TEST REPORT

Reference No......	:	WTX20X11088233W
FCC ID	:	2AHAF-MDT760
Applicant.....	:	TOPICON HK LIMITED
Address	:	Room 2314-2316, Tower C, Huangdu Plaza, Yitian Road, Futian District, Shenzhen, China
Product Name	:	GPS
Test Model.	:	MDT760
Standards.....	:	FCC Part 2.1093 ANSI / IEEE C95.1 :2005+A1:2010 ANSI / IEEE C95.3 : 2002(R2008) IEEE 1528 :2013
Date of Receipt sample....	:	Nov.20, 2020
Date of Test	:	Nov.20, 2020 to Dec.29, 2020
Date of Issue	:	Jan.05, 2021
Test Result	:	**Pass**

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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1. General Information

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	TOPICON HK LIMITED
Address of applicant:	Room 2314-2316, Tower C, Huangdu Plaza, Yitian Road, Futian District, Shenzhen, China
Manufacturer:	TOPICON HK LIMITED
Address of manufacturer:	Room 2314-2316, Tower C, Huangdu Plaza, Yitian Road, Futian District, Shenzhen, China

General Description of EUT:	
Product Name:	GPS
Trade Name:	/
Model No.:	MDT760
Adding Model(s):	MDT860, MDT761, MDT740, MDT741, MDT770, MDT780, OBC740, OBC760, MDT714D, MDT715D, M710A, M710AG, M710AB, M710AKB, M720A, M720AG, M720AB, M720AKB, MDT840, MDT841, MDT861, MDT870, MDT871, MDT880, MDTT881
Rated Voltage:	MDT760:DC3.7V MDT860:DC3.7V
Battery:	MDT760:4300mAh MDT860: 6300mAh
Software Version:	MDT760: mdt760_gms_0.9.2 MDT860: mdt860_gms_0.8.5
Hardware Version:	MDT760: MDT760_V20 MDT860: mdt760_v20
Device Category:	Portable Device
Note: The test data is gathered from a production sample provided by the manufacturer. The appearance of others models listed in the report is different from main-test model MDT760, but the circuit and the electronic construction do not change, declared by the manufacturer.	

Technical Characteristics of EUT:	
2G	
Support Networks:	GSM, GPRS, EDGE
Support Band:	GSM850/PCS1900
Uplink Frequency:	GSM/GPRS/EDGE 850: 824~849MHz GSM/GPRS/EDGE 1900: 1850~1910MHz
Downlink Frequency:	GSM/GPRS/EDGE 850: 869~894MHz GSM/GPRS/EDGE 1900: 1930~1990MHz
RF Output Power:	GSM850: 33.19dBm, GSM1900:30.65dBm EDGE850: 27.16dBm, EDGE1900: 26.67dBm
Type of Modulation:	GMSK, 8PSK
Type of Antenna:	Integral Antenna
Antenna Gain:	GSM850: 3dBi; GSM1900: 3dBi
GPRS/EDGE Class:	Class 12
3G	
Support Networks:	WCDMA, HSDPA, HSUPA
Support Band:	WCDMA Band 2, WCDMA Band 4, WCDMA Band 5
Uplink Frequency:	WCDMA Band 2: 1850~1910MHz WCDMA Band 4: 1710~1755MHz WCDMA Band 5: 824~849MHz
Downlink Frequency:	WCDMA Band 2: 1930~1990MHz WCDMA Band 4: 2110~2155MHz WCDMA Band 5: 869~894MHz
RF Output Power:	WCDMA Band 2: 23.81dBm, WCDMA Band 4: 23.41dBm WCDMA Band 5: 23.58dBm
Type of Modulation:	BPSK
Antenna Type:	Integral Antenna
Antenna Gain:	WCDMA Band 2: 3dBi, WCDMA Band 4: 3dBi, WCDMA Band 5: 3dBi
4G	
Support Networks:	FDD-LTE
Support Band:	FDD-LTE Band 2, 4, 5, 7,12, 17
Uplink Frequency:	FDD-LTE Band 2: Tx: 1850-1910MHz, FDD-LTE Band 4: Tx: 1710-1755MHz, FDD-LTE Band 5: Tx: 824-849MHz, FDD-LTE Band 7: Tx: 2500-2570MHz, FDD-LTE Band 12: Tx: 699-716MHz, FDD-LTE Band 17: Tx: 704-716MHz
Downlink Frequency:	FDD-LTE Band 2: Rx: 1930-1990MHz,

	FDD-LTE Band 4: Rx: 2110-2155MHz, FDD-LTE Band 5: Rx: 869-894MHz, FDD-LTE Band 7: Rx: 2620-2690MHz, FDD-LTE Band 12: Rx: 729-746MHz, FDD-LTE Band 17: Rx: 734-746MHz
RF Output Power:	FDD-LTE Band 2: 23.79dBm, FDD-LTE Band 4: 24.02dBm, FDD-LTE Band 5: 23.31dBm, FDD-LTE Band 7: 23.98dBm, FDD-LTE Band 12: 23.48dBm, FDD-LTE Band 17: 23.45dBm
Type of Modulation:	QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	FDD-LTE Band 2: 3dBi, FDD-LTE Band 4: 3dBi, FDD-LTE Band 5: 3dBi, FDD-LTE Band 7: 3dBi, FDD-LTE Band 12: 3dBi, FDD-LTE Band 17: 3dBi
WIFI(2.4G)	
Support Standards:	802.11b, 802.11g, 802.11n
Frequency Range:	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
RF Output Power:	15.53dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	11 for 802.11b/g/n(HT20) 7 for 802.11n(HT40)
Channel Separation:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	3dBi
Bluetooth	
Bluetooth Version:	V4.0
Frequency Range:	2402-2480MHz
RF Output Power:	6.74dBm (Conducted)
Data Rate:	1Mbps, 2Mbps, 3Mbps
Modulation:	GFSK, Pi/4 QDPSK, 8DPSK
Quantity of Channels:	79/40
Channel Separation:	1MHz/2MHz
Antenna Type:	Integral Antenna
Antenna Gain:	3dBi

1.2 Test Standards

The following report is prepared on behalf of the TOPICON HK LIMITED in accordance with FCC 47 CFR Part 2.1093, ANSI/IEEE C95.1-2005, ANSI / IEEE C95.3 :2002, IEEE 1528-2013, KDB 447498 D01 v06, KDB 648474 D04 v01r03, KDB 248227 D01 v02r02, KDB 941225 D01 v03r01, KDB 941225 D05 v02r05 , and KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02.

The objective is to determine compliance with FCC Part 2.1093 of the Federal Communication Commissions rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02. The public notice KDB 447498 D01 v06 for Mobile and Portable Devices RF Exposure Procedure also.

1.4 Test Facility

Address of the test laboratory
Laboratory: Waltek Testing Group (Shenzhen) Co., Ltd.
Address: 1/F., Room 101, Building 1, Hongwei Industrial Park, Liuxian 2nd Road, Block 70 Bao'an District, Shenzhen, Guangdong, China

FCC – Registration No.: 125990
Waltek Testing Group (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. The Designation Number is CN5010.Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A
The 3m Semi-anechoic chamber of Waltek Testing Group (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

2. Summary of Test Results

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

MDT760:

Frequency Band	Body (0mm Gap) Maximum SAR_{1g} (W/kg)	SAR_{1g} Limit (W/kg)
GSM	0.380	1.6
WCDMA	**1.024**	1.6
LTE	0.770	1.6
WLAN 2.4G	0.253	1.6
Simultaneous Transmission	**1.285**	1.6

MDT860:

Frequency Band	Body (0mm Gap) Maximum SAR_{1g} (W/kg)	SAR_{1g} Limit (W/kg)
GSM	0.180	1.6
WCDMA	0.509	1.6
LTE	**0.756**	1.6
WLAN 2.4G	0.270	1.6
Simultaneous Transmission	**1.026**	1.6

Remark:

*The highest reported SAR values for head and body transmission conditions are **1.024 W/kg, and 1.285 W/kg** respectively.*

The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR Part 2.1093 and ANSI/IEEE C95.1-2005, and had been tested in accordance with the measurement methods and procedure specified in IEEE 1528-2013 and KDB 865664 D01 v01r04 and KDB 865664 D02 v01r02

3. Specific Absorption Rate (SAR)

3.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techiques 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.

3.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (□). 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 either related to the temperature elevation in tissue by

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

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

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

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

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

4. SAR Measurement System

4.1 The Measurement System

Comosar is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The Comosar system consists of the following items:
- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

The following figure shows the system.

The EUT under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The OpenSAR software computes the results to give a SAR value in a 1g or 10g mass.

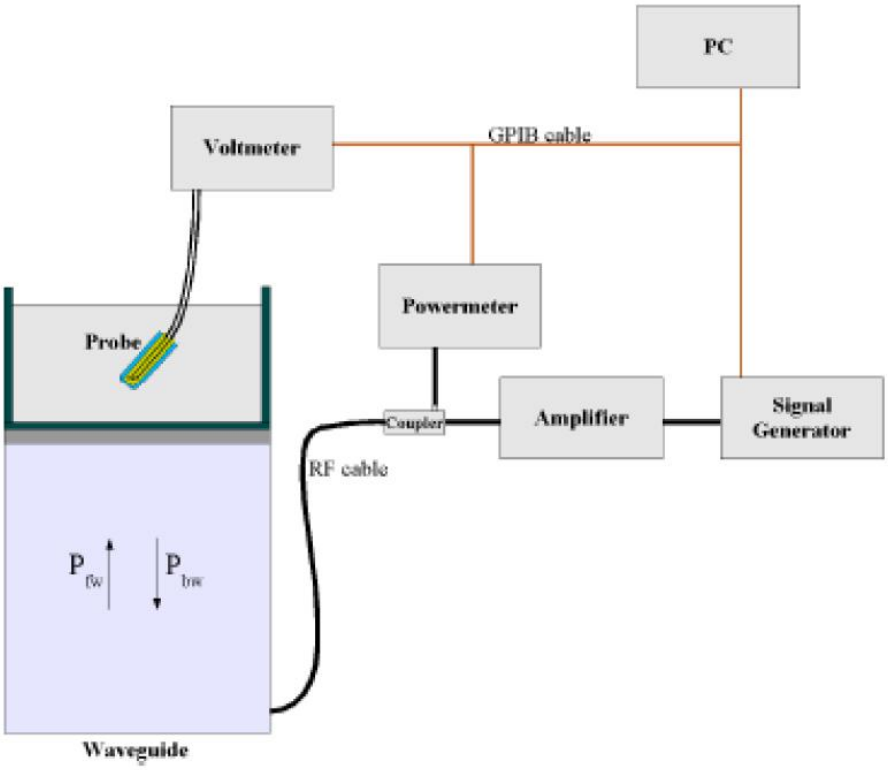
4.2 Probe

For the measurements the Specific Dosimetric E-Field Probe SSE2 SN 45/15 EPGO280 with following specifications is used
- Dynamic range: 0.01-100 W/kg
- Probe Length: 330 mm
- Length of Individual Dipoles: 4.5 mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter : 5 mm

- Distance between dipoles / probe extremity: 2.7mm
- Probe linearity: ＜0.25 dB
- Axial Isotropy: ＜0.25 dB
- Spherical Isotropy: ＜0.50 dB
- Calibration range: 700 to 3000MHz for head & body simulating liquid.

Angle between probe axis (evaluation axis) and suface normal line:1ess than 30°

Probe calibration is realized, in compliance with EN 62209-1 and IEEE 1528 STD, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 62209-1 annexe technique using reference guide at the five frequencies.



$$SAR = \frac{4\left(P_{fw} - P_{bw}\right)}{ab\delta} \cos^2\left(\pi \frac{y}{a}\right) e^{-(2z/\delta)}$$

Where :

Pfw = Forward Power

Pbw = Backward Power

a and b =Waveguide dimensions

I = Skin depth

Keithley configuration:

Rate = Medium; Filter = ON; RDGS = 10; Filter type = Moving Average; Range auto after each calibration, a SAR measurement is performed on a validation dipole and compared with a NPL calibrated probe, to verify it.

The calibration factors, CF(N), for the 3 sensors corresponding to dipole 1, dipole 2 and dipole 3 are:

$$CF(N)=SAR(N)/Vlin(N)\ (N=1,2,3)$$

The linearised output voltage Vlin(N) is obtained from the displayed output voltage V(N) using

$$Vlin(N)=V(N)*(1+V(N)/DCP(N))\ (N=1,2,3)$$

where DCP is the diode compression point in mV.

4.3 Probe Calibration Process

Dosimetric Assessment Procedure

Each E-Probe/Probe Amplifier combination has unique calibration parameters. SATIMO Probe calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm2) using an with CALISAR, Antenna proprietary calibration system.

Free Space Assessment Procedure

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and in a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1mW/cm2.

Temperature Assessment Procedure

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

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

Where:

Δt = exposure time (30 seconds),

C = heat capacity of tissue (brain or muscle),

ΔT = temperature increase due to RF exposure.

SAR is proportional to $\Delta T/\Delta t$, the initial rate of tissue heating, before thermal diffusion takes place. The electric field in the simulated tissue can be used to estimate SAR by equating the thermally derived SAR to that with the E- field component.

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

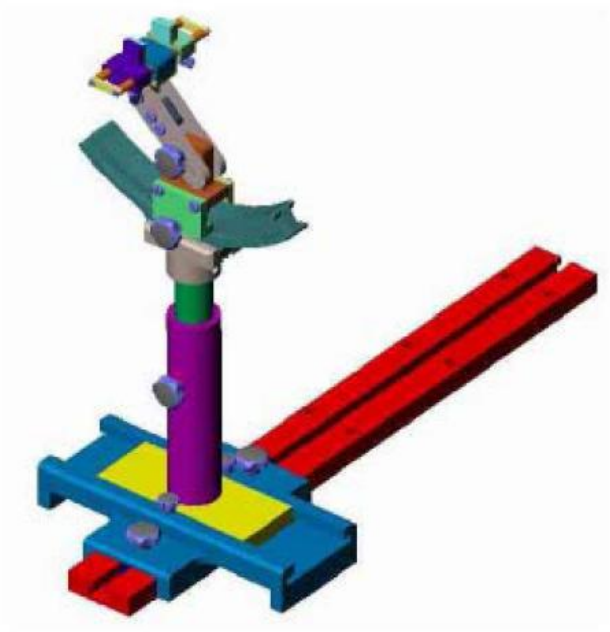
Where:
σ = simulated tissue conductivity,
ρ = Tissue density (1.25 g/cm3 for brain tissue)

4.4 Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.

4.5 Device Holder

The positioning system allows obtaining cheek and tilting position with a very good accuracy. In compliance with CENELEC, the tilt angle uncertainty is lower than 1°.



System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

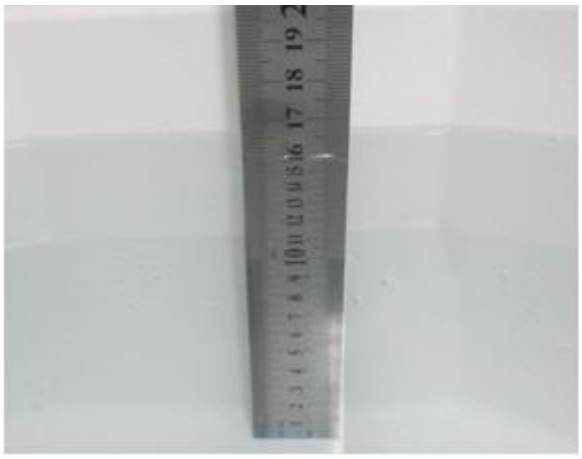
4.6 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
E-Field Probe	MVG	SSE5	SN 09/13 EP168	2020-05-22	2021-05-21
750MHz Dipole	MVG	SID750	SN 47/12 DIP 0G750-203	2020-03-11	2021-03-10
835MHz Dipole	MVG	SID835	SN 47/12 DIP 0G835-204	2020-03-11	2021-03-10
1800MHz Dipole	MVG	SID1800	SN 47/12 DIP 1G800-206	2020-03-11	2021-03-10
1900MHz Dipole	MVG	SID1900	SN 47/12 DIP 1G900-207	2020-03-11	2021-03-10
2450MHz Dipole	MVG	SID2450	SN 13/15 DIP 2G450-364	2020-03-11	2021-03-10
2600MHz Dipole	MVG	SID2600	SN 13/15 DIP 2G600-365	2020-03-11	2021-03-10
Dielectric Probe Kit	SATIMO	SCLMP	SN 47/12 OCPG49	2020-03-11	2021-03-10
SAM Phantom	SATIMO	SAM	SN/ 47/12 SAM95	N/A	N/A
MULTIMETER	KEITHLEY	Keithley 2000	4006367	2020-04-28	2021-04-27
Signal Generator	Agilent	N5182A	MY47070282	2020-04-28	2021-04-27
Universal Tester	Rohde & Schwarz	CMU200	112315	2020-04-28	2021-04-27
Communications Tester	Rohde & Schwarz	CMW500	148650	2020-04-28	2021-04-27
Network Analyzer	HP	8753C	SEMT-1064	2020-04-28	2021-04-27
Directional Couplers	Agilent	778D	SEMT-1198	2020-04-28	2021-04-27

5. Tissue Simulating Liquids

5.1 Composition of Tissue Simulating Liquid

For the measurement of the field distribution inside the SAM phantom with SMTIMO, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. Please see the following photos for the liquid height.



Liquid Height for Head SAR

Liquid Height for Body SAR

The Composition of Tissue Simulating Liquid

Frequency (MHz)	Water (%)	Salt (%)	Sugar (%)	HEC (%)	Preventol (%)	DGBE (%)
Head						
750	41.1	1.4	57.0	0.2	0.3	0
835	40.3	1.4	57.9	0.2	0.2	0
1700-1900	55.2	0.3	0	0	0	44.5
2450	55.0	0.1	0	0	0	44.9
2600	54.9	0.1	0	0	0	45.0

5.2 Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

Target Frequency (MHz)	Head	
	Conductivity (□)	Permittivity ($□_r$)
150	0.76	52.3
300	0.87	45.3
450	0.87	43.5
750	**0.89**	**41.9**
835	**0.90**	**41.5**
900	0.97	41.5
915	0.98	41.5
1450	1.20	40.5
1610	1.29	40.3
1750	**1.37**	**40.1**
1800-2000	**1.40**	**40.0**
2450	**1.80**	**39.2**
3000	2.40	38.5
5200	4.66	36.0
5800	5.27	35.3

5.3 Tissue Calibration Result

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

Calibration Result for Dielectric Parameters of Tissue Simulating Liquid

Head Tissue Simulating Liquid									
Freq. MHz.	Temp. (℃)	Conductivity			Permittivity			Limit (%)	Date
		Reading (□)	Target (□)	Delta (%)	Reading (□r)	Target (□r)	Delta (%)		
750	21.5	0.86	0.89	-3.37	42.78	41.9	2.10	±5	2020-12-29
835	21.5	0.88	0.90	-2.22	42.43	41.5	2.24	±5	2020-12-29
1800	21.8	1.39	1.40	-0.71	39.42	40.0	-1.45	±5	2020-12-25
1900	21.8	1.41	1.40	0.71	39.11	40.0	-2.23	±5	2020-12-25
2450	21.4	1.81	1.80	0.56	39.76	39.2	1.43	±5	2020-12-23
2600	21.4	1.99	1.96	1.53	38.53	39.0	-1.21	±5	2020-12-23

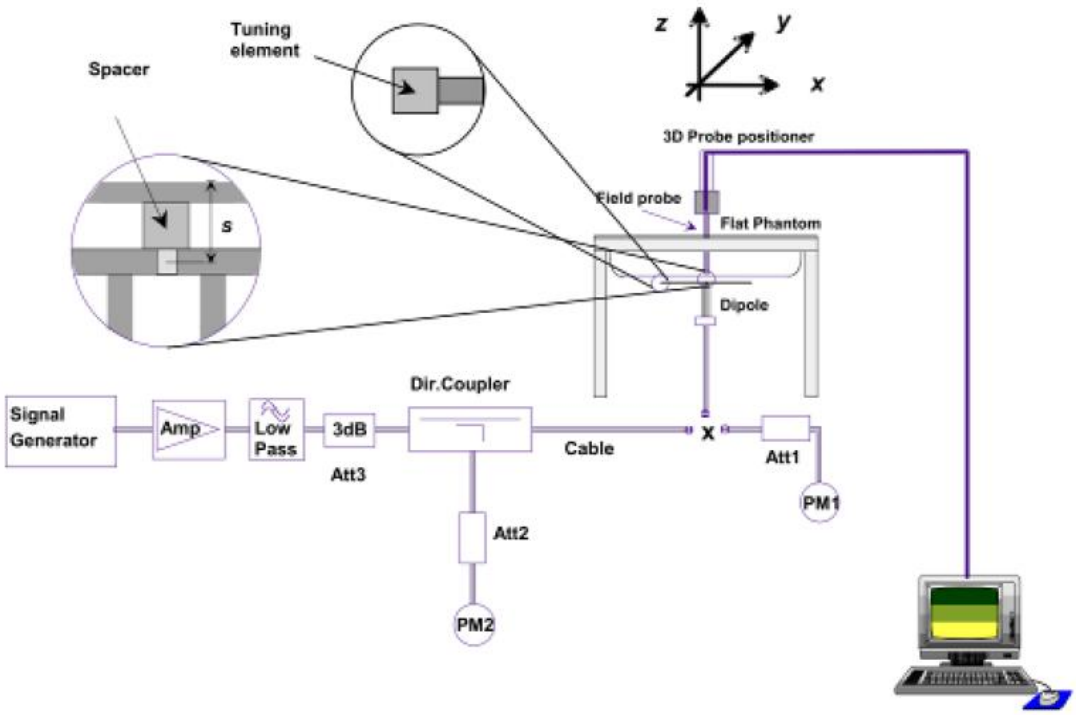
6. SAR Measurement Evaluation

6.1 Purpose of System Performance Check

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

6.2 System Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave which comes from a signal generator at frequency 835MHz ,1800MHz, 1900MHz 2450MHz,2600MHz,and 5GHz. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom.



System Verification Setup Block Diagram

Setup Photo of Dipole Antenna

The output power on dipole port must be calibrated to 24 dBm(250 mW) before dipole is connected.

6.3 Validation Results

Comparing to the original SAR value provided by SATIMO, the validation data should be within its specification of 10 %. Table 6.1 shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion.

Frequency MHz	Targeted SAR_{1g} (W/kg)	Measured SAR_{1g} (W/kg)	Normalized SAR_{1g} (W/kg)	Tolerance (%)	Date
Head					
750	8.40	2.06	8.24	-1.90	2020-12-29
835	9.65	2.34	9.36	-3.01	2020-12-29
1800	38.49	9.57	38.28	-0.55	2020-12-25
1900	39.59	10.12	40.48	2.25	2020-12-25
2450	53.76	13.83	55.32	2.90	2020-12-23
2600	55.70	14.21	56.84	2.05	2020-12-23

Remark: Referring to IEEE 1528-2013, Section 8.2, The system check shall be performed at a test frequency that is within ±10% or ±100 MHz of the compliance test mid-band frequency, so the 1750 MHz system verification is made of 1800MHz Dipole.

Targeted and Measurement SAR

Please refer to Annex A for the plots of system performance check.

7. EUT Testing Position

7.1 Body Position

(a) To position the device parallel to the phantom surface with each side.
(b) To adjust the device parallel to the flat phantom.
(c) To adjust the distance between the device surface and the flat phantom to 0mm.

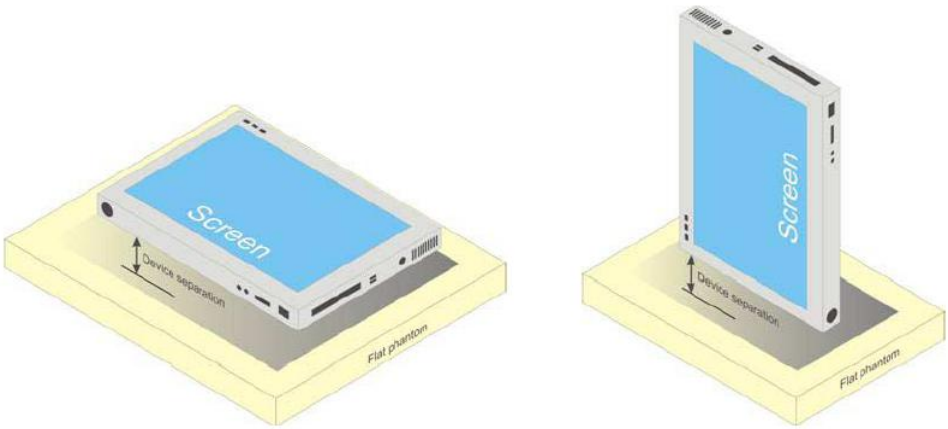
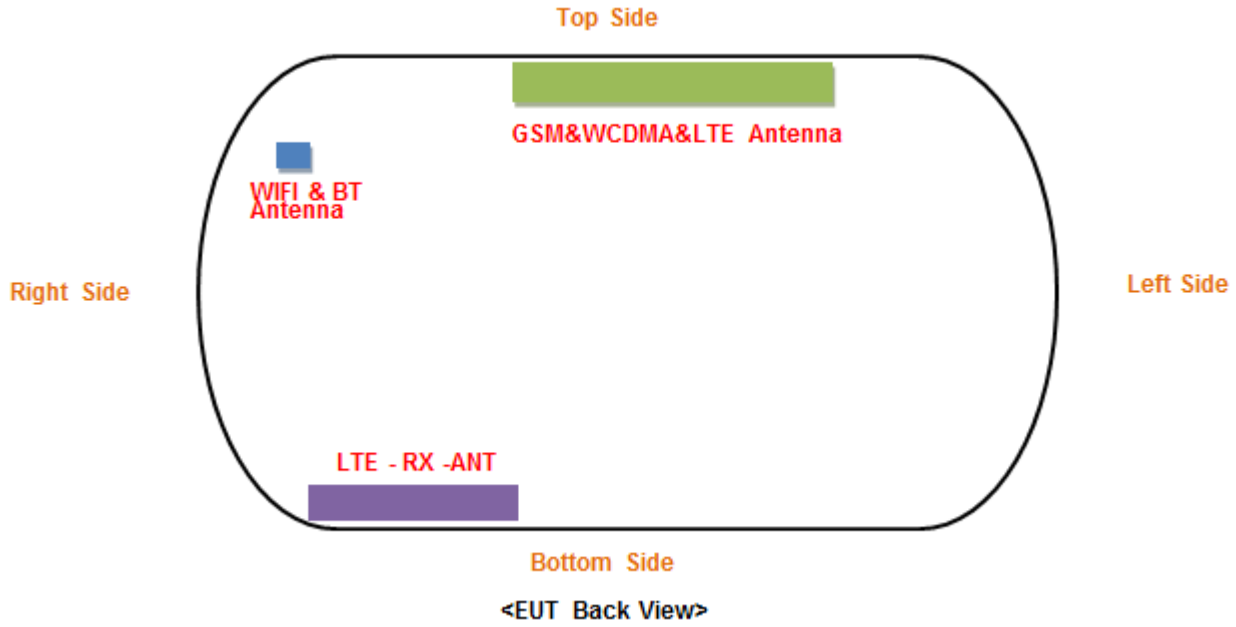


Illustration for Body Position

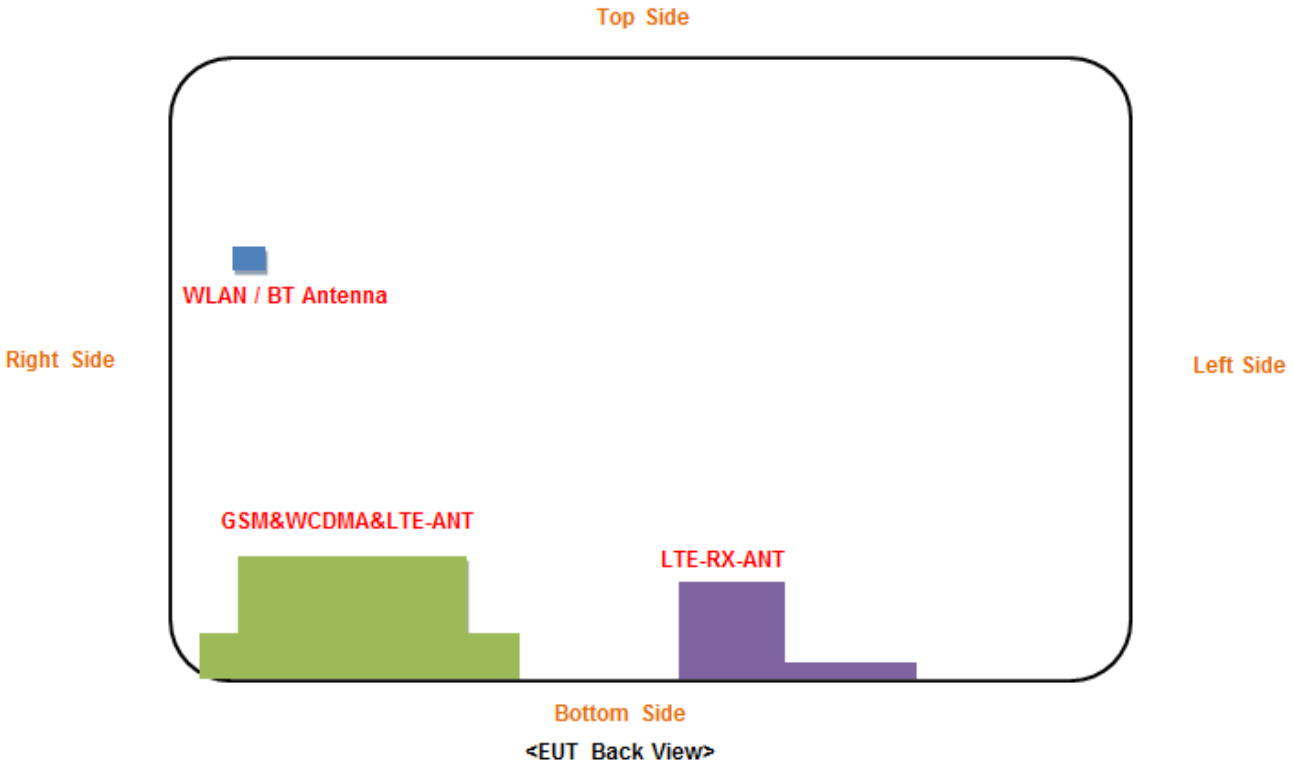
7.2 EUT Antenna Position

MDT760



EUT Size: Long*Width*Height=214mm*127mm*17mm

MDT860



EUT Size: Long*Width*Height=229mm*158mm*23mm

Block Diagram for EUT Antenna Position

7.3 EUT Testing Position

Head/Body mode SAR assessments are required for this device. This EUT was tested in different positions for different SAR test modes, more information as below:

MDT760:

SAR Test Exclusion Thresholds <50mm															
Frequency Bands	Tune up Power (dBm)	Tune up (mW)	Min test Separation Distance(mm)						Result						Limit
			Front	Back	Left	Right	Top	Bottom	Front	Back	Left	Right	Top	Bottom	
GSM 850	24.5	281.8	/	2	/	/	5	/	/	127.9	/	/	51.2	/	3
GSM 1900	22.0	158.5	/	2	/	/	5	/	/	107.8	/	/	43.1	/	3
GPRS 850	27.0	501.2	/	2	/	/	5	/	/	227.5	/	/	91.0	/	3
GPRS 1900	24.0	251.2	/	2	/	/	5	/	/	173.6	/	/	69.4	/	3
WCDMA1900	24.0	251.2	/	2	/	/	5	/	/	173.5	/	/	69.4	/	3
WCDMA1700	23.5	223.9	/	2	/	/	5	/	/	146.5	/	/	58.6	/	3
WCDMA 850	24.0	251.2	/	2	/	/	5	/	/	114.2	/	/	45.7	/	3
LTE Band 2	24.0	251.2	/	2	/	/	5	/	/	171.3	/	/	68.5	/	3
LTE Band 4	24.5	281.8	/	2	/	/	5	/	/	184.8	/	/	73.9	/	3
LTE Band 5	23.5	223.9	/	2	/	/	5	/	/	102.3	/	/	40.9	/	3
LTE Band 7	24.0	251.2	/	2	/	/	5	/	/	200.0	/	/	80.0	/	3
LTE Band 12	23.5	223.9	/	2	/	/	5	/	/	93.9	/	/	37.6	/	3
LTE Band 17	23.5	223.9	/	2	/	/	5	/	/	94.3	/	/	37.7	/	3
WLAN(2.4G)	16.0	39.81	/	5	/	13	24	/	/	12.4	/	4.76	2.58	/	3
Bluetooth	7.0	5.01	/	5	/	13	24	/	/	1.58	/	0.61	0.33	/	3

Note: 1.Refer to Chapter 9.1 Conducted RF Output Power

2. Per KDB 447498 D01 V06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0

SAR Test Exclusion Thresholds ≥50mm														
Frequency Bands	Tune up Power (dBm)	Tune up (mW)	Min test Separation Distance(mm)						Evaluation					
			Front	Back	Left	Right	Top	Bottom	Front	Back	Left	Right	Top	Bottom
GSM 850	24.5	281.8	/	/	50	75	/	100	/	/	164	303	/	442
GSM 1900	22.0	158.5	/	/	50	75	/	100	/	/	109	359	/	509
GPRS 850	27.0	501.2	/	/	50	75	/	100	/	/	164	303	/	442
GPRS 1900	24.0	251.2	/	/	50	75	/	100	/	/	109	359	/	509
WCDMA1900	24.0	251.2	/	/	50	75	/	100	/	/	109	359	/	509

WCDMA1700	23.5	223.9	/	/	50	75	/	100	/	/	109	359	/	509
WCDMA 850	24.0	251.2	/	/	50	75	/	100	/	/	164	303	/	442
LTE Band 2	24.0	251.2	/	/	50	75	/	100	/	/	109	359	/	509
LTE Band 4	24.5	281.8	/	/	50	75	/	100	/	/	109	359	/	509
LTE Band 5	23.5	223.9	/	/	50	75	/	100	/	/	164	303	/	442
LTE Band 7	24.0	251.2	/	/	50	75	/	100	/	/	96	346	/	596
LTE Band 12	23.5	223.9	/	/	50	75	/	100	/	/	164	303	/	442
LTE Band 17	23.5	223.9	/	/	50	75	/	100	/	/	164	303	/	442
WLAN(2.4G)	16.0	39.81	/	/	196	/	/	91	/	/	1556	/	/	506
Bluetooth	7.0	5.01	/	/	196	/	/	91	/	/	1556	/	/	506
Note: 1.Refer to Chapter 9.1 Conducted RF Output Power														

Body SAR tests, Test distance: 0mm						
Antennas	**Front**	**Back**	**Left Side**	**Right Side**	**Top Side**	**Bottom**
GSM 850	/	Yes	Yes	No	Yes	No
GSM 1900	/	Yes	Yes	No	Yes	No
GPRS 850	/	Yes	Yes	No	Yes	No
GPRS 1900	/	Yes	Yes	No	Yes	No
WCDMA1900	/	Yes	Yes	No	Yes	No
WCDMA1700	/	Yes	Yes	No	Yes	No
WCDMA 850	/	Yes	Yes	No	Yes	No
LTE Band 2	/	Yes	Yes	No	Yes	No
LTE Band 4	/	Yes	Yes	No	Yes	No
LTE Band 5	/	Yes	Yes	No	Yes	No
LTE Band 7	/	Yes	Yes	No	Yes	No
LTE Band 12	/	Yes	Yes	No	Yes	No
LTE Band 17	/	Yes	Yes	No	Yes	No
WLAN(2.4G)	/	Yes	No	Yes	No	No
Bluetooth	/	No	No	No	No	No

Remark:

1. Referring to KDB 616217 D04 v01r02, KDB 248227 D01 v02r02 and KDB 447498 D01 v06, this device is overall diagonal dimension(>20cm) tablet, tested in direct contact (no gap) with flat phantom.
2. For tablet with overall diagonal dimension >20cm, SAR testing for front surface of the display section is exempted according to KDB616217 D04.

MDT860:

SAR Test Exclusion Thresholds <50mm															
Frequency Bands	Tune up Power (dBm)	Tune up (mW)	Min test Separation Distance(mm)						Result						Limit
			Front	Back	Left	Right	Top	Bottom	Front	Back	Left	Right	Top	Bottom	
GSM 850	24.5	281.8	/	5	/	13	/	7	/	51.2	/	19.7	/	36.6	3
GSM 1900	22.0	158.5	/	5	/	13	/	7	/	43.1	/	16.6	/	30.8	3
GPRS 850	27.0	501.2	/	5	/	13	/	7	/	91.7	/	35.3	/	65.5	3
GPRS 1900	24.0	251.2	/	5	/	13	/	7	/	69.4	/	26.7	/	49.6	3
WCDMA1900	24.0	251.2	/	5	/	13	/	7	/	69.4	/	26.7	/	49.6	3
WCDMA1700	23.5	223.9	/	5	/	13	/	7	/	58.6	/	22.5	/	41.9	3
WCDMA 850	24.0	251.2	/	5	/	13	/	7	/	45.7	/	17.6	/	32.6	3
LTE Band 2	24.0	251.2	/	5	/	13	/	7	/	68.5	/	26.4	/	48.9	3
LTE Band 4	24.5	281.8	/	5	/	13	/	7	/	73.9	/	28.4	/	52.8	3
LTE Band 5	23.5	223.9	/	5	/	13	/	7	/	41.0	/	15.8	/	29.3	3
LTE Band 7	24.0	251.2	/	5	/	13	/	7	/	80.0	/	30.8	/	57.1	3
LTE Band 12	23.5	223.9	/	5	/	13	/	7	/	37.6	/	14.4	/	26.8	3
LTE Band 17	23.5	223.9	/	5	/	13	/	7	/	37.7	/	14.5	/	26.9	3
WLAN(2.4G)	16.0	39.81	/	5	/	17	/	/	/	12.4	/	3.64	/	/	3
Bluetooth	7.0	5.01	/	5	/	17	/	/	/	1.58	/	0.46	/	/	3

Note: 1.Refer to Chapter 9.1 Conducted RF Output Power

2. Per KDB 447498 D01 V06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0

SAR Test Exclusion Thresholds ≥50mm														
Frequency Bands	Tune up Power (dBm)	Tune up (mW)	Min test Separation Distance(mm)						Evaluation					
			Front	Back	Left	Right	Top	Bottom	Front	Back	Left	Right	Top	Bottom
GSM 850	24.5	281.8	/	/	157	/	125	/	/	/	721	/	/	554
GSM 1900	22.0	158.5	/	/	157	/	125	/	/	/	1109	/	/	809
GPRS 850	27.0	501.2	/	/	157	/	125	/	/	/	721	/	/	554
GPRS 1900	24.0	251.2	/	/	157	/	125	/	/	/	1109	/	/	809
WCDMA1900	24.0	251.2	/	/	157	/	125	/	/	/	1109	/	/	809
WCDMA1700	23.5	223.9	/	/	157	/	125	/	/	/	1109	/	/	809
WCDMA 850	24.0	251.2	/	/	157	/	125	/	/	/	721	/	/	554
LTE Band 2	24.0	251.2	/	/	157	/	125	/	/	/	1109	/	/	809
LTE Band 4	24.5	281.8	/	/	157	/	125	/	/	/	1109	/	/	809

LTE Band 5	23.5	223.9	/	/	157	/	125	/	/	/	721	/	/	554
LTE Band 7	24.0	251.2	/	/	157	/	125	/	/	/	1096	/	/	796
LTE Band 12	23.5	223.9	/	/	157	/	125	/	/	/	721	/	/	554
LTE Band 17	23.5	223.9	/	/	157	/	125	/	/	/	721	/	/	554
WLAN(2.4G)	16.0	39.81	/	/	208	/	51	99	/	/	1496	/	96	586
Bluetooth	7.0	5.01	/	/	208	/	51	99	/	/	1496	/	96	586
Note: 1.Refer to Chapter 9.1 Conducted RF Output Power														

Body SAR tests, Test distance: 0mm						
Antennas	**Front**	**Back**	**Left Side**	**Right Side**	**Top Side**	**Bottom**
GSM 850	/	Yes	No	Yes	No	Yes
GSM 1900	/	Yes	No	Yes	No	Yes
GPRS 850	/	Yes	No	Yes	No	Yes
GPRS 1900	/	Yes	No	Yes	No	Yes
WCDMA1900	/	Yes	No	Yes	No	Yes
WCDMA1700	/	Yes	No	Yes	No	Yes
WCDMA 850	/	Yes	No	Yes	No	Yes
LTE Band 2	/	Yes	No	Yes	No	Yes
LTE Band 4	/	Yes	No	Yes	No	Yes
LTE Band 5	/	Yes	No	Yes	No	Yes
LTE Band 7	/	Yes	No	Yes	No	Yes
LTE Band 12	/	Yes	No	Yes	No	Yes
LTE Band 17	/	Yes	No	Yes	No	Yes
WLAN(2.4G)	/	Yes	No	Yes	No	No
Bluetooth	/	No	No	No	No	No

Remark:

3. Referring to KDB 616217 D04 v01r02, KDB 248227 D01 v02r02 and KDB 447498 D01 v06, this device is overall diagonal dimension(>20cm) tablet, tested in direct contact (no gap) with flat phantom.
4. For tablet with overall diagonal dimension >20cm, SAR testing for front surface of the display section is exempted according to KDB616217 D04.

Please refer to Annex D for the EUT test setup photos.

8. SAR Measurement Procedures

8.1 Measurement Procedures

The measurement procedures are as follows:
(a) Use base station simulator (if applicable) or engineering software to transmit RF power continuously (continuous Tx) in the highest power channel.
(b) Keep EUT to radiate maximum output power or 100% factor (if applicable)
(c) Measure output power through RF cable and power meter.
(d) Place the EUT in the positions as Annex D demonstrates.
(e) Set scan area, grid size and other setting on the SATIMO software.
(f) Measure SAR results for the highest power channel on each testing position.
(g) Find out the largest SAR result on these testing positions of each band
(h) Measure SAR results for other channels in worst SAR testing position if the SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:
(a) Power reference measurement
(b) Area scan
(c) Zoom scan
(d) Power drift measurement

8.2 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 SATIMO 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. 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
(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 3D 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

8.3 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan measures 5x5x7 points with step size 8, 8 and 5 mm for 300 MHz to 3 GHz, and 8x8x8 points with step size 4, 4 and 2.5 mm for 3 GHz to 6 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

8.4 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing (step-size is 4, 4 and 2.5 mm). When all volume scan were completed, the software can combine and subsequently superpose these measurement data to calculating the multiband SAR.

8.5 SAR Averaged Methods

The local SAR inside the phantom is measured using small dipole sensing elements inside a probe body. The probe tip must not be in contact with the phantom surface in order to minimize measurements errors, but the highest local SAR will occur at the surface of the phantom.

An extrapolation is using to determinate this highest local SAR values. The extrapolation is based on a fourth-order least-square polynomial fit of measured data. The local SAR value is then extrapolated from the liquid surface with a 1mm step.

The measurements have to be performed over a limited time (due to the duration of the battery) so the step of measurement is high. It could vary between 5 and 8 mm. To obtain an accurate assessment of the maximum SAR averaged over 10g and 1 g requires a very fine resolution in the three dimensional scanned data array.

8.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In SATIMO 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.

9. SAR Test Result

9.1 Conducted RF Output Power

GSM - Burst Average Power (dBm)								
Band	**GSM850**			**Tune-up power (dBm)**	**PCS1900**			**Tune-up power (dBm)**
Channel	**128**	**190**	**251**		**512**	**661**	**810**	
Frequency (MHz)	**824.2**	**836.6**	**848.8**		**1850.2**	**1880**	**1909.8**	
GSM	33.19	33.09	33.04	33.5	30.62	30.27	30.07	31.0
GPRS (1 slot)	33.18	33.10	33.03	33.5	30.65	30.30	30.10	31.0
GPRS (2 slots)	32.50	32.49	32.44	33.0	29.72	29.56	29.41	30.0
GPRS (3 slots)	30.78	30.82	30.73	31.0	27.82	27.84	27.82	28.0
GPRS (4 slots)	29.83	29.81	29.72	30.0	26.75	26.79	26.80	27.0
EDGE (1 slot)	27.07	27.16	27.16	27.5	26.07	26.54	26.67	27.0
EDGE (2 slots)	26.03	26.20	26.21	26.5	25.18	25.63	25.72	26.0
EDGE (3 slots)	24.21	24.27	24.21	24.5	23.37	23.87	23.91	24.0
EDGE (4 slots)	23.20	23.35	23.18	23.5	22.36	22.70	22.99	23.0

GSM - Source-Based Time-Average Power (dBm)								
Band	**GSM850**			**Tune-up power (dBm)**	**PCS1900**			**Tune-up power (dBm)**
Channel	**128**	**190**	**251**		**512**	**661**	**810**	
Frequency (MHz)	**824.2**	**836.6**	**848.8**		**1850.2**	**1880**	**1909.8**	
GSM	24.19	24.09	24.04	24.5	21.62	21.27	21.07	22.0
GPRS (1 slot)	24.18	24.10	24.03	24.5	21.65	21.30	21.10	22.0
GPRS (2 slots)	26.50	26.49	26.44	27.0	23.72	23.56	23.41	24.0
GPRS (3 slots)	26.53	26.57	26.48	27.0	23.57	23.59	23.57	24.0
GPRS (4 slots)	26.83	26.81	26.72	27.0	23.75	23.79	23.80	24.0
EDGE (1 slot)	18.07	18.16	18.16	18.5	17.07	17.54	17.67	18.0
EDGE (2 slots)	20.03	20.20	20.21	20.5	19.18	19.63	19.72	20.0
EDGE (3 slots)	19.96	20.02	19.96	20.5	19.12	19.62	19.66	20.0
EDGE (4 slots)	20.20	20.35	20.18	20.5	19.36	19.70	19.99	20.0
Note: The source-based time-averaged power is linearly scaled the maximum burst averaged power based on time slots. The calculated method are shown as below: Source based time-average power = Burst averaged power - Duty cycle factor in dB Duty cycle factor = 9 dB for 1 Tx slot, 6 dB for 2 Tx slots, 4.25 dB for 3 Tx slots, 3 dB for 4 Tx slots								

Remark:

1. For Head SAR testing, GSM should be evaluated, therefore the EUT was set in GSM for GSM850 and GSM1900 due to its highest source-based time-average power.
2. For Body SAR testing, GPRS should be evaluated, therefore the EUT was set in GPRS (4TX slots) for GSM850 and GPRS (4TX slots) for GSM1900 due to its highest source-based time-average power.

3. Per KDB 447498 D01 v06, the maximum output power channel is used for SAR testing and for further SAR test reduction.

4. The DUT do not support DTM function.

5. The DUT do not support Hotspot function.

WCDMA - Average Power (dBm)								
Band	**WCDMA Band II**				**WCDMA Band VI**			
Channel	**9262**	**9400**	**9538**	**Tune-up power (dBm)**	**1312**	**1412**	**1513**	**Tune-up power (dBm)**
Frequency (MHz)	**1852.4**	**1880.0**	**1907.6**		**1712.4**	**1732.4**	**1752.6**	
RMC 12.2k	23.40	23.75	23.81	24.0	23.41	23.32	23.19	23.5
HSDPA Subtest-1	22.44	22.80	22.84	23.0	22.38	22.34	22.21	22.5
HSDPA Subtest-2	22.41	22.78	22.81	23.0	22.36	22.31	22.19	22.5
HSDPA Subtest-3	22.42	22.79	22.82	23.0	22.37	22.32	22.18	22.5
HSDPA Subtest-4	22.43	22.78	22.82	23.0	22.36	22.32	22.20	22.5
HSUPA Subtest-1	22.43	22.50	22.82	23.0	22.37	22.29	22.22	22.5
HSUPA Subtest-2	22.41	22.49	22.79	23.0	22.35	22.26	22.18	22.5
HSUPA Subtest-3	22.42	22.48	22.81	23.0	22.34	22.27	22.19	22.5
HSUPA Subtest-4	22.42	22.49	22.80	23.0	22.34	22.28	22.20	22.5
HSUPA Subtest-5	22.41	22.48	22.81	23.0	22.34	22.27	22.19	22.5

WCDMA - Average Power (dBm)				
Band	**WCDMA Band V**			
Channel	**4132**	**4183**	**4233**	**Tune-up power (dBm)**
Frequency (MHz)	**826.4**	**836.4**	**846.6**	
RMC 12.2k	23.58	23.50	23.45	24.0
HSDPA Subtest-1	22.52	22.49	22.42	23.0
HSDPA Subtest-2	22.51	22.46	22.41	23.0
HSDPA Subtest-3	22.50	22.47	22.40	23.0
HSDPA Subtest-4	22.49	22.48	22.41	22.5
HSUPA Subtest-1	22.57	22.45	22.35	23.0
HSUPA Subtest-2	22.56	22.43	22.33	23.0
HSUPA Subtest-3	22.57	22.43	22.31	23.0
HSUPA Subtest-4	22.56	22.42	22.32	23.0
HSUPA Subtest-5	22.57	22.41	22.34	23.0

Remark:

1. per KDB 941225 D01 v03, The 12.2kbps RMC mode was selected for SAR testing(the primary mode).

2. When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤1/4 dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode

FDD-LTE Band 2:

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.24	0
		1	3	23.36	0
		1	5	23.25	0
		3	0	23.47	0
		3	2	23.50	0
		3	3	23.47	0
		6	0	22.33	1
	MCH	1	0	23.22	0
		1	3	23.33	0
		1	5	23.18	0
		3	0	23.40	0
		3	2	23.35	0
		3	3	23.38	0
		6	0	22.17	1
	HCH	1	0	22.89	0
		1	3	23.05	0
		1	5	22.90	0
		3	0	23.05	0
		3	2	23.06	0
		3	3	23.06	0
		6	0	21.91	1
16QAM	LCH	1	0	22.58	1
		1	3	22.82	1
		1	5	22.64	1
		3	0	22.62	1
		3	2	22.64	1
		3	3	22.62	1
		6	0	21.40	2
	MCH	1	0	22.69	1
		1	3	22.85	1
		1	5	22.68	1
		3	0	22.44	1
		3	2	22.45	1
		3	3	22.44	1
		6	0	21.26	2
	HCH	1	0	22.19	1
		1	3	22.33	1

		1	5	22.16	1
		3	0	22.11	1
		3	2	22.13	1
		3	3	22.13	1
		6	0	21.07	2

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.32	0
		1	7	23.59	0
		1	14	23.33	0
		8	0	22.37	1
		8	4	22.35	1
		8	7	22.32	1
		15	0	22.36	1
	MCH	1	0	23.23	0
		1	7	23.45	0
		1	14	23.20	0
		8	0	22.19	1
		8	4	22.25	1
		8	7	22.22	1
		15	0	22.25	1
	HCH	1	0	22.95	0
		1	7	23.02	0
		1	14	22.87	0
		8	0	21.88	1
		8	4	21.95	1
		8	7	21.87	1
		15	0	21.90	1
16QAM	LCH	1	0	22.68	1
		1	7	22.91	1
		1	14	22.67	1
		8	0	21.49	2
		8	4	21.51	2
		8	7	21.45	2
		15	0	21.37	2
	MCH	1	0	22.72	1
		1	7	22.95	1
		1	14	22.73	1
		8	0	21.30	2
		8	4	21.31	2

		8	7	21.28	2
		15	0	21.29	2
	HCH	1	0	22.26	1
		1	7	22.41	1
		1	14	22.15	1
		8	0	20.90	2
		8	4	20.94	2
		8	7	20.90	2
		15	0	20.97	2

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.31	0
		1	12	23.77	0
		1	24	23.32	0
		12	0	22.38	1
		12	6	22.42	1
		12	13	22.38	1
		25	0	22.41	1
	MCH	1	0	23.22	0
		1	12	23.59	0
		1	24	23.12	0
		12	0	22.28	1
		12	6	22.37	1
		12	13	22.31	1
		25	0	22.34	1
	HCH	1	0	22.92	0
		1	12	23.21	0
		1	24	22.87	0
		12	0	22.00	1
		12	6	22.02	1
		12	13	21.92	1
		25	0	21.96	1
16QAM	LCH	1	0	22.64	1
		1	12	22.82	1
		1	24	22.64	1
		12	0	21.53	2
		12	6	21.55	2
		12	13	21.46	2
		25	0	21.52	2
	MCH	1	0	22.65	1

		1	12	22.92	1
		1	24	22.52	1
		12	0	21.47	2
		12	6	21.55	2
		12	13	21.46	2
		25	0	21.45	2
	HCH	1	0	22.12	1
		1	12	22.43	1
		1	24	22.05	1
		12	0	21.09	2
		12	6	21.07	2
		12	13	20.94	2
		25	0	21.09	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.32	0
		1	24	23.50	0
		1	49	23.33	0
		25	0	22.50	1
		25	12	22.43	1
		25	25	22.43	1
		50	0	22.52	1
	MCH	1	0	23.25	0
		1	24	23.37	0
		1	49	23.14	0
		25	0	22.33	1
		25	12	22.28	1
		25	25	22.32	1
		50	0	22.32	1
	HCH	1	0	23.03	0
		1	24	23.12	0
		1	49	22.91	0
		25	0	22.09	1
		25	12	21.99	1
		25	25	21.92	1
		50	0	22.06	1
16QAM	LCH	1	0	22.70	1
		1	24	22.86	1
		1	49	22.73	1
		25	0	21.61	2

		25	12	21.54	2
		25	25	21.57	2
		50	0	21.57	2
	MCH	1	0	22.75	1
		1	24	22.89	1
		1	49	22.62	1
		25	0	21.49	2
		25	12	21.48	2
		25	25	21.46	2
		50	0	21.51	2
	HCH	1	0	22.34	1
		1	24	22.43	1
		1	49	22.18	1
		25	0	21.19	2
		25	12	21.12	2
		25	25	21.04	2
		50	0	21.16	2

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.25	0
		1	37	23.58	0
		1	74	23.23	0
		37	0	22.44	1
		37	18	22.38	1
		37	38	22.34	1
		75	0	22.38	1
	MCH	1	0	23.17	0
		1	37	23.41	0
		1	74	22.98	0
		37	0	22.30	1
		37	18	22.32	1
		37	38	22.21	1
		75	0	22.27	1
	HCH	1	0	23.05	0
		1	37	23.19	0
		1	74	22.84	0
		37	0	22.14	1
		37	18	22.07	1
		37	38	21.95	1
		75	0	22.04	1

16QAM	LCH	1	0	22.60	1
		1	37	22.94	1
		1	74	22.57	1
		37	0	21.43	2
		37	18	21.44	2
		37	38	21.40	2
		75	0	21.47	2
	MCH	1	0	22.60	1
		1	37	22.79	1
		1	74	22.38	1
		37	0	21.35	2
		37	18	21.35	2
		37	38	21.24	2
		75	0	21.33	2
	HCH	1	0	22.37	1
		1	37	22.50	1
		1	74	22.08	1
		37	0	21.11	2
		37	18	21.05	2
		37	38	20.94	2
		75	0	21.09	2

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.56	0
		1	49	23.79	0
		1	99	23.41	0
		50	0	22.48	1
		50	25	22.52	1
		50	50	22.40	1
		100	0	22.48	1
	MCH	1	0	23.08	0
		1	49	23.46	0
		1	99	22.86	0
		50	0	22.37	1
		50	25	22.37	1
		50	50	22.22	1
		100	0	22.30	1
	HCH	1	0	22.82	0
		1	49	23.11	0
		1	99	22.52	0

		50	0	22.22	1
		50	25	22.13	1
		50	50	21.94	1
		100	0	22.09	1
16QAM	LCH	1	0	22.45	1
		1	49	22.94	1
		1	99	22.40	1
		50	0	21.56	2
		50	25	21.59	2
		50	50	21.50	2
		100	0	21.59	2
	MCH	1	0	22.56	1
		1	49	22.88	1
		1	99	22.34	1
		50	0	21.53	2
		50	25	21.50	2
		50	50	21.34	2
		100	0	21.41	2
	HCH	1	0	22.25	1
		1	49	22.52	1
		1	99	21.89	1
		50	0	21.29	2
		50	25	21.25	2
		50	50	21.01	2
		100	0	21.20	2

FDD-LTE Band 4:

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.39	0
		1	3	23.51	0
		1	5	23.40	0
		3	0	23.58	0
		3	2	23.63	0
		3	3	23.58	0
		6	0	22.47	1
	MCH	1	0	23.57	0
		1	3	23.75	0
		1	5	23.56	0
		3	0	23.74	0
		3	2	23.74	0
		3	3	23.71	0
		6	0	22.61	1
	HCH	1	0	23.43	0
		1	3	23.59	0
		1	5	23.45	0
		3	0	23.61	0
		3	2	23.64	0
		3	3	23.63	0
		6	0	22.50	1
16QAM	LCH	1	0	22.74	1
		1	3	22.94	1
		1	5	22.79	1
		3	0	22.74	1
		3	2	22.74	1
		3	3	22.72	1
		6	0	21.53	2
	MCH	1	0	22.95	1
		1	3	23.16	1
		1	5	22.96	1
		3	0	22.69	1
		3	2	22.75	1
		3	3	22.75	1
		6	0	21.61	2
	HCH	1	0	22.71	1
		1	3	22.89	1

		1	5	22.72	1
		3	0	22.66	1
		3	2	22.69	1
		3	3	22.69	1
		6	0	21.69	2

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.47	0
		1	7	23.64	0
		1	14	23.48	0
		8	0	22.48	1
		8	4	22.51	1
		8	7	22.50	1
		15	0	22.52	1
	MCH	1	0	23.59	0
		1	7	23.84	0
		1	14	23.56	0
		8	0	22.63	1
		8	4	22.62	1
		8	7	22.62	1
		15	0	22.61	1
	HCH	1	0	23.56	0
		1	7	23.70	0
		1	14	23.49	0
		8	0	22.52	1
		8	4	22.50	1
		8	7	22.43	1
		15	0	22.50	1
16QAM	LCH	1	0	22.80	1
		1	7	23.06	1
		1	14	22.78	1
		8	0	21.63	2
		8	4	21.69	2
		8	7	21.63	2
		15	0	21.58	2
	MCH	1	0	23.00	1
		1	7	23.22	1
		1	14	23.05	1
		8	0	21.67	2
		8	4	21.67	2

		8	7	21.65	2
		15	0	21.67	2
	HCH	1	0	22.86	1
		1	7	23.23	1
		1	14	22.76	1
		8	0	21.52	2
		8	4	21.56	2
		8	7	21.48	2
		15	0	21.58	2

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.45	0
		1	12	23.80	0
		1	24	23.47	0
		12	0	22.44	1
		12	6	22.58	1
		12	13	22.53	1
		25	0	22.52	1
	MCH	1	0	23.54	0
		1	12	24.00	0
		1	24	23.52	0
		12	0	22.65	1
		12	6	22.68	1
		12	13	22.49	1
		25	0	22.64	1
	HCH	1	0	23.51	0
		1	12	23.83	0
		1	24	23.47	0
		12	0	22.53	1
		12	6	22.61	1
		12	13	22.44	1
		25	0	22.54	1
16QAM	LCH	1	0	22.75	1
		1	12	23.08	1
		1	24	22.74	1
		12	0	21.60	2
		12	6	21.70	2
		12	13	21.66	2
		25	0	21.59	2
	MCH	1	0	22.80	1

		1	12	23.21	1
		1	24	22.82	1
		12	0	21.83	2
		12	6	21.84	2
		12	13	21.68	2
		25	0	21.75	2
	HCH	1	0	22.77	1
		1	12	23.02	1
		1	24	22.66	1
		12	0	21.64	2
		12	6	21.66	2
		12	13	21.57	2
		25	0	21.68	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.46	0
		1	24	23.68	0
		1	49	23.46	0
		25	0	22.49	1
		25	12	22.56	1
		25	25	22.63	1
		50	0	22.61	1
	MCH	1	0	23.60	0
		1	24	23.75	0
		1	49	23.51	0
		25	0	22.76	1
		25	12	22.64	1
		25	25	22.64	1
		50	0	22.70	1
	HCH	1	0	23.58	0
		1	24	23.75	0
		1	49	23.47	0
		25	0	22.65	1
		25	12	22.62	1
		25	25	22.50	1
		50	0	22.58	1
16QAM	LCH	1	0	22.83	1
		1	24	23.02	1
		1	49	22.78	1
		25	0	21.63	2

		25	12	21.65	2
		25	25	21.74	2
		50	0	21.62	2
	MCH	1	0	22.97	1
		1	24	23.16	1
		1	49	23.01	1
		25	0	21.85	2
		25	12	21.75	2
		25	25	21.75	2
		50	0	21.81	2
	HCH	1	0	22.93	1
		1	24	23.09	1
		1	49	22.74	1
		25	0	21.74	2
		25	12	21.72	2
		25	25	21.62	2
		50	0	21.68	2

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.43	0
		1	37	23.70	0
		1	74	23.42	0
		37	0	22.50	1
		37	18	22.59	1
		37	38	22.57	1
		75	0	22.53	1
	MCH	1	0	23.50	0
		1	37	23.76	0
		1	74	23.44	0
		37	0	22.75	1
		37	18	22.71	1
		37	38	22.57	1
		75	0	22.70	1
	HCH	1	0	23.57	0
		1	37	23.89	0
		1	74	23.39	0
		37	0	22.56	1
		37	18	22.66	1
		37	38	22.55	1
		75	0	22.56	1

16QAM	LCH	1	0	22.76	1
		1	37	22.93	1
		1	74	22.67	1
		37	0	21.55	2
		37	18	21.57	2
		37	38	21.57	2
		75	0	21.61	2
	MCH	1	0	22.79	1
		1	37	23.07	1
		1	74	22.79	1
		37	0	21.74	2
		37	18	21.70	2
		37	38	21.63	2
		75	0	21.70	2
	HCH	1	0	22.90	1
		1	37	23.18	1
		1	74	22.67	1
		37	0	21.63	2
		37	18	21.64	2
		37	38	21.58	2
		75	0	21.64	2

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.93	0
		1	49	24.02	0
		1	99	23.41	0
		50	0	22.47	1
		50	25	22.57	1
		50	50	22.44	1
		100	0	22.47	1
	MCH	1	0	23.38	0
		1	49	23.80	0
		1	99	23.32	0
		50	0	22.77	1
		50	25	22.69	1
		50	50	22.53	1
		100	0	22.63	1
	HCH	1	0	23.29	0
		1	49	23.65	0
		1	99	23.14	0

		50	0	22.65	1
		50	25	22.63	1
		50	50	22.61	1
		100	0	22.56	1
16QAM	LCH	1	0	22.57	1
		1	49	22.93	1
		1	99	22.59	1
		50	0	21.48	2
		50	25	21.63	2
		50	50	21.50	2
		100	0	21.53	2
	MCH	1	0	22.70	1
		1	49	23.22	1
		1	99	22.78	1
		50	0	21.87	2
		50	25	21.79	2
		50	50	21.67	2
		100	0	21.74	2
	HCH	1	0	22.66	1
		1	49	23.10	1
		1	99	22.51	1
		50	0	21.77	2
		50	25	21.80	2
		50	50	21.69	2
		100	0	21.71	2

FDD-LTE Band 5:

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	22.87	0
		1	3	22.99	0
		1	5	22.87	0
		3	0	22.98	0
		3	2	23.03	0
		3	3	22.96	0
		6	0	21.96	1
	MCH	1	0	22.90	0
		1	3	23.03	0
		1	5	22.90	0
		3	0	22.97	0
		3	2	22.96	0
		3	3	22.95	0
		6	0	21.88	1
	HCH	1	0	22.88	0
		1	3	23.09	0
		1	5	22.97	0
		3	0	23.05	0
		3	2	23.07	0
		3	3	23.09	0
		6	0	21.94	1
16QAM	LCH	1	0	22.17	1
		1	3	22.31	1
		1	5	22.12	1
		3	0	22.10	1
		3	2	22.09	1
		3	3	22.05	1
		6	0	20.98	2
	MCH	1	0	22.29	1
		1	3	22.47	1
		1	5	22.27	1
		3	0	21.94	1
		3	2	21.97	1
		3	3	22.04	1
		6	0	20.95	2
	HCH	1	0	22.22	1
		1	3	22.51	1

		1	5	22.26	1
		3	0	22.07	1
		3	2	22.14	1
		3	3	22.14	1
		6	0	21.17	2

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	22.92	0
		1	7	23.12	0
		1	14	22.88	0
		8	0	21.90	1
		8	4	21.91	1
		8	7	21.91	1
		15	0	21.89	1
	MCH	1	0	22.90	0
		1	7	23.14	0
		1	14	22.86	0
		8	0	21.83	1
		8	4	21.88	1
		8	7	21.86	1
		15	0	21.85	1
	HCH	1	0	22.96	0
		1	7	23.27	0
		1	14	22.97	0
		8	0	21.92	1
		8	4	21.97	1
		8	7	21.90	1
		15	0	21.95	1
16QAM	LCH	1	0	22.23	1
		1	7	22.38	1
		1	14	22.13	1
		8	0	21.03	2
		8	4	21.07	2
		8	7	21.00	2
		15	0	20.96	2
	MCH	1	0	22.33	1
		1	7	22.54	1
		1	14	22.33	1
		8	0	20.93	2
		8	4	20.97	2

		8	7	20.93	2
		15	0	20.92	2
	HCH	1	0	22.26	1
		1	7	22.49	1
		1	14	22.29	1
		8	0	20.97	2
		8	4	21.01	2
		8	7	20.97	2
		15	0	21.01	2

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	22.89	0
		1	12	23.16	0
		1	24	22.88	0
		12	0	21.91	1
		12	6	21.97	1
		12	13	21.91	1
		25	0	21.88	1
	MCH	1	0	22.84	0
		1	12	23.20	0
		1	24	22.83	0
		12	0	21.86	1
		12	6	21.92	1
		12	13	21.90	1
		25	0	21.94	1
	HCH	1	0	22.95	0
		1	12	23.24	0
		1	24	22.94	0
		12	0	22.00	1
		12	6	21.99	1
		12	13	21.89	1
		25	0	21.99	1
16QAM	LCH	1	0	22.21	1
		1	12	22.41	1
		1	24	22.09	1
		12	0	20.99	2
		12	6	21.04	2
		12	13	20.95	2
		25	0	20.96	2
	MCH	1	0	22.19	1

		1	12	22.52	1
		1	24	22.16	1
		12	0	21.00	2
		12	6	21.08	2
		12	13	21.04	2
		25	0	21.00	2
	HCH	1	0	22.14	1
		1	12	22.45	1
		1	24	22.19	1
		12	0	21.03	2
		12	6	21.03	2
		12	13	20.95	2
		25	0	21.06	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	22.92	0
		1	24	23.05	0
		1	49	22.91	0
		25	0	21.97	1
		25	12	21.95	1
		25	25	21.96	1
		50	0	21.95	1
	MCH	1	0	23.04	0
		1	24	23.31	0
		1	49	22.88	0
		25	0	21.99	1
		25	12	21.93	1
		25	25	22.04	1
		50	0	21.96	1
	HCH	1	0	22.99	0
		1	24	23.05	0
		1	49	22.99	0
		25	0	22.07	1
		25	12	21.98	1
		25	25	21.87	1
		50	0	21.98	1
16QAM	LCH	1	0	22.26	1
		1	24	22.34	1
		1	49	22.24	1
		25	0	21.01	2

		25	12	20.99	2
		25	25	20.99	2
		50	0	20.97	2
	MCH	1	0	22.35	1
		1	24	22.54	1
		1	49	22.30	1
		25	0	21.09	2
		25	12	20.98	2
		25	25	21.12	2
		50	0	21.09	2
	HCH	1	0	22.24	1
		1	24	22.34	1
		1	49	22.32	1
		25	0	21.14	2
		25	12	21.06	2
		25	25	20.94	2
		50	0	21.06	2

FDD-LTE Band 7

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.19	0
		1	12	23.58	0
		1	24	23.23	0
		12	0	22.27	1
		12	6	22.34	1
		12	13	22.28	1
		25	0	22.29	1
	MCH	1	0	23.48	0
		1	12	23.97	0
		1	24	23.50	0
		12	0	22.53	1
		12	6	22.62	1
		12	13	22.56	1
		25	0	22.59	1
	HCH	1	0	23.61	0
		1	12	23.84	0
		1	24	23.59	0
		12	0	22.64	1
		12	6	22.76	1
		12	13	22.67	1
		25	0	22.65	1
16QAM	LCH	1	0	22.43	1
		1	12	22.87	1
		1	24	22.50	1
		12	0	21.35	2
		12	6	21.41	2
		12	13	21.35	2
		25	0	21.33	2
	MCH	1	0	22.86	1
		1	12	23.18	1
		1	24	22.84	1
		12	0	21.70	2
		12	6	21.82	2
		12	13	21.75	2
		25	0	21.65	2
	HCH	1	0	22.91	1
		1	12	23.12	1

		1	24	22.75	1
		12	0	21.80	2
		12	6	21.84	2
		12	13	21.76	2
		25	0	21.76	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.29	0
		1	24	23.44	0
		1	49	23.28	0
		25	0	22.38	1
		25	12	22.34	1
		25	25	22.32	1
		50	0	22.37	1
	MCH	1	0	23.49	0
		1	24	23.66	0
		1	49	23.48	0
		25	0	22.55	1
		25	12	22.64	1
		25	25	22.61	1
		50	0	22.60	1
	HCH	1	0	23.69	0
		1	24	23.83	0
		1	49	23.56	0
		25	0	22.60	1
		25	12	22.49	1
		25	25	22.49	1
		50	0	22.66	1
16QAM	LCH	1	0	22.57	1
		1	24	22.75	1
		1	49	22.58	1
		25	0	21.44	2
		25	12	21.40	2
		25	25	21.44	2
		50	0	21.38	2
	MCH	1	0	23.01	1
		1	24	23.23	1
		1	49	23.01	1
		25	0	21.72	2
		25	12	21.75	2

		25	25	21.76	2
		50	0	21.72	2
	HCH	1	0	22.75	1
		1	24	23.11	1
		1	49	22.77	1
		25	0	21.53	2
		25	12	21.74	2
		25	25	21.86	2
		50	0	21.68	2

Channel Bandwidth: 15 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.17	0
		1	37	23.49	0
		1	74	23.05	0
		37	0	22.31	1
		37	18	22.31	1
		37	38	22.27	1
		75	0	22.29	1
	MCH	1	0	23.35	0
		1	37	23.63	0
		1	74	23.36	0
		37	0	22.48	1
		37	18	22.52	1
		37	38	22.51	1
		75	0	22.52	1
	HCH	1	0	23.67	0
		1	37	23.78	0
		1	74	23.52	0
		37	0	22.64	1
		37	18	22.67	1
		37	38	22.65	1
		75	0	22.70	1
16QAM	LCH	1	0	22.50	1
		1	37	22.73	1
		1	74	22.51	1
		37	0	21.31	2
		37	18	21.31	2
		37	38	21.28	2
		75	0	21.32	2
	MCH	1	0	22.77	1

		1	37	23.10	1
		1	74	22.78	1
		37	0	21.55	2
		37	18	21.63	2
		37	38	21.58	2
		75	0	21.57	2
	HCH	1	0	23.00	1
		1	37	23.31	1
		1	74	22.79	1
		37	0	21.75	2
		37	18	21.72	2
		37	38	21.73	2
		75	0	21.83	2

Channel Bandwidth: 20 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.09	0
		1	49	23.48	0
		1	99	23.10	0
		50	0	22.31	1
		50	25	22.32	1
		50	50	22.32	1
		100	0	22.31	1
	MCH	1	0	23.18	0
		1	49	23.98	0
		1	99	23.29	0
		50	0	22.53	1
		50	25	22.60	1
		50	50	22.63	1
		100	0	22.55	1
	HCH	1	0	23.35	0
		1	49	23.71	0
		1	99	23.25	0
		50	0	22.86	1
		50	25	22.79	1
		50	50	22.80	1
		100	0	22.82	1
16QAM	LCH	1	0	22.31	1
		1	49	22.74	1
		1	99	22.41	1
		50	0	21.35	2

		50	25	21.37	2
		50	50	21.36	2
		100	0	21.38	2
	MCH	1	0	22.63	1
		1	49	23.22	1
		1	99	22.78	1
		50	0	21.67	2
		50	25	21.71	2
		50	50	21.77	2
		100	0	21.66	2
	HCH	1	0	22.79	1
		1	49	23.16	1
		1	99	22.67	1
		50	0	21.96	2
		50	25	21.90	2
		50	50	21.93	2
		100	0	21.85	2

FDD-LTE Band 12:

Channel Bandwidth: 1.4 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.01	0
		1	3	23.15	0
		1	5	22.95	0
		3	0	23.14	0
		3	2	23.18	0
		3	3	23.16	0
		6	0	22.14	1
	MCH	1	0	23.09	0
		1	3	23.17	0
		1	5	23.04	0
		3	0	23.15	0
		3	2	23.12	0
		3	3	23.12	0
		6	0	22.08	1
	HCH	1	0	22.97	0
		1	3	23.13	0
		1	5	22.98	0
		3	0	23.13	0
		3	2	23.14	0
		3	3	23.16	0
		6	0	22.09	1
16QAM	LCH	1	0	22.42	1
		1	3	22.66	1
		1	5	22.45	1
		3	0	22.42	1
		3	2	22.38	1
		3	3	22.37	1
		6	0	21.18	2
	MCH	1	0	22.56	1
		1	3	22.79	1
		1	5	22.57	1
		3	0	22.23	1
		3	2	22.24	1
		3	3	22.24	1
		6	0	21.12	2
	HCH	1	0	22.35	1
		1	3	22.55	1

		1	5	22.34	1
		3	0	22.24	1
		3	2	22.27	1
		3	3	22.24	1
		6	0	21.25	2

Channel Bandwidth: 3 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.13	0
		1	7	23.37	0
		1	14	23.09	0
		8	0	22.12	1
		8	4	22.14	1
		8	7	22.09	1
		15	0	22.11	1
	MCH	1	0	23.08	0
		1	7	23.40	0
		1	14	23.08	0
		8	0	22.08	1
		8	4	22.12	1
		8	7	22.07	1
		15	0	22.15	1
	HCH	1	0	23.09	0
		1	7	23.29	0
		1	14	23.07	0
		8	0	22.08	1
		8	4	22.09	1
		8	7	22.04	1
		15	0	22.03	1
16QAM	LCH	1	0	22.56	1
		1	7	22.75	1
		1	14	22.54	1
		8	0	21.21	2
		8	4	21.29	2
		8	7	21.21	2
		15	0	21.14	2
	MCH	1	0	22.63	1
		1	7	22.89	1
		1	14	22.58	1
		8	0	21.16	2
		8	4	21.12	2

		8	7	21.15	2
		15	0	21.13	2
	HCH	1	0	22.43	1
		1	7	22.63	1
		1	14	22.43	1
		8	0	21.07	2
		8	4	21.11	2
		8	7	21.05	2
		15	0	21.08	2

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.09	0
		1	12	23.46	0
		1	24	23.06	0
		12	0	22.14	1
		12	6	22.19	1
		12	13	22.14	1
		25	0	22.18	1
	MCH	1	0	23.08	0
		1	12	23.36	0
		1	24	23.00	0
		12	0	22.13	1
		12	6	22.17	1
		12	13	22.15	1
		25	0	22.19	1
	HCH	1	0	23.01	0
		1	12	23.33	0
		1	24	22.98	0
		12	0	22.14	1
		12	6	22.18	1
		12	13	22.05	1
		25	0	22.10	1
16QAM	LCH	1	0	22.44	1
		1	12	22.76	1
		1	24	22.49	1
		12	0	21.18	2
		12	6	21.26	2
		12	13	21.20	2
		25	0	21.18	2
	MCH	1	0	22.54	1

		1	12	22.82	1
		1	24	22.43	1
		12	0	21.25	2
		12	6	21.29	2
		12	13	21.23	2
		25	0	21.22	2
	HCH	1	0	22.32	1
		1	12	22.37	1
		1	24	22.30	1
		12	0	21.09	2
		12	6	21.15	2
		12	13	21.00	2
		25	0	21.19	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.10	0
		1	24	23.48	0
		1	49	23.04	0
		25	0	22.16	1
		25	12	22.17	1
		25	25	22.27	1
		50	0	22.21	1
	MCH	1	0	23.07	0
		1	24	23.21	0
		1	49	22.94	0
		25	0	22.17	1
		25	12	22.17	1
		25	25	22.15	1
		50	0	22.15	1
	HCH	1	0	23.11	0
		1	24	23.18	0
		1	49	22.97	0
		25	0	22.11	1
		25	12	22.10	1
		25	25	22.09	1
		50	0	22.06	1
16QAM	LCH	1	0	22.53	1
		1	24	22.71	1
		1	49	22.42	1
		25	0	21.25	2

		25	12	21.21	2
		25	25	21.34	2
		50	0	21.21	2
	MCH	1	0	22.65	1
		1	24	22.81	1
		1	49	22.53	1
		25	0	21.24	2
		25	12	21.20	2
		25	25	21.19	2
		50	0	21.18	2
	HCH	1	0	22.48	1
		1	24	22.57	1
		1	49	22.39	1
		25	0	21.14	2
		25	12	21.10	2
		25	25	21.08	2
		50	0	21.11	2

FDD-LTE Band 17

Channel Bandwidth: 5 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.16	0
		1	12	23.42	0
		1	24	23.06	0
		12	0	22.21	1
		12	6	22.22	1
		12	13	22.22	1
		25	0	22.21	1
	MCH	1	0	23.11	0
		1	12	23.43	0
		1	24	23.04	0
		12	0	22.15	1
		12	6	22.20	1
		12	13	22.07	1
		25	0	22.15	1
	HCH	1	0	23.08	0
		1	12	23.32	0
		1	24	23.00	0
		12	0	22.14	1
		12	6	22.15	1
		12	13	22.04	1
		25	0	22.12	1
16QAM	LCH	1	0	22.52	1
		1	12	22.86	1
		1	24	22.43	1
		12	0	21.27	2
		12	6	21.30	2
		12	13	21.31	2
		25	0	21.24	2
	MCH	1	0	22.53	1
		1	12	22.79	1
		1	24	22.43	1
		12	0	21.25	2
		12	6	21.29	2
		12	13	21.20	2
		25	0	21.17	2
	HCH	1	0	22.34	1
		1	12	22.44	1
		1	24	22.29	1

		12	0	21.14	2
		12	6	21.15	2
		12	13	21.05	2
		25	0	21.15	2

Channel Bandwidth: 10 MHz					
Modulation	Channel	RB Configuration		Average Power [dBm]	MPR (dB)
		Size	Offset		
QPSK	LCH	1	0	23.45	0
		1	24	23.24	0
		1	49	22.97	0
		25	0	22.17	1
		25	12	22.16	1
		25	25	22.14	1
		50	0	22.14	1
	MCH	1	0	23.13	0
		1	24	23.20	0
		1	49	22.97	0
		25	0	22.15	1
		25	12	22.13	1
		25	25	22.10	1
		50	0	22.10	1
	HCH	1	0	23.19	0
		1	24	23.23	0
		1	49	23.05	0
		25	0	22.16	1
		25	12	22.11	1
		25	25	22.07	1
		50	0	22.17	1
16QAM	LCH	1	0	22.58	1
		1	24	22.66	1
		1	49	22.37	1
		25	0	21.22	2
		25	12	21.18	2
		25	25	21.17	2
		50	0	21.15	2
	MCH	1	0	22.69	1
		1	24	22.73	1
		1	49	22.49	1
		25	0	21.22	2
		25	12	21.17	2
		25	25	21.14	2

		50	0	21.18	2
	HCH	1	0	22.61	1
		1	24	22.61	1
		1	49	22.44	1
		25	0	21.19	2
		25	12	21.19	2
		25	25	21.08	2
		50	0	21.15	2

Remark:

1. Per KDB941225 D05 v02r05, Start with the largest channel bandwidth then measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle, and lower edge of each required test channel. When the reported SAR is≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. 6 When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.
2. Per KDB941225 D05 v02r05, The procedures required for 1 RB allocation in 5.2.1 are applied to measure the SAR for QPSK with 50% RB allocation.
3. Per KDB941225 D05 v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations, and the highest reported SAR for 1 RB and 50% RB allocation in 5.2.1 and 5.2.2 are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB941225 D05 v02r05, For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in 5.2.1, 5.2.2, and 5.2.3 to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

WLAN - Maximum Average Power					
Test Mode	**Data Rate**	**Channel**	**Frequency (MHz)**	**Average Power (dBm)**	**Tune-up power (dBm)**
802.11b	1Mbps	CH 01	2412	15.53	16.0
		CH 06	2437	14.39	14.5
		CH 11	2462	14.27	14.5
802.11g	6Mbps	CH 01	2412	12.72	13.0
		CH 06	2437	12.15	12.5
		CH 11	2462	11.25	11.5
802.11n (20MHz)	MCS0	CH 01	2412	11.47	11.5
		CH 06	2437	12.01	12.5
		CH 11	2462	10.67	11.0
802.11n (40MHz)	MCS0	CH 03	2422	10.84	11.0
		CH 06	2437	11.25	11.5
		CH 09	2452	10.18	10.5

Remark:

1. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions.

2. Per KDB 248227 D01 v02r02, For 802.11b DSSS SAR measurements ,when the reported SAR of the highest measured maximum output power channel (see 3.1) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

3 .For OFDM modes (802.11g/n), SAR is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and it is <= 1.2W/kg.

Bluetooth - Maximum Average Power			
Test Mode	**Data Rate**	**Average Power(dBm)**	**Tune- up power (dBm)**
GFSK	1Mbps	6.74	7.0
4*π4DQPSK	2Mbps	6.11	6.5
8DPSK	3Mbps	6.02	6.5

Bluetooth - Maximum Average Power			
Test Mode	**Channel(MHz)**	**Average Power(dBm)**	**Tune- up power (dBm)**
BLE	2402	-7.45	-7.0
	2440	-7.17	-7.0
	2480	-6.76	-6.5

Remark:

Bluetooth maximum output power is 6.74dBm *respectively*, and Maximum Tune-Up output power is 7.0dBm *respectively*,. Per KDB 447498 D01 V06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,16 where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation17
- The result is rounded to one decimal place for comparison

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	Result	Limit
7.0	5.01	5	2.480	1.58	3

The exclusion thresholds is 1.58< 3, therefore, the RF exposure evaluation is not required.

9.2 Test Results for Standalone SAR Test

MDT 760: Body SAR

GSM850 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
1.	GSM	Back	128	824.2	33.19	33.5	1.074	0.206	0.221
2.	GPRS_4TX	Back Side	128	824.2	29.83	30.0	1.040	0.252	0.262
3.	GPRS_4TX	Left side	128	824.2	29.83	30.0	1.040	0.018	0.019
4.	GPRS_4TX	Top side	128	824.2	29.83	30.0	1.040	0.096	0.100

GSM1900 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
5.	GSM	Back	512	1850.2	30.62	31.0	1.091	0.274	0.299
6.	GPRS_4TX	Back Side	810	1909.8	26.80	27.0	1.047	0.363	0.380
7.	GPRS_4TX	Left side	810	1909.8	26.80	27.0	1.047	0.026	0.027
8.	GPRS_4TX	Top side	810	1909.8	26.80	27.0	1.047	0.117	0.123

WCDMA Band 2 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
9.	RMC 12.2k	Back Side	9538	1907.6	23.81	24.0	1.045	0.980	1.024
10.	**RMC 12.2k**	**Back Side**	**9538**	**1907.6**	**23.81**	**24.0**	**1.045**	**0.956**	**0.999**
11.	RMC 12.2k	Back Side	9262	1852.4	23.40	24.0	1.148	0.887	1.018
12.	RMC 12.2k	Back Side	9400	1880.0	23.75	24.0	1.059	0.866	0.917
13.	RMC 12.2k	Left side	9538	1907.6	23.81	24.0	1.045	0.008	0.008
14.	RMC 12.2k	Top side	9538	1907.6	23.81	24.0	1.045	0.043	0.045

WCDMA Band 4 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
15.	RMC 12.2k	Back Side	1312	1712.4	23.41	23.5	1.021	0.833	0.850
16.	**RMC 12.2k**	**Back Side**	**1312**	**1712.4**	**23.41**	**23.5**	**1.021**	**0.804**	**0.821**
17.	RMC 12.2k	Back Side	1412	1732.4	23.32	23.5	1.042	0.761	0.793
18.	RMC 12.2k	Back Side	1513	1752.6	23.19	23.5	1.074	0.625	0.671
19.	RMC 12.2k	Left side	1312	1712.4	23.41	23.5	1.021	0.038	0.039
20.	RMC 12.2k	Top side	1312	1712.4	23.41	23.5	1.021	0.246	0.251

WCDMA Band 5 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
21.	RMC 12.2k	Back Side	4132	826.4	23.58	24.0	1.102	0.290	0.319
22.	RMC 12.2k	Left side	4132	826.4	23.58	24.0	1.102	0.012	0.013
23.	RMC 12.2k	Top side	4132	826.4	23.58	24.0	1.102	0.090	0.099

LTE Band 2–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
24.	QPSK 20MHz 1RB	Back Side	1860	23.79	24.0	1.050	0.580	0.609
25.	QPSK 20MHz 1RB	Left side	1860	23.79	24.0	1.050	0.042	0.044
26.	QPSK 20MHz 1RB	Top side	1860	23.79	24.0	1.050	0.229	0.240
27.	QPSK 20MHz 50%RB	Back Side	1860	22.52	23.0	1.117	0.482	0.538
28.	QPSK 20MHz 50%RB	Left side	1860	22.52	23.0	1.117	0.036	0.040
29.	QPSK 20MHz 50%RB	Top side	1860	22.52	23.0	1.117	0.192	0.214

LTE Band 4–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
30.	QPSK 20MHz 1RB	Back Side	1720	24.02	24.5	1.117	0.469	0.524
31.	QPSK 20MHz 1RB	Left side	1720	24.02	24.5	1.117	0.028	0.031
32.	QPSK 20MHz 1RB	Top side	1720	24.02	24.5	1.117	0.189	0.211
33.	QPSK 20MHz 50%RB	Back Side	1732.5	22.77	23.0	1.054	0.463	0.488
34.	QPSK 20MHz 50%RB	Left side	1732.5	22.77	23.0	1.054	0.024	0.025
35.	QPSK 20MHz 50%RB	Top side	1732.5	22.77	23.0	1.054	0.185	0.195

LTE Band 5–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
36.	QPSK 10MHz 1RB	Back Side	836.5	23.31	23.5	1.045	0.196	0.205
37.	QPSK 10MHz 1RB	Left side	836.5	23.31	23.5	1.045	0.015	0.016
38.	QPSK 10MHz 1RB	Top side	836.5	23.31	23.5	1.045	0.061	0.064
39.	QPSK 10MHz 50%RB	Back Side	836.5	22.04	22.5	1.112	0.149	0.166
40.	QPSK 10MHz 50%RB	Left side	836.5	22.04	22.5	1.112	0.012	0.013
41.	QPSK 10MHz 50%RB	Top side	836.5	22.04	22.5	1.112	0.048	0.053

LTE Band 7–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
42.	QPSK 20MHz 1RB	Back Side	2535	23.98	24.0	1.005	0.766	0.770
43.	QPSK 20MHz 1RB	Left side	2535	23.98	24.0	1.005	0.064	0.064
44.	QPSK 20MHz 1RB	Top side	2535	23.98	24.0	1.005	0.375	0.377
45.	QPSK 20MHz 50%RB	Back Side	2560	22.86	23.0	1.033	0.730	0.754
46.	QPSK 20MHz 50%RB	Left side	2560	22.86	23.0	1.033	0.057	0.059
47.	QPSK 20MHz 50%RB	Top side	2560	22.86	23.0	1.033	0.350	0.361

LTE Band 12–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
48.	QPSK 10MHz 1RB	Back Side	704	23.48	23.5	1.005	0.239	0.240
49.	QPSK 10MHz 1RB	Left side	704	23.48	23.5	1.005	0.016	0.016
50.	QPSK 10MHz 1RB	Top side	704	23.48	23.5	1.005	0.053	0.053
51.	QPSK 10MHz 50%RB	Back Side	704	22.27	22.5	1.054	0.181	0.191
52.	QPSK 10MHz 50%RB	Left side	704	22.27	22.5	1.054	0.012	0.013
53.	QPSK 10MHz 50%RB	Top side	704	22.27	22.5	1.054	0.045	0.047

LTE Band 17–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position Body	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB		MHz					
54.	QPSK 10MHz 1RB	Back Side	709	23.45	23.5	1.012	0.272	0.275
55.	QPSK 10MHz 1RB	Left side	709	23.45	23.5	1.012	0.020	0.020
56.	QPSK 10MHz 1RB	Top side	709	23.45	23.5	1.012	0.067	0.068
57.	QPSK 10MHz 50%RB	Back Side	709	22.17	22.5	1.079	0.246	0.265
58.	QPSK 10MHz 50%RB	Left side	709	22.17	22.5	1.079	0.018	0.019
59.	QPSK 10MHz 50%RB	Top side	709	22.17	22.5	1.079	0.061	0.066

WLAN 2.4GHz –Body SAR Test									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
60.	802.11b	Back Side	01	2412	15.53	16.0	1.114	0.227	0.253
61.	802.11b	Right Side	01	2412	15.53	16.0	1.114	0.119	0.133

Repeated SAR

Mode	Test Position Body	Frequency		SAR1g (W/kg)	Repeated SAR		Ratio	
		CH.	MHz		1	2	1	2
WCDMA Band 2	Back Side	9538	1907.6	0.980	0.956	/	1.025	/
WCDMA Band 4	Back Side	1312	1712.4	0.833	0.804	/	1.036	/

Remark:

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.

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

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

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

MDT 860: Body SAR

GSM850 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
62.	GSM	Back	128	824.2	33.19	33.5	1.074	0.074	0.079
63.	GPRS_4TX	Back Side	128	824.2	29.83	30.0	1.040	0.085	0.088
64.	GPRS_4TX	Right side	128	824.2	29.83	30.0	1.040	0.052	0.054
65.	GPRS_4TX	Bottom side	128	824.2	29.83	30.0	1.040	0.079	0.082

GSM1900 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
66.	GSM	Back	512	1850.2	30.62	31.0	1.091	0.056	0.061
67.	GPRS_4TX	Back Side	810	1909.8	26.80	27.0	1.047	0.069	0.072
68.	GPRS_4TX	Right side	810	1909.8	26.80	27.0	1.047	0.006	0.006
69.	GPRS_4TX	Bottom side	810	1909.8	26.80	27.0	1.047	0.172	0.180

WCDMA Band 2 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
70.	RMC 12.2k	Back Side	9538	1907.6	23.81	24.0	1.045	0.317	0.331
71.	RMC 12.2k	Right side	9538	1907.6	23.81	24.0	1.045	0.048	0.050
72.	RMC 12.2k	Bottom side	9538	1907.6	23.81	24.0	1.045	0.487	0.509

WCDMA Band 4 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
73.	RMC 12.2k	Back Side	1312	1712.4	23.41	23.5	1.021	0.153	0.156
74.	RMC 12.2k	Right side	1312	1712.4	23.41	23.5	1.021	0.020	0.020
75.	RMC 12.2k	Bottom side	1312	1712.4	23.41	23.5	1.021	0.230	0.235

WCDMA Band 5 – Body SAR Test (Gap: 0mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
76.	RMC 12.2k	Back Side	4132	826.4	23.58	24.0	1.102	0.105	0.116
77.	RMC 12.2k	Right side	4132	826.4	23.58	24.0	1.102	0.035	0.039
78.	RMC 12.2k	Bottom side	4132	826.4	23.58	24.0	1.102	0.073	0.080

LTE Band 2–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position	Frequency	Output Power	Rated Limit	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB	Body	MHz	(dBm)	(dBm)			
79.	QPSK 20MHz 1RB	Back Side	1860	23.79	24.0	1.050	0.191	0.200
80.	QPSK 20MHz 1RB	Right side	1860	23.79	24.0	1.050	0.021	0.022
81.	QPSK 20MHz 1RB	Bottom side	1860	23.79	24.0	1.050	0.387	0.406
82.	QPSK 20MHz 50%RB	Back Side	1860	22.52	23.0	1.117	0.110	0.123
83.	QPSK 20MHz 50%RB	Right side	1860	22.52	23.0	1.117	0.019	0.021
84.	QPSK 20MHz 50%RB	Bottom side	1860	22.52	23.0	1.117	0.334	0.373

LTE Band 4–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position	Frequency	Output Power	Rated Limit	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB	Body	MHz	(dBm)	(dBm)			
85.	QPSK 20MHz 1RB	Back Side	1720	24.02	24.5	1.117	0.092	0.103
86.	QPSK 20MHz 1RB	Right side	1720	24.02	24.5	1.117	0.009	0.010
87.	QPSK 20MHz 1RB	Bottom side	1720	24.02	24.5	1.117	0.195	0.218
88.	QPSK 20MHz 50%RB	Back Side	1732.5	22.77	23.0	1.054	0.080	0.084
89.	QPSK 20MHz 50%RB	Right side	1732.5	22.77	23.0	1.054	0.008	0.008
90.	QPSK 20MHz 50%RB	Bottom side	1732.5	22.77	23.0	1.054	0.186	0.196

LTE Band 5–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position	Frequency	Output Power	Rated Limit	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB	Body	MHz	(dBm)	(dBm)			
91.	QPSK 10MHz 1RB	Back Side	836.5	23.31	23.5	1.045	0.095	0.099
92.	QPSK 10MHz 1RB	Right side	836.5	23.31	23.5	1.045	0.050	0.052
93.	QPSK 10MHz 1RB	Bottom side	836.5	23.31	23.5	1.045	0.065	0.068
94.	QPSK 10MHz 50%RB	Back Side	836.5	22.04	22.5	1.112	0.059	0.066
95.	QPSK 10MHz 50%RB	Right side	836.5	22.04	22.5	1.112	0.038	0.042
96.	QPSK 10MHz 50%RB	Bottom side	836.5	22.04	22.5	1.112	0.050	0.056

LTE Band 7–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position	Frequency	Output Power	Rated Limit	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB	Body	MHz	(dBm)	(dBm)			
97.	QPSK 20MHz 1RB	Back Side	2535	23.98	24.0	1.005	0.753	0.756
98.	QPSK 20MHz 1RB	Right side	2535	23.98	24.0	1.005	0.170	0.171
99.	QPSK 20MHz 1RB	Bottom side	2535	23.98	24.0	1.005	0.704	0.707
100.	QPSK 20MHz 50%RB	Back Side	2560	22.86	23.0	1.033	0.645	0.666

101.	QPSK 20MHz 50%RB	Right side	2560	22.86	23.0	1.033	0.108	0.112
102.	QPSK 20MHz 50%RB	Bottom side	2560	22.86	23.0	1.033	0.585	0.604

LTE Band 12–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position	Frequency	Output Power	Rated Limit	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB	Body	MHz	(dBm)	(dBm)			
103.	QPSK 10MHz 1RB	Back Side	704	23.48	23.5	1.005	0.086	0.086
104.	QPSK 10MHz 1RB	Right side	704	23.48	23.5	1.005	0.023	0.023
105.	QPSK 10MHz 1RB	Bottom side	704	23.48	23.5	1.005	0.047	0.047
106.	QPSK 10MHz 50%RB	Back Side	704	22.27	22.5	1.054	0.071	0.075
107.	QPSK 10MHz 50%RB	Right side	704	22.27	22.5	1.054	0.021	0.022
108.	QPSK 10MHz 50%RB	Bottom side	704	22.27	22.5	1.054	0.042	0.044

LTE Band 17–Body SAR Test (Gap: 0mm)								
Plot No.	Mode	Test Position	Frequency	Output Power	Rated Limit	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth, RB	Body	MHz	(dBm)	(dBm)			
109.	QPSK 10MHz 1RB	Back Side	709	23.45	23.5	1.012	0.067	0.068
110.	QPSK 10MHz 1RB	Right side	709	23.45	23.5	1.012	0.025	0.025
111.	QPSK 10MHz 1RB	Bottom side	709	23.45	23.5	1.012	0.045	0.046
112.	QPSK 10MHz 50%RB	Back Side	709	22.17	22.5	1.079	0.063	0.068
113.	QPSK 10MHz 50%RB	Right side	709	22.17	22.5	1.079	0.023	0.025
114.	QPSK 10MHz 50%RB	Bottom side	709	22.17	22.5	1.079	0.039	0.042

WLAN 2.4GHz –Body SAR Test									
Plot No.	Mode	Test Position	Frequency		Output Power	Rated Limit	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
		Body	CH.	MHz	(dBm)	(dBm)			
115.	802.11b	Back Side	01	2412	15.53	16.0	1.114	0.242	0.270
116.	802.11b	Right Side	01	2412	15.53	16.0	1.114	0.055	0.061

9.3 Simultaneous Multi-band Transmission SAR Analysis

List of Mode for Simultaneous Multi-band Transmission

No.	Configurations	Body-worn SAR
1	GSM(Voice/Data) + WLAN(2.4G)(Data)	Yes
2	WCDMA (Data)+ (2.4G)(Data)	Yes
3	LTE(Data) + (2.4G)(Data)	Yes
4	GSM(Voice/Data) + Bluetooth(Data)	Yes
5	WCDMA (Data) + Bluetooth(Data)	Yes
6	LTE(Data) + Bluetooth(Data)	Yes

Remark:

1. GSM ,WCDMA and LTE share the same antenna, and cannot transmit simultaneously.
2. WLAN and Bluetooth share the same antenna, and cannot transmit simultaneously.
3. According to the KDB 447498 D01 v06, when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f(GHz)/x] W/kg for test separation distances ≤ 50 mm;

where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR.

For simultaneous transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01 v06 as below:

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	X	SAR(1g) 5mm	SAR(1g) 10mm
8.0	6.31	5/10	2.402	7.5	0.261	0.131

MDT760:

	WWAN		WLAN(2.4G)	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	0.380	0.253	0.633
Right side	GSM	/	0.133	0.133
Left side	GSM	0.027	/	0.027
Top side	GSM	0.123	/	0.123
Bottom side	GSM	/	/	/
Back	WCDMA	1.024	0.253	1.277
Right side	WCDMA		0.133	0.133
Left side	WCDMA	0.039	/	0.039
Top side	WCDMA	0.251	/	0.251
Bottom side	WCDMA	/	/	/
Back	LTE	0.770	0.253	1.023
Right side	LTE	/	0.133	0.133
Left side	LTE	0.064	/	0.064
Top side	LTE	0.377	/	0.377
Bottom side	LTE	/	/	/

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	0.380	0.261	0.641
Right side	GSM	/	0.261	0.261
Left side	GSM	0.027	/	0.027
Top side	GSM	0.123	/	0.123
Bottom side	GSM	/	/	/
Back	WCDMA	1.024	0.261	1.285
Right side	WCDMA	/	0.261	0.261
Left side	WCDMA	0.039	/	0.039
Top side	WCDMA	0.251	/	0.251
Bottom side	WCDMA	/	/	/
Back	LTE	0.770	0.261	1.031
Right side	LTE	/	0.261	0.261
Left side	LTE	0.064	/	0.064
Top side	LTE	0.377	/	0.377
Bottom side	LTE	/	/	/

MDT860:

	WWAN		WLAN(2.4G)	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	0.088	0.270	0.358
Right side	GSM	0.054	0.061	0.115
Left side	GSM	/	/	/
Top side	GSM	/	/	/
Bottom side	GSM	0.180	/	0.180
Back	WCDMA	0.331	0.270	0.601
Right side	WCDMA	0.050	0.061	0.111
Left side	WCDMA	/	/	/
Top side	WCDMA	/	/	/
Bottom side	WCDMA	0.509	/	0.509
Back	LTE	0.756	0.270	1.026
Right side	LTE	0.171	0.061	0.232
Left side	LTE	/	/	/
Top side	LTE	/	/	/
Bottom side	LTE	0.707	/	0.707

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM	0.088	0.261	0.349
Right side	GSM	0.054	0.261	0.315
Left side	GSM	/	/	/
Top side	GSM	/	/	/
Bottom side	GSM	0.180	/	0.180
Back	WCDMA	0.331	0.261	0.592
Right side	WCDMA	0.050	0.261	0.311
Left side	WCDMA	/	/	/
Top side	WCDMA	/	/	/
Bottom side	WCDMA	0.509	/	0.509
Back	LTE	0.756	0.261	1.017
Right side	LTE	0.171	0.261	0.432
Left side	LTE	/	/	/
Top side	LTE	/	/	/
Bottom side	LTE	0.707	/	0.707

10. Measurement Uncertainty

10.1 Uncertainty for EUT SAR Test

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	**Sec.**	**Tol (+- %)**	**Prob. Dist.**	**Div.**	**Ci (1g)**	**Ci (10g)**	**1g Ui (+-%)**	**10g Ui (+-%)**	**Vi**
Measurement System□									
Probe calibration	E.2.1	7.0	N	□□	1	1	7.00	7.00	□□
Axial Isotropy	E.2.2	2.5	R	□□□	(1_Cp)^1/2	(1_Cp)^1/2	1.02	1.02	□□
Hemispherical Isotropy	E.2.2	4.0	R	□□□	(Cp)^1/2	(Cp)^1/2	1.63	1.63	□□
Boundary effect	E.2.3	1.0	R	□□□	1	1	0.58	0.58	□□
Linearity	E.2.4	5.0	R	□□□	1	1	2.89	2.89	□□
System detection limits	E.2.5	1.0	R	□□□	1	1	0.58	0.58	□□
Readout Electronics	E.2.6	0.02	N	□□	1	1	0.02	0.02	□□
Reponse Time	E.2.7	3.0	R	□□□	1	1	1.73	1.73	□□
Integration Time	E.2.8	2.0	R	□□□	1	1	1.15	1.15	□□
RF ambient Conditions – Noise	E.6.1	3.0	R	□□□	1	1	1.73	1.73	□□
RF ambient Conditions - Reflections	E.6.1	3.0	R	□□□	1	1	1.73	1.73	□□
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	□□□	1	1	1.15	1.15	□□
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	□□□	1	1	0.03	0.03	□□
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5	5.0	R	□□□	1	1	2.89	2.89	□□
Test Sample Related□									
Test sample positioning	E.4.2	0.03	N	□□	1	1	0.03	0.03	□□□□
Device Holder Uncertainty	E.4.1	5.00	N	□□	1	1	5.00	5.00	□
Output power Variation - SAR drift measurement	E.2.9	12.02	R	□□□	1	1	6.94	6.94	□□
SAR scaling	E6.5	0.0	R	□□□	1	1	0.0	0.0	□□
Phantom and Tissue Parameters□									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	□□□	1	1	0.03	0.03	□□

Uncertainty in SAR correction for deviations in permittivity and conductivity	E3.2	1.9	R	□□□	1	0.84	1.10	0.90	□□
Liquid conductivity - deviation from target value	E.3.2	5.00	R	□□□	0.64	0.43	1.85	1.24	□□
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	□□	0.64	0.43	3.20	2.15	□□
Liquid permittivity - deviation from target value	E.3.2	0.37	R	□□□	0.6	0.49	0.13	0.10	□□
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	□□	0.6	0.49	6.00	4.90	□□
Combined Standard Uncertainty			RSS	□			12.98	12.53	□
Expanded Uncertainty (95% Confidence interval)			K=2	□			25.32	24.43	□

10.2 Uncertainty for System Performance Check

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	**Sec.**	**Tol (+- %)**	**Prob. Dist.**	**Div.**	**Ci (1g)**	**Ci (10g)**	**1g Ui (+-%)**	**10g Ui (+-%)**	**Vi**
Measurement System□									
Probe calibration	E.2.1	7.0	N	□□	1	1	7.00	7.00	□□
Axial Isotropy	E.2.2	2.5	R	□□□	(1_Cp)^1/2	(1_Cp)^1/2	1.02	1.02	□□
Hemispherical Isotropy	E.2.2	4.0	R	□□□	(Cp)^1/2	(Cp)^1/2	1.63	1.63	□□
Boundary effect	E.2.3	1.0	R	□□□	1	1	0.58	0.58	□□
Linearity	E.2.4	5.0	R	□□□	1	1	2.89	2.89	□□
System detection limits	E.2.5	1.0	R	□□□	1	1	0.58	0.58	□□
Modulation response	E.2.5	0	R	□□□	0	0	0.0	0.0	□□
Readout Electronics	E.2.6	0.02	N	□□	1	1	0.02	0.02	□□
Reponse Time	E.2.7	3.0	R	□□□	1	1	1.73	1.73	□□
Integration Time	E.2.8	2.0	R	□□□	1	1	1.15	1.15	□□
RF ambient Conditions – Noise	E.6.1	3.0	R	□□□	1	1	1.73	1.73	□□
RF ambient Conditions - Reflections	E.6.1	3.0	R	□□□	1	1	1.73	1.73	□□
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	□□□	1	1	1.15	1.15	□□

Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	□□□	1	1	0.03	0.03	□□
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	5.0	R	□□□	1	1	2.89	2.89	□□
Dipole□									
Dipole axis to liquid Distance	8,E.4.2	1.00	N	□□□	1	1	0.58	0.58	□□□□
Input power and SAR drift measurement	8,6.6.2	12.02	R	□□□	1	1	6.94	6.94	□□
Deviation of experimental dipole from numerical dipole	E.6.4	5.5	R	□□□	1	1	3.20	3.20	□□
Phantom and Tissue Parameters□									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	□□□	1	1	0.03	0.03	□□
Uncertainty in SAR correction for deviations in permittivity and conductivity	E3.2	2.0	R	□□□	1	0.84	1.10	1.10	□□
Liquid conductivity - deviation from target value	E.3.2	5.00	R	□□□	0.64	0.43	1.85	1.24	□
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	□□	0.64	0.43	3.20	2.15	□
Liquid permittivity - deviation from target value	E.3.2	0.37	R	□□□	0.6	0.49	0.13	0.10	□
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	□□	0.6	0.49	6.00	4.90	□□
Combined Standard Uncertainty			RSS	□			12.00	11.50	□
Expanded Uncertainty (95% Confidence interval)			K=2	□			23.39	22.43	□

Annex A. Plots of System Performance Check

MEASUREMENT 1

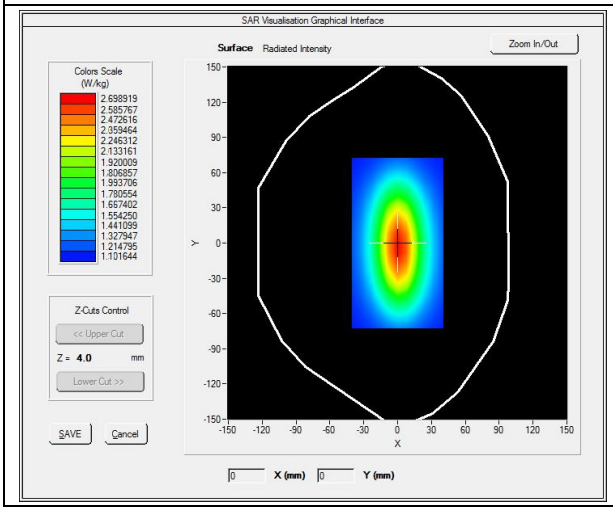
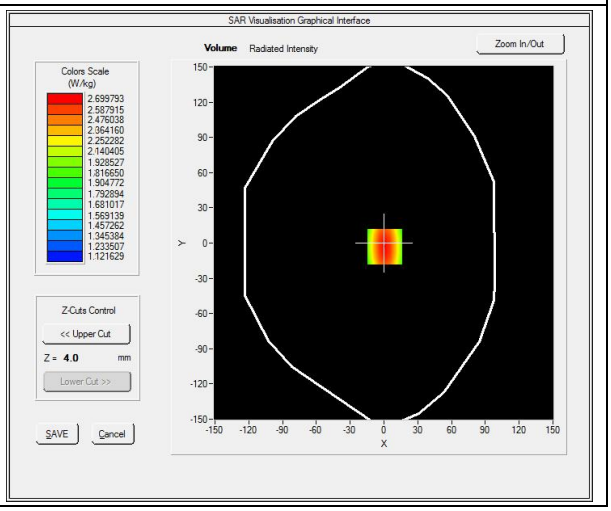
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 7 minutes 21 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.99; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	750.000000
Relative Permittivity (real part)	42.780138
Conductivity (S/m)	0.864252
Power Variation (%)	0.030000
Ambient Temperature	21.5
Liquid Temperature	21.5

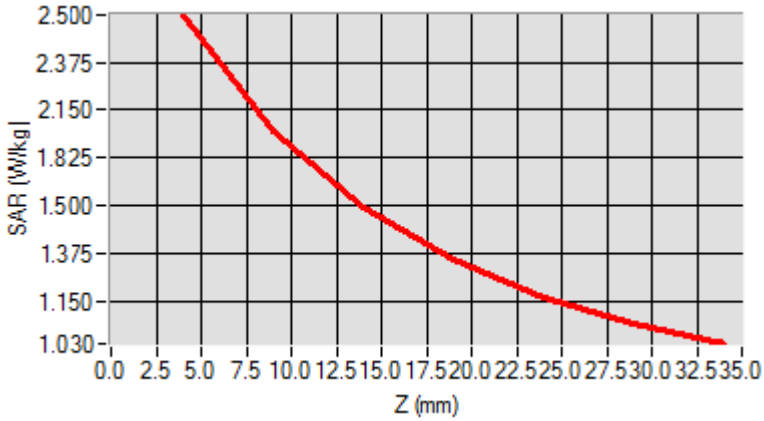
SURFACE SAR	VOLUME SAR
	

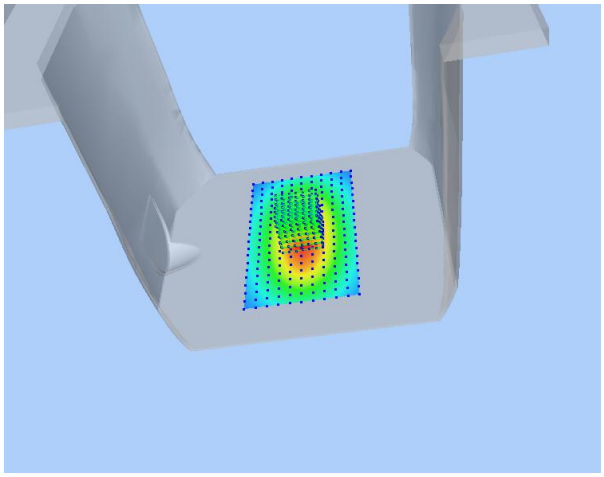
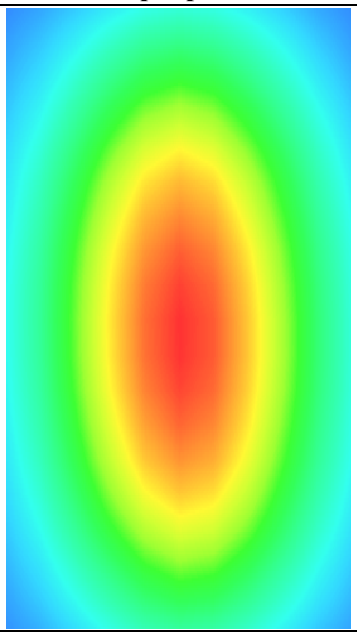
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**1.342744**
SAR 1g (W/Kg)	**2.064534**

Z Axis Scan

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**
SAR (W/Kg)	**0.0000**	**2.3634**	**1.8023**	**1.4523**	**1.2514**	**1.1005**	**1.0245**



3D screen shot	**Hot spot position**
	

MEASUREMENT 2

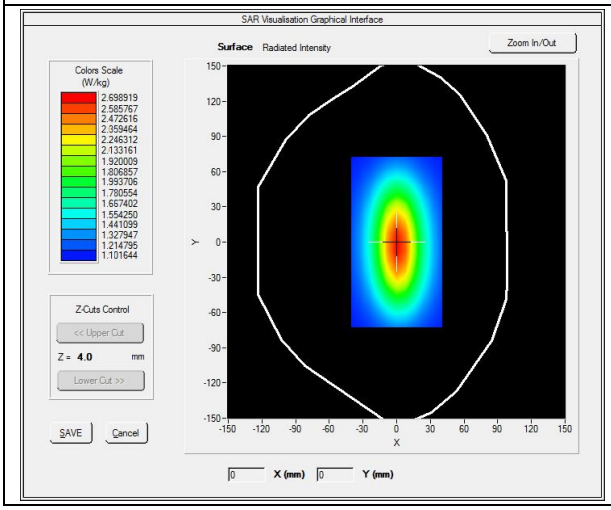
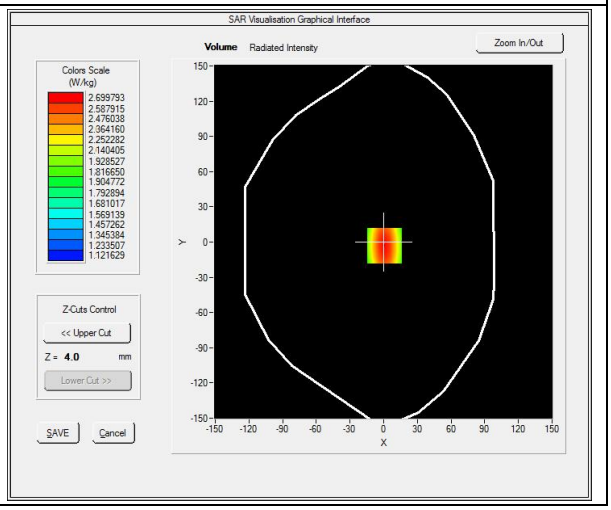
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	835.000000
Relative Permittivity (real part)	42.430271
Conductivity (S/m)	0.8768312
Power Variation (%)	1.810000
Ambient Temperature	21.5
Liquid Temperature	21.5

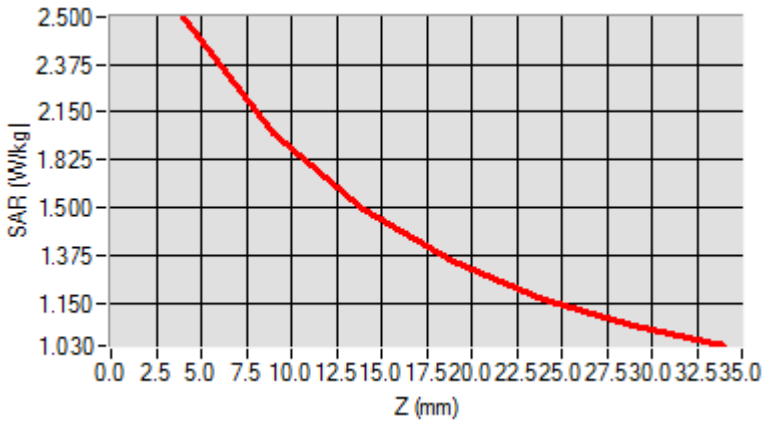
SURFACE SAR	VOLUME SAR
	

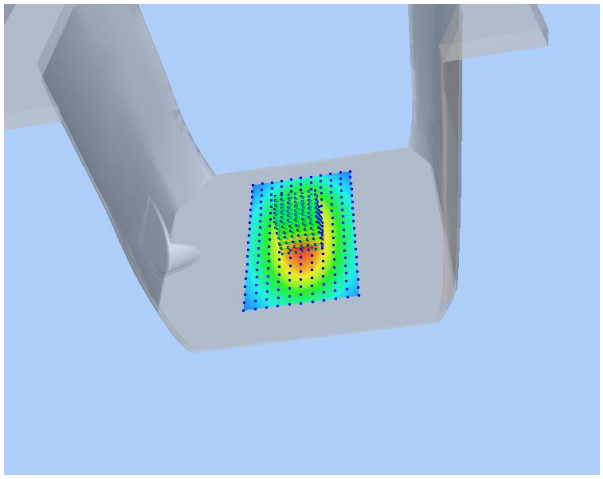
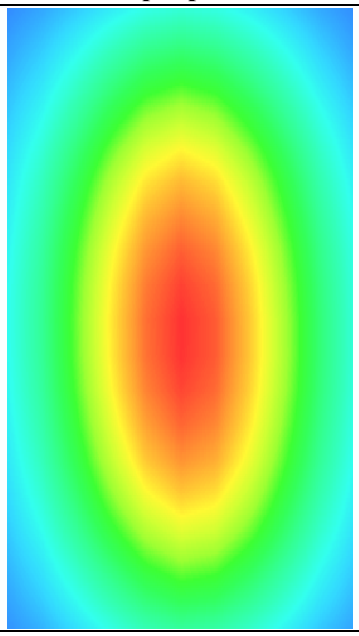
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**1.501263**
SAR 1g (W/Kg)	**2.341250**

Z Axis Scan

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**
SAR (W/Kg)	**0.0000**	**2.4900**	**1.8942**	**1.4811**	**1.3541**	**1.1123**	**1.0539**



3D screen shot	**Hot spot position**
	

MEASUREMENT 3

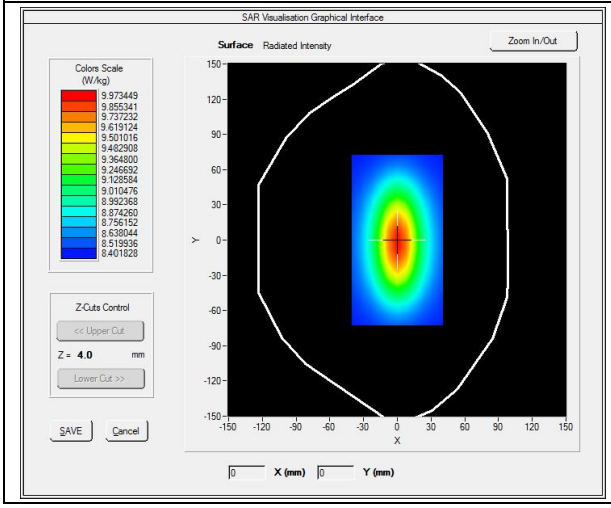
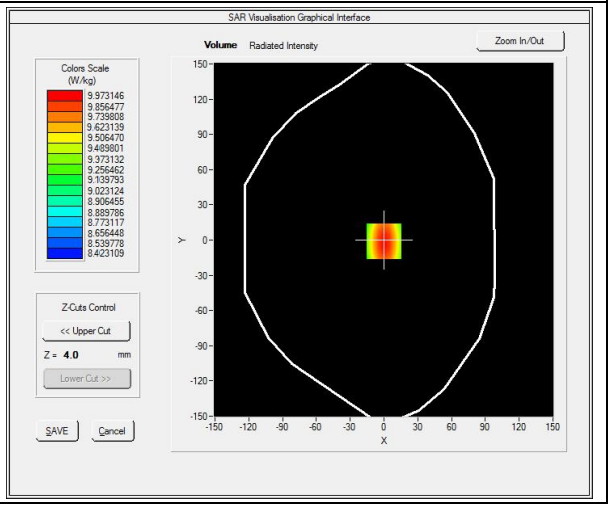
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.84; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	1800.000000
Relative Permittivity (real part)	39.424170
Conductivity (S/m)	1.391250
Power Variation (%)	1.400000
Ambient Temperature	21.8
Liquid Temperature	21.8

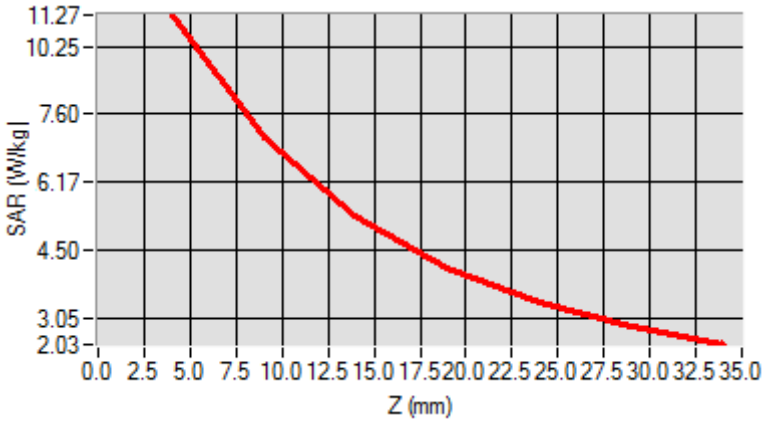
SURFACE SAR	VOLUME SAR
	

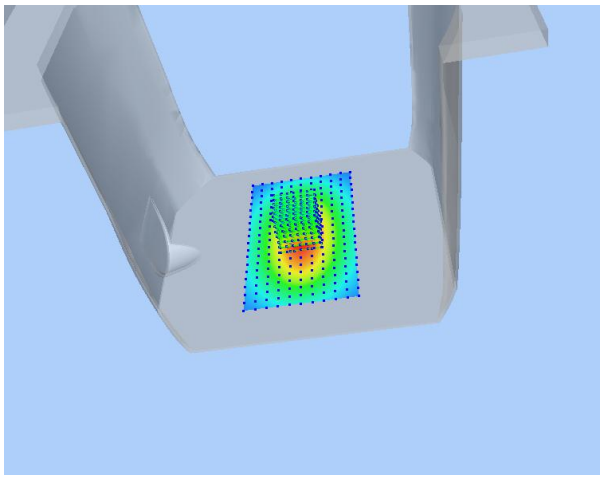
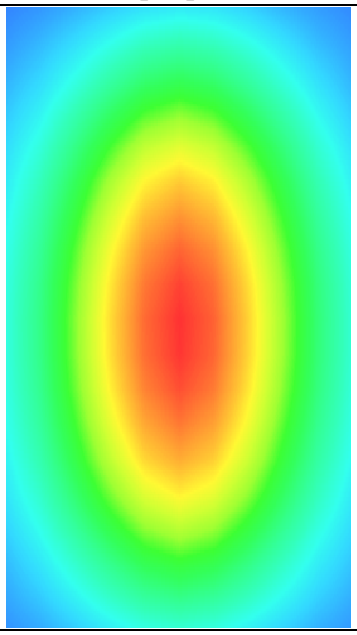
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**5.041252**
SAR 1g (W/Kg)	**9.571250**

Z Axis Scan

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**
SAR (W/Kg)	**0.0000**	**10.3455**	**7.1125**	**5.1026**	**3.425**	**3.0242**	**2.1125**



3D screen shot	**Hot spot position**
	

MEASUREMENT 4

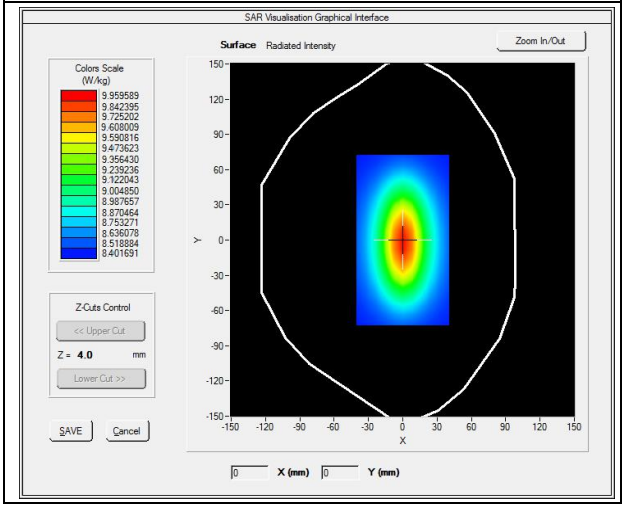
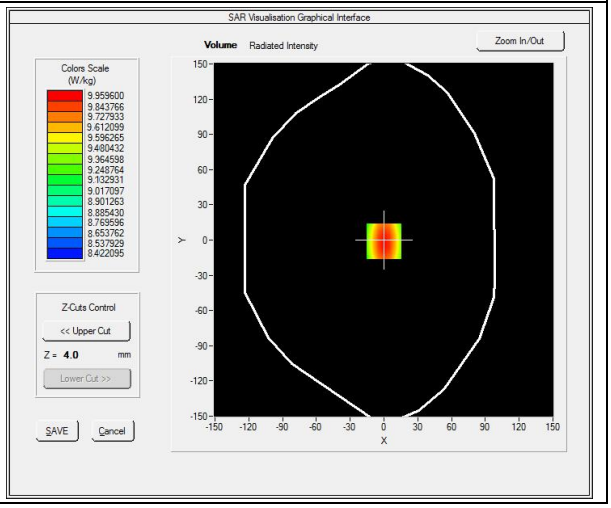
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	1900.00000
Relative Permittivity (real part)	39.107500
Conductivity (S/m)	1.412250
Power Variation (%)	1.140000
Ambient Temperature	21.8
Liquid Temperature	21.8

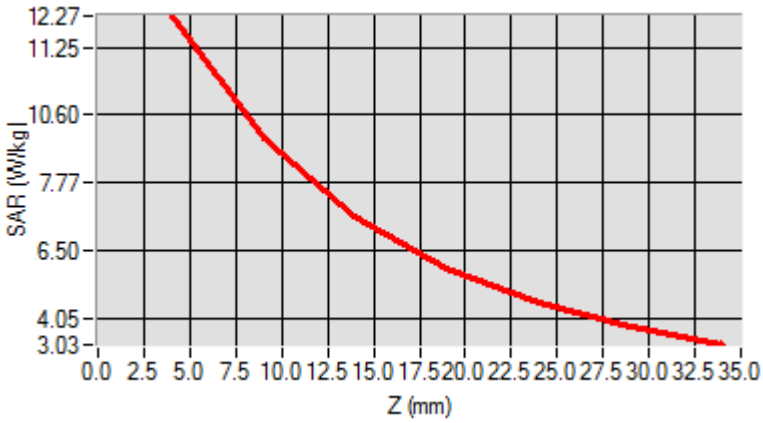
SURFACE SAR	VOLUME SAR
	

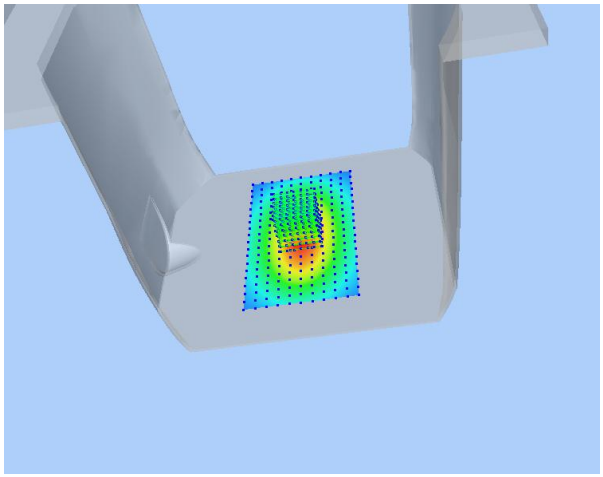
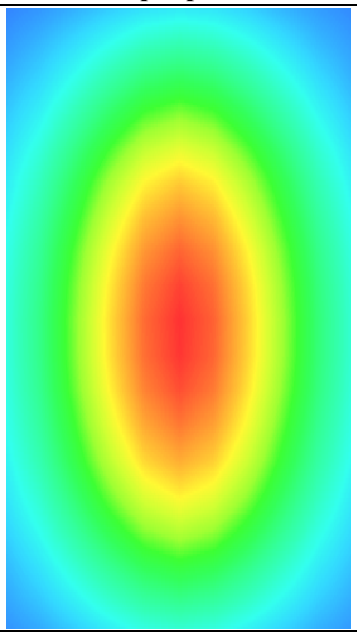
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**5.271250**
SAR 1g (W/Kg)	**10.120350**

Z Axis Scan

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**
SAR (W/Kg)	**0.0000**	**12.1250**	**10.3114**	**8.4212**	**6.4041**	**5.3425**	**3.3642**



3D screen shot	**Hot spot position**
	

MEASUREMENT 5

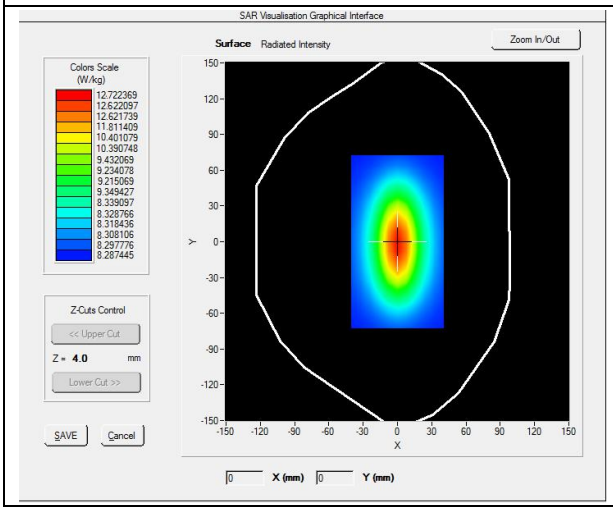
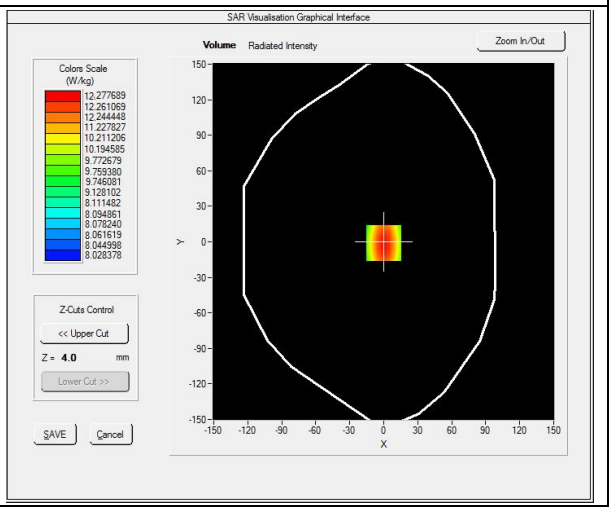
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.64; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	39.761212
Conductivity (S/m)	1.811202
Power Variation (%)	1.140000
Ambient Temperature	21.4
Liquid Temperature	21.4

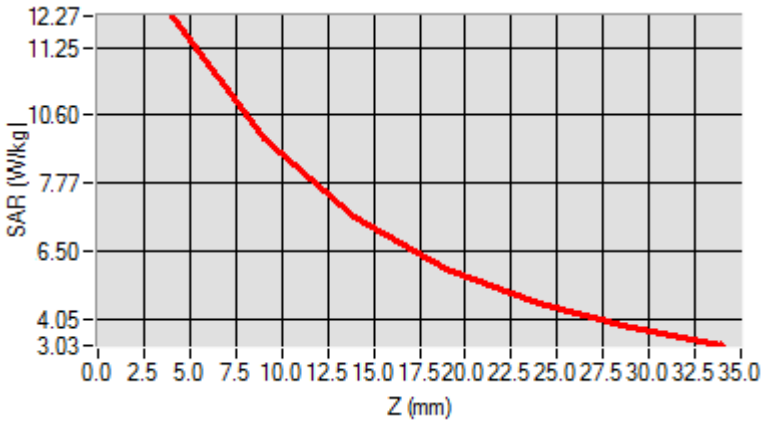
SURFACE SAR	VOLUME SAR
	

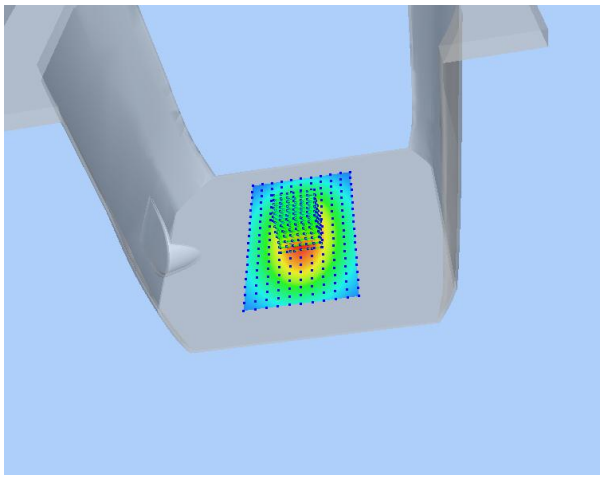
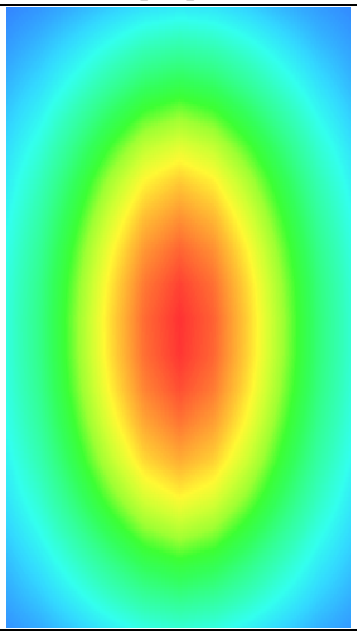
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**6.162122**
SAR 1g (W/Kg)	**13.831201**

Z Axis Scan

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**
SAR (W/Kg)	**0.0000**	**12.2365**	**10.3321**	**8.4512**	**6.4365**	**5.6123**	**3.5621**



3D screen shot	**Hot spot position**
	

MEASUREMENT 6

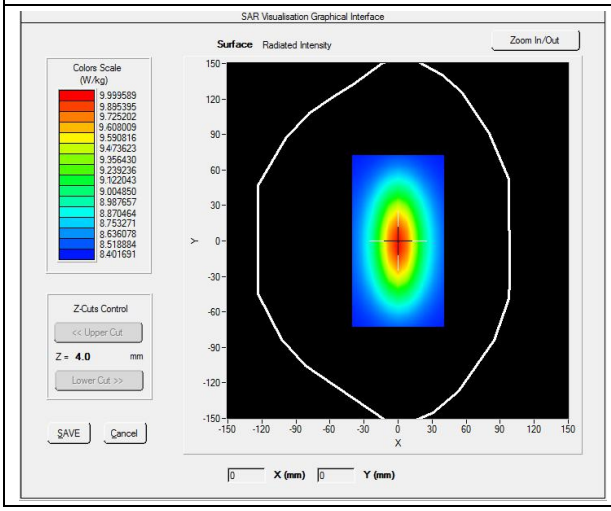
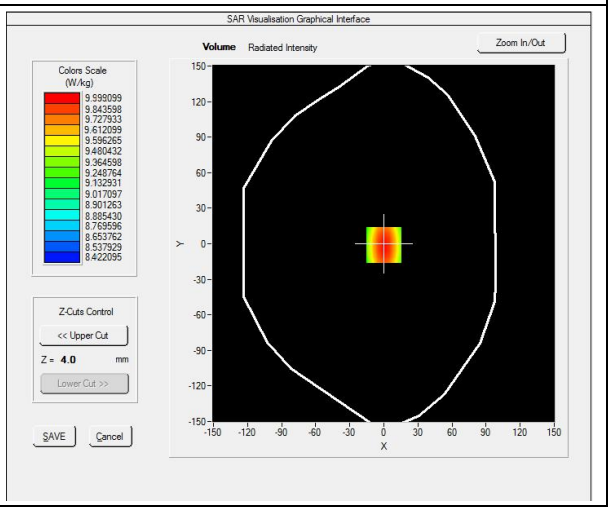
Type: Validation measurement (Fast, 75.00 %)
Measurement duration: 12 minutes 21 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.37; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	2600.000000
Relative Permittivity (real part)	38.536133
Conductivity (S/m)	1.991242
Power Variation (%)	-0.360000
Ambient Temperature	21.4
Liquid Temperature	21.4

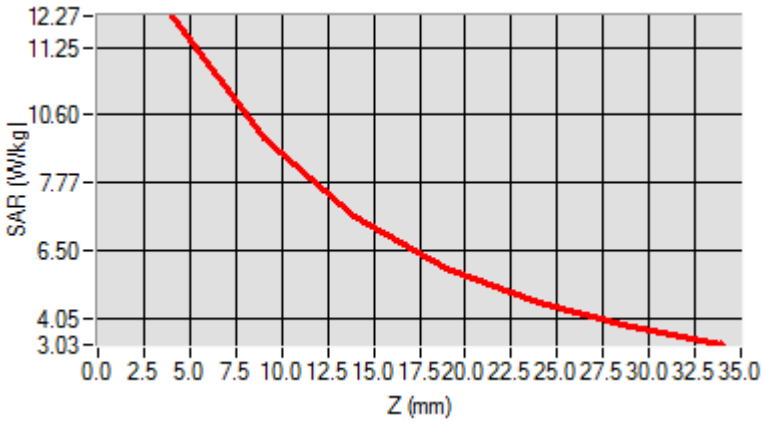
SURFACE SAR	VOLUME SAR
	

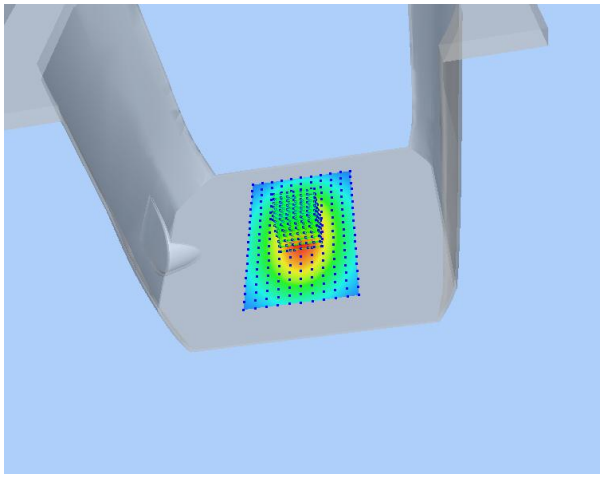
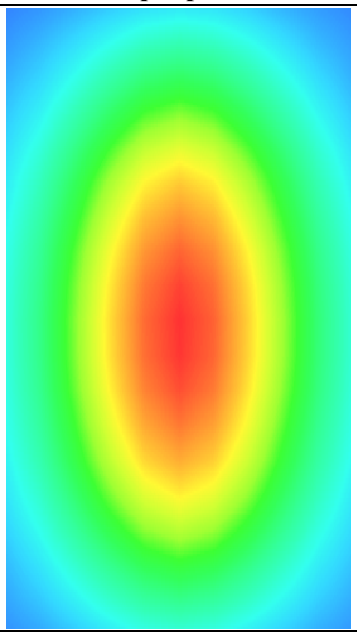
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**6.163156**
SAR 1g (W/Kg)	**14.213311**

Z Axis Scan

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**
SAR (W/Kg)	**0.0000**	**12.14321**	**10.3214**	**8.4598**	**6.4653**	**5.6765**	**3.5986**



3D screen shot	**Hot spot position**
	

Annex B. Plots of SAR Measurement

TYPE	BAND	PARAMETERS
Tablet	GPRS850_4TX	Measurement 2: Flat Plane with Back device position on Low Channel in GPRS mode
Tablet	GPRS1900_4TX	Measurement 6: Flat Plane with Back device position on High Channel in GPRS mode
Tablet	WCDMA1900_RMC	Measurement 9: Flat Plane with Back side device position on High Channel in WCDMA mode
Tablet	WCDMA1700_RMC	Measurement 15: Flat Plane with Back side device position on Low Channel in WCDMA mode
Tablet	WCDMA850_RMC	Measurement 21: Flat Plane with Back side device position on Low Channel in WCDMA mode
Tablet	LTE Band 2_QPSK	Measurement 24: Flat Plane with Back device position on Low Channel in LTE mode
Tablet	LTE Band 4_ QPSK	Measurement 30: Flat Plane with Back device position on Low Channel in LTE mode
Tablet	LTE Band 5_ QPSK	Measurement 36: Flat Plane with Back device position on Middle Channel in LTE mode
Tablet	LTE Band 7_ QPSK	Measurement 42: Flat Plane with Back device position on Middle Channel in LTE mode
Tablet	LTE Band 12_ QPSK	Measurement 48: Flat Plane with Back device position on Low Channel in LTE mode
Tablet	LTE Band 17_ QPSK	Measurement 54: Flat Plane with Back device position on Low Channel in LTE mode
Tablet	WIFI	Measurement 60: Flat Plane with Back device position on Low Channel in 802.11b mode
Tablet	GPRS850_4TX	Measurement 63: Flat Plane with Back device position on Low Channel in GPRS mode
Tablet	GPRS1900_4TX	Measurement 69: Flat Plane with Bottom device position on High Channel in GPRS mode
Tablet	WCDMA1900_RMC	Measurement 72: Flat Plane with Bottom side device position on High Channel in WCDMA mode
Tablet	WCDMA1700_RMC	Measurement 75: Flat Plane with Bottom side device position on Low Channel in WCDMA mode
Tablet	WCDMA850_RMC	Measurement 76: Flat Plane with Back side device position on Low Channel in WCDMA mode
Tablet	LTE Band 2_QPSK	Measurement 81: Flat Plane with Bottom device position on Low Channel in LTE mode

Tablet	**LTE Band 4_ QPSK**	Measurement 87: Flat Plane with Bottom device position on Low Channel in LTE mode
Tablet	**LTE Band 5_ QPSK**	Measurement 91: Flat Plane with Back device position on Middle Channel in LTE mode
Tablet	**LTE Band 7_ QPSK**	Measurement 97: Flat Plane with Back device position on Middle Channel in LTE mode
Tablet	**LTE Band 12_ QPSK**	Measurement 103: Flat Plane with Back device position on Low Channel in LTE mode
Tablet	**LTE Band 17_ QPSK**	Measurement 109: Flat Plane with Back device position on Low Channel in LTE mode
Tablet	**WIFI**	Measurement 115: Flat Plane with Back device position on Low Channel in 802.11b mode
Remark: SAR plot is showed the highest measured SAR in each exposure configuration, wireless mode and frequency band combination.		

MEASUREMENT 2

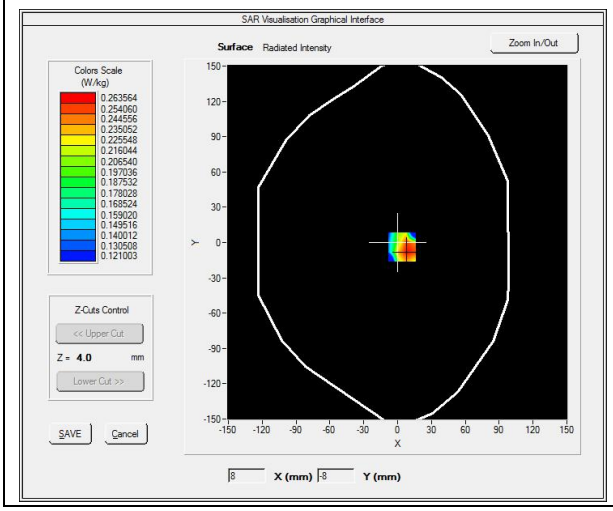
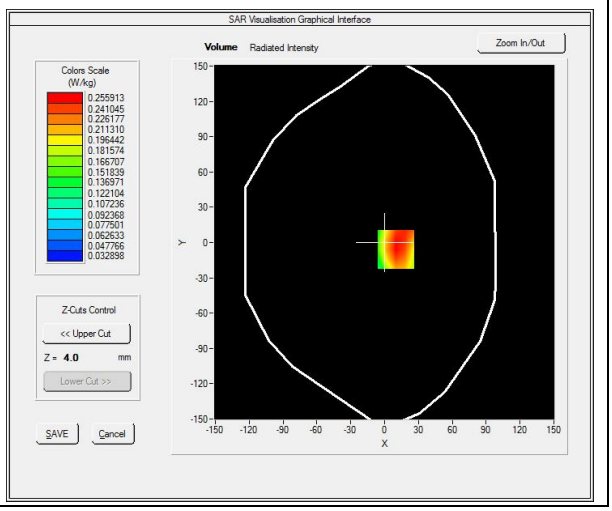
Type: Phone measurement (Complete)
Date of measurement: 2020-12-29
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	GPRS850_4TX
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	824.200000
Relative Permittivity (real part)	42.460277
Conductivity (S/m)	0.878883
Power Variation (%)	-1.090000
Ambient Temperature	21.5
Liquid Temperature	21.5

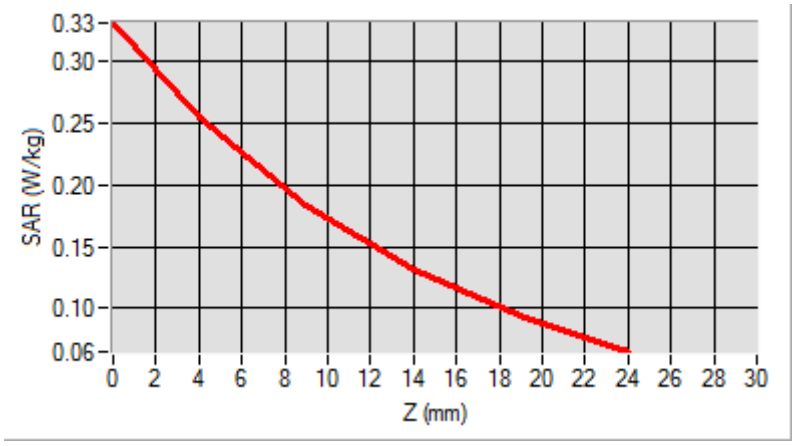
SURFACE SAR	VOLUME SAR
	

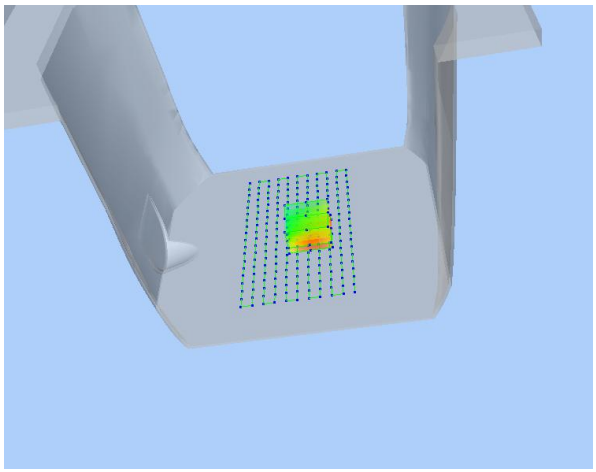
Maximum location: X=10.00, Y=-6.00

SAR Peak: 0.34 W/kg

SAR 10g (W/Kg)	**0.178758**
SAR 1g (W/Kg)	**0.251990**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.3317**	**0.2559**	**0.1836**	**0.1314**	**0.0938**



3D screen shot	**Hot spot position**
	

MEASUREMENT 6

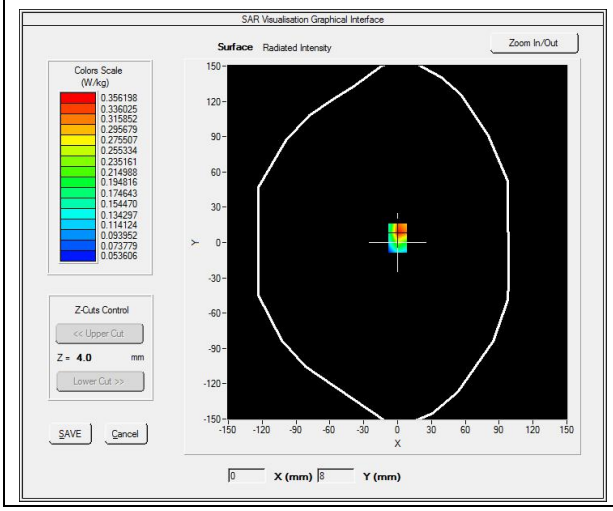
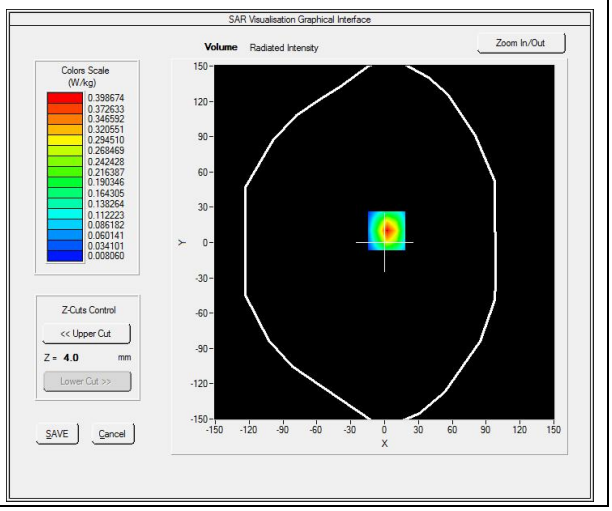
Type: Phone measurement (Complete)
Date of measurement: 2020-12-25
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	GPRS1900_4TX
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1909.800000
Relative Permittivity (real part)	39.107500
Conductivity (S/m)	1.412250
Power Variation (%)	1.460000
Ambient Temperature	21.8
Liquid Temperature	21.8

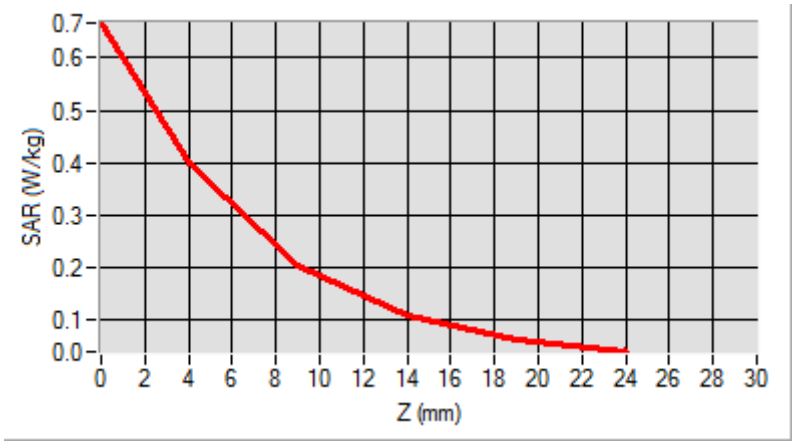
SURFACE SAR	VOLUME SAR
	

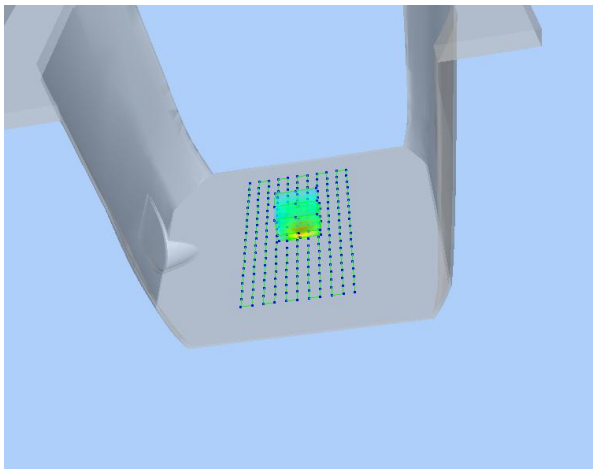
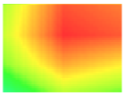
Maximum location: X=2.00, Y=10.00

SAR Peak: 0.67 W/kg

SAR 10g (W/Kg)	**0.169376**
SAR 1g (W/Kg)	**0.362655**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.6671**	**0.3987**	**0.2025**	**0.1054**	**0.0613**



3D screen shot	**Hot spot position**
	

MEASUREMENT 9

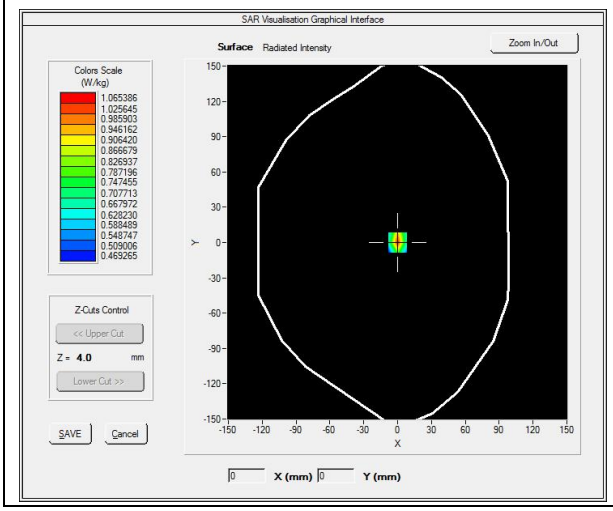
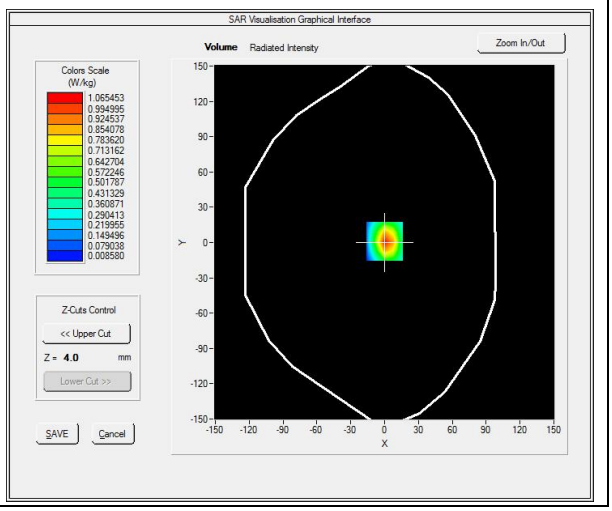
Type: Phone measurement (Complete)
Date of measurement: 2020-12-25
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1907.600000
Relative Permittivity (real part)	39.107500
Conductivity (S/m)	1.412250
Power Variation (%)	-1.490000
Ambient Temperature	21.8
Liquid Temperature	21.8

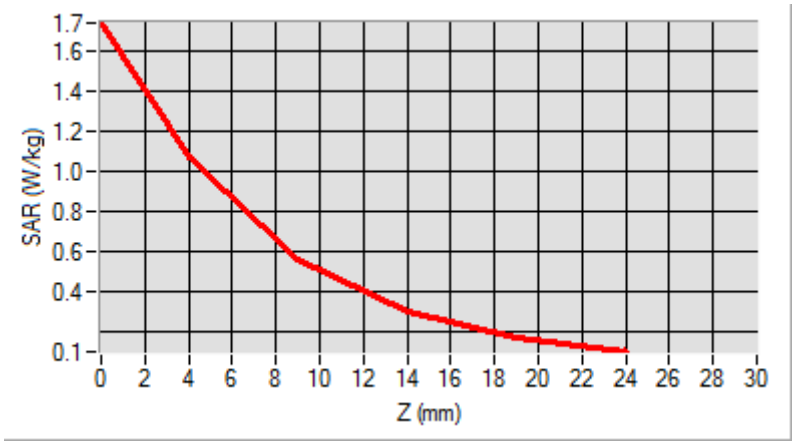
SURFACE SAR	VOLUME SAR
	

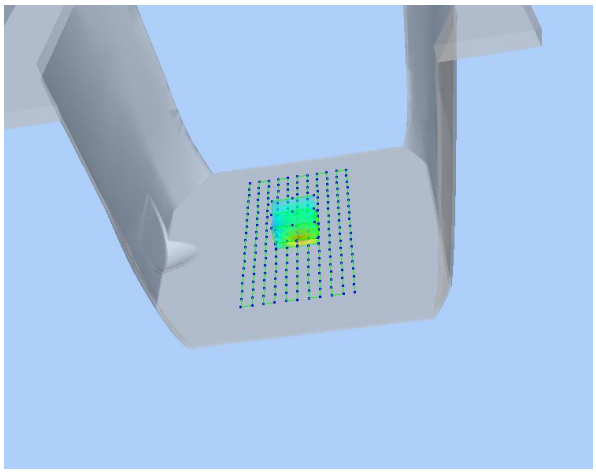
Maximum location: X=0.00, Y=1.00

SAR Peak: 1.76 W/kg

SAR 10g (W/Kg)	**0.475445**
SAR 1g (W/Kg)	**0.980146**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.7427**	**1.0655**	**0.5569**	**0.2940**	**0.1667**



3D screen shot	**Hot spot position**
	

MEASUREMENT 15

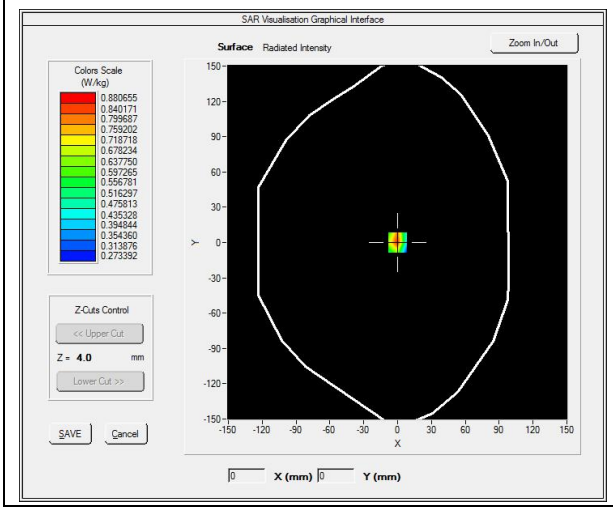
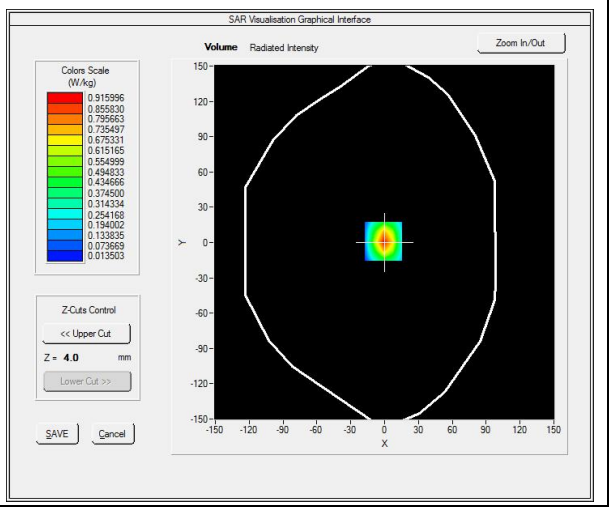
Type: Phone measurement (Complete)
Date of measurement: 2020-12-25
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 5.84; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	WCDMA1700_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1712.400000
Relative Permittivity (real part)	39.883514
Conductivity (S/m)	1.338387
Power Variation (%)	-0.520000
Ambient Temperature	21.8
Liquid Temperature	21.8

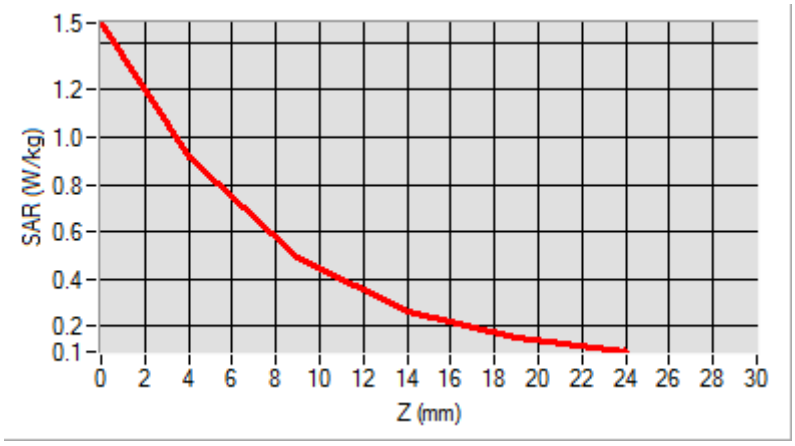
SURFACE SAR	VOLUME SAR
	

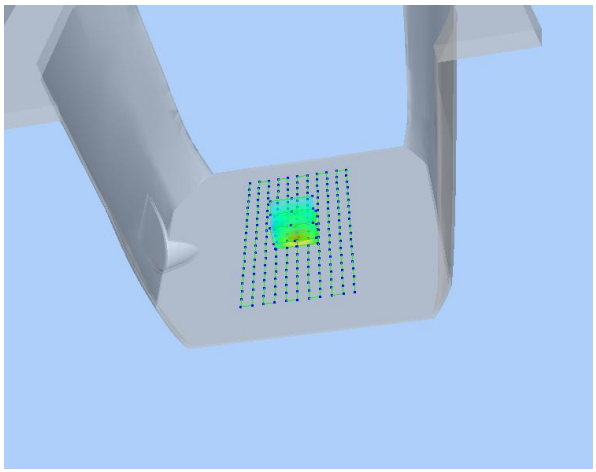
Maximum location: X=-1.00, Y=1.00

SAR Peak: 1.49 W/kg

SAR 10g (W/Kg)	**0.402158**
SAR 1g (W/Kg)	**0.833302**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**1.4845**	**0.9160**	**0.4864**	**0.2623**	**0.1526**



3D screen shot	**Hot spot position**
	

MEASUREMENT 21

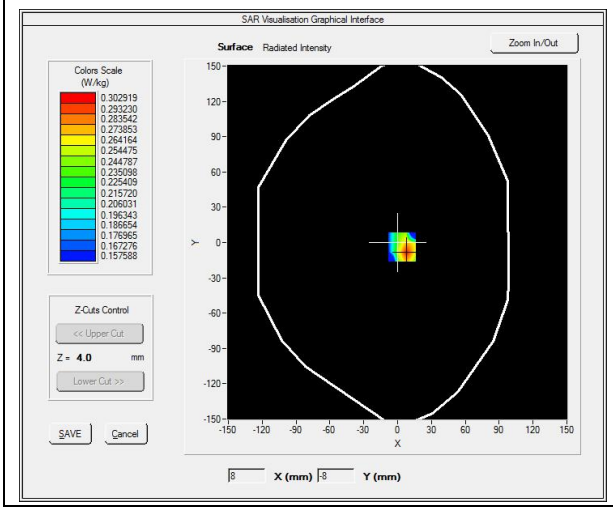
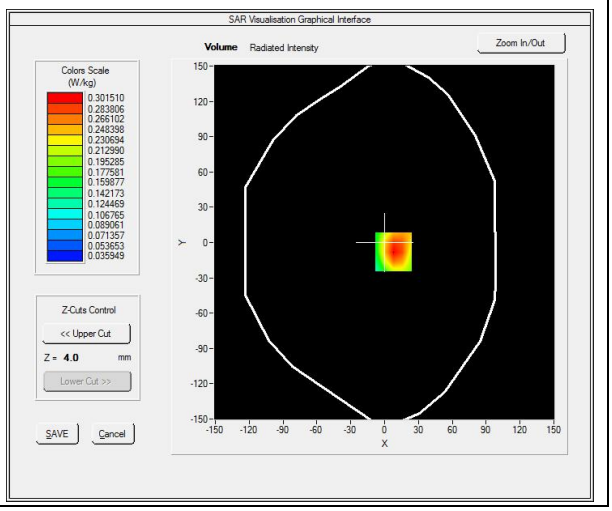
Type: Phone measurement (Complete)
Date of measurement: 2020-12-29
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.93; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	WCDMA850_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	826.400000
Relative Permittivity (real part)	42.460277
Conductivity (S/m)	0.878883
Power Variation (%)	-0.580000
Ambient Temperature	21.5
Liquid Temperature	21.5

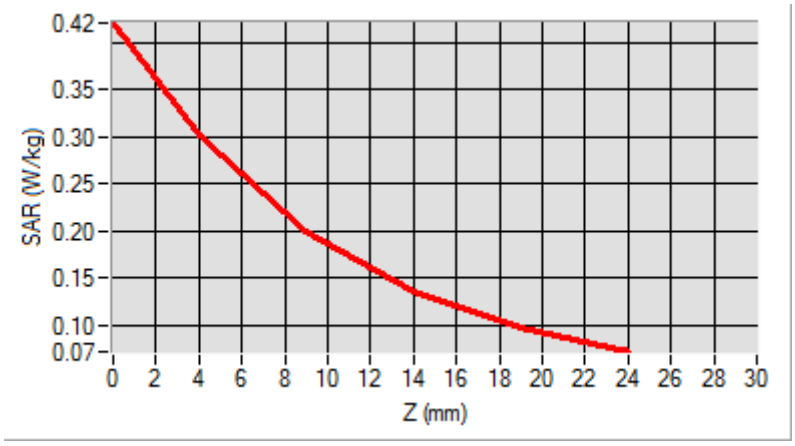
SURFACE SAR	VOLUME SAR
	

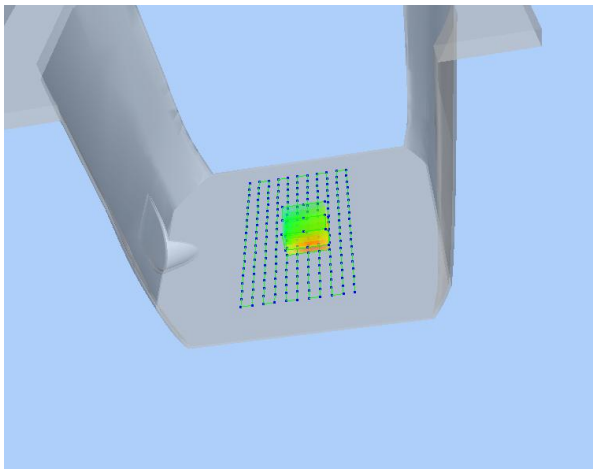
Maximum location: X=8.00, Y=-8.00

SAR Peak: 0.42 W/kg

SAR 10g (W/Kg)	**0.193538**
SAR 1g (W/Kg)	**0.289843**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.4209**	**0.3015**	**0.1996**	**0.1364**	**0.0982**



3D screen shot	**Hot spot position**
	

MEASUREMENT 24

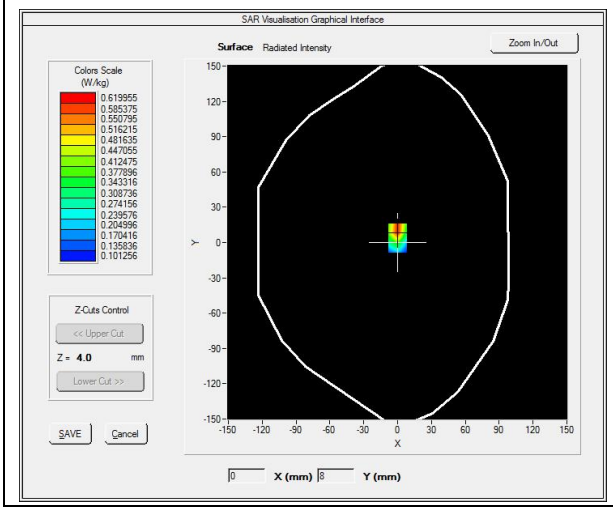
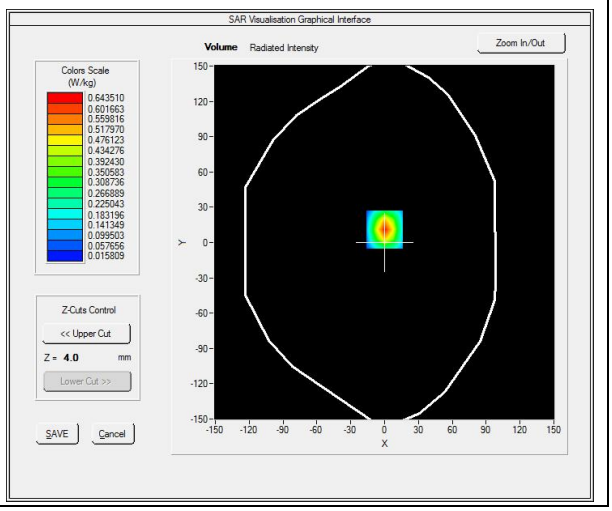
Type: Phone measurement (Complete)
Date of measurement: 2020-12-25
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5- SN 09/13 EP168; ConvF: 6.35; Calibrated: 2020-05-22

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Zoom Scan	dx=8mm dy=8mm dz=5mm
Phantom	Flat Plane
Device Position	Back
Band	LTE Band 2
Channels	QPSK, 20MHz, 1RB,Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1860.000000
Relative Permittivity (real part)	39.140521
Conductivity (S/m)	1.407486
Power Variation (%)	-1.010000
Ambient Temperature	21.8
Liquid Temperature	21.8

SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=11.00