TESTING
NVLAP LAB CODE 600118-0

SAR TEST REPORT

No. I21Z60861-SEM03

For

TCL Communication Ltd

Tablet PC

9198S

With

Hardware Version: 03

Software Version: 2C61

FCC ID: 2ACCJB155

Issued Date: 2021-9-27

Note:

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Test Laboratory:

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I21Z60861-SEM03	Rev.0	2021-8-30	Initial creation of test report
I21Z60861-SEM03	Rev.1	2021-9-27	Add the ANNEX J for evaluation of G-Sensor and Hall-Sensor on Page 306

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1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL(Shouxiang)
Address:	No. 51 Shouxiang Science Building, Xueyuan Road, Haidian District, Beijing, P. R. China100191

1.2 Testing Environment

Temperature:	18°C~25°C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω
Ambient noise & Reflection:	< 0.012 W/kg

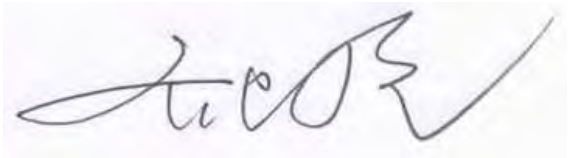
1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	June 18, 2021
Testing End Date:	July 20, 2021

1.4 Signature

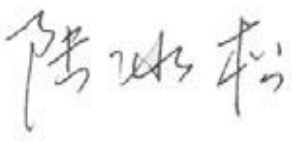
Lin Xiaojun

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory

(Approved this test report)

2 Statement of Compliance

The maximum results of SAR found during testing for TCL Communication Ltd Tablet PC 9198S are as follows:

Table 2.1: Highest Reported SAR (1g)

Mode		Antenna	Highest Reported SAR (1g)
GSM	GSM 850	ANT0	0.65
	PCS 1900	ANT0	0.57
WCDMA	UMTS FDD 2	ANT0	0.51
	UMTS FDD 5	ANT0	0.71
LTE	LTE Band 2	ANT0	**0.77**
	LTE Band 2	ANT1	0.52
	LTE Band 4	ANT0	0.64
	LTE Band 5	ANT0	0.71
	LTE Band 7	ANT0	0.68
	LTE Band 12	ANT0	0.68
	LTE Band 13	ANT0	0.65
	LTE Band 48	ANT6	0.71
	LTE Band 66	ANT0	0.63
	LTE Band 66	ANT1	0.47
NR	N2(EN-DC)	ANT0	0.72
	N5(EN-DC)	ANT0	0.66
	N66(EN-DC)	ANT0	0.62
	n77(EN-DC)	ANT6	0.63
WLAN 2.4 GHz		ANT9	0.43
WLAN 5 GHz			0.39
WLAN 2.4 GHz		ANT10	0.35
WLAN 5 GHz			0.69
WLAN 2.4 GHz		MIMO	0.49
WLAN 5 GHz			0.46
BT			<0.01

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1g tissue according to the ANSI C95.1-1992.

For body operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and which provides a minimum separation distance of 0/8/10/11/13/15/17mm between this device and the body of the user. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output.

The measurement together with the test system set-up is described in annex C of this test report. A detailed description of the equipment under test can be found in chapter 4 of this test report. The highest reported SAR value is obtained at the case of **(Table 2.1),** and the values are**: 0.77 W/kg (1g).**

Table 2.2: The sum of reported SAR values for main antenna and WiFi2.4G-MIMO

	Position	Band	Main antenna	WLAN antenna	Sum
Maximum reported SAR value for Body	Rear 11mm	LTE Band 2	0.77	0.37	**1.14**

Table 2.3: The sum of reported SAR values for main antenna and WiFi5G-MIMO

	Position	Band	Main antenna	WLAN antenna	Sum
Maximum reported SAR value for Body	Top 0mm	LTE Band 48	0.71	0.46	**1.17**

Table 2.4: The sum of reported SAR values for main antenna + WiFi5G-MIMO+BT

	Position	Band	Main antenna	WLAN antenna	BT	Sum
Maximum reported SAR value for Body	Top 0mm	LTE Band 48	0.71	0.46	<0.01 [1]	**1.17**

[1] - The head SAR of BT is too low to get it, so the “<0.01” is used to indicate the SAR of BT.

According to the above tables, the highest sum of reported SAR values is **1.17 W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 13.

3 Client Information

3.1 Applicant Information

Company Name:	TCL Communication Ltd
Address/Post:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Contact Person:	Gong Zhizhou
E-mail:	zhizhou.gong@tcl.com
Telephone:	0086-755-36611722
Fax:	0086-755-36612000-81722

3.2 Manufacturer Information

Company Name:	TCL Communication Ltd
Address/Post:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Contact Person:	Gong Zhizhou
E-mail:	zhizhou.gong@tcl.com
Telephone:	0086-755-36611722
Fax:	0086-755-36612000-81722

4 Equipment Under Test (EUT) and Ancillary Equipment (AE)

4.1 About EUT

Description:	Tablet PC
Model name:	9198S
Operating mode(s):	GSM850/1900, WCDMA850/900/1900/2100, BT, Wi-Fi (2.4G/5G), n2/n5/n66/n77/n260/261 LTE Band 2/3/4/5/7/12/13/20/28/46/48/66
Tested Tx Frequency:	824 – 849 MHz (GSM 850)
	1850 – 1910 MHz (GSM 1900)
	824–849 MHz (WCDMA 850 Band V)
	1710 – 1755 MHz (WCDMA 1700 Band IV)
	1850–1910 MHz (WCDMA1900 Band II)
	1850 – 1910 MHz(LTE Band 2)
	1710 – 1755 MHz (LTE Band 4)
	824 – 849 MHz (LTE Band 5)
	2500 – 2570 MHz(LTE Band 7)
	699 – 716 MHz (LTE Band 12)
	779.5 –784.5 MHz (LTE Band 13)
	3550 – 3700 MHz (LTE Band 48)
	1710 – 1780 MHz (LTE Band 66)
	2412 – 2462 MHz (Wi-Fi 2.4G)
	5150-5825 MHz (Wi-Fi 5G)
	1850 – 1910 MHz(n2)
	824 – 849 MHz(n5)
	1710 – 1780 MHz (n66)
	3700– 3980 MHz (n77)
	37000– 40000 MHz (n260)
	27500– 28350 MHz (n261)
GPRS/EGPRS Multislot Class:	12
GPRS capability Class:	B
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna

4.2Internal Identification of EUT used during the test

EUT ID*	IMEI	HW	SW Version
EUT1	358861400001056	03	2C61
EUT2	358861400001643	03	2C61
EUT3	358861400000918	03	2C61
EUT4	358861400001692	03	2C61
EUT5	358861400001841	03	2C61
EUT6	358861400000926	03	2C61

*EUT ID: is used to identify the test sample in the lab internally.

Note: It is performed to test SAR with the EUT1-3 and conducted power with the EUT4-6.

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	TLp078B1	CAC7800008C1	BYD

*AE ID: is used to identify the test sample in the lab internally.

5 TEST METHODOLOGY

5.1 Applicable Limit Regulations

ANSI C95.1–1992:IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

5.2 Applicable Measurement Standards

IEEE 1528–2013: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

KDB447498 D01: General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

KDB648474 D04 Handset SAR v01r03: SAR Evaluation Considerations for Wireless Handsets.

KDB941225 D01 SAR test for 3G devices v03r01: SAR Measurement Procedures for 3G Devices

KDB941225 D05 SAR for LTE Devices v02r05: SAR Evaluation Considerations for LTE Devices

KDB941225 D06 Hotspot Mode SAR v02r01: SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities

KDB248227 D01 802.11 Wi-Fi SAR v02r02: SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS

KDB865664 D01SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz.

KDB865664 D02RF Exposure Reporting v01r02: RF Exposure Compliance Reporting and Documentation Considerations

6 Smart Transmit feature for RF Exposure compliance

The FCC RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN transmitter to ensure the product in compliance with FCC RF exposure limit over a defined time window for SAR (transmit frequency ≤ 6GHz). To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement.

The purpose of the Part 1 test in this report is to demonstrate that the device meets the FCC SAR limits when transmitting in static transmission scenario at maximum allowable time-averaged power levels. The parameters obtained from SAR characterization (referred to as SAR char, respectively) will be used as input for Smart Transmit. SAR char will be entered via the Embedded File System (EFS) to enable the Smart Transmit Feature.

WLAN/BT operations are not enabled with Smart Transmit.

Term	Description
P_{limit}	The time-averaged RF power which corresponds to SAR_design_target.
P_{max}	Maximum target power level
SAR_design_target:	The design target for SAR compliance. It should be less than regulatory power density limit to account for all device design related uncertainties.
SAR Char	P_{limit} for all the technologies/bands for all applicable DSI

Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit.

Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI).

<Plimit for supported technologies and bands (Plimit in EFS file)>

For FCC				
Band	Antenna	Sensor active	Sensor deactive	Pmax*
		DSI1	DSI2	
GSM850 (1 Tx slots)**	0	25	30	32.5
GSM1900 (1 Tx slots)**	0	17.5	27.5	30
WCDMA II	0	10	20.5	24
WCDMA V	0	16.5	23.5	23.5
LTE Band 2	0	9.5	20.5	24
LTE Band 2	1	11	19	24
LTE Band 4	0	10	18	24
LTE Band 5	0	17	23.5	23.5
LTE Band 7	0	10.5	21	24
LTE Band 12	0	17	23.5	23.5
LTE Band 13	0	17	24	24
LTE Band 48**	6	9	19	23.5
LTE Band 66	0	10	19	24
LTE Band 66	1	10	16.5	24
FR1 N2	0	9.5	19.5	23.5
FR1 N5	0	18.5	22	23.5
FR1 N66	0	9.5	16.5	23.5
FR1 N77**	6	6.5	18.5	25

*Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + 1dB uncertainty.
**All Plimit power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM & LTE TDD & NR TDD).

The max allowed output power is the Plimit + 1dB device uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax instead.

7 Specific Absorption Rate (SAR)

7.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

7.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ) . The equation description is as below:

$$SAR = \frac{d}{dt}\left(\frac{dW}{dm}\right) = \frac{d}{dt}\left(\frac{dW}{\rho dv}\right)$$

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = c\left(\frac{\delta T}{\delta t}\right)$$

Where: C is the specific head capacity, δT is the temperature rise and δt is the exposure duration, or related to the electrical field in the tissue by

$$SAR = \frac{\sigma |E|^2}{\rho}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

8 Tissue Simulating Liquids

8.1 Targets for tissue simulating liquid

Table 8.1: Targets for tissue simulating liquid

Frequency(MHz)	Liquid Type	Conductivity(σ)	±10% Range	Permittivity(ε)	± 10% Range
750	Head	0.89	0.80～0.98	41.94	37.75～46.13
835	Head	0.90	0.81～0.99	41.5	37.35～45.65
1750	Head	1.40	1.26～1.54	40.0	36～44
1900	Head	1.40	1.26～1.54	40.0	36～44
2450	Head	1.80	1.62～1.98	39.2	35.28～43.12
2600	Head	1.96	1.76～2.16	39.01	35.11～42.91

Table 8.2: Targets for tissue simulating liquid

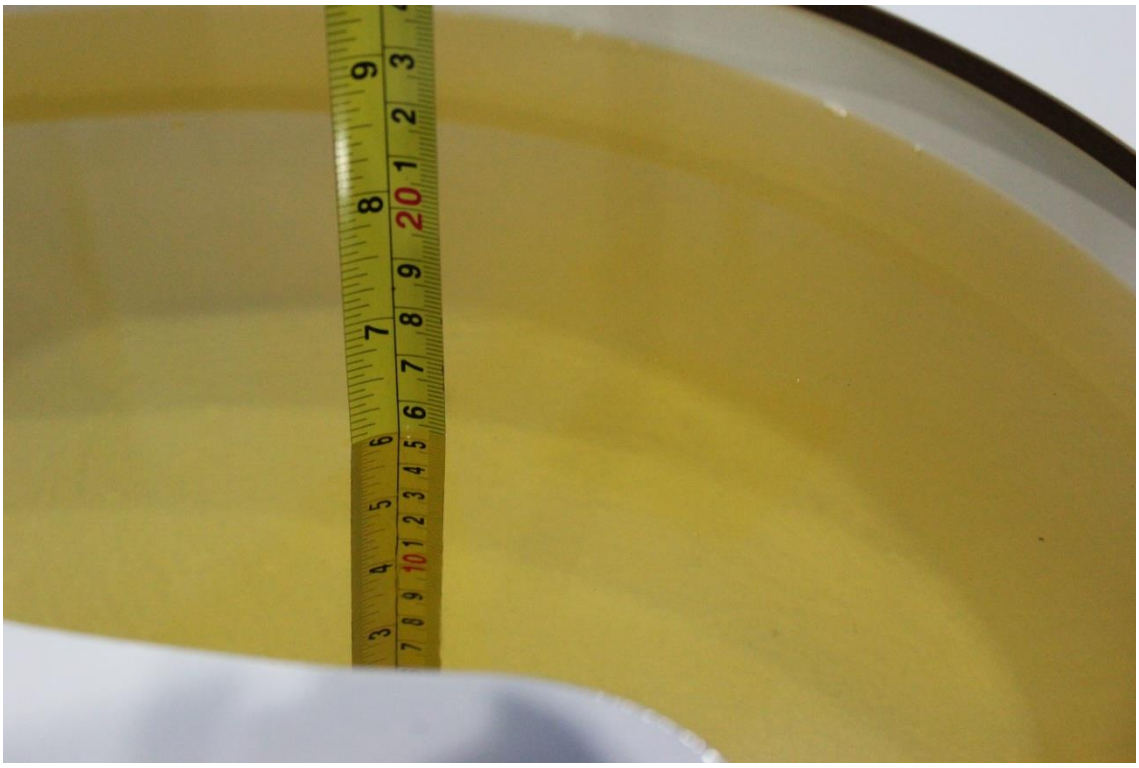
Frequency(MHz)	Liquid Type	Conductivity(σ)	± 5% Range	Permittivity(ε)	± 5% Range
3700	Head	3.12	2.96～3.28	37.70	35.82～39.59
3900	Head	3.32	3.15～3.49	37.47	35.6～39.34
5250	Head	4.71	4.47～4.95	35.93	34.13～37.73
5600	Head	5.07	4.82～5.32	35.53	33.8～37.3
5750	Head	5.22	4.96～5.48	35.36	33.59～37.13

8.2 Dielectric Performance

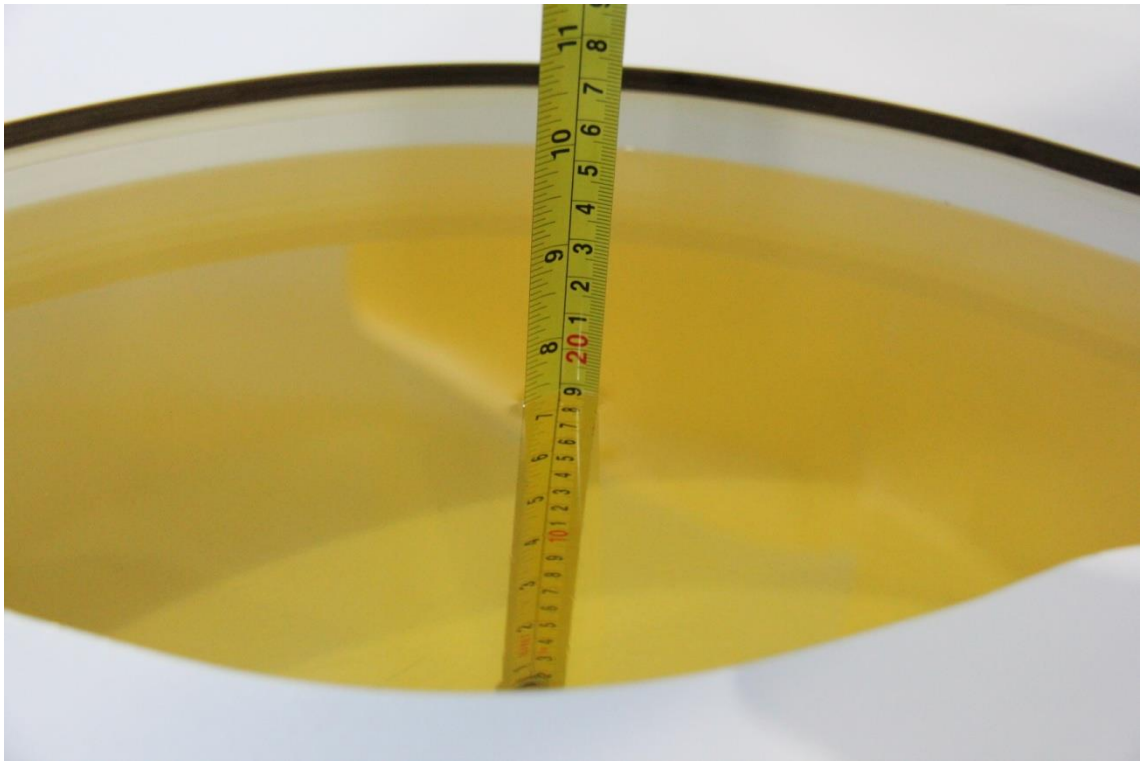
Table 8.3: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ε	Drift (%)	Conductivity σ (S/m)	Drift (%)
2021-7-8	Head	750 MHz	45.24	7.87	0.8364	-6.02
2021-7-13	Head	835 MHz	44.9	8.19	0.8745	-2.83
2021-7-9	Head	1750 MHz	42.25	5.41	1.39	1.46
2021-7-20	Head	1900 MHz	41.98	4.95	1.49	6.43
2021-6-18	Head	2450 MHz	40.05	2.17	1.924	6.89
2021-7-1	Head	2450 MHz	41.46	5.77	1.941	7.83
2021-7-17	Head	2600 MHz	41.15	5.49	2.063	5.26
2021-7-18	Head	3700 MHz	37.95	0.66	3.035	-2.72
2021-7-17	Head	3900 MHz	37.64	0.45	3.225	-2.86
2021-6-24	Head	5250 MHz	35.07	-2.39	4.903	4.10
2021-6-29	Head	5250 MHz	35.22	-1.98	4.75	0.85
2021-6-25	Head	5600 MHz	34.3	-3.46	5.31	4.73
2021-6-30	Head	5600 MHz	34.54	-2.79	5.153	1.64
2021-6-26	Head	5750 MHz	33.98	-3.90	5.47	4.79
2021-6-27	Head	5750 MHz	34.26	-3.11	5.331	2.13

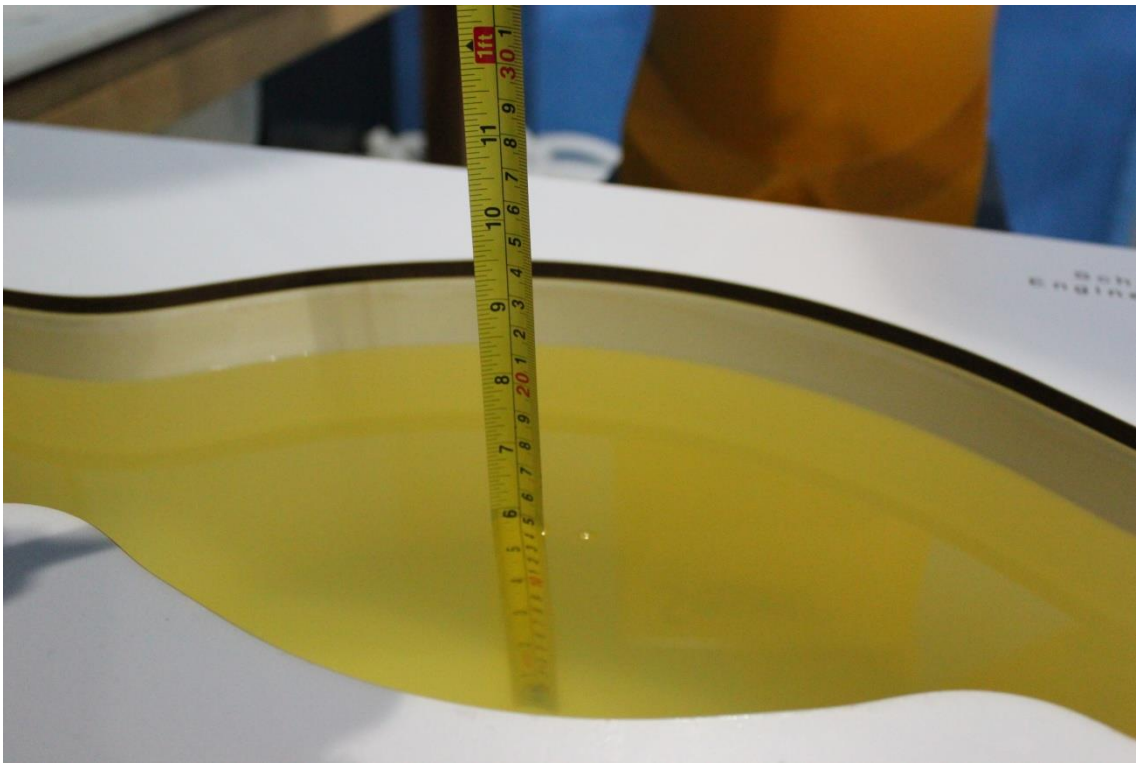
Note: The liquid temperature is 22.0°C



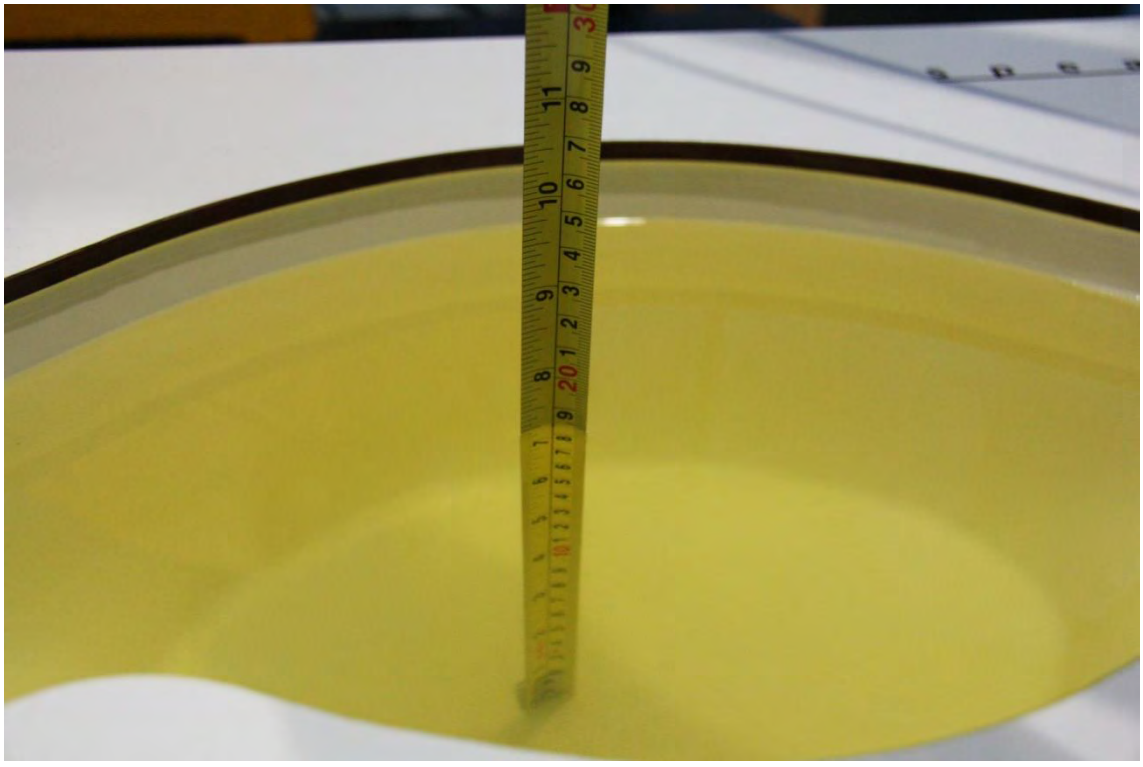
Picture 8-1 Liquid depth in the Head Phantom (750MHz)



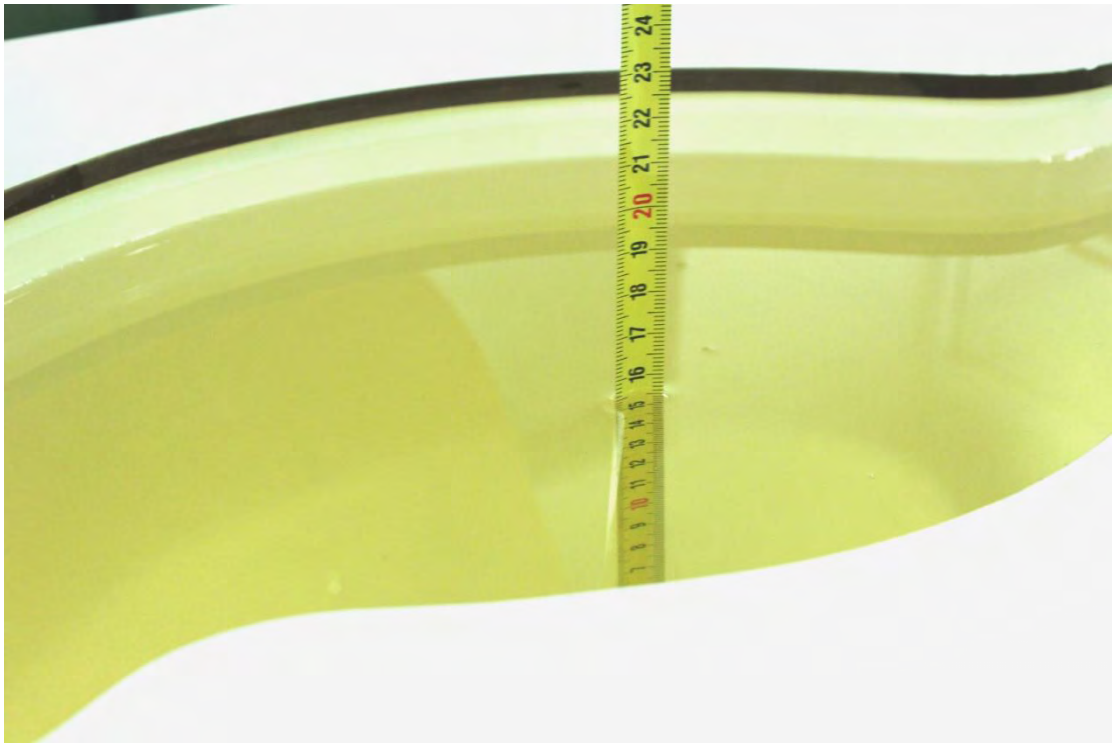
Picture 8-2 Liquid depth in the Head Phantom (835 MHz)



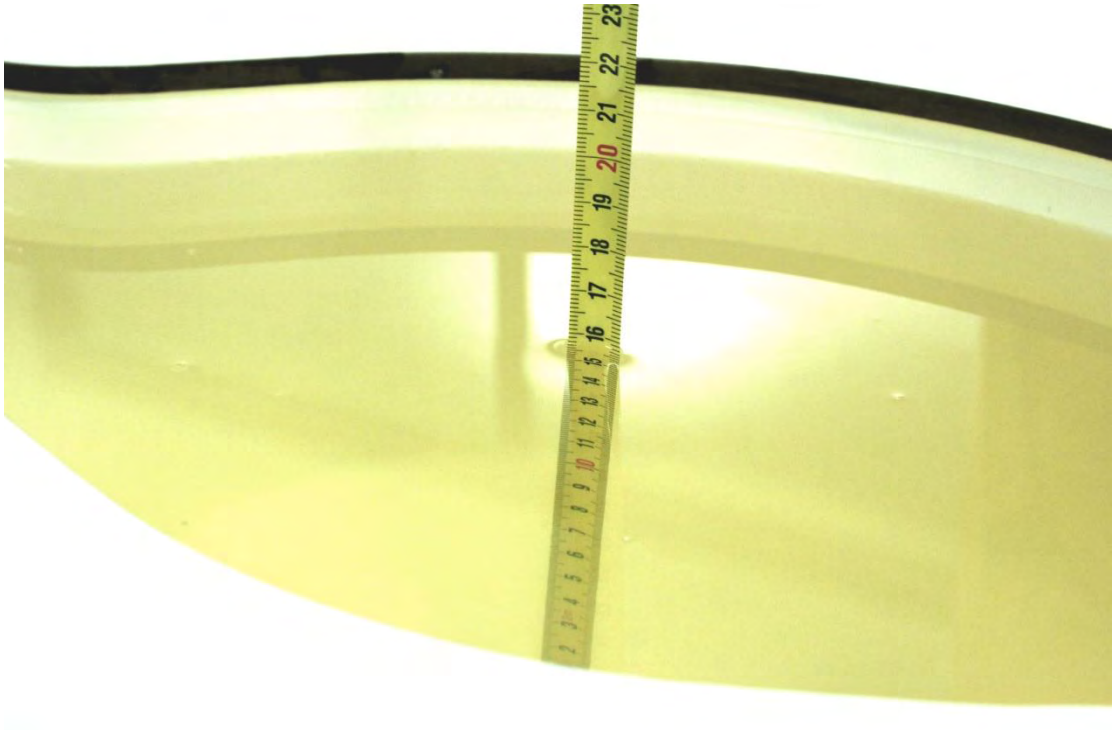
Picture 8-3 Liquid depth in the Head Phantom (1750 MHz)



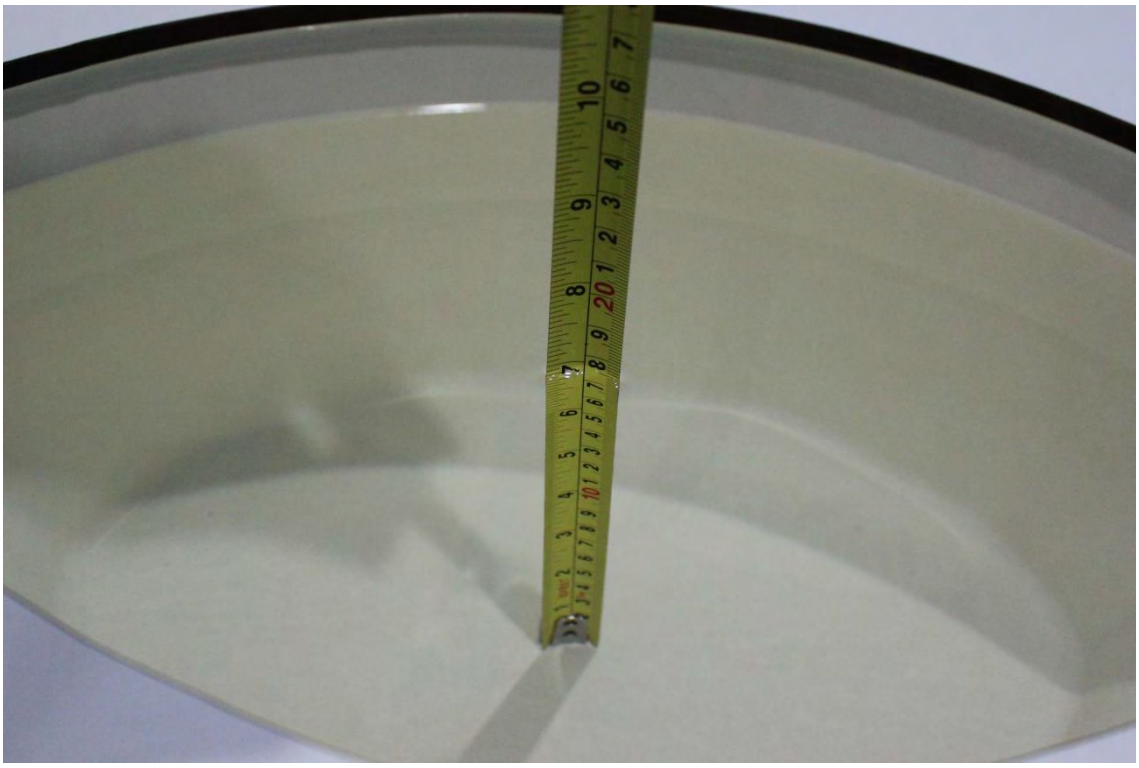
Picture 8-4 Liquid depth in the Head Phantom (1900 MHz)



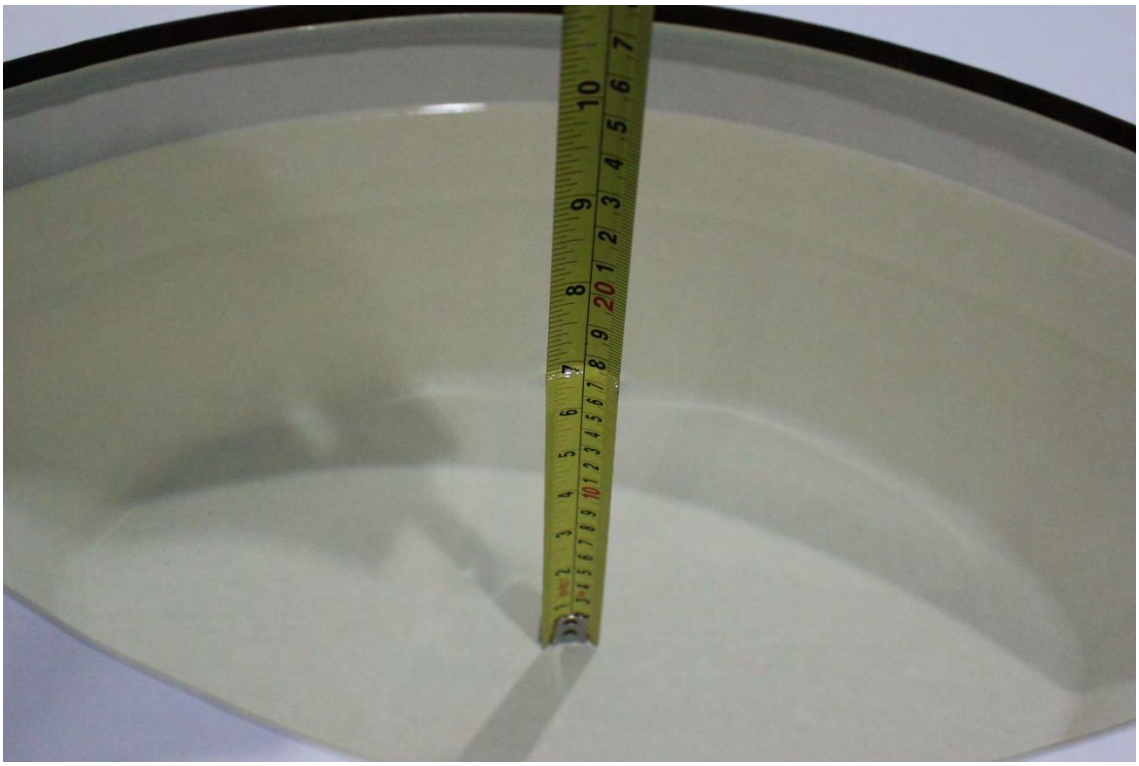
Picture 8-5 Liquid depth in the Head Phantom (2450MHz)



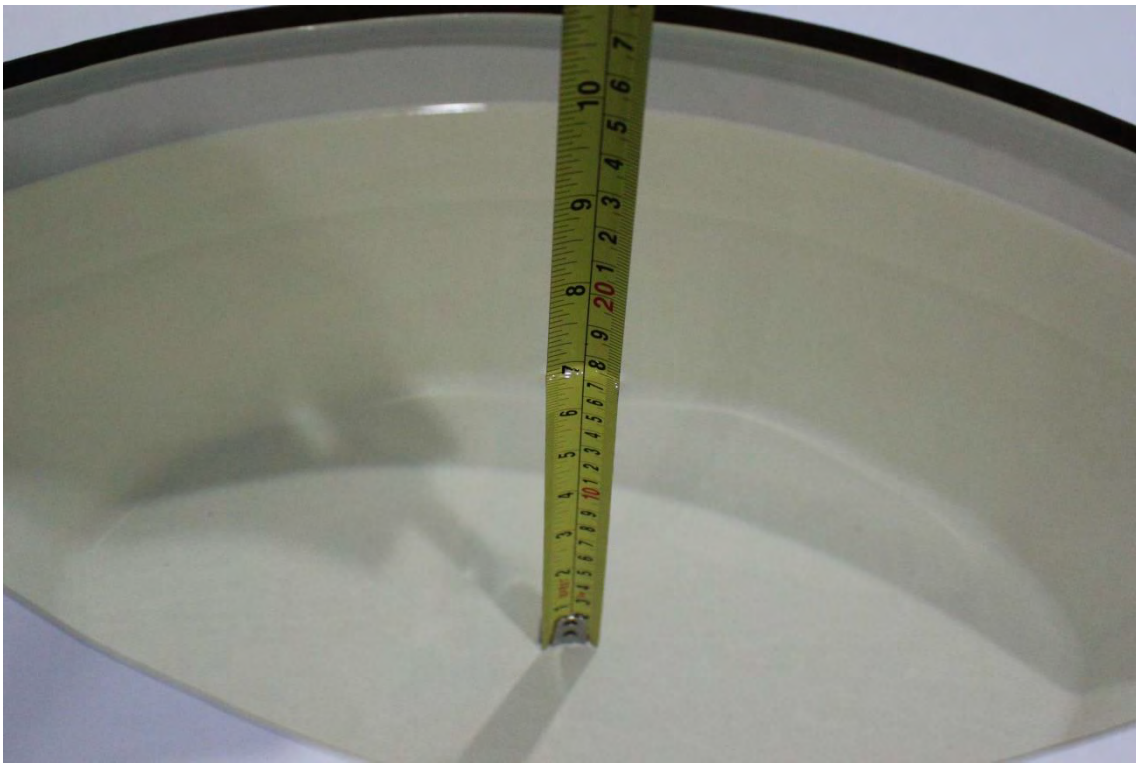
Picture 8-6 Liquid depth in the Head Phantom (2600 MHz)



Picture 8-7 Liquid depth in the Head Phantom (3700 MHz)



Picture 8-8 Liquid depth in the Head Phantom (3900 MHz)

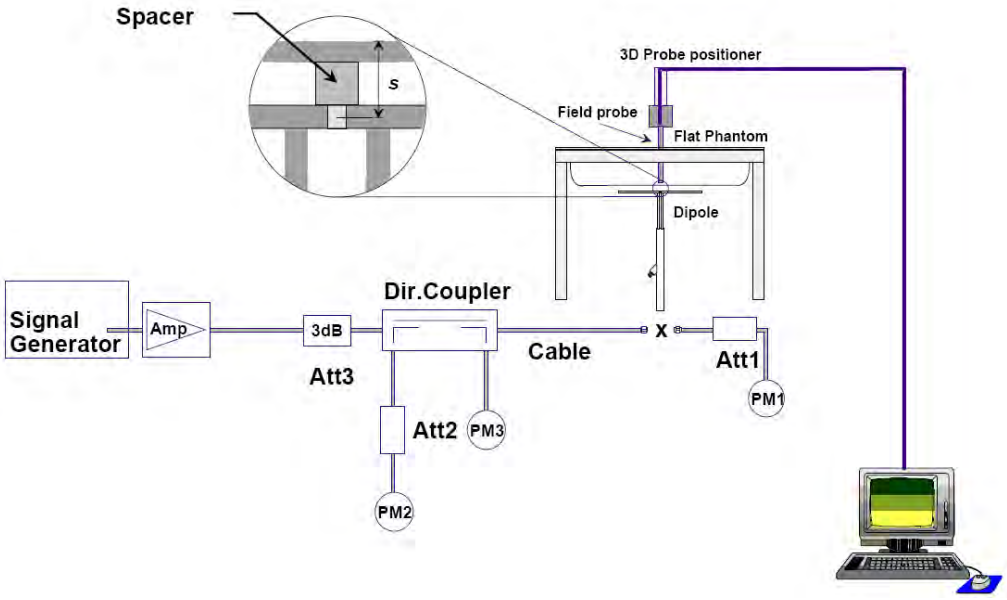


Picture 8-9 Liquid depth in the Head Phantom (5GHz)

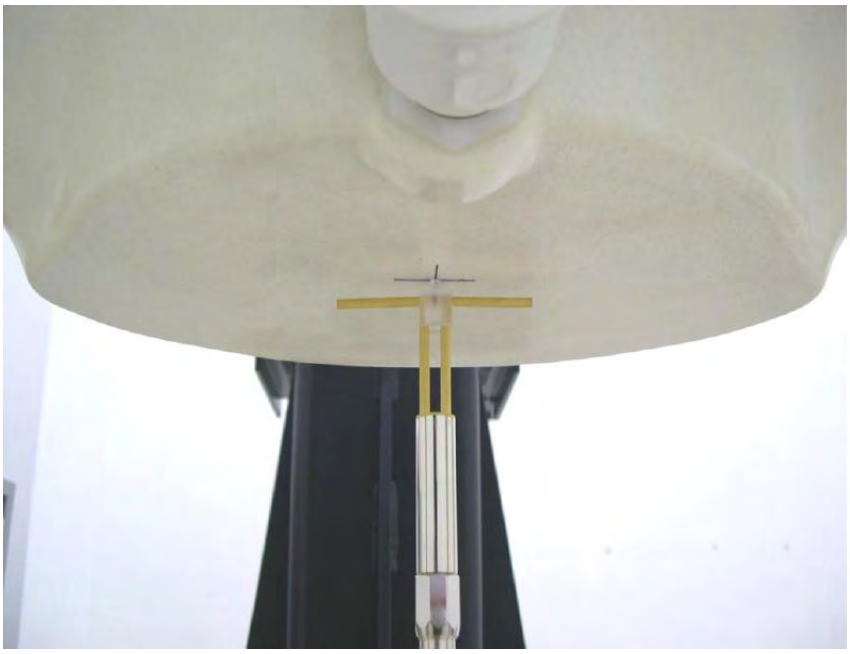
9 System verification

9.1 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



Picture 9.1 System Setup for System Evaluation



Picture 9.2 Photo of Dipole Setup

9.2 System Verification

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device.

The system verification results are required that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR. The details are presented in annex B.

Table 9.1: System Verification of Head

Measurement Date (yyyy-mm-dd)	Frequency	Target value (W/kg)		Measured value(W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
2021-7-8	750 MHz	5.76	8.59	5.48	8.20	-4.86%	-4.54%
2021-7-13	835 MHz	6.11	9.49	6.04	9.08	-1.15%	-4.32%
2021-7-9	1750 MHz	18.9	36.4	19.0	35.8	0.74%	-1.54%
2021-7-20	1900 MHz	20.3	40.1	20.2	38.9	-0.30%	-3.04%
2021-7-1	2450 MHz	24.0	53.1	24.3	52.0	1.33%	-2.07%
2021-6-18	2450 MHz	24.0	53.1	24.1	51.6	0.50%	-2.82%
2021-7-17	2600 MHz	25.3	57.0	25.0	56.4	-1.03%	-1.05%
2021-7-18	3700 MHz	24.8	67.4	25.8	70.0	3.87%	3.86%
2021-7-17	3900 MHz	24.0	68.1	23.2	66.0	-3.17%	-3.08%
2021-6-29	5250 MHz	22.5	78.5	22.0	76.9	-2.22%	-2.04%
2021-6-24	5250 MHz	22.5	78.5	22.7	79.4	0.89%	1.15%
2021-6-30	5600 MHz	23.3	81.6	22.5	78.6	-3.43%	-3.68%
2021-6-25	5600 MHz	23.3	81.6	23.2	81.0	-0.43%	-0.74%
2021-6-27	5750 MHz	21.8	76.7	21.7	75.8	-0.46%	-1.17%
2021-6-26	5750 MHz	21.8	76.7	22.3	77.8	2.29%	1.43%

10 Measurement Procedures

10.1 Tests to be performed

In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in picture 9.1.

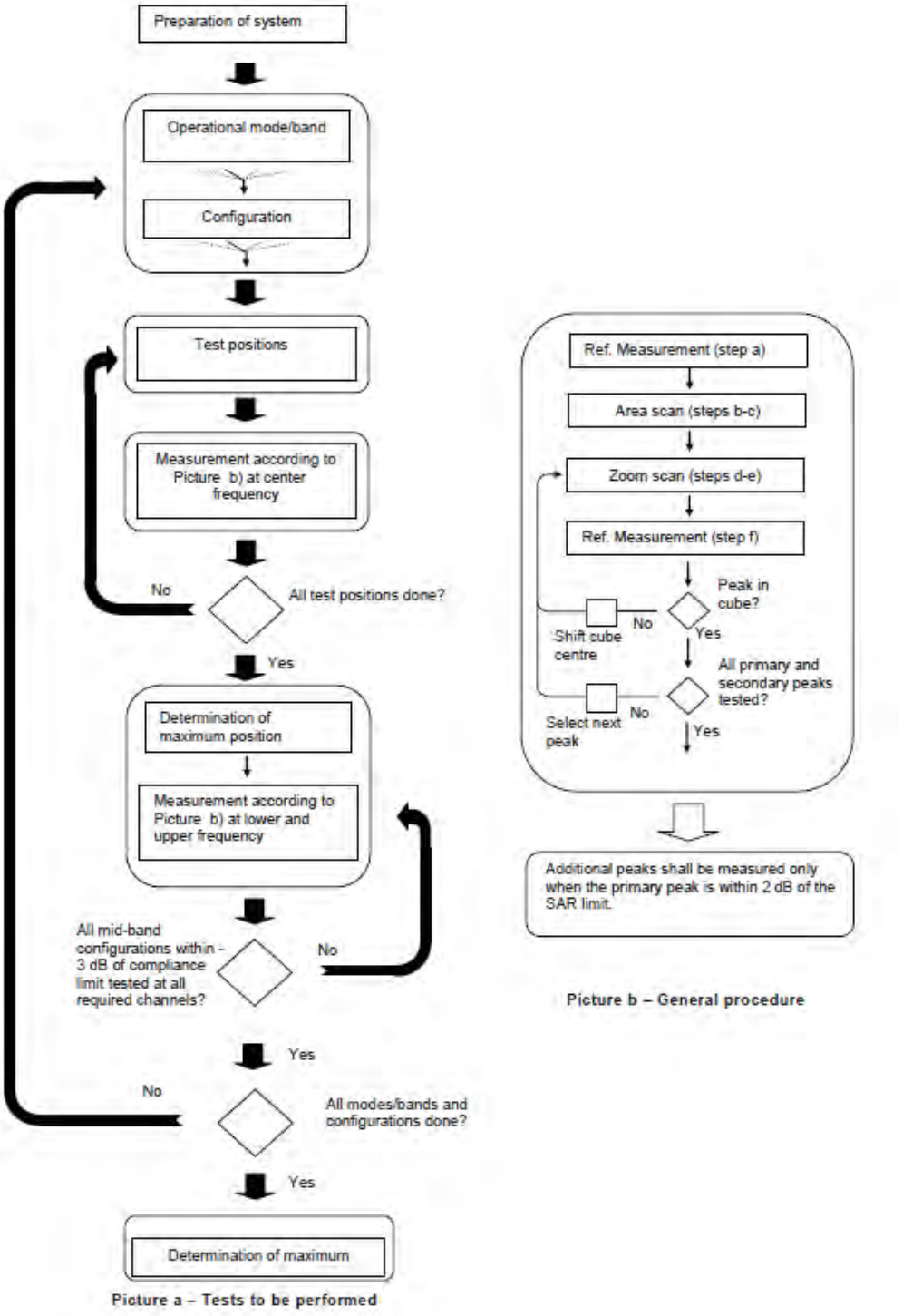
Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:

a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in annex D),
b) all configurations for each device position in a), e.g., antenna extended and retracted, and
c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., $N_c > 3$), then all frequencies, configurations and modes shall be tested for all of the above test conditions.

Step 2: For the condition providing highest peak spatial-average SAR determined in Step 1,perform all tests described in 9.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

Step 3: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.



Picture 10.1 Block diagram of the tests to be performed

10.2 General Measurement Procedure

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements and fully documented in SAR reports to qualify for TCB approval. Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2013. The results should be documented as part of the system validation records and may be requested to support test results when all the measurement parameters in the following table are not satisfied.

<table>
<tr><td colspan="3"></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}</td><td>≤ 2 GHz: ≤ 8 mm
2 – 3 GHz: ≤ 5 mm*</td><td>3 – 4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{Zoom}(n)$</td><td>≤ 5 mm</td><td>3 – 4 GHz: ≤ 4 mm
4 – 5 GHz: ≤ 3 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface</td><td>≤ 4 mm</td><td>3 – 4 GHz: ≤ 3 mm
4 – 5 GHz: ≤ 2.5 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td>$\Delta z_{Zoom}(n>1)$: between subsequent points</td><td colspan="2">≤ 1.5·$\Delta z_{Zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3 – 4 GHz: ≥ 28 mm
4 – 5 GHz: ≥ 25 mm
5 – 6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">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 <u>reported</u> SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

10.3 WCDMA Measurement Procedures for SAR

The following procedures are applicable to WCDMA handsets operating under 3GPP Release99, Release 5 and Release 6. The default test configuration is to measure SAR with an established radio link between the DUT and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations (DPCCH & $DPDCH_n$), HSDPA and HSPA (HSUPA/HSDPA) modes according to output power, exposure conditions and device operating capabilities. Both uplink and downlink should be configured with the same RMC or AMR, when required. SAR for Release 5 HSDPA and Release 6 HSPA are measured using the applicable FRC (fixed reference channel) and E-DCH reference channel configurations. Maximum output power is verified according to applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. When Maximum Power Reduction (MPR) is not implemented according to Cubic Metric (CM) requirements for Release 6 HSPA, the following procedures do not apply.

For Release 5 HSDPA Data Devices:

Sub-test	β_c	β_d	β_d （SF）	β_c/β_d	β_{hs}	CM/dB
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15	15/15	64	12/15	24/25	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

For Release 6 HSPA Data Devices

Sub-test	β_c	β_d	β_d （SF）	β_c/β_d	β_{hs}	β_{ec}	β_{ed}	β_{ed} （SF）	β_{ed} （codes）	CM (dB)	MPR (dB)	AG Index	E-TFCI
1	11/15	15/15	64	11/15	22/15	209/225	1039/225	4	1	1.5	1.5	20	75
2	6/15	15/15	64	6/15	12/15	12/15	12/15	4	1	1.5	1.5	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}:47/15 β_{ed2}:47/15	4	2	1.5	1.5	15	92
4	2/15	15/15	64	2/15	4/15	4/15	56/75	4	1	1.5	1.5	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.5	1.5	21	81

Rel.8 DC-HSDPA (Cat 24)

SAR test exclusion for Rel.8 DC-HSDPA must satisfy the SAR test exclusion requirements of Rel.5 HSDPA. SAR test exclusion for DC-HSDPA devices is determined by power measurements according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to qualify for SAR test exclusion.

10.4 SAR Measurement for LTE

SAR tests for LTE are performed with a base station simulator, Rohde & Rchwarz CMW500. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. All powers were measured with the CMW 500.
It is performed for conducted power and SAR based on the KDB941225 D05.
SAR is evaluated separately according to the following procedures for the different test positions in each exposure condition – head, body, body-worn accessories and other use conditions. The procedures in the following subsections are applied separately to test each LTE frequency band.

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 among 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.

TDD test:

TDD testing is performed using guidance from FCC KDB 941225 D05 v02r05 and the SAR test guidance provided in April 2013 TCB works hop notes. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05 v02r05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211.

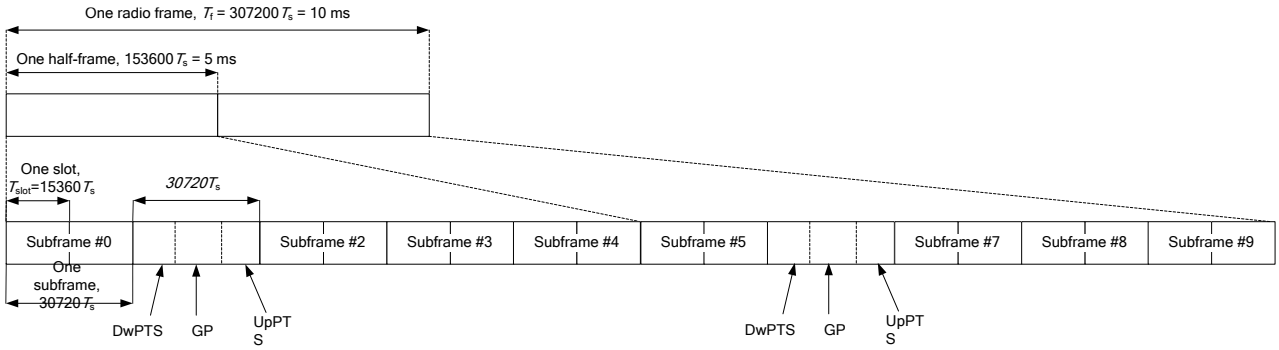


Figure 10.2: Frame structure type 2 (for 5 ms switch-point periodicity)

Table 10.1: 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 10.2: 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

Duty factor is calculated by:

Duty factor = uplink frame*6+UpPTS*2/one frame length

= (30720.T_s * 6+5120. T_s*2)/307200.T_s

= 0.633

According to the KDB 447498 D01, SAR should be evaluated at more than 3 frequencies for devices supporting transmit bands wider than 100MHz. Oct.2014 FCC-TCB conference notes (Dec. 2014 rev.) specifies the 5 test channels to use for 3GPP band 41 SAR evaluation.

10.5 Bluetooth & Wi-Fi Measurement Procedures for SAR

Normal network operating configurations are not suitable for measuring the SAR of 802.11 transmitters in general. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure that the results are consistent and reliable.

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in a test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

10.6 Power Drift

To control the output power stability during the SAR test, DASY4 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in section14 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

11 Area Scan Based 1-g SAR

11.1 Requirement of KDB

According to the KDB447498 D01 v06, when the implementation is based the specific polynomial fit algorithm as presented at the 29th Bioelectromagnetics Society meeting (2007) and the estimated 1-gSAR is ≤ 1.2 W/kg, a zoom scan measurement is not required provided it is also not needed for any other purpose; for example, if the peak SAR location required for simultaneous transmission SAR test exclusion can be determined accurately by the SAR system or manually to discriminate between distinctive peaks and scattered noisy SAR distributions from area scans.

There must not be any warning or alert messages due to various measurement concerns identified by the SAR system; for example, noise in measurements, peaks too close to scan boundary, peaks are too sharp, spatial resolution and uncertainty issues etc. The SAR system verification must also demonstrate that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR (See Annex B). When all the SAR results for each exposure condition in a frequency band and wireless mode are based on estimated 1-g SAR, the 1-g SAR for the highest SAR configuration must be determined by a zoom scan.

11.2 Fast SAR Algorithms

The approach is based on the area scan measurement applying a frequency dependent attenuation parameter. This attenuation parameter was empirically determined by analyzing a large number of phones. The MOTOROLA FAST SAR was developed and validated by the MOTOROLA Research Group in Ft. Lauderdale.

In the initial study, an approximation algorithm based on Linear fit was developed. The accuracy of the algorithm has been demonstrated across a broad frequency range (136-2450 MHz)and for both 1- and 10-g averaged SAR using a sample of 264 SAR measurements from 55wireless handsets. For the sample size studied, the root-mean-squared errors of the algorithm mare 1.2% and 5.8% for 1- and 10-g averaged SAR, respectively. The paper describing the algorithm in detail is expected to be published in August 2004 within the Special Issue of Transactions on MTT.

In the second step, the same research group optimized the fitting algorithm to an Polynomial fit whereby the frequency validity was extended to cover the range 30-6000MHz. Details of this study can be found in the BEMS 2007 Proceedings.

Both algorithms are implemented in DASY software.

12 Conducted Output Power

All conducted power measurements for 2G/3G/4G WWAN technologies and bands in this section were performed by setting Reserve_power_margin (Qualcomm® Smart Transmit EFS entry) to 0dB, so that the EUT transmits continuously at minimum (Plimit, maximum tune up output power Pmax).The details of test scenarios categorization in the table below

Sensor deactive (Body scenario)	**Sensor active (Body scenario)**	**Full Power**
Plimit		Pmax
DSI2	DSI1	

12.1 GSM Measurement result

During the process of testing, the EUT was controlled via Agilent Digital Radio Communication tester (E5515C) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured peak output power should be greater and within 5% than EMI measurement.

Full Power-GSM850

GSM 850 GPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	190	128			251	190	128
1 Txslot	33.21	33.28	33.26	33.50	-9.03	24.18	24.25	24.23
2 Txslots	**31.16**	**31.27**	**31.33**	**31.50**	**-6.02**	**25.14**	**25.25**	**25.31**
3Txslots	29.06	29.26	29.40	30.00	-4.26	24.80	25.00	25.14
4 Txslots	27.51	27.74	27.92	28.50	-3.01	24.50	24.73	24.91
GSM 850 EGPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	190	128			251	190	128
1 Txslot	33.12	33.17	33.19	33.50	-9.03	24.09	24.14	24.16
2 Txslots	31.07	31.18	31.24	31.50	-6.02	25.05	25.16	25.22
3Txslots	28.99	29.18	29.32	30.00	-4.26	24.73	24.92	25.06
4 Txslots	27.43	27.69	27.90	28.50	-3.01	24.42	24.68	24.89
GSM 850 EGPRS (8PSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	190	128			251	190	128
1 Txslot	26.63	26.54	26.43	27.00	-9.03	17.60	17.51	17.40
2 Txslots	25.01	25.02	25.29	26.00	-6.02	18.99	19.00	19.27
3Txslots	23.72	24.77	23.86	25.00	-4.26	19.46	20.51	19.60
4 Txslots	22.49	22.24	22.09	23.50	-3.01	19.48	19.23	19.08

DSI1-GSM850

GSM 850 GPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	190	128			251	190	128
1 Txslot	**24.48**	**24.78**	**24.99**	**26.00**	**-9.03**	**15.45**	**15.75**	**15.96**
2 Txslots	18.61	18.87	18.50	20.00	-6.02	12.59	12.85	12.48
3Txslots	19.20	19.30	19.39	20.00	-4.26	14.94	15.04	15.13
4 Txslots	18.15	18.35	17.66	19.00	-3.01	15.14	15.34	14.65
GSM 850 EGPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	190	128			251	190	128
1 Txslot	24.47	24.77	25.01	26.00	-9.03	15.44	15.74	15.98
2 Txslots	18.59	18.87	18.48	20.00	-6.02	12.57	12.85	12.46
3Txslots	19.16	19.30	19.37	20.00	-4.26	14.90	15.04	15.11
4 Txslots	18.09	18.33	17.62	19.00	-3.01	15.08	15.32	14.61
GSM 850 EGPRS (8PSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	190	128			251	190	128
1 Txslot	23.41	23.27	23.43	24.50	-9.03	14.38	14.24	14.40
2 Txslots	21.13	21.14	21.15	22.00	-6.02	15.11	15.12	15.13
3Txslots	19.35	19.30	19.40	20.00	-4.26	15.09	15.04	15.14
4 Txslots	17.84	17.82	17.76	19.00	-3.01	14.83	14.81	14.75

DSI2-GSM850

GSM 850 GPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	190	128			251	190	128
1 Txslot	**29.56**	**29.66**	**29.79**	**31.50**	**-9.03**	**20.53**	**20.63**	**20.76**
2 Txslots	26.47	26.64	26.38	27.50	-6.02	20.45	20.62	20.36
3Txslots	24.77	24.47	24.72	25.50	-4.26	20.51	20.21	20.46
4 Txslots	20.59	20.25	20.49	21.50	-3.01	17.58	17.24	17.48
GSM 850 EGPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	190	128			251	190	128
1 Txslot	29.58	29.72	29.75	31.5	-9.03	20.55	20.69	20.72
2 Txslots	26.55	26.70	26.35	27.50	-6.02	20.53	20.68	20.33
3Txslots	24.79	24.47	24.68	25.50	-4.26	20.53	20.21	20.42
4 Txslots	20.58	20.23	20.45	21.50	-3.01	17.57	17.22	17.44
GSM 850 EGPRS (8PSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	251	190	128			251	190	128
1 Txslot	24.98	24.91	25.11	26.00	-9.03	15.95	15.88	16.08
2 Txslots	23.64	23.68	23.87	25.00	-6.02	17.62	17.66	17.85
3Txslots	22.40	22.53	22.60	24.00	-4.26	18.14	18.27	18.34
4 Txslots	20.97	20.78	20.92	22.00	-3.01	17.96	17.77	17.91

Full Power-GSM1900

PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	810	661	512			810	661	512
1 Txslot	30.31	30.55	30.71	31.00	-9.03	21.28	21.52	21.68
2 Txslots	**30.05**	**29.60**	**29.96**	**30.50**	**-6.02**	**24.03**	**23.58**	**23.94**
3Txslots	28.06	27.64	27.95	29.00	-4.26	23.80	23.38	23.69
4 Txslots	26.32	26.00	26.26	27.00	-3.01	23.31	22.99	23.25
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	810	661	512			810	661	512
1 Txslot	30.28	30.54	30.67	32.00	-9.03	21.25	21.51	21.64
2 Txslots	30.02	29.58	29.92	30.50	-6.02	24.00	23.56	23.90
3Txslots	27.95	27.64	27.91	29.00	-4.26	23.69	23.38	23.65
4 Txslots	26.27	25.90	26.21	27.00	-3.01	23.26	22.89	23.20
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	810	661	512			810	661	512
1 Txslot	26.68	26.09	26.37	27.00	-9.03	17.65	17.06	17.34
2 Txslots	25.14	24.44	24.88	26.00	-6.02	19.12	18.42	18.86
3Txslots	23.74	23.12	23.65	24.00	-4.26	19.48	18.86	19.39
4 Txslots	21.78	21.38	21.51	23.00	-3.01	18.77	18.37	18.50

DSI1- GSM1900

PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	810	661	512			810	661	512
1 Txslot	**18.10**	**17.67**	**17.64**	**19.50**	**-9.03**	**9.07**	**8.64**	**8.61**
2 Txslots	13.44	12.50	12.80	14.00	-6.02	7.42	6.48	6.78
3Txslots	11.46	10.52	10.76	12.00	-4.26	7.20	6.26	6.50
4 Txslots	9.83	9.22	9.29	10.50	-3.01	6.82	6.21	6.28
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	810	661	512			810	661	512
1 Txslot	18.03	17.57	17.69	19.50	-9.03	9.00	8.54	8.66
2 Txslots	13.33	12.64	12.83	14.00	-6.02	7.31	6.62	6.81
3Txslots	11.47	10.52	10.82	12.00	-4.26	7.21	6.26	6.56
4 Txslots	9.85	9.26	9.33	10.50	-3.01	6.84	6.25	6.32
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	810	661	512			810	661	512
1 Txslot	18.54	17.79	17.97	19.00	-9.03	9.51	8.76	8.94
2 Txslots	15.40	14.54	14.64	16.00	-6.02	9.38	8.52	8.62
3Txslots	20.40	20.04	20.03	21.00	-4.26	16.14	15.78	15.77
4 Txslots	18.93	18.59	18.60	20.00	-3.01	15.92	15.58	15.59

DSI2- GSM1900

PCS1900 GPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	810	661	512			810	661	512
1 Txslot	27.44	27.06	27.32	29.00	-9.03	18.41	18.03	18.29
2 Txslots	23.94	23.72	23.76	25.00	-6.02	17.92	17.70	17.74
3Txslots	22.08	21.69	21.71	23.00	-4.26	17.82	17.43	17.45
4 Txslots	20.65	20.33	20.22	21.50	-3.01	17.64	17.32	17.21
PCS1900 EGPRS (GMSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	810	661	512			810	661	512
1 Txslot	27.42	27.04	27.30	29.00	-9.03	18.39	18.01	18.27
2 Txslots	23.93	23.70	23.74	25.00	-6.02	17.91	17.68	17.72
3Txslots	22.05	21.68	21.77	23.00	-4.26	17.79	17.42	17.51
4 Txslots	20.63	20.21	20.29	21.50	-3.01	17.62	17.20	17.28
PCS1900 EGPRS (8PSK)	Measured Power (dBm)				calculation	Averaged Power (dBm)		
	810	661	512			810	661	512
1 Txslot	24.83	24.42	24.16	25.50	-9.03	15.80	15.39	15.13
2 Txslots	22.47	21.30	21.45	23.00	-6.02	16.45	15.28	15.43
3Txslots	20.26	19.31	19.44	21.00	-4.26	16.00	15.05	15.18
4 Txslots	20.03	19.20	19.25	21.00	-3.01	17.02	16.19	16.24

12.2 WCDMA Measurement result

Full Power- WCDMA850

Item	band	FDDV result			
	ARFCN	4132 (826.4MHz)	4182 (836.4MHz)	4233 (846.6MHz)	Tune up
WCDMA	\	24.24	24.25	24.3	24.50
HSUPA	1	22.54	22.63	22.63	24.00
	2	20.58	20.64	20.57	24.00
	3	21.55	21.61	21.57	23.00
	4	20.59	20.63	20.58	22.00
	5	22.62	22.57	22.65	24.00
DC-HSDPA	1	22.59	22.62	22.63	24.00
	2	22.6	22.63	22.63	24.00
	3	22.11	22.13	22.12	23.50
	4	22.1	22.12	22.13	23.50

DSI1- WCDMA850

Item	band	FDDV result			
	ARFCN	4132 (826.4MHz)	4182 (836.4MHz)	4233 (846.6MHz)	Tune up
WCDMA	\	17.20	17.26	17.27	18.50
HSUPA	1	16.25	16.29	16.32	17.00
	2	14.26	14.29	14.13	15.50
	3	15.23	15.22	15.35	16.50
	4	14.19	14.22	14.31	15.50
	5	16.27	16.24	16.20	17.00
DC-HSDPA	1	16.23	16.24	16.24	17.00
	2	16.27	16.27	16.30	17.00
	3	15.75	15.76	15.79	16.50
	4	15.74	15.75	15.76	16.50

Full Power- WCDMA1900

Item	band	FDDII result			
	ARFCN	9262 (1852.4MHz)	9400 (1880MHz)	9538 (1907.6MHz)	
WCDMA	\	24.96	24.94	24.95	25.00
HSUPA	1	23.11	23.12	23.14	24.00
	2	21.18	21.11	21.12	24.00
	3	22.19	22.07	22.07	23.00
	4	21.17	21.11	21.13	22.00
	5	23.13	23.14	23.15	24.00
DC-HSDPA	1	23.15	23.12	23.16	24.00
	2	23.16	23.13	23.15	24.00
	3	22.65	22.63	22.66	23.50
	4	22.66	22.64	22.67	23.50

DSI1- WCDMA1900

Item	band	FDDII result			
	ARFCN	9262 (1852.4MHz)	9400 (1880MHz)	9538 (1907.6MHz)	
WCDMA	\	10.29	10.36	10.35	11.00
HSUPA	1	8.48	8.53	8.53	9.50
	2	6.55	6.55	6.53	7.50
	3	7.51	7.52	7.51	8.50
	4	6.48	6.47	6.55	7.50
	5	8.5	8.55	8.56	9.50
DC-HSDPA	1	8.52	8.55	8.50	9.50
	2	8.46	8.54	8.53	9.50
	3	7.97	8.03	8.02	9.00
	4	7.99	8.05	8.02	9.00

DSI2- WCDMA1900

Item	band	FDDII result			
	ARFCN	9262 (1852.4MHz)	9400 (1880MHz)	9538 (1907.6MHz)	
WCDMA	\	20.75	20.94	20.79	21.50
HSUPA	1	18.98	18.95	18.98	20.00
	2	16.9	16.99	16.95	18.00
	3	18.03	17.92	17.96	19.00
	4	16.94	16.96	17.00	18.00
	5	18.96	18.93	18.99	20.00
DC-HSDPA	1	18.96	18.97	18.99	20
	2	18.96	18.98	19.00	20
	3	18.46	18.49	18.50	19.5
	4	18.45	18.50	18.48	19.5

12.3 LTE Measurement result

The tune up for LTE–Full Power

Band	Tune up
LTE Band 2(ANT0)	25(ANT0)
LTE Band 2(ANT1)	25
LTE Band 4	25
LTE Band 5	24.5
LTE Band 7	25
LTE Band 12	24.5
LTE Band 13	25
LTE Band 48	24.5
LTE Band 66(ANT0)	25
LTE Band 66(ANT1)	25

The tune up for LTE–DSI1

Band	Tune up
LTE Band 2(ANT0)	10.5
LTE Band 2(ANT1)	12
LTE Band 4	11.5
LTE Band 5	18
LTE Band 7	11.5
LTE Band 12	18
LTE Band 13	18
LTE Band 48	10
LTE Band 66(ANT0)	11.5
LTE Band 66(ANT1)	11

The tune up for LTE–DSI2

Band	Tune up
LTE Band 2(ANT0)	21.5
LTE Band 2(ANT1)	20
LTE Band 4	19.5
LTE Band 7	22
LTE Band 48	20
LTE Band 66(ANT0)	21
LTE Band 66(ANT1)	18

Maximum Power Reduction (MPR) for LTE—Full Power

Modulation	Channel bandwidth / Transmission bandwidth configuration [RB]						MPR (dB)
	1.4 MHz	3 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	3
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	3
256 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	5
256 QAM	> 5	> 4	> 8	> 12	> 16	> 18	5

Maximum Power Reduction (MPR) for LTE—DSI1/2

Modulation	Channel bandwidth / Transmission bandwidth configuration [RB]						MPR (dB)
	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	0
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	0
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	0
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	0
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	0
256 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	0
256 QAM	> 5	> 4	> 8	> 12	> 16	> 18	0

Full Power-ANT0

Band 2						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)	256QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	1909.3	24.00	22.76	21.12	19.35
		1880	24.47	23.83	21.89	20.12
		1850.7	24.51	23.90	21.86	20.09
	1RB Middle (3)	1909.3	23.95	22.90	21.24	19.47
		1880	24.55	23.82	21.97	20.20
		1850.7	24.51	23.84	21.89	20.12
	1RB Low (0)	1909.3	23.95	22.95	21.18	19.41
		1880	24.53	23.89	21.99	20.22
		1850.7	24.44	23.87	21.83	20.06
	3RB High (3)	1909.3	23.72	22.79	21.14	19.37
		1880	24.46	23.63	21.86	20.09
		1850.7	24.42	23.79	21.88	20.11
	3RB Middle (1)	1909.3	23.81	23.03	21.31	19.54
		1880	24.52	23.75	21.96	20.19
		1850.7	24.47	23.70	21.90	20.13
	3RB Low (0)	1909.3	23.84	22.99	21.38	19.61
		1880	24.55	23.67	21.95	20.18
		1850.7	24.54	23.73	21.90	20.13
	6RB (0)	1909.3	22.88	22.08	20.08	19.45
		1880	23.61	22.82	20.78	20.15
		1850.7	23.59	22.75	20.76	20.13
3 MHz	1RB High (14)	1908.5	23.95	22.95	21.24	19.31
		1880	24.49	23.87	21.98	20.05
		1851.5	24.59	23.84	22.13	20.20
	1RB Middle (7)	1908.5	24.11	23.08	21.31	19.38
		1880	24.47	23.84	21.95	20.02
		1851.5	24.47	23.88	22.05	20.12
	1RB Low (0)	1908.5	24.32	23.35	21.48	19.55
		1880	24.56	23.96	22.00	20.07
		1851.5	24.45	23.83	21.99	20.06
	8RB High (7)	1908.5	23.01	22.10	20.22	19.56
		1880	23.64	22.81	20.84	20.18
		1851.5	23.62	22.84	20.86	20.20
	8RB Middle (4)	1908.5	23.16	22.26	20.32	19.66
		1880	23.69	22.87	20.87	20.21
		1851.5	23.66	22.85	20.87	20.21
	8RB Low (0)	1908.5	23.23	22.40	20.39	19.73
		1880	23.70	22.91	20.85	20.19
		1851.5	23.64	22.80	20.81	20.15
	15RB (0)	1908.5	23.10	22.21	20.31	19.65
		1880	23.67	22.76	20.78	20.12
		1851.5	23.63	22.76	20.76	20.10

5 MHz	1RB High (24)	1907.5	24.10	23.03	21.28	19.35
		1880	24.44	23.86	22.02	20.09
		1852.5	24.61	23.86	22.10	20.17
	1RB Middle (12)	1907.5	24.31	23.18	21.44	19.51
		1880	24.40	23.88	21.89	19.96
		1852.5	24.42	23.97	21.88	19.95
	1RB Low (0)	1907.5	24.60	23.57	21.74	19.81
		1880	24.49	23.96	22.03	20.10
		1852.5	24.42	23.97	21.85	19.92
	12RB High (13)	1907.5	23.12	22.13	20.26	19.60
		1880	23.53	22.76	20.85	20.19
		1852.5	23.57	22.80	20.90	20.24
	12RB Middle (6)	1907.5	23.29	22.42	20.48	19.82
		1880	23.62	22.82	20.85	20.19
		1852.5	23.57	22.83	20.90	20.24
	12RB Low (0)	1907.5	23.47	22.53	20.58	19.92
		1880	23.67	22.86	20.86	20.20
		1852.5	23.56	22.86	20.88	20.22
	25RB (0)	1907.5	23.20	22.32	20.30	19.64
		1880	23.59	22.70	20.71	20.05
		1852.5	23.56	22.80	20.80	20.14
10 MHz	1RB High (49)	1905	24.43	22.99	21.44	19.51
		1880	24.57	23.95	22.14	20.21
		1855	24.31	23.67	21.61	19.68
	1RB Middle (24)	1905	24.57	23.46	21.73	19.80
		1880	24.35	23.78	21.90	19.97
		1855	24.42	23.79	21.76	19.83
	1RB Low (0)	1905	24.47	23.36	21.62	19.69
		1880	24.55	24.00	22.10	20.17
		1855	24.43	23.81	21.76	19.83
	25RB High (25)	1905	23.40	22.34	20.46	19.80
		1880	23.58	22.76	20.84	20.18
		1855	23.51	22.62	20.66	20.00
	25RB Middle (12)	1905	23.54	22.61	20.64	19.98
		1880	23.65	22.82	20.87	20.21
		1855	23.63	22.71	20.74	20.08
	25RB Low (0)	1905	23.53	22.64	20.66	20.00
		1880	23.76	22.92	21.00	20.34
		1855	23.59	22.77	20.75	20.09
	50RB (0)	1905	23.28	22.45	20.40	19.74
		1880	23.57	22.75	20.75	20.09
		1855	23.49	22.72	20.64	19.98
15 MHz	1RB High (74)	1902.5	24.21	23.16	21.43	19.50
		1880	24.51	24.00	22.08	20.15
		1857.5	24.23	23.54	21.40	19.47
	1RB Middle (37)	1902.5	24.57	23.47	21.57	19.64
		1880	24.40	23.93	21.97	20.04
		1857.5	24.42	23.69	21.65	19.72

	1RB Low (0)	1902.5	24.48	23.30	21.55	19.62
		1880	24.42	23.94	21.92	19.99
		1857.5	24.62	23.87	21.90	19.97
	36RB High (38)	1902.5	23.53	22.54	20.57	19.91
		1880	23.66	22.81	20.93	20.27
		1857.5	23.52	22.60	20.70	20.04
	36RB Middle (19)	1902.5	23.54	22.68	20.66	20.00
		1880	23.67	22.86	20.96	20.30
		1857.5	23.63	22.72	20.87	20.21
	36RB Low (0)	1902.5	23.51	22.59	20.67	20.01
		1880	23.81	22.98	21.08	20.42
		1857.5	23.76	22.85	20.98	20.32
	75RB (0)	1902.5	23.36	22.58	20.47	19.81
		1880	23.70	22.82	20.88	20.22
		1857.5	23.57	22.67	20.65	19.99
20 MHz	1RB High (99)	1900	24.27	23.34	21.59	19.66
		1880	24.70	23.91	22.17	20.24
		1860	24.58	23.84	21.62	19.69
	1RB Middle (50)	1900	24.37	23.39	21.64	19.71
		1880	24.57	23.86	22.07	20.14
		1860	24.46	23.68	21.67	19.74
	1RB Low (0)	1900	24.54	23.58	21.80	19.87
		1880	24.58	23.98	22.09	20.16
		1860	24.80	23.86	22.10	20.17
	50RB High (50)	1900	23.64	22.68	20.57	19.91
		1880	23.88	22.97	20.95	20.29
		1860	23.77	22.77	20.73	20.07
	50RB Middle (25)	1900	23.70	22.76	20.64	19.98
		1880	23.91	22.94	20.93	20.27
		1860	23.74	22.83	20.86	20.20
	50RB Low (0)	1900	23.76	22.75	20.67	20.01
		1880	23.76	22.77	21.07	20.41
		1860	23.90	22.95	20.98	20.32
	100RB (0)	1900	23.56	22.61	20.53	19.87
		1880	23.89	22.93	20.82	20.16
		1860	23.75	22.74	20.79	20.13

DSI1-ANT0

Band 2						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)	256QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	1909.3	9.86	10.17	10.29	10.37
		1880	9.23	9.60	9.56	9.64
		1850.7	8.98	9.36	9.31	9.39
	1RB Middle (3)	1909.3	10.03	10.26	10.36	10.44
		1880	9.50	9.75	9.58	9.66
		1850.7	9.14	9.51	9.37	9.45
	1RB Low (0)	1909.3	10.00	10.32	10.21	10.29
		1880	9.33	9.71	9.72	9.80
		1850.7	9.04	9.43	9.36	9.44
	3RB High (3)	1909.3	9.96	10.00	10.07	10.15
		1880	9.38	9.45	9.49	9.57
		1850.7	9.07	9.25	9.25	9.33
	3RB Middle (1)	1909.3	10.02	9.81	10.07	10.15
		1880	9.54	9.48	9.51	9.59
		1850.7	9.02	9.18	9.24	9.32
	3RB Low (0)	1909.3	9.99	10.22	10.08	10.16
		1880	9.46	9.37	9.46	9.54
		1850.7	9.14	9.18	9.22	9.30
	6RB (0)	1909.3	9.97	10.12	10.14	10.22
		1880	9.41	9.56	9.44	9.52
		1850.7	9.08	9.18	9.15	9.23
3 MHz	1RB High (14)	1908.5	9.92	10.27	10.03	10.11
		1880	9.43	9.71	9.64	9.72
		1851.5	9.06	9.29	9.24	9.32
	1RB Middle (7)	1908.5	10.03	10.20	10.24	10.32
		1880	9.37	9.69	9.68	9.76
		1851.5	9.06	9.54	9.68	9.76
	1RB Low (0)	1908.5	10.10	10.40	10.32	10.40
		1880	9.48	9.92	9.74	9.82
		1851.5	9.25	9.46	9.47	9.55
	8RB High (7)	1908.5	10.15	10.10	10.16	10.24
		1880	9.53	9.48	9.54	9.62
		1851.5	9.16	9.18	9.28	9.36
	8RB Middle (4)	1908.5	10.19	10.17	10.08	10.16
		1880	9.53	9.57	9.58	9.66
		1851.5	9.25	9.27	9.27	9.35
	8RB Low (0)	1908.5	10.21	10.22	10.29	10.37
		1880	9.49	9.56	9.60	9.68
		1851.5	9.27	9.27	9.35	9.43
	15RB (0)	1908.5	10.10	10.19	10.16	10.24
		1880	9.52	9.56	9.51	9.59
		1851.5	9.23	9.28	9.18	9.26

5 MHz	1RB High (24)	1907.5	10.04	10.38	10.19	10.27
		1880	9.49	9.72	9.67	9.75
		1852.5	9.07	9.44	9.27	9.35
	1RB Middle (12)	1907.5	10.00	10.37	10.18	10.26
		1880	9.42	9.89	9.60	9.68
		1852.5	9.10	9.64	9.28	9.36
	1RB Low (0)	1907.5	10.08	10.42	10.29	10.37
		1880	9.41	9.82	9.73	9.81
		1852.5	9.13	9.58	9.34	9.42
	12RB High (13)	1907.5	10.06	10.12	10.10	10.18
		1880	9.54	9.53	9.49	9.57
		1852.5	9.11	9.17	9.14	9.22
	12RB Middle (6)	1907.5	10.18	10.16	10.21	10.29
		1880	9.48	9.48	9.44	9.52
		1852.5	9.25	9.32	9.28	9.36
	12RB Low (0)	1907.5	10.19	10.17	10.15	10.23
		1880	9.57	9.60	9.56	9.64
		1852.5	9.25	9.29	9.28	9.36
	25RB (0)	1907.5	10.13	10.10	10.17	10.25
		1880	9.60	9.60	9.59	9.67
		1852.5	9.28	9.34	9.22	9.30
10 MHz	1RB High (49)	1905	10.01	10.31	10.21	10.29
		1880	9.49	9.76	9.51	9.59
		1855	9.09	9.39	9.39	9.47
	1RB Middle (24)	1905	10.08	10.43	10.21	10.29
		1880	9.39	9.73	9.69	9.77
		1855	9.10	9.30	9.32	9.40
	1RB Low (0)	1905	9.96	10.33	10.09	10.17
		1880	9.57	9.86	9.59	9.67
		1855	9.20	9.50	9.42	9.50
	25RB High (25)	1905	10.15	10.14	10.13	10.21
		1880	9.55	9.56	9.55	9.63
		1855	9.22	9.24	9.25	9.33
	25RB Middle (12)	1905	10.12	10.13	10.16	10.24
		1880	9.58	9.60	9.60	9.68
		1855	9.27	9.28	9.19	9.27
	25RB Low (0)	1905	10.06	10.10	10.04	10.12
		1880	9.49	9.59	9.57	9.65
		1855	9.20	9.22	9.29	9.37
	50RB (0)	1905	10.11	10.10	10.13	10.21
		1880	9.61	9.62	9.62	9.70
		1855	9.21	9.31	9.08	9.16
15 MHz	1RB High (74)	1902.5	10.01	10.23	10.22	10.30
		1880	9.44	9.80	9.82	9.90
		1857.5	9.18	9.40	9.44	9.52
	1RB Middle (37)	1902.5	9.81	10.26	10.11	10.19
		1880	9.38	9.65	9.61	9.69
		1857.5	9.06	9.34	9.27	9.35

	1RB Low (0)	1902.5	9.80	10.25	10.19	10.27
		1880	9.32	9.57	9.51	9.59
		1857.5	9.07	9.51	9.42	9.50
	36RB High (38)	1902.5	10.08	10.06	10.04	10.12
		1880	9.56	9.46	9.46	9.54
		1857.5	9.18	9.25	9.22	9.30
	36RB Middle (19)	1902.5	9.96	9.95	10.04	10.12
		1880	9.50	9.50	9.48	9.56
		1857.5	9.20	9.17	9.14	9.22
	36RB Low (0)	1902.5	10.00	9.94	9.94	10.02
		1880	9.38	9.39	9.37	9.45
		1857.5	9.01	9.06	9.03	9.11
	75RB (0)	1902.5	9.98	9.90	9.90	9.98
		1880	9.42	9.50	9.50	9.58
		1857.5	9.15	9.19	9.20	9.28
20 MHz	1RB High (99)	1900	9.83	10.22	10.23	10.31
		1880	9.50	9.90	9.74	9.82
		1860	9.19	9.50	9.45	9.53
	1RB Middle (50)	1900	9.78	10.20	9.99	10.07
		1880	9.31	9.69	9.57	9.65
		1860	9.10	9.43	9.33	9.41
	1RB Low (0)	1900	9.60	9.95	9.83	9.91
		1880	9.26	9.61	9.52	9.60
		1860	9.05	9.58	9.15	9.23
	50RB High (50)	1900	9.03	9.97	10.05	10.13
		1880	9.56	9.61	9.59	9.67
		1860	9.22	9.22	9.22	9.30
	50RB Middle (25)	1900	9.22	9.98	9.97	10.05
		1880	9.53	9.57	9.48	9.56
		1860	9.27	9.27	9.24	9.32
	50RB Low (0)	1900	9.04	9.80	9.78	9.86
		1880	9.39	9.41	9.39	9.47
		1860	9.11	9.19	9.13	9.21
	100RB (0)	1900	9.18	9.97	9.87	9.95
		1880	9.44	9.53	9.53	9.61
		1860	9.21	9.31	9.22	9.30

DSI2-ANT0

Band 2						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)	256QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	1909.3	20.88	21.16	21.11	20.95
		1880	20.19	20.48	20.49	20.33
		1850.7	19.95	20.28	20.18	20.02
	1RB Middle (3)	1909.3	20.86	21.43	21.21	21.05
		1880	20.40	20.64	20.43	20.27
		1850.7	20.25	20.33	20.31	20.15
	1RB Low (0)	1909.3	20.97	21.30	21.26	21.10
		1880	20.29	20.50	20.48	20.32
		1850.7	20.07	20.31	20.28	20.12
	3RB High (3)	1909.3	20.83	21.05	20.89	20.73
		1880	20.23	20.36	20.34	20.18
		1850.7	19.97	20.33	20.11	19.95
	3RB Middle (1)	1909.3	20.98	21.03	21.02	20.86
		1880	20.32	20.27	20.14	19.98
		1850.7	20.03	19.87	20.15	19.99
	3RB Low (0)	1909.3	20.86	21.08	21.14	20.98
		1880	20.34	20.37	20.30	20.14
		1850.7	20.06	19.99	19.95	19.79
	6RB (0)	1909.3	21.07	21.10	20.92	20.76
		1880	20.38	20.67	20.37	20.21
		1850.7	20.11	20.04	20.07	19.91
3 MHz	1RB High (14)	1908.5	20.99	21.26	21.15	20.99
		1880	20.27	20.65	20.50	20.34
		1851.5	19.95	20.30	20.25	20.09
	1RB Middle (7)	1908.5	20.90	21.25	21.07	20.91
		1880	20.25	20.56	20.50	20.34
		1851.5	19.98	20.44	20.07	19.91
	1RB Low (0)	1908.5	21.15	21.37	21.32	21.16
		1880	20.28	20.71	20.65	20.49
		1851.5	20.16	20.50	20.35	20.19
	8RB High (7)	1908.5	21.01	21.05	21.13	20.97
		1880	20.37	20.29	20.42	20.26
		1851.5	20.11	20.06	20.08	19.92
	8RB Middle (4)	1908.5	21.05	21.18	21.23	21.07
		1880	20.50	20.53	20.58	20.42
		1851.5	20.15	20.17	20.18	20.02
	8RB Low (0)	1908.5	21.15	21.11	21.02	20.86
		1880	20.36	20.39	20.38	20.22
		1851.5	20.16	20.22	20.20	20.04
	15RB (0)	1908.5	21.07	21.10	21.07	20.91
		1880	20.41	20.39	20.36	20.20
		1851.5	20.15	20.10	20.11	19.95

5 MHz	1RB High (24)	1907.5	20.97	21.21	21.20	21.04
		1880	20.42	20.62	20.81	20.65
		1852.5	20.07	20.40	20.20	20.04
	1RB Middle (12)	1907.5	20.99	21.45	21.11	20.95
		1880	20.25	20.76	20.24	20.08
		1852.5	19.95	20.28	19.79	19.63
	1RB Low (0)	1907.5	21.03	21.15	21.33	21.17
		1880	20.31	20.66	20.54	20.38
		1852.5	20.16	20.45	20.38	20.22
	12RB High (13)	1907.5	21.00	21.11	21.04	20.88
		1880	20.42	20.42	20.42	20.26
		1852.5	20.07	20.08	19.99	19.83
	12RB Middle (6)	1907.5	21.12	21.13	21.05	20.89
		1880	20.48	20.35	20.42	20.26
		1852.5	20.17	20.16	20.14	19.98
	12RB Low (0)	1907.5	21.14	21.15	21.18	21.02
		1880	20.40	20.45	20.39	20.23
		1852.5	20.15	20.20	20.33	20.17
	25RB (0)	1907.5	21.06	21.12	21.25	21.09
		1880	20.46	20.41	20.49	20.33
		1852.5	20.11	20.13	20.14	19.98
10 MHz	1RB High (49)	1905	21.00	21.33	21.16	21.00
		1880	20.50	20.72	20.64	20.48
		1855	20.00	20.34	20.32	20.16
	1RB Middle (24)	1905	20.98	21.34	21.27	21.11
		1880	20.38	20.51	20.56	20.40
		1855	19.99	20.34	20.22	20.06
	1RB Low (0)	1905	20.99	21.34	21.07	20.91
		1880	20.35	20.60	20.43	20.27
		1855	20.16	20.47	20.28	20.12
	25RB High (25)	1905	21.03	21.03	20.44	20.28
		1880	20.48	20.39	20.51	20.35
		1855	20.15	20.14	20.22	20.06
	25RB Middle (12)	1905	21.05	21.13	20.65	20.49
		1880	20.50	20.51	20.52	20.36
		1855	20.17	20.16	20.26	20.10
	25RB Low (0)	1905	20.97	21.01	20.74	20.58
		1880	20.40	20.37	20.42	20.26
		1855	20.15	20.25	20.17	20.01
	50RB (0)	1905	20.98	21.09	20.47	20.31
		1880	20.42	20.45	20.53	20.37
		1855	20.16	20.25	20.25	20.09
15 MHz	1RB High (74)	1902.5	20.89	20.98	20.90	20.74
		1880	20.50	20.56	20.67	20.51
		1857.5	20.16	20.39	20.17	20.01
	1RB Middle (37)	1902.5	20.81	21.12	20.98	20.82
		1880	20.27	20.59	20.45	20.29
		1857.5	19.95	20.22	20.02	19.86

	1RB Low (0)	1902.5	20.72	21.19	21.05	20.89
		1880	20.13	20.45	20.31	20.15
		1857.5	19.92	20.25	20.08	19.92
	36RB High (38)	1902.5	20.93	20.93	20.88	20.72
		1880	20.52	20.44	20.53	20.37
		1857.5	20.19	20.12	20.12	19.96
	36RB Middle (19)	1902.5	20.95	20.80	20.87	20.71
		1880	20.42	20.41	20.41	20.25
		1857.5	20.13	20.05	20.14	19.98
	36RB Low (0)	1902.5	20.95	20.86	20.87	20.71
		1880	20.29	20.30	20.30	20.14
		1857.5	19.97	20.02	20.05	19.89
	75RB (0)	1902.5	20.85	20.94	20.89	20.73
		1880	20.38	20.39	20.40	20.24
		1857.5	20.11	20.18	20.20	20.04
20 MHz	1RB High (99)	1900	20.77	20.97	21.03	20.87
		1880	20.45	20.84	20.72	20.56
		1860	20.04	20.51	20.53	20.37
	1RB Middle (50)	1900	20.79	20.94	20.90	20.74
		1880	20.21	20.48	20.50	20.34
		1860	19.95	20.28	20.24	20.08
	1RB Low (0)	1900	20.53	20.86	20.85	20.69
		1880	20.18	20.49	20.37	20.21
		1860	20.02	20.25	20.33	20.17
	50RB High (50)	1900	20.97	20.96	20.94	20.78
		1880	20.51	20.49	20.56	20.40
		1860	20.17	20.12	20.21	20.05
	50RB Middle (25)	1900	20.88	20.91	20.89	20.73
		1880	20.40	20.39	20.40	20.24
		1860	20.12	20.08	20.11	19.95
	50RB Low (0)	1900	20.69	20.64	20.71	20.55
		1880	20.28	20.25	20.30	20.14
		1860	20.04	19.99	20.04	19.88
	100RB (0)	1900	20.78	20.75	20.56	20.40
		1880	20.40	20.34	20.38	20.22
		1860	20.14	20.18	20.18	20.02

Full Power-ANT1

Band 2						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)	256QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	1909.3	23.79	22.67	22.19	19.24
		1880	24.26	23.74	22.96	19.58
		1850.7	24.30	23.81	22.93	19.55
	1RB Middle (3)	1909.3	23.74	22.81	22.31	19.03
		1880	24.34	23.73	22.94	19.66
		1850.7	24.30	23.75	22.96	19.58
	1RB Low (0)	1909.3	23.74	22.86	22.25	19.07
		1880	24.32	23.80	22.96	19.68
		1850.7	24.23	23.78	22.90	19.52
	3RB High (3)	1909.3	23.51	22.70	22.21	19.03
		1880	24.25	23.54	22.93	19.55
		1850.7	24.21	23.70	22.95	19.57
	3RB Middle (1)	1909.3	23.60	22.94	22.38	19.00
		1880	24.31	23.66	22.93	19.65
		1850.7	24.26	23.61	22.97	19.59
	3RB Low (0)	1909.3	23.63	22.90	22.45	19.07
		1880	24.34	23.58	22.92	19.64
		1850.7	24.33	23.64	22.97	19.59
	6RB (0)	1909.3	22.67	21.99	21.15	19.07
		1880	23.40	22.73	21.85	19.61
		1850.7	23.38	22.66	21.83	19.59
3 MHz	1RB High (14)	1908.5	23.74	22.86	22.31	19.07
		1880	24.28	23.78	22.94	19.51
		1851.5	24.38	23.75	22.86	19.66
	1RB Middle (7)	1908.5	23.90	22.99	22.38	19.34
		1880	24.26	23.75	22.96	19.48
		1851.5	24.26	23.79	22.84	19.58
	1RB Low (0)	1908.5	24.11	23.26	22.55	19.01
		1880	24.35	23.87	22.98	19.53
		1851.5	24.24	23.74	22.86	19.52
	8RB High (7)	1908.5	22.80	22.01	21.29	19.02
		1880	23.43	22.72	21.91	19.64
		1851.5	23.41	22.75	21.93	19.66
	8RB Middle (4)	1908.5	22.95	22.17	21.39	19.12
		1880	23.48	22.78	21.94	19.67
		1851.5	23.45	22.76	21.94	19.67
	8RB Low (0)	1908.5	23.02	22.31	21.46	19.19
		1880	23.49	22.82	21.92	19.65
		1851.5	23.43	22.71	21.88	19.61
	15RB (0)	1908.5	22.89	22.12	21.38	19.11
		1880	23.46	22.67	21.85	19.58
		1851.5	23.42	22.67	21.83	19.56

5 MHz	1RB High (24)	1907.5	23.89	22.94	22.35	19.01
		1880	24.23	23.77	22.98	19.55
		1852.5	24.40	23.77	22.86	19.63
	1RB Middle (12)	1907.5	24.10	23.09	22.51	19.07
		1880	24.19	23.79	22.96	19.42
		1852.5	24.21	23.88	22.95	19.41
	1RB Low (0)	1907.5	24.39	23.48	22.81	19.27
		1880	24.28	23.87	22.91	19.56
		1852.5	24.21	23.88	22.92	19.38
	12RB High (13)	1907.5	22.91	22.04	21.33	19.06
		1880	23.32	22.67	21.92	19.65
		1852.5	23.36	22.71	21.97	19.70
	12RB Middle (6)	1907.5	23.08	22.33	21.55	19.28
		1880	23.41	22.73	21.92	19.65
		1852.5	23.36	22.74	21.97	19.70
	12RB Low (0)	1907.5	23.26	22.44	21.65	19.38
		1880	23.46	22.77	21.93	19.66
		1852.5	23.35	22.77	21.95	19.68
	25RB (0)	1907.5	22.99	22.23	21.37	19.10
		1880	23.38	22.61	21.78	19.51
		1852.5	23.35	22.71	21.87	19.60
10 MHz	1RB High (49)	1905	24.22	22.90	22.51	19.06
		1880	24.36	23.86	22.84	19.67
		1855	24.10	23.58	22.68	19.14
	1RB Middle (24)	1905	24.36	23.37	22.80	19.26
		1880	24.14	23.69	22.97	19.43
		1855	24.21	23.70	22.83	19.29
	1RB Low (0)	1905	24.26	23.27	22.69	19.15
		1880	24.34	23.91	22.87	19.63
		1855	24.22	23.72	22.83	19.29
	25RB High (25)	1905	23.19	22.25	21.53	19.26
		1880	23.37	22.67	21.91	19.64
		1855	23.30	22.53	21.73	19.46
	25RB Middle (12)	1905	23.33	22.52	21.71	19.44
		1880	23.44	22.73	21.94	19.67
		1855	23.42	22.62	21.81	19.54
	25RB Low (0)	1905	23.32	22.55	21.73	19.46
		1880	23.55	22.83	21.96	19.80
		1855	23.38	22.68	21.82	19.55
	50RB (0)	1905	23.07	22.36	21.47	19.20
		1880	23.36	22.66	21.82	19.55
		1855	23.28	22.63	21.71	19.44
15 MHz	1RB High (74)	1902.5	24.00	23.07	22.50	19.54
		1880	24.30	23.91	22.95	19.61
		1857.5	24.02	23.45	22.47	19.50
	1RB Middle (37)	1902.5	24.36	23.38	22.64	19.10
		1880	24.19	23.84	22.84	19.50
		1857.5	24.21	23.60	22.72	19.18

	1RB Low (0)	1902.5	24.27	23.21	22.62	19.08
		1880	24.21	23.85	22.99	19.45
		1857.5	24.41	23.78	22.97	19.43
	36RB High (38)	1902.5	23.32	22.45	21.64	19.37
		1880	23.45	22.72	22.00	19.73
		1857.5	23.31	22.51	21.77	19.50
	36RB Middle (19)	1902.5	23.33	22.59	21.63	19.46
		1880	23.46	22.77	21.94	19.76
		1857.5	23.42	22.63	21.94	19.67
	36RB Low (0)	1902.5	23.30	22.50	21.74	19.47
		1880	23.60	22.89	21.95	19.88
		1857.5	23.55	22.76	21.86	19.78
	75RB (0)	1902.5	23.15	22.49	21.54	19.27
		1880	23.49	22.73	21.95	19.68
		1857.5	23.36	22.58	21.72	19.45
20 MHz	1RB High (99)	1900	24.16	23.65	22.62	19.12
		1880	24.05	23.67	22.52	19.70
		1860	24.19	23.61	22.30	19.15
	1RB Middle (50)	1900	24.11	23.65	21.91	19.17
		1880	24.12	23.66	22.44	19.60
		1860	24.03	23.41	22.40	19.20
	1RB Low (0)	1900	24.22	23.66	22.36	19.33
		1880	24.16	23.71	22.26	19.62
		1860	23.91	22.15	22.30	19.63
	50RB High (50)	1900	23.43	22.59	21.64	19.37
		1880	23.35	22.52	21.55	19.75
		1860	23.25	22.47	21.41	19.53
	50RB Middle (25)	1900	23.39	22.61	21.68	19.44
		1880	23.27	22.47	21.49	19.73
		1860	23.25	22.45	21.43	19.66
	50RB Low (0)	1900	23.33	22.51	21.58	19.47
		1880	23.15	22.43	21.41	19.87
		1860	23.12	22.34	21.34	19.78
	100RB (0)	1900	23.11	22.43	21.54	19.33
		1880	23.24	22.55	21.47	19.62
		1860	23.29	22.51	21.52	19.59

DSI1-ANT1

Band 2						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)	256QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	1909.3	11.39	11.43	11.75	11.89
		1880	10.76	10.86	11.02	11.16
		1850.7	10.51	10.62	10.77	10.91
	1RB Middle (3)	1909.3	11.56	11.52	11.82	11.96
		1880	11.03	11.01	11.04	11.18
		1850.7	10.67	10.77	10.83	10.97
	1RB Low (0)	1909.3	11.53	11.58	11.67	11.81
		1880	10.86	10.97	11.18	11.32
		1850.7	10.57	10.69	10.82	10.96
	3RB High (3)	1909.3	11.49	11.26	11.53	11.67
		1880	10.91	10.71	10.95	11.09
		1850.7	10.60	10.51	10.71	10.85
	3RB Middle (1)	1909.3	11.55	11.07	11.53	11.67
		1880	11.07	10.74	10.97	11.11
		1850.7	10.55	10.44	10.70	10.84
	3RB Low (0)	1909.3	11.52	11.48	11.54	11.68
		1880	10.99	10.63	10.92	11.06
		1850.7	10.67	10.44	10.68	10.82
	6RB (0)	1909.3	11.50	11.38	11.60	11.74
		1880	10.94	10.82	10.90	11.04
		1850.7	10.61	10.44	10.61	10.75
3 MHz	1RB High (14)	1908.5	11.45	11.53	11.49	11.63
		1880	10.96	10.97	11.10	11.24
		1851.5	10.59	10.55	10.70	10.84
	1RB Middle (7)	1908.5	11.56	11.46	11.70	11.84
		1880	10.90	10.95	11.14	11.28
		1851.5	10.59	10.80	11.14	11.28
	1RB Low (0)	1908.5	11.63	11.66	11.78	11.92
		1880	11.01	11.18	11.20	11.34
		1851.5	10.78	10.72	10.93	11.07
	8RB High (7)	1908.5	11.68	11.36	11.62	11.76
		1880	11.06	10.74	11.00	11.14
		1851.5	10.69	10.44	10.74	10.88
	8RB Middle (4)	1908.5	11.72	11.43	11.54	11.68
		1880	11.06	10.83	11.04	11.18
		1851.5	10.78	10.53	10.73	10.87
	8RB Low (0)	1908.5	11.74	11.48	11.75	11.89
		1880	11.02	10.82	11.06	11.20
		1851.5	10.80	10.53	10.81	10.95
	15RB (0)	1908.5	11.63	11.45	11.62	11.76
		1880	11.05	10.82	10.97	11.11
		1851.5	10.76	10.54	10.64	10.78

5 MHz	1RB High (24)	1907.5	11.57	11.64	11.65	11.79
		1880	11.02	10.98	11.13	11.27
		1852.5	10.60	10.70	10.73	10.87
	1RB Middle (12)	1907.5	11.53	11.63	11.64	11.78
		1880	10.95	11.15	11.06	11.20
		1852.5	10.63	10.90	10.74	10.88
	1RB Low (0)	1907.5	11.61	11.68	11.75	11.89
		1880	10.94	11.08	11.19	11.33
		1852.5	10.66	10.84	10.80	10.94
	12RB High (13)	1907.5	11.59	11.38	11.56	11.70
		1880	11.07	10.79	10.95	11.09
		1852.5	10.64	10.43	10.60	10.74
	12RB Middle (6)	1907.5	11.71	11.42	11.67	11.81
		1880	11.01	10.74	10.90	11.04
		1852.5	10.78	10.58	10.74	10.88
	12RB Low (0)	1907.5	11.72	11.43	11.61	11.75
		1880	11.10	10.86	11.02	11.16
		1852.5	10.78	10.55	10.74	10.88
	25RB (0)	1907.5	11.66	11.36	11.63	11.77
		1880	11.13	10.86	11.05	11.19
		1852.5	10.81	10.60	10.68	10.82
10 MHz	1RB High (49)	1905	11.54	11.57	11.67	11.81
		1880	11.02	11.02	10.97	11.11
		1855	10.62	10.65	10.85	10.99
	1RB Middle (24)	1905	11.61	11.69	11.67	11.81
		1880	10.92	10.99	11.15	11.29
		1855	10.63	10.56	10.78	10.92
	1RB Low (0)	1905	11.49	11.59	11.55	11.69
		1880	11.10	11.12	11.05	11.19
		1855	10.73	10.76	10.88	11.02
	25RB High (25)	1905	11.68	11.40	11.59	11.73
		1880	11.08	10.82	11.01	11.15
		1855	10.75	10.50	10.71	10.85
	25RB Middle (12)	1905	11.65	11.39	11.62	11.76
		1880	11.11	10.86	11.06	11.20
		1855	10.80	10.54	10.65	10.79
	25RB Low (0)	1905	11.59	11.36	11.50	11.64
		1880	11.02	10.85	11.03	11.17
		1855	10.73	10.48	10.75	10.89
	50RB (0)	1905	11.64	11.36	11.59	11.73
		1880	11.14	10.88	11.08	11.22
		1855	10.74	10.57	10.54	10.68
15 MHz	1RB High (74)	1902.5	11.54	11.49	11.68	11.82
		1880	10.97	11.06	11.28	11.42
		1857.5	10.71	10.66	10.90	11.04
	1RB Middle (37)	1902.5	11.34	11.52	11.57	11.71
		1880	10.91	10.91	11.07	11.21
		1857.5	10.59	10.60	10.73	10.87

	1RB Low (0)	1902.5	11.33	11.51	11.65	11.79
		1880	10.85	10.83	10.97	11.11
		1857.5	10.60	10.77	10.88	11.02
	36RB High (38)	1902.5	11.61	11.32	11.50	11.64
		1880	11.09	10.72	10.92	11.06
		1857.5	10.71	10.51	10.68	10.82
	36RB Middle (19)	1902.5	11.49	11.21	11.50	11.64
		1880	11.03	10.76	10.94	11.08
		1857.5	10.73	10.43	10.60	10.74
	36RB Low (0)	1902.5	11.53	11.20	11.40	11.54
		1880	10.91	10.65	10.83	10.97
		1857.5	10.54	10.32	10.49	10.63
	75RB (0)	1902.5	11.51	11.16	11.36	11.50
		1880	10.95	10.76	10.96	11.10
		1857.5	10.68	10.45	10.66	10.80
20 MHz	1RB High (99)	1900	10.98	11.15	11.28	11.44
		1880	11.03	11.16	11.29	11.40
		1860	10.96	11.11	11.23	11.36
	1RB Middle (50)	1900	11.00	11.21	11.29	11.46
		1880	10.97	11.19	11.27	11.44
		1860	10.93	11.12	11.21	11.38
	1RB Low (0)	1900	11.05	11.16	11.20	11.43
		1880	10.98	11.15	11.20	11.32
		1860	10.96	11.11	11.18	11.36
	50RB High (50)	1900	11.21	11.22	11.26	11.27
		1880	11.20	11.19	11.21	11.24
		1860	11.14	11.12	11.17	11.15
	50RB Middle (25)	1900	11.24	11.24	11.29	11.28
		1880	11.13	11.13	11.21	11.16
		1860	11.14	11.13	11.20	11.17
	50RB Low (0)	1900	11.15	11.16	11.20	11.19
		1880	11.12	11.15	11.17	11.13
		1860	11.08	11.16	11.18	11.14
	100RB (0)	1900	11.13	11.14	11.13	11.14
		1880	11.08	11.11	11.09	11.13
		1860	11.13	11.13	11.08	11.14

DSI2-ANT1

Band 2						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)	256QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	1909.3	19.23	19.39	19.48	19.56
		1880	18.54	18.71	18.86	18.94
		1850.7	18.30	18.51	18.55	18.63
	1RB Middle (3)	1909.3	19.21	19.66	19.58	19.66
		1880	18.75	18.87	18.80	18.88
		1850.7	18.60	18.56	18.68	18.76
	1RB Low (0)	1909.3	19.32	19.53	19.63	19.71
		1880	18.64	18.73	18.85	18.93
		1850.7	18.42	18.54	18.65	18.73
	3RB High (3)	1909.3	19.18	19.28	19.26	19.34
		1880	18.58	18.59	18.71	18.79
		1850.7	18.32	18.56	18.48	18.56
	3RB Middle (1)	1909.3	19.33	19.26	19.39	19.47
		1880	18.67	18.50	18.51	18.59
		1850.7	18.38	18.10	18.52	18.60
	3RB Low (0)	1909.3	19.21	19.31	19.51	19.59
		1880	18.69	18.60	18.67	18.75
		1850.7	18.41	18.22	18.32	18.40
	6RB (0)	1909.3	19.42	19.33	19.29	19.37
		1880	18.73	18.90	18.74	18.82
		1850.7	18.46	18.27	18.44	18.52
3 MHz	1RB High (14)	1908.5	19.34	19.49	19.52	19.60
		1880	18.62	18.88	18.87	18.95
		1851.5	18.30	18.53	18.62	18.70
	1RB Middle (7)	1908.5	19.25	19.48	19.44	19.52
		1880	18.60	18.79	18.87	18.95
		1851.5	18.33	18.67	18.44	18.52
	1RB Low (0)	1908.5	19.50	19.60	19.69	19.77
		1880	18.63	18.94	19.02	19.10
		1851.5	18.51	18.73	18.72	18.80
	8RB High (7)	1908.5	19.36	19.28	19.50	19.58
		1880	18.72	18.52	18.79	18.87
		1851.5	18.46	18.29	18.45	18.53
	8RB Middle (4)	1908.5	19.40	19.41	19.60	19.68
		1880	18.85	18.76	18.95	19.03
		1851.5	18.50	18.40	18.55	18.63
	8RB Low (0)	1908.5	19.50	19.34	19.39	19.47
		1880	18.71	18.62	18.75	18.83
		1851.5	18.51	18.45	18.57	18.65
	15RB (0)	1908.5	19.42	19.33	19.44	19.52
		1880	18.76	18.62	18.73	18.81
		1851.5	18.50	18.33	18.48	18.56

5 MHz	1RB High (24)	1907.5	19.32	19.44	19.57	19.65
		1880	18.77	18.85	19.18	19.26
		1852.5	18.42	18.63	18.57	18.65
	1RB Middle (12)	1907.5	19.34	19.68	19.48	19.56
		1880	18.60	18.99	18.61	18.69
		1852.5	18.30	18.51	18.16	18.24
	1RB Low (0)	1907.5	19.38	19.38	19.70	19.78
		1880	18.66	18.89	18.91	18.99
		1852.5	18.51	18.68	18.75	18.83
	12RB High (13)	1907.5	19.35	19.34	19.41	19.49
		1880	18.77	18.65	18.79	18.87
		1852.5	18.42	18.31	18.36	18.44
	12RB Middle (6)	1907.5	19.47	19.36	19.42	19.50
		1880	18.83	18.58	18.79	18.87
		1852.5	18.52	18.39	18.51	18.59
	12RB Low (0)	1907.5	19.49	19.38	19.55	19.63
		1880	18.75	18.68	18.76	18.84
		1852.5	18.50	18.43	18.70	18.78
	25RB (0)	1907.5	19.41	19.35	19.62	19.70
		1880	18.81	18.64	18.86	18.94
		1852.5	18.46	18.36	18.51	18.59
10 MHz	1RB High (49)	1905	19.35	19.56	19.53	19.61
		1880	18.85	18.95	19.01	19.09
		1855	18.35	18.57	18.69	18.77
	1RB Middle (24)	1905	19.33	19.57	19.64	19.72
		1880	18.73	18.74	18.93	19.01
		1855	18.34	18.57	18.59	18.67
	1RB Low (0)	1905	19.34	19.57	19.44	19.52
		1880	18.70	18.83	18.80	18.88
		1855	18.51	18.70	18.65	18.73
	25RB High (25)	1905	19.38	19.26	18.81	18.89
		1880	18.83	18.62	18.88	18.96
		1855	18.50	18.37	18.59	18.67
	25RB Middle (12)	1905	19.40	19.36	19.02	19.10
		1880	18.85	18.74	18.89	18.97
		1855	18.52	18.39	18.63	18.71
	25RB Low (0)	1905	19.32	19.24	19.11	19.19
		1880	18.75	18.60	18.79	18.87
		1855	18.50	18.48	18.54	18.62
	50RB (0)	1905	19.33	19.32	18.84	18.92
		1880	18.77	18.68	18.90	18.98
		1855	18.51	18.48	18.62	18.70
15 MHz	1RB High (74)	1902.5	19.24	19.21	19.27	19.35
		1880	18.85	18.79	19.04	19.12
		1857.5	18.51	18.62	18.54	18.62
	1RB Middle (37)	1902.5	19.16	19.35	19.35	19.43
		1880	18.62	18.82	18.82	18.90
		1857.5	18.30	18.45	18.39	18.47

	1RB Low (0)	1902.5	19.07	19.42	19.42	19.50
		1880	18.48	18.68	18.68	18.76
		1857.5	18.27	18.48	18.45	18.53
	36RB High (38)	1902.5	19.28	19.16	19.25	19.33
		1880	18.87	18.67	18.90	18.98
		1857.5	18.54	18.35	18.49	18.57
	36RB Middle (19)	1902.5	19.30	19.03	19.24	19.32
		1880	18.77	18.64	18.78	18.86
		1857.5	18.48	18.28	18.51	18.59
	36RB Low (0)	1902.5	19.30	19.09	19.24	19.32
		1880	18.64	18.53	18.67	18.75
		1857.5	18.32	18.25	18.42	18.50
	75RB (0)	1902.5	19.20	19.17	19.26	19.34
		1880	18.73	18.62	18.77	18.85
		1857.5	18.46	18.41	18.57	18.65
20 MHz	1RB High (99)	1900	19.12	19.25	19.45	19.52
		1880	19.16	19.23	19.45	19.49
		1860	19.06	19.21	19.44	19.42
	1RB Middle (50)	1900	19.13	19.27	19.26	19.50
		1880	19.08	19.27	19.22	19.45
		1860	19.01	19.23	19.21	19.42
	1RB Low (0)	1900	19.17	19.24	19.39	19.46
		1880	19.15	19.21	19.32	19.42
		1860	19.13	19.17	19.27	19.41
	50RB High (50)	1900	19.29	19.33	19.36	19.38
		1880	19.26	19.31	19.32	19.33
		1860	19.25	19.27	19.30	19.31
	50RB Middle (25)	1900	19.35	19.29	19.33	19.41
		1880	19.18	19.29	19.31	19.42
		1860	19.21	19.22	19.30	19.39
	50RB Low (0)	1900	19.22	19.26	19.25	19.27
		1880	19.21	19.23	19.29	19.27
		1860	19.12	19.25	19.26	19.36
	100RB (0)	1900	19.34	19.31	19.28	19.29
		1880	19.18	19.30	19.27	19.26
		1860	19.20	19.27	19.29	19.28

Full Power-ANT0

Band 4						
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)			
	RB offset		QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB_High	1754.3	24.47	23.84	22.82	19.83
		1732.5	24.38	23.77	22.55	19.56
		1710.7	24.37	23.68	22.62	19.63
	1RB_Middle	1754.3	24.81	23.98	22.87	19.88
		1732.5	24.68	23.76	22.70	19.71
		1710.7	24.67	23.85	22.67	19.68
	1RB_Low	1754.3	24.36	23.90	22.85	19.86
		1732.5	24.34	23.76	22.57	19.58
		1710.7	24.36	23.70	22.60	19.61
	3RB_High	1754.3	24.57	23.82	22.72	19.73
		1732.5	24.48	23.56	22.52	19.53
		1710.7	24.43	23.42	22.54	19.55
	3RB_Middle	1754.3	24.80	23.59	22.63	19.64
		1732.5	24.58	23.78	22.68	19.69
		1710.7	24.45	23.52	22.45	19.46
	3RB_Low	1754.3	24.59	23.69	22.67	19.68
		1732.5	24.48	23.62	22.59	19.60
		1710.7	24.44	23.47	22.52	19.53
	6RB	1754.3	23.64	22.71	21.51	19.43
		1732.5	23.22	22.61	21.27	19.19
		1710.7	23.51	22.48	21.31	19.23
3 MHz	1RB_High	1753.5	24.51	23.93	22.85	19.86
		1732.5	24.58	23.93	22.68	19.69
		1711.5	24.46	23.80	22.66	19.67
	1RB_Middle	1753.5	24.50	23.96	22.83	19.84
		1732.5	24.52	23.95	22.73	19.74
		1711.5	24.44	23.48	22.45	19.46
	1RB_Low	1753.5	24.68	23.86	22.91	19.92
		1732.5	24.59	23.83	22.71	19.72
		1711.5	24.47	23.82	22.65	19.66
	8RB_High	1753.5	23.66	22.80	21.79	19.71
		1732.5	23.63	22.72	21.61	19.53
		1711.5	23.52	22.50	21.30	19.22
	8RB_Middle	1753.5	23.81	22.83	21.66	19.58
		1732.5	23.68	22.67	21.68	19.60
		1711.5	23.63	22.62	21.38	19.30
	8RB_Low	1753.5	23.70	22.69	21.68	19.60
		1732.5	23.55	22.61	21.56	19.48
		1711.5	23.57	22.61	21.63	19.55
	15RB	1753.5	23.76	22.77	21.71	19.63
		1732.5	23.57	22.55	21.51	19.43

		1711.5	23.51	22.57	21.38	19.30
5 MHz	1RB_High	1752.5	24.68	23.87	22.90	19.91
		1732.5	24.65	23.88	22.75	19.76
		1712.5	24.52	23.80	22.64	19.65
	1RB_Middle	1752.5	24.53	23.92	22.71	19.72
		1732.5	24.47	23.81	22.57	19.58
		1712.5	24.40	23.81	22.62	19.63
	1RB_Low	1752.5	24.75	24.00	22.99	20.00
		1732.5	24.60	23.83	22.72	19.73
		1712.5	24.52	23.82	22.84	19.85
	12RB_High	1752.5	23.81	22.79	21.71	19.63
		1732.5	23.67	22.72	21.65	19.57
		1712.5	23.55	22.57	21.48	19.40
	12RB_Middle	1752.5	23.72	22.76	21.71	19.63
		1732.5	23.63	22.55	21.47	19.39
		1712.5	23.62	22.60	21.51	19.43
	12RB_Low	1752.5	23.75	22.78	21.68	19.60
		1732.5	23.58	22.58	21.53	19.45
		1712.5	23.52	22.51	21.54	19.46
	25RB	1752.5	23.78	22.83	21.72	19.64
		1732.5	23.60	22.52	21.48	19.40
		1712.5	23.59	22.53	21.56	19.48
10MHz	1RB_High	1750	24.67	23.88	22.73	19.74
		1732.5	24.60	23.99	22.77	19.78
		1715	24.46	23.86	22.44	19.45
	1RB_Middle	1750	24.65	23.86	22.63	19.64
		1732.5	24.63	23.87	22.84	19.85
		1715	24.49	23.61	22.54	19.55
	1RB_Low	1750	24.75	23.90	22.69	19.70
		1732.5	24.64	23.89	22.81	19.82
		1715	24.42	23.79	22.59	19.60
	25RB_High	1750	23.76	22.83	21.70	19.62
		1732.5	23.64	22.69	21.64	19.56
		1715	23.62	22.57	21.50	19.42
	25RB_Middle	1750	23.71	22.75	21.70	19.62
		1732.5	23.69	22.61	21.64	19.56
		1715	23.62	22.59	21.47	19.39
	25RB_Low	1750	23.71	22.77	21.54	19.46
		1732.5	23.57	22.68	21.58	19.50
		1715	23.56	22.55	21.48	19.40
	50RB	1750	23.72	22.70	21.70	19.62
		1732.5	23.64	22.60	21.40	19.32
		1715	23.53	22.56	21.50	19.42
15MHz	1RB_High	1747.5	24.40	23.85	22.80	19.81
		1732.5	24.39	23.68	22.81	19.82
		1717.5	24.36	23.75	22.46	19.47
	1RB_Middle	1747.5	24.50	23.78	22.68	19.69
		1732.5	24.36	23.71	22.54	19.55

		1717.5	24.22	23.56	22.38	19.39
	1RB_Low	1747.5	24.46	23.94	22.67	19.68
		1732.5	24.43	23.66	22.78	19.79
		1717.5	24.36	23.76	22.53	19.54
	36RB_High	1747.5	23.66	22.56	21.57	19.49
		1732.5	23.55	22.60	21.53	19.45
		1717.5	23.37	22.41	21.38	19.30
	36RB_Middle	1747.5	23.55	22.58	21.50	19.42
		1732.5	23.52	22.49	21.46	19.38
		1717.5	23.55	22.50	21.48	19.40
	36RB_Low	1747.5	23.62	22.51	21.47	19.39
		1732.5	23.51	22.49	21.42	19.34
		1717.5	23.43	22.42	21.32	19.24
	75RB	1747.5	23.62	22.51	21.53	19.45
		1732.5	23.43	22.57	21.44	19.36
		1717.5	23.47	22.42	21.41	19.33
20MHz	1RB_High	1745	24.53	23.67	22.95	19.96
		1732.5	24.46	23.67	22.73	19.74
		1720	24.35	23.66	22.66	19.67
	1RB_Middle	1745	24.38	23.86	22.91	19.92
		1732.5	24.32	23.69	22.52	19.53
		1720	24.29	23.59	22.66	19.67
	1RB_Low	1745	24.52	23.78	22.76	19.77
		1732.5	24.38	23.81	22.70	19.71
		1720	24.23	23.66	22.66	19.67
	50RB_High	1745	23.65	22.62	21.61	19.53
		1732.5	23.56	22.49	21.59	19.51
		1720	23.48	22.48	21.45	19.37
	50RB_Middle	1745	23.50	22.51	21.57	19.49
		1732.5	23.47	22.52	21.55	19.47
		1720	23.47	22.42	21.49	19.41
	50RB_Low	1745	23.56	22.54	21.51	19.43
		1732.5	23.53	22.44	21.49	19.41
		1720	23.30	22.42	21.42	19.34
	100RB	1745	23.43	22.45	21.59	19.51
		1732.5	23.37	22.39	21.55	19.47
		1720	23.36	22.41	21.40	19.32

DSI1-ANT0

Band 4						
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)			
	RB offset		QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB_High	1754.3	10.49	10.71	10.76	10.60
		1732.5	10.34	10.78	10.64	10.48
		1710.7	10.27	10.72	10.53	10.37
	1RB_Middle	1754.3	10.56	10.79	10.58	10.42
		1732.5	10.39	10.83	10.66	10.50
		1710.7	10.33	10.64	10.51	10.35
	1RB_Low	1754.3	10.53	10.77	10.80	10.64
		1732.5	10.42	10.64	10.60	10.44
		1710.7	10.38	10.60	10.56	10.40
	3RB_High	1754.3	10.52	10.61	10.66	10.50
		1732.5	10.46	10.49	10.40	10.24
		1710.7	10.33	10.40	10.45	10.29
	3RB_Middle	1754.3	10.65	10.71	10.44	10.28
		1732.5	10.38	10.20	10.53	10.37
		1710.7	10.40	10.48	10.39	10.23
	3RB_Low	1754.3	10.54	10.75	10.48	10.32
		1732.5	10.43	10.53	10.54	10.38
		1710.7	10.41	10.51	10.42	10.26
	6RB	1754.3	10.57	10.63	10.60	10.44
		1732.5	10.46	10.65	10.47	10.31
		1710.7	10.44	10.54	10.41	10.25
3 MHz	1RB_High	1753.5	10.66	10.92	10.75	10.59
		1732.5	10.53	10.89	10.66	10.50
		1711.5	10.44	10.66	10.58	10.42
	1RB_Middle	1753.5	10.63	10.85	10.70	10.54
		1732.5	10.49	10.77	10.67	10.51
		1711.5	10.39	10.65	10.52	10.36
	1RB_Low	1753.5	10.63	10.88	10.77	10.61
		1732.5	10.40	10.75	10.75	10.59
		1711.5	10.48	10.66	10.69	10.53
	8RB_High	1753.5	10.73	10.78	10.66	10.50
		1732.5	10.52	10.56	10.58	10.42
		1711.5	10.53	10.48	10.55	10.39
	8RB_Middle	1753.5	10.68	10.75	10.64	10.48
		1732.5	10.64	10.70	10.65	10.49
		1711.5	10.57	10.50	10.62	10.46
	8RB_Low	1753.5	10.70	10.75	10.74	10.58
		1732.5	10.53	10.56	10.55	10.39
		1711.5	10.53	10.57	10.50	10.34
	15RB	1753.5	10.67	10.63	10.58	10.42
		1732.5	10.47	10.55	10.53	10.37

		1711.5	10.56	10.52	10.40	10.24
5 MHz	1RB_High	1752.5	10.66	10.91	10.86	10.70
		1732.5	10.51	10.87	10.78	10.62
		1712.5	10.49	10.74	10.67	10.51
	1RB_Middle	1752.5	10.57	10.78	10.73	10.57
		1732.5	10.51	10.84	10.66	10.50
		1712.5	10.40	10.82	10.63	10.47
	1RB_Low	1752.5	10.65	10.84	10.83	10.67
		1732.5	10.48	10.88	10.61	10.45
		1712.5	10.42	10.78	10.64	10.48
	12RB_High	1752.5	10.66	10.70	10.66	10.50
		1732.5	10.54	10.63	10.50	10.34
		1712.5	10.45	10.49	10.43	10.27
	12RB_Middle	1752.5	10.80	10.73	10.72	10.56
		1732.5	10.51	10.59	10.47	10.31
		1712.5	10.52	10.61	10.59	10.43
	12RB_Low	1752.5	10.68	10.71	10.82	10.66
		1732.5	10.58	10.45	10.51	10.35
		1712.5	10.51	10.37	10.48	10.32
	25RB	1752.5	10.71	10.67	10.74	10.58
		1732.5	10.57	10.46	10.52	10.36
		1712.5	10.54	10.61	10.51	10.35
10MHz	1RB_High	1750	10.65	10.94	10.93	10.77
		1732.5	10.51	11.00	10.49	10.33
		1715	10.37	10.75	10.44	10.28
	1RB_Middle	1750	10.63	10.86	10.79	10.63
		1732.5	10.51	10.72	10.67	10.51
		1715	10.28	10.62	10.59	10.43
	1RB_Low	1750	10.67	10.89	10.85	10.69
		1732.5	10.38	10.86	10.59	10.43
		1715	10.29	10.68	10.61	10.45
	25RB_High	1750	10.69	10.66	10.71	10.55
		1732.5	10.64	10.64	10.59	10.43
		1715	10.52	10.53	10.49	10.33
	25RB_Middle	1750	10.68	10.68	10.67	10.51
		1732.5	10.58	10.55	10.63	10.47
		1715	10.54	10.61	10.62	10.46
	25RB_Low	1750	10.65	10.65	10.71	10.55
		1732.5	10.55	10.62	10.57	10.41
		1715	10.55	10.48	10.53	10.37
	50RB	1750	10.63	10.70	10.59	10.43
		1732.5	10.50	10.60	10.54	10.38
		1715	10.56	10.53	10.52	10.36
15MHz	1RB_High	1747.5	10.45	10.84	10.70	10.54
		1732.5	10.41	10.77	10.79	10.63
		1717.5	10.34	10.64	10.66	10.50
	1RB_Middle	1747.5	10.44	10.90	10.81	10.65
		1732.5	10.41	10.81	10.59	10.43

		1717.5	10.36	10.66	10.51	10.35
	1RB_Low	1747.5	10.35	10.82	10.77	10.61
		1732.5	10.35	10.74	10.66	10.50
		1717.5	10.28	10.72	10.59	10.43
	36RB_High	1747.5	10.54	10.54	10.62	10.46
		1732.5	10.56	10.44	10.46	10.30
		1717.5	10.39	10.47	10.42	10.26
	36RB_Middle	1747.5	10.48	10.57	10.63	10.47
		1732.5	10.50	10.46	10.45	10.29
		1717.5	10.48	10.35	10.49	10.33
	36RB_Low	1747.5	9.74	10.54	10.40	10.24
		1732.5	10.44	10.44	10.48	10.32
		1717.5	10.39	10.52	10.33	10.17
	75RB	1747.5	10.27	10.53	10.52	10.36
		1732.5	10.44	10.42	10.40	10.24
		1717.5	10.45	10.41	10.38	10.22
20MHz	1RB_High	1745	10.44	10.90	10.80	10.64
		1732.5	10.32	10.75	10.78	10.62
		1720	10.41	10.73	10.59	10.43
	1RB_Middle	1745	10.39	10.85	10.70	10.54
		1732.5	10.39	10.64	10.64	10.48
		1720	10.24	10.55	10.57	10.41
	1RB_Low	1745	10.46	10.77	10.68	10.52
		1732.5	10.30	10.63	10.51	10.35
		1720	10.32	10.70	10.64	10.48
	50RB_High	1745	10.55	10.47	10.56	10.40
		1732.5	10.50	10.47	10.49	10.33
		1720	10.40	10.44	10.38	10.22
	50RB_Middle	1745	10.59	10.60	10.58	10.42
		1732.5	10.41	10.44	10.47	10.31
		1720	10.42	10.40	10.40	10.24
	50RB_Low	1745	10.49	10.49	10.49	10.33
		1732.5	10.43	10.38	10.45	10.29
		1720	10.39	10.41	10.36	10.20
	100RB	1745	10.51	10.40	10.50	10.34
		1732.5	10.44	10.40	10.33	10.17
		1720	10.40	10.38	10.47	10.31

DSI2-ANT0

Band 4						
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Actual output power (dBm)			
	RB offset		QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB_High	1754.3	18.90	18.95	18.91	18.79
		1732.5	18.47	18.89	18.96	18.84
		1710.7	18.52	18.68	18.52	18.40
	1RB_Middle	1754.3	18.93	18.98	18.94	18.82
		1732.5	18.82	18.92	18.76	18.64
		1710.7	18.81	19.00	18.89	18.77
	1RB_Low	1754.3	18.76	18.95	18.91	18.79
		1732.5	18.60	18.96	18.62	18.50
		1710.7	18.42	18.75	18.48	18.36
	3RB_High	1754.3	18.68	18.66	18.79	18.67
		1732.5	18.60	18.54	18.74	18.62
		1710.7	18.48	18.76	18.55	18.43
	3RB_Middle	1754.3	18.75	18.82	18.88	18.76
		1732.5	18.67	18.67	18.78	18.66
		1710.7	18.58	18.64	18.72	18.60
	3RB_Low	1754.3	18.68	18.78	18.65	18.53
		1732.5	18.55	18.62	18.75	18.63
		1710.7	18.49	18.62	18.49	18.37
	6RB	1754.3	18.78	18.81	18.91	18.79
		1732.5	18.58	18.61	18.66	18.54
		1710.7	17.53	18.54	18.79	18.67
3 MHz	1RB_High	1753.5	18.54	18.80	18.87	18.75
		1732.5	18.68	18.75	18.94	18.82
		1711.5	18.53	18.91	18.81	18.69
	1RB_Middle	1753.5	18.55	18.92	18.73	18.61
		1732.5	18.56	18.75	18.79	18.67
		1711.5	18.40	18.92	18.42	18.30
	1RB_Low	1753.5	18.78	18.94	19.00	18.88
		1732.5	18.59	18.99	18.93	18.81
		1711.5	18.54	18.96	18.68	18.56
	8RB_High	1753.5	18.85	18.76	18.81	18.69
		1732.5	18.70	18.74	18.77	18.65
		1711.5	18.54	18.73	18.67	18.55
	8RB_Middle	1753.5	18.74	18.87	18.94	18.82
		1732.5	18.71	18.85	18.84	18.72
		1711.5	18.75	18.67	18.75	18.63
	8RB_Low	1753.5	18.82	18.88	18.85	18.73
		1732.5	18.65	18.80	18.74	18.62
		1711.5	18.63	18.78	18.60	18.48
	15RB	1753.5	18.87	18.85	18.82	18.70
		1732.5	18.75	18.71	18.63	18.51

		1711.5	18.61	18.57	18.58	18.46
5 MHz	1RB_High	1752.5	18.67	18.91	18.94	18.82
		1732.5	18.70	18.96	18.96	18.84
		1712.5	18.60	18.94	18.83	18.71
	1RB_Middle	1752.5	18.60	18.85	18.89	18.77
		1732.5	18.63	18.88	18.71	18.59
		1712.5	18.45	18.99	18.50	18.38
	1RB_Low	1752.5	18.90	18.96	18.82	18.70
		1732.5	18.74	18.97	18.92	18.80
		1712.5	18.47	18.88	18.94	18.82
	12RB_High	1752.5	18.83	18.89	18.94	18.82
		1732.5	18.77	18.58	18.68	18.56
		1712.5	18.63	18.62	18.68	18.56
	12RB_Middle	1752.5	18.86	18.87	18.85	18.73
		1732.5	18.68	18.63	18.68	18.56
		1712.5	18.71	18.69	18.61	18.49
	12RB_Low	1752.5	18.81	18.91	18.77	18.65
		1732.5	18.70	18.79	18.76	18.64
		1712.5	18.61	18.67	18.70	18.58
	25RB	1752.5	18.85	18.90	18.87	18.75
		1732.5	18.70	18.68	18.53	18.41
		1712.5	18.69	18.55	18.62	18.50
10MHz	1RB_High	1750	18.49	18.98	19.00	18.88
		1732.5	18.69	18.73	18.76	18.64
		1715	18.63	18.93	18.59	18.47
	1RB_Middle	1750	18.89	18.98	18.94	18.82
		1732.5	18.84	18.97	18.86	18.74
		1715	18.66	18.87	18.77	18.65
	1RB_Low	1750	18.77	18.95	18.98	18.86
		1732.5	18.56	18.90	18.68	18.56
		1715	18.57	18.77	18.61	18.49
	25RB_High	1750	18.79	18.87	18.93	18.81
		1732.5	18.76	18.82	18.67	18.55
		1715	18.62	18.63	18.52	18.40
	25RB_Middle	1750	18.85	18.78	18.92	18.80
		1732.5	18.74	18.78	18.74	18.62
		1715	18.61	18.70	18.69	18.57
	25RB_Low	1750	18.80	18.81	18.88	18.76
		1732.5	18.69	18.74	18.67	18.55
		1715	18.70	18.64	18.69	18.57
	50RB	1750	18.83	18.81	18.71	18.59
		1732.5	18.78	18.73	18.71	18.59
		1715	18.60	18.64	18.59	18.47
15MHz	1RB_High	1747.5	18.74	18.92	18.53	18.41
		1732.5	18.56	18.99	18.73	18.61
		1717.5	18.42	18.58	18.36	18.24
	1RB_Middle	1747.5	18.63	18.96	18.75	18.63
		1732.5	18.48	18.87	18.72	18.60

		1717.5	18.42	18.79	18.55	18.43
	1RB_Low	1747.5	18.58	18.95	18.69	18.57
		1732.5	18.50	18.82	18.78	18.66
		1717.5	18.40	18.80	18.60	18.48
	36RB_High	1747.5	18.70	18.75	18.76	18.64
		1732.5	18.63	18.72	18.65	18.53
		1717.5	18.53	18.60	18.54	18.42
	36RB_Middle	1747.5	18.63	18.75	18.70	18.58
		1732.5	18.52	18.65	18.67	18.55
		1717.5	18.56	18.55	18.55	18.43
	36RB_Low	1747.5	18.64	18.71	18.59	18.47
		1732.5	18.66	18.63	18.63	18.51
		1717.5	18.54	18.47	18.45	18.33
	75RB	1747.5	18.66	18.69	18.69	18.57
		1732.5	18.55	18.56	18.60	18.48
		1717.5	18.54	18.47	18.58	18.46
20MHz	1RB_High	1745	18.56	18.91	18.74	18.62
		1732.5	18.54	18.99	18.80	18.68
		1720	18.50	18.92	18.61	18.49
	1RB_Middle	1745	18.52	18.94	18.78	18.66
		1732.5	18.47	18.87	18.65	18.53
		1720	18.42	18.65	18.48	18.36
	1RB_Low	1745	18.55	18.93	18.72	18.60
		1732.5	18.46	18.85	18.60	18.48
		1720	18.46	18.79	18.49	18.37
	50RB_High	1745	18.66	18.68	18.76	18.64
		1732.5	18.62	18.63	18.73	18.61
		1720	18.63	18.67	18.59	18.47
	50RB_Middle	1745	18.65	18.63	18.70	18.58
		1732.5	18.51	18.72	18.65	18.53
		1720	18.59	18.63	18.55	18.43
	50RB_Low	1745	18.61	18.73	18.63	18.51
		1732.5	18.62	18.61	18.66	18.54
		1720	18.44	18.46	18.55	18.43
	100RB	1745	18.60	18.59	18.67	18.55
		1732.5	18.55	18.65	18.69	18.57
		1720	18.51	18.57	18.55	18.43

Full Power-ANT0

Band 5						
Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB High (5)	848.3	23.65	22.98	21.23	18.51
		836.5	23.73	23.00	21.54	18.82
		824.7	23.65	22.99	21.40	18.68
	1RB Middle (3)	848.3	23.73	23.01	21.54	18.82
		836.5	24.01	23.06	21.57	18.85
		824.7	23.63	22.99	21.41	18.69
	1RB Low (0)	848.3	23.78	22.98	21.68	18.96
		836.5	23.66	23.06	21.53	18.81
		824.7	23.66	22.98	21.37	18.65
	3RB High (3)	848.3	23.66	22.73	21.62	18.90
		836.5	23.77	22.74	21.47	18.75
		824.7	23.69	22.86	21.41	18.69
	3RB Middle (1)	848.3	23.73	22.80	21.65	18.93
		836.5	23.81	22.81	21.43	18.71
		824.7	23.78	22.87	21.26	18.54
	3RB Low (0)	848.3	23.67	22.86	21.76	19.04
		836.5	23.64	22.79	21.53	18.81
		824.7	23.70	22.74	21.33	18.61
	6RB (0)	848.3	22.80	21.81	20.50	18.58
		836.5	22.71	21.93	20.39	18.57
		824.7	22.75	21.98	20.30	18.51
3 MHz	1RB High (14)	847.5	23.71	23.07	21.42	18.70
		836.5	23.81	23.15	21.64	18.92
		825.5	23.77	23.11	21.84	19.12
	1RB Middle (7)	847.5	23.71	23.08	21.76	19.04
		836.5	23.73	23.32	21.63	18.91
		825.5	23.73	23.47	21.55	18.83
	1RB Low (0)	847.5	23.85	23.17	21.90	19.18
		836.5	23.79	23.16	21.79	19.07
		825.5	23.77	23.07	21.47	18.75
	8RB High (7)	847.5	22.78	21.87	20.66	18.74
		836.5	22.87	21.87	20.45	18.53
		825.5	22.91	21.79	20.70	18.78
	8RB Middle (4)	847.5	22.88	21.82	20.79	18.87
		836.5	22.87	21.86	20.59	18.67
		825.5	22.91	21.92	20.65	18.73
	8RB Low (0)	847.5	22.83	21.80	21.01	19.09
		836.5	22.82	21.81	20.63	18.71
		825.5	22.85	21.96	20.51	18.59
	15RB (0)	847.5	22.80	21.92	20.67	18.75
		836.5	22.85	21.86	20.46	18.54
		825.5	22.90	21.84	20.58	18.66

5 MHz	1RB High (24)	846.5	23.97	23.08	21.48	18.76
		836.5	23.94	23.05	21.41	18.69
		826.5	23.82	23.11	21.66	18.94
	1RB Middle (12)	846.5	23.76	22.99	21.81	19.09
		836.5	23.75	23.46	21.53	18.81
		826.5	23.73	23.45	21.69	18.97
	1RB Low (0)	846.5	23.86	23.07	21.94	19.22
		836.5	23.86	23.25	21.85	19.13
		826.5	23.87	23.18	21.43	18.71
	12RB High (13)	846.5	22.88	21.85	20.57	18.65
		836.5	22.87	21.87	20.42	18.50
		826.5	22.92	21.90	20.84	18.92
	12RB Middle (6)	846.5	22.81	21.81	20.82	18.90
		836.5	22.86	21.89	20.60	18.68
		826.5	22.98	21.97	20.77	18.85
	12RB Low (0)	846.5	22.80	21.79	20.86	18.94
		836.5	22.82	21.82	20.72	18.80
		826.5	22.97	21.91	20.57	18.65
	25RB (0)	846.5	22.69	21.78	20.65	18.73
		836.5	22.82	21.87	20.45	18.53
		826.5	22.97	21.87	20.72	18.80
10 MHz	1RB High (49)	844.0	23.74	22.96	21.47	18.75
		836.5	23.74	23.14	21.44	18.72
		829.0	23.66	23.04	22.01	19.29
	1RB Middle (24)	844.0	23.72	22.96	21.80	19.08
		836.5	23.76	22.97	21.71	18.99
		829.0	23.86	23.06	21.85	19.13
	1RB Low (0)	844.0	23.91	23.06	21.55	18.83
		836.5	23.68	23.09	21.87	19.15
		829.0	23.79	23.08	21.51	18.79
	25RB High (25)	844.0	22.78	21.63	20.74	18.82
		836.5	22.82	21.80	20.52	18.60
		829.0	22.82	21.82	20.84	18.92
	25RB Middle (12)	844.0	22.74	21.80	20.86	18.94
		836.5	22.80	21.79	20.61	18.69
		829.0	22.86	21.93	20.93	19.01
	25RB Low (0)	844.0	22.84	21.83	20.68	18.76
		836.5	22.76	21.63	20.73	18.81
		829.0	22.85	21.79	20.87	18.95
	50RB (0)	844.0	22.79	21.79	20.36	18.54
		836.5	22.69	21.79	20.58	18.66
		829.0	22.81	21.86	20.78	18.86

DSI1-ANT0

Band 5						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB High (5)	848.3	16.90	17.38	17.20	17.07
		836.5	17.02	17.39	17.21	17.08
		824.7	17.03	17.40	17.47	17.34
	1RB Middle (3)	848.3	17.09	17.34	17.43	17.30
		836.5	16.99	17.39	17.35	17.22
		824.7	17.08	17.42	17.34	17.21
	1RB Low (0)	848.3	16.95	17.29	17.43	17.30
		836.5	17.00	17.24	17.35	17.22
		824.7	16.84	17.24	17.24	17.11
	3RB High (3)	848.3	17.03	17.12	17.21	17.08
		836.5	17.04	17.12	17.20	17.07
		824.7	17.09	17.08	17.17	17.04
	3RB Middle (1)	848.3	17.01	17.11	17.20	17.07
		836.5	17.05	17.15	17.21	17.08
		824.7	17.12	17.13	17.30	17.17
	3RB Low (0)	848.3	16.95	17.09	17.18	17.05
		836.5	17.07	17.05	17.13	17.00
		824.7	17.15	17.16	17.19	17.06
	6RB (0)	848.3	17.11	17.29	17.08	16.95
		836.5	17.09	17.22	17.14	17.01
		824.7	17.20	17.32	17.12	16.99
3 MHz	1RB High (14)	847.5	17.12	17.45	17.23	17.10
		836.5	17.17	17.56	17.30	17.17
		825.5	17.28	17.46	17.28	17.15
	1RB Middle (7)	847.5	17.01	17.27	17.11	16.98
		836.5	17.09	17.63	17.30	17.17
		825.5	16.92	17.48	17.30	17.17
	1RB Low (0)	847.5	17.21	17.55	17.28	17.15
		836.5	17.16	17.46	17.31	17.18
		825.5	17.23	17.63	17.37	17.24
	8RB High (7)	847.5	17.08	17.21	17.29	17.16
		836.5	17.24	17.25	17.24	17.11
		825.5	17.22	17.18	17.38	17.25
	8RB Middle (4)	847.5	17.20	17.22	17.41	17.28
		836.5	17.19	17.37	17.30	17.17
		825.5	17.26	17.35	17.28	17.15
	8RB Low (0)	847.5	17.10	17.27	17.25	17.12
		836.5	17.20	17.20	17.14	17.01
		825.5	17.31	17.31	17.36	17.23
	15RB (0)	847.5	17.26	17.26	17.17	17.04
		836.5	17.16	17.21	17.13	17.00
		825.5	17.21	17.33	17.27	17.14

5 MHz	1RB High (24)	846.5	17.03	17.44	17.31	17.18
		836.5	17.19	17.53	17.26	17.13
		826.5	17.24	17.49	17.36	17.23
	1RB Middle (12)	846.5	17.11	17.33	17.04	16.91
		836.5	17.08	17.64	17.07	16.94
		826.5	17.14	17.80	17.32	17.19
	1RB Low (0)	846.5	17.11	17.52	17.26	17.13
		836.5	17.14	17.48	17.46	17.33
		826.5	17.36	17.65	17.28	17.15
	12RB High (13)	846.5	17.24	17.21	17.19	17.06
		836.5	17.25	17.28	17.31	17.18
		826.5	17.28	17.36	17.35	17.22
	12RB Middle (6)	846.5	17.17	17.20	17.19	17.06
		836.5	17.25	17.24	17.24	17.11
		826.5	17.31	17.28	17.27	17.14
	12RB Low (0)	846.5	17.17	17.17	17.26	17.13
		836.5	17.13	17.21	17.29	17.16
		826.5	17.30	17.38	17.37	17.24
	25RB (0)	846.5	17.12	17.16	17.08	16.95
		836.5	17.14	17.27	17.19	17.06
		826.5	17.28	17.33	17.33	17.20
10 MHz	1RB High (49)	844.0	17.04	17.49	17.34	17.21
		836.5	17.09	17.56	17.46	17.33
		829.0	17.15	17.43	17.38	17.25
	1RB Middle (24)	844.0	17.10	17.31	17.23	17.10
		836.5	17.02	17.52	17.15	17.02
		829.0	17.07	17.51	17.45	17.32
	1RB Low (0)	844.0	17.26	17.59	17.59	17.46
		836.5	17.14	17.59	17.45	17.32
		829.0	17.23	17.50	17.48	17.35
	25RB High (25)	844.0	17.19	17.33	17.28	17.15
		836.5	17.19	17.24	17.27	17.14
		829.0	17.18	17.30	17.31	17.18
	25RB Middle (12)	844.0	17.22	17.33	17.22	17.09
		836.5	17.18	17.30	17.26	17.13
		829.0	17.31	17.36	17.37	17.24
	25RB Low (0)	844.0	17.26	17.23	17.25	17.12
		836.5	17.21	17.23	17.23	17.10
		829.0	17.19	17.32	17.31	17.18
	50RB (0)	844.0	17.26	17.31	17.14	17.01
		836.5	17.21	17.24	17.25	17.12
		829.0	17.28	17.32	17.30	17.17

Full Power-ANT0

Band 7					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5 MHz	1RB High (24)	2567.5	24.30	23.64	22.42
		2535	24.36	23.70	22.54
		2502.5	24.31	23.64	22.56
	1RB Middle (12)	2567.5	24.22	23.32	22.23
		2535	24.29	23.71	22.36
		2502.5	24.30	23.72	22.36
	1RB Low (0)	2567.5	24.25	23.57	22.34
		2535	24.44	23.71	22.59
		2502.5	24.20	23.55	22.21
	12RB High (13)	2567.5	23.43	22.44	21.25
		2535	23.57	22.49	21.44
		2502.5	23.45	22.46	21.43
	12RB Middle (6)	2567.5	23.48	22.43	21.24
		2535	23.44	22.47	21.46
		2502.5	23.42	22.48	21.35
	12RB Low (0)	2567.5	23.32	22.31	21.23
		2535	23.41	22.38	21.43
		2502.5	23.31	22.42	21.25
	25RB (0)	2567.5	23.32	22.34	21.23
		2535	23.43	22.49	21.40
		2502.5	23.47	22.45	21.20
10 MHz	1RB High (49)	2565	24.27	23.80	22.47
		2535	24.34	23.74	22.48
		2505	24.45	23.80	22.60
	1RB Middle (24)	2565	24.19	23.54	22.36
		2535	24.35	23.54	22.45
		2505	24.28	23.42	22.49
	1RB Low (0)	2565	24.35	23.70	22.49
		2535	24.35	23.79	22.53
		2505	24.28	23.79	22.18
	25RB High (25)	2565	23.34	22.37	21.34
		2535	23.39	22.34	21.41
		2505	23.43	22.41	21.43
	25RB Middle (12)	2565	23.39	22.39	21.34
		2535	23.51	22.48	21.42
		2505	23.45	22.54	21.50
	25RB Low (0)	2565	23.39	22.31	21.30
		2535	23.48	22.60	21.48
		2505	23.44	22.48	21.36
	50RB (0)	2565	23.37	22.41	21.34
		2535	23.39	22.43	21.40

		2505	23.37	22.44	21.42
15 MHz	1RB High (74)	2562.5	24.07	23.37	22.11
		2535	24.15	23.55	22.22
		2507.5	24.17	23.43	22.37
	1RB Middle (37)	2562.5	24.10	23.42	22.22
		2535	24.17	23.49	22.38
		2507.5	24.10	23.41	22.37
	1RB Low (0)	2562.5	24.07	23.60	22.29
		2535	24.06	23.57	22.25
		2507.5	24.15	23.45	22.10
	36RB High (38)	2562.5	23.33	22.31	21.17
		2535	23.33	22.38	21.34
		2507.5	23.20	22.33	21.22
	36RB Middle (19)	2562.5	23.31	22.32	21.24
		2535	23.30	22.33	21.28
		2507.5	23.26	22.32	21.26
	36RB Low (0)	2562.5	23.35	22.25	21.30
		2535	23.40	22.40	21.36
		2507.5	23.38	22.27	21.29
	75RB (0)	2562.5	23.31	22.37	21.21
		2535	23.25	22.38	21.29
		2507.5	23.29	22.21	21.28
20 MHz	1RB High (99)	2560	23.94	23.29	22.13
		2535	24.06	23.36	22.24
		2510	24.13	23.35	22.20
	1RB Middle (50)	2560	24.01	23.31	22.17
		2535	24.03	23.42	22.45
		2510	24.09	23.25	22.28
	1RB Low (0)	2560	24.05	23.42	22.35
		2535	24.09	23.36	22.93
		2510	24.05	23.37	22.20
	50RB High (50)	2560	23.24	22.17	21.23
		2535	23.13	22.15	21.28
		2510	23.17	22.29	21.25
	50RB Middle (25)	2560	23.21	22.23	21.31
		2535	23.18	22.27	21.33
		2510	23.37	22.31	21.32
	50RB Low (0)	2560	23.25	22.23	21.29
		2535	23.31	22.28	21.35
		2510	23.25	22.26	21.32
	100RB (0)	2560	23.22	22.21	21.29
		2535	23.13	22.20	21.29
		2510	23.26	22.29	21.37

DSI1-ANT0

Band 7					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5 MHz	1RB High (24)	2567.5	10.31	10.62	10.46
		2535	10.43	10.75	10.58
		2502.5	10.42	10.67	10.71
	1RB Middle (12)	2567.5	10.23	10.78	10.29
		2535	10.40	10.55	10.58
		2502.5	10.52	10.84	10.36
	1RB Low (0)	2567.5	10.23	10.67	10.44
		2535	10.41	10.72	10.50
		2502.5	10.40	10.66	10.58
	12RB High (13)	2567.5	10.55	10.40	10.40
		2535	10.41	10.42	10.45
		2502.5	10.51	10.43	10.48
	12RB Middle (6)	2567.5	10.40	10.38	10.41
		2535	10.53	10.50	10.49
		2502.5	10.48	10.45	10.44
	12RB Low (0)	2567.5	10.35	10.35	10.29
		2535	10.46	10.46	10.43
		2502.5	10.37	10.36	10.34
	25RB (0)	2567.5	10.35	10.33	10.39
		2535	10.40	10.44	10.36
		2502.5	10.41	10.43	10.42
10 MHz	1RB High (49)	2565	10.44	10.63	10.38
		2535	10.34	10.75	10.63
		2505	10.42	10.80	10.52
	1RB Middle (24)	2565	10.31	10.69	10.37
		2535	10.38	10.75	10.54
		2505	10.34	10.73	10.52
	1RB Low (0)	2565	10.36	10.65	10.56
		2535	10.45	10.74	10.60
		2505	10.38	10.77	10.53
	25RB High (25)	2565	10.43	10.40	10.35
		2535	10.47	10.54	10.42
		2505	10.56	10.50	10.50
	25RB Middle (12)	2565	10.42	10.45	10.44
		2535	10.58	10.55	10.53
		2505	10.53	10.51	10.49
	25RB Low (0)	2565	10.49	10.47	10.42
		2535	10.52	10.59	10.46
		2505	10.48	10.46	10.42
	50RB (0)	2565	10.47	10.51	10.29
		2535	10.42	10.35	10.35

		2505	10.43	10.42	10.45
15 MHz	1RB High (74)	2562.5	10.37	10.63	10.26
		2535	10.43	10.74	10.49
		2507.5	10.37	10.70	10.32
	1RB Middle (37)	2562.5	10.36	10.62	10.55
		2535	10.49	10.79	10.48
		2507.5	10.44	10.66	10.46
	1RB Low (0)	2562.5	10.42	10.72	10.54
		2535	10.36	10.74	10.45
		2507.5	10.28	10.50	10.54
	36RB High (38)	2562.5	10.51	10.40	10.43
		2535	10.52	10.41	10.44
		2507.5	10.52	10.48	10.48
	36RB Middle (19)	2562.5	10.54	10.44	10.49
		2535	10.48	10.47	10.41
		2507.5	10.42	10.43	10.38
	36RB Low (0)	2562.5	10.61	10.51	10.54
		2535	10.61	10.52	10.57
		2507.5	10.47	10.42	10.48
	75RB (0)	2562.5	10.54	10.47	10.34
		2535	10.47	10.45	10.35
		2507.5	10.43	10.41	10.35
20 MHz	1RB High (99)	2560	10.09	10.46	10.29
		2535	10.27	10.54	10.50
		2510	10.20	10.42	10.47
	1RB Middle (50)	2560	10.10	10.56	10.42
		2535	10.20	10.59	10.36
		2510	10.05	10.41	10.36
	1RB Low (0)	2560	10.17	10.59	10.48
		2535	10.17	10.51	10.37
		2510	10.13	10.38	10.37
	50RB High (50)	2560	10.25	10.33	10.34
		2535	10.25	10.33	10.32
		2510	10.34	10.34	10.35
	50RB Middle (25)	2560	10.33	10.36	10.40
		2535	10.29	10.29	10.26
		2510	10.28	10.30	10.25
	50RB Low (0)	2560	10.42	10.42	10.41
		2535	10.35	10.40	10.38
		2510	10.30	10.37	10.30
	100RB (0)	2560	10.36	10.32	10.36
		2535	10.29	10.32	10.37
		2510	10.26	10.28	10.25

DSI12-ANT0

Band 7					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)		
			QPSK	16QAM	64QAM
5 MHz	1RB High (24)	2567.5	21.42	21.66	21.47
		2535	21.50	21.81	21.62
		2502.5	21.45	21.78	21.63
	1RB Middle (12)	2567.5	21.32	21.71	21.23
		2535	21.37	21.52	21.54
		2502.5	21.32	21.48	21.29
	1RB Low (0)	2567.5	21.21	21.70	21.60
		2535	21.52	21.74	21.69
		2502.5	21.44	21.77	21.48
	12RB High (13)	2567.5	21.49	21.53	21.44
		2535	21.57	21.59	21.71
		2502.5	21.57	21.54	21.55
	12RB Middle (6)	2567.5	21.41	21.60	21.35
		2535	21.56	21.59	21.48
		2502.5	21.52	21.53	21.56
	12RB Low (0)	2567.5	21.37	21.44	21.33
		2535	21.48	21.42	21.47
		2502.5	21.40	21.45	21.34
	25RB (0)	2567.5	21.36	21.42	21.41
		2535	21.57	21.54	21.52
		2502.5	21.54	21.48	21.52
10 MHz	1RB High (49)	2565	21.42	21.79	21.47
		2535	21.44	21.74	21.57
		2505	21.38	21.74	21.47
	1RB Middle (24)	2565	21.27	21.49	21.62
		2535	21.33	21.71	21.58
		2505	21.35	21.68	21.60
	1RB Low (0)	2565	21.23	21.88	21.56
		2535	21.47	21.79	21.63
		2505	21.47	21.76	21.57
	25RB High (25)	2565	21.45	21.44	21.44
		2535	21.48	21.52	21.47
		2505	21.38	21.42	21.48
	25RB Middle (12)	2565	21.48	21.46	21.45
		2535	21.57	21.61	21.54
		2505	21.47	21.55	21.56
	25RB Low (0)	2565	21.46	21.44	21.48
		2535	21.53	21.52	21.62
		2505	21.51	21.46	21.49
	50RB (0)	2565	21.49	21.37	21.50
		2535	21.42	21.48	21.50

		2505	21.49	21.50	21.34
15 MHz	1RB High (74)	2562.5	21.13	21.50	21.37
		2535	21.24	21.64	21.48
		2507.5	21.20	21.52	21.36
	1RB Middle (37)	2562.5	21.12	21.28	21.17
		2535	21.17	21.57	21.44
		2507.5	21.20	21.56	21.33
	1RB Low (0)	2562.5	21.19	21.47	21.47
		2535	21.18	21.69	21.56
		2507.5	21.25	21.60	21.26
	36RB High (38)	2562.5	21.25	21.33	21.30
		2535	21.32	21.38	21.31
		2507.5	21.22	21.31	21.33
	36RB Middle (19)	2562.5	21.30	21.35	21.37
		2535	21.34	21.36	21.35
		2507.5	21.30	21.28	21.33
	36RB Low (0)	2562.5	21.38	21.33	21.40
		2535	21.42	21.51	21.51
		2507.5	21.33	21.38	21.34
	75RB (0)	2562.5	21.38	21.34	21.30
		2535	21.28	21.29	21.29
		2507.5	21.40	21.32	21.30
20 MHz	1RB High (99)	2560	21.19	21.57	21.48
		2535	21.23	21.51	21.43
		2510	21.21	21.70	21.41
	1RB Middle (50)	2560	21.31	21.46	21.46
		2535	21.21	21.60	21.42
		2510	21.27	21.49	21.31
	1RB Low (0)	2560	21.31	21.90	21.49
		2535	21.32	21.53	21.56
		2510	21.29	21.59	21.35
	50RB High (50)	2560	21.38	21.42	21.43
		2535	21.35	21.34	21.39
		2510	21.18	21.38	21.36
	50RB Middle (25)	2560	21.38	21.40	21.38
		2535	21.35	21.32	21.40
		2510	21.41	21.39	21.41
	50RB Low (0)	2560	21.35	21.39	21.39
		2535	21.44	21.45	21.43
		2510	21.36	21.38	21.32
	100RB (0)	2560	21.41	21.43	21.37
		2535	21.37	21.33	21.33
		2510	21.40	21.35	21.45

Full Power-ANT0

Band 12					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	715.3	23.49	22.72	21.70
		707.5	23.61	22.95	21.70
		699.7	23.54	22.79	21.84
	1RB Middle (3)	715.3	23.57	22.98	21.83
		707.5	23.92	22.99	21.90
		699.7	23.91	22.97	21.90
	1RB Low (0)	715.3	23.48	22.96	21.78
		707.5	23.64	23.00	21.89
		699.7	23.75	22.80	22.00
	3RB High (3)	715.3	23.81	22.01	21.65
		707.5	23.72	22.73	21.79
		699.7	23.61	22.83	21.79
	3RB Middle (1)	715.3	23.67	22.62	21.74
		707.5	23.68	22.65	21.55
		699.7	23.71	22.79	21.96
	3RB Low (0)	715.3	23.63	22.74	21.74
		707.5	23.68	22.63	21.78
		699.7	23.69	23.01	21.91
	6RB (0)	715.3	22.61	21.57	20.30
		707.5	22.66	21.75	19.80
		699.7	22.71	21.93	20.81
3 MHz	1RB High (14)	714.5	23.65	22.93	21.21
		707.5	23.67	23.01	21.74
		700.5	23.68	23.10	21.76
	1RB Middle (7)	714.5	23.63	23.09	21.60
		707.5	23.62	23.00	21.66
		700.5	23.57	23.09	21.88
	1RB Low (0)	714.5	23.79	22.90	21.62
		707.5	23.65	22.98	21.59
		700.5	23.56	23.12	22.08
	8RB High (7)	714.5	22.70	21.56	20.52
		707.5	22.74	21.80	20.80
		700.5	22.85	21.81	20.89
	8RB Middle (4)	714.5	22.86	21.85	20.20
		707.5	22.72	21.78	20.71
		700.5	22.84	21.80	20.94
	8RB Low (0)	714.5	22.69	21.83	19.54
		707.5	22.75	21.73	20.83
		700.5	22.84	21.89	21.04
	15RB (0)	714.5	22.62	21.82	20.75
		707.5	22.65	21.75	20.75
		700.5	22.90	21.86	20.89
5 MHz	1RB	713.5	23.54	22.91	21.85

	High (24)	707.5	23.77	22.83	21.98
		701.5	23.66	22.96	20.71
	1RB Middle (12)	713.5	23.55	22.98	21.86
		707.5	23.65	23.07	21.82
		701.5	23.69	23.15	20.60
	1RB Low (0)	713.5	23.34	22.98	21.78
		707.5	23.72	23.11	21.78
		701.5	23.88	23.10	21.92
	12RB High (13)	713.5	22.32	21.78	20.75
		707.5	22.75	21.79	20.66
		701.5	22.83	21.84	20.81
	12RB Middle (6)	713.5	22.63	21.79	19.51
		707.5	22.72	21.82	20.72
		701.5	22.86	21.70	20.74
	12RB Low (0)	713.5	22.81	21.79	20.21
		707.5	22.83	21.78	19.90
		701.5	22.80	21.65	20.11
	25RB (0)	713.5	22.53	21.66	20.63
		707.5	22.75	21.76	20.68
		701.5	22.80	21.62	20.47
10 MHz	1RB High (49)	711	23.51	23.10	21.59
		707.5	23.62	22.98	21.77
		704	23.63	23.01	21.74
	1RB Middle (24)	711	23.54	22.92	22.02
		707.5	23.53	22.95	20.86
		704	23.57	22.86	22.17
	1RB Low (0)	711	23.66	23.16	21.88
		707.5	23.84	22.98	21.90
		704	23.84	22.96	22.33
	25RB High (25)	711	22.65	21.65	20.78
		707.5	22.69	21.75	20.60
		704	22.77	21.76	20.89
	25RB Middle (12)	711	22.61	21.66	20.73
		707.5	22.65	21.66	20.82
		704	22.86	21.86	19.85
	25RB Low (0)	711	22.74	21.73	20.82
		707.5	22.79	21.70	20.87
		704	22.81	21.86	20.81
	50RB (0)	711	22.68	21.69	20.76
		707.5	22.66	21.57	19.78
		704	22.81	21.71	20.11

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Band 12					
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	QPSK Actual output power (dBm)	16QAM Actual output power (dBm)	64QAM Actual output power (dBm)
1.4 MHz	1RB High (5)	715.3	16.97	17.24	17.16
		707.5	16.88	17.36	17.34
		699.7	17.09	17.73	17.21
	1RB Middle (3)	715.3	16.89	17.28	17.22
		707.5	17.27	17.35	17.32
		699.7	17.40	17.45	17.40
	1RB Low (0)	715.3	16.97	17.23	17.48
		707.5	17.08	17.43	17.50
		699.7	17.18	17.40	17.40
	3RB High (3)	715.3	16.94	17.00	17.08
		707.5	17.07	17.17	17.16
		699.7	17.10	17.23	17.02
	3RB Middle (1)	715.3	17.03	17.20	16.81
		707.5	17.06	17.34	17.21
		699.7	17.23	17.18	17.32
	3RB Low (0)	715.3	17.04	17.10	17.10
		707.5	17.00	17.17	17.07
		699.7	17.16	17.36	17.09
	6RB (0)	715.3	17.10	17.11	17.03
		707.5	16.98	17.17	17.04
		699.7	17.22	17.19	17.20
3 MHz	1RB High (14)	714.5	17.02	17.40	17.31
		707.5	17.12	17.43	17.41
		700.5	17.08	17.47	17.40
	1RB Middle (7)	714.5	16.95	17.37	17.28
		707.5	16.99	17.59	17.18
		700.5	17.07	17.50	17.23
	1RB Low (0)	714.5	17.02	17.52	17.18
		707.5	17.15	17.42	17.33
		700.5	17.21	17.61	17.36
	8RB High (7)	714.5	17.09	17.23	17.20
		707.5	17.10	17.22	17.21
		700.5	17.20	17.25	17.25
	8RB Middle (4)	714.5	17.20	17.20	17.26
		707.5	17.02	17.27	17.21
		700.5	17.27	17.34	17.34
	8RB Low (0)	714.5	17.08	17.14	17.29
		707.5	17.22	17.16	17.21
		700.5	17.31	17.28	17.39
	15RB (0)	714.5	17.08	17.07	17.15
		707.5	17.08	17.23	17.18
		700.5	17.23	17.32	17.20
5 MHz	1RB	713.5	16.95	17.52	17.16

	High (24)	707.5	17.18	17.36	17.29
		701.5	17.12	17.36	17.19
	1RB Middle (12)	713.5	17.03	17.27	16.91
		707.5	17.06	17.44	17.11
		701.5	17.03	17.56	17.13
	1RB Low (0)	713.5	17.29	17.48	17.29
		707.5	17.19	17.53	17.40
		701.5	17.20	17.50	17.45
	12RB High (13)	713.5	17.10	17.09	17.15
		707.5	17.18	17.21	17.17
		701.5	17.21	16.99	17.17
	12RB Middle (6)	713.5	17.17	17.23	17.13
		707.5	17.19	17.11	17.18
		701.5	17.25	17.23	17.20
	12RB Low (0)	713.5	17.05	17.14	17.13
		707.5	17.14	17.18	17.08
		701.5	17.30	17.20	17.10
	25RB (0)	713.5	17.04	17.09	17.12
		707.5	17.14	17.08	17.17
		701.5	17.33	17.13	17.23
10 MHz	1RB High (49)	711	16.92	17.38	17.21
		707.5	17.03	17.31	16.97
		704	17.14	17.42	17.03
	1RB Middle (24)	711	17.24	17.49	17.31
		707.5	17.17	17.54	17.40
		704	17.12	17.32	17.17
	1RB Low (0)	711	17.07	17.63	17.36
		707.5	17.10	17.65	17.31
		704	17.17	17.46	17.30
	25RB High (25)	711	17.22	17.16	17.24
		707.5	17.21	17.21	17.20
		704	17.16	17.31	17.12
	25RB Middle (12)	711	17.21	17.17	17.15
		707.5	17.11	17.29	17.18
		704	17.25	17.23	17.33
	25RB Low (0)	711	17.19	17.21	17.13
		707.5	17.16	17.29	17.24
		704	17.24	17.33	17.14
	50RB (0)	711	17.06	17.25	17.25
		707.5	17.18	17.20	17.29
		704	17.32	17.29	17.29

Full Power-ANT0

Band 13						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
5 MHz	1RB High (24)	784.5	24.08	23.37	22.46	19.66
		782	24.13	23.49	22.33	19.53
		779.5	24.18	23.41	22.43	19.63
	1RB Middle (12)	784.5	24.20	23.38	22.51	19.71
		782	24.16	23.52	22.57	19.77
		779.5	24.08	23.41	22.46	19.66
	1RB Low (0)	784.5	24.24	23.51	22.46	19.66
		782	24.04	23.64	22.32	19.52
		779.5	24.10	23.56	22.32	19.52
	12RB High (13)	784.5	23.20	22.21	21.26	19.42
		782	23.17	22.28	21.28	19.44
		779.5	23.20	22.23	21.31	19.47
	12RB Middle (6)	784.5	23.17	22.27	21.38	19.54
		782	23.13	22.19	21.34	19.50
		779.5	23.29	22.26	21.21	19.37
	12RB Low (0)	784.5	23.12	22.18	21.28	19.44
		782	23.15	22.12	21.28	19.44
		779.5	23.07	22.20	21.22	19.38
	25RB (0)	784.5	23.19	22.25	21.29	19.45
		782	23.08	22.17	21.22	19.38
		779.5	23.22	22.27	21.25	19.41
10 MHz	1RB High (49)	782	24.06	23.39	22.31	19.57
	1RB Middle (24)	782	24.10	23.50	22.74	19.63
	1RB Low (0)	782	24.06	23.49	22.41	19.59
	25RB High (25)	782	23.16	22.14	21.27	19.57
	25RB Middle (12)	782	23.18	22.11	21.34	19.55
	25RB Low (0)	782	23.17	22.22	21.27	19.53
	50RB (0)	782	23.26	22.10	21.26	19.41

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Band 13						
Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
5 MHz	1RB High (24)	784.5	17.54	17.74	17.78	17.75
		782	17.57	17.62	17.89	17.86
		779.5	17.55	17.82	17.68	17.65
	1RB Middle (12)	784.5	17.68	17.96	17.82	17.79
		782	17.88	17.87	17.87	17.84
		779.5	17.69	17.76	17.86	17.83
	1RB Low (0)	784.5	17.85	17.63	17.88	17.85
		782	17.65	17.74	17.85	17.82
		779.5	17.72	17.41	17.82	17.79
	12RB High (13)	784.5	17.74	17.45	17.83	17.80
		782	17.76	17.49	17.77	17.74
		779.5	17.77	17.58	17.88	17.85
	12RB Middle (6)	784.5	17.77	17.50	17.80	17.77
		782	17.71	17.46	17.77	17.74
		779.5	17.90	17.54	17.93	17.90
	12RB Low (0)	784.5	17.63	17.39	17.79	17.76
		782	17.72	17.53	17.70	17.67
		779.5	17.79	17.35	17.77	17.74
	25RB (0)	784.5	17.79	17.49	17.81	17.78
		782	17.62	17.35	17.62	17.59
		779.5	17.87	17.57	17.79	17.76
10 MHz	1RB High (49)	782	17.51	17.64	17.92	17.89
	1RB Middle (24)	782	17.70	17.74	17.88	17.85
	1RB Low (0)	782	17.73	17.74	17.82	17.79
	25RB High (25)	782	17.75	17.49	17.80	17.77
	25RB Middle (12)	782	17.80	17.55	17.78	17.75
	25RB Low (0)	782	17.84	17.52	17.85	17.82
	50RB (0)	782	17.76	17.50	17.78	17.75

Full Power-ANT0

Band 48						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
5 MHz	1RB High (24)	3697.5	23.49	22.78	21.29	19.25
		3625.0	23.71	22.79	21.38	19.34
		3552.5	23.24	22.36	21.07	19.03
	1RB Middle (12)	3697.5	23.44	22.58	21.25	19.21
		3625.0	23.87	22.73	21.39	19.35
		3552.5	23.42	22.34	21.17	19.02
	1RB Low (0)	3697.5	23.48	22.51	21.07	19.03
		3625.0	23.58	22.68	21.25	19.21
		3552.5	23.24	22.33	21.38	19.06
	12RB High (13)	3697.5	22.47	21.42	20.57	19.09
		3625.0	22.60	21.62	20.68	19.20
		3552.5	22.24	21.20	20.35	19.06
	12RB Middle (6)	3697.5	22.52	21.48	20.56	19.08
		3625.0	22.72	21.70	20.79	19.31
		3552.5	22.30	21.30	20.36	19.08
	12RB Low (0)	3697.5	22.44	21.41	20.55	19.07
		3625.0	22.68	21.67	20.76	19.28
		3552.5	22.31	21.25	20.31	19.03
	25RB (0)	3697.5	22.50	21.53	20.57	19.09
		3625.0	22.63	21.63	20.68	19.20
		3552.5	22.28	21.31	20.36	19.08
10 MHz	1RB High (49)	3695.0	23.49	22.48	21.29	19.25
		3625.0	23.69	22.76	21.41	19.37
		3555.0	23.28	22.31	21.03	19.09
	1RB Middle (24)	3695.0	23.54	22.47	21.22	19.18
		3625.0	23.74	22.70	21.42	19.38
		3555.0	23.27	22.31	21.84	19.04
	1RB Low (0)	3695.0	23.55	22.55	21.23	19.19
		3625.0	23.75	22.79	21.44	19.40
		3555.0	23.37	22.41	21.05	19.11
	25RB High (25)	3695.0	22.50	21.52	20.58	19.10
		3625.0	22.65	21.68	20.70	19.22
		3555.0	22.29	21.28	20.38	19.10
	25RB Middle (12)	3695.0	22.53	21.57	20.59	19.11
		3625.0	22.68	21.70	20.76	19.28
		3555.0	22.32	21.32	20.40	19.03
	25RB Low (0)	3695.0	22.51	21.54	20.57	19.09
		3625.0	22.66	21.75	20.80	19.32
		3555.0	22.28	21.32	20.38	19.09
	50RB (0)	3695.0	22.55	21.59	20.56	19.08
		3625.0	22.64	21.67	20.70	19.22
		3555.0	22.32	21.35	20.36	19.08

15 MHz	1RB High (74)	3692.5	23.45	22.46	21.15	19.11
		3625.0	23.49	22.65	21.20	19.16
		3557.5	23.02	22.17	21.36	19.03
	1RB Middle (37)	3692.5	23.37	22.43	21.07	19.03
		3625.0	23.53	22.66	21.25	19.21
		3557.5	23.08	22.19	21.24	19.06
	1RB Low (0)	3692.5	23.37	22.43	21.08	19.04
		3625.0	23.52	22.63	21.22	19.18
		3557.5	23.14	22.25	21.96	19.08
	36RB High (38)	3692.5	22.43	21.34	20.37	19.46
		3625.0	22.58	21.60	20.55	19.64
		3557.5	22.16	21.13	20.15	19.24
	36RB Middle (19)	3692.5	22.47	21.42	20.39	19.48
		3625.0	22.54	21.54	20.55	19.64
		3557.5	22.20	21.18	20.21	19.30
	36RB Low (0)	3692.5	22.42	21.37	20.37	19.46
		3625.0	22.58	21.62	20.60	19.69
		3557.5	22.21	21.20	20.17	19.26
	75RB (0)	3692.5	22.46	21.46	20.43	19.52
		3625.0	22.55	21.55	20.52	19.61
		3557.5	22.06	21.18	20.15	19.24
20 MHz	1RB High (99)	3690.0	23.40	22.44	22.36	19.07
		3625.0	23.57	22.62	22.41	19.24
		3560.0	23.12	22.29	22.00	19.05
	1RB Middle (50)	3690.0	23.41	22.40	22.33	19.04
		3625.0	23.58	22.66	22.44	19.25
		3560.0	23.09	22.29	22.04	19.05
	1RB Low (0)	3690.0	23.37	22.46	22.32	19.03
		3625.0	23.60	22.65	22.41	19.22
		3560.0	23.22	22.38	22.12	19.09
	50RB High (50)	3690.0	22.41	21.42	21.34	19.63
		3625.0	22.61	21.62	21.46	19.73
		3560.0	22.24	21.29	21.08	19.45
	50RB Middle (25)	3690.0	22.46	21.45	21.36	19.66
		3625.0	22.60	21.62	21.42	19.74
		3560.0	22.24	21.28	21.13	19.79
	50RB Low (0)	3690.0	22.46	21.49	21.37	19.76
		3625.0	22.67	21.66	21.47	19.65
		3560.0	22.31	21.36	21.21	19.70
	100RB (0)	3690.0	22.50	21.46	21.47	19.64
		3625.0	22.63	21.63	21.46	19.63
		3560.0	22.25	21.29	21.13	20.22

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Band 48						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
5 MHz	1RB High (24)	3697.5	8.21	8.29	8.00	7.98
		3625.0	8.40	8.53	8.31	8.29
		3552.5	8.14	8.25	8.03	8.01
	1RB Middle (12)	3697.5	8.35	8.23	7.99	7.97
		3625.0	8.43	8.50	8.23	8.21
		3552.5	8.06	8.18	8.00	7.98
	1RB Low (0)	3697.5	8.10	8.22	8.01	7.99
		3625.0	8.41	8.48	8.30	8.28
		3552.5	8.11	8.17	7.99	7.97
	12RB High (13)	3697.5	8.13	8.09	8.17	8.15
		3625.0	8.40	8.33	8.39	8.37
		3552.5	8.17	8.05	8.18	8.16
	12RB Middle (6)	3697.5	8.21	8.17	8.26	8.24
		3625.0	8.47	8.44	8.50	8.48
		3552.5	8.15	8.14	8.25	8.23
	12RB Low (0)	3697.5	8.19	8.10	8.20	8.18
		3625.0	8.45	8.41	8.51	8.49
		3552.5	8.14	8.08	8.12	8.10
	25RB (0)	3697.5	8.20	8.22	8.18	8.16
		3625.0	8.38	8.41	8.37	8.35
		3552.5	8.15	8.16	8.11	8.09
10 MHz	1RB High (49)	3695.0	8.03	8.19	7.99	7.97
		3625.0	8.34	8.45	8.25	8.23
		3555.0	8.03	8.14	7.94	7.92
	1RB Middle (24)	3695.0	8.14	8.21	8.07	8.05
		3625.0	8.42	8.47	8.35	8.33
		3555.0	8.03	8.17	7.93	7.91
	1RB Low (0)	3695.0	8.14	8.26	8.09	8.07
		3625.0	8.45	8.55	8.42	8.40
		3555.0	8.15	8.28	8.13	8.11
	25RB High (25)	3695.0	8.21	8.26	8.19	8.17
		3625.0	8.38	8.44	8.42	8.40
		3555.0	8.07	8.07	8.07	8.05
	25RB Middle (12)	3695.0	8.18	8.23	8.19	8.17
		3625.0	8.41	8.42	8.45	8.43
		3555.0	8.19	8.22	8.16	8.14
	25RB Low (0)	3695.0	8.17	8.25	8.18	8.16
		3625.0	8.46	8.49	8.46	8.44
		3555.0	8.16	8.19	8.15	8.13
	50RB (0)	3695.0	8.22	8.28	8.21	8.19
		3625.0	8.40	8.44	8.39	8.37
		3555.0	8.09	8.14	8.09	8.07

15 MHz	1RB High (74)	3692.5	8.08	8.20	7.93	7.91
		3625.0	8.30	8.38	8.18	8.16
		3557.5	7.95	8.11	7.86	7.84
	1RB Middle (37)	3692.5	7.94	8.10	7.84	7.82
		3625.0	8.18	8.39	8.10	8.08
		3557.5	7.88	8.05	7.83	7.81
	1RB Low (0)	3692.5	7.98	8.11	7.90	7.88
		3625.0	8.23	8.47	8.18	8.16
		3557.5	7.96	8.15	7.89	7.87
	36RB High (38)	3692.5	8.14	8.10	8.14	8.12
		3625.0	8.32	8.28	8.34	8.32
		3557.5	8.00	7.97	7.98	7.96
	36RB Middle (19)	3692.5	8.10	8.10	8.08	8.06
		3625.0	8.27	8.28	8.29	8.27
		3557.5	7.94	7.96	7.99	7.97
	36RB Low (0)	3692.5	8.11	8.05	8.09	8.07
		3625.0	8.39	8.37	8.37	8.35
		3557.5	8.06	8.03	8.05	8.03
	75RB (0)	3692.5	8.12	8.15	8.09	8.07
		3625.0	8.27	8.34	8.30	8.28
		3557.5	7.96	8.00	7.99	7.97
20 MHz	1RB High (99)	3690.0	8.08	8.19	7.93	7.91
		3625.0	8.26	8.40	8.10	8.08
		3560.0	8.03	8.14	7.90	7.88
	1RB Middle (50)	3690.0	7.91	8.12	7.83	7.81
		3625.0	8.22	8.42	8.13	8.11
		3560.0	7.88	8.05	7.80	7.78
	1RB Low (0)	3690.0	8.07	8.22	7.95	7.93
		3625.0	8.34	8.53	8.22	8.20
		3560.0	8.07	8.26	7.98	7.96
	50RB High (50)	3690.0	8.10	8.12	8.03	8.01
		3625.0	8.34	8.32	8.27	8.25
		3560.0	8.08	8.08	8.08	8.06
	50RB Middle (25)	3690.0	8.14	8.15	8.09	8.07
		3625.0	8.30	8.36	8.28	8.26
		3560.0	8.08	8.09	8.03	8.01
	50RB Low (0)	3690.0	8.11	8.12	8.08	8.06
		3625.0	8.36	8.41	8.36	8.34
		3560.0	8.08	8.09	8.04	8.02
	100RB (0)	3690.0	8.14	8.20	8.17	8.15
		3625.0	8.36	8.34	8.38	8.36
		3560.0	8.08	8.11	8.14	8.12

DSI2-ANT0

Band 48						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
5 MHz	1RB High (24)	3697.5	19.00	19.10	18.82	18.76
		3625.0	19.19	19.35	19.04	18.98
		3552.5	18.83	19.01	18.71	18.65
	1RB Middle (12)	3697.5	19.14	18.98	18.74	18.68
		3625.0	19.17	19.32	19.03	18.97
		3552.5	18.79	18.95	18.68	18.62
	1RB Low (0)	3697.5	18.88	18.98	18.75	18.69
		3625.0	19.23	19.26	19.02	18.96
		3552.5	18.84	18.94	18.70	18.64
	12RB High (13)	3697.5	18.98	18.91	18.98	18.92
		3625.0	19.17	19.11	19.20	19.14
		3552.5	18.90	18.83	18.89	18.83
	12RB Middle (6)	3697.5	18.97	18.94	19.00	18.94
		3625.0	19.28	19.23	19.25	19.19
		3552.5	18.89	18.88	18.99	18.93
	12RB Low (0)	3697.5	18.92	18.93	19.01	18.95
		3625.0	19.21	19.21	19.26	19.20
		3552.5	18.88	18.85	18.89	18.83
	25RB (0)	3697.5	18.99	18.96	18.92	18.86
		3625.0	19.14	19.17	19.18	19.12
		3552.5	18.88	18.89	18.88	18.82
10 MHz	1RB High (49)	3695.0	18.93	18.99	18.82	18.76
		3625.0	19.19	19.31	19.12	19.06
		3555.0	18.77	18.92	18.71	18.65
	1RB Middle (24)	3695.0	18.94	18.98	18.79	18.73
		3625.0	19.20	19.30	19.11	19.05
		3555.0	18.80	18.93	18.67	18.61
	1RB Low (0)	3695.0	18.97	19.06	18.88	18.82
		3625.0	19.21	19.34	19.12	19.06
		3555.0	18.87	18.97	18.78	18.72
	25RB High (25)	3695.0	18.99	19.01	18.98	18.92
		3625.0	19.19	19.18	19.17	19.11
		3555.0	18.85	18.86	18.87	18.81
	25RB Middle (12)	3695.0	18.96	19.02	18.97	18.91
		3625.0	19.22	19.27	19.22	19.16
		3555.0	18.91	18.91	18.82	18.76
	25RB Low (0)	3695.0	18.91	19.00	18.94	18.88
		3625.0	19.21	19.32	19.24	19.18
		3555.0	18.85	18.92	18.85	18.79
	50RB (0)	3695.0	19.00	19.04	18.98	18.92
		3625.0	19.18	19.24	19.15	19.09
		3555.0	18.86	18.96	18.86	18.80

15 MHz	1RB High (74)	3692.5	18.71	18.93	18.63	18.57
		3625.0	19.00	19.16	18.90	18.84
		3557.5	18.56	18.76	18.48	18.42
	1RB Middle (37)	3692.5	18.68	18.89	18.63	18.57
		3625.0	19.02	19.18	18.90	18.84
		3557.5	18.64	18.79	18.51	18.45
	1RB Low (0)	3692.5	18.74	18.88	18.60	18.54
		3625.0	19.01	19.18	18.91	18.85
		3557.5	18.70	18.84	18.58	18.52
	36RB High (38)	3692.5	18.81	18.80	18.84	18.78
		3625.0	19.06	19.11	19.12	19.06
		3557.5	18.72	18.68	18.72	18.66
	36RB Middle (19)	3692.5	18.88	18.87	18.89	18.83
		3625.0	19.07	19.09	19.10	19.04
		3557.5	18.77	18.79	18.76	18.70
	36RB Low (0)	3692.5	18.84	18.84	18.84	18.78
		3625.0	19.11	19.12	19.14	19.08
		3557.5	18.76	18.79	18.75	18.69
	75RB (0)	3692.5	18.86	18.94	18.89	18.83
		3625.0	19.09	19.12	19.11	19.05
		3557.5	18.67	18.70	18.71	18.65
20 MHz	1RB High (99)	3690.0	18.67	18.82	18.58	18.52
		3625.0	18.94	19.07	18.86	18.80
		3560.0	18.70	18.83	18.62	18.56
	1RB Middle (50)	3690.0	18.65	18.75	18.52	18.46
		3625.0	19.01	19.13	18.89	18.83
		3560.0	18.65	18.80	18.59	18.53
	1RB Low (0)	3690.0	18.66	18.78	18.55	18.49
		3625.0	19.07	19.19	18.92	18.86
		3560.0	18.80	18.88	18.66	18.60
	50RB High (50)	3690.0	18.75	18.79	18.75	18.69
		3625.0	19.09	19.10	19.08	19.02
		3560.0	18.75	18.81	18.75	18.69
	50RB Middle (25)	3690.0	18.83	18.83	18.79	18.73
		3625.0	19.09	19.08	19.07	19.01
		3560.0	18.74	18.78	18.82	18.76
	50RB Low (0)	3690.0	18.81	18.81	18.79	18.73
		3625.0	19.13	19.17	19.12	19.06
		3560.0	18.85	18.95	18.83	18.77
	100RB (0)	3690.0	18.82	18.82	18.86	18.80
		3625.0	19.05	19.08	19.14	19.08
		3560.0	18.78	18.82	18.85	18.79

Full Power-ANT0

Band 66						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB High (5)	1779.3	24.59	23.92	22.70	19.50
		1745	24.51	23.72	22.78	19.58
		1710.7	24.20	23.54	22.46	19.26
	1RB Middle (3)	1779.3	24.85	23.91	22.88	19.68
		1745	24.74	23.77	22.80	19.60
		1710.7	24.50	23.61	22.67	19.47
	1RB Low (0)	1779.3	24.62	23.99	22.93	19.73
		1745	24.45	23.82	22.71	19.51
		1710.7	24.28	23.60	22.64	19.44
	3RB High (3)	1779.3	24.61	23.75	22.82	19.62
		1745	24.60	23.53	22.66	19.46
		1710.7	24.33	23.47	22.52	19.32
	3RB Middle (1)	1779.3	24.66	23.71	22.94	19.74
		1745	24.55	23.49	22.66	19.46
		1710.7	24.26	23.40	22.44	19.24
	3RB Low (0)	1779.3	24.74	23.85	22.82	19.62
		1745	24.55	23.60	22.74	19.54
		1710.7	24.34	23.36	22.42	19.22
	6RB (0)	1779.3	23.70	22.85	21.68	19.63
		1745	23.59	22.69	21.63	19.58
		1710.7	23.36	22.30	21.27	19.22
3 MHz	1RB High (14)	1778.5	24.58	23.92	22.85	19.65
		1745	24.63	23.92	22.84	19.64
		1711.5	24.26	23.75	22.51	19.31
	1RB Middle (7)	1778.5	24.72	23.92	22.79	19.59
		1745	24.59	23.96	22.72	19.52
		1711.5	24.23	23.69	22.54	19.34
	1RB Low (0)	1778.5	24.83	23.94	22.81	19.61
		1745	24.66	23.79	22.63	19.43
		1711.5	24.49	23.72	22.52	19.32
	8RB High (7)	1778.5	23.86	22.87	21.92	19.87
		1745	23.60	22.69	21.62	19.57
		1711.5	23.45	22.22	21.44	19.39
	8RB Middle (4)	1778.5	23.85	22.93	21.76	19.71
		1745	23.62	22.66	21.63	19.58
		1711.5	23.50	22.55	21.58	19.53
	8RB Low (0)	1778.5	23.84	22.98	21.86	19.81
		1745	23.48	22.69	21.62	19.57
		1711.5	23.46	22.47	21.42	19.37
	15RB	1778.5	23.89	22.85	21.90	19.85

	(0)	1745	23.58	22.59	21.66	19.61
		1711.5	23.43	22.47	21.57	19.52
5 MHz	1RB High (24)	1777.5	24.78	23.83	22.82	19.62
		1745	24.61	23.87	22.92	19.72
		1712.5	24.32	23.76	22.60	19.40
	1RB Middle (12)	1777.5	24.77	23.96	22.95	19.75
		1745	24.48	23.76	22.71	19.51
		1712.5	24.30	23.89	22.65	19.45
	1RB Low (0)	1777.5	24.74	23.95	22.91	19.71
		1745	24.54	23.80	22.59	19.39
		1712.5	24.41	23.76	22.69	19.49
	12RB High (13)	1777.5	23.87	22.91	21.82	19.77
		1745	23.67	22.75	21.72	19.67
		1712.5	23.44	22.41	21.45	19.40
	12RB Middle (6)	1777.5	23.88	22.96	21.87	19.82
		1745	23.66	22.60	21.70	19.65
		1712.5	23.44	22.54	21.43	19.38
	12RB Low (0)	1777.5	23.83	22.79	21.94	19.89
		1745	23.57	22.60	21.58	19.53
		1712.5	23.44	22.38	21.45	19.40
	25RB (0)	1777.5	23.85	22.89	21.93	19.88
		1745	23.57	22.66	21.59	19.54
		1712.5	23.50	22.52	21.43	19.38
10 MHz	1RB High (49)	1775	24.73	23.96	22.90	19.70
		1745	24.62	23.86	22.91	19.71
		1715	24.37	23.67	22.74	19.54
	1RB Middle (24)	1775	24.71	23.94	22.55	19.35
		1745	24.60	23.96	22.62	19.42
		1715	24.44	23.60	22.42	19.22
	1RB Low (0)	1775	24.75	23.93	22.82	19.62
		1745	24.47	23.91	22.62	19.42
		1715	24.40	23.65	22.59	19.39
	25RB High (25)	1775	23.84	22.94	21.90	19.85
		1745	23.68	22.66	21.67	19.62
		1715	23.42	22.38	21.42	19.37
	25RB Middle (12)	1775	23.83	22.90	21.84	19.79
		1745	23.58	22.64	21.61	19.56
		1715	23.50	22.47	21.47	19.42
	25RB Low (0)	1775	23.81	22.91	21.83	19.78
		1745	23.65	22.67	21.72	19.67
		1715	23.40	22.38	21.51	19.46
	50RB (0)	1775	23.80	22.84	21.89	19.84
		1745	23.60	22.56	21.70	19.65
		1715	23.42	22.42	21.43	19.38
15 MHz	1RB High (74)	1772.5	24.68	23.92	22.99	19.79
		1745	24.57	23.94	22.60	19.40
		1717.5	24.36	23.67	22.65	19.45
	1RB	1772.5	24.74	23.93	22.82	19.62

	Middle (37)	1745	24.50	23.72	22.46	19.26
		1717.5	24.23	23.56	22.37	19.17
	1RB Low (0)	1772.5	24.61	23.93	22.84	19.64
		1745	24.37	23.83	22.69	19.49
		1717.5	24.28	23.59	22.59	19.39
	36RB High (38)	1772.5	23.73	22.82	21.77	19.72
		1745	23.61	22.57	21.60	19.55
		1717.5	23.39	22.41	21.39	19.34
	36RB Middle (19)	1772.5	23.74	22.67	21.74	19.69
		1745	23.53	22.50	21.60	19.55
		1717.5	23.37	22.39	21.41	19.36
	36RB Low (0)	1772.5	23.68	22.71	21.68	19.63
		1745	23.48	22.49	21.47	19.42
		1717.5	23.26	22.34	21.30	19.25
	75RB (0)	1772.5	23.67	22.73	21.74	19.69
		1745	23.50	22.40	21.56	19.51
		1717.5	23.37	22.35	21.38	19.33
20 MHz	1RB High (99)	1770	24.57	23.98	22.86	19.66
		1745	24.50	23.73	22.99	19.79
		1720	24.30	23.77	22.54	19.34
	1RB Middle (50)	1770	24.59	23.95	22.86	19.66
		1745	24.44	23.85	22.51	19.31
		1720	24.24	23.60	22.80	19.60
	1RB Low (0)	1770	24.68	23.89	22.91	19.71
		1745	24.35	23.61	22.64	19.44
		1720	24.22	23.54	22.52	19.32
	50RB High (50)	1770	23.73	22.64	21.82	19.77
		1745	23.58	22.57	21.59	19.54
		1720	23.35	22.33	21.47	19.42
	50RB Middle (25)	1770	23.62	22.61	21.70	19.65
		1745	23.54	22.56	21.55	19.50
		1720	23.32	22.36	21.42	19.37
	50RB Low (0)	1770	23.59	22.52	21.71	19.66
		1745	23.44	22.45	21.54	19.49
		1720	23.31	22.29	21.30	19.25
	100RB (0)	1770	23.62	22.59	21.68	19.63
		1745	23.43	22.44	21.58	19.53
		1720	23.39	22.40	21.43	19.38

DSI1-ANT0

Band 66						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB High (5)	1779.3	10.63	10.79	10.70	10.57
		1745	10.43	10.83	10.61	10.48
		1710.7	10.25	10.67	10.68	10.55
	1RB Middle (3)	1779.3	10.86	10.84	10.98	10.85
		1745	10.46	10.88	10.66	10.53
		1710.7	10.53	10.71	10.61	10.48
	1RB Low (0)	1779.3	10.62	10.86	10.86	10.73
		1745	10.44	10.80	10.61	10.48
		1710.7	10.30	10.56	10.67	10.54
	3RB High (3)	1779.3	10.58	10.75	10.75	10.62
		1745	10.44	10.47	10.48	10.35
		1710.7	10.33	10.44	10.49	10.36
	3RB Middle (1)	1779.3	10.71	10.78	10.73	10.60
		1745	10.47	10.64	10.57	10.44
		1710.7	10.38	10.57	10.54	10.41
	3RB Low (0)	1779.3	10.58	10.82	10.85	10.72
		1745	10.43	10.58	10.60	10.47
		1710.7	10.31	10.45	10.44	10.31
	6RB (0)	1779.3	10.71	10.85	10.75	10.62
		1745	10.49	10.61	10.56	10.43
		1710.7	10.11	10.55	10.45	10.32
3 MHz	1RB High (14)	1778.5	10.67	10.95	10.91	10.78
		1745	10.58	10.90	10.76	10.63
		1711.5	10.43	10.81	10.65	10.52
	1RB Middle (7)	1778.5	10.68	10.86	10.84	10.71
		1745	10.50	10.89	10.54	10.41
		1711.5	10.45	10.67	10.53	10.40
	1RB Low (0)	1778.5	10.81	10.96	10.82	10.69
		1745	10.48	10.82	10.61	10.48
		1711.5	10.42	10.79	10.66	10.53
	8RB High (7)	1778.5	10.85	10.88	10.97	10.84
		1745	10.58	10.64	10.79	10.66
		1711.5	10.53	10.60	10.56	10.43
	8RB Middle (4)	1778.5	10.81	10.87	10.89	10.76
		1745	10.65	10.63	10.61	10.48
		1711.5	10.58	10.61	10.58	10.45
	8RB Low (0)	1778.5	10.78	10.84	10.83	10.70
		1745	10.54	10.62	10.67	10.54
		1711.5	10.45	10.62	10.62	10.49
	15RB	1778.5	10.88	10.84	10.74	10.61

	(0)	1745	10.64	10.68	10.59	10.46
		1711.5	10.55	10.49	10.45	10.32
5 MHz	1RB High (24)	1777.5	10.71	10.99	10.93	10.80
		1745	10.55	10.87	10.69	10.56
		1712.5	10.41	10.69	10.55	10.42
	1RB Middle (12)	1777.5	10.71	10.94	10.87	10.74
		1745	10.50	10.81	10.64	10.51
		1712.5	10.43	10.93	10.59	10.46
	1RB Low (0)	1777.5	10.79	10.83	10.88	10.75
		1745	10.53	10.78	10.77	10.64
		1712.5	10.50	10.88	10.61	10.48
	12RB High (13)	1777.5	10.83	10.86	10.92	10.79
		1745	10.61	10.67	10.64	10.51
		1712.5	10.44	10.55	10.61	10.48
	12RB Middle (6)	1777.5	10.92	10.88	10.91	10.78
		1745	10.56	10.60	10.60	10.47
		1712.5	10.52	10.60	10.48	10.35
	12RB Low (0)	1777.5	10.81	10.80	10.86	10.73
		1745	10.57	10.40	10.59	10.46
		1712.5	10.51	10.62	10.57	10.44
	25RB (0)	1777.5	10.82	10.88	10.87	10.74
		1745	10.70	10.73	10.62	10.49
		1712.5	10.53	10.53	10.53	10.40
10 MHz	1RB High (49)	1775	10.70	10.92	10.85	10.72
		1745	10.55	10.98	10.68	10.55
		1715	10.40	10.62	10.71	10.58
	1RB Middle (24)	1775	10.75	10.88	10.89	10.76
		1745	10.52	10.84	10.69	10.56
		1715	10.39	10.65	10.58	10.45
	1RB Low (0)	1775	10.67	10.96	10.68	10.55
		1745	10.51	10.90	10.65	10.52
		1715	10.29	10.81	10.56	10.43
	25RB High (25)	1775	10.87	10.87	10.94	10.81
		1745	10.61	10.71	10.70	10.57
		1715	10.54	10.57	10.45	10.32
	25RB Middle (12)	1775	10.78	10.86	10.80	10.67
		1745	10.59	10.71	10.59	10.46
		1715	10.53	10.59	10.57	10.44
	25RB Low (0)	1775	10.74	10.88	10.77	10.64
		1745	10.57	10.68	10.67	10.54
		1715	10.53	10.62	10.52	10.39
	50RB (0)	1775	10.76	10.78	10.84	10.71
		1745	10.64	10.64	10.53	10.40
		1715	10.53	10.53	10.55	10.42
15 MHz	1RB High (74)	1772.5	10.62	10.97	10.89	10.76
		1745	10.48	10.91	10.65	10.52
		1717.5	10.37	10.71	10.64	10.51
	1RB	1772.5	10.65	10.86	10.94	10.81

	Middle (37)	1745	10.39	10.90	10.73	10.60
		1717.5	10.34	10.72	10.66	10.53
	1RB Low (0)	1772.5	10.67	10.98	10.93	10.80
		1745	10.42	10.74	10.71	10.58
		1717.5	10.33	10.65	10.64	10.51
	36RB High (38)	1772.5	10.71	10.71	10.80	10.67
		1745	10.53	10.61	10.62	10.49
		1717.5	10.45	10.40	10.46	10.33
	36RB Middle (19)	1772.5	10.72	10.61	10.69	10.56
		1745	10.44	10.53	10.52	10.39
		1717.5	10.41	10.47	10.46	10.33
	36RB Low (0)	1772.5	10.60	10.70	10.64	10.51
		1745	10.44	10.42	10.51	10.38
		1717.5	10.31	10.44	10.44	10.31
	75RB (0)	1772.5	10.68	10.70	10.60	10.47
		1745	10.45	10.53	10.43	10.30
		1717.5	10.44	10.43	10.42	10.29
20 MHz	1RB High (99)	1770	10.62	10.95	10.82	10.69
		1745	10.59	10.75	10.84	10.71
		1720	10.36	10.83	10.62	10.49
	1RB Middle (50)	1770	10.63	10.74	10.99	10.86
		1745	10.40	10.89	10.76	10.63
		1720	10.28	10.69	10.59	10.46
	1RB Low (0)	1770	10.52	10.99	10.84	10.71
		1745	10.50	10.69	10.72	10.59
		1720	10.26	10.67	10.58	10.45
	50RB High (50)	1770	10.76	10.78	10.76	10.63
		1745	10.63	10.57	10.54	10.41
		1720	10.41	10.46	10.49	10.36
	50RB Middle (25)	1770	10.75	10.77	10.65	10.52
		1745	10.50	10.47	10.53	10.40
		1720	10.46	10.44	10.44	10.31
	50RB Low (0)	1770	10.67	10.69	10.66	10.53
		1745	10.44	10.54	10.47	10.34
		1720	10.37	10.40	10.38	10.25
	100RB (0)	1770	10.77	10.68	10.67	10.54
		1745	10.44	10.54	10.54	10.41
		1720	10.44	10.39	10.50	10.37

DSI2-ANT0

Band 66						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB High (5)	1779.3	19.64	19.88	20.00	19.98
		1745	19.59	19.87	19.96	19.94
		1710.7	19.46	19.70	19.76	19.74
	1RB Middle (3)	1779.3	19.84	19.87	19.71	19.69
		1745	19.81	19.83	19.88	19.86
		1710.7	19.36	19.76	19.75	19.73
	1RB Low (0)	1779.3	19.91	19.97	19.97	19.95
		1745	19.53	19.84	19.84	19.82
		1710.7	19.35	19.67	19.62	19.60
	3RB High (3)	1779.3	19.74	19.93	19.80	19.78
		1745	19.59	19.76	19.67	19.65
		1710.7	19.36	19.49	19.50	19.48
	3RB Middle (1)	1779.3	19.99	19.90	19.89	19.87
		1745	19.63	19.81	19.70	19.68
		1710.7	19.55	19.56	19.80	19.78
	3RB Low (0)	1779.3	19.72	19.72	19.87	19.85
		1745	19.63	19.62	19.69	19.67
		1710.7	19.44	19.45	19.52	19.50
	6RB (0)	1779.3	19.79	19.96	19.84	19.82
		1745	19.66	19.70	19.64	19.62
		1710.7	19.55	19.51	19.45	19.43
3 MHz	1RB High (14)	1778.5	19.52	19.74	19.88	19.86
		1745	19.68	20.00	19.86	19.84
		1711.5	19.47	19.72	19.77	19.75
	1RB Middle (7)	1778.5	19.66	19.89	19.86	19.84
		1745	19.56	19.56	19.66	19.64
		1711.5	19.39	19.89	19.61	19.59
	1RB Low (0)	1778.5	19.84	19.96	19.99	19.97
		1745	19.74	19.92	19.94	19.92
		1711.5	19.54	19.75	19.74	19.72
	8RB High (7)	1778.5	19.77	19.83	20.00	19.98
		1745	19.77	19.75	19.79	19.77
		1711.5	19.46	19.51	19.52	19.50
	8RB Middle (4)	1778.5	19.93	19.82	19.89	19.87
		1745	19.71	19.90	19.81	19.79
		1711.5	19.48	19.63	19.65	19.63
	8RB Low (0)	1778.5	19.88	19.90	19.83	19.81
		1745	19.60	19.74	19.65	19.63
		1711.5	19.48	19.52	19.64	19.62
	15RB	1778.5	19.88	19.93	19.88	19.86

	(0)	1745	19.60	19.57	19.64	19.62
		1711.5	19.53	19.56	19.54	19.52
5 MHz	1RB High (24)	1777.5	19.83	19.83	19.82	19.80
		1745	19.68	19.97	19.84	19.82
		1712.5	19.50	19.93	19.79	19.77
	1RB Middle (12)	1777.5	19.74	19.93	19.96	19.94
		1745	19.68	19.85	19.68	19.66
		1712.5	19.37	19.86	19.60	19.58
	1RB Low (0)	1777.5	19.83	19.92	19.95	19.93
		1745	19.64	19.88	19.98	19.96
		1712.5	19.51	19.80	19.74	19.72
	12RB High (13)	1777.5	19.89	19.88	19.90	19.88
		1745	19.75	19.64	19.69	19.67
		1712.5	19.60	19.57	19.56	19.54
	12RB Middle (6)	1777.5	19.95	19.85	19.88	19.86
		1745	19.77	19.75	19.66	19.64
		1712.5	19.63	19.65	19.58	19.56
	12RB Low (0)	1777.5	19.93	19.94	20.00	19.98
		1745	19.66	19.71	19.76	19.74
		1712.5	19.52	19.58	19.57	19.55
	25RB (0)	1777.5	19.95	19.90	19.93	19.91
		1745	19.71	19.70	19.68	19.66
		1712.5	19.62	19.53	19.51	19.49
10 MHz	1RB High (49)	1775	19.82	19.91	19.98	19.96
		1745	19.74	19.84	19.81	19.79
		1715	19.37	19.64	19.44	19.42
	1RB Middle (24)	1775	19.86	19.82	19.89	19.87
		1745	19.68	19.85	19.93	19.91
		1715	19.38	19.81	19.64	19.62
	1RB Low (0)	1775	19.95	19.80	19.94	19.92
		1745	19.77	19.78	19.64	19.62
		1715	19.44	19.76	19.56	19.54
	25RB High (25)	1775	19.89	20.00	19.92	19.90
		1745	19.75	19.63	19.73	19.71
		1715	19.56	19.55	19.63	19.61
	25RB Middle (12)	1775	19.84	19.92	19.96	19.94
		1745	19.78	19.79	19.78	19.76
		1715	19.59	19.62	19.51	19.49
	25RB Low (0)	1775	19.89	19.95	19.88	19.86
		1745	19.68	19.75	19.71	19.69
		1715	19.54	19.65	19.57	19.55
	50RB (0)	1775	19.87	19.80	19.92	19.90
		1745	19.69	19.72	19.68	19.66
		1715	19.58	19.58	19.58	19.56
15 MHz	1RB High (74)	1772.5	19.72	19.96	19.99	19.97
		1745	19.56	19.88	19.51	19.49
		1717.5	19.39	19.62	19.53	19.51
	1RB	1772.5	19.72	19.92	19.81	19.79

	Middle (37)	1745	19.62	19.86	19.79	19.77
		1717.5	19.33	19.73	19.35	19.33
	1RB Low (0)	1772.5	19.67	19.86	19.95	19.93
		1745	19.50	19.88	19.67	19.65
		1717.5	19.35	19.63	19.50	19.48
	36RB High (38)	1772.5	19.79	19.80	19.85	19.83
		1745	19.67	19.70	19.76	19.74
		1717.5	19.51	19.54	19.48	19.46
	36RB Middle (19)	1772.5	19.81	19.78	19.71	19.69
		1745	19.57	19.69	19.67	19.65
		1717.5	19.44	19.52	19.48	19.46
	36RB Low (0)	1772.5	19.72	19.85	19.72	19.70
		1745	19.56	19.55	19.56	19.54
		1717.5	19.37	19.36	19.41	19.39
	75RB (0)	1772.5	19.70	19.76	19.78	19.76
		1745	19.60	19.54	19.56	19.54
		1717.5	19.49	19.48	19.49	19.47
20 MHz	1RB High (99)	1770	19.70	19.95	19.90	19.88
		1745	19.65	19.97	19.60	19.58
		1720	19.41	19.65	19.48	19.46
	1RB Middle (50)	1770	19.76	19.98	19.91	19.89
		1745	19.57	19.88	19.67	19.65
		1720	19.35	19.57	19.39	19.37
	1RB Low (0)	1770	19.80	19.82	19.93	19.91
		1745	19.42	19.80	19.55	19.53
		1720	19.35	19.69	19.49	19.47
	50RB High (50)	1770	19.80	19.91	19.86	19.84
		1745	19.63	19.67	19.61	19.59
		1720	19.45	19.50	19.54	19.52
	50RB Middle (25)	1770	19.84	19.85	19.78	19.76
		1745	19.54	19.59	19.61	19.59
		1720	19.44	19.50	19.46	19.44
	50RB Low (0)	1770	19.79	19.84	19.78	19.76
		1745	19.57	19.58	19.68	19.66
		1720	19.43	19.38	19.38	19.36
	100RB (0)	1770	19.73	19.77	19.76	19.74
		1745	19.53	19.55	19.56	19.54
		1720	19.52	19.49	19.47	19.45

Full Power-ANT1

Band 66						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB High (5)	1779.3	23.23	22.09	21.51	19.30
		1745	23.70	23.16	22.28	19.37
		1710.7	23.74	23.23	22.25	19.34
	1RB Middle (3)	1779.3	23.18	22.23	21.63	19.07
		1745	23.78	23.15	22.36	19.45
		1710.7	23.74	23.17	22.28	19.37
	1RB Low (0)	1779.3	23.18	22.28	21.57	19.06
		1745	23.76	23.22	22.38	19.47
		1710.7	23.67	23.20	22.22	19.31
	3RB High (3)	1779.3	23.06	22.12	21.53	19.04
		1745	23.69	22.96	22.25	19.34
		1710.7	23.65	23.12	22.27	19.36
	3RB Middle (1)	1779.3	23.04	22.36	21.70	19.11
		1745	23.75	23.08	22.35	19.44
		1710.7	23.70	23.03	22.29	19.38
	3RB Low (0)	1779.3	23.07	22.32	21.77	19.08
		1745	23.78	23.00	22.34	19.43
		1710.7	23.77	23.06	22.29	19.38
	6RB (0)	1779.3	22.11	21.41	20.47	19.07
		1745	22.84	22.15	21.17	19.40
		1710.7	22.82	22.08	21.15	19.38
3 MHz	1RB High (14)	1778.5	23.18	22.28	21.63	19.06
		1745	23.72	23.20	22.37	19.30
		1711.5	23.82	23.17	22.52	19.45
	1RB Middle (7)	1778.5	23.34	22.41	21.70	19.03
		1745	23.70	23.17	22.34	19.27
		1711.5	23.70	23.21	22.44	19.37
	1RB Low (0)	1778.5	23.55	22.68	21.87	19.08
		1745	23.79	23.29	22.39	19.32
		1711.5	23.68	23.16	22.38	19.31
	8RB High (7)	1778.5	22.24	21.43	20.61	19.01
		1745	22.87	22.14	21.23	19.43
		1711.5	22.85	22.17	21.25	19.45
	8RB Middle (4)	1778.5	22.39	21.59	20.71	19.09
		1745	22.92	22.20	21.26	19.46
		1711.5	22.89	22.18	21.26	19.46
	8RB Low (0)	1778.5	22.46	21.73	20.78	19.07
		1745	22.93	22.24	21.24	19.44
		1711.5	22.87	22.13	21.20	19.40
	15RB	1778.5	22.33	21.54	20.70	19.03

	(0)	1745	22.90	22.09	21.17	19.37
		1711.5	22.86	22.09	21.15	19.35
5 MHz	1RB High (24)	1777.5	23.33	22.36	21.67	19.05
		1745	23.67	23.19	22.41	19.34
		1712.5	23.84	23.19	22.49	19.42
	1RB Middle (12)	1777.5	23.54	22.51	21.83	19.07
		1745	23.63	23.21	22.28	19.21
		1712.5	23.65	23.30	22.27	19.20
	1RB Low (0)	1777.5	23.83	22.90	22.13	19.06
		1745	23.72	23.29	22.42	19.35
		1712.5	23.65	23.30	22.24	19.17
	12RB High (13)	1777.5	22.35	21.46	20.65	19.07
		1745	22.76	22.09	21.24	19.44
		1712.5	22.80	22.13	21.29	19.49
	12RB Middle (6)	1777.5	22.52	21.75	20.87	19.07
		1745	22.85	22.15	21.24	19.44
		1712.5	22.80	22.16	21.29	19.49
	12RB Low (0)	1777.5	22.70	21.86	20.97	19.17
		1745	22.90	22.19	21.25	19.45
		1712.5	22.79	22.19	21.27	19.47
	25RB (0)	1777.5	22.43	21.65	20.69	19.03
		1745	22.82	22.03	21.10	19.30
		1712.5	22.79	22.13	21.19	19.39
10 MHz	1RB High (49)	1775	23.66	22.32	21.83	19.07
		1745	23.80	23.28	22.53	19.46
		1715	23.54	23.00	22.00	19.13
	1RB Middle (24)	1775	23.80	22.79	22.12	19.05
		1745	23.58	23.11	22.29	19.22
		1715	23.65	23.12	22.15	19.08
	1RB Low (0)	1775	23.70	22.69	22.01	19.05
		1745	23.78	23.33	22.49	19.42
		1715	23.66	23.14	22.15	19.08
	25RB High (25)	1775	22.63	21.67	20.85	19.05
		1745	22.81	22.09	21.23	19.43
		1715	22.74	21.95	21.05	19.25
	25RB Middle (12)	1775	22.77	21.94	21.03	19.23
		1745	22.88	22.15	21.26	19.46
		1715	22.86	22.04	21.13	19.33
	25RB Low (0)	1775	22.76	21.97	21.05	19.25
		1745	22.99	22.25	21.39	19.59
		1715	22.82	22.10	21.14	19.34
	50RB (0)	1775	22.51	21.78	20.79	19.09
		1745	22.80	22.08	21.14	19.34
		1715	22.72	22.05	21.03	19.23
15 MHz	1RB High (74)	1772.5	23.44	22.49	21.82	19.06
		1745	23.74	23.33	22.47	19.40
		1717.5	23.46	22.87	21.79	19.08
	1RB	1772.5	23.80	22.80	21.96	19.08

	Middle (37)	1745	23.63	23.26	22.36	19.29
		1717.5	23.65	23.02	22.04	19.13
	1RB Low (0)	1772.5	23.71	22.63	21.94	19.17
		1745	23.65	23.27	22.31	19.24
		1717.5	23.85	23.20	22.29	19.22
	36RB High (38)	1772.5	22.76	21.87	20.96	19.16
		1745	22.89	22.14	21.32	19.52
		1717.5	22.75	21.93	21.09	19.29
	36RB Middle (19)	1772.5	22.77	22.01	21.05	19.25
		1745	22.90	22.19	21.35	19.55
		1717.5	22.86	22.05	21.26	19.46
	36RB Low (0)	1772.5	22.74	21.92	21.06	19.26
		1745	23.04	22.31	21.47	19.67
		1717.5	22.99	22.18	21.37	19.57
	75RB (0)	1772.5	22.59	21.91	20.86	19.06
		1745	22.93	22.15	21.27	19.47
		1717.5	22.80	22.00	21.04	19.24
20 MHz	1RB High (99)	1770	24.05	23.86	22.08	19.06
		1745	24.12	23.47	22.03	19.49
		1720	23.81	23.17	22.01	19.04
	1RB Middle (50)	1770	23.94	23.52	22.61	19.06
		1745	24.06	23.42	22.13	19.39
		1720	24.02	23.35	22.06	19.05
	1RB Low (0)	1770	23.59	23.29	22.77	19.12
		1745	23.96	23.24	22.00	19.41
		1720	24.22	23.61	22.08	19.42
	50RB High (50)	1770	22.94	22.14	21.02	19.16
		1745	22.99	22.12	21.05	19.54
		1720	22.98	22.19	21.05	19.32
	50RB Middle (25)	1770	23.02	22.27	21.14	19.23
		1745	22.92	22.08	21.09	19.52
		1720	23.05	22.23	21.16	19.45
	50RB Low (0)	1770	23.05	22.37	21.27	19.26
		1745	22.97	22.07	20.99	19.66
		1720	22.93	22.22	21.09	19.57
	100RB (0)	1770	23.06	22.26	21.25	19.12
		1745	23.09	22.42	21.36	19.41
		1720	23.01	22.25	21.16	19.38

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Band 66						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB High (5)	1779.3	9.87	9.82	9.90	10.09
		1745	9.67	9.86	9.81	10.00
		1710.7	9.49	9.70	9.88	10.07
	1RB Middle (3)	1779.3	10.10	9.87	10.18	10.37
		1745	9.70	9.91	9.86	10.05
		1710.7	9.77	9.74	9.81	10.00
	1RB Low (0)	1779.3	9.86	9.89	10.06	10.25
		1745	9.68	9.83	9.81	10.00
		1710.7	9.54	9.59	9.87	10.06
	3RB High (3)	1779.3	9.82	9.78	9.95	10.14
		1745	9.68	9.50	9.68	9.87
		1710.7	9.57	9.47	9.69	9.88
	3RB Middle (1)	1779.3	9.95	9.81	9.93	10.12
		1745	9.71	9.67	9.77	9.96
		1710.7	9.62	9.60	9.74	9.93
	3RB Low (0)	1779.3	9.82	9.85	10.05	10.24
		1745	9.67	9.61	9.80	9.99
		1710.7	9.55	9.48	9.64	9.83
	6RB (0)	1779.3	9.95	9.88	9.95	10.14
		1745	9.73	9.64	9.76	9.95
		1710.7	9.35	9.58	9.65	9.84
3 MHz	1RB High (14)	1778.5	9.91	9.98	10.11	10.30
		1745	9.82	9.93	9.96	10.15
		1711.5	9.67	9.84	9.85	10.04
	1RB Middle (7)	1778.5	9.92	9.89	10.04	10.23
		1745	9.74	9.92	9.74	9.93
		1711.5	9.69	9.70	9.73	9.92
	1RB Low (0)	1778.5	10.05	9.99	10.02	10.21
		1745	9.72	9.85	9.81	10.00
		1711.5	9.66	9.82	9.86	10.05
	8RB High (7)	1778.5	10.09	9.91	10.17	10.36
		1745	9.82	9.67	9.99	10.18
		1711.5	9.77	9.63	9.76	9.95
	8RB Middle (4)	1778.5	10.05	9.90	10.09	10.28
		1745	9.89	9.66	9.81	10.00
		1711.5	9.82	9.64	9.78	9.97
	8RB Low (0)	1778.5	10.02	9.87	10.03	10.22
		1745	9.78	9.65	9.87	10.06
		1711.5	9.69	9.65	9.82	10.01
	15RB	1778.5	10.12	9.87	9.94	10.13

	(0)	1745	9.88	9.71	9.79	9.98
		1711.5	9.79	9.52	9.65	9.84
5 MHz	1RB High (24)	1777.5	9.95	10.02	10.13	10.32
		1745	9.79	9.90	9.89	10.08
		1712.5	9.65	9.72	9.75	9.94
	1RB Middle (12)	1777.5	9.95	9.97	10.07	10.26
		1745	9.74	9.84	9.84	10.03
		1712.5	9.67	9.96	9.79	9.98
	1RB Low (0)	1777.5	10.03	9.86	10.08	10.27
		1745	9.77	9.81	9.97	10.16
		1712.5	9.74	9.91	9.81	10.00
	12RB High (13)	1777.5	10.07	9.89	10.12	10.31
		1745	9.85	9.70	9.84	10.03
		1712.5	9.68	9.58	9.81	10.00
	12RB Middle (6)	1777.5	10.16	9.91	10.11	10.30
		1745	9.80	9.63	9.80	9.99
		1712.5	9.76	9.63	9.68	9.87
	12RB Low (0)	1777.5	10.05	9.83	10.06	10.25
		1745	9.81	9.43	9.79	9.98
		1712.5	9.75	9.65	9.77	9.96
	25RB (0)	1777.5	10.06	9.91	10.07	10.26
		1745	9.94	9.76	9.82	10.01
		1712.5	9.77	9.56	9.73	9.92
10 MHz	1RB High (49)	1775	9.94	9.95	10.05	10.24
		1745	9.79	10.01	9.88	10.07
		1715	9.64	9.65	9.91	10.10
	1RB Middle (24)	1775	9.99	9.91	10.09	10.28
		1745	9.76	9.87	9.89	10.08
		1715	9.63	9.68	9.78	9.97
	1RB Low (0)	1775	9.91	9.99	9.88	10.07
		1745	9.75	9.93	9.85	10.04
		1715	9.53	9.84	9.76	9.95
	25RB High (25)	1775	10.11	9.90	10.14	10.33
		1745	9.85	9.74	9.90	10.09
		1715	9.78	9.60	9.65	9.84
	25RB Middle (12)	1775	10.02	9.89	10.00	10.19
		1745	9.83	9.74	9.79	9.98
		1715	9.77	9.62	9.77	9.96
	25RB Low (0)	1775	9.98	9.91	9.97	10.16
		1745	9.81	9.71	9.87	10.06
		1715	9.77	9.65	9.72	9.91
	50RB (0)	1775	10.00	9.81	10.04	10.23
		1745	9.88	9.67	9.73	9.92
		1715	9.77	9.56	9.75	9.94
15 MHz	1RB High (74)	1772.5	9.86	10.00	10.09	10.28
		1745	9.72	9.94	9.85	10.04
		1717.5	9.61	9.74	9.84	10.03
	1RB	1772.5	9.89	9.89	10.14	10.33

	Middle (37)	1745	9.63	9.93	9.93	10.12
		1717.5	9.58	9.75	9.86	10.05
	1RB Low (0)	1772.5	9.91	10.01	10.13	10.32
		1745	9.66	9.77	9.91	10.10
		1717.5	9.57	9.68	9.84	10.03
	36RB High (38)	1772.5	9.95	9.74	10.00	10.19
		1745	9.77	9.64	9.82	10.01
		1717.5	9.69	9.43	9.66	9.85
	36RB Middle (19)	1772.5	9.96	9.64	9.89	10.08
		1745	9.68	9.56	9.72	9.91
		1717.5	9.65	9.50	9.66	9.85
	36RB Low (0)	1772.5	9.84	9.73	9.84	10.03
		1745	9.68	9.45	9.71	9.90
		1717.5	9.55	9.47	9.64	9.83
	75RB (0)	1772.5	9.92	9.73	9.80	9.99
		1745	9.69	9.56	9.63	9.82
		1717.5	9.68	9.46	9.62	9.81
20 MHz	1RB High (99)	1770	9.86	9.98	10.02	10.21
		1745	9.98	9.96	9.99	10.19
		1720	10.00	10.01	10.00	10.17
	1RB Middle (50)	1770	9.83	10.00	10.14	10.23
		1745	9.92	9.99	10.09	10.18
		1720	10.04	9.96	10.04	10.13
	1RB Low (0)	1770	9.89	9.97	10.10	10.24
		1745	9.96	10.00	10.06	10.19
		1720	10.09	9.98	10.06	10.14
	50RB High (50)	1770	9.91	9.88	9.94	9.93
		1745	9.99	9.91	9.96	9.92
		1720	10.13	9.95	9.99	9.97
	50RB Middle (25)	1770	10.00	10.00	10.05	10.05
		1745	9.99	10.01	10.06	10.04
		1720	10.12	10.04	10.02	10.01
	50RB Low (0)	1770	9.95	9.97	10.00	9.99
		1745	9.98	9.98	9.99	10.01
		1720	10.15	10.00	10.04	10.06
	100RB (0)	1770	9.93	9.95	9.94	9.97
		1745	9.96	9.99	9.97	9.96
		1720	10.06	10.04	9.96	9.98

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Band 66						
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Actual output power (dBm)			
			QPSK	16QAM	64QAM	256QAM
1.4 MHz	1RB High (5)	1779.3	16.47	16.50	16.59	16.67
		1745	16.27	16.54	16.50	16.58
		1710.7	16.09	16.38	16.57	16.65
	1RB Middle (3)	1779.3	16.70	16.55	16.87	16.95
		1745	16.30	16.59	16.55	16.63
		1710.7	16.37	16.42	16.50	16.58
	1RB Low (0)	1779.3	16.46	16.57	16.75	16.83
		1745	16.28	16.51	16.50	16.58
		1710.7	16.14	16.27	16.56	16.64
	3RB High (3)	1779.3	16.42	16.46	16.64	16.72
		1745	16.28	16.18	16.37	16.45
		1710.7	16.17	16.15	16.38	16.46
	3RB Middle (1)	1779.3	16.55	16.49	16.62	16.70
		1745	16.31	16.35	16.46	16.54
		1710.7	16.22	16.28	16.43	16.51
	3RB Low (0)	1779.3	16.42	16.53	16.74	16.82
		1745	16.27	16.29	16.49	16.57
		1710.7	16.15	16.16	16.33	16.41
	6RB (0)	1779.3	16.55	16.56	16.64	16.72
		1745	16.33	16.32	16.45	16.53
		1710.7	16.07	16.26	16.34	16.42
3 MHz	1RB High (14)	1778.5	16.51	16.66	16.80	16.88
		1745	16.42	16.61	16.65	16.73
		1711.5	16.27	16.52	16.54	16.62
	1RB Middle (7)	1778.5	16.52	16.57	16.73	16.81
		1745	16.34	16.60	16.43	16.51
		1711.5	16.29	16.38	16.42	16.50
	1RB Low (0)	1778.5	16.65	16.67	16.71	16.79
		1745	16.32	16.53	16.50	16.58
		1711.5	16.26	16.50	16.55	16.63
	8RB High (7)	1778.5	16.69	16.59	16.86	16.94
		1745	16.42	16.35	16.68	16.76
		1711.5	16.37	16.31	16.45	16.53
	8RB Middle (4)	1778.5	16.65	16.58	16.78	16.86
		1745	16.49	16.34	16.50	16.58
		1711.5	16.42	16.32	16.47	16.55
	8RB Low (0)	1778.5	16.62	16.55	16.72	16.80
		1745	16.38	16.33	16.56	16.64
		1711.5	16.29	16.33	16.51	16.59
	15RB	1778.5	16.72	16.55	16.63	16.71

	(0)	1745	16.48	16.39	16.48	16.56
		1711.5	16.39	16.20	16.34	16.42
5 MHz	1RB High (24)	1777.5	16.55	16.70	16.82	16.90
		1745	16.39	16.58	16.58	16.66
		1712.5	16.25	16.40	16.44	16.52
	1RB Middle (12)	1777.5	16.55	16.65	16.76	16.84
		1745	16.34	16.52	16.53	16.61
		1712.5	16.27	16.64	16.48	16.56
	1RB Low (0)	1777.5	16.63	16.54	16.77	16.85
		1745	16.37	16.49	16.66	16.74
		1712.5	16.34	16.59	16.50	16.58
	12RB High (13)	1777.5	16.67	16.57	16.81	16.89
		1745	16.45	16.38	16.53	16.61
		1712.5	16.28	16.26	16.50	16.58
	12RB Middle (6)	1777.5	16.76	16.59	16.80	16.88
		1745	16.40	16.31	16.49	16.57
		1712.5	16.36	16.31	16.37	16.45
	12RB Low (0)	1777.5	16.65	16.51	16.75	16.83
		1745	16.41	16.11	16.48	16.56
		1712.5	16.35	16.33	16.46	16.54
	25RB (0)	1777.5	16.66	16.59	16.76	16.84
		1745	16.54	16.44	16.51	16.59
		1712.5	16.37	16.24	16.42	16.50
10 MHz	1RB High (49)	1775	16.54	16.63	16.74	16.82
		1745	16.39	16.69	16.57	16.65
		1715	16.24	16.33	16.60	16.68
	1RB Middle (24)	1775	16.59	16.59	16.78	16.86
		1745	16.36	16.55	16.58	16.66
		1715	16.23	16.36	16.47	16.55
	1RB Low (0)	1775	16.51	16.67	16.57	16.65
		1745	16.35	16.61	16.54	16.62
		1715	16.13	16.52	16.45	16.53
	25RB High (25)	1775	16.71	16.58	16.83	16.91
		1745	16.45	16.42	16.59	16.67
		1715	16.38	16.28	16.34	16.42
	25RB Middle (12)	1775	16.62	16.57	16.69	16.77
		1745	16.43	16.42	16.48	16.56
		1715	16.37	16.30	16.46	16.54
	25RB Low (0)	1775	16.58	16.59	16.66	16.74
		1745	16.41	16.39	16.56	16.64
		1715	16.37	16.33	16.41	16.49
	50RB (0)	1775	16.60	16.49	16.73	16.81
		1745	16.48	16.35	16.42	16.50
		1715	16.37	16.24	16.44	16.52
15 MHz	1RB High (74)	1772.5	16.46	16.68	16.78	16.86
		1745	16.32	16.62	16.54	16.62
		1717.5	16.21	16.42	16.53	16.61
	1RB	1772.5	16.49	16.57	16.83	16.91

	Middle (37)	1745	16.23	16.61	16.62	16.70
		1717.5	16.18	16.43	16.55	16.63
	1RB Low (0)	1772.5	16.51	16.69	16.82	16.90
		1745	16.26	16.45	16.60	16.68
		1717.5	16.17	16.36	16.53	16.61
	36RB High (38)	1772.5	16.55	16.42	16.69	16.77
		1745	16.37	16.32	16.51	16.59
		1717.5	16.29	16.11	16.35	16.43
	36RB Middle (19)	1772.5	16.56	16.32	16.58	16.66
		1745	16.28	16.24	16.41	16.49
		1717.5	16.25	16.18	16.35	16.43
	36RB Low (0)	1772.5	16.44	16.41	16.53	16.61
		1745	16.28	16.13	16.40	16.48
		1717.5	16.15	16.15	16.33	16.41
	75RB (0)	1772.5	16.52	16.41	16.49	16.57
		1745	16.29	16.24	16.32	16.40
		1717.5	16.28	16.14	16.31	16.39
20 MHz	1RB High (99)	1770	16.46	16.66	16.71	16.79
		1745	16.57	16.59	16.70	16.71
		1720	16.57	16.61	16.68	16.67
	1RB Middle (50)	1770	16.48	16.54	16.71	16.77
		1745	16.54	16.56	16.67	16.71
		1720	16.58	16.61	16.66	16.71
	1RB Low (0)	1770	16.55	16.59	16.77	16.71
		1745	16.58	16.60	16.71	16.63
		1720	16.66	16.66	16.67	16.62
	50RB High (50)	1770	16.55	16.53	16.61	16.57
		1745	16.64	16.55	16.63	16.59
		1720	16.76	16.58	16.66	16.61
	50RB Middle (25)	1770	16.64	16.68	16.60	16.70
		1745	16.60	16.59	16.61	16.68
		1720	16.76	16.58	16.56	16.62
	50RB Low (0)	1770	16.62	16.64	16.62	16.61
		1745	16.62	16.60	16.61	16.63
		1720	16.78	16.63	16.64	16.67
	100RB (0)	1770	16.62	16.61	16.63	16.64
		1745	16.60	16.60	16.60	16.63
		1720	16.66	16.52	16.54	16.61

LTE Carrier Aggregation Conducted Power (Uplink)

This device supports uplink carrier aggregation for LTE CA_5B, CA_66B and CA_48C with a maximum of two 20MHz component carriers. For intra band contiguous carrier aggregation scenarios, 3GPP specifies that the aggregate maximum allowed output power is equivalent to the single carrier scenario. For the non-contiguously allocated resource blocks which the MPR level is determined by various RB separation and RB sizes requirement, and the allowed MPR levels, settings and the conducted powers are permanently implemented in this device per the 3GPP requirements.

According to FCC guidance, the output power with uplink CA active was measured for the high / middle / low channel configuration with the highest reported SAR for each exposure condition, the power was measured with wideband signal integration over both component carriers.

In applying the power measurement procedures of KDB 941225 D05A for DL CA to qualify for UL SAR test exclusion, power measurement is required only for the subset in each row with the largest combination of frequency bands and CCs

Maximum output power measurement is required for each UL CA configuration for the required test channels described in KDB 941225 D05. The required test channel should be associated with the UL PCC. For channels at the ends of a frequency band, the SCC and subsequent CCs are added to the side within the transmission band. Otherwise, the CCs should be added alternatively to either side of the PCC.

Full Power

UL LTE CA Class	PCC				SCC				Power
	PCC Bandwidth	UL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA 5B	5M	20425	1	24	3M	2464	1	0	23.44
CA 5B	10M	20450	1	49	5M	2522	1	0	23.12
CA 5B	10M	20450	1	49	10M	2549	1	0	23.22
CA 5B	5M	20625	1	24	3M	2586	1	0	23.17
CA 5B	10M	20600	1	49	5M	2528	1	0	23.15
CA 5B	10M	20600	1	49	10M	2501	1	0	23.27

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UL LTE CA Class	PCC				SCC				Power
	PCC Bandwidth	UL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA 5B	5M	20425	25	0	3M	2464	1	0	18.15
CA 5B	10M	20450	1	49	5M	2522	1	0	18.11
CA 5B	10M	20450	1	49	10M	2549	1	0	18.04
CA 5B	5M	20625	1	24	3M	2586	1	0	18.06
CA 5B	10M	20600	1	49	5M	2528	1	0	18.01
CA 5B	10M	20600	1	49	10M	2501	1	0	18.07

Full Power

UL LTE CA Class	PCC				SCC				Power
	PCC Bandwidth	UL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA 66B	5M	131997	1	24	5M	66509	1	0	24.65
CA 66B	10M	132022	1	49	5M	66558	1	0	24.59
CA 66B	15M	132047	1	74	5M	66604	1	0	24.66
CA 66B	10M	132022	1	49	10M	66585	1	0	24.72

DSI1

UL LTE CA Class	PCC				SCC				Power
	PCC Bandwidth	UL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA 66B	5M	131997	1	24	5M	66509	1	0	10.78
CA 66B	10M	132022	1	49	5M	66558	1	0	10.8
CA 66B	15M	132047	1	74	5M	66604	1	0	10.81
CA 66B	10M	132022	1	49	10M	66585	1	0	10.79

DSI2

UL LTE CA Class	PCC				SCC				Power
	PCC Bandwidth	UL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA 66B	5M	131997	1	24	5M	66509	1	0	19.91
CA 66B	10M	132022	1	49	5M	66558	1	0	19.68
CA 66B	15M	132047	1	74	5M	66604	1	0	19.77
CA 66B	10M	132022	1	49	10M	66585	1	0	19.87

Full Power

UL LTE CA Class	PCC				SCC				Power
	PCC Bandwidth	UL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA 48C	20M	55340	1	99	5M	55457	1	0	23.69
CA 48C	20M	55340	1	99	10M	55484	1	0	23.61
CA 48C	20M	55340	1	99	15M	55511	1	0	23.74
CA 48C	20M	55340	1	99	20M	55538	1	0	23.98
CA 48C	20M	56640	1	0	5M	56523	1	24	23.39
CA 48C	20M	56640	1	0	10M	56496	1	49	23.22
CA 48C	20M	56640	1	99	20M	56442	1	0	23.19

DSI1

UL LTE CA Class	PCC				SCC				Power
	PCC Bandwidth	UL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA 48C	20M	55340	1	99	5M	55457	1	0	8.32
CA 48C	20M	55340	1	99	10M	55484	1	0	8.22
CA 48C	20M	55340	1	99	15M	55511	1	0	8.20
CA 48C	20M	55340	1	99	20M	55538	1	0	8.35
CA 48C	20M	56640	1	0	5M	56523	1	24	8.25
CA 48C	20M	56640	1	0	10M	56496	1	49	8.24
CA 48C	20M	56640	1	99	20M	56442	1	0	8.21

DSI2

UL LTE CA Class	PCC				SCC				Power
	PCC Bandwidth	UL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA 48C	20M	55340	1	99	5M	55457	1	0	19.03
CA 48C	20M	55340	1	99	10M	55484	1	0	18.94
CA 48C	20M	55340	1	99	15M	55511	1	0	18.86
CA 48C	20M	55340	1	99	20M	55538	1	0	18.85
CA 48C	20M	56640	1	0	5M	56523	1	24	19.00
CA 48C	20M	56640	1	0	10M	56496	1	49	18.98
CA 48C	20M	56640	1	0	15M	56469	1	74	18.99
CA 48C	20M	56640	1	0	20M	56442	1	99	18.92

LTE Carrier Aggregation Conducted Power (Downlink)

Full Power

The conducted power measurement results of downlink LTE CA conducted Power are as below (Normal Power):

DL LTE CA Class	PCC								SCC1			SCC2			SCC3			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm)
2A-2A-66B	2	20	1	0	1	0	18700	700	2	20	1100	66	10	67086	66	10	66987	24.8	24.54
2A-2A-66C	2	20	1	0	1	0	18700	700	2	20	1100	66	20	67036	66	20	66838	24.8	24.62
2A-4A-5B	2	20	1	0	1	0	18700	700	4	20	2175	5	10	2600	5	10	2501	24.8	24.47
2A-5A-66B	2	20	1	0	1	0	18700	700	5	10	2525	66	10	67086	66	10	66987	24.8	24.56
2A-5A-66C	2	20	1	0	1	0	18700	700	5	10	2525	66	20	67036	66	20	66838	24.8	24.73
2A-5B-66A	2	20	1	0	1	0	18700	700	5	10	2600	5	10	2501	66	20	66786	24.8	24.61
2A-13A-66B	2	20	1	0	1	0	18700	700	13	10	5230	66	10	67086	66	10	66987	24.8	24.57
2A-13A-66C	2	20	1	0	1	0	18700	700	13	10	5230	66	20	67036	66	20	66838	24.8	24.67
4A-4A-5B	4	20	1	99	1	99	20300	2300	4	20	2050	5	10	2600	5	10	2501	24.53	24.23
5A-5A-66B	5	10	1	0	1	0	20600	2600	5	10	2600	66	10	67086	66	10	66987	23.91	23.64
5A-5A-66C	5	10	1	0	1	0	20600	2600	5	10	2600	66	20	67036	66	20	66838	23.91	23.62
5B-66A-66A	5	10	1	0	1	0	20600	2600	5	10	2501	66	20	67036	66	20	66536	23.91	23.75
5B-66B	5	10	1	0	1	0	20600	2600	5	10	2501	66	10	67086	66	10	66987	23.91	23.78
5B-66C	5	10	1	0	1	0	20600	2600	5	10	2501	66	20	67036	66	20	66838	23.91	23.69
2A-13A-48C	2	20	1	0	1	0	18700	700	13	10	5230	48	20	56640	48	20	56442	24.8	24.59
2A-48A-48C	2	20	1	0	1	0	18700	700	48	20	55990	48	20	56640	48	20	56442	24.8	24.73
4A-48D	4	20	1	99	1	99	20300	2300	48	20	55990	48	20	55792	48	20	56188	24.53	24.25
2A-48D	2	20	1	0	1	0	18700	700	48	20	55990	48	20	55792	48	20	56188	24.8	24.52
13A-48C-66A	13	10	1	24	1	24	23230	5230	48	20	56640	48	20	56442	66	20	66786	24.1	23.89
13A-48A-66B	13	10	1	24	1	24	23230	5230	48	20	55990	66	10	67086	66	10	66987	24.1	23.83
13A-48A-66C	13	10	1	24	1	24	23230	5230	48	20	55990	66	20	67036	66	20	66838	24.1	23.98
13A-48A-48C	13	10	1	24	1	24	23230	5230	48	20	55990	48	20	56640	48	20	56442	24.1	23.87
13A-48D	13	10	1	24	1	24	23230	5230	48	20	55990	48	20	55792	48	20	56188	24.1	23.91
48A-48A-66B	48	20	1	50	1	50	56640	56640	48	20	55340	66	10	67086	66	10	66987	23.41	23.16
48A-48A-66C	48	20	1	50	1	50	56640	56640	48	20	55340	66	20	67036	66	20	66838	23.41	23.27
48A-48C-66A	48	20	1	0	1	0	55990	55990	48	20	55640	48	20	56442	66	20	66786	23.6	23.3
48C-66A-66A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	67036	66	20	66536	23.41	23.1
48D-66A	48	20	1	0	1	0	55990	55990	48	20	55792	48	20	56188	66	20	66786	23.6	23.5
48C-66B	48	20	1	50	1	50	56640	56640	48	20	56442	66	10	67086	66	10	66987	23.41	23.24
48C-66C	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	67036	66	20	66838	23.41	23.15

DL LTE CA Class	PCC								SCC1			SCC2			SCC3			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm)
66B-2A-2A	66	10	1	0	1	0	132622	67086	66	10	66987	2	20	700	2	20	1100	24.75	24.55
66C-2A-2A	66	20	1	0	1	0	132572	67036	66	20	67234	2	20	700	2	20	1100	24.68	24.6
5B-2A-4A	5	10	1	0	1	0	20600	2600	5	10	2501	2	20	900	4	20	2175	23.91	23.72
4A-5B-2A	4	20	1	99	1	99	20300	2300	5	10	2600	5	10	2501	2	20	900	24.53	24.32
66B-2A-5A	66	10	1	0	1	0	132622	67086	66	10	66987	2	20	900	5	10	2525	24.75	24.54
66C-2A-5A	66	20	1	0	1	0	132572	67036	66	20	67234	2	20	900	5	10	2525	24.68	24.62
2A-5A-66B	2	20	1	0	1	0	18700	700	5	10	2525	66	10	67086	66	10	66987	24.8	24.65
2A-5A-66C	2	20	1	0	1	0	18700	700	5	10	2525	66	20	67036	66	20	66838	24.8	24.62
66A-2A-5B	66	20	1	0	1	0	132572	67036	2	20	900	5	10	2600	5	10	2501	24.68	24.47
5B-66A-2A	5	10	1	0	1	0	20600	2600	5	10	2501	66	20	66786	2	20	900	23.91	23.82
66B-2A-13A	66	10	1	0	1	0	132622	67086	66	10	66987	2	20	900	13	10	5230	24.75	24.57
66C-2A-13A	66	20	1	0	1	0	132572	67036	66	20	67234	2	20	900	13	10	5230	24.68	24.61
13A-66B-2A	13	10	1	24	1	24	23230	5230	66	10	67086	66	10	66987	2	20	900	24.1	23.93
13A-66C-2A	13	10	1	24	1	24	23230	5230	66	20	67036	66	20	66838	2	20	900	24.1	23.89
66B-5A-5A	66	10	1	0	1	0	132622	67086	66	10	66987	5	10	2600	5	10	2450	24.75	24.62
66C-5A-5A	66	20	1	0	1	0	132572	67036	66	20	67234	5	10	2600	5	10	2450	24.68	24.49
66A-66A-5B	66	20	1	0	1	0	132572	67036	66	20	66536	5	10	2600	5	10	2501	24.68	24.53
66B-5B	66	10	1	0	1	0	132622	67086	66	10	66987	5	10	2600	5	10	2501	24.75	24.45
66C-5B	66	20	1	0	1	0	132572	67036	66	20	67234	5	10	2600	5	10	2501	24.68	24.48
48C-2A-13A	48	20	1	50	1	50	56640	56640	48	20	56442	2	20	900	13	10	5230	23.41	23.18
48C-2A-48A	48	20	1	50	1	50	56640	56640	48	20	56442	2	20	900	48	20	55990	23.41	23.26
13A-48C-2A	13	10	1	24	1	24	23230	5230	48	20	56640	48	20	56442	2	20	900	24.1	23.87
48A-48C-2A	48	20	1	0	1	0	55990	55990	48	20	56640	48	20	56442	2	20	900	23.6	23.26
48D-4A	48	20	1	0	1	0	55990	55990	48	20	55792	48	20	56188	4	20	2175	23.6	23.42
48D-2A	48	20	1	0	1	0	55990	55990	48	20	55792	48	20	56188	2	20	900	23.6	23.29

DL LTE CA Class	PCC								SCC1			SCC2			SCC3			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm)
66A-13A-48C	66	20	1	0	1	0	132572	67036	13	10	5230	48	20	56640	48	20	56442	24.68	24.5
66B-13A-48A	66	10	1	0	1	0	132622	67086	66	10	66987	13	10	5230	48	20	55990	24.75	24.62
66C-13A-48A	66	20	1	0	1	0	132572	67036	66	20	67234	13	10	5230	48	20	55990	24.68	24.39
48C-66A-13A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	66786	13	10	5230	23.41	23.22
48A-66B-13A	48	20	1	0	1	0	55990	55990	66	10	67086	66	10	66987	13	10	5230	23.6	23.42
48A-66C-13A	48	20	1	0	1	0	55990	55990	66	20	67036	66	20	66838	13	10	5230	23.6	23.37
48A-48C-13A	48	20	1	0	1	0	55990	55990	48	20	56640	48	20	56442	13	10	5230	23.6	23.52
48C-48A-13A	48	20	1	50	1	50	56640	56640	48	20	56442	48	20	55990	13	10	5230	23.41	23.21
48D-13A	48	20	1	50	1	50	55990	55990	48	20	55792	48	20	56188	13	10	5230	23.41	23.19
66B-48A-48A	66	10	1	0	1	0	132622	67086	66	10	66987	48	20	56640	48	20	55340	24.75	24.55
66C-48A-48A	66	20	1	0	1	0	132572	67036	66	20	67234	48	20	56640	48	20	55340	24.68	24.38
66A-48A-48C	66	20	1	0	1	0	132572	67036	48	20	55990	48	20	56640	48	20	56442	24.68	24.49
48C-66A-48A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	66786	48	20	55990	24.68	24.46
66A-48D	66	20	1	0	1	0	132572	67036	48	20	55990	48	20	55792	48	20	56188	24.68	24.37
66B-48C	66	10	1	0	1	0	132622	67086	66	10	66987	48	20	56640	48	20	56442	24.75	24.6
66C-48C	66	20	1	0	1	0	132572	67036	66	20	67234	48	20	56640	48	20	56442	24.68	24.39

DL LTE CA Class	PCC								SCC1			SCC2			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm)
2A-2A-4A	2	20	1	0	1	0	18700	700	2	20	1100	4	20	2175	24.8	24.55
2A-2A-5A	2	20	1	0	1	0	18700	700	2	20	1100	5	10	2525	24.8	24.54
2A-2A-13A	2	20	1	0	1	0	18700	700	2	20	1100	13	10	5230	24.8	24.64
2A-2A-66A	2	20	1	0	1	0	18700	700	2	20	1100	66	20	66786	24.8	24.39
2A-4A-5A	2	20	1	0	1	0	18700	700	4	20	2175	5	10	2525	24.8	24.62
2A-4A-13A	2	20	1	0	1	0	18700	700	4	20	2175	13	10	5230	24.8	24.47
2A-5A-66A	2	20	1	0	1	0	18700	700	5	10	2525	66	20	66786	24.8	24.49
2A-13A-66A	2	20	1	0	1	0	18700	700	13	10	5230	66	20	66786	24.8	24.67
2A-66A-66A	2	20	1	0	1	0	18700	700	66	20	67036	66	20	66536	24.8	24.63
4A-4A-5A	4	20	1	99	1	99	20300	2300	4	20	2050	5	10	2525	24.53	24.33
4A-4A-13A	4	20	1	99	1	99	20300	2300	4	20	2050	13	10	5230	24.53	24.44
5A-5A-66A	5	10	1	0	1	0	20600	2600	5	10	2450	66	20	66786	23.91	23.71
5A-66A-66A	5	10	1	0	1	0	20600	2600	66	20	67036	66	20	66536	23.91	23.69
13A-66A-66A	13	10	1	24	1	24	23230	5230	66	20	67036	66	20	66536	24.1	23.91
66A-66A-66A	66	20	1	0	1	0	132572	67036	66	20	66536	66	20	66786	24.68	24.46
2A-48A-48A	2	20	1	0	1	0	18700	700	48	20	56640	48	20	55340	24.8	24.68
13A-48A-48A	13	10	1	24	1	24	23230	5230	48	20	56640	48	20	55340	24.1	23.93
13A-48A-66A	13	10	1	24	1	24	23230	5230	48	20	55990	66	20	66786	24.1	23.94
48A-48A-66A	48	20	1	50	1	50	56640	56640	48	20	55340	66	20	66786	23.41	23.11
48A-66A-66A	48	20	1	0	1	0	55990	55990	66	20	67036	66	20	66536	23.6	23.42
2A-13A-48A	2	20	1	0	1	0	18700	700	13	10	5230	48	20	55990	24.8	24.67

DL LTE CA Class	PCC								SCC1			SCC2			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm)
4A-2A-2A	4	20	1	99	1	99	20300	2300	2	20	700	2	20	1100	24.53	24.33
5A-2A-2A	5	10	1	0	1	0	20600	2600	2	20	700	2	20	1100	23.91	23.78
13A-2A-2A	13	10	1	24	1	24	23230	5230	2	20	700	2	20	1100	24.1	23.89
66A-2A-2A	66	20	1	0	1	0	132572	67036	2	20	700	2	20	1100	24.68	24.34
4A-4A-2A	4	20	1	99	1	99	20300	2300	4	20	2050	2	20	900	24.53	24.32
5A-2A-4A	5	10	1	0	1	0	20600	2600	2	20	900	4	20	2175	23.91	23.7
13A-2A-4A	13	10	1	24	1	24	23230	5230	2	20	900	4	20	2175	24.1	23.85
4A-5A-2A	4	20	1	99	1	99	20300	2300	5	10	2525	2	20	900	24.53	24.13
4A-13A-2A	4	20	1	99	1	99	20300	2300	13	10	5230	2	20	900	24.53	24.03
66A-5A-2A	66	20	1	0	1	0	132572	67036	5	10	2525	2	20	900	24.68	24.45
5A-66A-2A	5	10	1	0	1	0	20600	2600	66	20	66786	2	20	900	24.68	24.38
13A-66A-2A	13	10	1	24	1	24	23230	5230	66	20	66786	2	20	900	24.68	24.41
66A-13A-2A	66	20	1	0	1	0	132572	67036	13	10	5230	2	20	900	24.68	24.29
66A-66A-2A	66	20	1	0	1	0	132572	67036	66	20	66536	2	20	900	24.68	24.37
5A-4A-4A	5	10	1	0	1	0	20600	2600	4	20	2300	4	20	2120	24.68	24.48
66A-5A-5A	66	20	1	0	1	0	132572	67036	5	10	2600	5	10	2450	24.68	24.49
66A-66A-5A	66	20	1	0	1	0	132572	67036	66	20	66536	5	10	2525	24.68	24.51
66A-66A-13A	66	20	1	0	1	0	132572	67036	66	20	66536	13	10	5230	24.68	24.44
48A-48A-2A	48	20	1	50	1	50	56640	56640	48	20	55340	2	20	900	23.6	23.14

DSI1

DL LTE CA Class	PCC								SCC1			SCC2			SCC3			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm)
2A-2A-66B	2	20	1	0	1	0	18700	700	2	20	1100	66	10	67086	66	10	66987	9.05	8.91
2A-2A-66C	2	20	1	0	1	0	18700	700	2	20	1100	66	20	67036	66	20	66838	9.05	8.95
2A-4A-5B	2	20	1	0	1	0	18700	700	4	20	2175	5	10	2600	5	10	2501	9.05	8.82
2A-5A-66B	2	20	1	0	1	0	18700	700	5	10	2525	66	10	67086	66	10	66987	9.05	8.89
2A-5A-66C	2	20	1	0	1	0	18700	700	5	10	2525	66	20	67036	66	20	66838	9.05	8.86
2A-5B-66A	2	20	1	0	1	0	18700	700	5	10	2600	5	10	2501	66	20	66786	9.05	8.93
2A-13A-66B	2	20	1	0	1	0	18700	700	13	10	5230	66	10	67086	66	10	66987	9.05	8.83
2A-13A-66C	2	20	1	0	1	0	18700	700	13	10	5230	66	20	67036	66	20	66838	9.05	8.88
4A-4A-5B	4	20	1	99	1	99	20300	2300	4	20	2050	5	10	2600	5	10	2501	10.44	10.22
5A-5A-66B	5	10	1	0	1	0	20600	2600	5	10	2600	66	10	67086	66	10	66987	17.26	17.19
5A-5A-66C	5	10	1	0	1	0	20600	2600	5	10	2600	66	20	67036	66	20	66838	17.26	17.12
5B-66A-66A	5	10	1	0	1	0	20600	2600	5	10	2501	66	20	67036	66	20	66536	17.26	17.02
5B-66B	5	10	1	0	1	0	20600	2600	5	10	2501	66	10	67086	66	10	66987	17.26	17.09
5B-66C	5	10	1	0	1	0	20600	2600	5	10	2501	66	20	67036	66	20	66838	17.26	17.11
2A-13A-48C	2	20	1	0	1	0	18700	700	13	10	5230	48	20	56640	48	20	56442	9.05	8.83
2A-48A-48C	2	20	1	0	1	0	18700	700	48	20	55990	48	20	56640	48	20	56442	9.05	8.91
4A-48D	4	20	1	99	1	99	20300	2300	48	20	55990	48	20	55792	48	20	56188	10.44	10.33
2A-48D	2	20	1	0	1	0	18700	700	48	20	55990	48	20	55792	48	20	56188	9.05	8.9
13A-48C-66A	13	10	1	24	1	24	23230	5230	48	20	56640	48	20	56442	66	20	66786	17.7	17.33
13A-48A-66B	13	10	1	24	1	24	23230	5230	48	20	55990	66	10	67086	66	10	66987	17.7	17.44
13A-48A-66C	13	10	1	24	1	24	23230	5230	48	20	55990	66	20	67036	66	20	66838	17.7	17.34
13A-48A-48C	13	10	1	24	1	24	23230	5230	48	20	55990	48	20	56640	48	20	56442	17.7	17.54
13A-48D	13	10	1	24	1	24	23230	5230	48	20	55990	48	20	55792	48	20	56188	17.7	17.47
48A-48A-66B	48	20	1	50	1	50	56640	56640	48	20	55340	66	10	67086	66	10	66987	7.91	7.69
48A-48A-66C	48	20	1	50	1	50	56640	56640	48	20	55340	66	20	67036	66	20	66838	7.91	7.78
48A-48C-66A	48	20	1	0	1	0	55990	55990	48	20	56640	48	20	56442	66	20	66786	8.34	8.04
48C-66A-66A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	67036	66	20	66536	7.91	7.89
48D-66A	48	20	1	0	1	0	55990	55990	48	20	55792	48	20	56188	66	20	66786	8.34	8.22
48C-66B	48	20	1	50	1	50	56640	56640	48	20	56442	66	10	67086	66	10	66987	7.91	7.69
48C-66C	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	67036	66	20	66838	7.91	7.77

DL LTE CA Class	PCC								SCC1			SCC2			SCC3			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm
2A-2A-66B	2	20	1	0	1	0	18700	700	2	20	1100	66	10	67086	66	10	66987	9.05	8.91
2A-2A-66C	2	20	1	0	1	0	18700	700	2	20	1100	66	20	67036	66	20	66838	9.05	8.95
2A-4A-5B	2	20	1	0	1	0	18700	700	4	20	2175	5	10	2600	5	10	2501	9.05	8.82
2A-5A-66B	2	20	1	0	1	0	18700	700	5	10	2525	66	10	67086	66	10	66987	9.05	8.89
2A-5A-66C	2	20	1	0	1	0	18700	700	5	10	2525	66	20	67036	66	20	66838	9.05	8.86
2A-5B-66A	2	20	1	0	1	0	18700	700	5	10	2600	5	10	2501	66	20	66786	9.05	8.93
2A-13A-66B	2	20	1	0	1	0	18700	700	13	10	5230	66	10	67086	66	10	66987	9.05	8.83
2A-13A-66C	2	20	1	0	1	0	18700	700	13	10	5230	66	20	67036	66	20	66838	9.05	8.88
4A-4A-5B	4	20	1	99	1	99	20300	2300	4	20	2050	5	10	2600	5	10	2501	10.44	10.22
5A-5A-66B	5	10	1	0	1	0	20600	2600	5	10	2600	66	10	67086	66	10	66987	17.26	17.19
5A-5A-66C	5	10	1	0	1	0	20600	2600	5	10	2600	66	20	67036	66	20	66838	17.26	17.12
5B-66A-66A	5	10	1	0	1	0	20600	2600	5	10	2501	66	20	67036	66	20	66536	17.26	17.02
5B-66B	5	10	1	0	1	0	20600	2600	5	10	2501	66	10	67086	66	10	66987	17.26	17.09
5B-66C	5	10	1	0	1	0	20600	2600	5	10	2501	66	20	67036	66	20	66838	17.26	17.11
2A-13A-48C	2	20	1	0	1	0	18700	700	13	10	5230	48	20	56640	48	20	56442	9.05	8.83
2A-48A-48C	2	20	1	0	1	0	18700	700	48	20	55990	48	20	56640	48	20	56442	9.05	8.91
4A-48D	4	20	1	99	1	99	20300	2300	48	20	55990	48	20	55792	48	20	56188	10.44	10.33
2A-48D	2	20	1	0	1	0	18700	700	48	20	55990	48	20	55792	48	20	56188	9.05	8.9
13A-48C-66A	13	10	1	24	1	24	23230	5230	48	20	56640	48	20	56442	66	20	66786	17.7	17.33
13A-48A-66B	13	10	1	24	1	24	23230	5230	48	20	55990	66	10	67086	66	10	66987	17.7	17.44
13A-48A-66C	13	10	1	24	1	24	23230	5230	48	20	55990	66	20	67036	66	20	66838	17.7	17.34
13A-48A-48C	13	10	1	24	1	24	23230	5230	48	20	55990	48	20	56640	48	20	56442	17.7	17.54
13A-48D	13	10	1	24	1	24	23230	5230	48	20	55990	48	20	55792	48	20	56188	17.7	17.47
48A-48A-66B	48	20	1	50	1	50	56640	56640	48	20	55340	66	10	67086	66	10	66987	7.91	7.69
48A-48A-66C	48	20	1	50	1	50	56640	56640	48	20	55340	66	20	67036	66	20	66838	7.91	7.78
48A-48C-66A	48	20	1	0	1	0	55990	55990	48	20	56640	48	20	56442	66	20	66786	8.34	8.04
48C-66A-66A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	67036	66	20	66536	7.91	7.89
48D-66A	48	20	1	0	1	0	55990	55990	48	20	55792	48	20	56188	66	20	66786	8.34	8.22
48C-66B	48	20	1	50	1	50	56640	56640	48	20	56442	66	10	67086	66	10	66987	7.91	7.69
48C-66C	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	67036	66	20	66838	7.91	7.77

DL LTE CA Class	PCC								SCC1			SCC2			SCC3			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm
66A-13A-48C	66	20	1	0	1	0	132572	67036	13	10	5230	48	20	56640	48	20	56442	10.62	10.42
66B-13A-48A	66	10	1	0	1	0	132622	67086	66	10	66987	13	10	5230	48	20	55990	10.67	10.49
66C-13A-48A	66	20	1	0	1	0	132572	67036	66	20	67234	13	10	5230	48	20	55990	10.62	10.51
48C-66A-13A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	66786	13	10	5230	7.91	7.72
48A-66B-13A	48	20	1	0	1	0	55990	55990	66	10	67086	66	10	66987	13	10	5230	8.34	8.19
48A-66C-13A	48	20	1	0	1	0	55990	55990	66	20	67036	66	20	66838	13	10	5230	8.34	8.21
48A-48C-13A	48	20	1	0	1	0	55990	55990	48	20	56640	48	20	56442	13	10	5230	8.34	8.15
48C-48A-13A	48	20	1	50	1	50	56640	56640	48	20	56442	48	20	55990	13	10	5230	7.91	7.69
48D-13A	48	20	1	50	1	50	55990	55990	48	20	55792	48	20	56188	13	10	5230	7.91	7.82
66B-48A-48A	66	10	1	0	1	0	132622	67086	66	10	66987	48	20	56640	48	20	55340	10.67	10.39
66C-48A-48A	66	20	1	0	1	0	132572	67036	66	20	67234	48	20	56640	48	20	55340	10.67	10.42
66A-48A-48C	66	20	1	0	1	0	132572	67036	48	20	55990	48	20	56640	48	20	56442	10.67	10.47
48C-66A-48A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	66786	48	20	55990	7.91	7.69
66A-48D	66	20	1	0	1	0	132572	67036	48	20	55990	48	20	55792	48	20	56188	10.67	10.51
66B-48C	66	10	1	0	1	0	132622	67086	66	10	66987	48	20	56640	48	20	56442	10.67	10.43
66C-48C	66	20	1	0	1	0	132572	67036	66	20	67234	48	20	56640	48	20	56442	10.67	10.49

DL LTE CA Class	PCC								SCC1			SCC2			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm
2A-2A-4A	2	20	1	0	1	0	18700	700	2	20	1100	4	20	2175	9.05	8.89
2A-2A-5A	2	20	1	0	1	0	18700	700	2	20	1100	5	10	2525	9.05	8.87
2A-2A-13A	2	20	1	0	1	0	18700	700	2	20	1100	13	10	5230	9.05	8.9
2A-2A-66A	2	20	1	0	1	0	18700	700	2	20	1100	66	20	66786	9.05	8.79
2A-4A-5A	2	20	1	0	1	0	18700	700	4	20	2175	5	10	2525	9.05	8.88
2A-4A-13A	2	20	1	0	1	0	18700	700	4	20	2175	13	10	5230	9.05	8.82
2A-5A-66A	2	20	1	0	1	0	18700	700	5	10	2525	66	20	66786	9.05	8.79
2A-13A-66A	2	20	1	0	1	0	18700	700	13	10	5230	66	20	66786	9.05	8.74
2A-66A-66A	2	20	1	0	1	0	18700	700	66	20	67036	66	20	66536	9.05	8.91
4A-4A-5A	4	20	1	99	1	99	20300	2300	4	20	2050	5	10	2525	10.44	10.22
4A-4A-13A	4	20	1	99	1	99	20300	2300	4	20	2050	13	10	5230	10.44	10.2
5A-5A-66A	5	10	1	0	1	0	20600	2600	5	10	2450	66	20	66786	17.26	17.1
5A-66A-66A	5	10	1	0	1	0	20600	2600	66	20	67036	66	20	66536	17.26	17.06
13A-66A-66A	13	10	1	24	1	24	23230	5230	66	20	67036	66	20	66536	17.7	17.33
66A-66A-66A	66	20	1	0	1	0	132572	67036	66	20	66536	66	20	66786	10.67	10.55
2A-48A-48A	2	20	1	0	1	0	18700	700	48	20	56640	48	20	55340	9.05	8.83
13A-48A-48A	13	10	1	24	1	24	23230	5230	48	20	56640	48	20	55340	17.7	17.54
13A-48A-66A	13	10	1	24	1	24	23230	5230	48	20	55990	66	20	66786	17.7	17.49
48A-48A-66A	48	20	1	50	1	50	56640	56640	48	20	55340	66	20	66786	7.91	7.81
48A-66A-66A	48	20	1	0	1	0	55990	55990	66	20	67036	66	20	66536	8.34	8.24
2A-13A-48A	2	20	1	0	1	0	18700	700	13	10	5230	48	20	55990	9.05	8.87

DL LTE CA Class	PCC								SCC1			SCC2			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm
4A-2A-2A	4	20	1	99	1	99	20300	2300	2	20	700	2	20	1100	10.44	10.31
5A-2A-2A	5	10	1	0	1	0	20600	2600	2	20	700	2	20	1100	17.26	17.2
13A-2A-2A	13	10	1	24	1	24	23230	5230	2	20	700	2	20	1100	17.7	17.55
66A-2A-2A	66	20	1	0	1	0	132572	67036	2	20	700	2	20	1100	10.62	10.46
4A-4A-2A	4	20	1	99	1	99	20300	2300	4	20	2050	2	20	900	10.44	10.21
5A-2A-4A	5	10	1	0	1	0	20600	2600	2	20	900	4	20	2175	17.26	17.01
13A-2A-4A	13	10	1	24	1	24	23230	5230	2	20	900	4	20	2175	17.7	17.31
4A-5A-2A	4	20	1	99	1	99	20300	2300	5	10	2525	2	20	900	10.44	10.27
4A-13A-2A	4	20	1	99	1	99	20300	2300	13	10	5230	2	20	900	10.44	10.32
66A-5A-2A	66	20	1	0	1	0	132572	67036	5	10	2525	2	20	900	10.62	10.49
5A-66A-2A	5	10	1	0	1	0	20600	2600	66	20	66786	2	20	900	17.26	17.12
13A-66A-2A	13	10	1	24	1	24	23230	5230	66	20	66786	2	20	900	17.7	17.39
66A-13A-2A	66	20	1	0	1	0	132572	67036	13	10	5230	2	20	900	10.62	10.48
66A-66A-2A	66	20	1	0	1	0	132572	67036	66	20	66536	2	20	900	10.62	10.42
5A-4A-4A	5	10	1	0	1	0	20600	2600	4	20	2300	4	20	2120	17.26	17.06
66A-5A-5A	66	20	1	0	1	0	132572	67036	5	10	2600	5	10	2450	10.62	10.39
66A-66A-5A	66	20	1	0	1	0	132572	67036	66	20	66536	5	10	2525	10.62	10.28
66A-66A-13A	66	20	1	0	1	0	132572	67036	66	20	66536	13	10	5230	10.62	10.42
48A-48A-2A	48	20	1	50	1	50	56640	56640	48	20	55340	2	20	900	10.62	10.53

DSI2

DL LTE CA Class	PCC								SCC1			SCC2			SCC3			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm
2A-2A-66B	2	20	1	0	1	0	18700	700	2	20	1100	66	10	67086	66	10	66987	20.02	19.92
2A-2A-66C	2	20	1	0	1	0	18700	700	2	20	1100	66	20	67036	66	20	66838	20.02	19.81
2A-4A-5B	2	20	1	0	1	0	18700	700	4	20	2175	5	10	2600	5	10	2501	20.02	19.79
2A-5A-66B	2	20	1	0	1	0	18700	700	5	10	2525	66	10	67086	66	10	66987	20.02	19.82
2A-5A-66C	2	20	1	0	1	0	18700	700	5	10	2525	66	20	67036	66	20	66838	20.02	19.57
2A-5B-66A	2	20	1	0	1	0	18700	700	5	10	2600	5	10	2501	66	20	66786	20.02	19.62
2A-13A-66B	2	20	1	0	1	0	18700	700	13	10	5230	66	10	67086	66	10	66987	20.02	19.64
2A-13A-66C	2	20	1	0	1	0	18700	700	13	10	5230	66	20	67036	66	20	66838	20.02	19.55
4A-4A-5B	4	20	1	99	1	99	20300	2300	4	20	2050	5	10	2600	5	10	2501	18.56	19.67
2A-13A-48C	2	20	1	0	1	0	18700	700	13	10	5230	48	20	56640	48	20	56442	20.02	19.68
2A-48A-48C	2	20	1	0	1	0	18700	700	48	20	55990	48	20	56640	48	20	56442	20.02	19.69
4A-48D	4	20	1	99	1	99	20300	2300	48	20	55990	48	20	55792	48	20	56188	18.56	17.99
2A-48D	2	20	1	0	1	0	18700	700	48	20	55990	48	20	55792	48	20	56188	20.02	20.11
13A-48C-66A	13	10	1	24	1	24	23230	5230	48	20	56640	48	20	56442	66	20	66786	24.1	21.94
13A-48A-66B	13	10	1	24	1	24	23230	5230	48	20	55990	66	10	67086	66	10	66987	24.1	22.02
13A-48A-66C	13	10	1	24	1	24	23230	5230	48	20	55990	66	20	67036	66	20	66838	24.1	21.83
13A-48A-48C	13	10	1	24	1	24	23230	5230	48	20	55990	48	20	56640	48	20	56442	24.1	21.85
13A-48D	13	10	1	24	1	24	23230	5230	48	20	55990	48	20	55792	48	20	56188	24.1	21.83
48A-48A-66B	48	20	1	50	1	50	56640	56640	48	20	55340	66	10	67086	66	10	66987	18.65	18.08
48A-48A-66C	48	20	1	50	1	50	56640	56640	48	20	55340	66	20	67036	66	20	66838	18.65	18.23
48A-48C-66A	48	20	1	0	1	0	55990	55990	48	20	56640	48	20	56442	66	20	66786	19.07	18.43
48C-66A-66A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	67036	66	20	66536	18.65	18.45
48D-66A	48	20	1	0	1	0	55990	55990	48	20	55792	48	20	56188	66	20	66786	18.65	18.50
48C-66B	48	20	1	50	1	50	56640	56640	48	20	56442	66	10	67086	66	10	66987	18.65	18.46
48C-66C	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	67036	66	20	66838	19.07	18.37

DL LTE CA Class	PCC								SCC1			SCC2			SCC3			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm
66B-2A-2A	66	10	1	0	1	0	132622	67086	66	10	66987	2	20	700	2	20	1100	19.95	19.63
66C-2A-2A	66	20	1	0	1	0	132572	67036	66	20	67234	2	20	700	2	20	1100	19.8	19.5
5B-2A-4A	5	10	1	0	1	0	20600	2600	5	10	2501	2	20	900	4	20	2175	23.91	22.3
4A-5B-2A	4	20	1	99	1	99	20300	2300	5	10	2600	5	10	2501	2	20	900	18.56	18.31
66B-2A-5A	66	10	1	0	1	0	132622	67086	66	10	66987	2	20	900	5	10	2525	19.95	19.7
66C-2A-5A	66	20	1	0	1	0	132572	67036	66	20	67234	2	20	900	5	10	2525	19.8	19.58
2A-5A-66B	2	20	1	0	1	0	18700	700	5	10	2525	66	10	67086	66	10	66987	20.02	20.06
2A-5A-66C	2	20	1	0	1	0	18700	700	5	10	2525	66	20	67036	66	20	66838	20.02	20.17
66A-2A-5B	66	20	1	0	1	0	132572	67036	2	20	900	5	10	2600	5	10	2501	19.95	19.33
5B-66A-2A	5	10	1	0	1	0	20600	2600	5	10	2501	66	20	66786	2	20	900	23.91	22.17
66B-2A-13A	66	10	1	0	1	0	132622	67086	66	10	66987	2	20	900	13	10	5230	19.95	19.76
66C-2A-13A	66	20	1	0	1	0	132572	67036	66	20	67234	2	20	900	13	10	5230	19.8	19.46
13A-66B-2A	13	10	1	24	1	24	23230	5230	66	10	67086	66	10	66987	2	20	900	24.1	22.79
13A-66C-2A	13	10	1	24	1	24	23230	5230	66	20	67036	66	20	66838	2	20	900	24.1	22.87
66B-5A-5A	66	10	1	0	1	0	132622	67086	66	10	66987	5	10	2600	5	10	2450	19.95	19.61
66C-5A-5A	66	20	1	0	1	0	132572	67036	66	20	67234	5	10	2600	5	10	2450	19.8	19.45
66A-66A-5B	66	20	1	0	1	0	132572	67036	66	20	66536	5	10	2600	5	10	2501	19.8	19.31
66B-5B	66	10	1	0	1	0	132622	67086	66	10	66987	5	10	2600	5	10	2501	19.95	19.69
66C-5B	66	20	1	0	1	0	132572	67036	66	20	67234	5	10	2600	5	10	2501	19.8	19.36
48C-2A-13A	48	20	1	50	1	50	56640	56640	48	20	56442	2	20	900	13	10	5230	18.65	18.36
48C-2A-48A	48	20	1	50	1	50	56640	56640	48	20	56442	2	20	900	48	20	55990	18.65	18.31
13A-48C-2A	13	10	1	24	1	24	23230	5230	48	20	56640	48	20	56442	2	20	900	18.65	18.64
48A-48C-2A	48	20	1	0	1	0	55990	55990	48	20	56640	48	20	56442	2	20	900	19.07	18.51
48D-4A	48	20	1	0	1	0	55990	55990	48	20	55792	48	20	56188	4	20	2175	19.07	18.57
48D-2A	48	20	1	0	1	0	55990	55990	48	20	55792	48	20	56188	2	20	900	19.07	18.58

DL LTE CA Class	PCC								SCC1			SCC2			SCC3			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm
66A-13A-48C	66	20	1	0	1	0	132572	67036	13	10	5230	48	20	56640	48	20	56442	19.8	19.32
66B-13A-48A	66	10	1	0	1	0	132622	67086	66	10	66987	13	10	5230	48	20	55990	19.95	19.71
66C-13A-48A	66	20	1	0	1	0	132572	67036	66	20	67234	13	10	5230	48	20	55990	19.8	19.53
48C-66A-13A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	66786	13	10	5230	18.65	18.39
48A-66B-13A	48	20	1	0	1	0	55990	55990	66	10	67086	66	10	66987	13	10	5230	18.65	18.56
48A-66C-13A	48	20	1	0	1	0	55990	55990	66	20	67036	66	20	66838	13	10	5230	18.65	18.5
48A-48C-13A	48	20	1	0	1	0	55990	55990	48	20	56640	48	20	56442	13	10	5230	18.65	18.73
48C-48A-13A	48	20	1	50	1	50	56640	56640	48	20	56442	48	20	55990	13	10	5230	18.65	18.41
48D-13A	48	20	1	50	1	50	55990	55990	48	20	55792	48	20	56188	13	10	5230	19.07	18.62
66B-48A-48A	66	10	1	0	1	0	132622	67086	66	10	66987	48	20	56640	48	20	55340	19.95	19.55
66C-48A-48A	66	20	1	0	1	0	132572	67036	66	20	67234	48	20	56640	48	20	55340	19.8	19.36
66A-48A-48C	66	20	1	0	1	0	132572	67036	48	20	55990	48	20	56640	48	20	56442	19.8	19.47
48C-66A-48A	48	20	1	50	1	50	56640	56640	48	20	56442	66	20	66786	48	20	55990	19.8	18.50
66A-48D	66	20	1	0	1	0	132572	67036	48	20	55990	48	20	55792	48	20	56188	19.8	19.3
66B-48C	66	10	1	0	1	0	132622	67086	66	10	66987	48	20	56640	48	20	56442	19.95	19.39
66C-48C	66	20	1	0	1	0	132572	67036	66	20	67234	48	20	56640	48	20	56442	19.8	19.46

DL LTE CA Class	PCC								SCC1			SCC2			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm
2A-2A-4A	2	20	1	0	1	0	18700	700	2	20	1100	4	20	2175	20.02	20.02
2A-2A-5A	2	20	1	0	1	0	18700	700	2	20	1100	5	10	2525	20.02	20.01
2A-2A-13A	2	20	1	0	1	0	18700	700	2	20	1100	13	10	5230	20.02	20.05
2A-2A-66A	2	20	1	0	1	0	18700	700	2	20	1100	66	20	66786	20.02	20.03
2A-4A-5A	2	20	1	0	1	0	18700	700	4	20	2175	5	10	2525	20.02	20
2A-4A-13A	2	20	1	0	1	0	18700	700	4	20	2175	13	10	5230	20.02	20.01
2A-5A-66A	2	20	1	0	1	0	18700	700	5	10	2525	66	20	66786	20.02	20.07
2A-13A-66A	2	20	1	0	1	0	18700	700	13	10	5230	66	20	66786	20.02	20.1
2A-66A-66A	2	20	1	0	1	0	18700	700	66	20	67036	66	20	66536	20.02	20.02
4A-4A-5A	4	20	1	99	1	99	20300	2300	4	20	2050	5	10	2525	18.56	17.39
4A-4A-13A	4	20	1	99	1	99	20300	2300	4	20	2050	13	10	5230	18.56	17.52
13A-66A-66A	13	10	1	24	1	24	23230	5230	66	20	67036	66	20	66536	24.1	23.84
66A-66A-66A	66	20	1	0	1	0	132572	67036	66	20	66536	66	20	66786	19.8	19.54
2A-48A-48A	2	20	1	0	1	0	18700	700	48	20	56640	48	20	55340	20.02	19.84
13A-48A-48A	13	10	1	24	1	24	23230	5230	48	20	56640	48	20	55340	24.1	23.89
13A-48A-66A	13	10	1	24	1	24	23230	5230	48	20	55990	66	20	66786	24.1	23.71
48A-48A-66A	48	20	1	50	1	50	56640	56640	48	20	55340	66	20	66786	18.65	17.62
48A-66A-66A	48	20	1	0	1	0	55990	55990	66	20	67036	66	20	66536	18.65	17.58
2A-13A-48A	2	20	1	0	1	0	18700	700	13	10	5230	48	20	55990	20.2	20.01

DL LTE CA Class	PCC								SCC1			SCC2			Power	
	PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC DL Channel	Rel 8 LTETx Power(dBm)	Rel 10 DL LTE CA Tx Power(dBm
4A-2A-2A	4	20	1	99	1	99	20300	2300	2	20	700	2	20	1100	18.56	18.27
13A-2A-2A	13	10	1	24	1	24	23230	5230	2	20	700	2	20	1100	24.1	23.14
66A-2A-2A	66	20	1	0	1	0	132572	67036	2	20	700	2	20	1100	19.8	18.76
4A-4A-2A	4	20	1	99	1	99	20300	2300	4	20	2050	2	20	900	24.1	23.76
13A-2A-4A	13	10	1	24	1	24	23230	5230	2	20	900	4	20	2175	24.1	23.91
4A-5A-2A	4	20	1	99	1	99	20300	2300	5	10	2525	2	20	900	18.56	18.15
4A-13A-2A	4	20	1	99	1	99	20300	2300	13	10	5230	2	20	900	18.56	18.31
66A-5A-2A	66	20	1	0	1	0	132572	67036	5	10	2525	2	20	900	19.8	19.37
13A-66A-2A	13	10	1	24	1	24	23230	5230	66	20	66786	2	20	900	24.1	23.98
66A-13A-2A	66	20	1	0	1	0	132572	67036	13	10	5230	2	20	900	19.8	19.38
66A-66A-2A	66	20	1	0	1	0	132572	67036	66	20	66536	2	20	900	19.8	19.26
66A-5A-5A	66	20	1	0	1	0	132572	67036	5	10	2600	5	10	2450	19.8	19.35
66A-66A-5A	66	20	1	0	1	0	132572	67036	66	20	66536	5	10	2525	19.8	19.38
66A-66A-13A	66	20	1	0	1	0	132572	67036	66	20	66536	13	10	5230	19.8	19.45
48A-48A-2A	48	20	1	50	1	50	56640	56640	48	20	55340	2	20	900	18.65	18.53

12.4 Wi-Fi and BT Measurement result

The maximum output power of BT is12.73dBm.
The maximum tune up of BT is 13dBm.

Table2: Summery of Receiver detection mechanism

Antenna	Sensor deactive (Body scenario)	Sensor active (Body scenario)
ANT9/10	DSI2(Normal power)	DSI1(Low power)

The average conducted power for Wi-Fi is as following:

The conducted output power for WiFi 2.4G-ANT9 power is as following- DSI2

802.11b	Channel\data	1Mbps
WLAN2450	11(2462MHz)	19.94
	6(2437(MHz)	20.12
	1(2412MHz)	19.51
	Tune up	20.50
802.11g	Channel\data	6Mbps
WLAN2450	11(2462MHz)	17.43
	6(2437(MHz)	17.68
	1(2412MHz)	16.85
	Tune up	18.00
802.11n-20MHz	Channel\data	MCS0
WLAN2450	11(2462MHz)	17.25
	6(2437(MHz)	17.56
	1(2412MHz)	16.69
	Tune up	18.00
802.11n-40MHz	Channel\data	MCS0
WLAN2450	9(2452MHz)	17.47
	Tune up	18.00
	6(2437MHz)	18.04
	Tune up	18.50
	3(2422MHz)	17.37
	Tune up	18.00

The conducted output power for WiFi 2.4G-ANT9 power is as following- DSI1

802.11b	Channel\data	1Mbps
WLAN2450	11(2462MHz)	14.04
	6(2437(MHz)	14.34
	1(2412MHz)	14.74
	Tune up	15.00
802.11g	Channel\data	6Mbps
WLAN2450	11(2462MHz)	12.45
	6(2437(MHz)	12.78
	1(2412MHz)	12.15
	Tune up	13.00
802.11n-20MHz	Channel\data	MCS0
WLAN2450	11(2462MHz)	12.24
	6(2437(MHz)	12.58
	1(2412MHz)	11.96
	Tune up	13.00
802.11n-40MHz	Channel\data	MCS0
WLAN2450	9(2452MHz)	12.33
	6(2437MHz)	13.06
	3(2422MHz)	12.52
	Tune up	13.50

The conducted output power for WiFi 2.4G-ANT10 power is as following- DSI2

802.11b	Channel\data	1Mbps
WLAN2450	11(2462MHz)	20.38
	6(2437(MHz)	20.75
	1(2412MHz)	20.39
	Tune up	21.00
802.11g	Channel\data	6Mbps
WLAN2450	11(2462MHz)	18.22
	Tune up	18.50
	6(2437(MHz)	18.57
	Tune up	19.00
	1(2412MHz)	18.12
	Tune up	18.50
802.11n-20MHz	Channel\data	MCS0
WLAN2450	11(2462MHz)	18.21
	Tune up	18.50
	6(2437(MHz)	18.56
	Tune up	19.00
	1(2412MHz)	18.08
	Tune up	18.50
802.11n-40MHz	Channel\data	MCS0
WLAN2450	9(2452MHz)	18.77
	6(2437MHz)	18.71
	3(2422MHz)	18.22
	Tune up	19.00

The conducted output power for WiFi 2.4G-ANT10 power is as following- DSI1

802.11b	Channel\data	1Mbps
WLAN2450	11(2462MHz)	14.91
	6(2437(MHz)	14.80
	1(2412MHz)	14.25
	Tune up	16.00
802.11g	Channel\data	6Mbps
WLAN2450	11(2462MHz)	12.88
	6(2437(MHz)	13.23
	1(2412MHz)	12.73
	Tune up	13.50
802.11n-20MHz	Channel\data	MCS0
WLAN2450	11(2462MHz)	12.68
	6(2437(MHz)	13.06
	1(2412MHz)	12.54
	Tune up	13.50
802.11n-40MHz	Channel\data	MCS0
WLAN2450	9(2452MHz)	13.49
	6(2437MHz)	13.44
	3(2422MHz)	12.71
	Tune up	14.00

The conducted output power for WiFi 2.4G-MIMO power is as following- DSI2

802.11b	Channel\data	1Mbps
WLAN2450	11(2462MHz)	23.18
	6(2437(MHz)	23.46
	1(2412MHz)	22.98
	Tune up	24.00
802.11g	Channel\data	6Mbps
WLAN2450	11(2462MHz)	20.85
	Tune up	21.00
	6(2437(MHz)	21.16
	Tune up	21.50
	1(2412MHz)	20.54
	Tune up	21.00
802.11n-20MHz	Channel\data	MCS0
WLAN2450	11(2462MHz)	20.77
	6(2437(MHz)	21.10
	1(2412MHz)	20.45
	Tune up	21.50
802.11n-40MHz	Channel\data	MCS0
WLAN2450	9(2452MHz)	21.18
	6(2437MHz)	21.40
	3(2422MHz)	20.83
	Tune up	21.50

The conducted output power for WiFi 2.4G-MIMO power is as following- DSI1

802.11b	Channel\data	1Mbps
WLAN2450	11(2462MHz)	17.51
	6(2437(MHz)	17.59
	1(2412MHz)	17.51
	Tune up	18.00
802.11g	Channel\data	6Mbps
WLAN2450	11(2462MHz)	15.68
	Tune up	16.00
	6(2437(MHz)	16.02
	Tune up	16.50
	1(2412MHz)	15.46
	Tune up	16.00
802.11n-20MHz	Channel\data	MCS0
WLAN2450	11(2462MHz)	15.48
	Tune up	16.00
	6(2437(MHz)	15.84
	Tune up	16.50
	1(2412MHz)	15.27
	Tune up	16.00
802.11n-40MHz	Channel\data	MCS0
WLAN2450	9(2452MHz)	15.96
	6(2437MHz)	16.26
	Tune up	16.50
	3(2422MHz)	15.63
	Tune up	16.00

The conducted output power for WiFi 5G-ANT9 power is as following- DSI2

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	16.28
40(5200 MHz)	16.27
44(5220 MHz)	16.25
48(5240 MHz)	16.09
52(5260 MHz)	**16.02**
56(5280 MHz)	15.81
60(5300 MHz)	15.82
64(5320 MHz)	15.68
Tune up	17.50
100(5500 MHz)	14.55
104(5520 MHz)	15.11
108(5540 MHz)	15.73
Tune up	16.00
112(5560 MHz)	16.59
116(5580 MHz)	16.91
120(5600 MHz)	**16.99**
124(5620 MHz)	16.29
Tune up	17.50
128(5640 MHz)	15.45
132(5660 MHz)	14.88
136(5680 MHz)	14.45
140(5700 MHz)	14.61
144(5720 MHz)	15.13
Tune up	16.00
149(5745 MHz)	15.93
153(5765 MHz)	16.85
157(5785 MHz)	**17.17**
161(5805 MHz)	16.98
165(5825 MHz)	16.64
Tune up	17.50

The conducted output power for WiFi 5G-ANT9 power is as following- DSI1

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	6.18
40(5200 MHz)	6.14
44(5220 MHz)	6.28
48(5240 MHz)	6.10
52(5260 MHz)	6.03
56(5280 MHz)	5.40
60(5300 MHz)	5.44
64(5320 MHz)	5.43
Tune up	7.00
100(5500 MHz)	4.91
104(5520 MHz)	5.34
Tune up	6.00
108(5540 MHz)	6.05
112(5560 MHz)	6.44
116(5580 MHz)	6.84
120(5600 MHz)	6.93
124(5620 MHz)	6.38
Tune up	7.50
128(5640 MHz)	5.38
132(5660 MHz)	4.61
136(5680 MHz)	4.55
140(5700 MHz)	4.76
144(5720 MHz)	5.26
Tune up	6.00
149(5745 MHz)	6.05
153(5765 MHz)	6.52
157(5785 MHz)	7.14
161(5805 MHz)	6.83
165(5825 MHz)	6.55
Tune up	7.50

The conducted output power for WiFi 5G-ANT10 power is as following- DSI2

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	17.36
40(5200 MHz)	16.97
44(5220 MHz)	16.74
48(5240 MHz)	16.60
52(5260 MHz)	16.68
56(5280 MHz)	16.44
60(5300 MHz)	16.29
64(5320 MHz)	16.22
Tune up	18.00
100(5500 MHz)	14.13
104(5520 MHz)	14.15
108(5540 MHz)	14.59
112(5560 MHz)	15.12
Tune up	16.00
116(5580 MHz)	15.85
120(5600 MHz)	16.26
124(5620 MHz)	15.90
128(5640 MHz)	15.70
132(5660 MHz)	15.23
136(5680 MHz)	14.87
140(5700 MHz)	15.39
144(5720 MHz)	15.85
Tune up	16.50
149(5745 MHz)	16.29
153(5765 MHz)	16.53
157(5785 MHz)	16.75
161(5805 MHz)	16.48
165(5825 MHz)	16.13
Tune up	17.50

The conducted output power for WiFi 5G-ANT10 power is as following- DSI1

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	7.29
40(5200 MHz)	6.52
44(5220 MHz)	6.51
48(5240 MHz)	6.53
52(5260 MHz)	6.62
56(5280 MHz)	6.38
60(5300 MHz)	6.11
64(5320 MHz)	6.08
Tune up	7.80
100(5500 MHz)	4.05
104(5520 MHz)	4.13
108(5540 MHz)	4.52
112(5560 MHz)	4.94
Tune up	5.50
116(5580 MHz)	5.43
120(5600 MHz)	6.59
124(5620 MHz)	5.87
Tune up	7.00
128(5640 MHz)	5.61
132(5660 MHz)	5.06
136(5680 MHz)	4.88
140(5700 MHz)	5.18
144(5720 MHz)	5.62
Tune up	6.50
149(5745 MHz)	6.03
153(5765 MHz)	6.53
157(5785 MHz)	6.69
161(5805 MHz)	6.24
165(5825 MHz)	5.79
Tune up	7.50

The conducted output power for WiFi 5G-MIMO power is as following- DSI2

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	19.86
40(5200 MHz)	19.64
44(5220 MHz)	19.51
48(5240 MHz)	19.36
52(5260 MHz)	19.37
56(5280 MHz)	19.15
60(5300 MHz)	19.07
64(5320 MHz)	18.97
Tune up	20.00
100(5500 MHz)	17.36
104(5520 MHz)	17.67
108(5540 MHz)	18.21
Tune up	18.50
112(5560 MHz)	18.93
116(5580 MHz)	19.42
120(5600 MHz)	19.65
124(5620 MHz)	19.11
128(5640 MHz)	18.59
Tune up	20.00
132(5660 MHz)	18.07
136(5680 MHz)	17.68
140(5700 MHz)	18.03
Tune up	18.50
144(5720 MHz)	18.52
149(5745 MHz)	19.12
153(5765 MHz)	19.70
Tune up	20.00
157(5785 MHz)	19.98
161(5805 MHz)	19.75
165(5825 MHz)	19.40
Tune up	20.50

The conducted output power for WiFi 5G-MIMO power is as following- DSI1

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	9.78
40(5200 MHz)	9.34
44(5220 MHz)	9.41
48(5240 MHz)	9.33
52(5260 MHz)	9.35
56(5280 MHz)	8.93
60(5300 MHz)	8.80
64(5320 MHz)	8.78
Tune up	10.00
100(5500 MHz)	7.51
104(5520 MHz)	7.79
108(5540 MHz)	8.36
112(5560 MHz)	8.76
Tune up	9.00
116(5580 MHz)	9.20
120(5600 MHz)	9.77
124(5620 MHz)	9.14
Tune up	10.00
128(5640 MHz)	8.51
132(5660 MHz)	7.85
136(5680 MHz)	7.73
140(5700 MHz)	7.99
144(5720 MHz)	8.45
Tune up	9.00
149(5745 MHz)	9.05
153(5765 MHz)	9.54
157(5785 MHz)	9.93
161(5805 MHz)	9.56
165(5825 MHz)	9.20
Tune up	10.50

12.5 NR 5G Measurement result

Full Power-ANT0

No.	Test Freq Description	5G-n2								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		n	NR Test CH.	Tune up	n2
1	High	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1907.5	381500	24.50	22.61
2	Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1880	376000	24.50	23.32
3	Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1852.5	370500	24.50	23.15
4	High	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1900	380000	24.50	23.14
5	Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1880	376000	24.50	23.22
6	Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1860	372000	24.50	22.95

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n2								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n2
1	default	15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12@6	1880	376000	24.5	22.85
2	default	15	5	DFT-s-OFDM 16QAM	Inner_Full	12@6	1880	376000	23.5	22.58
3	default	15	5	DFT-s-OFDM 64QAM	Inner_Full	12@6	1880	376000	22	21.24
4	default	15	5	DFT-s-OFDM 256QAM	Inner_Full	12@6	1880	376000	20	19.43
5	default	15	5	CP-OFDM QPSK	Inner_Full	12@6	1880	376000	23	22.67
6	default	15	5	CP-OFDM 16QAM	Inner_Full	12@6	1880	376000	22.5	22.20
7	default	15	5	CP-OFDM 64QAM	Inner_Full	12@6	1880	376000	21	20.97
8	default	15	5	CP-OFDM 256QAM	Inner_Full	12@6	1880	376000	18	17.91
9	default	15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2@23	1880	376000	23.50	22.60
10	default	15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	1880	376000	23.50	22.54
11	default	15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1@23	1880	376000	24.50	23.11
12	default	15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1880	376000	24.50	23.19
13	default	15	5	DFT-s-OFDM QPSK	Outer_Full	25@0	1880	376000	23.50	22.35
14	default	15	10	DFT-s-OFDM QPSK	Inner_Full	25@12	1855	370064	24.50	23.27
15	default	15	15	DFT-s-OFDM QPSK	Inner_Full	36@18	1857.5	370078	24.50	23.08

DSI1-ANT0

No.	Test Freq Description	5G-n2								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		n	NR Test CH.	Tune up	n2
1	High	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1907.5	381500	11.00	10.19
2	Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1880	376000	11.00	9.66
3	Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1852.5	370500	11.00	9.41
4	High	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1900	380000	11.00	9.96
5	Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1880	376000	11.00	9.54
6	Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1860	372000	11.00	9.24

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n2								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n2
1	default	15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12@6	1907.5	381500	11.00	10.18
2	default	15	5	DFT-s-OFDM 16QAM	Inner_Full	12@6	1907.5	381500	11.00	10.16
3	default	15	5	DFT-s-OFDM 64QAM	Inner_Full	12@6	1907.5	381500	11.00	10.15
4	default	15	5	DFT-s-OFDM 256QAM	Inner_Full	12@6	1907.5	381500	11.00	10.13
5	default	15	5	CP-OFDM QPSK	Inner_Full	12@6	1907.5	381500	11.00	10.13
6	default	15	5	CP-OFDM 16QAM	Inner_Full	12@6	1907.5	381500	11.00	10.14
7	default	15	5	CP-OFDM 64QAM	Inner_Full	12@6	1907.5	381500	11.00	10.09
8	default	15	5	CP-OFDM 256QAM	Inner_Full	12@6	1907.5	381500	11.00	10.14
9	default	15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2@23	1907.5	381500	11.00	10.08
10	default	15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	1907.5	381500	11.00	10.13
11	default	15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1@23	1907.5	381500	11.00	10.07
12	default	15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1907.5	381500	11.00	10.09
13	default	15	5	DFT-s-OFDM QPSK	Outer_Full	25@0	1907.5	381500	11.00	10.11
14	default	15	10	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1902.5	380500	11.00	10.08
15	default	15	15	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1905	381000	11.00	10.05

DSI2-ANT0

No.	Test Freq Description	5G-n2								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		n	NR Test CH.	Tune up	n2
1	High	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1907.5	381500	20.50	20.31
2	Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1880	376000	20.50	19.77
3	Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1852.5	370500	20.50	19.43
4	High	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1900	380000	20.50	20.01
5	Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1880	376000	20.50	19.61
6	Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1860	372000	20.50	19.29

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n2								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n2
1	default	15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12@6	1907.5	381500	20.50	20.17
2	default	15	5	DFT-s-OFDM 16QAM	Inner_Full	12@6	1907.5	381500	20.50	20.26
3	default	15	5	DFT-s-OFDM 64QAM	Inner_Full	12@6	1907.5	381500	20.50	20.27
4	default	15	5	DFT-s-OFDM 256QAM	Inner_Full	12@6	1907.5	381500	20.50	20.24
5	default	15	5	CP-OFDM QPSK	Inner_Full	12@6	1907.5	381500	20.50	20.19
6	default	15	5	CP-OFDM 16QAM	Inner_Full	12@6	1907.5	381500	20.50	20.18
7	default	15	5	CP-OFDM 64QAM	Inner_Full	12@6	1907.5	381500	20.50	20.16
8	default	15	5	CP-OFDM 256QAM	Inner_Full	12@6	1907.5	381500	20.50	19.64
9	default	15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2@23	1907.5	381500	20.50	20.08
10	default	15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	1907.5	381500	20.50	20.19
11	default	15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1@23	1907.5	381500	20.50	20.15
12	default	15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1907.5	381500	20.50	20.14
13	default	15	5	DFT-s-OFDM QPSK	Outer_Full	25@0	1907.5	381500	20.50	20.18
14	default	15	10	DFT-s-OFDM QPSK	Inner_Full	25@12	1902.5	380500	20.50	20.03
15	default	15	15	DFT-s-OFDM QPSK	Inner_Full	36@18	1905	381000	20.50	20.07

Full Power-ANT0

No.	Test Freq Description	5G-n5								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n5
1	High	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	846.5	169300	24.5	23.75
2	Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	836.5	167300	24.5	23.99
3	Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	826.5	165300	24.5	24.10
4	High	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	839	167800	24.5	22.51
5	Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	836.5	167300	24.5	23.02
6	Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	834	166800	24.5	23.21

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n5								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n5
1	Middle	15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12@6	826.5	165300	24.5	23.53
2	Middle	15	5	DFT-s-OFDM 16QAM	Inner_Full	12@6	826.5	165300	23.5	22.84
3	Middle	15	5	DFT-s-OFDM 64QAM	Inner_Full	12@6	826.5	165300	22	21.89
4	Middle	15	5	DFT-s-OFDM 256QAM	Inner_Full	12@6	826.5	165300	20	19.98
5	Middle	15	5	CP-OFDM QPSK	Inner_Full	12@6	826.5	165300	23	22.45
6	Middle	15	5	CP-OFDM 16QAM	Inner_Full	12@6	826.5	165300	22.5	22.43
7	Middle	15	5	CP-OFDM 64QAM	Inner_Full	12@6	826.5	165300	22	21.67
8	Middle	15	5	CP-OFDM 256QAM	Inner_Full	12@6	826.5	165300	18.5	18.28
9	Middle	15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2@23	826.5	165300	23.5	23.46
10	Middle	15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	826.5	165300	23.5	23.47
11	Middle	15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1@23	826.5	165300	24.5	23.41
12	Middle	15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	826.5	165300	24.5	23.49
13	Middle	15	5	DFT-s-OFDM QPSK	Outer_Full	25@0	826.5	165300	23.5	23.34
14	Middle	15	10	CP-OFDM QPSK	Inner_Full	25@12	829	165800	24.5	23.62
15	Middle	15	15	CP-OFDM QPSK	Inner_Full	36@18	831.5	166300	24.5	23.57

DSI1-ANT0

No.	Test Freq Description	5G-n5							Tune up	Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n5
1	High	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	846.5	169300	20	18.59
2	Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	836.5	167300	20	18.81
3	Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	826.5	165300	20	18.99
4	High	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	839	167800	20	18.70
5	Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	836.5	167300	20	18.75
6	Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	834	166800	20	18.81

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n5							Tune up	Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n5
1	Middle	15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12@6	826.5	165300	20	18.95
2	Middle	15	5	DFT-s-OFDM 16QAM	Inner_Full	12@6	826.5	165300	20	18.96
3	Middle	15	5	DFT-s-OFDM 64QAM	Inner_Full	12@6	826.5	165300	20	18.95
4	Middle	15	5	DFT-s-OFDM 256QAM	Inner_Full	12@6	826.5	165300	20	18.93
5	Middle	15	5	CP-OFDM QPSK	Inner_Full	12@6	826.5	165300	20	18.89
6	Middle	15	5	CP-OFDM 16QAM	Inner_Full	12@6	826.5	165300	20	18.91
7	Middle	15	5	CP-OFDM 64QAM	Inner_Full	12@6	826.5	165300	20	18.96
8	Middle	15	5	CP-OFDM 256QAM	Inner_Full	12@6	826.5	165300	20	18.02
9	Middle	15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2@23	826.5	165300	20	18.97
10	Middle	15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	826.5	165300	20	18.99
11	Middle	15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1@23	826.5	165300	20	18.78
12	Middle	15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	826.5	165300	20	18.90
13	Middle	15	5	DFT-s-OFDM QPSK	Outer_Full	25@0	826.5	165300	20	18.93
14	Middle	15	10	DFT-s-OFDM QPSK	Inner_Full	25@12	826.5	165300	20	18.95
15	Middle	15	15	DFT-s-OFDM QPSK	Inner_Full	36@18	826.5	165300	20	18.87

DSI2-ANT0

No.	Test Freq Description	5G-n5							Tune up	Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n5
1	High	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	846.5	169300	23	22.10
2	Middle	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	836.5	167300	23	22.30
3	Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	826.5	165300	23	22.49
4	High	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	839	167800	23	22.21
5	Middle	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	836.5	167300	23	22.30
6	Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	834	166800	23	22.27

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n5							Tune up	Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n5
1	Middle	15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12@6	826.5	165300	23	22.45
2	Middle	15	5	DFT-s-OFDM 16QAM	Inner_Full	12@6	826.5	165300	23	22.43
3	Middle	15	5	DFT-s-OFDM 64QAM	Inner_Full	12@6	826.5	165300	23	22.01
4	Middle	15	5	DFT-s-OFDM 256QAM	Inner_Full	12@6	826.5	165300	23	19.97
5	Middle	15	5	CP-OFDM QPSK	Inner_Full	12@6	826.5	165300	23	22.40
6	Middle	15	5	CP-OFDM 16QAM	Inner_Full	12@6	826.5	165300	23	22.39
7	Middle	15	5	CP-OFDM 64QAM	Inner_Full	12@6	826.5	165300	23	20.98
8	Middle	15	5	CP-OFDM 256QAM	Inner_Full	12@6	826.5	165300	23	18.01
9	Middle	15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2@23	826.5	165300	23	21.40
10	Middle	15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	826.5	165300	23	21.55
11	Middle	15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1@23	826.5	165300	23	22.31
12	Middle	15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	826.5	165300	23	22.42
13	Middle	15	5	DFT-s-OFDM QPSK	Outer_Full	25@0	826.5	165300	23	21.45
14	Middle	15	10	DFT-s-OFDM QPSK	Inner_Full	25@12	826.5	165300	23	22.42
15	Middle	15	15	DFT-s-OFDM QPSK	Inner_Full	36@18	826.5	165300	23	22.41

Full Power-ANT0

No.	Test Freq Description	5G-n66							Power Results (dBm)	
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n66
1	Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1777.5	355500	24.50	23.42
2	Middle-1	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1745	349000	24.50	22.55
3	High	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1712.5	342500	24.50	22.91
4	Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1770	354000	24.50	23.71
5	Middle-1	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1745	349000	24.50	23.79
6	High	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1720	344000	24.50	23.71
According to the table above, the maximum power configuration is selected as the default test configuration										

No.	Test Freq Description	5G-n66							Power Results (dBm)	
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n66
1	Low	15	5	DFT-s-OFDM PI/2 BPSK	Inner_Full	50@25	1745	349000	24.5	23.34
2	Low	15	5	DFT-s-OFDM 16QAM	Inner_Full	50@25	1745	349000	23.5	22.83
3	Low	15	5	DFT-s-OFDM 64QAM	Inner_Full	50@25	1745	349000	22	21.48
4	Low	15	5	DFT-s-OFDM 256QAM	Inner_Full	50@25	1745	349000	20	19.86
5	Low	15	5	CP-OFDM QPSK	Inner_Full	50@25	1745	349000	24	23.47
6	Low	15	5	CP-OFDM 16QAM	Inner_Full	50@25	1745	349000	23	22.89
7	Low	15	5	CP-OFDM 64QAM	Inner_Full	50@25	1745	349000	22.5	22.12
8	Low	15	5	CP-OFDM 256QAM	Inner_Full	50@25	1745	349000	18.5	18.35
11	Low	15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2@23	1777.5	355500	23.5	23.42
12	Low	15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	1777.5	355500	23.5	23.43
13	Low	15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1@23	1777.5	355500	24.5	23.68
14	Low	15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1777.5	355500	24.5	23.84
15	Low	15	5	DFT-s-OFDM QPSK	Outer_Full	25@0	1777.5	355500	23.5	22.74
18	default	15	10	DFT-s-OFDM QPSK	Inner_Full	12@6	1745	349000	24.5	23.21
19	default	15	15	DFT-s-OFDM QPSK	Inner_Full	12@6	1745	349000	24.5	23.54

DSI1-ANT0

No.	Test Freq Description	5G-n66							Power Results (dBm)	
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n66
1	Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1777.5	355500	11.50	10.08
2	Middle-1	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1745	349000	11.50	10.02
3	High	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1712.5	342500	11.50	9.99
4	Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1770	354000	11.50	9.88
5	Middle-1	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1745	349000	11.50	9.81
6	High	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1720	344000	11.50	9.67

No.	Test Freq Description	5G-n66							Power Results (dBm)	
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n66
1	Low	15	5	DFT-s-OFDM PI/2 BPSK	Inner_Full	12@6	1777.5	355500	11.50	9.99
2	Low	15	5	DFT-s-OFDM 16QAM	Inner_Full	12@6	1777.5	355500	11.50	9.98
3	Low	15	5	DFT-s-OFDM 64QAM	Inner_Full	12@6	1777.5	355500	11.50	10.07
4	Low	15	5	DFT-s-OFDM 256QAM	Inner_Full	12@6	1777.5	355500	11.50	10.05
5	Low	15	5	CP-OFDM QPSK	Inner_Full	12@6	1777.5	355500	11.50	9.97
6	Low	15	5	CP-OFDM 16QAM	Inner_Full	12@6	1777.5	355500	11.50	9.99
7	Low	15	5	CP-OFDM 64QAM	Inner_Full	12@6	1777.5	355500	11.50	10.04
8	Low	15	5	CP-OFDM 256QAM	Inner_Full	12@6	1777.5	355500	11.50	10.03
11	Low	15	5	DFT-s-OFDM 64QAM	Edge_Full_Right	2@23	1777.5	355500	11.50	9.96
12	Low	15	5	DFT-s-OFDM 64QAM	Edge_Full_Left	2@0	1777.5	355500	11.50	9.93
13	Low	15	5	DFT-s-OFDM 64QAM	Inner_1RB_Right	1@23	1777.5	355500	11.50	9.92
14	Low	15	5	DFT-s-OFDM 64QAM	Inner_1RB_Left	1@1	1777.5	355500	11.50	10.01
15	Low	15	5	DFT-s-OFDM 64QAM	Outer_Full	25@0	1777.5	355500	11.50	10.04
18	default	15	10	DFT-s-OFDM 64QAM	Inner_Full	12@6	1745	349000	11.50	9.89
19	default	15	15	DFT-s-OFDM 64QAM	Inner_Full	12@6	1745	349000	11.50	9.97

DSI2-ANT0

No.	Test Freq Description	5G-n66							Tune up	Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n66
1	Low	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1777.5	355500	18.50	17.49
2	Middle-1	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1745	349000	18.50	17.43
3	High	15	5	DFT-s-OFDM QPSK	Inner_Full	12@6	1712.5	342500	18.50	17.30
4	Low	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1770	354000	18.50	17.30
5	Middle-1	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1745	349000	18.50	17.28
6	High	15	20	DFT-s-OFDM QPSK	Inner_Full	50@25	1720	344000	18.50	17.22
According to the table above, the maximum power configuration is selected as the default test configuration										

No.	Test Freq Description	5G-n66								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n66
1	Low	15	5	DFT-s-OFDM PI/2 BPSK	Inner_Full	12@6	1777.5	355500	18.50	16.88
2	Low	15	5	DFT-s-OFDM 16QAM	Inner_Full	12@6	1777.5	355500	18.50	16.97
3	Low	15	5	DFT-s-OFDM 64QAM	Inner_Full	12@6	1777.5	355500	18.50	16.97
4	Low	15	5	DFT-s-OFDM 256QAM	Inner_Full	12@6	1777.5	355500	18.50	16.91
5	Low	15	5	CP-OFDM QPSK	Inner_Full	12@6	1777.5	355500	18.50	16.97
6	Low	15	5	CP-OFDM 16QAM	Inner_Full	12@6	1777.5	355500	18.50	16.91
7	Low	15	5	CP-OFDM 64QAM	Inner_Full	12@6	1777.5	355500	18.50	16.88
8	Low	15	5	CP-OFDM 256QAM	Inner_Full	12@6	1777.5	355500	18.50	16.97
11	Low	15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2@23	1777.5	355500	18.50	17.40
12	Low	15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	1777.5	355500	18.50	17.38
13	Low	15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1@23	1777.5	355500	18.50	17.38
14	Low	15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	1777.5	355500	18.50	17.39
15	Low	15	5	DFT-s-OFDM QPSK	Outer_Full	25@0	1777.5	355500	18.50	17.36
18	default	15	10	DFT-s-OFDM QPSK	Inner_Full	25@12	1772.5	354500	18.50	17.41
19	default	15	15	DFT-s-OFDM QPSK	Inner_Full	36@18	1775	355000	18.50	17.39

Full Power-ANT0

No.	Test Freq Description	5G-n77							Tune up	Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n77
1	High	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3969.990	664666	26	24.59
2	Middle-1	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3918.000	661200	26	25.48
3	Middle-2	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3866.000	657733	26	25.43
4	Middle-3	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3814.000	654267	26	25.48
5	Middle-5	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3762.000	650800	26	25.54
6	Low	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3710.010	647334	26	25.49
7	High	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3930.000	662000	26	25.19
8	Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3894.000	659600	26	25.18
9	Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3858.000	657200	26	25.14
10	Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3822.000	654800	26	25.18
11	Middle-4	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3786.000	652400	26	25.22
12	Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3750.000	650000	26	25.26
According to the table above, the maximum power configuration is selected as the default test configuration										

No.	Test Freq Description	5G-n77							Tune up	Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.		n77
1	Middle-5	30	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	25@12	3762.000	650800	26	25.48
2	Middle-5	30	20	DFT-s-OFDM 16QAM	Inner_Full	25@12	3762.000	650800	25	24.33
3	Middle-5	30	20	DFT-s-OFDM 64QAM	Inner_Full	25@12	3762.000	650800	23.5	22.93
4	Middle-5	30	20	DFT-s-OFDM 256QAM	Inner_Full	25@12	3762.000	650800	21.5	20.99
5	Middle-5	30	20	CP-OFDM QPSK	Inner_Full	25@12	3762.000	650800	24.5	23.87
6	Middle-5	30	20	CP-OFDM 16QAM	Inner_Full	25@12	3762.000	650800	24	23.48
7	Middle-5	30	20	CP-OFDM 64QAM	Inner_Full	25@12	3762.000	650800	22.5	21.99
8	Middle-5	30	20	CP-OFDM 256QAM	Inner_Full	25@12	3762.000	650800	19.5	18.86
9	Middle-5	30	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@49	3762.000	650800	25	24.08
10	Middle-5	30	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	3762.000	650800	25	23.99
11	Middle-5	30	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@49	3762.000	650800	26	25.47
12	Middle-5	30	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	3762.000	650800	26	25.51
13	Middle-5	30	20	DFT-s-OFDM QPSK	Outer_Full	50@0	3762.000	650800	25	24.52
14	Middle-5	30	40	DFT-s-OFDM QPSK	Inner_Full	50@25	3768.000	651200	26	25.51
15	Middle-5	30	50	DFT-s-OFDM QPSK	Inner_Full	64@32	3771.000	651400	26	25.37
16	Middle-5	30	60	DFT-s-OFDM QPSK	Inner_Full	81@40	3774.000	651600	26	25.38
17	Middle-5	30	80	DFT-s-OFDM QPSK	Inner_Full	108@54	3780.000	652000	26	25.23
18	Middle-5	30	90	DFT-s-OFDM QPSK	Inner_Full	120@60	3783.000	652200	26	25.23

DSI1-ANT0

No.	Test Freq Description	5G-n77								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	High	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3969.990	664666	8	6.34
2	Middle-1	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3918.000	661200	8	6.42
3	Middle-2	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3866.000	657733	8	6.27
4	Middle-3	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3814.000	654267	8	6.18
5	Middle-5	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3762.000	650800	8	6.12
6	Low	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3710.010	647334	8	6.39
7	High	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3930.000	662000	8	6.17
8	Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3894.000	659600	8	6.11
9	Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3858.000	657200	8	6.10
10	Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3822.000	654800	8	6.02
11	Middle-4	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3786.000	652400	8	6.00
12	Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3750.000	650000	8	6.04

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n77								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	Middle-5	30	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	25@12	3918.000	661200	8	6.34
2	Middle-5	30	20	DFT-s-OFDM 16QAM	Inner_Full	25@12	3918.000	661200	8	6.40
3	Middle-5	30	20	DFT-s-OFDM 64QAM	Inner_Full	25@12	3918.000	661200	8	6.36
4	Middle-5	30	20	DFT-s-OFDM 256QAM	Inner_Full	25@12	3918.000	661200	8	6.37
5	Middle-5	30	20	CP-OFDM QPSK	Inner_Full	25@12	3918.000	661200	8	6.33
6	Middle-5	30	20	CP-OFDM 16QAM	Inner_Full	25@12	3918.000	661200	8	6.40
7	Middle-5	30	20	CP-OFDM 64QAM	Inner_Full	25@12	3918.000	661200	8	6.34
8	Middle-5	30	20	CP-OFDM 256QAM	Inner_Full	25@12	3918.000	661200	8	6.38
9	Middle-5	30	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@49	3918.000	661200	8	6.30
10	Middle-5	30	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	3918.000	661200	8	6.38
11	Middle-5	30	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@49	3918.000	661200	8	6.25
12	Middle-5	30	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	3918.000	661200	8	6.29
13	Middle-5	30	20	DFT-s-OFDM QPSK	Outer_Full	50@0	3918.000	661200	8	6.35
14	Middle-5	30	40	DFT-s-OFDM QPSK	Inner_Full	50@25	3918.000	661200	8	6.32
15	Middle-5	30	50	DFT-s-OFDM QPSK	Inner_Full	64@32	3918.000	661200	8	6.21
16	Middle-5	30	60	DFT-s-OFDM QPSK	Inner_Full	81@40	3918.000	661200	8	6.13
17	Middle-5	30	80	DFT-s-OFDM QPSK	Inner_Full	108@54	3918.000	661200	8	6.10
18	Middle-5	30	90	DFT-s-OFDM QPSK	Inner_Full	120@60	3918.000	661200	8	6.06

DSI2-ANT0

No.	Test Freq Description	5G-n77								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	High	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3969.990	664666	19.5	18.55
2	Middle-1	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3918.000	661200	19.5	18.82
3	Middle-2	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3866.000	657733	19.5	18.53
4	Middle-3	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3814.000	654267	19.5	18.49
5	Middle-5	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3762.000	650800	19.5	18.46
6	Low	30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3710.010	647334	19.5	18.55
7	High	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3930.000	662000	19.5	18.40
8	Middle-1	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3894.000	659600	19.5	18.45
9	Middle-2	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3858.000	657200	19.5	18.43
10	Middle-3	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3822.000	654800	19.5	18.41
11	Middle-4	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3786.000	652400	19.5	18.36
12	Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3750.000	650000	19.5	18.20

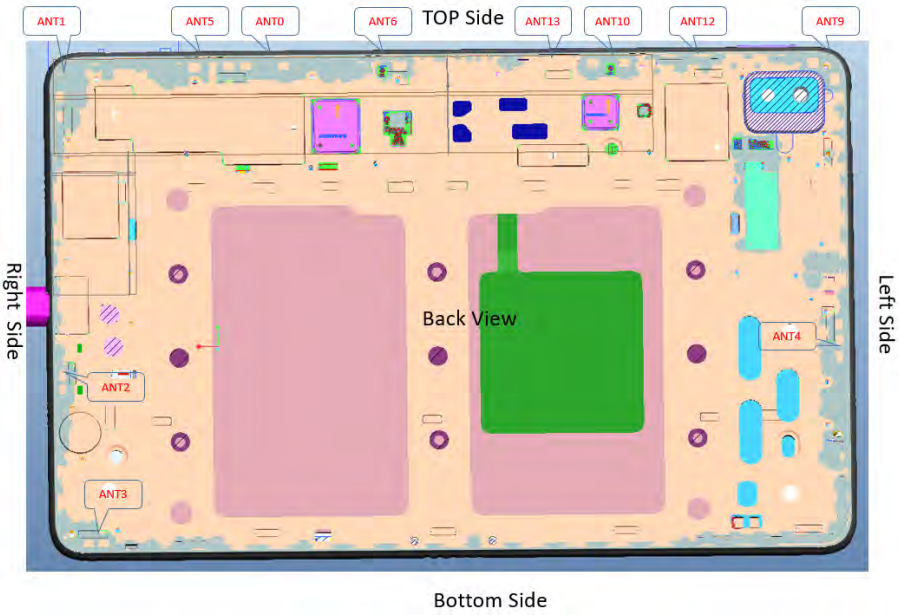
According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n77								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	Middle-5	30	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	25@12	3918.000	661200	19.5	18.67
2	Middle-5	30	20	DFT-s-OFDM 16QAM	Inner_Full	25@12	3918.000	661200	19.5	18.75
3	Middle-5	30	20	DFT-s-OFDM 64QAM	Inner_Full	25@12	3918.000	661200	19.5	18.69
4	Middle-5	30	20	DFT-s-OFDM 256QAM	Inner_Full	25@12	3918.000	661200	19.5	18.67
5	Middle-5	30	20	CP-OFDM QPSK	Inner_Full	25@12	3918.000	661200	19.5	18.68
6	Middle-5	30	20	CP-OFDM 16QAM	Inner_Full	25@12	3918.000	661200	19.5	18.77
7	Middle-5	30	20	CP-OFDM 64QAM	Inner_Full	25@12	3918.000	661200	19.5	18.68
8	Middle-5	30	20	CP-OFDM 256QAM	Inner_Full	25@12	3918.000	661200	19.5	18.73
9	Middle-5	30	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@49	3918.000	661200	19.5	18.81
10	Middle-5	30	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	3918.000	661200	19.5	18.73
11	Middle-5	30	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@49	3918.000	661200	19.5	18.76
12	Middle-5	30	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	3918.000	661200	19.5	18.72
13	Middle-5	30	20	DFT-s-OFDM QPSK	Outer_Full	50@0	3918.000	661200	19.5	18.75
14	Middle-5	30	40	DFT-s-OFDM QPSK	Edge_Full_Right	50@25	3918.000	661200	19.5	18.55
15	Middle-5	30	50	DFT-s-OFDM QPSK	Edge_Full_Right	64@32	3918.000	661200	19.5	18.40
16	Middle-5	30	60	DFT-s-OFDM QPSK	Edge_Full_Right	81@40	3918.000	661200	19.5	18.43
17	Middle-5	30	80	DFT-s-OFDM QPSK	Edge_Full_Right	108@54	3918.000	661200	19.5	18.25
18	Middle-5	30	90	DFT-s-OFDM QPSK	Edge_Full_Right	120@60	3918.000	661200	19.5	17.78

13 Simultaneous TX SAR Considerations

13.1 Transmit Antenna Separation Distances

ANT	VZW Band
ANT0	GSM850/900/1800/1900, WCDMA B1/2/5/8, LTE B2/3/4/66/5/7/12/13/20/28, n2/5/66 TRX
ANT1	ENDC B2/66 TRX
ANT2	B2/4/66 PRX MIMO, n2/66 PRX MIMO, n48/77/B48 DRX
ANT3	GSM1800/1900,WCDMA B1/2 DRX,LTE B2/3/4/7/66 DRX, n2/66 DRX, n48/77/B48 DRX MIMO
ANT4	GSM850/900,WCDMA B5/8 DRX,LTE B5/12/13/20/28 DRX, n5 DRX, LTE B2/4/66 DRX MIMO,n2/66 DRX MIMO
ANT6	N48/77/B48 TRX
ANT5	n77/n48/B48 PRX MIMO
ANT7	B46 PRX
ANT8	B46 DRX
ANT9	2.4G/5G CH0,GPS L1
ANT10	2.4G/5G CH1
ANT11	/
ANT12	mmW ant 0
ANT13	mmW ant 1
ANT14	/



Picture 13.1 Antenna Locations

13.2 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR v01, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

SAR measurement positions						
Mode	Front	Rear	Left edge	Right edge	Top edge	Bottom edge
ANT0	No	Yes	No	No	Yes	No
ANT1	No	Yes	No	Yes	Yes	No
ANT6	No	Yes	No	No	Yes	No
ANT9	No	Yes	Yes	No	Yes	No
ANT10	No	Yes	No	No	Yes	No

13.3 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied. The 1-g SAR test exclusion threshold 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, where

- 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

Table 13.1: Standalone SAR test exclusion considerations

Band/Mode	F(GHz)	Position	SAR test exclusion threshold(mW)	RF output power		SAR test exclusion
				dBm	mW	
Bluetooth	2.441	Body	19.20	13	19.95	No
2.4GHz WLAN	2.45	Body	19.17	24	251.19	No
5GHz WLAN	5.2	Body	13.16	20	100	No
	5.3	Body	13.03	20	100	No
	5.6	Body	12.68	20	100	No
	5.8	Body	12.46	20.5	112.20	No

14 Evaluation of Simultaneous

Table 14.1: The sum of reported SAR values for main antenna and WiFi2.4G-MIMO

	Position	Band	Main antenna	WLAN antenna	Sum
Maximum reported SAR value for Body	Rear 11mm	LTE Band 2	0.77	0.37	**1.14**

Table 14.2: The sum of reported SAR values for main antenna and WiFi5G-MIMO

	Position	Band	Main antenna	WLAN antenna	Sum
Maximum reported SAR value for Body	Top 0mm	LTE Band 48	0.71	0.46	**1.17**

Table 14.3: The sum of reported SAR values for main antenna + WiFi5G-MIMO+BT

	Position	Band	Main antenna	WLAN antenna	BT	Sum
Maximum reported SAR value for Body	Top 0mm	LTE Band 48	0.71	0.46	<0.01 [1]	**1.17**

[1] - The head SAR of BT is too low to get it, so the “<0.01” is used to indicate the SAR of BT.

Conclusion:

According to the above tables, the sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

15 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom. The distance is 10 mm or 15mm and just applied to the condition of body worn accessory.

It is performed for all SAR measurements with area scan based 1-g SAR estimation (Fast SAR). A zoom scan measurement is added when the estimated 1-gSAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or more than 1.2W/kg.

The calculated SAR is obtained by the following formula:

$$\text{Reported SAR} = \text{Measured SAR} \times 10^{(P_{Target}-P_{Measured})/10}$$

Where P_{Target} is the power of manufacturing upper limit;

$P_{Measured}$ is the measured power in chapter 11.

Table 15.1: Duty Cycle

Mode	Duty Cycle
GPRS&EGPRS for GSM850/1900	1:8.3
WCDMA&LTE FDD	1:1
LTE B48	1:1.58

15.1 SAR results for Fast SAR

Table 15.1-1: SAR Values (GSM 850 MHz Band - Body)

Frequency		Mode (number of timeslots)	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
251	848.8	GPRS (1)	Rear	/	24.48	26.00	0.227	**0.32**	0.402	**0.57**	0.13
190	836.6	GPRS (1)	Rear	/	24.78	26.00	0.222	**0.29**	0.447	**0.59**	0.17
128	824.2	GPRS (1)	Rear	Fig.1	24.99	26.00	0.254	**0.32**	0.513	**0.65**	0.12
190	836.6	GPRS (1)	Top	/	24.78	26.00	0.142	**0.19**	0.268	**0.35**	0.03
190	836.6	GPRS (1)	Rear	Note1	29.66	31.50	0.222	**0.34**	0.376	**0.57**	0.12
190	836.6	GPRS (1)	Top	Note2	29.66	31.50	0.059	**0.09**	0.094	**0.14**	0.02
190	836.6	EGPRS (1)	Rear	/	25.01	26.00	0.237	**0.30**	0.501	**0.63**	0.09

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.

Table 15.1-2: SAR Values (GSM 1900 MHz Band - Body)

Frequency		Mode (number of timeslots)	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
661	1880	GPRS (1)	Rear	/	17.67	19.50	0.148	**0.23**	0.368	**0.56**	0.17
661	1880	GPRS (1)	Top	/	17.67	19.50	0.142	**0.22**	0.351	**0.53**	0.09
810	1909.8	GPRS (1)	Rear	Note1	27.44	29.00	0.173	**0.25**	0.347	**0.50**	0.13
661	1880	GPRS (1)	Rear	Note1 Fig.2	27.06	29.00	0.183	**0.29**	0.366	**0.57**	-0.11
512	1850.2	GPRS (1)	Rear	Note1	27.32	29.00	0.166	**0.24**	0.330	**0.49**	-0.09
661	1880	GPRS (1)	Top	Note2	27.06	29.00	0.099	**0.16**	0.182	**0.28**	0.14
661	1880	EGPRS (1)	Rear	Note1	27.04	29.00	0.171	**0.27**	0.329	**0.52**	0.07

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.

Table 15.1-3: SAR Values (WCDMA 850 MHz Band - Body)

Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
4182	836.4	Rear	/	17.26	18.50	0.229	**0.30**	0.445	**0.59**	0.07
4182	836.4	Top	/	17.26	18.50	0.163	**0.22**	0.320	**0.43**	0.13
4233	846.6	Rear	Note1 Fig.3	24.24	24.50	0.412	**0.44**	0.672	**0.71**	0.13
4182	836.4	Rear	Note1	24.25	24.50	0.319	**0.34**	0.517	**0.55**	-0.15
4132	826.4	Rear	Note1	24.30	24.50	0.359	**0.38**	0.578	**0.61**	0.16
4182	836.4	Top	Note2	24.25	24.50	0.149	**0.16**	0.244	**0.26**	0.00

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.

Table 15.1-4: SAR Values (WCDMA 1900 MHz Band - Body)

Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
9538	1907.6	Rear	Fig.4	10.29	11.00	0.174	**0.20**	0.436	**0.51**	0.09
9400	1880	Rear	/	10.36	11.00	0.170	**0.20**	0.422	**0.49**	0.07
9262	1852.4	Rear	/	10.35	11.00	0.168	**0.20**	0.415	**0.48**	0.13
9400	1880	Top	/	10.36	11.00	0.167	**0.19**	0.415	**0.48**	0.06
9400	1880	Rear	Note1	20.94	21.50	0.206	**0.23**	0.424	**0.48**	0.07
9400	1880	Top	Note2	20.94	21.50	0.155	**0.18**	0.293	**0.33**	0.05

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.

Table 15.1-5: SAR Values (LTE Band2 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
19100	1900	1RB_High	Rear	/	9.83	10.50	0.215	**0.25**	0.533	**0.62**	0.19
19100	1900	1RB_High	Top	/	9.83	10.50	0.209	**0.24**	0.522	**0.61**	-0.16
18900	1880	50RB_ High	Rear	/	9.56	10.50	0.144	**0.18**	0.357	**0.44**	0.11
18900	1880	50RB_ High	Top	/	9.56	10.50	0.160	**0.20**	0.395	**0.49**	0.02
19100	1900	1RB_Mid	Rear	Note1	20.79	21.50	0.263	**0.31**	0.514	**0.61**	0.15
19100	1900	1RB_Mid	Top	Note2	20.79	21.50	0.160	**0.19**	0.302	**0.36**	-0.16
19100	1900	50RB_ High	Rear	Note1 Fig.5	20.97	21.50	0.332	**0.38**	0.679	**0.77**	0.12
19100	1900	50RB_ High	Top	Note2	20.97	21.50	0.167	**0.19**	0.312	**0.35**	-0.20

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.
Note3: The LTE mode is QPSK_20MHz.

Table 15.1-6 SAR Values (LTE Band4 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20300	1745	1RB_ Low	Rear	/	10.46	11.50	0.201	**0.26**	0.471	**0.60**	0.09
20300	1745	1RB_ Low	Top	Fig.6	10.46	11.50	0.209	**0.27**	0.505	**0.64**	-0.12
20300	1745	50RB_ Mid	Rear	/	10.59	11.50	0.155	**0.19**	0.332	**0.41**	-0.01
20300	1745	50RB_ Mid	Top	/	10.59	11.50	0.211	**0.26**	0.512	**0.63**	-0.01
20300	1745	1RB_ Low	Rear	Note1	18.55	19.50	0.227	**0.28**	0.450	**0.56**	0.17
20300	1745	1RB_ Low	Top	Note2	18.55	19.50	0.126	**0.16**	0.228	**0.28**	0.12
20300	1745	50RB_High	Rear	Note1	18.66	19.50	0.220	**0.27**	0.437	**0.53**	0.06
20300	1745	50RB_High	Top	Note2	18.66	19.50	0.125	**0.15**	0.225	**0.27**	0.09

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.
Note3: The LTE mode is QPSK_20MHz.

Table 15.1-7: SAR Values (LTE Band5 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20600	844	1RB_ Low	Rear	/	17.26	18.00	0.279	**0.33**	0.572	**0.68**	-0.15
20600	844	1RB_ Low	Top	/	17.26	18.00	0.152	**0.18**	0.266	**0.32**	0.12
20450	829	25RB_Mid	Rear	/	17.31	18.00	0.322	**0.38**	0.546	**0.64**	0.00
20450	829	25RB_Mid	Top	/	17.31	18.00	0.161	**0.19**	0.340	**0.40**	0.09
20525	836.5	1RB_ Low	Rear	Note1 Fig.7	23.91	24.50	0.376	**0.43**	0.619	**0.71**	0.02
20525	836.5	1RB_ Low	Top	Note2	23.91	24.50	0.098	**0.11**	0.156	**0.18**	0.13
20450	829	25RB_Mid	Rear	Note1	22.86	23.50	0.323	**0.37**	0.499	**0.58**	0.09
20450	829	25RB_Mid	Top	Note2	22.86	23.50	0.079	**0.09**	0.126	**0.15**	0.17
20425	826.5	1RB_High	Rear	ULCA Note1	23.44	24.5	0.332	**0.42**	0.511	**0.65**	0.07

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.
Note3: The LTE mode is QPSK_10MHz.

Table 15.1-8: SAR Values (LTE Band7 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
21100	2535	1RB_High	Rear	/	10.27	11.50	0.170	**0.23**	0.460	**0.61**	-0.04
21100	2535	1RB_High	Top	/	10.27	11.50	0.163	**0.22**	0.503	**0.67**	-0.05
21350	2560	50RB_Low	Rear	/	10.42	11.50	0.177	**0.23**	0.481	**0.62**	0.09
21350	2560	50RB_Low	Top	Fig.8	10.42	11.50	0.172	**0.22**	0.528	**0.68**	-0.17
21100	2535	1RB_Low	Rear	Note1	21.32	22.00	0.269	**0.31**	0.518	**0.61**	0.15
21100	2535	1RB_Low	Top	Note2	21.32	22.00	0.135	**0.16**	0.252	**0.29**	0.07
21100	2535	50RB_Low	Rear	Note1	21.44	22.00	0.283	**0.32**	0.573	**0.65**	0.06
21100	2535	50RB_Low	Top	Note2	21.44	22.00	0.145	**0.16**	0.271	**0.31**	0.08

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.
Note3: The LTE mode is QPSK_20MHz.

Table 15.1-9: SAR Values (LTE Band12 - Body)

Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23130	711	1RB_Mid	Rear	/	17.24	18.00	0.331	**0.39**	0.566	**0.67**	-0.11
23130	711	1RB_Mid	Top	/	17.24	18.00	0.170	**0.20**	0.333	**0.40**	-0.14
23060	704	25RB_Mid	Rear	Fig.9	17.25	18.00	0.272	**0.32**	0.571	**0.68**	-0.19
23060	704	25RB_Mid	Top	/	17.25	18.00	0.164	**0.19**	0.309	**0.37**	0.18
23060	704	1RB_Low	Rear	Note1	23.84	24.50	0.227	**0.26**	0.374	**0.44**	0.08
23060	704	1RB_Low	Top	Note2	23.84	24.50	0.082	**0.10**	0.126	**0.15**	-0.10
23060	704	25RB_ Mid	Rear	Note1	22.86	23.50	0.200	**0.23**	0.322	**0.37**	-0.03
23060	704	25RB_ Mid	Top	Note2	22.86	23.50	0.075	**0.09**	0.116	**0.13**	0.13

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.
Note3: The LTE mode is QPSK_10MHz.

Table 15.1-10: SAR Values (LTE Band13 - Body)

Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23230	782	1RB_Low	Rear	/	17.73	18.00	0.261	**0.28**	0.525	**0.56**	-0.01
23230	782	1RB_Low	Top	/	17.73	18.00	0.190	**0.20**	0.369	**0.39**	-0.06
23230	782	25RB_Low	Rear	Fig.10	17.84	18.00	0.306	**0.32**	0.623	**0.65**	0.09
23230	782	25RB_Low	Top	/	17.84	18.00	0.209	**0.22**	0.392	**0.41**	0.03
23230	782	1RB_Low	Rear	Note1	24.10	25.00	0.307	**0.38**	0.513	**0.63**	0.06
23230	782	1RB_Low	Top	Note2	24.10	25.00	0.096	**0.12**	0.152	**0.19**	-0.01
23230	782	25RB_ Mid	Rear	Note1	23.18	24.00	0.277	**0.33**	0.429	**0.52**	0.16
23230	782	25RB_ Mid	Top	Note2	23.18	24.00	0.085	**0.10**	0.136	**0.16**	0.02

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.
Note3: The LTE mode is QPSK_10MHz.

Table 15.1-11: SAR Values (LTE Band48 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
55990	3625	1RB_Low	Rear	/	8.34	10.00	0.070	**0.10**	0.259	**0.38**	0.18
55990	3625	1RB_Low	Top	/	8.34	10.00	0.122	**0.18**	0.426	**0.62**	0.12
55990	3625	50RB_Low	Rear	/	8.36	10.00	0.079	**0.12**	0.228	**0.33**	-0.06
55990	3625	50RB_Low	Top	Fig.11	8.36	10.00	0.134	**0.20**	0.488	**0.71**	0.17
55990	3625	1RB_Low	Rear	Note1	19.07	20.00	0.174	**0.22**	0.387	**0.48**	0.17
55990	3625	1RB_Low	Top	Note2	19.07	20.00	0.189	**0.23**	0.420	**0.52**	-0.17
55990	3625	50RB_Low	Rear	Note1	19.13	20.00	0.174	**0.21**	0.400	**0.49**	0.16
55990	3625	50RB_Low	Top	Note2	19.13	20.00	0.193	**0.24**	0.433	**0.53**	-0.18
55340	3560	1RB_High	Top	ULCA	8.35	10.00	0.081	**0.12**	0.220	**0.32**	0.16

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.
Note3: The LTE mode is QPSK_20MHz.

Table 15.1-12: SAR Values (LTE Band66 - Body)

Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
132572	1770	1RB_Mid	Rear	/	10.63	11.50	0.221	**0.27**	0.466	**0.57**	-0.01
132572	1770	1RB_Mid	Top	/	10.63	11.50	0.183	**0.22**	0.419	**0.51**	-0.07
132572	1770	50RB_High	Rear	/	10.76	11.50	0.224	**0.27**	0.473	**0.56**	-0.18
132572	1770	50RB_High	Top	Fig.12	10.76	11.50	0.217	**0.26**	0.530	**0.63**	-0.09
132572	1770	1RB_Low	Rear	Note1	19.80	21.00	0.224	**0.30**	0.434	**0.57**	-0.13
132572	1770	1RB_Low	Top	Note2	19.80	21.00	0.127	**0.17**	0.231	**0.30**	-0.10
132572	1770	50RB_ Mid	Rear	Note1	19.84	21.00	0.225	**0.29**	0.437	**0.57**	-0.13
132572	1770	50RB_ Mid	Top	Note2	19.84	21.00	0.126	**0.16**	0.230	**0.30**	-0.11
132047	1717.5	1RB_High	Top	ULCA	10.81	11.50	0.058	**0.07**	0.216	**0.25**	0.17

Note: The distance between the EUT and the phantom bottom is 0mm.
Note1: The distance between the EUT and the phantom bottom is 11mm.
Note2: The distance between the EUT and the phantom bottom is 17mm.
Note3: The LTE mode is QPSK_20MHz.

15.2 SAR results for Standard procedure

There is zoom scan measurement to be added for the highest measured SAR in each exposure configuration/band.

Table 15.2-1: SAR Values (GSM 850 MHz Band - Body)

Frequency		Mode (number of timeslots)	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
128	824.2	GPRS (1)	Rear	Fig.1	24.99	26.00	0.254	**0.32**	0.513	**0.65**	0.12

Note: The distance between the EUT and the phantom bottom is 0mm.

Table 15.2-2: SAR Values (GSM 1900 MHz Band - Body)

Frequency		Mode (number of timeslots)	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
661	1880	GPRS (1)	Rear	Note1 Fig.2	27.06	29.00	0.183	**0.29**	0.366	**0.57**	-0.11

Note1: The distance between the EUT and the phantom bottom is 11mm.

Table 15.2-3: SAR Values (WCDMA 850 MHz Band - Body)

Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
4233	846.6	Rear	Note1 Fig.3	24.24	24.50	0.412	**0.44**	0.672	**0.71**	0.13

Note1: The distance between the EUT and the phantom bottom is 11mm.

Table 15.2-4: SAR Values (WCDMA 1900 MHz Band - Body)

Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
9538	1907.6	Rear	Fig.4	10.29	11.00	0.174	**0.20**	0.436	**0.51**	0.09

Note: The distance between the EUT and the phantom bottom is 0mm.

Table 15.2-5: SAR Values (LTE Band2 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
19100	1900	50RB_ High	Rear	Note1 Fig.5	20.97	21.50	0.332	**0.38**	0.679	**0.77**	0.12

Note1: The distance between the EUT and the phantom bottom is 11mm.

Note2: The LTE mode is QPSK_20MHz.

Table 15.2-6 SAR Values (LTE Band4 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20300	1745	1RB_ Low	Top	Fig.6	10.46	11.50	0.209	**0.27**	0.505	**0.64**	-0.12

Note: The distance between the EUT and the phantom bottom is 0mm.

Note1: The LTE mode is QPSK_20MHz.

Table 15.2-7: SAR Values (LTE Band5 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20525	836.5	1RB_ Low	Rear	Note1 Fig.7	23.91	24.5	0.376	**0.43**	0.619	**0.71**	0.02

Note1: The distance between the EUT and the phantom bottom is 11mm.

Note2: The LTE mode is QPSK_10MHz.

Table 15.2-8: SAR Values (LTE Band7 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
21350	2560	50RB_Low	Top	Fig.8	10.42	11.50	0.172	**0.22**	0.528	**0.68**	-0.17

Note1: The distance between the EUT and the phantom bottom is 0mm.

Note2: The LTE mode is QPSK_20MHz.

Table 15.2-9: SAR Values (LTE Band12 - Body)

Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23060	704	25RB_Mid	Rear	Fig.9	17.25	18.00	0.272	**0.32**	0.571	**0.68**	-0.19

Note: The distance between the EUT and the phantom bottom is 0mm.

Note1: The LTE mode is QPSK_10MHz.

Table 15.2-10: SAR Values (LTE Band13 - Body)

Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23230	782	25RB_Low	Rear	Fig.10	17.84	18.00	0.306	**0.32**	0.623	**0.65**	0.09

Note: The distance between the EUT and the phantom bottom is 0mm.

Note1: The LTE mode is QPSK_10MHz.

Table 15.2-11: SAR Values (LTE Band48 - Body)

Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
55990	3625	50RB_Low	Top	Fig.11	8.36	10.00	0.134	**0.20**	0.488	**0.71**	0.17

Note: The distance between the EUT and the phantom bottom is 0mm.

Note1: The LTE mode is QPSK_20MHz.

Table 15.2-12: SAR Values (LTE Band66 - Body)

Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
132572	1770	50RB_High	Top	Fig.12	10.76	11.50	0.217	**0.26**	0.530	**0.63**	-0.09

Note: The distance between the EUT and the phantom bottom is 0mm.

Note1: The LTE mode is QPSK_20MHz.

15.3 WLAN Evaluation for 2.4G

According to the KDB248227 D01, SAR is measured for 2.4GHz 802.11b DSSS using the initial test position procedure.

ANT9

Table 15.3-1: SAR Values (WLAN - Body)– 802.11b

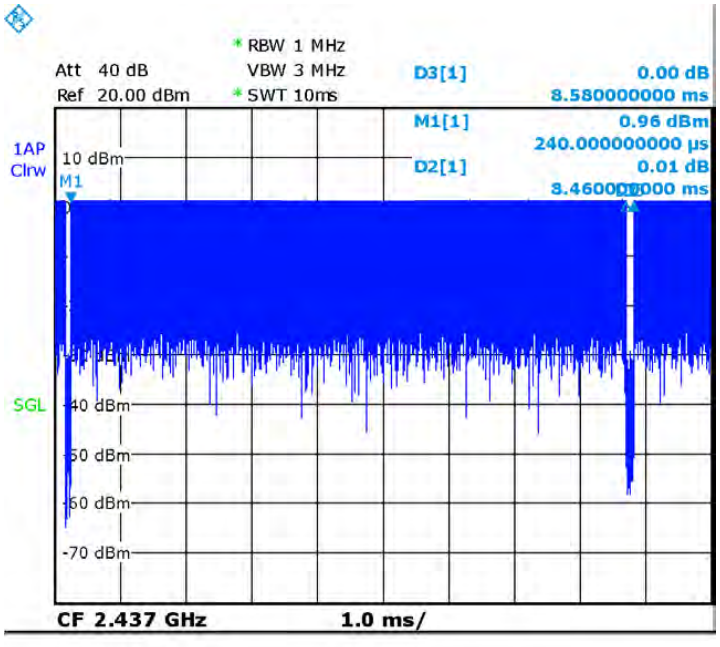
Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2412	1	Rear 0mm	/	14.74	15.00	0.084	**0.09**	0.207	**0.22**	0.15
2412	1	Left 0mm	/	14.74	15.00	0.076	**0.08**	0.206	**0.22**	0.11
2412	1	Top 0mm	/	14.74	15.00	0.029	**0.03**	0.079	**0.08**	-0.13
2437	6	Rear 8mm	/	20.12	20.50	0.156	**0.17**	0.308	**0.34**	0.08
2437	6	Left 10mm	Fig.13	20.12	20.50	0.199	**0.22**	0.390	**0.43**	0.10
2437	6	Top 10mm	/	20.12	20.50	0.039	**0.04**	0.075	**0.08**	0.17

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 15.3-2: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃						
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.					
2437	6	Left 10mm	98.6%	100%	**0.43**	**0.43**

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.



Picture 15.1 Duty factor plot for head

ANT10

Table 15.3-3: SAR Values (WLAN - Body)– 802.11b

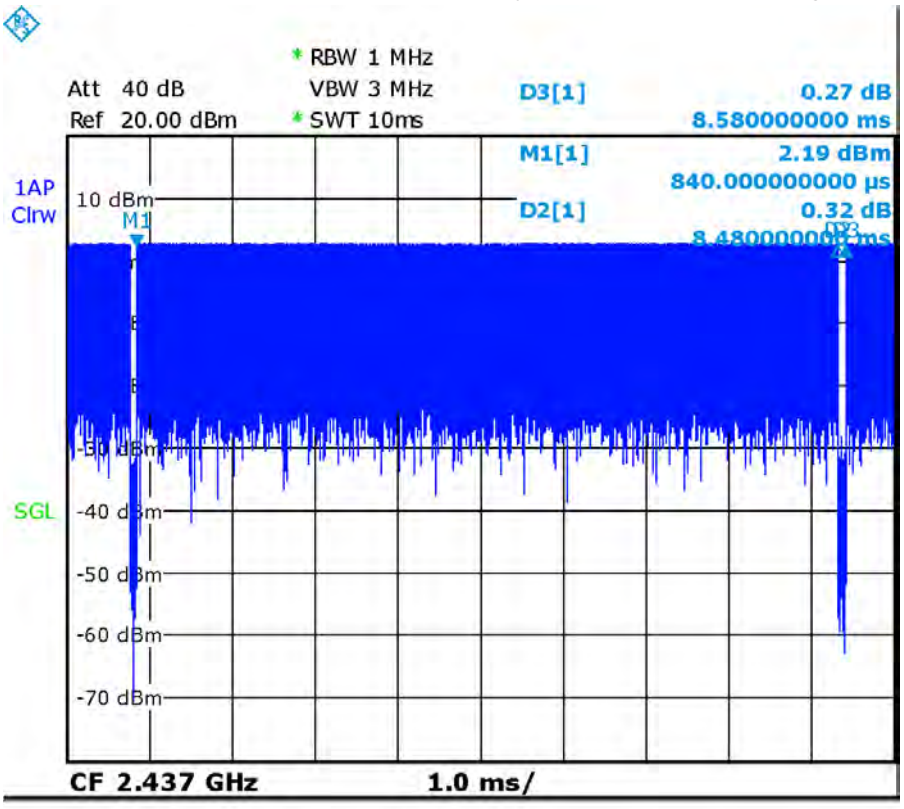
Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2462	11	Rear 0mm	/	14.91	16.00	0.062	**0.08**	0.171	**0.22**	0.05
2462	11	Top 0mm	/	14.91	16.00	0.051	**0.07**	0.125	**0.16**	0.02
2437	6	Rear 8mm	Fig.14	20.75	21.00	0.165	**0.17**	0.362	**0.38**	-0.12
2437	6	Top 10mm	/	20.75	21.00	0.110	**0.12**	0.212	**0.22**	0.03

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 15.3-4: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C						
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.					
2437	6	Rear 8mm	98.83%	100%	**0.38**	**0.39**

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.



Picture 15.2 Duty factor plot for head

MIMO

Table 15.3-5: SAR Values (WLAN - Body)– 802.11b

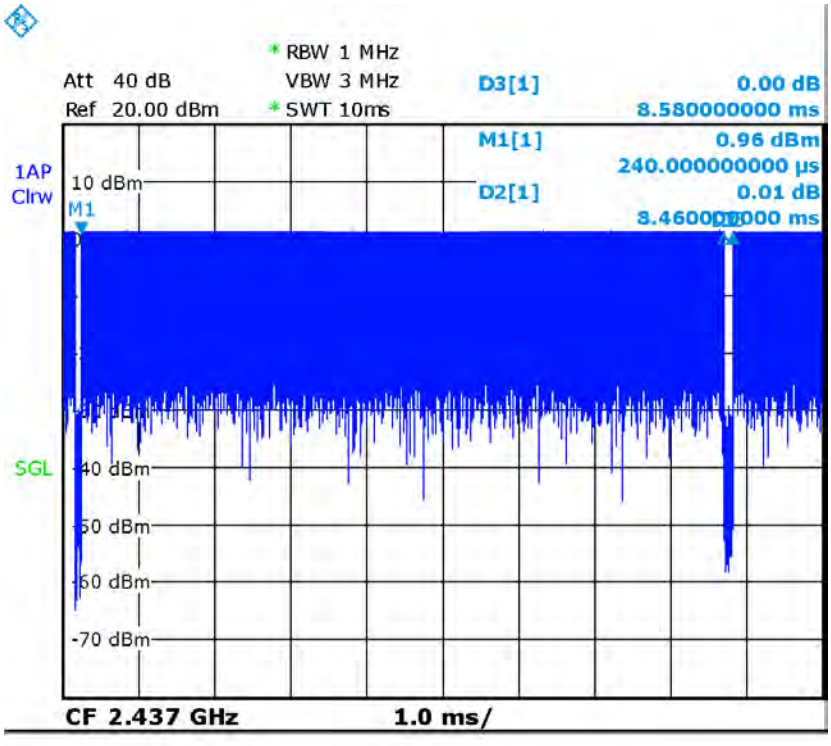
Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2437	6	Rear 0mm	/	17.59	18.00	0.088	**0.10**	0.203	**0.22**	0.09
2437	6	Left 0mm	/	17.59	18.00	0.079	**0.09**	0.215	**0.24**	-0.08
2437	6	Top 0mm	/	17.59	18.00	0.040	**0.04**	0.103	**0.11**	0.10
2437	6	Rear 8mm	/	23.46	24.50	0.132	**0.17**	0.295	**0.37**	0.04
2437	6	Left 10mm	/	23.46	24.50	0.011	**0.01**	0.019	**0.02**	0.18
2437	6	Top 10mm	Fig.15	23.46	24.50	0.198	**0.25**	0.380	**0.48**	-0.05

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 15.3-6: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C						
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.					
2437	6	Top 10mm	98.6%	100%	**0.48**	**0.49**

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.



Picture 15.3 Duty factor plot for head

15.4 WLAN Evaluation for 5G

Table 14.4-1: OFDM mode specified maximum output power of WLAN antenna

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	X		X	X	X	X	X	
U-NII-2A	X		X	X	X	X	X	
U-NII-2C	X		X	X	X	X	X	
U-NII-3	X		X	X	X	X	X	
§ 15.247 (5.8 GHz)								
X: maximum(conducted) output power(mW), including tolerance, specified for production units								

Table 14.4-2: Maximum output power specified of WLAN antenna for Sensor deactive-ANT9

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	56		45	35	45	35	35	
U-NII-2A	56		45	35	45	35	35	
U-NII-2C	56		32	25	32	35	35	
U-NII-3	56		45	35	45	35	35	
§ 15.247 (5.8 GHz)								

- The maximum output power specified for production units is the same for all channels, modulations and data rates in each channel bandwidth configuration of the 802.11a/g/n/ac modes.
- The blue highlighted cells represent highest output configurations in each standalone or aggregated frequency band, with tune-up tolerance included.

Table 14.4-3: Maximum output power specified of WLAN antenna for Sensor deactive -ANT10

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	63		50	40	50	40	40	
U-NII-2A	63		50	40	50	40	40	
U-NII-2C	45		32	40	40	40	40	
U-NII-3	56		50	40	50	40	40	
§ 15.247 (5.8 GHz)								

- The maximum output power specified for production units is the same for all channels, modulations and data rates in each channel bandwidth configuration of the 802.11a/g/n/ac modes.
- The blue highlighted cells represent highest output configurations in each standalone or aggregated frequency band, with tune-up tolerance included.

Table 14.4-4: Maximum output power specified of WLAN antenna for Sensor deactive-MIMO

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	100		71	56	71	56	56	
U-NII-2A	100		71	56	71	56	56	
U-NII-2C	100		71	50	71	56	56	
U-NII-3	112		71	56	71	56	56	
§ 15.247 (5.8 GHz)								

- The maximum output power specified for production units is the same for all channels, modulations and data rates in each channel bandwidth configuration of the 802.11a/g/n/ac modes.
- The blue highlighted cells represent highest output configurations in each standalone or aggregated frequency band, with tune-up tolerance included.

Table 14.4-5: Maximum output power specified of WLAN antenna for Sensor active-ANT9

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	5		4	4	4	4	4	
U-NII-2A	5		4	4	4	4	4	
U-NII-2C	6		3	3	3	3	3	
U-NII-3	6		5	5	5	5	5	
§ 15.247 (5.8 GHz)								

- The maximum output power specified for production units is the same for all channels, modulations and data rates in each channel bandwidth configuration of the 802.11a/g/n/ac modes.
- The blue highlighted cells represent highest output configurations in each standalone or aggregated frequency band, with tune-up tolerance included.

Table 14.4-6: Maximum output power specified of WLAN antenna for Sensor active –ANT10

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	6		5	5	5	5	5	
U-NII-2A	6		5	5	5	5	5	
U-NII-2C	5		4	4	4	4	4	
U-NII-3	6		5	5	5	5	5	
§ 15.247 (5.8 GHz)								

- The maximum output power specified for production units is the same for all channels, modulations and data rates in each channel bandwidth configuration of the 802.11a/g/n/ac modes.
- The blue highlighted cells represent highest output configurations in each standalone or aggregated frequency band, with tune-up tolerance included.

Table 14.4-7: Maximum output power specified of WLAN antenna for Sensor active-MIMO

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	10		9	9	9	8	8	
U-NII-2A	10		9	9	9	8	8	
U-NII-2C	10		7	7	7	7	7	
U-NII-3	11		9	10	10	10	10	
§ 15.247 (5.8 GHz)								

- The maximum output power specified for production units is the same for all channels, modulations and data rates in each channel bandwidth configuration of the 802.11a/g/n/ac modes.
- The blue highlighted cells represent highest output configurations in each standalone or aggregated frequency band, with tune-up tolerance included.

Table 14.4-8: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations –Sensor deactive ANT9

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 **42/42/42/41**	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 **40/38/38/37**	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112 116/120/124/128 132/136/140/144 **29/32/37/46/49/** **50/43/35/31/28/** **29/33**	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	106/122/138 20/19/21 Lower power
U-NII-3	149/153/157/161/ 165 **38/48/52/50/46**	149/153/157/161 /165 Lower power	151/159 Lower power	149/153/157/161 /165 Lower power	151/159 Lower power	155 Lower power

- The **bold numbers** is the maximum output measured power (mW).
- Channels with measured maximum power within 0.25dB are considered to have the same measured output. Channels selected for initial test configuration are highlighted in yellow.

Table 14.4-9: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations –Sensor active ANT9

802.11 mode	a	n		ac		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-1	36/40/44/48 **4/4/4/4**	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 **4/3/3/3**	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112 116/120/124/128 132/136/140/144 **3/3/4/4/5/5/4/3/3/3/3/3**	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	106/122/138 20/19/21 Lower power
U-NII-3	149/153/157/161/165 **4/4/5/5/5/**	149/153/157/161/165 Lower power	151/159 Lower power	149/153/157/161/165 Lower power	151/159 Lower power	155 Lower power

- The **bold numbers** is the maximum output measured power (mW).
- Channels with measured maximum power within 0.25dB are considered to have the same measured output. Channels selected for initial test configuration are highlighted in yellow.

Table 14.4-10: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations –Sensor deactive ANT10

802.11 mode	a	n		ac		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-1	36/40/44/48 **54/50/47/46**	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 **47/44/43/42**	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112 116/120/124/128 132/136/140/144 **26/26/29/33/38/42/39/37/33/31/35/38**	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	106/122/138 20/19/21 Lower power
U-NII-3	149/153/157/161/165 **43/45/47/44/416**	149/153/157/161/165 Lower power	151/159 Lower power	149/153/157/161/165 Lower power	151/159 Lower power	155 Lower power

- The **bold numbers** is the maximum output measured power (mW).
- Channels with measured maximum power within 0.25dB are considered to have the same measured output.

Channels selected for initial test configuration are highlighted in yellow.

Table 14.4-11: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations –Sensor active ANT10

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 **5/4/4/4**	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 **5/4/4/4**	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112 116/120/124/128 132/136/140/144 **3/3/3/3/3/5/4/4/3/3/3/4**	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	106/122/138 20/19/21 Lower power
U-NII-3	149/153/157/161/165 **4/4/5/4/4**	149/153/157/161/165 Lower power	151/159 Lower power	149/153/157/161/165 Lower power	151/159 Lower power	155 Lower power

- The **bold numbers** is the maximum output measured power (mW).
- Channels with measured maximum power within 0.25dB are considered to have the same measured output. Channels selected for initial test configuration are highlighted in yellow.

Table 14.4-12: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations –Sensor deactive MIMO

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 **97/92/89/86**	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 **87/82/81/79**	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112 116/120/124/128 132/136/140/144 **54/58/66/78/88/92/81/72/64/59/64/71**	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	106/122/138 20/19/21 Lower power
U-NII-3	149/153/157/161/165	149/153/157/161/165	151/159 Lower power	149/153/157/161/165	151/159 Lower power	155 Lower power

	82/93/99/94/87	Lower power		Lower power		

- The **bold numbers** is the maximum output measured power (mW).
- Channels with measured maximum power within 0.25dB are considered to have the same measured output. Channels selected for initial test configuration are highlighted in yellow.

Table 14.4-13: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations –Sensor active MIMO

802.11 mode	**a**	**n**		**ac**		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-1	36/40/44/48 **11/9/9/9**	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 **9/8/8/8**	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112 116/120/124/128 132/136/140/144 **6/6/7/8/8/9/8/7/6/6/6/7**	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	100/104/108/112 116/132/136/140 Lower power	102/110/134 Lower power	106/122/138 20/19/21 Lower power
U-NII-3	149/153/157/161/ 165 **8/9/10/9/8**	149/153/157/161 /165 Lower power	151/159 Lower power	149/153/157/161 /165 Lower power	151/159 Lower power	155 Lower power

- The **bold numbers** is the maximum output measured power (mW).
- Channels with measured maximum power within 0.25dB are considered to have the same measured output. Channels selected for initial test configuration are highlighted in yellow.

Table 14.4-14: Reported SAR of initial test configuration for ANT9

802.11 mode	**a**	**n**		**ac**		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-1	36/40/44/48 UNII-2A exclusion applied	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64 **0.35**	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112/ 116/120/124/128/ 132/136/140/144 **0.22**	100/104/108/112 116/132/136/140	102/110/118/ 126/134	100/104/108/112 116/132/136/140	102/110 /134	106/122/138
U-NII-3	149/153/157/161 /165	149/153/157/161 /165	151/159	149/153/157/161 /165	151/159	155

	0.26					
Highest measured output power channel tested initially are in yellow highlight. The tune up of UNII-1 is less than UNII-2A. SAR is measured for UNII-2A band first. Adjusted SAR of UNII-2A band is ≤ 1.2 W/kg. SAR is not required for UNII-1 band.						

Table 14.4-15: Reported SAR of initial test configuration for ANT10

802.11 mode	**a**	**n**		**ac**		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-1	36/40/44/48 UNII-2A exclusion applied	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64 **0.69**	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112/ 116/120/124/128/ 132/136/140/144 **0.49**	100/104/108/112 116/132/136/140	102/110/118/ 126/134	100/104/108/112 116/132/136/140	102/110 /134	106/122/138
U-NII-3	149/153/157/161 /165 **0.32**	149/153/157/161 /165	151/159	149/153/157/161 /165	151/159	155
Highest measured output power channel tested initially are in yellow highlight. The tune up of UNII-1 is less than UNII-2A. SAR is measured for UNII-2A band first. Adjusted SAR of UNII-2A band is ≤ 1.2 W/kg. SAR is not required for UNII-1 band.						

Table 14.4-16: Reported SAR of initial test configuration for MIMO

802.11 mode	**a**	**n**		**ac**		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-1	36/40/44/48 UNII-2A exclusion applied	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64 **0.46**	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112/ 116/120/124/128/ 132/136/140/144 **0.40**	100/104/108/112 116/132/136/140	102/110/118/ 126/134	100/104/108/112 116/132/136/140	102/110 /134	106/122/138
U-NII-3	149/153/157/161 /165 **0.322**	149/153/157/161 /165	151/159	149/153/157/161 /165	151/159	155
Highest measured output power channel tested initially are in yellow highlight. The tune up of UNII-1 is less than UNII-2A. SAR is measured for UNII-2A band first. Adjusted SAR of UNII-2A band is						

≤ 1.2 W/kg. SAR is not required for UNII-1 band.

Table 14.4-17: SAR Values (WLAN - Body)-ANT9

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
5250	52	Rear	Note2	16.02	17.5	0.062	**0.09**	0.177	**0.25**	0.15
5250	52	Left	Note3	16.02	17.5	<0.01	**<0.01**	<0.01	**<0.01**	
5250	52	Top	Note3	16.02	17.5	0.041	**0.06**	0.090	**0.13**	-0.17
5600	120	Rear	Note2	16.99	17.5	0.060	**0.07**	0.173	**0.19**	0.13
5600	120	Left	Note3	16.99	17.5	0.002	**0.00**	0.007	**0.01**	0.01
5600	120	Top	Note3	16.99	17.5	0.021	**0.02**	0.054	**0.06**	0.06
5785	157	Rear	Note2	17.17	17.5	0.040	**0.04**	0.130	**0.14**	0.18
5785	157	Left	Note3	17.17	17.5	0.003	**0.00**	0.008	**0.01**	-0.08
5785	157	Top	Note3	17.17	17.5	0.019	**0.02**	0.050	**0.05**	0.11
5250	52	Rear	/	6.03	7	0.045	**0.06**	0.184	**0.23**	0.14
5250	52	Left	Fig.16	6.03	7	0.068	**0.09**	0.276	**0.35**	0.01
5250	52	Top	/	6.03	7	0.017	**0.02**	0.069	**0.09**	0.03
5600	120	Rear	/	6.93	7.5	0.015	**0.02**	0.079	**0.09**	0.10
5600	120	Left	/	6.93	7.5	0.055	**0.06**	0.189	**0.22**	0.15
5600	120	Top	/	6.93	7.5	0.014	**0.02**	0.047	**0.05**	0.06
5785	157	Rear	/	7.14	7.5	0.018	**0.02**	0.080	**0.09**	-0.15
5785	157	Left	/	7.14	7.5	0.057	**0.06**	0.243	**0.26**	0.10
5785	157	Top	/	7.14	7.5	0.016	**0.02**	0.055	**0.06**	-0.14

Note1: The distance between the EUT and the phantom bottom is 0mm.

Note2: The distance between the EUT and the phantom bottom is 8mm.

Note3: The distance between the EUT and the phantom bottom is 10mm.

Table 14.4-18: SAR Values (WLAN - Body)-ANT10

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
5250	52	Rear	Note2	16.68	18	0.111	**0.15**	0.307	**0.42**	0.09
5250	52	Top	Note3	16.68	18	0.141	**0.19**	0.368	**0.50**	0.02
5600	120	Rear	Note2	16.26	16.5	0.083	**0.09**	0.233	**0.25**	-0.02
5600	120	Top	Note3	16.26	16.5	0.100	**0.11**	0.270	**0.29**	-0.01
5785	157	Rear	Note2	16.75	17.5	0.059	**0.07**	0.199	**0.24**	-0.05
5785	157	Top	Note3	16.75	17.5	0.080	**0.10**	0.222	**0.26**	-0.02
5250	52	Rear	/	6.62	7.8	0.061	**0.08**	0.261	**0.34**	0.12
5250	52	Top	Fig.17	6.62	7.8	0.103	**0.14**	0.511	**0.67**	-0.07
5600	120	Rear	/	6.59	7	0.059	**0.06**	0.209	**0.23**	-0.06
5600	120	Top	/	6.59	7	0.087	**0.10**	0.442	**0.49**	-0.15
5785	157	Rear	/	6.69	7.5	0.017	**0.02**	0.087	**0.10**	0.16
5785	157	Top	/	6.69	7.5	0.057	**0.07**	0.268	**0.32**	-0.08

Note1: The distance between the EUT and the phantom bottom is 0mm.

Note2: The distance between the EUT and the phantom bottom is 8mm.

Note3: The distance between the EUT and the phantom bottom is 10mm.

Table 14.4-19: SAR Values (WLAN - Body)-MIMO

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
MHz	Ch.									
5250	52	Rear	Note2	19.37	20	0.099	**0.11**	0.270	**0.31**	0.01
5250	52	Left	Note3	19.37	20	0.091	**0.11**	0.240	**0.28**	-0.12
5250	52	Top	Note3	19.37	20	0.112	**0.13**	0.297	**0.34**	-0.07
5600	120	Rear	Note2	19.65	20	0.075	**0.08**	0.237	**0.26**	0.11
5600	120	Left	Note3	19.65	20	0.060	**0.07**	0.155	**0.17**	0.06
5600	120	Top	Note3	19.65	20	0.086	**0.09**	0.237	**0.26**	0.07
5785	157	Rear	Note2	19.98	20.5	0.048	**0.05**	0.150	**0.17**	0.14
5785	157	Left	Note3	19.98	20.5	0.057	**0.06**	0.147	**0.17**	0.08
5785	157	Top	Note3	19.98	20.5	0.053	**0.06**	0.146	**0.16**	0.06
5250	52	Rear	/	9.35	10	0.057	**0.07**	0.251	**0.29**	0.02
5250	52	Left	/	9.35	10	0.069	**0.08**	0.281	**0.33**	0.14
5250	52	Top	Fig.18	9.35	10	0.078	**0.09**	0.386	**0.45**	0.15
5600	120	Rear	/	9.77	10	0.033	**0.03**	0.169	**0.18**	-0.15
5600	120	Left	/	9.77	10	0.066	**0.07**	0.279	**0.29**	0.08
5600	120	Top	/	9.77	10	0.072	**0.08**	0.377	**0.40**	-0.07
5785	157	Rear	/	9.93	10.5	0.017	**0.02**	0.091	**0.10**	0.16
5785	157	Left	/	9.93	10.5	0.045	**0.05**	0.192	**0.22**	0.09
5785	157	Top	/	9.93	10.5	0.050	**0.06**	0.278	**0.32**	-0.13

Note1: The distance between the EUT and the phantom bottom is 0mm.

Note2: The distance between the EUT and the phantom bottom is 8mm.
Note3: The distance between the EUT and the phantom bottom is 10mm.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.4-20: SAR Values (WLAN - Body)-ANT9

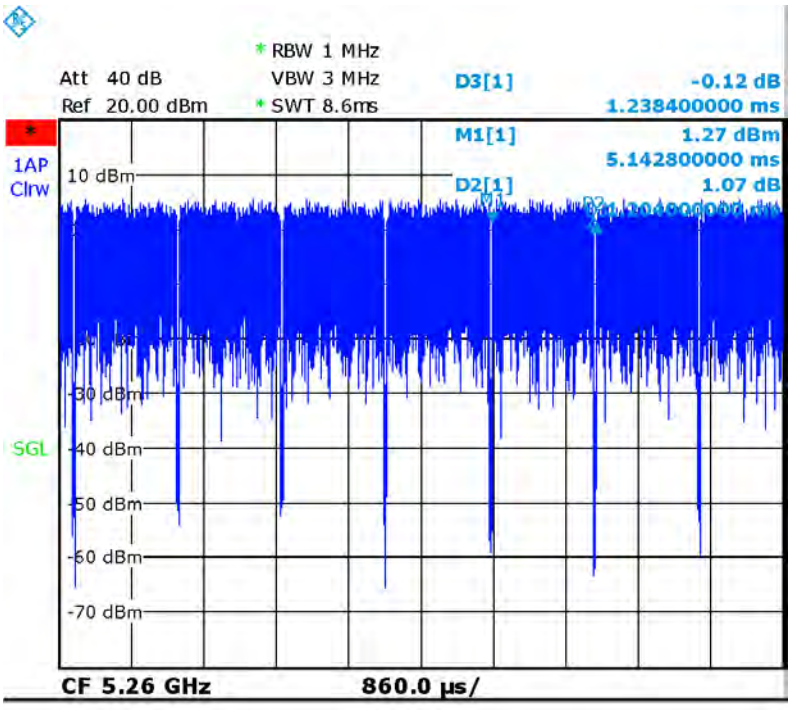
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.					
5260	52	Left	100%	97.22%	**0.35**	**0.35**

Table 14.4-20: SAR Values (WLAN - Body)-ANT10

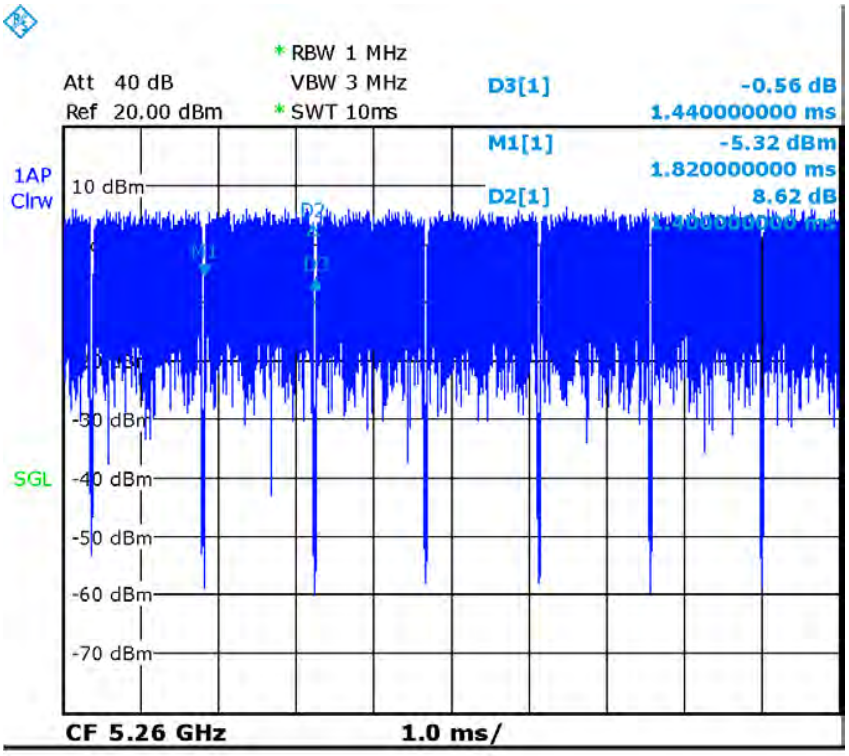
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.					
5260	52	Top	100%	97.22%	**0.67**	**0.69**

Table 14.4-20: SAR Values (WLAN - Body)-MIMO

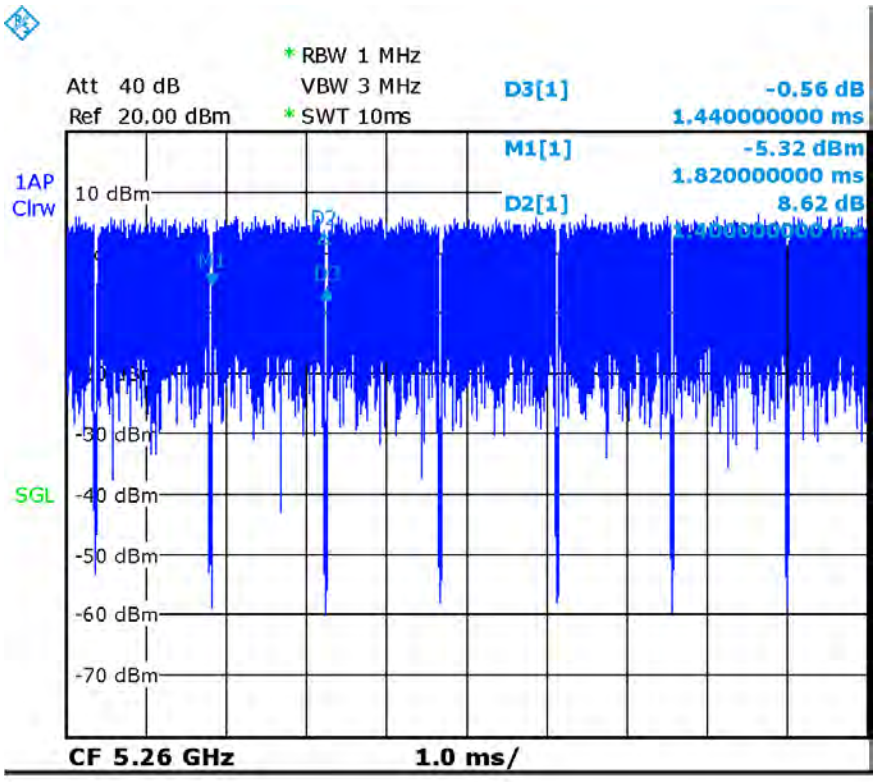
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.					
5260	52	Top	100%	97.22%	**0.45**	**0.46**



Picture 14.5 The plot of duty factor for Body ANT9



Picture 14.5 The plot of duty factor for Body ANT9



Picture 14.6 The plot of duty factor for Body ANT9

15.5 SAR results for Fast BT

Table 15.5-1: SAR Values (Bluetooth - Body)

Ambient Temperature: 22.2 ℃ Liquid Temperature: 22 ℃										
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch	MHz									
39	2441	Rear	/	12.73	13	< 0.01	**< 0.01**	< 0.01	**< 0.01**	/
39	2441	Top	/	12.73	13	< 0.01	**< 0.01**	< 0.01	**< 0.01**	/

Note1: The distance between the EUT and the phantom bottom is 0mm

15.6 SAR results for SUB6G

Table 15.6-1: SAR Values (NR5G n2-Body)

Ambient Temperature: 22.2 ℃ Liquid Temperature: 22 ℃										
Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
381500	19107.5	Rear	/	10.19	11.00	0.198	**0.24**	0.489	**0.59**	0.11
381500	19107.5	Top	/	10.19	11.00	0.204	**0.25**	0.508	**0.61**	-0.12
381500	19107.5	Rear	Note1 Fig.19	20.31	20.50	0.325	**0.34**	0.687	**0.72**	0.17
381500	19107.5	Top	Note2	20.31	20.50	0.259	**0.27**	0.510	**0.53**	-0.17
381500	19107.5	Rear	Note1 CP-OFDM	20.19	20.50	0.217	**0.23**	0.428	**0.46**	0.13

Note: The distance between the EUT and the phantom bottom is 0mm
Note1: The distance between the EUT and the phantom bottom is 11mm
Note2: The distance between the EUT and the phantom bottom is 17mm

Table 14.6-2: SAR Values (NR5G n5-Body)

Ambient Temperature: 22.2 °C Liquid Temperature: 22 °C										
Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
165300	826.5	Rear	/	18.99	20.00	0.240	**0.30**	0.499	**0.63**	-0.06
165300	826.5	Top	/	18.99	20.00	0.223	**0.28**	0.474	**0.60**	-0.13
165300	826.5	Rear	Note1 Fig.20	22.49	23.00	0.343	**0.39**	0.587	**0.66**	-0.08
165300	826.5	Top	Note2	22.49	23.00	0.083	**0.09**	0.134	**0.15**	-0.15
165300	826.5	Rear	Note1 CP-OFDM	22.40	23.00	0.282	**0.32**	0.463	**0.53**	-0.20

Note: The distance between the EUT and the phantom bottom is 0mm

Note1: The distance between the EUT and the phantom bottom is 11mm

Note2: The distance between the EUT and the phantom bottom is 17mm

Table 14.6-2: SAR Values (NR5G n66-Body)

Ambient Temperature: 22.2 °C Liquid Temperature: 22 °C										
Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
355500	1777.5	Rear	Fig.21	10.08	11.50	0.188	**0.26**	0.450	**0.62**	0.18
355500	1777.5	Top	/	10.08	11.50	0.166	**0.23**	0.404	**0.56**	-0.11
355500	1777.5	Rear	Note1	17.49	18.50	0.163	**0.21**	0.330	**0.42**	0.12
355500	1777.5	Top	Note2	17.49	18.50	0.069	**0.09**	0.121	**0.15**	0.09
355500	1777.5	Rear	CP-OFDM	10.04	11.50	0.142	**0.20**	0.384	**0.54**	0.09

Note: The distance between the EUT and the phantom bottom is 0mm

Note1: The distance between the EUT and the phantom bottom is 11mm

Note2: The distance between the EUT and the phantom bottom is 17mm

Table 14.6-4: SAR Values (NR5G n77-Body)

Ambient Temperature: 22.2 °C Liquid Temperature: 22 °C										
Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
661200	3918	Rear	/	6.42	8.00	0.034	**0.05**	0.117	**0.17**	-0.11
661200	3918	Top	Fig.22	6.42	8.00	0.114	**0.16**	0.436	**0.63**	0.17
661200	3918	Rear	Note1	18.82	19.50	0.162	**0.19**	0.371	**0.43**	0.16
661200	3918	Top	Note2	18.82	19.50	0.189	**0.22**	0.415	**0.49**	0.08
661200	3918	Rear	CP-OFDM	6.40	8.00	0.101	**0.15**	0.417	**0.60**	0.09

Note: The distance between the EUT and the phantom bottom is 0mm

Note1: The distance between the EUT and the phantom bottom is 11mm

Note2: The distance between the EUT and the phantom bottom is 17mm

Table 14.6-5: SAR Values (NR5G n77- Body) – Scaled Reported SAR

Frequency		Test Position	D (mm)	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.						
661200	3918	Top	0	71.43%	71.43%	**0.63**	**0.63**

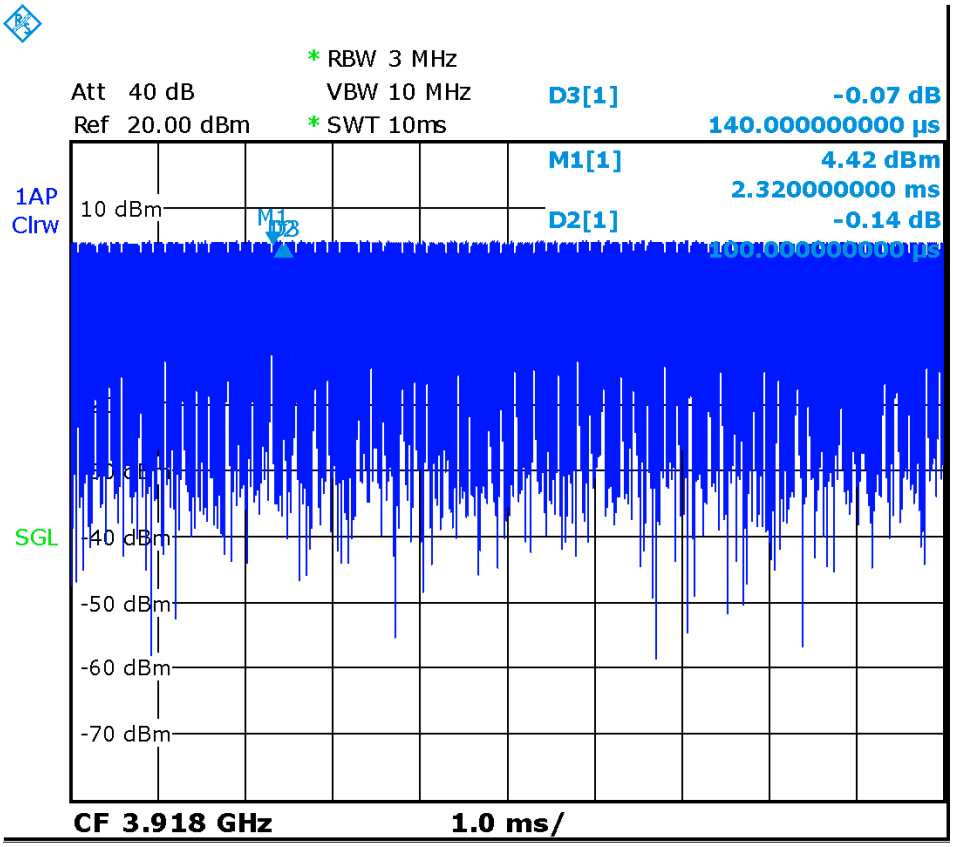


Table 14.6-6: SAR Values (LTE Band2 – Body ANT1)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
19100	1900	1RB_Low	Rear	Note1	19.17	20.00	0.197	**0.24**	0.354	**0.43**	0.06
19100	1900	1RB_Low	Right	Note2	19.17	20.00	0.113	**0.14**	0.199	**0.24**	-0.02
19100	1900	1RB_Low	Top	Note3	19.17	20.00	0.071	**0.09**	0.132	**0.16**	0.06
19100	1900	50RB_Mid	Rear	Note1	19.35	20.00	0.202	**0.23**	0.363	**0.42**	0.05
19100	1900	50RB_Mid	Right	Note2	19.35	20.00	0.125	**0.15**	0.227	**0.26**	-0.07
19100	1900	50RB_Mid	Top	Note3	19.35	20.00	0.077	**0.09**	0.141	**0.16**	-0.08
19100	1900	1RB_Low	Rear	/	11.05	12.00	0.175	**0.22**	0.368	**0.46**	0.19
19100	1900	1RB_Low	Right	/	11.05	12.00	0.126	**0.16**	0.250	**0.31**	-0.14
19100	1900	1RB_Low	Top	Fig.23	11.05	12.00	0.168	**0.21**	0.416	**0.52**	0.14
19100	1900	50RB_Mid	Rear	/	11.24	12.00	0.187	**0.22**	0.360	**0.43**	0.11
19100	1900	50RB_Mid	Right	/	11.24	12.00	0.126	**0.15**	0.262	**0.31**	0.12
19100	1900	50RB_Mid	Top	/	11.24	12.00	0.165	**0.20**	0.407	**0.48**	0.16

Note: The distance between the EUT and the phantom bottom is 0mm.

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The distance between the EUT and the phantom bottom is 13mm.

Note3: The distance between the EUT and the phantom bottom is 15mm.

Note4: The LTE mode is QPSK_20MHz.

Note5: The data is used for ENDC

Table 14.6-7: SAR Values (LTE Band66 – Body ANT1)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
132072	1720	1RB_Low	Rear	Note1	16.66	18.00	0.134	**0.18**	0.240	**0.33**	0.14
132072	1720	1RB_Low	Right	Note2	16.66	18.00	0.070	**0.10**	0.121	**0.16**	0.14
132072	1720	1RB_Low	Top	Note3	16.66	18.00	0.069	**0.09**	0.129	**0.18**	0.12
132072	1720	50RB_Low	Rear	Note1	16.80	18.00	0.146	**0.19**	0.265	**0.35**	0.12
132072	1720	50RB_Low	Right	Note2	16.80	18.00	0.070	**0.09**	0.122	**0.16**	-0.14
132072	1720	50RB_Low	Top	Note3	16.80	18.00	0.066	**0.09**	0.122	**0.16**	0.12
132072	1720	1RB_Low	Rear	Fig.24	10.09	11.00	0.184	**0.23**	0.385	**0.47**	0.03
132072	1720	1RB_Low	Right	/	10.09	11.00	0.135	**0.17**	0.307	**0.38**	-0.17
132072	1720	1RB_Low	Top	/	10.09	11.00	0.141	**0.17**	0.335	**0.41**	0.01
132072	1720	50RB_Low	Rear	/	10.15	11.00	0.181	**0.22**	0.364	**0.44**	0.02
132072	1720	50RB_Low	Right		10.15	11.00	0.145	**0.18**	0.327	**0.40**	0.03
132072	1720	50RB_Low	Top		10.15	11.00	0.148	**0.18**	0.345	**0.42**	0.06

Note: The distance between the EUT and the phantom bottom is 0mm.

Note1: The distance between the EUT and the phantom bottom is 10mm.

Note2: The distance between the EUT and the phantom bottom is 13mm.

Note3: The distance between the EUT and the phantom bottom is 15mm.

Note4: The LTE mode is QPSK_20MHz.

Note5: The data is used for ENDC

15 SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps2) through 4) do not apply.

2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

16 Measurement Uncertainty

16.1 Measurement Uncertainty for Normal SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	√3	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	√3	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	√3	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	N	1	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	√3	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	√3	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	√3	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	√3	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	√3	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.4	R	√3	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	√3	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	√3	1	1	0.6	0.6	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	√3	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	√3	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	√3	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	√3	0.6	0.49	1.7	1.4	∞
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521

Combined standard uncertainty	$u_c' = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					9.55	9.43	257
Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$					19.1	18.9	

16.2 Measurement Uncertainty for Normal SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	√3	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	√3	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	√3	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	√3	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	√3	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	√3	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	√3	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	√3	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	√3	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.8	R	√3	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	√3	1	1	3.9	3.9	∞
13	Post-processing	B	4.0	R	√3	1	1	2.3	2.3	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	√3	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	√3	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	√3	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity	B	5.0	R	√3	0.6	0.49	1.7	1.4	∞

	(target)									
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.7	10.6	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						21.4	21.1	

16.3 Measurement Uncertainty for Fast SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	7.0	R	$\sqrt{3}$	1	1	4.0	4.0	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞

19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.4	10.3	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						20.8	20.6	

16.4 Measurement Uncertainty for Fast SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	14.0	R	$\sqrt{3}$	1	1	8.1	8.1	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71

16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						13.5	13.4	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						27.0	26.8	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 14, 2021	One year
02	Power meter	NRVD	102083	October 23，2020	One year
03	Power sensor	NRV-Z5	100542		
04	Signal Generator	E4438C	MY49071430	February 1, 2021	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	CMW500	159890	January 25 2021	One year
07	BTS	CMW500	159889	January 13 2021	One year
08	E-field Probe	SPEAG EX3DV4	7600	November 30，2020	One year
09	DAE	SPEAG DAE4	1525	September 2, 2020	One year
10	Dipole Validation Kit	SPEAG D750V3	1132	December 23，2020	One year
11	Dipole Validation Kit	SPEAG D835V2	4d120	June 23, 2021	One year
12	Dipole Validation Kit	SPEAG D1750V2	1023	June 23, 2021	One year
13	Dipole Validation Kit	SPEAG D1900V2	5d142	June 25, 2021	One year
14	Dipole Validation Kit	SPEAG D2450V2	869	June 22, 2021	One year
15	Dipole Validation Kit	SPEAG D2600V2	1012	July 21,2020	One year
16	Dipole Validation Kit	SPEAG D3700V2	1074	March 23, 2021	One year
17	Dipole Validation Kit	SPEAG D3900V2	1045	March 24, 2021	One year
18	Dipole Validation Kit	SPEAG D5GHzV2	1203	December 22, 2020	One year

END OF REPORT BODY

ANNEX A Graph Results

GSM850_ CH128 Rear
Date: 7/13/2021
Electronics: DAE4 Sn1525
Medium: H835
Medium parameters used: f = 824.2 MHz; σ = 0.871 S/m; εr = 44.948; ρ = 1000 kg/m3
Ambient Temperature:22.9oC Liquid Temperature: 22.5oC
Communication System: GSM850 Frequency: 824.2 MHz Duty Cycle: 1:8.30042
Probe: EX3DV4 - SN7600 ConvF(10.88, 10.88, 10.88)

Area Scan (131x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.762 W/kg

Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.269 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.513 W/kg; SAR(10 g) = 0.254 W/kg
Maximum value of SAR (measured) = 1.03 W/kg

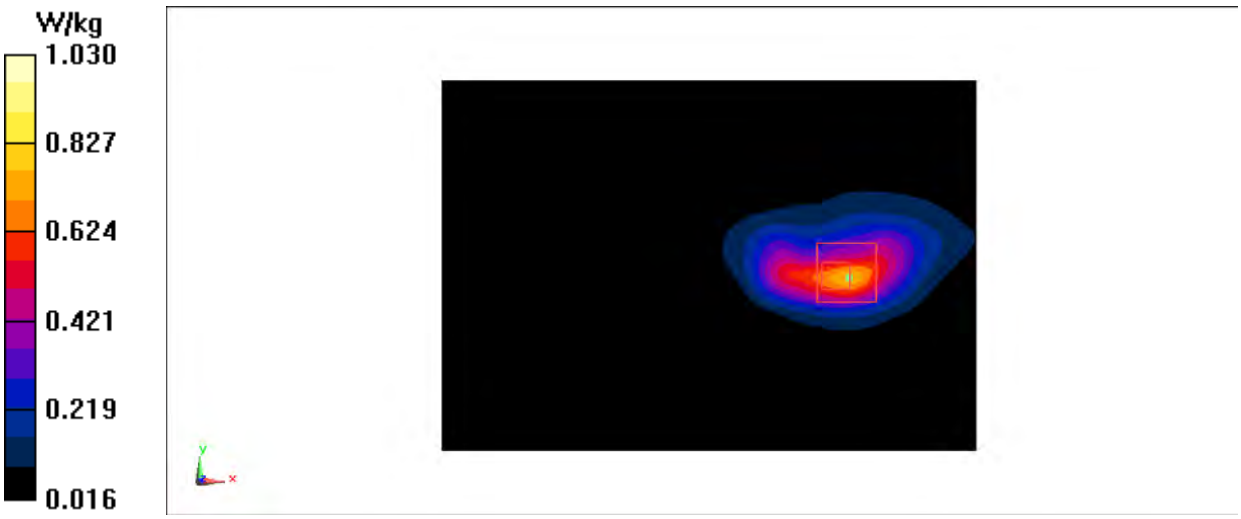


Fig A.1

PCS1900_CH810 Rear
Date: 7/20/2021
Electronics: DAE4 Sn1525
Medium: H1900
Medium parameters used: f = 1880 MHz; σ = 1.472 S/m; εr = 42.028; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.6oC
Communication System: GSM1900 (PCS) Frequency: 1880 MHz Duty Cycle: 1:8.30042
Probe: EX3DV4 - SN7600 ConvF(8.7, 8.7, 8.7)

Area Scan (131x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.573 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.202 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.684 W/kg
SAR(1 g) = 0.366 W/kg; SAR(10 g) = 0.183 W/kg
Maximum value of SAR (measured) = 0.524 W/kg

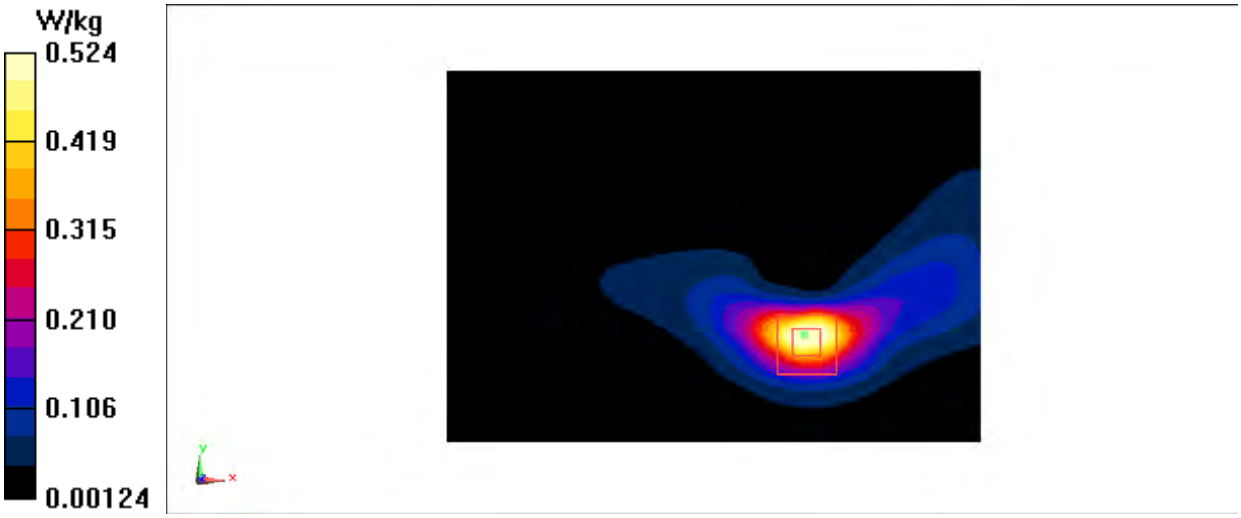


Fig A.2

WCDMA1900-BII_CH9538 Rear
Date: 7/20/2021
Electronics: DAE4 Sn1525
Medium: H1900
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.498 S/m; εr = 41.972; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.6oC
Communication System: WCDMA1900(B2) Frequency: 1907.6 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(8.7, 8.7, 8.7)

Area Scan (131x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.895 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.66 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.436 W/kg; SAR(10 g) = 0.174 W/kg
Maximum value of SAR (measured) = 0.859 W/kg

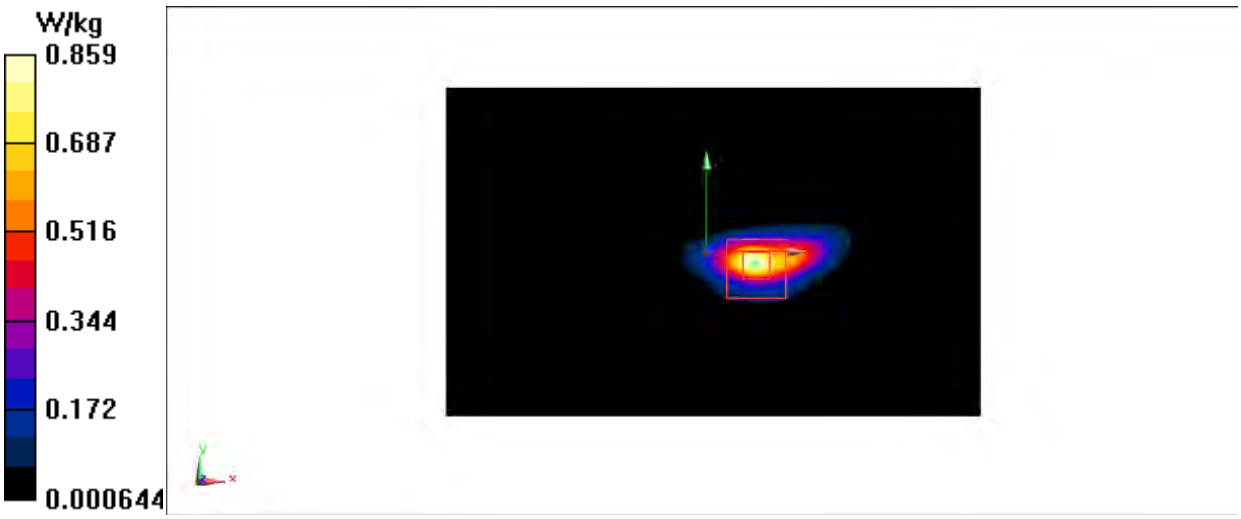


Fig A.3

WCDMA850-BV_CH4132 Rear
Date: 7/13/2021
Electronics: DAE4 Sn1525
Medium: H835
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.879 S/m; εr = 44.84; ρ = 1000 kg/m3
Ambient Temperature:22.9oC Liquid Temperature: 22.5oC
Communication System: WCDMA Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(10.88, 10.88, 10.88)

Area Scan (161x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.879 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.42 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.672 W/kg; SAR(10 g) = 0.412 W/kg
Maximum value of SAR (measured) = 0.926 W/kg

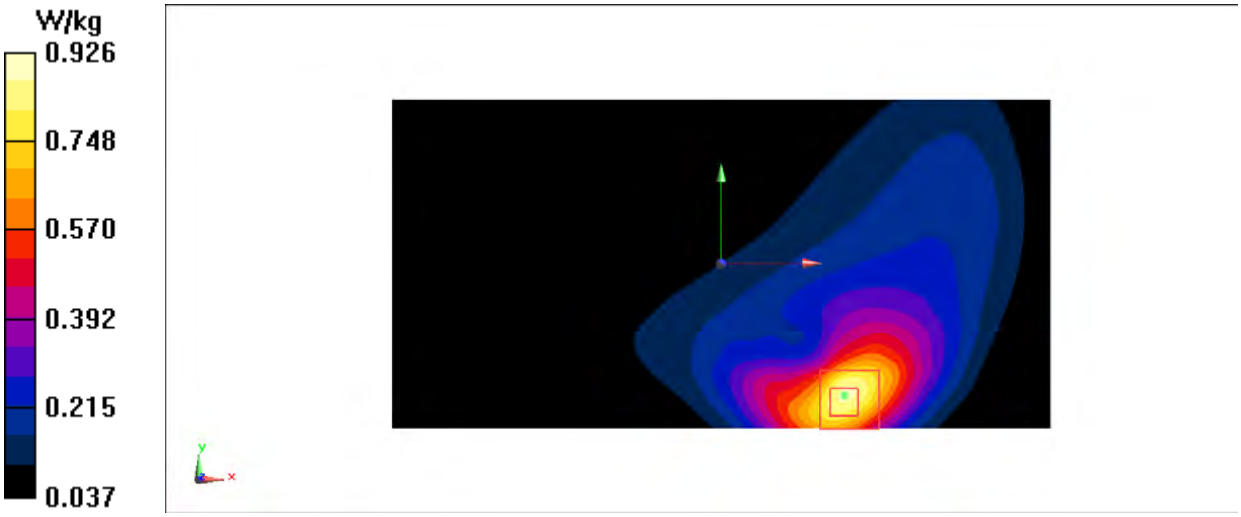


Fig A.4

LTE1900-FDD2_CH19100 Rear
Date: 7/20/2021
Electronics: DAE4 Sn1525
Medium: H1900
Medium parameters used: f = 1900 MHz; σ = 1.49 S/m; εr = 41.983; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.6oC
Communication System: LTE Band2 Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(8.7, 8.7, 8.7)

Area Scan (131x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.857 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.998 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.679 W/kg; SAR(10 g) = 0.332 W/kg
Maximum value of SAR (measured) = 1.02 W/kg

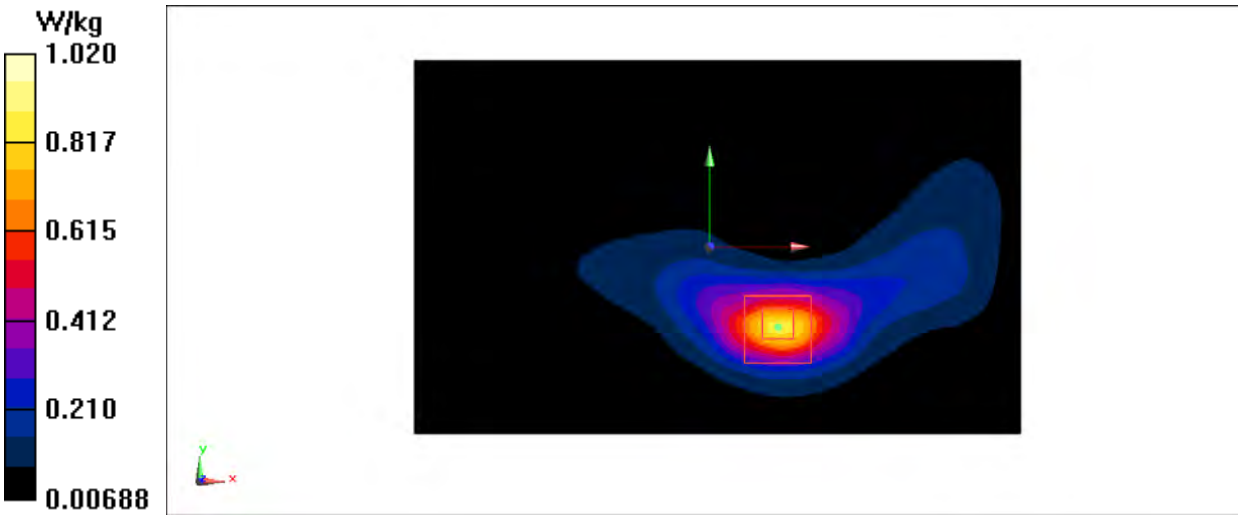


Fig A.5

LTE1750-FDD4_CH20300 Top
Date: 7/9/2021
Electronics: DAE4 Sn1525
Medium: H1750
Medium parameters used: f = 1745 MHz; σ = 1.387 S/m; εr = 42.276; ρ = 1000 kg/m3
Ambient Temperature:22.5oC Liquid Temperature: 22.5oC
Communication System: LTE Band4 Frequency: 1745 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(9.01, 9.01, 9.01)

Area Scan (161x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.942 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.157 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.505 W/kg; SAR(10 g) = 0.209 W/kg
Maximum value of SAR (measured) = 0.967 W/kg

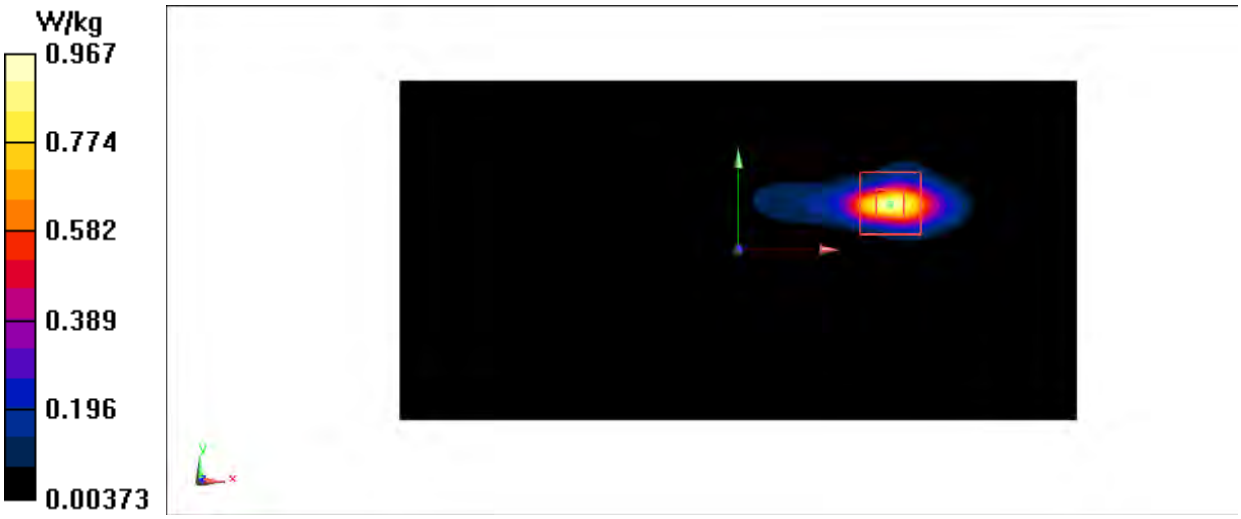


Fig A.6

LTE850-FDD5_CH20525 Rear
Date: 7/13/2021
Electronics: DAE4 Sn1525
Medium: H835
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.875 S/m; εr = 44.9; ρ = 1000 kg/m3
Ambient Temperature:22.9oC Liquid Temperature: 22.5oC
Communication System: LTE Band5 Frequency: 836.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(10.88, 10.88, 10.88)

Area Scan (161x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.828 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.28 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.619 W/kg; SAR(10 g) = 0.376 W/kg
Maximum value of SAR (measured) = 0.852 W/kg

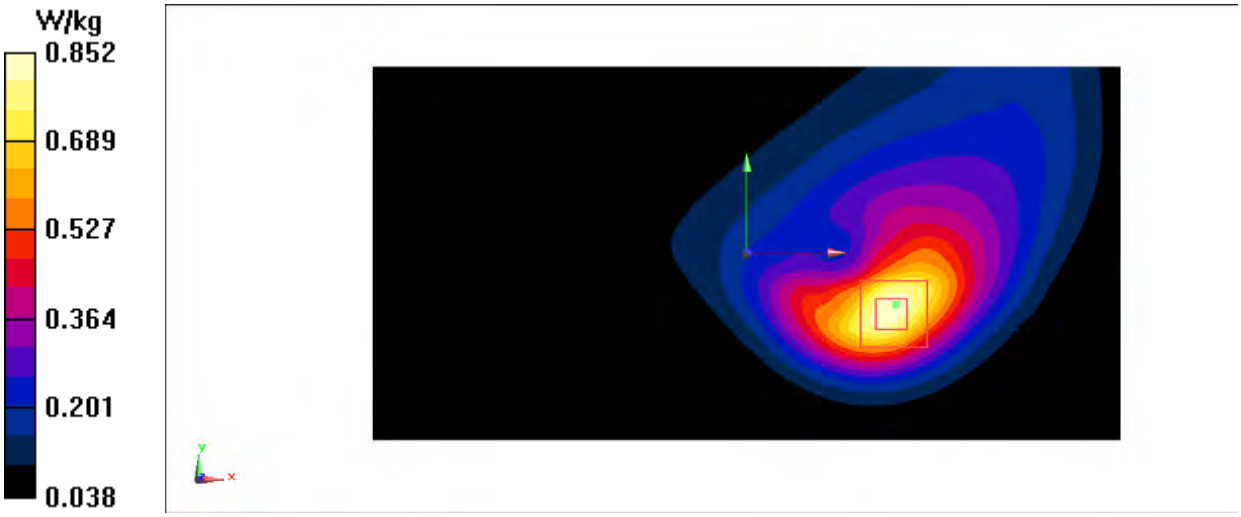


Fig A.7

LTE2500-FDD7_CH21100 Rear
Date: 7/17/2021
Electronics: DAE4 Sn1525
Medium: H2600
Medium parameters used: f = 2560 MHz; σ = 2.029 S/m; εr = 41.21; ρ = 1000 kg/m3
Ambient Temperature:22.6oC Liquid Temperature: 22.2oC
Communication System: LTE Band7 Frequency: 2560 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(7.67, 7.67, 7.67)

Area Scan (161x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.22 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.363 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 1.69 W/kg
SAR(1 g) = 0.528 W/kg; SAR(10 g) = 0.172 W/kg
Maximum value of SAR (measured) = 1.23 W/kg

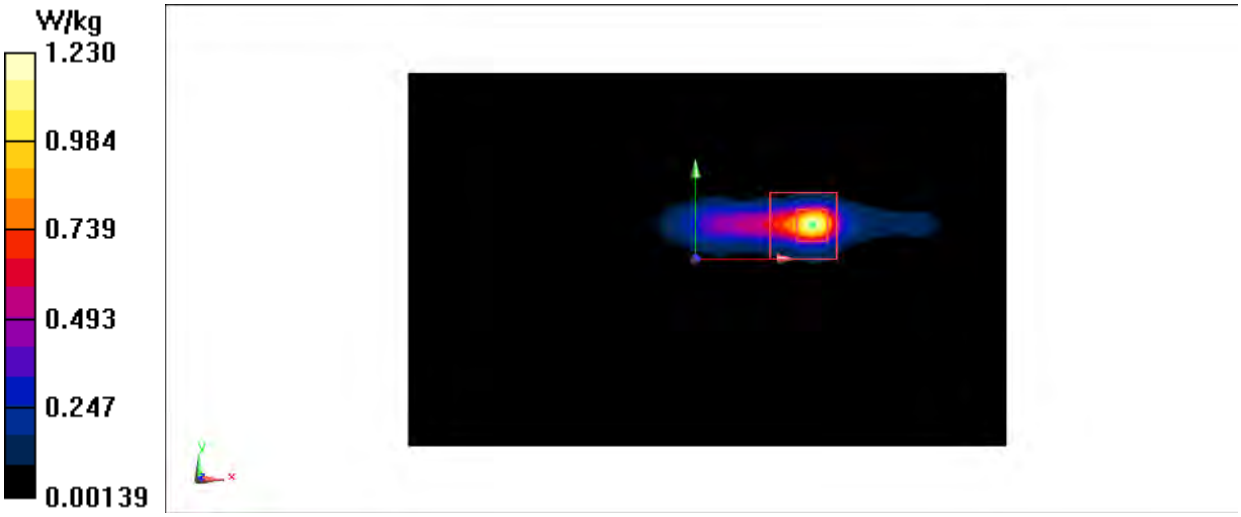


Fig A.8

LTE700-FDD12_CH23060 Rear
Date: 7/8/2021
Electronics: DAE4 Sn1525
Medium: H750
Medium parameters used (interpolated): f = 704 MHz; σ = 0.819 S/m; εr = 45.459; ρ = 1000 kg/m3
Ambient Temperature:23.1oC Liquid Temperature: 22.7oC
Communication System:LTE Band12 Frequency: 704 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(10.88, 10.88, 10.88)

Area Scan (131x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.890 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.28 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.73 W/kg
SAR(1 g) = 0.571 W/kg; SAR(10 g) = 0.272 W/kg
Maximum value of SAR (measured) = 1.20 W/kg

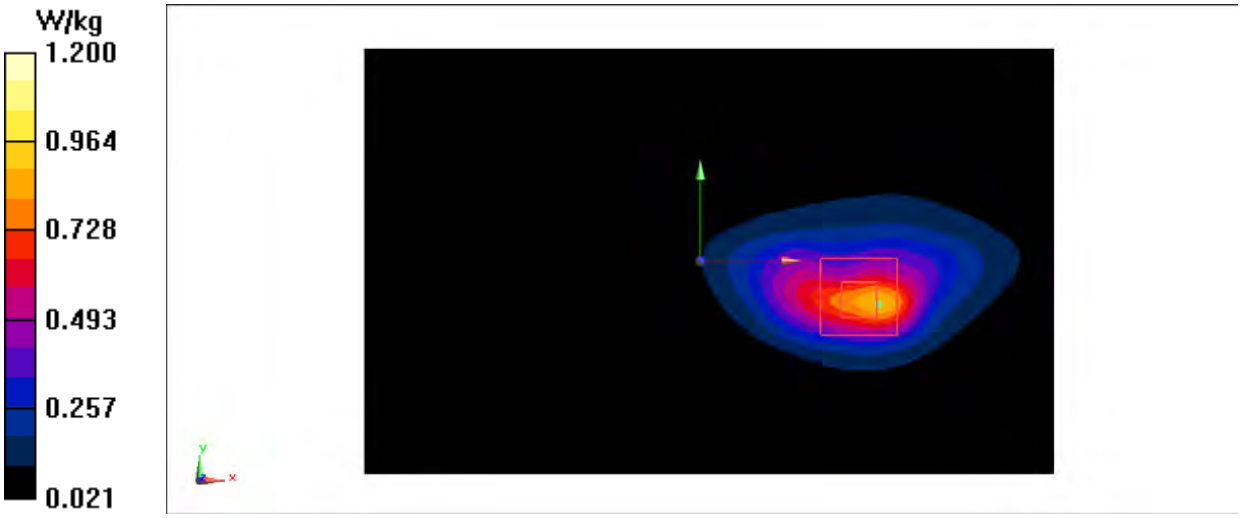


Fig A.9

LTE750-FDD13_CH23230 Rear
Date: 7/8/2021
Electronics: DAE4 Sn1525
Medium: H750
Medium parameters used (interpolated): f = 782 MHz; σ = 0.852 S/m; εr = 45.073; ρ = 1000 kg/m3
Ambient Temperature:23.1oC Liquid Temperature: 22.7oC
Communication System: LTE Band13 Frequency: 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(10.88, 10.88, 10.88)

Area Scan (131x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.20 W/kg

Zoom Scan (7x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.342 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 0.623 W/kg; SAR(10 g) = 0.306 W/kg
Maximum value of SAR (measured) = 1.31 W/kg

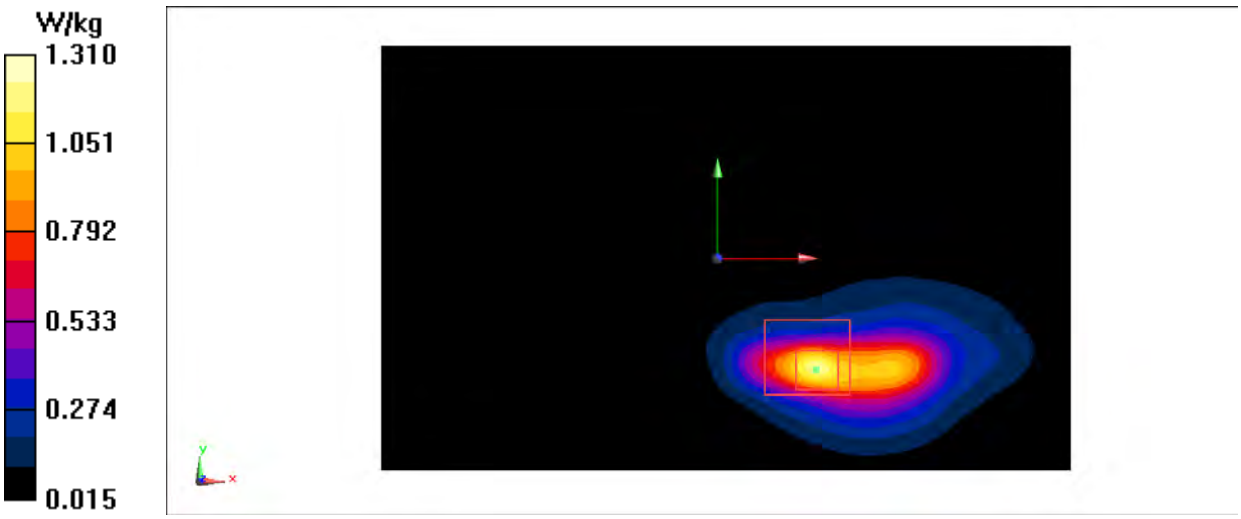


Fig A.10

LTE3700-FDD48_CH55990 Top
Date: 7/18/2021
Electronics: DAE4 Sn1525
Medium: H3700
Medium parameters used: f = 3625 MHz; σ = 2.965 S/m; ε_r = 38.084; ρ = 1000 kg/m^3
Ambient Temperature:22.9ºC Liquid Temperature: 22.7ºC
Communication System: LTE Band48 Frequency: 3625 MHz Duty Cycle: 1:1.5787
Probe: EX3DV4 - SN7600 ConvF(6.77, 6.77, 6.77)

Area Scan (161x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.62 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.256 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.488 W/kg; SAR(10 g) = 0.134 W/kg
Maximum value of SAR (measured) = 1.16 W/kg

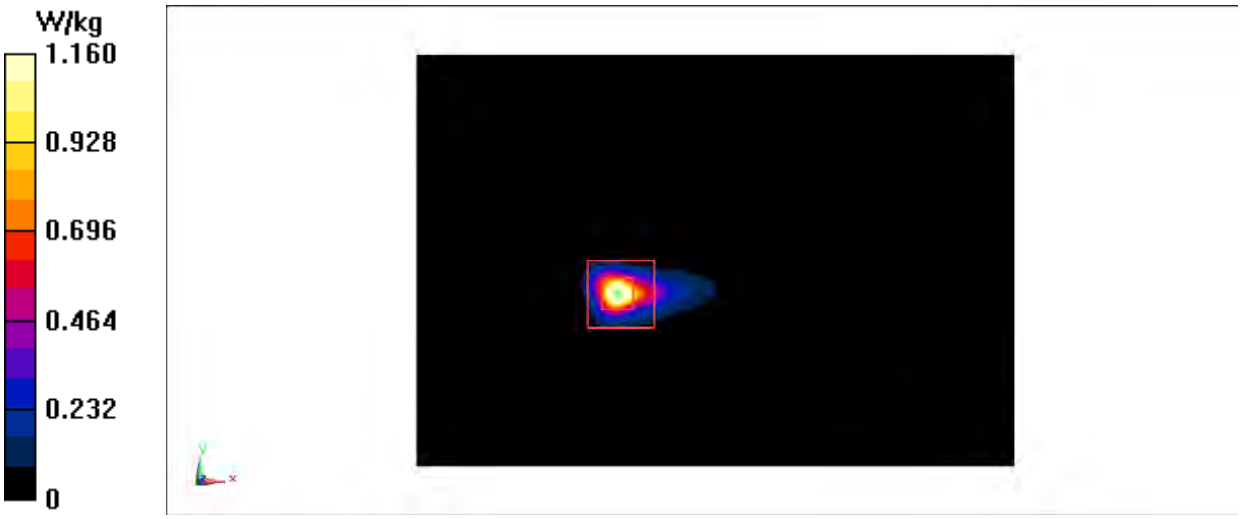


Fig A.11

LTE1750-FDD66_CH132572 Top
Date: 7/9/2021
Electronics: DAE4 Sn1525
Medium: H1750
Medium parameters used: f = 1770 MHz; σ = 1.4 S/m; εr = 42.172; ρ = 1000 kg/m3
Ambient Temperature:22.5oC Liquid Temperature: 22.5oC
Communication System: LTE Band66 Frequency: 1770 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(9.01, 9.01, 9.01)

Area Scan (131x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.808 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.666 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.530 W/kg; SAR(10 g) = 0.217 W/kg
Maximum value of SAR (measured) = 1.01 W/kg

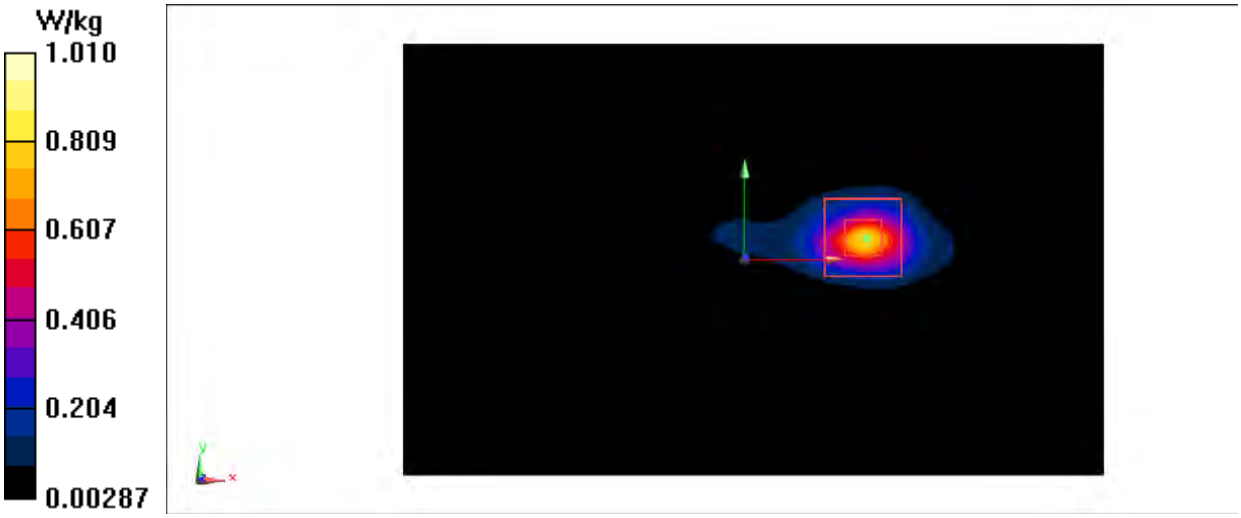


Fig A.12

WLAN2450_CH6 Left ANT9
Date: 6/18/2021
Electronics: DAE4 Sn1525
Medium: H2450
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.915 S/m; εr = 40.082; ρ = 1000 kg/m3
Ambient Temperature:22.3oC Liquid Temperature: 22.4oC
Communication System: WIFI 2450 Frequency: 2437 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(7.79, 7.79, 7.79)

Area Scan (151x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.633 W/kg

Zoom Scan (12x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.645 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.763 W/kg
SAR(1 g) = 0.390 W/kg; SAR(10 g) = 0.199 W/kg
Maximum value of SAR (measured) = 0.599 W/kg

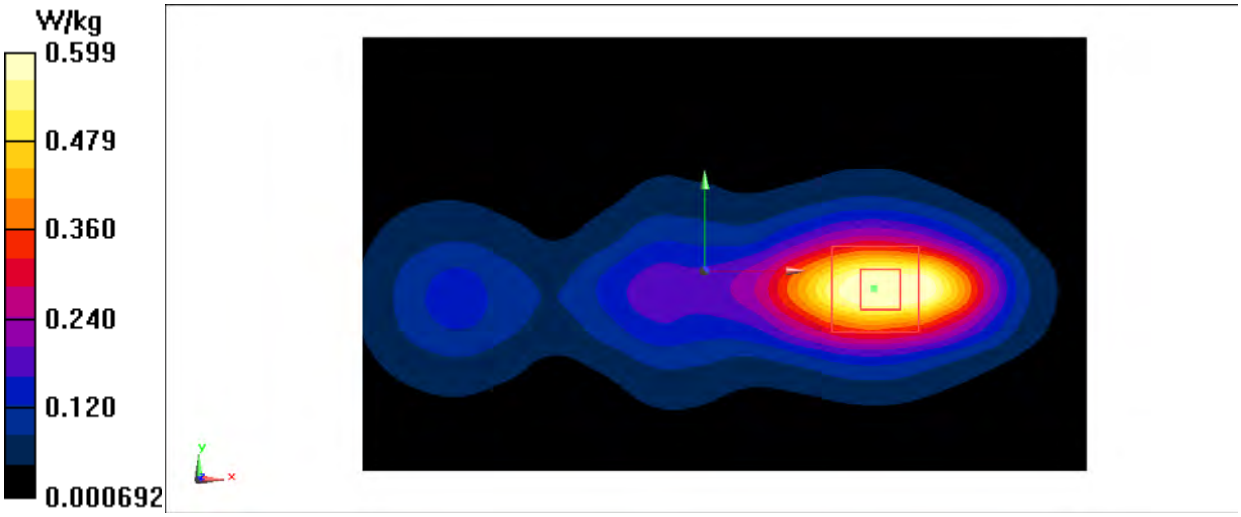


Fig A.13

WLAN2450_CH6 Rear ANT10
Date: 6/18/2021
Electronics: DAE4 Sn1525
Medium: H2450
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.915 S/m; εr = 40.082; ρ = 1000 kg/m3
Ambient Temperature:22.3oC Liquid Temperature: 22.4oC
Communication System: WIFI 2450 Frequency: 2437 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(7.79, 7.79, 7.79)

Area Scan (151x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.718 W/kg

Zoom Scan (12x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.129 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.921 W/kg
SAR(1 g) = 0.362 W/kg; SAR(10 g) = 0.165 W/kg
Maximum value of SAR (measured) = 0.654 W/kg

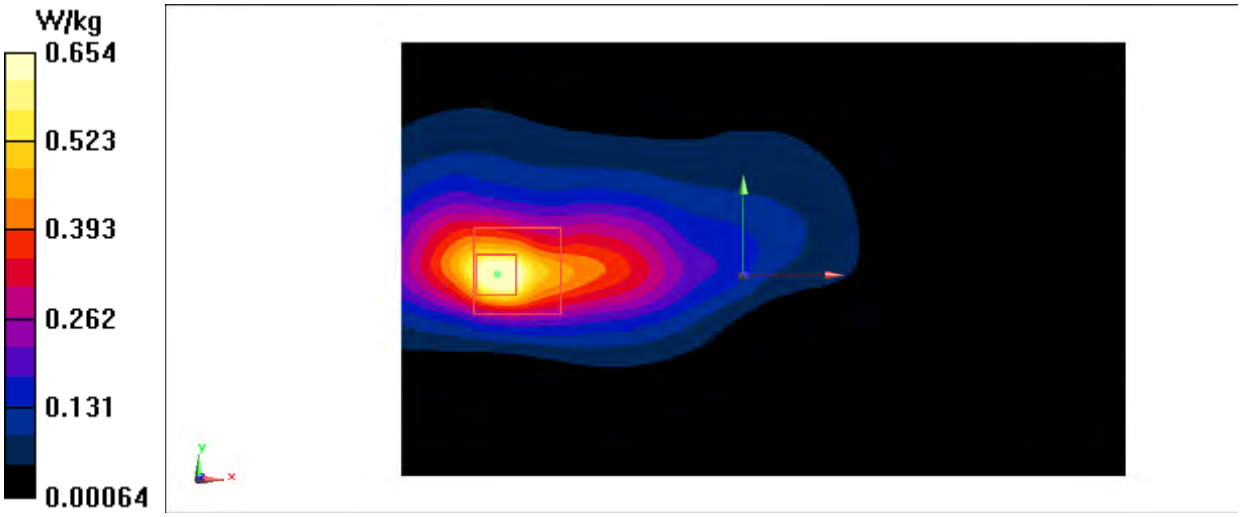


Fig A.14

WLAN2450_CH6 Top MIMO
Date: 7/1/2021
Electronics: DAE4 Sn1525
Medium: H2450
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.929 S/m; εr = 41.498; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.3oC
Communication System: WIFI 2450 Frequency: 2437 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(7.79, 7.79, 7.79)

Area Scan (151x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.626 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.40 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.714 W/kg
SAR(1 g) = 0.380 W/kg; SAR(10 g) = 0.198 W/kg
Maximum value of SAR (measured) = 0.587 W/kg

Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.40 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.613 W/kg
SAR(1 g) = 0.319 W/kg; SAR(10 g) = 0.162 W/kg
Maximum value of SAR (measured) = 0.501 W/kg

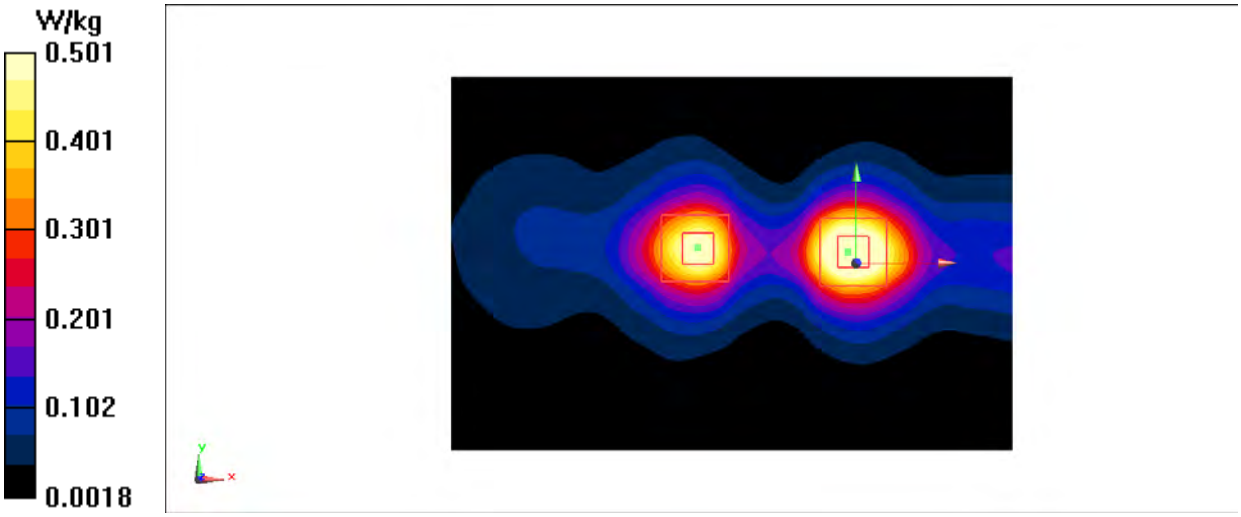


Fig A.15

WLAN5G_CH52 Left ANT9
Date: 6/24/2021
Electronics: DAE4 Sn1525
Medium: H5G
Medium parameters used: f = 5260 MHz; σ = 4.914 S/m; εr = 35.051; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.3oC
Communication System: WLAN 5G Frequency: 5260 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(5.68, 5.68, 5.68)

Area Scan (201x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.748 W/kg

Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 11.06 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.68 W/kg
SAR(1 g) = 0.276 W/kg; SAR(10 g) = 0.068 W/kg
Maximum value of SAR (measured) = 0.804 W/kg

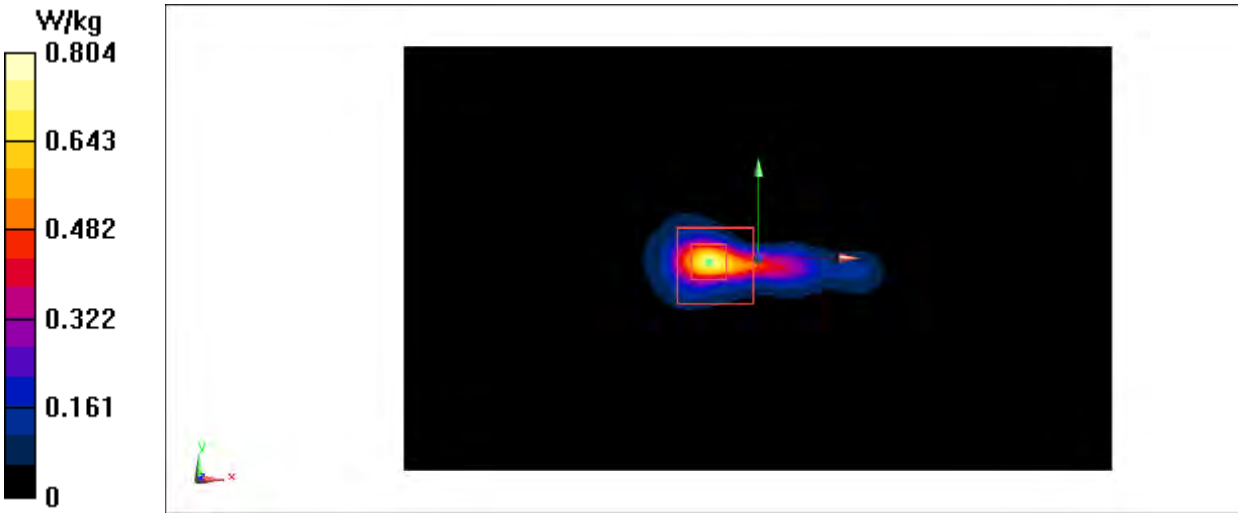


Fig A.16

WLAN5G_CH52 Top ANT10
Date: 6/24/2021
Electronics: DAE4 Sn1525
Medium: H5G
Medium parameters used: f = 5260 MHz; σ = 4.914 S/m; εr = 35.051; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.3oC
Communication System: WLAN 5G Frequency: 5260 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(5.68, 5.68, 5.68)

Area Scan (201x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.36 W/kg

Zoom Scan (10x10x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 10.80 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 3.22 W/kg
SAR(1 g) = 0.511 W/kg; SAR(10 g) = 0.103 W/kg
Maximum value of SAR (measured) = 1.61 W/kg

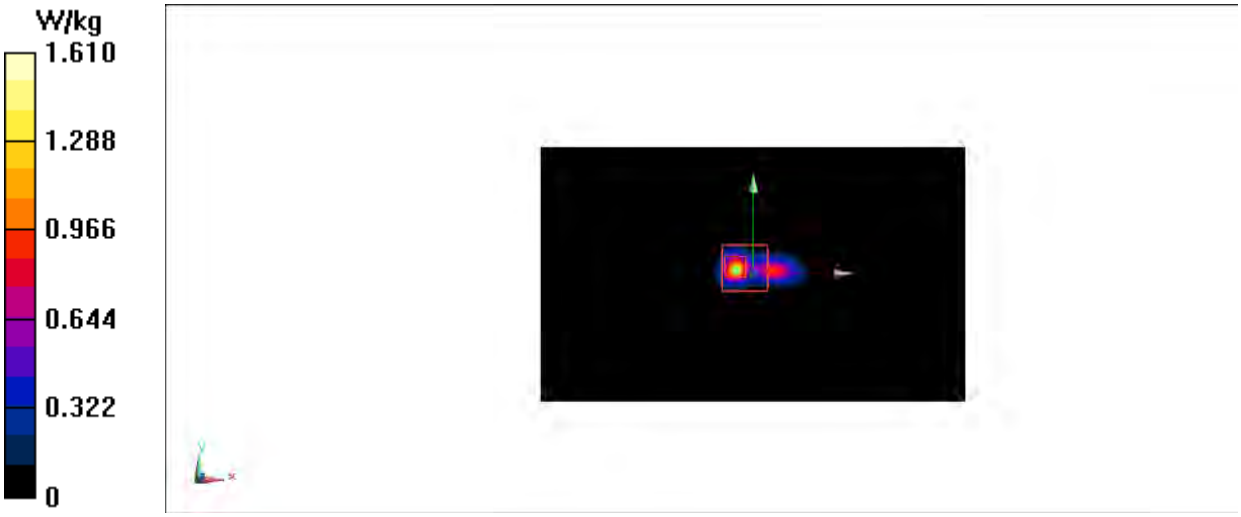


Fig A.17

WLAN5G_CH52 Top MIMO
Date: 6/24/2021
Electronics: DAE4 Sn1525
Medium: H5G
Medium parameters used: f = 5260 MHz; σ = 4.914 S/m; εr = 35.051; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.3oC
Communication System: WLAN 5G Frequency: 5260 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(5.68, 5.68, 5.68)

Area Scan (181x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.10 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 13.39 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 2.45 W/kg
SAR(1 g) = 0.386 W/kg; SAR(10 g) = 0.078 W/kg
Maximum value of SAR (measured) = 1.17 W/kg

Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 13.39 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 1.65 W/kg
SAR(1 g) = 0.320 W/kg; SAR(10 g) = 0.061 W/kg
Maximum value of SAR (measured) = 0.911 W/kg

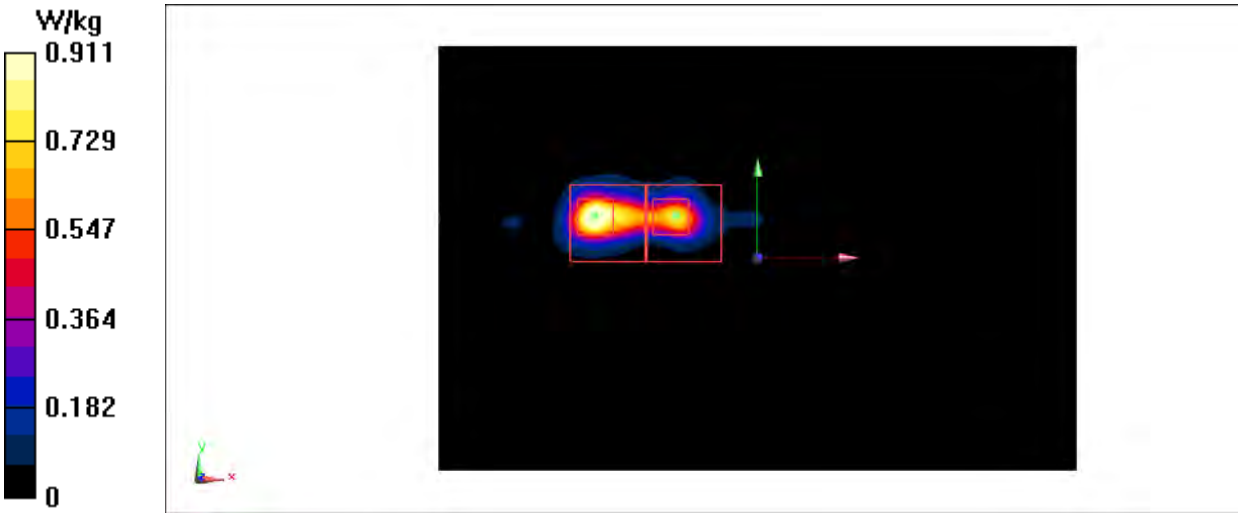


Fig A.18

n2_CH381500 Rear
Date: 7/20/2021
Electronics: DAE4 Sn1525
Medium: H1900
Medium parameters used (interpolated): f = 1907.5 MHz; σ = 1.498 S/m; εr = 41.972; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.6oC
Communication System: 5G N2 Frequency: 1907.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(8.7, 8.7, 8.7)

Area Scan (131x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.945 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.09 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 1.37 W/kg
SAR(1 g) = 0.687 W/kg; SAR(10 g) = 0.325 W/kg
Maximum value of SAR (measured) = 0.957 W/kg

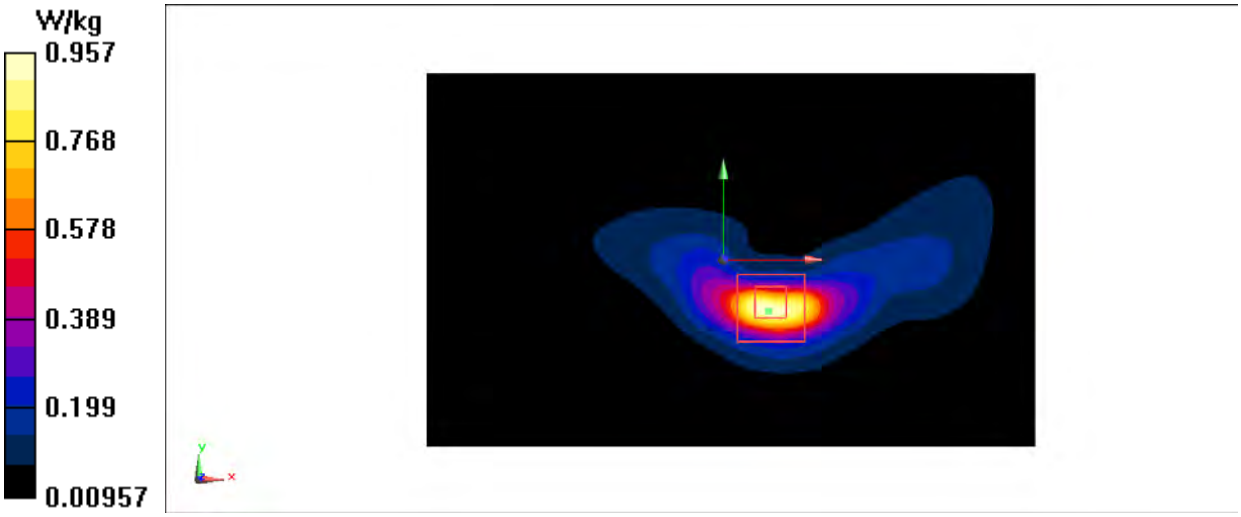


Fig A.19

N5_CH165300 Rear
Date: 7/13/2021
Electronics: DAE4 Sn1525
Medium: H835
Medium parameters used (interpolated): f = 826.5 MHz; σ = 0.871 S/m; εr = 44.941; ρ = 1000 kg/m3
Ambient Temperature:22.9oC Liquid Temperature: 22.5oC
Communication System: 5G N5 Frequency: 826.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(10.88, 10.88, 10.88)

Area Scan (131x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.879 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.92 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.587 W/kg; SAR(10 g) = 0.343 W/kg
Maximum value of SAR (measured) = 0.871 W/kg

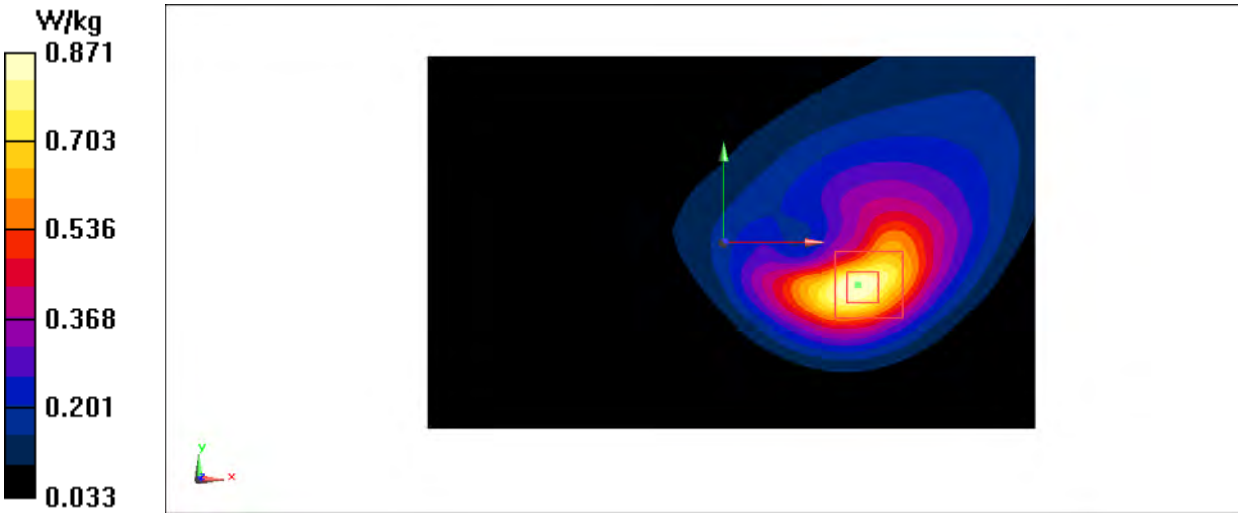


Fig A.20

N66_CH355500 Rear
Date: 7/9/2021
Electronics: DAE4 Sn1525
Medium: H1750
Medium parameters used (interpolated): f = 1777.5 MHz; σ = 1.405 S/m; εr = 42.152; ρ = 1000 kg/m3
Ambient Temperature:22.5oC Liquid Temperature: 22.5oC
Communication System: N66 Frequency: 1777.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(9.01, 9.01, 9.01)

Area Scan (131x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.693 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.516 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.450 W/kg; SAR(10 g) = 0.188 W/kg
Maximum value of SAR (measured) = 0.830 W/kg

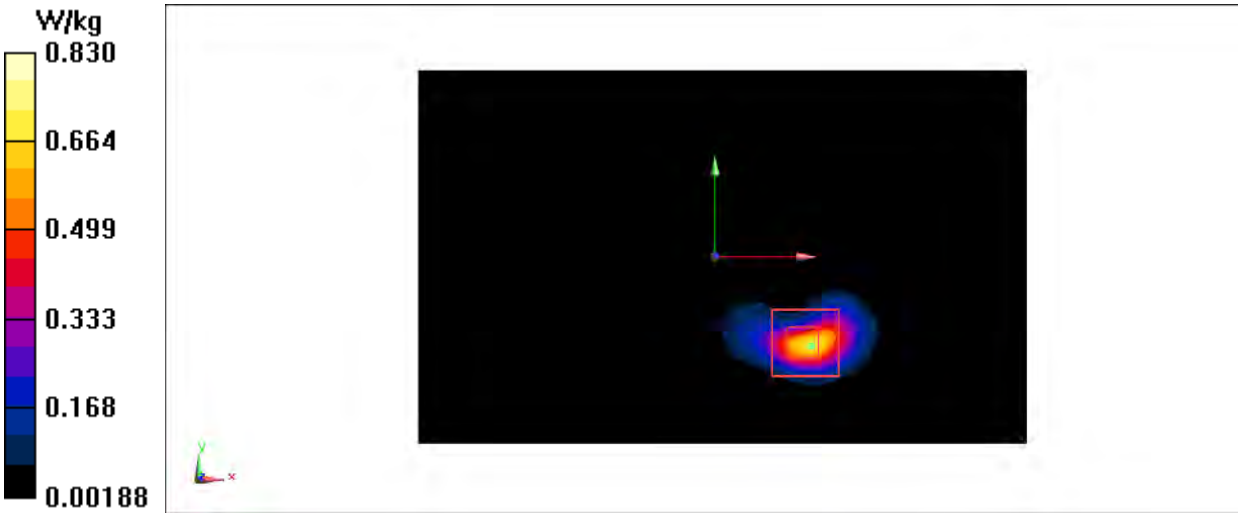


Fig A.21

N77_CH661200 Top
Date: 7/17/2021
Electronics: DAE4 Sn1525
Medium: H3900
Medium parameters used (interpolated): f = 3918 MHz; σ = 3.243 S/m; εr = 37.618; ρ = 1000 kg/m3
Ambient Temperature:23oC Liquid Temperature: 22.5oC
Communication System: N77 Frequency: 3918 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(6.85, 6.85, 6.85)

Area Scan (151x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.05 W/kg

Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 5.959 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 0.436 W/kg; SAR(10 g) = 0.114 W/kg
Maximum value of SAR (measured) = 1.01 W/kg

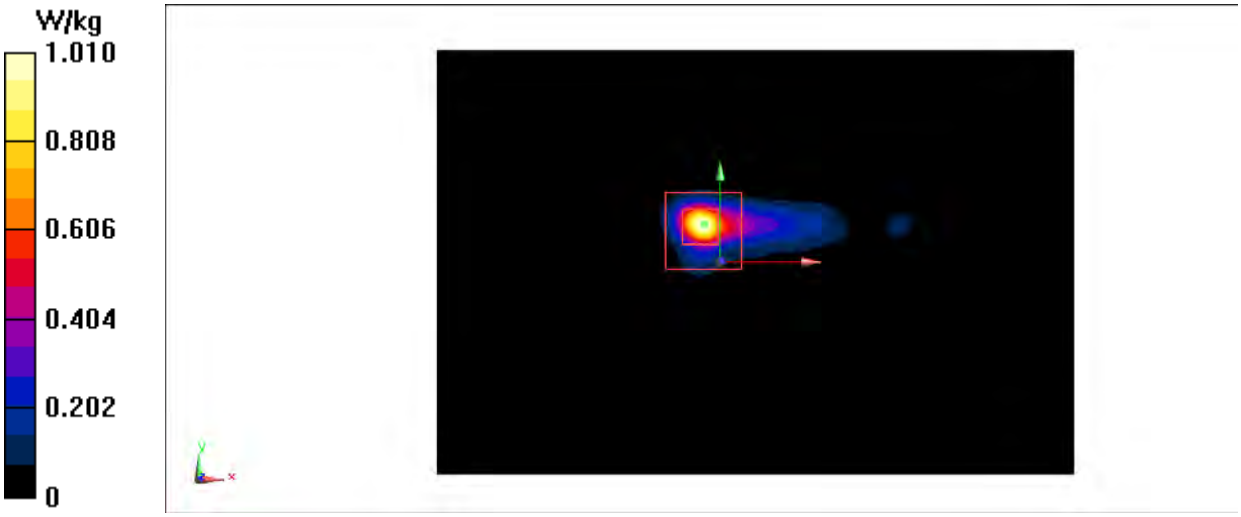


Fig A.22

LTE1900-FDD2_CH19100 Top ANT1
Date: 7/20/2021
Electronics: DAE4 Sn1525
Medium: H1900
Medium parameters used: f = 1900 MHz; σ = 1.49 S/m; εr = 41.983; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.6oC
Communication System: LTE Band2 Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(8.7, 8.7, 8.7)

Area Scan (131x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.929 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.009 V/m; Power Drift = 0.21 dB
Peak SAR (extrapolated) = 0.982 W/kg
SAR(1 g) = 0.416 W/kg; SAR(10 g) = 0.168 W/kg
Maximum value of SAR (measured) = 0.781 W/kg

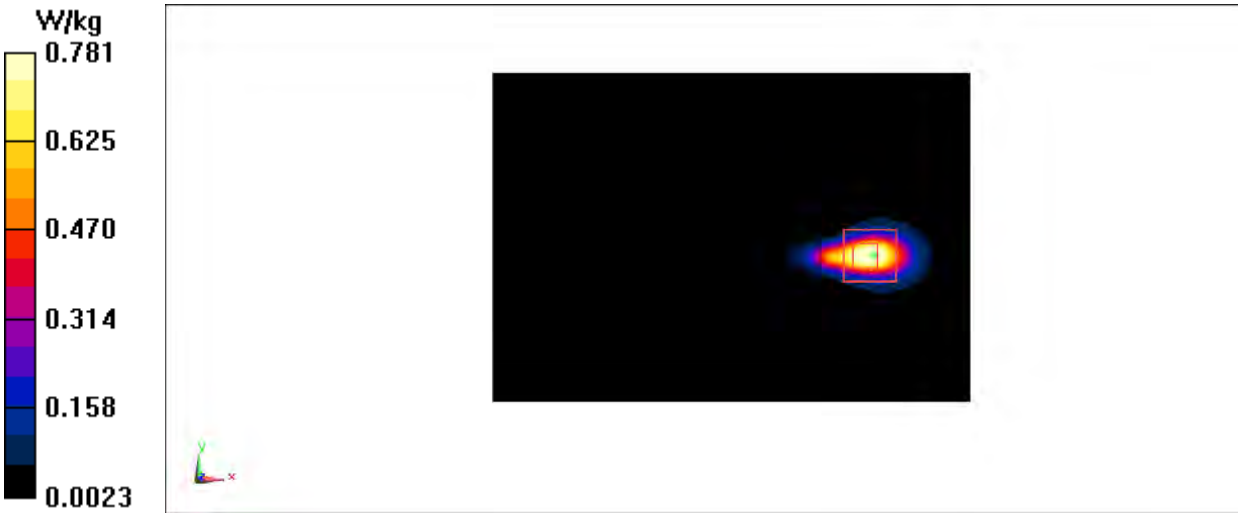


Fig A.23

LTE1750-FDD66_CH132072 Rear ANT1
Date: 7/9/2021
Electronics: DAE4 Sn1525
Medium: H1750
Medium parameters used: f = 1720 MHz; σ = 1.335 S/m; εr = 41.133; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band66 Frequency: 1720 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(9.01, 9.01, 9.01)

Area Scan (131x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.714 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.832 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.978 W/kg
SAR(1 g) = 0.385 W/kg; SAR(10 g) = 0.184 W/kg
Maximum value of SAR (measured) = 0.705 W/kg

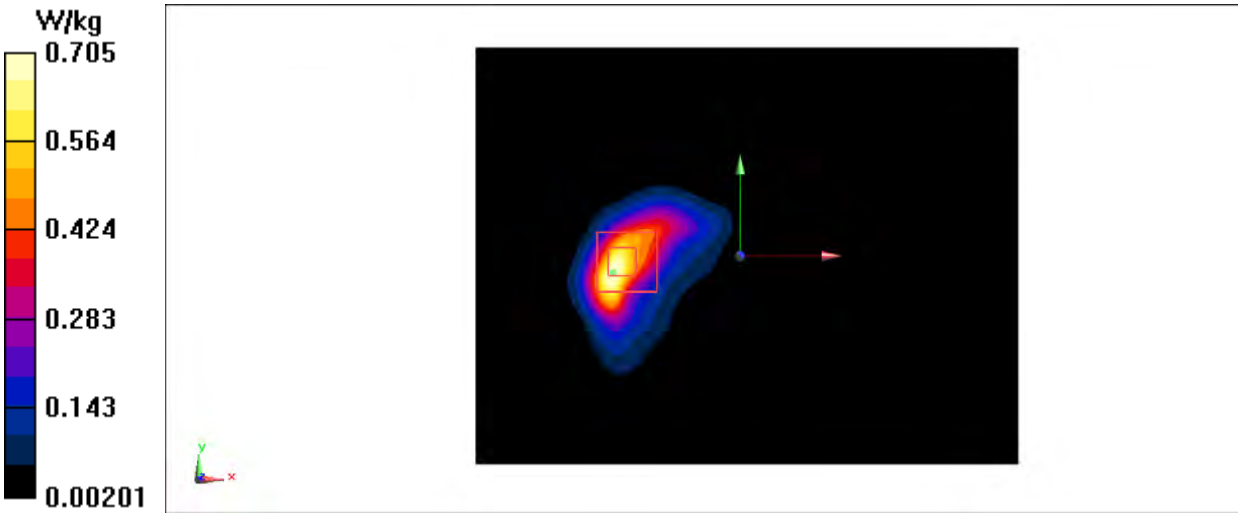


Fig A.24

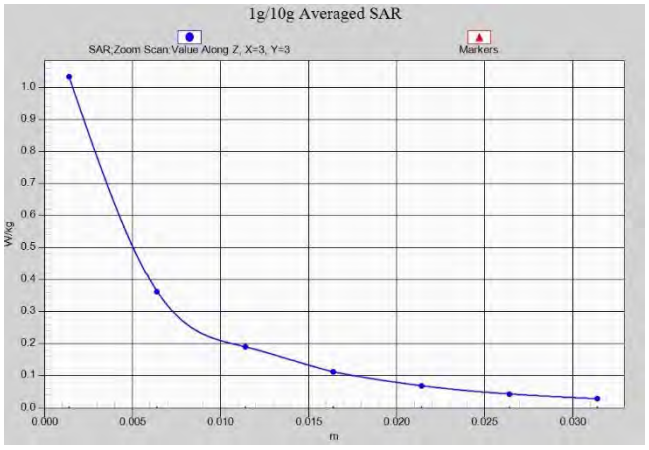


Fig. 1-1 Z-Scan at power reference point (850 MHz)

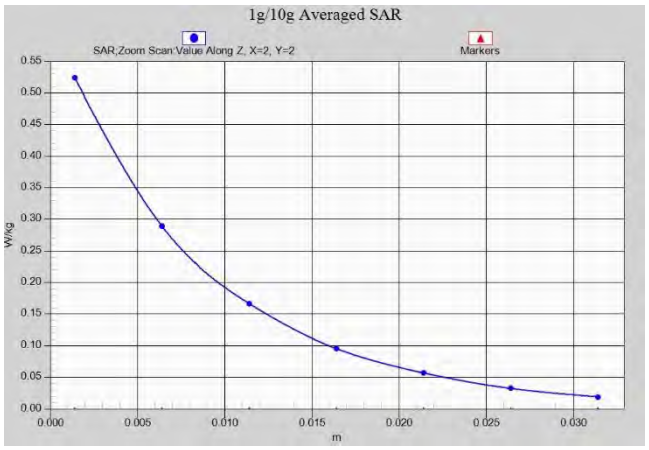


Fig. 1-2 Z-Scan at power reference point (1900 MHz)

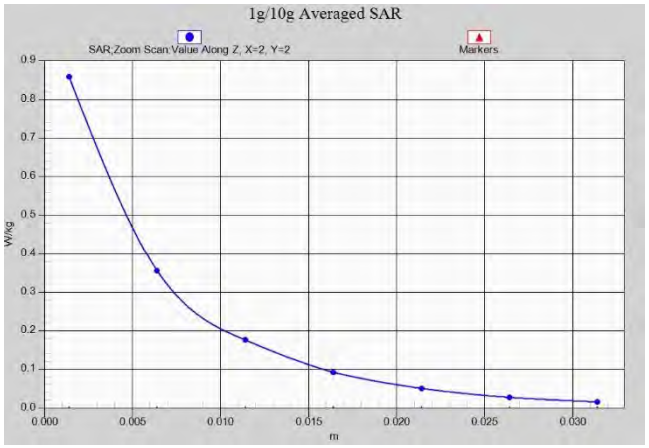


Fig. 1-3 Z-Scan at power reference point (WCDMA1900)

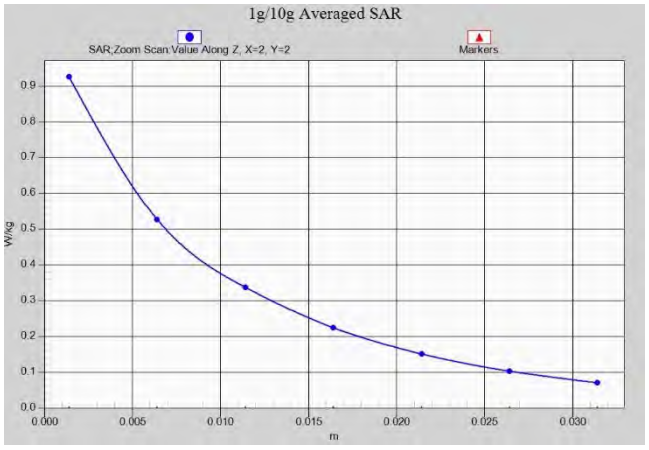


Fig. 1-4 Z-Scan at power reference point (WCDMA850)

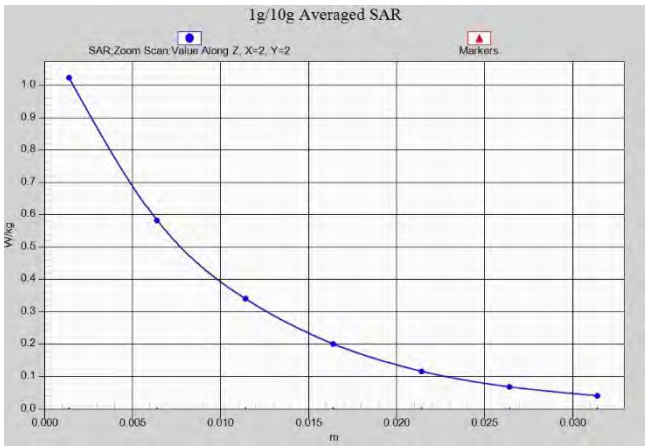


Fig. 1-5 Z-Scan at power reference point (LTE Band2)

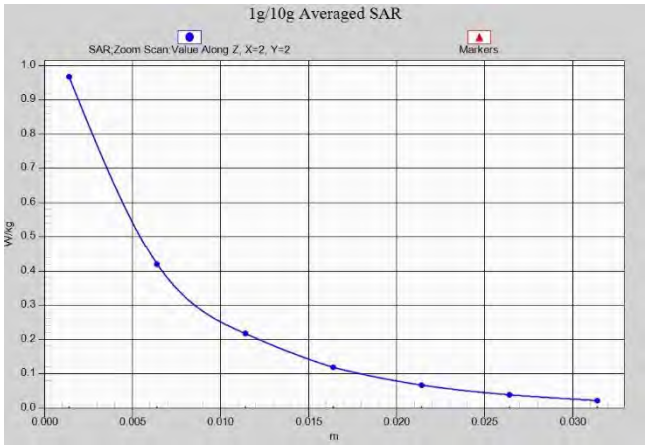


Fig. 1-6 Z-Scan at power reference point (LTE Band4)

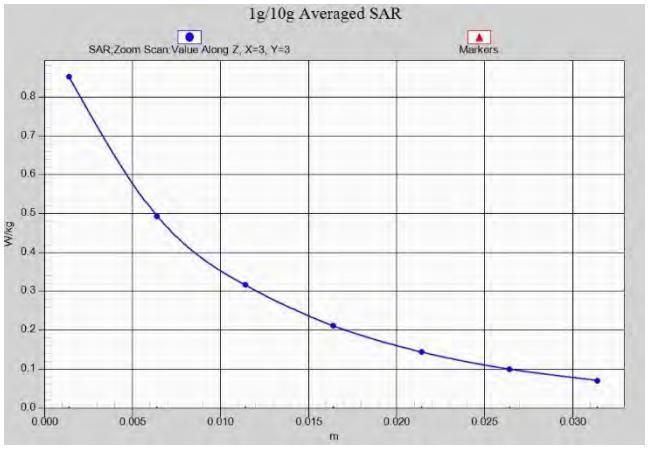


Fig. 1-7 Z-Scan at power reference point (LTE Band5)

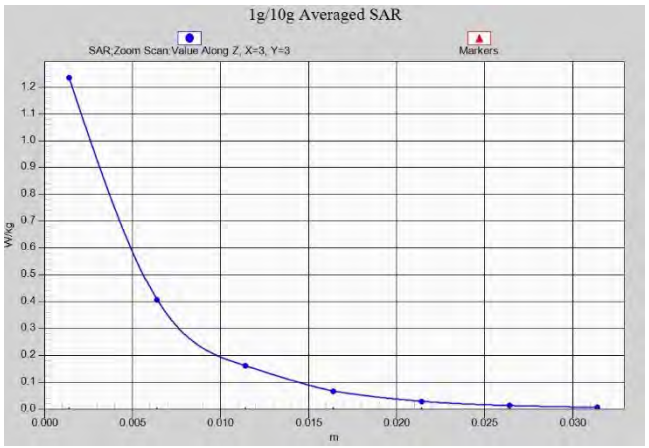


Fig. 1-8 Z-Scan at power reference point (LTE Band7)

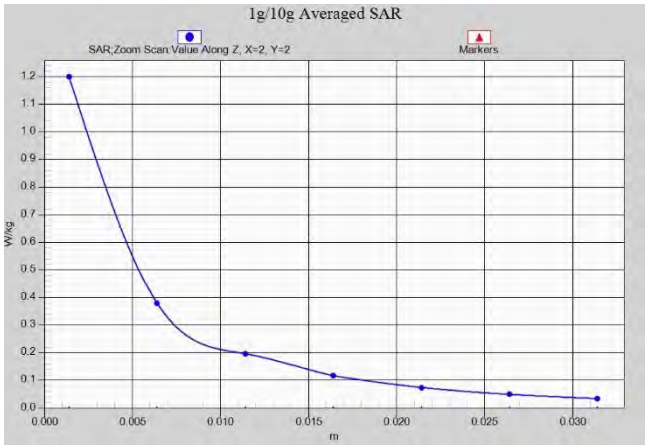


Fig. 1-9 Z-Scan at power reference point (LTE Band12)

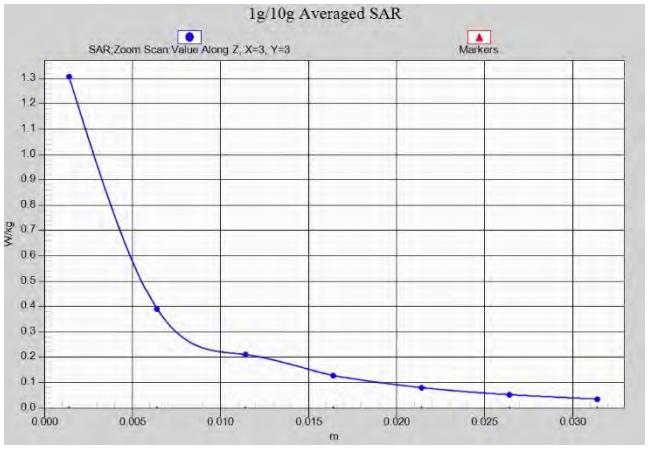


Fig. 1-10 Z-Scan at power reference point (LTE Band13)

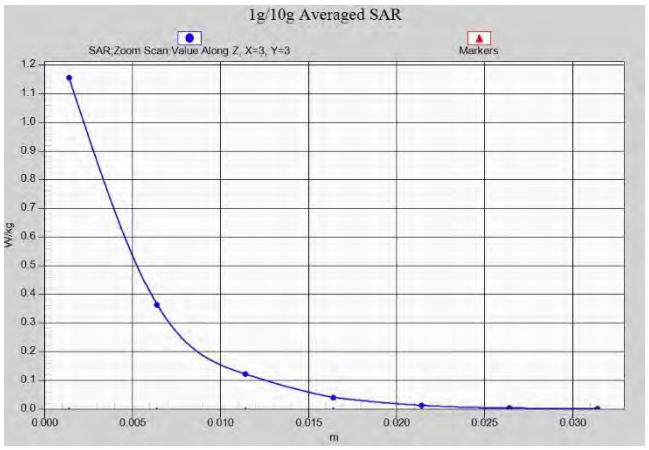


Fig. 1-11 Z-Scan at power reference point (LTE Band48)

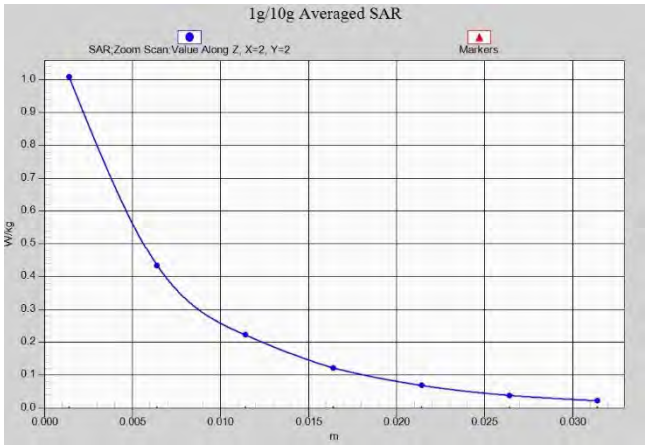


Fig. 1-12 Z-Scan at power reference point (LTE Band66)

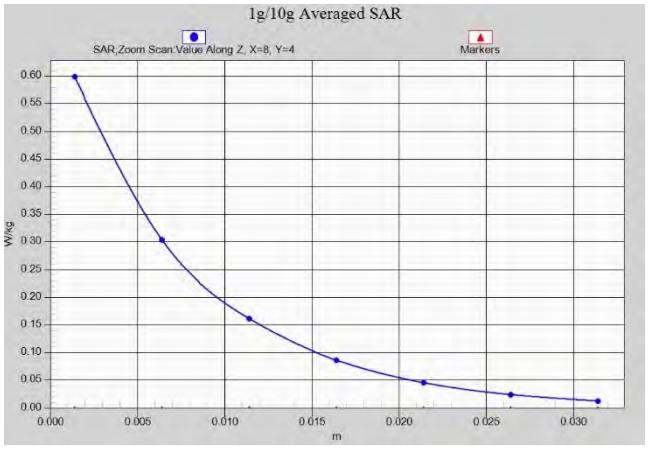


Fig. 1-13 Z-Scan at power reference point (wifi2450)

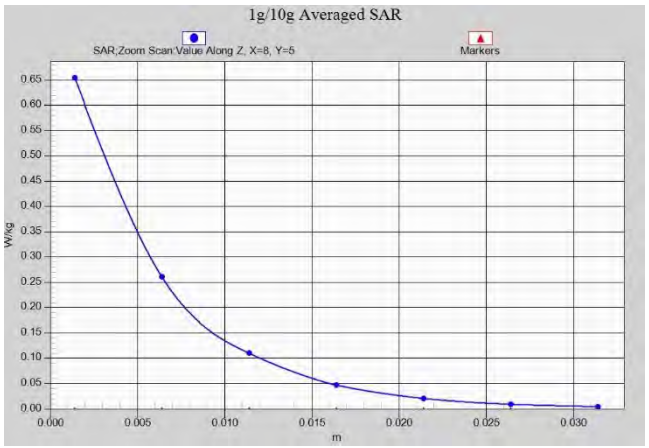


Fig. 1-14 Z-Scan at power reference point (wifi2450)

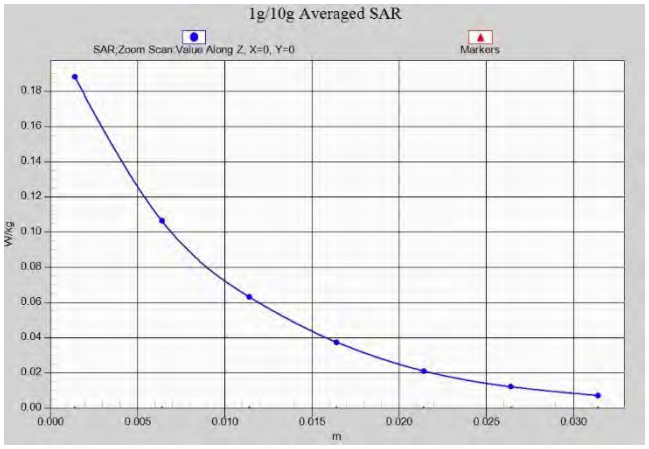


Fig. 1-15 Z-Scan at power reference point (wifi2450)

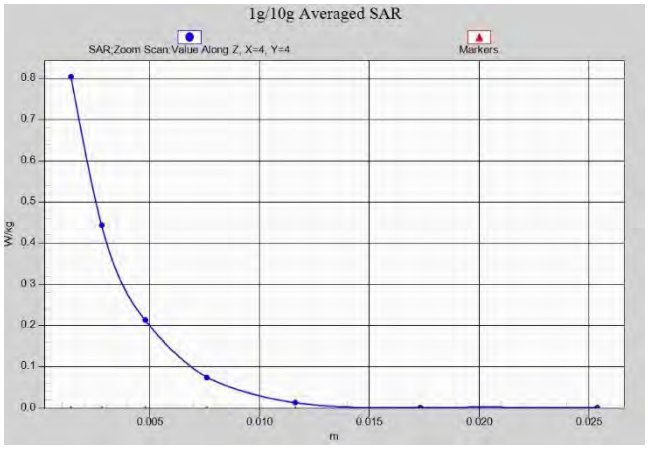


Fig. 1-16 Z-Scan at power reference point (wifi5G)

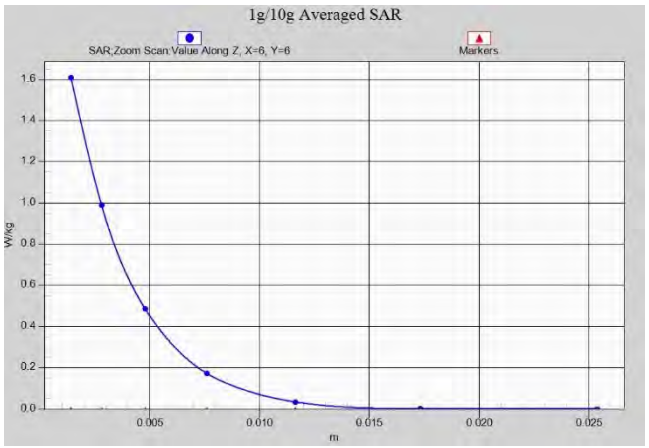


Fig. 1-17 Z-Scan at power reference point (wifi5G)

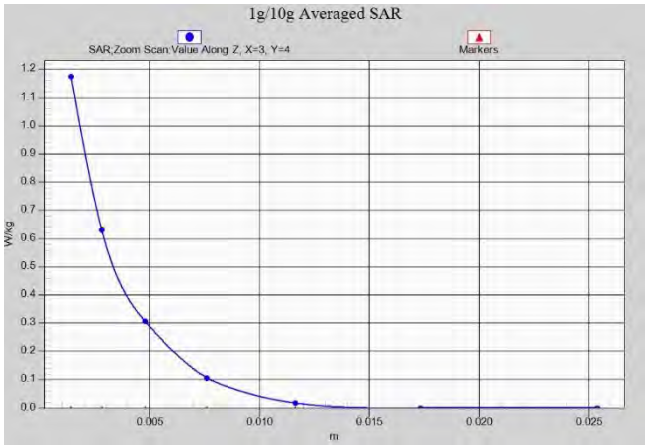


Fig. 1-18 Z-Scan at power reference point (wifi5G)

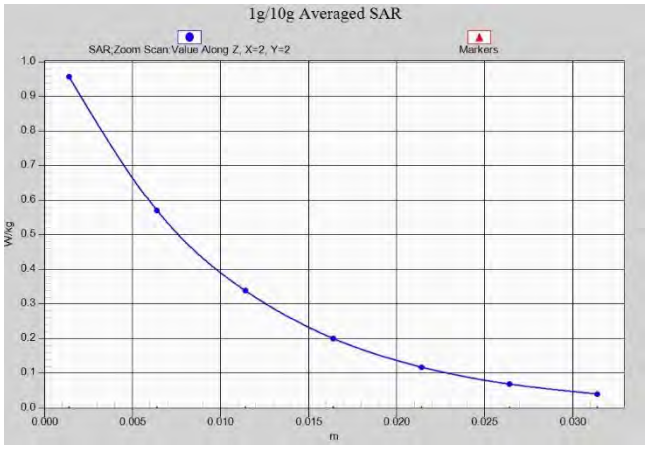


Fig. 1-19 Z-Scan at power reference point (n2)

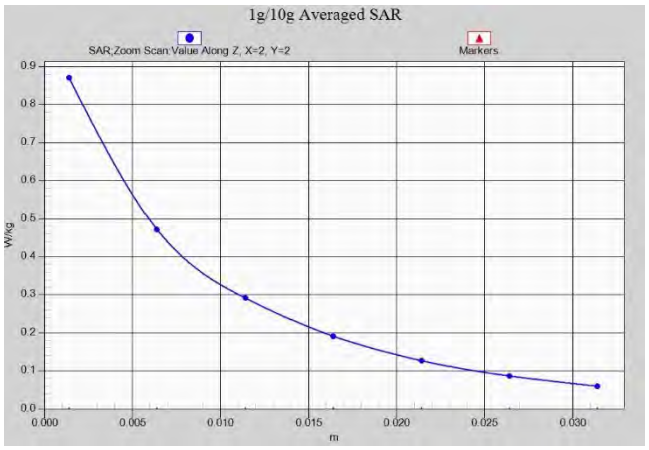


Fig. 1-20 Z-Scan at power reference point (n5)

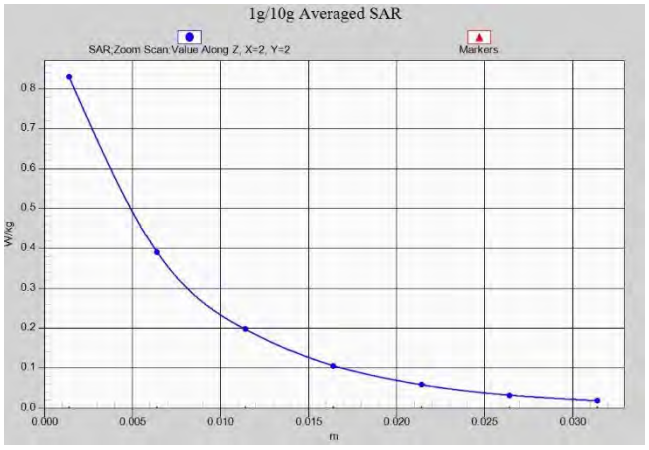


Fig. 1-21 Z-Scan at power reference point (n66)

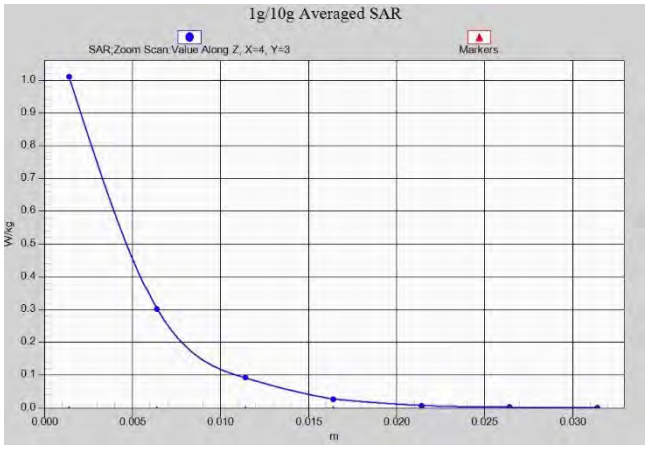


Fig. 1-22 Z-Scan at power reference point (n77)

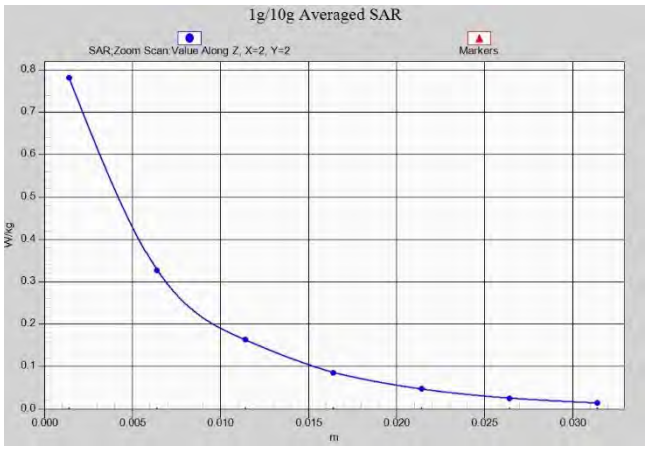


Fig. 1-23 Z-Scan at power reference point (LTE Band2)

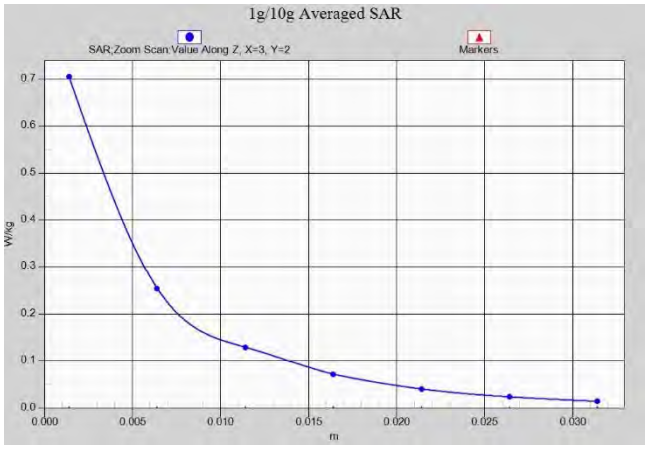


Fig. 1-24 Z-Scan at power reference point (LTE Band66)

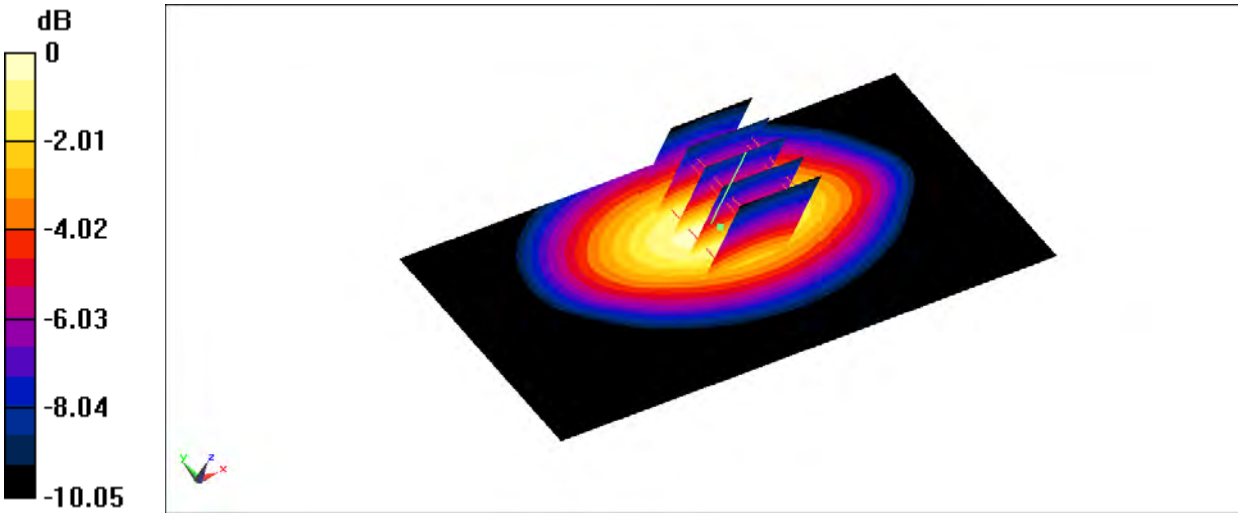
ANNEX B System Verification Results

750 MHz

Date: 7/8/2021
Electronics: DAE4 Sn1525
Medium: H750
Medium parameters used: f = 750 MHz; σ = 0.836 S/m; εr = 45.238; ρ = 1000 kg/m3
Ambient Temperature:23.1oC Liquid Temperature: 22.7oC
Communication System: CW Frequency: 750 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(10.88, 10.88, 10.88)

Area Scan (131x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 52.27 V/m; Power Drift = -0.15 dB
Fast SAR: SAR(1 g) = 2.06 W/kg; SAR(10 g) = 1.37 W/kg
Maximum value of SAR (interpolated) = 2.66 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 52.27 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 3.12 W/kg
SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.37 W/kg
Maximum value of SAR (measured) = 2.73 W/kg



0 dB = 2.73 W/kg = 4.36 dBW/kg

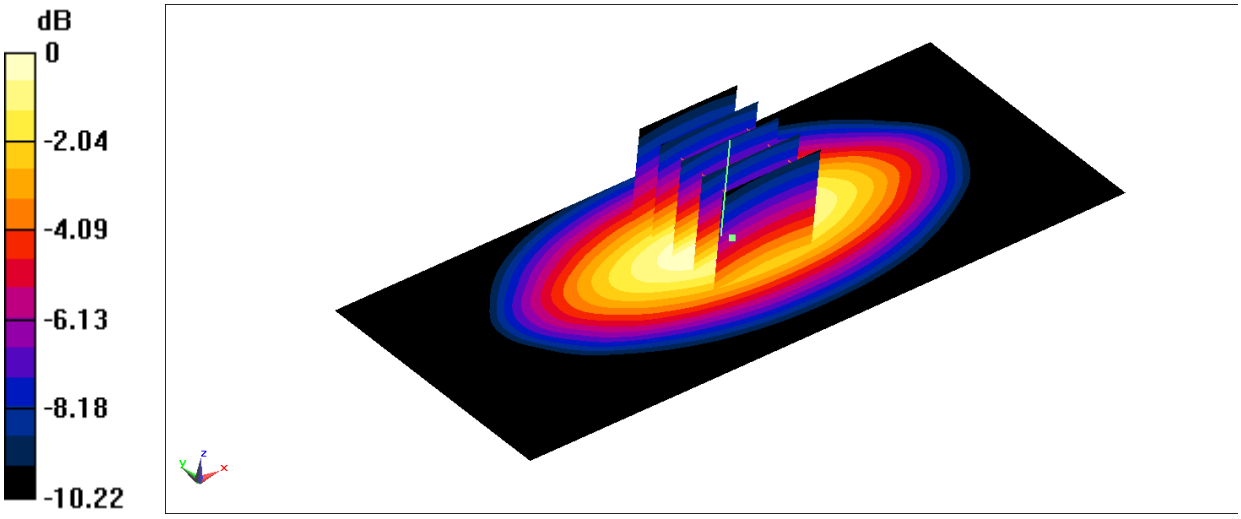
Fig.B.1 validation 750 MHz 250mW

835 MHz

Date: 7/13/2021
Electronics: DAE4 Sn1525
Medium: H835
Medium parameters used: f = 835 MHz; σ = 0.875 S/m; εr = 44.897; ρ = 1000 kg/m3
Ambient Temperature:22.9oC Liquid Temperature: 22.5oC
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(10.88, 10.88, 10.88)

Area Scan (131x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 60.48 V/m; Power Drift = -0.16 dB
Fast SAR: SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.55 W/kg
Maximum value of SAR (interpolated) = 3.10 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 60.48 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 3.48 W/kg
SAR(1 g) = 2.27 W/kg; SAR(10 g) = 1.51 W/kg
Maximum value of SAR (measured) = 3.00 W/kg



0 dB = 3.00 W/kg = 4.77 dBW/kg

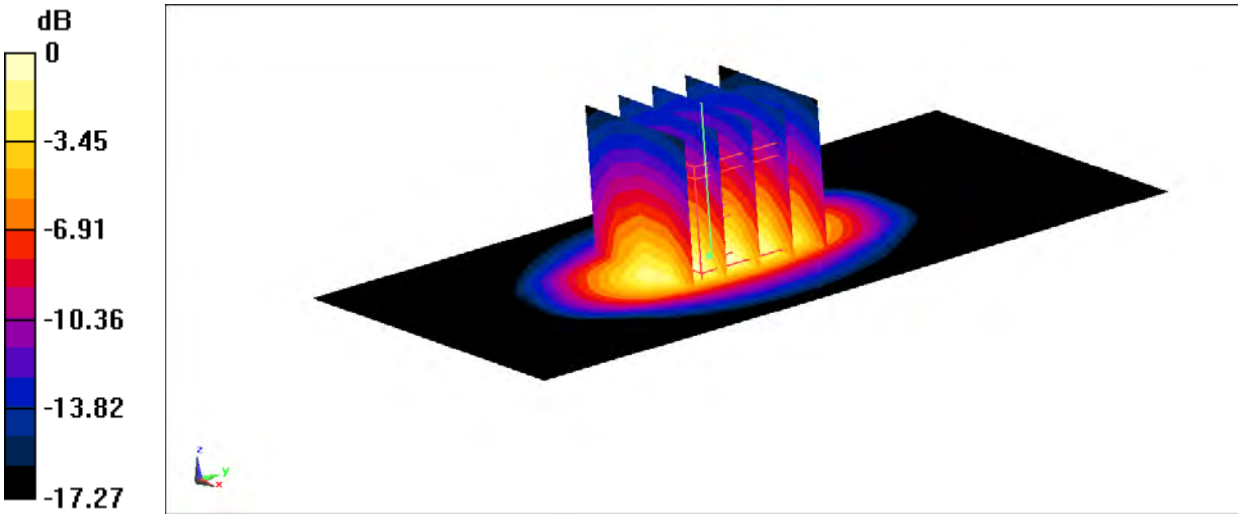
Fig.B.2 validation 835 MHz 250mW

1750 MHz

Date: 7/9/2021
Electronics: DAE4 Sn1525
Medium: H1750
Medium parameters used: f = 1750 MHz; σ = 1.39 S/m; ε r = 42.254; ρ = 1000 kg/m3
Ambient Temperature:22.5oC Liquid Temperature: 22.5oC
Communication System: CW Frequency: 1750 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(9.01, 9.01, 9.01)

Area Scan (51x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 98.93 V/m; Power Drift = -0.16 dB
Fast SAR: SAR(1 g) = 8.94 W/kg; SAR(10 g) = 4.72 W/kg
Maximum value of SAR (interpolated) = 13.7 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 98.93 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 16.5 W/kg
SAR(1 g) = 8.96 W/kg; SAR(10 g) = 4.76 W/kg
Maximum value of SAR (measured) = 13.4 W/kg



0 dB = 13.4 W/kg = 11.27 dBW/kg

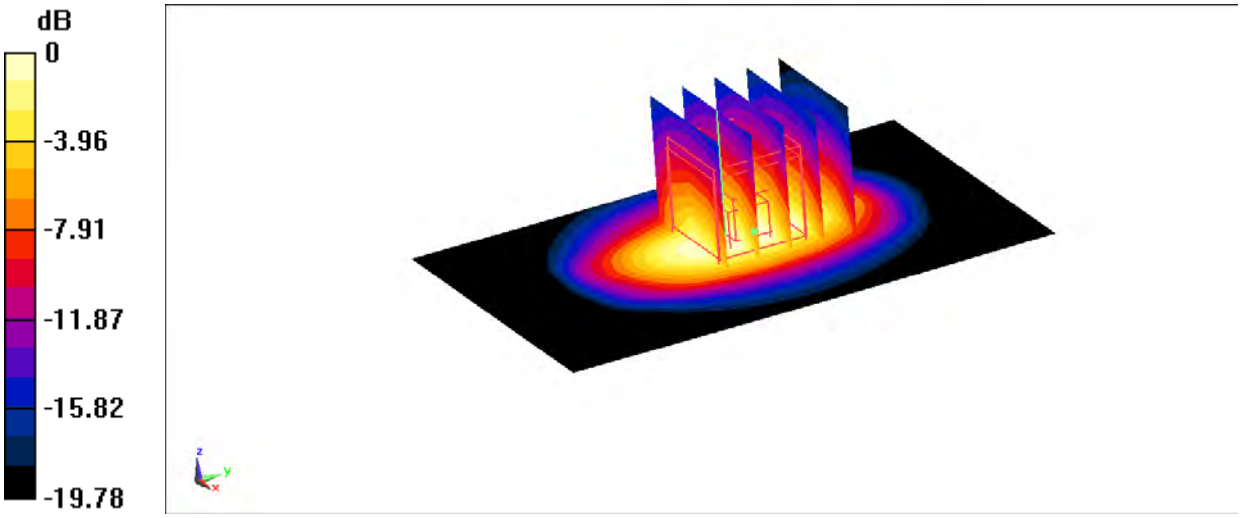
Fig.B.3 validation 1750 MHz 250mW

1900 MHz

Date: 7/20/2021
Electronics: DAE4 Sn1525
Medium: H1900
Medium parameters used: f = 1900 MHz; σ = 1.49 S/m; ε r = 41.983; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.6oC
Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(8.7, 8.7, 8.7)

Area Scan (51x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Reference Value = 104.5 V/m; Power Drift = -0.12 dB
Fast SAR: SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.19 W/kg
Maximum value of SAR (interpolated) = 15.9 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 104.5 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 9.72 W/kg; SAR(10 g) = 5.06 W/kg
Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kg = 11.58 dBW/kg

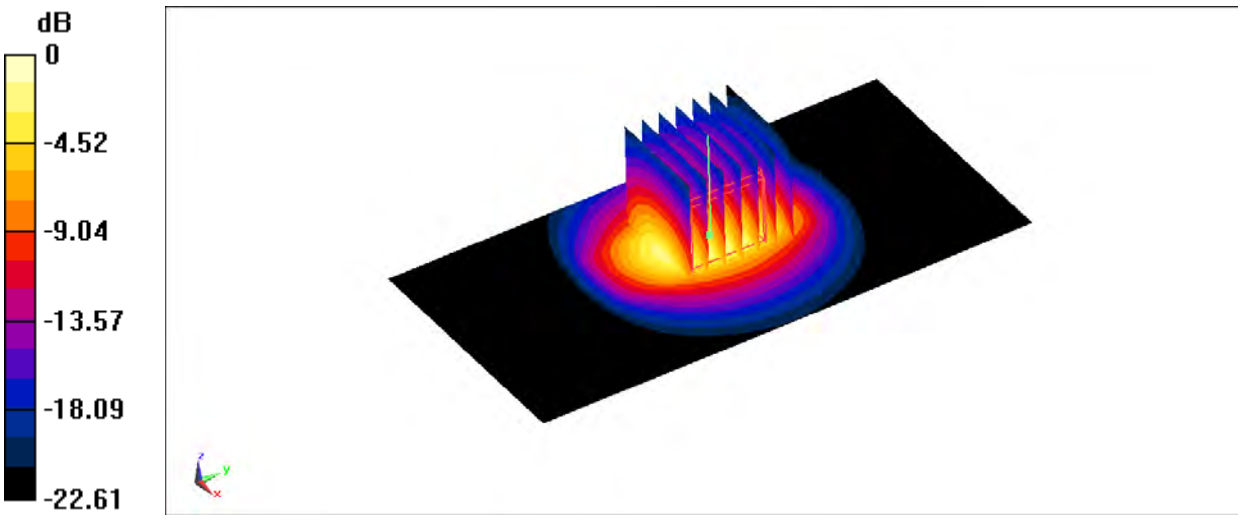
Fig.B.4 validation 1900 MHz 250mW

2450 MHz

Date: 7/1/2021
Electronics: DAE4 Sn1525
Medium: H2450
Medium parameters used: f = 2450 MHz; σ = 1.941 S/m; εr = 41.464; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.3oC
Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(7.79, 7.79, 7.79)

Area Scan (61x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 102.2 V/m; Power Drift = 0.16 dB
Fast SAR: SAR(1 g) = 12.6 W/kg; SAR(10 g) = 5.91 W/kg
Maximum value of SAR (interpolated) = 20.5 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 102.2 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 26.8 W/kg
SAR(1 g) = 13 W/kg; SAR(10 g) = 6.08 W/kg
Maximum value of SAR (measured) = 21.4 W/kg



0 dB = 21.4 W/kg = 13.30 dBW/kg

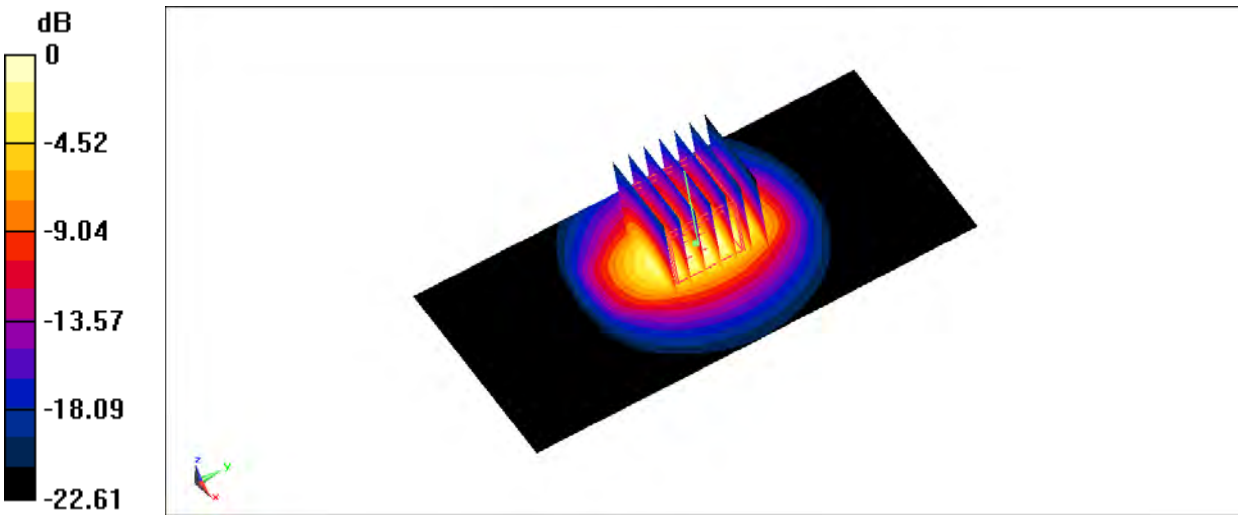
Fig.B.5 validation 2450 MHz 250mW

2450 MHz

Date: 6/18/2021
Electronics: DAE4 Sn1525
Medium: H2450
Medium parameters used: f = 2450 MHz; σ = 1.924 S/m; εr = 40.054; ρ = 1000 kg/m3
Ambient Temperature:22.3oC Liquid Temperature: 22.4oC
Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(7.79, 7.79, 7.79)

Area Scan (61x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 101.9 V/m; Power Drift = 0.11 dB
Fast SAR: SAR(1 g) = 12.57 W/kg; SAR(10 g) = 5.88 W/kg
Maximum value of SAR (interpolated) = 20.3 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 101.9 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 26.5 W/kg
SAR(1 g) = 12.9 W/kg; SAR(10 g) = 6.03 W/kg
Maximum value of SAR (measured) = 21.2 W/kg



0 dB = 21.2 W/kg = 13.26 dBW/kg

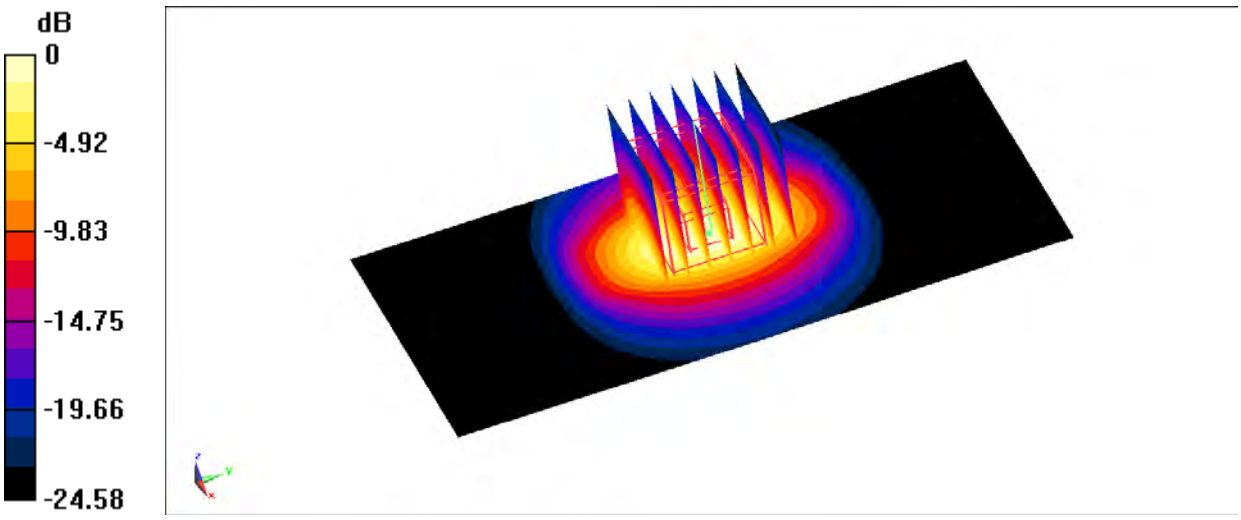
Fig.B.6 validation 2450 MHz 250mW

2600 MHz

Date: 7/17/2021
Electronics: DAE4 Sn1525
Medium: H2600
Medium parameters used: f = 2600 MHz; σ = 2.063 S/m; εr = 41.148; ρ = 1000 kg/m3
Ambient Temperature:23oC Liquid Temperature: 22.5oC
Communication System: CW Frequency: 2600 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(7.67, 7.67, 7.67)

Area Scan (61x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 111.0 V/m; Power Drift = -0.05 dB
Fast SAR: SAR(1 g) = 14.4 W/kg; SAR(10 g) = 6.36 W/kg
Maximum value of SAR (interpolated) = 24.8 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 111.0 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 31.1 W/kg
SAR(1 g) = 14.1 W/kg; SAR(10 g) = 6.26 W/kg
Maximum value of SAR (measured) = 24.0 W/kg



0 dB = 24.0 W/kg = 13.80 dBW/kg

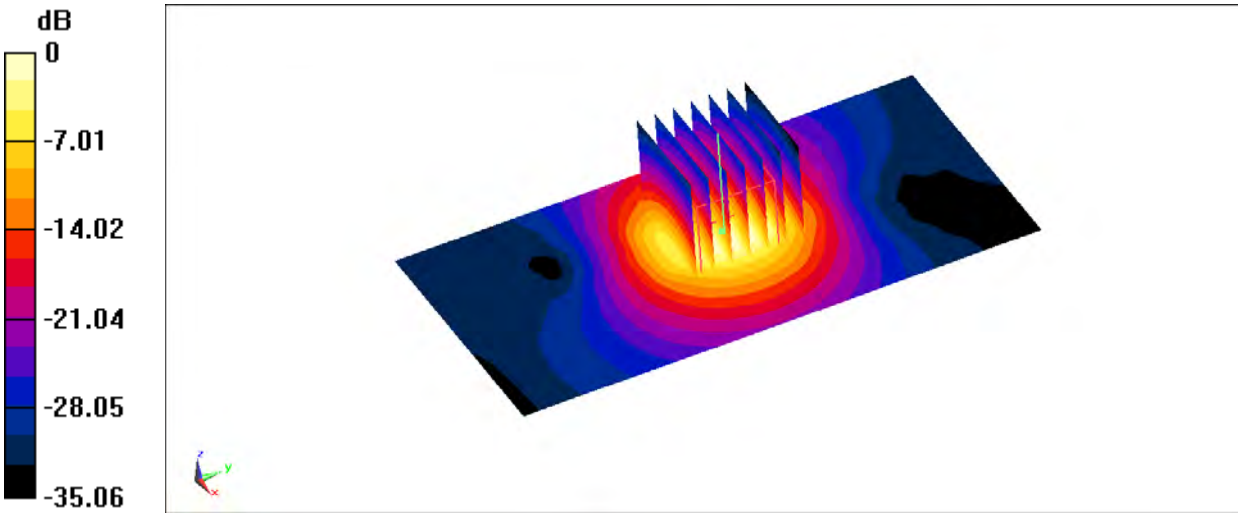
Fig.B.7 validation 2600 MHz 250mW

3700 MHz

Date: 7/18/2021
Electronics: DAE4 Sn1525
Medium: H3700
Medium parameters used: f = 3700 MHz; σ = 3.035 S/m; ε_r = 37.945; ρ = 1000 kg/m3
Ambient Temperature:22.9oC Liquid Temperature: 22.7oC
Communication System: CW Frequency: 3700 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(6.77, 6.77, 6.77)

Area Scan (61x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 36.1 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 105.2 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 47.6 W/kg
SAR(1 g) = 17.5 W/kg; SAR(10 g) = 6.44 W/kg
Maximum value of SAR (measured) = 33.2 W/kg



0 dB = 33.2 W/kg = 15.21 dBW/kg

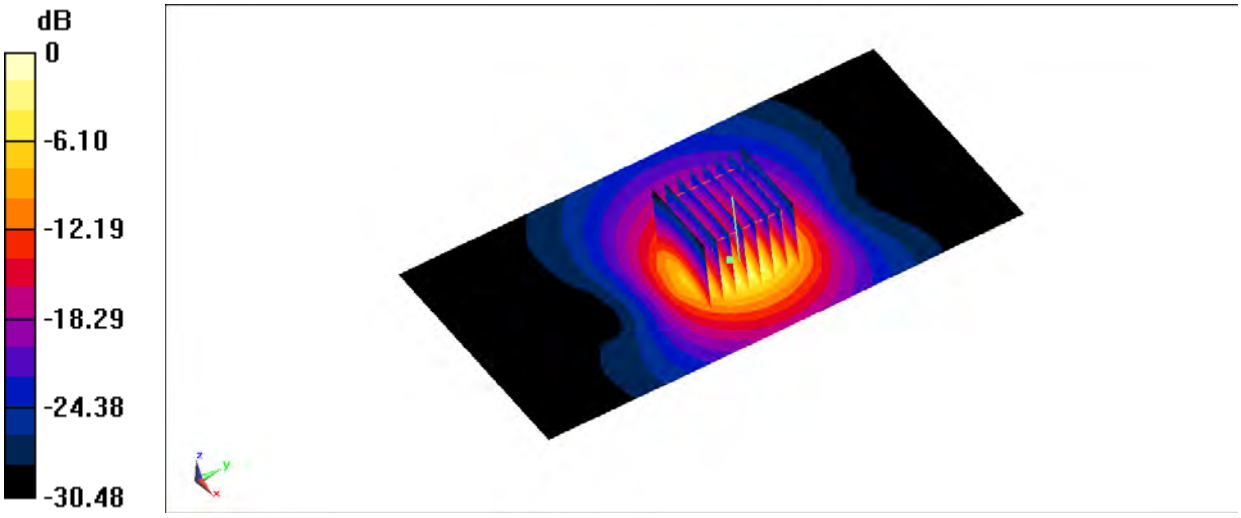
Fig.B.8 validation 3700 MHz 100mW

3900 MHz

Date: 7/17/2021
Electronics: DAE4 Sn1525
Medium: H3900
Medium parameters used: f = 3900 MHz; σ = 3.225 S/m; εr = 37.639; ρ = 1000 kg/m3
Ambient Temperature:23oC Liquid Temperature: 22.5oC
Communication System: CW Frequency: 3900 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(6.85, 6.85, 6.85)

Area Scan (81x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 35.4 W/kg

Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 67.04 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 48.0 W/kg
SAR(1 g) = 16.5 W/kg; SAR(10 g) = 5.81 W/kg
Maximum value of SAR (measured) = 32.7 W/kg



0 dB = 32.7 W/kg = 15.15 dBW/kg

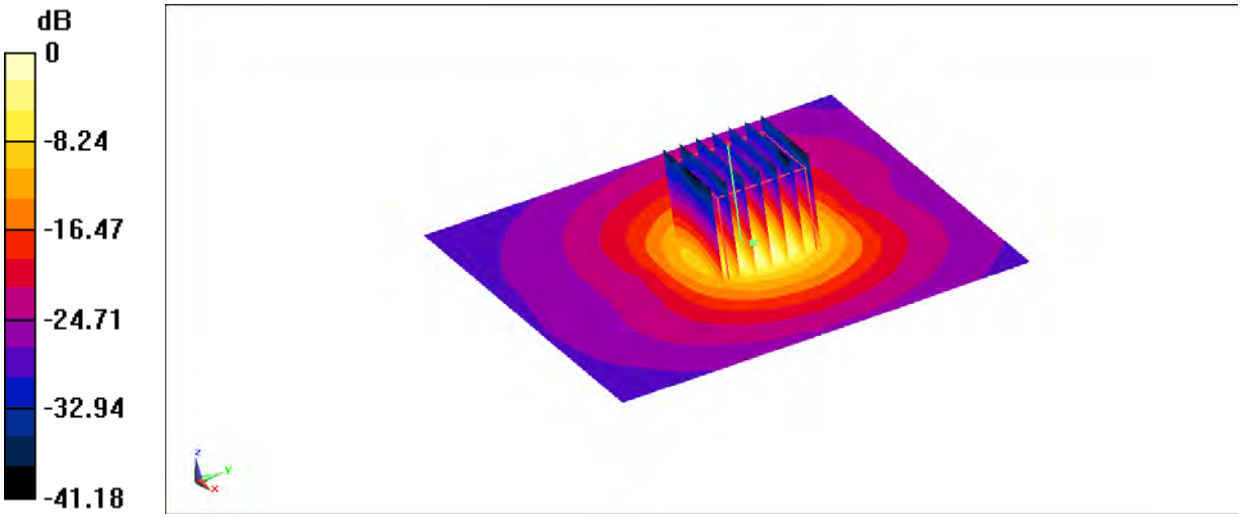
Fig.B.9 validation 3900 MHz 100mW

5250 MHz

Date: 6/29/2021
Electronics: DAE4 Sn1525
Medium: H5250
Medium parameters used: f = 5250 MHz; σ = 4.75 S/m; ε_r = 35.215; ρ = 1000 kg/m3
Ambient Temperature:22.8oC Liquid Temperature: 22.5oC
Communication System: CW Frequency: 5250 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(5.68, 5.68, 5.68)

Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.4 W/kg

Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 57.96 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 32.2 W/kg
SAR(1 g) = 7.69 W/kg; SAR(10 g) = 2.2 W/kg
Maximum value of SAR (measured) = 18.0 W/kg



0 dB = 18.0 W/kg = 12.55 dBW/kg

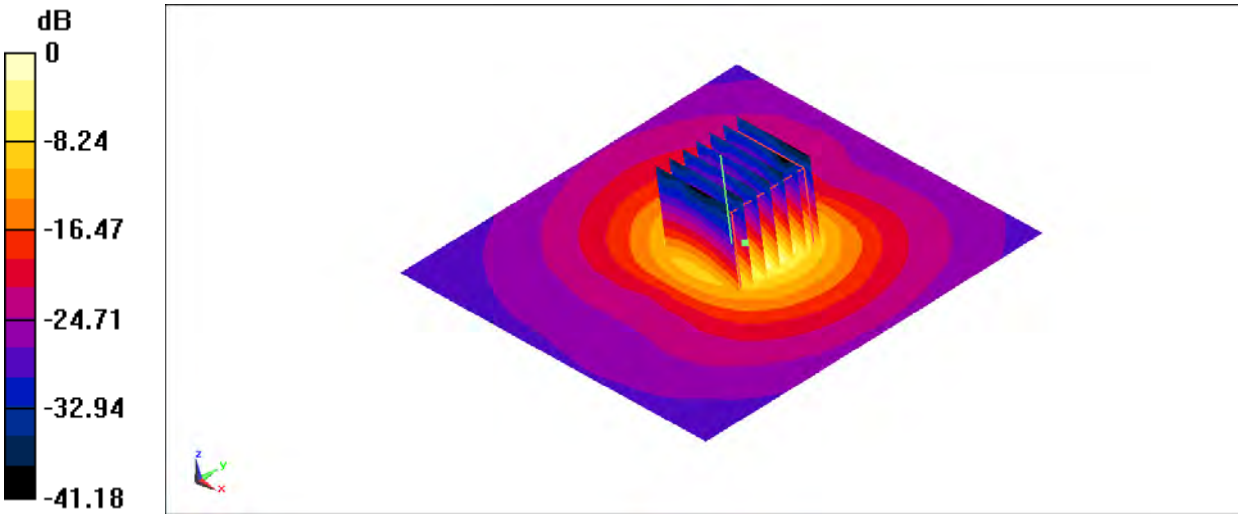
Fig.B.10 validation 5250 MHz 100mW

5250 MHz

Date: 6/24/2021
Electronics: DAE4 Sn1525
Medium: H5G
Medium parameters used: f = 5250 MHz; σ = 4.903 S/m; εr = 35.074; ρ = 1000 kg/m3
Ambient Temperature:22.7oC Liquid Temperature: 22.3oC
Communication System: CW Frequency: 5250 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(5.68, 5.68, 5.68)

Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 20.0 W/kg

Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 57.12 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 33.2 W/kg
SAR(1 g) = 7.94 W/kg; SAR(10 g) = 2.27 W/kg
Maximum value of SAR (measured) = 18.6 W/kg



0 dB = 18.6 W/kg = 12.70 dBW/kg

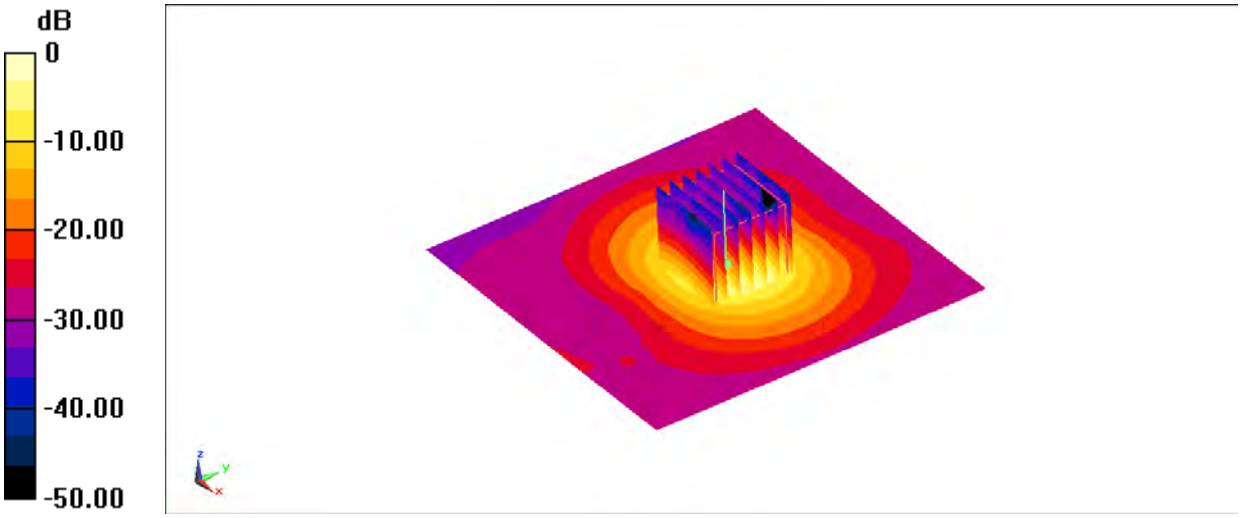
Fig.B.11 validation 5250 MHz 100mW

5600 MHz

Date: 6/30/2021
Electronics: DAE4 Sn1525
Medium: H5G
Medium parameters used: f = 5600 MHz; σ = 5.153 S/m; εr = 34.537; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(5.11, 5.11, 5.11)

Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.8 W/kg

Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 55.92 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 35.6 W/kg
SAR(1 g) = 7.86 W/kg; SAR(10 g) = 2.25 W/kg
Maximum value of SAR (measured) = 19.3 W/kg



0 dB = 19.3 W/kg = 12.86 dBW/kg

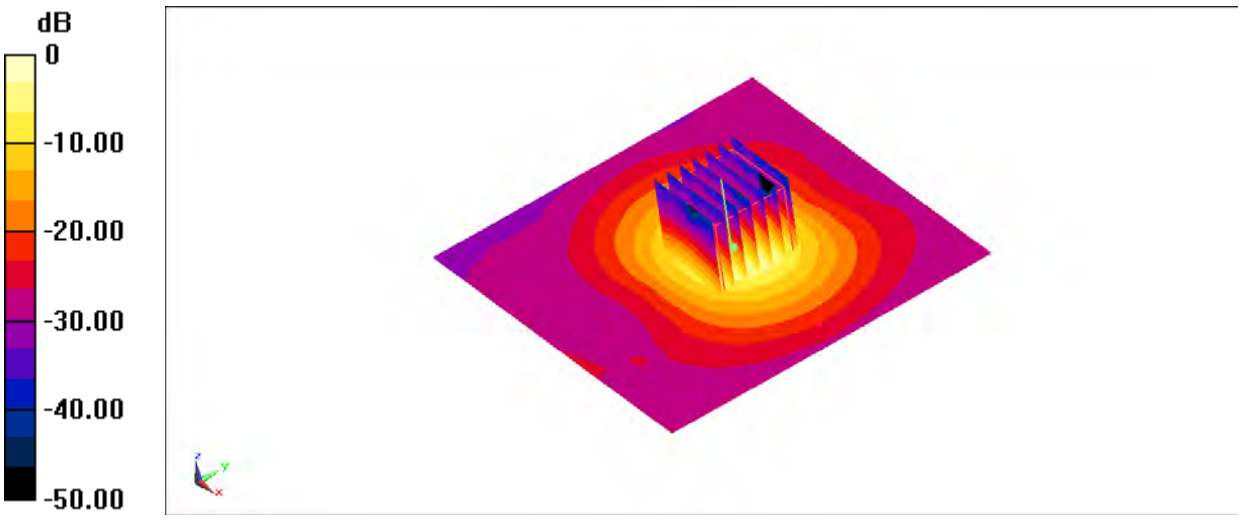
Fig.B.12 validation 5600 MHz 100mW

5600 MHz

Date: 6/25/2021
Electronics: DAE4 Sn1525
Medium: H5G
Medium parameters used: f = 5600 MHz; σ = 5.31 S/m; ε r = 34.301; ρ = 1000 kg/m3
Ambient Temperature:22.9oC Liquid Temperature: 22.1oC
Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(5.11, 5.11, 5.11)

Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 20.4 W/kg

Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 55.51 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 36.7 W/kg
SAR(1 g) = 8.1 W/kg; SAR(10 g) = 2.32 W/kg
Maximum value of SAR (measured) = 19.9 W/kg



0 dB = 19.9 W/kg = 12.99 dBW/kg

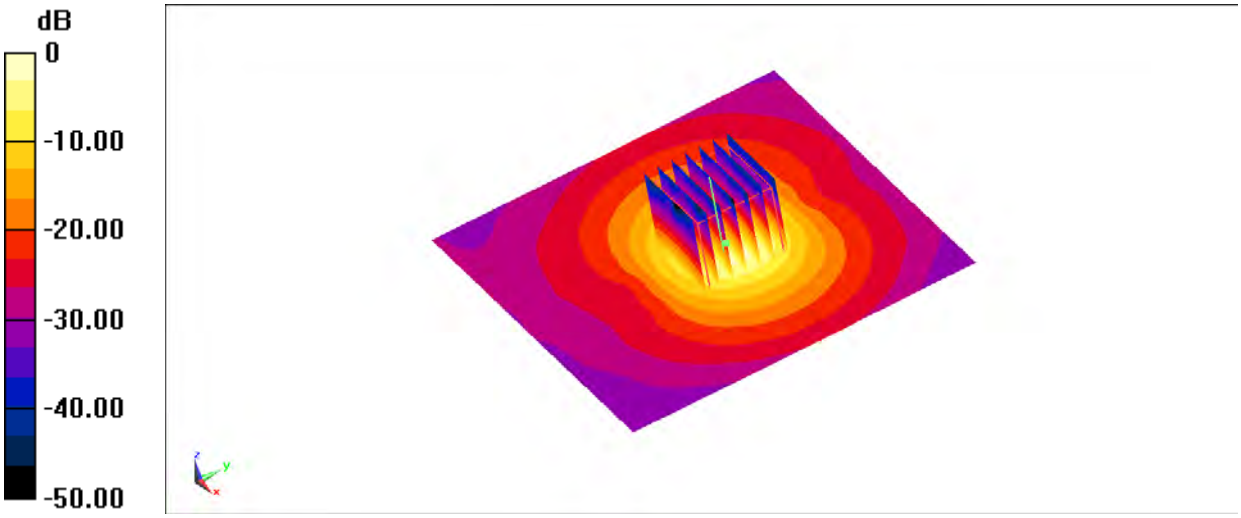
Fig.B.13 validation 5600 MHz 100mW

5750 MHz

Date: 6/27/2021
Electronics: DAE4 Sn1525
Medium: H5G
Medium parameters used: f = 5750 MHz; σ = 5.331 S/m; εr = 34.262; ρ = 1000 kg/m3
Ambient Temperature:22.9oC Liquid Temperature: 22.4oC
Communication System: CW Frequency: 5750 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(5.07, 5.07, 5.07)

Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.9 W/kg

Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 55.03 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 35.4 W/kg
SAR(1 g) = 7.58 W/kg; SAR(10 g) = 2.17 W/kg
Maximum value of SAR (measured) = 18.8 W/kg



0 dB = 18.8 W/kg = 12.74 dBW/kg

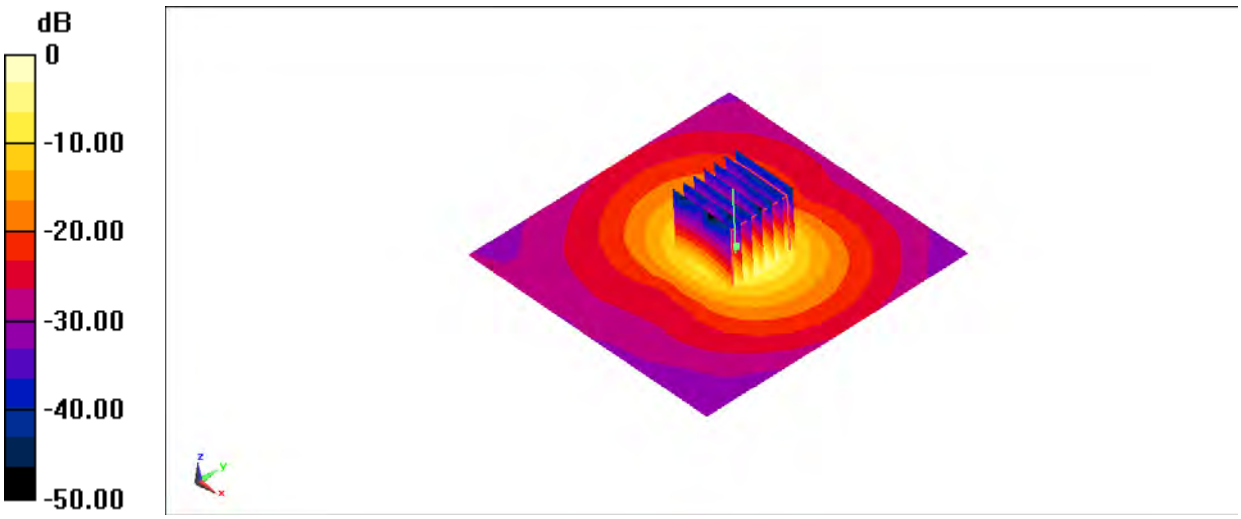
Fig.B.14 validation 5750 MHz 100mW

5750 MHz

Date: 6/26/2021
Electronics: DAE4 Sn1525
Medium: H5G
Medium parameters used: f = 5750 MHz; σ = 5.47 S/m; ε r = 33.984; ρ = 1000 kg/m3
Ambient Temperature:23.1oC Liquid Temperature: 22.7oC
Communication System: CW Frequency: 5750 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(5.07, 5.07, 5.07)

Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 20.4 W/kg

Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 54.29 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 36.3 W/kg
SAR(1 g) = 7.78 W/kg; SAR(10 g) = 2.23 W/kg
Maximum value of SAR (measured) = 19.3 W/kg



0 dB = 19.3 W/kg = 12.86 dBW/kg

Fig.B.15 validation 5750 MHz 100mW

The SAR system verification must be required that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR.

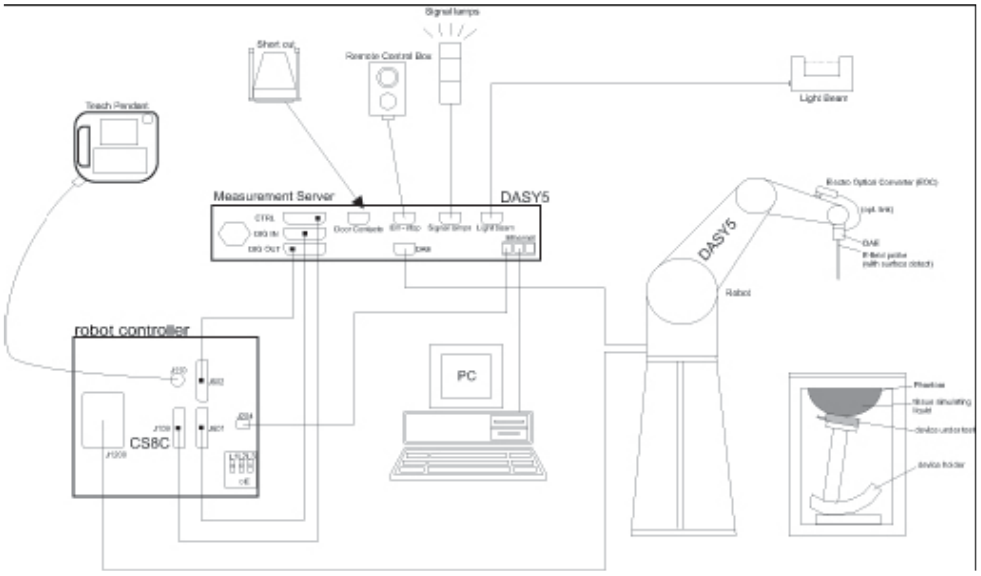
Table B.1 Comparison between area scan and zoom scan for system verification

Date	Band	Position	Area scan (1g)	Zoom scan (1g)	Drift (%)
2021-7-8	750 MHz	Head	1.37	1.37	0.00
2021-7-13	835 MHz	Head	1.55	1.51	2.65
2021-7-9	1750 MHz	Head	4.72	4.76	-0.84
2021-7-20	1900 MHz	Head	5.19	5.06	2.57
2021-7-1	2450 MHz	Head	5.91	6.08	-2.80
2021-6-18	2450 MHz	Head	5.88	6.03	-2.49
2021-7-17	2600 MHz	Head	6.36	6.26	1.60

ANNEX C SAR Measurement Setup

C.1 Measurement Set-up

The Dasy5 or DASY6 system for performing compliance tests is illustrated above graphically. This system consists of the following items:



Picture C.1SAR Lab Test Measurement Set-up

- A standard high precision 6-axis robot (StäubliTX=RX family) 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 and the DASY5 or DASY6 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.

C.2 Dasy5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY5 or DASY6 software reads the reflection durning a software approach and looks for the maximum using 2nd ord curve fitting. The approach is stopped at reaching the maximum.

Probe Specifications:

Model: ES3DV3, EX3DV4
Frequency 10MHz — 6.0GHz(EX3DV4)
Range: 10MHz — 4GHz(ES3DV3)
Calibration: In head and body simulating tissue at Frequencies from 835 up to 5800MHz
Linearity: ± 0.2 dB(30 MHz to 6 GHz) for EX3DV4
± 0.2 dB(30 MHz to 4 GHz) for ES3DV3
DynamicRange: 10 mW/kg — 100W/kg
Probe Length: 330 mm
Probe Tip
Length: 20 mm
Body Diameter: 12 mm
Tip Diameter: 2.5 mm (3.9 mm for ES3DV3)
Tip-Center: 1 mm (2.0mm for ES3DV3)
Application: SAR Dosimetry Testing
Compliance tests ofmobile phones
Dosimetry in strong gradient fields

Picture C.2Near-field Probe

Picture C.3E-field Probe

C.3 E-field Probe Calibration

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm^2) using an RF Signal generator, TEM cell, and RF Power Meter.

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and inn a waveguide or

other methodologies 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 until the three channels show the maximum reading. The power density readings equates to 1 mW/cm^2.

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

$$SAR = C\frac{\Delta T}{\Delta t}$$

Where:

Δt = Exposure time (30 seconds),

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

ΔT = Temperature increase due to RF exposure.

$$SAR = \frac{|E|^2 \cdot \sigma}{\rho}$$

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

C.4 Other Test Equipment

C.4.1 Data Acquisition Electronics(DAE)

The data acquisition electronics consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

PictureC.4: DAE

C.4.2 Robot

The SPEAG DASY system uses the high precision robots (DASY5: RX160L) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchron motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

Picture C.5 DASY 5

C.4.3 Measurement Server

The Measurement server is based on a PC/104 CPU broad with CPU (DASY5: 400 MHz, Intel Celeron), chipdisk (DASY5: 128MB), RAM DASY5: 128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O broad, which is directly connected to the PC/104 bus of the CPU broad.

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.

Picture C.6 Server for DASY 5

C.4.4 Device Holder for Phantom

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5mm distance, a positioning uncertainty of ±0.5mm would produce a SAR uncertainty of ±20%. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

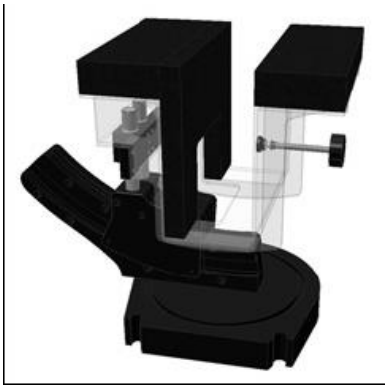
The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales are the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity ε=3 and loss tangent δ =0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

<Laptop Extension Kit>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin-SAM and ELI phantoms.

Picture C7-1: Device Holder



Picture C.7-2: Laptop Extension Kit

C.4.5 Phantom

The SAM Twin Phantom V4.0 is constructed of a fiberglass shell integrated in a table. The shape of the shell is based on data from an anatomical study designed to

Represent the 90th percentile of the population. The phantom enables the dissymmetric evaluation of SAR for both left and right handed handset usage, as well as body-worn usage using the flat phantom region. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. The shell phantom has a 2mm shell thickness (except the ear region where shell thickness increases to 6 mm).

Shell Thickness: 2±0. 2 mm
Filling Volume: Approx. 25 liters
Dimensions: 810 x l000 x 500 mm (H x L x W)

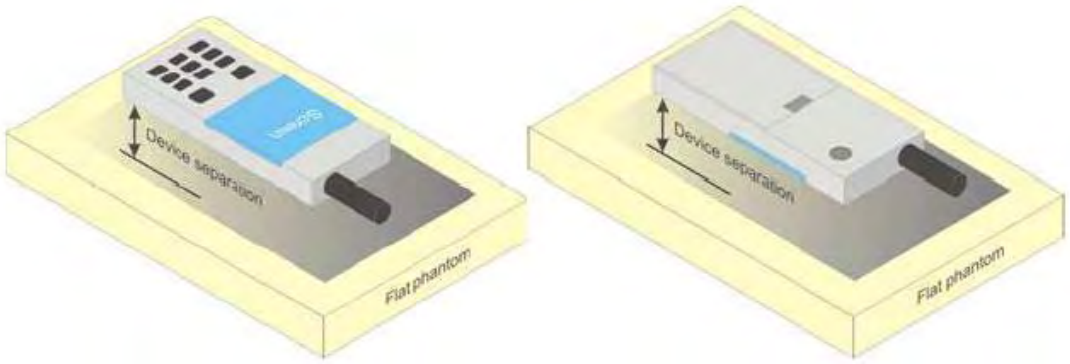
Available: Special

Picture C.8: SAM Twin Phantom

ANNEX D Position of the wireless device in relation to the phantom

D.1 Body-worn device

A typical example of a body-worn device is a mobile phone, wireless enabled PDA or other battery operated wireless device with the ability to transmit while mounted on a person's body using a carry accessory approved by the wireless device manufacturer.

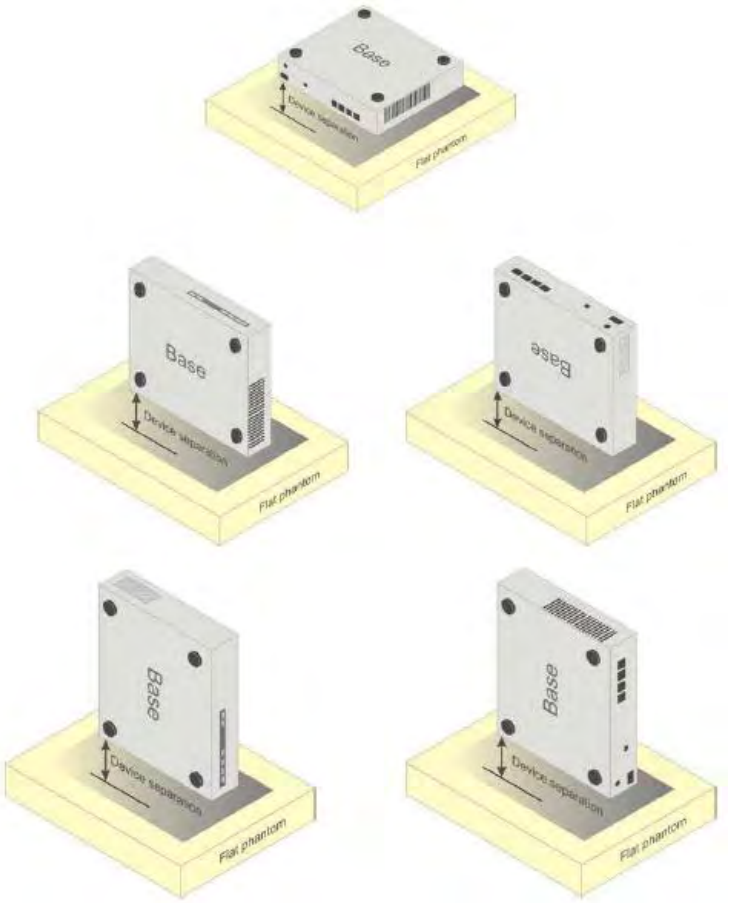


Picture D.1 Test positions for body-worn devices

D.2 Desktop device

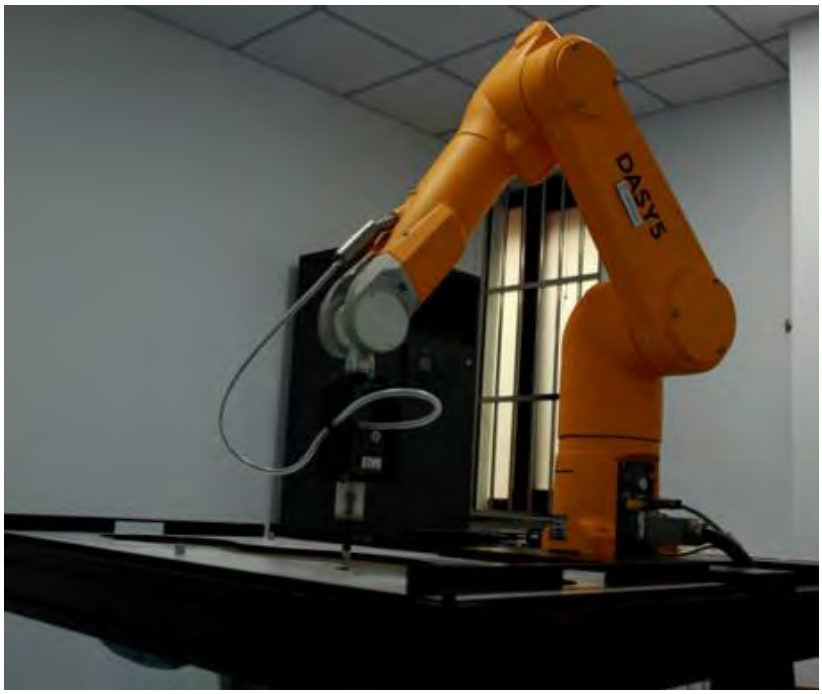
A typical example of a desktop device is a wireless enabled desktop computer placed on a table or desk when used.

The DUT shall be positioned at the distance and in the orientation to the phantom that corresponds to the intended use as specified by the manufacturer in the user instructions. For devices that employ an external antenna with variable positions, tests shall be performed for all antenna positions specified. Picture8.5 show positions for desktop device SAR tests. If the intended use is not specified, the device shall be tested directly against the flat phantom.



Picture D.2 Test positions for desktop devices

D.3 DUT Setup Photos



Picture D.5

ANNEX E Equivalent Media Recipes

The liquid used for the frequency range of 800-3000 MHz consisted of water, sugar, salt, preventol, glycol monobutyl and Cellulose. The liquid has been previously proven to be suited for worst-case. The Table E.1 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528 and IEC 62209.

TableE.1: Composition of the Tissue Equivalent Matter

Frequency (MHz)	835Head	835Body	1900 Head	1900 Body	2450 Head	2450 Body	5800 Head	5800 Body
Ingredients (% by weight)								
Water	41.45	52.5	55.242	69.91	58.79	72.60	65.53	65.53
Sugar	56.0	45.0	\	\	\	\	\	\
Salt	1.45	1.4	0.306	0.13	0.06	0.18	\	\
Preventol	0.1	0.1	\	\	\	\	\	\
Cellulose	1.0	1.0	\	\	\	\	\	\
Glycol Monobutyl	\	\	44.452	29.96	41.15	27.22	\	\
Diethylenglycol monohexylether	\	\	\	\	\	\	17.24	17.24
Triton X-100	\	\	\	\	\	\	17.24	17.24
Dielectric Parameters Target Value	ε=41.5 σ=0.90	ε=55.2 σ=0.97	ε=40.0 σ=1.40	ε=53.3 σ=1.52	ε=39.2 σ=1.80	ε=52.7 σ=1.95	ε=35.3 σ=5.27	ε=48.2 σ=6.00

Note: There are a little adjustment respectively for 750, 1750, 2600, 5200, 5300 and 5600 based on the recipe of closest frequency in table E.1.

ANNEX F System Validation

The SAR system must be validated against its performance specifications before it is deployed. When SAR probes, system components or software are changed, upgraded or recalibrated, these must be validated with the SAR system(s) that operates with such components.

Table F.1: System Validation for 7600

Probe SN.	Liquid name	Validation date	Frequency point	Status (OK or Not)
7600	Head 750MHz	December 2，2020	750 MHz	OK
7600	Head 900MHz	December 2，2020	900 MHz	OK
7600	Head 1450MHz	December 3，2020	1450 MHz	OK
7600	Head 1640MHz	December 3，2020	1640 MHz	OK
7600	Head 1750MHz	December 3，2020	1750 MHz	OK
7600	Head 1900MHz	December 4，2020	1900 MHz	OK
7600	Head 2000MHz	December 4，2020	2000 MHz	OK
7600	Head 2300MHz	December 4，2020	2300 MHz	OK
7600	Head 2450MHz	December 5，2020	2450 MHz	OK
7600	Head 2600MHz	December 5，2020	2600 MHz	OK
7600	Head 3300MHz	December 6，2020	3300 MHz	OK
7600	Head 3500MHz	December 6，2020	3500 MHz	OK
7600	Head 3700MHz	December 6，2020	3700 MHz	OK
7600	Head 3900MHz	December 7，2020	3900 MHz	OK
7600	Head 4100MHz	December 7，2020	4100MHz	OK
7600	Head 4200MHz	December 7，2020	4200MHz	OK
7600	Head 4400MHz	December 8，2020	4400MHz	OK
7600	Head 4600MHz	December 8，2020	4600MHz	OK
7600	Head 4800MHz	December 8，2020	4800MHz	OK
7600	Head 4950MHz	December 8，2020	4950MHz	OK
7600	Head 5250MHz	December 9，2020	5250MHz	OK
7600	Head 5600MHz	December 9，2020	5600 MHz	OK
7600	Head 5750MHz	December 9，2020	5750 MHz	OK

ANNEX G Probe Calibration Certificate

Probe 7600 Calibration Certificate

In Collaboration with
s p e a g
CALIBRATION LABORATORY
Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

中国认可 国际互认 校准 CALIBRATION CNAS L0570

Client CTTL Certificate No: Z20-60421

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN : 7600
Calibration Procedure(s)	FF-Z11-004-02 Calibration Procedures for Dosimetric E-field Probes
Calibration date:	November 30, 2020

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Power sensor NRP-Z91	101547	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Power sensor NRP-Z91	101548	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Reference 10dBAttenuator	18N50W-10dB	10-Feb-20(CTTL, No.J20X00525)	Feb-22
Reference 20dBAttenuator	18N50W-20dB	10-Feb-20(CTTL, No.J20X00526)	Feb-22
Reference Probe EX3DV4	SN 7307	29-May-20(SPEAG, No.EX3-7307_May20)	May-21
DAE4	SN 1556	4-Feb-20(SPEAG, No.DAE4-1556_Feb20)	Feb-21

Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	23-Jun-20(CTTL, No.J20X04343)	Jun-21
Network Analyzer E5071C	MY46110673	10-Feb-20(CTTL, No.J20X00515)	Feb-21

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: December 02, 2020

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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
Polarization Φ	Φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i θ=0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016

c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below ConvF).
- *NORM(f)x,y,z = NORMx,y,z* frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- *Ax,y,z; Bx,y,z; Cx,y,z; VRx,y,z:* A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from±50MHz to±100MHz.
- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7600

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²)[A]	0.70	0.65	0.67	±10.0%
DCP(mV)[B]	109.4	109.2	108.7	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (*k*=2)
0	CW	X	0.0	0.0	1.0	0.00	225.0	±2.1%
		Y	0.0	0.0	1.0		206.5	
		Z	0.0	0.0	1.0		212.8	

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor *k*=2, which for a normal distribution Corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X, Y, Z do not affect the E²-field uncertainty inside TSL (see Page 4).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7600

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (*k*=2)
750	41.9	0.89	10.88	10.88	10.88	0.40	0.77	±12.1%
900	41.5	0.97	10.45	10.45	10.45	0.17	1.31	±12.1%
1450	40.5	1.20	9.28	9.28	9.28	0.10	1.40	±12.1%
1640	40.3	1.29	9.10	9.10	9.10	0.21	1.03	±12.1%
1750	40.1	1.37	9.01	9.01	9.01	0.20	1.11	±12.1%
1900	40.0	1.40	8.70	8.70	8.70	0.26	1.03	±12.1%
2000	40.0	1.40	8.68	8.68	8.68	0.21	1.16	±12.1%
2300	39.5	1.67	8.19	8.19	8.19	0.37	0.88	±12.1%
2450	39.2	1.80	7.79	7.79	7.79	0.35	1.00	±12.1%
2600	39.0	1.96	7.67	7.67	7.67	0.46	0.80	±12.1%
3300	38.2	2.71	7.35	7.35	7.35	0.43	0.95	±13.3%
3500	37.9	2.91	7.01	7.01	7.01	0.44	0.94	±13.3%
3700	37.7	3.12	6.77	6.77	6.77	0.42	1.02	±13.3%
3900	37.5	3.32	6.85	6.85	6.85	0.35	1.30	±13.3%
4100	37.2	3.53	6.75	6.75	6.75	0.40	1.15	±13.3%
4200	37.1	3.63	6.65	6.65	6.65	0.35	1.35	±13.3%
4400	36.9	3.84	6.54	6.54	6.54	0.35	1.35	±13.3%
4600	36.7	4.04	6.39	6.39	6.39	0.45	1.25	±13.3%
4800	36.4	4.25	6.34	6.34	6.34	0.40	1.42	±13.3%
4950	36.3	4.40	6.01	6.01	6.01	0.45	1.30	±13.3%
5250	35.9	4.71	5.68	5.68	5.68	0.45	1.30	±13.3%
5600	35.5	5.07	5.11	5.11	5.11	0.50	1.25	±13.3%
5750	35.4	5.22	5.07	5.07	5.07	0.50	1.25	±13.3%

[C] Frequency validity above 300 MHz of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequency below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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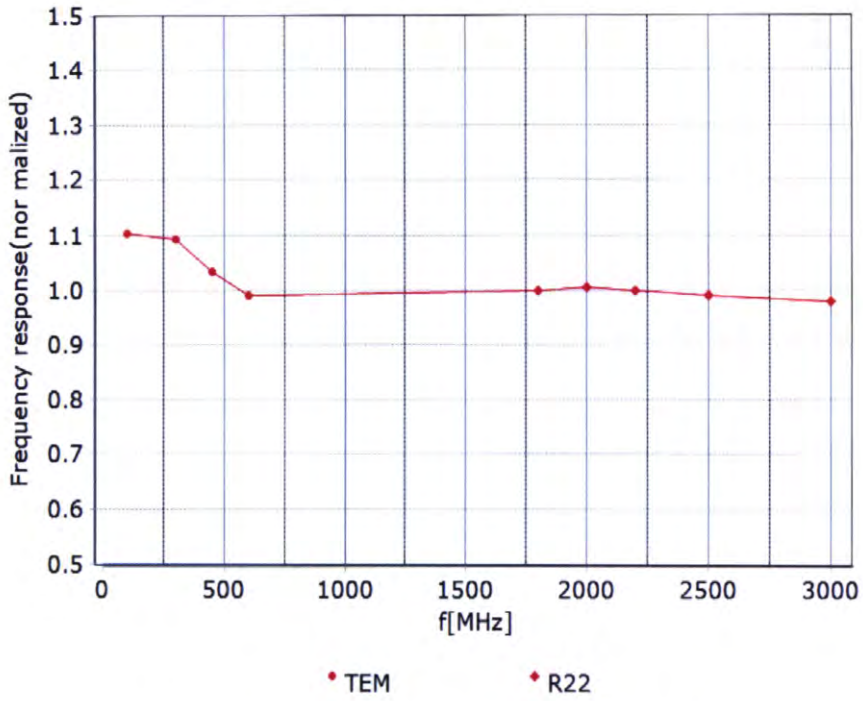
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ±7.4% (*k*=2)

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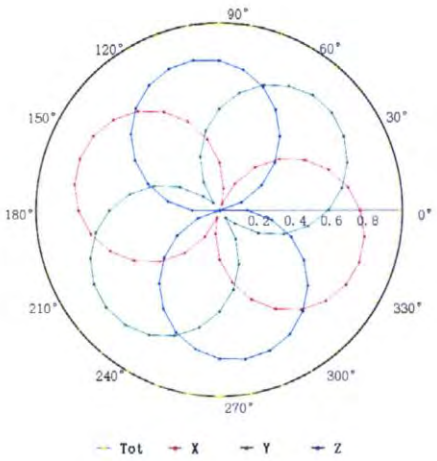
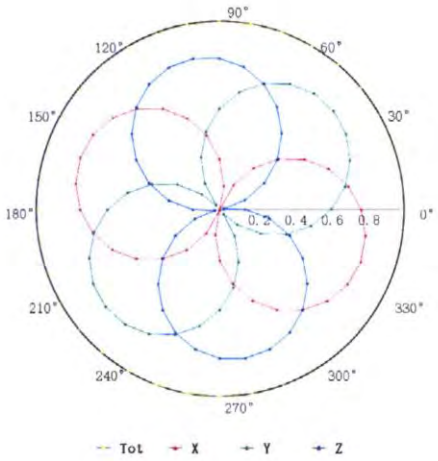
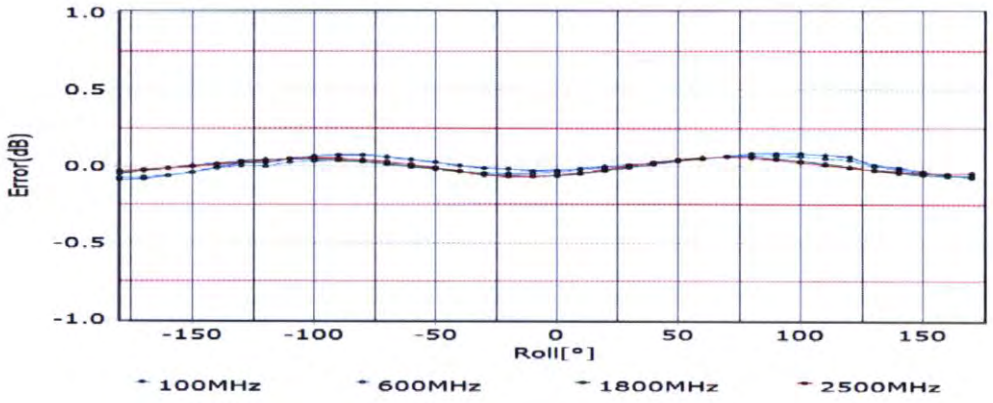
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





Uncertainty of Axial Isotropy Assessment: ±1.2% (*k*=2)