Edge | RMC  | DSI4 | -   | -  | 4183/836.6   | 25.00 | 24.00 | 0.251 | 1.26 | 0.316 | NO  |
|                       | Upper<br>Antenna | Back Side   | RMC  | DSI4 | -   | -  | 4183/836.6   | 25.00 | 24.00 | 0.393 | 1.26 | 0.495 | NO  |
|                       |                  | Front Side  | RMC  | DSI4 | -   | -  | 4183/836.6   | 25.00 | 24.00 | 0.259 | 1.26 | 0.326 | NO  |
|                       |                  | Top Edge    | RMC  | DSI4 | -   | -  | 4183/836.6   | 25.00 | 24.00 | 0.258 | 1.26 | 0.325 | NO  |
|                       |                  |             |      |      |     |    |              |       |       |       |      |       |     |
| LTE 2<br>(Original)   | Low<br>Antenna   | Back Side   | QPSK | DSI4 | 1   | 50 | 18700/1860   | 25.00 | 20.50 | 0.548 | 2.82 | 1.546 | YES |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 18700/1860   | 24.00 | 20.50 | 0.503 | 2.24 | 1.126 | NO  |
|                       |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 18700/1860   | 25.00 | 20.50 | 0.246 | 2.82 | 0.694 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 18700/1860   | 24.00 | 20.50 | 0.222 | 2.24 | 0.497 | NO  |
|                       |                  | Bottom Edge | QPSK | DSI4 | 1   | 50 | 18700/1860   | 25.00 | 20.50 | 0.789 | 2.82 | 2.223 | YES |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 18700/1860   | 24.00 | 20.50 | 0.667 | 2.24 | 1.492 | YES |
|                       | Upper<br>Antenna | Back Side   | QPSK | DSI4 | 1   | 50 | 18900/1880   | 25.00 | 19.50 | 0.220 | 3.55 | 0.780 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 25 | 18900/1880   | 24.00 | 19.50 | 0.233 | 2.82 | 0.656 | NO  |
|                       |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 18900/1880   | 25.00 | 19.50 | 0.147 | 3.55 | 0.523 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 25 | 18900/1880   | 24.00 | 19.50 | 0.152 | 2.82 | 0.429 | NO  |
|                       |                  | Top Edge    | QPSK | DSI4 | 1   | 50 | 18900/1880   | 25.00 | 19.50 | 0.315 | 3.55 | 1.117 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 25 | 18900/1880   | 24.00 | 19.50 | 0.332 | 2.82 | 0.934 | NO  |
|                       |                  |             |      |      |     |    |              |       |       |       |      |       |     |
|                       |                  |             |      |      |     |    |              |       |       |       |      |       |     |
| LTE 4<br>(Original)   | Low<br>Antenna   | Back Side   | QPSK | DSI4 | 1   | 50 | 20300/1745   | 24.00 | 21.00 | 0.508 | 2.00 | 1.013 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20300/1745   | 23.00 | 21.00 | 0.513 | 1.58 | 0.813 | NO  |
|                       |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 20300/1745   | 24.00 | 21.00 | 0.233 | 2.00 | 0.465 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20300/1745   | 23.00 | 21.00 | 0.244 | 1.58 | 0.387 | NO  |
|                       |                  | Bottom Edge | QPSK | DSI4 | 1   | 50 | 20300/1745   | 24.00 | 21.00 | 0.686 | 2.00 | 1.369 | YES |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20300/1745   | 23.00 | 21.00 | 0.777 | 1.58 | 1.232 | YES |
|                       | Upper<br>Antenna | Back Side   | QPSK | DSI4 | 1   | 50 | 20175/1732.5 | 23.00 | 19.50 | 0.491 | 2.24 | 1.100 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20300/1745   | 23.00 | 19.50 | 0.479 | 2.24 | 1.072 | NO  |
|                       |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 20175/1732.5 | 23.00 | 19.50 | 0.283 | 2.24 | 0.634 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20300/1745   | 23.00 | 19.50 | 0.280 | 2.24 | 0.628 | NO  |
|                       |                  | Top Edge    | QPSK | DSI4 | 1   | 50 | 20175/1732.5 | 23.00 | 19.50 | 0.593 | 2.24 | 1.327 | YES |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20300/1745   | 23.00 | 19.50 | 0.599 | 2.24 | 1.341 | YES |
|                       |                  |             |      |      |     |    |              |       |       |       |      |       |     |
|                       |                  |             |      |      |     |    |              |       |       |       |      |       |     |
| LTE 5<br>(Original)   | Low<br>Antenna   | Back Side   | QPSK | DSI4 | 1   | 25 | 20525/836.5  | 25.00 | 24.50 | 0.393 | 1.12 | 0.441 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20450/829    | 23.50 | 23.50 | 0.265 | 1.00 | 0.265 | NO  |
|                       |                  | Front Side  | QPSK | DSI4 | 1   | 25 | 20525/836.5  | 25.00 | 24.50 | 0.206 | 1.12 | 0.231 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20450/829    | 23.50 | 23.50 | 0.161 | 1.00 | 0.161 | NO  |
|                       |                  | Bottom Edge | QPSK | DSI4 | 1   | 25 | 20525/836.5  | 25.00 | 24.50 | 0.328 | 1.12 | 0.368 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20450/829    | 23.50 | 23.50 | 0.237 | 1.00 | 0.237 | NO  |
|                       | Upper<br>Antenna | Back Side   | QPSK | DSI4 | 1   | 25 | 20525/836.5  | 25.00 | 24.50 | 0.318 | 1.12 | 0.356 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20525/836.5  | 23.50 | 23.50 | 0.268 | 1.00 | 0.268 | NO  |
|                       |                  | Front Side  | QPSK | DSI4 | 1   | 25 | 20525/836.5  | 25.00 | 24.50 | 0.200 | 1.12 | 0.225 | NO  |
|                       |                  |             | QPSK | DSI4 | 50% | 0  | 20525/836.5  | 23.50 | 23.50 | 0.163 | 1.00 | 0.163 | NO  |
|                       |                  | Top Edge    | QPSK | DSI4 | 1   | 25 | 20525/836.5  | 25.00 | 24.50 | 0.206 | 1.12 | 0.231 | NO  |
|                       |                  |             | QPSK | DSI4 | 1   | 25 | 20525/836.5  | 25.00 | 24.50 | 0.206 | 1.12 | 0.231 | NO  |



|                             |                  |             |      |      |     |    |             |       |       |       |      |       |     |
|-----------------------------|------------------|-------------|------|------|-----|----|-------------|-------|-------|-------|------|-------|-----|
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 20525/836.5 | 23.50 | 23.50 | 0.147 | 1.00 | 0.147 | NO  |
| LTE 7<br>(Original)         | Low<br>Antenna   | Back Side   | QPSK | DSI4 | 1   | 50 | 21350/2560  | 24.00 | 18.00 | 0.479 | 3.98 | 1.906 | YES |
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 20850/2510  | 23.00 | 18.00 | 0.699 | 3.16 | 2.210 | YES |
|                             |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 21350/2560  | 24.00 | 18.00 | 0.266 | 3.98 | 1.058 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 20850/2510  | 23.00 | 18.00 | 0.419 | 3.16 | 1.326 | YES |
|                             |                  | Bottom Edge | QPSK | DSI4 | 1   | 50 | 21350/2560  | 24.00 | 18.00 | 0.875 | 3.98 | 3.483 | YES |
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 20850/2510  | 23.00 | 18.00 | 1.025 | 3.16 | 3.242 | YES |
|                             | Upper<br>Antenna | Back Side   | QPSK | DSI4 | 1   | 50 | 20850/2510  | 24.00 | 20.50 | 0.510 | 2.24 | 1.141 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 25 | 21100/2535  | 23.00 | 20.50 | 0.476 | 1.78 | 0.846 | NO  |
|                             |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 20850/2510  | 24.00 | 20.50 | 0.265 | 2.24 | 0.592 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 25 | 21100/2535  | 23.00 | 20.50 | 0.257 | 1.78 | 0.458 | NO  |
|                             |                  | Top Edge    | QPSK | DSI4 | 1   | 50 | 20850/2510  | 24.00 | 20.50 | 0.367 | 2.24 | 0.823 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 25 | 21100/2535  | 23.00 | 20.50 | 0.462 | 1.78 | 0.822 | NO  |
| LTE 38<br>TDD<br>(Original) | Low<br>Antenna   | Back Side   | QPSK | DSI4 | 1   | 0  | 38000/2595  | 24.50 | 22.50 | 0.485 | 1.58 | 0.769 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 38000/2595  | 23.50 | 22.50 | 0.480 | 1.26 | 0.605 | NO  |
|                             |                  | Front Side  | QPSK | DSI4 | 1   | 0  | 38000/2595  | 24.50 | 22.50 | 0.289 | 1.58 | 0.459 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 38000/2595  | 23.50 | 22.50 | 0.272 | 1.26 | 0.343 | NO  |
|                             |                  | Bottom Edge | QPSK | DSI4 | 1   | 0  | 38000/2595  | 24.50 | 22.50 | 0.558 | 1.58 | 0.884 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 38000/2595  | 23.50 | 22.50 | 0.664 | 1.26 | 0.836 | NO  |
|                             | Upper<br>Antenna | Back Side   | QPSK | DSI4 | 1   | 50 | 37850/2580  | 24.50 | 24.00 | 0.374 | 1.12 | 0.420 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 37850/2580  | 23.50 | 23.50 | 0.389 | 1.00 | 0.389 | NO  |
|                             |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 37850/2580  | 24.50 | 24.00 | 0.204 | 1.12 | 0.229 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 37850/2580  | 23.50 | 23.50 | 0.228 | 1.00 | 0.228 | NO  |
|                             |                  | Top Edge    | QPSK | DSI4 | 1   | 50 | 37850/2580  | 24.50 | 24.00 | 0.425 | 1.12 | 0.477 | NO  |
|                             |                  |             | QPSK | DSI4 | 50% | 0  | 37850/2580  | 23.50 | 23.50 | 0.379 | 1.00 | 0.379 | NO  |

| Band                | Antenna          | Test Position | Mode | Power Reduction | RB  | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/kg) | Scaling Factor | Report SAR1g (W/kg) | 0mm SAR |
|---------------------|------------------|---------------|------|-----------------|-----|--------|-----------------|---------------|----------------------|-----------------------|----------------|---------------------|---------|
| LTE 12<br>(Variant) | Low<br>Antenna   | Back Side     | QPSK | DSI4            | 1   | 25     | 23130/711       | 25.50         | 24.00                | 0.200                 | 1.41           | 0.282               | NO      |
|                     |                  |               | QPSK | DSI4            | 50% | 25     | 23060/704       | 24.50         | 24.00                | 0.212                 | 1.12           | 0.237               | NO      |
|                     |                  | Front Side    | QPSK | DSI4            | 1   | 25     | 23130/711       | 25.50         | 24.00                | 0.182                 | 1.41           | 0.257               | NO      |
|                     |                  |               | QPSK | DSI4            | 50% | 25     | 23060/704       | 24.50         | 24.00                | 0.151                 | 1.12           | 0.170               | NO      |
|                     |                  | Bottom Edge   | QPSK | DSI4            | 1   | 25     | 23130/711       | 25.50         | 24.00                | 0.127                 | 1.41           | 0.179               | NO      |
|                     |                  |               | QPSK | DSI4            | 50% | 25     | 23060/704       | 24.50         | 24.00                | 0.121                 | 1.12           | 0.135               | NO      |
| LTE 17<br>(Variant) | Low<br>Antenna   | Back Side     | QPSK | DSI4            | 1   | 25     | 23790/710       | 25.50         | 24.00                | 0.232                 | 1.41           | 0.327               | NO      |
|                     |                  |               | QPSK | DSI4            | 50% | 13     | 23790/710       | 24.50         | 24.50                | 0.260                 | 1.00           | 0.260               | NO      |
|                     |                  | Front Side    | QPSK | DSI4            | 1   | 25     | 23790/710       | 25.50         | 24.00                | 0.234                 | 1.41           | 0.331               | NO      |
|                     |                  |               | QPSK | DSI4            | 50% | 13     | 23790/710       | 24.50         | 24.50                | 0.221                 | 1.00           | 0.221               | NO      |
|                     |                  | Bottom Edge   | QPSK | DSI4            | 1   | 25     | 23790/710       | 25.50         | 24.00                | 0.173                 | 1.41           | 0.245               | NO      |
|                     |                  |               | QPSK | DSI4            | 50% | 13     | 23790/710       | 24.50         | 24.50                | 0.143                 | 1.00           | 0.143               | NO      |
|                     | Upper<br>Antenna | Back Side     | QPSK | DSI4            | 1   | 25     | 23780/709       | 25.50         | 24.50                | 0.307                 | 1.26           | 0.387               | NO      |
|                     |                  |               | QPSK | DSI4            | 50% | 0      | 23780/709       | 24.50         | 24.50                | 0.252                 | 1.00           | 0.252               | NO      |



|                            |                  |             |      |      |     |    |              |       |       |       |      |       |     |
|----------------------------|------------------|-------------|------|------|-----|----|--------------|-------|-------|-------|------|-------|-----|
|                            |                  | Front Side  | QPSK | DSI4 | 1   | 25 | 23780/709    | 25.50 | 24.50 | 0.161 | 1.26 | 0.203 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 0  | 23780/709    | 24.50 | 24.50 | 0.209 | 1.00 | 0.209 | NO  |
|                            |                  | Top Edge    | QPSK | DSI4 | 1   | 25 | 23780/709    | 25.50 | 24.50 | 0.245 | 1.26 | 0.308 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 0  | 23780/709    | 24.50 | 24.50 | 0.179 | 1.00 | 0.179 | NO  |
| LTE 66<br>(Variant)        | Low<br>Antenna   | Back Side   | QPSK | DSI4 | 1   | 50 | 132322/1745  | 24.00 | 21.00 | 0.474 | 2.00 | 0.946 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 50 | 132322/1745  | 23.00 | 21.00 | 0.529 | 1.58 | 0.839 | NO  |
|                            |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 132322/1745  | 24.00 | 21.00 | 0.281 | 2.00 | 0.560 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 50 | 132322/1745  | 23.00 | 21.00 | 0.264 | 1.58 | 0.418 | NO  |
|                            |                  | Bottom Edge | QPSK | DSI4 | 1   | 50 | 132322/1745  | 24.00 | 21.00 | 0.666 | 2.00 | 1.329 | YES |
|                            |                  |             | QPSK | DSI4 | 50% | 50 | 132322/1745  | 23.00 | 21.00 | 0.863 | 1.58 | 1.368 | YES |
|                            | Upper<br>Antenna | Back Side   | QPSK | DSI4 | 1   | 50 | 132072/1720  | 24.00 | 19.50 | 0.423 | 2.82 | 1.191 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 0  | 132072/1720  | 23.00 | 19.50 | 0.404 | 2.24 | 0.905 | NO  |
|                            |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 132072/1720  | 24.00 | 19.50 | 0.405 | 2.82 | 1.143 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 0  | 132072/1720  | 23.00 | 19.50 | 0.367 | 2.24 | 0.822 | NO  |
|                            |                  | Top Edge    | QPSK | DSI4 | 1   | 50 | 132072/1720  | 24.00 | 19.50 | 0.573 | 2.82 | 1.616 | YES |
|                            |                  |             | QPSK | DSI4 | 50% | 0  | 132072/1720  | 23.00 | 19.50 | 0.560 | 2.24 | 1.255 | YES |
| LTE 41<br>TDD<br>(Variant) | Low<br>Antenna   | Back Side   | QPSK | DSI4 | 1   | 50 | 41490/2680   | 24.00 | 22.50 | 0.446 | 1.41 | 0.630 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 0  | 41055/2636.5 | 23.00 | 22.50 | 0.413 | 1.12 | 0.464 | NO  |
|                            |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 41490/2680   | 24.00 | 22.50 | 0.212 | 1.41 | 0.300 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 0  | 41055/2636.5 | 23.00 | 22.50 | 0.202 | 1.12 | 0.226 | NO  |
|                            |                  | Bottom Edge | QPSK | DSI4 | 1   | 50 | 41490/2680   | 24.00 | 22.50 | 0.316 | 1.41 | 0.446 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 0  | 41055/2636.5 | 23.00 | 22.50 | 0.296 | 1.12 | 0.332 | NO  |
|                            | Upper<br>Antenna | Back Side   | QPSK | DSI4 | 1   | 50 | 40185/2549.5 | 24.00 | 23.50 | 0.637 | 1.12 | 0.715 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 25 | 40185/2549.5 | 23.00 | 23.00 | 0.503 | 1.00 | 0.503 | NO  |
|                            |                  | Front Side  | QPSK | DSI4 | 1   | 50 | 40185/2549.5 | 24.00 | 23.50 | 0.294 | 1.12 | 0.330 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 25 | 40185/2549.5 | 23.00 | 23.00 | 0.280 | 1.00 | 0.280 | NO  |
|                            |                  | Top Edge    | QPSK | DSI4 | 1   | 50 | 40185/2549.5 | 24.00 | 23.50 | 0.371 | 1.12 | 0.416 | NO  |
|                            |                  |             | QPSK | DSI4 | 50% | 25 | 40185/2549.5 | 23.00 | 23.00 | 0.356 | 1.00 | 0.356 | NO  |

## Product Specific 10-g SAR

| Band                      | Antenna          | Test Position         | Dist. (mm) | Mode | Power Reduction | RB | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR10g (W/kg) | Power Drift (dB) | Scaling Factor | Report SAR10g (W/kg) | Plot No. |
|---------------------------|------------------|-----------------------|------------|------|-----------------|----|--------|-----------------|---------------|----------------------|------------------------|------------------|----------------|----------------------|----------|
| WCDMA II<br>(Original)    | Low<br>Antenna   | Back Side             | 0          | RMC  | DSI4            | -  | -      | 9400/1880       | 20.50         | 19.55                | 1.450                  | 0.088            | 1.24           | 1.805                | \        |
|                           |                  | Bottom Edge           | 0          | RMC  | DSI4            | -  | -      | 9400/1880       | 20.50         | 19.55                | 0.978                  | 0.034            | 1.24           | 1.217                | \        |
|                           |                  | Back Side<br>Battery2 | 0          | RMC  | DSI4            | -  | -      | 9400/1880       | 20.50         | 19.55                | 1.580                  | 0.010            | 1.24           | 1.966                | 43       |
| WCDMA II<br>(Variant)     | Low<br>Antenna   | Back Side             | 0          | RMC  | DSI4            | -  | -      | 9400/1880       | 20.50         | 19.55                | 1.260                  | 0.072            | 1.24           | 1.568                | \        |
| WCDMA<br>IV<br>(Original) | Low<br>Antenna   | Back Side             | 0          | RMC  | DSI4            | -  | -      | 1413/1732.6     | 21.00         | 20.20                | 1.660                  | 0.076            | 1.20           | 1.996                | 43       |
|                           |                  | Bottom Edge           | 0          | RMC  | DSI4            | -  | -      | 1413/1732.6     | 21.00         | 20.20                | 1.490                  | -0.020           | 1.20           | 1.791                | \        |
|                           | Upper<br>Antenna | Back Side             | 0          | RMC  | DSI4            | -  | -      | 1413/1732.6     | 19.00         | 18.23                | 0.889                  | 0.028            | 1.19           | 1.061                | \        |
|                           |                  | Top Edge              | 0          | RMC  | DSI4            | -  | -      | 1413/1732.6     | 19.00         | 18.23                | 1.020                  | 0.011            | 1.19           | 1.218                | \        |



|                    |               |                      |   |      |      |     |    |              |       |       |       |        |      |       |    |
|--------------------|---------------|----------------------|---|------|------|-----|----|--------------|-------|-------|-------|--------|------|-------|----|
|                    | Low Antenna   | Back Side Battery2   | 0 | RMC  | DSI4 | -   | -  | 1413/1732.6  | 21.00 | 20.20 | 1.620 | 0.000  | 1.20 | 1.948 | \  |
|                    |               | Back Side SIM2       | 0 | RMC  | DSI4 | -   | -  | 1413/1732.6  | 21.00 | 20.20 | 1.480 | 0.060  | 1.20 | 1.779 | \  |
| WCDMA IV (Variant) | Low Antenna   | Back Side            | 0 | RMC  | DSI4 | -   | -  | 1413/1732.6  | 21.00 | 20.20 | 1.300 | 0.011  | 1.20 | 1.563 | \  |
| LTE 2 (Original)   | Low Antenna   | Back Side            | 0 | QPSK | DSI4 | 1   | 50 | 18700/1860   | 20.50 | 19.66 | 1.460 | 0.083  | 1.21 | 1.772 | 43 |
|                    |               |                      | 0 | QPSK | DSI4 | 50% | 0  | 18700/1860   | 20.50 | 19.94 | 1.410 | 0.020  | 1.14 | 1.604 | \  |
|                    |               | Bottom Edge          | 0 | QPSK | DSI4 | 1   | 50 | 18700/1860   | 20.50 | 19.66 | 1.030 | -0.019 | 1.21 | 1.250 | \  |
|                    |               |                      | 0 | QPSK | DSI4 | 50% | 0  | 18700/1860   | 20.50 | 19.94 | 0.979 | 0.032  | 1.14 | 1.114 | \  |
|                    | Low Antenna   | Back Side Battery2   | 0 | QPSK | DSI4 | 1   | 50 | 18700/1860   | 20.50 | 19.66 | 1.380 | 0.027  | 1.21 | 1.674 | \  |
| LTE 2 (Variant)    | Low Antenna   | Back Side            | 0 | QPSK | DSI4 | 1   | 50 | 18700/1860   | 20.50 | 19.66 | 1.330 | 0.091  | 1.21 | 1.614 | \  |
| LTE 4 (Original)   | Low Antenna   | Bottom Edge          | 0 | QPSK | DSI4 | 1   | 50 | 20300/1745   | 21.00 | 20.73 | 1.280 | 0.036  | 1.06 | 1.362 | \  |
|                    |               |                      | 0 | QPSK | DSI4 | 50% | 0  | 20300/1745   | 21.00 | 20.63 | 1.330 | 0.040  | 1.09 | 1.448 | \  |
|                    | Upper Antenna | Top Edge             | 0 | QPSK | DSI4 | 1   | 50 | 20175/1732.5 | 19.50 | 18.94 | 1.150 | 0.025  | 1.14 | 1.308 | \  |
|                    |               |                      | 0 | QPSK | DSI4 | 50% | 0  | 20300/1745   | 19.50 | 18.75 | 1.120 | -0.090 | 1.19 | 1.331 | \  |
|                    | Low Antenna   | Bottom Edge Battery2 | 0 | QPSK | DSI4 | 50% | 0  | 20300/1745   | 21.00 | 20.63 | 1.510 | -0.090 | 1.09 | 1.644 | 43 |
| LTE 4 (Variant)    | Low Antenna   | Bottom Edge          | 0 | QPSK | DSI4 | 50% | 0  | 20300/1745   | 21.00 | 20.63 | 1.210 | 0.041  | 1.09 | 1.318 | \  |
| LTE 7 (Original)   | Low Antenna   | Back Side            | 0 | QPSK | DSI4 | 1   | 50 | 21350/2560   | 18.00 | 17.22 | 0.998 | 0.017  | 1.20 | 1.194 | \  |
|                    |               |                      | 0 | QPSK | DSI4 | 50% | 0  | 20850/2510   | 18.00 | 16.84 | 1.070 | 0.024  | 1.31 | 1.398 | 43 |
|                    |               | Front Side           | 0 | QPSK | DSI4 | 1   | 50 | 21350/2560   | 18.00 | 17.22 | 0.652 | 0.035  | 1.20 | 0.780 | \  |
|                    |               |                      | 0 | QPSK | DSI4 | 50% | 0  | 20850/2510   | 18.00 | 16.84 | 0.882 | 0.000  | 1.31 | 1.152 | \  |
|                    |               | Bottom Edge          | 0 | QPSK | DSI4 | 1   | 50 | 21350/2560   | 18.00 | 17.22 | 0.497 | 0.012  | 1.20 | 0.595 | \  |
|                    |               |                      | 0 | QPSK | DSI4 | 50% | 0  | 20850/2510   | 18.00 | 16.84 | 0.546 | 0.148  | 1.31 | 0.713 | \  |
|                    | Low Antenna   | Back Side Battery2   | 0 | QPSK | DSI4 | 50% | 0  | 20850/2510   | 18.00 | 16.84 | 0.823 | 0.030  | 1.31 | 1.075 | \  |
| LTE 7 (Variant)    | Low Antenna   | Back Side            | 0 | QPSK | DSI4 | 50% | 0  | 20850/2510   | 18.00 | 16.84 | 0.751 | 0.091  | 1.31 | 0.981 | \  |

| Band             | Antenna       | Test Position     | Dist. (mm) | Mode | Power Reduction | RB  | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR10g (W/kg) | Scaling Factor | Report SAR10g (W/kg) | Plot No. |
|------------------|---------------|-------------------|------------|------|-----------------|-----|--------|-----------------|---------------|----------------------|------------------------|----------------|----------------------|----------|
| LTE 66 (Variant) | Low Antenna   | Bottom Edge       | 0          | QPSK | DSI4            | 1   | 50     | 132322/1745     | 21.00         | 20.43                | 1.180                  | 1.14           | 1.345                | \        |
|                  |               |                   | 0          | QPSK | DSI4            | 50% | 50     | 132322/1745     | 21.00         | 19.64                | 1.050                  | 1.37           | 1.436                | \        |
|                  | Upper Antenna | Top Edge          | 0          | QPSK | DSI4            | 1   | 50     | 132072/1720     | 19.50         | 18.58                | 1.080                  | 1.24           | 1.335                | \        |
|                  |               |                   | 0          | QPSK | DSI4            | 50% | 0      | 132072/1720     | 19.50         | 18.43                | 1.260                  | 1.28           | 1.612                | 43       |
|                  |               | Top Edge Battery2 | 0          | QPSK | DSI4            | 50% | 0      | 132072/1720     | 19.50         | 18.43                | 1.070                  | 1.28           | 1.369                | \        |



| Band                | Antenna | Test Position      | Dist. (mm) | Mode    | Duty Cycle | Power Reduction | RB  | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR10g | Power Drift (dB) | Scaling Factor | Report SAR10g | Plot No. |
|---------------------|---------|--------------------|------------|---------|------------|-----------------|-----|--------|-----------------|---------------|----------------------|-----------------|------------------|----------------|---------------|----------|
| U-NII-2A (Original) | Wi-Fi   | Back Side          | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 64/5320         | 16.50         | 14.62                | 0.794           | 0.075            | 1.57           | 1.249         | \        |
|                     |         | Front Side         | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 64/5320         | 16.50         | 14.62                | 0.082           | 0.020            | 1.57           | 0.129         | \        |
|                     |         | Left Edge          | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 64/5320         | 16.50         | 14.62                | 0.021           | 0.011            | 1.57           | 0.033         | \        |
|                     |         | Right Edge         | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 64/5320         | 16.50         | 14.62                | 0.114           | 0.039            | 1.57           | 0.179         | \        |
|                     |         | Top Edge           | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 64/5320         | 16.50         | 14.62                | 0.397           | -0.030           | 1.57           | 0.625         | \        |
|                     |         | Bottom Edge        | 0          | N/A     | N/A        | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A             | N/A              | N/A            | N/A           | \        |
|                     |         | Back Side Battery2 | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 64/5320         | 16.50         | 14.62                | 0.629           | 0.040            | 1.57           | 0.990         | \        |
| U-NII-2A (Variant)  | Wi-Fi   | Back Side          | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 64/5320         | 16.50         | 14.62                | 0.528           | 0.042            | 1.57           | 0.831         | \        |
| U-NII-2C (Original) | Wi-Fi   | Back Side          | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 120/5600        | 15.50         | 14.08                | 1.160           | 0.020            | 1.42           | 1.641         | 43       |
|                     |         | Front Side         | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 120/5600        | 15.50         | 14.08                | 0.153           | 0.018            | 1.42           | 0.217         | \        |
|                     |         | Left Edge          | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 120/5600        | 15.50         | 14.08                | 0.019           | -0.024           | 1.42           | 0.027         | \        |
|                     |         | Right Edge         | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 120/5600        | 15.50         | 14.08                | 0.243           | 0.090            | 1.42           | 0.344         | \        |
|                     |         | Top Edge           | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 120/5600        | 15.50         | 14.08                | 1.020           | 0.000            | 1.42           | 1.443         | \        |
|                     |         | Bottom Edge        | 0          | N/A     | N/A        | N/A             | N/A | N/A    | N/A             | N/A           | N/A                  | N/A             | N/A              | N/A            | N/A           | \        |
|                     |         | Back Side Battery2 | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 120/5600        | 15.50         | 14.08                | 1.120           | 0.014            | 1.42           | 1.585         | \        |
| U-NII-2C (Variant)  | Wi-Fi   | Back Side          | 0          | 802.11a | 98.0%      | Receiver off    | -   | -      | 120/5600        | 15.50         | 14.08                | 0.764           | 0.090            | 1.42           | 1.081         | \        |

## Additional SAR test at a conservative distance (triggering distance minus 1mm)

| Band                | Antenna       | Dist. (mm) | Test Position | Mode           | Power Reduction | RB | offset | Ch./Freq. (MHz) | Tune-up (dBm) | Measured power (dBm) | Measured SAR1g (W/kg) | Power Drift (dB) | Scaling Factor | Report SAR1g (W/kg) | Plot No. |
|---------------------|---------------|------------|---------------|----------------|-----------------|----|--------|-----------------|---------------|----------------------|-----------------------|------------------|----------------|---------------------|----------|
| GSM 1900 (Original) | Upper Antenna | 17         | Back Side     | GPRS 2TX Slots | DSI2            | -  | -      | 661/1880        | 29.00         | 27.58                | 0.167                 | 0.011            | 1.39           | 0.232               | \        |
|                     |               | 10         | Front Side    | GPRS 2TX Slots | DSI2            | -  | -      | 661/1880        | 29.00         | 27.58                | 0.358                 | 0.024            | 1.39           | 0.496               | \        |
|                     |               | 17         | Top Edge      | GPRS 2TX Slots | DSI2            | -  | -      | 661/1880        | 29.00         | 27.58                | 0.242                 | 0.000            | 1.39           | 0.336               | \        |
| WCDMA II (Original) | Low Antenna   | 21         | Back Side     | RMC 12.2K      | DSI2            | -  | -      | 9400/1880       | 25.00         | 24.12                | 0.268                 | -0.011           | 1.22           | 0.328               | \        |
|                     |               | 16         | Front Side    | RMC 12.2K      | DSI2            | -  | -      | 9400/1880       | 25.00         | 24.12                | 0.320                 | 0.025            | 1.22           | 0.392               | \        |
|                     |               | 23         | Bottom Edge   | RMC 12.2K      | DSI2            | -  | -      | 9400/1880       | 25.00         | 24.12                | 0.292                 | 0.090            | 1.22           | 0.358               | \        |
|                     | Upper Antenna | 17         | Back Side     | RMC 12.2K      | DSI2            | -  | -      | 9400/1880       | 25.00         | 24.22                | 0.181                 | 0.035            | 1.20           | 0.217               | \        |
|                     |               | 10         | Front Side    | RMC 12.2K      | DSI2            | -  | -      | 9400/1880       | 25.00         | 24.22                | 0.527                 | 0.017            | 1.20           | 0.631               | \        |
|                     |               | 17         | Top Edge      | RMC 12.2K      | DSI2            | -  | -      | 9400/1880       | 25.00         | 24.22                | 0.258                 | 0.062            | 1.20           | 0.309               | \        |
| WCDMA IV (Original) | Low Antenna   | 21         | Back Side     | RMC 12.2K      | DSI2            | -  | -      | 1413/1732.6     | 24.00         | 23.20                | 0.196                 | 0.033            | 1.20           | 0.236               | \        |
|                     |               | 16         | Front Side    | RMC 12.2K      | DSI2            | -  | -      | 1413/1732.6     | 24.00         | 23.20                | 0.211                 | -0.080           | 1.20           | 0.254               | \        |
|                     |               | 23         | Bottom Edge   | RMC 12.2K      | DSI2            | -  | -      | 1413/1732.6     | 24.00         | 23.20                | 0.257                 | 0.022            | 1.20           | 0.309               | \        |
|                     | Upper Antenna | 17         | Back Side     | RMC 12.2K      | DSI2            | -  | -      | 1413/1732.6     | 24.00         | 23.03                | 0.283                 | 0.026            | 1.25           | 0.354               | \        |
|                     |               | 10         | Front Side    | RMC 12.2K      | DSI2            | -  | -      | 1413/1732.6     | 24.00         | 23.03                | 0.676                 | 0.060            | 1.25           | 0.845               | \        |



## SAR Test Report

Report No.: R2111A1057-S1

|                          |                  |    |             |           |      |   |   |             |       |       |       |        |      |       |   |
|--------------------------|------------------|----|-------------|-----------|------|---|---|-------------|-------|-------|-------|--------|------|-------|---|
|                          |                  | 17 | Top Edge    | RMC 12.2K | DSI2 | - | - | 1413/1732.6 | 24.00 | 23.03 | 0.347 | 0.182  | 1.25 | 0.434 | \ |
| WCDMA<br>V<br>(Original) | Low<br>Antenna   | 21 | Back Side   | RMC 12.2K | DSI2 | - | - | 4183/836.6  | 25.00 | 24.50 | 0.121 | -0.042 | 1.12 | 0.136 | \ |
|                          |                  | 16 | Front Side  | RMC 12.2K | DSI2 | - | - | 4183/836.6  | 25.00 | 24.50 | 0.174 | 0.035  | 1.12 | 0.195 | \ |
|                          |                  | 23 | Bottom Edge | RMC 12.2K | DSI2 | - | - | 4183/836.6  | 25.00 | 24.50 | 0.051 | 0.090  | 1.12 | 0.057 | \ |
|                          | Upper<br>Antenna | 17 | Back Side   | RMC 12.2K | DSI2 | - | - | 4183/836.6  | 25.00 | 24.51 | 0.094 | 0.032  | 1.12 | 0.105 | \ |
|                          |                  | 10 | Front Side  | RMC 12.2K | DSI2 | - | - | 4183/836.6  | 25.00 | 24.51 | 0.229 | 0.080  | 1.12 | 0.256 | \ |
|                          |                  | 17 | Top Edge    | RMC 12.2K | DSI2 | - | - | 4183/836.6  | 25.00 | 24.51 | 0.059 | -0.070 | 1.12 | 0.066 | \ |

| Band                | Antenna          | Dist.<br>(mm) | Test<br>Position | Mode | Power<br>Reduction | RB   | offset | Ch./Freq.<br>(MHz) | Tune-up<br>(dBm) | Measured<br>power<br>(dBm) | Measured<br>SAR1g | Power<br>Drift<br>(dB) | Scaling<br>Factor | Report<br>SAR1g | Plot<br>No. |
|---------------------|------------------|---------------|------------------|------|--------------------|------|--------|--------------------|------------------|----------------------------|-------------------|------------------------|-------------------|-----------------|-------------|
| LTE 2<br>(Original) | Low<br>Antenna   | 21            | Back Side        | QPSK | DSI2               | 1    | 50     | 19100/1900         | 25.00            | 24.26                      | 0.346             | 0.042                  | 1.19              | 0.410           | \           |
|                     |                  | 21            | Back Side        | QPSK | DSI2               | 50%  | 25     | 18700/1860         | 24.00            | 23.20                      | 0.261             | -0.011                 | 1.20              | 0.314           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 1    | 50     | 19100/1900         | 25.00            | 24.26                      | 0.291             | 0.039                  | 1.19              | 0.345           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 50%  | 25     | 18700/1860         | 24.00            | 23.20                      | 0.219             | 0.050                  | 1.20              | 0.263           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 1    | 50     | 19100/1900         | 25.00            | 24.26                      | 0.371             | 0.040                  | 1.19              | 0.440           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 50%  | 25     | 18700/1860         | 24.00            | 23.20                      | 0.297             | 0.022                  | 1.20              | 0.357           | \           |
|                     | Upper<br>Antenna | 17            | Back Side        | QPSK | DSI2               | 1    | 50     | 18700/1860         | 25.00            | 24.40                      | 0.112             | 0.069                  | 1.15              | 0.129           | \           |
|                     |                  | 17            | Back Side        | QPSK | DSI2               | 50%  | 0      | 18700/1860         | 24.00            | 23.00                      | 0.103             | -0.031                 | 1.26              | 0.130           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 1    | 50     | 18700/1860         | 25.00            | 24.40                      | 0.595             | 0.030                  | 1.15              | 0.683           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 50%  | 0      | 18700/1860         | 24.00            | 23.00                      | 0.421             | -0.036                 | 1.26              | 0.530           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 1    | 50     | 18700/1860         | 25.00            | 24.40                      | 0.162             | 0.020                  | 1.15              | 0.186           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 50%  | 0      | 18700/1860         | 24.00            | 23.00                      | 0.171             | 0.018                  | 1.26              | 0.215           | \           |
| LTE 4<br>(Original) | Low<br>Antenna   | 21            | Back Side        | QPSK | DSI2               | 1    | 50     | 20050/1720         | 24.00            | 23.35                      | 0.293             | 0.024                  | 1.16              | 0.340           | \           |
|                     |                  | 21            | Back Side        | QPSK | DSI2               | 50%  | 0      | 20050/1720         | 23.00            | 22.08                      | 0.204             | -0.069                 | 1.24              | 0.252           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 1    | 50     | 20050/1720         | 24.00            | 23.35                      | 0.231             | 0.022                  | 1.16              | 0.268           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 50%  | 0      | 20050/1720         | 23.00            | 22.08                      | 0.163             | 0.000                  | 1.24              | 0.201           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 1    | 50     | 20050/1720         | 24.00            | 23.35                      | 0.278             | 0.032                  | 1.16              | 0.323           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 50%  | 0      | 20050/1720         | 23.00            | 22.08                      | 0.232             | 0.051                  | 1.24              | 0.287           | \           |
|                     | Upper<br>Antenna | 17            | Back Side        | QPSK | DSI2               | 1    | 50     | 20175/1732.5       | 23.00            | 22.65                      | 0.194             | 0.070                  | 1.08              | 0.210           | \           |
|                     |                  | 17            | Back Side        | QPSK | DSI2               | 50%  | 0      | 20050/1720         | 23.00            | 22.03                      | 0.218             | -0.035                 | 1.25              | 0.273           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 1    | 50     | 20050/1720         | 23.00            | 22.55                      | 0.769             | 0.023                  | 1.11              | 0.853           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 1    | 50     | 20175/1732.5       | 23.00            | 22.65                      | 0.845             | 0.040                  | 1.08              | 0.916           | 43          |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 1    | 0      | 20300/1745         | 23.00            | 22.49                      | 0.782             | 0.029                  | 1.12              | 0.879           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 50%  | 0      | 20050/1720         | 23.00            | 22.03                      | 0.712             | 0.028                  | 1.25              | 0.890           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 50%  | 0      | 20175/1732.5       | 23.00            | 22.03                      | 0.719             | -0.055                 | 1.25              | 0.899           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 50%  | 0      | 20300/1745         | 23.00            | 21.98                      | 0.722             | 0.017                  | 1.26              | 0.913           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 100% | 0      | 20050/1720         | 23.00            | 21.80                      | 0.685             | 0.072                  | 1.32              | 0.903           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 100% | 0      | 20175/1732.5       | 23.00            | 22.00                      | 0.715             | 0.038                  | 1.26              | 0.900           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 100% | 0      | 20300/1745         | 23.00            | 21.82                      | 0.689             | 0.049                  | 1.31              | 0.904           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 1    | 50     | 20175/1732.5       | 23.00            | 22.65                      | 0.258             | 0.014                  | 1.08              | 0.280           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 50%  | 0      | 20050/1720         | 23.00            | 22.03                      | 0.271             | -0.032                 | 1.25              | 0.339           | \           |
| LTE 4               | Upper            | 10            | Front Side       | QPSK | DSI2               | 1    | 50     | 20175/1732.5       | 23.00            | 22.65                      | 0.785             | 0.028                  | 1.08              | 0.851           | \           |



| (Variant)            | Antenna          |    |             |      |      |     |    |             |       |       |       |        |      |       |   |
|----------------------|------------------|----|-------------|------|------|-----|----|-------------|-------|-------|-------|--------|------|-------|---|
| LTE 5<br>(Original)  | Low<br>Antenna   | 21 | Back Side   | QPSK | DSI2 | 1   | 25 | 20450/829   | 25.00 | 24.27 | 0.123 | 0.090  | 1.18 | 0.146 | \ |
|                      |                  | 21 | Back Side   | QPSK | DSI2 | 50% | 13 | 20450/829   | 23.50 | 23.01 | 0.108 | 0.061  | 1.12 | 0.121 | \ |
|                      |                  | 16 | Front Side  | QPSK | DSI2 | 1   | 25 | 20450/829   | 25.00 | 24.27 | 0.121 | 0.022  | 1.18 | 0.143 | \ |
|                      |                  | 16 | Front Side  | QPSK | DSI2 | 50% | 13 | 20450/829   | 23.50 | 23.01 | 0.122 | 0.170  | 1.12 | 0.137 | \ |
|                      |                  | 23 | Bottom Edge | QPSK | DSI2 | 1   | 25 | 20450/829   | 25.00 | 24.27 | 0.049 | 0.023  | 1.18 | 0.058 | \ |
|                      |                  | 23 | Bottom Edge | QPSK | DSI2 | 50% | 13 | 20450/829   | 23.50 | 23.01 | 0.043 | 0.000  | 1.12 | 0.048 | \ |
|                      | Upper<br>Antenna | 17 | Back Side   | QPSK | DSI2 | 1   | 25 | 20450/829   | 25.00 | 24.45 | 0.121 | -0.090 | 1.14 | 0.137 | \ |
|                      |                  | 17 | Back Side   | QPSK | DSI2 | 50% | 13 | 20525/836.5 | 23.50 | 23.24 | 0.111 | 0.010  | 1.06 | 0.118 | \ |
|                      |                  | 10 | Front Side  | QPSK | DSI2 | 1   | 25 | 20450/829   | 25.00 | 24.45 | 0.295 | 0.028  | 1.14 | 0.335 | \ |
|                      |                  | 10 | Front Side  | QPSK | DSI2 | 50% | 13 | 20525/836.5 | 23.50 | 23.24 | 0.253 | 0.011  | 1.06 | 0.269 | \ |
|                      |                  | 17 | Top Edge    | QPSK | DSI2 | 1   | 25 | 20450/829   | 25.00 | 24.45 | 0.073 | 0.032  | 1.14 | 0.083 | \ |
|                      |                  | 17 | Top Edge    | QPSK | DSI2 | 50% | 13 | 20525/836.5 | 23.50 | 23.24 | 0.064 | -0.058 | 1.06 | 0.068 | \ |
| LTE 7<br>(Original)  | Low<br>Antenna   | 21 | Back Side   | QPSK | DSI2 | 1   | 0  | 21350/2560  | 24.00 | 22.89 | 0.263 | 0.020  | 1.29 | 0.340 | \ |
|                      |                  | 21 | Back Side   | QPSK | DSI2 | 50% | 25 | 21100/2535  | 23.00 | 21.84 | 0.240 | 0.000  | 1.31 | 0.313 | \ |
|                      |                  | 16 | Front Side  | QPSK | DSI2 | 1   | 0  | 21350/2560  | 24.00 | 22.89 | 0.243 | 0.037  | 1.29 | 0.314 | \ |
|                      |                  | 16 | Front Side  | QPSK | DSI2 | 50% | 25 | 21100/2535  | 23.00 | 21.84 | 0.225 | 0.014  | 1.31 | 0.294 | \ |
|                      |                  | 23 | Bottom Edge | QPSK | DSI2 | 1   | 0  | 21350/2560  | 24.00 | 22.89 | 0.324 | -0.099 | 1.29 | 0.418 | \ |
|                      |                  | 23 | Bottom Edge | QPSK | DSI2 | 50% | 25 | 21100/2535  | 23.00 | 21.84 | 0.309 | 0.025  | 1.31 | 0.404 | \ |
|                      | Upper<br>Antenna | 17 | Back Side   | QPSK | DSI2 | 1   | 50 | 20850/2510  | 24.00 | 22.98 | 0.138 | 0.031  | 1.26 | 0.175 | \ |
|                      |                  | 17 | Back Side   | QPSK | DSI2 | 50% | 25 | 21100/2535  | 23.00 | 21.66 | 0.131 | 0.018  | 1.36 | 0.178 | \ |
|                      |                  | 10 | Front Side  | QPSK | DSI2 | 1   | 50 | 20850/2510  | 24.00 | 22.98 | 0.410 | 0.034  | 1.26 | 0.519 | \ |
|                      |                  | 10 | Front Side  | QPSK | DSI2 | 50% | 25 | 21100/2535  | 23.00 | 21.66 | 0.335 | 0.021  | 1.36 | 0.456 | \ |
|                      |                  | 17 | Top Edge    | QPSK | DSI2 | 1   | 50 | 20850/2510  | 24.00 | 22.98 | 0.126 | -0.029 | 1.26 | 0.159 | \ |
|                      |                  | 17 | Top Edge    | QPSK | DSI2 | 50% | 25 | 21100/2535  | 23.00 | 21.66 | 0.108 | 0.033  | 1.36 | 0.147 | \ |
| LTE 38<br>(Original) | Low<br>Antenna   | 21 | Back Side   | QPSK | DSI2 | 1   | 50 | 37850/2580  | 24.50 | 23.65 | 0.138 | 0.050  | 1.22 | 0.168 | \ |
|                      |                  | 21 | Back Side   | QPSK | DSI2 | 50% | 0  | 38150/2610  | 23.50 | 22.30 | 0.103 | 0.020  | 1.32 | 0.136 | \ |
|                      |                  | 16 | Front Side  | QPSK | DSI2 | 1   | 50 | 37850/2580  | 24.50 | 23.65 | 0.136 | 0.041  | 1.22 | 0.165 | \ |
|                      |                  | 16 | Front Side  | QPSK | DSI2 | 50% | 0  | 38150/2610  | 23.50 | 22.30 | 0.081 | -0.011 | 1.32 | 0.107 | \ |
|                      |                  | 23 | Bottom Edge | QPSK | DSI2 | 1   | 50 | 37850/2580  | 24.50 | 23.65 | 0.144 | 0.013  | 1.22 | 0.175 | \ |
|                      |                  | 23 | Bottom Edge | QPSK | DSI2 | 50% | 0  | 38150/2610  | 23.50 | 22.30 | 0.096 | 0.025  | 1.32 | 0.127 | \ |
|                      | Upper<br>Antenna | 17 | Back Side   | QPSK | DSI2 | 1   | 50 | 37850/2580  | 24.50 | 23.60 | 0.135 | 0.062  | 1.23 | 0.166 | \ |
|                      |                  | 17 | Back Side   | QPSK | DSI2 | 50% | 0  | 37850/2580  | 23.50 | 22.23 | 0.108 | -0.080 | 1.34 | 0.145 | \ |
|                      |                  | 10 | Front Side  | QPSK | DSI2 | 1   | 50 | 37850/2580  | 24.50 | 23.60 | 0.258 | 0.035  | 1.23 | 0.317 | \ |
|                      |                  | 10 | Front Side  | QPSK | DSI2 | 50% | 0  | 37850/2580  | 23.50 | 22.23 | 0.190 | 0.071  | 1.34 | 0.255 | \ |
|                      |                  | 17 | Top Edge    | QPSK | DSI2 | 1   | 50 | 37850/2580  | 24.50 | 23.60 | 0.141 | -0.039 | 1.23 | 0.173 | \ |
|                      |                  | 17 | Top Edge    | QPSK | DSI2 | 50% | 0  | 37850/2580  | 23.50 | 22.23 | 0.113 | 0.120  | 1.34 | 0.151 | \ |



| Band                | Antenna          | Dist.<br>(mm) | Test<br>Position | Mode | Power<br>Reduction | RB  | offset | Ch./Freq.<br>(MHz) | Tune-up<br>(dBm) | Measured<br>power<br>(dBm) | Measured<br>SAR1g | Power<br>Drift<br>(dB) | Scaling<br>Factor | Report<br>SAR1g | Plot<br>No. |
|---------------------|------------------|---------------|------------------|------|--------------------|-----|--------|--------------------|------------------|----------------------------|-------------------|------------------------|-------------------|-----------------|-------------|
| LTE 12<br>(Variant) | Low<br>Antenna   | 21            | Back Side        | QPSK | DSI2               | 1   | 25     | 23095/707.5        | 25.50            | 24.77                      | 0.089             | 0.100                  | 1.18              | 0.105           | \           |
|                     |                  | 21            | Back Side        | QPSK | DSI2               | 50% | 13     | 23095/707.5        | 24.50            | 23.50                      | 0.083             | -0.010                 | 1.26              | 0.104           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 1   | 25     | 23095/707.5        | 25.50            | 24.77                      | 0.062             | -0.045                 | 1.18              | 0.073           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 50% | 13     | 23095/707.5        | 24.50            | 23.50                      | 0.056             | 0.000                  | 1.26              | 0.071           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 1   | 25     | 23095/707.5        | 25.50            | 24.77                      | 0.014             | 0.030                  | 1.18              | 0.017           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 50% | 13     | 23095/707.5        | 24.50            | 23.50                      | 0.014             | 0.064                  | 1.26              | 0.018           | \           |
|                     | Upper<br>Antenna | 17            | Back Side        | QPSK | DSI2               | 1   | 25     | 23130/711          | 25.50            | 25.01                      | 0.206             | -0.020                 | 1.12              | 0.231           | \           |
|                     |                  | 17            | Back Side        | QPSK | DSI2               | 50% | 0      | 23060/704          | 24.50            | 23.44                      | 0.159             | 0.060                  | 1.28              | 0.203           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 1   | 25     | 23130/711          | 25.50            | 25.01                      | 0.149             | 0.010                  | 1.12              | 0.167           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 50% | 0      | 23060/704          | 24.50            | 23.44                      | 0.106             | -0.022                 | 1.28              | 0.135           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 1   | 25     | 23130/711          | 25.50            | 25.01                      | 0.038             | 0.000                  | 1.12              | 0.043           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 50% | 0      | 23060/704          | 24.50            | 23.44                      | 0.029             | -0.031                 | 1.28              | 0.037           | \           |
| LTE 17<br>(Variant) | Low<br>Antenna   | 21            | Back Side        | QPSK | DSI2               | 1   | 25     | 23780/709          | 25.50            | 24.61                      | 0.093             | 0.041                  | 1.23              | 0.114           | \           |
|                     |                  | 21            | Back Side        | QPSK | DSI2               | 50% | 13     | 23780/709          | 24.50            | 23.43                      | 0.078             | 0.026                  | 1.28              | 0.100           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 1   | 25     | 23780/709          | 25.50            | 24.61                      | 0.064             | 0.015                  | 1.23              | 0.079           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 50% | 13     | 23780/709          | 24.50            | 23.43                      | 0.053             | -0.069                 | 1.28              | 0.068           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 1   | 25     | 23780/709          | 25.50            | 24.61                      | 0.021             | 0.035                  | 1.23              | 0.026           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 50% | 13     | 23780/709          | 24.50            | 23.43                      | 0.016             | 0.020                  | 1.28              | 0.020           | \           |
|                     | Upper<br>Antenna | 17            | Back Side        | QPSK | DSI2               | 1   | 25     | 23790/710          | 25.50            | 25.33                      | 0.152             | 0.010                  | 1.04              | 0.158           | \           |
|                     |                  | 17            | Back Side        | QPSK | DSI2               | 50% | 13     | 23780/709          | 24.50            | 23.72                      | 0.115             | 0.020                  | 1.20              | 0.138           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 1   | 25     | 23790/710          | 25.50            | 25.33                      | 0.122             | 0.050                  | 1.04              | 0.127           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 50% | 13     | 23780/709          | 24.50            | 23.72                      | 0.101             | 0.090                  | 1.20              | 0.121           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 1   | 25     | 23790/710          | 25.50            | 25.33                      | 0.042             | 0.050                  | 1.04              | 0.044           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 50% | 13     | 23780/709          | 24.50            | 23.72                      | 0.028             | 0.020                  | 1.20              | 0.034           | \           |
| LTE 41<br>(Variant) | Low<br>Antenna   | 21            | Back Side        | QPSK | DSI2               | 1   | 0      | 39750/2506         | 24.00            | 22.59                      | 0.279             | 0.150                  | 1.38              | 0.386           | \           |
|                     |                  | 21            | Back Side        | QPSK | DSI2               | 50% | 25     | 40185/2549.5       | 23.00            | 21.85                      | 0.248             | 0.017                  | 1.30              | 0.323           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 1   | 0      | 39750/2506         | 24.00            | 22.59                      | 0.475             | 0.146                  | 1.38              | 0.657           | 43          |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 50% | 25     | 40185/2549.5       | 23.00            | 21.85                      | 0.383             | -0.020                 | 1.30              | 0.499           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 1   | 0      | 39750/2506         | 24.00            | 22.59                      | 0.323             | 0.060                  | 1.38              | 0.447           | \           |
|                     |                  | 23            | Bottom Edge      | QPSK | DSI2               | 50% | 25     | 40185/2549.5       | 23.00            | 21.85                      | 0.285             | -0.080                 | 1.30              | 0.371           | \           |
|                     | Upper<br>Antenna | 17            | Back Side        | QPSK | DSI2               | 1   | 50     | 41490/2680         | 24.00            | 23.21                      | 0.119             | 0.078                  | 1.20              | 0.143           | \           |
|                     |                  | 17            | Back Side        | QPSK | DSI2               | 50% | 25     | 40185/2549.5       | 23.00            | 22.28                      | 0.102             | -0.040                 | 1.18              | 0.120           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 1   | 50     | 41490/2680         | 24.00            | 23.21                      | 0.185             | 0.069                  | 1.20              | 0.222           | \           |
|                     |                  | 10            | Front Side       | QPSK | DSI2               | 50% | 25     | 40185/2549.5       | 23.00            | 22.28                      | 0.149             | 0.021                  | 1.18              | 0.176           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 1   | 50     | 41490/2680         | 24.00            | 23.21                      | 0.193             | 0.040                  | 1.20              | 0.232           | \           |
|                     |                  | 17            | Top Edge         | QPSK | DSI2               | 50% | 25     | 40185/2549.5       | 23.00            | 22.28                      | 0.139             | 0.030                  | 1.18              | 0.164           | \           |
| LTE 66<br>(Variant) | Low<br>Antenna   | 21            | Back Side        | QPSK | DSI2               | 1   | 50     | 132322/1745        | 24.00            | 23.18                      | 0.229             | -0.040                 | 1.21              | 0.277           | \           |
|                     |                  | 21            | Back Side        | QPSK | DSI2               | 50% | 25     | 132322/1745        | 23.00            | 21.69                      | 0.164             | 0.120                  | 1.35              | 0.222           | \           |
|                     |                  | 16            | Front Side       | QPSK | DSI2               | 1   | 50     | 132322/1745        | 24.00            | 23.18                      | 0.164             | 0.070                  | 1.21              | 0.198           | \           |

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|  |                  |    |             |      |      |     |    |             |       |       |       |        |      |       |   |
|--|------------------|----|-------------|------|------|-----|----|-------------|-------|-------|-------|--------|------|-------|---|
|  |                  | 16 | Front Side  | QPSK | DSI2 | 50% | 25 | 132322/1745 | 23.00 | 21.69 | 0.127 | -0.070 | 1.35 | 0.172 | \ |
|  |                  | 23 | Bottom Edge | QPSK | DSI2 | 1   | 50 | 132322/1745 | 24.00 | 23.18 | 0.265 | 0.170  | 1.21 | 0.320 | \ |
|  |                  | 23 | Bottom Edge | QPSK | DSI2 | 50% | 25 | 132322/1745 | 23.00 | 21.69 | 0.203 | 0.050  | 1.35 | 0.274 | \ |
|  | Upper<br>Antenna | 17 | Back Side   | QPSK | DSI2 | 1   | 50 | 132322/1745 | 24.00 | 23.50 | 0.372 | -0.028 | 1.12 | 0.418 | \ |
|  |                  | 17 | Back Side   | QPSK | DSI2 | 50% | 0  | 132322/1745 | 23.00 | 22.00 | 0.291 | 0.020  | 1.26 | 0.366 | \ |
|  |                  | 10 | Front Side  | QPSK | DSI2 | 1   | 50 | 132322/1745 | 24.00 | 23.50 | 0.359 | 0.140  | 1.12 | 0.403 | \ |
|  |                  | 10 | Front Side  | QPSK | DSI2 | 50% | 0  | 132322/1745 | 23.00 | 22.00 | 0.267 | -0.100 | 1.26 | 0.336 | \ |
|  |                  | 17 | Top Edge    | QPSK | DSI2 | 1   | 50 | 132322/1745 | 24.00 | 23.50 | 0.596 | 0.020  | 1.12 | 0.669 | \ |
|  |                  | 17 | Top Edge    | QPSK | DSI2 | 50% | 0  | 132322/1745 | 23.00 | 22.00 | 0.470 | 0.010  | 1.26 | 0.592 | \ |

**BT**

| Band      | Configuration             | Frequency (MHz) | Maximum Power (dBm) | Separation Distance (mm) | Estimated SAR (W/kg) |
|-----------|---------------------------|-----------------|---------------------|--------------------------|----------------------|
| Bluetooth | Head                      | 2480            | 9.50                | 5                        | 0.374                |
|           | 10mm Body SAR             | 2480            | 9.50                | 10                       | 0.187                |
|           | Product Specific 10-g SAR | 2480            | 9.50                | 5                        | 0.150                |

For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01 based on the formula below.  
(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm) ·  $\sqrt{f(\text{GHz})/x}$  W/kg  
for test separation distances  $\leq 50$  mm; where  $x = 7.5$  for 1-g SAR, and  $x = 18.75$  for 10-g SAR.

## 10.4 Simultaneous Transmission Analysis

| Simultaneous Transmission Configurations | Head | Body-Worn | Product Specific 10-g SAR |
|------------------------------------------|------|-----------|---------------------------|
| WWAN + Bluetooth                         | Yes  | Yes       | Yes                       |
| WWAN + WLAN                              | Yes  | Yes       | Yes                       |
| WLAN + Bluetooth                         | Yes  | Yes       | Yes                       |
| WWAN + WLAN + Bluetooth                  | Yes  | Yes       | Yes                       |

### General Note:

1. The Scaled SAR summation is calculated based on the same configuration and test position.
2. Per KDB 447498 D01, simultaneous transmission SAR is compliant if,
  - i) Scalar SAR summation  $< 1.6\text{W/kg}$ , simultaneously transmission SAR measurement is not necessary.
  - ii)  $\text{SPLSR} = (\text{SAR1} + \text{SAR2})^{1.5} / (\text{min. separation distance, mm})$ , and the peak separation distance is determined from the square root of  $[(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2]$ , where  $(x_1, y_1, z_1)$  and  $(x_2, y_2, z_2)$  are the coordinates of the extrapolated peak SAR locations in the zoom scan.
  - iii) If  $\text{SPLSR} \leq 0.04$ , simultaneously transmission SAR measurement is not necessary.

The maximum SAR<sub>1g/10g</sub> Value for Low Antenna

| SAR <sub>1g/10g</sub> (W/kg) |             | GSM   | GSM   | WCDM  | WCDM  | WCDM  | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | MAX.                  |
|------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------|
| Test Position                |             | 850   | 1900  | A 2   | A 4   | A 5   | 2     | 4     | 5     | 7     | 38    | 12    | 13    | 17    | 26    | 41    | 66    | SAR <sub>1g/10g</sub> |
| Head                         | Left Cheek  | 0.148 | 0.123 | 0.254 | 0.116 | 0.155 | 0.302 | 0.122 | 0.206 | 0.252 | 0.130 | 0.196 | 0.148 | 0.216 | 0.204 | 0.066 | 0.121 | 0.302                 |
|                              | Left Tilt   | 0.087 | 0.081 | 0.175 | 0.133 | 0.091 | 0.181 | 0.108 | 0.114 | 0.178 | 0.094 | 0.109 | 0.072 | 0.096 | 0.136 | 0.044 | 0.099 | 0.181                 |
|                              | Right Cheek | 0.034 | 0.086 | 0.173 | 0.184 | 0.159 | 0.198 | 0.120 | 0.206 | 0.124 | 0.078 | 0.254 | 0.098 | 0.241 | 0.208 | 0.030 | 0.098 | 0.254                 |
|                              | Right Tilt  | 0.020 | 0.057 | 0.104 | 0.096 | 0.089 | 0.134 | 0.091 | 0.105 | 0.263 | 0.108 | 0.131 | 0.056 | 0.097 | 0.104 | 0.043 | 0.077 | 0.263                 |
| Body SAR                     | Back Side   | 0.391 | 0.788 | 0.624 | 0.677 | 0.368 | 0.548 | 0.513 | 0.393 | 0.699 | 0.485 | 0.212 | 0.272 | 0.260 | 0.391 | 0.446 | 0.529 | 0.788                 |
|                              | Front Side  | 0.226 | 0.375 | 0.248 | 0.251 | 0.210 | 0.246 | 0.244 | 0.206 | 0.419 | 0.289 | 0.182 | 0.182 | 0.234 | 0.251 | 0.212 | 0.281 | 0.419                 |
|                              | Left Edge   | 0.000 | 0.219 | 0.353 | 0.231 | 0.000 | 0.401 | 0.210 | 0.000 | 0.281 | 0.142 | 0.079 | 0.059 | 0.063 | 0.154 | 0.187 | 0.242 | 0.401                 |
|                              | Right Edge  | 0.081 | 0.000 | 0.051 | 0.061 | 0.103 | 0.066 | 0.060 | 0.151 | 0.364 | 0.151 | 0.162 | 0.112 | 0.101 | 0.271 | 0.310 | 0.142 | 0.364                 |
|                              | Top Edge    | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A                   |
|                              | Bottom Edge | 0.266 | 1.078 | 0.778 | 0.884 | 0.251 | 0.789 | 0.777 | 0.328 | 1.025 | 0.747 | 0.127 | 0.227 | 0.173 | 0.337 | 0.316 | 0.863 | 1.078                 |
| Product Specific 10-g SAR    | Back Side   | N/A   | N/A   | 1.966 | 1.996 | N/A   | 1.772 | N/A   | N/A   | 1.398 | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | 1.996                 |
|                              | Front Side  | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | 1.152 | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | 1.152                 |
|                              | Left Edge   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A                   |
|                              | Right Edge  | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A                   |
|                              | Top Edge    | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A                   |
|                              | Bottom Edge | N/A   | N/A   | 1.217 | 1.791 | N/A   | 1.250 | 1.644 | N/A   | 0.713 | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | 1.436 | 1.791                 |

The maximum SAR<sub>1g/10g</sub> Value for Upper Antenna

| SAR <sub>1g/10g</sub> (W/kg) |             | GSM   | GSM   | WCDM  | WCDM  | WCDM  | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | LTE   | MAX.                  |
|------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------|
| Test Position                |             | 850   | 1900  | A 2   | A 4   | A 5   | 2     | 4     | 5     | 7     | 38    | 12    | 13    | 17    | 26    | 41    | 66    | SAR <sub>1g/10g</sub> |
| Head                         | Left Cheek  | 0.625 | 0.398 | 0.467 | 0.481 | 0.586 | 0.530 | 0.358 | 0.412 | 0.431 | 0.308 | 0.403 | 0.242 | 0.524 | 0.618 | 0.365 | 0.433 | 0.625                 |
|                              | Left Tilt   | 0.558 | 0.452 | 0.521 | 0.549 | 0.569 | 0.575 | 0.371 | 0.366 | 0.456 | 0.370 | 0.338 | 0.213 | 0.460 | 0.552 | 0.391 | 0.346 | 0.575                 |
|                              | Right Cheek | 0.760 | 0.530 | 0.593 | 0.625 | 0.787 | 0.553 | 0.640 | 0.602 | 0.624 | 0.576 | 0.668 | 0.307 | 0.503 | 0.541 | 0.461 | 0.471 | 0.787                 |
|                              | Right Tilt  | 0.649 | 0.702 | 0.703 | 0.739 | 0.706 | 0.667 | 0.840 | 0.428 | 0.841 | 0.449 | 0.544 | 0.362 | 0.550 | 0.547 | 0.541 | 0.599 | 0.841                 |
| Body SAR                     | Back Side   | 0.557 | 0.268 | 0.178 | 0.521 | 0.393 | 0.233 | 0.491 | 0.318 | 0.510 | 0.389 | 0.339 | 0.193 | 0.307 | 0.356 | 0.637 | 0.423 | 0.637                 |
|                              | Front Side  | 0.173 | 0.176 | 0.118 | 0.294 | 0.245 | 0.152 | 0.916 | 0.200 | 0.265 | 0.228 | 0.186 | 0.135 | 0.209 | 0.212 | 0.294 | 0.405 | 0.916                 |
|                              | Left Edge   | 0.135 | 0.067 | 0.112 | 0.156 | 0.168 | 0.088 | 0.133 | 0.125 | 0.371 | 0.282 | 0.165 | 0.090 | 0.170 | 0.150 | 0.261 | 0.100 | 0.371                 |
|                              | Right Edge  | 0.095 | 0.000 | 0.054 | 0.068 | 0.096 | 0.054 | 0.056 | 0.107 | 0.095 | 0.078 | 0.119 | 0.121 | 0.136 | 0.107 | 0.055 | 0.031 | 0.136                 |
|                              | Top Edge    | 0.189 | 0.386 | 0.247 | 0.604 | 0.258 | 0.332 | 0.599 | 0.206 | 0.462 | 0.425 | 0.228 | 0.192 | 0.245 | 0.234 | 0.371 | 0.573 | 0.604                 |
|                              | Bottom Edge | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A                   |
| Product Specific 10-g SAR    | Back Side   | N/A   | N/A   | N/A   | N/A   | 1.061 | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | 1.061                 |
|                              | Front Side  | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A                   |
|                              | Left Edge   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A                   |
|                              | Right Edge  | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A                   |
|                              | Top Edge    | N/A   | N/A   | N/A   | N/A   | 1.218 | N/A   | 1.331 | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | 1.612 | 1.612                 |
|                              | Bottom Edge | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A                   |



About Wi-Fi and BT and Low Antenna

| SAR <sub>1g/10g</sub> (W/kg) |              | Low antenna | BT    | Wi-Fi 2.4G   | Wi-Fi (U-NII-1) | Wi-Fi (U-NII-2A) | Wi-Fi (U-NII-2C) | Wi-Fi (U-NII-3) | MAX. $\Sigma$ SAR <sub>1g/10g</sub> |
|------------------------------|--------------|-------------|-------|--------------|-----------------|------------------|------------------|-----------------|-------------------------------------|
| Test Position                |              |             |       |              |                 |                  |                  |                 |                                     |
| Head                         | Left, Cheek  | 0.302       | 0.374 | <b>0.570</b> | 0.501           | 0.329            | 0.340            | 0.242           | 1.246                               |
|                              | Left, Tilt   | 0.181       | 0.374 | 0.452        | 0.475           | 0.405            | <b>0.484</b>     | 0.306           | 1.039                               |
|                              | Right, Cheek | 0.254       | 0.374 | 0.272        | 0.294           | 0.298            | <b>0.300</b>     | 0.199           | 0.928                               |
|                              | Right, Tilt  | 0.263       | 0.146 | 0.250        | 0.318           | 0.297            | <b>0.405</b>     | 0.225           | 0.814                               |
| 10mm Body SAR                | Back Side    | 0.788       | 0.187 | <b>0.435</b> | 0.344           | N/A              | N/A              | 0.385           | <b>1.410</b>                        |
|                              | Front Side   | 0.419       | 0.187 | <b>0.207</b> | 0.146           | N/A              | N/A              | 0.071           | 0.813                               |
|                              | Left Edge    | 0.401       | 0.187 | 0.017        | <b>0.115</b>    | N/A              | N/A              | 0.018           | 0.703                               |
|                              | Right Edge   | 0.364       | 0.187 | 0.242        | <b>0.374</b>    | N/A              | N/A              | 0.250           | 0.925                               |
|                              | Top Edge     | N/A         | 0.187 | 0.151        | <b>0.578</b>    | N/A              | N/A              | 0.451           | 0.765                               |
|                              | Bottom Edge  | 1.078       | 0.187 | N/A          | N/A             | N/A              | N/A              | N/A             | 1.265                               |
| Product Specific 10-g SAR    | Back Side    | 1.996       | 0.150 | N/A          | N/A             | 1.249            | <b>1.641</b>     | N/A             | <b>3.787</b>                        |
|                              | Front Side   | 1.152       | 0.150 | N/A          | N/A             | 0.129            | <b>0.217</b>     | N/A             | 1.519                               |
|                              | Left Edge    | N/A         | 0.150 | N/A          | N/A             | <b>0.033</b>     | 0.027            | N/A             | 0.183                               |
|                              | Right Edge   | N/A         | 0.150 | N/A          | N/A             | 0.179            | <b>0.344</b>     | N/A             | 0.494                               |
|                              | Top Edge     | N/A         | 0.150 | N/A          | N/A             | 0.625            | <b>1.443</b>     | N/A             | 1.593                               |
|                              | Bottom Edge  | 1.791       | 0.150 | N/A          | N/A             | N/A              | N/A              | N/A             | 1.941                               |

Note: 1. The value with blue color is the maximum  $\Sigma$ SAR<sub>1g/10g</sub> Value.  
2. MAX.  $\Sigma$ SAR<sub>1g/10g</sub> = Unlicensed SAR<sub>MAX</sub> + Licensed SAR<sub>MAX</sub>

MAX.  $\Sigma$ SAR<sub>1g</sub> = 1.410 W/kg < 1.6 W/kg and MAX.  $\Sigma$ SAR<sub>10g</sub> = 3.787 W/kg < 4 W/kg, so the Simultaneous transimition SAR with volum scan are not required for Wi-Fi and BT and Low Antenna.



## About Wi-Fi and BT and Upper Antenna

| Test Position             |              | SAR <sub>1g/10g</sub> (W/kg) | Upper Antenna | BT    | Wi-Fi 2.4G   | Wi-Fi (U-NII-1) | Wi-Fi (U-NII-2A) | Wi-Fi (U-NII-2C) | Wi-Fi (U-NII-3) | MAX. $\Sigma$ SAR <sub>1g/10g</sub> |
|---------------------------|--------------|------------------------------|---------------|-------|--------------|-----------------|------------------|------------------|-----------------|-------------------------------------|
| Head                      | Left, Cheek  |                              | 0.625         | 0.374 | <b>0.570</b> | 0.501           | 0.329            | 0.340            | 0.242           | 1.569                               |
|                           | Left, Tilt   |                              | 0.575         | 0.374 | 0.452        | 0.475           | 0.405            | <b>0.484</b>     | 0.306           | 1.433                               |
|                           | Right, Cheek |                              | 0.787         | 0.374 | 0.272        | 0.294           | 0.298            | <b>0.300</b>     | 0.199           | 1.461                               |
|                           | Right, Tilt  |                              | 0.841         | 0.146 | 0.250        | 0.318           | 0.297            | <b>0.405</b>     | 0.225           | 1.392                               |
| 10mm Body SAR             | Back Side    |                              | 0.637         | 0.187 | <b>0.435</b> | 0.344           | N/A              | N/A              | 0.385           | 1.259                               |
|                           | Front Side   |                              | 0.916         | 0.187 | <b>0.207</b> | 0.146           | N/A              | N/A              | 0.071           | 1.310                               |
|                           | Left Edge    |                              | 0.371         | 0.187 | 0.017        | <b>0.115</b>    | N/A              | N/A              | 0.018           | 0.673                               |
|                           | Right Edge   |                              | 0.136         | 0.187 | 0.242        | <b>0.374</b>    | N/A              | N/A              | 0.250           | 0.697                               |
|                           | Top Edge     |                              | 0.604         | 0.187 | 0.151        | <b>0.578</b>    | N/A              | N/A              | 0.451           | 1.369                               |
|                           | Bottom Edge  |                              | N/A           | 0.187 | N/A          | N/A             | N/A              | N/A              | N/A             | 0.187                               |
| Product Specific 10-g SAR | Back Side    |                              | 1.061         | 0.150 | N/A          | N/A             | 1.249            | <b>1.641</b>     | N/A             | 2.852                               |
|                           | Front Side   |                              | N/A           | 0.150 | N/A          | N/A             | 0.129            | <b>0.217</b>     | N/A             | 0.367                               |
|                           | Left Edge    |                              | N/A           | 0.150 | N/A          | N/A             | <b>0.033</b>     | 0.027            | N/A             | 0.183                               |
|                           | Right Edge   |                              | N/A           | 0.150 | N/A          | N/A             | 0.179            | <b>0.344</b>     | N/A             | 0.494                               |
|                           | Top Edge     |                              | 1.612         | 0.150 | N/A          | N/A             | 0.625            | <b>1.443</b>     | N/A             | 3.205                               |
|                           | Bottom Edge  |                              | N/A           | 0.150 | N/A          | N/A             | N/A              | N/A              | N/A             | 0.150                               |

Note: 1. The value with blue color is the maximum  $\Sigma$ SAR<sub>1g/10g</sub> Value.  
2. MAX.  $\Sigma$ SAR<sub>1g/10g</sub> = Unlicensed SAR<sub>MAX</sub> + Licensed SAR<sub>MAX</sub>

MAX.  $\Sigma$ SAR<sub>1g</sub> = 1.569W/kg < 1.6W/kg and MAX.  $\Sigma$ SAR<sub>10g</sub> = 3.205W/kg < 4 W/kg, so the Simultaneous transimition SAR with volum scan are not required for Wi-Fi and BT and Upper Antenna.



## 11 Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is  $< 1.5$  W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528- 2013 is not required in SAR reports submitted for equipment approval. This also applies to the 10-g SAR required for phablets in KDB Publication 648474.

\*\*\*\*\*END OF REPORT \*\*\*\*\*

## ANNEX A: Test Layout

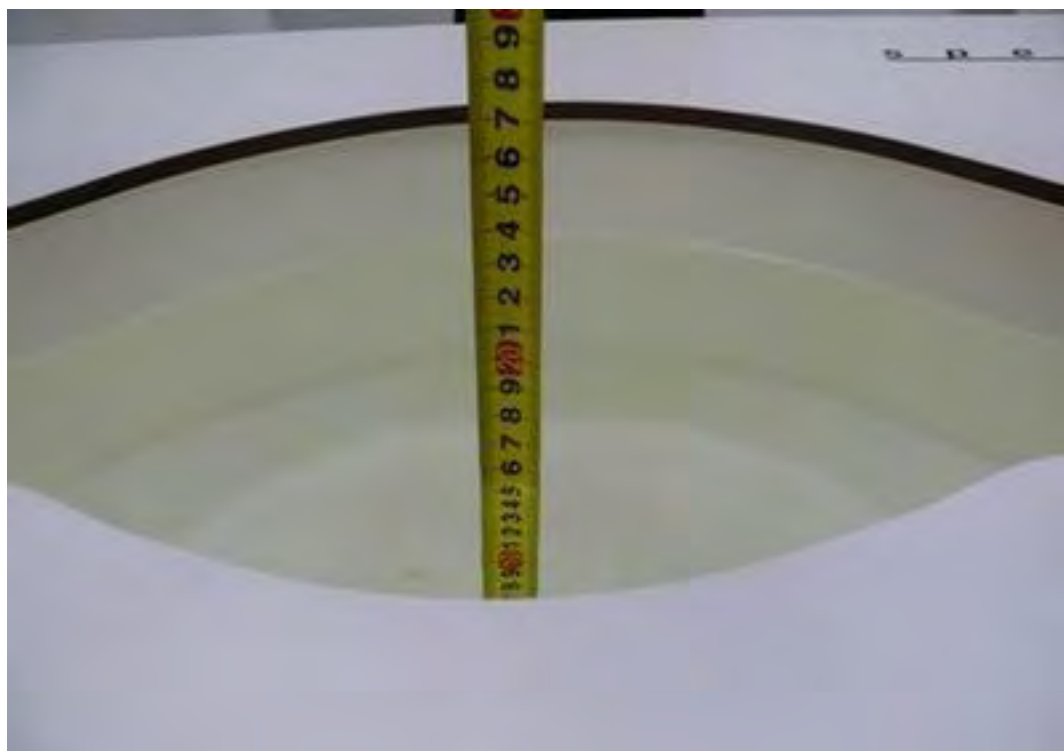


## Tissue Simulating Liquids

For the measurement of the field distribution inside the flat phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For Head and Body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Picture 3 and Picture 4.



Picture 3: liquid depth in the head Phantom



Picture 4: Liquid depth in the flat Phantom

## ANNEX B: System Check Results

### Original

#### Plot 1 System Performance Check at 835 MHz TSL

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2**

Date: 2021/12/30

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.89$  S/m;  $\epsilon_r = 41.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C

Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=15mm, Pin=250mW/Area Scan (4x12x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.64 mW/g

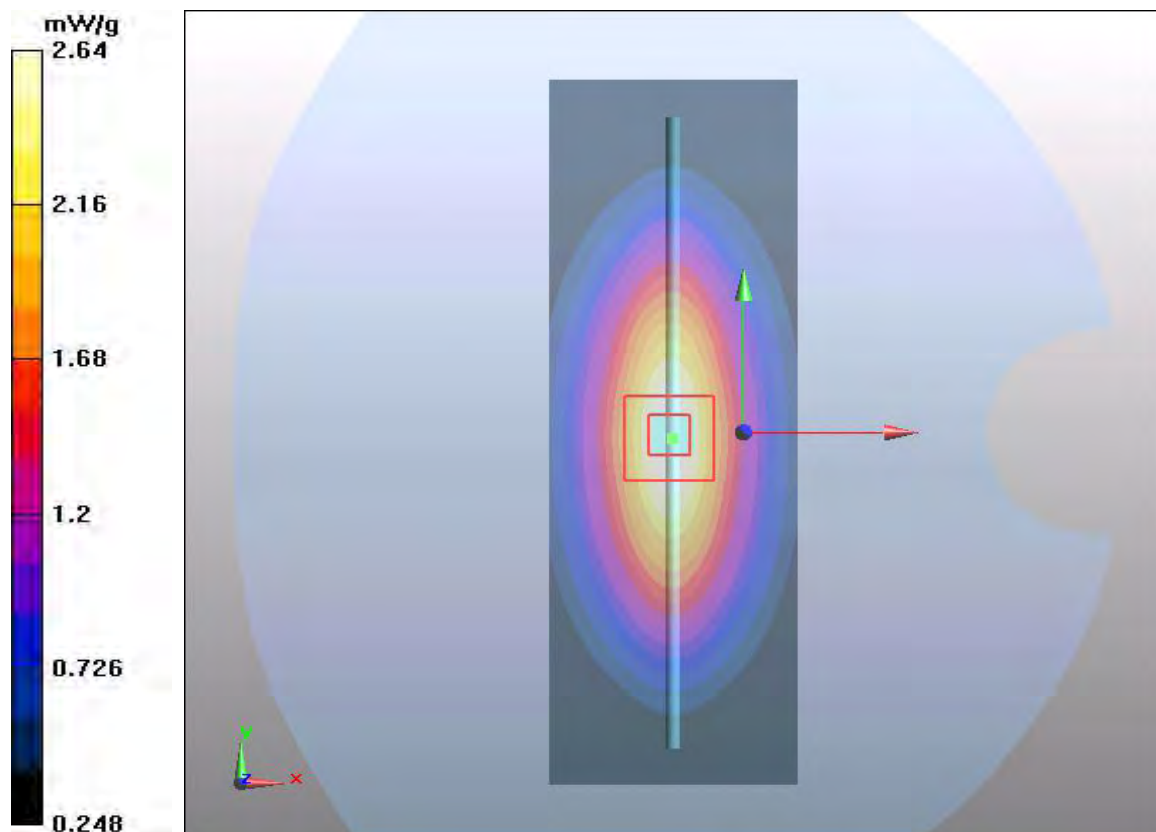
**d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.4 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 3.67 W/kg

**SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.6 mW/g**

Maximum value of SAR (measured) = 2.64 mW/g



## Plot 2 System Performance Check at 835 MHz TSL

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2**

Date: 2021/12/31

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.87$  S/m;  $\epsilon_r = 41.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=15mm, Pin=250mW/Area Scan (4x12x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.59 mW/g

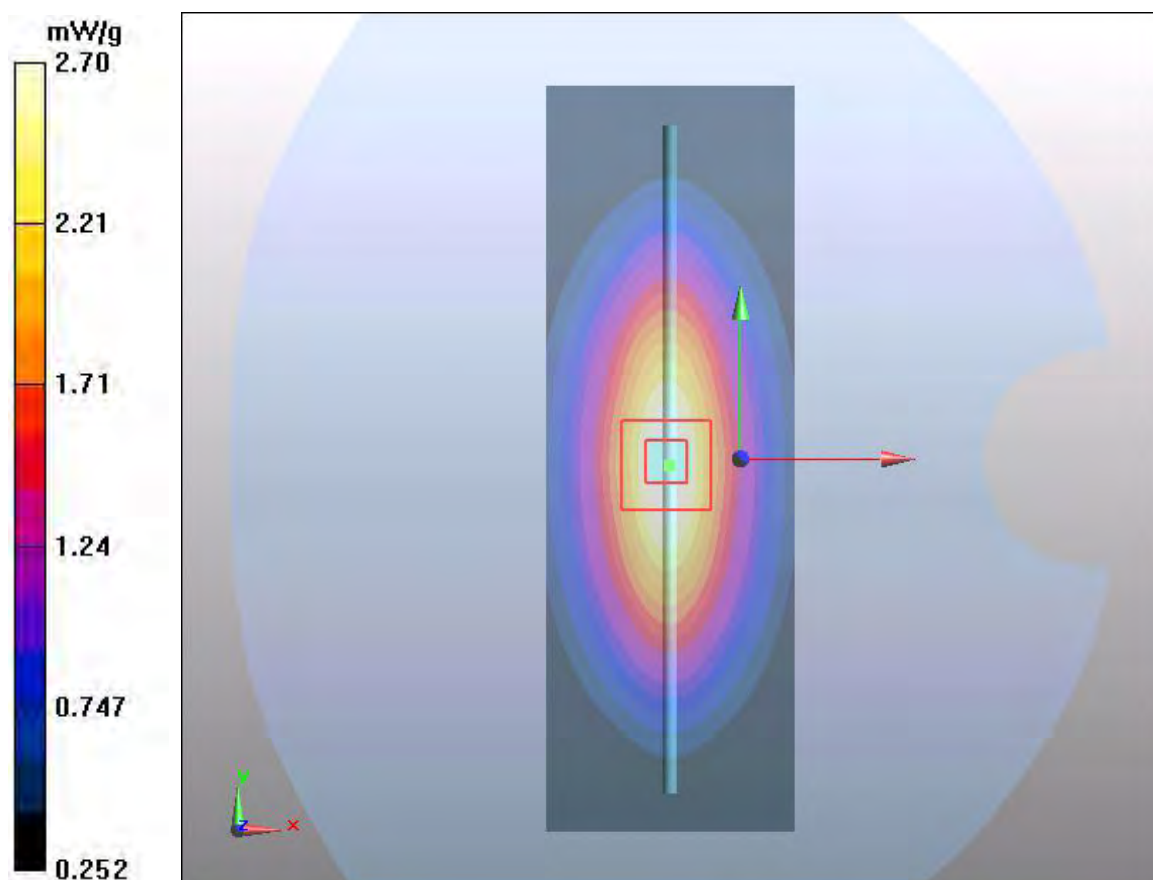
**d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.3 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.67 W/kg

**SAR(1 g) = 2.46 mW/g; SAR(10 g) = 1.65 mW/g**

Maximum value of SAR (measured) = 2.70 mW/g



### Plot 3 System Performance Check at 1750 MHz TSL

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2**

Date: 2022/1/1

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1750 \text{ MHz}$ ;  $\sigma = 1.35 \text{ S/m}$ ;  $\epsilon_r = 40.5$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$

Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (5x8x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.78 mW/g

**d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

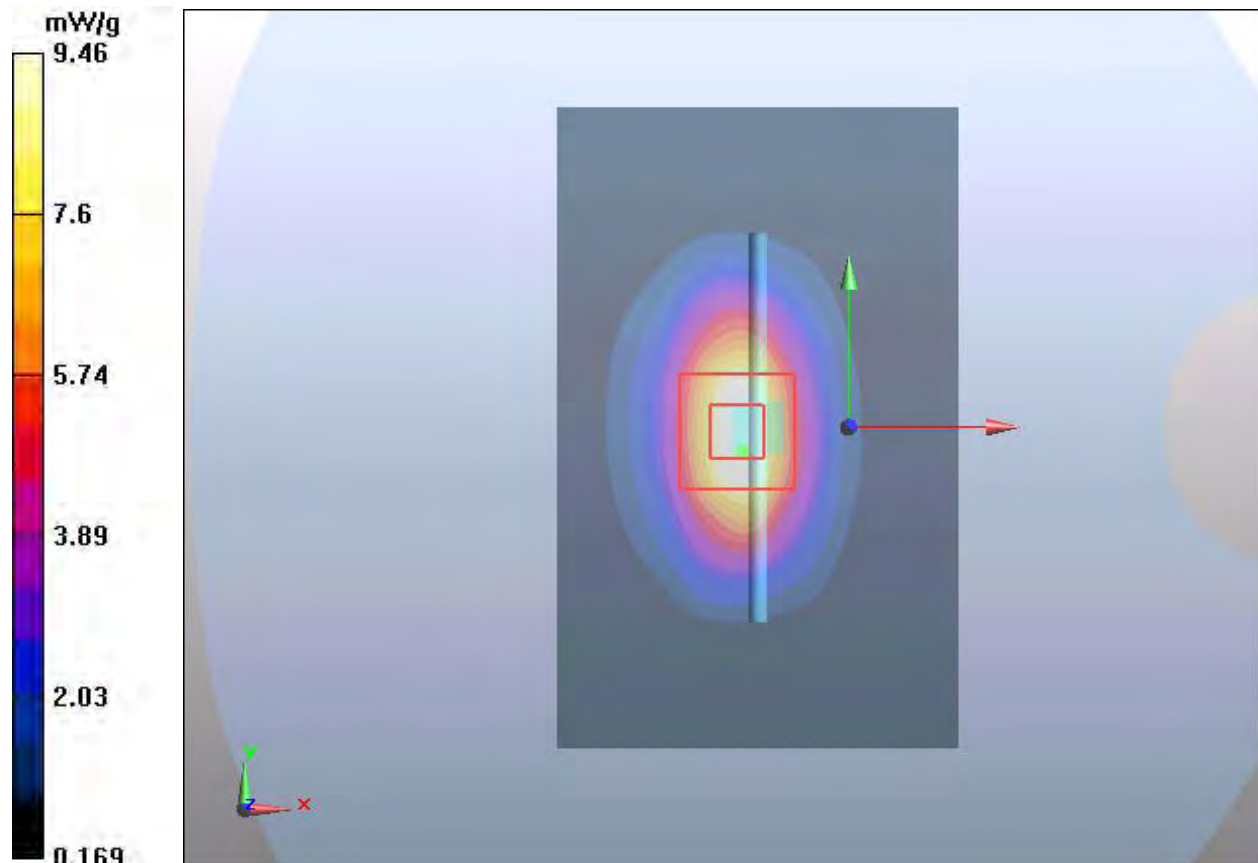
dz=5mm

Reference Value = 80 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 15.5 W/kg

**SAR(1 g) = 8.95 mW/g; SAR(10 g) = 4.5 mW/g**

Maximum value of SAR (measured) = 9.46 mW/g



## Plot 4 System Performance Check at 1750 MHz TSL

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2**

Date: 2022/1/2

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.34$  S/m;  $\epsilon_r = 40.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C

Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (5x8x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.77 mW/g

**d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

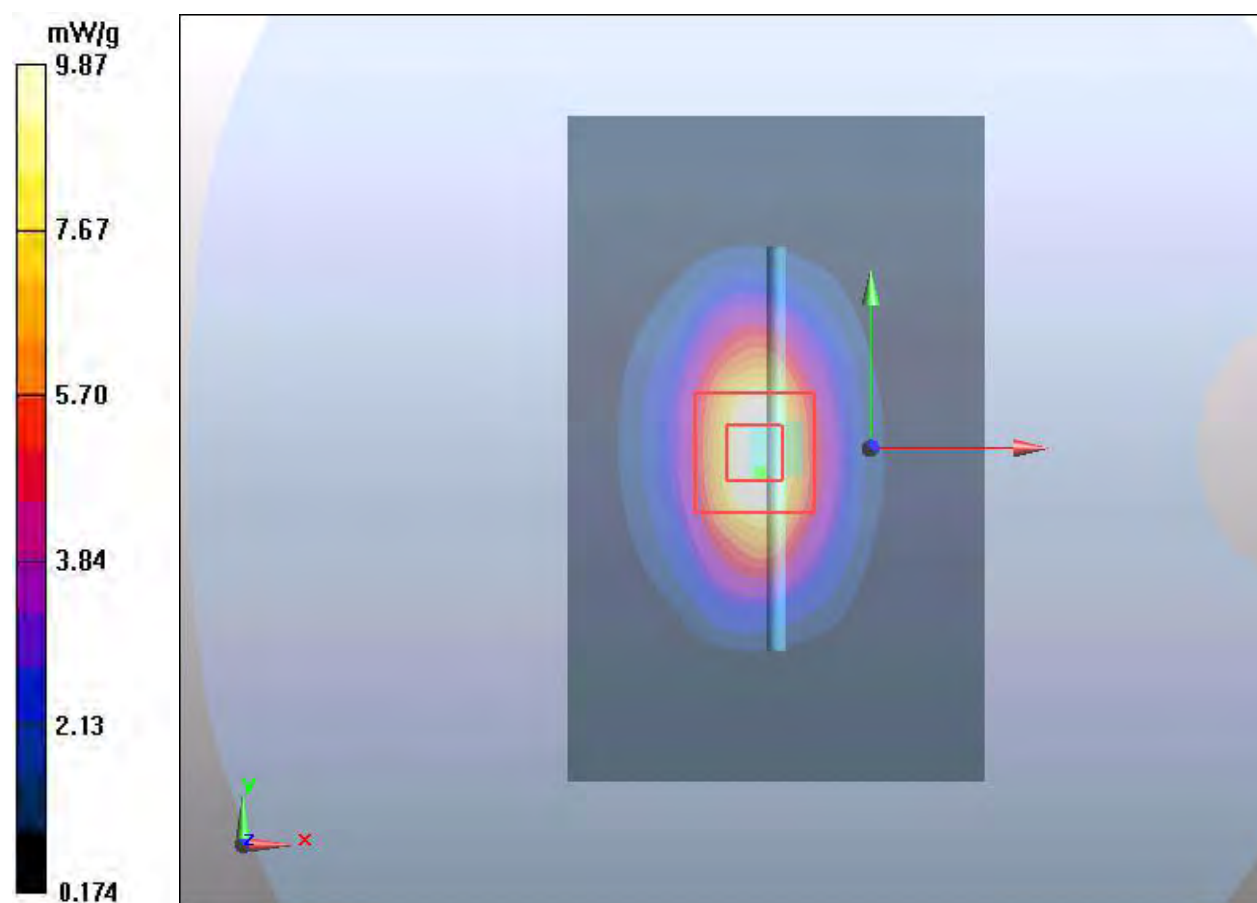
dz=5mm

Reference Value = 80 V/m; Power Drift = 0.055 dB

Peak SAR (extrapolated) = 15.51 W/kg

**SAR(1 g) = 9.11 mW/g; SAR(10 g) = 4.77 mW/g**

Maximum value of SAR (measured) = 9.87 mW/g



## Plot 5 System Performance Check at 1900 MHz TSL

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2**

Date: 2022/1/4

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.41$  S/m;  $\epsilon_r = 40.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C

Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.3 mW/g

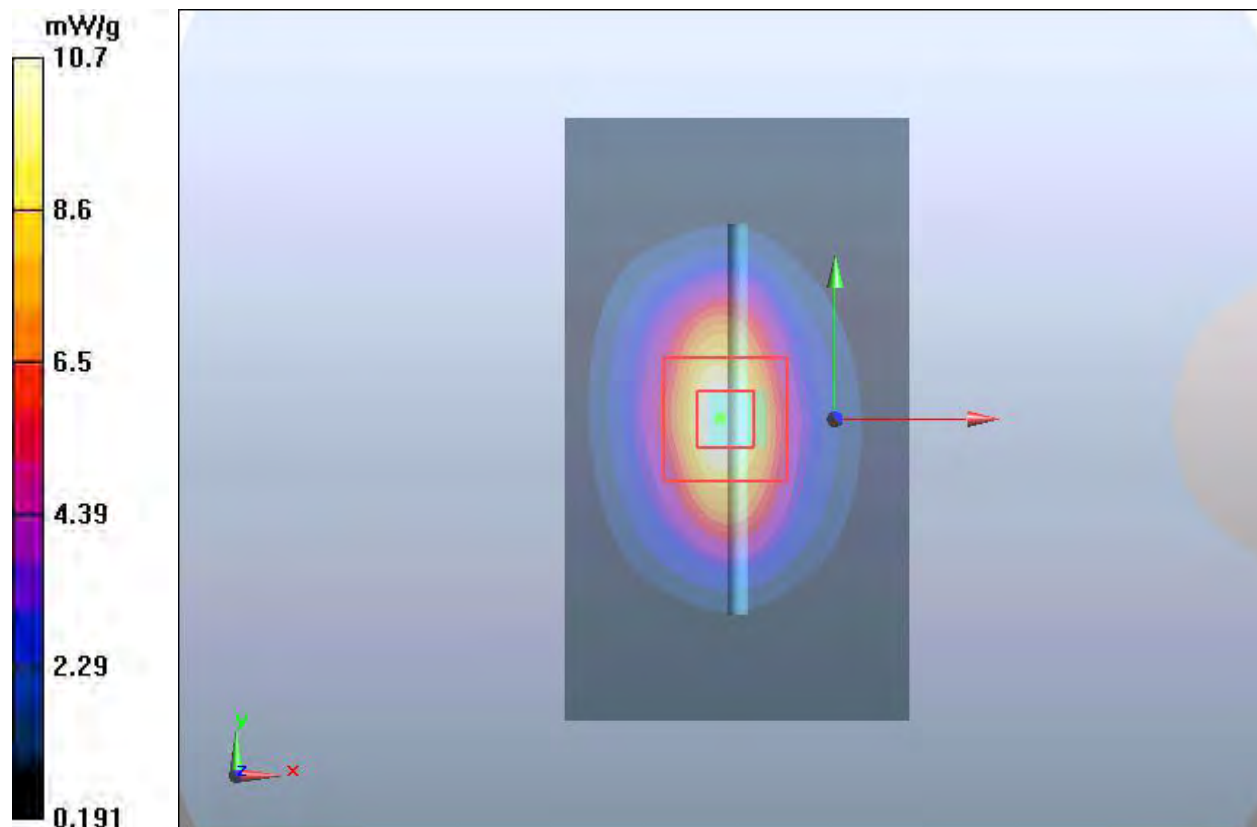
**d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 85.5 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 17.8 W/kg

**SAR(1 g) = 9.88 mW/g; SAR(10 g) = 4.9 mW/g**

Maximum value of SAR (measured) = 10.7 mW/g



## Plot 6 System Performance Check at 1900 MHz TSL

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2**

Date: 2022/1/5

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.42$  S/m;  $\epsilon_r = 40.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C

Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.23 mW/g

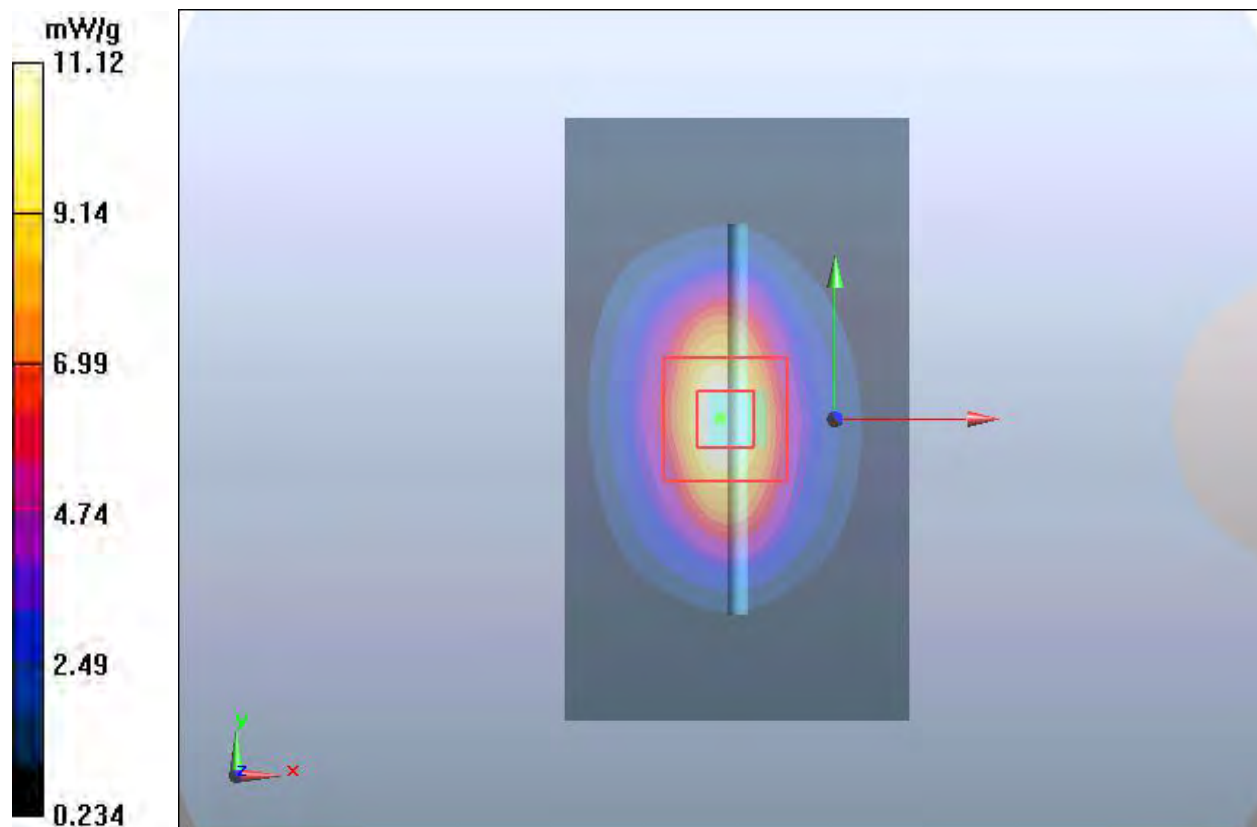
**d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 85.0 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 17.8 W/kg

**SAR(1 g) = 9.85 mW/g; SAR(10 g) = 4.93 mW/g**

Maximum value of SAR (measured) = 11.12 mW/g



## Plot 10 System Performance Check at 2450 MHz TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 786

Date: 2022/1/1

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.82$  S/m;  $\epsilon_r = 38.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 18.2 mW/g

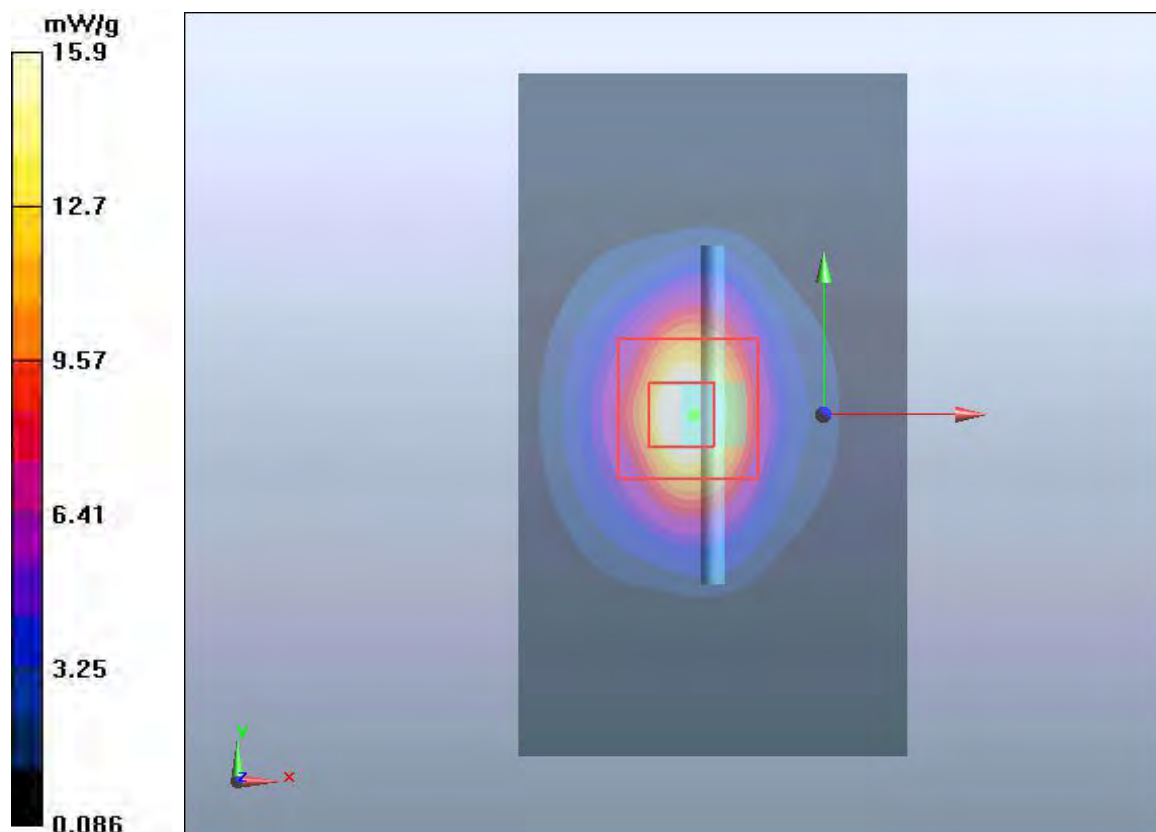
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.8 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 30 W/kg

**SAR(1 g) = 13.7 mW/g; SAR(10 g) = 6.22 mW/g**

Maximum value of SAR (measured) = 15.9 mW/g



## Plot 7 System Performance Check at 2450 MHz TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2

Date: 2022/1/3

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.84$  S/m;  $\epsilon_r = 38.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C

Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 21.11 mW/g

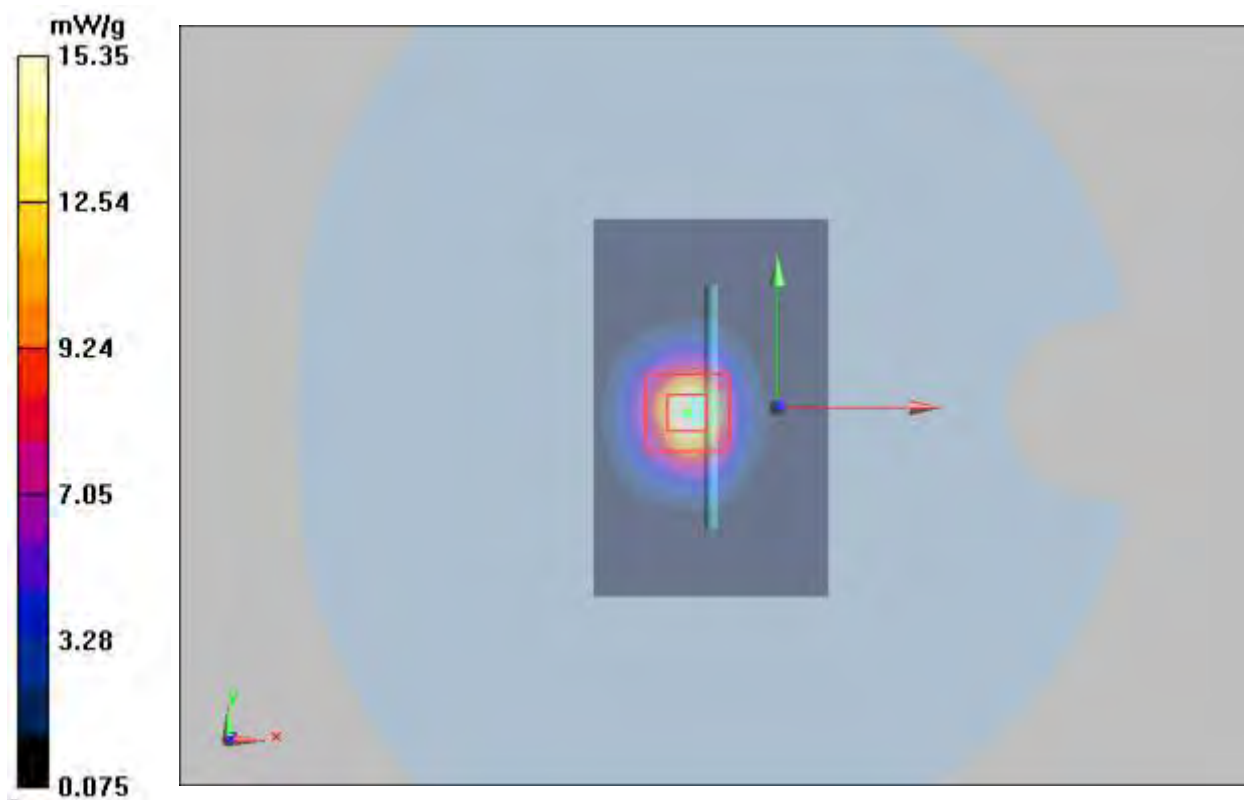
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 67.0 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 28.0 W/kg

**SAR(1 g) = 13.20 mW/g; SAR(10 g) = 6.47 mW/g**

Maximum value of SAR (measured) = 15.35 mW/g



## Plot 11 System Performance Check at 2600 MHz TSL

**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025**

Date: 2022/1/4

Communication System: CW; Frequency: 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.01$  S/m;  $\epsilon_r = 38.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid:dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.439 mW/g

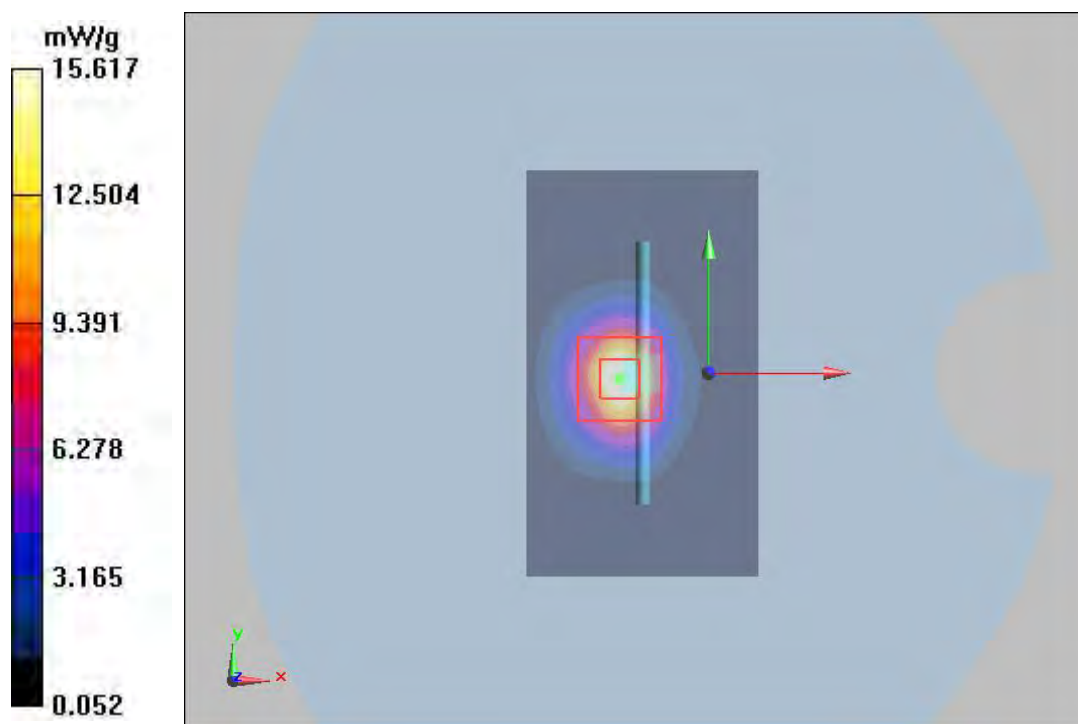
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

**SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.07 mW/g**

Maximum value of SAR (measured) = 15.617 mW/g



## Plot 12 System Performance Check at 2600 MHz TSL

**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025**

Date: 2022/1/5

Communication System: CW; Frequency: 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.96$  S/m;  $\epsilon_r = 38.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.59 mW/g

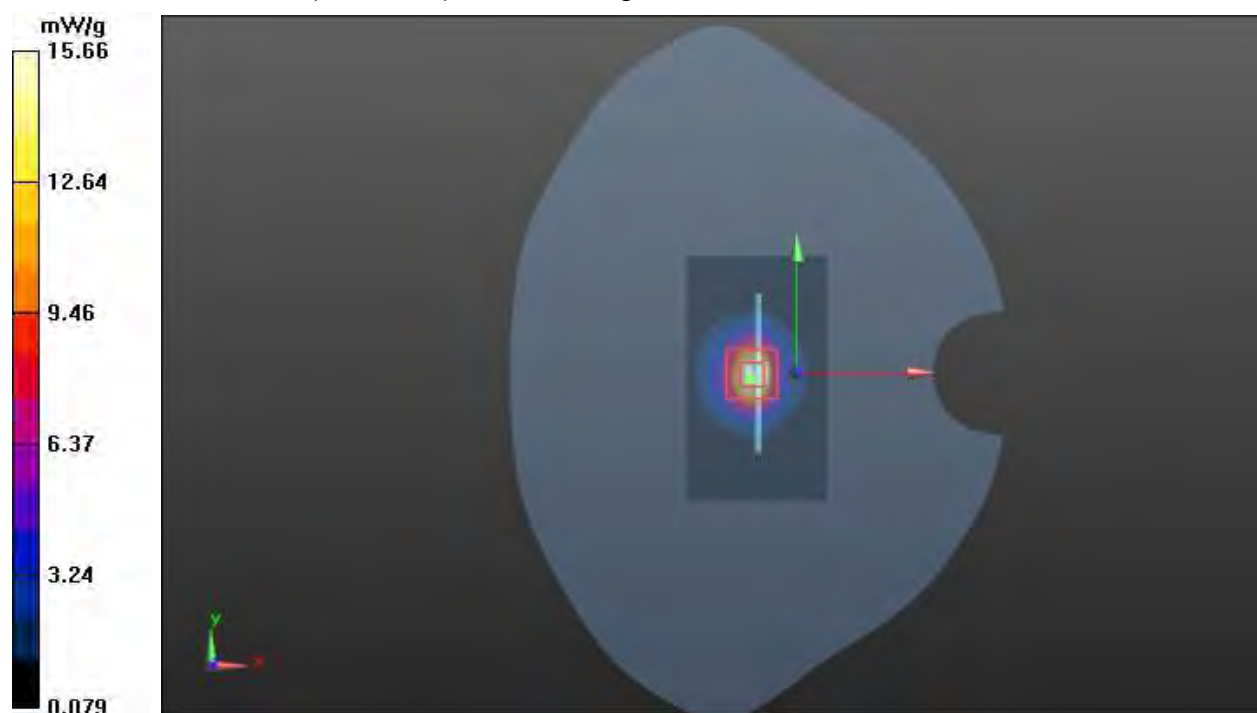
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

**SAR(1 g) = 13.88 mW/g; SAR(10 g) = 6.09 mW/g**

Maximum value of SAR (measured) = 15.66 mW/g



## Plot 13 System Performance Check at 2600 MHz TSL

**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025**

Date: 2022/1/6

Communication System: CW; Frequency: 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.96$  S/m;  $\epsilon_r = 38.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.32 mW/g

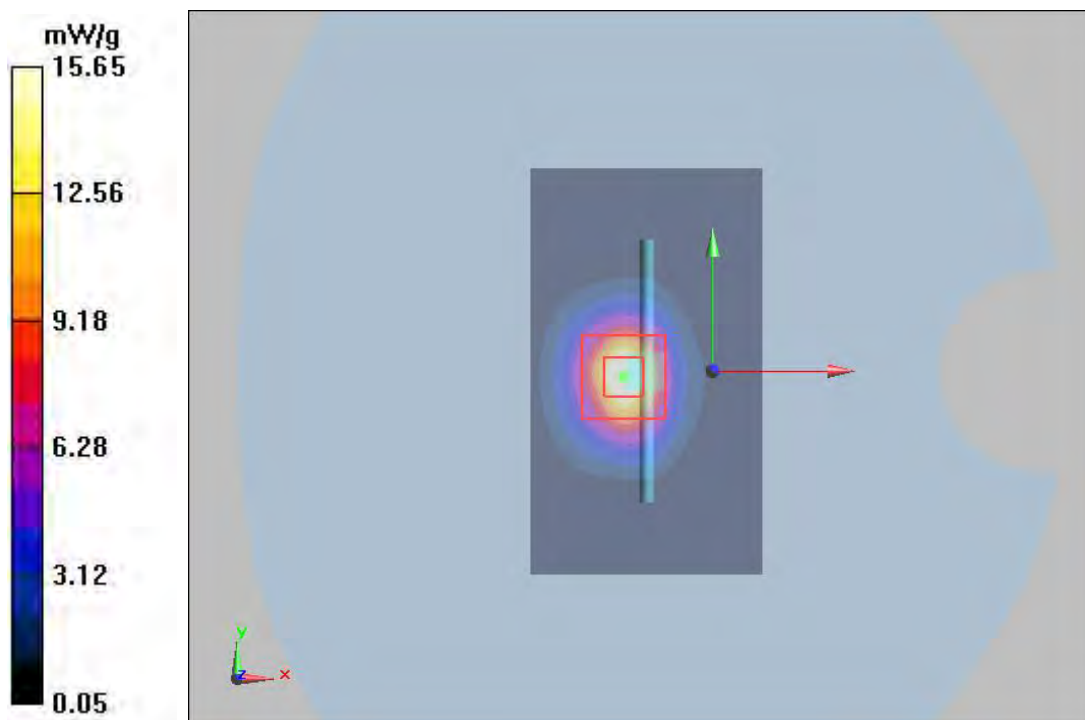
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.465 V/m; Power Drift = 0.146 dB

Peak SAR (extrapolated) = 31.85 W/kg

**SAR(1 g) = 13.94 mW/g; SAR(10 g) = 6.11 mW/g**

Maximum value of SAR (measured) = 15.65 mW/g



## Plot 8 System Performance Check at 2600 MHz TSL

**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2**

Date: 2022/1/7

Communication System: CW; Frequency: 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.01$  mho/m;  $\epsilon_r = 38.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 17.439 mW/g

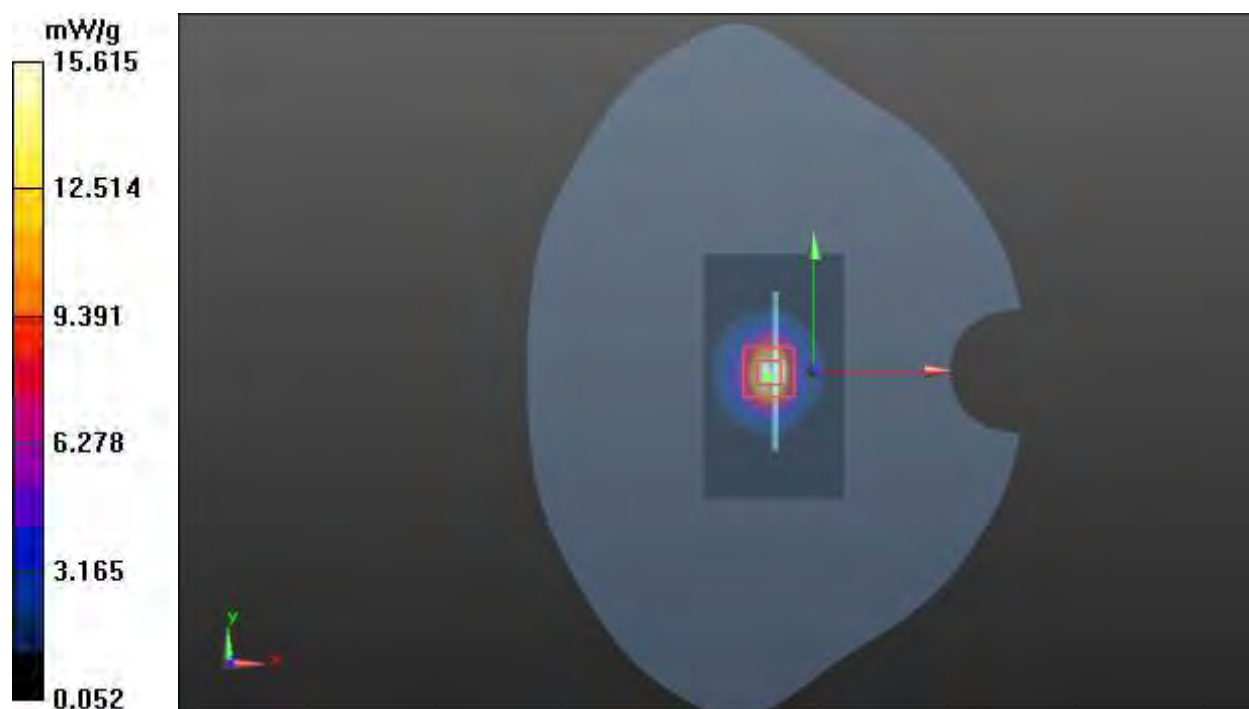
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

**SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.08 mW/g**

Maximum value of SAR (measured) = 15.615 mW/g



## Plot 10 System Performance Check at 2600 MHz TSL

**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2**

Date: 2022/1/9

Communication System: CW; Frequency: 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.97$  S/m;  $\epsilon_r = 38.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.32 mW/g

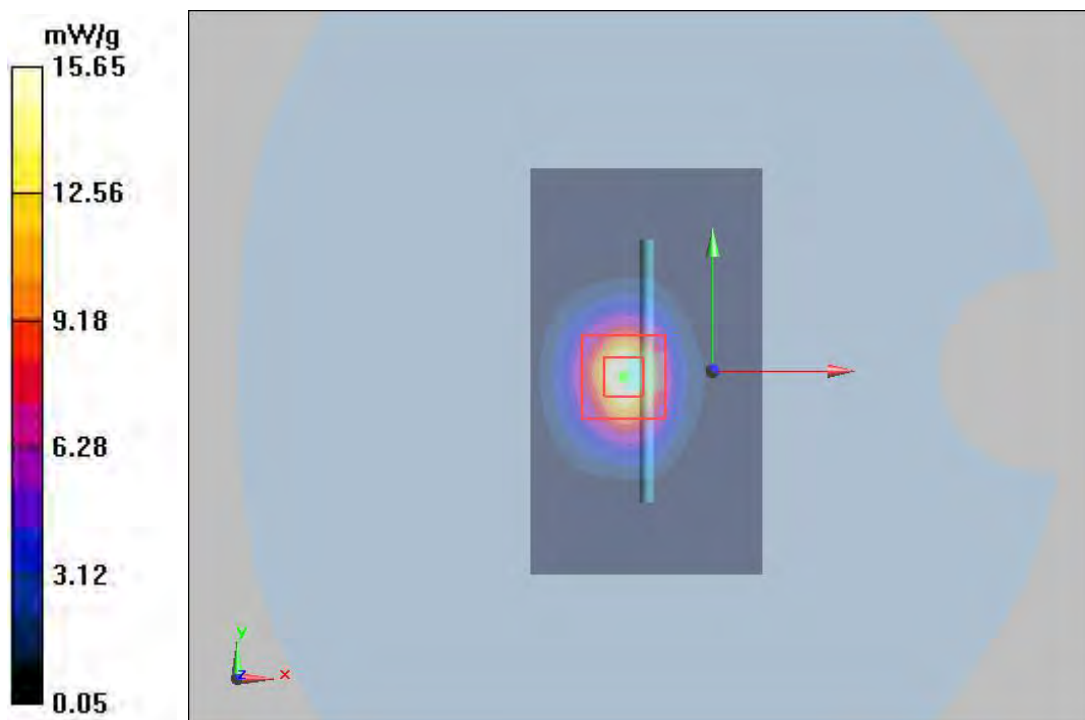
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.465 V/m; Power Drift = 0.146 dB

Peak SAR (extrapolated) = 31.85 W/kg

**SAR(1 g) = 13.94 mW/g; SAR(10 g) = 6.11 mW/g**

Maximum value of SAR (measured) = 15.65 mW/g



## Plot 9 System Performance Check at 2600 MHz TSL

**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2**

Date: 2022/1/8

Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.96$  S/m;  $\epsilon_r = 38.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.59 mW/g

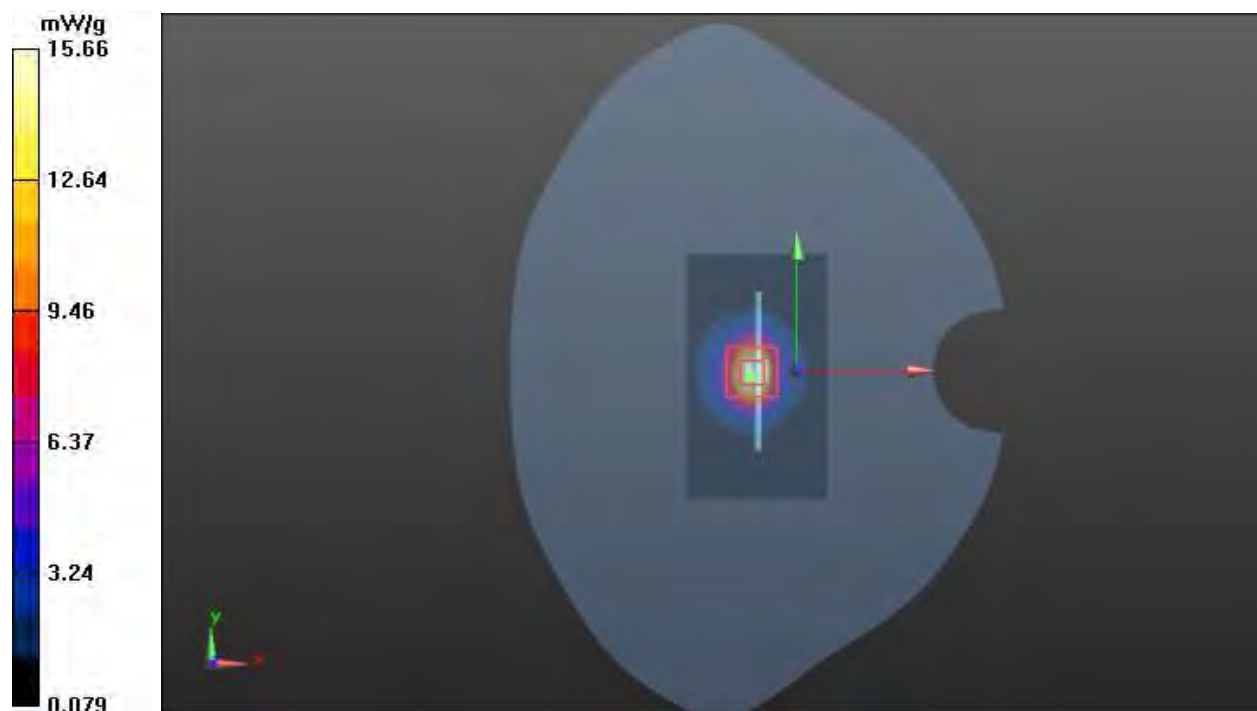
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

**SAR(1 g) = 13.88 mW/g; SAR(10 g) = 6.09 mW/g**

Maximum value of SAR (measured) = 15.66 mW/g



## Plot 12 System Performance Check at 5250 MHz TSL

**DUT: Dipole 5250 MHz; Type: D5GHzV2; Serial: D5GHzV2**

Date: 2022/1/6

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5250$  MHz;  $\sigma = 4.82$  S/m;  $\epsilon_r = 35.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=100mW/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 9.14 mW/g

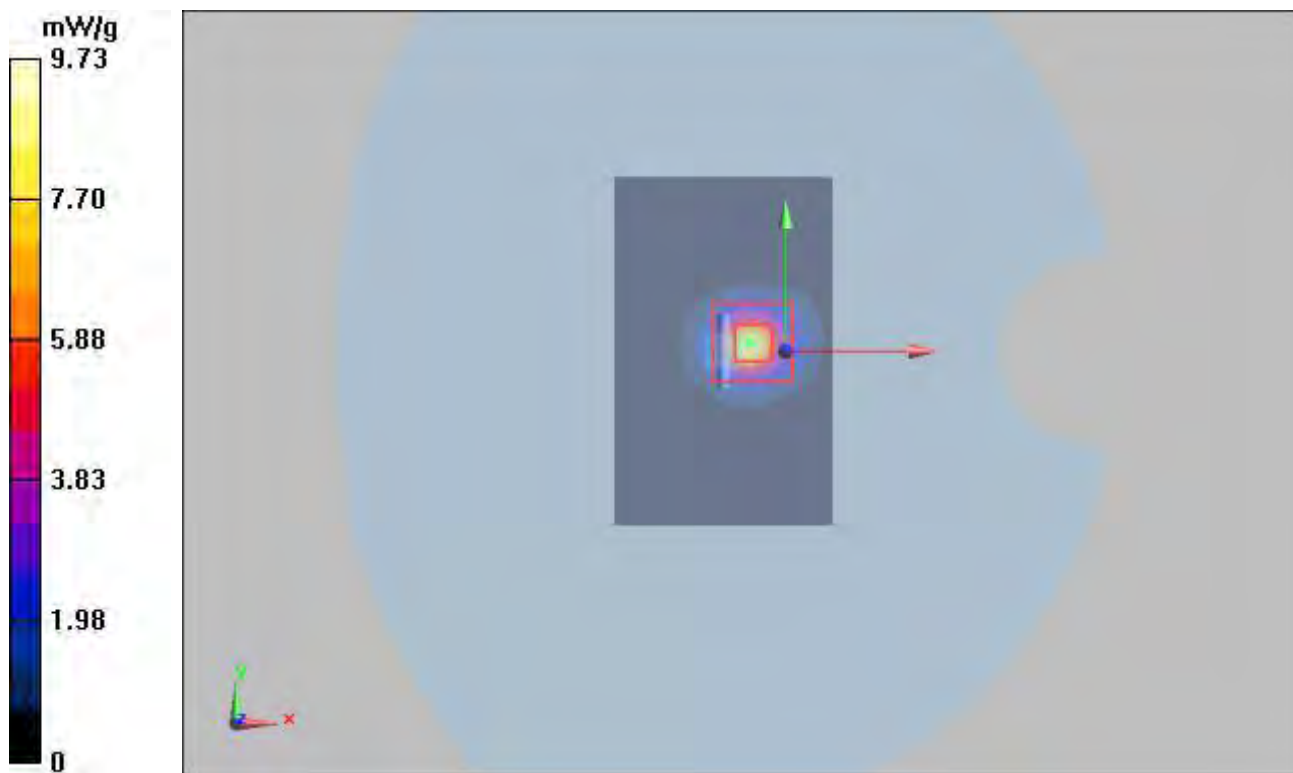
**d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 33.6 V/m; Power Drift = -0.095 dB

Peak SAR (extrapolated) = 52.2 W/kg

**SAR(1 g) = 7.87 mW/g; SAR(10 g) = 2.25 mW/g**

Maximum value of SAR (measured) = 9.73 mW/g



## Plot 13 System Performance Check at 5600 MHz TSL

**DUT: Dipole 5600 MHz; Type: D5GHzV2; Serial: D5GHzV2**

Date: 2022/1/10

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.21$  S/m;  $\epsilon_r = 34.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00, 5.00); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=100mW/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.25 mW/g

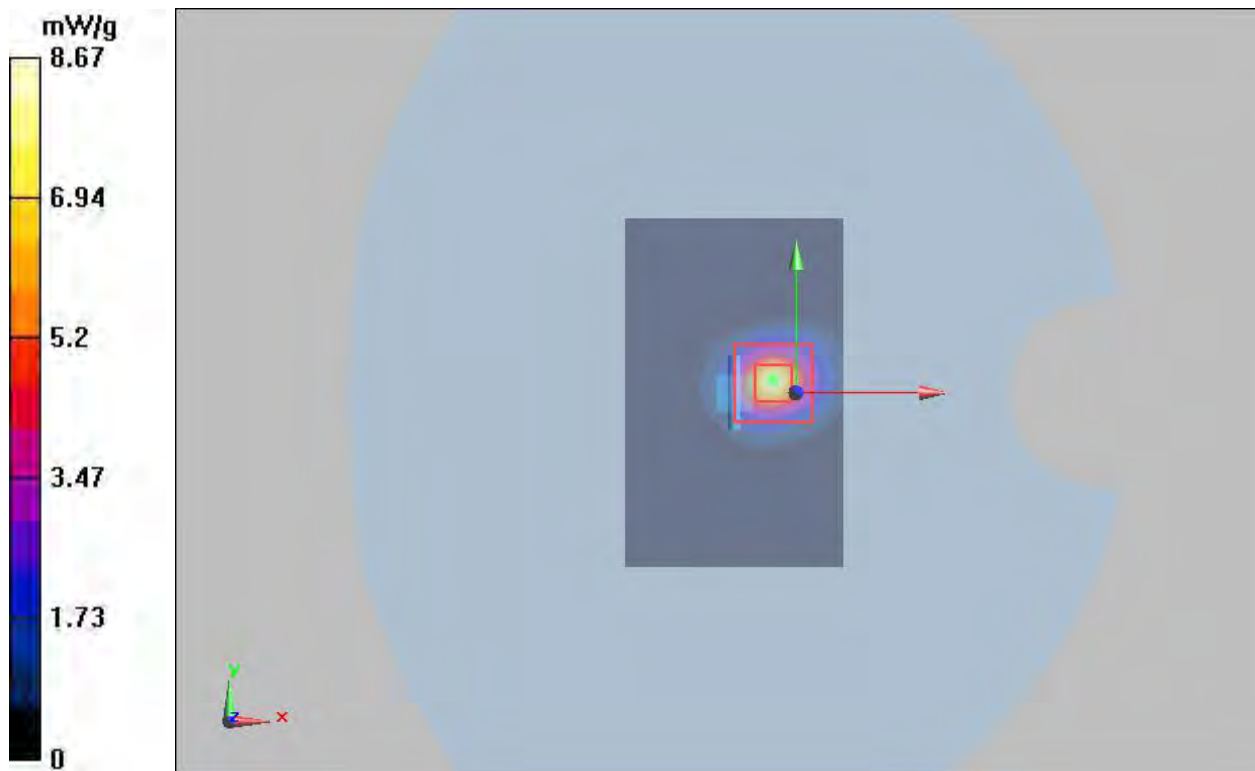
**d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 23.1 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 22.9 W/kg

**SAR(1 g) = 7.67 mW/g; SAR(10 g) = 2.27 mW/g**

Maximum value of SAR (measured) = 8.67 mW/g



## Plot 14 System Performance Check at 5750 MHz TSL

**DUT: Dipole 5750 MHz; Type: D5GHzV2; Serial: D5GHzV2**

Date: 2022/1/11

Communication System: CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.22$  S/m;  $\epsilon_r = 34.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(4.95, 4.95, 4.95); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=100mW/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.31 mW/g

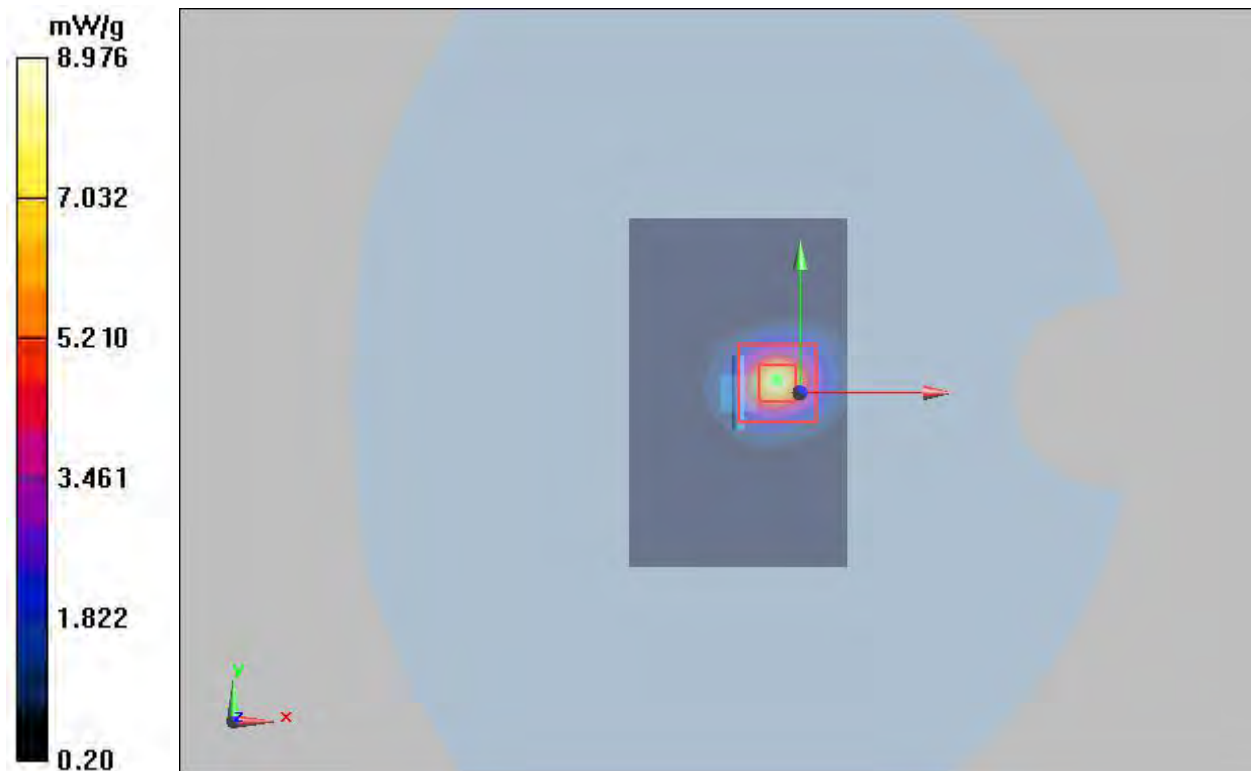
**d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 23.1 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 23.4 W/kg

**SAR(1 g) = 7.66 mW/g; SAR(10 g) = 2.27 mW/g**

Maximum value of SAR (measured) = 8.976 mW/g



## Variant

### Plot 1 System Performance Check at 750 MHz TSL

**DUT: Dipole 750 MHz; Type: D750V3; Serial: 1045**

Date: 2022/1/12

Communication System: CW (0); Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.85 \text{ S/m}$ ;  $\epsilon_r = 42.2$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$  Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=15mm, Pin=250mW/Area Scan (4x12x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.29 W/kg

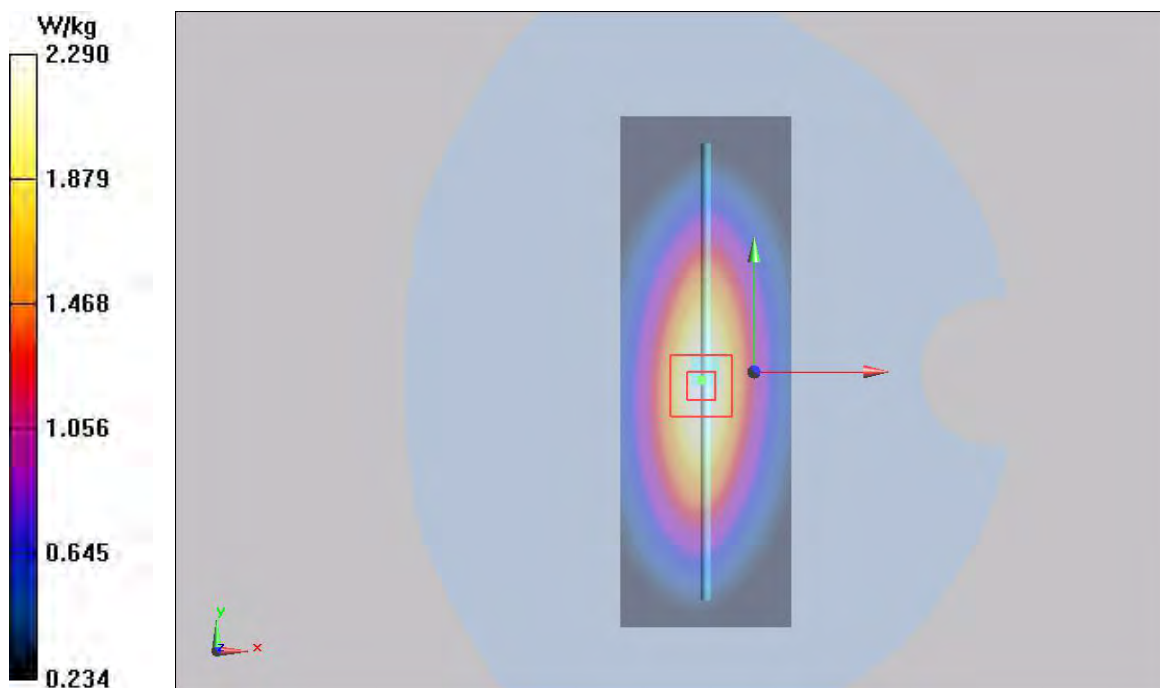
**d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.653 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.16 W/kg

**SAR(1 g) = 2.13 W/kg; SAR(10 g) = 1.41 W/kg**

Maximum value of SAR (measured) = 2.29 W/kg



## Plot 1 System Performance Check at 750 MHz TSL

**DUT: Dipole 750 MHz; Type: D750V3; Serial: 1045**

Date: 2022/1/13

Communication System: CW (0); Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.87 \text{ S/m}$ ;  $\epsilon_r = 42.0$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$       Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=15mm, Pin=250mW/Area Scan (4x12x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) =  $2.31 \text{ W/kg}$

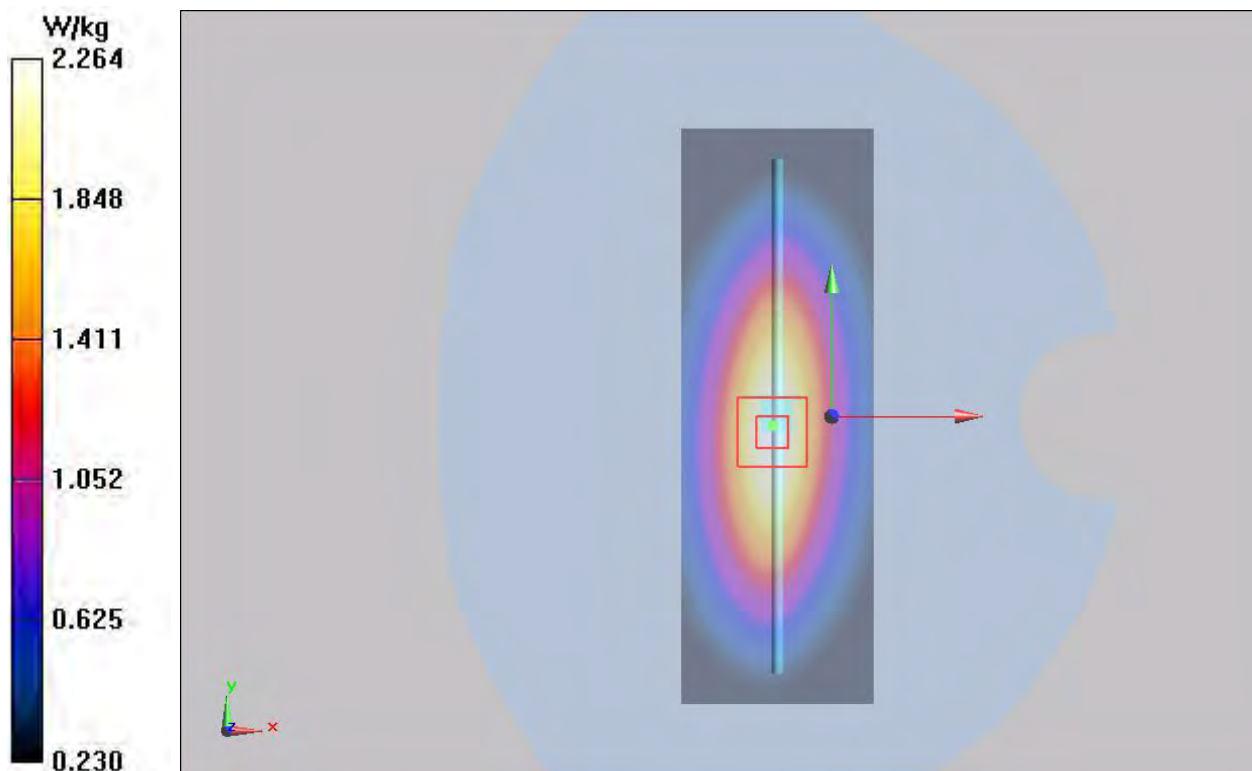
**d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value =  $50.557 \text{ V/m}$ ; Power Drift =  $0.11 \text{ dB}$

Peak SAR (extrapolated) =  $3.14 \text{ W/kg}$

**SAR(1 g) =  $2.10 \text{ W/kg}$ ; SAR(10 g) =  $1.37 \text{ W/kg}$**

Maximum value of SAR (measured) =  $2.264 \text{ W/kg}$



## Plot 1 System Performance Check at 750 MHz TSL

**DUT: Dipole 750 MHz; Type: D750V3; Serial: 1045**

Date: 2022/1/15

Communication System: CW (0); Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.88 \text{ S/m}$ ;  $\epsilon_r = 42.3$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$  Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=15mm, Pin=250mW/Area Scan (4x12x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.29 W/kg

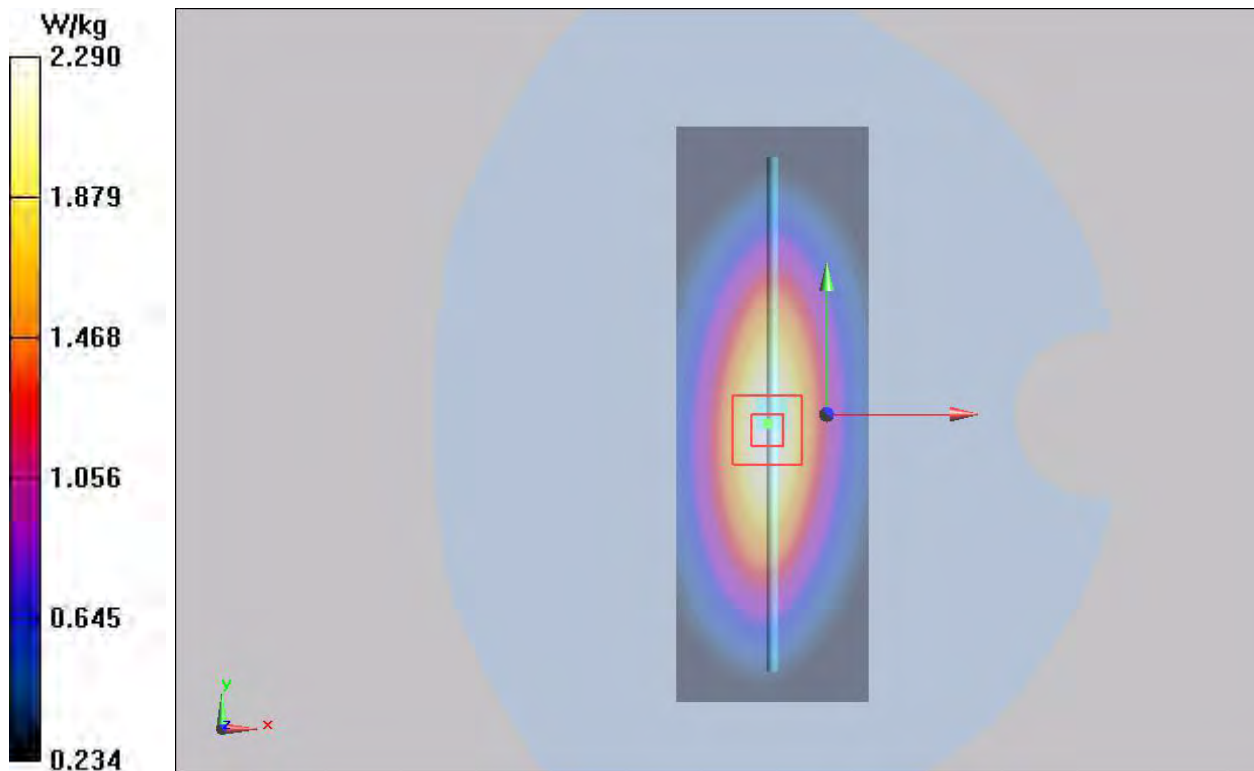
**d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.653 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.16 W/kg

**SAR(1 g) = 2.12 W/kg; SAR(10 g) = 1.41 W/kg**

Maximum value of SAR (measured) = 2.29 W/kg



## Plot 7 System Performance Check at 835 MHz TSL

**DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d020**

Date: 2022/1/16

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.88 \text{ mho/m}$ ;  $\epsilon_r = 41.4$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$

Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=15mm, Pin=250mW/Area Scan (4x12x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.71 mW/g

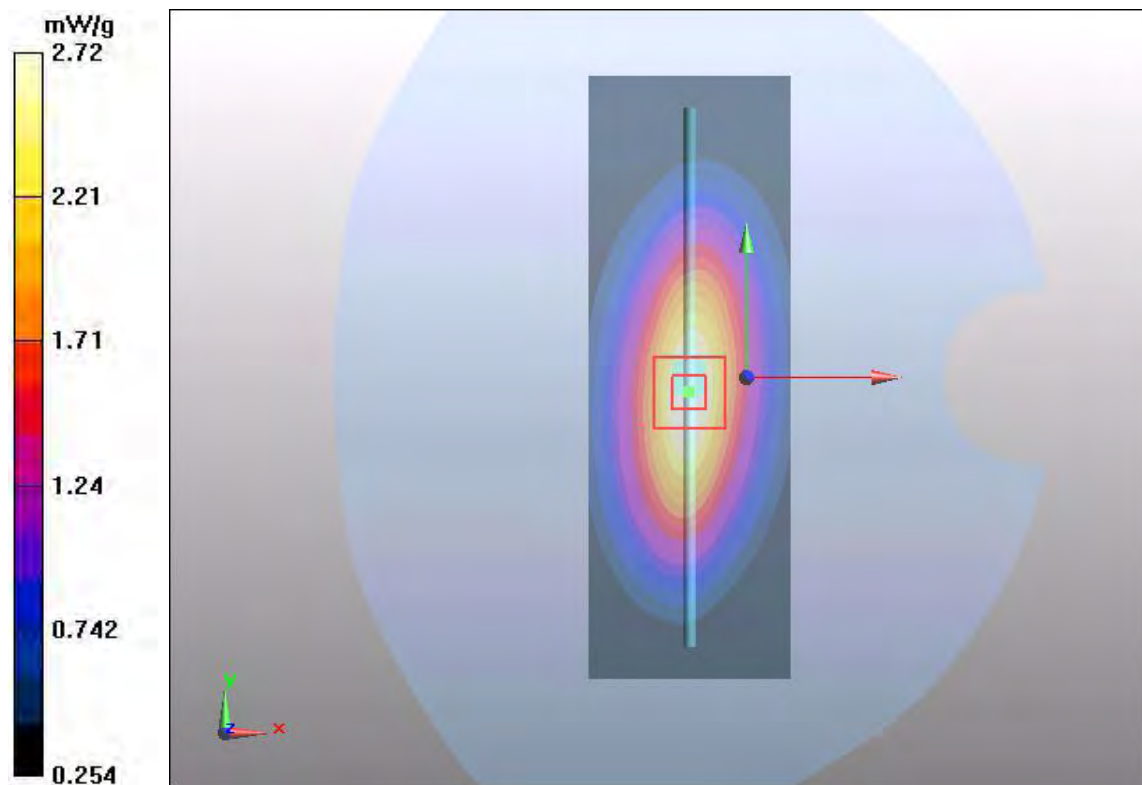
**d=15mm, Pin=250mW/Zoom Scan(5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.2 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 3.79 W/kg

**SAR(1 g) = 2.54 mW/g; SAR(10 g) = 1.56 mW/g**

Maximum value of SAR (measured) = 2.72 mW/g



## Plot 13 System Performance Check at 1750 MHz TSL

**DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1033**

Date: 2022/1/17

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.37$  mho/m;  $\epsilon_r = 39.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (5x8x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 9.77 mW/g

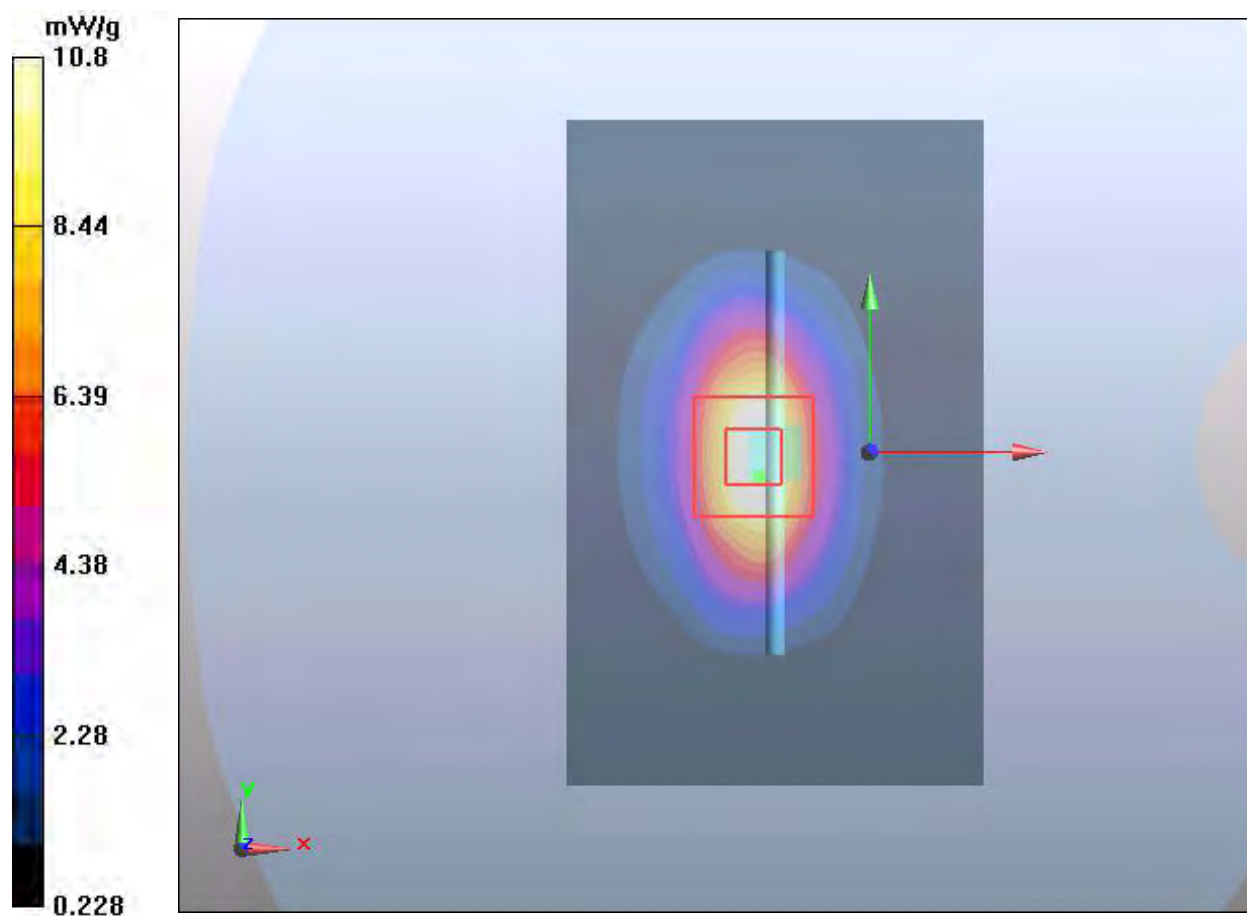
**d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 80 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 15.5 W/kg

**SAR(1 g) = 8.92 mW/g; SAR(10 g) = 4.65 mW/g**

Maximum value of SAR (measured) = 10.8 mW/g



## Plot 10 System Performance Check at 1900 MHz

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d060**

Date: 2022/1/17

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.34$  mho/m;  $\epsilon_r = 40.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (4x7x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.84 mW/g

**d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm,

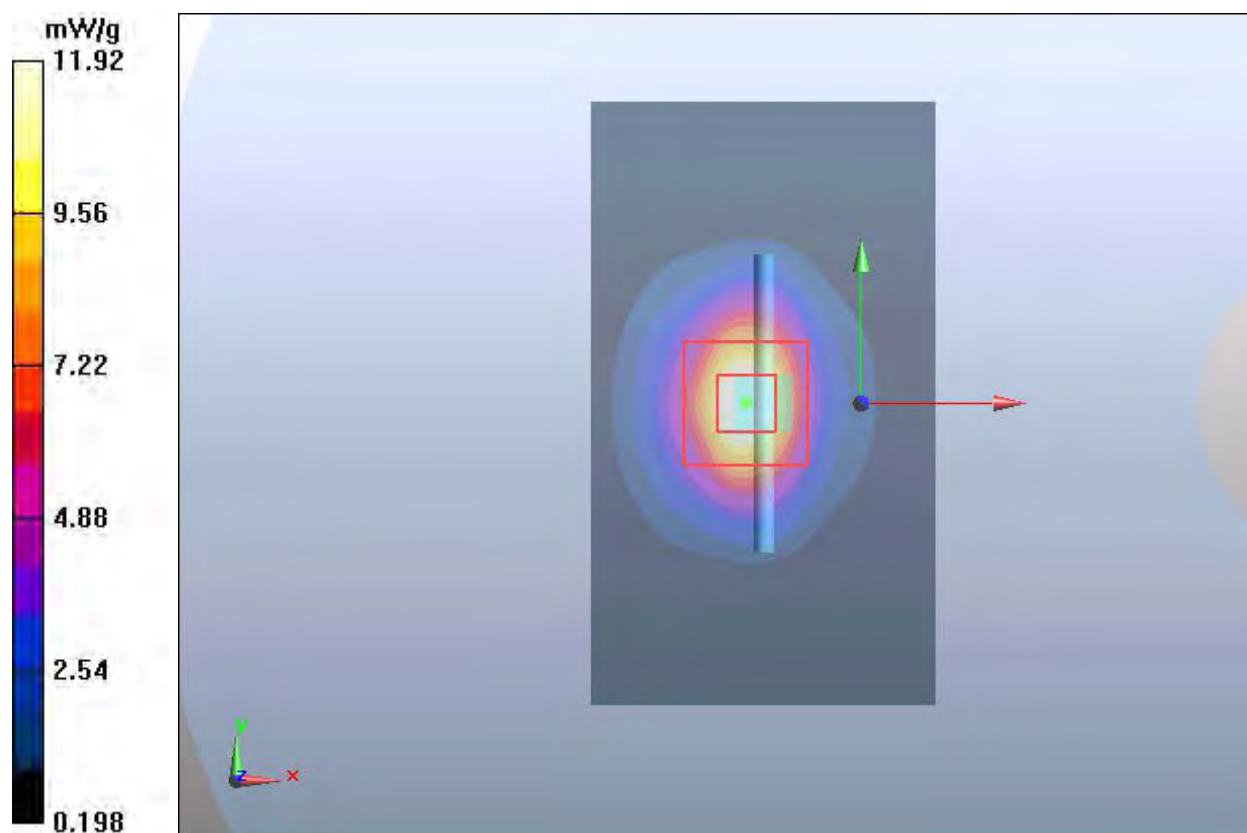
dz=5mm

Reference Value = 87.8 V/m; Power Drift = 0.040 dB

Peak SAR (extrapolated) = 20.1 W/kg

**SAR(1 g) = 10.50 mW/g; SAR(10 g) = 5.38 mW/g**

Maximum value of SAR (measured) = 11.92 mW/g



## Plot 21 System Performance Check at 2450 MHz TSL

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 786**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.81$  mho/m;  $\epsilon_r = 38.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (61x101x1):** Measurement grid: dx=1.200mm, dy=1.200mm

Maximum value of SAR (interpolated) = 21.11 mW/g

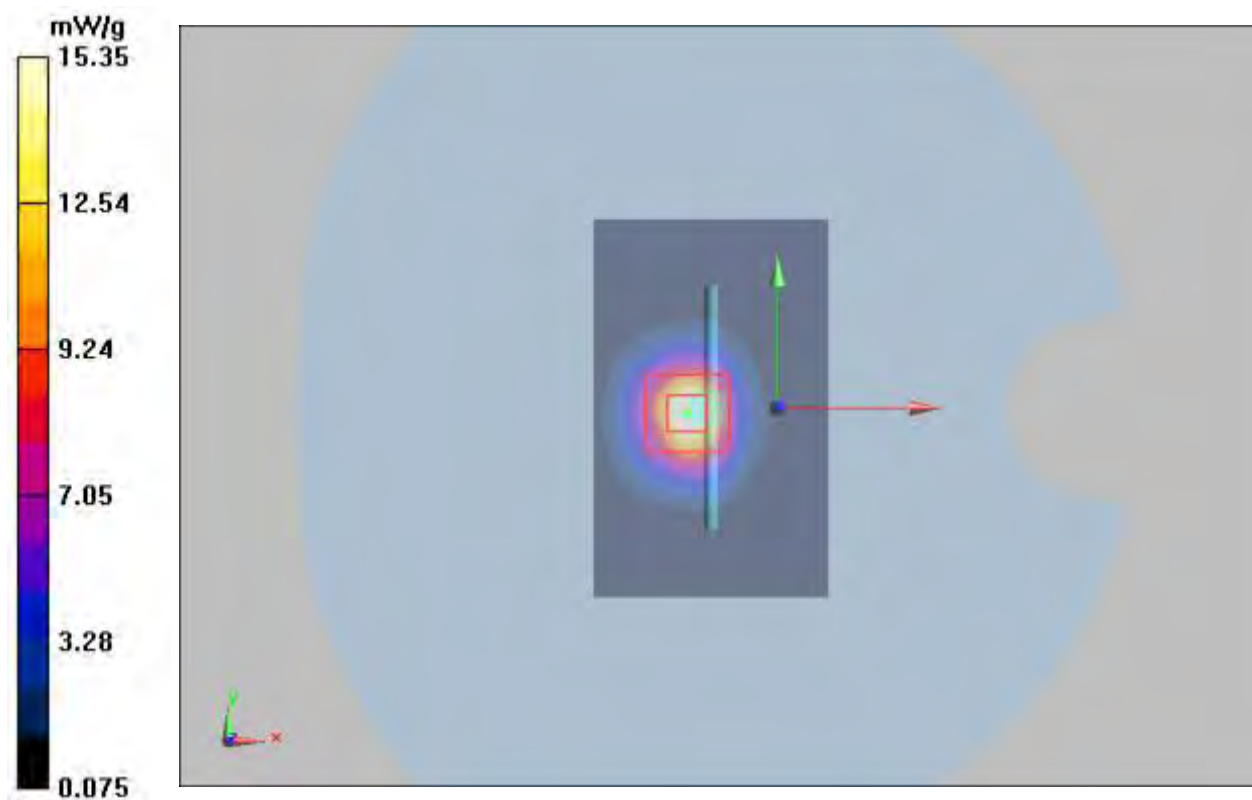
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 67.0 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 28.0 W/kg

**SAR(1 g) = 13.20 mW/g; SAR(10 g) = 6.47 mW/g**

Maximum value of SAR (measured) = 15.35 mW/g



## Plot 15 System Performance Check at 2600 MHz TSL

**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025**

Date: 2022/1/14

Communication System: CW; Frequency: 2600 MHz

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.95$  mho/m;  $\epsilon_r = 38.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=250mW/Area Scan (6x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.59 mW/g

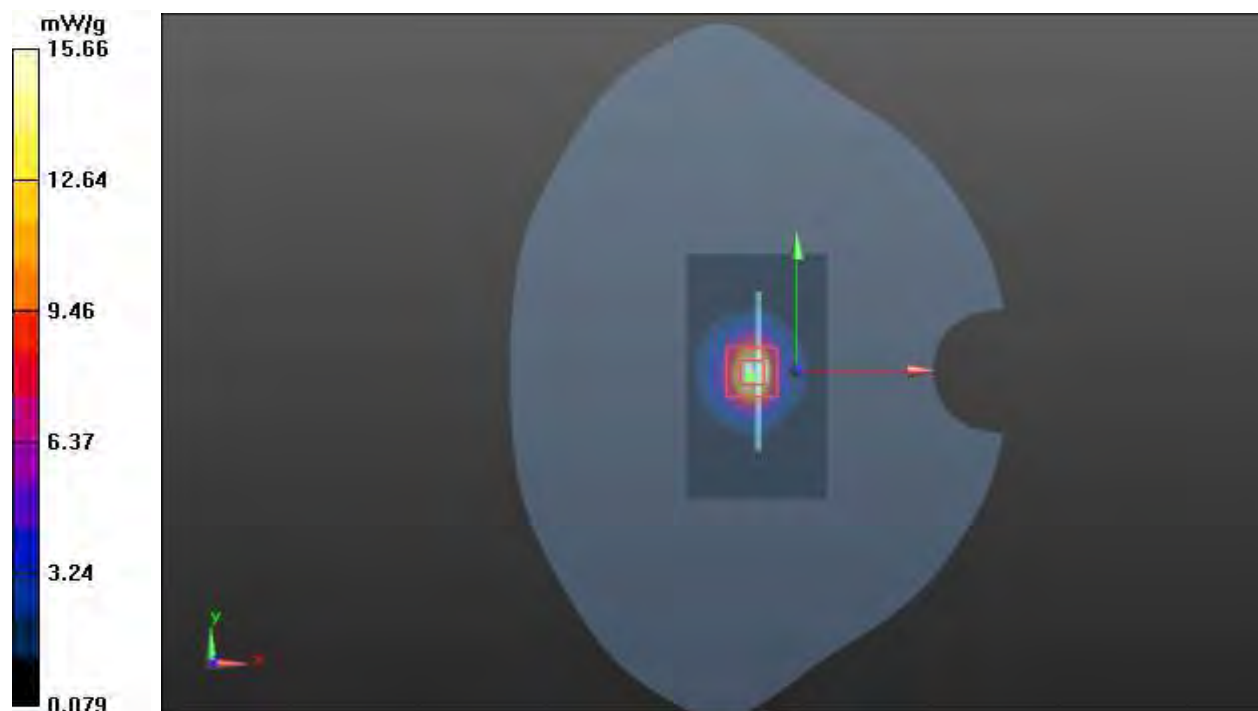
**d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

**SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.09 mW/g**

Maximum value of SAR (measured) = 15.66 mW/g



## Plot 28 System Performance Check at 5250 MHz TSL

**DUT: Dipole 5250 MHz; Type: D5GHzV2; Serial: 1151**

Date: 2022/1/18

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5250$  MHz;  $\sigma = 5.32$  mho/m;  $\epsilon_r = 36.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.45, 5.45, 5.45); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=100mW/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 7.69 mW/g

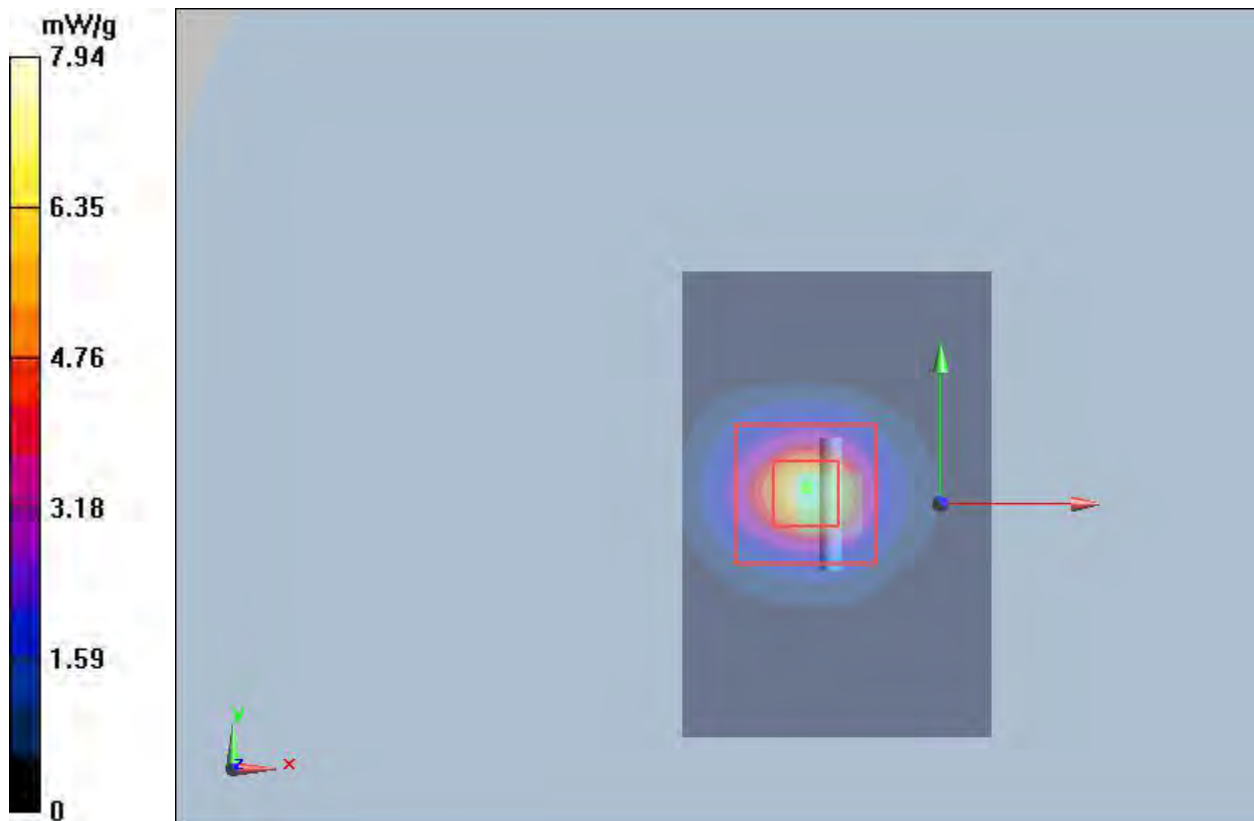
**d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 36.3 V/m; Power Drift = 0.0277 dB

Peak SAR (extrapolated) = 47.7 W/kg

**SAR(1 g) = 7.46 mW/g; SAR(10 g) = 2.26 mW/g**

Maximum value of SAR (measured) = 7.94 mW/g



## Plot 32 System Performance Check at 5600 MHz TSL

DUT: Dipole 5600 MHz; Type: D5GHzV2; Serial: 1151

Date: 2022/1/18

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.28$  mho/m;  $\epsilon_r = 36.8$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**d=10mm, Pin=100mW/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 7.8 mW/g

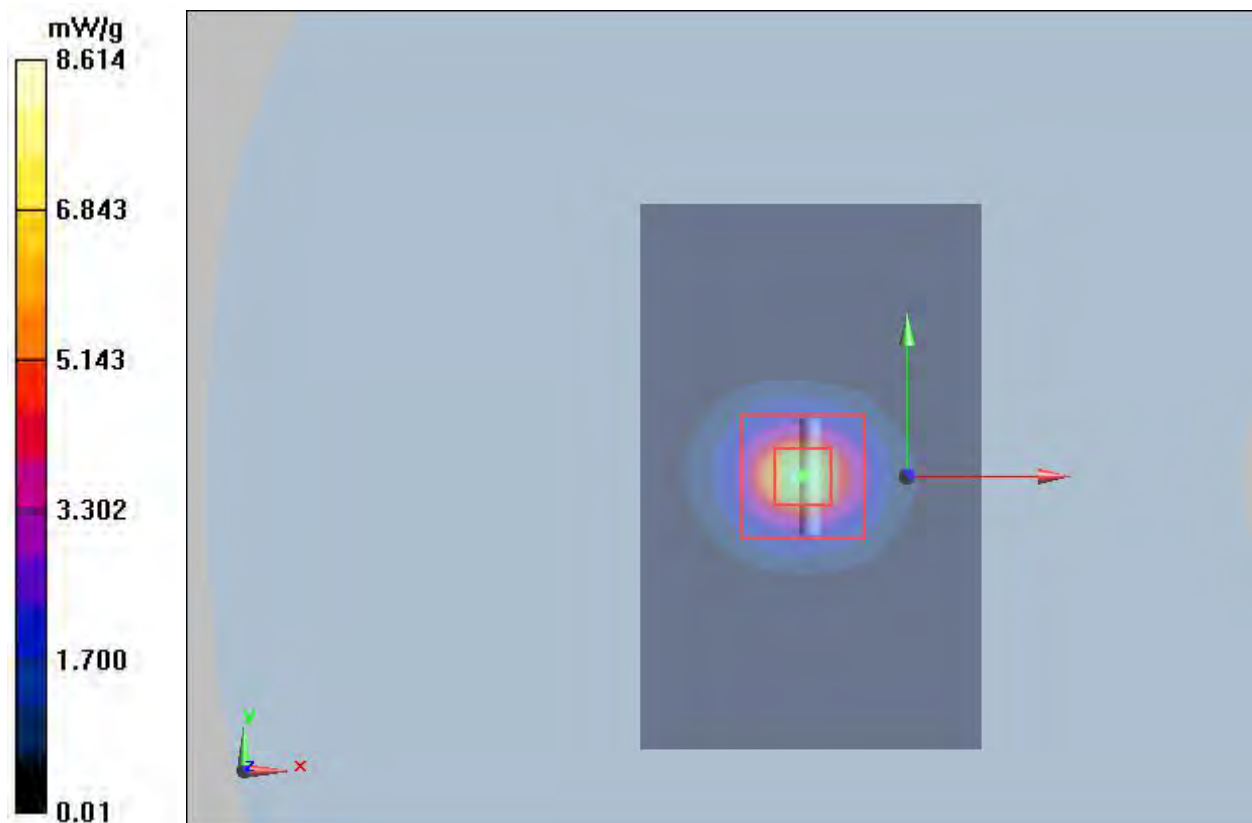
**d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 38.12 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 22.67 W/kg

**SAR(1 g) = 8.04 mW/g; SAR(10 g) = 2.21 mW/g**

Maximum value of SAR (measured) = 8.614 mW/g



## Plot 34 System Performance Check at 5750 MHz TSL

**DUT: Dipole 5750 MHz; Type: D5GHzV2; Serial: 1151**

Date: 2022/1/18

Communication System: CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5750 \text{ MHz}$ ;  $\sigma = 5.14 \text{ mho/m}$ ;  $\epsilon_r = 35.6$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$  Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.04, 5.04, 5.04); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**d=10mm, Pin=100mW/Area Scan (6x10x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 7.84 mW/g

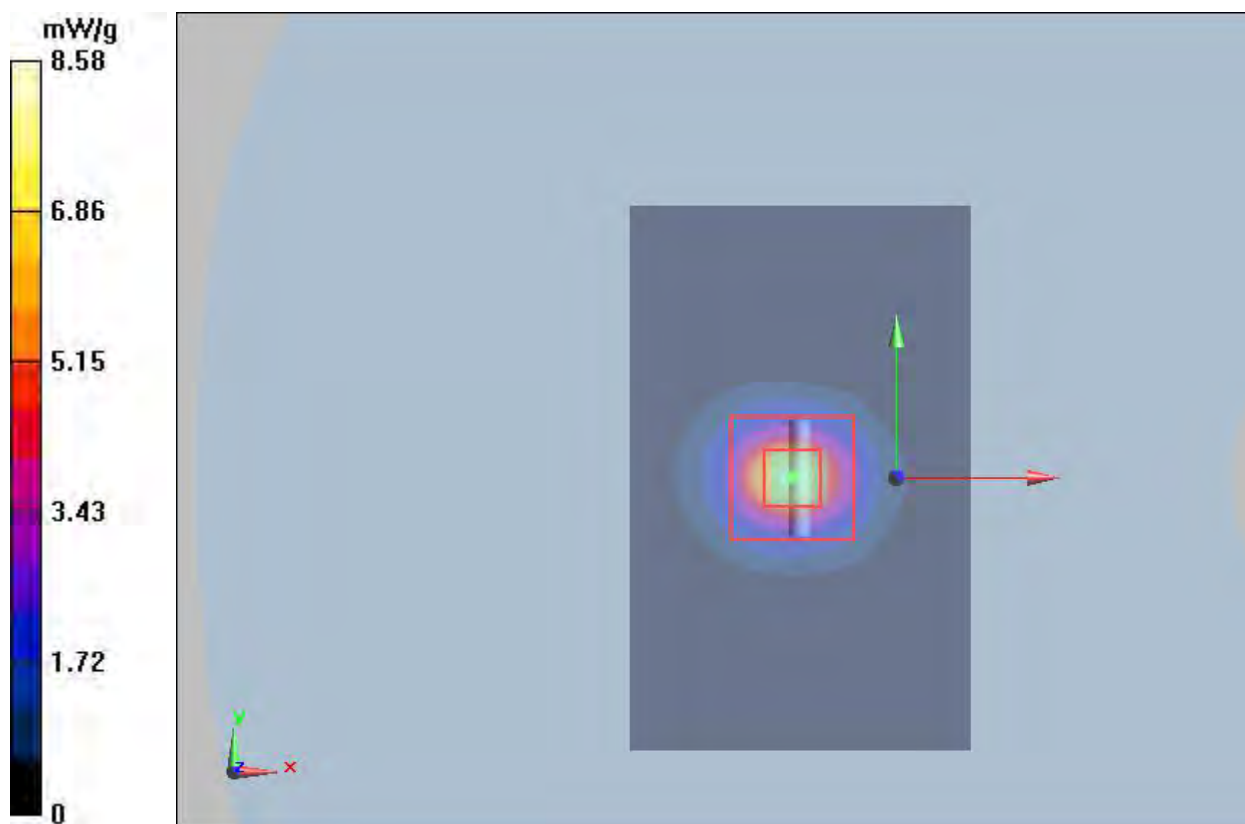
**d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 38 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 22.6 W/kg

**SAR(1 g) = 7.15 mW/g; SAR(10 g) = 1.99 mW/g**

Maximum value of SAR (measured) = 8.58 mW/g



## ANNEX C: Highest Graph Results

### Plot 15 GSM 850 Right Cheek Middle

Date: 2022/1/17

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.30

Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.953$  S/m;  $\epsilon_r = 39.762$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Cheek Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.790 W/kg

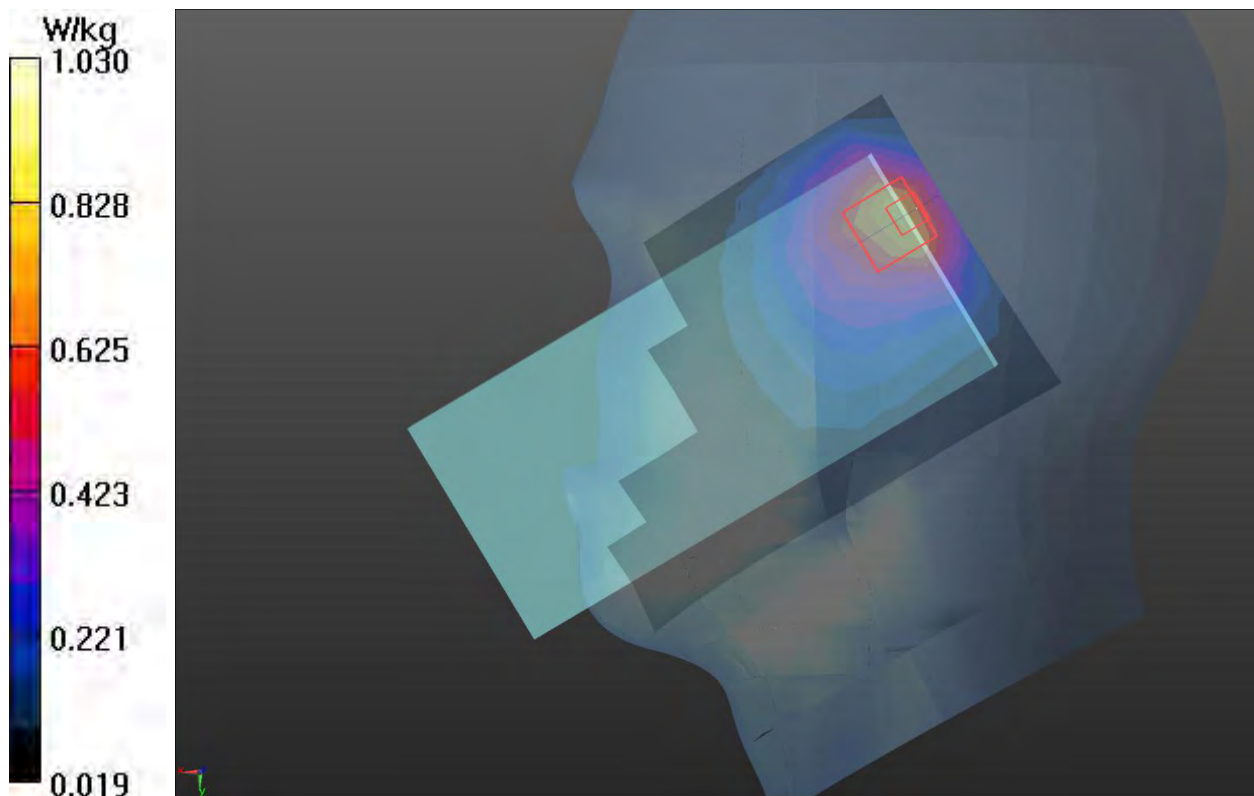
**Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.91 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.38 W/kg

**SAR(1 g) = 0.609 W/kg; SAR(10 g) = 0.362 W/kg**

Maximum value of SAR (measured) = 1.03 W/kg



## Plot 16 GSM 1900 Right Tilt Middle (Battery2)

Date: 2022/1/4

Communication System: UID 0, GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  S/m;  $\epsilon_r = 38.948$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.541 W/kg

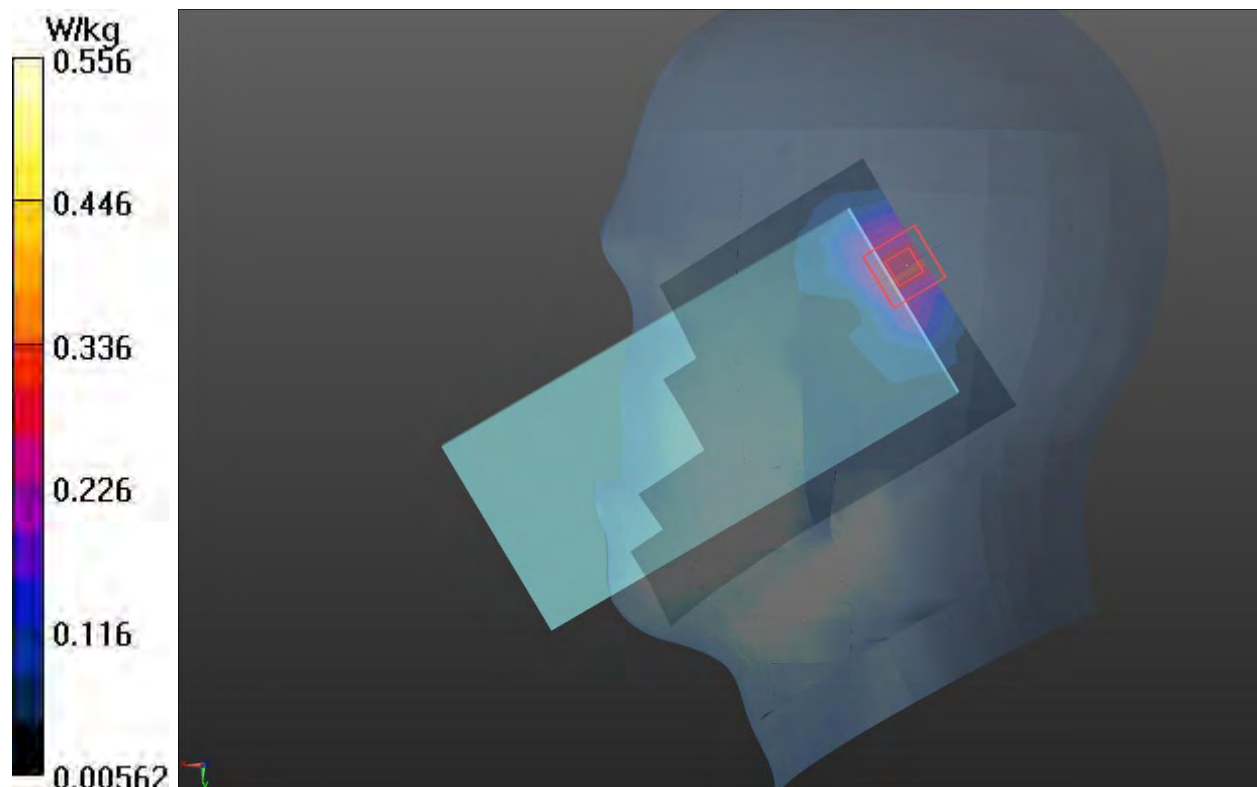
**Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.48 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.999 W/kg

**SAR(1 g) = 0.536 W/kg; SAR(10 g) = 0.249 W/kg**

Maximum value of SAR (measured) = 0.556 W/kg



## Plot 17 UMTS Band II Right Tilt Middle

Date: 2022/1/4

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  S/m;  $\epsilon_r = 38.948$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.593 W/kg

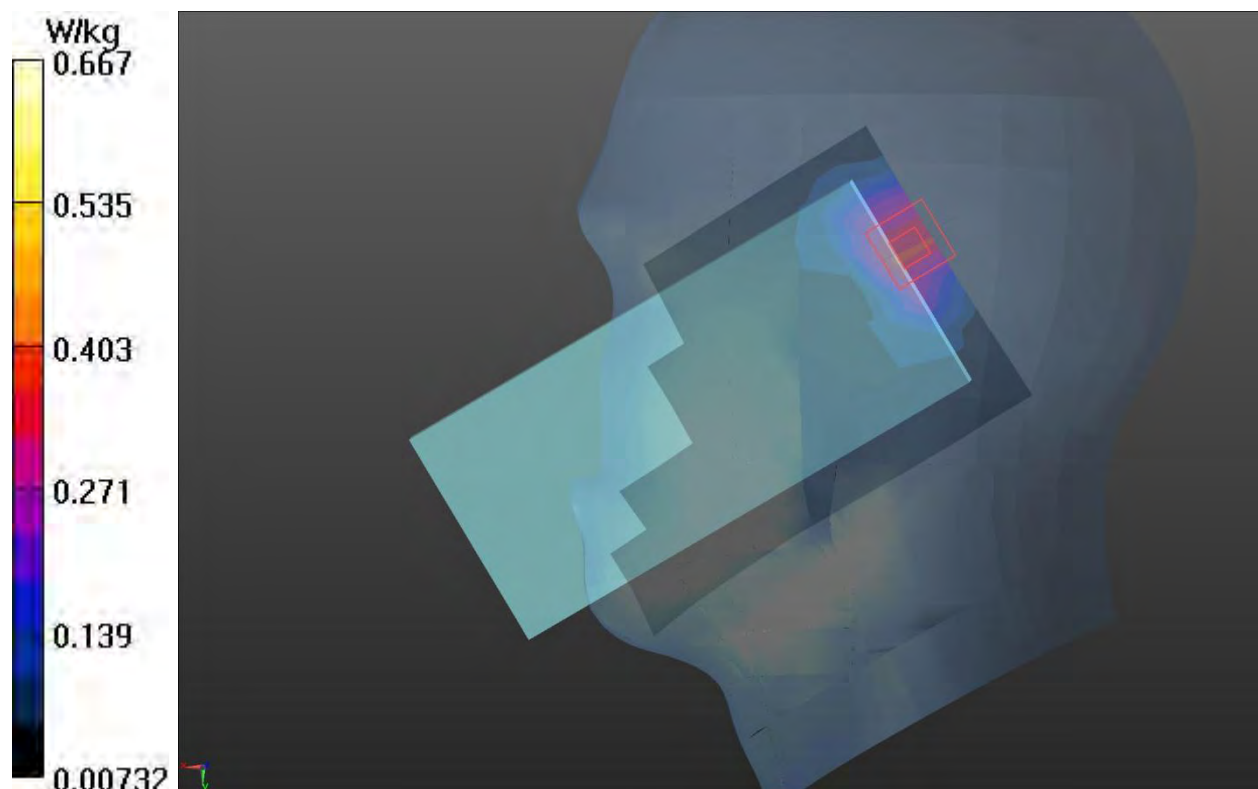
**Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.95 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.23 W/kg

**SAR(1 g) = 0.581 W/kg; SAR(10 g) = 0.262 W/kg**

Maximum value of SAR (measured) = 0.667 W/kg



## Plot 18 UMTS Band IV Right Tilt Middle (Battery2)

Date: 2022/1/1

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1732.6$  MHz;  $\sigma = 1.312$  S/m;  $\epsilon_r = 39.365$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.710 W/kg

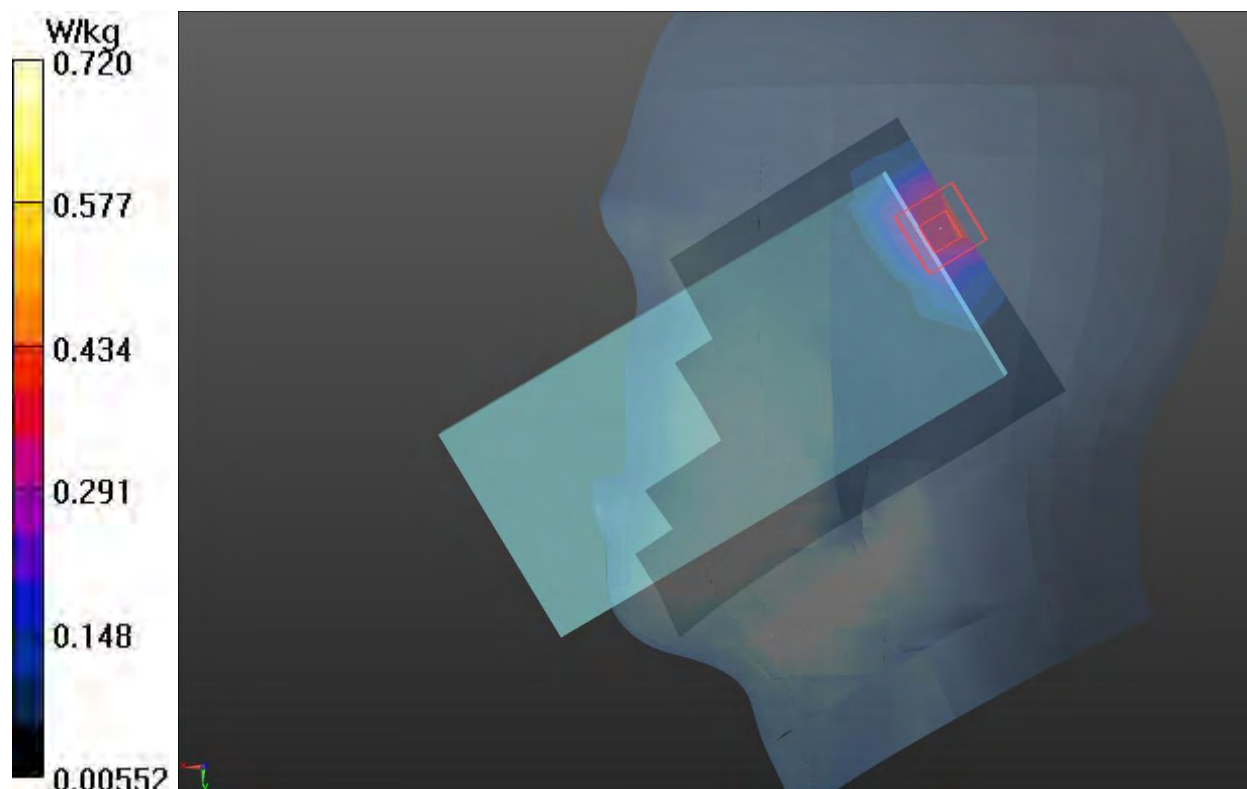
**Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.14 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 1.30 W/kg

**SAR(1 g) = 0.635 W/kg; SAR(10 g) = 0.289 W/kg**

Maximum value of SAR (measured) = 0.720 W/kg



## Plot 19 UMTS Band V Right Cheek Middle

Date: 2021/12/30

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.953$  S/m;  $\epsilon_r = 39.762$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Cheek Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.682 W/kg

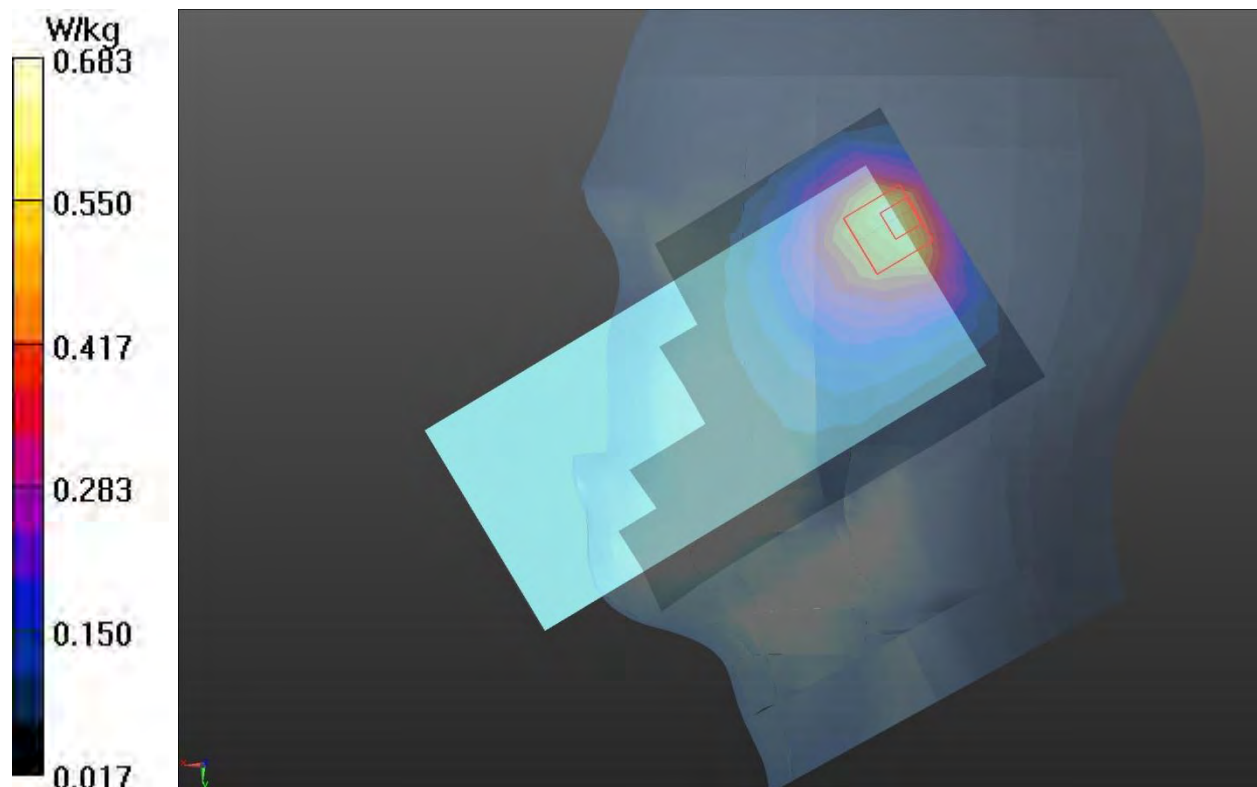
**Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.79 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.26 W/kg

**SAR(1 g) = 0.681 W/kg; SAR(10 g) = 0.402 W/kg**

Maximum value of SAR (measured) = 0.683 W/kg



## Plot 20 LTE Band 2 50%RB Right Tilt High (Battery2)

Date: 2022/1/4

Communication System: UID 0, LTE (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.434$  S/m;  $\epsilon_r = 38.861$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt High/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.560 W/kg

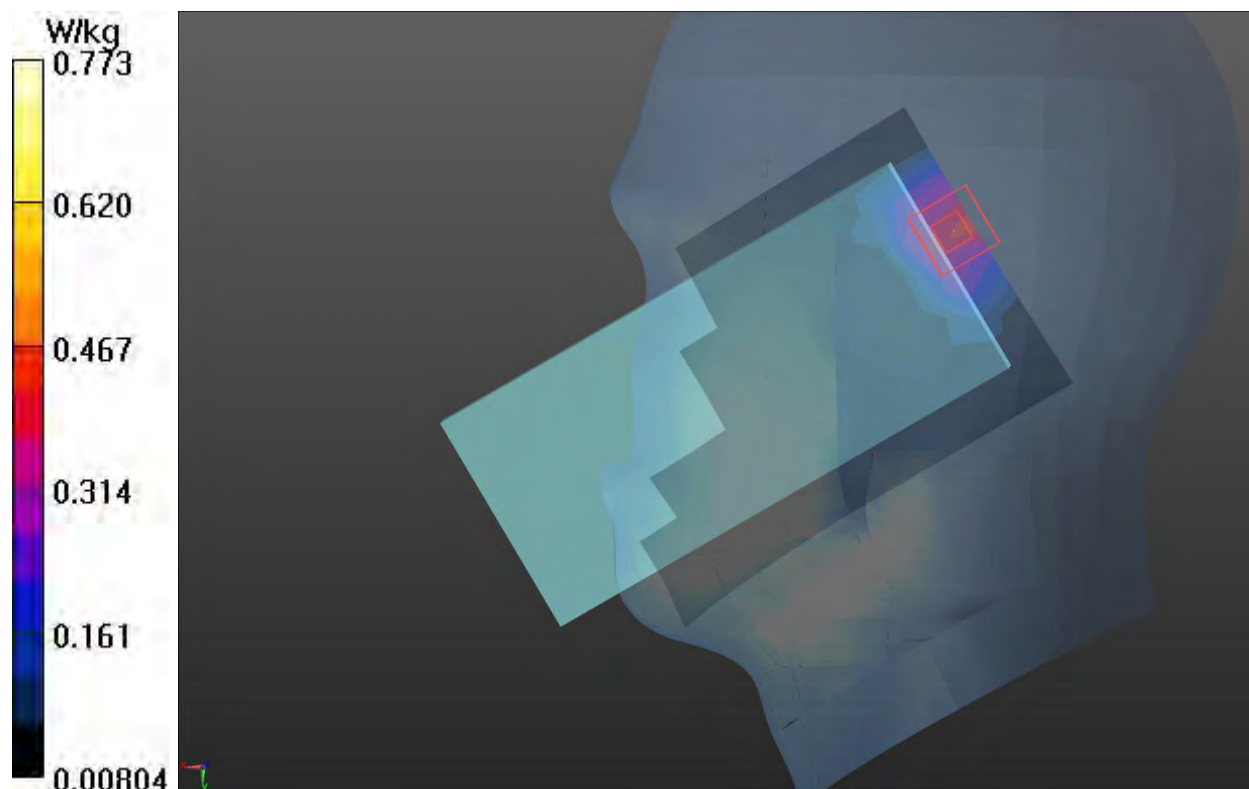
**Right Tilt High/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.99 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.42 W/kg

**SAR(1 g) = 0.531 W/kg; SAR(10 g) = 0.245 W/kg**

Maximum value of SAR (measured) = 0.773 W/kg



## Plot 21 LTE Band 4 1RB Right Tilt Middle

Date: 2022/1/1

Communication System: UID 0, LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.313$  S/m;  $\epsilon_r = 39.384$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.872 W/kg

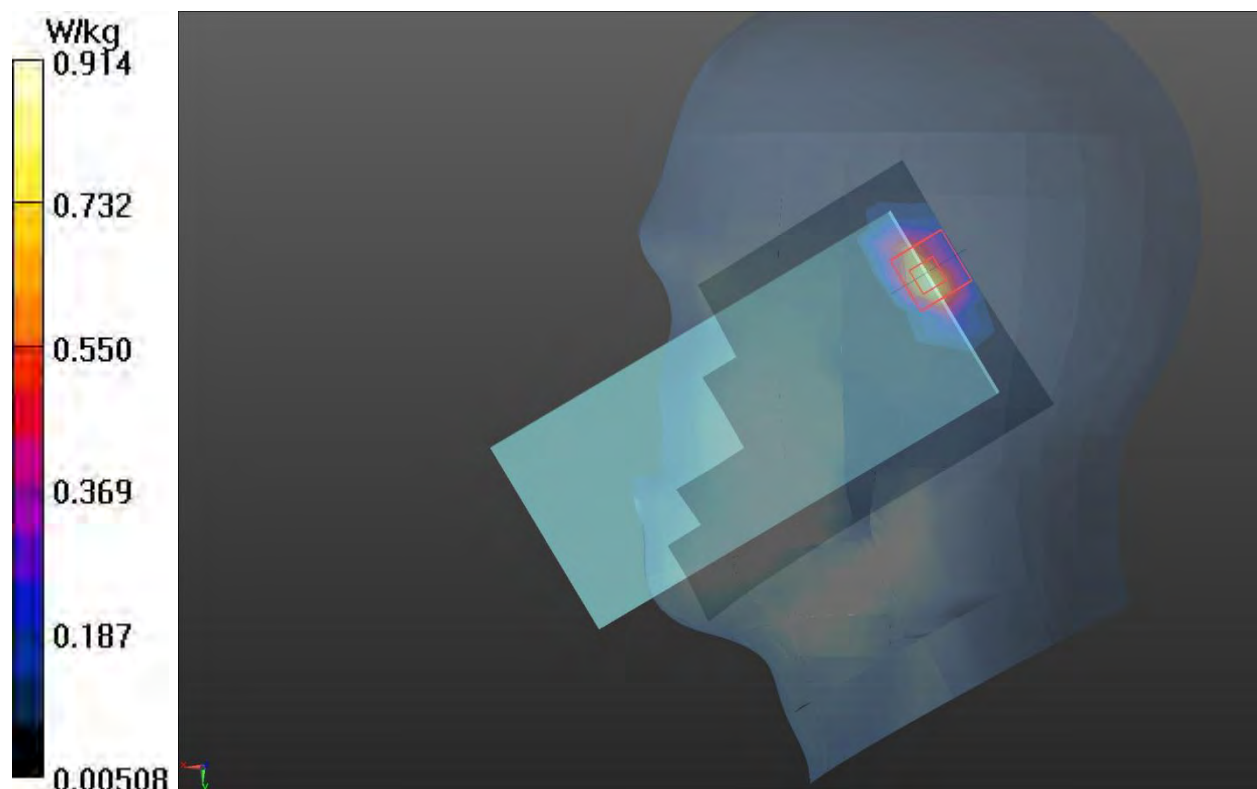
**Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.91 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.72 W/kg

**SAR(1 g) = 0.782 W/kg; SAR(10 g) = 0.341 W/kg**

Maximum value of SAR (measured) = 0.914 W/kg



## Plot 22 LTE Band 5 1RB Right Cheek Middle

Date: 2021/12/30

Communication System: UID 0, LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.953$  S/m;  $\epsilon_r = 39.767$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Cheek Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.57 W/kg

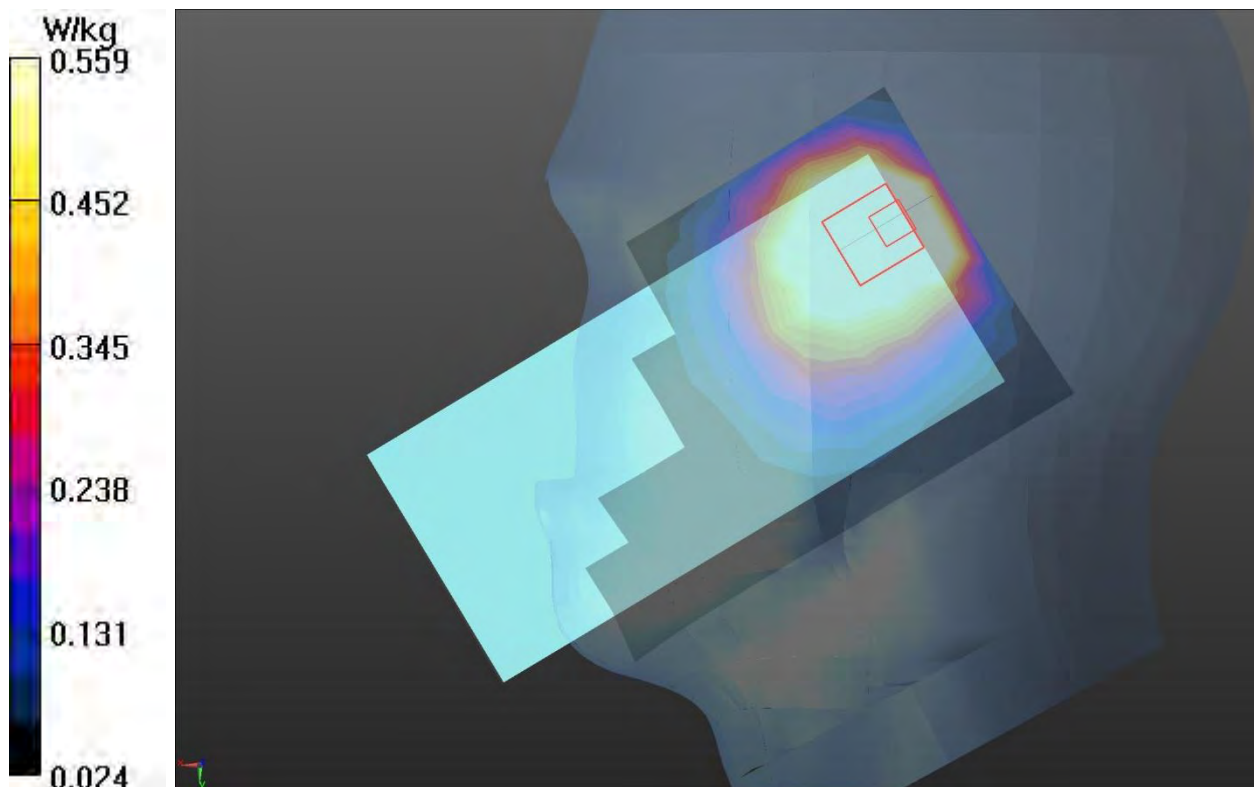
**Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.14 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.88 W/kg

**SAR(1 g) = 0.482 W/kg; SAR(10 g) = 0.291 W/kg**

Maximum value of SAR (measured) = 0.559 W/kg



## Plot 23 LTE Band 7 50%RB Right Tilt Middle (Battery2)

Date: 2022/1/14

Communication System: UID 0, LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2535$  MHz;  $\sigma = 1.94$  S/m;  $\epsilon_r = 37.31$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Middle/Area Scan (10x18x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.995 W/kg

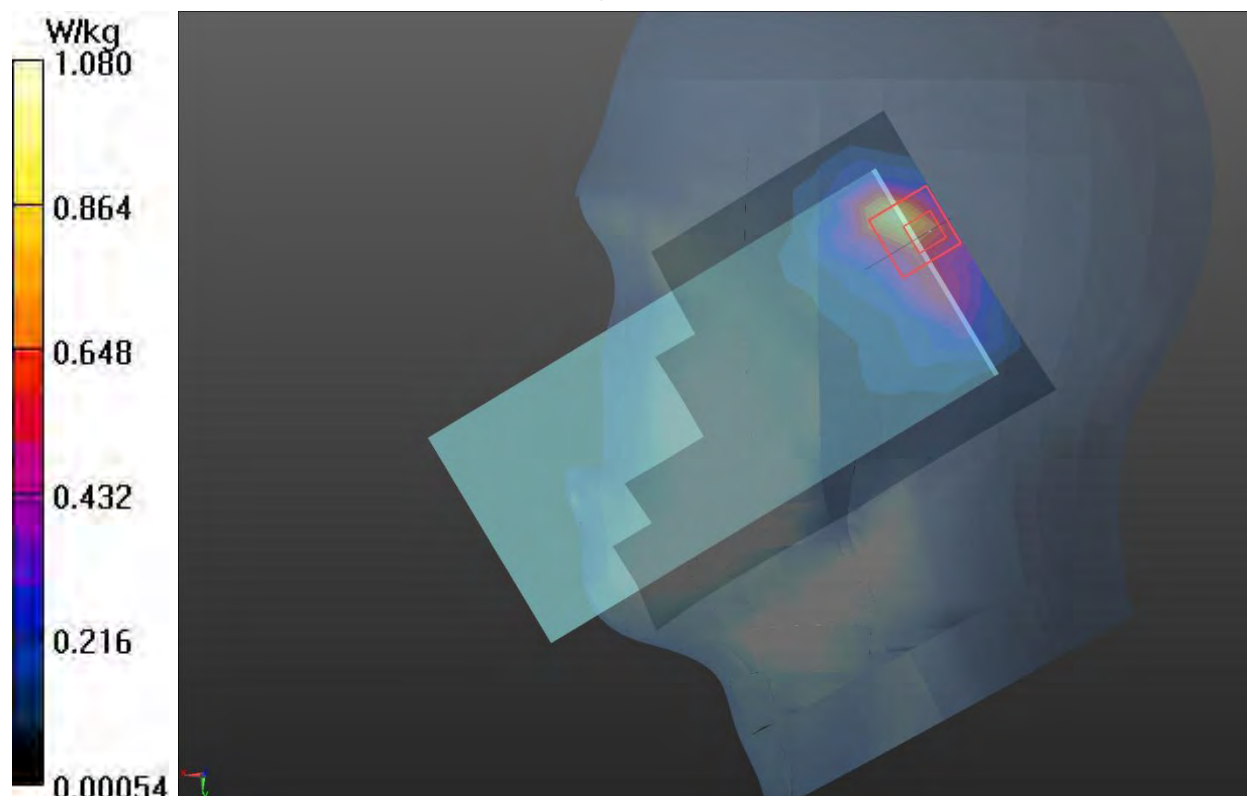
**Right Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.88 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.41 W/kg

**SAR(1 g) = 0.625 W/kg; SAR(10 g) = 0.293 W/kg**

Maximum value of SAR (measured) = 1.08 W/kg



## Plot 24 LTE Band 38 1RB Right Cheek Low

Date: 2022/1/14

Communication System: UID 0, LTE (0); Frequency: 2580 MHz; Duty Cycle: 1:1.58

Medium parameters used:  $f = 2580$  MHz;  $\sigma = 1.995$  S/m;  $\epsilon_r = 37.164$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Cheek Low/Area Scan (10x18x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.736 W/kg

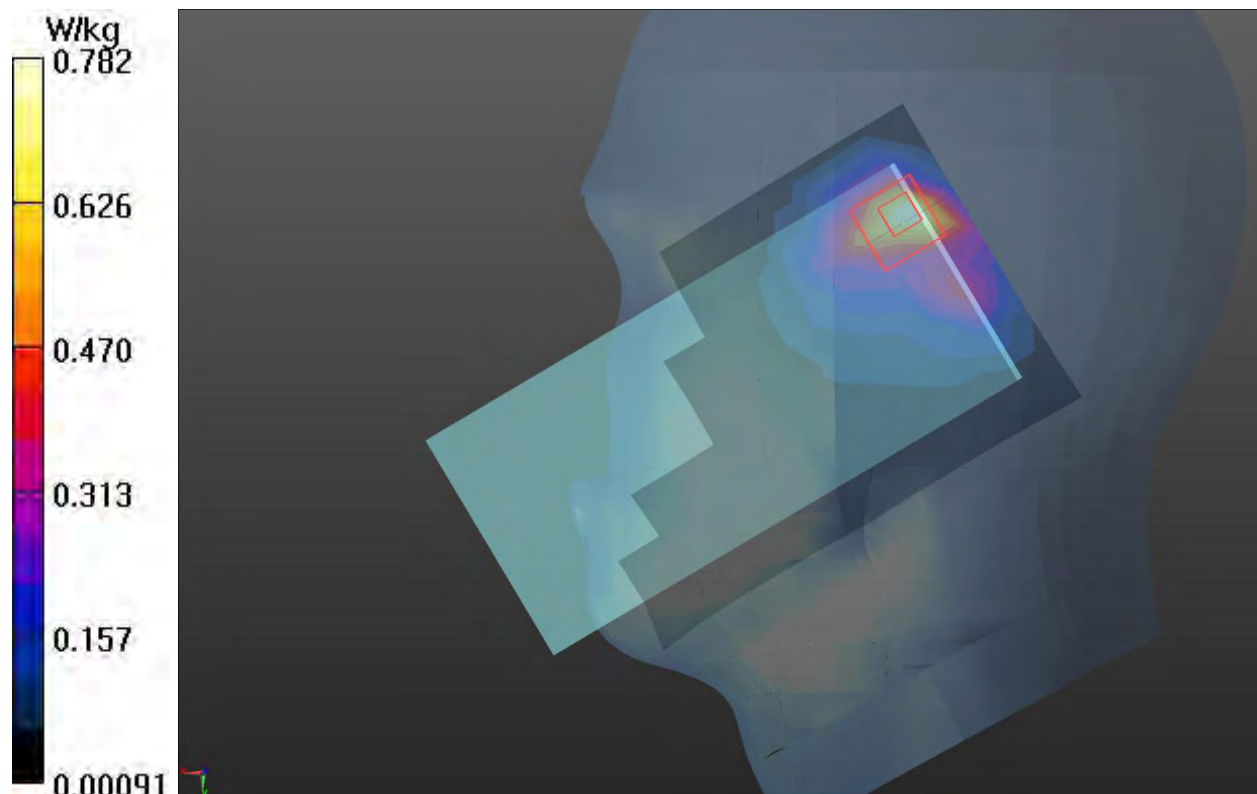
**Right Cheek Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.95 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.10 W/kg

**SAR(1 g) = 0.506 W/kg; SAR(10 g) = 0.232 W/kg**

Maximum value of SAR (measured) = 0.782 W/kg



## Plot 25 LTE Band 12 1RB Right Cheek Middle

Date: 2022/1/12

Communication System: UID 0, LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 707.5$  MHz;  $\sigma = 0.869$  S/m;  $\epsilon_r = 40.725$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Cheek Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.840 W/kg

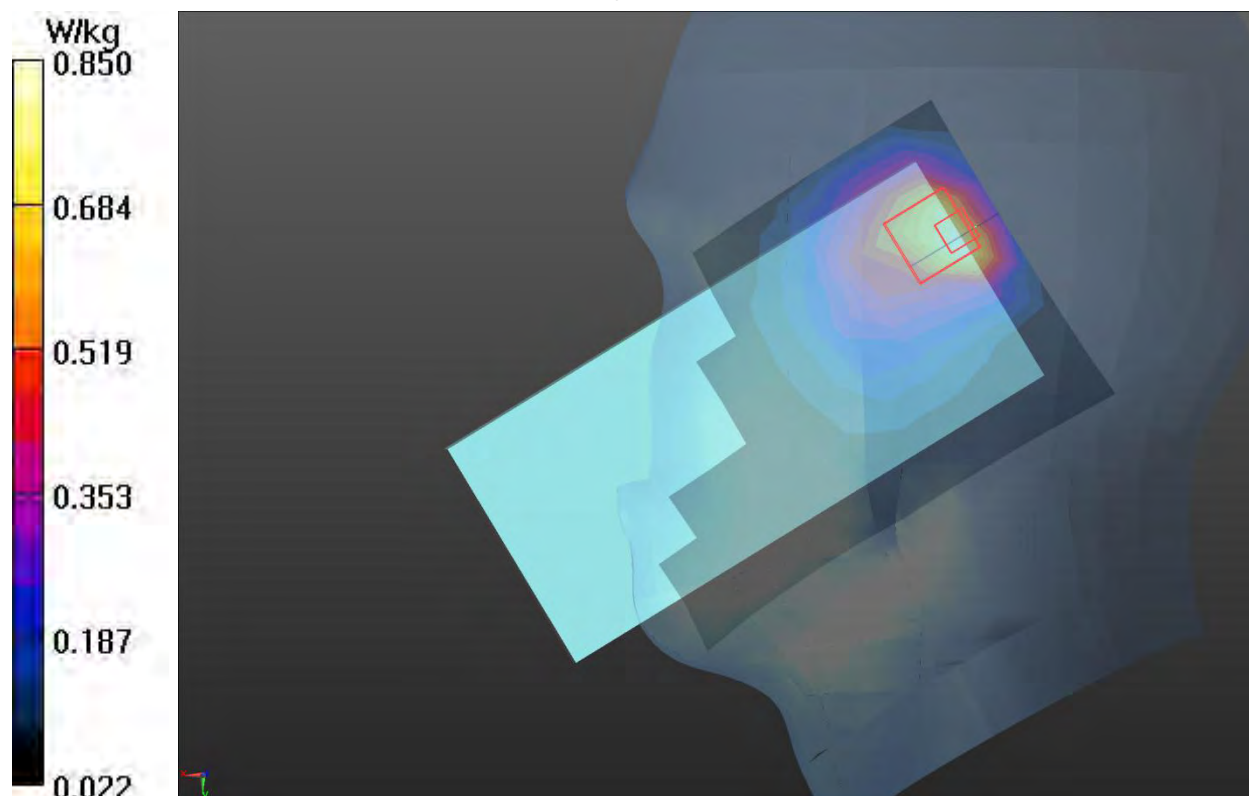
**Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.63 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.23 W/kg

**SAR(1 g) = 0.533 W/kg; SAR(10 g) = 0.328 W/kg**

Maximum value of SAR (measured) = 0.850 W/kg



## Plot 25 LTE Band 13 1RB Right Tilt Middle

Date: 2022/1/13

Communication System: UID 0, LTE (0); Frequency: 782 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.917 \text{ S/m}$ ;  $\epsilon_r = 40.132$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$  Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Middle/Area Scan (8x14x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) =  $0.426 \text{ W/kg}$

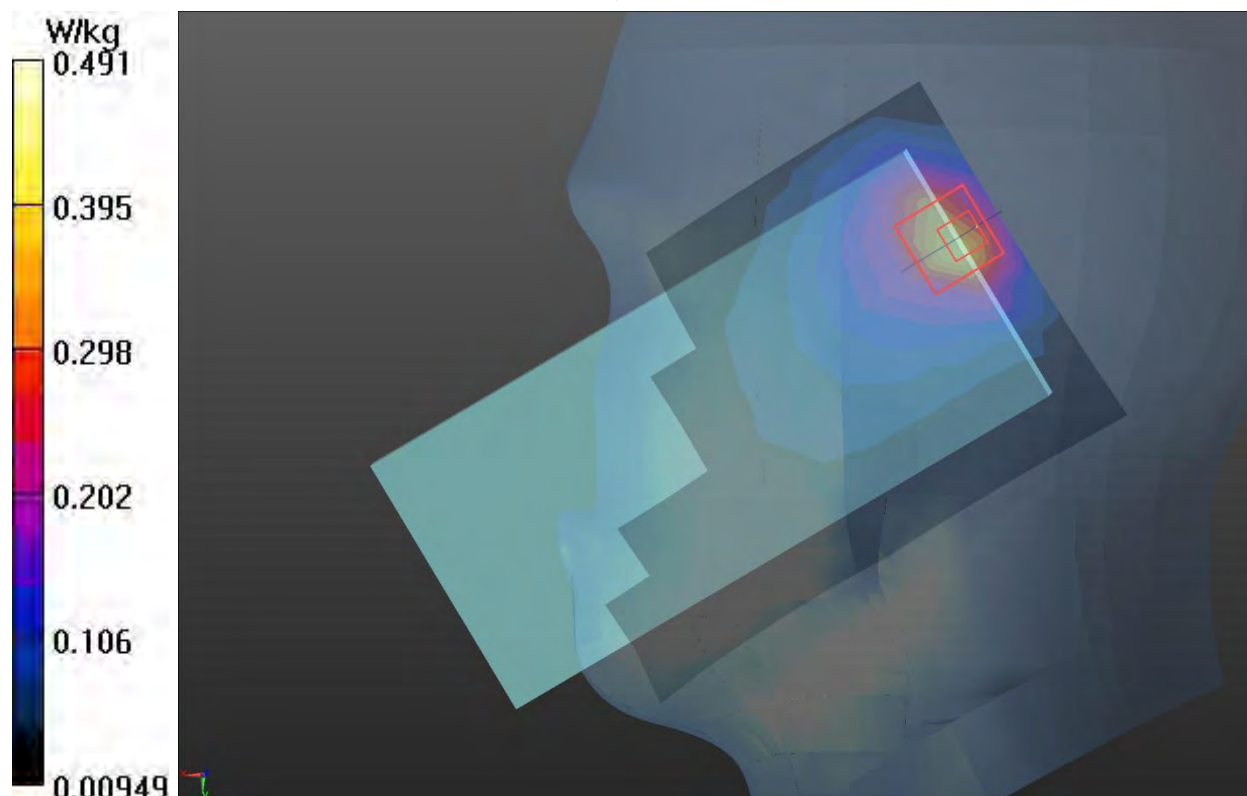
**Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $15.72 \text{ V/m}$ ; Power Drift =  $0.00 \text{ dB}$

Peak SAR (extrapolated) =  $0.738 \text{ W/kg}$

**SAR(1 g) =  $0.282 \text{ W/kg}$ ; SAR(10 g) =  $0.151 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.491 \text{ W/kg}$



## Plot 25 LTE Band 17 1RB Right Tilt Low (Battery2)

Date: 2022/1/15

Communication System: UID 0, LTE (0); Frequency: 709 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 709 \text{ MHz}$ ;  $\sigma = 0.87 \text{ S/m}$ ;  $\epsilon_r = 40.715$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$  Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Low/Area Scan (8x14x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) =  $0.719 \text{ W/kg}$

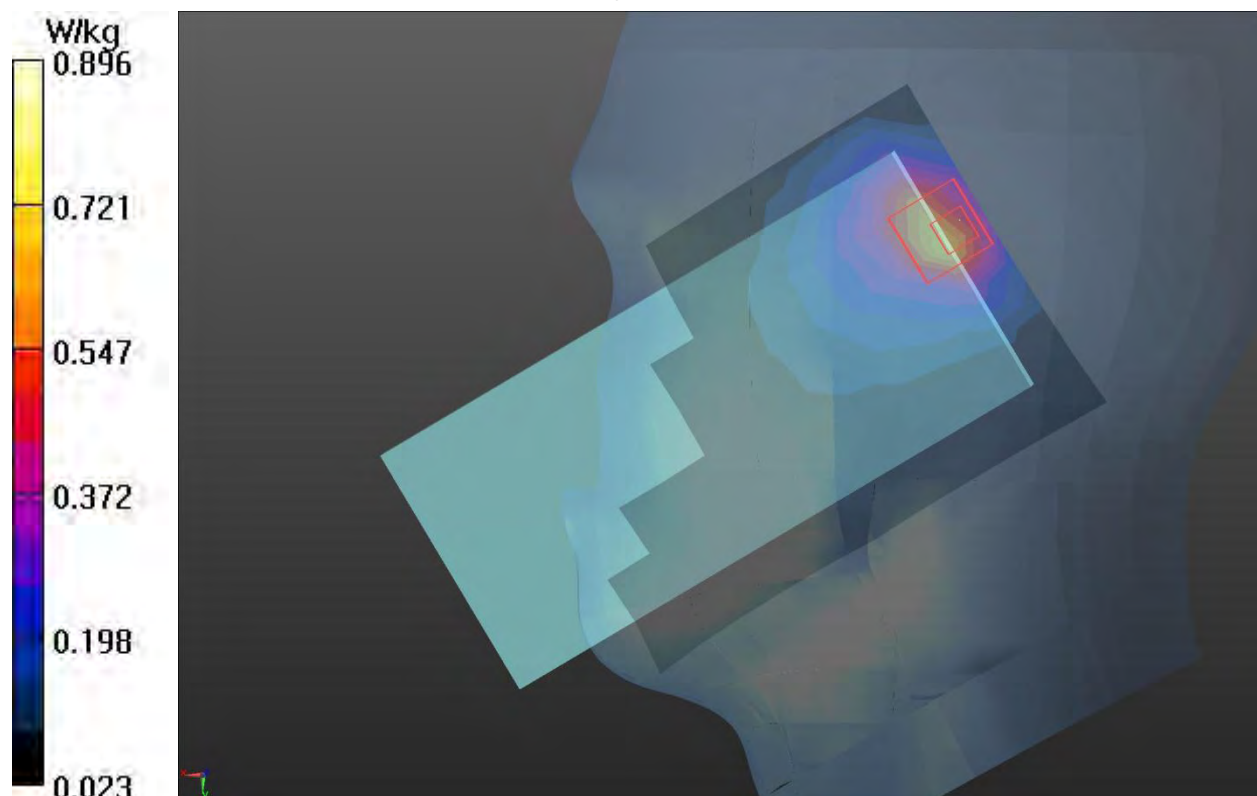
**Right Tilt Low/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $21.67 \text{ V/m}$ ; Power Drift =  $0.048 \text{ dB}$

Peak SAR (extrapolated) =  $1.31 \text{ W/kg}$

**SAR(1 g) =  $0.512 \text{ W/kg}$ ; SAR(10 g) =  $0.268 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.896 \text{ W/kg}$



## Plot 25 LTE Band 26 50%RB Left Cheek Middle

Date: 2022/1/16

Communication System: UID 0, LTE (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 831.5$  MHz;  $\sigma = 0.95$  S/m;  $\epsilon_r = 39.79$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Left Cheek Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.578 W/kg

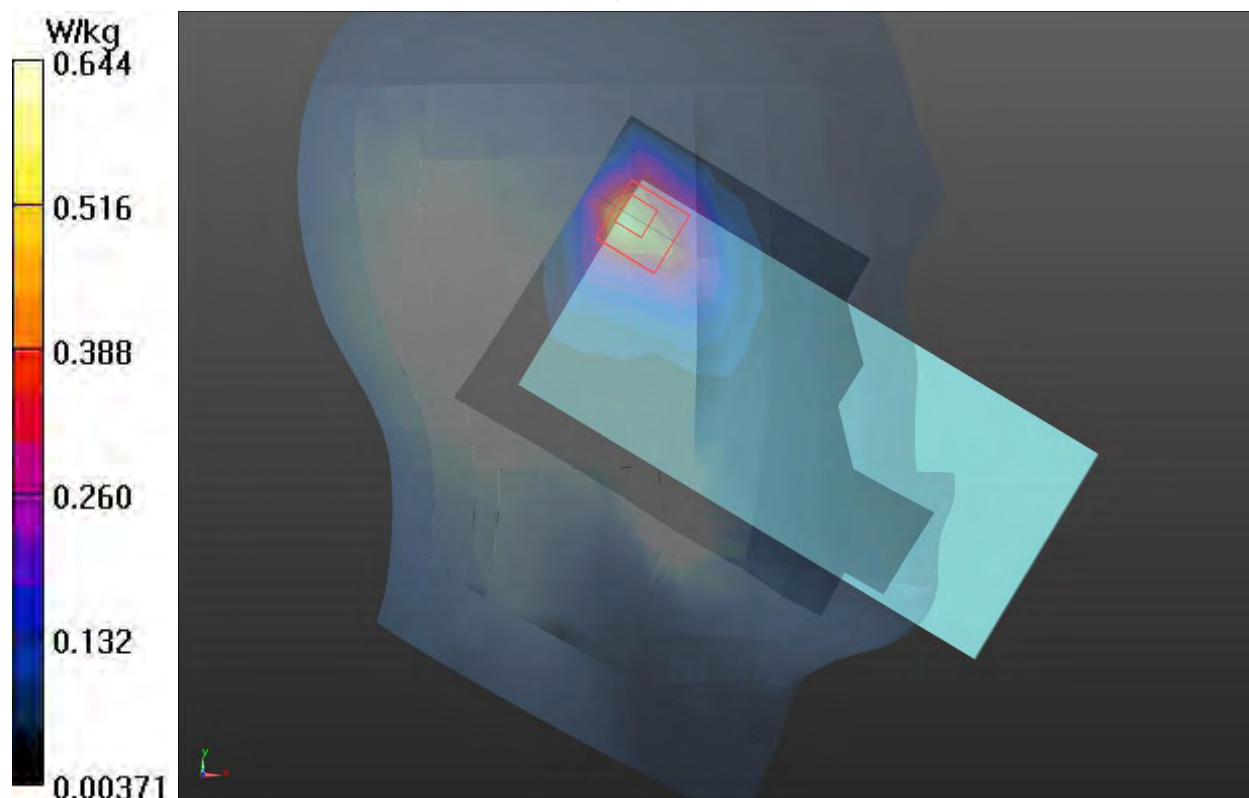
**Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.49 V/m; Power Drift = 0.001 dB

Peak SAR (extrapolated) = 0.920 W/kg

**SAR(1 g) = 0.531 W/kg; SAR(10 g) = 0.36 W/kg**

Maximum value of SAR (measured) = 0.644 W/kg



## Plot 25 LTE Band 41 50%RB Right Tilt Middle

Date: 2022/1/14

Communication System: UID 0, LTE (0); Frequency: 2593 MHz; Duty Cycle: 1:1.58

Medium parameters used:  $f = 2593$  MHz;  $\sigma = 2.009$  S/m;  $\epsilon_r = 37.118$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Middle/Area Scan (10x18x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.618 W/kg

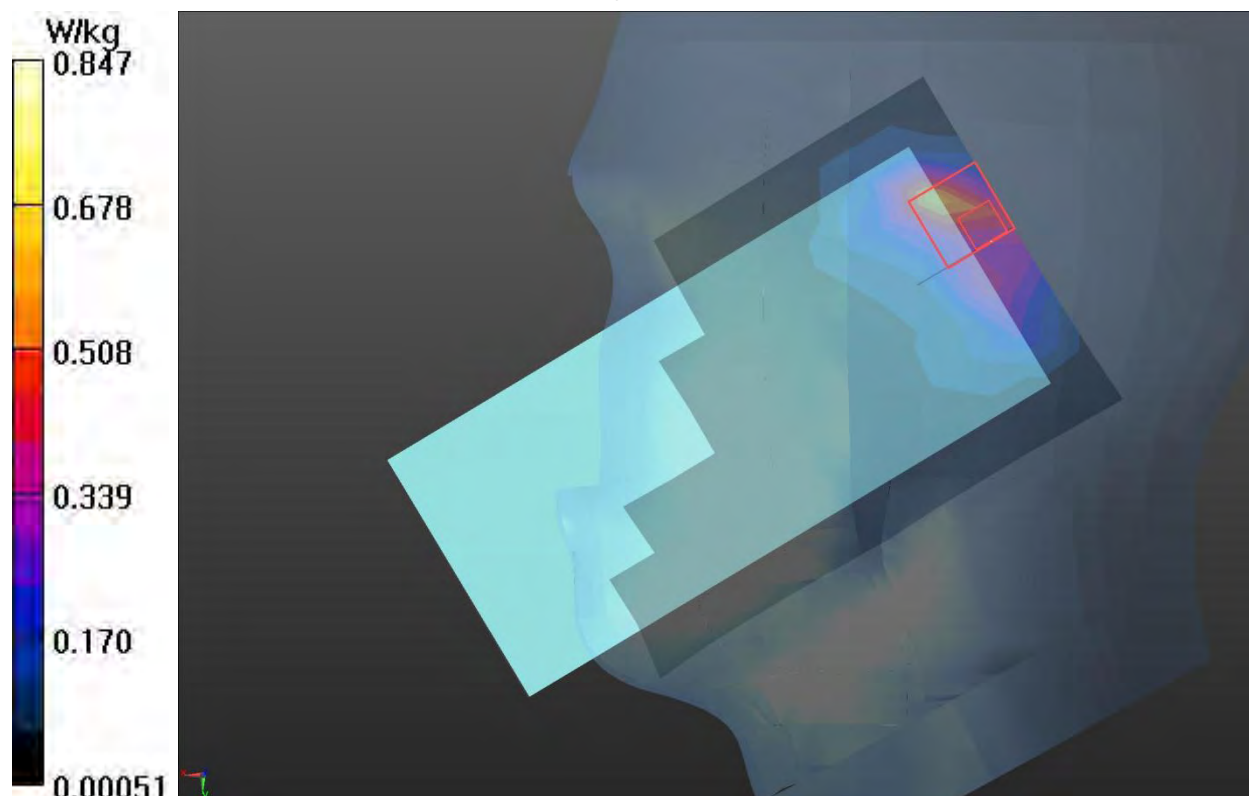
**Right Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.72 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.06 W/kg

**SAR(1 g) = 0.448 W/kg; SAR(10 g) = 0.186 W/kg**

Maximum value of SAR (measured) = 0.847 W/kg



## Plot 25 LTE Band 66 1RB Right Tilt Middle

Date: 2022/1/17

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1745$  MHz;  $\sigma = 1.323$  S/m;  $\epsilon_r = 39.378$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.623 W/kg

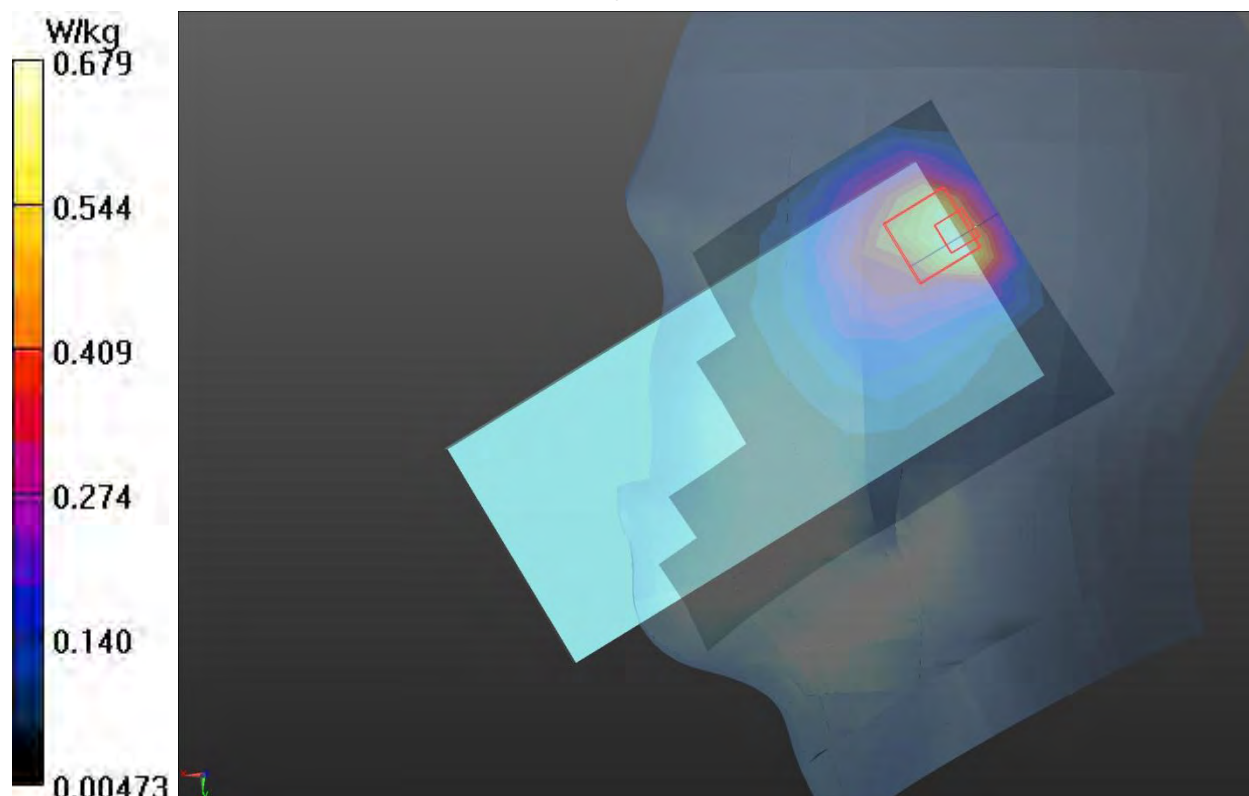
**Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.39 V/m; Power Drift = 0.058 dB

Peak SAR (extrapolated) = 0.953 W/kg

**SAR(1 g) = 0.531 W/kg; SAR(10 g) = 0.36 W/kg**

Maximum value of SAR (measured) = 0.679 W/kg



## Plot 26 802.11b Left Cheek Low

Date: 2022/1/1

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz; Duty Cycle: 1:1.02

Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.87$  S/m;  $\epsilon_r = 37.542$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: SAM

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Left Cheek Low/Area Scan (10x18x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.692 W/kg

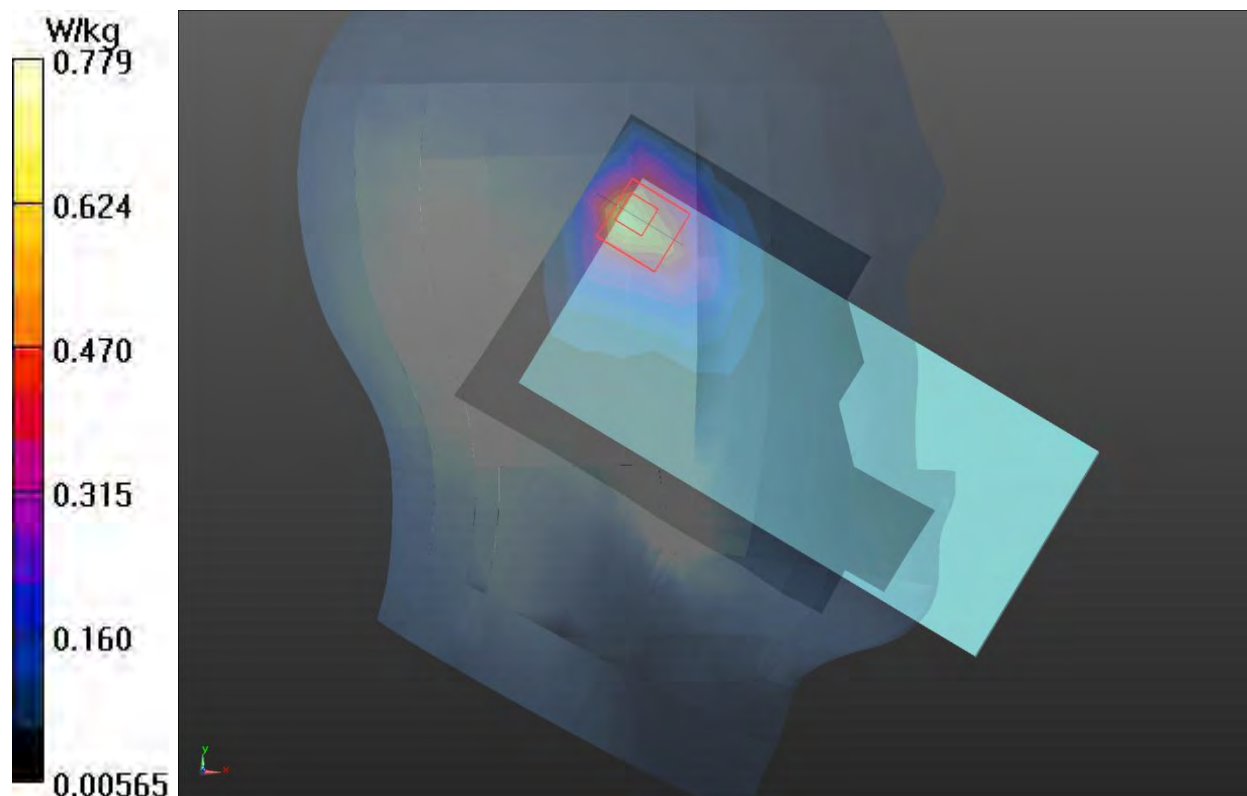
**Left Cheek Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.474 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 1.09 W/kg

**SAR(1 g) = 0.365 W/kg; SAR(10 g) = 0.181 W/kg**

Maximum value of SAR (measured) = 0.779 W/kg



## Plot 27 802.11a U-NII-2C Left Tilt Middle (Battery2)

Date: 2022/1/10

Communication System: UID 0, 802.11a (0); Frequency: 5600 MHz; Duty Cycle: 1:1.02

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.31$  S/m;  $\epsilon_r = 35.639$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00, 5.00); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Left Tilt Middle/Area Scan (12x21x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.920 W/kg

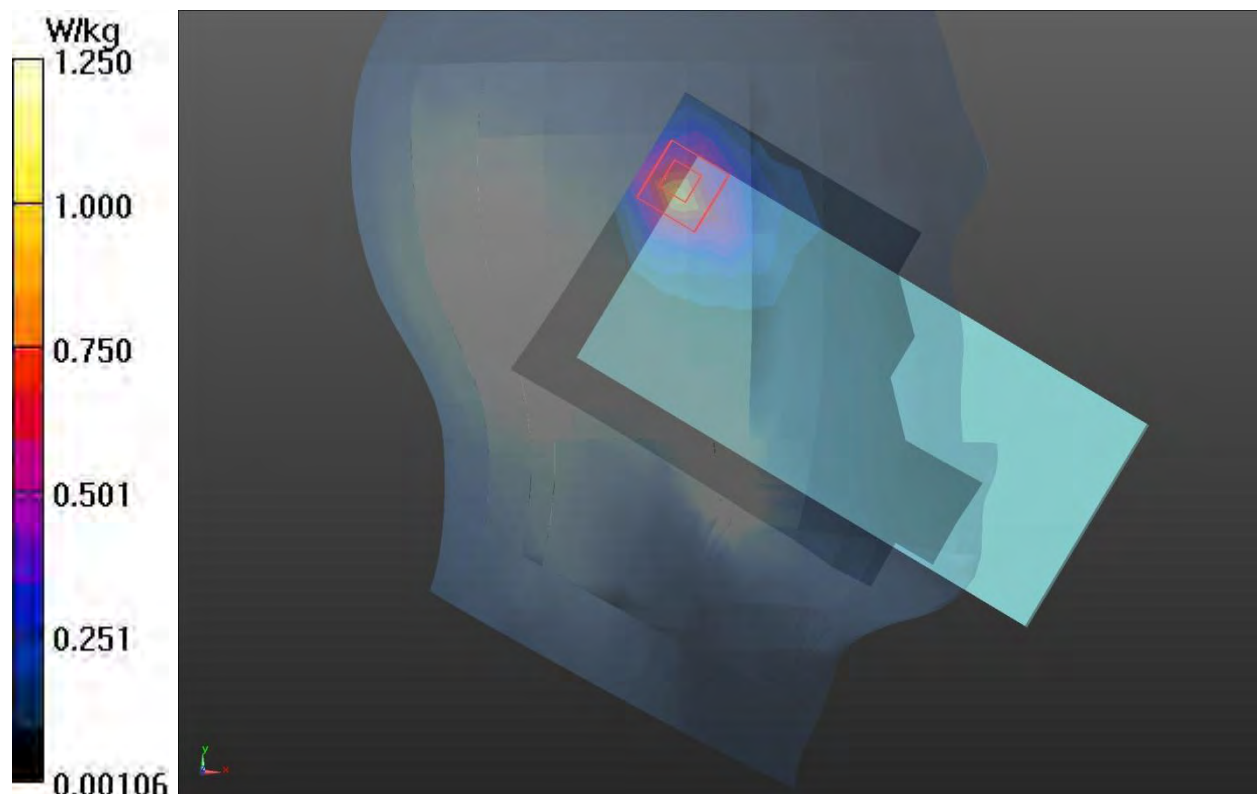
**Left Tilt Middle/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.5890 V/m; Power Drift = 0.038 dB

Peak SAR (extrapolated) = 2.87 W/kg

**SAR(1 g) = 0.342 W/kg; SAR(10 g) = 0.104 W/kg**

Maximum value of SAR (measured) = 1.25 W/kg



## Plot 28 Bluetooth Right Tilt Middle

Date: 2022/1/3

Communication System: UID 0, BT (0); Frequency: 2480 MHz; Duty Cycle: 1:2.17

Medium parameters used:  $f = 2480$  MHz;  $\sigma = 1.878$  S/m;  $\epsilon_r = 37.511$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Right Tilt Middle/Area Scan (10x18x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.074 W/kg

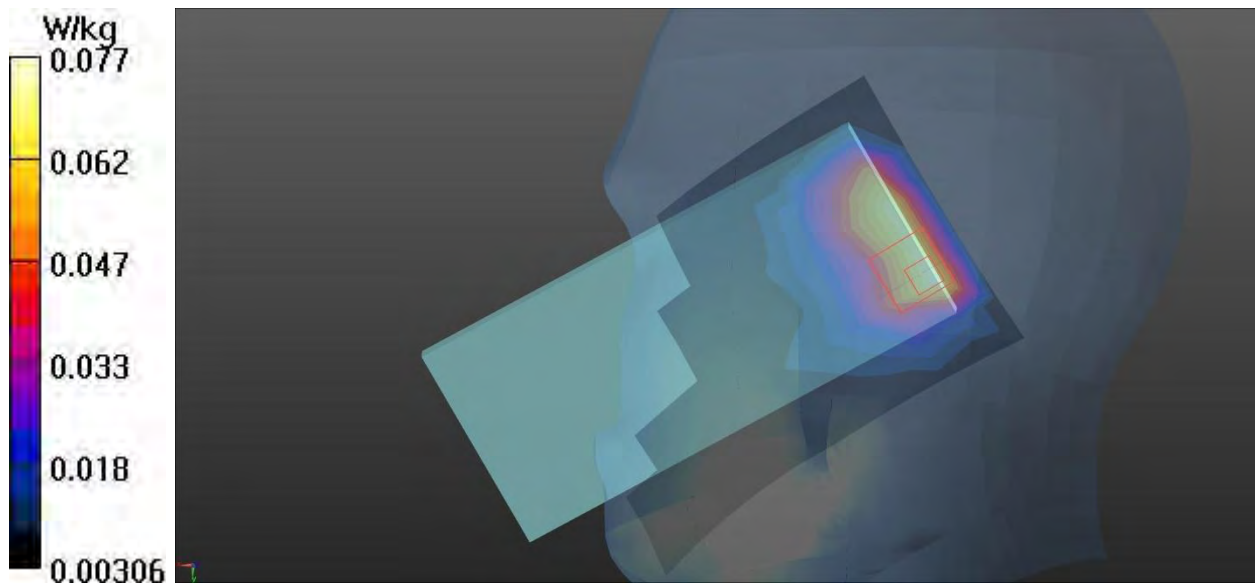
**Right Tilt Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.049 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 0.104 W/kg

**SAR(1 g) = 0.047 W/kg; SAR(10 g) = 0.025 W/kg**

Maximum value of SAR (measured) = 0.077 W/kg



## Plot 29 GSM 850 GPRS (2Txslots) Back Side Middle (Distance 10mm)

Date: 2021/12/30

Communication System: UID 0, GPRS 2TX (0); Frequency: 836.6 MHz; Duty Cycle: 1:4.15

Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.923$  S/m;  $\epsilon_r = 42.201$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.391 W/kg

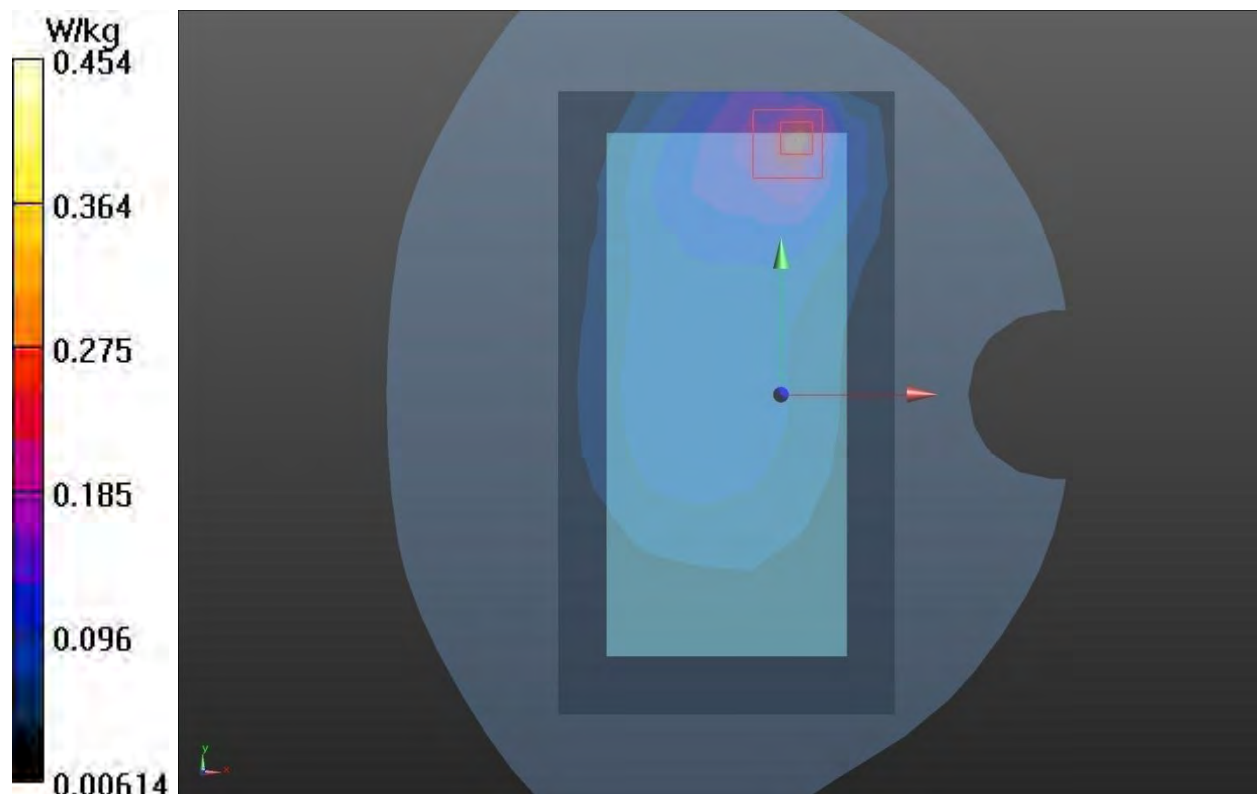
**Back Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.45 V/m; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 0.651 W/kg

**SAR(1 g) = 0.381 W/kg; SAR(10 g) = 0.209 W/kg**

Maximum value of SAR (measured) = 0.454 W/kg



# **Plot 30 GSM 1900 GPRS (2Txslots) Bottom Edge Middle (Distance 10mm, Battery2)**

Date: 2022/1/17

Communication System: UID 0, GPRS 2TX (0); Frequency: 1880 MHz; Duty Cycle: 1:4.15

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  S/m;  $\epsilon_r = 38.948$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Bottom Edge Middle/Area Scan (4x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.797 W/kg

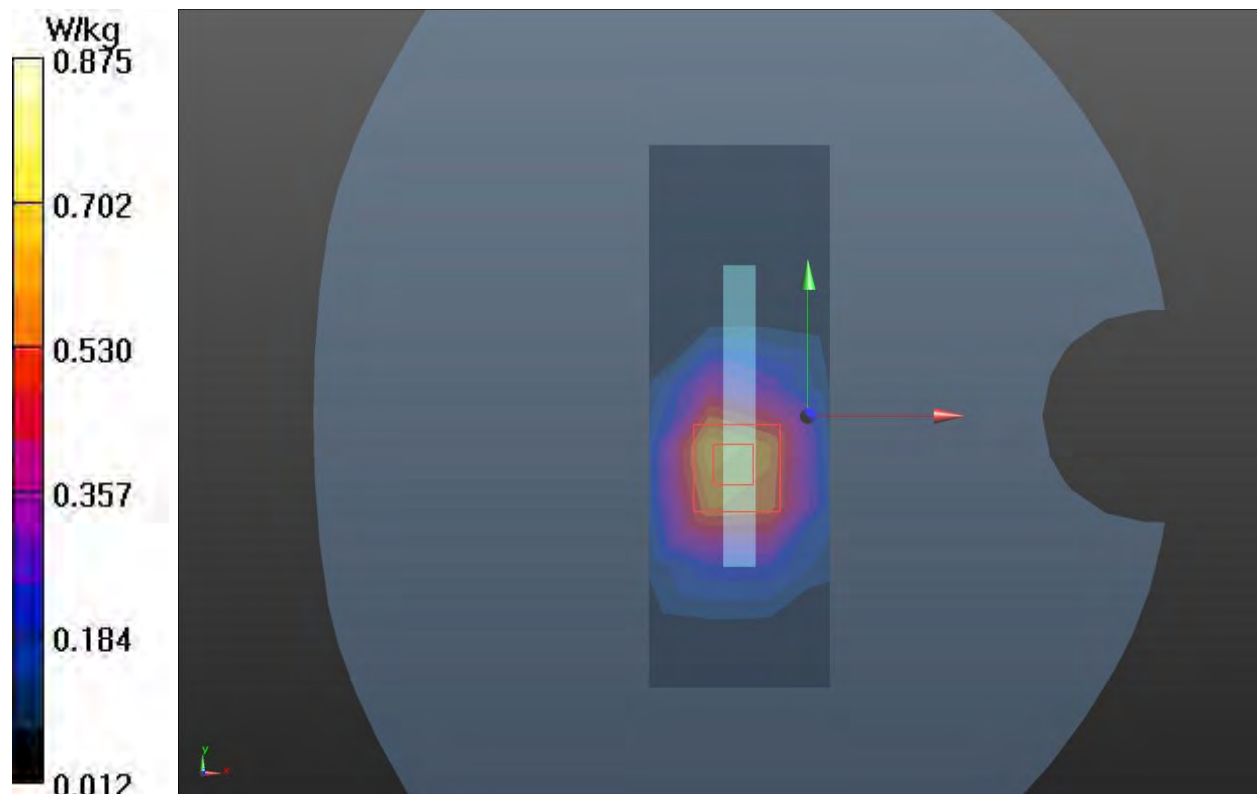
**Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.96 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.40 W/kg

**SAR(1 g) = 0.781 W/kg; SAR(10 g) = 0.427 W/kg**

Maximum value of SAR (measured) = 0.875 W/kg



## Plot 31 UMTS Band II Bottom Edge Middle (Distance 10mm Battery2)

Date: 2022/1/4

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  S/m;  $\epsilon_r = 38.948$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Bottom Edge Middle/Area Scan (4x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.640 W/kg

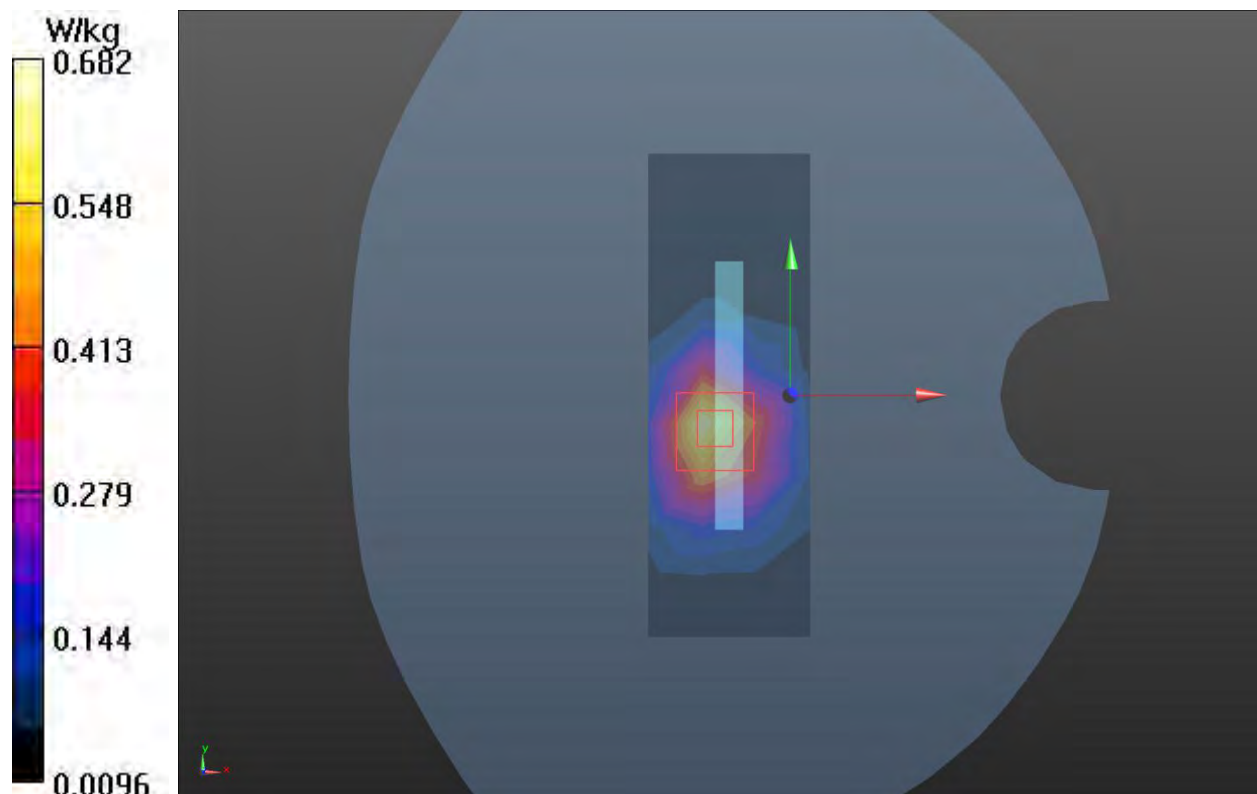
**Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.67 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 1.11 W/kg

**SAR(1 g) = 0.625 W/kg; SAR(10 g) = 0.334 W/kg**

Maximum value of SAR (measured) = 0.682 W/kg



## Plot 32 UMTS Band IV Bottom Edge Middle (Distance 10mm)

Date: 2022/1/1

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1732.6$  MHz;  $\sigma = 1.312$  S/m;  $\epsilon_r = 39.365$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Bottom Edge Middle/Area Scan (4x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.841 W/kg

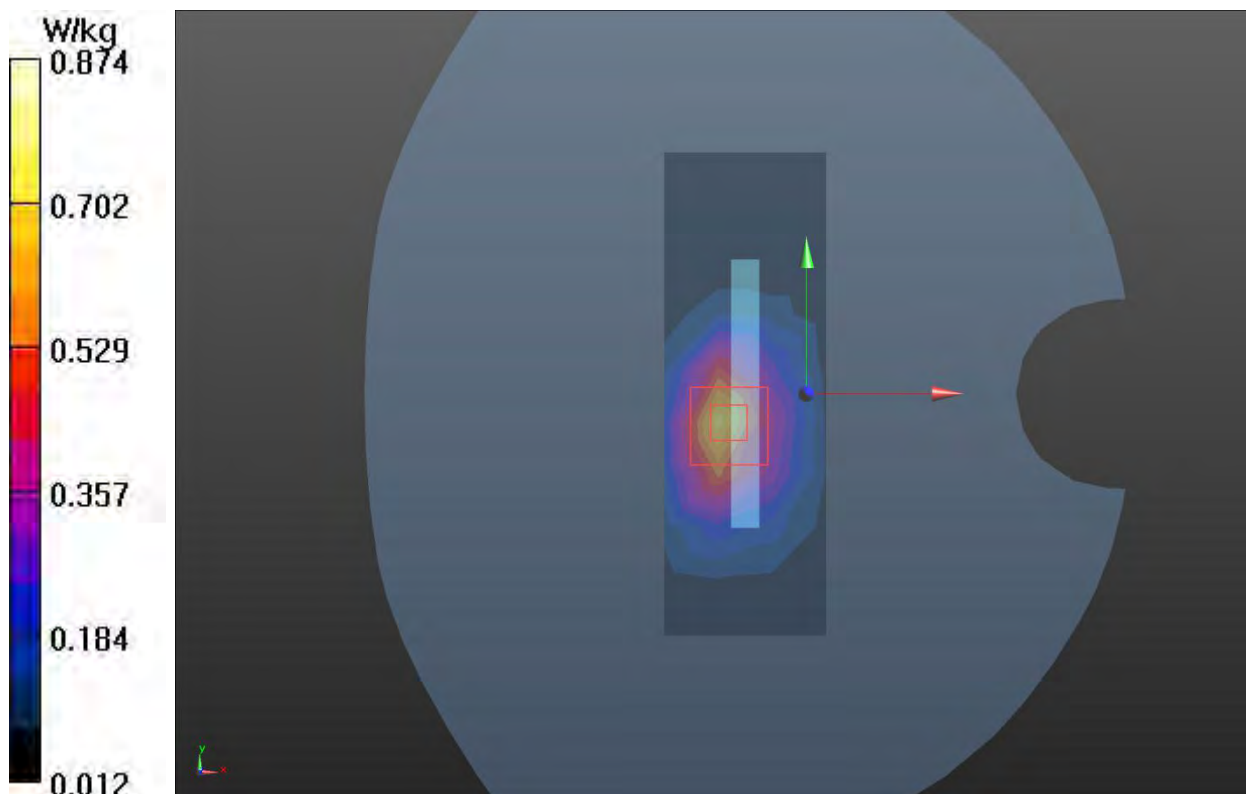
**Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.32 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 1.16 W/kg

**SAR(1 g) = 0.735 W/kg; SAR(10 g) = 0.398 W/kg**

Maximum value of SAR (measured) = 0.874 W/kg



# Plot 33 UMTS Band V Back Side Middle (Distance 10mm Battery2)

Date: 2021/12/30

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 836.6$  MHz;  $\sigma = 0.953$  S/m;  $\epsilon_r = 39.762$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.348 W/kg

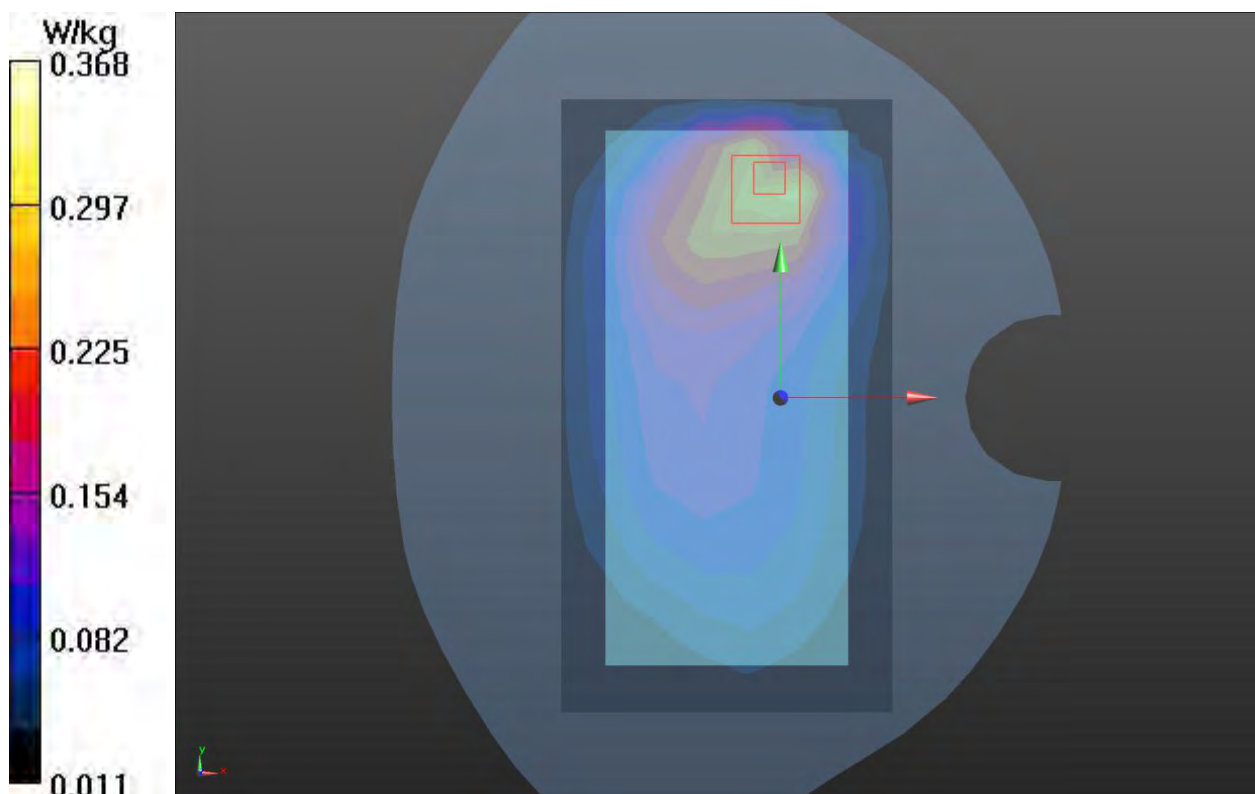
**Back Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.67 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.633 W/kg

**SAR(1 g) = 0.340 W/kg; SAR(10 g) = 0.195 W/kg**

Maximum value of SAR (measured) = 0.368 W/kg



## Plot 34 LTE Band 2 1RB Bottom Edge Low (Distance 10mm Battery2)

Date: 2022/1/5

Communication System: UID 0, LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1860$  MHz;  $\sigma = 1.407$  S/m;  $\epsilon_r = 39.071$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Bottom Edge Low/Area Scan (4x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.659 W/kg

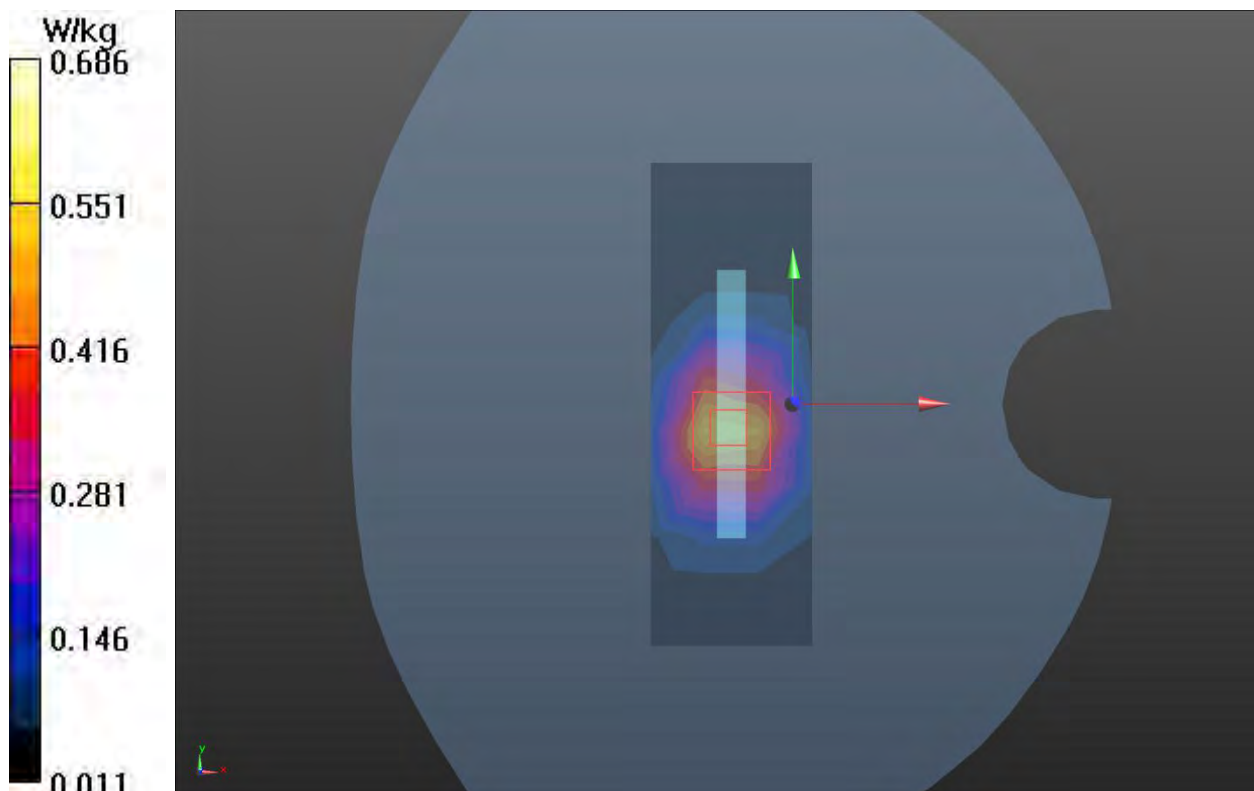
**Bottom Edge Low/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.39 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.09 W/kg

**SAR(1 g) = 0.650 W/kg; SAR(10 g) = 0.346 W/kg**

Maximum value of SAR (measured) = 0.686 W/kg



# Plot 35 LTE Band 4 50%RB Bottom Edge High (Distance 10mm)

Date: 2022/1/2

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1745$  MHz;  $\sigma = 1.323$  S/m;  $\epsilon_r = 39.378$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Bottom Edge High/Area Scan (4x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.752 W/kg

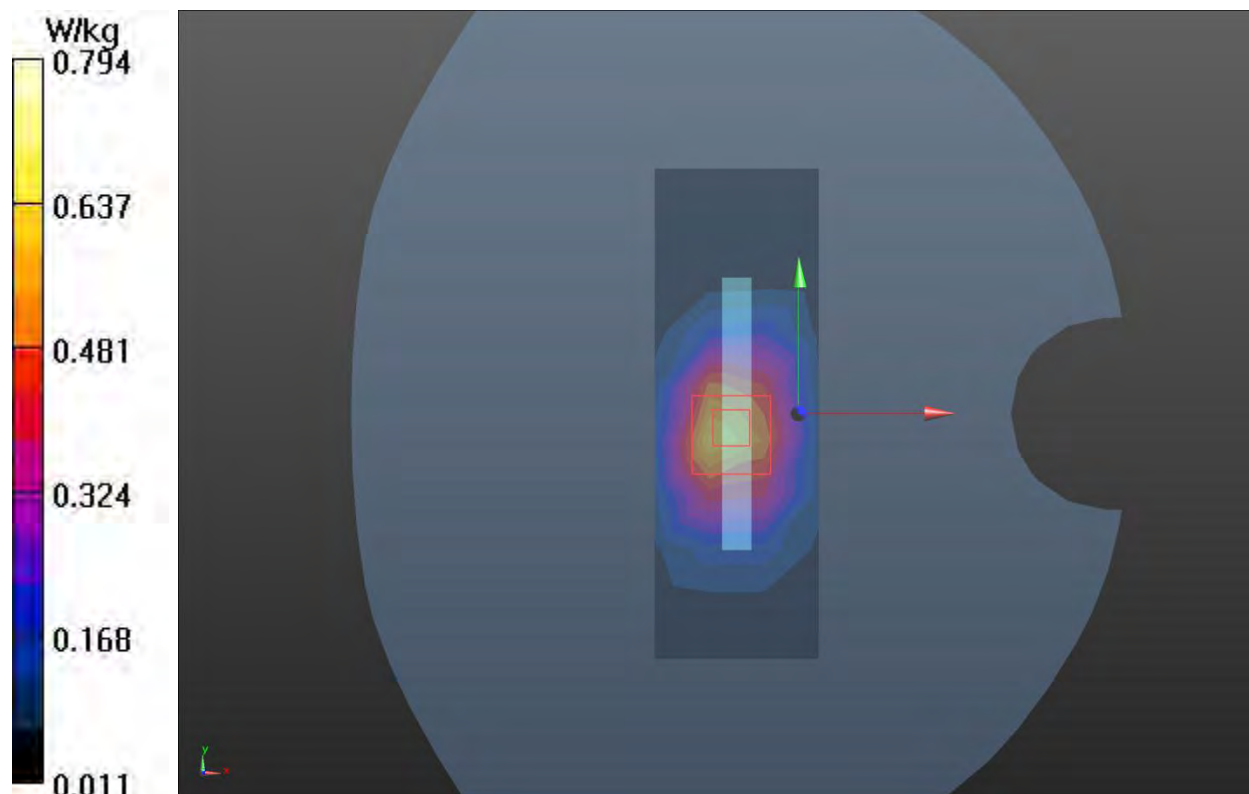
**Bottom Edge High/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.49 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.21 W/kg

**SAR(1 g) = 0.714 W/kg; SAR(10 g) = 0.396 W/kg**

Maximum value of SAR (measured) = 0.794 W/kg



## Plot 36 LTE Band 5 1RB Back Side Middle (Distance 10mm)

Date: 2021/12/31

Communication System: UID 0, LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 836.5$  MHz;  $\sigma = 0.953$  S/m;  $\epsilon_r = 39.767$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.418 W/kg

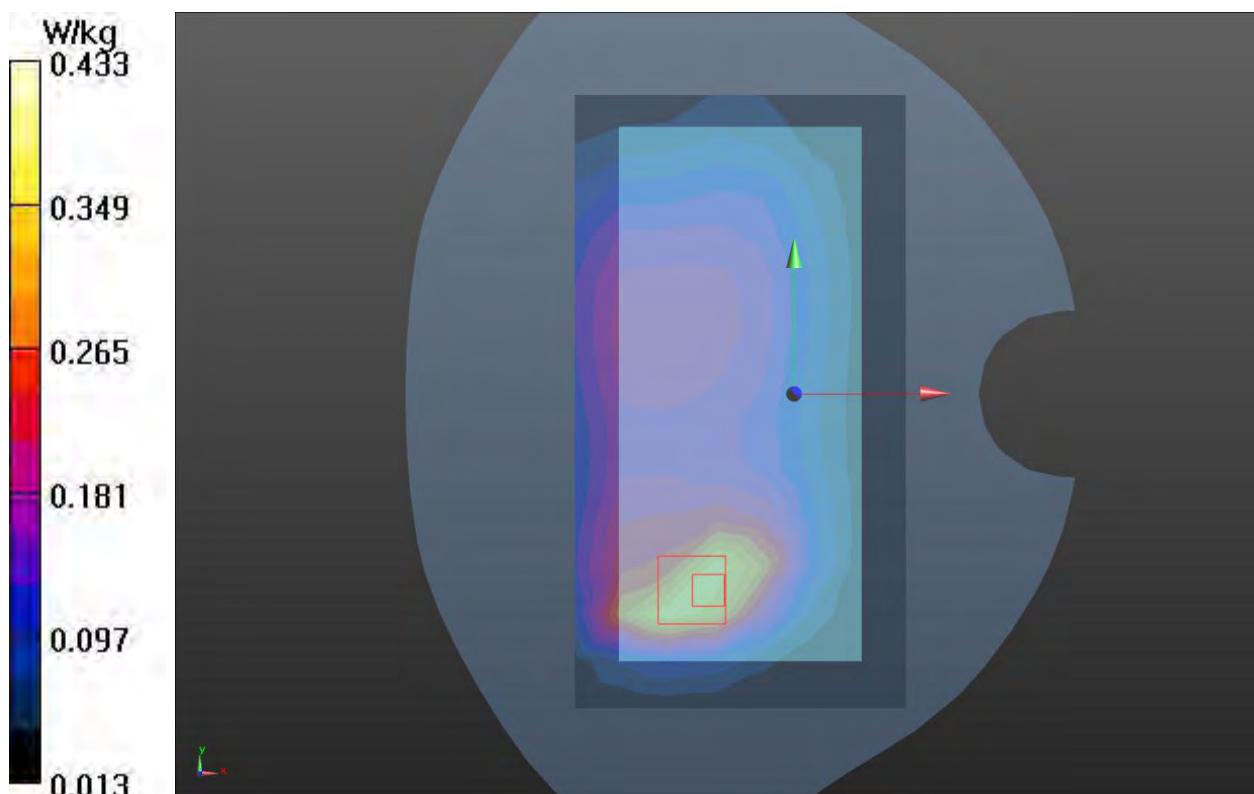
**Back Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.48 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 0.705 W/kg

**SAR(1 g) = 0.399 W/kg; SAR(10 g) = 0.232 W/kg**

Maximum value of SAR (measured) = 0.433 W/kg



# Plot 37 LTE Band 7 50%RB Bottom Edge Low (Distance 10mm)

Date: 2022/1/7

Communication System: UID 0, LTE (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2510$  MHz;  $\sigma = 1.91$  S/m;  $\epsilon_r = 37.398$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Bottom Edge Low/Area Scan (5x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.05 W/kg

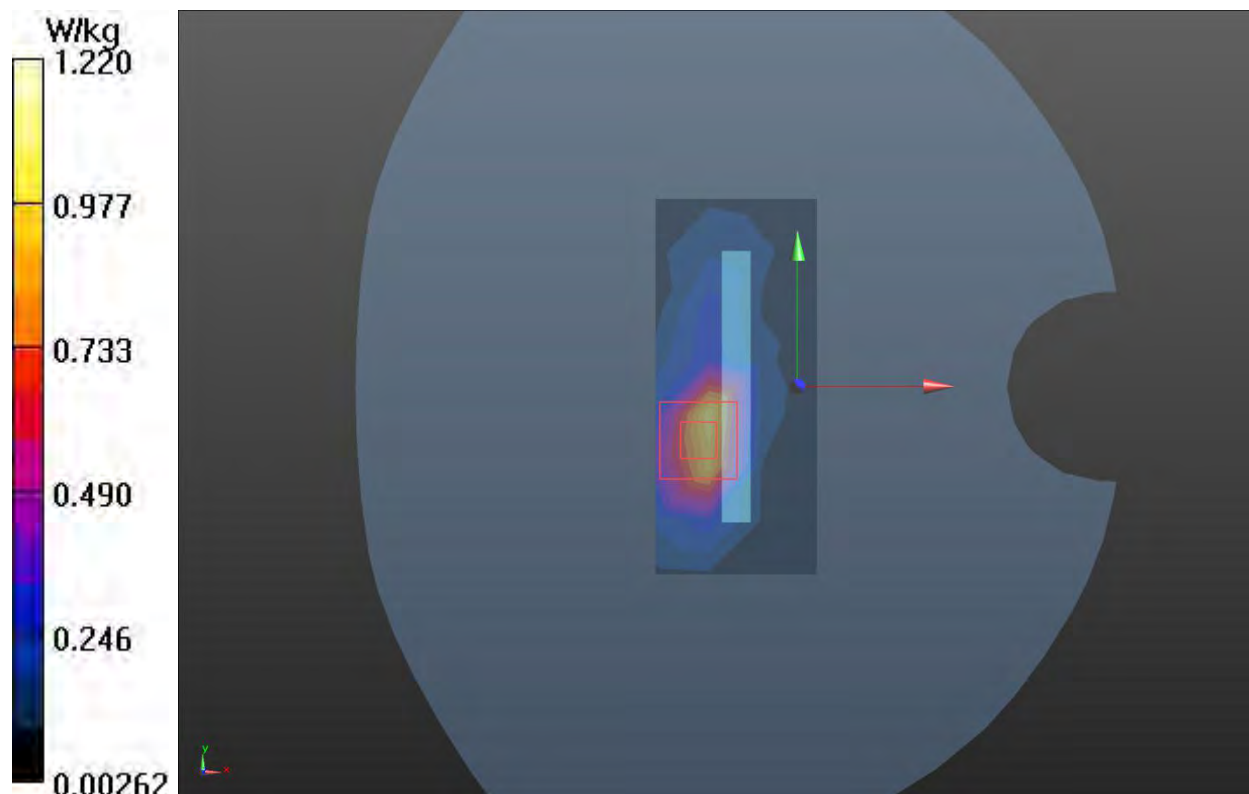
**Bottom Edge Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.06 V/m; Power Drift = 0.057 dB

Peak SAR (extrapolated) = 1.51 W/kg

**SAR(1 g) = 0.785 W/kg; SAR(10 g) = 0.352 W/kg**

Maximum value of SAR (measured) = 1.22 W/kg



# Plot 38 LTE Band 38 50%RB Bottom Edge Middle (Distance 10mm Battery2)

Date: 2022/1/9

Communication System: UID 0, LTE (0); Frequency: 2595 MHz; Duty Cycle: 1:1.58

Medium parameters used:  $f = 2595$  MHz;  $\sigma = 2.011$  S/m;  $\epsilon_r = 37.134$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Bottom Edge Middle/Area Scan (5x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.733 W/kg

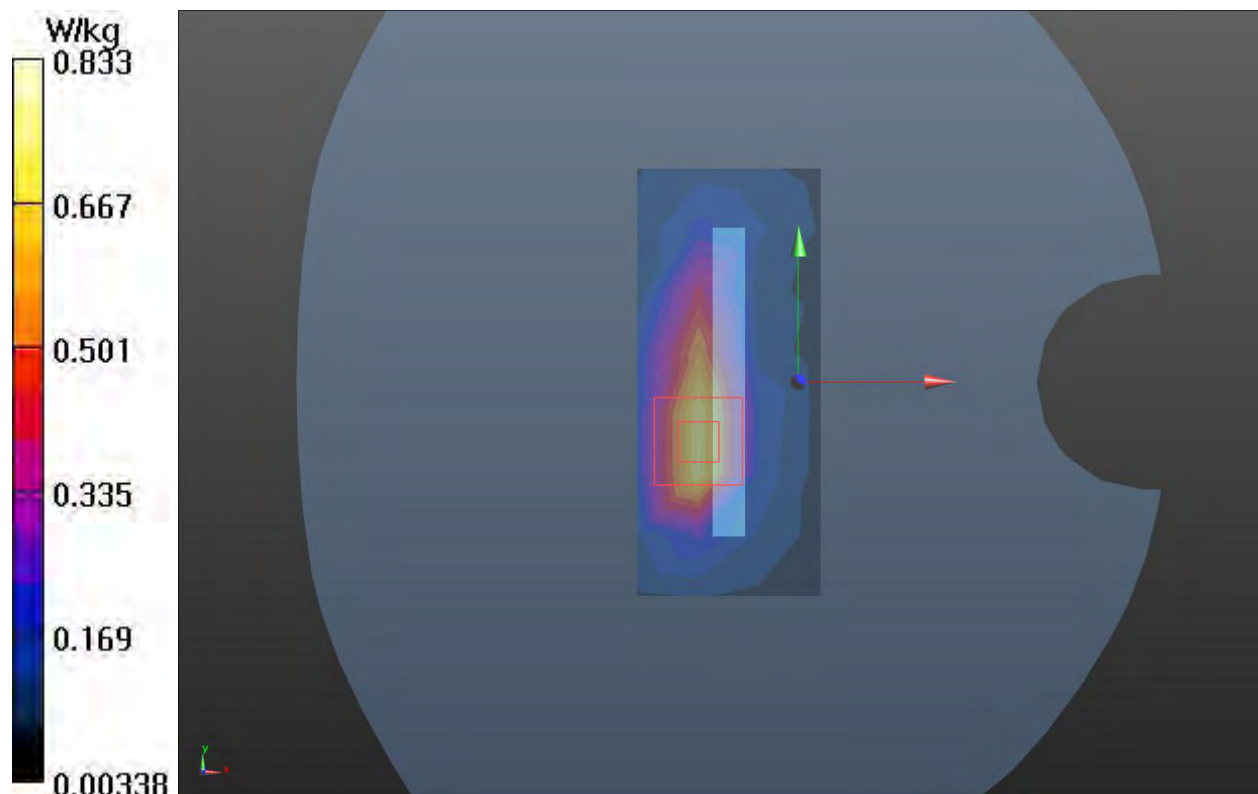
**Bottom Edge Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.92 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.02 W/kg

**SAR(1 g) = 0.524 W/kg; SAR(10 g) = 0.237 W/kg**

Maximum value of SAR (measured) = 0.833 W/kg



## Plot 39 LTE Band 12 1RB Back Side High (Distance 10mm)

Date: 2022/1/12

Communication System: UID 0, LTE (0); Frequency: 711 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 711$  MHz;  $\sigma = 0.871$  S/m;  $\epsilon_r = 40.711$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side High/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.378 W/kg

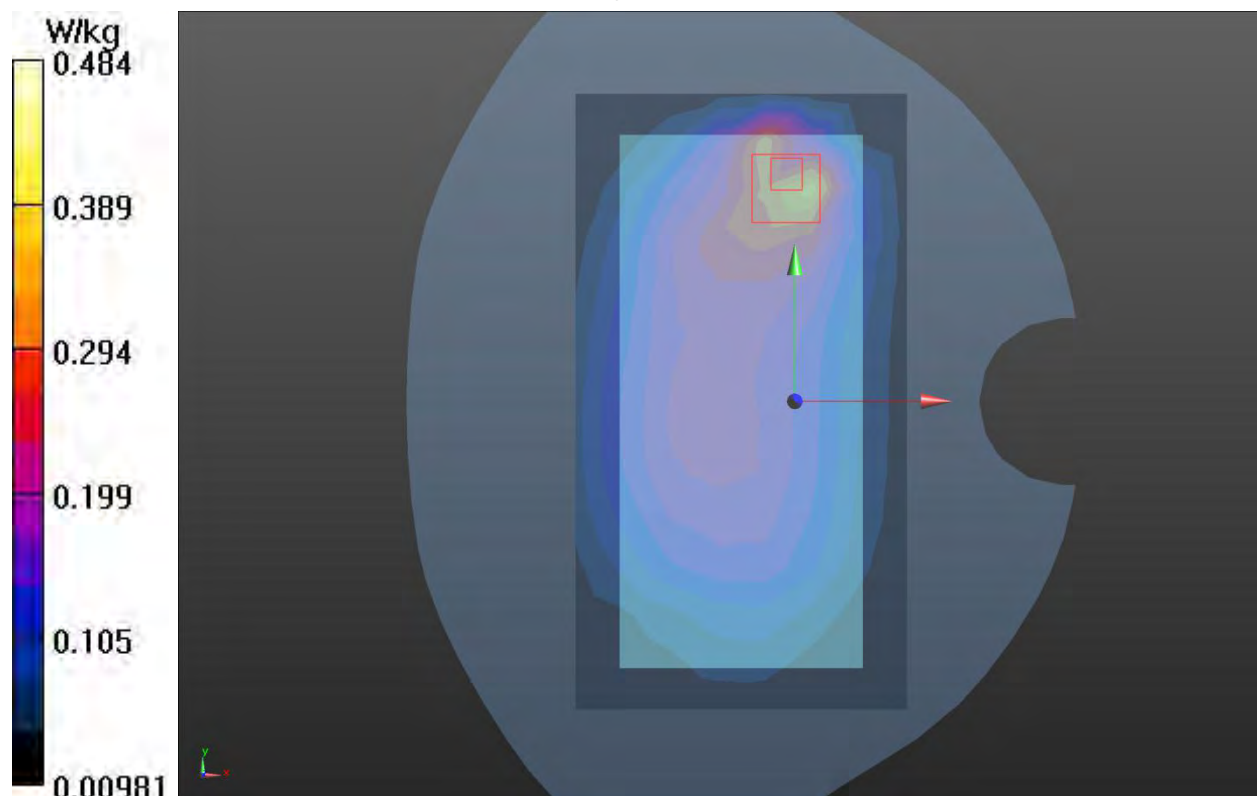
**Back Side High/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.39 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 0.670 W/kg

**SAR(1 g) = 0.303 W/kg; SAR(10 g) = 0.169 W/kg**

Maximum value of SAR (measured) = 0.484 W/kg



## Plot 39 LTE Band 13 1RB Back Side Middle (Distance 10mm)

Date: 2022/1/13

Communication System: UID 0, LTE (0); Frequency: 782 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.917 \text{ S/m}$ ;  $\epsilon_r = 40.132$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$  Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Middle/Area Scan (8x14x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) =  $0.309 \text{ W/kg}$

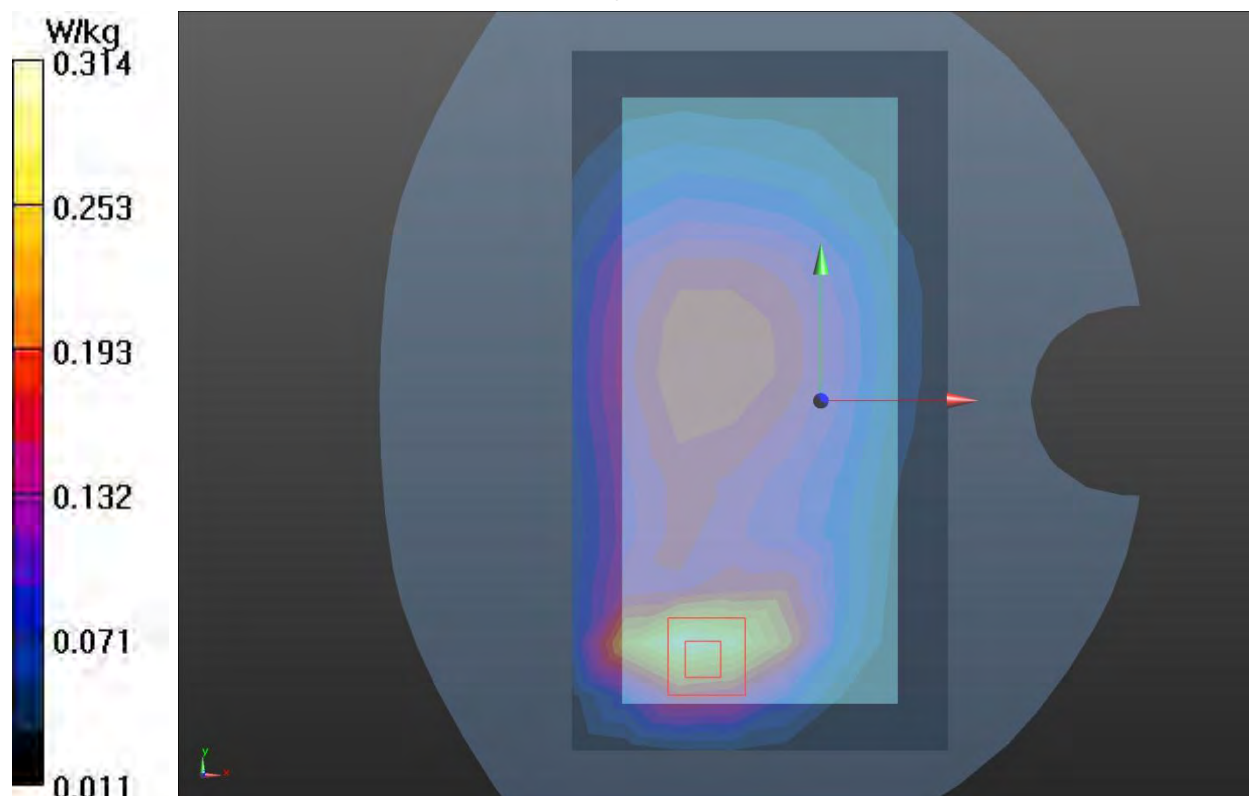
**Back Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $12.76 \text{ V/m}$ ; Power Drift =  $-0.07 \text{ dB}$

Peak SAR (extrapolated) =  $0.439 \text{ W/kg}$

**SAR(1 g) =  $0.211 \text{ W/kg}$ ; SAR(10 g) =  $0.116 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.314 \text{ W/kg}$



## Plot 39 LTE Band 17 1RB Back Side Low (Distance 10mm)

Date: 2022/1/15

Communication System: UID 0, LTE (0); Frequency: 709 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 709 \text{ MHz}$ ;  $\sigma = 0.87 \text{ S/m}$ ;  $\epsilon_r = 40.715$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:  $22.3^\circ\text{C}$  Liquid Temperature:  $21.5^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Low/Area Scan (8x14x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$

Maximum value of SAR (measured) =  $0.401 \text{ W/kg}$

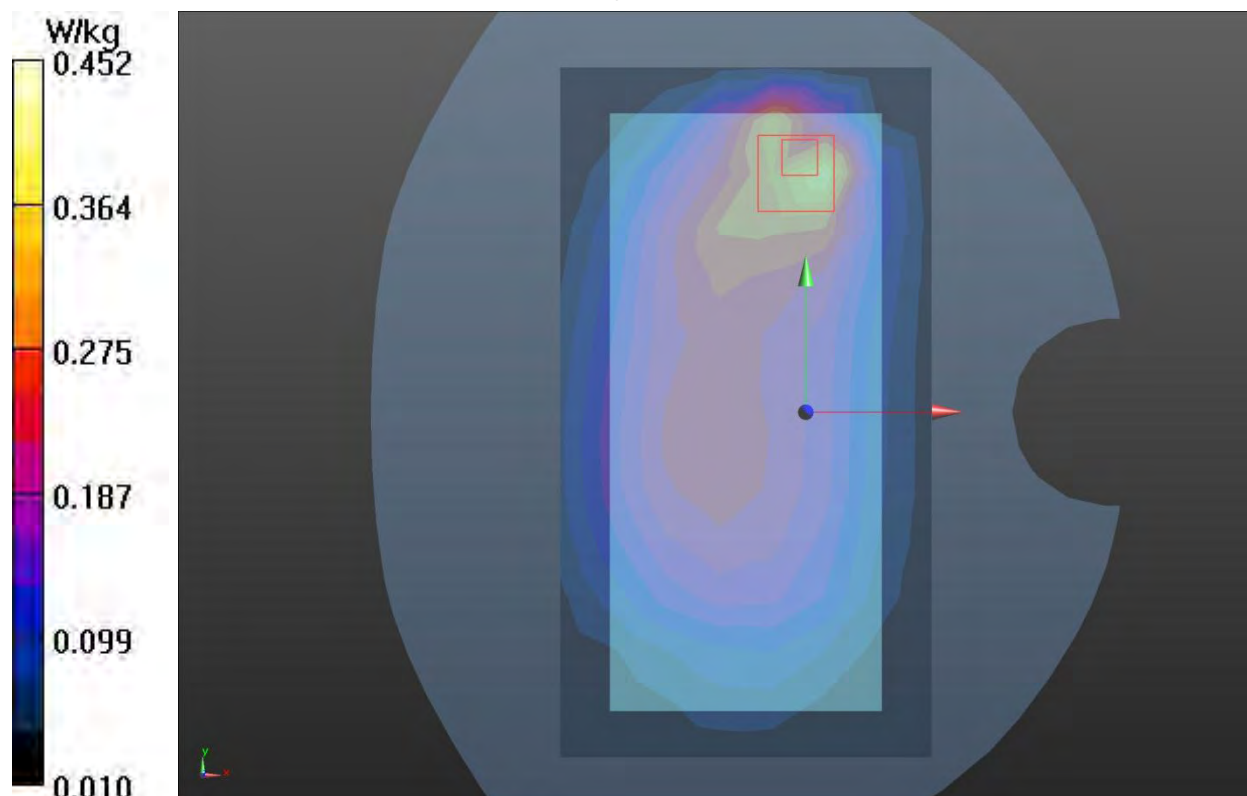
**Back Side Low/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $14.76 \text{ V/m}$ ; Power Drift =  $-0.03 \text{ dB}$

Peak SAR (extrapolated) =  $0.631 \text{ W/kg}$

**SAR(1 g) =  $0.286 \text{ W/kg}$ ; SAR(10 g) =  $0.162 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.452 \text{ W/kg}$



## Plot 39 LTE Band 26 1RB Back Side Middle (Distance 10mm)

Date: 2022/1/16

Communication System: UID 0, LTE (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 831.5$  MHz;  $\sigma = 0.95$  S/m;  $\epsilon_r = 39.79$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.43 W/kg

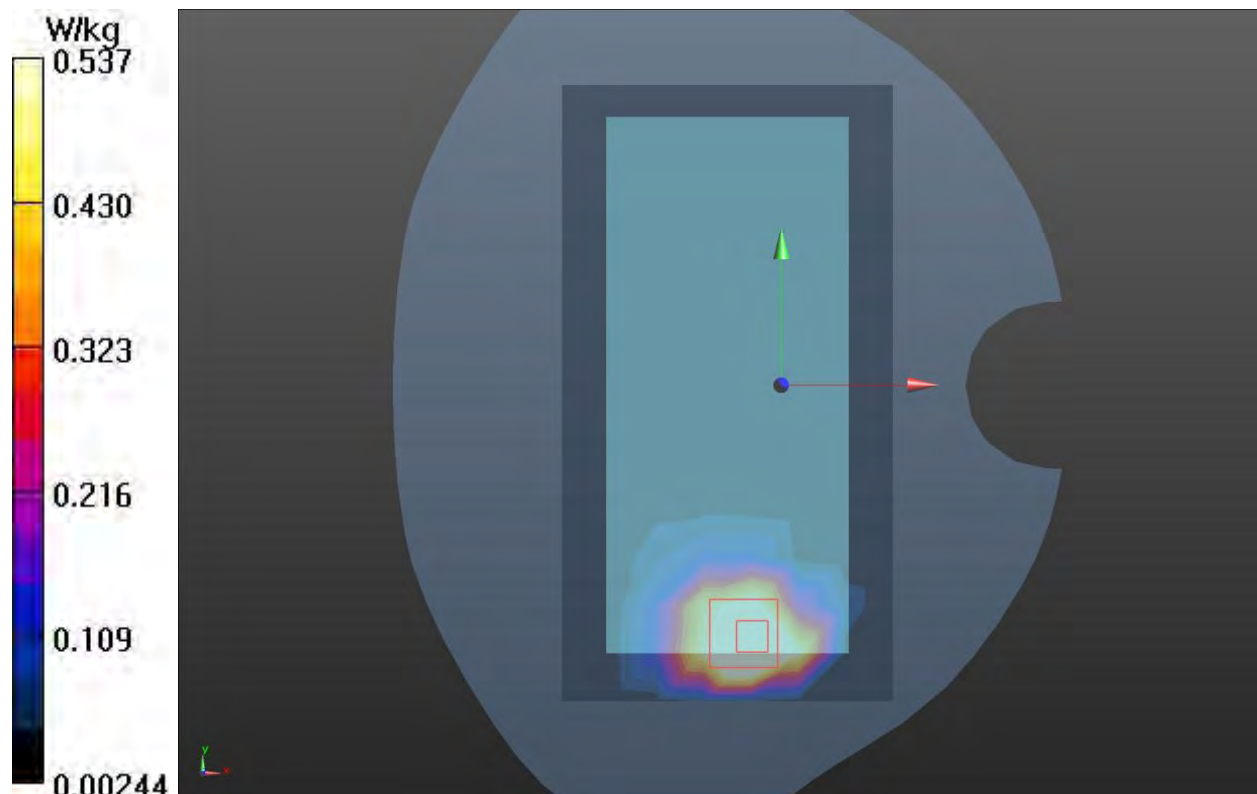
**Back Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.275 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 2.56 W/kg

**SAR(1 g) = 0.307 W/kg; SAR(10 g) = 0.181 W/kg**

Maximum value of SAR (measured) = 0.537 W/kg



# Plot 39 LTE Band 41 1RB Back Side Middle (Distance 10mm)

Date: 2022/1/14

Communication System: UID 0, LTE (0); Frequency: 2549.5 MHz; Duty Cycle: 1:1.58

Medium parameters used (interpolated):  $f = 2549.5$  MHz;  $\sigma = 1.958$  S/m;  $\epsilon_r = 37.264$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C      Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Middle/Area Scan (10x18x1):** Measurement grid: dx=12mm, dy=12mm\

Maximum value of SAR (measured) = 0.921 W/kg

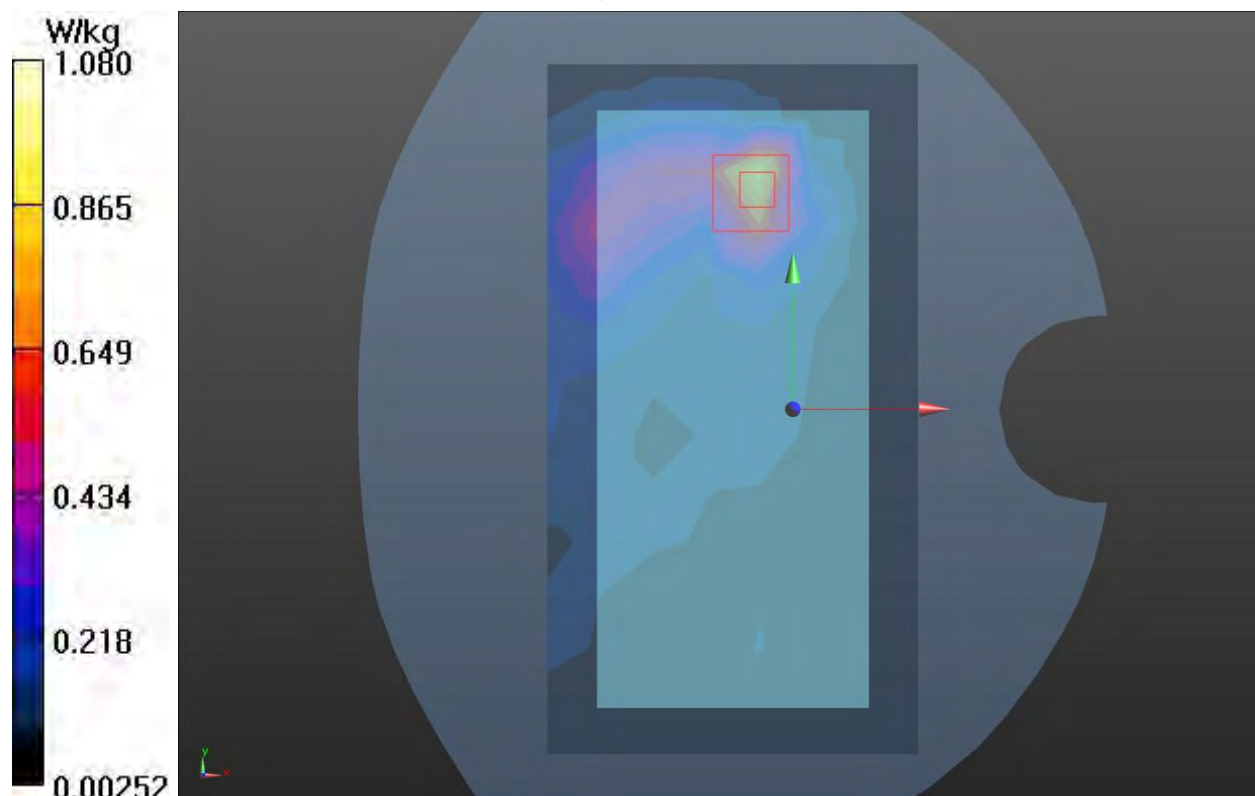
**Back Side Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.408 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 1.39 W/kg

**SAR(1 g) = 0.589 W/kg; SAR(10 g) = 0.255 W/kg**

Maximum value of SAR (measured) = 1.08 W/kg



# Plot 39 LTE Band 66 1RB Bottom Edge Middle (Distance 10mm)

Date: 2022/1/17

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1745$  MHz;  $\sigma = 1.323$  S/m;  $\epsilon_r = 39.378$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Bottom Edge Middle/Area Scan (4x9x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.671 W/kg

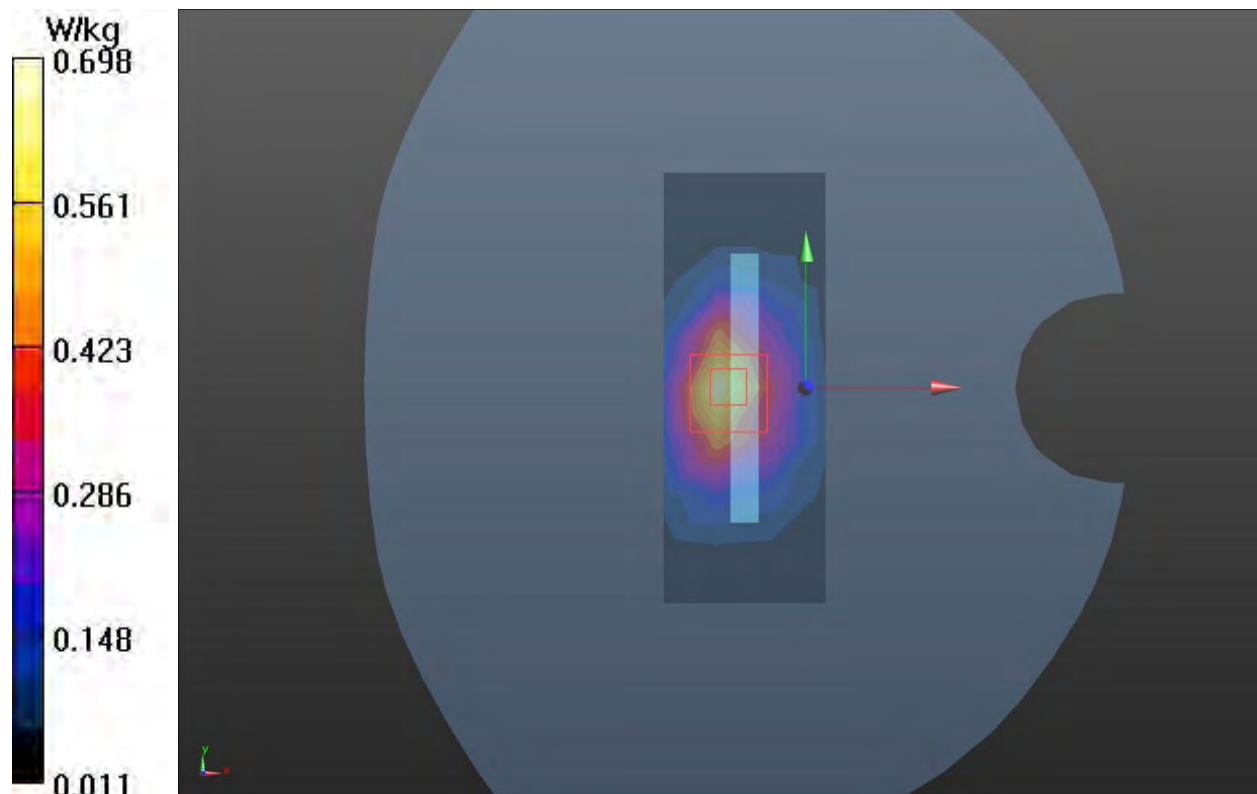
**Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.17 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.06 W/kg

**SAR(1 g) = 0.631 W/kg; SAR(10 g) = 0.346 W/kg**

Maximum value of SAR (measured) = 0.698 W/kg



## Plot 40 802.11b Back Side High (Distance 10mm Battery2)

Date: 2022/1/3

Communication System: UID 0, 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1.02

Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.859$  S/m;  $\epsilon_r = 37.58$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side High/Area Scan (10x18x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.316 W/kg

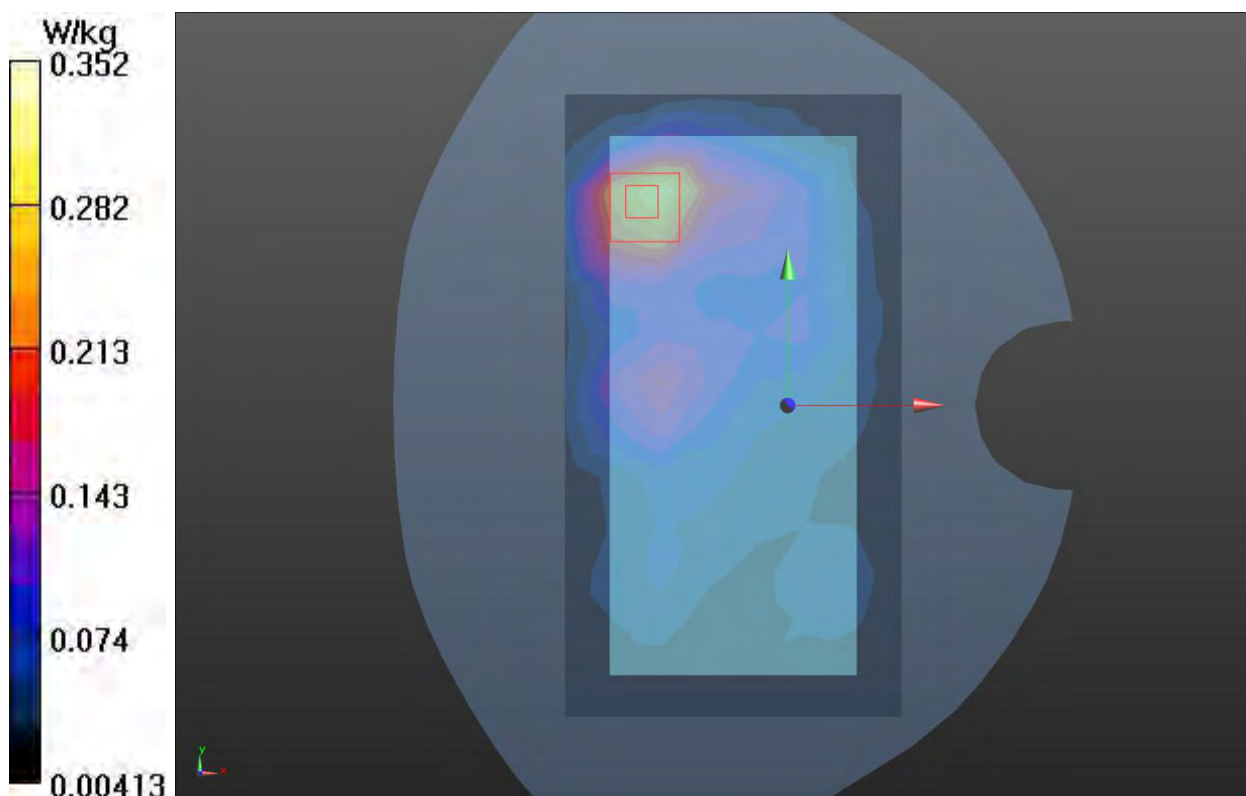
**Back Side High/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.585 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.448 W/kg

**SAR(1 g) = 0.284 W/kg; SAR(10 g) = 0.147 W/kg**

Maximum value of SAR (measured) = 0.352 W/kg



## Plot 41 802.11a U-NII-1 Top Edge Middle (Distance 10mm)

Date: 2022/1/6

Communication System: UID 0, 802.11a (0); Frequency: 5200 MHz; Duty Cycle: 1:1.02

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.823$  S/m;  $\epsilon_r = 36.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.51, 5.51, 5.51); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Top Edge Middle/Area Scan (5x10x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.651 W/kg

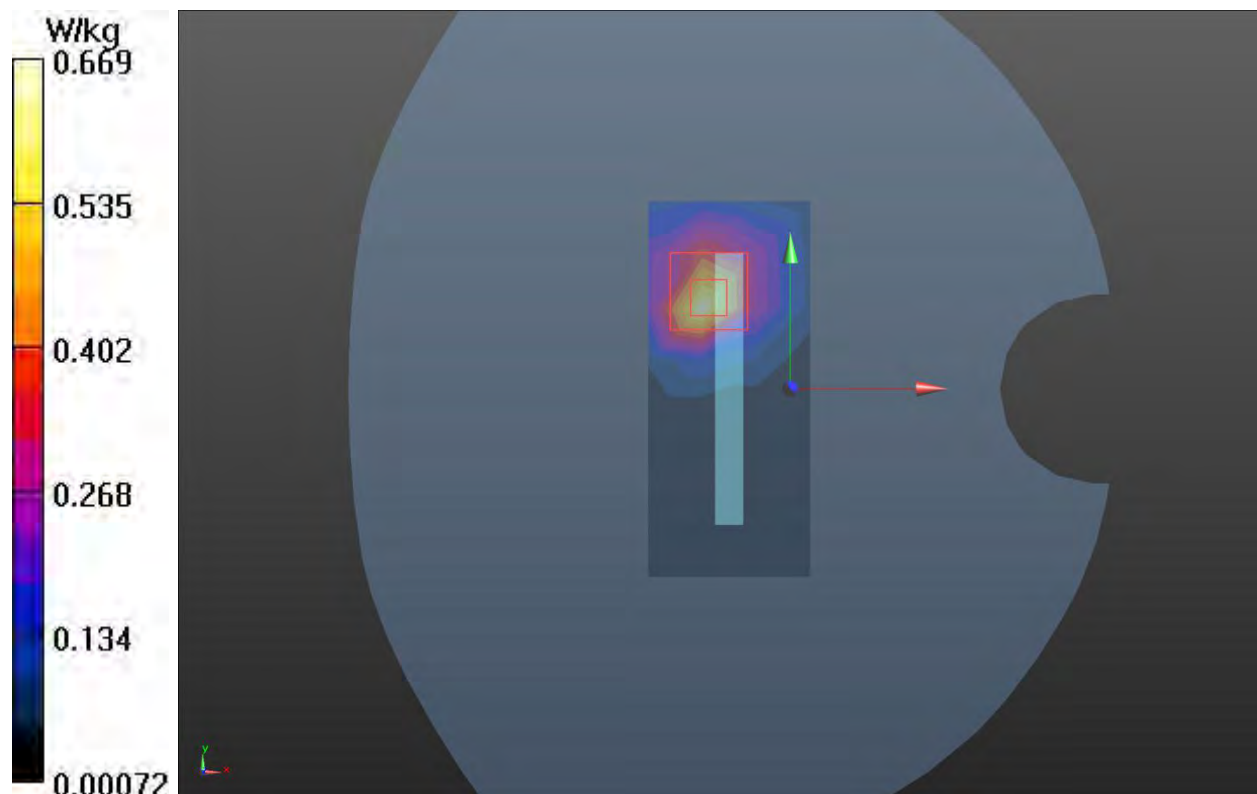
**Top Edge Middle/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.677 V/m; Power Drift = 0.161 dB

Peak SAR (extrapolated) = 1.20 W/kg

**SAR(1 g) = 0.368 W/kg; SAR(10 g) = 0.139 W/kg**

Maximum value of SAR (measured) = 0.669 W/kg



## Plot 43 UMTS Band II Back Side Middle (Distance 0mm Battery2)

Date: 2022/1/5

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.42$  S/m;  $\epsilon_r = 38.948$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.51 W/kg

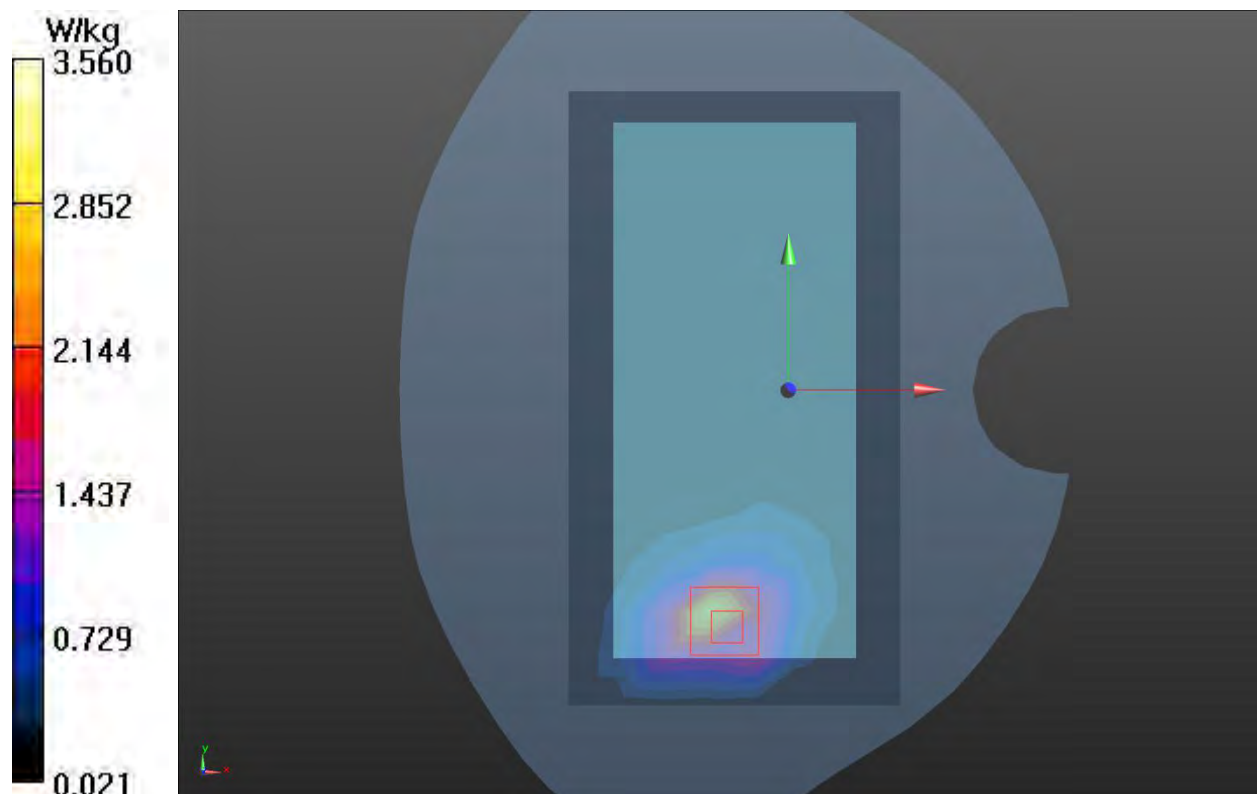
**Back Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.475 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 7.94 W/kg

**SAR(1 g) = 3.42 W/kg; SAR(10 g) = 1.58 W/kg**

Maximum value of SAR (measured) = 3.56 W/kg



## Plot 44 UMTS Band IV Back Side Middle (Distance 0mm)

Date: 2022/1/2

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1732.6$  MHz;  $\sigma = 1.312$  S/m;  $\epsilon_r = 39.365$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.61 W/kg

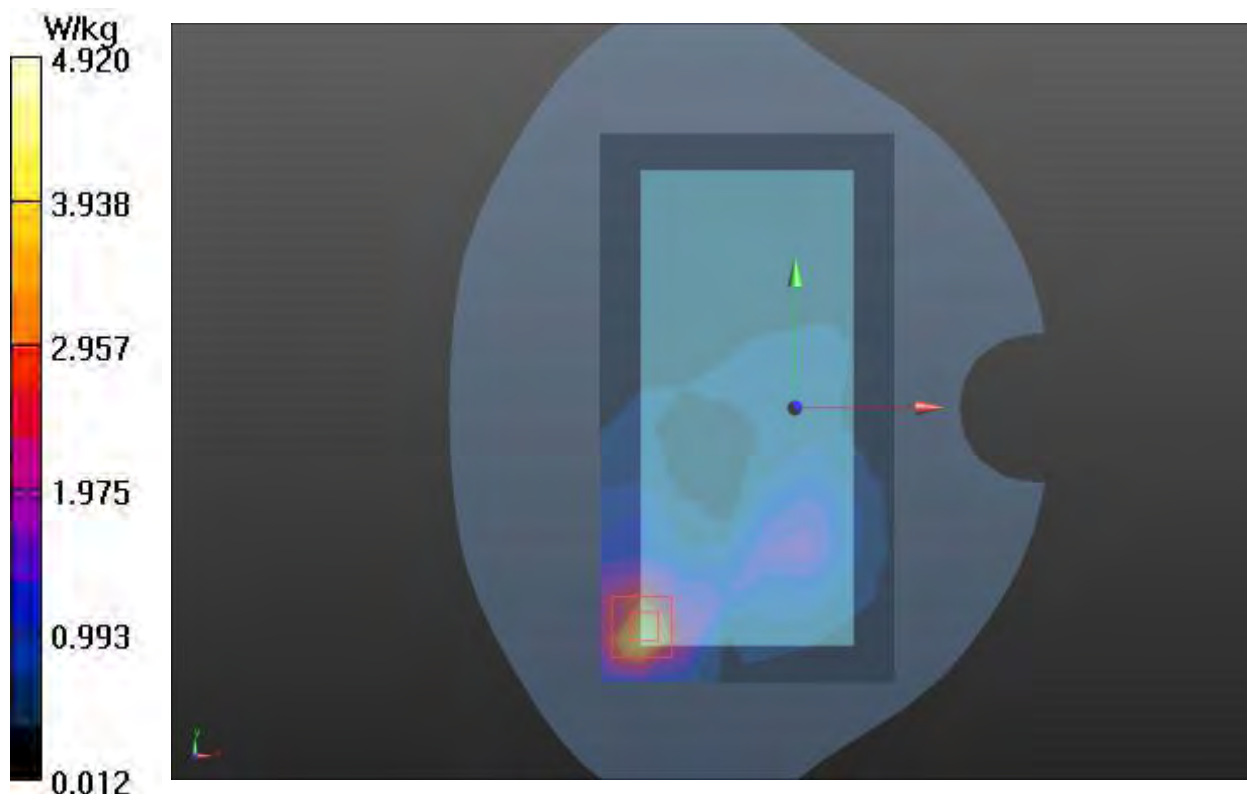
**Back Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.599 V/m; Power Drift = 0.076 dB

Peak SAR (extrapolated) = 10.1 W/kg

**SAR(1 g) = 3.98 W/kg; SAR(10 g) = 1.66 W/kg**

Maximum value of SAR (measured) = 4.92 W/kg



## Plot 45 LTE Band 2 1RB Back Side Low (Distance 0mm Battery2)

Date: 2022/1/5

Communication System: UID 0, LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1860$  MHz;  $\sigma = 1.407$  S/m;  $\epsilon_r = 39.071$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Low/Area Scan (7x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.62 W/kg

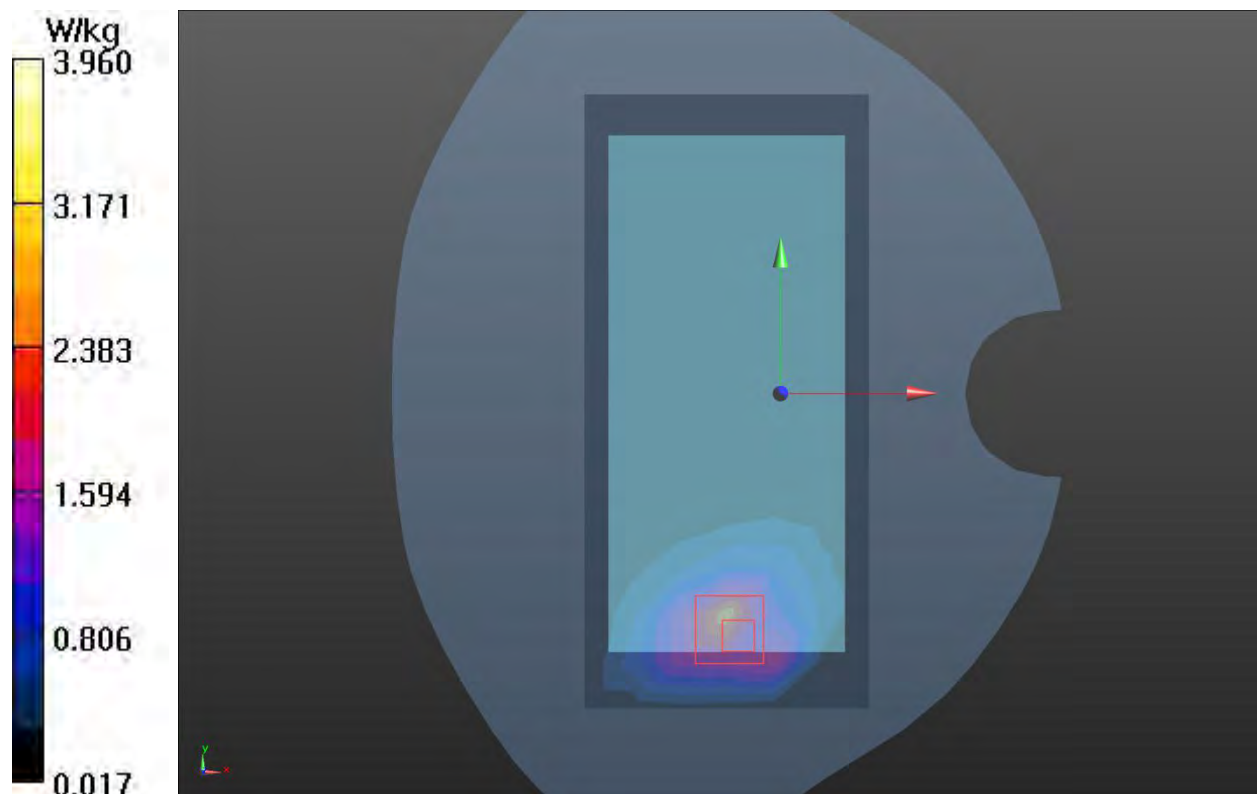
**Back Side Low/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.482 V/m; Power Drift = 0.083 dB

Peak SAR (extrapolated) = 7.86 W/kg

**SAR(1 g) = 3.3 W/kg; SAR(10 g) = 1.46 W/kg**

Maximum value of SAR (measured) = 3.96 W/kg



## Plot 46 LTE Band 4 50%RB Bottom Edge High (Distance 0mm Battery2)

Date: 2022/1/2

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1745$  MHz;  $\sigma = 1.323$  S/m;  $\epsilon_r = 39.378$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Bottom Edge High/Area Scan (4x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.6 W/kg

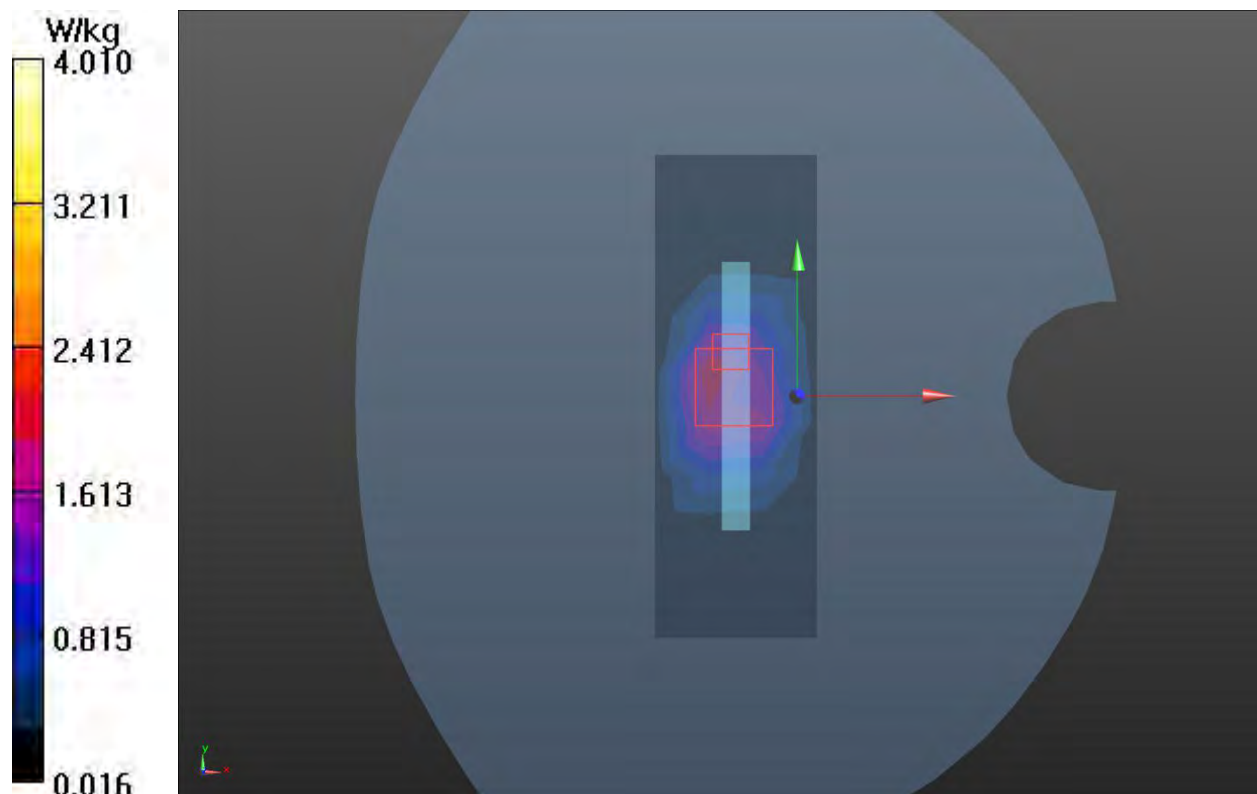
**Bottom Edge High/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 49.26 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 8.60 W/kg

**SAR(1 g) = 3.32 W/kg; SAR(10 g) = 1.51 W/kg**

Maximum value of SAR (measured) = 4.01 W/kg



## Plot 47 LTE Band 7 50%RB Back Side Low (Distance 0mm)

Date: 2022/1/7

Communication System: UID 0, LTE (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2510$  MHz;  $\sigma = 1.91$  S/m;  $\epsilon_r = 37.398$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Low/Area Scan (10x18x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 3.59 W/kg

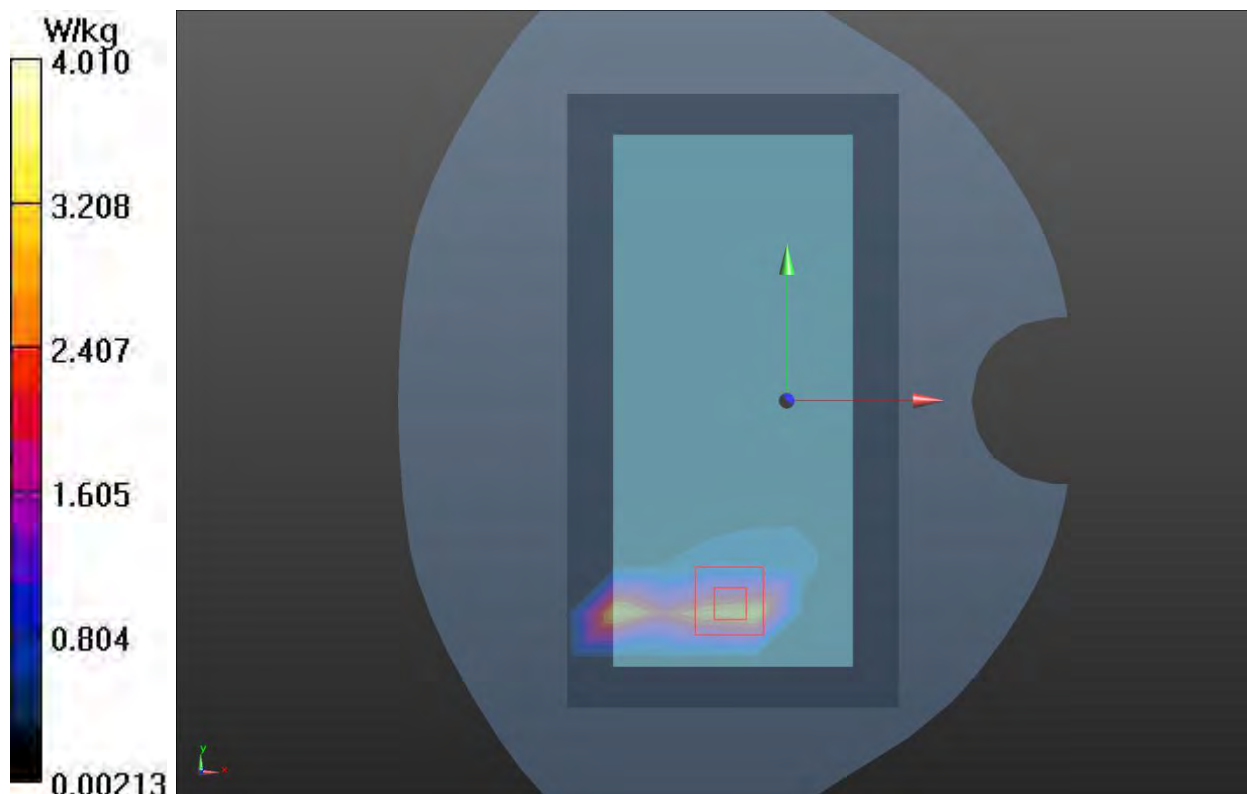
**Back Side Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.702 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 8.53 W/kg

**SAR(1 g) = 3.35 W/kg; SAR(10 g) = 1.07 W/kg**

Maximum value of SAR (measured) = 4.01 W/kg



## Plot 47 LTE Band 66 50%RB Top Edge Low (Distance 0mm)

Date: 2022/1/17

Communication System: UID 0, LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.303$  S/m;  $\epsilon_r = 39.467$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Top Edge Low/Area Scan (4x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.18 W/kg

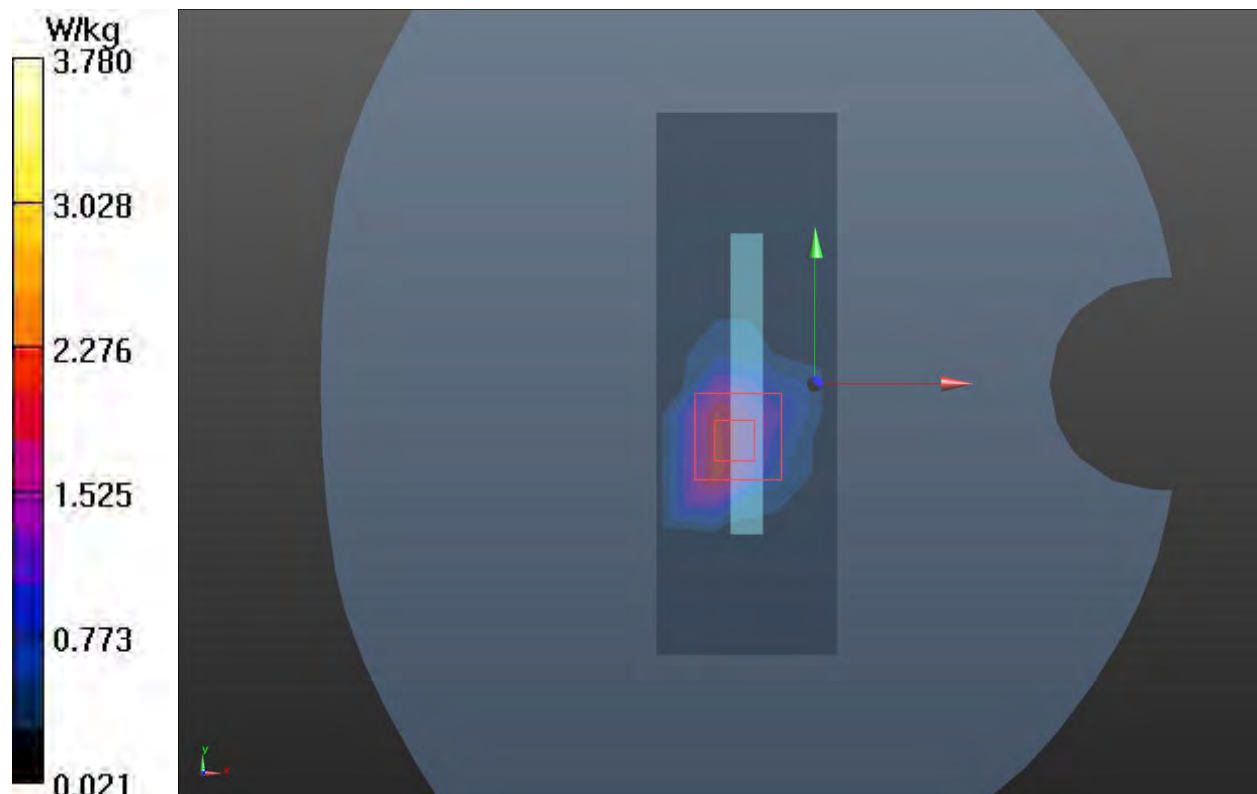
**Top Edge Low/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 42.76 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 7.54 W/kg

**SAR(1 g) = 3.12 W/kg; SAR(10 g) = 1.26 W/kg**

Maximum value of SAR (measured) = 3.78 W/kg



# Plot 48 802.11a U-NII-2C Back Side Middle (Distance 0mm)

Date: 2022/1/10

Communication System: UID 0, 802.11a (0); Frequency: 5600 MHz; Duty Cycle: 1:1.02

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.31$  S/m;  $\epsilon_r = 35.639$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(5.00, 5.00, 5.00); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Back Side Middle/Area Scan (12x21x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 4.86 W/kg

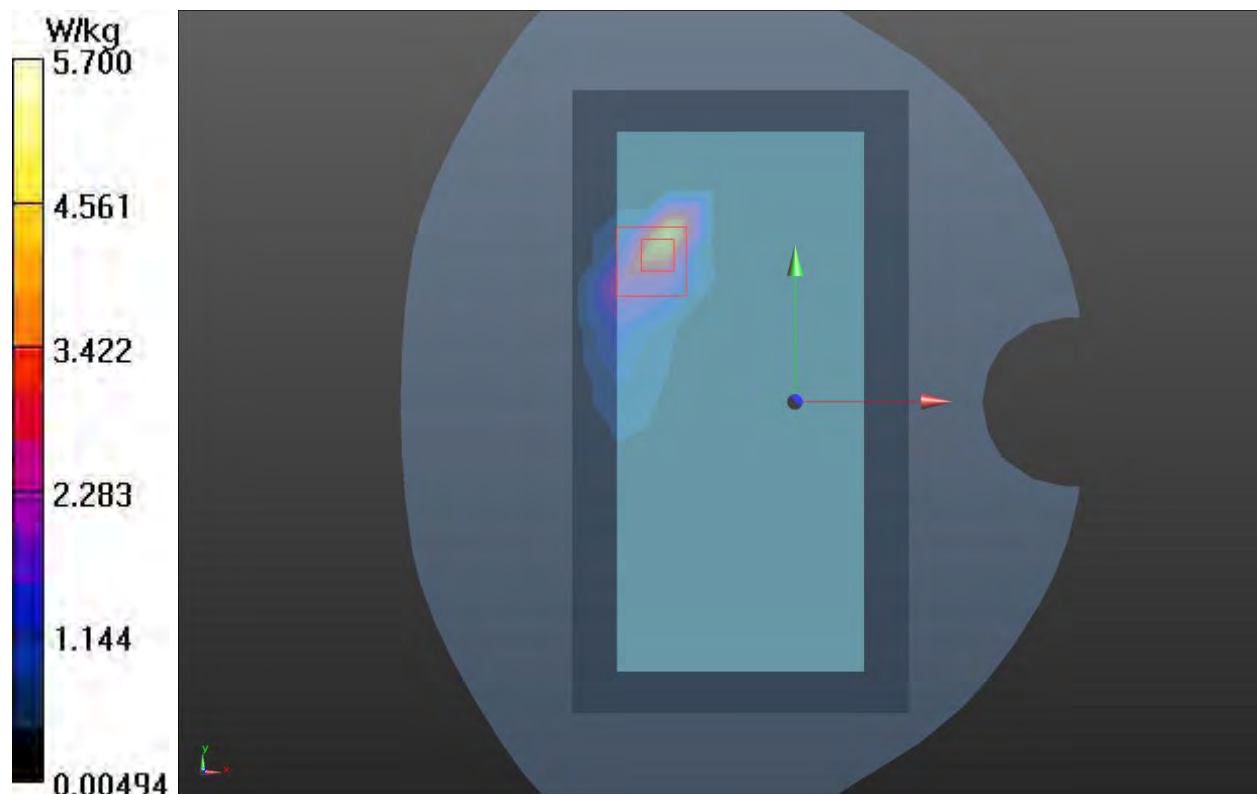
**Back Side Middle/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.8080 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 8.8 W/kg

**SAR(1 g) = 4.48 W/kg; SAR(10 g) = 1.16 W/kg**

Maximum value of SAR (measured) = 5.7 W/kg



## Plot 54 LTE Band 4 1RB Front Side Middle (Distance 10mm)

Date: 2022/1/2

Communication System: UID 0, LTE (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.313$  S/m;  $\epsilon_r = 39.384$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2021/2/16

Electronics: DAE4 SN1648; Calibrated: 2021/5/17

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Front Side Middle/Area Scan (8x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.852 W/kg

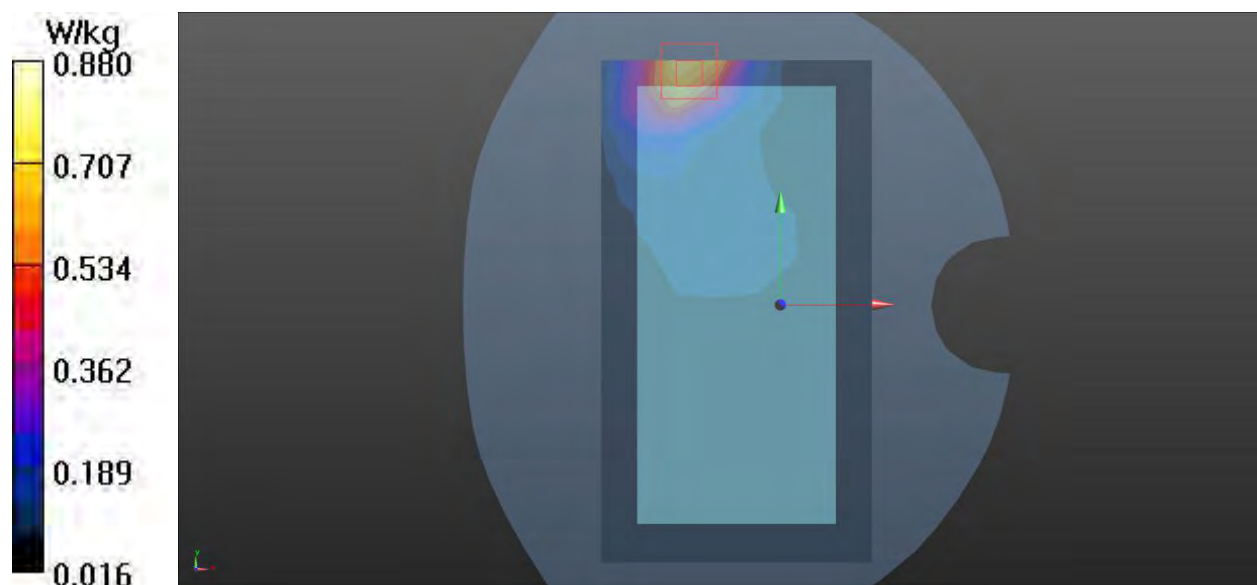
**Front Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.398 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.49 W/kg

**SAR(1 g) = 0.845 W/kg; SAR(10 g) = 0.453 W/kg**

Maximum value of SAR (measured) = 0.880 W/kg



## Plot 54 LTE Band 41 1RB Front Side Low (Distance 16mm)

Date: 2022/1/14

Communication System: UID 0, LTE (0); Frequency: 2506 MHz; Duty Cycle: 1:1.58

Medium parameters used:  $f = 2506$  MHz;  $\sigma = 1.905$  S/m;  $\epsilon_r = 37.414$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1317; Calibrated: 2021/2/23

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Front Side Low/Area Scan (10x18x1):** Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.662 W/kg

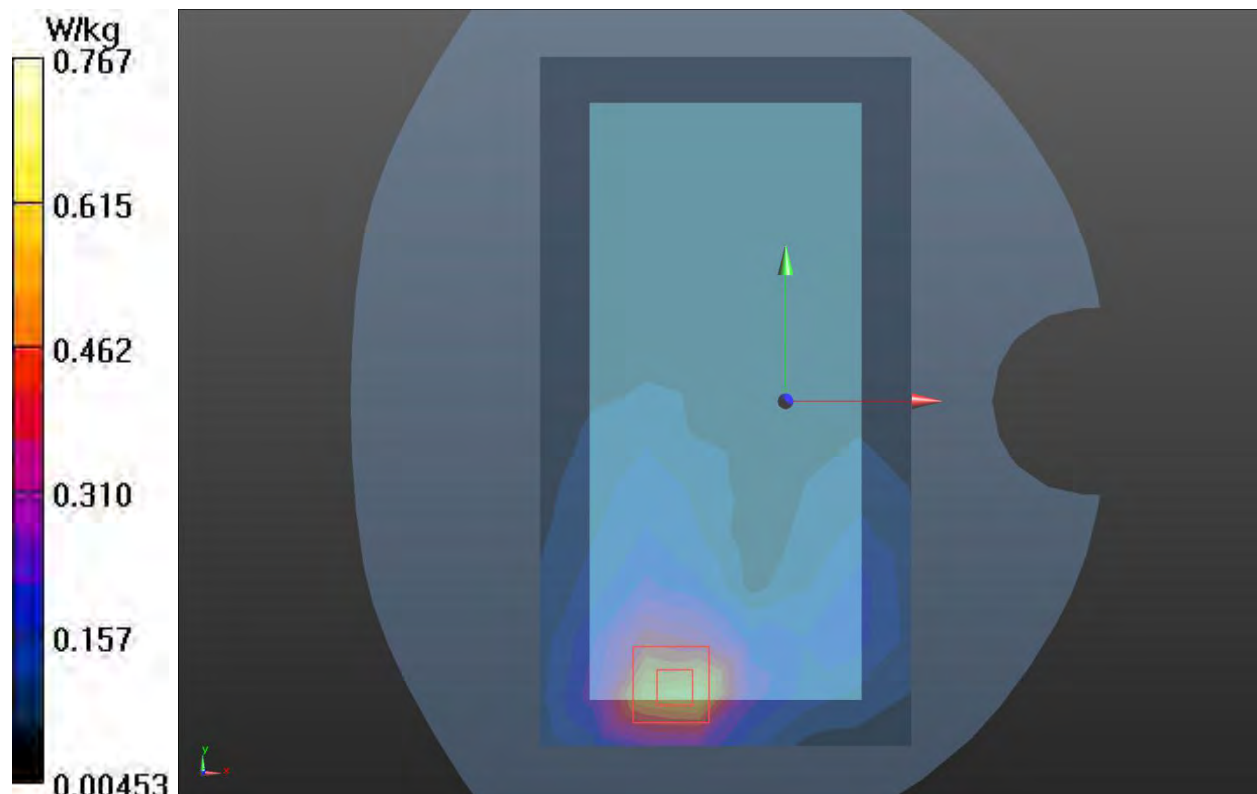
**Front Side Low/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.162 V/m; Power Drift = 0.146 dB

Peak SAR (extrapolated) = 0.937 W/kg

**SAR(1 g) = 0.475 W/kg; SAR(10 g) = 0.237 W/kg**

Maximum value of SAR (measured) = 0.767 W/kg



# ANNEX D: Probe Calibration Certificate(SN: 7628)

Calibration Laboratory of  
Schmid & Partner  
Engineering AG  
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst  
C Service suisse d'étalonnage  
S Servizio svizzero di taratura  
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)  
The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client **Auden**

Certificate No: **EX3-7628\_Feb21**

## CALIBRATION CERTIFICATE

|                                                                                                                                                                                                                                                                               |                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Object                                                                                                                                                                                                                                                                        | EX3DV4 - SN:7628                                                                                              |
| Calibration procedure(s)                                                                                                                                                                                                                                                      | QA CAL-01.v9, QA CAL-14.v6, QA CAL-23.v5, QA CAL-25.v7<br>Calibration procedure for dosimetric E-field probes |
| Calibration date:                                                                                                                                                                                                                                                             | February 16, 2021                                                                                             |
| This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).<br>The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate. |                                                                                                               |
| All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.                                                                                                                                                |                                                                                                               |
| Calibration Equipment used (M&TE critical for calibration)                                                                                                                                                                                                                    |                                                                                                               |

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 01-Apr-20 (No. 217-03100/03101)   | Apr-21                 |
| Power sensor NRP-Z91       | SN: 103244       | 01-Apr-20 (No. 217-03100)         | Apr-21                 |
| Power sensor NRP-Z91       | SN: 103245       | 01-Apr-20 (No. 217-03101)         | Apr-21                 |
| Reference 20 dB Attenuator | SN: CC2552 (20x) | 31-Mar-20 (No. 217-03106)         | Apr-21                 |
| DAE4                       | SN: 660          | 23-Dec-20 (No. DAE4-660_Dec20)    | Dec-21                 |
| Reference Probe ES3DV2     | SN: 3013         | 30-Dec-20 (No. ES3-3013_Dec20)    | Dec-21                 |
| Secondary Standards        | ID               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B         | SN: GB41293874   | 06-Apr-16 (in house check Jun-20) | In house check: Jun-22 |
| Power sensor E4412A        | SN: MY41498087   | 06-Apr-16 (in house check Jun-20) | In house check: Jun-22 |
| Power sensor E4412A        | SN: 000110210    | 06-Apr-16 (in house check Jun-20) | In house check: Jun-22 |
| RF generator HP 8648C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-20) | In house check: Jun-22 |
| Network Analyzer E8358A    | SN: US41080477   | 31-Mar-14 (in house check Oct-20) | In house check: Oct-21 |

|                |                        |                                   |                           |
|----------------|------------------------|-----------------------------------|---------------------------|
| Calibrated by: | Name<br>Jeton Kastrati | Function<br>Laboratory Technician | Signature<br>             |
| Approved by:   | Name<br>Katja Pokovic  | Function<br>Technical Manager     | Signature<br>             |
|                |                        |                                   | Issued: February 16, 2021 |

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: EX3-7628\_Feb21

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Calibration Laboratory of  
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Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst  
C Service suisse d'étalonnage  
S Servizio svizzero di taratura  
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: SCS 0108

The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

#### Glossary:

|                          |                                                                                                                                                         |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| TSL                      | tissue simulating liquid                                                                                                                                |
| NORM <sub>x,y,z</sub>    | sensitivity in free space                                                                                                                               |
| ConvF                    | sensitivity in TSL / NORM <sub>x,y,z</sub>                                                                                                              |
| DCP                      | diode compression point                                                                                                                                 |
| CF                       | crest factor (1/duty_cycle) of the RF signal                                                                                                            |
| A, B, C, D               | modulation dependent linearization parameters                                                                                                           |
| Polarization $\varphi$   | $\varphi$ rotation around probe axis                                                                                                                    |
| Polarization $\vartheta$ | $\vartheta$ rotation around an axis that is in the plane normal to probe axis (at measurement center),<br>i.e., $\vartheta = 0$ is normal to probe axis |
| Connector Angle          | information used in DASY system to align probe sensor X to the robot coordinate system                                                                  |

#### Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

#### Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\vartheta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<sup>2</sup>-field uncertainty inside TSL (see below ConvF).
- NORM(f)<sub>x,y,z</sub> = NORM<sub>x,y,z</sub> \* frequency\_response** (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP<sub>x,y,z</sub>**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A<sub>x,y,z</sub>; B<sub>x,y,z</sub>; C<sub>x,y,z</sub>; D<sub>x,y,z</sub>; VR<sub>x,y,z</sub>**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for  $f \leq 800$  MHz) and inside waveguide using analytical field distributions based on power measurements for  $f > 800$  MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM<sub>x,y,z</sub> \* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from  $\pm 50$  MHz to  $\pm 100$  MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM<sub>x</sub> (no uncertainty required).

EX3DV4 – SN:7628

February 16, 2021

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628

### Basic Calibration Parameters

|                                       | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|---------------------------------------|----------|----------|----------|-----------|
| Norm ( $\mu V/(V/m)^2$ ) <sup>A</sup> | 0.61     | 0.56     | 0.61     | ± 10.1 %  |
| DCP (mV) <sup>B</sup>                 | 109.2    | 108.2    | 109.0    |           |

### Calibration Results for Modulation Response

| UID       | Communication System Name   |   | A<br>dB | B<br>dB/μV | C     | D<br>dB | VR<br>mV | Max<br>dev. | Max<br>Unc <sup>E</sup><br>(k=2) |
|-----------|-----------------------------|---|---------|------------|-------|---------|----------|-------------|----------------------------------|
| 0         | CW                          | X | 0.00    | 0.00       | 1.00  | 0.00    | 149.4    | ± 2.7 %     | ± 4.7 %                          |
|           |                             | Y | 0.00    | 0.00       | 1.00  |         | 155.2    |             |                                  |
|           |                             | Z | 0.00    | 0.00       | 1.00  |         | 166.3    |             |                                  |
| 10352-AAA | Pulse Waveform (200Hz, 10%) | X | 1.78    | 61.75      | 7.06  | 10.00   | 60.0     | ± 2.9 %     | ± 9.6 %                          |
|           |                             | Y | 1.55    | 60.76      | 6.50  |         | 60.0     |             |                                  |
|           |                             | Z | 1.58    | 60.81      | 6.57  |         | 60.0     |             |                                  |
| 10353-AAA | Pulse Waveform (200Hz, 20%) | X | 0.85    | 60.00      | 5.15  | 6.99    | 80.0     | ± 2.3 %     | ± 9.6 %                          |
|           |                             | Y | 0.85    | 60.00      | 5.03  |         | 80.0     |             |                                  |
|           |                             | Z | 0.79    | 60.00      | 4.98  |         | 80.0     |             |                                  |
| 10354-AAA | Pulse Waveform (200Hz, 40%) | X | 0.44    | 60.00      | 4.18  | 3.98    | 95.0     | ± 2.5 %     | ± 9.6 %                          |
|           |                             | Y | 8.00    | 70.00      | 7.00  |         | 95.0     |             |                                  |
|           |                             | Z | 0.10    | 132.92     | 0.43  |         | 95.0     |             |                                  |
| 10355-AAA | Pulse Waveform (200Hz, 60%) | X | 0.26    | 60.00      | 3.63  | 2.22    | 120.0    | ± 1.6 %     | ± 9.6 %                          |
|           |                             | Y | 10.15   | 157.55     | 9.99  |         | 120.0    |             |                                  |
|           |                             | Z | 7.49    | 159.80     | 25.97 |         | 120.0    |             |                                  |
| 10387-AAA | QPSK Waveform, 1 MHz        | X | 0.71    | 69.02      | 16.11 | 1.00    | 150.0    | ± 3.3 %     | ± 9.6 %                          |
|           |                             | Y | 0.53    | 63.89      | 12.42 |         | 150.0    |             |                                  |
|           |                             | Z | 0.53    | 63.57      | 12.67 |         | 150.0    |             |                                  |
| 10388-AAA | QPSK Waveform, 10 MHz       | X | 1.60    | 69.56      | 15.90 | 0.00    | 150.0    | ± 1.1 %     | ± 9.6 %                          |
|           |                             | Y | 1.33    | 66.14      | 13.93 |         | 150.0    |             |                                  |
|           |                             | Z | 1.33    | 66.05      | 14.03 |         | 150.0    |             |                                  |
| 10396-AAA | 64-QAM Waveform, 100 kHz    | X | 1.78    | 65.59      | 16.29 | 3.01    | 150.0    | ± 1.0 %     | ± 9.6 %                          |
|           |                             | Y | 1.71    | 64.82      | 15.85 |         | 150.0    |             |                                  |
|           |                             | Z | 1.57    | 63.48      | 15.49 |         | 150.0    |             |                                  |
| 10399-AAA | 64-QAM Waveform, 40 MHz     | X | 2.93    | 67.49      | 15.80 | 0.00    | 150.0    | ± 1.4 %     | ± 9.6 %                          |
|           |                             | Y | 2.81    | 66.48      | 15.12 |         | 150.0    |             |                                  |
|           |                             | Z | 2.80    | 66.27      | 15.10 |         | 150.0    |             |                                  |
| 10414-AAA | WLAN CCDF, 64-QAM, 40MHz    | X | 3.83    | 66.82      | 15.68 | 0.00    | 150.0    | ± 2.5 %     | ± 9.6 %                          |
|           |                             | Y | 3.77    | 66.09      | 15.24 |         | 150.0    |             |                                  |
|           |                             | Z | 3.92    | 66.64      | 15.56 |         | 150.0    |             |                                  |

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

<sup>A</sup> The uncertainties of Norm X,Y,Z do not affect the E<sup>2</sup>-field uncertainty inside TSL (see Pages 5 and 6).

<sup>B</sup> Numerical linearization parameter; uncertainty not required.

<sup>E</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

EX3DV4- SN:7628

February 16, 2021

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$V^{-1}$ | T1<br>ms. $V^{-2}$ | T2<br>ms. $V^{-1}$ | T3<br>ms | T4<br>$V^{-2}$ | T5<br>$V^{-1}$ | T6   |
|---|----------|----------|----------------------|--------------------|--------------------|----------|----------------|----------------|------|
| X | 8.5      | 59.16    | 31.40                | 4.05               | 0.00               | 4.90     | 0.60           | 0.00           | 1.00 |
| Y | 9.3      | 65.93    | 32.35                | 4.45               | 0.00               | 4.92     | 0.54           | 0.00           | 1.00 |
| Z | 9.2      | 65.89    | 32.86                | 1.60               | 0.00               | 4.90     | 0.18           | 0.00           | 1.00 |

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle ( $^{\circ}$ )                | -144.2     |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

**Note:** Measurement distance from surface can be increased to 3-4 mm for an Area Scan job.

EX3DV4- SN:7628

February 16, 2021

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 41.9                               | 0.89                            | 10.48   | 10.48   | 10.48   | 0.43               | 0.80                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 10.15   | 10.15   | 10.15   | 0.46               | 0.80                    | ± 12.0 %  |
| 900                  | 41.5                               | 0.97                            | 9.77    | 9.77    | 9.77    | 0.51               | 0.86                    | ± 12.0 %  |
| 1450                 | 40.5                               | 1.20                            | 9.03    | 9.03    | 9.03    | 0.35               | 0.80                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.76    | 8.76    | 8.76    | 0.28               | 0.86                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.38    | 8.38    | 8.38    | 0.28               | 0.86                    | ± 12.0 %  |
| 2000                 | 40.0                               | 1.40                            | 8.29    | 8.29    | 8.29    | 0.37               | 0.88                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 8.15    | 8.15    | 8.15    | 0.36               | 0.92                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 8.01    | 8.01    | 8.01    | 0.27               | 0.92                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.71    | 7.71    | 7.71    | 0.40               | 0.92                    | ± 12.0 %  |
| 3300                 | 38.2                               | 2.71                            | 7.24    | 7.24    | 7.24    | 0.30               | 1.35                    | ± 13.1 %  |
| 3500                 | 37.9                               | 2.91                            | 7.04    | 7.04    | 7.04    | 0.30               | 1.35                    | ± 13.1 %  |
| 3700                 | 37.7                               | 3.12                            | 7.00    | 7.00    | 7.00    | 0.35               | 1.35                    | ± 13.1 %  |
| 3900                 | 37.5                               | 3.32                            | 6.83    | 6.83    | 6.83    | 0.35               | 1.50                    | ± 13.1 %  |
| 4100                 | 37.2                               | 3.53                            | 6.73    | 6.73    | 6.73    | 0.35               | 1.50                    | ± 13.1 %  |
| 4200                 | 37.1                               | 3.63                            | 6.46    | 6.46    | 6.46    | 0.35               | 1.60                    | ± 13.1 %  |
| 4400                 | 36.9                               | 3.84                            | 6.39    | 6.39    | 6.39    | 0.35               | 1.60                    | ± 13.1 %  |
| 4600                 | 36.7                               | 4.04                            | 6.12    | 6.12    | 6.12    | 0.35               | 1.70                    | ± 13.1 %  |
| 4800                 | 36.4                               | 4.25                            | 6.16    | 6.16    | 6.16    | 0.40               | 1.80                    | ± 13.1 %  |
| 4950                 | 36.3                               | 4.40                            | 5.94    | 5.94    | 5.94    | 0.40               | 1.80                    | ± 13.1 %  |
| 5250                 | 35.9                               | 4.71                            | 5.51    | 5.51    | 5.51    | 0.40               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 5.00    | 5.00    | 5.00    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 4.95    | 4.95    | 4.95    | 0.40               | 1.80                    | ± 13.1 %  |

<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

<sup>F</sup> At frequencies below 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

EX3DV4—SN:7628

February 16, 2021

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 6500                 | 34.5                               | 6.07                            | 5.50    | 5.50    | 5.50    | 0.20               | 2.50                    | ± 18.6 %  |
| 7000                 | 33.9                               | 6.65                            | 5.60    | 5.60    | 5.60    | 0.25               | 2.50                    | ± 18.6 %  |
| 8000                 | 32.7                               | 7.84                            | 5.40    | 5.40    | 5.40    | 0.50               | 1.50                    | ± 18.6 %  |
| 9000                 | 31.5                               | 9.08                            | 5.35    | 5.35    | 5.35    | 0.50               | 1.80                    | ± 18.6 %  |

<sup>C</sup> Frequency validity above 6GHz is ± 700 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

<sup>F</sup> At frequencies 6-10 GHz, the validity of tissue parameters ( $\epsilon$  and  $\sigma$ ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

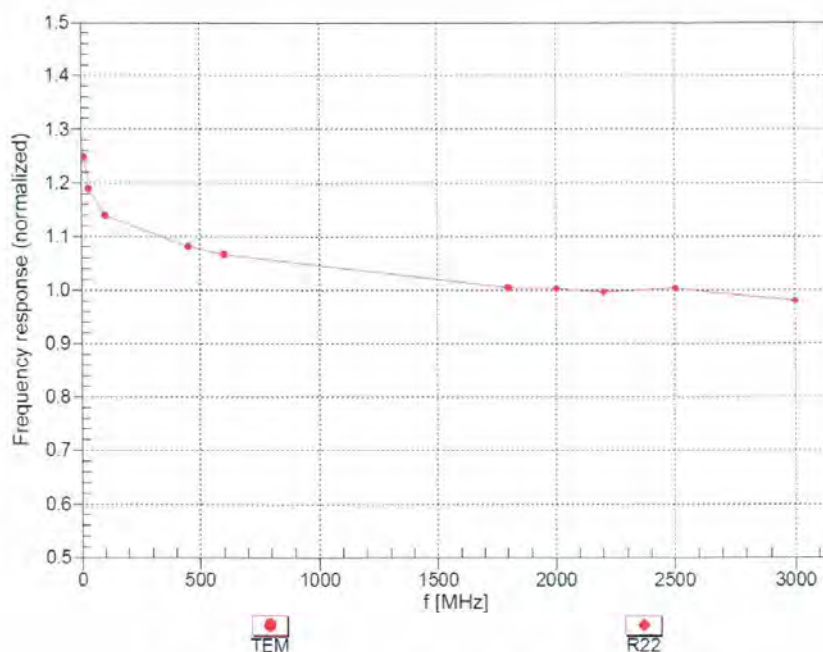
<sup>G</sup> Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz; below ± 2% for frequencies between 3-6 GHz; and below ± 4% for frequencies between 6-10 GHz at any distance larger than half the probe tip diameter from the boundary.

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## Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)



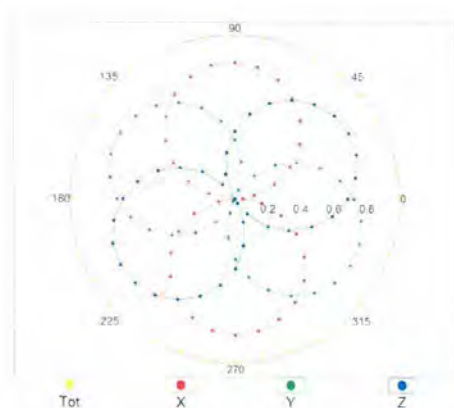
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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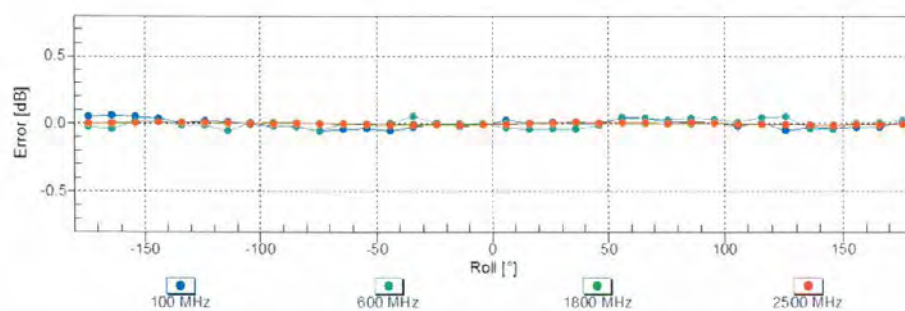
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## Receiving Pattern ( $\phi$ ), $\theta = 0^\circ$

f=600 MHz,TEM



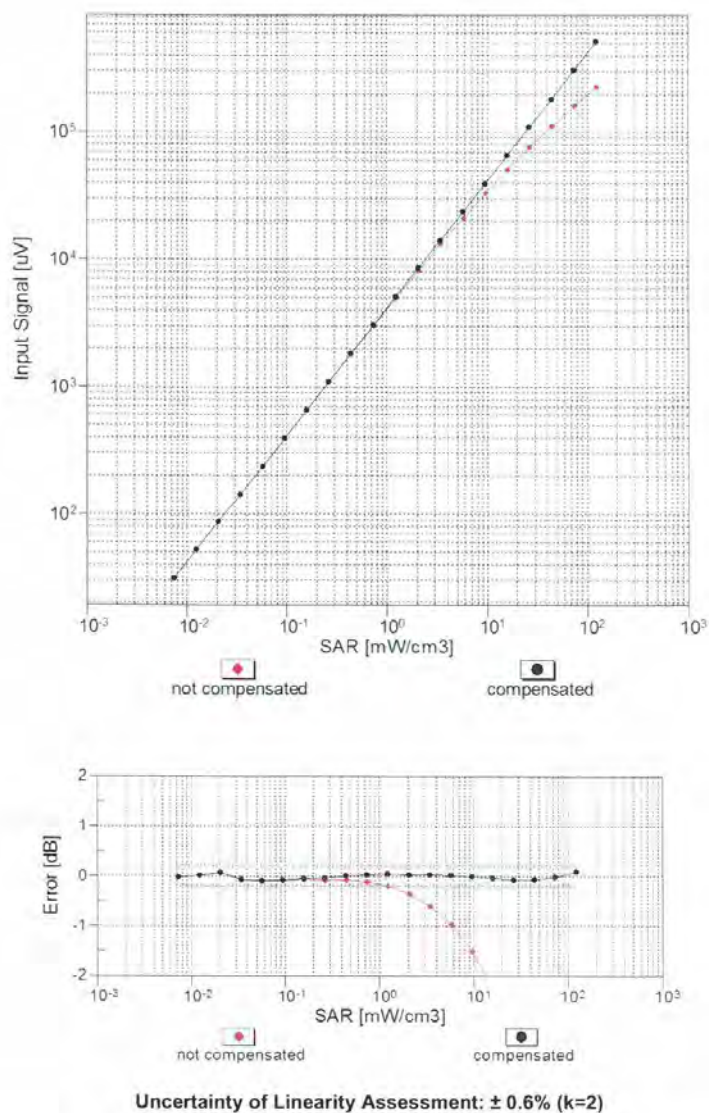
f=1800 MHz,R22


Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

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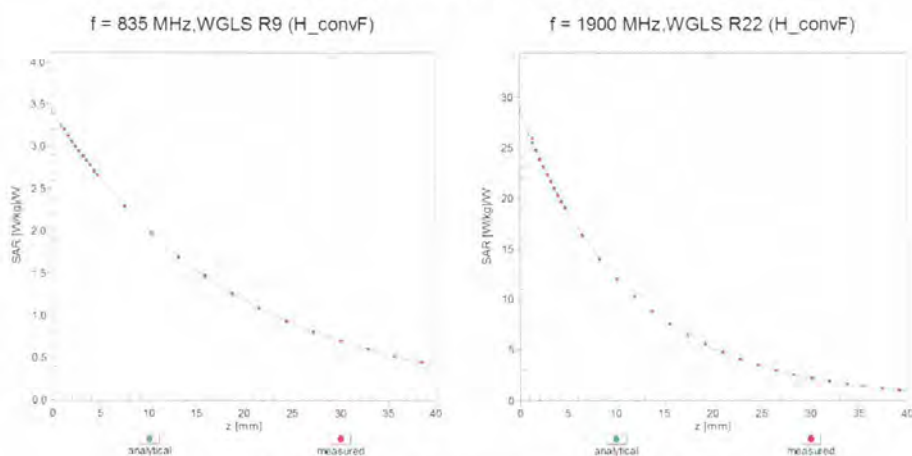
### Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell, $f_{\text{eval}} = 1900 \text{ MHz}$ )



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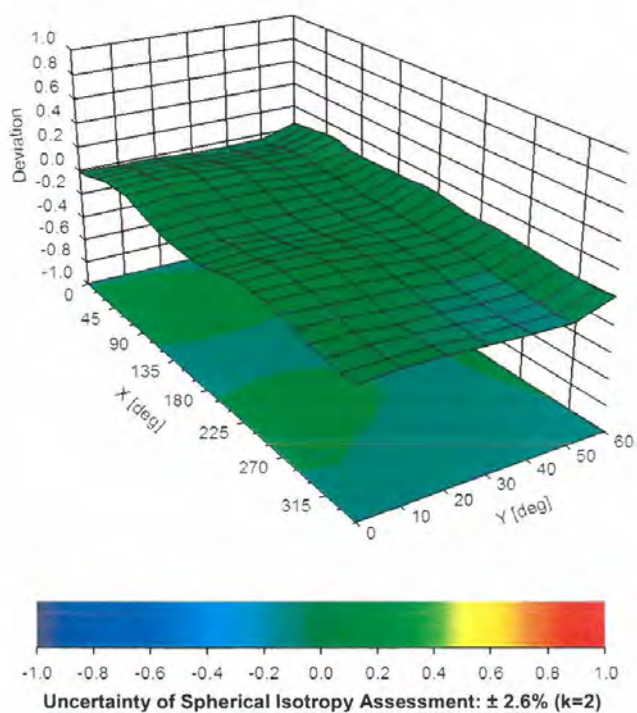
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## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

Error ( $\phi, \theta$ ),  $f = 900 \text{ MHz}$



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## Appendix: Modulation Calibration Parameters

| UID   | Rev | Communication System Name                           | Group     | PAR (dB) | Unc <sup>E</sup> (k=2) |
|-------|-----|-----------------------------------------------------|-----------|----------|------------------------|
| 0     |     | CW                                                  | CW        | 0.00     | ± 4.7 %                |
| 10010 | CAA | SAR Validation (Square, 100ms, 10ms)                | Test      | 10.00    | ± 9.6 %                |
| 10011 | CAB | UMTS-FDD (WCDMA)                                    | WCDMA     | 2.91     | ± 9.6 %                |
| 10012 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)            | WLAN      | 1.87     | ± 9.6 %                |
| 10013 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)       | WLAN      | 9.46     | ± 9.6 %                |
| 10021 | DAC | GSM-FDD (TDMA, GMSK)                                | GSM       | 9.39     | ± 9.6 %                |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0)                         | GSM       | 9.57     | ± 9.6 %                |
| 10024 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                       | GSM       | 6.56     | ± 9.6 %                |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                         | GSM       | 12.62    | ± 9.6 %                |
| 10026 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                       | GSM       | 9.55     | ± 9.6 %                |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)                     | GSM       | 4.80     | ± 9.6 %                |
| 10028 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)                   | GSM       | 3.55     | ± 9.6 %                |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)                     | GSM       | 7.78     | ± 9.6 %                |
| 10030 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)                 | Bluetooth | 5.30     | ± 9.6 %                |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)                 | Bluetooth | 1.87     | ± 9.6 %                |
| 10032 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | Bluetooth | 1.16     | ± 9.6 %                |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | Bluetooth | 7.74     | ± 9.6 %                |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | Bluetooth | 4.53     | ± 9.6 %                |
| 10035 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | Bluetooth | 3.83     | ± 9.6 %                |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | Bluetooth | 8.01     | ± 9.6 %                |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | Bluetooth | 4.77     | ± 9.6 %                |
| 10038 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | Bluetooth | 4.10     | ± 9.6 %                |
| 10039 | CAB | CDMA2000 (1xRTT, RC1)                               | CDMA2000  | 4.57     | ± 9.6 %                |
| 10042 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | AMPS      | 7.78     | ± 9.6 %                |
| 10044 | CAA | IS-97/EIA/TIA-553 FDD (FDMA, FM)                    | AMPS      | 0.00     | ± 9.6 %                |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | DECT      | 13.80    | ± 9.6 %                |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | DECT      | 10.79    | ± 9.6 %                |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | TD-SCDMA  | 11.01    | ± 9.6 %                |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | GSM       | 6.52     | ± 9.6 %                |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | WLAN      | 2.12     | ± 9.6 %                |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | WLAN      | 2.83     | ± 9.6 %                |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)           | WLAN      | 3.60     | ± 9.6 %                |
| 10062 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)            | WLAN      | 8.68     | ± 9.6 %                |
| 10063 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)            | WLAN      | 8.63     | ± 9.6 %                |
| 10064 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)           | WLAN      | 9.09     | ± 9.6 %                |
| 10065 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)           | WLAN      | 9.00     | ± 9.6 %                |
| 10066 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)           | WLAN      | 9.38     | ± 9.6 %                |
| 10067 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)           | WLAN      | 10.12    | ± 9.6 %                |
| 10068 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)           | WLAN      | 10.24    | ± 9.6 %                |
| 10069 | CAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)           | WLAN      | 10.56    | ± 9.6 %                |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)       | WLAN      | 9.83     | ± 9.6 %                |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)      | WLAN      | 9.62     | ± 9.6 %                |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)      | WLAN      | 9.94     | ± 9.6 %                |
| 10074 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)      | WLAN      | 10.30    | ± 9.6 %                |
| 10075 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)      | WLAN      | 10.77    | ± 9.6 %                |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)      | WLAN      | 10.94    | ± 9.6 %                |
| 10077 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)      | WLAN      | 11.00    | ± 9.6 %                |
| 10081 | CAB | CDMA2000 (1xRTT, RC3)                               | CDMA2000  | 3.97     | ± 9.6 %                |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | AMPS      | 4.77     | ± 9.6 %                |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | GSM       | 6.56     | ± 9.6 %                |
| 10097 | CAC | UMTS-FDD (HSDPA)                                    | WCDMA     | 3.98     | ± 9.6 %                |
| 10098 | DAC | UMTS-FDD (HSUPA, Subtest 2)                         | WCDMA     | 3.98     | ± 9.6 %                |



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|       |     |                                                |         |       |         |
|-------|-----|------------------------------------------------|---------|-------|---------|
| 10099 | CAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                  | GSM     | 9.55  | ± 9.6 % |
| 10100 | CAC | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)       | LTE-FDD | 5.67  | ± 9.6 % |
| 10101 | CAB | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)     | LTE-FDD | 6.42  | ± 9.6 % |
| 10102 | CAB | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)     | LTE-FDD | 6.60  | ± 9.6 % |
| 10103 | DAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)       | LTE-TDD | 9.29  | ± 9.6 % |
| 10104 | CAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)     | LTE-TDD | 9.97  | ± 9.6 % |
| 10105 | CAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)     | LTE-TDD | 10.01 | ± 9.6 % |
| 10108 | CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)       | LTE-FDD | 5.80  | ± 9.6 % |
| 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)     | LTE-FDD | 6.43  | ± 9.6 % |
| 10110 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)        | LTE-FDD | 5.75  | ± 9.6 % |
| 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)      | LTE-FDD | 6.44  | ± 9.6 % |
| 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | LTE-FDD | 6.59  | ± 9.6 % |
| 10113 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | LTE-FDD | 6.62  | ± 9.6 % |
| 10114 | CAG | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | WLAN    | 8.10  | ± 9.6 % |
| 10115 | CAG | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | WLAN    | 8.46  | ± 9.6 % |
| 10116 | CAG | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | WLAN    | 8.15  | ± 9.6 % |
| 10117 | CAG | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | WLAN    | 8.07  | ± 9.6 % |
| 10118 | CAD | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | WLAN    | 8.59  | ± 9.6 % |
| 10119 | CAD | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | WLAN    | 8.13  | ± 9.6 % |
| 10140 | CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | LTE-FDD | 6.49  | ± 9.6 % |
| 10141 | CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | LTE-FDD | 6.53  | ± 9.6 % |
| 10142 | CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | LTE-FDD | 5.73  | ± 9.6 % |
| 10143 | CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | LTE-FDD | 6.35  | ± 9.6 % |
| 10144 | CAC | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | LTE-FDD | 6.65  | ± 9.6 % |
| 10145 | CAC | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | LTE-FDD | 5.76  | ± 9.6 % |
| 10146 | CAC | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | LTE-FDD | 6.41  | ± 9.6 % |
| 10147 | CAC | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | LTE-FDD | 6.72  | ± 9.6 % |
| 10149 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)      | LTE-FDD | 6.42  | ± 9.6 % |
| 10150 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)      | LTE-FDD | 6.60  | ± 9.6 % |
| 10151 | CAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)        | LTE-TDD | 9.28  | ± 9.6 % |
| 10152 | CAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)      | LTE-TDD | 9.92  | ± 9.6 % |
| 10153 | CAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)      | LTE-TDD | 10.05 | ± 9.6 % |
| 10154 | CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)        | LTE-FDD | 5.75  | ± 9.6 % |
| 10155 | CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)      | LTE-FDD | 6.43  | ± 9.6 % |
| 10156 | CAF | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)         | LTE-FDD | 5.79  | ± 9.6 % |
| 10157 | CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)       | LTE-FDD | 6.49  | ± 9.6 % |
| 10158 | CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)      | LTE-FDD | 6.62  | ± 9.6 % |
| 10159 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)       | LTE-FDD | 6.56  | ± 9.6 % |
| 10160 | CAG | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)        | LTE-FDD | 5.82  | ± 9.6 % |
| 10161 | CAG | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)      | LTE-FDD | 6.43  | ± 9.6 % |
| 10162 | CAG | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)      | LTE-FDD | 6.58  | ± 9.6 % |
| 10166 | CAG | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)       | LTE-FDD | 5.46  | ± 9.6 % |
| 10167 | CAG | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)     | LTE-FDD | 6.21  | ± 9.6 % |
| 10168 | CAG | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)     | LTE-FDD | 6.79  | ± 9.6 % |
| 10169 | CAG | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)          | LTE-FDD | 5.73  | ± 9.6 % |
| 10170 | CAG | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)        | LTE-FDD | 6.52  | ± 9.6 % |
| 10171 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)        | LTE-FDD | 6.49  | ± 9.6 % |
| 10172 | CAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)          | LTE-TDD | 9.21  | ± 9.6 % |
| 10173 | CAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)        | LTE-TDD | 9.48  | ± 9.6 % |
| 10174 | CAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)        | LTE-TDD | 10.25 | ± 9.6 % |
| 10175 | CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)          | LTE-FDD | 5.72  | ± 9.6 % |
| 10176 | CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)        | LTE-FDD | 6.52  | ± 9.6 % |
| 10177 | CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)           | LTE-FDD | 5.73  | ± 9.6 % |
| 10178 | CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)         | LTE-FDD | 6.52  | ± 9.6 % |
| 10179 | AAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)        | LTE-FDD | 6.50  | ± 9.6 % |
| 10180 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)         | LTE-FDD | 6.50  | ± 9.6 % |

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|       |     |                                               |         |       |         |
|-------|-----|-----------------------------------------------|---------|-------|---------|
| 10181 | CAG | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)         | LTE-FDD | 5.72  | ± 9.6 % |
| 10182 | CAG | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)       | LTE-FDD | 6.52  | ± 9.6 % |
| 10183 | CAG | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)       | LTE-FDD | 6.50  | ± 9.6 % |
| 10184 | CAG | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | LTE-FDD | 5.73  | ± 9.6 % |
| 10185 | CAI | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | LTE-FDD | 6.51  | ± 9.6 % |
| 10186 | CAG | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | LTE-FDD | 6.50  | ± 9.6 % |
| 10187 | CAG | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | LTE-FDD | 5.73  | ± 9.6 % |
| 10188 | CAG | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | LTE-FDD | 6.52  | ± 9.6 % |
| 10189 | CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | LTE-FDD | 6.50  | ± 9.6 % |
| 10193 | CAE | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | WLAN    | 8.09  | ± 9.6 % |
| 10194 | AAD | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | WLAN    | 8.12  | ± 9.6 % |
| 10195 | CAE | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | WLAN    | 8.21  | ± 9.6 % |
| 10196 | CAE | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | WLAN    | 8.10  | ± 9.6 % |
| 10197 | AAE | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | WLAN    | 8.13  | ± 9.6 % |
| 10198 | CAF | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | WLAN    | 8.27  | ± 9.6 % |
| 10219 | CAF | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | WLAN    | 8.03  | ± 9.6 % |
| 10220 | AAF | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | WLAN    | 8.13  | ± 9.6 % |
| 10221 | CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | WLAN    | 8.27  | ± 9.6 % |
| 10222 | CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | WLAN    | 8.06  | ± 9.6 % |
| 10223 | CAD | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)      | WLAN    | 8.48  | ± 9.6 % |
| 10224 | CAD | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)     | WLAN    | 8.08  | ± 9.6 % |
| 10225 | CAD | UMTS-FDD (HSPA+)                              | WCDMA   | 5.97  | ± 9.6 % |
| 10226 | CAD | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | LTE-TDD | 9.49  | ± 9.6 % |
| 10227 | CAD | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | LTE-TDD | 10.26 | ± 9.6 % |
| 10228 | CAD | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | LTE-TDD | 9.22  | ± 9.6 % |
| 10229 | DAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | LTE-TDD | 9.48  | ± 9.6 % |
| 10230 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | LTE-TDD | 10.25 | ± 9.6 % |
| 10231 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | LTE-TDD | 9.19  | ± 9.6 % |
| 10232 | CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)        | LTE-TDD | 9.48  | ± 9.6 % |
| 10233 | CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)        | LTE-TDD | 10.25 | ± 9.6 % |
| 10234 | CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)          | LTE-TDD | 9.21  | ± 9.6 % |
| 10235 | CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)       | LTE-TDD | 9.48  | ± 9.6 % |
| 10236 | CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)       | LTE-TDD | 10.25 | ± 9.6 % |
| 10237 | CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)         | LTE-TDD | 9.21  | ± 9.6 % |
| 10238 | CAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)       | LTE-TDD | 9.48  | ± 9.6 % |
| 10239 | CAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)       | LTE-TDD | 10.25 | ± 9.6 % |
| 10240 | CAB | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)         | LTE-TDD | 9.21  | ± 9.6 % |
| 10241 | CAB | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)    | LTE-TDD | 9.82  | ± 9.6 % |
| 10242 | CAD | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)    | LTE-TDD | 9.86  | ± 9.6 % |
| 10243 | CAD | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)      | LTE-TDD | 9.46  | ± 9.6 % |
| 10244 | CAD | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)      | LTE-TDD | 10.06 | ± 9.6 % |
| 10245 | CAG | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)      | LTE-TDD | 10.06 | ± 9.6 % |
| 10246 | CAG | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)        | LTE-TDD | 9.30  | ± 9.6 % |
| 10247 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)      | LTE-TDD | 9.91  | ± 9.6 % |
| 10248 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)      | LTE-TDD | 10.09 | ± 9.6 % |
| 10249 | CAG | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)        | LTE-TDD | 9.29  | ± 9.6 % |
| 10250 | CAG | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)     | LTE-TDD | 9.81  | ± 9.6 % |
| 10251 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)     | LTE-TDD | 10.17 | ± 9.6 % |
| 10252 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)       | LTE-TDD | 9.24  | ± 9.6 % |
| 10253 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)     | LTE-TDD | 9.90  | ± 9.6 % |
| 10254 | CAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)     | LTE-TDD | 10.14 | ± 9.6 % |
| 10255 | CAB | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)       | LTE-TDD | 9.20  | ± 9.6 % |
| 10256 | CAB | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)   | LTE-TDD | 9.96  | ± 9.6 % |
| 10257 | CAD | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)   | LTE-TDD | 10.08 | ± 9.6 % |
| 10258 | CAD | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)     | LTE-TDD | 9.34  | ± 9.6 % |
| 10259 | CAD | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)     | LTE-TDD | 9.98  | ± 9.6 % |

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|-------|-----|-----------------------------------------------------------|----------|-------|---------|
| 10260 | CAG | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)                 | LTE-TDD  | 9.97  | ± 9.6 % |
| 10261 | CAG | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)                   | LTE-TDD  | 9.24  | ± 9.6 % |
| 10262 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)                 | LTE-TDD  | 9.83  | ± 9.6 % |
| 10263 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)                 | LTE-TDD  | 10.16 | ± 9.6 % |
| 10264 | CAG | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)                   | LTE-TDD  | 9.23  | ± 9.6 % |
| 10265 | CAG | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)                | LTE-TDD  | 9.92  | ± 9.6 % |
| 10266 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)                | LTE-TDD  | 10.07 | ± 9.6 % |
| 10267 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)                  | LTE-TDD  | 9.30  | ± 9.6 % |
| 10268 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)                | LTE-TDD  | 10.06 | ± 9.6 % |
| 10269 | CAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)                | LTE-TDD  | 10.13 | ± 9.6 % |
| 10270 | CAB | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                  | LTE-TDD  | 9.58  | ± 9.6 % |
| 10274 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                 | WCDMA    | 4.87  | ± 9.6 % |
| 10275 | CAD | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                  | WCDMA    | 3.96  | ± 9.6 % |
| 10277 | CAD | PHS (QPSK)                                                | PHS      | 11.81 | ± 9.6 % |
| 10278 | CAD | PHS (QPSK, BW 884MHz, Rolloff 0.5)                        | PHS      | 11.81 | ± 9.6 % |
| 10279 | CAG | PHS (QPSK, BW 884MHz, Rolloff 0.38)                       | PHS      | 12.18 | ± 9.6 % |
| 10290 | CAG | CDMA2000, RC1, SQ55, Full Rate                            | CDMA2000 | 3.91  | ± 9.6 % |
| 10291 | CAG | CDMA2000, RC3, SQ55, Full Rate                            | CDMA2000 | 3.46  | ± 9.6 % |
| 10292 | CAG | CDMA2000, RC3, SQ32, Full Rate                            | CDMA2000 | 3.39  | ± 9.6 % |
| 10293 | CAG | CDMA2000, RC3, SQ3, Full Rate                             | CDMA2000 | 3.50  | ± 9.6 % |
| 10295 | CAG | CDMA2000, RC1, SQ3, 1/8th Rate 25 fr.                     | CDMA2000 | 12.49 | ± 9.6 % |
| 10297 | CAF | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                   | LTE-FDD  | 5.81  | ± 9.6 % |
| 10298 | CAF | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                    | LTE-FDD  | 5.72  | ± 9.6 % |
| 10299 | CAF | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                  | LTE-FDD  | 6.39  | ± 9.6 % |
| 10300 | CAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                  | LTE-FDD  | 6.60  | ± 9.6 % |
| 10301 | CAC | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)        | WiMAX    | 12.03 | ± 9.6 % |
| 10302 | CAB | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL) | WiMAX    | 12.57 | ± 9.6 % |
| 10303 | CAB | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)       | WiMAX    | 12.52 | ± 9.6 % |
| 10304 | CAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)       | WiMAX    | 11.86 | ± 9.6 % |
| 10305 | CAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)      | WiMAX    | 15.24 | ± 9.6 % |
| 10306 | CAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)      | WiMAX    | 14.67 | ± 9.6 % |
| 10307 | AAB | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC)       | WiMAX    | 14.49 | ± 9.6 % |
| 10308 | AAB | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)      | WiMAX    | 14.46 | ± 9.6 % |
| 10309 | AAB | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3)   | WiMAX    | 14.58 | ± 9.6 % |
| 10310 | AAB | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3)    | WiMAX    | 14.57 | ± 9.6 % |
| 10311 | AAB | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                  | LTE-FDD  | 6.06  | ± 9.6 % |
| 10313 | AAD | iDEN 1:3                                                  | iDEN     | 10.51 | ± 9.6 % |
| 10314 | AAD | iDEN 1:6                                                  | iDEN     | 13.48 | ± 9.6 % |
| 10315 | AAD | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc)         | WLAN     | 1.71  | ± 9.6 % |
| 10316 | AAD | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)     | WLAN     | 8.36  | ± 9.6 % |
| 10317 | AAA | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc dc)           | WLAN     | 8.36  | ± 9.6 % |
| 10352 | AAA | Pulse Waveform (200Hz, 10%)                               | Generic  | 10.00 | ± 9.6 % |
| 10353 | AAA | Pulse Waveform (200Hz, 20%)                               | Generic  | 6.99  | ± 9.6 % |
| 10354 | AAA | Pulse Waveform (200Hz, 40%)                               | Generic  | 3.98  | ± 9.6 % |
| 10355 | AAA | Pulse Waveform (200Hz, 60%)                               | Generic  | 2.22  | ± 9.6 % |
| 10356 | AAA | Pulse Waveform (200Hz, 80%)                               | Generic  | 0.97  | ± 9.6 % |
| 10387 | AAA | QPSK Waveform, 1 MHz                                      | Generic  | 5.10  | ± 9.6 % |
| 10388 | AAA | QPSK Waveform, 10 MHz                                     | Generic  | 5.22  | ± 9.6 % |
| 10396 | AAA | 64-QAM Waveform, 100 kHz                                  | Generic  | 6.27  | ± 9.6 % |
| 10399 | AAA | 64-QAM Waveform, 40 MHz                                   | Generic  | 6.27  | ± 9.6 % |
| 10400 | AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)               | WLAN     | 8.37  | ± 9.6 % |
| 10401 | AAA | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc)               | WLAN     | 8.60  | ± 9.6 % |
| 10402 | AAA | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc)               | WLAN     | 8.53  | ± 9.6 % |
| 10403 | AAB | CDMA2000 (1xEV-DO, Rev. 0)                                | CDMA2000 | 3.76  | ± 9.6 % |
| 10404 | AAB | CDMA2000 (1xEV-DO, Rev. A)                                | CDMA2000 | 3.77  | ± 9.6 % |
| 10406 | AAD | CDMA2000, RC3, SQ32, SCH0, Full Rate                      | CDMA2000 | 5.22  | ± 9.6 % |

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|-------|-----|------------------------------------------------------------|----------|-------|---------|
| 10410 | AAA | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)  | LTE-TDD  | 7.82  | ± 9.6 % |
| 10414 | AAA | WLAN CCDF, 64-QAM, 40MHz                                   | Generic  | 8.54  | ± 9.6 % |
| 10415 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)          | WLAN     | 1.54  | ± 9.6 % |
| 10416 | AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)      | WLAN     | 8.23  | ± 9.6 % |
| 10417 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)          | WLAN     | 8.23  | ± 9.6 % |
| 10418 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)  | WLAN     | 8.14  | ± 9.6 % |
| 10419 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short) | WLAN     | 8.19  | ± 9.6 % |
| 10422 | AAA | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)               | WLAN     | 8.32  | ± 9.6 % |
| 10423 | AAA | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)            | WLAN     | 8.47  | ± 9.6 % |
| 10424 | AAE | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)            | WLAN     | 8.40  | ± 9.6 % |
| 10425 | AAE | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                | WLAN     | 8.41  | ± 9.6 % |
| 10426 | AAE | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)              | WLAN     | 8.45  | ± 9.6 % |
| 10427 | AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)             | WLAN     | 8.41  | ± 9.6 % |
| 10430 | AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                           | LTE-FDD  | 8.28  | ± 9.6 % |
| 10431 | AAC | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                          | LTE-FDD  | 8.38  | ± 9.6 % |
| 10432 | AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                          | LTE-FDD  | 8.34  | ± 9.6 % |
| 10433 | AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                          | LTE-FDD  | 8.34  | ± 9.6 % |
| 10434 | AAG | W-CDMA (BS Test Model 1, 64 DPCH)                          | WCDMA    | 8.60  | ± 9.6 % |
| 10435 | AAA | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub)              | LTE-TDD  | 7.82  | ± 9.6 % |
| 10447 | AAA | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)             | LTE-FDD  | 7.56  | ± 9.6 % |
| 10448 | AAA | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)            | LTE-FDD  | 7.53  | ± 9.6 % |
| 10449 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)            | LTE-FDD  | 7.51  | ± 9.6 % |
| 10450 | AAA | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)            | LTE-FDD  | 7.48  | ± 9.6 % |
| 10451 | AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)            | WCDMA    | 7.59  | ± 9.6 % |
| 10453 | AAC | Validation (Square, 10ms, 1ms)                             | Test     | 10.00 | ± 9.6 % |
| 10456 | AAC | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc dc)               | WLAN     | 8.63  | ± 9.6 % |
| 10457 | AAC | UMTS-FDD (DC-HSDPA)                                        | WCDMA    | 6.62  | ± 9.6 % |
| 10458 | AAC | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                     | CDMA2000 | 6.55  | ± 9.6 % |
| 10459 | AAC | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                     | CDMA2000 | 8.25  | ± 9.6 % |
| 10460 | AAC | UMTS-FDD (WCDMA, AMR)                                      | WCDMA    | 2.39  | ± 9.6 % |
| 10461 | AAC | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub)             | LTE-TDD  | 7.82  | ± 9.6 % |
| 10462 | AAC | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Sub)           | LTE-TDD  | 8.30  | ± 9.6 % |
| 10463 | AAD | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub)           | LTE-TDD  | 8.56  | ± 9.6 % |
| 10464 | AAD | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub)               | LTE-TDD  | 7.82  | ± 9.6 % |
| 10465 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub)             | LTE-TDD  | 8.32  | ± 9.6 % |
| 10466 | AAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub)             | LTE-TDD  | 8.57  | ± 9.6 % |
| 10467 | AAA | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub)               | LTE-TDD  | 7.82  | ± 9.6 % |
| 10468 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub)             | LTE-TDD  | 8.32  | ± 9.6 % |
| 10469 | AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub)             | LTE-TDD  | 8.56  | ± 9.6 % |
| 10470 | AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub)              | LTE-TDD  | 7.82  | ± 9.6 % |
| 10471 | AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)            | LTE-TDD  | 8.32  | ± 9.6 % |
| 10472 | AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub)            | LTE-TDD  | 8.57  | ± 9.6 % |
| 10473 | AAA | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)              | LTE-TDD  | 7.82  | ± 9.6 % |
| 10474 | AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub)            | LTE-TDD  | 8.32  | ± 9.6 % |
| 10475 | AAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub)            | LTE-TDD  | 8.57  | ± 9.6 % |
| 10477 | AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)            | LTE-TDD  | 8.32  | ± 9.6 % |
| 10478 | AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub)            | LTE-TDD  | 8.57  | ± 9.6 % |
| 10479 | AAC | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub)           | LTE-TDD  | 7.74  | ± 9.6 % |
| 10480 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)         | LTE-TDD  | 8.18  | ± 9.6 % |
| 10481 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Sub)         | LTE-TDD  | 8.45  | ± 9.6 % |
| 10482 | AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub)             | LTE-TDD  | 7.71  | ± 9.6 % |
| 10483 | AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub)              | LTE-TDD  | 8.39  | ± 9.6 % |
| 10484 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)           | LTE-TDD  | 8.47  | ± 9.6 % |
| 10485 | AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub)             | LTE-TDD  | 7.59  | ± 9.6 % |
| 10486 | AAB | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub)           | LTE-TDD  | 8.38  | ± 9.6 % |
| 10487 | AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub)           | LTE-TDD  | 8.60  | ± 9.6 % |

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| 10488 | AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub)     | LTE-TDD | 7.70 | ± 9.6 % |
| 10489 | AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.31 | ± 9.6 % |
| 10490 | AAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.54 | ± 9.6 % |
| 10491 | AAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub)     | LTE-TDD | 7.74 | ± 9.6 % |
| 10492 | AAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.41 | ± 9.6 % |
| 10493 | AAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.55 | ± 9.6 % |
| 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub)     | LTE-TDD | 7.74 | ± 9.6 % |
| 10495 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.37 | ± 9.6 % |
| 10496 | AAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.54 | ± 9.6 % |
| 10497 | AAE | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub)   | LTE-TDD | 7.67 | ± 9.6 % |
| 10498 | AAE | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub) | LTE-TDD | 8.40 | ± 9.6 % |
| 10499 | AAC | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub) | LTE-TDD | 8.68 | ± 9.6 % |
| 10500 | AAF | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub)     | LTE-TDD | 7.67 | ± 9.6 % |
| 10501 | AAF | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.44 | ± 9.6 % |
| 10502 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.52 | ± 9.6 % |
| 10503 | AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub)     | LTE-TDD | 7.72 | ± 9.6 % |
| 10504 | AAB | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub)   | LTE-TDD | 8.31 | ± 9.6 % |
| 10505 | AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub)   | LTE-TDD | 8.54 | ± 9.6 % |
| 10506 | AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub)    | LTE-TDD | 7.74 | ± 9.6 % |
| 10507 | AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub)  | LTE-TDD | 8.36 | ± 9.6 % |
| 10508 | AAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub)  | LTE-TDD | 8.55 | ± 9.6 % |
| 10509 | AAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub)    | LTE-TDD | 7.99 | ± 9.6 % |
| 10510 | AAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub)  | LTE-TDD | 8.49 | ± 9.6 % |
| 10511 | AAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Sub)  | LTE-TDD | 8.51 | ± 9.6 % |
| 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Sub)    | LTE-TDD | 7.74 | ± 9.6 % |
| 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Sub)  | LTE-TDD | 8.42 | ± 9.6 % |
| 10514 | AAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub)  | LTE-TDD | 8.45 | ± 9.6 % |
| 10515 | AAE | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc)   | WLAN    | 1.58 | ± 9.6 % |
| 10516 | AAE | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc) | WLAN    | 1.57 | ± 9.6 % |
| 10517 | AAF | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc)  | WLAN    | 1.58 | ± 9.6 % |
| 10518 | AAF | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc)   | WLAN    | 8.23 | ± 9.6 % |
| 10519 | AAF | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc)  | WLAN    | 8.39 | ± 9.6 % |
| 10520 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc)  | WLAN    | 8.12 | ± 9.6 % |
| 10521 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc)  | WLAN    | 7.97 | ± 9.6 % |
| 10522 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc)  | WLAN    | 8.45 | ± 9.6 % |
| 10523 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc)  | WLAN    | 8.08 | ± 9.6 % |
| 10524 | AAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc)  | WLAN    | 8.27 | ± 9.6 % |
| 10525 | AAC | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc dc)           | WLAN    | 8.36 | ± 9.6 % |
| 10526 | AAF | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc dc)           | WLAN    | 8.42 | ± 9.6 % |
| 10527 | AAF | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc dc)           | WLAN    | 8.21 | ± 9.6 % |
| 10528 | AAF | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc dc)           | WLAN    | 8.36 | ± 9.6 % |
| 10529 | AAF | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc dc)           | WLAN    | 8.36 | ± 9.6 % |
| 10531 | AAF | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc dc)           | WLAN    | 8.43 | ± 9.6 % |
| 10532 | AAF | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc dc)           | WLAN    | 8.29 | ± 9.6 % |
| 10533 | AAE | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc dc)           | WLAN    | 8.38 | ± 9.6 % |
| 10534 | AAE | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc dc)           | WLAN    | 8.45 | ± 9.6 % |
| 10535 | AAE | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc dc)           | WLAN    | 8.45 | ± 9.6 % |
| 10536 | AAF | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc dc)           | WLAN    | 8.32 | ± 9.6 % |
| 10537 | AAF | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc dc)           | WLAN    | 8.44 | ± 9.6 % |
| 10538 | AAF | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc dc)           | WLAN    | 8.54 | ± 9.6 % |
| 10540 | AAA | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc dc)           | WLAN    | 8.39 | ± 9.6 % |
| 10541 | AAA | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc dc)           | WLAN    | 8.46 | ± 9.6 % |
| 10542 | AAA | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc dc)           | WLAN    | 8.65 | ± 9.6 % |
| 10543 | AAC | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc dc)           | WLAN    | 8.65 | ± 9.6 % |
| 10544 | AAC | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc dc)           | WLAN    | 8.47 | ± 9.6 % |
| 10545 | AAC | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc dc)           | WLAN    | 8.55 | ± 9.6 % |

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|       |     |                                                         |      |      |         |
|-------|-----|---------------------------------------------------------|------|------|---------|
| 10546 | AAC | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc dc)               | WLAN | 8.35 | ± 9.6 % |
| 10547 | AAC | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc dc)               | WLAN | 8.49 | ± 9.6 % |
| 10548 | AAC | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc dc)               | WLAN | 8.37 | ± 9.6 % |
| 10550 | AAC | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc dc)               | WLAN | 8.38 | ± 9.6 % |
| 10551 | AAC | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc dc)               | WLAN | 8.50 | ± 9.6 % |
| 10552 | AAC | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc dc)               | WLAN | 8.42 | ± 9.6 % |
| 10553 | AAC | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc dc)               | WLAN | 8.45 | ± 9.6 % |
| 10554 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc dc)              | WLAN | 8.48 | ± 9.6 % |
| 10555 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc dc)              | WLAN | 8.47 | ± 9.6 % |
| 10556 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc dc)              | WLAN | 8.50 | ± 9.6 % |
| 10557 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc dc)              | WLAN | 8.52 | ± 9.6 % |
| 10558 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc dc)              | WLAN | 8.61 | ± 9.6 % |
| 10560 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc dc)              | WLAN | 8.73 | ± 9.6 % |
| 10561 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc dc)              | WLAN | 8.56 | ± 9.6 % |
| 10562 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc dc)              | WLAN | 8.69 | ± 9.6 % |
| 10563 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc dc)              | WLAN | 8.77 | ± 9.6 % |
| 10564 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc dc)  | WLAN | 8.25 | ± 9.6 % |
| 10565 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc dc) | WLAN | 8.45 | ± 9.6 % |
| 10566 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc dc) | WLAN | 8.13 | ± 9.6 % |
| 10567 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc dc) | WLAN | 8.00 | ± 9.6 % |
| 10568 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc) | WLAN | 8.37 | ± 9.6 % |
| 10569 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc dc) | WLAN | 8.10 | ± 9.6 % |
| 10570 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc dc) | WLAN | 8.30 | ± 9.6 % |
| 10571 | AAC | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc dc)       | WLAN | 1.99 | ± 9.6 % |
| 10572 | AAC | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc dc)       | WLAN | 1.99 | ± 9.6 % |
| 10573 | AAC | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc dc)     | WLAN | 1.98 | ± 9.6 % |
| 10574 | AAC | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc dc)      | WLAN | 1.98 | ± 9.6 % |
| 10575 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc dc)  | WLAN | 8.59 | ± 9.6 % |
| 10576 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc dc)  | WLAN | 8.60 | ± 9.6 % |
| 10577 | AAC | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc dc) | WLAN | 8.70 | ± 9.6 % |
| 10578 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dc) | WLAN | 8.49 | ± 9.6 % |
| 10579 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc dc) | WLAN | 8.36 | ± 9.6 % |
| 10580 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc dc) | WLAN | 8.76 | ± 9.6 % |
| 10581 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc dc) | WLAN | 8.35 | ± 9.6 % |
| 10582 | AAD | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc dc) | WLAN | 8.67 | ± 9.6 % |
| 10583 | AAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc dc)       | WLAN | 8.59 | ± 9.6 % |
| 10584 | AAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc dc)       | WLAN | 8.60 | ± 9.6 % |
| 10585 | AAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc dc)      | WLAN | 8.70 | ± 9.6 % |
| 10586 | AAD | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc dc)      | WLAN | 8.49 | ± 9.6 % |
| 10587 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc dc)      | WLAN | 8.36 | ± 9.6 % |
| 10588 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc dc)      | WLAN | 8.76 | ± 9.6 % |
| 10589 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc dc)      | WLAN | 8.35 | ± 9.6 % |
| 10590 | AAA | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc dc)      | WLAN | 8.67 | ± 9.6 % |
| 10591 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc dc)           | WLAN | 8.63 | ± 9.6 % |
| 10592 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc dc)           | WLAN | 8.79 | ± 9.6 % |
| 10593 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc)           | WLAN | 8.64 | ± 9.6 % |
| 10594 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc)           | WLAN | 8.74 | ± 9.6 % |
| 10595 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc dc)           | WLAN | 8.74 | ± 9.6 % |
| 10596 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc dc)           | WLAN | 8.71 | ± 9.6 % |
| 10597 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc dc)           | WLAN | 8.72 | ± 9.6 % |
| 10598 | AAA | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc dc)           | WLAN | 8.50 | ± 9.6 % |
| 10599 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc)           | WLAN | 8.79 | ± 9.6 % |
| 10600 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc dc)           | WLAN | 8.88 | ± 9.6 % |
| 10601 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc)           | WLAN | 8.82 | ± 9.6 % |
| 10602 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc dc)           | WLAN | 8.94 | ± 9.6 % |
| 10603 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc dc)           | WLAN | 9.03 | ± 9.6 % |

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|       |     |                                                   |           |       |         |
|-------|-----|---------------------------------------------------|-----------|-------|---------|
| 10604 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc dc)     | WLAN      | 8.76  | ± 9.6 % |
| 10605 | AAA | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc dc)     | WLAN      | 8.97  | ± 9.6 % |
| 10606 | AAC | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc dc)     | WLAN      | 8.82  | ± 9.6 % |
| 10607 | AAC | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc dc)         | WLAN      | 8.64  | ± 9.6 % |
| 10608 | AAC | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc dc)         | WLAN      | 8.77  | ± 9.6 % |
| 10609 | AAC | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc dc)         | WLAN      | 8.57  | ± 9.6 % |
| 10610 | AAC | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc dc)         | WLAN      | 8.78  | ± 9.6 % |
| 10611 | AAC | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc dc)         | WLAN      | 8.70  | ± 9.6 % |
| 10612 | AAC | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc dc)         | WLAN      | 8.77  | ± 9.6 % |
| 10613 | AAC | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc dc)         | WLAN      | 8.94  | ± 9.6 % |
| 10614 | AAC | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc dc)         | WLAN      | 8.59  | ± 9.6 % |
| 10615 | AAC | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc dc)         | WLAN      | 8.82  | ± 9.6 % |
| 10616 | AAC | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc dc)         | WLAN      | 8.82  | ± 9.6 % |
| 10617 | AAC | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc dc)         | WLAN      | 8.81  | ± 9.6 % |
| 10618 | AAC | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc dc)         | WLAN      | 8.58  | ± 9.6 % |
| 10619 | AAC | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc dc)         | WLAN      | 8.86  | ± 9.6 % |
| 10620 | AAC | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc dc)         | WLAN      | 8.87  | ± 9.6 % |
| 10621 | AAC | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc dc)         | WLAN      | 8.77  | ± 9.6 % |
| 10622 | AAC | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc dc)         | WLAN      | 8.68  | ± 9.6 % |
| 10623 | AAC | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc dc)         | WLAN      | 8.82  | ± 9.6 % |
| 10624 | AAC | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc dc)         | WLAN      | 8.96  | ± 9.6 % |
| 10625 | AAC | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc dc)         | WLAN      | 8.96  | ± 9.6 % |
| 10626 | AAC | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc dc)         | WLAN      | 8.83  | ± 9.6 % |
| 10627 | AAC | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc dc)         | WLAN      | 8.88  | ± 9.6 % |
| 10628 | AAC | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc dc)         | WLAN      | 8.71  | ± 9.6 % |
| 10629 | AAC | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc dc)         | WLAN      | 8.85  | ± 9.6 % |
| 10630 | AAC | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc dc)         | WLAN      | 8.72  | ± 9.6 % |
| 10631 | AAC | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc dc)         | WLAN      | 8.81  | ± 9.6 % |
| 10632 | AAC | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc dc)         | WLAN      | 8.74  | ± 9.6 % |
| 10633 | AAC | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc dc)         | WLAN      | 8.83  | ± 9.6 % |
| 10634 | AAC | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc dc)         | WLAN      | 8.80  | ± 9.6 % |
| 10635 | AAC | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc dc)         | WLAN      | 8.81  | ± 9.6 % |
| 10636 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc dc)        | WLAN      | 8.83  | ± 9.6 % |
| 10637 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc dc)        | WLAN      | 8.79  | ± 9.6 % |
| 10638 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc dc)        | WLAN      | 8.86  | ± 9.6 % |
| 10639 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc dc)        | WLAN      | 8.85  | ± 9.6 % |
| 10640 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc dc)        | WLAN      | 8.98  | ± 9.6 % |
| 10641 | AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc dc)        | WLAN      | 9.06  | ± 9.6 % |
| 10642 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc dc)        | WLAN      | 9.06  | ± 9.6 % |
| 10643 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc dc)        | WLAN      | 8.89  | ± 9.6 % |
| 10644 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc dc)        | WLAN      | 9.05  | ± 9.6 % |
| 10645 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc dc)        | WLAN      | 9.11  | ± 9.6 % |
| 10646 | AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub=2,7)  | LTE-TDD   | 11.96 | ± 9.6 % |
| 10647 | AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub=2,7) | LTE-TDD   | 11.96 | ± 9.6 % |
| 10648 | AAC | CDMA2000 (1x Advanced)                            | CDMA2000  | 3.45  | ± 9.6 % |
| 10652 | AAC | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)    | LTE-TDD   | 6.91  | ± 9.6 % |
| 10653 | AAC | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)   | LTE-TDD   | 7.42  | ± 9.6 % |
| 10654 | AAC | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)   | LTE-TDD   | 6.96  | ± 9.6 % |
| 10655 | AAC | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)   | LTE-TDD   | 7.21  | ± 9.6 % |
| 10658 | AAC | Pulse Waveform (200Hz, 10%)                       | Test      | 10.00 | ± 9.6 % |
| 10659 | AAC | Pulse Waveform (200Hz, 20%)                       | Test      | 6.99  | ± 9.6 % |
| 10660 | AAC | Pulse Waveform (200Hz, 40%)                       | Test      | 3.98  | ± 9.6 % |
| 10661 | AAC | Pulse Waveform (200Hz, 60%)                       | Test      | 2.22  | ± 9.6 % |
| 10662 | AAC | Pulse Waveform (200Hz, 80%)                       | Test      | 0.97  | ± 9.6 % |
| 10670 | AAC | Bluetooth Low Energy                              | Bluetooth | 2.19  | ± 9.6 % |
| 10671 | AAD | IEEE 802.11ax (20MHz, MCS0, 90pc dc)              | WLAN      | 9.09  | ± 9.6 % |

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|-------|-----|---------------------------------------|------|------|---------|
| 10672 | AAD | IEEE 802.11ax (20MHz, MCS1, 90pc dc)  | WLAN | 8.57 | ± 9.6 % |
| 10673 | AAD | IEEE 802.11ax (20MHz, MCS2, 90pc dc)  | WLAN | 8.78 | ± 9.6 % |
| 10674 | AAD | IEEE 802.11ax (20MHz, MCS3, 90pc dc)  | WLAN | 8.74 | ± 9.6 % |
| 10675 | AAD | IEEE 802.11ax (20MHz, MCS4, 90pc dc)  | WLAN | 8.90 | ± 9.6 % |
| 10676 | AAD | IEEE 802.11ax (20MHz, MCS5, 90pc dc)  | WLAN | 8.77 | ± 9.6 % |
| 10677 | AAD | IEEE 802.11ax (20MHz, MCS6, 90pc dc)  | WLAN | 8.73 | ± 9.6 % |
| 10678 | AAD | IEEE 802.11ax (20MHz, MCS7, 90pc dc)  | WLAN | 8.78 | ± 9.6 % |
| 10679 | AAD | IEEE 802.11ax (20MHz, MCS8, 90pc dc)  | WLAN | 8.89 | ± 9.6 % |
| 10680 | AAD | IEEE 802.11ax (20MHz, MCS9, 90pc dc)  | WLAN | 8.80 | ± 9.6 % |
| 10681 | AAG | IEEE 802.11ax (20MHz, MCS10, 90pc dc) | WLAN | 8.62 | ± 9.6 % |
| 10682 | AAF | IEEE 802.11ax (20MHz, MCS11, 90pc dc) | WLAN | 8.83 | ± 9.6 % |
| 10683 | AAA | IEEE 802.11ax (20MHz, MCS0, 99pc dc)  | WLAN | 8.42 | ± 9.6 % |
| 10684 | AAC | IEEE 802.11ax (20MHz, MCS1, 99pc dc)  | WLAN | 8.26 | ± 9.6 % |
| 10685 | AAC | IEEE 802.11ax (20MHz, MCS2, 99pc dc)  | WLAN | 8.33 | ± 9.6 % |
| 10686 | AAC | IEEE 802.11ax (20MHz, MCS3, 99pc dc)  | WLAN | 8.28 | ± 9.6 % |
| 10687 | AAE | IEEE 802.11ax (20MHz, MCS4, 99pc dc)  | WLAN | 8.45 | ± 9.6 % |
| 10688 | AAE | IEEE 802.11ax (20MHz, MCS5, 99pc dc)  | WLAN | 8.29 | ± 9.6 % |
| 10689 | AAD | IEEE 802.11ax (20MHz, MCS6, 99pc dc)  | WLAN | 8.55 | ± 9.6 % |
| 10690 | AAE | IEEE 802.11ax (20MHz, MCS7, 99pc dc)  | WLAN | 8.29 | ± 9.6 % |
| 10691 | AAB | IEEE 802.11ax (20MHz, MCS8, 99pc dc)  | WLAN | 8.25 | ± 9.6 % |
| 10692 | AAA | IEEE 802.11ax (20MHz, MCS9, 99pc dc)  | WLAN | 8.29 | ± 9.6 % |
| 10693 | AAA | IEEE 802.11ax (20MHz, MCS10, 99pc dc) | WLAN | 8.25 | ± 9.6 % |
| 10694 | AAA | IEEE 802.11ax (20MHz, MCS11, 99pc dc) | WLAN | 8.57 | ± 9.6 % |
| 10695 | AAA | IEEE 802.11ax (40MHz, MCS0, 90pc dc)  | WLAN | 8.78 | ± 9.6 % |
| 10696 | AAA | IEEE 802.11ax (40MHz, MCS1, 90pc dc)  | WLAN | 8.91 | ± 9.6 % |
| 10697 | AAA | IEEE 802.11ax (40MHz, MCS2, 90pc dc)  | WLAN | 8.61 | ± 9.6 % |
| 10698 | AAA | IEEE 802.11ax (40MHz, MCS3, 90pc dc)  | WLAN | 8.89 | ± 9.6 % |
| 10699 | AAA | IEEE 802.11ax (40MHz, MCS4, 90pc dc)  | WLAN | 8.82 | ± 9.6 % |
| 10700 | AAA | IEEE 802.11ax (40MHz, MCS5, 90pc dc)  | WLAN | 8.73 | ± 9.6 % |
| 10701 | AAA | IEEE 802.11ax (40MHz, MCS6, 90pc dc)  | WLAN | 8.86 | ± 9.6 % |
| 10702 | AAA | IEEE 802.11ax (40MHz, MCS7, 90pc dc)  | WLAN | 8.70 | ± 9.6 % |
| 10703 | AAA | IEEE 802.11ax (40MHz, MCS8, 90pc dc)  | WLAN | 8.82 | ± 9.6 % |
| 10704 | AAA | IEEE 802.11ax (40MHz, MCS9, 90pc dc)  | WLAN | 8.56 | ± 9.6 % |
| 10705 | AAA | IEEE 802.11ax (40MHz, MCS10, 90pc dc) | WLAN | 8.69 | ± 9.6 % |
| 10706 | AAC | IEEE 802.11ax (40MHz, MCS11, 90pc dc) | WLAN | 8.66 | ± 9.6 % |
| 10707 | AAC | IEEE 802.11ax (40MHz, MCS0, 99pc dc)  | WLAN | 8.32 | ± 9.6 % |
| 10708 | AAC | IEEE 802.11ax (40MHz, MCS1, 99pc dc)  | WLAN | 8.55 | ± 9.6 % |
| 10709 | AAC | IEEE 802.11ax (40MHz, MCS2, 99pc dc)  | WLAN | 8.33 | ± 9.6 % |
| 10710 | AAC | IEEE 802.11ax (40MHz, MCS3, 99pc dc)  | WLAN | 8.29 | ± 9.6 % |
| 10711 | AAC | IEEE 802.11ax (40MHz, MCS4, 99pc dc)  | WLAN | 8.39 | ± 9.6 % |
| 10712 | AAC | IEEE 802.11ax (40MHz, MCS5, 99pc dc)  | WLAN | 8.67 | ± 9.6 % |
| 10713 | AAC | IEEE 802.11ax (40MHz, MCS6, 99pc dc)  | WLAN | 8.33 | ± 9.6 % |
| 10714 | AAC | IEEE 802.11ax (40MHz, MCS7, 99pc dc)  | WLAN | 8.26 | ± 9.6 % |
| 10715 | AAC | IEEE 802.11ax (40MHz, MCS8, 99pc dc)  | WLAN | 8.45 | ± 9.6 % |
| 10716 | AAC | IEEE 802.11ax (40MHz, MCS9, 99pc dc)  | WLAN | 8.30 | ± 9.6 % |
| 10717 | AAC | IEEE 802.11ax (40MHz, MCS10, 99pc dc) | WLAN | 8.48 | ± 9.6 % |
| 10718 | AAC | IEEE 802.11ax (40MHz, MCS11, 99pc dc) | WLAN | 8.24 | ± 9.6 % |
| 10719 | AAC | IEEE 802.11ax (80MHz, MCS0, 90pc dc)  | WLAN | 8.81 | ± 9.6 % |
| 10720 | AAC | IEEE 802.11ax (80MHz, MCS1, 90pc dc)  | WLAN | 8.87 | ± 9.6 % |
| 10721 | AAC | IEEE 802.11ax (80MHz, MCS2, 90pc dc)  | WLAN | 8.76 | ± 9.6 % |
| 10722 | AAC | IEEE 802.11ax (80MHz, MCS3, 90pc dc)  | WLAN | 8.55 | ± 9.6 % |
| 10723 | AAC | IEEE 802.11ax (80MHz, MCS4, 90pc dc)  | WLAN | 8.70 | ± 9.6 % |
| 10724 | AAC | IEEE 802.11ax (80MHz, MCS5, 90pc dc)  | WLAN | 8.90 | ± 9.6 % |
| 10725 | AAC | IEEE 802.11ax (80MHz, MCS6, 90pc dc)  | WLAN | 8.74 | ± 9.6 % |
| 10726 | AAC | IEEE 802.11ax (80MHz, MCS7, 90pc dc)  | WLAN | 8.72 | ± 9.6 % |
| 10727 | AAC | IEEE 802.11ax (80MHz, MCS8, 90pc dc)  | WLAN | 8.66 | ± 9.6 % |

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|-------|-----|-----------------------------------------------|---------------|------|---------|
| 10728 | AAC | IEEE 802.11ax (80MHz, MCS9, 90pc dc)          | WLAN          | 8.65 | ± 9.6 % |
| 10729 | AAC | IEEE 802.11ax (80MHz, MCS10, 90pc dc)         | WLAN          | 8.64 | ± 9.6 % |
| 10730 | AAC | IEEE 802.11ax (80MHz, MCS11, 90pc dc)         | WLAN          | 8.67 | ± 9.6 % |
| 10731 | AAC | IEEE 802.11ax (80MHz, MCS0, 99pc dc)          | WLAN          | 8.42 | ± 9.6 % |
| 10732 | AAC | IEEE 802.11ax (80MHz, MCS1, 99pc dc)          | WLAN          | 8.46 | ± 9.6 % |
| 10733 | AAC | IEEE 802.11ax (80MHz, MCS2, 99pc dc)          | WLAN          | 8.40 | ± 9.6 % |
| 10734 | AAC | IEEE 802.11ax (80MHz, MCS3, 99pc dc)          | WLAN          | 8.25 | ± 9.6 % |
| 10735 | AAC | IEEE 802.11ax (80MHz, MCS4, 99pc dc)          | WLAN          | 8.33 | ± 9.6 % |
| 10736 | AAC | IEEE 802.11ax (80MHz, MCS5, 99pc dc)          | WLAN          | 8.27 | ± 9.6 % |
| 10737 | AAC | IEEE 802.11ax (80MHz, MCS6, 99pc dc)          | WLAN          | 8.36 | ± 9.6 % |
| 10738 | AAC | IEEE 802.11ax (80MHz, MCS7, 99pc dc)          | WLAN          | 8.42 | ± 9.6 % |
| 10739 | AAC | IEEE 802.11ax (80MHz, MCS8, 99pc dc)          | WLAN          | 8.29 | ± 9.6 % |
| 10740 | AAC | IEEE 802.11ax (80MHz, MCS9, 99pc dc)          | WLAN          | 8.48 | ± 9.6 % |
| 10741 | AAC | IEEE 802.11ax (80MHz, MCS10, 99pc dc)         | WLAN          | 8.40 | ± 9.6 % |
| 10742 | AAC | IEEE 802.11ax (80MHz, MCS11, 99pc dc)         | WLAN          | 8.43 | ± 9.6 % |
| 10743 | AAC | IEEE 802.11ax (160MHz, MCS0, 90pc dc)         | WLAN          | 8.94 | ± 9.6 % |
| 10744 | AAC | IEEE 802.11ax (160MHz, MCS1, 90pc dc)         | WLAN          | 9.16 | ± 9.6 % |
| 10745 | AAC | IEEE 802.11ax (160MHz, MCS2, 90pc dc)         | WLAN          | 8.93 | ± 9.6 % |
| 10746 | AAC | IEEE 802.11ax (160MHz, MCS3, 90pc dc)         | WLAN          | 9.11 | ± 9.6 % |
| 10747 | AAC | IEEE 802.11ax (160MHz, MCS4, 90pc dc)         | WLAN          | 9.04 | ± 9.6 % |
| 10748 | AAC | IEEE 802.11ax (160MHz, MCS5, 90pc dc)         | WLAN          | 8.93 | ± 9.6 % |
| 10749 | AAC | IEEE 802.11ax (160MHz, MCS6, 90pc dc)         | WLAN          | 8.90 | ± 9.6 % |
| 10750 | AAC | IEEE 802.11ax (160MHz, MCS7, 90pc dc)         | WLAN          | 8.79 | ± 9.6 % |
| 10751 | AAC | IEEE 802.11ax (160MHz, MCS8, 90pc dc)         | WLAN          | 8.82 | ± 9.6 % |
| 10752 | AAC | IEEE 802.11ax (160MHz, MCS9, 90pc dc)         | WLAN          | 8.81 | ± 9.6 % |
| 10753 | AAC | IEEE 802.11ax (160MHz, MCS10, 90pc dc)        | WLAN          | 9.00 | ± 9.6 % |
| 10754 | AAC | IEEE 802.11ax (160MHz, MCS11, 90pc dc)        | WLAN          | 8.94 | ± 9.6 % |
| 10755 | AAC | IEEE 802.11ax (160MHz, MCS0, 99pc dc)         | WLAN          | 8.64 | ± 9.6 % |
| 10756 | AAC | IEEE 802.11ax (160MHz, MCS1, 99pc dc)         | WLAN          | 8.77 | ± 9.6 % |
| 10757 | AAC | IEEE 802.11ax (160MHz, MCS2, 99pc dc)         | WLAN          | 8.77 | ± 9.6 % |
| 10758 | AAC | IEEE 802.11ax (160MHz, MCS3, 99pc dc)         | WLAN          | 8.69 | ± 9.6 % |
| 10759 | AAC | IEEE 802.11ax (160MHz, MCS4, 99pc dc)         | WLAN          | 8.58 | ± 9.6 % |
| 10760 | AAC | IEEE 802.11ax (160MHz, MCS5, 99pc dc)         | WLAN          | 8.49 | ± 9.6 % |
| 10761 | AAC | IEEE 802.11ax (160MHz, MCS6, 99pc dc)         | WLAN          | 8.58 | ± 9.6 % |
| 10762 | AAC | IEEE 802.11ax (160MHz, MCS7, 99pc dc)         | WLAN          | 8.49 | ± 9.6 % |
| 10763 | AAC | IEEE 802.11ax (160MHz, MCS8, 99pc dc)         | WLAN          | 8.53 | ± 9.6 % |
| 10764 | AAC | IEEE 802.11ax (160MHz, MCS9, 99pc dc)         | WLAN          | 8.54 | ± 9.6 % |
| 10765 | AAC | IEEE 802.11ax (160MHz, MCS10, 99pc dc)        | WLAN          | 8.54 | ± 9.6 % |
| 10766 | AAC | IEEE 802.11ax (160MHz, MCS11, 99pc dc)        | WLAN          | 8.51 | ± 9.6 % |
| 10767 | AAC | 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)    | 5G NR FR1 TDD | 7.99 | ± 9.6 % |
| 10768 | AAC | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)   | 5G NR FR1 TDD | 8.01 | ± 9.6 % |
| 10769 | AAC | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)   | 5G NR FR1 TDD | 8.01 | ± 9.6 % |
| 10770 | AAC | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)   | 5G NR FR1 TDD | 8.02 | ± 9.6 % |
| 10771 | AAC | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)   | 5G NR FR1 TDD | 8.02 | ± 9.6 % |
| 10772 | AAC | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)   | 5G NR FR1 TDD | 8.23 | ± 9.6 % |
| 10773 | AAC | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)   | 5G NR FR1 TDD | 8.03 | ± 9.6 % |
| 10774 | AAC | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)   | 5G NR FR1 TDD | 8.02 | ± 9.6 % |
| 10775 | AAC | 5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)  | 5G NR FR1 TDD | 8.31 | ± 9.6 % |
| 10776 | AAC | 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.30 | ± 9.6 % |
| 10777 | AAC | 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.30 | ± 9.6 % |
| 10778 | AAC | 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10779 | AAC | 5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.42 | ± 9.6 % |
| 10780 | AAC | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.38 | ± 9.6 % |
| 10781 | AAC | 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.38 | ± 9.6 % |
| 10782 | AAC | 5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.43 | ± 9.6 % |
| 10783 | AAC | 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz) | 5G NR FR1 TDD | 8.31 | ± 9.6 % |

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|-------|-----|-------------------------------------------------|---------------|------|---------|
| 10784 | AAC | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)  | 5G NR FR1 TDD | 8.29 | ± 9.6 % |
| 10785 | AAC | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)  | 5G NR FR1 TDD | 8.40 | ± 9.6 % |
| 10786 | AAC | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)  | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10787 | AAC | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)  | 5G NR FR1 TDD | 8.44 | ± 9.6 % |
| 10788 | AAC | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)  | 5G NR FR1 TDD | 8.39 | ± 9.6 % |
| 10789 | AAC | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)  | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10790 | AAC | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)  | 5G NR FR1 TDD | 8.39 | ± 9.6 % |
| 10791 | AAC | 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)      | 5G NR FR1 TDD | 7.83 | ± 9.6 % |
| 10792 | AAC | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 7.92 | ± 9.6 % |
| 10793 | AAC | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 7.95 | ± 9.6 % |
| 10794 | AAC | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 7.82 | ± 9.6 % |
| 10795 | AAC | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 7.84 | ± 9.6 % |
| 10796 | AAC | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 7.82 | ± 9.6 % |
| 10797 | AAC | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 8.01 | ± 9.6 % |
| 10798 | AAC | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 7.89 | ± 9.6 % |
| 10799 | AAC | 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 7.93 | ± 9.6 % |
| 10801 | AAC | 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 7.89 | ± 9.6 % |
| 10802 | AAC | 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 7.87 | ± 9.6 % |
| 10803 | AAE | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)    | 5G NR FR1 TDD | 7.93 | ± 9.6 % |
| 10805 | AAD | 5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10806 | AAD | 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10809 | AAD | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10810 | AAD | 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10812 | AAD | 5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10817 | AAD | 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10818 | AAD | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10819 | AAD | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.33 | ± 9.6 % |
| 10820 | AAD | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.30 | ± 9.6 % |
| 10821 | AAC | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10822 | AAD | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10823 | AAC | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.36 | ± 9.6 % |
| 10824 | AAD | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.39 | ± 9.6 % |
| 10825 | AAD | 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10827 | AAD | 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.42 | ± 9.6 % |
| 10828 | AAE | 5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)  | 5G NR FR1 TDD | 8.43 | ± 9.6 % |
| 10829 | AAD | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz) | 5G NR FR1 TDD | 8.40 | ± 9.6 % |
| 10830 | AAD | 5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.63 | ± 9.6 % |
| 10831 | AAD | 5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.73 | ± 9.6 % |
| 10832 | AAD | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.74 | ± 9.6 % |
| 10833 | AAD | 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10834 | AAD | 5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.75 | ± 9.6 % |
| 10835 | AAD | 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10836 | AAE | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.66 | ± 9.6 % |
| 10837 | AAD | 5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.68 | ± 9.6 % |
| 10839 | AAD | 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.70 | ± 9.6 % |
| 10840 | AAD | 5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)     | 5G NR FR1 TDD | 7.67 | ± 9.6 % |
| 10841 | AAD | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)    | 5G NR FR1 TDD | 7.71 | ± 9.6 % |
| 10843 | AAD | 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)   | 5G NR FR1 TDD | 8.49 | ± 9.6 % |
| 10844 | AAD | 5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)   | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10846 | AAD | 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)   | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10854 | AAD | 5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)  | 5G NR FR1 TDD | 8.34 | ± 9.6 % |
| 10855 | AAD | 5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)  | 5G NR FR1 TDD | 8.36 | ± 9.6 % |
| 10856 | AAD | 5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)  | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10857 | AAD | 5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)  | 5G NR FR1 TDD | 8.35 | ± 9.6 % |
| 10858 | AAD | 5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)  | 5G NR FR1 TDD | 8.36 | ± 9.6 % |
| 10859 | AAD | 5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)  | 5G NR FR1 TDD | 8.34 | ± 9.6 % |

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|-------|-----|------------------------------------------------------|---------------|------|---------|
| 10860 | AAD | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)       | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10861 | AAD | 5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)       | 5G NR FR1 TDD | 8.40 | ± 9.6 % |
| 10863 | AAD | 5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)       | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10864 | AAE | 5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)       | 5G NR FR1 TDD | 8.37 | ± 9.6 % |
| 10865 | AAD | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)      | 5G NR FR1 TDD | 8.41 | ± 9.6 % |
| 10866 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)      | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10868 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 5.89 | ± 9.6 % |
| 10869 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)     | 5G NR FR2 TDD | 5.75 | ± 9.6 % |
| 10870 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)  | 5G NR FR2 TDD | 5.86 | ± 9.6 % |
| 10871 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)    | 5G NR FR2 TDD | 5.75 | ± 9.6 % |
| 10872 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz) | 5G NR FR2 TDD | 6.52 | ± 9.6 % |
| 10873 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)    | 5G NR FR2 TDD | 6.61 | ± 9.6 % |
| 10874 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz) | 5G NR FR2 TDD | 6.65 | ± 9.6 % |
| 10875 | AAD | 5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)        | 5G NR FR2 TDD | 7.78 | ± 9.6 % |
| 10876 | AAD | 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)     | 5G NR FR2 TDD | 8.39 | ± 9.6 % |
| 10877 | AAD | 5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)       | 5G NR FR2 TDD | 7.95 | ± 9.6 % |
| 10878 | AAD | 5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)    | 5G NR FR2 TDD | 8.41 | ± 9.6 % |
| 10879 | AAD | 5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)       | 5G NR FR2 TDD | 8.12 | ± 9.6 % |
| 10880 | AAD | 5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)    | 5G NR FR2 TDD | 8.38 | ± 9.6 % |
| 10881 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)      | 5G NR FR2 TDD | 5.75 | ± 9.6 % |
| 10882 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)   | 5G NR FR2 TDD | 5.96 | ± 9.6 % |
| 10883 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)     | 5G NR FR2 TDD | 6.57 | ± 9.6 % |
| 10884 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)  | 5G NR FR2 TDD | 6.53 | ± 9.6 % |
| 10885 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)     | 5G NR FR2 TDD | 6.61 | ± 9.6 % |
| 10886 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)  | 5G NR FR2 TDD | 6.65 | ± 9.6 % |
| 10887 | AAD | 5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)         | 5G NR FR2 TDD | 7.78 | ± 9.6 % |
| 10888 | AAD | 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)      | 5G NR FR2 TDD | 8.35 | ± 9.6 % |
| 10889 | AAD | 5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)        | 5G NR FR2 TDD | 8.02 | ± 9.6 % |
| 10890 | AAD | 5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)     | 5G NR FR2 TDD | 8.40 | ± 9.6 % |
| 10891 | AAD | 5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)        | 5G NR FR2 TDD | 8.13 | ± 9.6 % |
| 10892 | AAD | 5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)     | 5G NR FR2 TDD | 8.41 | ± 9.6 % |
| 10897 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)        | 5G NR FR1 TDD | 5.66 | ± 9.6 % |
| 10898 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)       | 5G NR FR1 TDD | 5.67 | ± 9.6 % |
| 10899 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)       | 5G NR FR1 TDD | 5.67 | ± 9.6 % |
| 10900 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)       | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10901 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)       | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10902 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)       | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10903 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)       | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10904 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)       | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10905 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)       | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10906 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)       | 5G NR FR1 TDD | 5.68 | ± 9.6 % |
| 10907 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)      | 5G NR FR1 TDD | 5.78 | ± 9.6 % |
| 10908 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.93 | ± 9.6 % |
| 10909 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.96 | ± 9.6 % |
| 10910 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.83 | ± 9.6 % |
| 10911 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.93 | ± 9.6 % |
| 10912 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.84 | ± 9.6 % |
| 10913 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.84 | ± 9.6 % |
| 10914 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.85 | ± 9.6 % |
| 10915 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.83 | ± 9.6 % |
| 10916 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 80 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.87 | ± 9.6 % |
| 10917 | AAD | 5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)    | 5G NR FR1 TDD | 5.94 | ± 9.6 % |
| 10918 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 5.86 | ± 9.6 % |
| 10919 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)    | 5G NR FR1 TDD | 5.86 | ± 9.6 % |
| 10920 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)    | 5G NR FR1 TDD | 5.87 | ± 9.6 % |
| 10921 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)    | 5G NR FR1 TDD | 5.84 | ± 9.6 % |

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February 16, 2021

|       |     |                                                     |               |       |         |
|-------|-----|-----------------------------------------------------|---------------|-------|---------|
| 10922 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 5.82  | ± 9.6 % |
| 10923 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 5.84  | ± 9.6 % |
| 10924 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 5.84  | ± 9.6 % |
| 10925 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 5.95  | ± 9.6 % |
| 10926 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 5.84  | ± 9.6 % |
| 10927 | AAD | 5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)   | 5G NR FR1 TDD | 5.94  | ± 9.6 % |
| 10928 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)       | 5G NR FR1 FDD | 5.52  | ± 9.6 % |
| 10929 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)      | 5G NR FR1 FDD | 5.52  | ± 9.6 % |
| 10930 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)      | 5G NR FR1 FDD | 5.52  | ± 9.6 % |
| 10931 | AAD | 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)      | 5G NR FR1 FDD | 5.51  | ± 9.6 % |
| 10932 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)      | 5G NR FR1 FDD | 5.51  | ± 9.6 % |
| 10933 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)      | 5G NR FR1 FDD | 5.51  | ± 9.6 % |
| 10934 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)      | 5G NR FR1 FDD | 5.51  | ± 9.6 % |
| 10935 | AAA | 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)      | 5G NR FR1 FDD | 5.51  | ± 9.6 % |
| 10936 | AAC | 5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)     | 5G NR FR1 FDD | 5.90  | ± 9.6 % |
| 10937 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)    | 5G NR FR1 FDD | 5.77  | ± 9.6 % |
| 10938 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)    | 5G NR FR1 FDD | 5.90  | ± 9.6 % |
| 10939 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)    | 5G NR FR1 FDD | 5.82  | ± 9.6 % |
| 10940 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)    | 5G NR FR1 FDD | 5.89  | ± 9.6 % |
| 10941 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)    | 5G NR FR1 FDD | 5.83  | ± 9.6 % |
| 10942 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)    | 5G NR FR1 FDD | 5.85  | ± 9.6 % |
| 10943 | AAB | 5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)    | 5G NR FR1 FDD | 5.95  | ± 9.6 % |
| 10944 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)    | 5G NR FR1 FDD | 5.81  | ± 9.6 % |
| 10945 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)   | 5G NR FR1 FDD | 5.85  | ± 9.6 % |
| 10946 | AAC | 5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)   | 5G NR FR1 FDD | 5.83  | ± 9.6 % |
| 10947 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)   | 5G NR FR1 FDD | 5.87  | ± 9.6 % |
| 10948 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)   | 5G NR FR1 FDD | 5.94  | ± 9.6 % |
| 10949 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)   | 5G NR FR1 FDD | 5.87  | ± 9.6 % |
| 10950 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)   | 5G NR FR1 FDD | 5.94  | ± 9.6 % |
| 10951 | AAB | 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)   | 5G NR FR1 FDD | 5.92  | ± 9.6 % |
| 10952 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)   | 5G NR FR1 FDD | 8.25  | ± 9.6 % |
| 10953 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)  | 5G NR FR1 FDD | 8.15  | ± 9.6 % |
| 10954 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)  | 5G NR FR1 FDD | 8.23  | ± 9.6 % |
| 10955 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)  | 5G NR FR1 FDD | 8.42  | ± 9.6 % |
| 10956 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)   | 5G NR FR1 FDD | 8.14  | ± 9.6 % |
| 10957 | AAC | 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)  | 5G NR FR1 FDD | 8.31  | ± 9.6 % |
| 10958 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)  | 5G NR FR1 FDD | 8.61  | ± 9.6 % |
| 10959 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)  | 5G NR FR1 FDD | 8.33  | ± 9.6 % |
| 10960 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)   | 5G NR FR1 TDD | 9.32  | ± 9.6 % |
| 10961 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)  | 5G NR FR1 TDD | 9.36  | ± 9.6 % |
| 10962 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)  | 5G NR FR1 TDD | 9.40  | ± 9.6 % |
| 10963 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)  | 5G NR FR1 TDD | 9.55  | ± 9.6 % |
| 10964 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)   | 5G NR FR1 TDD | 9.29  | ± 9.6 % |
| 10965 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)  | 5G NR FR1 TDD | 9.37  | ± 9.6 % |
| 10966 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)  | 5G NR FR1 TDD | 9.55  | ± 9.6 % |
| 10967 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)  | 5G NR FR1 TDD | 9.42  | ± 9.6 % |
| 10968 | AAB | 5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz) | 5G NR FR1 TDD | 9.49  | ± 9.6 % |
| 10972 | AAB | 5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)         | 5G NR FR1 TDD | 11.59 | ± 9.6 % |
| 10973 | AAB | 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)     | 5G NR FR1 TDD | 9.06  | ± 9.6 % |
| 10974 | AAB | 5G NR (CP-OFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz)  | 5G NR FR1 TDD | 10.28 | ± 9.6 % |

<sup>15</sup> Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



## ANNEX E: Probe Calibration Certificate(SN:3677)



In Collaboration with  
**s p e a g**  
CALIBRATION LABORATORY



中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L0570

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com Http://www.chinattl.cn

Client **TA(Shanghai)**Certificate No: **Z21-60285****CALIBRATION CERTIFICATE**Object **EX3DV4 - SN : 3677**

Calibration Procedure(s) **FF-Z11-004-02**  
**Calibration Procedures for Dosimetric E-field Probes**

Calibration date: **August 12, 2021**

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.

Calibration Equipment used (M&amp;TE critical for calibration)

| Primary Standards        | ID #        | Cal Date(Calibrated by, Certificate No.) | Scheduled Calibration |
|--------------------------|-------------|------------------------------------------|-----------------------|
| Power Meter NRP2         | 101919      | 15-Jun-21(CTTL, No.J21X04466)            | Jun-22                |
| Power sensor NRP-Z91     | 101547      | 15-Jun-21(CTTL, No.J21X04466)            | Jun-22                |
| Power sensor NRP-Z91     | 101548      | 15-Jun-21(CTTL, No.J21X04466)            | Jun-22                |
| Reference 10dBAttenuator | 18N50W-10dB | 10-Feb-20(CTTL, No.J20X00525)            | Feb-22                |
| Reference 20dBAttenuator | 18N50W-20dB | 10-Feb-20(CTTL, No.J20X00526)            | Feb-22                |
| Reference Probe EX3DV4   | SN 3617     | 27-Jan-21(SPEAG, No.EX3-3617_Jan21)      | Jan-22                |
| DAE4                     | SN 1556     | 15-Jan-21(SPEAG, No.DAE4-1556_Jan21)     | Jan-22                |
| Secondary Standards      | ID #        | Cal Date(Calibrated by, Certificate No.) | Scheduled Calibration |
| SignalGenerator MG3700A  | 6201052605  | 16-Jun-21(CTTL, No.J21X04467)            | Jun-22                |
| Network Analyzer E5071C  | MY46110673  | 21-Jan-21(CTTL, No.J20X00515)            | Jan-22                |

|                | Name        | Function           | Signature |
|----------------|-------------|--------------------|-----------|
| Calibrated by: | Yu Zongying | SAR Test Engineer  |           |
| Reviewed by:   | Lin Hao     | SAR Test Engineer  |           |
| Approved by:   | Qi Dianyuan | SAR Project Leader |           |

Issued: August 14, 2021

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: Z21-60285

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