SAR TEST REPORT

Applicant	Dspread Technology (Beijing) Inc
FCC ID	2AGQ6-D70
Product Type	Smart POS
Model	D70
Report No.	R2411A1678-S1V2
Issue Date	February 24, 2025

Eurofins 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.

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Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	January 24, 2025
Rev.1	Update description.	February 19, 2025
Rev.2	Update description.	February 24, 2025
Note: This revised report (Report No.: R2411A1678-S1V2) supersedes and replaces the previously issued report (Report No.: R2411A1678-S1V1). Please discard or destroy the previously issued report and dispose of it accordingly.		

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 **Eurofins 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)

Eurofins 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)

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

1.3 Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
Address:	Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
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1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25°C
Relative humidity	Min. = 20%, Max. = 80%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards 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 Body-worn (Separation 15mm)	1g SAR Hotspot (Separation 10mm)	Product Specific 10-g SAR (Separation 0mm)
GSM 850	0.789	0.789	1.014
GSM 1900	0.776	1.389	3.268
WCDMA Band II	0.625	1.013	2.455
WCDMA Band IV	0.840	1.348	2.852
WCDMA Band V	0.341	0.341	0.408
LTE FDD 4	0.890	1.446	3.054
LTE FDD 7	0.827	1.268	2.212
LTE FDD 12 (LTE FDD 17)	0.399	0.399	0.460
LTE FDD 25 (LTE FDD 2)	0.682	1.350	3.033
LTE FDD 26 (LTE FDD 5)	0.327	0.441	0.470
LTE TDD 41 (LTE TDD 38)	1.071	1.364	2.172
Wi-Fi (2.4GHz)	0.223	0.223	0.194
Wi-Fi (5GHz)	0.150	0.254	0.199
Bluetooth	NA	NA	NA
NFC	NA	NA	0.060

Date of Testing: November 13, 2024 ~ November 25, 2024
Date of Sample Received: November 7, 2024

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 Eurofins 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.

1) According to TCB workshop October, 2014 RF Exposure Procedures Update (Overlapping LTE Bands):
   a) Main and Div Antenna SAR for LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range 699-716 MHz); LTE Band 2 (Frequency range 1850-1910) is covered by LTE Band 25 (Frequency range: 1850-1915 MHz) ; LTE Band 5 (Frequency range 824-849 MHz) is covered by LTE Band 26 (Frequency range: 814- 849MHz) ; LTE Band 38 (Frequency range 2570-2620 MHz) is covered by LTE Band 41 (Frequency range: 2535-2654.9MHz) due to similar frequency range, same maximum tune up limit and same channel bandwidth.

The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits according to the FCC rule §2.1093, the ANSI C95.1: 1992/IEEE C95.1: 1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.

Table 2: Highest Simultaneous Transmission SAR

Exposure Configuration	1g SAR Body-worn (Separation 15mm)	1g SAR Hotspot (Separation 10mm)	Product Specific 10-g SAR (Separation 0mm)
Highest Simultaneous Transmission SAR (W/kg)	1.294	1.564	3.504
Note: The detail for simultaneous transmission consideration is described in chapter 10.3.			

3 Description of Equipment Under Test

Client Information

Applicant	Dspread Technology (Beijing) Inc
Applicant address	Rm.407, B12C, #10 (Universal Business Park), Jiuxianqiao Road, Chaoyang District, Beijing, China,100015
Manufacturer	Dspread Technology (Beijing) Inc
Manufacturer address	Rm.407, B12C, #10 (Universal Business Park), Jiuxianqiao Road, Chaoyang District, Beijing, China,100015

General Technologies

EUT Stage	Identical Prototype
Model	D70
IMEI	IMEI 1: 866146070000330 IMEI 2: 866146070002435
Hardware Version	1.1.0
Software Version	1.1.0
Antenna Type	Internal Antenna
Wi-Fi Hotspot	Wi-Fi 2.4GHz Wi-Fi 5GHz U-NII-1&U-NII-2A& U-NII-2C&U-NII-3
Power Class	GSM 850: 4 GSM 1900: 1 WCDMA Band II/IV/V: 3 LTE FDD 2/4/5/7/12/17/25/26: 3 LTE TDD 38/41: 3
Power Level	GSM 850: level 5 GSM 1900: level 0 WCDMA Band II/IV/V: all up bits LTE FDD 2/4/5/7/12/17/26: max power LTE TDD 38/41: max power
EUT Accessory	
Battery	Manufacturer: Guangdong Fenghua New Energy Co.,Ltd. Model: F50109MA
USB Cable	Manufacturer: ShenZhen FKY-QY Hardware&Electronics.,Ltd. Model: XC04W1000100
Note: The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.	

Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)	Rx (MHz)
GSM	850	Voice(GMSK) GPRS(GMSK) EGPRS(GMSK)	☐Multi-slot Class:8-1UP ☐Multi-slot Class:10-2UP ☒Multi-slot Class:12-4UP ☐Multi-slot Class:33-4UP	824 ~ 849	869 ~ 894
	1900			1850 ~ 1910	1930 ~ 1990
	Does this device support DTM (Dual Transfer Mode)? ☐Yes ☒No				
WCDMA	Band II	QPSK	HSDPA UE Category:24 HSUPA UE Category:7	1850 ~ 1910	1930 ~ 1990
	Band IV			1710 ~ 1755	2110 ~ 2155
	Band V			824 ~ 849	869 ~ 894
LTE	FDD 2	QPSK, 16QAM, 64QAM	Rel.9 /Category 4	1850 ~ 1910	1930 ~ 1990
	FDD 4			1710 ~ 1755	2110 ~ 2155
	FDD 5			824 ~ 849	869 ~ 894
	FDD 7			2500 ~ 2570	2620 ~ 2690
	FDD 12			699 ~ 716	729 ~ 746
	FDD 17			704 ~ 716	734 ~ 746
	FDD 25			1850 ~ 1915	1930 ~ 1995
	FDD 26			814 ~ 849	859 ~ 894
	TDD 38			2570 ~ 2620	2570 ~ 2620
	TDD 41			2535 ~ 2654.9	2535 ~ 2654.9
	Does this device support Carrier Aggregation (CA) ☐Yes ☒No				
	Does this device support SV-LTE (1xRTT-LTE)? ☐Yes ☒No				
Bluetooth	2.4GHz	Version 5.0 BR/EDR + LE		2402 ~2480	2402 ~2480
Wi-Fi	2.4GHz	DSSS, OFDM	802.11b/g/n HT20	2412 ~ 2462	2412 ~ 2462
		OFDM	802.11n HT40	2422 ~ 2452	2422 ~ 2452
	5GHz	OFDM	802.11a/n HT20/ HT40/ ac VHT20/ VHT40/ VHT80	5150 ~ 5250 5250 ~ 5350 5470 ~ 5725 5725 ~ 5850	5150 ~ 5250 5250 ~ 5350 5470 ~ 5725 5725 ~ 5850
	Does this device support MIMO ☐Yes ☒No				
NFC	13.56MHz				

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:

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 D06 Hotspot Mode v02r01

5 Operational Conditions during Test

5.1 Test Positions

5.1.1 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 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.

5.1.2 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 ≤ 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 (top) 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 ≥ 0.80 W/kg, the measurement was repeated once.
2) A second repeated measurement was preformed 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 ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 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 WCDMA 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 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

5.3.2.3 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 (βc, βd), and HS-DPCCH power offset parameters (ΔACK, ΔNACK, ΔCQI) 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 WCDMA Release 5 HSDPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (note 1, note 2)	CM(dB) (note 3)	MPR(dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (note 4)	15/15 (note 4)	64	12/15 (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

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI}= 8$\Leftrightarrow$$A_{hs}$ = β_{hs}/β_c=30/15$\Leftrightarrow$$\beta_{hs}$=30/15*$\beta_c$
Note 2: CM=1 for β_c/β_d =12/15, β_{hs}/β_c=24/15.
Note 3: For subtest 2 the β_c/β_d 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 β_c=11/15 and β_d=15/15.

5.3.2.4 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 β 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	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs}(1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM (2) (dB)	MPR (dB)	AG(4) Index	E-TFCI
1	11/15(3)	15/15(3)	64	11/15(3)	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	β_{ed1}:47/15 β_{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(4)	15/15(4)	64	15/15(4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, ΔNACK and Δ_{CQI} = 8 $\Leftrightarrow$ A_{hs} = β_{hs}/β_c = 30/15 $\Leftrightarrow\beta_{hs}$= 30/15 *$\beta_c$.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 β_c/β_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 β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_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 β_c = 14/15 and β_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: β_{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 (No DPDCH)	4	8	2	2 SF2 & 2 SF4	11484	5.76
	4	4	10		20000	2.00
7 (No DPDCH)	4	8	2	2 SF2 & 2 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.
UE Categories 1 to 6 supports QPSK only. UE Category 7 supports QPSK and 16QAM. (TS25.306-7.3.0)

5.3.2.5 HSPA Test Configuration

SAR test exclusion may apply to 3GPP Rel. 6 HSPA. When SAR measurement is required for HSPA, 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 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) Regardless of whether a PBA is required, the following information must be verified and included in the SAR report for devices supporting HSPA:
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 β and Δ values used to configure the device for testing, power setback procedures described in 3GPP TS 34.121 for the power measurements, and HSPA channel conditions (active and stable) for the entire duration of the measurement according to the required E-TFCI and AG index values.
3) 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 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			
Category 17 NOTE 2	15	1	35280	259200	QPSK, 16QAM, 64QAM	–	
			23370	345600	–	QPSK, 16QAM	
Category 18 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			
Category 21	15	1	23370	345600	-	-	QPSK, 16QAM
Category 22	15	1	27952	345600			
Category 23	15	1	35280	518400			QPSK, 16QAM, 64QAM
Category 24	15	1	42192	518400			

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 ≤ 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 ≤ 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 > ½ 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 > ½ 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.

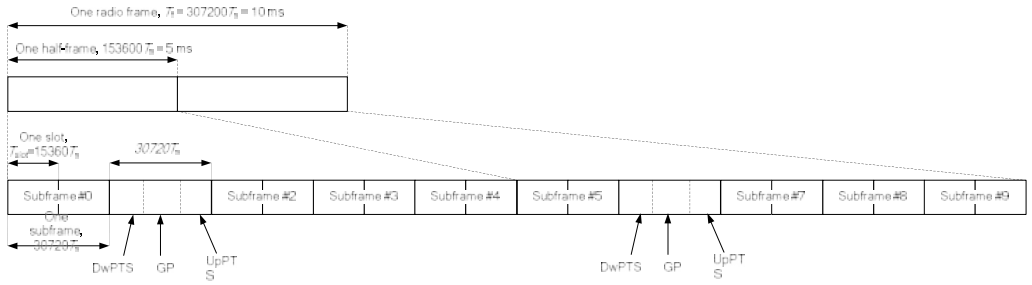


Figure 1: Frame structure type 2

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:

Duty cycle = (30720Ts*Ups + Uplink Component*Specials)/(307200Ts)

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

Uplink Component = UpPTS

In conclusion, for the TDD LTE Band, Duty Cycle can be calculated with formula as below. All these

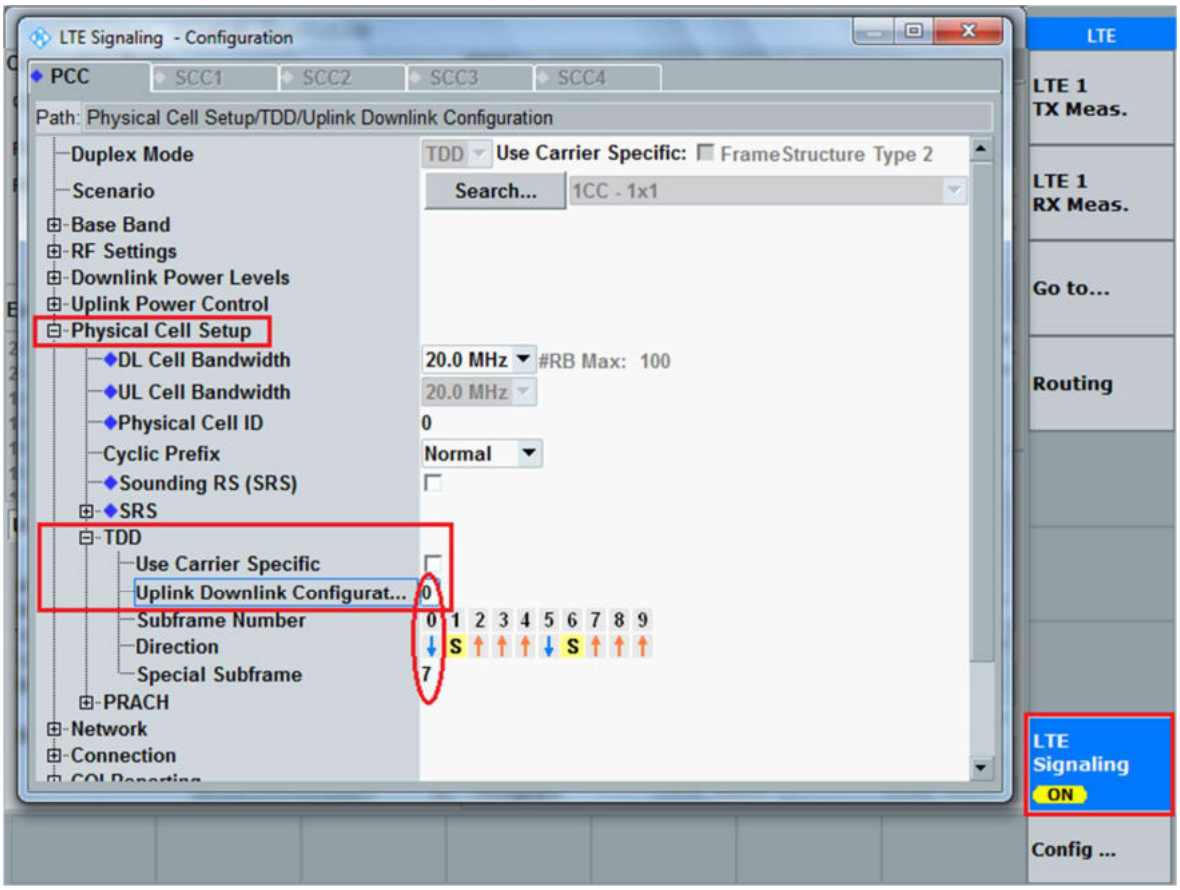
sets are ok when we test, or we can set as below.

Duty cycle = [(30720Ts*Ups) + UpPTS *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	3	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



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:

- ≤ 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 ≤ 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 ≤ 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.

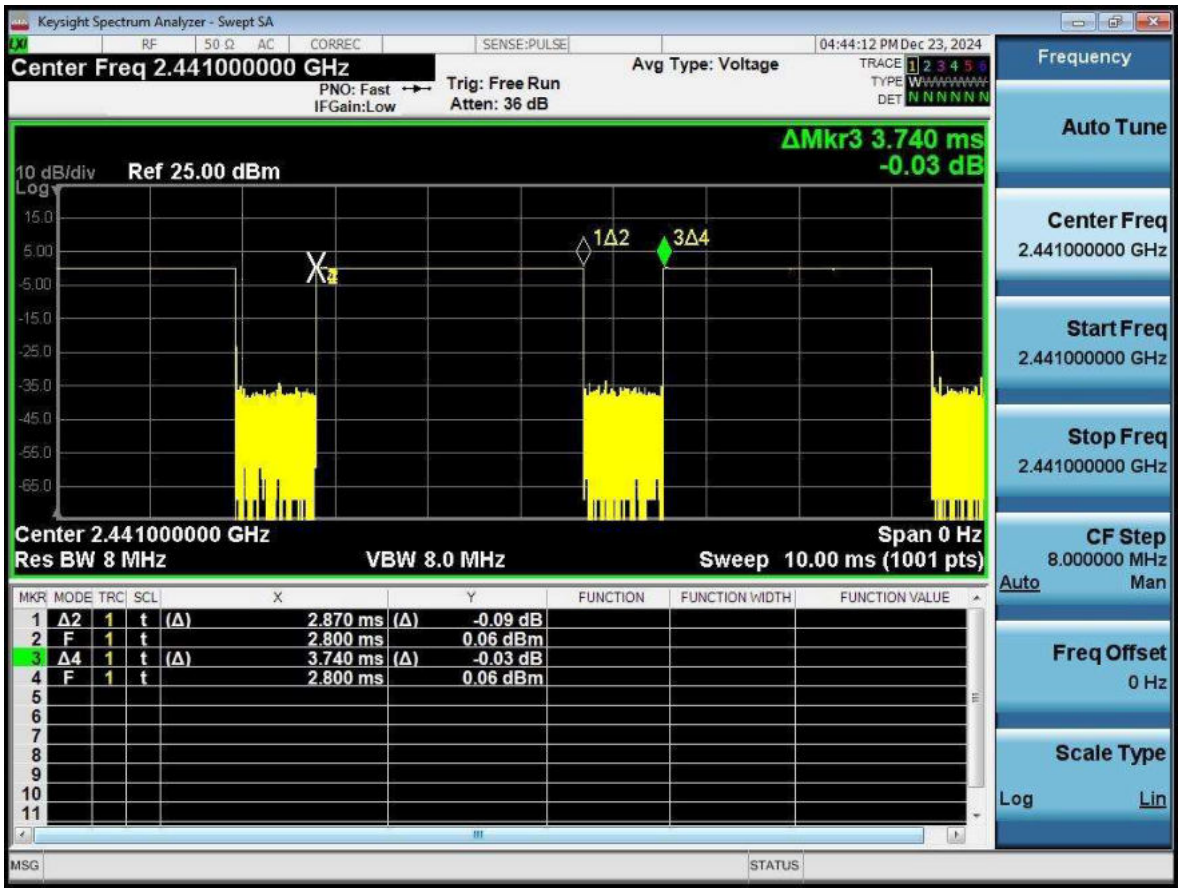
To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

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 Bluetooth Test Configuration

For Bluetooth SAR testing, Bluetooth 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 hoping off and data rate set for DH5.

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

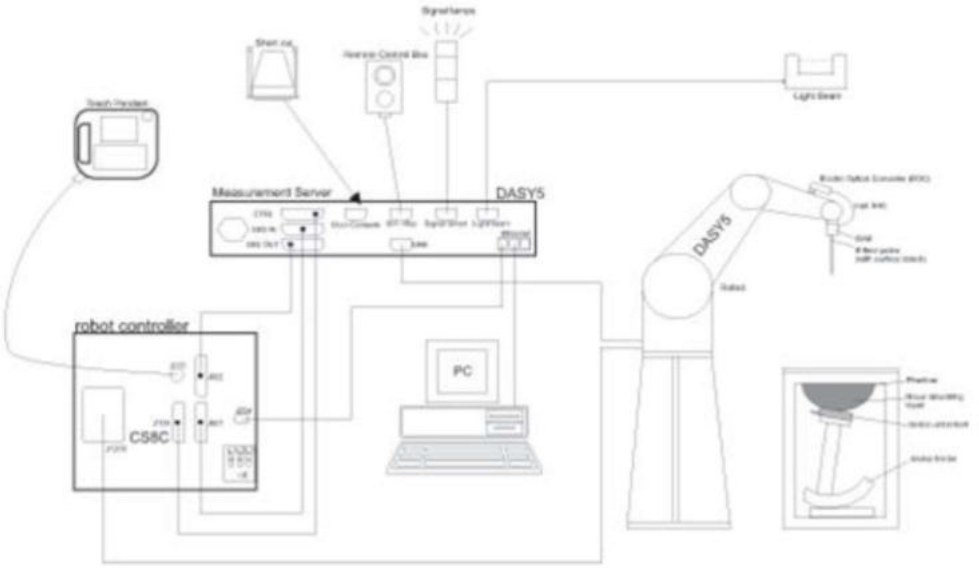


Note: Duty factor= Ton (ms)/ T(on+off) (ms)=2.800/3.740*100%=74.9%

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 Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) 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 ± 10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB. 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 bellow 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.

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

Where: Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),

ΔT = Temperature increase due to RF exposure.

Or

$$SAR=|E|^2\sigma/\rho$$

Where: σ = Simulated tissue conductivity,
ρ = Tissue density (kg/m^3).

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	½·δ·ln(2) ± 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: ΔxArea, ΔyArea	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 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 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 shoes 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: $\triangle x_{zoom} \triangle y_{zoom}$			≤2GHz: ≤8mm 2 – 3GHz: ≤5mm*	3 – 4GHz: ≤5mm* 4 – 6GHz: ≤4mm*
Maximum zoom scan spatial resolution, normal to phantom surface	Uniform grid: $\triangle z_{zoom}(n)$		≤5mm	3 – 4GHz: ≤4mm 4 – 5GHz: ≤3mm 5 – 6GHz: ≤2mm
	Graded grid	$\triangle z_{zoom}(1)$: between 1st two points closest to phantom surface	≤4mm	3 – 4GHz: ≤3mm 4 – 5GHz: ≤2.5mm 5 – 6GHz: ≤2mm
		$\triangle z_{zoom}(n>1)$: between subsequent points	≤1.5•$\triangle z_{zoom}(n-1)$	
Minimum zoom scan volume	X, y, z		≥30mm	3 – 4GHz: ≥28mm 4 – 5GHz: ≥25mm 5 – 6GHz: ≥22mm
Note: δ 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 *reported* SAR from the *area scan based 1-g SAR estimation* 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 for 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 Main Test Equipment

Name of Equipment	Manufacturer	Type/Model	Serial Number	Software Version	Last Cal.	Cal. Due Date
Network Analyzer	Agilent	E5071B	MY42404014	/	2024-05-07	2025-05-06
Dielectric Probe Kit	SPEAG	DAK-12	1171	/	2024-07-15	2025-07-14
Dielectric Probe Kit	SPEAG	DAK-3.5	1332	/	2024-07-15	2025-07-14
Power Meter	Agilent	E4417A	GB41291714	/	2024-05-07	2025-05-06
Power Sensor	Agilent	N8481H	MY50350004	/	2024-05-07	2025-05-06
Power Sensor	Agilent	E9327A	US40441622	/	2024-05-07	2025-05-06
Signal Generator	KEYSIGHT	N5182B-X07	MY51350303	/	2023-12-05	2024-12-04
Dual Directional Coupler	UCL	UCL-DDC056G-S	20010600118		/	/
Amplifier	R&S	SCU18F	101022	/	2024-05-08	2025-05-07
Wireless Communication Tester	Anritsu	MT8820C	6201342015	/	2023-12-05	2024-12-04
Wireless Communication Tester	Agilent	E5515C	MY48360988	/	2023-12-05	2024-12-04
Wireless Communication Tester	R&S	CMW 500	146734	/	2024-05-07	2025-05-06
E-field Probe	SPEAG	EX3DV4	7689	/	2024-06-04	2025-06-03
DAE	SPEAG	DAE4	1317	/	2024-09-10	2025-09-09
Validation Kit 750MHz	SPEAG	D750V3	1045	/	2023-09-12	2026-09-11
Validation Kit 835MHz	SPEAG	D835V2	4d020	/	2023-09-15	2026-09-14
Validation Kit 1750MHz	SPEAG	D1750V2	1033	/	2023-03-23	2026-03-22
Validation Kit 1900MHz	SPEAG	D1900V2	5d060	/	2023-09-12	2026-09-11
Validation Kit 2450MHz	SPEAG	D2450V2	786	/	2023-09-12	2026-09-11
Validation Kit 2600MHz	SPEAG	D2600V2	1025	/	2024-05-08	2027-05-07
Validation Kit 5GHz	SPEAG	D5GHzV2	1203	/	2022-12-09	2025-12-08
Validation Kit 13MHz	SPEAG	CLA13	1024	/	2022-09-12	2025-09-11
Software for Tissue	SPEAG	DAK 3.0.4.1	/	3.0.4.1	/	/
Temperature Probe	Auden	DTM3000	3905	/	2023-12-05	2024-12-04
Twin SAM Phantom	SPEAG	SAM1	1667	/	/	/
Twin SAM Phantom	SPEAG	SAM2	1666	/	/	/
Hygrothermograph	Anymetr	HTC - 1	TA2024A030	/	2024-05-06	2025-05-05
Test System	SPEAG	TX90 XLspeag	F11/5H7CA1/A/01	52.10.4.1527	/	/

8 Tissue Dielectric Parameter Measurements & System Check

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 ± 2°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)	ε_r	σ(s/m)
750	42.0	0.90
835	41.5	0.90
1750	40.1	1.37
1900	40.0	1.40
2450	39.2	1.80
2600	39.0	1.96
5250	35.9	4.71
5600	35.5	5.07
5750	35.4	5.22
13.56	55.0	0.75

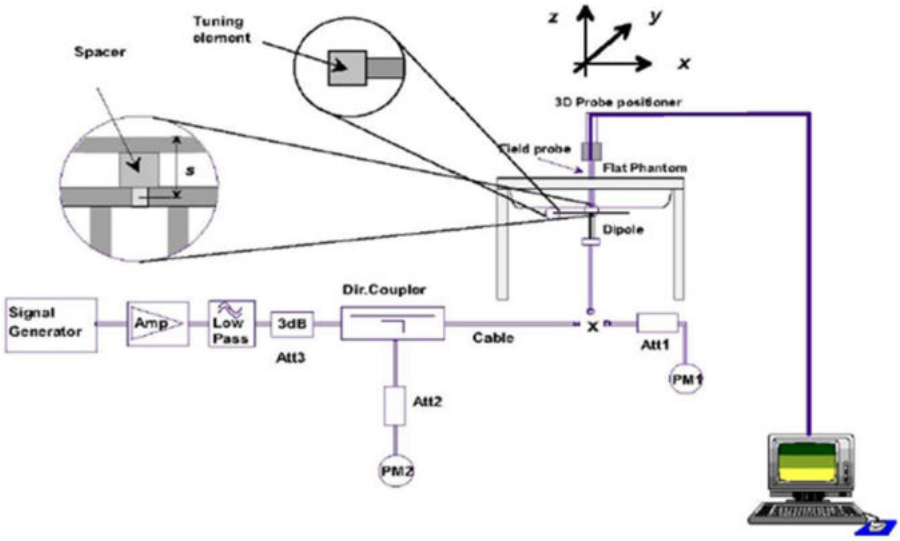
Measurements results

Frequency (MHz)	Test Date	Temp ℃	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within ±5%)	
			ε_r	σ(s/m)	ε_r	σ(s/m)	Dev ε_r(%)	Dev σ(%)
750	2024/11/13	21.5	42.3	0.88	42.0	0.90	0.95	-1.12
835	2024/11/14	21.5	41.4	0.88	41.5	0.90	-0.24	-2.22
1750	2024/11/16	21.5	40.2	1.34	40.1	1.37	0.25	-2.19
1900	2024/11/18	21.5	40.1	1.41	40.0	1.40	0.25	0.71
	2024/11/19	21.5	40.2	1.43	40.0	1.40	0.50	2.14
2450	2024/11/15	21.5	38.6	1.81	39.2	1.80	-1.53	0.56
2600	2024/11/20	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
	2024/11/21	21.5	38.4	1.94	39.0	1.96	-1.54	-1.02
5250	2024/11/23	21.5	35.5	4.80	35.9	4.71	-1.11	1.91
5600	2024/11/25	21.5	34.2	5.21	35.5	5.07	-3.66	2.76
5750	2024/11/25	21.5	34.9	5.21	35.4	5.22	-1.41	-0.19
13.56	2024/11/23	21.5	54.18	0.73	55.0	0.75	-1.49	-2.67
Note: The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm.								

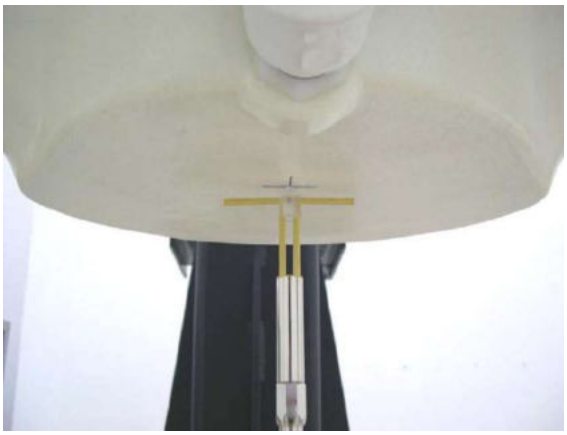
8.2 System Check

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 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)	Δ %	Impedance (Ω)			
					Real	ΔΩ	Imaginary	ΔΩ
Dipole D1750V2 SN: 1033	Head Liquid	3/23/2023	36.2	/	51.2	/	-0.98	/
		3/22/2024	35.4	-2.2	51.6	0.4	-1.28	-0.3
Dipole D5GHzV2 (5250 MHz) SN: 1203	Head Liquid	12/9/2022	29.0	/	48.5	/	-3.20	/
		12/8/2023	28.4	-2.1	48.4	-0.1	-3.40	-0.2
		12/7/2024	28.7	1.1	48.8	0.4	-3.30	0.1
Dipole D5GHzV2 (5600 MHz) SN: 1203	Head Liquid	12/9/2022	30.4	/	51.7	/	2.60	/
		12/8/2023	30.5	0.3%	51.5	-0.2	2.40	-0.2
		12/7/2024	30.2	-1.0	51.6	0.1	2.70	0.3
Dipole D5GHzV2 (5750 MHz) SN: 1203	Head Liquid	12/9/2022	25.3	/	53.6	/	4.30	/
		12/8/2023	25.7	1.6%	53.1	-0.5	4.7	0.4
		12/7/2024	25.5	-0.8	53.4	0.3	4.50	-0.2
Dipole CLA13 SN: 1024	Head Liquid	9/12/2022	-26.9	/	46.3	/	2.40	/
		9/11/2023	-26.0	3.3	47.0	0.7	2.37	-0.03
		9/10/2024	-26.3	1.2	46.7	-0.3	2.44	0.07

System Check Results

Frequency (MHz)	Test Date	Temp ℃	250mW Measured SAR_{1g} (W/kg)	1W Normalized SAR_{1g} (W/kg)	1W Target SAR_{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
750	2024/11/13	21.5	2.13	8.52	8.47	0.59	1
835	2024/11/14	21.5	2.44	9.76	9.75	0.10	2
1750	2024/11/16	21.5	8.95	35.80	36.80	-2.72	3
1900	2024/11/18	21.5	9.88	39.52	40.40	-2.18	4
	2024/11/19	21.5	9.85	39.40	40.40	-2.48	5
2450	2024/11/15	21.5	13.70	54.80	52.60	4.18	6
2600	2024/11/20	21.5	13.90	55.60	56.10	-0.89	7
	2024/11/21	21.5	13.88	55.52	56.10	-1.03	8
Frequency (MHz)	**Test Date**	**Temp ℃**	**100mW Measured SAR_{1g} (W/kg)**	**1W Normalized SAR_{1g} (W/kg)**	**1W Target SAR_{1g} (W/kg)**	**Δ % (Limit ±10%)**	**Plot No.**
5250	2024/11/23	21.5	7.87	78.70	77.70	1.29	9
5600	2024/11/25	21.5	7.67	76.70	80.30	-4.48	10
5750	2024/11/25	21.5	7.66	76.60	76.80	-0.26	11
Note: Target Values used derive from the calibration certificate data storage and evaluation.							

Frequency (MHz)	Test Date	Temp ℃	1W Measured SAR_{10g} (W/kg)	1W Target SAR_{10g} (W/kg)	Δ % (Limit ±10%)	Plot No.
13.56	2024/11/23	21.5	0.343	0.355	-3.38	12
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 (Σ)	CW Validation		
								Sensitivity	Probe Linearity	Probe Isotropy
750	2022/12/10	7689	EX3DV4	750	Head	42.0	0.90	PASS	PASS	PASS
835	2022/12/10	7689	EX3DV4	835	Head	41.5	0.90	PASS	PASS	PASS
1750	2022/12/10	7689	EX3DV4	1750	Head	40.1	1.37	PASS	PASS	PASS
1900	2022/12/10	7689	EX3DV4	1900	Head	40.0	.1.40	PASS	PASS	PASS
2300	2022/12/10	7689	EX3DV4	1900	Head	39.5	.1.67	PASS	PASS	PASS
2450	2022/12/10	7689	EX3DV4	2450	Head	39.2	1.80	PASS	PASS	PASS
2600	2022/12/10	7689	EX3DV4	2600	Head	39.0	1.96	PASS	PASS	PASS
3500	2022/12/10	7689	EX3DV4	3500	Head	37.9	2.91	PASS	PASS	PASS
3700	2022/12/10	7689	EX3DV4	3700	Head	37.7	3.12	PASS	PASS	PASS
3900	2022/12/10	7689	EX3DV4	3900	Head	37.5	3.32	PASS	PASS	PASS
5250	2022/12/10	7689	EX3DV4	5250	Head	35.9	4.71	PASS	PASS	PASS
5600	2022/12/10	7689	EX3DV4	5600	Head	35.5	5.07	PASS	PASS	PASS
5750	2022/12/10	7689	EX3DV4	5750	Head	35.4	5.22	PASS	PASS	PASS

Frequency [MHz]	Date	Probe SN	Probe Type	Probe Cal Point		PERM (Er)	COND (Σ)	CW Validation		
								Sensitivity	Probe Linearity	Probe Isotropy
13	2023/07/20	7689	EX3DV4	13	Head	55.0	0.75	PASS	PASS	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

GSM 850		Burst-Averaged Output Power(dBm)				Division Factors	Frame-Averaged Output Power(dBm)			
		Tune-up	Channel/Frequency (MHz)				Tune-up	Channel/Frequency (MHz)		
		MAX	128 /824.2	190 /836.6	251 /848.8		MAX	128 /824.2	190 /836.6	251 /848.8
GSM	CS	33.00	31.83	31.85	31.85	9.03	23.97	22.80	22.82	22.82
GPRS/ EGPRS (GMSK)	1 Tx Slot	33.00	31.73	31.87	31.82	9.03	23.97	22.70	22.84	22.79
	2 Tx Slots	32.00	31.37	31.43	31.37	6.02	25.98	25.35	25.41	25.35
	3 Tx Slots	30.50	29.90	29.90	29.91	4.26	26.24	25.64	25.64	25.65
	4 Tx Slots	29.50	28.77	28.86	28.87	3.01	**26.49**	25.76	25.85	25.86
GSM 1900		Burst-Averaged Output Power(dBm)				Division Factors	Frame-Averaged Output Power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	512 /1850.2	661 /1880	810 /1909.8		MAX	512 /1850.2	661 /1880	810 /1909.8
GSM	CS	30.50	29.32	29.15	29.11	9.03	21.47	20.29	20.12	20.08
GPRS/ EGPRS (GMSK)	1 Tx Slot	30.50	29.30	29.16	28.83	9.03	21.47	20.27	20.13	19.80
	2 Tx Slots	30.00	28.68	28.59	28.28	6.02	23.98	22.66	22.57	22.26
	3 Tx Slots	28.00	27.10	27.00	26.73	4.26	23.74	22.84	22.74	22.47
	4 Tx Slots	27.00	26.01	25.94	25.70	3.01	**23.99**	23.00	22.93	22.69
Notes: The worst-case configuration and mode for SAR testing is determined to be as follows: Standalone: GSM 850 GMSK (GPRS) mode with 4 time slots for Max power, 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.

WCDMA Band II					
Full Power--Main Ant		Maximum Output Power (dBm)			
		Channel/Frequency (MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	22.38	22.26	22.17	23.00
HSDPA	Subtest 1	21.50	21.34	21.17	22.00
	Subtest 2	21.26	21.12	20.94	22.00
	Subtest 3	20.69	20.64	20.43	21.50
	Subtest 4	20.70	20.59	20.41	21.50
HSUPA	Subtest 1	19.51	19.31	19.13	20.50
	Subtest 2	19.47	19.34	19.15	20.50
	Subtest 3	20.49	20.35	20.16	21.00
	Subtest 4	19.03	18.87	18.69	20.50
	Subtest 5	20.52	20.34	20.14	21.50
Note: 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 IV					
Full Power--Main Ant		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	22.84	22.81	22.78	23.50
HSDPA	Subtest 1	21.94	21.67	21.58	23.00
	Subtest 2	21.74	21.46	21.41	23.00
	Subtest 3	21.29	20.95	20.90	22.00
	Subtest 4	21.20	20.92	20.87	22.00
HSUPA	Subtest 1	19.95	19.68	19.54	21.00
	Subtest 2	19.94	19.66	19.57	21.00
	Subtest 3	20.93	20.64	20.56	22.00
	Subtest 4	19.44	19.17	19.10	20.50
	Subtest 5	20.95	20.64	20.55	22.00
Note: 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 V					
Full Power--Main Ant		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	21.96	21.99	21.98	23.00
HSDPA	Subtest 1	21.15	21.16	21.09	22.00
	Subtest 2	21.14	21.15	21.08	22.00
	Subtest 3	20.63	20.64	20.57	21.50
	Subtest 4	20.62	20.63	20.56	21.50
HSUPA	Subtest 1	20.11	20.12	20.05	21.00
	Subtest 2	18.10	18.11	18.04	19.00
	Subtest 3	19.08	19.10	19.03	20.00
	Subtest 4	18.07	18.09	18.02	19.00
	Subtest 5	21.56	21.58	21.51	22.50
Note: 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_{RB})						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

LTE Band 2							
Full Power-Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency (MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	22.61	22.54	22.50	23.50
		1	2	22.70	22.68	22.66	23.50
		1	5	22.61	22.53	22.49	23.50
		3	0	22.66	22.60	22.61	23.50
		3	2	22.72	22.63	22.59	23.50
		3	3	22.73	22.67	22.60	23.50
		6	0	21.72	21.61	21.57	22.50
	16QAM	1	0	21.96	21.84	21.79	22.50
		1	2	22.05	21.95	21.87	22.50
		1	5	21.99	21.87	21.80	22.50
		3	0	21.67	21.64	21.57	22.50
		3	2	21.72	21.71	21.57	22.50
		3	3	21.72	21.63	21.56	22.50
		6	0	20.84	20.69	20.66	21.50
	64QAM	1	0	20.86	20.69	20.67	21.50
		1	2	20.97	20.79	20.78	21.50
		1	5	20.85	20.70	20.66	21.50
		3	0	20.86	20.80	20.73	21.50
		3	2	20.82	20.78	20.73	21.50
		3	3	20.84	20.75	20.67	21.50
		6	0	19.75	19.64	19.62	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	22.65	22.58	22.51	23.50
		1	7	22.63	22.58	22.55	23.50
		1	14	22.64	22.53	22.53	23.50
		8	0	21.70	21.64	21.60	22.50

		8	4	21.68	21.60	21.62	22.50
		8	7	21.64	21.58	21.56	22.50
		15	0	21.66	21.62	21.60	22.50
	16QAM	1	0	21.94	21.87	21.79	22.50
		1	7	21.90	21.86	21.83	22.50
		1	14	21.94	21.88	21.83	22.50
		8	0	20.78	20.70	20.68	21.50
		8	4	20.79	20.73	20.73	21.50
		8	7	20.76	20.69	20.68	21.50
		15	0	20.72	20.64	20.61	21.50
	64QAM	1	0	20.91	20.72	20.75	21.50
		1	7	20.93	20.79	20.79	21.50
		1	14	20.89	20.76	20.79	21.50
		8	0	19.80	19.71	19.69	20.50
		8	4	19.82	19.69	19.72	20.50
		8	7	19.77	19.69	19.68	20.50
		15	0	19.69	19.67	19.64	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	22.56	22.51	22.44	23.50
		1	13	22.66	22.60	22.57	23.50
		1	24	22.52	22.42	22.44	23.50
		12	0	21.73	21.62	21.58	22.50
		12	6	21.74	21.66	21.65	22.50
		12	13	21.67	21.57	21.58	22.50
		25	0	21.73	21.62	21.61	22.50
	16QAM	1	0	21.90	21.81	21.74	22.50
		1	13	22.00	21.91	21.84	22.50
		1	24	21.87	21.76	21.70	22.50
		12	0	20.75	20.67	20.60	21.50
		12	6	20.76	20.67	20.66	21.50
		12	13	20.69	20.63	20.61	21.50
		25	0	20.75	20.66	20.64	21.50
	64QAM	1	0	20.76	20.71	20.66	21.50
		1	13	20.88	20.82	20.77	21.50
		1	24	20.75	20.64	20.64	21.50
		12	0	19.80	19.67	19.63	20.50
		12	6	19.82	19.70	19.70	20.50
		12	13	19.76	19.62	19.62	20.50
		25	0	19.76	19.64	19.64	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	22.67	22.59	22.60	23.50
		1	25	22.76	22.65	22.69	23.50
		1	49	22.63	22.57	22.57	23.50
		25	0	21.82	21.69	21.63	22.50
		25	13	21.75	21.67	21.65	22.50

		25	25	21.75	21.65	21.71	22.50
		50	0	21.80	21.68	21.64	22.50
	16QAM	1	0	21.91	21.88	21.85	22.50
		1	25	21.99	22.00	21.91	22.50
		1	49	21.84	21.88	21.80	22.50
		25	0	20.84	20.73	20.66	21.50
		25	13	20.78	20.70	20.66	21.50
		25	25	20.82	20.66	20.75	21.50
		50	0	20.85	20.69	20.70	21.50
	64QAM	1	0	20.96	20.85	20.75	21.50
		1	25	21.01	20.91	20.86	21.50
		1	49	20.82	20.80	20.76	21.50
		25	0	19.86	19.69	19.59	20.50
		25	13	19.80	19.71	19.68	20.50
		25	25	19.82	19.61	19.68	20.50
		50	0	19.82	19.64	19.63	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	22.64	22.56	22.48	23.50
		1	38	22.63	22.58	22.55	23.50
		1	74	22.49	22.46	22.50	23.50
		36	0	21.76	21.69	21.66	22.50
		36	18	21.74	21.69	21.66	22.50
		36	39	21.77	21.64	21.69	22.50
		75	0	21.74	21.64	21.65	22.50
	16QAM	1	0	21.93	21.91	21.84	22.50
		1	38	21.96	21.93	21.90	22.50
		1	74	21.86	21.83	21.80	22.50
		36	0	20.77	20.70	20.68	21.50
		36	18	20.72	20.64	20.68	21.50
		36	39	20.77	20.63	20.70	21.50
		75	0	20.79	20.68	20.69	21.50
	64QAM	1	0	20.89	20.82	20.67	21.50
		1	38	20.92	20.82	20.73	21.50
		1	74	20.79	20.68	20.70	21.50
		36	0	19.80	19.69	19.70	20.50
		36	18	19.77	19.71	19.70	20.50
		36	39	19.78	19.62	19.68	20.50
		75	0	19.77	19.66	19.66	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	22.53	22.44	22.32	23.50
		1	50	**22.74**	**22.64**	**22.62**	23.50
		1	99	22.38	22.35	22.33	23.50
		50	0	21.74	**21.72**	21.66	22.50
		50	25	21.75	21.67	21.71	22.50
		50	50	**21.82**	21.60	**21.72**	22.50

		100	0	**21.80**	21.68	21.71	22.50
	16QAM	1	0	21.88	21.77	21.63	22.50
		1	50	22.08	22.01	21.93	22.50
		1	99	21.72	21.60	21.56	22.50
		50	0	20.77	20.73	20.68	21.50
		50	25	20.77	20.71	20.70	21.50
		50	50	20.85	20.64	20.75	21.50
		100	0	20.79	20.70	20.75	21.50
	64QAM	1	0	20.63	20.69	20.61	21.50
		1	50	20.89	20.94	20.94	21.50
		1	99	20.55	20.59	20.57	21.50
		50	0	19.79	19.75	19.68	20.50
		50	25	19.76	19.69	19.71	20.50
		50	50	19.86	19.62	19.70	20.50
		100	0	19.82	19.69	19.72	20.50

LTE Band 4							
Full Power-Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	23.29	23.30	23.24	24.00
		1	2	23.44	23.45	23.36	24.00
		1	5	23.30	23.30	23.21	24.00
		3	0	23.37	23.35	23.31	24.00
		3	2	23.41	23.39	23.33	24.00
		3	3	23.37	23.37	23.30	24.00
		6	0	22.39	22.40	22.34	23.00
	16QAM	1	0	22.66	22.68	22.59	23.00
		1	2	22.80	22.76	22.81	23.00
		1	5	22.66	22.67	22.62	23.00
		3	0	22.50	22.41	22.34	23.00
		3	2	22.50	22.42	22.35	23.00
		3	3	22.48	22.42	22.33	23.00
		6	0	21.50	21.54	21.44	22.00
	64QAM	1	0	21.55	21.57	21.52	22.00
		1	2	21.68	21.68	21.60	22.00
		1	5	21.48	21.51	21.50	22.00
		3	0	21.54	21.66	21.49	22.00
		3	2	21.56	21.59	21.54	22.00
		3	3	21.53	21.60	21.50	22.00
		6	0	20.45	20.48	20.36	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	23.37	23.35	23.27	24.00
		1	7	23.38	23.37	23.29	24.00
		1	14	23.37	23.33	23.27	24.00
		8	0	22.35	22.40	22.32	23.00

		8	4	22.38	22.38	22.31	23.00
		8	7	22.35	22.36	22.30	23.00
		15	0	22.33	22.38	22.30	23.00
	16QAM	1	0	22.72	22.72	22.64	23.00
		1	7	22.72	22.69	22.66	23.00
		1	14	22.72	22.69	22.65	23.00
		8	0	21.48	21.49	21.45	22.00
		8	4	21.52	21.52	21.42	22.00
		8	7	21.48	21.47	21.42	22.00
		15	0	21.45	21.41	21.38	22.00
	64QAM	1	0	21.54	21.58	21.57	22.00
		1	7	21.55	21.57	21.58	22.00
		1	14	21.55	21.60	21.60	22.00
		8	0	20.48	20.51	20.45	21.00
		8	4	20.53	20.53	20.43	21.00
		8	7	20.50	20.47	20.42	21.00
		15	0	20.41	20.46	20.32	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				19975/1712.5	20175/1732.5	20375/1752.5	
5MHz	QPSK	1	0	23.28	23.29	23.19	24.00
		1	13	23.39	23.36	23.27	24.00
		1	24	23.24	23.25	23.15	24.00
		12	0	22.36	22.41	22.33	23.00
		12	6	22.40	22.43	22.36	23.00
		12	13	22.41	22.39	22.31	23.00
		25	0	22.40	22.41	22.32	23.00
	16QAM	1	0	22.60	22.68	22.55	23.00
		1	13	22.70	22.76	22.63	23.00
		1	24	22.59	22.66	22.55	23.00
		12	0	21.42	21.47	21.36	22.00
		12	6	21.48	21.50	21.44	22.00
		12	13	21.47	21.44	21.35	22.00
		25	0	21.44	21.44	21.41	22.00
	64QAM	1	0	21.55	21.59	21.48	22.00
		1	13	21.62	21.65	21.52	22.00
		1	24	21.55	21.55	21.42	22.00
		12	0	20.44	20.52	20.39	21.00
		12	6	20.53	20.55	20.48	21.00
		12	13	20.51	20.52	20.37	21.00
		25	0	20.44	20.46	20.42	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	23.40	23.41	23.36	24.00
		1	25	23.43	23.41	23.34	24.00
		1	49	23.36	23.32	23.28	24.00
		25	0	22.38	22.48	22.42	23.00
		25	13	22.40	22.44	22.39	23.00

		25	25	22.46	22.42	22.33	23.00
		50	0	22.42	22.42	22.34	23.00
	16QAM	1	0	22.71	22.71	22.63	23.00
		1	25	22.75	22.75	22.67	23.00
		1	49	22.68	22.66	22.51	23.00
		25	0	21.44	21.56	21.48	22.00
		25	13	21.44	21.48	21.43	22.00
		25	25	21.52	21.49	21.39	22.00
		50	0	21.50	21.50	21.42	22.00
	64QAM	1	0	21.71	21.71	21.69	22.00
		1	25	21.67	21.79	21.65	22.00
		1	49	21.66	21.62	21.51	22.00
		25	0	20.44	20.59	20.50	21.00
		25	13	20.47	20.46	20.44	21.00
		25	25	20.55	20.50	20.42	21.00
		50	0	20.48	20.52	20.45	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	23.30	23.35	23.30	24.00
		1	38	23.38	23.38	23.30	24.00
		1	74	23.25	23.21	23.17	24.00
		36	0	22.41	22.45	22.40	23.00
		36	18	22.46	22.46	22.38	23.00
		36	39	22.43	22.38	22.31	23.00
		75	0	22.41	22.40	22.35	23.00
	16QAM	1	0	22.66	22.64	22.69	23.00
		1	38	22.70	22.68	22.65	23.00
		1	74	22.61	22.56	22.51	23.00
		36	0	21.45	21.50	21.43	22.00
		36	18	21.45	21.51	21.41	22.00
		36	39	21.45	21.44	21.34	22.00
		75	0	21.45	21.46	21.41	22.00
	64QAM	1	0	21.57	21.62	21.63	22.00
		1	38	21.56	21.66	21.63	22.00
		1	74	21.51	21.49	21.50	22.00
		36	0	20.51	20.54	20.47	21.00
		36	18	20.53	20.53	20.45	21.00
		36	39	20.51	20.46	20.39	21.00
		75	0	20.46	20.46	20.39	21.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	1	0	23.16	23.18	23.22	24.00
		1	50	**23.42**	**23.40**	**23.57**	24.00
		1	99	23.10	23.02	23.03	24.00
		50	0	22.37	**22.47**	22.40	23.00
		50	25	**22.47**	22.43	**22.46**	23.00
		50	50	22.39	22.31	22.28	23.00

		100	0	22.36	**22.41**	22.38	23.00
	16QAM	1	0	22.64	22.61	22.60	23.00
		1	50	22.86	22.85	22.83	23.00
		1	99	22.55	22.45	22.40	23.00
		50	0	21.41	21.53	21.47	22.00
		50	25	21.51	21.50	21.46	22.00
		50	50	21.42	21.39	21.32	22.00
		100	0	21.42	21.45	21.42	22.00
	64QAM	1	0	21.44	21.37	21.38	22.00
		1	50	21.66	21.63	21.65	22.00
		1	99	21.36	21.20	21.29	22.00
		50	0	20.42	20.54	20.50	21.00
		50	25	20.50	20.51	20.48	21.00
		50	50	20.44	20.42	20.38	21.00
		100	0	20.43	20.53	20.44	21.00

LTE Band 5							
Full Power-Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	22.60	22.62	22.55	23.50
		1	2	22.71	22.76	22.69	23.50
		1	5	22.64	22.64	22.56	23.50
		3	0	22.70	22.73	22.66	23.50
		3	2	22.72	22.78	22.68	23.50
		3	3	22.71	22.74	22.64	23.50
		6	0	21.71	21.77	21.73	22.50
	16QAM	1	0	21.98	22.02	21.83	22.50
		1	2	22.09	22.12	22.06	22.50
		1	5	22.01	22.02	21.90	22.50
		3	0	21.74	21.78	21.71	22.50
		3	2	21.72	21.81	21.76	22.50
		3	3	21.71	21.77	21.74	22.50
		6	0	20.79	20.88	20.80	21.50
	64QAM	1	0	20.83	20.89	20.71	21.50
		1	2	20.95	21.05	20.92	21.50
		1	5	20.82	20.88	20.78	21.50
		3	0	20.83	20.85	20.80	21.50
		3	2	20.88	20.87	20.79	21.50
		3	3	20.83	20.82	20.82	21.50
		6	0	19.74	19.78	19.76	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	22.64	22.65	22.62	23.50
		1	7	22.70	22.66	22.61	23.50
		1	14	22.64	22.68	22.64	23.50
		8	0	21.66	21.64	21.64	22.50
		8	4	21.70	21.74	21.69	22.50
		8	7	21.65	21.68	21.65	22.50
		15	0	21.62	21.66	21.66	22.50
	16QAM	1	0	22.04	22.01	21.98	22.50
		1	7	22.07	22.06	21.94	22.50
		1	14	22.01	22.01	21.91	22.50
		8	0	20.78	20.77	20.74	21.50
		8	4	20.79	20.82	20.77	21.50
		8	7	20.78	20.81	20.72	21.50
		15	0	20.69	20.71	20.67	21.50
	64QAM	1	0	20.82	20.89	20.86	21.50
		1	7	20.88	20.94	20.78	21.50
		1	14	20.87	20.99	20.79	21.50
		8	0	19.74	19.81	19.76	20.50
		8	4	19.81	19.83	19.81	20.50

		8	7	19.80	19.82	19.73	20.50
		15	0	19.73	19.77	19.72	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	22.56	22.60	22.56	23.50
		1	13	22.67	22.70	22.62	23.50
		1	24	22.60	22.61	22.55	23.50
		12	0	21.62	21.67	21.64	22.50
		12	6	21.74	21.74	21.70	22.50
		12	13	21.65	21.69	21.63	22.50
		25	0	21.65	21.71	21.63	22.50
	16QAM	1	0	21.95	21.90	21.90	22.50
		1	13	22.03	22.03	21.94	22.50
		1	24	21.93	21.97	21.83	22.50
		12	0	20.65	20.69	20.72	21.50
		12	6	20.76	20.79	20.74	21.50
		12	13	20.67	20.74	20.63	21.50
		25	0	20.71	20.78	20.69	21.50
	64QAM	1	0	20.74	20.86	20.85	21.50
		1	13	20.89	20.98	20.94	21.50
		1	24	20.78	20.87	20.80	21.50
		12	0	19.70	19.76	19.74	20.50
		12	6	19.80	19.81	19.80	20.50
		12	13	19.72	19.80	19.69	20.50
		25	0	19.73	19.76	19.69	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	QPSK	1	0	22.60	22.64	22.68	23.50
		1	25	**22.80**	**22.79**	**22.76**	23.50
		1	49	22.64	22.69	22.62	23.50
		25	0	21.70	21.73	21.72	22.50
		25	13	**21.71**	21.75	**21.73**	22.50
		25	25	21.63	**21.83**	21.66	22.50
		50	0	21.69	**21.74**	21.71	22.50
	16QAM	1	0	21.95	21.94	21.96	22.50
		1	25	22.09	22.12	22.03	22.50
		1	49	22.02	22.06	21.92	22.50
		25	0	20.77	20.78	20.77	21.50
		25	13	20.74	20.79	20.78	21.50
		25	25	20.65	20.81	20.74	21.50
		50	0	20.71	20.78	20.74	21.50
	64QAM	1	0	20.83	20.87	20.90	21.50
		1	25	20.95	20.99	20.99	21.50
		1	49	20.87	20.87	20.90	21.50
		25	0	19.77	19.81	19.79	20.50
		25	13	19.74	19.80	19.79	20.50
		25	25	19.70	19.85	19.74	20.50

		50	0	19.74	19.82	19.77	20.50

LTE Band 7							
Full Power-Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	21.47	21.05	21.09	22.00
		1	13	21.65	21.55	21.34	22.00
		1	24	21.25	21.21	21.17	22.00
		12	0	20.59	20.49	20.12	21.00
		12	6	20.73	20.42	20.39	21.00
		12	13	20.73	20.38	20.27	21.00
		25	0	20.75	20.58	20.16	21.00
	16QAM	1	0	20.52	20.48	20.56	21.00
		1	13	20.67	20.99	20.66	21.00
		1	24	20.80	20.56	20.58	21.00
		12	0	19.61	19.57	19.39	20.00
		12	6	19.50	19.36	19.32	20.00
		12	13	19.16	19.52	19.44	20.00
		25	0	19.63	19.23	19.39	20.00
	64QAM	1	0	19.35	19.45	19.39	20.00
		1	13	19.75	19.75	19.67	20.00
		1	24	19.60	19.48	19.30	20.00
		12	0	18.73	18.47	18.63	19.00
		12	6	18.84	18.58	18.64	19.00
		12	13	18.25	18.39	18.53	19.00
		25	0	18.42	18.52	18.60	19.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	21.19	21.27	21.01	22.00
		1	25	21.81	21.49	21.44	22.00
		1	49	21.41	21.01	21.03	22.00
		25	0	20.57	20.31	20.06	21.00
		25	13	20.59	20.36	20.43	21.00
		25	25	20.77	20.52	20.19	21.00
		50	0	20.57	20.42	20.16	21.00
	16QAM	1	0	20.28	20.32	20.60	21.00
		1	25	20.69	20.99	20.52	21.00
		1	49	20.80	20.62	20.78	21.00
		25	0	19.43	19.27	19.47	20.00
		25	13	19.78	19.26	19.58	20.00
		25	25	19.42	19.48	19.36	20.00
		50	0	19.61	19.43	19.45	20.00
	64QAM	1	0	19.29	19.57	19.45	20.00
		1	25	19.53	19.77	19.67	20.00
		1	49	19.30	19.34	19.52	20.00
		25	0	18.67	18.51	18.45	19.00

		25	13	18.64	18.64	18.80	19.00
		25	25	18.41	18.45	18.53	19.00
		50	0	18.34	18.46	18.26	19.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	21.35	21.09	20.89	22.00
		1	38	21.71	21.61	21.28	22.00
		1	74	21.33	21.19	21.07	22.00
		36	0	20.43	20.55	20.30	21.00
		36	18	20.65	20.26	20.31	21.00
		36	39	20.75	20.34	20.33	21.00
		75	0	20.75	20.44	20.24	21.00
	16QAM	1	0	20.50	20.40	20.38	21.00
		1	38	20.77	20.85	20.66	21.00
		1	74	20.86	20.66	20.62	21.00
		36	0	19.45	19.61	19.37	20.00
		36	18	19.72	19.60	19.34	20.00
		36	39	19.34	19.38	19.42	20.00
		75	0	19.57	19.33	19.45	20.00
	64QAM	1	0	19.21	19.53	19.35	20.00
		1	38	19.71	19.69	19.65	20.00
		1	74	19.56	19.44	19.30	20.00
		36	0	18.51	18.55	18.43	19.00
		36	18	18.76	18.32	18.66	19.00
		36	39	18.33	18.23	18.41	19.00
		75	0	18.38	18.46	18.54	19.00
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	21.31	21.15	20.99	22.00
		1	50	**21.65**	**21.53**	**21.34**	22.00
		1	99	21.33	21.19	21.05	22.00
		50	0	20.53	**20.43**	20.12	21.00
		50	25	20.65	20.38	**20.25**	21.00
		50	50	**20.71**	20.32	20.19	21.00
		100	0	**20.67**	20.44	20.14	21.00
	16QAM	1	0	20.38	20.46	20.50	21.00
		1	50	20.65	20.87	20.70	21.00
		1	99	20.78	20.52	20.62	21.00
		50	0	19.45	19.45	19.43	20.00
		50	25	19.58	19.42	19.40	20.00
		50	50	19.26	19.36	19.28	20.00
		100	0	19.67	19.33	19.49	20.00
	64QAM	1	0	19.31	19.41	19.37	20.00
		1	50	19.69	19.65	19.75	20.00
		1	99	19.48	19.44	19.40	20.00
		50	0	18.57	18.47	18.55	19.00
		50	25	18.74	18.42	18.58	19.00

		50	50	18.29	18.35	18.39	19.00
		100	0	18.36	18.44	18.44	19.00

LTE Band 12							
Full Power-Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				23017/699.7	23095/707.5	23173/715.3	
1.4MHz	QPSK	1	0	22.50	22.53	22.43	23.50
		1	2	22.61	22.63	22.52	23.50
		1	5	22.55	22.53	22.47	23.50
		3	0	22.58	22.60	22.55	23.50
		3	2	22.59	22.60	22.60	23.50
		3	3	22.64	22.57	22.56	23.50
		6	0	21.68	21.62	21.57	22.50
	16QAM	1	0	21.88	21.86	21.74	22.50
		1	2	22.03	21.98	21.90	22.50
		1	5	21.90	21.87	21.78	22.50
		3	0	21.59	21.65	21.57	22.50
		3	2	21.59	21.68	21.61	22.50
		3	3	21.61	21.66	21.57	22.50
		6	0	20.76	20.74	20.70	21.50
	64QAM	1	0	20.74	20.81	20.64	21.50
		1	2	20.83	20.92	20.74	21.50
		1	5	20.74	20.81	20.67	21.50
		3	0	20.77	20.78	20.71	21.50
		3	2	20.82	20.83	20.82	21.50
		3	3	20.83	20.74	20.77	21.50
		6	0	19.65	19.67	19.65	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				23025/700.5	23095/707.5	23165/714.5	
3MHz	QPSK	1	0	22.54	22.60	22.54	23.50
		1	7	22.61	22.59	22.54	23.50
		1	14	22.61	22.59	22.55	23.50
		8	0	21.64	21.65	21.59	22.50
		8	4	21.67	21.67	21.60	22.50
		8	7	21.66	21.65	21.60	22.50
		15	0	21.71	21.64	21.58	22.50
	16QAM	1	0	21.89	21.90	21.80	22.50
		1	7	21.92	21.90	21.83	22.50
		1	14	21.95	21.88	21.82	22.50
		8	0	20.69	20.78	20.67	21.50
		8	4	20.80	20.74	20.72	21.50
		8	7	20.77	20.74	20.70	21.50
		15	0	20.72	20.70	20.62	21.50
	64QAM	1	0	20.83	20.87	20.76	21.50
		1	7	20.89	20.89	20.80	21.50
		1	14	20.89	20.86	20.79	21.50

		8	0	19.72	19.74	19.73	20.50
		8	4	19.79	19.78	19.72	20.50
		8	7	19.78	19.72	19.70	20.50
		15	0	19.65	19.65	19.65	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				23035/701.5	23095/707.5	23155/713.5	
5MHz	QPSK	1	0	22.44	22.47	22.37	23.50
		1	13	22.62	22.58	22.54	23.50
		1	24	22.51	22.47	22.43	23.50
		12	0	21.60	21.67	21.58	22.50
		12	6	21.75	21.72	21.66	22.50
		12	13	21.68	21.68	21.52	22.50
		25	0	21.67	21.67	21.57	22.50
	16QAM	1	0	21.72	21.85	21.74	22.50
		1	13	21.96	21.93	21.89	22.50
		1	24	21.85	21.82	21.78	22.50
		12	0	20.62	20.67	20.62	21.50
		12	6	20.69	20.73	20.67	21.50
		12	13	20.67	20.72	20.56	21.50
		25	0	20.65	20.71	20.62	21.50
	64QAM	1	0	20.76	20.72	20.63	21.50
		1	13	20.92	20.85	20.77	21.50
		1	24	20.80	20.74	20.67	21.50
		12	0	19.69	19.69	19.65	20.50
		12	6	19.78	19.76	19.72	20.50
		12	13	19.72	19.74	19.64	20.50
		25	0	19.67	19.67	19.62	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				23060/704	23095/707.5	23130/711	
10MHz	QPSK	1	0	22.50	22.55	22.56	23.50
		1	25	**22.70**	**22.66**	**22.63**	23.50
		1	49	22.63	22.59	22.56	23.50
		25	0	21.71	21.71	**21.66**	22.50
		25	13	21.69	21.71	**21.66**	22.50
		25	25	**21.72**	**21.79**	21.60	22.50
		50	0	21.72	**21.77**	21.68	22.50
	16QAM	1	0	21.80	21.81	21.92	22.50
		1	25	22.00	22.05	21.92	22.50
		1	49	21.97	21.87	21.83	22.50
		25	0	20.72	20.74	20.74	21.50
		25	13	20.76	20.74	20.72	21.50
		25	25	20.77	20.82	20.70	21.50
		50	0	20.74	20.78	20.71	21.50
	64QAM	1	0	20.79	20.74	20.79	21.50
		1	25	20.96	20.92	20.83	21.50
		1	49	20.90	20.83	20.82	21.50
		25	0	19.69	19.74	19.70	20.50

		25	13	19.74	19.72	19.69	20.50
		25	25	19.78	19.79	19.71	20.50
		50	0	19.73	19.81	19.72	20.50

LTE Band 17							
Full Power-Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				23755/706.5	23790/710	23825/713.5	
5MHz	QPSK	1	0	22.53	22.50	22.45	23.50
		1	13	22.61	22.60	22.56	23.50
		1	24	22.53	22.50	22.42	23.50
		12	0	21.67	21.60	21.57	22.50
		12	6	21.70	21.67	21.66	22.50
		12	13	21.67	21.66	21.55	22.50
		25	0	21.69	21.64	21.60	22.50
	16QAM	1	0	21.89	21.86	21.85	22.50
		1	13	21.98	21.93	21.94	22.50
		1	24	21.83	21.83	21.79	22.50
		12	0	20.69	20.65	20.60	21.50
		12	6	20.72	20.71	20.69	21.50
		12	13	20.72	20.69	20.58	21.50
		25	0	20.71	20.72	20.65	21.50
	64QAM	1	0	20.83	20.77	20.72	21.50
		1	13	20.92	20.81	20.80	21.50
		1	24	20.77	20.76	20.67	21.50
		12	0	19.71	19.67	19.65	20.50
		12	6	19.73	19.78	19.73	20.50
		12	13	19.74	19.76	19.62	20.50
		25	0	19.69	19.73	19.67	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				23780/709	23790/710	23800/711	
10MHz	QPSK	1	0	22.59	22.57	22.58	23.50
		1	25	**22.76**	**22.73**	**22.66**	23.50
		1	49	22.61	22.66	22.59	23.50
		25	0	21.74	**21.74**	21.67	22.50
		25	13	21.69	21.72	**21.69**	22.50
		25	25	**21.78**	**21.74**	21.68	22.50
		50	0	**21.78**	21.74	21.69	22.50
	16QAM	1	0	21.97	21.94	21.91	22.50
		1	25	22.09	22.00	21.97	22.50
		1	49	21.94	21.92	21.87	22.50
		25	0	20.74	20.74	20.73	21.50
		25	13	20.74	20.74	20.74	21.50
		25	25	20.83	20.76	20.74	21.50
		50	0	20.83	20.76	20.74	21.50
	64QAM	1	0	20.80	20.81	20.87	21.50
		1	25	20.89	20.90	20.92	21.50

		1	49	20.92	20.86	20.86	21.50
		25	0	19.76	19.78	19.74	20.50
		25	13	19.77	19.74	19.74	20.50
		25	25	19.87	19.78	19.74	20.50
		50	0	19.80	19.78	19.73	20.50

LTE Band 25							
Full Power-Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				26047/1850.7	26365/1882,5	26683/1914.3	
1.4MHz	QPSK	1	0	22.54	22.41	22.37	23.50
		1	2	22.67	22.54	22.48	23.50
		1	5	22.57	22.40	22.38	23.50
		3	0	22.65	22.52	22.51	23.50
		3	2	22.66	22.48	22.52	23.50
		3	3	22.65	22.51	22.48	23.50
		6	0	21.68	21.51	21.52	22.50
	16QAM	1	0	21.86	21.76	21.71	22.50
		1	2	22.01	21.93	21.86	22.50
		1	5	21.87	21.76	21.72	22.50
		3	0	21.70	21.53	21.47	22.50
		3	2	21.73	21.50	21.49	22.50
		3	3	21.71	21.49	21.45	22.50
		6	0	20.75	20.64	20.63	21.50
	64QAM	1	0	20.79	20.63	20.62	21.50
		1	2	20.89	20.73	20.72	21.50
		1	5	20.75	20.61	20.57	21.50
		3	0	20.79	20.70	20.62	21.50
		3	2	20.77	20.71	20.64	21.50
		3	3	20.76	20.70	20.61	21.50
		6	0	19.70	19.51	19.53	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26055/1851.5	26365/1882,5	26675/1913.5	
3MHz	QPSK	1	0	22.55	22.47	22.41	23.50
		1	7	22.58	22.44	22.44	23.50
		1	14	22.52	22.43	22.42	23.50
		8	0	21.61	21.51	21.51	22.50
		8	4	21.60	21.52	21.50	22.50
		8	7	21.59	21.46	21.48	22.50
		15	0	21.58	21.46	21.49	22.50
	16QAM	1	0	21.89	21.79	21.71	22.50
		1	7	21.89	21.79	21.70	22.50
		1	14	21.84	21.73	21.68	22.50
		8	0	20.72	20.57	20.59	21.50
		8	4	20.73	20.59	20.57	21.50
		8	7	20.69	20.57	20.55	21.50
		15	0	20.60	20.51	20.55	21.50

	64QAM	1	0	20.73	20.64	20.64	21.50
		1	7	20.73	20.68	20.68	21.50
		1	14	20.67	20.66	20.66	21.50
		8	0	19.71	19.55	19.61	20.50
		8	4	19.72	19.57	19.54	20.50
		8	7	19.71	19.54	19.55	20.50
		15	0	19.64	19.53	19.50	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26065/1852.5	26365/1882,5	26665/1912.5	
5MHz	QPSK	1	0	22.50	22.39	22.30	23.50
		1	13	22.57	22.49	22.46	23.50
		1	24	22.43	22.36	22.30	23.50
		12	0	21.62	21.49	21.53	22.50
		12	6	21.65	21.53	21.56	22.50
		12	13	21.56	21.47	21.42	22.50
		25	0	21.60	21.51	21.54	22.50
	16QAM	1	0	21.80	21.71	21.59	22.50
		1	13	21.87	21.80	21.73	22.50
		1	24	21.73	21.66	21.58	22.50
		12	0	20.64	20.55	20.55	21.50
		12	6	20.67	20.59	20.55	21.50
		12	13	20.57	20.47	20.41	21.50
		25	0	20.67	20.51	20.52	21.50
	64QAM	1	0	20.75	20.60	20.57	21.50
		1	13	20.82	20.71	20.69	21.50
		1	24	20.63	20.57	20.50	21.50
		12	0	19.73	19.57	19.60	20.50
		12	6	19.73	19.57	19.61	20.50
		12	13	19.62	19.50	19.48	20.50
		25	0	19.66	19.51	19.53	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26090/1855	26365/1882,5	26640/1910	
10MHz	QPSK	1	0	22.62	22.49	22.44	23.50
		1	25	22.65	22.59	22.57	23.50
		1	49	22.52	22.45	22.47	23.50
		25	0	21.71	21.59	21.58	22.50
		25	13	21.64	21.58	21.56	22.50
		25	25	21.70	21.56	21.51	22.50
		50	0	21.69	21.61	21.58	22.50
	16QAM	1	0	21.89	21.82	21.61	22.50
		1	25	21.93	21.85	21.81	22.50
		1	49	21.81	21.75	21.71	22.50
		25	0	20.77	20.64	20.59	21.50
		25	13	20.69	20.60	20.59	21.50
		25	25	20.73	20.59	20.52	21.50
		50	0	20.75	20.64	20.55	21.50
	64QAM	1	0	20.88	20.76	20.66	21.50

		1	25	20.96	20.85	20.73	21.50
		1	49	20.80	20.69	20.64	21.50
		25	0	19.77	19.61	19.55	20.50
		25	13	19.69	19.61	19.59	20.50
		25	25	19.73	19.51	19.45	20.50
		50	0	19.73	19.55	19.52	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26115/1857.5	26365/1882,5	26615/1907.5	
15MHz	QPSK	1	0	22.55	22.47	22.38	23.50
		1	38	22.58	22.52	22.46	23.50
		1	74	22.44	22.37	22.37	23.50
		36	0	21.72	21.62	21.52	22.50
		36	18	21.67	21.59	21.56	22.50
		36	39	21.70	21.57	21.52	22.50
		75	0	21.67	21.57	21.48	22.50
	16QAM	1	0	21.78	21.73	21.69	22.50
		1	38	21.90	21.83	21.77	22.50
		1	74	21.71	21.69	21.63	22.50
		36	0	20.73	20.64	20.53	21.50
		36	18	20.66	20.61	20.55	21.50
		36	39	20.71	20.59	20.55	21.50
		75	0	20.67	20.59	20.50	21.50
	64QAM	1	0	20.77	20.63	20.67	21.50
		1	38	20.77	20.75	20.76	21.50
		1	74	20.64	20.59	20.62	21.50
		36	0	19.72	19.61	19.51	20.50
		36	18	19.71	19.61	19.59	20.50
		36	39	19.72	19.55	19.52	20.50
		75	0	19.71	19.55	19.46	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26140/1860	26365/1882,5	26590/1905	
20MHz	QPSK	1	0	22.36	22.32	22.26	23.50
		1	50	**22.65**	**22.59**	**22.53**	23.50
		1	99	22.21	22.18	22.26	23.50
		50	0	21.61	**21.66**	21.51	22.50
		50	25	21.68	21.56	**21.56**	22.50
		50	50	**21.73**	21.57	21.45	22.50
		100	0	**21.68**	21.61	21.52	22.50
	16QAM	1	0	21.73	21.70	21.56	22.50
		1	50	22.01	21.96	21.84	22.50
		1	99	21.63	21.60	21.54	22.50
		50	0	20.66	20.64	20.53	21.50
		50	25	20.69	20.64	20.57	21.50
		50	50	20.73	20.59	20.50	21.50
		100	0	20.71	20.62	20.53	21.50
	64QAM	1	0	20.64	20.42	20.35	21.50
		1	50	20.85	20.73	20.72	21.50

		1	99	20.43	20.35	20.35	21.50
		50	0	19.73	19.66	19.52	20.50
		50	25	19.68	19.60	19.59	20.50
		50	50	19.76	19.57	19.47	20.50
		100	0	19.73	19.60	19.48	20.50

LTE Band 26							
Full Power-Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				26697/814.7	26865/831.5	27033/848.3	
1.4MHz	QPSK	1	0	22.55	22.53	22.55	23.50
		1	2	22.72	22.59	22.68	23.50
		1	5	22.54	22.52	22.52	23.50
		3	0	22.64	22.61	22.63	23.50
		3	2	22.66	22.63	22.67	23.50
		3	3	22.62	22.63	22.62	23.50
		6	0	21.65	21.62	21.65	22.50
	16QAM	1	0	21.93	21.91	21.91	22.50
		1	2	22.03	22.06	22.01	22.50
		1	5	21.94	21.95	21.88	22.50
		3	0	21.67	21.67	21.70	22.50
		3	2	21.72	21.72	21.72	22.50
		3	3	21.66	21.72	21.74	22.50
		6	0	20.80	20.79	20.78	21.50
	64QAM	1	0	20.79	20.83	20.80	21.50
		1	2	20.92	20.97	20.87	21.50
		1	5	20.78	20.82	20.79	21.50
		3	0	20.80	20.77	20.81	21.50
		3	2	20.85	20.78	20.81	21.50
		3	3	20.79	20.78	20.78	21.50
		6	0	19.72	19.73	19.73	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26705/815.5	26865/831.5	27025/847.5	
3MHz	QPSK	1	0	22.55	22.56	22.58	23.50
		1	7	22.58	22.56	22.56	23.50
		1	14	22.60	22.59	22.58	23.50
		8	0	21.60	21.59	21.63	22.50
		8	4	21.60	21.62	21.64	22.50
		8	7	21.62	21.61	21.56	22.50
		15	0	21.58	21.59	21.61	22.50
	16QAM	1	0	21.94	21.92	21.89	22.50
		1	7	21.96	21.91	21.90	22.50
		1	14	22.02	21.93	21.86	22.50
		8	0	20.67	20.71	20.73	21.50
		8	4	20.73	20.71	20.73	21.50
		8	7	20.77	20.70	20.65	21.50
		15	0	20.60	20.63	20.63	21.50

	64QAM	1	0	20.77	20.80	20.74	21.50
		1	7	20.83	20.87	20.74	21.50
		1	14	20.86	20.83	20.71	21.50
		8	0	19.70	19.71	19.76	20.50
		8	4	19.77	19.74	19.74	20.50
		8	7	19.76	19.76	19.73	20.50
		15	0	19.67	19.67	19.67	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26715/816.5	26865/831.5	27015/846.5	
5MHz	QPSK	1	0	22.42	22.47	22.48	23.50
		1	13	22.61	22.58	22.61	23.50
		1	24	22.49	22.47	22.48	23.50
		12	0	21.57	21.64	21.58	22.50
		12	6	21.68	21.66	21.68	22.50
		12	13	21.60	21.53	21.57	22.50
		25	0	21.59	21.59	21.59	22.50
	16QAM	1	0	21.73	21.82	21.80	22.50
		1	13	21.93	21.94	21.89	22.50
		1	24	21.89	21.80	21.74	22.50
		12	0	20.60	20.65	20.62	21.50
		12	6	20.71	20.72	20.73	21.50
		12	13	20.63	20.57	20.57	21.50
		25	0	20.63	20.64	20.64	21.50
	64QAM	1	0	20.67	20.74	20.67	21.50
		1	13	20.90	20.87	20.82	21.50
		1	24	20.74	20.78	20.67	21.50
		12	0	19.65	19.73	19.69	20.50
		12	6	19.80	19.79	19.77	20.50
		12	13	19.71	19.62	19.65	20.50
		25	0	19.65	19.67	19.69	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26740/819	26865/831.5	26990/844	
10MHz	QPSK	1	0	22.52	22.55	22.61	23.50
		1	25	22.67	22.62	22.72	23.50
		1	49	22.62	22.60	22.61	23.50
		25	0	21.65	21.68	21.63	22.50
		25	13	21.66	21.65	21.67	22.50
		25	25	21.69	21.59	21.62	22.50
		50	0	21.67	21.66	21.63	22.50
	16QAM	1	0	21.93	21.91	21.90	22.50
		1	25	22.10	22.05	21.99	22.50
		1	49	21.99	21.95	21.87	22.50
		25	0	20.71	20.73	20.69	21.50
		25	13	20.72	20.70	20.71	21.50
		25	25	20.78	20.64	20.65	21.50
		50	0	20.74	20.71	20.69	21.50
	64QAM	1	0	20.77	20.82	20.83	21.50

		1	25	20.94	20.90	20.94	21.50
		1	49	20.87	20.88	20.83	21.50
		25	0	19.71	19.76	19.71	20.50
		25	13	19.73	19.71	19.74	20.50
		25	25	19.77	19.64	19.70	20.50
		50	0	19.76	19.72	19.71	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				26765/821.5	26865/831.5	26965/841.5	
15MHz	QPSK	1	0	22.41	22.45	22.46	23.50
		1	38	**22.56**	**22.53**	**22.59**	23.50
		1	74	**22.56**	22.52	22.49	23.50
		36	0	21.58	21.60	21.63	22.50
		36	18	**21.65**	**21.61**	**21.65**	22.50
		36	39	**21.65**	**21.61**	21.61	22.50
		75	0	21.61	**21.62**	21.60	22.50
	16QAM	1	0	21.72	21.78	21.80	22.50
		1	38	21.89	21.89	21.90	22.50
		1	74	21.85	21.84	21.81	22.50
		36	0	20.60	20.64	20.65	21.50
		36	18	20.65	20.67	20.67	21.50
		36	39	20.67	20.65	20.65	21.50
		75	0	20.67	20.67	20.64	21.50
	64QAM	1	0	20.70	20.67	20.71	21.50
		1	38	20.83	20.79	20.86	21.50
		1	74	20.79	20.77	20.74	21.50
		36	0	19.65	19.70	19.71	20.50
		36	18	19.70	19.73	19.73	20.50
		36	39	19.72	19.71	19.71	20.50
		75	0	19.69	19.69	19.67	20.50

LTE Band 38							
Full Power-Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	22.33	22.20	22.13	23.50
		1	13	22.38	22.27	22.21	23.50
		1	24	22.27	22.18	22.11	23.50
		12	0	21.44	21.28	21.26	22.50
		12	6	21.46	21.35	21.31	22.50
		12	13	21.37	21.32	21.26	22.50
		25	0	21.44	21.36	21.27	22.50
	16QAM	1	0	21.49	21.42	21.37	22.50
		1	13	21.61	21.54	21.48	22.50
		1	24	21.49	21.40	21.33	22.50
		12	0	20.49	20.33	20.28	21.50
		12	6	20.51	20.42	20.35	21.50
		12	13	20.42	20.38	20.32	21.50

		25	0	20.52	20.42	20.36	21.50
	64QAM	1	0	20.42	20.33	20.28	21.50
		1	13	20.49	20.45	20.38	21.50
		1	24	20.38	20.33	20.27	21.50
		12	0	19.49	19.38	19.30	20.50
		12	6	19.52	19.42	19.35	20.50
		12	13	19.46	19.42	19.36	20.50
		25	0	19.54	19.47	19.36	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	22.39	22.29	22.23	23.50
		1	25	22.46	22.39	22.31	23.50
		1	49	22.32	22.26	22.20	23.50
		25	0	21.49	21.35	21.32	22.50
		25	13	21.47	21.42	21.33	22.50
		25	25	21.46	21.47	21.39	22.50
		50	0	21.47	21.39	21.33	22.50
	16QAM	1	0	21.63	21.55	21.52	22.50
		1	25	21.70	21.63	21.57	22.50
		1	49	21.56	21.51	21.47	22.50
		25	0	20.61	20.45	20.40	21.50
		25	13	20.54	20.48	20.44	21.50
		25	25	20.53	20.55	20.45	21.50
		50	0	20.55	20.49	20.42	21.50
	64QAM	1	0	20.51	20.40	20.39	21.50
		1	25	20.57	20.51	20.46	21.50
		1	49	20.44	20.40	20.36	21.50
		25	0	19.65	19.51	19.46	20.50
		25	13	19.58	19.53	19.49	20.50
		25	25	19.61	19.57	19.49	20.50
		50	0	19.55	19.46	19.37	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	22.32	22.20	22.13	23.50
		1	38	22.36	22.28	22.20	23.50
		1	74	22.25	22.18	22.14	23.50
		36	0	21.39	21.33	21.30	22.50
		36	18	21.42	21.36	21.35	22.50
		36	39	21.40	21.38	21.33	22.50
		75	0	21.40	21.37	21.32	22.50
	16QAM	1	0	21.57	21.44	21.38	22.50
		1	38	21.58	21.52	21.49	22.50
		1	74	21.48	21.45	21.38	22.50
		36	0	20.45	20.31	20.24	21.50
		36	18	20.42	20.33	20.33	21.50
		36	39	20.40	20.36	20.33	21.50
		75	0	20.48	20.42	20.36	21.50

	64QAM	1	0	20.46	20.35	20.30	21.50
		1	38	20.47	20.42	20.36	21.50
		1	74	20.36	20.32	20.26	21.50
		36	0	19.44	19.36	19.28	20.50
		36	18	19.45	19.39	19.45	20.50
		36	39	19.40	19.42	19.35	20.50
		75	0	19.46	19.39	19.38	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)			Tune-up
				37850/2580	38000/2595	38150/2610	
20MHz	QPSK	1	0	22.16	22.04	22.03	23.50
		1	50	**22.38**	**22.37**	**22.31**	23.50
		1	99	22.09	22.02	21.98	23.50
		50	0	21.37	21.24	21.15	22.50
		50	25	21.40	21.36	21.32	22.50
		50	50	**21.42**	**21.42**	**21.39**	22.50
		100	0	**21.42**	21.35	21.29	22.50
	16QAM	1	0	21.40	21.28	21.24	22.50
		1	50	21.62	21.57	21.57	22.50
		1	99	21.33	21.28	21.22	22.50
		50	0	20.47	20.32	20.23	21.50
		50	25	20.49	20.42	20.42	21.50
		50	50	20.51	20.49	20.45	21.50
		100	0	20.49	20.45	20.33	21.50
	64QAM	1	0	20.27	20.19	20.15	21.50
		1	50	20.52	20.49	20.48	21.50
		1	99	20.23	20.17	20.08	21.50
		50	0	19.48	19.33	19.20	20.50
		50	25	19.52	19.40	19.39	20.50
		50	50	19.47	19.49	19.40	20.50
		100	0	19.47	19.42	19.33	20.50

LTE Band 41								
Full Power-Main Ant				Maximum Output Power (dBm)				Tune-up
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)				
				40065/2537.5	40385/2569.5	40705/2601.5	41215/2652.5	
5MHz	QPSK	1	0	22.62	22.37	22.19	22.10	23.50
		1	13	22.70	22.45	22.28	22.18	23.50
		1	24	22.57	22.32	22.20	22.11	23.50
		12	0	21.66	21.49	21.33	21.26	22.50
		12	6	21.67	21.48	21.37	21.27	22.50
		12	13	21.65	21.44	21.35	21.22	22.50
		25	0	21.68	21.48	21.35	21.24	22.50
	16QAM	1	0	21.78	21.56	21.40	21.33	22.50
		1	13	21.92	21.70	21.55	21.44	22.50
		1	24	21.81	21.55	21.40	21.32	22.50
		12	0	20.83	20.53	20.38	20.28	21.50
		12	6	20.79	20.55	20.44	20.33	21.50

		12	13	20.74	20.51	20.42	20.29	21.50
		25	0	20.79	20.56	20.42	20.35	21.50
	64QAM	1	0	20.70	20.48	20.36	20.28	21.50
		1	13	20.79	20.58	20.42	20.31	21.50
		1	24	20.65	20.45	20.36	20.24	21.50
		12	0	19.77	19.56	19.40	19.32	20.50
		12	6	19.79	19.58	19.37	19.33	20.50
		12	13	19.76	19.55	19.45	19.28	20.50
		25	0	19.83	19.58	19.48	19.40	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)				Tune-up
				40090/2540	40390/2570	40690/2600	41190/2650	
10MHz	QPSK	1	0	22.68	22.43	22.29	22.21	23.50
		1	25	22.75	22.54	22.38	22.26	23.50
		1	49	22.67	22.40	22.26	22.16	23.50
		25	0	21.69	21.56	21.38	21.39	22.50
		25	13	21.74	21.53	21.42	21.24	22.50
		25	25	21.69	21.53	21.48	21.30	22.50
		50	0	21.76	21.52	21.44	21.32	22.50
	16QAM	1	0	21.92	21.71	21.54	21.46	22.50
		1	25	22.00	21.78	21.63	21.51	22.50
		1	49	21.90	21.65	21.54	21.42	22.50
		25	0	20.82	20.64	20.47	20.45	21.50
		25	13	20.83	20.61	20.51	20.36	21.50
		25	25	20.83	20.58	20.57	20.33	21.50
		50	0	20.81	20.63	20.53	20.40	21.50
	64QAM	1	0	20.82	20.52	20.44	20.36	21.50
		1	25	20.79	20.65	20.48	20.39	21.50
		1	49	20.77	20.52	20.42	20.29	21.50
		25	0	19.86	19.69	19.49	19.54	20.50
		25	13	19.89	19.65	19.52	19.44	20.50
		25	25	19.85	19.65	19.65	19.40	20.50
		50	0	19.81	19.58	19.49	19.36	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)				Tune-up
				40115/2542.5	40395/2570.5	40685/2599.5	41165/2647.5	
15MHz	QPSK	1	0	22.58	22.39	22.20	22.14	23.50
		1	38	22.65	22.42	22.27	22.21	23.50
		1	74	22.53	22.32	22.22	22.12	23.50
		36	0	21.72	21.48	21.36	21.33	22.50
		36	18	21.69	21.49	21.36	21.30	22.50
		36	39	21.65	21.46	21.42	21.23	22.50
		75	0	21.66	21.48	21.37	21.27	22.50
	16QAM	1	0	21.82	21.64	21.45	21.38	22.50
		1	38	21.89	21.67	21.54	21.44	22.50
		1	74	21.79	21.55	21.47	21.37	22.50
		36	0	20.63	20.49	20.33	20.31	21.50
		36	18	20.67	20.49	20.33	20.30	21.50
		36	39	20.62	20.47	20.40	20.24	21.50

		75	0	20.74	20.54	20.45	20.32	21.50
	64QAM	1	0	20.72	20.49	20.35	20.27	21.50
		1	38	20.78	20.55	20.42	20.33	21.50
		1	74	20.63	20.46	20.39	20.24	21.50
		36	0	19.76	19.52	19.33	19.33	20.50
		36	18	19.71	19.51	19.40	19.32	20.50
		36	39	19.67	19.49	19.42	19.24	20.50
		75	0	19.69	19.54	19.40	19.31	20.50
Bandwidth	Modulation	RB Allocation	Offset	Channel/Frequency(MHz)				Tune-up
				40140/2545	40400/2571	40670/2598	41140/2645	
20MHz	QPSK	1	0	22.42	22.26	22.08	21.99	23.50
		1	50	**22.73**	**22.52**	**22.35**	**22.28**	23.50
		1	99	22.35	22.14	22.04	21.96	23.50
		50	0	21.65	**21.55**	21.24	**21.38**	22.50
		50	25	**21.71**	21.48	21.40	21.27	22.50
		50	50	21.56	21.40	**21.46**	21.15	22.50
		100	0	**21.64**	21.49	21.38	21.31	22.50
	16QAM	1	0	21.66	21.52	21.32	21.24	22.50
		1	50	21.95	21.76	21.59	21.53	22.50
		1	99	21.59	21.39	21.27	21.23	22.50
		50	0	20.74	20.62	20.33	20.47	21.50
		50	25	20.73	20.57	20.46	20.36	21.50
		50	50	20.60	20.51	20.53	20.26	21.50
		100	0	20.67	20.55	20.42	20.38	21.50
	64QAM	1	0	20.57	20.37	20.22	20.12	21.50
		1	50	20.81	20.62	20.55	20.40	21.50
		1	99	20.44	20.28	20.23	20.08	21.50
		50	0	19.73	19.58	19.33	19.44	20.50
		50	25	19.69	19.57	19.44	19.35	20.50
		50	50	19.58	19.48	19.51	19.19	20.50
		100	0	19.69	19.56	19.44	19.33	20.50

9.4 WLAN Mode

Wi-Fi 2.4GHz / Mode	Channel /Frequency (MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	19.50	18.73
	6/2437	19.50	**18.75**
	11/2462	19.50	18.48
802.11g (6M)	1/2412	17.00	16.10
	6/2437	17.00	16.06
	11/2462	17.00	16.17
802.11n-HT20 (MCS0)	1/2412	17.00	16.44
	6/2437	17.00	16.38
	11/2462	17.00	16.04
802.11n-HT40 (MCS0)	3/2422	15.50	14.13
	6/2437	15.50	14.09
	9/2452	15.50	14.02
Note: Initial test configuration is 802.11b mode.			

5GHz Wi-Fi U-NII-1	Channel /Frequency (MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	17.00	16.17
	40/5200	17.00	16.17
	44/5220	17.00	16.39
	48/5240	17.00	16.14
802.11nHT20(MCS0)	36/5180	16.00	14.61
	40/5200	16.00	14.68
	44/5220	16.00	14.48
	48/5240	16.00	14.45
802.11nHT40(MCS0)	38/5190	16.00	14.37
	46/5230	16.00	14.28
802.11ac-VHT20(MCS0)	36/5180	15.00	13.58
	40/5200	15.00	13.47
	44/5220	15.00	13.11
	48/5240	15.00	13.47
802.11ac-VHT40(MCS0)	38/5190	15.00	13.48
	46/5230	15.00	13.35
802.11ac-VHT80(MCS0)	42/5210	15.00	13.28
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

5GHz Wi-Fi (U-NII-2A)	Channel /Frequency (MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	52/5260	17.00	16.08
	56/5280	17.00	16.13
	60/5300	17.00	**16.16**
	64/5320	17.00	16.04
802.11nHT20(MCS0)	52/5260	16.00	14.08
	56/5280	16.00	14.41
	60/5300	16.00	14.47
	64/5320	16.00	14.04
802.11nHT40(MCS0)	54/5270	16.00	14.31
	62/5310	16.00	14.23
802.11ac-VHT20(MCS0)	52/5260	15.00	13.43
	56/5280	15.00	13.39
	60/5300	15.00	13.45
	64/5320	15.00	13.41
802.11ac-VHT40(MCS0)	54/5270	15.00	13.30
	62/5310	15.00	13.26
802.11ac-VHT80(MCS0)	58/5290	15.00	13.14
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

5GHz Wi-Fi U-NII-2C	Channel /Frequency (MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	16.50	**15.98**
	116/5580	16.50	15.51
	132/5660	16.50	15.08
	140/5700	16.50	15.06
802.11nHT20 (MCS0)	100/5500	15.00	14.37
	116/5580	15.00	14.02
	132/5660	15.00	13.33
	140/5700	15.00	13.41
802.11nHT40 (MCS0)	102/5510	15.00	14.02
	110/5550	15.00	14.04
	118/5590	15.00	13.63
	134/5670	15.00	13.28
802.11ac-VHT20 (MCS0)	100/5500	14.00	13.11
	116/5580	14.00	12.78
	132/5660	14.00	12.38
	140/5700	14.00	12.37
802.11ac-VHT40 (MCS0)	102/5510	14.00	13.11
	110/5550	14.00	12.93
	118/5590	14.00	12.72
	134/5670	14.00	12.26
802.11ac-VHT80 (MCS0)	106/5530	14.00	12.71
	122/5610	14.00	12.37
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

5GHz Wi-Fi U-NII-3	Channel /Frequency (MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	149/5745	16.50	15.06
	157/5785	16.50	15.26
	165/5825	16.50	**15.54**
802.11nHT20(MCS0)	149/5745	15.00	13.52
	157/5785	15.00	13.59
	165/5825	15.00	13.78
802.11nHT40(MCS0)	151/5755	15.00	13.24
	159/5795	15.00	13.41
802.11ac-VHT20(MCS0)	149/5745	14.00	12.47
	157/5785	14.00	12.56
	165/5825	14.00	12.76
802.11ac-VHT40(MCS0)	151/5755	14.00	12.40
	159/5795	14.00	12.37
802.11ac-VHT80(MCS0)	155/5775	14.00	12.09
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

9.5 Bluetooth Mode

Bluetooth	Conducted Power(dBm)			Tune-up Limit (dBm)
	Channel/Frequency (MHz)			
	Ch 0/2402 MHz	Ch 39/2441 MHz	Ch 78/2480 MHz	
GFSK	6.00	6.57	6.57	7.50
π/4DQPSK	5.12	5.55	5.57	7.00
8DPSK	5.17	5.63	5.60	7.00
Bluetooth LE	Ch 0/2402 MHz	Ch 19/2440 MHz	Ch 39/2480 MHz	Tune-up Limit (dBm)
GFSK(1M)	-0.90	-0.27	-0.49	0.00
GFSK(2M)	-2.93	-2.51	-2.64	0.00
S=2	-0.90	-0.38	-0.63	0.00
S=8	-0.89	-0.41	-0.46	0.00

10 Measured and Reported (Scaled) SAR Results

10.1 EUT Antenna Locations

The Detailed Antenna Locations Refer to *Antenna Locations.*

Overall (Length x Width): 157.96 mm x 78.40 mm Overall Diagonal: 176.35 mm/Display Diagonal: 94.17mm						
Distance of the Antenna to the EUT Surface/Edge						
Antenna	Back Side	Front Side	Left Edge	Right Edge	Top Edge	Bottom Edge
Main-Antenna	＜25mm	＜25mm	＜25mm	＜25mm	＞25mm	＜25mm
Bluetooth/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
Main-Antenna	Yes	Yes	Yes	Yes	N/A	Yes
Bluetooth/Wi-Fi Antenna	Yes	Yes	N/A	Yes	Yes	N/A

Note:
1. Per KDB 941225 D06, when the overall device length and width are ≥ 9cm*5cm, 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.
2. For smart phones with an overall diagonal dimension is 94.17mm. Per KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, product specific 10-g SAR must be tested as a phablet to determine SAR compliance. For Phablet, Since hotspot mode 1-g *reported* SAR <1.2W/kg, product specific 10-g SAR is no required.
3. Per FCC KDB 447498 D01, for each exposure position, testing of other requised 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:
a) ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100MHz
b) ≤ 0.6 W/kg or 1.5 W/kg, for1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
c) ≤ 0.4 W/kg or 1.0 Wkg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.
4. When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
5. Per FCC KDB Publication 648474 D04, SAR was evaluated without a headset connected to the device. Since the reported SAR was ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

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 ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for product specific 10-g SAR

- f(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
Hotspot	10	7.50	2480	0.89	No
Product Specific 10-g SAR	5	7.50	2480	0.89	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 ≤ ¼ 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 ≤ 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≥ 50% limit(1g).

5. Per 248227, for band U-NII-1 and U-NII-2A, when the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.
6. The highest reported SAR for a test configuration is > 1.2 W/kg, SAR is required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR. Since the band U-NII-2A does not support hotspot function, hotspot SAR for U-NII-1 is required.

Hotspot SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	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	Main	Back Side	10	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.412	0.030	1.16	0.477	/
		Back Side2	10	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.470	0.037	1.16	0.545	/
		Back Side3	10	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.526	0.127	1.16	0.610	/
		Front Side	10	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.681	-0.140	1.16	0.789	13
		Left Edge	10	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.197	-0.018	1.16	0.228	/
		Right Edge	10	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.425	0.060	1.16	0.492	/
		Top Edge	10	GPRS 4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.611	-0.030	1.16	0.708	/
GSM1900	Main	Back Side	10	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.608	0.015	1.28	0.776	/
		Back Side2	10	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.288	-0.027	1.28	0.368	/
		Back Side3	10	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.307	-0.020	1.28	0.392	/
		Front Side	10	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.226	0.028	1.28	0.288	/
		Left Edge	10	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.256	0.100	1.28	0.327	/
		Right Edge	10	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.055	0.031	1.28	0.070	/
		Top Edge	10	GPRS 4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	1.010	0.029	1.28	1.289	/
		Bottom Edge	10	GPRS 4TX Slots	N/A	N/A	512/1850.2	27.00	26.01	1.020	0.041	1.26	1.281	/
		Bottom Edge	10	GPRS 4TX Slots	N/A	N/A	810/1909.8	27.00	25.70	1.030	0.060	1.35	1.389	14
		Bottom Edge Repeat	10	GPRS 4TX Slots	N/A	N/A	810/1909.8	27.00	25.70	0.964	0.060	1.35	1.300	/
WCDMA II	Main	Back Side	10	RMC	N/A	N/A	9400/1880	23.00	22.26	0.527	0.130	1.19	0.625	/
		Back Side2	10	RMC	N/A	N/A	9400/1880	23.00	22.26	0.312	0.155	1.19	0.370	/
		Back Side3	10	RMC	N/A	N/A	9400/1880	23.00	22.26	0.440	0.028	1.19	0.522	/
		Front Side	10	RMC	N/A	N/A	9400/1880	23.00	22.26	0.201	0.024	1.19	0.238	/
		Left Edge	10	RMC	N/A	N/A	9400/1880	23.00	22.26	0.215	0.018	1.19	0.255	/
		Right Edge	10	RMC	N/A	N/A	9400/1880	23.00	22.26	0.045	0.080	1.19	0.053	/

		Top Edge	10	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	RMC	N/A	N/A	9400/1880	23.00	22.26	0.851	0.025	1.19	1.009	/
		Bottom Edge	10	RMC	N/A	N/A	9262/1852.4	23.00	22.38	0.878	0.030	1.15	1.013	15
		Bottom Edge Repeat	10	RMC	N/A	N/A	9262/1852.4	23.00	22.38	0.844	0.060	1.15	0.974	/
		Bottom Edge	10	RMC	N/A	N/A	9538/1907.6	23.00	22.17	0.835	0.020	1.21	1.011	/
WCDMA IV	Main	Back Side	10	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.717	-0.013	1.17	0.840	/
		Back Side	10	RMC	N/A	N/A	1312/1712.4	23.50	22.84	0.702	0.020	1.16	0.817	/
		Back Side	10	RMC	N/A	N/A	1513/1752.6	23.50	22.78	0.696	0.050	1.18	0.822	/
		Back Side2	10	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.318	0.145	1.17	0.373	/
		Back Side3	10	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.573	0.178	1.17	0.672	/
		Front Side	10	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.182	-0.059	1.17	0.213	/
		Left Edge	10	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.203	0.024	1.17	0.238	/
		Right Edge	10	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.052	0.020	1.17	0.061	/
		Top Edge	10	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	RMC	N/A	N/A	1413/1732.6	23.50	22.81	1.150	0.080	1.17	1.348	16
		Bottom Edge Repeat	10	RMC	N/A	N/A	1413/1732.6	23.50	22.81	1.000	0.010	1.17	1.172	/
		Bottom Edge	10	RMC	N/A	N/A	1312/1712.4	23.50	22.84	1.110	0.037	1.16	1.292	/
		Bottom Edge	10	RMC	N/A	N/A	1513/1752.6	23.50	22.78	1.070	0.015	1.18	1.263	/
WCDMA V	Main	Back Side	10	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.190	0.013	1.26	0.240	/
		Back Side2	10	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.183	-0.064	1.26	0.231	/
		Back Side3	10	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.270	0.151	1.26	0.341	17
		Front Side	10	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.226	0.029	1.26	0.285	/
		Left Edge	10	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.075	-0.010	1.26	0.095	/
		Right Edge	10	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.169	0.024	1.26	0.213	/
		Top Edge	10	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.258	0.030	1.26	0.326	/
LTE 4	Main	Back Side	10	QPSK	1	50	20300/1745	24.00	23.57	0.806	0.037	1.10	0.890	/
			10	QPSK	1	50	20050/1720	24.00	23.42	0.685	0.050	1.14	0.783	/
			10	QPSK	1	50	20175/1732.5	24.00	23.40	0.693	0.070	1.15	0.796	/
			10	QPSK	50%	0	20175/1732.5	23.00	22.47	0.700	0.080	1.13	0.791	/
		Back Side2	10	QPSK	1	50	20300/1745	24.00	23.57	0.311	-0.045	1.10	0.343	/
		Back Side3	10	QPSK	1	50	20300/1745	24.00	23.57	0.533	0.022	1.10	0.588	/
		Front Side	10	QPSK	1	50	20300/1745	24.00	23.57	0.293	-0.026	1.10	0.323	/
			10	QPSK	50%	0	20175/1732.5	23.00	22.47	0.168	0.088	1.13	0.190	/
		Left Edge	10	QPSK	1	50	20300/1745	24.00	23.57	0.273	0.047	1.10	0.301	/
			10	QPSK	50%	0	20175/1732.5	23.00	22.47	0.172	-0.106	1.13	0.194	/
		Right Edge	10	QPSK	1	50	20300/1745	24.00	23.57	0.083	0.028	1.10	0.092	/
			10	QPSK	50%	0	20175/1732.5	23.00	22.47	0.047	0.014	1.13	0.053	/
		Top Edge	10	QPSK	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			10	QPSK	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	QPSK	1	50	20300/1745	24.00	23.57	1.310	0.046	1.10	1.446	18
			10	QPSK	50%	0	20175/1732.5	23.00	22.47	1.100	0.014	1.13	1.243	/
			10	QPSK	50%	25	20050/1720	23.00	22.47	1.230	0.022	1.13	1.390	/
			10	QPSK	50%	25	20300/1745	23.00	22.46	1.270	-0.055	1.13	1.438	/
			10	QPSK	100%	0	20175/1732.5	23.00	22.41	0.889	0.030	1.15	1.018	/
			10	QPSK	100%	0	20050/1720	23.00	22.36	1.230	0.034	1.16	1.425	/
			10	QPSK	100%	0	20300/1745	23.00	22.38	1.250	0.030	1.15	1.442	/
			10	QPSK	1	50	20050/1720	24.00	23.42	1.150	0.050	1.14	1.314	/
			10	QPSK	1	50	20175/1732.5	24.00	23.40	1.040	0.010	1.15	1.194	/

		Bottom Edge Repeat	10	QPSK	1	50	20300/1745	24.00	23.57	1.120	0.050	1.10	1.237	/
		Bottom Edge SIM2	10	QPSK	1	50	20300/1745	24.00	23.57	1.300	0.110	1.10	1.435	/
LTE 7	Main	Back Side	10	QPSK	1	50	20850/2510	22.00	21.65	0.763	0.020	1.08	0.827	/
			10	QPSK	1	50	21100/2535	22.00	21.53	0.725	-0.110	1.11	0.808	/
			10	QPSK	1	50	21350/2560	22.00	21.34	0.698	0.125	1.16	0.813	/
			10	QPSK	50%	50	20850/2510	21.00	20.71	0.581	0.074	1.07	0.621	/
		Back Side2	10	QPSK	1	50	20850/2510	22.00	21.65	0.499	-0.082	1.08	0.541	/
		Back Side3	10	QPSK	1	50	20850/2510	22.00	21.65	0.758	0.090	1.08	0.822	/
		Back Side3	10	QPSK	1	50	21100/2535	22.00	21.53	0.946	0.034	1.11	1.054	/
		Back Side3	10	QPSK	1	50	21350/2560	22.00	21.34	0.932	0.032	1.16	1.085	/
		Front Side	10	QPSK	1	50	20850/2510	22.00	21.65	0.174	0.032	1.08	0.189	/
			10	QPSK	50%	50	20850/2510	21.00	20.71	0.148	-0.013	1.07	0.158	/
		Left Edge	10	QPSK	1	50	20850/2510	22.00	21.65	0.162	0.018	1.08	0.176	/
			10	QPSK	50%	50	20850/2510	21.00	20.71	0.124	0.150	1.07	0.133	/
		Right Edge	10	QPSK	1	50	20850/2510	22.00	21.65	0.126	0.060	1.08	0.137	/
			10	QPSK	50%	50	20850/2510	21.00	20.71	0.102	0.020	1.07	0.109	/
		Top Edge	10	QPSK	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			10	QPSK	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	QPSK	1	50	20850/2510	22.00	21.65	0.978	0.025	1.08	1.060	/
			10	QPSK	1	50	21100/2535	22.00	21.53	0.978	0.030	1.11	1.090	/
			10	QPSK	1	50	21350/2560	22.00	21.34	0.958	0.025	1.16	1.115	/
			10	QPSK	50%	50	20850/2510	21.00	20.71	1.000	0.019	1.07	1.069	/
			10	QPSK	50%	0	21100/2535	21.00	20.43	0.997	-0.027	1.14	1.137	/
			10	QPSK	50%	25	21350/2560	21.00	20.25	0.971	0.045	1.19	1.154	/
			10	QPSK	100%	0	20850/2510	21.00	20.67	0.980	0.011	1.08	1.057	/
			10	QPSK	100%	0	21100/2535	21.00	20.44	0.985	0.090	1.14	1.121	/
			10	QPSK	100%	0	21350/2560	21.00	20.14	0.989	-0.125	1.22	1.206	/
		Bottom Edge Repeat	10	QPSK	100%	0	21350/2560	21.00	20.14	1.040	-0.037	1.22	1.268	19
LTE 12	Main	Back Side	10	QPSK	1	25	23060/704	23.50	22.70	0.209	0.029	1.20	0.251	/
			10	QPSK	50%	25	23095/707.5	22.50	21.79	0.169	0.075	1.18	0.199	/
		Back Side2	10	QPSK	1	25	23060/704	23.50	22.70	0.211	0.046	1.20	0.254	/
		Back Side3	10	QPSK	1	25	23060/704	23.50	22.70	0.332	-0.031	1.20	0.399	20
		Front Side	10	QPSK	1	25	23060/704	23.50	22.70	0.232	0.040	1.20	0.279	/
			10	QPSK	50%	25	23095/707.5	22.50	21.79	0.219	0.038	1.18	0.258	/
		Left Edge	10	QPSK	1	25	23060/704	23.50	22.70	0.197	-0.078	1.20	0.237	/
			10	QPSK	50%	25	23095/707.5	22.50	21.79	0.167	0.017	1.18	0.197	/
		Right Edge	10	QPSK	1	25	23060/704	23.50	22.70	0.216	0.050	1.20	0.260	/
			10	QPSK	50%	25	23095/707.5	22.50	21.79	0.185	0.058	1.18	0.218	/
		Top Edge	10	QPSK	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			10	QPSK	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	QPSK	1	25	23060/704	23.50	22.70	0.214	0.036	1.20	0.257	/
			10	QPSK	50%	25	23095/707.5	22.50	21.79	0.172	-0.010	1.18	0.203	/
LTE 25	Main	Back Side	10	QPSK	1	50	26140/1860	23.50	22.65	0.561	0.052	1.22	0.682	/
			10	QPSK	50%	50	26140/1860	22.50	21.73	0.444	-0.036	1.19	0.530	/

		Back Side2	10	QPSK	1	50	26140/1860	23.50	22.65	0.262	-0.147	1.22	0.319	/
		Back Side3	10	QPSK	1	50	26140/1860	23.50	22.65	0.382	0.067	1.22	0.465	/
		Front Side	10	QPSK	1	50	26140/1860	23.50	22.65	0.218	0.032	1.22	0.265	/
			10	QPSK	50%	50	26140/1860	22.50	21.73	0.170	0.120	1.19	0.203	/
		Left Edge	10	QPSK	1	50	26140/1860	23.50	22.65	0.254	0.016	1.22	0.309	/
			10	QPSK	50%	50	26140/1860	22.50	21.73	0.204	0.080	1.19	0.244	/
		Right Edge	10	QPSK	1	50	26140/1860	23.50	22.65	0.051	0.012	1.22	0.062	/
			10	QPSK	50%	50	26140/1860	22.50	21.73	0.035	0.040	1.19	0.042	/
		Top Edge	10	QPSK	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			10	QPSK	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	QPSK	1	50	26140/1860	23.50	22.65	1.040	0.030	1.22	1.265	/
			10	QPSK	50%	50	26140/1860	22.50	21.73	0.739	0.010	1.19	0.882	/
			10	QPSK	50%	0	26365/1882,5	22.50	21.66	0.867	-0.024	1.21	1.052	/
			10	QPSK	50%	25	26590/1905	22.50	21.56	0.856	0.014	1.24	1.063	/
			10	QPSK	100%	0	26140/1860	22.50	21.68	0.825	0.040	1.21	0.996	/
			10	QPSK	100%	0	26365/1882,5	22.50	21.61	0.842	0.025	1.23	1.034	/
			10	QPSK	100%	0	26590/1905	22.50	21.52	0.794	0.013	1.25	0.995	/
			10	QPSK	1	50	26365/1882,5	23.50	22.59	1.000	0.040	1.23	1.233	/
			10	QPSK	1	50	26590/1905	23.50	22.53	1.030	0.060	1.25	1.288	/
		Bottom Edge Repeat	10	QPSK	1	50	26590/1905	23.50	22.53	1.080	0.015	1.25	1.350	21
LTE 26	Main	Back Side	10	QPSK	1	38	26965/841.5	23.50	22.59	0.229	0.130	1.23	0.282	/
			10	QPSK	50%	18	26965/841.5	22.50	21.65	0.184	0.017	1.22	0.224	/
		Back Side2	10	QPSK	1	38	26965/841.5	23.50	22.59	0.149	0.054	1.23	0.184	/
		Back Side3	10	QPSK	1	38	26965/841.5	23.50	22.59	0.230	-0.048	1.23	0.284	/
		Front Side	10	QPSK	1	38	26965/841.5	23.50	22.59	0.265	-0.022	1.23	0.327	/
			10	QPSK	50%	18	26965/841.5	22.50	21.65	0.211	0.059	1.22	0.257	/
		Left Edge	10	QPSK	1	38	26965/841.5	23.50	22.59	0.094	-0.061	1.23	0.116	/
			10	QPSK	50%	18	26965/841.5	22.50	21.65	0.070	0.010	1.22	0.085	/
		Right Edge	10	QPSK	1	38	26965/841.5	23.50	22.59	0.197	0.039	1.23	0.243	/
			10	QPSK	50%	18	26965/841.5	22.50	21.65	0.158	0.050	1.22	0.192	/
		Top Edge	10	QPSK	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			10	QPSK	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	QPSK	1	38	26965/841.5	23.50	22.59	0.358	0.070	1.23	0.441	22
			10	QPSK	50%	18	26965/841.5	22.50	21.65	0.287	0.026	1.22	0.349	/
LTE 41	Main	Back Side	10	QPSK	1	50	40140/2545	23.50	22.73	0.824	0.024	1.19	0.984	/
			10	QPSK	1	50	40400/2571	23.50	22.52	0.755	0.100	1.25	0.946	/
			10	QPSK	1	50	41140/2645	23.50	22.28	0.809	0.050	1.32	1.071	/
			10	QPSK	50%	25	40140/2545	22.50	21.71	0.659	0.021	1.20	0.790	/
		Back Side2	10	QPSK	1	50	40140/2545	23.50	22.73	0.337	0.178	1.19	0.402	/
		Back Side3	10	QPSK	1	50	40140/2545	23.50	22.73	0.507	-0.026	1.19	0.605	/
		Front Side	10	QPSK	1	50	40140/2545	23.50	22.73	0.151	-0.020	1.19	0.180	/
			10	QPSK	50%	25	40140/2545	22.50	21.71	0.124	0.027	1.20	0.149	/
		Left Edge	10	QPSK	1	50	40140/2545	23.50	22.73	0.113	0.030	1.19	0.135	/
			10	QPSK	50%	25	40140/2545	22.50	21.71	0.089	0.010	1.20	0.107	/
		Right Edge	10	QPSK	1	50	40140/2545	23.50	22.73	0.117	0.070	1.19	0.140	/

			10	QPSK	50%	25	40140/2545	22.50	21.71	0.080	0.059	1.20	0.096	/
		Top Edge	10	QPSK	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			10	QPSK	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	QPSK	1	50	40140/2545	23.50	22.73	1.010	-0.047	1.19	1.206	/
			10	QPSK	1	50	40400/2571	23.50	22.52	1.000	-0.023	1.25	1.253	/
			10	QPSK	1	50	41140/2645	23.50	22.28	1.030	-0.140	1.32	1.364	23
			10	QPSK	50%	25	40140/2545	22.50	21.71	0.806	-0.050	1.20	0.967	/
			10	QPSK	50%	0	40400/2571	22.50	21.55	0.944	-0.120	1.24	1.175	/
			10	QPSK	50%	0	41140/2645	22.50	21.38	0.947	-0.010	1.29	1.226	/
			10	QPSK	100%	0	40140/2545	22.50	21.64	0.961	-0.090	1.22	1.171	/
			10	QPSK	100%	0	40400/2571	22.50	21.49	0.938	-0.040	1.26	1.184	/
			10	QPSK	100%	0	41140/2645	22.50	21.31	0.939	0.010	1.32	1.235	/

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/Kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
2.4G	Wi-Fi	Back Side	10	802.11b	100.0%	6/2437	19.50	18.75	0.057	0.010	1.19	0.068	/
		Back Side2	10	802.11b	100.0%	6/2437	19.50	18.75	0.161	0.100	1.19	0.191	/
		Back Side3	10	802.11b	100.0%	6/2437	19.50	18.75	0.188	0.020	1.19	0.223	24
		Front Side	10	802.11b	100.0%	6/2437	19.50	18.75	0.089	0.090	1.19	0.106	/
		Left Edge	10	802.11b	100.0%	6/2437	19.50	18.75	0.077	0.027	1.19	0.092	/
		Right Edge	10	802.11b	100.0%	6/2437	19.50	18.75	0.114	0.074	1.19	0.135	/
		Top Edge	10	802.11b	100.0%	6/2437	19.50	18.75	0.062	-0.090	1.19	0.074	/
		Bottom Edge	10	802.11b	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
U-NII-2A	Wi-Fi	Back Side	10	802.11a	100.0%	60/5300	17.00	16.16	0.104	0.190	1.21	0.126	/
		Back Side2	10	802.11a	100.0%	60/5300	17.00	16.16	0.094	0.100	1.21	0.114	/
		Back Side3	10	802.11a	100.0%	60/5300	17.00	16.16	0.037	0.100	1.21	0.045	/
		Front Side	10	802.11a	100.0%	60/5300	17.00	16.16	0.077	0.021	1.21	0.093	/
		Left Edge	10	802.11a	100.0%	60/5300	17.00	16.16	0.093	-0.035	1.21	0.113	/
		Right Edge	10	802.11a	100.0%	60/5300	17.00	16.16	0.209	0.027	1.21	0.254	25
		Top Edge	10	802.11a	100.0%	60/5300	17.00	16.16	0.083	0.012	1.21	0.101	/
		Bottom Edge	10	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
U-NII-2C	Wi-Fi	Back Side	10	802.11a	100.0%	100/5500	16.50	15.98	0.115	0.035	1.13	0.130	/
		Back Side2	10	11a	100.0%	100/5500	16.50	15.98	0.106	0.160	1.13	0.119	/
		Back Side3	10	11a	100.0%	100/5500	16.50	15.98	0.052	-0.051	1.13	0.058	/
		Front Side	10	802.11a	100.0%	100/5500	16.50	15.98	0.089	0.096	1.13	0.100	/
		Left Edge	10	802.11a	100.0%	100/5500	16.50	15.98	0.101	0.071	1.13	0.114	/
		Right Edge	10	802.11a	100.0%	100/5500	16.50	15.98	0.125	0.166	1.13	0.141	/
		Top Edge	10	802.11a	100.0%	100/5500	16.50	15.98	0.062	0.030	1.13	0.070	/
		Bottom Edge	10	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
U-NII-3	Wi-Fi	Back Side	10	802.11a	100.0%	165/5825	16.50	15.54	0.120	0.048	1.25	0.150	/
		Back Side2	10	11a	100.0%	165/5825	16.50	15.54	0.186	0.049	1.25	0.232	/
		Back Side3	10	11a	100.0%	165/5825	16.50	15.54	0.155	0.032	1.25	0.193	/
		Front Side	10	802.11a	100.0%	165/5825	16.50	15.54	0.082	0.049	1.25	0.102	/
		Left Edge	10	802.11a	100.0%	165/5825	16.50	15.54	0.091	0.025	1.25	0.114	/
		Right Edge	10	802.11a	100.0%	165/5825	16.50	15.54	0.176	0.060	1.25	0.220	/
		Top Edge	10	802.11a	100.0%	165/5825	16.50	15.54	0.084	-0.022	1.25	0.105	/
		Bottom Edge	10	802.11a	100.0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/

Product-specific 10g SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	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.
GSM850	Main	Back Side	0	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.482	0.160	1.16	0.559	/
		Back Side2	0	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.544	0.065	1.16	0.630	/
		Back Side3	0	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.355	0.033	1.16	0.411	/
		Front Side	0	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.559	-0.040	1.16	0.648	/
		Left Edge	0	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.439	0.031	1.16	0.509	/
		Right Edge	0	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.875	0.030	1.16	1.014	26
		Top Edge	0	GPRS 4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	0	GPRS 4TX Slots	N/A	N/A	190/836.6	29.50	28.86	0.786	0.180	1.16	0.911	/
GSM1900	Main	Back Side	0	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.790	0.015	1.28	1.008	/
		Back Side2	0	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.438	0.100	1.28	0.559	/
		Back Side3	0	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.507	0.160	1.28	0.647	/
		Front Side	0	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.350	0.060	1.28	0.447	/
		Left Edge	0	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.705	0.036	1.28	0.900	/
		Right Edge	0	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	0.044	0.080	1.28	0.056	/
		Top Edge	0	GPRS 4TX Slots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	0	GPRS 4TX Slots	N/A	N/A	661/1880	27.00	25.94	2.560	-0.040	1.28	3.268	27
		Bottom Edge	0	GPRS 4TX Slots	N/A	N/A	512/1850.2	27.00	26.01	2.480	0.020	1.26	3.115	/
		Bottom Edge	0	GPRS 4TX Slots	N/A	N/A	810/1909.8	27.00	25.70	2.400	-0.120	1.35	3.238	/
WCDMA II	Main	Back Side	0	RMC	N/A	N/A	9400/1880	23.00	22.26	0.644	-0.039	1.19	0.764	/
		Back Side2	0	RMC	N/A	N/A	9400/1880	23.00	22.26	0.477	-0.085	1.19	0.566	/
		Back Side3	0	RMC	N/A	N/A	9400/1880	23.00	22.26	0.566	0.024	1.19	0.671	/
		Front Side	0	RMC	N/A	N/A	9400/1880	23.00	22.26	0.294	0.043	1.19	0.349	/
		Left Edge	0	RMC	N/A	N/A	9400/1880	23.00	22.26	0.577	0.038	1.19	0.684	/
		Right Edge	0	RMC	N/A	N/A	9400/1880	23.00	22.26	0.046	0.011	1.19	0.055	/
		Top Edge	0	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	0	RMC	N/A	N/A	9400/1880	23.00	22.26	2.070	0.060	1.19	2.455	28
		Bottom Edge	0	RMC	N/A	N/A	9262/1852.4	23.00	22.38	2.100	0.058	1.15	2.422	/
		Bottom Edge	0	RMC	N/A	N/A	9538/1907.6	23.00	22.17	1.950	0.014	1.21	2.361	/
WCDMA IV	Main	Back Side	0	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.932	-0.040	1.17	1.092	/
		Back Side2	0	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.406	-0.100	1.17	0.476	/
		Back Side3	0	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.705	0.021	1.17	0.826	/
		Front Side	0	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.202	0.022	1.17	0.237	/
		Left Edge	0	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.563	0.019	1.17	0.660	/
		Right Edge	0	RMC	N/A	N/A	1413/1732.6	23.50	22.81	0.053	0.100	1.17	0.062	/
		Top Edge	0	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	0	RMC	N/A	N/A	1413/1732.6	23.50	22.81	2.380	0.039	1.17	2.790	/
		Bottom Edge	0	RMC	N/A	N/A	1312/1712.4	23.50	22.84	2.450	0.120	1.16	2.852	29
		Bottom Edge	0	RMC	N/A	N/A	1513/1752.6	23.50	22.78	2.410	0.080	1.18	2.845	/
WCDMA V	Main	Back Side	0	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.205	0.010	1.26	0.259	/
		Back Side2	0	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.267	0.014	1.26	0.337	/
		Back Side3	0	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.163	0.025	1.26	0.206	/
		Front Side	0	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.212	0.029	1.26	0.268	/
		Left Edge	0	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.189	0.030	1.26	0.238	/
		Right Edge	0	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.323	-0.060	1.26	0.408	30
		Top Edge	0	RMC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	0	RMC	N/A	N/A	4183/836.6	23.00	21.99	0.321	0.100	1.26	0.405	/
LTE 4	Main	Back Side	0	QPSK	1	50	20300/1745	24.00	23.57	0.959	0.016	1.10	1.059	/
			0	QPSK	50%	0	20175/1732.5	23.00	22.47	0.901	0.027	1.13	1.018	/
		Back Side2	0	QPSK	1	50	20300/1745	24.00	23.57	0.417	-0.063	1.10	0.460	/

		Back Side3	0	QPSK	1	50	20300/1745	24.00	23.57	0.688	0.100	1.10	0.760	/
		Front Side	0	QPSK	1	50	20300/1745	24.00	23.57	0.235	-0.029	1.10	0.259	/
			0	QPSK	50%	0	20175/1732.5	23.00	22.47	0.181	0.058	1.13	0.204	/
		Left Edge	0	QPSK	1	50	20300/1745	24.00	23.57	0.626	0.040	1.10	0.691	/
			0	QPSK	50%	0	20175/1732.5	23.00	22.47	0.490	0.070	1.13	0.554	/
		Right Edge	0	QPSK	1	50	20300/1745	24.00	23.57	0.059	0.013	1.10	0.065	/
			0	QPSK	50%	0	20175/1732.5	23.00	22.47	0.052	0.022	1.13	0.059	/
		Top Edge	0	QPSK	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			0	QPSK	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	0	QPSK	1	50	20300/1745	24.00	23.57	2.710	0.011	1.10	2.992	/
			0	QPSK	50%	0	20175/1732.5	23.00	22.47	2.360	-0.060	1.13	2.666	/
			0	QPSK	100%	0	20175/1732.5	23.00	22.41	2.180	0.120	1.15	2.497	/
			0	QPSK	1	50	20050/1720	24.00	23.42	2.660	0.110	1.14	3.040	/
			0	QPSK	1	50	20175/1732.5	24.00	23.40	2.660	0.170	1.15	3.054	31
			0	QPSK	50%	25	20050/1720	23.00	22.47	2.160	0.120	1.13	2.440	/
			0	QPSK	50%	25	20300/1745	23.00	22.46	2.140	0.020	1.13	2.423	/
			0	QPSK	100%	0	20050/1720	23.00	22.36	2.180	0.011	1.16	2.526	/
			0	QPSK	100%	0	20300/1745	23.00	22.38	2.080	0.120	1.15	2.399	/
		Bottom Edge SIM2	0	QPSK	1	50	20175/1732.5	24.00	23.40	2.280	0.030	1.15	2.618	/
LTE 7	Main	Back Side	0	QPSK	1	50	20850/2510	22.00	21.65	0.777	0.025	1.08	0.842	/
			0	QPSK	50%	50	20850/2510	21.00	20.71	0.634	-0.042	1.07	0.678	/
		Back Side2	0	QPSK	1	50	20850/2510	22.00	21.65	0.735	0.150	1.08	0.797	/
		Back Side3	0	QPSK	1	50	20850/2510	22.00	21.65	0.840	0.083	1.08	0.910	/
		Front Side	0	QPSK	1	50	20850/2510	22.00	21.65	0.215	0.048	1.08	0.233	/
			0	QPSK	50%	50	20850/2510	21.00	20.71	0.188	0.020	1.07	0.201	/
		Left Edge	0	QPSK	1	50	20850/2510	22.00	21.65	0.338	0.060	1.08	0.366	/
			0	QPSK	50%	50	20850/2510	21.00	20.71	0.276	0.081	1.07	0.295	/
		Right Edge	0	QPSK	1	50	20850/2510	22.00	21.65	0.267	0.030	1.08	0.289	/
			0	QPSK	50%	50	20850/2510	21.00	20.71	0.218	0.011	1.07	0.233	/
		Top Edge	0	QPSK	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			0	QPSK	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	0	QPSK	1	50	20850/2510	22.00	21.65	2.030	-0.130	1.08	2.200	/
			0	QPSK	1	50	21100/2535	22.00	21.53	1.970	-0.120	1.11	2.195	/
			0	QPSK	1	50	21350/2560	22.00	21.34	1.900	-0.140	1.16	2.212	32
			0	QPSK	50%	50	20850/2510	21.00	20.71	1.600	-0.120	1.07	1.710	/
			0	QPSK	100%	0	20850/2510	21.00	20.67	1.540	0.014	1.08	1.662	/
LTE 12	Main	Back Side	0	QPSK	1	25	23060/704	23.50	22.70	0.247	0.030	1.20	0.297	/
			0	QPSK	50%	25	23095/707.5	22.50	21.79	0.198	0.090	1.18	0.233	/
		Back Side2	0	QPSK	1	25	23060/704	23.50	22.70	0.250	0.010	1.20	0.301	/
		Back Side3	0	QPSK	1	25	23060/704	23.50	22.70	0.117	-0.024	1.20	0.141	/
		Front Side	0	QPSK	1	25	23060/704	23.50	22.70	0.236	0.027	1.20	0.284	/
			0	QPSK	50%	25	23095/707.5	22.50	21.79	0.195	0.014	1.18	0.230	/
		Left Edge	0	QPSK	1	25	23060/704	23.50	22.70	0.232	-0.080	1.20	0.279	/
			0	QPSK	50%	25	23095/707.5	22.50	21.79	0.189	-0.020	1.18	0.223	/
		Right Edge	0	QPSK	1	25	23060/704	23.50	22.70	0.355	0.015	1.20	0.427	/
			0	QPSK	50%	25	23095/707.5	22.50	21.79	0.296	0.080	1.18	0.349	/
		Top Edge	0	QPSK	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			0	QPSK	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	0	QPSK	1	25	23060/704	23.50	22.70	0.383	0.130	1.20	0.460	33
			0	QPSK	50%	25	23095/707.5	22.50	21.79	0.307	0.070	1.18	0.362	/
LTE 25	Main	Back Side	0	QPSK	1	50	26140/1860	23.50	22.65	0.746	0.016	1.22	0.907	/
			0	QPSK	50%	50	26140/1860	22.50	21.73	0.581	0.011	1.19	0.694	/
		Back Side2	0	QPSK	1	50	26140/1860	23.50	22.65	0.412	-0.100	1.22	0.501	/
		Back Side3	0	QPSK	1	50	26140/1860	23.50	22.65	0.502	0.186	1.22	0.611	/
		Front Side	0	QPSK	1	50	26140/1860	23.50	22.65	0.335	-0.028	1.22	0.407	/