FCC SAR Test Report

Report No.	:	**SA121112C19**
Applicant	:	**Panasonic Corporation of North America**
Address	:	**One Panasonic way, 4B-8, Secaucus, New Jersey, United states 07094**
Product	:	**Tablet Computer**
FCC ID	:	**ACJ-JT-B1APAAZAMA**
Brand	:	**Panasonic**
Model No.	:	**JT-B1APAAAAM**
Standards	:	**FCC 47 CFR Part 2 (2.1093) / IEEE C95.1:1991 / IEEE 1528:2003** **FCC OET Bulletin 65 Supplement C (Edition 01-01)** **KDB 248227 D01 v01r02 / KDB 447498 D01 v05 / KDB 616217 D04 v01** **KDB 941225 D01 v02 / KDB 941225 D02 v02r01 / KDB 941225 D03 v01** **KDB 941225 D05 v02r01**
Date of Testing	:	**Dec. 20, 2012 ~ Jan. 03, 2013**

CERTIFICATION: The above equipment have been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch - Taiwan HwaYa Lab**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's SAR characteristics under the conditions specified in this report. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by TAF or any government agencies.

Prepared By : Vera Huang / Specialist

Approved By : Roy Wu / Manager

Testing Laboratory 2021

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Release Control Record

Issue No.	Reason for Change	Date Issued
R01	Initial release	Feb. 07, 2013

1. Summary of Maximum SAR Value

Equipment Class	Mode	Highest Reported Body SAR_{1g} (W/kg)
PCB	GSM850	1.30
	GSM1900	1.22
	WCDMA II	1.00
	WCDMA V	0.79
	LTE 4	1.29
	LTE 17	0.63
DTS	2.4G WLAN	0.49
	5.8G WLAN	0.25
NII	5.2G WLAN	0.53
	5.3G WLAN	0.74
	5.5G WLAN	0.39
DSS	Bluetooth	N/A
DXX	NFC	N/A
Highest Simultaneous Transmission SAR		Body (W/kg)
PCB + DTS		1.30
PCB + NII		1.53
PCB + DSS		1.40

Note:

1. The SAR limit **(Head & Body: SAR_{1g} 1.6 W/kg, Extremity: SAR_{10g} 4.0 W/kg)** for general population / uncontrolled exposure is specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1991.

2. Description of Equipment Under Test

EUT Type	Tablet Computer
FCC ID	ACJ-JT-B1APAAZAMA
Brand Name	Panasonic
Model Name	JT-B1APAAAAM
HW Version	1
SW Version	1
Tx Frequency Bands (Unit: MHz)	GSM850 : 824.2 ~ 848.8 GSM1900 : 1850.2 ~ 1909.8 WCDMA Band II : 1852.4 ~ 1907.6 WCDMA Band V : 826.4 ~ 846.6 LTE Band 4 : 1712.5 ~ 1752.5 LTE Band 17 : 706.5 ~ 713.5 WLAN : 2412 ~ 2462, 5180 ~ 5320, 5500 ~ 5700, 5745 ~ 5825 Bluetooth : 2402 ~ 2480 NFC : 13.56
Uplink Modulations	GPRS : GMSK EDGE : 8PSK WCDMA : QPSK LTE : QPSK, 16QAM 802.11b : DSSS 802.11a/g/n : OFDM Bluetooth : GFSK NFC : ASK
Maximum Tune-up Conducted Power (Unit: dBm)	GSM850 : 32.2 GSM1900 : 29.5 WCDMA Band II : 23.0 WCDMA Band V : 23.2 LTE Band 4 : 23.0 LTE Band 17 : 23.0 802.11b : 16.0 802.11g : 13.7 802.11n HT20 (2.4GHz) : 13.6 802.11a : 11.5 802.11n HT20 (5GHz) : 11.0 Bluetooth : 8.0
Antenna Type	Fixed Internal Antenna
EUT Stage	Identical Prototype

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or User's Manual.

List of Accessory:

Battery	**Brand Name**	Panasonic
	Model Name	JT-B1-BT000U
	Power Rating	3.7Vdc, 5720mAh
	Type	Li-ion

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

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.

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:

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

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be related to the electrical field in the tissue by

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

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

3.2 SPEAG DASY System

DASY system consists of high precision robot, probe alignment sensor, phantom, robot controller, controlled measurement server and near-field probe. The robot includes six axes that can move to the precision position of the DASY4/5 software defined. The DASY software can define the area that is detected by the probe. The robot is connected to controlled box. Controlled measurement server is connected to the controlled robot box. The DAE includes amplifier, signal multiplexing, AD converter, offset measurement and surface detection. It is connected to the Electro-optical coupler (ECO). The ECO performs the conversion form the optical into digital electric signal of the DAE and transfers data to the PC.

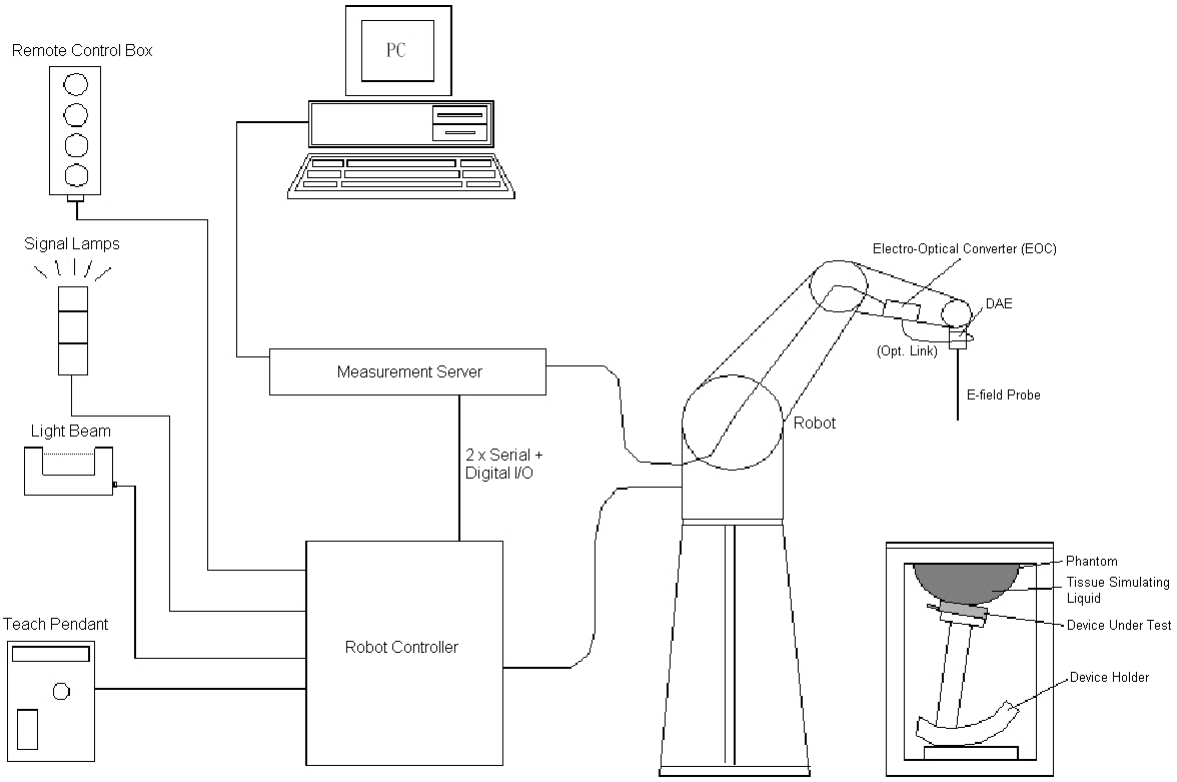


Fig-3.1 DASY System Setup

3.2.1 Robot

The DASY system uses the high precision robots from Stäubli SA (France). For the 6-axis controller system, the robot controller version (DASY4: CS7MB; DASY5: CS8c) from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability ±0.035 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

Fig-3.2 DASY4

Fig-3.3 DASY5

3.2.2 Probes

The SAR measurement is conducted with the dosimetric probe. 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.

Model	EX3DV4	
Construction	Symmetrical design with triangular core. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).	
Frequency	10 MHz to 6 GHz Linearity: ± 0.2 dB	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 µW/g to 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

Model	ES3DV3	
Construction	Symmetrical design with triangular core. Interleaved sensors. Built-in shielding against static charges. PEEK enclosure material (resistant to organic solvents, e.g., DGBE).	
Frequency	10 MHz to 4 GHz Linearity: ± 0.2 dB	
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.3 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	5 µW/g to 100 mW/g Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 3.9 mm (Body: 12 mm) Distance from probe tip to dipole centers: 2.0 mm	

3.2.3 Data Acquisition Electronics (DAE)

Model	DAE3, DAE4	
Construction	Signal amplifier, multiplexer, A/D converter and control logic. Serial optical link for communication with DASY4/5 embedded system (fully remote controlled). Two step probe touch detector for mechanical surface detection and emergency robot stop.	
Measurement Range	-100 to +300 mV (16 bit resolution and two range settings: 4mV, 400mV)	
Input Offset Voltage	< 5µV (with auto zero)	
Input Bias Current	< 50 fA	
Dimensions	60 x 60 x 68 mm	

3.2.4 Phantoms

Model	Twin SAM	
Construction	The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.	
Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2 ± 0.2 mm (6 ± 0.2 mm at ear point)	
Dimensions	Length: 1000 mm Width: 500 mm Height: adjustable feet	
Filling Volume	approx. 25 liters	

Model	ELI	
Construction	Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI is fully compatible with the IEC 62209-2 standard and all known tissue simulating liquids. ELI has been optimized regarding its performance and can be integrated into our standard phantom tables. 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 is compatible with all SPEAG dosimetric probes and dipoles.	
Material	Vinylester, glass fiber reinforced (VE-GF)	
Shell Thickness	2.0 ± 0.2 mm (bottom plate)	
Dimensions	Major axis: 600 mm Minor axis: 400 mm	
Filling Volume	approx. 30 liters	

3.2.5 Device Holder

Model	Mounting Device	
Construction	In combination with the Twin SAM Phantom or ELI4, the Mounting Device enables the rotation of the mounted transmitter device in spherical coordinates. Rotation point is the ear opening point. Transmitter devices can be easily and accurately positioned according to IEC, IEEE, FCC or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat).	
Material	POM	

Model	Laptop Extensions Kit	
Construction	Simple but effective and easy-to-use extension for Mounting Device that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.). It is lightweight and fits easily on the upper part of the Mounting Device in place of the phone positioner.	
Material	POM, Acrylic glass, Foam	

3.2.6 System Validation Dipoles

Model	D-Serial	
Construction	Symmetrical dipole with l/4 balun. Enables measurement of feed point impedance with NWA. Matched for use near flat phantoms filled with tissue simulating solutions.	
Frequency	750 MHz to 5800 MHz	
Return Loss	> 20 dB	
Power Capability	> 100 W (f < 1GHz), > 40 W (f > 1GHz)	

3.2.7 Tissue Simulating Liquids

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. 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. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5% are listed in Table-3.1.

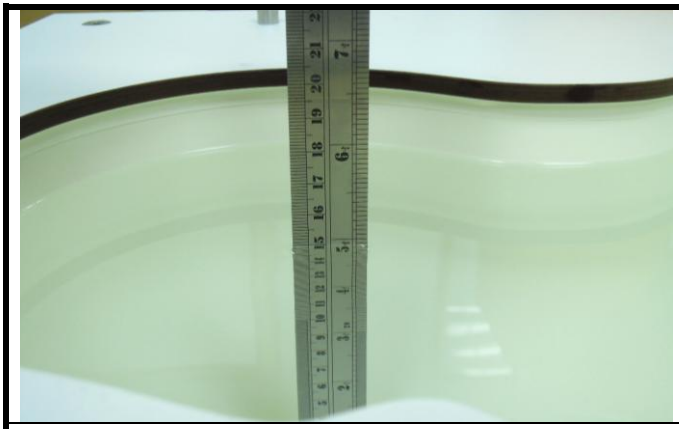


Photo of Liquid Height for Head Position

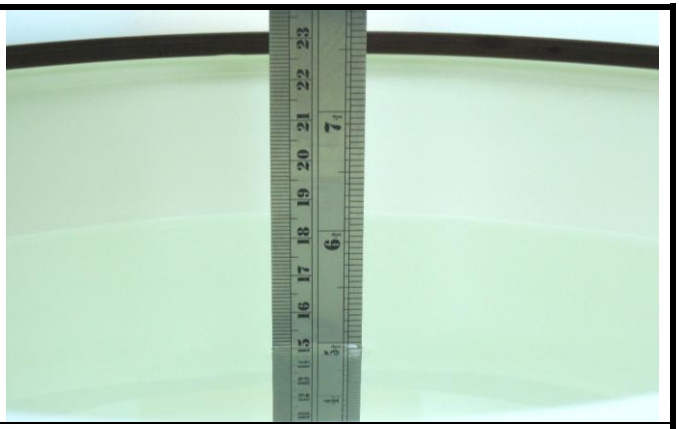


Photo of Liquid Height for Body Position

The dielectric properties of the head tissue simulating liquids are defined in IEEE 1528 and FCC OET 65 Supplement C Appendix C. For the body tissue simulating liquids, the dielectric properties are defined in FCC OET 65 Supplement C Appendix C. The dielectric properties of the tissue simulating liquids were verified prior to the SAR evaluation using an Agilent 85070D Dielectric Probe Kit and an Agilent Network Analyzer.

Table-3.1 Targets of Tissue Simulating Liquid

Frequency (MHz)	Target Permittivity	Range of ±5%	Target Conductivity	Range of ±5%
For Head				
750	41.9	39.8 ~ 44.0	0.89	0.85 ~ 0.93
835	41.5	39.4 ~ 43.6	0.90	0.86 ~ 0.95
1750	40.1	38.1 ~ 42.1	1.37	1.30 ~ 1.44
1900	40.0	38.0 ~ 42.0	1.40	1.33 ~ 1.47
2450	39.2	37.2 ~ 41.2	1.80	1.71 ~ 1.89
5200	36.0	34.2 ~ 37.8	4.66	4.43 ~ 4.89
5300	35.9	34.1 ~ 37.7	4.76	4.52 ~ 5.00
5600	35.5	33.7 ~ 37.3	5.07	4.82 ~ 5.32
5800	35.3	33.5 ~ 37.1	5.27	5.01 ~ 5.53
For Body				
750	55.5	52.7 ~ 58.3	0.96	0.91 ~ 1.01
835	55.2	52.4 ~ 58.0	0.97	0.92 ~ 1.02
1750	53.4	50.7 ~ 56.1	1.49	1.42 ~ 1.56
1900	53.3	50.6 ~ 56.0	1.52	1.44 ~ 1.60
2450	52.7	50.1 ~ 55.3	1.95	1.85 ~ 2.05
5200	49.0	46.6 ~ 51.5	5.30	5.04 ~ 5.57
5300	48.9	46.5 ~ 51.3	5.42	5.15 ~ 5.69
5600	48.5	46.1 ~ 50.9	5.77	5.48 ~ 6.06
5800	48.2	45.8 ~ 50.6	6.00	5.70 ~ 6.30

The following table gives the recipes for tissue simulating liquids.

Table-3.2 Recipes of Tissue Simulating Liquid

Tissue Type	Bactericide	DGBE	HEC	NaCl	Sucrose	Triton X-100	Water	Diethylene Glycol Mono-hexylether
H750	0.2	-	0.2	1.5	56.0	-	42.1	-
H835	0.2	-	0.2	1.5	57.0	-	41.1	-
H1750	-	47.0	-	0.4	-	-	52.6	-
H1900	-	44.5	-	0.2	-	-	55.3	-
H2450	-	45.0	-	0.1	-	-	54.9	-
H5G	-	-	-	-	-	17.2	65.5	17.3
B750	0.2	-	0.2	0.8	48.8	-	50.0	-
B835	0.2	-	0.2	0.9	48.5	-	50.2	-
B1750	-	31.0	-	0.2	-	-	68.8	-
B1900	-	29.5	-	0.3	-	-	70.2	-
B2450	-	31.4	-	0.1	-	-	68.5	-
B5G	-	-	-	-	-	10.7	78.6	10.7

3.3 SAR System Verification

The system check verifies that the system operates within its specifications. It is performed daily or before every SAR measurement. The system check uses normal SAR measurements in the flat section of the phantom with a matched dipole at a specified distance. The system verification setup is shown as below.

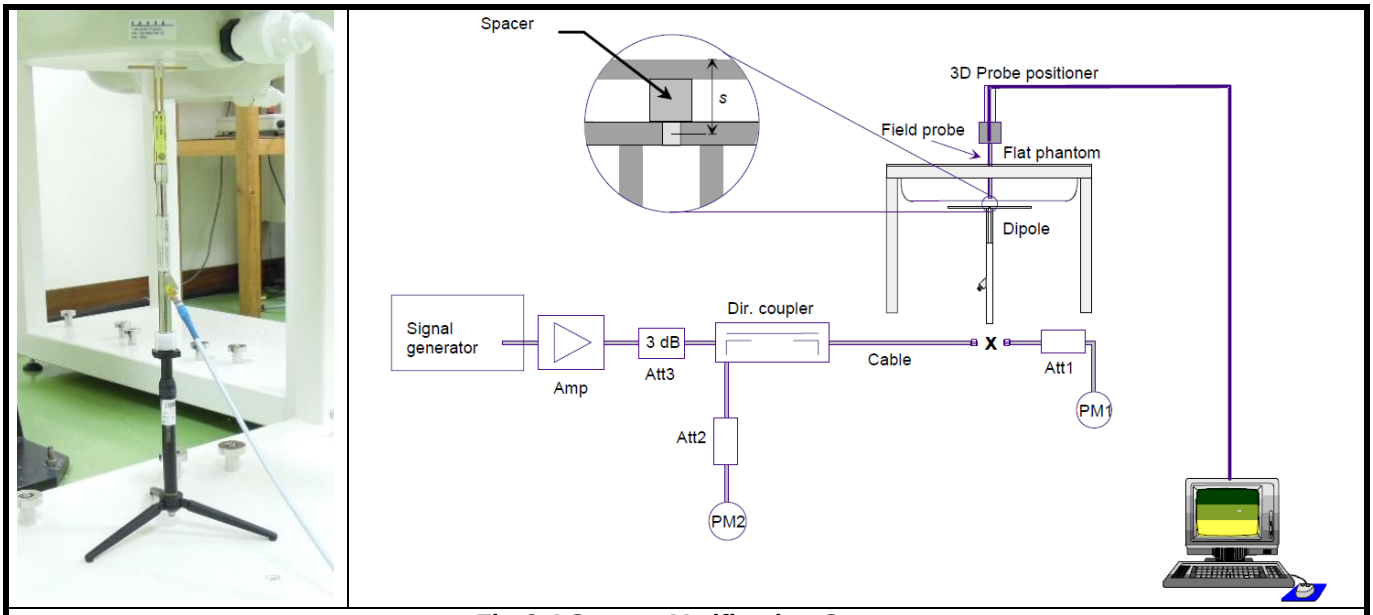


Fig-3.4 System Verification Setup

The validation dipole is placed beneath the flat phantom with the specific spacer in place. The distance spacer is touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The power meter PM1 measures the forward power at the location of the system check dipole connector. The signal generator is adjusted for the desired forward power (250 mW is used for 700 MHz to 3 GHz, 100 mW is used for 3.5 GHz to 6 GHz) at the dipole connector and the power meter PM2 is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter PM2.

After system check testing, the SAR result will be normalized to 1W forward input power and compared with the reference SAR value derived from validation dipole certificate report. The deviation of system check should be within 10 %.

3.4 SAR Measurement Procedure

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

(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

The SAR measurement procedures for each of test conditions are as follows:

(a) Make EUT to transmit maximum output power
(b) Measure conducted output power through RF cable
(c) Place the EUT in the specific position of phantom
(d) Perform SAR testing steps on the DASY system
(e) Record the SAR value

3.4.1 Area & Zoom Scan Procedure

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 10 g. According to KDB 865664D01v01, the resolution for Area and Zoom scan is specified in the table below.

Items	<= 2 GHz	2-3 GHz	3-4 GHz	4-5 GHz	5-6 GHz
Area Scan (Δx, Δy)	<= 15 mm	<= 12 mm	<= 12 mm	<= 10 mm	<= 10 mm
Zoom Scan (Δx, Δy)	<= 8 mm	<= 5 mm	<= 5 mm	<= 4 mm	<= 4 mm
Zoom Scan (Δz)	<= 5 mm	<= 5 mm	<= 4 mm	<= 3 mm	<= 2 mm
Zoom Scan Volume	>= 30 mm	>= 30 mm	>= 28 mm	>= 25 mm	>= 22 mm

Note:

When zoom scan is required and report SAR is <= 1.4 W/kg, the zoom scan resolution of Δx / Δy (2-3GHz: <= 8 mm, 3-4GHz: <= 7 mm, 4-6GHz: <= 5 mm) may be applied.

3.4.2 Volume Scan Procedure

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 postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

3.4.3 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 drift more than 5%, the SAR will be retested.

3.4.4 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 10g 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 the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

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

3.4.5 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 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

4. SAR Measurement Evaluation

4.1 EUT Configuration and Setting

The EUT is a data transmitter device that contains one WWAN transmitter. The GSM/WCDMA and LTE cannot transmit simultaneously. Confirming the LTE transmitter follows 3GPP standards, is category 3, BW 5/10 MHz, band 4/17, and supports QPSK / 16QAM modulations. Tested per 3GPP 36.521 maximum transmit procedures for both QPSK / 16QAM.

LTE Maximum Power Reduction in accordance with 3GPP 36.101: Power Reduction in accordance to 3GPP is active all times during LTE operation.

Modulation	Channel bandwidth / Transmission bandwidth configuration (RB)		3GPP Requirement (dB)	LTE MPR Setting (dB)
	BW 5 MHz	BW 10 MHz		
QPSK	> 8	> 12	<= 1	1
16QAM	<= 8	<= 12	<= 1	1
16QAM	> 8	> 12	<= 2	2

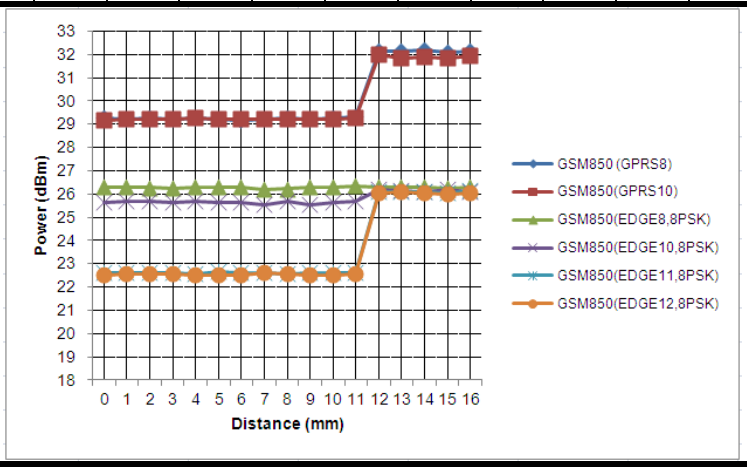
Note: MPR is according to the standard and implemented in the circuit (mandatory).

In addition, the device is compliant with A-MPR requirements defined in 36.101 section 6.2.4 that may be required to meet 3GPP Adjacent Channel Leakage Ratio (“ACLR”) requirements. A-MPR was disabled for all FCC compliance testing.

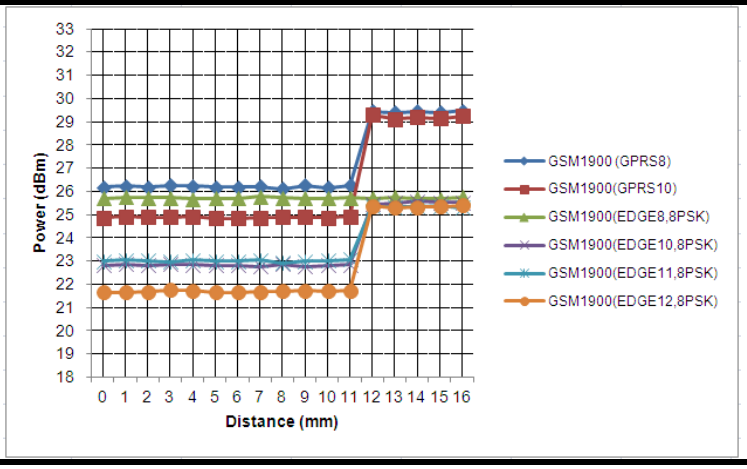
The device is tablet PC which supports WWAN, WLAN, Bluetooth and wireless hotspot capabilities. Because of the SAR issue, this device has designed with a proximity sensor which can trigger/not trigger power reduction for GPRS/EDGE, WCDMA and LTE on EUT Rear Face and EDGE1 orientations for SAR compliance. The proximity sensor is combined with the WWAN Tx antenna in a single FPC (Flexible Printed Circuit), and the P-sensor occupies the same area as the WWAN antenna. Others RF capabilities (WLAN and BT) have no power reduction. The power levels for all wireless technologies and the power reduction please refer to section 4.6.1 of this report.

The power vs distance plots for EUT Rear Face and EDGE1 and power chart for tilt angle influence are shown as below.

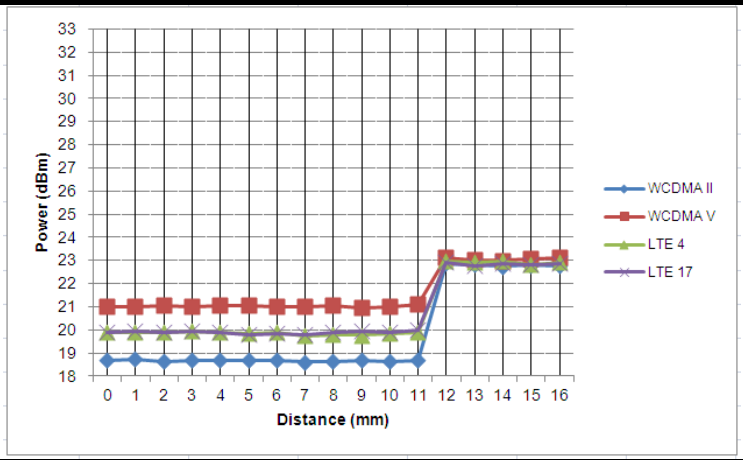
Power (dBm) vs Distance (mm) for EUT Rear Face																	
Distance	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
GSM850 GPRS8	29.25	29.21	29.25	29.22	29.29	29.22	29.19	29.21	29.25	29.20	29.27	29.30	32.15	32.14	32.18	32.11	32.14
GSM850 GPRS10	29.19	29.23	29.22	29.21	29.25	29.21	29.23	29.20	29.21	29.21	29.23	29.25	31.99	31.86	31.90	31.82	31.94
GSM850 EDGE8	26.29	26.30	26.27	26.25	26.28	26.29	26.29	26.18	26.22	26.30	26.29	26.33	26.30	26.29	26.30	26.24	26.28
GSM850 EDGE10	25.66	25.69	25.69	25.65	25.68	25.63	25.62	25.53	25.68	25.55	25.66	25.69	26.17	26.16	26.11	26.18	26.09
GSM850 EDGE11	22.59	22.63	22.62	22.60	22.58	22.65	22.62	22.59	22.58	22.60	22.60	22.63	26.10	26.10	26.09	26.05	26.12
GSM850 EDGE12	22.50	22.54	22.58	22.57	22.53	22.50	22.50	22.59	22.55	22.49	22.50	22.57	26.05	26.09	26.06	25.99	26.04



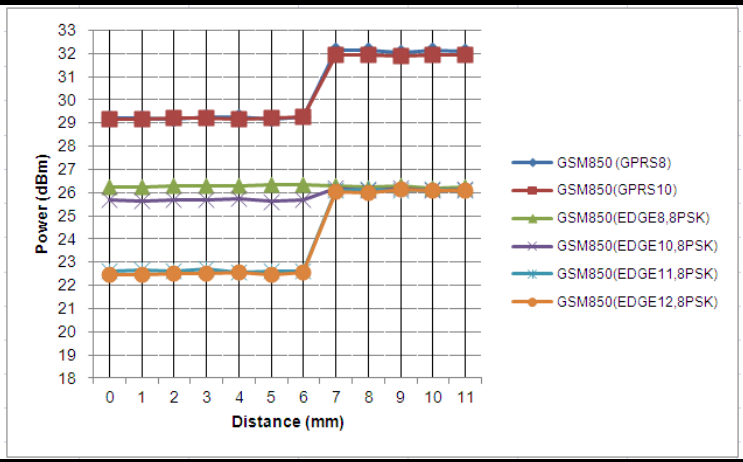
Power (dBm) vs Distance (mm) for EUT Rear Face																	
Distance	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
GSM1900 GPRS8	26.18	26.24	26.19	26.25	26.23	26.18	26.18	26.22	26.10	26.25	26.17	26.27	29.46	29.40	29.44	29.39	29.47
GSM1900 GPRS10	24.88	24.93	24.89	24.90	24.91	24.84	24.84	24.88	24.89	24.90	24.88	24.92	29.29	29.12	29.20	29.14	29.25
GSM1900 EDGE8	25.71	25.75	25.72	25.73	25.69	25.71	25.71	25.77	25.72	25.70	25.71	25.74	25.70	25.76	25.71	25.68	25.75
GSM1900 EDGE10	22.81	22.86	22.81	22.87	22.85	22.81	22.81	22.76	22.88	22.77	22.82	22.84	25.46	25.50	25.59	25.53	25.52
GSM1900 EDGE11	22.99	23.05	23.01	22.98	23.05	22.99	22.99	23.05	22.92	23.00	23.01	23.06	25.35	25.32	25.35	25.38	25.30
GSM1900 EDGE12	21.66	21.66	21.69	21.75	21.72	21.66	21.66	21.69	21.70	21.72	21.70	21.74	25.38	25.30	25.33	25.35	25.39



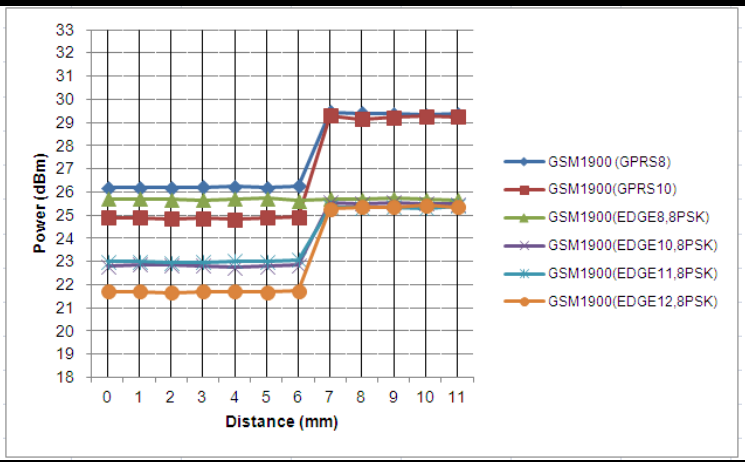
Power (dBm) vs Distance (mm) for EUT Rear Face																	
Distance	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
WCDMA II	18.66	18.71	18.65	18.67	18.70	18.69	18.66	18.60	18.65	18.70	18.63	18.68	22.85	22.80	22.74	22.79	22.77
WCDMA V	21.00	20.98	21.03	21.01	21.04	21.05	21.00	20.99	21.06	20.96	21.00	21.08	23.12	23.03	22.99	23.08	23.12
LTE 4	19.88	19.87	19.89	19.92	19.88	19.85	19.88	19.75	19.80	19.76	19.84	19.89	22.98	22.90	22.96	22.81	22.90
LTE 17	19.88	19.95	19.90	19.92	19.89	19.81	19.85	19.77	19.88	19.95	19.90	19.98	22.90	22.75	22.88	22.80	22.86



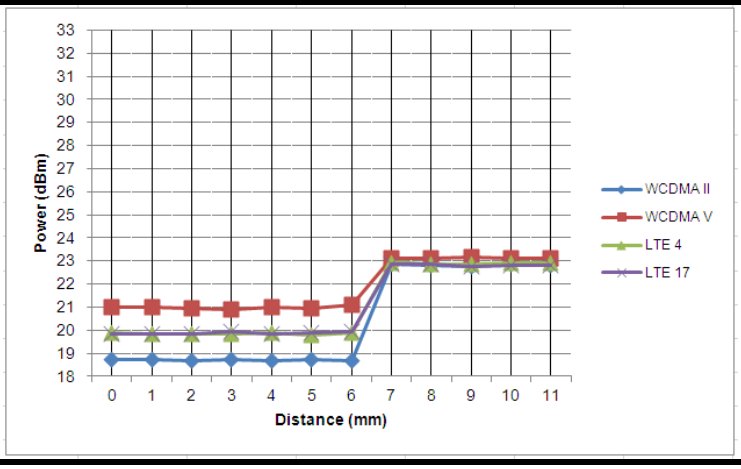
Power (dBm) vs Distance (mm) for EUT EDGE1												
Distance	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
GSM850 GPRS8	29.22	29.22	29.16	29.27	29.25	29.15	29.29	32.15	32.15	32.06	32.13	32.10
GSM850 GPRS10	29.17	29.17	29.20	29.22	29.19	29.24	29.25	31.96	31.95	31.88	31.92	31.96
GSM850 EDGE8	26.24	26.24	26.29	26.30	26.28	26.35	26.33	26.30	26.22	26.31	26.20	26.26
GSM850 EDGE10	25.69	25.65	25.70	25.71	25.74	25.61	25.69	26.17	26.09	26.17	26.11	26.12
GSM850 EDGE11	22.59	22.65	22.60	22.69	22.54	22.59	22.63	26.10	26.12	26.08	26.13	26.08
GSM850 EDGE12	22.48	22.48	22.50	22.51	22.54	22.48	22.57	26.04	26.00	26.15	26.11	26.09



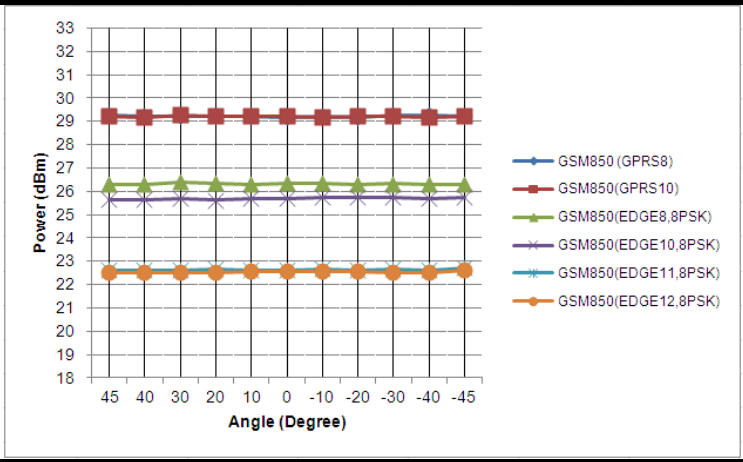
Power (dBm) vs Distance (mm) for EUT EDGE1												
Distance	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
GSM1900 GPRS8	26.19	26.19	26.18	26.22	26.24	26.19	26.27	29.46	29.40	29.38	29.33	29.38
GSM1900 GPRS10	24.90	24.90	24.85	24.88	24.81	24.90	24.92	29.29	29.14	29.22	29.28	29.25
GSM1900 EDGE8	25.70	25.70	25.69	25.66	25.70	25.73	25.64	25.70	25.68	25.72	25.69	25.66
GSM1900 EDGE10	22.79	22.87	22.85	22.81	22.75	22.80	22.84	25.56	25.49	25.54	25.51	25.48
GSM1900 EDGE11	23.00	23.00	22.95	22.97	23.01	22.99	23.06	25.35	25.32	25.36	25.30	25.39
GSM1900 EDGE12	21.70	21.70	21.66	21.71	21.71	21.69	21.74	25.28	25.34	25.36	25.42	25.34



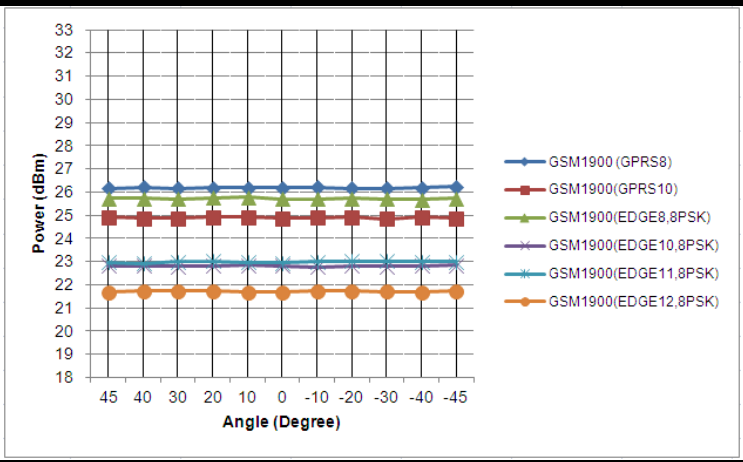
Power (dBm) vs Distance (mm) for EUT EDGE1												
Distance	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
WCDMA II	18.72	18.72	18.70	18.73	18.67	18.71	18.68	22.85	22.80	22.77	22.85	22.81
WCDMA V	21.00	21.00	20.95	20.91	21.00	20.95	21.08	23.12	23.10	23.15	23.10	23.11
LTE 4	19.88	19.82	19.85	19.83	19.88	19.80	19.89	22.94	22.85	22.88	22.90	22.93
LTE 17	19.85	19.85	19.85	19.92	19.86	19.89	19.94	22.88	22.86	22.78	22.82	22.80



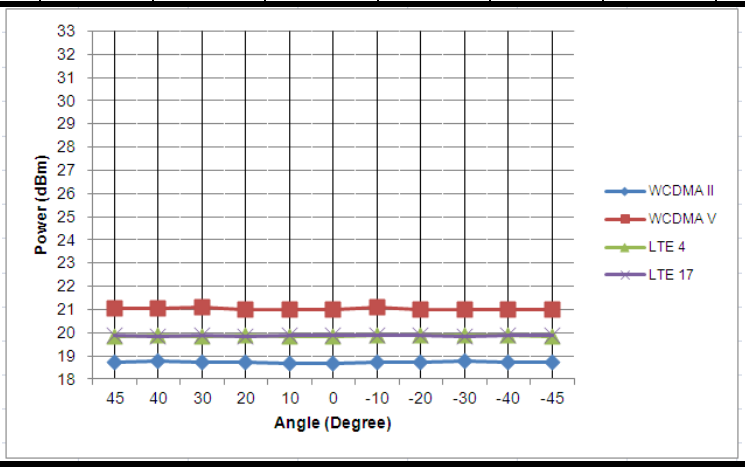
Power (dBm) vs Angle (Degree) for EUT EDGE1 at 6 mm											
Angle	**45**	**40**	**30**	**20**	**10**	**0**	**-10**	**-20**	**-30**	**-40**	**-45**
GSM850 GPRS8	29.25	29.23	29.21	29.20	29.22	29.19	29.22	29.19	29.25	29.28	29.23
GSM850 GPRS10	29.21	29.19	29.25	29.21	29.21	29.22	29.19	29.21	29.23	29.18	29.23
GSM850 EDGE8	26.29	26.31	26.39	26.34	26.30	26.33	26.35	26.31	26.32	26.28	26.29
GSM850 EDGE10	25.62	25.63	25.67	25.61	25.68	25.67	25.72	25.72	25.74	25.71	25.72
GSM850 EDGE11	22.61	22.63	22.61	22.65	22.59	22.62	22.66	22.61	22.65	22.61	22.69
GSM850 EDGE12	22.51	22.49	22.53	22.50	22.57	22.58	22.56	22.58	22.53	22.51	22.61



Power (dBm) vs Angle (Degree) for EUT EDGE1 at 6 mm											
Angle	**45**	**40**	**30**	**20**	**10**	**0**	**-10**	**-20**	**-30**	**-40**	**-45**
GSM1900 GPRS8	26.17	26.21	26.16	26.18	26.19	26.19	26.22	26.16	26.15	26.18	26.23
GSM1900 GPRS10	24.91	24.88	24.87	24.92	24.91	24.87	24.89	24.91	24.84	24.91	24.88
GSM1900 EDGE8	25.73	25.72	25.70	25.75	25.78	25.71	25.71	25.73	25.71	25.69	25.72
GSM1900 EDGE10	22.82	22.81	22.79	22.83	22.85	22.82	22.78	22.82	22.79	22.82	22.85
GSM1900 EDGE11	22.97	22.93	22.99	23.01	22.97	22.94	22.99	23.02	23.01	23.00	22.99
GSM1900 EDGE12	21.69	21.72	21.73	21.72	21.68	21.68	21.72	21.74	21.71	21.69	21.73



Power (dBm) vs Angle (Degree) for EUT EDGE1 at 6 mm											
Angle	**45**	**40**	**30**	**20**	**10**	**0**	**-10**	**-20**	**-30**	**-40**	**-45**
WCDMA II	18.75	18.78	18.72	18.75	18.69	18.68	18.73	18.75	18.77	18.75	18.75
WCDMA V	21.04	21.03	21.09	21.01	21.01	21.02	21.08	21.01	21.02	20.98	21.01
LTE 4	19.85	19.89	19.82	19.91	19.82	19.83	19.87	19.89	19.88	19.91	19.83
LTE 17	19.89	19.83	19.88	19.85	19.91	19.89	19.91	19.87	19.85	19.89	19.90



According to the procedures noticed in KDB 616217 D04, the proximity sensor triggering distance is 11 mm for EUT Rear Face, and 6 mm for EDGE1. The separation distance of 6 mm determined by the smallest triggering distance on EDGE1 is used to assess the tilt angle influence and the sensor does not release during ±45 degree. Therefore, the smallest separation distance for tilt angle influence on EDGE1 is 6 mm. Considering the production units may have 1 mm tolerance for proximity sensor triggering, we have discussed with applicant and decided to use the more conservative triggering distance based on the separation distance for the sensor triggered / not triggered to test SAR as EUT with power reduction at 0 mm, EUT without power reduction at 9 mm for EUT Rear Face, and EUT without power reduction at 4 mm for EDGE1.

The simultaneous transmission possibilities are listed as below.

Simultaneous Tx Combination	RF Configuration	Hotspot Mode	Body SAR
1	GSM850 (Data) + WLAN 2.4G (Data)	Yes	Yes
2	GSM1900 (Data) + WLAN 2.4G (Data)	Yes	Yes
3	WCDMA II (Data) + WLAN 2.4G (Data)	Yes	Yes
4	WCDMA V (Data) + WLAN 2.4G (Data)	Yes	Yes
5	LTE Band 4 (Data) + WLAN 2.4G (Data)	Yes	Yes
6	LTE Band 17 (Data) + WLAN 2.4G (Data)	Yes	Yes
7	GSM850 (Data) + WLAN 5G (Data)	No	Yes
8	GSM1900 (Data) + WLAN 5G (Data)	No	Yes
9	WCDMA II (Data) + WLAN 5G (Data)	No	Yes
10	WCDMA V (Data) + WLAN 5G (Data)	No	Yes
11	LTE Band 4 (Data) + WLAN 5G (Data)	No	Yes
12	LTE Band 17 (Data) + WLAN 5G (Data)	No	Yes
13	GSM850 (Data) + BT (Data)	No	Yes
14	GSM1900 (Data) + BT (Data)	No	Yes
15	WCDMA II (Data) + BT (Data)	No	Yes
16	WCDMA V (Data) + BT (Data)	No	Yes
17	LTE Band 4 (Data) + BT (Data)	No	Yes
18	LTE Band 17 (Data) + BT (Data)	No	Yes

Note :

1. This device does not support voice transmission capability.
2. The 2.4G WLAN and 5G WLAN cannot transmit simultaneously.
3. WLAN and BT cannot transmit at the same time.
4. The proximity sensor and power reduction do not affect the simultaneous transmission modes.
5. The power reduction due to P-sensor is also active for hotspot mode.
6. Since the body SAR test requirement for tablet is more conservative than the hotspot mode, hotspot SAR is not required.

The power reduction is depends on the proximity sensor input. For a steady SAR test, the power reduction can be enabled/disabled manually by engineering software during SAR testing. The power reduction can be enabled by below steps.

<Enable Power Reduction>
Execute “FaCTA” program
Select the “Operation”, “Scenario”, “Open File” to open “P-sensorDetect.sig” file
Select the “u_Fixed_Detect” command
Click “Send” button
<Disable Power Reduction>
Execute “FaCTA” program
Select the “Operation”, “Scenario”, “Open File” to open “P-sensorDetect.sig” file
Select the “u_Fixed_No_Detect” command
Click “Send” button

For WWAN SAR testing, the EUT was linked and controlled by base station emulator (Agilent E5515C is used for GSM/WCDMA, and Anritsu MT8820C is used for LTE). Communication between the EUT and the emulator was established by air link. The distance between the EUT and the communicating antenna of the emulator is larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of EUT. The EUT was set from the emulator to radiate maximum output power during SAR testing.

For GSM850, the power control level is set to 5. For GPRS850 (GMSK, CS1), the power control level is set to 5. For EDGE850 (8PSK:MCS9), the power control level is set to 8. For GSM1900, the power control level is set to 0. For GPRS1900 (GMSK, CS1), the power control level is set to 0. For EDGE1900 (8PSK:MCS9), the power control level is set to 2.

For WCDMA, head and body SAR is tested under 12.2k RMC mode with power control set all up bits. SAR for AMR is not required since its power is less than 1/4 dB higher than RMC. SAR for HSDPA/HSUPA is not required since its power is less than 1/4 dB higher than RMC without HSDPA/HSUPA and SAR for 12.2 kbps RMC is less than 75% of the SAR limit (1.2 W/kg).

For LTE, set the related parameters of operating band, channel bandwidth, uplink channel number, modulation type, and RB in base station simulator. When the EUT has registered and communicated to base station simulator, set the simulator to make EUT transmitting the maximum radiated power. The steps for system simulator (Anritsu MT8820C) setup are as below.

1. Press the “Std” button to select “LTE 22.20S” function
2. Choose the “Screen Select” item to “Fundamental Measurement”
3. Enter the “Common” item
4. Set the Operating Band
5. Set the Channel Bandwidth
6. Set the UL Channel & Frequency
7. Set the Modulation
8. Set the RB number and RB shift
9. Press “Start Call” button when EUT register to the system simulator
10. Set the TX-1 Max. Power to make the EUT transmit maximum output power

For WLAN SAR testing, the EUT has installed WLAN engineering testing software which can provide continuous transmitting RF signal. According to KDB 248227 D01, WLAN SAR should tested at the lowest data rate, and testing at higher data rate is not required when the maximum average output power is less than 1/4 dB higher than those measured at the lowest data rate. Since the WLAN power at lowest data rate has highest output power, WLAN SAR for this device was performed at the lowest data rate as set in 1 Mbps for 802.11b, 6 Mbps for 802.11a, and MCS0 for 802.11n. This RF signal utilized in SAR measurement has almost 100% duty cycle and the duty factor is 1 for WLAN SAR testing.

4.2 EUT Testing Position

According to KDB 616217 D04v01, SAR evaluation is required for back surface and edges of the devices. The back surface and edges of the tablet are tested with the tablet touching the phantom. Exposures from antennas through the front surface of the display section of a tablet are generally limited to the user's hands. Exposures to hands for typical consumer transmitters used in tablets are not expected to exceed the extremity SAR limit; therefore, SAR evaluation for the front surface of tablet display screens are generally not necessary. When voice mode is supported on a tablet and it is limited to speaker mode or headset operations only, additional SAR testing for this type of voice use is not required.

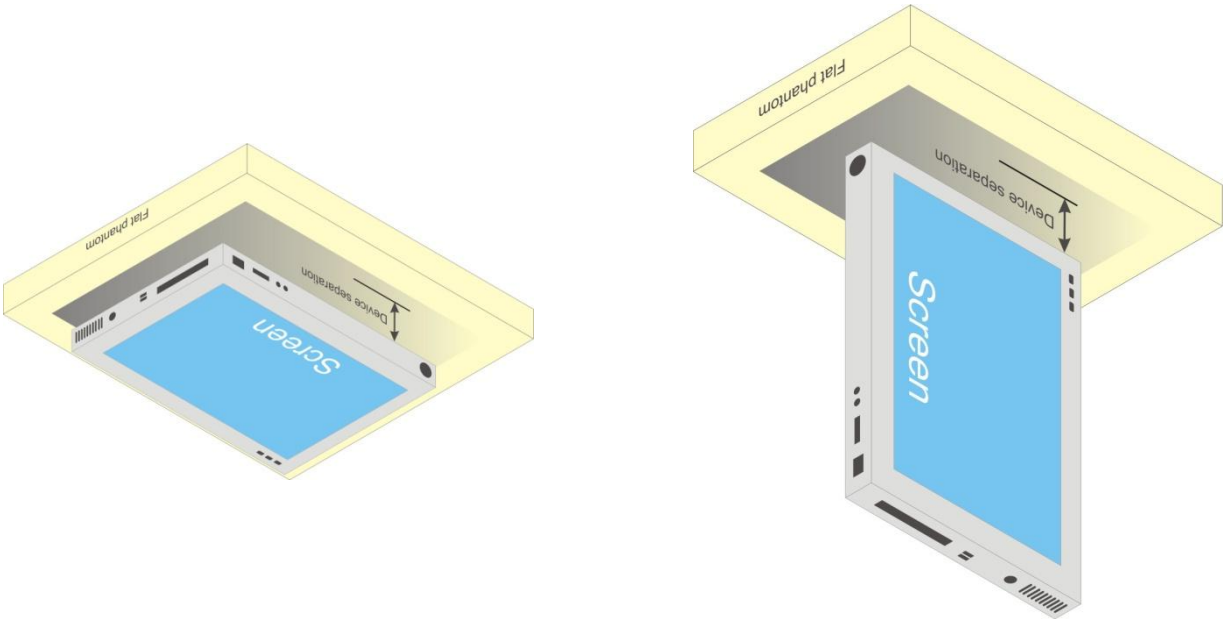


Fig-4.1 Illustration for Tablet Setup

For rear face SAR testing, since the rear face of this EUT is completely flat, the rear face of the EUT is parallel and touches the flat phantom. For edge SAR testing, this EUT was positioned the outer corner of both sides of this device to touch the flat phantom. The line between these two corners is the reference surface to determine P-sensor trigger distance and separation distance for SAR testing. Since this EUT has curved edge, the separation distance between the outer surface most close to antenna and the reference surface noted above is 1 mm. The illustration please refers to appendix D of this report.

According to KDB 447498 D01v05, the SAR test exclusion condition is based on source-based time-averaged maximum conducted output power, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The SAR exclusion threshold is determined by the following formula.

1. For the test separation distance <= 50 mm

$$\frac{\text{Max. Tune up Power}_{(mW)}}{\text{Min. Test Separation Distance}_{(mm)}} \times \sqrt{f_{(GHz)}} \leq 3.0$$

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

2. For the test separation distance > 50 mm, and the frequency at 100 MHz to 1500 MHz

$$\left[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50\ \text{mm}) \times \left(\frac{f_{(MHz)}}{150}\right)\right]_{(mW)}$$

3. For the test separation distance > 50 mm, and the frequency at > 1500 MHz to 6 GHz

$$[(\text{Threshold at 50 mm in Step 1}) + (\text{Test Separation Distance} - 50\ \text{mm}) \times 10]_{(mW)}$$

Mode	Max. Tune-up Power (dBm)	Max. Tune-up Power (mW)	Rear Face			EDGE1			EDGE2			EDGE3			EDGE4		
			Ant. to Surface (mm)	Exclusion Threshold (mW)	Require SAR Testing?	Ant. to Surface (mm)	Exclusion Threshold (mW)	Require SAR Testing?	Ant. to Surface (mm)	Exclusion Threshold (mW)	Require SAR Testing?	Ant. to Surface (mm)	Exclusion Threshold (mW)	Require SAR Testing?	Ant. to Surface (mm)	Exclusion Threshold (mW)	Require SAR Testing?
GSM 850	26.0	398	5	16	**Yes**	8.1	26	**Yes**	74.4	301	**Yes**	196.3	990	No	7.9	26	**Yes**
GSM 1900	23.3	214	5	11	**Yes**	8.1	18	**Yes**	74.4	353	No	196.3	1572	No	7.9	17	**Yes**
WCDMA II	23.0	200	5	11	**Yes**	8.1	18	**Yes**	74.4	353	No	196.3	1572	No	7.9	17	**Yes**
WCDMA V	23.2	209	5	16	**Yes**	8.1	26	**Yes**	74.4	301	No	196.3	988	No	7.9	26	**Yes**
LTE 4	23.0	200	5	11	**Yes**	8.1	18	**Yes**	74.4	357	No	196.3	1576	No	7.9	18	**Yes**
LTE 17	23.0	200	5	18	**Yes**	8.1	29	**Yes**	74.4	294	No	196.3	873	No	7.9	28	**Yes**
WLAN 2.4G	16.0	40	5	10	**Yes**	22.0	42	No	7.0	13	**Yes**	175.5	1351	No	112.4	720	No
BT	8.0	6	5	10	No	22.0	42	No	7.0	13	No	175.5	1350	No	112.4	719	No
WLAN 5.2G	11.3	13	5	7	**Yes**	40.0	53	No	15.6	20	No	172.5	1291	No	108.1	647	No
WLAN 5.3G	11.0	13	5	7	**Yes**	40.0	52	No	15.6	20	No	172.5	1290	No	108.1	646	No
WLAN 5.5G	11.5	14	5	6	**Yes**	40.0	51	No	15.6	20	No	172.5	1288	No	108.1	644	No
WLAN 5.8G	11.0	13	5	6	**Yes**	40.0	50	No	15.6	19	No	172.5	1287	No	108.1	643	No

4.3 Tissue Verification

The measuring results for tissue simulating liquid are shown as below.

Test Date	Tissue Type	Frequency (MHz)	Liquid Temp. (℃)	Measured Conductivity (σ)	Measured Permittivity (ε_r)	Target Conductivity (σ)	Target Permittivity (ε_r)	Conductivity Deviation (%)	Permittivity Deviation (%)
Dec. 22, 2012	Body	750	20.1	0.966	55.259	0.96	55.5	0.63	-0.43
Dec. 22, 2012	Body	835	20.7	0.993	56.738	0.97	55.2	2.37	2.79
Dec. 27, 2012	Body	835	20.6	0.968	55.273	0.97	55.2	-0.21	0.13
Jan. 03, 2013	Body	1750	20.2	1.447	53.388	1.49	53.4	-2.89	-0.02
Dec. 20, 2012	Body	1900	20.5	1.535	51.016	1.52	53.3	0.99	-4.29
Dec. 27, 2012	Body	1900	20.8	1.544	53.431	1.52	53.3	1.58	0.25
Jan. 10, 2013	Body	2450	21.4	1.958	50.929	1.95	52.7	0.41	-3.36
Dec. 25, 2012	Body	5200	20.5	5.278	48.936	5.30	49.0	-0.42	-0.13
Dec. 25, 2012	Body	5300	20.5	5.413	48.764	5.42	48.9	-0.13	-0.28
Dec. 26, 2012	Body	5600	20.8	5.868	48.274	5.77	48.5	1.70	-0.47
Jan. 08, 2013	Body	5800	20.8	6.148	47.973	6.00	48.2	2.47	-0.47

Note:

The dielectric properties of the tissue simulating liquid must be measured within 24 hours before the SAR testing and within ±5% of the target values. Liquid temperature during the SAR testing must be within ±2 ℃.

4.4 System Validation

The SAR measurement system was validated according to procedures in KDB 865664 D01v01. The validation status in tabulated summary is as below.

Test Date	Probe S/N	Calibration Point		Measured Conductivity (σ)	Measured Permittivity (ε_r)	Validation for CW			Validation for Modulation		
						Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR
Dec. 22, 2012	3801	Body	750	0.966	55.259	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 22, 2012	3801	Body	835	0.993	56.738	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 27, 2012	3801	Body	835	0.968	55.273	Pass	Pass	Pass	GMSK	Pass	N/A
Jan. 03, 2013	3650	Body	1750	1.447	53.388	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 20, 2012	3590	Body	1900	1.535	51.016	Pass	Pass	Pass	N/A	N/A	N/A
Dec. 27, 2012	3801	Body	1900	1.544	53.431	Pass	Pass	Pass	GMSK	Pass	N/A
Jan. 10, 2013	3590	Body	2450	1.958	50.929	Pass	Pass	Pass	OFDM	N/A	Pass
Dec. 25, 2012	3590	Body	5200	5.278	48.936	Pass	Pass	Pass	OFDM	N/A	Pass
Dec. 25, 2012	3590	Body	5300	5.413	48.764	Pass	Pass	Pass	OFDM	N/A	Pass
Dec. 26, 2012	3590	Body	5600	5.868	48.274	Pass	Pass	Pass	OFDM	N/A	Pass
Jan. 08, 2013	3590	Body	5800	6.148	47.973	Pass	Pass	Pass	OFDM	N/A	Pass

4.5 System Verification

The measuring results for system check are shown as below.

Test Date	Mode	Frequency (MHz)	1W Target SAR-1g (W/kg)	Measured SAR-1g (W/kg)	Normalized to 1W SAR-1g (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N
Dec. 22, 2012	Body	750	8.76	2.21	8.84	0.91	1013	3801	861
Dec. 22, 2012	Body	835	9.60	2.26	9.04	-5.83	4d021	3801	861
Dec. 27, 2012	Body	835	9.60	2.49	9.96	3.75	4d021	3801	861
Jan. 03, 2013	Body	1750	37.20	9.09	36.36	-2.26	1055	3650	1277
Dec. 20, 2012	Body	1900	38.90	9.81	39.24	0.87	5d036	3590	915
Dec. 27, 2012	Body	1900	38.90	9.49	37.96	-2.42	5d036	3801	861
Jan. 10, 2013	Body	2450	50.00	12.5	50.00	0.00	737	3590	687
Dec. 25, 2012	Body	5200	73.00	7.04	70.40	-3.56	1019	3590	915
Dec. 25, 2012	Body	5300	74.60	7.48	74.80	0.27	1019	3590	915
Dec. 26, 2012	Body	5600	79.90	7.61	76.10	-4.76	1019	3590	915
Jan. 08, 2013	Body	5800	73.40	6.97	69.70	-5.04	1019	3590	687

Note:

1. Comparing to the reference SAR value provided by SPEAG, the validation data should be within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots can be referred to Appendix A of this report.
2. The probe calibrated frequency intervals are properly matched with the device test frequency intervals, and the SAR measurement does not exceeding 50% (±50MHz) of the intervals. Therefore, SAR measurement in this report has satisfied the probe calibration requirements in KDB 450824.
3. SAR system verification has been performed for all SAR probes used in the measurements for the specific frequency bands and tissue-equivalent liquids used for SAR testing.

4.6 Conducted Power Results

4.6.1 Nominal Conducted Power

The nominal conducted power (Unit: dBm) including tune-up tolerance is shown as below.

Mode		GSM850 (without Power Reduction)	GSM850 (with Power Reduction)	Power Reduction
GPRS 8 (GMSK, 1 Uplink)	Maximum	32.2	29.3	2.9
	Nominal	31.2	28.3	
GPRS 10 (GMSK, 2 Uplink)	Maximum	32.0	29.3	2.7
	Nominal	31.0	28.3	
EDGE 8 (8PSK, 1 Uplink)	Maximum	27.0	27.0	0.0
	Nominal	26.0	26.0	
EDGE 10 (8PSK, 2 Uplink)	Maximum	27.0	26.0	1.0
	Nominal	26.0	25.0	
EDGE 11 (8PSK, 3 Uplink)	Maximum	27.0	23.0	4.0
	Nominal	26.0	22.0	
EDGE 12 (8PSK, 4 Uplink)	Maximum	27.0	23.0	4.0
	Nominal	26.0	22.0	

Mode		GSM1900 (without Power Reduction)	GSM1900 (with Power Reduction)	Power Reduction
GPRS 8 (GMSK, 1 Uplink)	Maximum	29.5	26.3	3.2
	Nominal	28.5	25.3	
GPRS 10 (GMSK, 2 Uplink)	Maximum	29.3	25.0	4.3
	Nominal	28.3	24.0	
EDGE 8 (8PSK, 1 Uplink)	Maximum	26.0	26.0	0.0
	Nominal	25.0	25.0	
EDGE 10 (8PSK, 2 Uplink)	Maximum	26.0	23.0	3.0
	Nominal	25.0	22.0	
EDGE 11 (8PSK, 3 Uplink)	Maximum	26.0	23.1	2.9
	Nominal	25.0	22.1	
EDGE 12 (8PSK, 4 Uplink)	Maximum	26.0	21.8	4.2
	Nominal	25.0	20.8	

Mode		WCDMA Band II (without Power Reduction)	WCDMA Band II (with Power Reduction)	Power Reduction
RMC 12.2K	Maximum	23.0	19.0	4.0
	Nominal	22.0	18.0	

Mode		WCDMA Band V (without Power Reduction)	WCDMA Band V (with Power Reduction)	Power Reduction
RMC 12.2K	Maximum	23.2	21.1	2.1
	Nominal	22.2	20.1	

BW / Modulation / RB#		LTE 4 (without Power Reduction)	LTE 4 (with Power Reduction)	Power Reduction
BW 5MHz / QPSK / RB < 8	Maximum	23.0	20.0	3.0
	Nominal	22.0	19.0	
BW 5MHz / QPSK / RB > 8	Maximum	22.0	20.0	2.0
	Nominal	21.0	19.0	
BW 5MHz / 16QAM / RB <= 8	Maximum	22.0	20.0	2.0
	Nominal	21.0	19.0	
BW 5MHz / 16QAM / RB > 8	Maximum	21.0	20.0	1.0
	Nominal	20.0	19.0	
BW 10MHz / QPSK / RB < 12	Maximum	23.0	20.0	3.0
	Nominal	22.0	19.0	
BW 10MHz / QPSK / RB > 12	Maximum	22.0	20.0	2.0
	Nominal	21.0	19.0	
BW 10MHz / 16QAM / RB <= 12	Maximum	22.0	20.0	2.0
	Nominal	21.0	19.0	
BW 10MHz / 16QAM / RB > 12	Maximum	21.0	20.0	1.0
	Nominal	20.0	19.0	

BW / Modulation / RB#		LTE 17 (without Power Reduction)	LTE 17 (with Power Reduction)	Power Reduction
BW 5MHz / QPSK / RB < 8	Maximum	23.0	20.0	3.0
	Nominal	22.0	19.0	
BW 5MHz / QPSK / RB > 8	Maximum	22.0	20.0	2.0
	Nominal	21.0	19.0	
BW 5MHz / 16QAM / RB <= 8	Maximum	22.0	20.0	2.0
	Nominal	21.0	19.0	
BW 5MHz / 16QAM / RB > 8	Maximum	21.0	20.0	1.0
	Nominal	20.0	19.0	
BW 10MHz / QPSK / RB < 12	Maximum	23.0	20.0	3.0
	Nominal	22.0	19.0	
BW 10MHz / QPSK / RB > 12	Maximum	22.0	20.0	2.0
	Nominal	21.0	19.0	
BW 10MHz / 16QAM / RB <= 12	Maximum	22.0	20.0	2.0
	Nominal	21.0	19.0	
BW 10MHz / 16QAM / RB > 12	Maximum	21.0	20.0	1.0
	Nominal	20.0	19.0	

Mode		2.4G WLAN	5.2G WLAN	5.3G WLAN	5.5G WLAN	5.8G WLAN
802.11b	Maximum	16.0	N/A	N/A	N/A	N/A
	Nominal	14.0	N/A	N/A	N/A	N/A
802.11g	Maximum	13.7	N/A	N/A	N/A	N/A
	Nominal	11.7	N/A	N/A	N/A	N/A
802.11a	Maximum	N/A	11.3	11.0	11.5	10.6
	Nominal	N/A	9.3	9.0	9.5	8.6
802.11n HT20	Maximum	13.6	10.3	10.0	10.8	11.0
	Nominal	11.6	8.3	8.0	8.8	9.0

Mode	Bluetooth
All	8.0

4.6.2 Measured Conducted Power Result

The measuring conducted power (Unit: dBm) are shown as below.

Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency (MHz)	824.2	836.4	848.8	1850.2	1880.0	1909.8
EUT without Power Reduction (P-Sensor NOT Triggered)						
Maximum Burst-Averaged Output Power						
GPRS 8 (GMSK, 1 Uplink)	32.10	32.06	**32.15**	29.27	**29.46**	29.39
GPRS 10 (GMSK, 2 Uplink)	31.99	31.90	32.00	29.17	29.29	29.21
EDGE 8 (8PSK, 1 Uplink)	26.20	26.21	26.30	25.66	25.54	25.72
EDGE 10 (8PSK, 2 Uplink)	26.07	26.08	26.17	25.42	25.46	25.54
EDGE 11 (8PSK, 3 Uplink)	26.00	26.01	26.10	25.33	25.25	25.38
EDGE 12 (8PSK, 4 Uplink)	25.94	25.95	26.04	25.36	25.18	25.29
Maximum Frame-Averaged Output Power						
GPRS 8 (GMSK, 1 Uplink)	23.10	23.06	23.15	20.27	20.46	20.39
GPRS 10 (GMSK, 2 Uplink)	25.99	25.90	26.00	23.17	23.29	23.21
EDGE 8 (8PSK, 1 Uplink)	17.20	17.21	17.30	16.66	16.54	16.72
EDGE 10 (8PSK, 2 Uplink)	20.07	20.08	20.17	19.42	19.46	19.54
EDGE 11 (8PSK, 3 Uplink)	21.74	21.75	21.84	21.07	20.99	21.12
EDGE 12 (8PSK, 4 Uplink)	22.94	22.95	23.04	22.36	22.18	22.29
EUT with Power Reduction (P-Sensor Triggered)						
Maximum Burst-Averaged Output Power						
GPRS 8 (GMSK, 1 Uplink)	**29.30**	29.23	29.19	25.85	**26.27**	26.20
GPRS 10 (GMSK, 2 Uplink)	29.25	29.18	29.16	24.54	24.92	24.82
EDGE 8 (8PSK, 1 Uplink)	26.33	26.23	26.21	25.66	25.72	25.54
EDGE 10 (8PSK, 2 Uplink)	25.69	25.57	25.58	22.79	22.84	22.73
EDGE 11 (8PSK, 3 Uplink)	22.63	22.47	22.45	23.00	23.06	22.63
EDGE 12 (8PSK, 4 Uplink)	22.57	22.40	22.35	21.66	21.74	21.61
Maximum Frame-Averaged Output Power						
GPRS 8 (GMSK, 1 Uplink)	20.30	20.23	20.19	16.85	17.27	17.20
GPRS 10 (GMSK, 2 Uplink)	23.25	23.18	23.16	18.54	18.92	18.82
EDGE 8 (8PSK, 1 Uplink)	17.33	17.23	17.21	16.66	16.72	16.54
EDGE 10 (8PSK, 2 Uplink)	19.69	19.57	19.58	16.79	16.84	16.73
EDGE 11 (8PSK, 3 Uplink)	18.37	18.21	18.19	18.74	18.80	18.37
EDGE 12 (8PSK, 4 Uplink)	19.57	19.40	19.35	18.66	18.74	18.61
Actual Reduced Power (dB)						
GPRS 8 (GMSK, 1 Uplink)	2.80	2.83	2.96	3.42	3.19	3.19
GPRS 10 (GMSK, 2 Uplink)	2.74	2.72	2.84	4.63	4.37	4.39
EDGE 8 (8PSK, 1 Uplink)	-0.13	-0.02	0.09	0.00	-0.18	0.18
EDGE 10 (8PSK, 2 Uplink)	0.38	0.51	0.59	2.63	2.62	2.81
EDGE 11 (8PSK, 3 Uplink)	3.37	3.54	3.65	2.33	2.19	2.75
EDGE 12 (8PSK, 4 Uplink)	3.37	3.55	3.69	3.70	3.44	3.68

Note:

1. SAR testing was performed on the maximum frame-averaged power mode.
2. The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum burst-averaged power based on time slots. The calculated method is shown as below:
   Frame-averaged power = 10 x log (Burst-averaged power mW x Slot used / 8)

Band	WCDMA Band II			WCDMA Band V			3PGG
Channel	9262	9400	9538	4132	4182	4233	MPR
Frequency (MHz)	1852.4	1880.0	1907.6	826.4	836.4	846.6	(dB)
EUT without Power Reduction (P-Sensor NOT Triggered)							
RMC 12.2K	22.68	**22.85**	22.49	**23.12**	22.74	22.94	-
HSDPA Subtest-1	22.11	22.28	21.92	22.57	22.19	22.39	0
HSDPA Subtest-2	22.21	22.38	22.02	22.58	22.20	22.40	0
HSDPA Subtest-3	21.69	21.86	21.50	22.08	21.70	21.90	0.5
HSDPA Subtest-4	21.71	21.88	21.52	22.05	21.67	21.87	0.5
HSUPA Subtest-1	21.95	22.16	21.85	21.96	21.88	21.58	0
HSUPA Subtest-2	20.60	20.77	20.41	20.45	20.07	20.27	2
HSUPA Subtest-3	21.34	21.28	20.75	20.96	20.58	20.78	1
HSUPA Subtest-4	20.77	20.88	20.72	20.87	20.81	20.12	2
HSUPA Subtest-5	22.14	22.31	21.95	22.38	22.00	22.20	0
EUT with Power Reduction (P-Sensor Triggered)							
RMC 12.2K	18.46	**18.68**	18.50	**21.09**	20.81	21.04	-
HSDPA Subtest-1	16.74	17.03	16.98	20.62	20.34	20.57	-
HSDPA Subtest-2	16.82	17.11	17.06	20.57	20.29	20.52	-
HSDPA Subtest-3	16.25	16.54	16.49	20.11	19.83	20.06	-
HSDPA Subtest-4	16.28	16.57	16.52	20.16	19.88	20.11	-
HSUPA Subtest-1	16.29	16.58	16.53	20.26	20.78	20.21	-
HSUPA Subtest-2	15.02	15.31	15.26	19.07	18.79	19.02	-
HSUPA Subtest-3	15.34	15.63	15.58	19.15	19.57	19.10	-
HSUPA Subtest-4	15.16	15.35	15.50	19.09	19.41	19.14	-
HSUPA Subtest-5	16.79	17.08	17.03	20.45	20.17	20.40	-
Actual Reduced Power (dB)							
RMC 12.2K	4.22	4.17	3.99	2.03	1.93	1.90	-
HSDPA Subtest-1	5.37	5.25	4.94	1.95	1.85	1.82	-
HSDPA Subtest-2	5.39	5.27	4.96	2.01	1.91	1.88	-
HSDPA Subtest-3	5.44	5.32	5.01	1.97	1.87	1.84	-
HSDPA Subtest-4	5.43	5.31	5.00	1.89	1.79	1.76	-
HSUPA Subtest-1	5.66	5.58	5.32	1.70	1.10	1.37	-
HSUPA Subtest-2	5.58	5.46	5.15	1.38	1.28	1.25	-
HSUPA Subtest-3	6.00	5.65	5.17	1.81	1.01	1.68	-
HSUPA Subtest-4	5.61	5.53	5.22	1.78	1.40	0.98	-
HSUPA Subtest-5	5.35	5.23	4.92	1.93	1.83	1.80	-

Band / BW	Modulation	RB Size	RB Offset	Low CH 19975 Frequency 1712.5 MHz	Mid CH 20175 Frequency 1732.5 MHz	High CH 20375 Frequency 1752.5 MHz	3PGG MPR (dB)
EUT without Power Reduction (P-Sensor NOT Triggered)							
4 / 5M	QPSK	1	0	22.85	22.79	22.97	0
		1	12	22.90	22.84	**22.99**	0
		1	24	22.61	22.55	22.73	0
		12	0	21.87	21.81	21.99	1
		12	6	21.84	21.78	21.96	1
		12	13	21.75	21.69	21.87	1
		25	0	21.83	21.77	21.95	1
	16QAM	1	0	21.73	21.67	21.85	1
		1	12	21.86	21.80	**21.98**	1
		1	24	21.51	21.45	21.63	1
		12	0	20.84	20.78	20.96	2
		12	6	20.84	20.78	20.96	2
		12	13	20.74	20.68	20.86	2
		25	0	20.84	20.78	20.96	2
EUT with Power Reduction (P-Sensor Triggered)							
4 / 5M	QPSK	1	0	19.29	**19.55**	19.03	N/A
		1	12	19.47	19.49	19.07	N/A
		1	24	19.39	19.49	19.08	N/A
		12	0	19.52	19.49	19.15	N/A
		12	6	19.46	19.49	19.19	N/A
		12	13	19.50	19.54	19.10	N/A
		25	0	19.26	19.20	19.14	N/A
	16QAM	1	0	18.92	19.56	19.81	N/A
		1	12	19.61	19.56	**19.85**	N/A
		1	24	19.63	19.50	19.68	N/A
		12	0	19.16	19.15	19.44	N/A
		12	6	19.20	19.20	19.45	N/A
		12	13	19.17	19.08	19.42	N/A
		25	0	19.65	19.62	19.56	N/A
Actual Reduced Power (dB)							
4 / 5M	QPSK	1	0	3.56	3.24	3.94	
		1	12	3.43	3.35	3.92	
		1	24	3.22	3.06	3.65	
		12	0	2.35	2.32	2.84	
		12	6	2.38	2.29	2.77	
		12	13	2.25	2.15	2.77	
		25	0	2.57	2.57	2.81	
	16QAM	1	0	2.81	2.11	2.04	
		1	12	2.25	2.24	2.13	
		1	24	1.88	1.95	1.95	
		12	0	1.68	1.63	1.52	
		12	6	1.64	1.58	1.51	
		12	13	1.57	1.60	1.44	
		25	0	1.19	1.16	1.40	

Note: The 3GPP MPR for LTE will be disabled when the P-sensor is triggered and the power reduction is active.

Band / BW	Modulation	RB Size	RB Offset	Low CH 20000 Frequency 1715.0 MHz	Mid CH 20175 Frequency 1732.5 MHz	High CH 20350 Frequency 1750.0 MHz	3PGG MPR (dB)
EUT without Power Reduction (P-Sensor NOT Triggered)							
4 / 10M	QPSK	1	0	22.97	22.68	22.96	0
		1	24	22.98	22.71	**23.00**	0
		1	49	22.96	22.60	22.71	0
		25	0	21.95	21.83	**22.00**	1
		25	12	21.82	21.80	21.92	1
		25	25	21.79	21.71	21.86	1
		50	0	21.80	21.68	21.87	1
	16QAM	1	0	21.73	21.83	21.78	1
		1	24	21.89	21.79	**21.99**	1
		1	49	21.79	21.68	21.66	1
		25	0	20.94	20.89	20.98	2
		25	12	20.81	20.78	20.95	2
		25	25	20.84	20.79	20.93	2
		50	0	20.82	20.73	20.84	2
EUT with Power Reduction (P-Sensor Triggered)							
4 / 10M	QPSK	1	0	19.52	19.61	19.45	N/A
		1	24	19.75	**19.89**	19.70	N/A
		1	49	19.28	19.25	19.57	N/A
		25	0	19.68	**19.81**	19.77	N/A
		25	12	19.41	19.10	19.17	N/A
		25	25	19.07	19.01	19.11	N/A
		50	0	19.21	19.27	19.30	N/A
	16QAM	1	0	18.89	19.03	19.11	N/A
		1	24	18.96	18.95	19.01	N/A
		1	49	18.97	18.96	18.87	N/A
		25	0	19.18	**19.19**	19.16	N/A
		25	12	19.11	19.15	19.18	N/A
		25	25	19.08	19.05	19.09	N/A
		50	0	19.13	19.10	19.14	N/A
Actual Reduced Power (dB)							
4 / 10M	QPSK	1	0	3.45	3.07	3.51	
		1	24	3.23	2.82	3.30	
		1	49	3.68	3.35	3.14	
		25	0	2.27	2.02	2.23	
		25	12	2.41	2.70	2.75	
		25	25	2.72	2.70	2.75	
		50	0	2.59	2.41	2.57	
	16QAM	1	0	2.84	2.80	2.67	
		1	24	2.93	2.84	2.98	
		1	49	2.82	2.72	2.79	
		25	0	1.76	1.70	1.82	
		25	12	1.70	1.63	1.77	
		25	25	1.76	1.74	1.84	
		50	0	1.69	1.63	1.70	

Note: The 3GPP MPR for LTE will be disabled when the P-sensor is triggered and the power reduction is active.

Band / BW	Modulation	RB Size	RB Offset	Low CH 23755 Frequency 706.5 MHz	Mid CH 23790 Frequency 710.0 MHz	High CH 23825 Frequency 713.5 MHz	3PGG MPR (dB)
EUT without Power Reduction (P-Sensor NOT Triggered)							
17 / 5M	QPSK	1	0	22.39	22.43	22.37	0
		1	12	22.44	**22.48**	22.42	0
		1	24	22.38	22.42	22.36	0
		12	0	21.66	21.70	21.64	1
		12	6	21.55	21.59	21.53	1
		12	13	21.64	21.68	21.62	1
		25	0	21.44	21.48	21.42	1
	16QAM	1	0	21.62	21.66	21.60	1
		1	12	21.78	**21.82**	21.76	1
		1	24	21.68	21.72	21.66	1
		12	0	20.55	20.59	20.53	2
		12	6	20.50	20.54	20.48	2
		12	13	20.56	20.60	20.54	2
		25	0	20.74	20.78	20.72	2
EUT with Power Reduction (P-Sensor Triggered)							
17 / 5M	QPSK	1	0	19.48	19.54	19.43	N/A
		1	12	19.52	19.58	19.47	N/A
		1	24	19.51	19.57	19.46	N/A
		12	0	19.59	19.65	19.54	N/A
		12	6	19.56	19.62	19.51	N/A
		12	13	19.66	**19.72**	19.61	N/A
		25	0	19.47	19.53	19.42	N/A
	16QAM	1	0	19.75	19.71	19.87	N/A
		1	12	**19.95**	19.83	19.88	N/A
		1	24	19.92	19.91	19.78	N/A
		12	0	19.77	19.85	19.84	N/A
		12	6	19.88	19.75	19.75	N/A
		12	13	19.83	19.86	19.94	N/A
		25	0	19.67	19.47	19.48	N/A
Actual Reduced Power (dB)							
17 / 5M	QPSK	1	0	2.91	2.89	2.94	
		1	12	2.92	2.90	2.95	
		1	24	2.87	2.85	2.90	
		12	0	2.07	2.05	2.10	
		12	6	1.99	1.97	2.02	
		12	13	1.98	1.96	2.01	
		25	0	1.97	1.95	2.00	
	16QAM	1	0	1.87	1.95	1.73	
		1	12	1.83	1.99	1.88	
		1	24	1.76	1.81	1.88	
		12	0	0.78	0.74	0.69	
		12	6	0.62	0.79	0.73	
		12	13	0.73	0.74	0.60	
		25	0	1.07	1.31	1.24	

Note: The 3GPP MPR for LTE will be disabled when the P-sensor is triggered and the power reduction is active.

Band / BW	Modulation	RB Size	RB Offset	Low CH 23780 Frequency 709.0 MHz	Mid CH 23790 Frequency 710.0 MHz	High CH 23800 Frequency 711.0 MHz	3PGG MPR (dB)
EUT without Power Reduction (P-Sensor NOT Triggered)							
17 / 10M	QPSK	1	0	22.63	22.41	22.30	0
		1	24	**22.80**	22.58	22.41	0
		1	49	22.74	22.56	22.20	0
		25	0	21.51	21.58	21.53	1
		25	12	21.59	21.54	21.47	1
		25	25	**21.65**	21.60	21.61	1
		50	0	21.62	21.52	21.52	1
	16QAM	1	0	21.54	21.54	21.62	1
		1	24	**21.83**	21.73	21.75	1
		1	49	21.80	21.81	21.67	1
		25	0	20.70	20.76	20.68	2
		25	12	20.74	20.64	20.61	2
		25	25	20.75	20.80	20.85	2
		50	0	20.55	20.50	20.44	2
EUT with Power Reduction (P-Sensor Triggered)							
17 / 10M	QPSK	1	0	19.71	19.77	19.66	N/A
		1	24	19.92	**19.98**	19.87	N/A
		1	49	19.81	19.87	19.76	N/A
		25	0	19.60	**19.66**	19.55	N/A
		25	12	19.51	19.57	19.46	N/A
		25	25	19.56	19.62	19.51	N/A
		50	0	19.74	19.80	19.69	N/A
	16QAM	1	0	19.47	19.54	19.31	N/A
		1	24	19.68	19.80	19.45	N/A
		1	49	19.60	**19.82**	19.36	N/A
		25	0	19.55	19.62	19.60	N/A
		25	12	19.67	19.63	19.63	N/A
		25	25	19.69	19.60	19.68	N/A
		50	0	19.69	19.49	19.50	N/A
Actual Reduced Power (dB)							
17 / 10M	QPSK	1	0	2.92	2.64	2.64	
		1	24	2.88	2.60	2.54	
		1	49	2.93	2.69	2.44	
		25	0	1.91	1.92	1.98	
		25	12	2.08	1.97	2.01	
		25	25	2.09	1.98	2.10	
		50	0	1.88	1.72	1.83	
	16QAM	1	0	2.07	2.00	2.31	
		1	24	2.15	1.93	2.30	
		1	49	2.20	1.99	2.31	
		25	0	1.15	1.14	1.08	
		25	12	1.07	1.01	0.98	
		25	25	1.06	1.20	1.17	
		50	0	0.86	1.01	0.94	

Note: The 3GPP MPR for LTE will be disabled when the P-sensor is triggered and the power reduction is active.

<WLAN 2.4G>

Mode	802.11b		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power	**15.91**	15.74	15.79
Mode	802.11g		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power	**13.61**	13.58	13.40
Mode	802.11n (HT20)		
Channel / Frequency (MHz)	1 (2412)	6 (2437)	11 (2462)
Average Power	13.31	13.44	**13.52**

<WLAN 5.2G>

Mode	802.11a			
Channel / Frequency (MHz)	36 (5180)	40 (5200)	44 (5220)	48 (5240)
Average Power	**11.25**	11.12	11.08	10.92
Mode	802.11n (HT20)			
Channel / Frequency (MHz)	36 (5180)	40 (5200)	44 (5220)	48 (5240)
Average Power	**10.25**	10.02	10.20	9.84

<WLAN 5.3G>

Mode	802.11a			
Channel / Frequency (MHz)	52 (5260)	56 (5280)	60 (5300)	64 (5320)
Average Power	**10.95**	10.68	10.63	10.71
Mode	802.11n (HT20)			
Channel / Frequency (MHz)	52 (5260)	56 (5280)	60 (5300)	64 (5320)
Average Power	9.81	**9.86**	9.64	9.84

<WLAN 5.6G>

Mode	802.11a							
Channel / Frequency (MHz)	100 (5500)	104 (5520)	108 (5540)	112 (5560)	116 (5580)	132 (5660)	136 (5680)	140 (5700)
Average Power	11.48	11.33	11.42	11.28	11.30	11.41	**11.48**	11.36
Mode	802.11n (HT20)							
Channel / Frequency (MHz)	100 (5500)	104 (5520)	108 (5540)	112 (5560)	116 (5580)	132 (5660)	136 (5680)	140 (5700)
Average Power	10.45	10.39	10.42	10.51	10.35	10.54	10.62	**10.72**

<WLAN 5.8G>

Mode	802.11a				
Channel / Frequency (MHz)	149 (5745)	153 (5765)	157 (5785)	161 (5805)	165 (5825)
Average Power	**10.52**	10.49	10.28	10.51	10.13
Mode	802.11n (HT20)				
Channel / Frequency (MHz)	149 (5745)	153 (5765)	157 (5785)	161 (5805)	165 (5825)
Average Power	**10.92**	10.91	10.90	10.88	10.64

4.7 SAR Testing Results

4.7.1 SAR Results for Body

Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Ch.	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
01	GSM850	GPRS10	Rear Face	0	128	w/	29.3	29.25	1.01	0.08	1.29	**1.30**
	GSM850	GPRS10	Rear Face	9	251	w/o	32.0	32.00	1.00	-0.14	0.648	0.65
	GSM850	GPRS10	EDGE1	0	128	w/	29.3	29.25	1.01	-0.08	0.397	0.40
	GSM850	GPRS10	EDGE1	4	251	w/o	32.0	32.00	1.00	0.01	0.540	0.54
	GSM850	GPRS10	EDGE4	0	251	w/o	32.0	32.00	1.00	0.01	0.681	0.68
	GSM850	GPRS10	EDGE2	0	251	w/o	32.0	32.00	1.00	-0.08	0.091	0.09
	GSM850	GPRS10	Rear Face	0	189	w/	29.3	29.18	1.03	0.01	1.14	1.17
	GSM850	GPRS10	Rear Face	0	251	w/	29.3	29.16	1.03	0.04	1.05	1.08
	GSM850	GPRS10	Rear Face	0	128	w/	29.3	29.25	1.01	-0.10	1.29	1.30
	GSM1900	GPRS10	Rear Face	0	661	w/	25.0	24.92	1.02	-0.11	1.18	1.20
	GSM1900	GPRS10	Rear Face	9	661	w/o	29.3	29.29	1.00	0.17	0.671	0.67
	GSM1900	GPRS10	EDGE1	0	661	w/	25.0	24.92	1.02	-0.12	0.164	0.17
	GSM1900	GPRS10	EDGE1	4	661	w/o	29.3	29.29	1.00	-0.14	0.323	0.32
	GSM1900	GPRS10	EDGE4	0	661	w/o	29.3	29.29	1.00	-0.03	0.782	0.78
	GSM1900	GPRS10	EDGE2	0	661	w/o	29.3	29.29	1.00	0.12	0.0082	0.01
	GSM1900	GPRS10	Rear Face	0	512	w/	25.0	24.54	1.11	0.19	1	1.11
02	GSM1900	GPRS10	Rear Face	0	810	w/	25.0	24.82	1.04	-0.08	1.17	**1.22**
	GSM1900	GPRS10	Rear Face	0	661	w/	25.0	24.92	1.02	0.13	1.18	1.20

Note:

1. SAR is performed on the highest power channel. When the reported SAR value of highest power channel is <= 0.8 W/kg, SAR testing for optional channel is not required.

Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Ch.	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	WCMDA II	RMC12.2K	Rear Face	0	9400	w/	19.0	18.68	1.08	-0.12	0.683	0.74
	WCMDA II	RMC12.2K	Rear Face	9	9400	w/o	23.0	22.85	1.04	-0.07	0.735	0.76
	WCMDA II	RMC12.2K	EDGE1	0	9400	w/	19.0	18.68	1.08	-0.12	0.124	0.13
	WCMDA II	RMC12.2K	EDGE1	4	9400	w/o	23.0	22.85	1.04	0.01	0.285	0.30
	WCMDA II	RMC12.2K	EDGE4	0	9400	w/o	23.0	22.85	1.04	-0.03	0.828	0.86
	WCMDA II	RMC12.2K	EDGE2	0	9400	w/o	23.0	22.85	1.04	0.15	0.011	0.01
03	WCMDA II	RMC12.2K	EDGE4	0	9262	w/o	23.0	22.68	1.08	0.04	0.929	**1.00**
	WCMDA II	RMC12.2K	EDGE4	0	9538	w/o	23.0	22.49	1.12	-0.07	0.715	0.80
	WCMDA II	RMC12.2K	EDGE4	0	9262	w/o	23.0	22.68	1.08	-0.14	0.875	0.95
	WCDMA V	RMC12.2K	Rear Face	0	4132	w/	21.1	21.09	1.00	-0.15	0.739	0.74
	WCDMA V	RMC12.2K	Rear Face	9	4132	w/o	23.2	23.12	1.02	0.04	0.486	0.50
	WCDMA V	RMC12.2K	EDGE1	0	4132	w/	21.1	21.09	1.00	-0.06	0.242	0.24
	WCDMA V	RMC12.2K	EDGE1	4	4132	w/o	23.2	23.12	1.02	-0.04	0.325	0.33
	WCDMA V	RMC12.2K	EDGE4	0	4132	w/o	23.2	23.12	1.02	0.04	0.479	0.49
	WCDMA V	RMC12.2K	EDGE2	0	4132	w/o	23.2	23.12	1.02	0.1	0.065	0.07
	WCDMA V	RMC12.2K	Rear Face	0	4182	w/	21.1	20.81	1.07	-0.07	0.676	0.72
04	WCDMA V	RMC12.2K	Rear Face	0	4233	w/	21.1	21.04	1.01	-0.06	0.781	**0.79**

Note:

1. SAR is performed on the highest power channel. When the reported SAR value of highest power channel is <= 0.8 W/kg, SAR testing for optional channel is not required.

Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Ch.	RB#	RB Offset	Power Reduction	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	LTE 4	QPSK_10	Rear Face	0	20175	1	24	w/	20.0	19.89	1.03	0.09	1.15	1.18
	LTE 4	QPSK_10	Rear Face	9	20350	1	24	w/o	23.0	23.00	1.00	-0.01	0.660	0.66
	LTE 4	QPSK_10	EDGE1	0	20175	1	24	w/	20.0	19.89	1.03	-0.07	0.364	0.37
	LTE 4	QPSK_10	EDGE1	4	20350	1	24	w/o	23.0	23.00	1.00	0.07	0.355	0.36
	LTE 4	QPSK_10	EDGE4	0	20350	1	24	w/o	23.0	23.00	1.00	-0.01	1.02	1.02
	LTE 4	QPSK_10	EDGE2	0	20350	1	24	w/o	23.0	23.00	1.00	0.01	0.026	0.03
05	LTE 4	QPSK_10	Rear Face	0	20000	1	24	w/	20.0	19.75	1.06	0.02	1.22	**1.29**
	LTE 4	QPSK_10	Rear Face	0	20350	1	24	w/	20.0	19.70	1.07	-0.07	0.961	1.03
	LTE 4	QPSK_10	EDGE4	0	20000	1	24	w/o	23.0	22.98	1.00	-0.11	1.02	1.02
	LTE 4	QPSK_10	EDGE4	0	20175	1	24	w/o	23.0	22.71	1.07	-0.04	1.05	1.12
	LTE 4	QPSK_10	Rear Face	0	20175	25	0	w/	20.0	19.81	1.04	0.11	1.14	1.19
	LTE 4	QPSK_10	Rear Face	9	20350	25	0	w/o	22.0	22.00	1.00	0.04	0.672	0.67
	LTE 4	QPSK_10	EDGE1	0	20175	25	0	w/	20.0	19.81	1.04	-0.16	0.156	0.16
	LTE 4	QPSK_10	EDGE1	4	20350	25	0	w/o	22.0	22.00	1.00	0.04	0.306	0.31
	LTE 4	QPSK_10	EDGE4	0	20350	25	0	w/o	22.0	22.00	1.00	0.07	0.926	0.93
	LTE 4	QPSK_10	EDGE2	0	20350	25	0	w/o	22.0	22.00	1.00	0.13	0.014	0.01
	LTE 4	QPSK_10	Rear Face	0	20000	25	0	w/	20.0	19.68	1.08	0.05	1.1	1.19
	LTE 4	QPSK_10	Rear Face	0	20350	25	0	w/	20.0	19.77	1.05	0.04	1.1	1.16
	LTE 4	QPSK_10	EDGE4	0	20000	25	0	w/o	22.0	21.95	1.01	-0.06	0.923	0.93
	LTE 4	QPSK_10	EDGE4	0	20175	25	0	w/o	22.0	21.83	1.04	0.04	0.955	0.99
	LTE 4	QPSK_10	Rear Face	0	20000	1	24	w/	20.0	19.75	1.06	0.12	1.15	1.22
	LTE 17	QPSK_10	Rear Face	0	23790	1	24	w/	20.0	19.98	1.00		0.564	0.56
	LTE 17	QPSK_10	Rear Face	9	23780	1	24	w/o	23.0	22.80	1.05	-0.14	0.32	0.34
	LTE 17	QPSK_10	EDGE1	0	23790	1	24	w/	20.0	19.98	1.00	-0.08	0.203	0.20
	LTE 17	QPSK_10	EDGE1	4	23780	1	24	w/o	23.0	22.80	1.05	-0.09	0.285	0.30
	LTE 17	QPSK_10	EDGE4	0	23780	1	24	w/o	23.0	22.80	1.05	-0.05	0.315	0.33
	LTE 17	QPSK_10	EDGE2	0	23780	1	24	w/o	23.0	22.80	1.05	0.15	0.094	0.10
06	LTE 17	QPSK_10	Rear Face	0	23790	25	0	w/	20.0	19.66	1.08	-0.12	0.586	**0.63**
	LTE 17	QPSK_10	Rear Face	9	23780	25	25	w/o	22.0	21.65	1.08	0	0.232	0.25
	LTE 17	QPSK_10	EDGE1	0	23790	25	0	w/	20.0	19.66	1.08	-0.16	0.231	0.25
	LTE 17	QPSK_10	EDGE1	4	23780	25	25	w/o	22.0	21.65	1.08	-0.07	0.199	0.21
	LTE 17	QPSK_10	EDGE4	0	23780	25	25	w/o	22.0	21.65	1.08	0.13	0.221	0.24
	LTE 17	QPSK_10	EDGE2	0	23780	25	25	w/o	22.0	21.65	1.08	0.09	0.064	0.07

Note:

1. SAR is performed on the highest power channel. When the reported SAR value of highest power channel is <= 0.8 W/kg, SAR testing for optional channel is not required.
2. According to KDB 941225, LTE SAR testing for remaining configurations for 1RB allocation is not required when the reported SAR is <= 0.8 W/kg.
3. According to KDB 941225, LTE SAR testing for remaining configurations for 50%RB allocation is not required when the reported SAR is <= 0.8 W/kg.
4. According to KDB 941225, LTE SAR testing for 16QAM is not required when the maximum power of 16QAM is less 1/2 dB higher than QPSK and the highest reported SAR of QPSK is less than 1.45 W/kg.
5. According to KDB 941225, the LTE SAR testing for other channel bandwidths is not required when the maximum power of smaller channel bandwidth is less 1/2 dB higher than largest channel bandwidth, and maximum SAR of largest channel bandwidth is less than 1.45 W/kg.

Plot No.	Band	Mode	Test Position	Separation Distance (cm)	Ch.	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
07	802.11b	-	Rear Face	0	1	16.0	15.91	1.02	0.13	0.477	**0.49**
	802.11b	-	EDGE1	0	1	16.0	15.91	1.02	-0.13	0.039	0.04
	802.11b	-	EDGE4	0	1	16.0	15.91	1.02	0.08	0.00025	0.01
	802.11b	-	EDGE2	0	1	16.0	15.91	1.02	-0.18	0.126	0.13
	802.11a	-	Rear Face	0	149	10.6	10.52	1.02	0.01	0.212	0.22
	802.11a	-	EDGE1	0	149	10.6	10.52	1.02	0.17	0.011	0.01
	802.11a	-	EDGE4	0	149	10.6	10.52	1.02	-0.11	0.000168	0.01
08	802.11n	HT20	Rear Face	0	149	11.0	10.92	1.02	-0.18	0.242	**0.25**
09	802.11a	-	Rear Face	0	36	11.3	11.25	1.01	0.02	0.52	**0.53**
	802.11a	-	EDGE4	0	36	11.3	11.25	1.01	0.13	0.0000431	0.01
10	802.11a	-	Rear Face	0	52	11.0	10.95	1.01	0.14	0.736	**0.74**
	802.11a	-	EDGE4	0	52	11.0	10.95	1.01	0.14	0.00179	0.01
11	802.11a	-	Rear Face	0	136	11.5	11.48	1.00	0.02	0.394	**0.39**
	802.11a	-	EDGE4	0	136	11.5	11.48	1.00	-0.01	0.00248	0.01
	Bluetooth	-	EDGE4	0	78	8.0	8.00	1.00	N/A	N/A	N/A

Note:

1. According to KDB 248227 D01, when the extrapolated maximum peak SAR for the maximum output power channel is <= 1.6 W/kg and the 1g averaged SAR is <= 0.8 W/kg, WLAN SAR testing for other channels is not required.
2. SAR testing for 802.11g/n is not required when its maximum power is less than 1/4 dB higher than 802.11b.
3. SAR testing for 802.11n is not required when its maximum power is less than 1/4 dB higher than 802.11a.
4. The “N/A” means there is not SAR value or the SAR is too low to be measured.

4.7.2 SAR Measurement Variability

According to KDB 865664 D01v01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10, the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

Band	Mode	Test Position	Separation Distance (cm)	Ch.	Original Measured SAR-1g (W/kg)	1st Repeated SAR-1g (W/kg)	L/S Ratio	2nd Repeated SAR-1g (W/kg)	L/S Ratio	3rd Repeated SAR-1g (W/kg)	L/S Ratio
GSM850	GPRS10	Rear Face	0	128	1.29	1.29	1.00	N/A	N/A	N/A	N/A
GSM1900	GPRS10	Rear Face	0	661	1.18	1.18	1.00	N/A	N/A	N/A	N/A
WCMDA II	RMC12.2K	EDGE4	0	9262	0.929	0.875	1.06	N/A	N/A	N/A	N/A
LTE 4	QPSK_10 RB1 / OS24	Rear Face	0	20000	1.22	1.15	1.06	N/A	N/A	N/A	N/A

4.7.3 Simultaneous Multi-band Transmission Evaluation

<Estimated SAR Calculation>

According to KDB 447498 D01v05, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR was estimated according to following formula to result in substantially conservative SAR values of <= 0.4 W/kg to determine simultaneous transmission SAR test exclusion.

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

If the minimum test separation distance is < 5 mm, a distance of 5 mm is used for estimated SAR calculation. When the test separation distance is > 50 mm, the 0.4 W/kg is used for SAR-1g.

Mode / Band	Frequency (GHz)	Max. Tune-up Power (dBm)	Test Position	Separation Distance (mm)	Estimated SAR (W/kg)
GSM850	0.835	26.0 (Max Frame-Averaged Power)	EDGE3	0	0.4
GSM1900	1.909	23.3 (Max Frame-Averaged Power)	EDGE3	0	0.4
WCDMA II	1.907	23.0	EDGE3	0	0.4
WCDMA V	0.846	23.2	EDGE3	0	0.4
LTE 4	1.752	23.0	EDGE3	0	0.4
LTE 17	0.713	23.0	EDGE3	0	0.4
WLAN (DTS)	2.462	16.0	EDGE3	0	0.4
WLAN (NII)	5.7	11.5	EDGE1	0	0.4
WLAN (NII)	5.7	11.5	EDGE1	4	0.4
WLAN (NII)	5.7	11.5	EDGE2	0	0.4
WLAN (NII)	5.7	11.5	EDGE3	0	0.4
BT (DSS)	2.48	8.0	Rear Face	0	0.3
BT (DSS)	2.48	8.0	Rear Face	9	0.1
BT (DSS)	2.48	8.0	EDGE1	0	0.3
BT (DSS)	2.48	8.0	EDGE1	4	0.3
BT (DSS)	2.48	8.0	EDGE2	0	0.3
BT (DSS)	2.48	8.0	EDGE3	0	0.3

Note:

1. The separation distance is determined from the outer housing of the tablet to the user.
2. When standalone SAR testing is not required, an estimated SAR can be applied to determine simultaneous transmission SAR test exclusion.

<SAR Summation Analysis>

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR_{1g} of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR_{1g} 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR_{1g} is greater than the SAR limit (SAR_{1g} 1.6 W/kg), SAR test exclusion is determined by the SPLSR.

No.	Conditions (SAR1 + SAR2)	Exposure Condition	Test Position	Separation (mm)	Max. SAR1	Max. SAR2	SAR Summation	SPLSR Analysis
1	GSM850 + WLAN (DTS)	Body	Rear Face	0	1.30	0.49	**1.79**	**Analyzed as below**
			Rear Face	9	0.65	0.49	1.14	Σ SAR < 1.6, Not required
			EDGE1	0	0.40	0.04	0.44	Σ SAR < 1.6, Not required
			EDGE1	4	0.54	0.04	0.58	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	0.68	0.01	0.69	Σ SAR < 1.6, Not required
			EDGE2	0	0.09	0.13	0.22	Σ SAR < 1.6, Not required
2	GSM850 + WLAN (NII)	Body	Rear Face	0	1.30	0.74	**2.04**	**Analyzed as below**
			Rear Face	9	0.65	0.74	1.39	Σ SAR < 1.6, Not required
			EDGE1	0	0.40	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE1	4	0.54	0.4 (Estimated SAR)	0.94	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	0.68	0.01	0.69	Σ SAR < 1.6, Not required
			EDGE2	0	0.09	0.4 (Estimated SAR)	0.49	Σ SAR < 1.6, Not required
3	GSM850 + BT (DSS)	Body	Rear Face	0	1.30	0.3 (Estimated SAR)	1.60	Σ SAR ≦ 1.6, Not required
			Rear Face	9	0.65	0.1 (Estimated SAR)	0.75	Σ SAR < 1.6, Not required
			EDGE1	0	0.40	0.3 (Estimated SAR)	0.70	Σ SAR < 1.6, Not required
			EDGE1	4	0.54	0.3 (Estimated SAR)	0.84	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.3 (Estimated SAR)	0.70	Σ SAR < 1.6, Not required
			EDGE4	0	0.68	0.00	0.68	Σ SAR < 1.6, Not required
			EDGE2	0	0.09	0.3 (Estimated SAR)	0.39	Σ SAR < 1.6, Not required

No.	Conditions (SAR1 + SAR2)	Exposure Condition	Test Position	Separation (mm)	Max. SAR1	Max. SAR2	SAR Summation	SPLSR Analysis
4	GSM1900 + WLAN (DTS)	Body	Rear Face	0	1.22	0.49	**1.71**	**Analyzed as below**
			Rear Face	9	0.67	0.49	1.16	Σ SAR < 1.6, Not required
			EDGE1	0	0.17	0.04	0.21	Σ SAR < 1.6, Not required
			EDGE1	4	0.32	0.04	0.36	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	0.78	0.01	0.79	Σ SAR < 1.6, Not required
			EDGE2	0	0.01	0.13	0.14	Σ SAR < 1.6, Not required
5	GSM1900 + WLAN (NII)	Body	Rear Face	0	1.22	0.74	**1.96**	**Analyzed as below**
			Rear Face	9	0.67	0.74	1.41	Σ SAR < 1.6, Not required
			EDGE1	0	0.17	0.4 (Estimated SAR)	0.57	Σ SAR < 1.6, Not required
			EDGE1	4	0.32	0.4 (Estimated SAR)	0.72	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	0.78	0.01	0.79	Σ SAR < 1.6, Not required
			EDGE2	0	0.01	0.4 (Estimated SAR)	0.41	Σ SAR < 1.6, Not required
6	GSM1900 + BT (DSS)	Body	Rear Face	0	1.22	0.3 (Estimated SAR)	1.52	Σ SAR < 1.6, Not required
			Rear Face	9	0.67	0.1 (Estimated SAR)	0.77	Σ SAR < 1.6, Not required
			EDGE1	0	0.17	0.3 (Estimated SAR)	0.47	Σ SAR < 1.6, Not required
			EDGE1	4	0.32	0.3 (Estimated SAR)	0.62	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.3 (Estimated SAR)	0.70	Σ SAR < 1.6, Not required
			EDGE4	0	0.78	0.00	0.78	Σ SAR < 1.6, Not required
			EDGE2	0	0.01	0.3 (Estimated SAR)	0.31	Σ SAR < 1.6, Not required

No.	Conditions (SAR1 + SAR2)	Exposure Condition	Test Position	Separation (mm)	Max. SAR1	Max. SAR2	SAR Summation	SPLSR Analysis
7	WCDMA II + WLAN (DTS)	Body	Rear Face	0	0.74	0.49	1.23	Σ SAR < 1.6, Not required
			Rear Face	9	0.76	0.49	1.25	Σ SAR < 1.6, Not required
			EDGE1	0	0.13	0.04	0.17	Σ SAR < 1.6, Not required
			EDGE1	4	0.30	0.04	0.34	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	1.00	0.01	1.01	Σ SAR < 1.6, Not required
			EDGE2	0	0.01	0.13	0.14	Σ SAR < 1.6, Not required
8	WCDMA II + WLAN (NII)	Body	Rear Face	0	0.74	0.74	1.48	Σ SAR < 1.6, Not required
			Rear Face	9	0.76	0.74	1.50	Σ SAR < 1.6, Not required
			EDGE1	0	0.13	0.4 (Estimated SAR)	0.53	Σ SAR < 1.6, Not required
			EDGE1	4	0.30	0.4 (Estimated SAR)	0.70	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	1.00	0.01	1.01	Σ SAR < 1.6, Not required
			EDGE2	0	0.01	0.4 (Estimated SAR)	0.41	Σ SAR < 1.6, Not required
9	WCDMA II + BT (DSS)	Body	Rear Face	0	0.74	0.3 (Estimated SAR)	1.04	Σ SAR < 1.6, Not required
			Rear Face	9	0.76	0.1 (Estimated SAR)	0.86	Σ SAR < 1.6, Not required
			EDGE1	0	0.13	0.3 (Estimated SAR)	0.43	Σ SAR < 1.6, Not required
			EDGE1	4	0.30	0.3 (Estimated SAR)	0.60	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.3 (Estimated SAR)	0.70	Σ SAR < 1.6, Not required
			EDGE4	0	1.00	0.00	1.00	Σ SAR < 1.6, Not required
			EDGE2	0	0.01	0.3 (Estimated SAR)	0.31	Σ SAR < 1.6, Not required

No.	Conditions (SAR1 + SAR2)	Exposure Condition	Test Position	Separation (mm)	Max. SAR1	Max. SAR2	SAR Summation	SPLSR Analysis
10	WCDMA V + WLAN (DTS)	Body	Rear Face	0	0.79	0.49	1.28	Σ SAR < 1.6, Not required
			Rear Face	9	0.50	0.49	0.99	Σ SAR < 1.6, Not required
			EDGE1	0	0.24	0.04	0.28	Σ SAR < 1.6, Not required
			EDGE1	4	0.33	0.04	0.37	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	0.49	0.01	0.50	Σ SAR < 1.6, Not required
			EDGE2	0	0.07	0.13	0.20	Σ SAR < 1.6, Not required
11	WCDMA V + WLAN (NII)	Body	Rear Face	0	0.79	0.74	1.53	Σ SAR < 1.6, Not required
			Rear Face	9	0.50	0.74	1.24	Σ SAR < 1.6, Not required
			EDGE1	0	0.24	0.4 (Estimated SAR)	0.64	Σ SAR < 1.6, Not required
			EDGE1	4	0.33	0.4 (Estimated SAR)	0.73	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	0.49	0.01	0.50	Σ SAR < 1.6, Not required
			EDGE2	0	0.07	0.4 (Estimated SAR)	0.47	Σ SAR < 1.6, Not required
12	WCDMA V + BT (DSS)	Body	Rear Face	0	0.79	0.3 (Estimated SAR)	1.09	Σ SAR < 1.6, Not required
			Rear Face	9	0.50	0.1 (Estimated SAR)	0.60	Σ SAR < 1.6, Not required
			EDGE1	0	0.24	0.3 (Estimated SAR)	0.54	Σ SAR < 1.6, Not required
			EDGE1	4	0.33	0.3 (Estimated SAR)	0.63	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.3 (Estimated SAR)	0.70	Σ SAR < 1.6, Not required
			EDGE4	0	0.49	0.00	0.49	Σ SAR < 1.6, Not required
			EDGE2	0	0.07	0.3 (Estimated SAR)	0.37	Σ SAR < 1.6, Not required

No.	Conditions (SAR1 + SAR2)	Exposure Condition	Test Position	Separation (mm)	Max. SAR1	Max. SAR2	SAR Summation	SPLSR Analysis
13	LTE 4 + WLAN (DTS)	Body	Rear Face	0	1.29	0.49	**1.78**	**Analyzed as below**
			Rear Face	9	0.67	0.49	1.16	Σ SAR < 1.6, Not required
			EDGE1	0	0.37	0.04	0.41	Σ SAR < 1.6, Not required
			EDGE1	4	0.36	0.04	0.40	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	1.12	0.01	1.13	Σ SAR < 1.6, Not required
			EDGE2	0	0.03	0.13	0.16	Σ SAR < 1.6, Not required
14	LTE 4 + WLAN (NII)	Body	Rear Face	0	1.29	0.74	**2.03**	**Analyzed as below**
			Rear Face	9	0.67	0.74	1.41	Σ SAR < 1.6, Not required
			EDGE1	0	0.37	0.4 (Estimated SAR)	0.77	Σ SAR < 1.6, Not required
			EDGE1	4	0.36	0.4 (Estimated SAR)	0.76	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	1.12	0.01	1.13	Σ SAR < 1.6, Not required
			EDGE2	0	0.03	0.4 (Estimated SAR)	0.43	Σ SAR < 1.6, Not required
15	LTE 4 + BT (DSS)	Body	Rear Face	0	1.29	0.3 (Estimated SAR)	1.59	Σ SAR < 1.6, Not required
			Rear Face	9	0.67	0.1 (Estimated SAR)	0.77	Σ SAR < 1.6, Not required
			EDGE1	0	0.37	0.3 (Estimated SAR)	0.67	Σ SAR < 1.6, Not required
			EDGE1	4	0.36	0.3 (Estimated SAR)	0.66	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.3 (Estimated SAR)	0.70	Σ SAR < 1.6, Not required
			EDGE4	0	1.12	0.00	1.12	Σ SAR < 1.6, Not required
			EDGE2	0	0.03	0.3 (Estimated SAR)	0.33	Σ SAR < 1.6, Not required

No.	Conditions (SAR1 + SAR2)	Exposure Condition	Test Position	Separation (mm)	Max. SAR1	Max. SAR2	SAR Summation	SPLSR Analysis
16	LTE 17 + WLAN (DTS)	Body	Rear Face	0	0.63	0.49	1.12	Σ SAR < 1.6, Not required
			Rear Face	9	0.34	0.49	0.83	Σ SAR < 1.6, Not required
			EDGE1	0	0.25	0.04	0.29	Σ SAR < 1.6, Not required
			EDGE1	4	0.30	0.04	0.34	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	0.33	0.01	0.34	Σ SAR < 1.6, Not required
			EDGE2	0	0.10	0.13	0.23	Σ SAR < 1.6, Not required
17	LTE 17 + WLAN (NII)	Body	Rear Face	0	0.63	0.74	1.37	Σ SAR < 1.6, Not required
			Rear Face	9	0.34	0.74	1.08	Σ SAR < 1.6, Not required
			EDGE1	0	0.25	0.4 (Estimated SAR)	0.65	Σ SAR < 1.6, Not required
			EDGE1	4	0.30	0.4 (Estimated SAR)	0.70	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.4 (Estimated SAR)	0.80	Σ SAR < 1.6, Not required
			EDGE4	0	0.33	0.01	0.34	Σ SAR < 1.6, Not required
			EDGE2	0	0.10	0.4 (Estimated SAR)	0.50	Σ SAR < 1.6, Not required
18	LTE 17 + BT (DSS)	Body	Rear Face	0	0.63	0.3 (Estimated SAR)	0.93	Σ SAR < 1.6, Not required
			Rear Face	9	0.34	0.1 (Estimated SAR)	0.44	Σ SAR < 1.6, Not required
			EDGE1	0	0.25	0.3 (Estimated SAR)	0.55	Σ SAR < 1.6, Not required
			EDGE1	4	0.30	0.3 (Estimated SAR)	0.60	Σ SAR < 1.6, Not required
			EDGE3	0	0.4 (Estimated SAR)	0.3 (Estimated SAR)	0.70	Σ SAR < 1.6, Not required
			EDGE4	0	0.33	0.00	0.33	Σ SAR < 1.6, Not required
			EDGE2	0	0.10	0.3 (Estimated SAR)	0.40	Σ SAR < 1.6, Not required

<SAR to Peak Location Separation Ratio Analysis>

The simultaneous transmitting antennas in each operating mode and exposure condition combination are considered one pair at a time to determine the SPLSR. When SAR is measured for both antennas in the pair, the peak location separation distance is computed by the following formula.

$$\text{Peak Location Separation Distance} = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2 + (z_1 - z_2)^2}$$

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 area or zoom scans.

When standalone test exclusion applies, SAR is estimated; the peak location is assumed to be at the feed-point or geometric center of the antenna. Due to curvatures on the SAM phantom, when SAR is estimated for one of the antennas in an antenna pair, the measured peak SAR location will be translated onto the test device to determine the peak location separation for the antenna pair.

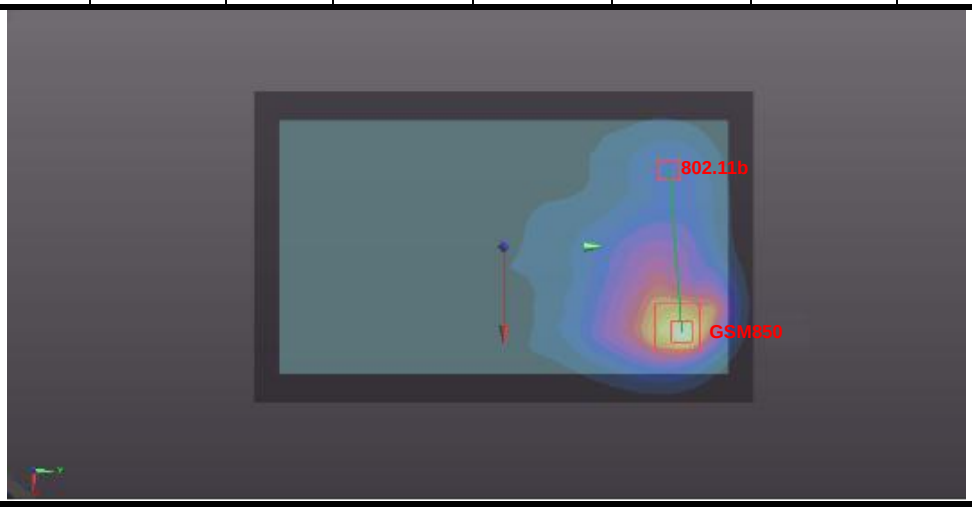
The SPLSR is determined by the following formula.

$$\text{SPLSR} = \frac{(\text{SAR}_1 + \text{SAR}_2)^{1.5}}{R_i}$$

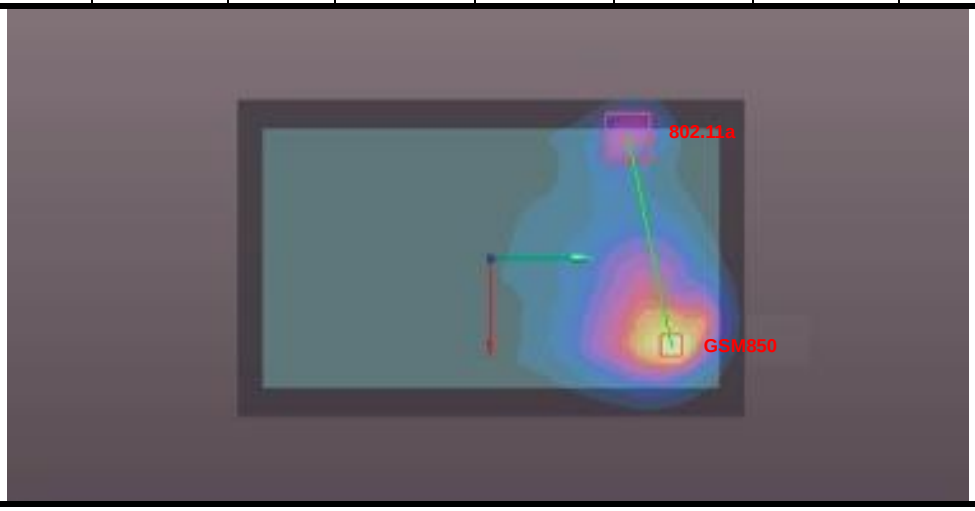
Where SAR_1 and SAR_2 are the highest reported or estimated SAR for each antenna in the pair, and R_i is the separation distance between the peak SAR locations for the antenna pair in mm.

When the SPLSR is <= 0.04, the simultaneous transmission SAR is not required. Otherwise, the enlarged zoom scan and volume scan post-processing procedures will be performed.

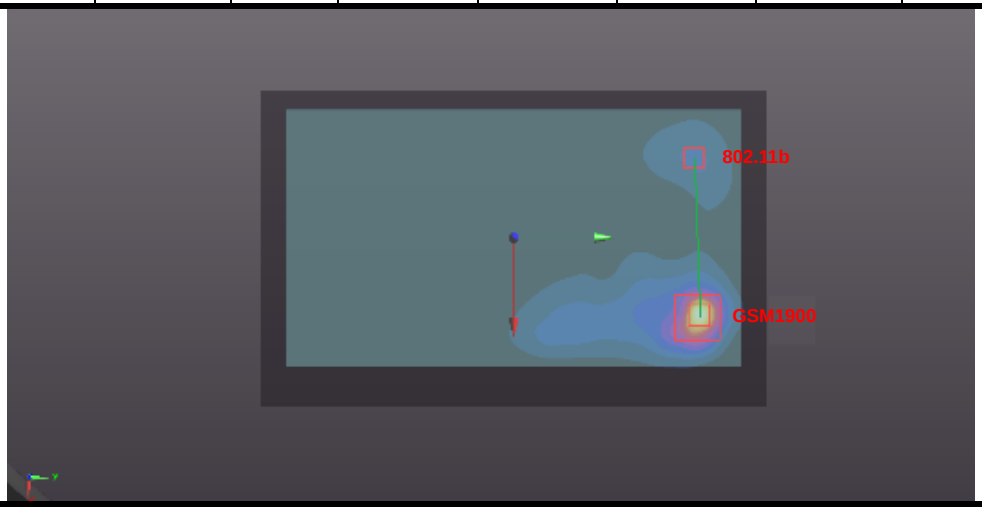
Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (R_i, mm)	SPLSR	Simultaneous Transmission SAR Test
				x	y	z			
GSM850 Ch128	Body	Rear Face	1.30	4.21	9.34	-17.95	93	0.026	SPLSR < 0.04, Not required
802.11b Ch1			0.49	-4.80	7.04	-18.00			



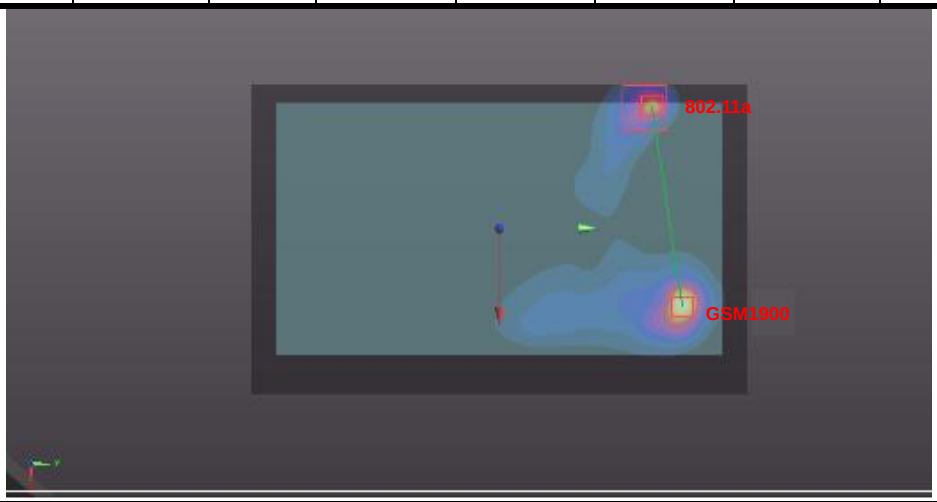
Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (R_i, mm)	SPLSR	Simultaneous Transmission SAR Test
				x	y	z			
GSM850 Ch128	Body	Rear Face	1.30	4.21	9.34	-17.95	101.1	0.029	SPLSR < 0.04, Not required
802.11a Ch52			0.74	-5.76	7.64	-17.92			



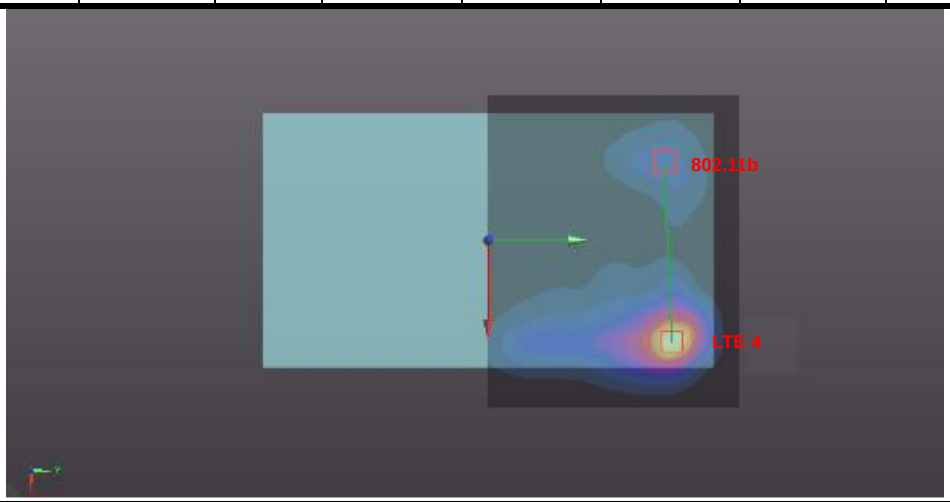
Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (R_i, mm)	SPLSR	Simultaneous Transmission SAR Test
				x	y	z			
GSM1900 Ch810	Body	Rear Face	1.22	3.65	9.01	-17.88	86.8	0.026	SPLSR < 0.04, Not required
802.11b Ch1			0.49	-4.80	7.04	-18.00			



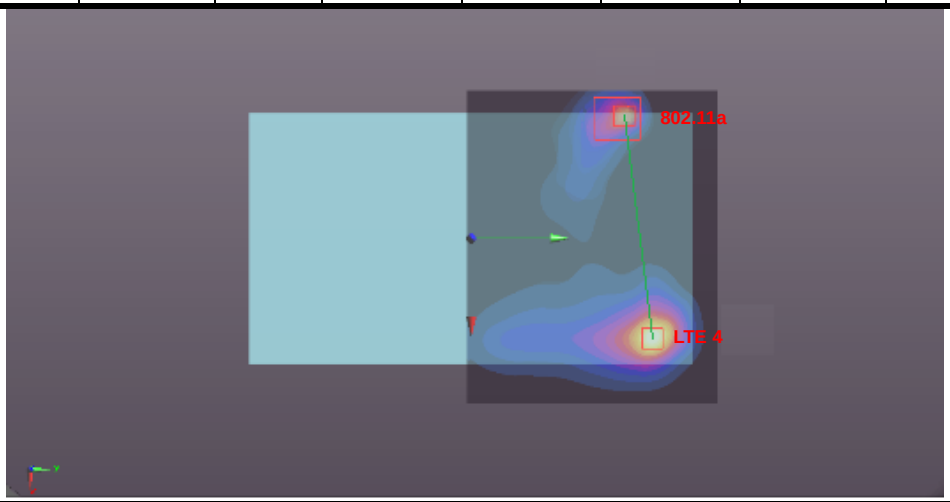
Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (R_i, mm)	SPLSR	Simultaneous Transmission SAR Test
				x	y	z			
GSM1900 Ch810	Body	Rear Face	1.22	3.65	9.01	-17.88	95.1	0.029	SPLSR < 0.04, Not required
802.11a Ch52			0.74	-5.76	7.64	-17.92			



Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (R_i, mm)	SPLSR	Simultaneous Transmission SAR Test
				x	y	z			
LTE 4 Ch20000	Body	Rear Face	1.29	4.37	9.34	-17.77	94.6	0.025	SPLSR < 0.04, Not required
802.11b Ch1			0.49	-4.80	7.04	-18.00			



Conditions	Exposure Condition	Test Position	SAR Value (W/kg)	Coordinates			Peak Location Separation Distance (R_i, mm)	SPLSR	Simultaneous Transmission SAR Test
				x	y	z			
LTE 4 Ch20000	Body	Rear Face	1.29	4.37	9.34	-17.77	102.7	0.028	SPLSR < 0.04, Not required
802.11a Ch52			0.74	-5.76	7.64	-17.92			



Test Engineer：Morrison Huang, and Mars Chang

5. Calibration of Test Equipment

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Kit	SPEAG	D750V3	1013	Apr. 23, 2012	Annual
System Validation Kit	SPEAG	D835V2	4d021	Apr. 20, 2012	Annual
System Validation Kit	SPEAG	D1750V2	1055	Aug. 23, 2012	Annual
System Validation Kit	SPEAG	D1900V2	5d036	Jan. 26, 2012	Annual
System Validation Kit	SPEAG	D2450V2	737	Jan. 24, 2012	Annual
System Validation Kit	SPEAG	D5GHzV2	1019	Nov. 16, 2012	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3590	Feb. 23, 2012	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3650	Oct. 26, 2012	Annual
Dosimetric E-Field Probe	SPEAG	EX3DV4	3801	Jun. 22, 2012	Annual
Data Acquisition Electronics	SPEAG	DAE3	579	Apr. 27, 2012	Annual
Data Acquisition Electronics	SPEAG	DAE4	687	Aug. 23, 2012	Annual
Data Acquisition Electronics	SPEAG	DAE4	861	Aug. 23, 2012	Annual
Data Acquisition Electronics	SPEAG	DAE4	915	Jun. 21, 2012	Annual
Data Acquisition Electronics	SPEAG	DAE4	1277	Jul. 19, 2012	Annual
SAM Phantom	SPEAG	QD000P40CD	TP-1127	N/A	N/A
ELI Phantom	SPEAG	QDOVA001B	TP-1043	N/A	N/A
Radio Communication Tester	Agilent	E5515C	MY50266628	Nov. 22, 2012	Biennial
Radio Communication Analyzer	Anritsu	MT8820C	6201010284	Aug. 18, 2012	Biennial
ENA Series Network Analyzer	Agilent	E5071C	MY46214281	May 14, 2012	Annual
MXG Analog Signal Generator	Agilent	N5181A	MY50143868	May 06, 2012	Annual
Power Meter	Anritsu	ML2495A	1218009	May 07, 2012	Annual
Power Sensor	Anritsu	MA2411B	1207252	May 07, 2012	Annual
EXA Spectrum Analyzer	Agilent	N9010A	MY52100136	Apr. 23, 2012	Annual
Dielectric Probe Kit	Agilent	85070D	E2-020018	May 14, 2012	Annual
Thermometer	YFE	YF-160A	110600361	Feb. 21, 2012	Annual
Directional Coupler	Woken	0110A05602O-10	11122702	Apr. 19, 2012	Annual
Power Amplifier	AR	5S1G4	0339656	Apr. 23, 2012	Annual
Power Amplifier	Mini-Circuit	ZVE-8G	001000422	Apr. 23, 2012	Annual
Attenuator	Woken	00800A1G01L-03	N/A	Apr. 19, 2012	Annual

6. Measurement Uncertainty

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Standard Uncertainty (1g)	Vi
Measurement System						
Probe Calibration	6.0	Normal	1	1	± 6.0 %	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	± 1.9 %	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	± 3.9 %	∞
Boundary Effects	1.0	Rectangular	√3	1	± 0.6 %	∞
Linearity	4.7	Rectangular	√3	1	± 2.7 %	∞
System Detection Limits	1.0	Rectangular	√3	1	± 0.6 %	∞
Readout Electronics	0.6	Normal	1	1	± 0.6 %	∞
Response Time	0.0	Rectangular	√3	1	± 0.0 %	∞
Integration Time	1.7	Rectangular	√3	1	± 1.0 %	∞
RF Ambient Noise	3.0	Rectangular	√3	1	± 1.7 %	∞
RF Ambient Reflections	3.0	Rectangular	√3	1	± 1.7 %	∞
Probe Positioner	0.5	Rectangular	√3	1	± 0.3 %	∞
Probe Positioning	2.9	Rectangular	√3	1	± 1.7 %	∞
Max. SAR Eval.	2.3	Rectangular	√3	1	± 1.3 %	∞
Test Sample Related						
Device Positioning	3.9	Normal	1	1	± 3.9 %	31
Device Holder	2.7	Normal	1	1	± 2.7 %	19
Power Drift	5.0	Rectangular	√3	1	± 2.9 %	∞
Phantom and Setup						
Phantom Uncertainty	4.0	Rectangular	√3	1	± 2.3 %	∞
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	± 1.8 %	∞
Liquid Conductivity (Meas.)	5.0	Normal	1	0.64	± 3.2 %	29
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	± 1.7 %	∞
Liquid Permittivity (Meas.)	5.0	Normal	1	0.6	± 3.0 %	29
Combined Standard Uncertainty					± 11.7 %	
Expanded Uncertainty (K=2)					**± 23.4 %**	

Uncertainty budget for frequency range 300 MHz to 3 GHz

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Standard Uncertainty (1g)	Vi
Measurement System						
Probe Calibration	6.55	Normal	1	1	± 6.55 %	∞
Axial Isotropy	4.7	Rectangular	√3	0.7	± 1.9 %	∞
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	± 3.9 %	∞
Boundary Effects	2.0	Rectangular	√3	1	± 1.2 %	∞
Linearity	4.7	Rectangular	√3	1	± 2.7 %	∞
System Detection Limits	1.0	Rectangular	√3	1	± 0.6 %	∞
Readout Electronics	0.3	Normal	1	1	± 0.3 %	∞
Response Time	0.8	Rectangular	√3	1	± 0.5 %	∞
Integration Time	2.6	Rectangular	√3	1	± 1.5 %	∞
RF Ambient Noise	3.0	Rectangular	√3	1	± 1.7 %	∞
RF Ambient Reflections	3.0	Rectangular	√3	1	± 1.7 %	∞
Probe Positioner	0.8	Rectangular	√3	1	± 0.5 %	∞
Probe Positioning	9.9	Rectangular	√3	1	± 5.7 %	∞
Max. SAR Eval.	4.0	Rectangular	√3	1	± 2.3 %	∞
Test Sample Related						
Device Positioning	3.9	Normal	1	1	± 3.9 %	31
Device Holder	2.7	Normal	1	1	± 2.7 %	19
Power Drift	5.0	Rectangular	√3	1	± 2.9 %	∞
Phantom and Setup						
Phantom Uncertainty	4.0	Rectangular	√3	1	± 2.3 %	∞
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	± 1.8 %	∞
Liquid Conductivity (Meas.)	5.0	Normal	1	0.64	± 3.2 %	30
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	± 1.7 %	∞
Liquid Permittivity (Meas.)	5.0	Normal	1	0.6	± 3.0 %	30
Combined Standard Uncertainty					± 13.4 %	
Expanded Uncertainty (K=2)					**± 26.8 %**	

Uncertainty budget for frequency range 3 GHz to 6 GHz

7. Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Taiwan HwaYa EMC/RF/Safety/Telecom Lab:
Add: No. 19, Hwa Ya 2nd Rd, Wen Hwa Vil., Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.
Tel: 886-3-318-3232
Fax: 886-3-327-0892

Taiwan LinKo EMC/RF Lab:
Add: No. 47, 14th Ling, Chia Pau Vil., Linkou Dist., New Taipei City 244, Taiwan, R.O.C.
Tel: 886-2-2605-2180
Fax: 886-2-2605-1924

Taiwan HsinChu EMC/RF Lab:
Add: No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Vil., Chiung Lin Township, Hsinchu County 307, Taiwan, R.O.C.
Tel: 886-3-593-5343
Fax: 886-3-593-5342

Email: service.adt@tw.bureauveritas.com
Web Site: www.adt.com.tw

The road map of all our labs can be found in our web site also.

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Appendix A. SAR Plots of System Verification

The plots for system verification are shown as follows.

System Check_B750_121222

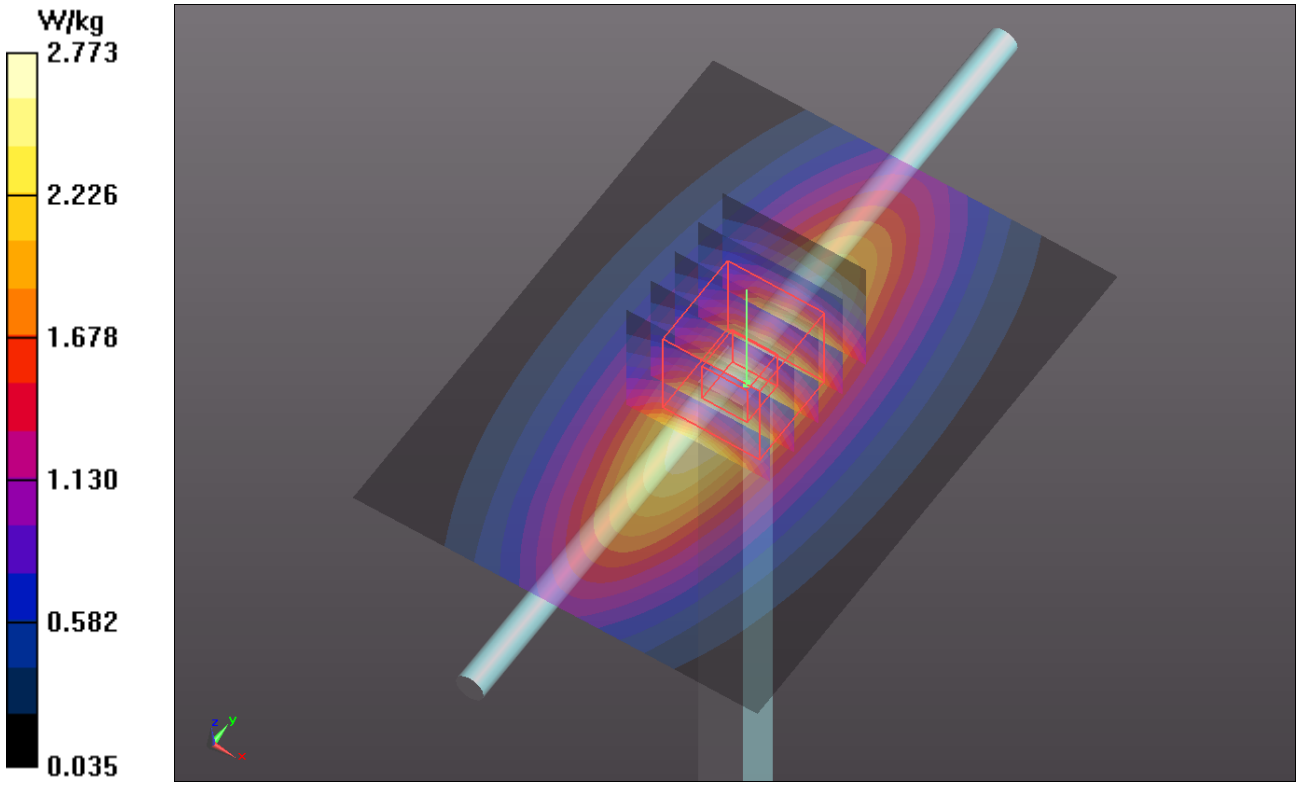
DUT: Dipole 750 MHz; Type: D750V3; SN: 1013

Communication System: CW; Frequency: 750 MHz;Duty Cycle: 1:1
Medium: B750_1222 Medium parameters used: f = 750 MHz; σ = 0.966 mho/m; ε_r = 55.259; ρ = 1000 kg/m^3
Ambient Temperature：21.5℃； Liquid Temperature：20.1℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 2012/06/22;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.77 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 54.377 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.21 W/kg
SAR(1 g) = 2.21 W/kg; SAR(10 g) = 1.49 W/kg
Maximum value of SAR (measured) = 2.76 W/kg



System Check_B835_121222

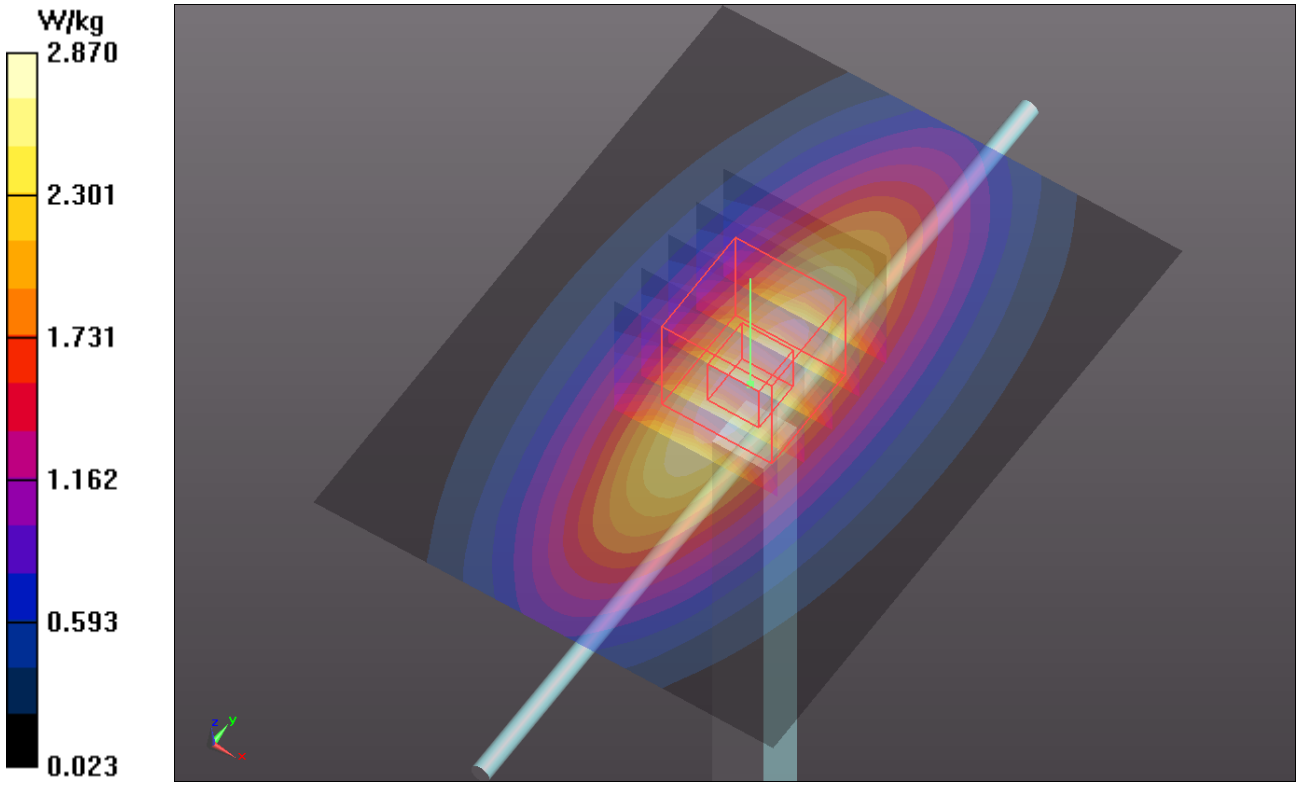
DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: B835_1222 Medium parameters used: f = 835 MHz; σ = 0.993 mho/m; ε_r = 56.738; ρ = 1000 kg/m^3
Ambient Temperature：21.5℃； Liquid Temperature：20.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/06/22;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.87 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 54.437 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 3.40 W/kg
SAR(1 g) = 2.26 W/kg; SAR(10 g) = 1.49 W/kg
Maximum value of SAR (measured) = 2.88 W/kg



System Check_B835_121227

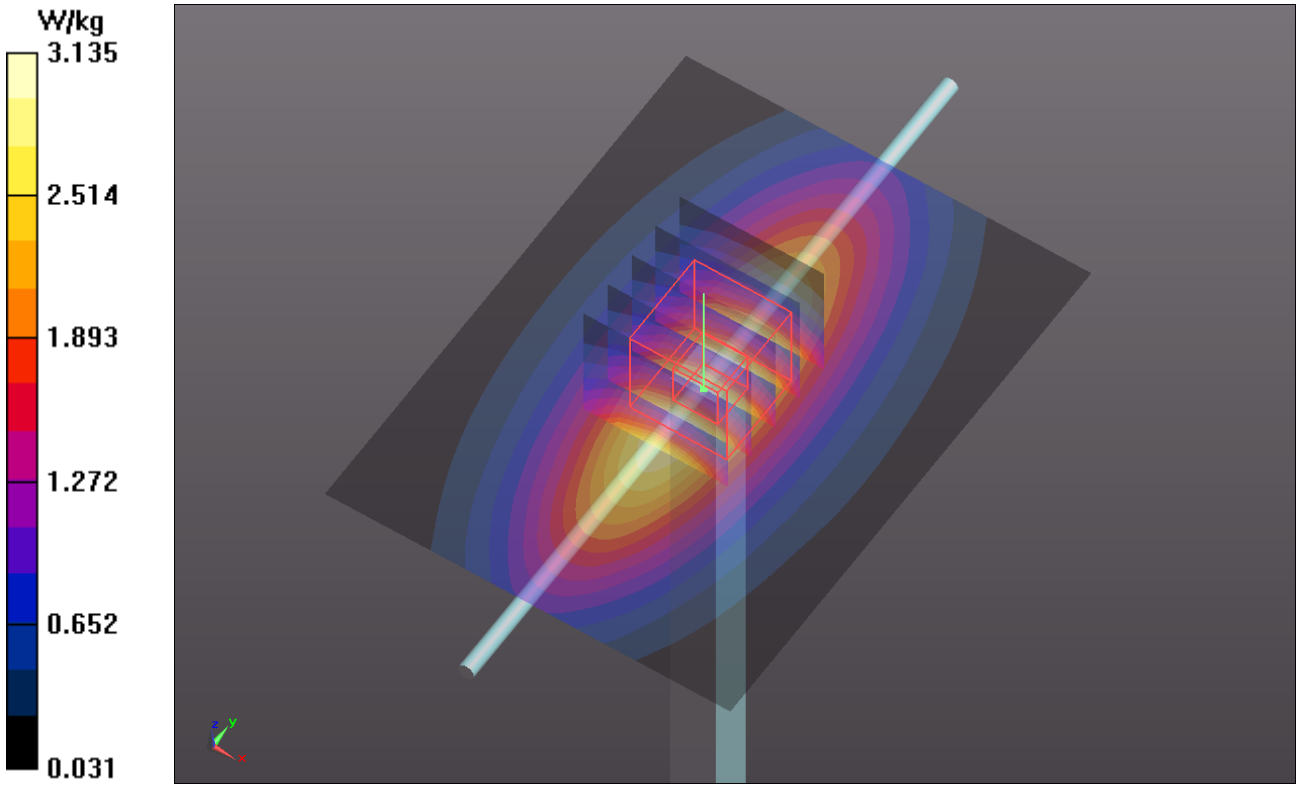
DUT: Dipole 835 MHz; Type: D835V2; SN: 4d021

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium: B835_1227 Medium parameters used: f = 835 MHz; σ = 0.968 mho/m; ε_r = 55.273; ρ = 1000 kg/m^3
Ambient Temperature：21.5℃； Liquid Temperature：20.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/06/22;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=250mW/Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.13 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 58.164 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.68 W/kg
SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.65 W/kg
Maximum value of SAR (measured) = 3.14 W/kg



Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab Date: 2013/01/03

System Check_B1750_130103

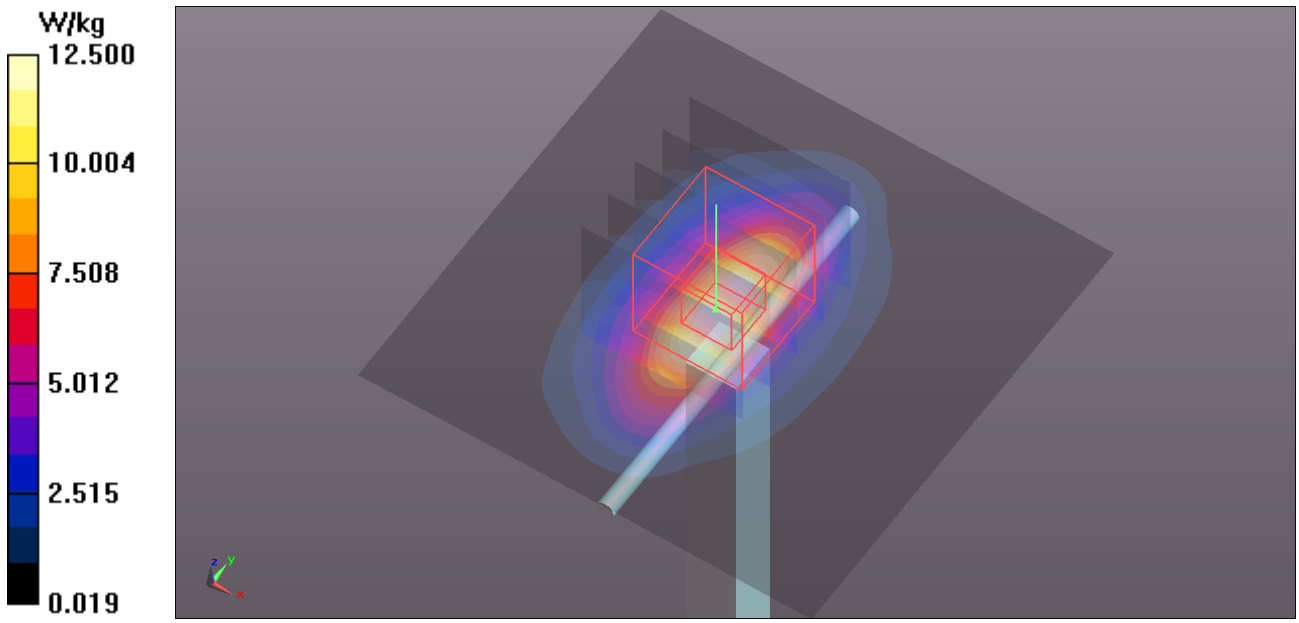
DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055

Communication System: CW; Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: B1750_0103 Medium parameters used: f = 1750 MHz; σ = 1.447 mho/m; ε_r = 53.388; ρ = 1000 kg/m^3
Ambient Temperature：21.2℃； Liquid Temperature：20.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3650; ConvF(7.31, 7.31, 7.31); Calibrated: 2012/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2012/07/19
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 12.5 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 93.059 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 16.0 W/kg
SAR(1 g) = 9.09 W/kg; SAR(10 g) = 4.84 W/kg
Maximum value of SAR (measured) = 12.8 W/kg



System Check_B1900_121220

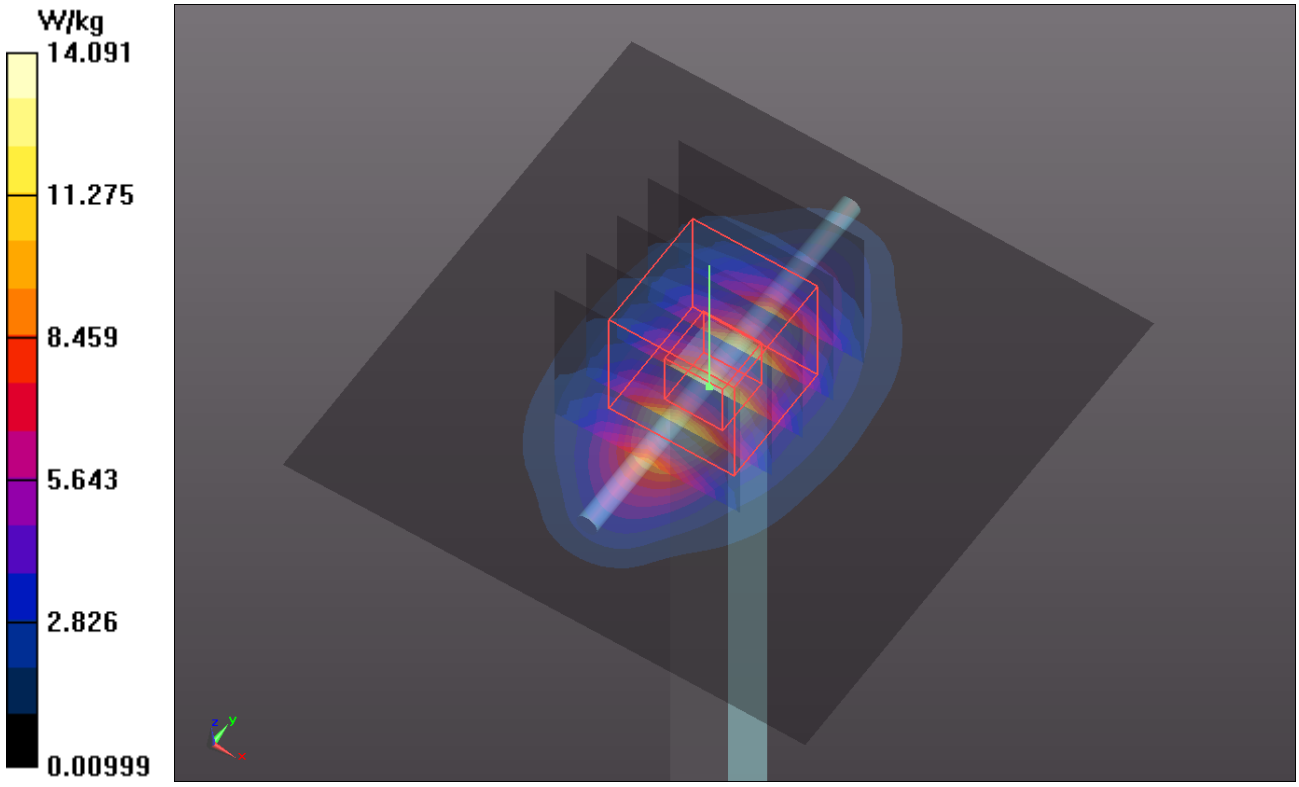
DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: B1900_1220 Medium parameters used: f = 1900 MHz; σ = 1.535 mho/m; ε_r = 51.016; ρ = 1000 kg/m^3
Ambient Temperature：21.6℃； Liquid Temperature：20.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(8.07, 8.07, 8.07); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2012/06/21
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 14.1 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 97.316 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 9.81 W/kg; SAR(10 g) = 5.07 W/kg
Maximum value of SAR (measured) = 14.1 W/kg



System Check_B1900_121227

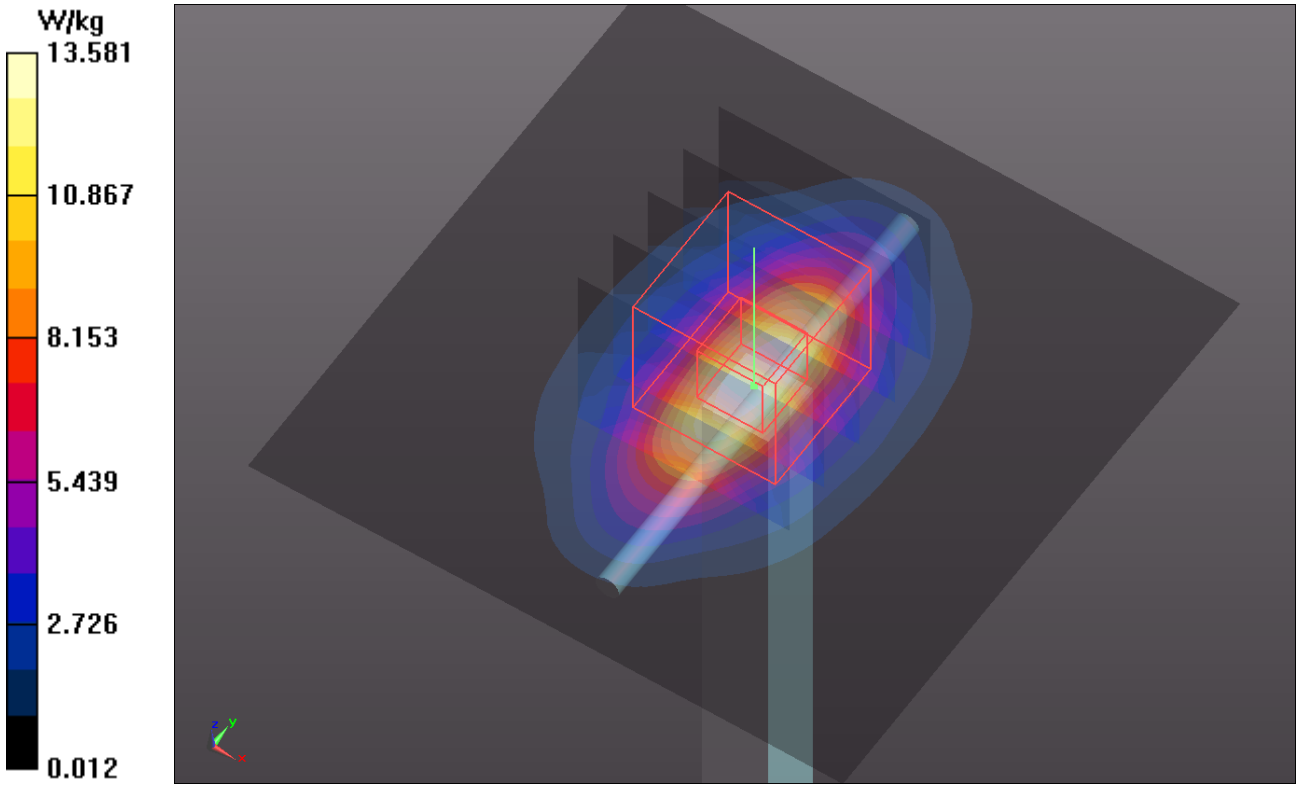
DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: B1900_1227 Medium parameters used: f = 1900 MHz; σ = 1.544 mho/m; ε_r = 53.431; ρ = 1000 kg/m^3
Ambient Temperature：21.7℃； Liquid Temperature：20.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/06/22;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 13.6 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 95.465 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 17.1 W/kg
SAR(1 g) = 9.49 W/kg; SAR(10 g) = 4.92 W/kg
Maximum value of SAR (measured) = 13.6 W/kg



System Check_B2450_130110

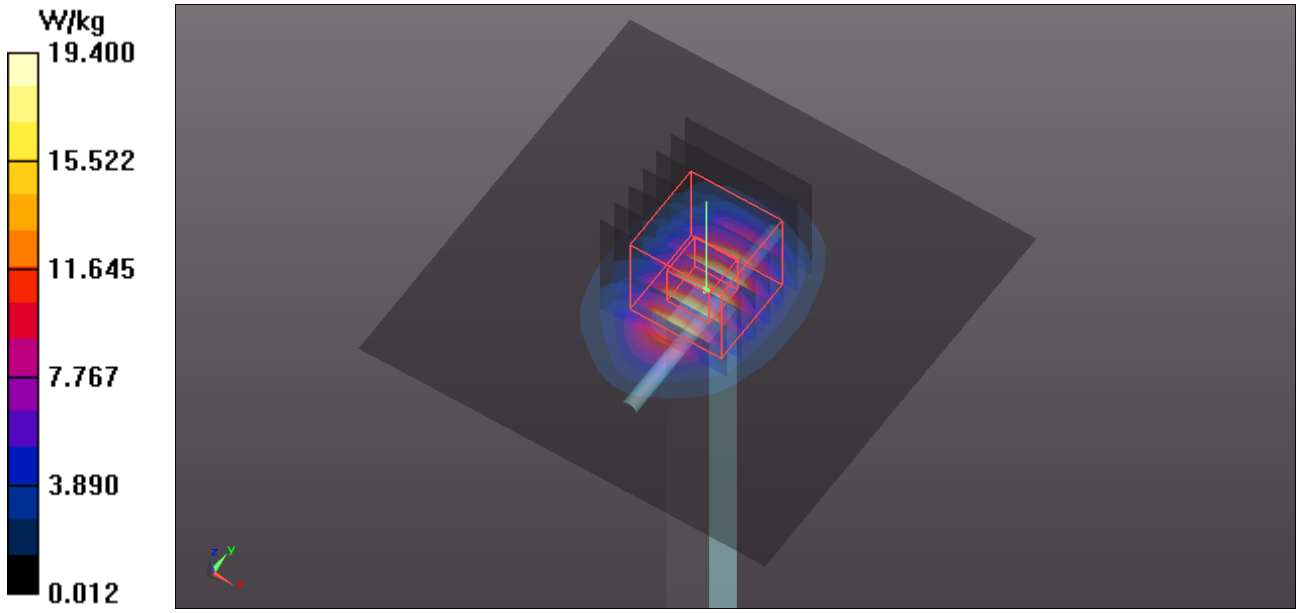
DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: B2450_0110 Medium parameters used: f = 2450 MHz; σ = 1.958 mho/m; ε_r = 50.929; ρ = 1000 kg/m^3
Ambient Temperature：22.3℃; Liquid Temperature：21.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(7.8, 7.8, 7.8); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn687; Calibrated: 2012/08/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=250mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 19.4 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 100.5 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 26.7 W/kg
SAR(1 g) = 12.5 W/kg; SAR(10 g) = 5.71 W/kg
Maximum value of SAR (measured) = 19.5 W/kg



System Check_B5200_121225

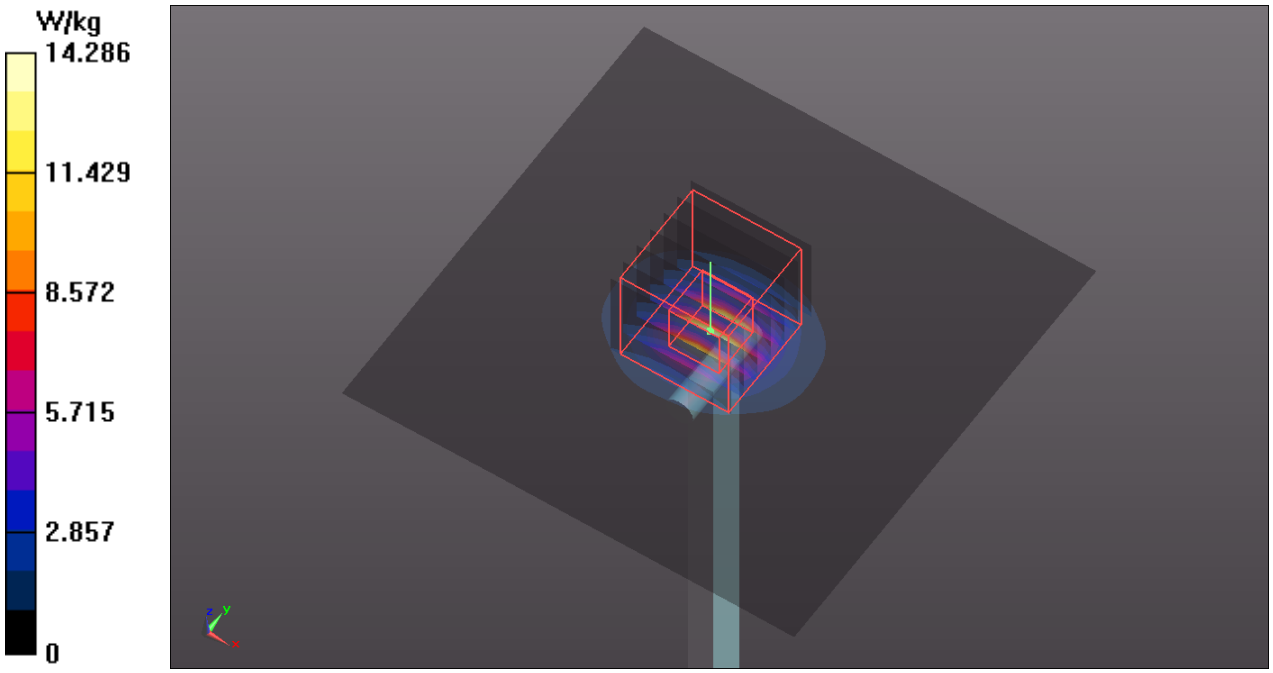
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: CW; Frequency: 5200 MHz;Duty Cycle: 1:1
Medium: B5G_1225 Medium parameters used: f = 5200 MHz; σ = 5.278 mho/m; ε_r = 48.936; ρ = 1000 kg/m^3
Ambient Temperature：21.5℃; Liquid Temperature：20.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(4.89, 4.89, 4.89); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2012/06/21
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 14.3 W/kg

Pin=100mW/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 58.501 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 26.3 W/kg
SAR(1 g) = 7.04 W/kg; SAR(10 g) = 1.98 W/kg
Maximum value of SAR (measured) = 14.9 W/kg



System Check_B5300_121225

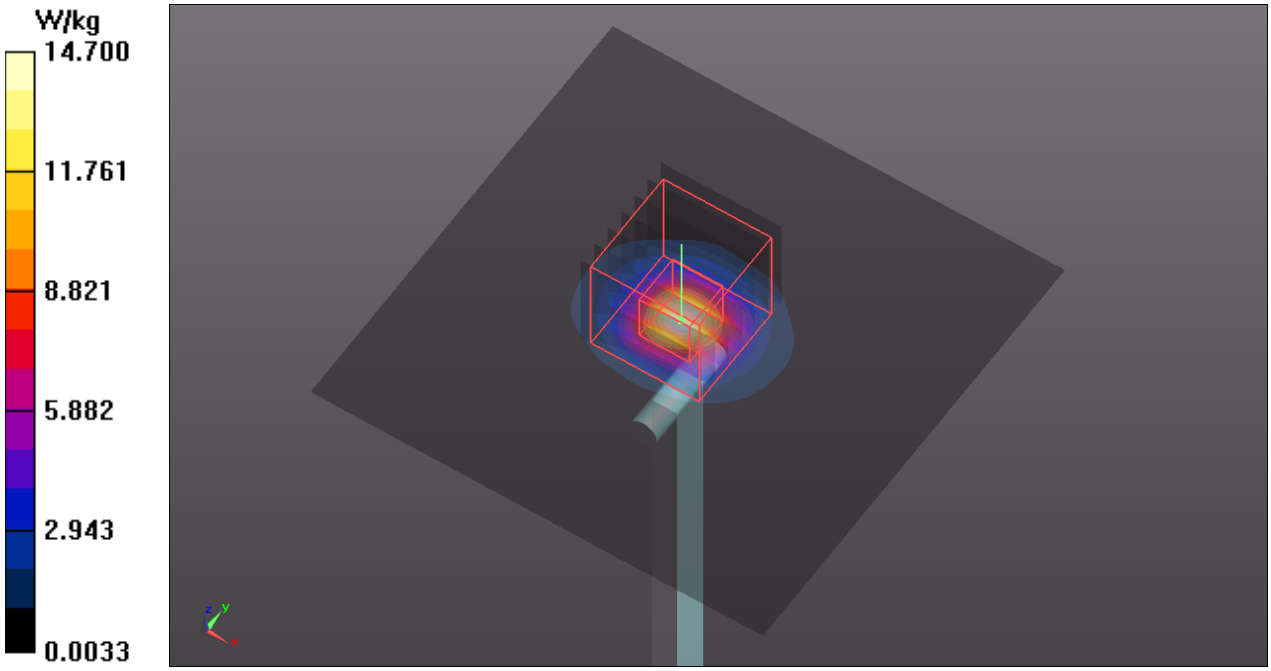
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: CW; Frequency: 5300 MHz;Duty Cycle: 1:1
Medium: B5G_1225 Medium parameters used: f = 5300 MHz; σ = 5.413 mho/m; ε_r = 48.764; ρ = 1000 kg/m^3
Ambient Temperature：21.5 ℃; Liquid Temperature：20.5 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(4.81, 4.81, 4.81); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2012/06/21
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 14.7 W/kg

Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 57.395 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 29.2 W/kg
SAR(1 g) = 7.48 W/kg; SAR(10 g) = 2.1 W/kg
Maximum value of SAR (measured) = 15.7 W/kg



System Check_B5600_121226

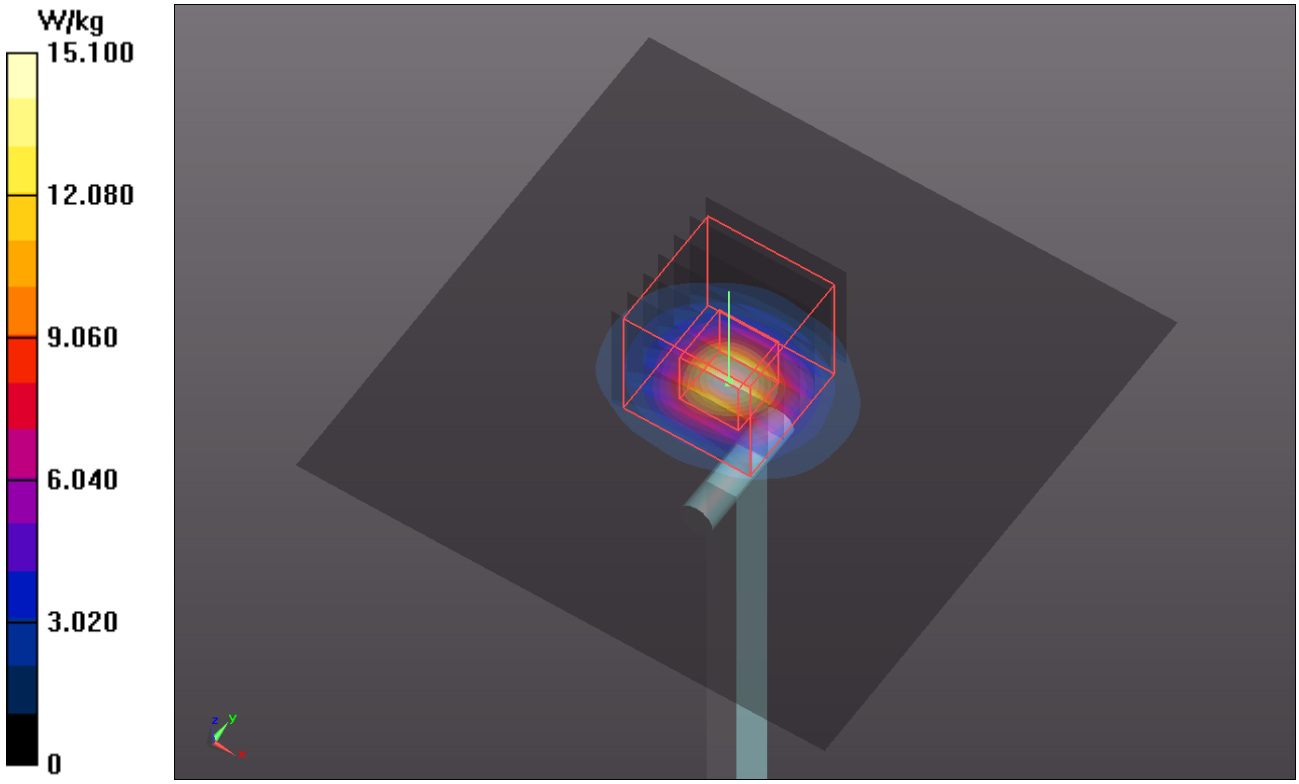
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: CW; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: B5G_1226 Medium parameters used: f = 5600 MHz; σ = 5.868 mho/m; ε_r = 48.274; ρ = 1000 kg/m^3
Ambient Temperature：21.7 ℃; Liquid Temperature：20.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(3.92, 3.92, 3.92); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2012/06/21
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.1 W/kg

Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 58.243 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 28.4 W/kg
SAR(1 g) = 7.61 W/kg; SAR(10 g) = 2.15 W/kg
Maximum value of SAR (measured) = 16.2 W/kg



System Check_B5800_130108

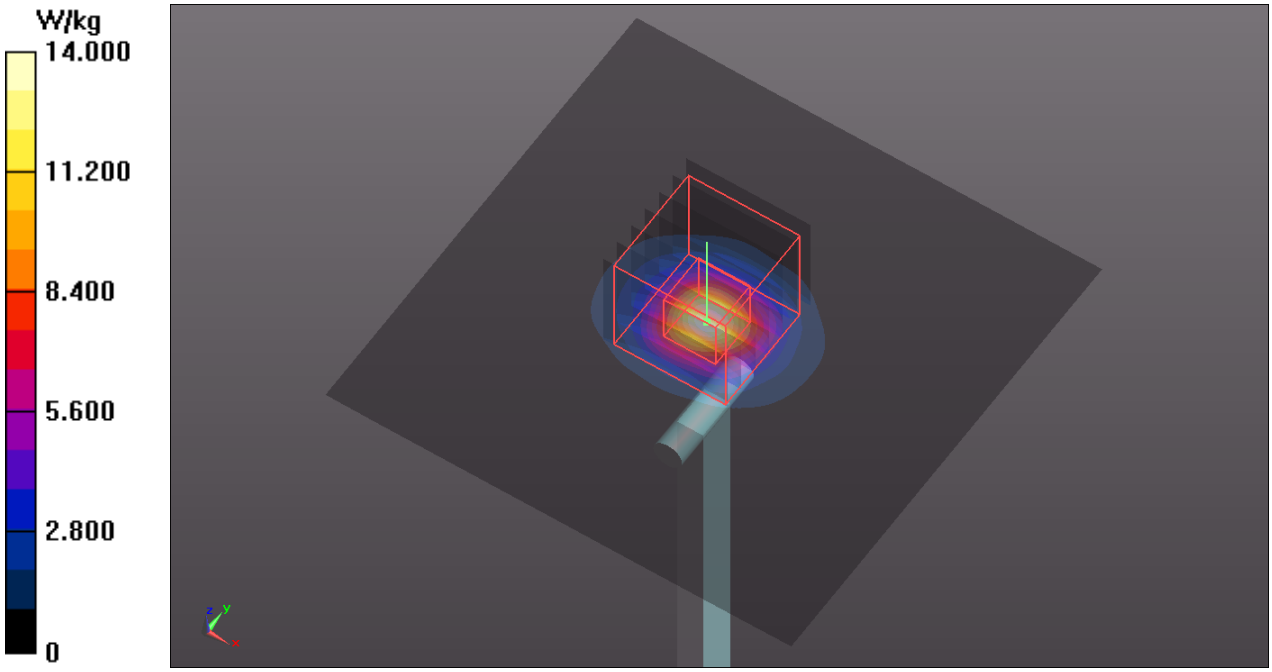
DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019

Communication System: CW; Frequency: 5800 MHz;Duty Cycle: 1:1
Medium: B5G_0108 Medium parameters used: f = 5800 MHz; σ = 6.148 mho/m; ε_r = 47.973; ρ = 1000 kg/m^3
Ambient Temperature：21.7 ℃; Liquid Temperature：20.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(4.54, 4.54, 4.54); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn687; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 14.0 W/kg

Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 52.806 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 30.0 W/kg
SAR(1 g) = 6.97 W/kg; SAR(10 g) = 1.95 W/kg
Maximum value of SAR (measured) = 15.0 W/kg



Appendix B. SAR Plots of SAR Measurement

The SAR plots for highest measured SAR and measured SAR > 1.5 W/kg are shown as follows.

P01 GSM850_GPRS10_Rear Face_0cm_Ch128_w/ Pw Reduction

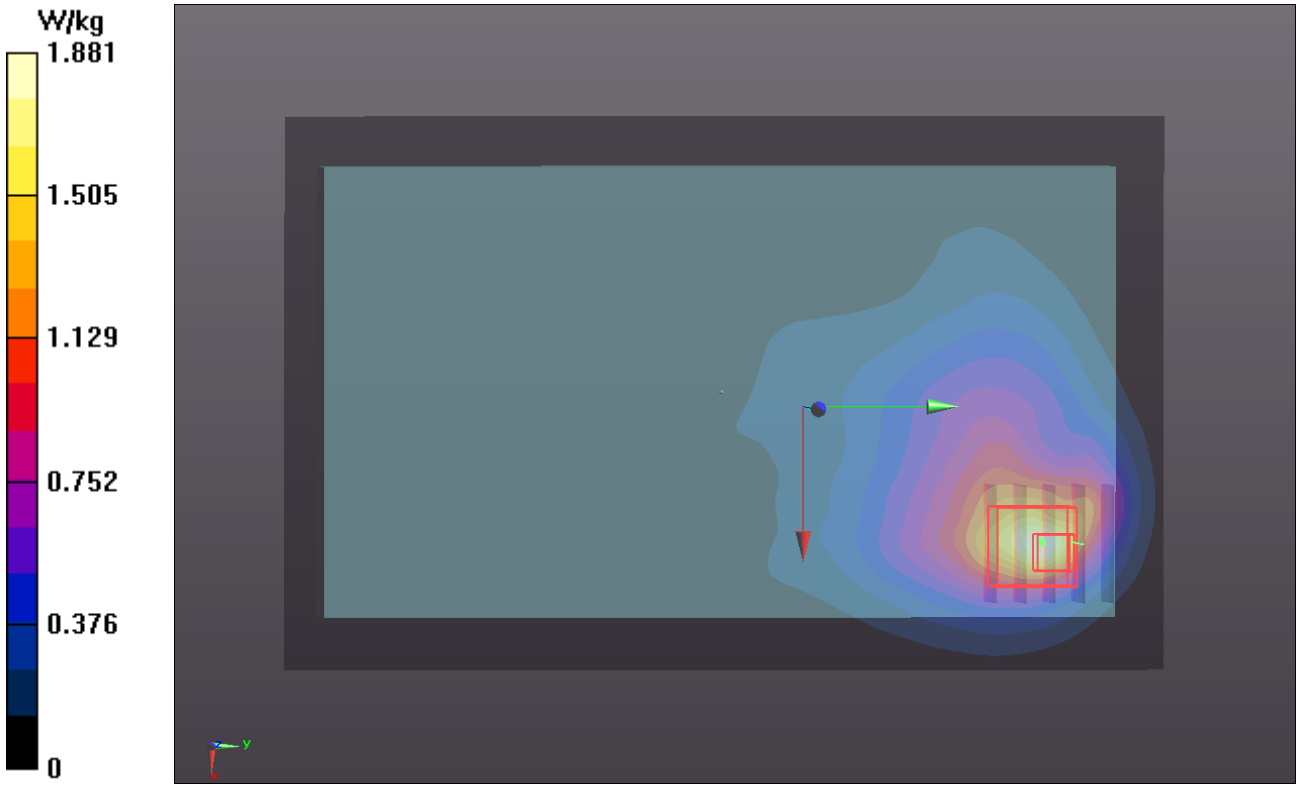
DUT: 121112C19

Communication System: GPRS10; Frequency: 824.2 MHz;Duty Cycle: 1:4
Medium: B835_1227 Medium parameters used: f = 824.2 MHz; σ = 0.958 mho/m; ε_r = 55.378; ρ = 1000 kg/m^3
Ambient Temperature：21.5℃； Liquid Temperature：20.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/06/22;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch128/Area Scan (101x161x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.88 W/kg

Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.522 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 2.50 W/kg
SAR(1 g) = 1.29 W/kg; SAR(10 g) = 0.774 W/kg
Maximum value of SAR (measured) = 1.84 W/kg



P02 GSM1900_GPRS10_Rear Face_0cm_Ch810_w/ Pw Reduction

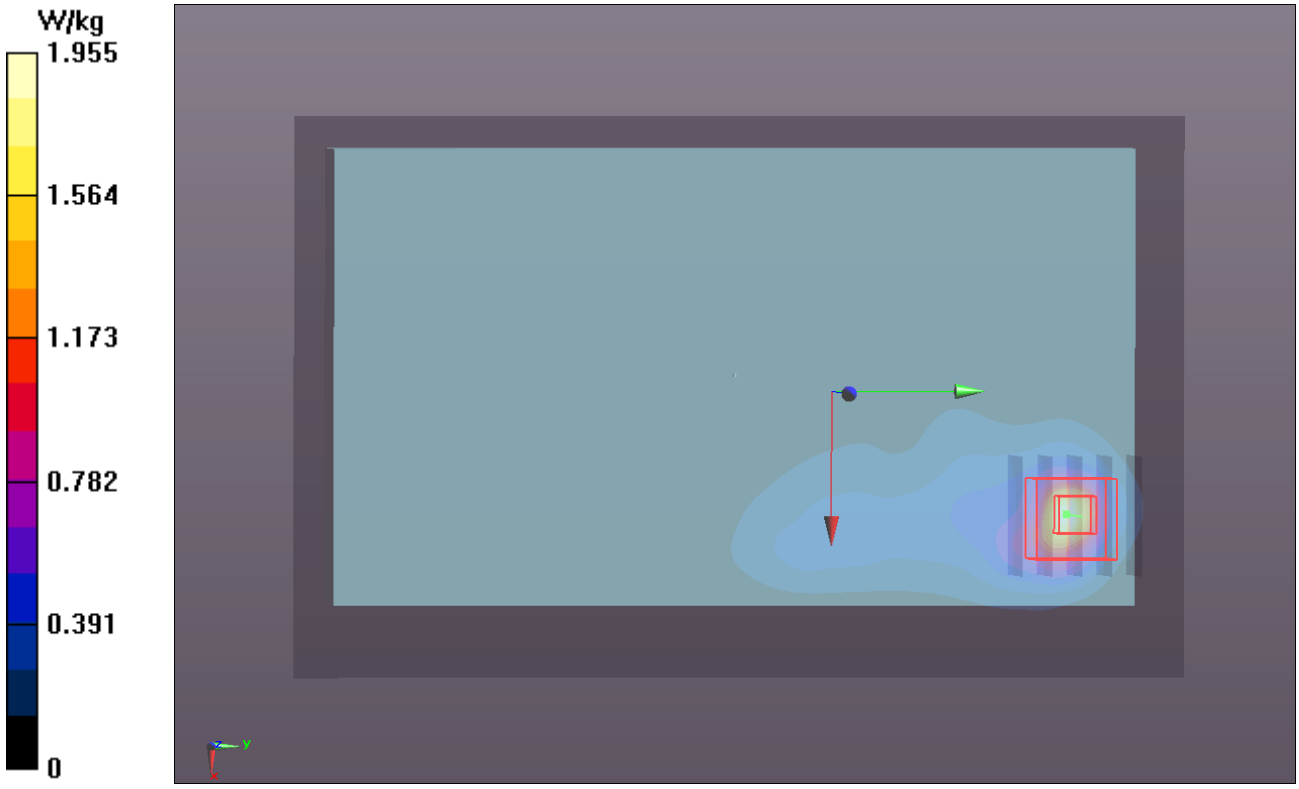
DUT: 121112C19

Communication System: GPRS10; Frequency: 1909.8 MHz;Duty Cycle: 1:4
Medium: B1900_1227 Medium parameters used: f = 1910 MHz; σ = 1.555 mho/m; ε_r = 53.414; ρ = 1000 kg/m^3
Ambient Temperature：21.7℃； Liquid Temperature：20.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/06/22;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch810/Area Scan (101x161x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.96 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.051 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 2.47 W/kg
SAR(1 g) = 1.17 W/kg; SAR(10 g) = 0.513 W/kg
Maximum value of SAR (measured) = 1.82 W/kg



P03 WCDMA II_RMC12.2K_EDGE4_0cm_ch9262_w/o Pw Reduction

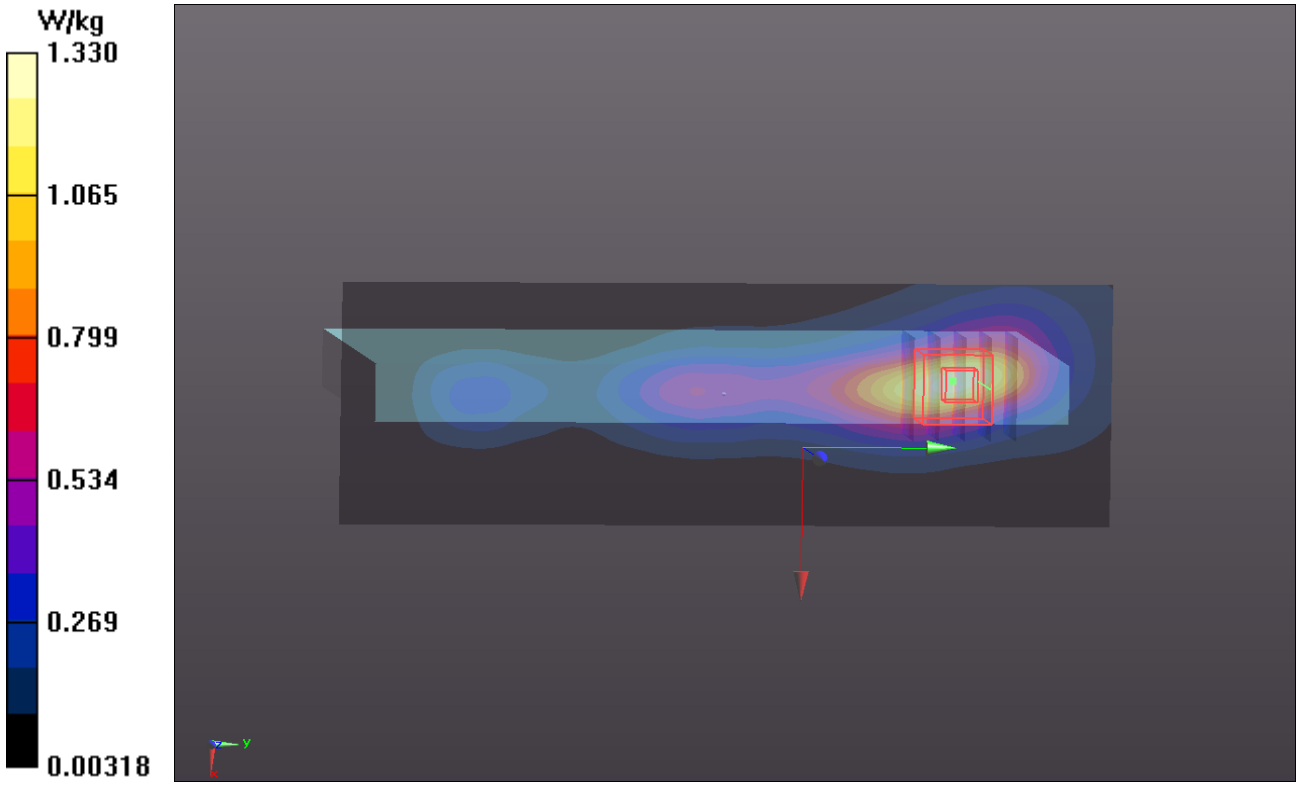
DUT: 121108C17

Communication System: WCDMA; Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium: B1900_1220 Medium parameters used: f = 1852.4 MHz; σ = 1.477 mho/m; ε_r = 51.194; ρ = 1000 kg/m^3
Ambient Temperature：21.6℃； Liquid Temperature：20.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(8.07, 8.07, 8.07); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2012/06/21
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch9262/Area Scan (51x161x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.33 W/kg

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.931 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 0.929 W/kg; SAR(10 g) = 0.519 W/kg
Maximum value of SAR (measured) = 1.28 W/kg



P04 WCDMA V_RMC12.2K_Rear Face_0cm_ch4233_w/ Pw Reduction

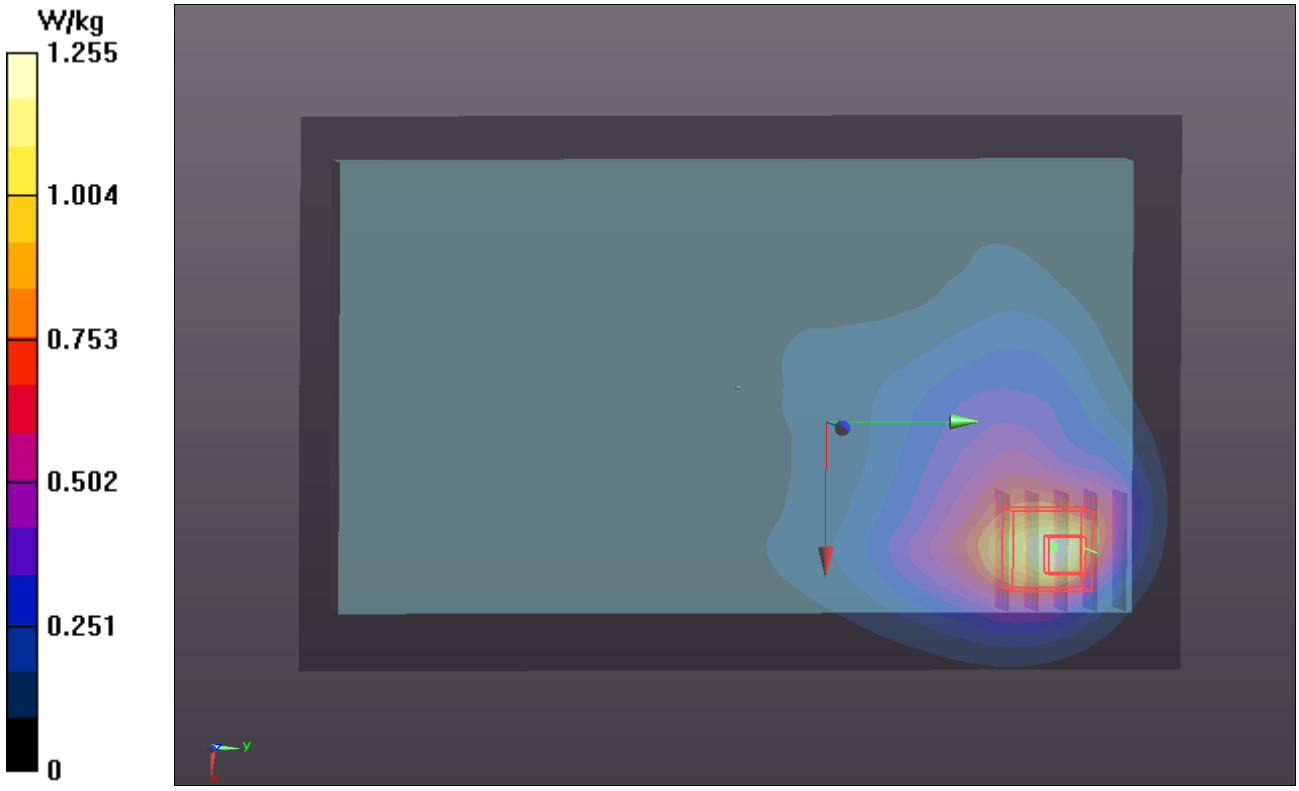
DUT: 121112C19

Communication System: WCDMA; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: B835_1222 Medium parameters used: f = 847 MHz; σ = 1.002 mho/m; ε_r = 56.632; ρ = 1000 kg/m^3
Ambient Temperature：21.5℃； Liquid Temperature：20.7℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/06/22;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch4233/Area Scan (101x161x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.25 W/kg

Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.470 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 0.781 W/kg; SAR(10 g) = 0.465 W/kg
Maximum value of SAR (measured) = 1.14 W/kg



P05 LTE 4_QPSK_10_Rear Face_0cm_Ch20000_w/ Pw Reduction_1RB_Offset 24

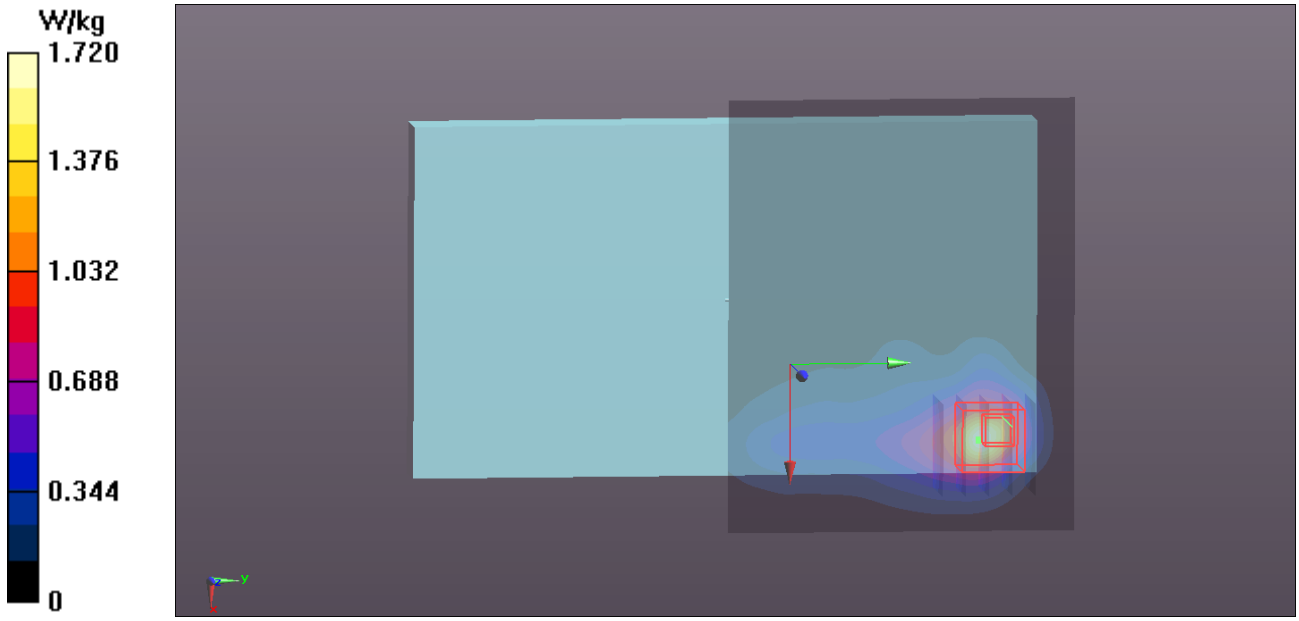
DUT: 121112C19

Communication System: LTE; Frequency: 1715 MHz;Duty Cycle: 1:1
Medium: B1750_0103 Medium parameters used: f = 1715 MHz; σ = 1.407 mho/m; ε_r = 53.539; ρ = 1000 kg/m^3
Ambient Temperature：21.2℃； Liquid Temperature：20.2 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3650; ConvF(7.31, 7.31, 7.31); Calibrated: 2012/10/26;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1277; Calibrated: 2012/07/19
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch20000/Area Scan (101x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.72 W/kg

Ch20000/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.361 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.61 W/kg
SAR(1 g) = 1.22 W/kg; SAR(10 g) = 0.601 W/kg
Maximum value of SAR (measured) = 1.84 W/kg



P06 LTE 17_QPSK_10_Rear Face_0cm_ch23790_w/ Pw Reduction_25RB_Offset 0

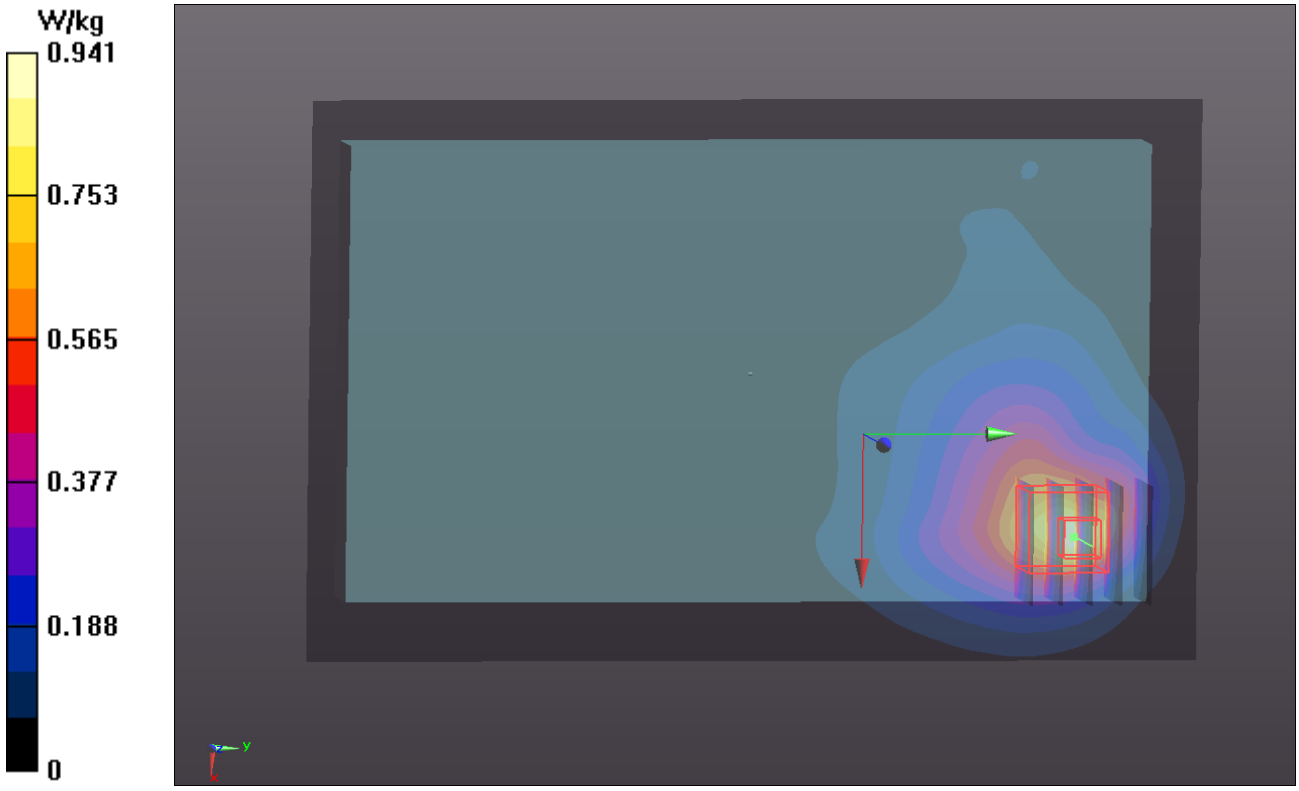
DUT: 121112C19

Communication System: LTE; Frequency: 710 MHz;Duty Cycle: 1:1
Medium: B750_1222 Medium parameters used: f = 710 MHz; σ = 0.933 mho/m; ε_r = 55.586; ρ = 1000 kg/m^3
Ambient Temperature：21.5℃； Liquid Temperature：20.1℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3801; ConvF(9, 9, 9); Calibrated: 2012/06/22;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch23790/Area Scan (101x161x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.941 W/kg

Ch23790/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.091 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.586 W/kg; SAR(10 g) = 0.358 W/kg
Maximum value of SAR (measured) = 0.787 W/kg



P07 802.11b_Rear Face_0cm_Ch1

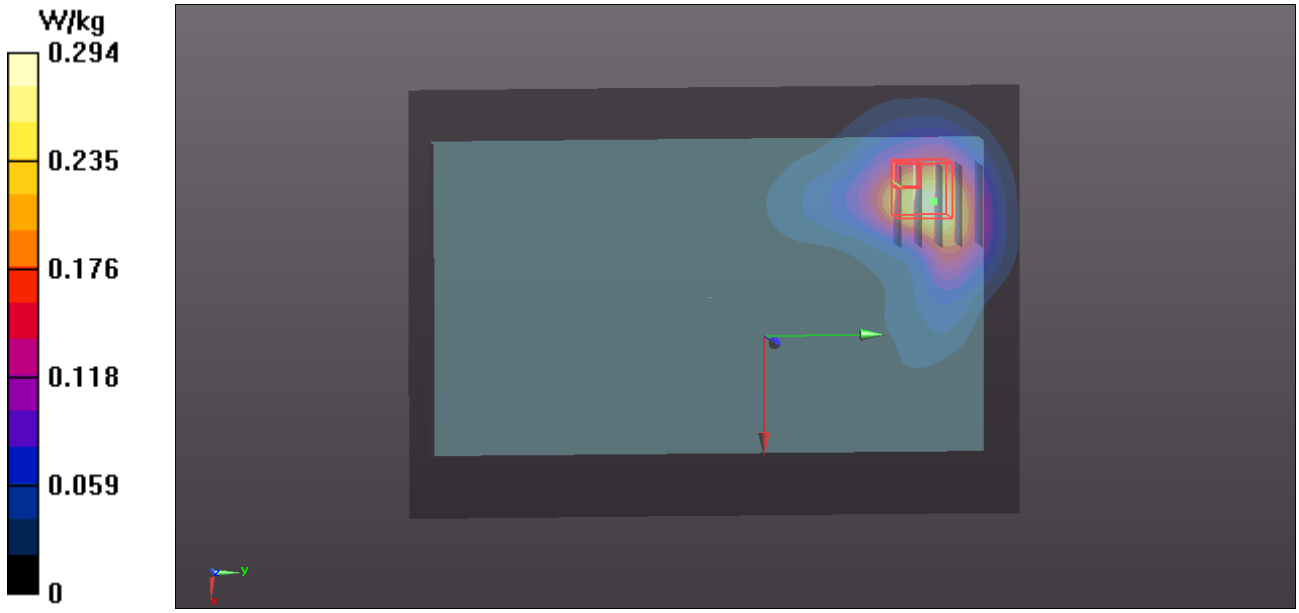
DUT: 121108C17

Communication System: WLAN_2.4G; Frequency: 2412 MHz;Duty Cycle: 1:1
Medium: B2450_0110 Medium parameters used: f = 2412 MHz; σ = 1.892 mho/m; ε_r = 51.116; ρ = 1000 kg/m^3
Ambient Temperature：22.3℃; Liquid Temperature：21.4 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(7.8, 7.8, 7.8); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn687; Calibrated: 2012/08/23
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1039
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch1/Area Scan (141x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.294 W/kg

Ch1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.274 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.24 W/kg
SAR(1 g) = 0.477 W/kg; SAR(10 g) = 0.164 W/kg
Maximum value of SAR (measured) = 0.831 W/kg



P08 802.11n_HT20_Rear Face_0cm_Ch149

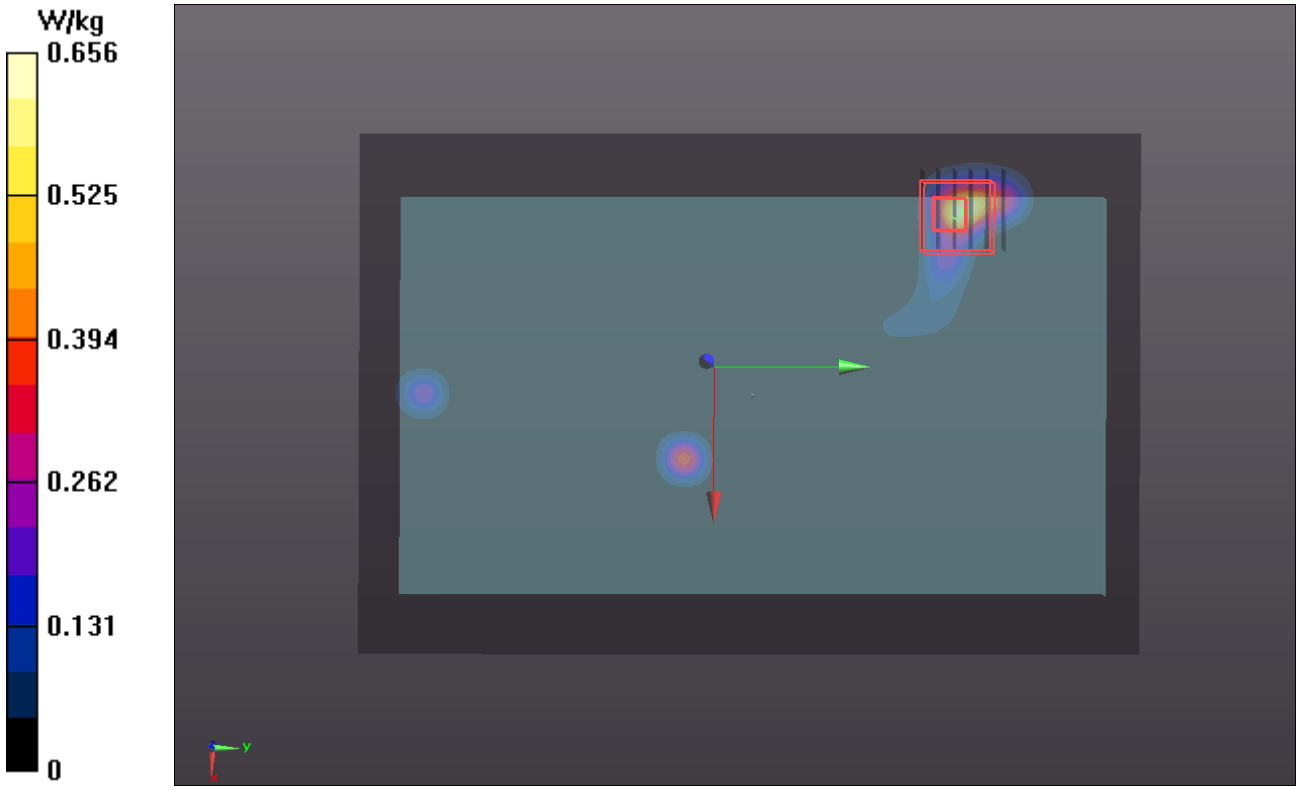
DUT: 121112C19

Communication System: WLAN_5G; Frequency: 5745 MHz;Duty Cycle: 1:1
Medium: B5G_0108 Medium parameters used: f = 5745 MHz; σ = 6.026 mho/m; ε_r = 48.398; ρ = 1000 kg/m^3
Ambient Temperature：21.7 ℃; Liquid Temperature：20.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(4.54, 4.54, 4.54); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn687; Calibrated: 2012/08/23
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch149/Area Scan (161x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.656 W/kg

Ch149/Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm
Reference Value = 0.862 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.242 W/kg; SAR(10 g) = 0.062 W/kg
Maximum value of SAR (measured) = 0.594 W/kg



P09 802.11a_Rear Face_0cm_Ch36

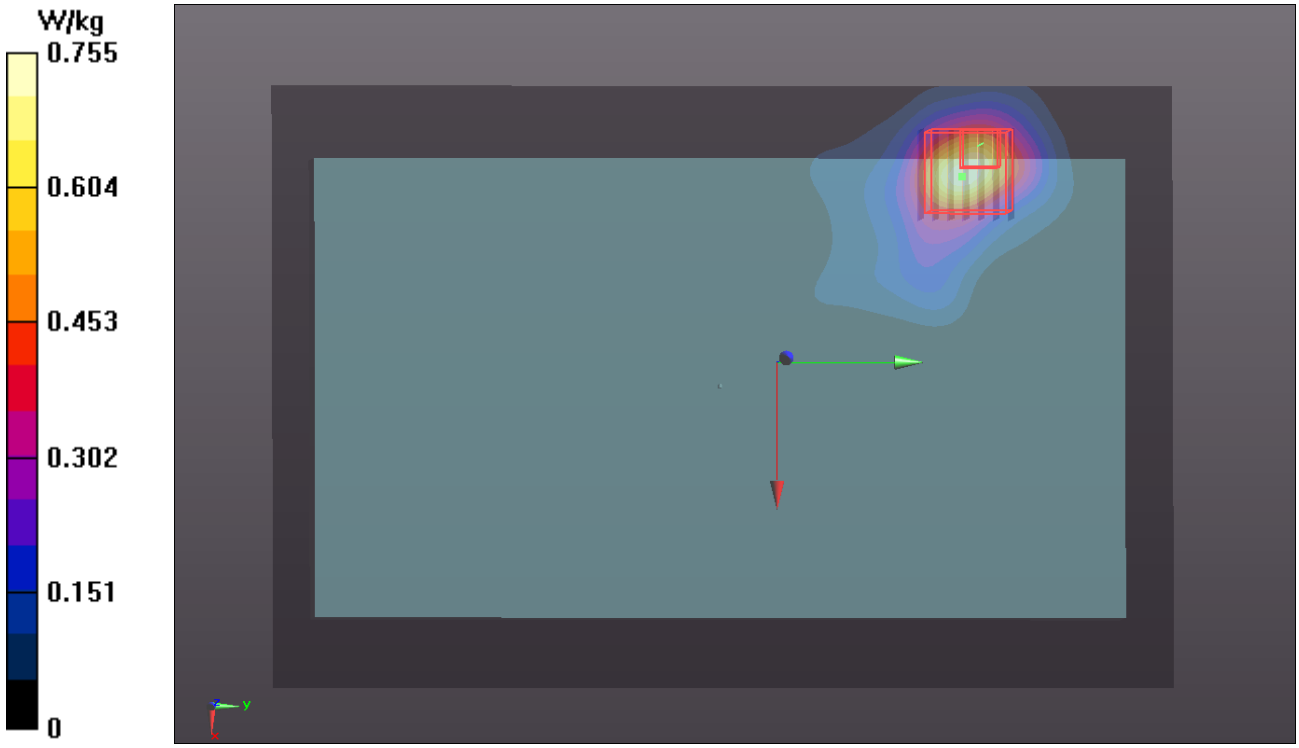
DUT: 121112C19

Communication System: WLAN_5G; Frequency: 5180 MHz;Duty Cycle: 1:1
Medium: B5G_1225 Medium parameters used: f = 5180 MHz; σ = 5.261 mho/m; ε_r = 49.042; ρ = 1000 kg/m^3
Ambient Temperature：21.5℃； Liquid Temperature：20.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(4.89, 4.89, 4.89); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2012/06/21
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch36/Area Scan (161x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.755 W/kg

Ch36/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.00 W/kg
SAR(1 g) = 0.520 W/kg; SAR(10 g) = 0.141 W/kg
Maximum value of SAR (measured) = 1.32 W/kg



P10 802.11a_Rear Face_0cm_Ch52

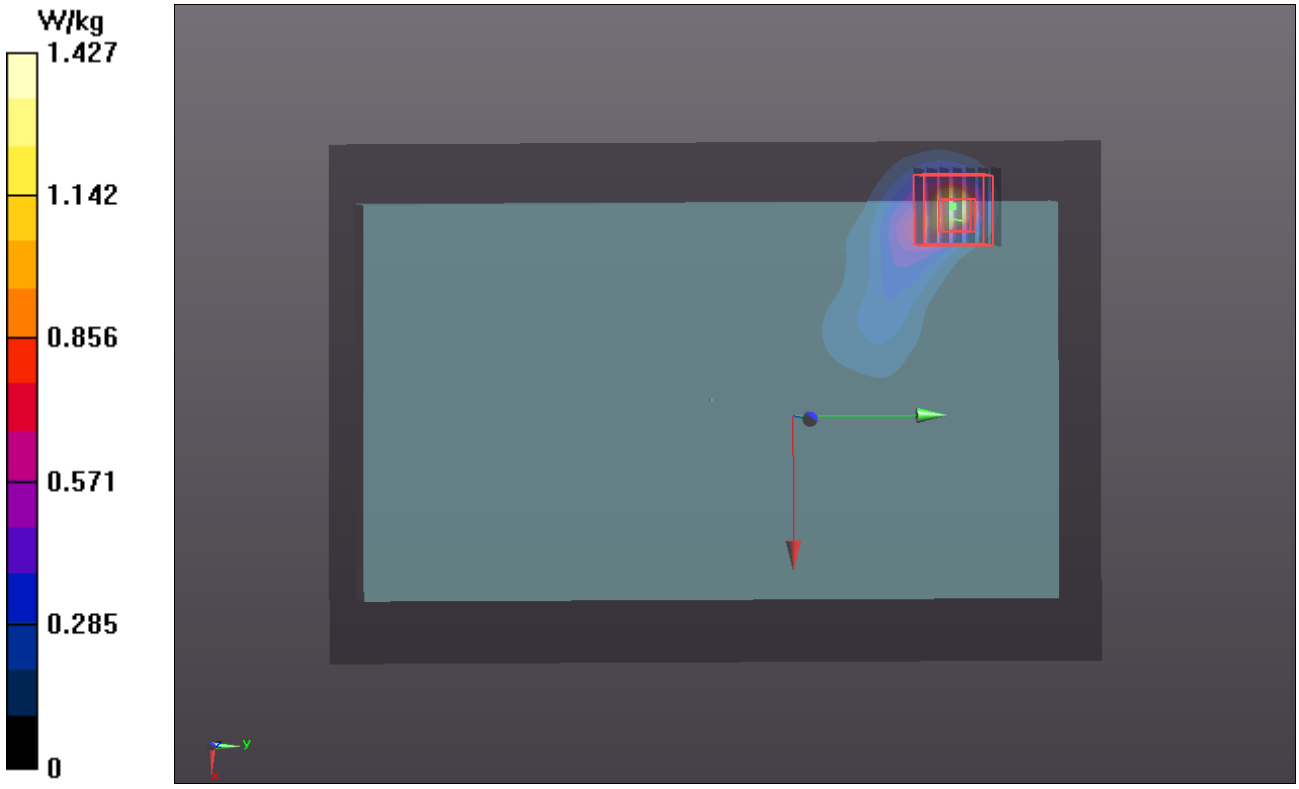
DUT: 121112C19

Communication System: WLAN_5G; Frequency: 5260 MHz;Duty Cycle: 1:1
Medium: B5G_1225 Medium parameters used: f = 5260 MHz; σ = 5.396 mho/m; ε_r = 48.862; ρ = 1000 kg/m^3
Ambient Temperature：21.5℃； Liquid Temperature：20.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(4.81, 4.81, 4.81); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2012/06/21
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch52/Area Scan (161x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.43 W/kg

Ch52/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0.191 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 3.59 W/kg
SAR(1 g) = 0.736 W/kg; SAR(10 g) = 0.184 W/kg
Maximum value of SAR (measured) = 1.62 W/kg



P11 802.11a_Rear Face_0cm_Ch136

DUT: 121112C19

Communication System: WLAN_5G; Frequency: 5680 MHz;Duty Cycle: 1:1
Medium: B5G_1226 Medium parameters used: f = 5680 MHz; σ = 5.942 mho/m; ε_r = 48.032; ρ = 1000 kg/m^3
Ambient Temperature：21.7℃； Liquid Temperature：20.8℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3590; ConvF(3.92, 3.92, 3.92); Calibrated: 2012/02/23;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2012/06/21
- Phantom: ELI v4.0; Type: QDOVA001BA; Serial: TP:1043
- Measurement SW: DASY52, Version 52.8 (3); SEMCAD X Version 14.6.7 (6848)

Ch136/Area Scan (161x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.630 W/kg

Ch136/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.27 W/kg
SAR(1 g) = 0.394 W/kg; SAR(10 g) = 0.092 W/kg
Maximum value of SAR (measured) = 0.941 W/kg