FCC SAR REPORT

Applicant:	Sun Cupid Technology (HK) Ltd.
Address of Applicant:	16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.
Equipment Under Test (EUT)	
Product Name:	LTE Smart phone
Model No.:	A6L-C, A6LC
Trade mark	NUU
FCC ID:	2ADINA6LC
Applicable standards:	FCC 47 CFR Part 2.1093
Date of Test:	23 Aug., 2018 ~ 21 Sep., 2018
Test Result:	Maximum Reported 1-g SAR (W/kg) Head: 1.010 Body: 1.108 Hotspot: 1.108

Authorized Signature:

Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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2 Version

Version No.	Date	Description
00	*06 Nov., 2018*	*Original*

Prepared by: Huheng Cai ***Date:*** *06 Nov., 2018*

Report Clerk

Reviewed by: Janet Wei ***Date:*** *06 Nov., 2018*

Project Engineer

3 Contents

4 SAR Results Summary

The maximum results of Specific Absorption Rate (SAR) found during test as bellows:

<Highest Reported standalone SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported 1-g SAR (W/kg)
Head	GSM 850	0.501	PCE	1.010
	GSM 1900	0.360		
	WCDMA Band V	0.607		
	WCDMA Band IV	0.320		
	WCDMA Band II	0.662		
	CDMA BC 0	0.727		
	CDMA BC 1	1.010		
	CDMA BC 10	0.716		
	LTE Band 25	0.704		
	LTE Band 4	0.258		
	LTE Band 26	0.229		
	LTE Band 7	0.384		
	LTE Band 12	0.227		
	LTE Band 41	0.289		
	WLAN 2.4 GHz	0.481	DTS	
Body (10 mm Gap)	GSM 850	0.472	PCE	1.108
	GSM 1900	0.251		
	WCDMA Band V	0.487		
	WCDMA Band IV	1.108		
	WCDMA Band II	0.348		
	CDMA BC 0	0.663		
	CDMA BC 1	0.443		
	CDMA BC 10	0.665		
	LTE Band 25	0.336		
	LTE Band 4	0.477		
	LTE Band 26	0.525		
	LTE Band 7	0.248		
	LTE Band 12	0.319		
	LTE Band 41	0.229		
	WLAN 2.4GHz	0.245	DTS	
Hotspot (10 mm Gap)	GSM 850	0.855	PCE	1.108
	GSM 1900	0.444		
	WCDMA Band V	0.487		
	WCDMA Band IV	1.108		
	WCDMA Band II	0.402		
	CDMA BC 0	0.663		
	CDMA BC 1	0.445		
	CDMA BC 10	0.665		
	LTE Band 25	0.430		
	LTE Band 4	0.790		
	LTE Band 26	0.525		

	LTE Band 7	0.248		
	LTE Band 12	0.319		
	LTE Band 41	0.229		
	WLAN 2.4 GHz	0.245	DTS	

<Highest Reported simultaneous SAR Summary>

Exposure Position	Frequency Band	Reported 1-g SAR (W/kg)	Equipment Class	Highest Reported Simultaneous Transmission 1-g SAR (W/kg)
Left Cheek	CDMA BC 1	1.010	PCE	1.491
	WLAN 2.4 GHz	0.481	DTS	

Note:

1. The highest simultaneous transmission is scalar summation of Reported standalone SAR per FCC KDB 690783 D01 v01r03, and scalar SAR summation of all possible simultaneous transmission scenarios are < 1.6W/kg.
2. This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013.
3. For FDD-LTE Band 2 is full covered by FDD-LTE Band 25, so only FDD-LTE Band 25 was tested, for FDD-LTE Band 5 is full covered by FDD-LTE Band 26, so only FDD-LTE Band 26 was tested, for FDD-LTE Band 17 is full covered by FDD-LTE Band 12, so only FDD-LTE Band 12 was tested.
4. The DUT is not supports VoLTE.

5 General Information

5.1 Client Information

Applicant:	Sun Cupid Technology (HK) Ltd.
Address of Applicant:	16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.
Manufacturer:	Sun Cupid Technology (HK) Ltd.
Address of Manufacturer:	16/F, CEO Tower, 77 Wing Hong Street, Cheung Sha Wan, Kowloon, Hong Kong.
Factory:	SUNCUPID (ShenZhen) Electronic Ltd
Address of Factory:	Baolong Industrial City, Longgang District, Shenzhen Hi-Tech Road, Building 1, A 7, China.

5.2 General Description of EUT

Product Name:	LTE Smart phone
Model No.:	A6L-C, A6LC
Category of device	Portable device
Operation Frequency:	GSM850: 824.2 ~ 848.8 MHz PCS 1900: 1850.2 ~ 1909.8 MHz WCDMA Band V: 826.4 ~ 846.6 MHz WCDMA Band IV: 1712.4 ~ 1752.6 MHz WCDMA Band II: 1852.4 ~ 1907.6 MHz CDMA BC 0: 824.7 ~ 848.31 MHz CDMA BC 1: 1851.25 ~ 1908.75 MHz CDMA BC 10: 817.9 ~ 823.1 MHz FDD LTE Band 25 : 1850MHz-1915MHz FDD LTE Band 2 :1850MHz~1910MHz FDD LTE Band 4 :1710MHz~1755MHz FDD LTE Band 26: 814MHz-849MHz FDD LTE Band 5 : 824MHz~849MHz FDD LTE Band 7: 2500MHz~2570MHz FDD LTE Band 12: 698MHz~716MHz FDD LTE Band 17: 704MHz~716MHz TDD LTE Band 41: 2496MHz~2690MHz Bluetooth: 2402 MHz ~ 2480 MHz Wi-Fi: 802.11b/g/n-HT20: 2412MHz ~ 2462 MHz 802.11n-HT40 :2422MHz~2452MHz
Modulation technology:	GSM/GPRS:GMSK, EGPRS: 8PSK, WCDMA/HSDPA/HSUPA: BPSK/QPSK LTE:QPSK/16QAM 1×RTT: BPSK, QPSK, OQPSK, HPSK 1×EVDO: BPSK, QPSK, 8PSK, 16-QAM Bluetooth: GFSK/π/4DQPSK/8DPSK Wi-Fi: 802.11b: DSSS, 802.11g/n: OFDM
Antenna Type:	Internal Antenna

Antenna Gain:	GSM 850: 0.85 dBi, PCS 1900: 1.46 dBi WCDMA Band II:1.46 dBi, WCDMA Band IV: 0.70 dBi WCDMA Band V: 0.85 dBi, BC 0:0.85 dBi; BC 1:1.46dBi; BC 10:0.85 dBi LTE Band 2: 1.46dBi, LTE Band 4: 0.70dBi LTE Band 5: 0.85dBi, LTE Band 7: 2.85dBi LTE Band 12: 0.71dBi, LTE Band 17: 0.71dBi LTE Band 25: 1.46dBi, LTE Band 26: 0.86dBi LTE Band 41: 2.85dBi WIFIBT: 2.61 dBi	
Release Version:	R99 for GSM, R6 for WCDMA/CDMA, R8 for LTE	
(E)GPRS Class:	(E)GPRS Class: 12	
Dimensions (L*W*H):	141 mm (L)× 67 mm (W)× 11 mm (H)	
Accessories information:	Adapter: Model: RD0501000-USBA-18MG Input: AC100-240V, 50/60Hz, 0.25A Max Output: DC 5.0V, 1000mA	Battery: Rechargeable Li-ion Battery 3.8V/2350mAh Headset: Support headset
Remark:	LTE Smart phone item No.: A6L-C, A6LC were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name and for different areas.	

5.3 Maximum RF Output Power

Mode	Average Power (dBm)	
	GSM 850	GSM 1900
GSM (Voice)	32.72	29.88
GPRS (1 TX Slot)	32.55	29.77
GPRS (2 TX Slots)	31.76	28.87
GPRS (3 TX Slots)	29.93	27.16
GPRS (4 TX Slots)	28.82	26.10
EGPRS (1 TX Slot)	26.89	25.31
EGPRS (2 TX Slots)	25.84	24.19
EGPRS (3 TX Slots)	23.74	22.03
EGPRS (4 TX Slots)	22.44	20.82

Mode	Average Power (dBm)		
	WCDMA Band V	WCDMA Band IV	WCDMA Band II
AMR 12.2 kbps	23.12	23.49	22.98
RMC 12.2 kbps	23.30	23.64	23.07
HSDPA Sub-test 1	22.26	22.57	22.01
HSDPA Sub-test 2	21.93	22.25	21.65
HSDPA Sub-test 3	20.37	20.68	20.12
HSDPA Sub-test 4	20.35	20.75	20.15
HSUPA Sub-test 1	21.79	22.13	21.53
HSUPA Sub-test 2	22.19	22.53	21.95
HSUPA Sub-test 3	19.83	20.20	19.60
HSUPA Sub-test 4	22.23	22.30	21.62
HSUPA Sub-test 5	22.38	22.57	22.00

Mode		Average Power (dBm)		
		BC 0	BC 1	BC 10
1XRTT/RC1	2(Loopback)	23.51	23.39	24.48
	55(Loopback)	23.54	23.40	24.46
1XRTT/RC2	9(Loopback)	23.51	22.85	24.45
	55(Loopback)	23.33	23.43	24.43
1XRTT/RC3	2(Loopback)	23.60	23.42	24.43
	55(Loopback)	23.64	23.41	24.45
	32(+F-SCH)	23.67	23.47	24.54
	32(+SCH)	23.66	23.45	24.52
1XRTT/RC4	2(Loopback)	23.62	23.37	24.44
	55(Loopback)	23.62	23.46	24.45
	32(+F-SCH)	23.63	23.43	24.53
	32(+SCH)	23.61	23.42	24.51
1XRTT/RC5	9(Loopback)	23.57	23.41	24.48
	55(Loopback)	23.35	23.38	24.48

Mode	Average Power (dBm)	
	BC 0	BC 1
1XEV-DO/Rel.0	22.98	22.66
1XEV-DO/Rel. A	22.89	22.66

Mode	Average Power (dBm)						
	LTE Band 25	LTE Band 4	LTE Band 26	LTE Band 7	LTE Band 12	LTE Band 17	LTE Band 41
BW/1.4 MHz	21.60	22.35	22.20	/	22.42	/	/
BW/3.0 MHz	21.54	22.16	22.09	/	22.33	/	/
BW/5.0 MHz	21.48	22.11	22.00	21.64	22.35	22.32	21.82
BW/10 MHz	21.53	22.19	22.15	21.87	22.46	22.41	21.89
BW/15 MHz	21.45	22.13	22.23	21.58	/	/	21.80
BW/20 MHz	21.56	22.15	/	21.57	/	/	21.81

WLAN 2.4 GHz Band Average Power (dBm)				
Mode/Band	b	g	n (HT-20)	n (HT-40)
WLAN 2.4GHz	17.09	16.14	16.09	15.79

Bluetooth Average Power (dBm)				
Mode/Band	1 Mbps(GFSK)	2 Mbps(π/4DQPSK)	3 Mbps (8DPSK)	LE (BT 4.0)
Bluetooth 2.4 GHz	7.41	6.55	6.61	7.34

5.4 Environment of Test Site

Temperature:	18°C ~25 °C
Humidity:	35%~75% RH
Atmospheric Pressure:	1010 mbar

5.5 Test Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
Bao'an District, Shenzhen, Guangdong, China
Tel: +86-755-23118282, Fax: +86-755-23116366
E-mail: info@ccis-cb.com

6 Introduction

6.1 Introduction

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

6.2 SAR Definition

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

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

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be either related to the temperature elevation in tissue by

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

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

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

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength. However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

7 RF Exposure Limits

7.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

7.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

7.3 RF Exposure Limits

SAR Human Exposure Specified in ANSI/IEEE C95.1-1992 and Health Canada Safety Code 6

HUMAN EXPOSURE LIMITS		
	UNCONTROLLED ENVIRONMENT *General Population* (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT *Occupational* (W/kg) or (mW/g)
SPATIAL PEAK SAR Brain	1.6	8.0
SPATIAL AVERAGE SAR Whole Body	0.08	0.4
SPATIAL PEAK SAR Hands, Feet, Ankles, Wrists	4.0	20

Note:

1. The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
2. The Spatial Average value of the SAR averaged over the whole body.
3. The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

8 SAR Measurement System

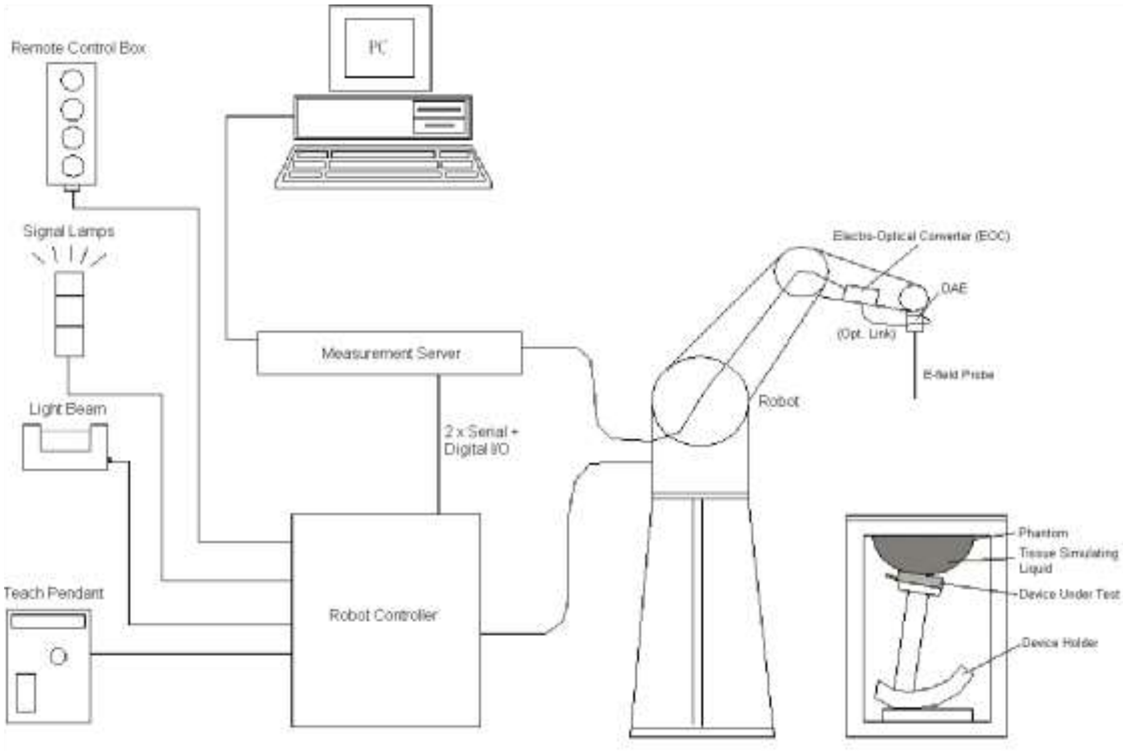


Fig. 8.1 SPEAG DASY System Configurations

The DASY system for performance compliance tests is illustrated above graphically. This system consists of the following items:

- A standard high precision 6-axis robot with controller, a teach pendant and software
- A data acquisition electronic (DAE) attached to the robot arm extension
- A dosimetric probe equipped with an optical surface detector system
- The electro-optical converter (EOC) performs the conversion between optical and electrical signals
- A measurement server performs the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the accuracy of the probe positioning
- A computer operating Windows XP
- DASY software
- Remove control with teach pendant and additional circuitry for robot safety such as warming lamps, etc.
- The SAM twin phantom
- A device holder
- Tissue simulating liquid
- Dipole for evaluating the proper functioning of the system

Component details are described in the following sub-sections.

8.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

- **E-Field Probe Specification**
  <EX3DV4 Probe>

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency Directivity	10 MHz to 6 GHz; Linearity: ± 0.2 dB ± 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: ± 0.2 dB (noise: typically < 1 µW/g)	
Dimensions	Overall length: 330 mm (Tip: 20mm) Tip diameter: 2.5 mm (Body: 12mm) Typical distance from probe tip to dipole centers: 1 mm	**Fig. 8.2 Photo of E-Field Probe**

- **E-Field Probe Calibration**
  Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than ± 10%. The spherical isotropy shall be evaluated and within ± 0.25 dB. The sensitivity parameters (Norm X, Norm Y and Norm Z), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested. The calibration data can be referred to appendix E of this report.

8.2 Data Acquisition Electronics (DAE)

The Data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock. The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Fig. 8.3 Photo of DAE

8.3 Robot

The SPEAG DASY system uses the high precision robots (DASY5: TX60XL) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version (DASY5: CS8c) from Stäubli is used. The Stäubli robot series have many features that are important for our application:

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

Fig. 8.4 Photo of Robot

8.4 Measurement Server

The measurement server is based on a PC/104 CPU board with CPU (DASY 5: 400MHz, Intel Celeron), chip-disk (DASY5: 128 MB), RAM (DASY5: 128 MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O board, which is directly connected to the PC/104 bus of the CPU board.
The measurement server performs all the real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operations.

Fig. 8.5 Photo of Server for DASY5

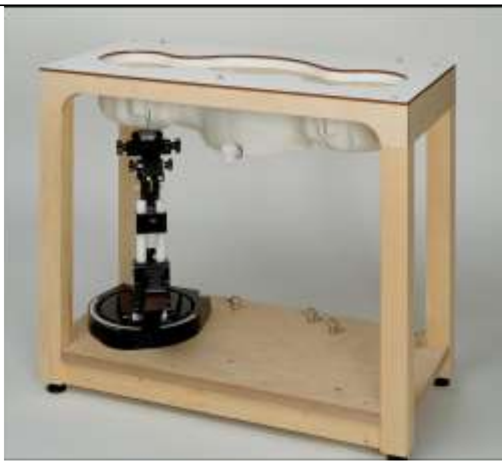
8.5 Light Beam Unit

The light beam switch allows automatic "tooling" of the probe. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.
The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.

Fig. 8.6 Photo of Light Beam

8.6 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	 **Fig. 8.7 Photo of SAM Twin Phantom**
Filling Volume Dimensions	Approx. 25 liters Length: 1000mm; Width: 500mm; Height: adjustable feet	
Measurement Areas	Left Head, Right Head, Flat phantom	

The bottom plate contains three pair 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 tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI4 Phantom >

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6 GHz. ELI4 is fully compatible with the latest draft of the standard IEC 62209-2 and all known tissue simulating liquids.

ELI4 has been optimized regarding its performance and can be integrated into a SPEAG standard phantom table. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points

The phantom can be used with the following tissue simulating liquids:

- Water-sugar based liquids can be left permanently in the phantom. Always cover the liquid if the system is not in use; otherwise the parameters will change due to water evaporation.
- DGBE based liquids should be used with care. As DGBE is a softener for most plastics, the liquid should be taken out of the phantom and the phantom should be dried when the system is not in use (desirable at least once a week).
- Do not use other organic solvents without previously testing the phantom resistiveness.

Fig.8.8 Photo of ELI4 Phantom

8.7 Device Holder

<Device Holder for SAM Twin Phantom>

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

The DASY device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (ERP).

Thus the device needs no repositioning when changing the angles.

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

Fig. 8.9 Photo of Device Holder

8.8 Data storage and Evaluation

- **Data Storage**

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

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

- **Data Evaluation**

The DASY post-processing software (SEMCAD) 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	$Norm_i$, a_{i0}, a_{i1}, a_{i2}
	- Conversion	$ConvF_i$
	- Diode compression point	dcp_i
Device Parameters:	- Frequency	f
	- Crest	cf
Media Parameters:	- Conductivity	σ
	- Density	ρ

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 DASY 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:

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

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: $E_i = \sqrt{\frac{V_i}{Norm_i \cdot ConvF}}$

H-Field Probes: $H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1} f + a_{i2} f^2}{f}$

With V_i = compensated signal of channel i, (i = x, y, z)
$Norm_i$ = senor sensitivity of channel i, (i = x, y, z), μV/ $(V/m)^2$
ConvF = sensitivity enhancement in solution
a_{ij} = sensor sensitivity factors for H-field probes
f = carrier frequency (GHz)
E_i = electric field strength of channel i in V/m
Hi = magnetic field strength of channel i in A/m

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

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

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

$$SAR = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1000}$$

With SAR = local specific absorption rate in mW/g
E_{tot} = total field strength in V/m
σ = conductivity in (mho/m) or (Siemens/m)
ρ = equipment tissue density in g/cm^3

Note that the density is set to 1, to account for actual head tissue density rather than the density of the tissue simulating liquid.

8.9 Test Equipment List

Manufacturer	Equipment Description	Model	S/N	Cal. Information	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1118	06.08.2017	06.07.2020
SPEAG	835MHz System Validation Kit	D835V2	4d154	06.16.2016	06.15.2019
MVG	COMOSAR 1800 MHz REFERENCE DIPOLE	SID1800	SN 09/15 DIP 1G800-360	02.28.2018	02.27.2021
SPEAG	1900MHz System Validation Kit	D1900V2	5d175	06.15.2016	06.14.2019
SPEAG	2450MHz System Validation Kit	D2450V2	910	06.15.2016	06.14.2019
SPEAG	2600MHz System Validation Kit	D2600V2	1114	09.21.2015	09.20.2018
SPEAG	Data Acquisition Electronics	DAE4	1373	03.22.2018	03.21.2019
SPEAG	Dosimetric E-Field Probe	EX3DV4	3924	07.19.2018	07.18.2019
SPEAG	DASY 52 Measurement Software	DASY 52	Version: 52.8.8.1222	N.C.R	N.C.R
SPEAG	DASY 52 File Conversion Software	SEMCAD X	Version: 14.6.10 (7331)	N.C.R	N.C.R
SPEAG	Phantom	Twin Phantom	1765	N.C.R	N.C.R
SPEAG	Phantom	ELI V5.0	1208	N.C.R	N.C.R
SPEAG	Phone Positioner	N/A	N/A	N.C.R	N.C.R
Stäubli	Robot	TX60L	F13/5P6VB1/A/01	N.C.R	N.C.R
Anritsu	Universal Radio Communication Analyzer	MT8820C	6201060814	03.07.2018	03.06.2019
R&S	Universal Radio Communication Tester	CMU200	113097	03.07.2018	03.06.2019
HP	Network Analyzer	8753D	3410A06291	03.19.2018	03.18.2019
Agilent	EPM Series Power Meter	E4418B	GB39512692	03.07.2018	03.06.2019
Agilent	MAX Signal Analyzer	N9020A	MY50510123	11.10.2017	11.09.2018
Agilent	Power Sensor	8481A	MY41090341	03.07.2018	03.06.2019
R&S	Power Sensor	URV5-Z2	SEL0071	03.07.2018	03.06.2019
R&S	Signal Generator	SMX	835457/016	03.07.2018	03.06.2019
R&S	Signal Generator	SMR20	10080050	03.07.2018	03.06.2019
Huber Suhner	RF Cable	SUCOFLEX	12341	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	17268	See Note 3	
Huber Suhner	RF Cable	SUCOFLEX	2080	See Note 3	
Weinschel	Attenuator	23-3-34	BL5513	See Note 3	
Anritsu	Directional Coupler	MP654A	100217491	See Note 3	
SPEAG	Dielectric Assessment Kit	3.5 Probe	1119	See Note 4	
SPEAG	DAK Measurement Software	DAK	Version: DAK 3.5	N.C.R	
Mini-circuits	Power amplifier	ZHL-42W	SC609401309	See Note 5	

Note:

1. The calibration certificate of DASY can be referred to appendix C of this report.
2. Referring to KDB 865664 D01v01r04, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The Insertion Loss calibration of Dual Directional Coupler and Attenuator were characterized via the network analyzer and compensated during system check.
4. The dielectric probe kit was calibrated via the network analyzer, with the specified procedure (calibrated in pure water) and calibration kit (standard) short circuit, before the dielectric measurement. The specific procedure and calibration kit are provided by Speag.
5. In system check we need to monitor the level on the power meter, and adjust the power amplifier level to have precise power level to the dipole; the measured SAR will be normalized to 1 W input power according to the ratio of 1 W to the input power to the dipole. For system check, the calibration of the power amplifier is deemed not critically required for correct measurement; the power meter is critical and we do have calibration for it
6. Attenuator insertion loss is calibrated by the network Analyzer, which the calibration is valid, before system check.
7. N.C.R means No Calibration Requirement.

9 Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 9.1, for body SAR testing, the liquid height from the center of the flat phantom to liquid top surface is larger than 15 cm, which is shown in Fig. 9.2.

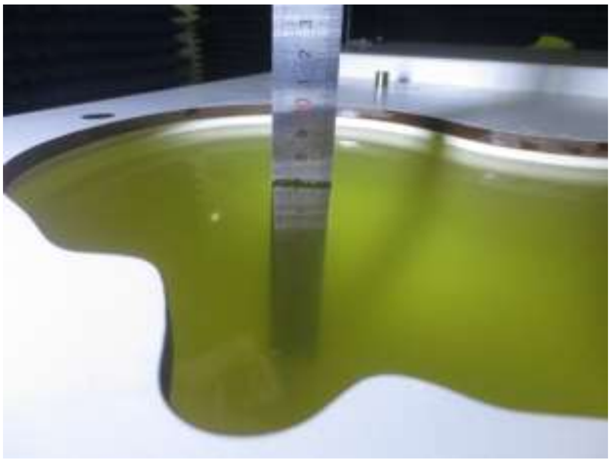


Fig. 9.1 Photo of Liquid Height for Head SAR (700MHz~1000MHz) (depth>15cm)

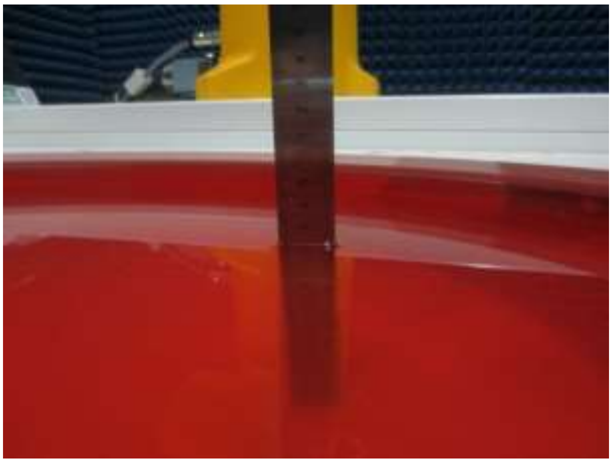


Fig. 9.2 Photo of Liquid Height for Body SAR of (700MHz~1000MHz) (depth>15cm)

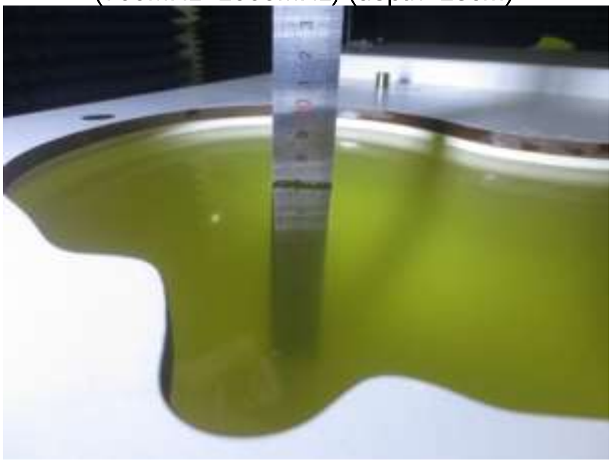


Fig. 9.3 Photo of Liquid Height for Head SAR (1710MHz~1910MHz) (depth>15cm)

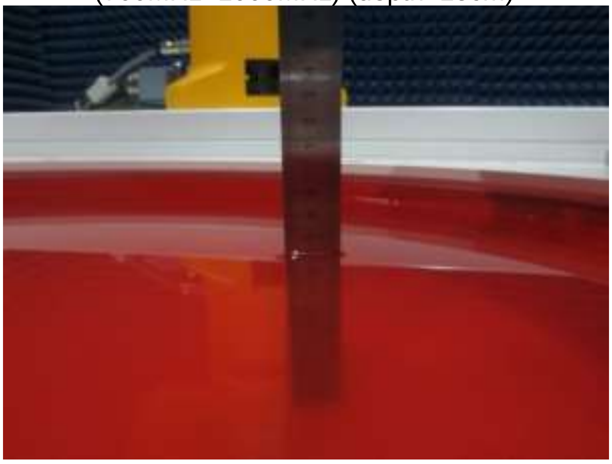


Fig. 9.4 Photo of Liquid Height for Body SAR of ELI V5.0 (1710MHz~1910MHz) (depth>15cm)

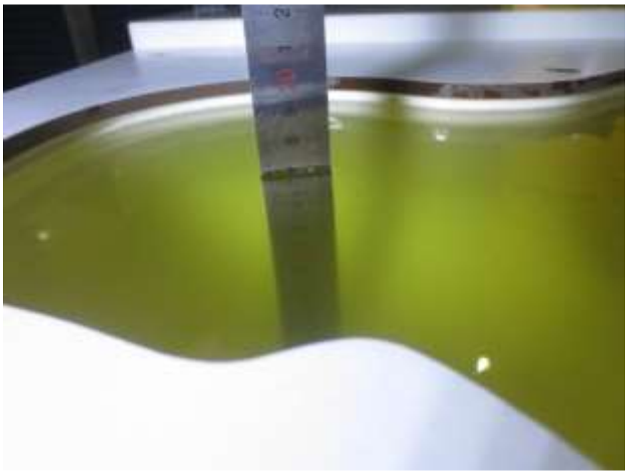


Fig. 9.5 Photo of Liquid Height for Head SAR (2000MHz~2600MHz) (depth>15cm)

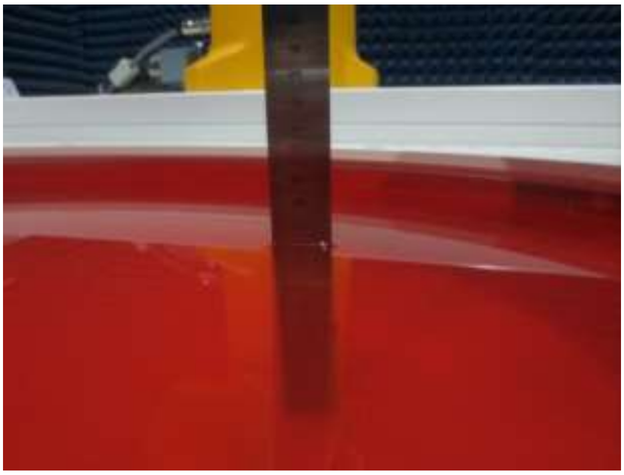


Fig. 9.6 Photo of Liquid Height for Body SAR of Twin Phantom (2000MHz~2600MHz) (depth>15cm)

The relative permittivity and conductivity of the tissue material should be within ±5% of the values given in the table below recommended by the FCC OET 65 supplement C and RSS 102 Issue 5.

Target Frequency	Head		Body	
(MHz)	εr	σ(S/m)	εr	σ(S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800-2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

(εr = relative permittivity, σ = conductivity and ρ = 1000 kg/m^3)

The dielectric parameters of liquids were verified prior to the SAR evaluation using a Speag Dielectric Probe Kit and an Agilent Network Analyzer.

The following table shows the measuring results for simulating liquid.

Frequency (MHz)	Liquid Type	Liquid Temp. (℃)	Conductivity (σ)	Permittivity (εr)	Conductivity Target(σ)	Permittivity Target(εr)	Delta (σ)%	Delta (εr)%	Limit (%)	Date (mm/dd/yy)
750	Head	22.6	0.86	41.89	0.89	41.9	-3.37	-0.02	±5	09.20.2018
835	Head	22.6	0.93	41.20	0.9	41.5	3.33	-0.72	±5	09.20.2018
1800	Head	22.4	1.41	40.22	1.4	40.0	0.71	0.55	±5	09.02.2018
1900	Head	22.4	1.43	39.31	1.4	40.0	2.14	-1.72	±5	09.02.2018
2450	Head	22.9	1.82	38.87	1.8	39.2	1.11	-0.84	±5	08.23.2018
2600	Head	22.9	2.03	37.51	1.96	39.0	3.57	-3.82	±5	08.23.2018
750	Body	22.3	0.96	56.16	0.96	55.5	0.00	1.19	±5	09.21.2018
835	Body	22.3	0.99	55.40	0.97	55.2	2.06	0.36	±5	09.21.2018
1800	Body	22.5	1.51	52.32	1.52	53.3	-0.66	-1.84	±5	09.05.2018
1900	Body	22.5	1.54	51.61	1.52	53.3	1.32	-3.17	±5	09.05.2018
2450	Body	22.3	1.97	52.10	1.95	52.7	1.03	-1.14	±5	09.15.2018
2600	Body	22.3	2.23	51.02	2.16	52.5	3.24	-2.82	±5	09.15.2018

10 SAR System Verification

Each DASY system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the DASY software, enable the user to conduct the system performance check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

- **Purpose of System Performance check**
  The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

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

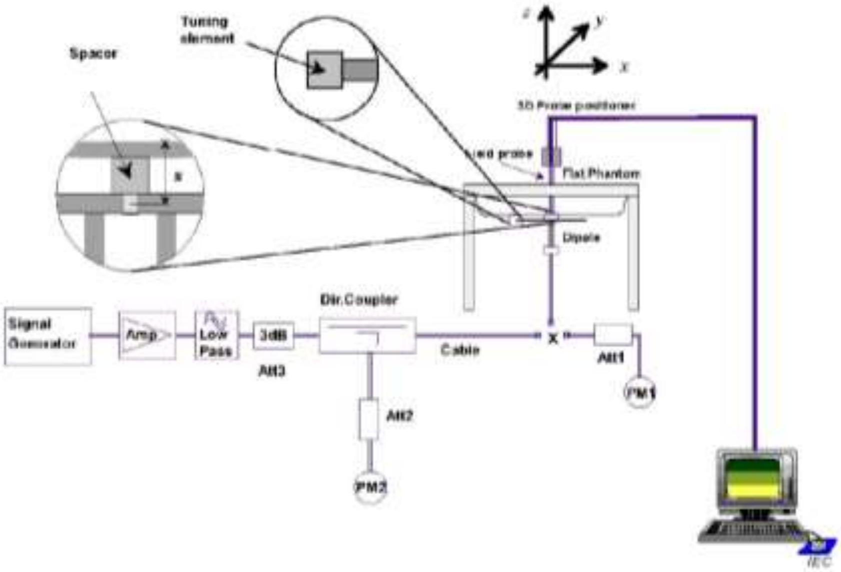


Fig.10.1 System Verification Setup Diagram

Fig.10.2 Photo of Dipole setup

- **System Verification Results**
  Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10%. The table as below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix C of this report.

Date (mm/dd/yy)	Frequency (MHz)	Liquid Type	Power fed onto dipole (mW)	Measured 1g SAR (W/kg)	Normalized to 1W 1g SAR (W/kg)	1W Target 1g SAR (W/kg)	Deviation (%)
09.20.2018	750	Head	80	0.691	8.64	8.31	3.97
09.20.2018	835	Head	80	0.779	9.74	9.24	5.41
09.02.2018	1800	Head	40	1.57	39.25	38.76	4.50
09.02.2018	1900	Head	40	1.66	41.50	40.4	2.72
08.23.2018	2450	Head	40	2.13	53.25	52.4	1.62
08.23.2018	2600	Head	40	2.35	58.75	56.9	3.25
09.21.2018	750	Body	80	0.703	8.79	8.76	0.34
09.21.2018	835	Body	80	0.792	9.90	9.57	3.45
09.05.2018	1800	Body	40	1.59	39.75	38.90	4.85
09.05.2018	1900	Body	40	1.67	41.75	40.1	4.11
09.15.2018	2450	Body	40	2.18	54.5	51.8	5.21
09.15.2018	2600	Body	40	2.22	55.5	54.5	1.83

11 EUT Testing Position

This EUT was tested in ten different positions. They are right cheek/right tilted/left cheek/left tilted for head, Front/Back/Right Side/Top Side/Bottom Side of the EUT with phantom 10 mm gap, as illustrated below, please refer to Appendix B for the test setup photos.

11.1 Handset Reference Points

- The vertical centreline passes through two points on the front side of the handset – the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.
- The horizontal line is perpendicular to the vertical centreline and passes the center of the acoustic output. The horizontal line is also tangential to the handset at point A.
- The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centreline is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.

Fig.11.1 Illustration for Front, Back and Side of SAM Phantom

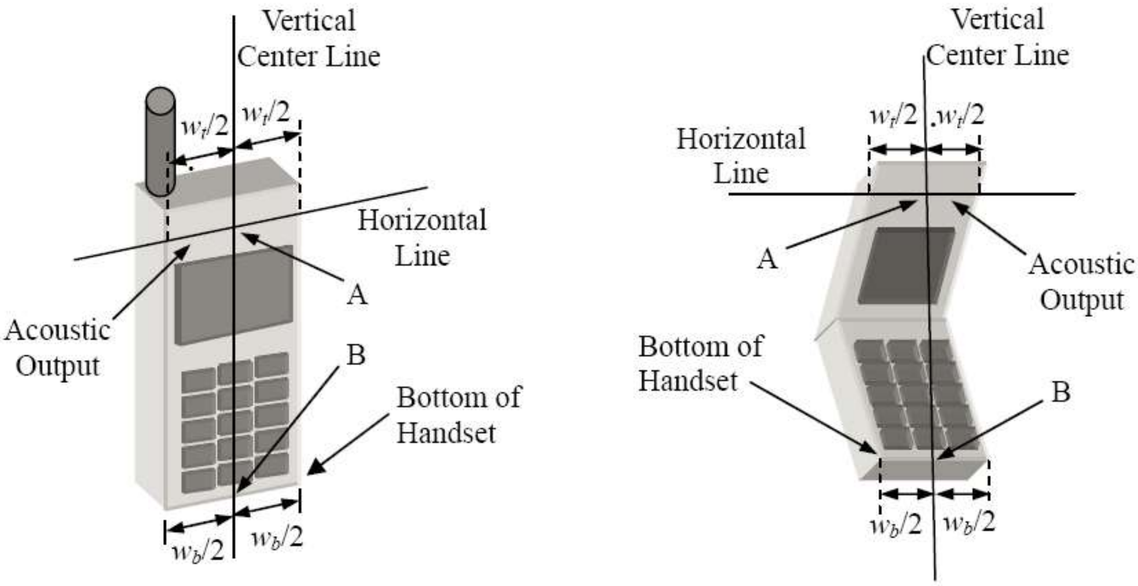


Fig. 11.2 Illustration for Handset Vertical and Horizontal Reference Lines

11.2 Positioning for Cheek / Touch

- To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost (see below figure)

Fig. 11.3 Illustration for Cheek Position

11.3 Positioning for Ear / 15º Tilt

- To position the device in the “cheek” position described above.
- While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost (see figure below).

Fig.11.4 Illustration for Tilted Position

11.4 SAR Evaluations near the Mouth/Jaw Regions of the SAM Phantom

Antennas located near the bottom of a phone may require SAR measurements around the mouth and jaw regions of the SAM head phantom. This typically applies to clam-shell style phones that are generally longer in the unfolded normal use positions or to certain older style long rectangular phones.
Under these circumstances, the following procedures apply, adopted from the FCC guidance on SAR handsets document FCC KDB Publication 648474 D04v01r03. The SAR required in these regions of SAM should be measured using a flat phantom. The phone should be positioned with a separation distance of 4 mm between the ear reference point (ERP) and the outer surface of the flat phantom shell. While maintaining this distance at the ERP location, the low (bottom) edge of the phone should be lowered from the phantom to establish the same separation distance between the peak SAR locations identified by the truncated partial SAR distribution measured with the SAM phantom. The distance from the peak SAR location to the phone is determined by the straight line passing perpendicularly through the phantom surface. When it is not feasible to maintain 4 mm separation at the ERP while also establishing the required separation at the peak SAR location, the top edge of the phone will be allowed to touch the phantom with a separation < 4 mm at the ERP. The phone should not be tilted to the left or right while placed in this inclined position to the flat phantom.

11.5 Body Worn Accessory Configurations

- To position the device parallel to the phantom surface with either keypad up or down.
- To adjust the device parallel to the flat phantom.
- To adjust the distance between the device surface and the flat phantom to 10 mm or holster surface and the flat phantom to 0 mm.

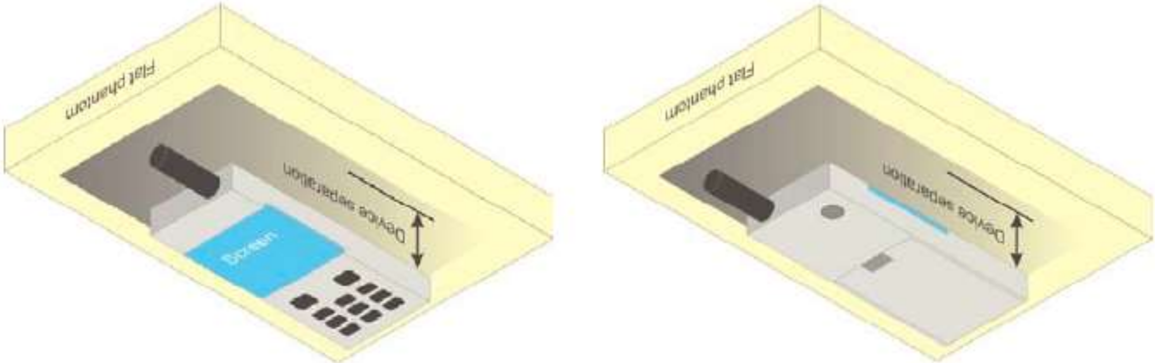


Fig.11.5 Illustration for Body Worn Position

11.6 Wireless Router (Hotspot) Configurations

Some battery-operated handsets have the capability to transmit and receive internet connectivity through simultaneous transmission of WIFI in conjunction with a separate licensed transmitter. The FCC has provided guidance in KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ≥
9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device with antennas 2.5 cm or closer to the edge of the device, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WIFI transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. Therefore, SAR must be evaluated for each frequency transmission and mode separately and summed with the WIFI transmitter according to KDB 648474 publication procedures. The "Portable Hotspot" feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.

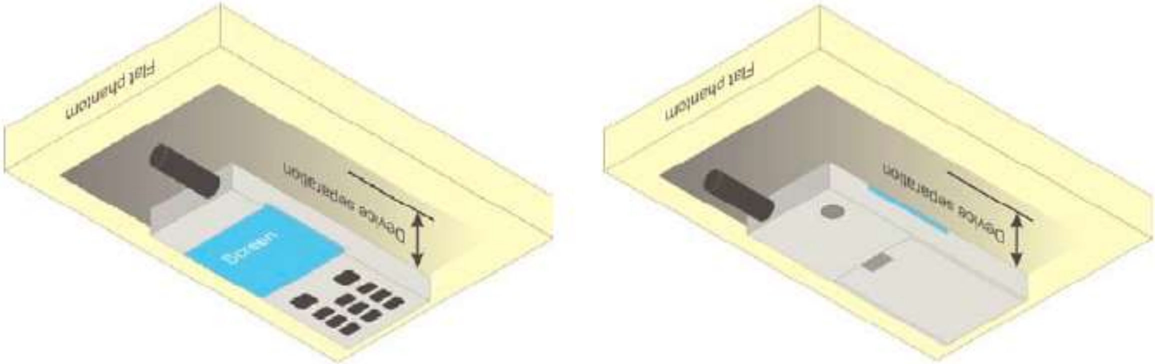


Fig.11.6 Illustration for Hotspot Position

12 Measurement Procedures

The measurement procedures are as bellows:

<Conducted power measurement>

- For WWAN power measurement, use base station simulator to configure EUT WWAN transition in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- Read the WWAN RF power level from the base station simulator.
- For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band.
- Connect EUT RF port through RF cable to the power meter or spectrum analyzer, and measure WLAN/BT output power.

<Conducted power measurement>

- Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- Place the EUT in positions as Appendix B demonstrates.
- Set scan area, grid size and other setting on the DASY software.
- Measure SAR results for the highest power channel on each testing position.
- Find out the largest SAR result on these testing positions of each band.
- Measure SAR results for other channels in worst SAR testing position if the Reported SAR or highest power channel is larger than 0.8 W/kg.

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- Power reference measurement
- Area scan
- Zoom scan
- Power drift measurement

12.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a “cube” measurement. The measured volume must include the 1g and 10 g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- Extraction of the measured data (grid and values) from the Zoom Scan.
- Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters).
- Generation of a high-resolution mesh within the measured volume.
- Interpolation of all measured values form the measurement grid to the high-resolution grid
- Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- Calculation of the averaged SAR within masses of 1g and 10g.

12.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurement are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

12.3 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

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

12.4 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD post-processor scan combine and subsequently superpose these measurement data to calculating the multiband SAR.

12.5 SAR Averaged Methods

In DASY, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1g and 10g cubes, the extrapolation distance should not be larger than 5 mm.

12.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

13 Proximity Sensor Triggering Test

5.1 Proximity sensor triggering distance

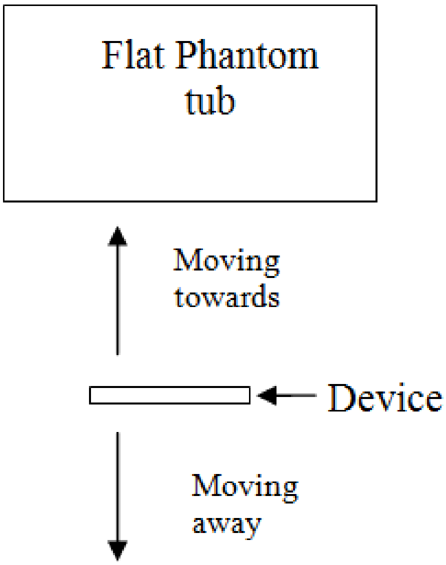
1). According to KDB 616217 D04, section 6.2, Proximity sensor triggering distance testing was determined by EUT moving toward the flat phantom and EUT moving further away from the flat phantom were both assessed and the flat phantom filled with the required tissue-equivalent medium.

2). Capacitive proximity sensor placed coincident with antenna elements at the bottom end of the phone are utilized to determine when the device comes in proximity of the user's body at the front, back, left, right, top or bottom side surface of the device. There is no need to do sensor coverage testing for the proximity sensor is designed to support sufficient detection range and sensitivity to cover regions of the sensors in all applicable directions since the proximity sensor entirely covers the antenna.

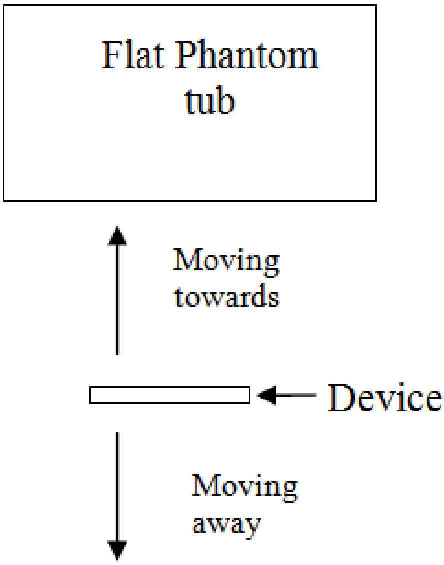
3). When Proximity sensor is active, WCDMA B2/B4/5, CDMA BC 0/ BC1/ BC 10 and LTE B2 / B4 / B5/ B7 / B25 / B26 reduced power will be active. The reduced power levels are the different. The reduced powers specified for each band are:

Frequency Band	Reduced power(dBm)		Frequency Band	Reduced power(dBm)
GSM 850	0		LTE B4	2.5
PCS 1900	0		LTE B5	3
WCDMA B2	3		LTE B7	1.5
WCDMA B4	6		LTE B12	0
WCDMA B5	2		LTE B17	0
CDMA BC 0	3		LTE B25	1
CDMA BC 1	3		LTE B26	3
CDMA BC 10	3		LTE B41	0
LTE B2	1		WIFI	0

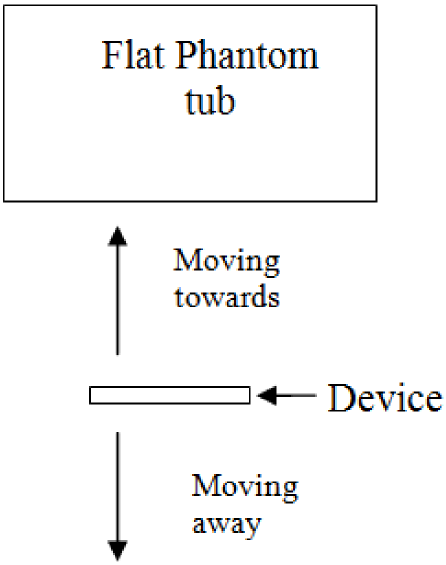
4). The sensors used to detect the proximity of the user's body at the front, back, left side, right, top or bottom side surface of the device use a detection threshold distance. The data shown in the sections below shows the distance(s).



Sensor detection test set-up,
front and back faces



Sensor detection test set-up,
left and right faces



Sensor detection test set-up,
top and bottom faces

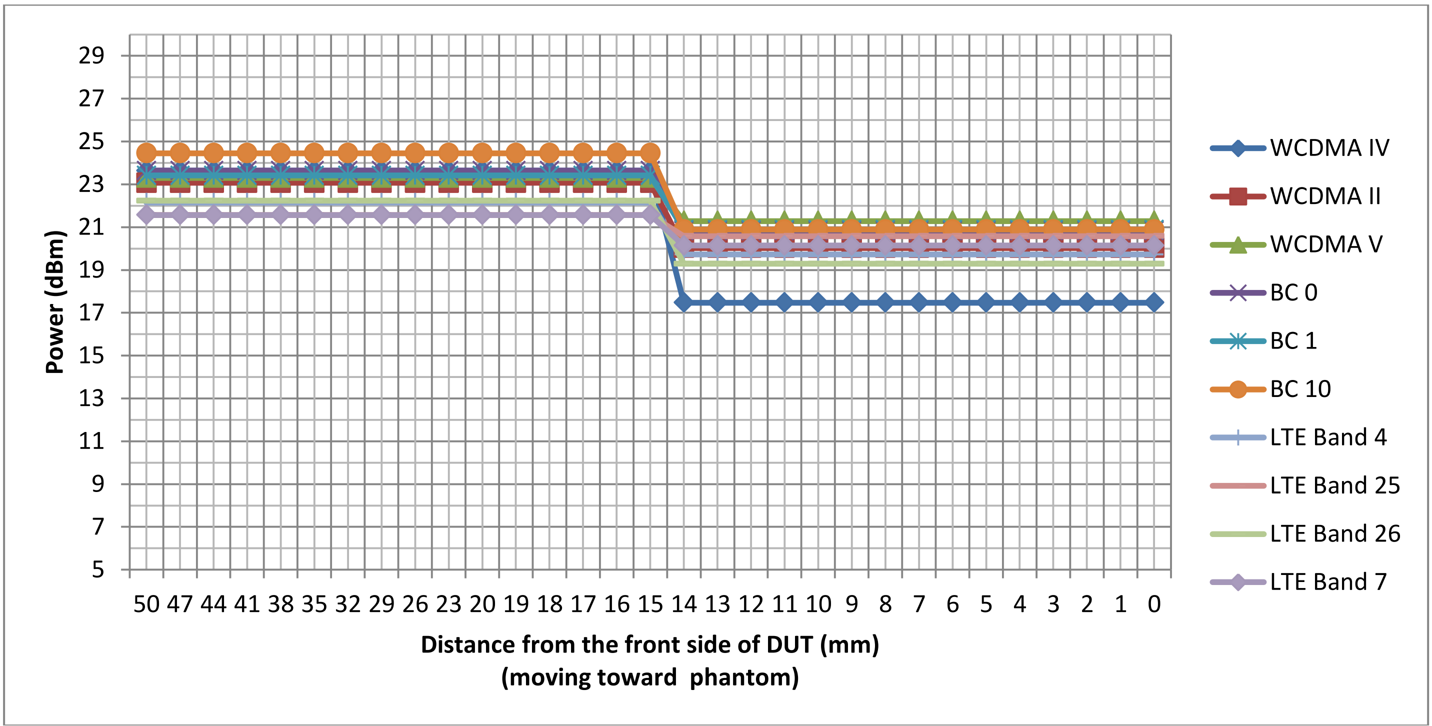
Bottom Proximity Sensor Triggering Distance (mm)										
Position	Front		Back		Left		Right		Bottom	
	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away	Moving towards	Moving away
Minimum	14	15	18	20	4	6	4	6	18	19

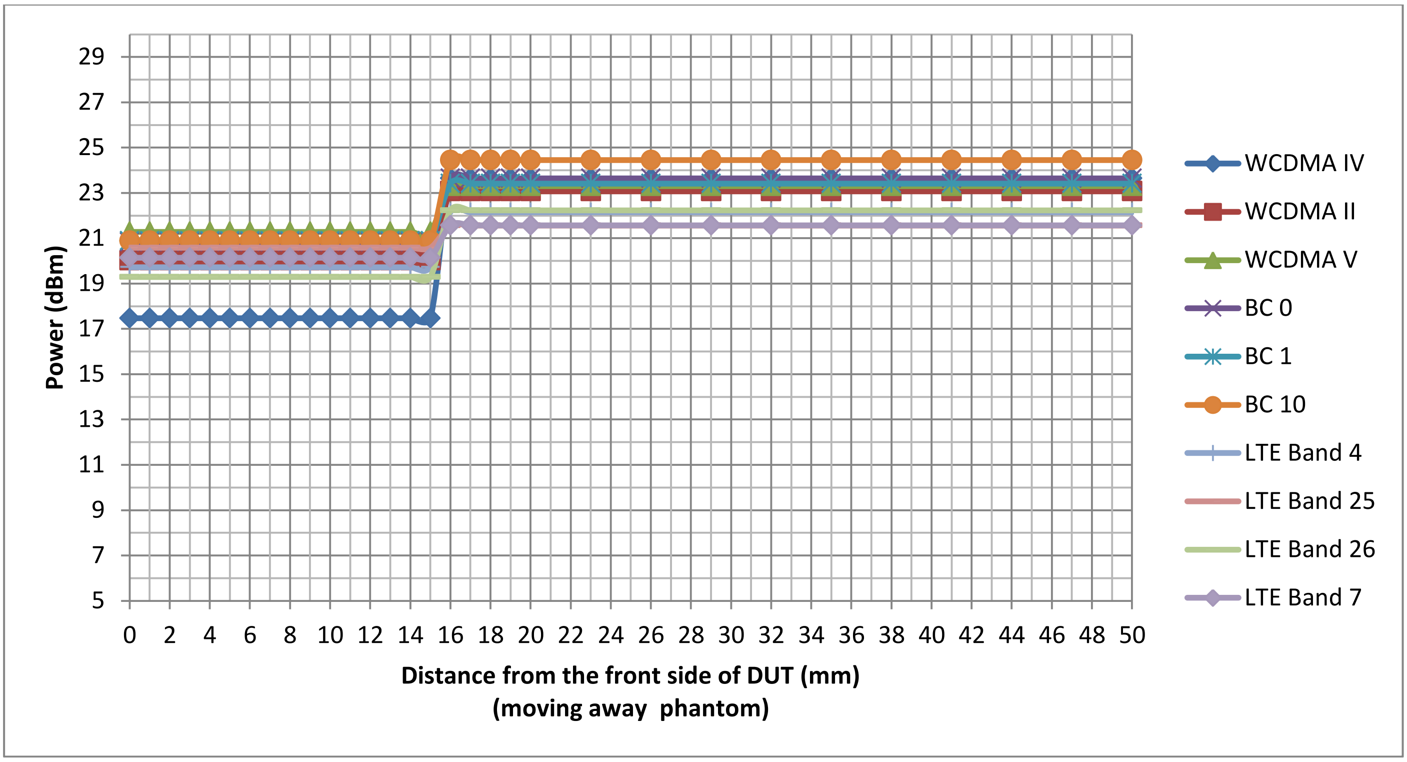
Working principle:

When the distance between the phantom and EUT is equal to or less than the detection threshold distance, the proximity sensor will be trigger, and the conducted power will be reduced.
When the distance between the phantom and EUT is greater than the detection threshold distance, the proximity sensor will be not trigger, and the DUT is in the full power transmit.

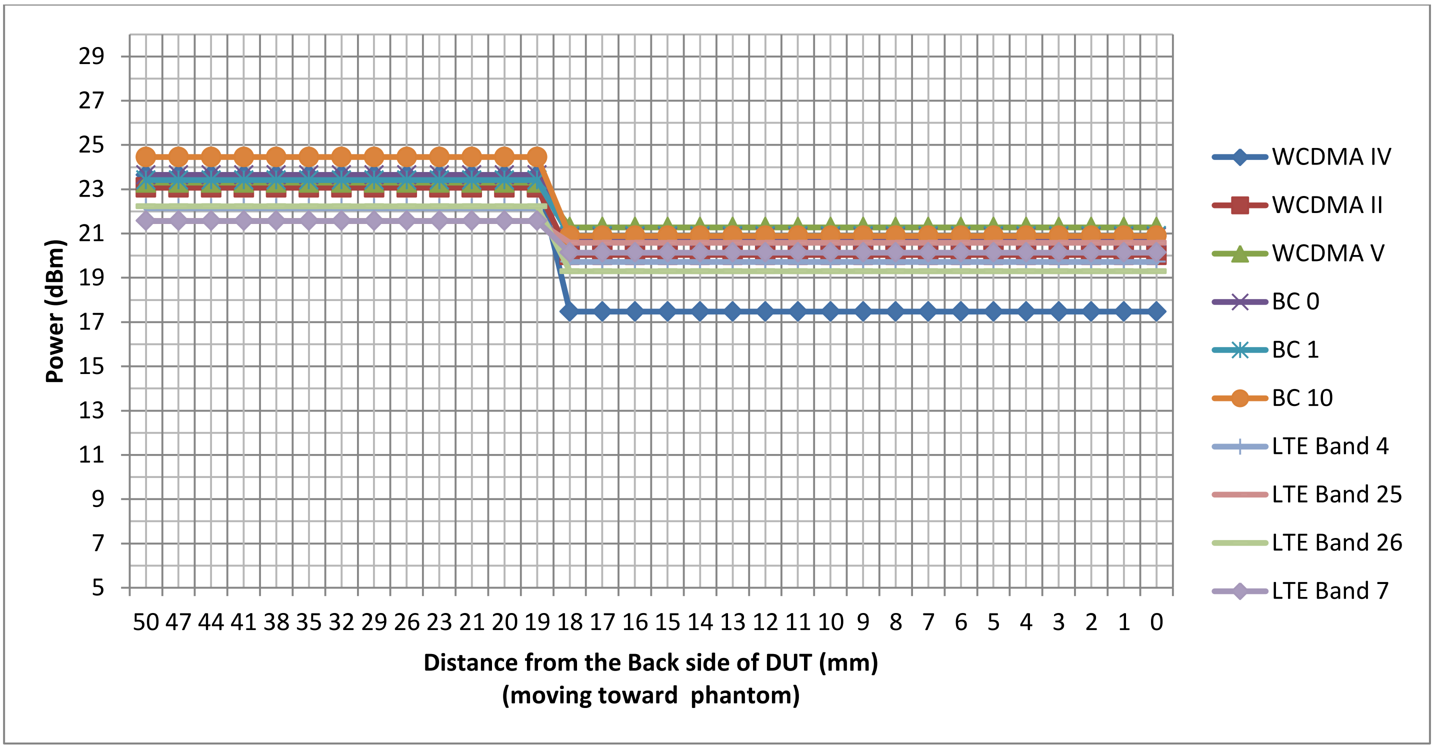
The relationship of distance and the conducted power show as below:

Bottom Sensor Trigger Distance:

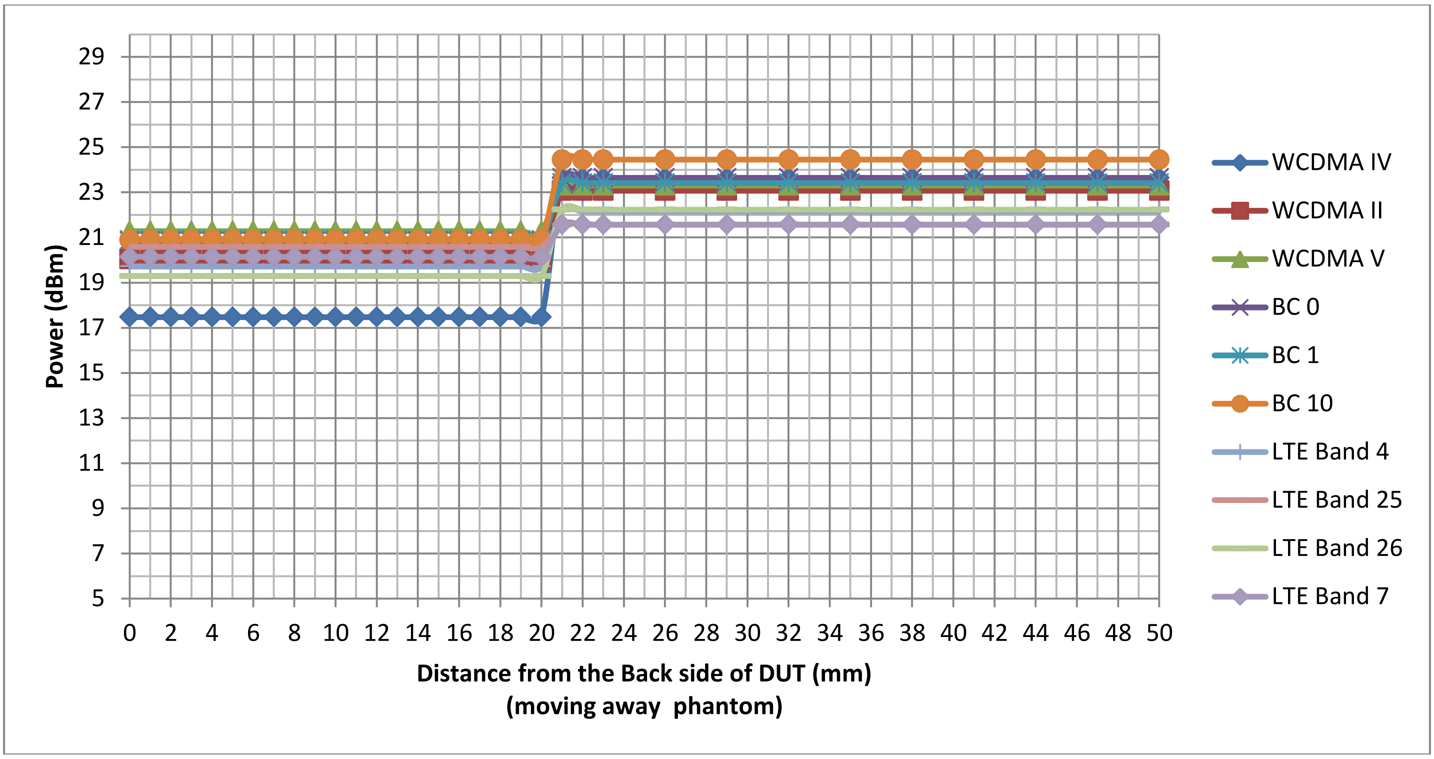


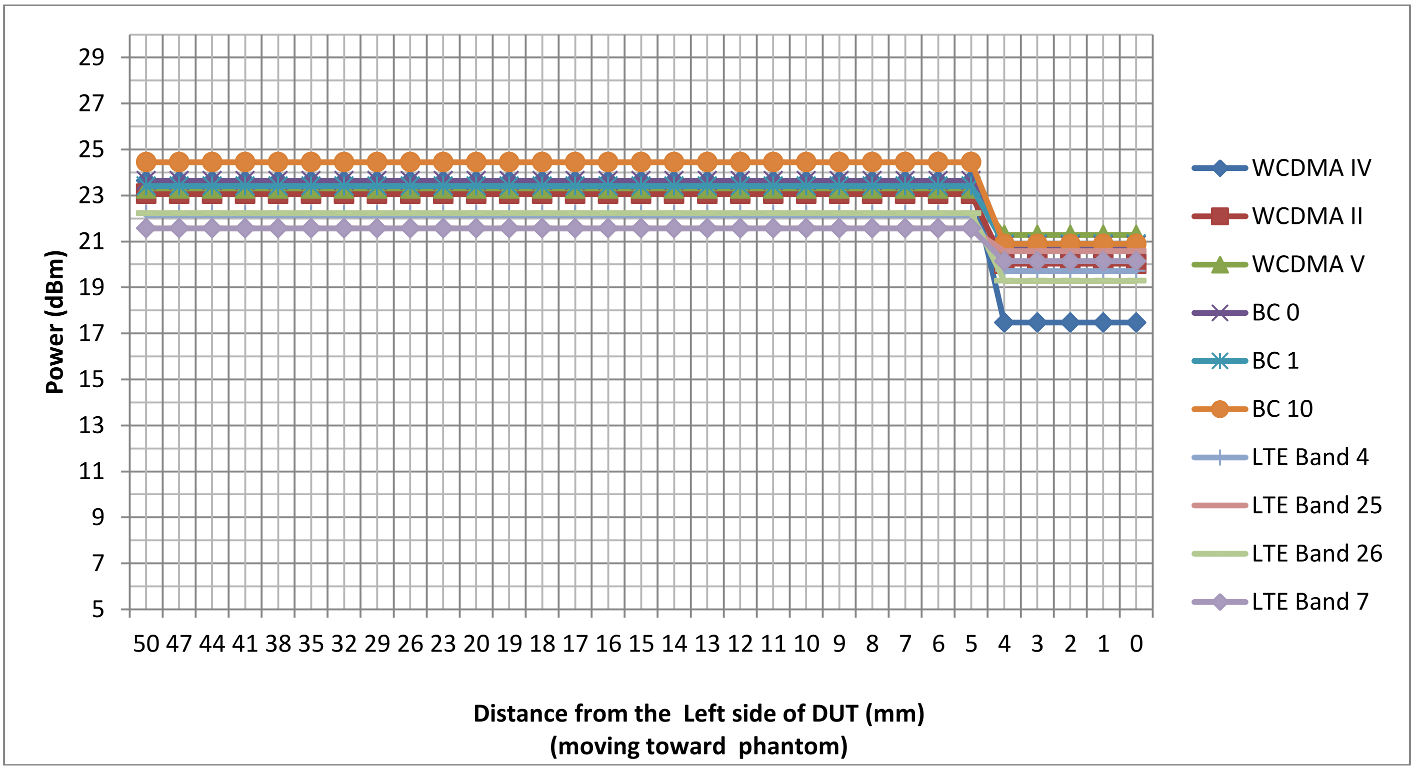


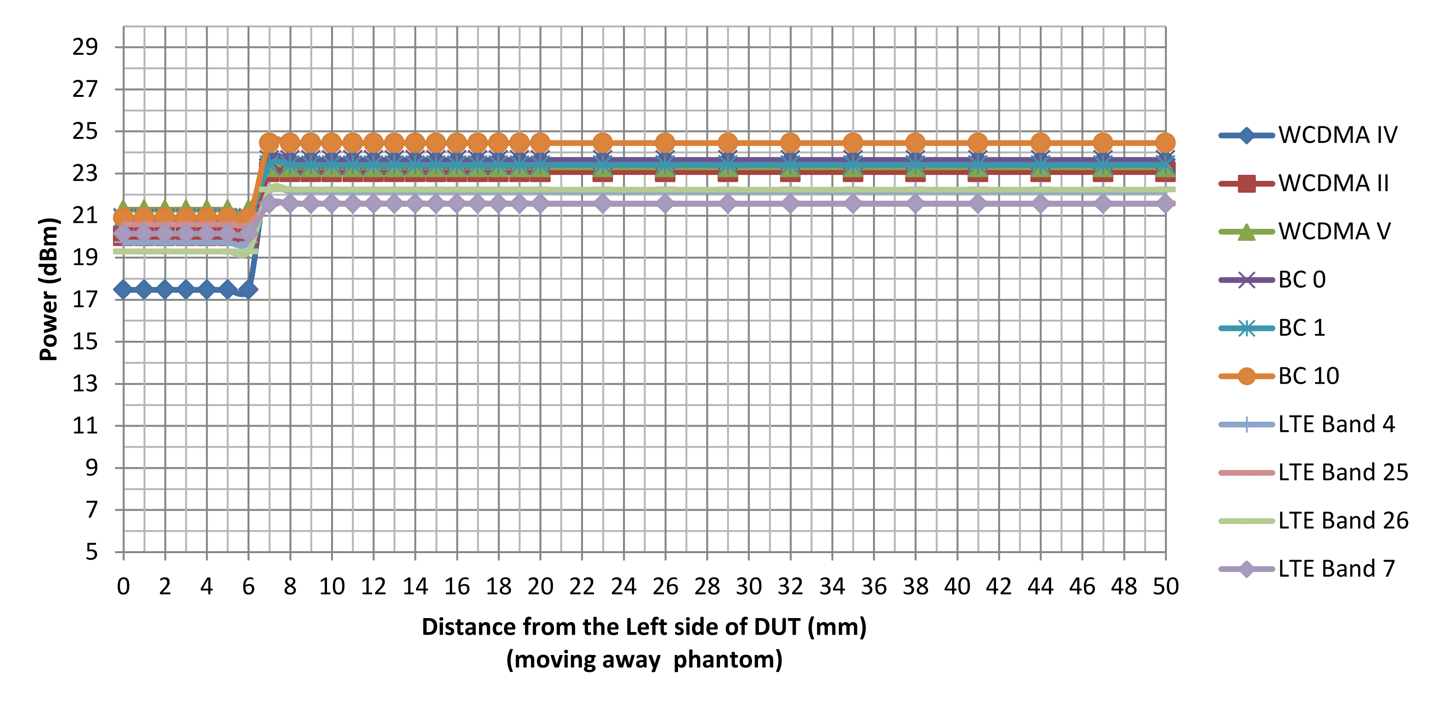
Power (dBm)
29
27
25
23
21
19
17
15
13
11
9
7
5
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50
Distance from the front side of DUT (mm)
(moving away phantom)
WCDMA IV
WCDMA II
WCDMA V
BC 0
BC 1
BC 10
LTE Band 4
LTE Band 25
LTE Band 26
LTE Band 7

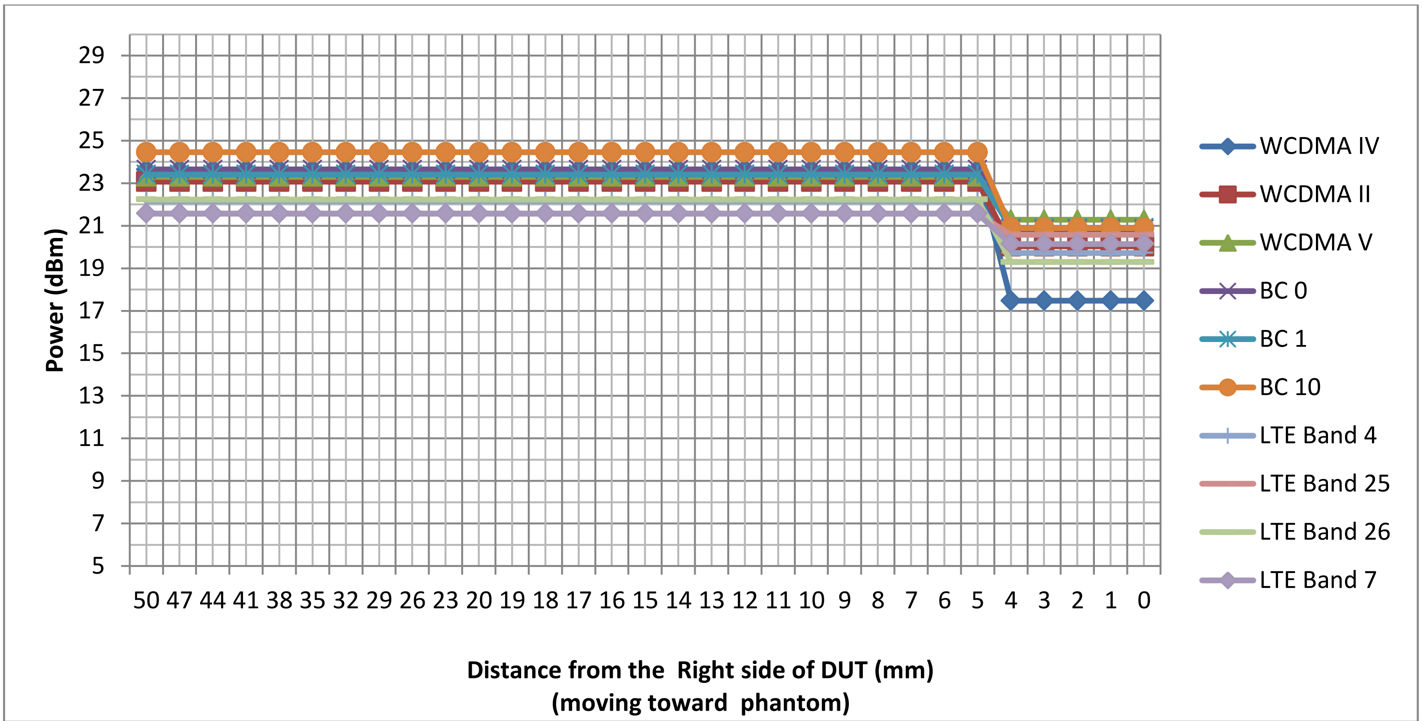


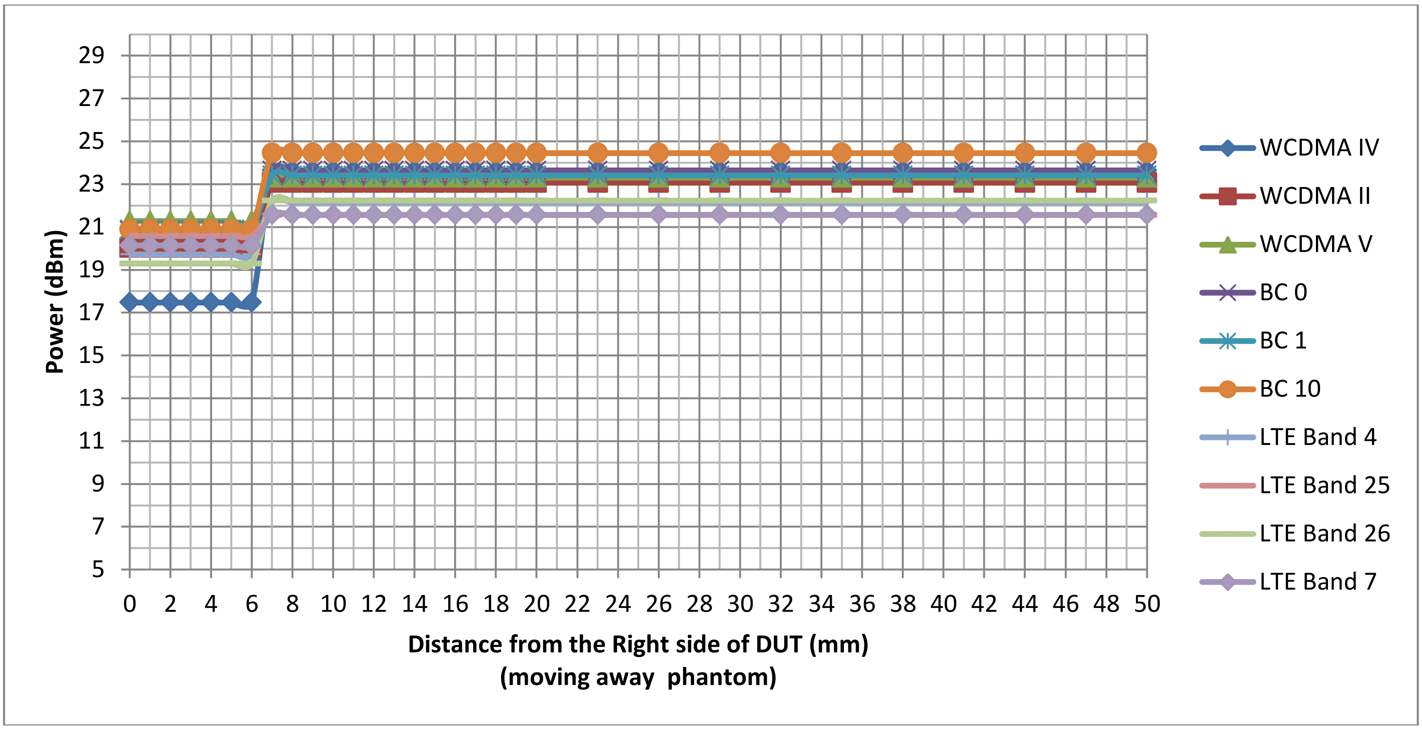
Power (dBm)
29
27
25
23
21
19
17
15
13
11
9
7
5
50 47 44 41 38 35 32 29 26 23 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Distance from the Back side of DUT (mm)
(moving toward phantom)
WCDMA IV
WCDMA II
WCDMA V
BC 0
BC 1
BC 10
LTE Band 4
LTE Band 25
LTE Band 26
LTE Band 7


Power (dBm)
29
27
25
23
21
19
17
15
13
11
9
7
5
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50
Distance from the Back side of DUT (mm)
(moving away phantom)
WCDMA IV
WCDMA II
WCDMA V
BC 0
BC 1
BC 10
LTE Band 4
LTE Band 25
LTE Band 26
LTE Band 7


Power (dBm)
29
27
25
23
21
19
17
15
13
11
9
7
5
50 47 44 41 38 35 32 29 26 23 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Distance from the Left side of DUT (mm)
(moving toward phantom)
WCDMA IV
WCDMA II
WCDMA V
BC 0
BC 1
BC 10
LTE Band 4
LTE Band 25
LTE Band 26
LTE Band 7


Power (dBm)
29
27
25
23
21
19
17
15
13
11
9
7
5
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50
Distance from the Left side of DUT (mm)
(moving away phantom)
WCDMA IV
WCDMA II
WCDMA V
BC 0
BC 1
BC 10
LTE Band 4
LTE Band 25
LTE Band 26
LTE Band 7


Power (dBm)
29
27
25
23
21
19
17
15
13
11
9
7
5
50 47 44 41 38 35 32 29 26 23 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Distance from the Right side of DUT (mm)
(moving toward phantom)
WCDMA IV
WCDMA II
WCDMA V
BC 0
BC 1
BC 10
LTE Band 4
LTE Band 25
LTE Band 26
LTE Band 7


29
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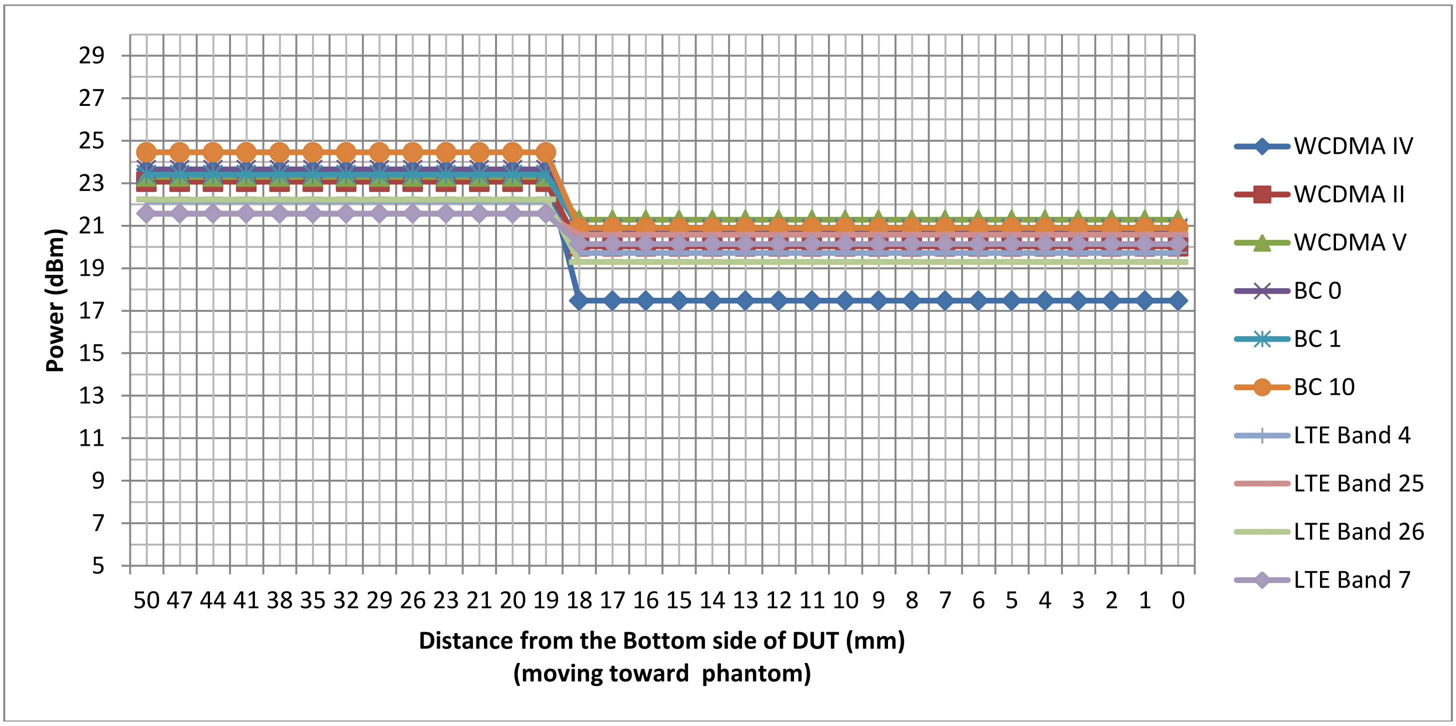
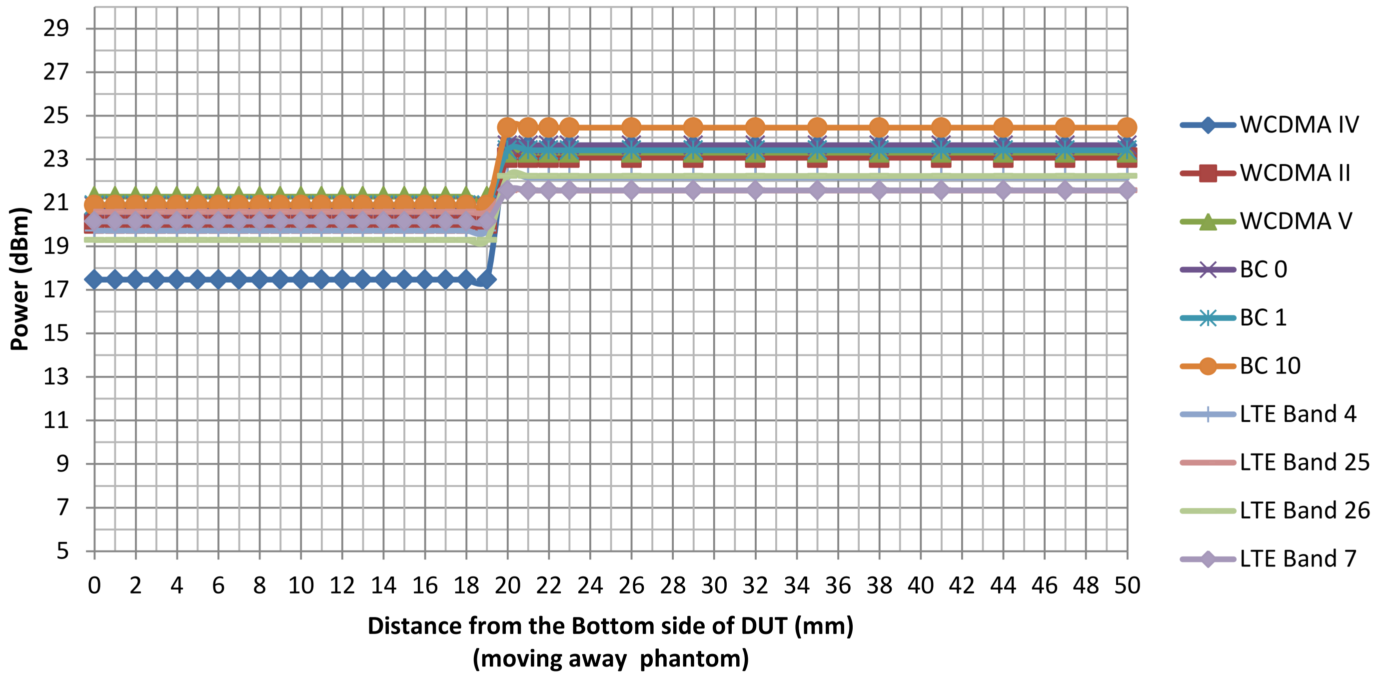
21
19
17
15
13
11
9
7
5
Power (dBm)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50
Distance from the Right side of DUT (mm)
(moving away phantom)
WCDMA IV
WCDMA II
WCDMA V
BC 0
BC 1
BC 10
LTE Band 4
LTE Band 25
LTE Band 26
LTE Band 7


29
27
25
23
21
19
17
15
13
11
9
7
5
Power (dBm)
50 47 44 41 38 35 32 29 26 23 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0
Distance from the Bottom side of DUT (mm)
(moving toward phantom)
WCDMA IV
WCDMA II
WCDMA V
BC 0
BC 1
BC 10
LTE Band 4
LTE Band 25
LTE Band 26
LTE Band 7


29
27
25
23
21
19
17
15
13
11
9
7
5
Power (dBm)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50
Distance from the Bottom side of DUT (mm)
(moving away phantom)
WCDMA IV
WCDMA II
WCDMA V
BC 0
BC 1
BC 10
LTE Band 4
LTE Band 25
LTE Band 26
LTE Band 7

14 Conducted RF Output Power

14.1 GSM Conducted Power

Band: GSM 850	Burst Average Power (dBm)			Frame-Average Power(dBm)		
Channel	128	190	251	128	190	251
Frequency (MHz)	824.2	836.6	848.8	824.2	836.6	848.8
GSM (GMSK, Voice)	32.67	**32.72**	32.65	23.64	23.69	23.62
GPRS (GMSK, 1 TX slot)	32.48	32.55	32.50	23.45	23.52	23.47
GPRS (GMSK, 2 TX slots)	31.72	31.76	31.71	25.70	25.74	25.69
GPRS (GMSK, 3 TX slots)	29.84	29.93	29.91	25.58	25.67	25.65
GPRS (GMSK, 4 TX slots)	28.68	28.8	**28.82**	25.67	25.79	**25.81**
EGPRS (8PSK, 1 TX slot)	26.87	26.89	26.86	17.84	17.86	17.83
EGPRS (8PSK, 2 TX slots)	25.75	25.84	25.76	19.73	19.82	19.74
EGPRS (8PSK, 3 TX slots)	23.66	23.74	23.72	19.40	19.48	19.46
EGPRS (8PSK, 4 TX slots)	22.32	22.44	22.37	19.31	19.43	19.36

Remark:

1. The frame-averaged power is linearly reported the maximum burst averaged power over 8 time slots. The calculated method are shown as below:
   The duty cycle "x" of different time slots as below:
   1 TX slot is 1/8, 2 TX slots is 2/8, 3 TX slots is 3/8 and 4 TX slots is 4/8
   Based on the calculation formula:
   Frame-averaged power = Burst averaged power + 10 1og (x)
   So,
   Frame-averaged power (1 TX slot) = Burst averaged power (1 TX slot)– 9.03
   Frame-averaged power (2 TX slots) = Burst averaged power (2 TX slots)– 6.02
   Frame-averaged power (3 TX slots) = Burst averaged power (3 TX slots)– 4.26
   Frame-averaged power (4 TX slots) = Burst averaged power (4 TX slots) – 3.01
2. CS1 coding scheme was used in GPRS conducted power measurements and SAR testing, MCS5 coding scheme was used in EGPRS conducted power measurements and SAR testing (if necessary).

Note:

1. For Head SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in GSM 850 Voice mode.
2. For Body worn SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in GSM 850 Voice mode.
3. For Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power.
4. Per KDB447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
5. The EUT do not support DTM and VoIP function.

Band: PCS 1900	Burst Average Power (dBm)			Frame-Average Power(dBm)		
Channel	512	661	810	512	661	810
Frequency (MHz)	1850.2	1880.0	1909.8	1850.2	1880.0	1909.8
GSM (GMSK, Voice)	29.72	29.80	**29.88**	20.69	20.77	20.85
GPRS (GMSK, 1 TX slot)	29.61	29.67	29.77	20.58	20.64	20.74
GPRS (GMSK, 2 TX slots)	28.68	28.80	28.87	22.66	22.78	22.85
GPRS (GMSK, 3 TX slots)	26.95	27.05	27.16	22.69	22.79	22.90
GPRS (GMSK, 4 TX slots)	25.87	25.98	**26.10**	22.86	22.97	**23.09**
EGPRS (8PSK, 1 TX slot)	25.26	25.31	25.25	16.23	16.28	16.22
EGPRS (8PSK, 2 TX slots)	24.17	24.05	24.19	18.15	18.03	18.17
EGPRS (8PSK, 3 TX slots)	22.03	21.93	21.99	17.77	17.67	17.73
EGPRS (8PSK, 4 TX slots)	20.81	20.74	20.82	17.80	17.73	17.81

Remark:

3. The frame-averaged power is linearly reported the maximum burst averaged power over 8 time slots. The calculated method are shown as below:
   The duty cycle "x" of different time slots as below:
   1 TX slot is 1/8, 2 TX slots is 2/8, 3 TX slots is 3/8 and 4 TX slots is 4/8
   Based on the calculation formula:
   Frame-averaged power = Burst averaged power + 10 1og (x)
   So,
   Frame-averaged power (1 TX slot) = Burst averaged power (1 TX slot)– 9.03
   Frame-averaged power (2 TX slots) = Burst averaged power (2 TX slots)– 6.02
   Frame-averaged power (3 TX slots) = Burst averaged power (3 TX slots)– 4.26
   Frame-averaged power (4 TX slots) = Burst averaged power (4 TX slots) – 3.01
4. CS1 coding scheme was used in GPRS conducted power measurements and SAR testing, MCS5 coding scheme was used in EGPRS conducted power measurements and SAR testing (if necessary).

Note:

1. For Head SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in GSM 1900 Voice mode.
2. For Body worn SAR testing, GSM Voice mode should be evaluated, therefore the EUT was set in GSM Voice 1900 mode.
3. For Hotspot mode SAR testing, GPRS and EGPRS mode should be evaluated, therefore the EUT was set in GPRS 4 TX slots mode due to the highest frame-averaged power.
4. Per KDB447498 D01v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.
5. The EUT do not support DTM and VoIP function.

14.2 WCDMA Conducted Power

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

HSDPA Setup Configuration:

a. The EUT was connected to Base Station Rohde & Schwarz CMU200 referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting:
   i. Set Gain Factors (β_c and β_d) and parameters were set according to each
   ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
   iii. Set RMC 12.2kbps + HSDPA mode.
   iv. Set Cell Power = -86 dBm
   v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
   vi. Select HSDPA Uplink Parameters
   vii. Set Delta ACK, Delta NACK and Delta CQI = 8
   viii. Set Ack-Nack Repetition Factor to 3
   ix. Set CQI Feedback Cycle (k) to 4 ms
   x. Set CQI Repetition Factor to 2
   xi. Power Ctrl Mode = All Up bits
d. The transmitted maximum output power was recorded.

Table 1

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

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 β_c/β_d =12/15, β_{hs}/β_c=24/15.
Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

HSDPA Sub-test setup configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Rohde & Schwarz CMU200 referred to the Setup Configuration.
b. The RF path losses were compensated into the measurements.
c. A call was established between EUT and Base Station with following setting * :
    i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
    ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
    iii. Set Cell Power = -86 dBm
    iv. Set Channel Type = 12.2k + HSPA
    v. Set UE Target Power
    vi. Power Ctrl Mode= Alternating bits
    vii. Set and observe the E-TFCI
    viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
d. The transmitted maximum output power was recorded.

Table 2

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

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

HSUPA Sub-test setup configuration

WCDMA Conducted Power:
<Maximum Average RF Power (Proximity Sensor Off)>

WCDMA Average power (dBm)			
Band	WCDMA Band V		
Channel	4132	4183	4233
Frequency (MHz)	826.4	836.6	846.6
AMR 12.2 kbps	23.12	23.06	23.02
RMC 12.2 kbps	23.29	**23.30**	23.26
HSDPA Sub-test 1	22.26	22.26	22.24
HSDPA Sub-test 2	21.93	21.90	21.89
HSDPA Sub-test 3	20.37	20.32	20.25
HSDPA Sub-test 4	20.25	20.35	20.33
HSUPA Sub-test 1	21.79	21.69	21.79
HSUPA Sub-test 2	22.18	22.19	22.18
HSUPA Sub-test 3	19.80	19.74	19.83
HSUPA Sub-test 4	22.23	22.22	22.22
HSUPA Sub-test 5	22.38	22.37	22.18

WCDMA Average power (dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
AMR 12.2 kbps	23.43	23.49	23.46
RMC 12.2 kbps	23.49	**23.64**	23.64
HSDPA Sub-test 1	22.53	22.56	22.57
HSDPA Sub-test 2	22.15	22.25	22.21
HSDPA Sub-test 3	20.52	20.51	20.68
HSDPA Sub-test 4	20.58	20.69	20.75
HSUPA Sub-test 1	22.13	22.09	22.12
HSUPA Sub-test 2	22.48	22.51	22.53
HSUPA Sub-test 3	20.09	20.15	20.20
HSUPA Sub-test 4	22.30	22.25	22.18
HSUPA Sub-test 5	22.53	22.57	22.57

WCDMA Average power (dBm)			
Band	WCDMA Band II		
Channel	9262	9400	9538
Frequency (MHz)	1852.4	1880.0	1907.6
AMR 12.2 kbps	22.98	22.69	22.80
RMC 12.2 kbps	**23.07**	22.97	22.96
HSDPA Sub-test 1	22.01	21.91	21.88
HSDPA Sub-test 2	21.65	21.46	21.57
HSDPA Sub-test 3	20.12	20.11	19.97
HSDPA Sub-test 4	20.15	20.09	19.89
HSUPA Sub-test 1	21.53	21.45	21.33
HSUPA Sub-test 2	21.95	21.82	21.82
HSUPA Sub-test 3	19.60	19.50	19.43
HSUPA Sub-test 4	21.62	21.46	21.49
HSUPA Sub-test 5	22.00	21.86	21.85

<Maximum Average RF Power (Proximity Sensor on>

WCDMA Average power (dBm)			
Band	WCDMA Band V		
Channel	4132	4183	4233
Frequency (MHz)	826.4	836.6	846.6
AMR 12.2 kbps	21.10	21.24	21.19
RMC 12.2 kbps	21.16	**21.28**	21.21
HSDPA Sub-test 1	22.23	**22.29**	22.29
HSDPA Sub-test 2	21.89	21.88	21.81
HSDPA Sub-test 3	20.30	20.28	20.20
HSDPA Sub-test 4	20.22	20.29	20.21
HSUPA Sub-test 1	21.61	21.60	21.63
HSUPA Sub-test 2	22.10	22.13	22.13
HSUPA Sub-test 3	19.67	19.62	19.66
HSUPA Sub-test 4	22.09	22.11	22.10
HSUPA Sub-test 5	22.12	**22.13**	22.11

WCDMA Average power (dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency (MHz)	1712.4	1732.6	1752.6
AMR 12.2 kbps	17.34	17.38	17.36
RMC 12.2 kbps	17.45	**17.47**	17.40
HSDPA Sub-test 1	22.21	**22.23**	22.20
HSDPA Sub-test 2	22.06	22.11	22.10
HSDPA Sub-test 3	20.34	20.36	20.36
HSDPA Sub-test 4	20.29	20.32	20.35
HSUPA Sub-test 1	22.03	21.99	22.06
HSUPA Sub-test 2	22.16	22.15	22.11
HSUPA Sub-test 3	19.98	20.10	20.03
HSUPA Sub-test 4	22.13	22.16	22.14
HSUPA Sub-test 5	22.34	**22.39**	22.32

WCDMA Average power (dBm)			
Band	WCDMA Band II		
Channel	9262	9400	9538
Frequency (MHz)	1852.4	1880.0	1907.6
AMR 12.2 kbps	19.95	19.76	19.84
RMC 12.2 kbps	**20.03**	19.91	19.95
HSDPA Sub-test 1	**21.94**	21.88	21.69
HSDPA Sub-test 2	21.36	21.30	21.42
HSDPA Sub-test 3	20.03	20.01	19.82
HSDPA Sub-test 4	20.09	19.91	19.80
HSUPA Sub-test 1	21.37	21.31	21.22
HSUPA Sub-test 2	21.65	21.48	21.42
HSUPA Sub-test 3	19.51	19.43	19.36
HSUPA Sub-test 4	21.46	21.33	21.35
HSUPA Sub-test 5	**21.93**	21.70	21.69

Note:

1. Applying the subtest setup in Table C.11.1.3 of 3GPP TS 34.121-1
2. Per KDB 941225 D01, RMC 12.2kbps mode is used to evaluate SAR due the highest output power. If AMR 12.2 kbps power is < 0.25dB higher than RMC 12.2kbps, SAR tests with AMR 12.2 kbps can be excluded.
3. AMR, HSDPA RF power will not be larger than RMC 12.2kbps, detailed information is included in Tune-up Procure exhibit.

14.3 CDMA 2000 Conducted Power

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

CDMA 2000 1XRTT Setup Configuration:

Maximum output power is verified on the High, Middle and Low channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. Results for at least steps 3, 4 and 10 of the power measurement procedures should be tabulated in the SAR report. Steps 3 and 4 should be measured using SO55 with power control bits in “ALL UP” condition. TDSO/SO32 may be used instead of SO55 for step 2. Step 10 should be measured using TDSO/SO32 with power control bits in the “Bits Hold” condition. All power measurements defined in C.S0011/TIA-98-E that are inapplicable to the DUT or cannot be measured due to technical or equipment limitations should be clearly identified in the test report.

CDMA2000 1XRTT Conducted Power:

<Maximum Average RF Power (Proximity Sensor Off)>

Conducted Output Power (dBm)							
Band		BC 0			BC 1		
Channel		1013	384	777	25	600	1175
Frequency (MHz)		824.7	836.52	848.31	1851.25	1880	1908.75
RC1	2(Loopback)	23.51	23.50	23.43	23.39	23.37	23.36
	55(Loopback)	23.54	23.49	23.46	23.40	23.37	23.38
RC2	9(Loopback)	23.51	23.46	23.44	22.81	22.85	22.70
	55(Loopback)	23.33	23.31	23.20	23.43	23.35	23.36
RC3	2(Loopback)	23.60	23.32	23.24	23.42	23.37	23.40
	55(Loopback)	**23.64**	23.47	23.42	**23.41**	23.37	23.39
	32(+F-SCH)	**23.67**	23.63	23.56	**23.47**	23.42	23.40
	32(+SCH)	23.66	23.65	23.58	23.45	23.41	23.39
RC4	2(Loopback)	23.62	23.55	23.50	23.37	23.34	23.37
	55(Loopback)	23.62	23.56	23.23	23.46	23.38	23.36
	32(+F-SCH)	23.63	23.60	23.54	23.43	23.41	23.41
	32(+SCH)	23.61	23.58	23.53	23.42	23.42	23.40
RC5	9(Loopback)	23.57	23.50	23.25	23.41	23.33	23.32
	55(Loopback)	23.35	23.32	23.24	23.38	23.35	23.37

Conducted Output Power (dBm)				
Band		BC 10		
Channel		476	580	684
Frequency (MHz)		817.9	820.5	823.1
RC1	2(Loopback)	24.48	24.43	24.44
	55(Loopback)	24.46	24.39	24.41
RC2	9(Loopback)	24.45	24.40	24.41
	55(Loopback)	24.43	24.37	24.38
RC3	2(Loopback)	24.43	24.38	24.42
	55(Loopback)	**24.45**	24.40	24.39
	32(+F-SCH)	**24.54**	24.49	24.51
	32(+SCH)	24.52	24.48	24.49
RC4	2(Loopback)	24.44	24.39	24.41
	55(Loopback)	24.45	24.40	24.43
	32(+F-SCH)	24.53	24.46	24.48
	32(+SCH)	24.51	24.45	24.48
RC5	9(Loopback)	24.48	24.42	24.45
	55(Loopback)	24.48	24.41	24.44

<Maximum Average RF Power (Proximity Sensor on>

Conducted Output Power (dBm)							
Band		BC 0			BC 1		
Channel		1013	384	777	25	600	1175
Frequency (MHz)		824.7	836.52	848.31	1851.25	1880	1908.75
RC1	2(Loopback)	20.55	20.47	20.42	20.53	20.34	20.35
	55(Loopback)	20.61	20.60	20.57	20.49	20.48	20.35
RC2	9(Loopback)	20.60	20.45	20.43	19.88	19.84	19.81
	55(Loopback)	20.41	20.32	20.21	20.62	20.36	20.35
RC3	2(Loopback)	20.72	20.44	20.27	20.59	20.49	20.43
	55(Loopback)	**20.83**	20.66	20.61	**20.89**	20.87	20.87
	32(+F-SCH)	**20.85**	20.81	20.74	**20.92**	20.91	20.87
	32(+SCH)	20.80	20.76	20.52	20.59	20.40	20.33
RC4	2(Loopback)	20.65	20.54	20.45	20.48	20.35	20.34
	55(Loopback)	20.73	20.57	20.21	20.67	20.39	20.47
	32(+F-SCH)	20.62	20.59	20.53	20.52	20.40	20.40
	32(+SCH)	20.62	20.59	20.54	20.43	20.43	20.41
RC5	9(Loopback)	20.55	20.48	20.23	20.77	20.64	20.53
	55(Loopback)	20.32	20.29	20.21	20.79	20.72	20.35

Conducted Output Power (dBm)				
Band		BC 10		
Channel		476	580	684
Frequency (MHz)		817.9	820.5	823.1
RC1	2(Loopback)	20.62	20.47	20.50
	55(Loopback)	20.55	20.54	20.50
RC2	9(Loopback)	20.57	20.49	20.59
	55(Loopback)	20.62	20.49	20.69
RC3	2(Loopback)	20.58	20.49	20.63
	55(Loopback)	**20.89**	20.83	20.81
	32(+F-SCH)	**20.99**	20.94	20.98
	32(+SCH)	20.71	20.57	20.64
RC4	2(Loopback)	20.62	20.40	20.58
	55(Loopback)	20.74	20.59	20.63
	32(+F-SCH)	20.84	20.74	20.80
	32(+SCH)	20.82	20.81	20.88
RC5	9(Loopback)	20.78	20.61	20.66
	55(Loopback)	20.86	20.91	20.75

Note:

4. Per KDB 941225 D01, SAR for head exposure configurations is measured in RC3 with the DUT configured to transmit at full rate using Loopback Service Option SO55.
5. Per KDB 941225 D01, SAR for RC1 is not required when the maximum average output of each channel is less than ¼ dB higher than that measured in RC3.
6. Per KDB 941225 D01, SAR for body exposure configurations is measured in RC3 with the DUT configured using TDSO/SO32, to transmit at full rate on FCH with all other code channels disabled.
7. Per KDB 941225 D01, SAR for multiple code channels (FCH + SCH_n) is not required when the maximum average output of each RF channel is less than ¼ dB higher than that measured with FCH only.

CDMA 2000 1XEV-DO Release 0 Setup Configuration:

1. Configure all of the open loop parameters to their maximum settings. Set the following parameters of the *Access Parameters Message* as specified below:

Parameter	Value(Decimal)
Open Loop Adjust	81 (-81 dB) for BC 0, 2, 3, 5, 7, and 9 84 (-84 dB) for BC 1, 4, 6, and 8
Probe Initial Adjust	15 (15dB)
Probe Num Adjust	15 (15 probes/sequence)

2. Set the following fields of the Initial Configuration attribute of the Default Access Channel MAC Protocol as specified below:

Parameter	Value(Decimal)
Power Step	15 (7.5 dB/step)
Probe Sequence Max	15 (15 sequences)

3. Connect the sector to the access terminal antenna connector as shown in Figure 11.5.1-4. The AWGN generator and the CW generator are not applicable in this test.
4. Set up a Test Application session. Open a connection and configure the Test Application RTAP so that the Reverse Data Channel rate corresponds to 153.6 kbps. Configure the Test Application FTAP so that the Forward Traffic Channel data rate corresponds to the 2-slot version of 307.2 kbps, and the ACK Channel is transmitted at all the slots.
5. Set Îor to –105.5 dBm/1.23 MHz. (Check latest standards/revisions on -105 dBm)
6. Send continuously ‘0’ power control bits to the access terminal.
7. Measure the access terminal output power at the access terminal antenna connector.

CDMA2000 1XEV-DO Release 0 Conducted Power:

<Maximum Average RF Power (Proximity Sensor Off)>

Conducted Output Power (dBm)							
Band		BC 0			BC 1		
Channel		1013	384	777	25	600	1175
Frequency (MHz)		824.7	836.52	848.31	1851.25	1880	1908.75
FTAP Rate	RTAP Rate	22.95	22.98	22.84	22.66	22.50	22.59
307.2kbps	153.6kbps						

<Maximum Average RF Power (Proximity Sensor On)>

Conducted Output Power (dBm)							
Band		BC 0			BC 1		
Channel		1013	384	777	25	600	1175
Frequency (MHz)		824.7	836.52	848.31	1851.25	1880	1908.75
FTAP Rate	RTAP Rate	19.79	19.86	19.73	19.57	19.4	19.44
307.2kbps	153.6kbps						

Note:

1. Applying the subtest setup in KDB 941225 D01.
2. Pre KDB 941225 D01, when the maximum average output of each channel in Rev. 0 is less than ¼ dB higher than that measured in RC3 (1x RTT), body SAR for Ev-Do is not required.

CDMA 2000 1XEV-DO Release A Setup Configuration:

1. Configure all of the open loop parameters to their maximum settings. Set the following parameters of the *Access Parameters Message* as specified below:

Parameter	Value(Decimal)
Open Loop Adjust	81 (-81 dB) for BC 0, 2, 3, 5, 7, 9, 10, 11,and 12 84 (-84 dB) for BC 1, 4, 6, and 8
Probe Initial Adjust	15 (15dB)
Probe Num Adjust	15 (15 7.5 dB/step)

2. Connect the sector to the access terminal antenna connector as shown in Figure 8.5.1-4. The AWGN generator and the CW generator are not applicable in this test.

3. For each band class that the access terminal supports, configure the access terminal to operate in that band class and perform steps 4 through 7.
4. Set up a Test Application session using one of the Physical Layer subtypes. Open a connection. For Subtype 0 or 1 Physical Layer, configure the Test Application RTAP so that the Reverse Data Channel rate corresponds to 153.6 kbps. For Subtype 2 Physical Layer, configure the Test Application RETAP so that the Reverse Data Channel payload size corresponds to 4096 bits with Termination Target of 16 slots. Configure the Test Application FTAP (for Subtype 0 or 1 Physical Layer) or FETAP (for Subtype 2 Physical Layer) so that the Forward Traffic Channel data rate corresponds to the 2-slot version of 307.2 kbps, and the ACK Channel is transmitted 4 at all the slots.
5. Set Îor to –60 dBm/1.23 MHz. (Check latest standards/revisions on -60 dBm)
6. Send continuously ‘0’ power control bits to the access terminal.
7. Measure the mean access terminal output power at the access terminal antenna connector.

CDMA2000 1XEV-DO Release A Conducted Power:

<Maximum Average RF Power (Proximity Sensor Off)>

Conducted Output Power (dBm)							
Band		BC 0			BC 1		
Channel		1013	384	777	25	600	1175
Frequency (MHz)		824.7	836.52	848.31	1851.25	1880	1908.75
FETAP-Traffic Format	RETAP-Data Payload Size	22.89	22.85	22.66	22.66	22.56	22.50
307.2k,QPSK/ACK Channel is transmitted at all the slots	4096						

<Maximum Average RF Power (Proximity Sensor On)>

Conducted Output Power (dBm)							
Band		BC 0			BC 1		
Channel		1013	384	777	25	600	1175
Frequency (MHz)		824.7	836.52	848.31	1851.25	1880	1908.75
FETAP-Traffic Format	RETAP-Data Payload Size	19.98	19.86	19.6	19.77	19.64	19.51
307.2k,QPSK/ACK Channel is transmitted at all the slots	4096						

Note:

3. Applying the subtest setup in KDB 941225 D01.
4. Pre KDB 941225 D01, SAR for Rev. A is not required when the maximum average output of each channel is less than that measured in Rev. 0 or less than ¼ dB higher than that measured in RC3.

14.4 LTE Conducted Power

14.4.1 Largest channel bandwidth standalone SAR test requirements

QPSK with 1 RB allocation

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel.8 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.

QPSK with 50% RB allocation

The procedures required for 1 RB allocation in section 4.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.9

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 sections 4.2.1 and 4.2.2 are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in sections 4.2.1, 5.2.2 and 4.2.3 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.

14.4.2 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 4.2 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. The equivalent channel configuration for the RB allocation, RB offset and modulation etc. is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth. For example, 50 RB in 10 MHz channel bandwidth does not apply to 5 MHz channel bandwidth; therefore, this cannot be tested in the smaller channel bandwidth. However, 50% RB allocation in 10 MHz channel bandwidth is equivalent to 100% RB allocation in 5 MHz channel bandwidth; therefore, these are the equivalent configurations to be compared to determine the specific channel and configuration in the smaller channel bandwidth that need SAR testing.

13.3.3 TDD LTE configuration setup for SAR measurement

According to KDB 941225 D05v02r03 and April 2013 TCB workshop slides, SAR must be tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

- see 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “special subframe S” contains both uplink and downlink transmissions and must be taken into consideration to determine the transmission duty factor
  – according to the worst case uplink and downlink cyclic prefix requirements for UpPTS to determine the highest SAR test duty factor

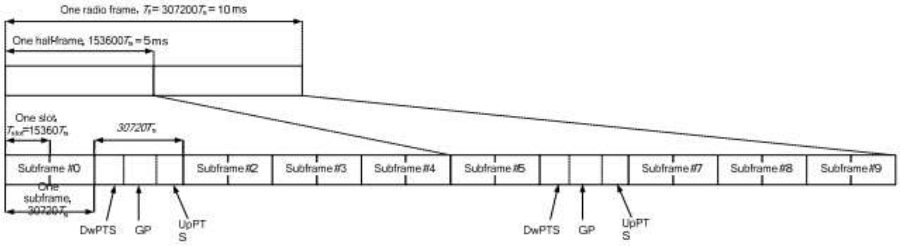


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity)

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-	-	-
9	$13168 \cdot T_s$			-	-	-

Per 3GPP 36.211 section 4.2, each radio frame of length T_f=37200·Ts = 10 ms consists of two half-frames of length 153600·Ts = 5ms each. Each half-frame consists of five subframes of length 30720 ·Ts = 1ms. So, the uplink duty factor in special subframe as below:

Special Subframe configuration	Normal cyclic prefix in downlink		Extended cyclic prefix in downlink	
	Duty factor of Uplink		Duty factor of Uplink	
	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	7.14%	8.33%	7.14%	8.33%
1	7.14%	8.33%	7.14%	8.33%
2	7.14%	8.33%	7.14%	8.33%
3	7.14%	8.33%	7.14%	8.33%
4	7.14%	8.33%	14.27%	16.67%
5	14.27%	16.67%	14.27%	16.67%
6	14.27%	16.67%	14.27%	16.67%
7	14.27%	16.67%	14.27%	16.67%
8	14.27%	16.67%	/	/
9	14.27%	16.67%	/	/

Table 4.2-2: Uplink-downlink configurations

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

According to above table:

1. The highest duty factor is configuration 0;
2. The duty factor of uplink in one half-frame with normal cyclic prefix is: (3ms + 0.143ms)/5ms=62.86%;
3. The duty factor of uplink in one half-frame with extended cyclic prefix is: (3ms + 0.167ms)/5ms=63.34%;
4. For purpose to get the worst case SAR test duty factor, the duty factor of normal cyclic prefix in uplink scaled-up to the extended cyclic prefix in uplink, the scaling factor is 63.34%/62.86%=1.008, and the scaling factor will be taken into the final measured SAR.

<Maximum Average RF Power (Proximity Sensor Off)>

LTE Band 25 part

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26047	26365	26683
					1850.70MHz	1882.5MHz	1914.3MHz
Band 25	1.4	QPSK	1	0	21.54	21.41	21.40
			1	2	21.55	21.60	21.56
			1	5	21.46	21.41	21.38
			3	0	20.63	20.44	20.41
			3	1	20.61	20.53	20.39
			3	2	20.57	20.33	20.31
			6	0	20.62	20.50	20.44
		16QAM	1	0	20.77	20.32	20.45
			1	2	20.81	20.34	20.46
			1	5	20.56	20.54	20.33
			3	0	20.56	20.32	20.72
			3	1	20.64	20.71	20.74
			3	2	20.48	20.63	20.55
			6	0	20.49	20.68	20.48

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26055	26365	26675
					1851.50MHz	1882.5MHz	1913.5MHz
Band 25	3	QPSK	1	0	21.47	21.38	21.45
			1	7	21.51	21.39	21.46
			1	14	21.36	21.39	21.54
			8	0	20.49	20.38	20.50
			8	4	20.43	20.51	20.58
			8	7	20.44	20.42	20.45
			15	0	20.40	20.38	20.43
		16QAM	1	0	20.47	20.51	20.53
			1	7	20.41	20.34	20.45
			1	14	20.56	20.57	20.61
			8	0	20.54	20.44	20.42
			8	4	20.42	20.49	20.41
			8	7	20.42	20.37	20.45
			15	0	20.34	20.32	20.33

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26065	26365	26665
					1852.5MHz	1882.5MHz	1912.5MHz
Band 25	5	QPSK	1	0	21.33	21.30	21.37
			1	12	21.40	21.40	21.48
			1	24	21.30	21.21	21.34
			12	0	20.47	20.36	20.54
			12	6	20.40	20.49	20.47
			12	11	20.37	20.43	20.34
			25	0	20.40	20.51	20.37
		16QAM	1	0	20.25	20.37	20.46
			1	12	20.40	20.34	20.58
			1	24	20.36	20.49	20.65
			12	0	20.32	20.34	20.54
			12	6	20.34	20.40	20.32
			12	11	20.35	20.35	20.32
			25	0	20.37	20.41	20.33

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26090	26365	26640
					1855.00MHz	1882.5MHz	1910.0MHz
Band 25	10	QPSK	1	0	21.53	21.46	21.34
			1	24	21.43	21.49	21.47
			1	49	21.38	21.35	21.30
			25	0	20.49	20.48	20.42
			25	12	20.56	20.45	20.48
			25	24	20.64	20.39	20.29
			50	0	20.41	20.45	20.38
		16QAM	1	0	20.80	20.45	20.37
			1	24	20.54	20.38	20.58
			1	49	20.46	20.50	20.32
			25	0	20.50	20.37	20.36
			25	12	20.35	20.39	20.31
			25	24	20.36	20.45	20.35
			50	0	20.31	20.31	20.35

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26115	26365	26615
					1857.50MHz	1882.5MHz	1907.5MHz
Band 25	15	QPSK	1	0	21.34	21.27	21.45
			1	37	21.39	21.42	21.41
			1	74	21.19	21.21	21.34
			36	0	20.51	20.38	20.44
			36	16	20.51	20.43	20.42
			36	35	20.32	20.36	20.34
			75	0	20.48	20.50	20.43
		16QAM	1	0	20.66	20.21	20.28
			1	37	20.60	20.71	20.79
			1	74	20.53	20.56	20.57
			36	0	20.41	20.46	20.47
			36	16	20.40	20.45	20.52
			36	35	20.35	20.37	20.39
			75	0	20.37	20.36	20.40

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26140	26365	26590
					1860.00MHz	1882.50MHz	1905.00MHz
Band 25	20	QPSK	1	0	21.35	21.21	21.18
			1	49	21.56	21.42	21.55
			1	99	21.08	21.14	21.24
			50	0	20.59	20.48	20.62
			50	24	20.50	20.46	20.48
			50	49	20.47	20.48	20.44
			100	0	20.38	20.48	20.61
		16QAM	1	0	20.48	20.44	20.36
			1	49	20.73	20.86	20.80
			1	99	20.74	20.89	20.47
			50	0	20.48	20.57	20.57
			50	24	20.47	20.59	20.40
			50	49	20.49	20.53	20.35
			100	0	20.41	20.41	20.45

LTE Band 4 part

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19957	20175	20393
					1710.7MHz	1732.5MHz	1754.3MHz
Band 4	1.4	QPSK	1	0	22.18	22.18	21.95
			1	2	22.32	22.35	22.11
			1	5	22.06	22.10	22.04
			3	0	21.21	21.23	21.08
			3	1	21.18	21.17	21.26
			3	2	21.09	21.21	21.08
			6	0	21.26	21.24	21.11
		16QAM	1	0	21.25	21.19	20.84
			1	2	21.61	21.25	21.03
			1	5	21.26	21.56	21.14
			3	0	21.01	21.26	21.08
			3	1	21.15	21.42	21.17
			3	2	21.12	21.22	21.25
			6	0	20.45	20.41	20.44

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
Band 4	3	QPSK	1	0	22.11	22.18	22.02
			1	7	22.16	22.07	22.05
			1	14	22.09	22.08	22.07
			8	0	21.25	21.12	21.01
			8	4	21.19	21.07	21.05
			8	7	21.15	21.19	21.02
			15	0	21.18	21.22	21.08
		16QAM	1	0	21.34	21.16	21.21
			1	7	21.25	20.94	21.15
			1	14	21.31	21.27	21.21
			8	0	20.43	20.40	20.45
			8	4	20.53	20.44	20.58
			8	7	20.40	20.45	20.45
			15	0	20.41	20.42	20.55

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19975	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
Band 4	5	QPSK	1	0	22.08	22.09	21.99
			1	12	22.04	22.11	22.01
			1	24	22.04	22.03	21.86
			12	0	21.06	21.02	21.12
			12	6	21.11	21.06	21.03
			12	11	21.13	21.14	20.97
			25	0	21.15	21.10	21.07
		16QAM	1	0	21.02	21.11	21.17
			1	12	21.31	21.19	20.93
			1	24	21.17	21.41	21.03
			12	0	20.58	20.60	20.56
			12	6	20.62	20.48	20.51
			12	11	20.64	20.40	20.44
			25	0	20.61	20.51	20.51

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20000	20175	20350
					1715.0MHz	1732.5MHz	1750.0MHz
Band 4	10	QPSK	1	0	22.15	22.13	22.01
			1	24	22.19	22.16	22.01
			1	49	21.92	22.06	21.89
			25	0	21.21	21.15	21.18
			25	12	21.16	21.17	21.17
			25	24	21.08	21.10	20.98
			50	0	21.17	21.22	21.14
		16QAM	1	0	21.47	21.24	21.14
			1	24	21.32	21.12	21.14
			1	49	21.08	21.45	21.00
			25	0	20.45	20.42	20.44
			25	12	20.46	20.41	20.45
			25	24	20.46	20.49	20.42
			50	0	20.50	20.45	20.48

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20025	20175	20325
					1717.5MHz	1732.5MHz	1747.5MHz
Band 4	15	QPSK	1	0	21.98	21.98	21.90
			1	37	21.99	22.13	22.09
			1	74	21.97	21.83	21.74
			36	0	21.19	21.06	21.16
			36	16	21.12	21.08	21.01
			36	35	21.06	21.09	21.00
			75	0	21.03	21.10	21.05
		16QAM	1	0	20.93	21.68	21.19
			1	37	20.86	21.77	21.56
			1	74	21.58	20.81	21.50
			36	0	20.45	20.52	20.60
			36	16	20.47	20.52	20.51
			36	35	20.48	20.42	20.47
			75	0	20.46	20.49	20.45

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20050	20175	20300
					1720.0MHz	1732.5MHz	1745.0MHz
Band 4	20	QPSK	1	0	21.88	21.84	21.77
			1	49	22.02	22.15	22.06
			1	99	21.82	21.72	21.60
			50	0	21.20	20.99	21.08
			50	24	21.06	21.04	21.04
			50	49	21.02	21.12	20.88
			100	0	21.06	21.03	20.99
		16QAM	1	0	21.07	21.55	21.14
			1	49	21.41	21.45	21.39
			1	99	20.98	20.87	20.91
			50	0	20.47	20.45	20.62
			50	24	20.44	20.51	20.58
			50	49	20.45	20.45	20.43
			100	0	20.46	20.46	20.51

LTE Band 26 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26697	26865	27033
					814.7MHz	831.5MHz	848.3MHz
Band 26	1.4	QPSK	1	0	21.99	22.00	21.92
			1	2	22.12	21.99	22.20
			1	5	21.87	21.91	21.92
			3	0	21.06	21.09	21.02
			3	1	21.17	21.08	21.01
			3	2	21.05	21.03	21.07
			6	0	21.11	21.12	21.01
		16QAM	1	0	20.91	20.80	21.03
			1	2	21.06	20.81	21.14
			1	5	21.32	21.05	20.81
			3	0	21.11	21.20	21.12
			3	1	21.21	21.10	21.06
			3	2	21.08	21.08	21.00
			6	0	20.95	20.98	20.98

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26705	26865	27025
					815.5MHz	831.5MHz	847.5MHz
Band 26	3	QPSK	1	0	22.09	21.92	21.90
			1	7	21.99	21.96	21.93
			1	14	21.97	22.02	22.02
			8	0	21.03	20.99	21.13
			8	4	21.00	21.00	21.02
			8	7	21.05	21.02	20.99
			15	0	21.03	21.06	21.00
		16QAM	1	0	21.10	21.14	21.02
			1	7	21.15	20.85	21.07
			1	14	21.17	21.09	21.03
			8	0	20.93	20.92	20.87
			8	4	20.92	20.98	20.80
			8	7	20.92	20.89	20.81
			15	0	20.95	20.85	20.83

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26715	26865	27015
					816.5MHz	831.5MHz	846.5MHz
Band 26	5	QPSK	1	0	21.98	21.86	21.84
			1	12	21.94	22.00	21.97
			1	24	21.87	21.82	21.92
			12	0	20.90	20.95	21.06
			12	6	21.00	21.02	21.09
			12	11	20.99	20.94	20.93
			25	0	21.04	21.00	21.06
		16QAM	1	0	21.27	20.87	21.02
			1	12	21.12	21.04	21.40
			1	24	20.68	20.90	20.91
			12	0	20.91	20.53	20.40
			12	6	20.93	20.53	20.45
			12	11	20.95	20.56	20.45
			25	0	20.98	20.51	20.41

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26750	26865	26990
					820MHz	831.5MHz	844MHz
Band 26	10	QPSK	1	0	21.99	21.95	21.98
			1	24	22.04	22.12	22.15
			1	49	21.98	21.94	21.91
			25	0	21.10	21.02	21.22
			25	12	21.14	20.99	21.11
			25	24	21.12	20.91	20.96
			50	0	21.06	20.99	21.15
		16QAM	1	0	21.41	21.37	21.15
			1	24	21.12	21.12	21.43
			1	49	21.10	21.00	21.03
			25	0	20.93	20.68	20.52
			25	12	20.97	20.67	20.57
			25	24	20.96	20.67	20.50
			50	0	20.94	20.63	20.56

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26775	26865	26965
					822.5MHz	831.5MHz	841.5MHz
Band 26	15	QPSK	1	0	21.98	21.97	21.88
			1	37	22.23	22.10	22.06
			1	74	21.85	21.74	21.89
			36	0	21.22	20.99	21.20
			36	16	21.05	21.00	21.00
			36	35	20.99	20.89	20.93
			75	0	21.08	21.05	21.09
		16QAM	1	0	21.52	21.02	20.79
			1	37	20.80	21.08	21.16
			1	74	21.01	21.17	21.02

			36	0	20.98	20.93	20.68
			36	16	20.96	20.88	20.63
			36	35	20.91	20.87	20.67
			75	0	20.85	20.78	20.60

LTE Band 7 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20775	21100	21425
					2502.5MHz	2535.0MHz	2567.5MHz
Band 7	5	QPSK	1	0	21.24	21.40	21.47
			1	12	21.35	21.32	21.64
			1	24	21.33	21.31	21.55
			12	0	21.13	21.24	21.24
			12	6	21.15	21.21	21.28
			12	11	21.16	21.23	21.27
			25	0	21.13	21.23	21.49
		16QAM	1	0	20.75	20.71	20.74
			1	12	20.89	20.69	20.72
			1	24	20.87	20.68	20.76
			12	0	20.87	20.69	20.75
			12	6	20.45	20.64	20.62
			12	11	20.49	20.60	20.57
			25	0	20.47	20.52	20.54

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20800	21100	21400
					2505.0MHz	2535.0MHz	2565.0MHz
Band 7	10	QPSK	1	0	21.21	21.26	21.48
			1	24	21.49	21.46	21.87
			1	49	21.31	21.37	21.62
			25	0	21.15	21.14	21.26
			25	12	21.10	21.14	20.20
			25	24	21.18	21.13	21.21
			50	0	21.19	21.18	21.25
		16QAM	1	0	20.73	20.81	20.64
			1	24	20.76	20.74	20.61
			1	49	20.50	20.97	20.62
			25	0	20.59	20.54	20.67
			25	12	20.44	20.61	20.57
			25	24	20.41	20.66	20.58
			50	0	20.44	20.63	20.53

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20825	21100	21375
					2507.5MHz	2535.0MHz	2562.5MHz
Band 7	15	QPSK	1	0	21.30	21.23	21.46
			1	37	21.30	21.46	21.58
			1	74	21.28	21.31	21.54
			36	0	21.08	21.19	21.28
			36	16	21.03	21.10	21.29
			36	35	21.07	21.11	21.29
			75	0	21.02	21.15	21.29
		16QAM	1	0	20.63	20.63	20.61
			1	37	20.64	20.64	20.67
			1	74	20.61	20.61	20.66
			36	0	20.53	20.42	20.44
			36	16	20.55	20.46	20.40
			36	35	20.43	20.46	20.41
			75	0	20.39	20.37	20.46

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20850	21100	21350
					2510.0MHz	2535.0MHz	2560.0MHz
Band 7	20	QPSK	1	0	21.43	21.49	21.34
			1	49	21.42	21.41	21.57
			1	99	21.47	21.21	21.33
			50	0	21.26	21.06	21.15
			50	24	21.24	21.03	21.17
			50	49	21.27	21.05	21.15
			100	0	21.23	21.00	21.19
		16QAM	1	0	20.74	20.84	20.99
			1	49	20.70	20.79	20.97
			1	99	20.60	20.75	20.94
			50	0	20.49	20.38	20.71
			50	24	20.43	20.47	20.72
			50	49	20.45	20.45	20.67
			100	0	20.36	20.48	20.64

LTE Band 12 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23017	23095	23175
					699.7MHz	707.5MHz	715.3MHz
Band 12	1.4	QPSK	1	0	22.18	22.21	22.19
			1	2	22.42	22.37	22.33
			1	5	22.19	22.24	22.21
			3	0	21.26	21.35	21.28
			3	1	21.18	21.45	21.23
			3	2	21.27	21.33	21.35
			6	0	21.29	21.43	21.26
		16QAM	1	0	21.72	21.38	21.25
			1	2	21.48	21.50	21.38
			1	5	21.17	21.24	21.42
			3	0	21.21	21.43	21.27
			3	1	21.19	21.07	21.55
			3	2	21.31	21.64	21.34
			6	0	20.49	20.44	20.39

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23025	23095	23165
					700.5MHz	707.5MHz	714.5MHz
Band 12	3	QPSK	1	0	22.22	22.17	22.33
			1	7	22.22	22.28	22.28
			1	14	22.26	22.26	22.29
			8	0	21.16	21.29	21.29
			8	4	21.32	21.38	21.27
			8	7	21.27	21.32	21.34
			15	0	21.28	21.30	21.25
		16QAM	1	0	21.68	21.29	21.31
			1	7	21.44	21.48	21.76
			1	14	21.19	21.27	21.34
			8	0	20.57	20.47	20.44
			8	4	20.59	20.40	20.44
			8	7	20.52	20.46	20.46
			15	0	20.56	20.40	20.44

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23035	23095	23155
					701.5MHz	707.5MHz	713.5MHz
Band 12	5	QPSK	1	0	22.10	22.10	22.13
			1	12	22.26	22.30	22.35
			1	24	22.11	22.16	22.07
			12	0	21.16	21.28	21.18
			12	6	21.28	21.39	21.27
			12	11	21.22	21.32	21.24
			25	0	21.18	21.35	21.29
		16QAM	1	0	21.20	20.94	21.28
			1	12	21.73	21.52	21.74
			1	24	21.20	21.64	21.52
			12	0	20.42	20.41	20.34
			12	6	20.39	20.38	20.41
			12	11	20.34	20.37	20.35
			25	0	20.37	20.40	20.35

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23060	23095	23130
					704MHz	707.5MHz	711MHz
Band 12	10	QPSK	1	0	22.13	22.06	22.24
			1	24	22.46	22.33	22.38
			1	49	22.24	22.23	22.27
			25	0	21.25	21.24	21.22
			25	12	21.33	21.29	21.31
			25	24	21.44	21.47	21.44
			50	0	21.39	21.37	21.36
		16QAM	1	0	21.26	21.60	21.71
			1	24	21.47	21.43	21.46
			1	49	21.70	21.34	21.61
			25	0	20.35	20.35	20.39
			25	12	20.35	20.43	20.40
			25	24	20.36	20.37	20.39
			50	0	20.36	20.36	20.36

LTE Band 17 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23755	23790	23825
					706.5MHz	710.0MHz	713.5MHz
Band 17	5	QPSK	1	0	22.08	22.23	22.19
			1	12	22.25	22.28	22.32
			1	24	22.20	22.23	22.14
			12	0	21.19	21.23	21.17
			12	6	21.37	21.39	21.37
			12	11	21.29	21.35	21.20
			25	0	21.34	21.28	21.33
		16QAM	1	0	21.22	21.27	21.62
			1	12	21.49	21.52	21.46
			1	24	21.27	21.16	21.64
			12	0	20.31	20.12	20.68
			12	6	20.45	20.48	20.33
			12	11	20.37	20.42	20.37
			25	0	20.36	20.37	20.33

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					23780	23790	23800
					709.0MHz	710.0MHz	711.0MHz
Band 17	10	QPSK	1	0	22.21	22.24	22.18
			1	24	22.40	22.27	22.41
			1	49	22.21	22.20	22.27
			25	0	21.35	21.21	21.20
			25	12	21.32	21.46	21.34
			25	24	21.42	21.42	21.30
			50	0	21.42	21.40	21.27
		16QAM	1	0	21.32	21.33	21.26
			1	24	21.72	21.52	21.46
			1	49	21.35	21.35	21.32
			25	0	20.28	20.33	20.26
			25	12	20.37	20.45	20.31
			25	24	20.52	20.47	20.39
			50	0	20.36	20.36	20.38

LTE Band 41 part:

LTE Band	Band width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39675	40148	40620	41093	41565
					2498.5MHz	2545.5MHz	2593.0MHz	2640.3MHz	2687.5MHz
Band 41	5	QPSK	1	0	21.25	21.48	21.53	21.63	21.68
			1	12	21.39	21.70	21.71	21.81	21.82
			1	24	21.34	21.58	21.61	21.65	21.68
			12	0	21.25	21.28	21.33	21.30	21.35
			12	6	21.21	21.31	21.32	21.34	21.35
			12	11	21.24	21.28	21.31	21.23	21.28
			25	0	21.21	21.31	21.36	21.25	21.26
		16QAM	1	0	20.84	20.59	20.60	20.59	20.62
			1	12	20.84	20.73	20.76	20.61	20.66
			1	24	20.86	20.68	20.73	20.60	20.65
			12	0	20.73	20.41	20.46	20.45	20.48
			12	6	20.72	20.45	20.46	20.43	20.48
			12	11	20.79	20.37	20.42	20.40	20.43
			25	0	20.64	20.42	20.45	20.46	20.47

LTE Band	Band width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39700	40160	40620	41080	41540
					2501.0MHz	2547.0MHz	2593.0MHz	2639.0MHz	2685.0MHz
Band 41	10	QPSK	1	0	21.41	21.60	21.62	21.68	21.73
			1	24	21.43	21.72	21.78	21.88	21.89
			1	49	21.46	21.67	21.70	21.67	21.73
			25	0	21.35	21.52	21.57	21.56	21.59
			25	12	21.30	21.55	21.56	21.48	21.53
			25	24	21.34	21.52	21.58	21.52	21.53
			50	0	21.36	21.52	21.55	21.53	21.56
		16QAM	1	0	20.93	20.63	20.68	21.64	21.69
			1	24	20.92	20.82	20.83	21.64	21.65
			1	49	20.96	20.81	20.86	21.62	21.65
			25	0	20.73	20.79	20.80	21.39	21.44
			25	12	20.79	20.75	20.77	21.48	21.49
			25	24	20.71	20.68	20.74	21.44	21.49
			50	0	20.41	20.71	20.74	21.43	21.46

LTE Band	Band width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39725	40173	40620	41068	41515
					2503.5MHz	2548.5MHz	2593.0MHz	2637.8MHz	2682.5MHz
Band 41	15	QPSK	1	0	21.36	21.59	21.65	21.64	21.70
			1	37	21.46	21.77	21.80	21.76	21.79
			1	74	21.40	21.66	21.71	21.74	21.79
			36	0	21.10	21.30	21.31	21.48	21.49
			36	16	21.11	21.30	21.32	21.46	21.48
			36	35	21.18	21.31	21.33	21.42	21.48
			75	0	21.19	21.35	21.36	21.37	21.40
		16QAM	1	0	20.65	20.81	20.85	20.85	20.90
			1	37	20.66	20.89	20.94	20.93	20.94
			1	74	20.63	20.88	20.89	20.87	20.92
			36	0	20.59	20.75	20.81	20.86	20.87
			36	16	20.55	20.80	20.85	20.87	20.89
			36	35	20.58	20.76	20.83	20.81	20.87
			75	0	20.51	20.78	20.81	20.85	20.88

LTE Band	Band width (MHz)	Modu-lation	RB Size	RB Offset	Average Power (dBm)				
					39750	40185	40620	41055	41490
					2506.0MHz	2549.5MHz	2593.0MHz	2636.5MHz	2680.0MHz
Band 41	20	QPSK	1	0	21.45	21.43	21.46	21.43	21.54
			1	49	21.40	21.42	21.52	21.52	21.56
			1	99	21.52	21.58	21.81	21.73	21.71
			50	0	21.02	21.11	21.35	21.33	21.31
			50	24	21.31	21.43	21.59	21.48	21.49
			50	49	21.05	21.20	21.33	21.33	21.35
			100	0	21.02	21.09	21.30	21.32	21.33
		16QAM	1	0	20.64	20.65	20.67	20.72	20.83
			1	49	20.67	20.62	20.66	20.73	20.98
			1	99	20.64	20.61	20.66	20.71	20.86
			50	0	20.43	20.40	20.45	20.53	20.89
			50	24	20.45	20.43	20.47	20.42	20.41
			50	49	20.48	20.43	20.44	20.41	20.43
			100	0	20.47	20.41	20.39	20.40	20.48

Note:

1. Per KDB 447498 D01v05r02 section 4.1, 6), the required test channels number is 5 for LTE Band 41.

<Maximum Average RF Power (Proximity Sensor on)>

LTE Band 25 part

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26047	26365	26683
					1850.70MHz	1882.5MHz	1914.3MHz
Band 25	1.4	QPSK	1	0	20.52	20.37	20.37
			1	2	20.52	20.58	20.55
			1	5	20.41	20.38	20.36
			3	0	19.64	19.46	19.46
			3	1	19.63	19.55	19.40
			3	2	19.54	19.32	19.26
			6	0	19.61	19.47	19.42
		16QAM	1	0	19.71	19.24	19.40
			1	2	19.79	19.35	19.45
			1	5	19.65	19.62	19.40
			3	0	19.61	19.36	19.73
			3	1	19.65	19.79	19.80
			3	2	19.46	19.60	19.50
			6	0	19.46	19.65	19.42

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26055	26365	26675
					1851.50MHz	1882.5MHz	1913.5MHz
Band 25	3	QPSK	1	0	20.45	20.34	20.42
			1	7	20.48	20.38	20.41
			1	14	20.35	20.36	20.52
			8	0	19.43	19.30	19.45
			8	4	19.41	19.52	19.57
			8	7	19.41	19.41	19.40
			15	0	19.39	19.35	19.41
		16QAM	1	0	19.52	19.55	19.54
			1	7	19.42	19.42	19.51
			1	14	19.65	19.65	19.68
			8	0	19.59	19.48	19.43
			8	4	19.40	19.50	19.40
			8	7	19.39	19.36	19.40
			15	0	19.31	19.29	19.27

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26065	26365	26665
					1852.5MHz	1882.5MHz	1912.5MHz
Band 25	5	QPSK	1	0	20.31	20.26	20.34
			1	12	20.37	20.39	20.43
			1	24	20.29	20.18	20.32
			12	0	19.41	19.28	19.49
			12	6	19.38	19.50	19.46
			12	11	19.38	19.51	19.40
			25	0	19.49	19.59	19.44
		16QAM	1	0	19.30	19.41	19.47
			1	12	19.38	19.35	19.57
			1	24	19.33	19.48	19.60
			12	0	19.37	19.38	19.55
			12	6	19.32	19.41	19.31
			12	11	19.32	19.34	19.27
			25	0	19.34	19.38	19.27

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26090	26365	26640
					1855.00MHz	1882.5MHz	1910.0MHz
Band 25	10	QPSK	1	0	20.51	20.42	20.31
			1	24	20.40	20.48	20.42
			1	49	20.37	20.32	20.28
			25	0	19.43	19.40	19.37
			25	12	19.54	19.46	19.47
			25	24	19.65	19.47	19.35
			50	0	19.35	19.37	19.33
		16QAM	1	0	19.78	19.46	19.36
			1	24	19.55	19.46	19.64
			1	49	19.55	19.58	19.39
			25	0	19.55	19.41	19.37
			25	12	19.33	19.42	19.30
			25	24	19.33	19.44	19.31
			50	0	19.28	19.28	19.29

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26115	26365	26615
					1857.50MHz	1882.5MHz	1907.5MHz
Band 25	15	QPSK	1	0	20.32	20.23	20.42
			1	37	20.36	20.41	20.36
			1	74	20.18	20.18	20.32
			36	0	19.45	19.30	19.39
			36	16	19.49	19.44	19.41
			36	35	19.33	19.44	19.40
			75	0	19.42	19.42	19.38
		16QAM	1	0	19.64	19.22	19.27
			1	37	19.61	19.79	19.85
			1	74	19.62	19.64	19.64
			36	0	19.46	19.50	19.48
			36	16	19.38	19.46	19.51
			36	35	19.32	19.36	19.34
			75	0	19.34	19.33	19.34

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26140	26365	26590
					1860.00MHz	1882.50MHz	1905.00MHz
Band 25	20	QPSK	1	0	20.36	20.23	20.23
			1	49	20.58	20.44	20.56
			1	99	20.07	20.11	20.22
			50	0	19.53	19.40	19.57
			50	24	19.48	19.47	19.47
			50	49	19.48	19.56	19.50
			100	0	19.32	19.40	19.56
		16QAM	1	0	19.46	19.45	19.35
			1	49	19.74	19.94	19.86
			1	99	19.83	19.97	19.54
			50	0	19.53	19.61	19.58
			50	24	19.45	19.60	19.39
			50	49	19.46	19.52	19.30
			100	0	19.38	19.38	19.39

LTE Band 4 part

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19957	20175	20393
					1710.7MHz	1732.5MHz	1754.3MHz
Band 4	1.4	QPSK	1	0	19.75	19.69	19.51
			1	2	19.91	19.92	19.70
			1	5	19.66	19.72	19.65
			3	0	18.68	18.68	18.54
			3	1	18.62	18.58	18.75
			3	2	18.61	18.72	18.57
			6	0	18.73	18.68	18.52
		16QAM	1	0	18.70	18.69	18.31
			1	2	19.10	18.73	18.48
			1	5	18.78	19.10	18.69
			3	0	18.58	18.80	18.66
			3	1	18.60	18.84	18.68
			3	2	18.59	18.73	18.70
			6	0	17.99	17.99	18.01

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19965	20175	20385
					1711.5MHz	1732.5MHz	1753.5MHz
Band 4	3	QPSK	1	0	19.68	19.69	19.58
			1	7	19.75	19.64	19.64
			1	14	19.69	19.70	19.68
			8	0	18.72	18.57	18.47
			8	4	18.63	18.48	18.54
			8	7	18.67	18.70	18.51
			15	0	18.65	18.66	18.49
		16QAM	1	0	18.79	18.66	18.68
			1	7	18.74	18.42	18.60
			1	14	18.83	18.81	18.76
			8	0	18.00	17.94	18.03
			8	4	17.98	17.86	18.09
			8	7	17.87	17.96	17.90
			15	0	17.95	18.00	18.12

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19975	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
Band 4	5	QPSK	1	0	19.68	19.71	19.60
			1	12	19.56	19.65	19.56
			1	24	19.61	19.57	19.44
			12	0	18.51	18.52	18.59
			12	6	18.60	18.54	18.48
			12	11	18.65	18.68	18.52
			25	0	18.72	18.64	18.65
		16QAM	1	0	18.47	18.61	18.64
			1	12	18.80	18.67	18.38
			1	24	18.69	18.95	18.58
			12	0	18.15	18.14	18.14
			12	6	18.14	18.02	18.06
			12	11	18.21	17.94	18.02
			25	0	18.06	18.01	17.98

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20000	20175	20350
					1715.0MHz	1732.5MHz	1750.0MHz
Band 4	10	QPSK	1	0	19.67	19.67	19.56
			1	24	19.76	19.70	19.59
			1	49	19.44	19.60	19.44
			25	0	18.66	18.65	18.65
			25	12	18.65	18.65	18.62
			25	24	18.60	18.64	18.53
			50	0	18.74	18.76	18.72
		16QAM	1	0	18.96	18.72	18.59
			1	24	18.84	18.66	18.69
			1	49	18.65	18.99	18.58
			25	0	17.90	17.92	17.91
			25	12	17.91	17.91	17.92
			25	24	17.95	17.97	17.87
			50	0	17.99	17.93	17.93

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20025	20175	20325
					1717.5MHz	1732.5MHz	1747.5MHz
Band 4	15	QPSK	1	0	19.50	19.52	19.45
			1	37	19.56	19.67	19.67
			1	74	19.49	19.37	19.29
			36	0	18.64	18.56	18.63
			36	16	18.61	18.56	18.46
			36	35	18.58	18.63	18.55
			75	0	18.60	18.64	18.63
		16QAM	1	0	18.42	19.16	18.64
			1	37	18.38	19.31	19.11
			1	74	19.15	18.35	19.08
			36	0	17.90	18.02	18.07
			36	16	17.92	18.02	17.98
			36	35	17.97	17.90	17.92
			75	0	17.95	17.97	17.90

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20050	20175	20300
					1720.0MHz	1732.5MHz	1745.0MHz
Band 4	20	QPSK	1	0	19.45	19.38	19.35
			1	49	19.61	19.72	19.65
			1	99	19.42	19.34	19.21
			50	0	18.72	18.53	18.63
			50	24	18.63	18.58	18.62
			50	49	18.51	18.60	18.33
			100	0	18.63	18.57	18.57
		16QAM	1	0	18.56	19.03	18.59
			1	49	18.93	18.99	18.94
			1	99	18.55	18.41	18.49
			50	0	17.92	17.95	18.09
			50	24	18.01	18.05	18.16
			50	49	17.94	17.93	17.88
			100	0	18.03	18.00	18.09

LTE Band 26 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26797	26915	27033
					824.7MHz	836.5MHz	848.3MHz
Band 26	1.4	QPSK	1	0	18.55	19.07	18.98
			1	2	18.70	19.11	19.39
			1	5	18.45	18.97	19.01
			3	0	18.39	18.23	18.14
			3	1	18.10	18.03	17.95
			3	2	18.23	18.05	18.12
			6	0	17.46	18.09	17.96
		16QAM	1	0	17.33	17.74	17.93
			1	2	17.54	17.79	18.11
			1	5	17.77	18.13	17.84
			3	0	17.68	18.15	18.09
			3	1	17.53	18.0	18.04
			3	2	17.38	18.06	17.91
			6	0	17.50	18.0	17.95

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26805	26915	27025
					825.5MHz	836.5MHz	847.5MHz
Band 26	3	QPSK	1	0	19.01	18.99	18.96
			1	7	19.36	19.10	19.05
			1	14	19.04	18.97	18.96
			8	0	18.09	18.01	18.18
			8	4	18.08	17.95	17.96
			8	7	18.10	18.04	18.04
			15	0	18.05	18.03	17.95
		16QAM	1	0	17.83	18.08	17.92
			1	7	18.25	17.83	18.04
			1	14	18.15	18.17	18.06
			8	0	17.99	17.87	17.84
			8	4	18.06	17.88	17.78
			8	7	17.76	17.87	17.72
			15	0	17.86	17.87	17.80

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26815	26915	27015
					826.5MHz	836.5MHz	846.5MHz
Band 26	5	QPSK	1	0	19.06	18.93	18.90
			1	12	19.30	19.14	19.09
			1	24	18.83	18.77	18.86
			12	0	18.11	17.97	18.11
			12	6	18.04	17.97	18.03
			12	11	18.08	17.96	17.98
			25	0	17.97	17.97	18.01
		16QAM	1	0	18.26	17.81	17.92
			1	12	17.96	18.02	18.37
			1	24	17.85	17.98	17.94
			12	0	17.51	17.48	17.37
			12	6	17.68	17.43	17.43
			12	11	17.48	17.54	17.36
			25	0	17.49	17.53	17.38

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26840	26915	26990
					829MHz	836.5MHz	844MHz
Band 26	10	QPSK	1	0	19.08	18.93	18.95
			1	24	19.01	19.20	19.18
			1	49	18.87	18.89	18.88
			25	0	18.24	18.04	18.27
			25	12	18.09	17.93	18.01
			25	24	18.10	17.89	17.93
			50	0	18.07	18.07	18.18
		16QAM	1	0	18.14	18.31	18.05
			1	24	18.23	18.10	18.40
			1	49	18.02	18.08	18.06
			25	0	17.59	17.63	17.49
			25	12	17.61	17.57	17.55
			25	24	17.51	17.65	17.41
			50	0	17.59	17.65	17.53

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					26865	26915	26965
					831.5MHz	836.5MHz	841.5MHz
Band 26	15	QPSK	1	0	18.99	18.95	18.85
			1	37	19.29	19.12	19.03
			1	74	18.78	18.69	18.86
			36	0	18.28	18.01	18.25
			36	16	18.03	17.94	17.90
			36	35	18.01	17.87	17.90
			75	0	18.09	18.02	18.04
		16QAM	1	0	18.50	17.96	17.69
			1	37	17.82	18.06	18.13
			1	74	17.99	18.11	17.92

			36	0	18	17.91	17.65
			36	16	17.94	17.96	17.66
			36	35	17.91	17.82	17.64
			75	0	17.99	17.68	17.58

LTE Band 7 part:

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20775	21100	21425
					2502.5MHz	2535.0MHz	2567.5MHz
Band 7	5	QPSK	1	0	19.86	19.99	20.07
			1	12	19.93	19.87	20.21
			1	24	19.92	19.86	20.09
			12	0	19.60	19.65	19.63
			12	6	19.60	19.63	19.66
			12	11	19.56	19.58	19.64
			25	0	19.47	19.62	19.84
		16QAM	1	0	19.23	19.16	19.19
			1	12	19.39	19.16	19.15
			1	24	19.38	19.16	19.25
			12	0	19.41	19.26	19.34
			12	6	18.92	19.08	19.00
			12	11	18.88	18.98	18.91
			25	0	18.82	18.83	18.87

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20800	21100	21400
					2505.0MHz	2535.0MHz	2565.0MHz
Band 7	10	QPSK	1	0	19.75	19.83	20.07
			1	24	19.96	19.87	20.26
			1	49	19.76	19.79	20.00
			25	0	19.55	19.49	19.63
			25	12	19.55	19.56	18.58
			25	24	19.58	19.48	19.58
			50	0	19.53	19.57	19.60
		16QAM	1	0	19.21	19.26	19.09
			1	24	19.26	19.21	19.04
			1	49	19.01	19.45	19.11
			25	0	19.13	19.11	19.26
			25	12	18.91	19.05	18.95
			25	24	18.80	19.04	18.92
			50	0	18.79	18.94	18.86

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20825	21100	21375
					2507.5MHz	2535.0MHz	2562.5MHz
Band 7	15	QPSK	1	0	19.84	19.80	20.05
			1	37	19.77	19.87	19.97
			1	74	19.73	19.73	19.92
			36	0	19.48	19.54	19.65
			36	16	19.48	19.52	19.67
			36	35	19.47	19.46	19.66
			75	0	19.36	19.54	19.64
		16QAM	1	0	19.11	19.08	19.06
			1	37	19.14	19.11	19.10
			1	74	19.12	19.09	19.15
			36	0	19.07	18.99	19.03
			36	16	19.02	18.90	18.78
			36	35	18.82	18.84	18.75
			75	0	18.74	18.68	18.79

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20850	21100	21350
					2510.0MHz	2535.0MHz	2560.0MHz
Band 7	20	QPSK	1	0	20.05	20.08	19.94
			1	49	20.00	19.96	20.14
			1	99	20.06	19.76	19.87
			50	0	19.63	19.47	19.54
			50	24	19.69	19.45	19.55
			50	49	19.67	19.40	19.52
			100	0	19.57	19.39	19.54
		16QAM	1	0	19.22	19.29	19.44
			1	49	19.20	19.26	19.40
			1	99	19.11	19.23	19.43
			50	0	19.03	18.95	19.30
			50	24	18.90	18.91	19.10
			50	49	18.84	18.83	19.01
			100	0	18.71	18.79	18.97

14.5 WLAN 2.4 GHz Band Conducted Power

Average Power (dBm)				
Channel	Frequency (MHz)	802.11 b	802.11 g	802.11n (HT20)
CH 01	2412	16.88	13.86	13.89
CH 06	2437	**17.09**	**16.14**	16.09
CH 11	2462	16.97	16.02	16.02

Average Power (dBm)		
Channel	Frequency (MHz)	802.11n (HT40)
CH 03	2422	15.63
CH 06	2437	15.79
CH 09	2452	15.62

Note:

1. Per KDB 447498 D01v06, the 1-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, 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

Channel	Frequency (GHz)	Max. Tune-up Power (dBm)	Max. Power (mW)	Test distance (mm)	Result	exclusion thresholds for 1-g SAR
b/CH 06	2.437	17.5	56.23	5	17.54	3.0
g/CH 06	2.437	16.5	44.67	5	13.94	3.0

2. Base on the result of note1, RF exposure evaluation of 802.11 b mode is required.
3. Per KDB 248227 D01v02r02, choose the highest output power channel to test SAR and determine further SAR exclusion.
4. Per KDB 248227 D01v02r02, In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. 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.
5. The output power of all data rate were pre-scan, just the worst case (the lowest data rate) of all mode were shown in report.
6. Per KDB 248227 D01V02r02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 97.4%, so the duty cycle factor is 1.03.

14.6 Bluetooth Conducted Power

Average Power (dBm) (Bluetooth)				
Channel	Frequency (MHz)	GFSK	π/4-DQPSK	8DPSK
CH 01	2402	7.01	6.03	6.09
CH 39	2441	**7.41**	6.55	6.61
CH 78	2480	6.67	5.76	5.85

Average Power (dBm)		
Channel	Frequency (MHz)	BLE
CH 00	2402	6.73
CH 20	2442	7.34
CH 39	2480	6.46

Note:

1. Per KDB 447498 D01v06, the 1-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, 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

Channel	Frequency (GHz)	Max. tune-up Power (dBm)	Max. Power (mW)	Test distance (mm)	Result	exclusion thresholds for 1-g SAR
CH 39	2.441	7.5	5.62	5	1.75	3.0

2. The max. tune-up power was provided by manufacturer, base on the result of note 1, RF exposure evaluation is not required.
3. The output power of all data rate were pre-scan, just the worst case of all mode were shown in report.
4. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according is applied to determine SAR test exclusion.

15 Exposure Positions Consideration

15.1 EUT Antenna Locations

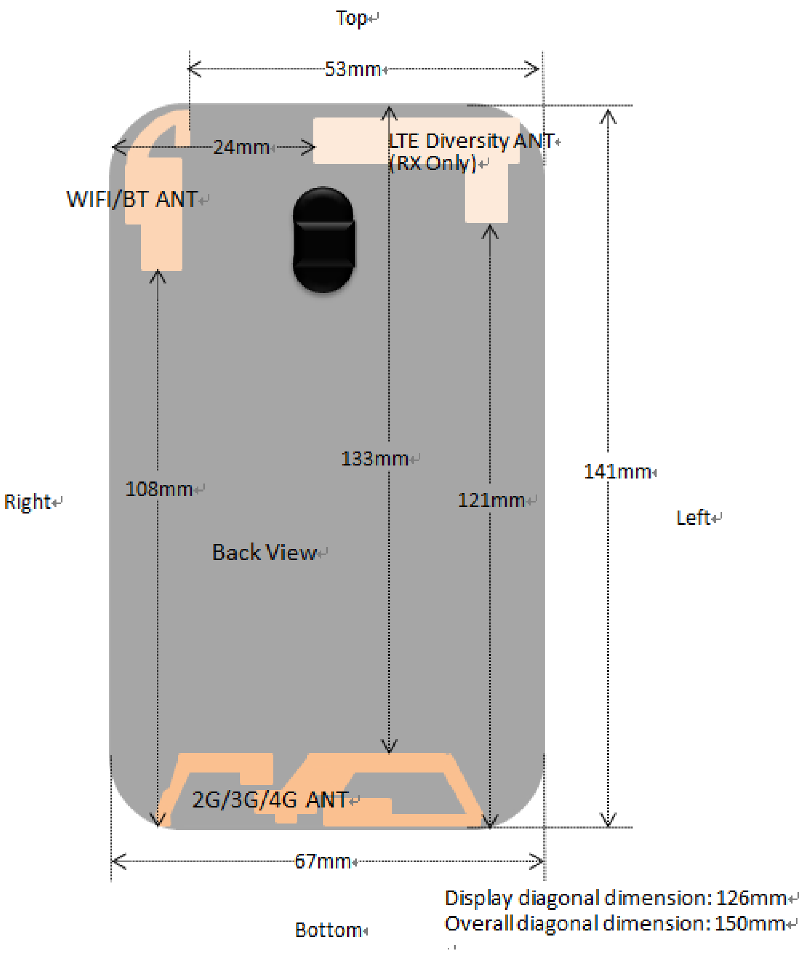


Fig.14.1 EUT Antenna Locations

15.2 Test Positions Consideration

Distance of Antennas to EUT edge/surface Test distance: 10mm						
Antennas	**Back**	**Front**	**Top Side**	**Bottom Side**	**Right Side**	**Left Side**
2G/3G/4G	<25mm	<25mm	133mm	<25mm	<25mm	<25mm
WLAN & Bluetooth	<25mm	<25mm	<25mm	108mm	<25mm	53mm

Test Positions Test distance: 10mm						
Antennas	**Back**	**Front**	**Top Side**	**Bottom Side**	**Right Side**	**Left Side**
2G/3G/4G	Yes	Yes	No	Yes	Yes	Yes
WLAN & Bluetooth	Yes	Yes	Yes	No	Yes	No

Note:

1. Head/Body-worn/Hotspot mode SAR assessments are required.
2. Referring to KDB 941225 D06 v02r01, when the overall device length and width are ≥ 9cm * 5cm, the test distance is 10mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.
3. Per KDB 447498 D01v06, for handsets the test separation distance is determined by the smallest distance between the outer surface of the device and the user, which is 0 mm for head SAR, 10 mm for hotspot SAR, and 10 mm for body-worn SAR.

16 SAR Test Results Summary

16.1 Standalone Head SAR Data

➢ GSM Head SAR

Plot No.	Band/ Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	GSM850 /Voice	Right Cheek	P-Sensor Off	190	836.6	32.72	-0.23	33.0	0.427	1.067	0.456
	GSM850 /Voice	Right Tilted	P-Sensor Off	190	836.6	32.72	0.18	33.0	0.211	1.067	0.225
1	GSM850 /Voice	Left Cheek	P-Sensor Off	190	836.6	32.72	-0.10	33.0	**0.470**	1.067	0.501
	GSM850 /Voice	Left Tilted	P-Sensor Off	190	836.6	32.72	0.09	33.0	0.231	1.067	0.246
	GSM1900 /Voice	Right Cheek	P-Sensor Off	810	1909.8	29.88	-0.15	30.0	0.276	1.028	0.284
	GSM1900 /Voice	Right Tilted	P-Sensor Off	810	1909.8	29.88	-0.06	30.0	0.134	1.028	0.138
2	GSM1900 /Voice	Left Cheek	P-Sensor Off	810	1909.8	29.88	-0.34	30.0	**0.350**	1.028	0.360
	GSM1900 /Voice	Left Tilted	P-Sensor Off	810	1909.8	29.88	-0.17	30.0	0.162	1.028	0.167
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Head SAR

Plot No.	Band/ Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Powe r Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band V /RMC	Right Cheek	P-Sensor Off	4183	836.6	23.30	-0.03	23.5	0.515	1.047	0.539
	Band V /RMC	Right Tilted	P-Sensor Off	4183	836.6	23.30	0.11	23.5	0.223	1.047	0.233
3	Band V /RMC	Left Cheek	P-Sensor Off	4183	836.6	23.30	-0.21	23.5	**0.580**	1.047	0.607
	Band V /RMC	Left Tilted	P-Sensor Off	4183	836.6	23.30	-0.14	23.5	0.259	1.047	0.271
4	Band IV /RMC	Right Cheek	P-Sensor Off	1412	1732.6	23.64	-0.01	24.0	**0.295**	1.086	0.320
	Band IV /RMC	Right Tilted	P-Sensor Off	1412	1732.6	23.64	0.17	24.0	0.147	1.086	0.160
	Band IV /RMC	Left Cheek	P-Sensor Off	1412	1732.6	23.64	0.31	24.0	0.240	1.086	0.261
	Band IV /RMC	Left Tilted	P-Sensor Off	1412	1732.6	23.64	0.26	24.0	0.123	1.086	0.134
5	Band II /RMC	Right Cheek	P-Sensor Off	9262	1852.4	23.07	0.38	23.5	**0.600**	1.104	0.662
	Band II /RMC	Right Tilted	P-Sensor Off	9262	1852.4	23.07	0.21	23.5	0.279	1.104	0.308
	Band II /RMC	Left Cheek	P-Sensor Off	9262	1852.4	23.07	0.13	23.5	0.381	1.104	0.421
	Band II /RMC	Left Tilted	P-Sensor Off	9262	1852.4	23.07	0.12	23.5	0.173	1.104	0.191
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ CDMA Head SAR

Plot No.	Band/ Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
6	BC0/RC3 (SO55)	Right Cheek	P-Sensor Off	1013	824.7	23.64	0.10	24.0	**0.669**	1.086	0.727
	BC0/RC3 (SO55)	Right Tilted	P-Sensor Off	1013	824.7	23.64	0.14	24.0	0.346	1.086	0.376
	BC0/RC3 (SO55)	Left Cheek	P-Sensor Off	1013	824.7	23.64	-0.40	24.0	0.350	1.086	0.380
	BC0/RC3 (SO55)	Left Tilted	P-Sensor Off	1013	824.7	23.64	-0.16	24.0	0.142	1.086	0.154
	BC1/RC3 (SO55)	Right Cheek	P-Sensor Off	25	1851.25	23.41	0.24	23.5	0.721	1.021	0.736
	BC1/RC3 (SO55)	Right Tilted	P-Sensor Off	25	1851.25	23.41	0.26	23.5	0.358	1.021	0.366
	BC1/RC3 (SO55)	Left Cheek	P-Sensor Off	25	1851.25	23.41	-0.19	23.5	0.947	1.021	0.967
7	BC1/RC3 (SO55)	Left Cheek	P-Sensor Off	600	1880.0	23.37	0.02	23.5	**0.981**	1.03	1.010
	BC1/RC3 (SO55)	**Left Cheek**	**P-Sensor Off**	**600**	**1880.0**	**23.37**	**0.13**	**23.5**	**0.956**	**1.03**	**0.985**
	BC1/RC3 (SO55)	Left Cheek	P-Sensor Off	1175	1908.75	23.39	-0.09	23.5	0.968	1.026	0.993
	BC1/RC3 (SO55)	Left Tilted	P-Sensor Off	25	1851.25	23.41	0.10	23.5	0.419	1.021	0.428
	BC10/RC3 (SO55)	Right Cheek	P-Sensor Off	476	817.9	24.45	0.13	24.5	0.663	1.012	0.671
	BC10/RC3 (SO55)	Right Tilted	P-Sensor Off	476	817.9	24.45	0.06	24.5	0.347	1.012	0.351
8	BC10/RC3 (SO55)	Left Cheek	P-Sensor Off	476	817.9	24.45	-0.10	24.5	**0.708**	1.012	0.716
	BC10/RC3 (SO55)	Left Tilted	P-Sensor Off	476	817.9	24.45	-0.23	24.5	0.361	1.012	0.365

ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population	**1.6 W/kg (mW/g) Averaged over 1g**

➢ LTE 20MHz QPSK 1RB Head SAR

Plot No.	Band/ Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band25 /RB#49	Right Cheek	P-Sensor Off	26140	1860.0	21.56	-0.34	22.0	0.305	1.107	0.338
	Band25 /RB#49	Right Tilted	P-Sensor Off	26140	1860.0	21.56	-0.21	22.0	0.143	1.107	0.158
9	Band25 /RB#49	Left Cheek	P-Sensor Off	26140	1860.0	21.56	0.17	22.0	**0.636**	1.107	0.704
	Band25 /RB#49	Left Tilted	P-Sensor Off	26140	1860.0	21.56	0.22	22.0	0.308	1.107	0.341
	Band4 /RB#49	Right Cheek	P-Sensor Off	20175	1732.5	22.15	0.05	22.5	0.115	1.084	0.125
	Band4 /RB#49	Right Tilted	P-Sensor Off	20175	1732.5	22.15	0.13	22.5	0.061	1.084	0.066
10	Band4 /RB#49	Left Cheek	P-Sensor Off	20175	1732.5	22.15	-0.11	22.5	**0.210**	1.084	0.228
	Band4 /RB#49	Left Tilted	P-Sensor Off	20175	1732.5	22.15	0.20	22.5	0.106	1.084	0.115
	Band7 /RB#49	Right Cheek	P-Sensor Off	21350	2560.0	21.57	-0.26	22.0	0.260	1.104	0.287
	Band7 /RB#49	Right Tilted	P-Sensor Off	21350	2560.0	21.57	0.25	22.0	0.132	1.104	0.146

11	Band7 /RB#49	Left Cheek	P-Sensor Off	21350	2560.0	21.57	0.06	22.0	**0.348**	1.104	0.384
	Band7 /RB#49	Left Tilted	P-Sensor Off	21350	2560.0	21.57	0.19	22.0	0.167	1.104	0.184
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 15MHz QPSK 1RB Head SAR

Plot No.	Band/ Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26 /RB#37	Right Cheek	P-Sensor Off	26775	822.5	22.23	0.31	22.5	0.201	1.064	0.214
	Band26 /RB#37	Right Tilted	P-Sensor Off	26775	822.5	22.23	0.23	22.5	0.098	1.064	0.104
12	Band26 /RB#37	Left Cheek	P-Sensor Off	26775	822.5	22.23	-0.11	22.5	**0.215**	1.064	0.229
	Band26 /RB#37	Left Tilted	P-Sensor Off	26775	822.5	22.23	0.15	22.5	0.102	1.064	0.109
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 10MHz QPSK 1RB Head SAR

Plot No.	Band/ Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12 /RB#24	Right Cheek	P-Sensor Off	23060	704.0	22.46	-0.18	22.5	0.197	1.009	0.199
	Band12 /RB#24	Right Tilted	P-Sensor Off	23060	704.0	22.46	-0.23	22.5	0.095	1.009	0.096
13	Band12 /RB#24	Left Cheek	P-Sensor Off	23060	704.0	22.46	-0.10	22.5	**0.225**	1.009	0.227
	Band12 /RB#24	Left Tilted	P-Sensor Off	23060	704.0	22.46	0.17	22.5	0.103	1.009	0.104
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE 20MHz QPSK 1RB Head SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41 /RB#99	Right Cheek	P-Sensor Off	40620	2593.0	21.81	0.22	22.0	0.108	1.045	1.008	0.114
	Band41 /RB#99	Right Tilted	P-Sensor Off	40620	2593.0	21.81	0.16	22.0	0.054	1.045	1.008	0.057
14	Band41 /RB#99	Left Cheek	P-Sensor Off	40620	2593.0	21.81	0.18	22.0	**0.250**	1.045	1.008	0.263
	Band41 /RB#99	Left Tilted	P-Sensor Off	40620	2593.0	21.81	0.05	22.0	0.126	1.045	1.008	0.133
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 20MHz QPSK 50%RB Head SAR

Plot No.	Band/ Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band25 /RB#0	Right Cheek	P-Sensor Off	26590	1905.0	20.62	0.28	21.0	0.390	1.091	0.425
	Band25 /RB#0	Right Tilted	P-Sensor Off	26590	1905.0	20.62	0.22	21.0	0.171	1.091	0.187
15	Band25 /RB#0	Left Cheek	P-Sensor Off	26590	1905.0	20.62	-0.27	21.0	**0.603**	1.091	0.658
	Band25 /RB#0	Left Tilted	P-Sensor Off	26590	1905.0	20.62	-0.13	21.0	0.285	1.091	0.311
	Band4 /RB#0	Right Cheek	P-Sensor Off	20050	1720.0	21.20	0.13	21.5	0.134	1.072	0.144
	Band4 /RB#0	Right Tilted	P-Sensor Off	20050	1720.0	21.20	0.26	21.5	0.072	1.072	0.077
16	Band4 /RB#0	Left Cheek	P-Sensor Off	20050	1720.0	21.20	0.10	21.5	**0.241**	1.072	0.258
	Band4 /RB#0	Left Tilted	P-Sensor Off	20050	1720.0	21.20	0.12	21.5	0.116	1.072	0.124
	Band7 /RB#49	Right Cheek	P-Sensor Off	20850	2510.0	21.27	0.04	21.5	0.265	1.054	0.279
	Band7 /RB#49	Right Tilted	P-Sensor Off	20850	2510.0	21.27	0.08	21.5	0.127	1.054	0.134
17	Band7 /RB#49	Left Cheek	P-Sensor Off	20850	2510.0	21.27	-0.38	21.5	**0.356**	1.054	0.375
	Band7 /RB#49	Left Tilted	P-Sensor Off	20850	2510.0	21.27	-0.24	21.5	0.169	1.054	0.178
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 15MHz QPSK 50%RB Head SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26 /RB#0	Right Cheek	P-Sensor Off	26775	822.5	21.22	-0.27	21.5	0.211	1.067	0.225
	Band26 /RB#0	Right Tilted	P-Sensor Off	26775	822.5	21.22	0.16	21.5	0.102	1.067	0.109
18	Band26 /RB#0	Left Cheek	P-Sensor Off	26775	822.5	21.22	-0.10	21.5	**0.213**	1.067	0.227
	Band26 /RB#0	Left Tilted	P-Sensor Off	26775	822.5	21.22	-0.06	21.5	0.105	1.067	0.112
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 10MHz QPSK 50%RB Head SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12 /RB#24	Right Cheek	P-Sensor Off	23095	707.5	21.47	-0.27	21.5	0.162	1.007	0.163
	Band12 /RB#24	Right Tilted	P-Sensor Off	23095	707.5	21.47	-0.16	21.5	0.081	1.007	0.082
19	Band12 /RB#24	Left Cheek	P-Sensor Off	23095	707.5	21.47	-0.26	21.5	**0.200**	1.007	0.201
	Band12 /RB#24	Left Tilted	P-Sensor Off	23095	707.5	21.47	0.08	21.5	0.096	1.007	0.097
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE 20MHz QPSK 50%RB Head SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41 /RB#24	Right Cheek	P-Sensor Off	40620	2593.0	21.59	0.14	22.0	0.111	1.099	1.008	0.123
	Band41 /RB#24	Right Tilted	P-Sensor Off	40620	2593.0	21.59	0.16	22.0	0.052	1.099	1.008	0.058
20	Band41 /RB#24	Left Cheek	P-Sensor Off	40620	2593.0	21.59	0.24	22.0	**0.261**	1.099	1.008	0.289
	Band41 /RB#24	Left Tilted	P-Sensor Off	40620	2593.0	21.59	-0.19	22.0	0.116	1.099	1.008	0.129
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 2.4 GHz Head SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b	Right Cheek	06	2437	17.09	-0.32	17.5	0.130	1.099	1.03	0.147
	2.4GHz/802.11b	Right Tilted	06	2437	17.09	-0.04	17.5	0.109	1.099	1.03	0.123
21	2.4GHz/802.11b	Left Cheek	06	2437	17.09	-0.19	17.5	**0.425**	1.099	1.03	0.481
	2.4GHz/802.11b	Left Tilted	06	2437	17.09	-0.11	17.5	0.246	1.099	1.03	0.278
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Per KDB 447498 D01v06, for each exposure position, if the highest output power channel Reported SAR ≤ 0.8W/kg, other channels SAR testing is not necessary.
2. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥ 0.8W/kg.
3. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
4. Per KDB 248227 D01v02r02, for 802.11b DSSS , 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 in that exposure configuration.
5. Per KDB 248227 D01v02r02, OFDM SAR is not required 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. Cuz the maximum output power specified for OFDM and DSSS are 41.11mW(16.14dBm) and 51.17mW(17.09dBm), the scaled SAR would be 0.481×(41.11/51.17)=0.386W/Kg<1.2 W/kg, therefore, SAR is not required for OFDM.
6. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
7. Highlight part of test data means repeated test.

16.2 Standalone Body SAR

- GSM Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
22	GSM850 /Voice	Front	P-Sensor Off	190	836.6	32.72	-0.01	33.0	**0.442**	1.067	0.472
	GSM850 /Voice	Back	P-Sensor Off	190	836.6	32.72	-0.04	33.0	0.393	1.067	0.419
23	GSM1900 /Voice	Front	P-Sensor Off	810	1909.8	29.88	0.03	30.0	**0.244**	1.028	0.251
	GSM1900 /Voice	Back	P-Sensor Off	810	1909.8	29.88	0.01	30.0	0.223	1.028	0.229
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

- WCDMA Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
24	Band V /RMC	Front	P-Sensor On	4183	836.6	21.28	0.18	21.5	**0.463**	1.052	0.487
	Band V /RMC	Back	P-Sensor On	4183	836.6	21.28	0.00	21.5	0.454	1.052	0.478
25	Band IV /RMC	Front	P-Sensor On	1412	1732.6	17.47	0.25	17.5	**1.10**	1.007	1.108
	Band IV /RMC	**Front**	**P-Sensor On**	**1412**	**1732.6**	**17.47**	**0.19**	**17.5**	**0.967**	**1.007**	**0.974**
	Band IV /RMC	Front	P-Sensor On	1312	1712.4	17.45	0.21	17.5	1.09	1.012	1.103
	Band IV /RMC	Front	P-Sensor On	1513	1752.6	17.40	0.06	17.5	1.01	1.023	1.033
	Band IV /RMC	Back	P-Sensor On	1412	1732.6	17.47	-0.21	17.5	0.613	1.007	0.617
26	Band II /RMC	Front	P-Sensor On	9262	1852.4	20.03	0.08	20.5	**0.312**	1.114	0.348
	Band II /RMC	Back	P-Sensor On	9262	1852.4	20.03	0.06	20.5	0.250	1.114	0.279
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
27	Band IV /HSDPA	Front	P-Sensor Off	1412	1732.6	22.23	0.11	22.5	**0.598**	1.064	0.636
	Band IV /HSDPA	Back	P-Sensor Off	1412	1732.6	22.23	0.23	22.5	0.402	1.064	0.428
28	Band IV /HSUPA	Front	P-Sensor Off	1412	1732.6	22.39	0.12	22.5	**0.535**	1.026	0.549
	Band IV /HSUPA	Back	P-Sensor Off	1412	1732.6	22.39	0.04	22.5	0.364	1.026	0.373
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ CDMA Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	BC 0/RC3 (+F-SCH)	Front	P-Sensor On	1013	824.7	20.85	0.02	21.0	0.630	1.035	0.652
29	BC 0/RC3 (+F-SCH)	Back	P-Sensor On	1013	824.7	20.85	0.03	21.0	**0.641**	1.035	0.663
30	BC 1/RC3 (+F-SCH)	Front	P-Sensor On	25	1851.25	20.92	-0.00	21.0	**0.435**	1.019	0.443
	BC 1/RC3 (+F-SCH)	Back	P-Sensor On	25	1851.25	20.92	0.13	21.0	0.407	1.019	0.415
	BC 10/RC3 (+F-SCH)	Front	P-Sensor On	476	817.9	20.99	0.01	21.0	0.645	1.002	0.646
31	BC 10/RC3 (+F-SCH)	Back	P-Sensor On	476	817.9	20.99	-0.01	21.0	**0.664**	1.002	0.665
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 20MHz QPSK 1RB Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
32	Band25 /RB#49	Front	P-Sensor On	26140	1860.0	20.58	0.06	21.0	**0.305**	1.102	0.336
	Band25 /RB#49	Back	P-Sensor On	26140	1860.0	20.58	-0.08	21.0	0.265	1.102	0.292
33	Band4 /RB#49	Front	P-Sensor On	20175	1732.5	19.72	0.13	20.0	**0.447**	1.067	0.477
	Band4 /RB#49	Back	P-Sensor On	20175	1732.5	19.72	-0.25	20.0	0.415	1.067	0.443
34	Band7 /RB#49	Front	P-Sensor On	21350	2560.0	20.14	-0.34	20.5	**0.216**	1.086	0.235
	Band7 /RB#49	Back	P-Sensor On	21350	2560.0	20.14	-0.24	20.5	0.216	1.086	0.235
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 15MHz QPSK 1RB Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26 /RB#37	Front	P-Sensor On	26775	822.5	19.29	0.03	19.5	0.394	1.05	0.414
35	Band26 /RB#37	Back	P-Sensor On	26775	822.5	19.29	-0.04	19.5	**0.404**	1.05	0.424
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 10MHz QPSK 1RB Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12 /RB#24	Front	P-Sensor Off	23060	704.0	22.46	-0.21	22.5	0.235	1.009	0.237
36	Band12 /RB#24	Back	P-Sensor Off	23060	704.0	22.46	0.10	22.5	**0.291**	1.009	0.294
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak					**1.6 W/kg (mW/g) Averaged over 1g**					

	Uncontrolled Exposure/General Population	

- TDD-LTE 20MHz QPSK 1RB Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41 /RB#99	Front	P-Sensor Off	40620	2593.0	21.81	0.03	22.0	0.180	1.045	1.008	0.190
37	Band41 /RB#99	Back	P-Sensor Off	40620	2593.0	21.81	0.34	22.0	**0.198**	1.045	1.008	0.209
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population								**1.6 W/kg (mW/g) Averaged over 1g**			

- LTE 20MHz QPSK 50%RB Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
38	Band25 /RB#0	Front	P-Sensor On	26590	1905.0	19.57	0.16	20.0	**0.282**	1.104	0.311
	Band25 /RB#0	Back	P-Sensor On	26590	1905.0	19.57	-0.02	20.0	0.260	1.104	0.287
	Band4 /RB#0	Front	P-Sensor On	20050	1720.0	18.72	0.12	19.0	0.418	1.067	0.446
39	Band4 /RB#0	Back	P-Sensor On	20050	1720.0	18.72	-0.33	19.0	**0.430**	1.067	0.459
	Band7 /RB#24	Front	P-Sensor On	20850	2510.0	19.69	0.08	20.0	0.200	1.074	0.215
40	Band7 /RB#24	Back	P-Sensor On	20850	2510.0	19.69	0.18	20.0	**0.231**	1.074	0.248
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**				

- LTE 15MHz QPSK 50%RB Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
41	Band26 /RB#0	Front	P-Sensor On	26775	822.5	18.28	0.01	18.5	**0.499**	1.052	0.525
	Band26 /RB#0	Back	P-Sensor On	26775	822.5	18.28	-0.01	18.5	0.497	1.052	0.523
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**				

- LTE 10MHz QPSK 50%RB Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12 /RB#24	Front	P-Sensor Off	23095	707.5	21.47	-0.02	21.5	0.277	1.007	0.279
42	Band12 /RB#24	Back	P-Sensor Off	23095	707.5	21.47	-0.04	21.5	**0.317**	1.007	0.319
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population						**1.6 W/kg (mW/g) Averaged over 1g**				

➢ TDD-LTE 20MHz QPSK 50%RB Body SAR

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41 /RB#24	Front	P-Sensor Off	40620	2593.0	21.59	0.11	22.0	0.154	1.099	1.008	0.171
43	Band41 /RB#24	Back	P-Sensor Off	40620	2593.0	21.59	-0.15	22.0	**0.207**	1.099	1.008	0.229
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ WLAN 2.4 GHz Body SAR

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b	Front	06	2437	17.09	0.02	17.5	0.081	1.099	1.03	0.092
44	2.4GHz/802.11b	Back	06	2437	17.09	-0.35	17.5	**0.216**	1.099	1.03	0.245
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

Note:

1. Body-worn SAR testing was performed at 10mm separation, and this distance is determined by the handset manufacturer that there will be body-worn accessories that users may acquire at the time of equipment certification, to enable users to purchase aftermarket body-worn accessories with the required minimum separation.
2. Per KDB 941225 D06v02r01, when the same wireless modes and device transmission configurations are required for testing body-worn accessories and hotspot mode, it is not necessary to test body-worn accessory SAR for the same device orientation if the test separation distance for hotspot mode is more conservative than that used for body-worn accessories.
3. Body-worn exposure conditions are intended to voice call operations, therefore GSM voice call is selected to be tested.
4. Per KDB 648474 D04v01r03, when the *Reported* SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
5. The WLAN SAR perform the front and back position, due considered the simultaneous SAR for body-worn.
6. Per KDB 447498 D01v06, for each exposure position, if the highest output channel Reported SAR ≤0.8W/kg, other channels SAR testing is not necessary.
7. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥0.8W/kg.
8. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg.
9. The device employs proximity sensors that detect the presence of the user's body at the front or back or bottom side faces of the device. When front or back or bottom side condition is detected, WCDMA B2/B4/5, CDMA BC 0/ BC1/ BC 10 and LTE B2 / B4 / B5/ B7 / B25 / B26 reduced power will be active.
10. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
11. Highlight part of test data means repeated test.
12. Per KDB 941225 D01v03r01, 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.
For WCDMA Band V/II, when P-Sensor On, the Max power of HSDPA/HSUPA is higher than RMC, therefore,
1) For WCDMA Band V, Cuz the maximum output power specified for HSDPA and RMC are 169.4mW(22.29dBm) and 134.28mW(21.28dBm), the scaled SAR would be 0.487×(169.4/134.28)=0.614W/Kg<1.2W/kg, therefore, SAR is not required for HSDPA. Cuz the maximum output power specified for HSUPA and RMC are 167.11mW(22.23dBm) and 134.28mW(21.28dBm), the scaled SAR would be 0.487×(167.11/134.28)=0.606W/Kg<1.2W/kg, therefore, SAR is not required for HSUPA.
2) For WCDMA Band II, Cuz the maximum output power specified for HSDPA and RMC are 156.31mW(21.94dBm) and 100.69mW(20.03dBm), the scaled SAR would be 0.348×(156.31/100.69)=0.540W/Kg <1.2 /kg, therefore, SAR is not required for HSDPA. Cuz the maximum output power specified for HSUPA and RMC are 155.96mW(21.93dBm) and 100.69mW(20.03dBm), the scaled SAR would be0.348×(155.961/100.69)=0.539W/Kg <1.2W/kg, therefore, SAR is not required for HSUPA.

16.3 Body SAR in Hotspot Mode

➢ GSM Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
45	GPRS850 /4 slots	Front	P-Sensor Off	251	848.8	28.82	-0.03	29.0	**0.809**	1.042	0.843
	GPRS850 /4 slots	**Front**	**P-Sensor Off**	**251**	**848.8**	**28.82**	**0.06**	**29.0**	**0.726**	**1.042**	**0.756**
	GPRS850 /4 slots	Front	P-Sensor Off	128	824.2	28.68	-0.03	29.0	0.795	1.076	0.855
	GPRS850 /4 slots	Front	P-Sensor Off	190	8366	28.80	-0.02	**29.0**	0.703	1.047	0.736
	GPRS850 /4 slots	Back	P-Sensor Off	251	848.8	28.82	0.03	29.0	0.805	1.042	0.839
	GPRS850 /4 slots	**Back**	**P-Sensor Off**	**251**	**848.8**	**28.82**	**0.11**	**29.0**	**0.741**	**1.042**	**0.772**
	GPRS850 /4 slots	Back	P-Sensor Off	128	824.2	28.68	0.02	29.0	0.782	1.076	0.841
	GPRS850 /4 slots	Back	P-Sensor Off	190	8366	28.80	-0.03	**29.0**	0.659	1.047	0.690
	GPRS850 /4 slots	Left	P-Sensor Off	251	848.8	28.82	-0.17	29.0	0.646	1.042	0.673
	GPRS850 /4 slots	Right	P-Sensor Off	251	848.8	28.82	-0.01	29.0	0.614	1.042	0.640
	GPRS850 /4 slots	Bottom	P-Sensor Off	251	848.8	28.82	-0.30	29.0	0.079	1.042	0.082
46	GPRS1900 /4 slots	Front	P-Sensor Off	810	1909.8	26.10	0.07	26.5	**0.405**	1.096	0.444
	GPRS1900 /4 slots	Back	P-Sensor Off	810	1909.8	26.10	0.02	26.5	0.373	1.096	0.409
	GPRS1900 /4 slots	Left	P-Sensor Off	810	1909.8	26.10	-0.13	26.5	0.239	1.096	0.262
	GPRS1900 /4 slots	Right	P-Sensor Off	810	1909.8	26.10	0.30	26.5	0.167	1.096	0.183
	GPRS1900 /4 slots	Bottom	P-Sensor Off	810	1909.8	26.10	0.04	26.5	0.381	1.096	0.418
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ WCDMA Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
24	Band V /RMC	Front	P-Sensor On	4183	836.6	21.28	0.18	21.5	**0.463**	1.052	0.487
	Band V /RMC	Back	P-Sensor On	4183	836.6	21.28	0.00	21.5	0.454	1.052	0.478
	Band V /RMC	Left	P-Sensor Off	4183	836.6	23.30	-0.08	23.5	0.414	1.047	0.433
	Band V /RMC	Right	P-Sensor Off	4183	836.6	23.30	0.05	23.5	0.399	1.047	0.418
	Band V /RMC	Bottom	P-Sensor On	4183	836.6	21.28	-0.24	21.5	0.041	1.052	0.043
25	Band IV /RMC	Front	P-Sensor On	1412	1732.6	17.47	0.25	17.5	**1.10**	1.007	1.108
	Band IV /RMC	**Front**	**P-Sensor On**	**1412**	**1732.6**	**17.47**	**0.19**	**17.5**	**0.967**	**1.007**	**0.974**
	Band IV /RMC	Front	P-Sensor On	1312	1712.4	17.45	0.21	17.5	1.09	1.012	1.103
	Band IV	Front	P-Sensor On	1513	1752.6	17.40	0.06	17.5	1.01	1.023	1.033

	/RMC										
	Band IV /RMC	Back	P-Sensor On	1412	1732.6	17.47	-0.21	17.5	0.613	1.007	0.617
	Band IV /RMC	Left	P-Sensor Off	1412	1732.6	23.64	-0.04	24.0	0.262	1.086	0.285
	Band IV /RMC	Right	P-Sensor Off	1412	1732.6	23.64	-0.13	24.0	0.048	1.086	0.052
	Band IV /RMC	Bottom	P-Sensor On	1412	1732.6	17.47	-0.03	17.5	0.420	1.007	0.423
	Band II /RMC	Front	P-Sensor On	9262	1852.4	20.03	0.08	20.5	0.312	1.114	0.348
	Band II /RMC	Back	P-Sensor On	9262	1852.4	20.03	0.06	20.5	0.250	1.114	0.279
	Band II /RMC	Left	P-Sensor Off	9262	1852.4	23.07	-0.27	23.5	0.339	1.104	0.374
	Band II /RMC	Right	P-Sensor Off	9262	1852.4	23.07	-0.17	23.5	0.192	1.104	0.212
47	Band II /RMC	Bottom	P-Sensor On	9262	1852.4	20.03	-0.34	20.5	**0.361**	1.114	0.402
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
27	Band IV /HSDPA	Front	P-Sensor Off	1412	1732.6	22.23	0.11	22.5	**0.598**	1.064	0.636
	Band IV /HSDPA	Back	P-Sensor Off	1412	1732.6	22.23	0.23	22.5	0.402	1.064	0.428
	Band IV /HSDPA	Left	P-Sensor Off	1412	1732.6	22.23	0.06	22.5	0.202	1.064	0.215
	Band IV /HSDPA	Right	P-Sensor Off	1412	1732.6	22.23	0.13	22.5	0.041	1.064	0.044
	Band IV /HSDPA	Bottom	P-Sensor Off	1412	1732.6	22.23	-0.18	22.5	0.302	1.064	0.321
28	Band IV /HSUPA	Front	P-Sensor Off	1412	1732.6	22.39	0.12	22.5	**0.535**	1.026	0.549
	Band IV /HSUPA	Back	P-Sensor Off	1412	1732.6	22.39	0.04	22.5	0.364	1.026	0.373
	Band IV /HSUPA	Left	P-Sensor Off	1412	1732.6	22.39	-0.20	22.5	0.176	1.026	0.181
	Band IV /HSUPA	Right	P-Sensor Off	1412	1732.6	22.39	-0.23	22.5	0.032	1.026	0.033
	Band IV /HSUPA	Bottom	P-Sensor Off	1412	1732.6	22.39	0.10	22.5	0.255	1.026	0.262
		ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				**1.6 W/kg (mW/g) Averaged over 1g**					

- CDMA Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	BC 0/RC3 (+F-SCH)	Front	P-Sensor On	1013	824.7	20.85	0.02	21.0	0.630	1.035	0.652
29	BC 0/RC3 (+F-SCH)	Back	P-Sensor On	1013	824.7	20.85	0.03	21.0	**0.641**	1.035	0.663
	BC 0/RC3 (+F-SCH)	Left	P-Sensor Off	1013	824.7	23.67	0.12	24.0	0.364	1.079	0.393
	BC 0/RC3 (+F-SCH)	Right	P-Sensor Off	1013	824.7	23.67	0.21	24.0	0.315	1.079	0.340

	BC 0/RC3 (+F-SCH)	Bottom	P-Sensor On	1013	824.7	20.85	-0.23	21.0	0.063	1.035	0.065
	BC 1/RC3 (+F-SCH)	Front	P-Sensor On	25	1851.25	20.92	-0.00	21.0	0.435	1.019	0.443
	BC 1/RC3 (+F-SCH)	Back	P-Sensor On	25	1851.25	20.92	0.13	21.0	0.407	1.019	0.415
	BC 1/RC3 (+F-SCH)	Left	P-Sensor Off	25	1851.25	23.47	0.25	23.5	0.288	1.007	0.290
	BC 1/RC3 (+F-SCH)	Right	P-Sensor Off	25	1851.25	23.47	0.19	23.5	0.201	1.007	0.202
48	BC 1/RC3 (+F-SCH)	Bottom	P-Sensor On	25	1851.25	20.92	-0.26	21.0	**0.437**	1.019	0.445
	BC 10/RC3 (+F-SCH)	Front	P-Sensor On	476	817.9	20.99	0.01	21.0	0.645	1.002	0.646
31	BC 10/RC3 (+F-SCH)	Back	P-Sensor On	476	817.9	20.99	-0.01	21.0	**0.664**	1.002	0.665
	BC 10/RC3 (+F-SCH)	Left	P-Sensor Off	476	817.9	24.54	0.09	25.0	0.419	1.112	0.466
	BC 10/RC3 (+F-SCH)	Right	P-Sensor Off	476	817.9	24.54	-0.03	25.0	0.342	1.112	0.380
	BC 10/RC3 (+F-SCH)	Bottom	P-Sensor On	476	817.9	20.99	0.05	21.0	0.063	1.002	0.063
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 20MHz QPSK 1RB Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band25 /RB#49	Front	P-Sensor On	26140	1860.0	20.58	0.06	21.0	0.305	1.102	0.336
	Band25 /RB#49	Back	P-Sensor On	26140	1860.0	20.58	-0.08	21.0	0.265	1.102	0.292
	Band25 /RB#49	Left	P-Sensor Off	26140	1860.0	21.56	-0.07	22.0	0.166	1.107	0.184
	Band25 /RB#49	Right	P-Sensor Off	26140	1860.0	21.56	-0.03	22.0	0.099	1.107	0.110
49	Band25 /RB#49	Bottom	P-Sensor On	26140	1860.0	20.58	-0.25	21.0	**0.390**	1.102	0.430
	Band4 /RB#49	Front	P-Sensor On	20175	1732.5	19.72	0.13	20.0	0.447	1.067	0.477
	Band4 /RB#49	Back	P-Sensor On	20175	1732.5	19.72	-0.25	20.0	0.415	1.067	0.443
	Band4 /RB#49	Left	P-Sensor Off	20175	1732.5	22.15	0.20	22.5	0.301	1.084	0.326
	Band4 /RB#49	Right	P-Sensor Off	20175	1732.5	22.15	-0.16	22.5	0.211	1.084	0.229
50	Band4 /RB#49	Bottom	P-Sensor On	20175	1732.5	19.72	-0.09	20.0	**0.712**	1.067	0.760
34	Band7 /RB#49	Front	P-Sensor On	21350	2560.0	20.14	-0.34	20.5	**0.216**	1.086	0.235
	Band7 /RB#49	Back	P-Sensor On	21350	2560.0	20.14	-0.24	20.5	0.216	1.086	0.235
	Band7 /RB#49	Left	P-Sensor Off	21350	2560.0	21.57	-0.15	22.0	0.141	1.104	0.156
	Band7 /RB#49	Right	P-Sensor Off	21350	2560.0	21.57	-0.21	22.0	0.097	1.104	0.107
	Band7 /RB#49	Bottom	P-Sensor On	21350	2560.0	20.14	-0.19	20.5	0.212	1.086	0.230
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 15MHz QPSK 1RB Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band26 /RB#37	Front	P-Sensor On	26775	822.5	19.29	0.03	19.5	0.394	1.05	0.414
35	Band26 /RB#37	Back	P-Sensor On	26775	822.5	19.29	-0.04	19.5	**0.404**	1.05	0.424
	Band26 /RB#37	Left	P-Sensor Off	26775	822.5	22.23	-0.15	22.5	0.256	1.064	0.272
	Band26 /RB#37	Right	P-Sensor Off	26775	822.5	22.23	0.11	22.5	0.152	1.064	0.162
	Band26 /RB#37	Bottom	P-Sensor On	26775	822.5	19.29	-0.10	19.5	0.046	1.05	0.048
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 10MHz QPSK 1RB Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12 /RB#24	Front	P-Sensor Off	23060	704.0	22.46	-0.21	22.5	0.235	1.009	0.237
36	Band12 /RB#24	Back	P-Sensor Off	23060	704.0	22.46	0.10	22.5	**0.291**	1.009	0.294
	Band12 /RB#24	Left	P-Sensor Off	23060	704.0	22.46	0.13	22.5	0.149	1.009	0.150
	Band12 /RB#24	Right	P-Sensor Off	23060	704.0	22.46	-0.10	22.5	0.085	1.009	0.086
	Band12 /RB#24	Bottom	P-Sensor Off	23060	704.0	22.46	0.09	22.5	0.017	1.009	0.017
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ TDD-LTE 20MHz QPSK 1RB Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41 /RB#99	Front	P-Sensor Off	40620	2593.0	21.81	0.03	22.0	0.180	1.045	1.008	0.190
	Band41 /RB#99	Back	P-Sensor Off	40620	2593.0	21.81	0.34	22.0	0.198	1.045	1.008	0.209
	Band41 /RB#99	Left	P-Sensor Off	40620	2593.0	21.81	0.26	22.0	0.106	1.045	1.008	0.112
	Band41 /RB#99	Right	P-Sensor Off	40620	2593.0	21.81	0.12	22.0	0.074	1.045	1.008	0.078
51	Band41 /RB#99	Bottom	P-Sensor Off	40620	2593.0	21.81	0.03	22.0	**0.204**	1.045	1.008	0.215
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**						

➢ LTE 20MHz QPSK 50%RB Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band25 /RB#0	Front	P-Sensor On	26590	1905.0	19.57	0.16	20.0	0.282	1.104	0.311
	Band25	Back	P-Sensor On	26590	1905.0	19.57	-0.02	20.0	0.260	1.104	0.287

	/RB#0										
	Band25 /RB#0	Left	P-Sensor Off	26590	1905.0	20.62	-0.34	21.0	0.181	1.091	0.197
	Band25 /RB#0	Right	P-Sensor Off	26590	1905.0	20.62	-0.06	21.0	0.137	1.091	0.149
52	Band25 /RB#0	Bottom	P-Sensor On	26590	1905.0	19.57	-0.22	20.0	**0.309**	1.104	0.341
	Band4 /RB#0	Front	P-Sensor On	20050	1720.0	18.72	0.12	19.0	0.418	1.067	0.446
	Band4 /RB#0	Back	P-Sensor On	20050	1720.0	18.72	-0.33	19.0	0.430	1.067	0.459
	Band4 /RB#0	Left	P-Sensor Off	20050	1720.0	21.20	0.21	21.5	0.334	1.072	0.358
	Band4 /RB#0	Right	P-Sensor Off	20050	1720.0	21.20	0.20	21.5	0.241	1.072	0.258
53	Band4 /RB#0	Bottom	P-Sensor On	20050	1720.0	18.72	-0.28	19.0	**0.740**	1.067	0.790
	Band7 /RB#24	Front	P-Sensor On	20850	2510.0	19.69	0.08	20.0	0.200	1.074	0.215
40	Band7 /RB#24	Back	P-Sensor On	20850	2510.0	19.69	0.18	20.0	**0.231**	1.074	0.248
	Band7 /RB#49	Left	P-Sensor Off	20850	2510.0	21.27	0.06	21.5	0.150	1.054	0.158
	Band7 /RB#49	Right	P-Sensor Off	20850	2510.0	21.27	0.24	21.5	0.103	1.054	0.109
	Band7 /RB#24	Bottom	P-Sensor On	20850	2510.0	19.69	0.18	20.0	0.217	1.074	0.233
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 10MHz QPSK 50%RB Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
41	Band26 /RB#0	Front	P-Sensor On	26775	822.5	18.28	0.01	18.5	**0.499**	1.052	0.525
	Band26 /RB#0	Back	P-Sensor On	26775	822.5	18.28	-0.01	18.5	0.497	1.052	0.523
	Band26 /RB#0	Left	P-Sensor Off	26775	822.5	21.22	0.09	21.5	0.271	1.067	0.289
	Band26 /RB#0	Right	P-Sensor Off	26775	822.5	21.22	0.06	21.5	0.155	1.067	0.165
	Band26 /RB#0	Bottom	P-Sensor On	26775	822.5	18.28	0.12	18.5	0.049	1.052	0.052
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					**1.6 W/kg (mW/g) Averaged over 1g**					

➢ LTE 10MHz QPSK 50%RB Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	Reported SAR_{1g} (W/kg)
	Band12 /RB#24	Front	P-Sensor Off	23095	707.5	21.47	-0.02	21.5	0.277	1.007	0.279
42	Band12 /RB#24	Back	P-Sensor Off	23095	707.5	21.47	-0.04	21.5	**0.317**	1.007	0.319
	Band12 /RB#24	Left	P-Sensor Off	23095	707.5	21.47	0.10	21.5	0.152	1.007	0.153
	Band12 /RB#24	Right	P-Sensor Off	23095	707.5	21.47	0.19	21.5	0.089	1.007	0.090
	Band12 /RB#24	Bottom	P-Sensor Off	23095	707.5	21.47	0.15	21.5	0.025	1.007	0.025

	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population	1.6 W/kg (mW/g) Averaged over 1g

➢ TDD-LTE 20MHz QPSK 50%RB Body SAR in Hotspot mode

Plot No.	Band /Mode	Test Position	Power mode	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	Band41 /RB#24	Front	P-Sensor Off	40620	2593.0	21.59	0.11	22.0	0.154	1.099	1.008	0.171
43	Band41 /RB#24	Back	P-Sensor Off	40620	2593.0	21.59	-0.15	22.0	**0.207**	1.099	1.008	0.229
	Band41 /RB#24	Left	P-Sensor Off	40620	2593.0	21.59	-0.16	22.0	0.105	1.099	1.008	0.116
	Band41 /RB#24	Right	P-Sensor Off	40620	2593.0	21.59	0.25	22.0	0.071	1.099	1.008	0.079
	Band41 /RB#24	Bottom	P-Sensor Off	40620	2593.0	21.59	0.11	22.0	0.173	1.099	1.008	0.192
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population			1.6 W/kg (mW/g) Averaged over 1g								

➢ WLAN 2.4GHz Body SAR in Hotspot mode

Plot No.	Band/Mode	Test Position	CH.	Freq. (MHz)	Ave. Power (dBm)	Power Drift (dB)	Tune-Up Limit (dBm)	Meas. SAR_{1g} (W/kg)	Scaling Factor	D.C Factor	Reported SAR_{1g} (W/kg)
	2.4GHz/802.11b	Front	06	2437	17.09	0.02	17.5	0.081	1.099	1.03	0.092
44	2.4GHz/802.11b	Back	06	2437	17.09	-0.35	17.5	**0.216**	1.099	1.03	0.245
	2.4GHz/802.11b	Right	06	2437	17.09	0.16	17.5	0.071	1.099	1.03	0.080
	2.4GHz/802.11b	Top	06	2437	17.09	0.01	17.5	0.062	1.099	1.03	0.070
ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population					1.6 W/kg (mW/g) Averaged over 1g						

Note:

1. Per KDB 447498 D01v06, for each exposure position, if the highest output channel Reported SAR ≤0.8W/kg, other channels SAR testing is not necessary.
2. Additional WLAN SAR testing was performed for simultaneous transmission analysis.
3. For Hotspot SAR testing, per KDB 941225 D06v02r01, for EUT dimension ≥ 9cm*5cm, the test distance is 10mm. SAR must be measured for all surfaces and sides with a transmitting antenna located within 2.5cm from that surface or edge.
4. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA output power is < 0.25dB higher than RMC 12.2kbps, or Reported SAR with RMC 12.2kbps setting is ≤ 1.2W/kg, HSDPA SAR evaluation can be excluded.
5. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required when the measured SAR is ≥0.8W/kg.
6. Per KDB 648474 D04v01r03, when the Reported SAR for a body-worn accessory measured without a headset connected to the handset is ﹥1.2 W/kg, SAR testing with a headset connected to the handset is required.
7. Per KDB 941225 D05v02r05, 100% RB allocation SAR measurement is not required when the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel.
8. According to KDB 865664 D02v01r02, SAR plot is required for the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.
9. The device employs proximity sensors that detect the presence of the user's body at the front or back or bottom side faces of the device. When front or back or bottom side condition is detected, WCDMA B2/B4/5, CDMA BC 0/ BC1/ BC 10 and LTE B2 / B4 / B5/ B7 / B25 / B26 reduced power will be active.
10. Highlight part of test data means repeated test.
13. Per KDB 941225 D01v03r01, 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.
    For WCDMA Band V/II, when P-Sensor On, the Max power of HSDPA/HSUPA is higher than RMC, therefore,
    3) For WCDMA Band V, Cuz the maximum output power specified for HSDPA and RMC are 169.4mW(22.29dBm) and 134.28mW(21.28dBm), the scaled SAR would be 0.487×(169.4/134.28)=0.614W/Kg<1.2W/kg, therefore, SAR is

not required for HSDPA. Cuz the maximum output power specified for HSUPA and RMC are 167.11mW(22.23dBm) and 134.28mW(21.28dBm), the scaled SAR would be 0.487×(167.11/134.28)=0.606W/Kg<1.2W/kg, therefore, SAR is not required for HSUPA.

4) For WCDMA Band II, Cuz the maximum output power specified for HSDPA and RMC are 156.31mW(21.94dBm) and 100.69mW(20.03dBm), the scaled SAR would be 0.361×(156.31/100.69)=0.560W/Kg <1.2 /kg, therefore, SAR is not required for HSDPA. Cuz the maximum output power specified for HSUPA and RMC are 155.96mW(21.93dBm) and 100.69mW(20.03dBm), the scaled SAR would be0.361×(155.961/100.69)=0.559W/Kg <1.2W/kg, therefore, SAR is not required for HSUPA.

16.4 Repeated SAR measurement

Band/ Mode	Test Position	Power mode	CH.	Freq. (MHz)	Measured SAR (W/kg)				
					Original	1st Repeated		2nd Repeated	
						Value	Ratio	Value	Ratio
BC1/RC3 (SO55)	Left Cheek	P-Sensor Off	600	1880.0	0.981	0.956	1.03	/	/
Band IV /RMC	Front	P-Sensor On	1412	1732.6	1.10	0.967	1.14	/	/
GPRS850 /4 slots	Front	P-Sensor Off	251	848.8	0.809	0.726	1.11	/	/
GPRS850 /4 slots	Back	P-Sensor Off	251	848.8	0.805	0.741	1.09	/	/
	ANSI / IEEE C95.1 – SAFETY LIMIT Spatial Peak Uncontrolled Exposure/General Population				**1.6 W/kg (mW/g) Averaged over 1g**				

Note:
1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥0.8 W/kg
2. Per KDB 865664 D01v01r04, if the ratio of *original* and *repeated* is ≤ 1.2 and the measured SAR <1.45 W/kg, only one repeated measurement is required.

16.5 Multi-Band Simultaneous Transmission Considerations

➢ **Simultaneous Transmission Capabilities**

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be transmitting simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds. Possible transmission paths for the EUT are shown in below Figure and are color-coded to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

Fig.15.1 Simultaneous Transmission Paths

➢ **Simultaneous Transmission Procedures**

This device contains transmitters that may operate simultaneously. Therefore simultaneous transmission analysis is required. Per FCC KDB 447498 D01v06, simultaneous transmission SAR test exclusion may be applied when the sum of the 1-g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is ≤ 1.6 W/kg. When standalone SAR is not required to be measured, per FCC KDB 447498 D01v06 4.3.2), the following equation must be used to estimate the standalone 1g SAR for simultaneous transmission assessment involving that transmitter.

$$\text{Estimated SAR} = \frac{\sqrt{f(GHz)}}{7.5} \cdot \frac{\text{Max. power of channel, mW}}{\text{Min. Separation Distance, mm}}$$

Mode	Max. tune-up Power (dBm)	Exposure Position	Head	Body
		Test Distance (mm)	0	10
Bluetooth	7.5	Estimated SAR (W/kg)	0.234	0.119

Note:

1. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm according is applied to determine estimated SAR.

➢ **Multi-Band simultaneous Transmission Consideration**

	Position	Applicable Combination
Simultaneous Transmission Consideration	Head	WWAN (Voice) + WLAN 2.4 GHz
		WWAN (Voice) + Bluetooth
	Body	WWAN (Voice) + WLAN 2.4 GHz
		WWAN (Voice) + Bluetooth
	Hotspot	WWAN (Voice) + WLAN 2.4 GHz

Note:

1. WLAN 2.4GHz Band and Bluetooth share the same antenna, and cannot transmit simultaneously.
2. GSM/WCDMA/LTE shares the same antenna, and cannot transmit simultaneously.
3. The Report SAR summation is calculated based on the same configuration and test position.
4. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
    - i. Scalar SAR summation < 1.6 W/kg.
    - ii. SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (*min. separation distance, mm*), and the peak separation distance is determined from the square root of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary
    - iii. Simultaneously transmission SAR measurement, and the Reported multi-band SAR < 1.6 W/kg

16.6 SAR Simultaneous Transmission Analysis

➢ **Head Simultaneous Transmission**

WWAN Mode	Position	WWAN SAR_{1g} (W/kg)	WLAN SAR_{1g} (W/kg)	Σ SAR (W/kg)
GSM850	Right Cheek	0.456	0.147	0.603
	Right Tilted	0.225	0.123	0.348
	Left Cheek	0.501	0.481	0.982
	Left Tilted	0.246	0.278	0.524

WWAN Mode	Position	WWAN SAR_{1g} (W/kg)	Bluetooth Estimated SAR_{1g} (W/kg)	Σ SAR (W/kg)
GSM850	Right Cheek	0.456	0.234	0.690
	Right Tilted	0.225	0.234	0.459
	Left Cheek	0.501	0.234	0.735
	Left Tilted	0.246	0.234	0.480

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
GSM 1900	Right Cheek	0.284	0.147	0.431
	Right Tilted	0.138	0.123	0.261
	Left Cheek	0.360	0.481	0.841
	Left Tilted	0.167	0.278	0.445

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
GSM 1900	Right Cheek	0.284	0.234	0.518
	Right Tilted	0.138	0.234	0.372
	Left Cheek	0.360	0.234	0.594
	Left Tilted	0.167	0.234	0.401

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band V	Right Cheek	0.539	0.147	0.686
	Right Tilted	0.233	0.123	0.356
	Left Cheek	0.607	0.481	1.088
	Left Tilted	0.271	0.278	0.549

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band V	Right Cheek	0.539	0.234	0.773
	Right Tilted	0.233	0.234	0.467
	Left Cheek	0.607	0.234	0.841
	Left Tilted	0.271	0.234	0.505

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band IV	Right Cheek	0.320	0.147	0.467
	Right Tilted	0.160	0.123	0.283
	Left Cheek	0.261	0.481	0.742
	Left Tilted	0.134	0.278	0.412

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band IV	Right Cheek	0.320	0.234	0.554
	Right Tilted	0.160	0.234	0.394
	Left Cheek	0.261	0.234	0.495
	Left Tilted	0.134	0.234	0.368

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band II	Right Cheek	0.662	0.147	0.809
	Right Tilted	0.308	0.123	0.431
	Left Cheek	0.421	0.481	0.902
	Left Tilted	0.191	0.278	0.469

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band II	Right Cheek	0.662	0.234	0.896
	Right Tilted	0.308	0.234	0.542
	Left Cheek	0.421	0.234	0.655
	Left Tilted	0.191	0.234	0.425

WWAN Mode	Position	WWAN SAR (W/kg)	WLAN SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 0	Right Cheek	0.727	0.147	0.874
	Right Tilted	0.376	0.123	0.499

WWAN Mode	Position	WWAN SAR (W/kg)	Bluetooth Estimated SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 0	Right Cheek	0.727	0.234	0.961
	Right Tilted	0.376	0.234	0.610

	Left Cheek	0.380	0.481	0.861
	Left Tilted	0.154	0.278	0.432

	Left Cheek	0.380	0.234	0.614
	Left Tilted	0.154	0.234	0.388

WWAN Mode	Position	WWAN SAR (W/kg)	WLAN SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 1	Right Cheek	0.736	0.147	0.883
	Right Tilted	0.366	0.123	0.489
	Left Cheek	1.010	0.481	1.491
	Left Tilted	0.428	0.278	0.706

WWAN Mode	Position	WWAN SAR (W/kg)	Bluetooth Estimated SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 1	Right Cheek	0.736	0.234	0.970
	Right Tilted	0.366	0.234	0.600
	Left Cheek	1.010	0.234	1.244
	Left Tilted	0.428	0.234	0.662

WWAN Mode	Position	WWAN SAR (W/kg)	WLAN SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 10	Right Cheek	0.671	0.147	0.818
	Right Tilted	0.351	0.123	0.474
	Left Cheek	0.716	0.481	1.197
	Left Tilted	0.365	0.278	0.643

WWAN Mode	Position	WWAN SAR (W/kg)	Bluetooth Estimated SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 10	Right Cheek	0.671	0.234	0.905
	Right Tilted	0.351	0.234	0.585
	Left Cheek	0.716	0.234	0.950
	Left Tilted	0.365	0.234	0.599

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 25	Right Cheek	0.425	0.147	0.572
	Right Tilted	0.187	0.123	0.310
	Left Cheek	0.704	0.481	1.185
	Left Tilted	0.341	0.278	0.619

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 25	Right Cheek	0.425	0.234	0.659
	Right Tilted	0.187	0.234	0.421
	Left Cheek	0.704	0.234	0.938
	Left Tilted	0.341	0.234	0.575

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 4	Right Cheek	0.144	0.147	0.291
	Right Tilted	0.077	0.123	0.200
	Left Cheek	0.258	0.481	0.739
	Left Tilted	0.124	0.278	0.402

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 4	Right Cheek	0.144	0.234	0.378
	Right Tilted	0.077	0.234	0.311
	Left Cheek	0.258	0.234	0.492
	Left Tilted	0.124	0.234	0.358

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 26	Right Cheek	0.225	0.147	0.372
	Right Tilted	0.109	0.123	0.232
	Left Cheek	0.229	0.481	0.710
	Left Tilted	0.112	0.278	0.390

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 26	Right Cheek	0.225	0.234	0.459
	Right Tilted	0.109	0.234	0.343
	Left Cheek	0.229	0.234	0.463
	Left Tilted	0.112	0.234	0.346

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 7	Right Cheek	0.287	0.147	0.434
	Right Tilted	0.146	0.123	0.269

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 7	Right Cheek	0.287	0.234	0.521
	Right Tilted	0.146	0.234	0.380

	Left Cheek	0.384	0.481	0.865
	Left Tilted	0.184	0.278	0.462

	Left Cheek	0.384	0.234	0.618
	Left Tilted	0.184	0.234	0.418

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 12	Right Cheek	0.199	0.147	0.346
	Right Tilted	0.096	0.123	0.219
	Left Cheek	0.227	0.481	0.708
	Left Tilted	0.104	0.278	0.382

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 12	Right Cheek	0.199	0.234	0.433
	Right Tilted	0.096	0.234	0.330
	Left Cheek	0.227	0.234	0.461
	Left Tilted	0.104	0.234	0.338

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 41	Right Cheek	0.123	0.147	0.270
	Right Tilted	0.058	0.123	0.181
	Left Cheek	0.289	0.481	0.770
	Left Tilted	0.133	0.278	0.411

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 41	Right Cheek	0.123	0.234	0.357
	Right Tilted	0.058	0.234	0.292
	Left Cheek	0.289	0.234	0.523
	Left Tilted	0.133	0.234	0.367

➢ **Body worn Simultaneous Transmission**

WWAN Mode	Position	WWAN SAR_{1g} (W/kg)	WLAN SAR_{1g} (W/kg)	Σ SAR (W/kg)
GSM850	Front	0.472	0.092	0.564
	Back	0.419	0.245	0.664

WWAN Mode	Position	WWAN SAR_{1g} (W/kg)	Bluetooth Estimated SAR_{1g} (W/kg)	Σ SAR (W/kg)
GSM850	Front	0.472	0.119	0.591
	Back	0.419	0.119	0.538

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
GSM 1900	Front	0.251	0.092	0.343
	Back	0.229	0.245	0.474

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
GSM 1900	Front	0.251	0.119	0.370
	Back	0.229	0.119	0.348

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band V	Front	0.487	0.092	0.579
	Back	0.478	0.245	0.723

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band V	Front	0.487	0.119	0.606
	Back	0.478	0.119	0.597

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band IV	Front	1.108	0.092	1.200
	Back	0.617	0.245	0.862

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band IV	Front	1.108	0.119	1.227
	Back	0.617	0.119	0.736

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band II	Front	0.348	0.092	0.440
	Back	0.279	0.245	0.524

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band II	Front	0.348	0.119	0.467
	Back	0.279	0.119	0.398

WWAN Mode	Position	WWAN SAR (W/kg)	WLAN SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 0	Front	0.652	0.092	0.744
	Back	0.663	0.245	0.908

WWAN Mode	Position	WWAN SAR (W/kg)	Bluetooth Estimated SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 0	Front	0.652	0.119	0.771
	Back	0.663	0.119	0.782

WWAN Mode	Position	WWAN SAR (W/kg)	WLAN SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 1	Front	0.443	0.092	0.535
	Back	0.415	0.245	0.660

WWAN Mode	Position	WWAN SAR (W/kg)	Bluetooth Estimated SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 1	Front	0.443	0.119	0.562
	Back	0.415	0.119	0.534

WWAN Mode	Position	WWAN SAR (W/kg)	WLAN SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 10	Front	0.646	0.092	0.738
	Back	0.665	0.245	0.910

WWAN Mode	Position	WWAN SAR (W/kg)	Bluetooth Estimated SAR (W/kg)	Σ SAR (W/kg)
CDMA BC 10	Front	0.646	0.119	0.765
	Back	0.665	0.119	0.784

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 25	Front	0.336	0.092	0.428
	Back	0.292	0.245	0.537

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 25	Front	0.336	0.119	0.455
	Back	0.292	0.119	0.411

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 4	Front	0.477	0.092	0.569
	Back	0.459	0.245	0.704

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 4	Front	0.477	0.119	0.596
	Back	0.459	0.119	0.578

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 26	Front	0.525	0.092	0.617
	Back	0.523	0.245	0.768

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 26	Front	0.525	0.119	0.644
	Back	0.523	0.119	0.642

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 7	Front	0.235	0.092	0.327
	Back	0.248	0.245	0.493

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 7	Front	0.235	0.119	0.354
	Back	0.248	0.119	0.367

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 12	Front	0.279	0.092	0.371
	Back	0.319	0.245	0.564

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 12	Front	0.279	0.119	0.398
	Back	0.319	0.119	0.438

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 41	Front	0.190	0.092	0.282
	Back	0.229	0.245	0.474

WWAN Mode	Position	WWAN SAR1g (W/kg)	Bluetooth Estimated SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 41	Front	0.190	0.119	0.309
	Back	0.229	0.119	0.348

- **Hotspot mode Simultaneous Transmission**

WWAN Mode	Position	WWAN SAR_{1g} (W/kg)	WLAN SAR_{1g} (W/kg)	Σ SAR (W/kg)
GSM850	Front	0.855	0.092	0.947
	Back	0.841	0.245	1.086
	Left	0.673	/	0.673
	Right	0.640	0.080	0.720
	Top	/	0.070	0.070
	Bottom	0.082	/	0.082

WWAN Mode	Position	WWAN SAR_{1g} (W/kg)	WLAN SAR_{1g} (W/kg)	Σ SAR (W/kg)
GSM 1900	Front	0.444	0.092	0.536
	Back	0.409	0.245	0.654
	Left	0.262	/	0.262
	Right	0.183	0.080	0.263
	Top	/	0.070	0.070
	Bottom	0.418	/	0.418

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band V	Front	0.487	0.092	0.579
	Back	0.478	0.245	0.723
	Left	0.433	/	0.433
	Right	0.418	0.080	0.498
	Top	/	0.070	0.070
	Bottom	0.043	/	0.043

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band IV	Front	1.108	0.092	1.20
	Back	0.617	0.245	0.862
	Left	0.285	/	0.285
	Right	0.052	0.080	0.132
	Top	/	0.070	0.070
	Bottom	0.423	/	0.423

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
WCDMA Band II	Front	0.348	0.092	0.440
	Back	0.279	0.245	0.524
	Left	0.374	/	0.374
	Right	0.212	0.080	0.292
	Top	/	0.070	0.070
	Bottom	0.402	/	0.402

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
CDMA BC 0	Front	0.652	0.092	0.744
	Back	0.663	0.245	0.908
	Left	0.393	/	0.393
	Right	0.340	0.080	0.420
	Top	/	0.070	0.070
	Bottom	0.065	/	0.065

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
CDMA BC 1	Front	0.443	0.092	0.535
	Back	0.415	0.245	0.660
	Left	0.290	/	0.290
	Right	0.202	0.080	0.282
	Top	/	0.070	0.070
	Bottom	0.445	/	0.445

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
CDMA BC 10	Front	0.646	0.092	0.738
	Back	0.665	0.245	0.910
	Left	0.466	/	0.466
	Right	0.380	0.080	0.460
	Top	/	0.070	0.070
	Bottom	0.063	/	0.063

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 25	Front	0.336	0.092	0.197
	Back	0.292	0.245	0.229
	Left	0.197	/	0.070
	Right	0.149	0.080	0.430
	Top	/	0.070	0.197
	Bottom	0.430	/	0.229

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 4	Front	0.477	0.092	0.569
	Back	0.459	0.245	0.704
	Left	0.358	/	0.358
	Right	0.258	0.080	0.338
	Top	/	0.070	0.070
	Bottom	0.790	/	0.790

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 26	Front	0.525	0.092	0.617
	Back	0.523	0.245	0.768
	Left	0.289	/	0.289
	Right	0.165	0.080	0.245
	Top		0.070	0.070
	Bottom	0.052	/	0.052

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 7	Front	0.235	0.092	0.327
	Back	0.248	0.245	0.493
	Left	0.158	/	0.158
	Right	0.109	0.080	0.189
	Top	/	0.070	0.070
	Bottom	0.233	/	0.233

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band 12	Front	0.279	0.092	0.371
	Back	0.319	0.245	0.564
	Left	0.153	/	0.153
	Right	0.090	0.080	0.170
	Top	/	0.070	0.070
	Bottom	0.025	/	0.025

WWAN Mode	Position	WWAN SAR1g (W/kg)	WLAN SAR1g (W/kg)	Σ SAR (W/kg)
LTE Band41	Front	0.190	0.092	0.282
	Back	0.229	0.245	0.474
	Left	0.116	/	0.116
	Right	0.079	0.080	0.159
	Top	/	0.070	0.070
	Bottom	0.215	/	0.215

- **Simultaneous Transmission Conclusion**

The above numerical summed SAR results for all the case simultaneous transmission conditions were below the SAR limit. Therefore, the above analysis is sufficient to determine that simultaneous transmission cases will not exceed the SAR limit and therefore no measured volumetric simultaneous SAR summation is required per FCC KDB Publication 447498 D01v06.

16.7 Measurement Uncertainty

The component of uncertainly may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainly by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A Type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in below Table.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor	1/k(b)	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

Uncertainty Component	Section	Uncert. Value	Prob. Dist.	Div.	(C_i) (1 g)	(C_i) (10 g)	Std. Unc. (1 g)	Std. Unc. (10 g)	V_i
Measurement System									
Probe Calibration	E.2.1	±7.4%	N	1	1	1	±7.4%	±7.4%	∞
Axial Isotropy	E.2.2	±1.2%	R	$\sqrt{3}$	0.7	0.7	±0.49%	±0.49%	∞
Hemispherical Isotropy	E.2.2	±3.2%	R	$\sqrt{3}$	0.7	0.7	±1.29%	±1.29%	∞
Boundary Effects	E.2.3	±1.0%	R	$\sqrt{3}$	1	1	±0.58%	±0.58%	∞
Linearity	E.2.4	±0.9%	R	$\sqrt{3}$	1	1	±0.52%	±0.52%	∞
System Detection Limits	E.2.5	±0.25%	R	$\sqrt{3}$	1	1	±0.14%	±0.14%	∞
Readout Electronics	E.2.6	±0.3%	N	1	1	1	±0.3%	±0.3%	∞
Response Time	E.2.7	±0.8%	R	$\sqrt{3}$	1	1	±0.46%	±0.46%	∞
Integration Time	E.2.8	±2.6%	R	$\sqrt{3}$	1	1	±1.5%	±1.5%	∞
RF Ambient Noise	E.6.1	±3.0%	R	$\sqrt{3}$	1	1	±1.73%	±1.73%	∞
RF Ambient Reflections	E.6.1	±3.0%	R	$\sqrt{3}$	1	1	±1.73%	±1.73%	∞
Probe positioner mechanical tolerances	E.6.2	±0.4%	R	$\sqrt{3}$	1	1	±0.23%	±0.23%	∞
Probe positioning tolerance with respect to the phantom shell surface	E.6.3	±2.9%	R	$\sqrt{3}$	1	1	±1.67%	±1.67%	∞
Interpolation, extrapolation, and integration algorithm For max. SAR Evaluation.	E.5	±1.0%	R	$\sqrt{3}$	1	1	±0.58%	±0.58%	∞
Test Sample Related									
Device Positioning	E.4.2	±4.6%	N	1	1	1	±4.6%	±4.6%	M-1
Device Holder	E.4.1	±5.2%	N	1	1	1	±5.2%	±5.2%	M-1
Power Drift	6.6.2	±5.0%	R	$\sqrt{3}$	1	1	±2.89%	±2.89%	∞
Phantom and Setup									
Phantom Uncertainty	E.3.1	±4.0%	R	$\sqrt{3}$	1	1	±2.31%	±2.31%	∞
Liquid conductivity (measured value)	E.3.3	±3.51%	N	1	0.78	0.71	±2.74%	±2.49%	M
Liquid dielectric constant (measured value)	E.3.3	±3.4%	N	1	0.23	0.26	±0.78%	±0.88%	M
Liquid Conductivity - Temperature Uncertainty	E.3.4	±1.6%	R	$\sqrt{3}$	0.78	0.71	±0.72%	±0.66%	∞
Liquid Dielectric Constant - Temperature Uncertainty	E.3.4	±0.9%	R	$\sqrt{3}$	0.23	0.26	±0.12%	±0.14%	∞
Combined Standard Uncertainty (RSS)							±11.61%	±11.55%	
Expanded Uncertainty (95% Confidence Level, k = 2)							±23.23%	±23.10%	

Uncertainty Budget for frequency range 300 MHz to 3 GHz according to IEEE1528-2013

16.8 Measurement Conclusion

The SAR evaluation indicates that the EUT complies with the RF radiation exposure limits of the FCC and Industry Canada, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested. Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

17 Reference

[1]. FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2]. ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3]. 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”, September2013

[4]. SPEAG DASY52 System Handbook

[5]. FCC KDB 248227 D01 v02r02, “SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS”, October 2015

[6]. FCC KDB 447498 D01 v06, “RF EXPOSURE PROCEDURES AND EQUIPMENT AUTHORIZATION POLICIES FOR MOBILE AND PORTABLE DEVICES”, October 2015

[7]. FCC KDB 648474 D04 v01r03, “SAR EVALUATION CONSIDERATIONS FOR WIRELESS HANDSETS”, October 2015

[8]. FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, October 2015

[9]. FCC KDB 941225 D05 v02r05, “SAR EVALUATION CONSIDERATIONS FOR LTE DEVICES”, Dec 2015

[10]. FCC KDB 941225 D03 v01, “Recommended SAR Test Reduction Procedures for GSM / GPRS / EDGE”, December 2008

[11]. FCC KDB 941225 D06 v02r01, " SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES", October 2015

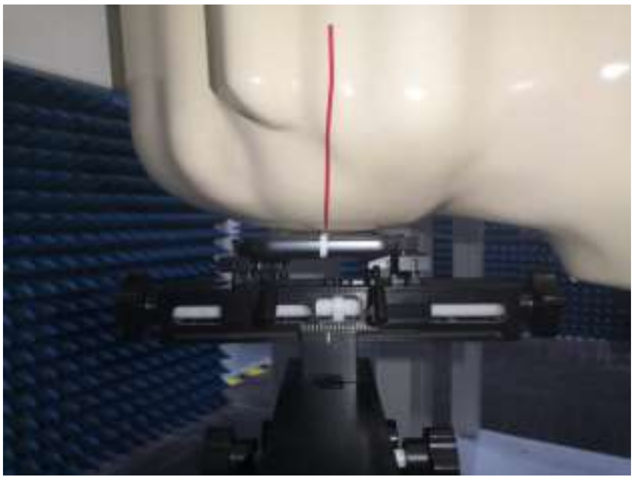
[12]. FCC KDB 865664 D01 v01r04, “SAR MEASUREMENT REQUIREMENTS FOR 100 MHz TO 6 GHz”, August 2015

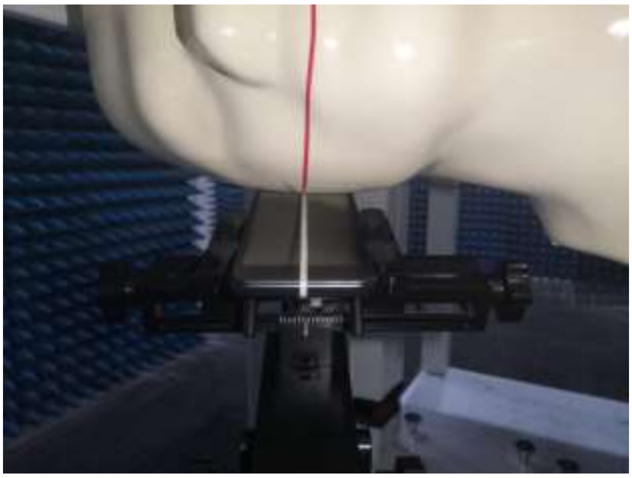
[13]. FCC KDB 616217 D04 v01r02, “SAR EVALUATION CONSIDERATIONS FOR LAPTOP, NOTEBOOK, NETBOOK AND TABLET COMPUTERS”, October 2015

Appendix A: EUT Photos

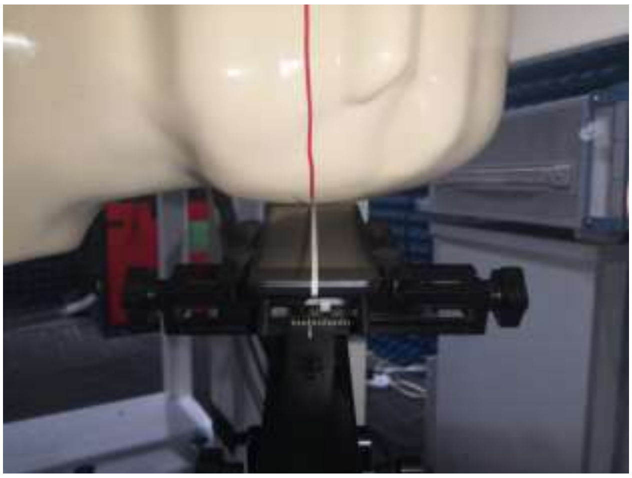
Appendix B: Test Setup Photos

Head

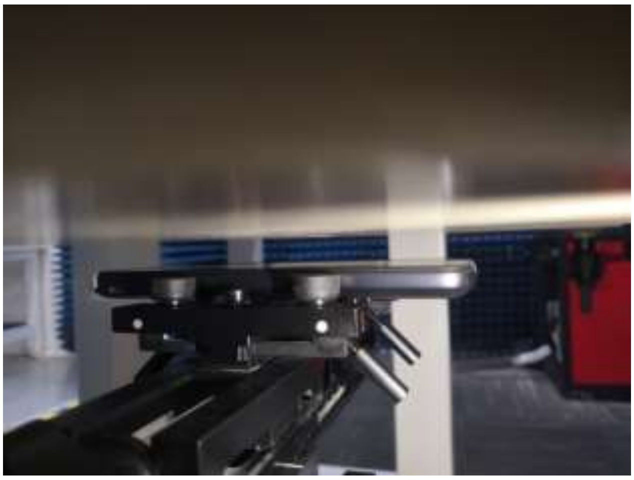

Right Cheek

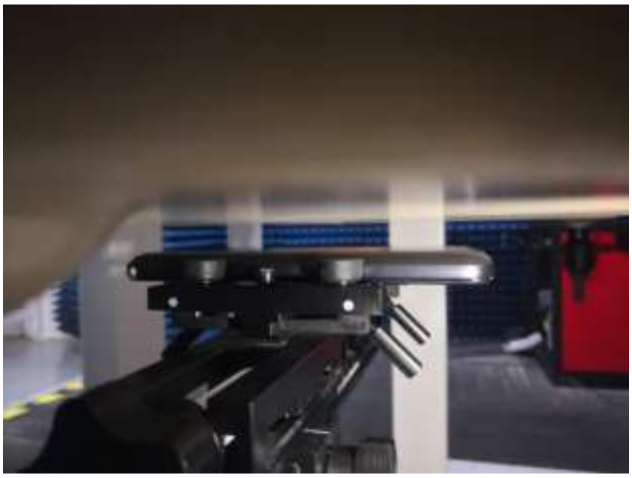

Right Tilted


Left Cheek


Left Tilted

Body


Front side (10mm)


Back side(10mm)

Top side(10mm)

Bottom side(10mm)

Left side(10mm)

Right side(10mm)

Appendix C: Plots of SAR System Check

Test Laboratory: CCIS Date/Time: 09.20.2018 07:51:49

DUT: Dipole 750 MHz; Type: D750V3; Serial: SN:1118

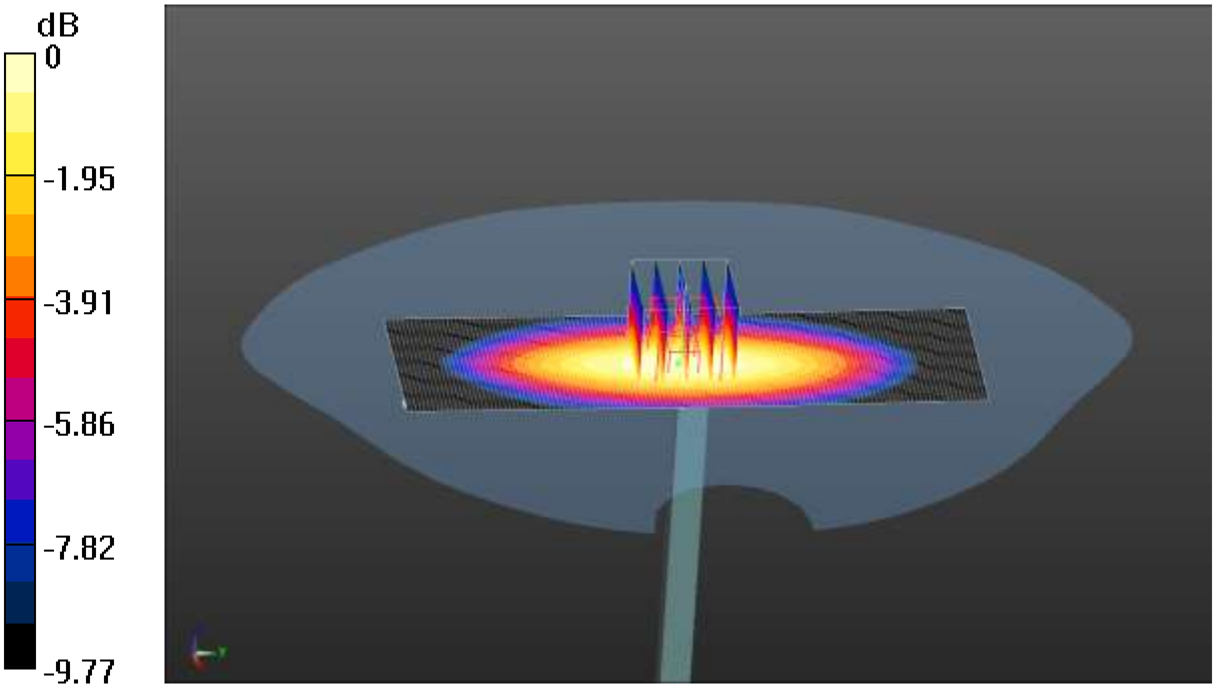
Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.856 S/m; ε_r = 41.889; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.06, 10.06, 10.06); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 750 MHz Head Tissue/d=15mm, Pin=80 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.97 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.961 W/kg
SAR(1 g) = 0.691 W/kg; SAR(10 g) = 0.443 W/kg
Maximum value of SAR (measured) = 0.791 W/kg

System Performance Check at Frequency 750 MHz Head Tissue/d=15mm, Pin=80 mW, dist=2.0mm (EX-Probe)/Area Scan (41x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.779 W/kg



0 dB = 0.779 W/kg = -1.08 dBW/kg

Test Laboratory: CCIS Date/Time: 09.20.2018 08:19:13

DUT: Dipole 835 MHz; Type: D835V2; Serial: SN:4d154

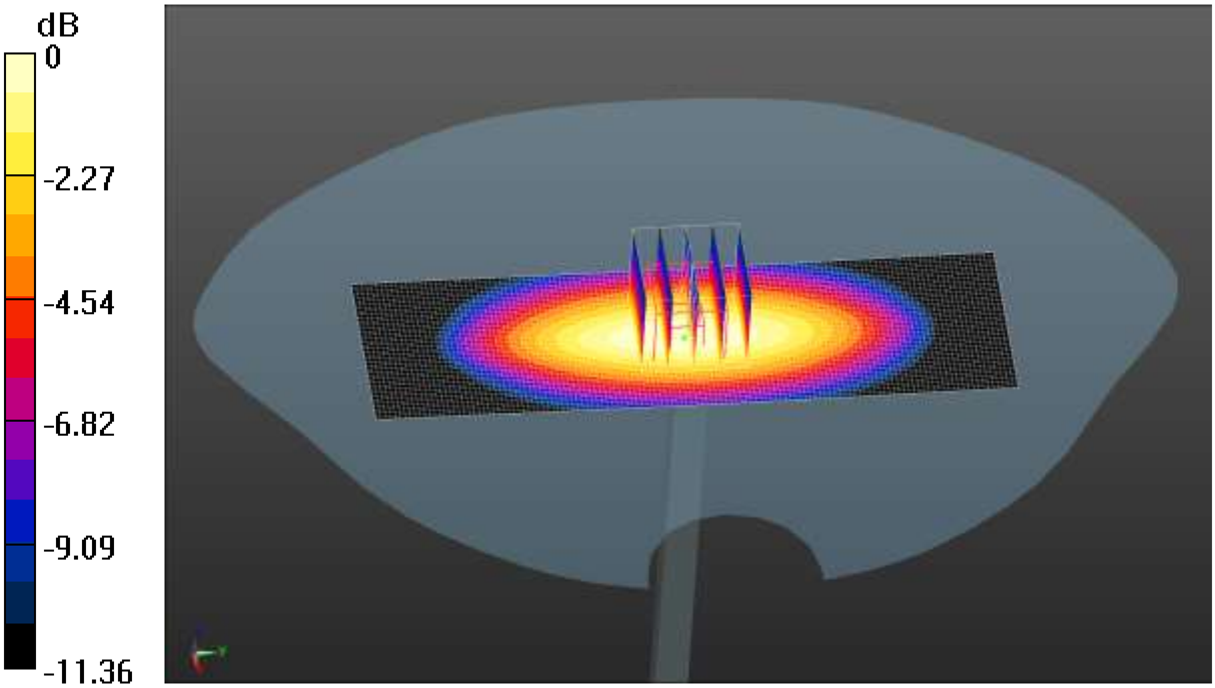
Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.926 S/m; ε_r = 41.203; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.66, 9.66, 9.66); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 835 MHz Head Tissue/d=15mm, Pin=80 mW, dist=2.0mm (EX-Probe)/Area Scan (41x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.985 W/kg

System Performance Check at Frequency 835 MHz Head Tissue/d=15mm, Pin=80 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 33.10 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.779 W/kg; SAR(10 g) = 0.493 W/kg
Maximum value of SAR (measured) = 0.961 W/kg



0 dB = 0.961 W/kg = -0.17 dBW/kg

Test Laboratory: CCIS Date/Time: 09.02.2018 08:22:06

DUT: Dipole 1800 MHz; Type: SID1800; Serial: SN:09/15 DIP IG800-360

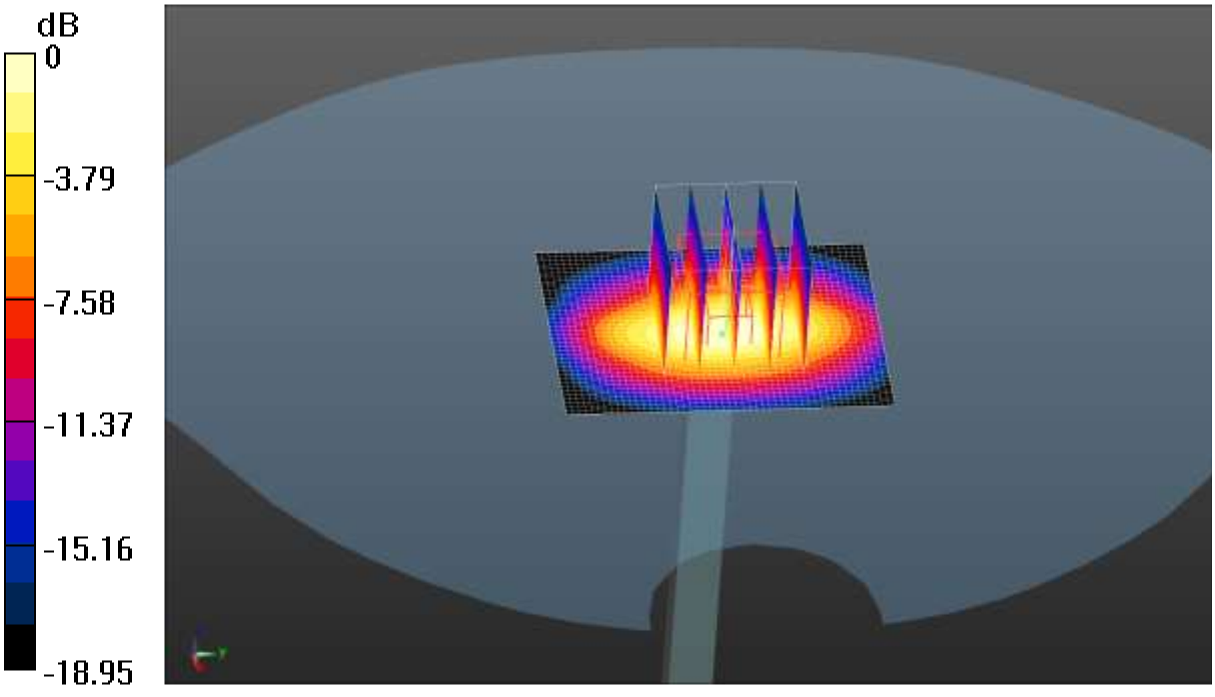
Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.408 S/m; ε_r = 40.217; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.3, 8.3, 8.3); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 1800MHz Head Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.86 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 3.02 W/kg
SAR(1 g) = 1.57 W/kg; SAR(10 g) = 0.794 W/kg
Maximum value of SAR (measured) = 2.41 W/kg

System Performance Check at Frequency 1800MHz Head Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Area Scan (41x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.35 W/kg



0 dB = 2.35 W/kg = 3.71 dBW/kg

Test Laboratory: CCIS Date/Time: 09.02.2018 07:55:41

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d175

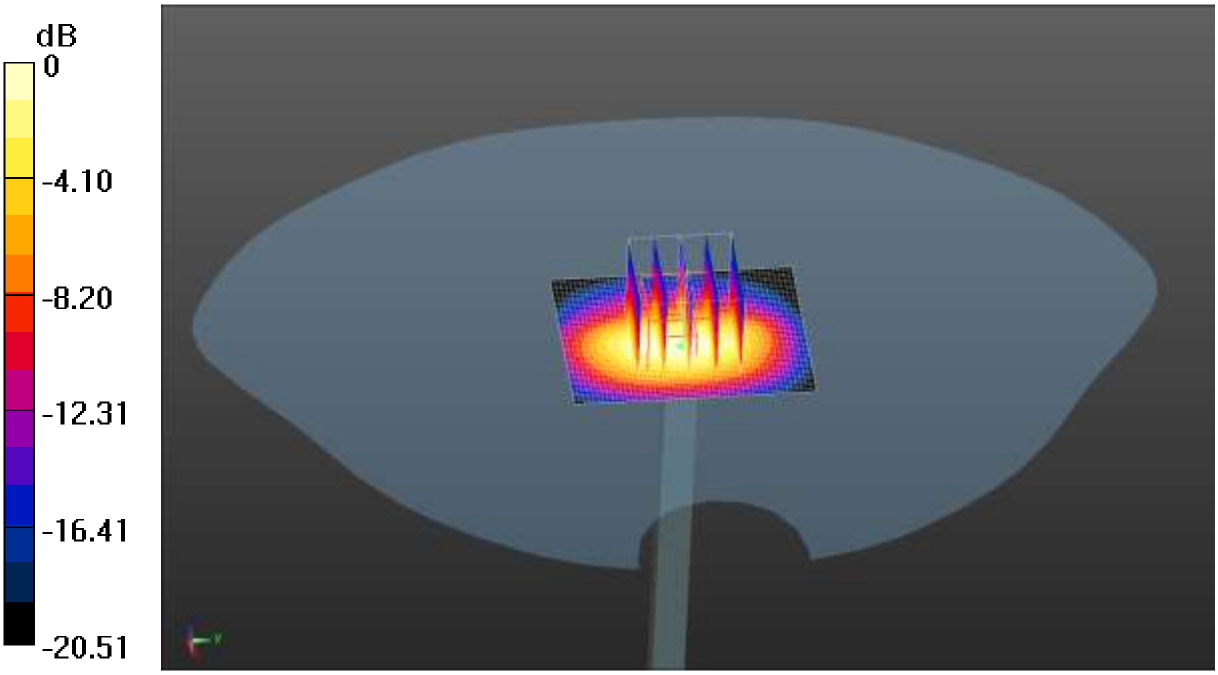
Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.432 S/m; ε_r = 39.311; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.03, 8.03, 8.03); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 1900MHz Head Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Area Scan (41x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.66 W/kg

System Performance Check at Frequency 1900MHz Head Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.03 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.32 W/kg
SAR(1 g) = 1.66 W/kg; SAR(10 g) = 0.829 W/kg
Maximum value of SAR (measured) = 2.50 W/kg



0 dB = 2.50 W/kg = 3.98 dBW/kg

Test Laboratory: CCIS Date/Time: 08.23.2018 08:38:06

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: SN:910

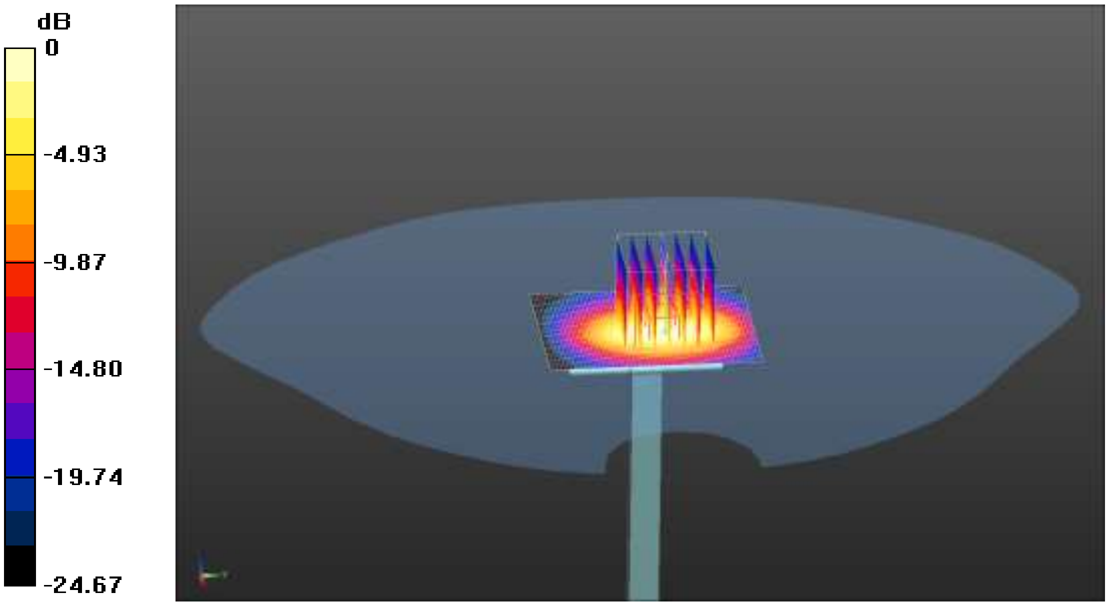
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.823 S/m; ε_r = 38.868; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.51, 7.51, 7.51); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 2450MHz Head Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Area Scan (51x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 3.52 W/kg

System Performance Check at Frequency 2450MHz Head Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 39.91 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 4.56 W/kg
SAR(1 g) = 2.13 W/kg; SAR(10 g) = 0.952 W/kg
Maximum value of SAR (measured) = 3.41 W/kg



0 dB = 3.41 W/kg = 5.33 dBW/kg

Test Laboratory: CCIS Date/Time: 08.23.2018 07:43:10

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: SN:1114

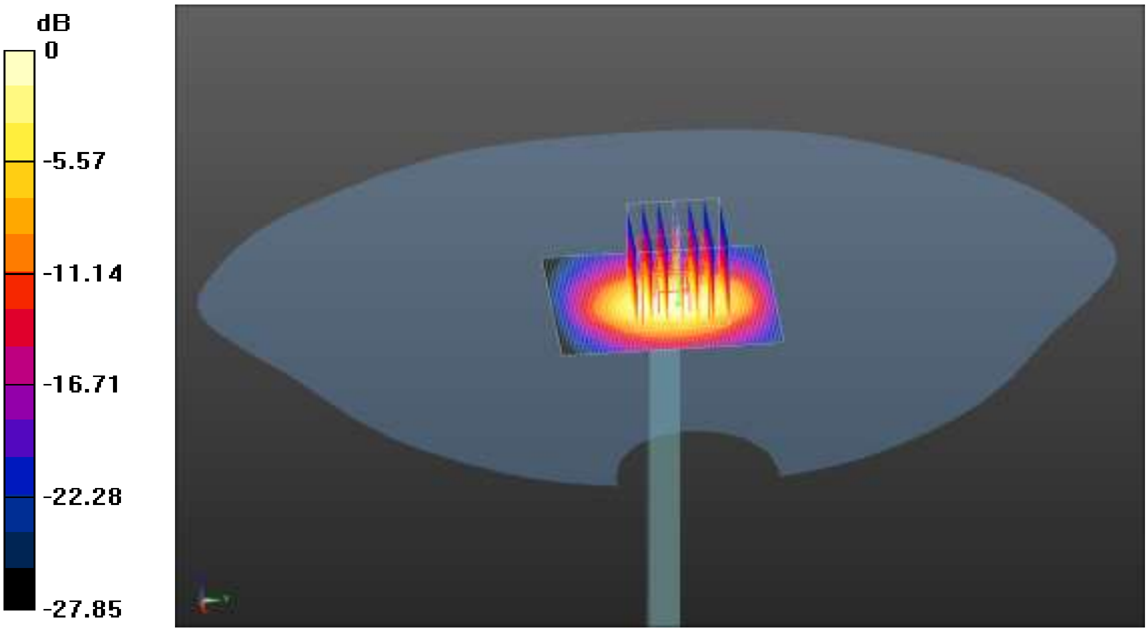
Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.034 S/m; ε_r = 37.512; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.27, 7.27, 7.27); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 2600MHz Head Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Zoom Scan(7X7X7) (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 42.63 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 5.35 W/kg
SAR(1 g) = 2.35 W/kg; SAR(10 g) = 0.994 W/kg
Maximum value of SAR (measured) = 3.88 W/kg

System Performance Check at Frequency 2600MHz Head Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Area Scan (51x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 4.09 W/kg



0 dB = 4.09 W/kg = 6.12 dBW/kg

Test Laboratory: CCIS Date/Time: 09.21.2018 08:07:13

DUT: Dipole 750 MHz; Type: D750V3; Serial: SN:1118

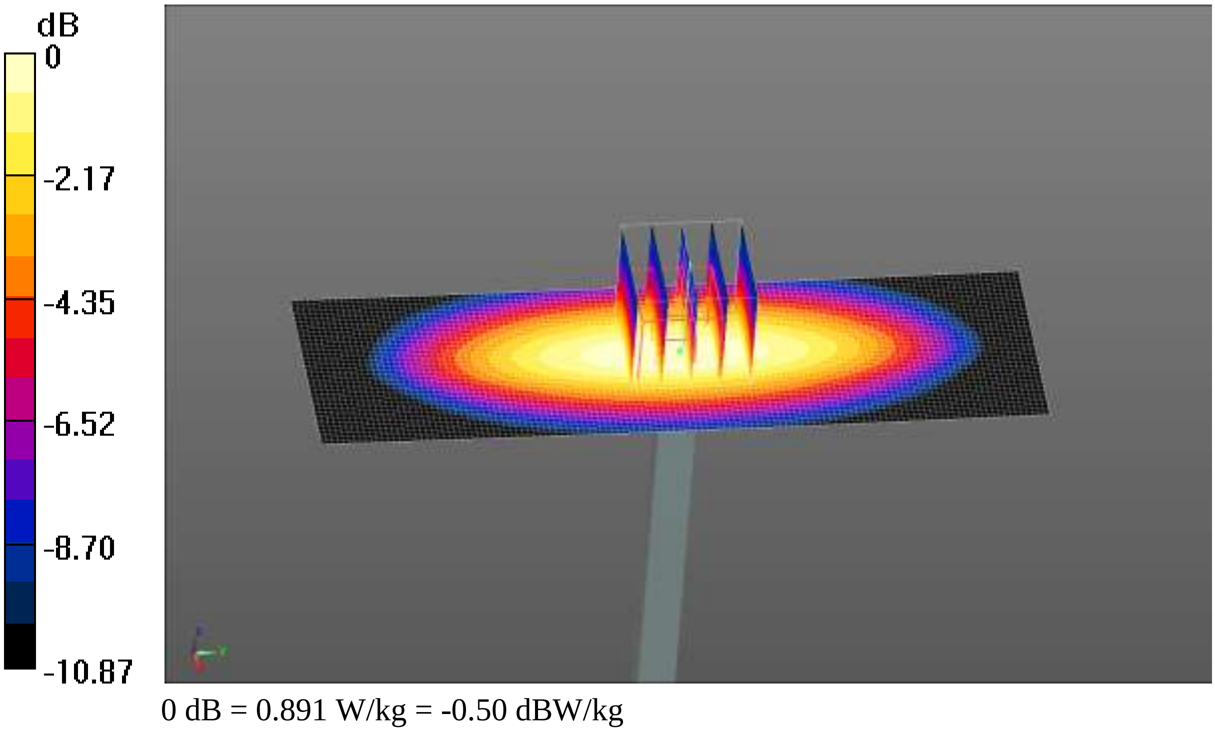
Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.956 S/m; ε_r = 56.162; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.23, 10.23, 10.23); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1208
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 750 MHz Body Tissue/d=15mm, Pin=80 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.61 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.703 W/kg; SAR(10 g) = 0.459 W/kg
Maximum value of SAR (measured) = 0.892 W/kg

System Performance Check at Frequency 750 MHz Body Tissue/d=15mm, Pin=80 mW, dist=2.0mm (EX-Probe)/Area Scan (41x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.891 W/kg



0 dB = 0.891 W/kg = -0.50 dBW/kg

Test Laboratory: CCIS Date/Time: 09.21.2018 08:30:47

DUT: Dipole 835 MHz; Type: D835V2; Serial: SN:4d154

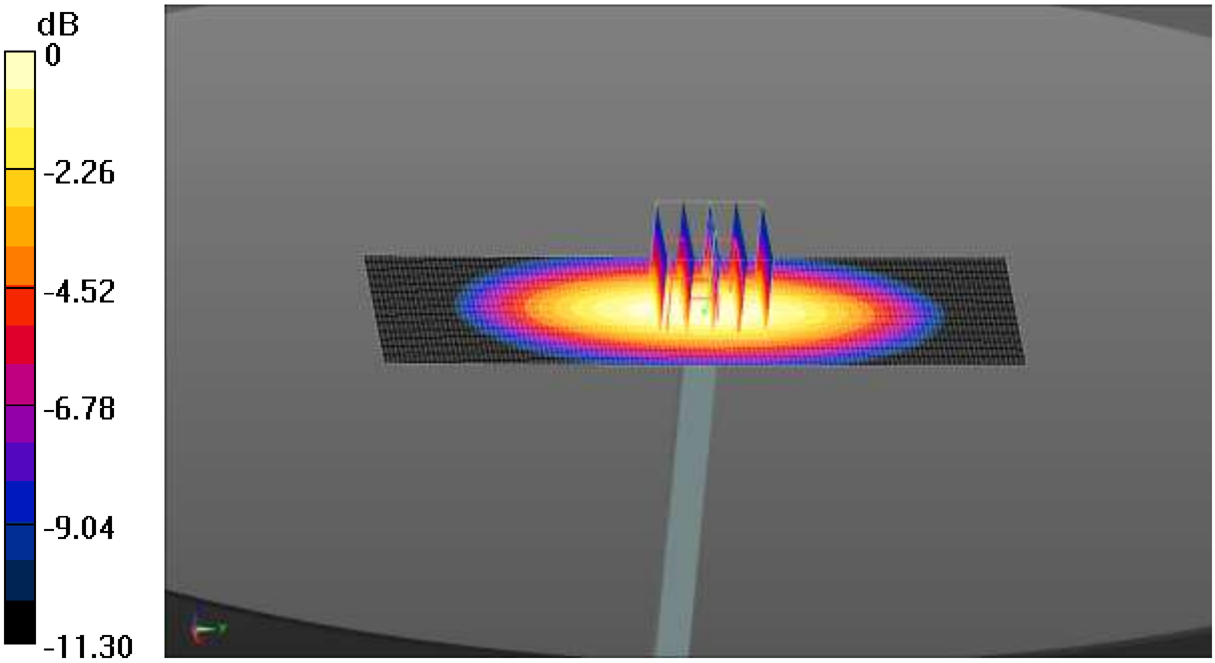
Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.985 S/m; ε_r = 55.401; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.86, 9.86, 9.86); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1208
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 835 MHz Body Tissue/d=15mm, Pin=80 mW, dist=2.0mm (EX-Probe)/Area Scan (41x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.02 W/kg

System Performance Check at Frequency 835 MHz Body Tissue/d=15mm, Pin=80 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 32.61 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.792 W/kg; SAR(10 g) = 0.512 W/kg
Maximum value of SAR (measured) = 0.996 W/kg



0 dB = 0.996 W/kg = -0.02 dBW/kg

Test Laboratory: CCIS Date/Time: 09.05.2018 08:32:51

DUT: Dipole 1800 MHz; Type: SID 1800; Serial: SN:09/15 DIP IG800-360

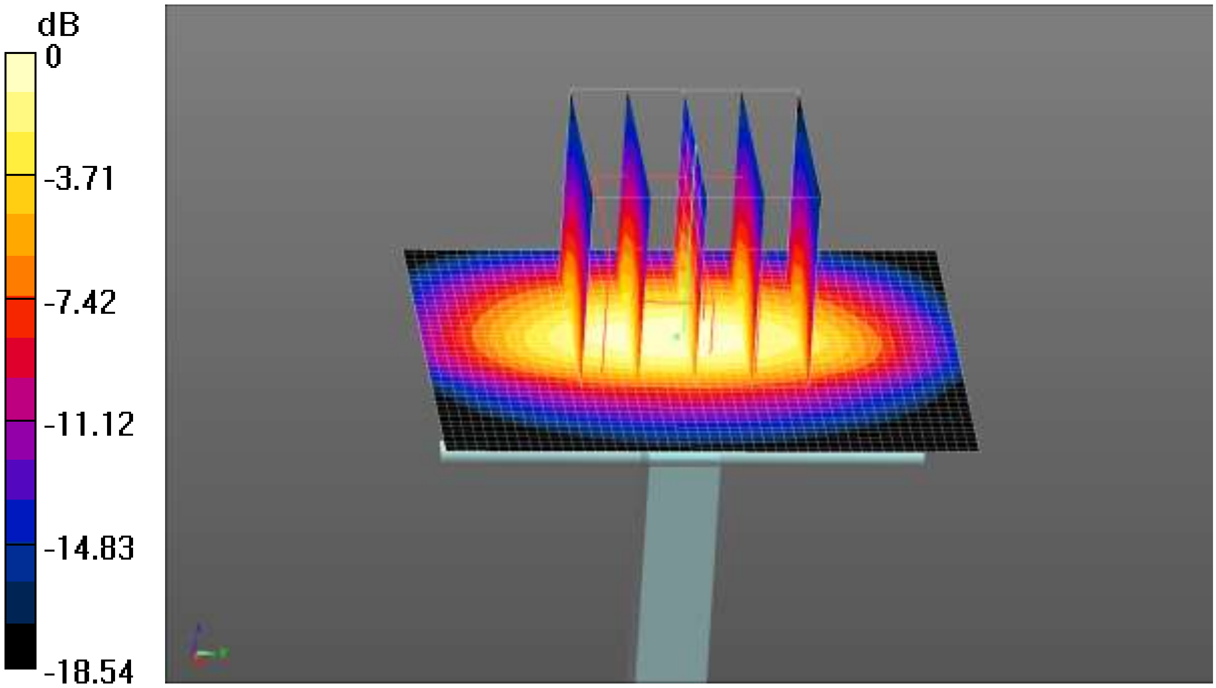
Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.512 S/m; ε_r = 52.319; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.02, 8.02, 8.02); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1208
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 1800MHz Body Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 37.06 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 2.95 W/kg
SAR(1 g) = 1.59 W/kg; SAR(10 g) = 0.818 W/kg
Maximum value of SAR (measured) = 2.42 W/kg

System Performance Check at Frequency 1800MHz Body Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Area Scan (41x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.35 W/kg



0 dB = 2.35 W/kg = 3.71 dBW/kg

Test Laboratory: CCIS Date/Time: 09.05.2018 07:59:37

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d175

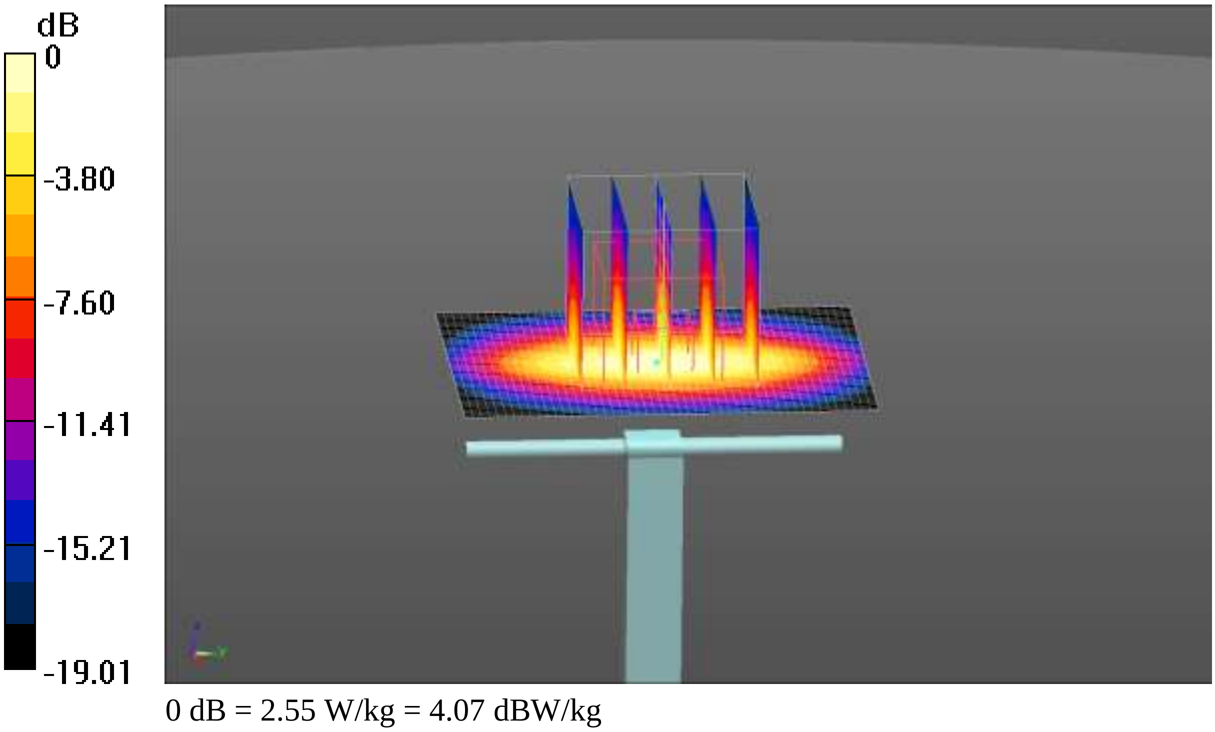
Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.543 S/m; ε_r = 51.608; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.72, 7.72, 7.72); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1208
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 1900MHz Body Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Area Scan (41x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.73 W/kg

System Performance Check at Frequency 1900MHz Body Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.86 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 2.96 W/kg
SAR(1 g) = 1.67 W/kg; SAR(10 g) = 0.839 W/kg
Maximum value of SAR (measured) = 2.55 W/kg



0 dB = 2.55 W/kg = 4.07 dBW/kg

Test Laboratory: CCIS Date/Time: 09.15.2018 08:42:03

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: SN:910

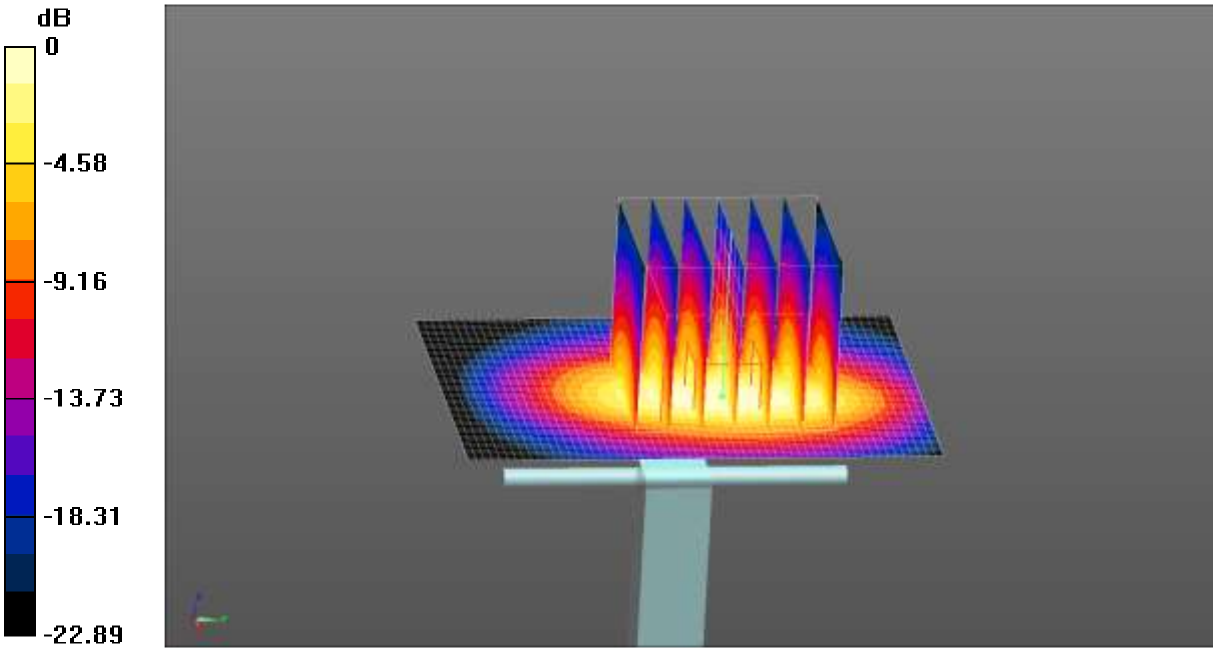
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.968 S/m; ε_r = 52.095; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.49, 7.49, 7.49); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1208
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 2450MHz Body Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 38.71 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 4.42 W/kg
SAR(1 g) = 2.18 W/kg; SAR(10 g) = 1 W/kg
Maximum value of SAR (measured) = 3.35 W/kg

System Performance Check at Frequency 2450MHz Body Tissue/d=10mm, Pin=40 mW, dist=2.0mm (EX-Probe)/Area Scan (51x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 3.53 W/kg



0 dB = 3.53 W/kg = 5.48 dBW/kg

Test Laboratory: CCIS Date/Time: 09.15.2018 08:06:25

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: SN:1114

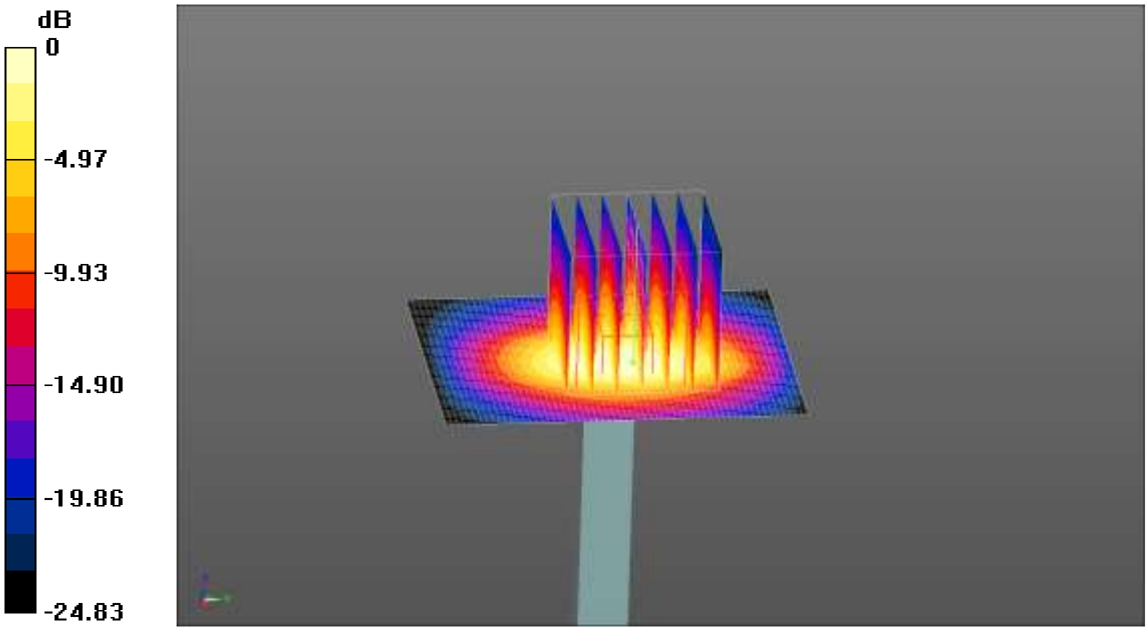
Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.231 S/m; ε_r = 51.016; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.12, 7.12, 7.12); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1208
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

System Performance Check at Frequency 2600MHz Body Tissue/d=10mm, Pin=40mW, dist=2.0mm(EX-Probe)/Area Scan (51x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 3.71 W/kg

System Performance Check at Frequency 2600MHz Body Tissue/d=10mm, Pin=40mW, dist=2.0mm(EX-Probe)/Zoom Scan(7X7X7) (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.08 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 4.73 W/kg
SAR(1 g) = 2.22 W/kg; SAR(10 g) = 0.981 W/kg
Maximum value of SAR (measured) = 3.43 W/kg



0 dB = 3.43 W/kg = 5.35 dBW/kg

Appendix D: Plots of SAR Test Data

Test Laboratory: CCIS Date/Time: 09.20.2018 09:26:40

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

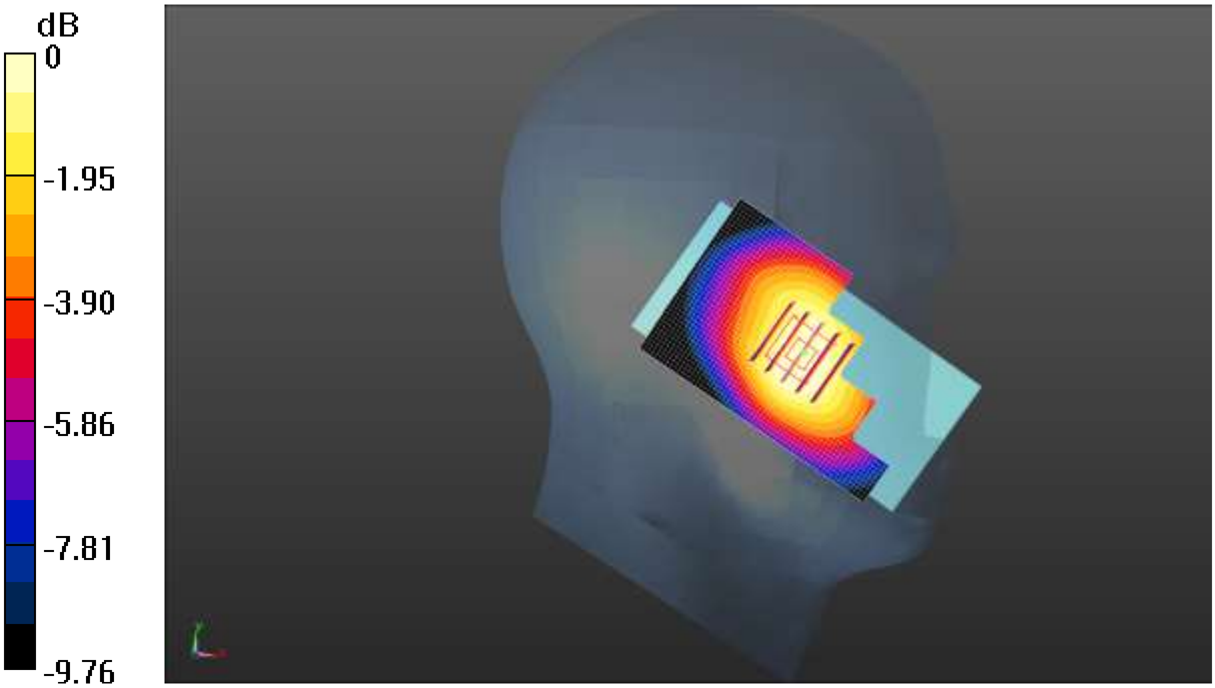
Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.30042
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.927 S/m; ε_r = 41.189; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.66, 9.66, 9.66); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

GSM 850 Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.817 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.630 W/kg
SAR(1 g) = 0.470 W/kg; SAR(10 g) = 0.348 W/kg
Maximum value of SAR (measured) = 0.569 W/kg

GSM 850 Left Cheek/Middle Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.568 W/kg



0 dB = 0.568 W/kg = -2.46 dBW/kg

Test Laboratory: CCIS　　　　　　　　　　　　　Date/Time: 09.02.2018 09:25:34

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

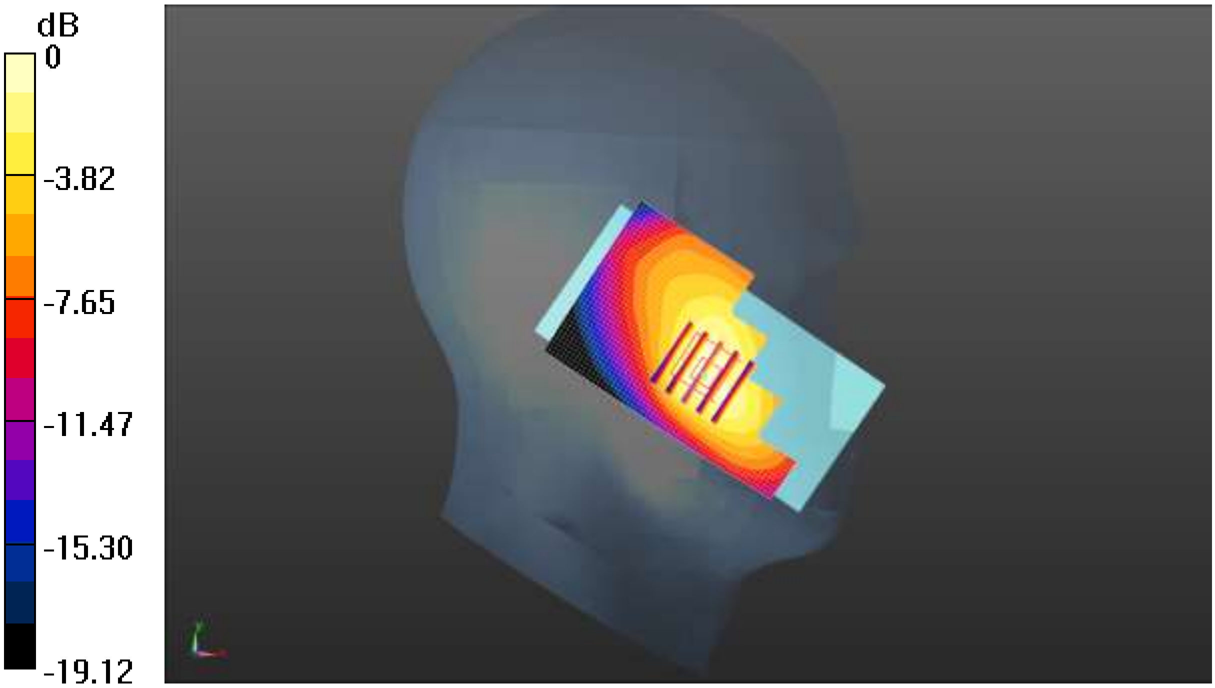
Communication System: UID 0, GSM (0); Frequency: 1909.8 MHz; Duty Cycle: 1:8.30042
Medium parameters used: f = 1910 MHz; σ = 1.435 S/m; ε_r = 39.204; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.03, 8.03, 8.03); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

GSM 1900 Left Cheek/High Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy1.500 mm
Maximum value of SAR (interpolated) = 0.470 W/kg

GSM 1900 Left Cheek/High Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.721 V/m; Power Drift = -0.34 dB
Peak SAR (extrapolated) = 0.585 W/kg
SAR(1 g) = 0.350 W/kg; SAR(10 g) = 0.208 W/kg
Maximum value of SAR (measured) = 0.499 W/kg



0 dB = 0.499 W/kg = -3.02 dBW/kg

Test Laboratory: CCIS Date/Time: 09.20.2018 09:42:00

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

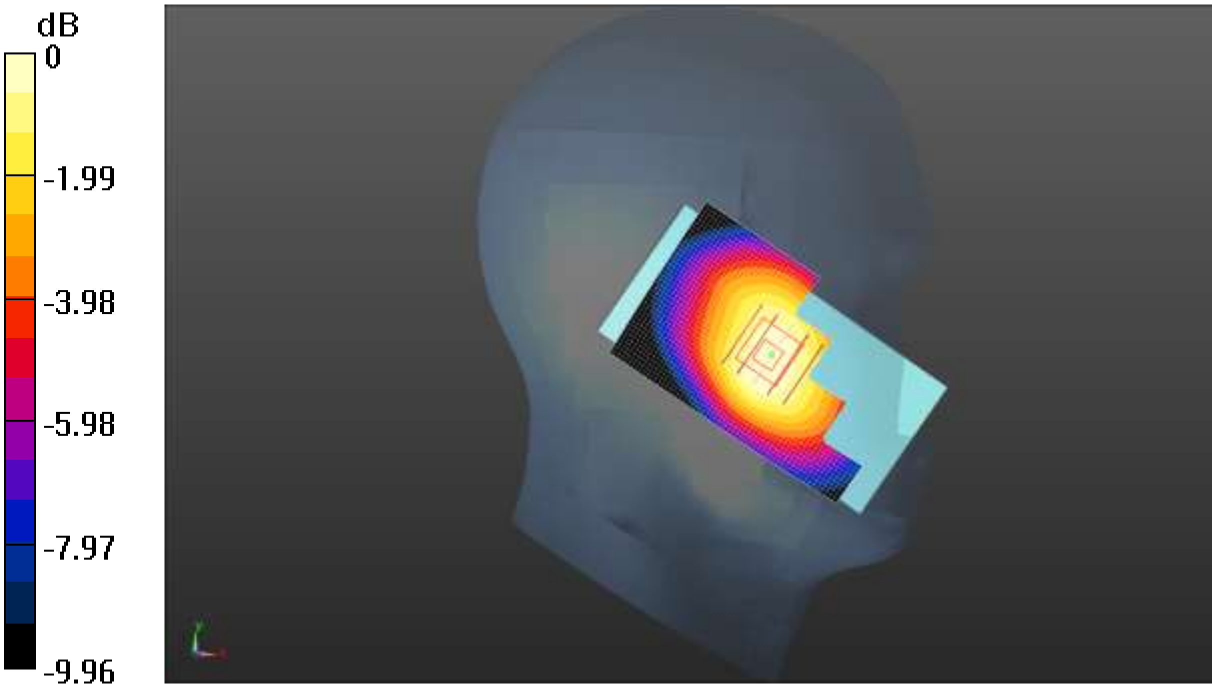
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.927 S/m; ε_r = 41.189; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.66, 9.66, 9.66); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

WCDMA 850 Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.755 V/m; Power Drift = -0.21 dB
Peak SAR (extrapolated) = 0.778 W/kg
SAR(1 g) = 0.580 W/kg; SAR(10 g) = 0.427 W/kg
Maximum value of SAR (measured) = 0.706 W/kg

WCDMA 850 Left Cheek/Middle Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.712 W/kg



0 dB = 0.712 W/kg = -1.48 dBW/kg

Test Laboratory: CCIS Date/Time: 09.02.2018 10:43:11

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

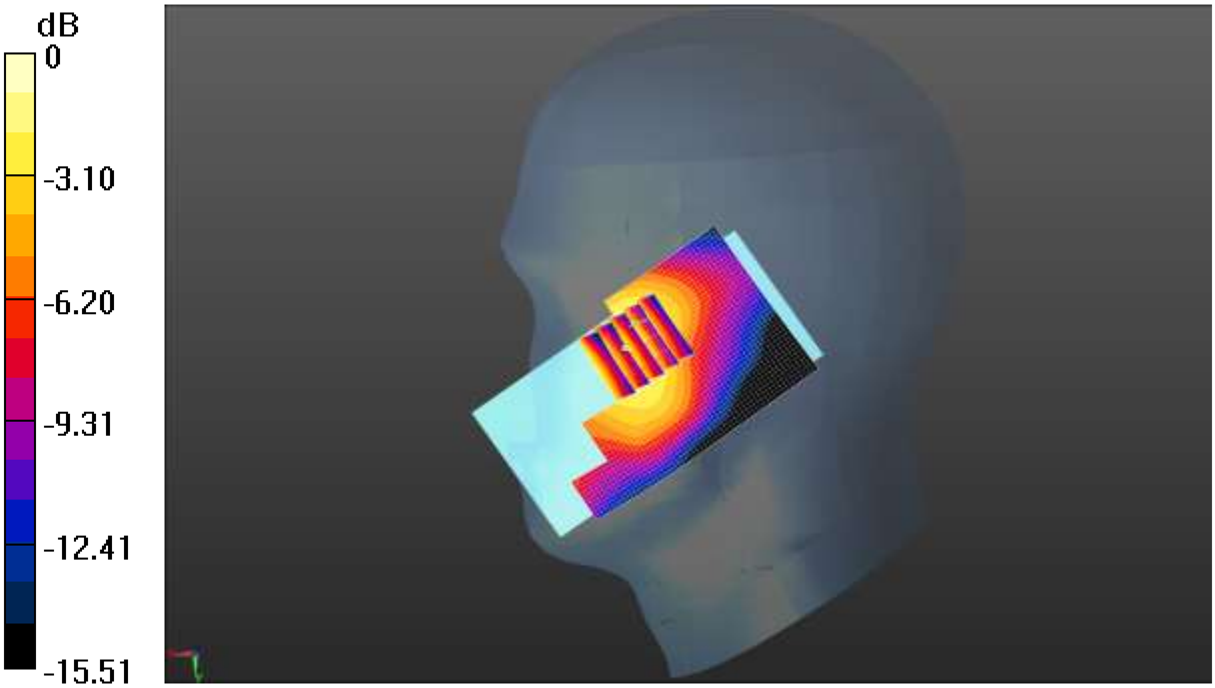
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.6 MHz; σ = 1.364 S/m; ε_r = 40.928; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.3, 8.3, 8.3); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

WCDMA 1700 Right Cheek/Middle Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.408 W/kg

WCDMA 1700 Right Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.342 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.466 W/kg
SAR(1 g) = 0.295 W/kg; SAR(10 g) = 0.184 W/kg
Maximum value of SAR (measured) = 0.383 W/kg



0 dB = 0.383 W/kg = -4.17 dBW/kg

Test Laboratory: CCIS Date/Time: 09.02.2018 10:31:53

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

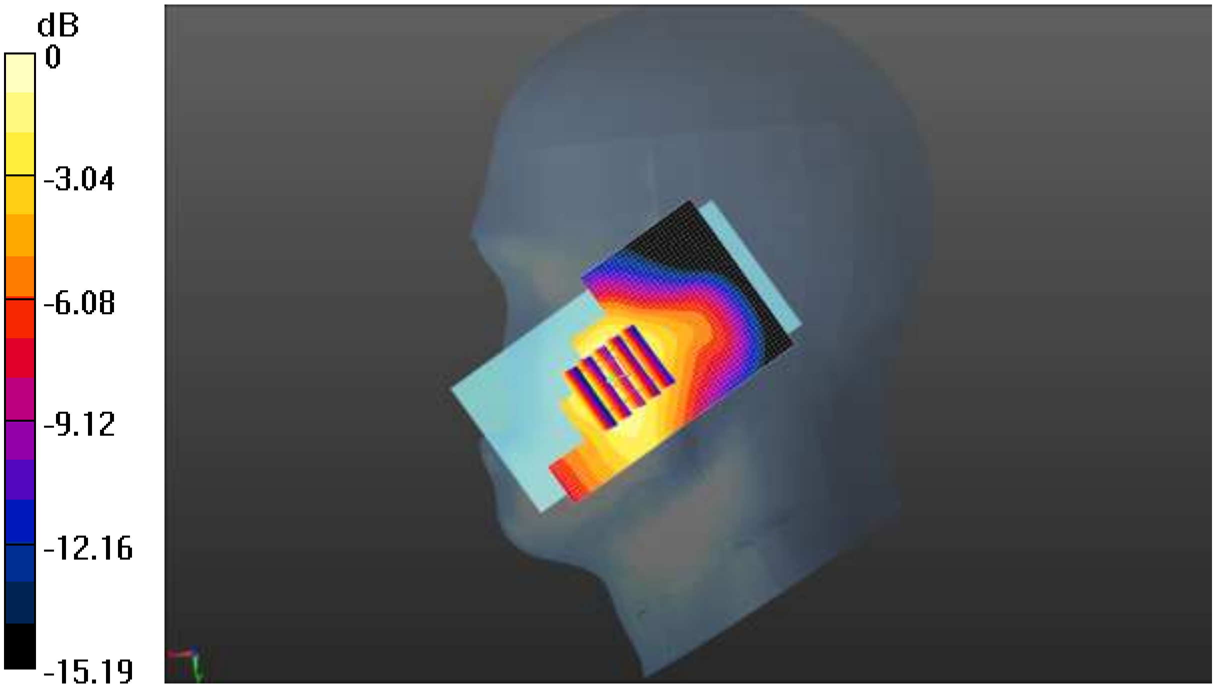
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.419 S/m; ε_r = 39.815; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.03, 8.03, 8.03); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

WCDMA 1900 Right Cheek/Low Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.811 W/kg

WCDMA 1900 Right Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.147 V/m; Power Drift = 0.38 dB
Peak SAR (extrapolated) = 0.943 W/kg
SAR(1 g) = 0.600 W/kg; SAR(10 g) = 0.372 W/kg
Maximum value of SAR (measured) = 0.792 W/kg



0 dB = 0.792 W/kg = -1.01 dBW/kg

Test Laboratory: CCIS Date/Time: 09.20.2018 11:32:43

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

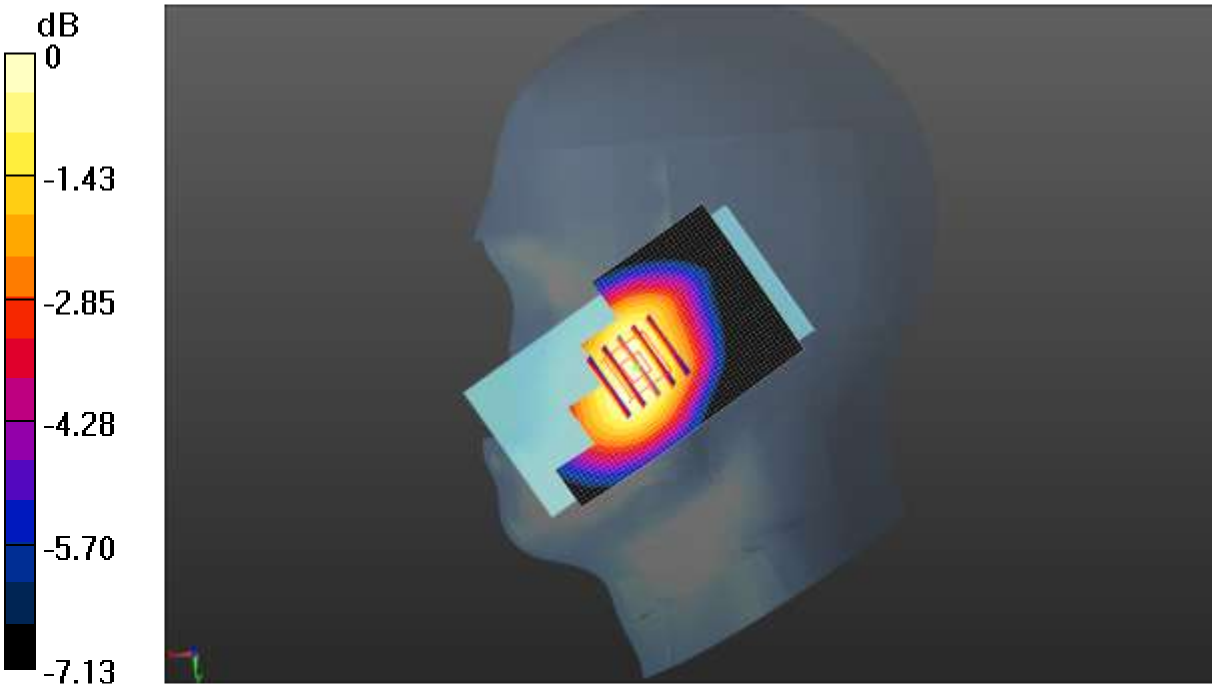
Communication System: UID 0, CDMA2000 1xRTT (0); Frequency: 824.7 MHz; Duty Cycle: 1:1
Medium parameters used: f = 825 MHz; σ = 0.921 S/m; ε_r = 41.389; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.66, 9.66, 9.66); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CDMA BC 0 Right Cheek/Low Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.750 W/kg

CDMA BC 0 Right Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.055 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.822 W/kg
SAR(1 g) = 0.669 W/kg; SAR(10 g) = 0.536 W/kg
Maximum value of SAR (measured) = 0.773 W/kg



0 dB = 0.773 W/kg = -1.12 dBW/kg

Test Laboratory: CCIS Date/Time: 09.02.2018 13:24:17

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

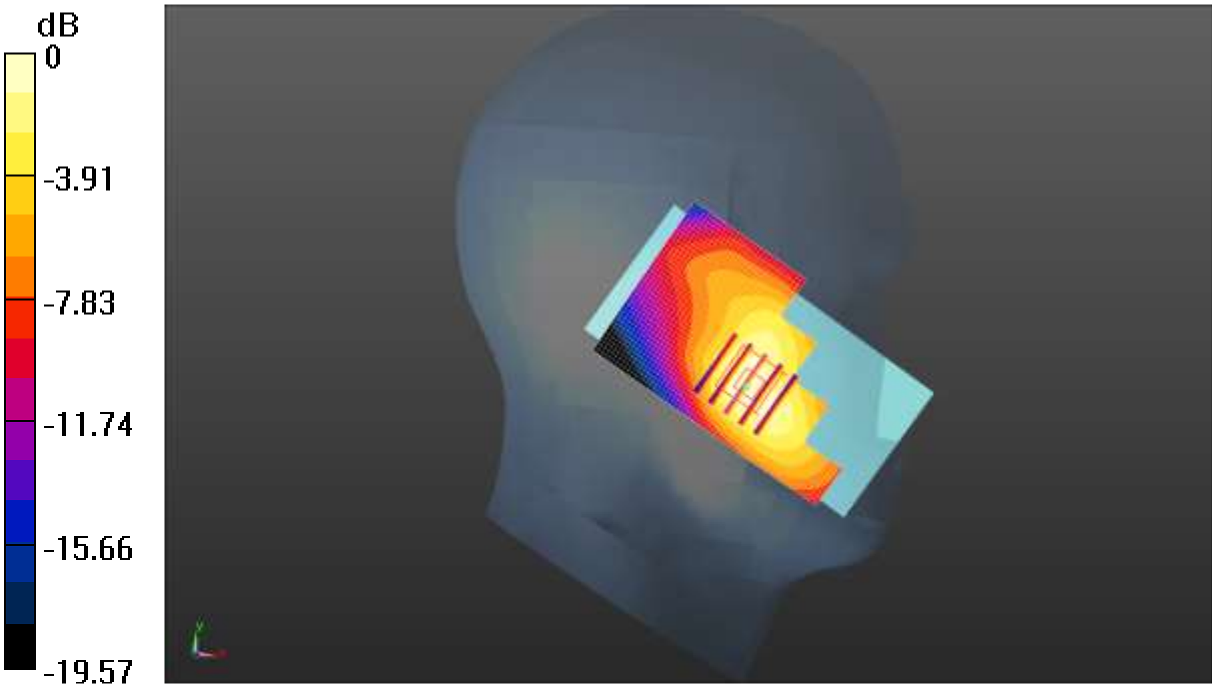
Communication System: UID 0, CDMA2000 1xRTT (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.425 S/m; ε_r = 39.507; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.03, 8.03, 8.03); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CDMA BC 1 Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.852 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.59 W/kg
SAR(1 g) = 0.981 W/kg; SAR(10 g) = 0.591 W/kg
Maximum value of SAR (measured) = 1.37 W/kg

CDMA BC 1 Left Cheek/Middle Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.48 W/kg



0 dB = 1.48 W/kg = 1.70 dBW/kg

Test Laboratory: CCIS Date/Time: 09.20.2018 12:32:25

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

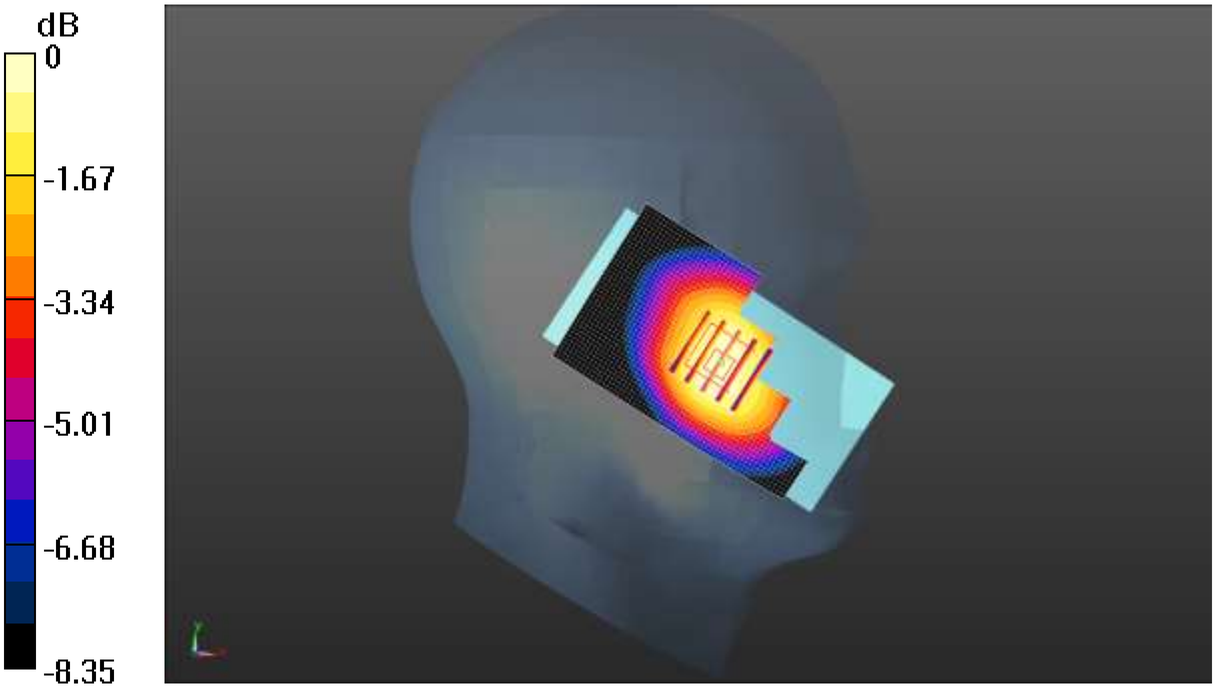
Communication System: UID 0, CDMA2000 1xRTT (0); Frequency: 817.9 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 817.9 MHz; σ = 0.911 S/m; ε_r = 41.443; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.66, 9.66, 9.66); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

CDMA BC 10 Left Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.058 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.904 W/kg
SAR(1 g) = 0.708 W/kg; SAR(10 g) = 0.560 W/kg
Maximum value of SAR (measured) = 0.829 W/kg

CDMA BC 10 Left Cheek/Low Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.815 W/kg



0 dB = 0.815 W/kg = -0.89 dBW/kg

Test Laboratory: CCIS Date/Time: 09.02.2018 15:14:16

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

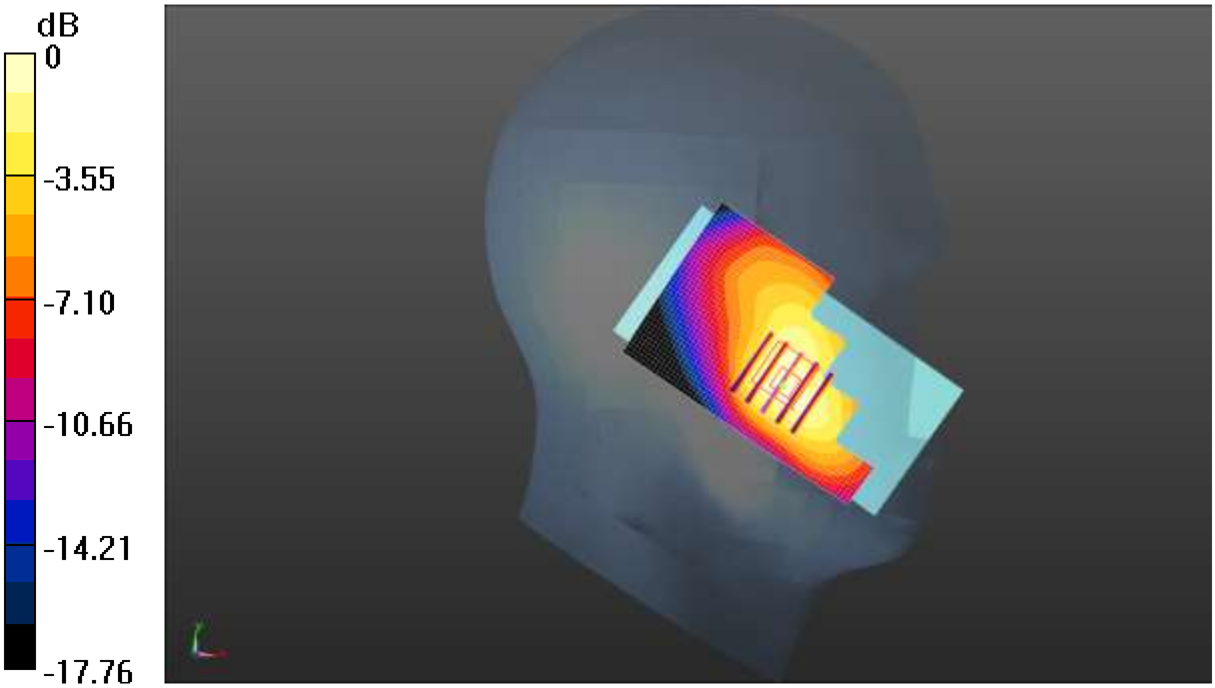
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1860 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.419 S/m; ε_r = 39.824; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.03, 8.03, 8.03); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 25 1RB(20MHz) Left Cheek/Low Channel/Area Scan (41x61x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.912 W/kg

LTE Band 25 1RB(20MHz) Left Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.953 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.636 W/kg; SAR(10 g) = 0.383 W/kg
Maximum value of SAR (measured) = 0.905 W/kg



0 dB = 0.905 W/kg = -0.43 dBW/kg

Test Laboratory: CCIS Date/Time: 09.02.2018 17:13:52

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

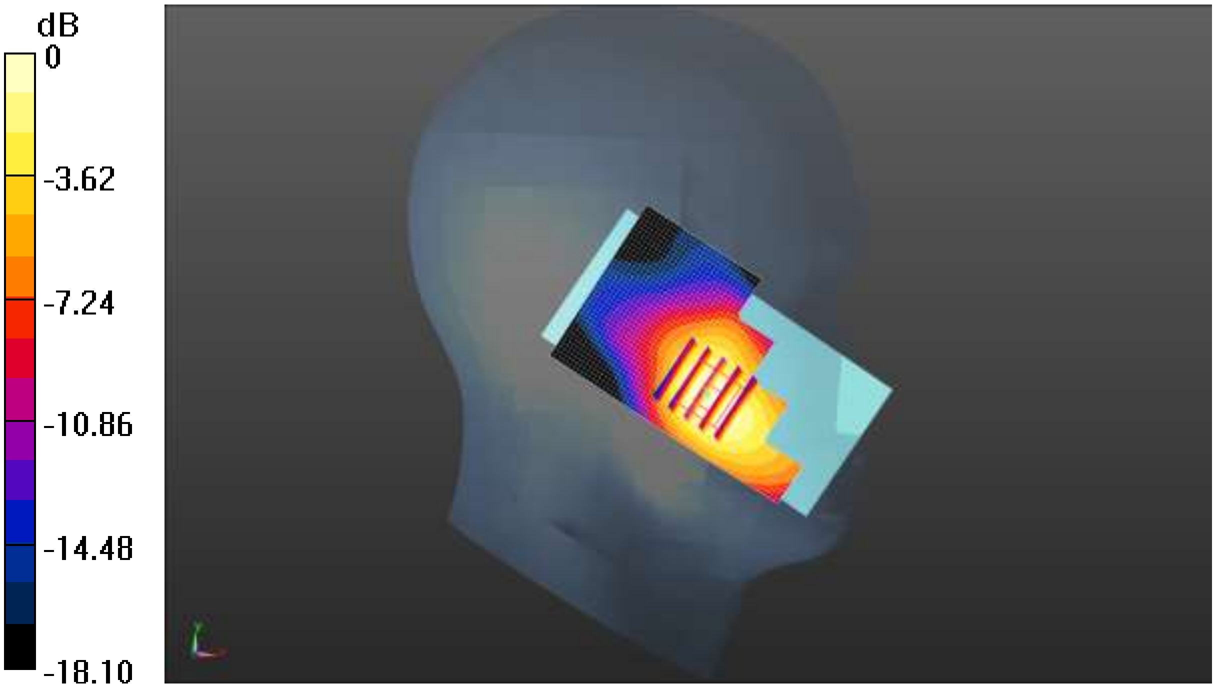
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 1732.5 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 1732.5 MHz; σ = 1.364 S/m; ε_r = 40.928; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.3, 8.3, 8.3); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 4 1RB(20MHz) Left Cheek/Middle Channel/Area Scan (41x61x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.296 W/kg

LTE Band 4 1RB(20MHz) Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.742 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.349 W/kg
SAR(1 g) = 0.210 W/kg; SAR(10 g) = 0.125 W/kg
Maximum value of SAR (measured) = 0.290 W/kg



0 dB = 0.290 W/kg = -5.38 dBW/kg

Test Laboratory: CCIS Date/Time: 08.23.2018 13:20:10

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

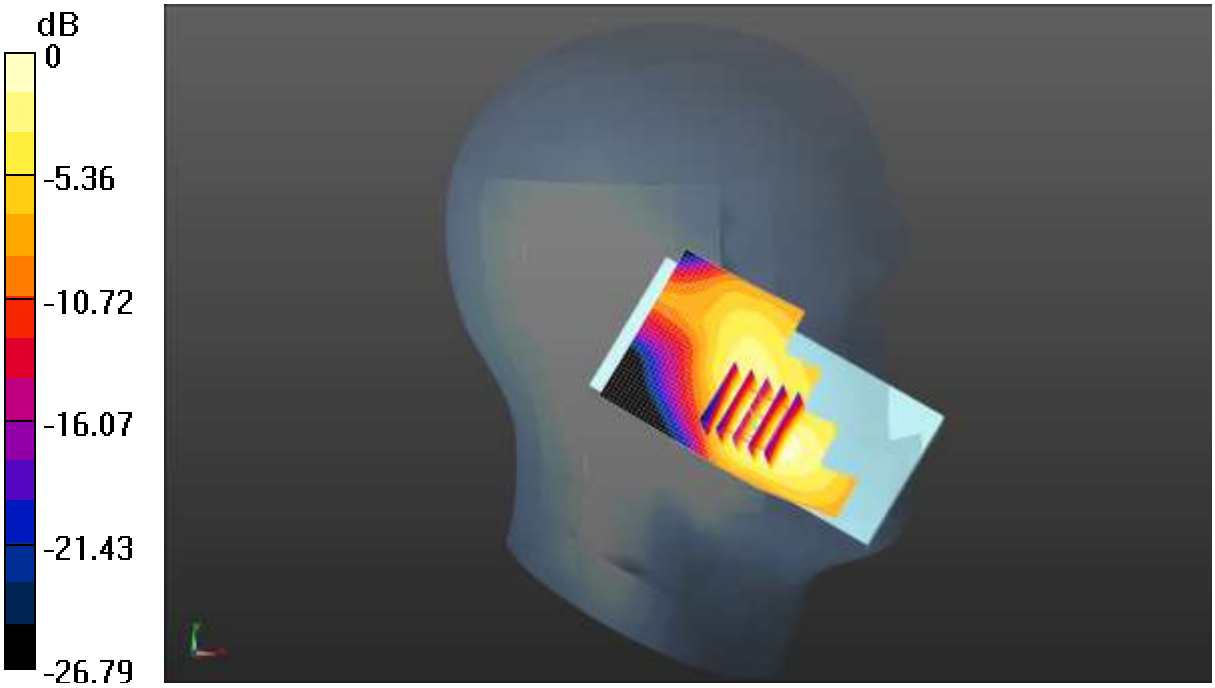
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 2560 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2560 MHz; σ = 1.962 S/m; ε_r = 37.938; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.27, 7.27, 7.27); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 7 1RB(20MHz) Left Cheek/High Channel/Area Scan (41x61x1):
Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.598 W/kg

LTE Band 7 1RB(20MHz) Left Cheek/High Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.285 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.658 W/kg
SAR(1 g) = 0.348 W/kg; SAR(10 g) = 0.185 W/kg
Maximum value of SAR (measured) = 0.529 W/kg



0 dB = 0.529 W/kg = -2.77 dBW/kg

Test Laboratory: CCIS Date/Time: 09.20.2018 15:02:58

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

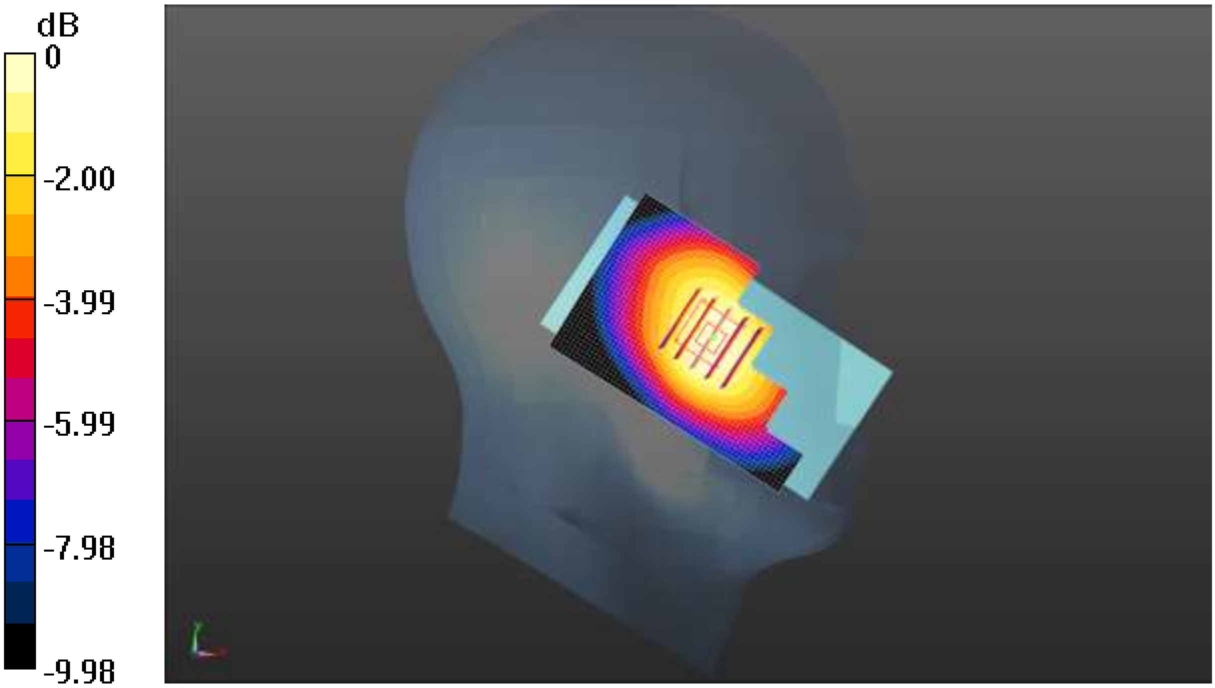
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 822.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 822.5 MHz; σ = 0.921 S/m; ε_r = 41.127; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.66, 9.66, 9.66); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 26 1RB(15MHz) Left Cheek/Low Channel/Area Scan (41x61x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.265 W/kg

LTE Band 26 1RB(15MHz) Left Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.090 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.288 W/kg
SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.159 W/kg
Maximum value of SAR (measured) = 0.261 W/kg



0 dB = 0.261 W/kg = -5.83 dBW/kg

Test Laboratory: CCIS Date/Time: 09.20.2018 16:19:57

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

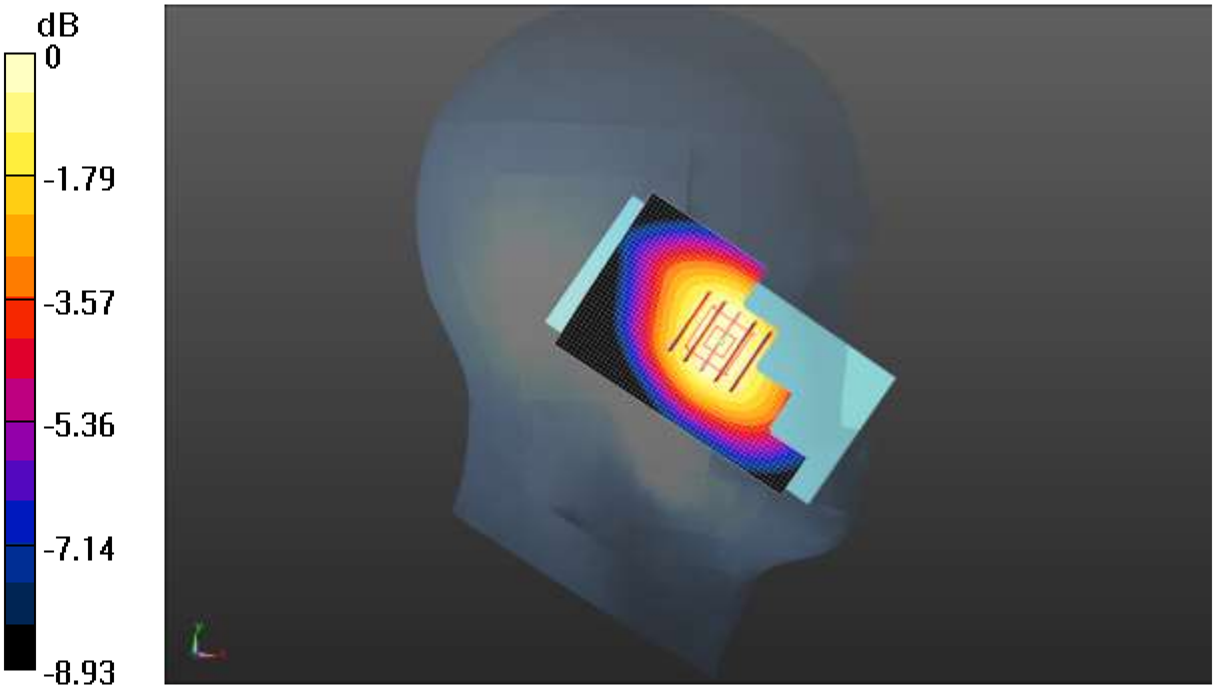
Communication System: UID 0, LTE-Fdd(USA) 1RB QPSK (0); Frequency: 704 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 704 MHz; σ = 0.839 S/m; ε_r = 42.287; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.06, 10.06, 10.06); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 12 1RB(10MHz) Left Cheek/Low Channel/Area Scan (41x61x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.266 W/kg

LTE Band 12 1RB(10MHz) Left Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.534 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.287 W/kg
SAR(1 g) = 0.225 W/kg; SAR(10 g) = 0.172 W/kg
Maximum value of SAR (measured) = 0.266 W/kg



0 dB = 0.266 W/kg = -5.75 dBW/kg

Test Laboratory: CCIS Date/Time: 08.23.2018 16:34:17

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

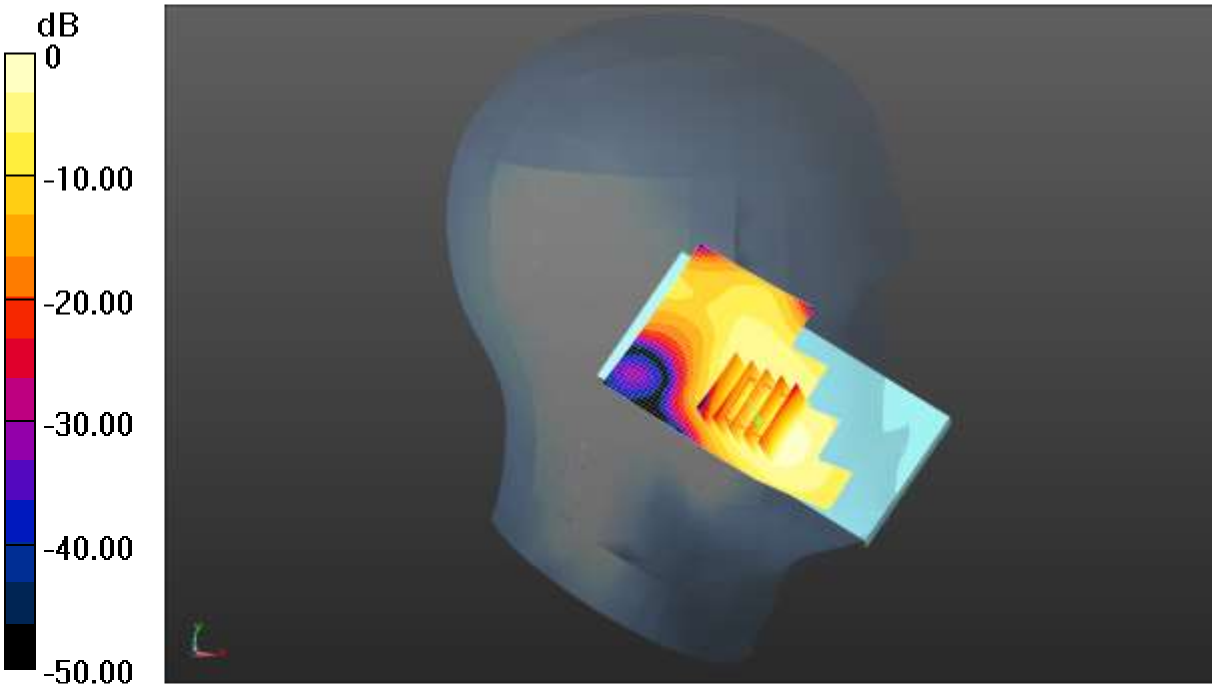
Communication System: UID 0, LTE-TDD(USA) 20MHz 1RB QPSK (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956
Medium parameters used: f = 2593 MHz; σ = 2.031 S/m; ε_r = 37.578; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.27, 7.27, 7.27); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 41 1RB(20MHz) Left Cheek/Middle Channel/Area Scan (41x61x1):
Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.436 W/kg

LTE Band 41 1RB(20MHz) Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.596 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.499 W/kg
SAR(1 g) = 0.250 W/kg; SAR(10 g) = 0.125 W/kg
Maximum value of SAR (measured) = 0.399 W/kg



0 dB = 0.399 W/kg = -3.99 dBW/kg

Test Laboratory: CCIS Date/Time: 09.02.2018 16:13:12

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

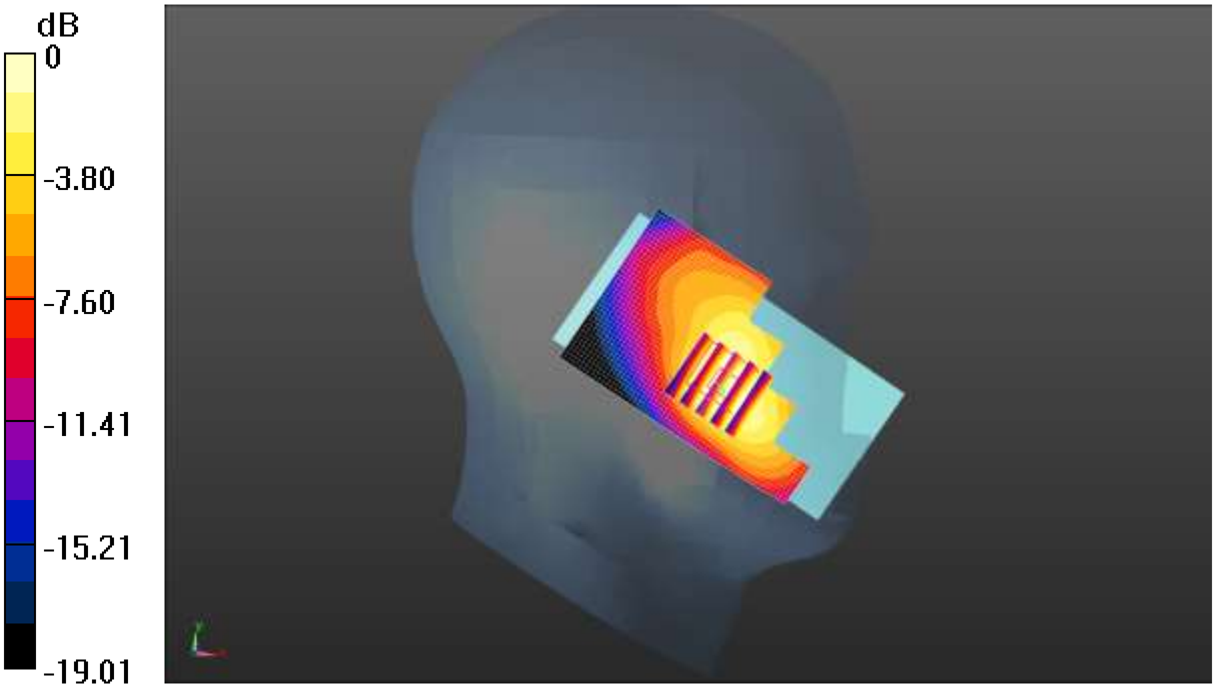
Communication System: UID 0, LTE-FDD(USA) 20MHz 50%RB QPSK (0); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1905 MHz; σ = 1.436 S/m; ε_r = 39.216; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.03, 8.03, 8.03); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 25 50%RB(20MHz) Left Cheek/High Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.851 W/kg

LTE Band 25 50%RB(20MHz) Left Cheek/High Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.928 V/m; Power Drift = -0.27 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.603 W/kg; SAR(10 g) = 0.355 W/kg
Maximum value of SAR (measured) = 0.875 W/kg



0 dB = 0.875 W/kg = -0.58 dBW/kg

Test Laboratory: CCIS Date/Time: 09.02.2018 19:01:58

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

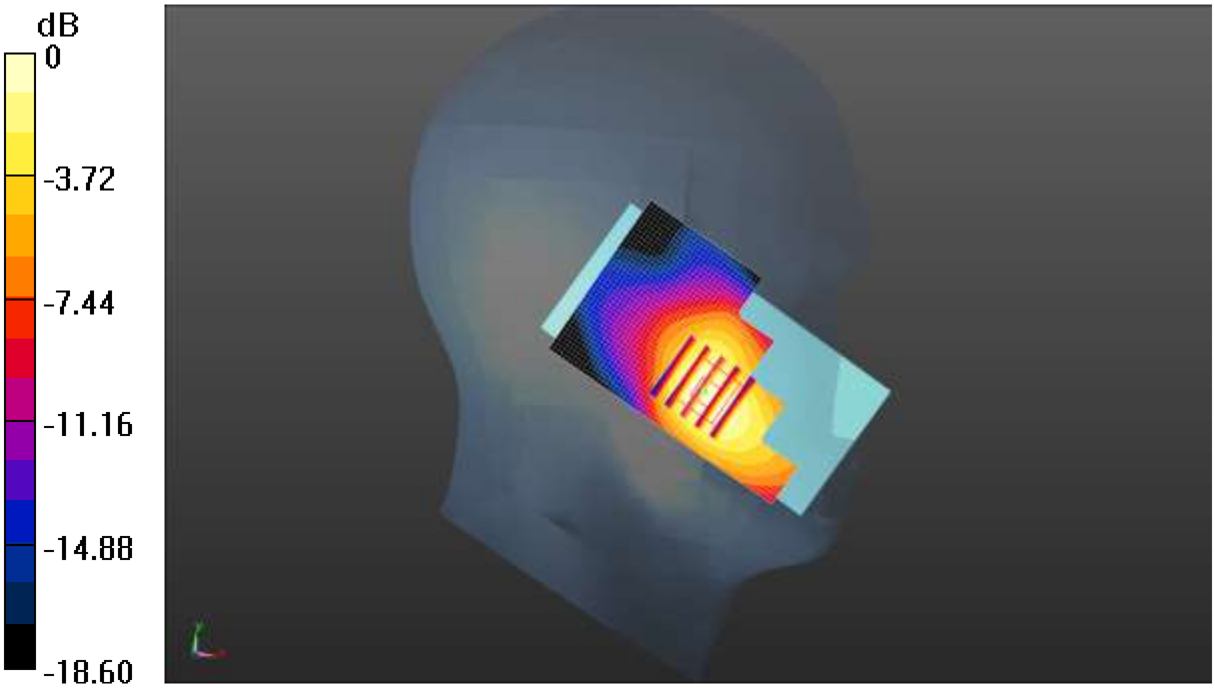
Communication System: UID 0, LTE-FDD(USA) 20MHz 50%RB QPSK (0); Frequency: 1720 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.358 S/m; ε_r = 41.105; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(8.3, 8.3, 8.3); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 4 50%RB(20MHz) Left Cheek/Low Channel/Area Scan (41x61x1):
Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.335 W/kg

LTE Band 4 50%RB(20MHz) Left Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.936 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.401 W/kg
SAR(1 g) = 0.241 W/kg; SAR(10 g) = 0.144 W/kg
Maximum value of SAR (measured) = 0.332 W/kg



0 dB = 0.332 W/kg = -4.79 dBW/kg

Test Laboratory: CCIS   Date/Time: 08.23.2018 15:06:59

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

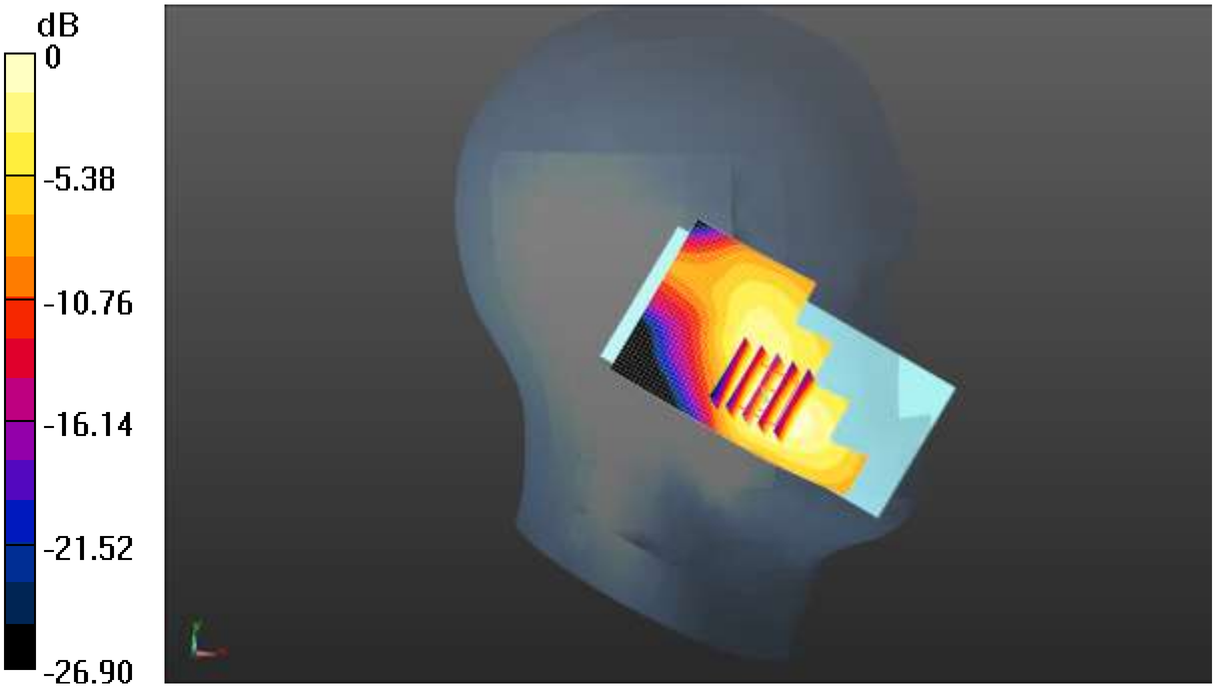
Communication System: UID 0, LTE-FDD(USA) 20MHz 50%RB QPSK (0); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.934 S/m; ε_r = 38.288; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.27, 7.27, 7.27); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 7 50%RB(20MHz) Left Cheek/Low Channel/Area Scan (41x61x1):
Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.606 W/kg

LTE Band 7 50%RB(20MHz) Left Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.825 V/m; Power Drift = -0.38 dB
Peak SAR (extrapolated) = 0.674 W/kg
SAR(1 g) = 0.356 W/kg; SAR(10 g) = 0.190 W/kg
Maximum value of SAR (measured) = 0.537 W/kg



0 dB = 0.537 W/kg = -2.70 dBW/kg

Test Laboratory: CCIS Date/Time: 09.20.2018 15:16:42

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

Communication System: UID 0, LTE-FDD (USA) (15MHz) 50%RB QPSK (0); Frequency: 822.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 822.5 MHz; σ = 0.921 S/m; ε_r = 41.127; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

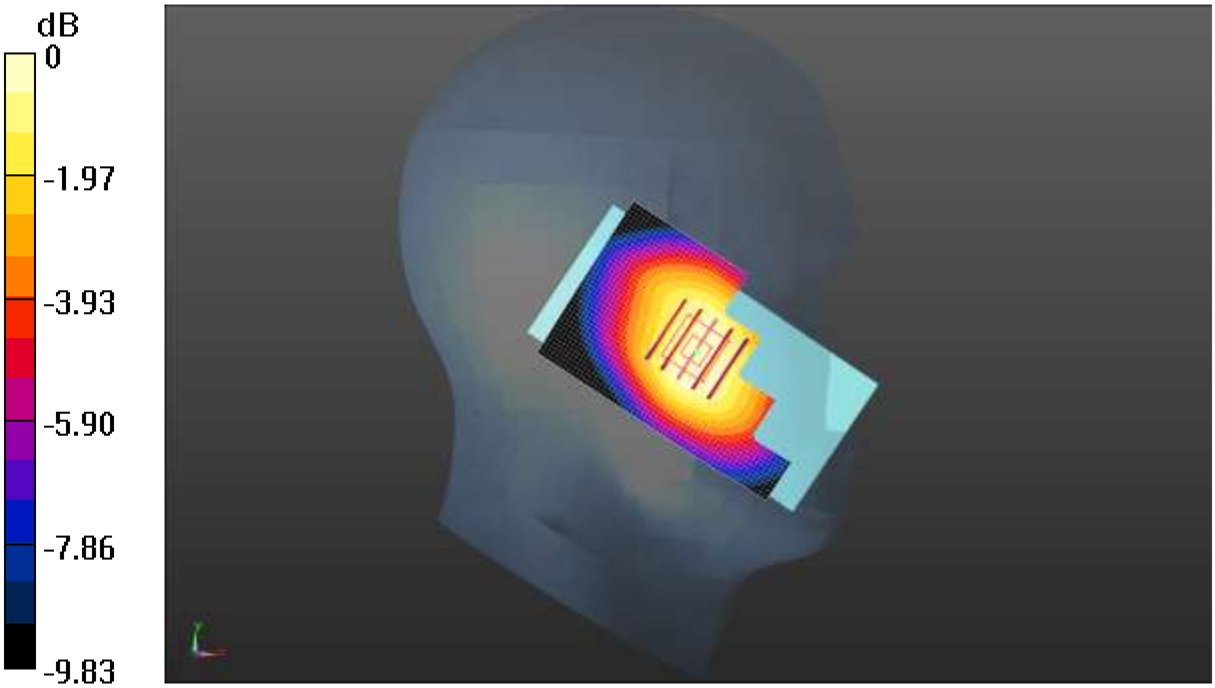
- Probe: EX3DV4 - SN3924; ConvF(9.66, 9.66, 9.66); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 26 50%RB(15MHz) Left Cheek/Low Channel/Area Scan (41x61x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.260 W/kg

LTE Band 26 50%RB(15MHz) Left Cheek/Low Channel/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.189 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.281 W/kg
SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.158 W/kg
Maximum value of SAR (measured) = 0.257 W/kg



0 dB = 0.257 W/kg = -5.90 dBW/kg

Test Laboratory: CCIS Date/Time: 09.20.2018 18:08:38

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

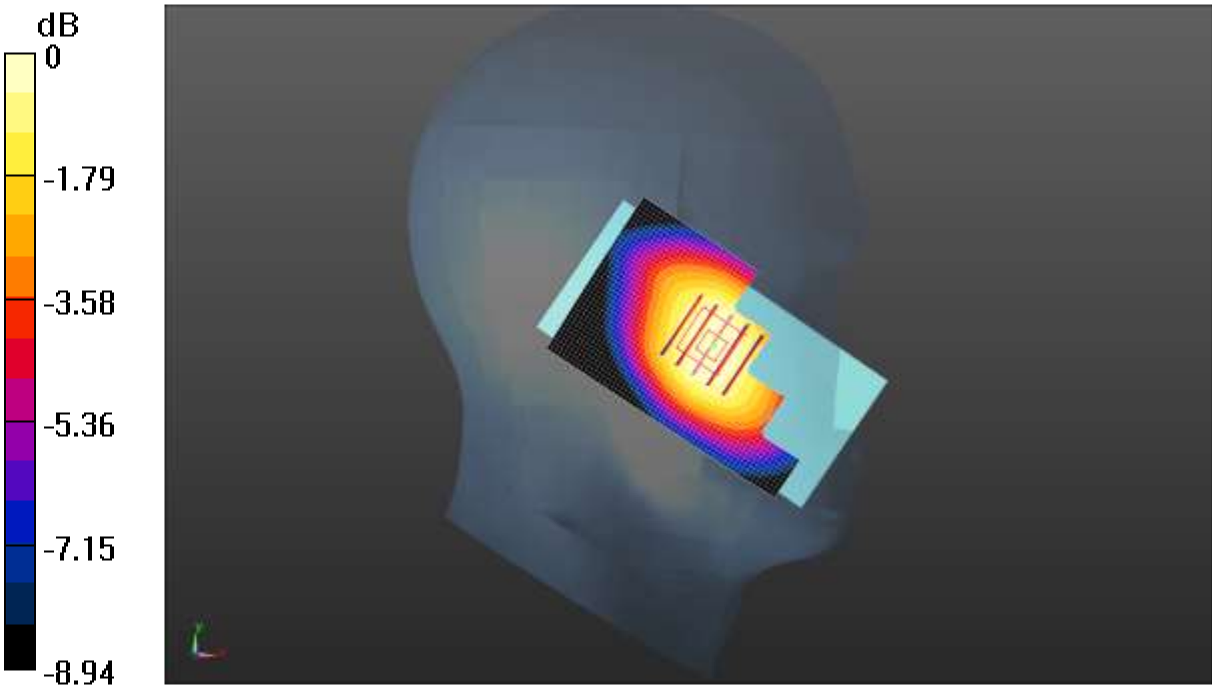
Communication System: UID 0, LTE-FDD (USA) 10MHz 50%RB QPSK (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.839 S/m; ε_r = 42.333; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(10.06, 10.06, 10.06); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 12 50%RB(10MHz) Left Cheek/Middle Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.239 W/kg

LTE Band 12 50%RB(10MHz) Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.709 V/m; Power Drift = -0.26 dB
Peak SAR (extrapolated) = 0.257 W/kg
SAR(1 g) = 0.200 W/kg; SAR(10 g) = 0.153 W/kg
Maximum value of SAR (measured) = 0.238 W/kg



0 dB = 0.238 W/kg = -6.23 dBW/kg

Test Laboratory: CCIS Date/Time: 08.23.2018 18:47:13

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

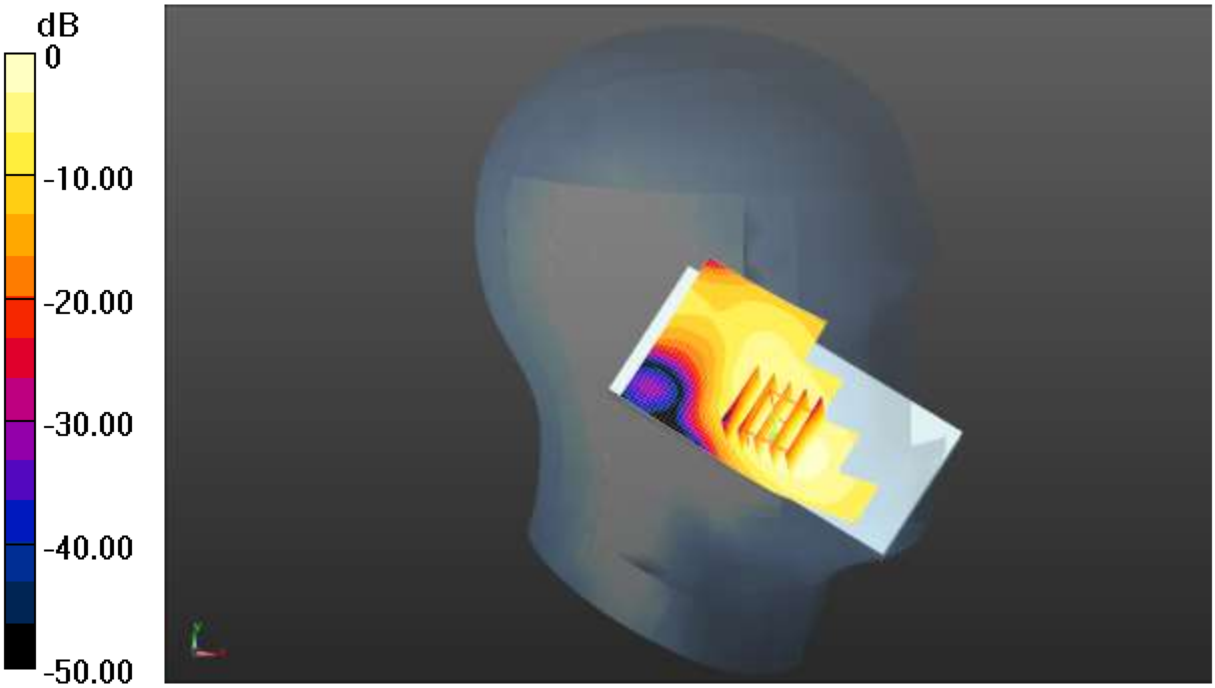
Communication System: UID 0, LTE-TDD(USA) 20MHz 50%RB QPSK (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59956
Medium parameters used: f = 2593 MHz; σ = 2.031 S/m; ε_r = 37.578; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.27, 7.27, 7.27); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

LTE Band 41 50%RB(20MHz) Left Cheek/Middle Channel/Area Scan (41x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.455 W/kg

LTE Band 41 50%RB(20MHz) Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5, dy=5mm, dz=5mm
Reference Value = 2.990 V/m; Power Drift = 0.24 dB
Peak SAR (extrapolated) = 0.521 W/kg
SAR(1 g) = 0.261 W/kg; SAR(10 g) = 0.130 W/kg
Maximum value of SAR (measured) = 0.417 W/kg



0 dB = 0.417 W/kg = -3.80 dBW/kg

Test Laboratory: CCIS   Date/Time: 08.23.2018 09:28:49

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

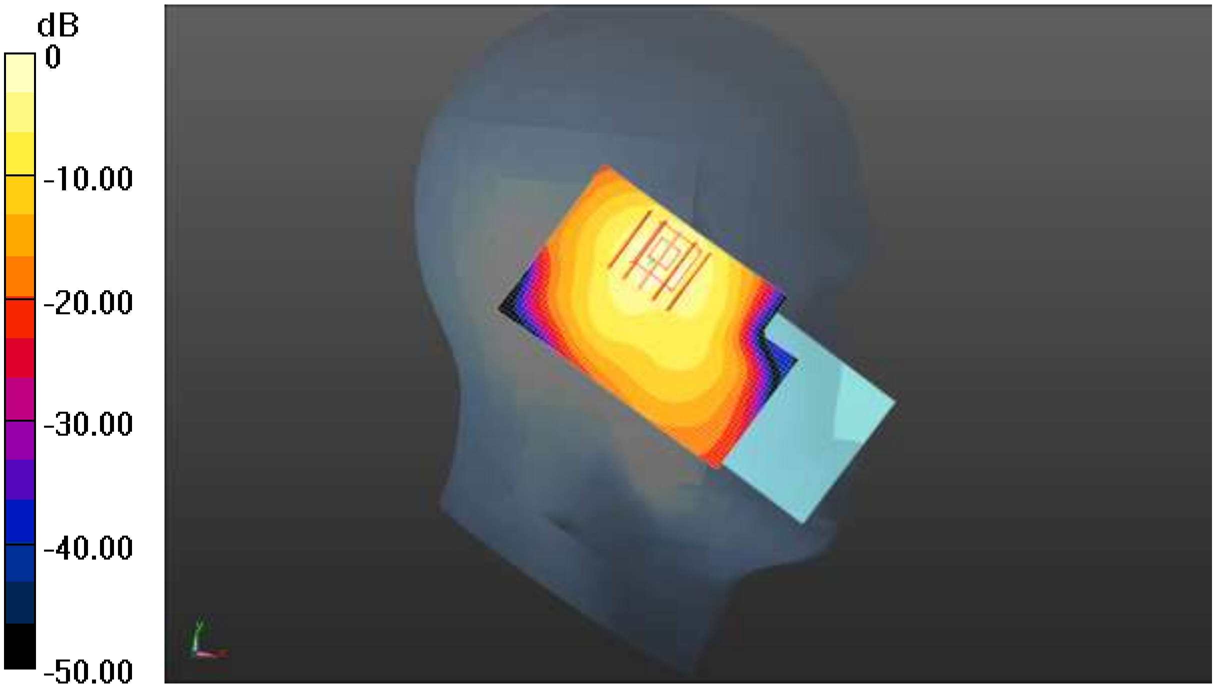
Communication System: UID 0, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps) (0);
Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.816 S/m; ε_r = 38.973; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(7.51, 7.51, 7.51); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: SAM 5.0; Type: QD000P40CD; Serial: TP:1765
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

WIFI Left Cheek/Middle Channel/Area Scan (41x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.762 W/kg

WIFI Left Cheek/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.02 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.425 W/kg; SAR(10 g) = 0.181 W/kg
Maximum value of SAR (measured) = 0.742 W/kg



0 dB = 0.742 W/kg = -1.30 dBW/kg

Test Laboratory: CCIS Date/Time: 09.21.2018 09:13:52

DUT: LTE Smart phone; Type: A6L-C; Serial: 1#

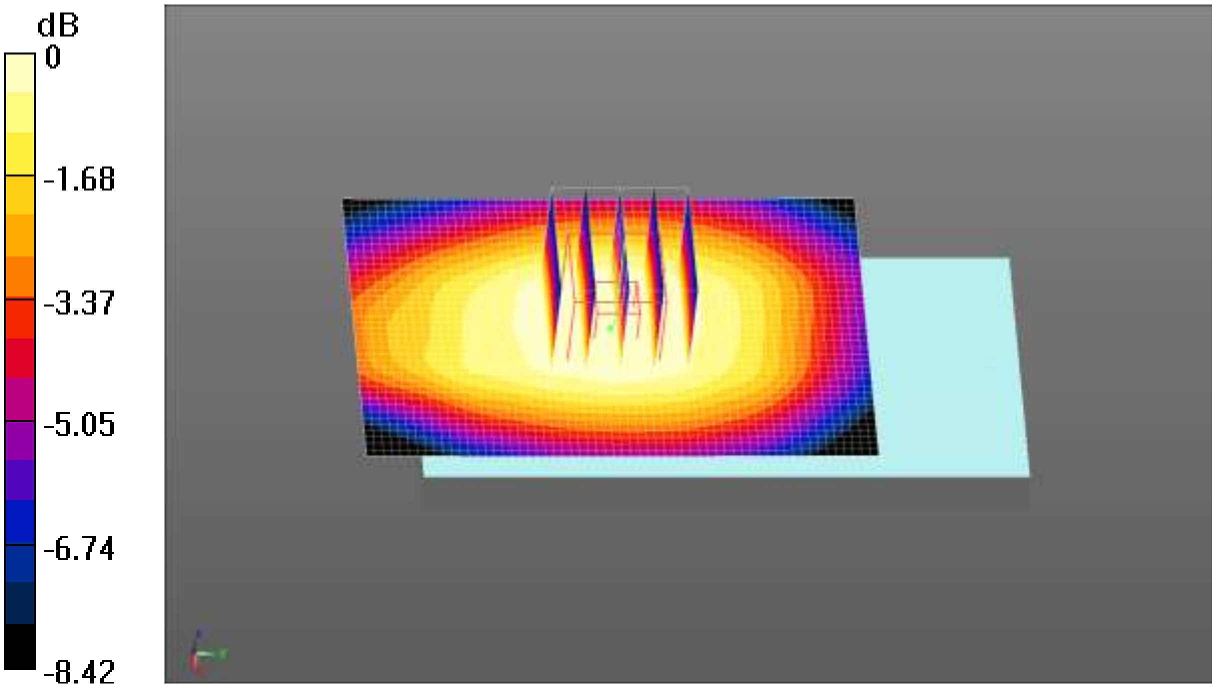
Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.30042
Medium parameters used (extrapolated): f = 836.6 MHz; σ = 0.985 S/m; ε_r = 55.396; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3924; ConvF(9.86, 9.86, 9.86); Calibrated: 07.19.2018;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1373; Calibrated: 03.22.2018
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:1208
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

GSM 850 Body Front/Middle Channel/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.541 W/kg

GSM 850 Body Front/Middle Channel/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.55 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.603 W/kg
SAR(1 g) = 0.442 W/kg; SAR(10 g) = 0.331 W/kg
Maximum value of SAR (measured) = 0.545 W/kg



0 dB = 0.545 W/kg = -2.64 dBW/kg