FCC SAR TEST REPORT

For

Infinity System, SL

A-2 KM 48.5 Pol. Ind de Cabanillas. Parcela 12B 19171 Guadalajara (SPAIN)

Product Name	: Smartphone
Model No.	: TM45LM
FCC ID	: 2AC99TM45LM
Date of Receipt	: 11th Oct. 2015
Date of Test	: 12th ~20th Oct. 2015
Issued Date	: 19th Nov. 2015
Report No.	: TS201510007
Report Version	: V1.0

Issue By

Shenzhen Sunway Communication CO.,LTD Testing Center

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1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing are as follows.

<Highest SAR Summary>

Exposure Position	Frequency Band	1g-SAR (W/kg)	Highest 1g-SAR (W/kg)
Head	GSM850	0.292	**0.321**
	GSM1900	0.133	
	WCDMA V	0.231	
	WCDMA II	0.319	
	LTE Band 2	**0.321**	
	LTE Band 4	0.075	
	LTE Band 7	0.102	
	WLAN 2.4GHz Band	0.121	
Body (1cm Gap)	GSM850	0.621	**0.798**
	GSM1900	0.724	
	WCDMA V	0.369	
	WCDMA II	**0.798**	
	LTE Band 2	0.563	
	LTE Band 4	0.334	
	LTE Band 7	0.785	
	WLAN 2.4GHz Band	0.241	

This device is in 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 C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013.

<Highest simultaneous transmission SAR>

	Position	Main antenna (W/kg)	WLAN 2.4G (W/kg)	Bluetooth (W/kg)	Max Sum (W/kg)
Highest SAR value for Head	Right Cheek	0.321	0.121	0.084	**0.442**
Highest SAR value for Body	Back	0.798	0.241	0.042	**1.039**

According to the above table, the maximum sum of reported SAR values for GSM/WCDMA/LTE and BT/WIFI is **1.039** W/kg (1g).

2. SAR Evaluation compliance

Product Name:	Smartphone
Brand Name:	N/A
Model Name:	TM45LM
Applicant:	Infinity System, SL
Address:	A-2 KM 48.5 Pol. Ind de Cabanillas. Parcela 12B 19171 Guadalajara (SPAIN)
Manufacturer:	Infinity System, SL
Address:	A-2 KM 48.5 Pol. Ind de Cabanillas. Parcela 12B 19171 Guadalajara (SPAIN)
Applicable Standard:	FCC 47 CFR Part 2 (2.1093) ANSI/IEEE C95.1-1992 IEEE 1528-2013 FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04 FCC KDB 865664 D02 SAR Reporting v01r01 FCC KDB 447498 D01 General RF Exposure Guidance v05r02 FCC KDB 941225 D06 Hotspot Mode v02 FCC KDB 648474 D04 Handset SAR v01r02 FCC KDB 248227 D01 SAR meas for 802 11abg v02r01 FCC KDB 941225 D01 3G SAR Procedures v03 FCC KDB 941225 D05 SAR for LTE Devices v02r03
Test Engineer:	Li.zhao
Reviewed By	Tomy.Liu
Performed Location:	Shenzhen Sunway Communication CO.,LTD Testing Center 1/F,BuildingA，SDG Info Port, KefengRoad，Hi-Tech Park, Nanshan District,Shenzhen , Guangdong, China 518104 Tel: +86-755- 36615880 Fax: +86-755- 86525532

3. General Information:

3.1 EUT Description:

EUT Information	
Product Name	Smartphone
Brand Name	N/A
Model Name	TM45LM
Hardware Version	/
Software Version	/
Antenna gain:	GSM 850: -0.35dBi PCS 1900:0.14dBi WCDMA 850:-0.35dBi WCDMA 1900:0.14dBi LTE Band 2: 0.14 dBi LTE Band 4: -0.35 dBi LTE Band 7: -0.14 dBi WIFI：-1.67 dBi BT: -1.65 dBi
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz LTE Band 2: 1850.7 MHz ~ 1909.3 MHz LTE Band 4: 1710.7 MHz ~ 1754.3 MHz LTE Band 7: 2502.5 MHz ~ 2567.5 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	GSM/GPRS/EGPRS RMC/AMR 12.2Kbps HSDPA HSUPA LTE QPSK/16QAM 802.11b/g/n HT20/HT40 Bluetooth v3.0+EDR Bluetooth v4.0 LE
GSM/(E)GPRS Transfer mode	Class B – EUT cannot support Packet Switched and Circuit Switched Network simultaneously but can automatically switch between Packet and Circuit Switched Network.

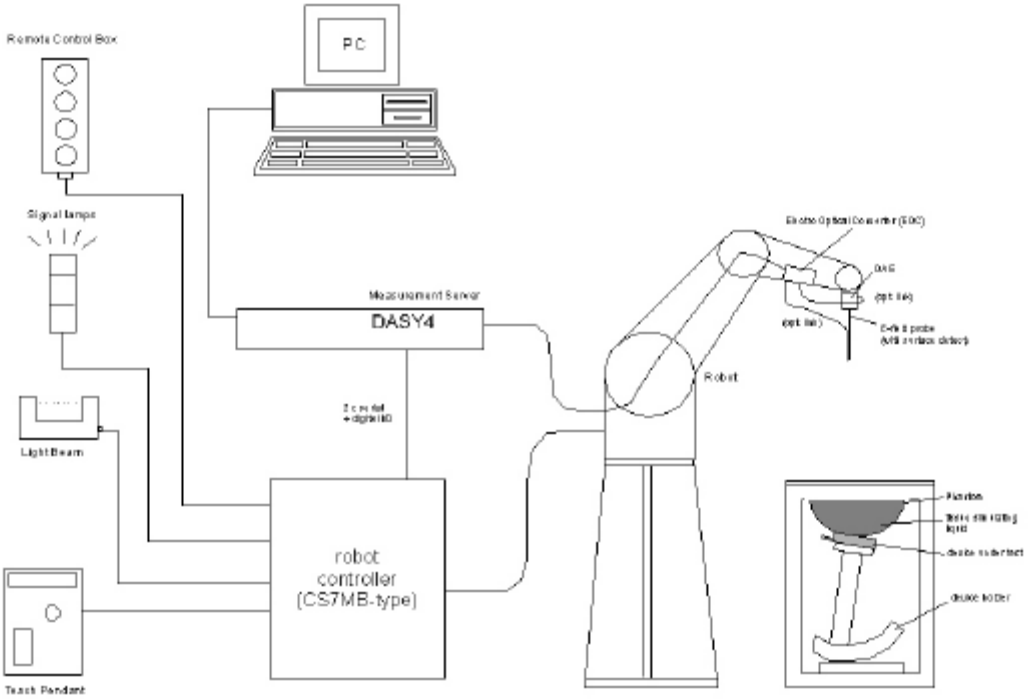
3.2 Test Environment:

Ambient conditions in the SAR laboratory:

Items	Required	Actual
Temperature (℃)	18-25	22~23
Humidity (%RH)	30-70	55~65

4. SAR Measurement System:

4.1 Dasy4 System Description:



The DASY4 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- A dosimetric probe, i.e., an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc.
- The Electro-optical converter (EOC) performs the conversion between optical and electrical of the signals for the digital communication to the DAE and for the analog signal from the optical surface detection.
- A probe alignment unit which improves the (absolute) accuracy of the probe positioning.
- A computer operating Windows 2000 or Windows XP.
- DASY4 software.
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom enabling testing left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- Validation dipole kits allowing to validate the proper functioning of the system.

5. System Components:

- DASY4 Measurement Server:

Calibration: No calibration required.

The DASY4 measurement server is based on a PC/104 CPU board with a 166MHz low-power pentium, 32MB chipdisk and 64MB RAM. The necessary circuits for communication with either the DAE4 (or DAE3) electronic box as well as the 16-bit AD-converter system for optical detection and digital I/O interface are contained on the DASY4 I/O-board, which is directly connected to the PC/104 bus of the CPU board.

- DATA Acquisition Electronics (DAE):

Calibration: Recommended once a year

The data acquisition electronics 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.

- Dosimetric Probes:

Calibration: Recommended once a year

Model: ES3DV3,
Frequency: 10MHz to 3G, Linearity:±0.2dB,
Dynamic Range: 10 µW/g to100 mW/g
Directivity:
± 0.3 dB in HSL (rotation around probe axis)
± 0.5 dB in tissue material (rotation normal to probe axis)

These probes are specially designed and calibrated for use in liquids with high permittivities. They should not be used in air, since the spherical isotropy in air is poor (±2 dB). The dosimetric probes have special calibrations in various liquids at different frequencies.

- 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.

Calibration: No calibration required.

- SAM Twin Phantom:

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:
• Left hand
• Right hand
• 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.

- Device Holder for SAM Twin Phantom:

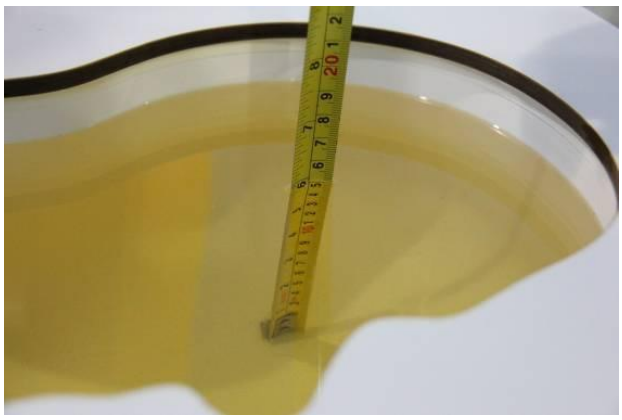
The DASY device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear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

The DASY device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity "=3 and loss tangent _=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

6. Tissue Simulating Liquid

6.1 The composition of the tissue simulating liquid:
The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (εr)
For Head								
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1750	55.2	0	0	0.3	0	44.5	1.37	40.1
1800,1900,2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
2600	54.8	0	0	0.1	0	45.1	1.96	39.0
For Body								
900	50.8	48.2	0	0.9	0.1	0	0.97	55.2
1750	70.2	0	0	0.4	0	29.4	1.49	53.4
1800,1900,2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0	0	31.4	1.95	52.7
2600	68.1	0	0	0.1	0	31.8	2.16	52.5



Head (depth>15cm)

Flat (depth>15cm)

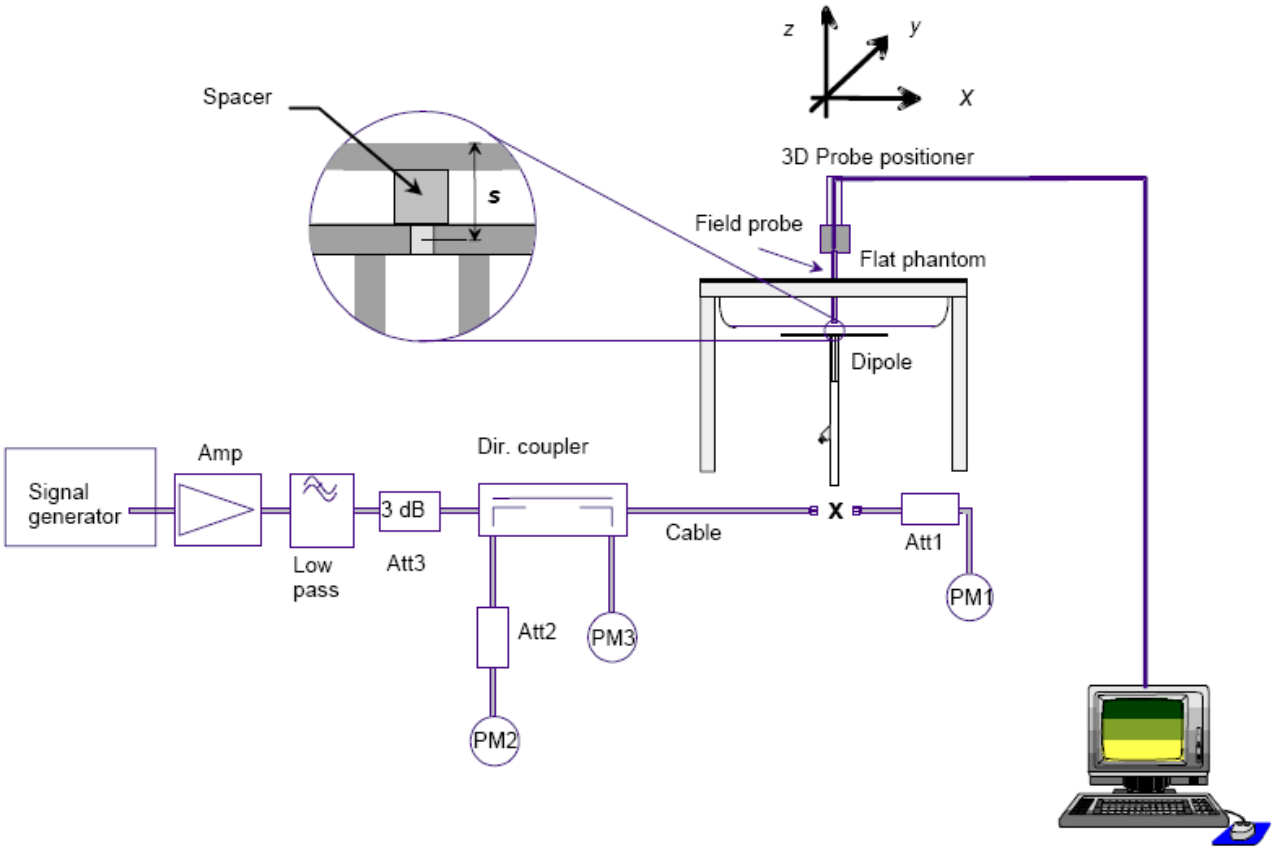
6.2 Tissue Calibration Result:

Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue				Liquid Temp.	Test Data
		ε_r	σ	ε_r	Dev. (%)	σ	Dev. (%)		
900H	900	41.5	0.97	42.2	1.7	0.96	-1.0	22.3	10/12/2015
1750H	1750	40.1	1.37	39.8	-0.7	1.36	-0.7	22.8	10/13/2015
1900H	1900	40.0	1.40	40.2	0.5	1.42	1.4	22.6	10/13/2015
2450H	2450	39.2	1.80	38.2	-2.6	1.83	1.7	22.4	10/14/2015
2600H	2600	39.0	1.96	38.1	-2.3	1.96	0	22.3	10/14/2015
900B	900	55.0	1.05	54.6	-0.7	1.02	-2.9	22.6	10/15/2015
1750B	1750	53.4	1.49	54.5	2.1	1.54	3.4	22.4	10/16/2015
1900B	1900	53.3	1.52	53.6	0.6	1.54	1.3	22.6	10/16/2015
2450B	2450	52.7	1.95	50.6	-4.0	1.91	-2.1	22.7	10/20/2015
2600B	2600	52.5	2.16	51.1	-2.7	2.21	2.3	22.5	10/19/2015

7. SAR System Validation

7.1 Validation System:

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:



7.2 Validation Dipoles:

The dipoles used is based on the IEEE-1528/EN62209-1 standard, and is complied with mechanical and electrical specifications in line with the requirements of both IEEE-1528/EN62209-1 and FCC Supplement C.

7.3 Validation Result:

Frequency (MHz)	Description	SAR(1g) W/Kg	SAR(10g) W/Kg	Tissue Temp. (℃)	Date
900 (Head)	Reference	10.7±10% (9.63~11.77)	6.87±10% (6.18~7.49)	NA	10/12/2015
	Measurement	10.6	6.84	22.3	
1750 (Head)	Reference	34.6±10% (31.14~38.06)	18.3±10% (16.47~20.13)	NA	10/13/2015
	Measurement	35.24	18.16	22.8	
1900 (Head)	Reference	40.6±10% (36.54~44.66)	21.3±10% (19.17~23.43)	NA	10/13/2015
	Measurement	39.44	20.96	22.6	
2450 (Head)	Reference	52.4±10% (47.16~57.64)	24.4±10% (21.96~26.84)	NA	10/14/2015
	Measurement	53.2	25.76	22.4	
2600 (Head)	Reference	57.9±10% (52.11~63.69)	26.2±10% (23.58~28.82)	NA	10/14/2015
	Measurement	57.6	25.84	22.3	
900 (Body)	Reference	10.7±10% (9.63~11.77)	6.94±10% (6.246~7.634)	NA	10/15/2015
	Measurement	9.84	6.48	22.6	
1750 (Body)	Reference	37.5±10% (33.75~41.25)	20.1±10% (18.09~22.11)	NA	10/16/2015
	Measurement	36.2	19.44	22.4	
1900 (Body)	Reference	40.1±10% (36.09~44.11)	21.3±10% (19.17~23.43)	NA	10/16/2015
	Measurement	40.4	21.68	22.6	
2450 (Body)	Reference	53.7±10% (48.33~59.07)	25±10% (22.5~27.5)	NA	10/20/2015
	Measurement	54	25.4	22.7	
2600 (Body)	Reference	56.8±10% (51.12~62.48)	25.3±10% (22.77~27.83)	NA	10/19/2015
	Measurement	58	25.88	22.5	

8. SAR Evaluation Procedures:

The procedure for assessing the average SAR value consists of the following steps:

- Power Reference Measurement

  The Power Reference Measurement and Power Drift Measurement jobs are useful jobs for monitoring the power drift of the device under test in the batch process. Both jobs measure the field at a specified reference position, at a selectable distance from the phantom surface. The reference position can be either the selected section's grid reference point or a user point in this section. The reference job projects the selected point onto the phantom surface, orients the probe perpendicularly to the surface, and approaches the surface using the selected detection method.

- Area Scan

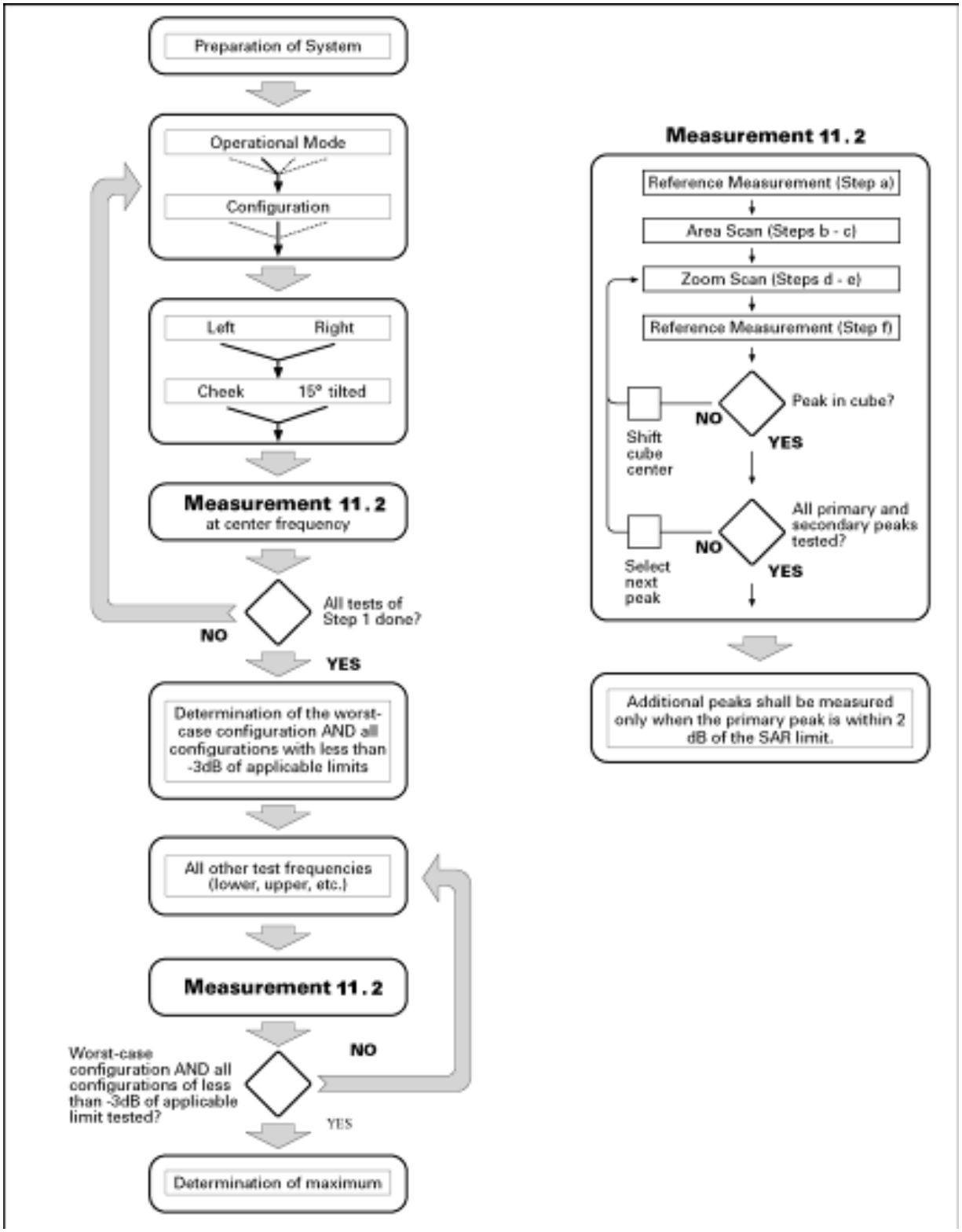
  The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a finer measurement around the hot spot. The sophisticated interpolation routines implemented in DASY4 software can find the maximum locations even in relatively coarse grids. The scanning area is defined by an editable grid. This grid is anchored at the grid reference point of the selected section in the phantom. When the Area Scan's property sheet is brought-up, grid settings can be edited by a user.

- Zoom Scan

  Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The default Zoom Scan measures 7 x 7 x 7 points (5mmx5mmx5mm) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure.

- Power Drift Measurement

  The Power Drift Measurement job measures the field at the same location as the most recent power reference measurement job within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement.



Block diagram of the tests to be performed

9. SAR Exposure Limits

9.1 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.

9.2 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. The 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.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

10. Measurement Uncertainty:

NO	Source	Uncert. ai（%）	Prob. Dist.	Div. k	ci (1g)	ci (10g)	Stand. Uncert. ui (1g)	Stand. Uncert. ui (10g)	*Veff*
1	Repeat	0.04	N	1	1	1	0.04	0.04	9
Instrument									
2	Probe calibration	7	N	2	1	1	3.5	3.5	∞
3	Axial isotropy	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
4	Hemispherical isotropy	9.6	R	$\sqrt{3}$	0.7	0.7	3.9	3.9	∞
5	Boundary effect	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Linearity	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
7	Detection limits	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
8	Readout electronics	0.3	N	1	1	1	0.3	0.3	∞
9	Response time	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
10	Integration time	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
11	Ambient noise	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
12	Ambient reflections	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Probe positioner mech. restrictions	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
14	Probe positioning with respect to phantom shell	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
15	Max.SAR evaluation	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related									
16	Device positioning	3.8	N	1	1	1	3.8	3.8	99

17	Device holder	5.1	N	1	1	1	5.1	5.1	5
18	Drift of output power	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up									
19	Phantom uncertainty	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
20	Liquid conductivity (target)	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
21	Liquid conductivity (meas)	2.5	N	1	0.64	0.43	1.6	1.2	∞
22	Liquid Permittivity (target)	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.5	∞
23	Liquid Permittivity (meas)	2.5	N	1	0.6	0.49	1.5	1.2	∞
Combined standard			RSS	$U_C = \sqrt{\sum_{i=1}^{n} C_i^2 U_i^2}$			12.2%	11.9%	236
Expanded uncertainty (P=95%)		$U = k\ U_C$,k=2					**24.4%**	**23.8%**	

11. Conducted Power Measurement:

<GSM Conducted Power>

General Note:

1. Per KDB 447498 D01v05r02, the maximum output power channel is used for SAR testing and for further SAR test reduction.
2. According to October 2013TCB Workshop, for GSM / GPRS, the number of time slots to test for SAR should correspond to the highest frame-average maximum output power configuration, considering the possibility of e.g. 3rd party VoIP operation for head and body-worn SAR testing, the EUT was set in GPRS (4Tx slot) for GSM850/GSM1900 band due to their highest frame-average power.
3. For hotspot mode SAR testing, GPRS should be evaluated, therefore the EUT was set in GPRS 4 Tx slots for GSM850/GSM1900 band due to its highest frame-average power.

Band GSM850	**Burst Average Power (dBm)**			**Frame-Average Power (dBm)**		
TX Channel	**128**	**189**	**251**	**128**	**189**	**251**
Frequency (MHz)	**824.2**	**836.4**	**848.8**	**824.2**	**836.4**	**848.8**
GSM (GMSK, 1 Tx slot)	32.88	32.79	32.65	23.88	23.79	23.65
GPRS (GMSK, 1 Tx slot) – CS1	32.91	32.79	32.61	23.91	23.79	23.61
GPRS (GMSK, 2 Tx slots) – CS1	32.28	32.11	31.92	26.28	26.11	25.92
GPRS (GMSK, 3 Tx slots) – CS1	30.69	30.44	30.18	26.43	26.18	25.92
GPRS (GMSK, 4 Tx slots) – CS1	**29.64**	**29.35**	**29.06**	**26.64**	**26.35**	**26.06**
EGPRS (8PSK, 1 Tx slot) – CS1	27.9	27.66	27.31	18.90	18.66	18.31
EGPRS (8PSK, 2 Tx slots) – CS1	26.85	26.6	26.25	20.85	20.60	20.25
EGPRS (8PSK, 3 Tx slots) – CS1	25.02	24.74	24.37	20.76	20.48	20.11
EGPRS (8PSK, 4 Tx slots) – CS1	24.08	23.77	23.41	21.08	20.77	20.41
Band GSM1900	**Burst Average Power (dBm)**			**Frame-Average Power (dBm)**		
TX Channel	**512**	**661**	**810**	**512**	**661**	**810**
Frequency (MHz)	**1850.2**	**1880**	**1909.8**	**1850.2**	**1880**	**1909.8**
GSM (GMSK, 1 Tx slot)	30.44	30.26	30.14	21.44	21.26	21.14
GPRS (GMSK, 1 Tx slot) – CS1	30.46	30.3	30.17	21.46	21.30	21.17
GPRS (GMSK, 2 Tx slots) – CS1	29.18	29.16	29.16	23.18	23.16	23.16
GPRS (GMSK, 3 Tx slots) – CS1	27.19	27.25	27.28	22.93	22.99	23.02
GPRS (GMSK, 4 Tx slots) – CS1	**26.27**	**26.26**	**26.15**	**23.27**	**23.26**	**23.15**
EGPRS (8PSK, 1 Tx slot) – CS1	26.47	26.69	26.62	17.47	17.69	17.62
EGPRS (8PSK, 2 Tx slots) – CS1	25.44	25.72	25.69	19.44	19.72	19.69
EGPRS (8PSK, 3 Tx slots) – CS1	23.74	24.02	23.95	19.48	19.76	19.69
EGPRS (8PSK, 4 Tx slots) – CS1	22.66	22.91	22.79	19.66	19.91	19.79

Remark: The frame-averaged power is linearly scaled the maximum burst averaged power over 8 time slots.

The calculated method are shown as below:

Frame-averaged power = Maximum burst averaged power (1 Tx Slot) - 9 dB

Frame-averaged power = Maximum burst averaged power (2 Tx Slots) - 6 dB

Frame-averaged power = Maximum burst averaged power (3 Tx Slots) - 4.26 dB

Frame-averaged power = Maximum burst averaged power (4 Tx Slots) - 3 dB

<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 Agilent E5515C 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 C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d *(SF)*	β_c/β_d	β_{HS} *(Note1, Note 2)*	**CM** (dB) *(Note 3)*	**MPR** (dB) *(Note 3)*
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 *(Note 4)*	15/15 *(Note 4)*	64	12/15 *(Note 4)*	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and Δ_{NACK} = 30/15 with β_{hs} = 30/15 * β_c, and Δ_{CQI} = 24/15 with β_{hs} = 24/15 * β_c.

Note 3: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

Setup Configuration

HSUPA Setup Configuration:

a. The EUT was connected to Base Station Agilent E5515C 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 C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (Note 5) (Note 6)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 6)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	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	$\beta_{ed}1$: 47/15 $\beta_{ed}2$: 47/15	4 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 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_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 signalled 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 signalled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.
Note 6: β_{ed} can not be set directly, it is set by Absolute Grant Value.

Setup Configuration

General Note:

1. Per KDB 941225 D01 v02, RMC 12.2kbps setting is used to evaluate SAR. If AMR 12.2kbps power is < 0.25dB higher than RMC 12.2kbps, SAR tests with AMR 12.2kbps can be excluded.
2. By design, AMR and HSDPA/HSUPA RF power will not be larger than RMC 12.2kbps, detailed information is included in Tune-up Procure exhibit.
3. It is expected by the manufacturer that MPR for some HSDPA/HSUPA subtests may differ from the specification of 3GPP, according to the chipset implementation in this model. The implementation and expected deviation are detailed in tune-up procedure exhibit.

Band	**WCDMA II**			**WCDMA V**		
TX Channel	**9262**	**9400**	**9538**	**4132**	**4183**	**4233**
Rx Channel	**9662**	**9800**	**9938**	**4357**	**4408**	**4458**
Frequency (MHz)	**1852.4**	**1880**	**1907.6**	**826.4**	**836.6**	**846.6**
RMC 12.2Kbps	21.85	**22.00**	21.55	**23.17**	22.74	22.6
AMR 12.2Kbps	21.39	21.56	21.16	22.16	21.63	21.55
HSDPA Subtest-1	17.08	16.99	15.9	19.99	19.35	19.72
HSDPA Subtest-2	18.11	18.48	16.53	18.66	18.67	18.6
HSDPA Subtest-3	18.67	19.05	18.9	18.2	17.58	17.91
HSDPA Subtest-4	19.87	19.93	19.33	20.6	20.25	20.17
HSUPA Subtest-1	20.99	21.11	20.62	21.78	21.24	21.16
HSUPA Subtest-2	17.73	18.32	17.49	19.27	18.53	18.52
HSUPA Subtest-3	21.48	21.61	21.27	22.16	21.58	21.53
HSUPA Subtest-4	18.97	19.05	17.79	19.8	18.99	19.04
HSUPA Subtest-5	21.39	21.56	21.16	22.16	21.63	21.55

<LTE Conducted Power>

General Note:

1. Per KDB941225 D05 v02r03, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r03, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r03, 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.
4. Per KDB 941225 D05v02r03, 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.
5. Per KDB 941225 D05v02r03, 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.

<LTE Band 2>

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18607	18900	19193
					1850.7MHz	1880.0MHz	1909.3MHz
2	1.4	QPSK	1	0	23.64	23.42	21.83
			1	2	23.47	23.35	21.87
			1	5	23.43	23.68	21.74
			3	0	23.57	23.51	21.93
			3	1	23.58	23.47	21.92
			3	2	23.51	23.46	21.86
			6	0	22.67	21.54	21.12
		16QAM	1	0	22.63	23.25	21.22
			1	2	22.62	22.47	21.08
			1	5	22.72	22.24	21.30
			3	0	22.87	22.45	21.16
			3	1	22.74	22.47	21.15
			3	2	22.62	23.51	21.26
			6	0	21.76	21.49	20.25
LTE Band	**Bandwidth (MHz)**	**Modulation**	**RB Size**	**RB Offset**	**Average Power (dBm)**		
					18615	**18900**	**19185**
					1851.5MHz	**1880.0MHz**	**1908.5MHz**
2	3	QPSK	1	0	23.21	23.25	22.08
			1	7	23.29	23.37	21.85
			1	14	23.45	23.22	21.79
			8	0	22.57	23.22	21.26
			8	4	22.58	23.47	21.17
			8	7	22.62	23.35	21.12
			15	0	22.59	22.49	21.18
		16QAM	1	0	22.51	22.52	21.24
			1	7	22.51	22.44	21.36
			1	14	22.67	22.46	21.25
			8	0	21.57	22.46	20.44
			8	4	21.61	22.56	20.33
			8	7	21.68	22.37	20.26
			15	0	21.70	21.45	20.38

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18625	18900	19175
					1852.5MHz	1880.0MHz	1907.5MHz
2	5	QPSK	1	0	23.06	23.05	21.81
			1	12	22.84	23.09	21.38
			1	24	23.17	23.15	21.47
			12	0	21.76	22.18	20.68
			12	6	21.75	22.22	20.51
			12	11	21.92	22.40	20.56
			25	0	21.88	22.26	20.59
		16QAM	1	0	22.02	22.32	21.06
			1	12	21.55	22.26	20.40
			1	24	22.24	22.53	20.95
			12	0	21.01	21.27	19.80
			12	6	20.96	21.41	19.56
			12	11	21.20	21.35	19.80
			25	0	21.15	21.40	19.75
LTE Band	**Bandwidth (MHz)**	**Modulation**	**RB Size**	**RB Offset**	**Average Power (dBm)**		
					18650	**18900**	**19150**
					1855.0MHz	**1880.0MHz**	**1905.0MHz**
2	10	QPSK	1	0	22.42	22.50	21.71
			1	24	22.78	23.14	21.56
			1	49	22.34	22.87	20.83
			25	0	21.91	22.03	20.88
			25	12	22.01	22.24	20.73
			25	24	21.98	22.31	20.58
			50	0	21.94	22.20	20.74
		16QAM	1	0	21.55	21.72	20.62
			1	24	22.28	22.25	20.72
			1	49	21.93	22.04	20.43
			25	0	21.07	21.14	20.01
			25	12	21.12	21.34	19.86
			25	24	21.14	21.38	19.74
			50	0	21.08	21.32	19.88

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18675	18900	19125
					1857.5MHz	1880.0MHz	1902.5MHz
2	15	QPSK	1	0	22.76	22.52	23.64
			1	37	22.83	23.04	23.14
			1	74	22.52	23.08	22.63
			36	0	22.06	21.90	22.48
			36	16	22.04	22.18	22.32
			36	35	21.90	22.37	22.18
			75	0	21.95	22.08	22.34
		16QAM	1	0	21.60	21.83	22.68
			1	37	22.51	22.75	22.84
			1	74	21.70	22.27	22.42
			36	0	21.16	20.88	21.61
			36	16	21.05	21.28	21.38
			36	35	20.93	21.43	21.32
			75	0	21.03	21.19	21.48
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					18700	18900	19100
					1860.0MHz	1880.0MHz	1900.0MHz
2	20	QPSK	1	0	23.76	23.26	23.42
			1	49	23.54	23.17	23.26
			1	99	23.15	23.20	22.76
			50	0	22.81	22.35	22.63
			50	24	22.62	22.36	22.38
			50	49	22.46	22.29	22.29
			100	0	22.63	22.26	22.56
		16QAM	1	0	22.91	22.88	22.62
			1	49	22.78	22.19	22.47
			1	99	22.83	22.45	22.28
			50	0	21.81	21.44	21.72
			50	24	21.58	21.42	21.41
			50	49	21.54	21.38	21.31
			100	0	21.71	21.30	21.61

<LTE Band 4>

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19957	20175	20393
					1710.7MHz	1732.5MHz	1754.3MHz
4	1.4	QPSK	1	0	21.85	21.67	21.56
			1	2	22.06	21.71	21.76
			1	5	21.86	21.62	21.58
			3	0	22.02	21.74	21.74
			3	1	22.65	21.70	21.65
			3	2	22.63	21.75	21.63
			6	0	22.03	21.69	21.76
		16QAM	1	0	22.92	21.72	21.65
			1	2	22.04	21.76	21.87
			1	5	22.81	21.68	21.63
			3	0	22.13	21.95	21.65
			3	1	22.10	21.84	21.60
			3	2	22.00	21.65	21.83
			6	0	21.97	21.66	21.70
LTE Band	**Bandwidth (MHz)**	**Modulation**	**RB Size**	**RB Offset**	**Average Power (dBm)**		
					19965	**20175**	**20385**
					1711.5MHz	**1732.5MHz**	**1753.5MHz**
4	3	QPSK	1	0	21.82	21.62	21.76
			1	7	22.06	21.68	21.80
			1	14	21.83	21.75	21.76
			8	0	22.06	22.03	21.92
			8	4	22.03	21.94	21.97
			8	7	22.08	21.96	21.92
			15	0	22.05	21.96	21.95
		16QAM	1	0	21.89	21.84	21.89
			1	7	22.14	21.88	22.85
			1	14	22.02	21.89	21.84
			8	0	21.96	21.95	21.86
			8	4	22.04	21.99	21.82
			8	7	21.95	21.91	21.90
			15	0	22.04	21.93	21.95

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					19975	20175	20375
					1712.5MHz	1732.5MHz	1752.5MHz
4	5	QPSK	1	0	22.15	21.86	21.76
			1	12	21.96	21.89	21.80
			1	24	22.03	21.74	21.76
			12	0	21.92	22.03	21.94
			12	6	21.95	21.97	21.95
			12	11	22.16	21.96	21.94
			25	0	22.01	21.93	21.86
		16QAM	1	0	22.25	21.96	21.86
			1	12	22.18	22.06	21.97
			1	24	22.20	21.76	21.81
			12	0	21.94	21.87	21.94
			12	6	21.96	21.99	21.81
			12	11	22.12	21.91	21.91
			25	0	22.06	21.89	21.89
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20000	20175	20350
					1715.0MHz	1732.5MHz	1750.0MHz
4	10	QPSK	1	0	21.67	21.93	21.76
			1	24	22.16	21.95	21.83
			1	49	22.07	21.68	21.70
			25	0	21.98	22.06	21.89
			25	12	22.25	21.96	21.87
			25	24	22.26	21.87	21.89
			50	0	22.18	21.97	21.91
		16QAM	1	0	21.80	22.04	21.94
			1	24	22.70	22.10	21.74
			1	49	22.30	22.09	22.21
			25	0	22.00	21.96	21.84
			25	12	22.24	21.98	21.87
			25	24	22.28	21.85	21.86
			50	0	22.21	21.95	21.93

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20025	20175	20325
					1717.5MHz	1732.5MHz	1747.5MHz
4	15	QPSK	1	0	21.87	22.10	21.78
			1	37	22.26	21.96	21.83
			1	74	21.36	21.63	21.76
			36	0	22.10	22.14	21.93
			36	16	22.36	22.03	21.94
			36	35	22.21	21.90	21.91
			75	0	22.32	21.99	21.92
		16QAM	1	0	21.64	22.36	22.04
			1	37	22.24	22.13	22.12
			1	74	22.30	21.90	21.95
			36	0	22.03	22.13	21.87
			36	16	22.34	22.04	21.92
			36	35	22.25	21.88	21.91
			75	0	22.38	21.98	21.88
LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20050	20175	20300
					1720.0MHz	1732.5MHz	1745.0MHz
24	20	QPSK	1	0	21.83	22.17	21.83
			1	49	22.13	21.97	21.86
			1	99	21.85	21.62	21.75
			50	0	22.27	22.16	21.97
			50	24	22.26	22.63	21.86
			50	49	22.16	21.86	21.87
			100	0	22.26	22.01	21.89
		16QAM	1	0	22.40	22.10	22.04
			1	49	22.91	22.63	22.03
			1	99	22.18	21.80	22.05
			50	0	22.25	22.11	21.93
			50	24	22.30	21.98	21.84
			50	49	22.08	21.80	21.89
			100	0	22.23	21.98	21.88

<LTE Band 7>

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20775	21100	21425
					2502.5MHz	2535.0MHz	2567.5MHz
7	5	QPSK	1	0	23.65	22.81	23.07
			1	12	23.73	22.73	22.65
			1	24	23.51	23.10	22.84
			12	0	22.80	21.94	22.16
			12	6	22.83	21.98	22.03
			12	11	22.76	22.18	22.05
			25	0	22.78	22.04	22.05
		16QAM	1	0	22.60	21.92	22.16
			1	12	22.71	21.99	21.99
			1	24	22.84	22.21	22.31
			12	0	21.59	21.01	21.20
			12	6	21.61	21.15	21.15
			12	11	21.57	21.34	21.18
			25	0	21.61	21.14	21.20
LTE Band	**Bandwidth (MHz)**	**Modulation**	**RB Size**	**RB Offset**	**Average Power (dBm)**		
					20800	**21100**	**21400**
					2505.0MHz	**2535.0MHz**	**2565.0MHz**
7	10	QPSK	1	0	23.40	22.43	23.20
			1	24	23.53	22.72	23.80
			1	49	23.56	22.80	23.45
			25	0	22.70	21.86	22.34
			25	12	22.67	22.03	22.36
			25	24	22.69	22.26	22.21
			50	0	22.61	22.07	22.29
		16QAM	1	0	22.55	21.95	22.27
			1	24	22.39	22.28	22.50
			1	49	22.71	21.95	22.02
			25	0	21.50	21.03	21.30
			25	12	21.57	21.13	21.24
			25	24	21.49	21.42	21.27
			50	0	21.57	21.23	21.25

LTE Band	Bandwidth (MHz)	Modulation	RB Size	RB Offset	Average Power (dBm)		
					20825	21100	21375
					2507.5MHz	2535.0MHz	2562.5MHz
7	15	QPSK	1	0	23.65	22.65	23.56
			1	37	23.75	22.73	23.10
			1	74	23.48	23.17	22.65
			36	0	22.73	21.87	22.54
			36	16	22.60	22.05	22.47
			36	35	22.67	23.39	22.32
			75	0	22.73	22.08	22.45
		16QAM	1	0	22.57	21.49	22.45
			1	37	22.76	21.73	22.32
			1	74	22.32	21.94	22.04
			36	0	21.62	20.93	21.40
			36	16	21.57	21.16	21.39
			36	35	21.47	21.35	21.27
			75	0	21.61	21.20	21.37
LTE Band	**Bandwidth (MHz)**	**Modulation**	**RB Size**	**RB Offset**	**Average Power (dBm)**		
					20850	**21100**	**21350**
					2510.0MHz	**2535.0MHz**	**2560.0MHz**
7	20	QPSK	1	0	23.60	22.56	23.42
			1	49	23.65	22.74	23.38
			1	99	23.32	23.21	22.76
			50	0	22.72	21.76	22.65
			50	24	22.76	21.97	22.48
			50	49	22.68	22.43	22.34
			100	0	22.71	22.05	22.45
		16QAM	1	0	22.21	21.95	22.48
			1	49	22.70	21.92	22.15
			1	99	22.32	22.42	21.48
			50	0	21.54	20.81	21.44
			50	24	21.56	21.08	21.39
			50	49	21.52	21.41	21.29
			100	0	21.64	21.19	21.45

<WLAN 2.4GHz Conducted Power>

Mode	Channel	Frequency (MHz)	Conducted Output Power(dBm)	Test Rate Data
802.11b	1	2412	**15.43**	1 Mbps
	6	2437	15.39	1 Mbps
	11	2462	14.45	1 Mbps
802.11g	1	2412	11.49	6 Mbps
	6	2437	13.45	6 Mbps
	11	2462	11.28	6 Mbps
802.11n(20MHz)	1	2412	11.47	6.5 Mbps
	6	2437	13.40	6.5 Mbps
	11	2462	11.36	6.5 Mbps
802.11n(40MHz)	3	2422	10.06	13.5Mbps
	6	2437	13.28	13.5Mbps
	9	2452	10.07	13.5Mbps

Note:

1. Per KDB 447498 D01v05r02, 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)	Tune-up Power (dBm)	Max. Power (mW)	Test distance (mm)	Result	exclusion thresholds for 1-g SAR
b/CH 1	2.412	16	39.81	5	12.49	3.0
g/CH 6	2.437	14	25.12	5	7.88	3.0

2. Base on the result of note1, RF exposure evaluation of 802.11 b mode is required.
3. Per KDB 248227 D01v02, choose the highest output power channel to test SAR and determine further SAR exclusion.
4. Per KDB 248227 D01v02, 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 D01V02 section 2.2, when the EUT in continuously transmitting mode, the actual duty cycle is 98.4%, so the duty cycle factor is 1.02.

<Bluetooth Conducted Power>

Mode Band	Average power(dBm)	
	Bluetooth v3.0+EDR	Bluetooth v4.0
2.4GHz Bluetooth	2.93	-4.52

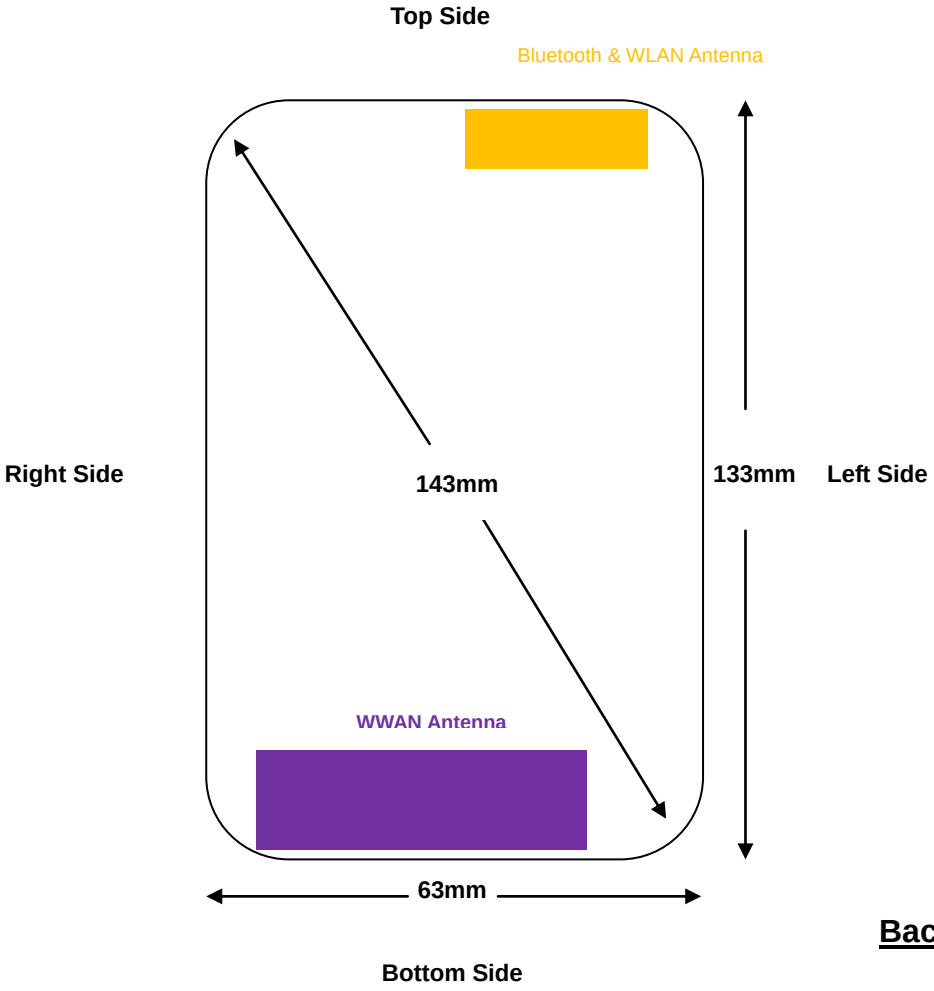
Per KDB 447498 D01v05r02, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[$\sqrt{}$f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR

- 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

Bluetooth Turn up Power (dBm)	Separation Distance (mm)	Frequency (GHz)	exclusion thresholds
3	0	2.48	0.63

Per KDB 447498 D01v05r02, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is **0.63** which is <= 3, SAR testing is not required.

12. Antenna Location



Back View

Distance of The Antenna to the EUT surface and edge						
Antennas	**Front**	**Back**	**Top Side**	**Bottom Side**	**Left Side**	**Right Side**
WWAN	/	/	>25mm	/	/	/
BT&WLAN	/	/	/	>25mm	/	>25mm

Positions for SAR tests; Hotspot mode						
Antennas	**Front**	**Back**	**Top Side**	**Bottom Side**	**Left Side**	**Right Side**
WWAN	Yes	Yes	No	Yes	Yes	Yes
BT&WLAN	Yes	Yes	Yes	No	Yes	No

General Note: Referring to KDB 941225 D06 v02, 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 with 25mm from that surface or edge.

13. Results and Test photos:

13.1 SAR result summary:
Head

Test Case of Head			Meas. Power (dBm)	Target Power (dBm)	Factor	Meas. SAR (W/kg) 1g Avg.	Scale SAR (W/kg)	Power Drift <±0.2 dB	Plot
Band	Test Position	CH							
GSM 850	Right Cheek	Ch128	32.88	33.00	1.028	0.284	**0.292**	0.064	**#1**
	Right Tilt	Ch128	32.88	33.00	1.028	0.203	0.209	0.038	
	Left Cheek	Ch128	32.88	33.00	1.028	0.267	0.274	-0.113	
	Left Tilt	Ch128	32.88	33.00	1.028	0.184	0.189	0.054	
GSM 1900	Right Cheek	Ch512	30.44	31.00	1.138	0.117	**0.133**	0.044	**#2**
	Right Tilt	Ch512	30.44	31.00	1.138	0.016	0.018	0.011	
	Left Cheek	Ch512	30.44	31.00	1.138	0.079	0.090	0.118	
	Left Tilt	Ch512	30.44	31.00	1.138	0.026	0.030	0.088	
WCDMA Band V	Right Cheek	Ch4132	23.17	23.50	1.079	0.214	**0.231**	-0.150	**#3**
	Right Tilt	Ch4132	23.17	23.50	1.079	0.141	0.152	0.149	
	Left Cheek	Ch4132	23.17	23.50	1.079	0.172	0.186	0.130	
	Left Tilt	Ch4132	23.17	23.50	1.079	0.132	0.142	0.063	
WCDMA Band II	Right Cheek	Ch9400	22.00	22.50	1.122	0.284	**0.319**	-0.086	**#4**
	Right Tilt	Ch9400	22.00	22.50	1.122	0.114	0.128	0.000	
	Left Cheek	Ch9400	22.00	22.50	1.122	0.231	0.259	0.192	
	Left Tilt	Ch9400	22.00	22.50	1.122	0.106	0.119	-0.134	

Test Case of Head			Meas. Power (dBm)	Target Power (dBm)	Factor	Meas. SAR (W/kg) 1g Avg.	Scale SAR (W/kg)	Power Drift <±0.2 dB	Plot
Band	Test Position	CH							
LTE Band 2 (20M 1RB)	Right Cheek	Ch18700	23.76	24.00	1.057	0.304	**0.321**	0.064	**#5**
	Right Tilt	Ch18700	23.76	24.00	1.057	0.124	0.131	0.038	
	Left Cheek	Ch18700	23.76	24.00	1.057	0.187	0.198	-0.113	
	Left Tilt	Ch18700	23.76	24.00	1.057	0.098	0.104	0.054	
LTE Band 2 (20M 50%RB)	Right Cheek	Ch18700	22.81	23.00	1.045	0.275	0.287	0.026	
	Right Tilt	Ch18700	22.81	23.00	1.045	0.101	0.106	0.144	
	Left Cheek	Ch18700	22.81	23.00	1.045	0.163	0.170	0.086	
	Left Tilt	Ch18700	22.81	23.00	1.045	0.071	0.074	-0.020	
LTE Band 4 (20M 1RB)	Right Cheek	Ch20175	22.17	22.50	1.079	0.0693	**0.075**	0.044	**#6**
	Right Tilt	Ch20175	22.17	22.50	1.079	0.0421	0.045	0.011	
	Left Cheek	Ch20175	22.17	22.50	1.079	0.0617	0.067	0.118	
	Left Tilt	Ch20175	22.17	22.50	1.079	0.0379	0.041	0.088	
LTE Band 4 (20M 50%RB)	Right Cheek	Ch20175	22.63	23.00	1.089	0.0584	0.064	-0.159	
	Right Tilt	Ch20175	22.63	23.00	1.089	0.0328	0.036	0.144	
	Left Cheek	Ch20175	22.63	23.00	1.089	0.0559	0.061	0.086	
	Left Tilt	Ch20175	22.63	23.00	1.089	0.0297	0.032	-0.020	
LTE Band 7 (20M 1RB)	Right Cheek	Ch20850	23.65	24.00	1.084	0.0941	**0.102**	-0.150	**#7**
	Right Tilt	Ch20850	23.65	24.00	1.084	0.0568	0.062	0.149	
	Left Cheek	Ch20850	23.65	24.00	1.084	0.0827	0.090	0.130	
	Left Tilt	Ch20850	23.65	24.00	1.084	0.0512	0.055	0.063	
LTE Band 7 (20M 50%RB)	Right Cheek	Ch20850	22.76	23.00	1.057	0.0874	0.092	-0.020	
	Right Tilt	Ch20850	22.76	23.00	1.057	0.0496	0.052	-0.062	
	Left Cheek	Ch20850	22.76	23.00	1.057	0.0753	0.080	-0.172	
	Left Tilt	Ch20850	22.76	23.00	1.057	0.0462	0.049	0.151	

Test Case of Head			Meas. Power (dBm)	Target Power (dBm)	Factor	D.C Factor	Meas. SAR (W/kg) 1g	Scale SAR (W/kg)	Power Drift(dB)	Plot
Band	Test Position	CH								
WLAN2.4G	Right Cheek	Ch1	15.43	16.00	1.140	1.02	0.104	**0.121**	-0.052	**#8**
	Right Tilt	Ch1	15.43	16.00	1.140	1.02	0.075	0.087	-0.028	
	Left Cheek	Ch1	15.43	16.00	1.140	1.02	0.051	0.059	0.140	
	Left Tilt	Ch1	15.43	16.00	1.140	1.02	0.021	0.024	0.051	

Body Hotspot (10mm between DUT and Flat Phantom)

Test Case of Body			Meas. Power (dBm)	Target Power (dBm)	Factor	Meas. SAR (W/kg) 1g Avg.	Scale SAR (W/kg)	Power Drift <±0.2 dB	Plot
Band	Test Position	CH							
GPRS 850(4 Tx slots)	Front	Ch128	29.64	30.00	1.086	0.343	0.373	0.130	
	Back	Ch128	29.64	30.00	1.086	0.572	**0.621**	-0.006	**#9**
	Left Side	Ch128	29.64	30.00	1.086	0.312	0.339	0.163	
	Right Side	Ch128	29.64	30.00	1.086	0.275	0.299	0.110	
	Bottom Side	Ch128	29.64	30.00	1.086	0.184	0.200	0.175	
GPRS 1900(4 Tx slots)	Front	Ch512	26.27	26.50	1.054	0.412	0.434	0.006	
	Back	Ch512	26.27	26.50	1.054	0.687	**0.724**	-0.099	**#10**
	Left Side	Ch512	26.27	26.50	1.054	0.157	0.166	-0.101	
	Right Side	Ch512	26.27	26.50	1.054	0.207	0.218	0.026	
	Bottom Side	Ch512	26.27	26.50	1.054	0.579	0.610	0.144	
WCDMA Band V	Front	Ch4132	23.17	23.50	1.079	0.204	0.220	0.086	
	Back	Ch4132	23.17	23.50	1.079	0.342	**0.369**	-0.020	**#11**
	Left Side	Ch4132	23.17	23.50	1.079	0.231	0.249	0.134	
	Right Side	Ch4132	23.17	23.50	1.079	0.253	0.273	-0.062	
	Bottom Side	Ch4132	23.17	23.50	1.079	0.117	0.126	-0.172	
WCDMA Band II	Front	Ch9400	22.00	22.50	1.122	0.449	0.504	0.151	
	Back	Ch9400	22.00	22.50	1.122	0.711	**0.798**	-0.094	**#12**
	Left Side	Ch9400	22.00	22.50	1.122	0.072	0.081	0.007	
	Right Side	Ch9400	22.00	22.50	1.122	0.105	0.118	0.053	
	Bottom Side	Ch9400	22.00	22.50	1.122	0.547	0.614	-0.159	

Test Case of Body			Meas. Power (dBm)	Target Power (dBm)	Factor	Meas. SAR (W/kg) 1g Avg.	Scale SAR (W/kg)	Power Drift <±0.2 dB	Plot
Band	Test Position	CH							
LTE Band 2 (20M 1RB)	Front	Ch18700	23.76	24.00	1.057	0.378	0.399	0.130	
	Back	Ch18700	23.76	24.00	1.057	0.533	**0.563**	-0.006	**#13**
	Left Side	Ch18700	23.76	24.00	1.057	0.115	0.122	0.024	
	Right Side	Ch18700	23.76	24.00	1.057	0.204	0.216	0.110	
	Bottom Side	Ch18700	23.76	24.00	1.057	0.312	0.330	0.175	
LTE Band 2 (20M 50%RB)	Front	Ch18700	22.81	23.00	1.045	0.312	0.326	0.006	
	Back	Ch18700	22.81	23.00	1.045	0.448	0.468	-0.099	
	Left Side	Ch18700	22.81	23.00	1.045	0.102	0.107	0.008	
	Right Side	Ch18700	22.81	23.00	1.045	0.175	0.183	0.026	
	Bottom Side	Ch18700	22.81	23.00	1.045	0.331	0.346	0.144	
LTE Band 4 (20M 1RB)	Front	Ch20175	22.17	22.50	1.079	0.176	0.190	0.086	
	Back	Ch20175	22.17	22.50	1.079	0.310	**0.334**	-0.020	**#14**
	Left Side	Ch20175	22.17	22.50	1.079	0.087	0.094	-0.134	
	Right Side	Ch20175	22.17	22.50	1.079	0.095	0.102	-0.062	
	Bottom Side	Ch20175	22.17	22.50	1.079	0.214	0.231	-0.172	
LTE Band 4 (20M 50%RB)	Front	Ch20175	22.63	23.00	1.089	0.137	0.149	0.151	
	Back	Ch20175	22.63	23.00	1.089	0.241	0.262	-0.094	
	Left Side	Ch20175	22.63	23.00	1.089	0.064	0.070	0.127	
	Right Side	Ch20175	22.63	23.00	1.089	0.067	0.073	0.053	
	Bottom Side	Ch20175	22.63	23.00	1.089	0.184	0.200	-0.159	

Test Case of Body			Meas. Power (dBm)	Target Power (dBm)	Factor	Meas. SAR (W/kg) 1g Avg.	Scale SAR (W/kg)	Power Drift <±0.2 dB	Plot
Band	Test Position	CH							
LTE Band 7 (20M 1RB)	Front	Ch20850	23.65	24.00	1.084	0.178	0.193	0.144	
	Back	Ch20850	23.65	24.00	1.084	0.724	**0.785**	0.086	**#15**
	Left Side	Ch20850	23.65	24.00	1.084	0.103	0.112	0.117	
	Right Side	Ch20850	23.65	24.00	1.084	0.134	0.145	-0.020	
	Bottom Side	Ch20850	23.65	24.00	1.084	0.561	0.608	-0.062	
LTE Band 7 (20M 50%RB)	Front	Ch20850	22.76	23.00	1.057	0.146	0.154	-0.172	
	Back	Ch20850	22.76	23.00	1.057	0.657	0.694	0.151	
	Left Side	Ch20850	22.76	23.00	1.057	0.089	0.094	-0.124	
	Right Side	Ch20850	22.76	23.00	1.057	0.102	0.108	-0.094	
	Bottom Side	Ch20850	22.76	23.00	1.057	0.445	0.470	0.053	

Test Case of Body			Meas. Power (dBm)	Target Power (dBm)	Factor	D.C Factor	Meas. SAR (W/kg) 1g	Scale SAR (W/kg)	Power Drift(dB)	Plot
Band	Test Position	CH								
WLAN 2.4G	Front	Ch1	15.43	16.00	1.140	1.02	0.114	0.133	0.094	
	Back	Ch1	15.43	16.00	1.140	1.02	0.207	**0.241**	0.114	**#16**
	Left Side	Ch1	15.43	16.00	1.140	1.02	0.046	0.054	0.054	
	Top	Ch1	15.43	16.00	1.140	1.02	0.103	0.120	0.058	

Body Worn (10mm between DUT and Flat Phantom)

Test Case of Body			Meas. Power (dBm)	Target Power (dBm)	Factor	Meas. SAR (W/kg) 1g Avg.	Scale SAR (W/kg)	Power Drift <±0.2 dB
Band	Test Position	CH						
GPRS 850 (4 Tx slots)	Front	Ch128	29.64	30.00	1.086	0.343	0.373	0.130
	Back	Ch128	29.64	30.00	1.086	0.572	**0.621**	-0.006
GPRS1900 (4Tx slots)	Front	Ch512	26.27	26.50	1.054	0.412	0.434	0.006
	Back	Ch512	26.27	26.50	1.054	0.687	**0.724**	-0.099
WCDMA Band V	Front	Ch4132	23.17	23.50	1.079	0.204	0.220	0.086
	Back	Ch4132	23.17	23.50	1.079	0.342	**0.369**	-0.020
WCDMA Band II	Front	Ch9400	22.00	22.50	1.122	0.449	0.504	0.151
	Back	Ch9400	22.00	22.50	1.122	0.711	**0.798**	-0.094
LTE Band2 (20M 1RB)	Front	Ch18700	23.76	24.00	1.057	0.378	0.399	0.130
	Back	Ch18700	23.76	24.00	1.057	0.533	**0.563**	-0.006
LTE Band2 (20M 50%RB)	Front	Ch18700	22.81	23.00	1.045	0.312	0.326	0.006
	Back	Ch18700	22.81	23.00	1.045	0.448	0.468	-0.099
LTE Band 4 (20M 1RB)	Front	Ch20175	22.17	22.50	1.079	0.176	0.190	0.086
	Back	Ch20175	22.17	22.50	1.079	0.310	**0.334**	-0.020
LTE Band 4 (20M 50%RB)	Front	Ch20175	22.63	23.00	1.089	0.137	0.149	0.151
	Back	Ch20175	22.63	23.00	1.089	0.241	0.262	-0.094
LTE Band 7 (20M 1RB)	Front	Ch20850	23.65	24.00	1.084	0.178	0.193	0.144
	Back	Ch20850	23.65	24.00	1.084	0.724	**0.785**	0.086
LTE Band 7 (20M 50%RB)	Front	Ch20850	22.76	23.00	1.057	0.146	0.154	-0.172
	Back	Ch20850	22.76	23.00	1.057	0.657	0.694	0.151
WLAN 2.4G	Front	Ch1	15.43	16.00	1.140/ 1.02	0.114	0.133	0.094
	Back	Ch1	15.43	16.00	1.140/ 1.02	0.207	**0.241**	0.114

13.2 Evaluation of Simultaneous:

BT* - Estimated SAR for Bluetooth

(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[$\sqrt{f_{(GHz)}}/x$] W/kg for test separation distances ≤ 50 mm;
where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.

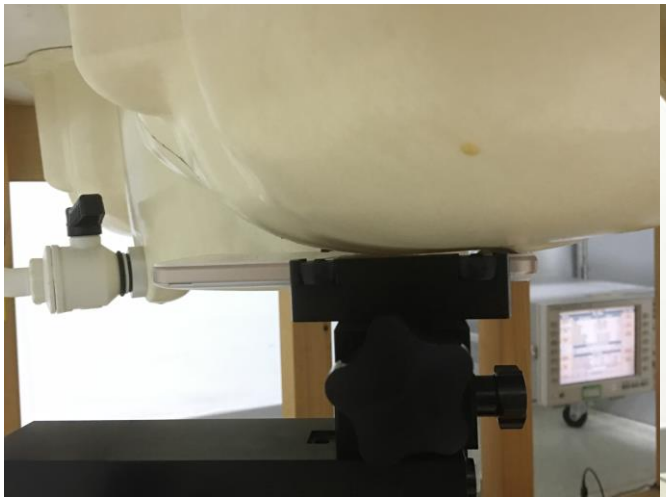
Maximum Turn up Power	Exposure Position	Head	Hotspot	Body-worn
	Test separation	0 mm	10 mm	10 mm
3dBm	Estimated SAR (W/kg)	0.084W/kg	0.042W/kg	0.042W/kg

Conclusion:
According to the above table, the sum of reported SAR values for GSM/WCDMA/LTE and WIFI/BT ＜1.6W/kg. So the simultaneous transmission SAR is not required for WIFI/BT transmitter.

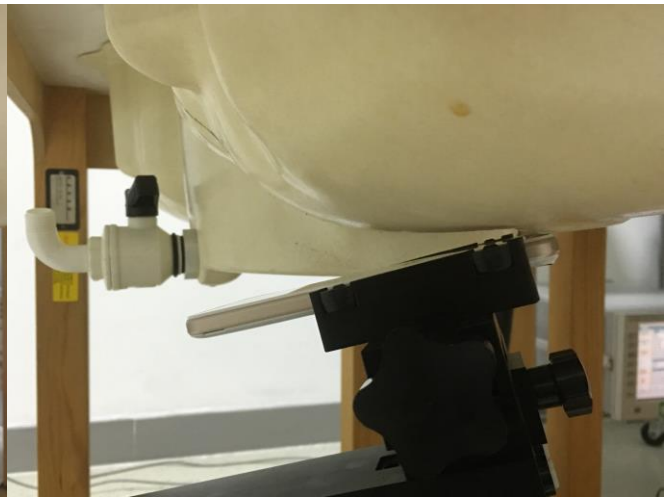
13.3 DUT and setup photos:

Front

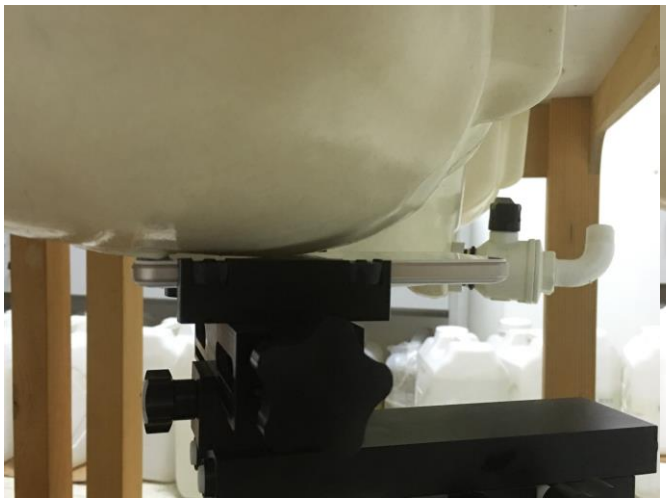
Back



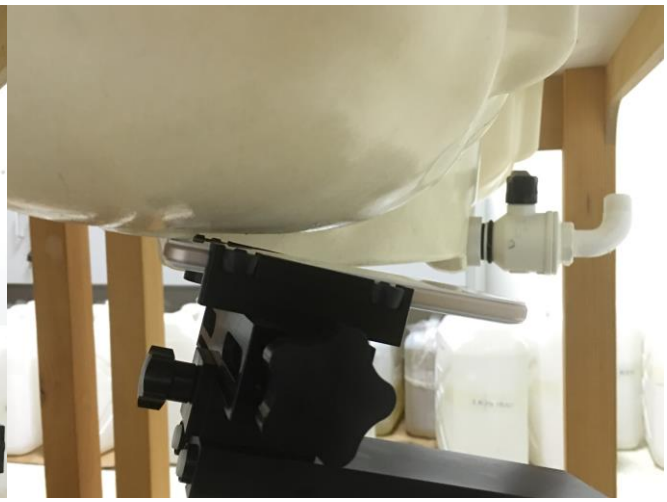
Left Cheek



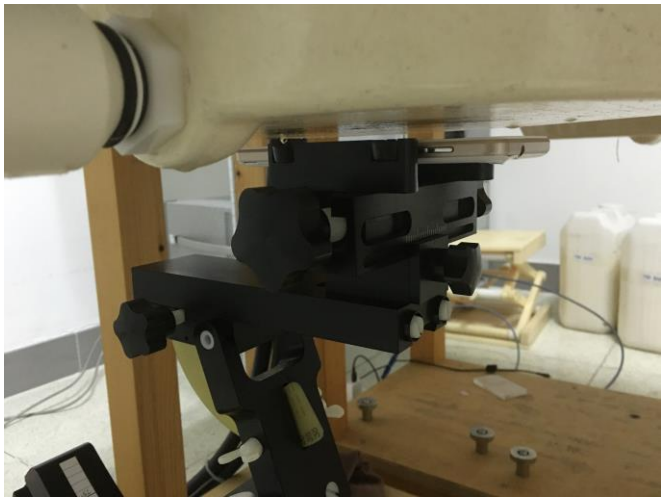
Left Tilt



Right Cheek



Right Tilt



Front of the EUT with 1 cm Gap

Back of the EUT with 1 cm Gap

Left Side of the EUT with 1 cm Gap

Right Side of the EUT with 1 cm Gap

Top of the EUT with 1 cm Gap

Bottom of the EUT with 1 cm Gap

14. Equipment List:

NO.	Instrument	Manufacturer	Model	S/N	Cal. Date	Cal. Due Date
1	Communication Tester	Agilent	E5515C	MY50267264	Dec 26th 2015	Dec 25th 2016
2	Communication Tester	R&S	CMW500	116581	Jul 7th 2015	Jul 6th 2016
3	E-field Probe	Speag	ES3DV3	3028	Oct 22th 2014	Oct 21th 2015
4	Dielectric Probe Kit	Speag	DAK	1038	N/A	N/A
5	DAE	Speag	DAE4	905	Jul 16th 2015	Jul 15th 2016
6	SAM TWIN phantom	Speag	SAM	1360/1432	N/A	N/A
7	Robot	Stabuli	TX60L	N/A	N/A	N/A
8	Device Holder	Speag	SD000H01HA	N/A	N/A	N/A
9	Vector Network	Agilent	E5071C	MY46107615	Jan 6th 2015	Jan 7th 2016
10	Signal Generator	Agilent	E4438C	MY49072279	Nov 27th 2014	Nov 26th 2015
11	Amplifier	Mini-circult	ZHL-42W	QA098002	N/A	N/A
12	Power Meter	Agilent	N1419A	MY50001563	Nov 27th 2014	Nov 26th 2015
13	Power Sensor	Agilent	N8481H	MY51020010	Nov 27th 2014	Nov 26th 2015
14	Directional Coupler	Agilent	772D	MY46151275	Nov 27th 2014	Nov 26th 2015
15	Directional Coupler	Agilent	778D	MY48220607	Nov 27th 2014	Nov 26th 2015
16	Dipole 900MHz	Speag	D900V2	1d086	Aug 9th 2013	Aug 8th 2016
17	Dipole 1750MHz	SPEAG	D1750V2	1021	Aug 2nd 2013	Aug 1st 2016
18	Dipole 1900MHz	Speag	D1900V2	5d194	Jan 7th 2015	Aug 6th 2018
19	Dipole 2450MHz	Speag	D2450V2	955	Jan 8th 2015	Jan 7th 2018
20	Dipole 2600MHz	SPEAG	D2600V2	1058	Jun 23th 2015	Jun 22th 2018

Appendix A. System validation plots:

Date: 10/12/2015

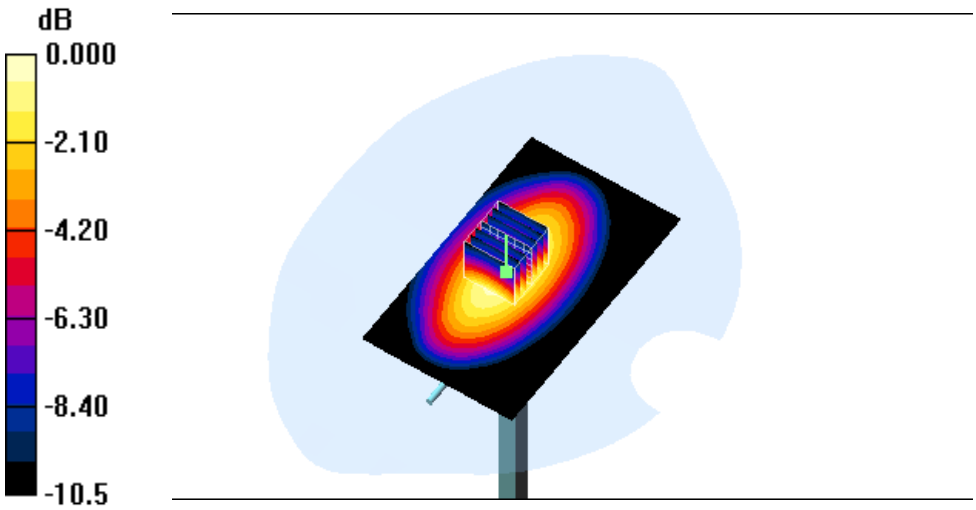
DUT: Dipole 900MHz; Type: D900V2; Serial: D900V2 - SN: 1d086
Program Name: System Performance Check Head at 900 MHz

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 0.96 mho/m; ε_r = 42.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(6.19, 6.19, 6.19); Calibrated:10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 2; Type: SAM; Serial: TP-1432
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=15mm, Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.82 mW/g

d=15mm, Pin=250mW/Zoom Scan (5x5x7) (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 54.523 V/m; Power Drift = -0.01dB
Peak SAR (extrapolated) = 4.068 W/kg
SAR(1 g) = 2.65 mW/g; SAR(10 g) = 1.71 mW/g
Maximum value of SAR (measured) = 2.90 mW/g



0 dB = 2.90mW/g

Date: 10/15/2015

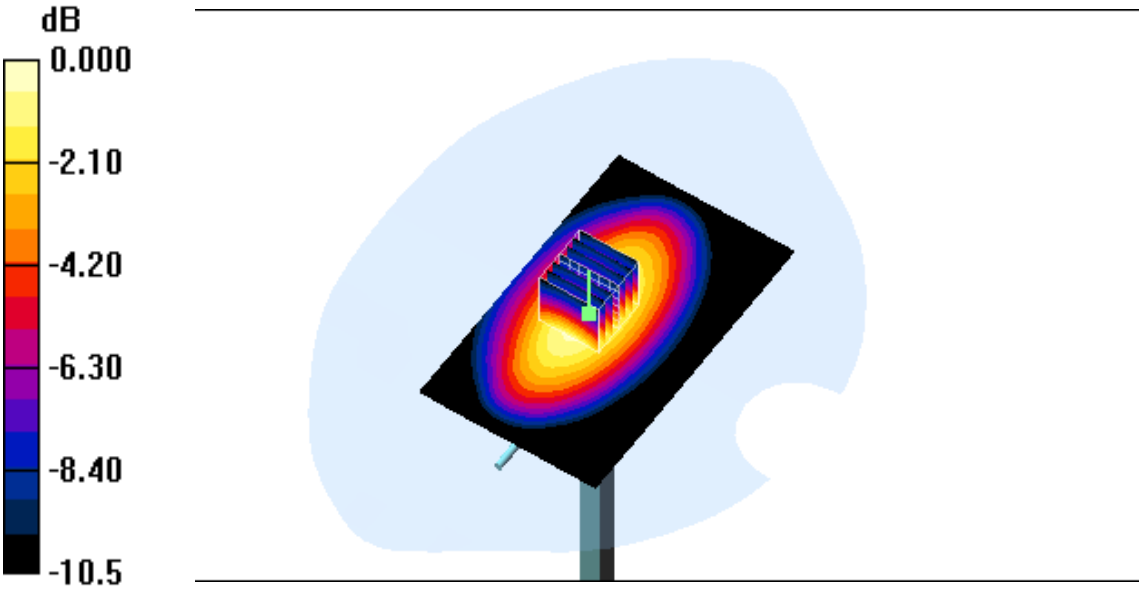
DUT: Dipole 900MHz; Type: D900V2; Serial: D900V2 - SN: 1d086
Program Name: System Performance Check at 900 MHz Body

Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1.02 mho/m; ε_r = 54.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(6.02, 6.02, 6.02); Calibrated:10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 2; Type: SAM; Serial: TP-1432
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=15mm, Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 2.72 mW/g

d=15mm, Pin=250mW/Zoom Scan (5x5x7) (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 54.523 V/m; Power Drift = -0.01dB
Peak SAR (extrapolated) = 4.068 W/kg
SAR(1 g) = 2.46 mW/g; SAR(10 g) = 1.62 mW/g
Maximum value of SAR (measured) = 2.80 mW/g



0 dB = 2.90mW/g

Date: 10/13/2015

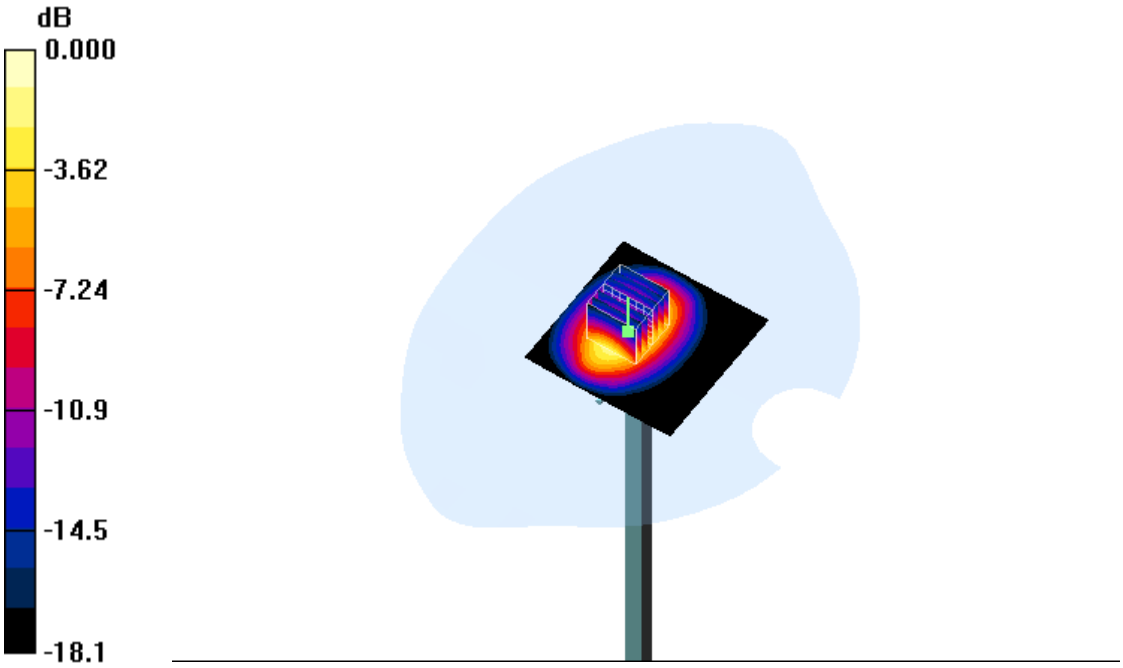
DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1021
Program Name: System Performance Check Head at 1750 MHz

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.36 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.97, 4.97, 4.97); Calibrated:10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=10mm, Pin=250mW/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 8.60 mW/g

d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 83.712 V/m; Power Drift = 0.03dB
Peak SAR (extrapolated) = 16.718 W/kg
SAR(1 g) = 8.81 mW/g; SAR(10 g) = 4.54 mW/g
Maximum value of SAR (measured) = 9.93 mW/g



0 dB = 9.93mW/g

Date: 10/16/2015

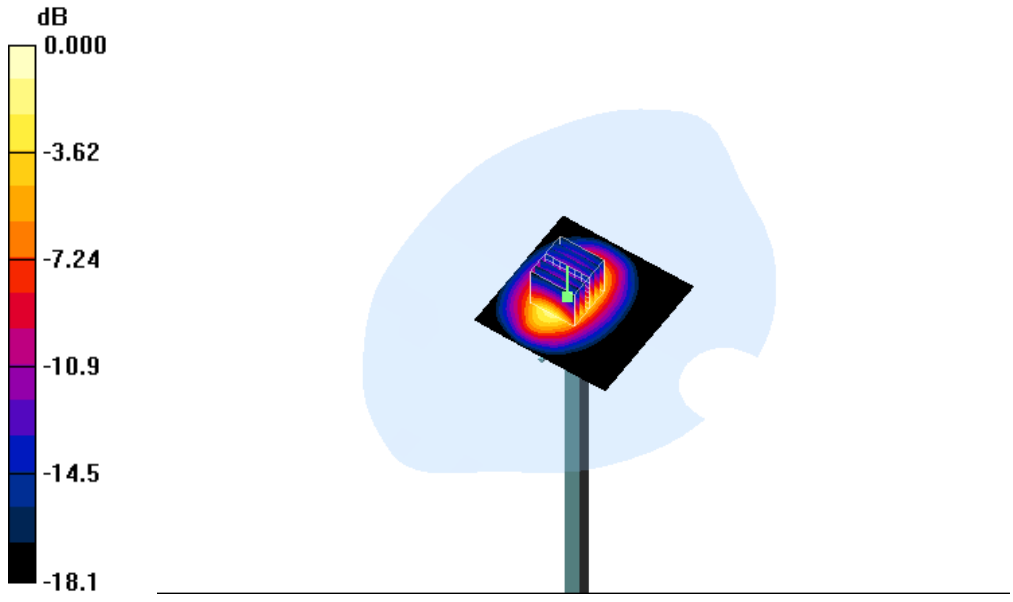
DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1021
Program Name: System Performance Check Body at 1750 MHz

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1750 MHz; σ = 1.54 mho/m; ε_r = 54.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.69, 4.69, 4.69); Calibrated:10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=15mm, Pin=250mW/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 12.60 mW/g

d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 81.17 V/m; Power Drift = 0.03dB
Peak SAR (extrapolated) = 15.81 W/kg
SAR(1 g) = 9.05 mW/g; SAR(10 g) = 4.86 mW/g
Maximum value of SAR (measured) = 12.8 mW/g



0 dB = 12.8mW/g

Date: 10/13/2015

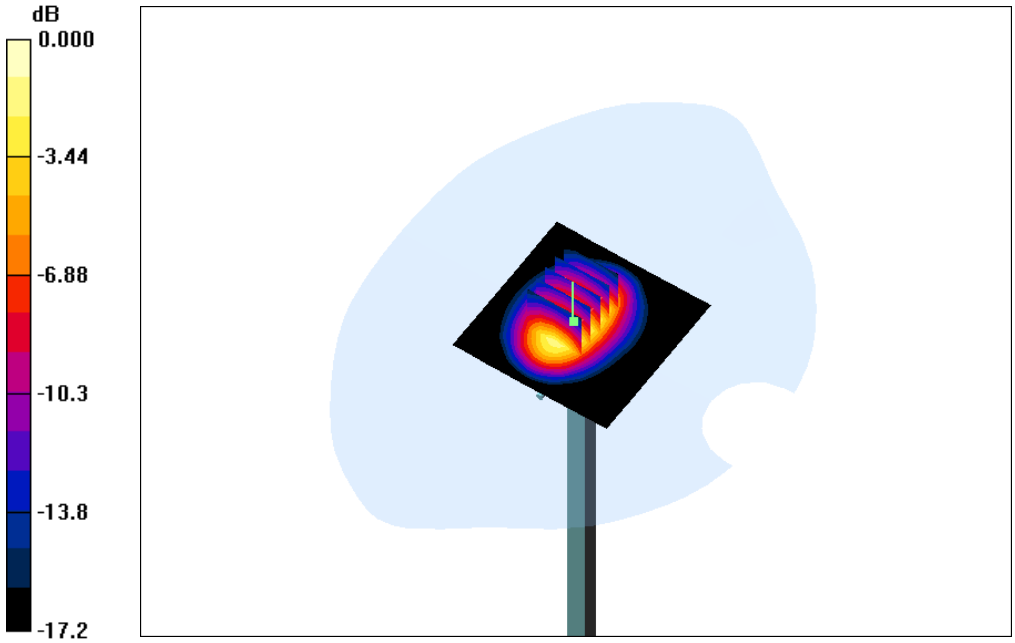
DUT: Dipole 1900MHz; Type: D1900V2; Serial: 5d194
Program Name: System Performance Check Head at 1900 MHz

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.42 mho/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.68, 4.68, 4.68); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=10mm, Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 11.3 mW/g

d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 80.6 V/m; Power Drift = -0.005 dB
Peak SAR (extrapolated) = 17.5 W/kg
SAR(1 g) = 9.86 mW/g; SAR(10 g) = 5.24 mW/g
Maximum value of SAR (measured) = 11.2 mW/g



0 dB = 11.2mW/g

Date: 10/16/2015

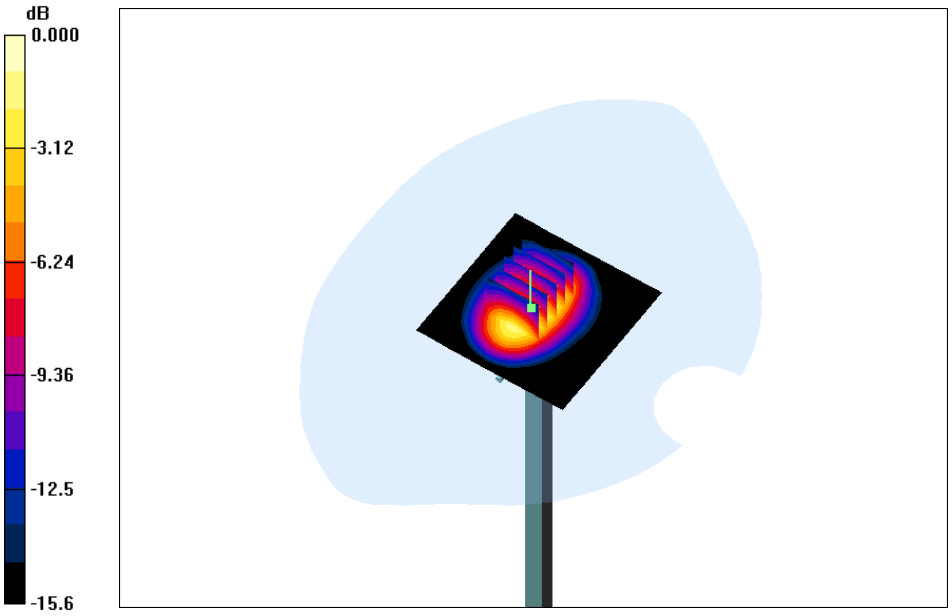
DUT: Dipole 1900MHz; Type: D1900V2; Serial: 5d194
Program Name: System Performance Check at Body 1900 MHz

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.54 mho/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.48, 4.48, 4.48); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=10mm, Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 12.8 mW/g

d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 85.9 V/m; Power Drift = 0.109 dB
Peak SAR (extrapolated) = 19.7 W/kg
SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.42 mW/g
Maximum value of SAR (measured) = 12.5 mW/g



0 dB = 12.5mW/g

Date: 10/14/2015

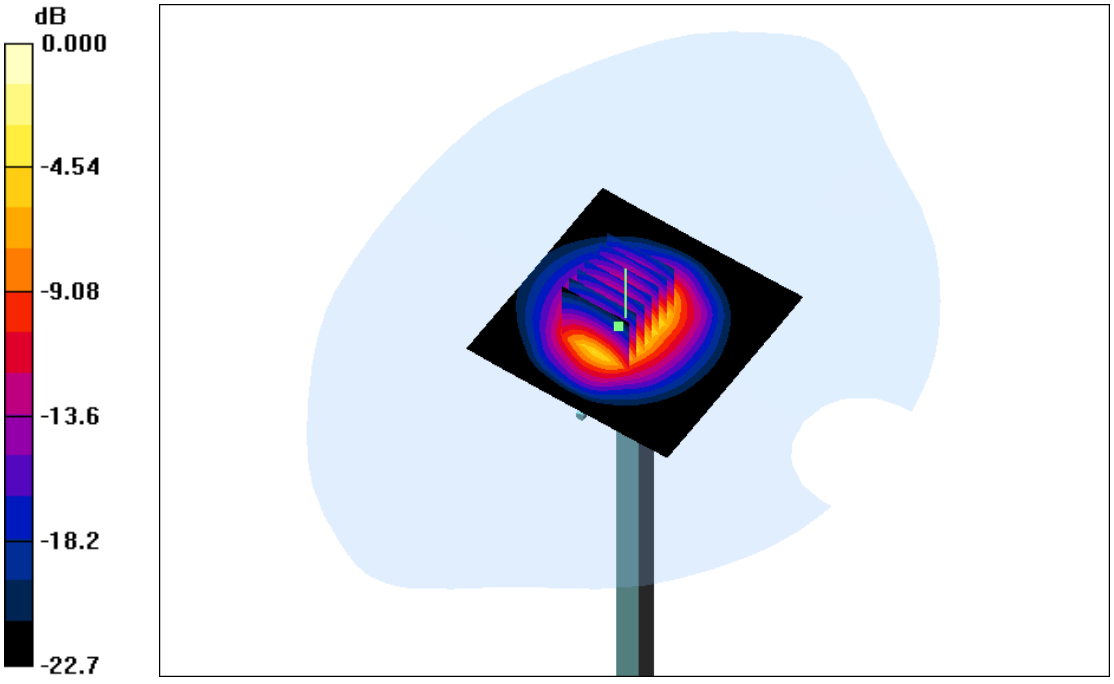
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 955
Program Name: System Performance Check Head at 2450 MHz

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.83 mho/m; ε_r = 38.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.21, 4.21, 4.21); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=10mm, Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 16.7 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 87.0 V/m; Power Drift = 0.019 dB
Peak SAR (extrapolated) = 30.7 W/kg
SAR(1 g) = 13.3 mW/g; SAR(10 g) = 6.44 mW/g
Maximum value of SAR (measured) = 16.2 mW/g



0 dB = 16.2mW/g

Date: 10/20/2015

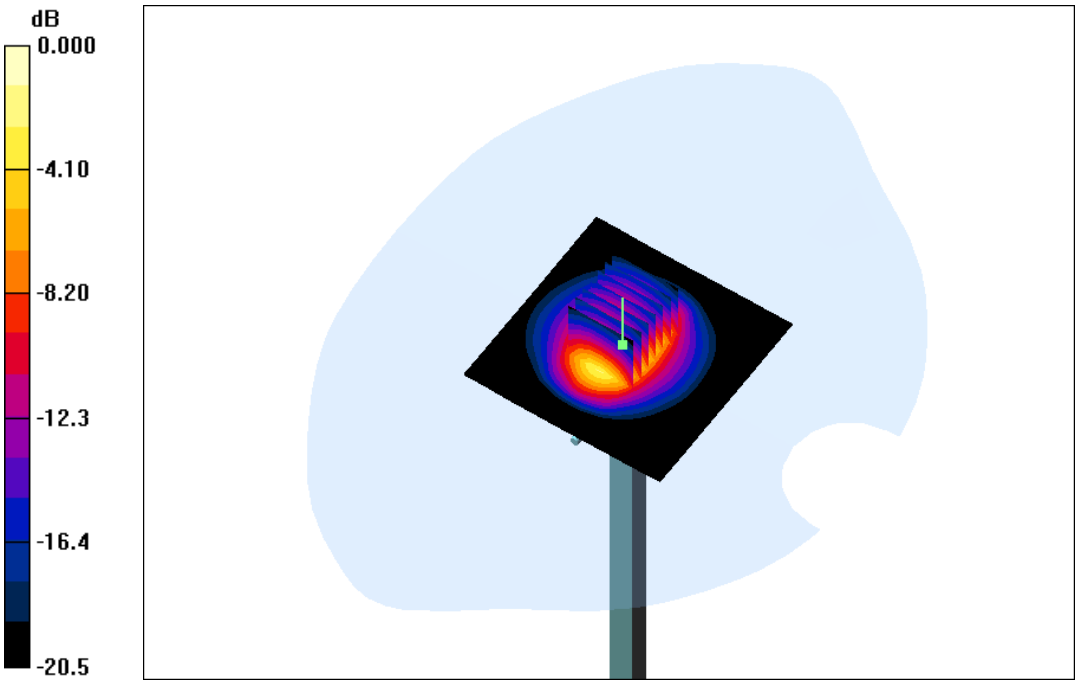
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 955
Program Name: System Performance Check Body at 2450 MHz

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.91 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.14, 4.14, 4.14); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=10mm, Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 16.2 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 89.5 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 27.0 W/kg
SAR(1 g) = 13.5 mW/g; SAR(10 g) = 6.35 mW/g
Maximum value of SAR (measured) = 15.4 mW/g



0 dB = 15.4mW/g

Date: 10/14/2015

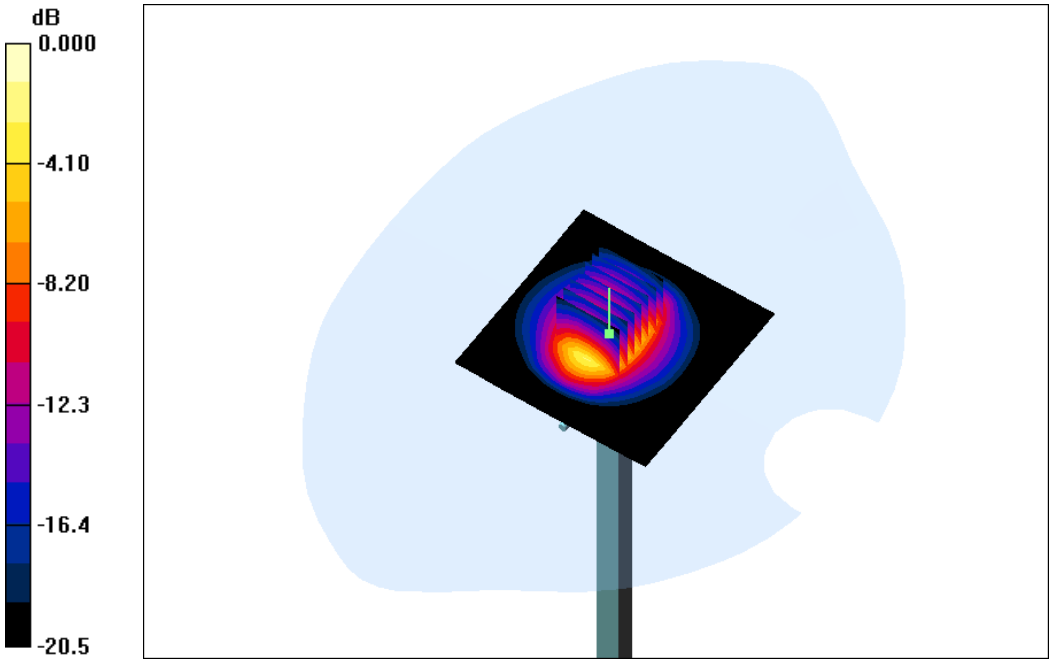
DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1058
Program Name: System Performance Check Head at 2600 MHz

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ =1.96 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.06, 4.06, 4.06); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=10mm, Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 21.1 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 84.1 V/m; Power Drift = 0.032 dB
Peak SAR (extrapolated) = 30.2 W/kg
SAR(1 g) = 14.4 mW/g; SAR(10 g) = 6.46 mW/g
Maximum value of SAR (measured) =19.7 mW/g



0 dB = 19.7mW/g

Date: 10/19/2015

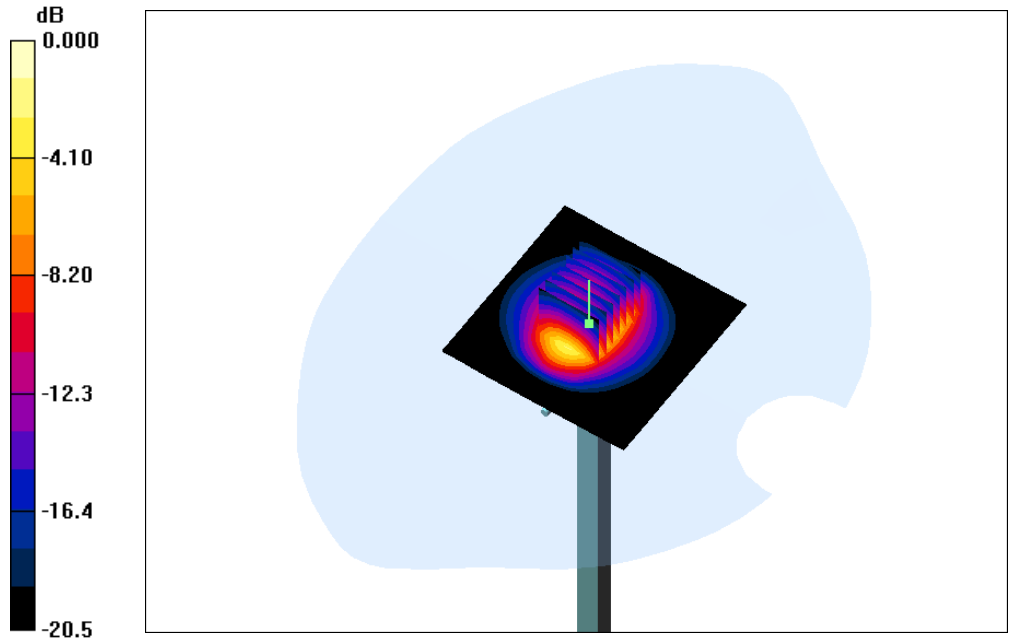
DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1058
Program Name: System Performance Check Body at 2600 MHz

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.21 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.02, 4.02, 4.02); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

d=10mm, Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 25.1 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 89.4 V/m; Power Drift = 0.018 dB
Peak SAR (extrapolated) = 34.1 W/kg
SAR(1 g) = 14.5 mW/g; SAR(10 g) = 6.47 mW/g
Maximum value of SAR (measured) = 23.2 mW/g



0 dB = 23.2mW/g

Appendix B. SAR Test plots:

#1

Date: 10/12/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

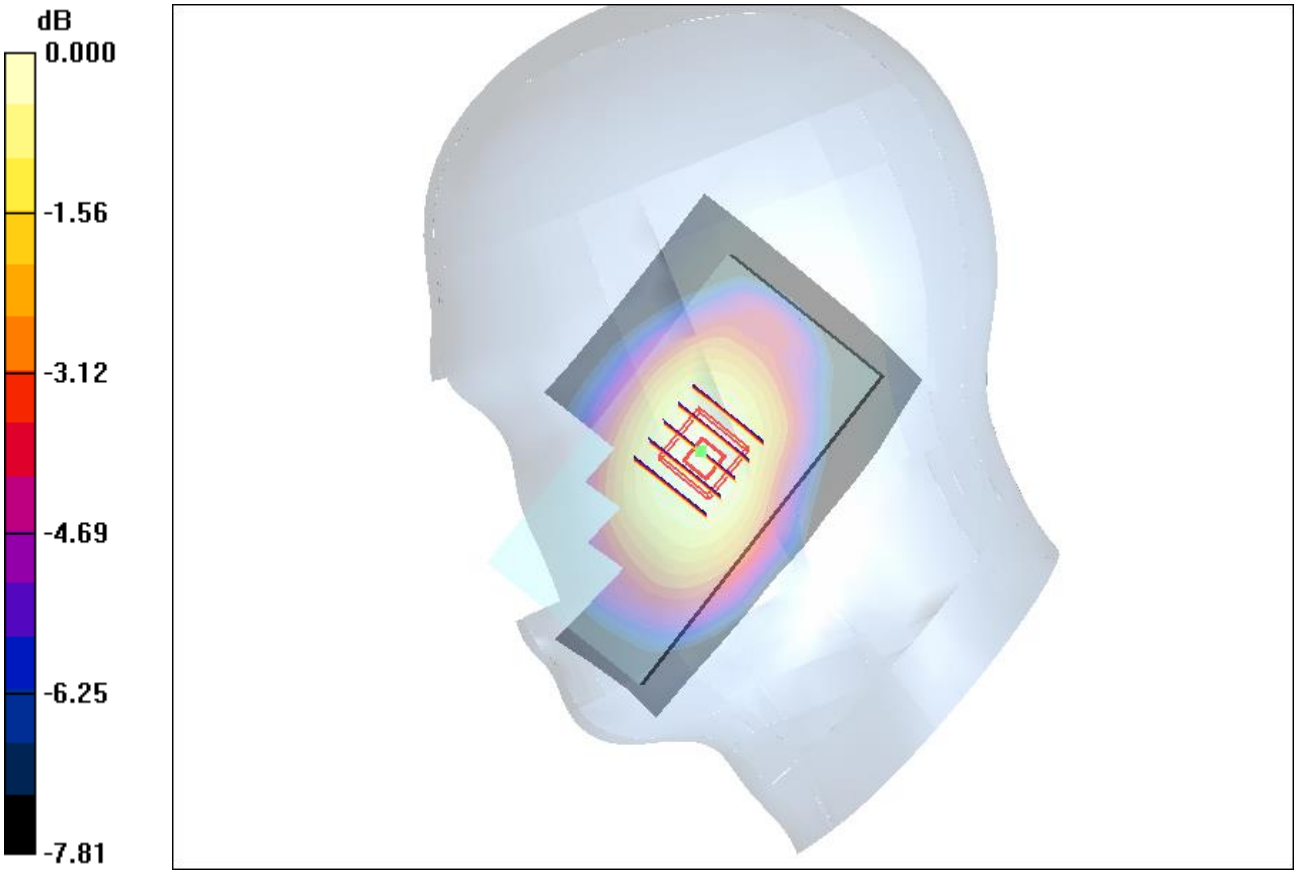
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.907 mho/m; ε_r = 41.4; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(6.19, 6.19, 6.19); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 2; Type: SAM; Serial: TP-1432
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Right Cheek/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.296 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.84 V/m; Power Drift = 0.064 dB
Peak SAR (extrapolated) = 0.351 W/kg
SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.217 mW/g
Maximum value of SAR (measured) = 0.297 mW/g



0 dB = 0.297mW/g

#2

Date: 10/13/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

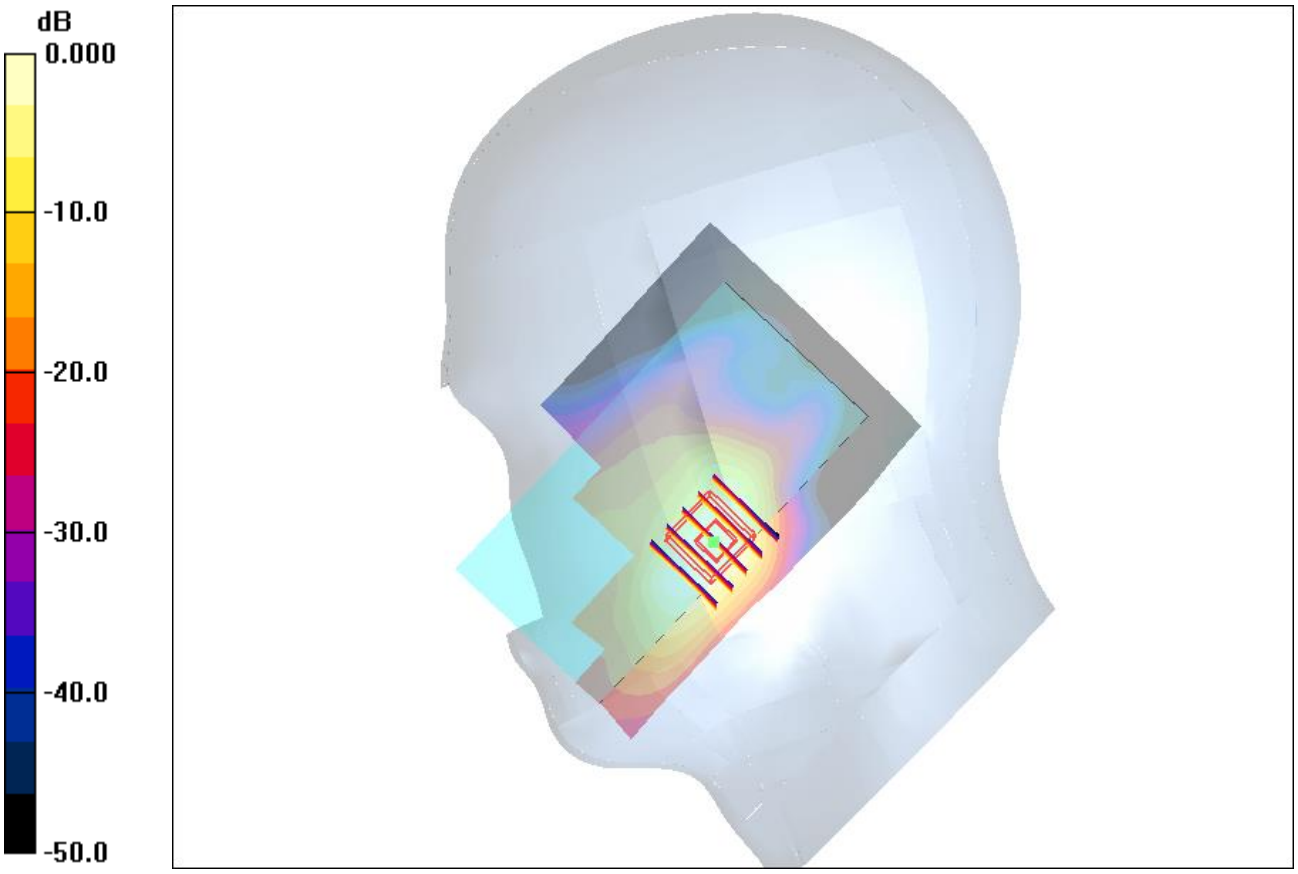
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: GSM 1900; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.36 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.68, 4.68, 4.68); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Right Cheek/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.219 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.52 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.223 W/kg
SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.0831 mW/g
Maximum value of SAR (measured) = 0.218 mW/g



0 dB = 0.218mW/g

#3

Date: 10/12/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

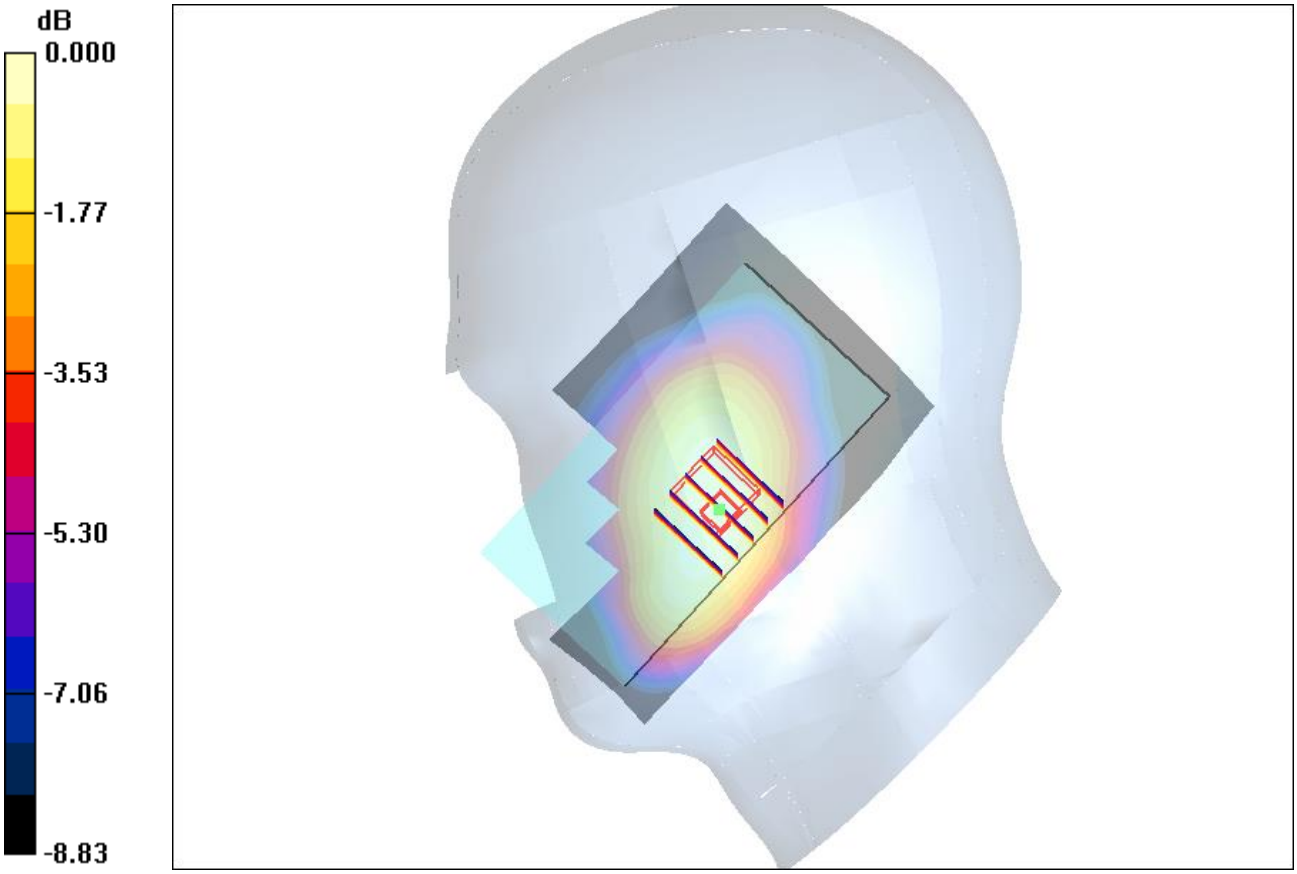
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: W850; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.911 mho/m; ε_r = 41.2; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(6.19, 6.19, 6.19); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 2; Type: SAM; Serial: TP-1432
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Right Cheek/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.343 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.13 V/m; Power Drift = -0.150 dB
Peak SAR (extrapolated) = 0.455 W/kg
SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.090 mW/g
Maximum value of SAR (measured) = 0.342 mW/g



0 dB = 0.342mW/g

#4

Date: 10/13/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

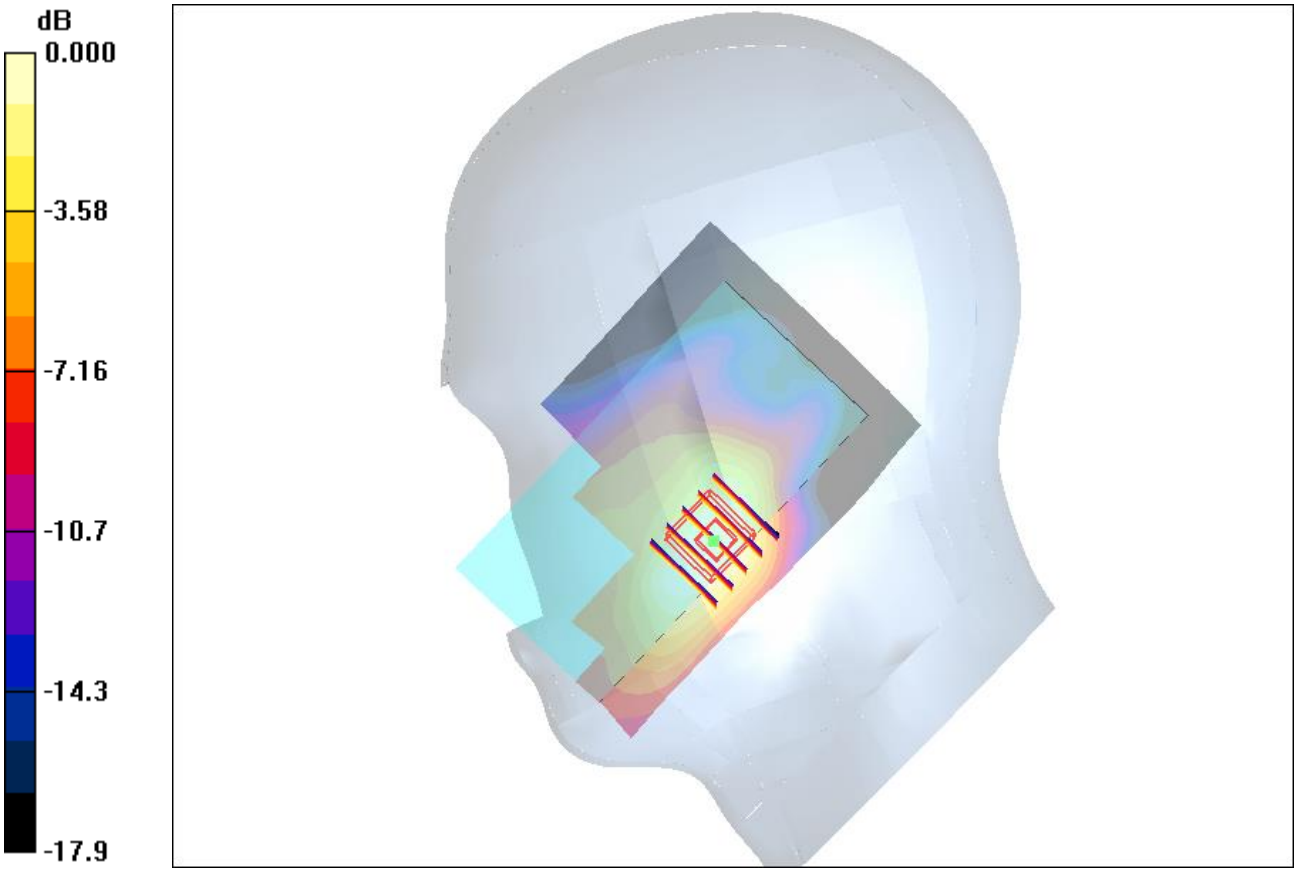
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: W1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.39 mho/m; ε_r = 39.7; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.68, 4.68, 4.68); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Right Cheek/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.334 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.79 V/m; Power Drift = -0.086 dB
Peak SAR (extrapolated) = 0.472 W/kg
SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.167 mW/g
Maximum value of SAR (measured) = 0.313 mW/g



0 dB = 0.313mW/g

#5

Date: 10/13/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

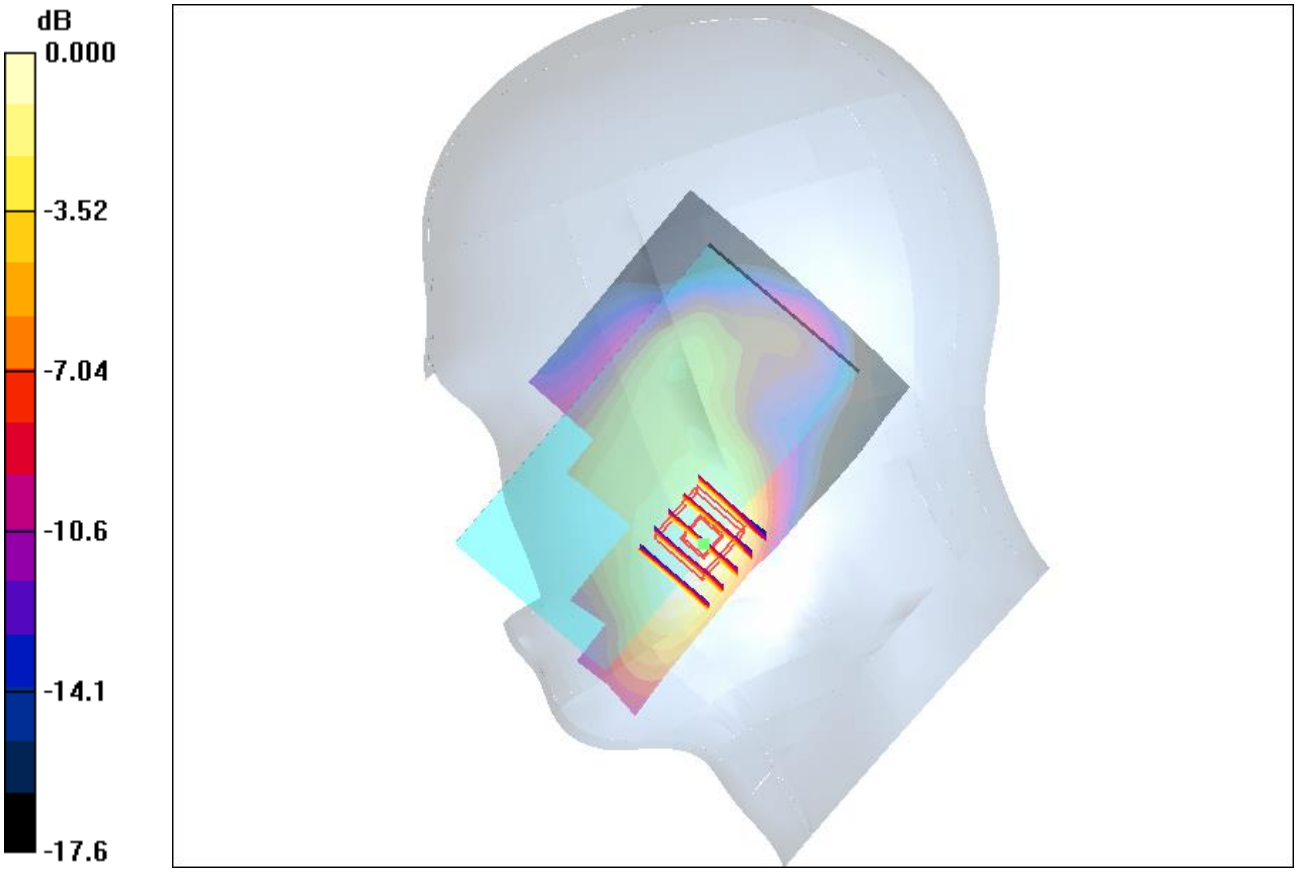
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: LTE; Frequency: 1860 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.37 mho/m; ε_r = 39.8; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.68, 4.68, 4.68); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Right Cheek/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.364 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.13 V/m; Power Drift = 0.064 dB
Peak SAR (extrapolated) = 0.486 W/kg
SAR(1 g) = 0.304 mW/g; SAR(10 g) = 0.185 mW/g
Maximum value of SAR (measured) = 0.327 mW/g



0 dB = 0.327mW/g

#6

Date: 10/13/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

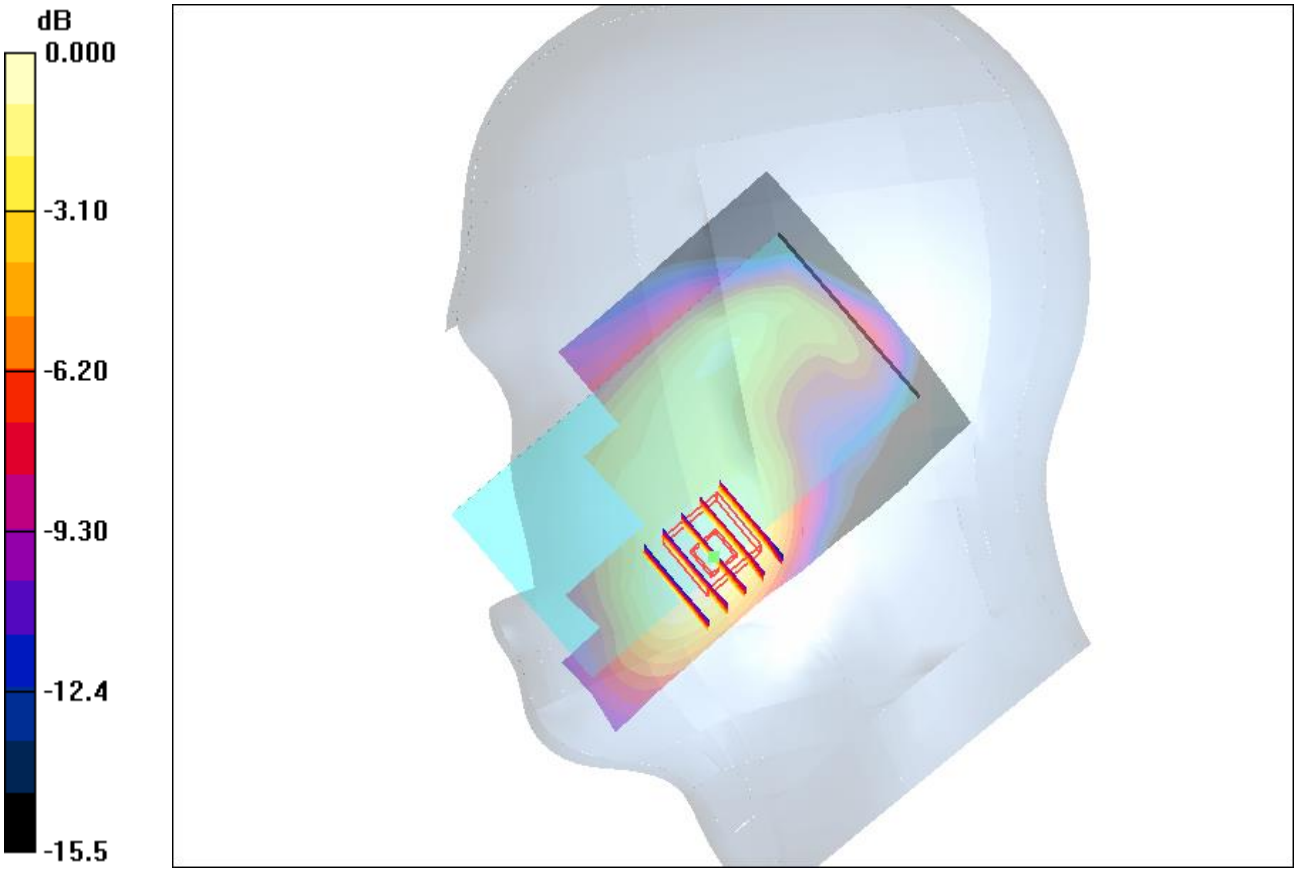
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: LTE; Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.25 mho/m; ε_r = 40.3; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.97, 4.97, 4.97); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Right Cheek/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.075 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.99 V/m; Power Drift = 0.044 dB
Peak SAR (extrapolated) = 0.104 W/kg
SAR(1 g) = 0.0693 mW/g; SAR(10 g) = 0.044 mW/g
Maximum value of SAR (measured) = 0.075 mW/g



0 dB = 0.075mW/g

#7

Date: 10/14/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

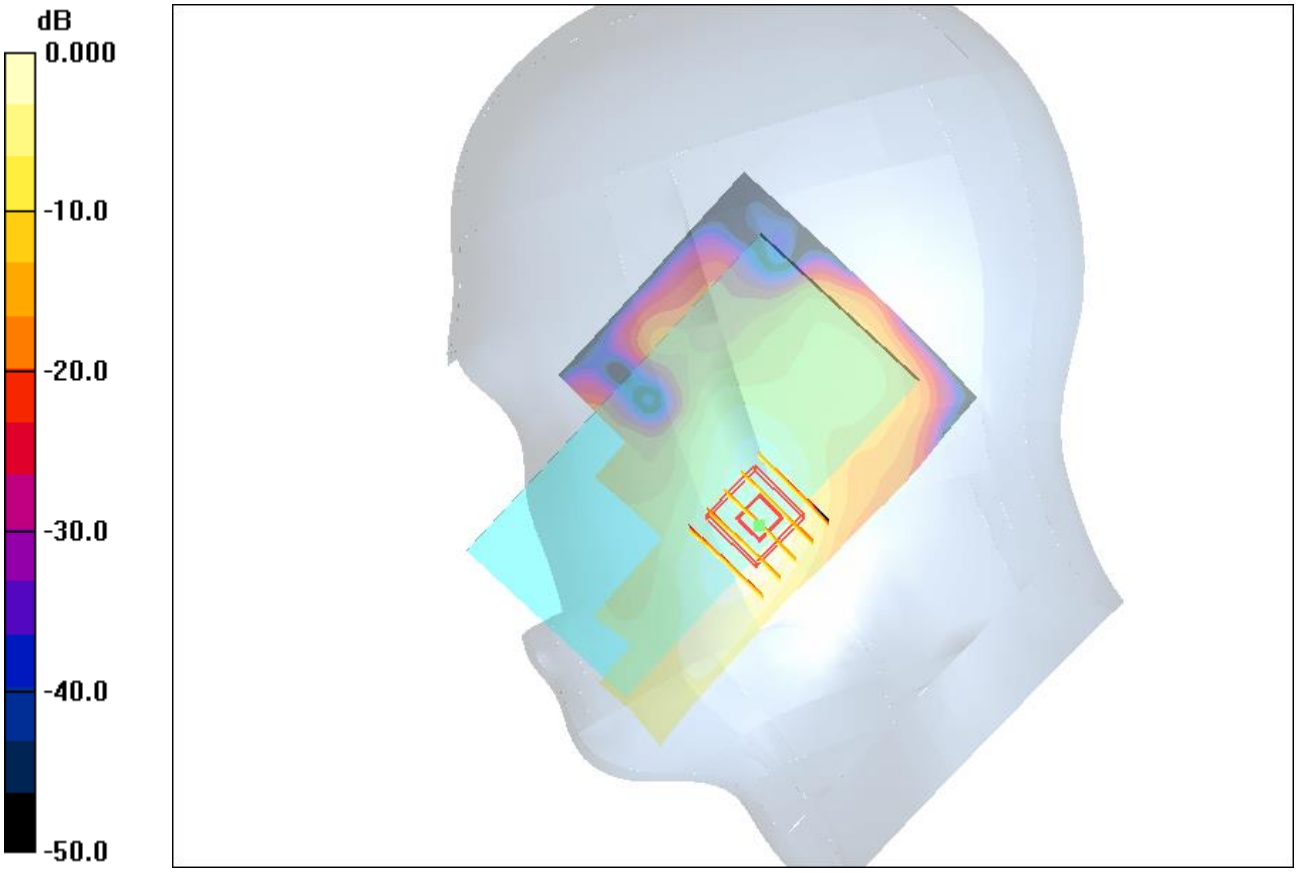
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: LTE; Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2510 MHz; σ = 1.81 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.21, 4.21, 4.21); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Right Cheek/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.095 mW/g

Right Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.74 V/m; Power Drift = -0.150 dB
Peak SAR (extrapolated) = 0.166 W/kg
SAR(1 g) = 0.0941 mW/g; SAR(10 g) = 0.042 mW/g
Maximum value of SAR (measured) = 0.099 mW/g



0 dB = 0.099mW/g

#8

Date: 10/14/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

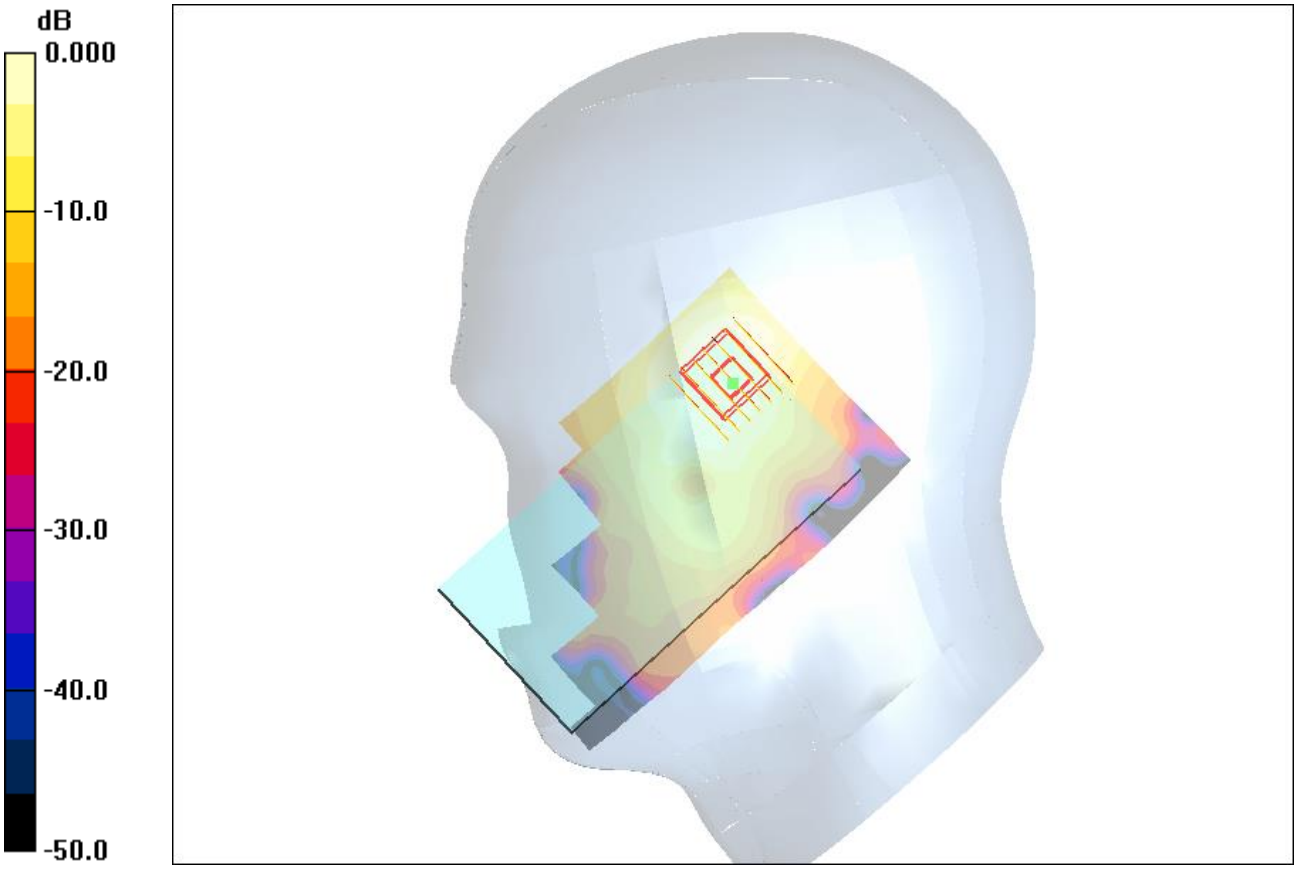
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: 802.11; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2412 MHz; σ = 1.77 mho/m; ε_r = 37.8; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.21, 4.21, 4.21); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Right Cheek/Area Scan (81x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.118 mW/g

Right Cheek/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.56 V/m; Power Drift = -0.052 dB
Peak SAR (extrapolated) = 0.211 W/kg
SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.051 mW/g
Maximum value of SAR (measured) = 0.115 mW/g



0 dB = 0.115mW/g

#9

Date: 10/15/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

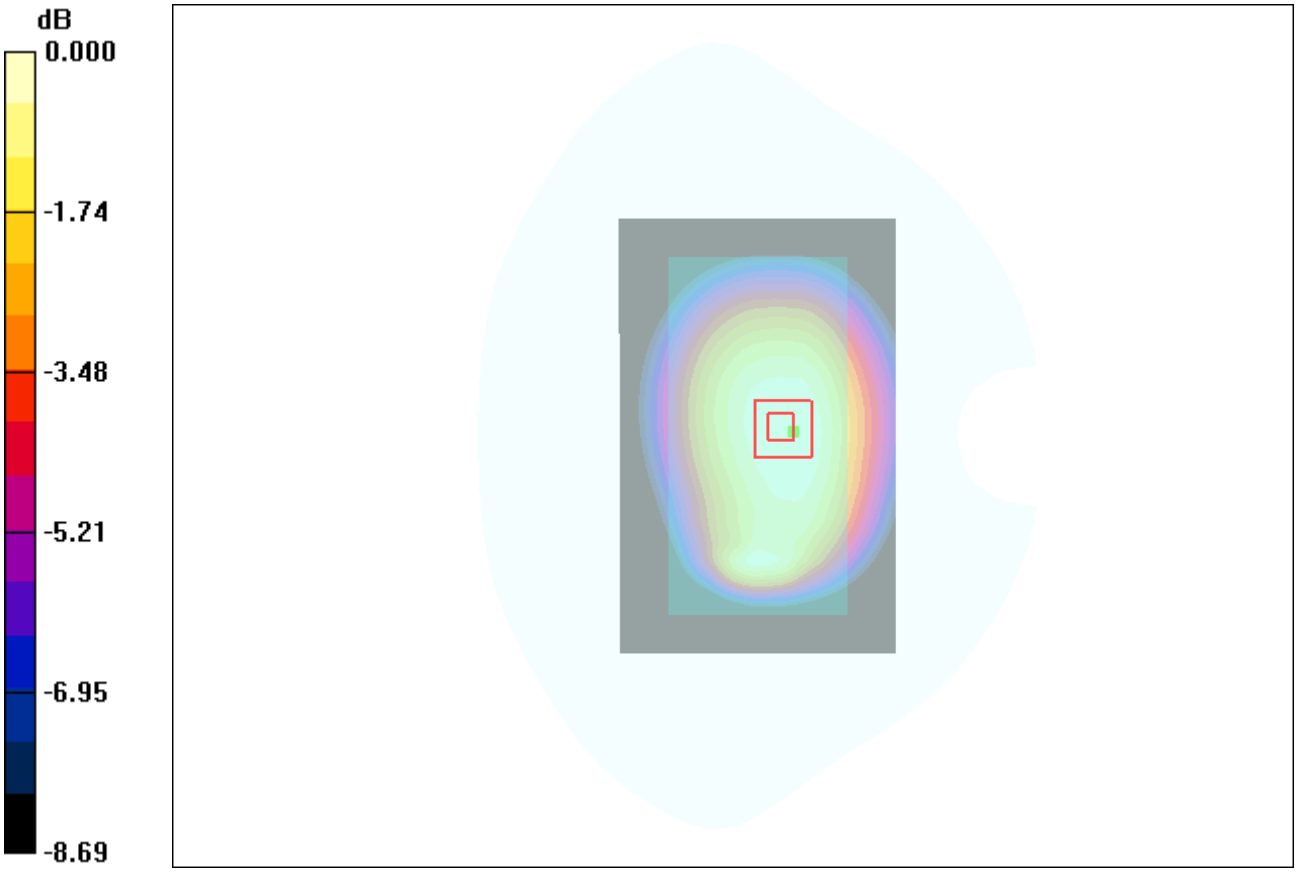
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: GSM 850; Frequency: 824.2 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.919 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(6.19, 6.19, 6.19); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 2; Type: SAM; Serial: TP-1432
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Back/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.594 mW/g

Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.1 V/m; Power Drift = -0.006 dB
Peak SAR (extrapolated) = 0.719 W/kg
SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.432 mW/g
Maximum value of SAR (measured) = 0.601 mW/g



0 dB = 0.601mW/g

#10

Date: 10/16/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

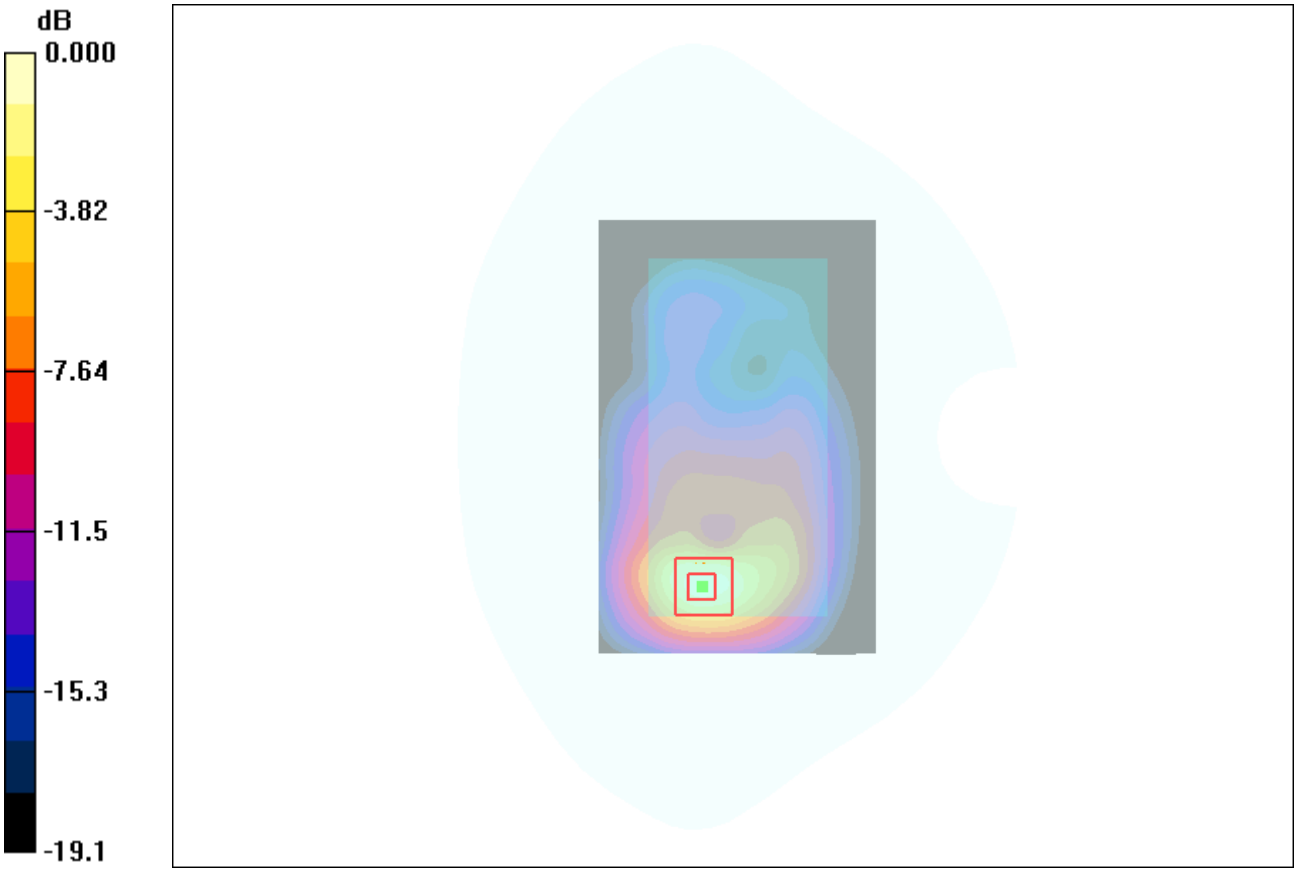
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: GPRS1900; Frequency: 1850.2 MHz;Duty Cycle: 1:2
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.48 mho/m; ε_r = 52.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.48, 4.48, 4.48); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Back/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.966 mW/g

Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.19 V/m; Power Drift = -0.099 dB
Peak SAR (extrapolated) = 1.78 W/kg
SAR(1 g) = 0.687 mW/g; SAR(10 g) = 0.358 mW/g
Maximum value of SAR (measured) = 1.09 mW/g



0 dB = 1.09mW/g

#11

Date: 10/15/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

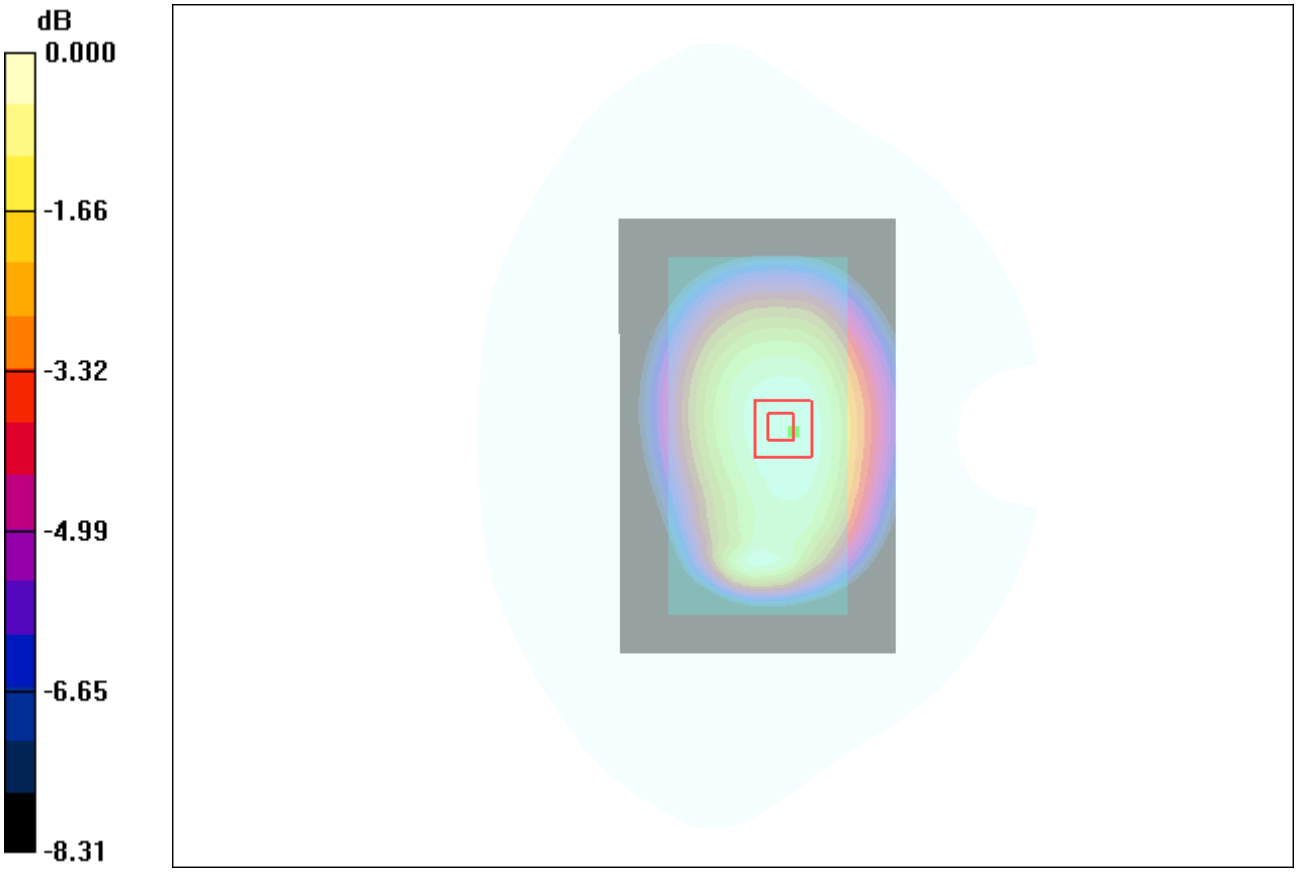
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: W850; Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.922 mho/m; ε_r = 42.9; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(6.19, 6.19, 6.19); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 2; Type: SAM; Serial: TP-1432
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Back 2/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.359 mW/g

Back 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.3 V/m; Power Drift = -0.020 dB
Peak SAR (extrapolated) = 0.432 W/kg
SAR(1 g) = 0.342 mW/g; SAR(10 g) = 0.258 mW/g
Maximum value of SAR (measured) = 0.358 mW/g



0 dB = 0.358mW/g

#12

Date: 10/16/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

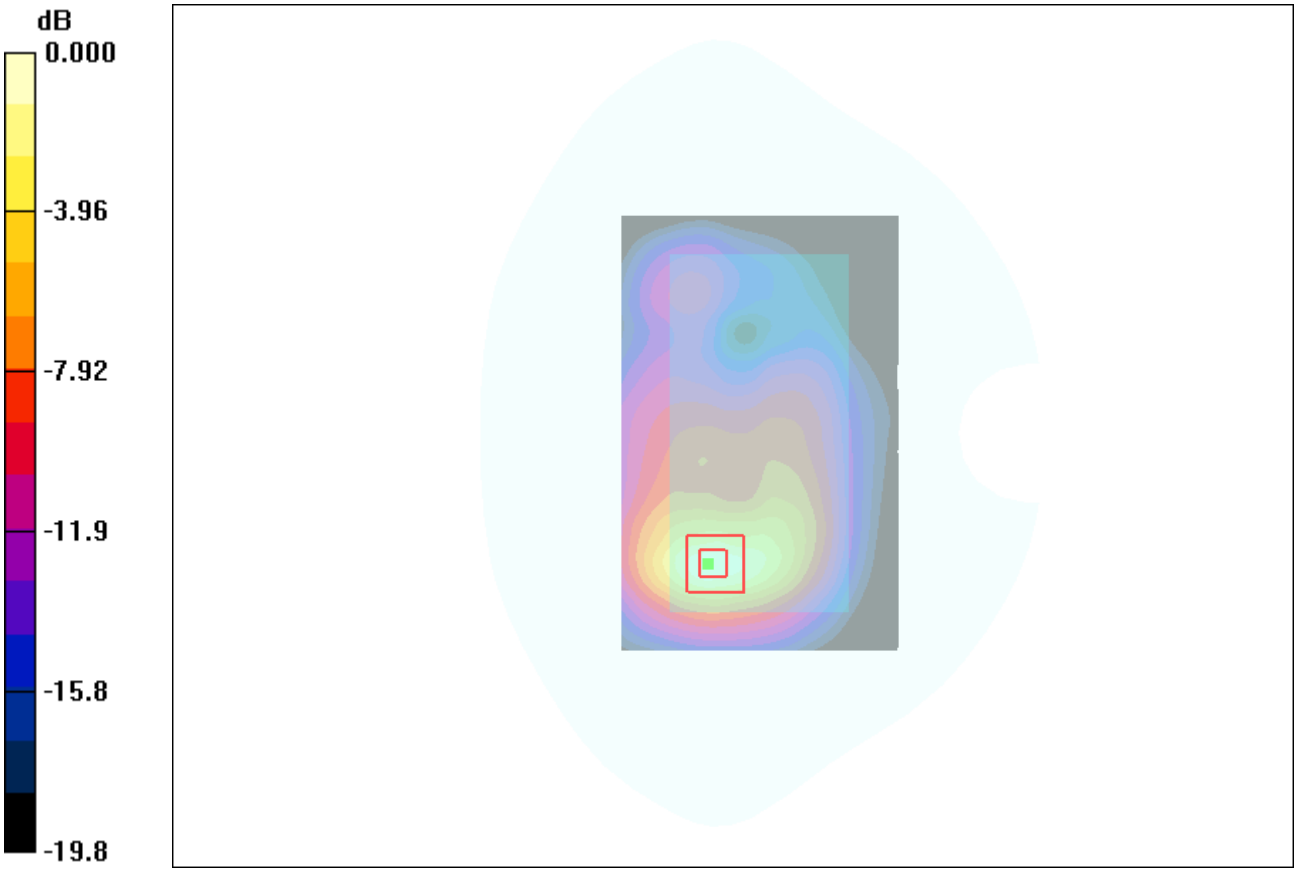
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: W1900; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.48, 4.48, 4.48); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Back/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.13 mW/g

Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.0 V/m; Power Drift = -0.094 dB
Peak SAR (extrapolated) = 1.67 W/kg
SAR(1 g) = 0.711 mW/g; SAR(10 g) = 0.404 mW/g
Maximum value of SAR (measured) = 1.19 mW/g



0 dB = 1.59mW/g

#13

Date: 10/16/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

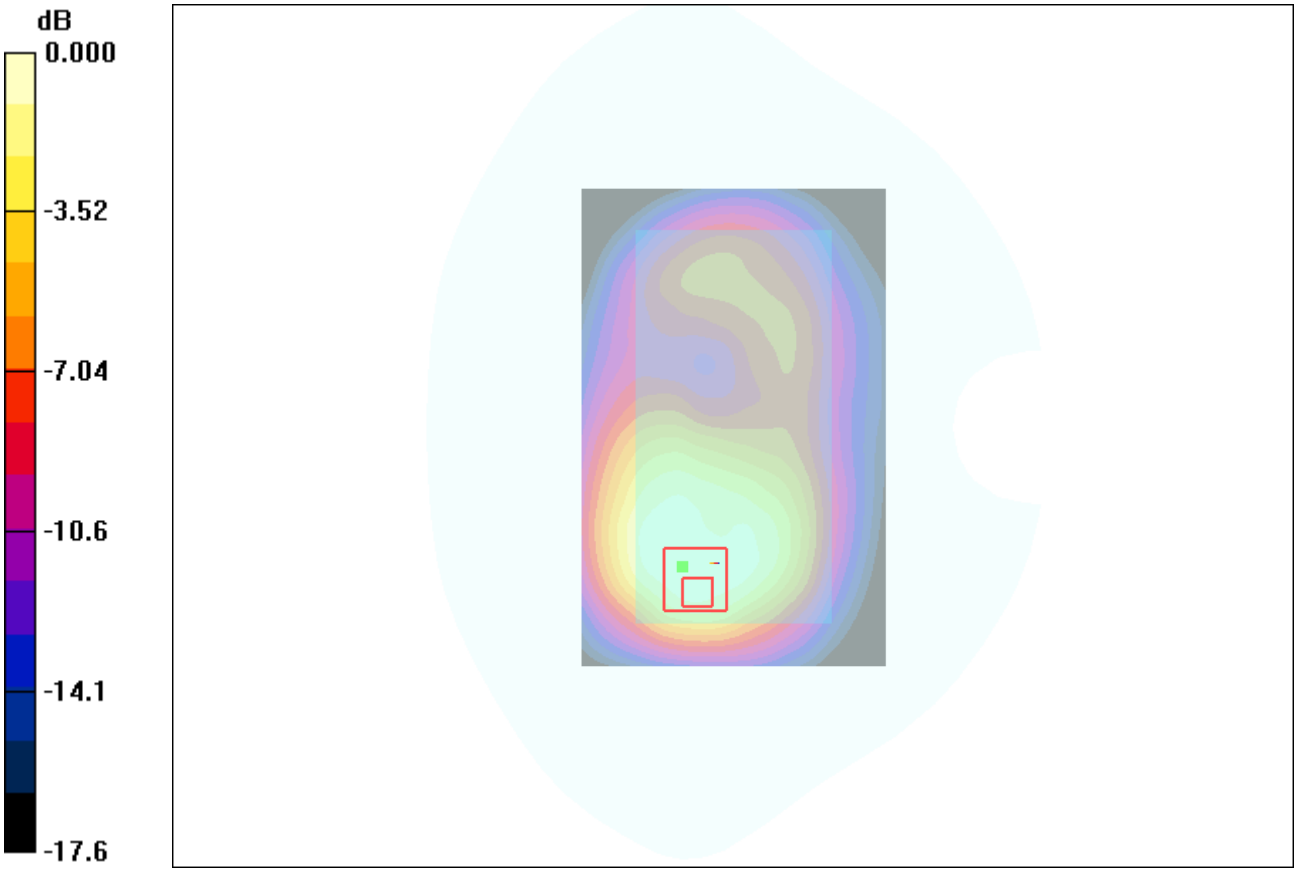
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: LTE; Frequency: 1860 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.49 mho/m; ε_r = 52.8; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.48, 4.48, 4.48); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Back/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.624 mW/g

Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.43 V/m; Power Drift = -0.006 dB
Peak SAR (extrapolated) = 0.935 W/kg
SAR(1 g) = 0.533 mW/g; SAR(10 g) = 0.298 mW/g
Maximum value of SAR (measured) = 0.601 mW/g



0 dB = 0.601mW/g

#14

Date: 10/16/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

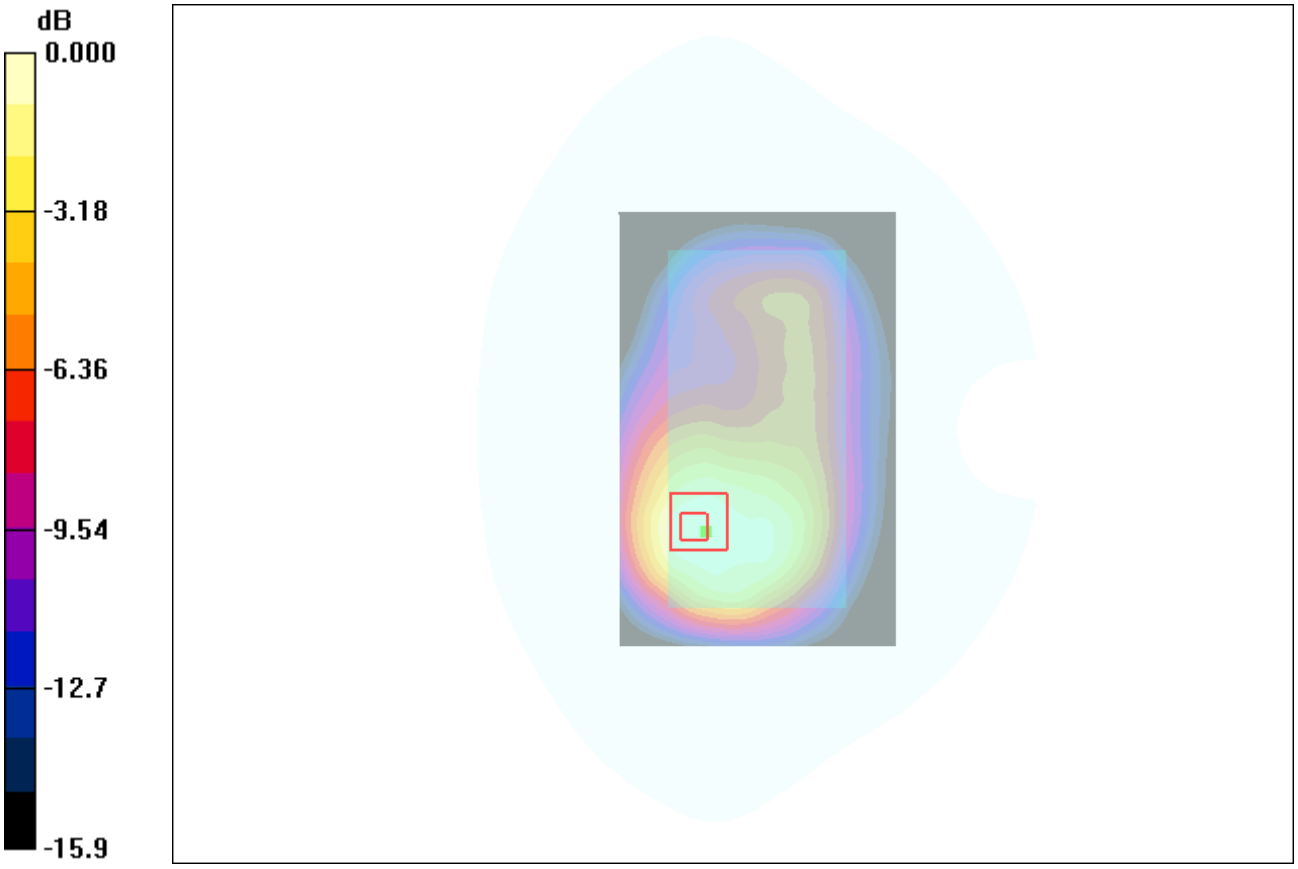
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: LTE; Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.35 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.69, 4.69, 4.69); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Back/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.346 mW/g

Back/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.91 V/m; Power Drift = -0.020 dB
Peak SAR (extrapolated) = 0.555 W/kg
SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.177 mW/g
Maximum value of SAR (measured) = 0.330 mW/g



0 dB = 0.330mW/g

#15

Date: 10/19/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

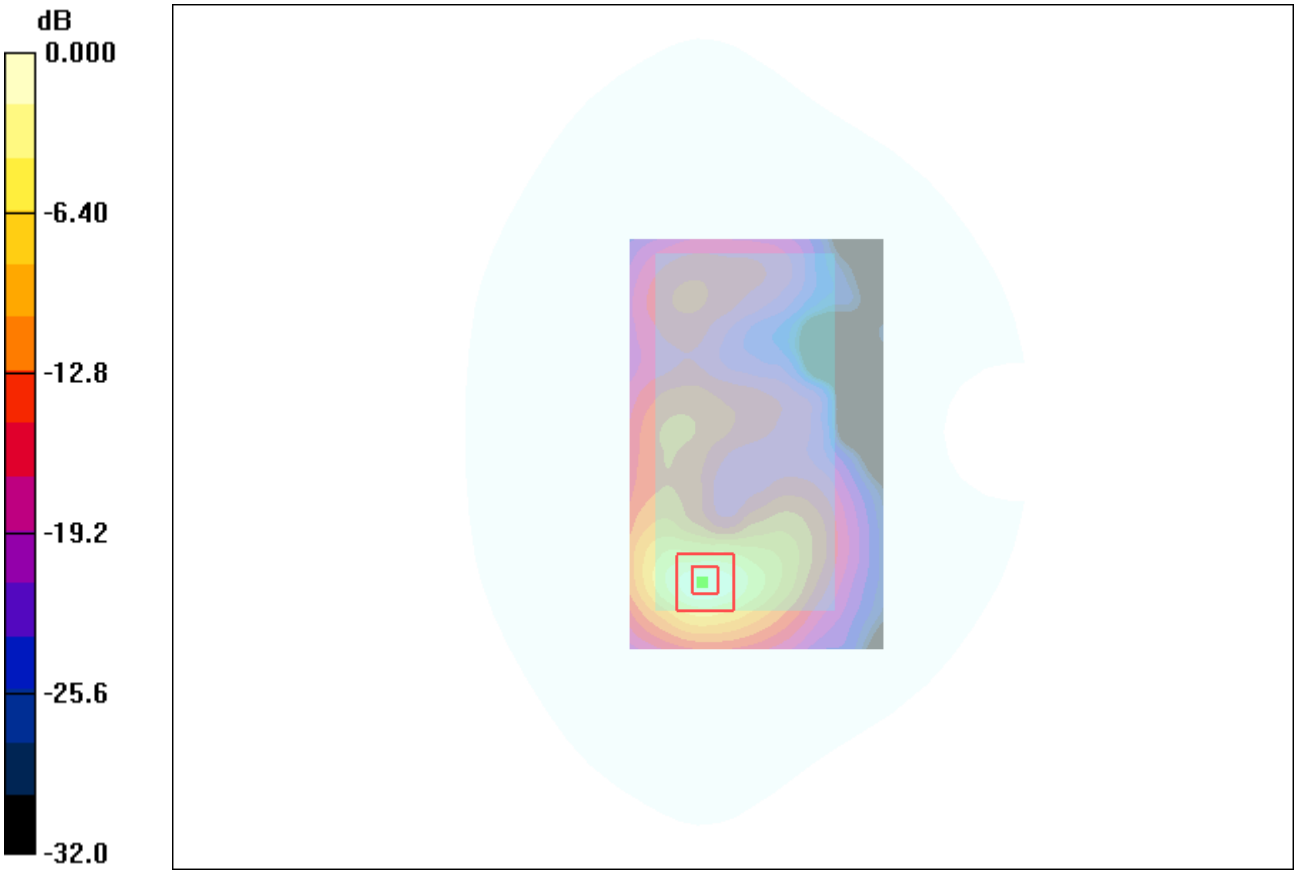
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: LTE; Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2510 MHz; σ = 1.88 mho/m; ε_r = 50.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.14, 4.14, 4.14); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
-- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Back/Area Scan (81x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.859 mW/g

Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.81 V/m; Power Drift = 0.086 dB
Peak SAR (extrapolated) = 1.83 W/kg
SAR(1 g) = 0.724 mW/g; SAR(10 g) = 0.297 mW/g
Maximum value of SAR (measured) = 0.891 mW/g



0 dB = 0.891mW/g

#16

Date: 10/20/2015

Test Laboratory: SUNWAY COMMUNICATION CO.,LTD.

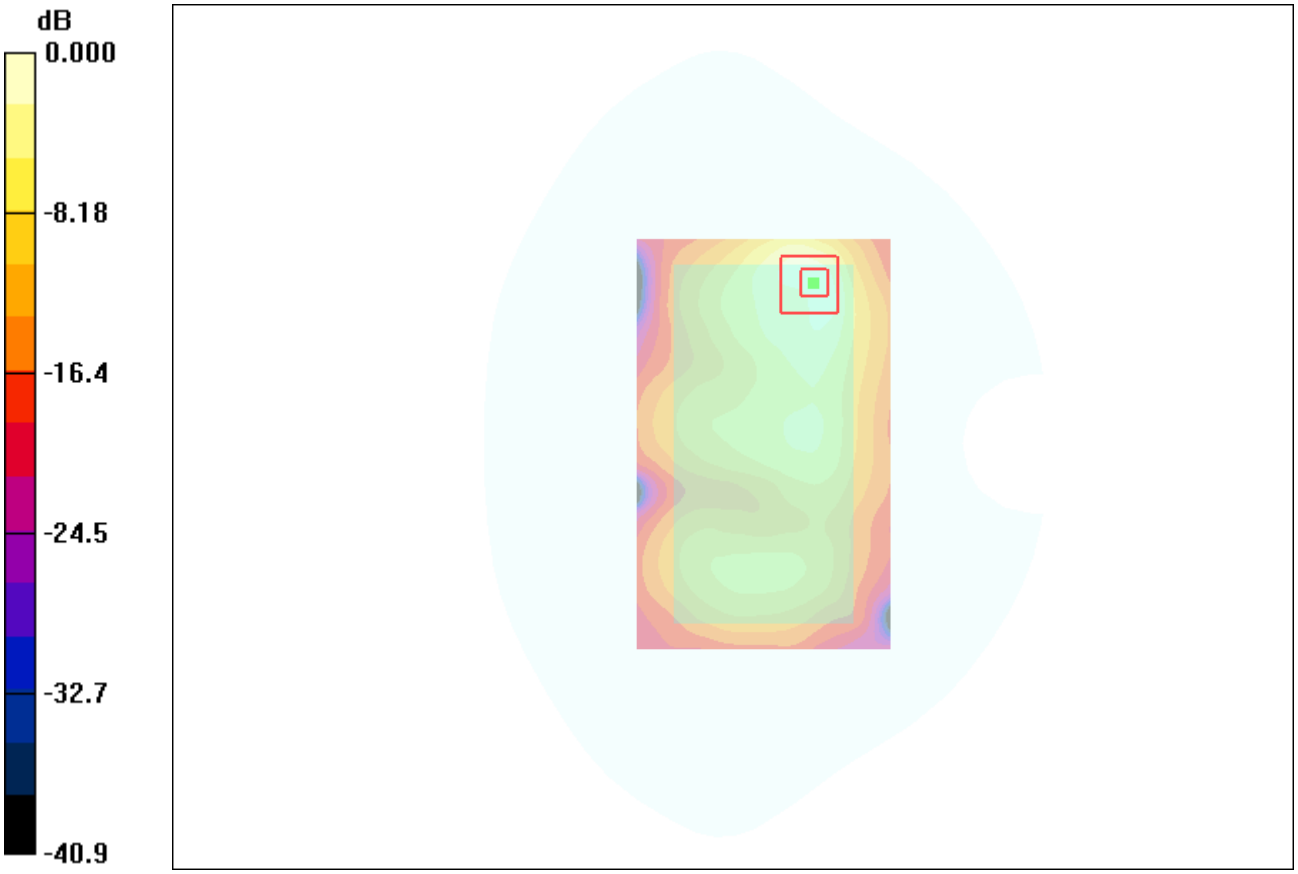
DUT: TM45LM; Type: SI PIN; Serial: IMEI Number
Program Name: TM45LM

Communication System: 802.11; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2412 MHz; σ = 1.88 mho/m; ε_r = 54; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ES3DV3 - SN3028; ConvF(4.14, 4.14, 4.14); Calibrated: 10/22/2014
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn905; Calibrated: 7/16/2015
- Phantom: SAM 1; Type: SAM; Serial: TP-1360
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

Back/Area Scan (81x131x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.224 mW/g

Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.42 V/m; Power Drift = 0.114 dB
Peak SAR (extrapolated) = 0.512 W/kg
SAR(1 g) = 0.207 mW/g; SAR(10 g) = 0.086 mW/g
Maximum value of SAR (measured) = 0.244 mW/g



0 dB = 0.244mW/g