FCC SAR Test Report

FCC ID: QISATH-UL06

|		
Project No.	**:**	1507C127
Equipment	**:**	Smart Phone
Model Name	**:**	HUAWEI ATH-UL06,ATH-UL06
Applicant	**:**	Huawei Technologies Co., Ltd.
Address	**:**	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen,518129, P.R.C

Date of Receipt	**:**	Jul. 10, 2015
Date of Test	**:**	Jul. 10, 2015~ Aug. 12, 2015
Issued Date	**:**	Aug. 14, 2015
Tested by	**:**	BTL Inc.

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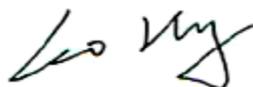
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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**), or National Institute of Standards and Technology (**NIST**) .

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

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BTL's laboratory quality assurance procedures are in compliance with the **ISO Guide17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCC-SAR-1507C127	Original Issue.	Aug. 14, 2015

1. GENERAL SUMMARY

Equipment	Smart Phone
Brand Name	HUAWEI
Model Name	HUAWEI ATH-UL06,ATH-UL06
Model difference	Only differ in model name.
Manufacturer	Huawei Technologies Co., Ltd.
Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen,518129, P.R.C
Standard(s)	**ANSI Std C95.1-1992**Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.(IEEE Std C95.1-1991) **IEEE Std 1528-2013**Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques **KDB941225 D01** 3G SAR Procedures v03 **KDB941225 D05** SAR for LTE Devices v02r03 **KDB941225 D06** Hotspot Mode V02 **KDB447498 D01** General RF Exposure Guidance v05r02 **KDB648474 D04** SAR Handsets Multi Xmiter and Ant v01r02 **KDB248227 D01** 802. 11 Wi-Fi SAR v02r01 **KDB865664 D01** SAR measurement 100 MHrz to 6 GHz v01r04 **KDB865664 D02** SAR Reporting v01r01 **KDB690783 D01** SAR Listings on Grants v01r03

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCC-SAR-1507C127) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. RF EMISSIONS MEASUREMENT

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **SAR room** at the location of No.3,Jinshagang 1st Road, ShiXia, Dalang Town,Dong Guan, China.523792

2.2 MEASUREMENT UNCERTAINTY

Note: Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01r03,when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

3. GENERAL INFORMATION

3.1 STATEMENT OF COMPLIANCE

Equipment Class	Mode	Highest Head SAR-1g (W/kg)	Highest Body-worn(15mm) SAR-1g(W/kg)	Highest Hotspot(10mm) SAR-1g(W/kg)
PCE(Main)	GSM850	0.25	0.27	0.45
	GSM1900	0.16	0.36	1.44
	WCDMA II	0.28	0.59	1.09
	WCDMA IV	0.49	0.88	0.96
	WCDMA V	0.20	0.29	0.36
	LTE 2	0.23	0.74	1.19
	LTE 4	0.35	0.70	0.70
	LTE 5	0.15	0.33	0.35
	LTE 7	0.13	0.42	0.87
PCE(Sub)	GSM850	1.07	0.15	0.35
	GSM1900	1.14	0.09	0.21
	WCDMA II	0.99	0.07	0.19
	WCDMA IV	1.22	0.13	0.25
	WCDMA V	1.06	0.19	0.39
	LTE 2	0.79	0.07	0.19
	LTE 4	0.83	0.07	0.19
	LTE 5	1.11	0.17	0.34
	LTE 7	0.85	0.11	0.25
DTS	2.4G WLAN	0.85	0.08	0.20
The highest simultaneous SAR value is 1.47 W/kg per KDB690783 D01				

Note:

1)* 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 that positions the handset a minimum of 15mm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The device is in compliance with Specific Absorption Rate（SAR）for general population uncontrolled exposure limits according to the FCC rule §2.1093, the ANSI/IEEE C95.1:1992, the NCRP Report Number 86 for uncontrolled environment, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 .

3.2 GENERAL DESCRIPTION OF EUT

Equipment	Smart Phone
Model Name	HUAWEI ATH-UL06,ATH-UL06
IMEI Code	Sample 1 IMEI 1: 867687020002305 IMEI 2: 867687020008302
	Sample 2 IMEI 1: 867687020000275 IMEI 2: 867687020006272
S/N	Sample 1: CED0115525000381 Sample 2: CED0115525000178
HW Version	HL1ATHUL06M
SW Version	ATH-UL01C00B030
Tested Mode(s)	GSM850/1900, UMTS Band 2/4/5, LTE Band 2/4/5/7 2.4GWiFi (tested),BT
Test Modulation	GSM(GMSK/8PSK),UMTS(QPSK),LTE(QPSK/16QAM), WiFi(DSSS/OFDM),BT(GFSK/ π /4-DQPSK/8-DPSK)

	Band	TX (MHz)	RX (MHz)
	GSM850	824-849	869-894
	GSM1900	1850-1910	1930-1990
	UMTS Band 2	1850–1910	1930–1990
	UMTS Band 4	1710–1755	2110–2155
Operation Frequency Range(s)	UMTS Band 5	824-849	869-894
	LTE Band 2	1850–1910	1930–1990
	LTE Band 4	1710–1755	2110–2155
	LTE Band 5	824-849	869-894
	LTE Band 7	2500-2570	2620-2690
	Bluetooth	2400 ~2483.5	
	WIFI	2412 ~2462	

GPRS/EDGE Multislot Class(12)	Max Number of Timeslots in Uplink:	4
	Max Number of Timeslots in Downlink:	4
	Max Total Timeslot:	5

GSM Device class	Class B
HSDPA UE Category	14
HSUPA UE Category	6
DC-HSDPA/ DC-HSPA+ UE Category	24
Power Class:	4,tested with power level 5(GSM850)
	1,tested with power level 0(GSM1900)
	3, tested with power control "all 1"(UMTS Band 2/4/5)
	3, tested with power control "all Max"(LTE Band 2/4/5/7)
Test Channels (low-mid-high):	128-190-251 (GSM850)
	512-661-810 (GSM1900)
	9262-9400-9538(UMTS Band 2)
	1312-1413-1513 (UMTS Band 4)
	4132-4182-4233 (UMTS Band 5)
	18607-18900-19193(LTE Band 2 BW=1.4MHz)
	18615-18900-19185(LTE Band 2 BW=3MHz)
	18625-18900-19175(LTE Band 2 BW=5MHz)
	18650-18900-19150(LTE Band 2 BW=10MHz)
	18675-18900-19125(LTE Band 2 BW=15MHz)
	18700-18900-19100(LTE Band 2 BW=20MHz)
	19957-20175-20393(LTE Band 4 BW=1.4MHz)
	19965-20175-20385 (LTE Band 4 BW=3MHz)
	19975-20175-20375 (LTE Band 4 BW=5MHz)
	20000-20175-20350(LTE Band 4 BW=10MHz)
	20025-20175-20325(LTE Band 4 BW=15MHz)
	20050-20175-20300(LTE Band 4 BW=20MHz)

	20407-20525-20643(LTE Band 5 BW=1.4MHz)
	20415-20525-20635(LTE Band 5 BW=3MHz)
	20425-20525-20625(LTE Band 5 BW=5MHz)
	20450-20525-20600(LTE Band 5 BW=10MHz)
	20775-21100-21425(LTE Band 7 BW=5MHz)
	20800-21100-21400(LTE Band 7 BW=10MHz)
	20825-21100-21375(LTE Band 7 BW=15MHz)
	20850-21100-21350(LTE Band 7 BW=20MHz)
	1-6-11(2.4G WIFI 802.11b/g/n HT20)
Antenna Gain	BT/2.4GWiFi: -1dBi
	GSM850: -2.2dBi
	GSM1900:1.9dBi
	UMTS/LTE Band 2:1.9dBi
	UMTS/LTE Band 4:0.9dBi
	UMTS/LTE Band 5:-2.2dBi
	LTE Band 7:1.4dBi

Other Information		
Battery	Brand	HUAWEI
	Model	HB4242B4EBW
	Capacitance	3000mAh
	Rated Voltage	3.8V
	Manufacturer	SCUD (FUJIAN) Electronics Co., Ltd.
		Sunwoda Eletronic Co., LTD.
Earphone	Brand	HUAWEI
	Model	1. MEMD1632B580A00 2.1311-3291-3.5mm-17822040178
	Manufacturer	1. QUANCHENG ELECTRONIC CO.,LTD 2. JIANGXI LIANCHUANG HONGSHENG ELECTRONIC CO., LTD.

3.3 HOTSPOT POWER REDUCTION SPECIFICATION FOR SAR

This device uses a single fixed level of power reduction through static table look-up for SAR compliance and it is triggered by a single event or operation. A fixed level power reduction is applied when hotspot mode becomes active. When the hotspot is disabled, the power value will be recovered.

Item	Description
Supporting power reduction or not	Yes
Frequency Band(s) using power reduction	GSM1900（GMSK）(Main), UMTS Band 2(Main), UMTS Band 4(Main), LTE Band 2(Main),LTE Band 4(Main), LTE Band 7(Main)
Power reduction feature	A fixed power reduction is applied when hotspot mode becomes active. When the hotspot is disabled, the power value will be recovered.
Triggering conditions	Only hotspot mode (wireless routing) and nothing else is used to trigger this power reduction.
Full power and reduced power specifications	See Section 8.1
All simultaneous voice and data transmissions combinations and considerations	See Section 8.3

3.4 LABORATORY ENVIRONMENT

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

3.5 MAIN TEST INSTRUMENTS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Data Acquisition Electronics	Speag	DAE4	1390	Sep. 15, 2015
2	E-field Probe	Speag	EX3DV4	3932	Jan. 30, 2016
3	Electro Optical Converter	Speag	ECO90	1151	N/A
4	SAM Twin Phantom	Speag	SAM	1784	N/A
5	Power Amplifier	Mini-circuits	ZHL-42W	N/A	N/A
6	Power Amplifier	Mini-circuits	ZVE-8G	N/A	N/A
7	ENA Network Analyzer	Agilent	E5071C	MY46102965	Mar. 29, 2016
8	Dielectric Probe Kit	Agilent	85070E	2593	N/A
9	P-series power meter	Agilent	N1911A	MY45100473	Mar. 29, 2016
10	wideband power sensor	Agilent	N1921A	MY51100041	Mar. 29, 2016
11	Power Meter	Anritsu	ML2487A	6K00004714	Mar. 16, 2016
12	Power Meter Sensor	Anritsu	MA2491A	34138	Mar. 16, 2016
13	MXG Analog Signal Generator	Agilent	N5181A	MY49060710	Nov. 02, 2015
14	System Validation Dipole	Speag	D835V2	4d160	Sep. 23, 2015
15	System Validation Dipole	Speag	D1750V2	1101	Sep. 19, 2015
16	System Validation Dipole	Speag	D1900V2	5d179	Sep. 18, 2015
17	System Validation Dipole	Speag	D2450V2	919	Sep. 17, 2015
18	System Validation Dipole	Speag	D2600V2	1067	Sep. 18, 2015
19	Low pass filter	Mini-Circuits	SLP-2950+	M108294	Mar. 29, 2016
20	Attenuator	Mini-Circuits	VAT-10+	31317-1	Mar. 29, 2016
21	Attenuator	Mini-Circuits	VAT-10+	31317-2	Mar. 29, 2016
22	Attenuator	MEB	300-affn-03	314	Mar. 29, 2016
23	Dual directional coupler	Agilent	777D	50208	Mar. 29, 2016
24	8960 Series wireless Communication Test SET	Agilent	E5515C	MY48364183	Mar. 28, 2016
25	Wideband radio communication tester	R&S	CMW500	12010002K50-122125-PJ	Mar. 29, 2016
26	Spectrum Analyzer	R&S	FSL 6	100423	Nov. 02, 2015
27	Directional Coupler	Telestone	TS-PCCOM-05	0107090019	Mar. 04, 2016
28	Coupler	Mini-Circuits	ZADC-10-63-S+	SF6631801334	Mar. 29, 2016

Remark: "N/A" denotes no model name, serial No. or calibration specified.
All calibration period of equipment list is one year.

4. SAR MEASUREMENTS SYSTEM CONFIGURATION

4.1 SAR MEASUREMENT SET-UP

The DASY5 system for performing compliance tests consists of the following items:

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).

2. A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

3. A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

4. A unit to operate the optical surface detector which is connected to the EOC.

5. The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.

6. TheDASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 7

7. DASY5 software and SEMCAD data evaluation software.

8. Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.

9. The generic twin phantom enabling the testing of left-hand and right-hand usage.

10. The device holder for handheld mobile phones.

11. Tissue simulating liquid mixed according to the given recipes.

12. System validation dipoles allowing to validate the proper functioning of the system.

4.1.1 Test Setup Layout
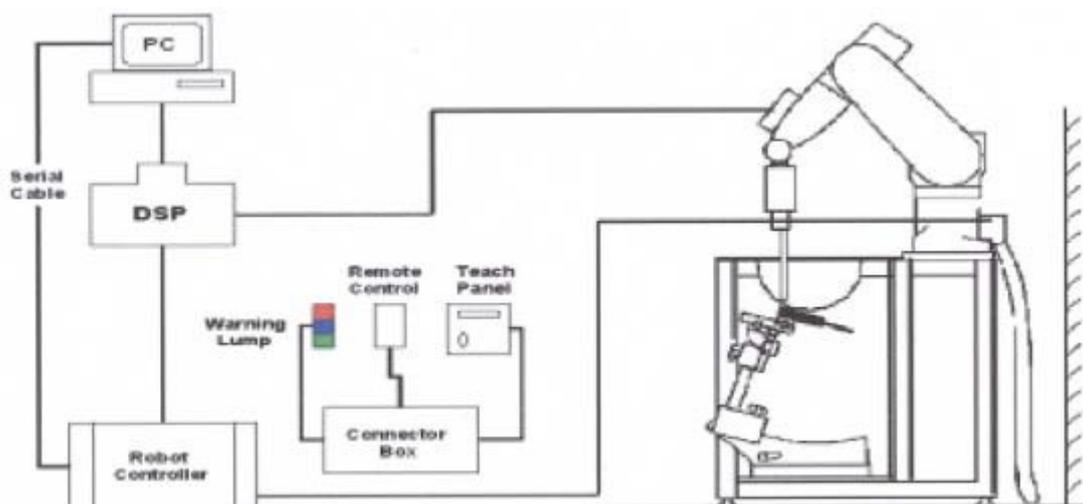
4.2 DASY5E-FIELDPROBESYSTEM

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

4.2.1 EX3DV4 PROBE SPECIFICATION

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity:± 0.2dB
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Distance from probe tip to dipole centers: 1.0 mm

EX3DV4 E-field Probe

4.2.2 E-FIELD PROBE CALIBRATION

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

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

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

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

Where: Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),
ΔT = Temperature increase due to RF exposure.

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

Where: σ = Simulated tissue conductivity,
ρ = Tissue density (kg/m3).

4.2.3 OTHER TEST EQUIPMENT

4.2.3.1. Device Holder for Transmitters
Construction: Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices (e.g., laptops, cameras, etc.) It is light weight and fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin SAM, ELI4and SAM v6.0Phantoms.
Material: POM, Acrylic glass, Foam

4.2.3.2 Phantom

The SAM twin phantom is a berglass shell phantom with2mm shell thickness (except the ear region, where shell thickness increases to 6 mm). The phantom has three measurement areas:

  _ Left hand
  _ Right hand
  _ Flat phantom

The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to cover the phantom during o-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible.

SAM twin Phantom

4.2.4 SCANNING PROCEDURE

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

The "reference" and "drift" measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT's output power and should vary max. ± 5 %.

The "surface check" measurement tests the optical surface detection system of the DASY5 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above ± 0.1mm). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within ± 30°.)

- Area Scan

The "area scan" measures the SAR above the DUT or verification dipole on a parallel plane to the surface. It is used to locate the approximate location of the peak SAR with 2D spline interpolation. The robot performs a stepped movement along one grid axis while the local electrical field strength is measured by the probe. The probe is touching the surface of the SAM during acquisition of measurement values. The standard scan uses large grid spacing for faster measurement.

Standard grid spacing for head measurements is 15 mm in x- and y- dimension($\leqslant$2GHz) , 12 mm in x- and y- dimension(2-4 GHz) and 10mm in x- and y- dimension(4-6GHz). If a finer resolution is needed, the grid spacing can be reduced. Grid spacing and orientation have no influence on the SAR result. For special applications where the standard scan method does not find the peak SAR within the grid, e.g. mobile phones with flip cover, the grid can be adapted in orientation.

- Zoom Scan

A "zoom scan" measures the field in a volume around the 2D peak SAR value acquired in the previous "coarse" scan. This is a fine grid with maximum scan spatial resolution: $\triangle x_{zoom}$, $\Delta y_{zoom} \leqslant$ 2GHz -$\leqslant$8mm, 2-4GHz -$\leqslant$5 mm and 4-6 GHz-$\leqslant$4mm; $\Delta z_{zoom} \leqslant$3GHz -$\leqslant$5 mm, 3-4 GHz-$\leqslant$4mm and 4-6GHz-$\leqslant$2mm where the robot additionally moves the probe along the z-axis away from the bottom of the Phantom. DASY is also able to perform repeated zoom scans if more than 1 peak is found during area scan. In this document, the evaluated peak 1g and 10g averaged SAR values are shown in the 2D-graphics in Appendix B. Test results relevant for the specified standard (see chapter 1.4.)are shown in table form form in chapter 7.2.

A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 2 mm steps. This measurement shows the continuity of the liquid and can - depending in the field strength – also show the liquid depth.

The following table summarizes the area scan and zoom scan resolutions per FCC KDB 865664D01:

Frequency	Maximun Area Scan resolution (Δx_{area}, Δy_{area})	Maximun Zoom Scan spatial resolution (Δx_{Zoom}, Δy_{Zoom})	Maximun Zoom Scan spatial resolution			Minimum zoom scan volume (x,y,z)
			Uniform Grid	Graded Grad		
			$\Delta z_{Zoom}(n)$	$\Delta z_{Zoom}(1)*$	$\Delta z_{Zoom}(n>1)*$	
≤2GHz	≤15mm	≤8mm	≤5mm	≤4mm	≤1.5*$\Delta z_{Zoom}(n-1)$	≥30mm
2-3GHz	≤12mm	≤5mm	≤5mm	≤4mm	≤1.5*$\Delta z_{Zoom}(n-1)$	≥30mm
3-4GHz	≤12mm	≤5mm	≤4mm	≤3mm	≤1.5*$\Delta z_{Zoom}(n-1)$	≥28mm
4-5GHz	≤10mm	≤4mm	≤3mm	≤2.5mm	≤1.5*$\Delta z_{Zoom}(n-1)$	≥25mm
5-6GHz	≤10mm	≤4mm	≤2mm	≤2mm	≤1.5*$\Delta z_{Zoom}(n-1)$	≥22mm

4.2.5 SPATIAL PEAK SAR EVALUATION

The spatial peak SAR - value for 1 and 10 g is evaluated after the Cube measurements have been done. The basis of the evaluation are the SAR values measured at the points of the fine cube grid consisting of 5 x 5 x 7 points(with 8mm horizontal resolution) or 7 x 7 x 7 points(with 5mm horizontal resolution) or 8 x 8 x 7 points(with 4mm horizontal resolution). The algorithm that finds the maximal averaged volume is separated into three different stages.

■ The data between the dipole center of the probe and the surface of the phantom are extrapolated. This data cannot be measured since the center of the dipole is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is about 1 mm (see probe calibration sheet). The extrapolated data from a cube measurement can be visualized by selecting "Graph Evaluated".

■ The maximum interpolated value is searched with a straight-forward algorithm. Around this maximum the SAR - values averaged over the spatial volumes (1g or 10 g) are computed using the 3d-spline interpolation algorithm. If the volume cannot be evaluated (i.e., if a part of the grid was cut off by the boundary of the measurement area) the evaluation will be started on the corners of the bottom plane of the cube.

■ All neighboring volumes are evaluated until no neighboring volume with a higher average value is found.

Extrapolation

The extrapolation is based on a least square algorithm [W. Gander, Computermathematik, p.168-180]. Through the points in the first 3 cm along the z-axis, polynomials of order four are calculated. These polynomials are then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from each other.

Interpolation

The interpolation of the points is done with a 3d-Spline. The 3d-Spline is composed of three one-dimensional splines with the "Not a knot"-condition [W. Gander, Computermathematik, p.141-150] (x, y and z -direction) [Numerical Recipes in C, Second Edition, p.123ff].

Volume Averaging

At First the size of the cube is calculated. Then the volume is integrated with the trapezoidal algorithm. 8000 points (20x20x20) are interpolated to calculate the average.

Advanced Extrapolation

DASY5 uses the advanced extrapolation option which is able to compansate boundary effects on E-field probes.

4.2.6 DATA STORAGE AND EVALUATION

4.2.5.1 Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension ".DAE4". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

4.4.2 Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	Sensitivity	Normi, a_{i0}, a_{i1}, a_{i2}
	Conversion factor	$ConvF_i$
	Diode compression point	Dcp_i
Device parameters:	Frequency	f
	Crest factor	cf
Media parameters:	Conductivity	
	Density	

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multi meter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot cf / dcp_i$$

With
V_i = compensated signal of channel i (i = x, y, z)
U_i = input signal of channel i (i = x, y, z)
cf = crest factor of exciting field (DASY parameter)
dcp_i = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes: $E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$

H-field probes: $H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1} f + a_{i2} f^2) / f$

With V_i = compensated signal of channel i   (i = x, y, z)

$Norm_i$ = sensor sensitivity of channel i   (i = x, y, z)
      $[mV/(V/m)^2]$ for E-field Probes

$ConvF$ = sensitivity enhancement in solution

aij = sensor sensitivity factors for H-field probes

f = carrier frequency [GHz]

E_i = electric field strength of channel i in V/m

H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = (E_X^2 + E_Y^2 + E_Z^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$SAR = (E_{tot})^2 \cdot \sigma / (\rho \cdot 1000)$$

With SAR = local specific absorption rate in mW/g

E_{tot} = total field strength in V/m
     = conductivity in [mho/m] or [Siemens/m]
     = equivalent tissue density in g/cm^3

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}^2 / 3770 \text{ or } P_{pwe} = H_{tot}^2 \cdot 37.7$$

With P_{pwe} = equivalent power density of a plane wave in mW/cm^2

E_{tot} = total field strength in V/m
H_{tot} = total magnetic field strength in A/m

5. SYSTEM VERIFICATION PROCEDURE

5.1 TISSUE VERIFICATION

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine of the dielectic parameter are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within ± 5% of the target values.

The following materials are used for producing the tissue-equivalent materials.

Ingredients (% of weight)	Head Tissue				
Frequency Band (MHz)	835	1750	1900	2450	2600
Water	41.45	52.64	55.242	62.7	55.242
Salt(NaCl)	1.45	0.36	0.306	0.5	0.306
Sugar	56.0	0.0	0.0	0.0	0.0
HEC	1.0	0.0	0.0	0.0	0.0
Bactericide	0.1	0.0	0.0	0.0	0.0
TritonX-100	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	47.0	44.542	36.8	44.452
Ingredients (% of weight)	Body Tissue				
Frequency Band (MHz)	835	1750	1900	2450	2600
Water	52.4	69.91	69.91	73.2	64.493
Salt(NaCl)	1.40	0.13	0.13	0.04	0.024
Sugar	45.0	0.0	0.0	0.0	0.0
HEC	1.0	0.0	0.0	0.0	0.0
Bactericide	0.1	0.0	0.0	0.0	0.0
TritonX-100	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	29.96	29.96	26.7	32.252

Salt: 99+% Pure Sodium Chloride; Sugar: 98+% Pure Sucrose; Water: De-ionized, 16M + resistivity
HEC: Hydroxyethyl Cellulose; DGBE: 99+% Di(ethylene glycol) butyl ether,[2-(2-butoxyethoxy)ethanol]
Triton X-100(ultra pure): Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl)phenyl]ether

Tissue Verification										
Tissue Type	Frequency (MHz)	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (εr)	Targeted Conductivity (σ)	Targeted Permittivity (εr)	Deviation Conductivity (σ) (%)	Deviation Permittivity (εr) (%)	Date	
Head	835	21.3	0.919	41.697	0.90	41.5	2.11	0.47	Aug. 09, 2015	
Head	1750	21.2	1.365	40.182	1.37	40.1	-0.36	0.25	Aug. 11, 2015	
Head	1900	21.4	1.424	39.098	1.40	40.0	1.71	-2.26	Aug. 07, 2015	
Head	1900	21.4	1.408	39.267	1.40	40.0	0.57	-1.83	Aug. 08, 2015	
Head	2450	21.6	1.810	39.580	1.80	39.2	0.56	0.97	Aug. 08, 2015	
Head	2450	21.6	1.830	39.560	1.80	39.2	1.67	0.92	Aug. 10, 2015	
Head	2600	21.6	1.956	38.587	1.96	39.0	-0.20	-1.06	Aug. 10, 2015	
Body	835	21.5	0.993	56.689	0.97	55.2	2.37	2.70	Aug. 03, 2015	
Body	835	21.5	0.989	56.678	0.97	55.2	1.96	2.68	Aug. 06, 2015	
Body	1750	21.3	1.466	53.656	1.49	53.4	-1.61	0.40	Aug. 05, 2015	
Body	1900	21.5	1.534	51.020	1.52	53.3	0.92	-4.28	Jul. 30, 2015	
Body	1900	21.5	1.523	51.080	1.52	53.3	0.20	-4.17	Aug. 04, 2015	
Body	2450	21.2	1.982	51.150	1.95	52.7	1.64	-2.94	Aug. 04, 2015	
Body	2600	21.2	2.200	52.401	2.16	52.5	1.85	-0.21	Aug. 04, 2015	

Note:
1)The dielectric parameters of the tissue-equivalent liquid should be measured under similar ambient conditions and within 2 °C of the conditions expected during the SAR evaluation to satisfy protocol requirements.
2)KDB 865664 was ensured to be applied for probe calibration frequencies greater than or equal to 50MHz of the EUT frequencies.
3)The above measured tissue parameters were used in the DASY software to perform interpolation via the DASY software to determine actual dielectric parameters at the test frequencies. The SAR test plots may slightly differ from the table above since the DASY rounds to three significant digits.

5.2 SYSTEM CHECK

The system check is performed for verifying the accuracy of the complete measurement system and performance of the software. The system check is performed with tissue equivalent material according to IEEE P1528 (described above). The following table shows system check results for all frequency bands and tissue liquids used during the tests.

System Check	Date	Frequency (MHz)	Targeted SAR (W/kg)	Measured SAR (W/kg)	normalized SAR (W/kg)	Deviation (%)	Dipole S/N
Head	Aug. 09, 2015	835	9.43	2.36	9.44	0.11	4d160
Head	Aug. 11, 2015	1750	36.10	9.02	36.08	-0.06	1101
Head	Aug. 07, 2015	1900	39.80	9.82	39.28	-1.31	5d179
Head	Aug. 08, 2015	1900	39.80	9.97	39.88	0.20	5d179
Head	Aug. 08, 2015	2450	51.50	12.82	51.28	-0.43	919
Head	Aug. 10, 2015	2450	51.50	12.86	51.44	-0.12	919
Head	Aug. 10, 2015	2600	58.00	14.46	57.84	-0.28	1067
Body	Aug. 03, 2015	835	9.56	2.40	9.60	0.42	4d160
Body	Aug. 06, 2015	835	9.56	2.38	9.52	-0.42	4d160
Body	Aug. 05, 2015	1750	37.90	9.45	37.80	-0.26	1101
Body	Jul. 30, 2015	1900	39.50	9.70	38.80	-1.77	5d179
Body	Aug. 04, 2015	1900	39.50	9.75	39.00	-1.27	5d179
Body	Aug. 04, 2015	2450	50.70	12.65	50.60	-0.20	919
Body	Aug. 04, 2015	2600	57.40	14.59	58.36	1.67	1067

5.3 SYSTEM CHECK PROCEDURE

The system check is performed by using a system check dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a plexiglass spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 250 mW(below 5GHz) or 100mW(above 5GHz). To adjust this power a power meter is used. The power sensor is connected to the cable before the system check to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the system check to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test.

System check results have to be equal or near the values determined during dipole calibration (target SAR in table above) with the relevant liquids and test system.
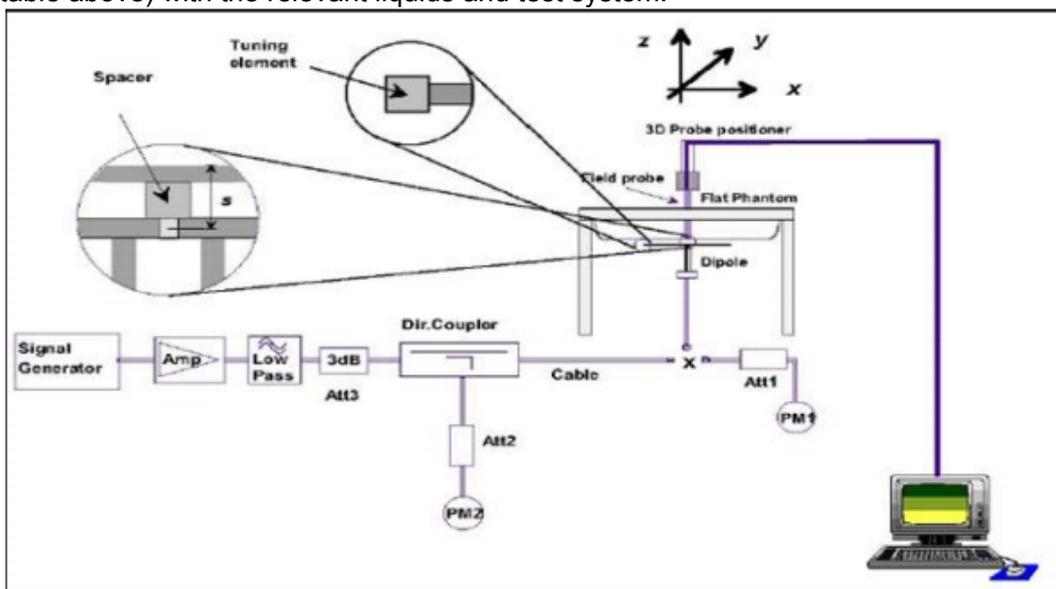
6.SAR MEASUREMENT VARIABILITY AND UNCERTAINTY

6.1SAR MEASUREMENT VARIABILITY

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz v01r03, 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. The additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1)   Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is $\geq$ 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$\geq$ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is $\geq$1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

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

The detailed repeated measurement results are shown in Section 8.2.

6.2SAR MEASUREMENT UNCERTAINTY

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01r03,when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis.

7. OPERATIONAL CONDITIONS DURING TEST

7.1 SAR TEST CONFIGURATION

7.1.1 GSM TEST CONFIGURATION

SAR tests for GSM850 and GSM1900, a communication link is set up with a base station by air link. Using 8960 Series the power lever is set to "5"and "0" in SAR of GSM850 and GSM1900. The tests in the
band of GSM850 and GSM1900 are performed in the mode of GPRS/EGPRS function. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslot is 5. The EGPRS class is 12 for this EUT, it has at most 4 timeslots in uplink, and at most 4 timeslots in downlink, the maximum total timeslot is 5.

When SAR tests for EGPRS mode is necessary, GMSK modulation should be used to minimize SAR measurement error due to higher peak-to-average power (PAR) ratios inherent in 8-PSK.

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot.

The allowed power reduction in the multi-slot configuration is as following:

Number of timeslots in uplink assignment		Reduction of maximum output power (dB)		
Band	Time Slots	GPRS (GMSK)	EGPRS (GMSK)	EGPRS (8PSK)
GSM850(Main)	1 TX slot	0	0	6
	2 TX slots	2.5	2.5	6.5
	3 TX slots	4.5	4.5	8.5
	4 TX slots	5.5	5.5	9.5
GSM850(Sub)	1 TX slot	0	0	3.5
	2 TX slots	2.5	2.5	4.5
	3 TX slots	5.5	5.5	6.5
	4 TX slots	6.5	6.5	7.5
GSM1900(Main)	1 TX slot	0	0	4.5
	2 TX slots	2	2	5
	3 TX slots	4.5	4.5	6
	4 TX slots	5.5	5.5	7
GSM1900(Main) (hotspot)	1 TX slot	0	0	2.5
	2 TX slots	2.5	2.5	3
	3 TX slots	4.5	4.5	4
	4 TX slots	5.5	5.5	5
GSM1900(Sub)	1 TX slot	0	0	1.5
	2 TX slots	2	2	2
	3 TX slots	4.5	4.5	3
	4 TX slots	5.5	5.5	4

7.1.2 UMTS TEST CONFIGURATION

1. Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the procedures description in section 5.2 of 3GPP TS 34.121,using the appropriate RMC or AMR with TPC(transmit power control) set to all "1s" for WCDMA/HSDPA or applying the required inner loop power control procedure to maintain maximum output power while HSUPA is active. Result for all applicable physical channel configurations(DPCCH,DPDCHn and spreading codes, HSDPA, HSPA)
Should be tabulated in the SAR report .All configuration that are not supported by the DUT or cannot be measured due to technical or equipment limitation should be clearly identified.

2. WCDMA

(1).Head SAR Measurements
SAR for Head exposure configurations in voice mode is measured using a 12.2 kbps RMC with TPC bits configured to all "1s". SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2 kbps AMR is less than ¼ dB higher than that measured in 12.2 kbps RMC. Otherwise SAR is measured on the maximum output channel in 12.2 kbps AMR with 3.4kbps SRB(signalling radio bearer) using the exposure configuration that results in the highest SAR in12.2kbps RMC for that RF channel.

(2).Body SAR Measurements
SAR for body exposure configurations is measured using the 12.2 kbps RMC with the TPC bits configured to all "1s".   SAR for other spreading codes and multiple DPDCHn, when supported by the EUT, are not required when the maximum average outputs of each RF channel, for each spreading code and DPDCHn configuration, are less than ¼ dB higher than those measured in 12.2 kbps RMC.

3. HSDPA

SAR for body exposure configurations is measured according to the "Body SAR Measurements"" procedures of 3G device. In addition, body SAR is also measured for HSDPA when the maximum average outputs of each RF channel with HSDPA active is at ¼ dB higher than that measured   without HSDPA using 12.2kbps RMC or the maximum SAR 12.2kbps RMC is above 75% of the SAR limit. Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration in 12.2 kbps RMC without HSDPA.
HSDPA should be configured according to UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HAPRQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission condition, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. The β_c andβ_d gain factors for DPCCH and DPDCH were set according to the values in the below table,β_{hs} for HS-DPCCH is set automatically to the correct value when $\triangle$ ACK, $\triangle$ NACK, $\triangle$ CQI = 8. The variation of theβ_c /β_d ratio causes a power reduction at sub-tests 2 - 4.

Sub-test	β_c	β_d	β_d (SF)	β_c /β_d	β_{hs} (1)	CM(dB)(2)	MPR (dB)
1	2/15	15/15	64	2/15	4/15	0.0	0
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0	0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: $\triangle$ACK, $\triangle$NACK and $\triangle$CQI = 8 $A_{hs}= \beta_{hs}/\beta_c = 30/15$ $\beta_{hs} = 30/15 * \beta_c$
Note 2 : CM=1 for β_c/β_d 12/15, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH,DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.
Note 3 : For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$

The measurements were performed with a Fixed Reference Channel (FRC) and H-Set 1 QPSK.

Settings of required H-Set 1 QPSK acc. to 3GPP 34.121

Parameter	Value
Nominal average inf. bit rate	534 kbit/s
Inter-TTI Distance	3 TTI"s
Number of HARQ Processes	2 Processes
Information Bit Payload	3202 Bits
MAC-d PDU size	336 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	4800 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	9600 SMLs
Coding Rate	0.67
Number of Physical Channel Codes	5

HSDPA UE category

HS-DSCH Category	Maximum HS-DSCH Codes Received	Minimum Inter-TTI Interval	Maximum HS-DSCH Transport Block Bits/HS-DSCH TTI	Total Soft Channel Bits
1	5	3	7298	19200
2	5	3	7298	28800
3	5	2	7298	28800
4	5	2	7298	38400
5	5	1	7298	57600
6	5	1	7298	67200
7	10	1	14411	115200
8	10	1	14411	134400
9	15	1	25251	172800
10	15	1	27952	172800
11	5	2	3630	14400
12	5	1	3630	28800
13	15	1	34800	259200
14	15	1	42196	259200
15	15	1	23370	345600
16	15	1	27952	345600

4. HSUPA

SAR for Body exposure configurations is measured according to the "Body SAR Measurements" procedures of 3G device. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leqslant \frac{1}{4}$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the primary mode and the adjusted SAR is $\leqslant$ 1.2W/kg, SAR measurement is not required for the secondary mode.

Per KDB941225 D01v03, the 3G SAR test reduction procedures is applied to HSPA (HSUPA/HSDPA with RMC) body configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures for the highest reported body exposure SAR configuration in 12.2 kbps RMC.

Due to inner loop power control requirements in HSUPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSDPA should be configured according to the values indicated below as well as other applicable procedures described in the "WCDMA Handset" and „Release 5 HSDPA Data Device" sections of 3G device.

Subtests for UMTS Release 6 HSUPA

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} [1]	β_{ec}	β_{ed}	β_{ec} (SF)	β_{ed} (code)	CM [2] (dB)	MPR (dB)	AG [4] Index	E-TFCI
1	11/15 [3]	15/15 [3]	64	11/15 [3]	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}:47/15 β_{ed2}:47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 [4]	15/15 [4]	64	15/15 [4]	30/15	24/15	134/15	4	1	1.0	0.0	21	81

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

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

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

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

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

Note 6: β_{ed} can not be set directly; it is set by Absolute Grant Value.

HSUPA UE category

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCH TTI(ms)	Minimum Speading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592
4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	10	2SF2&2SF4	11484	5.76
	4	4	2		20000	2.00
7 (No DPDCH)	4	8	2	2SF2&2SF4	22996	?
	4	4	10		20000	?

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4. UE categories 1 to 6 support QPSK only. UE category 7 supports QPSK and 16QAM.(TS25.306-7.3.0).

5. DC-HSDPA

In DC-HSDPA implementation of this device, the uplink parameters are the same as HSDPA. No additional channels and modulations (16 QAM, and 64 QAM) are supported in uplink. The difference is only in the downlink parameters, where two carriers are supported. HSDPA settings were used on uplink.

For Rel. 8 DC-HSDPA apply the four subtests from HSDPA Release 5 except use fixed reference channel H-Set 12 for DC-HSDPA. And we can apply the same SAR test exclusion criteria used for Rel. 6 HSPA for Rel. 7 HSPA+ and Rel. 8 DC-HSDPA. That is, if the HSPA, HSPA+, or the DC-HSDPA maximum output is not more than 0.25 dB higher than WCDMA, SAR measurement for those modes is not required.

The following tests were completed according to procedures in section 7.3.13 of 3GPP TS 34.108 v9.5.0. A summary of these settings are illustrated below:

Downlink Physical Channels are set as per 3GPP TS34.121-1 v9.0.0 E.5.0
Levels for HSDPA connection setup

Parameter During Connection setup	Unit	Value
P-CPICH_Ec/Ior	dB	-10
P-CCPCH and SCH_Ec/Ior	dB	-12
PICH _Ec/Ior	dB	-15
HS-PDSCH	dB	off
HS-SCCH_1	dB	off
DPCH_Ec/Ior	dB	-5
OCNS_Ec/Ior	dB	-3.1

Call is set up as per 3GPP TS34.108 v9.5.0 sub clause 7.3.13

The configurations of the fixed reference channels for HSDPA RF tests are described in 3GPP TS 34.121, annex C for FDD and 3GPP TS 34.122.

The measurements were performed with a Fixed Reference Channel (FRC) H-Set 12 with QPSK

Parameter	Value
Nominal average inf. bit rate	60 kbit/s
Inter-TTI Distance	1 TTI"s
Number of HARQ Processes	6 Processes
Information Bit Payload	120 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	960 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	3200 SMLs
Coding Rate	0.15
Number of Physical Channel Codes	1

Note:

1.The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table above.

2.Maximum number of transmission is limited to 1,i.e.,retransmission is not allowed. The redundancy and constellation version 0 shall be used.
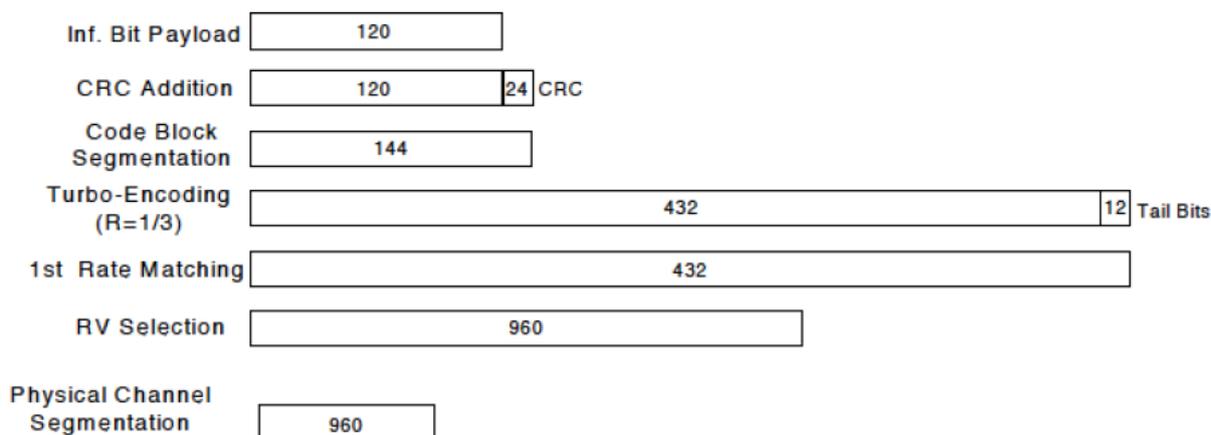
Figure C.8.19: Coding rate for Fixed reference Channel H-Set 12 (QPSK)

The following 4 Sub-tests for HSDPA were completed according to Release 5 procedures. A summary of subtest settings are illustrated below:

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	CM(dB)(2)	MPR (dB)	
1	2/15	15/15	64	2/15	4/15	0.0	0	
2	12/15(3)	15/15(3)	64	12/15(3)	24/15	1.0	0	
3	15/15	8/15	64	15/8	30/15	1.5	0.5	
4	15/15	4/15	64	15/4	30/15	1.5	0.5	

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

Note 2: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$

Up commands are set continuously to set the UE to Max power.

Note:

1.The Dual Carriers transmission only applies to HSDPA physical channels

2.The Dual Carriers belong to the same Node and are on adjacent carriers.

3.The Dual Carriers do not support MIMO to serve UEs configured for dual cell operation

4.The Dual Carriers operate in the same frequency band .

5.The device doesn't support the modulation of 16QAM in uplink but 64QAM in downlink for DC-HSDPA mode.

6.The device doesn"t support carrier aggregation for it just can operate in Release 8.

7.1.3 LTE TEST CONFIGURATION

SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices v02r03. The CMW500 Wide Band Radio Communication Tester was used for LTE output power measurements and SAR testing. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. SAR test were performed with the same number of RB and RB offsets transmitting on all TTI frames(Maximum TTI)

1. Spectrum Plots for RB configurations

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

2. MPR

When MPR is implemented permanently within the UE, regardless of network requirements, only those RB configurations allowed by 3GPP for the channel bandwidth and modulation combinations may be tested with MPR active. Configurations with RB allocations less than the RB thresholds required by 3GPP must be tested without MPR.

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

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

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

3. A-MPR

A-MPR(Additional MPR) has been disabled for all SAR tests by using Network Signalling Value of "NS_01"on the base station simulator.

4. LTE procedures for SAR testing

A) Largest channel bandwidth standalone SAR test requirements

i) QPSK with 1 RB allocation

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

ii) QPSK with 50% RB allocation

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

iii) 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 i) and ii) 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.

iv) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

B) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

7.1.4 2.4G WIFI TEST CONFIGURATION

For WLAN SAR testing, WLAN engineering testing software installed on the DUT can provide continuous transmitting RF signal.

Mode	b	g	N20
Power Setting	17.5	15	11
Duty cycle	100%		
Crest factor	1		

For the 802.11b SAR tests, a communication link is set up with the test mode software for WiFi mode test. The Absolute Radio Frequency Channel Number(ARFCN) is allocated to 1 ,6 and 11 respectively in the case of 2450 MHz. During the test, at the each test frequency channel, the EUT is operated at the RF continuous emission mode. Each channel should be tested at the lowest data rate.

✧ **802.11b DSSS SAR Test Requirements**

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:
1) When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
2) When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

✧ **2.4 GHz 802.11g/n OFDM SAR Test Exclusion Requirements**

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied. SAR is not required for the following 2.4 GHz OFDM conditions.
1) When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
2) When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

7.2 TEST POSITION

7.2.1 Head
Measurements were made in "cheek" and "tilt" positions on both the left hand and right hand sides of the phantom.

7.2.2 Body
The size of the mobile phone is 141.85mm (length)X71.2mm (width), the length of the diagonal is144.5mm .
The location of the antennas inside mobile phone is shown as below picture:
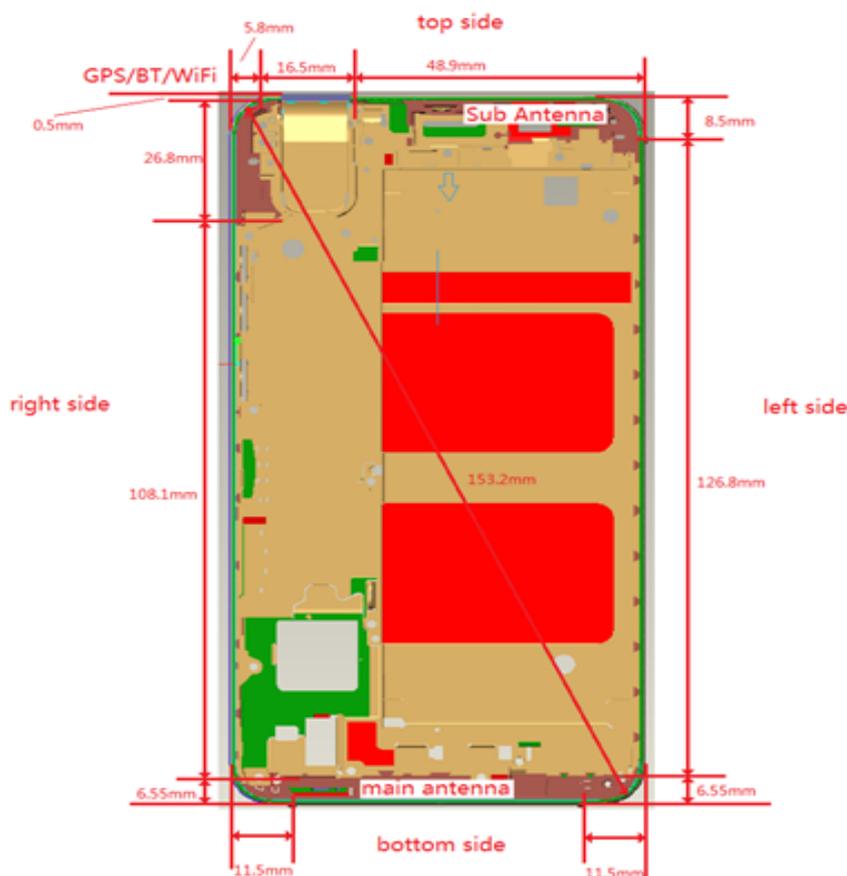
Table 7.2.2 Hotspot Side For SAR Testing

Mode	Exposure Condition	Front Side	Rear Side	Left Side	Right Side	Top Side	Bottom Side
GSM850/1900(Main)	Hotspot	YES	YES	YES	YES	NO	YES
UMTS Band 2/4/5(Main)	Hotspot	YES	YES	YES	YES	NO	YES
LTE Band 2/4/5/7(Main)	Hotspot	YES	YES	YES	YES	NO	YES
2.4GWiFi	Hotspot	YES	YES	NO	YES	YES	NO

Mode	Exposure Condition	Front Side	Rear Side	Left Side	Right Side	Top Side	Bottom Side
GSM850/1900(Sub)	Hotspot	YES	YES	YES	YES	YES	NO
UMTS Band 2/4/5(Sub)	Hotspot	YES	YES	YES	YES	YES	NO
LTE Band 2/4/5/7(Sub)	Hotspot	YES	YES	YES	YES	YES	NO

Note: Per KDB 941225 D06, particular DUT edges were not required to be evaluated for Hotspot SAR if the antenna-to-edge distance is greater than 2.5cm.

8.TEST RESULT

8.1CONDUCTED POWER RESULTS

8.1.1CONDUCTED POWER MEASUREMENTS OF GSM850

1) Conducted power measurement results of GSM850

GSM850(Main)		Tune-up	Max Burst Average Power (dBm)			Tune-up	Max Frame Average Power (dBm)		
			128CH	190CH	251CH		128CH	190CH	251CH
			824.2MHz	836.6MHz	848.8MHz		824.2MHz	836.6MHz	848.8MHz
GSM (CS)		**33.50**	32.85	32.88	32.87	**24.31**	23.66	23.69	23.68
GPRS/ EDGE (GMSK)	1 Tx Slot	**33.50**	32.82	32.83	32.81	**24.31**	23.63	23.64	23.62
	2 Tx Slot	**31.00**	30.44	29.97	30.04	**24.87**	24.31	23.84	23.91
	3 Tx Slot	**29.00**	28.19	27.79	27.84	**24.58**	23.77	23.37	23.42
	4 Tx Slot	**28.00**	26.91	26.58	26.61	**24.82**	23.73	23.40	23.43
EDGE (8PSK)	1 Tx Slot	**27.50**	26.46	26.04	26.03	**18.31**	17.27	16.85	16.84
	2 Tx Slot	**27.00**	26.28	25.92	25.98	**20.87**	20.15	19.79	19.85
	3 Tx Slot	**25.00**	23.93	23.57	23.54	**20.58**	19.51	19.15	19.12
	4 Tx Slot	**24.00**	22.52	22.30	22.32	**20.82**	19.34	19.12	19.14

GSM850(Sub)		Tune-up	Max Burst Average Power (dBm)			Tune-up	Max Frame Average Power (dBm)		
			128CH	190CH	251CH		128CH	190CH	251CH
			824.2MHz	836.6MHz	848.8MHz		824.2MHz	836.6MHz	848.8MHz
GSM (CS)		**29.50**	29.03	29.01	29.02	**20.31**	19.84	19.82	19.83
GPRS/ EDGE (GMSK)	1 Tx Slot	**29.50**	28.99	28.52	28.77	**20.31**	19.80	19.33	19.58
	2 Tx Slot	**27.00**	26.13	25.90	26.18	**20.87**	20.00	19.77	20.05
	3 Tx Slot	**24.00**	24.02	23.87	24.13	**19.58**	19.60	19.45	19.71
	4 Tx Slot	**23.00**	22.67	22.65	22.75	**19.82**	19.49	19.47	19.57
EDGE (8PSK)	1 Tx Slot	**27.50**	26.35	26.07	26.14	**18.31**	17.16	16.88	16.95
	2 Tx Slot	**26.00**	26.31	25.96	26.01	**19.87**	20.18	19.83	19.88
	3 Tx Slot	**25.00**	24.02	23.62	23.75	**20.58**	19.60	19.20	19.33
	4 Tx Slot	**24.00**	22.76	22.41	22.60	**20.82**	19.58	19.23	19.42

Note:
1) The conducted power of GSM850 is measured with RMS detector.
2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 time slots.
3) Per KDB941225 D01v03, the bolded GPRS2Tx mode was selected for SAR testing according to the highest frame –averaged output power table.
4) The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:
Frame-averaged power=10 x log(Burst-averaged power mW x Slot used/8)

8.1.2 CONDUCTED POWER MEASUREMENTS OF GSM1900

1) Conducted power measurement results of GSM1900 (Hotspot disabled)

GSM1900(Main)		Tune-up	Max Burst Average Power (dBm)			Tune-up	Max Frame Average Power (dBm)		
			512CH	661CH	810CH		512CH	661CH	810CH
			1850.2MHz	1880MHz	1909.8MHz		1850.2MHz	1880MHz	1909.8MHz
GSM (CS)		**31.00**	30.35	30.28	30.55	**21.81**	21.16	21.09	21.36
GPRS /EDGE (GMSK)	1 Tx Slot	**31.00**	30.39	**30.52**	30.46	**21.81**	21.20	21.33	21.27
	2 Tx Slots	**29.00**	28.41	28.47	28.49	**22.87**	22.28	22.34	22.36
	3 Tx Slots	**26.50**	26.03	25.88	26.03	**22.08**	21.61	21.46	21.61
	4 Tx Slots	**25.50**	24.78	24.45	25.01	**22.32**	21.60	21.27	21.83
EDGE (8PSK)	1 Tx Slot	**26.50**	25.85	25.55	25.91	**17.31**	16.66	16.36	16.72
	2 Tx Slots	**26.00**	25.68	25.17	25.76	**19.87**	19.55	19.04	19.63
	3 Tx Slots	**25.00**	23.95	23.43	23.79	**20.58**	19.53	19.01	19.37
	4 Tx Slots	**24.00**	22.71	22.25	22.54	**20.82**	19.53	19.07	19.36

GSM1900(Sub)		Tune-up	Max Burst Average Power (dBm)			Tune-up	Max Frame Average Power (dBm)		
			512CH	661CH	810CH		512CH	661CH	810CH
			1850.2MHz	1880MHz	1909.8MHz		1850.2MHz	1880MHz	1909.8MHz
GSM (CS)		**28.00**	27.17	27.00	27.14	**18.81**	17.98	17.81	17.95
GPRS /EDGE (GMSK)	1 Tx Slot	**28.00**	26.21	26.31	26.35	**18.81**	17.02	17.12	17.16
	2 Tx Slots	**26.00**	25.58	25.68	25.53	**19.87**	19.45	19.55	19.40
	3 Tx Slots	**23.50**	22.72	22.64	22.84	**19.08**	18.30	18.22	18.42
	4 Tx Slots	**22.50**	21.82	21.82	21.91	**19.32**	18.64	18.64	18.73
EDGE (8PSK)	1 Tx Slot	**26.50**	25.25	25.28	25.26	**17.31**	16.06	16.09	16.07
	2 Tx Slots	**26.00**	24.45	24.51	24.48	**19.87**	18.32	18.38	18.35
	3 Tx Slots	**25.00**	23.29	23.35	23.22	**20.58**	18.87	18.93	18.80
	4 Tx Slots	**24.00**	22.16	22.15	22.15	**20.82**	18.98	18.97	18.97

2）Conducted power measurement results of GSM1900 (Hotspot activated)

GSM1900(Main)		Tune-up	Max Burst Average Power (dBm)			Tune-up	Max Frame Average Power (dBm)		
			512CH	661CH	810CH		512CH	661CH	810CH
			1850.2MHz	1880MHz	1909.8MHz		1850.2MHz	1880MHz	1909.8MHz
GSM (CS)		**29.00**	28.59	28.57	28.98	**19.81**	19.40	19.38	19.79
GPRS /EDGE (GMSK)	1 Tx Slot	**29.00**	28.58	28.56	28.93	**19.81**	19.39	19.37	19.74
	2 Tx Slots	**26.50**	25.93	25.92	26.06	**20.37**	19.80	19.79	19.93
	3 Tx Slots	**24.50**	23.75	23.71	23.84	**20.08**	19.33	19.29	19.42
	4 Tx Slots	**23.50**	22.45	22.36	22.67	**20.32**	19.27	19.18	19.49
EDGE (8PSK)	1 Tx Slot	**26.50**	25.69	25.45	25.97	**17.31**	16.50	16.26	16.78
	2 Tx Slots	**26.00**	25.40	25.35	25.72	**19.87**	19.27	19.22	19.59
	3 Tx Slots	**25.00**	23.65	23.67	23.96	**20.58**	19.23	19.25	19.54
	4 Tx Slots	**24.00**	22.37	22.23	22.68	**20.82**	19.19	19.05	19.50

Note:
1) The conducted power of GSM1900 is measured with RMS detector.
2) Frame-averaged output power was calculated from the measured burst-averaged output power by converting the slot powers into linear units and calculating the energy over 8 time slots.
3) Per KDB941225 D01v03, the bolded GPRS 2Tx mode was selected for SAR testing according to the highest frame –averaged output power table.
4) The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:
Frame-averaged power=10 x log(Burst-averaged power mW x Slot used/8)

8.1.3CONDUCTED POWER MEASUREMENTS OF UMTS1900 Band 2

1）Conducted power measurement results of UMTS1900 Band 2 (Hotspot disabled)

UMTS1900(Main) (Band 2)		Tune-up	SAR Conducted Power (dBm)		
			9262CH	9400CH	9538CH
			1852.4	1880	1907.6
WCDMA	12.2kbps RMC	**23.00**	21.60	21.86	22.23
	64kbps RMC	**23.00**	21.63	21.86	22.18
	144kbps RMC	**23.00**	21.61	21.88	22.26
	384kbps RMC	**23.00**	21.61	21.86	22.15
HSDPA	Subtest 1	**22.00**	20.65	20.82	21.24
	Subtest 2	**21.50**	20.46	20.71	`20.42
	Subtest 3	**21.50**	20.03	20.29	20.53
	Subtest 4	**21.50**	19.96	20.25	20.69
HSUPA	Subtest 1	**21.50**	20.32	20.61	20.94
	Subtest 2	**21.50**	20.02	20.29	20.63
	Subtest 3	**21.50**	20.54	20.72	21.04
	Subtest 4	**21.50**	20.51	20.74	21.15
	Subtest 5	**21.00**	19.73	19.99	20.25
DC-HSDPA	Subtest 1	**22.00**	20.65	20.82	21.24
	Subtest 2	**21.50**	20.46	20.71	`20.42
	Subtest 3	**21.50**	20.03	20.29	20.53
	Subtest 4	**21.50**	19.96	20.25	20.69

UMTS1900(Sub) (Band 2)		Tune-up	SAR Conducted Power (dBm)		
			9262CH	9400CH	9538CH
			1852.4	1880	1907.6
WCDMA	12.2kbps RMC	**19.00**	17.51	17.71	17.73
	64kbps RMC	**19.00**	17.56	17.75	17.69
	144kbps RMC	**19.00**	17.58	17.77	17.60
	384kbps RMC	**19.00**	17.52	17.79	17.64
HSDPA	Subtest 1	**18.00**	16.49	16.80	17.29
	Subtest 2	**17.50**	16.45	16.75	17.25
	Subtest 3	**17.50**	15.99	16.28	16.77
	Subtest 4	**17.50**	15.70	15.97	16.35
HSUPA	Subtest 1	**17.50**	16.22	16.44	16.88
	Subtest 2	**17.50**	15.71	15.86	16.29
	Subtest 3	**17.50**	16.17	16.45	16.80
	Subtest 4	**17.50**	16.12	16.38	16.81
	Subtest 5	**17.00**	16.24	16.43	16.88
DC-HSDPA	Subtest 1	**18.00**	16.49	16.80	17.29
	Subtest 2	**17.50**	16.45	16.75	17.25
	Subtest 3	**17.50**	15.99	16.28	16.77
	Subtest 4	**17.50**	15.70	15.97	16.35

2) Conducted power measurement results of UMTS1900 Band 2 (Hotspot activated)

UMTS1900(Main) (Band 2)		Tune-up	SAR Conducted Power (dBm)		
			9262CH	9400CH	9538CH
			1852.4	1880	1907.6
WCDMA	12.2kbps RMC	**18.00**	16.88	17.18	17.51
	64kbps RMC	**18.00**	16.84	17.01	17.50
	144kbps RMC	**18.00**	16.81	17.23	17.57
	384kbps RMC	**18.00**	16.89	17.18	17.55
HSDPA	Subtest 1	**16.50**	15.86	16.26	16.74
	Subtest 2	**16.50**	15.89	16.23	16.63
	Subtest 3	**16.50**	15.48	15.58	16.38
	Subtest 4	**16.50**	15.24	15.46	16.11
HSUPA	Subtest 1	**16.50**	15.63	16.10	16.48
	Subtest 2	**16.50**	15.26	15.51	16.03
	Subtest 3	**16.50**	15.67	16.03	16.42
	Subtest 4	**16.50**	15.69	16.13	16.61
	Subtest 5	**16.50**	15.63	16.11	16.46
DC-HSDPA	Subtest 1	**16.50**	15.86	16.26	16.74
	Subtest 2	**16.50**	15.89	16.23	16.63
	Subtest 3	**16.50**	15.48	15.58	16.38
	Subtest 4	**16.50**	15.24	15.46	16.11

HSPA+/ DC-HSPA+
Since 16QAM is not used for uplink, the uplink category and release is same as HSUPA,i.e,CAT6 Rel 6.Therefore,the RF conducted power is not measured.

Note:
1) The conducted power of UMTS Band 2 is measured with RMS detector.
2)Note: Per KDB941225 D01v03, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

8.1.4CONDUCTED POWER MEASUREMENTS OF UMTS1700 Band 4

1）Conducted power measurement results of UMTS1700 Band 4 (Hotspot disabled)

UMTS1700 (Main) (Band 4)		Tune-up	SAR Conducted Power (dBm)		
			1312CH	1413CH	1513CH
			1712.4	1732.6	1752.6
WCDMA	12.2kbps RMC	**24.00**	22.12	22.29	22.14
	64kbps RMC	**24.00**	22.14	22.23	22.09
	144kbps RMC	**24.00**	22.10	22.24	22.06
	384kbps RMC	**24.00**	22.13	22.25	22.07
HSDPA	Subtest 1	**22.00**	21.18	21.26	21.04
	Subtest 2	**22.00**	20.94	21.06	20.83
	Subtest 3	**22.00**	20.43	20.54	20.51
	Subtest 4	**22.00**	20.53	20.68	20.37
HSUPA	Subtest 1	**22.00**	20.89	20.97	20.89
	Subtest 2	**22.00**	20.65	20.77	20.55
	Subtest 3	**22.00**	21.03	21.07	20.91
	Subtest 4	**22.00**	21.17	21.26	21.01
	Subtest 5	**22.00**	20.21	20.31	20.24
DC-HSDPA	Subtest 1	**22.00**	21.18	21.26	21.04
	Subtest 2	**22.00**	20.94	21.06	20.83
	Subtest 3	**22.00**	20.43	20.54	20.51
	Subtest 4	**22.00**	20.53	20.68	20.37

UMTS1700 (Sub) (Band 4)		Tune-up	SAR Conducted Power (dBm)		
			1312CH	1413CH	1513CH
			1712.4	1732.6	1752.6
WCDMA	12.2kbps RMC	**20.00**	18.17	18.34	18.01
	64kbps RMC	**20.00**	18.12	18.33	18.01
	144kbps RMC	**20.00**	18.19	18.34	18.10
	384kbps RMC	**20.00**	18.21	18.27	18.03
HSDPA	Subtest 1	**18.00**	17.12	17.22	17.04
	Subtest 2	**18.00**	17.10	17.21	17.04
	Subtest 3	**18.00**	16.71	16.83	16.52
	Subtest 4	**18.00**	16.44	16.54	16.42
HSUPA	Subtest 1	**18.00**	16.96	16.91	16.76
	Subtest 2	**18.00**	16.44	16.58	16.32
	Subtest 3	**18.00**	16.88	17.02	16.82
	Subtest 4	**18.00**	16.92	17.08	16.84
	Subtest 5	**18.00**	16.88	17.07	16.84
DC-HSDPA	Subtest 1	**18.00**	17.12	17.22	17.04
	Subtest 2	**18.00**	17.10	17.21	17.04
	Subtest 3	**18.00**	16.71	16.83	16.52
	Subtest 4	**18.00**	16.44	16.54	16.42

2) Conducted power measurement results of UMTS1700 Band 4 (Hotspot activated)

UMTS1700 (Main) (Band 4)		Tune-up	SAR Conducted Power (dBm)		
			1312CH	1413CH	1513CH
			1712.4	1732.6	1752.6
WCDMA	12.2kbps RMC	**19.20**	17.51	17.57	17.33
	64kbps RMC	**19.20**	17.48	17.60	17.35
	144kbps RMC	**19.20**	17.53	17.61	17.36
	384kbps RMC	**19.20**	17.51	17.56	17.38
HSDPA	Subtest 1	**18.00**	16.51	16.53	16.29
	Subtest 2	**17.50**	16.48	16.49	16.37
	Subtest 3	**17.50**	15.91	16.02	15.98
	Subtest 4	**17.50**	15.89	16.01	15.72
HSUPA	Subtest 1	**18.00**	16.43	16.56	16.35
	Subtest 2	**17.50**	15.96	16.09	15.89
	Subtest 3	**17.50**	16.43	16.52	16.37
	Subtest 4	**17.50**	16.44	16.58	16.35
	Subtest 5	**17.50**	16.49	16.43	16.28
DC-HSDPA	Subtest 1	**18.00**	16.51	16.53	16.29
	Subtest 2	**17.50**	16.48	16.49	16.37
	Subtest 3	**17.50**	15.91	16.02	15.98
	Subtest 4	**17.50**	15.89	16.01	15.72

HSPA+/ DC-HSPA+
Since 16QAM is not used for uplink, the uplink category and release is same as HSUPA,i.e,CAT6 Rel 6.Therefore,the RF conducted power is not measured.
Note:
1) The conducted power of UMTS Band 4 is measured with RMS detector.
2)Note: Per KDB941225 D01v03, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

8.1.4 CONDUCTED POWER MEASUREMENTS OF UMTS850 Band 5

1）Conducted power measurement results of UMTS850 Band 5

UMTS850(Main) (Band 5)		Tune-up	SAR Conducted Power (dBm)		
			4132CH	4182CH	4233CH
			826.4	836.4	846.6
WCDMA	12.2kbps RMC	**24.50**	23.35	23.34	23.32
	64kbps RMC	**24.50**	23.30	23.32	23.37
	144kbps RMC	**24.50**	23.27	23.31	23.35
	384kbps RMC	**24.50**	23.33	23.29	23.31
HSDPA	Subtest 1	**22.50**	21.79	21.87	21.83
	Subtest 2	**22.50**	21.32	21.29	21.28
	Subtest 3	**22.50**	20.89	21.07	20.89
	Subtest 4	**22.50**	21.78	21.77	21.75
HSUPA	Subtest 1	**22.50**	21.31	21.34	21.38
	Subtest 2	**22.50**	21.80	21.79	21.70
	Subtest 3	**22.50**	21.56	21.67	21.57
	Subtest 4	**22.50**	22.21	22.13	22.21
	Subtest 5	**22.00**	20.33	20.38	20.41
DC-HSDPA	Subtest 1	**22.50**	21.79	21.87	21.83
	Subtest 2	**22.50**	21.32	21.29	21.28
	Subtest 3	**22.50**	20.89	21.07	20.89
	Subtest 4	**22.50**	21.78	21.77	21.75

UMTS850(Sub) (Band 5)		Tune-up	SAR Conducted Power (dBm)		
			4132CH	4182CH	4233CH
			826.4	836.4	846.6
WCDMA	12.2kbps RMC	**20.50**	19.28	19.23	19.24
	64kbps RMC	**20.50**	19.30	19.25	19.28
	144kbps RMC	**20.50**	19.32	19.33	19.25
	384kbps RMC	**20.50**	19.24	19.29	19.28
HSDPA	Subtest 1	**18.50**	18.29	18.34	18.26
	Subtest 2	**18.50**	18.29	18.36	18.28
	Subtest 3	**18.50**	17.72	17.77	17.69
	Subtest 4	**18.50**	17.56	17.64	17.59
HSUPA	Subtest 1	**18.50**	18.24	18.16	18.14
	Subtest 2	**18.50**	17.64	17.66	17.55
	Subtest 3	**18.50**	18.22	18.11	18.13
	Subtest 4	**18.50**	18.15	18.18	18.15
	Subtest 5	**18.50**	18.11	17.98	18.15
DC-HSDPA	Subtest 1	**18.50**	18.29	18.34	18.26
	Subtest 2	**18.50**	18.29	18.36	18.28
	Subtest 3	**18.50**	17.72	17.77	17.69
	Subtest 4	**18.50**	17.56	17.64	17.59

HSPA+/ DC-HSPA+

Since 16QAM is not used for uplink, the uplink category and release is same as HSUPA,i.e,CAT6 Rel 6.Therefore,the RF conducted power is not measured.

Note:

1) The conducted power of UMTS Band 5 is measured with RMS detector.

2)Note: Per KDB941225 D01v03, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

8.1.5 CONDUCTED POWER MEASUREMENTS OF LTE Band 2

1）Conducted power measurement results of LTE Band 2 (Hotspot disabled) (Main)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18607 1850.7	Mid 18900 1880	High 19193 1909.3
1.4MHz	QPSK	1	0	**23.00**	21.59	21.81	21.75
		1	2	**23.00**	21.60	21.89	22.09
		1	5	**23.00**	21.61	21.83	22.01
		3	0	**23.00**	21.48	21.63	21.98
		3	1	**23.00**	21.75	21.66	22.22
		3	3	**23.00**	21.80	21.77	21.98
		6	0	**22.00**	20.52	20.68	20.85
	16QAM	1	0	**22.00**	21.27	21.24	21.07
		1	2	**22.00**	21.39	21.29	20.94
		1	5	**22.00**	21.29	21.20	21.04
		3	0	**22.00**	20.70	20.61	20.82
		3	1	**22.00**	20.46	20.64	20.74
		3	3	**22.00**	20.42	20.76	20.70
		6	0	**21.00**	19.37	19.78	20.07
Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18615 1851.5	Mid 18900 1880	High 19185 1908.5
3MHz	QPSK	1	0	**23.00**	21.64	21.93	22.01
		1	7	**23.00**	21.78	22.02	21.99
		1	14	**23.00**	21.85	21.83	21.91
		8	0	**22.00**	20.57	20.68	20.98
		8	3	**22.00**	20.53	20.71	20.87
		8	7	**22.00**	20.53	20.71	20.83
		15	0	**22.00**	20.52	20.69	20.90
	16QAM	1	0	**22.00**	21.05	21.31	21.07
		1	7	**22.00**	21.27	21.29	20.51
		1	14	**22.00**	21.27	21.32	20.43
		8	0	**21.00**	19.48	19.99	19.88
		8	3	**21.00**	19.48	20.02	19.97
		8	7	**21.00**	19.50	20.01	20.07
		15	0	**21.00**	19.62	19.97	19.89

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18625 1852.5	Mid 18900 1880	High 19175 1907.5
5MHz	QPSK	1	0	**23.00**	21.75	21.76	22.32
		1	12	**23.00**	21.68	21.64	21.81
		1	24	**23.00**	21.71	21.61	21.66
		12	0	**22.00**	20.59	20.77	20.89
		12	6	**22.00**	20.66	20.70	20.87
		12	13	**22.00**	20.65	20.73	20.84
		25	0	**22.00**	20.62	20.73	20.89
	16QAM	1	0	**22.00**	20.60	21.16	21.27
		1	12	**22.00**	20.63	20.65	21.05
		1	24	**22.00**	20.67	20.52	21.09
		12	0	**21.00**	19.52	19.81	20.02
		12	6	**21.00**	19.66	19.81	19.99
		12	13	**21.00**	19.70	19.83	20.08
		25	0	**21.00**	19.65	19.84	20.03

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18650 1855	Mid 18900 1880	High 19150 1905
10MHz	QPSK	1	0	**23.00**	21.75	21.99	22.39
		1	24	**23.00**	21.80	22.01	22.30
		1	49	**23.00**	21.79	21.83	21.90
		25	0	**22.00**	20.57	20.79	21.10
		25	12	**22.00**	20.56	20.69	20.99
		25	25	**22.00**	20.58	20.78	20.81
		50	0	**22.00**	20.64	20.79	20.91
	16QAM	1	0	**22.00**	20.73	21.32	21.28
		1	24	**22.00**	21.34	21.07	21.08
		1	49	**22.00**	21.23	20.99	21.04
		25	0	**21.00**	19.51	20.03	20.21
		25	12	**21.00**	19.50	19.89	20.12
		25	25	**21.00**	19.52	19.72	20.02
		50	0	**21.00**	19.55	19.90	20.08

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low	Mid	High
					18675	18900	19125
					1857.5	1880	1902.5
15MHz	QPSK	1	0	**23.00**	21.80	21.94	22.15
		1	38	**23.00**	21.62	21.95	21.98
		1	74	**23.00**	21.78	21.98	21.90
		36	0	**22.00**	20.58	21.98	21.11
		36	18	**22.00**	20.52	20.73	21.12
		36	39	**22.00**	20.49	20.69	21.00
		75	0	**22.00**	20.54	20.78	21.05
	16QAM	1	0	**22.00**	21.08	21.37	21.98
		1	38	**22.00**	20.97	21.23	21.13
		1	74	**22.00**	20.99	21.07	21.75
		36	0	**21.00**	19.53	20.04	20.15
		36	18	**21.00**	19.39	19.92	20.13
		36	39	**21.00**	19.36	19.89	19.91
		75	0	**21.00**	19.51	19.85	20.01
Bandwidth	Modulation	RB size	RB offset	Tune-up	Low	Mid	High
					18700	18900	19100
					1860	1880	1900
20MHz	QPSK	1	0	**23.00**	21.73	21.58	21.88
		1	50	**23.00**	21.56	21.50	22.17
		1	99	**23.00**	21.50	21.85	21.67
		50	0	**22.00**	20.56	20.77	21.07
		50	25	**22.00**	20.52	20.73	21.11
		50	50	**22.00**	20.50	20.70	20.96
		100	0	**22.00**	20.58	20.73	20.99
	16QAM	1	0	**22.00**	20.74	20.43	21.46
		1	50	**22.00**	20.53	20.42	21.23
		1	99	**22.00**	20.64	20.47	20.80
		50	0	**21.00**	19.69	19.88	20.04
		50	25	**21.00**	19.57	19.82	20.18
		50	50	**21.00**	19.42	19.70	20.02
		100	0	**21.00**	19.41	19.81	19.98

Conducted power measurement results of LTE Band 2 (Hotspot disabled) (Sub)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18607 1850.7	Mid 18900 1880	High 19193 1909.3
1.4MHz	QPSK	1	0	**19.00**	17.10	17.19	17.79
		1	2	**19.00**	17.20	17.60	17.80
		1	5	**19.00**	17.19	17.26	17.80
		3	0	**19.00**	17.11	17.19	17.75
		3	1	**19.00**	17.25	17.24	17.79
		3	3	**19.00**	17.34	17.25	17.75
		6	0	**18.00**	16.16	16.33	16.69
	16QAM	1	0	**18.00**	16.59	17.00	16.85
		1	2	**18.00**	17.01	17.17	16.91
		1	5	**18.00**	16.91	16.87	16.79
		3	0	**18.00**	16.33	16.29	16.94
		3	1	**18.00**	16.35	16.33	16.97
		3	3	**18.00**	16.33	16.44	17.16
		6	0	**17.00**	15.26	15.26	15.89

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18615 1851.5	Mid 18900 1880	High 19185 1908.5
3MHz	QPSK	1	0	**19.00**	17.35	17.22	17.62
		1	7	**19.00**	17.39	17.30	17.38
		1	14	**19.00**	17.35	17.29	17.48
		8	0	**18.00**	16.04	16.31	16.69
		8	3	**18.00**	16.12	16.30	16.64
		8	7	**18.00**	16.20	16.34	16.65
		15	0	**18.00**	16.21	16.26	16.66
	16QAM	1	0	**18.00**	16.11	16.95	16.90
		1	7	**18.00**	16.91	16.92	17.12
		1	14	**18.00**	16.84	17.00	16.88
		8	0	**17.00**	15.32	15.90	15.66
		8	3	**17.00**	15.55	15.88	15.47
		8	7	**17.00**	15.57	15.69	15.51
		15	0	**17.00**	15.23	15.49	15.56

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18625 1852.5	Mid 18900 1880	High 19175 1907.5
5MHz	QPSK	1	0	**19.00**	17.37	17.08	17.56
		1	12	**19.00**	17.34	17.08	17.34
		1	24	**19.00**	17.31	17.16	17.42
		12	0	**18.00**	16.10	16.34	16.70
		12	6	**18.00**	16.18	16.30	16.58
		12	13	**18.00**	16.18	16.40	16.66
		25	0	**18.00**	16.05	16.35	16.62
	16QAM	1	0	**18.00**	15.76	16.24	16.88
		1	12	**18.00**	16.11	16.40	16.87
		1	24	**18.00**	16.15	16.42	16.86
		12	0	**17.00**	15.26	15.30	15.67
		12	6	**17.00**	15.30	15.35	15.68
		12	13	**17.00**	15.19	15.45	15.53
		25	0	**17.00**	15.42	15.35	15.61

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18650 1855	Mid 18900 1880	High 19150 1905
10MHz	QPSK	1	0	**19.00**	17.42	17.24	17.81
		1	24	**19.00**	17.41	17.21	18.00
		1	49	**19.00**	17.50	17.46	17.95
		25	0	**18.00**	16.19	16.38	16.78
		25	12	**18.00**	16.21	16.38	16.71
		25	25	**18.00**	16.26	16.49	16.62
		50	0	**18.00**	16.20	16.38	16.71
	16QAM	1	0	**18.00**	16.43	16.94	16.63
		1	24	**18.00**	16.51	17.02	16.96
		1	49	**18.00**	16.35	17.06	16.93
		25	0	**17.00**	15.37	15.76	15.80
		25	12	**17.00**	15.18	15.66	15.66
		25	25	**17.00**	15.16	15.78	15.65
		50	0	**17.00**	15.17	15.45	15.66

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low	Mid	High
					18675	18900	19125
					1857.5	1880	1902.5
15MHz	QPSK	1	0	**19.00**	17.43	17.49	18.10
		1	38	**19.00**	17.24	17.40	17.98
		1	74	**19.00**	17.14	17.50	17.96
		36	0	**18.00**	16.22	16.54	16.88
		36	18	**18.00**	16.26	16.35	16.86
		36	39	**18.00**	16.17	16.40	16.66
		75	0	**18.00**	16.23	16.42	16.79
	16QAM	1	0	**18.00**	16.43	16.66	17.69
		1	38	**18.00**	16.50	17.01	17.77
		1	74	**18.00**	16.40	17.16	17.80
		36	0	**17.00**	15.40	15.35	15.83
		36	18	**17.00**	15.41	15.53	15.77
		36	39	**17.00**	15.30	15.47	15.62
		75	0	**17.00**	15.30	15.47	15.69

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low	Mid	High
					18700	18900	19100
					1860	1880	1900
20MHz	QPSK	1	0	**19.00**	17.25	17.14	17.80
		1	50	**19.00**	17.25	17.19	17.88
		1	99	**19.00**	17.18	17.58	17.64
		50	0	**18.00**	16.27	16.39	16.78
		50	25	**18.00**	16.21	16.44	16.85
		50	50	**18.00**	16.15	16.48	16.70
		100	0	**18.00**	16.26	16.44	16.82
	16QAM	1	0	**18.00**	16.36	16.30	16.97
		1	50	**18.00**	16.91	16.32	17.23
		1	99	**18.00**	16.69	16.62	17.09
		50	0	**17.00**	15.39	15.42	15.73
		50	25	**17.00**	15.37	15.43	15.92
		50	50	**17.00**	15.34	15.42	15.79
		100	0	**17.00**	15.33	15.35	15.73

2）Conducted power measurement results of LTE Band 2 (Hotspot activated) (Main)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18607 1850.7	Mid 18900 1880	High 19193 1909.3
1.4MHz	QPSK	1	0	**19.00**	17.63	17.79	18.04
		1	2	**19.00**	17.90	17.96	18.11
		1	5	**19.00**	17.68	17.72	17.97
		3	0	**19.00**	17.47	17.67	17.96
		3	1	**19.00**	17.58	17.72	18.10
		3	3	**19.00**	17.51	17.71	17.93
		6	0	**19.00**	17.58	17.65	17.90
	16QAM	1	0	**19.00**	18.23	18.24	18.04
		1	2	**19.00**	18.27	18.28	18.09
		1	5	**19.00**	18.11	18.22	18.03
		3	0	**19.00**	17.57	17.55	18.26
		3	1	**19.00**	17.38	17.59	18.28
		3	3	**19.00**	17.33	17.72	18.37
		6	0	**19.00**	17.57	17.40	18.13

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18615 1851.5	Mid 18900 1880	High 19185 1908.5
3MHz	QPSK	1	0	**19.00**	17.65	17.65	18.16
		1	7	**19.00**	17.78	17.68	18.07
		1	14	**19.00**	17.70	17.78	17.90
		8	0	**19.00**	17.47	17.67	18.17
		8	3	**19.00**	17.50	17.73	18.06
		8	7	**19.00**	17.51	17.74	17.96
		15	0	**19.00**	17.57	17.69	17.98
	16QAM	1	0	**19.00**	18.03	18.25	18.22
		1	7	**19.00**	18.15	18.23	18.43
		1	14	**19.00**	18.17	18.33	18.05
		8	0	**19.00**	17.51	17.95	18.10
		8	3	**19.00**	17.80	17.82	17.80
		8	7	**19.00**	17.83	17.82	17.88
		15	0	**19.00**	17.58	17.76	18.00

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18625 1852.5	Mid 18900 1880	High 19175 1907.5
5MHz	QPSK	1	0	19.00	17.57	17.40	17.89
		1	12	19.00	17.72	17.48	17.71
		1	24	19.00	17.69	17.46	17.62
		12	0	19.00	17.56	17.71	17.99
		12	6	19.00	17.65	17.66	17.99
		12	13	19.00	17.64	17.62	17.97
		25	0	19.00	17.60	17.61	18.00
	16QAM	1	0	19.00	17.42	17.44	18.18
		1	12	19.00	17.42	17.26	18.10
		1	24	19.00	17.39	17.34	18.09
		12	0	19.00	17.49	17.61	18.01
		12	6	19.00	17.41	17.89	18.01
		12	13	19.00	17.58	17.63	18.02
		25	0	19.00	17.76	17.74	18.06

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18650 1855	Mid 18900 1880	High 19150 1905
10MHz	QPSK	1	0	**19.00**	17.93	17.79	18.37
		1	24	**19.00**	17.91	17.72	18.27
		1	49	**19.00**	17.76	18.06	18.04
		25	0	**19.00**	17.59	17.85	18.20
		25	12	**19.00**	17.63	17.64	18.11
		25	25	**19.00**	17.61	17.75	17.93
		50	0	**19.00**	17.57	17.73	18.01
	16QAM	1	0	**19.00**	17.75	18.29	18.43
		1	24	**19.00**	17.87	18.02	18.23
		1	49	**19.00**	18.21	18.55	18.23
		25	0	**19.00**	17.51	17.85	18.36
		25	12	**19.00**	17.61	17.84	18.13
		25	25	**19.00**	17.48	18.05	18.00
		50	0	**19.00**	17.52	17.74	17.99

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18675 1857.5	Mid 18900 1880	High 19125 1902.5
15MHz	QPSK	1	0	**19.00**	18.00	17.79	18.08
		1	38	**19.00**	17.76	17.66	18.08
		1	74	**19.00**	17.82	17.78	17.82
		36	0	**19.00**	17.66	17.78	18.12
		36	18	**19.00**	17.53	17.59	18.20
		36	39	**19.00**	17.49	17.76	18.00
		75	0	**19.00**	17.61	17.72	18.14
	16QAM	1	0	**19.00**	17.57	18.51	18.94
		1	38	**19.00**	17.31	18.22	19.34
		1	74	**19.00**	18.10	18.46	18.79
		36	0	**19.00**	17.50	18.46	18.17
		36	18	**19.00**	17.55	17.76	18.13
		36	39	**19.00**	17.42	17.84	17.96
		75	0	**19.00**	17.55	17.73	18.02

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 18700 1860	Mid 18900 1880	High 19100 1900
20MHz	QPSK	1	0	**19.00**	17.56	17.58	17.96
		1	50	**19.00**	17.49	17.47	18.05
		1	99	**19.00**	17.52	17.59	17.87
		50	0	**19.00**	17.54	17.72	18.06
		50	25	**19.00**	17.52	17.69	18.09
		50	50	**19.00**	17.47	17.75	18.09
		100	0	**19.00**	17.56	17.78	17.97
	16QAM	1	0	**19.00**	17.59	17.93	18.03
		1	50	**19.00**	17.74	17.52	18.85
		1	99	**19.00**	17.48	17.54	18.59
		50	0	**19.00**	17.68	17.73	18.04
		50	25	**19.00**	17.56	17.71	18.27
		50	50	**19.00**	17.52	17.78	18.04
		100	0	**19.00**	17.61	17.79	18.03

8.1.5 CONDUCTED POWER MEASUREMENTS OF LTE Band 4

1）Conducted power measurement results of LTE Band 4 (Hotspot disabled) (Main)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 19957 1710.7	Mid 20175 1732.5	High 20393 1754.3
1.4MHz	QPSK	1	0	**23.00**	21.74	21.94	21.78
		1	2	**23.00**	21.74	21.94	21.70
		1	5	**23.00**	21.59	21.77	21.63
		3	0	**23.00**	21.69	21.58	21.75
		3	1	**23.00**	21.72	21.69	21.71
		3	3	**23.00**	21.72	21.68	21.56
		6	0	**22.00**	20.65	20.70	20.77
	16QAM	1	0	**22.00**	21.54	21.32	20.93
		1	2	**22.00**	21.75	21.41	21.04
		1	5	**22.00**	21.82	21.28	20.90
		3	0	**22.00**	20.73	20.74	21.11
		3	1	**22.00**	20.75	20.74	21.15
		3	3	**22.00**	20.74	20.82	21.35
		6	0	**21.00**	19.68	19.49	19.95

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 19965 1711.5	Mid 20175 1732.5	High 20385 1753.5
3MHz	QPSK	1	0	**23.00**	21.83	21.75	21.76
		1	7	**23.00**	21.76	21.70	21.57
		1	14	**23.00**	21.81	21.69	21.50
		8	0	**23.00**	20.58	20.78	20.67
		8	3	**22.00**	20.64	20.71	20.66
		8	7	**22.00**	20.67	20.84	20.75
		15	0	**22.00**	20.65	20.87	20.69
	16QAM	1	0	**22.00**	20.66	21.33	20.86
		1	7	**22.00**	20.67	21.31	21.07
		1	14	**22.00**	21.27	21.32	20.92
		8	0	**21.00**	20.04	20.03	19.79
		8	3	**21.00**	20.09	20.08	19.59
		8	7	**21.00**	20.03	20.06	19.66
		15	0	**21.00**	19.83	19.97	19.71

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 19975 1712.5	Mid 20175 1732.5	High 20375 1752.5
5MHz	QPSK	1	0	**23.00**	21.87	21.72	21.38
		1	12	**23.00**	21.72	21.47	21.43
		1	24	**23.00**	21.83	21.49	21.44
		12	0	**23.00**	20.62	20.79	20.70
		12	6	**22.00**	20.64	20.74	20.60
		12	13	**22.00**	20.71	20.86	20.61
		25	0	**22.00**	20.71	20.81	20.67
	16QAM	1	0	**22.00**	20.52	21.08	21.25
		1	12	**22.00**	20.22	20.58	20.83
		1	24	**22.00**	20.33	20.47	20.93
		12	0	**21.00**	19.58	19.84	19.72
		12	6	**21.00**	19.71	19.80	19.60
		12	13	**21.00**	19.76	19.82	19.56
		25	0	**21.00**	19.67	19.74	19.70

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20000 1715	Mid 20175 1732.5	High 20350 1750
10MHz	QPSK	1	0	**23.00**	22.08	21.89	21.79
		1	24	**23.00**	22.23	21.83	21.67
		1	49	**23.00**	22.09	21.71	21.57
		25	0	**23.00**	20.77	20.89	20.78
		25	12	**22.00**	20.71	20.86	20.66
		25	25	**22.00**	20.64	20.80	20.70
		50	0	**22.00**	20.75	20.93	20.70
	16QAM	1	0	**22.00**	20.90	21.48	21.00
		1	24	**22.00**	21.49	21.40	20.90
		1	49	**22.00**	21.43	21.28	20.88
		25	0	**21.00**	19.85	19.84	19.93
		25	12	**21.00**	19.62	19.81	19.92
		25	25	**21.00**	19.74	19.83	19.87
		50	0	**21.00**	19.81	19.85	19.70

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20025 1717.5	Mid 20175 1732.5	High 20325 1747.5
15MHz	QPSK	1	0	**23.00**	22.11	21.92	21.88
		1	37	**23.00**	22.03	21.78	21.66
		1	74	**23.00**	22.10	21.70	21.65
		36	0	**23.00**	20.76	21.70	20.81
		36	19	**22.00**	20.67	20.82	20.75
		36	39	**22.00**	20.81	20.79	20.63
		75	0	**22.00**	20.73	20.82	20.74
	16QAM	1	0	**22.00**	21.23	21.19	21.74
		1	37	**22.00**	21.12	21.04	21.52
		1	74	**22.00**	21.19	21.24	21.62
		36	0	**21.00**	19.85	19.93	19.83
		36	19	**21.00**	19.78	19.85	19.91
		36	39	**21.00**	19.83	19.83	19.77
		75	0	**21.00**	19.83	19.95	19.72

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20050 1720	Mid 20175 1732.5	High 20300 1745
20MHz	QPSK	1	0	**23.00**	21.88	21.92	21.58
		1	50	**23.00**	21.75	21.85	21.84
		1	99	**23.00**	21.70	21.91	21.43
		50	0	**23.00**	20.83	21.05	20.83
		50	25	**22.00**	20.79	20.87	20.74
		50	50	**22.00**	20.82	20.85	20.75
		100	0	**22.00**	20.86	20.90	20.69
	16QAM	1	0	**22.00**	21.57	21.12	21.25
		1	50	**22.00**	21.56	20.90	21.36
		1	99	**22.00**	20.82	20.59	21.02
		50	0	**21.00**	20.04	19.99	19.82
		50	25	**21.00**	20.03	19.97	19.69
		50	50	**21.00**	19.79	19.87	19.67
		100	0	**21.00**	19.88	19.83	19.68

Conducted power measurement results of LTE Band 4 (Hotspot disabled) (Sub)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 19957 1710.7	Mid 20175 1732.5	High 20393 1754.3
1.4MHz	QPSK	1	0	**19.00**	17.74	17.76	17.83
		1	2	**19.00**	17.74	17.78	17.87
		1	5	**19.00**	17.59	17.82	17.77
		3	0	**18.00**	17.71	17.72	17.72
		3	1	**18.00**	17.73	17.75	17.66
		3	3	**18.00**	17.73	17.85	17.67
		6	0	**18.00**	16.78	16.77	16.63
	16QAM	1	0	**18.00**	17.45	17.26	16.57
		1	2	**18.00**	17.57	17.34	16.89
		1	5	**18.00**	17.54	17.23	16.77
		3	0	**17.00**	16.94	16.72	16.77
		3	1	**17.00**	16.98	16.74	16.93
		3	3	**17.00**	17.02	16.71	17.01
		6	0	**17.00**	15.75	15.49	15.81

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 19965 1711.5	Mid 20175 1732.5	High 20385 1753.5
3MHz	QPSK	1	0	**19.00**	17.91	18.06	17.73
		1	7	**19.00**	17.82	18.08	17.80
		1	14	**19.00**	17.87	18.07	17.82
		8	0	**18.00**	16.73	16.92	16.54
		8	3	**18.00**	16.75	16.77	16.56
		8	7	**18.00**	16.68	16.82	16.61
		15	0	**18.00**	16.67	16.79	16.57
	16QAM	1	0	**18.00**	17.08	17.31	16.73
		1	7	**18.00**	16.87	17.28	16.96
		1	14	**18.00**	16.89	17.25	16.79
		8	0	**17.00**	15.71	15.84	15.65
		8	3	**17.00**	15.71	15.89	15.69
		8	7	**17.00**	15.56	15.86	15.72
		15	0	**17.00**	15.64	15.87	15.60

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 19975 1712.5	Mid 20175 1732.5	High 20375 1752.5
5MHz	QPSK	1	0	**19.00**	17.91	17.89	17.39
		1	12	**19.00**	17.66	17.89	17.37
		1	24	**19.00**	17.80	17.95	17.41
		12	0	**18.00**	16.77	16.80	16.58
		12	6	**18.00**	16.73	16.80	16.54
		12	13	**18.00**	16.80	16.77	16.51
		25	0	**18.00**	16.71	16.73	16.51
	16QAM	1	0	**18.00**	16.55	17.25	16.78
		1	12	**18.00**	16.30	16.68	16.72
		1	24	**18.00**	16.37	16.66	16.79
		12	0	**17.00**	15.58	15.76	15.48
		12	6	**17.00**	15.57	15.75	15.45
		12	13	**17.00**	15.69	15.86	15.43
		25	0	**17.00**	15.73	15.87	15.62

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20000 1715	Mid 20175 1732.5	High 20350 1750
10MHz	QPSK	1	0	**19.00**	17.93	18.07	17.75
		1	24	**19.00**	17.82	18.16	17.61
		1	49	**19.00**	17.85	18.11	17.61
		25	0	**18.00**	16.80	16.89	16.64
		25	12	**18.00**	16.64	16.74	16.52
		25	25	**18.00**	16.68	16.74	16.55
		50	0	**18.00**	16.78	16.78	16.59
	16QAM	1	0	**18.00**	16.97	17.39	17.38
		1	24	**18.00**	17.61	17.34	17.24
		1	49	**18.00**	17.50	17.21	17.29
		25	0	**17.00**	15.64	15.96	15.61
		25	12	**17.00**	15.60	15.84	15.55
		25	25	**17.00**	15.66	15.86	15.57
		50	0	**17.00**	15.74	15.81	15.57

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20025 1717.5	Mid 20175 1732.5	High 20325 1747.5
15MHz	QPSK	1	0	**19.00**	17.95	17.96	17.86
		1	37	**19.00**	17.97	17.86	17.47
		1	74	**19.00**	18.06	17.76	17.43
		36	0	**18.00**	16.79	17.76	16.71
		36	19	**18.00**	16.75	16.80	16.64
		36	39	**18.00**	16.83	16.70	16.51
		75	0	**18.00**	16.75	16.74	16.67
	16QAM	1	0	**18.00**	17.22	17.11	17.67
		1	37	**18.00**	17.50	17.25	17.40
		1	74	**18.00**	17.50	17.19	17.49
		36	0	**17.00**	15.72	15.93	15.74
		36	19	**17.00**	15.68	15.84	15.68
		36	39	**17.00**	15.78	15.73	15.56
		75	0	**17.00**	15.62	15.76	15.67

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20050 1720	Mid 20175 1732.5	High 20300 1745
20MHz	QPSK	1	0	**19.00**	17.78	17.91	17.61
		1	50	**19.00**	17.69	17.39	17.44
		1	99	**19.00**	17.63	17.55	17.45
		50	0	**18.00**	16.87	16.96	16.81
		50	25	**18.00**	16.86	16.84	16.60
		50	50	**18.00**	16.84	16.70	16.62
		100	0	**18.00**	16.86	16.79	16.62
	16QAM	1	0	**18.00**	16.87	17.14	17.32
		1	50	**18.00**	16.68	16.64	17.07
		1	99	**18.00**	16.73	16.53	17.06
		50	0	**17.00**	15.92	15.97	15.79
		50	25	**17.00**	15.71	15.75	15.58
		50	50	**17.00**	15.69	15.61	15.58
		100	0	**17.00**	15.70	15.80	15.62

2）Conducted power measurement results of LTE Band 4 (Hotspot activated) (Main)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low	Mid	High
					19957	20175	20393
					1712.5	1732.5	1752.5
1.4MHz	QPSK	1	0	**19**	17.73	17.79	17.88
		1	2	**19**	17.83	17.97	17.92
		1	5	**19**	17.64	17.80	17.87
		3	0	**19**	17.71	17.73	17.83
		3	1	**19**	17.65	17.84	17.69
		3	3	**19**	17.77	17.82	17.69
		6	0	**19**	17.71	17.76	17.65
	16QAM	1	0	**19**	18.38	18.03	18.17
		1	2	**19**	18.67	18.09	18.76
		1	5	**19**	18.47	18.01	18.48
		3	0	**19**	17.70	18.18	17.94
		3	1	**19**	17.75	18.28	17.51
		3	3	**19**	17.41	18.34	17.49
		6	0	**19**	17.48	17.82	17.56

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low	Mid	High
					19965	20175	20385
					1711.5	1732.5	1753.5
3MHz	QPSK	1	0	**19**	17.96	17.88	17.74
		1	7	**19**	17.79	17.82	17.66
		1	14	**19**	17.85	17.90	17.72
		8	0	**19**	17.75	17.83	17.68
		8	3	**19**	17.68	17.76	17.68
		8	7	**19**	17.70	17.84	17.74
		15	0	**19**	17.68	17.78	17.80
	16QAM	1	0	**19**	18.46	18.39	17.84
		1	7	**19**	18.47	18.38	18.09
		1	14	**19**	18.38	18.29	17.90
		8	0	**19**	17.60	17.91	18.03
		8	3	**19**	17.43	17.86	18.04
		8	7	**19**	17.37	17.86	17.63
		15	0	**19**	17.63	17.69	17.68

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 19975 1712.5	Mid 20175 1732.5	High 20375 1752.5
5MHz	QPSK	1	0	**19**	17.84	17.79	17.49
		1	12	**19**	17.72	17.59	17.28
		1	24	**19**	17.91	17.51	17.51
		12	0	**19**	17.68	17.75	17.59
		12	6	**19**	17.64	17.81	17.65
		12	13	**19**	17.67	17.88	17.69
		25	0	**19**	17.65	17.86	17.60
	16QAM	1	0	**19**	17.50	17.80	18.03
		1	12	**19**	17.21	17.54	17.86
		1	24	**19**	17.27	17.53	17.88
		12	0	**19**	17.74	17.73	17.66
		12	6	**19**	17.70	17.80	17.49
		12	13	**19**	17.81	17.76	17.60
		25	0	**19**	17.82	17.83	17.86

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20000 1715	Mid 20175 1732.5	High 20350 1750
10MHz	QPSK	1	0	**19**	18.02	18.06	17.79
		1	24	**19**	17.98	17.79	17.65
		1	49	**19**	18.07	17.78	17.77
		25	0	**19**	17.73	17.87	17.70
		25	12	**19**	17.61	17.77	17.70
		25	25	**19**	17.76	17.79	17.69
		50	0	**19**	17.84	17.83	17.75
	16QAM	1	0	**19**	17.83	18.47	17.98
		1	24	**19**	18.52	18.43	17.92
		1	49	**19**	18.49	18.32	17.92
		25	0	**19**	17.70	17.99	17.85
		25	12	**19**	17.70	17.90	17.66
		25	25	**19**	17.70	17.85	17.77
		50	0	**19**	17.80	17.84	17.68

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20025 1717.5	Mid 20175 1732.5	High 20325 1747.5
15MHz	QPSK	1	0	**19**	18.14	17.97	17.90
		1	37	**19**	17.89	17.81	17.56
		1	74	**19**	17.96	17.69	17.69
		36	0	**19**	17.76	17.69	17.71
		36	19	**19**	17.63	17.87	17.67
		36	39	**19**	17.82	17.80	17.68
		75	0	**19**	17.77	17.84	17.67
	16QAM	1	0	**19**	18.29	18.54	18.80
		1	37	**19**	18.09	18.36	18.51
		1	74	**19**	17.75	18.27	18.71
		36	0	**19**	17.79	18.27	17.86
		36	19	**19**	17.52	18.02	17.83
		36	39	**19**	17.83	17.94	17.72
		75	0	**19**	17.70	17.87	17.75

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20050 1720	Mid 20175 1732.5	High 20300 1745
20MHz	QPSK	1	0	**19**	17.85	17.94	17.61
		1	50	**19**	17.83	17.80	17.83
		1	99	**19**	17.83	17.59	17.78
		50	0	**19**	17.83	18.01	17.79
		50	25	**19**	17.77	17.92	17.66
		50	50	**19**	17.80	17.83	17.67
		100	0	**19**	17.82	17.92	17.72
	16QAM	1	0	**19**	18.47	18.00	18.00
		1	50	**19**	18.34	17.81	17.84
		1	99	**19**	17.78	17.65	17.58
		50	0	**19**	17.99	17.97	17.82
		50	25	**19**	17.89	17.83	17.68
		50	50	**19**	17.81	17.74	17.69
		100	0	**19**	17.86	17.92	17.83

8.1.6 CONDUCTED POWER MEASUREMENTS OF LTE Band 5

1）Conducted power measurement results of LTE Band 5 (Main)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20407 824.7	Mid 20525 836.5	High 20643 848.3
1.4MHz	QPSK	1	0	**24**	22.84	23.07	23.15
		1	2	**24**	23.07	23.00	23.15
		1	5	**24**	23.01	23.04	23.09
		3	0	**24**	22.98	23.03	23.18
		3	1	**24**	23.19	23.11	23.25
		3	3	**24**	23.10	23.06	23.18
		6	0	**23**	22.02	21.98	22.11
	16QAM	1	0	**23**	22.60	22.18	22.00
		1	2	**23**	22.65	22.12	22.06
		1	5	**23**	22.70	22.04	21.95
		3	0	**23**	22.15	21.98	21.96
		3	1	**23**	22.09	21.95	22.22
		3	3	**23**	22.31	22.00	21.89
		6	0	**22**	21.09	20.61	21.03

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20415 825.5	Mid 20525 836.5	High 20635 847.5
3MHz	QPSK	1	0	**24**	23.16	23.19	23.28
		1	7	**24**	23.26	22.99	23.20
		1	14	**24**	23.28	22.98	23.05
		8	0	**24**	22.11	22.07	22.16
		8	3	**24**	22.07	21.98	22.06
		8	7	**24**	22.04	22.04	22.00
		15	0	**23**	22.18	22.17	22.10
	16QAM	1	0	**23**	22.63	22.37	22.21
		1	7	**23**	22.72	22.35	21.75
		1	14	**23**	22.69	21.87	21.60
		8	0	**23**	21.72	21.13	20.93
		8	3	**23**	21.61	21.08	20.96
		8	7	**23**	21.68	21.08	20.90
		15	0	**22**	21.34	21.18	20.90

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20425 826.5	Mid 20525 836.5	High 20625 846.5
5MHz	QPSK	1	0	**24**	23.10	22.96	23.30
		1	12	**24**	23.05	22.79	22.91
		1	24	**24**	23.12	22.68	22.84
		12	0	**23**	22.09	22.12	22.06
		12	6	**23**	22.08	22.09	22.02
		12	13	**23**	22.04	22.09	21.98
		25	0	**23**	22.11	22.10	22.13
	16QAM	1	0	**23**	21.92	22.26	22.25
		1	12	**23**	21.89	21.99	21.97
		1	24	**23**	21.81	21.96	21.98
		12	0	**22**	20.88	20.96	21.15
		12	6	**22**	21.00	21.11	20.95
		12	13	**22**	20.99	21.18	21.00
		25	0	**22**	21.00	21.20	20.95

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20450 829	Mid 20525 836.5	High 20600 844
10MHz	QPSK	1	0	**24**	23.15	23.24	23.17
		1	24	**24**	23.11	23.09	23.17
		1	49	**24**	23.15	23.16	23.09
		25	0	**23**	22.22	22.17	22.24
		25	12	**23**	22.17	22.11	22.07
		25	25	**23**	22.08	22.02	22.03
		50	0	**23**	22.11	22.14	22.10
	16QAM	1	0	**23**	22.06	22.72	22.26
		1	24	**23**	22.05	22.33	22.04
		1	49	**23**	22.04	22.51	22.15
		25	0	**22**	20.99	21.08	21.03
		25	12	**22**	20.99	21.10	21.02
		25	25	**22**	20.94	21.09	20.91
		50	0	**22**	20.97	20.87	20.98

Conducted power measurement results of LTE Band 5 (Sub)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20407 824.7	Mid 20525 836.5	High 20643 848.3
1.4MHz	QPSK	1	0	21	19.57	19.57	19.84
		1	2	21	19.69	19.66	19.87
		1	5	21	19.68	19.66	19.83
		3	0	21	19.58	19.64	19.76
		3	1	21	19.83	19.73	19.74
		3	3	21	19.88	19.68	19.79
		6	0	20	18.69	18.63	18.79
	16QAM	1	0	20	18.94	18.55	18.56
		1	2	20	19.44	18.48	18.47
		1	5	20	19.33	18.47	18.68
		3	0	20	18.76	18.06	18.92
		3	1	20	18.16	18.04	18.70
		3	3	20	18.26	18.01	18.54
		6	0	19	17.29	17.11	17.64

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20415 825.5	Mid 20525 836.5	High 20635 847.5
3MHz	QPSK	1	0	21	19.85	19.75	19.84
		1	7	21	19.90	19.62	19.59
		1	14	21	19.93	19.63	19.53
		8	0	21	18.80	18.74	18.80
		8	3	21	18.80	18.69	18.59
		8	7	21	18.70	18.64	18.63
		15	0	20	18.72	18.75	18.75
	16QAM	1	0	20	19.07	19.14	18.88
		1	7	20	19.38	18.86	18.98
		1	14	20	19.19	19.04	18.74
		8	0	20	18.35	17.94	17.57
		8	3	20	18.36	17.90	17.56
		8	7	20	18.35	17.84	17.49
		15	0	19	17.63	17.81	17.49

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20425 826.5	Mid 20525 836.5	High 20625 846.5
5MHz	QPSK	1	0	**21**	19.67	19.52	20.11
		1	12	**21**	19.72	19.41	19.57
		1	24	**21**	19.73	19.26	19.40
		12	0	**20**	18.72	18.65	18.83
		12	6	**20**	18.71	18.61	18.67
		12	13	**20**	18.63	18.63	18.59
		25	0	**20**	18.69	18.72	18.68
	16QAM	1	0	**20**	18.58	18.94	18.97
		1	12	**20**	18.55	18.64	18.81
		1	24	**20**	18.49	18.64	18.78
		12	0	**19**	17.59	17.70	17.66
		12	6	**19**	17.68	17.67	17.60
		12	13	**19**	17.62	17.58	17.53
		25	0	**19**	17.61	17.66	17.71

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20450 829	Mid 20525 836.5	High 20600 844
10MHz	QPSK	1	0	**21**	19.78	19.90	19.83
		1	24	**21**	19.90	19.65	19.76
		1	49	**21**	19.84	19.89	19.70
		25	0	**20**	18.82	18.75	18.73
		25	12	**20**	18.78	18.73	18.73
		25	25	**20**	18.71	18.70	18.62
		50	0	**20**	18.74	18.73	18.74
	16QAM	1	0	**20**	18.83	19.46	19.06
		1	24	**20**	18.70	19.00	18.96
		1	49	**20**	18.18	19.35	18.65
		25	0	**19**	17.87	17.60	17.92
		25	12	**19**	17.68	17.52	17.65
		25	25	**19**	17.71	17.50	17.59
		50	0	**19**	17.65	17.61	17.71

8.1.7CONDUCTED POWER MEASUREMENTS OF LTE Band 7

1) Conducted power measurement results of LTE Band 7 (Hotspot disabled) (Main)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20775 2502.5	Mid 21100 2535	High 21425 2567.5
5MHz	QPSK	1	0	23	22.43	22.27	22.20
		1	12	23	22.80	22.07	21.88
		1	24	23	22.47	22.20	21.93
		12	0	22	21.60	21.26	21.17
		12	6	22	21.54	21.17	21.15
		12	13	22	21.55	21.19	21.15
		25	0	22	21.62	21.25	21.13
	16QAM	1	0	22	21.31	21.27	21.27
		1	12	22	21.16	21.18	21.25
		1	24	22	21.39	21.10	21.17
		12	0	21	20.55	20.08	20.03
		12	6	21	20.56	20.16	19.84
		12	13	21	20.54	20.18	20.13
		25	0	21	20.73	20.16	20.11
Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20800 2505	Mid 21100 2535	High 21400 2565
10MHz	QPSK	1	0	23	22.84	22.52	22.34
		1	24	23	22.97	22.27	22.37
		1	49	23	22.63	22.29	22.29
		25	0	22	21.75	21.32	21.22
		25	12	22	21.71	21.28	21.19
		25	25	22	21.62	21.27	21.16
		50	0	22	21.67	21.30	21.20
	16QAM	1	0	22	21.75	21.92	21.27
		1	24	22	21.99	21.78	21.18
		1	49	22	21.55	21.59	21.08
		25	0	21	20.64	20.35	20.28
		25	12	21	20.44	20.26	20.29
		25	25	21	20.39	20.32	20.17
		50	0	21	20.64	20.42	20.11

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20825 2507.5	Mid 21100 2535	High 21375 2562.5
15MHz	QPSK	1	0	**23**	22.74	22.55	22.11
		1	38	**23**	22.84	22.43	21.91
		1	74	**23**	22.72	22.28	21.99
		36	0	**22**	21.67	21.33	21.17
		36	18	**22**	21.52	21.22	21.10
		36	39	**22**	21.44	21.21	21.12
		75	0	**22**	21.53	21.29	21.15
	16QAM	1	0	**22**	21.57	21.45	22.04
		1	38	**22**	21.30	21.20	21.86
		1	74	**22**	21.49	21.09	21.96
		36	0	**21**	20.75	20.22	20.25
		36	18	**21**	20.70	20.21	20.14
		36	39	**21**	20.53	20.30	20.11
		75	0	**21**	20.54	20.37	20.18
Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20850 2510	Mid 21100 2535	High 21350 2560
20MHz	QPSK	1	0	**23**	22.99	22.59	22.12
		1	50	**23**	22.75	22.39	22.05
		1	99	**23**	22.38	22.11	21.85
		50	0	**22**	21.71	21.44	21.25
		50	25	**22**	21.51	21.25	21.16
		50	50	**22**	21.45	21.17	21.08
		100	0	**22**	21.63	21.26	21.19
	16QAM	1	0	**22**	21.63	21.35	21.48
		1	50	**22**	21.51	21.27	21.45
		1	99	**22**	21.05	21.06	21.28
		50	0	**21**	20.69	20.47	20.22
		50	25	**21**	20.55	20.31	20.18
		50	50	**21**	20.50	20.11	19.99
		100	0	**21**	20.53	20.21	20.14

Conducted power measurement results of LTE Band 7 (Hotspot disabled) (Sub)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20775 2502.5	Mid 21100 2535	High 21425 2567.5
5MHz	QPSK	1	0	**18**	17.26	16.68	16.26
		1	12	**18**	17.29	16.50	16.36
		1	24	**18**	17.35	16.51	16.31
		12	0	**17**	16.24	15.77	15.50
		12	6	**17**	16.15	15.69	15.46
		12	13	**17**	16.24	15.74	15.45
		25	0	**17**	16.19	15.78	15.53
	16QAM	1	0	**17**	16.09	16.08	15.80
		1	12	**17**	15.61	15.77	15.71
		1	24	**17**	15.47	15.75	15.55
		12	0	**16**	15.31	14.88	14.45
		12	6	**16**	15.21	14.80	14.38
		12	13	**16**	15.07	14.85	14.32
		25	0	**16**	15.37	14.97	14.49

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20800 2505	Mid 21100 2535	High 21400 2565
10MHz	QPSK	1	0	**18**	17.51	17.00	16.70
		1	24	**18**	17.39	16.82	16.69
		1	49	**18**	17.22	16.66	16.37
		25	0	**17**	16.27	15.81	15.56
		25	12	**17**	16.19	15.75	15.41
		25	25	**17**	16.05	15.66	15.45
		50	0	**17**	16.29	15.81	15.55
	16QAM	1	0	**17**	16.97	16.50	15.73
		1	24	**17**	16.92	15.78	15.60
		1	49	**17**	16.73	16.11	15.67
		25	0	**16**	15.36	15.14	14.58
		25	12	**16**	15.20	14.81	14.61
		25	25	**16**	15.20	14.74	14.52
		50	0	**16**	15.29	14.79	14.50

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low	Mid	High
					20825	21100	21375
					2507.5	2535	2562.5
15MHz	QPSK	1	0	**18**	17.65	17.38	16.69
		1	38	**18**	17.23	16.64	16.53
		1	74	**18**	17.26	16.51	16.24
		36	0	**17**	16.34	15.83	15.61
		36	18	**17**	16.08	15.68	15.54
		36	39	**17**	16.07	15.65	15.46
		75	0	**17**	16.15	15.72	15.52
	16QAM	1	0	**17**	16.80	16.63	16.50
		1	38	**17**	16.05	15.99	16.32
		1	74	**17**	16.09	15.76	16.31
		36	0	**16**	15.49	15.05	14.65
		36	18	**16**	15.06	14.73	14.59
		36	39	**16**	15.04	14.87	14.30
		75	0	**16**	15.22	14.87	14.57
Bandwidth	Modulation	RB size	RB offset	Tune-up	Low	Mid	High
					20850	21100	21350
					2510	2535	2560
20MHz	QPSK	1	0	**18**	17.46	17.11	16.67
		1	50	**18**	17.04	16.68	16.79
		1	99	**18**	17.12	16.51	16.36
		50	0	**17**	16.25	15.97	15.59
		50	25	**17**	16.10	15.74	15.54
		50	50	**17**	16.09	15.67	15.43
		100	0	**17**	16.05	15.80	15.44
	16QAM	1	0	**17**	16.32	15.96	16.02
		1	50	**17**	16.08	15.70	15.87
		1	99	**17**	15.95	15.47	15.63
		50	0	**16**	15.40	15.13	14.53
		50	25	**16**	15.25	14.80	14.40
		50	50	**16**	15.33	14.83	14.38
		100	0	**16**	15.19	14.93	14.47

2）Conducted power measurement results of LTE Band 7 (Hotspot activated) (Main)

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20775 2502.5	Mid 21100 2535	High 21425 2567.5
5MHz	QPSK	1	0	**20**	19.75	19.21	19.23
		1	12	**20**	19.67	19.04	19.23
		1	24	**20**	19.74	19.05	19.35
		12	0	**20**	19.60	19.28	19.19
		12	6	**20**	19.64	19.30	19.17
		12	13	**20**	19.56	19.31	19.19
		25	0	**20**	19.61	19.24	19.24
	16QAM	1	0	**20**	19.19	19.34	19.35
		1	12	**20**	19.20	18.99	19.38
		1	24	**20**	19.51	19.04	19.39
		12	0	**20**	19.53	19.11	19.16
		12	6	**20**	19.58	19.16	19.17
		12	13	**20**	19.62	19.32	19.12
		25	0	**20**	19.68	19.43	19.11

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20800 2505	Mid 21100 2535	High 21400 2565
10MHz	QPSK	1	0	**20**	19.38	19.56	19.42
		1	24	**20**	19.82	19.31	19.25
		1	49	**20**	19.80	19.14	19.33
		25	0	**20**	19.73	19.45	19.27
		25	12	**20**	19.63	19.37	19.21
		25	25	**20**	19.56	19.25	19.21
		50	0	**20**	19.64	19.33	19.20
	16QAM	1	0	**20**	19.89	19.47	19.83
		1	24	**20**	19.74	19.36	19.65
		1	49	**20**	19.83	19.44	19.76
		25	0	**20**	19.80	19.49	19.41
		25	12	**20**	19.54	19.43	19.30
		25	25	**20**	19.56	19.40	19.28
		50	0	**20**	19.55	19.38	19.22

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20825 2507.5	Mid 21100 2535	High 21375 2562.5
15MHz	QPSK	1	0	**20**	19.85	19.69	19.28
		1	38	**20**	19.77	19.33	18.90
		1	74	**20**	19.79	19.22	18.95
		36	0	**20**	19.72	19.40	19.25
		36	18	**20**	19.63	19.33	19.19
		36	39	**20**	19.59	19.27	19.16
		75	0	**20**	19.64	19.37	19.19
	16QAM	1	0	**20**	19.81	19.39	19.76
		1	38	**20**	19.53	19.13	19.56
		1	74	**20**	19.69	19.06	19.65
		36	0	**20**	19.66	19.41	19.32
		36	18	**20**	19.59	19.34	19.21
		36	39	**20**	19.58	19.30	19.15
		75	0	**20**	19.50	19.37	19.12

Bandwidth	Modulation	RB size	RB offset	Tune-up	Low 20850 2510	Mid 21100 2535	High 21350 2560
20MHz	QPSK	1	0	**20**	19.88	19.50	19.07
		1	50	**20**	19.67	19.42	19.15
		1	99	**20**	19.31	19.10	18.91
		50	0	**20**	19.72	19.59	19.27
		50	25	**20**	19.58	19.39	19.26
		50	50	**20**	19.55	19.31	19.13
		100	0	**20**	19.65	19.39	19.30
	16QAM	1	0	**20**	19.60	19.57	19.61
		1	50	**20**	19.59	19.36	19.57
		1	99	**20**	19.20	19.13	19.39
		50	0	**20**	19.82	19.48	19.29
		50	25	**20**	19.69	19.37	19.26
		50	50	**20**	19.48	19.30	19.13
		100	0	**20**	19.56	19.28	19.21

8.1.8 CONDUCTED POWER MEASUREMENTS OF WiFi 2.4G

WiFi 2.4G	Frequency (MHz)	Power Setting	Tune-up	Average Power (dBm) for Data Rates (Mbps)			
				1	2	5.5	11
802.11b	2412	17.5	18	17.11	16.74	16.81	16.51
	2437	17.5	18	17.03	16.99	16.96	16.51
	2462	17.5	18	17.06	16.94	16.85	16.64

WiFi 2.4G	Frequency (MHz)	Power Setting	Tune-up	Average Power (dBm) for Data Rates (Mbps)							
				6	9	12	18	24	36	48	54
802.11g	2412	15	17	14.21	13.77	13.59	13.17	12.70	12.17	11.48	11.25
	2437	15	17	14.13	13.99	13.78	13.19	12.75	11.97	11.49	11.34
	2462	15	17	14.43	14.16	14.01	13.55	13.20	12.37	11.96	11.67

WiFi 2.4G	Frequency (MHz)	Power Setting	Tune-up	Average Power (dBm) for Data Rates (Mbps)							
				MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
802.11n HT20	2412	11	13	10.83	9.72	9.18	8.85	8.35	7.66	7.54	7.32
	2437	11	13	10.10	9.53	9.16	8.71	8.22	7.68	7.63	7.23
	2462	11	13	10.45	10.05	9.66	9.11	8.71	8.04	7.98	7.64

Note:

1) The Average conducted power of WiFi is measured with RMS detector.

2) Per KDB248227, for WiFi 2.4GHz, the highest measured maximum output power Channel for DSSS modes(802.11b)was selected for SAR measurement.SAR for OFDM modes(2.4GHz 802.11g/n) was not required When the highest reported SAR for DSSS is adjusted by the ratio of OFDM modes(802.11g/n)to DSSS modes(802.11b)specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

8.1.9 CONDUCTED POWER MEASUREMENTS OF BT

BT MHz	Average Conducted Power (dBm)			Tune Up
	CH0	CH39	CH78	
DH5	9.09	10.59	9.13	11
2DH5	7.78	9.27	7.81	11
3DH5	7.51	9.28	7.85	11

BT MHz	Average Conducted Power (dBm)			Tune Up
	CH0	CH19	CH39	
BT (4.0)	-2.68	1.36	2.29	3

Note:
1) The conducted power of BT is measured with RMS detector.

8.2SAR TEST RESULTS

General Notes:
1) Per KDB447498 D01v05r02, all measurement SAR results are scaled to the maximum tune-up tolerance limit to demonstrate compliant.
2) Per KDB447498 D01v05r02, testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:≤0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is≤100 MHz. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.
3) Per KDB865664 D01v01r03,for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8W/Kg; if the deviation among the repeated measurement is ≤20%,and the measured SAR <1.45W/Kg, only one repeated measurement is required.
4) Per KDB941225 D06v02, the DUT Dimension is bigger than 9 cm x 5 cm, so 10mm is chosen as the test separation distance for Hotspot mode. When the antenna-to-edge distance is greater than 2.5cm, such position does not need to be tested.
5) Per KDB648474 D04v01r02, SAR is evaluated without a headset connected to the device. When the standalone reported body-worn SAR is ≤1.2 W/kg, no additional SAR evaluations using a headset are required.
6) Per KDB865664 D02v01r01, SAR plot is only required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination; Plots are also required when the measured SAR is > 1.5 W/kg, or > 7.0 W/kg for occupational exposure. The published RF exposure KDB procedures may require additional plots; for example, to support SAR to peak location separation ratio test exclusion and/or volume scan post-processing.

GSM Notes:
1) Per KDB648474 D04v01r02, body-worn accessory testing is typically associated with voice operations. Therefore, GSM voice was evaluated for body-worn SAR.
2) Per KDB941225 D01v03, SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.

UMTS Notes:
Per KDB941225 D01v03, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

LTE notes:
1) The LTE test configurations are determined according to KDB941225 D05 SAR for LTE Devices v02r03.The general test procedures used for SAR testing can be found in Section 7.1.3.
2) A-MPR was disabled for all SAR test by setting NS_01 on the base station simulator. SAR tests were performed with the same number of RB and RB offsets transmitting on all TTI frames(maximum TTI)

WLAN Notes:

1. For exposure conditions with multiple test positions, such as handset operating next to the ear, devices with hotspot mode, procedures for initial test position can be applied. Using the transmission mode determined by the DSSS procedure or initial test configuration, area scans are measured for all positions in an exposure condition. The test position with the highest extrapolated(peak)SAR is used as the initial test position. When the reported SAR of the initial test position is ≤ 0.4 W/kg, further SAR measurement is not required for the other (remaining) test positions. Otherwise, SAR is evaluated at the subsequent highest peak SAR position until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.

2. Justification for test configurations for WLAN per KDB Publication 248227 for 2.4GHZ WIFI single transmission chain operations, the highest measured maximum output power Channel for DSSS was selected for SAR measurement.SAR for OFDM modes(2.4GHz 802.11g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR. See Section 7.1.4 for more information.

Note: The device supports two SIM cards. SIM1 supports GSM&UMTS&LTE and SIM2 only supports GSM.

8.2.1 SAR MEASUREMENT RESULT OF GSM850

1. Head SAR test results of GSM850(Main)

Test No.	Band	Mode	CH	Test Position	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM 1									
T01	GSM 850	GSM	190	Right Cheek	33.5	32.88	-0.08	0.113	0.130
T02	GSM 850	GSM	190	Right Tilted	33.5	32.88	-0.04	0.116	0.134
T03	GSM 850	GSM	190	Left Cheek	33.5	32.88	-0.04	0.193	0.223
T04	GSM 850	GSM	190	Left Tilted	33.5	32.88	-0.03	0.144	0.166
Test at worst position with the battery 1# Sample 1 SIM 2									
T05	GSM 850	GSM	190	Left Cheek	33.5	32.88	-0.02	0.189	0.218
Test at worst position with the battery 2# Sample 2 SIM 1									
T06	GSM 850	GSM	190	Left Cheek	33.5	32.88	-0.03	0.215	**0.248**

Head SAR test results of GSM850(Sub)

Test No.	Band	Mode	CH	Test Position	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM 1									
T07	GSM 850	GSM	190	Right Cheek	29.5	29.01	-0.05	0.758	0.849
T08	GSM 850	GSM	128	Right Cheek	29.5	29.03	-0.02	0.746	0.831
T09	GSM 850	GSM	251	Right Cheek	29.5	29.02	-0.05	0.767	0.857
T10	GSM 850	GSM	190	Right Tilted	29.5	29.01	-0.05	0.822	0.920
T11	GSM 850	GSM	128	Right Tilted	29.5	29.03	-0.03	0.887	0.988
T12	GSM 850	GSM	251	Right Tilted	29.5	29.02	-0.01	0.740	0.826
T13	GSM 850	GSM	190	Left Cheek	29.5	29.01	-0.03	0.472	0.528
T14	GSM 850	GSM	190	Left Tilted	29.5	29.01	-0.07	0.503	0.563
Test at worst position with the battery 1# Sample 1 SIM 2									
T15	GSM 850	GSM	128	Right Tilted	29.5	29.03	-0.03	0.843	0.939
Test at worst position with the battery 2# Sample 2 SIM 1									
T16	GSM 850	GSM	128	Right Tilted	29.5	29.03	-0.02	0.959	**1.069**
1st Repeat SAR Test									
T17	GSM 850	GSM	128	Right Tilted	29.5	29.03	-0.05	0.868	0.967

2. Body-Worn SAR test results of GSM850(Main)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Tune up	Measured			
Test data with the battery 1# Sample 1 SIM 1									
T01	GSM 850	GSM	190	Front Face	1.5	33.5	32.88	-0.03	0.180	0.208
T02	GSM 850	GSM	190	Rear Face	1.5	33.5	32.88	-0.05	0.207	0.239
Test at worst position with the battery 1# Sample 1 SIM 2									
T03	GSM 850	GSM	190	Rear Face	1.5	33.5	32.88	-0.02	0.221	0.255
Test at worst position with the battery 2# Sample 2 SIM 2									
T04	GSM 850	GSM	190	Rear Face	1.5	33.5	32.88	-0.02	0.236	**0.272**

Body-Worn SAR test results of GSM850(Sub)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Tune up	Measured			
Test data with the battery 1# Sample 1 SIM 1									
T12	GSM 850	GSM	190	Front Face	1.5	29.5	29.01	-0.07	0.098	0.110
T13	GSM 850	GSM	190	Rear Face	1.5	29.5	29.01	-0.02	0.136	**0.152**
Test at worst position with the battery 1# Sample 1 SIM 2									
T14	GSM 850	GSM	190	Rear Face	1.5	29.5	29.01	-0.09	0.105	0.118
Test at worst position with the battery 2# Sample 1 SIM 1									
T15	GSM 850	GSM	190	Rear Face	1.5	29.5	29.01	-0.05	0.132	0.148

3. Hotspot SAR test results of GSM850(Main)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Tune up	Measured			
Test data with the battery 1# Sample 1 SIM 1										
T05	GSM 850	GPRS 2Tx	190	Front Face	1	31	29.97	-0.08	0.264	0.335
T06	GSM 850	GPRS 2Tx	190	Rear Face	1	31	29.97	-0.02	0.284	0.360
T07	GSM 850	GPRS 2Tx	190	Left Side	1	31	29.97	-0.06	0.164	0.208
T08	GSM 850	GPRS 2Tx	190	Right Side	1	31	29.97	-0.03	0.190	0.241
T09	GSM 850	GPRS 2Tx	190	Bottom	1	31	29.97	-0.06	0.204	0.259
Test at worst position with the battery 1# Sample 1 SIM 2										
T10	GSM 850	GPRS 2Tx	190	Rear Face	1	31	29.97	-0.09	0.308	0.390
Test at worst position with the battery 2# Sample 2 SIM 1										
T11	GSM 850	GPRS 2Tx	190	Rear Face	1	31	29.97	-0.05	0.357	**0.453**

Hotspot SAR test results of GSM850(Sub)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Tune up	Measured			
Test data with the battery 1# Sample 1 SIM 1										
T16	GSM 850	GPRS 2Tx	190	Front Face	1	27	25.9	-0.03	0.259	0.334
T17	GSM 850	GPRS 2Tx	190	Rear Face	1	27	25.9	-0.05	0.243	0.313
T18	GSM 850	GPRS 2Tx	190	Left Side	1	27	25.9	-0.02	0.252	0.325
T19	GSM 850	GPRS 2Tx	190	Right Side	1	27	25.9	-0.06	0.104	0.134
T20	GSM 850	GPRS 2Tx	190	Top	1	27	25.9	-0.02	0.233	0.300
Test at worst position with the battery 1# Sample 1 SIM 2										
T21	GSM 850	GPRS 2Tx	190	Rear Face	1	27	25.9	-0.09	0.229	0.295
Test at worst position with the battery 2# Sample 2 SIM 1										
T22	GSM 850	GPRS 2Tx	190	Rear Face	1	27	25.9	-0.03	0.272	**0.350**

8.2.2 SAR MEASUREMENT RESULT OF GSM1900

1. Head SAR test results of GSM1900(Main)

Test No.	Band	Mode	CH	Test Position	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM 1									
T17	GSM1900	GSM	661	Right Cheek	31	30.28	0.08	0.124	0.146
T18	GSM1900	GSM	661	Right Tilted	31	30.28	-0.01	0.061	0.072
T19	GSM1900	GSM	661	Left Cheek	31	30.28	-0.05	0.082	0.097
T20	GSM1900	GSM	661	Left Tilted	31	30.28	-0.08	0.060	0.071
Test at worst position with the battery 1# Sample 1 SIM 2									
T21	GSM1900	GSM	661	Right Cheek	31	30.28	-0.02	**0.131**	**0.155**
Test at worst position with the battery 2# Sample 2 SIM 1									
T22	GSM1900	GSM	661	Right Cheek	31	30.28	-0.01	0.121	0.143

Head SAR test results of GSM1900(Sub)

Test No.	Band	Mode	CH	Test Position	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM 1									
T23	GSM1900	GSM	661	Right Cheek	28	27	-0.05	0.742	0.934
T24	GSM1900	GSM	512	Right Cheek	28	27.17	-0.03	0.688	0.837
T25	GSM1900	GSM	810	Right Cheek	28	27.14	-0.03	0.823	0.971
T26	GSM1900	GSM	661	Right Tilted	28	27	-0.07	0.590	0.743
T27	GSM1900	GSM	661	Left Cheek	28	27	-0.09	0.270	0.340
T28	GSM1900	GSM	661	Left Tilted	28	27	-0.03	0.290	0.365
Test at worst position with the battery 1# Sample 1 SIM 2									
T29	GSM1900	GSM	810	Right Cheek	28	27.14	-0.07	0.778	0.948
Test at worst position with the battery 2# Sample 2 SIM 1									
T30	GSM1900	GSM	810	Right Cheek	28	27.14	-0.06	0.938	**1.143**
1st Repeat SAR Test									
T31	GSM1900	GSM	810	Right Cheek	28	27.14	-0.02	0.921	1.123

2. Body-Worn SAR test results of GSM1900(Main)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Test data with the battery 1# Sample 1 SIM 1					
T23	GSM 1900	GSM	661	Front Face	1.5	31	30.28	0.04	**0.304**	**0.359**
T24	GSM 1900	GSM	661	Rear Face	1.5	31	30.28	0	0.260	0.307
					Test at worst position with the battery 1# Sample 1 SIM 2					
T25	GSM 1900	GSM	661	Front Face	1.5	31	30.28	0.09	0.268	0.316
					Test at worst position with the battery 2# Sample 2 SIM 1					
T26	GSM 1900	GSM	661	Front Face	1.5	31	30.28	0.09	0.298	0.352

Body-Worn SAR test results of GSM1900(Sub)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Test data with the battery 1# Sample 1 SIM 1					
T37	GSM 1900	GSM	661	Front Face	1.5	28	27	0.03	0.064	0.081
T38	GSM 1900	GSM	661	Rear Face	1.5	28	27	0.05	0.068	0.085
					Test at worst position with the battery 1# Sample 1 SIM 2					
T39	GSM 1900	GSM	661	Rear Face	1.5	28	27	0.03	0.065	0.082
					Test at worst position with the battery 2# Sample 2 SIM 1					
T40	GSM 1900	GSM	661	Rear Face	1.5	28	27	0.05	0.070	**0.088**

3. Hotspot SAR test results of GSM1900(Main)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM 1										
T27	GSM 1900	GPRS 2Tx	661	Front Face	1	26.5	25.92	0.03	0.282	0.322
T28	GSM 1900	GPRS 2Tx	661	Rear Face	1	26.5	25.92	0.05	0.385	0.440
T29	GSM 1900	GPRS 2Tx	661	Left Side	1	26.5	25.92	-0.06	0.049	0.056
T30	GSM 1900	GPRS 2Tx	661	Right Side	1	26.5	25.92	-0.09	0.095	0.109
T31	GSM 1900	GPRS 2Tx	661	Bottom	1	26.5	25.92	-0.08	1.160	1.326
T32	GSM 1900	GPRS 2Tx	512	Bottom	1	26.5	25.93	-0.05	1.150	1.311
T33	GSM 1900	GPRS 2Tx	810	Bottom	1	26.5	26.06	-0.07	**1.300**	**1.439**
Test at worst position with the battery 1# Sample 1 SIM 2										
T34	GSM 1900	GPRS 2Tx	810	Bottom	1	26.5	26.06	-0.02	**1.300**	**1.439**
Test at worst position with the battery 2# Sample 2 SIM 1										
T35	GSM 1900	GPRS 2Tx	661	Bottom	1	26.5	25.92	-0.01	1.130	1.291
1st Repeat SAR Test										
T36	GSM 1900	GPRS 2Tx	810	Bottom	1	26.5	26.06	-0.06	1.290	1.428

Hotspot SAR test results of GSM1900(Sub)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM 1										
T41	GSM 1900	GPRS 2Tx	661	Front Face	1	26	25.68	-0.07	0.142	0.153
T42	GSM 1900	GPRS 2Tx	661	Rear Face	1	26	25.68	-0.07	0.154	0.166
T43	GSM 1900	GPRS 2Tx	661	Left Side	1	26	25.68	-0.01	0.149	0.160
T44	GSM 1900	GPRS 2Tx	661	Right Side	1	26	25.68	-0.03	0.046	0.050
T45	GSM 1900	GPRS 2Tx	661	Top	1	26	25.68	-0.09	0.190	0.205
Test at worst position with the battery 1# Sample 1 SIM 2										
T46	GSM 1900	GPRS 2Tx	661	Top	1	26	25.68	0.06	0.192	**0.207**
Test at worst position with the battery 2# Sample 2 SIM 1										
T47	GSM 1900	GPRS 2Tx	661	Top	1	26	25.68	-0.05	0.192	**0.207**

8.2.3SAR MEASUREMENT RESULT OF UMTS Band 2

1. Head SAR test results of UMTS Band 2(Main)

Test data with the battery 1# Sample 1 SIM1									
Test No.	Band	Mode	CH	Test Position	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Tune up	Measured			
T32	WCDMA II	RMC12.2K	9400	Right Cheek	23	21.86	-0.06	0.146	0.190
T33	WCDMA II	RMC12.2K	9400	Right Tilted	23	21.86	-0.01	0.064	0.083
T34	WCDMA II	RMC12.2K	9400	Left Cheek	23	21.86	-0.02	0.096	0.125
T35	WCDMA II	RMC12.2K	9400	Left Tilted	23	21.86	-0.05	0.062	0.080
Test at worst position with the battery 1# Sample 2 SIM1									
T36	WCDMA II	RMC12.2K	9400	Right Cheek	23	21.86	0.03	0.217	**0.282**

Head SAR test results of UMTS Band 2(Sub)

Test data with the battery 1# Sample 1 SIM1									
Test No.	Band	Mode	CH	Test Position	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Tune up	Measured			
T37	WCDMA II	RMC12.2K	9400	Right Cheek	19	17.71	-0.04	0.698	0.939
T38	WCDMA II	RMC12.2K	9262	Right Cheek	19	17.51	-0.04	0.699	**0.985**
T39	WCDMA II	RMC12.2K	9538	Right Cheek	19	17.73	-0.03	0.730	0.978
T40	WCDMA II	RMC12.2K	9400	Right Tilted	19	17.71	-0.01	0.539	0.725
T41	WCDMA II	RMC12.2K	9400	Left Cheek	19	17.71	-0.08	0.149	0.201
T42	WCDMA II	RMC12.2K	9400	Left Tilted	19	17.71	-0.02	0.160	0.215
Test at worst position with the battery 2# Sample 2 SIM1									
T43	WCDMA II	RMC12.2K	9400	Right Cheek	19	17.71	-0.04	0.582	0.783

2. Body-Worn SAR test results of UMTS Band 2 (Main)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Test data with the battery 1# Sample 1 SIM 1					
T60	WCDMA II	RMC12.2K	9400	Front Face	1.5	23	21.86	0.07	0.406	0.528
T61	WCDMA II	RMC12.2K	9400	Rear Face	1.5	23	21.86	0.01	**0.455**	**0.592**
					Test at worst position with the battery 2# Sample 2 SIM 1					
T62	WCDMA II	RMC12.2K	9400	Rear Face	1.5	23	21.86	-0.03	0.436	0.567

Body-Worn SAR test results of UMTS Band 2 (Sub)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Test data with the battery 1# Sample 1 SIM 1					
T48	WCDMA II	RMC12.2K	9400	Front Face	1.5	19	17.71	-0.07	0.050	0.067
T49	WCDMA II	RMC12.2K	9400	Rear Face	1.5	19	17.71	-0.09	0.051	0.069
					Test at worst position with the battery 2# Sample 2 SIM 1					
T50	WCDMA II	RMC12.2K	9400	Rear Face	1.5	19	17.71	0.01	**0.054**	**0.073**

3. Hotspot SAR test results of UMTS Band 2(Main)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Test data with the battery 1# Sample 1 SIM 1					
T51	WCDMA II	RMC12.2K	9400	Front Face	1	18	17.18	0.07	0.327	0.395
T52	WCDMA II	RMC12.2K	9400	Rear Face	1	18	17.18	0.03	0.352	0.425
T53	WCDMA II	RMC12.2K	9400	Left Side	1	18	17.18	-0.08	0.037	0.044
T54	WCDMA II	RMC12.2K	9400	Right Side	1	18	17.18	-0.04	0.076	0.092
T55	WCDMA II	RMC12.2K	9400	Bottom	1	18	17.18	-0.06	0.801	0.967
T56	WCDMA II	RMC12.2K	9400	Bottom	1	18	17.18	-0.05	0.800	0.966
T57	WCDMA II	RMC12.2K	9262	Bottom	1	18	16.88	-0.04	0.767	0.993
T58	WCDMA II	RMC12.2K	9538	Bottom	1	18	17.51	-0.08	0.756	0.846
				Test at worst position with the battery 2# Sample 2 SIM 1						
T59	WCDMA II	RMC12.2K	9400	Bottom	1	18	17.18	-0.04	0.901	**1.088**

Hotspot SAR test results of UMTS Band 2(Sub)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Test data with the battery 1# Sample 1 SIM 1					
T63	WCDMA II	RMC12.2K	9400	Front Face	1	19	17.71	0.03	0.109	0.147
T64	WCDMA II	RMC12.2K	9400	Rear Face	1	19	17.71	0.04	0.087	0.117
T65	WCDMA II	RMC12.2K	9400	Left Side	1	19	17.71	-0.01	0.132	0.178
T66	WCDMA II	RMC12.2K	9400	Right Side	1	19	17.71	-0.03	0.035	0.047
T67	WCDMA II	RMC12.2K	9400	Top	1	19	17.71	-0.04	0.140	0.188
				Test at worst position with the battery 2# Sample 2 SIM 1						
T68	WCDMA II	RMC12.2K	9400	Top	1	19	17.71	-0.06	**0.144**	**0.194**

8.2.4 SAR MEASUREMENT RESULT OF UMTS Band 4

1. Head SAR test results of UMTS Band 4(Main)

Test No.	Band	Mode	CH	Test Position	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Tune up	Measured			
Test data with the battery 1# Sample 1 SIM1								
T44	WCDMA IV	RMC12.2K	1413	Right Cheek	24	22.29	-0.07	0.322	0.477
T45	WCDMA IV	RMC12.2K	1413	Right Tilted	24	22.29	-0.06	0.148	0.219
T46	WCDMA IV	RMC12.2K	1413	Left Cheek	24	22.29	0.01	0.237	0.351
T47	WCDMA IV	RMC12.2K	1413	Left Tilted	24	22.29	-0.04	0.141	0.209
Test at worst position with the battery 2# Sample 2 SIM1								
T48	WCDMA IV	RMC12.2K	1413	Right Cheek	24	22.29	-0.02	0.333	**0.494**

Head SAR test results of UMTS Band 4(Sub)

Test No.	Band	Mode	CH	Test Position	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Tune up	Measured			
Test data with the battery 1# Sample 1 SIM1								
T51	WCDMA IV	RMC12.2K	1413	Right Cheek	20	18.34	-0.03	0.716	1.049
T52	WCDMA IV	RMC12.2K	1312	Right Cheek	20	18.17	0.06	0.693	1.056
T53	WCDMA IV	RMC12.2K	1513	Right Cheek	20	18.01	-0.01	0.744	1.176
T54	WCDMA IV	RMC12.2K	1413	Right Tilted	20	18.34	-0.07	0.555	0.813
T55	WCDMA IV	RMC12.2K	1413	Left Cheek	20	18.34	-0.01	0.243	0.356
T56	WCDMA IV	RMC12.2K	1413	Left Tilted	20	18.34	-0.01	0.258	0.378
Test at worst position with the battery 2# Sample 2 SIM1								
T57	WCDMA IV	RMC12.2K	1513	Right Cheek	20	18.01	-0.04	0.771	**1.219**

2. Body-Worn SAR test results of UMTS Band 4(Main)

Test data with the battery 1# Sample 1 SIM 1									
Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
T69	WCDMA Band IV	RMC12.2K	1413	Front Face	1.5	24	22.29	-0.03	0.549	0.814
T70	WCDMA Band IV	RMC12.2K	1312	Front Face	1.5	24	22.12	-0.03	0.486	0.749
T71	WCDMA Band IV	RMC12.2K	1513	Front Face	1.5	24	22.14	-0.02	0.506	0.777
T72	WCDMA Band IV	RMC12.2K	1413	Rear Face	1.5	24	22.29	-0.07	0.590	**0.875**
T73	WCDMA Band IV	RMC12.2K	1312	Rear Face	1.5	24	22.12	-0.06	0.565	0.871
T74	WCDMA Band IV	RMC12.2K	1513	Rear Face	1.5	24	22.14	-0.04	0.548	0.841
Test at worst position with the battery 2# Sample 2 SIM 1									
T75	WCDMA Band IV	RMC12.2K	1413	Rear Face	1.5	24	22.29	-0.09	0.574	0.851

Body-Worn SAR test results of UMTS Band 4(Sub)

Test data with the battery 1# Sample 1 SIM 1									
Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
T84	WCDMA Band IV	RMC12.2K	1413	Front Face	1.5	20	18.34	0.08	0.079	0.115
T85	WCDMA Band IV	RMC12.2K	1413	Rear Face	1.5	20	18.34	-0.08	0.077	0.113
Test at worst position with the battery 2# Sample 2 SIM 1									
T86	WCDMA Band IV	RMC12.2K	1413	Front Face	1.5	20	18.34	0.05	0.091	**0.133**

3. Hotspot SAR test results of UMTS Band 4(Main)

						Power(dBm)			SAR	Reported
Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Tune up	Measured	Drift (dB)	Value (W/kg)1-g	SAR

Test data with the battery 1# Sample 1 SIM 1

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Tune up	Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
T76	WCDMA Band IV	RMC12.2K	1413	Front Face	1	19	17.57	-0.05	0.411	0.571
T77	WCDMA Band IV	RMC12.2K	1413	Rear Face	1	19	17.57	-0.08	0.407	0.566
T78	WCDMA Band IV	RMC12.2K	1413	Left Side	1	19	17.57	-0.08	0.111	0.154
T79	WCDMA Band IV	RMC12.2K	1413	Right Side	1	19	17.57	-0.06	0.164	0.228
T80	WCDMA Band IV	RMC12.2K	1413	Bottom	1	19	17.57	-0.02	0.655	0.910
T81	WCDMA Band IV	RMC12.2K	1312	Bottom	1	19	17.51	-0.09	0.553	0.779
T82	WCDMA Band IV	RMC12.2K	1513	Bottom	1	19	17.33	-0.01	0.654	**0.961**
Test at worst position with the battery 2# Sample 2 SIM 1										
T83	WCDMA Band IV	RMC12.2K	1413	Bottom	1	19	17.57	-0.08	0.601	0.835

Hotspot SAR test results of UMTS Band 4(Sub)

Test data with the battery 1# Sample 1 SIM 1

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Tune up	Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
T87	WCDMA Band IV	RMC12.2K	1413	Front Face	1	20	18.34	0.07	0.137	0.201
T88	WCDMA Band IV	RMC12.2K	1413	Rear Face	1	20	18.34	-0.09	0.150	0.220
T89	WCDMA Band IV	RMC12.2K	1413	Left Side	1	20	18.34	-0.03	0.124	0.182
T90	WCDMA Band IV	RMC12.2K	1413	Right Side	1	20	18.34	-0.07	0.046	0.067
T91	WCDMA Band IV	RMC12.2K	1413	Top	1	20	18.34	-0.02	0.167	0.245
Test at worst position with the battery 2# Sample 2 SIM 1										
T92	WCDMA Band IV	RMC12.2K	1413	Top	1	20	18.34	-0.06	**0.172**	**0.252**

8.2.5 SAR MEASUREMENT RESULT OF UMTS Band 5

1. Head SAR test results of UMTS Band 5 (Main)

Test No.	Band	Mode	CH	Test Position	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Tune up	Measured			
Test data with the battery 1# Sample 1 SIM1									
T58	WCDMA V	RMC12.2K	4182	Right Cheek	24.5	23.34	-0.06	0.025	0.033
T59	WCDMA V	RMC12.2K	4182	Right Tilted	24.5	23.34	-0.06	0.043	0.056
T60	WCDMA V	RMC12.2K	4182	Left Cheek	24.5	23.34	-0.01	0.148	0.193
T61	WCDMA V	RMC12.2K	4182	Left Tilted	24.5	23.34	-0.04	0.126	0.165
Test at worst position with the battery 2# Sample 2 SIM1									
T62	WCDMA V	RMC12.2K	4182	Left Cheek	24.5	23.34	-0.06	0.153	**0.200**

Head SAR test results of UMTS Band 5 (Sub)

Test No.	Band	Mode	CH	Test Position	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
					Tune up	Measured			
Test data with the battery 1# Sample 1 SIM1									
T63	WCDMA V	RMC12.2K	4182	Right Cheek	20.5	19.23	-0.02	0.745	0.998
T64	WCDMA V	RMC12.2K	4132	Right Cheek	20.5	19.28	-0.09	0.756	1.001
T65	WCDMA V	RMC12.2K	4233	Right Cheek	20.5	19.24	-0.03	0.796	**1.064**
T66	WCDMA V	RMC12.2K	4182	Right Tilted	20.5	19.23	-0.02	0.706	0.946
T67	WCDMA V	RMC12.2K	4132	Right Tilted	20.5	19.28	-0.05	0.624	0.826
T68	WCDMA V	RMC12.2K	4233	Right Tilted	20.5	19.24	-0.07	0.695	0.929
T69	WCDMA V	RMC12.2K	4182	Left Cheek	20.5	19.23	-0.04	0.411	0.551
T70	WCDMA V	RMC12.2K	4182	Left Tilted	20.5	19.23	-0.08	0.380	0.509
Test at worst position with the battery 2# Sample 2 SIM1									
T71	WCDMA V	RMC12.2K	4233	Right Cheek	20.5	19.24	-0.02	0.751	1.004

2. Body-Worn SAR test results of UMTS Band 5 (Main)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Tune up	Measured			
Test data with the battery 1# Sample 1 SIM 1										
T93	WCDMA Band V	RMC12.2K	4182	Front Face	1.5	24.5	23.34	-0.01	0.162	0.212
T94	WCDMA Band V	RMC12.2K	4182	Rear Face	1.5	24.5	23.34	-0.02	0.224	**0.293**
Test at worst position with the battery 2# Sample 2 SIM 1										
T95	WCDMA Band V	RMC12.2K	4182	Rear Face	1.5	24.5	23.34	-0.02	0.220	0.287

Body-Worn SAR test results of UMTS Band 5 (Sub)

Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Tune up	Measured			
Test data with the battery 1# Sample 1 SIM 1										
T102	WCDMA Band V	RMC12.2K	4182	Front Face	1.5	20.5	19.23	-0.08	0.144	**0.193**
T103	WCDMA Band V	RMC12.2K	4182	Rear Face	1.5	20.5	19.23	-0.09	0.143	0.192
Test at worst position with the battery 2# Sample 2 SIM 1										
T104	WCDMA Band V	RMC12.2K	4182	Front Face	1.5	20.5	19.23	-0.04	0.139	0.186

3. Hotspot SAR test results of UMTS Band 5(Main)

Test data with the battery 1# Sample 1 SIM1										
Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Tune up	Measured			
T96	WCDMA Band V	RMC12.2K	4182	Front Face	1	24.5	23.34	-0.03	0.220	0.287
T97	WCDMA Band V	RMC12.2K	4182	Rear Face	1	24.5	23.34	-0.05	0.273	**0.357**
T98	WCDMA Band V	RMC12.2K	4182	Left Side	1	24.5	23.34	-0.09	0.142	0.185
T99	WCDMA Band V	RMC12.2K	4182	Right Side	1	24.5	23.34	-0.09	0.213	0.278
T100	WCDMA Band V	RMC12.2K	4182	Bottom	1	24.5	23.34	-0.01	0.184	0.240
Test at worst position with the battery 2# Sample 2 SIM1										
T101	WCDMA Band V	RMC12.2K	4182	Rear Face	1	24.5	23.15	-0.02	0.266	0.363

Hotspot SAR test results of UMTS Band 5(Sub)

Test data with the battery 1# Sample 1 SIM1										
Test No.	Band	Mode	CH	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Tune up	Measured			
T105	WCDMA Band V	RMC12.2K	4182	Front Face	1	20.5	19.23	-0.01	0.281	0.376
T106	WCDMA Band V	RMC12.2K	4182	Rear Face	1	20.5	19.23	-0.07	0.271	0.363
T107	WCDMA Band V	RMC12.2K	4182	Left Side	1	20.5	19.23	-0.02	0.240	0.322
T108	WCDMA Band V	RMC12.2K	4182	Right Side	1	20.5	19.23	-0.08	0.103	0.138
T109	WCDMA Band V	RMC12.2K	4182	Top	1	20.5	19.23	-0.07	0.229	0.307
Test at worst position with the battery 2# Sample 2 SIM1										
T110	WCDMA Band V	RMC12.2K	4182	Front Face	1	20.5	19.23	-0.02	0.291	**0.390**

8.2.6 SAR MEASUREMENT RESULT OF LTE Band 2

1. Head SAR test results of LTE Band 2 (Main)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
12 Test data with the battery 1# Sample 1 SIM1												
T72	LTE 2	QPSK 20M	19100	1	50	Right Cheek	23	22.17	-0.05	0.188	**0.228**
T73	LTE 2	QPSK 20M	19100	1	50	Right Tilted	23	22.17	-0.05	0.056	0.068
T74	LTE 2	QPSK 20M	19100	1	50	Left Cheek	23	22.17	-0.02	0.119	0.144
T75	LTE 2	QPSK 20M	19100	1	50	Left Tilted	23	22.17	-0.04	0.051	0.062
T76	LTE 2	QPSK 20M	19100	50	25	Right Cheek	22	21.11	0.01	0.148	0.182
T77	LTE 2	QPSK 20M	19100	50	25	Right Tilted	22	21.11	0.09	0.055	0.068
T78	LTE 2	QPSK 20M	19100	50	25	Left Cheek	22	21.11	-0.03	0.090	0.110
T79	LTE 2	QPSK 20M	19100	50	25	Left Tilted	22	21.11	0.08	0.045	0.055
12 Test at worst position with the battery 2# Sample 2 SIM1												
T80	LTE 2	QPSK 20M	19100	1	50	Right Cheek	23	22.17	-0.01	0.157	0.190

Head SAR test results of LTE Band 2 (Sub)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM1
T81	LTE 2	QPSK 20M	19100	1	50	Right Cheek	19	17.88	-0.04	0.608	**0.787**
T82	LTE 2	QPSK 20M	19100	1	50	Right Tilted	19	17.88	-0.08	0.520	0.673
T83	LTE 2	QPSK 20M	19100	1	50	Left Cheek	19	17.88	-0.08	0.164	0.212
T84	LTE 2	QPSK 20M	19100	1	50	Left Tilted	19	17.88	0.01	0.168	0.217
T85	LTE 2	QPSK 20M	19100	50	25	Right Cheek	18	16.85	-0.02	0.452	0.589
T86	LTE 2	QPSK 20M	19100	50	25	Right Tilted	18	16.85	-0.01	0.426	0.555
T87	LTE 2	QPSK 20M	19100	50	25	Left Cheek	18	16.85	-0.04	0.157	0.205
T88	LTE 2	QPSK 20M	19100	50	25	Left Tilted	18	16.85	-0.08	0.151	0.197
Test at worst position with the battery 2# Sample 2 SIM1
T89	LTE 2	QPSK 20M	19100	1	50	Right Cheek	19	17.88	-0.07	0.569	0.736

2. Body-Worn SAR test results of LTE Band 2(Main)

Test data with the battery 1# Sample 1 SIM 1											
Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
								Tune up	Meas ured			
T111	LTE 2	QPSK 20M	19100	1	50	Front Face	1.5	23	22.17	-0.09	0.432	0.523
T112	LTE 2	QPSK 20M	19100	1	50	Rear Face	1.5	23	22.17	0.04	0.610	**0.738**
T113	LTE 2	QPSK 20M	19100	50	25	Front Face	1.5	22	21.11	-0.02	0.425	0.522
T114	LTE 2	QPSK 20M	19100	50	25	Rear Face	1.5	22	21.11	-0.04	0.353	0.433
Test at worst position with the battery 2# Sample 2 SIM 1											
T115	LTE 2	QPSK 20M	19100	1	50	Rear Face	1.5	23	22.17	-0.02	0.525	0.636

Body-Worn SAR test results of LTE Band 2(Sub)

Test data with the battery 1# Sample 1 SIM 1											
Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
								Tune up	Meas ured			
T134	LTE 2	QPSK 20M	19100	1	50	Front Face	1.5	19	17.88	0.02	0.044	0.057
T135	LTE 2	QPSK 20M	19100	1	50	Rear Face	1.5	19	17.88	0.07	0.054	**0.069**
T136	LTE 2	QPSK 20M	19100	50	25	Front Face	1.5	18	16.85	0.02	0.034	0.044
T137	LTE 2	QPSK 20M	19100	50	25	Rear Face	1.5	18	16.85	0.09	0.041	0.054
Test at worst position with the battery 2# Sample 2 SIM 1											
T138	LTE 2	QPSK 20M	19100	1	50	Rear Face	1.5	19	17.88	-0.06	0.052	0.067

3. Hotspot SAR test results of LTE Band 2(Main)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM 1											
T116	LTE 2	QPSK 20M	19100	1	50	Front Face	1	19	18.05	-0.05	0.305	0.380
T117	LTE 2	QPSK 20M	19100	1	50	Rear Face	1	19	18.05	-0.05	0.312	0.388
T118	LTE 2	QPSK 20M	19100	1	50	Left Side	1	19	18.05	-0.08	0.079	0.098
T119	LTE 2	QPSK 20M	19100	1	50	Right Side	1	19	18.05	0.05	0.125	0.156
T120	LTE 2	QPSK 20M	19100	1	50	Bottom	1	19	18.05	-0.07	0.825	1.027
T121	LTE 2	QPSK 20M	18700	1	0	Bottom	1	19	17.56	-0.03	0.855	**1.191**
T122	LTE 2	QPSK 20M	18900	1	99	Bottom	1	19	17.59	-0.08	0.849	1.175
T123	LTE 2	QPSK 20M	19100	50	25	Front Face	1	19	18.09	0.05	0.326	0.402
T124	LTE 2	QPSK 20M	19100	50	25	Rear Face	1	19	18.09	0.07	0.343	0.423
T125	LTE 2	QPSK 20M	19100	50	25	Left Side	1	19	18.09	-0.04	0.081	0.100
T126	LTE 2	QPSK 20M	19100	50	25	Right Side	1	19	18.09	0.03	0.132	0.162
T127	LTE 2	QPSK 20M	19100	50	25	Bottom	1	19	18.09	-0.04	0.841	1.037
T128	LTE 2	QPSK 20M	18700	50	0	Bottom	1	19	17.54	-0.02	0.807	1.129
T129	LTE 2	QPSK 20M	18900	50	0	Bottom	1	19	17.75	-0.08	0.786	1.048
T130	LTE 2	QPSK 20M	19100	100	0	Bottom	1	19	17.97	-0.09	0.851	1.079
Test at worst position with the battery 2# Sample 2 SIM 1											
T131	LTE 2	QPSK 20M	18700	1	0	Bottom	1	19	17.56	-0.04	0.792	1.103
1st Repeat SAR Test											
T132	LTE 2	QPSK 20M	18700	1	0	Bottom	1	19	17.56	-0.03	0.853	1.188

Hotspot SAR test results of LTE Band 2(Sub)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Test data with the battery 1# Sample 1 SIM 1						
T139	LTE 2	QPSK 20M	19100	1	50	Front Face	1	19	17.88	-0.03	0.103	0.133
T140	LTE 2	QPSK 20M	19100	1	50	Rear Face	1	19	17.88	0.01	0.125	0.162
T141	LTE 2	QPSK 20M	19100	1	50	Left Side	1	19	17.88	-0.03	0.132	0.171
T142	LTE 2	QPSK 20M	19100	1	50	Right Side	1	19	17.88	-0.07	0.024	0.032
T143	LTE 2	QPSK 20M	19100	1	50	Top	1	19	17.88	-0.01	0.147	**0.190**
T144	LTE 2	QPSK 20M	19100	50	25	Front Face	1	18	16.85	-0.01	0.107	0.139
T145	LTE 2	QPSK 20M	19100	50	25	Rear Face	1	18	16.85	0.04	0.087	0.113
T146	LTE 2	QPSK 20M	19100	50	25	Left Side	1	18	16.85	-0.03	0.132	0.172
T147	LTE 2	QPSK 20M	19100	50	25	Right Side	1	18	16.85	-0.04	0.018	0.023
T148	LTE 2	QPSK 20M	19100	50	25	Top	1	18	16.85	-0.02	0.121	0.158
						Test at worst position with the battery 2# Sample 2 SIM 1						
T149	LTE 2	QPSK 20M	19100	1	50	Top	1	19	17.88	-0.03	0.136	0.176

8.2.7 SAR MEASUREMENT RESULT OF LTE Band 4

1. Head SAR test results of LTE Band 4(Main)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM1
T91	LTE 4	QPSK 20M	2017 5	1	0	Right Cheek	23	21.92	-0.07	0.268	0.344
T92	LTE 4	QPSK 20M	2017 5	1	0	Right Tilted	23	21.92	-0.04	0.170	0.218
T93	LTE 4	QPSK 20M	2017 5	1	0	Left Cheek	23	21.92	-0.01	0.199	0.255
T94	LTE 4	QPSK 20M	2017 5	1	0	Left Tilted	23	21.92	-0.03	0.153	0.196
T95	LTE 4	QPSK 20M	2017 5	50	0	Right Cheek	22	21.05	-0.07	0.211	0.263
T96	LTE 4	QPSK 20M	2017 5	50	0	Right Tilted	22	21.05	-0.08	0.133	0.166
T97	LTE 4	QPSK 20M	2017 5	50	0	Left Cheek	22	21.05	-0.02	0.138	0.172
T98	LTE 4	QPSK 20M	2017 5	50	0	Left Tilted	22	21.05	-0.09	0.125	0.156
Test at worst position with the battery 2# Sample 2 SIM1
T99	LTE 4	QPSK 20M	2017 5	1	0	Right Cheek	23	21.92	-0.02	0.269	**0.345**

Head SAR test results of LTE Band 4(Sub)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Power(dBm) Tune up	Power(dBm) Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Test data with the battery 1# Sample 1 SIM1					
T100	LTE 4	QPSK 20M	20175	1	0	Right Cheek	19	17.91	-0.09	0.643	**0.826**
T101	LTE 4	QPSK 20M	20050	1	0	Right Cheek	19	17.78	-0.05	0.512	0.678
T102	LTE 4	QPSK 20M	20300	1	0	Right Cheek	19	17.61	-0.03	0.527	0.726
T103	LTE 4	QPSK 20M	20175	1	0	Right Tilted	19	17.91	-0.05	0.430	0.553
T104	LTE 4	QPSK 20M	20175	1	0	Left Cheek	19	17.91	-0.01	0.106	0.136
T105	LTE 4	QPSK 20M	20175	1	0	Left Tilted	19	17.91	0.05	0.076	0.098
T106	LTE 4	QPSK 20M	20175	50	0	Right Cheek	18	16.96	-0.07	0.470	0.597
T107	LTE 4	QPSK 20M	20175	50	0	Right Tilted	18	16.96	-0.06	0.320	0.407
T108	LTE 4	QPSK 20M	20175	50	0	Left Cheek	18	16.96	-0.09	0.067	0.085
T109	LTE 4	QPSK 20M	20175	50	0	Left Tilted	18	16.96	-0.09	0.077	0.098
T110	LTE 4	QPSK 20M	20050	100	0	Right Cheek	18	16.86	-0.01	0.623	0.810
						Test at worst position with the battery 2# Sample 2 SIM1					
T111	LTE 4	QPSK 20M	20175	1	0	Right Cheek	19	17.91	-0.07	0.547	0.703

2. Body-Worn SAR test results of LTE Band 4(Main)

Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Report ed SAR
Test data with the battery 1# Sample 1 SIM 1												
T150	LTE 4	QPSK 20M	20175	1	0	Front Face	1.5	23	21.92	0.06	0.503	0.645
T151	LTE 4	QPSK 20M	20175	1	0	Rear Face	1.5	23	21.92	-0.01	0.544	**0.698**
T152	LTE 4	QPSK 20M	20175	50	0	Front Face	1.5	22	21.05	-0.04	0.397	0.494
T153	LTE 4	QPSK 20M	20175	50	0	Rear Face	1.5	22	21.05	-0.04	0.420	0.523
Test at worst position with the battery 2# Sample 2 SIM 1												
T154	LTE 4	QPSK 20M	20175	1	0	Rear Face	1.5	23	21.92	-0.07	0.537	0.689

Body-Worn SAR test results of LTE Band 4(Sub)

Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Report ed SAR
Test data with the battery 1# Sample 1 SIM 1												
T166	LTE 4	QPSK 20M	20175	1	0	Front Face	1.5	19	17.91	0.06	0.047	0.060
T167	LTE 4	QPSK 20M	20175	1	0	Rear Face	1.5	19	17.91	0.04	0.055	**0.071**
T168	LTE 4	QPSK 20M	20175	50	0	Front Face	1.5	18	16.96	0.05	0.038	0.048
T169	LTE 4	QPSK 20M	20175	50	0	Rear Face	1.5	18	16.96	0.05	0.043	0.055
Test at worst position with the battery 2# Sample 2 SIM 1												
T170	LTE 4	QPSK 20M	20175	1	0	Rear Face	1.5	19	17.91	-0.06	0.054	0.069

3. Hotspot SAR test results of LTE Band 4(Main)

Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Report ed SAR
Test data with the battery 1# Sample 1 SIM 1

Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Tune up	Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Report ed SAR
T155	LTE 4	QPSK 20M	20175	1	0	Front Face	1	19	17.94	-0.09	0.334	0.426
T156	LTE 4	QPSK 20M	20175	1	0	Rear Face	1	19	17.94	0.04	0.387	0.494
T157	LTE 4	QPSK 20M	20175	1	0	Left Side	1	19	17.94	-0.07	0.085	0.108
T158	LTE 4	QPSK 20M	20175	1	0	Right Side	1	19	17.94	0.05	0.143	0.183
T159	LTE 4	QPSK 20M	20175	1	0	Bottom	1	19	17.94	-0.05	0.547	**0.698**
T160	LTE 4	QPSK 20M	20175	50	0	Front Face	1	19	18.01	-0.01	0.342	0.430
T161	LTE 4	QPSK 20M	20175	50	0	Rear Face	1	19	18.01	-0.03	0.379	0.476
T162	LTE 4	QPSK 20M	20175	50	0	Left Side	1	19	18.01	-0.09	0.088	0.111
T163	LTE 4	QPSK 20M	20175	50	0	Right Side	1	19	18.01	0.06	0.127	0.160
T164	LTE 4	QPSK 20M	20175	50	0	Bottom	1	19	18.01	-0.01	0.557	0.700
Test at worst position with the battery 2# Sample 2 SIM 1
T165	LTE 4	QPSK 20M	20175	50	0	Bottom	1	19	18.01	-0.05	0.553	0.695

Hotspot SAR test results of LTE Band 4(Sub)

Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Tune up	Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Report ed SAR
Test data with the battery 1# Sample 1 SIM 1
T171	LTE 4	QPSK 20M	20175	1	0	Front Face	1	19	17.91	-0.06	0.112	0.144
T172	LTE 4	QPSK 20M	20175	1	0	Rear Face	1	19	17.91	0.06	0.147	0.189
T173	LTE 4	QPSK 20M	20175	1	0	Left Side	1	19	17.91	-0.04	0.109	0.140
T174	LTE 4	QPSK 20M	20175	1	0	Right Side	1	19	17.91	-0.07	0.045	0.058
T175	LTE 4	QPSK 20M	20175	1	0	Top	1	19	17.91	0.02	0.151	**0.194**
T176	LTE 4	QPSK 20M	20175	50	0	Front Face	1	18	16.96	-0.05	0.102	0.130
T177	LTE 4	QPSK 20M	20175	50	0	Rear Face	1	18	16.96	-0.01	0.085	0.108
T178	LTE 4	QPSK 20M	20175	50	0	Left Side	1	18	16.96	-0.05	0.107	0.136
T179	LTE 4	QPSK 20M	20175	50	0	Right Side	1	18	16.96	-0.04	0.038	0.048
T180	LTE 4	QPSK 20M	20175	50	0	Top	1	18	16.96	-0.09	0.118	0.150
Test at worst position with the battery 2# Sample 2 SIM 1
T181	LTE 4	QPSK 20M	20175	1	0	Top	1	19	17.91	-0.02	0.127	0.163

8.2.8 SAR MEASUREMENT RESULT OF LTE Band 5

1. Head SAR test results of LTE Band 5(Main)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Test data with the battery 1# Sample 1 SIM1					
T112	LTE 5	QPSK 10M	20525	1	0	Right Cheek	24	23.24	-0.06	0.101	0.120
T113	LTE 5	QPSK 10M	20525	1	0	Right Tilted	24	23.24	-0.08	0.093	0.111
T114	LTE 5	QPSK 10M	20525	1	0	Left Cheek	24	23.24	-0.06	0.129	**0.154**
T115	LTE 5	QPSK 10M	20525	1	0	Left Tilted	24	23.24	-0.02	0.102	0.122
T116	LTE 5	QPSK 10M	20450	25	0	Right Cheek	23	22.22	0.05	0.081	0.097
T117	LTE 5	QPSK 10M	20450	25	0	Right Tilted	23	22.22	-0.07	0.076	0.091
T118	LTE 5	QPSK 10M	20450	25	0	Left Cheek	23	22.22	-0.07	0.108	0.129
T119	LTE 5	QPSK 10M	20450	25	0	Left Tilted	23	22.22	-0.02	0.075	0.090
						Test at worst position with the battery 2# Sample 2 SIM1					
T120	LTE 5	QPSK 10M	20525	1	0	Left Cheek	24	23.24	-0.07	0.126	0.150

Head SAR test results of LTE Band 5(Sub)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
							Tune up	Measured			
Test data with the battery 1# Sample 1 SIM1											
T121	LTE 5	QPSK 10M	20525	1	0	Right Cheek	21	19.9	-0.06	0.550	0.709
T122	LTE 5	QPSK 10M	20525	1	0	Right Tilted	21	19.9	-0.05	0.712	0.917
T123	LTE 5	QPSK 10M	20450	1	24	Right Tilted	21	19.9	-0.04	0.729	0.939
T124	LTE 5	QPSK 10M	20600	1	0	Right Tilted	21	19.83	-0.02	0.781	1.022
T125	LTE 5	QPSK 10M	20525	1	0	Left Cheek	21	19.9	-0.07	0.342	0.441
T126	LTE 5	QPSK 10M	20525	1	0	Left Tilted	21	19.9	-0.06	0.438	0.564
T127	LTE 5	QPSK 10M	20450	25	0	Right Cheek	20	18.82	-0.03	0.468	0.614
T128	LTE 5	QPSK 10M	20450	25	0	Right Tilted	20	18.82	-0.03	0.552	0.724
T129	LTE 5	QPSK 10M	20450	25	0	Left Cheek	20	18.82	-0.04	0.241	0.316
T130	LTE 5	QPSK 10M	20450	25	0	Left Tilted	20	18.82	-0.05	0.319	0.419
T131	LTE 5	QPSK 10M	20450	50	0	Right Tilted	20	18.74	-0.04	0.582	0.778
Test at worst position with the battery 2# Sample 2 SIM1											
T132	LTE 5	QPSK 10M	20600	1	0	Right Tilted	21	19.83	-0.09	0.846	**1.108**
1st Repeat SAR Test											
T133	LTE 5	QPSK 10M	20600	1	0	Right Tilted	21	19.83	-0.05	0.827	1.083

Body-Worn SAR test results of LTE Band 5

| | | | | | | | Separation | Power(dBm) | | Drift | SAR | Report |
Test No.	Band	Mode	CH	RB	Off set	Test Position	Distance (cm)	Tune up	Meas ured	(dB)	Value (W/kg)1-g	ed SAR
Test data with the battery 1# Sample 1 SIM 1
T182	LTE 5	QPSK 10M	20525	1	0	Front Face	1.5	24	23.24	-0.04	0.189	0.225
T183	LTE 5	QPSK 10M	20525	1	0	Rear Face	1.5	24	23.24	-0.04	0.275	**0.328**
T184	LTE 5	QPSK 10M	20450	25	0	Front Face	1.5	23	22.24	-0.06	0.155	0.185
T185	LTE 5	QPSK 10M	20450	25	0	Rear Face	1.5	23	22.24	-0.07	0.219	0.261
Test at worst position with the battery 2# Sample 2 SIM 1
T186	LTE 5	QPSK 10M	20525	1	0	Rear Face	1.5	24	23.24	-0.05	0.272	0.324

Body-Worn SAR test results of LTE Band 5(Sub)

| | | | | | | | Separation | Power(dBm) | | Drift | SAR | Report |
Test No.	Band	Mode	CH	RB	Off set	Test Position	Distance (cm)	Tune up	Meas ured	(dB)	Value (W/kg)1-g	ed SAR
Test data with the battery 1# Sample 1 SIM 1
T198	LTE 5	QPSK 10M	20525	1	0	Front Face	1.5	21	19.9	-0.07	0.123	0.158
T199	LTE 5	QPSK 10M	20525	1	0	Rear Face	1.5	21	19.9	-0.09	0.133	**0.171**
T200	LTE 5	QPSK 10M	20450	25	0	Front Face	1.5	20	18.82	-0.01	0.117	0.154
T201	LTE 5	QPSK 10M	20450	25	0	Rear Face	1.5	20	18.82	-0.08	0.103	0.135
Test at worst position with the battery 2# Sample 2 SIM 1
T202	LTE 5	QPSK 10M	20525	1	0	Rear Face	1.5	21	19.9	-0.04	0.127	0.164

Hotspot SAR test results of LTE Band 5(Main)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
								Tune up	Meas ured			
Test data with the battery 1# Sample 1 SIM 1												
T187	LTE 5	QPSK 10M	20525	1	0	Front Face	1	24	23.24	-0.03	0.201	0.239
T188	LTE 5	QPSK 10M	20525	1	0	Rear Face	1	24	23.24	-0.03	0.297	**0.354**
T189	LTE 5	QPSK 10M	20525	1	0	Left Side	1	24	23.24	-0.08	0.296	0.353
T190	LTE 5	QPSK 10M	20525	1	0	Right Side	1	24	23.24	-0.01	0.243	0.289
T191	LTE 5	QPSK 10M	20525	1	0	Bottom	1	24	23.24	-0.01	0.138	0.164
T192	LTE 5	QPSK 10M	20600	25	0	Front Face	1	23	22.24	-0.06	0.172	0.205
T193	LTE 5	QPSK 10M	20600	25	0	Rear Face	1	23	22.24	-0.07	0.247	0.294
T194	LTE 5	QPSK 10M	20600	25	0	Left Side	1	23	22.24	-0.09	0.258	0.307
T195	LTE 5	QPSK 10M	20600	25	0	Right Side	1	23	22.24	-0.03	0.196	0.233
T196	LTE 5	QPSK 10M	20600	25	0	Bottom	1	23	22.24	-0.09	0.127	0.151
Test at worst position with the battery 2# Sample 2 SIM 1												
T197	LTE 5	QPSK 10M	20525	1	0	Rear Face	1	24	23.24	-0.08	0.229	0.273

Hotspot SAR test results of LTE Band 5(Sub)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Separation Distance (cm)	Power(dBm)		Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
								Tune up	Meas ured			
Test data with the battery 1# Sample 1 SIM 1												
T203	LTE 5	QPSK 10M	20525	1	0	Front Face	1	21	19.9	-0.09	0.233	0.300
T204	LTE 5	QPSK 10M	20525	1	0	Rear Face	1	21	19.9	-0.03	0.267	**0.344**
T205	LTE 5	QPSK 10M	20525	1	0	Left Side	1	21	19.9	-0.07	0.163	0.210
T206	LTE 5	QPSK 10M	20525	1	0	Right Side	1	21	19.9	-0.04	0.071	0.092
T207	LTE 5	QPSK 10M	20525	1	0	Top	1	21	19.9	-0.01	0.237	0.305
T208	LTE 5	QPSK 10M	20450	25	0	Front Face	1	20	18.82	-0.09	0.214	0.281
T209	LTE 5	QPSK 10M	20450	25	0	Rear Face	1	20	18.82	-0.02	0.241	0.316
T210	LTE 5	QPSK 10M	20450	25	0	Left Side	1	20	18.82	-0.02	0.136	0.178
T211	LTE 5	QPSK 10M	20450	25	0	Right Side	1	20	18.82	-0.05	0.060	0.079
T212	LTE 5	QPSK 10M	20450	25	0	Top	1	20	18.82	-0.04	0.197	0.259
Test at worst position with the battery 2# Sample 2 SIM 1												
T213	LTE 5	QPSK 10M	20525	1	0	Rear Face	1	21	19.9	-0.05	0.241	0.310

SAR MEASUREMENT RESULT OF LTE Band 7

1. Head SAR test results of LTE Band 7(Main)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
						Test data with the battery 1# Sample 1 SIM1					
T133	LTE 7	QPSK 20M	208 50	1	0	Right Cheek	23	22.99	0.07	0.055	0.055
T134	LTE 7	QPSK 20M	208 50	1	0	Right Tilted	23	22.99	0.03	0.033	0.033
T135	LTE 7	QPSK 20M	208 50	1	0	Left Cheek	23	22.99	0.09	0.102	0.102
T136	LTE 7	QPSK 20M	208 50	1	0	Left Tilted	23	22.99	0.09	0.032	0.032
T137	LTE 7	QPSK 20M	208 50	50	0	Right Cheek	22	21.71	0.03	0.030	0.032
T138	LTE 7	QPSK 20M	208 50	50	0	Right Tilted	22	21.71	0.01	0.017	0.018
T139	LTE 7	QPSK 20M	208 50	50	0	Left Cheek	22	21.71	0.01	0.071	0.076
T140	LTE 7	QPSK 20M	208 50	50	0	Left Tilted	22	21.71	0.01	0.027	0.029
						Test at worst position with the battery 2# Sample 2 SIM1					
T141	LTE 7	QPSK 20M	208 50	1	0	Left Cheek	23	22.99	0.03	0.126	**0.126**

Head SAR test results of LTE Band 7(Sub)

Test No.	Band	Mode	CH	RB	Offset	Test Position	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1# Sample 1 SIM1											
T142	LTE 7	QPSK 20M	208 50	1	0	Right Cheek	18	17.46	-0.04	0.561	0.635
T143	LTE 7	QPSK 20M	208 50	1	0	Right Tilted	18	17.46	-0.01	0.535	0.606
T144	LTE 7	QPSK 20M	208 50	1	0	Left Cheek	18	17.46	-0.02	0.189	0.214
T145	LTE 7	QPSK 20M	208 50	1	0	Left Tilted	18	17.46	-0.06	0.190	0.215
T146	LTE 7	QPSK 20M	208 50	50	0	Right Cheek	17	16.25	-0.02	0.413	0.491
T147	LTE 7	QPSK 20M	208 50	50	0	Right Tilted	17	16.25	-0.01	0.423	0.503
T148	LTE 7	QPSK 20M	208 50	50	0	Left Cheek	17	16.25	-0.09	0.150	0.178
T149	LTE 7	QPSK 20M	208 50	50	0	Left Tilted	17	16.25	-0.06	0.157	0.187
Test at worst position with the battery 2# Sample 2 SIM1											
T150	LTE 7	QPSK 20M	208 50	1	0	Right Cheek	18	17.46	0.05	0.753	**0.853**
T151	LTE 7	QPSK 20M	211 00	1	0	Right Cheek	18	17.11	0.02	0.694	0.852
T152	LTE 7	QPSK 20M	213 50	1	50	Right Cheek	18	16.79	0.04	0.643	0.850

2. Body-Worn SAR test results of LTE Band 7(Main)

								Power(dBm)			SAR	Report
Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Tune up	Meas ured	Drift (dB)	Value (W/kg)1-g	ed SAR
T214	LTE 7	QPSK 20M	20850	1	0	Front Face	1.5	23	22.99	-0.07	0.416	**0.417**
T215	LTE 7	QPSK 20M	20850	1	0	Rear Face	1.5	23	22.99	0.04	0.387	0.388
T216	LTE 7	QPSK 20M	20850	50	0	Front Face	1.5	22	21.71	-0.04	0.268	0.287
T217	LTE 7	QPSK 20M	20850	50	0	Rear Face	1.5	22	21.71	-0.07	0.298	0.319

Table title: Test data with the battery 1# Sample 1 SIM 1

Test at worst position with the battery 2# Sample 2 SIM 1

T218	LTE 7	QPSK 20M	20850	1	0	Front Face	1.5	23	22.99	-0.07	0.296	0.297

Body-Worn SAR test results of LTE Band 7(Sub)

Test data with the battery 1# Sample 1 SIM 1

								Power(dBm)			SAR	Report
Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Tune up	Meas ured	Drift (dB)	Value (W/kg)1-g	ed SAR
T233	LTE 7	QPSK 20M	20850	1	0	Front Face	1.5	18	17.46	-0.08	0.100	**0.113**
T234	LTE 7	QPSK 20M	20850	1	0	Rear Face	1.5	18	17.46	0.08	0.077	0.087
T235	LTE 7	QPSK 20M	20850	50	0	Front Face	1.5	17	16.25	-0.03	0.072	0.085
T236	LTE 7	QPSK 20M	20850	50	0	Rear Face	1.5	17	16.25	-0.04	0.051	0.061

Test at worst position with the battery 2# Sample 2 SIM 1

T237	LTE 7	QPSK 20M	20850	1	0	Front Face	1.5	18	17.46	0.07	0.094	0.106

3. Hotspot SAR test results of LTE Band 7(Main)

Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Report ed SAR
Test data with the battery 1# Sample 1 SIM 1												
T219	LTE 7	QPSK 20M	20850	1	0	Front Face	1	20	19.88	0.02	0.316	0.325
T220	LTE 7	QPSK 20M	20850	1	0	Rear Face	1	20	19.88	-0.03	0.352	0.362
T221	LTE 7	QPSK 20M	20850	1	0	Left Side	1	20	19.88	-0.01	0.019	0.019
T222	LTE 7	QPSK 20M	20850	1	0	Right Side	1	20	19.88	0.03	0.044	0.045
T223	LTE 7	QPSK 20M	20850	1	0	Bottom	1	20	19.88	-0.09	0.666	0.685
T224	LTE 7	QPSK 20M	20850	50	0	Front Face	1	20	19.72	-0.03	0.404	0.431
T225	LTE 7	QPSK 20M	20850	50	0	Rear Face	1	20	19.72	-0.01	0.483	0.515
T226	LTE 7	QPSK 20M	20850	50	0	Left Side	1	20	19.72	-0.08	0.045	0.048
T227	LTE 7	QPSK 20M	20850	50	0	Right Side	1	20	19.72	0.01	0.087	0.093
T228	LTE 7	QPSK 20M	20850	50	0	Bottom	1	20	19.72	-0.01	0.760	0.811
T229	LTE 7	QPSK 20M	21100	50	0	Bottom	1	20	19.59	-0.07	0.745	0.819
T230	LTE 7	QPSK 20M	21350	50	0	Bottom	1	20	19.27	-0.07	0.738	**0.873**
T231	LTE 7	QPSK 20M	20850	100	0	Bottom	1	20	19.65	-0.09	0.758	0.822
Test at worst position with the battery 2# Sample 2 SIM 1												
T232	LTE 7	QPSK 20M	20850	50	0	Bottom	1	20	19.72	-0.07	0.811	0.865
1st Repeat SAR Test												
T233	LTE 7	QPSK 20M	20850	50	0	Bottom	1	20	19.72	-0.07	0.809	0.863

Hotspot SAR test results of LTE Band 7(Sub)

Test No.	Band	Mode	CH	RB	Off set	Test Position	Separation Distance (cm)	Power(dBm) Tune up	Power(dBm) Meas ured	Drift (dB)	SAR Value (W/kg)1-g	Report ed SAR
							Test data with the battery 1# Sample 1 SIM 1					
T238	LTE 7	QPSK 20M	20850	1	0	Front Face	1	18	17.46	0.06	0.219	**0.248**
T239	LTE 7	QPSK 20M	20850	1	0	Rear Face	1	18	17.46	0.04	0.196	0.222
T240	LTE 7	QPSK 20M	20850	1	0	Left Side	1	18	17.46	-0.08	0.191	0.216
T241	LTE 7	QPSK 20M	20850	1	0	Right Side	1	18	17.46	-0.06	0.019	0.022
T242	LTE 7	QPSK 20M	20850	1	0	Top	1	18	17.46	-0.02	0.105	0.119
T243	LTE 7	QPSK 20M	20850	50	0	Front Face	1	17	16.25	-0.07	0.169	0.201
T244	LTE 7	QPSK 20M	20850	50	0	Rear Face	1	17	16.25	-0.08	0.133	0.158
T245	LTE 7	QPSK 20M	20850	50	0	Left Side	1	17	16.25	-0.02	0.149	0.177
T246	LTE 7	QPSK 20M	20850	50	0	Right Side	1	17	16.25	-0.06	0.016	0.019
T247	LTE 7	QPSK 20M	20850	50	0	Top	1	17	16.25	-0.06	0.099	0.118
Test at worst position with the battery 2# Sample 2 SIM 1												
T248	LTE 7	QPSK 20M	20850	1	0	Front Face	1	18	17.46	0.09	0.190	0.215

8.2.9 SAR MEASUREMENT RESULT OF WiFi 2.4G

1. Head SAR test results of WiFi 2.4G

Test No.	Band	CH	Test Position	Power(dBm) Power Setting	Tune up	Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1#
T154	802.11b	1	Right Cheek	17.5	18	17.11	-0.01	0.205	0.252
T155	802.11b	1	Right Tilted	17.5	18	17.11	-0.07	0.263	0.323
T156	802.11b	1	Left Cheek	17.5	18	17.11	-0.06	0.679	0.833
T157	802.11b	1	Left Tilted	17.5	18	17.11	-0.03	0.540	0.663
T158	802.11b	6	Left Cheek	17.5	18	17.03	0.02	0.680	**0.850**
T159	802.11b	11	Left Cheek	17.5	18	17.06	-0.09	0.643	0.798
Test at worst position with the battery 2#
T160	802.11b	6	Left Cheek	17.5	18	17.03	-0.03	0.658	0.823

2. Body-Worn SAR test results of WiFi 2.4G

Test No.	Band	CH	Test Position	Separation Distance(cm)	Power(dBm) Power Setting	Tune up	Measured	Drift (dB)	SAR Value (W/kg)1-g	Reported SAR
Test data with the battery 1#
T249	802.11b	1	Front Face	1.5	17.5	18	17.11	0.09	0.051	0.062
T250	802.11b	1	Rear Face	1.5	17.5	18	17.11	0.02	0.047	0.058
Test at worst position with the battery 2#
T251	802.11b	1	Front Face	1.5	17.5	18	17.11	0.01	0.062	**0.076**

3. Hotspot SAR test results of WiFi 2.4G

| Test No. | Band | CH | Test Position | Separation Distance(cm) | Power(dBm) | | | Drift (dB) | SAR Value (W/kg)1-g | Reported SAR |
					Power Setting	Tune up	Measured			
				Test data with the battery 1#						
T252	802.11b	1	Front Face	1	17.5	18	17.11	0.01	0.090	0.111
T253	802.11b	1	Rear Face	1	17.5	18	17.11	-0.03	0.115	0.141
T254	802.11b	1	Right Side	1	17.5	18	17.11	-0.01	0.079	0.097
T255	802.11b	1	Top	1	17.5	18	17.11	-0.07	0.156	0.191
				Test at worst position with the battery 2#						
T256	802.11b	1	Top	1	17.5	18	17.11	-0.09	0.166	**0.204**

Note: Per KDB248227D01, the highest SAR measured for the <u>initial test position</u> or <u>initial test configuration</u> should be used to determine SAR test exclusion according to the sum of 1-g SAR and SAR peak to location ratio provisions in KDB 447498. In addition, a test lab may also choose to perform standalone SAR measurements for test positions and 802.11 configurations that are not required by the <u>initial test position</u> or <u>initial test configuration</u> procedures and apply the results to determine simultaneous transmission SAR test exclusion, according to sum of 1-g and SAR peak to location ratio requirements to reduce the number of simultaneous transmission SAR measurements.

8.3 MULTIPLE TRANSMITTER EVALUATION

The following tables list information which is relevant for the decision if a simultaneous transmit evaluation is necessary according to FCC KDB 447498D01 General RF Exposure Guidance v05r02.

The size of the mobile phone is 141.85mm (length)X71.2mm (width), the length of the diagonal is144.5mm .

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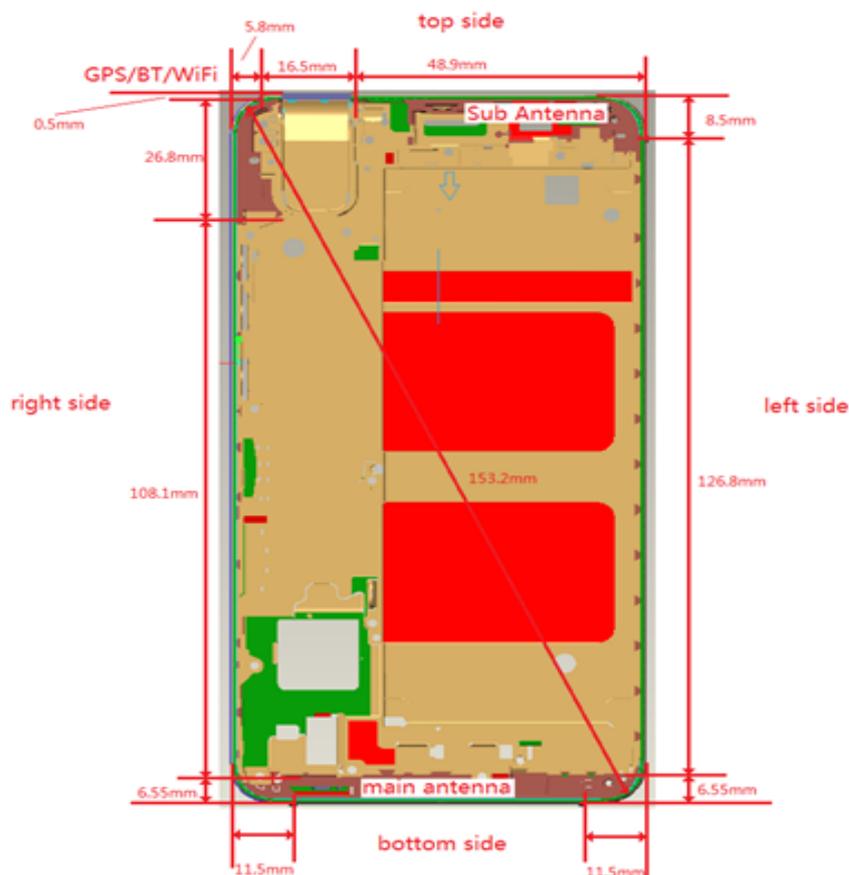
Note:

The device supports the dynamic antenna switching function to optimize transmission efficiency for wide range frequency operations. It has two 2G/3G/4G Tx antennas (Main Antenna and Sub Antenna). It can transmit from either Main Antenna or Sub Antenna. The device is capable of switching between the Main Antenna and Sub Antenna based on signal strength. The Main Antenna and Sub Antenna cannot transmit simultaneously.

8.3.1 STAND-ALONE SAR TEST EXCLUSION

Per FCC KDB 447498D01v05, the 1-g SAR and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)][√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity 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

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Standalone SAR test exclusion for BT

Mode	Position	P_{max} (dBm)*	P_{max} (mW)	Distance (mm)	f (GHz)	Calculation Result	SAR Exclusion threshold	SAR test exclusion
BT	Body-Worn	11	12.59	15	2.48	1.322	3	Yes

Note:

1)* - maximum possible output power declared by manufacturer

2) Held to ear configurations are not applicable to Bluetooth for this device.

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 and x = 18.75 for 10-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

According to KDB 447498 D01,when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standslone SAR was estimated according to following formula to result in substantially conservative SAR values of≤0.4W/Kg to determine simultaneous transmission SAR test exclusion.

$$\text{Estimated SAR} = \frac{\text{Max. Tune up Power}_{(mW)}}{\text{Min. Test Separation Distance}_{(mm)}} \times \frac{\sqrt{f_{(GHz)}}}{7.5}$$

Estimated SAR calculation

Mode	Position	P_{max} (dBm)*	P_{max} (mW)	Distance (mm)	f (GHz)	X	Estimated SAR (W/Kg)*
BT	Front	11	12.59	15	2.48	7.5	0.176
	Rear	11	12.59	15	2.48	7.5	0.176

Note: * - maximum possible output power declared by manufacturer

8.3.2 STAND-ALONE SAR TEST EXCLUSION

Per FCC KDB 447498D01v05 r02, SAR compliance for simultaneous transmission must be considered when the maximum duration of overlapping transmissions, including network hand-offs, is greater than 30 seconds. This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis.

The Simultaneous Transmission Possibilities of this device are as below:

No.	Configuration	Head	Body-worn	Hotspot
1	GSM (Voice) + WiFi 2.4G	Yes	Yes	N/A
2	GPRS/EDGE (DATA) + WiFi 2.4G	N/A	N/A	Yes
3	GSM(Voice) +BT	N/A	Yes	N/A
4	GPRS/EDGE(DATA)+BT	N/A	N/A	N/A
5	UMTS(Voice)+WiFi 2.4G	Yes	Yes	N/A
6	UMTS(DATA)+WiFi 2.4G	N/A	Yes	Yes
7	UMTS(Voice)+BT	N/A	Yes	N/A
8	UMTS(DATA)+BT	N/A	Yes	N/A
9	LTE(DATA)+WiFi 2.4G	Yes*	Yes*	Yes
10	LTE(DATA)+BT	N/A	Yes*	N/A

Note:
i)* VOIP 3rd party applications may possibly be installed and used by the end user.
ii) Wi-Fi 2.4G and Bluetooth share the same antenna and can't transmit simultaneously.
iii) 2G&3G&4G share the same antenna and can't transmit simultaneously.
iv) The device does not support DTM function.
v) Held to ear configurations are not applicable to Bluetooth and therefore were not considered for simultaneous transmission.

8.3.3 SAR SUMMATION SCENARIO

About 2.4G WiFi and GSM/UMTS/LTE Main antenna

Test Position Reported SAR_{1g}	Head				Body-Worn		Hotspot					
	Right Cheek	Right Tilted	Left Cheek	Left Tilted	Front	Rear	Front	Rear	Left	Right	Top	Bottom
GSM850	0.130	0.134	0.248	0.166	0.208	0.272	0.335	0.453	0.208	0.241	/	0.259
GSM1900	0.155	0.072	0.097	0.071	0.359	0.307	0.322	0.440	0.056	0.109	/	1.439
UMTS B2	0.282	0.083	0.125	0.080	0.528	0.592	0.395	0.425	0.044	0.092	/	1.088
UMTS B4	0.494	0.219	0.351	0.209	0.814	0.875	0.571	0.566	0.154	0.228	/	0.961
UMTS B5	0.033	0.056	0.200	0.165	0.212	0.293	0.287	0.357	0.185	0.278	/	0.240
LTE B2	0.228	0.068	0.144	0.062	0.523	0.738	0.402	0.423	0.100	0.162	/	1.191
LTE B4	0.345	0.218	0.255	0.196	0.645	0.698	0.430	0.494	0.111	0.183	/	0.700
LTE B5	0.120	0.111	0.154	0.122	0.225	0.328	0.239	0.354	0.353	0.289	/	0.164
LTE B7	0.055	0.033	0.126	0.032	0.417	0.388	0.431	0.515	0.048	0.093	/	0.873
2.4G WiFi	0.252	0.323	0.850	0.663	0.076	0.058	0.111	0.141	/	0.097	0.204	/
MAX∑SAR1g	0.746	0.542	1.201	0.872	0.89	0.933	0.682	0.707	0.353	0.386	0.204	1.439

MAX. $\sum SAR_{1g}=1.439W/Kg<1.6\ W/Kg$,so the SAR to peak location separation ratio should not be considered.

About 2.4G WiFi and GSM/UMTS/LTE Sub antenna

Test Position Reported SAR$_{1g}$	Head				Body-Worn		Hotspot					
	Right Cheek	Right Tilted	Left Cheek	Left Tilted	Front	Rear	Front	Rear	Left	Right	Top	Bottom
GSM850	0.857	1.069	0.528	0.563	0.110	0.152	0.334	0.350	0.325	0.134	0.300	/
GSM1900	1.143	0.743	0.340	0.365	0.081	0.088	0.153	0.166	0.160	0.050	0.207	/
UMTS B2	0.985	0.725	0.201	0.215	0.067	0.073	0.147	0.117	0.178	0.047	0.194	/
UMTS B4	1.219	0.813	0.356	0.378	0.133	0.113	0.201	0.220	0.182	0.067	0.252	/
UMTS B5	1.064	0.946	0.551	0.509	0.193	0.192	0.390	0.363	0.322	0.138	0.307	/
LTE B2	0.787	0.673	0.212	0.217	0.051	0.069	0.139	0.162	0.172	0.032	0.190	/
LTE B4	0.826	0.553	0.136	0.098	0.06	0.071	0.144	0.189	0.140	0.058	0.194	/
LTE B5	0.709	1.108	0.441	0.564	0.158	0.171	0.300	0.344	0.210	0.092	0.305	/
LTE B7	0.853	0.606	0.214	0.215	0.113	0.087	0.248	0.222	0.216	0.022	0.119	/
2.4G WiFi	0.252	0.323	0.850	0.663	0.076	0.058	0.111	0.141	/	0.097	0.204	/
MAX∑SAR1g	1.471	1.431	1.401	1.227	0.269	0.25	0.501	0.504	0.322	0.235	0.511	/

MAX. ∑SAR$_{1g}$=1.471W/Kg<1.6 W/Kg, so the SAR to peak location separation ratio should not be considered.

About BT and GSM/UMTS/LTE Main antenna

Test Position Reported SAR$_{1g}$	Body-Worn	
	Front	Rear
GSM850	0.208	0.272
GSM1900	0.359	0.307
UMTS B2	0.528	0.592
UMTS B4	0.814	0.875
UMTS B5	0.212	0.293
LTE B2	0.523	0.738
LTE B4	0.645	0.698
LTE B5	0.225	0.328
LTE B7	0.417	0.388
BT	0.176	0.176
MAX∑SAR1g	0.990	1.051

MAX. ∑SAR$_{1g}$=1.051W/Kg<1.6 W/Kg, so the SAR to peak location separation ratio should not be considered

About BT and GSM/UMTS/LTE Sub antenna

Test Position Reported SAR$_{1g}$	Body-Worn	
	Front	Rear
GSM850	0.110	0.152
GSM1900	0.081	0.088
UMTS B2	0.067	0.073
UMTS B4	0.133	0.113
UMTS B5	0.193	0.192
LTE B2	0.051	0.062
LTE B4	0.06	0.071
LTE B5	0.158	0.171
LTE B7	0.113	0.087
BT	0.176	0.176
MAX∑SAR1g	0.369	0.368

MAX. ∑SAR$_{1g}$=0.369W/Kg<1.6 W/Kg, so the SAR to peak location separation ratio should not be considered

APPENDIX

1. Test Layout

Specific Absorption Rate Test Layout

Liquid depth in the flat Phantom (≥15cm depth)

Body(700MHz~920MHz)　　　　　　Head(700MHz~920MHz)
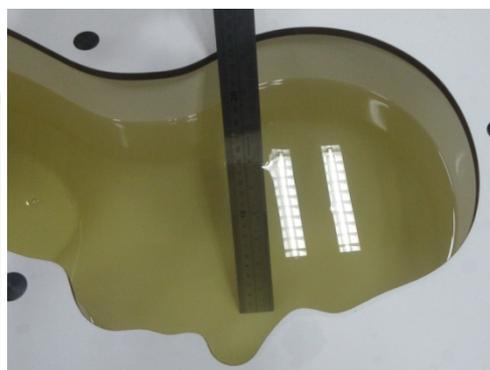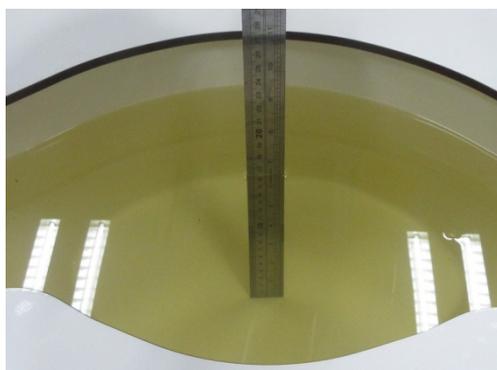
Body(1700MHz~2700MHz)
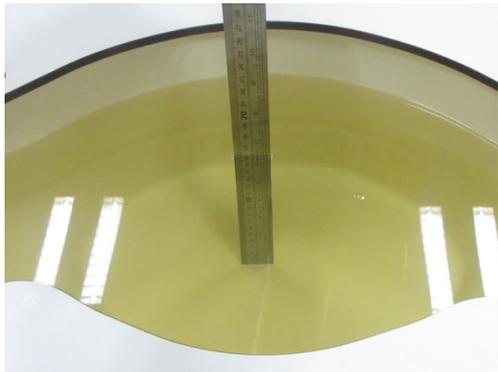
Head(1700MHz~2700MHz)

Body(700MHz~920MHz)
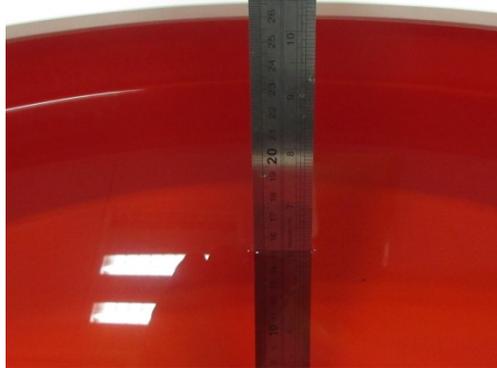
Body(1700MHz~2700MHz)

2. System Check Plots

Test Laboratory: BTL Inc.

System Check_B835

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d160;

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.993 S/m; ε_r = 56.689; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn915; Calibrated: 09/15/2014

- Phantom: SAM with CRP left; Type: SAM; Serial: TP:1784

- DASY52 52.8.3(988); SEMCAD X 14.6.10(7164)

Area Scan （5x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 3.06 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 55.447 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 3.57 W/kg
SAR(1 g) = 2.4 W/kg; SAR(10 g) = 1.58 W/kg
Maximum value of SAR (measured) = 3.04 W/kg
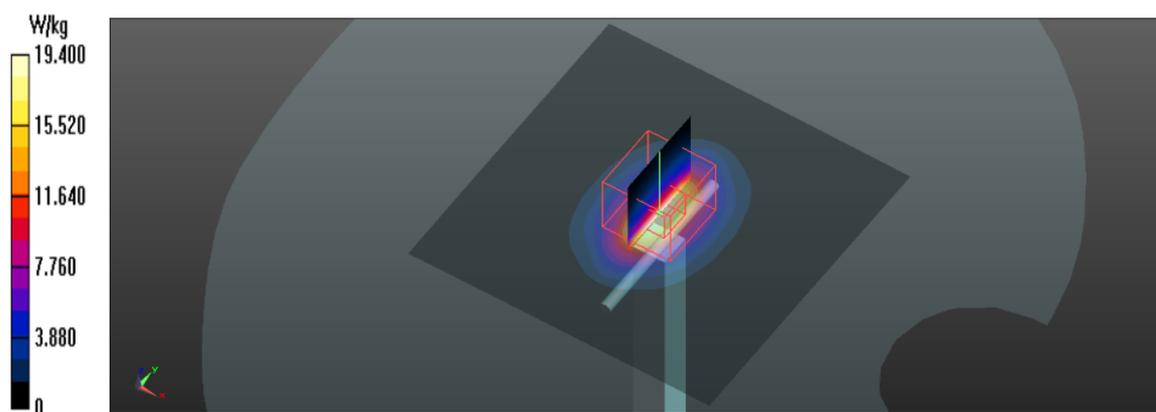
System Check_B835

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d160;

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.989 S/m; εr = 56.678; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn915; Calibrated: 09/15/2014

- Phantom: SAM with CRP left; Type: SAM; Serial: TP:1784

- DASY52 52.8.3(988); SEMCAD X 14.6.10(7164)

Area Scan (5x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 3.03 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 55.343 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 3.45 W/kg
SAR(1 g) = 2.38 W/kg; SAR(10 g) = 1.55 W/kg
Maximum value of SAR (measured) = 3.21 W/kg
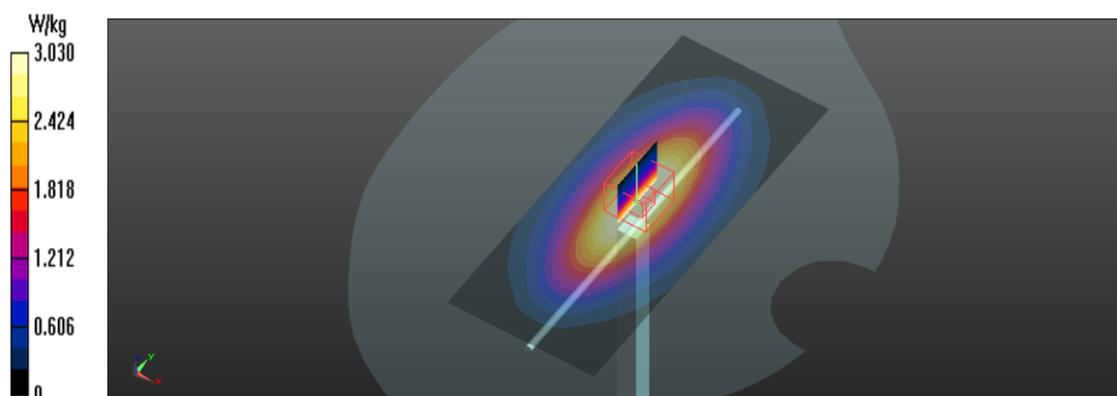
System Check_H835

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d160;
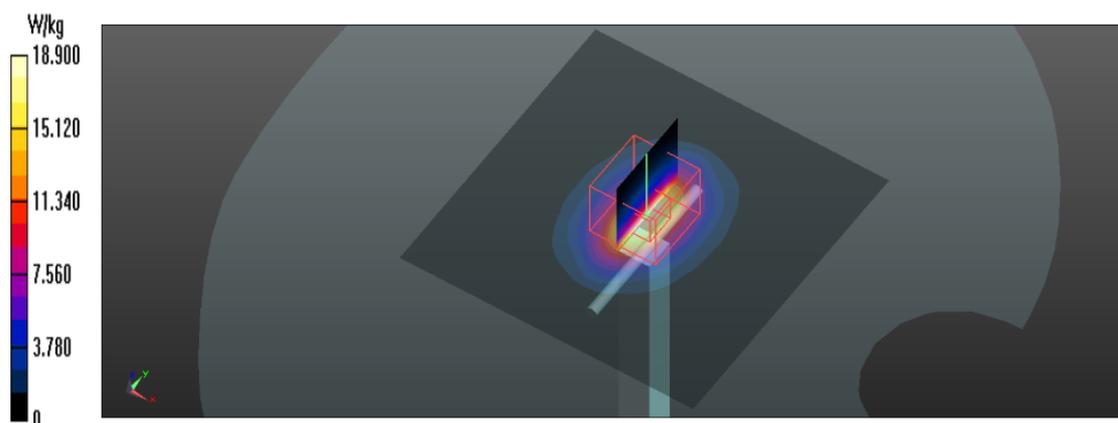
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.919 S/m; $ε_r$ = 41.697; ρ = 1000 kg/m^3
Ambient Temperature : 20.5 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 – SN3932; ConvF(9.75, 9.75, 9.75); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1277; Calibrated: 09/15/2014

- Phantom: SAM Phantom_right; Type: QD000P40CC; Serial: TP:1784

- DASY52 52.8.2(969); SEMCAD X 14.6.10(7164)

Area Scan (5x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 3.14 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 59.543 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.71 W/kg
SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.56 W/kg
Maximum value of SAR (measured) = 3.14 W/kg
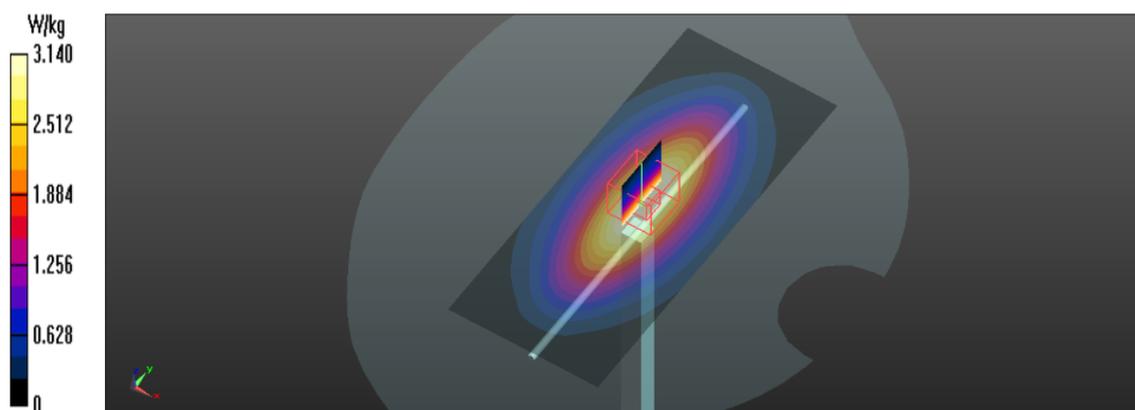
System Check_B1750

DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1101;

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.466 S/m; ε_r = 53.656; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.08, 8.08, 8.08); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1277; Calibrated: 09/15/2014

- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP:1784

- DASY52 52.8.2(969); SEMCAD X 14.6.10(7164)

Area Scan (6x6x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 13.4 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 95.207 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 16.1 W/kg
SAR(1 g) = 9.45 W/kg; SAR(10 g) = 5.04 W/kg
Maximum value of SAR (measured) = 13.6 W/kg
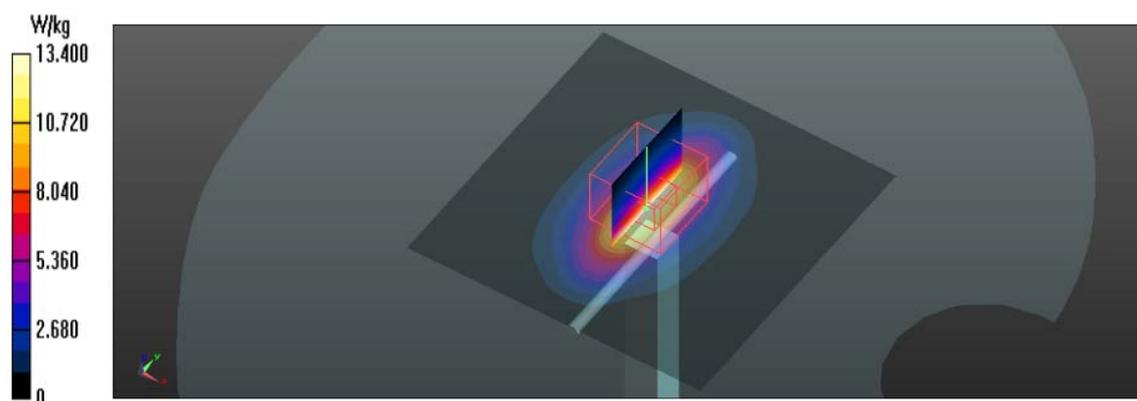
System Check_H1750

DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1101;

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.365 S/m; $ε_r$ = 40.182; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.42, 8.42, 8.42); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn915; Calibrated: 09/15/2014

- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP: 1784

- DASY52 52.8.3(988); SEMCAD X 14.6.10(7164)

Area Scan (6x6x1): Interpolated grid: dx=15 mm, dy=15 mm
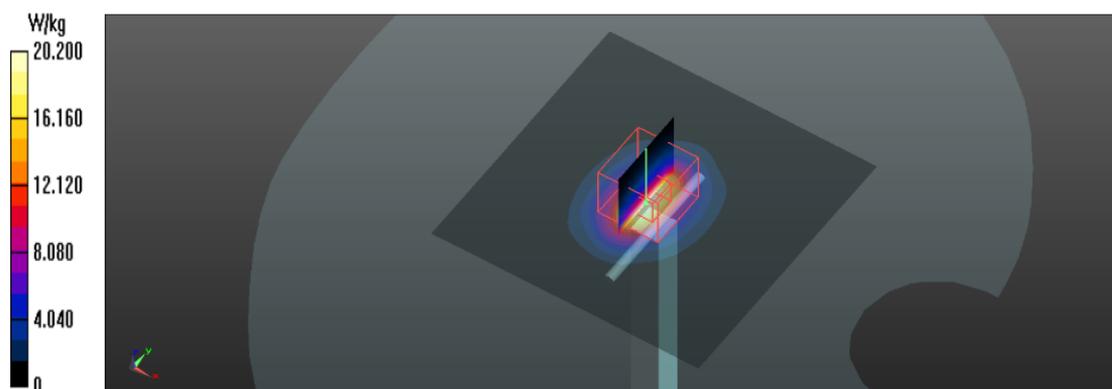Maximum value of SAR (interpolated) = 13.1 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 99.401 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 17.6 W/kg
SAR(1 g) = 9.02 W/kg; SAR(10 g) = 4.75 W/kg
Maximum value of SAR (measured) = 13.7 W/kg

System Check_B1900

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d179;
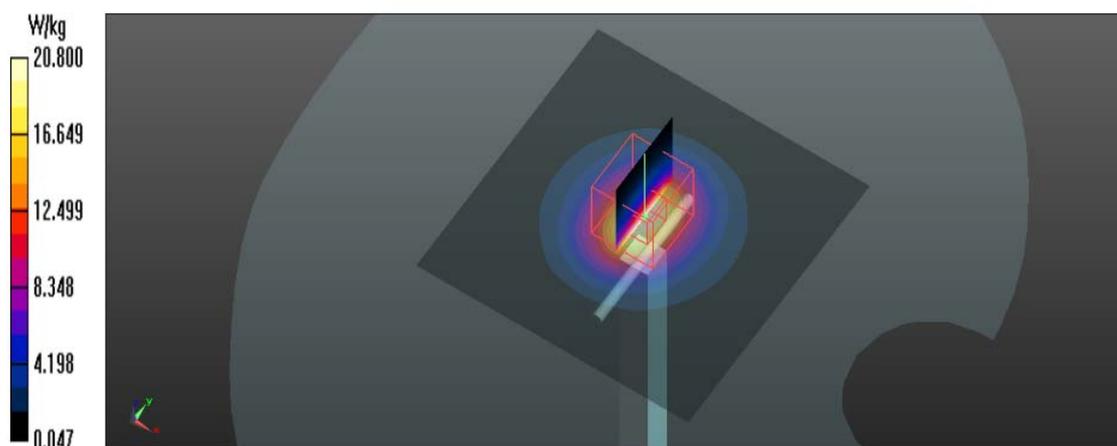
Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.534 S/m; ε_r = 51.02; ρ = 1000 kg/m³
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 – SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1277; Calibrated: 09/15/2014

- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1784

- DASY52 52.8.3(988); SEMCAD X 14.6.10(7164)

Area Scan (6x6x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 13.2 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 94.711 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 9.7 W/kg; SAR(10 g) = 4.99 W/kg
Maximum value of SAR (measured) = 14.2 W/kg

System Check_B1900

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d179;

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.523 S/m; εr = 51.08; ρ = 1000 kg/m3
Ambient Temperature：20.8℃; Liquid Temperature：21.5 ℃

DASY Configuration:

- Probe: EX3DV4 – SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1277; Calibrated: 09/15/2014

- Phantom: SAM with CRP v5.0 Front; Type: QD000P40CD; Serial: TP:1784

- DASY52 52.8.3(988); SEMCAD X 14.6.10(7164)

Area Scan (6x6x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 13.4 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 94.761 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 9.75 W/kg; SAR(10 g) = 4.89 W/kg
Maximum value of SAR (measured) = 14.25 W/kg

System Check_H1900

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d179;

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.424 S/m; ε_r = 39.098; ρ = 1000 kg/m³
Ambient Temperature : 20.9 ℃; Liquid Temperature : 21.4 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.23, 8.23, 8.23); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.2 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 97.717 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 17.8 W/kg
SAR(1 g) = 9.82 W/kg; SAR(10 g) = 4.94 W/kg
Maximum value of SAR (measured) = 13.6 W/kg

System Check_H1900

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d179;

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.408 S/m; ε_r = 39.267; ρ = 1000 kg/m^3
Ambient Temperature : 20.9 ℃; Liquid Temperature : 21.4 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.23, 8.23, 8.23); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.9 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 98.214 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 18.6 W/kg
SAR(1 g) = 9.97 W/kg; SAR(10 g) = 4.89 W/kg
Maximum value of SAR (measured) = 13.7 W/kg
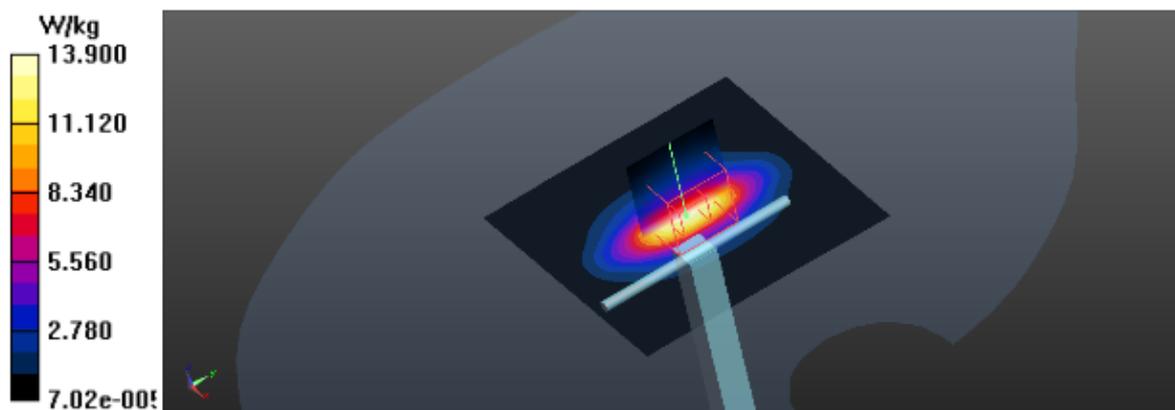
System Check_B2450

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 919;

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.982 S/m; ε_r = 51.15; ρ = 1000 kg/m^3
Ambient Temperature : 20.7 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.60, 7.60, 7.60); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1277; Calibrated: 09/15/2014

- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP:1784

- DASY52 52.8.2(969); SEMCAD X 14.6.10(7164)

Area Scan (8x8x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 19.4 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 101.7 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 26.5 W/kg
SAR(1 g) = 12.65 W/kg; SAR(10 g) = 5.82 W/kg
Maximum value of SAR (measured) = 19.5 W/kg

System Check_H2450

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 919;

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.81 S/m; ε_r = 39.58; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.6 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.38, 7.38, 7.38); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1277; Calibrated: 09/15/2014

- Phantom: SAM Phantom_right; Type: QD000P40CC; Serial: TP:1784

- DASY52 52.8.2(969); SEMCAD X 14.6.10(7164)

Area Scan (8x8x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 18.9 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 103.0 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 26.1 W/kg
SAR(1 g) = 12.82 W/kg; SAR(10 g) = 5.63 W/kg
Maximum value of SAR (measured) = 19.0 W/kg

System Check_H2450

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 919;

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.83 S/m; εr = 39.56; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.6 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.38, 7.38, 7.38); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1277; Calibrated: 09/15/2014

- Phantom: SAM Phantom_right; Type: QD000P40CC; Serial: TP:1784

- DASY52 52.8.2(969); SEMCAD X 14.6.10(7164)

Area Scan (8x8x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 19.2 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 103.12 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 26.13 W/kg
SAR(1 g) = 12.86 W/kg; SAR(10 g) = 5.65 W/kg
Maximum value of SAR (measured) = 19.23 W/kg
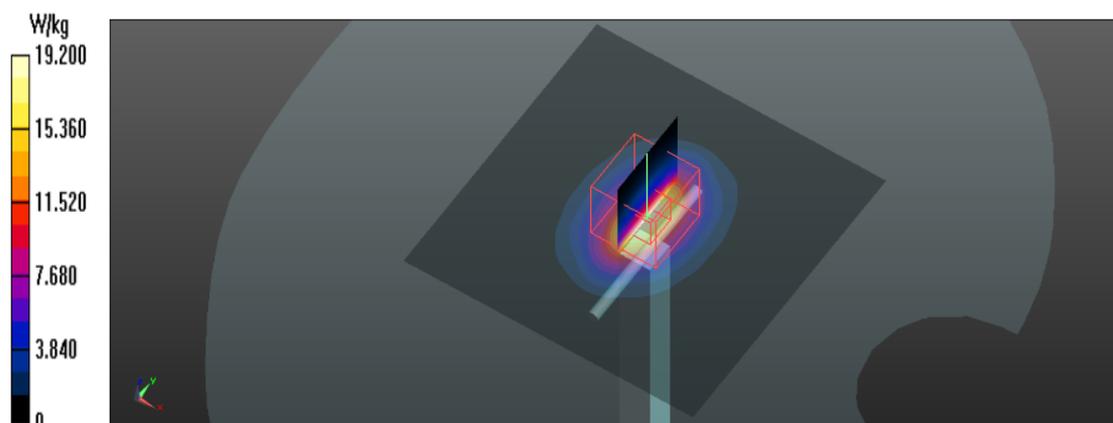
Test Laboratory: BTL Inc.

Date: 08/04/2015

System Check_B2600

DUT: Dipole 2600 MHz; Type: D2600V2; SN: 1067;

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used: f = 2600 MHz; σ = 2.2 S/m; ε_r = 52.401; ρ = 1000 kg/m³

Ambient Temperature：20.7 ℃; Liquid Temperature：21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.48, 7.48, 7.48); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1277; Calibrated: 09/15/2014

- Phantom: SAM Phantom_Front; Type: SAM V4.0; Serial: TP:1784

- DASY52 4.7.80(0); SEMCAD X 14.6.10(7164)

Area Scan (8x8x1): Interpolated grid: dx=12 mm, dy=12 mm

Maximum value of SAR (interpolated) = 20.2 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 95.532 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 28.5 W/kg

SAR(1 g) = 14.59 W/kg; SAR(10 g) = 5.92 W/kg

Maximum value of SAR (measured) = 20.5 W/kg

System Check_H2600

DUT: Dipole 2600 MHz; Type: D2600V2; SN: 1067;

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.956 S/m; ε_r = 38.587; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.6 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.20, 7.20, 7.20); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1277; Calibrated: 09/15/2014

- Phantom: SAM Phantom_Left; Type: SAM V4.0; Serial: TP 1652

- DASY52 4.7.80(0); SEMCAD X 14.6.10(7164)

Area Scan (8x8x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 20.8 W/kg

Zoom Scan (4x4x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 102.0 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 28.3 W/kg
SAR(1 g) = 14.46 W/kg; SAR(10 g) = 6.63 W/kg
Maximum value of SAR (measured) = 20.9 W/kg

3. SAR Measurement Plots

T04_GSM 850_GSM_CH190_Rear Face_15mm _ANT Main

DUT: Smart Phone;

Communication System: UID 0, Generic GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.30042
Medium parameters used: f = 837 MHz; σ = 0.978 S/m; ε_r = 54.638; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
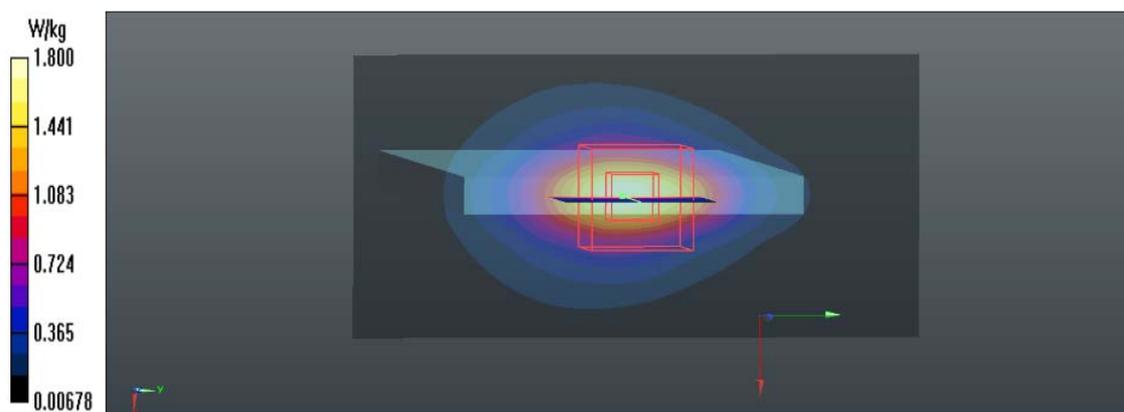Maximum value of SAR (interpolated) = 0.279 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.366 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.296 W/kg
SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.183 W/kg
Maximum value of SAR (measured) = 0.245 W/kg
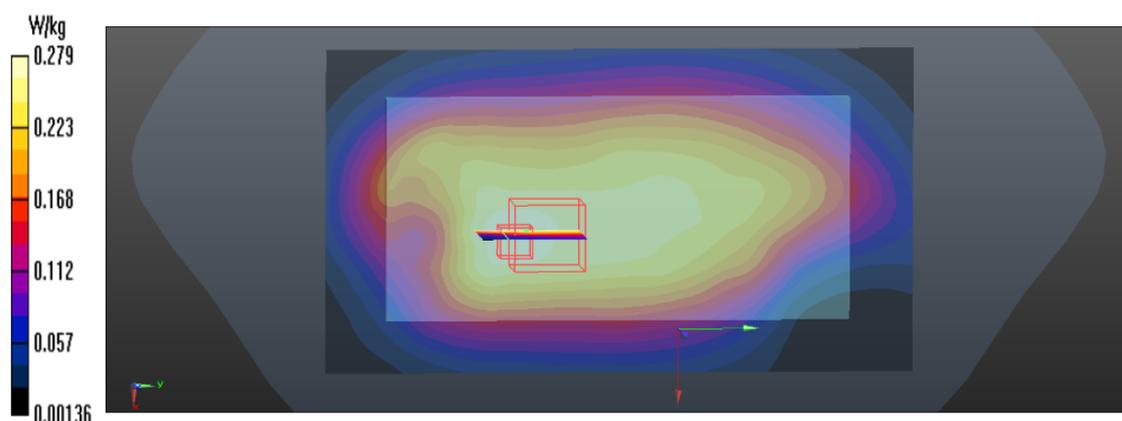
T11_ GSM 850_GPRS10_CH190_Rear Face_10mm _ANT Main

DUT: Smart Phone;
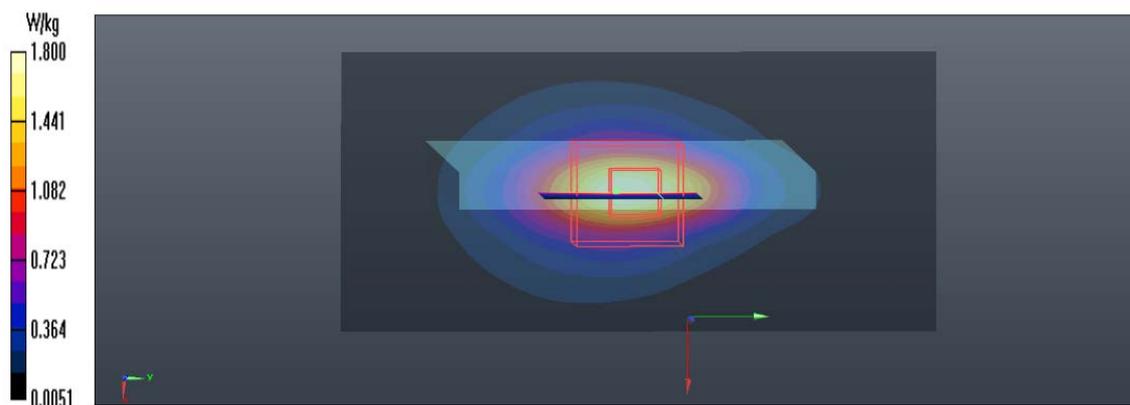
Communication System: UID 0, GPRS 10 (0); Frequency: 836.6 MHz; Duty Cycle: 1:4.00037
Medium parameters used: f = 837 MHz; σ = 0.978 S/m; $ε_r$ = 54.638; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.460 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.127 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.527 W/kg
SAR(1 g) = 0.357 W/kg; SAR(10 g) = 0.250 W/kg
Maximum value of SAR (measured) = 0.372 W/kg
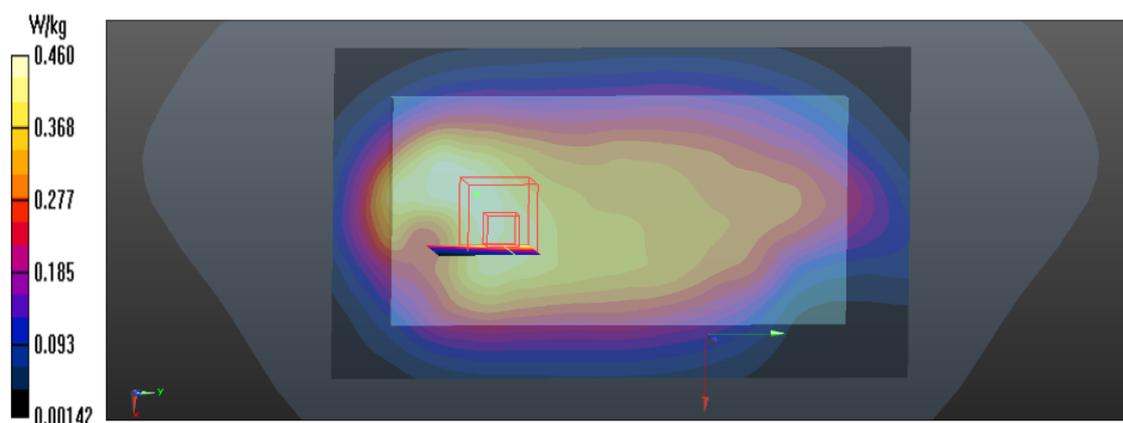
T06_GSM 850_GSM_CH190_Left Cheek _ANT Main

DUT: Smart Phone;

Communication System: UID 0, Generic GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.30042
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 S/m; ε_r = 41.478; ρ = 1000 kg/m^3
Ambient Temperature : 20.5 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(9.75, 9.75, 9.75); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.245 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.374 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.281 W/kg
SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.171 W/kg
Maximum value of SAR (measured) = 0.226 W/kg
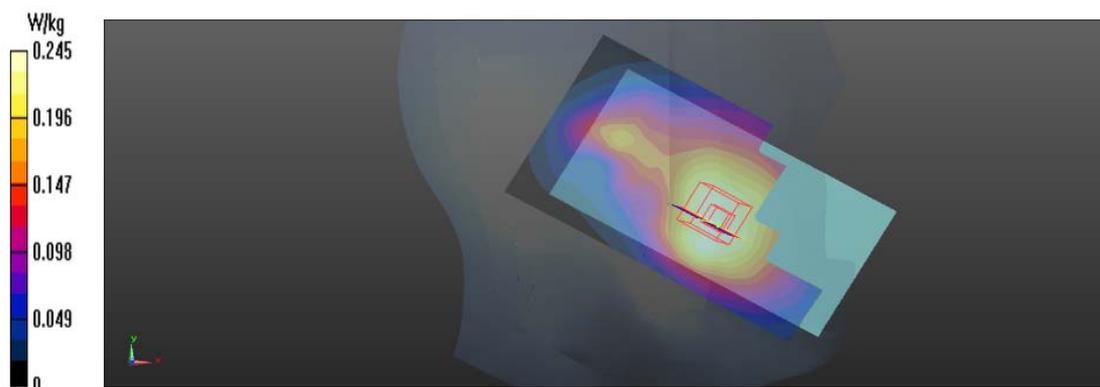
T13_GSM 1900_GSM_CH190_Rear Face_15mm _ANT Sub

DUT: Smart Phone;
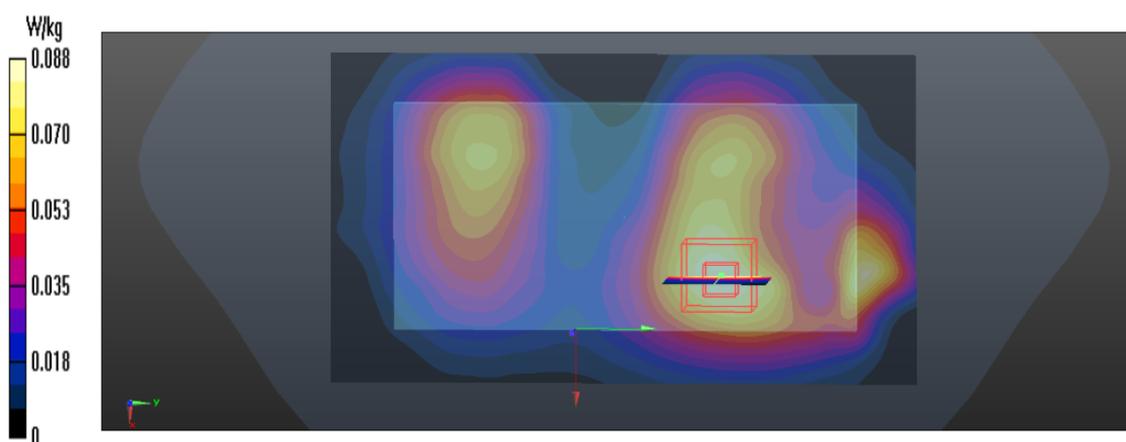
Communication System: UID 0, Generic GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.30042
Medium parameters used: f = 837 MHz; σ = 0.978 S/m; ε_r = 54.638; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.287 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.014 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.170 W/kg
SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.105 W/kg
Maximum value of SAR (measured) = 0.146 W/kg
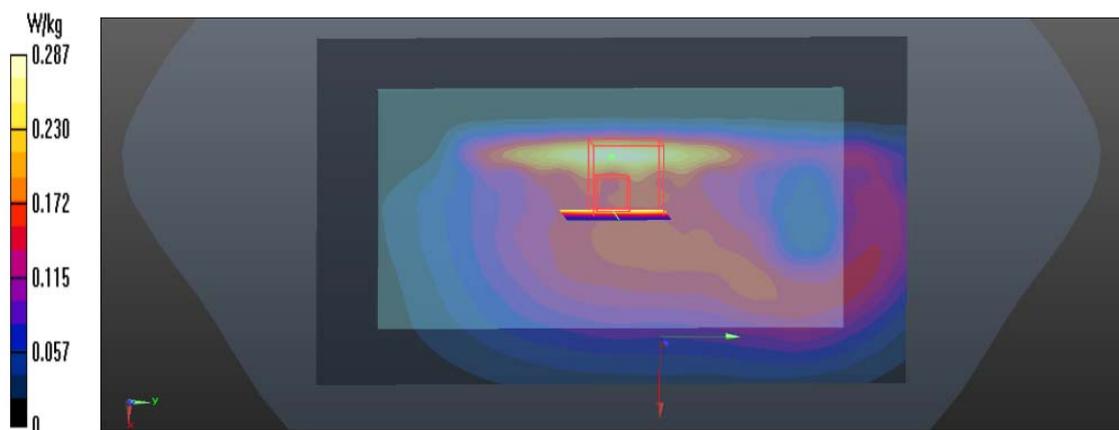
T22_GSM 1900_GPRS 10_CH190_Rear Face_10mm _ANT Sub

DUT: Smart Phone;
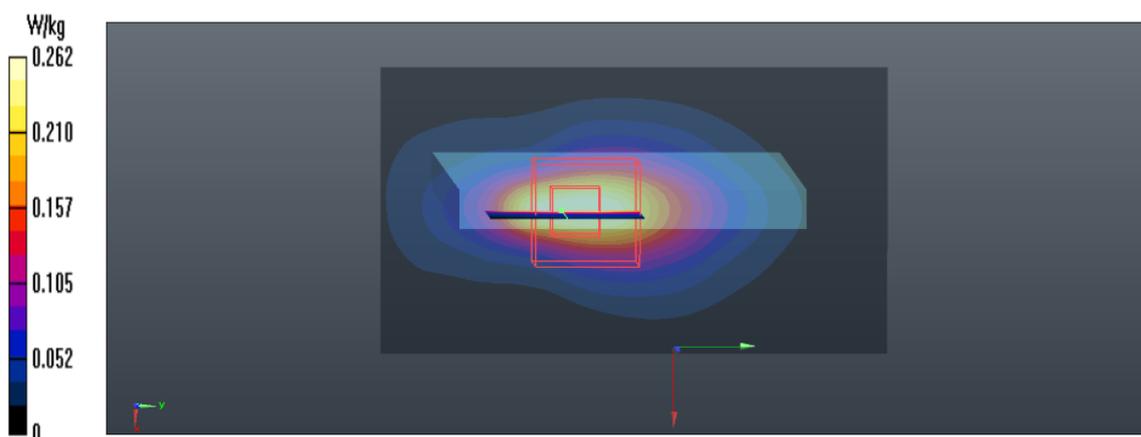
Communication System: UID 0, GPRS 10 (0); Frequency: 836.6 MHz; Duty Cycle: 1:4.00037
Medium parameters used: f = 837 MHz; σ = 0.978 S/m; $ε_r$ = 54.638; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.379 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.971 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.458 W/kg
SAR(1 g) = 0.272 W/kg; SAR(10 g) = 0.159 W/kg
Maximum value of SAR (measured) = 0.300 W/kg
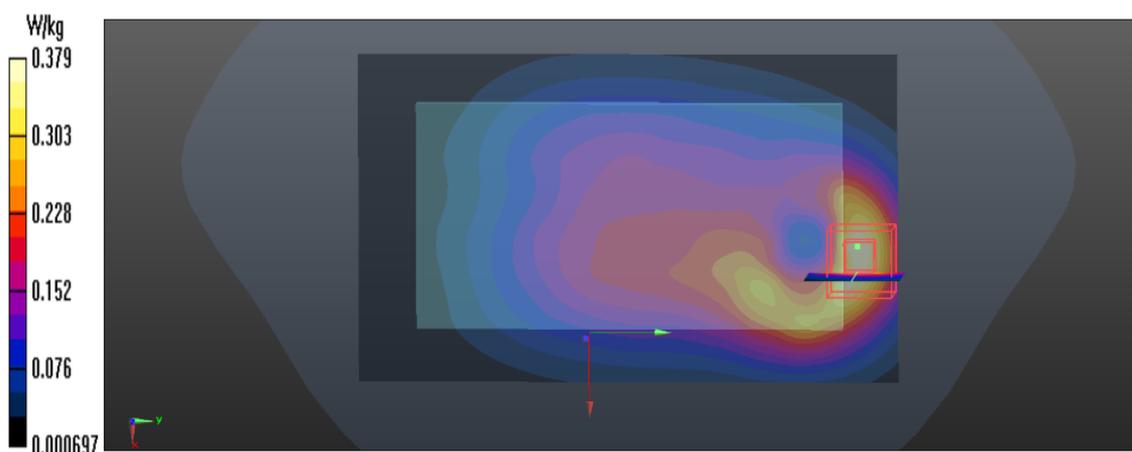
T16_GSM 850_GSM_CH128_Right Tilted _ANT Sub

DUT: Smart Phone;

Communication System: UID 0, Generic GSM (0); Frequency: 824.2 MHz; Duty Cycle: 1:8.30042
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.88 S/m; $ε_r$ = 41.628; ρ = 1000 kg/m^3
Ambient Temperature : 20.5 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(9.75, 9.75, 9.75); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.33 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.290 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 2.30 W/kg
SAR(1 g) = 0.959 W/kg; SAR(10 g) = 0.467 W/kg
Maximum value of SAR (measured) = 1.07 W/kg

T23_GSM 1900_GSM_CH661_Front Face_15mm _ANT Main

DUT: Smart Phone;

Communication System: UID 0, Generic GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.30042
Medium parameters used: f = 1880 MHz; σ = 1.528 S/m; ε_r = 53.058; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.381 W/kg

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.716 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.465 W/kg
SAR(1 g) = 0.304 W/kg; SAR(10 g) = 0.182 W/kg
Maximum value of SAR (measured) = 0.337 W/kg

T33_GSM 1900_GPRS_CH810_Bottom Side_10mm_ANT Main

DUT: Smart Phone;
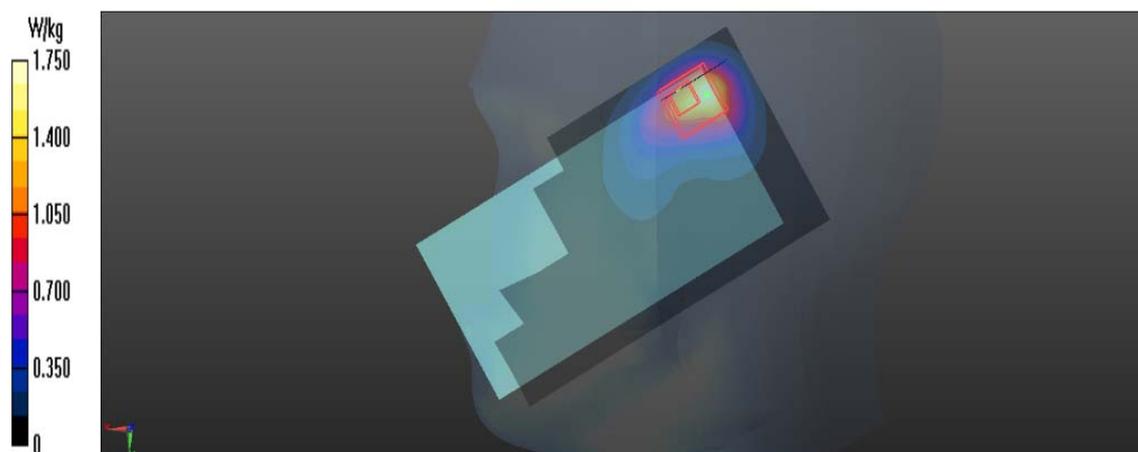
Communication System: UID 0, GPRS 10 (0); Frequency: 1909.8 MHz; Duty Cycle: 1:4.00037
Medium parameters used: f = 1910 MHz; σ = 1.563 S/m; ε_r = 52.992; ρ = 1000 kg/m³
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x8x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.80 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.704 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 2.13 W/kg
SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.691 W/kg
Maximum value of SAR (measured) = 1.45 W/kg

T34_GSM 1900_GPRS_CH810_Bottom Side_10mm _ANT Main

DUT: Smart Phone;

Communication System: UID 0, GPRS 10 (0); Frequency: 1909.8 MHz; Duty Cycle: 1:4.00037
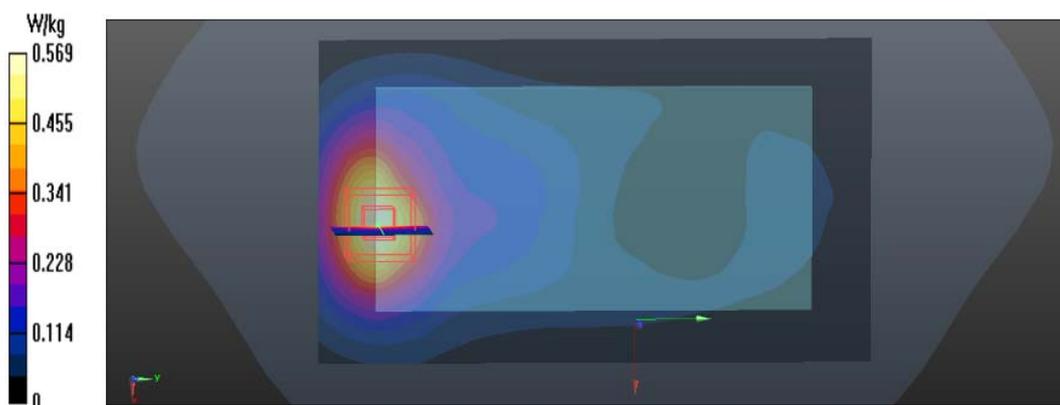Medium parameters used: f = 1910 MHz; σ = 1.563 S/m; ε_r = 52.992; ρ = 1000 kg/m³
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x8x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.80 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.614 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 2.18 W/kg
SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.697 W/kg
Maximum value of SAR (measured) = 1.43 W/kg

T21_GSM 1900_GSM_CH661_Right Cheek _ANT Main

DUT: Smart Phone;

Communication System: UID 0, Generic GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.30042
Medium parameters used: f = 1880 MHz; σ = 1.399 S/m; ε_r = 39.208; ρ = 1000 kg/m^3
Ambient Temperature : 20.9 ℃; Liquid Temperature : 21.4 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.23, 8.23, 8.23); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.167 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.926 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.190 W/kg
SAR(1 g) = 0.131 W/kg; SAR(10 g) = 0.086 W/kg
Maximum value of SAR (measured) = 0.139 W/kg
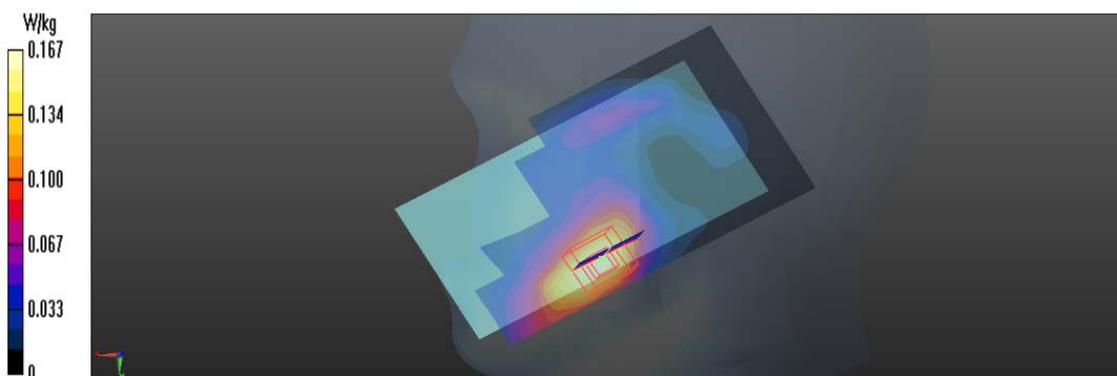
T40_GSM 1900_GSM_CH661_Rear Face_15mm _ANT Sub

DUT: Smart Phone;

Communication System: UID 0, Generic GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.30042
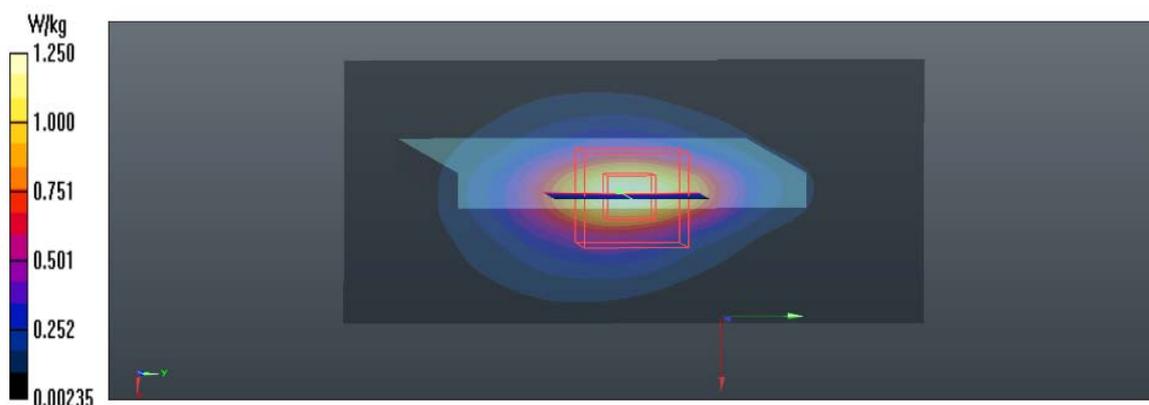Medium parameters used: f = 1880 MHz; σ = 1.528 S/m; ε_r = 53.058; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0881 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.440 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.104 W/kg
SAR(1 g) = 0.070 W/kg; SAR(10 g) = 0.045 W/kg
Maximum value of SAR (measured) = 0.0746 W/kg

T46_GSM 1900_GPRS 10_CH661_Top Side_10mm _SIM_ANT Sub

DUT: Smart Phone;
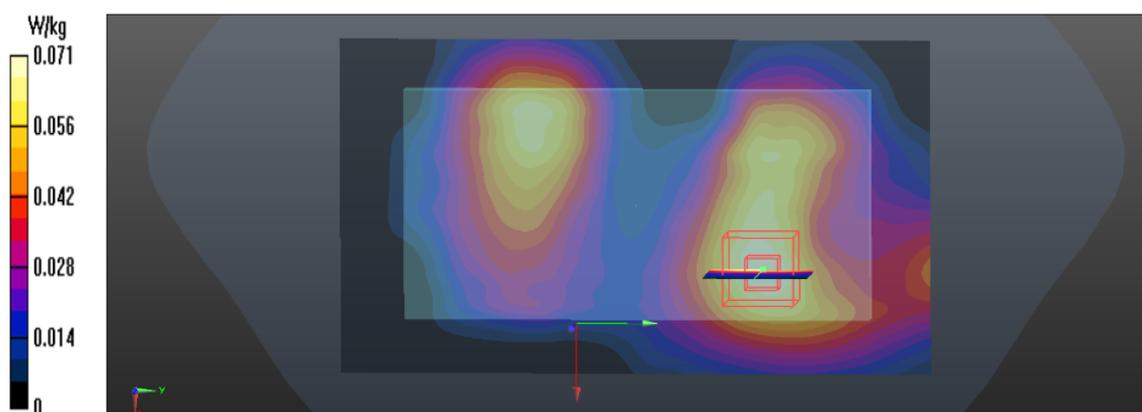
Communication System: UID 0, GPRS 10 (0); Frequency: 1880 MHz; Duty Cycle: 1:4.00037
Medium parameters used: f = 1880 MHz; σ = 1.528 S/m; $ε_r$ = 53.058; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x7x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.262 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.398 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.346 W/kg
SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.098 W/kg
Maximum value of SAR (measured) = 0.221 W/kg

T47_GSM 1900_GPRS 10_CH661_Top Side_10mm _SIM_ANT Sub

DUT: Smart Phone;
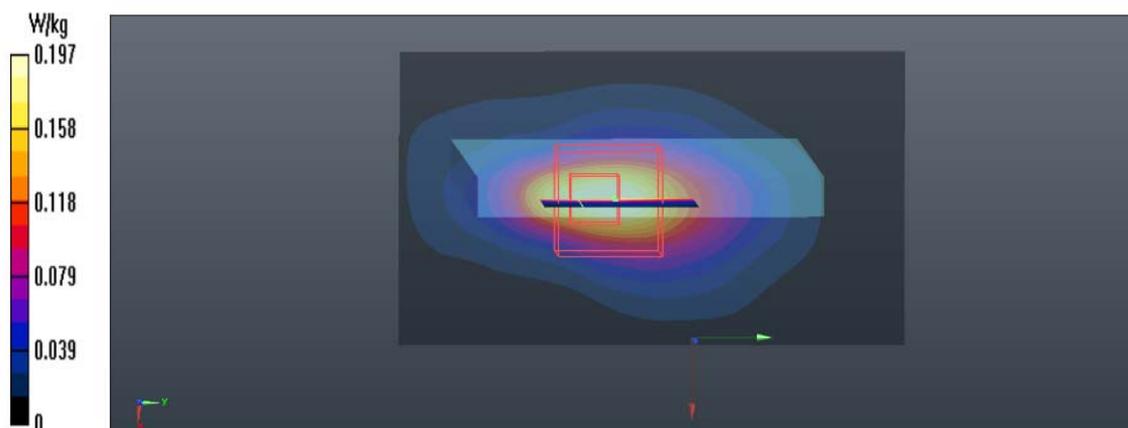
Communication System: UID 0, GPRS 10 (0); Frequency: 1880 MHz; Duty Cycle: 1:4.00037
Medium parameters used: f = 1880 MHz; σ = 1.528 S/m; ε_r = 53.058; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x7x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.275 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.767 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.326 W/kg
SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.099 W/kg
Maximum value of SAR (measured) = 0.220 W/kg
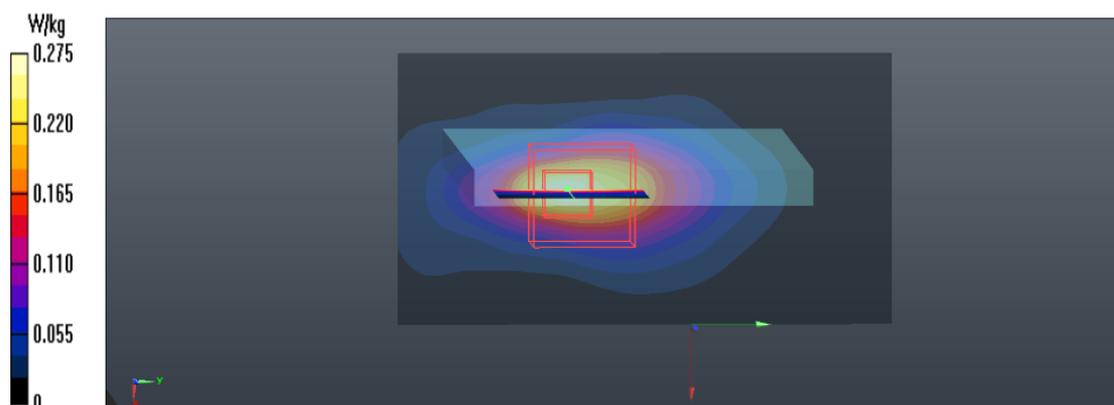
T30_GSM 1900_GSM_CH810_Right Cheek_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, Generic GSM (0); Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042
Medium parameters used: f = 1910 MHz; σ = 1.435 S/m; ε_r = 39.054; ρ = 1000 kg/m^3
Ambient Temperature : 20.9 ℃; Liquid Temperature : 21.4 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.23, 8.23, 8.23); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.75 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.712 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.88 W/kg
SAR(1 g) = 0.938 W/kg; SAR(10 g) = 0.521 W/kg
Maximum value of SAR (measured) = 0.981 W/kg

T48_WCDMA Band II_RMC12.2K_CH9400_Rear Face_15mm_ANT Main

DUT: Smart Phone;
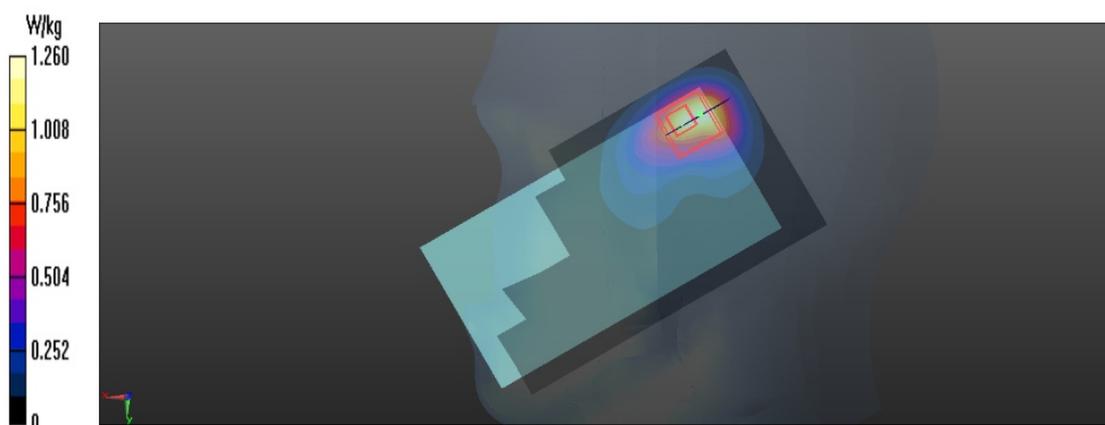
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.528 S/m; ε_r = 53.058; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.569 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.730 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.695 W/kg
SAR(1 g) = 0.455 W/kg; SAR(10 g) = 0.276 W/kg
Maximum value of SAR (measured) = 0.493 W/kg

T59_WCDMA Band II_RMC12.2K_CH9400_Bottom Side_10mm_battery 2_ANT Main

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.528 S/m; ε_r = 53.058; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x8x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.25 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.091 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.901 W/kg; SAR(10 g) = 0.482 W/kg
Maximum value of SAR (measured) = 1.01 W/kg

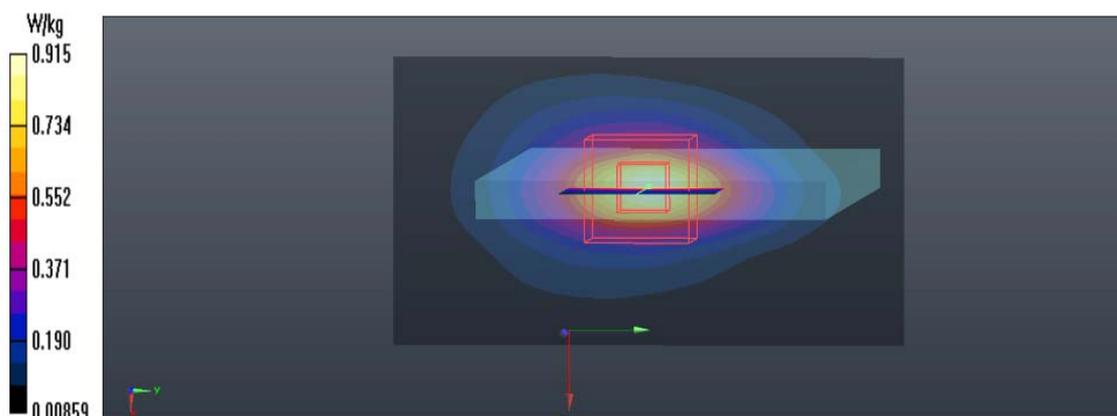**T36_WCDMA II_RMC12.2K_CH9400_Right Cheek _ANT Main**

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.399 S/m; ε_r = 39.208; ρ = 1000 kg/m^3
Ambient Temperature : 20.9 ℃; Liquid Temperature : 21.4 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.23, 8.23, 8.23); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.277 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.486 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.306 W/kg
SAR(1 g) = 0.217 W/kg; SAR(10 g) = 0.142 W/kg
Maximum value of SAR (measured) = 0.234 W/kg

T62_WCDMA Band II_RMC12.2K_CH9400_Rear Face_15mm_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1
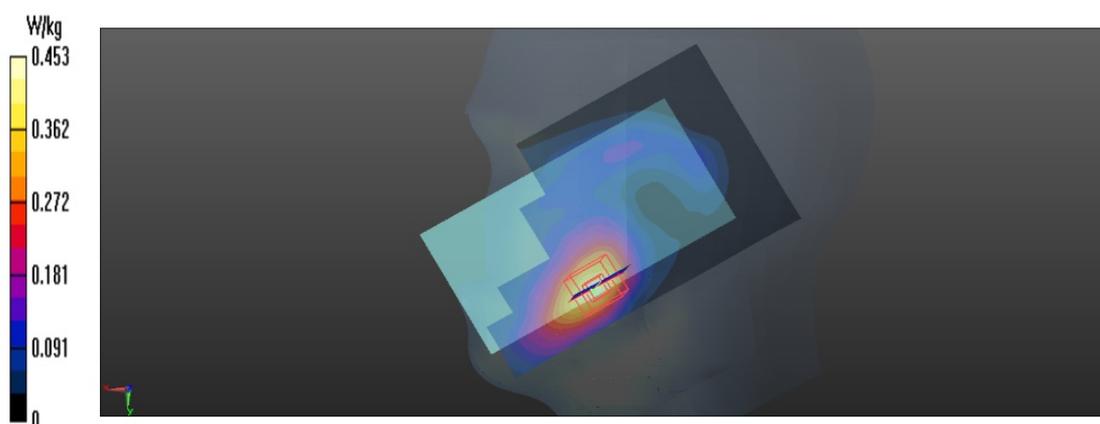Medium parameters used: f = 1880 MHz; σ = 1.528 S/m; ε_r = 53.058; ρ = 1000 kg/m³
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0706 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.415 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.0800 W/kg
SAR(1 g) = 0.054 W/kg; SAR(10 g) = 0.035 W/kg
Maximum value of SAR (measured) = 0.0581 W/kg

T68_WCDMA Band II_RMC12.2K_CH9400_Top Side_10mm_ANT Sub

DUT: Smart Phone;
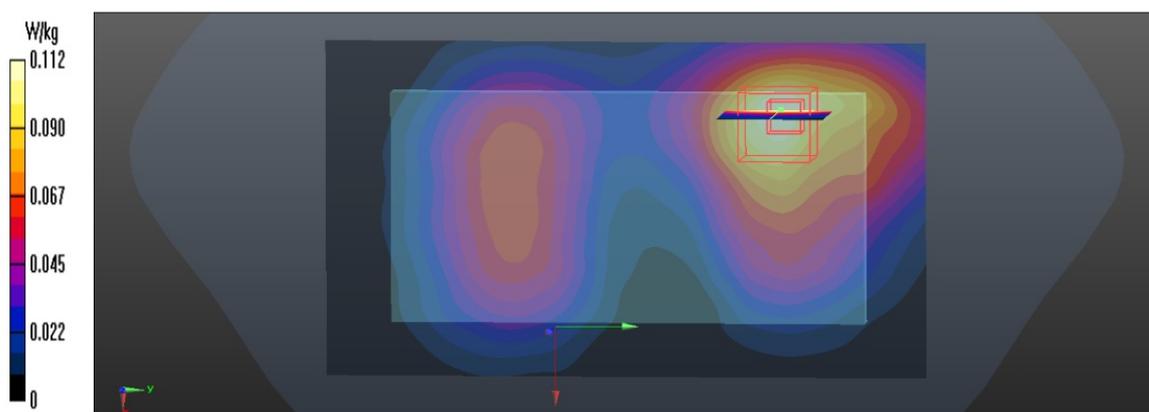
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.528 S/m; ε_r = 53.058; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x7x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.197 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.342 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.252 W/kg
SAR(1 g) = 0.144 W/kg; SAR(10 g) = 0.074 W/kg
Maximum value of SAR (measured) = 0.163 W/kg

T39_WCDMA II_RMC12.2K_CH9538_Right Cheek _ANT Sub

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1908 MHz; σ = 1.433 S/m; $ε_r$ = 39.062; ρ = 1000 kg/m^3
Ambient Temperature : 20.9 ℃; Liquid Temperature : 21.4 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.23, 8.23, 8.23); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.26 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.472 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.730 W/kg; SAR(10 g) = 0.401 W/kg
Maximum value of SAR (measured) = 0.775 W/kg

T72_WCDMA Band IV_RMC12.2K_CH1413_Rear Face_15mm_ANT Main

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

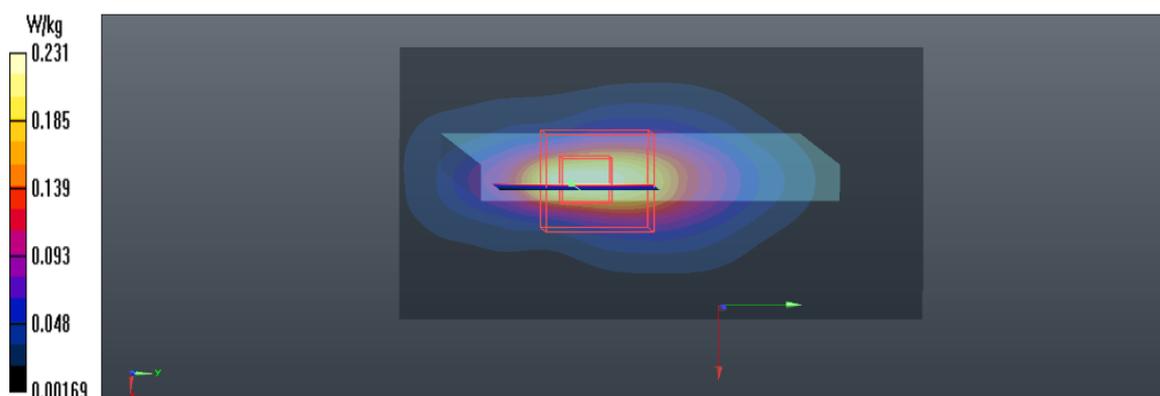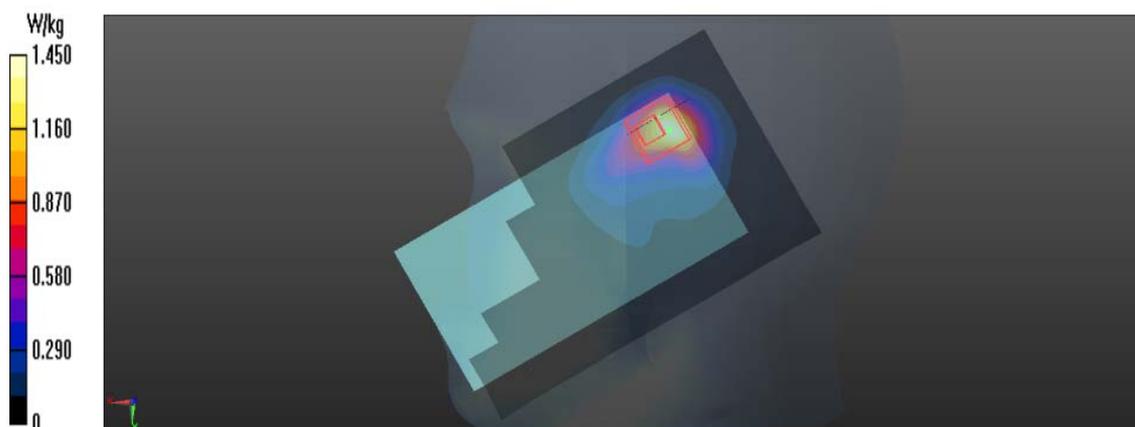Medium parameters used: f = 1733 MHz; σ = 1.438 S/m; ε_r = 54.255; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.08, 8.08, 8.08); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.729 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.626 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.904 W/kg
SAR(1 g) = 0.590 W/kg; SAR(10 g) = 0.369 W/kg
Maximum value of SAR (measured) = 0.648 W/kg
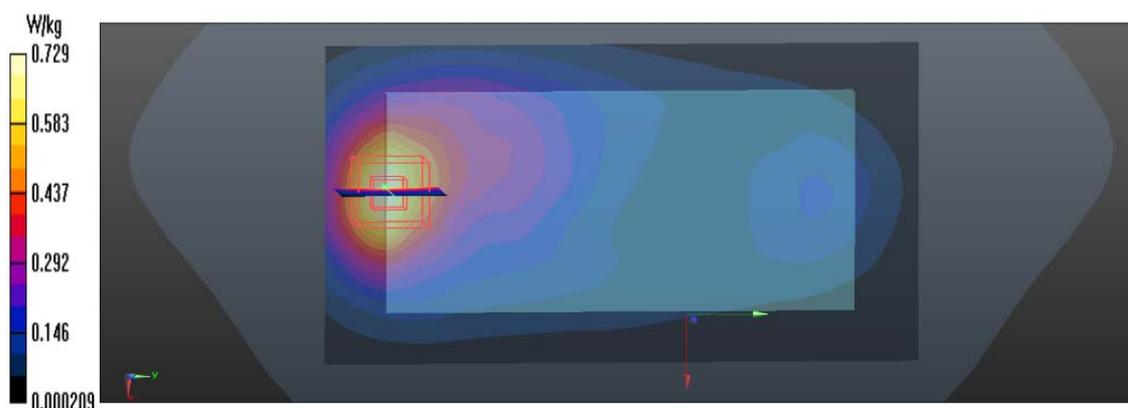
T80_WCDMA Band IV_RMC12.2K_CH1413_Bottom Side_10mm_ANT Main

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1733 MHz; σ = 1.438 S/m; ε_r = 54.255; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.08, 8.08, 8.08); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x7x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.915 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.127 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.655 W/kg; SAR(10 g) = 0.361 W/kg
Maximum value of SAR (measured) = 0.747 W/kg

T48_ WCDMA Band IV _RMC12.2K_CH1413_Right Cheek _ANT Main

DUT: Smart Phone;
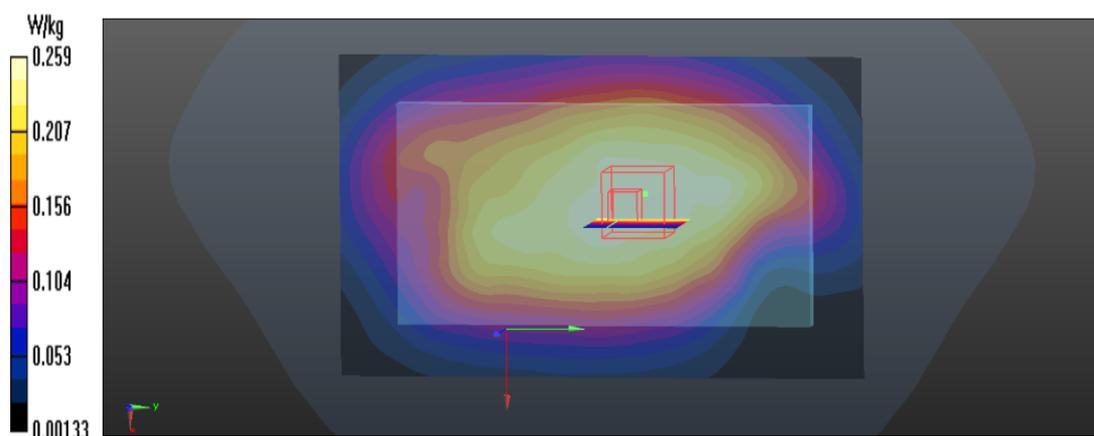
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1733 MHz; σ = 1.352 S/m; ε_r = 41.238; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.42, 8.42, 8.42); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.453 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.806 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.483 W/kg
SAR(1 g) = 0.333 W/kg; SAR(10 g) = 0.215 W/kg
Maximum value of SAR (measured) = 0.360 W/kg

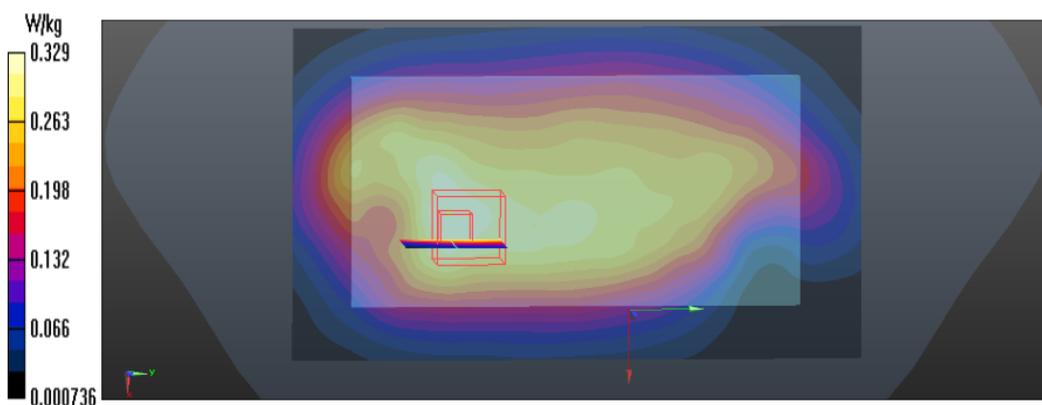**T86_WCDMA Band IV_RMC12.2K_CH1413_Front Face_15mm_ANT Sub**

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1733 MHz; σ = 1.438 S/m; ε_r = 54.255; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.08, 8.08, 8.08); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.112 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.631 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.126 W/kg
SAR(1 g) = 0.091 W/kg; SAR(10 g) = 0.060 W/kg
Maximum value of SAR (measured) = 0.0953 W/kg

T92_WCDMA Band IV_RMC12.2K_CH1413_Top Side_10mm_ANT Sub

DUT: Smart Phone;
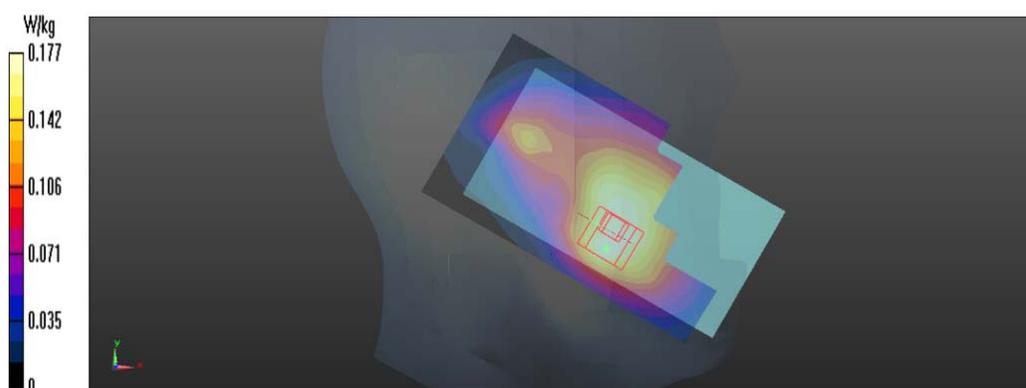
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1733 MHz; σ = 1.438 S/m; ε_r = 54.255; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.08, 8.08, 8.08); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x7x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.231 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.676 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.295 W/kg
SAR(1 g) = 0.172 W/kg; SAR(10 g) = 0.089 W/kg
Maximum value of SAR (measured) = 0.192 W/kg

T57_WCDMA IV_RMC12.2K_CH1513_Right Cheek_ ANT Sub

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1753 MHz; σ = 1.375 S/m; ε_r = 41.132; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃ ; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.42, 8.42, 8.42); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.45 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.677 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.771 W/kg; SAR(10 g) = 0.418 W/kg
Maximum value of SAR (measured) = 0.834 W/kg

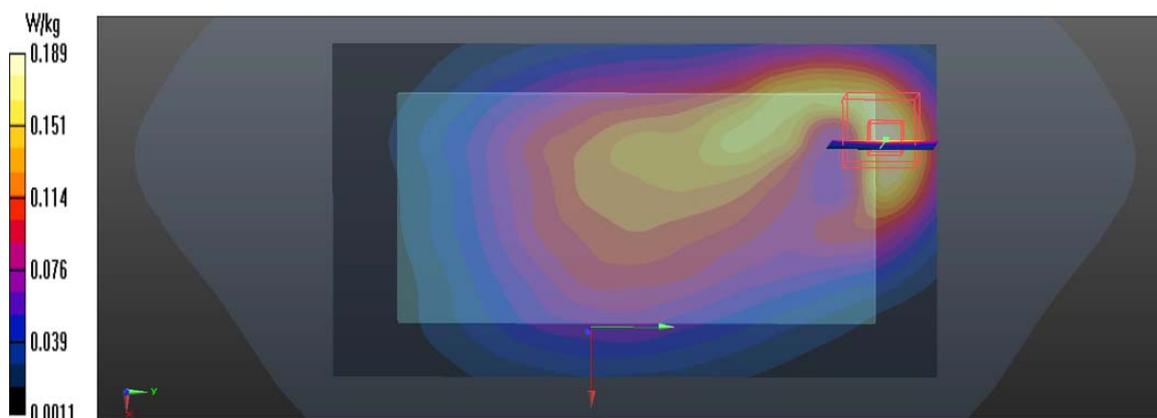**T94_WCDMA Band V_RMC12.2K_CH4182_RearFace_15mm_ANT Main**

DUT: Smart Phone;
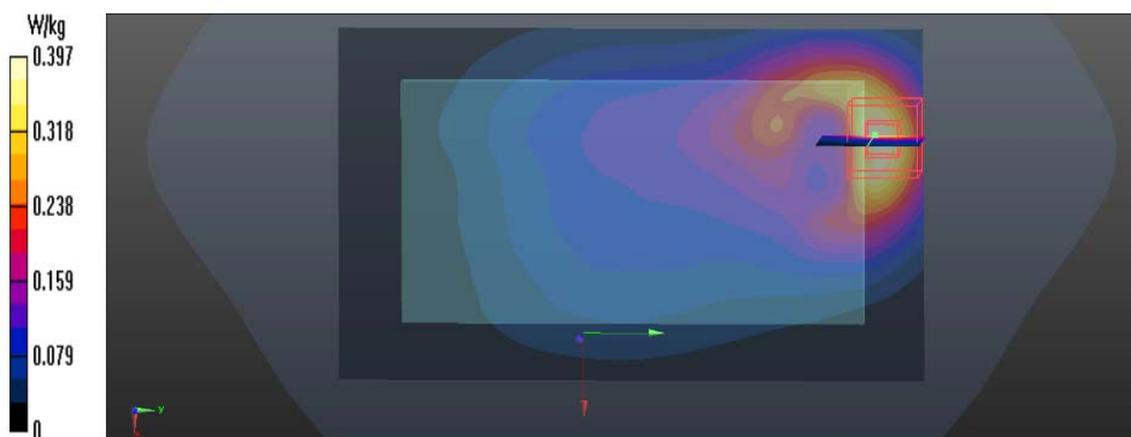
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 1.003 S/m; $ε_r$ = 57.161; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.259 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.044 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.274 W/kg
SAR(1 g) = 0.224 W/kg; SAR(10 g) = 0.180 W/kg
Maximum value of SAR (measured) = 0.233 W/kg

T97_WCDMA Band V_RMC12.2K_CH4182_RearFace_10mm_ANT Main

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 1.003 S/m; ε_r = 57.161; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014
- Phantom: SAM 1; Type: SAM; Serial: 1784
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.329 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.831 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.350 W/kg
SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.208 W/kg
Maximum value of SAR (measured) = 0.290 W/kg

T62_WCDMA Band V_RMC12.2K_CH4182_Left   Cheek_ ANT Main

DUT: Smart Phone;
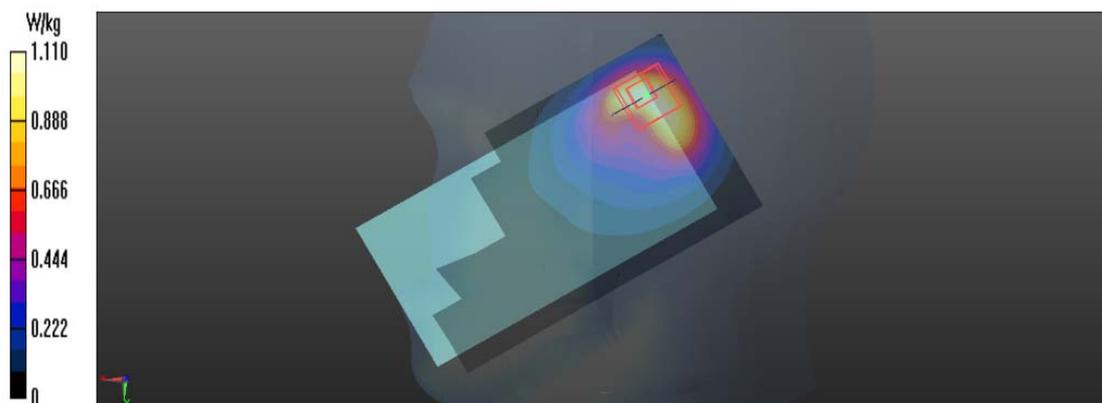
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.89 S/m; ε_r = 41.478; ρ = 1000 kg/m³
Ambient Temperature : 20.5 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(9.75, 9.75, 9.75); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.177 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.942 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.193 W/kg
SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.117 W/kg
Maximum value of SAR (measured) = 0.156 W/kg

T102_WCDMA Band V_RMC12.2K_CH4182_Front Face_15mm_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 1.003 S/m; ε_r = 57.161; ρ = 1000 kg/m^3
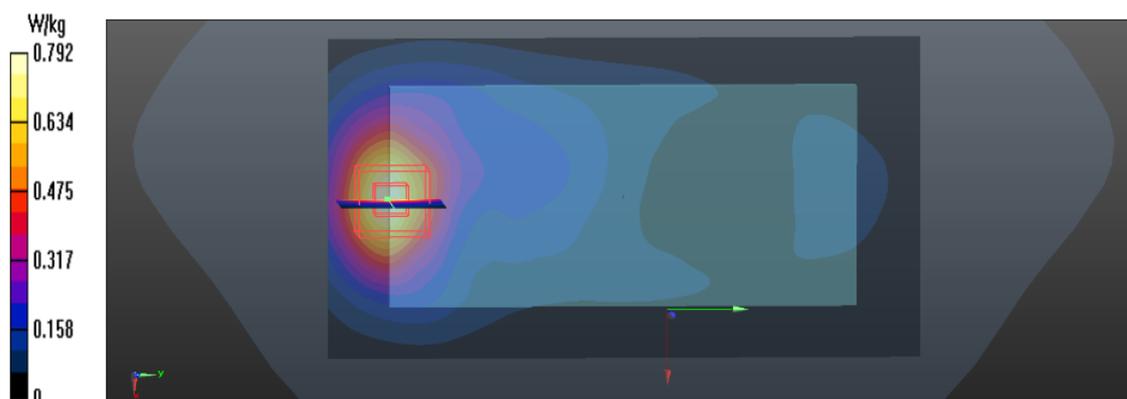Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.189 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.476 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.237 W/kg
SAR(1 g) = 0.144 W/kg; SAR(10 g) = 0.088 W/kg
Maximum value of SAR (measured) = 0.162 W/kg

T110_WCDMA Band V_RMC12.2K_CH4182_Front Face_10mm_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used: f = 837 MHz; σ = 1.003 S/m; ε_r = 57.161; ρ = 1000 kg/m^3
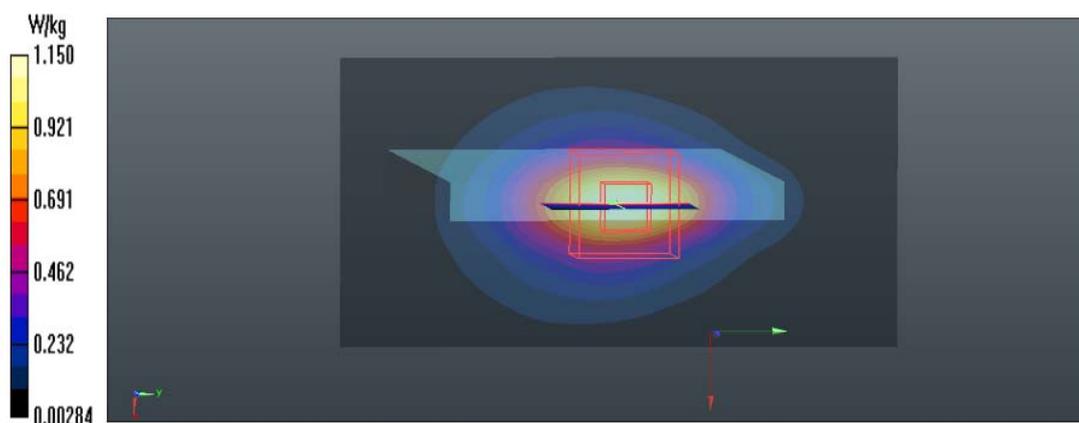Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.397 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.527 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.506 W/kg
SAR(1 g) = 0.291 W/kg; SAR(10 g) = 0.165 W/kg
Maximum value of SAR (measured) = 0.325 W/kg

T65_WCDMA Band V_RMC12.2K_CH4233_Right Cheek _ANT Sub

DUT: Smart Phone;

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 846.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.898 S/m; $ε_r$ = 41.352; ρ = 1000 kg/m³
Ambient Temperature : 20.5 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(9.75, 9.75, 9.75); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.11 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.574 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 0.796 W/kg; SAR(10 g) = 0.409 W/kg
Maximum value of SAR (measured) = 0.909 W/kg

T112_LTE 2_QPSK 20M_CH19100_1RB_Rear Face_15mm_ANT Main

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.553 S/m; ε_r = 52.993; ρ = 1000 kg/m^3
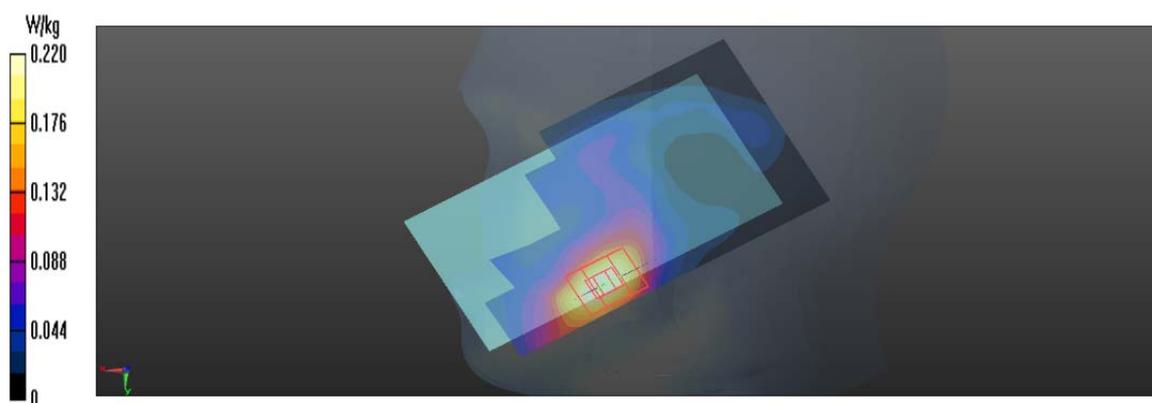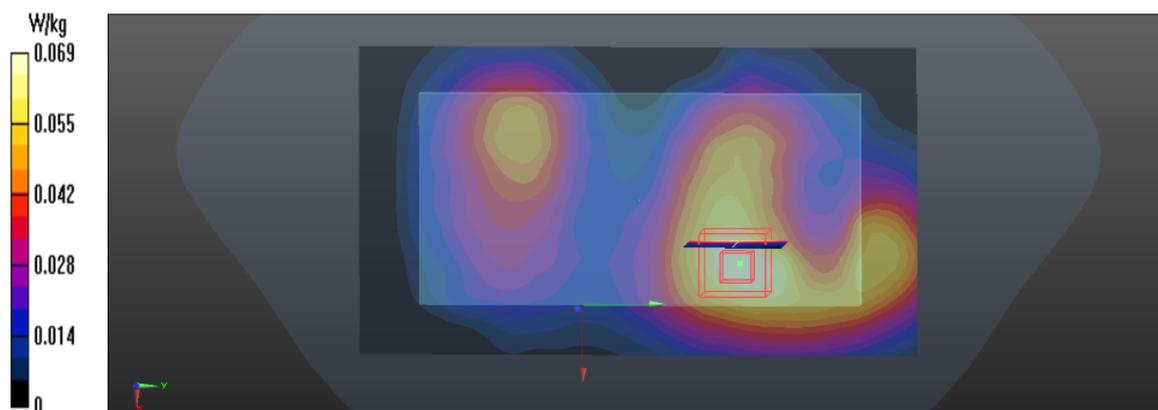Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.792 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.415 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.928 W/kg
SAR(1 g) = 0.610 W/kg; SAR(10 g) = 0.366 W/kg
Maximum value of SAR (measured) = 0.661 W/kg

T121_LTE 2_QPSK 20M_CH18700_1RB_Bottom Side_10mm_ANT Main

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1860 MHz; Duty Cycle: 1:1
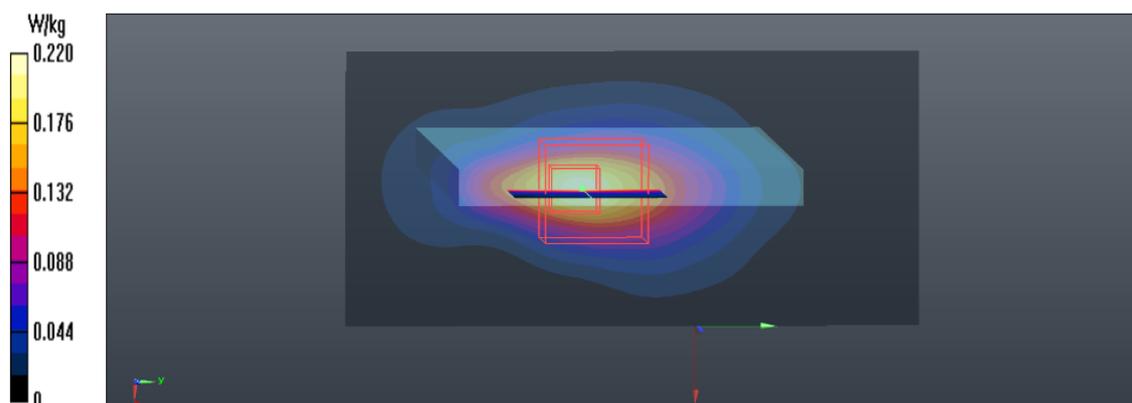Medium parameters used: f = 1860 MHz; σ = 1.5 S/m; ε_r = 53.155; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x8x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.15 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.791 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.855 W/kg; SAR(10 g) = 0.467 W/kg
Maximum value of SAR (measured) = 0.942 W/kg

T72_LTE 2_QPSK 20M_CH19100_1RB_Right Cheek _ANT Main

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1900 MHz; Duty Cycle: 1:1
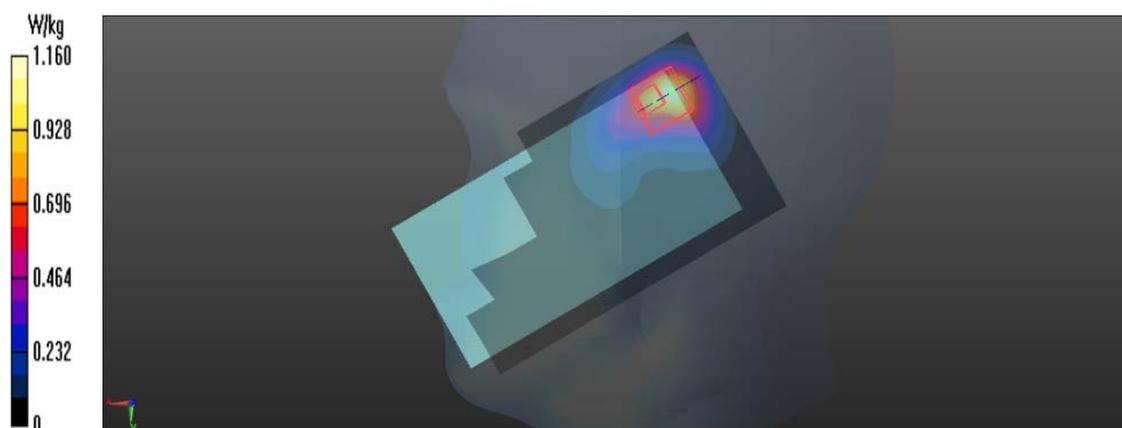Medium parameters used: f = 1900 MHz; σ = 1.424 S/m; $ε_r$ = 39.098; ρ = 1000 kg/m^3
Ambient Temperature : 20.9 ℃; Liquid Temperature : 21.4 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.23, 8.23, 8.23); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.220 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.221 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.272 W/kg
SAR(1 g) = 0.188 W/kg; SAR(10 g) = 0.120 W/kg
Maximum value of SAR (measured) = 0.204 W/kg

T135_LTE 2_QPSK 20M_CH19100_1RB_Rear Face_15mm_ANT Sub

DUT: Smart Phone;
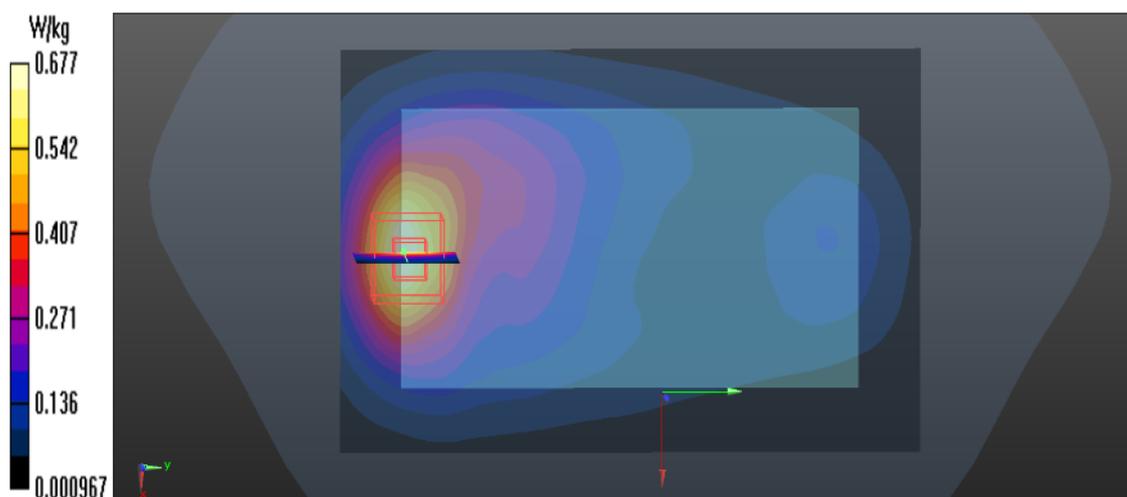
Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.553 S/m; ε_r = 52.993; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (71x121x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0692 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.032 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.0830 W/kg
SAR(1 g) = 0.054 W/kg; SAR(10 g) = 0.035 W/kg
Maximum value of SAR (measured) = 0.0573 W/kg

T143_LTE 2_QPSK 20M_CH19100_1RB_Top Side_10mm_ANT Sub

DUT: Smart Phone;
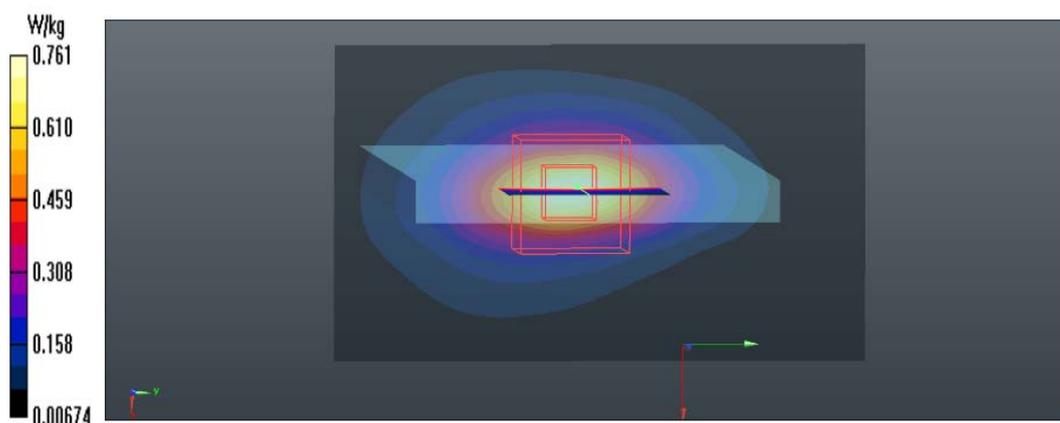
Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.553 S/m; $ε_r$ = 52.993; ρ = 1000 kg/m^3
Ambient Temperature : 20.8℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.86, 7.86, 7.86); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x8x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.220 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.333 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.267 W/kg
SAR(1 g) = 0.147 W/kg; SAR(10 g) = 0.076 W/kg
Maximum value of SAR (measured) = 0.167 W/kg

T81_LTE 2_QPSK 20M_CH19100_1RB_Right Cheek_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.424 S/m; ε_r = 39.098; ρ = 1000 kg/m^3
Ambient Temperature : 20.9 ℃; Liquid Temperature : 21.4 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.23, 8.23, 8.23); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.16 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.012 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.608 W/kg; SAR(10 g) = 0.346 W/kg
Maximum value of SAR (measured) = 0.641 W/kg

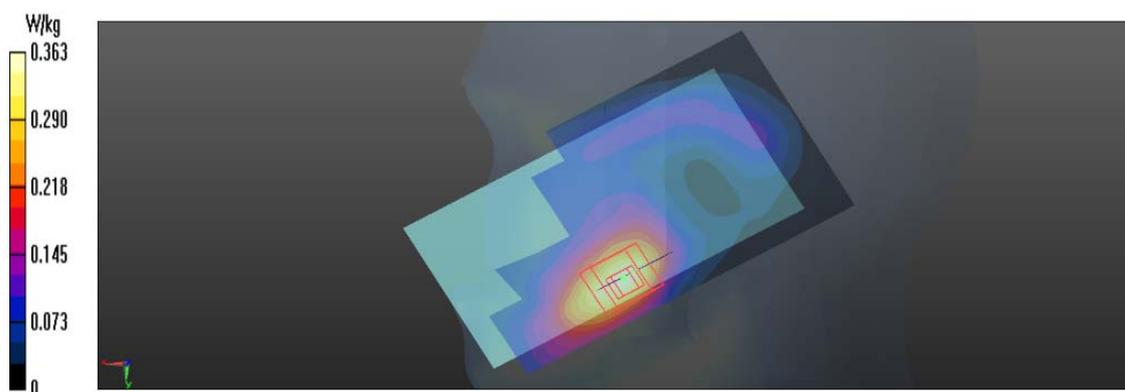**T151_LTE 4_QPSK 20M_CH20175_1RB_Rear Face_15mm_ANT Main**

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.438 S/m; ε_r = 54.257; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.08, 8.08, 8.08); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.677 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.049 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.806 W/kg
SAR(1 g) = 0.544 W/kg; SAR(10 g) = 0.337 W/kg.
Maximum value of SAR (measured) = 0.600 W/kg

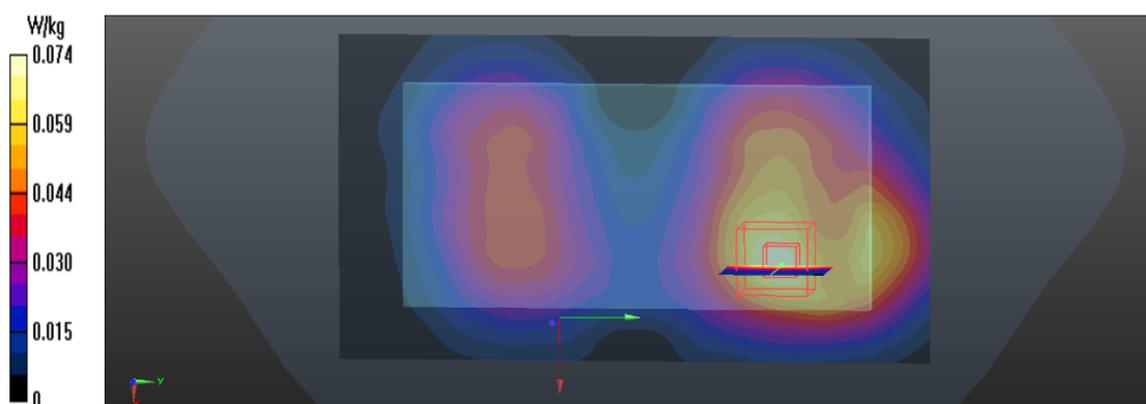**T164_LTE 4_QPSK 20M_CH20175_50%RB_Bottom Side_10mm_ANT Main**

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.438 S/m; ε_r = 54.257; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.08, 8.08, 8.08); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x7x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.761 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.838 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.877 W/kg
SAR(1 g) = 0.557 W/kg; SAR(10 g) = 0.307 W/kg
Maximum value of SAR (measured) = 0.634 W/kg

T99_LTE 4_QPSK 20M_CH20175_1RB_Right Cheek _ANT Main
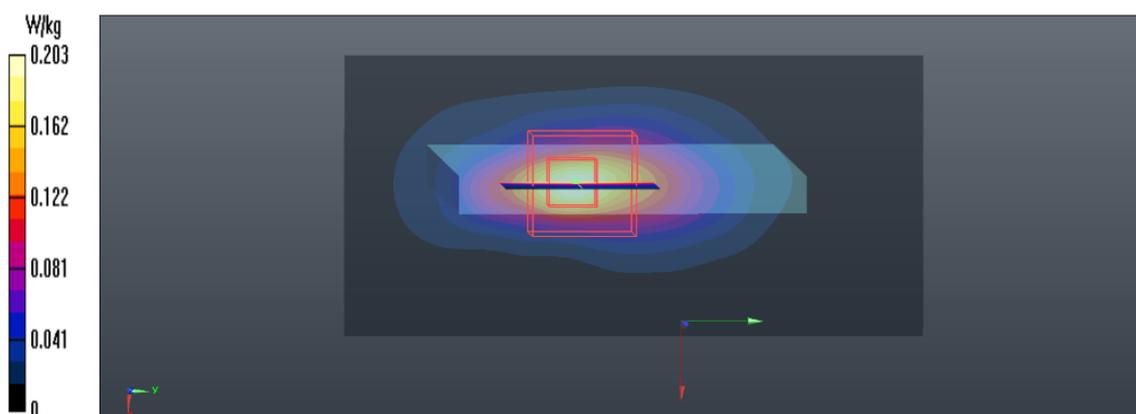
DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.351 S/m; $ε_r$ = 41.242; ρ = 1000 kg/m³
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.42, 8.42, 8.42); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.363 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.163 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.400 W/kg
SAR(1 g) = 0.269 W/kg; SAR(10 g) = 0.177 W/kg
Maximum value of SAR (measured) = 0.289 W/kg

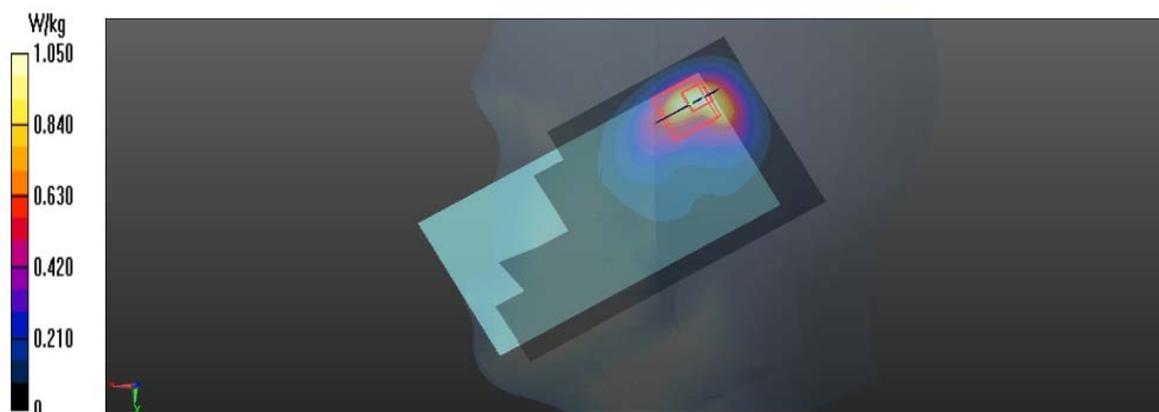**T167_LTE 4_QPSK 20M_CH20175_1RB_Rear Face_15mm_ANT Sub**

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1732.5 MHz; Duty Cycle:1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.438 S/m; ε_r = 54.257; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.08, 8.08, 8.08); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.0740 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.598 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.0790 W/kg
SAR(1 g) = 0.055 W/kg; SAR(10 g) = 0.036 W/kg
Maximum value of SAR (measured) = 0.0584 W/kg

T175_LTE 4_QPSK 20M_CH20175_1RB_Top Side_10mm_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1732.5 MHz; σ = 1.438 S/m; $ε_r$ = 54.257; ρ = 1000 kg/m³
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.08, 8.08, 8.08); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x8x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.203 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.874 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.254 W/kg
SAR(1 g) = 0.151 W/kg; SAR(10 g) = 0.078 W/kg
Maximum value of SAR (measured) = 0.173 W/kg

T100_LTE 4_QPSK 20M_CH20175_1RB_Right Cheek _ANT Sub
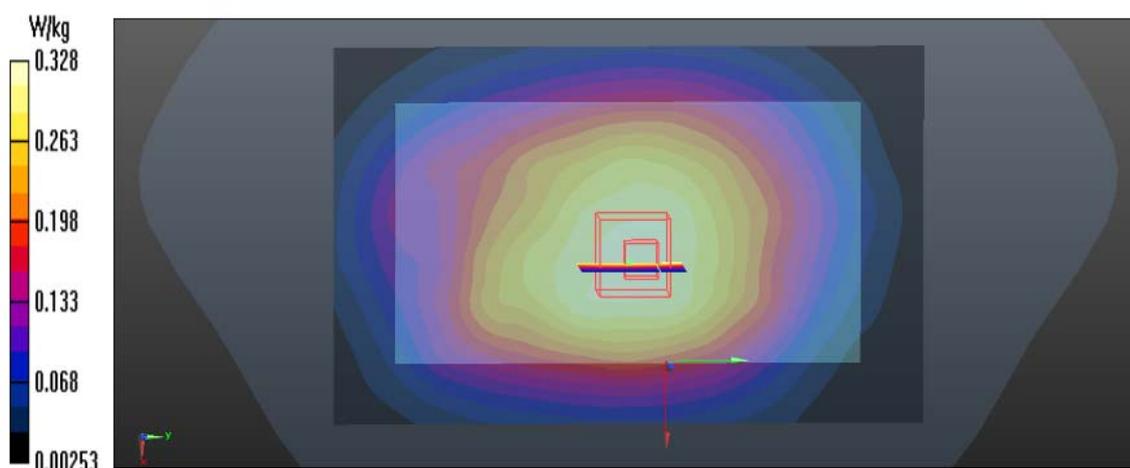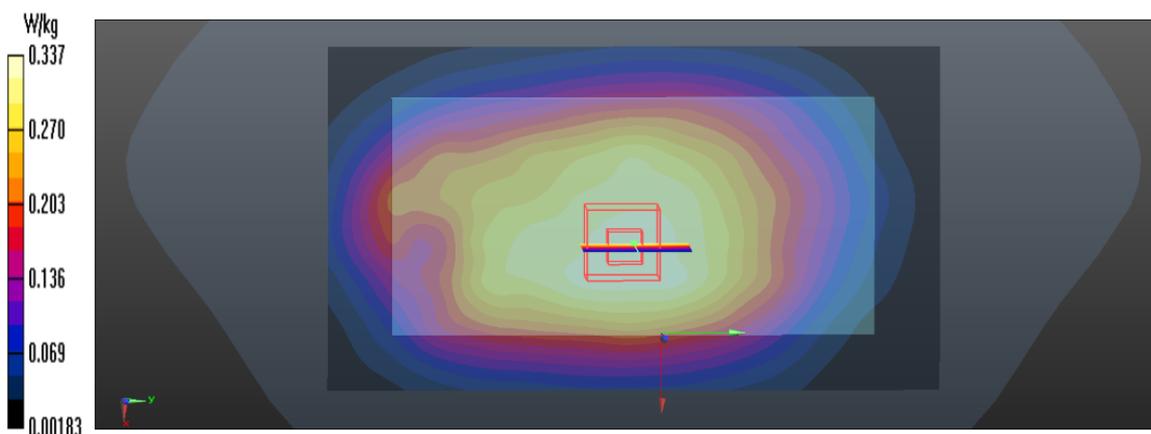
DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.5 MHz; σ = 1.351 S/m; ε_r = 41.242; ρ = 1000 kg/m^3
Ambient Temperature : 20.6 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(8.42, 8.42, 8.42); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.05 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.757 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.643 W/kg; SAR(10 g) = 0.340 W/kg
Maximum value of SAR (measured) = 0.739 W/kg

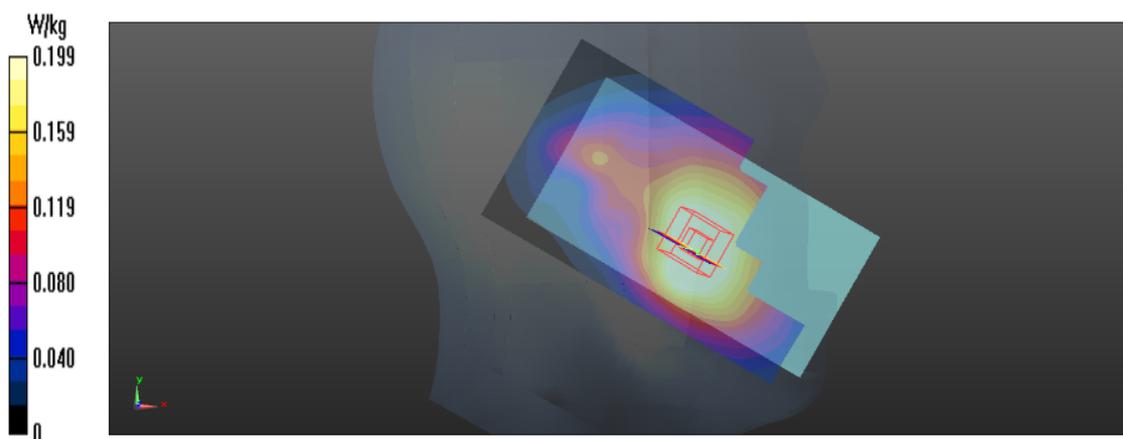**T183_LTE 5_QPSK 10M_CH20525_1RB_Rear Face_15mm_ANT Main**

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,10MHz,QPSK) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 1.002 S/m; ε_r = 57.165; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.328 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.870 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.338 W/kg
SAR(1 g) = 0.275 W/kg; SAR(10 g) = 0.221 W/kg
Maximum value of SAR (measured) = 0.287 W/kg

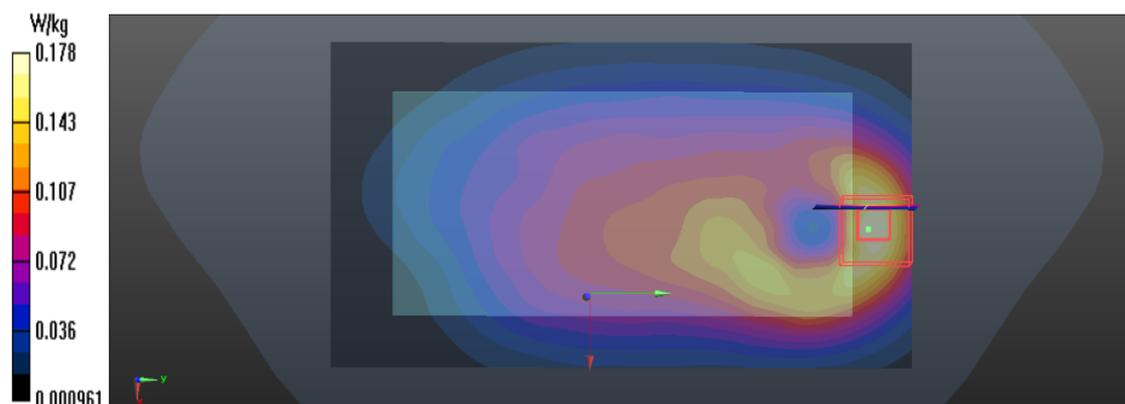**T188_LTE 5_QPSK 10M_CH20525_1RB_Rear Face_10mm_ANT Main**

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,10MHz,QPSK) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 1.002 S/m; ε_r = 57.165; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.337 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.072 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.357 W/kg
SAR(1 g) = 0.297 W/kg; SAR(10 g) = 0.235 W/kg
Maximum value of SAR (measured) = 0.311 W/kg

T114_LTE 5_QPSK 10M_CH20525_1RB_Left Cheek_ ANT Main

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,10MHz,QPSK) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.89 S/m; $ε_r$ = 41.479; ρ = 1000 kg/m^3
Ambient Temperature : 20.5 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(9.75, 9.75, 9.75); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (61x121x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.199 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.573 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.162 W/kg
SAR(1 g) = 0.129 W/kg; SAR(10 g) = 0.099 W/kg
Maximum value of SAR (measured) = 0.137 W/kg

T199_LTE 5_QPSK 10M_CH20525_1RB_Rear Face_15mm_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,10MHz,QPSK) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
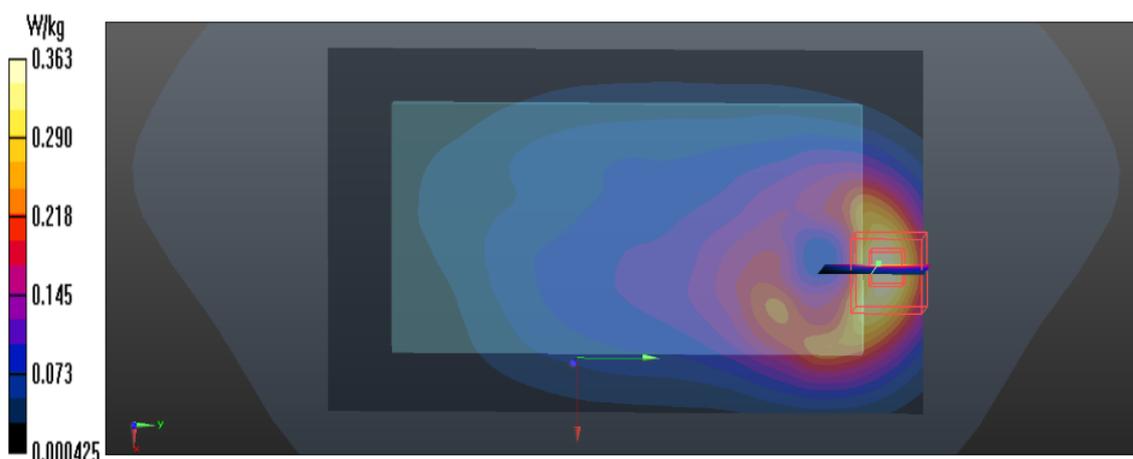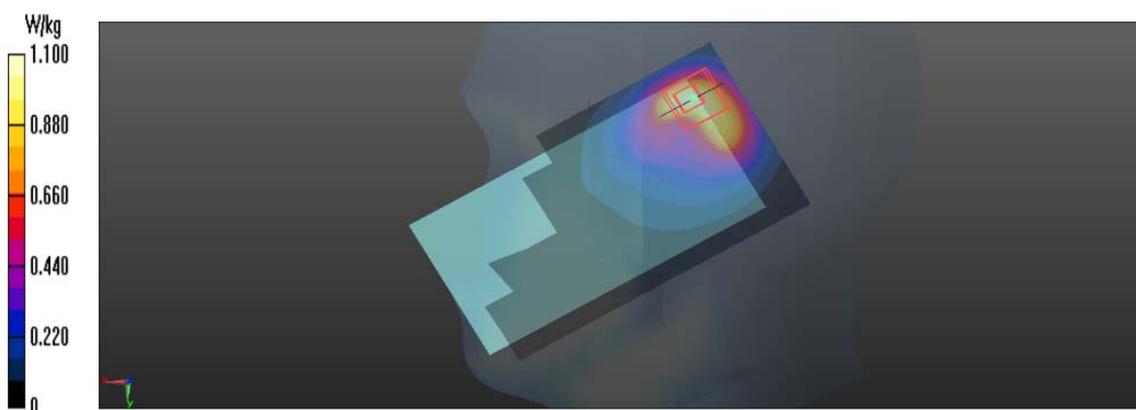Medium parameters used (interpolated): f = 836.5 MHz; σ = 1.002 S/m; ε_r = 57.165; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), Sensor-Surface: z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.178 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.052 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.214 W/kg
SAR(1 g) = 0.133 W/kg; SAR(10 g) = 0.081 W/kg
Maximum value of SAR (measured) = 0.145 W/kg

T204_LTE 5_QPSK 10M_CH20525_1RB_Rear Face_10mm_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,10MHz,QPSK) (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium parameters used: f = 836.5 MHz; σ = 1.002 S/m; ε_r = 57.165; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(10.19, 10.19, 10.19); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.363 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.995 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.461 W/kg
SAR(1 g) = 0.267 W/kg; SAR(10 g) = 0.152 W/kg
Maximum value of SAR (measured) = 0.288 W/kg

T132_LTE 5_QPSK 10M_CH20600_1RB_Right Tilted_ ANT Sub

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,10MHz,QPSK) (0); Frequency: 844 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 844 MHz; σ = 0.896 S/m; ε_r = 41.385; ρ = 1000 kg/m^3
Ambient Temperature : 20.5 ℃; Liquid Temperature : 21.3 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(9.75, 9.75, 9.75); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (6x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 1.10 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.490 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 2.01 W/kg
SAR(1 g) = 0.846 W/kg; SAR(10 g) = 0.410 W/kg
Maximum value of SAR (measured) = 0.939 W/kg

T214_LTE 7_QPSK 20M_CH20850_1RB_Front Face_15mm_ANT Main

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 2510 MHz; Duty Cycle: 1:1
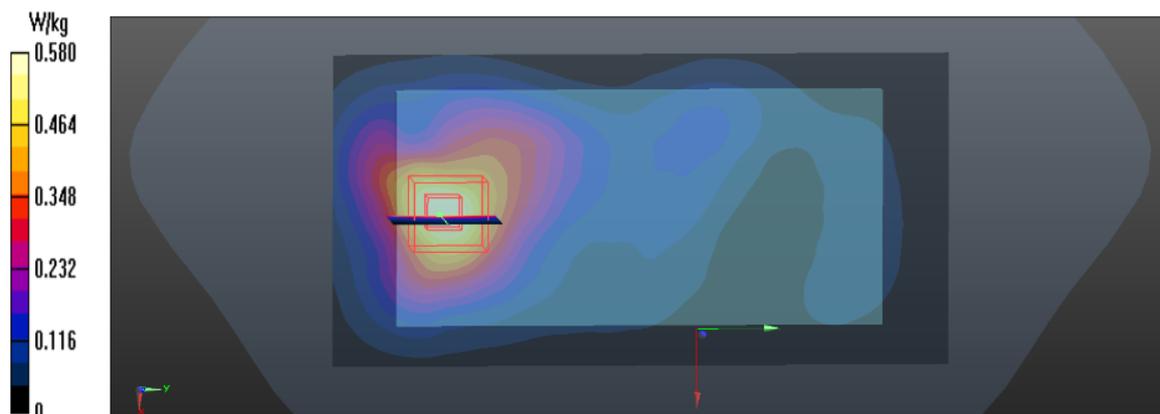Medium parameters used: f = 2510 MHz; σ = 2.076 S/m; ε_r = 52.656; ρ = 1000 kg/m^3
Ambient Temperature : 20.7 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.6, 7.6, 7.6); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (8x15x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.580 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.447 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.737 W/kg
SAR(1 g) = 0.416 W/kg; SAR(10 g) = 0.230 W/kg
Maximum value of SAR (measured) = 0.455 W/kg

T232_LTE 7_QPSK 20M_CH20850_50%RB_Bottom Side_10mm_ANT Main

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(50% RB, 20MHz, QPSK) (0); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.076 S/m; ε_r = 52.656; ρ = 1000 kg/m^3
Ambient Temperature : 20.7 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.6, 7.6, 7.6); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (5x10x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 1.25 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.702 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.811 W/kg; SAR(10 g) = 0.413 W/kg
Maximum value of SAR (measured) = 0.890 W/kg
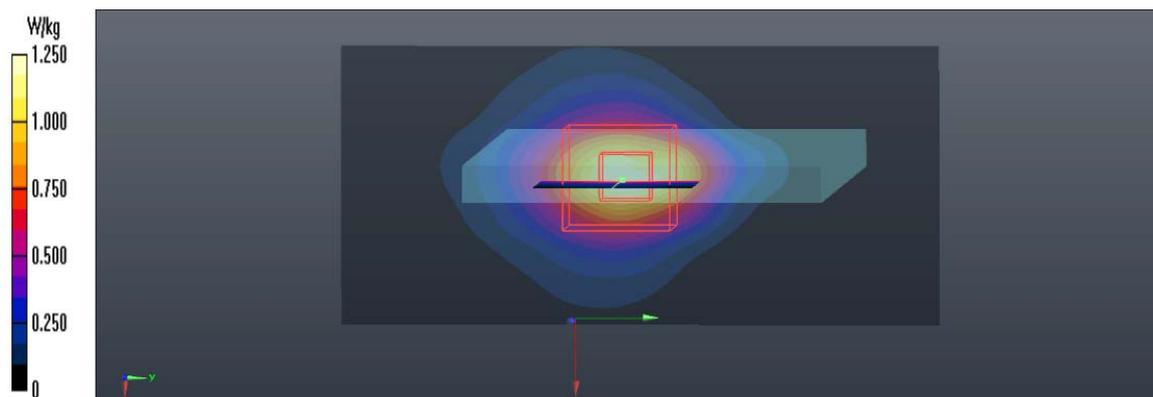
T141_LTE 7_QPSK 20M_CH20850_1RB_Left Cheek_ ANT Main

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 2510 MHz; Duty Cycle: 1:1

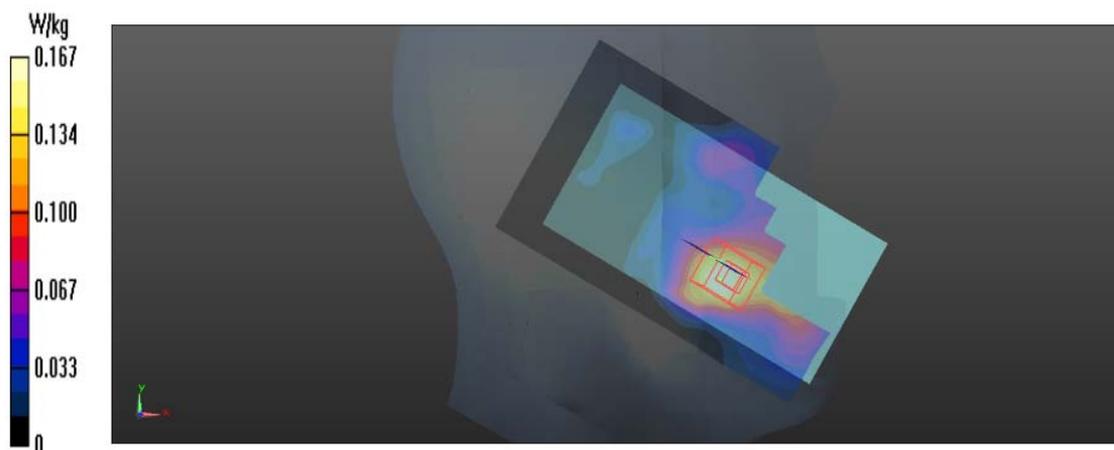Medium parameters used: f = 2510 MHz; σ = 1.952 S/m; ε_r = 37.928; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.6 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.38, 7.38, 7.38); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (8x15x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.167 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.275 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.194 W/kg
SAR(1 g) = 0.126 W/kg; SAR(10 g) = 0.059 W/kg
Maximum value of SAR (measured) = 0.135 W/kg

T233_LTE 7_QPSK 20M_CH20850_1RB_Front Face_15mm_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 2510 MHz; Duty Cycle: 1:1
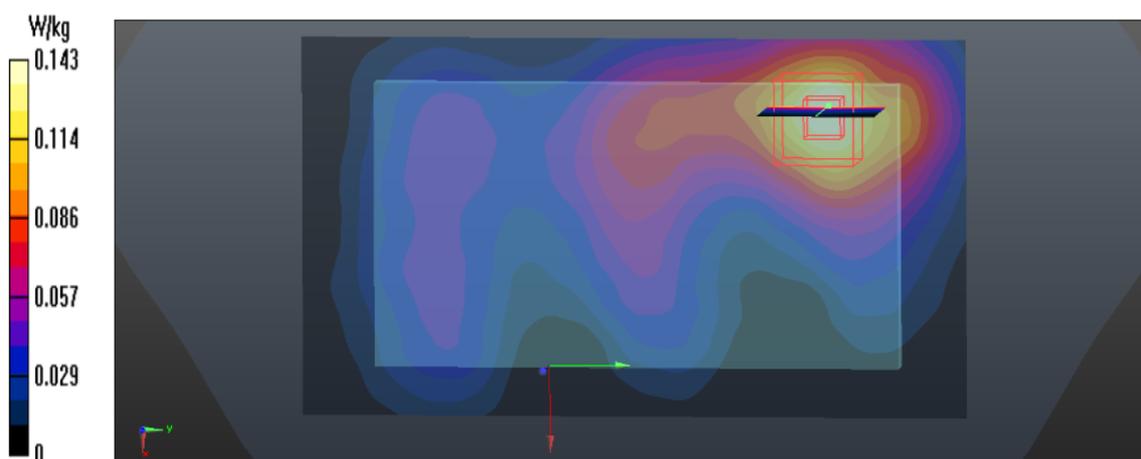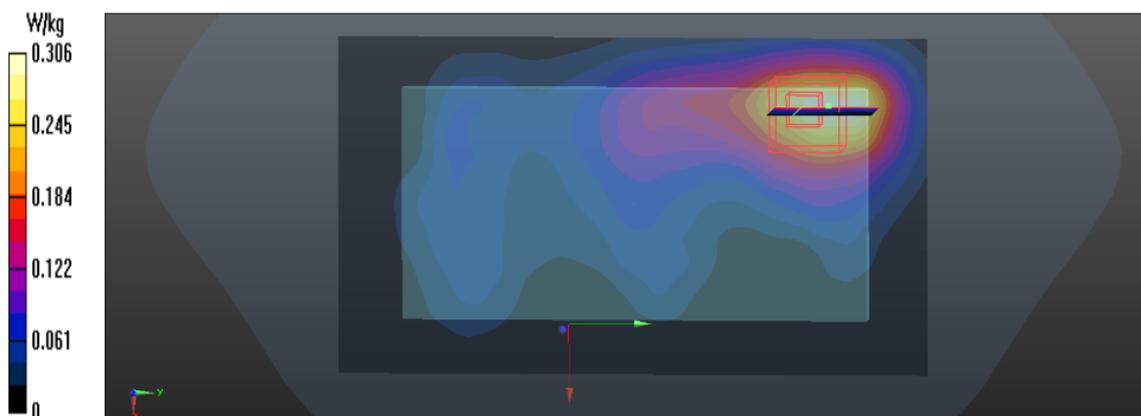Medium parameters used: f = 2510 MHz; σ = 2.076 S/m; ε_r = 52.656; ρ = 1000 kg/m^3
Ambient Temperature : 20.7 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.6, 7.6, 7.6); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (8x15x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.143 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.454 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.178 W/kg
SAR(1 g) = 0.100 W/kg; SAR(10 g) = 0.056 W/kg
Maximum value of SAR (measured) = 0.111 W/kg

T238_LTE 7_QPSK 20M_CH20850_1RB_Front Face_10mm_ANT Sub

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.076 S/m; ε_r = 52.656; ρ = 1000 kg/m^3
Ambient Temperature : 20.7 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.6, 7.6, 7.6); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (7x12x1): Interpolated grid: dx=15 mm, dy=15 mm
Maximum value of SAR (interpolated) = 0.306 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.180 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.403 W/kg
SAR(1 g) = 0.219 W/kg; SAR(10 g) = 0.117 W/kg
Maximum value of SAR (measured) = 0.247 W/kg

T150_LTE 7_QPSK 20M_CH20850_1RB_Right Cheek _ANT Sub

DUT: Smart Phone;

Communication System: UID 0, LTE-FDD(1RB,20MHz,QPSK) (0); Frequency: 2510 MHz; Duty Cycle: 1:1
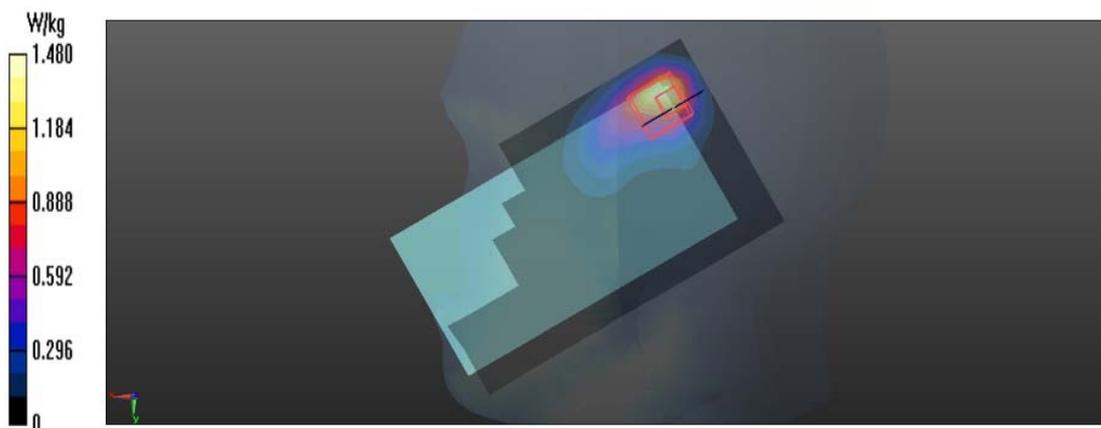Medium parameters used: f = 2510 MHz; σ = 1.952 S/m; ε_r = 37.928; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.6 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.38, 7.38, 7.38); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (8x15x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 1.48 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.268 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 0.753 W/kg; SAR(10 g) = 0.374 W/kg
Maximum value of SAR (measured) = 0.838 W/kg

T251_2.4G WIFI_802.11b_CH1_Front Face_15mm

DUT: Smart Phone;

Communication System: UID 0, IEEE 802.11b WiFi 2.4GHz (DSSS,1Mbps) (0); Frequency: 2412 MHz;

Duty Cycle: 1:1

Medium parameters used: f = 2412 MHz; σ = 1.945 S/m; ε_r = 51.855; ρ = 1000 kg/m^3
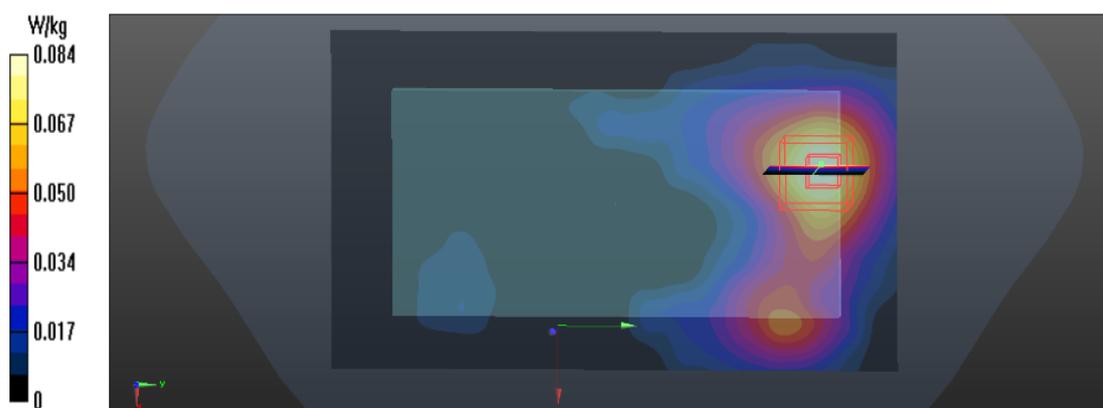Ambient Temperature : 20.7 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.6, 7.6, 7.6); Calibrated: 01/30/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection),z = 1.0, 31.0
- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014
- Phantom: SAM 1; Type: SAM; Serial: 1784
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (9x15x1): Interpolated grid: dx=12 mm, dy=12 mm
Maximum value of SAR (interpolated) = 0.0840 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.242 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.102 W/kg
SAR(1 g) = 0.062 W/kg; SAR(10 g) = 0.035 W/kg
Maximum value of SAR (measured) = 0.0682 W/kg

T256_2.4G WIFI_802.11b_CH1_Top Side_10mm

DUT: Smart Phone;

Communication System: UID 0, IEEE 802.11b WiFi 2.4GHz (DSSS,1Mbps) (0); Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: f = 2412 MHz; σ = 1.945 S/m; ε_r = 51.855; ρ = 1000 kg/m^3

Ambient Temperature : 20.7 ℃; Liquid Temperature : 21.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.6, 7.6, 7.6); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (4x9x1): Interpolated grid: dx=12 mm, dy=12 mm
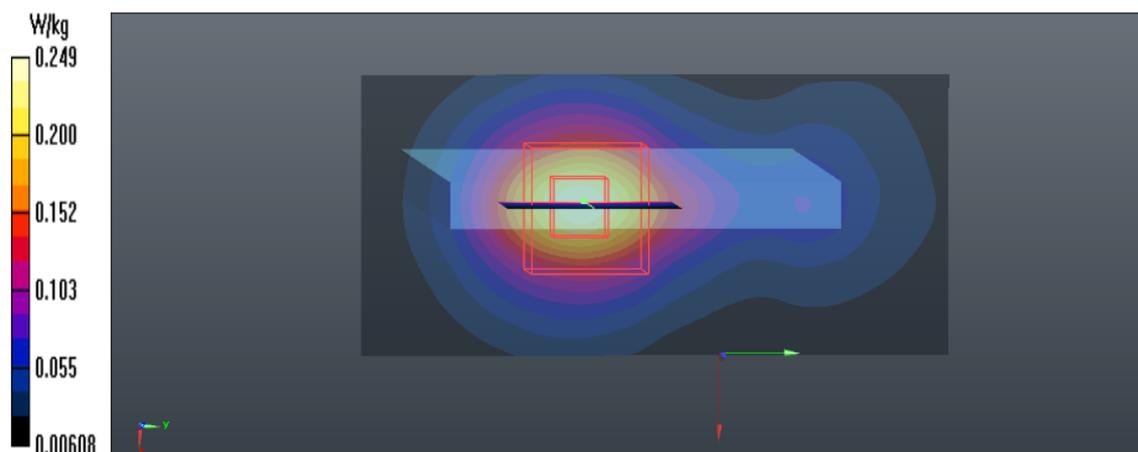Maximum value of SAR (interpolated) = 0.249 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.489 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.292 W/kg
SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.086 W/kg
Maximum value of SAR (measured) = 0.186 W/kg

T158_2.4G WIFI_802.11b_CH6_Left   Cheek

DUT: Smart Phone;

Communication System: UID 0, IEEE 802.11b WiFi 2.4GHz (DSSS,1Mbps) (0); Frequency: 2437 MHz;

Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.861 S/m; ε_r = 38.309; ρ = 1000 kg/m^3
Ambient Temperature : 20.8 ℃; Liquid Temperature : 21.6 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3932; ConvF(7.38, 7.38, 7.38); Calibrated: 01/30/2015;

- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0

- Electronics: DAE4 Sn1390; Calibrated: 09/15/2014

- Phantom: SAM 1; Type: SAM; Serial: 1784

- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Area Scan (8x15x1): Interpolated grid: dx=12 mm, dy=12 mm
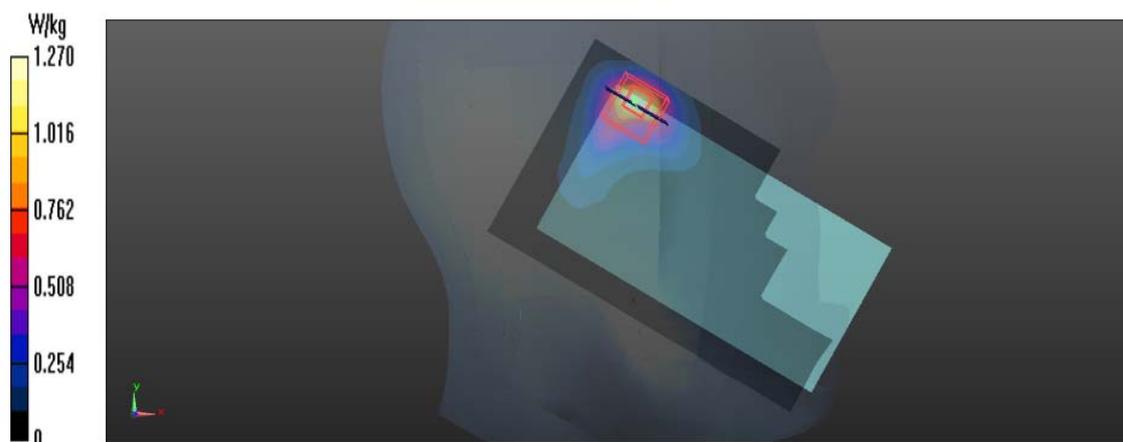Maximum value of SAR (interpolated) = 1.27 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.230 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 0.680 W/kg; SAR(10 g) = 0.325 W/kg
Maximum value of SAR (measured) = 0.743 W/kg

4. Calibration Certificate

(Pls See Appendix A.)

5. EUT Testing Position
(Pls See Appendix B.)