SAR TEST REPORT

No. I21Z60989-SEM05

For

TCL Communication Ltd.

GSM/UMTS/LTE Mobile phone

Model name: 5087Z

With

Hardware Version: 07

Software Version: EPS0J000

FCC ID: 2ACCJH138

Issued Date: 2021-08-13

Note:

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Test Laboratory:

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I21Z60989-SEM05	Rev.0	2021-08-13	Initial creation of test report

TABLE OF CONTENT

1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL
Address:	No. 51, Xueyuan Road, Haidian District, Beijing, P. R. China 100191.

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

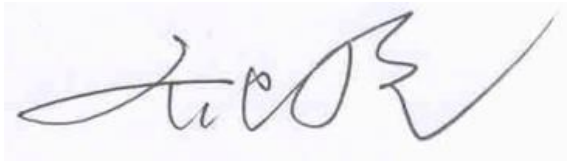
1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	July 19, 2021
Testing End Date:	August 13, 2021

1.4 Signature

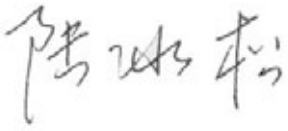
Lin Xiaojun

(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. GSM/UMTS/LTE Mobile phone 5087Z are as follows:

Table 2.1: Highest Reported SAR (1g)

Exposure Configuration	Technology Band	Highest Reported SAR 1g(W/kg)	Equipment Class
Head (Separation Distance 0mm)	GSM 850	**0.18**	PCE
	PCS 1900	**0.13**	
	UMTS FDD 2	**0.21**	
	UMTS FDD 4	**0.27**	
	UMTS FDD 5	**0.82**	
	LTE Band7	**0.27**	
	LTE Band12	**0.77**	
	LTE Band 25	**0.15**	
	LTE Band 26	**0.99**	
	LTE Band 41PC3	**0.18**	
	LTE Band 41PC2	**0.20**	
	LTE Band 66	**0.40**	
	LTE Band 71	**0.65**	
	WLAN 2.4 GHz	**0.87**	DTS
	WLAN 2.4 GHz	**0.40**	
	WLAN 5 GHz	**1.39**	UNII
	WLAN 5 GHz	**0.44**	
Body (Separation Distance 10mm)	GSM 850	**0.40**	PCE
	PCS 1900	**0.75**	
	UMTS FDD 2	**1.09**	
	UMTS FDD 4	**1.16**	
	UMTS FDD 5	**0.41**	
	LTE Band7	**0.56**	
	LTE Band12	**0.31**	
	LTE Band 25	**1.23**	
	LTE Band 26	**0.53**	
	LTE Band 41PC3	**0.37**	
	LTE Band 41PC2	**0.54**	
	LTE Band 66	**1.25**	
	LTE Band 71	**0.71**	
	WLAN 2.4 GHz	**0.38**	DTS
	WLAN 2.4 GHz	**0.08**	
	WLAN 5 GHz	**1.15**	UNII
	WLAN 5 GHz	**0.55**	

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 10 mm for body worn 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**:1.39 W/kg(1g).**

Table 2.2: The sum of reported SAR values for main antenna and WiFi.

	Position	Main antenna	WiFi	Sum
Highest reported SAR value for Head	Right head, Cheek (LTE Band26+WIFI2.4G)	0.91	0.40	**1.31**
Highest reported SAR value for Head	Left head, Cheek (LTE Band26+WIFI5G)	0.93	0.44	**1.37**
Highest reported SAR value for Body	Front 10mm (WCDMA1700+WIFI5G)	0.86	0.09	**0.95**
Highest reported SAR value for Body	Rear 10mm (WCDMA1700+WIFI5G)	0.99	0.46	**1.45**
Highest reported SAR value for Body	Left Edge 10mm (LTE Band71+WIFI2.4G)	0.71	0.06	**0.77**
Highest reported SAR value for Body	Right Edge 10mm (LTE Band71+WIFI5G)	0.71	0.55	**1.26**
Highest reported SAR value for Body	Top 10mm (LTE Band26+WIFI5G)	0.39	0.09	**0.48**
Highest reported SAR value for Body	Bottom 10mm (LTE Band66)	1.25	/	**1.25**

Table 2.3: The sum of reported SAR values for main antenna and BT

	Position	Main antenna	BT	Sum
Maximum reported SAR value for Head	Left head, Cheek (LTE Band26)	0.93	0.33[1]	1.26
Maximum reported SAR value for Body	Bottom 10mm (LTE Band66)	1.25	0.17[1]	1.42

[1] - Estimated SAR for Bluetooth (see the table 13.3)

According to the above tables, the highest sum of reported SAR values is **1.45W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 13.

According to the KDB648474 D04, the UMPC mini-tablet procedures must also be applied to test

the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB Publication 865664 D01 to address interactive hand use exposure conditions. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg

Table 2.4: 0mm Reported SAR for phablet (10g)

Exposure Configuration	Technology Band	Highest Reported SAR 10g(W/kg)	Limit 10g (W/kg)
Separation Distance 0mm	LTE Band25	3.78	4.0

Table 2.5: The sum of reported SAR values for main antenna and WiFi5G

Exposure Configuration	**Main antenna**	**WiFi**	**Sum**	Limit 10g (W/kg)
Highest reported SAR value for Limb	LTE Band25 3.78	0.02	3.80	4.0

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
Contact Email:	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
Contact Email:	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:	GSM/UMTS/LTE Mobile phone
Model name:	5087Z
Operating mode(s):	GSM 850/900/1800/1900, WCDMA850/1700/1900, BT, Wi-Fi2.4G/5G LTE Band 2/4/5/7/12/25/26/41(PC2/PC3)/66/71
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)
	2502.5 – 2567.5 MHz(LTE Band 7)
	699.7 – 711 MHz(LTE Band 12)
	779.5 – 782 MHz(LTE Band 13)
	1850.7–1905 MHz(LTE Band 25)
	814.7 – 841.5 MHz(LTE Band 26)
	2498.5 –2680 MHz (LTE Band 41)
	1710.7 – 1770MHz(LTE Band66)
	665.5 – 688MHz(LTE Band71)
	2412 – 2462 MHz (Wi-Fi 2.4G)
	5.15 – 5.35 GHz 5.47 – 5.850 GHz(Wi-Fi 5G)
GPRS/EGPRS Multislot Class:	12
GPRS capability Class:	B
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Hotspot mode:	Support

4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI	HW	SW Version
EUT1	016000000204588	07	EPS0J000
EUT2	016000000000457	07	EPS0J000
EUT3	016000000000226	07	EPS0J000
EUT4	016000000000887	07	EPS0J000
EUT5	016000000204521	07	EPS0J000
EUT6	016000000000218	07	EPS0J000

*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	EPS0J000	CAC4850000C1	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 Specific Absorption Rate (SAR)

6.1 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.

6.2 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.

7 Tissue Simulating Liquids

7.1 Targets for tissue simulating liquid

Table 7.1: Targets for tissue simulating liquid

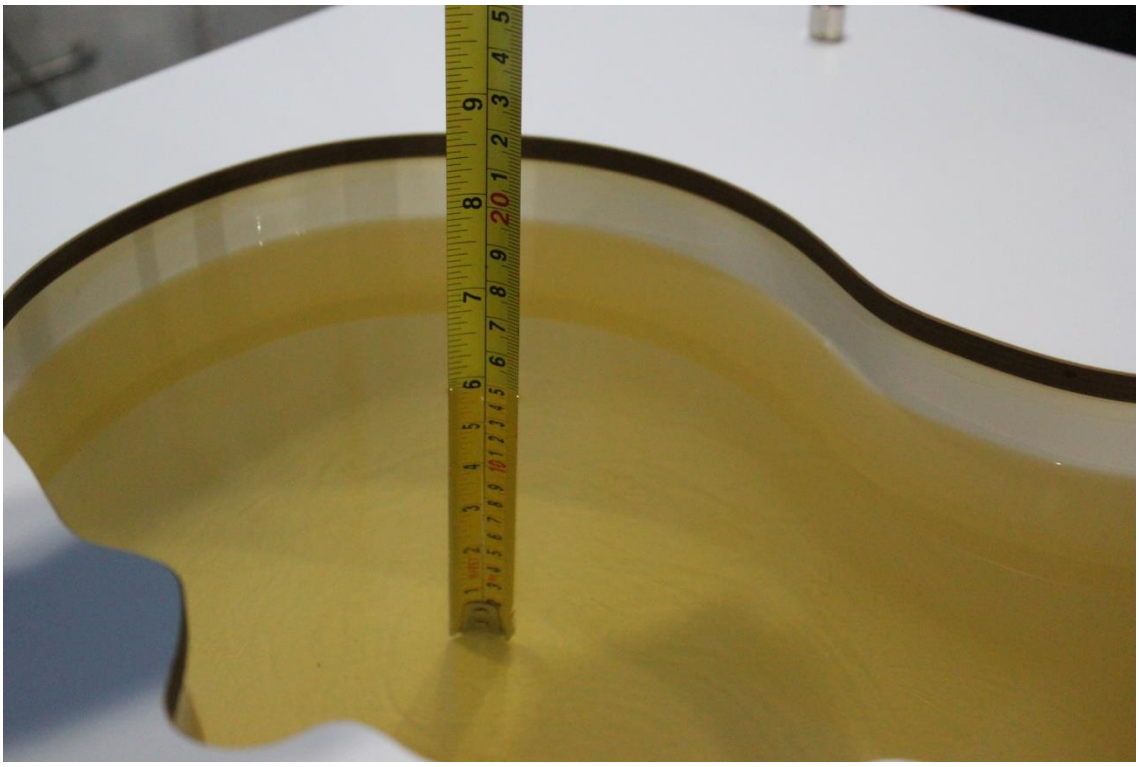
Frequency(MHz)	Liquid Type	Conductivity(σ)	± 5% Range	Permittivity(ε)	± 5% Range
750	Head	0.89	0.85～0.93	41.94	39.8～44.0
835	Head	0.90	0.86～0.95	41.5	39.4～43.6
1750	Head	1.37	1.30～1.44	40.08	38.1～42.1
1900	Head	1.40	1.33～1.47	40.0	38.0～42.0
2450	Head	1.67	1.59～1.75	39.47	37.5～41.4
2600	Head	1.96	1.86～2.06	39.01	37.1～41.0
5250	Head	4.66	4.43～4.89	35.99	34.19～37.79
5600	Head	5.07	4.82～5.32	35.53	33.75～37.31
5750	Head	5.27	5.01～5.53	35.3	33.5～37.1

7.2 Dielectric Performance

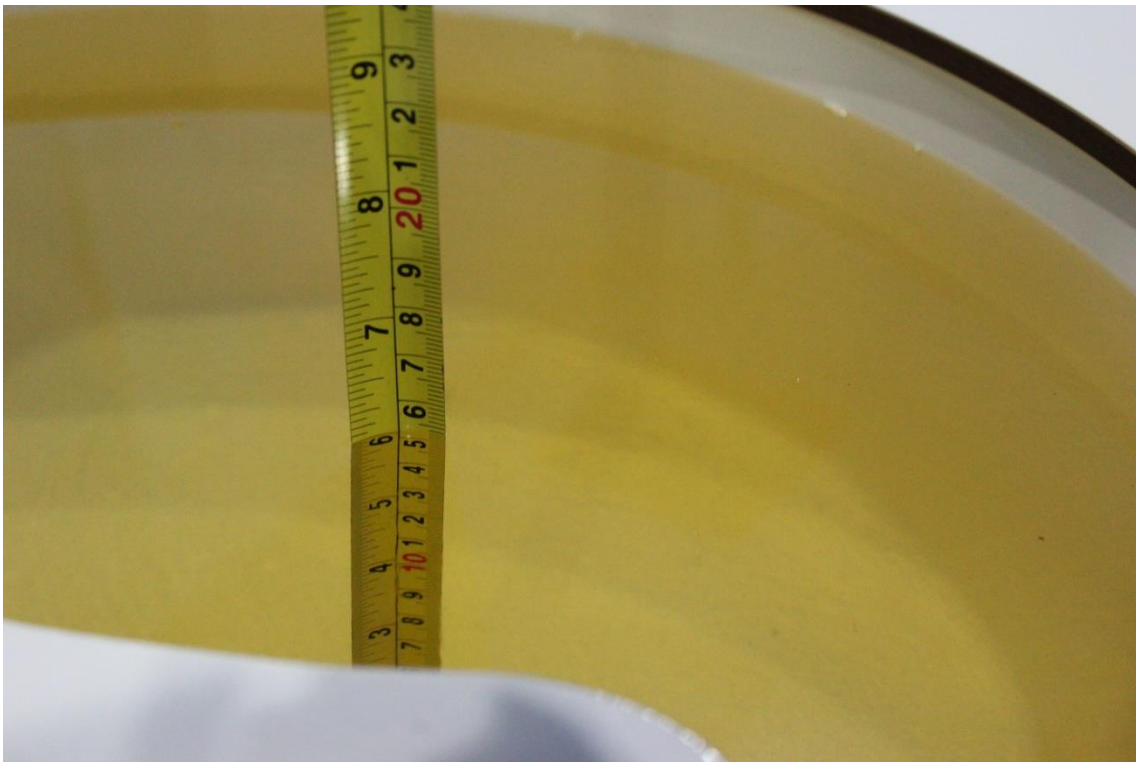
Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ε	Drift (%)	Conductivity σ (S/m)	Drift (%)
2021/7/25	Head	750 MHz	42.22	0.67	0.881	-1.01
2021/7/26	Head	835 MHz	42.29	1.90	0.889	-1.22
2021/7/27	Head	1750 MHz	40.85	1.92	1.358	-0.88
2021/7/28	Head	1900 MHz	40.17	0.43	1.418	1.29
2021/7/29	Head	2450 MHz	39.01	-0.48	1.797	-0.17
2021/7/30	Head	2600 MHz	38.96	-0.13	1.985	1.28
2021/7/31	Head	5250 MHz	35.52	-1.14	4.685	-0.53
2021/8/1	Head	5600 MHz	35.74	0.59	5.019	-1.01
2021/8/2	Head	5750 MHz	35.92	1.58	5.161	-1.13

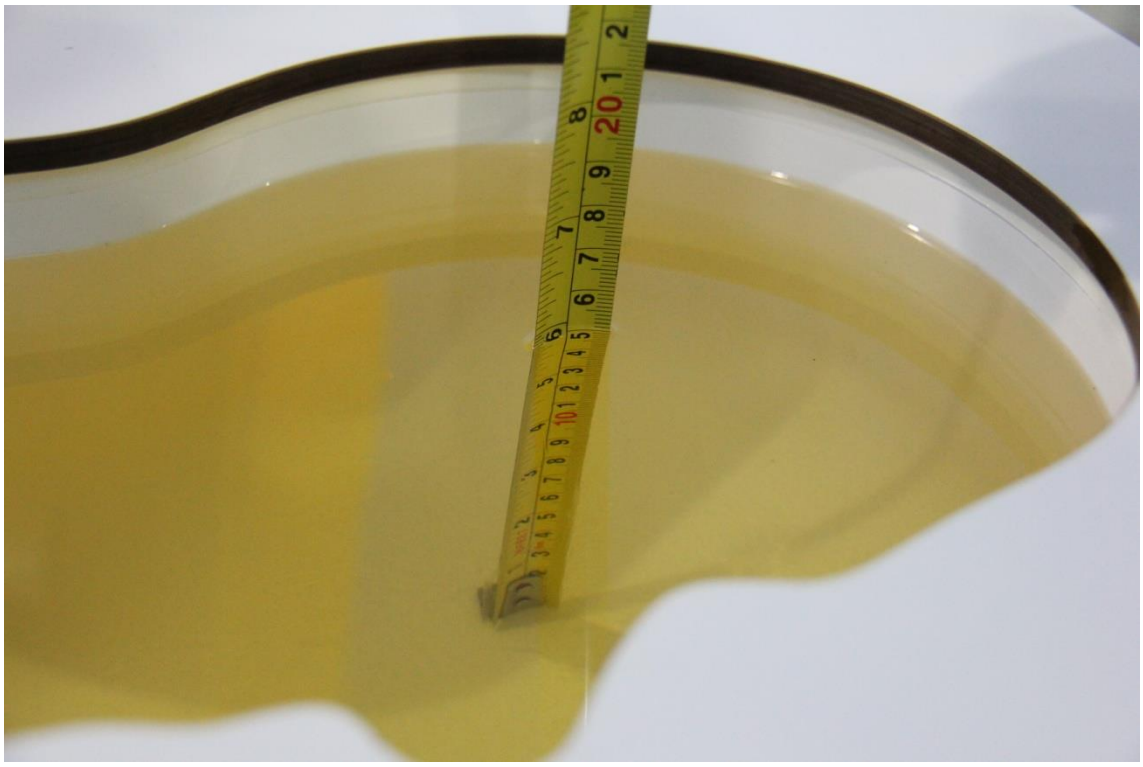
Note: The liquid temperature is 22.0°C



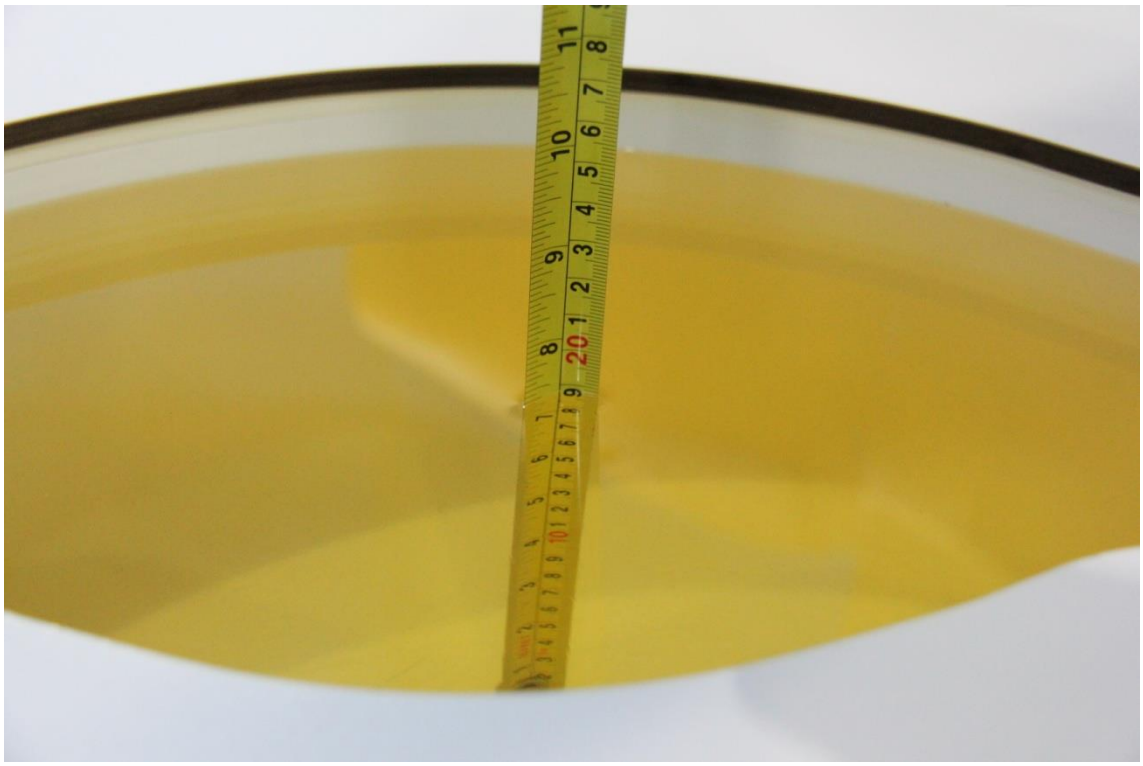
Picture 7-1 Liquid depth in the Head Phantom (750MHz)



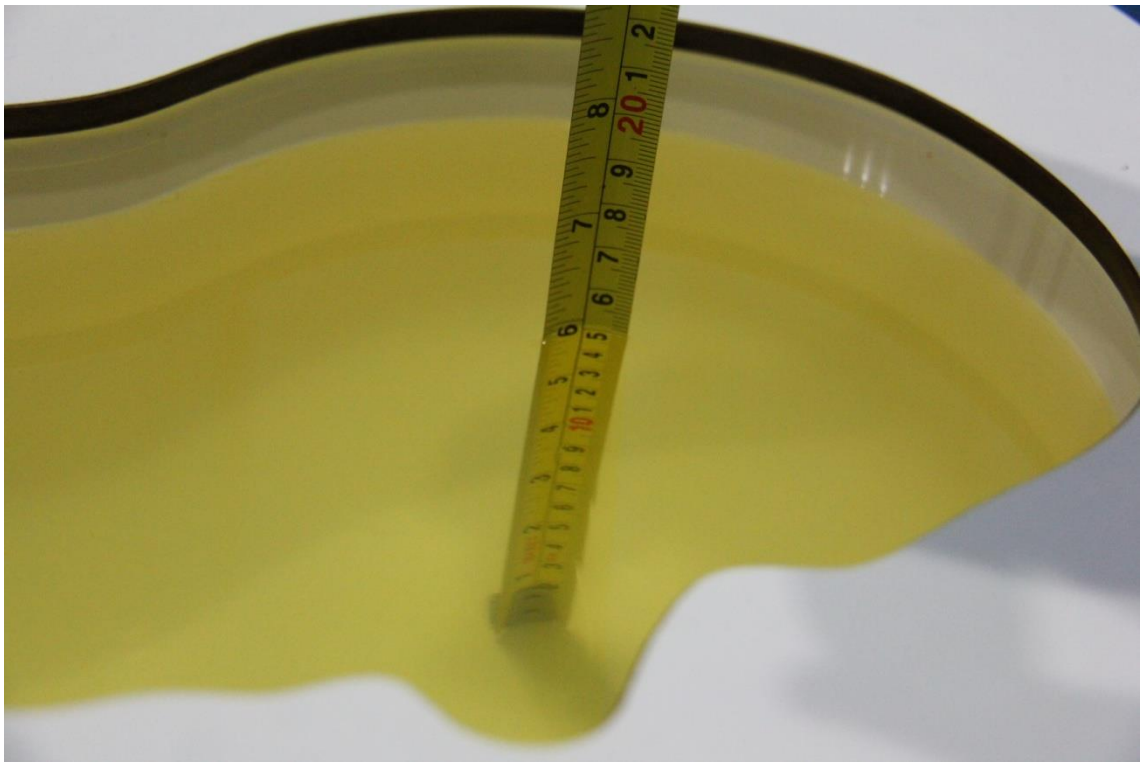
Picture 7-2 Liquid depth in the Flat Phantom (750MHz)



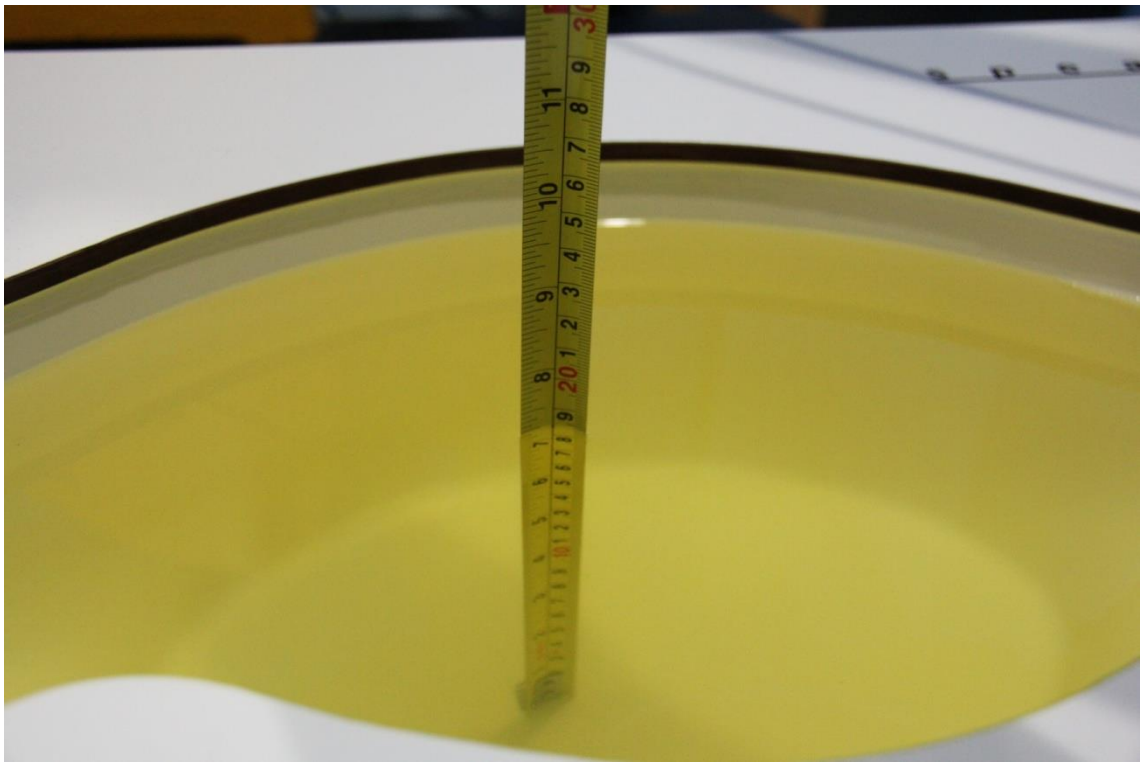
Picture 7-3 Liquid depth in the Head Phantom (835 MHz)



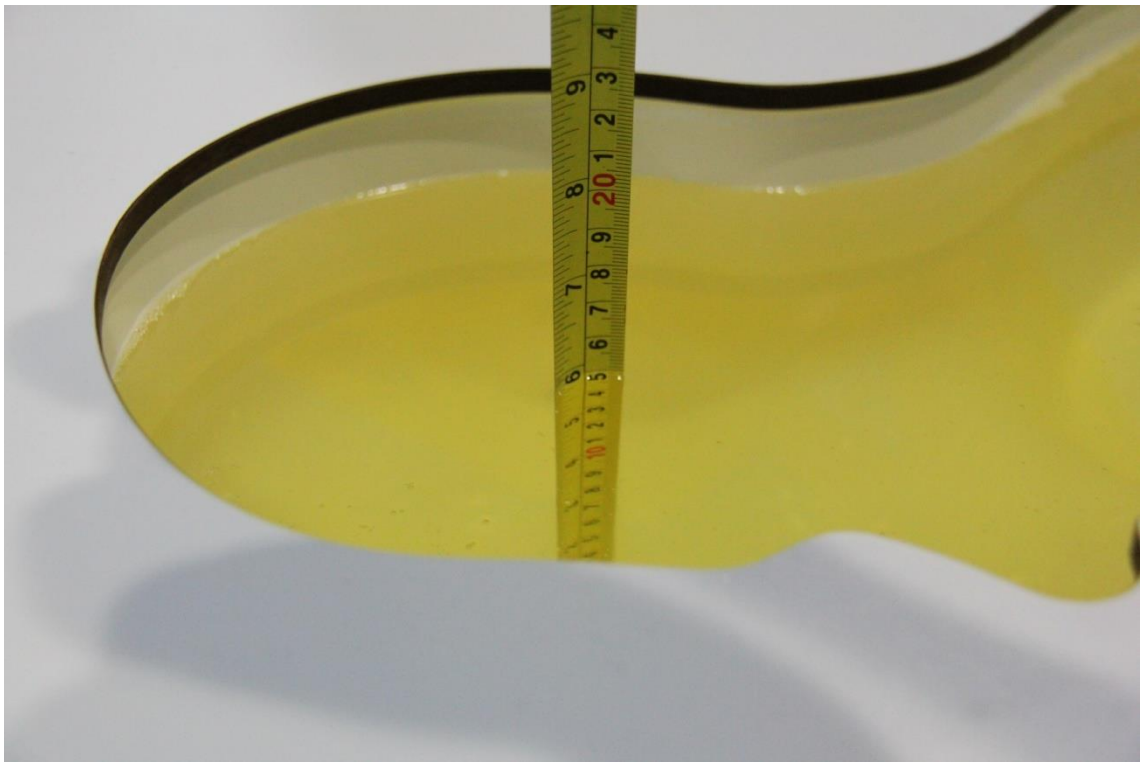
Picture 7-4 Liquid depth in the Flat Phantom (835 MHz)



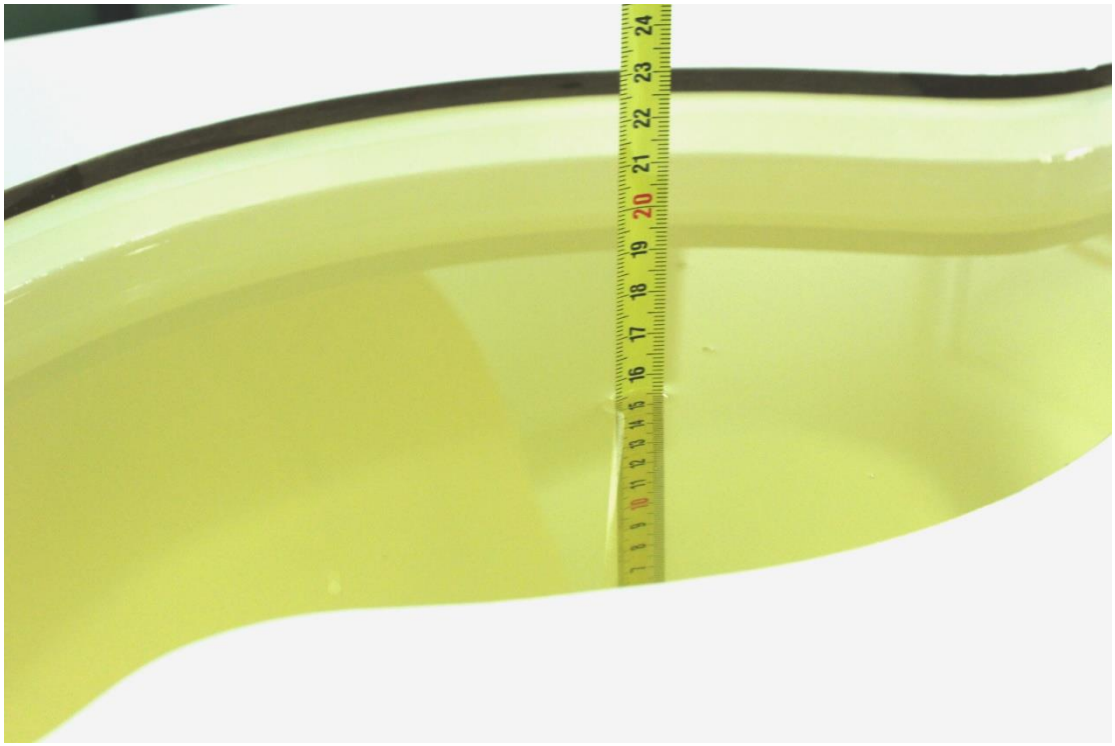
Picture 7-5 Liquid depth in the Head Phantom (1900 MHz)



Picture 7-6 Liquid depth in the Flat Phantom (1900MHz)

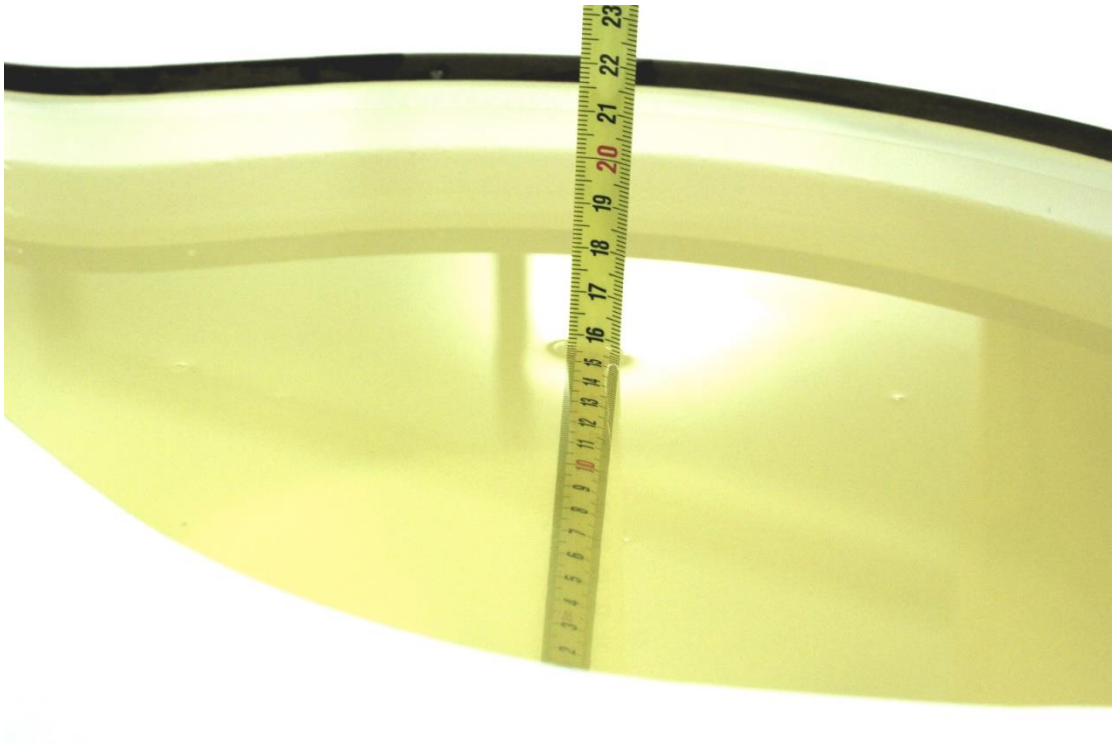


Picture 7-7 Liquid depth in the Head Phantom (2450MHz)

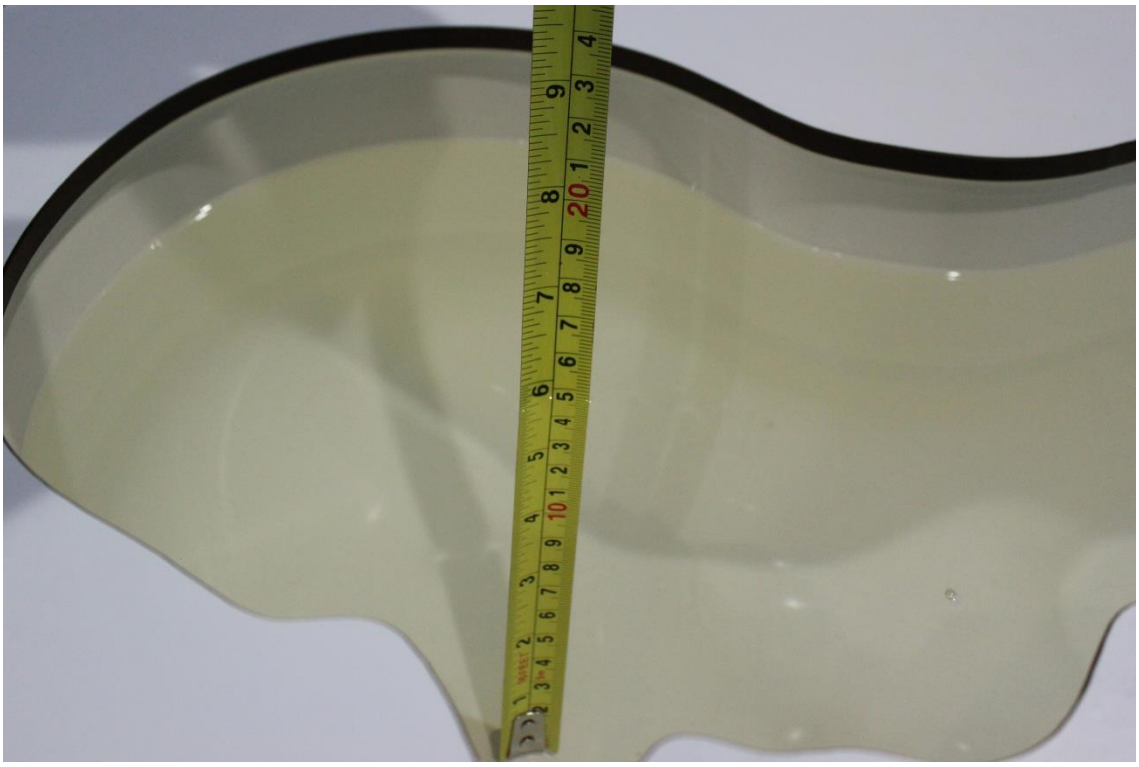


Picture 7-8 Liquid depth in the Flat Phantom (2450MHz)

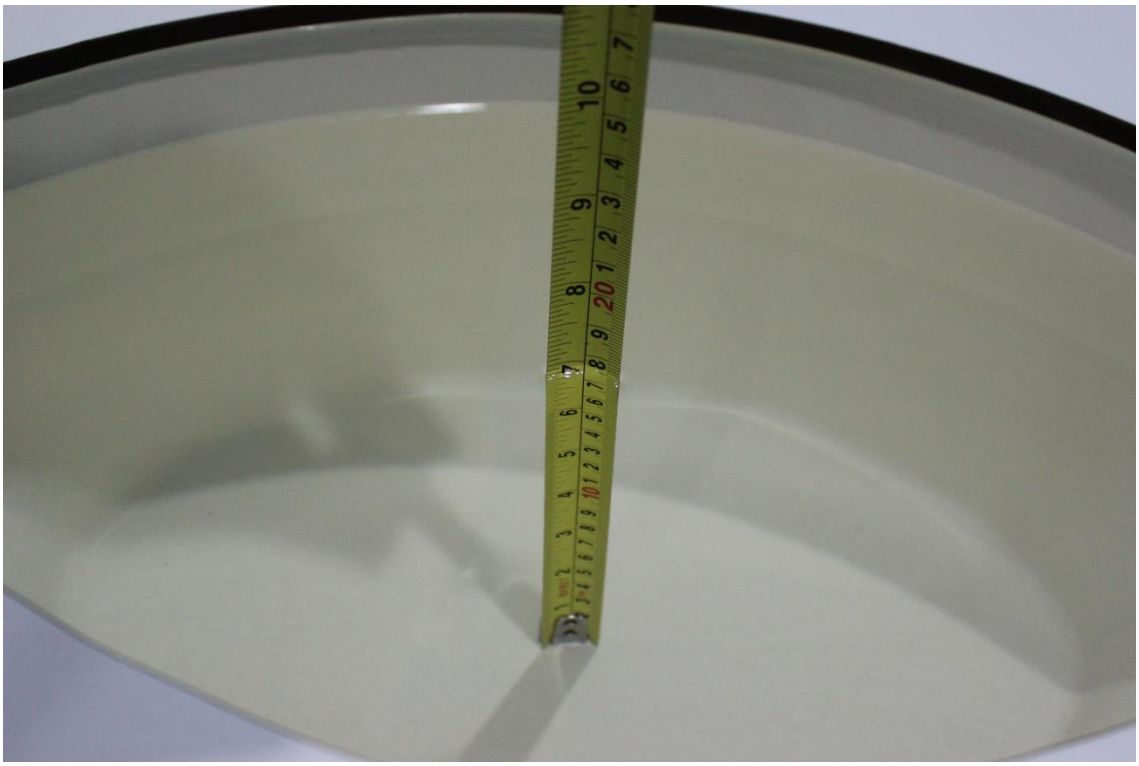
Picture 7-9 Liquid depth in the Head Phantom (2600 MHz)



Picture 7-10 Liquid depth in the Flat Phantom (2600MHz)



Picture 7-11 Liquid depth in the Head Phantom (5GHz)

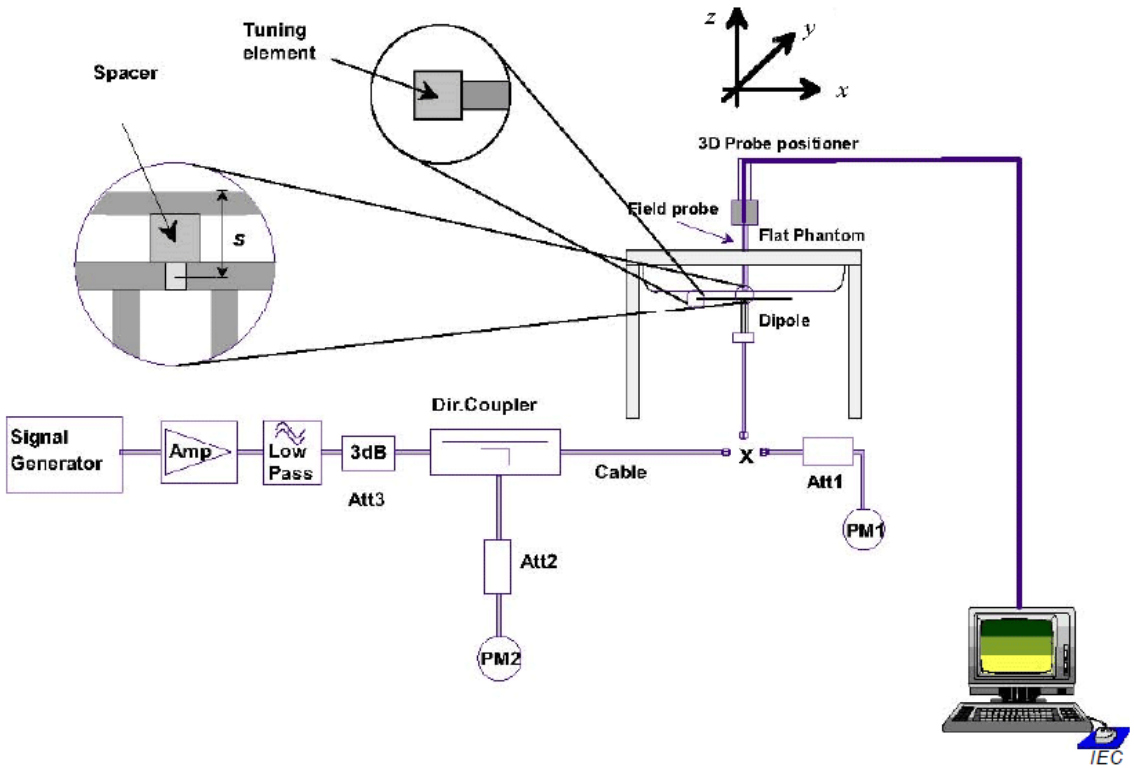


Picture 7-12 Liquid depth in the Flat Phantom (5GHz)

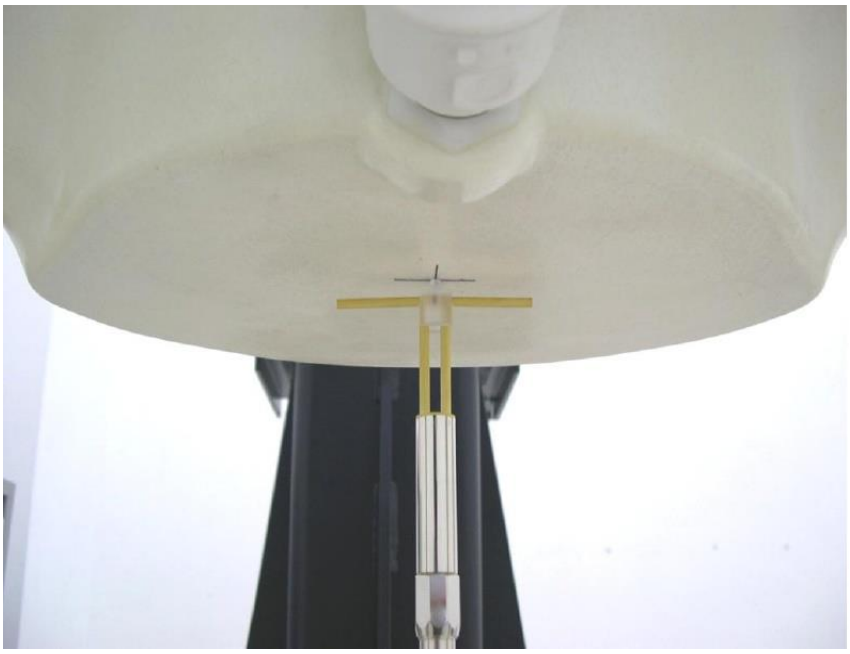
8 System verification

8.1 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 8.1 System Setup for System Evaluation



Picture 8.2 Photo of Dipole Setup

8.2 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 8.1: 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
2021/7/25	750 MHz	5.53	8.47	5.44	8.48	-1.63%	0.12%
2021/7/26	835 MHz	6.25	9.60	6.24	9.72	-0.16%	1.25%
2021/7/27	1750 MHz	19.1	36.5	18.96	36.64	-0.73%	0.38%
2021/7/28	1900 MHz	20.6	39.6	20.44	39.6	-0.78%	0.00%
2021/7/29	2450 MHz	24.5	52.5	24.04	52.92	-1.88%	0.80%
2021/7/30	2600 MHz	25.3	57.0	24.84	57.48	-1.82%	0.84%
2021/7/31	5250 MHz	22.9	80.5	22.7	80.2	-0.79%	-0.42%
2021/8/1	5600 MHz	23.6	83.3	23.4	83.0	-0.85%	-0.41%
2021/8/2	5750 MHz	22.7	80.4	22.7	80.0	0.09%	-0.55%

9 Measurement Procedures

9.1 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.

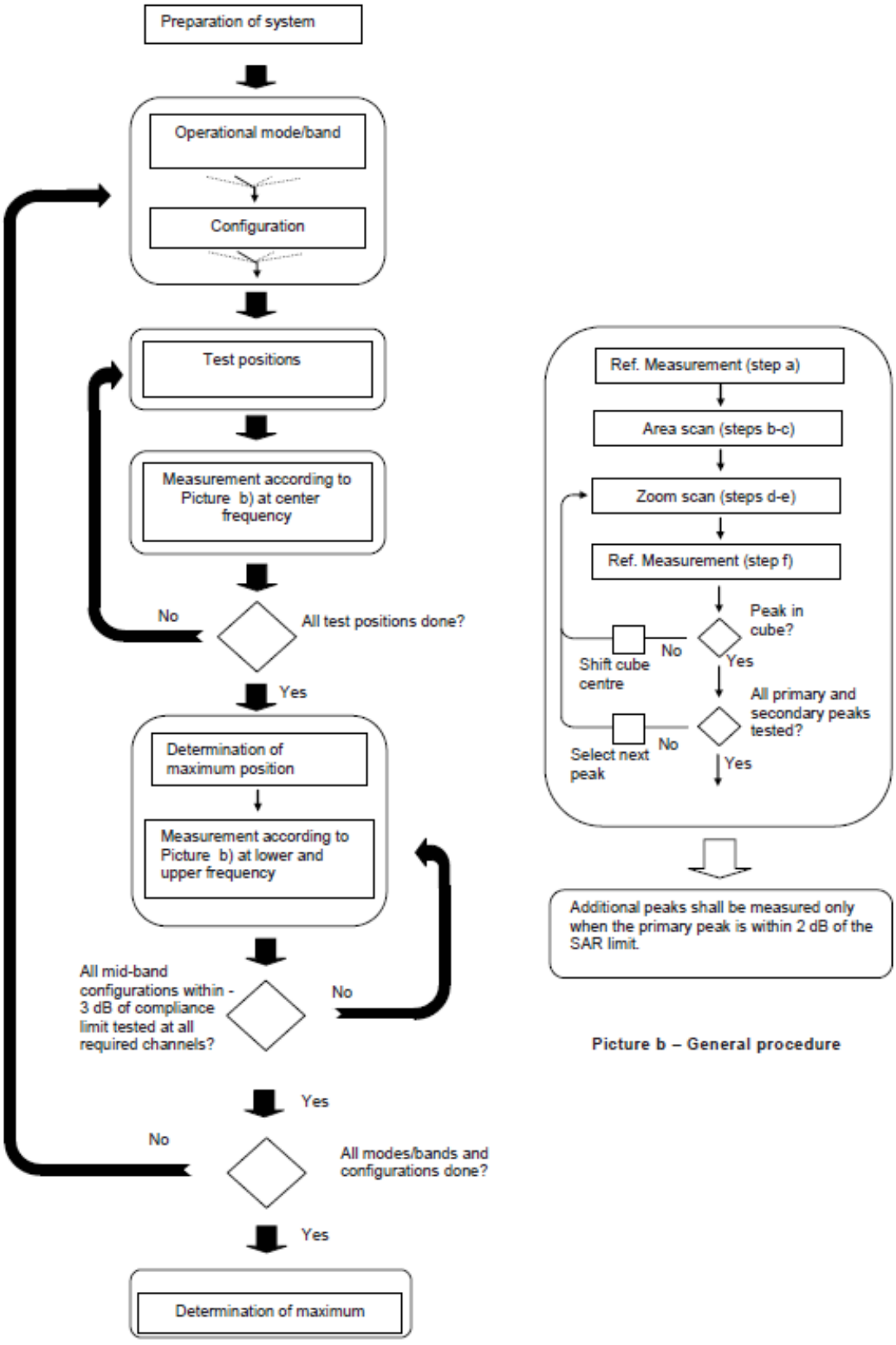
Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:

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 a – Tests to be performed

Picture b – General procedure

Picture 9.1Block diagram of the tests to be performed

9.2 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 1528-2003. 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 reported 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>

9.3 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.

9.4 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.

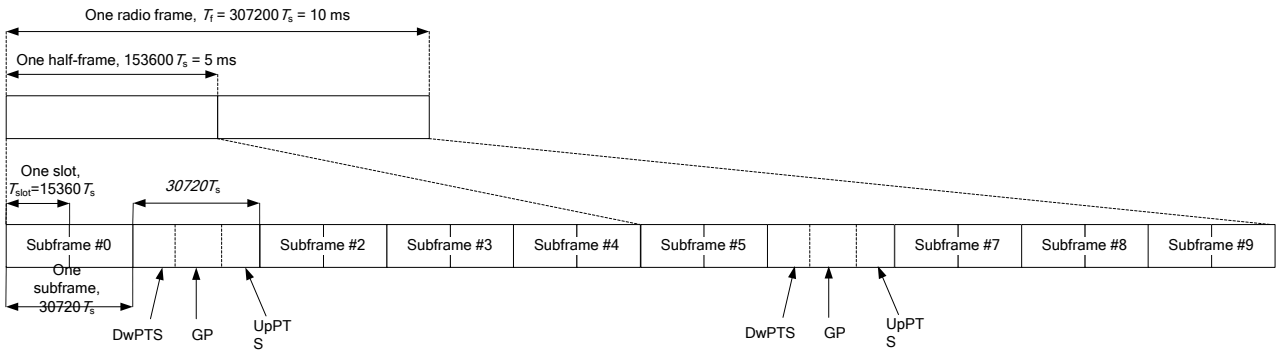


Figure 9.2: Frame structure type 2 (for 5 ms switch-point periodicity)

Table 9.1: 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 9.2: 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.

9.5 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.

9.6 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%.

10 Area Scan Based 1-g SAR

10.1 Requirement of KDB

According to the KDB447498 D01 v05, 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.

10.2 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.

11 Conducted Output Power

For Main antenna, there are two sets of tune-up power, Normal power（Receiver on）for Head SAR. Low power (Receiver off) of GSM1900, WCDMA B2/B4, LTE B25/B66.

Normal power	Low Power- Receiver off
Power Level A	Power Level B

11.1 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.

Table 11.1-1: The conducted power measurement results for GSM, GPRS and EGPRS-Level A

GSM 850	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
Speech (GMSK)	251	190	128			251	190	128
1 Txslot	32.02	32.04	32.06	33.30	/	/	/	/
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	251	190	128			251	190	128
1 Txslot	31.89	32.00	32.02	33.30	-9.03	22.86	22.97	22.99
2 Txslots	31.23	31.34	31.36	32.30	-6.02	25.21	25.32	25.34
3 Txslots	29.56	29.67	29.68	30.50	-4.26	25.30	25.41	25.42
4 Txslots	**28.45**	**28.55**	**28.55**	**29.50**	**-3.01**	**25.44**	**25.54**	**25.54**
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	251	190	128			251	190	128
1 Txslot	31.89	32.00	32.02	33.30	-9.03	22.86	22.97	22.99
2 Txslots	31.23	31.34	31.36	32.30	-6.02	25.21	25.32	25.34
3Txslots	29.57	29.67	29.68	30.50	-4.26	25.31	25.41	25.42
4 Txslots	**28.44**	**28.54**	**28.54**	**29.50**	**-3.01**	**25.43**	**25.53**	**25.53**
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	251	190	128			251	190	128
1 Txslot	25.97	26.00	26.63	27.00	-9.03	16.94	16.97	17.60
2 Txslots	25.06	25.41	25.13	25.50	-6.02	19.04	19.39	19.11
3 Txslots	22.89	22.96	22.84	24.00	-4.26	18.63	18.70	18.58
4 Txslots	21.29	21.39	21.95	22.50	-3.01	18.28	18.38	18.94
PCS1900	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
Speech (GMSK)	810	661	512			810	661	512
1 Txslot	29.03	29.12	29.07	30.30	/	/	/	/
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	28.29	28.15	28.34	30.00	/	/	/	/
1 Txslot	28.80	29.03	28.96	30.30	-9.03	19.77	20.00	19.93

2 Txslots	**26.47**	**26.68**	**26.52**	**28.00**	**-6.02**	**20.45**	**20.66**	**20.50**
3 Txslots	24.29	24.45	24.25	26.00	-4.26	20.03	20.19	19.99
4 Txslots	23.08	23.24	23.01	25.00	-3.01	20.07	20.23	20.00
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	810	661	512			810	661	512
1 Txslot	28.81	29.05	28.97	30.30	-9.03	19.78	20.02	19.94
2 Txslots	**26.29**	**26.50**	**26.34**	**28.00**	**-6.02**	**20.27**	**20.48**	**20.32**
3 Txslots	24.30	24.47	24.26	26.00	-4.26	20.04	20.21	20.00
4 Txslots	23.09	23.25	23.02	25.00	-3.01	20.08	20.24	20.01
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	810	661	512			810	661	512
1 Txslot	25.17	25.22	25.14	26.00	-9.03	16.14	16.19	16.11
2 Txslots	24.01	24.10	24.10	24.50	-6.02	17.99	18.08	18.08
3 Txslots	21.78	22.08	21.87	23.00	-4.26	17.52	17.82	17.61
4 Txslots	20.64	20.66	20.58	21.50	-3.01	17.63	17.65	17.57

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

According to the conducted power as above, the body measurements are performed with 4Txslots for GSM850 and2Txslots for GSM1900.

Power-Level B

PCS1900	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
Speech (GMSK)	810	661	512			810	661	512
1 Txslot	27.16	27.25	27.28	27.30	/	/	/	/
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	810	661	512		/	/	/	/
1 Txslot	25.37	25.38	25.44	26.80	-9.03	16.34	16.35	16.41
2 Txslots	**22.57**	**22.56**	**22.70**	**24.00**	**-6.02**	**16.55**	**16.54**	**16.68**
3 Txslots	20.78	20.74	20.87	22.00	-4.26	16.52	16.48	16.61
4 Txslots	19.50	19.44	19.56	21.00	-3.01	16.49	16.43	16.55
PCS1900	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
EGPRS (GMSK)	810	661	512			810	661	512
1 Txslot	25.32	25.35	25.48	26.80	-9.03	16.29	16.32	16.45
2 Txslots	**22.65**	**22.63**	**22.74**	**24.00**	**-6.02**	**16.63**	**16.61**	**16.72**
3 Txslots	20.85	20.81	20.92	22.00	-4.26	16.59	16.55	16.66
4 Txslots	19.58	19.52	19.60	21.00	-3.01	16.57	16.51	16.59
PCS1900	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
EGPRS (8PSK)	810	661	512			810	661	512

1 Txslot	20.68	20.71	21.26	22.50	-9.03	11.65	11.68	12.23
2 Txslots	17.44	17.51	17.95	19.00	-6.02	11.42	11.49	11.93
3 Txslots	15.45	16.09	15.90	17.00	-4.26	11.19	11.83	11.64
4 Txslots	13.91	13.99	14.37	15.50	-3.01	10.90	10.98	11.36

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

According to the conducted power as above, the body measurements are performed with 2Txslots for GSM1900.

11.2 WCDMA Measurement result

Table 11.2-1: The conducted Power for WCDMA-Level A

Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4182 (836.4MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	23.96	23.91	23.93	24.50
HSUPA	1	21.14	21.08	20.99	22.00
	2	21.13	21.07	20.99	22.00
	3	22.07	22.03	21.95	22.00
	4	20.64	20.57	20.51	21.00
	5	22.04	21.98	21.91	22.00
HSPA+(16QAM)		22.53	22.52	22.46	23.00
DC-HSDPA	1	22.11	22.20	22.01	23.00
	2	22.08	22.01	21.98	23.00
	3	21.60	21.65	21.54	23.00
	4	21.60	21.60	21.47	23.00
Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	23.32	23.37	23.38	24.50
HSUPA	1	20.63	20.65	20.65	22.00
	2	20.61	20.67	20.67	22.00
	3	21.6	21.63	21.63	22.00
	4	20.11	20.14	20.15	21.00
	5	20.91	20.94	20.91	21.00
HSPA+(16QAM)		22.19	22.24	22.15	23.00
DC-HSDPA	1	21.67	21.68	21.80	22.00
	2	20.82	20.86	20.95	21.00

	3	20.80	20.82	20.93	21.00
	4	20.83	20.81	20.90	21.00
Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	22.81	22.88	22.71	24.50
HSUPA	1	20.07	20.20	20.10	22.00
	2	20.06	20.17	20.05	22.00
	3	21.05	21.15	21.05	22.00
	4	21.06	21.14	21.02	22.00
	5	19.55	19.66	19.56	21.00
HSPA+(16QAM)		21.68	21.73	21.53	23.00
DC-HSDPA	1	21.16	21.25	21.18	22.00
	2	21.03	21.20	21.13	22.00
	3	20.57	20.73	20.74	22.00
	4	20.55	20.73	20.78	22.00

Table 11.2-2: The conducted Power for WCDMA-Level B

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	21.11	21.24	21.14	21.50
HSUPA	1	18.75	18.43	18.44	19.00
	2	18.36	18.41	18.79	19.00
	3	20.32	20.41	20.39	21.00
	4	18.87	18.73	18.89	19.00
	5	20.32	20.39	20.15	21.00
HSPA+(16QAM)		20.93	20.99	20.90	21.00
DC-HSDPA	1	20.51	20.53	20.62	21.50
	2	20.46	20.52	20.61	21.00
	3	19.99	19.98	20.08	21.00
	4	19.95	19.99	20.04	21.00
Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	20.97	20.95	20.90	21.50
HSUPA	1	18.65	18.58	18.55	19.00
	2	18.97	18.89	18.85	19.00
	3	19.82	19.88	19.86	20.00
	4	17.78	17.67	17.70	18.00
	5	19.85	19.84	19.83	20.00
HSPA+(16QAM)		19.99	19.93	19.97	20.00
DC-HSDPA	1	19.82	19.79	19.78	20.00

	2	19.97	19.92	19.98	20.00
	3	19.87	19.85	19.82	20.00
	4	19.82	19.80	19.78	20.00

11.3 LTE Measurement result

Table 13.3-1: Maximum Power Reduction (MPR) for LTE-Normal 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	2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	3

Table 13.3-2: Maximum Power Reduction (MPR) for LTE -Low 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	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

Table 11.3-3: The tune up for LTE – Level A

Band	Tune up
LTE Band 7	25
LTE Band 12	25
LTE Band 25	25
LTE Band 26	25
LTE Band41(PC3)	25
LTE Band41(PC2)	27.8
LTE Band 66	25
LTE Band 71	25

Table 11.3-4: The tune up for LTE – Level B

Band	Tune up
LTE Band 25	22
LTE Band 66	22

LTE B7-Level A					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
5MHz	1RB-High (24)	2567.5 (21425)	23.64	22.85	21.85
		2535 (21100)	23.89	23.35	22.22
		2502.5 (20775)	23.70	22.91	21.85
	1RB-Middle (12)	2567.5 (21425)	23.81	23.11	22.01
		2535 (21100)	23.80	23.33	22.28
		2502.5 (20775)	23.69	23.20	22.12
	1RB-Low (0)	2567.5 (21425)	23.69	22.92	21.87
		2535 (21100)	23.82	23.01	21.96
		2502.5 (20775)	23.69	22.91	21.78
	12RB-High (13)	2567.5 (21425)	22.83	21.79	20.88
		2535 (21100)	23.16	22.11	21.18
		2502.5 (20775)	22.87	21.87	20.90
	12RB-Middle (6)	2567.5 (21425)	22.93	21.92	20.94
		2535 (21100)	22.71	22.08	21.11
		2502.5 (20775)	22.90	21.89	20.90
	12RB-Low (0)	2567.5 (21425)	22.87	21.84	20.89
		2535 (21100)	22.97	21.95	21.01
		2502.5 (20775)	22.83	21.78	20.82
	25RB (0)	2567.5 (21425)	22.89	21.88	20.89
		2535 (21100)	22.71	22.10	21.09
		2502.5 (20775)	22.87	21.85	20.86
10MHz	1RB-High (49)	2565 (21400)	23.73	22.93	21.85
		2535 (21100)	23.43	23.59	22.53
		2505 (20800)	23.75	22.99	21.90
	1RB-Middle (24)	2565 (21400)	23.70	23.07	22.05
		2535 (21100)	23.78	23.21	22.25
		2505 (20800)	23.91	23.17	22.02
	1RB-Low (0)	2565 (21400)	23.86	23.13	22.01
		2535 (21100)	23.87	22.97	22.09
		2505 (20800)	23.75	22.96	21.94
	25RB-High (25)	2565 (21400)	22.92	21.91	20.92
		2535 (21100)	23.30	22.26	21.29
		2505 (20800)	22.91	21.90	20.91
	25RB-Middle (12)	2565 (21400)	22.90	21.93	20.92
		2535 (21100)	23.09	22.12	21.10
		2505 (20800)	22.95	21.93	20.92
	25RB-Low (0)	2565 (21400)	22.95	21.95	20.96
		2535 (21100)	22.99	22.00	21.01
		2505 (20800)	22.88	21.86	20.85

	50RB (0)	2565 (21400)	22.96	21.93	20.93
		2535 (21100)	23.86	22.17	21.16
		2505 (20800)	22.90	21.90	20.87
15MHz	1RB-High (74)	2562.5 (21375)	23.64	22.92	21.82
		2535 (21100)	23.32	23.58	22.45
		2507.5 (20825)	23.62	22.80	21.80
	1RB-Middle (37)	2562.5 (21375)	23.54	23.11	22.01
		2535 (21100)	23.90	23.27	22.11
		2507.5 (20825)	23.81	23.02	21.91
	1RB-Low (0)	2562.5 (21375)	23.75	23.15	22.20
		2535 (21100)	23.77	23.05	21.94
		2507.5 (20825)	23.70	22.92	21.83
	36RB-High (38)	2562.5 (21375)	22.88	21.88	20.93
		2535 (21100)	23.36	22.31	21.38
		2507.5 (20825)	22.89	21.81	20.83
	36RB-Middle (19)	2562.5 (21375)	22.92	21.94	20.98
		2535 (21100)	23.10	22.11	21.13
		2507.5 (20825)	22.86	21.84	20.88
	36RB-Low (0)	2562.5 (21375)	22.98	22.00	21.02
		2535 (21100)	22.95	21.96	21.00
		2507.5 (20825)	22.82	21.82	20.83
	75RB (0)	2562.5 (21375)	22.94	21.98	20.98
		2535 (21100)	23.18	22.16	21.18
		2507.5 (20825)	22.79	21.83	20.81
20MHz	1RB-High (99)	2560 (21350)	23.84	22.39	21.44
		2535 (21100)	23.91	22.91	21.80
		2510 (20850)	23.49	22.47	21.30
	1RB-Middle (50)	2560 (21350)	23.61	22.75	21.79
		2535 (21100)	23.76	22.95	21.86
		2510 (20850)	23.45	22.63	21.55
	1RB-Low (0)	2560 (21350)	23.80	22.52	21.90
		2535 (21100)	23.50	22.54	21.45
		2510 (20850)	23.39	22.39	21.41
	50RB-High (50)	2560 (21350)	22.56	21.54	20.53
		2535 (21100)	22.94	21.96	20.94
		2510 (20850)	22.55	21.34	20.31
	50RB-Middle (25)	2560 (21350)	22.85	21.63	20.60
		2535 (21100)	22.79	21.76	20.72
		2510 (20850)	22.45	21.48	20.42
	50RB-Low (0)	2560 (21350)	22.84	21.77	20.77
		2535 (21100)	22.56	21.54	20.50
		2510 (20850)	22.43	21.42	20.38

	100RB (0)	2560 (21350)	22.70	21.62	20.63
		2535 (21100)	22.76	21.72	20.71
		2510 (20850)	22.40	21.36	20.33

LTE B12-Level A					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
1.4MHz	1RB-High (5)	715.3 (23173)	23.66	22.82	21.84
		707.5 (23095)	23.76	23.04	21.96
		699.7 (23017)	23.40	22.76	21.61
	1RB-Middle (3)	715.3 (23173)	23.81	22.88	21.98
		707.5 (23095)	23.84	23.06	22.03
		699.7 (23017)	23.48	22.76	21.69
	1RB-Low (0)	715.3 (23173)	23.68	22.91	21.93
		707.5 (23095)	23.74	22.93	21.94
		699.7 (23017)	23.25	22.59	21.55
	3RB-High (3)	715.3 (23173)	23.75	22.69	21.83
		707.5 (23095)	23.85	22.80	21.94
		699.7 (23017)	23.45	22.49	21.59
	3RB-Middle (1)	715.3 (23173)	23.80	22.71	21.94
		707.5 (23095)	23.90	22.82	22.06
		699.7 (23017)	23.50	22.54	21.62
	3RB-Low (0)	715.3 (23173)	23.77	22.70	21.87
		707.5 (23095)	23.83	22.82	22.00
		699.7 (23017)	23.40	22.36	21.53
	6RB (0)	715.3 (23173)	22.77	21.91	20.80
		707.5 (23095)	22.85	21.98	20.90
		699.7 (23017)	22.48	21.59	20.49
3MHz	1RB-High (14)	714.5 (23165)	23.70	22.78	21.83
		707.5 (23095)	23.77	23.03	22.00
		700.5 (23025)	23.71	22.95	21.96
	1RB-Middle (7)	714.5 (23165)	23.89	23.02	22.03
		707.5 (23095)	23.95	23.12	22.17
		700.5 (23025)	23.68	22.95	21.88
	1RB-Low (0)	714.5 (23165)	23.72	22.97	21.93
		707.5 (23095)	23.82	23.04	22.00
		700.5 (23025)	23.31	22.63	21.56
	8RB-High (7)	714.5 (23165)	22.69	21.82	20.83
		707.5 (23095)	22.83	21.89	20.90
		700.5 (23025)	22.72	21.80	20.75
	8RB-Middle (4)	714.5 (23165)	22.75	21.85	20.85

		707.5 (23095)	22.86	21.95	20.96
		700.5 (23025)	22.64	21.76	20.69
	8RB-Low (0)	714.5 (23165)	22.75	21.84	20.87
		707.5 (23095)	22.82	21.94	20.94
		700.5 (23025)	22.49	21.54	20.56
	15RB (0)	714.5 (23165)	22.75	21.82	20.79
		707.5 (23095)	22.82	21.90	20.90
		700.5 (23025)	22.61	21.64	20.62
5MHz	1RB-High (24)	713.5 (23155)	23.60	22.74	21.73
		707.5 (23095)	23.64	22.90	21.86
		701.5 (23035)	23.61	22.90	21.88
	1RB-Middle (12)	713.5 (23155)	23.89	23.04	22.08
		707.5 (23095)	23.96	23.08	22.18
		701.5 (23035)	23.87	23.04	22.11
	1RB-Low (0)	713.5 (23155)	23.65	22.82	21.92
		707.5 (23095)	23.68	22.96	21.88
		701.5 (23035)	23.23	22.58	21.44
	12RB-High (13)	713.5 (23155)	22.69	21.71	20.76
		707.5 (23095)	22.79	21.84	20.89
		701.5 (23035)	22.85	21.85	20.89
	12RB-Middle (6)	713.5 (23155)	22.84	21.85	20.91
		707.5 (23095)	22.88	21.92	20.96
		701.5 (23035)	22.83	21.83	20.88
	12RB-Low (0)	713.5 (23155)	22.81	21.84	20.89
		707.5 (23095)	22.84	21.87	20.93
		701.5 (23035)	22.60	21.59	20.65
	25RB (0)	713.5 (23155)	22.75	21.80	20.85
		707.5 (23095)	22.86	21.89	20.91
		701.5 (23035)	22.74	21.72	20.73
10MHz	1RB-High (49)	711 (23130)	23.71	22.97	21.88
		707.5 (23095)	23.78	23.06	21.95
		704 (23060)	23.81	23.08	22.07
	1RB-Middle (24)	711 (23130)	23.94	23.17	22.15
		707.5 (23095)	23.98	23.27	22.13
		704 (23060)	23.97	23.26	22.20
	1RB-Low (0)	711 (23130)	23.84	23.08	22.03
		707.5 (23095)	23.83	23.15	22.06
		704 (23060)	23.43	22.80	21.73
	25RB-High (25)	711 (23130)	22.87	21.92	20.92
		707.5 (23095)	22.93	21.97	20.96
		704 (23060)	22.96	22.00	20.97
	25RB-Middle (12)	711 (23130)	22.93	21.98	20.97

		707.5 (23095)	22.98	22.04	21.03
		704 (23060)	22.96	22.01	21.03
	25RB-Low (0)	711 (23130)	22.97	22.03	21.01
		707.5 (23095)	22.95	22.01	21.00
		704 (23060)	22.88	21.88	20.87
	50RB (0)	711 (23130)	22.91	21.97	20.95
		707.5 (23095)	22.96	21.99	20.97
		704 (23060)	22.94	21.94	20.96

LTE B25-Level A					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
1.4MHz	1RB-High (5)	1914.3 (26683)	24.00	23.10	22.04
		1882.5 (26365)	24.08	23.17	22.23
		1850.7 (26047)	23.99	23.29	22.07
	1RB-Middle (3)	1914.3 (26683)	24.10	23.16	22.14
		1882.5 (26365)	24.12	23.37	22.40
		1850.7 (26047)	24.09	23.33	22.19
	1RB-Low (0)	1914.3 (26683)	24.03	23.14	22.01
		1882.5 (26365)	24.06	23.23	22.20
		1850.7 (26047)	24.02	23.18	22.15
	3RB-High (3)	1914.3 (26683)	23.78	22.68	21.71
		1882.5 (26365)	23.81	22.75	21.92
		1850.7 (26047)	23.81	22.68	21.82
	3RB-Middle (1)	1914.3 (26683)	23.84	22.79	21.80
		1882.5 (26365)	23.72	22.88	21.91
		1850.7 (26047)	23.85	22.76	21.89
	3RB-Low (0)	1914.3 (26683)	23.87	22.72	21.79
		1882.5 (26365)	23.85	22.79	21.89
		1850.7 (26047)	23.79	22.73	21.87
	6RB (0)	1914.3 (26683)	22.87	21.80	20.81
		1882.5 (26365)	22.81	21.95	20.86
		1850.7 (26047)	22.85	21.84	20.84
3MHz	1RB-High (14)	1913.5 (26675)	24.04	23.01	22.08
		1882.5 (26365)	24.11	23.35	22.20
		1851.5 (26055)	23.97	23.14	22.10
	1RB-Middle (7)	1913.5 (26675)	24.11	23.33	22.21
		1882.5 (26365)	24.13	23.44	22.37
		1851.5 (26055)	24.11	23.39	22.29
	1RB-Low (0)	1913.5 (26675)	24.02	23.15	22.13
		1882.5 (26365)	24.11	23.37	22.23
		1851.5 (26055)	24.05	23.20	22.13

	8RB-High (7)	1913.5 (26675)	23.05	22.02	21.06
		1882.5 (26365)	23.13	22.13	21.19
		1851.5 (26055)	23.04	22.08	21.08
	8RB-Middle (4)	1913.5 (26675)	23.11	22.07	21.13
		1882.5 (26365)	23.14	22.16	21.19
		1851.5 (26055)	23.07	22.08	21.13
	8RB-Low (0)	1913.5 (26675)	23.08	22.06	21.13
		1882.5 (26365)	23.13	22.17	21.19
		1851.5 (26055)	23.04	22.07	21.11
	15RB (0)	1913.5 (26675)	23.11	22.05	21.10
		1882.5 (26365)	23.16	22.11	21.17
		1851.5 (26055)	23.05	22.02	21.05
5MHz	1RB-High (24)	1912.5 (26665)	23.92	22.94	21.96
		1882.5 (26365)	23.96	23.23	22.10
		1852.5 (26065)	23.84	23.17	22.00
	1RB-Middle (12)	1912.5 (26665)	24.18	23.24	22.33
		1882.5 (26365)	24.10	23.44	22.40
		1852.5 (26065)	24.11	23.35	22.31
	1RB-Low (0)	1912.5 (26665)	23.91	23.05	22.04
		1882.5 (26365)	23.99	23.26	22.08
		1852.5 (26065)	23.90	23.09	22.14
	12RB-High (13)	1912.5 (26665)	22.99	21.92	21.01
		1882.5 (26365)	23.13	22.07	21.19
		1852.5 (26065)	23.05	21.98	21.07
	12RB-Middle (6)	1912.5 (26665)	23.11	22.05	21.13
		1882.5 (26365)	23.22	22.15	21.23
		1852.5 (26065)	23.09	22.05	21.10
	12RB-Low (0)	1912.5 (26665)	23.13	22.06	21.11
		1882.5 (26365)	23.14	22.11	21.14
		1852.5 (26065)	22.99	21.90	21.01
	25RB (0)	1912.5 (26665)	23.10	22.04	21.10
		1882.5 (26365)	23.18	22.13	21.14
		1852.5 (26065)	23.06	22.01	21.03
10MHz	1RB-High (49)	1910 (26640)	24.02	23.14	22.07
		1882.5 (26365)	24.06	23.27	22.20
		1855 (26090)	23.93	23.13	22.06
	1RB-Middle (24)	1910 (26640)	24.09	23.34	22.17
		1882.5 (26365)	24.11	23.45	22.34
		1855 (26090)	24.08	23.25	22.22
	1RB-Low (0)	1910 (26640)	23.95	23.21	22.08
		1882.5 (26365)	24.11	23.41	22.20
		1855 (26090)	24.04	23.22	22.20

	25RB-High (25)	1910 (26640)	23.01	21.95	21.00
		1882.5 (26365)	23.18	22.14	21.20
		1855 (26090)	23.04	22.04	21.06
	25RB-Middle (12)	1910 (26640)	23.14	22.11	21.13
		1882.5 (26365)	23.22	22.19	21.21
		1855 (26090)	23.05	22.02	21.08
	25RB-Low (0)	1910 (26640)	23.17	22.10	21.17
		1882.5 (26365)	23.23	22.20	21.24
		1855 (26090)	23.02	22.01	21.04
	50RB (0)	1910 (26640)	23.11	22.08	21.11
		1882.5 (26365)	23.20	22.18	21.20
		1855 (26090)	23.04	22.03	21.04
15MHz	1RB-High (74)	1907.5 (26615)	23.98	23.04	22.05
		1882.5 (26365)	23.98	23.18	22.11
		1857.5 (26115)	23.91	23.20	22.08
	1RB-Middle (37)	1907.5 (26615)	24.01	23.24	22.12
		1882.5 (26365)	24.08	23.26	22.23
		1857.5 (26115)	23.96	23.11	22.05
	1RB-Low (0)	1907.5 (26615)	23.92	23.16	22.09
		1882.5 (26365)	24.05	23.33	22.23
		1857.5 (26115)	23.99	23.13	22.13
	36RB-High (38)	1907.5 (26615)	23.04	21.96	21.06
		1882.5 (26365)	23.13	22.10	21.18
		1857.5 (26115)	23.04	21.99	21.07
	36RB-Middle (19)	1907.5 (26615)	23.07	22.01	21.11
		1882.5 (26365)	23.16	22.15	21.19
		1857.5 (26115)	23.02	21.97	21.04
	36RB-Low (0)	1907.5 (26615)	23.09	22.06	21.09
		1882.5 (26365)	23.21	22.16	21.23
		1857.5 (26115)	23.03	21.95	21.02
	75RB (0)	1907.5 (26615)	23.05	22.01	21.05
		1882.5 (26365)	23.17	22.15	21.18
		1857.5 (26115)	23.01	22.00	21.02
20MHz	1RB-High (99)	1905 (26590)	23.95	23.07	22.02
		1882.5 (26365)	23.89	23.08	22.09
		1860 (26140)	23.93	23.16	22.00
	1RB-Middle (50)	1905 (26590)	24.09	23.33	22.15
		1882.5 (26365)	24.18	23.33	22.33
		1860 (26140)	24.01	23.29	22.10
	1RB-Low (0)	1905 (26590)	23.90	23.22	22.01
		1882.5 (26365)	24.00	23.18	22.20
		1860 (26140)	23.92	23.21	22.07

	50RB-High (50)	1905 (26590)	22.92	21.89	20.93
		1882.5 (26365)	23.10	22.02	21.03
		1860 (26140)	23.06	22.02	21.06
	50RB-Middle (25)	1905 (26590)	23.11	22.05	21.08
		1882.5 (26365)	23.18	22.16	21.19
		1860 (26140)	23.08	22.03	21.05
	50RB-Low (0)	1905 (26590)	23.11	22.06	21.07
		1882.5 (26365)	23.17	22.19	21.23
		1860 (26140)	22.98	21.94	20.95
	100RB (0)	1905 (26590)	22.99	21.95	20.98
		1882.5 (26365)	23.14	22.11	21.15
		1860 (26140)	23.02	21.95	20.97

LTE B25-Level B					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
1.4MHz	1RB-High (5)	1914.3 (26683)	21.05	21.15	21.01
		1882.5 (26365)	21.01	21.09	21.12
		1850.7 (26047)	21.04	21.09	21.13
	1RB-Middle (3)	1914.3 (26683)	21.09	21.05	21.12
		1882.5 (26365)	21.10	21.08	21.09
		1850.7 (26047)	21.12	21.05	21.14
	1RB-Low (0)	1914.3 (26683)	20.98	21.16	21.06
		1882.5 (26365)	21.00	21.09	21.08
		1850.7 (26047)	21.07	21.13	21.15
	3RB-High (3)	1914.3 (26683)	21.07	20.92	21.07
		1882.5 (26365)	21.10	21.03	21.15
		1850.7 (26047)	21.14	21.11	21.09
	3RB-Middle (1)	1914.3 (26683)	21.14	21.05	21.11
		1882.5 (26365)	21.13	21.07	21.11
		1850.7 (26047)	21.14	21.11	21.11
	3RB-Low (0)	1914.3 (26683)	21.08	20.93	21.04
		1882.5 (26365)	21.14	21.06	21.08
		1850.7 (26047)	21.18	21.07	21.12
	6RB (0)	1914.3 (26683)	21.11	21.13	20.05
		1882.5 (26365)	21.11	21.09	20.16
		1850.7 (26047)	21.15	21.14	20.12
3MHz	1RB-High (14)	1913.5 (26675)	20.97	21.14	20.99
		1882.5 (26365)	21.02	21.06	21.15
		1851.5 (26055)	21.08	21.06	21.10
	1RB-Middle (7)	1913.5 (26675)	21.15	21.10	21.14
		1882.5 (26365)	21.14	21.09	21.11

		1851.5 (26055)	21.12	21.08	21.14
	1RB-Low (0)	1913.5 (26675)	21.01	21.11	21.06
		1882.5 (26365)	21.04	21.05	21.13
		1851.5 (26055)	21.13	21.16	21.14
	8RB-High (7)	1913.5 (26675)	21.05	20.98	20.07
		1882.5 (26365)	21.06	21.14	20.07
		1851.5 (26055)	21.12	21.08	20.12
	8RB-Middle (4)	1913.5 (26675)	21.10	21.06	20.07
		1882.5 (26365)	21.14	21.07	20.11
		1851.5 (26055)	21.16	21.11	20.05
	8RB-Low (0)	1913.5 (26675)	21.10	21.07	20.16
		1882.5 (26365)	21.07	21.13	20.10
		1851.5 (26055)	21.12	21.14	20.14
	15RB (0)	1913.5 (26675)	21.11	21.05	20.09
		1882.5 (26365)	21.08	21.07	20.15
		1851.5 (26055)	21.13	21.13	20.20
5MHz	1RB-High (24)	1912.5 (26665)	20.87	21.03	20.86
		1882.5 (26365)	20.88	21.15	21.05
		1852.5 (26065)	20.93	21.05	21.10
	1RB-Middle (12)	1912.5 (26665)	21.14	21.01	21.09
		1882.5 (26365)	21.06	21.06	21.07
		1852.5 (26065)	21.13	21.01	21.08
	1RB-Low (0)	1912.5 (26665)	20.88	21.05	21.05
		1882.5 (26365)	20.94	21.13	21.07
		1852.5 (26065)	21.00	21.03	21.11
	12RB-High (13)	1912.5 (26665)	21.00	20.92	20.04
		1882.5 (26365)	21.05	21.06	20.12
		1852.5 (26065)	21.11	21.08	20.16
	12RB-Middle (6)	1912.5 (26665)	21.14	21.08	20.20
		1882.5 (26365)	21.15	21.10	20.21
		1852.5 (26065)	21.15	21.13	20.25
	12RB-Low (0)	1912.5 (26665)	21.09	21.04	20.18
		1882.5 (26365)	21.10	21.04	20.18
		1852.5 (26065)	21.09	21.10	20.18
	25RB (0)	1912.5 (26665)	21.11	21.05	20.13
		1882.5 (26365)	21.09	21.09	20.16
		1852.5 (26065)	21.13	21.15	20.20
10MHz	1RB-High (49)	1910 (26640)	20.43	20.22	20.99
		1882.5 (26365)	20.06	20.26	21.17
		1855 (26090)	20.09	20.46	21.00
	1RB-Middle (24)	1910 (26640)	20.20	20.51	21.25
		1882.5 (26365)	20.23	20.45	21.27

		1855 (26090)	20.23	20.58	21.27
	1RB-Low (0)	1910 (26640)	20.06	20.37	21.10
		1882.5 (26365)	20.12	20.41	21.21
		1855 (26090)	20.17	20.50	21.24
	25RB-High (25)	1910 (26640)	20.02	20.03	20.03
		1882.5 (26365)	20.08	20.11	20.11
		1855 (26090)	20.16	20.17	20.20
	25RB-Middle (12)	1910 (26640)	20.15	20.17	20.17
		1882.5 (26365)	20.18	20.22	20.19
		1855 (26090)	20.22	20.20	20.19
	25RB-Low (0)	1910 (26640)	20.27	20.29	20.28
		1882.5 (26365)	20.23	20.22	20.24
		1855 (26090)	20.20	20.21	20.20
	50RB (0)	1910 (26640)	20.18	20.15	20.07
		1882.5 (26365)	20.17	20.19	20.08
		1855 (26090)	20.18	20.18	20.15
15MHz	1RB-High (74)	1907.5 (26615)	20.00	20.26	20.08
		1882.5 (26365)	20.09	20.31	20.22
		1857.5 (26115)	20.02	20.28	20.16
	1RB-Middle (37)	1907.5 (26615)	20.08	20.42	20.27
		1882.5 (26365)	20.12	20.48	20.35
		1857.5 (26115)	20.17	20.39	20.35
	1RB-Low (0)	1907.5 (26615)	20.01	20.38	20.16
		1882.5 (26365)	20.05	20.43	20.27
		1857.5 (26115)	20.14	20.39	20.34
	36RB-High (38)	1907.5 (26615)	20.06	20.03	20.04
		1882.5 (26365)	20.10	20.09	20.10
		1857.5 (26115)	20.19	20.17	20.19
	36RB-Middle (19)	1907.5 (26615)	20.17	20.15	20.18
		1882.5 (26365)	20.17	20.18	20.16
		1857.5 (26115)	20.17	20.17	20.17
	36RB-Low (0)	1907.5 (26615)	20.20	20.15	20.18
		1882.5 (26365)	20.23	20.21	20.23
		1857.5 (26115)	20.20	20.17	20.17
	75RB (0)	1907.5 (26615)	20.14	20.12	20.13
		1882.5 (26365)	20.16	20.15	20.14
		1857.5 (26115)	20.17	20.19	20.15
20MHz	1RB-High (99)	1905 (26590)	21.16	21.17	21.07
		1882.5 (26365)	20.96	21.05	21.13
		1860 (26140)	20.93	21.15	21.06
	1RB-Middle (50)	1905 (26590)	21.18	21.12	21.11
		1882.5 (26365)	21.09	21.08	21.13

		1860 (26140)	21.12	21.17	21.10
	1RB-Low (0)	1905 (26590)	21.04	21.10	21.05
		1882.5 (26365)	21.00	21.12	21.12
		1860 (26140)	21.04	21.08	21.16
	50RB-High (50)	1905 (26590)	21.06	21.05	21.05
		1882.5 (26365)	21.08	21.08	21.06
		1860 (26140)	21.10	21.13	21.09
	50RB-Middle (25)	1905 (26590)	21.13	21.06	21.06
		1882.5 (26365)	21.17	21.14	21.15
		1860 (26140)	21.15	21.07	21.14
	50RB-Low (0)	1905 (26590)	21.12	21.14	21.12
		1882.5 (26365)	21.14	21.15	21.12
		1860 (26140)	21.14	21.14	21.14
	100RB (0)	1905 (26590)	21.15	21.13	21.10
		1882.5 (26365)	21.08	21.06	21.03
		1860 (26140)	21.13	21.14	21.12

LTE B26-Level A					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
1.4MHz	1RB-High (5)	848.3 (27033)	23.68	22.79	21.74
		831.5 (26865)	23.62	22.86	21.72
		814.7 (26697)	23.63	22.89	21.72
	1RB-Middle (3)	848.3 (27033)	23.56	22.98	22.00
		831.5 (26865)	23.56	22.95	21.89
		814.7 (26697)	23.55	23.01	21.87
	1RB-Low (0)	848.3 (27033)	23.70	22.89	21.88
		831.5 (26865)	23.63	22.83	21.75
		814.7 (26697)	23.63	22.83	21.81
	3RB-High (3)	848.3 (27033)	23.42	22.64	21.83
		831.5 (26865)	23.55	22.63	21.83
		814.7 (26697)	23.56	22.62	21.79
	3RB-Middle (1)	848.3 (27033)	23.58	22.74	21.90
		831.5 (26865)	23.48	22.71	21.87
		814.7 (26697)	23.53	22.72	21.83
	3RB-Low (0)	848.3 (27033)	23.59	22.66	21.81
		831.5 (26865)	23.53	22.63	21.83
		814.7 (26697)	23.57	22.64	21.84
	6RB (0)	848.3 (27033)	22.61	21.85	20.80
		831.5 (26865)	22.74	21.78	20.73
		814.7 (26697)	22.75	21.85	20.82

3MHz	1RB-High (14)	847.5 (27025)	23.53	22.78	21.80
		831.5 (26865)	23.52	22.83	21.81
		815.5 (26705)	23.18	22.18	21.81
	1RB-Middle (7)	847.5 (27025)	23.53	23.04	21.98
		831.5 (26865)	23.59	23.05	21.95
		815.5 (26705)	23.09	22.09	21.82
	1RB-Low (0)	847.5 (27025)	23.54	22.86	21.85
		831.5 (26865)	23.56	22.88	21.84
		815.5 (26705)	23.23	22.19	20.85
	8RB-High (7)	847.5 (27025)	22.75	21.78	20.83
		831.5 (26865)	22.70	21.71	20.81
		815.5 (26705)	22.66	22.67	21.69
	8RB-Middle (4)	847.5 (27025)	22.76	21.82	20.86
		831.5 (26865)	22.70	21.72	20.79
		815.5 (26705)	23.67	22.70	21.68
	8RB-Low (0)	847.5 (27025)	22.77	21.78	20.88
		831.5 (26865)	22.67	21.72	20.77
		815.5 (26705)	23.65	22.72	21.68
	15RB (0)	847.5 (27025)	22.80	21.76	20.82
		831.5 (26865)	22.72	21.72	20.78
		815.5 (26705)	22.72	21.76	20.77
5MHz	1RB-High (24)	846.5 (27015)	23.60	22.80	21.72
		831.5 (26865)	23.51	22.77	21.70
		816.5 (26715)	23.51	22.75	21.72
	1RB-Middle (12)	846.5 (27015)	23.53	23.12	21.98
		831.5 (26865)	23.48	23.00	21.93
		816.5 (26715)	23.48	22.97	21.99
	1RB-Low (0)	846.5 (27015)	23.62	22.91	21.74
		831.5 (26865)	23.53	22.84	21.75
		816.5 (26715)	23.58	22.77	21.73
	12RB-High (13)	846.5 (27015)	22.72	21.67	20.77
		831.5 (26865)	22.70	21.68	20.76
		816.5 (26715)	22.68	21.67	20.74
	12RB-Middle (6)	846.5 (27015)	22.82	21.80	20.92
		831.5 (26865)	22.74	21.74	20.79
		816.5 (26715)	22.75	21.74	20.80
	12RB-Low (0)	846.5 (27015)	22.83	21.83	20.89
		831.5 (26865)	22.66	21.65	20.74
		816.5 (26715)	22.67	21.66	20.70
	25RB (0)	846.5 (27015)	22.80	21.77	20.84
		831.5 (26865)	22.72	21.69	20.75
		816.5 (26715)	22.69	21.66	20.71

10MHz	1RB-High (49)	844 (26990)	23.70	22.80	21.78
		831.5 (26865)	23.60	22.80	21.77
		820 (26750)	23.55	22.77	21.72
	1RB-Middle (24)	844 (26990)	23.58	23.07	22.05
		831.5 (26865)	23.58	22.91	21.84
		820 (26750)	23.51	22.90	21.90
	1RB-Low (0)	844 (26990)	23.70	22.88	21.86
		831.5 (26865)	23.60	22.80	21.77
		820 (26750)	23.66	22.80	21.83
	25RB-High (25)	844 (26990)	22.78	21.77	20.83
		831.5 (26865)	22.81	21.80	20.82
		820 (26750)	22.67	21.67	20.74
	25RB-Middle (12)	844 (26990)	22.87	21.84	20.92
		831.5 (26865)	22.77	21.76	20.82
		820 (26750)	22.71	21.71	20.76
	25RB-Low (0)	844 (26990)	22.92	21.91	20.95
		831.5 (26865)	22.80	21.78	20.83
		820 (26750)	22.66	21.67	20.72
	50RB (0)	844 (26990)	22.83	21.81	20.85
		831.5 (26865)	22.80	21.78	20.83
		820 (26750)	22.69	21.66	20.73
15MHz	1RB-High (74)	841.5 (26965)	23.86	22.97	21.99
		831.5 (26865)	23.84	23.09	21.94
		822.5 (26775)	23.78	22.92	22.01
	1RB-Middle (37)	841.5 (26965)	23.95	23.19	22.12
		831.5 (26865)	23.86	23.02	22.05
		822.5 (26775)	23.85	23.03	22.01
	1RB-Low (0)	841.5 (26965)	23.82	23.08	21.97
		831.5 (26865)	23.82	23.10	22.04
		822.5 (26775)	23.84	22.98	22.06
	36RB-High (38)	841.5 (26965)	23.00	21.92	21.03
		831.5 (26865)	22.98	21.94	21.01
		822.5 (26775)	22.88	21.81	20.90
	36RB-Middle (19)	841.5 (26965)	23.04	22.01	21.07
		831.5 (26865)	22.96	21.90	21.01
		822.5 (26775)	22.87	21.84	20.93
	36RB-Low (0)	841.5 (26965)	22.98	21.93	21.00
		831.5 (26865)	22.97	21.95	21.02
		822.5 (26775)	22.86	21.82	20.90
	75RB (0)	841.5 (26965)	22.99	21.96	21.00
		831.5 (26865)	22.98	21.96	21.00
		822.5 (26775)	22.84	21.87	20.88

LTE 41(PC3)-Level A					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
5MHz	1RB-High (24)	2687.5 (41565)	23.08	22.15	20.75
		2640.3(41093)	23.20	22.20	20.83
		2593 (40620)	23.41	22.36	21.00
		2545.8(40148)	23.47	22.48	20.93
		2498.5 (39675)	23.01	22.09	20.61
	1RB-Middle (12)	2687.5 (41565)	23.30	22.34	20.98
		2640.3(41093)	23.43	22.45	21.10
		2593 (40620)	23.57	22.58	21.23
		2545.8(40148)	23.61	22.59	21.29
		2498.5 (39675)	23.17	22.32	20.91
	1RB-Low (0)	2687.5 (41565)	23.14	22.16	20.79
		2640.3(41093)	23.36	22.36	20.97
		2593 (40620)	23.46	22.45	21.09
		2545.8(40148)	23.48	22.44	21.04
		2498.5 (39675)	23.02	22.05	20.61
	12RB-High (13)	2687.5 (41565)	22.30	21.24	20.27
		2640.3(41093)	22.43	21.32	20.42
		2593 (40620)	22.58	21.45	20.52
		2545.8(40148)	22.54	21.44	20.51
		2498.5 (39675)	22.12	21.07	20.14
	12RB-Middle (6)	2687.5 (41565)	22.31	21.25	20.30
		2640.3(41093)	22.53	21.40	20.50
		2593 (40620)	22.70	21.57	20.64
		2545.8(40148)	22.57	21.54	20.59
		2498.5 (39675)	22.19	21.13	20.14
	12RB-Low (0)	2687.5 (41565)	22.26	21.21	20.24
		2640.3(41093)	22.50	21.35	20.47
		2593 (40620)	22.61	21.49	20.57
		2545.8(40148)	22.50	21.47	20.53
		2498.5 (39675)	22.14	21.01	20.14
	25RB (0)	2687.5 (41565)	22.24	21.27	20.31
		2640.3(41093)	22.37	21.36	20.46
		2593 (40620)	22.51	21.51	20.55
		2545.8(40148)	22.54	21.53	20.53
		2498.5 (39675)	22.09	21.07	20.11
10MHz	1RB-High (49)	2685 (41540)	23.18	22.25	20.82
		2639(41080)	23.25	22.27	20.91
		2593 (40620)	23.44	22.44	21.06

		2547(40160)	23.53	22.54	21.12
		2501 (39700)	23.15	22.17	20.67
	1RB-Middle (24)	2685 (41540)	23.36	22.42	20.98
		2639(41080)	23.58	22.55	21.19
		2593 (40620)	23.70	22.68	21.22
		2547(40160)	23.72	22.67	21.18
		2501 (39700)	23.29	22.22	20.84
	1RB-Low (0)	2685 (41540)	23.25	22.32	20.90
		2639(41080)	23.62	22.55	21.17
		2593 (40620)	23.64	22.60	21.25
		2547(40160)	23.60	22.59	21.15
		2501 (39700)	23.12	22.13	20.66
	25RB-High (25)	2685 (41540)	22.31	21.29	20.38
		2639(41080)	22.37	21.39	20.45
		2593 (40620)	22.55	21.54	20.54
		2547(40160)	22.52	21.49	20.65
		2501 (39700)	22.17	21.16	20.17
	25RB-Middle (12)	2685 (41540)	22.29	21.33	20.36
		2639(41080)	22.49	21.45	20.52
		2593 (40620)	22.63	21.60	20.68
		2547(40160)	22.64	21.60	20.60
		2501 (39700)	22.21	21.14	20.21
	25RB-Low (0)	2685 (41540)	22.26	21.24	20.31
		2639(41080)	22.58	21.53	20.60
		2593 (40620)	22.65	21.66	20.71
		2547(40160)	22.57	21.53	20.61
		2501 (39700)	22.15	21.12	20.11
	50RB (0)	2685 (41540)	22.19	21.19	20.25
		2639(41080)	22.38	21.43	20.40
		2593 (40620)	22.48	21.52	20.54
		2547(40160)	22.42	21.50	20.54
		2501 (39700)	22.01	21.07	20.15
15MHz	1RB-High (74)	2682.5 (41515)	23.05	22.12	20.71
		2637.8(41068)	23.14	22.13	20.77
		2593 (40620)	23.35	22.31	20.90
		2548.3(40173)	23.40	22.40	20.97
		2503.5 (39725)	23.11	22.11	20.65
	1RB-Middle (37)	2682.5 (41515)	23.20	22.25	20.86
		2637.8(41068)	23.46	22.49	21.06
		2593 (40620)	23.61	22.58	21.14
		2548.3(40173)	23.56	22.56	21.21
		2503.5 (39725)	23.21	22.14	20.76

	1RB-Low (0)	2682.5 (41515)	23.18	22.21	20.81
		2637.8(41068)	23.51	22.49	21.12
		2593 (40620)	23.57	22.56	21.14
		2548.3(40173)	23.48	22.51	20.99
		2503.5 (39725)	23.19	22.04	20.59
	36RB-High (38)	2682.5 (41515)	22.23	21.17	20.17
		2637.8(41068)	22.42	21.33	20.35
		2593 (40620)	22.53	21.37	20.42
		2548.3(40173)	22.53	21.43	20.47
		2503.5 (39725)	22.16	21.10	20.13
	36RB-Middle (19)	2682.5 (41515)	22.29	21.18	20.21
		2637.8(41068)	22.56	21.46	20.45
		2593 (40620)	22.63	21.47	20.50
		2548.3(40173)	22.61	21.47	20.53
		2503.5 (39725)	22.16	21.08	20.10
	36RB-Low (0)	2682.5 (41515)	22.28	21.16	20.22
		2637.8(41068)	22.65	21.54	20.56
		2593 (40620)	22.70	21.55	20.58
		2548.3(40173)	22.62	21.45	20.52
		2503.5 (39725)	22.16	21.05	20.07
	75RB (0)	2682.5 (41515)	22.19	21.21	20.24
		2637.8(41068)	22.48	21.37	20.43
		2593 (40620)	22.48	21.46	20.49
		2548.3(40173)	22.46	21.42	20.54
		2503.5 (39725)	22.10	21.06	20.14
20MHz	1RB-High (99)	2680 (41490)	23.31	22.58	21.16
		2636.5(41055)	23.31	22.59	21.22
		2593 (40620)	23.40	22.63	21.19
		2549.5(40185)	23.42	22.67	21.29
		2506 (39750)	23.24	22.49	20.98
	1RB-Middle (50)	2680 (41490)	23.60	22.86	21.49
		2636.5(41055)	23.83	22.98	21.66
		2593 (40620)	23.78	22.91	21.67
		2549.5(40185)	23.85	22.93	21.67
		2506 (39750)	23.45	22.69	21.26
	1RB-Low (0)	2680 (41490)	23.42	22.67	21.25
		2636.5(41055)	23.69	22.92	21.56
		2593 (40620)	23.70	22.96	21.53
		2549.5(40185)	23.64	22.88	21.45
		2506 (39750)	23.75	22.40	20.98
	50RB-High (50)	2680 (41490)	22.41	21.69	20.75
		2636.5(41055)	22.48	21.76	20.79

		2593 (40620)	22.48	21.76	20.76
		2549.5(40185)	22.44	21.77	20.91
		2506 (39750)	22.25	21.52	20.60
	50RB-Middle (25)	2680 (41490)	22.47	21.73	20.78
		2636.5(41055)	22.69	21.95	20.96
		2593 (40620)	22.63	21.88	20.88
		2549.5(40185)	22.60	21.86	20.98
		2506 (39750)	22.22	21.56	20.64
	50RB-Low (0)	2680 (41490)	22.39	21.68	20.73
		2636.5(41055)	22.74	21.98	21.01
		2593 (40620)	22.70	21.95	20.95
		2549.5(40185)	22.61	21.90	20.94
		2506 (39750)	22.19	21.47	20.57
	100RB (0)	2680 (41490)	22.45	21.83	20.80
		2636.5(41055)	22.71	21.92	20.97
		2593 (40620)	22.69	21.94	20.84
		2549.5(40185)	22.62	21.95	20.87
		2506 (39750)	22.30	21.51	20.57

LTE 41(PC2)-Level A					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
5MHz	1RB-High (24)	2687.5 (41565)	26.06	25.06	23.96
		2640.3(41093)	26.25	25.06	23.99
		2593 (40620)	26.43	25.27	24.17
		2545.8(40148)	26.42	25.34	24.25
		2498.5 (39675)	26.01	25.05	23.90
	1RB-Middle (12)	2687.5 (41565)	26.29	25.23	24.11
		2640.3(41093)	26.60	25.34	24.24
		2593 (40620)	26.76	25.49	24.38
		2545.8(40148)	26.71	25.55	24.43
		2498.5 (39675)	26.20	25.19	24.04
	1RB-Low (0)	2687.5 (41565)	26.10	25.09	23.99
		2640.3(41093)	26.42	25.20	24.13
		2593 (40620)	26.51	25.33	24.23
		2545.8(40148)	26.43	25.37	24.25
		2498.5 (39675)	25.98	25.01	23.88
	12RB-High (13)	2687.5 (41565)	25.26	24.17	23.28
		2640.3(41093)	25.43	24.24	23.34
		2593 (40620)	25.58	24.38	23.46
		2545.8(40148)	25.59	24.44	23.54
		2498.5 (39675)	25.17	24.08	23.18

	12RB-Middle (6)	2687.5 (41565)	25.32	24.22	23.33
		2640.3(41093)	25.53	24.32	23.39
		2593 (40620)	25.68	24.47	23.58
		2545.8(40148)	25.68	24.51	23.62
		2498.5 (39675)	25.20	24.08	23.18
	12RB-Low (0)	2687.5 (41565)	25.26	24.15	23.28
		2640.3(41093)	25.53	24.30	23.41
		2593 (40620)	25.63	24.44	23.57
		2545.8(40148)	25.61	24.45	23.54
		2498.5 (39675)	25.17	24.05	23.13
	25RB (0)	2687.5 (41565)	25.21	24.17	23.28
		2640.3(41093)	25.38	24.25	23.35
		2593 (40620)	25.50	24.41	23.48
		2545.8(40148)	25.50	24.43	23.53
		2498.5 (39675)	25.10	24.04	23.14
10MHz	1RB-High (49)	2685 (41540)	26.14	25.15	24.02
		2639(41080)	26.32	25.13	24.04
		2593 (40620)	26.49	25.32	24.20
		2547(40160)	26.53	25.45	24.34
		2501 (39700)	26.11	25.16	24.00
	1RB-Middle (24)	2685 (41540)	26.30	25.29	24.17
		2639(41080)	26.57	25.37	24.27
		2593 (40620)	26.70	25.53	24.42
		2547(40160)	26.66	25.57	24.47
		2501 (39700)	26.21	25.26	24.11
	1RB-Low (0)	2685 (41540)	26.23	25.20	24.08
		2639(41080)	26.63	25.40	24.30
		2593 (40620)	26.66	25.49	24.38
		2547(40160)	26.54	25.48	24.36
		2501 (39700)	26.07	25.14	23.96
	25RB-High (25)	2685 (41540)	25.30	24.25	23.37
		2639(41080)	25.46	24.31	23.41
		2593 (40620)	25.59	24.44	23.55
		2547(40160)	25.62	24.51	23.61
		2501 (39700)	25.20	24.15	23.24
	25RB-Middle (12)	2685 (41540)	25.27	24.19	23.36
		2639(41080)	25.52	24.35	23.47
		2593 (40620)	25.65	24.48	23.57
		2547(40160)	25.62	24.54	23.63
		2501 (39700)	25.21	24.13	23.22
	25RB-Low (0)	2685 (41540)	25.25	24.21	23.33
		2639(41080)	25.57	24.43	23.54

		2593 (40620)	25.67	24.54	23.65
		2547(40160)	25.62	24.51	23.60
		2501 (39700)	25.16	24.09	23.20
	50RB (0)	2685 (41540)	25.34	24.29	23.35
		2639(41080)	25.57	24.40	23.49
		2593 (40620)	25.71	24.55	23.62
		2547(40160)	25.69	24.58	23.64
		2501 (39700)	25.25	24.20	23.21
15MHz	1RB-High (74)	2682.5 (41515)	26.00	25.03	23.93
		2637.8(41068)	26.17	24.98	23.93
		2593 (40620)	26.29	25.15	24.07
		2548.3(40173)	26.33	25.29	24.17
		2503.5 (39725)	26.03	25.10	23.96
	1RB-Middle (37)	2682.5 (41515)	26.17	25.16	24.05
		2637.8(41068)	26.51	25.29	24.22
		2593 (40620)	26.58	25.42	24.31
		2548.3(40173)	26.53	25.45	24.35
		2503.5 (39725)	26.11	25.16	24.02
	1RB-Low (0)	2682.5 (41515)	26.11	25.12	24.00
		2637.8(41068)	26.55	25.33	24.26
		2593 (40620)	26.54	25.42	24.32
		2548.3(40173)	26.43	25.40	24.29
		2503.5 (39725)	25.98	25.02	23.86
	36RB-High (38)	2682.5 (41515)	25.26	24.15	23.23
		2637.8(41068)	25.42	24.24	23.32
		2593 (40620)	25.49	24.39	23.40
		2548.3(40173)	25.56	24.41	23.47
		2503.5 (39725)	25.21	24.08	23.16
	36RB-Middle (19)	2682.5 (41515)	25.28	24.16	23.25
		2637.8(41068)	25.57	24.35	23.44
		2593 (40620)	25.58	24.44	23.50
		2548.3(40173)	25.62	24.45	23.52
		2503.5 (39725)	25.20	24.07	23.14
	36RB-Low (0)	2682.5 (41515)	25.26	24.16	23.24
		2637.8(41068)	25.61	24.43	23.61
		2593 (40620)	25.64	24.48	23.58
		2548.3(40173)	25.59	24.45	23.51
		2503.5 (39725)	25.16	24.03	23.10
	75RB (0)	2682.5 (41515)	25.25	24.21	23.27
		2637.8(41068)	25.47	24.35	23.38
		2593 (40620)	25.56	24.34	23.49
		2548.3(40173)	25.58	24.46	23.51

		2503.5 (39725)	25.13	24.09	23.15
20MHz	1RB-High (99)	2680 (41490)	26.25	25.37	24.26
		2636.5(41055)	26.37	25.31	24.23
		2593 (40620)	26.39	25.35	24.26
		2549.5(40185)	26.40	25.49	24.35
		2506 (39750)	26.18	25.34	24.17
	1RB-Middle (50)	2680 (41490)	26.57	25.62	24.51
		2636.5(41055)	26.89	25.77	24.69
		2593 (40620)	26.86	25.77	24.66
		2549.5(40185)	26.84	25.85	24.73
		2506 (39750)	26.41	25.55	24.39
	1RB-Low (0)	2680 (41490)	26.35	25.41	24.31
		2636.5(41055)	26.73	25.63	24.57
		2593 (40620)	26.69	25.65	24.55
		2549.5(40185)	26.59	25.67	24.52
		2506 (39750)	26.75	25.27	24.11
	50RB-High (50)	2680 (41490)	25.58	24.63	23.68
		2636.5(41055)	25.71	24.63	23.68
		2593 (40620)	25.74	24.64	23.70
		2549.5(40185)	25.75	24.73	23.77
		2506 (39750)	25.43	24.47	23.50
	50RB-Middle (25)	2680 (41490)	25.60	24.64	23.71
		2636.5(41055)	25.92	24.83	23.88
		2593 (40620)	25.86	24.80	23.84
		2549.5(40185)	25.85	24.83	23.81
		2506 (39750)	25.47	24.47	23.51
	50RB-Low (0)	2680 (41490)	25.54	24.53	23.61
		2636.5(41055)	25.94	24.87	23.95
		2593 (40620)	25.89	24.85	23.88
		2549.5(40185)	25.86	24.84	23.87
		2506 (39750)	25.38	24.41	23.44
	100RB (0)	2680 (41490)	25.64	24.65	23.69
		2636.5(41055)	25.83	24.80	23.88
		2593 (40620)	25.84	24.77	23.87
		2549.5(40185)	25.83	24.83	23.86
		2506 (39750)	25.41	24.45	23.48

LTE 66-Level A					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
1.4MHz	1RB-High (5)	1779.3 (132665)	23.79	22.57	21.85
		1745 (132322)	23.74	22.97	21.87

		1710.7 (131979)	23.44	22.84	21.89
	1RB-Middle (3)	1779.3 (132665)	23.90	22.51	21.94
		1745 (132322)	23.68	22.99	22.00
		1710.7 (131979)	23.40	22.65	21.98
	1RB-Low (0)	1779.3 (132665)	23.78	22.52	21.91
		1745 (132322)	23.63	22.78	21.83
		1710.7 (131979)	23.31	22.55	21.86
	3RB-High (3)	1779.3 (132665)	23.82	22.42	21.89
		1745 (132322)	23.70	22.71	21.88
		1710.7 (131979)	23.44	22.22	21.86
	3RB-Middle (1)	1779.3 (132665)	23.92	22.58	21.92
		1745 (132322)	23.61	22.67	21.95
		1710.7 (131979)	23.45	22.32	21.88
	3RB-Low (0)	1779.3 (132665)	23.83	22.50	21.89
		1745 (132322)	23.45	22.58	21.86
		1710.7 (131979)	23.41	22.24	21.86
	6RB (0)	1779.3 (132665)	22.81	21.91	20.90
		1745 (132322)	22.56	21.90	20.88
		1710.7 (131979)	22.44	21.51	20.94
3MHz	1RB-High (14)	1778.5 (132657)	23.86	22.91	21.93
		1745 (132322)	23.87	23.06	21.92
		1711.5 (131987)	23.86	22.89	21.89
	1RB-Middle (7)	1778.5 (132657)	23.74	22.94	22.06
		1745 (132322)	23.71	23.20	22.06
		1711.5 (131987)	23.86	23.20	22.09
	1RB-Low (0)	1778.5 (132657)	23.89	23.02	21.95
		1745 (132322)	23.83	23.00	21.93
		1711.5 (131987)	23.49	22.96	21.93
	8RB-High (7)	1778.5 (132657)	22.88	21.90	20.93
		1745 (132322)	22.89	21.88	20.93
		1711.5 (131987)	22.47	21.84	20.95
	8RB-Middle (4)	1778.5 (132657)	22.92	21.97	20.98
		1745 (132322)	22.94	21.91	20.96
		1711.5 (131987)	22.68	21.91	20.95
	8RB-Low (0)	1778.5 (132657)	22.93	21.90	20.96
		1745 (132322)	22.90	21.87	20.91
		1711.5 (131987)	22.52	21.90	20.92
	15RB (0)	1778.5 (132657)	22.92	21.87	20.94
		1745 (132322)	22.92	21.84	20.90
		1711.5 (131987)	22.75	21.87	20.91
5MHz	1RB-High (24)	1777.5 (132647)	23.74	22.81	21.79
		1745 (132322)	23.73	22.91	21.79

		1712.5 (131997)	23.75	22.94	21.79
	1RB-Middle (12)	1777.5 (132647)	23.65	23.15	22.16
		1745 (132322)	23.65	23.14	22.12
		1712.5 (131997)	23.81	23.12	22.09
	1RB-Low (0)	1777.5 (132647)	23.75	22.79	21.89
		1745 (132322)	23.76	22.96	21.84
		1712.5 (131997)	23.38	22.82	21.89
	12RB-High (13)	1777.5 (132647)	22.85	21.81	20.87
		1745 (132322)	22.90	21.84	20.92
		1712.5 (131997)	22.61	21.85	20.91
	12RB-Middle (6)	1777.5 (132647)	22.96	21.90	20.97
		1745 (132322)	22.96	21.89	20.98
		1712.5 (131997)	22.71	21.90	20.97
	12RB-Low (0)	1777.5 (132647)	22.92	21.85	20.94
		1745 (132322)	22.79	21.77	20.91
		1712.5 (131997)	22.74	21.79	20.85
	25RB (0)	1777.5 (132647)	22.94	21.89	20.93
		1745 (132322)	22.92	21.86	20.92
		1712.5 (131997)	22.71	21.86	20.95
10MHz	1RB-High (49)	1775 (132622)	23.81	23.06	21.90
		1745 (132322)	23.84	23.02	21.87
		1715 (132022)	23.89	23.03	21.98
	1RB-Middle (24)	1775 (132622)	23.91	23.09	21.99
		1745 (132322)	23.95	23.13	21.98
		1715 (132022)	23.95	23.07	22.06
	1RB-Low (0)	1775 (132622)	23.85	22.98	21.92
		1745 (132322)	23.88	22.99	21.98
		1715 (132022)	23.91	22.97	21.94
	25RB-High (25)	1775 (132622)	22.90	21.86	20.89
		1745 (132322)	23.02	21.94	20.98
		1715 (132022)	23.02	21.96	21.02
	25RB-Middle (12)	1775 (132622)	22.97	21.90	20.94
		1745 (132322)	22.96	21.90	20.96
		1715 (132022)	22.97	21.91	20.97
	25RB-Low (0)	1775 (132622)	23.00	21.89	20.94
		1745 (132322)	22.96	21.88	20.92
		1715 (132022)	22.89	21.82	20.86
	50RB (0)	1775 (132622)	22.98	21.91	20.97
		1745 (132322)	23.02	21.95	21.00
		1715 (132022)	22.98	21.90	20.94
15MHz	1RB-High (74)	1772.5 (132597)	23.78	22.88	21.87
		1745 (132322)	23.80	22.96	21.85

		1717.5 (132047)	23.81	23.05	21.90
	1RB-Middle (37)	1772.5 (132597)	23.86	22.98	21.99
		1745 (132322)	23.85	23.00	21.91
		1717.5 (132047)	23.88	23.03	21.99
	1RB-Low (0)	1772.5 (132597)	23.86	23.03	21.96
		1745 (132322)	23.82	22.97	21.88
		1717.5 (132047)	23.84	22.89	21.93
	36RB-High (38)	1772.5 (132597)	22.91	21.81	20.91
		1745 (132322)	22.98	21.87	20.97
		1717.5 (132047)	22.99	21.92	20.98
	36RB-Middle (19)	1772.5 (132597)	22.93	21.87	20.96
		1745 (132322)	23.00	21.89	20.97
		1717.5 (132047)	22.97	21.90	20.97
	36RB-Low (0)	1772.5 (132597)	22.98	21.89	20.96
		1745 (132322)	22.95	21.84	20.95
		1717.5 (132047)	22.90	21.79	20.91
	75RB (0)	1772.5 (132597)	22.94	21.89	20.89
		1745 (132322)	23.01	21.90	20.95
		1717.5 (132047)	22.96	21.88	20.91
20MHz	1RB-High (99)	1770 (132572)	23.71	22.96	21.89
		1745 (132322)	23.77	22.89	21.86
		1720 (132072)	23.76	22.96	21.92
	1RB-Middle (50)	1770 (132572)	23.90	23.18	22.05
		1745 (132322)	23.95	23.15	22.05
		1720 (132072)	23.98	23.09	22.16
	1RB-Low (0)	1770 (132572)	23.83	22.97	21.89
		1745 (132322)	23.76	23.03	21.89
		1720 (132072)	23.79	22.80	21.92
	50RB-High (50)	1770 (132572)	22.90	21.87	20.89
		1745 (132322)	23.00	21.95	20.91
		1720 (132072)	22.92	21.90	20.91
	50RB-Middle (25)	1770 (132572)	22.97	21.93	20.98
		1745 (132322)	23.01	21.96	21.00
		1720 (132072)	22.97	21.93	20.98
	50RB-Low (0)	1770 (132572)	23.00	21.96	20.92
		1745 (132322)	22.95	21.91	20.93
		1720 (132072)	22.90	21.85	20.86
	100RB (0)	1770 (132572)	22.93	21.89	20.93
		1745 (132322)	22.97	21.91	20.95
		1720 (132072)	22.88	21.80	20.88

LTE 66-Level B					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
1.4MHz	1RB-High (5)	1779.3 (132665)	21.02	21.11	21.09
		1745 (132322)	21.04	21.10	21.05
		1710.7 (131979)	21.13	21.13	21.11
	1RB-Middle (3)	1779.3 (132665)	21.14	21.16	21.18
		1745 (132322)	21.11	21.16	21.17
		1710.7 (131979)	21.19	21.18	21.16
	1RB-Low (0)	1779.3 (132665)	21.03	21.08	21.11
		1745 (132322)	21.07	21.12	21.07
		1710.7 (131979)	21.15	21.11	21.05
	3RB-High (3)	1779.3 (132665)	21.15	20.95	21.11
		1745 (132322)	21.18	21.01	21.07
		1710.7 (131979)	21.14	21.07	21.18
	3RB-Middle (1)	1779.3 (132665)	21.19	20.99	21.11
		1745 (132322)	21.11	21.05	21.12
		1710.7 (131979)	21.12	21.13	21.14
	3RB-Low (0)	1779.3 (132665)	21.16	20.98	21.08
		1745 (132322)	21.10	20.99	21.13
		1710.7 (131979)	21.16	21.02	21.17
	6RB (0)	1779.3 (132665)	21.17	21.12	20.08
		1745 (132322)	21.11	21.12	20.09
		1710.7 (131979)	21.17	21.20	20.17
3MHz	1RB-High (14)	1778.5 (132657)	21.12	21.15	21.09
		1745 (132322)	20.99	21.13	21.09
		1711.5 (131987)	21.01	21.14	21.16
	1RB-Middle (7)	1778.5 (132657)	21.10	21.13	21.17
		1745 (132322)	21.15	21.15	21.19
		1711.5 (131987)	21.19	21.19	21.18
	1RB-Low (0)	1778.5 (132657)	20.95	21.16	21.06
		1745 (132322)	20.98	21.11	21.15
		1711.5 (131987)	21.08	21.16	21.16
	8RB-High (7)	1778.5 (132657)	20.99	21.02	20.06
		1745 (132322)	20.99	21.06	20.07
		1711.5 (131987)	21.03	21.08	20.14
	8RB-Middle (4)	1778.5 (132657)	21.03	21.07	20.09
		1745 (132322)	21.05	21.06	20.12
		1711.5 (131987)	21.12	21.12	20.20
	8RB-Low (0)	1778.5 (132657)	20.99	21.04	20.09
		1745 (132322)	21.01	21.04	20.10
		1711.5 (131987)	21.06	21.06	20.16

	15RB (0)	1778.5 (132657)	20.98	20.98	20.07
		1745 (132322)	21.02	21.03	20.08
		1711.5 (131987)	21.07	21.05	20.08
5MHz	1RB-High (24)	1777.5 (132647)	21.10	21.10	20.95
		1745 (132322)	21.08	21.07	21.03
		1712.5 (131997)	20.94	21.18	20.98
	1RB-Middle (12)	1777.5 (132647)	21.11	21.10	21.10
		1745 (132322)	21.14	21.15	21.17
		1712.5 (131997)	21.19	21.18	21.12
	1RB-Low (0)	1777.5 (132647)	21.08	21.12	20.99
		1745 (132322)	20.99	21.12	21.02
		1712.5 (131997)	20.99	21.11	21.10
	12RB-High (13)	1777.5 (132647)	21.03	20.92	20.02
		1745 (132322)	21.15	21.01	20.10
		1712.5 (131997)	21.13	21.05	20.15
	12RB-Middle (6)	1777.5 (132647)	21.12	21.04	20.13
		1745 (132322)	21.18	21.01	20.15
		1712.5 (131997)	21.11	21.07	20.16
	12RB-Low (0)	1777.5 (132647)	21.15	20.99	20.11
		1745 (132322)	21.00	20.97	20.06
		1712.5 (131997)	20.99	20.91	20.07
	25RB (0)	1777.5 (132647)	21.25	21.02	20.07
		1745 (132322)	21.14	21.02	20.07
		1712.5 (131997)	21.06	21.03	20.20
10MHz	1RB-High (49)	1775 (132622)	20.98	21.02	21.12
		1745 (132322)	21.00	21.07	21.03
		1715 (132022)	21.03	21.11	21.15
	1RB-Middle (24)	1775 (132622)	21.14	21.14	21.18
		1745 (132322)	21.18	21.10	21.16
		1715 (132022)	21.11	21.16	21.17
	1RB-Low (0)	1775 (132622)	21.07	21.05	21.12
		1745 (132322)	21.05	21.04	21.12
		1715 (132022)	21.11	21.17	21.02
	25RB-High (25)	1775 (132622)	21.07	20.84	20.82
		1745 (132322)	21.16	20.92	21.01
		1715 (132022)	21.17	20.93	21.16
	25RB-Middle (12)	1775 (132622)	21.14	20.90	20.88
		1745 (132322)	21.14	20.89	21.03
		1715 (132022)	21.13	20.90	21.23
	25RB-Low (0)	1775 (132622)	21.16	20.89	20.88
		1745 (132322)	21.10	20.86	20.87
		1715 (132022)	21.06	21.14	21.06

	50RB (0)	1775 (132622)	21.10	20.87	20.89
		1745 (132322)	21.14	20.92	21.11
		1715 (132022)	21.13	21.19	21.18
15MHz	1RB-High (74)	1772.5 (132597)	21.15	21.10	21.00
		1745 (132322)	21.18	21.19	20.97
		1717.5 (132047)	20.95	21.14	21.02
	1RB-Middle (37)	1772.5 (132597)	21.18	21.11	21.06
		1745 (132322)	21.28	21.28	21.00
		1717.5 (132047)	21.10	21.14	21.07
	1RB-Low (0)	1772.5 (132597)	21.13	21.10	21.07
		1745 (132322)	21.09	21.17	21.03
		1717.5 (132047)	21.03	21.13	21.08
	36RB-High (38)	1772.5 (132597)	21.11	20.94	20.88
		1745 (132322)	21.09	20.96	20.94
		1717.5 (132047)	21.19	20.91	20.93
	36RB-Middle (19)	1772.5 (132597)	21.16	21.20	20.95
		1745 (132322)	20.99	21.00	20.95
		1717.5 (132047)	21.18	20.89	20.94
	36RB-Low (0)	1772.5 (132597)	21.15	21.02	20.93
		1745 (132322)	20.91	20.88	20.91
		1717.5 (132047)	21.16	20.85	20.88
	75RB (0)	1772.5 (132597)	21.15	21.20	20.90
		1745 (132322)	21.01	20.92	20.93
		1717.5 (132047)	21.14	20.88	20.89
20MHz	1RB-High (99)	1770 (132572)	21.28	21.12	21.04
		1745 (132322)	21.12	21.19	21.03
		1720 (132072)	21.20	21.16	21.23
	1RB-Middle (50)	1770 (132572)	21.30	21.18	21.18
		1745 (132322)	21.34	21.10	21.19
		1720 (132072)	21.33	21.10	21.21
	1RB-Low (0)	1770 (132572)	21.13	21.13	21.09
		1745 (132322)	21.21	21.16	21.12
		1720 (132072)	21.29	21.20	21.23
	50RB-High (50)	1770 (132572)	21.28	20.99	21.01
		1745 (132322)	21.33	21.05	21.09
		1720 (132072)	21.30	20.97	21.01
	50RB-Middle (25)	1770 (132572)	21.27	21.04	21.06
		1745 (132322)	21.32	21.02	21.08
		1720 (132072)	21.29	21.04	21.08
	50RB-Low (0)	1770 (132572)	21.23	21.11	21.13
		1745 (132322)	21.26	20.97	21.01
		1720 (132072)	21.18	20.91	20.94

	100RB (0)	1770 (132572)	21.32	21.02	21.07
		1745 (132322)	21.33	21.00	21.05
		1720 (132072)	21.23	20.88	20.97

LTE 71-Level A					
BANDWIDTH	**Number of RBs**	**Frequency**	**QPSK**	**16QAM**	**64QAM**
5MHz	1RB-High (24)	695.5 (133447)	23.40	22.61	21.57
		680.5 (133297)	23.08	22.43	21.30
		665.5 (133147)	23.37	22.63	21.60
	1RB-Middle (12)	695.5 (133447)	23.33	22.50	21.49
		680.5 (133297)	23.42	22.81	21.64
		665.5 (133147)	23.41	22.93	21.73
	1RB-Low (0)	695.5 (133447)	23.05	22.17	21.15
		680.5 (133297)	23.29	22.63	21.44
		665.5 (133147)	23.16	22.49	21.39
	12RB-High (13)	695.5 (133447)	22.30	21.30	20.36
		680.5 (133297)	22.23	21.23	20.30
		665.5 (133147)	22.47	21.48	20.55
	12RB-Middle (6)	695.5 (133447)	22.20	21.22	20.25
		680.5 (133297)	22.33	21.38	20.44
		665.5 (133147)	22.47	21.45	20.52
	12RB-Low (0)	695.5 (133447)	22.02	21.03	20.08
		680.5 (133297)	22.38	21.40	20.47
		665.5 (133147)	22.30	21.29	20.35
	25RB (0)	695.5 (133447)	22.17	21.19	20.21
		680.5 (133297)	22.28	21.29	20.33
		665.5 (133147)	22.39	21.41	20.47
10MHz	1RB-High (49)	693 (132422)	23.27	22.64	21.46
		680.5 (133297)	23.06	22.13	21.11
		668 (133172)	23.33	22.62	21.58
	1RB-Middle (24)	693 (132422)	23.27	22.33	21.14
		680.5 (133297)	23.28	22.66	21.46
		668 (133172)	23.40	22.86	21.80
	1RB-Low (0)	693 (132422)	23.10	22.43	21.25
		680.5 (133297)	23.54	22.86	21.69
		668 (133172)	23.26	22.56	21.49
	25RB-High (25)	693 (132422)	22.08	21.05	20.12
		680.5 (133297)	22.14	21.13	20.18
		668 (133172)	22.62	21.57	20.63
	25RB-Middle (12)	693 (132422)	22.03	21.01	20.08
		680.5 (133297)	22.32	21.29	20.37

		668 (133172)	22.64	21.60	20.67
	25RB-Low (0)	693 (132422)	22.08	21.07	20.11
		680.5 (133297)	22.47	21.49	20.52
		668 (133172)	22.51	21.49	20.53
	50RB (0)	693 (132422)	22.11	21.08	20.10
		680.5 (133297)	22.28	21.31	20.31
		668 (133172)	22.54	21.56	20.58
15MHz	1RB-High (74)	690.5 (133397)	23.28	22.66	21.53
		680.5 (133297)	23.11	22.18	21.11
		670.5 (133197)	23.35	22.71	21.54
	1RB-Middle (37)	690.5 (133397)	23.00	22.34	21.19
		680.5 (133297)	23.30	22.65	21.46
		670.5 (133197)	23.40	22.98	21.79
	1RB-Low (0)	690.5 (133397)	23.10	22.42	21.31
		680.5 (133297)	23.35	22.94	21.70
		670.5 (133197)	23.28	22.59	21.51
	36RB-High (38)	690.5 (133397)	22.10	21.08	20.13
		680.5 (133297)	22.16	21.15	20.18
		670.5 (133197)	22.62	21.57	20.66
	36RB-Middle (19)	690.5 (133397)	22.07	21.05	20.10
		680.5 (133297)	22.32	21.31	20.38
		670.5 (133197)	22.63	21.64	20.70
	36RB-Low (0)	690.5 (133397)	22.10	21.08	20.13
		680.5 (133297)	22.50	21.49	20.54
		670.5 (133197)	22.52	21.51	20.56
	75RB (0)	690.5 (133397)	22.10	21.09	20.11
		680.5 (133297)	22.31	21.33	20.31
		670.5 (133197)	22.55	21.58	20.59
20MHz	1RB-High (99)	688 (133372)	23.34	22.70	21.55
		683 (133322)	23.11	22.34	21.20
		673 (133222)	23.14	22.51	21.29
	1RB-Middle (50)	688 (133372)	23.17	22.52	21.34
		683 (133322)	23.36	22.79	21.60
		673 (133222)	23.36	22.96	21.81
	1RB-Low (0)	688 (133372)	23.38	22.73	21.56
		683 (133322)	23.63	22.76	21.67
		673 (133222)	23.45	22.53	21.37
	50RB-High (50)	688 (133372)	22.11	21.10	20.16
		683 (133322)	22.14	21.14	20.19
		673 (133222)	22.58	21.62	20.64
	50RB-Middle (25)	688 (133372)	22.05	21.09	20.11
		683 (133322)	22.37	21.39	20.42

		673 (133222)	22.64	21.66	20.68
	50RB-Low (0)	688 (133372)	22.31	21.32	20.34
		683 (133322)	22.43	21.44	20.50
		673 (133222)	22.67	21.69	20.70
	100RB (0)	688 (133372)	22.12	21.14	20.18
		683 (133322)	22.31	21.32	20.35
		673 (133222)	22.49	21.50	20.53

Uplink maximum output power is measured with downlink carrier aggregation active, using the channel with highest measured maximum output power when downlink carrier aggregation is inactive. SAR test in not required since maximum output power when downlink carrier aggregation active is not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

The conducted power are as follows:

Receiver on											
DL LTE CA Class	SCC1					SCC2				Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	RB	RB OFFSET	tune up	conducted power (dBm)
66A-66A	20M	132072	66536	1	50	20M	67036	1	50	25	23.96
66B	20M	132572	67036	1	50	20M	67108	1	50	25	23.87
66C	20M	132072	66536	1	50	20M	66734	1	50	25	23.72
12A-66A	10M	23095	5095	1	24	20M	67036	1	99	25	23.32
66A-12A	20M	132572	67036	1	99	10M	5095	1	24	25	23.64
66A-71A	20M	132572	67036	1	99	20M	68786	1	50	25	23.66
71A-66A	20M	133322	68786	1	50	20M	67036	1	99	25	22.22
41C(PC3)	20M	39750	2506	1	0	20M	39948	1	0	25	22.95
41C(PC2)	20M	39750	2506	1	0	20M	39948	1	0	27.8	23.34
41A-41A(PC3)	20M	39750	2506	1	0	20M	41490	1	0	25	22.94
41A-41A(PC2)	20M	39750	2506	1	0	20M	41490	1	0	27.8	23.35
25A 25A	20M	26140	8140	1	50	20M	8590	1	50	25	23.62
25A-26A	20M	26140	8140	1	0	15M	8865	1	37	25	23.60
26A-25A	15M	26865	8865	1	37	20M	8140	-	0	25	23.42
Receiver off											
DL LTE CA Class	SCC1					SCC2				Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	RB	RB OFFSET	tune up	conducted power (dBm)
66A-66A	20M	132072	66536	1	50	20M	67036	1	50	22	21.14
66B	20M	132572	67036	1	99	20M	67108	1	99	22	21.09
66C	20M	132072	66536	1	0	20M	66734	1	0	22	21.01
25A 25A	20M	26140	8140	1	50	20M	8590	1	50	22	20.92

The conducted power measurement results of uplink LTE CA are as below:

Head normal power											
UL LTE CA Class	SCC1					SCC2				Power	
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	RB	RB OFFSET	tune up	conducted power (dBm)
41(PC2)C	20M	39750	2506	1	99	20M	39948	1	99	27.8	26.77
41(PC3)C	20M	39750	2506	1	99	20M	39948	1	99	25	23.42

11.4 Wi-Fi and BT Measurement result

The maximum output power of BT antenna is 8.53dBm.
The maximum tune up of BT antenna is 9dBm.

The average conducted power for Wi-Fi 2.4G is as following:
WIFI and Cellular are not working at the same time. For WIFI 2.4G Antenna there are two of tune-up power, normal power (Receiver off) and lower power (Receiver on):

2.4G-Normal power		
802.11b	Channel\data rate	1Mbps
WLAN2450	11(2462MHz)	21.34
	6(2437(MHz)	21.85
	1(2412MHz)	21.81
	Tune up	23.00
802.11g	Channel\data rate	6Mbps
WLAN2450	11(2462MHz)	20.65
	6(2437(MHz)	20.89
	1(2412MHz)	20.98
	Tune up	22.00
802.11n-20MHz	Channel\data rate	MCS0
WLAN2450	11(2462MHz)	19.46
	6(2437(MHz)	19.78
	1(2412MHz)	19.93
	Tune up	21.00
802.11n-40MHz	Channel\data rate	MCS0
WLAN2450	9(2452MHz)	19.55
	6(2437MHz)	19.80
	3(2422MHz)	19.21
	Tune up	21.00

2.4G-Lower power		
802.11b	Channel\data rate	1Mbps
WLAN2450	11(2462MHz)	18.57
	6(2437(MHz)	18.97
	1(2412MHz)	18.78
	Tune up	20.00
802.11g	Channel\data rate	6Mbps
WLAN2450	11(2462MHz)	18.71
	6(2437(MHz)	18.72
	1(2412MHz)	18.96
	Tune up	20.00
802.11n-20MHz	Channel\data rate	MCS0
WLAN2450	11(2462MHz)	18.74
	6(2437(MHz)	18.92
	1(2412MHz)	18.94
	Tune up	20.00
802.11n-40MHz	Channel\data rate	MCS0
WLAN2450	9(2452MHz)	18.72
	6(2437MHz)	18.68
	3(2422MHz)	18.41
	Tune up	20.00

WIFI and Cellular are not working at the same time.

2.4G		
802.11b	Channel\data rate	1Mbps
WLAN2450	11(2462MHz)	16.40
	6(2437(MHz)	16.55
	1(2412MHz)	16.74
	Tune up	17.00
802.11g	Channel\data rate	6Mbps
WLAN2450	11(2462MHz)	16.70
	6(2437(MHz)	16.72
	1(2412MHz)	16.70
	Tune up	17.00
802.11n-20MHz	Channel\data rate	MCS0
WLAN2450	11(2462MHz)	16.25
	6(2437(MHz)	16.45
	1(2412MHz)	16.73
	Tune up	17.00
802.11n-40MHz	Channel\data rate	MCS0
WLAN2450	9(2452MHz)	16.26
	6(2437MHz)	16.24
	3(2422MHz)	16.00
	Tune up	17.00

The average conducted power for Wi-Fi 5G is as following:

WIFI 5G Tx Power: Receiver on, WIFI and Cellular are not working at the same time.

802.11n(dBm)-40MHz		
Channel\data rate	MCS0	Tune up
38(5190 MHz)	17.83	18.5
46(5230 MHz)	17.02	18.5
54(5270 MHz)	17.05	18
62(5310 MHz)	17.32	18
102(5510 MHz)	17.56	19
110(5550 MHz)	17.79	19
118(5590 MHz)	17.29	19
126(5630 MHz)	17.10	19
134(5670 MHz)	17.62	19
142(5710 MHz)	18.75	19
151(5755 MHz)	18.82	19
159(5795 MHz)	18.30	19

WIFI 5G Tx Power: Receiver on/ Receiver off, WIFI and Cellular are working at the same time.

802.11ac(dBm)-80MHz		
Channel\data rate	MCS0	Tune up
42(5210 MHz)	11.82	13
58(5290 MHz)	11.34	13
106(5530 MHz)	12.94	13
122(5610 MHz)	11.73	13
138(5690 MHz)	12.85	13
155(5775 MHz)	12.88	13

WIFI 5G Tx Power: Receiver off, WIFI and Cellular are not working at the same time.

802.11ac(dBm)-80MHz		
Channel\data rate	MCS0	Tune up
42(5210 MHz)	15.91	17
58(5290 MHz)	15.09	17
106(5530 MHz)	16.12	17
122(5610 MHz)	15.28	17
138(5690 MHz)	16.34	17
155(5775 MHz)	16.62	17

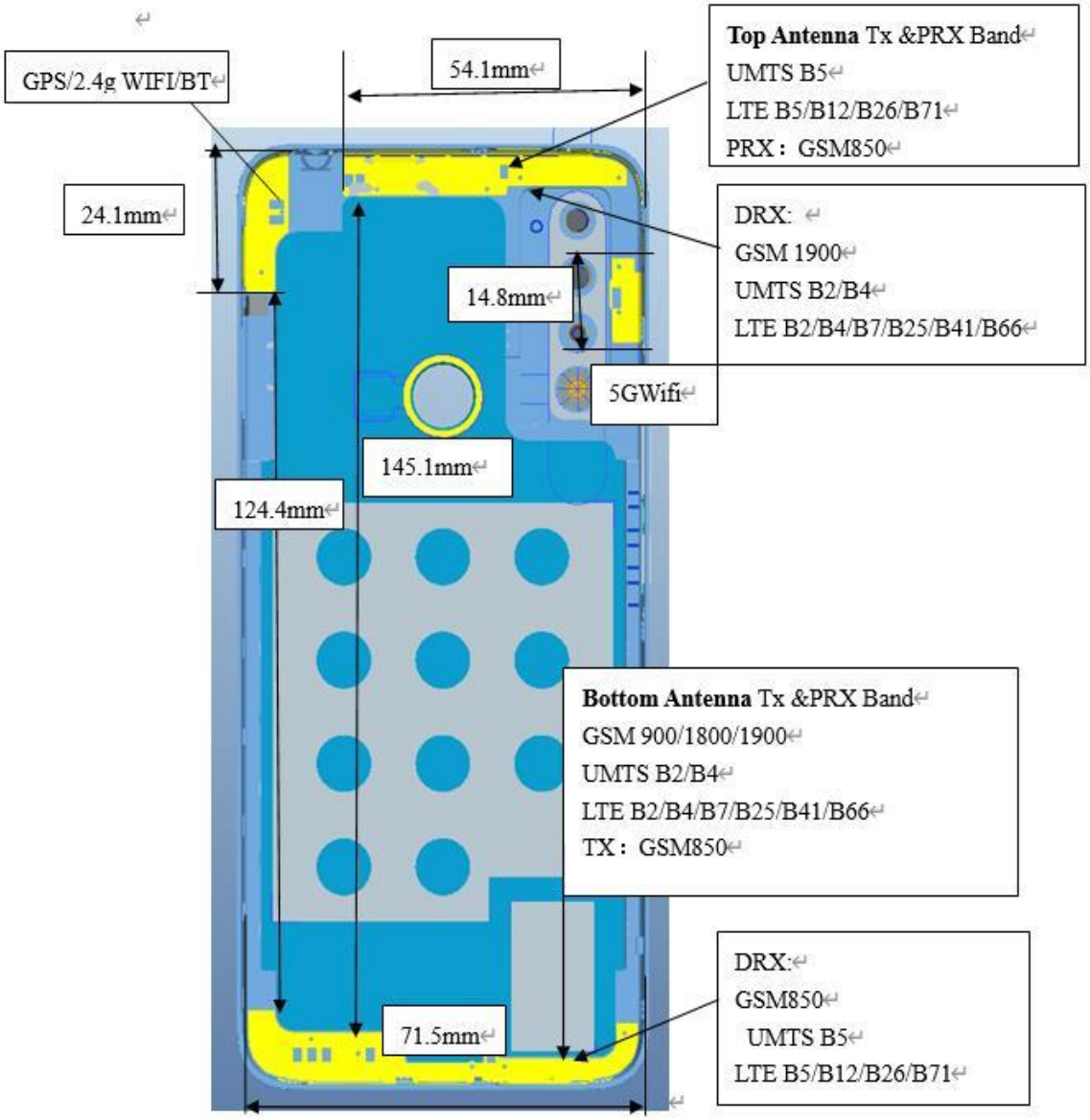
12 Simultaneous TX SAR Considerations

12.1 Introduction

The following procedures adopted from “FCC SAR Considerations for Cell Phones with Multiple Transmitters” are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter.
For this device, the BT and Wi-Fi can transmit simultaneous with other transmitters.

12.2 Transmit Antenna Separation Distances

The location of the antennas inside mobile phone is shown below:



Picture 12.1 Antenna Locations

12.3 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
Top Antenna	Yes	Yes	Yes	Yes	Yes	No
Bottom Antenna	Yes	Yes	Yes	Yes	No	Yes
WLAN 2.4G Antenna	Yes	Yes	Yes	No	Yes	No
WLAN 5G Antenna	Yes	Yes	No	Yes	Yes	No

12.4 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 12.1: 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	Head	9.60	9	7.9	Yes
		Body	19.20	9	7.9	Yes
2.4GHz WLAN	2.45	Head	9.58	20	100	No
		Body	19.17	23	200	No

13 Evaluation of Simultaneous

Table 13.1: The sum of reported SAR values for main antenna and WiFi2.4G/5G

	Position	Main antenna	WiFi	Sum
Highest reported SAR value for Head	Right head, Cheek (LTE Band26+WIFI2.4G)	0.91	0.40	**1.31**
Highest reported SAR value for Head	Left head, Cheek (LTE Band26+WIFI5G)	0.93	0.44	**1.37**
Highest reported SAR value for Body	Front 10mm (WCDMA1700+WIFI5G)	0.86	0.09	**0.95**
Highest reported SAR value for Body	Rear 10mm (WCDMA1700+WIFI5G)	0.99	0.46	**1.45**
Highest reported SAR value for Body	Left Edge 10mm (LTE Band71+WIFI2.4G)	0.71	0.06	**0.77**
Highest reported SAR value for Body	Right Edge 10mm (LTE Band71+WIFI5G)	0.71	0.55	**1.26**
Highest reported SAR value for Body	Top 10mm (LTE Band26+WIFI5G)	0.39	0.09	**0.48**
Highest reported SAR value for Body	Bottom 10mm (LTE Band66)	1.25	/	**1.25**

Table 13.2: The sum of reported SAR values for main antenna and BT

	Position	Main antenna	BT	Sum
Maximum reported SAR value for Head	Left head, Cheek (LTE Band26)	0.93	0.33[1]	1.26
Maximum reported SAR value for Body	Bottom 10mm (LTE Band66)	1.25	0.17[1]	1.42

[1] - Estimated SAR for Bluetooth (see the table 13.3)

Table 13.3: Estimated SAR for Bluetooth

Mode/Band	F (GHz)	Position	Distance (mm)	Upper limit of power *		Estimated$_{1g}$ (W/kg)
				dBm	mW	
Bluetooth	2.441	Head	5	9	7.9	0.33
Bluetooth	2.441	Body	10	9	7.9	0.17

* - Maximum possible output power declared by manufacturer

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;
where x = 7.5 for 1-g SAR.
When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

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.

14 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom. The distance is 10 mm 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 14.1: Duty Cycle

Mode	Duty Cycle
Speech for GSM850	1:8.3
Speech for GSM1900	1:8.3
GPRS&EGPRS for GSM850	1:2
GPRS&EGPRS for GSM1900	1:4
WCDMA&LTE FDD	1:1
LTE B41 PC2	1:2.309
LTE B41 PC3	1:1.58

14.1 SAR results for Fast SAR

Table 14.1-1: SAR Values (GSM 850 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	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										
190	836.6	Left	Touch	/	32.04	33.30	0.060	**0.08**	0.078	**0.10**	0.21
190	836.6	Left	Tilt	/	32.04	33.30	0.044	**0.06**	0.057	**0.08**	-0.33
190	836.6	Right	Touch	/	32.04	33.30	0.089	**0.12**	0.118	**0.16**	-0.37
128	824.2	Right	Touch	Fig.1	32.06	33.30	0.104	**0.14**	0.139	**0.18**	-0.14
251	848.8	Right	Touch	/	32.02	33.30	0.086	**0.12**	0.115	**0.15**	0.05
190	836.6	Right	Tilt	/	32.04	33.30	0.055	**0.07**	0.070	**0.09**	-0.25

Table 14.1-2: SAR Values (GSM 850 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode (number of timeslots)	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										
190	836.6	GPRS(4)	Front	/	28.55	29.50	0.074	**0.09**	0.126	**0.16**	-0.09
251	848.8	GPRS(4)	Rear	/	28.45	29.50	0.162	**0.21**	0.294	**0.37**	0.14
190	836.6	GPRS(4)	Rear	/	28.55	29.50	0.166	**0.21**	0.305	**0.38**	0.22
128	824.2	GPRS(4)	Rear	Fig.2	28.55	29.50	0.178	**0.22**	0.321	**0.40**	0.21
190	836.6	GPRS(4)	Left	/	28.55	29.50	0.031	**0.04**	0.045	**0.06**	-0.09
190	836.6	GPRS(4)	Right	/	28.55	29.50	0.085	**0.11**	0.125	**0.16**	-0.11
190	836.6	GPRS(4)	Bottom	/	28.55	29.50	0.099	**0.12**	0.182	**0.23**	0.30
128	824.2	EGPRS(4)	Rear	/	28.54	29.50	0.172	**0.21**	0.303	**0.38**	0.41

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

Table 14.1-3: SAR Values (GSM 1900 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	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										
661	1880	Left	Touch	/	29.12	30.30	0.050	0.07	0.077	0.10	0.22
661	1880	Left	Tilt	/	29.12	30.30	0.041	0.05	0.066	0.09	0.18
810	1909.8	Right	Touch	/	29.03	30.30	0.042	0.06	0.065	0.09	0.38
661	1880	Right	Touch	Fig.3	29.12	30.30	0.061	0.08	0.099	0.13	0.19
512	1850.2	Right	Touch	/	29.07	30.30	0.057	0.08	0.090	0.12	-0.39
661	1880	Right	Tilt	/	29.12	30.30	0.038	0.05	0.062	0.08	0.34

Table 14.1-4: SAR Values (GSM 1900 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode (number of timeslots)	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										
661	1880	GPRS(2)	Front	/	22.56	24.00	0.110	0.15	0.197	0.27	-0.31
661	1880	GPRS(2)	Rear	/	22.56	24.00	0.141	0.20	0.237	0.33	-0.44
661	1880	GPRS(2)	Left	/	22.56	24.00	0.042	0.06	0.075	0.10	0.03
661	1880	GPRS(2)	Right	/	22.56	24.00	0.025	0.04	0.041	0.06	-0.25
661	1880	GPRS(2)	Bottom	Fig.4	22.56	24.00	0.275	0.38	0.535	0.75	0.00
512	1850.2	GPRS(2)	Bottom	/	22.70	24.00	0.276	0.37	0.543	0.73	0.27
810	1909.8	GPRS(2)	Bottom	/	22.57	24.00	0.233	0.32	0.453	0.63	-0.03
661	1880	EGPRS(2)	Bottom	/	22.63	24.00	0.249	0.34	0.519	0.71	0.13

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

Table 14.1-5: SAR Values (WCDMA 1900 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	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										
9400	1880	Left	Touch	/	22.88	24.50	0.066	**0.10**	0.102	**0.15**	-0.23
9400	1880	Left	Tilt	/	22.88	24.50	0.058	**0.08**	0.096	**0.14**	-0.21
9538	1907.6	Right	Touch	/	22.81	24.50	0.082	**0.12**	0.133	**0.20**	0.45
9400	1880	Right	Touch	/	22.88	24.50	0.082	**0.12**	0.132	**0.19**	-0.10
9262	1852.4	Right	Touch	Fig.5	22.71	24.50	0.087	**0.13**	0.141	**0.21**	-0.24
9400	1880	Right	Tilt	/	22.88	24.50	0.056	**0.08**	0.095	**0.14**	-0.34

Table 14.1-6: SAR Values (WCDMA 1900 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
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									
9400	1880	Front	/	20.95	21.50	0.228	0.26	0.395	0.45	-0.18
9400	1880	Rear	/	20.95	21.50	0.305	0.35	0.515	0.58	0.06
9400	1880	Left	/	20.95	21.50	0.088	0.10	0.150	0.17	-0.02
9400	1880	Right	/	20.95	21.50	0.051	0.06	0.082	0.09	0.04
9400	1880	Bottom	/	20.95	21.50	0.480	0.54	0.928	1.05	0.17
9262	1852.4	Bottom	/	20.90	21.50	0.479	0.55	0.927	1.06	0.41
9538	1907.6	Bottom	Fig.6	20.97	21.50	0.500	0.56	0.965	1.09	-0.38

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

Table 14.1-7: SAR Values (WCDMA 1700 MHz Band – Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C											
Frequency		Side	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										
1412	1732.4	Left	Touch	/	23.37	24.50	0.097	0.13	0.147	0.19	-0.24
1412	1732.4	Left	Tilt	/	23.37	24.50	0.077	0.10	0.123	0.16	0.02
1513	1752.6	Right	Touch	/	23.32	24.50	0.122	0.16	0.193	0.25	-0.02
1412	1732.4	Right	Touch	/	23.37	24.50	0.127	0.16	0.199	0.26	-0.43
1312	1712.4	Right	Touch	Fig.7	23.38	24.50	0.131	0.17	0.207	0.27	-0.23
1412	1732.4	Right	Tilt	/	23.37	24.50	0.081	0.11	0.129	0.17	-0.36

Table 14.1-8: SAR Values (WCDMA 1700 MHz Band - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
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									
1412	1732.4	Front	/	21.24	21.50	0.450	**0.48**	0.808	**0.86**	0.06
1312	1712.4	Front	/	21.14	21.50	0.443	**0.48**	0.795	**0.86**	-0.24
1513	1752.6	Front	/	21.01	21.50	0.430	**0.48**	0.769	**0.86**	0.45
1513	1752.6	Rear	/	21.01	21.50	0.488	**0.55**	0.885	**0.99**	0.30
1412	1732.4	Rear	/	21.24	21.50	0.493	**0.52**	0.904	**0.96**	0.39
1312	1712.4	Rear	/	21.14	21.50	0.473	**0.51**	0.866	**0.94**	0.21
1412	1732.4	Left	/	21.24	21.50	0.107	**0.11**	0.184	**0.20**	0.45
1412	1732.4	Right	/	21.24	21.50	0.103	**0.11**	0.170	**0.18**	0.22
1412	1732.4	Bottom	Fig.8	21.24	21.50	0.551	**0.58**	1.090	**1.16**	-0.13
1312	1712.4	Bottom	/	21.14	21.50	0.527	**0.57**	1.045	**1.14**	-0.45

1513	1752.6	Bottom	/	21.11	21.50	0.537	**0.59**	1.016	**1.11**	0.21

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

Table 14.1-9: SAR Values (WCDMA 850 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	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										
4183	836.6	Left	Touch	/	23.91	24.50	0.380	0.44	0.646	0.74	-0.12
4233	846.6	Left	Tilt	/	23.96	24.50	0.322	0.37	0.603	0.69	0.00
4132	826.4	Left	Tilt	/	23.93	24.50	0.323	0.37	0.627	0.71	0.29
4183	836.6	Left	Tilt	Fig.9	23.91	24.50	0.373	0.43	0.712	0.82	-0.01
4183	836.6	Right	Touch	/	23.91	24.50	0.371	0.43	0.609	0.70	0.38
4183	836.6	Right	Tilt	/	23.91	24.50	0.299	0.34	0.532	0.61	-0.09

Table 14.1-10: SAR Values (WCDMA 850 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC										
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									
4183	836.6	Front	/	23.91	24.50	0.147	**0.17**	0.217	**0.25**	0.37
4233	846.6	Rear	Fig.10	23.96	24.50	0.240	**0.27**	0.361	**0.41**	-0.45
4183	836.6	Rear	/	23.91	24.50	0.200	**0.23**	0.307	**0.35**	-0.22
4132	826.4	Rear	/	23.93	24.50	0.200	**0.23**	0.296	**0.34**	-0.43
4183	836.6	Left	/	23.91	24.50	0.125	**0.14**	0.170	**0.19**	0.34
4183	836.6	Right	/	23.91	24.50	0.210	**0.24**	0.284	**0.33**	-0.13
4183	836.6	TOP	/	23.91	24.50	0.171	**0.20**	0.288	**0.33**	0.36

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

Table 14.1-11: SAR Values (LTE Band7 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	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											
21100	2535	1RB-High	Left	Touch	Fig.11	23.91	25	0.116	**0.15**	0.210	**0.27**	-0.41
21100	2535	1RB-High	Left	Tilt	/	23.91	25	0.087	**0.11**	0.166	**0.21**	-0.24
21100	2535	1RB-High	Right	Touch	/	23.91	25	0.085	**0.11**	0.152	**0.20**	0.41
21100	2535	1RB-High	Right	Tilt	/	23.91	25	0.076	**0.10**	0.139	**0.18**	-0.17
21100	2535	50RB-High	Left	Touch	/	22.94	24	0.098	**0.12**	0.180	**0.23**	-0.09

21100	2535	50RB-High	Left	Tilt	/	22.94	24	0.076	**0.10**	0.145	**0.18**	-0.45
21100	2535	50RB-High	Right	Touch	/	22.94	24	0.066	**0.08**	0.120	**0.15**	0.12
21100	2535	50RB-High	Right	Tilt	/	22.94	24	0.061	**0.08**	0.111	**0.14**	-0.42

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-12: SAR Values (LTE Band7 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
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										
21100	2535	1RB-High	Front	/	23.91	25	0.243	**0.31**	0.107	**0.14**	-0.05
21100	2535	1RB-High	Rear	Fig.12	23.91	25	0.246	**0.32**	0.439	**0.56**	0.09
20850	2510	1RB-High	Rear	/	23.49	25	0.261	**0.37**	0.391	**0.55**	-0.16
21350	2560	1RB-High	Rear	/	23.84	25	0.258	**0.34**	0.422	**0.55**	-0.04
21100	2535	1RB-High	Left	/	23.91	25	0.161	**0.21**	0.266	**0.34**	-0.30
21100	2535	1RB-High	Right	/	23.91	25	0.067	**0.09**	0.117	**0.15**	-0.09
21100	2535	1RB-High	Bottom	/	23.91	25	0.220	**0.28**	0.424	**0.54**	0.30
21100	2535	50RB-High	Front	/	22.94	24	0.106	**0.14**	0.167	**0.21**	0.33
21100	2535	50RB-High	Rear	/	22.94	24	0.198	**0.25**	0.348	**0.44**	-0.38
21100	2535	50RB-High	Left	/	22.94	24	0.120	**0.15**	0.201	**0.26**	-0.32
21100	2535	50RB-High	Right	/	22.94	24	0.066	**0.08**	0.112	**0.14**	-0.23
21100	2535	50RB-High	Bottom	/	22.94	24	0.172	**0.22**	0.333	**0.43**	0.01
21100	2535	100RB	Rear	/	22.76	24	0.200	**0.27**	0.339	**0.45**	-0.44
21100	2535	100RB	Bottom	/	22.76	24	0.161	**0.21**	0.313	**0.42**	-0.36

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.1-13: SAR Values (LTE Band12 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	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											
23095	707.5	1RB-Mid	Left	Touch	Fig.13	23.98	25	0.369	**0.47**	0.605	**0.77**	-0.26
23095	707.5	1RB-Mid	Left	Tilt	/	23.98	25	0.311	**0.39**	0.582	**0.74**	-0.05
23095	707.5	1RB-Mid	Right	Touch	/	23.98	25	0.354	**0.45**	0.569	**0.72**	0.38
23095	707.5	1RB-Mid	Right	Tilt	/	23.98	25	0.298	**0.38**	0.532	**0.67**	0.41
23095	707.5	25RB-Mid	Left	Touch	/	22.98	24	0.286	**0.36**	0.456	**0.58**	0.09
23095	707.5	25RB-Mid	Left	Tilt	/	22.98	24	0.242	**0.31**	0.449	**0.57**	0.15
23095	707.5	25RB-Mid	Right	Touch	/	22.98	24	0.282	**0.36**	0.463	**0.58**	-0.11

23095	707.5	25RB-Mid	Right	Tilt	/	22.98	24	0.230	**0.29**	0.409	**0.52**	0.02

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-14: SAR Values (LTE Band12 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
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										
23095	707.5	1RB-Mid	Front	/	23.98	25	0.079	**0.10**	0.131	**0.17**	-0.19
23095	707.5	1RB-Mid	Rear	/	23.98	25	0.128	**0.16**	0.217	**0.27**	-0.30
23095	707.5	1RB-Mid	Left	/	23.98	25	0.069	**0.09**	0.107	**0.14**	0.16
23095	707.5	1RB-Mid	Right	/	23.98	25	0.117	**0.15**	0.178	**0.23**	0.38
23095	707.5	1RB-Mid	Top	Fig.14	23.98	25	0.132	**0.17**	0.245	**0.31**	-0.24
23095	707.5	25RB-Mid	Front	/	22.98	24	0.079	**0.10**	0.112	**0.14**	0.19
23095	707.5	25RB-Mid	Rear	/	22.98	24	0.104	**0.13**	0.180	**0.23**	-0.21
23095	707.5	25RB-Mid	Left	/	22.98	24	0.059	**0.08**	0.093	**0.12**	-0.05
23095	707.5	25RB-Mid	Right	/	22.98	24	0.162	**0.20**	0.110	**0.14**	0.39
23095	707.5	25RB-Mid	Top	/	22.98	24	0.183	**0.23**	0.103	**0.13**	0.11

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-15: SAR Values (LTE Band25 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	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											
26365	1882.5	1RB-Mid	Left	Touch	/	24.18	25	0.063	0.08	0.100	0.12	0.15
26365	1882.5	1RB-Mid	Left	Tilt	/	24.18	25	0.056	0.07	0.095	0.12	-0.22
26365	1882.5	1RB-Mid	Right	Touch	Fig.15	24.18	25	0.074	0.09	0.123	0.15	-0.23
26365	1882.5	1RB-Mid	Right	Tilt	/	24.18	25	0.049	0.06	0.085	0.10	0.00
26365	1882.5	50RB-Mid	Left	Touch	/	23.18	24	0.047	0.06	0.075	0.09	0.09
26365	1882.5	50RB-Mid	Left	Tilt	/	23.18	24	0.040	0.05	0.068	0.08	-0.26
26365	1882.5	50RB-Mid	Right	Touch	/	23.18	24	0.060	0.07	0.102	0.12	-0.25
26365	1882.5	50RB-Mid	Right	Tilt	/	23.18	24	0.038	0.05	0.066	0.08	-0.23

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-16: SAR Values (LTE Band25 - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C											
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										
26590	1905	1RB-Mid	Front	/	21.18	22	0.206	0.25	0.376	0.45	-0.45
26590	1905	1RB-Mid	Rear	/	21.18	22	0.303	0.37	0.517	0.62	-0.27
26590	1905	1RB-Mid	Left	/	21.18	22	0.108	0.13	0.187	0.23	-0.02
26590	1905	1RB-Mid	Right	/	21.18	22	0.058	0.07	0.095	0.11	-0.25
26590	1905	1RB-Mid	Bottom	Fig.16	21.18	22	0.527	0.64	1.020	1.23	0.23
26365	1882.5	1RB-Mid	Bottom	/	21.09	22	0.504	0.62	0.981	1.21	-0.33
26140	1860	1RB-Mid	Bottom	/	21.12	22	0.524	0.64	0.970	1.19	0.39
26365	1882.5	50RB-Mid	Front	/	21.17	22	0.246	0.30	0.440	0.53	-0.38
26365	1882.5	50RB-Mid	Rear	/	21.17	22	0.296	0.36	0.501	0.61	-0.33
26365	1882.5	50RB-Mid	Left	/	21.17	22	0.083	0.10	0.139	0.17	-0.41
26365	1882.5	50RB-Mid	Right	/	21.17	22	0.046	0.06	0.075	0.09	0.35
26365	1882.5	50RB-Mid	Bottom	/	21.17	22	0.494	0.60	0.960	1.16	-0.30
26140	1860	50RB-Mid	Bottom	/	21.15	22	0.496	0.60	1.004	1.22	-0.05
26590	1905	50RB-Mid	Bottom	/	21.13	22	0.498	0.61	0.997	1.22	0.33
26590	1905	100RB	Bottom	/	21.15	22	0.495	0.60	0.980	1.19	0.45
26590	1905	100RB	Bottom	/	21.15	22	0.468	0.57	0.933	1.13	0.35
26590	1905	1RB-Mid	Bottom	0mm	21.18	22	3.130	3.78	7.830	9.46	-0.33
26365	1882.5	1RB-Mid	Bottom	0mm	21.09	22	3.010	3.71	7.530	9.29	-0.07
26140	1860	50RB-Mid	Bottom	0mm	21.15	22	2.980	3.62	7.501	9.12	0.28
26590	1905	50RB-Mid	Bottom	0mm	21.13	22	2.991	3.65	7.471	9.13	0.38
26590	1905	1RB-Mid	Bottom	Headset	21.18	22	0.503	0.61	0.989	1.19	0.10

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.1-17: SAR Values (LTE Band26 - Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C												
Frequency		Mode	Side	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											
26965	841.5	1RB-Mid	Left	Touch	/	23.95	25	0.426	**0.54**	0.715	**0.91**	0.19
26865	831.5	1RB-Mid	Left	Touch	/	23.86	25	0.422	**0.55**	0.713	**0.93**	0.03
26775	822.5	1RB-Mid	Left	Touch	/	23.85	25	0.406	**0.53**	0.684	**0.89**	0.28
26965	841.5	1RB-Mid	Left	Tilt	Fig.17	23.95	25	0.412	**0.52**	0.781	**0.99**	0.42
26865	831.5	1RB-Mid	Left	Tilt	/	23.86	25	0.381	**0.50**	0.737	**0.96**	-0.25
26775	822.5	1RB-Mid	Left	Tilt	/	23.85	25	0.343	**0.45**	0.669	**0.87**	0.09

26965	841.5	1RB-Mid	Right	Touch	/	23.95	25	0.422	**0.54**	0.713	**0.91**	0.29
26865	831.5	1RB-Mid	Right	Touch	/	23.86	25	0.416	**0.54**	0.701	**0.91**	0.31
26775	822.5	1RB-Mid	Right	Touch	/	23.85	25	0.394	**0.51**	0.655	**0.85**	-0.19
26965	841.5	1RB-Mid	Right	Tilt	/	23.95	25	0.372	**0.47**	0.660	**0.84**	-0.22
26865	831.5	1RB-Mid	Right	Tilt	/	23.86	25	0.341	**0.44**	0.598	**0.78**	-0.44
26775	822.5	1RB-Mid	Right	Tilt	/	23.85	25	0.307	**0.40**	0.537	**0.70**	-0.28
26965	841.5	36RB-High	Left	Touch	/	23.00	24	0.345	**0.43**	0.508	**0.64**	-0.23
26965	841.5	36RB-High	Left	Tilt	/	23.00	24	0.250	**0.32**	0.434	**0.55**	-0.04
26965	841.5	36RB-High	Right	Touch	/	23.00	24	0.335	**0.42**	0.566	**0.71**	-0.27
26965	841.5	36RB-High	Right	Tilt	/	23.00	24	0.300	**0.38**	0.535	**0.67**	0.40
26965	841.5	75RB	Left	Touch	/	22.99	24	0.335	**0.42**	0.562	**0.71**	0.18
26965	841.5	75RB	Left	Tilt	/	22.99	24	0.319	**0.40**	0.601	**0.76**	0.30
26965	841.5	75RB	Right	Touch	/	22.99	24	0.337	**0.43**	0.571	**0.72**	0.01
26965	841.5	75RB	Right	Tilt	/	22.99	24	0.296	**0.37**	0.528	**0.67**	0.23

Note1: The LTE mode is QPSK_15MHz.

Table 14.1-18: SAR Values (LTE Band26 - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C											
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										
26965	841.5	1RB-Mid	Front	/	23.95	25	0.180	**0.23**	0.288	**0.37**	0.14
26965	841.5	1RB-Mid	Rear	Fig.18	23.95	25	0.250	**0.32**	0.418	**0.53**	-0.30
26965	841.5	1RB-Mid	Left	/	23.95	25	0.124	**0.16**	0.185	**0.24**	0.14
26965	841.5	1RB-Mid	Right	/	23.95	25	0.248	**0.32**	0.363	**0.46**	-0.05
26965	841.5	1RB-Mid	TOP	/	23.95	25	0.199	**0.25**	0.371	**0.47**	-0.11
26965	841.5	36RB-High	Front	/	23.00	24	0.147	**0.19**	0.238	**0.30**	0.28
26965	841.5	36RB-High	Rear	/	23.00	24	0.183	**0.23**	0.304	**0.38**	-0.41
26965	841.5	36RB-High	Left	/	23.00	24	0.102	**0.13**	0.151	**0.19**	-0.03
26965	841.5	36RB-High	Right	/	23.00	24	0.196	**0.25**	0.287	**0.36**	-0.09
26965	841.5	36RB-High	TOP	/	23.00	24	0.166	**0.21**	0.314	**0.39**	0.34

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

Note2: The LTE mode is QPSK_15MHz.

Table 14.1-19: SAR Values (LTE Band41 (PC3) - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	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											
40185	2549.5	1RB-Mid	Left	Touch	Fig.19	23.85	25	0.075	**0.10**	0.136	**0.18**	-0.32
40185	2549.5	1RB-Mid	Left	Tilt	/	23.85	25	0.058	**0.08**	0.112	**0.15**	-0.11
40185	2549.5	1RB-Mid	Right	Touch	/	23.85	25	0.054	**0.07**	0.098	**0.13**	0.11
40185	2549.5	1RB-Mid	Right	Tilt	/	23.85	25	0.050	**0.07**	0.092	**0.12**	0.40
41055	2636.5	50RB-Low	Left	Touch	/	22.74	24	0.053	**0.07**	0.099	**0.13**	-0.23
41055	2636.5	50RB-Low	Left	Tilt	/	22.74	24	0.043	**0.06**	0.083	**0.11**	0.41
41055	2636.5	50RB-Low	Right	Touch	/	22.74	24	0.037	**0.05**	0.067	**0.09**	-0.27
41055	2636.5	50RB-Low	Right	Tilt	/	22.74	24	0.032	**0.04**	0.061	**0.08**	-0.35
39750	2506	1RB-High	Left	Touch	UL_CA	23.42	25	0.063	**0.09**	0.125	**0.18**	0.11

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-20: SAR Values (LTE Band41 (PC3) - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
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										
40185	2549.5	1RB-Mid	Front	/	23.85	25	0.076	**0.10**	0.141	**0.18**	0.39
40185	2549.5	1RB-Mid	Rear	Fig.20	23.85	25	0.149	**0.19**	0.282	**0.37**	-0.37
40185	2549.5	1RB-Mid	Left	/	23.85	25	0.089	**0.12**	0.151	**0.20**	-0.18
40185	2549.5	1RB-Mid	Right	/	23.85	25	0.044	**0.06**	0.079	**0.10**	-0.34
40185	2549.5	1RB-Mid	Bottom	/	23.85	25	0.115	**0.15**	0.224	**0.29**	0.36
41055	2636.5	50RB-Low	Front	/	22.74	24	0.048	**0.06**	0.084	**0.11**	-0.37
41055	2636.5	50RB-Low	Rear	/	22.74	24	0.146	**0.19**	0.258	**0.35**	-0.12
41055	2636.5	50RB-Low	Left	/	22.74	24	0.057	**0.08**	0.099	**0.13**	-0.10
41055	2636.5	50RB-Low	Right	/	22.74	24	0.025	**0.03**	0.043	**0.06**	0.24
41055	2636.5	50RB-Low	Bottom	/	22.74	24	0.083	**0.11**	0.162	**0.22**	0.23
39750	2506	1RB-High	Rear	UL_CA	23.42	25	0.138	**0.20**	0.253	**0.36**	0.01

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.1-21: SAR Values (LTE Band41 (PC2) - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	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											
41055	2636.5	1RB-Mid	Left	Touch	Fig.21	26.89	27.8	0.089	**0.11**	0.160	**0.20**	-0.11
41055	2636.5	1RB-Mid	Left	Tilt	/	26.89	27.8	0.068	**0.08**	0.132	**0.16**	0.33
41055	2636.5	1RB-Mid	Right	Touch	/	26.89	27.8	0.063	**0.08**	0.113	**0.14**	0.01
41055	2636.5	1RB-Mid	Right	Tilt	/	26.89	27.8	0.056	**0.07**	0.102	**0.13**	-0.31
41055	2636.5	50RB-Low	Left	Touch	/	25.94	26.8	0.070	**0.09**	0.127	**0.16**	-0.01
41055	2636.5	50RB-Low	Left	Tilt	/	25.94	26.8	0.055	**0.07**	0.105	**0.13**	0.20
41055	2636.5	50RB-Low	Right	Touch	/	25.94	26.8	0.050	**0.06**	0.091	**0.11**	-0.06
41055	2636.5	50RB-Low	Right	Tilt	/	25.94	26.8	0.445	**0.54**	0.084	**0.10**	0.06
39750	2506	1RB-High	Left	Touch	UL_CA	26.77	27.8	0.082	**0.12**	0.150	**0.23**	-0.06

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-22: SAR Values (LTE Band41 (PC2) - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
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										
41055	2636.5	1RB-Mid	Front	/	26.89	27.8	0.072	**0.09**	0.133	**0.16**	-0.18
41055	2636.5	1RB-Mid	Rear	Fig.22	26.89	27.8	0.243	**0.30**	0.441	**0.54**	-0.16
41055	2636.5	1RB-Mid	Left	/	26.89	27.8	0.085	**0.10**	0.155	**0.19**	-0.43
41055	2636.5	1RB-Mid	Right	/	26.89	27.8	0.037	**0.05**	0.068	**0.08**	-0.37
41055	2636.5	1RB-Mid	Bottom	/	26.89	27.8	0.131	**0.16**	0.263	**0.32**	-0.21
41055	2636.5	50RB-Low	Front	/	25.94	26.8	0.059	**0.07**	0.104	**0.13**	0.29
41055	2636.5	50RB-Low	Rear	/	25.94	26.8	0.157	**0.19**	0.277	**0.34**	-0.28
41055	2636.5	50RB-Low	Left	/	25.94	26.8	0.061	**0.07**	0.110	**0.13**	0.40
41055	2636.5	50RB-Low	Right	/	25.94	26.8	0.027	**0.03**	0.049	**0.06**	0.08
41055	2636.5	50RB-Low	Bottom	/	25.94	26.8	0.100	**0.12**	0.200	**0.24**	0.15
39750	2506	1RB-High	Rear	UL_CA	26.77	27.8	0.191	**0.24**	0.341	**0.43**	0.09

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.1-23: SAR Values (LTE Band66 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	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	1770	1RB-Mid	Left	Touch	/	23.98	25	0.164	**0.21**	0.258	**0.33**	0.15
132572	1770	1RB-Mid	Left	Tilt	/	23.98	25	0.083	**0.11**	0.179	**0.23**	0.14
132572	1770	1RB-Mid	Right	Touch	Fig.23	23.98	25	0.196	**0.25**	0.320	**0.40**	-0.34
132572	1770	1RB-Mid	Right	Tilt	/	23.98	25	0.138	**0.17**	0.231	**0.29**	-0.08
132322	1745	50RB-Mid	Left	Touch	/	23.01	24	0.113	**0.14**	0.180	**0.23**	-0.33
132322	1745	50RB-Mid	Left	Tilt	/	23.01	24	0.101	**0.13**	0.167	**0.21**	-0.20
132322	1745	50RB-Mid	Right	Touch	/	23.01	24	0.147	**0.18**	0.240	**0.30**	-0.16
132322	1745	50RB-Mid	Right	Tilt	/	23.01	24	0.104	**0.13**	0.175	**0.22**	-0.29

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-24: SAR Values (LTE Band66 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	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										
132322	1745	1RB-Mid	Front	/	21.34	22	0.331	**0.39**	0.583	**0.68**	-0.18
132322	1745	1RB-Mid	Rear	/	21.34	22	0.374	**0.43**	0.664	**0.77**	-0.33
132322	1745	1RB-Mid	Left	/	21.34	22	0.084	**0.10**	0.142	**0.17**	0.00
132322	1745	1RB-Mid	Right	/	21.34	22	0.068	**0.08**	0.111	**0.13**	0.20
132322	1745	1RB-Mid	Bottom	/	21.34	22	0.498	**0.58**	0.992	**1.15**	0.18
132072	1720	1RB-Mid	Bottom	/	21.33	22	0.517	**0.60**	1.021	**1.19**	-0.30
132572	1770	1RB-Mid	Bottom	Fig.24	21.30	22	0.530	**0.62**	1.060	**1.25**	-0.43
132322	1745	50RB-High	Front	/	21.33	22	0.304	**0.35**	0.547	**0.64**	-0.26
132322	1745	50RB-High	Rear	/	21.33	22	0.353	**0.41**	0.635	**0.74**	-0.27
132322	1745	50RB-High	Left	/	21.33	22	0.083	**0.10**	0.143	**0.17**	-0.17
132322	1745	50RB-High	Right	/	21.33	22	0.075	**0.09**	0.124	**0.15**	-0.10
132322	1745	50RB-High	Bottom	/	21.33	22	0.479	**0.56**	0.960	**1.12**	-0.09
132072	1720	50RB-High	Bottom	/	21.30	22	0.525	**0.62**	1.011	**1.19**	-0.04
132572	1770	50RB-High	Bottom	/	21.28	22	0.524	**0.62**	1.002	**1.18**	0.27
132322	1745	100RB	Front	/	21.33	22	0.326	**0.38**	0.579	**0.68**	-0.37
132322	1745	100RB	Rear	/	21.33	22	0.352	**0.41**	0.628	**0.73**	0.08
132322	1745	100RB	Bottom	/	21.33	22	0.524	**0.61**	1.011	**1.18**	0.25
132572	1770	1RB-Mid	Bottom	0mm	21.30	22	3.070	**3.61**	7.940	**9.33**	-0.43
132572	1770	1RB-Mid	Bottom	Headset	21.30	22	0.511	**0.60**	0.987	**1.16**	0.01

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.1-25: SAR Values (LTE Band71 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	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											
133322	683	1RB-Low	Left	Touch	Fig.25	23.63	25	0.282	**0.39**	0.473	**0.65**	-0.42
133322	683	1RB-Low	Left	Tilt	/	23.63	25	0.196	**0.27**	0.353	**0.48**	0.31
133322	683	1RB-Low	Right	Touch	/	23.63	25	0.269	**0.37**	0.463	**0.63**	-0.35
133322	683	1RB-Low	Right	Tilt	/	23.63	25	0.218	**0.30**	0.365	**0.50**	-0.01
133222	673	50RB-Low	Left	Touch	/	22.67	24	0.216	**0.29**	0.379	**0.51**	-0.39
133222	673	50RB-Low	Left	Tilt	/	22.67	24	0.233	**0.32**	0.350	**0.48**	0.41
133222	673	50RB-Low	Right	Touch	/	22.67	24	0.214	**0.29**	0.370	**0.50**	-0.20
133222	673	50RB-Low	Right	Tilt	/	22.67	24	0.182	**0.25**	0.295	**0.40**	-0.42

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-26: SAR Values (LTE Band71 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	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										
133322	683	1RB-Low	Front	/	23.63	25	0.264	**0.36**	0.354	**0.49**	0.17
133322	683	1RB-Low	Rear	/	23.63	25	0.383	**0.52**	0.516	**0.71**	0.08
133322	683	1RB-Low	Left	/	23.63	25	0.193	**0.26**	0.279	**0.38**	-0.29
133322	683	1RB-Low	Right	Fig.26	23.63	25	0.360	**0.49**	0.520	**0.71**	0.32
133322	683	1RB-Low	Top	/	23.63	25	0.154	**0.21**	0.274	**0.38**	-0.04
133222	673	50RB-Low	Front	/	22.67	24	0.166	**0.23**	0.220	**0.30**	0.28
133222	673	50RB-Low	Rear	/	22.67	24	0.289	**0.39**	0.388	**0.53**	0.13
133222	673	50RB-Low	Left	/	22.67	24	0.131	**0.18**	0.193	**0.26**	-0.14
133222	673	50RB-Low	Right	/	22.67	24	0.329	**0.45**	0.473	**0.64**	0.23
133222	673	50RB-Low	Top	/	22.67	24	0.124	**0.17**	0.219	**0.30**	0.13

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

Note2: The LTE mode is QPSK_20MHz.

14.2 SAR results for Standard procedure

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

Table 14.2-1: SAR Values (GSM 850 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	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										
128	824.2	Right	Touch	Fig.1	32.06	33.30	0.104	**0.14**	0.139	**0.18**	-0.14

Table 14.2-2: SAR Values (GSM 850 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode (number of timeslots)	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										
128	824.2	GPRS(4)	Rear	Fig.2	28.55	29.50	0.178	**0.22**	0.321	**0.40**	0.21

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

Table 14.2-3: SAR Values (GSM 1900 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	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										
661	1880	Right	Touch	Fig.3	29.12	30.30	0.061	0.08	0.099	0.13	0.19

Table 14.2-4: SAR Values (GSM 1900 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode (number of timeslots)	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										
661	1880	GPRS(2)	Bottom	Fig.4	22.56	24.00	0.275	0.38	0.535	0.75	0.00

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

Table 14.2-5: SAR Values (WCDMA 1900 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	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										
9262	1852.4	Right	Touch	Fig.5	22.71	24.50	0.087	**0.13**	0.141	**0.21**	-0.24

Table 14.2-6: SAR Values (WCDMA 1900 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC										
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									
9538	1907.6	Bottom	Fig.6	20.97	21.50	0.500	0.56	0.965	1.09	-0.38

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

Table 14.2-7: SAR Values (WCDMA 1700 MHz Band – Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	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										
1312	1712.4	Right	Touch	Fig.7	23.38	24.50	0.131	0.17	0.207	0.27	-0.23

Table 14.2-8: SAR Values (WCDMA 1700 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC										
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									
1412	1732.4	Bottom	Fig.8	21.24	21.50	0.551	**0.58**	1.090	**1.16**	-0.13

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

Table 14.2-9: SAR Values (WCDMA 850 MHz Band - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	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										
4183	836.6	Left	Tilt	Fig.9	23.91	24.50	0.373	0.43	0.712	0.82	-0.01

Table 14.2-10: SAR Values (WCDMA 850 MHz Band - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC										
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									
4233	846.6	Rear	Fig.10	23.96	24.50	0.240	**0.27**	0.361	**0.41**	-0.45

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

Table 14.2-11: SAR Values (LTE Band7 - Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C												
Frequency		Mode	Side	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											
21100	2535	1RB-High	Left	Touch	Fig.11	23.91	25	0.116	**0.15**	0.210	**0.27**	-0.41

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-12: SAR Values (LTE Band7 - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C											
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										
21100	2535	1RB-High	Rear	Fig.12	23.91	25	0.246	**0.32**	0.439	**0.56**	0.09

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-13: SAR Values (LTE Band12 - Head)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C												
Frequency		Mode	Side	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											
23095	707.5	1RB-Mid	Left	Touch	Fig.13	23.98	25	0.369	**0.47**	0.605	**0.77**	-0.26

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-14: SAR Values (LTE Band12 - Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C											
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										
23095	707.5	1RB-Mid	Top	Fig.14	23.98	25	0.132	**0.17**	0.245	**0.31**	-0.24

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.2-15: SAR Values (LTE Band25 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	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											
26365	1882.5	1RB-Mid	Right	Touch	Fig.15	24.18	25	0.074	0.09	0.123	0.15	-0.23

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-16: SAR Values (LTE Band25 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
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										
26590	1905	1RB-Mid	Bottom	Fig.16	21.18	22	0.527	0.64	1.020	1.23	0.23

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-17: SAR Values (LTE Band26 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	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											
26965	841.5	1RB-Mid	Left	Tilt	Fig.17	25	23.95	0.412	0.781	0.52	0.99	0.42

Note1: The LTE mode is QPSK_15MHz.

Table 14.2-18: SAR Values (LTE Band26 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
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										
26965	841.5	1RB-Mid	Rear	Fig.18	23.95	25	0.250	**0.32**	0.418	**0.53**	-0.30

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

Note2: The LTE mode is QPSK_15MHz.

Table 14.2-19: SAR Values (LTE Band41 (PC3) - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	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											
40185	2549.5	1RB-Mid	Left	Touch	Fig.19	23.85	25	0.075	**0.10**	0.136	**0.18**	-0.32

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-20: SAR Values (LTE Band41 (PC3) - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
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										
40185	2549.5	1RB-Mid	Rear	Fig.20	23.85	25	0.149	**0.19**	0.282	**0.37**	-0.37

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-21: SAR Values (LTE Band41 (PC2) - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	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											
41055	2636.5	1RB-Mid	Left	Touch	Fig.21	26.89	27.8	0.089	**0.11**	0.160	**0.20**	-0.11

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-22: SAR Values (LTE Band41 (PC2) - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
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										
41055	2636.5	1RB-Mid	Rear	Fig.22	26.89	27.8	0.243	**0.30**	0.441	**0.54**	-0.16

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-23: SAR Values (LTE Band66 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	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	Right	Touch	Fig.23	23.98	25	0.196	**0.25**	0.320	**0.40**	-0.34

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-24: SAR Values (LTE Band66 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	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	Bottom	Fig.24	21.30	22	0.530	**0.62**	1.060	**1.25**	-0.43

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.2-25: SAR Values (LTE Band71 - Head)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	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											
133322	683	1RB-Low	Left	Touch	Fig.25	23.63	25	0.282	**0.39**	0.473	**0.65**	-0.42

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-26: SAR Values (LTE Band71 - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No.	Conducted Power (dBm)	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										
133322	683	1RB-Low	Right	Fig.26	23.63	25	0.360	**0.49**	0.520	**0.71**	0.32

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

Note2: The LTE mode is QPSK_20MHz.

14.3 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.

Head Evaluation

WIFI and Cellular are not working at the same time.

Table 14.3-1: SAR Values (WLAN - Head)– 802.11b (Fast SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃										
Frequency		Side	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.										
2437	6	Left	Touch	/	18.97	20	0.228	**0.29**	0.400	**0.51**	-0.12
2437	6	Left	Tilt	/	18.97	20	0.260	**0.33**	0.479	**0.61**	-0.13
2437	6	Right	Touch	/	18.97	20	0.314	**0.40**	0.599	**0.76**	-0.03
2437	6	Right	Tilt	/	18.97	20	0.235	**0.30**	0.446	**0.57**	-0.03

As shown above table, the initial test position for head is “Right **Touch**”. So the head SAR of WLAN is presented as below:

Table 14.3-2: SAR Values (WLAN - Head)– 802.11b (Full SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	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.										
2437	6	Left	Touch	/	18.97	20	0.221	**0.28**	0.388	**0.49**	0.02
2437	6	Left	Tilt	/	18.97	20	0.254	**0.32**	0.466	**0.59**	0.13
2412	1	Right	Touch	/	18.78	20	0.311	**0.41**	0.577	**0.76**	-0.22
2437	6	Right	Touch	Fig.27	18.97	20	0.342	**0.43**	0.687	**0.87**	0.04
2462	11	Right	Touch	/	18.57	20	0.315	**0.44**	0.592	**0.82**	0.19
2437	6	Right	Tilt	/	18.97	20	0.230	**0.29**	0.449	**0.57**	0.08

Note1: When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg.
Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

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 14.3-3: SAR Values (WLAN - Head) – 802.11b (Scaled Reported SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃						
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.						

2437	6	Right	Touch	100%	100%	**0.87**	**0.87**

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

Body Evaluation

WIFI and Cellular are not working at the same time.

Table 14.3-4: SAR Values (WLAN - Body)– 802.11b (Fast SAR)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
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.									
2437	6	Front	/	21.85	**23.00**	0.112	**0.15**	0.199	**0.26**	0.16
2437	6	Rear	/	21.85	**23.00**	0.144	**0.19**	0.280	**0.36**	-0.03
2437	6	Left	/	21.85	**23.00**	0.102	**0.13**	0.201	**0.26**	-0.07
2437	6	Top	/	21.85	**23.00**	0.112	**0.15**	0.211	**0.28**	-0.03
2437	6	Bottom	/	21.85	**23.00**	0.033	**0.04**	0.074	**0.10**	0.20

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

As shown above table, the initial test position for body is “Rear”. So the body SAR of WLAN is presented as below:

Table 14.3-5: SAR Values (WLAN - Body)– 802.11b (Full SAR)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C										
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.									
2437	6	Rear	Fig.28	21.85	**23.00**	0.144	**0.19**	0.289	**0.38**	-0.03
Note1: When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg. Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.										

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 14.3-6: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5°C					
Frequency	Test	Actual duty	maximum	Reported SAR	Scaled reported SAR

MHz	Ch.	Position	factor	duty factor	(1g)(W/kg)	(1g)(W/kg)
2437	6	Rear	100%	100%	**0.38**	**0.38**

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

Head Evaluation

WIFI and Cellular are working at the same time.

Table 14.3-7: SAR Values (WLAN - Head)– 802.11b (Fast SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃										
Frequency		Side	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.										
2437	6	Left	Touch	/	16.55	17	0.129	**0.14**	0.242	**0.27**	-0.23
2437	6	Left	Tilt	/	16.55	17	0.147	**0.16**	0.289	**0.32**	-0.02
2437	6	Right	Touch	/	16.55	17	0.173	**0.19**	0.354	**0.39**	-0.26
2437	6	Right	Tilt	/	16.55	17	0.133	**0.15**	0.270	**0.30**	0.12

As shown above table, the initial test position for head is "Right **Touch**". So the head SAR of WLAN is presented as below:

Table 14.3-8: SAR Values (WLAN - Head)– 802.11b (Full SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	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.										
2437	6	Right	Touch	/	16.74	17	0.173	**0.18**	0.359	**0.38**	0.11
2437	6	Right	Touch	Fig.29	16.55	17	0.178	**0.20**	0.362	**0.40**	0.14
Note1: When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg. Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.										

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 14.3-9: SAR Values (WLAN - Head) – 802.11b (Scaled Reported SAR)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃							
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.						
2437	6	Right	Touch	100%	100%	**0.40**	**0.40**

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

Body Evaluation

WIFI and Cellular are working at the same time.

Table 14.3-10: SAR Values (WLAN - Body)– 802.11b (Fast SAR)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC										
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.									
2437	6	Front	/	16.55	17	0.030	**0.03**	0.052	**0.06**	0.28
2437	6	Rear	/	16.55	17	0.039	**0.04**	0.070	**0.08**	0.05
2437	6	Left	/	16.55	17	0.027	**0.03**	0.053	**0.06**	0.09
2437	6	Top	/	16.55	17	0.030	**0.03**	0.056	**0.06**	-0.08
2437	6	Bottom	0mm	16.55	17	0.009	**0.01**	0.019	**0.02**	-0.13

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

As shown above table, the initial test position for body is “Rear”. So the body SAR of WLAN is presented as below:

Table 14.3-11: SAR Values (WLAN - Body)– 802.11b (Full SAR)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC										
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.									
2437	6	Rear	Fig.30	16.55	17	0.038	**0.04**	0.076	**0.08**	-0.02

Note1: When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg.

Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

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 14.3-12: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC						
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	100%	100%	**0.08**	**0.08**

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

Picture 14.1-b Duty factor plot

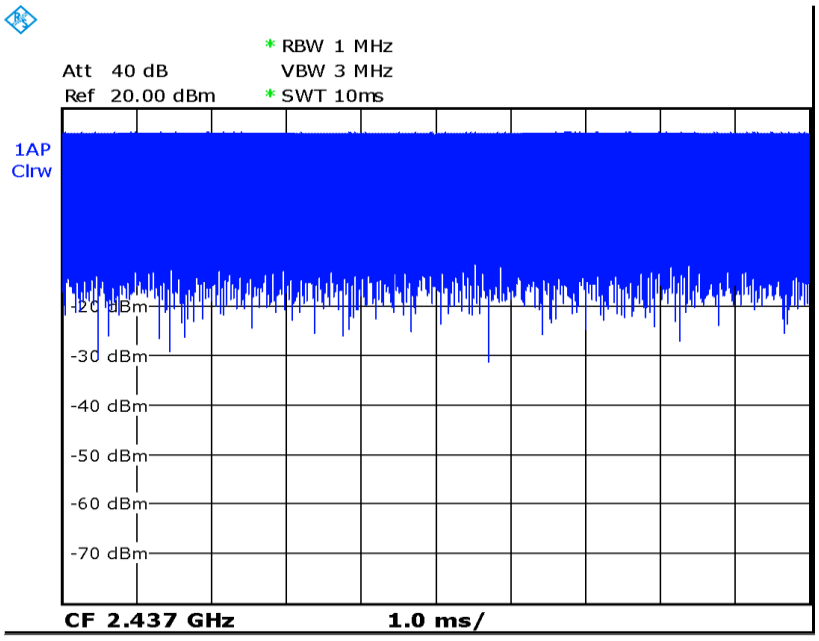


Table 14.3-13: SAR Values (WLAN - Body)– 802.11b (Limb SAR)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC										
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.									
2437	6	Bottom	/	16.55	17	0.011	**0.01**	0.025	**0.03**	-0.19

Table 14.3-14: SAR Values (Bluetooth - Body)

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC								
GFSK Ch.	Test Position	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)
73	Front	8.53	9	<0.01	/	<0.01	/	0.18
73	Rear	8.53	9	<0.01	/	<0.01	/	0.13
73	Left	8.53	9	<0.01	/	<0.01	/	-0.09
73	Right	8.53	9	<0.01	/	<0.01	/	0.05
73	Top	8.53	9	<0.01	/	<0.01	/	-0.18
73	Bottom	8.53	9	<0.01	/	<0.01	/	-0.10

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

14.4 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	X	
U-NII-2A	X	X	X	X	X	X	X	
U-NII-2C	X	X	X	X	X	X	X	
U-NII-3	X	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 – Head – Transmit alone

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	71		71	71	71	71	45	
U-NII-2A	63		63	63	63	63	45	
U-NII-2C	79		79	79	79	79	63	
U-NII-3	79		79	79	79	79	63	
§ 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 –Head and Body worn – Transmit with WWAN

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	20		20	20	20	20	20	
U-NII-2A	20		20	20	20	20	20	
U-NII-2C	20		20	20	20	20	20	
U-NII-3	20		20	20	20	20	20	
§ 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 – Body worn – Transmit alone

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	50		50	50	50	50	50	
U-NII-2A	50		50	50	50	50	50	
U-NII-2C	50		50	50	50	50	50	
U-NII-3	50		50	50	50	50	50	
§ 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 measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations – Head – Transmit alone

802.11 Mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 58/61/60/62 Lower power	36/40/44/48 Lower power	38/46 61/50	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 64/6**0/59/58** Lower power	52/56/60/64 Lower power	54/62 51/54	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 70/65/57/54/56/56/ 60/61/63/58/54/54 Lower power	100/104/108/112 116/120/124/128/ 132/136/140/144 Lower power	102/110/118/ 126/134/142 57/60/54/51/ 58/75	100/104/108/112 116/120/124/128/ 132/136/140/144 Lower power	102/110/118/ 126/134/142 Lower power	106/122/ 138 Lower power
U-NII-3	149/153/157/161/ 165 54/62/62/70/59 Lower power	149/153/157/161/ 165 Lower power	151/159 76/68	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 14.4-6: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations – Head and Body worn– Transmit with WWAN

802.11 Mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 Lower power	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 15 Lower power
U-NII-2A	52/56/60/64 Lower power	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 14 Lower power
U-NII-2C	100/104/108/112 116/120/124/128/ 132/136/140/144 Lower power	100/104/108/112 116/120/124/128/ 132/136/140/144 Lower power	102/110/118/ 126/134/142 Lower power	100/104/108/112 116/120/124/128/ 132/136/140/144 Lower power	102/110/118/ 126/134/142 Lower power	106/122/ 138 20/15/19 Lower power
U-NII-3	149/153/157/161/ 165 Lower power	149/153/157/161/ 165 Lower power	151/159 Lower power	149/153/157/161 /165 Lower power	151/159 Lower power	155 19 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 14.4-7: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations – Body worn– Transmit alone

802.11 Mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 Lower power	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 15
U-NII-2A	52/56/60/64 Lower power	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 14
U-NII-2C	100/104/108/112 116/120/124/128/ 132/136/140/144 Lower power	100/104/108/112 116/120/124/128/ 132/136/140/144 Lower power	102/110/118/ 126/134/142 Lower power	100/104/108/112 116/120/124/128/ 132/136/140/144 Lower power	102/110/118/ 126/134/142 Lower power	106/122/ 138 20/15/19
U-NII-3	149/153/157/161/ 165 Lower power	149/153/157/161/ 165 Lower power	151/159 Lower power	149/153/157/161 /165 Lower power	151/159 Lower power	155 19

- 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 14.4-8: Reported SAR of initial test configuration for Head transmit alone

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64	52/56/60/64	54/62 1.39	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112/116/120/124/128/132/136/140/144	100/104/108/112/116/120/124/128/132/136/140/144	102/110/118/126/134/142	100/104/108/112/116/120/124/128/132/136/140/144	102/110/118/126/134/142	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
Highest measured output power channel tested initially are in yellow highlight.						

Table 14.4-9: Reported SAR of initial test configuration for Body worn transmit alone

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64	52/56/60/64	54/62	52/56/60/64	54/62	58 1.15
U-NII-2C	100/104/108/112/116/120/124/128/132/136/140/144	100/104/108/112/116/120/124/128/132/136/140/144	102/110/118/126/134/142	100/104/108/112/116/120/124/128/132/136/140/144	102/110/118/126/134/142	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
Highest measured output power channel tested initially are in yellow highlight.						

Table 14.4-10: Reported SAR of initial test configuration for Head transmit with WWAN

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64	52/56/60/64	54/62	52/56/60/64	54/62	58 0.44
U-NII-2C	100/104/108/112/116/120/124/128/132/136/140/144	100/104/108/112/116/120/124/128/132/136/140/144	102/110/118/126/134/142	100/104/108/112/116/120/124/128/132/136/140/144	102/110/118/126/134/142	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

Highest measured output power channel tested initially are in yellow highlight.

Table 14.4-11: Reported SAR of initial test configuration for Body worn transmit with WWAN

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64	52/56/60/64	54/62	52/56/60/64	54/62	58 0.55
U-NII-2C	100/104/108/112/116/120/124/128/132/136/140/144	100/104/108/112/116/120/124/128/132/136/140/144	102/110/118/126/134/142	100/104/108/112/116/120/124/128/132/136/140/144	102/110/118/126/134/142	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
Highest measured output power channel tested initially are in yellow highlight.						

Table 14.4-12: SAR Values (WLAN 5G - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift (dB)
Ch.	MHz										
62	5310	Left	Cheek	Fig.31	17.32	18.00	0.387	**0.45**	1.190	**1.39**	0.26
54	5270	Left	Cheek	/	17.05	18.00	0.344	**0.43**	1.043	**1.30**	0.07
62	5310	Left	Tilt	/	17.32	19.00	0.210	**0.31**	0.596	**0.88**	0.31
54	5270	Left	Tilt	/	17.05	19.00	0.191	**0.30**	0.536	**0.84**	0.1
62	5310	Right	Cheek	/	17.32	19.00	0.118	**0.17**	0.318	**0.47**	-0.31
62	5310	Right	Tilt	/	17.32	19.00	0.111	**0.16**	0.297	**0.44**	-0.27
142	5710	Left	Cheek	/	18.75	19.00	0.203	**0.22**	0.614	**0.65**	0.07
142	5710	Left	Tilt	/	18.75	19.00	0.155	**0.16**	0.484	**0.51**	0.02
142	5710	Right	Cheek	/	18.75	19.00	0.083	**0.09**	0.261	**0.28**	0.02
142	5710	Right	Tilt	/	18.75	19.00	0.077	**0.08**	0.230	**0.24**	0.2
151	5755	Left	Cheek	/	18.82	19.00	0.180	**0.19**	0.571	**0.60**	-0.06
151	5755	Left	Tilt	/	18.82	19.00	0.107	**0.11**	0.307	**0.32**	-0.22
151	5755	Right	Cheek	/	18.82	19.00	0.056	**0.06**	0.157	**0.16**	0.07
151	5755	Right	Tilt	/	18.82	19.00	0.047	**0.05**	0.126	**0.13**	0.27

Note1: The results are used for Wifi transmit standalone.

Table 14.4-13: SAR Values (WLAN 5G – Body worn)

Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift (dB)
Ch.	MHz									
58	5290	Front	/	15.09	16.00	0.078	**0.10**	0.206	**0.25**	0.21
58	5290	Rear	/	15.09	16.00	0.325	**0.40**	0.879	**1.08**	0.16

58	5290	Right	Fig.32	15.09	16.00	0.364	**0.45**	0.932	**1.15**	-0.19
58	5290	Top	/	15.09	16.00	0.074	**0.09**	0.169	**0.21**	-0.27
138	5690	Front	/	16.34	16.00	0.063	**0.06**	0.171	**0.16**	-0.11
138	5690	Rear	/	16.34	16.00	0.279	**0.26**	0.743	**0.69**	-0.24
138	5690	Right	/	16.34	16.00	0.244	**0.23**	0.636	**0.59**	-0.08
138	5690	Top	/	16.34	16.00	0.070	**0.06**	0.151	**0.14**	-0.06
155	5775	Front	/	16.62	16.00	0.051	**0.04**	0.127	**0.11**	0.2
155	5775	Rear	/	16.62	16.00	0.185	**0.16**	0.489	**0.42**	-0.11
155	5775	Right	/	16.62	16.00	0.188	**0.16**	0.486	**0.42**	-0.21
155	5775	Top	/	16.62	16.00	0.063	**0.05**	0.135	**0.12**	-0.14

Note1: The results are used for Wifi transmit standalone.

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

Table 14.4-14: SAR Values (WLAN 5G - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift (dB)
Ch.	MHz										
58	5290	Left	Cheek	Fig.33	11.34	13	0.097	**0.14**	0.301	**0.44**	-0.31
58	5290	Left	Tilt	/	11.34	13	0.053	**0.08**	0.149	**0.22**	0.2
58	5290	Right	Cheek	/	11.34	13	0.027	**0.04**	0.076	**0.11**	-0.16
58	5290	Right	Tilt	/	11.34	13	0.025	**0.04**	0.067	**0.10**	-0.26
106	5530	Left	Cheek	/	12.94	13	0.052	**0.05**	0.175	**0.18**	-0.07
106	5530	Left	Tilt	/	12.94	13	0.031	**0.03**	0.094	**0.10**	-0.29
106	5530	Right	Cheek	/	12.94	13	0.014	**0.01**	0.039	**0.04**	0.01
106	5530	Right	Tilt	/	12.94	13	0.041	**0.04**	0.017	**0.02**	-0.07
155	5775	Left	Cheek	/	12.88	13	0.052	**0.05**	0.170	**0.17**	-0.27
155	5775	Left	Tilt	/	12.88	13	0.032	**0.03**	0.100	**0.10**	-0.21
155	5775	Right	Cheek	/	12.88	13	0.016	**0.02**	0.049	**0.05**	0.25
155	5775	Right	Tilt	/	12.88	13	0.015	**0.02**	0.044	**0.05**	0.21

Note1: The results are used for Wifi transmit with WWAN.

Table 14.4-15: SAR Values (WLAN 5G – Body worn)

Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift (dB)
Ch.	MHz									
58	5290	Front	/	11.34	13	0.029	**0.04**	0.065	**0.09**	-0.31
58	5290	Rear	/	11.34	13	0.129	**0.19**	0.311	**0.46**	0.11
58	5290	Right	Fig.34	11.34	13	0.147	**0.22**	0.375	**0.55**	-0.31
58	5290	Top	/	11.34	13	0.032	**0.05**	0.064	**0.09**	0.18
106	5530	Front	/	12.94	13	0.061	**0.06**	0.013	**0.01**	0.05
106	5530	Rear	/	12.94	13	0.093	**0.09**	0.225	**0.23**	-0.07
106	5530	Right	/	12.94	13	0.084	**0.09**	0.202	**0.20**	0.18
106	5530	Top	/	12.94	13	0.025	**0.03**	0.057	**0.06**	-0.21

155	5775	Front	/	12.88	13	0.012	**0.01**	0.042	**0.04**	-0.13
155	5775	Rear	/	12.88	13	0.080	**0.08**	0.195	**0.20**	0.09
155	5775	Right	/	12.88	13	0.066	**0.07**	0.162	**0.17**	-0.04
155	5775	Top	/	12.88	13	0.032	**0.03**	0.084	**0.09**	-0.12
58	5290	Bottom	0mm	11.34	13	0.012	**0.02**	0.027	**0.04**	0.3

Note1: The results are used for Wifi transmit with WWAN.

Note2: 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 14.4-16: SAR Values (WLAN 5G - Head) (Scaled Reported SAR)

Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
Ch.	MHz						
62	5310	Left	Cheek	100%	100%	**1.39**	**0.44**

Table 14.4-17: SAR Values (WLAN 5G - Body) (Scaled Reported SAR)

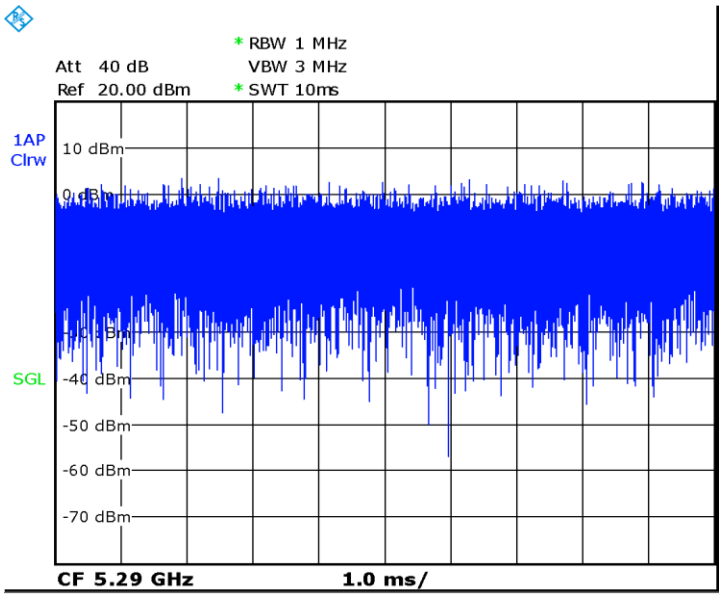
Frequency		Test Position	D (mm)	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
Ch.	MHz						
58	5290	Right Edge	10	100%	100%	**1.15**	**1.15**

Table 14.4-18: SAR Values (WLAN 5G - Head) (Scaled Reported SAR)

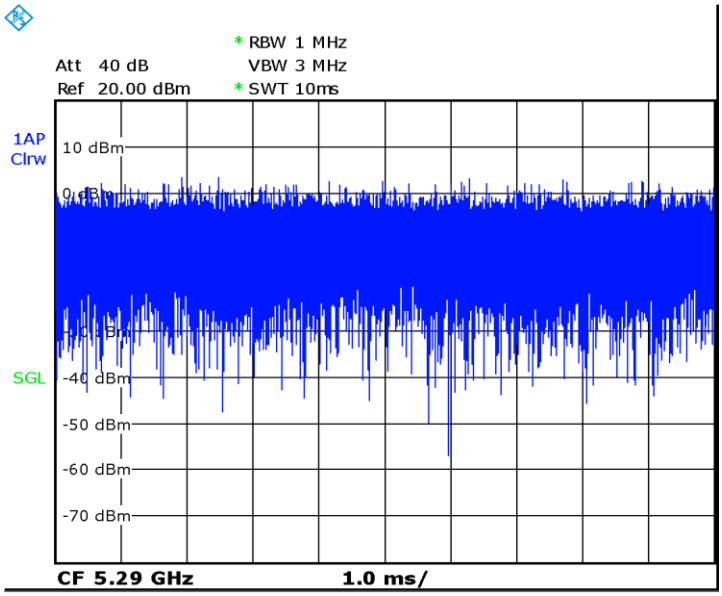
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
Ch.	MHz						
58	5290	Left	Cheek	100%	100%	**0.44**	**0.44**

Table 14.4-19: SAR Values (WLAN 5G - Body) (Scaled Reported SAR)

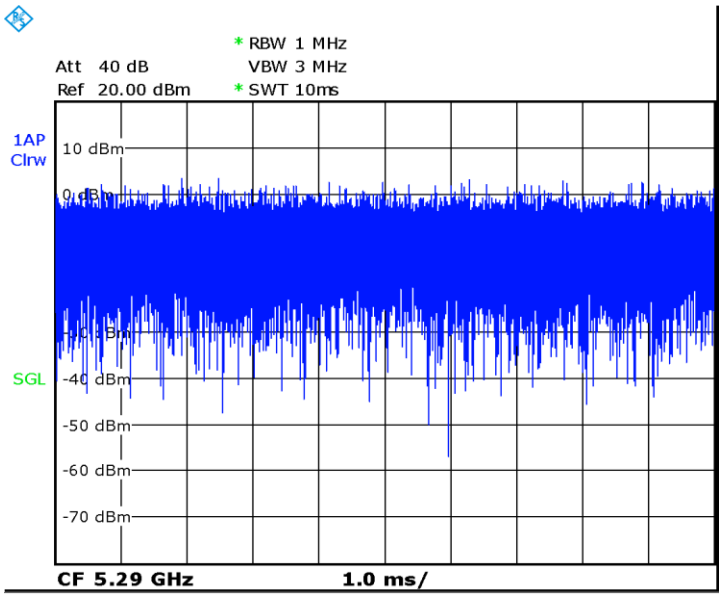
Frequency		Test Position	D (mm)	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
Ch.	MHz						
58	5290	Right Edge	10	100%	100%	**0.55**	**0.55**



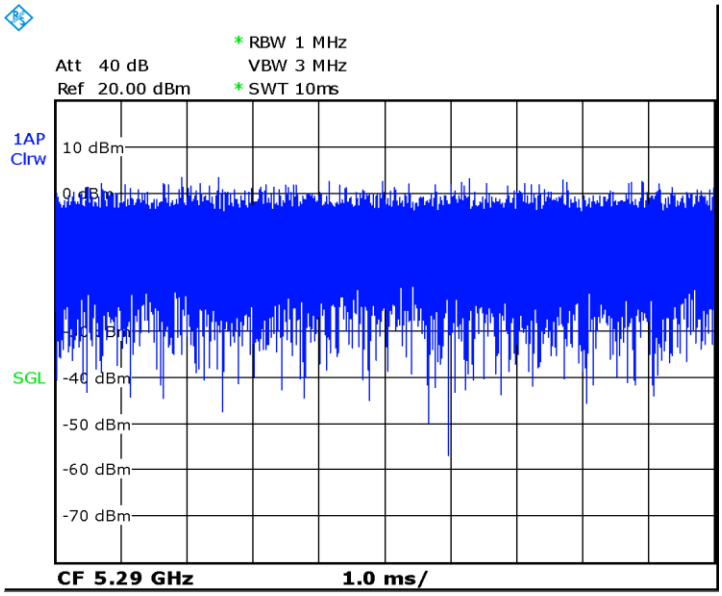
Picture 14.4-1 The plot of duty factor for CH.62



Picture 14.4-2 The plot of duty factor for CH.58



Picture 14.4-3 The plot of duty factor for CH.58



Picture 14.4-4 The plot of duty factor for CH.58

15 Measurement Uncertainty

15.1 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	$\sqrt{3}$	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	N	1	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	∞
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	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	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	$\sqrt{3}$	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	

15.2 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 (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		$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.7	10.6	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						21.4	21.1	

15.3 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	

15.4 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	

16 MAIN TEST INSTRUMENTS

Table 16.1: 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	NRP2	106276	May 11, 2021	One year
03	Power sensor	NRP6A	101369		
04	Signal Generator	E4438C	MY49071430	February 1, 2021	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	CMW500	159889	January 13, 2021	One year
07	E-field Probe	SPEAG EX3DV4	7548	June 25, 2021	One year
08	DAE	SPEAG DAE4	1331	September 2, 2020	One year
09	Dipole Validation Kit	SPEAG D750V3	1132	December 23,2020	One year
10	Dipole Validation Kit	SPEAG D835V2	4d120	June 23,,2021	One year
11	Dipole Validation Kit	SPEAG D1750V2	1023	June 23,2021	One year
12	Dipole Validation Kit	SPEAG D1900V2	5d142	June 25,2021	One year
13	Dipole Validation Kit	SPEAG D2450V2	869	June 22,2021	One year
14	Dipole Validation Kit	SPEAG D2550V2	1002	June 17,2021	One year
15	Dipole Validation Kit	SPEAG D5GHzV2	1203	December 22,2020	One year

END OF REPORT BODY

ANNEX A Graph Results

GSM850_CH128 Right Touch
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: body 835 MHz
Medium parameters used: f = 824.2; σ = 0.879 mho/m; εr = 42.3; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: GSM850 824.2 Duty Cycle: 1:8.3
Probe: EX3DV4 – SN7584 ConvF(9.74,9.74,9.74)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.166 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.709 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.178 W/kg
SAR(1 g) = 0.139 W/kg; SAR(10 g) = 0.104 W/kg
Maximum value of SAR (measured) = 0.166 W/kg

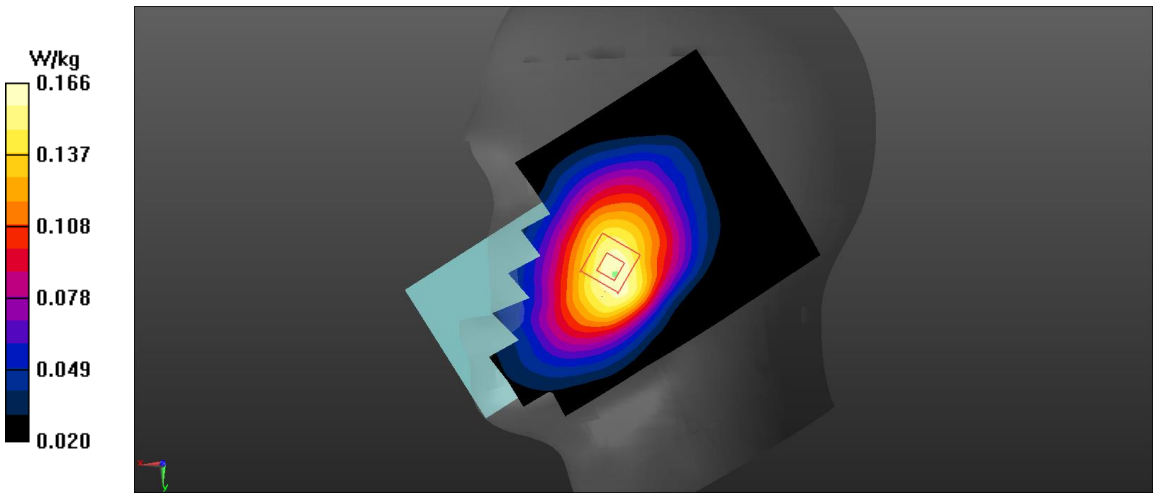


Fig A.1

GSM850_CH128 Rear 4TX 10mm
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: body 835 MHz
Medium parameters used: f = 824.2; σ = 0.879 mho/m; εr = 42.3; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: GSM850 824.2 Duty Cycle: 1:2
Probe: EX3DV4 – SN7584 ConvF(9.74,9.74,9.74)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.638 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.43 V/m; Power Drift = 0.21 dB
Peak SAR (extrapolated) = 0.779 W/kg
SAR(1 g) = 0.321 W/kg; SAR(10 g) = 0.178 W/kg
Maximum value of SAR (measured) = 0.611 W/kg

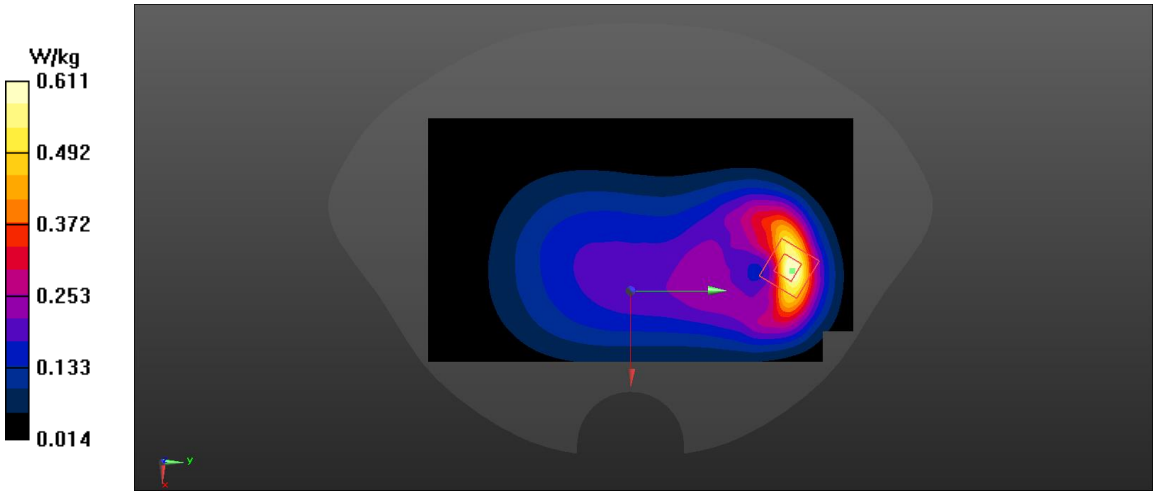


Fig A.2

PCS1900_CH661 Right Touch
Date: 7/28/2021
Electronics: DAE4 Sn1331
Medium: body 1900 MHz
Medium parameters used: f = 1880; σ = 1.399 mho/m; εr = 40.19; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: PCS1900 1880 Duty Cycle: 1:8.3
Probe: EX3DV4 – SN7584 ConvF(7.88,7.88,7.88)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.142 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.200 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.156 W/kg
SAR(1 g) = 0.099 W/kg; SAR(10 g) = 0.061 W/kg
Maximum value of SAR (measured) = 0.134 W/kg

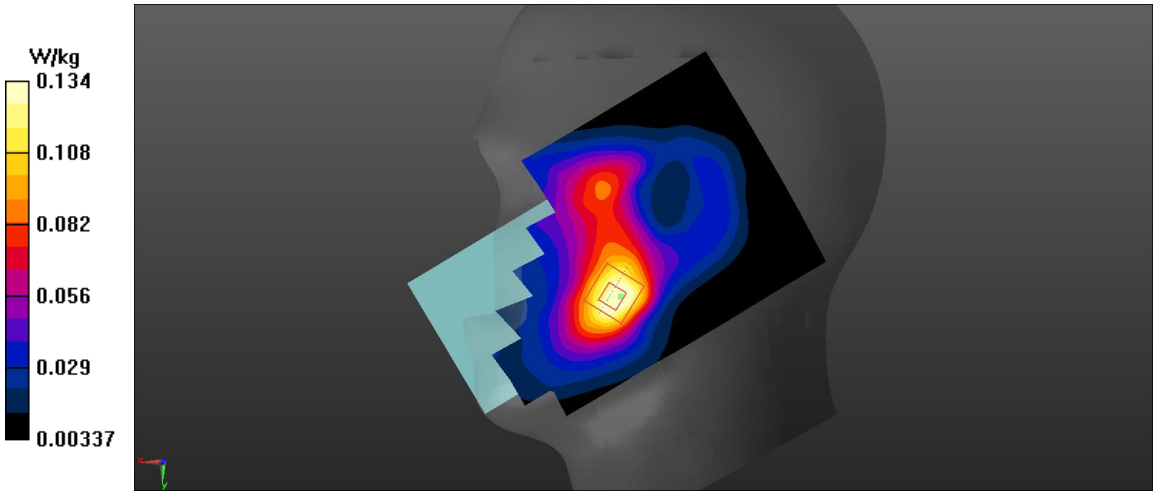


Fig A.3

PCS1900_CH661 Bottom 2TX 10mm
Date: 7/28/2021
Electronics: DAE4 Sn1331
Medium: body 1900 MHz
Medium parameters used: f = 1880; σ = 1.399 mho/m; εr = 40.19; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: PCS1900 1880 Duty Cycle: 1:4
Probe: EX3DV4 – SN7584 ConvF(7.88,7.88,7.88)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.774 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.22 V/m; Power Drift = 0 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.535 W/kg; SAR(10 g) = 0.275 W/kg
Maximum value of SAR (measured) = 0.832 W/kg

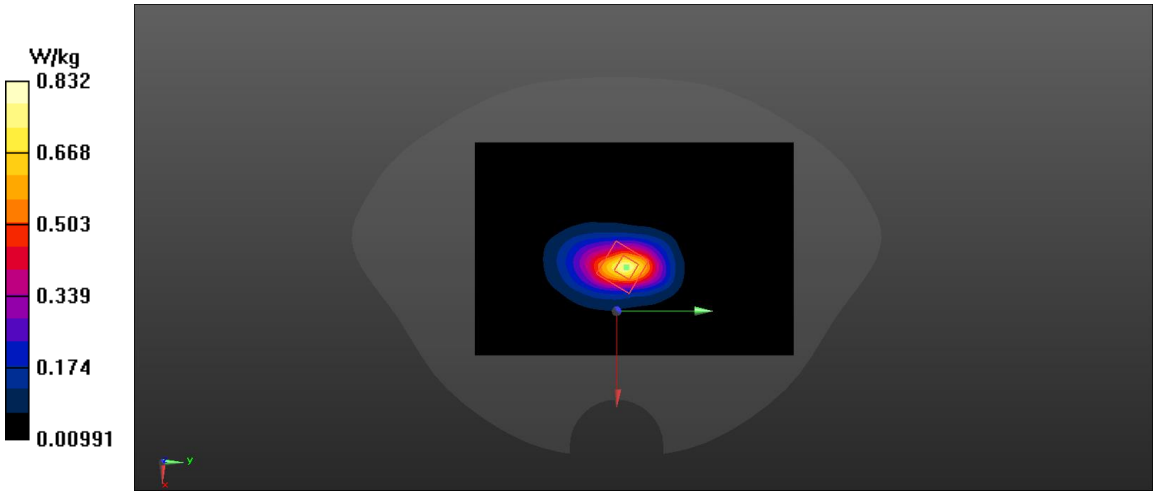


Fig A.4

WCDMA1900-BII_CH9262 Right Touch
Date: 7/28/2021
Electronics: DAE4 Sn1331
Medium: body 1900 MHz
Medium parameters used: f = 1852.4; σ = 1.372 mho/m; εr = 40.23; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WCDMA1900-BII 1852.4 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.88,7.88,7.88)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.972 V/m; Power Drift = -0.24 dB
Peak SAR (extrapolated) = 0.221 W/kg
SAR(1 g) = 0.141 W/kg; SAR(10 g) = 0.087 W/kg
Maximum value of SAR (measured) = 0.190 W/kg

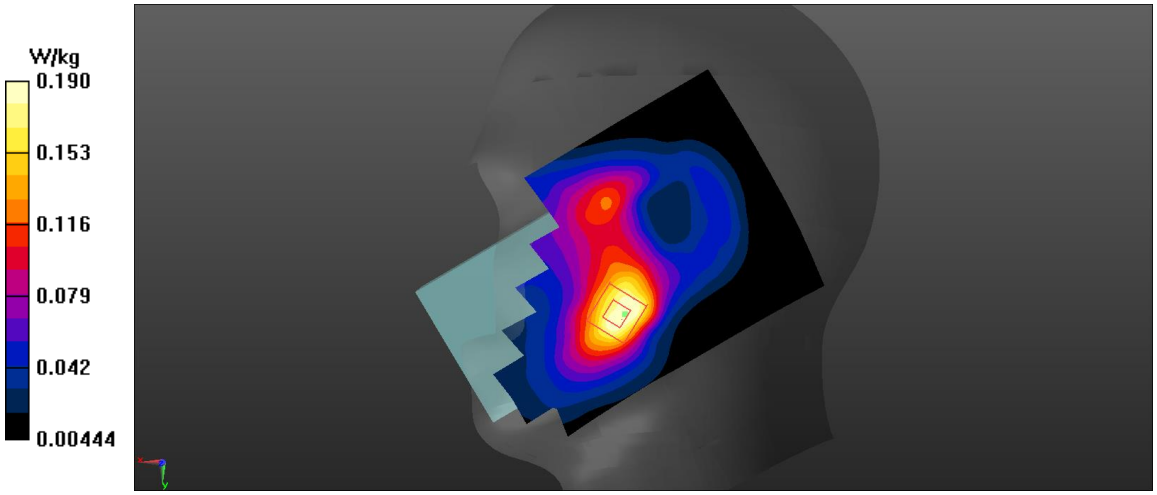


Fig A.5

WCDMA1900-BII_CH9538 Bottom 10mm
Date: 7/28/2021
Electronics: DAE4 Sn1331
Medium: body 1900 MHz
Medium parameters used: f = 1907.6; σ = 1.426 mho/m; εr = 40.16; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WCDMA1900-BII 1907.6 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.88,7.88,7.88)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.38 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.80 V/m; Power Drift = -0.38 dB
Peak SAR (extrapolated) = 1.83 W/kg
SAR(1 g) = 0.965 W/kg; SAR(10 g) = 0.5 W/kg
Maximum value of SAR (measured) = 1.50 W/kg

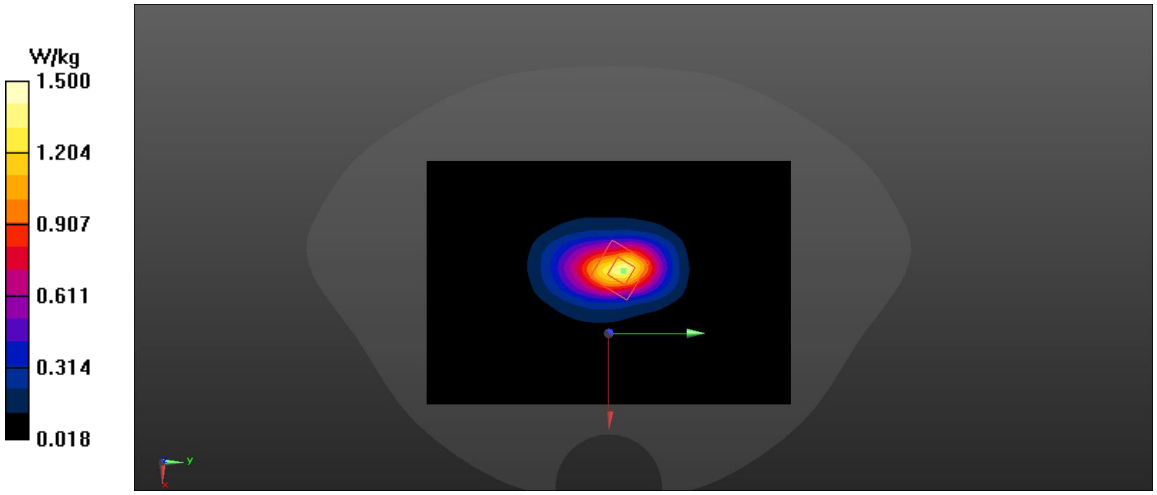


Fig A.6

WCDMA1700-BIV_CH1312 Right Touch
Date: 7/27/2021
Electronics: DAE4 Sn1331
Medium: body 1750 MHz
Medium parameters used: f = 1712.4; σ = 1.322 mho/m; εr = 40.9; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: WCDMA1700-BIV 1712.4 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.290 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.379 V/m; Power Drift = -0.23 dB
Peak SAR (extrapolated) = 0.311 W/kg
SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.131 W/kg
Maximum value of SAR (measured) = 0.274 W/kg

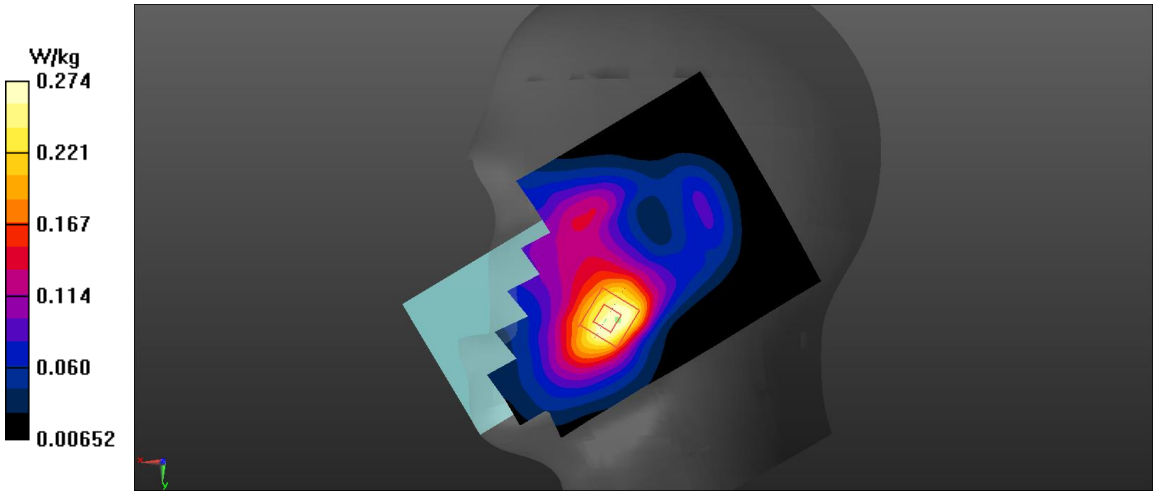


Fig A.7

WCDMA1700-BIV_CH1412 Bottom 10mm
Date: 7/27/2021
Electronics: DAE4 Sn1331
Medium: body 1750 MHz
Medium parameters used: f = 1732.4; σ = 1.341 mho/m; εr = 40.87; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: WCDMA1700-BIV 1732.4 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.64 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.71 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 2.10 W/kg
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.551 W/kg
Maximum value of SAR (measured) = 1.73 W/kg

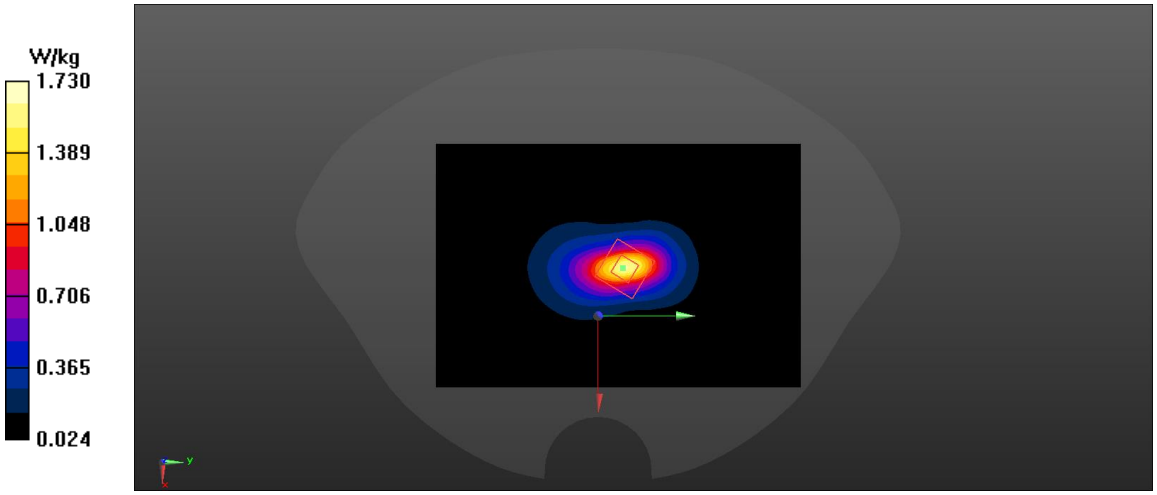


Fig A.8

WCDMA850-BV_CH4233 Left Tilt
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: head 835 MHz
Medium parameters used: f = 846.6; σ = 0.9 mho/m; εr = 42.28; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WCDMA850-BV 846.6 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(9.74,9.74,9.74)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.14 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.14 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.71 W/kg
SAR(1 g) = 0.712 W/kg; SAR(10 g) = 0.373 W/kg
Maximum value of SAR (measured) = 1.27 W/kg

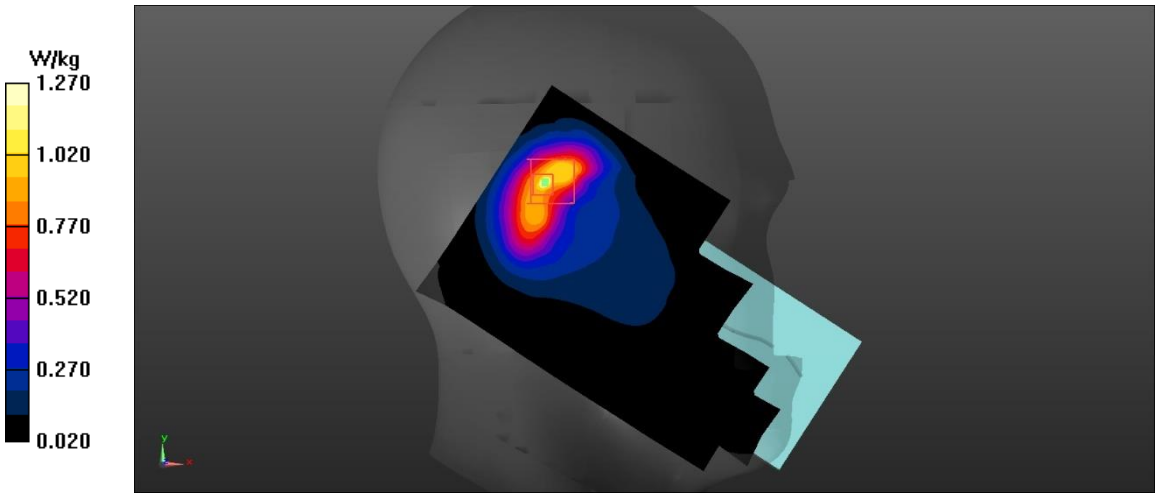


Fig A.9

WCDMA850-BV_CH4233 Rear 10mm
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: body 835 MHz
Medium parameters used: f = 846.6; σ = 0.9 mho/m; εr = 42.28; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: WCDMA850-BV 846.6 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(9.74,9.74,9.74)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.376 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.06 V/m; Power Drift = -0.45 dB
Peak SAR (extrapolated) = 0.439 W/kg
SAR(1 g) = 0.361 W/kg; SAR(10 g) = 0.24 W/kg
Maximum value of SAR (measured) = 0.400 W/kg

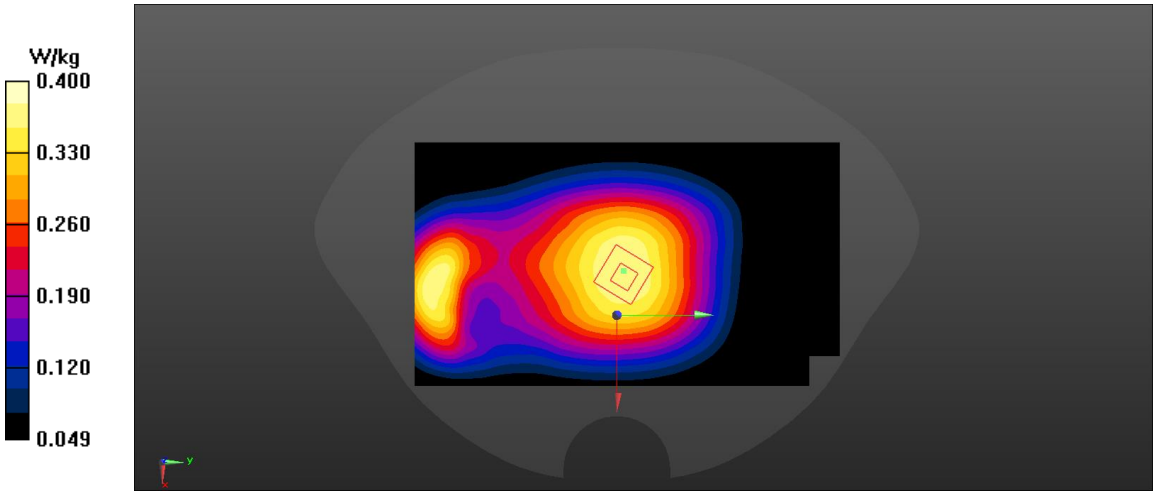


Fig A.10

LTE2500-FDD7_CH21100 Left Touch
Date: 7/30/2021
Electronics: DAE4 Sn1331
Medium: body 2600 MHz
Medium parameters used: f = 2535 MHz; σ = 1.923 mho/m; εr = 39.04; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: LTE2500-FDD7 2535 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.11,7.11,7.11)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.317 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.3960 V/m; Power Drift = -0.41 dB
Peak SAR (extrapolated) = 0.389 W/kg
SAR(1 g) = 0.21 W/kg; SAR(10 g) = 0.116 W/kg
Maximum value of SAR (measured) = 0.322 W/kg

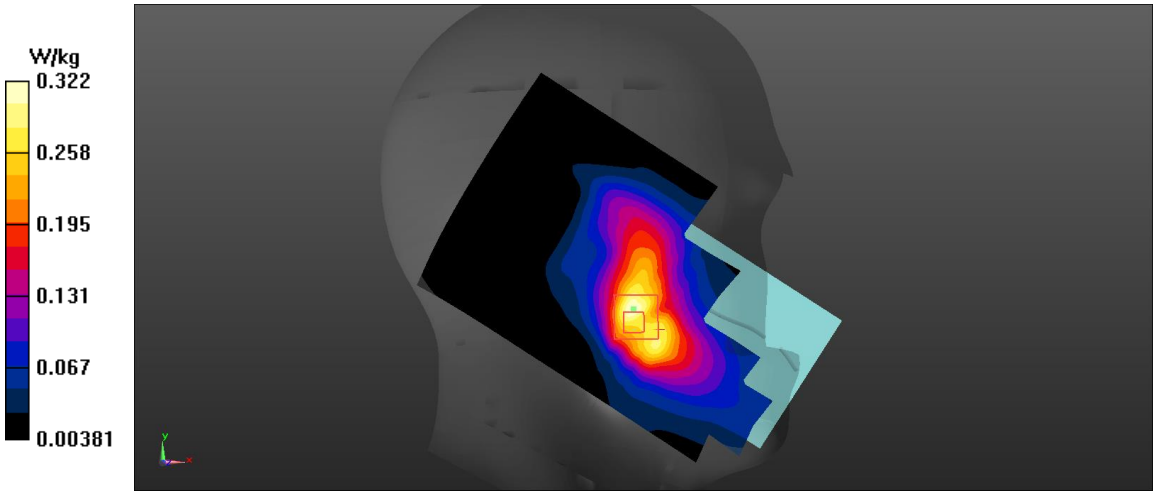


Fig A.11

LTE2500-FDD7_CH21100 Rear 10mm
Date: 7/30/2021
Electronics: DAE4 Sn1331
Medium: body 2600 MHz
Medium parameters used: f = 2535 MHz; σ = 1.923 mho/m; εr = 39.04; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: LTE2500-FDD7 2535 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.11,7.11,7.11)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.701 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.763 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.813 W/kg
SAR(1 g) = 0.439 W/kg; SAR(10 g) = 0.246 W/kg
Maximum value of SAR (measured) = 0.666 W/kg

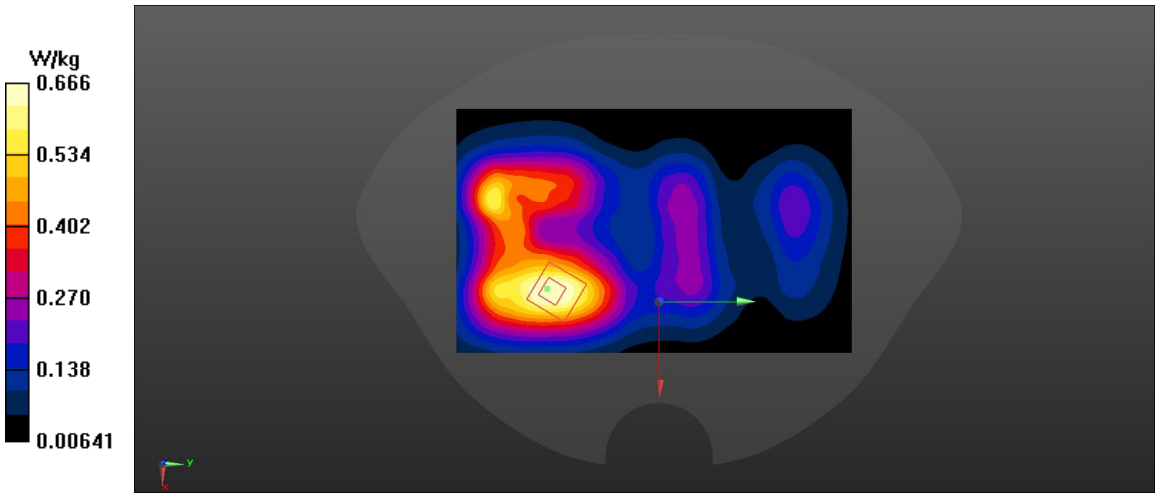


Fig A.12

LTE700-FDD12_CH23095 Left Touch
Date: 7/25/2021
Electronics: DAE4 Sn1331
Medium: body 750 MHz
Medium parameters used: f = 707.5 MHz; σ = 0.841 mho/m; εr = 42.27; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: LTE700-FDD12 707.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(10.36,10.36,10.36)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.915 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.58 V/m; Power Drift = -0.26 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.605 W/kg; SAR(10 g) = 0.369 W/kg
Maximum value of SAR (measured) = 1.03 W/kg

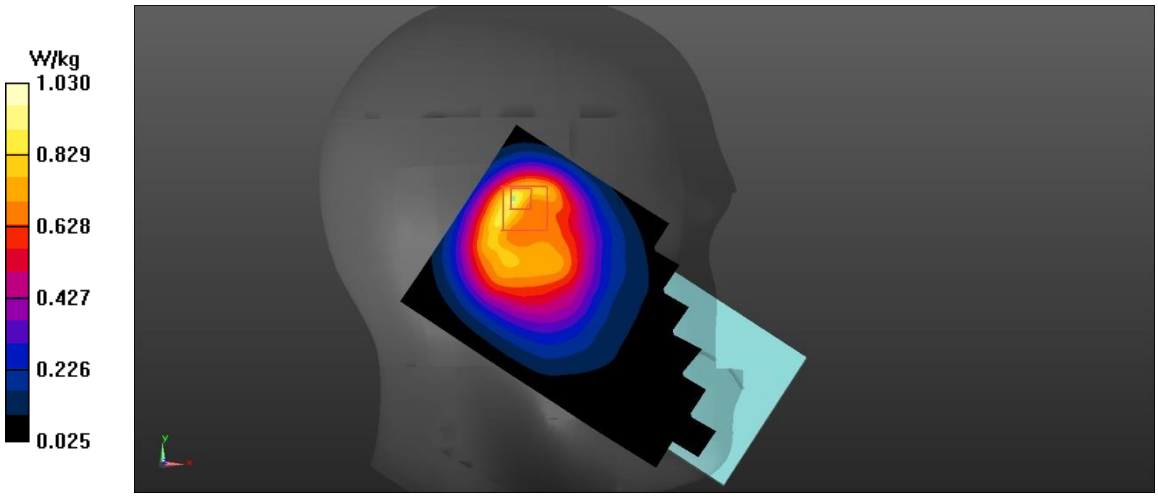


Fig A.13

LTE700-FDD12_CH23095 Top 10mm
Date: 7/25/2021
Electronics: DAE4 Sn1331
Medium: body 750 MHz
Medium parameters used: f = 707.5 MHz; σ = 0.841 mho/m; εr = 42.27; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: LTE700-FDD12 707.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(10.36,10.36,10.36)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.369 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.88 V/m; Power Drift = -0.24 dB
Peak SAR (extrapolated) = 0.488 W/kg
SAR(1 g) = 0.245 W/kg; SAR(10 g) = 0.132 W/kg
Maximum value of SAR (measured) = 0.388 W/kg

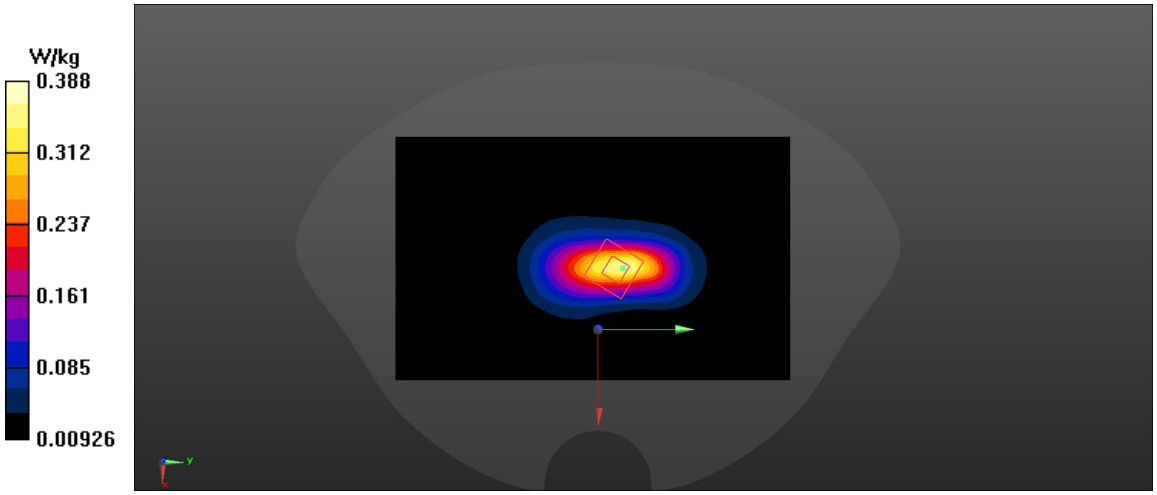


Fig A.14

LTE1900-FDD25_CH26365 Right Touch
Date: 7/28/2021
Electronics: DAE4 Sn1331
Medium: body 1900 MHz
Medium parameters used: f = 1882.5 MHz; σ = 1.401 mho/m; εr = 40.19; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE1900-FDD25 1882.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.88,7.88,7.88)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.179 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.419 V/m; Power Drift = -0.23 dB
Peak SAR (extrapolated) = 0.200 W/kg
SAR(1 g) = 0.123 W/kg; SAR(10 g) = 0.074 W/kg
Maximum value of SAR (measured) =0.168 W/kg

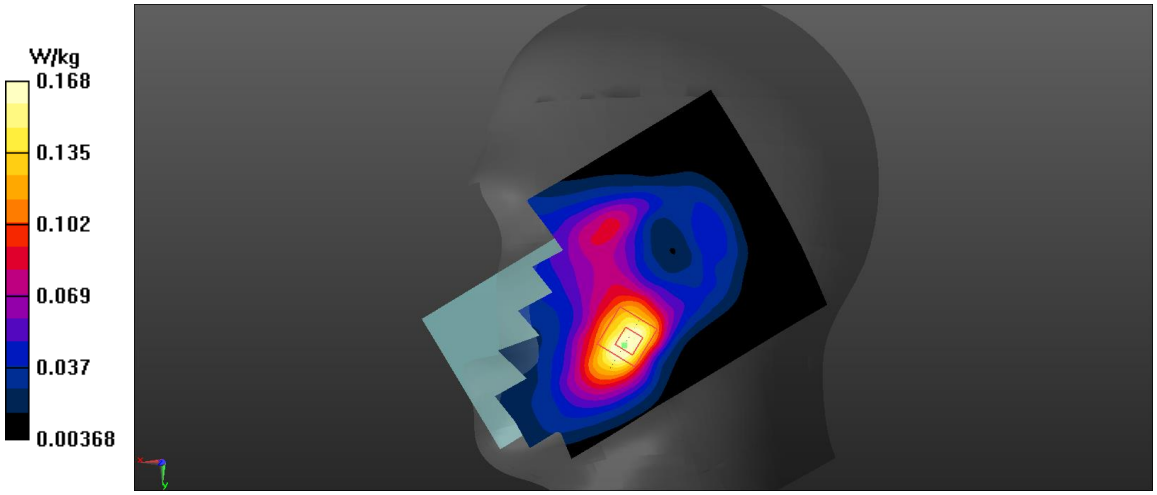


Fig A.15

LTE1900-FDD25_CH26590 Bottom 10mm
Date: 7/28/2021
Electronics: DAE4 Sn1331
Medium: body 1900 MHz
Medium parameters used: f = 1905 MHz; σ = 1.423 mho/m; εr = 40.16; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE1900-FDD25 1905 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.88,7.88,7.88)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.44 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.38 V/m; Power Drift = 0.23 dB
Peak SAR (extrapolated) = 1.88 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.527 W/kg
Maximum value of SAR (measured) = 1.55 W/kg

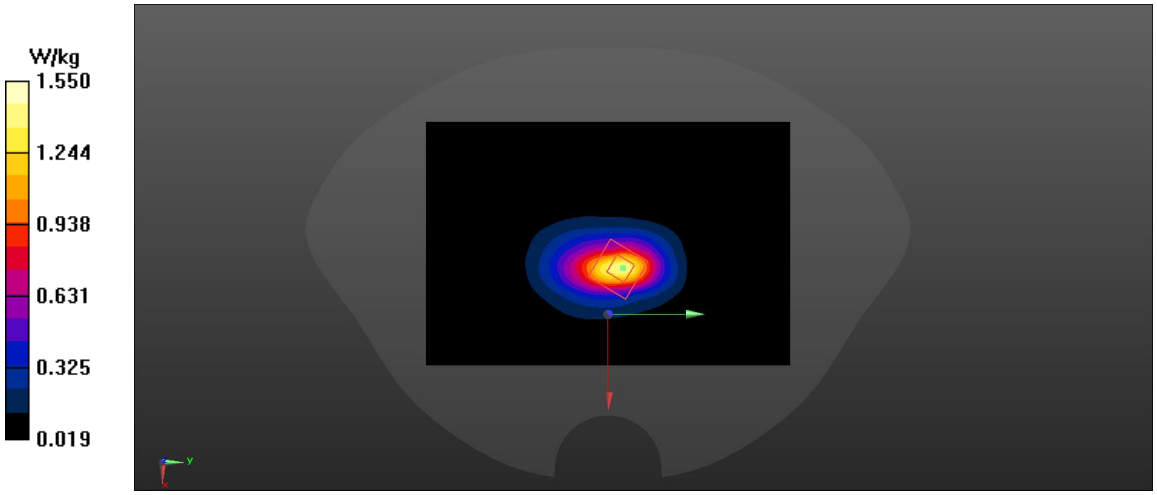


Fig A.16

LTE850-FDD26_CH26965 Left Tilt
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: head 835 MHz
Medium parameters used: f = 841.5 MHz; σ = 0.896 mho/m; εr = 42.28; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE850-FDD26 841.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(9.74,9.74,9.74)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.28 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.19 V/m; Power Drift = 0.42 dB
Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 0.781 W/kg; SAR(10 g) = 0.412 W/kg
Maximum value of SAR (measured) = 1.32 W/kg

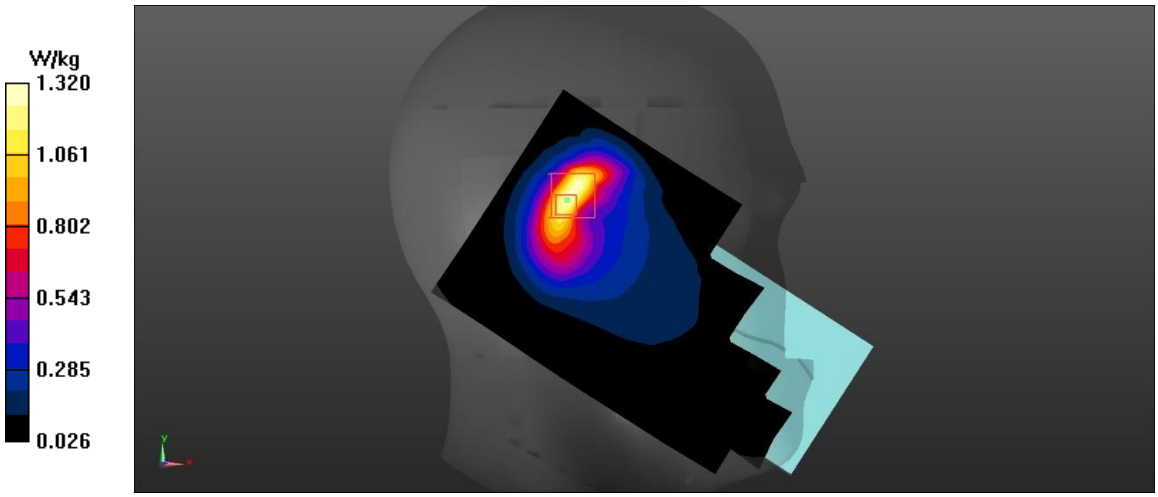


Fig A.17

LTE850-FDD26_CH26965 Rear 10mm
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: body 835 MHz
Medium parameters used: f = 841.5 MHz; σ = 0.896 mho/m; εr = 42.28; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: LTE850-FDD26 841.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(9.74,9.74,9.74)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.615 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.52 V/m; Power Drift = -0.3 dB
Peak SAR (extrapolated) = 0.729 W/kg
SAR(1 g) = 0.418 W/kg; SAR(10 g) = 0.25 W/kg
Maximum value of SAR (measured) = 0.610 W/kg

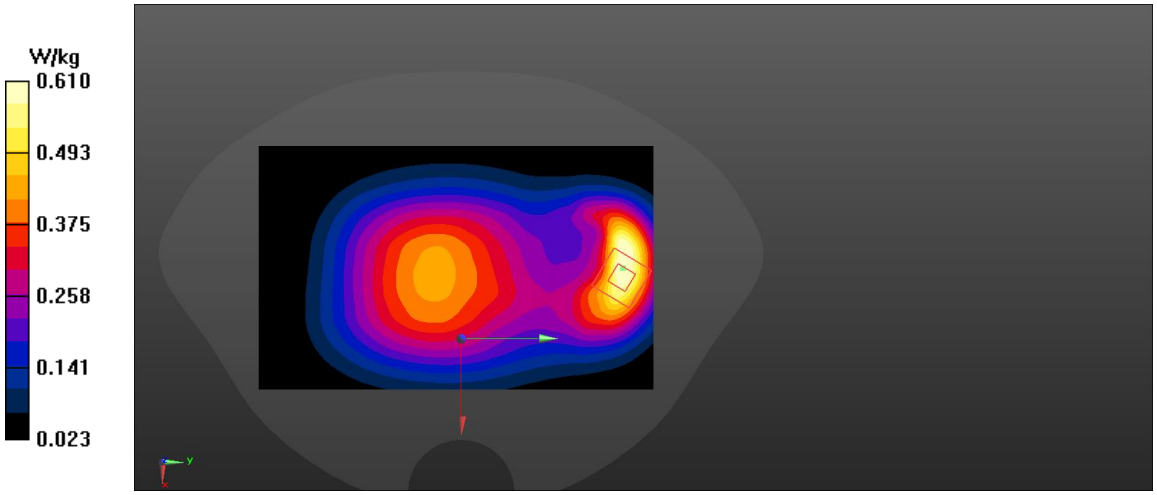


Fig A.18

LTE2500-TDD41 PC3_CH40185 Left Touch
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: body 2550 MHz
Medium parameters used: f = 2550 MHz; σ = 1.922 S/m; εr = 37.942; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE2500-TDD41PC3 2549.5 MHz Duty Cycle: 1:1.58
Probe: EX3DV4 – SN7584 ConvF(7.11,7.11,7.11)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.226 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.261 V/m; Power Drift = -0.32 dB
Peak SAR (extrapolated) = 0.249 W/kg
SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.0753 W/kg
Maximum value of SAR (measured) = 0.205 W/kg

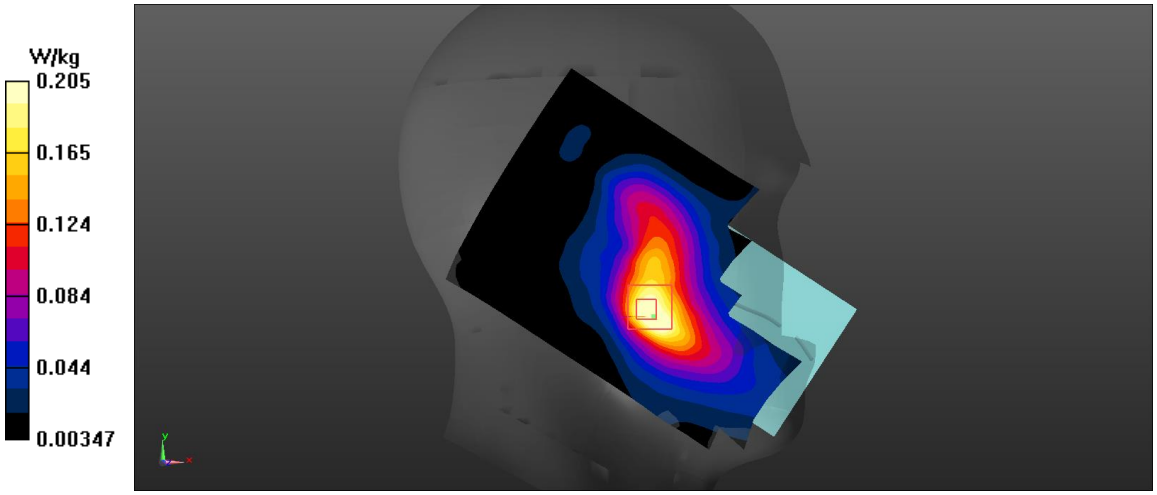


Fig A.19

LTE2500-TDD41 PC3_CH40185 Rear 10mm
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: body 2550 MHz
Medium parameters used: f = 2550 MHz; σ = 1.922 S/m; εr = 37.942; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE2500-TDD41PC3 2549.5 MHz Duty Cycle: 1:1.58
Probe: EX3DV4 – SN7584 ConvF(7.11,7.11,7.11)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.437 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.710 V/m; Power Drift = -0.37 dB
Peak SAR (extrapolated) = 0.530 W/kg
SAR(1 g) = 0.282 W/kg; SAR(10 g) = 0.149 W/kg
Maximum value of SAR (measured) = 0.433 W/kg

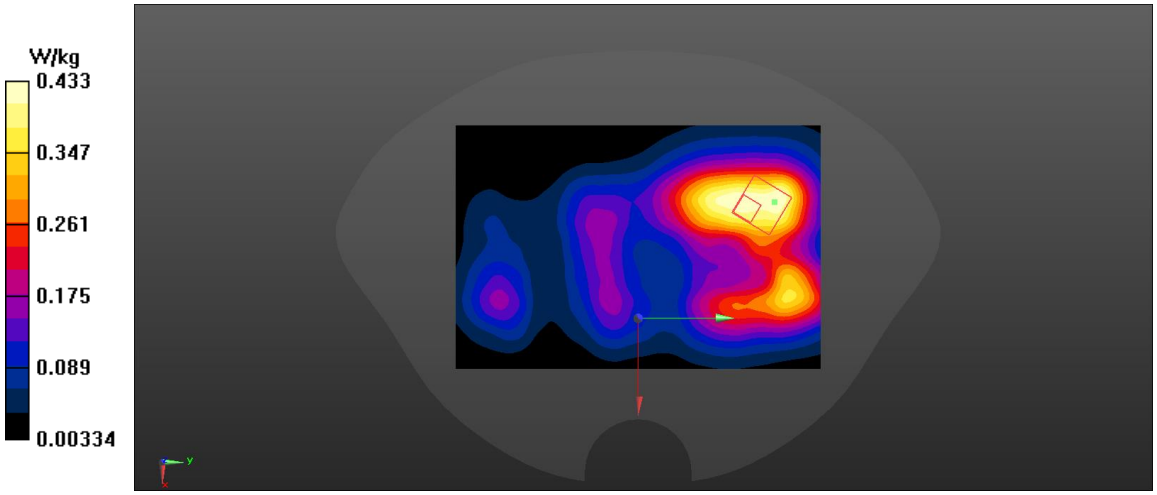


Fig A.20

LTE2500-TDD41 PC2_CH41055 Left Touch
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: body 2550 MHz
Medium parameters used: f = 2636.5 MHz; 1.997 S/m; εr = 37.83; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE2500-TDD41PC2 2636.5 MHz Duty Cycle: 1:2.309
Probe: EX3DV4 – SN7584 ConvF(7.11,7.11,7.11)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.265 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.619 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.285 W/kg
SAR(1 g) = 0.16 W/kg; SAR(10 g) = 0.089 W/kg
Maximum value of SAR (measured) = 0.235 W/kg

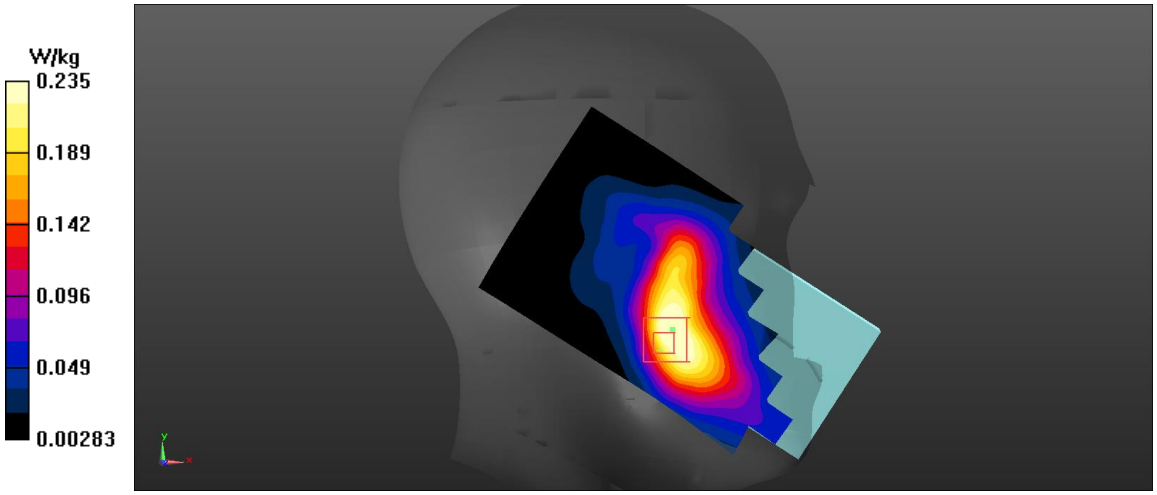


Fig A.21

LTE2500-TDD41 PC2_CH41055 Rear 10mm
Date: 7/26/2021
Electronics: DAE4 Sn1331
Medium: body 2550 MHz
Medium parameters used: f = 2636.5 MHz; σ =1.997 S/m; εr = 37.823; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE2500-TDD41PC2 2636.5 MHz Duty Cycle: 1:2.309
Probe: EX3DV4 – SN7584 ConvF(7.11,7.11,7.11)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.750 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.069 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.851 W/kg
SAR(1 g) = 0.441 W/kg; SAR(10 g) = 0.243 W/kg
Maximum value of SAR (measured) = 0.687 W/kg

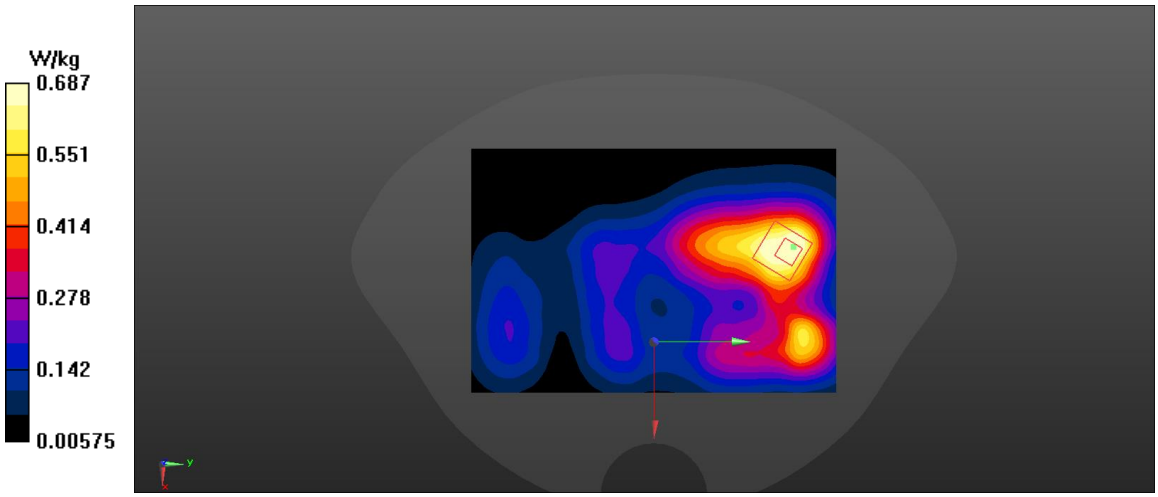


Fig A.22

LTE1700-FDD66_CH132572 Right Touch
Date: 7/27/2021
Electronics: DAE4 Sn1331
Medium: body 1750 MHz
Medium parameters used: f = 841.5 MHz; σ = 0.495 mho/m; εr = 41.94; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE1700-FDD66 841.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.451 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.269 V/m; Power Drift = -0.34 dB
Peak SAR (extrapolated) = 0.500 W/kg
SAR(1 g) = 0.32 W/kg; SAR(10 g) = 0.196 W/kg
Maximum value of SAR (measured) = 0.430 W/kg

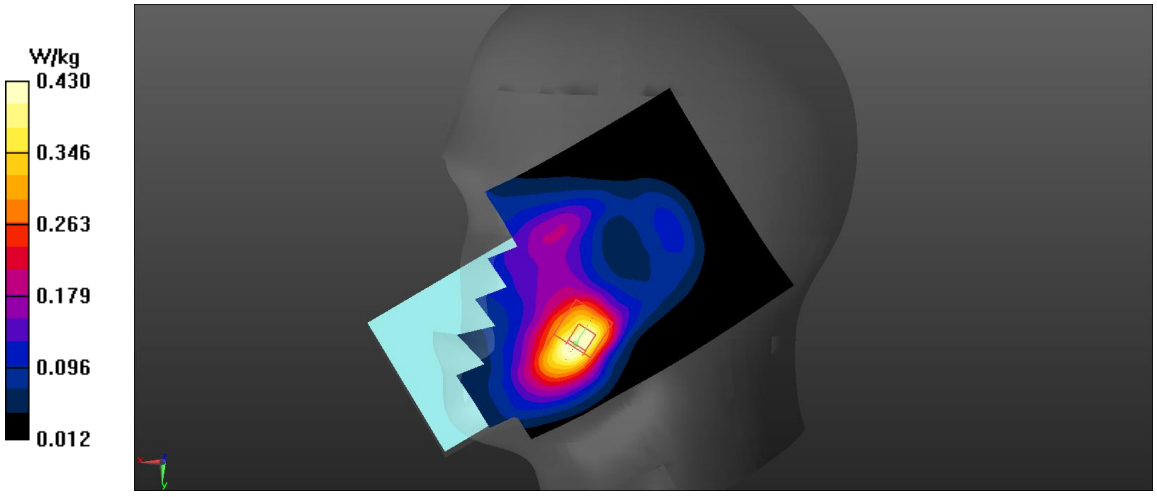


Fig A.23

LTE1700-FDD66_CH132572 Bottom 10mm
Date: 7/27/2021
Electronics: DAE4 Sn1331
Medium: body 1750 MHz
Medium parameters used: f = 841.5 MHz; σ = 0.495 mho/m; εr = 41.94; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: LTE1700-FDD66 841.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(8.14,8.14,8.14)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.50 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.32 V/m; Power Drift = -0.43 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.53 W/kg
Maximum value of SAR (measured) = 1.68 W/kg

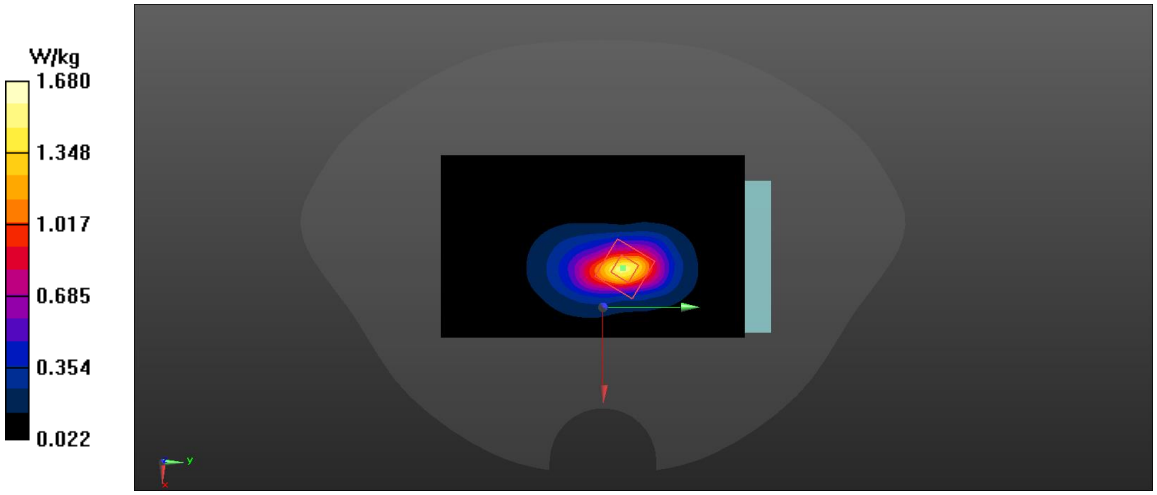


Fig A.24

LTE700-FDD71_CH133322 Left Touch
Date: 7/25/2021
Electronics: DAE4 Sn1331
Medium: body 750 MHz
Medium parameters used: f = 841.5 MHz; σ = 0.968 mho/m; εr = 42.11; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: LTE700-FDD71 841.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(10.36,10.36,10.36)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.742 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.48 V/m; Power Drift = -0.42 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.473 W/kg; SAR(10 g) = 0.282 W/kg
Maximum value of SAR (measured) = 0.812 W/kg

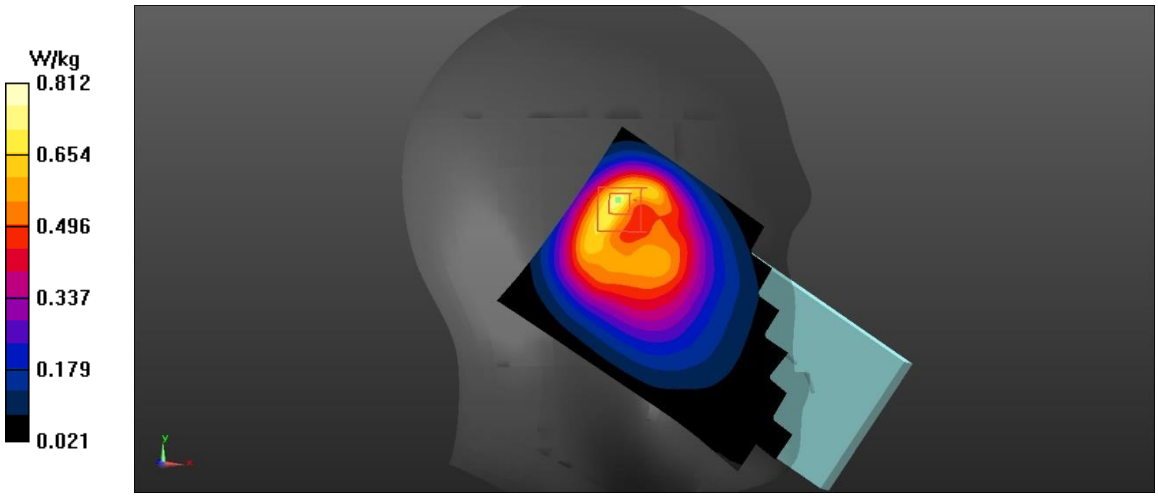


Fig A.25

LTE700-FDD71_CH133322 Right Edge 10mm
Date: 7/25/2021
Electronics: DAE4 Sn1331
Medium: body 750 MHz
Medium parameters used: f = 841.5 MHz; σ = 0.968 mho/m; εr = 42.11; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: LTE700-FDD71 841.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(10.36,10.36,10.36)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.654 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.66 V/m; Power Drift = 0.32 dB
Peak SAR (extrapolated) = 0.752 W/kg
SAR(1 g) = 0.52 W/kg; SAR(10 g) = 0.36 W/kg
Maximum value of SAR (measured) =0.674 W/kg

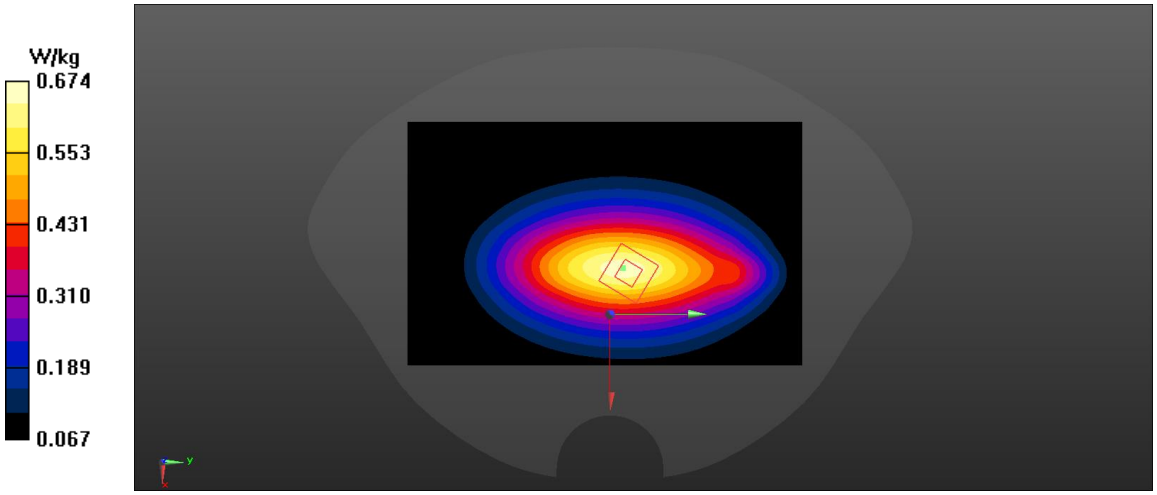


Fig A.26

WLAN2450_CH6 Right Touch
Date: 7/29/2021
Electronics: DAE4 Sn1331
Medium: body 2450 MHz
Medium parameters used: f = 2437; σ = 1.785 mho/m; εr = 39.03; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: WLAN2450 2437 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.35,7.35,7.35)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.07 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 9.752 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.434 W/kg; SAR(10 g) = 0.342 W/kg
Maximum value of SAR (measured) = 1.09 W/kg

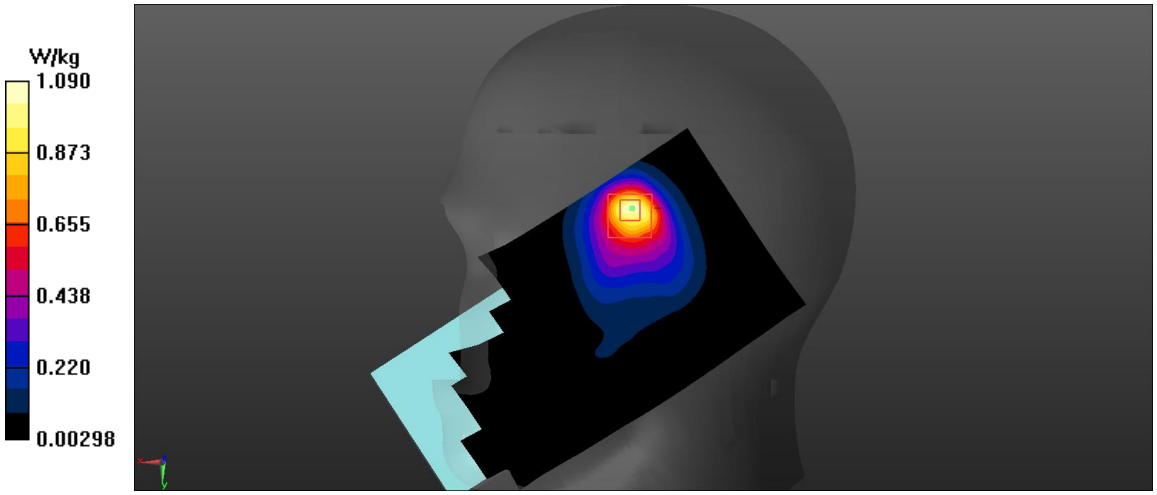


Fig A.27

WLAN2450_CH6 Rear 10mm
Date: 7/29/2021
Electronics: DAE4 Sn1331
Medium: body 2450 MHz
Medium parameters used: f = 2437; σ = 1.785 mho/m; εr = 39.03; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WLAN2450 2437 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.35,7.35,7.35)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.128 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 3.015 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.164 W/kg
SAR(1 g) = 0.188 W/kg; SAR(10 g) = 0.144 W/kg
Maximum value of SAR (measured) = 0.178 W/kg

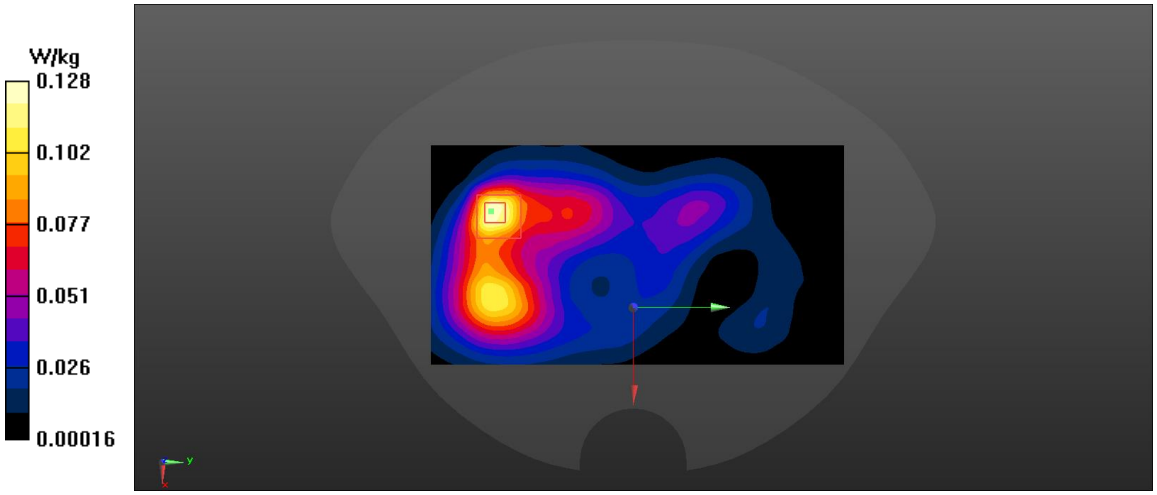


Fig A.28

WLAN2450_CH6 Right Touch
Date: 7/29/2021
Electronics: DAE4 Sn1331
Medium: body 2450 MHz
Medium parameters used: f = 2437; σ = 1.785 mho/m; εr = 39.03; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: WLAN2450 2437 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.35,7.35,7.35)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.575 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 8.146 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.755 W/kg
SAR(1 g) = 0.197 W/kg; SAR(10 g) = 0.178 W/kg
Maximum value of SAR (measured) = 0.580 W/kg

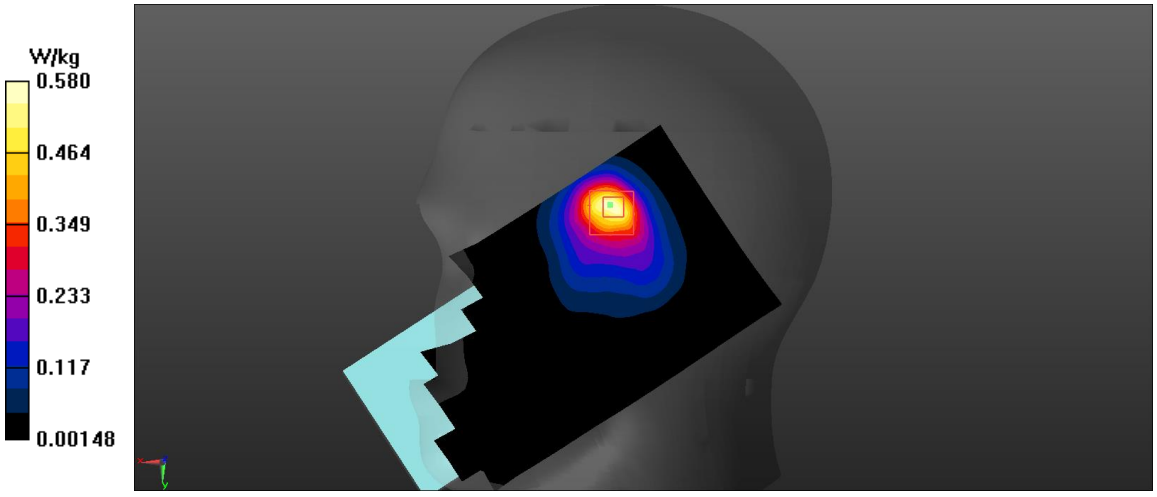


Fig A.29

WLAN2450_CH6 Rear 10mm
Date: 7/29/2021
Electronics: DAE4 Sn1331
Medium: body 2450 MHz
Medium parameters used: f = 2437; σ = 1.785 mho/m; εr = 39.03; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: WLAN2450 2437 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(7.35,7.35,7.35)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.141 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 7.398 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.214 W/kg
SAR(1 g) = 0.042 W/kg; SAR(10 g) = 0.038 W/kg
Maximum value of SAR (measured) = 0.128 W/kg

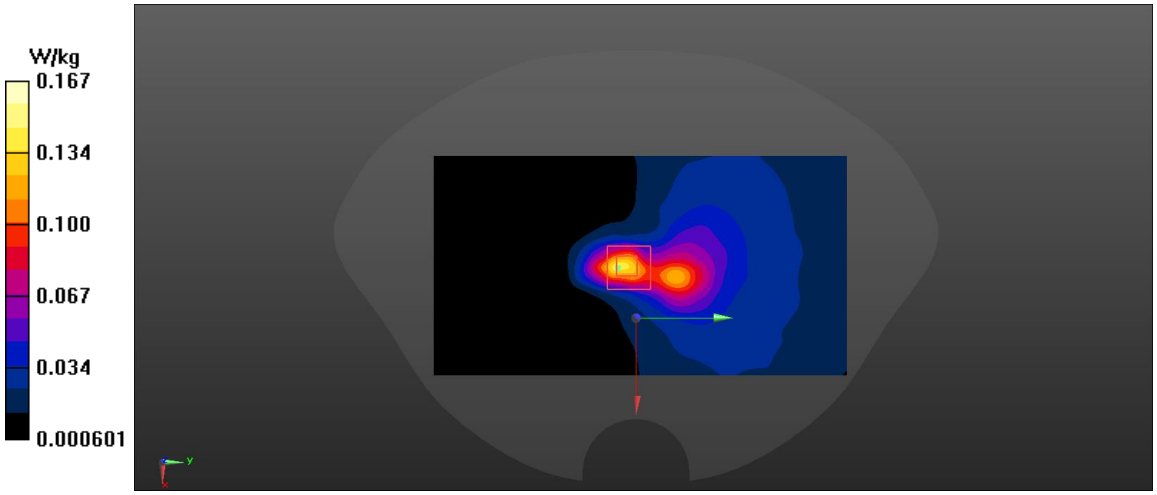


Fig A.30

UNII-2_CH62 Left Touch
Date: 8/1/2021
Electronics: DAE4 Sn1331
Medium: body 5600 MHz
Medium parameters used: f = 5310; σ = 4.744 mho/m; εr = 36.09; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: UNII-2 5310 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(4.68,4.68,4.68)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.85 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 5.281 V/m; Power Drift = 0.26 dB
Peak SAR (extrapolated) = 4.63 W/kg
SAR(1 g) = 0.453 W/kg; SAR(10 g) = 0.387 W/kg
Maximum value of SAR (measured) = 2.79 W/kg

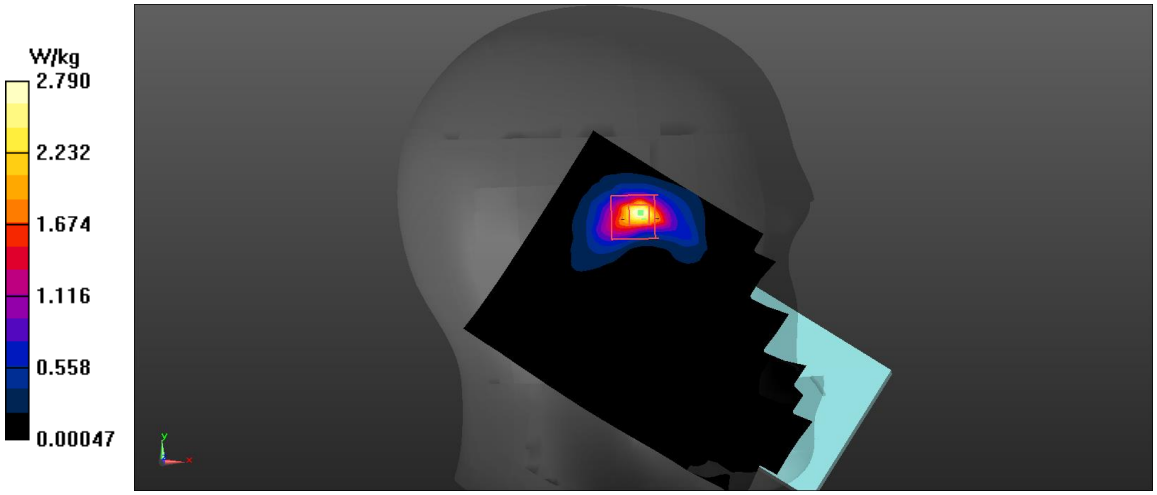


Fig A.31

UNII-2_CH58 Right Edge 10mm
Date: 8/1/2021
Electronics: DAE4 Sn1331
Medium: body 5600 MHz
Medium parameters used: f = 5290; σ = 4.724 mho/m; εr = 36.11; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: UNII-2 5290 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(4.68,4.68,4.68)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.08 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 4.032 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 3.05 W/kg
SAR(1 g) = 0.449 W/kg; SAR(10 g) = 0.364 W/kg
Maximum value of SAR (measured) = 0.731 W/kg

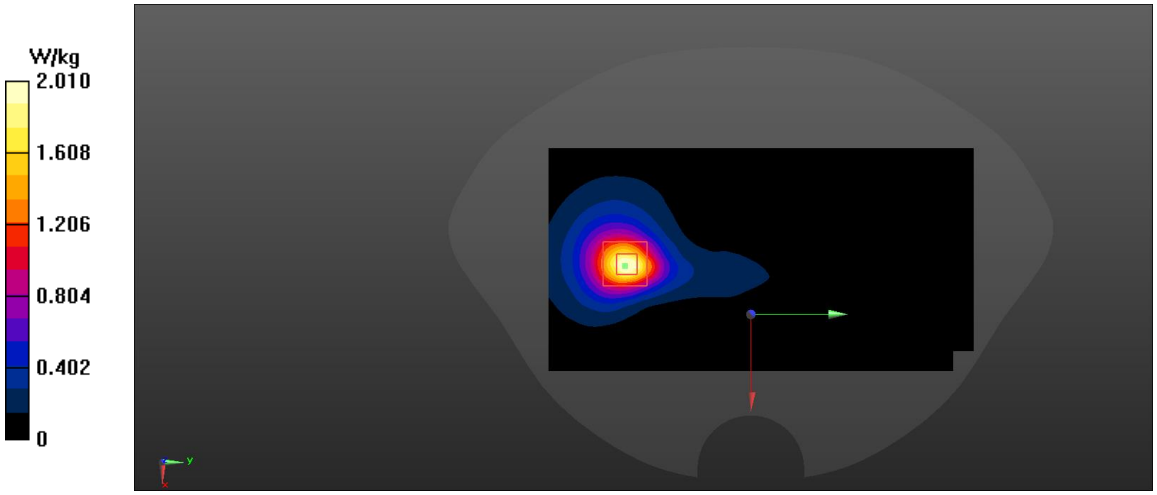


Fig A.32

UNII-2_CH58 Left Touch
Date: 8/1/2021
Electronics: DAE4 Sn1331
Medium: body 5600 MHz
Medium parameters used: f = 5290; σ = 4.724 mho/m; εr = 36.11; ρ = 1000 kg/m^3
Ambient Temperature: 22.5°C, Liquid Temperature: 22.3°C
Communication System: UNII-2 5290 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(4.68,4.68,4.68)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.771 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.884 V/m; Power Drift = -0.31 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.097 W/kg
Maximum value of SAR (measured) = 0.731 W/kg

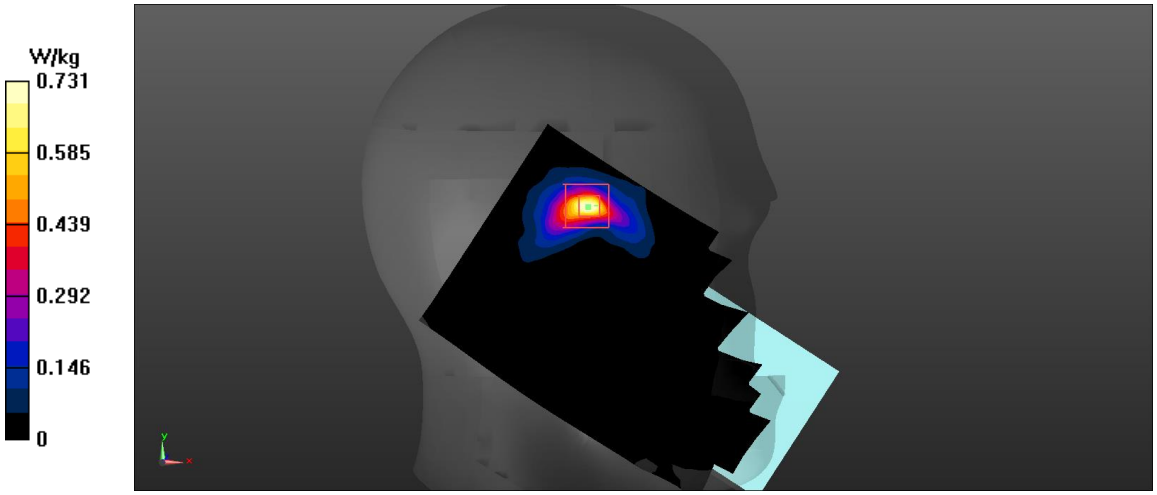


Fig A.33

UNII-2_CH58 Right Edge 10mm
Date: 8/1/2021
Electronics: DAE4 Sn1331
Medium: body 5600 MHz
Medium parameters used: f = 5290; σ = 4.724 mho/m; εr = 36.11; ρ = 1000 kg/m^3
Ambient Temperature: 22.5ºC, Liquid Temperature: 22.3ºC
Communication System: UNII-2 5290 Duty Cycle: 1:1
Probe: EX3DV4 – SN7584 ConvF(4.68,4.68,4.68)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.808 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.158 V/m; Power Drift = -0.31 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.147 W/kg
Maximum value of SAR (measured) = 0.820 W/kg

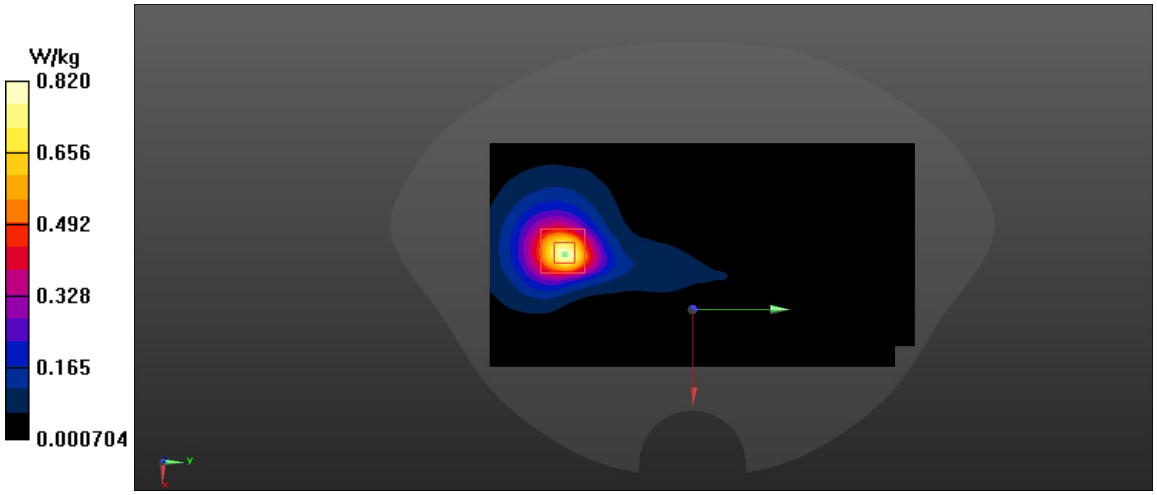
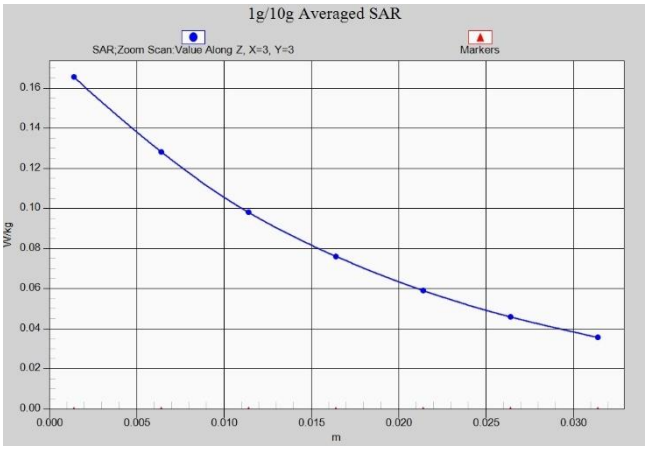
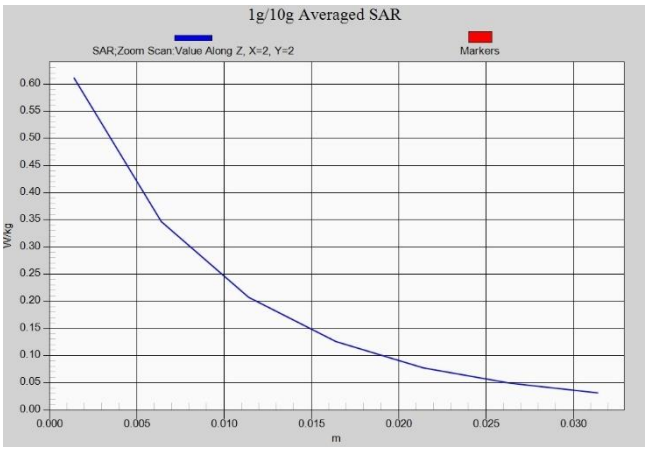


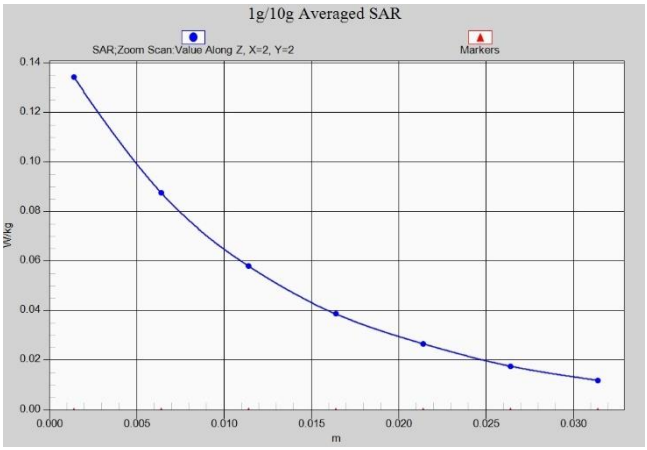
Fig A.34



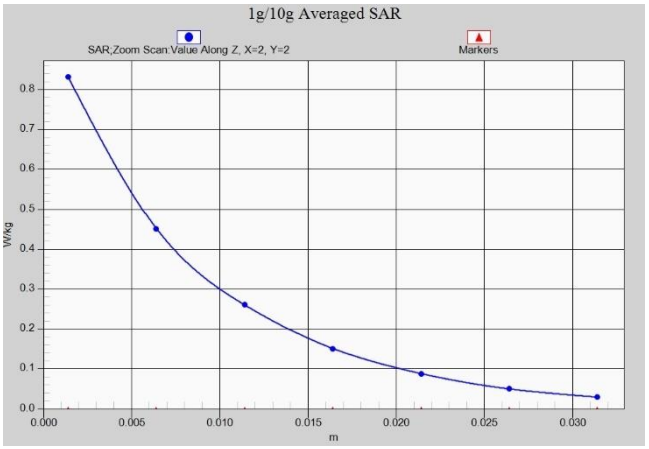
Z-Scan at power reference point-head (850 MHz)



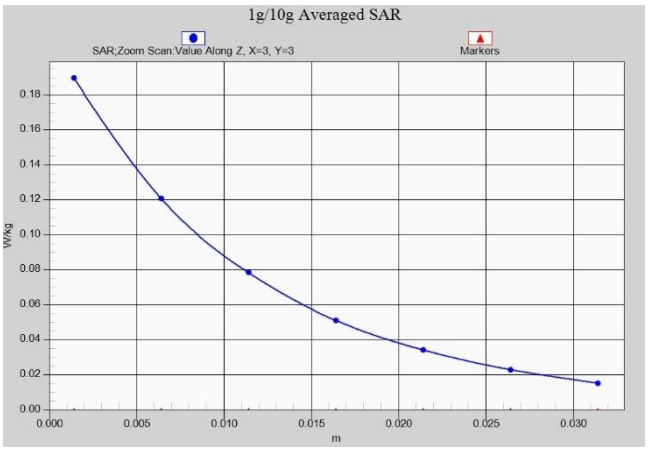
Z-Scan at power reference point-body (850 MHz)



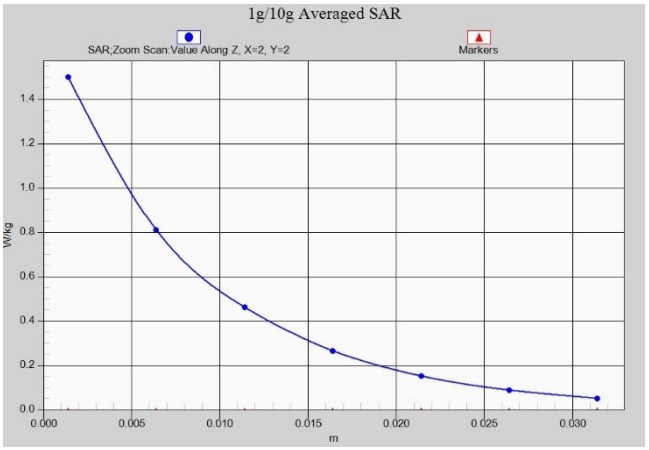
Z-Scan at power reference point (1900 MHz)



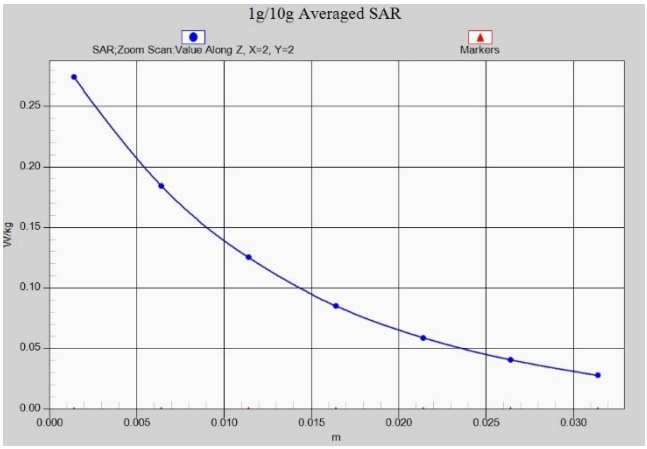
Z-Scan at power reference point (1900 MHz)



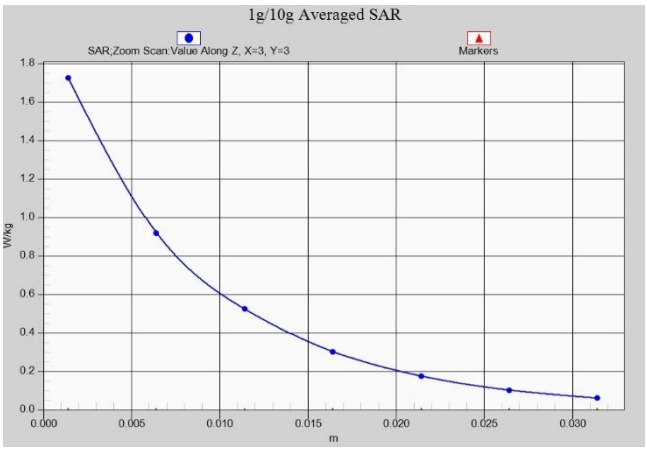
Z-Scan at power reference point (WCDMA1900)



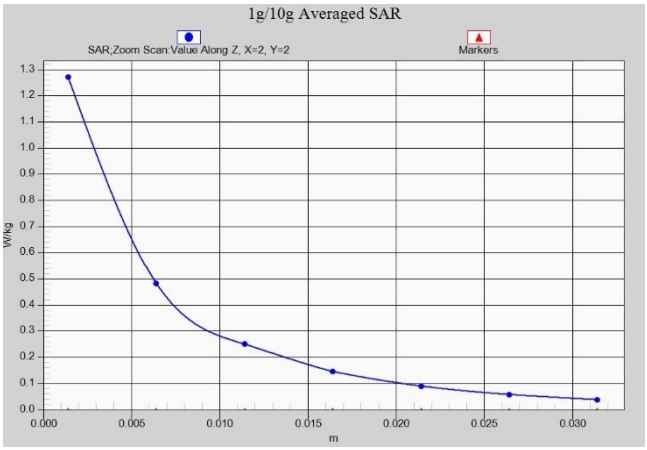
Z-Scan at power reference point (WCDMA1900)



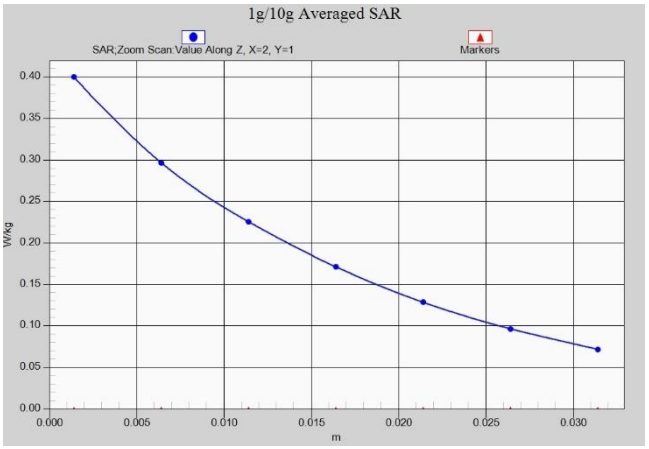
Z-Scan at power reference point (WCDMA1700)



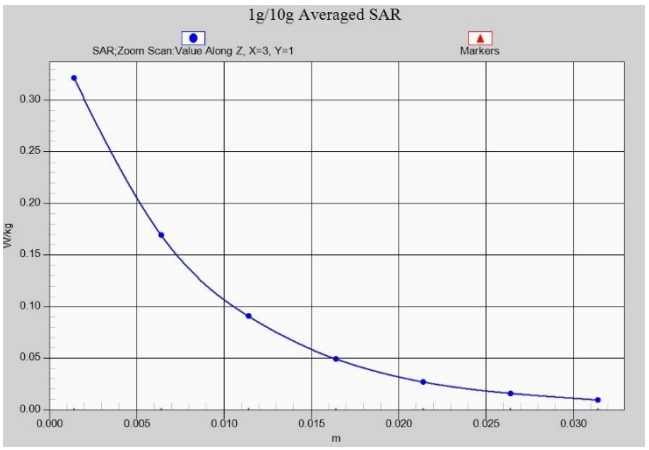
Z-Scan at power reference point (WCDMA1700)



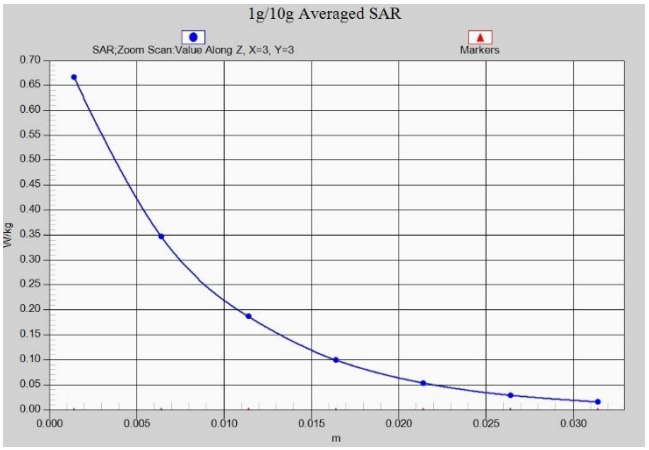
Z-Scan at power reference point (WCDMA850)



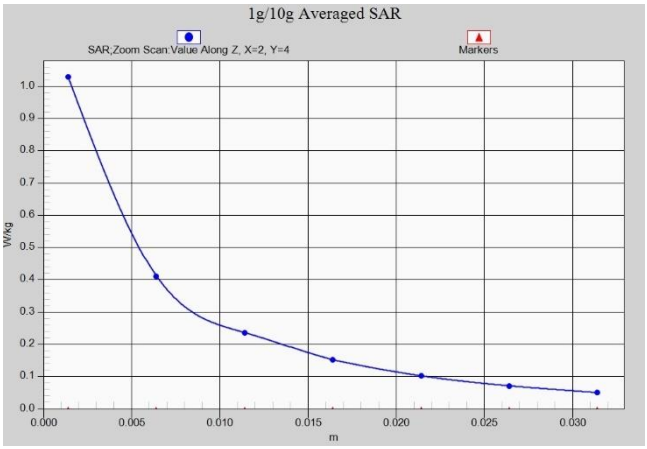
Z-Scan at power reference point (WCDMA850)



Z-Scan at power reference point (LTEB7)



Z-Scan at power reference point (LTEB7)



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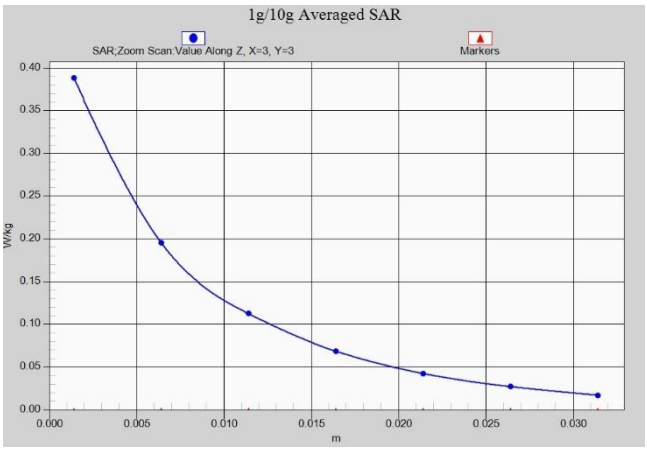

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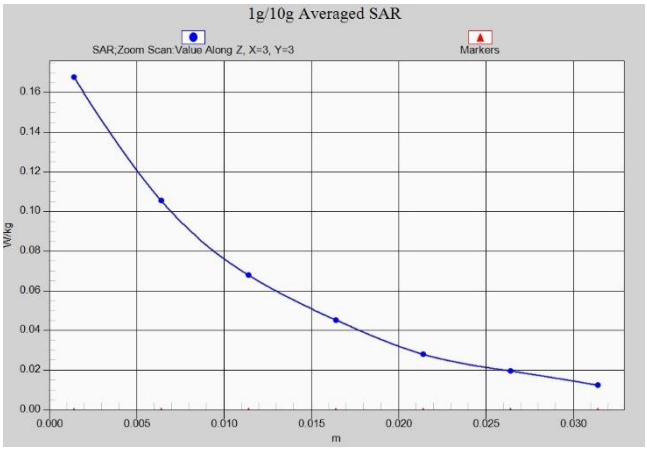
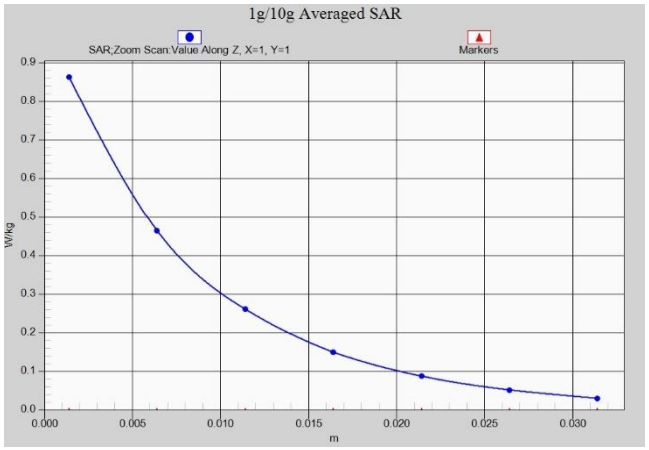


Z-Scan at power reference point (LTEB25)



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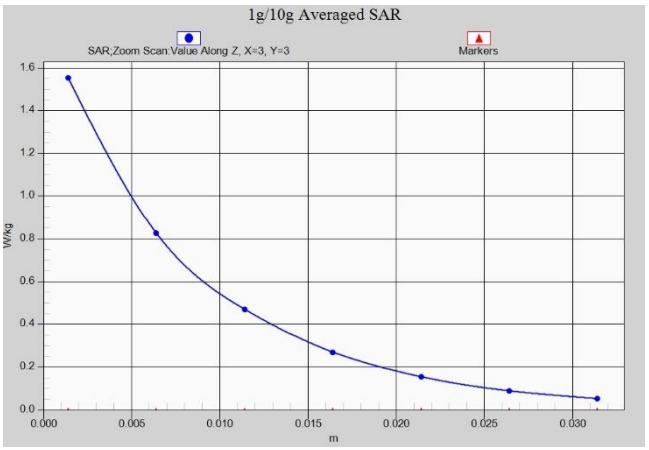

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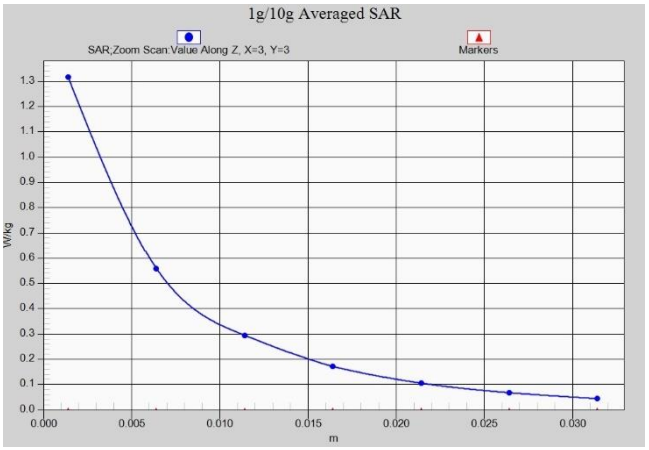
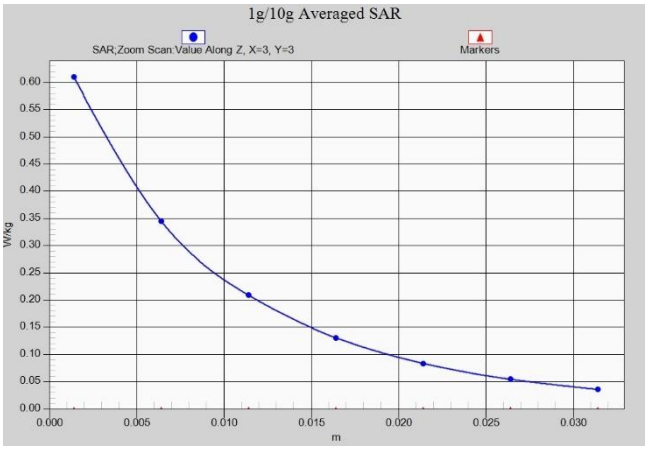
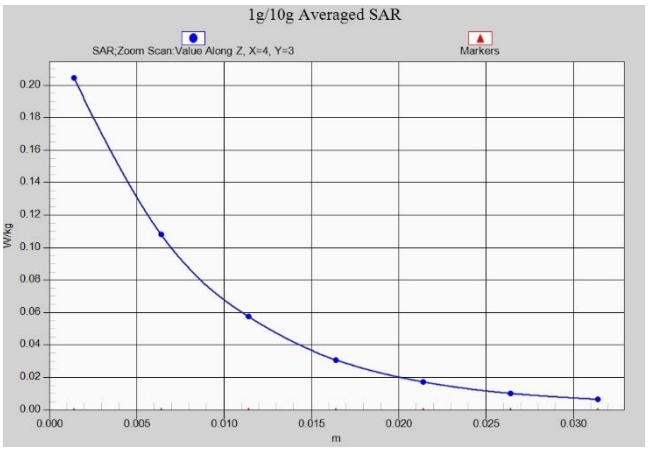


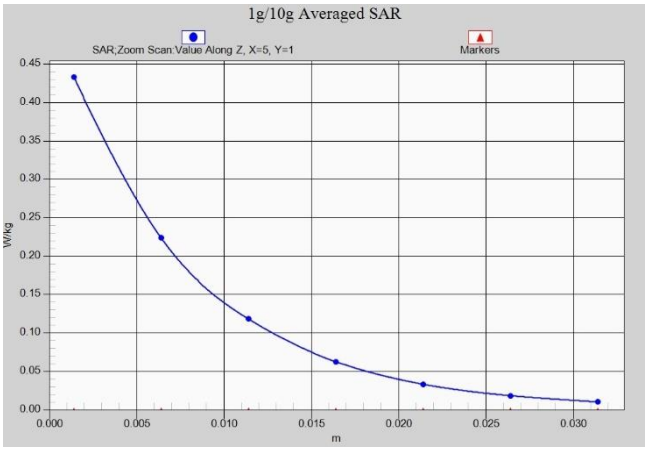
Z-Scan at power reference point (LTEB26)



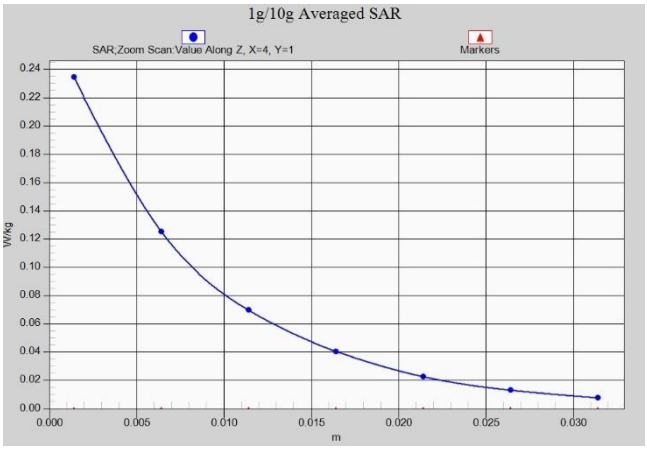
Z-Scan at power reference point (LTEB26)



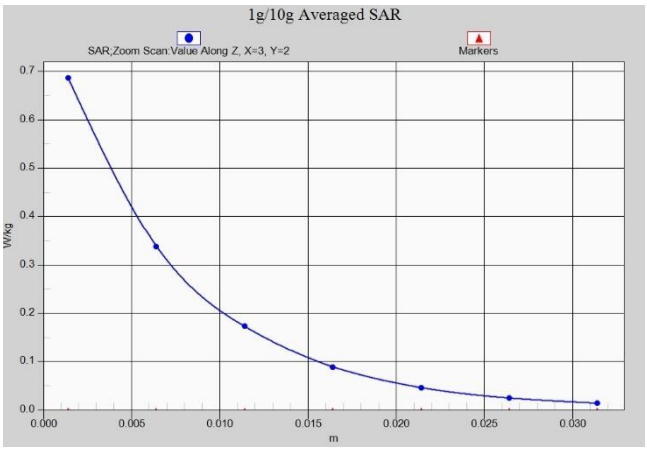
Z-Scan at power reference point (LTEB41(PC3))



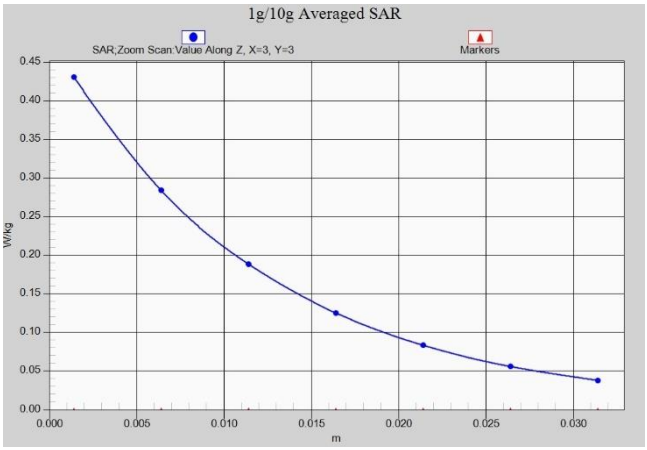
Z-Scan at power reference point (LTEB41(PC3))



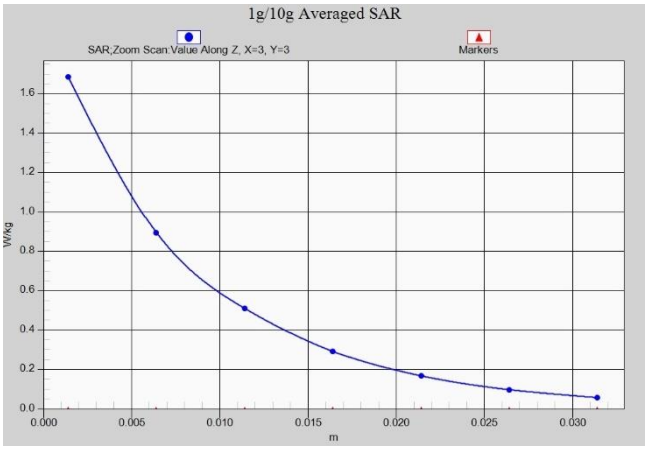
Z-Scan at power reference point (LTEB41(PC2))



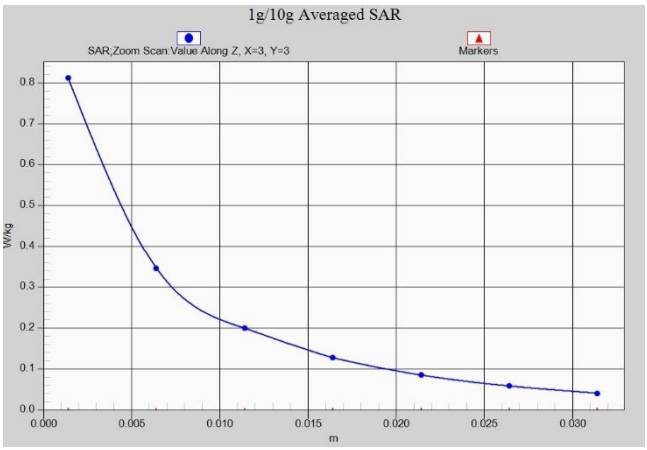
Z-Scan at power reference point (LTEB41(PC2))



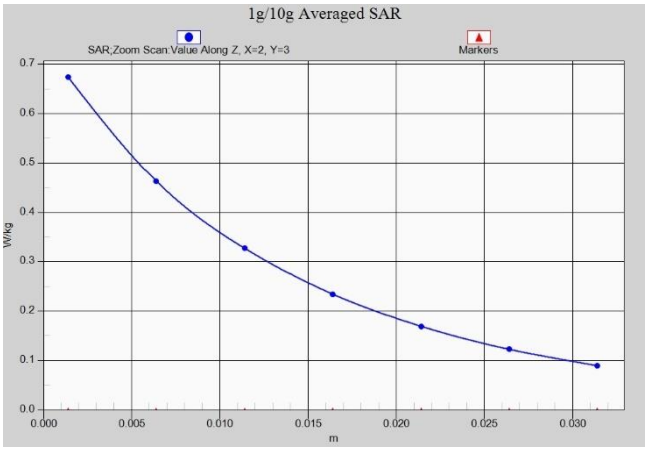
Z-Scan at power reference point (LTEB66)



Z-Scan at power reference point (LTEB66)



Z-Scan at power reference point (LTEB71)



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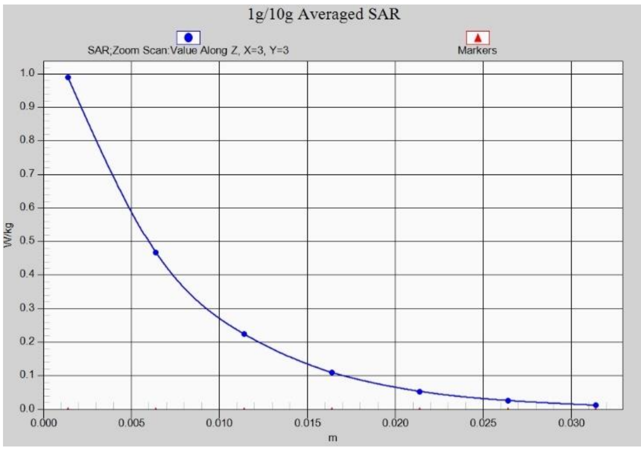
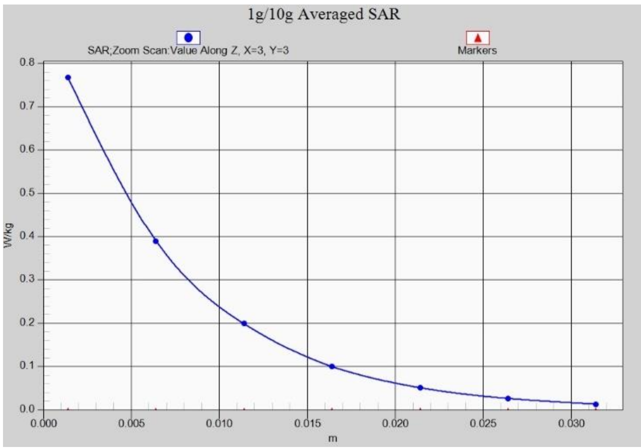
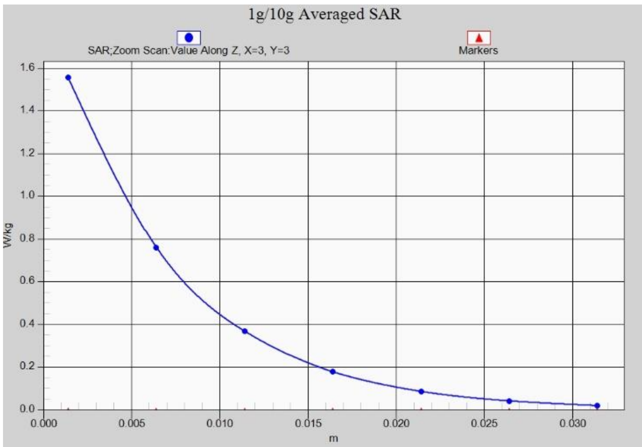


Z-Scan at power reference point (WLAN2.4G)



Z-Scan at power reference point (WLAN2.4G)



Z-Scan at power reference point (WLAN2.4G)