SAR TEST REPORT

No. I16Z60265-SEM01

For

TCL Communication Ltd.

SIMBA6 CRICKET

Modelname: 6060C

With

Hardware Version: 10

Software Version: 2A5TUCT0

FCC ID: 2ACCJA021

Issued Date: 2017-4-28

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检测
TESTING
CNAS L0570

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I16Z60265-SEM01	Rev.0	2017-4-28	Initial creation of test report

TABLE OF CONTENT

1 Test Laboratory

1.1 Testing Location

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

1.2 Testing Environment

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

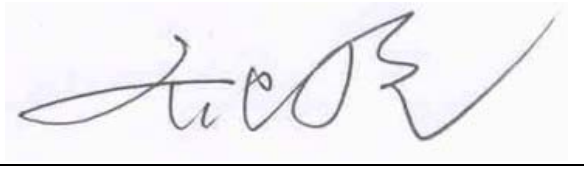
1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	March 25, 2017
Testing End Date:	April 2, 2017

1.4 Signature

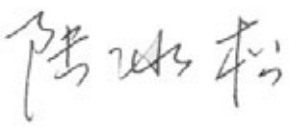
Lin Xiaojun

(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. SIMBA6 CRICKET 6060C 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 antenna up	0.45	PCE
	GSM 850 antenna down	0.23	
	PCS 1900	0.46	
	WCDMA850 antenna up	1.18	
	WCDMA850 antenna down	0.18	
	WCDMA1700	0.81	
	WCDMA1900	1.26	
	LTE Band 2	1.43	
	LTE Band 4	1.43	
	LTE Band 5 antenna up	0.90	
	LTE Band 5 antenna down	0.17	
	LTE Band 7	1.10	
	LTE Band 12 antenna up	0.63	
	LTE Band 12 antenna down	0.12	
	LTE Band 30 antenna up	1.39	
	LTE Band 30 antenna down	0.08	
	WLAN 2.4 GHz(Normal)	1.07	DTS
	WLAN 2.4 GHz(Low)	0.09	
	WLAN 5 GHz(Normal)	1.17	UNII
	WLAN 5 GHz(Low)	0.11	
Hotspot (Separation Distance 10mm)	GSM 850 antenna up	0.33	PCE
	GSM 850 antenna down	0.42	
	PCS 1900	0.50	
	WCDMA850 antenna up	0.23	
	WCDMA850 antenna down	0.32	
	WCDMA1700	0.63	
	WCDMA1900	0.83	
	LTE Band 2	0.62	
	LTE Band 4	0.55	
	LTE Band 5 antenna up	0.30	
	LTE Band 5 antenna	0.24	

	down		
	LTE Band 7	1.05	
	LTE Band 12 antenna up	0.21	
	LTE Band 12 antenna down	0.25	
	LTE Band 30 antenna up	0.59	
	LTE Band 30 antenna down	0.13	
	WLAN 2.4 GHz	0.17	DTS
	WLAN 5 GHz	0.16	UNII

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 worn 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 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**: 1.43W/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	Left hand, Tilt	1.17	0.11	**1.28**
	Right hand, Touch cheek	1.43	0.09	**1.52**
Highest reported SAR value for Body	Front	0.79	0.16	**0.95**
	Rear	1.05	0.15	**1.20**
	Right	0.28	0.17	**0.45**

Note1: we have evaluated and chose the highest value of both main antenna in the above table

Note2: we have evaluated and chose the highest value of WiFi 2.4G and 5G in the above table

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	Right hand, Touch cheek	1.43	<0.01	**1.44**
Maximum reported SAR value for Body	Rear	1.05	0.29[1]	**1.34**

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

According to the above tables, the highest sum of reported SAR values is **1.52 W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 13.

3 Client Information

3.1 Applicant Information

Company Name:	TCL Communication Ltd.
Address/Post:	5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Country:	China
Contact Person:	Gong Zhizhou
E-mail:	zhizhou.gong@tcl.com
Telephone:	0086-21-31363544
Fax:	0086-21-61460602

3.2 Manufacturer Information

Company Name:	TCL Communication Ltd.
Address/Post:	5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Country:	China
Contact Person:	Gong Zhizhou
E-mail:	zhizhou.gong@tcl.com
Telephone:	0086-21-31363544
Fax:	0086-21-61460602

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

4.1 About EUT

Description:	SIMBA6 CRICKET
Model name:	6060C
Operating mode(s):	GSM 850/900/1800/1900, UMTS FDD 1/2/4/5, BT, Wi-Fi LTE Band 1/2/4/5/7/12/30
Tested Tx Frequency:	825 – 848.8 MHz (GSM 850)
	1850.2 – 1910 MHz (GSM 1900)
	826.4–846.6 MHz (WCDMA 850 Band V)
	1712.4 – 1752.6 MHz (WCDMA 1700 Band IV)
	1852.4–1907.6 MHz (WCDMA1900 Band II)
	1860 – 1900 MHz (LTE Band 2)
	1720 – 1745 MHz (LTE Band 4)
	824.7 – 848.3 MHz (LTE Band 5)
	2502.5 – 2567.5 MHz (LTE Band 7)
	699.7 – 715.3 MHz (LTE Band 12)
	2307.5 – 2310 MHz (LTE Band 30)
	2412 – 2462 MHz (Wi-Fi 2.4G)
	5150-5825 MHz (Wi-Fi 5G)
GPRS/EGPRS Multislot Class:	12
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Hotspot mode:	Support
Product Dimension:	L: 148mm W: 72mm overall diagonal: 165mm

4.2Internal Identification of EUT used during the test

EUT ID*	IMEI	HW	SW Version
EUT1	014889000002964	10	2A5TUCT0
EUT2	014889000002733	10	2A5TUCT0
EUT3	014889000002998	10	2A5TUCT0
EUT4	014889000004655	10	2A5TUCT0
EUT5	014889000002618	10	2A5TUCT0
EUT6	014889000002733	10	2A5TUCT0
EUT7	014889000002774	10	2A5TUCT0
EUT8	014889000002642	10	2A5TUCT0

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

Note: It is performed to test SAR with the EUT1&2&3&4 and conducted power with the EUT5&6&7&8.

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	TLp027B1	CAC2780001C1	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

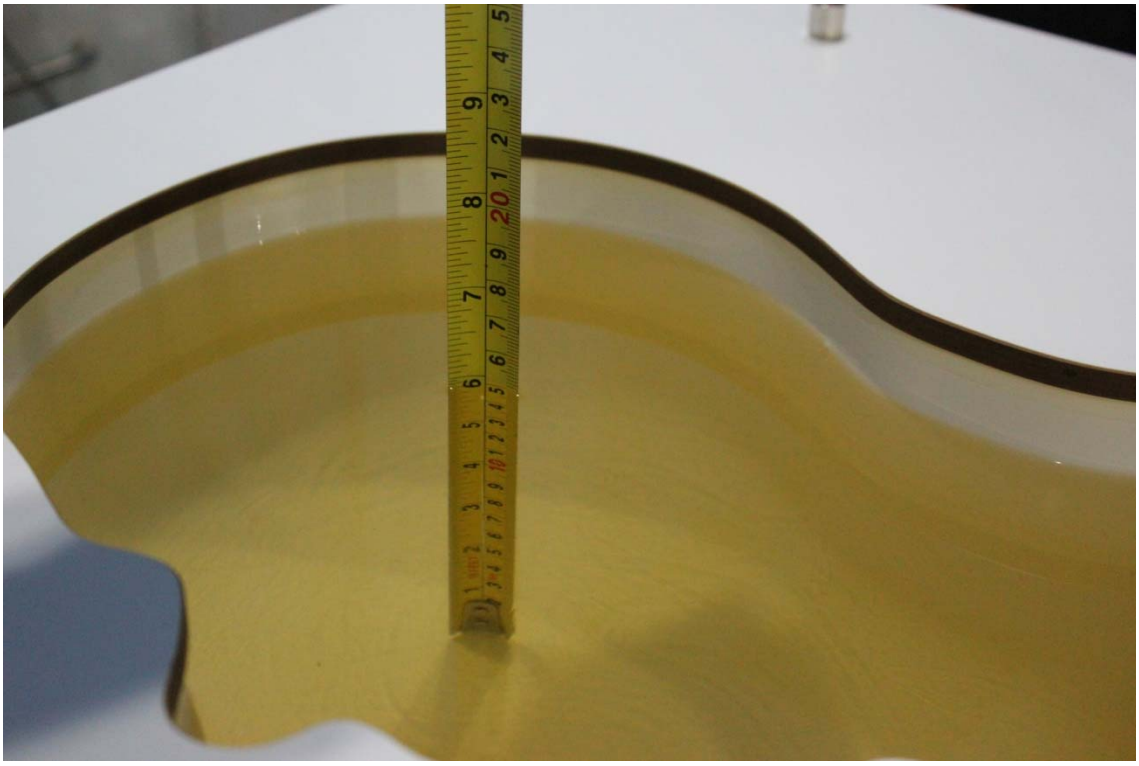
Frequency(MHz)	Liquid Type	Conductivity(σ)	± 5% Range	Permittivity(ε)	± 5% Range
750	Head	0.89	0.85～0.93	41.94	39.8～44.0
750	Body	0.96	0.91～1.01	55.5	52.7～58.3
835	Head	0.90	0.86～0.95	41.5	39.4～43.6
835	Body	0.97	0.92～1.02	55.2	52.4～58.0
1750	Head	1.37	1.30～1.44	40.08	38.1～42.1
1750	Body	1.49	1.42～1.56	53.4	50.7～56.1
1900	Head	1.40	1.33～1.47	40.0	38.0～42.0
1900	Body	1.52	1.44～1.60	53.3	50.6～56.0
2300	Head	1.67	1.59～1.75	39.47	37.5～41.4
2300	Body	1.85	1.76～1.94	52.8	50.2～55.4
2450	Head	1.80	1.71～1.89	39.2	37.2～41.2
2450	Body	1.95	1.85～2.05	52.7	50.1～55.3
2600	Head	1.96	1.86～2.06	39.01	37.1～41.0
2600	Body	2.16	2.05～2.27	52.5	49.9～55.1
5250	Head	4.71	4.47～4.95	35.93	34.1～37.7
5250	Body	5.36	5.09～5.63	48.9	46.5～51.3
5600	Head	5.07	4.82～5.32	35.53	33.8～37.3
5600	Body	5.77	5.48～6.06	48.5	46.1～50.9
5750	Head	5.22	4.96～5.48	35.36	33.6～37.1
5750	Body	5.94	5.64～6.24	48.3	45.9～50.7

7.2 Dielectric Performance

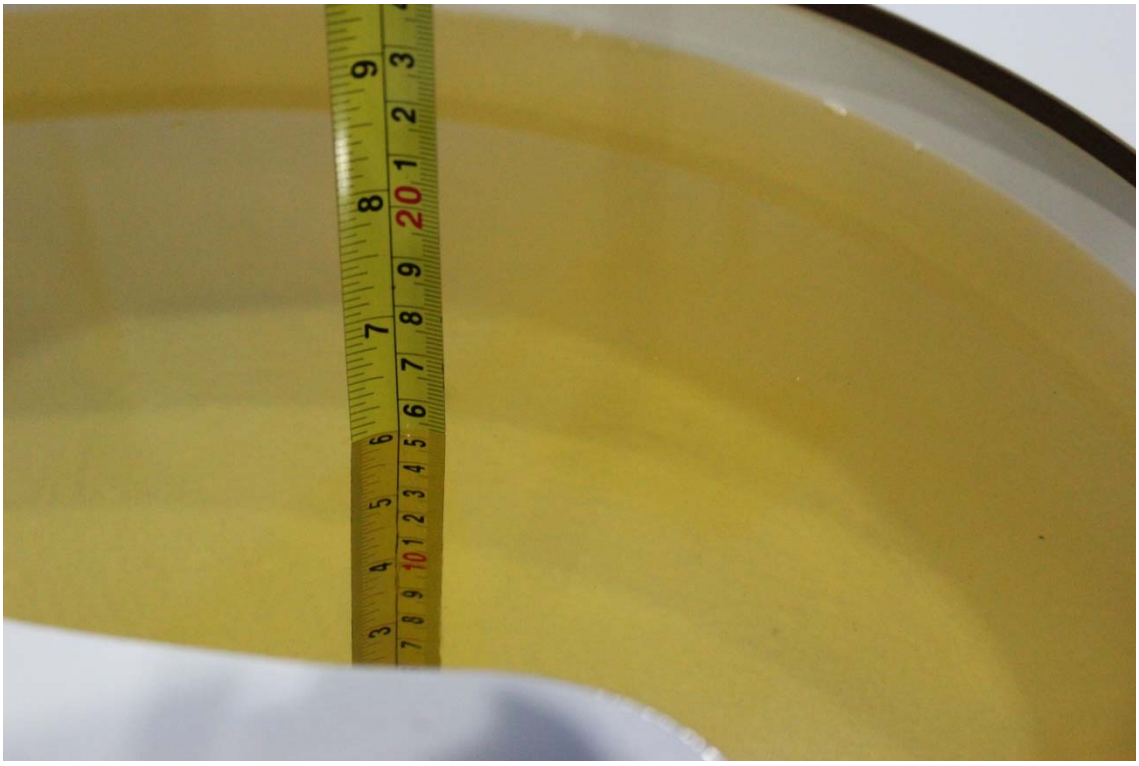
Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ε	Drift (%)	Conductivity σ (S/m)	Drift (%)
2017/3/25	Head	750 MHz	42.07	0.31	0.897	0.79
	Body	750 MHz	55.03	-0.85	0.961	0.10
2017/3/26	Head	835 MHz	41.45	-0.12	0.884	-1.78
	Body	835 MHz	54.75	-0.82	0.974	0.41
2017/3/27	Head	1750 MHz	39.44	-1.60	1.374	0.29
	Body	1750 MHz	54.04	1.20	1.466	-1.61
2017/3/28	Head	1900 MHz	39.33	-1.68	1.382	-1.29
	Body	1900 MHz	53.21	-0.17	1.525	0.33
2017/3/29	Head	2300 MHz	39.01	-1.17	1.628	-2.51
	Body	2300 MHz	52.37	-0.81	1.803	-2.54
2017/3/30	Head	2450 MHz	39.22	0.05	1.813	0.72
	Body	2450 MHz	52.62	-0.15	1.95	0.00
2017/3/31	Head	2600 MHz	38.4	-1.56	1.96	0.00
	Body	2600 MHz	53.1	1.14	2.151	-0.42
2017/4/2	Head	835 MHz	41.1	-0.96	0.892	-0.89
	Body	835 MHz	54.29	-1.65	0.977	0.72
2017-4-1	Head	5250 MHz	36.28	0.97	4.726	0.34
	Body	5250 MHz	47.44	-2.99	5.259	-1.88
	Head	5600 MHz	35.73	0.56	5.199	2.54
	Body	5600 MHz	46.98	-3.13	5.708	-1.07
	Head	5825 MHz	35.38	0.06	5.414	3.72
	Body	5825 MHz	46.78	-3.15	5.992	0.88

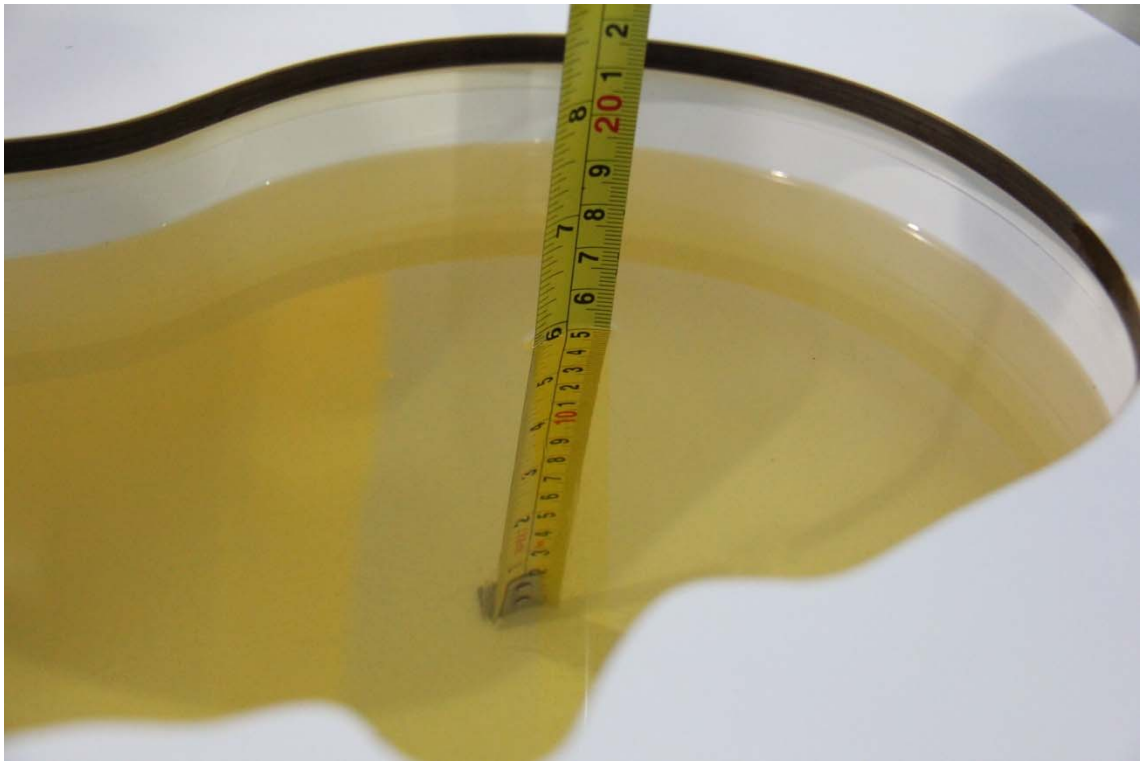
Note: The liquid temperature is 22.0°C



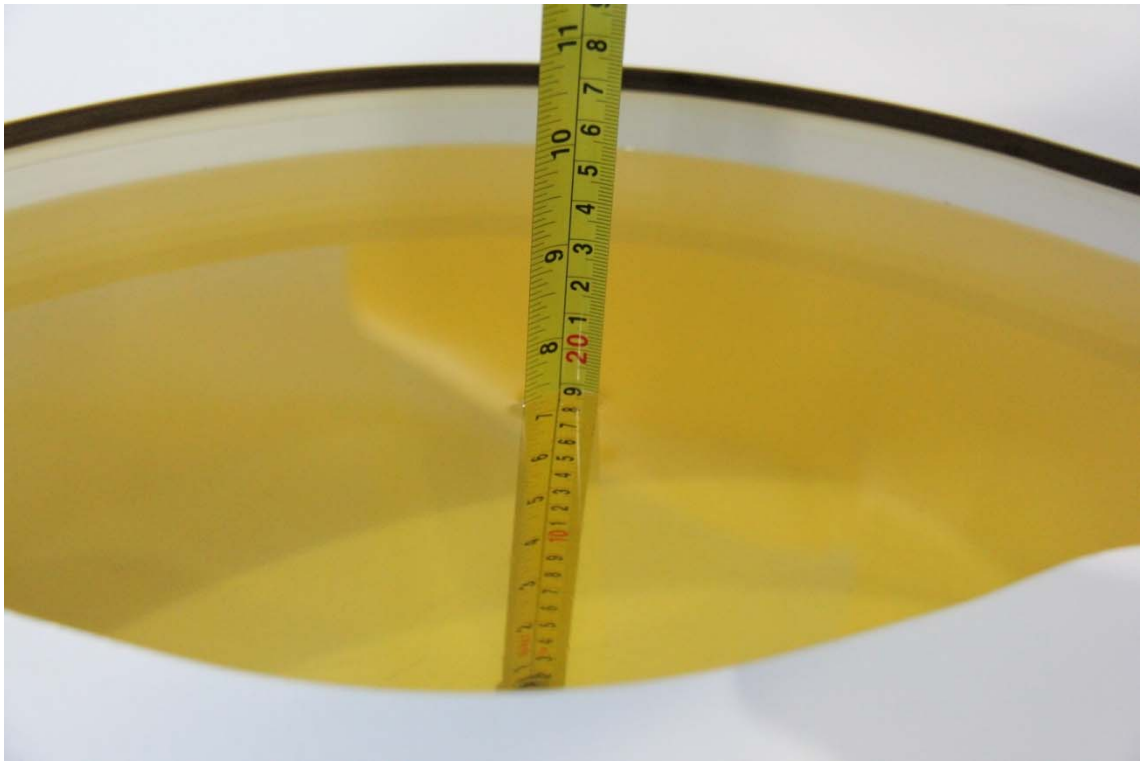
Picture 7-1 Liquid depth in the Head Phantom (750MHz)



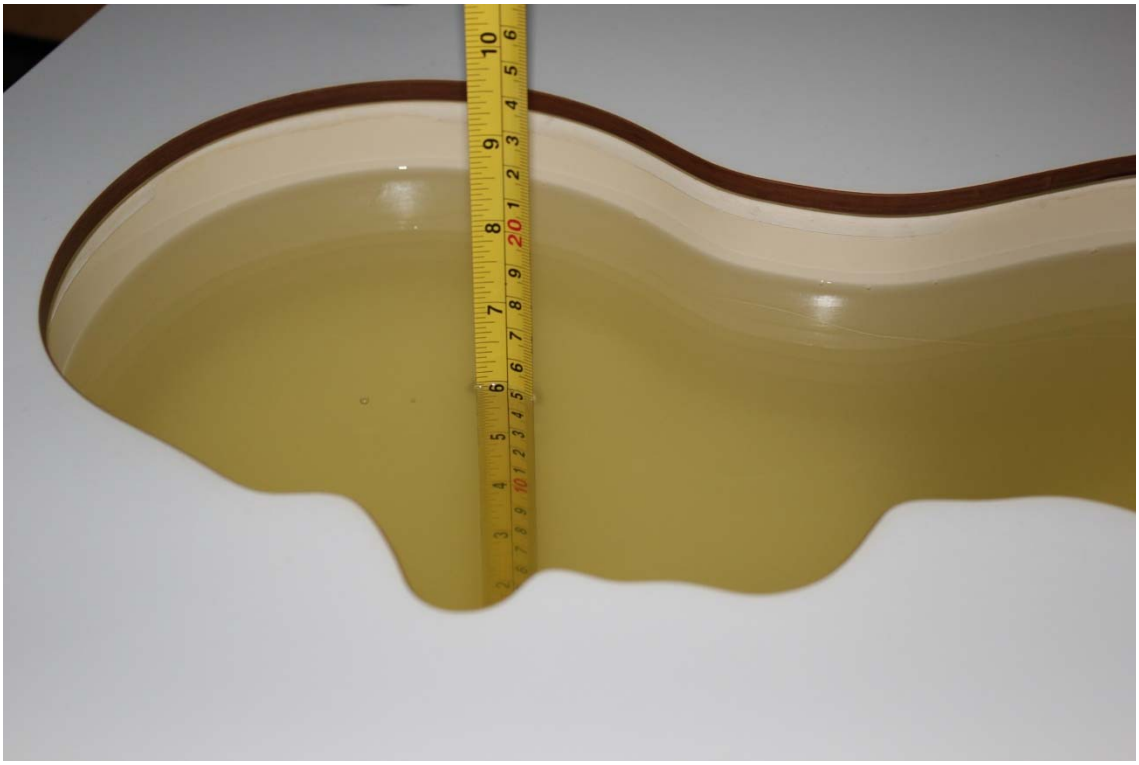
Picture 7-2 Liquid depth in the Flat Phantom (750MHz)



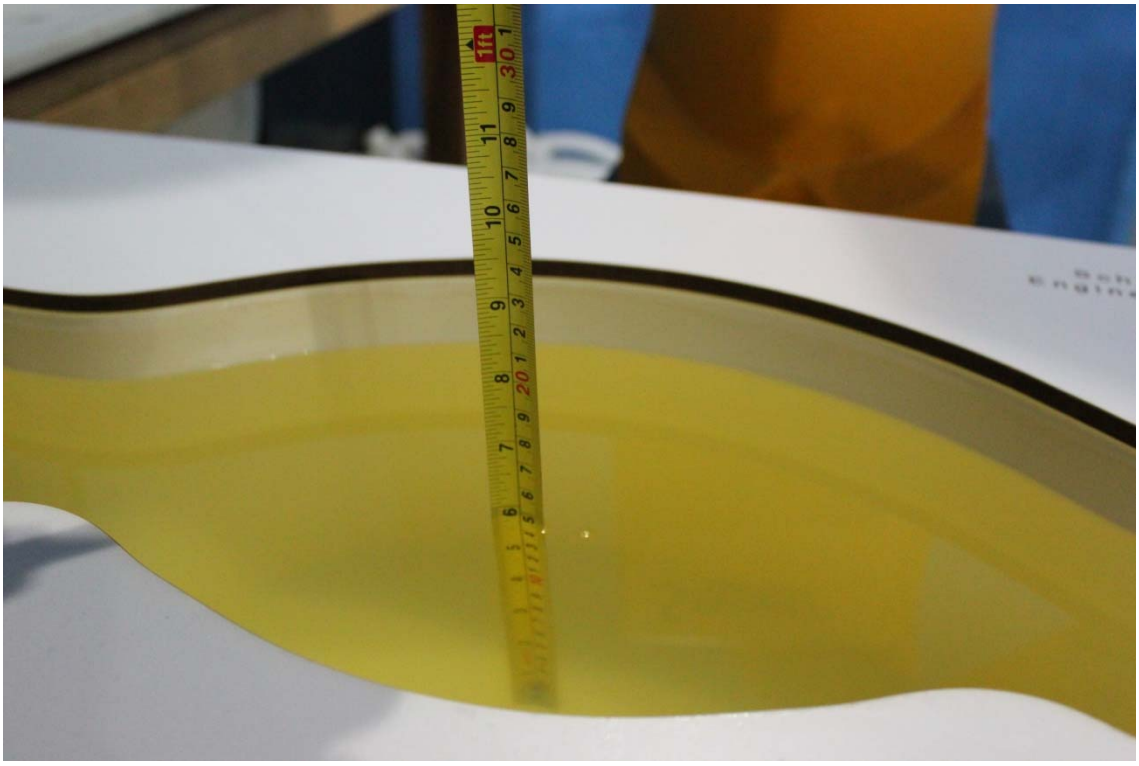
Picture 7-3 Liquid depth in the Head Phantom (835 MHz)



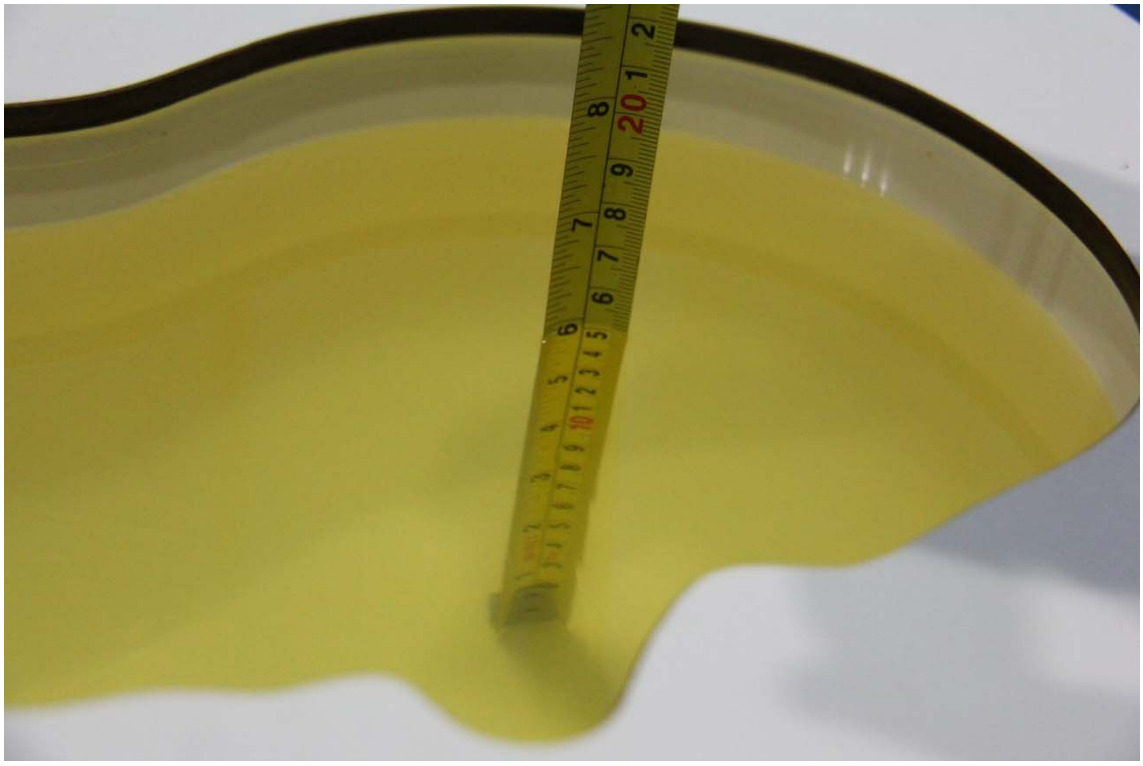
Picture 7-4 Liquid depth in the Flat Phantom (835 MHz)



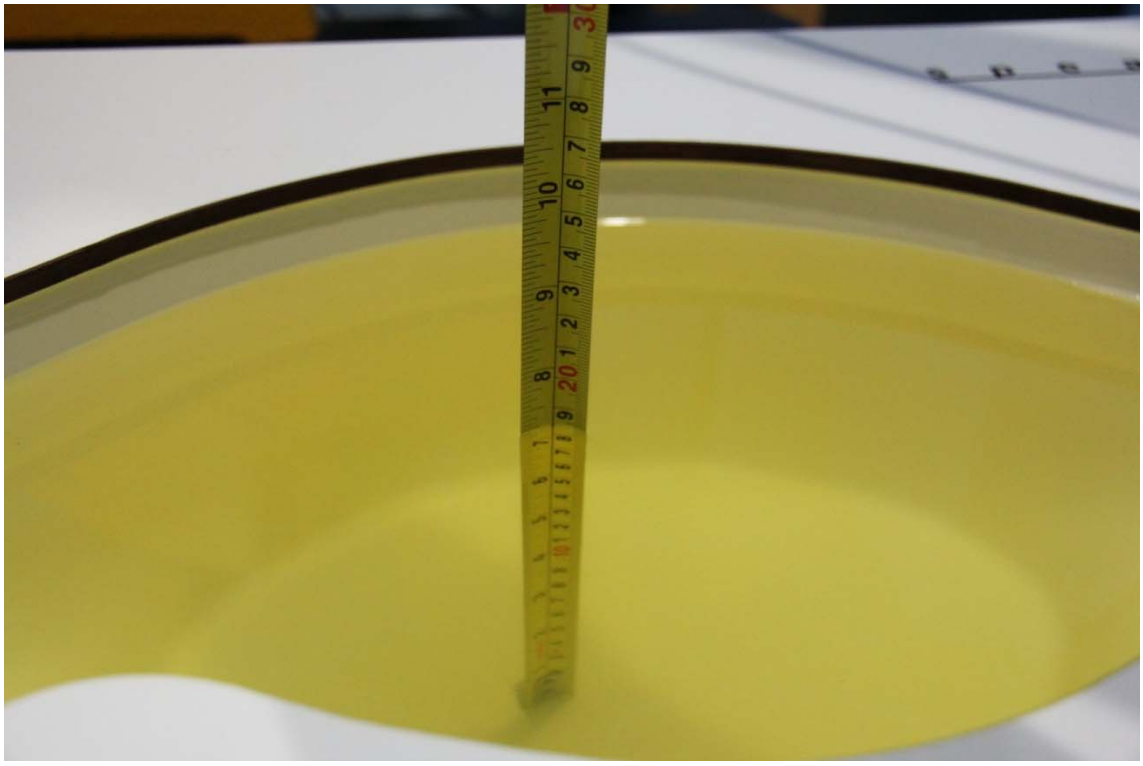
Picture 7-5 Liquid depth in the Head Phantom (1750 MHz)



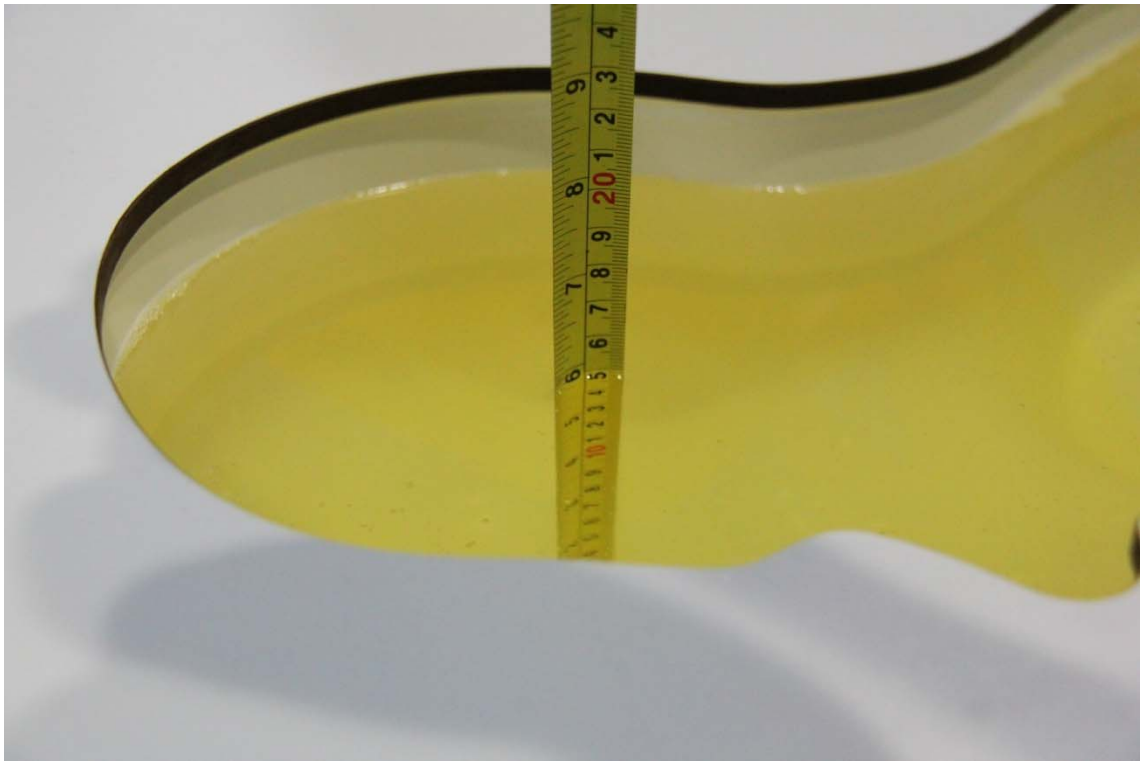
Picture 7-6 Liquid depth in the Flat Phantom (1750MHz)



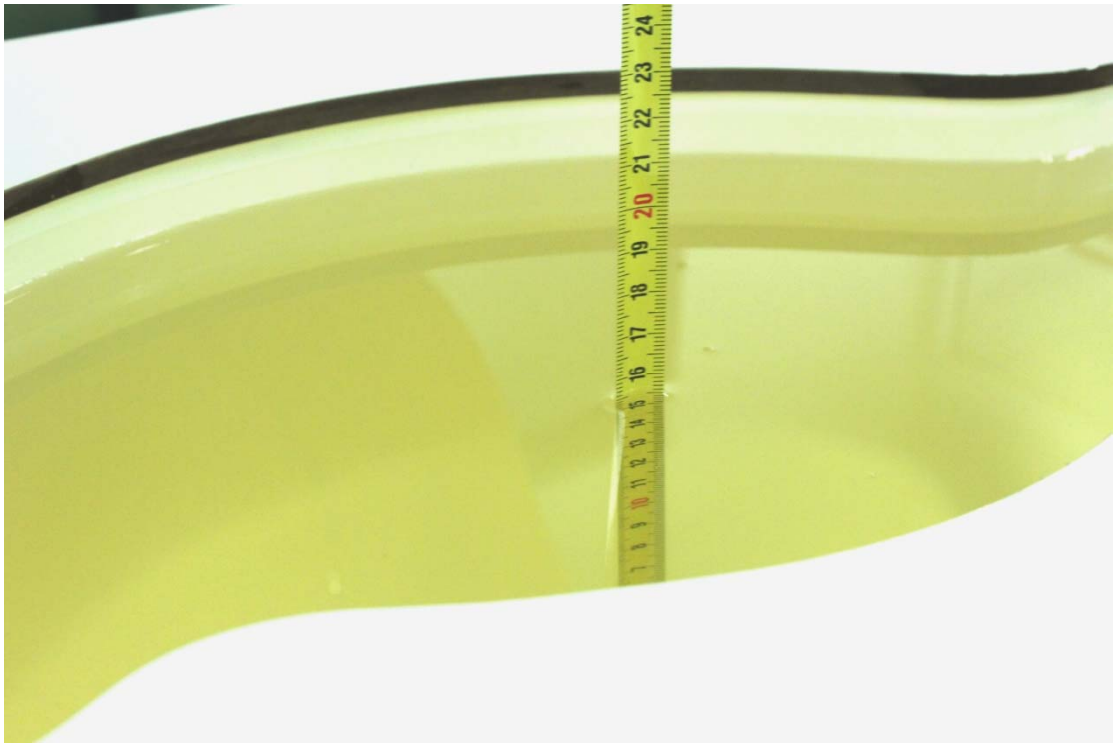
Picture 7-7 Liquid depth in the Head Phantom (1900 MHz)



Picture 7-8 Liquid depth in the Flat Phantom (1900MHz)



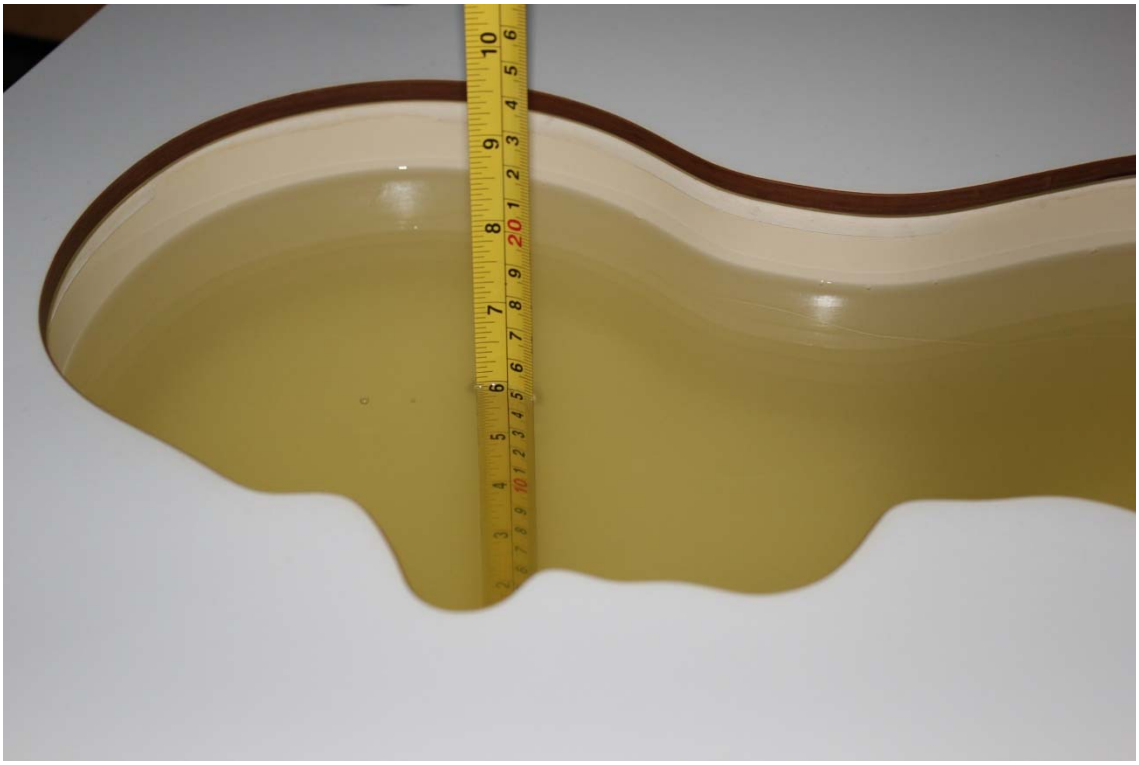
Picture 7-9 Liquid depth in the Head Phantom (2450MHz)



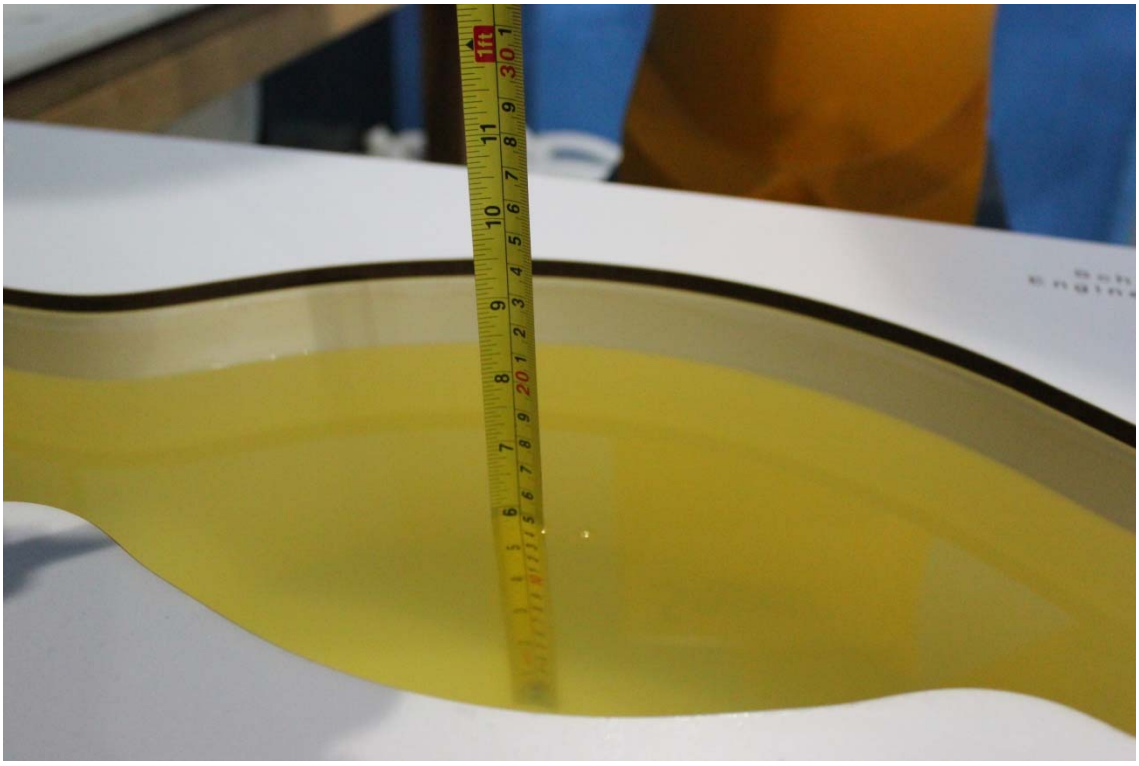
Picture 7-10 Liquid depth in the Flat Phantom (2450MHz)

Picture 7-11 Liquid depth in the Head Phantom (2600 MHz Head)

Picture 7-12 Liquid depth in the Flat Phantom (2600MHz)

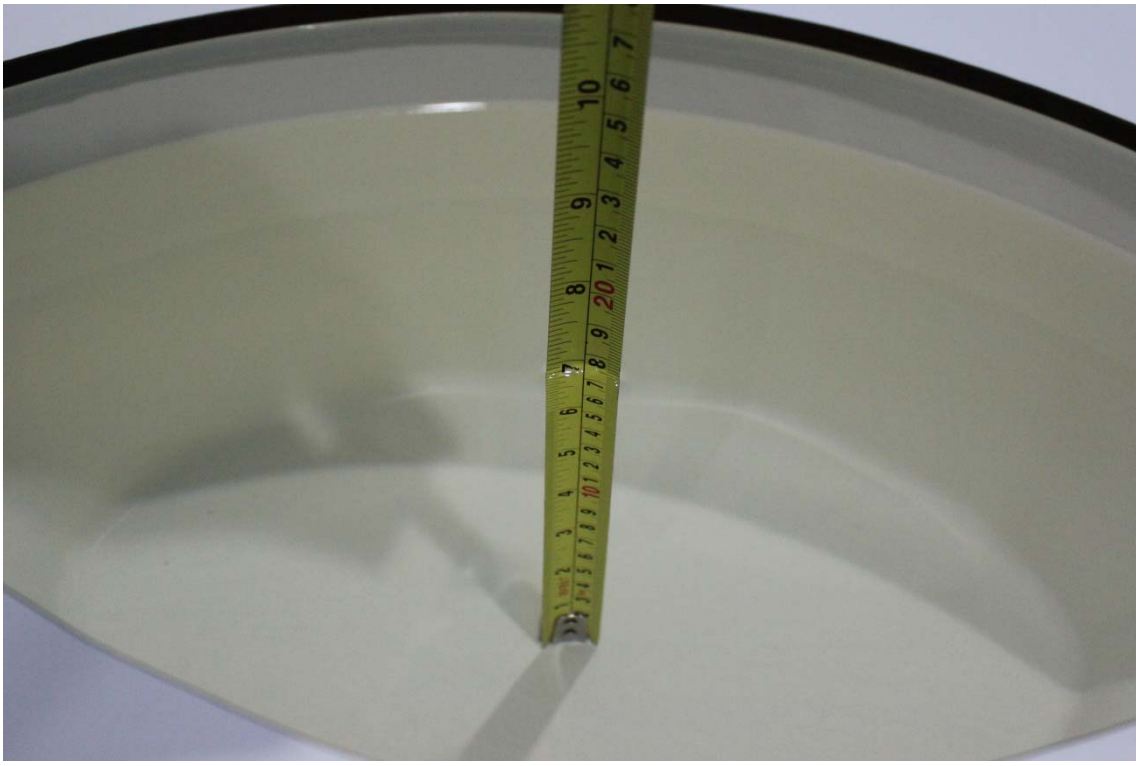


Picture 7-13 Liquid depth in the Head Phantom (2300 MHz)



Picture 7-14 Liquid depth in the Flat Phantom (2300MHz)

Picture 7-15 Liquid depth in the Head Phantom (5GHz)

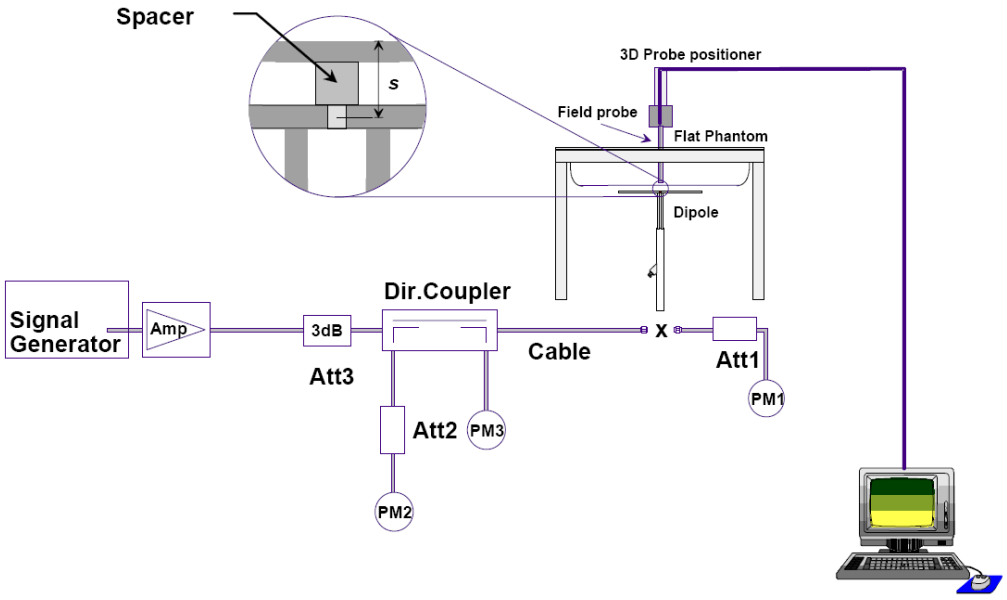


Picture 7-16 Liquid depth in the Flat Phantom (5GHz)

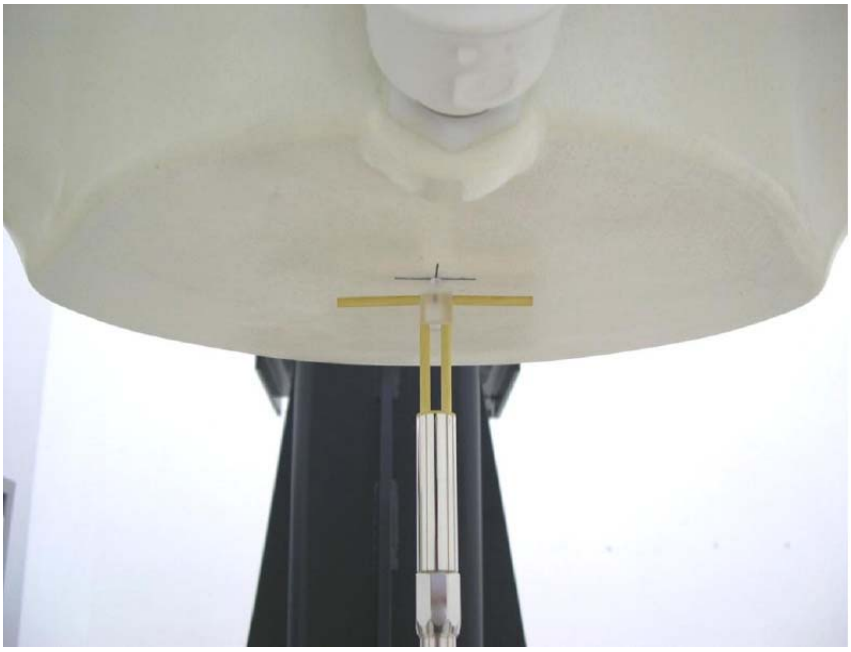
8 System verification

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
2017/3/25	750 MHz	5.46	8.33	5.56	8.28	1.83%	-0.60%
2017/3/26	835 MHz	6.18	9.44	6.12	9.52	-0.97%	0.85%
2017/3/27	1750 MHz	19.5	36.8	19.44	36.32	-0.31%	-1.30%
2017/3/28	1900 MHz	21.2	40.7	21.56	40.8	1.70%	0.25%
2017/3/29	2300 MHz	23.8	49.8	23.6	48.8	-0.67%	-2.01%
2017/3/30	2450 MHz	24.6	52.8	24.36	52.08	-0.98%	-1.36%
2017/3/31	2600 MHz	25.2	56.7	25.36	55.56	0.63%	-2.01%
2017/4/1	835 MHz	6.18	9.44	6.2	9.32	0.32%	-1.27%
2017-4-2	5250 MHz	22.5	78.6	22.0	77.7	-2.22%	-1.15%
	5600 MHz	23.4	81.8	23.1	82.0	-1.28%	0.24%
	5750 MHz	22.7	79.8	22.7	81.2	0.00%	1.75%

Table 8.2: System Verification of Body

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
2017/3/25	750 MHz	5.76	8.78	5.68	8.68	-1.39%	-1.14%
2017/3/26	835 MHz	6.36	9.69	6.44	9.84	1.26%	1.55%
2017/3/27	1750 MHz	19.60	37.00	19.44	37	-0.82%	0.00%
2017/3/28	1900 MHz	21.30	40.10	21.48	41	0.85%	2.24%
2017/3/29	2300 MHz	23.3	48.1	23.44	48.80	0.60%	1.46%
2017/3/30	2450 MHz	24.10	51.20	24.72	52.76	2.57%	3.05%
2017/3/31	2600 MHz	24.80	55.30	25.24	56.8	1.77%	2.71%
2017/4/1	835 MHz	6.36	9.69	6.2	9.64	-2.52%	-0.52%
2017-4-2	5250 MHz	21.2	75.6	21.30	75.40	0.47%	-0.26%
	5600 MHz	22.1	79.1	22.50	79.30	1.81%	0.25%
	5750 MHz	20.8	74.5	20.90	74.20	0.48%	-0.40%

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.

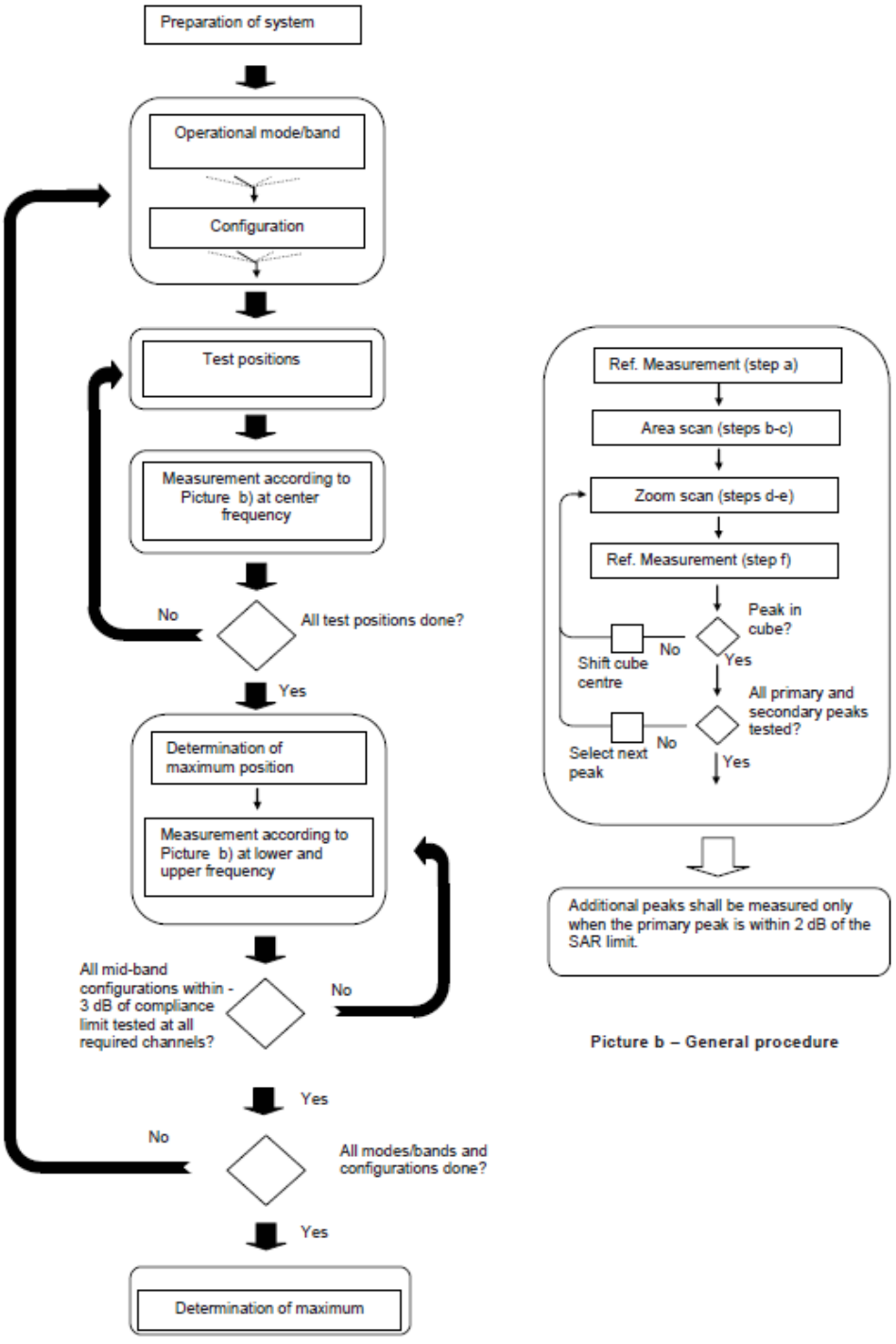
Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:

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 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 <u>reported</u> SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

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.

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

There are two sets of tune-up power, Normal power and Low power, used for different cases. Normal power status is applied for Body test of all bands. Low power status is applied for Head test of Up Antenna and Normal power is for body of Up Antenna. For Down Antenna, Normal power status is applied for both head and body test.

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.

Normal Power

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

GSM 850	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
Speech (GMSK)	251	190	128			251	190	128
Speech	32.72	32.72	32.66	**33.50**	/	/	/	/
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	251	190	128			251	190	128
1 Txslot	32.65	32.67	32.63	33.50	-9.03	23.62	23.64	23.60
2 Txslots	**31.20**	**31.20**	**31.17**	**31.50**	**-6.02**	**25.18**	**25.18**	**25.15**
3Txslots	29.24	29.26	29.21	29.50	-4.26	24.98	25.00	24.95
4 Txslots	27.81	27.83	27.81	28.00	-3.01	24.80	24.82	24.80
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	251	190	128			251	190	128
1 Txslot	32.72	32.74	32.69	33.50	-9.03	23.69	23.71	23.66
2 Txslots	**31.24**	**31.24**	**31.19**	**31.50**	**-6.02**	**25.22**	**25.22**	**25.17**
3Txslots	29.22	29.24	29.21	29.50	-4.26	24.96	24.98	24.95
4 Txslots	27.78	27.80	27.78	28.00	-3.01	24.77	24.79	24.77
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	251	190	128			251	190	128
1 Txslot	26.93	26.92	26.78	27.50	-9.03	17.90	17.89	17.75
2 Txslots	24.94	24.98	24.86	25.50	-6.02	18.92	18.96	18.84
3Txslots	22.95	22.91	22.84	23.50	-4.26	18.69	18.65	18.58
4 Txslots	21.41	21.36	21.21	22.00	-3.01	18.40	18.35	18.20
PCS1900	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
Speech (GMSK)	810	661	512			810	661	512
Speech	29.80	29.83	29.71	**30.50**	/	/	/	/
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	810	661	512			810	661	512
1 Txslot	29.81	29.83	29.69	30.50	-9.03	20.78	20.80	20.66
2 Txslots	**28.62**	**28.22**	**28.06**	**29.00**	**-6.02**	**22.60**	**22.20**	**22.04**
3Txslots	26.78	26.24	25.73	27.50	-4.26	22.52	21.98	21.47

4 Txslots	25.60	24.79	24.20	26.00	-3.01	22.59	21.78	21.19
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	810	661	512			810	661	512
1 Txslot	29.84	29.76	29.69	30.50	-9.03	20.81	20.73	20.66
2 Txslots	**28.65**	**28.24**	**27.87**	**29.00**	**-6.02**	**22.63**	**22.22**	**21.85**
3Txslots	26.78	26.24	25.73	27.50	-4.26	22.52	21.98	21.47
4 Txslots	25.59	24.77	24.19	26.00	-3.01	22.58	21.76	21.18
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	810	661	512			810	661	512
1 Txslot	25.84	25.78	25.76	26.00	-9.03	16.81	16.75	16.73
2 Txslots	24.02	23.86	23.87	24.50	-6.02	18.00	17.84	17.85
3Txslots	22.02	21.81	21.87	22.50	-4.26	17.76	17.55	17.61
4 Txslots	20.33	20.15	20.16	20.50	-3.01	17.32	17.14	17.15

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 GSM850 and PCS1900.

Low Power

Table 11.1-2: The conducted power measurement results for GSM, GPRS and EGPRS

GSM 850	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
Speech (GMSK)	251	190	128			251	190	128
Speech	30.21	30.20	30.07	**30.50**	/	/	/	/
PCS1900	Measured Power (dBm)			Tune up	calculation	Averaged Power (dBm)		
Speech (GMSK)	810	661	512			810	661	512
Speech	24.99	24.50	24.16	**25.00**	/	/	/	/

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

11.2 WCDMA Measurement result

Normal Power

Table 11.2-1: The conducted Power for WCDMA

Item	band	FDDV result			
	ARFCN	4132 (826.4MHz)	4182 (836.4MHz)	4233 (846.6MHz)	Tune up
WCDMA	\	24.63	24.66	24.80	25.00
HSUPA	1	20.35	20.43	20.95	21.00
	2	20.4	20.43	20.45	21.00
	3	21.39	21.45	21.48	22.00
	4	19.97	20.07	20.00	20.50
	5	21.37	21.46	21.45	21.50
DC-HSDPA	1	22.15	22.23	22.25	23.00
	2	22.17	22.66	22.24	23.50
	3	22.18	22.73	22.26	23.50
	4	22.18	22.22	22.24	23.50
Item	band	FDDIV result			
	ARFCN	1312 (1712.4MHz)	1412 (1732.4MHz)	1513 (1752.6MHz)	
WCDMA	\	24.40	24.39	24.45	25.00
HSUPA	1	20.29	20.36	20.91	21.00
	2	20.28	20.3	20.41	22.00
	3	21.31	21.28	21.47	22.00
	4	19.83	19.9	19.97	20.00
	5	21.29	21.37	21.39	23.00
DC-HSDPA	1	22.01	22.07	22.09	23.00
	2	22.08	22.09	22.17	23.50
	3	22.12	22.11	22.17	23.50
	4	22.07	22.09	22.15	23.50
Item	band	FDDII result			
	ARFCN	9262 (1852.4MHz)	9400 (1880MHz)	9538 (1907.6MHz)	
WCDMA	\	24.24	24.21	24.11	25.00
HSUPA	1	20.24	20.21	20.55	21.00
	2	20.24	20.24	20.10	22.00
	3	21.16	21.2	21.10	21.50
	4	19.75	19.73	19.61	20.00
	5	21.12	21.22	21.05	21.50
DC-HSDPA	1	22.06	22.19	22.07	23.00
	2	22.08	22.12	22.06	23.50
	3	22.08	22.14	22.08	23.50
	4	22.11	22.14	22.09	23.50

Low Power

Table 11.2-2: The conducted Power for WCDMA

Item	band	FDDV result			
	ARFCN	4132 (826.4MHz)	4182 (836.4MHz)	4233 (846.6MHz)	Tune up
WCDMA	\	23.87	23.97	24.01	24.50
HSUPA	1	20.35	20.38	20.87	21.50
	2	20.36	20.37	20.4	21.00
	3	21.3	21.42	21.14	22.00
	4	19.9	19.93	19.58	20.50
	5	21.28	21.36	21.35	21.50
DC-HSDPA	1	21.73	21.76	21.72	22.50
	2	21.25	21.23	21.33	22.00
	3	21.23	21.23	21.31	22.00
	4	21.21	21.24	21.3	22.00
Item	band	FDDIV result			
	ARFCN	1312 (1712.4MHz)	1412 (1732.4MHz)	1513 (1752.6MHz)	
WCDMA	\	19.83	19.78	19.83	21.00
HSUPA	1	17.82	17.88	18.55	19.00
	2	17.89	17.92	18.01	19.00
	3	18.85	18.9	19.06	20.00
	4	17.44	17.44	17.61	18.50
	5	18.93	18.92	19.02	20.00
DC-HSDPA	1	19.63	19.67	19.61	20.50
	2	19.02	19.11	19.03	20.00
	3	19.01	19.09	19.03	20.00
	4	19.01	19.1	19.04	20.00
Item	band	FDDII result			
	ARFCN	9262 (1852.4MHz)	9400 (1880MHz)	9538 (1907.6MHz)	
WCDMA	\	20.73	20.80	20.80	22.00
HSUPA	1	18.84	18.85	19.29	19.80
	2	18.99	18.91	18.86	19.80
	3	19.84	19.92	19.84	20.80
	4	18.46	18.39	18.39	19.50
	5	19.83	19.82	19.79	20.80
DC-HSDPA	1	20.83	20.97	20.73	21.00
	2	20.84	21.02	20.71	22.00
	3	20.81	21.04	20.71	22.00
	4	20.82	21.03	20.72	22.00

11.3 LTE Measurement result

Normal power

Table 11.3-1: The conducted Power for LTE

Band 2							
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
1.4 MHz	1RB High (5)	1909.3	24.3	23.90	0	22.89	1
		1880	24.3	23.89	0	22.88	1
		1850.7	24.3	23.88	0	22.91	1
	1RB Middle (3)	1909.3	24.3	23.82	0	22.81	1
		1880	24.3	23.82	0	22.82	1
		1850.7	24.3	23.81	0	22.86	1
	1RB Low (0)	1909.3	24.3	23.85	0	22.85	1
		1880	24.3	23.86	0	22.85	1
		1850.7	24.3	23.84	0	22.89	1
	3RB High (3)	1909.3	24.3	24.02	0	22.93	1
		1880	24.3	23.99	0	22.91	1
		1850.7	24.3	24.04	0	22.99	1
	3RB Middle (1)	1909.3	24.3	23.89	0	22.93	1
		1880	24.3	23.87	0	22.92	1
		1850.7	24.3	23.91	0	22.99	1
	3RB Low (0)	1909.3	24.3	23.93	0	23.00	1
		1880	24.3	23.92	0	22.99	1
		1850.7	24.3	23.97	0	23.06	1
	6RB (0)	1909.3	24.3	22.82	1	21.85	2
		1880	24.3	22.86	1	21.87	2
		1850.7	24.3	22.84	1	21.89	2
3 MHz	1RB High (14)	1908.5	24.3	23.90	0	22.86	1
		1880	24.3	23.87	0	23.03	1
		1851.5	24.3	23.88	0	22.88	1
	1RB Middle (7)	1908.5	24.3	23.82	0	22.79	1
		1880	24.3	23.81	0	22.95	1
		1851.5	24.3	23.81	0	22.82	1
	1RB Low (0)	1908.5	24.3	23.92	0	22.88	1
		1880	24.3	23.88	0	23.03	1
		1851.5	24.3	23.92	0	22.92	1
	8RB High (7)	1908.5	24.3	22.97	1	22.04	2
		1880	24.3	22.98	1	22.03	2
		1851.5	24.3	22.99	1	22.06	2
	8RB Middle (4)	1908.5	24.3	22.98	1	22.02	2
		1880	24.3	22.98	1	22.01	2
		1851.5	24.3	22.96	1	22.03	2
	8RB Low (0)	1908.5	24.3	22.93	1	22.00	2
		1880	24.3	22.93	1	21.96	2
		1851.5	24.3	22.93	1	22.01	2

	15RB (0)	1908.5	24.3	22.96	1	22.04	2
		1880	24.3	22.93	1	22.00	2
		1851.5	24.3	22.95	1	22.04	2
5 MHz	1RB High (24)	1907.5	24.3	23.86	0	22.99	1
		1880	24.3	23.81	0	22.97	1
		1852.5	24.3	23.82	0	23.01	1
	1RB Middle (12)	1907.5	24.3	23.85	0	22.93	1
		1880	24.3	23.80	0	22.94	1
		1852.5	24.3	23.82	0	22.98	1
	1RB Low (0)	1907.5	24.3	23.85	0	22.97	1
		1880	24.3	23.85	0	22.95	1
		1852.5	24.3	23.87	0	23.02	1
	12RB High (13)	1907.5	24.3	22.93	1	21.97	2
		1880	24.3	22.93	1	21.95	2
		1852.5	24.3	22.91	1	21.95	2
	12RB Middle (6)	1907.5	24.3	22.93	1	21.96	2
		1880	24.3	22.92	1	21.93	2
		1852.5	24.3	22.92	1	21.96	2
	12RB Low (0)	1907.5	24.3	22.96	1	22.00	2
		1880	24.3	22.90	1	21.92	2
		1852.5	24.3	22.92	1	21.96	2
	25RB (0)	1907.5	24.3	22.90	1	21.94	2
		1880	24.3	22.89	1	21.90	2
		1852.5	24.3	22.90	1	21.94	2
10 MHz	1RB High (49)	1905	24.3	24.03	0	22.98	1
		1880	24.3	23.97	0	23.15	1
		1855	24.3	23.98	0	23.00	1
	1RB Middle (24)	1905	24.3	23.93	0	22.92	1
		1880	24.3	23.91	0	23.07	1
		1855	24.3	23.89	0	22.94	1
	1RB Low (0)	1905	24.3	24.01	0	23.00	1
		1880	24.3	24.00	0	23.11	1
		1855	24.3	24.01	0	23.02	1
	25RB High (25)	1905	24.3	22.85	1	21.88	2
		1880	24.3	22.92	1	21.93	2
		1855	24.3	22.92	1	21.95	2
	25RB Middle (12)	1905	24.3	22.90	1	21.92	2
		1880	24.3	22.89	1	21.89	2
		1855	24.3	22.88	1	21.90	2
	25RB Low (0)	1905	24.3	22.95	1	21.99	2
		1880	24.3	22.93	1	21.93	2
		1855	24.3	22.90	1	21.93	2
	50RB (0)	1905	24.3	22.93	1	22.01	2
		1880	24.3	22.94	1	21.98	2
		1855	24.3	22.95	1	22.00	2
15 MHz	1RB High (74)	1902.5	24.3	24.11	0	23.05	1
		1880	24.3	24.03	0	23.24	1
		1857.5	24.3	24.06	0	23.06	1

	1RB Middle (37)	1902.5	24.3	23.94	0	22.92	1
		1880	24.3	23.93	0	23.06	1
		1857.5	24.3	23.89	0	22.91	1
	1RB Low (0)	1902.5	24.3	24.12	0	23.14	1
		1880	24.3	24.13	0	23.22	1
		1857.5	24.3	24.12	0	23.10	1
	36RB High (38)	1902.5	24.3	22.98	1	22.01	2
		1880	24.3	23.02	1	22.03	2
		1857.5	24.3	22.98	1	22.03	2
	36RB Middle (19)	1902.5	24.3	23.00	1	22.03	2
		1880	24.3	23.02	1	22.01	2
		1857.5	24.3	22.93	1	21.97	2
	36RB Low (0)	1902.5	24.3	23.05	1	22.10	2
		1880	24.3	23.11	1	22.10	2
		1857.5	24.3	22.97	1	22.03	2
	75RB (0)	1902.5	24.3	23.03	1	22.03	2
		1880	24.3	23.08	1	22.04	2
		1857.5	24.3	22.99	1	22.00	2
20 MHz	1RB High (99)	1900	24.3	24.28	0	23.22	1
		1880	24.3	24.24	0	23.30	1
		1860	24.3	24.26	0	23.22	1
	1RB Middle (50)	1900	24.3	23.96	0	22.98	1
		1880	24.3	23.97	0	23.09	1
		1860	24.3	23.93	0	22.98	1
	1RB Low (0)	1900	24.3	24.24	0	23.29	1
		1880	24.3	24.25	0	23.29	1
		1860	24.3	24.24	0	23.26	1
	50RB High (50)	1900	24.3	22.94	1	22.00	2
		1880	24.3	23.03	1	22.07	2
		1860	24.3	23.02	1	22.08	2
	50RB Middle (25)	1900	24.3	23.01	1	22.06	2
		1880	24.3	22.98	1	22.00	2
		1860	24.3	22.96	1	22.02	2
	50RB Low (0)	1900	24.3	23.08	1	22.16	2
		1880	24.3	23.13	1	22.15	2
		1860	24.3	23.02	1	22.07	2
	100RB (0)	1900	24.3	23.01	1	22.05	2
		1880	24.3	23.10	1	22.09	2
		1860	24.3	23.02	1	22.04	2
Band 4							
Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
1.4 MHz	1RB High (5)	1754.3	24	23.70	0	22.71	1
		1732.5	24	23.47	0	22.53	1
		1710.7	24	23.50	0	22.54	1

	1RB Middle (3)	1754.3	24	23.62	0	22.64	1
		1732.5	24	23.40	0	22.48	1
		1710.7	24	23.43	0	22.48	1
	1RB Low (0)	1754.3	24	23.64	0	22.68	1
		1732.5	24	23.42	0	22.52	1
		1710.7	24	23.47	0	22.52	1
	3RB High (3)	1754.3	24	23.81	0	22.74	1
		1732.5	24	23.64	0	22.61	1
		1710.7	24	23.65	0	22.58	1
	3RB Middle (1)	1754.3	24	23.68	0	22.75	1
		1732.5	24	23.49	0	22.61	1
		1710.7	24	23.52	0	22.59	1
	3RB Low (0)	1754.3	24	23.72	0	22.80	1
		1732.5	24	23.55	0	22.70	1
		1710.7	24	23.57	0	22.66	1
	6RB (0)	1754.3	24	22.64	1	21.68	2
		1732.5	24	22.41	1	21.51	2
		1710.7	24	22.47	1	21.53	2
3 MHz	1RB High (14)	1753.5	24	23.51	0	22.48	1
		1732.5	24	23.43	0	22.69	1
		1711.5	24	23.52	0	22.49	1
	1RB Middle (7)	1753.5	24	23.42	0	22.39	1
		1732.5	24	23.36	0	22.62	1
		1711.5	24	23.44	0	22.44	1
	1RB Low (0)	1753.5	24	23.47	0	22.45	1
		1732.5	24	23.43	0	22.71	1
		1711.5	24	23.55	0	22.54	1
	8RB High (7)	1753.5	24	22.57	1	21.66	2
		1732.5	24	22.57	1	21.70	2
		1711.5	24	22.64	1	21.70	2
	8RB Middle (4)	1753.5	24	22.57	1	21.63	2
		1732.5	24	22.56	1	21.67	2
		1711.5	24	22.59	1	21.68	2
	8RB Low (0)	1753.5	24	22.52	1	21.60	2
		1732.5	24	22.53	1	21.64	2
		1711.5	24	22.57	1	21.65	2
	15RB (0)	1753.5	24	22.55	1	21.64	2
		1732.5	24	22.55	1	21.67	2
		1711.5	24	22.60	1	21.68	2
5 MHz	1RB High (24)	1752.5	24	23.47	0	22.61	1
		1732.5	24	23.40	0	22.64	1
		1712.5	24	23.47	0	22.63	1
	1RB Middle (12)	1752.5	24	23.41	0	22.53	1
		1732.5	24	23.39	0	22.63	1
		1712.5	24	23.45	0	22.59	1
	1RB Low (0)	1752.5	24	23.41	0	22.53	1
		1732.5	24	23.42	0	22.65	1
		1712.5	24	23.49	0	22.63	1

	12RB High (13)	1752.5	24	22.49	1	21.53	2
		1732.5	24	22.53	1	21.60	2
		1712.5	24	22.53	1	21.58	2
	12RB Middle (6)	1752.5	24	22.49	1	21.54	2
		1732.5	24	22.53	1	21.59	2
		1712.5	24	22.53	1	21.58	2
	12RB Low (0)	1752.5	24	22.52	1	21.56	2
		1732.5	24	22.54	1	21.59	2
		1712.5	24	22.53	1	21.58	2
	25RB (0)	1752.5	24	22.48	1	21.52	2
		1732.5	24	22.53	1	21.59	2
		1712.5	24	22.51	1	21.56	2
10 MHz	1RB High (49)	1750	24	23.61	0	22.58	1
		1732.5	24	23.55	0	22.80	1
		1715	24	23.59	0	22.58	1
	1RB Middle (24)	1750	24	23.50	0	22.47	1
		1732.5	24	23.51	0	22.76	1
		1715	24	23.55	0	22.56	1
	1RB Low (0)	1750	24	23.55	0	22.56	1
		1732.5	24	23.58	0	22.81	1
		1715	24	23.63	0	22.61	1
	25RB High (25)	1750	24	22.40	1	21.41	2
		1732.5	24	22.53	1	21.58	2
		1715	24	22.49	1	21.51	2
	25RB Middle (12)	1750	24	22.47	1	21.48	2
		1732.5	24	22.52	1	21.56	2
		1715	24	22.52	1	21.55	2
	25RB Low (0)	1750	24	22.54	1	21.57	2
		1732.5	24	22.56	1	21.59	2
		1715	24	22.55	1	21.57	2
	50RB (0)	1750	24	22.49	1	21.56	2
		1732.5	24	22.58	1	21.65	2
		1715	24	22.53	1	21.58	2
15 MHz	1RB High (74)	1747.5	24	23.71	0	22.67	1
		1732.5	24	23.59	0	22.84	1
		1717.5	24	23.66	0	22.88	1
	1RB Middle (37)	1747.5	24	23.50	0	22.47	1
		1732.5	24	23.48	0	22.73	1
		1717.5	24	23.50	0	22.69	1
	1RB Low (0)	1747.5	24	23.67	0	22.68	1
		1732.5	24	23.68	0	22.90	1
		1717.5	24	23.69	0	22.87	1
	36RB High (38)	1747.5	24	22.48	1	21.52	2
		1732.5	24	22.56	1	21.65	2
		1717.5	24	22.55	1	21.58	2
	36RB Middle (19)	1747.5	24	22.52	1	21.59	2
		1732.5	24	22.55	1	21.61	2
		1717.5	24	22.57	1	21.62	2

	36RB Low (0)	1747.5	24	22.58	1	21.65	2
		1732.5	24	22.61	1	21.68	2
		1717.5	24	22.65	1	21.69	2
	75RB (0)	1747.5	24	22.56	1	21.56	2
		1732.5	24	22.60	1	21.64	2
		1717.5	24	22.62	1	21.62	2
20 MHz	1RB High (99)	1745	24	23.86	0	22.85	1
		1732.5	24	23.81	0	22.90	1
		1720	24	23.84	0	22.89	1
	1RB Middle (50)	1745	24	23.51	0	22.56	1
		1732.5	24	23.52	0	22.74	1
		1720	24	23.54	0	22.70	1
	1RB Low (0)	1745	24	23.78	0	22.87	1
		1732.5	24	23.84	0	22.90	1
		1720	24	23.85	0	22.89	1
	50RB High (50)	1745	24	22.46	1	21.50	2
		1732.5	24	22.66	1	21.73	2
		1720	24	22.54	1	21.60	2
	50RB Middle (25)	1745	24	22.54	1	21.60	2
		1732.5	24	22.58	1	21.65	2
		1720	24	22.56	1	21.62	2
	50RB Low (0)	1745	24	22.64	1	21.69	2
		1732.5	24	22.73	1	21.79	2
		1720	24	22.72	1	21.75	2
	100RB (0)	1745	24	22.56	1	21.57	2
		1732.5	24	22.71	1	21.73	2
		1720	24	22.65	1	21.65	2
Band 5							
Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
1.4 MHz	1RB High (5)	848.3	24	23.29	0	22.33	1
		836.5	24	23.44	0	22.49	1
		824.7	24	23.29	0	22.29	1
	1RB Middle (3)	848.3	24	23.23	0	22.27	1
		836.5	24	23.38	0	22.43	1
		824.7	24	23.21	0	22.24	1
	1RB Low (0)	848.3	24	23.25	0	22.30	1
		836.5	24	23.39	0	22.46	1
		824.7	24	23.25	0	22.26	1
	3RB High (3)	848.3	24	23.43	0	22.35	1
		836.5	24	23.60	0	22.52	1
		824.7	24	23.51	0	22.40	1
	3RB Middle (1)	848.3	24	23.31	0	22.37	1
		836.5	24	23.46	0	22.53	1
		824.7	24	23.39	0	22.43	1

	3RB Low (0)	848.3	24	23.35	0	22.42	1
		836.5	24	23.50	0	22.60	1
		824.7	24	23.42	0	22.47	1
	6RB (0)	848.3	24	22.27	1	21.33	2
		836.5	24	22.44	1	21.50	2
		824.7	24	22.40	1	21.43	2
3 MHz	1RB High (14)	847.5	24	23.26	0	22.46	1
		836.5	24	23.30	0	22.51	1
		825.5	24	23.52	0	22.49	1
	1RB Middle (7)	847.5	24	23.20	0	22.38	1
		836.5	24	23.23	0	22.45	1
		825.5	24	23.44	0	22.42	1
	1RB Low (0)	847.5	24	23.26	0	22.46	1
		836.5	24	23.28	0	22.53	1
		825.5	24	23.52	0	22.49	1
	8RB High (7)	847.5	24	22.40	1	21.49	2
		836.5	24	22.46	1	21.55	2
		825.5	24	22.42	1	21.48	2
	8RB Middle (4)	847.5	24	22.38	1	21.45	2
		836.5	24	22.43	1	21.51	2
		825.5	24	22.39	1	21.45	2
	8RB Low (0)	847.5	24	22.36	1	21.43	2
		836.5	24	22.39	1	21.49	2
		825.5	24	22.34	1	21.41	2
	15RB (0)	847.5	24	22.39	1	21.45	2
		836.5	24	22.41	1	21.50	2
		825.5	24	22.36	1	21.42	2
5 MHz	1RB High (24)	846.5	24	23.23	0	22.42	1
		836.5	24	23.28	0	22.48	1
		826.5	24	23.27	0	22.43	1
	1RB Middle (12)	846.5	24	23.21	0	22.39	1
		836.5	24	23.25	0	22.47	1
		826.5	24	23.27	0	22.37	1
	1RB Low (0)	846.5	24	23.26	0	22.41	1
		836.5	24	23.26	0	22.46	1
		826.5	24	23.26	0	22.38	1
	12RB High (13)	846.5	24	22.31	1	21.35	2
		836.5	24	22.40	1	21.45	2
		826.5	24	22.31	1	21.34	2
	12RB Middle (6)	846.5	24	22.34	1	21.37	2
		836.5	24	22.39	1	21.43	2
		826.5	24	22.32	1	21.33	2
	12RB Low (0)	846.5	24	22.41	1	21.41	2
		836.5	24	22.36	1	21.39	2
		826.5	24	22.33	1	21.34	2
	25RB (0)	846.5	24	22.33	1	21.34	2
		836.5	24	22.36	1	21.38	2
		826.5	24	22.29	1	21.29	2

10 MHz	1RB High (49)	844.0	24	23.43	0	22.43	1
		836.5	24	23.43	0	22.62	1
		829.0	24	23.69	0	22.70	1
	1RB Middle (24)	844.0	24	23.41	0	22.38	1
		836.5	24	23.38	0	22.60	1
		829.0	24	23.59	0	22.58	1
	1RB Low (0)	844.0	24	23.42	0	22.42	1
		836.5	24	23.41	0	22.59	1
		829.0	24	23.60	0	22.58	1
	25RB High (25)	844.0	24	22.25	1	21.25	2
		836.5	24	22.39	1	21.38	2
		829.0	24	22.37	1	21.35	2
	25RB Middle (12)	844.0	24	22.36	1	21.36	2
		836.5	24	22.38	1	21.39	2
		829.0	24	22.33	1	21.33	2
	25RB Low (0)	844.0	24	22.43	1	21.42	2
		836.5	24	22.40	1	21.40	2
		829.0	24	22.37	1	21.36	2
	50RB (0)	844.0	24	22.36	1	21.39	2
		836.5	24	22.40	1	21.41	2
		829.0	24	22.36	1	21.39	2
Band 7							
Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
5 MHz	1RB High (24)	2567.5	24	23.18	0	22.31	1
		2535	24	23.03	0	22.19	1
		2502.5	24	23.08	0	22.40	1
	1RB Middle (12)	2567.5	24	23.14	0	22.28	1
		2535	24	23.01	0	22.15	1
		2502.5	24	23.08	0	22.39	1
	1RB Low (0)	2567.5	24	23.12	0	22.26	1
		2535	24	23.04	0	22.18	1
		2502.5	24	23.10	0	22.41	1
	12RB High (13)	2567.5	24	22.24	1	21.25	2
		2535	24	22.10	1	21.11	2
		2502.5	24	22.13	1	21.11	2
	12RB Middle (6)	2567.5	24	22.24	1	21.24	2
		2535	24	22.11	1	21.10	2
		2502.5	24	22.12	1	21.11	2
	12RB Low (0)	2567.5	24	22.25	1	21.24	2
		2535	24	22.11	1	21.11	2
		2502.5	24	22.11	1	21.09	2
	25RB (0)	2567.5	24	22.23	1	21.24	2
		2535	24	22.10	1	21.08	2
		2502.5	24	22.12	1	21.08	2

10 MHz	1RB High (49)	2565	24	23.36	0	22.50	1
		2535	24	23.21	0	22.38	1
		2505	24	23.21	0	22.42	1
	1RB Middle (24)	2565	24	23.21	0	22.36	1
		2535	24	23.11	0	22.28	1
		2505	24	23.12	0	22.30	1
	1RB Low (0)	2565	24	23.18	0	22.35	1
		2535	24	23.14	0	22.30	1
		2505	24	23.17	0	22.31	1
	25RB High (25)	2565	24	22.21	1	21.21	2
		2535	24	22.12	1	21.11	2
		2505	24	22.19	1	21.17	2
	25RB Middle (12)	2565	24	22.18	1	21.17	2
		2535	24	22.10	1	21.07	2
		2505	24	22.12	1	21.08	2
	25RB Low (0)	2565	24	22.17	1	21.16	2
		2535	24	22.11	1	21.08	2
		2505	24	22.09	1	21.05	2
	50RB (0)	2565	24	22.20	1	21.24	2
		2535	24	22.13	1	21.14	2
		2505	24	22.16	1	21.15	2
15 MHz	1RB High (74)	2562.5	24	23.39	0	22.52	1
		2535	24	23.25	0	22.44	1
		2507.5	24	23.25	0	22.46	1
	1RB Middle (37)	2562.5	24	23.15	0	22.31	1
		2535	24	23.10	0	22.25	1
		2507.5	24	23.11	0	22.30	1
	1RB Low (0)	2562.5	24	23.28	0	22.45	1
		2535	24	23.28	0	22.43	1
		2507.5	24	23.30	0	22.42	1
	36RB High (38)	2562.5	24	22.29	1	21.28	2
		2535	24	22.21	1	21.21	2
		2507.5	24	22.23	1	21.25	2
	36RB Middle (19)	2562.5	24	22.24	1	21.24	2
		2535	24	22.18	1	21.18	2
		2507.5	24	22.18	1	21.18	2
	36RB Low (0)	2562.5	24	22.24	1	21.24	2
		2535	24	22.22	1	21.22	2
		2507.5	24	22.22	1	21.20	2
	75RB (0)	2562.5	24	22.31	1	21.27	2
		2535	24	22.25	1	21.19	2
		2507.5	24	22.27	1	21.23	2
20 MHz	1RB High (99)	2560	24	23.70	0	22.67	1
		2535	24	23.45	0	22.59	1
		2510	24	23.44	0	22.45	1
	1RB Middle (50)	2560	24	23.21	0	22.35	1
		2535	24	23.17	0	22.31	1
		2510	24	23.16	0	22.20	1

	1RB Low (0)	2560	24	23.43	0	22.59	1
		2535	24	23.44	0	22.57	1
		2510	24	23.45	0	22.41	1
	50RB High (50)	2560	24	22.28	1	21.30	2
		2535	24	22.25	1	21.27	2
		2510	24	22.34	1	21.36	2
	50RB Middle (25)	2560	24	22.19	1	21.23	2
		2535	24	22.16	1	21.16	2
		2510	24	22.15	1	21.17	2
	50RB Low (0)	2560	24	22.22	1	21.26	2
		2535	24	22.24	1	21.24	2
		2510	24	22.16	1	21.17	2
	100RB (0)	2560	24	22.27	1	21.25	2
		2535	24	22.28	1	21.24	2
		2510	24	22.29	1	21.26	2

Band 12							
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
1.4 MHz	1RB High (5)	715.3	24	23.25	0	22.28	1
		707.5	24	23.22	0	22.30	1
		699.7	24	23.29	0	22.31	1
	1RB Middle (3)	715.3	24	23.17	0	22.23	1
		707.5	24	23.16	0	22.25	1
		699.7	24	23.20	0	22.26	1
	1RB Low (0)	715.3	24	23.19	0	22.26	1
		707.5	24	23.19	0	22.27	1
		699.7	24	23.20	0	22.26	1
	3RB High (3)	715.3	24	23.38	0	22.31	1
		707.5	24	23.50	0	22.43	1
		699.7	24	23.42	0	22.34	1
	3RB Middle (1)	715.3	24	23.24	0	22.31	1
		707.5	24	23.34	0	22.43	1
		699.7	24	23.27	0	22.35	1
	3RB Low (0)	715.3	24	23.30	0	22.38	1
		707.5	24	23.40	0	22.52	1
		699.7	24	23.33	0	22.40	1
	6RB (0)	715.3	24	22.22	1	21.24	2
		707.5	24	22.30	1	21.35	2
		699.7	24	22.23	1	21.27	2
3 MHz	1RB High (14)	714.5	24	23.25	0	22.25	1
		707.5	24	23.19	0	22.45	1
		700.5	24	23.27	0	22.28	1
	1RB Middle (7)	714.5	24	23.16	0	22.16	1
		707.5	24	23.12	0	22.37	1
		700.5	24	23.20	0	22.22	1

	1RB Low (0)	714.5	24	23.25	0	22.25	1
		707.5	24	23.19	0	22.47	1
		700.5	24	23.28	0	22.28	1
	8RB High (7)	714.5	24	22.35	1	21.41	2
		707.5	24	22.34	1	21.44	2
		700.5	24	22.40	1	21.45	2
	8RB Middle (4)	714.5	24	22.34	1	21.38	2
		707.5	24	22.34	1	21.39	2
		700.5	24	22.36	1	21.42	2
	8RB Low (0)	714.5	24	22.31	1	21.37	2
		707.5	24	22.29	1	21.36	2
		700.5	24	22.31	1	21.38	2
	15RB (0)	714.5	24	22.33	1	21.39	2
		707.5	24	22.32	1	21.40	2
		700.5	24	22.34	1	21.40	2
5 MHz	1RB High (24)	713.5	24	23.21	0	22.37	1
		707.5	24	23.14	0	22.38	1
		701.5	24	23.34	0	22.53	1
	1RB Middle (12)	713.5	24	23.19	0	22.34	1
		707.5	24	23.12	0	22.35	1
		701.5	24	23.31	0	22.47	1
	1RB Low (0)	713.5	24	23.18	0	22.36	1
		707.5	24	23.16	0	22.39	1
		701.5	24	23.31	0	22.47	1
	12RB High (13)	713.5	24	22.24	1	21.23	2
		707.5	24	22.30	1	21.30	2
		701.5	24	22.32	1	21.34	2
	12RB Middle (6)	713.5	24	22.28	1	21.29	2
		707.5	24	22.29	1	21.29	2
		701.5	24	22.30	1	21.30	2
	12RB Low (0)	713.5	24	22.31	1	21.31	2
		707.5	24	22.29	1	21.30	2
		701.5	24	22.28	1	21.27	2
	25RB (0)	713.5	24	22.24	1	21.23	2
		707.5	24	22.27	1	21.28	2
		701.5	24	22.28	1	21.27	2
10 MHz	1RB High (49)	711	24	23.36	0	22.35	1
		707.5	24	23.34	0	22.56	1
		704	24	23.45	0	22.48	1
	1RB Middle (24)	711	24	23.28	0	22.32	1
		707.5	24	23.26	0	22.50	1
		704	24	23.41	0	22.44	1
	1RB Low (0)	711	24	23.30	0	22.34	1
		707.5	24	23.30	0	22.53	1
		704	24	23.41	0	22.43	1
	25RB High (25)	711	24	22.24	1	21.23	2
		707.5	24	22.30	1	21.30	2
		704	24	22.31	1	21.28	2

	25RB Middle (12)	711	24	22.28	1	21.28	2
		707.5	24	22.29	1	21.28	2
		704	24	22.31	1	21.29	2
	25RB Low (0)	711	24	22.27	1	21.27	2
		707.5	24	22.31	1	21.30	2
		704	24	22.26	1	21.25	2
	50RB (0)	711	24	22.25	1	21.29	2
		707.5	24	22.30	1	21.32	2
		704	24	22.30	1	21.30	2

Band 30							
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
5 MHz	1RB High (24)	2312.5	24	23.24	0	22.40	1
		2310	24	23.22	0	22.37	1
		2307.5	24	23.25	0	22.37	1
	1RB Middle (12)	2312.5	24	23.22	0	22.39	1
		2310	24	23.19	0	22.35	1
		2307.5	24	23.26	0	22.36	1
	1RB Low (0)	2312.5	24	23.23	0	22.37	1
		2310	24	23.23	0	22.37	1
		2307.5	24	23.29	0	22.40	1
	12RB High (13)	2312.5	24	22.31	1	21.33	2
		2310	24	22.26	1	21.28	2
		2307.5	24	22.29	1	21.30	2
	12RB Middle (6)	2312.5	24	22.33	1	21.33	2
		2310	24	22.30	1	21.30	2
		2307.5	24	22.32	1	21.31	2
	12RB Low (0)	2312.5	24	22.37	1	21.36	2
		2310	24	22.35	1	21.33	2
		2307.5	24	22.34	1	21.33	2
	25RB (0)	2312.5	24	22.32	1	21.32	2
		2310	24	22.27	1	21.27	2
		2307.5	24	22.28	1	21.27	2
10 MHz	1RB High (49)	2310	24	23.48	0	22.13	1
	1RB Middle (24)	2310	24	23.38	0	22.02	1
	1RB Low (0)	2310	24	23.44	0	22.08	1
	25RB High (25)	2310	24	22.22	1	21.21	2
	25RB Middle (12)	2310	24	22.29	1	21.26	2
	25RB Low (0)	2310	24	22.34	1	21.32	2

	50RB (0)	2310	24	22.29	1	21.33	2

Low power

Table 11.3-2: The conducted Power for LTE

Band 2							
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
1.4 MHz	1RB High (5)	1909.3	21.5	20.90	0	21.18	0
		1880	21.5	20.97	0	21.22	0
		1850.7	21.5	21.04	0	20.74	0
	1RB Middle (3)	1909.3	21.5	20.82	0	21.21	0
		1880	21.5	20.88	0	21.24	0
		1850.7	21.5	20.99	0	20.69	0
	1RB Low (0)	1909.3	21.5	20.88	0	21.18	0
		1880	21.5	20.95	0	21.22	0
		1850.7	21.5	21.05	0	20.73	0
	3RB High (3)	1909.3	21.5	21.05	0	21.03	0
		1880	21.5	21.05	0	21.00	0
		1850.7	21.5	21.16	0	21.14	0
	3RB Middle (1)	1909.3	21.5	20.89	0	21.03	0
		1880	21.5	20.91	0	21.02	0
		1850.7	21.5	20.99	0	21.15	0
	3RB Low (0)	1909.3	21.5	20.96	0	21.10	0
		1880	21.5	20.97	0	21.08	0
		1850.7	21.5	21.09	0	21.23	0
	6RB (0)	1909.3	21.5	20.78	0	20.85	0
		1880	21.5	20.85	0	20.89	0
		1850.7	21.5	20.94	0	21.00	0
3 MHz	1RB High (14)	1908.5	21.5	20.81	0	21.09	0
		1880	21.5	20.88	0	21.14	0
		1851.5	21.5	20.92	0	21.20	0
	1RB Middle (7)	1908.5	21.5	20.77	0	21.05	0
		1880	21.5	20.83	0	21.08	0
		1851.5	21.5	20.87	0	21.15	0
	1RB Low (0)	1908.5	21.5	20.83	0	21.11	0
		1880	21.5	20.88	0	21.15	0
		1851.5	21.5	20.94	0	21.25	0
	8RB High (7)	1908.5	21.5	20.92	0	21.02	0
		1880	21.5	20.99	0	21.06	0
		1851.5	21.5	21.07	0	21.14	0
	8RB Middle (4)	1908.5	21.5	20.91	0	21.00	0
		1880	21.5	20.97	0	21.05	0
		1851.5	21.5	21.04	0	21.13	0
	8RB	1908.5	21.5	20.87	0	20.98	0

	Low (0)	1880	21.5	20.95	0	21.01	0
		1851.5	21.5	21.02	0	21.11	0
	15RB (0)	1908.5	21.5	20.94	0	21.02	0
		1880	21.5	20.98	0	21.05	0
		1851.5	21.5	21.07	0	21.16	0
5 MHz	1RB High (24)	1907.5	21.5	20.76	0	21.03	0
		1880	21.5	20.84	0	21.08	0
		1852.5	21.5	20.88	0	21.14	0
	1RB Middle (12)	1907.5	21.5	20.75	0	21.01	0
		1880	21.5	20.82	0	21.06	0
		1852.5	21.5	20.89	0	21.15	0
	1RB Low (0)	1907.5	21.5	20.76	0	21.04	0
		1880	21.5	20.85	0	21.06	0
		1852.5	21.5	20.93	0	21.17	0
	12RB High (13)	1907.5	21.5	20.93	0	20.97	0
		1880	21.5	20.97	0	20.99	0
		1852.5	21.5	21.02	0	21.07	0
	12RB Middle (6)	1907.5	21.5	20.92	0	20.96	0
		1880	21.5	20.96	0	20.97	0
		1852.5	21.5	21.04	0	21.06	0
	12RB Low (0)	1907.5	21.5	20.96	0	20.97	0
		1880	21.5	20.95	0	20.95	0
		1852.5	21.5	21.04	0	21.06	0
	25RB (0)	1907.5	21.5	21.10	0	21.00	0
		1880	21.5	20.96	0	21.05	0
		1852.5	21.5	21.02	0	20.97	0
10 MHz	1RB High (49)	1905	21.5	20.88	0	21.17	0
		1880	21.5	20.93	0	21.22	0
		1855	21.5	21.00	0	21.29	0
	1RB Middle (24)	1905	21.5	20.85	0	21.12	0
		1880	21.5	20.89	0	21.16	0
		1855	21.5	20.94	0	21.23	0
	1RB Low (0)	1905	21.5	20.94	0	21.21	0
		1880	21.5	20.96	0	21.19	0
		1855	21.5	21.04	0	21.39	0
	25RB High (25)	1905	21.5	20.87	0	20.90	0
		1880	21.5	20.97	0	20.97	0
		1855	21.5	21.03	0	21.04	0
	25RB Middle (12)	1905	21.5	20.90	0	20.91	0
		1880	21.5	20.94	0	20.94	0
		1855	21.5	20.99	0	21.01	0
	25RB Low (0)	1905	21.5	20.96	0	21.03	0
		1880	21.5	20.98	0	20.88	0
		1855	21.5	21.02	0	21.03	0
	50RB (0)	1905	21.5	21.03	0	20.78	0
		1880	21.5	21.09	0	21.23	0
		1855	21.5	21.04	0	21.24	0
15 MHz	1RB	1902.5	21.5	20.95	0	21.22	0

	High (74)	1880	21.5	21.01	0	21.29	0
		1857.5	21.5	21.06	0	21.32	0
	1RB Middle (37)	1902.5	21.5	20.87	0	21.14	0
		1880	21.5	20.92	0	21.16	0
		1857.5	21.5	20.94	0	21.22	0
	1RB Low (0)	1902.5	21.5	21.06	0	21.35	0
		1880	21.5	21.08	0	21.29	0
		1857.5	21.5	21.14	0	21.42	0
	36RB High (38)	1902.5	21.5	20.87	0	20.96	0
		1880	21.5	20.98	0	21.03	0
		1857.5	21.5	21.01	0	21.07	0
	36RB Middle (19)	1902.5	21.5	20.92	0	20.98	0
		1880	21.5	20.98	0	21.03	0
		1857.5	21.5	20.97	0	21.03	0
	36RB Low (0)	1902.5	21.5	20.99	0	21.02	0
		1880	21.5	21.00	0	21.12	0
		1857.5	21.5	21.01	0	21.09	0
	75RB (0)	1902.5	21.5	21.10	0	20.99	0
		1880	21.5	20.90	0	20.91	0
		1857.5	21.5	21.18	0	20.98	0
20 MHz	1RB High (99)	1900	21.5	21.12	0	21.33	0
		1880	21.5	21.21	0	21.42	0
		1860	21.5	21.23	0	21.41	0
	1RB Middle (50)	1900	21.5	20.93	0	20.95	0
		1880	21.5	20.96	0	21.15	0
		1860	21.5	20.99	0	21.22	0
	1RB Low (0)	1900	21.5	21.20	0	21.38	0
		1880	21.5	21.49	0	21.27	0
		1860	21.5	21.27	0	21.38	0
	50RB High (50)	1900	21.5	20.94	0	20.98	0
		1880	21.5	21.05	0	21.09	0
		1860	21.5	21.05	0	21.06	0
	50RB Middle (25)	1900	21.5	20.99	0	21.08	0
		1880	21.5	20.95	0	21.01	0
		1860	21.5	21.02	0	21.00	0
	50RB Low (0)	1900	21.5	21.13	0	21.09	0
		1880	21.5	21.11	0	21.11	0
		1860	21.5	21.12	0	21.08	0
	100RB (0)	1900	21.5	21.00	0	21.00	0
		1880	21.5	21.15	0	21.07	0
		1860	21.5	21.02	0	21.02	0
Band 4							
Bandwidth (MHz)	RB allocation	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
	RB offset (Start RB)			Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
1.4 MHz	1RB	1754.3	22	21.15	0	21.42	0

	High (5)	1732.5	22	21.12	0	21.39	0
		1710.7	22	21.11	0	21.35	0
	1RB Middle (3)	1754.3	22	21.07	0	21.43	0
		1732.5	22	21.03	0	21.41	0
		1710.7	22	21.01	0	21.36	0
	1RB Low (0)	1754.3	22	21.11	0	21.39	0
		1732.5	22	21.10	0	21.39	0
		1710.7	22	21.10	0	21.36	0
	3RB High (3)	1754.3	22	21.30	0	21.22	0
		1732.5	22	21.28	0	21.25	0
		1710.7	22	21.20	0	21.15	0
	3RB Middle (1)	1754.3	22	21.15	0	21.22	0
		1732.5	22	21.12	0	21.23	0
		1710.7	22	21.06	0	21.15	0
	3RB Low (0)	1754.3	22	21.23	0	21.27	0
		1732.5	22	21.22	0	21.31	0
		1710.7	22	21.14	0	21.24	0
	6RB (0)	1754.3	22	21.05	0	21.11	0
		1732.5	22	21.01	0	21.09	0
		1710.7	22	20.99	0	21.04	0
3 MHz	1RB High (14)	1753.5	22	21.05	0	21.30	0
		1732.5	22	21.02	0	21.31	0
		1711.5	22	20.99	0	21.24	0
	1RB Middle (7)	1753.5	22	20.97	0	21.23	0
		1732.5	22	20.95	0	21.25	0
		1711.5	22	20.94	0	21.18	0
	1RB Low (0)	1753.5	22	21.00	0	21.28	0
		1732.5	22	21.02	0	21.33	0
		1711.5	22	21.01	0	21.28	0
	8RB High (7)	1753.5	22	21.17	0	21.25	0
		1732.5	22	21.18	0	21.28	0
		1711.5	22	21.17	0	21.23	0
	8RB Middle (4)	1753.5	22	21.16	0	21.22	0
		1732.5	22	21.15	0	21.23	0
		1711.5	22	21.13	0	21.20	0
	8RB Low (0)	1753.5	22	21.11	0	21.19	0
		1732.5	22	21.13	0	21.22	0
		1711.5	22	21.12	0	21.19	0
	15RB (0)	1753.5	22	21.16	0	21.22	0
		1732.5	22	21.17	0	21.27	0
		1711.5	22	21.15	0	21.21	0
5 MHz	1RB High (24)	1752.5	22	21.01	0	21.25	0
		1732.5	22	20.99	0	21.25	0
		1712.5	22	20.98	0	21.20	0
	1RB Middle (12)	1752.5	22	20.97	0	21.20	0
		1732.5	22	20.96	0	21.24	0
		1712.5	22	20.95	0	21.18	0
	1RB	1752.5	22	20.96	0	21.20	0

	Low (0)	1732.5	22	20.99	0	21.25	0
		1712.5	22	20.98	0	21.20	0
	12RB High (13)	1752.5	22	21.12	0	21.12	0
		1732.5	22	21.12	0	21.16	0
		1712.5	22	21.10	0	21.11	0
	12RB Middle (6)	1752.5	22	21.12	0	21.11	0
		1732.5	22	21.11	0	21.15	0
		1712.5	22	21.11	0	21.11	0
	12RB Low (0)	1752.5	22	21.11	0	21.12	0
		1732.5	22	21.11	0	21.14	0
		1712.5	22	21.09	0	21.10	0
	25RB (0)	1752.5	22	21.10	0	21.10	0
		1732.5	22	21.11	0	21.12	0
		1712.5	22	21.08	0	21.07	0
10 MHz	1RB High (49)	1750	22	21.12	0	21.37	0
		1732.5	22	21.09	0	21.40	0
		1715	22	21.08	0	21.34	0
	1RB Middle (24)	1750	22	21.01	0	21.27	0
		1732.5	22	21.05	0	21.35	0
		1715	22	21.05	0	21.29	0
	1RB Low (0)	1750	22	21.07	0	21.35	0
		1732.5	22	21.10	0	21.40	0
		1715	22	21.11	0	21.34	0
	25RB High (25)	1750	22	21.02	0	20.99	0
		1732.5	22	21.13	0	21.13	0
		1715	22	21.05	0	21.03	0
	25RB Middle (12)	1750	22	21.08	0	21.05	0
		1732.5	22	21.11	0	21.11	0
		1715	22	21.10	0	21.08	0
	25RB Low (0)	1750	22	21.17	0	21.15	0
		1732.5	22	21.14	0	21.14	0
		1715	22	21.12	0	21.11	0
	50RB (0)	1750	22	21.13	0	21.15	0
		1732.5	22	21.16	0	21.20	0
		1715	22	21.09	0	21.12	0
15 MHz	1RB High (74)	1747.5	22	21.21	0	21.45	0
		1732.5	22	21.15	0	21.44	0
		1717.5	22	21.17	0	21.45	0
	1RB Middle (37)	1747.5	22	21.04	0	21.29	0
		1732.5	22	21.05	0	21.35	0
		1717.5	22	21.02	0	21.27	0
	1RB Low (0)	1747.5	22	21.20	0	21.47	0
		1732.5	22	21.20	0	21.47	0
		1717.5	22	21.19	0	21.42	0
	36RB High (38)	1747.5	22	21.07	0	21.13	0
		1732.5	22	21.12	0	21.21	0
		1717.5	22	21.06	0	21.13	0
	36RB	1747.5	22	21.11	0	21.17	0

	Middle (19)	1732.5	22	21.09	0	21.18	0
		1717.5	22	21.11	0	21.16	0
	36RB Low (0)	1747.5	22	21.16	0	21.24	0
		1732.5	22	21.18	0	21.24	0
		1717.5	22	21.17	0	21.23	0
	75RB (0)	1747.5	22	21.15	0	21.15	0
		1732.5	22	21.16	0	21.19	0
		1717.5	22	21.15	0	21.15	0
20 MHz	1RB High (99)	1745	22	21.34	0	21.53	0
		1732.5	22	21.32	0	21.54	0
		1720	22	21.32	0	21.54	0
	1RB Middle (50)	1745	22	21.05	0	21.28	0
		1732.5	22	21.08	0	21.31	0
		1720	22	21.04	0	21.26	0
	1RB Low (0)	1745	22	21.28	0	21.53	0
		1732.5	22	21.31	0	21.54	0
		1720	22	21.29	0	21.51	0
	50RB High (50)	1745	22	21.04	0	21.06	0
		1732.5	22	21.21	0	21.25	0
		1720	22	21.11	0	21.15	0
	50RB Middle (25)	1745	22	21.11	0	21.14	0
		1732.5	22	21.14	0	21.18	0
		1720	22	21.11	0	21.13	0
	50RB Low (0)	1745	22	21.22	0	21.25	0
		1732.5	22	21.28	0	21.30	0
		1720	22	21.25	0	21.27	0
	100RB (0)	1745	22	21.14	0	21.14	0
		1732.5	22	21.25	0	21.24	0
		1720	22	21.20	0	21.20	0
Band 7							
Bandwidth (MHz)	RB allocation / RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
5 MHz	1RB High (24)	2567.5	17	16.15	0	16.35	0
		2535	17	15.99	0	16.17	0
		2502.5	17	16.06	0	16.39	0
	1RB Middle (12)	2567.5	17	16.10	0	16.31	0
		2535	17	15.96	0	16.14	0
		2502.5	17	16.04	0	16.37	0
	1RB Low (0)	2567.5	17	16.09	0	16.28	0
		2535	17	15.98	0	16.16	0
		2502.5	17	16.06	0	16.40	0
	12RB High (13)	2567.5	17	16.19	0	16.19	0
		2535	17	16.07	0	16.04	0
		2502.5	17	16.08	0	16.08	0
	12RB	2567.5	17	16.18	0	16.18	0

	Middle (6)	2535	17	16.06	0	16.04	0
		2502.5	17	16.06	0	16.06	0
	12RB Low (0)	2567.5	17	16.17	0	16.16	0
		2535	17	16.07	0	16.05	0
		2502.5	17	16.06	0	16.03	0
	25RB (0)	2567.5	17	16.18	0	16.16	0
		2535	17	16.05	0	16.02	0
		2502.5	17	16.05	0	16.02	0
10 MHz	1RB High (49)	2565	17	16.32	0	16.56	0
		2535	17	16.18	0	16.41	0
		2505	17	16.13	0	16.38	0
	1RB Middle (24)	2565	17	16.17	0	16.41	0
		2535	17	16.08	0	16.31	0
		2505	17	16.06	0	16.30	0
	1RB Low (0)	2565	17	16.14	0	16.37	0
		2535	17	16.09	0	16.31	0
		2505	17	16.08	0	16.30	0
	25RB High (25)	2565	17	16.17	0	16.14	0
		2535	17	16.09	0	16.05	0
		2505	17	16.13	0	16.10	0
	25RB Middle (12)	2565	17	16.14	0	16.11	0
		2535	17	16.07	0	16.03	0
		2505	17	16.06	0	16.03	0
	25RB Low (0)	2565	17	16.12	0	16.09	0
		2535	17	16.07	0	16.03	0
		2505	17	16.04	0	16.00	0
	50RB (0)	2565	17	16.15	0	16.16	0
		2535	17	16.09	0	16.08	0
		2505	17	16.09	0	16.08	0
15 MHz	1RB High (74)	2562.5	17	16.34	0	16.57	0
		2535	17	16.23	0	16.45	0
		2507.5	17	16.14	0	16.40	0
	1RB Middle (37)	2562.5	17	16.16	0	16.38	0
		2535	17	16.10	0	16.31	0
		2507.5	17	16.06	0	16.29	0
	1RB Low (0)	2562.5	17	16.24	0	16.48	0
		2535	17	16.22	0	16.43	0
		2507.5	17	16.19	0	16.42	0
	36RB High (38)	2562.5	17	16.20	0	16.23	0
		2535	17	16.15	0	16.16	0
		2507.5	17	16.16	0	16.21	0
	36RB Middle (19)	2562.5	17	16.14	0	16.18	0
		2535	17	16.11	0	16.13	0
		2507.5	17	16.10	0	16.13	0
	36RB Low (0)	2562.5	17	16.15	0	16.18	0
		2535	17	16.16	0	16.18	0
		2507.5	17	16.13	0	16.16	0
	75RB (0)	2562.5	17	16.20	0	16.18	0
		2535	17	16.17	0	16.15	0

		2507.5	17	16.17	0	16.16	0
20 MHz	1RB High (99)	2560	17	16.46	0	16.67	0
		2535	17	16.34	0	16.56	0
		2510	17	16.30	0	16.49	0
	1RB Middle (50)	2560	17	16.17	0	16.38	0
		2535	17	16.11	0	16.34	0
		2510	17	16.11	0	16.31	0
	1RB Low (0)	2560	17	16.34	0	16.56	0
		2535	17	16.28	0	16.52	0
		2510	17	16.28	0	16.51	0
	50RB High (50)	2560	17	16.21	0	16.22	0
		2535	17	16.17	0	16.19	0
		2510	17	16.27	0	16.31	0
	50RB Middle (25)	2560	17	16.13	0	16.15	0
		2535	17	16.10	0	16.11	0
		2510	17	16.08	0	16.12	0
	50RB Low (0)	2560	17	16.15	0	16.16	0
		2535	17	16.17	0	16.19	0
		2510	17	16.09	0	16.10	0
	100RB (0)	2560	17	16.20	0	16.17	0
		2535	17	16.21	0	16.17	0
		2510	17	16.21	0	16.20	0

Band 12							
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
1.4 MHz	1RB High (5)	715.3	23	22.70	0	22.43	1
		707.5	23	22.58	0	22.14	1
		699.7	23	22.61	0	22.15	1
	1RB Middle (3)	715.3	23	22.61	0	22.44	1
		707.5	23	22.52	0	22.09	1
		699.7	23	22.54	0	22.09	1
	1RB Low (0)	715.3	23	22.65	0	22.40	1
		707.5	23	22.54	0	22.12	1
		699.7	23	22.55	0	22.09	1
	3RB High (3)	715.3	23	22.79	0	22.19	1
		707.5	23	22.76	0	22.19	1
		699.7	23	22.76	0	22.16	1
	3RB Middle (1)	715.3	23	22.63	0	22.19	1
		707.5	23	22.61	0	22.19	1
		699.7	23	22.63	0	22.16	1
	3RB Low (0)	715.3	23	22.69	0	22.25	1
		707.5	23	22.67	0	22.26	1
		699.7	23	22.67	0	22.21	1
	6RB (0)	715.3	23	22.09	1	21.13	2
		707.5	23	22.06	1	21.10	2

		699.7	23	22.08	1	21.12	2
3 MHz	1RB High (14)	714.5	23	22.59	0	22.30	1
		707.5	23	22.56	0	22.30	1
		700.5	23	22.59	0	22.32	1
	1RB Middle (7)	714.5	23	22.50	0	22.24	1
		707.5	23	22.49	0	22.24	1
		700.5	23	22.54	0	22.25	1
	1RB Low (0)	714.5	23	22.57	0	22.30	1
		707.5	23	22.59	0	22.33	1
		700.5	23	22.58	0	22.29	1
	8RB High (7)	714.5	23	22.22	1	21.29	2
		707.5	23	22.22	1	21.30	2
		700.5	23	22.27	1	21.31	2
	8RB Middle (4)	714.5	23	22.20	1	21.26	2
		707.5	23	22.19	1	21.27	2
		700.5	23	22.22	1	21.29	2
	8RB Low (0)	714.5	23	22.17	1	21.24	2
		707.5	23	22.16	1	21.24	2
		700.5	23	22.19	1	21.25	2
	15RB (0)	714.5	23	22.20	1	21.26	2
		707.5	23	22.19	1	21.26	2
		700.5	23	22.21	1	21.26	2
5 MHz	1RB High (24)	713.5	23	22.57	0	22.26	1
		707.5	23	22.53	0	22.24	1
		701.5	23	22.56	0	22.29	1
	1RB Middle (12)	713.5	23	22.52	0	22.24	1
		707.5	23	22.51	0	22.23	1
		701.5	23	22.52	0	22.23	1
	1RB Low (0)	713.5	23	22.53	0	22.23	1
		707.5	23	22.56	0	22.28	1
		701.5	23	22.54	0	22.20	1
	12RB High (13)	713.5	23	22.07	1	21.08	2
		707.5	23	22.15	1	21.18	2
		701.5	23	22.19	1	21.22	2
	12RB Middle (6)	713.5	23	22.15	1	21.16	2
		707.5	23	22.16	1	21.16	2
		701.5	23	22.17	1	21.17	2
	12RB Low (0)	713.5	23	22.18	1	21.18	2
		707.5	23	22.16	1	21.16	2
		701.5	23	22.16	1	21.16	2
	25RB (0)	713.5	23	22.11	1	21.14	2
		707.5	23	22.14	1	21.13	2
		701.5	23	22.15	1	21.15	2
10 MHz	1RB High (49)	711	23	22.79	0	22.24	1
		707.5	23	22.81	0	22.39	1
		704	23	22.89	0	22.41	1
	1RB Middle (24)	711	23	22.72	0	22.17	1
		707.5	23	22.79	0	22.34	1
		704	23	22.84	0	22.39	1

	1RB Low (0)	711	23	22.80	0	22.21	1
		707.5	23	22.80	0	22.38	1
		704	23	22.86	0	22.35	1
	25RB High (25)	711	23	22.15	1	21.08	2
		707.5	23	22.27	1	21.15	2
		704	23	22.31	1	21.19	2
	25RB Middle (12)	711	23	22.23	1	21.13	2
		707.5	23	22.27	1	21.14	2
		704	23	22.26	1	21.17	2
	25RB Low (0)	711	23	22.27	1	21.14	2
		707.5	23	22.25	1	21.14	2
		704	23	22.26	1	21.13	2
	50RB (0)	711	23	22.22	1	21.14	2
		707.5	23	22.26	1	21.17	2
		704	23	22.29	1	21.17	2

Band 30							
Bandwidth (MHz)	RB allocation RB offset (Start RB)	Frequency (MHz)	Max. Target Power (dBm)	QPSK		16QAM	
				Actual output power (dBm)	MPR	Actual output power (dBm)	MPR
5 MHz	1RB High (24)	2312.5	19.5	18.64	0	18.87	0
		2310	19.5	18.62	0	18.84	0
		2307.5	19.5	18.68	0	19.02	0
	1RB Middle (12)	2312.5	19.5	18.62	0	18.85	0
		2310	19.5	18.60	0	18.82	0
		2307.5	19.5	18.66	0	19.00	0
	1RB Low (0)	2312.5	19.5	18.63	0	18.84	0
		2310	19.5	18.64	0	18.85	0
		2307.5	19.5	18.71	0	19.08	0
	12RB High (13)	2312.5	19.5	18.75	0	18.77	0
		2310	19.5	18.70	0	18.71	0
		2307.5	19.5	18.74	0	18.75	0
	12RB Middle (6)	2312.5	19.5	18.78	0	18.78	0
		2310	19.5	18.75	0	18.74	0
		2307.5	19.5	18.78	0	18.76	0
	12RB Low (0)	2312.5	19.5	18.81	0	18.79	0
		2310	19.5	18.76	0	18.77	0
		2307.5	19.5	18.77	0	18.77	0
	25RB (0)	2312.5	19.5	18.77	0	18.75	0
		2310	19.5	18.71	0	18.70	0
		2307.5	19.5	18.72	0	18.71	0
10 MHz	1RB High (49)	2310	19.5	18.91	0	19.17	0
	1RB Middle (24)	2310	19.5	18.81	0	19.04	0
	1RB Low (0)	2310	19.5	18.85	0	19.11	0

	25RB High (25)	2310	19.5	18.75	0	18.73	0
	25RB Middle (12)	2310	19.5	18.80	0	18.78	0
	25RB Low (0)	2310	19.5	18.86	0	18.84	0
	50RB (0)	2310	19.5	18.82	0	18.83	0

11.4 Wi-Fi and BT Measurement result

The output power of BT antenna is as following:

Condition	GFSK			EDR2M-4_DQPSK			EDR3M-8DPSK		
	Channel 0	Channel 39	Channel 78	Channel 0	Channel 39	Channel 78	Channel 0	Channel 39	Channel 78
Peak Output Power(dBm)									
Hopping OFF	8.27	9.32	11.68	7.49	8.15	10.81	7.28	8.71	11.01
Tune up	8.50	9.50	12.00	7.50	8.50	11.00	7.50	9.00	11.50

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

802.11b(dBm)				
Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1(2412MHz)	16.90	/	16.99	/
tune up	17.50	/	17.50	/
6(2437MHz)	17.20	17.15	17.27	17.12
tune up	17.50	17.50	17.50	17.50
11(2462MHz)	17.14	/	17.22	/
tune up	17.50	/	17.50	/

802.11g(dBm)								
Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1(2412MHz)	16.52	/	/	/	/	/	/	/
tune up	17.50	/	/	/	/	/	/	/
6(2437MHz)	16.80	16.62	16.59	16.50	16.43	16.35	15.05	14.72
tune up	17.50	17.50	17.50	17.50	17.50	17.50	16.00	15.50
11(2462MHz)	16.63	/	/	/	/	/	/	/
tune up	17.50	/	/	/	/	/	/	/

802.11n(dBm)-20MHz								
Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1(2412MHz)	16.23	/	/	/	/	/	/	/
tune up	17.50	/	/	/	/	/	/	/
6(2437MHz)	16.54	16.35	16.38	16.31	15.82	15.04	14.68	14.29
tune up	17.50	17.50	17.50	17.50	16.80	16.00	16.00	15.50
11(2462MHz)	16.43	/	/	/	/	/	/	/
tune up	17.50	/	/	/	/	/	/	/

802.11n(dBm)-40MHz								
Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
3(2422MHz)	16.18	/	/	/	/	/	/	/
tune up	17.00	/	/	/	/	/	/	/
6(2437MHz)	16.40	/	/	/	/	/	/	/
tune up	17.50	/	/	/	/	/	/	/
9(2452MHz)	16.50	16.28	16.30	16.20	15.59	13.92	13.38	13.00
tune up	17.50	17.00	17.00	17.00	16.50	15.00	14.50	14.00

802.11a(dBm)								
Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
36(5180 MHz)	16.75	16.71	16.64	16.61	16.51	16.36	15.03	14.61
tune up	18.00	18.00	17.50	17.50	17.50	17.50	16.00	15.50
40(5200 MHz)	16.55	/	/	/	/	/	/	/
tune up	18.00	/	/	/	/	/	/	/
44(5220 MHz)	16.36	/	/	/	/	/	/	/
tune up	18.00	/	/	/	/	/	/	/
48(5240 MHz)	16.31	/	/	/	/	/	/	/
tune up	18.00	/	/	/	/	/	/	/
52(5260 MHz)	16.59	/	/	/	/	/	/	/
tune up	18.00	/	/	/	/	/	/	/
56(5280 MHz)	16.82	/	/	/	/	/	/	/
tune up	18.00	/	/	/	/	/	/	/
60(5300 MHz)	17.03	/	/	/	/	/	/	/
tune up	18.00	/	/	/	/	/	/	/
64(5320 MHz)	17.19	17.16	17.07	17.06	16.92	16.76	15.47	15.05
tune up	18.00	18.00	18.00	18.00	17.50	17.50	16.00	15.50
100(5500 MHz)	18.82	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
104(5520 MHz)	18.62	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
108(5540 MHz)	18.42	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
112(5560 MHz)	18.21	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
116(5580 MHz)	18.14	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
120(5600 MHz)	18.27	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
124(5620 MHz)	18.40	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
128(5640 MHz)	18.59	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
132(5660 MHz)	18.99	18.66	18.45	18.59	18.49	18.32	16.25	15.86
tune up	19.00	19.00	19.00	19.00	19.00	19.00	17.00	16.50
136(5680 MHz)	18.77	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
140(5700 MHz)	18.41	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
144(5720 MHz)	17.78	/	/	/	/	/	/	/
tune up	19.00	/	/	/	/	/	/	/
149(5745 MHz)	14.90	/	/	/	/	/	/	/
tune up	15.50	/	/	/	/	/	/	/
153(5765 MHz)	17.77	/	/	/	/	/	/	/
tune up	18.50	/	/	/	/	/	/	/
157(5785 MHz)	17.94	/	/	/	/	/	/	/
tune up	18.50	/	/	/	/	/	/	/
161(5805 MHz)	18.42	18.37	18.31	18.32	18.14	17.95	16.04	15.61
tune up	18.50	18.50	18.50	18.50	18.50	18.50	16.50	16.00
165(5825 MHz)	16.05	/	/	/	/	/	/	/
tune up	17.00	/	/	/	/	/	/	/

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

802.11b(dBm)				
Channel\data rate	1Mbps	2Mbps	5.5Mbps	11Mbps
1(2412MHz)	6.38	/	6.41	/
tune up	7.20	/	7.20	/
6(2437MHz)	6.56	6.55	6.58	6.48
tune up	7.20	7.20	7.20	7.20
11(2462MHz)	6.54	/	6.55	/
tune up	7.20	/	7.20	/

802.11g(dBm)								
Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
1(2412MHz)	6.13	/	/	/	/	/	/	/
tune up	7.20	/	/	/	/	/	/	/
6(2437MHz)	6.40	6.32	6.25	6.21	6.10	5.65	4.48	4.05
tune up	7.20	7.20	7.20	7.20	7.20	6.80	5.50	5.20
11(2462MHz)	6.31	/	/	/	/	/	/	/
tune up	7.20	/	/	/	/	/	/	/

802.11n(dBm)-20MHz								
Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
1(2412MHz)	5.96	/	/	/	/	/	/	/
tune up	7.00	/	/	/	/	/	/	/
6(2437MHz)	6.21	6.02	6.00	5.92	5.50	4.45	4.01	3.63
tune up	7.00	7.00	7.00	7.00	6.50	5.50	5.00	4.50
11(2462MHz)	6.12	/	/	/	/	/	/	/
tune up	7.00	/	/	/	/	/	/	/

802.11n(dBm)-40MHz								
Channel\data rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
3(2422MHz)	5.95	/	/	/	/	/	/	/
tune up	7.00	/	/	/	/	/	/	/
6(2437MHz)	6.13	/	/	/	/	/	/	/
tune up	7.00	/	/	/	/	/	/	/
9(2452MHz)	6.20	6.04	6.02	5.93	5.32	3.27	2.79	2.38
tune up	7.00	7.00	7.00	7.00	6.30	4.00	3.50	3.40

802.11a(dBm)								
Channel\data rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
36(5180 MHz)	5.55	5.52	5.44	5.42	5.34	5.50	4.59	4.28
tune up	6.50	6.50	6.50	6.50	6.50	6.50	5.50	5.50
40(5200 MHz)	5.07							
tune up	6.50	/	/	/	/	/	/	/
44(5220 MHz)	4.53							
tune up	6.50	/	/	/	/	/	/	/
48(5240 MHz)	4.17							
tune up	4.50	/	/	/	/	/	/	/
52(5260 MHz)	4.39							
tune up	6.00	/	/	/	/	/	/	/
56(5280 MHz)	4.75							
tune up	6.00	/	/	/	/	/	/	/
60(5300 MHz)	5.21							
tune up	6.00	/	/	/	/	/	/	/
64(5320 MHz)	5.91	5.86	5.78	5.75	5.65	5.85	4.96	4.64
tune up	6.00	6.00	6.00	6.00	6.00	6.00	5.00	5.00
100(5500 MHz)	4.53					4.77		
tune up	6.30	/	/	/	/	6.30	/	/
104(5520 MHz)	5.05					5.30		
tune up	6.30	/	/	/	/	6.30	/	/
108(5540 MHz)	5.54					5.89		
tune up	6.30	/	/	/	/	6.30	/	/
112(5560 MHz)	5.94	5.87	5.83	5.80	5.73	6.25	5.44	5.15
tune up	6.30	6.30	6.30	6.30	6.30	6.30	6.30	6.30
116(5580 MHz)	5.84					6.13		
tune up	6.30	/	/	/	/	6.30	/	/
120(5600 MHz)	5.26					5.60		
tune up	6.30	/	/	/	/	6.30	/	/
124(5620 MHz)	4.63					4.92		
tune up	5.00	/	/	/	/	5.00	/	/
128(5640 MHz)	4.00					4.27		
tune up	5.00	/	/	/	/	5.00	/	/
132(5660 MHz)	3.63					3.98		
tune up	5.00	/	/	/	/	5.00	/	/
136(5680 MHz)	3.50					3.86		
tune up	5.00	/	/	/	/	5.00	/	/
140(5700 MHz)	3.66					4.03		
tune up	5.00	/	/	/	/	5.00	/	/
144(5720 MHz)	4.13					4.42		
tune up	5.00	/	/	/	/	5.00	/	/
149(5745 MHz)	5.43							
tune up	6.00	/	/	/	/	/	/	/
153(5765 MHz)	6.18							
tune up	7.50	/	/	/	/	/	/	/
157(5785 MHz)	6.54	6.52	6.47	6.40	6.34	6.35	5.52	5.25
tune up	7.50	7.50	7.50	7.50	7.50	7.50	6.50	6.30
161(5805 MHz)	6.36							
tune up	7.50	/	/	/	/	/	/	/
165(5825 MHz)	5.85							
tune up	7.50	/	/	/	/	/	/	/

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

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
Primary antenna Up	Yes	Yes	Yes	Yes	Yes	No
Primary antenna Down	Yes	Yes	Yes	Yes	No	Yes
WLAN	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	11.5	14.13	No
		Body	19.20	11.5	14.13	Yes
2.4GHz WLAN	2.45	Head	9.58	17.5	56.23	No
		Body	19.17	17.5	56.23	No
WLAN 5GHz	5.2	Head	6.58	18	63.1	No
		Body	13.16	18	63.1	No
	5.3	Head	6.52	17.5	56.23	No
		Body	13.03	17.5	56.23	No
	5.6	Head	6.34	19	79.43	No
		Body	12.68	19	79.43	No
	5.8	Head	6.23	18.5	70.79	No
		Body	12.46	18.5	70.79	No

13 Evaluation of Simultaneous

Table 13.1: The sum of reported SAR values for main antenna and WiFi

	Position	Main antenna	WiFi	Sum
Highest reported SAR value for Head	Left hand, Tilt	1.17	0.11	**1.28**
	Right hand, Touch cheek	1.45	0.09	**1.54**
Highest reported SAR value for Body	Front	0.79	0.16	**0.95**
	Rear	1.05	0.15	**1.20**
	Right	0.28	0.17	**0.45**

Note1: we have evaluated and chose the highest value of both main antennae in the above table
Note2: we have evaluated and chose the highest value of WiFi 2.4G and 5G in the above table

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	Right hand, Touch cheek	1.45	<0.01	**1.46**
Maximum reported SAR value for Body	Rear	1.05	0.29[1]	**1.34**

[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	Body	10	11.5	14.13	0.29

* - Maximum possible output power declared by manufacturer

Note: The Value of BT Head is lower than 0.01.

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& GSM1900	1:8.3
GPRS&EGPRS for GSM850& GSM1900	1:4
WCDMA&LTE FDD	1:1

14.1 SAR results for Fast SAR

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

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
190	836.6	Left	Touch	/	30.2	30.5	0.154	**0.16**	0.288	**0.31**	0.04
190	836.6	Left	Tilt	/	30.2	30.5	0.120	**0.13**	0.235	**0.25**	-0.05
251	848.8	Right	Touch	/	30.21	30.5	0.163	**0.17**	0.328	**0.35**	-0.01
190	836.6	Right	Touch	/	30.2	30.5	0.186	**0.20**	0.359	**0.39**	0.04
128	824.2	Right	Touch	Fig.1	30.07	30.5	0.214	**0.24**	0.412	**0.45**	-0.06
190	836.6	Right	Tilt	/	30.2	30.5	0.142	**0.15**	0.306	**0.33**	0.02

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

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode (number of timeslots)	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
190	836.6	GPRS (2)	Front	/	31.2	31.5	0.146	**0.16**	0.246	**0.26**	0.09
251	848.8	GPRS (2)	Rear	/	31.2	31.5	0.129	**0.14**	0.209	**0.22**	0.01
190	836.6	GPRS (2)	Rear	/	31.2	31.5	0.155	**0.17**	0.255	**0.27**	0.07
128	824.2	GPRS (2)	Rear	Fig.2	31.17	31.5	0.176	**0.19**	0.304	**0.33**	-0.04
190	836.6	GPRS (2)	Left	/	31.2	31.5	0.137	**0.15**	0.203	**0.22**	0.02
190	836.6	GPRS (2)	Right	/	31.2	31.5	0.031	**0.03**	0.046	**0.05**	0.01
190	836.6	GPRS (2)	Top	/	31.2	31.5	0.113	**0.12**	0.213	**0.23**	0.01
128	824.2	EGPRS (2)	Rear	/	31.19	31.5	0.166	**0.18**	0.285	**0.31**	-0.04

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

Table 14.1-3: SAR Values (GSM 850 MHz Band - Head) – antenna down

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
190	836.6	Left	Touch	/	32.72	33.5	0.091	**0.11**	0.114	**0.14**	0.01
190	836.6	Left	Tilt	/	32.72	33.5	0.076	**0.09**	0.094	**0.11**	-0.08
251	848.8	Right	Touch	/	32.72	33.5	0.146	**0.17**	0.187	**0.22**	0.04
190	836.6	Right	Touch	/	32.72	33.5	0.147	**0.18**	0.189	**0.23**	0.15
128	824.2	Right	Touch	Fig.3	32.66	33.5	0.150	**0.18**	0.193	**0.23**	0.05
190	836.6	Right	Tilt	/	32.72	33.5	0.096	**0.11**	0.122	**0.15**	-0.03

Table 14.1-4: SAR Values (GSM 850 MHz Band - Body) – antenna down

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode (number of timeslots)	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
251	848.8	GPRS (2)	Front	/	31.2	31.5	0.214	**0.23**	0.381	**0.41**	0.02
190	836.6	GPRS (2)	Front	Fig.4	31.2	31.5	0.224	**0.24**	0.396	**0.42**	-0.09
128	824.2	GPRS (2)	Front	/	31.17	31.5	0.188	**0.20**	0.337	**0.36**	0.07
190	836.6	GPRS (2)	Rear	/	31.2	31.5	0.171	**0.18**	0.312	**0.33**	0.03
190	836.6	GPRS (2)	Left	/	31.2	31.5	0.071	**0.08**	0.113	**0.12**	0.09
190	836.6	GPRS (2)	Right	/	31.2	31.5	0.169	**0.18**	0.260	**0.28**	-0.05
190	836.6	GPRS (2)	Bottom	/	31.2	31.5	0.111	**0.12**	0.234	**0.25**	0.06
190	836.6	EGPRS (2)	Front	/	31.19	31.5	0.239	**0.26**	0.366	**0.39**	-0.07

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

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

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
810	1909.8	Left	Touch	/	24.99	25	0.190	**0.19**	0.308	**0.31**	0.08
810	1909.8	Left	Tilt	/	24.99	25	0.175	**0.18**	0.303	**0.30**	0.01
810	1909.8	Right	Touch	/	24.99	25	0.249	**0.25**	0.428	**0.43**	0.06
661	1880	Right	Touch	Fig.5	24.5	25	0.234	**0.26**	0.411	**0.46**	0.16
512	1850.2	Right	Touch	/	24.16	25	0.200	**0.24**	0.360	**0.44**	0.06
810	1909.8	Right	Tilt	/	24.99	25	0.194	**0.19**	0.347	**0.35**	-0.03

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

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode (number of timeslots)	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
810	1909.8	GPRS (2)	Front	Fig.6	28.62	29	0.253	**0.28**	0.461	**0.50**	0.11
661	1880	GPRS (2)	Front	/	28.22	29	0.120	**0.14**	0.237	**0.28**	0.07
512	1850.2	GPRS (2)	Front	/	28.16	29	0.120	**0.15**	0.207	**0.25**	-0.08
810	1909.8	GPRS (2)	Rear	/	28.62	29	0.154	**0.17**	0.250	**0.27**	0.08
810	1909.8	GPRS (2)	Left	/	28.62	29	0.146	**0.16**	0.257	**0.28**	0.01
810	1909.8	GPRS (2)	Right	/	28.62	29	0.037	**0.04**	0.066	**0.07**	0.03
810	1909.8	GPRS (2)	Top	/	28.62	29	0.192	**0.21**	0.379	**0.41**	-0.06
810	1909.8	EGPRS (2)	Front	/	28.65	29	0.238	**0.26**	0.445	**0.48**	0.04

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

Table 14.1-7: SAR Values (WCDMA 850 MHz Band - Head) – antenna up

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
4233	846.6	Left	Touch	/	24.01	24.5	0.456	**0.51**	0.775	**0.87**	0.07
4182	836.4	Left	Touch	/	23.97	24.5	0.444	**0.50**	0.768	**0.87**	0.03
4132	826.4	Left	Touch	/	23.87	24.5	0.521	**0.60**	0.872	**1.01**	0.04
4182	836.4	Left	Tilt	/	23.97	24.5	0.341	**0.39**	0.613	**0.69**	-0.04
4233	846.6	Right	Touch	Fig.7	24.01	24.5	0.568	**0.64**	1.05	**1.18**	-0.13
4182	836.4	Right	Touch	/	23.97	24.5	0.539	**0.61**	0.998	**1.13**	0.09
4132	826.4	Right	Touch	/	23.87	24.5	0.506	**0.58**	0.922	**1.07**	0.01
4233	846.6	Right	Tilt	/	24.01	24.5	0.427	**0.48**	0.861	**0.96**	0.05
4182	836.4	Right	Tilt	/	23.97	24.5	0.474	**0.54**	0.911	**1.03**	0.08
4132	826.4	Right	Tilt	/	23.87	24.5	0.504	**0.58**	0.976	**1.13**	0.04

Table 14.1-8: SAR Values (WCDMA 850 MHz Band - Body) – antenna up

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
4182	836.4	Front	/	24.66	25	0.117	**0.13**	0.172	**0.19**	0.09
4233	846.6	Rear	Fig.8	24.63	25	0.126	**0.14**	0.212	**0.23**	-0.12
4182	836.4	Rear	/	24.66	25	0.123	**0.13**	0.174	**0.19**	0.08
4132	826.4	Rear	/	24.8	25	0.130	**0.14**	0.182	**0.19**	0.01
4182	836.4	Left	/	24.66	25	0.101	**0.11**	0.122	**0.13**	0.08
4182	836.4	Right	/	24.66	25	0.029	**0.03**	0.036	**0.04**	0.09
4182	836.4	Top	/	24.66	25	0.076	**0.08**	0.130	**0.14**	0.01

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

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

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
4182	836.4	Left	Touch	/	24.66	25	0.091	**0.10**	0.110	**0.12**	0.01
4182	836.4	Left	Tilt	/	24.66	25	0.072	**0.08**	0.091	**0.10**	-0.1
4233	846.6	Right	Touch	/	24.63	25	0.102	**0.11**	0.148	**0.16**	0.17
4182	836.4	Right	Touch	/	24.66	25	0.127	**0.14**	0.163	**0.18**	0.04
4132	826.4	Right	Touch	Fig.9	24.8	25	0.135	**0.14**	0.175	**0.18**	0.05
4182	836.4	Right	Tilt	/	24.66	25	0.082	**0.09**	0.102	**0.11**	0.07

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

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
4233	846.6	Front	/	24.63	25	0.163	**0.18**	0.246	**0.27**	0.02
4182	836.4	Front	Fig.10	24.66	25	0.168	**0.18**	0.293	**0.32**	0.01
4132	826.4	Front	/	24.8	25	0.164	**0.17**	0.247	**0.26**	0.01
4182	836.4	Rear	/	24.66	25	0.150	**0.16**	0.223	**0.24**	0.09
4182	836.4	Left	/	24.66	25	0.054	**0.06**	0.068	**0.07**	-0.06
4182	836.4	Right	/	24.66	25	0.154	**0.17**	0.193	**0.21**	0.01
4182	836.4	Bottom	/	24.66	25	0.094	**0.10**	0.168	**0.18**	0.05

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

Table 14.1-11: SAR Values (WCDMA 1700 MHz Band - Head)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
1637	1732.4	Left	Touch	/	19.78	20	0.388	**0.41**	0.663	**0.70**	-0.02
1637	1732.4	Left	Tilt	/	19.78	20	0.384	**0.40**	0.716	**0.75**	0.09
1738	1752.6	Right	Touch	/	19.83	20	0.218	**0.23**	0.482	**0.50**	0.01
1637	1732.4	Right	Touch	Fig.11	19.78	20	0.442	**0.46**	0.766	**0.81**	0.13
1537	1712.4	Right	Touch	/	19.83	20	0.192	**0.20**	0.458	**0.48**	0.03
1738	1752.6	Right	Tilt	/	19.83	20	0.376	**0.39**	0.704	**0.73**	-0.04

Table 14.1-12: SAR Values (WCDMA 1700 MHz Band - Body)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
1637	1732.5	Front	/	24.39	25	0.226	**0.26**	0.426	**0.49**	0.09
1637	1732.5	Rear	/	24.39	25	0.175	**0.20**	0.320	**0.37**	0.01
1637	1732.5	Left	/	24.39	25	0.169	**0.19**	0.276	**0.32**	0.08
1637	1732.5	Right	/	24.39	25	0.026	**0.03**	0.043	**0.05**	0.02
1738	1752.6	Top	/	24.4	25	0.153	**0.18**	0.356	**0.41**	0.01
1637	1732.5	Top	Fig.12	24.39	25	0.278	**0.32**	0.546	**0.63**	0.19
1537	1712.4	Top	/	24.45	25	0.266	**0.30**	0.522	**0.59**	0.09

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

Table 14.1-13: SAR Values(WCDMA 1900 MHz Band - Head)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
9938	1907.6	Left	Touch	/	20.8	21	0.507	**0.53**	0.845	**0.88**	0.02
9800	1880	Left	Touch	/	20.8	21	0.519	**0.54**	0.851	**0.89**	0.09
9662	1852.4	Left	Touch	/	20.73	21	0.506	**0.54**	0.828	**0.88**	-0.04
9938	1907.6	Left	Tilt	/	20.8	21	0.455	**0.48**	0.754	**0.79**	-0.11
9800	1880	Left	Tilt	/	20.8	21	0.487	**0.51**	0.864	**0.90**	0.01
9662	1852.4	Left	Tilt	/	20.73	21	0.465	**0.49**	0.799	**0.85**	0.13
9938	1907.6	Right	Touch	Fig.13	20.8	21	0.703	**0.74**	1.20	**1.26**	-0.07
9800	1880	Right	Touch	/	20.8	21	0.697	**0.73**	1.19	**1.24**	0.09
9662	1852.4	Right	Touch	/	20.73	21	0.671	**0.71**	1.14	**1.21**	0.01
9938	1907.6	Right	Tilt	/	20.8	21	0.505	**0.53**	0.954	**1.00**	0.06
9800	1880	Right	Tilt	/	20.8	21	0.520	**0.54**	0.972	**1.02**	0.09
9662	1852.4	Right	Tilt	/	20.73	21	0.486	**0.52**	0.940	**1.00**	-0.11

Table 14.1-14: SAR Values (WCDMA 1900 MHz Band - Body)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
9800	1880	Front	/	24.21	25	0.272	**0.33**	0.494	**0.59**	0.08
9800	1880	Rear	/	24.21	25	0.203	**0.24**	0.356	**0.43**	0.01
9800	1880	Left	/	24.21	25	0.162	**0.19**	0.270	**0.32**	-0.04
9800	1880	Right	/	24.21	25	0.048	**0.06**	0.080	**0.10**	0.02
9938	1907.6	Top	/	24.24	25	0.287	**0.34**	0.556	**0.66**	0.09
9800	1880	Top	Fig.14	24.21	25	0.353	**0.42**	0.695	**0.83**	-0.03
9662	1852.4	Top	/	24.11	25	0.323	**0.40**	0.623	**0.76**	0.01

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

Table 14.1-15: SAR Values (LTE Band2 - Head)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
19100	1900	1RB_Low	Left	Touch	/	21.2	21.5	0.575	**0.62**	0.974	**1.04**	-0.04
18900	1880	1RB_Low	Left	Touch	/	21.49	21.5	0.575	**0.58**	0.968	**0.97**	0.02
18700	1860	1RB_Low	Left	Touch	/	21.27	21.5	0.558	**0.59**	0.943	**0.99**	0.15
19100	1900	1RB_Low	Left	Tilt	/	21.2	21.5	0.511	**0.55**	0.882	**0.95**	0.13
18900	1880	1RB_Low	Left	Tilt	/	21.49	21.5	0.525	**0.53**	0.904	**0.91**	0.08
18700	1860	1RB_Low	Left	Tilt	/	21.27	21.5	0.501	**0.53**	0.860	**0.91**	0.06
19100	1900	1RB_Low	Right	Touch	Fig.15	21.2	21.5	0.744	**0.80**	1.33	**1.43**	0.02
18900	1880	1RB_Low	Right	Touch	/	21.49	21.5	0.734	**0.74**	1.28	**1.28**	0.03
18700	1860	1RB_Low	Right	Touch	/	21.27	21.5	0.685	**0.72**	1.26	**1.33**	0.11
19100	1900	1RB_Low	Right	Tilt	/	21.2	21.5	0.614	**0.66**	1.16	**1.24**	-0.07
18900	1880	1RB_Low	Right	Tilt	/	21.49	21.5	0.613	**0.61**	1.17	**1.17**	-0.11
18700	1860	1RB_Low	Right	Tilt	/	21.27	21.5	0.581	**0.61**	1.12	**1.18**	0.08
19100	1900	50RB_Low	Left	Touch	/	21.13	21.5	0.533	**0.58**	0.906	**0.99**	0.12
18900	1880	50RB_Low	Left	Touch	/	21.11	21.5	0.578	**0.63**	0.977	**1.07**	0.05
18700	1860	50RB_Low	Left	Touch	/	21.12	21.5	0.534	**0.58**	0.900	**0.98**	0.01
19100	1900	50RB_Mid	Left	Tilt	/	21.13	21.5	0.476	**0.52**	0.822	**0.90**	0.10
18900	1880	50RB_Mid	Left	Tilt	/	21.11	21.5	0.528	**0.58**	0.907	**0.99**	-0.06
18700	1860	50RB_Mid	Left	Tilt	/	21.12	21.5	0.484	**0.53**	0.832	**0.91**	0.14
19100	1900	50RB_Low	Right	Touch	/	21.13	21.5	0.712	**0.78**	1.30	**1.42**	0.05
18900	1880	50RB_Low	Right	Touch	/	21.11	21.5	0.694	**0.76**	1.24	**1.35**	0.09
18700	1860	50RB_Low	Right	Touch	/	21.12	21.5	0.676	**0.74**	1.21	**1.32**	0.18
19100	1900	50RB_Low	Right	Tilt	/	21.13	21.5	0.573	**0.62**	1.07	**1.17**	-0.05
18900	1880	50RB_Low	Right	Tilt	/	21.11	21.5	0.614	**0.67**	1.17	**1.28**	-0.17
18700	1860	50RB_Low	Right	Tilt	/	21.12	21.5	0.554	**0.60**	1.06	**1.16**	-0.06
18900	1880	100RB	Left	Touch	/	21.15	21.5	0.568	**0.62**	0.958	**1.04**	0.11
18900	1880	100RB	Left	Tilt	/	21.15	21.5	0.516	**0.56**	0.888	**0.96**	0.08
18900	1880	100RB	Right	Touch	/	21.15	21.5	0.730	**0.79**	1.31	**1.42**	0.04
18700	1860	100RB	Right	Touch	/	21.02	21.5	0.611	**0.68**	1.05	**1.17**	0.01
18900	1880	100RB	Right	Tilt	/	21.15	21.5	0.608	**0.66**	1.15	**1.25**	0.15
18700	1860	100RB	Right	Tilt	/	21.02	21.5	0.591	**0.66**	0.998	**1.11**	0.11

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-16: SAR Values (LTE Band2 - Body)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
19100	1900	1RB_High	Front	/	24.28	24.3	0.234	**0.24**	0.440	**0.44**	0.01
19100	1900	1RB_High	Rear	/	24.28	24.3	0.321	**0.32**	0.565	**0.57**	-0.06
19100	1900	1RB_High	Left	/	24.28	24.3	0.149	**0.15**	0.260	**0.26**	-0.05
19100	1900	1RB_High	Right	/	24.28	24.3	0.045	**0.05**	0.079	**0.08**	-0.09
19100	1900	1RB_High	Top	Fig.16	24.28	24.3	0.322	**0.32**	0.617	**0.62**	0.14
18900	1880	50RB_Low	Front	/	23.13	23.3	0.188	**0.20**	0.360	**0.37**	0.03
18900	1880	50RB_Low	Rear	/	23.13	23.3	0.273	**0.28**	0.480	**0.50**	0.01
18900	1880	50RB_Low	Left	/	23.13	23.3	0.167	**0.17**	0.304	**0.32**	0.06
18900	1880	50RB_Low	Right	/	23.13	23.3	0.034	**0.04**	0.060	**0.06**	-0.01
18900	1880	50RB_Low	Top	/	23.13	23.3	0.244	**0.25**	0.493	**0.51**	0.02

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 Band4 - Head)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
20300	1745	1RB_High	Left	Touch	/	21.34	22	0.503	**0.59**	0.829	**0.97**	0.09
20175	1732.5	1RB_High	Left	Touch	/	21.32	22	0.509	**0.60**	0.870	**1.02**	0.12
20050	1720	1RB_High	Left	Touch	/	31.32	22	0.513	**0.06**	0.906	**0.11**	-0.04
20300	1745	1RB_High	Left	Tilt	/	21.34	22	0.509	**0.59**	0.937	**1.09**	0.15
20175	1732.5	1RB_High	Left	Tilt	/	21.32	22	0.523	**0.61**	0.983	**1.15**	0.09
20050	1720	1RB_High	Left	Tilt	/	31.32	22	0.539	**0.06**	1.028	**0.12**	0.10
20300	1745	1RB_High	Right	Touch	Fig.17	21.34	22	0.687	**0.80**	1.23	**1.43**	0.03
20175	1732.5	1RB_High	Right	Touch	/	21.32	22	0.650	**0.76**	1.11	**1.30**	-0.01
20050	1720	1RB_High	Right	Touch	/	21.32	22	0.633	**0.74**	1.11	**1.29**	-0.08
20300	1745	1RB_High	Right	Tilt	/	21.34	22	0.539	**0.63**	0.982	**1.14**	0.02
20175	1732.5	1RB_High	Right	Tilt	/	21.32	22	0.544	**0.64**	1.00	**1.17**	0.18
20050	1720	1RB_High	Right	Tilt	/	21.32	22	0.542	**0.63**	1.01	**1.18**	0.03
20300	1745	50RB_Low	Left	Touch	/	21.22	22	0.516	**0.62**	0.887	**1.06**	0.08
20175	1732.5	50RB_Low	Left	Touch	/	21.28	22	0.502	**0.59**	0.893	**1.05**	0.11
20050	1720	50RB_Low	Left	Touch	/	21.25	22	0.528	**0.63**	0.963	**1.14**	0.14
20300	1745	50RB_Low	Left	Tilt	/	21.22	22	0.512	**0.61**	0.930	**1.11**	-0.05
20175	1732.5	50RB_Low	Left	Tilt	/	21.28	22	0.502	**0.59**	0.932	**1.10**	-0.12
20050	1720	50RB_Low	Left	Tilt	/	21.25	22	0.522	**0.62**	0.983	**1.17**	0.07
20300	1745	50RB_Low	Right	Touch	/	21.22	22	0.610	**0.73**	1.09	**1.30**	0.09
20175	1732.5	50RB_Low	Right	Touch	/	21.28	22	0.636	**0.75**	1.08	**1.27**	0.02
20050	1720	50RB_Low	Right	Touch	/	21.25	22	0.612	**0.73**	1.09	**1.30**	0.14
20300	1745	50RB_Low	Right	Tilt	/	21.22	22	0.540	**0.65**	0.987	**1.18**	0.11
20175	1732.5	50RB_Low	Right	Tilt	/	21.28	22	0.528	**0.62**	0.970	**1.14**	-0.13
20050	1720	50RB_Low	Right	Tilt	/	21.25	22	0.529	**0.63**	0.983	**1.17**	-0.06
20175	1732.5	100RB	Left	Touch	/	21.25	22	0.495	**0.59**	0.869	**1.03**	0.02
20175	1732.5	100RB	Left	Tilt	/	21.25	22	0.492	**0.58**	0.906	**1.08**	0.10
20175	1732.5	100RB	Right	Touch	/	21.25	22	0.618	**0.73**	1.08	**1.28**	0.12
20050	1720	100RB	Right	Touch	/	21.2	22	0.598	**0.72**	0.981	**1.18**	0.02
20175	1732.5	100RB	Right	Tilt	/	21.25	22	0.515	**0.61**	0.944	**1.12**	0.05

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-18: SAR Values (LTE Band4 - Body)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20300	1745	1RB_High	Front	/	23.86	24	0.213	**0.22**	0.407	**0.42**	0.11
20300	1745	1RB_High	Rear	/	23.86	24	0.173	**0.18**	0.309	**0.32**	0.10
20300	1745	1RB_High	Left	/	23.86	24	0.157	**0.16**	0.265	**0.27**	-0.12
20300	1745	1RB_High	Right	/	23.86	24	0.015	**0.02**	0.025	**0.03**	0.04
20300	1745	1RB_High	Top	Fig.18	23.86	24	0.270	**0.28**	0.533	**0.55**	-0.05
20175	1732.5	50RB_Low	Front	/	22.73	23	0.161	**0.17**	0.312	**0.33**	0.10
20175	1732.5	50RB_Low	Rear	/	22.73	23	0.133	**0.14**	0.246	**0.26**	-0.01
20175	1732.5	50RB_Low	Left	/	22.73	23	0.114	**0.12**	0.193	**0.21**	0.03
20175	1732.5	50RB_Low	Right	/	22.73	23	0.009	**0.01**	0.015	**0.02**	0.14
20175	1732.5	50RB_Low	Top	/	22.73	23	0.221	**0.24**	0.443	**0.47**	-0.02

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

Note2: The LTE mode is QPSK_20MHz.

Table 14.1-19: SAR Values (LTE Band5 - Head) – antenna up

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃												
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											
20450	829	1RB_High	Left	Touch	/	23.69	24	0.438	**0.47**	0.684	**0.73**	0.03
20450	829	1RB_High	Left	Tilt	/	23.69	24	0.312	**0.34**	0.502	**0.54**	0.02
20600	844	1RB_High	Right	Touch	/	23.43	24	0.449	**0.51**	0.746	**0.85**	0.05
20525	836.5	1RB_High	Right	Touch	Fig.19	23.43	24	0.472	**0.54**	0.787	**0.90**	-0.01
20450	829	1RB_High	Right	Touch	/	23.69	24	0.482	**0.52**	0.809	**0.87**	0.09
20450	829	1RB_High	Right	Tilt	/	23.69	24	0.409	**0.44**	0.733	**0.79**	0.04
20600	844	25RB_Low	Left	Touch	/	22.43	23	0.336	**0.38**	0.519	**0.59**	0.01
20600	844	25RB_Low	Left	Tilt	/	22.43	23	0.246	**0.28**	0.395	**0.45**	0.05
20600	844	25RB_Low	Right	Touch	/	22.43	23	0.387	**0.44**	0.644	**0.73**	0.01
20600	844	25RB_Low	Right	Tilt	/	22.43	23	0.328	**0.37**	0.603	**0.69**	0.02
20525	836.5	50RB	Right	Touch	/	22.4	23	0.364	**0.42**	0.609	**0.70**	-0.03

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-20: SAR Values (LTE Band5 - Body) – antenna up

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
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										
20450	829	1RB_High	Front	/	23.69	24	0.135	**0.14**	0.246	**0.26**	-0.08
20450	829	1RB_High	Rear	Fig.20	23.69	24	0.160	**0.17**	0.283	**0.30**	0.11
20450	829	1RB_High	Left	/	23.69	24	0.131	**0.14**	0.196	**0.21**	0.04
20450	829	1RB_High	Right	/	23.69	24	0.054	**0.06**	0.094	**0.10**	-0.11
20450	829	1RB_High	Top	/	23.69	24	0.087	**0.09**	0.182	**0.20**	0.01
20600	844	25RB_Low	Front	/	22.43	23	0.106	**0.12**	0.194	**0.22**	0.05
20600	844	25RB_Low	Rear	/	22.43	23	0.124	**0.14**	0.215	**0.25**	0.09
20600	844	25RB_Low	Left		22.43	23	0.101	**0.12**	0.152	**0.17**	-0.17
20600	844	25RB_Low	Right	/	22.43	23	0.026	**0.03**	0.067	**0.08**	0.09
20600	844	25RB_Low	Top	/	22.43	23	0.067	**0.08**	0.139	**0.16**	0.04

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-21: SAR Values (LTE Band5 - Head) – antenna down

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃												
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											
20450	829	1RB_High	Left	Touch	/	23.69	24	0.098	**0.11**	0.128	**0.14**	-0.08
20450	829	1RB_High	Left	Tilt	/	23.69	24	0.059	**0.06**	0.080	**0.09**	-0.05
20450	829	1RB_High	Right	Touch	Fig.21	23.69	24	0.123	**0.13**	0.159	**0.17**	0.02
20450	829	1RB_High	Right	Tilt	/	23.69	24	0.074	**0.08**	0.100	**0.11**	0.01
20600	844	25RB_Low	Left	Touch	/	22.43	23	0.091	**0.10**	0.120	**0.14**	0.06
20600	844	25RB_Low	Left	Tilt	/	22.43	23	0.045	**0.05**	0.066	**0.07**	0.03
20600	844	25RB_Low	Right	Touch	/	22.43	23	0.074	**0.08**	0.100	**0.11**	0.01
20600	844	25RB_Low	Right	Tilt	/	22.43	23	0.057	**0.07**	0.077	**0.09**	0.03

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-22: SAR Values (LTE Band5 - Body) – antenna down

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
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										
20450	829	1RB_High	Front	Fig.22	23.69	24	0.128	**0.14**	0.222	**0.24**	-0.14
20450	829	1RB_High	Rear	/	23.69	24	0.093	**0.10**	0.169	**0.18**	0.04
20450	829	1RB_High	Left	/	23.69	24	0.040	**0.04**	0.061	**0.07**	-0.01
20450	829	1RB_High	Right	/	23.69	24	0.115	**0.12**	0.177	**0.19**	0.02
20450	829	1RB_High	Bottom	/	23.69	24	0.067	**0.07**	0.141	**0.15**	0.15
20600	844	25RB_Low	Front	/	22.43	23	0.095	**0.11**	0.168	**0.19**	0.09
20600	844	25RB_Low	Rear	/	22.43	23	0.073	**0.08**	0.132	**0.15**	-0.04
20600	844	25RB_Low	Left	/	22.43	23	0.031	**0.03**	0.047	**0.05**	-0.11
20600	844	25RB_Low	Right	/	22.43	23	0.086	**0.10**	0.133	**0.15**	-0.03
20600	844	25RB_Low	Bottom	/	22.43	23	0.052	**0.06**	0.111	**0.13**	0.04

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-23: SAR Values (LTE Band7 - Head)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
21350	2560	1RB_High	Left	Touch	/	16.46	17	0.330	**0.37**	0.663	**0.75**	0.06
21350	2560	1RB_High	Left	Tilt	/	16.46	17	0.250	**0.28**	0.523	**0.59**	-0.03
21350	2560	1RB_High	Right	Touch	Fig.23	16.46	17	0.440	**0.50**	0.974	**1.10**	-0.02
21100	2535	1RB_High	Right	Touch	/	16.34	17	0.418	**0.49**	0.897	**1.04**	0.07
20850	2510	1RB_High	Right	Touch	/	16.3	17	0.412	**0.48**	0.886	**1.04**	0.01
21350	2560	1RB_High	Right	Tilt	/	16.46	17	0.311	**0.35**	0.685	**0.78**	-0.01
20850	2510	50RB_ High	Left	Touch	/	16.27	17	0.300	**0.35**	0.572	**0.68**	0.07
20850	2510	50RB_ High	Left	Tilt	/	16.27	17	0.229	**0.27**	0.450	**0.53**	0.08
21350	2560	50RB_ High	Right	Touch	/	16.21	17	0.395	**0.47**	0.853	**1.02**	0.00
21100	2535	50RB_ Low	Right	Touch	/	16.17	17	0.405	**0.49**	0.874	**1.06**	0.00
20850	2510	50RB_ High	Right	Touch	/	16.27	17	0.399	**0.47**	0.858	**1.02**	0.02
20850	2510	50RB_ High	Right	Tilt	/	16.27	17	0.288	**0.34**	0.617	**0.73**	-0.06
20850	2510	100RB	Right	Touch	/	16.21	17	0.227	**0.27**	0.390	**0.47**	-0.06

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-24: SAR Values (LTE Band7 - Body)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
21350	2560	1RB_High	Front	/	23.7	24	0.384	**0.41**	0.739	**0.79**	-0.08
21350	2560	1RB_High	Rear	/	23.7	24	0.462	**0.50**	0.863	**0.92**	0.13
21100	2535	1RB_High	Rear	Fig.18	23.45	24	0.505	**0.57**	0.929	**1.05**	-0.18
20850	2510	1RB_Low	Rear	/	23.45	24	0.403	**0.46**	0.748	**0.85**	0.04
21350	2560	1RB_High	Left	/	23.7	24	0.120	**0.13**	0.227	**0.24**	0.01
21350	2560	1RB_High	Right	/	23.7	24	0.027	**0.03**	0.052	**0.06**	-0.06
21350	2560	1RB_High	Top	/	23.7	24	0.098	**0.11**	0.193	**0.21**	-0.11
20850	2510	50RB_ High	Front	/	22.34	23	0.284	**0.33**	0.540	**0.63**	0.05
20850	2510	50RB_ High	Rear	/	22.34	23	0.317	**0.37**	0.591	**0.69**	0.09
20850	2510	50RB_ High	Left	/	22.34	23	0.075	**0.09**	0.145	**0.17**	-0.17
20850	2510	50RB_ High	Right	/	22.34	23	0.178	**0.21**	0.035	**0.04**	0.09
20850	2510	50RB_ High	Top	/	22.34	23	0.076	**0.09**	0.161	**0.19**	0.04
20850	2510	100RB	Rear	/	22.29	23	0.262	**0.31**	0.568	**0.67**	-0.12

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 Band12 - Head) – antenna up

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
23060	704	1RB_High	Left	Touch	/	22.89	23	0.254	**0.26**	0.470	**0.48**	-0.05
23060	704	1RB_High	Left	Tilt	/	22.89	23	0.212	**0.22**	0.388	**0.40**	0.03
23060	704	1RB_High	Right	Touch	/	22.89	23	0.254	**0.26**	0.505	**0.52**	-0.08
23060	704	1RB_High	Right	Tilt	Fig.25	22.89	23	0.298	**0.31**	0.614	**0.63**	-0.10
23060	704	25RB_High	Left	Touch	/	22.31	23	0.190	**0.22**	0.354	**0.41**	0.06
23060	704	25RB_High	Left	Tilt	/	22.31	23	0.161	**0.19**	0.294	**0.34**	0.01
23060	704	25RB_High	Right	Touch	/	22.31	23	0.188	**0.22**	0.372	**0.44**	0.05
23060	704	25RB_High	Right	Tilt	/	22.31	23	0.224	**0.26**	0.459	**0.54**	-0.08

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-26: SAR Values (LTE Band12 - Body) – antenna up

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23060	704	1RB_High	Front	/	23.45	24	0.078	**0.09**	0.141	**0.16**	0.13
23060	704	1RB_High	Rear	Fig.26	23.45	24	0.105	**0.12**	0.186	**0.21**	0.02
23060	704	1RB_High	Left	/	23.45	24	0.072	**0.08**	0.109	**0.12**	0.01
23060	704	1RB_High	Right	/	23.45	24	0.027	**0.03**	0.040	**0.05**	0.04
23060	704	1RB_High	Top	/	23.45	24	0.048	**0.05**	0.100	**0.11**	0.13
23095	707.5	25RB_Low	Front	/	22.31	23	0.057	**0.07**	0.104	**0.12**	-0.12
23095	707.5	25RB_Low	Rear	/	22.31	23	0.079	**0.09**	0.136	**0.16**	0.04
23095	707.5	25RB_Low	Left	/	22.31	23	0.052	**0.06**	0.081	**0.09**	-0.02
23095	707.5	25RB_Low	Right	/	22.31	23	0.018	**0.02**	0.027	**0.03**	0.05
23095	707.5	25RB_Low	Top	/	22.31	23	0.036	**0.04**	0.076	**0.09**	0.11

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-27: SAR Values (LTE Band12 - Head) – antenna down

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
23060	704	1RB_High	Left	Touch	/	23.45	24	0.075	**0.08**	0.089	**0.10**	-0.05
23060	704	1RB_High	Left	Tilt	/	23.45	24	0.059	**0.07**	0.073	**0.08**	0.09
23060	704	1RB_High	Right	Touch	Fig.27	23.45	24	0.087	**0.10**	0.107	**0.12**	0.02
23060	704	1RB_High	Right	Tilt	/	23.45	24	0.064	**0.07**	0.078	**0.09**	0.02
23095	707.5	25RB_Low	Left	Touch	/	22.31	23	0.059	**0.07**	0.071	**0.08**	-0.04
23095	707.5	25RB_Low	Left	Tilt	/	22.31	23	0.050	**0.06**	0.066	**0.08**	0.01
23095	707.5	25RB_Low	Right	Touch	/	22.31	23	0.073	**0.08**	0.089	**0.10**	0.03
23095	707.5	25RB_Low	Right	Tilt	/	22.31	23	0.049	**0.06**	0.059	**0.07**	0.01

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-28: SAR Values (LTE Band12 - Body) – antenna down

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23060	704	1RB_High	Front	/	23.45	24	0.126	**0.14**	0.157	**0.18**	0.11
23060	704	1RB_High	Rear	/	23.45	24	0.105	**0.12**	0.135	**0.15**	-0.08
23060	704	1RB_High	Left	/	23.45	24	0.065	**0.07**	0.114	**0.13**	0.09
23060	704	1RB_High	Right	Fig.28	23.45	24	0.155	**0.18**	0.217	**0.25**	-0.18
23060	704	1RB_High	Bottom	/	23.45	24	0.046	**0.05**	0.081	**0.09**	-0.13
23095	707.5	25RB_Low	Front	/	22.31	23	0.099	**0.12**	0.125	**0.15**	-0.01
23095	707.5	25RB_Low	Rear	/	22.31	23	0.084	**0.10**	0.107	**0.13**	0.03
23095	707.5	25RB_Low	Left	/	22.31	23	0.062	**0.07**	0.088	**0.10**	0.05
23095	707.5	25RB_Low	Right	/	22.31	23	0.110	**0.13**	0.153	**0.18**	-0.02
23095	707.5	25RB_Low	Bottom	/	22.31	23	0.035	**0.04**	0.064	**0.07**	0.11

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-29: SAR Values (LTE Band30 - Head) – antenna up

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
27710	2310	1RB_High	Left	Touch	/	18.91	19.2	0.433	**0.46**	0.859	**0.92**	0.02
27710	2310	1RB_High	Left	Tilt	/	18.91	19.2	0.371	**0.40**	0.793	**0.85**	-0.04
27710	2310	1RB_High	Right	Touch	Fig.29	18.91	19.2	0.621	**0.66**	1.30	**1.39**	0.04
27710	2310	1RB_High	Right	Tilt	/	18.91	19.2	0.470	**0.50**	1.05	**1.12**	0.03
27710	2310	25RB_Low	Left	Touch	/	18.86	19.2	0.423	**0.46**	0.842	**0.91**	0.09
27710	2310	25RB_Low	Left	Tilt	/	18.86	19.2	0.492	**0.53**	0.779	**0.84**	0.01
27710	2310	25RB_Low	Right	Touch	/	18.86	19.2	0.608	**0.66**	1.27	**1.37**	0.03
27710	2310	25RB_Low	Right	Tilt	/	18.86	19.2	0.461	**0.50**	1.04	**1.12**	0.04
27710	2310	50RB	Left	Touch	/	18.82	19.2	0.451	**0.49**	0.897	**0.98**	0.03
27710	2310	50RB	Left	Tilt	/	18.82	19.2	0.353	**0.39**	0.753	**0.82**	0.01
27710	2310	50RB	Right	Touch	/	18.82	19.2	0.534	**0.58**	1.11	**1.21**	0.08
27710	2310	50RB	Right	Tilt	/	18.82	19.2	0.383	**0.42**	0.837	**0.91**	0.06

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-30: SAR Values (LTE Band30 - Body) – antenna up

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
27710	2310	1RB_High	Front	Fig.30	23.48	24	0.302	**0.34**	0.523	**0.59**	0.15
27710	2310	1RB_High	Rear	/	23.48	24	0.291	**0.33**	0.483	**0.54**	0.01
27710	2310	1RB_High	Left	/	23.48	24	0.129	**0.15**	0.222	**0.25**	0.09
27710	2310	1RB_High	Right	/	23.48	24	0.021	**0.02**	0.037	**0.04**	0.06
27710	2310	1RB_High	Top	/	23.48	24	0.134	**0.15**	0.265	**0.30**	-0.06
27710	2310	25RB_Low	Front	/	22.34	23	0.222	**0.26**	0.385	**0.45**	0.12
27710	2310	25RB_Low	Rear	/	22.34	23	0.216	**0.25**	0.359	**0.42**	0.16
27710	2310	25RB_Low	Left	/	22.34	23	0.094	**0.11**	0.162	**0.19**	0.04
27710	2310	25RB_Low	Right	/	22.34	23	0.013	**0.02**	0.021	**0.02**	0.05
27710	2310	25RB_Low	Top	/	22.34	23	0.106	**0.12**	0.209	**0.24**	0.09

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

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-31: SAR Values (LTE Band30 - Head) – antenna down

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
27710	2310	1RB_High	Left	Touch	/	23.48	24	0.022	**0.02**	0.038	**0.04**	0.17
27710	2310	1RB_High	Left	Tilt	/	23.48	24	0.012	**0.01**	0.026	**0.03**	0.08
27710	2310	1RB_High	Right	Touch	Fig.31	23.48	24	0.042	**0.05**	0.074	**0.08**	0.01
27710	2310	1RB_High	Right	Tilt	/	23.48	24	0.010	**0.01**	0.019	**0.02**	0.03
27710	2310	25RB_Low	Left	Touch	/	22.34	23	0.017	**0.02**	0.032	**0.04**	0.01
27710	2310	25RB_Low	Left	Tilt	/	22.34	23	0.010	**0.01**	0.024	**0.03**	0.15
27710	2310	25RB_Low	Right	Touch	/	22.34	23	0.033	**0.04**	0.059	**0.07**	0.06
27710	2310	25RB_Low	Right	Tilt	/	22.34	23	0.008	**0.01**	0.015	**0.02**	0.02

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-32: SAR Values (LTE Band30 - Body) – antenna down

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
27710	2310	1RB_High	Front	Fig.32	23.48	24	0.062	**0.07**	0.115	**0.13**	0.16
27710	2310	1RB_High	Rear	/	23.48	24	0.053	**0.06**	0.092	**0.10**	0.11
27710	2310	1RB_High	Left	/	23.48	24	0.035	**0.04**	0.064	**0.07**	-0.09
27710	2310	1RB_High	Right	/	23.48	24	0.006	**0.01**	0.011	**0.01**	0.17
27710	2310	1RB_High	Bottom	/	23.48	24	0.031	**0.03**	0.062	**0.07**	-0.09
27710	2310	25RB_Low	Front	/	22.34	23	0.049	**0.06**	0.091	**0.11**	0.03
27710	2310	25RB_Low	Rear	/	22.34	23	0.048	**0.06**	0.083	**0.10**	-0.04
27710	2310	25RB_Low	Left	/	22.34	23	0.025	**0.03**	0.046	**0.05**	0.02
27710	2310	25RB_Low	Right	/	22.34	23	0.004	**0.00**	0.008	**0.01**	0.16
27710	2310	25RB_Low	Bottom	/	22.34	23	0.028	**0.03**	0.056	**0.07**	-0.01

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

Note2: The LTE mode is QPSK_10MHz.

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) – antenna up

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
128	824.2	Right	Touch	Fig.1	30.07	30.5	0.214	**0.24**	0.412	**0.45**	-0.06

Note: the head SAR of GSM850 is tested with GPRS (3Txslots) mode because of VoIP.

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

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode (number of timeslots)	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
128	824.2	GPRS (2)	Rear	Fig.2	31.17	31.5	0.176	**0.19**	0.304	**0.33**	-0.04

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

Table 14.2-3: SAR Values (GSM 850 MHz Band - Head) – antenna down

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
128	824.2	Right	Touch	Fig.3	32.66	33.5	0.150	**0.18**	0.193	**0.23**	0.05

Note: the head SAR of GSM850 is tested with GPRS (3Txslots) mode because of VoIP.

Table 14.2-4: SAR Values (GSM 850 MHz Band - Body) – antenna down

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode (number of timeslots)	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
190	836.6	GPRS (2)	Front	Fig.4	31.2	31.5	0.224	**0.24**	0.396	**0.42**	-0.09

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

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

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
661	1880	Right	Touch	Fig.5	24.5	25	0.234	**0.26**	0.411	**0.46**	0.16

Note: the head SAR of GSM1900 is tested with GPRS (2Txslots) mode because of VoIP.

Table 14.2-6: 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./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
810	1909.8	GPRS (2)	Front	Fig.6	28.62	29	0.253	**0.28**	0.461	**0.50**	0.11

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

Table 14.2-7: SAR Values (WCDMA 850 MHz Band - Head) – antenna up

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
4233	846.6	Right	Touch	Fig.7	24.01	24.5	0.568	**0.64**	1.05	**1.18**	-0.13

Table 14.2-8: SAR Values (WCDMA 850 MHz Band - Body) – antenna up

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC										
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
4233	846.6	Rear	Fig.8	24.63	25	0.126	**0.14**	0.212	**0.23**	-0.12

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

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

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
4132	826.4	Right	Touch	Fig.9	24.8	25	0.135	**0.14**	0.175	**0.18**	0.05

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

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
4182	836.4	Front	Fig.10	24.66	25	0.168	**0.18**	0.293	**0.32**	0.01

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

Table 14.2-11: SAR Values (WCDMA 1700 MHz Band - Head)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
1637	1732.4	Right	Touch	Fig.11	19.78	20	0.442	**0.46**	0.766	**0.81**	0.13

Table 14.2-12: SAR Values (WCDMA 1700 MHz Band - Body)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
1637	1732.5	Top	Fig.12	24.39	25	0.278	**0.32**	0.546	**0.63**	0.19

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

Table 14.2-13: SAR Values(WCDMA 1900 MHz Band - Head)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
9938	1907.6	Right	Touch	Fig.13	20.8	21	0.703	**0.74**	1.20	**1.26**	-0.07

Table 14.2-14: SAR Values (WCDMA 1900 MHz Band - Body)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
9800	1880	Top	Fig.14	24.21	25	0.353	**0.42**	0.695	**0.83**	-0.03

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

Table 14.2-15: SAR Values (LTE Band2 - Head)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
19100	1900	1RB_Low	Right	Touch	Fig.15	21.2	21.5	0.744	**0.80**	1.33	1.43	0.02

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-16: SAR Values (LTE Band2 - Body)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)	
Ch.	MHz											
19100	1900	1RB_High	Top	Fig.16	24.28	24.3	0.322	**0.32**	0.617	0.62	0.14	

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 Band4 - Head)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
20300	1745	1RB_High	Right	Touch	Fig.17	21.34	22	0.687	**0.80**	1.23	1.43	0.03

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-18: SAR Values (LTE Band4 - Body)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
20300	1745	1RB_High	Top	Fig.18	23.86	24	0.270	**0.28**	0.533	0.55	-0.05

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_20MHz.

Table 14.2-19: SAR Values (LTE Band5 - Head) – antenna up

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											
20525	836.5	1RB_High	Right	Touch	Fig.19	23.43	24	0.472	**0.54**	0.787	**0.90**	-0.01

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-20: SAR Values (LTE Band5 - Body) – antenna up

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											
20450	829	1RB_High	Rear	Fig.20	23.69	24	0.160	**0.17**	0.283	**0.30**	0.11	

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_10MHz.

Table 14.2-21: SAR Values (LTE Band5 - Head) – antenna down

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											
20450	829	1RB_High	Right	Touch	Fig.21	23.69	24	0.123	**0.13**	0.159	**0.17**	0.02

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-22: SAR Values (LTE Band5 - Body) – antenna down

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											
20450	829	1RB_High	Front	Fig.22	23.69	24	0.128	**0.14**	0.222	**0.24**	-0.14	

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_10MHz.

Table 14.2-23: SAR Values (LTE Band7 - Head)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
21350	2560	1RB_High	Right	Touch	Fig.23	16.46	17	0.440	**0.50**	0.974	**1.10**	-0.02

Note1: The LTE mode is QPSK_20MHz.

Table 14.2-24: SAR Values (LTE Band7 - Body)

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
21100	2535	1RB_High	Rear	Fig.18	23.45	24	0.505	**0.57**	0.929	**1.05**	-0.18

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 Band12 - Head) – antenna up

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
23060	704	1RB_High	Right	Tilt	Fig.25	22.89	23	0.298	**0.31**	0.614	**0.63**	-0.10

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-26: SAR Values (LTE Band12 - Body) – antenna up

Ambient Temperature: 22.9 ℃ Liquid Temperature: 22.5℃											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
23060	704	1RB_High	Rear	Fig.26	23.45	24	0.105	**0.12**	0.186	**0.21**	0.02

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_10MHz.

Table 14.2-27: SAR Values (LTE Band12 - Head) – antenna down

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
23060	704	1RB_High	Right	Touch	Fig.27	23.45	24	0.087	**0.10**	0.107	**0.12**	0.02

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-28: SAR Values (LTE Band12 - Body) – antenna down

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)	
Ch.	MHz											
23060	704	1RB_High	Right	Fig.28	23.45	24	0.155	**0.18**	0.217	**0.25**	-0.18	

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_10MHz.

Table 14.2-29: SAR Values (LTE Band30 - Head) – antenna up

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
27710	2310	1RB_High	Right	Touch	Fig.29	18.91	19.2	0.621	**0.66**	1.30	**1.39**	0.04

Note1: The LTE mode is QPSK_10MHz.

Table 14.3-30: SAR Values (LTE Band30 - Body) – antenna up

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
27710	2310	1RB_High	Front	Fig.30	23.48	24	0.302	**0.34**	0.523	**0.59**	0.15

Note1: The distance between the EUT and the phantom bottom is 10mm.
Note2: The LTE mode is QPSK_10MHz.

Table 14.2-31: SAR Values (LTE Band30 - Head) – antenna down

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC												
Frequency		Mode	Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
27710	2310	1RB_High	Right	Touch	Fig.31	23.48	24	0.042	**0.05**	0.074	**0.08**	0.01

Note1: The LTE mode is QPSK_10MHz.

Table 14.2-32: SAR Values (LTE Band30 - Body) – antenna down

Ambient Temperature: 22.9 ºC Liquid Temperature: 22.5ºC											
Frequency		Mode	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
27710	2310	1RB_High	Front	Fig.32	23.48	24	0.062	**0.07**	0.115	**0.13**	0.16

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

Note2: The LTE mode is QPSK_10MHz.

14.3 WLAN Evaluation

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

Normal power

Head Evaluation

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

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2437	6	Left	Touch	/	17.27	17.5	0.435	**0.46**	0.818	**0.86**	-0.07
2437	6	Left	Tilt	/	17.27	17.5	0.362	**0.38**	0.687	**0.72**	-0.03
2437	6	Right	Touch	/	17.27	17.5	0.119	**0.13**	0.207	**0.22**	0.02
2437	6	Right	Tilt	/	17.27	17.5	0.129	**0.14**	0.243	**0.26**	-0.11

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

Table 14.3-2: SAR Values (WLAN - Head)– 802.11b 1Mbps (Full SAR)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2437	6	Left	Touch	/	17.27	17.5	0.432	**0.46**	0.877	**0.92**	-0.07
2437	6	Left	Tilt	/	17.27	17.5	0.408	**0.43**	0.973	**1.03**	-0.03
2437	6	Right	Tilt	/	17.27	17.5	0.127	**0.13**	0.265	**0.28**	-0.11
2462	11	Left	Touch	/	17.22	17.5	0.41	**0.44**	0.849	**0.91**	0.04
2462	11	Left	Tilt	Fig.33	17.22	17.5	0.404	**0.43**	0.982	**1.05**	0.00

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 1Mbps (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.						
2462	11	Left	Tilt	98.18%	100%	**1.05**	**1.07**

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

Body Evaluation

Table 14.3-4: SAR Values(WLAN - Body)– 802.11b 1Mbps (Fast SAR)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2437	6	Front	/	17.27	17.5	0.081	**0.08**	0.145	**0.15**	-0.06
2437	6	Rear	/	17.27	17.5	0.081	**0.09**	0.147	**0.15**	-0.08
2437	6	Right	/	17.27	17.5	0.083	**0.09**	0.157	**0.17**	0.17
2437	6	Top	/	17.27	17.5	0.045	**0.05**	0.084	**0.09**	0.11

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

Table 14.3-5: SAR Values(WLAN - Body)– 802.11b 1Mbps (Full SAR)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃										
Frequency		Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.									
2437	6	Right	Fig.34	17.27	17.5	0.083	**0.09**	0.160	**0.17**	0.17

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.

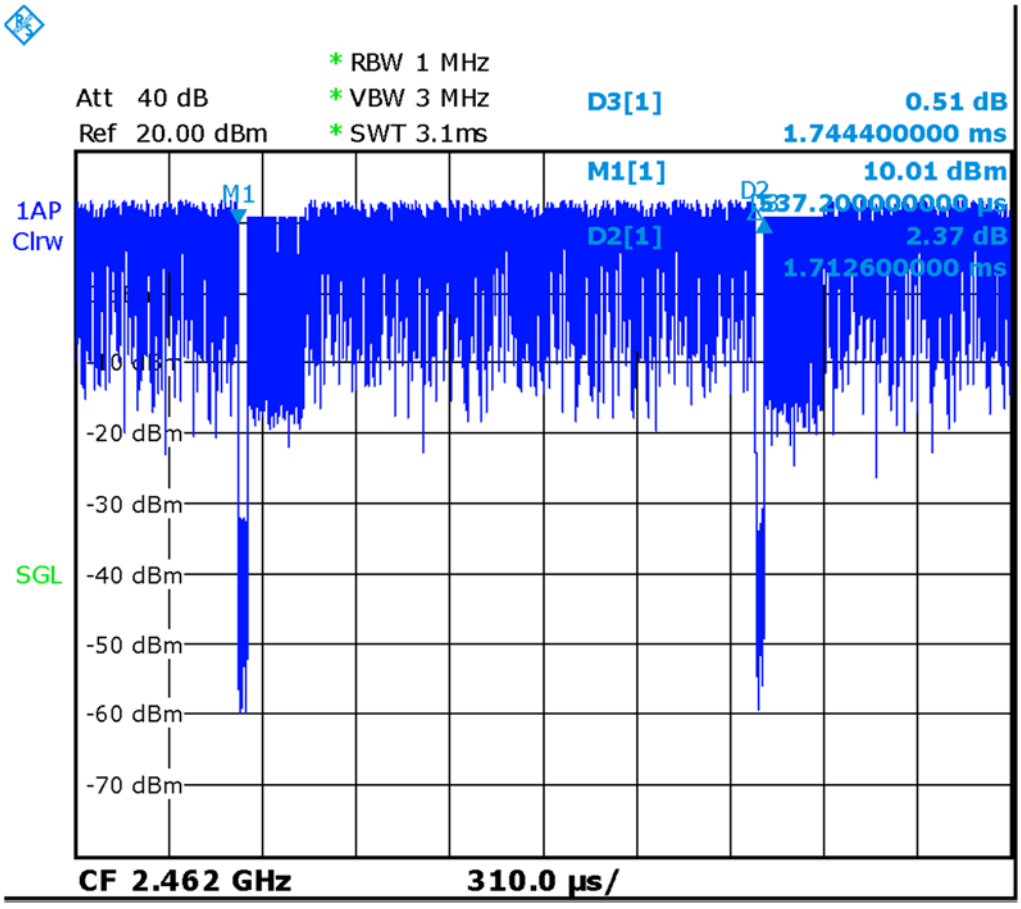
Note2: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg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

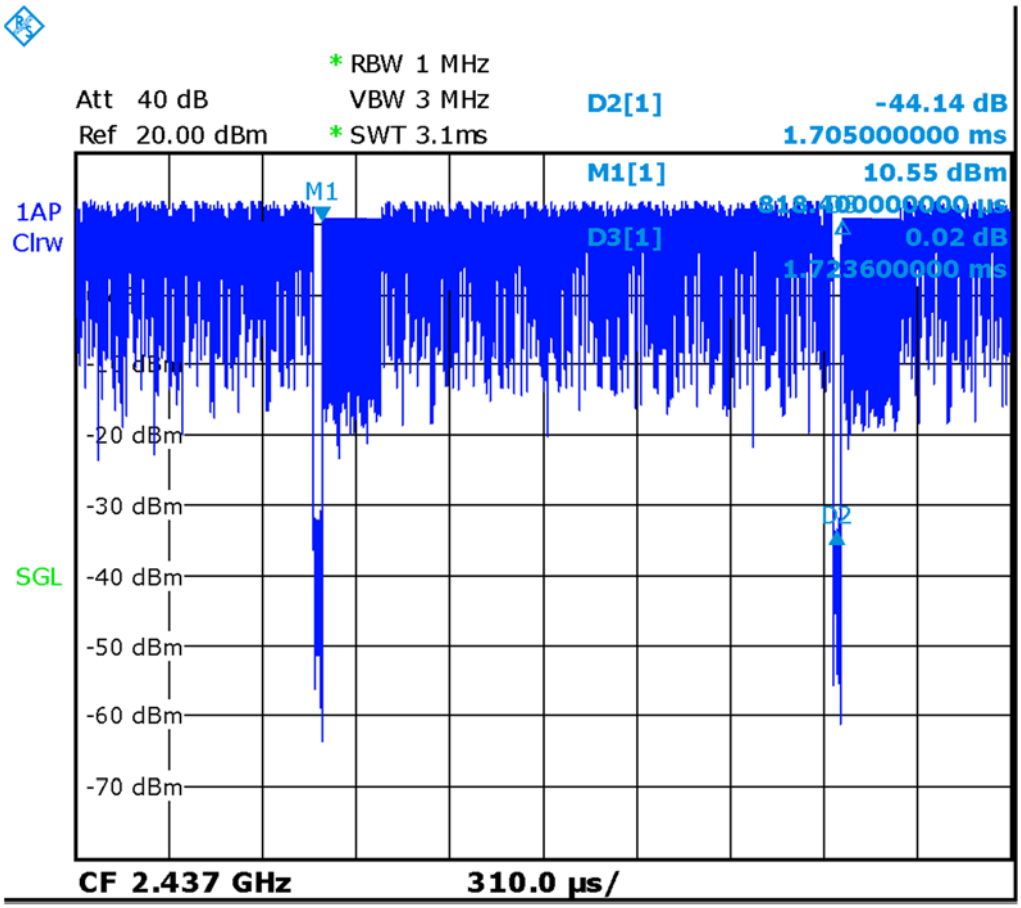
Table 14.3-6: SAR Values (WLAN - Body) – 802.11b 1Mbps (Scaled Reported SAR)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃						
Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.					
2437	6	Right	98.92%	100%	**0.17**	**0.17**
2437	6	Rear	98.92%	100%	**0.15**	**0.15**
2437	6	Front	98.92%	100%	**0.15**	**0.15**

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



Picture 14.1 Duty factor plot (CH11)



Picture 14.2 Duty factor plot (CH6)

Low power

Head Evaluation

Table 14.3-7: SAR Values (WLAN - Head)– 802.11b 1Mbps (Fast SAR)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2437	6	Left	Touch	/	6.58	7.2	0.038	**0.04**	0.079	**0.09**	0.03
2437	6	Left	Tilt	/	6.58	7.2	0.034	**0.04**	0.080	**0.09**	0.05
2437	6	Right	Touch	/	6.58	7.2	0.010	**0.01**	0.020	**0.02**	0.05
2437	6	Right	Tilt	/	6.58	7.2	0.010	**0.01**	0.021	**0.02**	0.07

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

Table 14.3-8: SAR Values (WLAN - Head)– 802.11b 1Mbps (Full SAR)

Ambient Temperature: 22.9℃ Liquid Temperature: 22.5℃											
Frequency		Side	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
MHz	Ch.										
2437	6	Left	Tilt	Fig.35	6.58	7.2	0.031	**0.04**	0.074	**0.09**	0.05

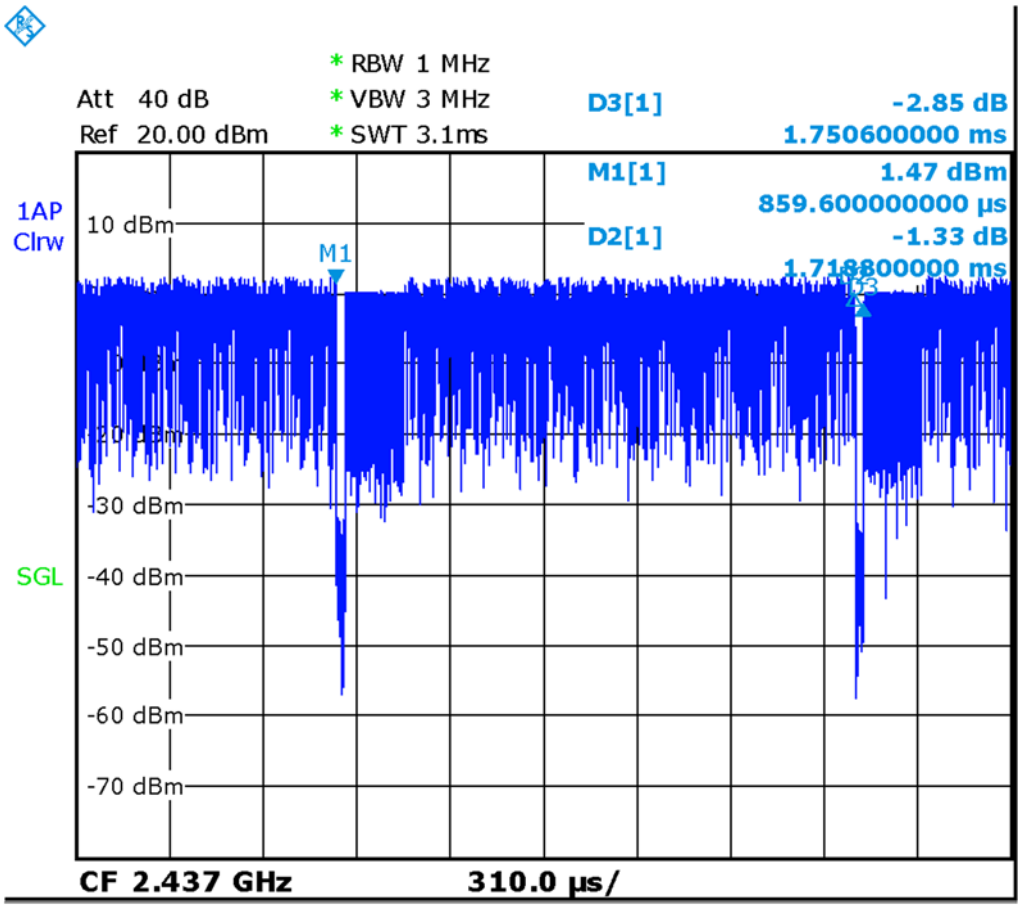
Note1: When the reported SAR of the initial test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position using subsequent highest estimated 1-g SAR conditions determined by area scans, on the highest maximum output power channel, until 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 1Mbps (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	Left	Tilt	98.18%	100%	**0.09**	**0.09**
2437	6	Right	Touch	98.18%	100%	**0.02**	**0.02**

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



Picture 14.3 Duty factor plot

14.4 WLAN Evaluation For 5G

Normal power

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

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

Table 14.4-2: Maximum output power specified of WLAN antenna

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	63		56	56	56	43	33	
U-NII-2A	63		52	50	50	47	43	
U-NII-2C	79		71	45	56	43	33	
U-NII-3	71		66	50	56	36	25	
§ 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 measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 **47/45/43/42**	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 **45/48/50/52**	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112 **76/73/70/66** 116/120/124/128/132 /136/140/144 **65/67/69/72/79/75/69 /60**	100/104/108/112 116/120/124/128 /132/136/140/14 4 Lower power	102/110/118/ 126/134/142 Lower power	100/104/108/112 116/120/124/128 /132/136/140/14 4 Lower power	102/110/118/ 126/134/142 Lower power	106/122/138 Lower power
U-NII-3	149/153/157/161/165 **31/60/62/70/40**	149/153/157/161 /165 Lower power	151/159 Lower power	149/153/157/161 /165 Lower power	151/159 Lower power	155 Lower power

- 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 14.4-4: Reported SAR of initial test configuration for Head

802.11 mode	a	n		ac		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-1	36/40/44/48 U-NII-2A exclusion applied	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64 **1.12**	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112 116/120/124/128/132/ 136/140/144 **1.14**	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 **0.72**	149/153/157/161 /165	151/159	149/153/157/161 /165	151/159	155
U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is ≤ 1.2W/kg, SAR is not required for U-NII-1 band.						

Table 14.4-5: Reported SAR of initial test configuration for Body

802.11 mode	a	n		ac		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-1	36/40/44/48 U-NII-2A exclusion applied	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64 **0.11**	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112 116/120/124/128/132/ 136/140/144 **0.16**	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 **0.11**	149/153/157/161 /165	151/159	149/153/157/161 /165	151/159	155
U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is ≤ 1.2W/kg, SAR is not required for U-NII-1 band.						

Table 14.4-6: SAR Values (WLAN - Head) – 802.11a 6Mbps

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.										
5320	64	Left	Touch	/	17.19	18	0.317	**0.38**	0.918	**1.11**	-0.05
5300	60	Left	Touch	/	17.03	18	0.338	**0.42**	0.882	**1.10**	0.03
5320	64	Left	Tilt	/	17.19	18	0.295	**0.36**	0.926	**1.12**	0.09
5300	60	Left	Tilt	/	17.03	18	0.331	**0.41**	0.812	**1.02**	0.05
5320	64	Right	Touch	/	17.19	18	0.234	**0.28**	0.646	**0.78**	0.07
5320	64	Right	Tilt	/	17.19	18	0.188	**0.23**	0.538	**0.65**	0.10
5660	132	Left	Touch	/	18.99	19	0.331	**0.33**	0.838	**0.84**	-0.15
5500	100	Left	Touch	/	18.82	19	0.335	**0.35**	0.729	**0.76**	0.01
5660	132	Left	Tilt	Fig.36	18.99	19	0.434	**0.44**	1.14	**1.14**	0.09
5500	100	Left	Tilt	/	18.82	19	0.351	**0.37**	1.04	**1.08**	0.17
5660	132	Right	Touch	/	18.99	19	0.337	**0.34**	0.836	**0.84**	0.03
5500	100	Right	Touch	/	18.82	19	0.311	**0.32**	0.733	**0.76**	0.04
5660	132	Right	Tilt	/	18.99	19	0.277	**0.28**	0.680	**0.68**	0.13
5805	161	Left	Touch	/	18.42	18.5	0.339	**0.35**	0.942	**0.96**	0.06
5785	157	Left	Touch	/	17.94	18.5	0.314	**0.36**	0.859	**0.98**	0.07
5805	161	Left	Tilt	/	18.42	18.5	0.252	**0.26**	0.703	**0.72**	0.03
5805	161	Right	Touch	/	18.42	18.5	0.157	**0.16**	0.524	**0.53**	0.07
5805	161	Right	Tilt	/	18.42	18.5	0.135	**0.14**	0.401	**0.41**	0.05

Table 14.4-7: SAR Values (WLAN - Body) – 802.11a 6Mbps

Frequency		Test Position	D (mm)	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.										
5320	64	Front	10	/	17.19	18	0.036	**0.04**	0.089	**0.11**	0.09
5320	64	Rear	10	/	17.19	18	0.012	**0.01**	0.030	**0.04**	0.15
5320	64	Right	10	/	17.19	18	0.031	**0.04**	0.071	**0.09**	0.14
5320	64	Top	10	/	17.19	18	0.013	**0.02**	0.032	**0.04**	0.01
5660	132	Front	10	Fig.37	18.99	19	0.057	**0.06**	0.160	**0.16**	0.18
5660	132	Rear	10	/	18.99	19	0.031	**0.03**	0.074	**0.07**	0.01
5660	132	Right	10	/	18.99	19	0.054	**0.05**	0.138	**0.14**	0.14
5660	132	Top	10	/	18.99	19	0.046	**0.05**	0.113	**0.11**	0.04
5805	161	Front	10	/	18.42	18.5	0.035	**0.04**	0.093	**0.09**	0.06
5805	161	Rear	10	/	18.42	18.5	0.024	**0.02**	0.064	**0.07**	0.05
5805	161	Right	10	/	18.42	18.5	0.052	**0.05**	0.110	**0.11**	0.12
5805	161	Top	10	/	18.42	18.5	0.035	**0.04**	0.073	**0.07**	0.07

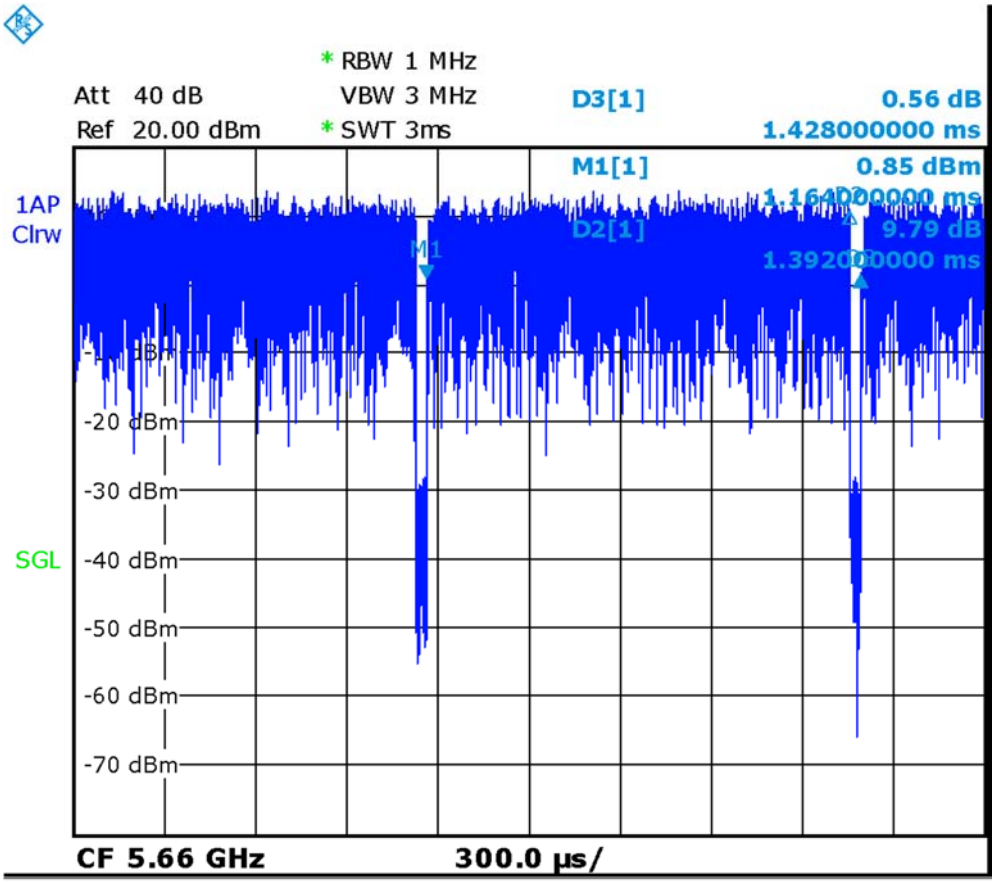
According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.4-8: SAR Values (WLAN - Head) – 802.11a 6Mbps (Scaled Reported SAR)

Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.						
5660	132	Left	Tilt	97.48%	100%	**1.14**	1.17

Table 14.4-9: SAR Values (WLAN - Body) – 802.11a 6Mbps (Scaled Reported SAR)

Frequency		Test Position	D (mm)	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.						
5660	132	Front	10	97.48%	100%	**0.16**	0.16
5660	132	Rear	10	97.48%	100%	**0.07**	**0.07**
5660	132	Right	10	97.48%	100%	**0.14**	**0.14**



Picture 14.4 The plot of duty factor for U-NII-2C

Low power

Table 14.4-10: OFDM mode specified maximum output power of WLAN antenna

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

Table 14.4-11: Maximum output power specified of WLAN antenna

802.11 mode	a	g	n		ac			
Ch. BW(MHz)	20	20	20	40	20	40	80	160
U-NII-1	4		3	2	2	2	2	
U-NII-2A	4		3	2	2	2	2	
U-NII-2C	4		3	2	2	1	2	
U-NII-3	6		3	2	3	2	2	
§ 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 14.4-12: Maximum output power measured of WLAN antenna, for the applicable OFDM configurations according to the default power measurement procedures for selection initial test configurations

802.11 mode	a	n		ac		
BW(MHz)	20	20	40	20	40	80
U-NII-1	36/40/44/48 **4/3/3/3**	36/40/44/48 Lower power	38/46 Lower power	36/40/44/48 Lower power	38/46 Lower power	42 Lower power
U-NII-2A	52/56/60/64 **3/3/3/4**	52/56/60/64 Lower power	54/62 Lower power	52/56/60/64 Lower power	54/62 Lower power	58 Lower power
U-NII-2C	100/104/108/112 **3/3/4/4** 116/120/124/128/132 /136/140/144 **4/4/3/3/3/2/3/3**	100/104/108/112 116/120/124/128 /132/136/140/14 4 Lower power	102/110/118/ 126/134/142 Lower power	100/104/108/112 116/120/124/128 /132/136/140/14 4 Lower power	102/110/118/ 126/134/142 Lower power	106/122/138 Lower power
U-NII-3	149/153/157/161/165 **3/4/5/4/4**	149/153/157/161 /165 Lower power	151/159 Lower power	149/153/157/161 /165 Lower power	151/159 Lower power	155 Lower power

- Channels with measured maximum power within 0.25dB are considered to have the same measured output. Channels selected for initial test configuration are highlighted in yellow.

Table 14.4-13: Reported SAR of initial test configuration for Head

802.11 mode	a	n		ac		
BW(MHz)	**20**	**20**	**40**	**20**	**40**	**80**
U-NII-1	36/40/44/48 U-NII-2A exclusion applied	36/40/44/48	38/46	36/40/44/48	38/46	42
U-NII-2A	52/56/60/64 **0.03**	52/56/60/64	54/62	52/56/60/64	54/62	58
U-NII-2C	100/104/108/112 116/120/124/128/132/ 136/140/144 **0.09**	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 **0.04**	149/153/157/161 /165	151/159	149/153/157/161 /165	151/159	155
U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is ≤ 1.2W/kg, SAR is not required for U-NII-1 band.						

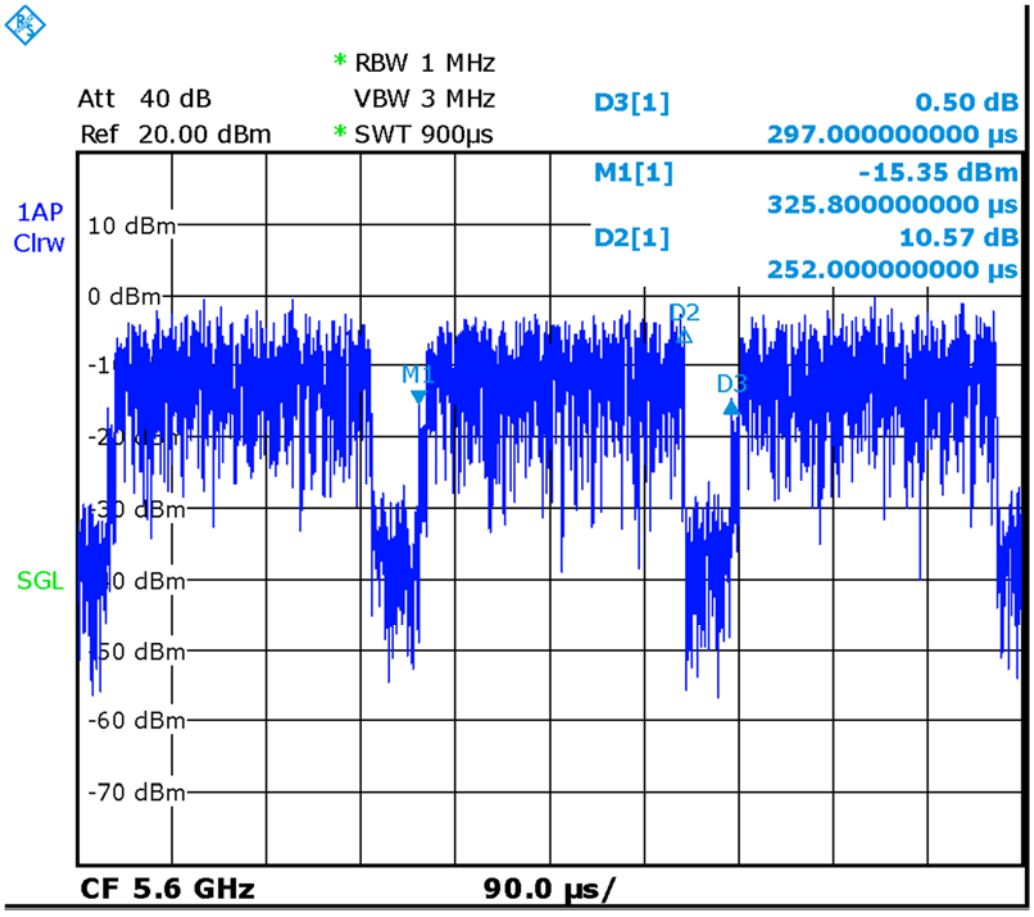
Table 14.4-14: SAR Values (WLAN - Head) – 802.11a 6Mbps

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.										
5320	64	Left	Touch	/	5.91	6	0.004	**0.00**	0.021	**0.02**	0.09
5320	64	Left	Tilt	/	5.91	6	0.009	**0.01**	0.024	**0.02**	0.04
5320	64	Right	Touch	/	5.91	6	0.001	**0.00**	0.009	**0.01**	0.09
5320	64	Right	Tilt	/	5.91	6	0.005	**0.01**	0.018	**0.02**	0.14
5600	120	Left	Touch	/	6.25	6.3	0.024	**0.02**	0.080	**0.08**	0.07
5600	120	Left	Tilt	Fig.38	6.25	6.3	0.029	**0.03**	0.085	**0.09**	0.07
5600	120	Right	Touch	/	6.25	6.3	0.027	**0.03**	0.079	**0.08**	0.03
5600	120	Right	Tilt	/	6.25	6.3	0.021	**0.02**	0.056	**0.06**	-0.01
5785	157	Left	Touch	/	6.54	7.5	0.008	**0.01**	0.022	**0.03**	0.18
5785	157	Left	Tilt	/	6.54	7.5	0.011	**0.01**	0.034	**0.04**	0.04
5785	157	Right	Touch	/	6.54	7.5	0.001	**0.00**	0.005	**0.01**	0.12
5785	157	Right	Tilt	/	6.54	7.5	0.006	**0.01**	0.016	**0.02**	0.08

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 14.4-15: SAR Values (WLAN - Head) – 802.11a 6Mbps (Scaled Reported SAR)

Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
MHz	Ch.						
5600	120	Left	Tilt	84.84%	100%	**0.09**	**0.11**
5600	120	Right	Touch	84.84%	100%	**0.08**	**0.09**



Picture 14.5 The plot of duty factor for U-NII-2C

15 SAR Measurement Variability

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

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

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

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

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

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

Table 15.1: SAR Measurement Variability for Head W850 ANT up (1g)

Frequency		Phantom Position	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
4233	846.6	Right	Touch	1.05	1.02	1.03	/

Table 15.2: SAR Measurement Variability for Head W1900 (1g)

Frequency		Phantom Position	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
9938	1907.6	Right	Touch	1.20	1.18	1.02	/

Table 15.3: SAR Measurement Variability for Head LTE B2 (1g)

Frequency		Mode	Phantom Position	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
19100	1900	1RB_High	Right	Touch	1.33	1.29	1.03	/

Table 15.4: SAR Measurement Variability for Head LTE B4 (1g)

Frequency		Mode	Phantom Position	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
20300	1745	1RB_High	Right	Touch	1.23	1.19	1.03	/

Table 15.5: SAR Measurement Variability for Head LTE B7 (1g)

Frequency		Mode	Phantom Position	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
21350	2560	1RB_High	Right	Touch	0.974	0.969	1.01	/

Table 15.6: SAR Measurement Variability for Body LTE B7 (1g)

Frequency		Mode	Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
21110	2535	1RB_High	Rear	10	0.929	0.925	1.00	/

Table 15.7: SAR Measurement Variability for Head LTE B30 (1g)

Frequency		Mode	Phantom Position	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz							
27710	2310	1RB_High	Right	Touch	1.30	1.28	1.02	/

Table 15.8: SAR Measurement Variability for Head Wifi 2.4G Normal Power (1g)

Frequency		Phantom Position	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
4233	846.6	Left	Tilt	1.05	1.02	1.03	/

Table 15.9: SAR Measurement Variability for Head Wifi 5G Normal Power (1g)

Frequency		Phantom Position	Test Position	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
Ch.	MHz						
132	5660	Right	Touch	1.14	1.11	1.03	/

16 Measurement Uncertainty

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	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	

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	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	4.0	R	$\sqrt{3}$	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	$\sqrt{3}$	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	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞

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

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

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

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

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

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	14.0	R	$\sqrt{3}$	1	1	8.1	8.1	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder	A	3.4	N	1	1	1	3.4	3.4	5

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

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 13, 2017	One year
02	Power meter	NRVD	102083	September 22,2016	One year
03	Power sensor	NRV-Z5	100595		
04	Signal Generator	E4438C	MY49071430	January 13,2017	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	E5515C	MY50263375	January 16, 2017	One year
07	BTS	CMW500	159890	November 25, 2016	One year
08	E-field Probe	SPEAG EX3DV4	3846	January 13,2017	One year
09	DAE	SPEAG DAE4	1331	January 19, 2017	One year
10	Dipole Validation Kit	SPEAG D750V3	1017	July 20,2016	One year
11	Dipole Validation Kit	SPEAG D835V2	4d069	July 20,2016	One year
12	Dipole Validation Kit	SPEAG D1750V2	1003	July 21,2016	One year
13	Dipole Validation Kit	SPEAG D1900V2	5d101	July 28,2016	One year
14	Dipole Validation Kit	SPEAG D2300V2	1018	July 25,2016	One year
15	Dipole Validation Kit	SPEAG D2450V2	853	July 25,2016	One year
16	Dipole Validation Kit	SPEAG D2600V2	1012	July 25,2016	One year
17	Dipole Validation Kit	SPEAG D5GHzV2	1060	July 27,2016	One year

END OF REPORT BODY

ANNEX A Graph Results

850 Right Cheek Low – antenna up

Date: 2017-3-26
Electronics: DAE4 Sn1331
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.873 mho/m; εr = 41.99; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 – SN3846 ConvF(9.33, 9.33, 9.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.458 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.76 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.914 W/kg
SAR(1 g) = 0.412 W/kg; SAR(10 g) = 0.214 W/kg
Maximum value of SAR (measured) = 0.564 W/kg

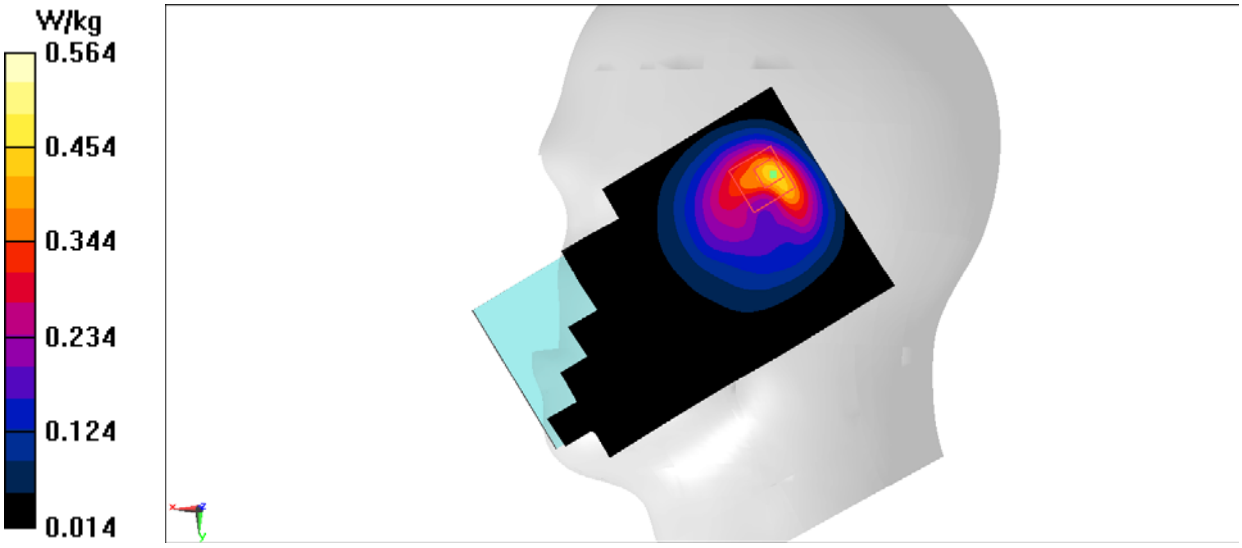


Fig.1 850MHz

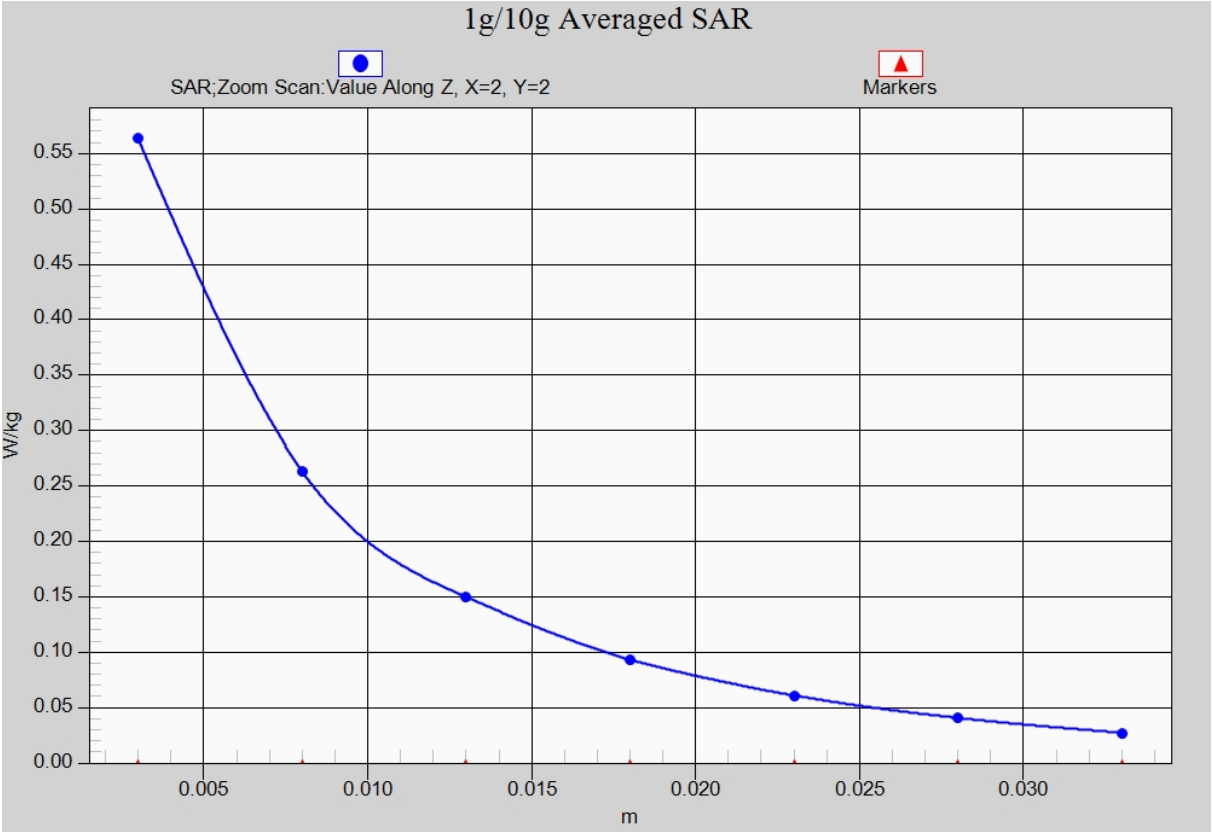


Fig. 1-1 Z-Scan at power reference point (850 MHz)

850 Body Rear Low – antenna up

Date: 2017-3-26
Electronics: DAE4 Sn1331
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.961 mho/m; εr = 55.46; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:4
Probe: EX3DV4 – SN3846 ConvF(9.52, 9.52, 9.52)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.371 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.01 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.521 W/kg
SAR(1 g) = 0.304 W/kg; SAR(10 g) = 0.176 W/kg
Maximum value of SAR (measured) = 0.375 W/kg

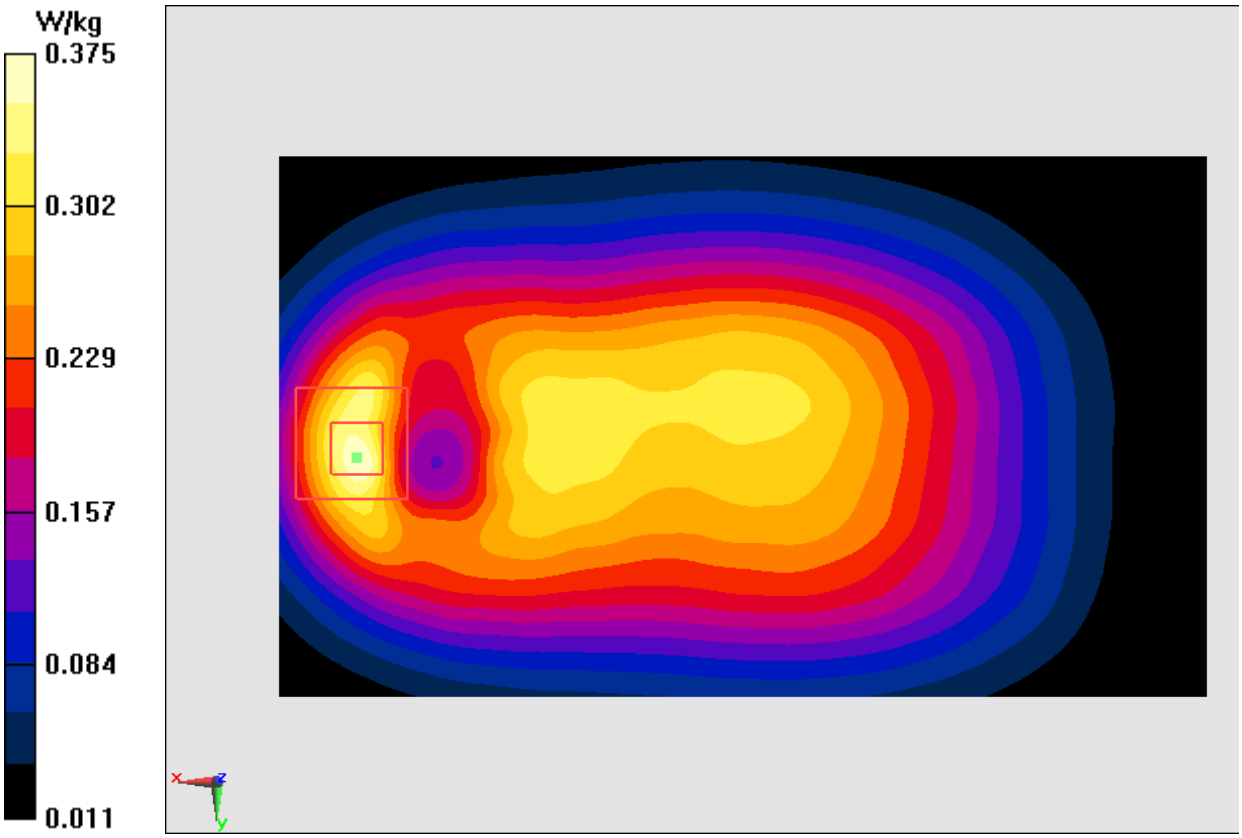


Fig.2 850 MHz

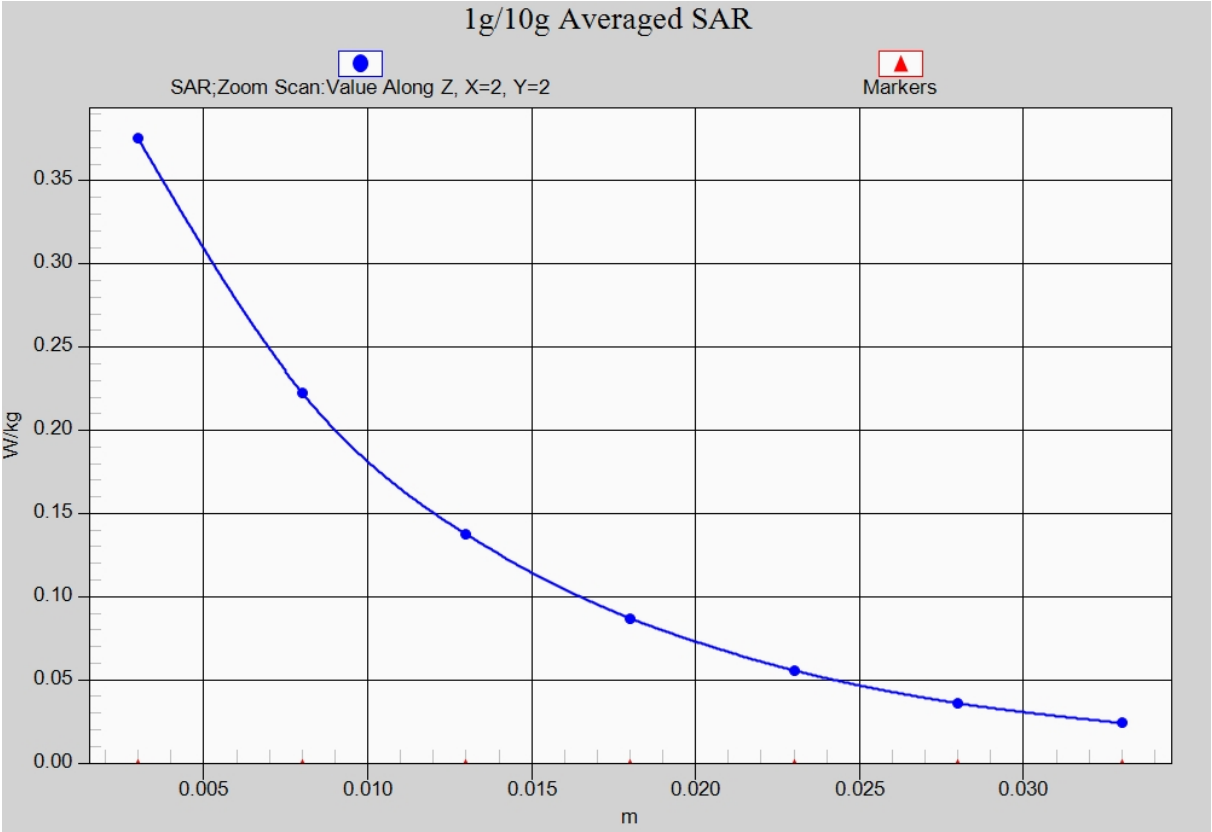


Fig. 2-1 Z-Scan at power reference point (850 MHz)

850 Right Cheek Low – antenna down

Date: 2017-4-2
Electronics: DAE4 Sn1331
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.880 mho/m; εr = 41.63; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: GSM 850 GPRS Frequency: 824.2 MHz Duty Cycle: 1:8.3
Probe: EX3DV4 – SN3846 ConvF(9.33, 9.33, 9.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.210 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.136 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.240 W/kg
SAR(1 g) = 0.189 W/kg; SAR(10 g) = 0.147 W/kg
Maximum value of SAR (measured) = 0.206 W/kg

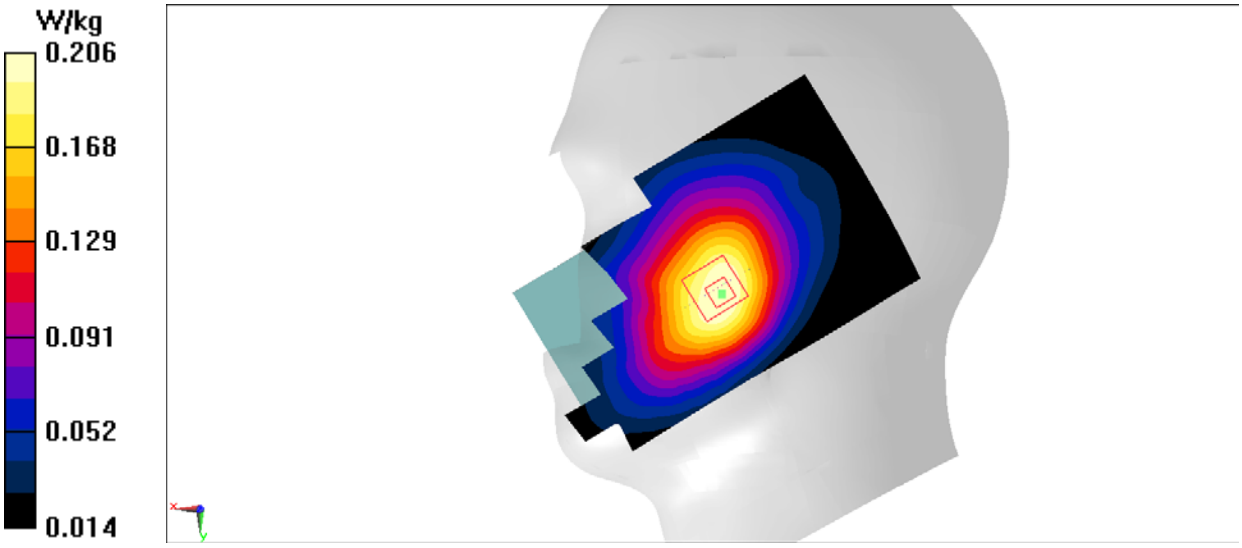


Fig.3 850MHz

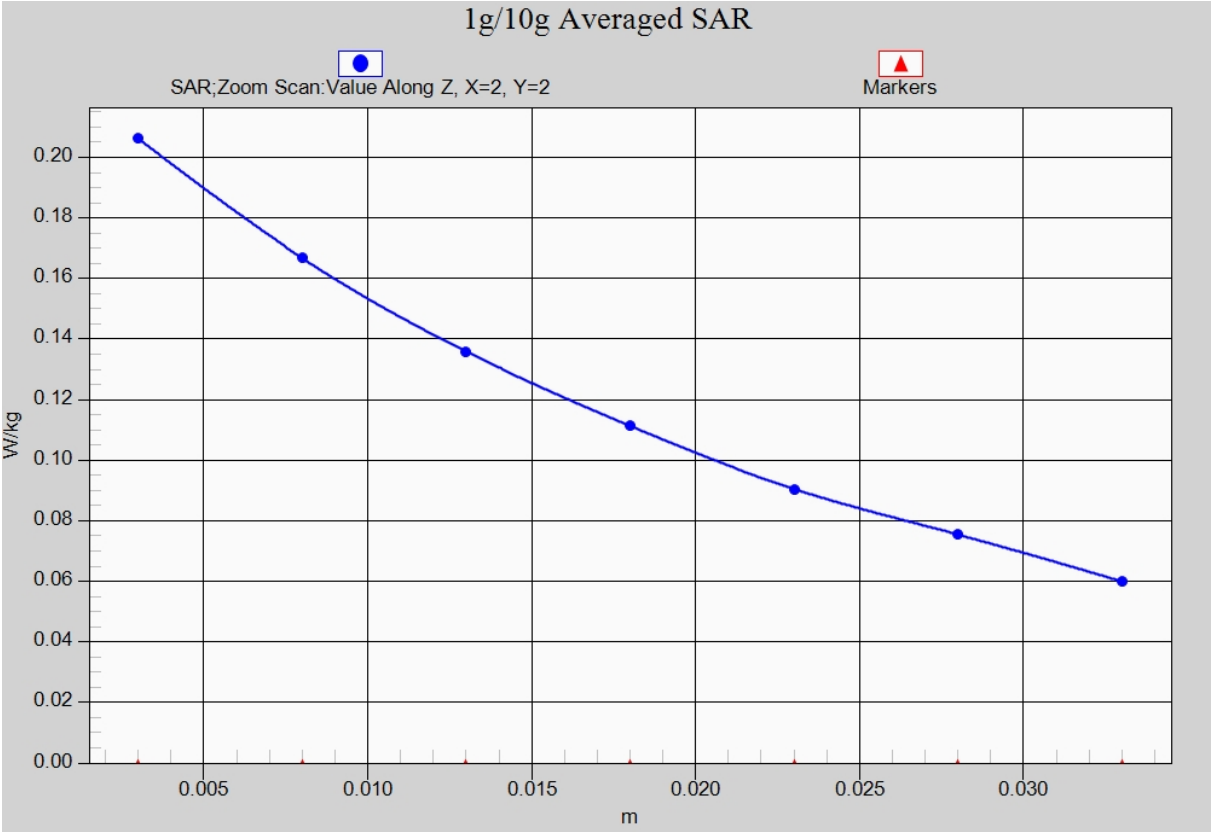


Fig. 3-1 Z-Scan at power reference point (850 MHz)

850 Body Front Middle – antenna down

Date: 2017-4-2

Electronics: DAE4 Sn1331

Medium: Body 850 MHz

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.979 mho/m; εr = 54.19; ρ = 1000 kg/m^3

Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC

Communication System: GSM 850 GPRS Frequency: 836.6 MHz Duty Cycle: 1:4

Probe: EX3DV4 – SN7307 ConvF(9.52, 9.52, 9.52)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.446 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.21 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.695 W/kg

SAR(1 g) = 0.396 W/kg; SAR(10 g) = 0.224 W/kg

Maximum value of SAR (measured) = 0.472 W/kg

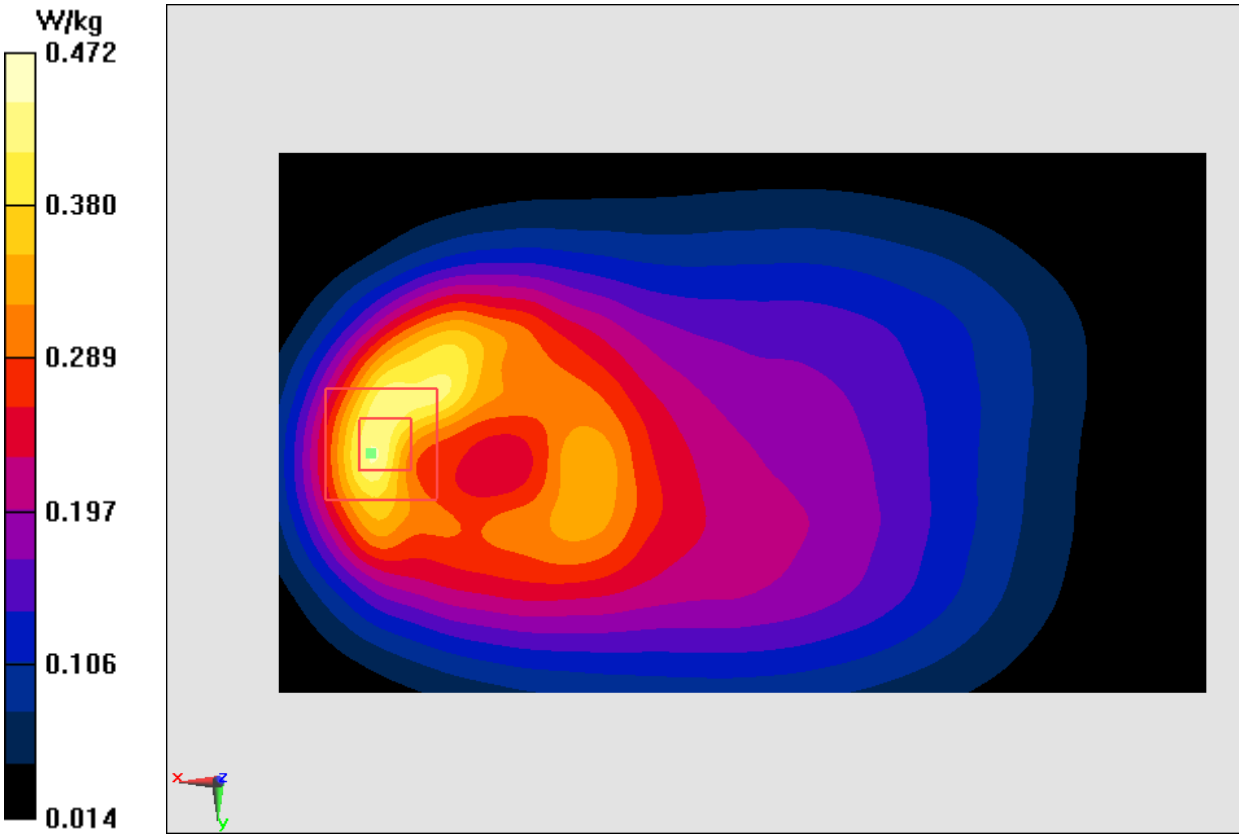


Fig.4 850 MHz

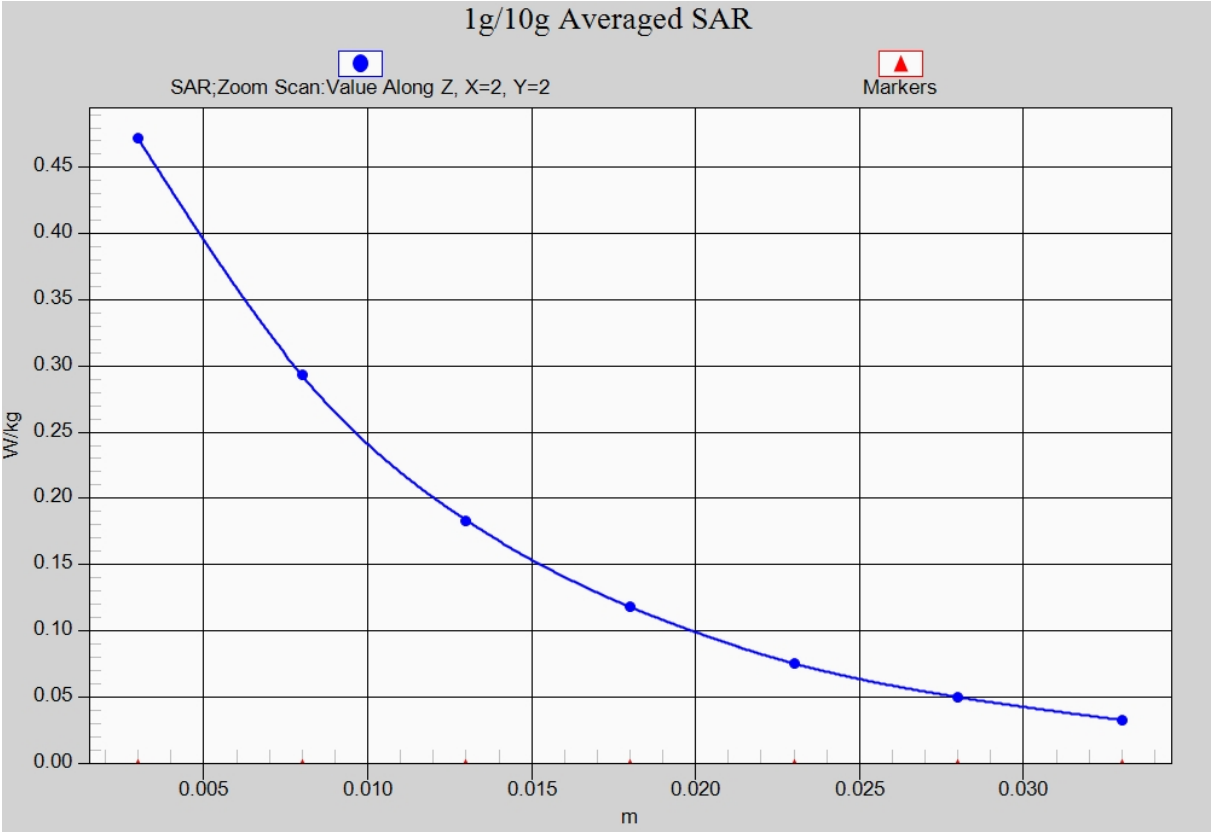


Fig. 4-1 Z-Scan at power reference point (850 MHz)

1900 Right Cheek Middle
Date: 2017-3-28
Electronics: DAE4 Sn1331
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1880 MHz; σ = 1.367 mho/m; εr = 39.74; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: GSM 1900MHz GRPS Frequency: 1880 MHz Duty Cycle: 1:4
Probe: EX3DV4– SN3846 ConvF(7.89, 7.89, 7.89)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.531 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.00 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.769 W/kg
SAR(1 g) = 0.411 W/kg; SAR(10 g) = 0.234 W/kg
Maximum value of SAR (measured) = 0.481 W/kg

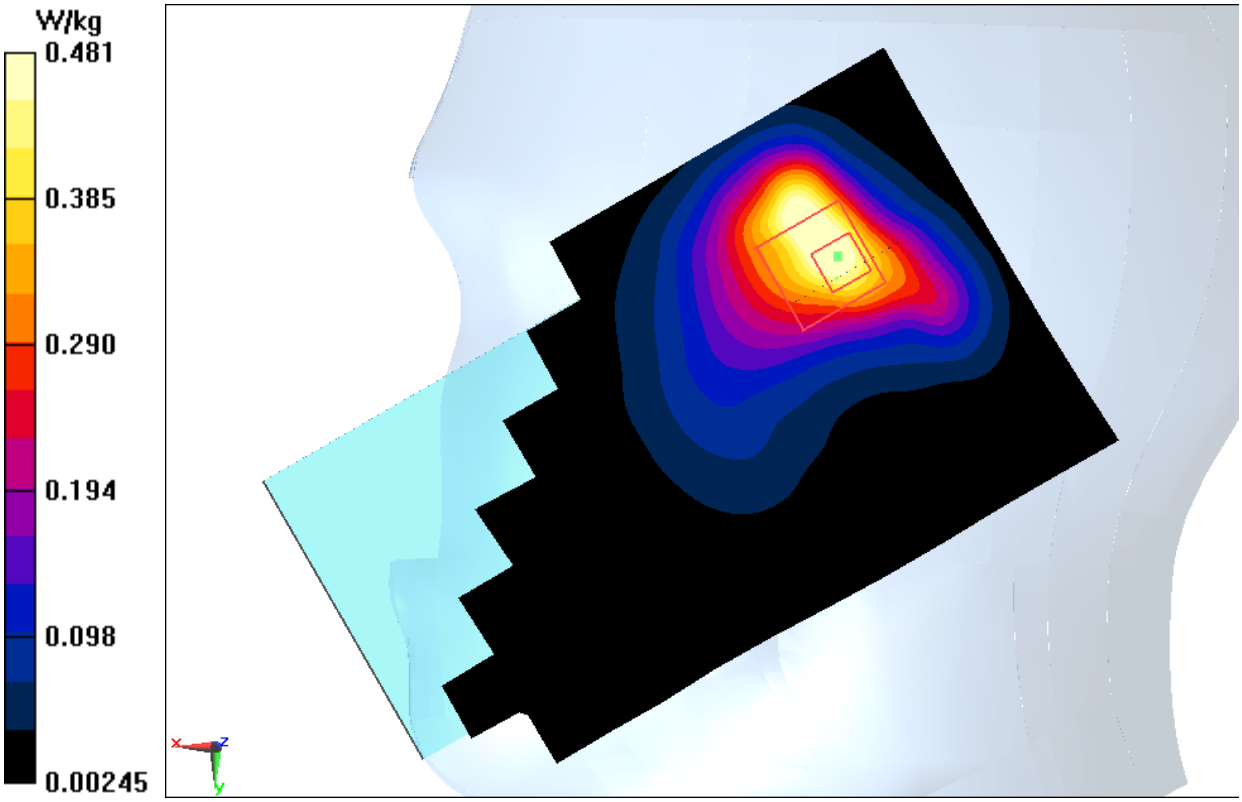


Fig.5 1900 MHz

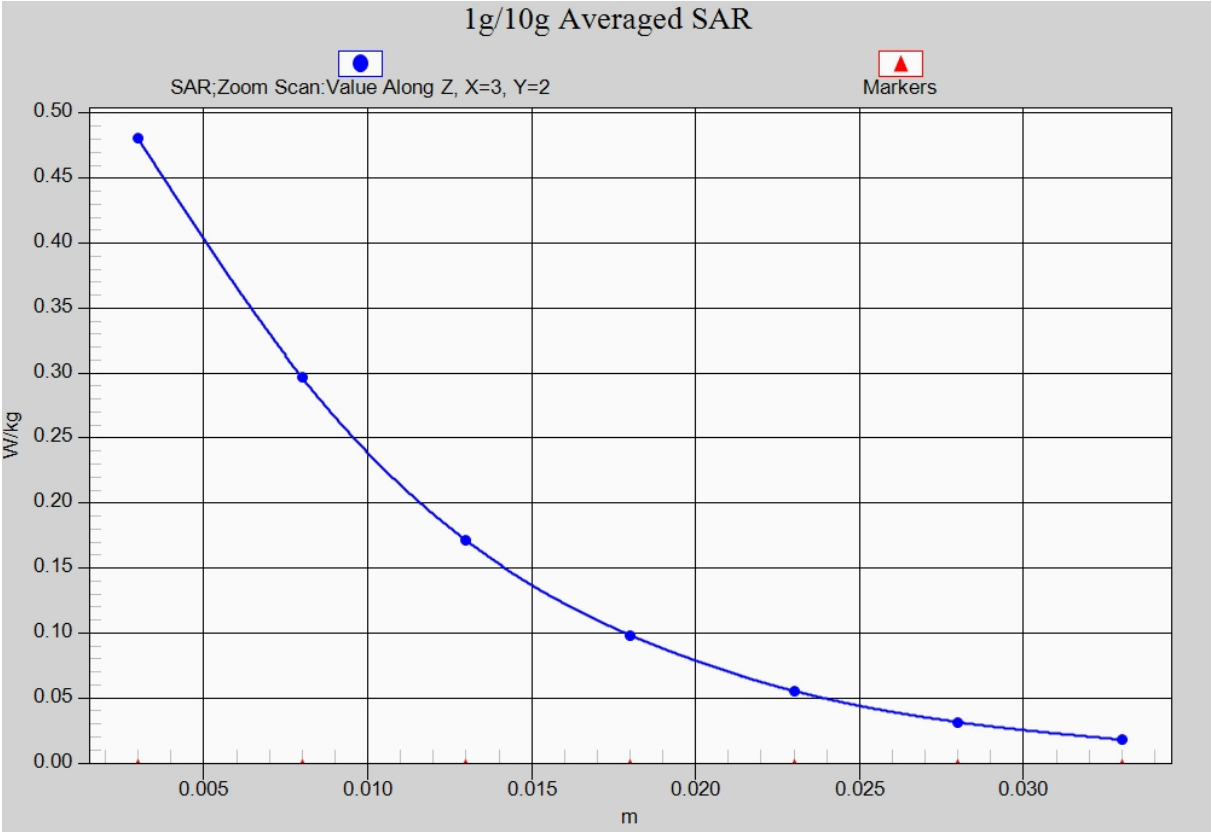


Fig. 5-1 Z-Scan at power reference point (1900 MHz)

1900 Body Front High
Date: 2017-3-28
Electronics: DAE4 Sn1331
Medium: Body 1900 MHz
Medium parameters used: f = 1909.8 MHz; σ =1.533 mho/m; εr = 52.94; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: GSM 1900MHz GPRS Frequency: 1909.8 MHz Duty Cycle: 1:4
Probe: EX3DV4– SN7307 ConvF(7.67, 7.67, 7.67)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.588 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.82 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.805 W/kg
SAR(1 g) = 0.461 W/kg; SAR(10 g) = 0.253 W/kg
Maximum value of SAR (measured) = 0.580 W/kg

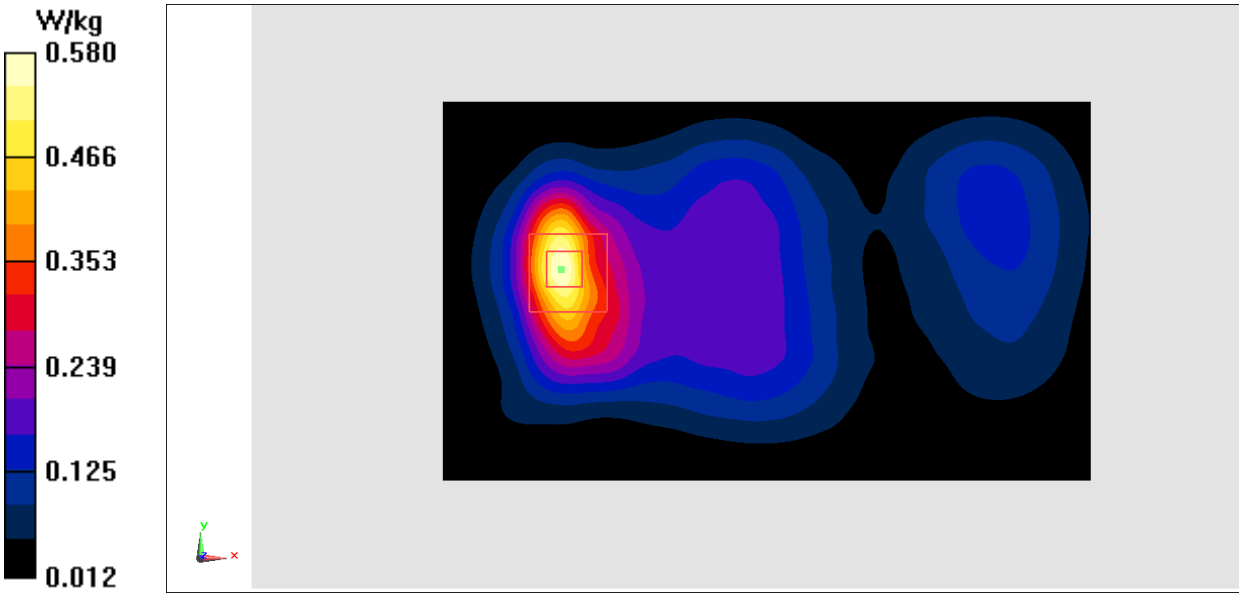


Fig.6 1900 MHz

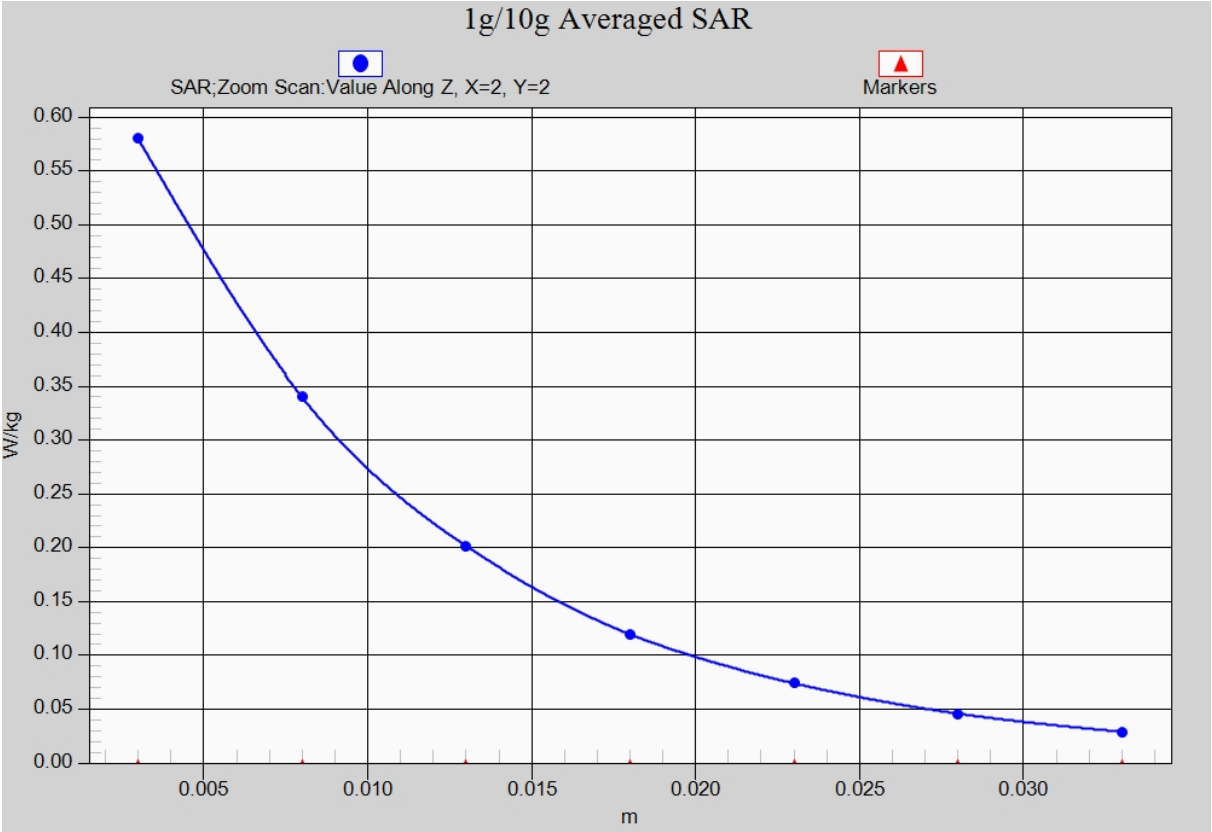


Fig. 6-1 Z-Scan at power reference point (1900 MHz)

WCDMA 850 Right Cheek High – antenna up

Date: 2017-3-26
Electronics: DAE4 Sn1331
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.896 mho/m; εr = 40.87; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.33, 9.33, 9.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.26 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.30 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 2.27 W/kg
SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.568 W/kg
Maximum value of SAR (measured) = 1.34 W/kg

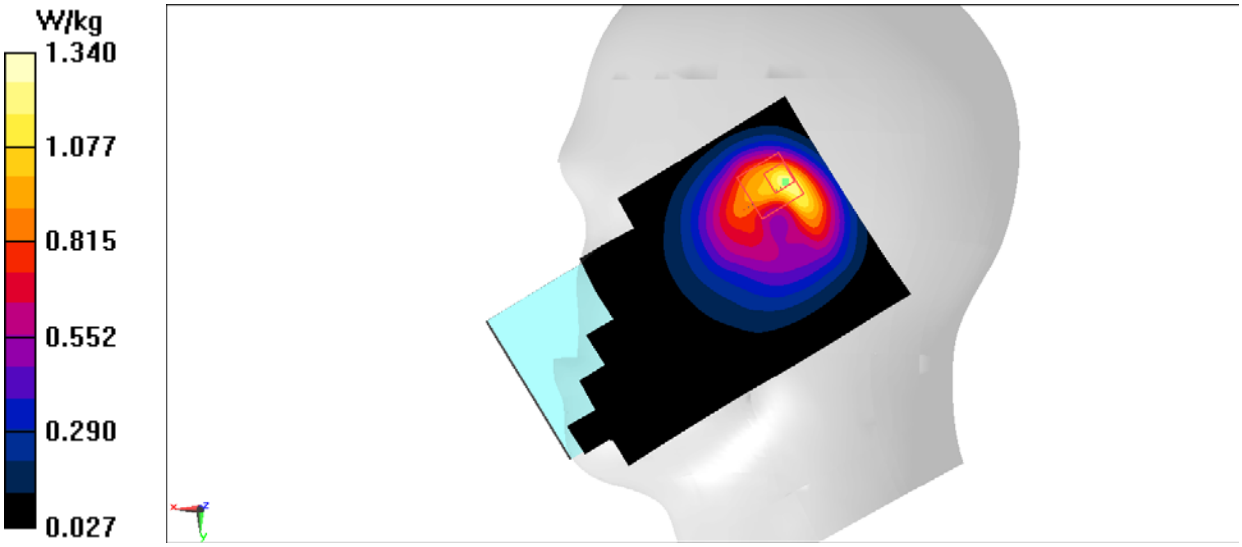


Fig.7 WCDMA 850

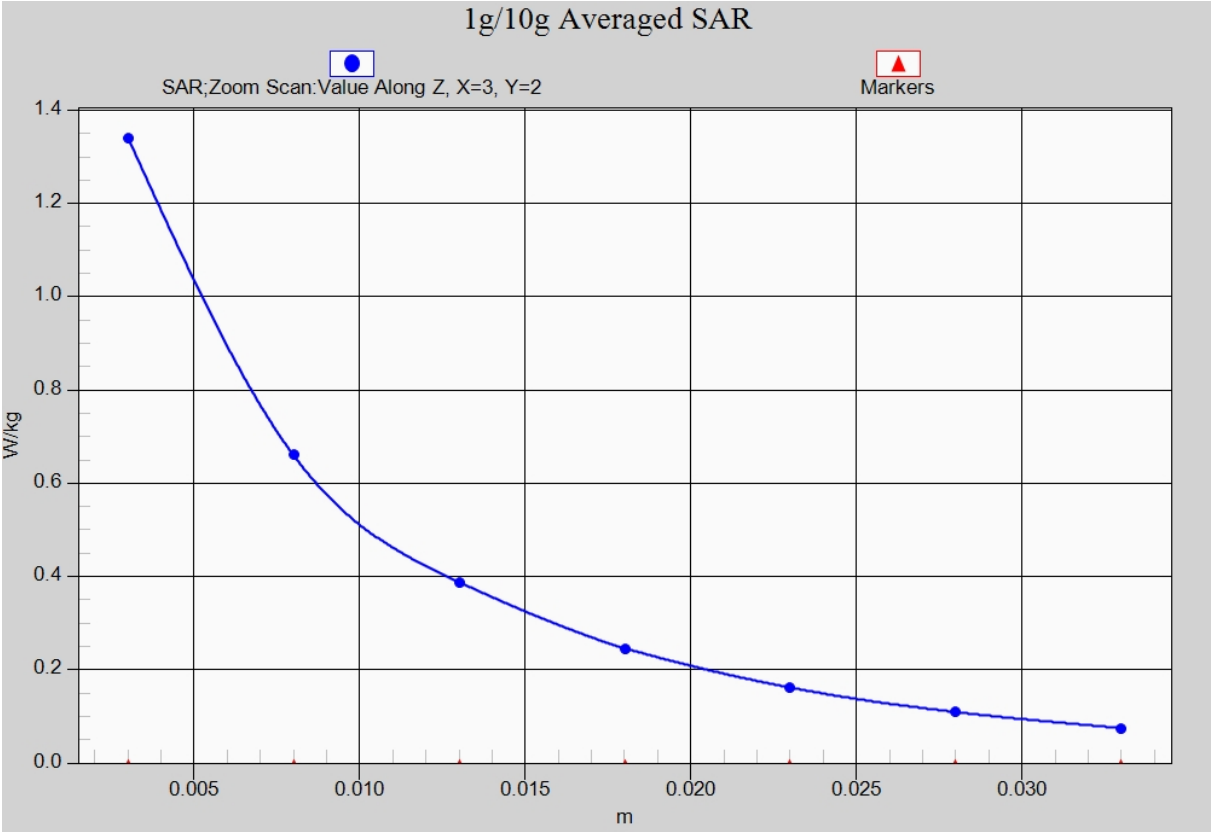


Fig. 7-1 Z-Scan at power reference point (850 MHz)

WCDMA 850 Body Rear High – antenna up
Date: 2017-3-26
Electronics: DAE4 Sn1331
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.988 mho/m; εr = 53.99; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.52, 9.52, 9.52)

Area Scan (111x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.256 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.85 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.358 W/kg
SAR(1 g) = 0.212 W/kg; SAR(10 g) = 0.126 W/kg
Maximum value of SAR (measured) = 0.249 W/kg

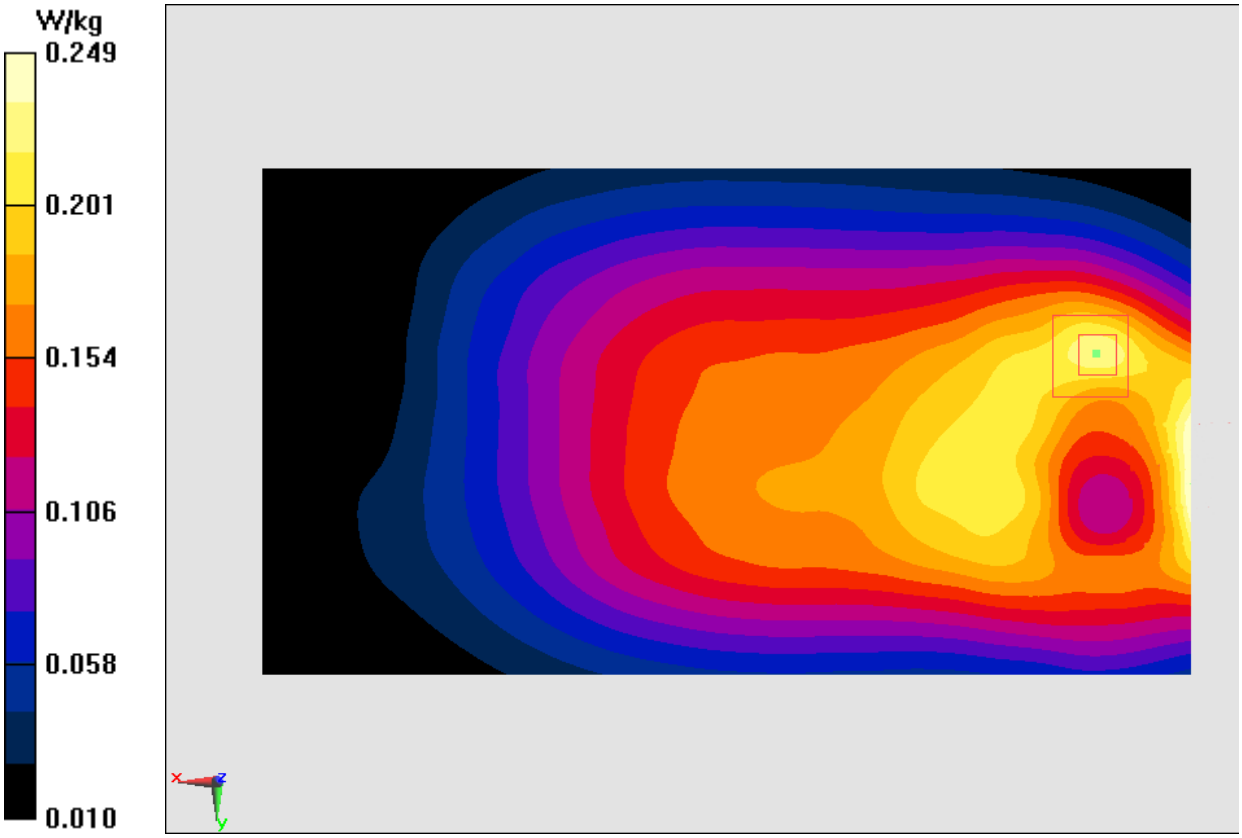


Fig.8 WCDMA 850

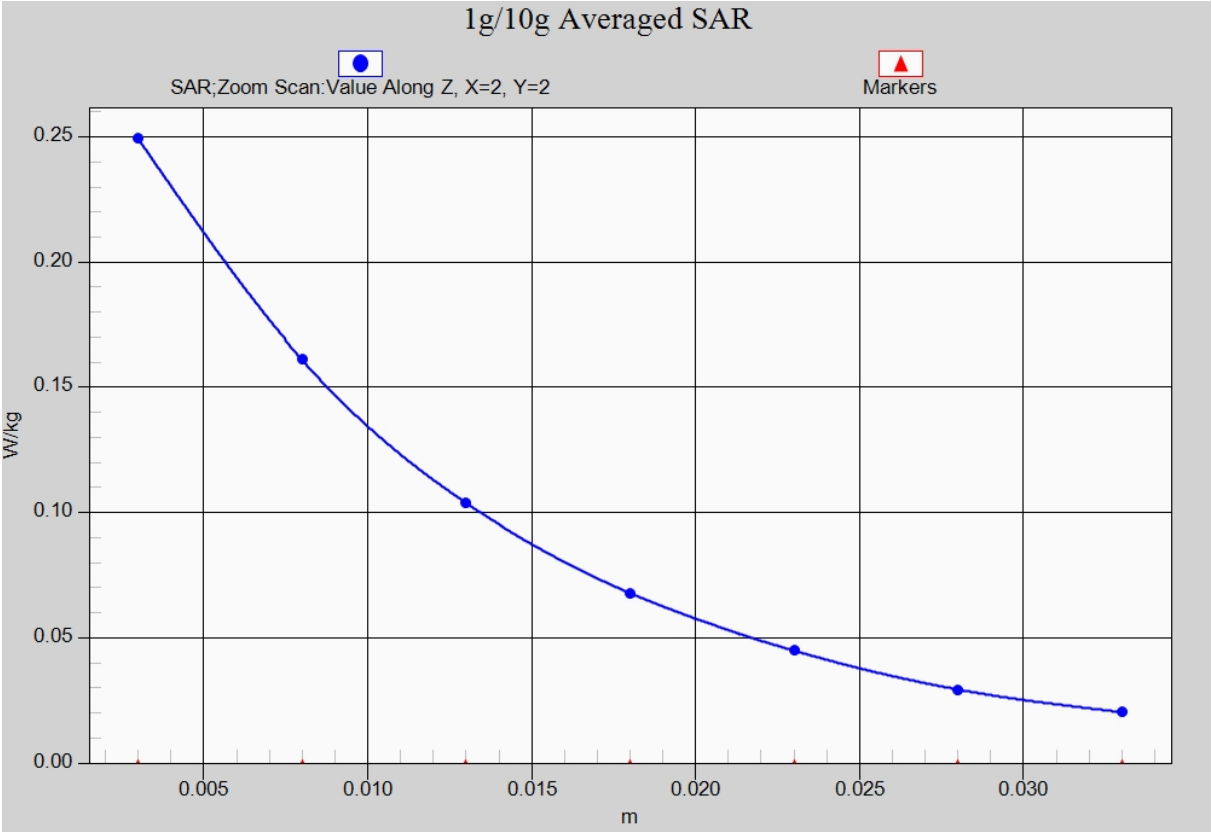


Fig. 8-1 Z-Scan at power reference point (WCDMA850)

WCDMA 850 Right Cheek Low – antenna down

Date: 2017-4-2
Electronics: DAE4 Sn1331
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.883 mho/m; εr = 41.52; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3846ConvF(9.33, 9.33, 9.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.193 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.004 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.220 W/kg
SAR(1 g) = 0.175 W/kg; SAR(10 g) = 0.135 W/kg
Maximum value of SAR (measured) = 0.191 W/kg

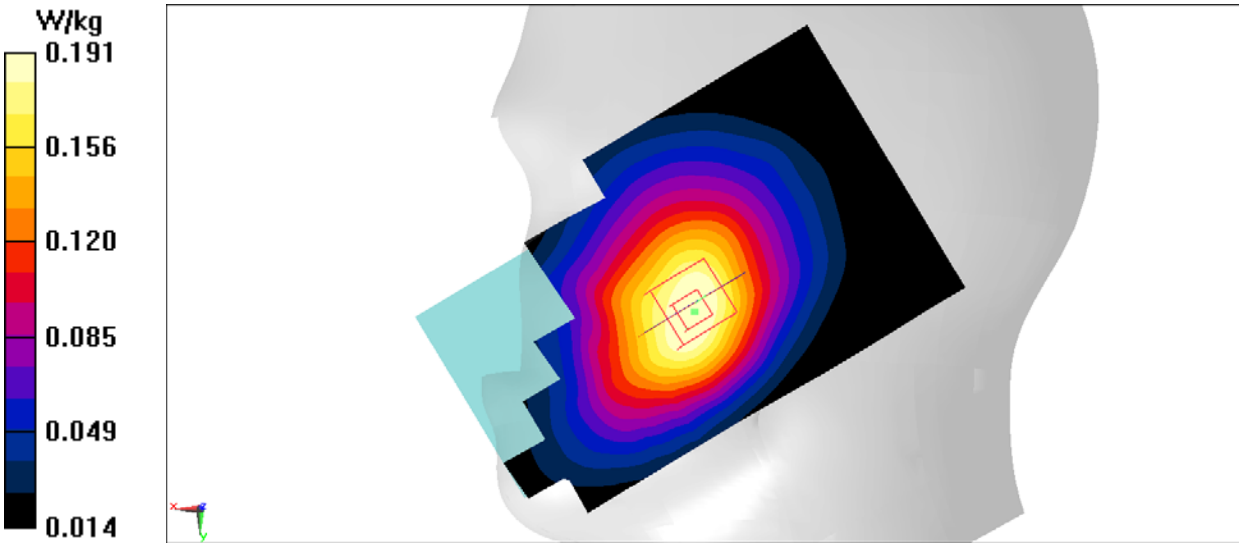


Fig.9 WCDMA 850

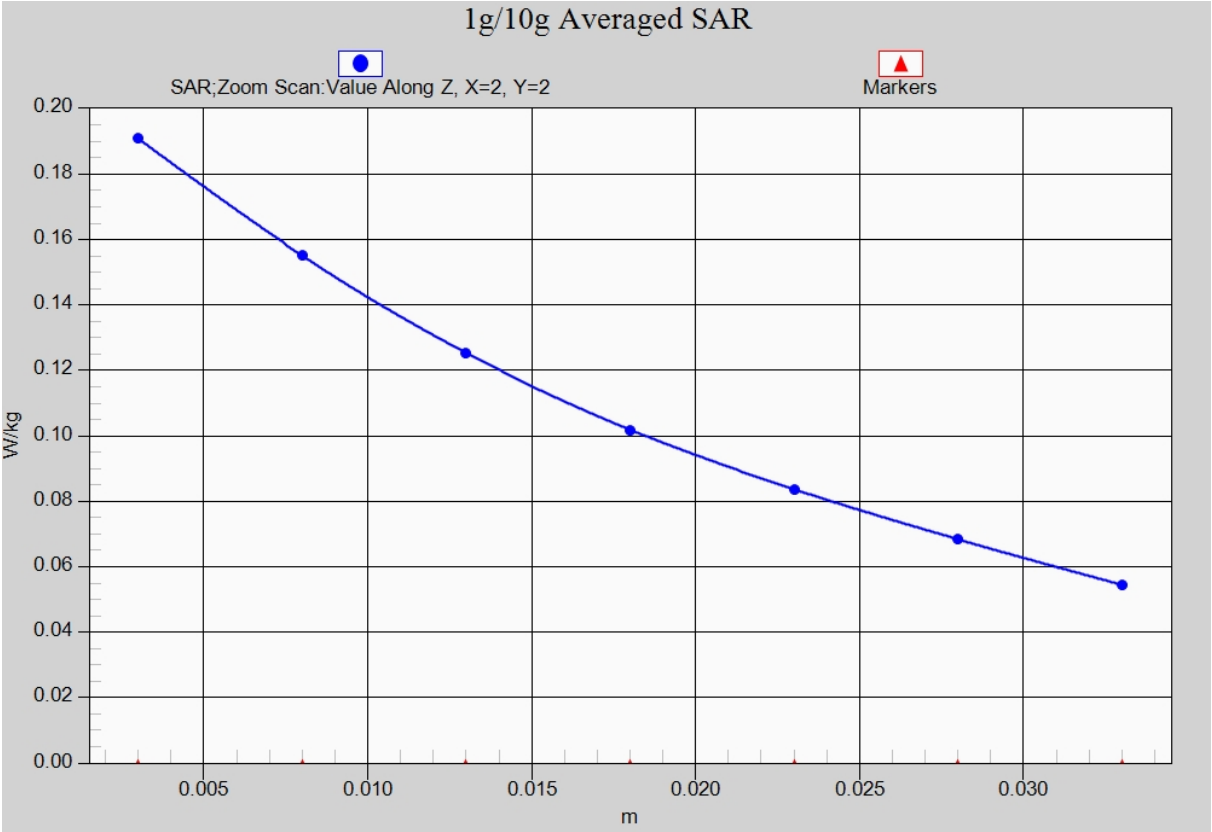


Fig. 9-1 Z-Scan at power reference point (850 MHz)

WCDMA 850 Body Front Middle – antenna down

Date: 2017-4-2
Electronics: DAE4 Sn1331
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.979 mho/m; εr = 54.2; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.52, 9.52, 9.52)

Area Scan (121x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.308 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.75 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.503 W/kg
SAR(1 g) = 0.293 W/kg; SAR(10 g) = 0.168 W/kg
Maximum value of SAR (measured) = 0.361 W/kg

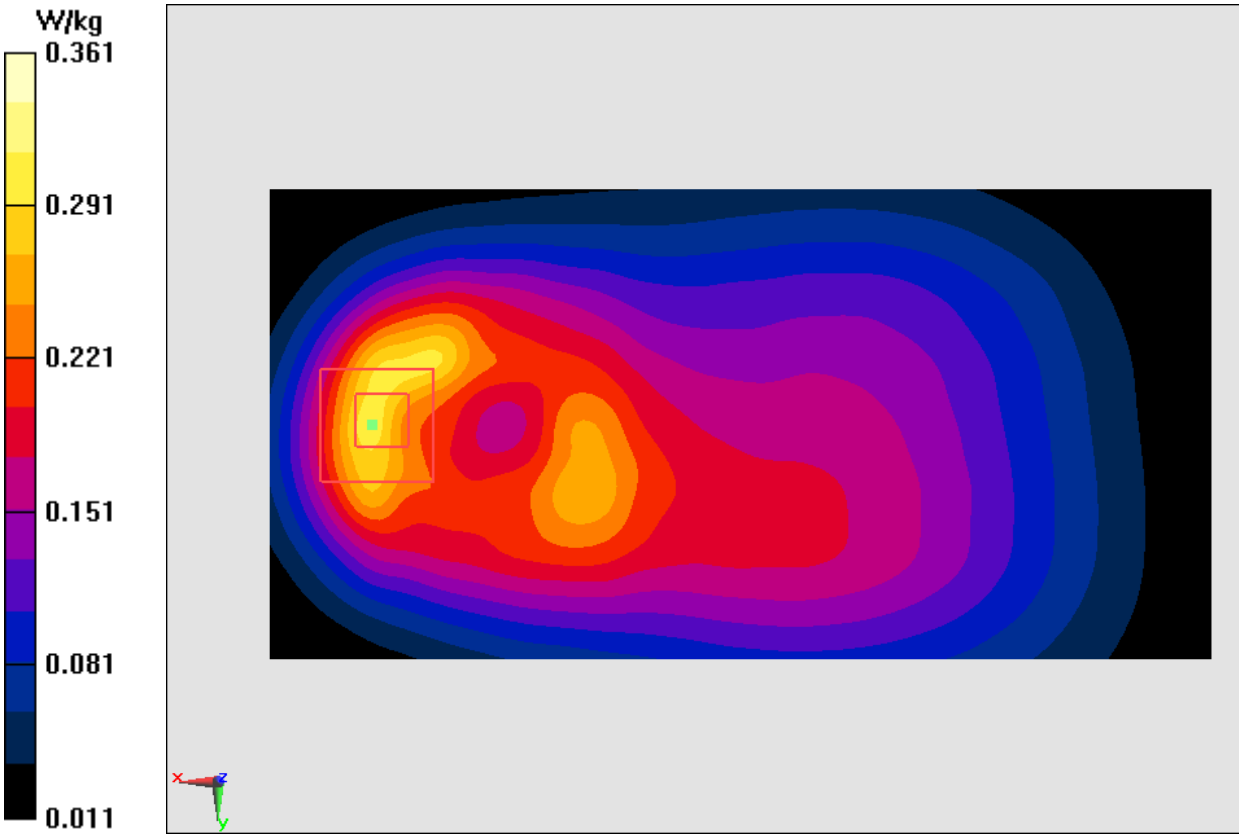


Fig.10 WCDMA 850

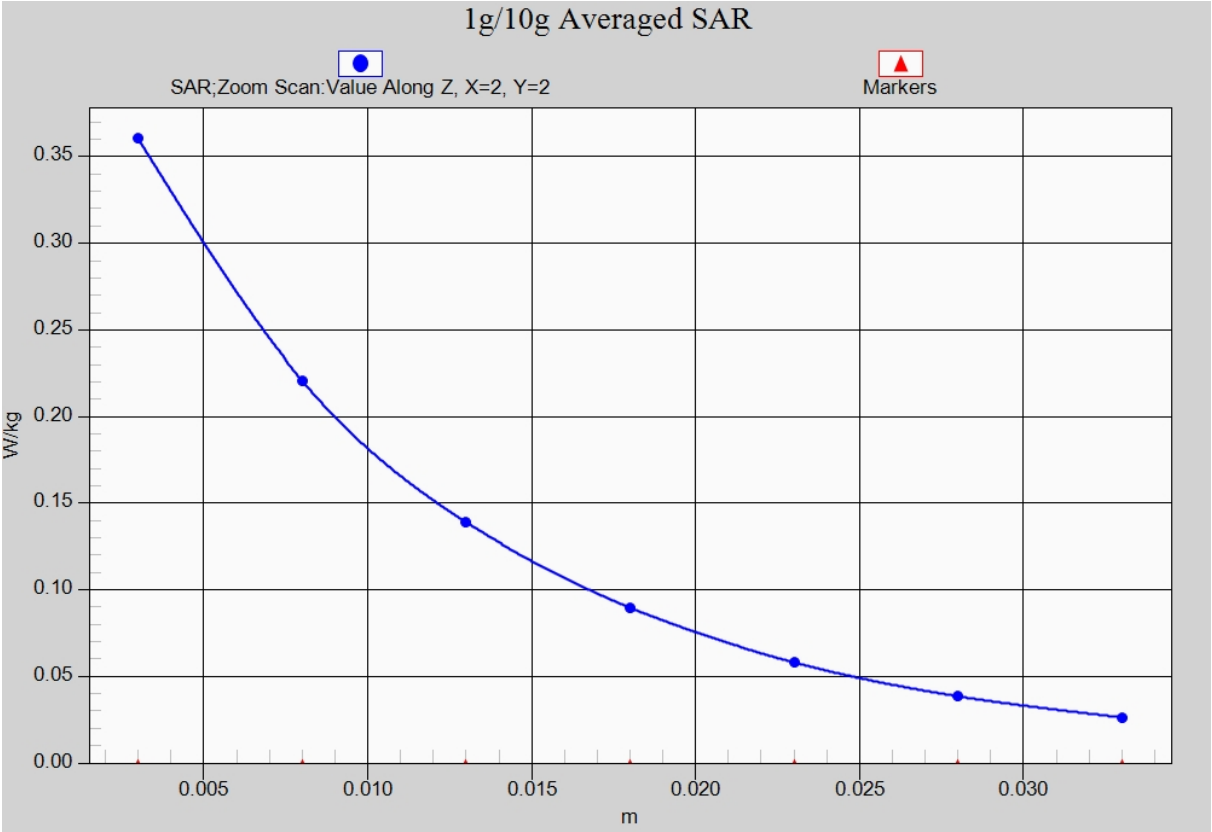


Fig. 10-1 Z-Scan at power reference point (WCDMA850)

WCDMA 1700 Right Cheek Middle

Date: 2017-3-27
Electronics: DAE4 Sn1331
Medium: Head 1750 MHz
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.36 mho/m; εr = 39.84; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: WCDMA 1750 Frequency: 1732.5 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(8.16, 8.16, 8.16)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.943 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.84 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.32 W/kg
SAR(1 g) = 0.766 W/kg; SAR(10 g) = 0.442 W/kg
Maximum value of SAR (measured) = 0.916 W/kg

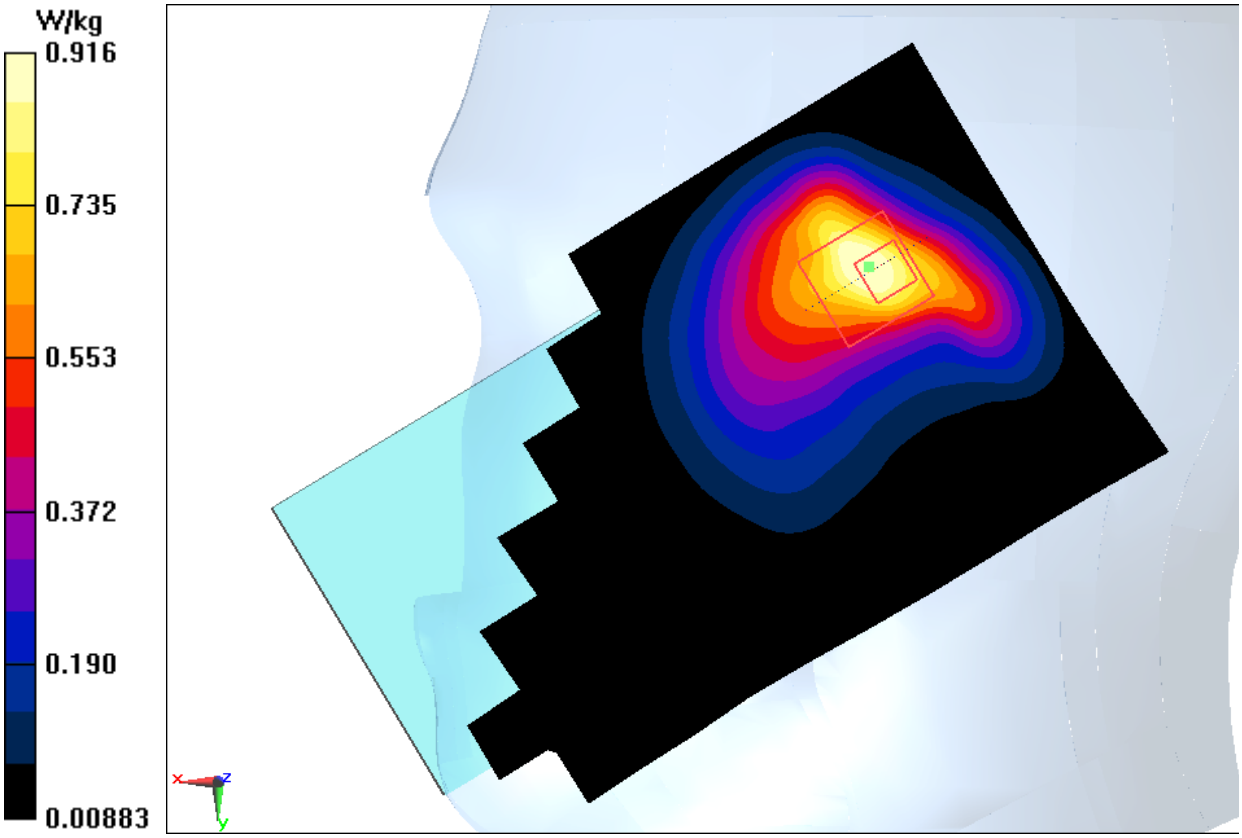


Fig.11 WCDMA1700

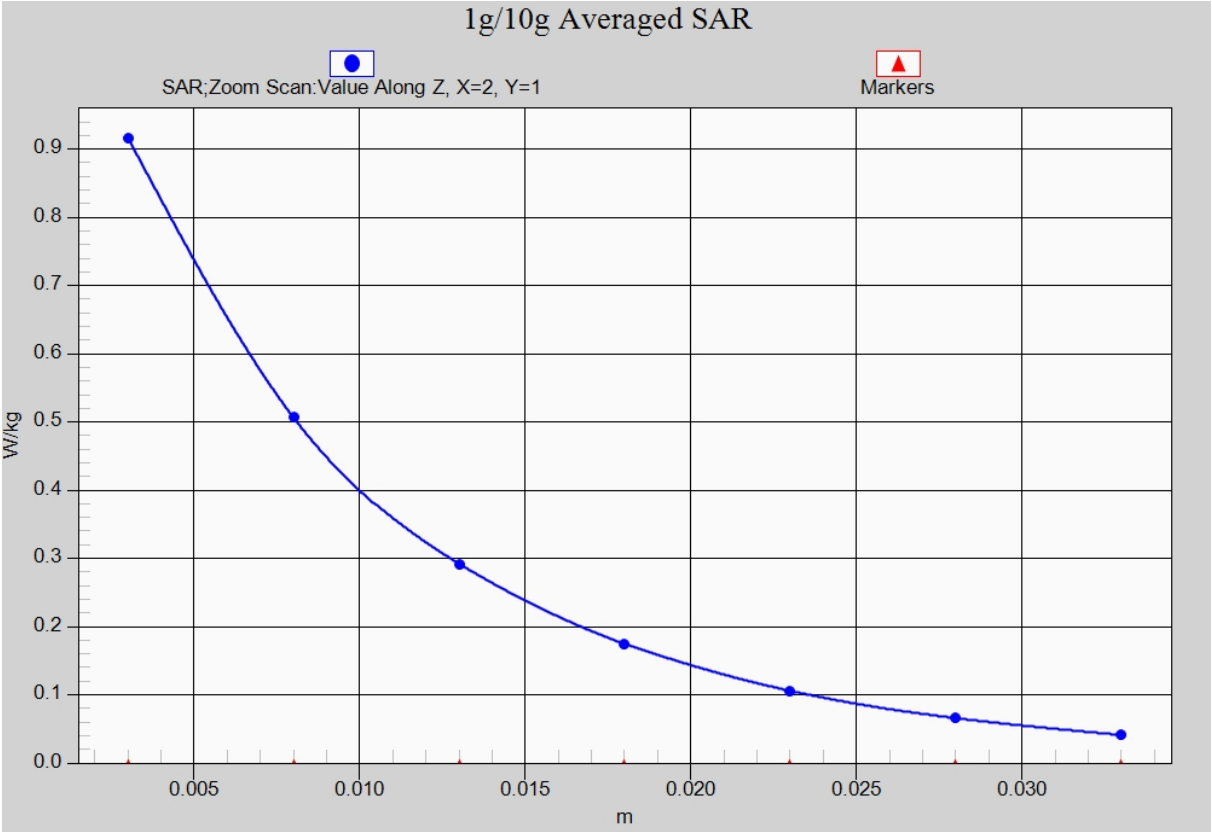


Fig. 11-1 Z-Scan at power reference point (WCDMA1700)

WCDMA 1700 Body Top Middle

Date: 2017-3-27
Electronics: DAE4 Sn1331
Medium: Body 1750 MHz
Medium parameters used: f = 1732.4 MHz; σ = 1.451 mho/m; εr = 54.58; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: WCDMA 1900 Frequency: 1732.4 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.90, 7.90, 7.90)

Area Scan (111x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.733 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.32 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.979 W/kg
SAR(1 g) = 0.546 W/kg; SAR(10 g) = 0.278 W/kg
Maximum value of SAR (measured) = 0.694 W/kg

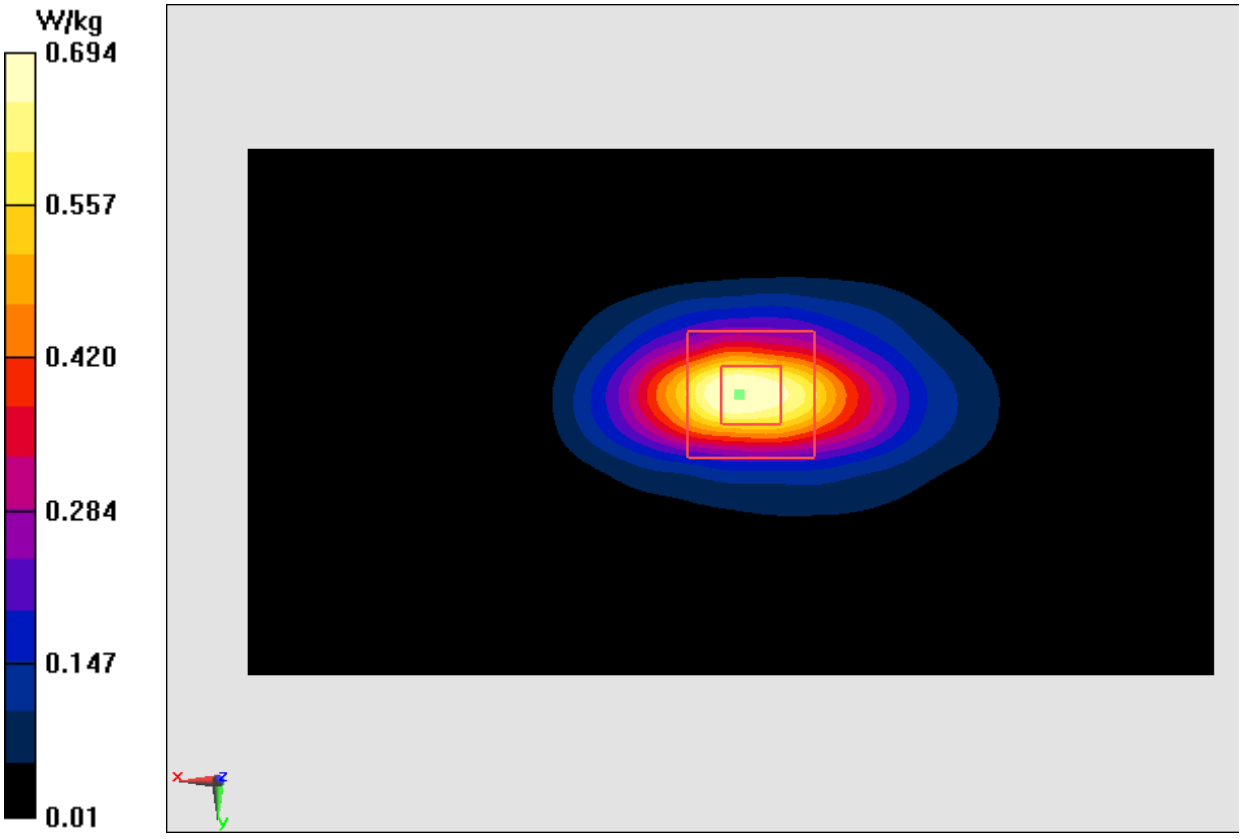


Fig.12 WCDMA1700

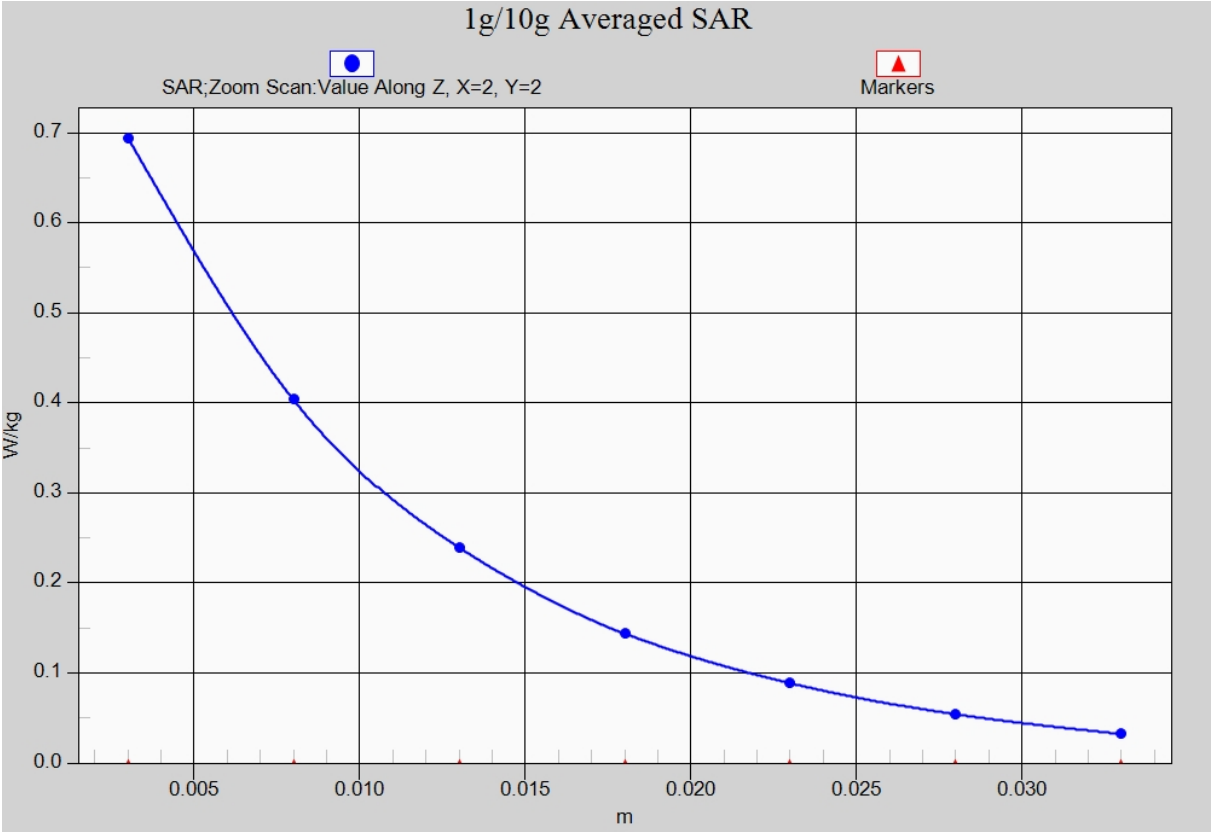


Fig. 12-1 Z-Scan at power reference point (WCDMA1700)

WCDMA 1900 Right Cheek High

Date: 2017-3-28
Electronics: DAE4 Sn1331
Medium: Head 1900 MHz
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.388 mho/m; εr = 39.17; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: WCDMA 1900 Frequency: 1907.6 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.89, 7.89, 7.89)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.65 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.02 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 2.07 W/kg
SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.703 W/kg
Maximum value of SAR (measured) = 1.43 W/kg

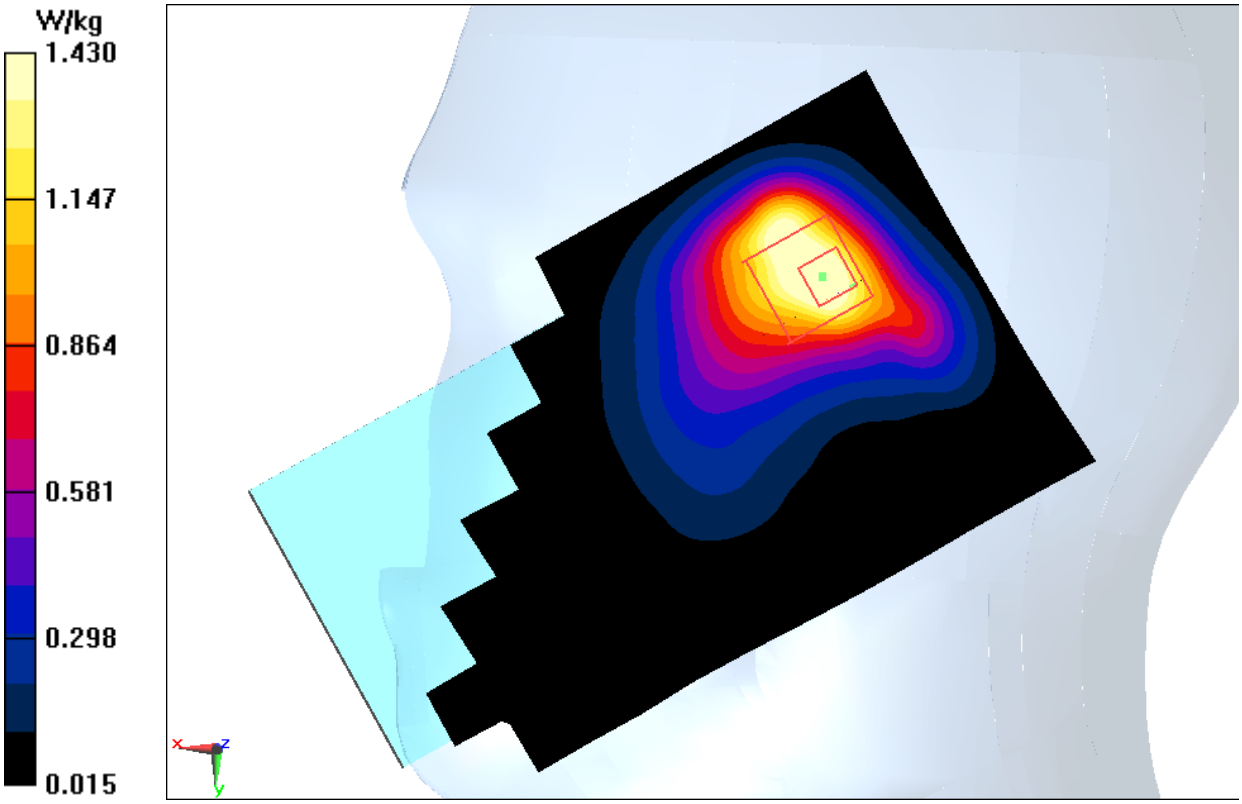


Fig.13 WCDMA1900

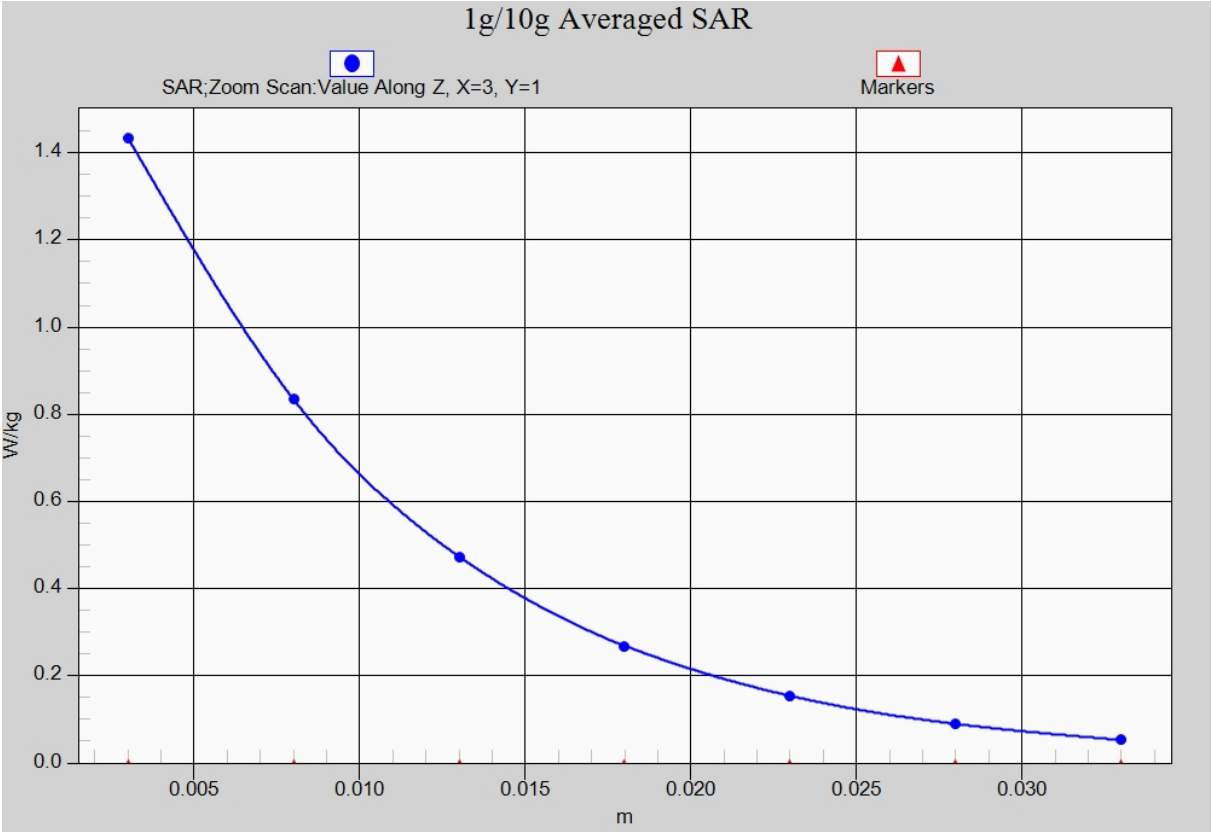


Fig. 13-1 Z-Scan at power reference point (WCDMA1900)

WCDMA 1900 Body Top Middle

Date: 2017-3-28
Electronics: DAE4 Sn1331
Medium: Body 1900 MHz
Medium parameters used (interpolated): f = 1880 MHz; σ = 1.509 mho/m; εr = 53.77; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: WCDMA 1900 Frequency: 1880 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.57, 7.57, 7.57)

Area Scan (111x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.917 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.11 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.695 W/kg; SAR(10 g) = 0.353 W/kg
Maximum value of SAR (measured) = 0.879 W/kg

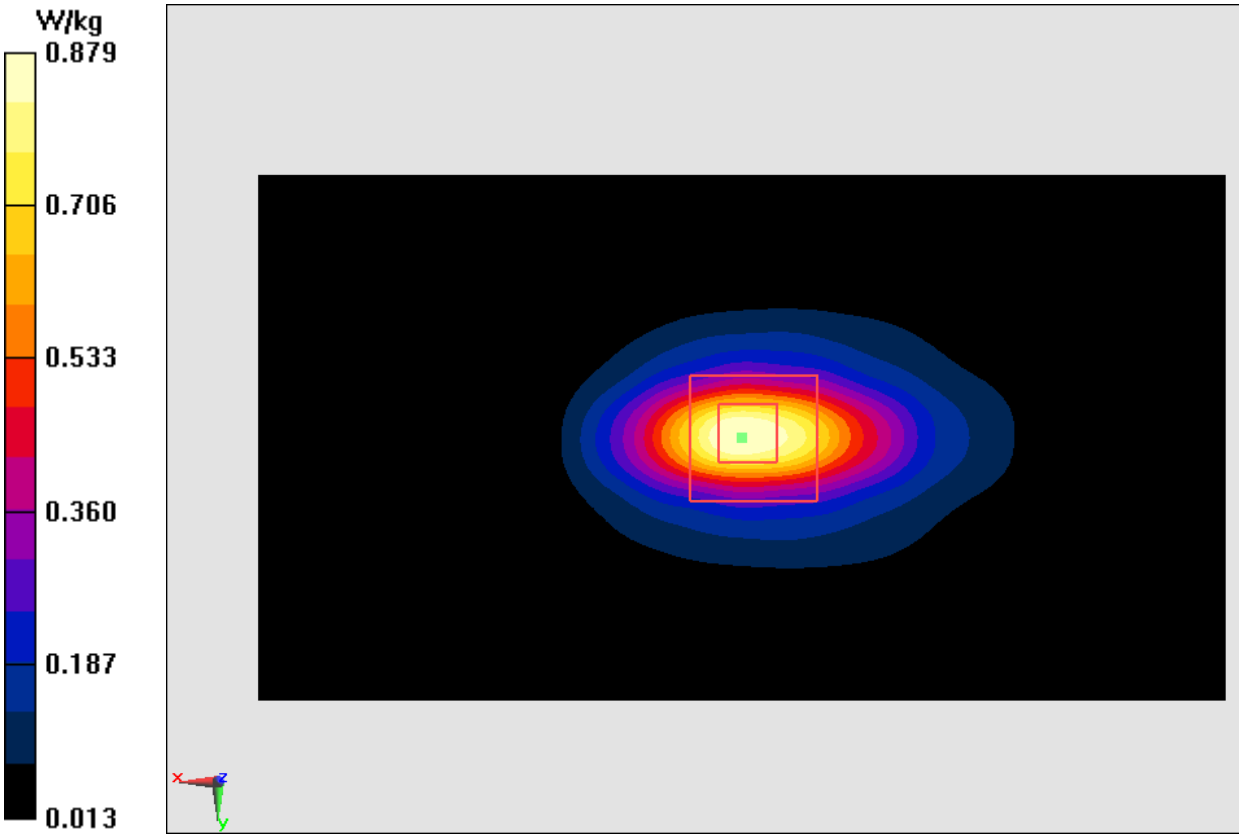


Fig.14 WCDMA1900

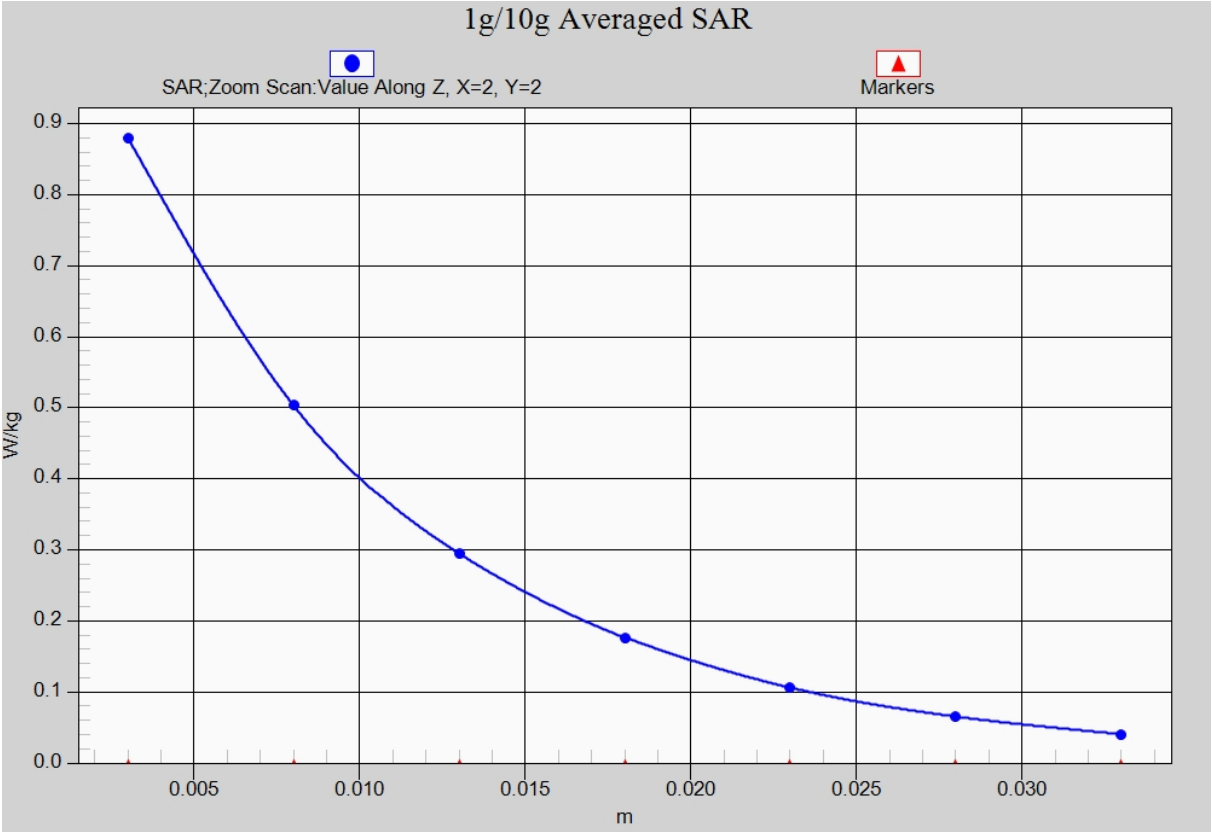


Fig. 14-1 Z-Scan at power reference point (WCDMA1900)

LTE Band2 Right Cheek High with QPSK_20M_1RB_High

Date: 2017-3-28
Electronics: DAE4 Sn1331
Medium: Head 1900 MHz
Medium parameters used: f = 1900 MHz; σ =1.382. mho/m; εr = 39.33; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band2 Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.89, 7.89, 7.89)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.75 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.07 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.34 W/kg
SAR(1 g) = 1.33 W/kg; SAR(10 g) = 0.744 W/kg
Maximum value of SAR (measured) = 1.59 W/kg

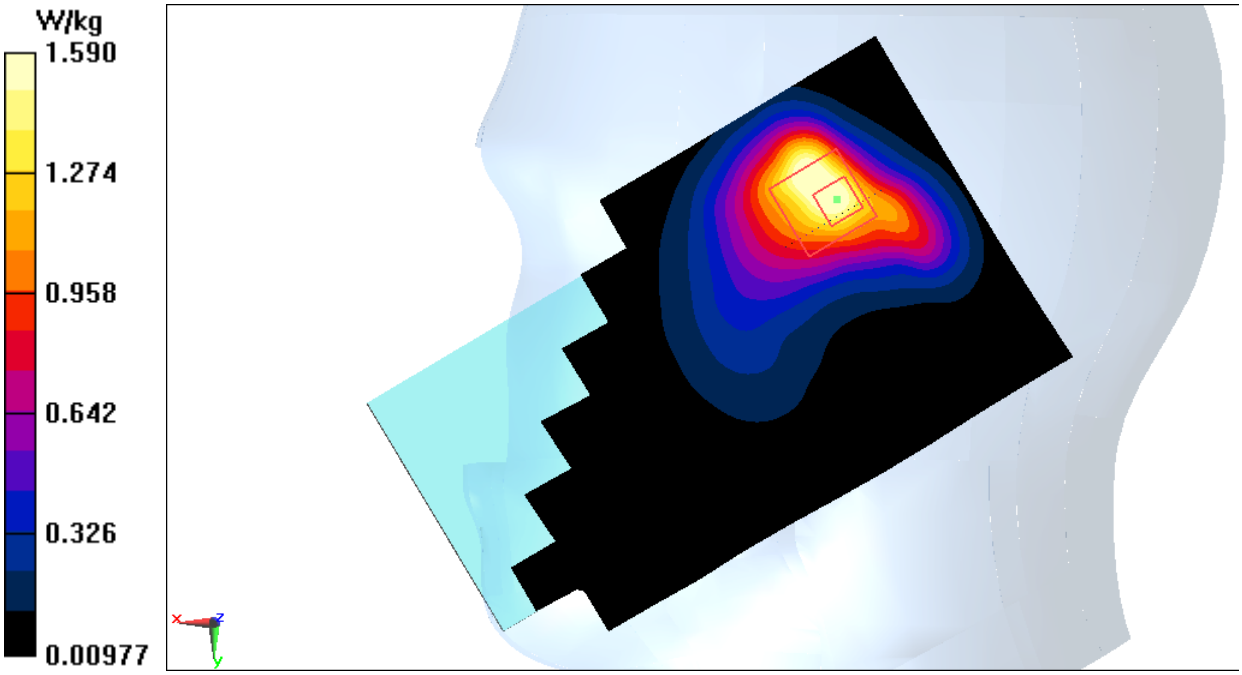


Fig.15 LTE Band2

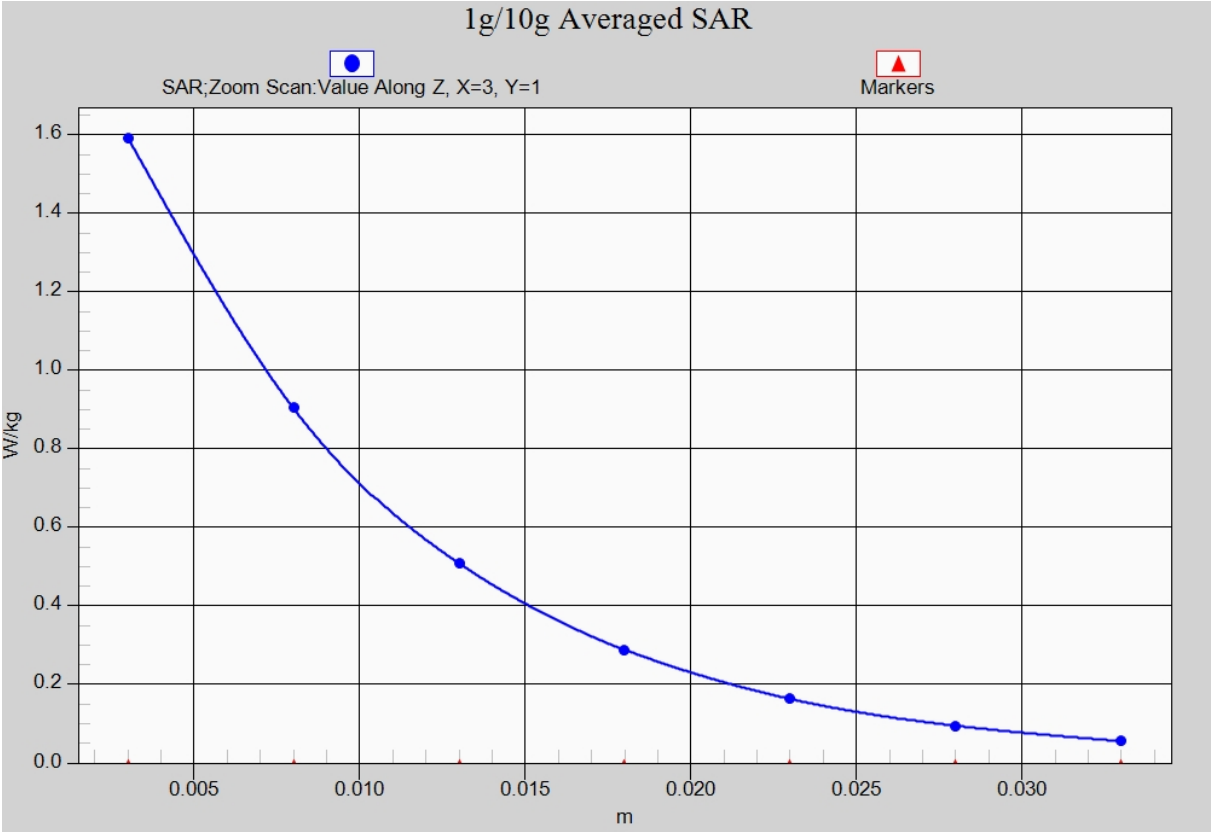


Fig. 15-1 Z-Scan at power reference point (LTE Band2)

LTE Band2 Body Top High with QPSK_20M_1RB_High
Date: 2017-3-28
Electronics: DAE4 Sn1331
Medium: Body 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.25 mho/m; εr = 53.21; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band2 Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.57, 7.57, 7.57)

Area Scan (111x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.840 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.88 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.617 W/kg; SAR(10 g) = 0.322 W/kg
Maximum value of SAR (measured) = 0.773 W/kg

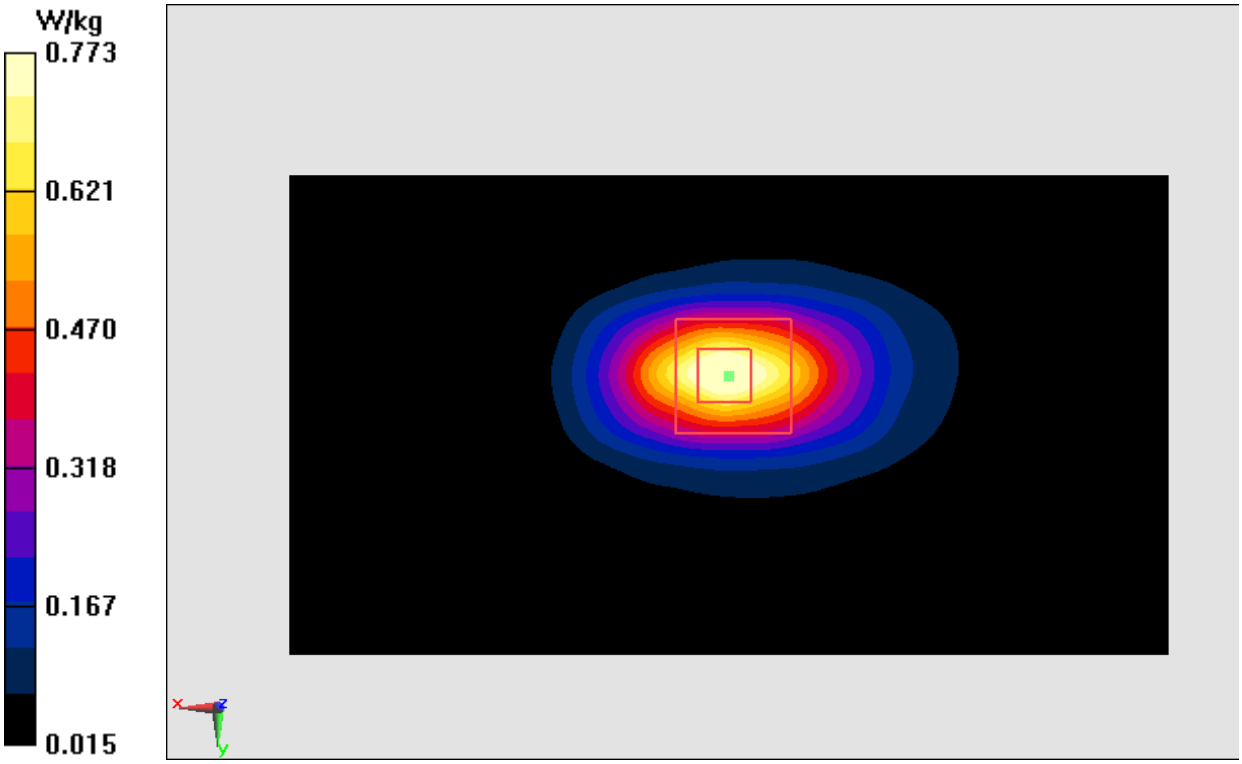


Fig.16 LTE Band2

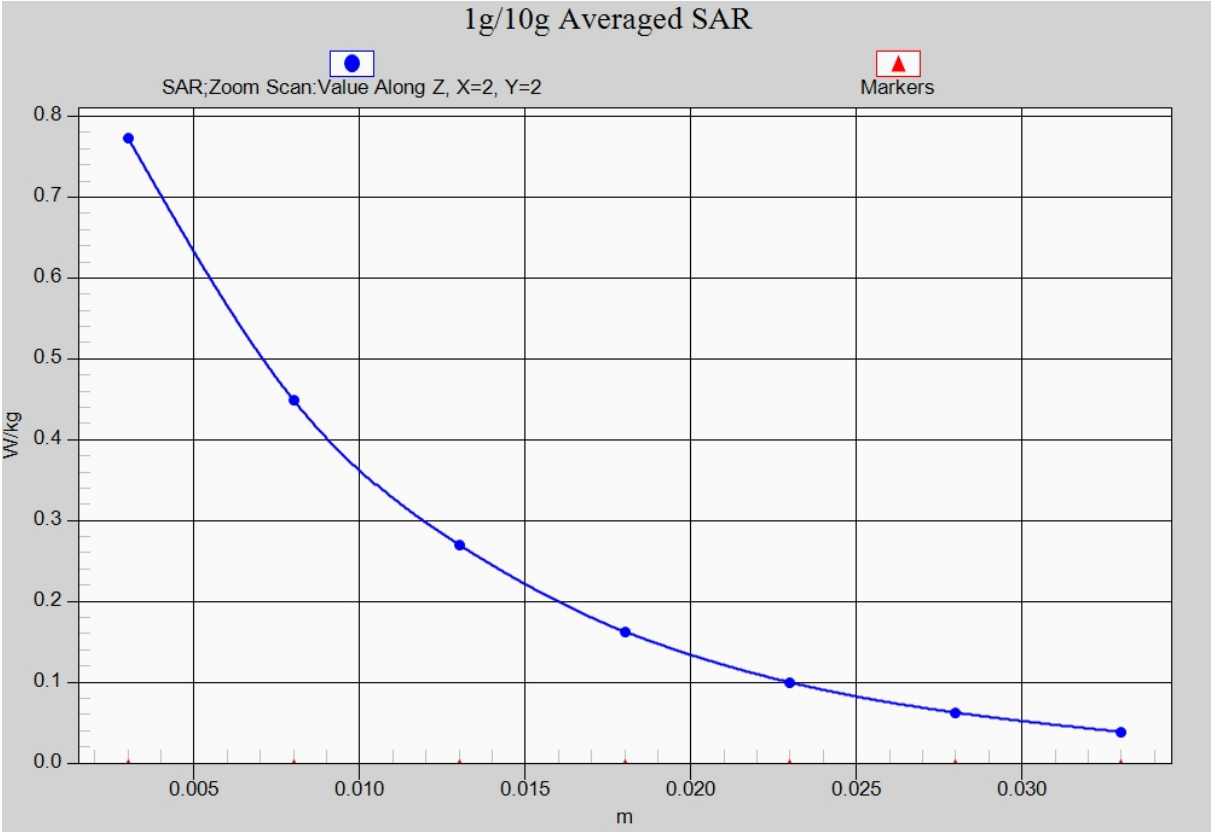


Fig. 16-1 Z-Scan at power reference point (LTE Band2)

LTE Band4 Right Cheek High with QPSK_20M_1RB_High

Date: 2017-3-27
Electronics: DAE4 Sn1331
Medium: Head 1750 MHz
Medium parameters used f = 1745 MHz; σ = 1.370 mho/m; εr = 39.55; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band4 Frequency: 1745MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(8.16, 8.16, 8.16)

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 = 25.73 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 2.16 W/kg
SAR(1 g) = 1.23 W/kg; SAR(10 g) = 0.687 W/kg
Maximum value of SAR (measured) = 1.49 W/kg

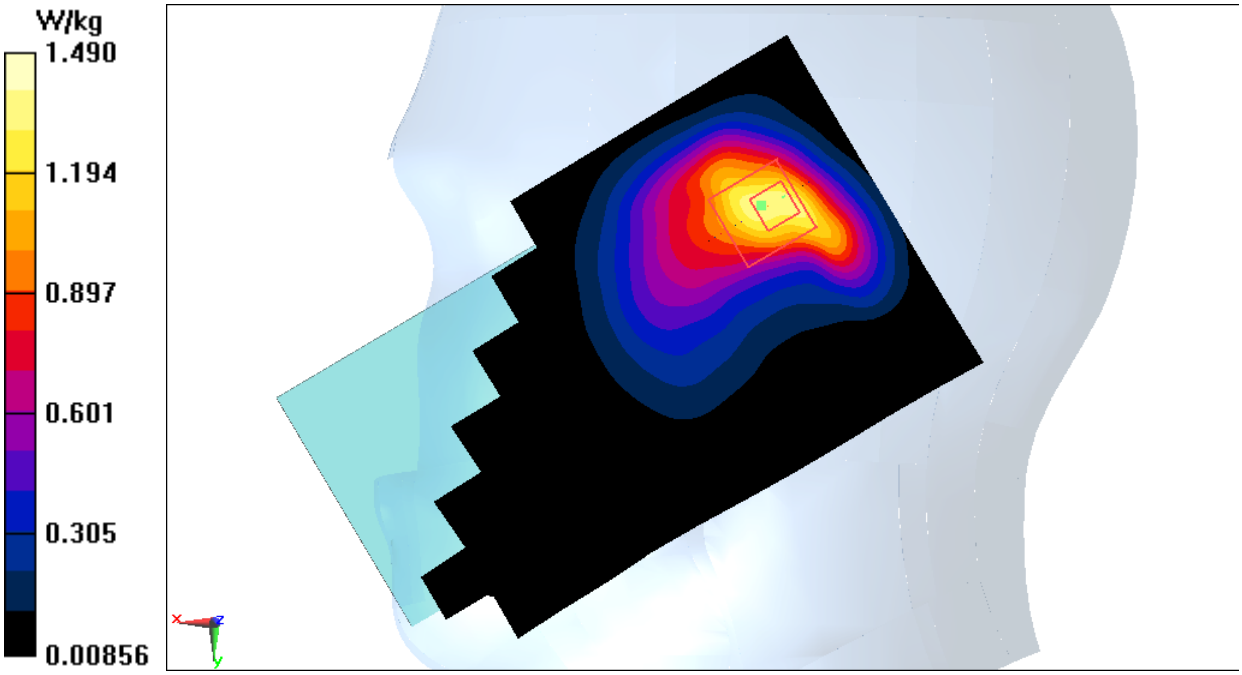


Fig.17 LTE Band4

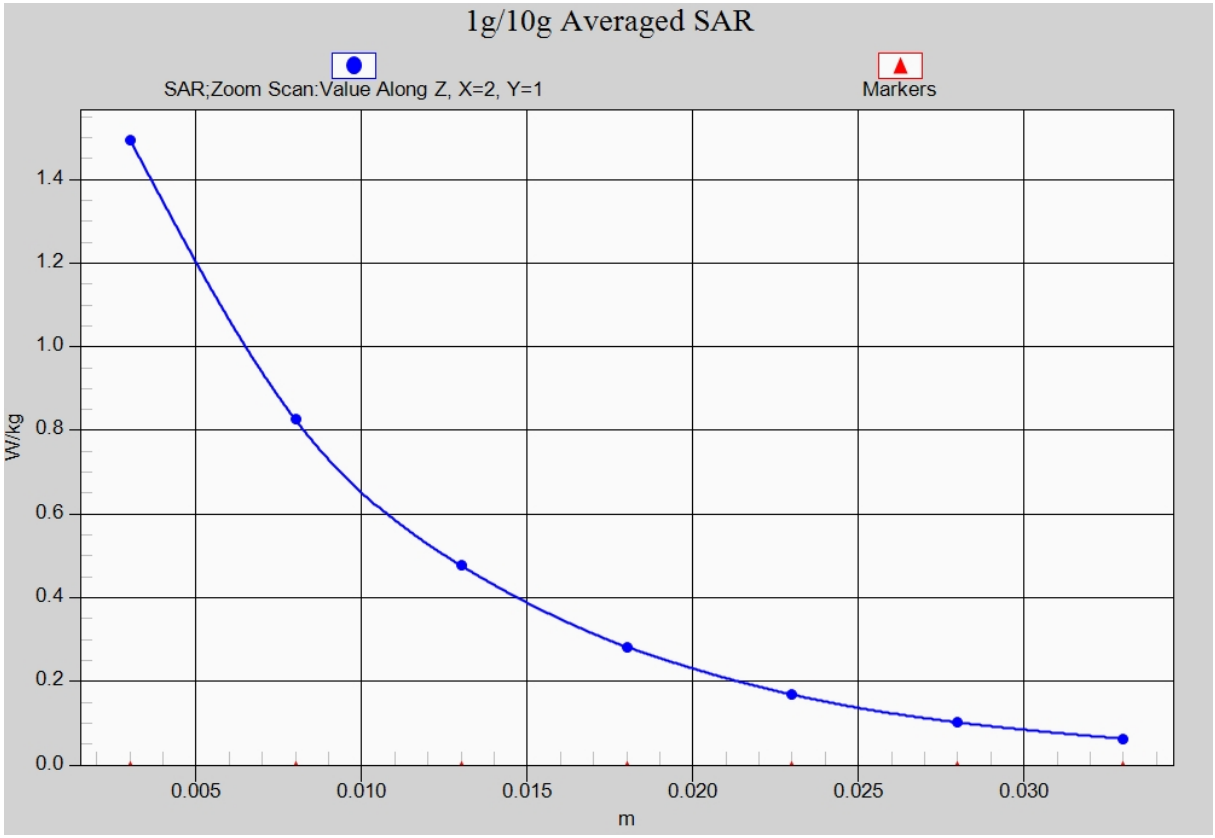


Fig. 17-1 Z-Scan at power reference point (LTE Band4)

LTE Band4 Body Top High with QPSK_20M_1RB_High
Date: 2017-3-27
Electronics: DAE4 Sn1331
Medium: Body 1750 MHz
Medium parameters used: f = 1745 MHz; σ =1.462 mho/m; εr = 54.19; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band4 Frequency: 1745 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(7.90, 7.90, 7.90)

Area Scan (111x61x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.705 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.40 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.963 W/kg
SAR(1 g) = 0.533 W/kg; SAR(10 g) = 0.270 W/kg
Maximum value of SAR (measured) = 0.679 W/kg

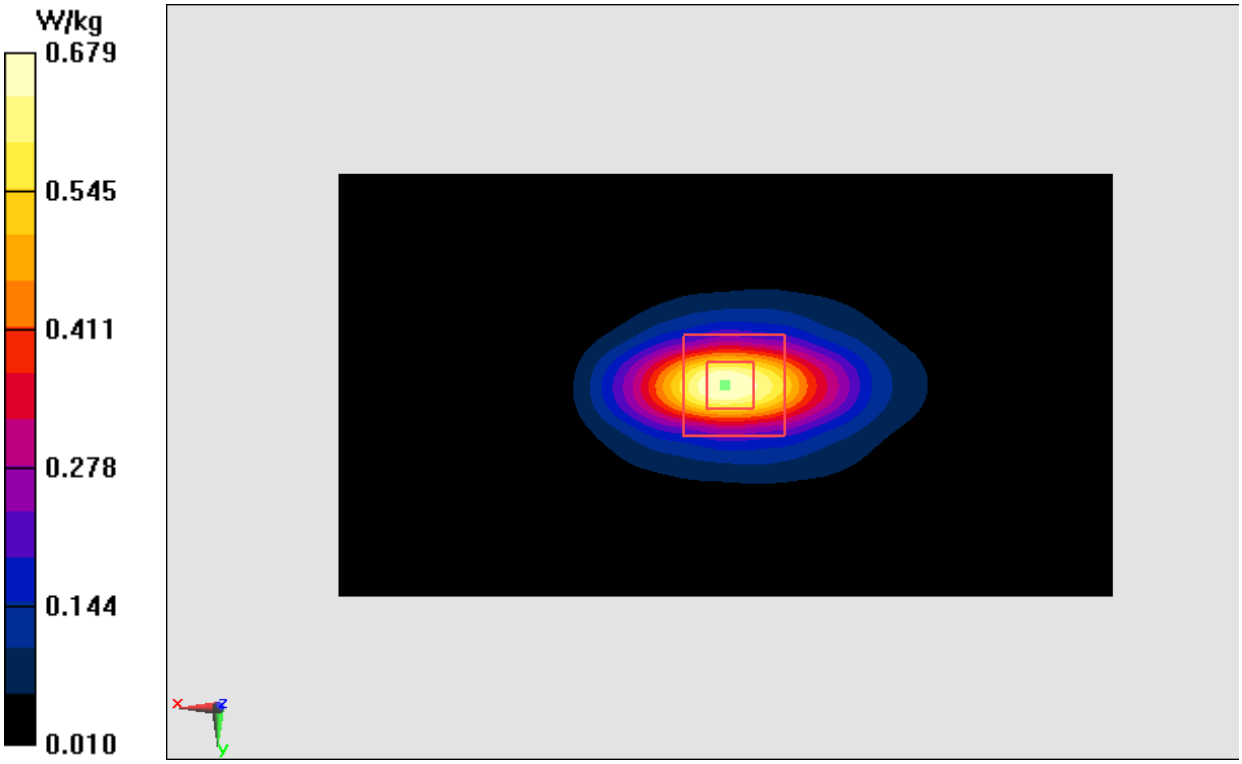


Fig.18 LTE Band4

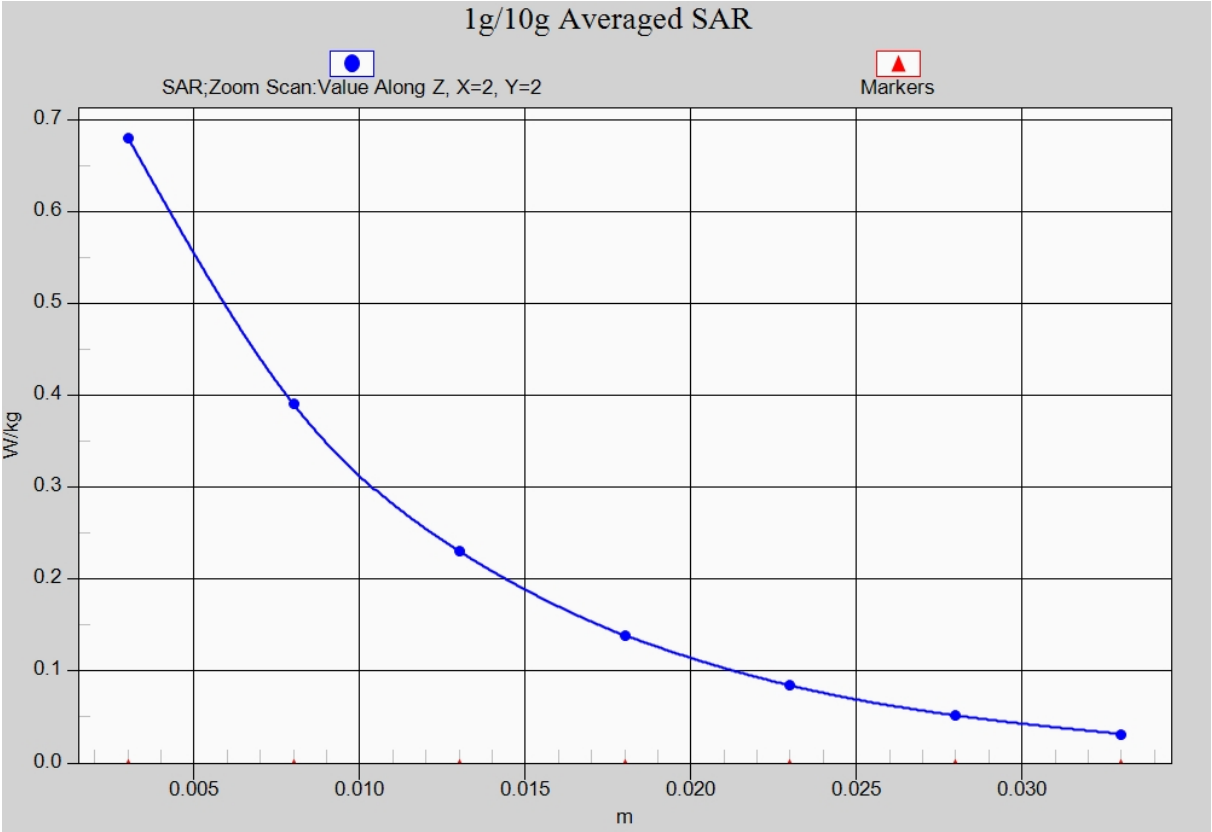


Fig. 18-1 Z-Scan at power reference point (LTE Band4)

LTE Band5 Right Cheek Middle with QPSK_10M_25RB_High – antenna up
Date: 2017-3-26
Electronics: DAE4 Sn1331
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.894 mho/m; εr = 41.03; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band5 Frequency: 836.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.33, 9.33, 9.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.919 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.03 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 0.809 W/kg; SAR(10 g) = 0.482 W/kg
Maximum value of SAR (measured) = 1.05 W/kg

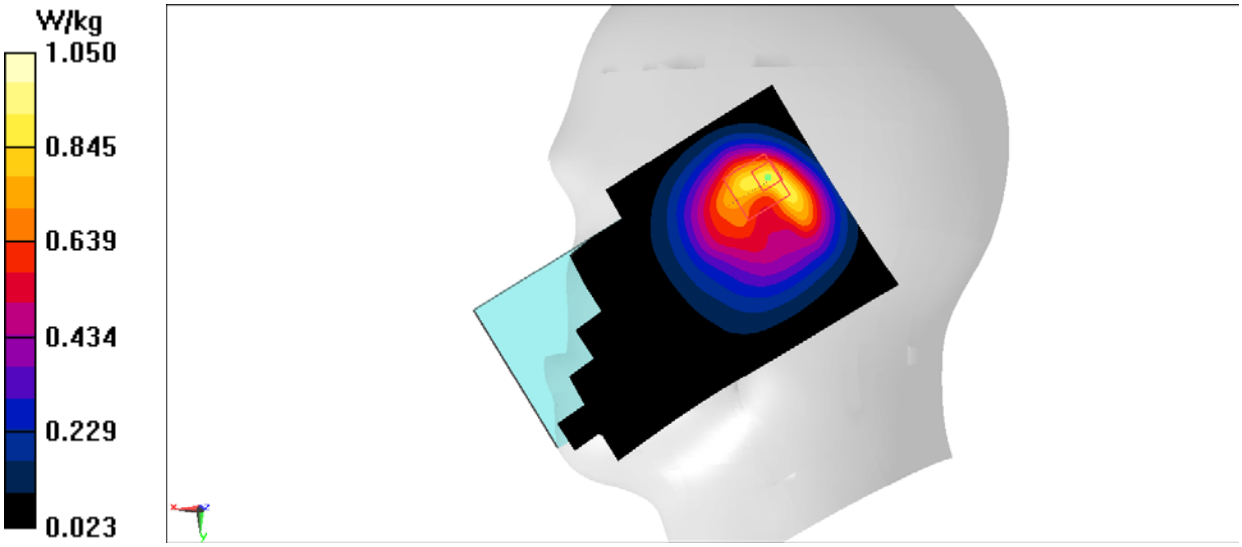


Fig.19 LTE Band5

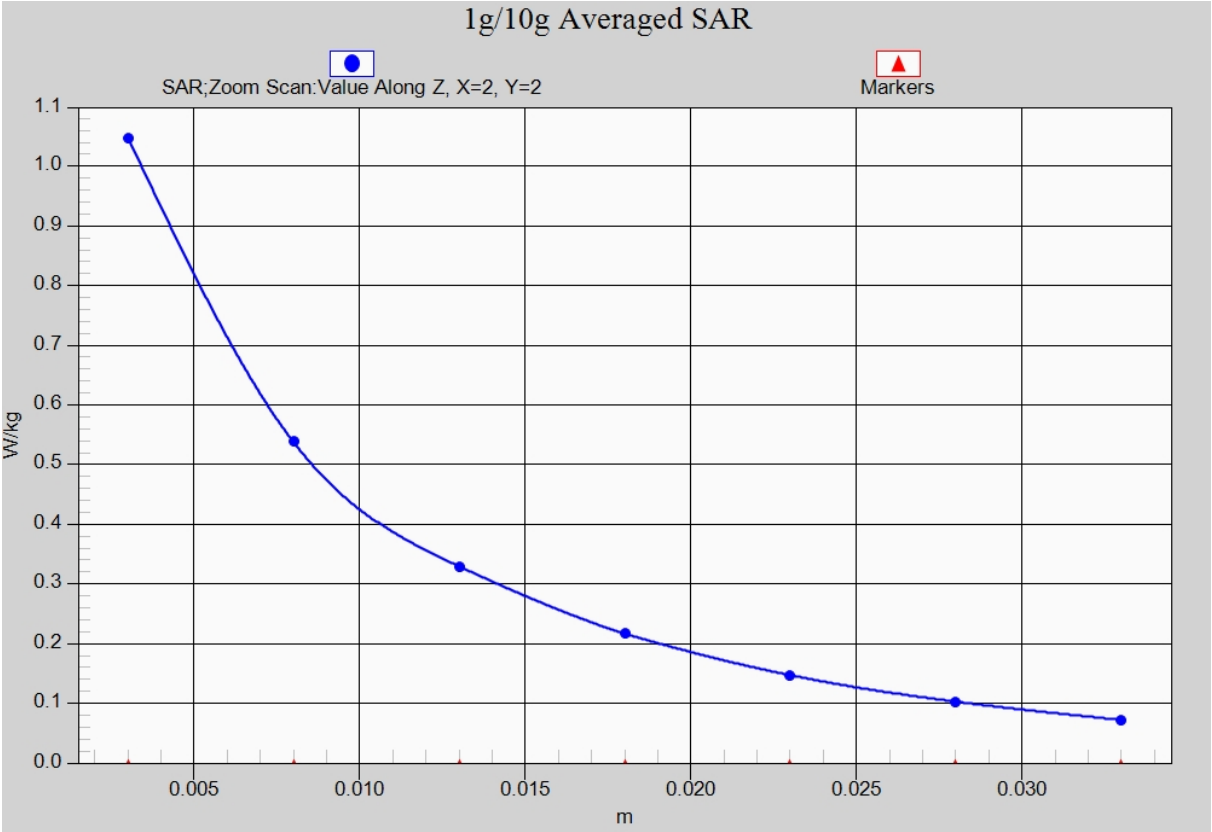


Fig. 19-1 Z-Scan at power reference point (LTE Band5)

LTE Band5 Body Rear Low with QPSK_10M_25RB_High – antenna up
Date: 2017-3-26
Electronics: DAE4 Sn1331
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 829 MHz; σ = 0.967 mho/m; εr = 55.14; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band5 Frequency: 829 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.52, 9.52, 9.52)

Area Scan (151x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.329 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.84 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.504 W/kg
SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.160 W/kg
Maximum value of SAR (measured) = 0.340 W/kg

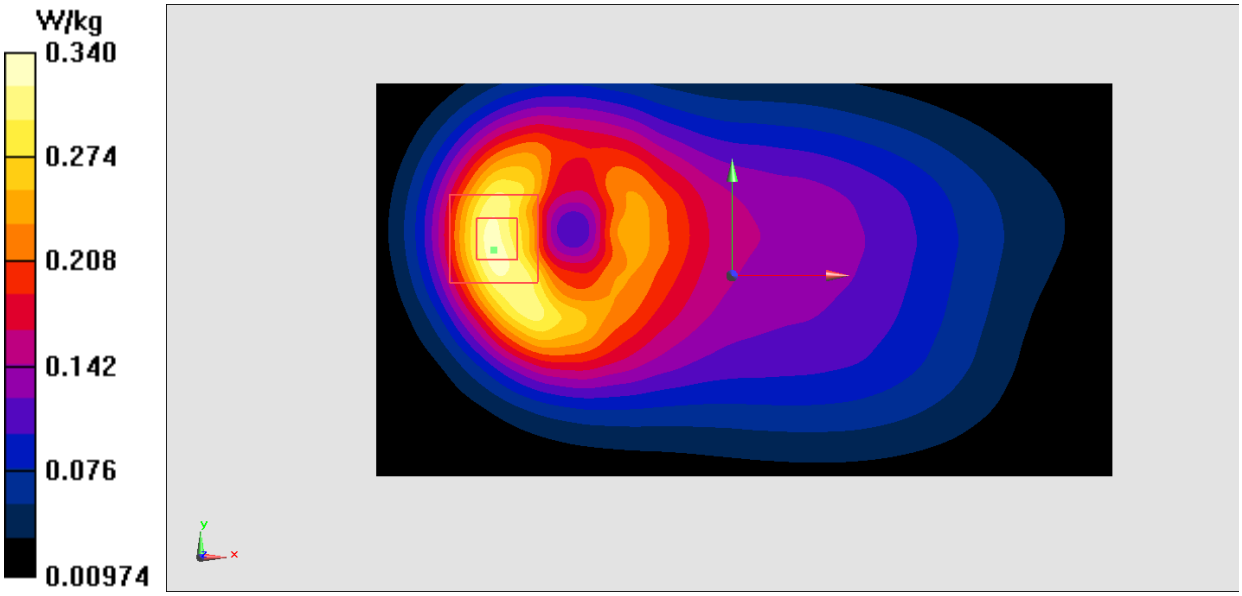


Fig.20 LTE Band5

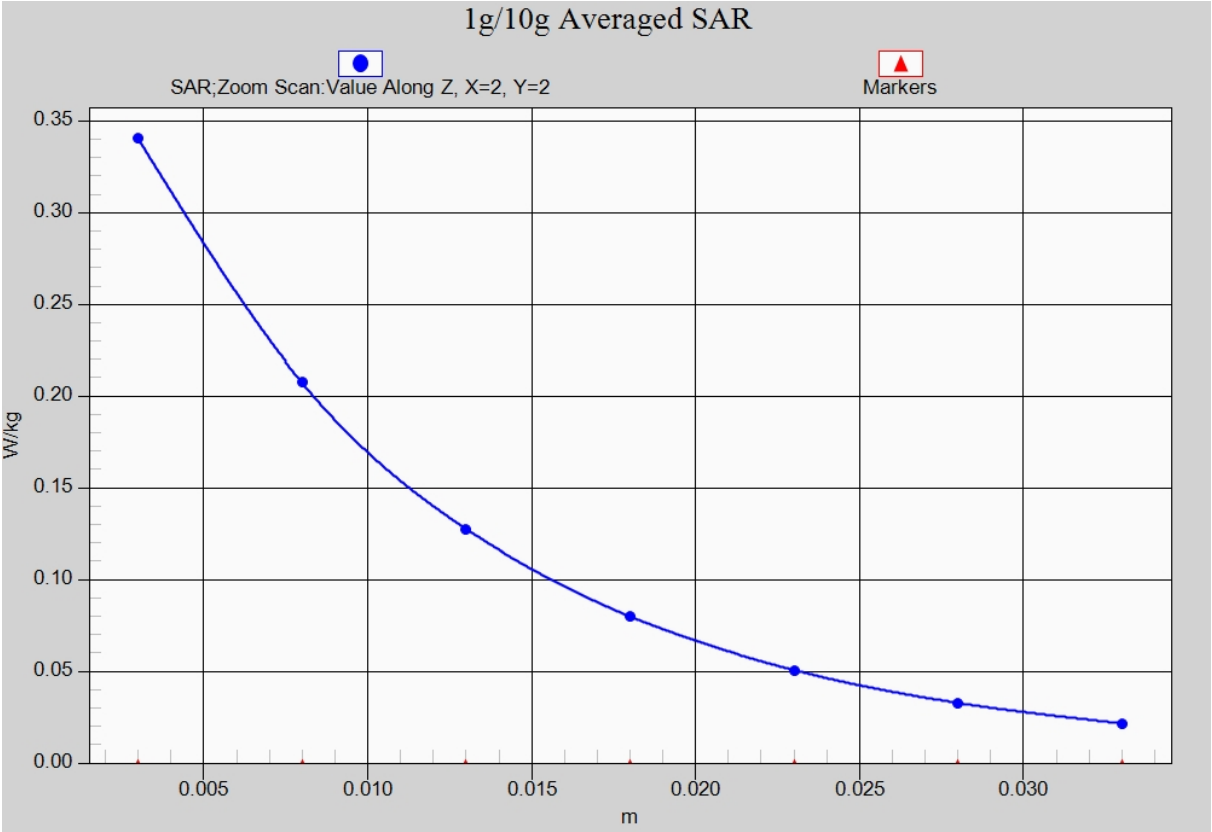


Fig. 20-1 Z-Scan at power reference point (LTE Band5)

LTE Band5 Right Cheek Low with QPSK_10M_1RB_High – antenna down
Date: 2017-4-2
Electronics: DAE4 Sn1331
Medium: Head 850 MHz
Medium parameters used (interpolated): f = 829 MHz; σ = 0.886 mho/m; εr = 41.40; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band5 Frequency: 829 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.33, 9.33, 9.33)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.174 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.648 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.199 W/kg
SAR(1 g) = 0.159 W/kg; SAR(10 g) = 0.123 W/kg
Maximum value of SAR (measured) = 0.171 W/kg

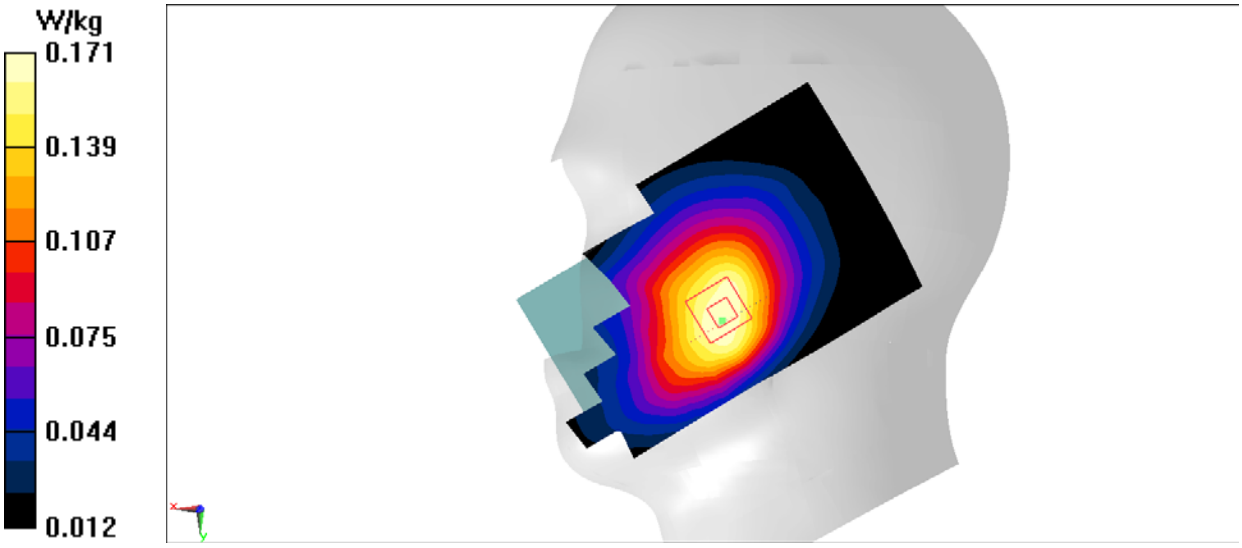


Fig.21 LTE Band5

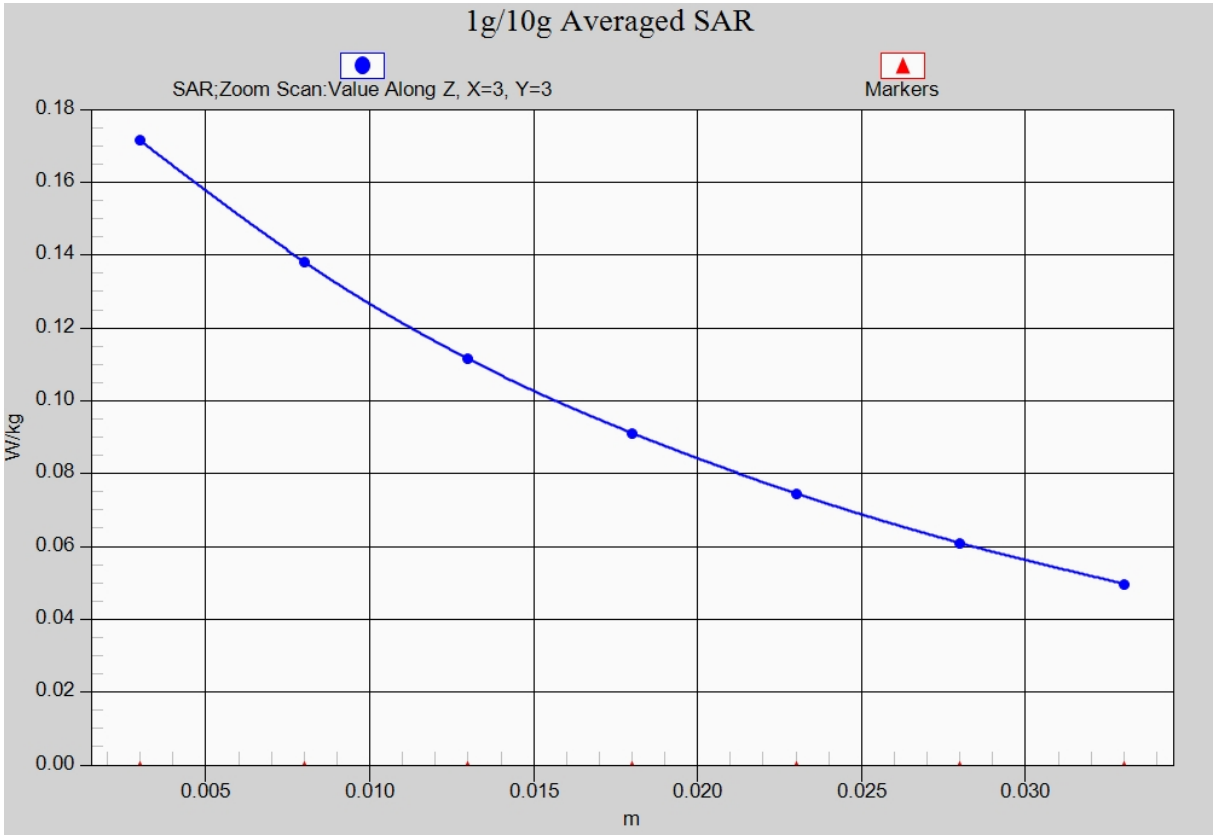


Fig. 21-1 Z-Scan at power reference point (LTE Band5)

LTE Band5 Body Front Low with QPSK_10M_1RB_High – antenna down
Date: 2017-4-2
Electronics: DAE4 Sn1331
Medium: Body 850 MHz
Medium parameters used (interpolated): f = 829 MHz; σ = 0.970 mho/m; εr = 54.68; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band5 Frequency: 829 MHz Duty Cycle: 1:1
Probe: EX3DV4 – SN3846 ConvF(9.52, 9.52, 9.52)

Area Scan (151x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.283 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.15 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.378 W/kg
SAR(1 g) = 0.222 W/kg; SAR(10 g) = 0.128 W/kg
Maximum value of SAR (measured) = 0.273 W/kg

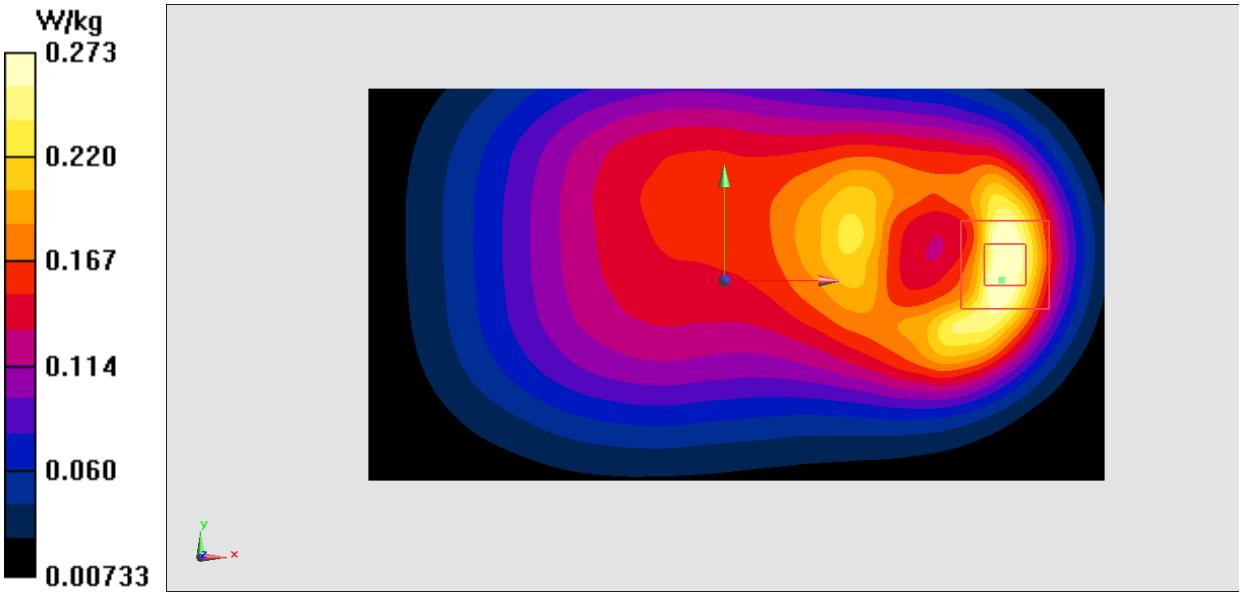


Fig.22 LTE Band5

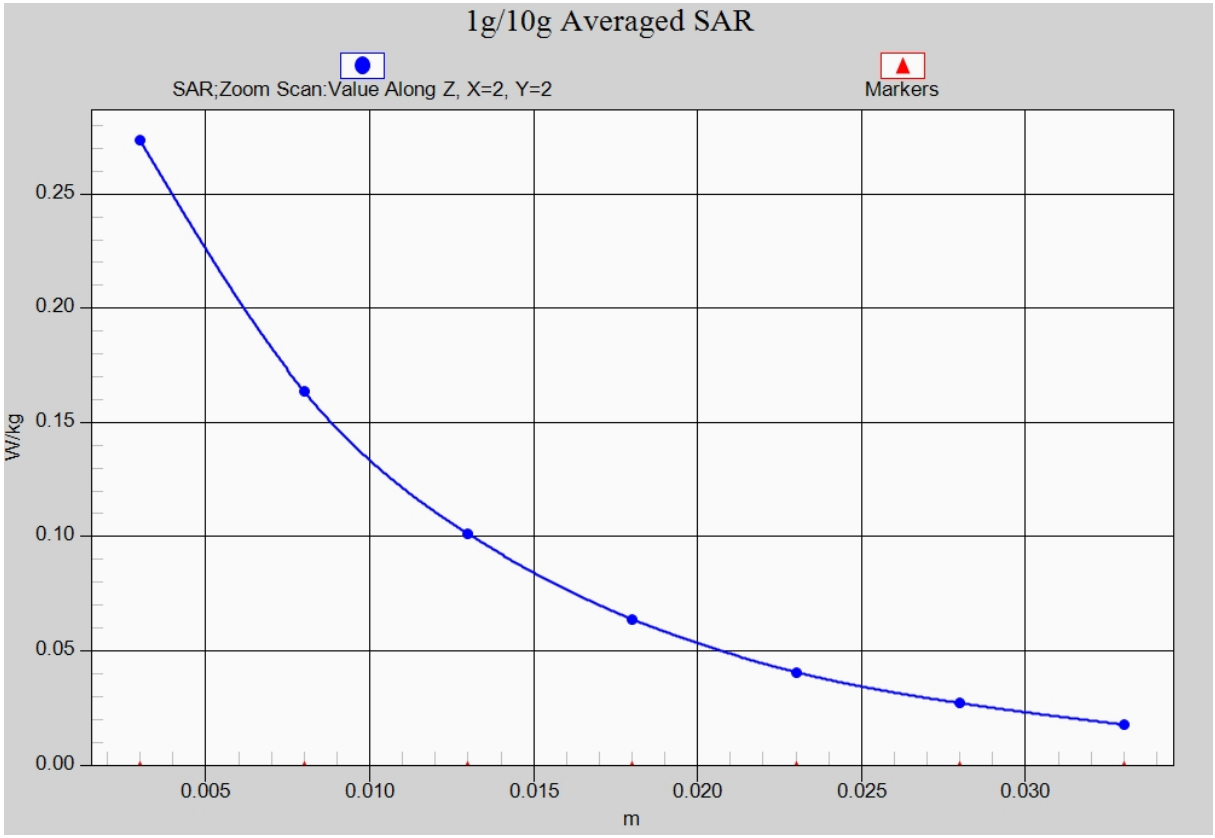


Fig. 22-1 Z-Scan at power reference point (LTE Band5)

LTE Band7 Right Cheek High with QPSK_20M_1RB_High

Date: 2017-3-31
Electronics: DAE4 Sn1331
Medium: Head2600 MHz
Medium parameters used: f = 2560 MHz; σ = 1.930 mho/m; εr = 38.99; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band7Frequency: 2560 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.12, 7.12, 7.12)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.26 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.21 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 2.12 W/kg
SAR(1 g) = 0.974 W/kg; SAR(10 g) = 0.440 W/kg
Maximum value of SAR (measured) = 1.28 W/kg

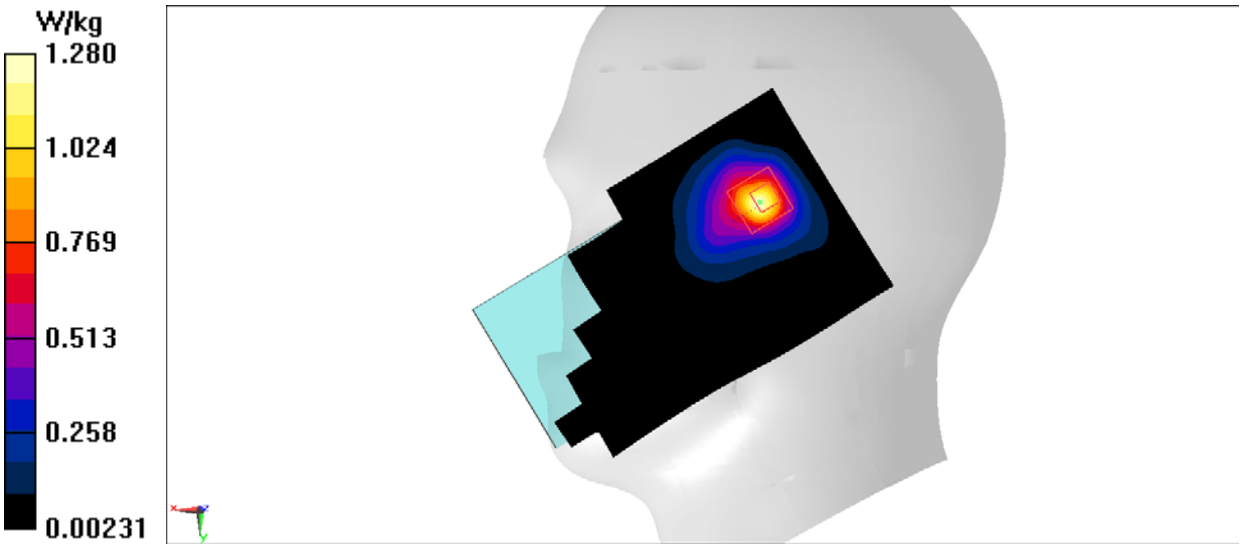


Fig.23 LTE Band7

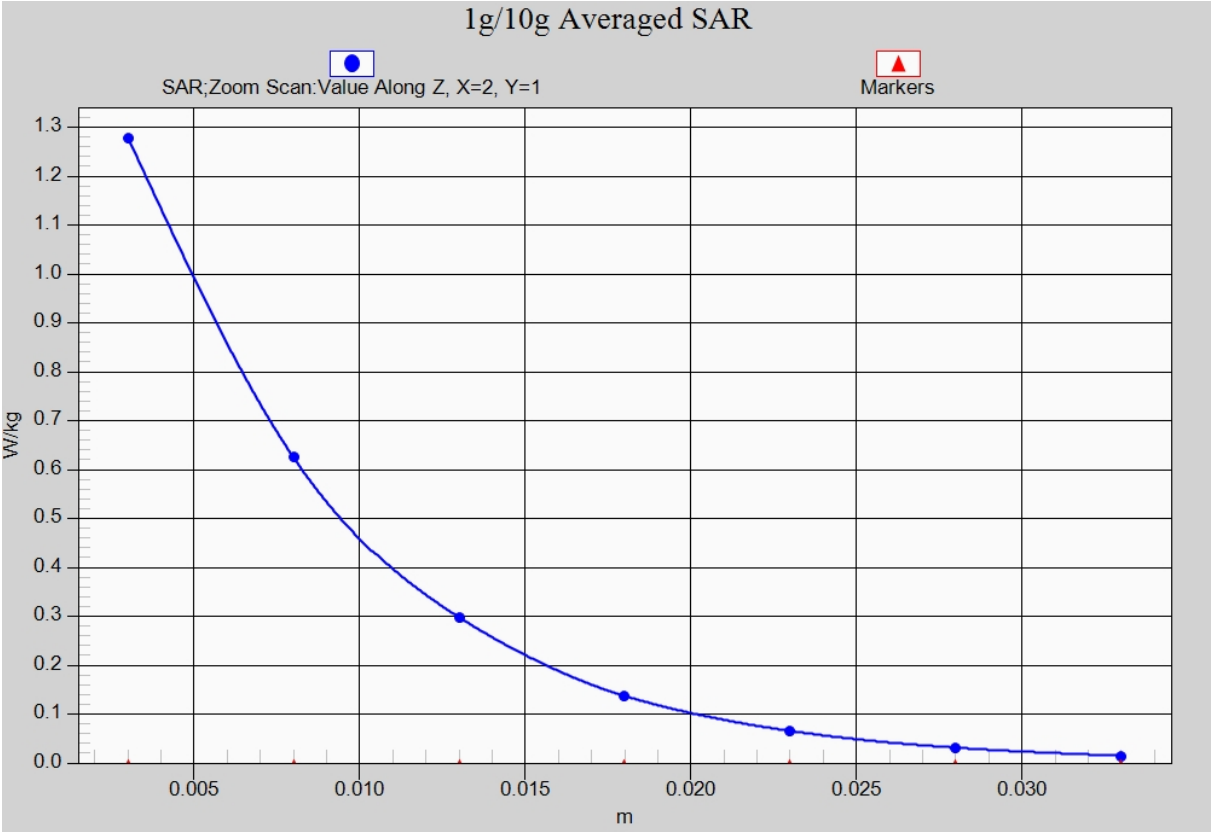


Fig. 23-1 Z-Scan at power reference point (LTE Band7)

LTE Band7 Body Rear Middle with QPSK_20M_1RB_High

Date: 2017-3-31
Electronics: DAE4 Sn1331
Medium: Body2600 MHz
Medium parameters used: f = 2535 MHz; σ = 2.097 mho/m; εr = 54.43; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band7 Frequency: 2535 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.25, 7.25, 7.25)

Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.17 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.603 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.60 W/kg
SAR(1 g) = 0.929 W/kg; SAR(10 g) = 0.505 W/kg
Maximum value of SAR (measured) = 1.11 W/kg

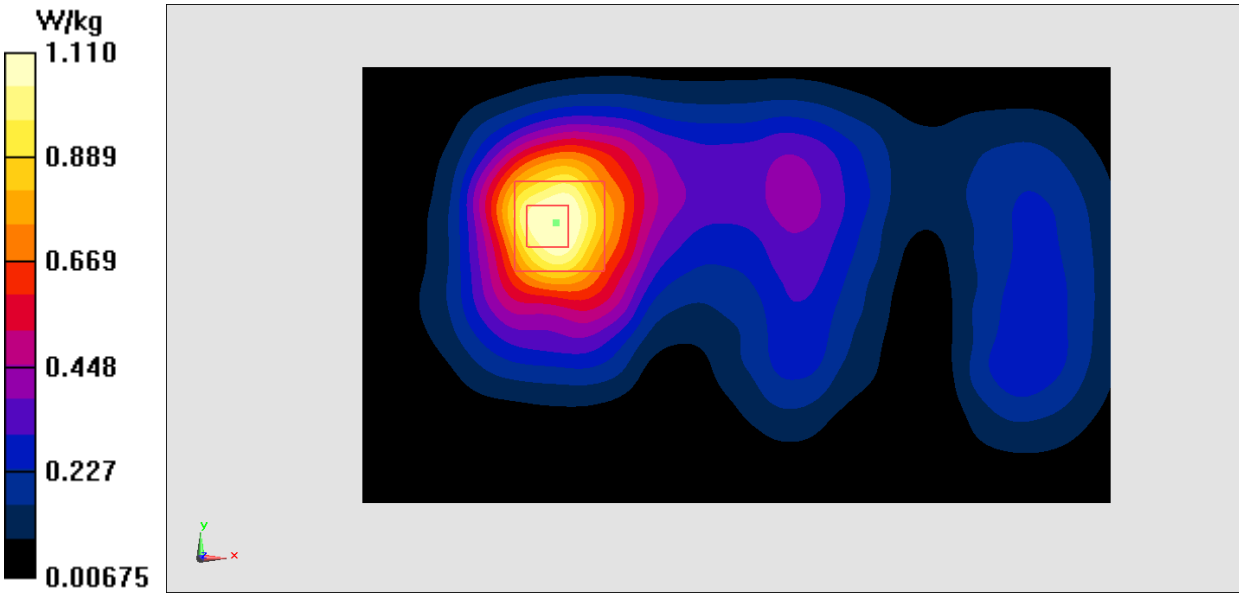


Fig.24 LTE Band7

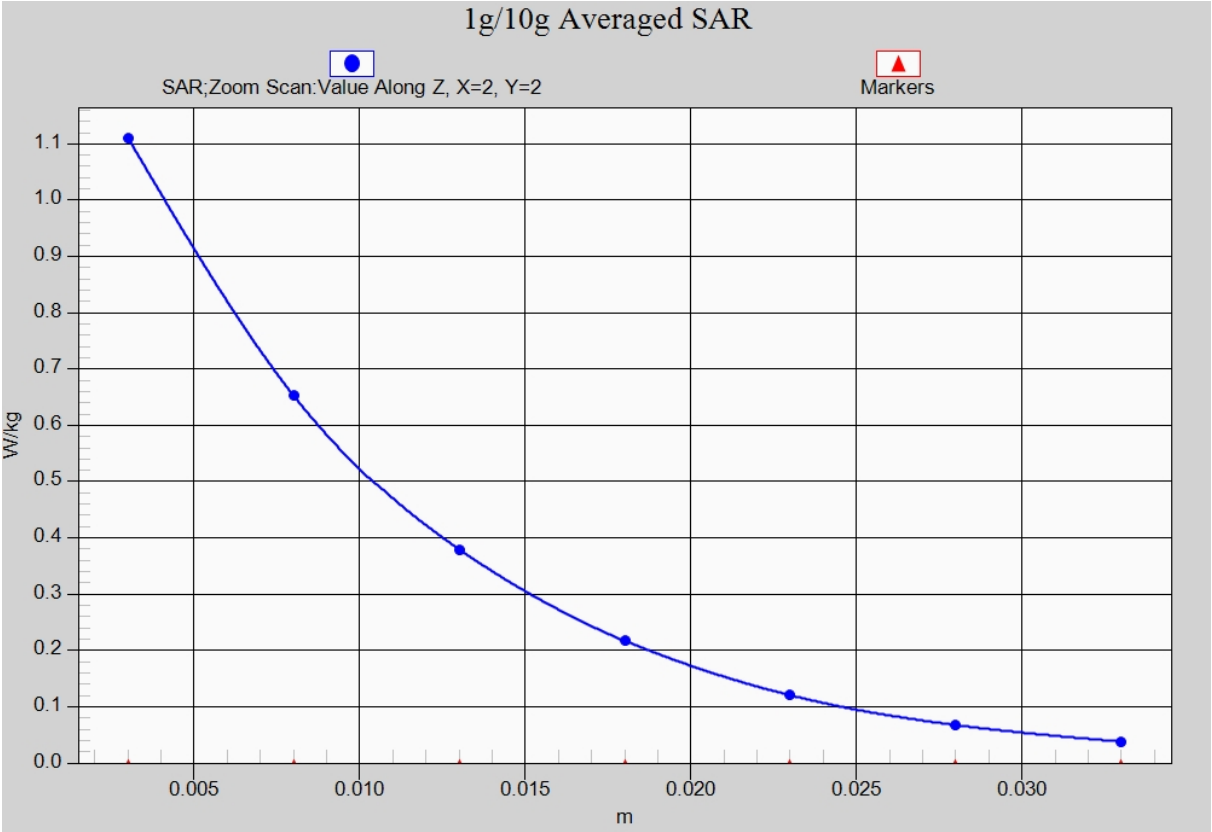


Fig. 24-1 Z-Scan at power reference point (LTE Band7)

LTE Band12 Right Tilt Low with QPSK_10M_1RB_High – antenna up

Date: 2017-3-25
Electronics: DAE4 Sn1331
Medium: Head750 MHz
Medium parameters used (interpolated): f = 704 MHz; σ = 0.842 mho/m; εr = 44.65; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band12Frequency: 704 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(9.65, 9.65, 9.65)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.698 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.41 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.614 W/kg; SAR(10 g) = 0.298 W/kg
Maximum value of SAR (measured) = 0.831 W/kg

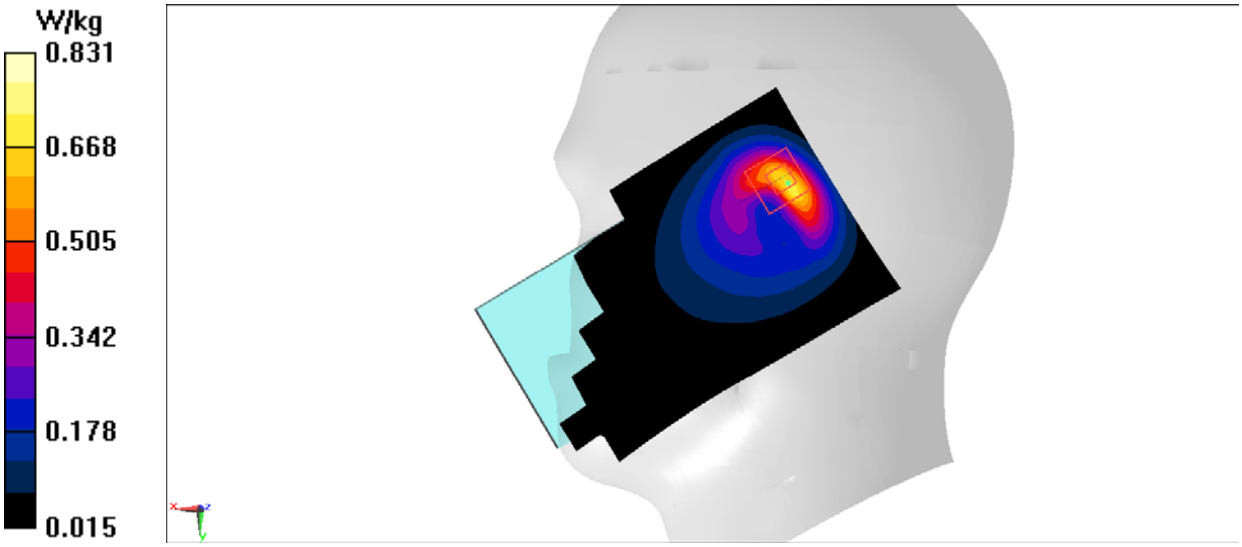


Fig.25 LTE Band12

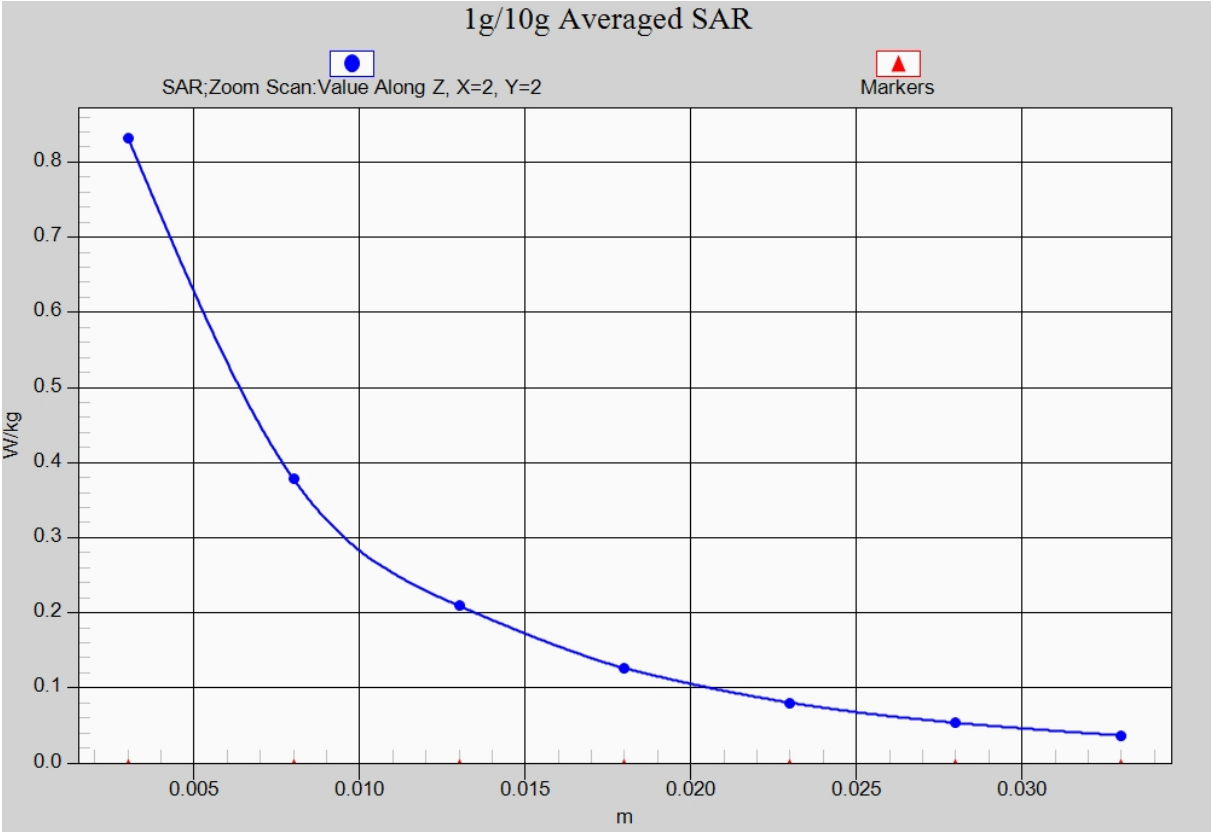


Fig. 25-1 Z-Scan at power reference point (LTE Band12)

LTE Band12 Body Rear Low with QPSK_10M_1RB_High – antenna up
Date: 2017-3-25
Electronics: DAE4 Sn1331
Medium: Body750 MHz
Medium parameters used (interpolated): f = 704 MHz; σ = 0.902 mho/m; εr = 58.41; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band12Frequency: 704 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(9.96, 9.96, 9.96)

Area Scan (151x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.229 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.12 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.343 W/kg
SAR(1 g) = 0.186 W/kg; SAR(10 g) = 0.105 W/kg
Maximum value of SAR (measured) = 0.224 W/kg

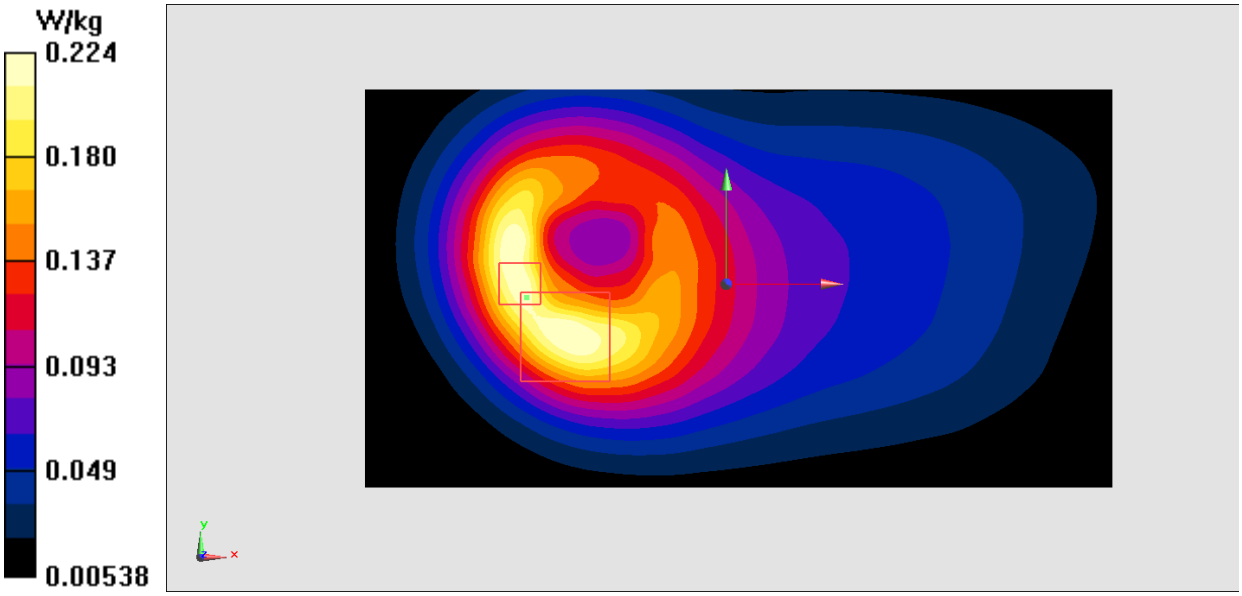


Fig.26 LTE Band12

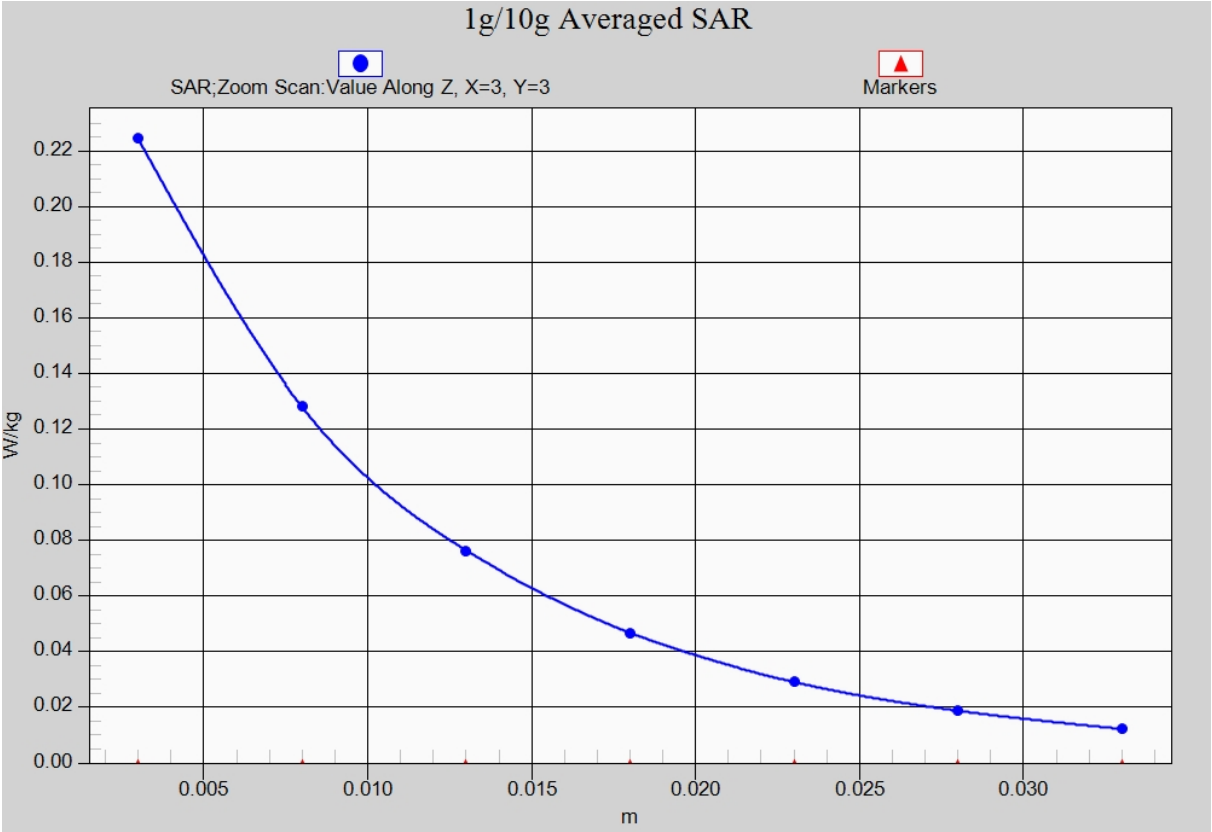


Fig. 26-1 Z-Scan at power reference point (LTE Band12)

LTE Band12 Right Cheek Low with QPSK_10M_1RB_High – antenna down
Date: 2017-3-25
Electronics: DAE4 Sn1331
Medium: Head750 MHz
Medium parameters used (interpolated): f = 704 MHz; σ = 0.842 mho/m; εr = 44.65; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band12 Frequency: 704 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(9.65,9.65, 9.65)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.117 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.813 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.130 W/kg
SAR(1 g) = 0.107 W/kg; SAR(10 g) = 0.087 W/kg
Maximum value of SAR (measured) = 0.114 W/kg

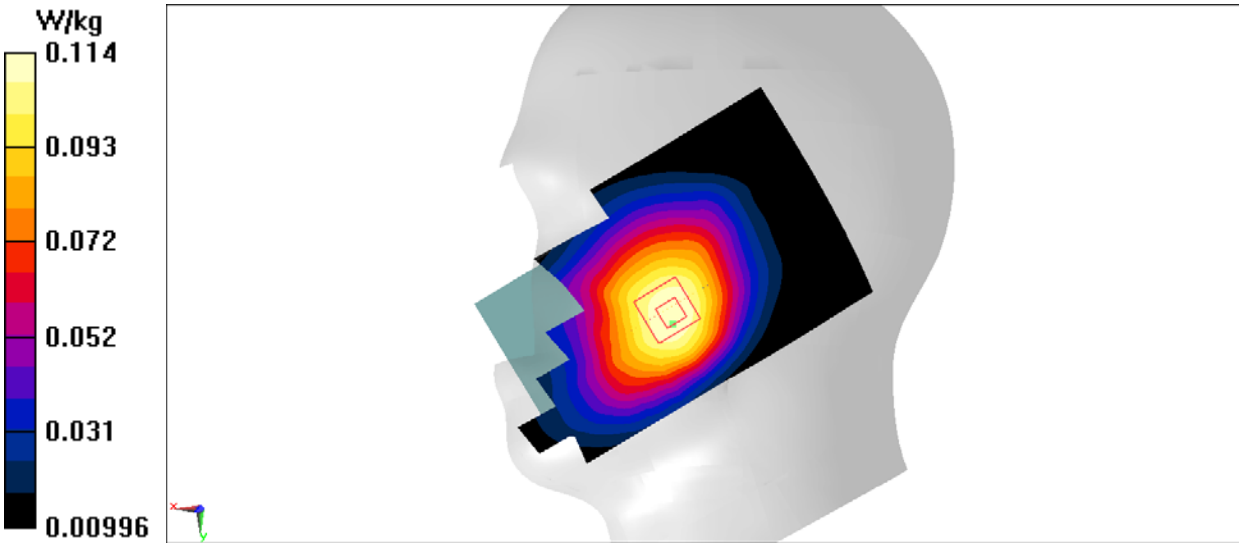


Fig.27 LTE Band12

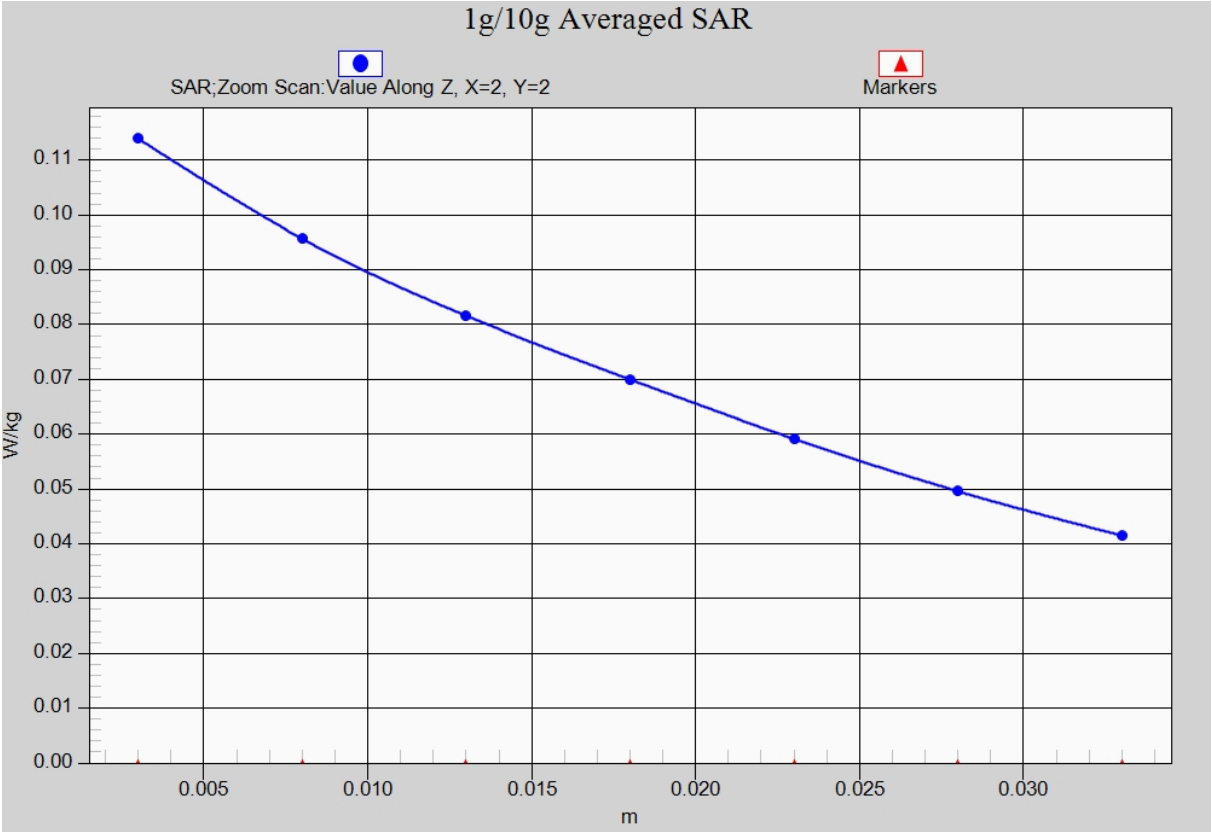


Fig. 27-1 Z-Scan at power reference point (LTE Band12)

LTE Band12 Body Right Low with QPSK_10M_1RB_High – antenna down
Date: 2017-3-25
Electronics: DAE4 Sn1331
Medium: Body750 MHz
Medium parameters used (interpolated): f = 704 MHz; σ = 0.902 mho/m; εr = 58.41; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band12Frequency: 704 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(9.96, 9.96, 9.96)

Area Scan (151x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.247 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.92 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.302 W/kg
SAR(1 g) = 0.217 W/kg; SAR(10 g) = 0.155 W/kg
Maximum value of SAR (measured) = 0.246 W/kg

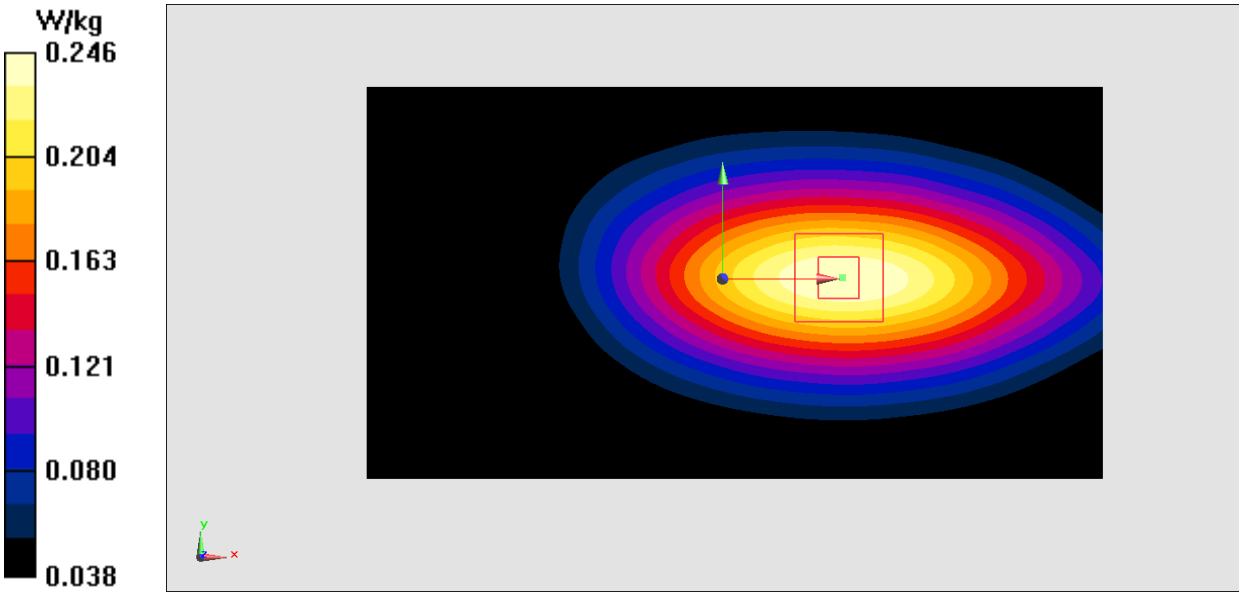


Fig.28 LTE Band12

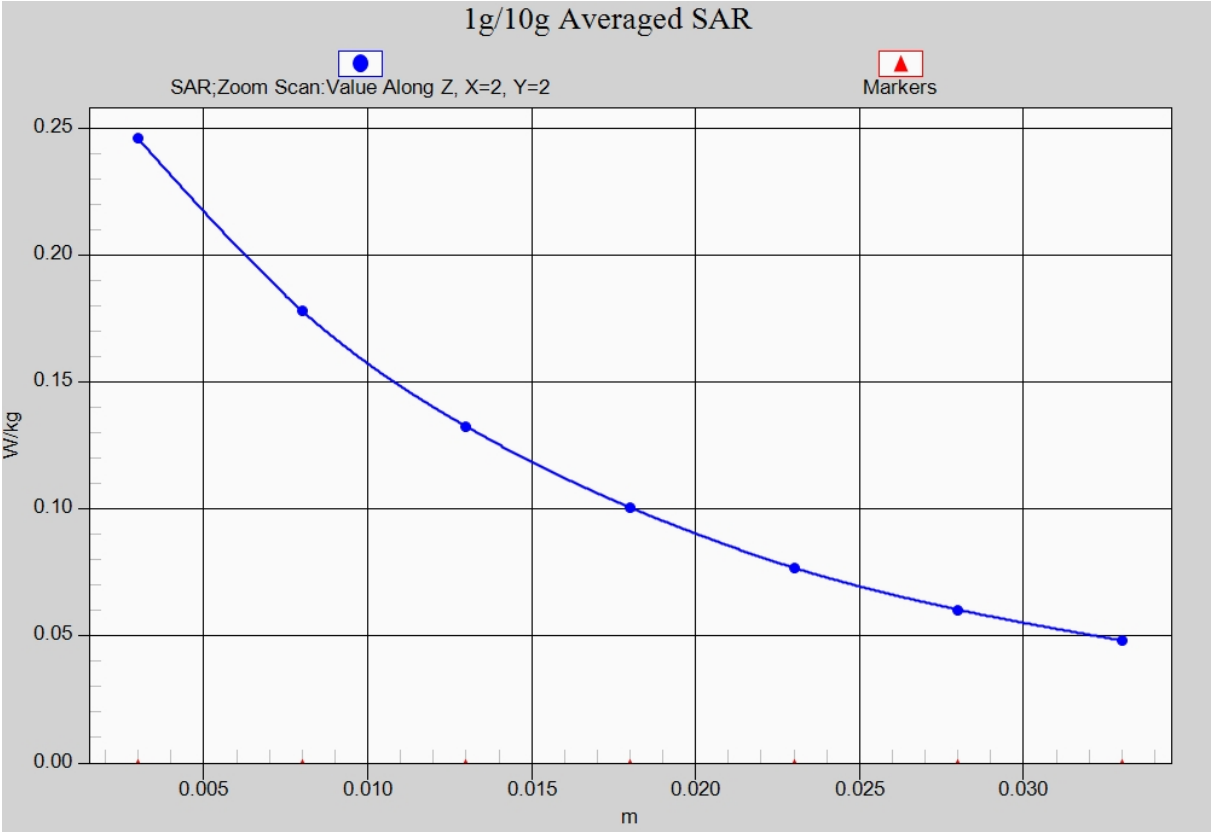


Fig. 28-1 Z-Scan at power reference point (LTE Band12)

LTE Band30 Right Cheek with QPSK_10M_1RB_High antenna up

Date: 2017-3-29
Electronics: DAE4 Sn1331
Medium: Head 2300 MHz
Medium parameters used: f = 2310 MHz; σ = 1.635 mho/m; εr = 38.84; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band30 Frequency: 2310 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.43, 7.43, 7.43)

Area Scan (71x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.56 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.56 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 2.69 W/kg
SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.621 W/kg
Maximum value of SAR (measured) = 1.75 W/kg

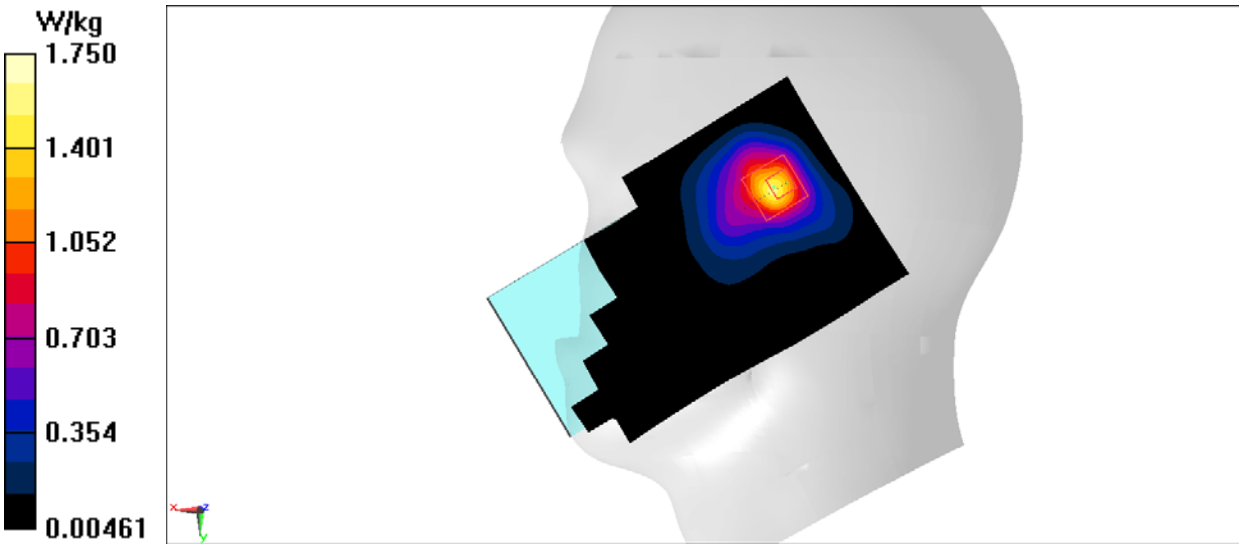


Fig.29 LTE Band30

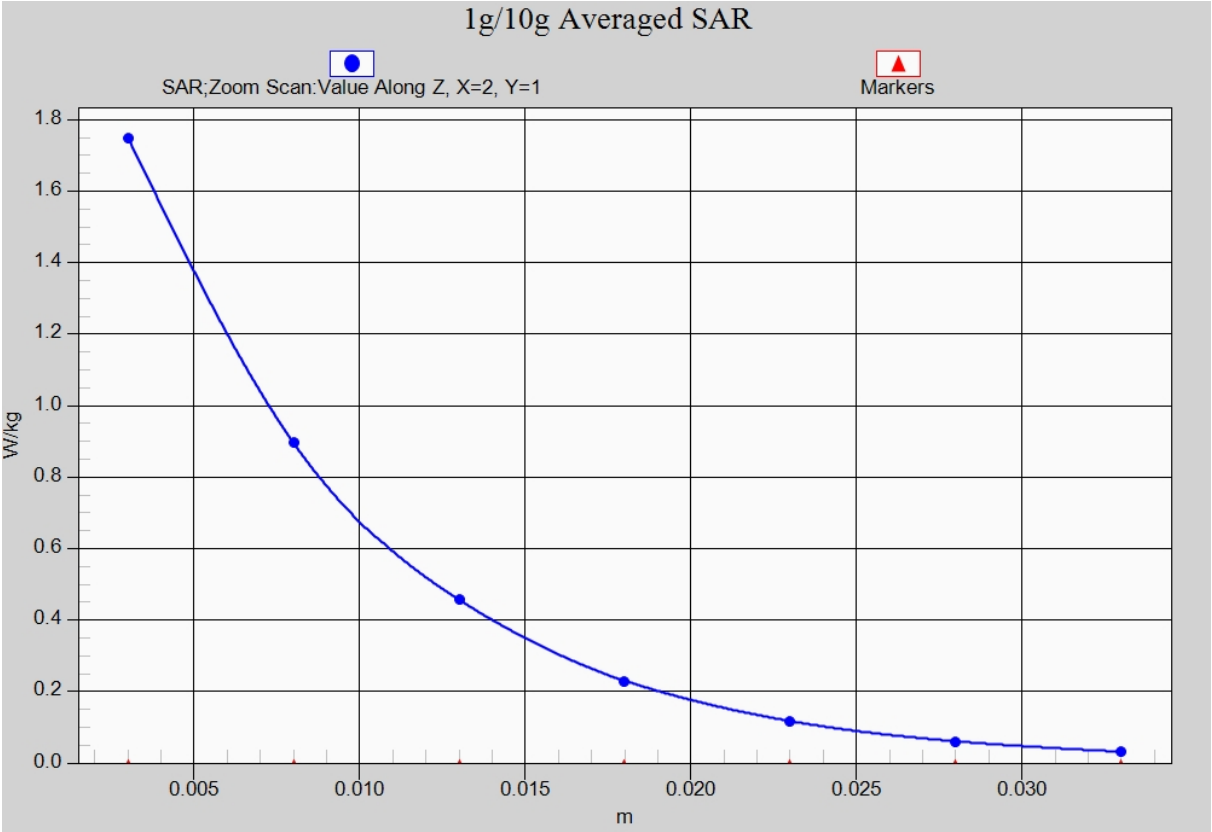


Fig. 29-1 Z-Scan at power reference point (LTE Band30)

LTE Band30 Body Front with QPSK_10M_1RB_High antenna up
Date: 2017-3-29
Electronics: DAE4 Sn1331
Medium: Body 2300 MHz
Medium parameters used: f = 2310 MHz; σ = 1.811 mho/m; εr = 52.14; ρ = 1000 kg/m^3
Ambient Temperature: 22.9ºC Liquid Temperature: 22.5ºC
Communication System: LTE Band30 Frequency: 2310 MHz Duty Cycle: 1:1
Probe: EX3DV4– SN3846 ConvF(7.55, 7.55, 7.55)

Area Scan (151x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.620 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.998 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.842 W/kg
SAR(1 g) = 0.523 W/kg; SAR(10 g) = 0.302 W/kg
Maximum value of SAR (measured) = 0.634 W/kg

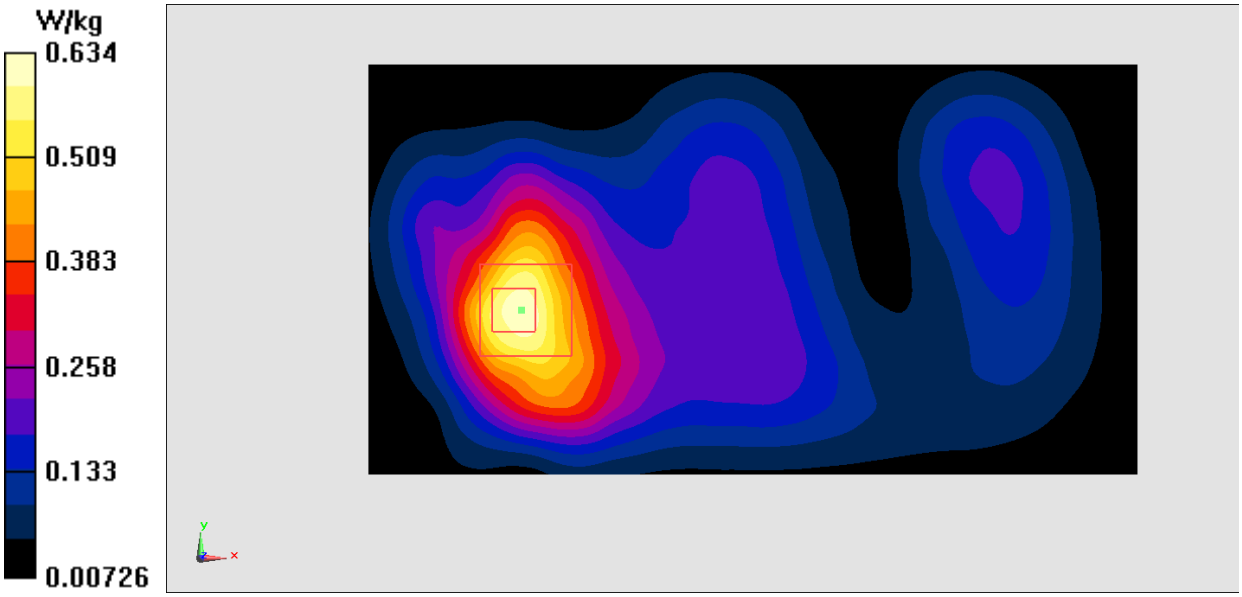


Fig.30 LTE Band30