FCC SAR
Measurement and Test Report

For

G53 Limited

ROOM 1701, 17/F FEE TAT COMMERCIAL CENTRE, 613 NATHAN ROAD, MONGKOK, KOWLOON, Hong Kong

FCC ID: 2ADLM-SLG2

Test Standards:	FCC Part 2.1093 ANSI / IEEE C95.1 :2005 ANSI / IEEE C95.3 :2002 IEEE 1528 :2013
Product Description:	4G Smart Phone
Tested Model:	SLG2
Report No.:	STR15108024H
Tested Date:	2015-08-27 to 2015-09-06
Issued Date:	2015-10-13
Tested By:	Vigoss Liang / Engineer
Reviewed By:	Silin Chen / EMC Manager
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1. General Information

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant:	G53 Limited
Address of applicant:	ROOM 1701, 17/F FEE TAT COMMERCIAL CENTRE, 613 NATHAN ROAD, MONGKOK, KOWLOON, Hong Kong
Manufacturer:	Shenzhen Fortuneship Technology Co., Ltd.
Address of manufacturer:	Room 701-716, 7th Floor, Kanghesheng Building, No.1 ChuangSheng Road, Nanshan District, Shenzhen, Guangdong, P. R. China

General Description of EUT:	
Product Name:	4G Smart Phone
Brand Name:	G53
Model No.:	SLG2
Hardware version:	A880-MB-V1.0
Software version:	A880_10H_HS005_QHD_COLUMBIA_V004_20150919_1310
IMEI:	353222076130684/353222076130692
Rated Voltage:	DC 3.8V Li-ion Battery
Battery:	2200mAh
Device Category:	Portable Device
The EUT Main board support GSM850/900/DCS1800/PCS1900, WCDMA Band 2/5, LTE Band 4/7 function. It is intended for speech, Multimedia Message Service (MMS) transmission and SLG2. It is equipped with GPRS/EDGE class 12 for GSM850/900/DCS1800/PCS1900, GPS, FM, Bluetooth and Wi-Fi functions. For more information see the following datasheet	
Note: The test data is gathered from a production sample provided 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
Max RF Output Power:	GSM850: 32.17dBm, GSM1900: 28.24dBm EDGE850: 26.12dBm, EDGE1900: 23.89dBm
Type of Modulation:	GMSK, 8PSK
Type of Antenna:	Integral Antenna
Antenna Gain:	GSM850: -1dBi; GSM1900: -0.6dBi
GPRS/EDGE Class:	Class 12
3G	
Support Networks:	WCDMA, HSDPA, HSUPA
Support Band:	WCDMA Band 2, WCDMA Band 5
Uplink Frequency:	WCDMA Band 2: 1850~1910MHz WCDMA Band 5: 824~849MHz
Downlink Frequency:	WCDMA Band 2: 1930~1990MHz WCDMA Band 5: 869~894MHz
RF Output Power:	WCDMA Band 2: 22.21dBm, WCDMA Band 5: 22.33dBm
Type of Modulation:	BPSK
Antenna Type:	Integral Antenna
Antenna Gain:	WCDMA Band 2: -0.6dBi, WCDMA Band 5: -1dBi
4G	
Support Networks:	FDD-LTE
Support Band:	FDD-LTE Band 4,7
Uplink Frequency:	FDD-LTE Band 4: Tx: 1710-1755MHz, FDD-LTE Band 7: Tx: 2500-2570MHz
Downlink Frequency:	FDD-LTE Band 4: Rx: 2110-2155MHz, FDD-LTE Band 7: Rx: 2620-2690MHz,
RF Output Power:	FDD-LTE Band 4: 23.99dBm, FDD-LTE Band 7: 22.87dBm,
Type of Modulation:	QPSK, 16QAM
Antenna Type:	Integral Antenna
Antenna Gain:	FDD-LTE Band 4: 0dBi, FDD-LTE Band 7: 0dBi,

WIFI	
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:	10.01dBm (Conducted)
Type of Modulation:	CCK, OFDM, QPSK, BPSK, 16QAM, 64QAM
Data Rate:	1-11Mbps, 6-54Mbps, up to 150Mbps
Quantity of Channels:	11/7
Channel Separation:	5MHz
Antenna Type:	Integral Antenna
Antenna Gain:	0dBi
Bluetooth	
Bluetooth Version:	V4.0
Frequency Range:	2402-2480MHz
AV Output Power:	-0.612dBm (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:	0dBi

1.2 Test Standards

The following report is prepared on behalf of the G53 Limited in accordance with FCC 47 CFR Part 2.1093, ANSI/IEEE C95.1-2005, ANSI / IEEE C95.3 :2002, IEEE 1528-2013, the following FCC Published RF exposure KDB procedures, and TCB workshop updates:
447498 D01 General RF Exposure Guidance v05r02
648474 D04 Handset SAR v01r02
941225 D01 SAR test for 3G devices v03
941225 D02 HSPA and 1x Advanced v02r02
941225 D03 SAR Test Reduction GSM GPRS EDGE v01
941225 D04 SAR for GSM E GPRS Dual Xfer Mode v01
941225 D06 Hotspot Mode SAR v01r01
248227 D01 SAR Meas for 802 11abg v02r01
865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
865664 D02 SAR Reporting v01r01
690783 D01 SAR Listings on Grants v01r03

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 v01r01. The public notice KDB 447498 D01 v05r02 for Mobile and Portable Devices RF Exposure Procedure also.

1.4 Test Facility

- **FCC – Registration No.: 934118**
  Shenzhen SEM.Test Technology 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 and the Registration is 934118.

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

- **CNAS Registration No.: L4062**

  Shenzhen SEM.Test Technology Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 1/F, Building A, Hongwei Industrial Park, Liuxian 2nd Road, Bao'an District, Shenzhen, P.R.C (518101)

2. Summary of Test Results

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

Frequency Band	Head SAR	Body-worn (10mm Gap)	Hotspot (10mm Gap)	SAR_{1g} Limit (W/kg)
	Maximum SAR_{1g} (W/kg)	Maximum SAR_{1g} (W/kg)	Maximum SAR_{1g} (W/kg)	
GSM850	0.226	0.364	0.524	1.6
GSM1900	0.124	0.410	**1.060**	1.6
WCDMA Band 2	0.308	0.688	0.931	1.6
WCDMA Band 5	0.198	0.311	0.311	1.6
FDD-LTE Band 4	0.314	**0.794**	0.951	1.6
FDD-LTE Band 7	0.052	0.131	0.131	1.6
WLAN 2.4G	**0.330**	0.106	0.106	1.6
Simultaneous Transmission	0.644	0.889	**1.079**	1.6

Remark:

*The highest reported SAR values for head, body-worn accessory, wireless router(hotspot), and simultaneous transmission conditions are **0.330W/kg, 0.794W/kg , 1.060W/kg, and 1.079W/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 v01r01

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 (ρ). The equation description is as below:

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

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be 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, δ T is the temperature rise and δ 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: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

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

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

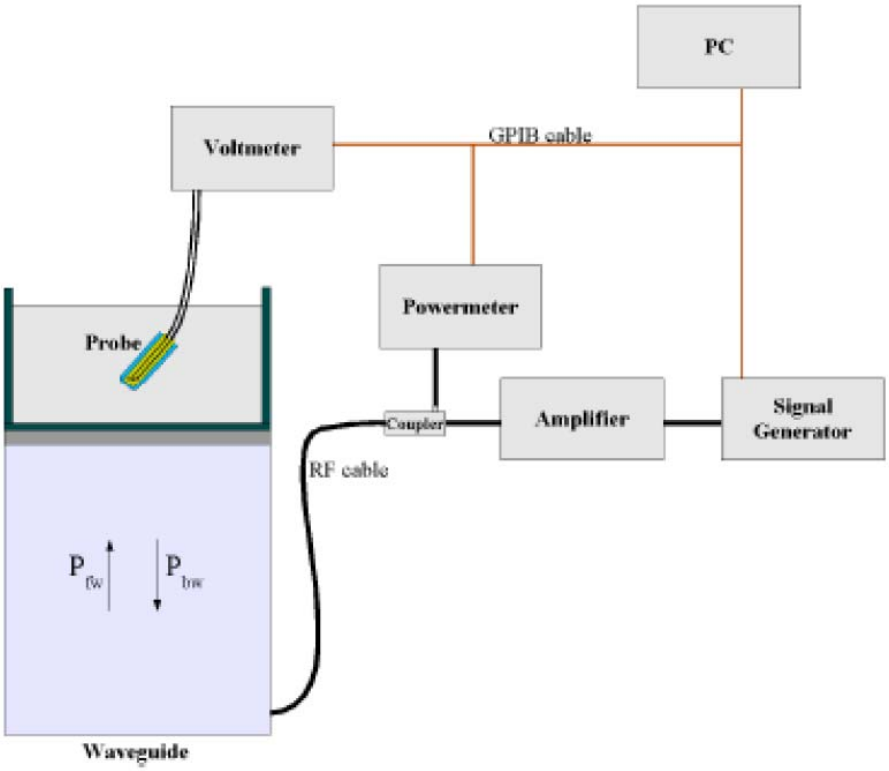
For the measurements the Specific Dosimetric E-Field Probe SSE5 SN 09/13 EP168 with following specifications is used

- 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.



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

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:

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

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

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

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.

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

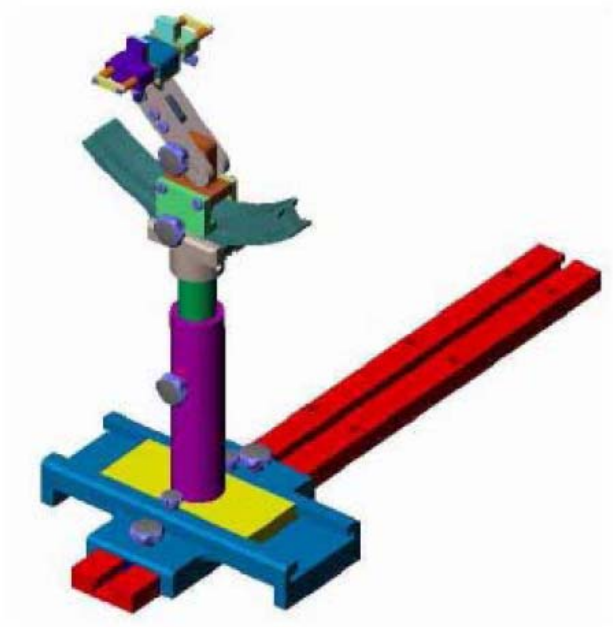
Where:
σ = simulated tissue conductivity,
ρ = Tissue density (1.25 g/cm3 for brain tissue)

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

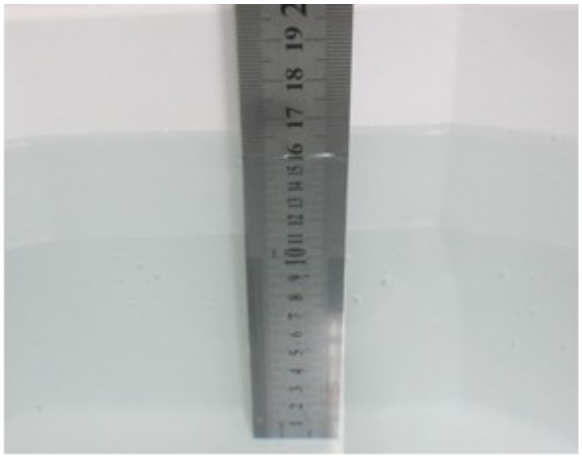
4.6 Test Equipment List

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
E-Field Probe	SATIMO	SSE5	SN 09/13 EP168	2015-06-03	2016-06-02
750MHz Dipole	SATIMO	SID750	SN 47/12 DIP 0G750-203	2015-03-16	2016-03-15
835MHz Dipole	SATIMO	SID835	SN 47/12 DIP 0G835-204	2015-03-16	2016-03-15
1800MHz Dipole	SATIMO	SID1800	SN 47/12 DIP 1G800-206	2015-03-16	2016-03-15
1900MHz Dipole	SATIMO	SID1900	SN 47/12 DIP 1G900-207	2015-03-16	2016-03-15
2450MHz Dipole	SATIMO	SID2450	SN 13/15 DIP 2G450-364	2015-04-13	2016-04-12
Dielectric Probe Kit	SATIMO	SCLMP	SN 47/12 OCPG49	2015-03-16	2016-03-15
SAM Phantom	SATIMO	SAM	SN/ 47/12 SAM95	N/A	N/A
MULTIMETER	KEITHLEY	Keithley 2000	4006367	2015-06-17	2016-06-16
Signal Generator	Rohde & Schwarz	SMR20	100047	2015-06-17	2016-06-16
Universal Tester	Rohde & Schwarz	CMU200	112012	2015-06-17	2016-06-16
Network Analyzer	HP	8753C	2901A00831	2015-06-17	2016-06-16
Data Acquisition Electronics	SATIMO	DAE4	915	2015-06-17	2016-06-16
Directional Couplers	Agilent	778D	20160	2015-06-17	2016-06-16

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 (%)	Triton (%)	HEC (%)	Preventol (%)	DGBE (%)
Head						
835	35.34	0.98	0.00	0.00	63.68	0.00
1800	55.19	0.66	30.35	0.00	0.00	13.80
1900	55.26	0.52	30.40	0.00	0.00	13.82
2450	55.44	0.32	30.50	0.00	0.00	13.74
Body						
835	52.87	1.07	0.00	0.00	46.10	0.00
1800	70.81	0.52	20.01	0.00	0.00	8.65
1900	69.99	0.41	20.66	0.00	0.00	8.93
2450	55.44	0.32	30.50	0.00	0.00	13.74

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		Body	
	Conductivity (σ)	Permittivity (ε_r)	Conductivity (σ)	Permittivity (ε_r)
150	0.76	52.3	0.80	61.9
300	0.87	45.3	0.92	58.2
450	0.87	43.5	0.94	56.7
750	0.89	41.9	0.96	55.5
835	**0.90**	**41.5**	**0.97**	**55.2**
900	0.97	41.5	1.05	55.0
915	0.98	41.5	1.06	55.0
1450	1.20	40.5	1.30	54.0
1610	1.29	40.3	1.40	53.8
1800-2000	**1.40**	**40.0**	**1.52**	**53.3**
2450	**1.80**	**39.2**	**1.95**	**52.7**
3000	2.40	38.5	2.73	52.0
5800	5.27	35.3	6.00	48.2

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 (σ)	Target (σ)	Delta (%)	Reading (ε r)	Target (ε r)	Delta (%)		
750	21.2	0.86	0.89	-3.37	41.32	41.90	-1.38	±5	2015-08-28
835	21.2	0.87	0.90	-3.33	41.11	41.50	-0.94	±5	2015-08-28
1800	21.3	1.37	1.40	-2.14	39.02	40.0	-2.50	±5	2015-08-28
1900	21.3	1.38	1.40	-1.43	38.56	40.00	-3.60	±5	2015-08-28
2450	21.3	1.74	1.80	-3.33	38.15	39.20	-2.68	±5	2015-08-28

Body Tissue Simulating Liquid									
Freq. MHz.	Temp. (℃)	Conductivity			Permittivity			Limit (%)	Date
		Reading (σ)	Target (σ)	Delta (%)	Reading (ε r)	Target (ε r)	Delta (%)		
750	21.2	0.93	0.96	-3.12	54.96	55.50	-0.97	±5	2015-08-28
835	21.2	0.95	0.97	-2.06	54.85	55.20	-0.63	±5	2015-08-28
1800	21.3	1.46	1.52	-3.95	51.22	53.30	-3.94	±5	2015-08-28
1900	21.3	1.50	1.52	-1.32	52.42	53.30	-1.65	±5	2015-08-28
2450	21.3	1.91	1.95	-2.05	52.01	52.70	-1.31	±5	2015-08-28

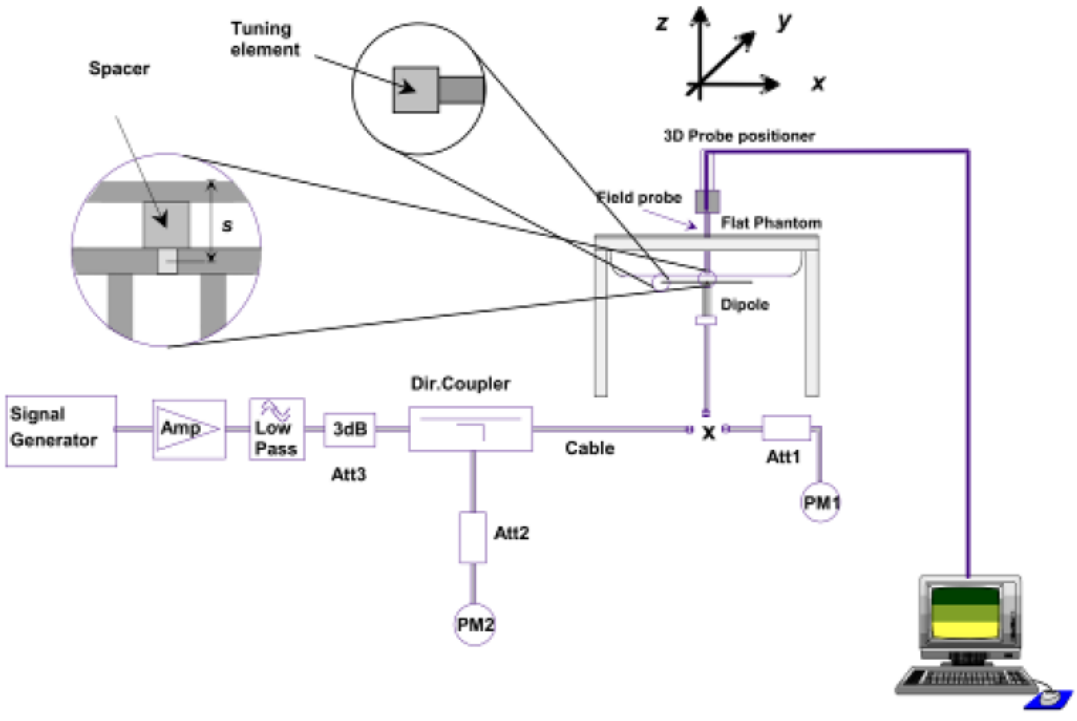
6. SAR Measurement Evaluation

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 835 MHz and 1900 MHz. 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	Targeted SAR_{1g}	Measured SAR_{1g}	Normalized SAR_{1g}	Tolerance
MHz	(W/kg)	(W/kg)	(W/kg)	(%)
Head				
835	9.65	2.41	9.64	-0.10
1800	38.49	9.61	38.45	-0.10
1900	39.59	9.91	39.62	0.08
2450	53.76	13.45	53.78	0.04
Body				
835	9.36	2.35	9.38	0.21
1800	38.29	9.58	38.32	0.08
1900	39.01	9.78	39.10	0.23
2450	50.33	12.59	50.35	0.04

Targeted and Measurement SAR

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

7. EUT Testing Position

7.1 Define Two Imaginary Lines on The Handset

(a) The vertical centerline passes through two points on the front side of the handset - the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.

(b) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.

(c) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.

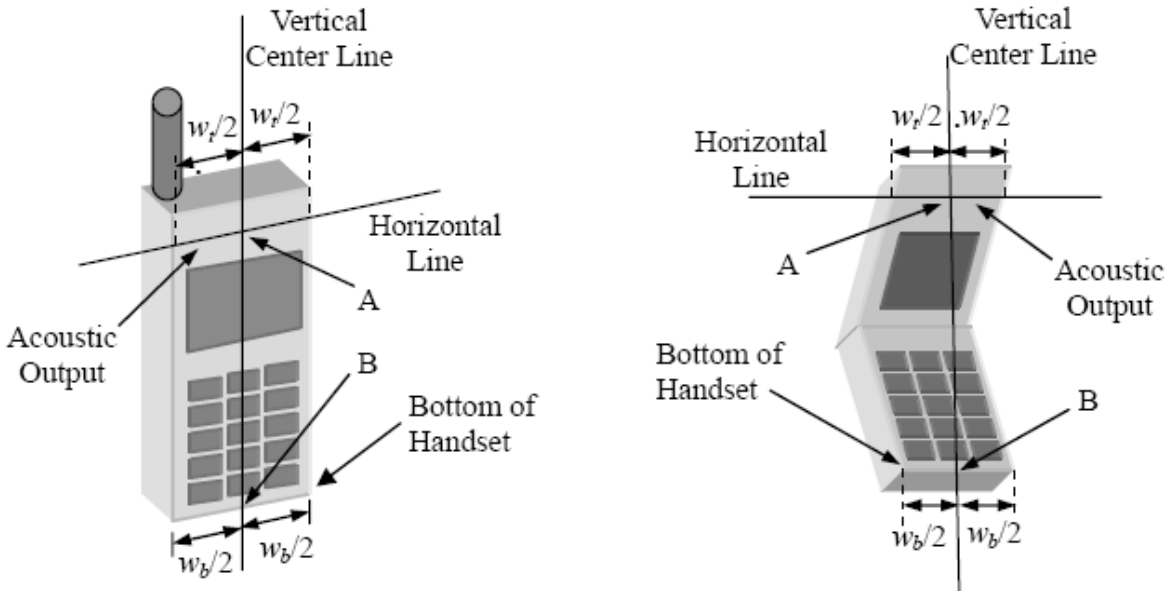


Illustration for Handset Vertical and Horizontal Reference Lines

7.2 Cheek Position

(a) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
(b) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost (see Fig. 7.2).

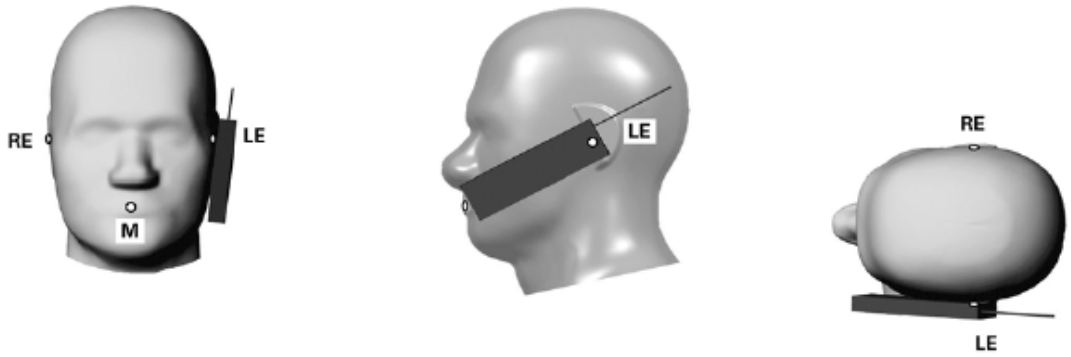


Illustration for Cheek Position

7.3 Tilted Position

(a) To position the device in the “cheek” position described above.
(b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost (see Fig. 7.3).

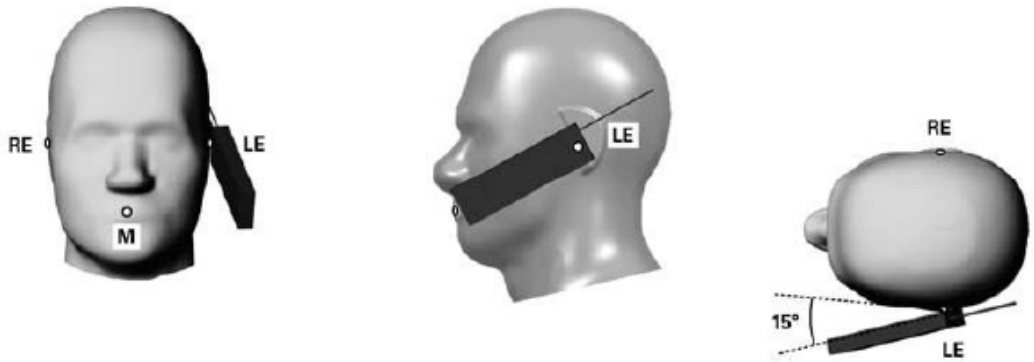


Illustration for Tilted Position

7.4 Body Position

(a) To position the device parallel to the phantom surface with either keypad up or down.
(b) To adjust the device parallel to the flat phantom.
(c) To adjust the distance between the device surface and the flat phantom to 10mm.

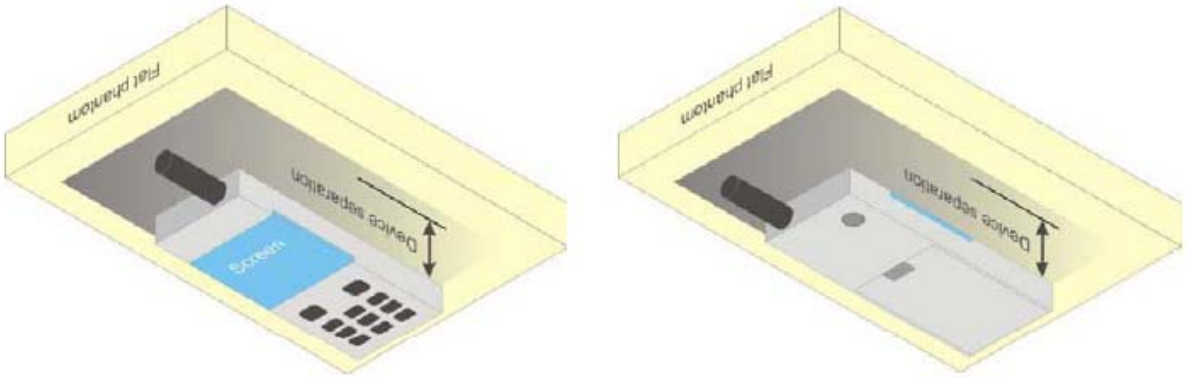


Illustration for Body Position

7.5 EUT Antenna Position

Block Diagram for EUT Antenna Position

7.6 EUT Testing Position

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

Head SAR tests				
Antennas	**Right Cheek**	**Left Cheek**	**Right Tilted**	**Left Tilted**
WWAN	Yes	Yes	Yes	Yes
WLAN	Yes	Yes	Yes	Yes

Hotspot SAR tests, Test distance: 10mm						
Antennas	**Front**	**Back**	**Right Side**	**Left Side**	**Top Side**	**Bottom Side**
WWAN	Yes	Yes	Yes	Yes	No	Yes
WLAN	Yes	Yes	No	Yes	Yes	No

Body-worn SAR tests, Test distance: 10mm		
Antennas	**Front**	**Back**
WWAN	Yes	Yes
WLAN	Yes	Yes

Remark:

1. Referring to KDB 941225 D06, when the overall device length and width are >= 9cm*5cm, the test separation is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.

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 E 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**			**PCS1900**		
Channel	**128**	**190**	**251**	**512**	**661**	**810**
Frequency (MHz)	**824.2**	**836.6**	**848.8**	**1850.2**	**1880**	**1909.8**
GSM	32.12	32.17	32.16	28.22	28.24	28.15
GPRS (1 slot)	32.08	32.11	32.12	28.20	28.20	28.14
GPRS (2 slots)	31.55	31.59	31.60	27.74	27.78	27.77
GPRS (3 slots)	30.02	30.09	30.12	26.12	26.32	26.42
GPRS (4 slots)	28.95	29.03	29.03	25.02	25.16	25.36
EDGE (1 slot)	25.85	26.1	26.12	23.89	23.7	23.75
EDGE (2 slots)	24.38	24.68	24.68	22.61	22.31	22.47
EDGE (3 slots)	22	22.31	22.35	20.29	20	20.1
EDGE (4 slots)	20.69	20.9	20.93	19.03	18.75	18.78

GSM - Source-Based Time-Average Power (dBm)						
Band	**GSM850**			**PCS1900**		
Channel	**128**	**190**	**251**	**512**	**661**	**810**
Frequency (MHz)	**824.2**	**836.6**	**848.8**	**1850.2**	**1880**	**1909.8**
GSM	23.12	23.17	23.16	19.22	19.24	19.15
GPRS (1 slot)	23.08	23.11	23.12	19.20	19.20	19.14
GPRS (2 slots)	25.55	25.59	25.60	21.74	21.78	21.77
GPRS (3 slots)	25.77	25.84	25.87	21.87	22.07	22.17
GPRS (4 slots)	25.95	26.03	26.03	22.02	22.16	22.36
EDGE (1 slot)	16.85	17.10	17.12	14.89	14.70	14.75
EDGE (2 slots)	18.38	18.68	18.68	16.61	16.31	16.47
EDGE (3 slots)	17.75	18.06	18.10	16.04	15.75	15.85
EDGE (4 slots)	17.69	17.90	17.93	16.03	15.75	15.78
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 GSM1900 due to its highest source-based time-average power.
3. Per KDB 447498 D01 v05r02, the maximum output power channel is used for SAR testing and for further SAR test reduction.
4. The DUT do not support DTM function.

WCDMA - Average Power (dBm)						
Band	**WCDMA Band 2**			**WCDMA Band 5**		
Channel	**9262**	**9400**	**9538**	**4132**	**4182**	**4233**
Frequency (MHz)	**1852.4**	**1880.0**	**1907.6**	**826.4**	**836.6**	**846.6**
RMC 12.2k	22.08	22.17	22.21	22.24	22.33	22.26
HSDPA Subtest-1	21.00	21.21	21.26	21.23	21.27	21.27
HSDPA Subtest-2	20.89	21.13	21.13	21.13	21.10	21.15
HSDPA Subtest-3	20.71	21.02	21.11	21.09	21.00	21.01
HSDPA Subtest-4	20.59	20.89	21.04	20.85	20.84	20.89
HSUPA Subtest-1	20.97	21.21	21.23	21.23	21.33	21.29
HSUPA Subtest-2	20.83	21.08	21.14	21.18	21.21	21.16
HSUPA Subtest-3	20.67	20.89	20.88	21.07	21.15	20.99
HSUPA Subtest-4	20.48	20.62	20.69	20.87	21.05	20.86
HSUPA Subtest-5	20.42	20.52	20.61	20.77	20.85	20.66

Remark:

1. For Head SAR, per KDB 941225 D01 v03, RMC 12.2kbps setting is used to evaluate SAR. If AMR 12.2kbps power is < 1/4 dB higher than RMC, SAR tests with AMR 12.2kbps can be excluded.
2. For Body SAR, per KDB 941225 D01 v03, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA subset-1 output power is < 1/4 dB higher than RMC, and SAR with RMC 12.2kbps setting is ≦1.2W/kg, HSDPA SAR evaluation can be excluded.

FDD-LTE Band 4				FDD-LTE Band 7			
Modulation	**Bandwidth (MHz)**	**Channel**	**Average Power (dBm)**	**Modulation**	**Bandwidth (MHz)**	**Channel**	**Average Power (dBm)**
QPSK	1.4	LCH	23.33	QPSK	1.4	LCH	/
		MCH	22.90			MCH	/
		HCH	23.85			HCH	/
	3	LCH	23.22		3	LCH	/
		MCH	22.86			MCH	/
		HCH	23.86			HCH	/
	5	LCH	23.35		5	LCH	22.53
		MCH	22.97			MCH	22.87
		HCH	23.98			HCH	22.57
	10	LCH	23.30		10	LCH	22.62
		MCH	23.00			MCH	22.81
		HCH	23.86			HCH	22.51
	15	LCH	23.30		15	LCH	22.62
		MCH	23.04			MCH	22.79
		HCH	23.88			HCH	22.05
	20	LCH	23.41		20	LCH	22.85
		MCH	23.29			MCH	22.82
		HCH	23.99			HCH	22.39
16QAM	1.4	LCH	22.62	16QAM	1.4	LCH	/
		MCH	22.11			MCH	/
		HCH	23.20			HCH	/
	3	LCH	22.54		3	LCH	/
		MCH	22.11			MCH	/
		HCH	23.17			HCH	/
	5	LCH	22.79		5	LCH	21.81
		MCH	22.27			MCH	21.83
		HCH	22.90			HCH	21.64
	10	LCH	22.57		10	LCH	21.74
		MCH	22.26			MCH	21.98
		HCH	23.19			HCH	21.74
	15	LCH	22.58		15	LCH	21.83
		MCH	22.34			MCH	22.00
		HCH	23.11			HCH	21.24
	20	LCH	22.59		20	LCH	21.88
		MCH	22.45			MCH	21.94
		HCH	23.27			HCH	21.60

WLAN - Maximum Average Power				
Test Mode	**Data Rate**	**Channel**	**Frequency (MHz)**	**Average Power (dBm)**
802.11b	1Mbps	CH 01	2412	8.22
		CH 06	2437	10.01
		CH 11	2462	8.57
802.11g	54Mbps	CH 01	2412	3.85
		CH 06	2437	5.91
		CH 11	2462	5.09
802.11n (20MHz)	MCS7	CH 01	2412	3.28
		CH 06	2437	4.91
		CH 11	2462	4.48
802.11n (40MHz)	MCS7	CH 03	2422	2.94
		CH 06	2437	3.35
		CH 09	2452	2.85

Remark:

1. Per KDB 248227 D01 v02r01, choose the highest output power channel to test SAR and determine further SAR exclusion

2. Per KDB 248227 D01 v02r01, if 11g and 11n average output power is higher than 1/4 dB higher than 11b mode, SAR will be verified.

3. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 1/4 dB higher than those measured at the lowest data rate. For 802.11n mode, SAR test according to the highest power channel with correspondence data rates.

Bluetooth - Maximum Average Power				
Test Mode	**Data Rate**	**Channel**	**Frequency (MHz)**	**Average Power (dBm)**
GFSK	1Mbps	CH 00	2402	-0.784
		CH 39	2441	-0.612
		CH 78	2480	-3.698
4*π4DQPSK	2Mbps	CH 00	2402	-2.407
		CH 39	2441	-1.937
		CH 78	2480	-5.037
8DPSK	3Mbps	CH 00	2402	-2.098
		CH 39	2441	-1.803
		CH 78	2480	-4.837
BLE	1Mbps	CH 00	2402	-8.646
		CH 19	2440	-7.907
		CH 39	2480	-11.23

Remark:

Bluetooth maximum output power is -0.612dBm, and Tune-Up output power is -0.5dBm. Per KDB 648474 D01, 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

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	Result	Limit
-0.5	0.89	5	2.441	0.2781	3

The exclusion thresholds is 0.2781< 3, therefore, the RF exposure evaluation is not required.

9.2 Test Results for Standalone SAR Test

Head SAR

GSM850 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
1	GSM	Right Cheek	190	836.6	32.17	32.5	1.0789	0.1804	0.1946
2	GSM	Right Tilted	190	836.6	32.17	32.5	1.0789	0.1307	0.1410
3	GSM	Left Cheek	190	836.6	32.17	32.5	1.0789	0.2097	0.2263
4	GSM	Left Tilted	190	836.6	32.17	32.5	1.0789	0.1053	0.1136

GSM1900 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	M Hz					
12	GSM	Right Cheek	661	1880.0	28.24	28.5	1.0617	0.1145	0.1216
13	GSM	Right Tilted	661	1880.0	28.24	28.5	1.0617	0.0181	0.0192
14	GSM	Left Cheek	661	1880.0	28.24	28.5	1.0617	0.1168	0.1240
15	GSM	Left Tilted	661	1880.0	28.24	28.5	1.0617	0.0208	0.0221

WCDMA Band 2 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
25	RMC	Right Cheek	9538	1907.6	22.21	22.5	1.0691	0.2881	0.3080
26	RMC	Right Tilted	9538	1907.6	22.21	22.5	1.0691	0.0482	0.0515
27	RMC	Left Cheek	9538	1907.6	22.21	22.5	1.0691	0.2315	0.2475
28	RMC	Left Tilted	9538	1907.6	22.21	22.5	1.0691	0.0448	0.0479

WCDMA Band 5 – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
36	RMC	Right Cheek	4182	836.6	22.33	22.5	1.0399	0.1899	0.1975
37	RMC	Right Tilted	4182	836.6	22.33	22.5	1.0399	0.1560	0.1622
38	RMC	Left Cheek	4182	836.6	22.33	22.5	1.0399	0.1794	0.1866
39	RMC	Left Tilted	4182	836.6	22.33	22.5	1.0399	0.1260	0.1310

LTE Band 4– Head SAR Test								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
45	RMC,QPSK 20MHz	Right Cheek	1745.0	23.99	24.0	1.0023	0.3137	0.3144
46	RMC,QPSK 20MHz	Right Tilted	1745.0	23.99	24.0	1.0023	0.0300	0.0301
47	RMC,QPSK 20MHz	Left Cheek	1745.0	23.99	24.0	1.0023	0.1892	0.1896
48	RMC,QPSK 20MHz	Left Tilted	1745.0	23.99	24.0	1.0023	0.0243	0.0244

LTE Band 7– Head SAR Test								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
56	RMC,QPSK 5MHz	Right Cheek	2535.0	22.87	23.0	1.0304	0.0505	0.0520
57	RMC,QPSK 5MHz	Right Tilted	2535.0	22.87	23.0	1.0304	0.0045	0.0046
58	RMC,QPSK 5MHz	Left Cheek	2535.0	22.87	23.0	1.0304	0.0322	0.0332
59	RMC,QPSK 5MHz	Left Tilted	2535.0	22.87	23.0	1.0304	0.0047	0.0048

WLAN 2.4GHz – Head SAR Test									
Plot No.	Mode	Test Position Head	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
65	802.11b	Right Cheek	06	2437	10.01	10.5	1.1194	0.2945	0.3297
66	802.11b	Right Tilted	06	2437	10.01	10.5	1.1194	0.1711	0.1915
67	802.11b	Left Cheek	06	2437	10.01	10.5	1.1194	0.1054	0.1180
68	802.11b	Left Tilted	06	2437	10.01	10.5	1.1194	0.0545	0.0610

Remark: Per KDB 447498 D01 v05r02, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

Body-worn SAR

GSM850 – Body SAR Test (Gap: 10mm)									
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	190	836.6	32.17	32.5	1.0789	0.3370	0.3636
6	GSM	Front	190	836.6	32.17	32.5	1.0789	0.2689	0.2901

GSM1900 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
16	GSM	Back	661	1880.0	28.24	28.5	1.0617	0.3859	0.4097
17	GSM	Front	661	1880.0	28.24	28.5	1.0617	0.2738	0.2907

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
29	RMC 12.2k	Back Side	9538	1907.6	22.21	22.5	1.0691	0.4701	0.5026
30	RMC 12.2k	Front Side	9538	1907.6	22.21	22.5	1.0691	0.6438	0.6883

WCDMA Band 5 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
40	RMC 12.2k	Back Side	4182	836.6	22.33	22.5	1.0399	0.2991	0.3110
41	RMC 12.2k	Front Side	4182	836.6	22.33	22.5	1.0399	0.2441	0.2538

LTE Band 4–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
49	RMC,QPSK 20MHz	Back Side	1745.0	23.99	24.0	1.0023	0.5768	0.5781
50	RMC,QPSK 20MHz	Front Side	1745.0	23.99	24.0	1.0023	0.7918	0.7936

LTE Band 7–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
60	RMC,QPSK 5MHz	Back Side	2535.0	22.87	23.0	1.0304	0.1273	0.1312
61	RMC,QPSK 5MHz	Front Side	2535.0	22.87	23.0	1.0304	0.0806	0.0830

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					
69	802.11b	Back Side	06	2437	10.01	10.5	1.1194	0.0948	0.1061
70	802.11b	Front Side	06	2437	10.01	10.5	1.1194	0.0852	0.0954

Remark: Per KDB 447498 D01 v05r02, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

Hotspot SAR

GSM850 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
7	GPRS_4TX	Back Side	190	836.6	29.03	29.5	1.1143	0.4698	0.5235
8	GPRS_4TX	Front Side	190	836.6	29.03	29.5	1.1143	0.3784	0.4216
9	GPRS_4TX	Bottom side	190	836.6	29.03	29.5	1.1143	0.2486	0.2770
10	GPRS_4TX	Right side	190	836.6	29.03	29.5	1.1143	0.4363	0.4862
11	GPRS_4TX	Left side	190	836.6	29.03	29.5	1.1143	0.3425	0.3816

GSM1900 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
18	GPRS_4TX	Back Side	810	1909.8	25.36	25.5	1.0328	0.5105	0.5272
19	GPRS_4TX	Front Side	810	1909.8	25.36	25.5	1.0328	0.7311	0.7551
20	GPRS_4TX	Bottom side	810	1909.8	25.36	25.5	1.0328	1.0267	1.0603
21	GPRS_4TX	Bottom side	512	1850.2	25.02	25.5	1.1169	0.8951	0.9997
22	GPRS_4TX	Bottom side	661	1880.0	25.16	25.5	1.0814	0.9282	1.0038
23	GPRS_4TX	Right side	810	1909.8	25.36	25.5	1.0328	0.3187	0.3291
24	GPRS_4TX	Left side	810	1909.8	25.36	25.5	1.0328	0.1500	0.1549

WCDMA Band 2 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
29	RMC 12.2k	Back Side	9538	1907.6	22.21	22.5	1.0691	0.4701	0.5026
30	RMC 12.2k	Front Side	9538	1907.6	22.21	22.5	1.0691	0.6438	0.6883
31	RMC 12.2k	Bottom side	9538	1907.6	22.21	22.5	1.0691	0.8710	0.9311
32	RMC 12.2k	Bottom side	9262	1852.4	22.08	22.5	1.1015	0.7216	0.7949
33	RMC 12.2k	Bottom side	9400	1880.0	22.17	22.5	1.0789	0.7812	0.8429
34	RMC 12.2k	Right side	9538	1907.6	22.21	22.5	1.0691	0.3072	0.3284
35	RMC 12.2k	Left side	9538	1907.6	22.21	22.5	1.0691	0.1341	0.1434

WCDMA Band 5 – Body SAR Test (Gap: 10mm)									
Plot No.	Mode	Test Position Body	Frequency		Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
			CH.	MHz					
40	RMC 12.2k	Back Side	4182	836.6	22.33	22.5	1.0399	0.2991	0.3110
41	RMC 12.2k	Front Side	4182	836.6	22.33	22.5	1.0399	0.2441	0.2538
42	RMC 12.2k	Bottom side	4182	836.6	22.33	22.5	1.0399	0.1572	0.1635
43	RMC 12.2k	Right side	4182	836.6	22.33	22.5	1.0399	0.2745	0.2855
44	RMC 12.2k	Left side	4182	836.6	22.33	22.5	1.0399	0.2272	0.2363

LTE Band 4–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
49	RMC,QPSK 20MHz	Back Side	1745.0	23.99	24.0	1.0023	0.5768	0.5781
50	RMC,QPSK 20MHz	Front Side	1745.0	23.99	24.0	1.0023	0.7918	0.7936
51	RMC,QPSK 20MHz	Bottom side	1745.0	23.99	24.0	1.0023	0.8600	0.8620
52	RMC,QPSK 20MHz	Bottom side	1720.0	23.41	24.0	1.1455	0.8305	0.9513
53	RMC,QPSK 20MHz	Bottom side	1732.5	23.29	24.0	1.1776	0.7840	0.9232
54	RMC,QPSK 20MHz	Right side	1745.0	23.99	24.0	1.0023	0.1813	0.1817
55	RMC,QPSK 20MHz	Left side	1745.0	23.99	24.0	1.0023	0.0858	0.0860

LTE Band 7–Body SAR Test (Gap: 10mm)								
Plot No.	Mode	Test Position Head	Frequency	Output Power (dBm)	Rated Limit (dBm)	Scaling Factor	SAR1g (W/kg)	Scaled SAR1g (W/kg)
	Modulation, Bandwidth		MHz					
60	RMC,QPSK 5MHz	Back Side	2535.0	22.87	23.0	1.0304	0.1273	0.1312
61	RMC,QPSK 5MHz	Front Side	2535.0	22.87	23.0	1.0304	0.0806	0.0830
62	RMC,QPSK 5MHz	Bottom side	2535.0	22.87	23.0	1.0304	0.0208	0.0214
63	RMC,QPSK 5MHz	Right side	2535.0	22.87	23.0	1.0304	0.0026	0.0027
64	RMC,QPSK 5MHz	Left side	2535.0	22.87	23.0	1.0304	0.0435	0.0448

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					
69	802.11b	Back Side	06	2437	10.01	10.5	1.1194	0.0948	0.1061
70	802.11b	Front Side	06	2437	10.01	10.5	1.1194	0.0852	0.0954
71	802.11b	Left side	06	2437	10.01	10.5	1.1194	0.0585	0.0655
72	802.11b	Top Side	06	2437	10.01	10.5	1.1194	0.0515	0.0577

Remark: Per KDB 447498 D01 v05r02, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

9.3 Simultaneous Multi-band Transmission SAR Analysis

List of Mode for Simultaneous Multi-band Transmission

No.	Configurations	Head SAR	Body-worn SAR	Hotspot SAR
1	GSM + WLAN	Yes	Yes	-
2	GPRS + WLAN	-	-	Yes
3	WCDMA + WLAN	Yes	Yes	-
4	HSDPA + WLAN	-	-	Yes
5	HSUPA + WLAN	-	-	Yes
6	LTE + WLAN	Yes	Yes	Yes
7	GSM + Bluetooth	Yes	Yes	-
8	GPRS + Bluetooth	-	-	Yes
9	WCDMA + Bluetooth	Yes	Yes	-
10	HSDPA + Bluetooth	-	-	Yes
11	HSUPA + Bluetooth	-	-	Yes
12	LTE + Bluetooth	Yes	Yes	Yes

Remark:

1. GSM and WCDMA 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 D01v05r01, 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 D01v05r01 as below:

Bluetooth:

Tune-Up Power (dBm)	Max. Power (mW)	Distance (mm)	Frequency (GHz)	X	SAR(1g) 5mm	SAR(1g) 10mm
-0.5	0.89	5/10	2.441	7.5	0.0371	0.0185

4. The maximum SAR summation is calculated based on the same configuration and test position.

Head SAR

WWAN and WLAN

	WWAN		WLAN	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Right Cheek	GSM850	0.1946	0.3297	0.5243
Right Tilted	GSM850	0.1410	0.1915	0.3325
Left Cheek	GSM850	0.2263	0.1180	0.3443
Left Tilted	GSM850	0.1136	0.0610	0.1746
Right Cheek	GSM1900	0.1216	0.3297	0.4513
Right Tilted	GSM1900	0.0192	0.1915	0.2107
Left Cheek	GSM1900	0.1240	0.1180	0.242
Left Tilted	GSM1900	0.0221	0.0610	0.0831
Right Cheek	WCDMA Band 2	0.3080	0.3297	0.6377
Right Tilted	WCDMA Band 2	0.0515	0.1915	0.243
Left Cheek	WCDMA Band 2	0.2475	0.1180	0.3655
Left Tilted	WCDMA Band 2	0.0479	0.0610	0.1089
Right Cheek	WCDMA Band 5	0.1975	0.3297	0.5272
Right Tilted	WCDMA Band 5	0.1622	0.1915	0.3537
Left Cheek	WCDMA Band 5	0.1866	0.1180	0.3046
Left Tilted	WCDMA Band 5	0.1310	0.0610	0.192
Right Cheek	LTE Band 4	0.3144	0.3297	**0.6441**
Right Tilted	LTE Band 4	0.0301	0.1915	0.2216
Left Cheek	LTE Band 4	0.1896	0.1180	0.3076
Left Tilted	LTE Band 4	0.0244	0.0610	0.0854
Right Cheek	LTE Band 7	0.0520	0.3297	0.3817
Right Tilted	LTE Band 7	0.0046	0.1915	0.1961
Left Cheek	LTE Band 7	0.0332	0.1180	0.1512
Left Tilted	LTE Band 7	0.0048	0.0610	0.0658

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Right Cheek	GSM850	0.1946	0.0371	0.2317
Right Tilted	GSM850	0.1410	0.0371	0.1781
Left Cheek	GSM850	0.2263	0.0371	0.2634
Left Tilted	GSM850	0.1136	0.0371	0.1507
Right Cheek	GSM1900	0.1216	0.0371	0.1587
Right Tilted	GSM1900	0.0192	0.0371	0.0563
Left Cheek	GSM1900	0.1240	0.0371	0.1611
Left Tilted	GSM1900	0.0221	0.0371	0.0592
Right Cheek	WCDMA Band 2	0.3080	0.0371	0.3451
Right Tilted	WCDMA Band 2	0.0515	0.0371	0.0886
Left Cheek	WCDMA Band 2	0.2475	0.0371	0.2846
Left Tilted	WCDMA Band 2	0.0479	0.0371	0.085
Right Cheek	WCDMA Band 5	0.1975	0.0371	0.2346
Right Tilted	WCDMA Band 5	0.1622	0.0371	0.1993
Left Cheek	WCDMA Band 5	0.1866	0.0371	0.2237
Left Tilted	WCDMA Band 5	0.1310	0.0371	0.1681
Right Cheek	LTE Band 4	0.3144	0.0371	**0.3515**
Right Tilted	LTE Band 4	0.0301	0.0371	0.0672
Left Cheek	LTE Band 4	0.1896	0.0371	0.2267
Left Tilted	LTE Band 4	0.0244	0.0371	0.0615
Right Cheek	LTE Band 7	0.0520	0.0371	0.0891
Right Tilted	LTE Band 7	0.0046	0.0371	0.0417
Left Cheek	LTE Band 7	0.0332	0.0371	0.0703
Left Tilted	LTE Band 7	0.0048	0.0371	0.0419

Body-worn SAR

WWAN and WLAN

	WWAN		WLAN	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM850	0.3636	0.1061	0.4697
Front	GSM850	0.2901	0.0954	0.3855
Back	GSM1900	0.4097	0.1061	0.5158
Front	GSM1900	0.2907	0.0954	0.3861
Back	WCDMA Band 2	0.5026	0.1061	0.6087
Front	WCDMA Band 2	0.6883	0.0954	0.7837
Back	WCDMA Band 5	0.3110	0.1061	0.4171
Front	WCDMA Band 5	0.2538	0.0954	0.3492
Back	LTE Band 4	0.5781	0.1061	0.6842
Front	LTE Band 4	0.7936	0.0954	**0.8890**
Back	LTE Band 7	0.1312	0.1061	0.2373
Front	LTE Band 7	0.0830	0.0954	0.1784

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	**Band**	**Scaled SAR (W/kg)**	**Scaled SAR (W/kg)**	
Back	GSM850	0.3636	0.0185	0.3821
Front	GSM850	0.2901	0.0185	0.3086
Back	GSM1900	0.4097	0.0185	0.4282
Front	GSM1900	0.2907	0.0185	0.3092
Back	WCDMA Band 2	0.5026	0.0185	0.5211
Front	WCDMA Band 2	0.6883	0.0185	0.7068
Back	WCDMA Band 5	0.3110	0.0185	0.3295
Front	WCDMA Band 5	0.2538	0.0185	0.2723
Back	LTE Band 4	0.5781	0.0185	0.5966
Front	LTE Band 4	0.7936	0.0185	**0.8121**
Back	LTE Band 7	0.1312	0.0185	0.1497
Front	LTE Band 7	0.0830	0.0185	0.1015

Hotspot SAR

WWAN and WLAN

	WWAN		WLAN	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM850	0.5235	0.1061	0.6296
Front	GSM850	0.4216	0.0954	0.517
Top side	GSM850	--	0.0577	0.0577
Bottom side	GSM850	0.2770	--	0.2770
Right side	GSM850	0.4862	--	0.4862
Left side	GSM850	0.3816	0.0655	0.4471
Back	GSM1900	0.5272	0.1061	0.6333
Front	GSM1900	0.7551	0.0954	0.8505
Top side	GSM1900	--	0.0577	0.0577
Bottom side	GSM1900	1.0603	--	**1.0603**
Right side	GSM1900	0.3291	--	0.3291
Left side	GSM1900	0.1549	0.0655	0.2204
Back	WCDMA Band 2	0.5026	0.1061	0.6087
Front	WCDMA Band 2	0.6883	0.0954	0.7837
Top side	WCDMA Band 2	--	0.0577	0.0577
Bottom side	WCDMA Band 2	0.9311	--	0.9311
Right side	WCDMA Band 2	0.3284	--	0.3284
Left side	WCDMA Band 2	0.1434	0.0655	0.2089
Back	WCDMA Band 5	0.3110	0.1061	0.4171
Front	WCDMA Band 5	0.2538	0.0954	0.3492
Top side	WCDMA Band 5	--	0.0577	0.0577
Bottom side	WCDMA Band 5	0.1635	--	0.1635
Right side	WCDMA Band 5	0.2855	--	0.2855
Left side	WCDMA Band 5	0.2363	0.0655	0.3018
Back	LTE Band 4	0.5781	0.1061	0.6842
Front	LTE Band 4	0.7936	0.0954	0.889
Top side	LTE Band 4	--	0.0577	0.0577
Bottom side	LTE Band 4	0.9513	--	0.9513
Right side	LTE Band 4	0.1817	--	0.1817
Left side	LTE Band 4	0.0860	0.0655	0.1515
Back	LTE Band 7	0.1312	0.1061	0.2373
Front	LTE Band 7	0.0830	0.0954	0.1784
Top side	LTE Band 7	--	0.0577	0.0577
Bottom side	LTE Band 7	0.0214	--	0.0214
Right side	LTE Band 7	0.0027	--	0.0027
Left side	LTE Band 7	0.0448	0.0655	0.1103

WWAN and Bluetooth

	WWAN		Bluetooth	Summed SAR (W/kg)
Position	Band	Scaled SAR (W/kg)	Scaled SAR (W/kg)	
Back	GSM850	0.5235	0.0185	0.542
Front	GSM850	0.4216	0.0185	0.4401
Top side	GSM850	--	0.0185	0.0185
Bottom side	GSM850	0.2770	0.0185	0.2955
Right side	GSM850	0.4862	0.0185	0.5047
Left side	GSM850	0.3816	0.0185	0.4001
Back	GSM1900	0.5272	0.0185	0.5457
Front	GSM1900	0.7551	0.0185	0.7736
Top side	GSM1900	--	0.0185	0.0185
Bottom side	GSM1900	1.0603	0.0185	**1.0788**
Right side	GSM1900	0.3291	0.0185	0.3476
Left side	GSM1900	0.1549	0.0185	0.1734
Back	WCDMA Band 2	0.5026	0.0185	0.5211
Front	WCDMA Band 2	0.6883	0.0185	0.7068
Top side	WCDMA Band 2	--	0.0185	0.0185
Bottom side	WCDMA Band 2	0.9311	0.0185	0.9496
Right side	WCDMA Band 2	0.3284	0.0185	0.3469
Left side	WCDMA Band 2	0.1434	0.0185	0.1619
Back	WCDMA Band 5	0.3110	0.0185	0.3295
Front	WCDMA Band 5	0.2538	0.0185	0.2723
Top side	WCDMA Band 5	--	0.0185	0.0185
Bottom side	WCDMA Band 5	0.1635	0.0185	0.182
Right side	WCDMA Band 5	0.2855	0.0185	0.304
Left side	WCDMA Band 5	0.2363	0.0185	0.2548
Back	LTE Band 4	0.5781	0.0185	0.5966
Front	LTE Band 4	0.7936	0.0185	0.8121
Top side	LTE Band 4	--	0.0185	0.0185
Bottom side	LTE Band 4	0.9513	0.0185	0.9698
Right side	LTE Band 4	0.1817	0.0185	0.2002
Left side	LTE Band 4	0.0860	0.0185	0.1045
Back	LTE Band 7	0.1312	0.0185	0.1497
Front	LTE Band 7	0.0830	0.0185	0.1015
Top side	LTE Band 7	--	0.0185	0.0185
Bottom side	LTE Band 7	0.0214	0.0185	0.0399
Right side	LTE Band 7	0.0027	0.0185	0.0212
Left side	LTE Band 7	0.0448	0.0185	0.0633

Remark: For BT the 1g SAR value is not being captured by the measurement system, the 1g-SAR value is conservatively used for simultaneous transmission analysis.

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	1	7.00	7.00	∝
Axial Isotropy	E.2.2	2.5	R	√3	(1_Cp)^1/2	(1_Cp)^1/2	1.02	1.02	∝
Hemispherical Isotropy	E.2.2	4.0	R	√3	(Cp)^1/2	(Cp)^1/2	1.63	1.63	∝
Boundary effect	E.2.3	1.0	R	√3	1	1	0.58	0.58	∝
Linearity	E.2.4	5.0	R	√3	1	1	2.89	2.89	∝
System detection limits	E.2.5	1.0	R	√3	1	1	0.58	0.58	∝
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	∝
Reponse Time	E.2.7	3.0	R	√3	1	1	1.73	1.73	∝
Integration Time	E.2.8	2.0	R	√3	1	1	1.15	1.15	∝
RF ambient Conditions	E.6.1	3.0	R	√3	1	1	1.73	1.73	∝
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	√3	1	1	1.15	1.15	∝
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	√3	1	1	0.03	0.03	∝
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	5.0	R	√3	1	1	2.89	2.89	∝
Test Sample Related									
Test sample positioning	E.4.2.1	0.03	N	1	1	1	0.03	0.03	N−1
Device Holder Uncertainty	E.4.1.1	5.00	N	1	1	1	5.00	5.00	
Output power Variation - SAR drift measurement	6.6.2	12.02	R	√3	1	1	6.94	6.94	∝
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	√3	1	1	0.03	0.03	∝
Liquid conductivity - deviation from target value	E.3.2	5.00	R	√3	0.64	0.43	1.85	1.24	
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	
Liquid permittivity - deviation from target value	E.3.2	0.37	R	√3	0.6	0.49	0.13	0.10	
Liquid permittivity -	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	M

measurement uncertainty									
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	1	7.00	7.00	∝
Axial Isotropy	E.2.2	2.5	R	√3	(1_Cp)^1/2	(1_Cp)^1/2	1.02	1.02	∝
Hemispherical Isotropy	E.2.2	4.0	R	√3	(Cp)^1/2	(Cp)^1/2	1.63	1.63	∝
Boundary effect	E.2.3	1.0	R	√3	1	1	0.58	0.58	∝
Linearity	E.2.4	5.0	R	√3	1	1	2.89	2.89	∝
System detection limits	E.2.5	1.0	R	√3	1	1	0.58	0.58	∝
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	∝
Reponse Time	E.2.7	3.0	R	√3	1	1	1.73	1.73	∝
Integration Time	E.2.8	2.0	R	√3	1	1	1.15	1.15	∝
RF ambient Conditions	E.6.1	3.0	R	√3	1	1	1.73	1.73	∝
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	√3	1	1	1.15	1.15	∝
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	√3	1	1	0.03	0.03	∝
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	5.0	R	√3	1	1	2.89	2.89	∝
Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.00	N	√3	1	1	0.58	0.58	N−1
Input power and SAR drift measurement	8,6.6.2	12.02	R	√3	1	1	6.94	6.94	∝
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	√3	1	1	0.03	0.03	∝
Liquid conductivity - deviation from target value	E.3.2	5.00	R	√3	0.64	0.43	1.85	1.24	

Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	
Liquid permittivity - deviation from target value	E.3.2	0.37	R	√3	0.6	0.49	0.13	0.10	
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	M
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

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 10/10/2015

Measurement duration: 7 minutes 21 seconds

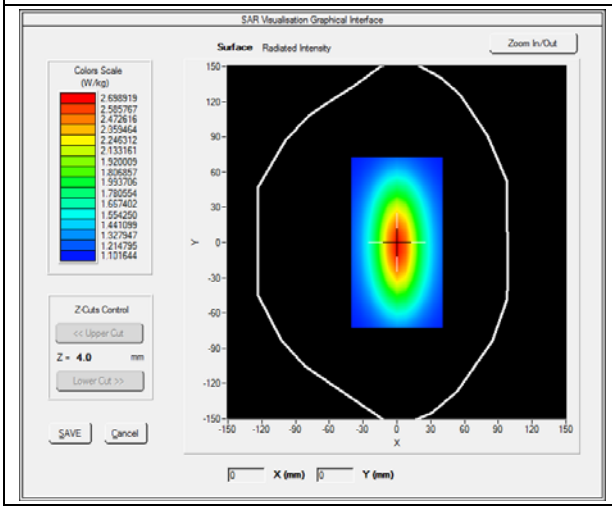
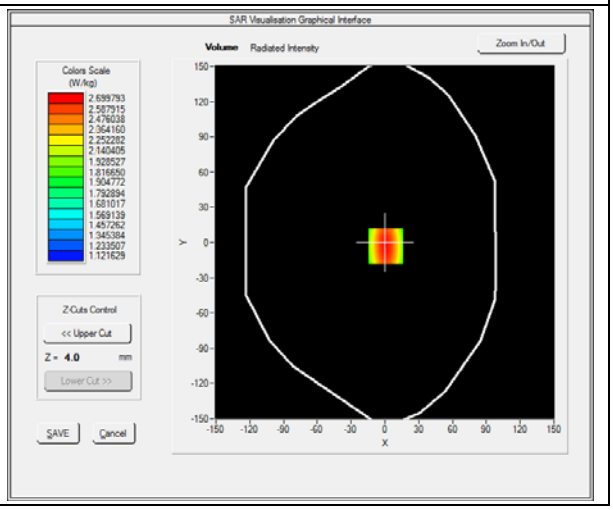
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.93; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
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)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	0.038437
Ambient Temperature	21.1
Liquid Temperature	21.3

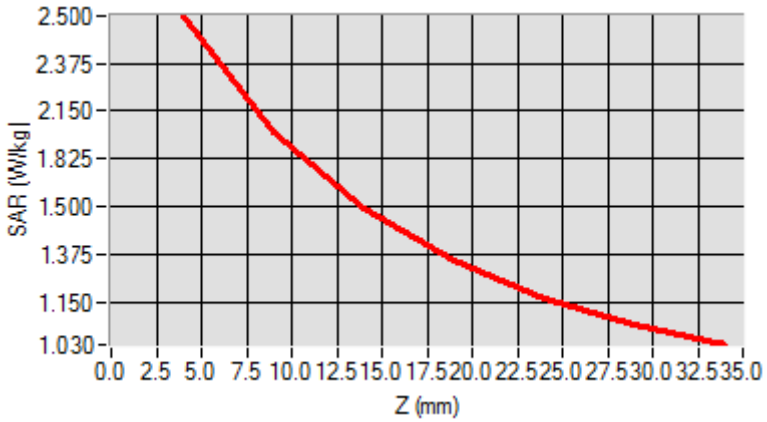
SURFACE SAR	VOLUME SAR
	

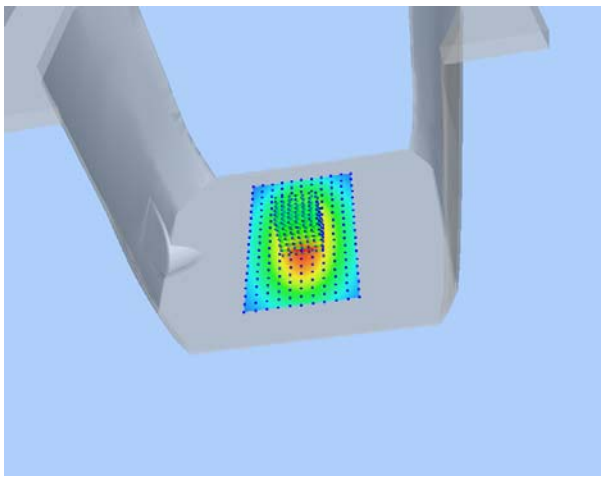
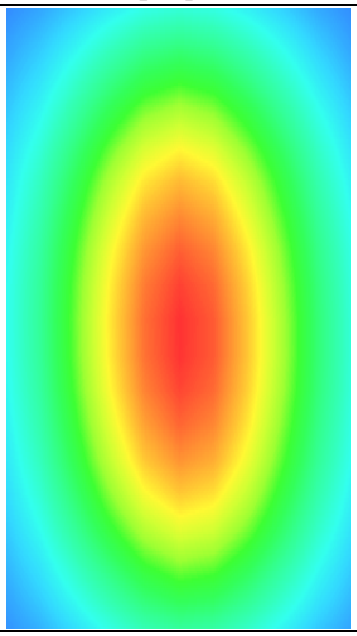
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.129489
SAR 1g (W/Kg)	2.411253

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 2

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 10/10/2015

Measurement duration: 12 minutes 21 seconds

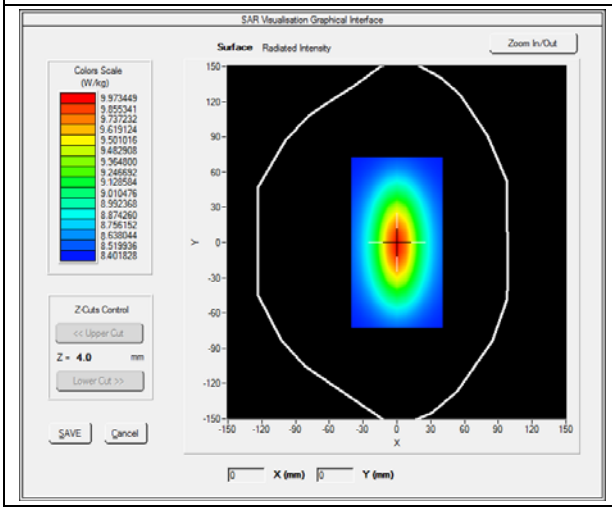
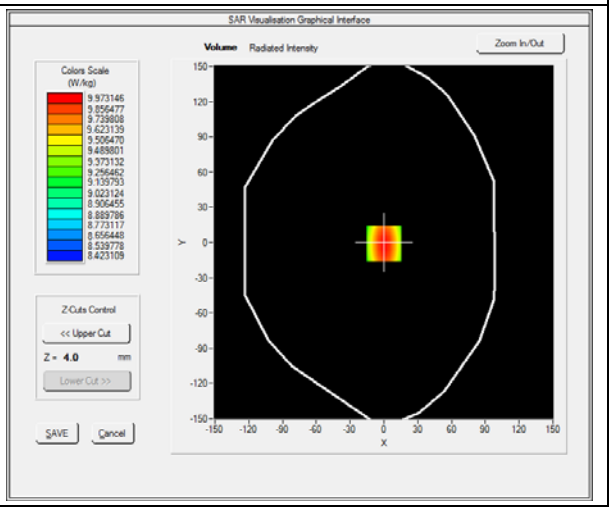
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 5.84; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
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)	39.024890
Conductivity (S/m)	1.371250
Power Variation (%)	1.401232
Ambient Temperature	21.1
Liquid Temperature	21.2

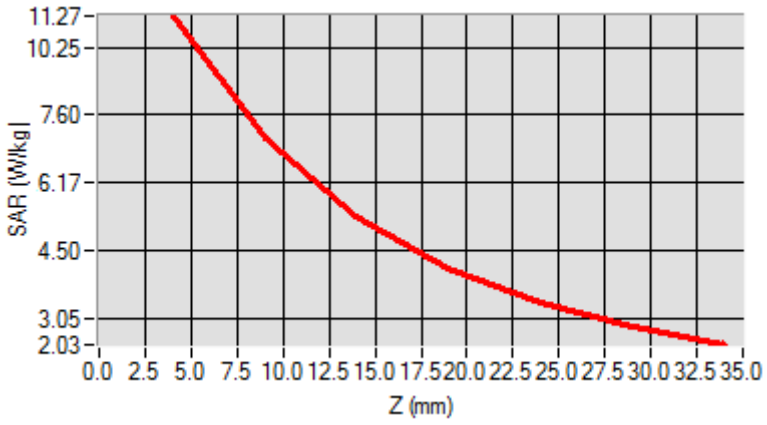
SURFACE SAR	VOLUME SAR
	

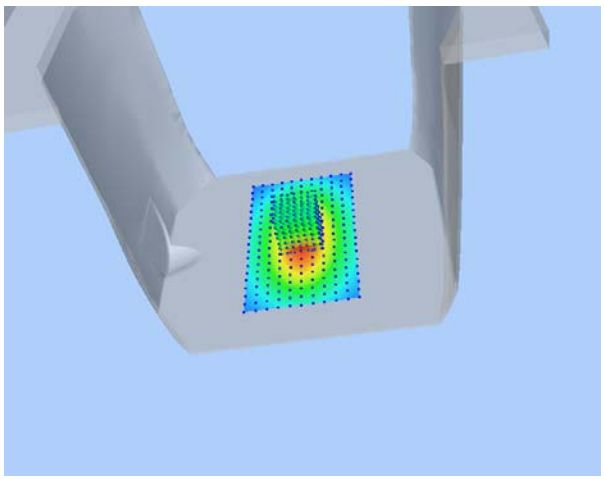
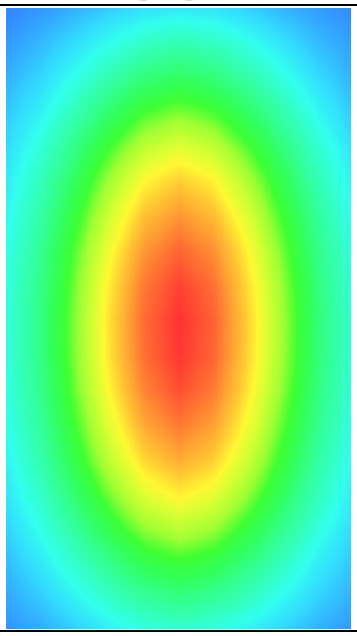
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.171252
SAR 1g (W/Kg)	9.611250

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 3

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 10/10/2015

Measurement duration: 12 minutes 21 seconds

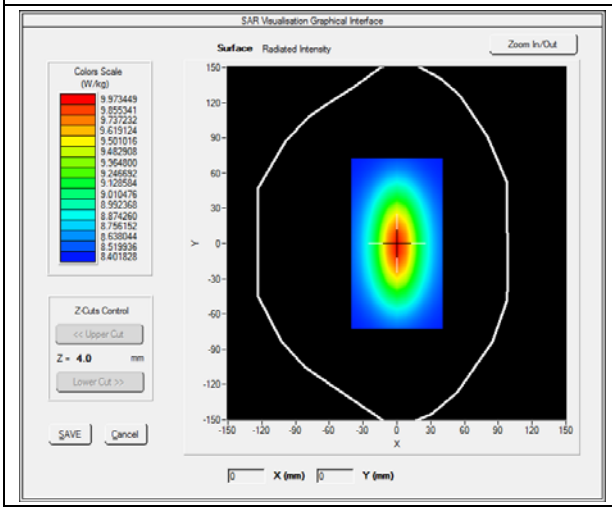
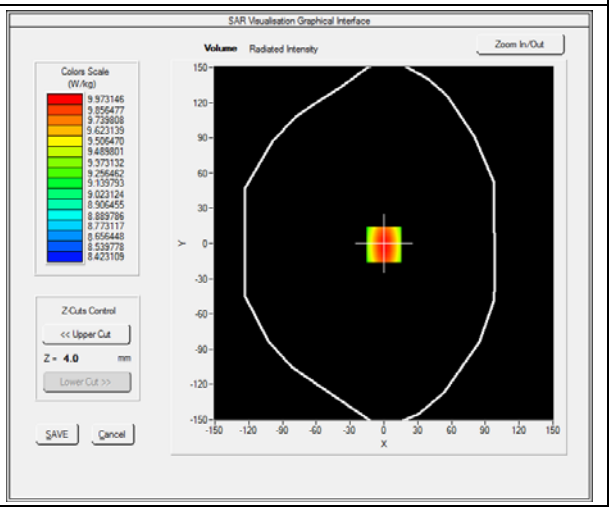
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.35; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.022540
Ambient Temperature	21.1
Liquid Temperature	21.3

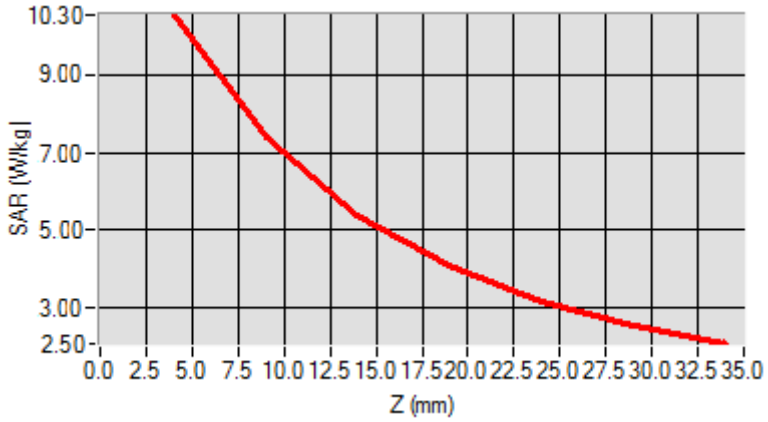
SURFACE SAR	VOLUME SAR
	

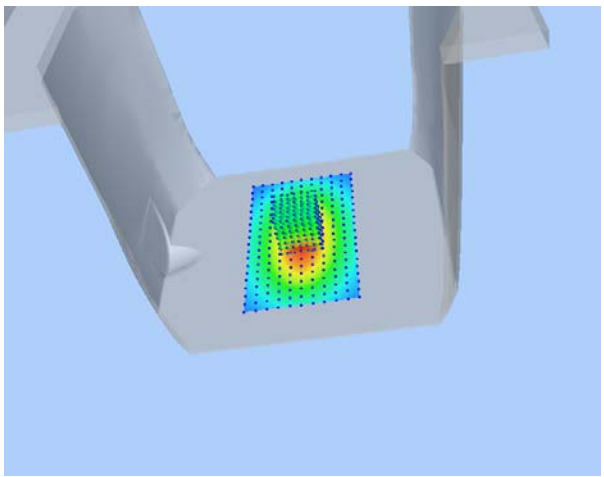
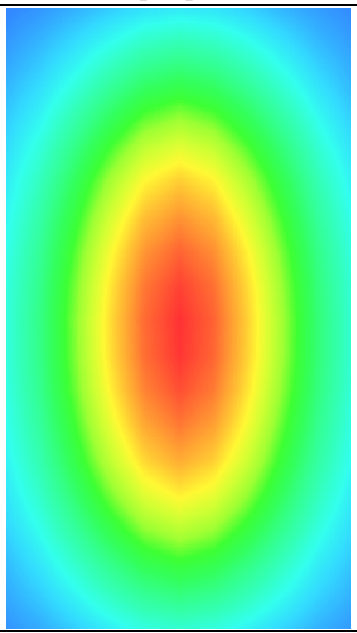
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	7.174526
SAR 1g (W/Kg)	9.913214

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.2354	6.8400	5.0121	4.1189	3.0522	2.8424



3D screen shot	Hot spot position
	

MEASUREMENT 4

For Head Liquid

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 10/10/2015

Measurement duration: 12 minutes 21 seconds

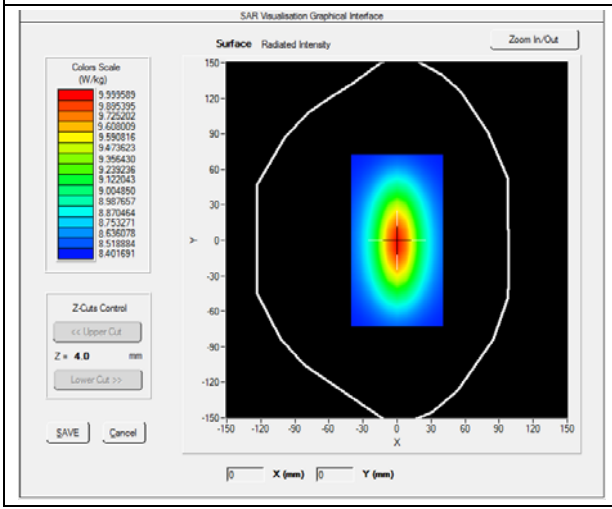
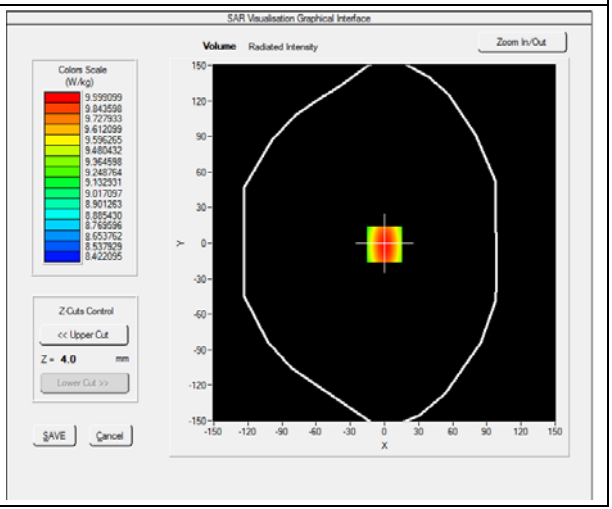
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 5.64; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	38.153660
Conductivity (S/m)	1.740236
Power Variation (%)	1.141452
Ambient Temperature	21.1
Liquid Temperature	21.2

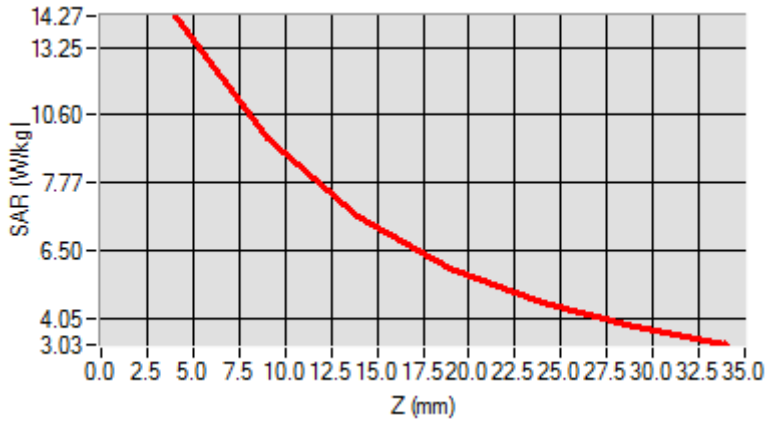
SURFACE SAR	VOLUME SAR
	

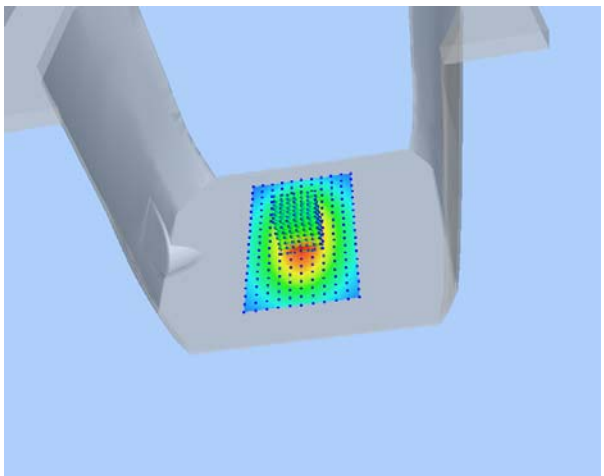
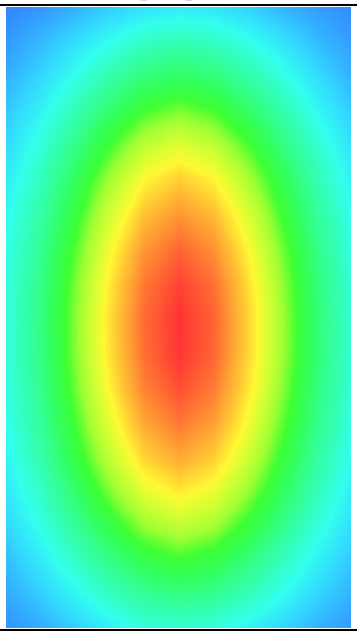
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**8.020427**
SAR 1g (W/Kg)	**13.452457**

Z Axis Scan

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**
SAR (W/Kg)	**0.0000**	**14.1034**	**12.0012**	**10.2624**	**7.4715**	**5.9022**	**4.5114**



3D screen shot	**Hot spot position**
	

MEASUREMENT 5

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 10/10/2015

Measurement duration: 12 minutes 21 seconds

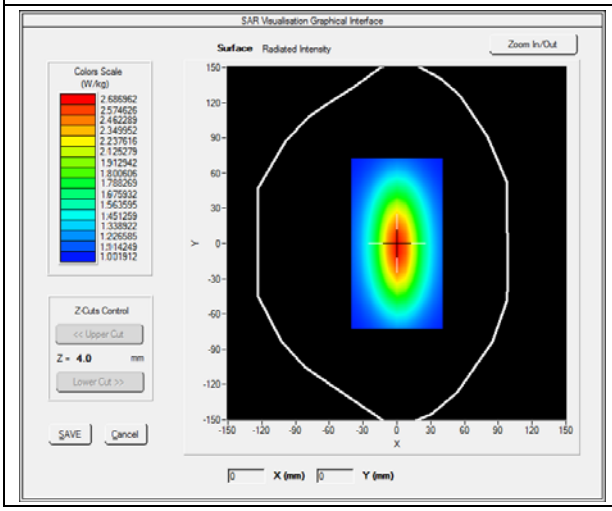
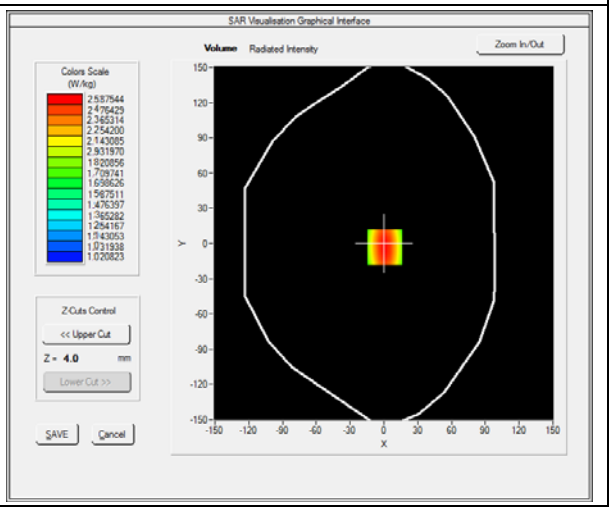
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 7.13; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
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)	54.851214
Conductivity (S/m)	0.951454
Power Variation (%)	0.901472
Ambient Temperature	21.1
Liquid Temperature	21.3

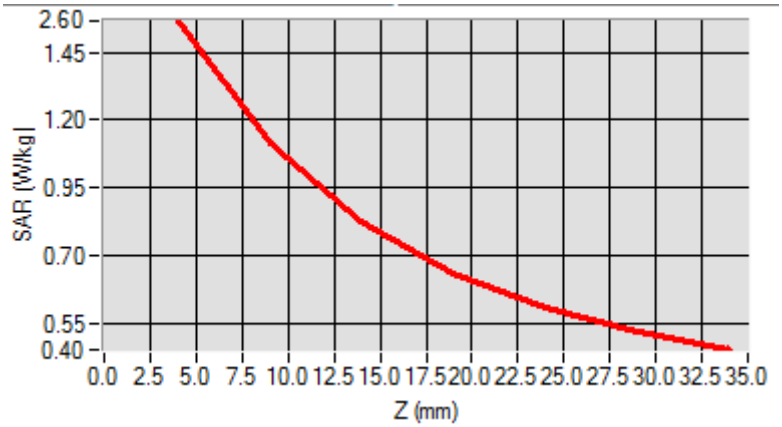
SURFACE SAR	VOLUME SAR
	

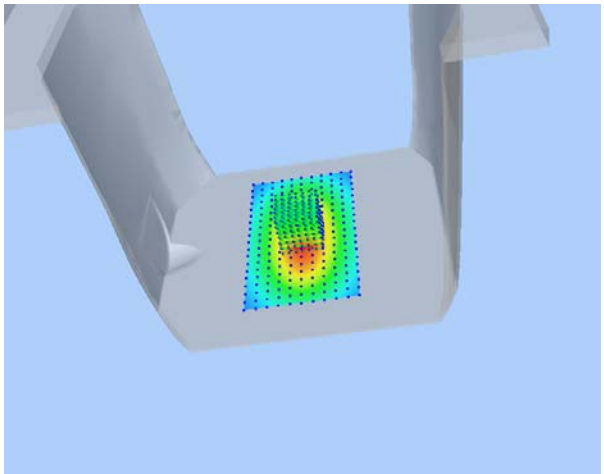
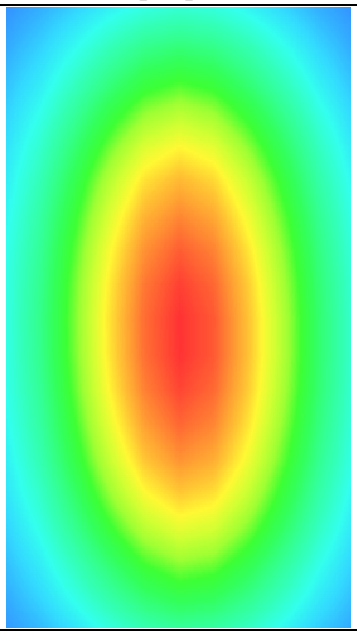
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	1.028956
SAR 1g (W/Kg)	2.354211

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.5789	1.1300	0.8795	0.5940	0.5011	0.5100



3D screen shot	Hot spot position
	

MEASUREMENT 6

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 10/10/2015

Measurement duration: 12 minutes 21 seconds

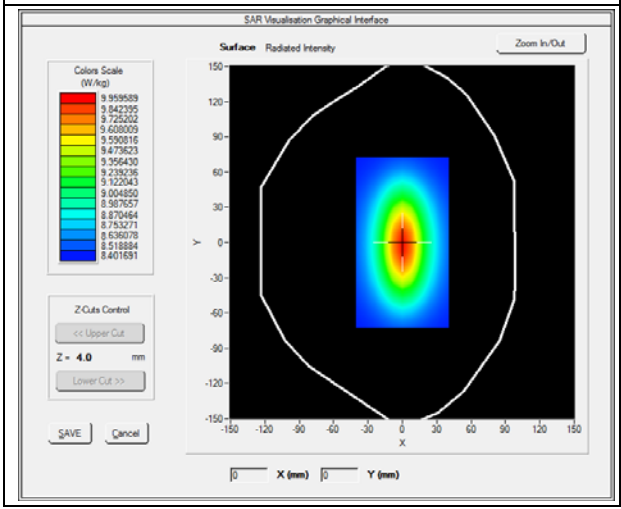
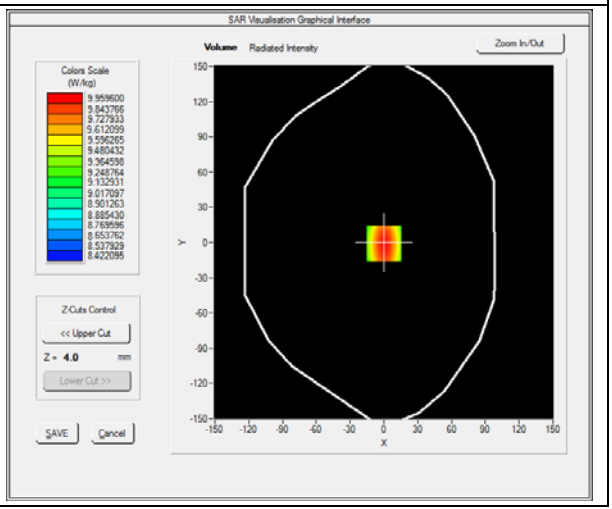
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.06; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
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)	51.224510
Conductivity (S/m)	1.461261
Power Variation (%)	0.845690
Ambient Temperature	21.1
Liquid Temperature	21.2

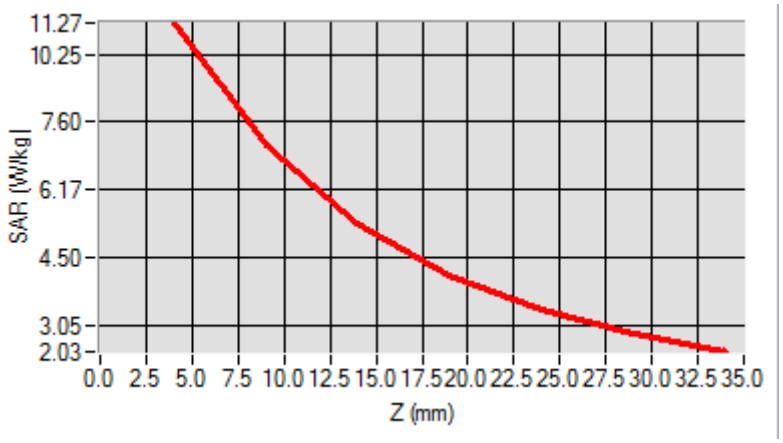
SURFACE SAR	VOLUME SAR
	

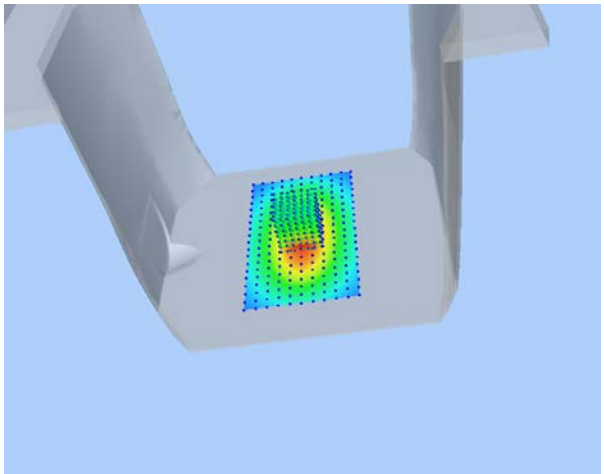
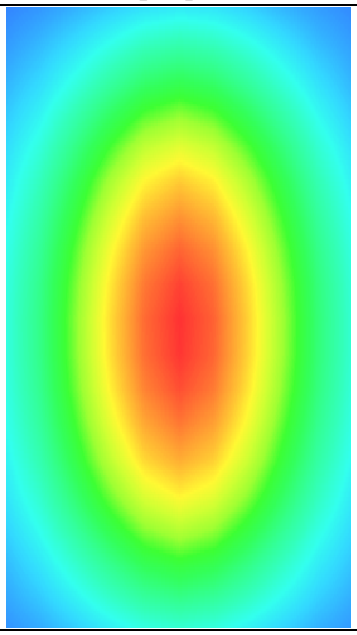
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	**5.221202**
SAR 1g (W/Kg)	**9.582560**

Z Axis Scan

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**	**24.00**	**29.00**
SAR (W/Kg)	**0.0000**	**11.2425**	**9.4123**	**8.0345**	**6.9125**	**6.3092**	**3.9460**



3D screen shot	**Hot spot position**
	

MEASUREMENT 7

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 10/10/2015

Measurement duration: 12 minutes 21 seconds

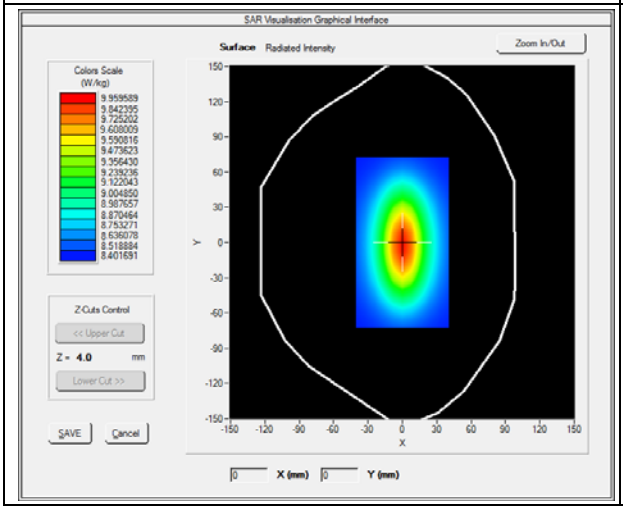
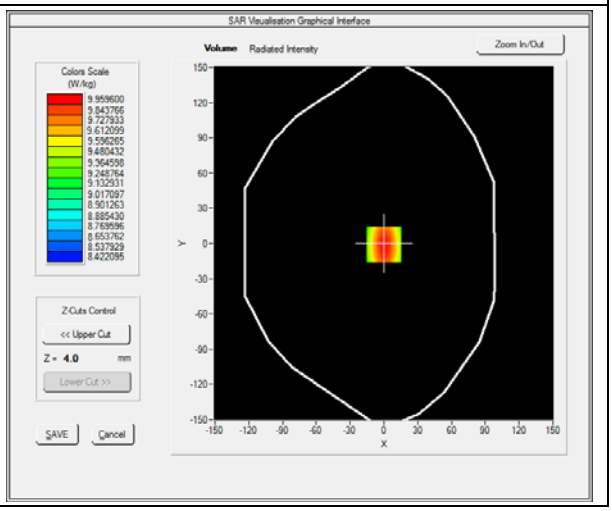
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	1900.000000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	0.541872
Ambient Temperature	21.1
Liquid Temperature	21.3

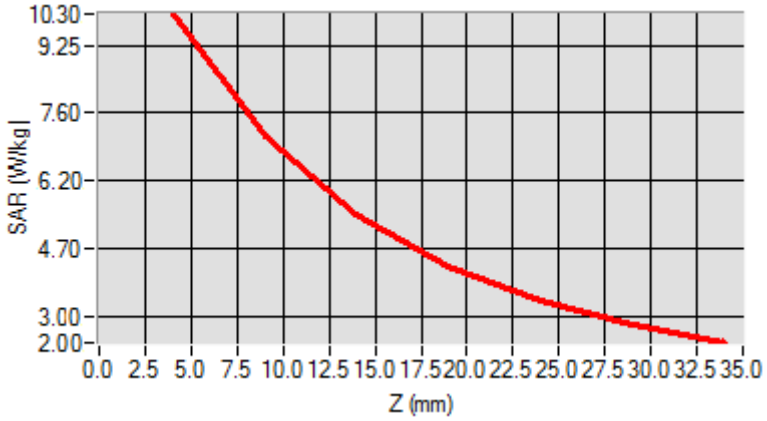
SURFACE SAR	VOLUME SAR
	

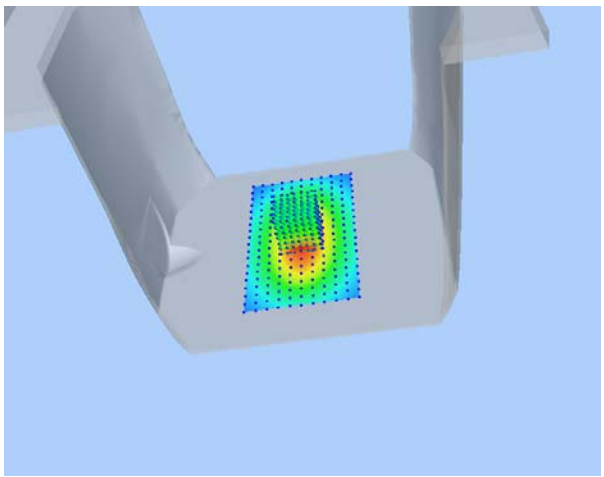
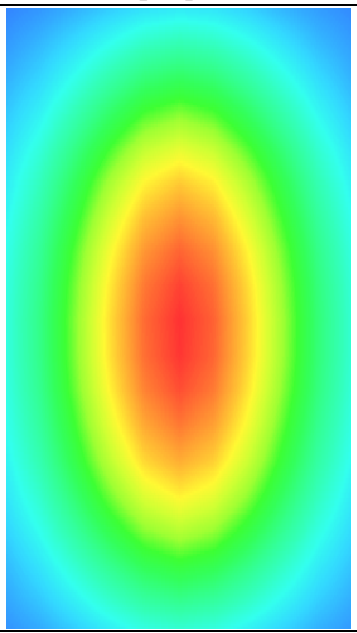
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	5.134651
SAR 1g (W/Kg)	9.781550

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.2031	6.43001	4.9011	4.5325	3.1201	2.5024



3D screen shot	Hot spot position
	

MEASUREMENT 8

For Body Liquid

Type: Validation measurement (Fast, 75.00 %)

Date of measurement: 10/10/2015

Measurement duration: 12 minutes 21 seconds

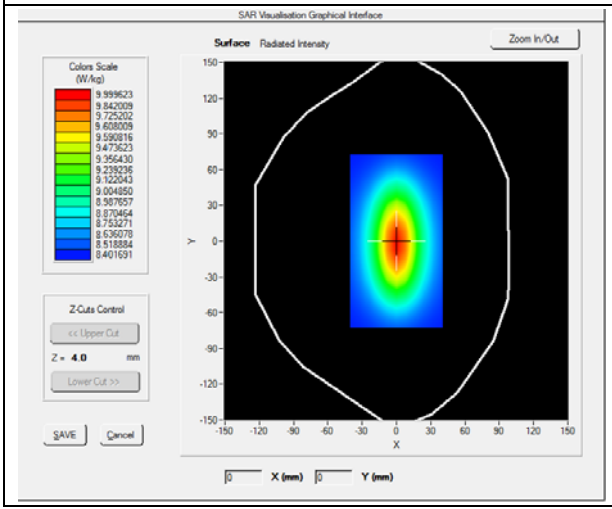
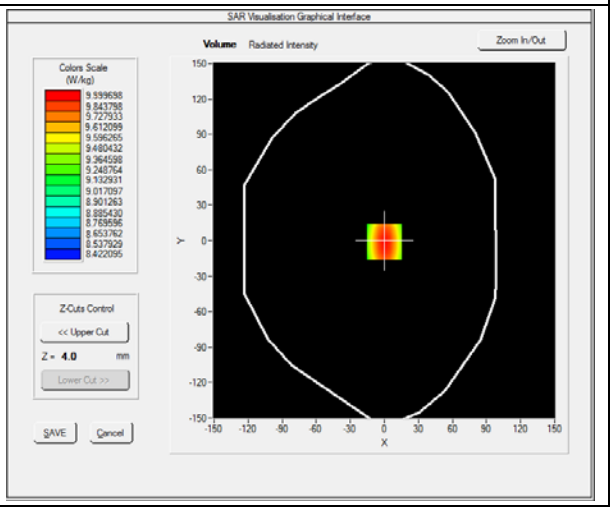
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 5.80; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	dx=8mm dy=8mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	2450.000000
Relative Permittivity (real part)	52.0102121
Conductivity (S/m)	1.910255
Power Variation (%)	1.369745
Ambient Temperature	21.1
Liquid Temperature	21.2

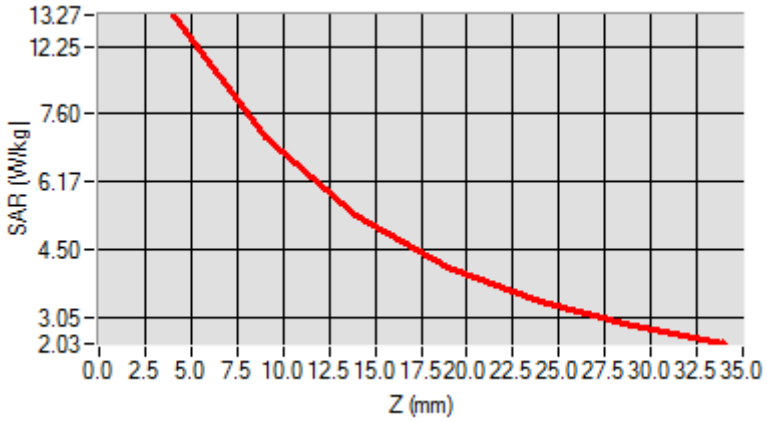
SURFACE SAR	VOLUME SAR
	

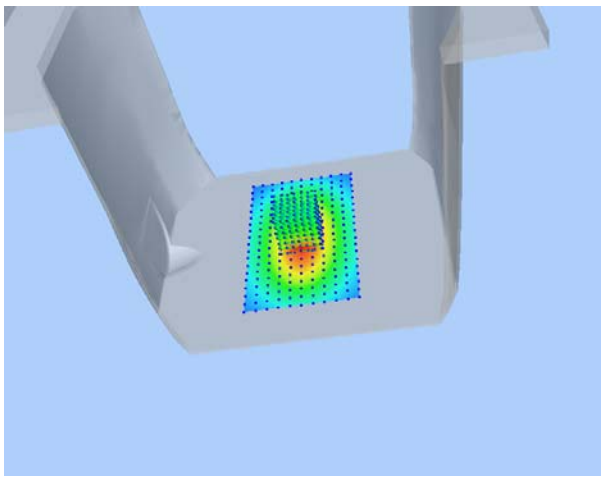
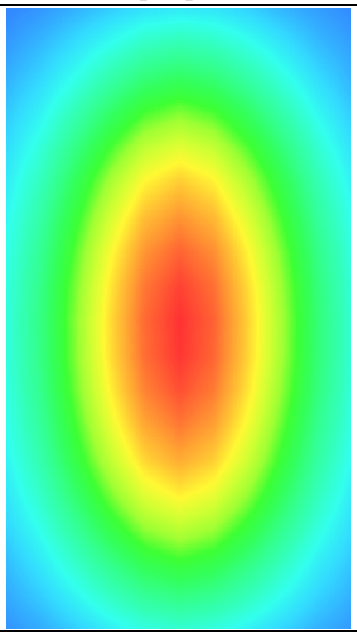
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	7.119522
SAR 1g (W/Kg)	12.592360

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	13.3911	11.7951	9.2945	8.5400	6.3712	4.6225



3D screen shot	Hot spot position
	

Annex B. Plots of SAR Measurement

TYPE	BAND	PARAMETERS
Phone	**GSM850**	Measurement 1:Right Head with Cheek device position on Middle Channel in GSM mode
Phone	**GSM850**	Measurement 2: Right Head with Tilt device position on Middle Channel in GSM mode
Phone	**GSM850**	Measurement 3: Left Head with Cheek device position on Middle Channel in GSM mode
Phone	**GSM850**	Measurement 4: Left Head with Tilt device position on Middle Channel in GSM mode
Phone	**GSM850**	Measurement 5: Flat Plane with Back(Body-worn) device position on Middle Channel in GSM mode
Phone	**GSM850**	Measurement 6: Flat Plane with Front(Body-worn) device position on Middle Channel in GSM mode
Phone	**GPRS850_4TX**	Measurement 7: Flat Plane with Back device position on Middle Channel in GPRS mode
Phone	**GPRS850_4TX**	Measurement 8: Flat Plane with Front device position on Middle Channel in GPRS mode
Phone	**GPRS850_4TX**	Measurement 9: Flat Plane with Bottom side device position on Middle Channel in GPRS mode
Phone	**GPRS850_4TX**	Measurement 10: Flat Plane with Right side device position on Middle Channel in GPRS mode
Phone	**GPRS850_4TX**	Measurement 11: Flat Plane with Left side device position on Middle Channel in GPRS mode
Phone	**GSM1900**	Measurement 12: Right Head with Cheek device position on Middle Channel in GSM mode
Phone	**GSM1900**	Measurement 13: Right Head with Tilt device position on Middle Channel in GSM mode
Phone	**GSM1900**	Measurement 14: Left Head with Cheek device position on Middle Channel in GSM mode
Phone	**GSM1900**	Measurement 15: Left Head with Tilt device position on Middle Channel in GSM mode
Phone	**GSM1900**	Measurement 16: Flat Plane with Back(Body-worn) device position on Middle Channel in GSM mode
Phone	**GSM1900**	Measurement 17: Flat Plane with Front(Body-worn) device position on Middle Channel in GSM mode
Phone	**GPRS1900_4TX**	Measurement 18: Flat Plane with Back device position on High Channel in GPRS mode
Phone	**GPRS1900_4TX**	Measurement 19: Flat Plane with Front device position on High Channel in GPRS mode

Phone	**GPRS1900_4TX**	Measurement 20: Flat Plane with Bottom side device position on High Channel in GPRS mode
Phone	**GPRS1900_4TX**	Measurement 21: Flat Plane with Bottom side device position on Low Channel in GPRS mode
Phone	**GPRS1900_4TX**	Measurement 22: Flat Plane with Bottom side device position on Middle Channel in GPRS mode
Phone	**GPRS1900_4TX**	Measurement 23: Flat Plane with Right side device position on High Channel in GPRS mode
Phone	**GPRS1900_4TX**	Measurement 24: Flat Plane with Left side device position on High Channel in GPRS mode
Phone	**WCDMA1900_RMC**	Measurement 25: Right Head with Cheek device position on High Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 26: Right Head with Tilt device position on High Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 27: Left Head with Cheek device position on High Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 28: Left Head with Tilt device position on High Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 29: Flat Plane with Back device position on High Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 30: Flat Plane with Front device position on High Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 31: Flat Plane with Bottom side device position on High Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 32: Flat Plane with Bottom side device position on Low Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 33: Flat Plane with Bottom side device position on Middle Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 34: Flat Plane with Right side device position on High Channel in WCDMA mode
Phone	**WCDMA1900_RMC**	Measurement 35: Flat Plane with Left side device position on High Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 36: Right Head with Cheek device position on Middle Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 37: Right Head with Tilt device position on Middle Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 38: Left Head with Cheek device position on Middle Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 39: Left Head with Tilt device position on Middle Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 40: Flat Plane with Back device position on Middle Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 41: Flat Plane with Front device position

		on Middle Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 42: Flat Plane with Bottom side device position on Middle Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 43: Flat Plane with Right side device position on Middle Channel in WCDMA mode
Phone	**WCDMA850_RMC**	Measurement 44: Flat Plane with Left side device position on Middle Channel in WCDMA mode
Phone	**LTE Band 4_RMC**	Measurement 45: Right Head with Cheek device position on High Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 46: Right Head with Tilt device position on High Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 47: Left Head with Cheek device position on High Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 48: Left Head with Tilt device position on High Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 49: Flat Plane with Back device position on High Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 50: Flat Plane with Front device position on High Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 51: Flat Plane with Bottom side device position on High Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 52: Flat Plane with Bottom side device position on Low Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 53: Flat Plane with Bottom side device position on Middle Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 54: Flat Plane with Right side device position on High Channel in LTE mode
Phone	**LTE Band 4_RMC**	Measurement 55: Flat Plane with Left side device position on High Channel in LTE mode
Phone	**LTE Band 7_RMC**	Measurement 56: Right Head with Cheek device position on Low Channel in LTE mode
Phone	**LTE Band 7_RMC**	Measurement 57: Right Head with Tilt device position on Low Channel in LTE mode
Phone	**LTE Band 7_RMC**	Measurement 58: Left Head with Cheek device position on Low Channel in LTE mode
Phone	**LTE Band 7_RMC**	Measurement 59: Left Head with Tilt device position on Low Channel in LTE mode
Phone	**LTE Band 7_RMC**	Measurement 60: Flat Plane with Back device position on Low Channel in LTE mode
Phone	**LTE Band 7_RMC**	Measurement 61: Flat Plane with Front device position on Low Channel in LTE mode
Phone	**LTE Band 7_RMC**	Measurement 62: Flat Plane with Bottom side device position on Low Channel in LTE mode
Phone	**LTE Band 7_RMC**	Measurement 63: Flat Plane with Right side device

		position on Low Channel in LTE mode
Phone	**LTE Band 7_RMC**	Measurement 64: Flat Plane with Left side device position on Low Channel in LTE mode
Phone	**WiFi_802.11b**	Measurement 65: Right Head with Cheek device position on Middle Channel in 802.11b mode
Phone	**WiFi_802.11b**	Measurement 66: Right Head with Tilt device position on Middle Channel in 802.11b mode
Phone	**WiFi_802.11b**	Measurement 67: Left Head with Cheek device position on Middle Channel in 802.11b mode
Phone	**WiFi_802.11b**	Measurement 68: Left Head with Tilt device position on Middle Channel in 802.11b mode
Phone	**WiFi_802.11b**	Measurement 69: Flat Plane with Back side device position on Middle Channel in 802.11b mode
Phone	**WiFi_802.11b**	Measurement 70: Flat Plane with Front side device position on Middle Channel in 802.11b mode
Phone	**WiFi_802.11b**	Measurement 71: Flat Plane with Left side device position on Middle Channel in 802.11b mode
Phone	**WiFi_802.11b**	Measurement 72: Flat Plane with Top side device position on Middle Channel in 802.11b mode

MEASUREMENT 1

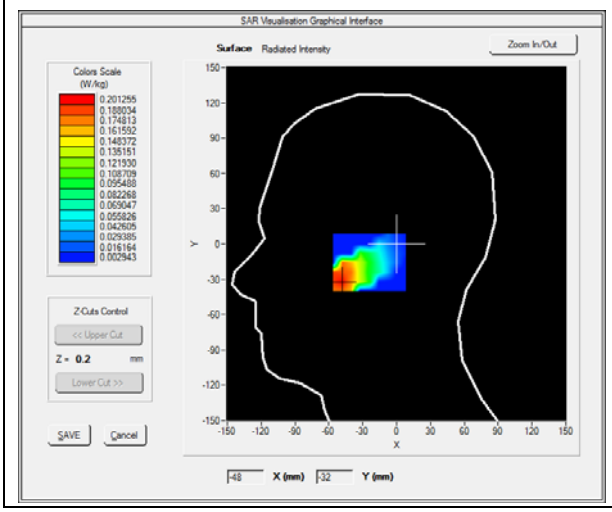
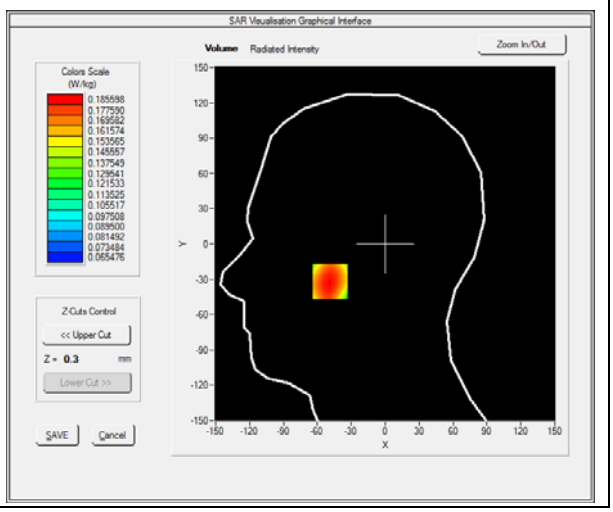
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.93; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

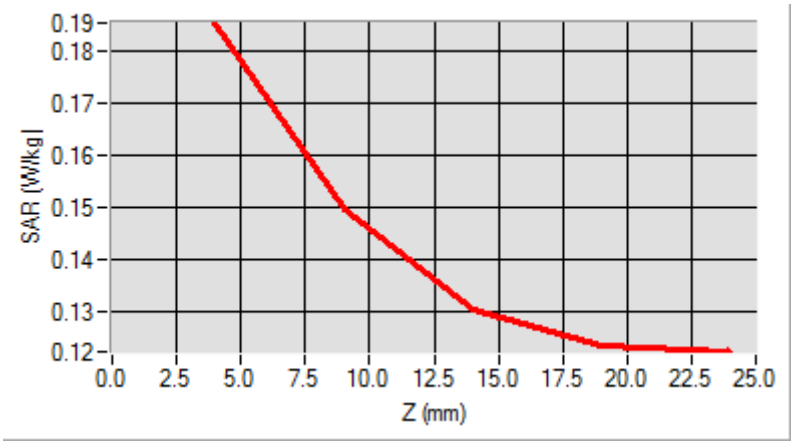
Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	1.564544
Ambient Temperature	21.1
Liquid Temperature	21.3

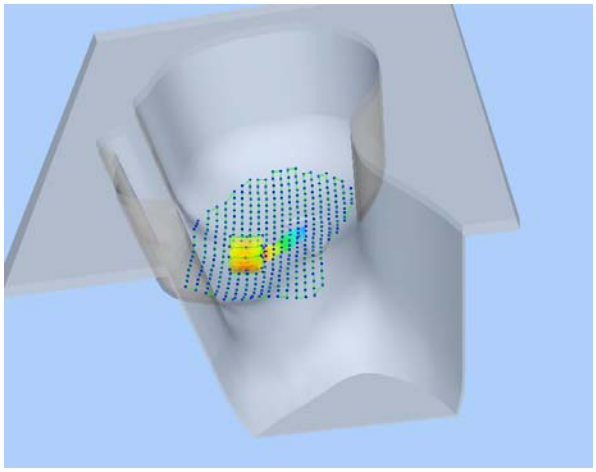
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-49.00, Y=-32.00

SAR 10g (W/Kg)	0.144727
SAR 1g (W/Kg)	0.180407

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1856	0.1495	0.1303	0.1233



3D screen shot	Hot spot position
	

MEASUREMENT 2

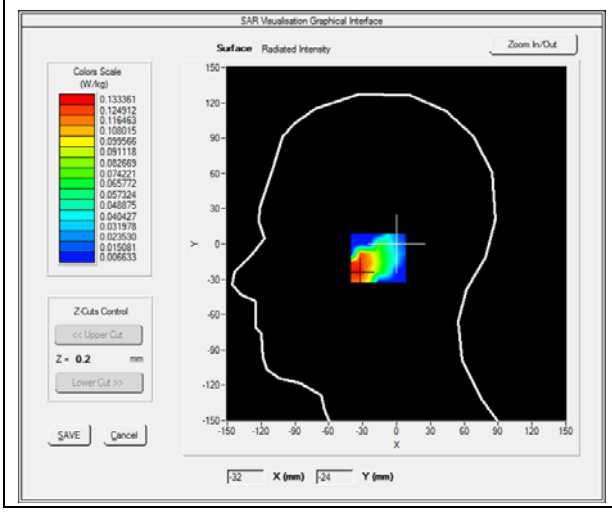
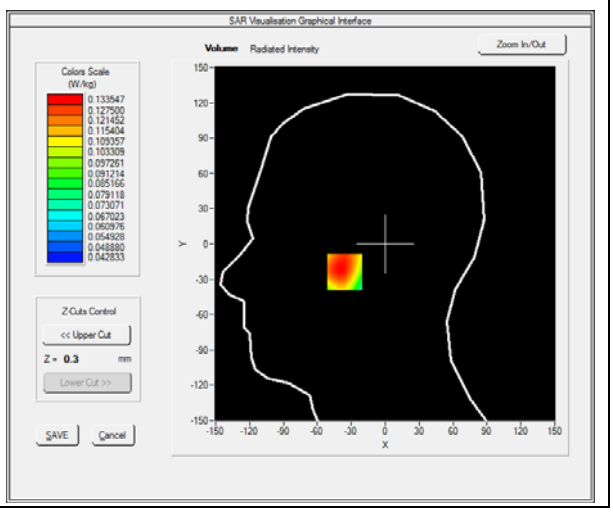
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.93; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

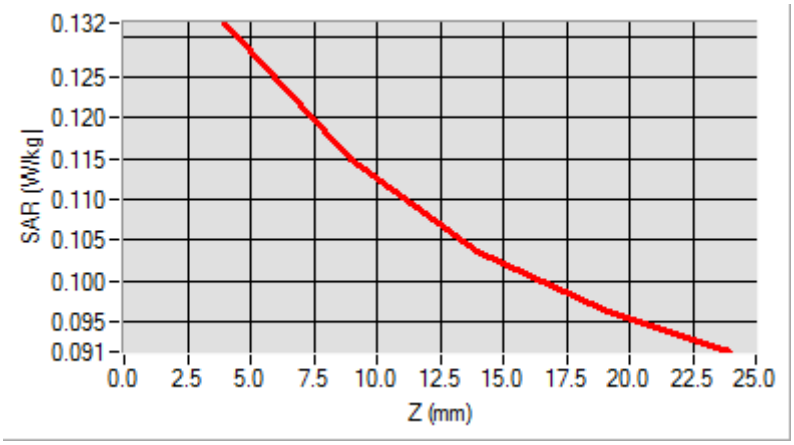
Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	2.533224
Ambient Temperature	21.1
Liquid Temperature	21.3

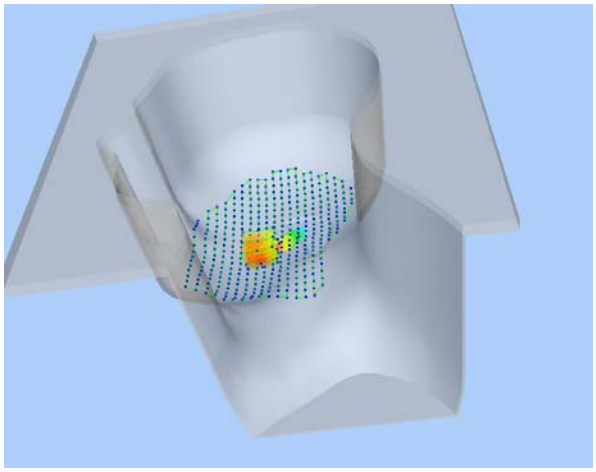
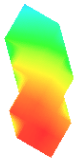
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-34.00, Y=-24.00

SAR 10g (W/Kg)	0.110256
SAR 1g (W/Kg)	0.130663

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1316	0.1149	0.1036	0.0965



3D screen shot	Hot spot position
	

MEASUREMENT 3

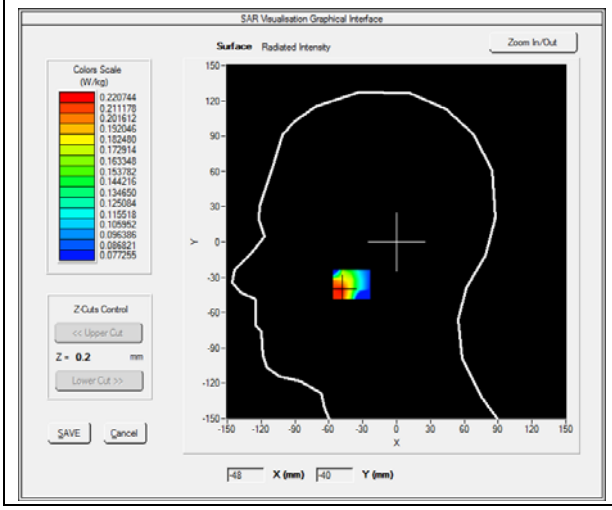
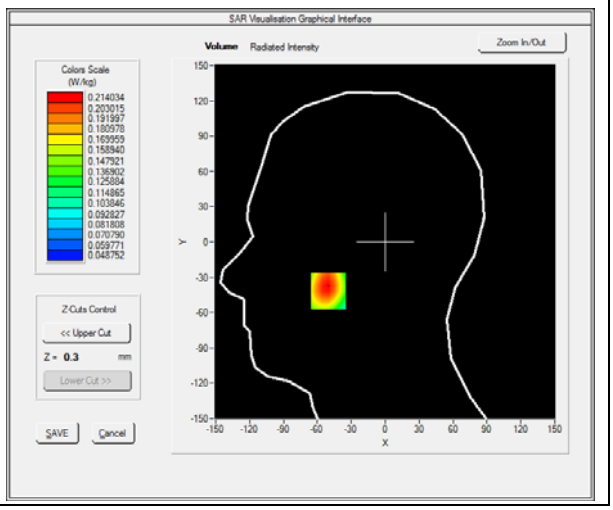
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.93; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

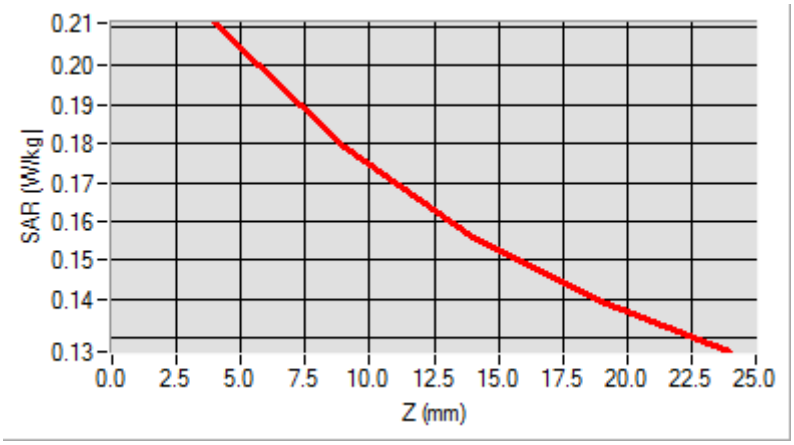
Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	1.144536
Ambient Temperature	21.1
Liquid Temperature	21.3

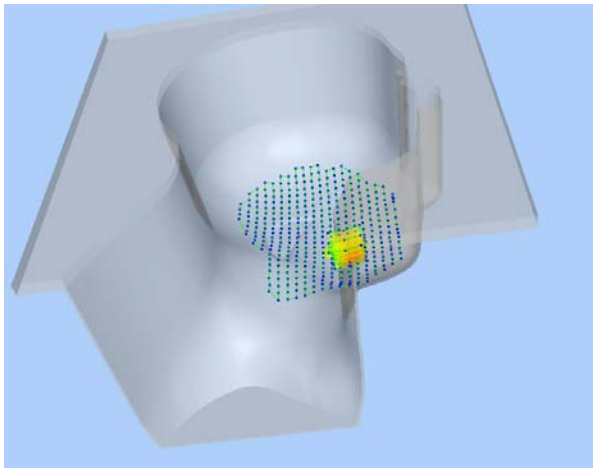
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-50.00, Y=-42.00

SAR 10g (W/Kg)	0.165350
SAR 1g (W/Kg)	0.209672

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2110	0.1791	0.1560	0.1395



3D screen shot	Hot spot position
	

MEASUREMENT 4

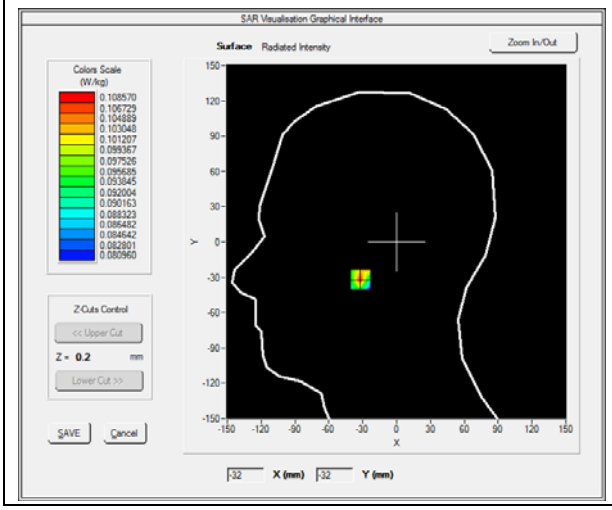
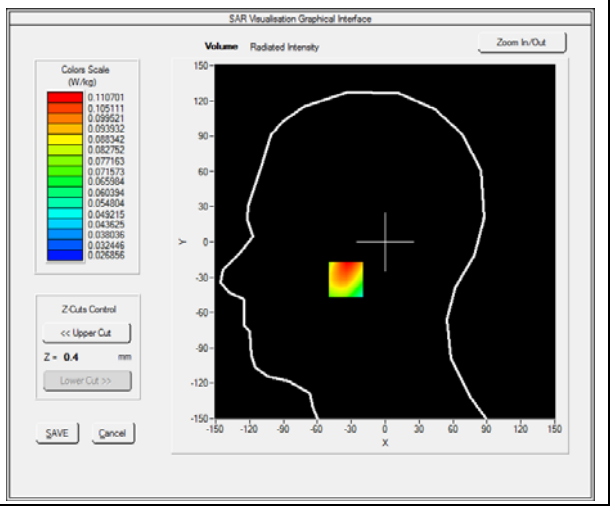
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.93; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

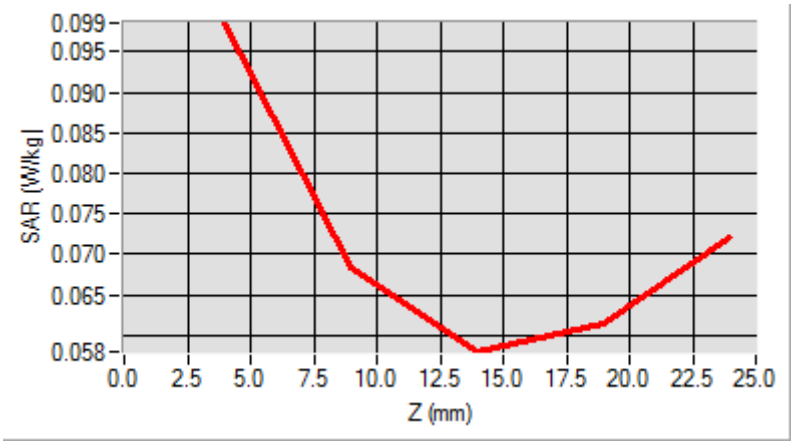
Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	1.045578
Ambient Temperature	21.1
Liquid Temperature	21.3

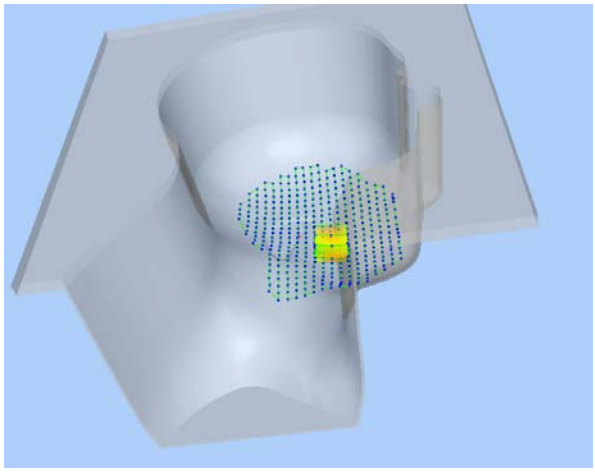
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-32.00, Y=-32.00

SAR 10g (W/Kg)	0.076183
SAR 1g (W/Kg)	0.105328

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0986	0.0683	0.0579	0.0613



3D screen shot	Hot spot position
	

MEASUREMENT 5

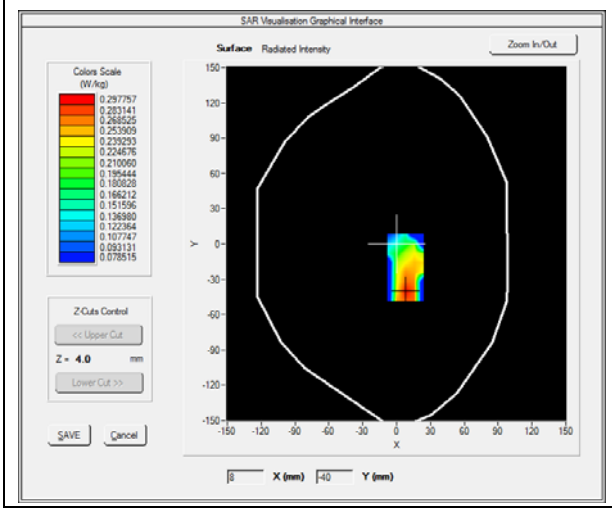
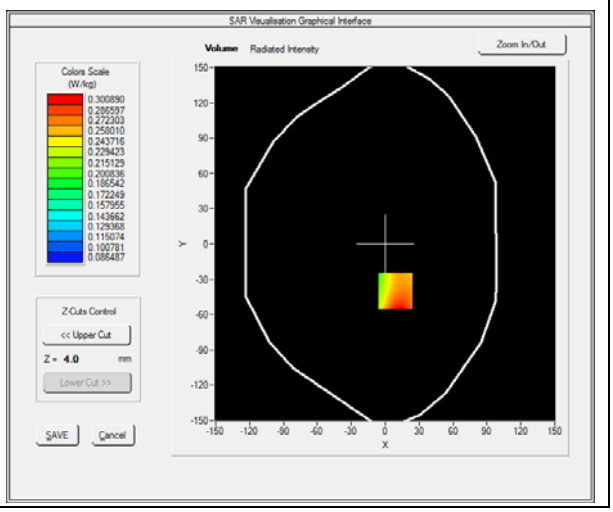
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 7.13; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back(Body-worn)
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

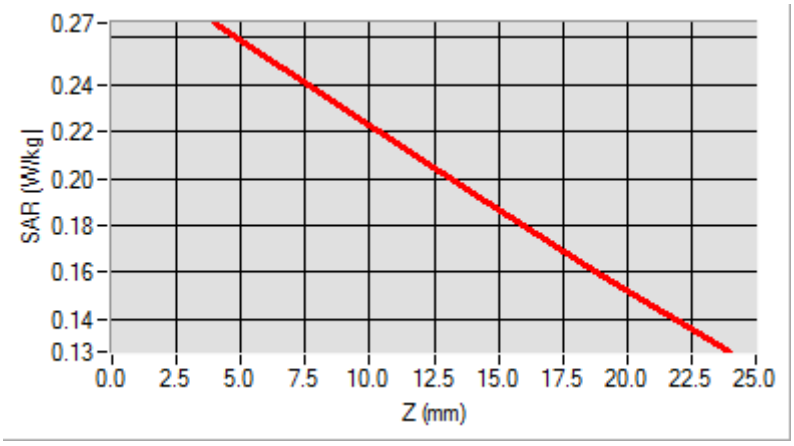
Frequency (MHz)	836.600000
Relative Permittivity (real part)	54.851214
Conductivity (S/m)	0.951454
Power Variation (%)	0.901472
Ambient Temperature	21.1
Liquid Temperature	21.3

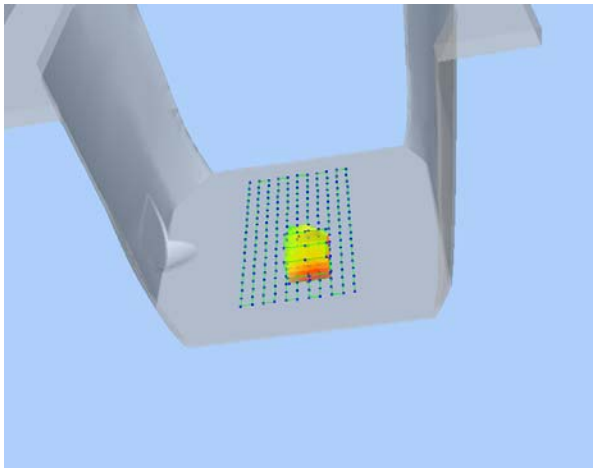
SURFACE SAR	VOLUME SAR
	

Maximum location: X=9.00, Y=-40.00

SAR 10g (W/Kg)	**0.261545**
SAR 1g (W/Kg)	**0.336994**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.0000**	**0.2664**	**0.2297**	**0.1934**	**0.1585**



3D screen shot	**Hot spot position**
	

MEASUREMENT 6

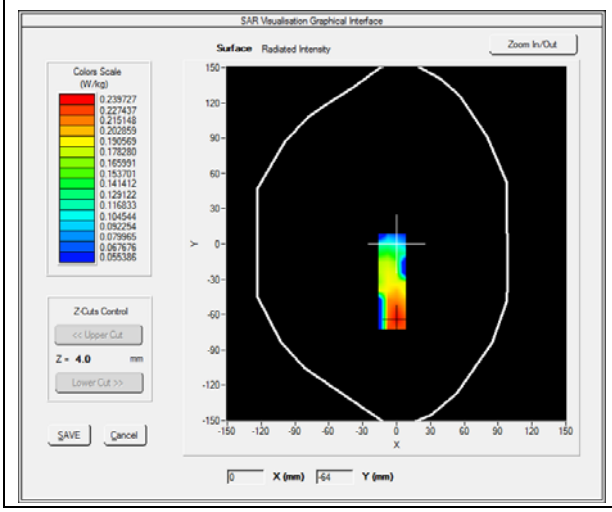
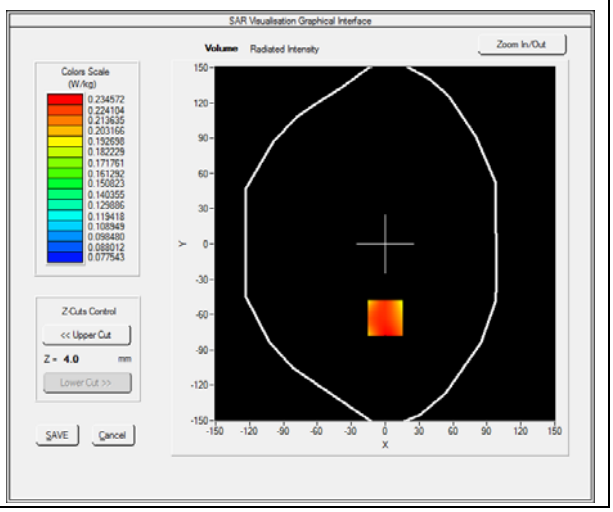
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 7.13; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Body-worn)
Band	GSM850
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

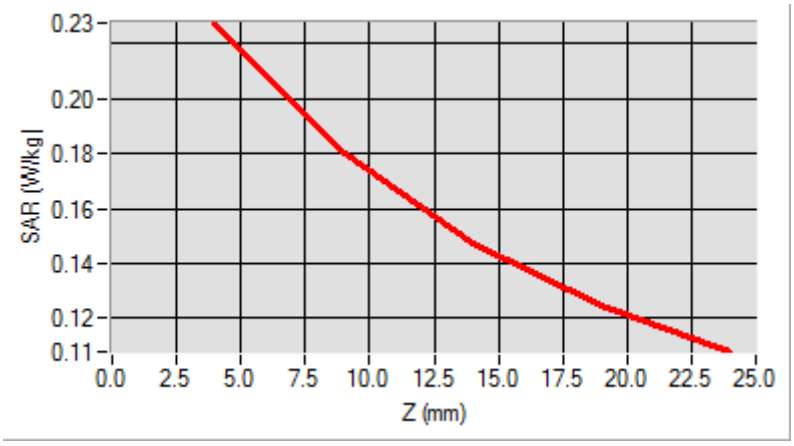
Frequency (MHz)	836.600000
Relative Permittivity (real part)	54.851214
Conductivity (S/m)	0.951454
Power Variation (%)	1.483222
Ambient Temperature	21.1
Liquid Temperature	21.3

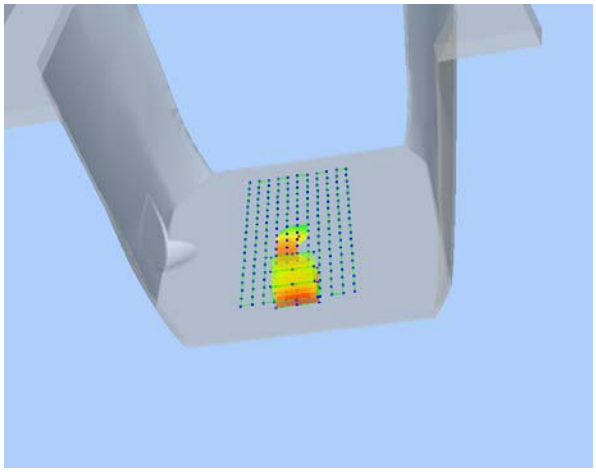
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-63.00

SAR 10g (W/Kg)	**0.209956**
SAR 1g (W/Kg)	**0.268915**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.0000**	**0.2275**	**0.1798**	**0.1469**	**0.1248**



3D screen shot	**Hot spot position**
	

MEASUREMENT 7

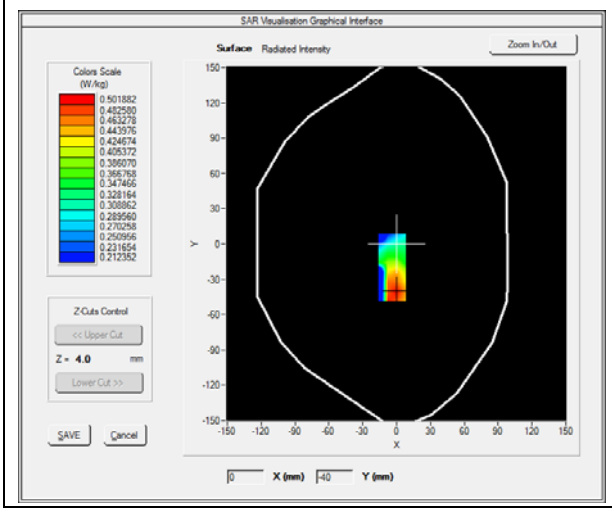
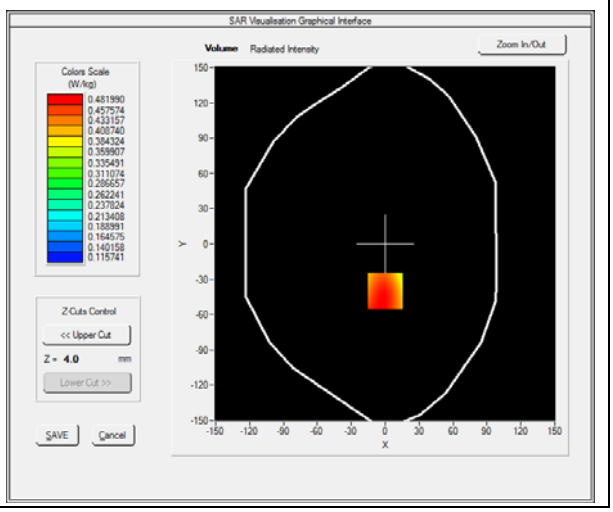
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 7.13; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Back
Band	GPRS850_4TX
Channels	Middle
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

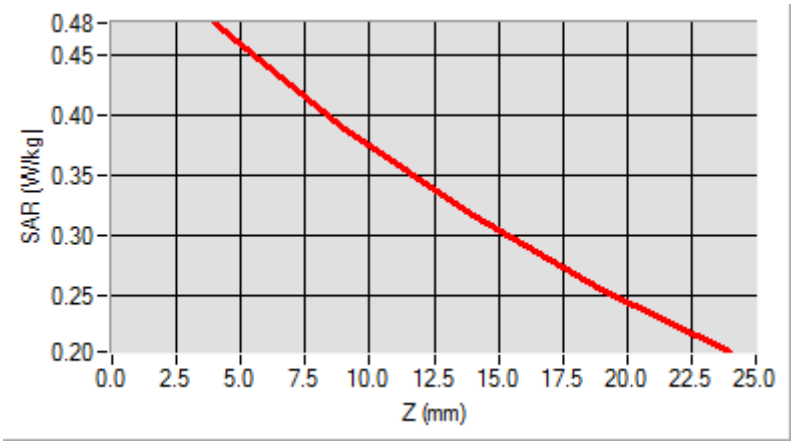
Frequency (MHz)	836.600000
Relative Permittivity (real part)	54.851214
Conductivity (S/m)	0.951454
Power Variation (%)	0.901472
Ambient Temperature	21.1
Liquid Temperature	21.3

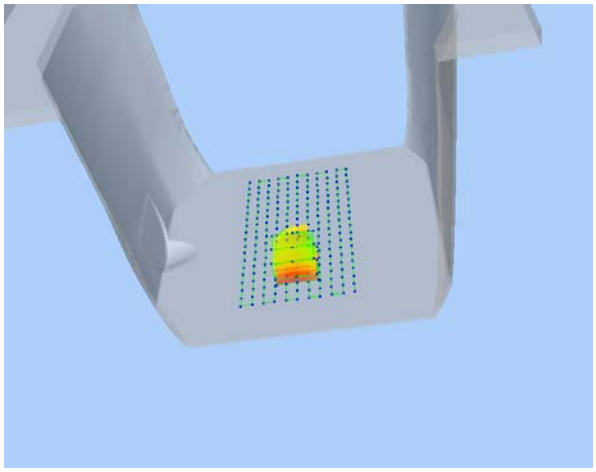
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-40.00

SAR 10g (W/Kg)	0.364603
SAR 1g (W/Kg)	0.469822

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.4776	0.3893	0.3160	0.2549



3D screen shot	Hot spot position
	

MEASUREMENT 8

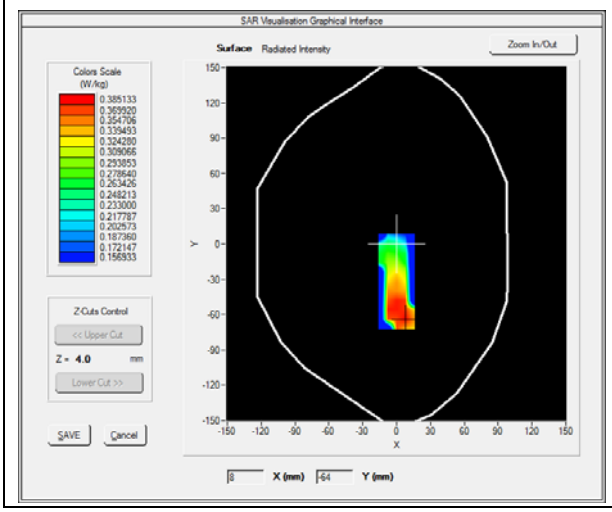
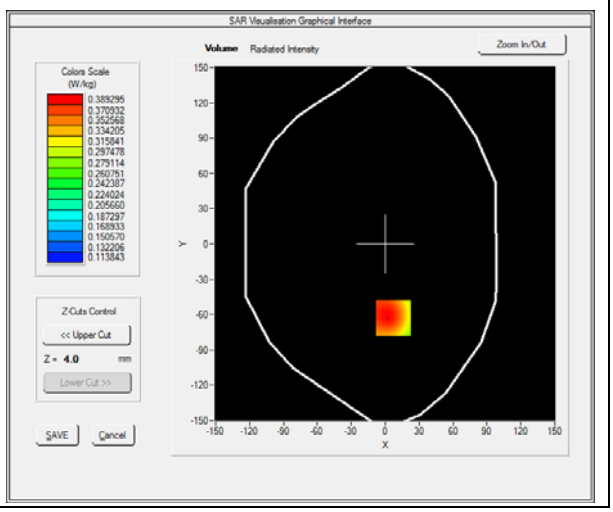
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 7.13; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Front
Band	GPRS850_4TX
Channels	Middle
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

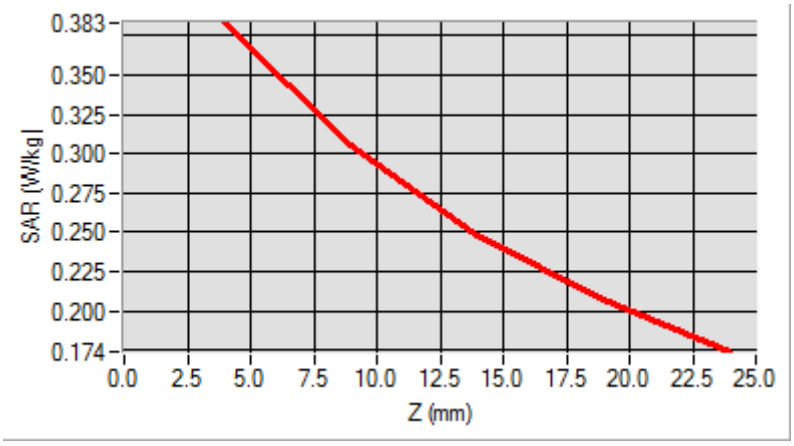
Frequency (MHz)	836.600000
Relative Permittivity (real part)	54.851214
Conductivity (S/m)	0.951454
Power Variation (%)	0.757758
Ambient Temperature	21.1
Liquid Temperature	**21.3**

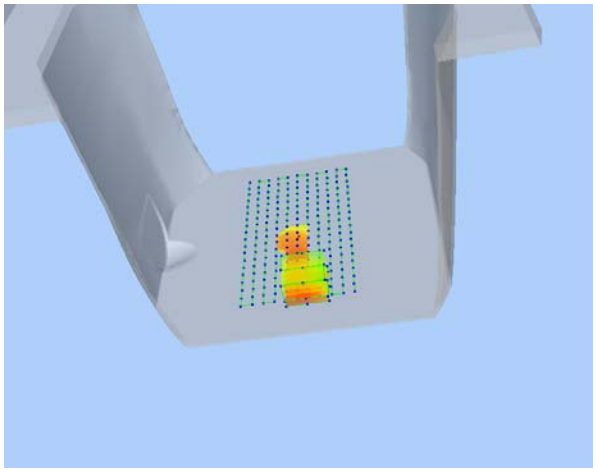
SURFACE SAR	**VOLUME SAR**
	

Maximum location: X=7.00, Y=-63.00

SAR 10g (W/Kg)	0.295949
SAR 1g (W/Kg)	0.378441

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.3829	0.3052	0.2485	0.2072



3D screen shot	Hot spot position
	

MEASUREMENT 9

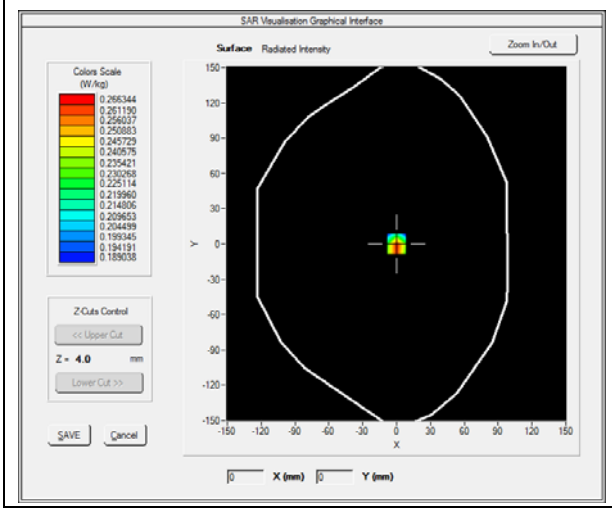
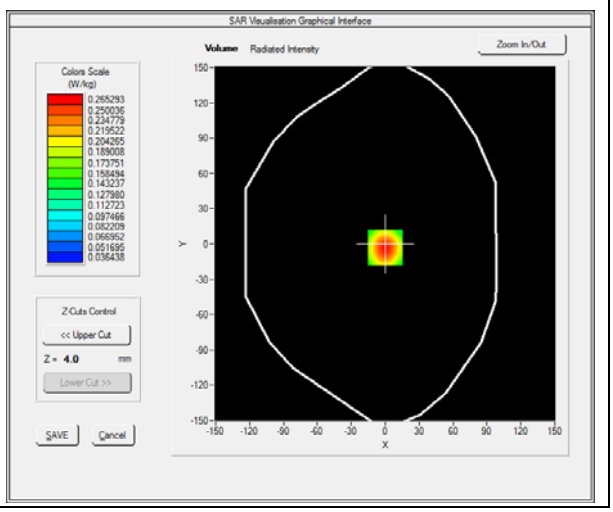
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 7.13; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Bottom
Band	GPRS850_4TX
Channels	Middle
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

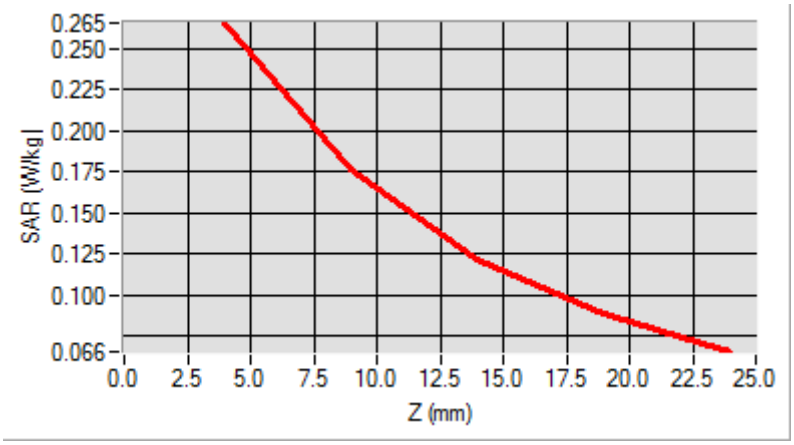
Frequency (MHz)	836.600000
Relative Permittivity (real part)	54.851214
Conductivity (S/m)	0.951454
Power Variation (%)	2.103734
Ambient Temperature	21.1
Liquid Temperature	21.3

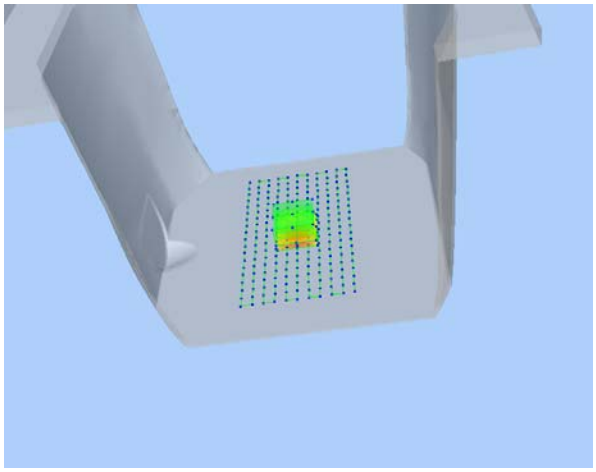
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-3.00

SAR 10g (W/Kg)	**0.160421**
SAR 1g (W/Kg)	**0.248604**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.0000**	**0.2653**	**0.1769**	**0.1221**	**0.0887**



3D screen shot	**Hot spot position**
	

MEASUREMENT 10

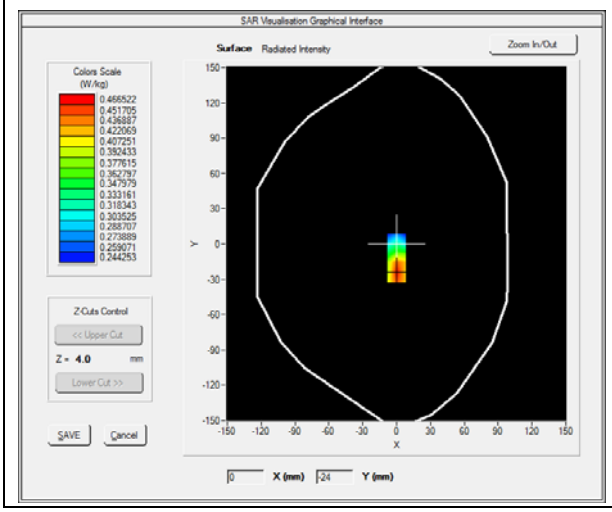
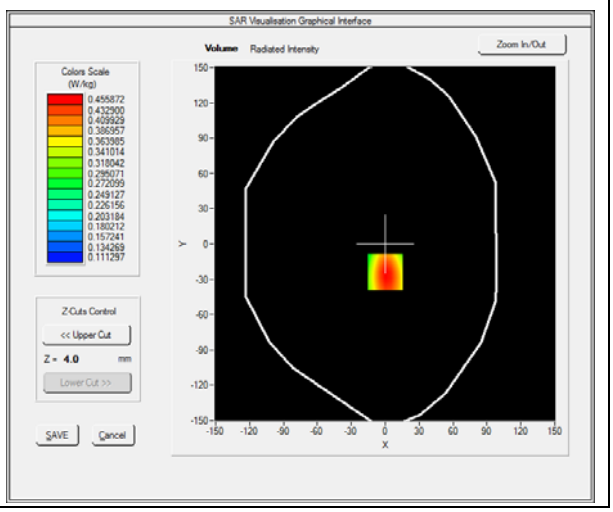
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 7.13; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Right side
Band	GPRS850_4TX
Channels	Middle
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

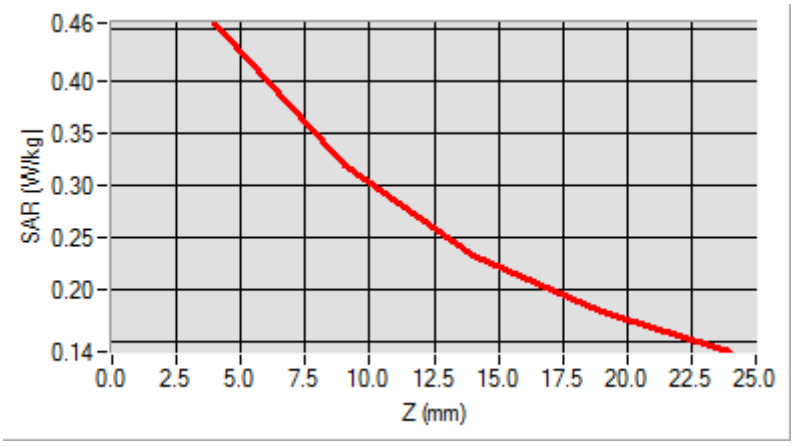
Frequency (MHz)	836.600000
Relative Permittivity (real part)	54.851214
Conductivity (S/m)	0.951454
Power Variation (%)	1.446333
Ambient Temperature	21.1
Liquid Temperature	21.3

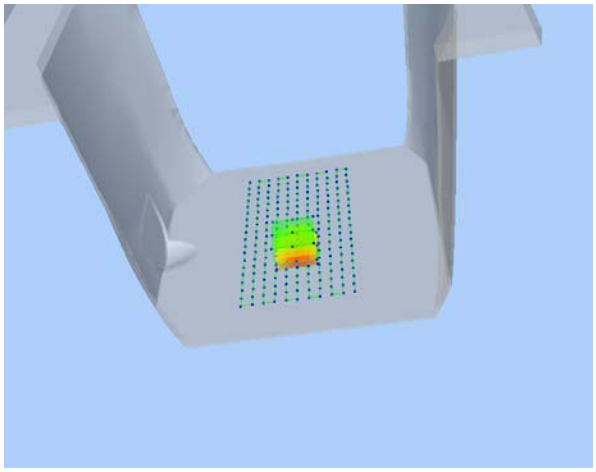
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-24.00

SAR 10g (W/Kg)	0.304926
SAR 1g (W/Kg)	0.436346

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.4559	0.3196	0.2328	0.1786



3D screen shot	Hot spot position
	

MEASUREMENT 11

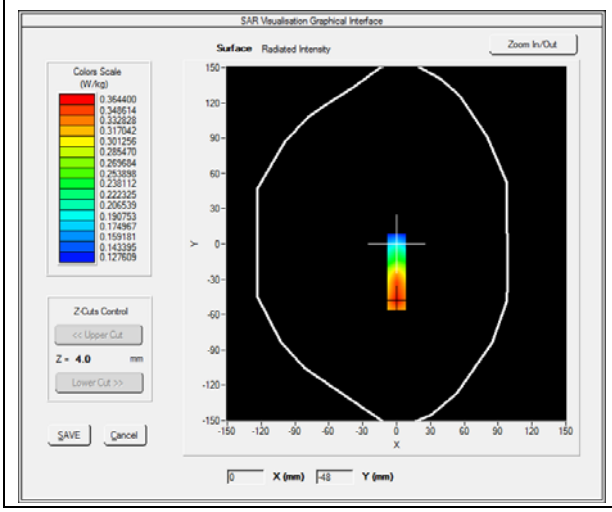
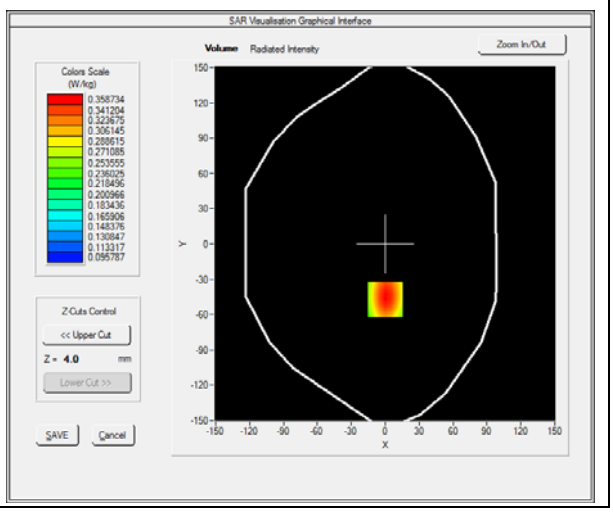
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 7.13; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Left side
Band	GPRS850_4TX
Channels	Middle
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

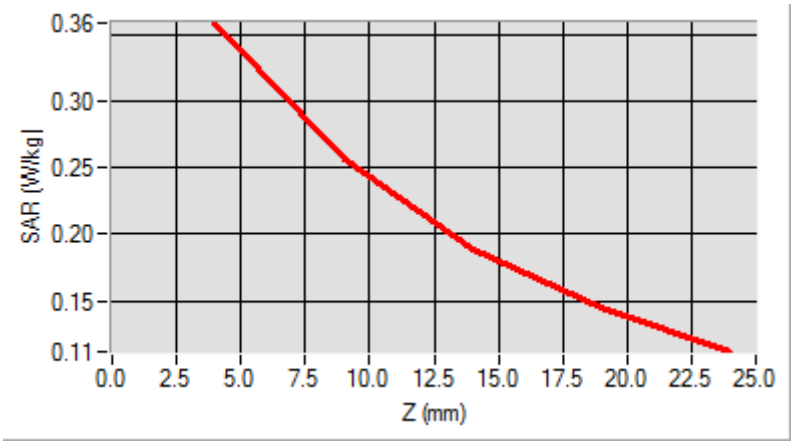
Frequency (MHz)	836.600000
Relative Permittivity (real part)	54.851214
Conductivity (S/m)	0.951454
Power Variation (%)	1.274632
Ambient Temperature	21.1
Liquid Temperature	21.3

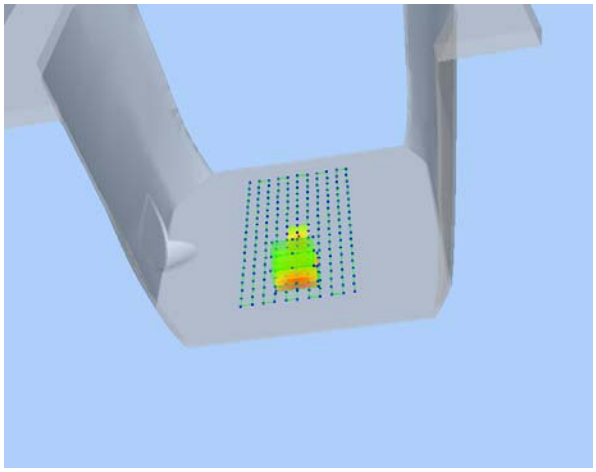
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-47.00

SAR 10g (W/Kg)	0.240049
SAR 1g (W/Kg)	0.342455

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.3587	0.2561	0.1884	0.1443



3D screen shot	Hot spot position
	

MEASUREMENT 12

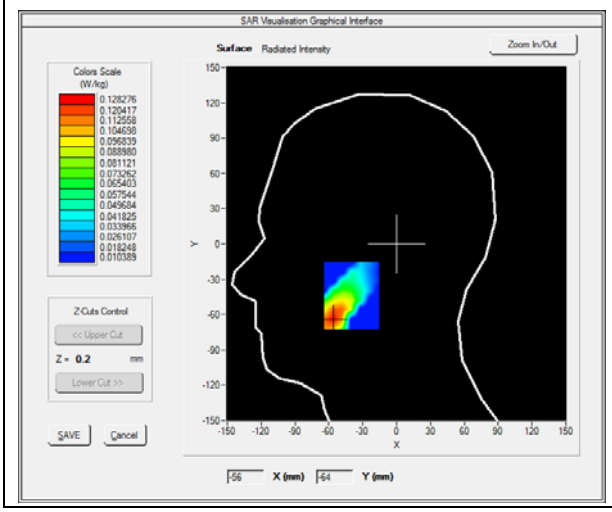
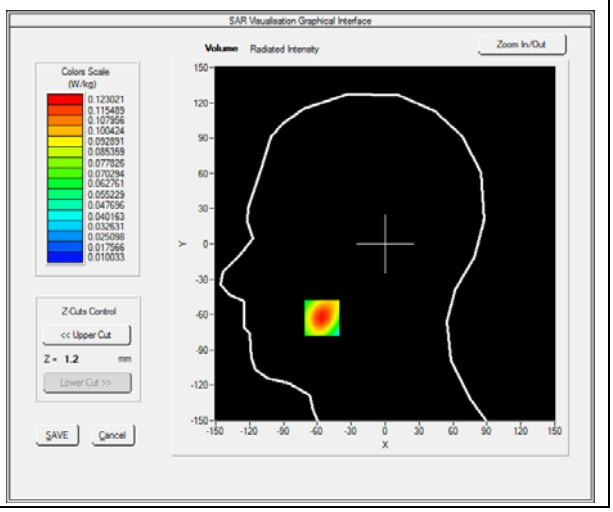
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.35; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

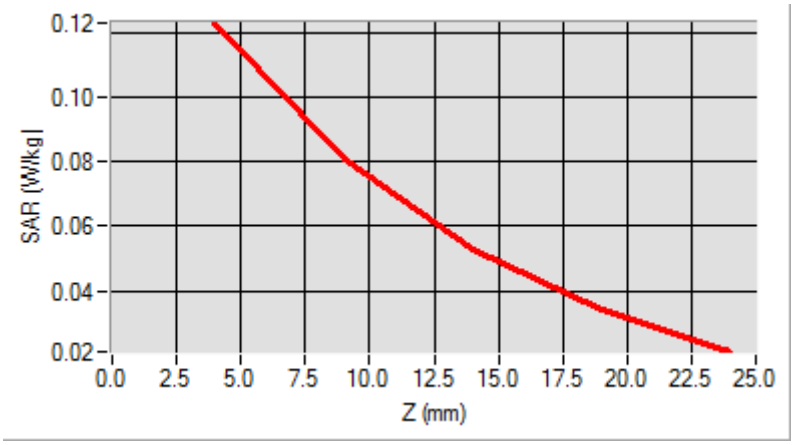
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.314523
Ambient Temperature	21.1
Liquid Temperature	21.3

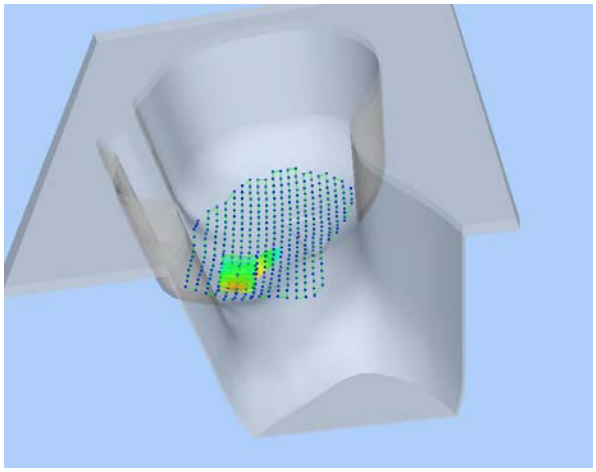
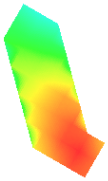
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-56.00, Y=-63.00

SAR 10g (W/Kg)	0.069478
SAR 1g (W/Kg)	0.114464

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1230	0.0808	0.0527	0.0342



3D screen shot	Hot spot position
	

MEASUREMENT 13

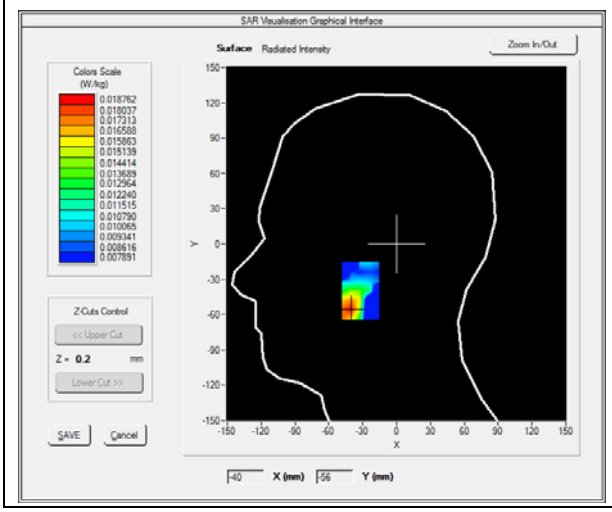
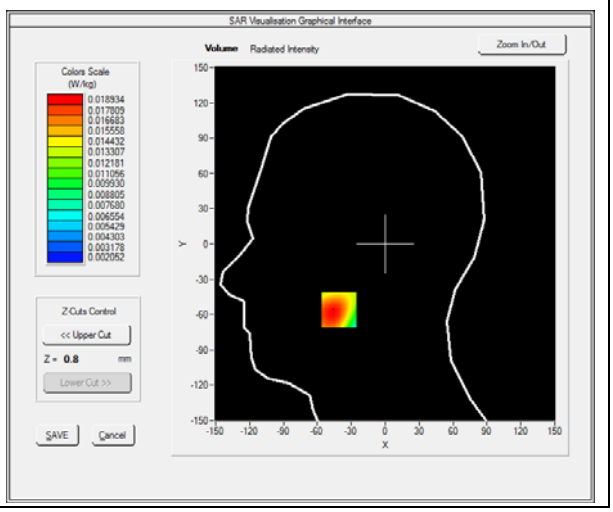
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.35; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

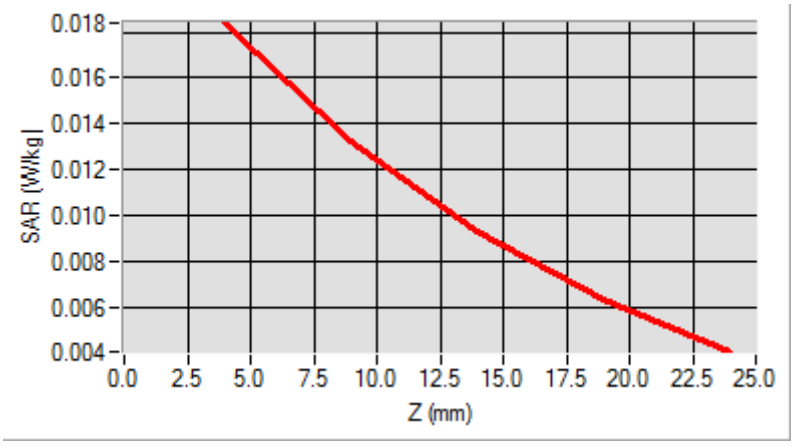
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.104384
Ambient Temperature	21.1
Liquid Temperature	21.3

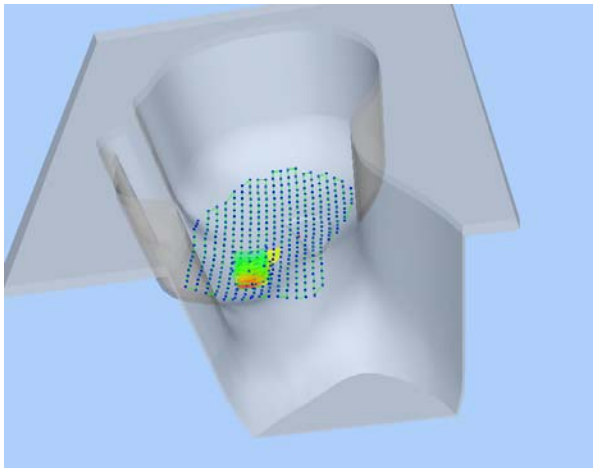
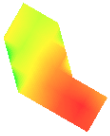
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-41.00, Y=-56.00

SAR 10g (W/Kg)	0.011861
SAR 1g (W/Kg)	0.018149

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0184	0.0133	0.0093	0.0063



3D screen shot	Hot spot position
	

MEASUREMENT 14

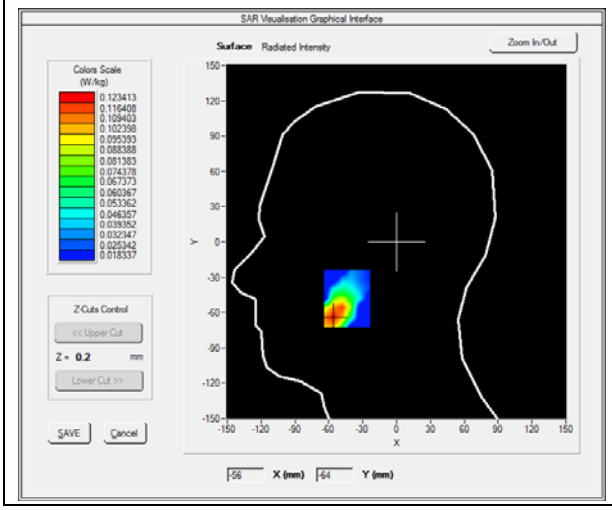
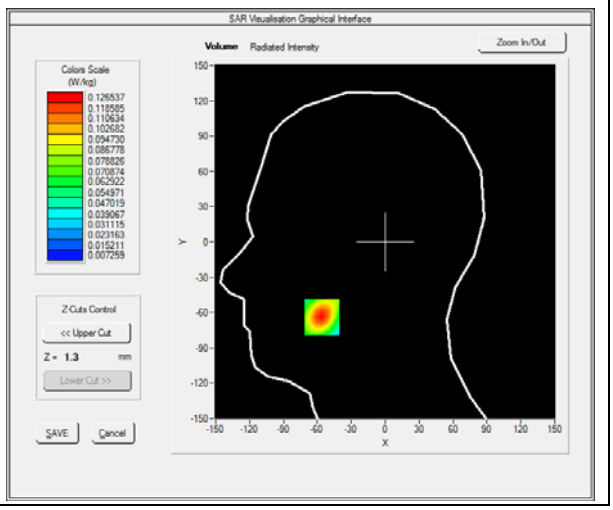
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 11 minutes 48 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.35; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

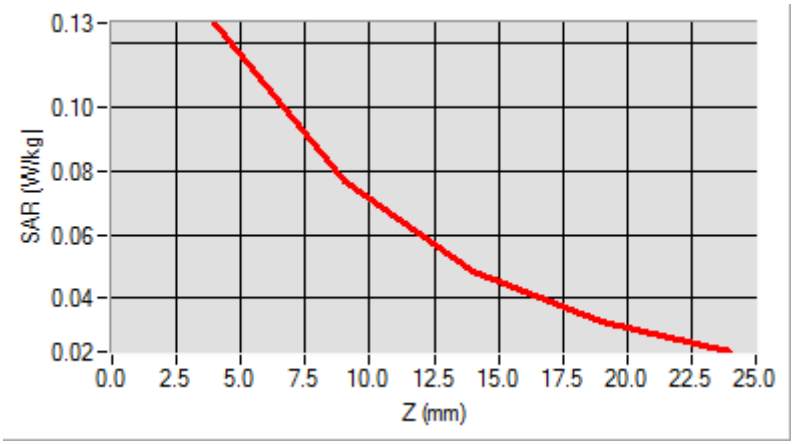
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.442440
Ambient Temperature	21.1
Liquid Temperature	21.3

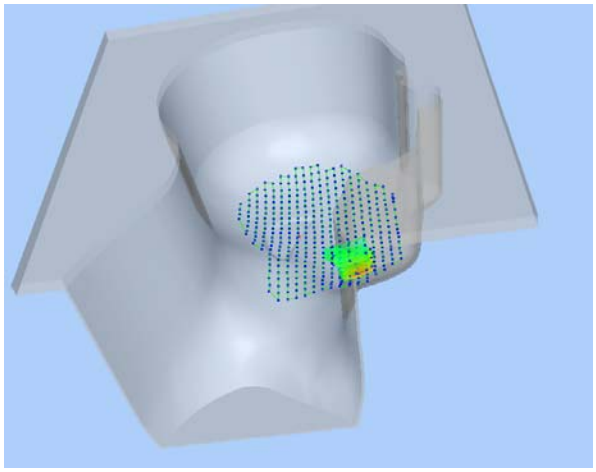
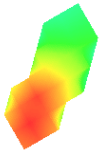
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-56.00, Y=-64.00

SAR 10g (W/Kg)	0.067759
SAR 1g (W/Kg)	0.116830

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1265	0.0768	0.0484	0.0330



3D screen shot	Hot spot position
	

MEASUREMENT 15

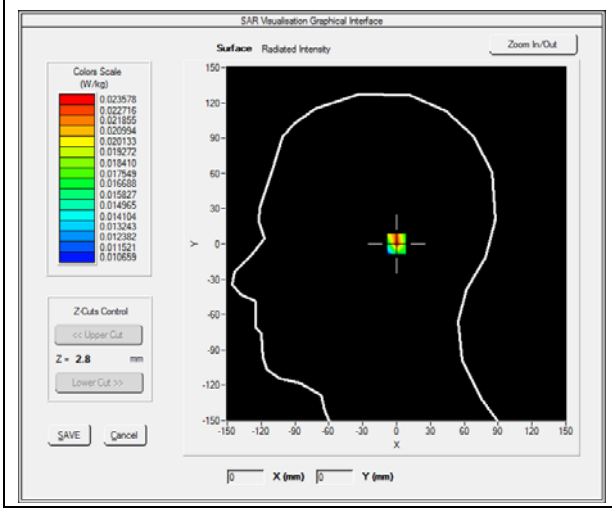
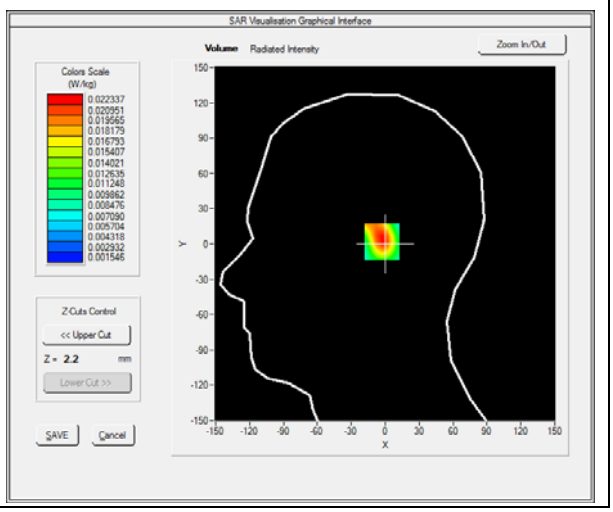
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.35; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

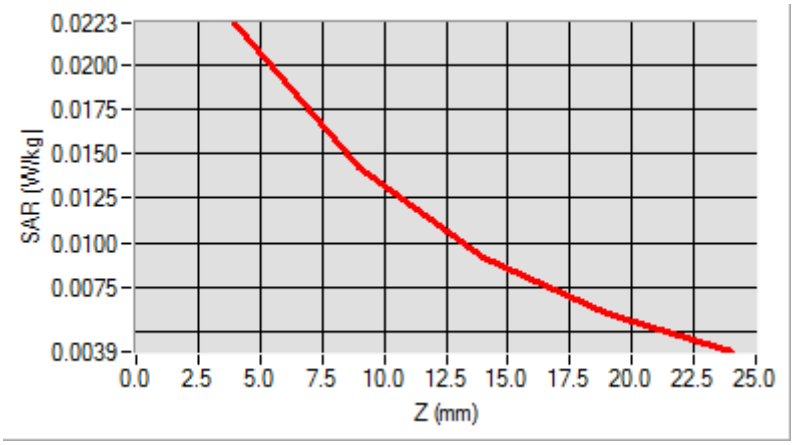
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.543453
Ambient Temperature	21.1
Liquid Temperature	21.3

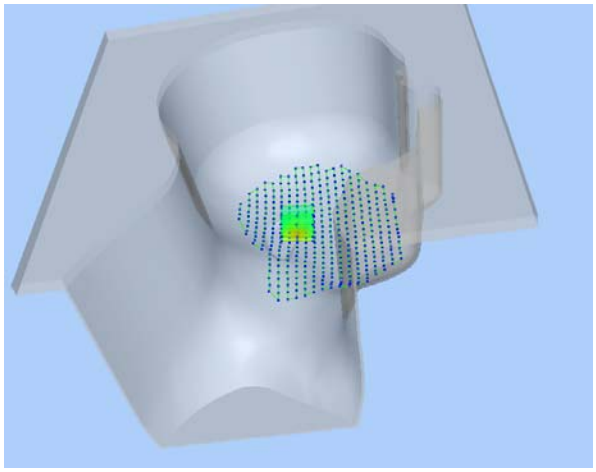
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=2.00

SAR 10g (W/Kg)	0.012172
SAR 1g (W/Kg)	0.020792

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0223	0.0142	0.0091	0.0060



3D screen shot	Hot spot position
	

MEASUREMENT 16

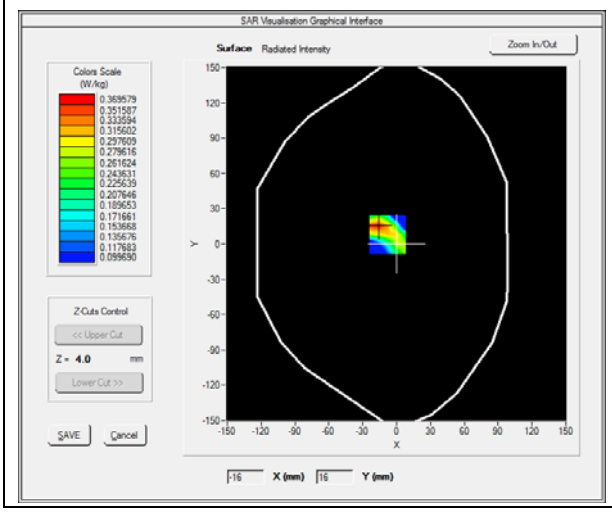
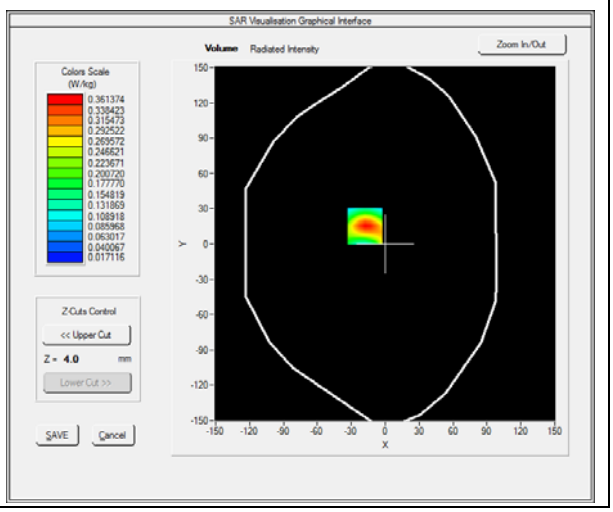
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back(Body-worn)
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

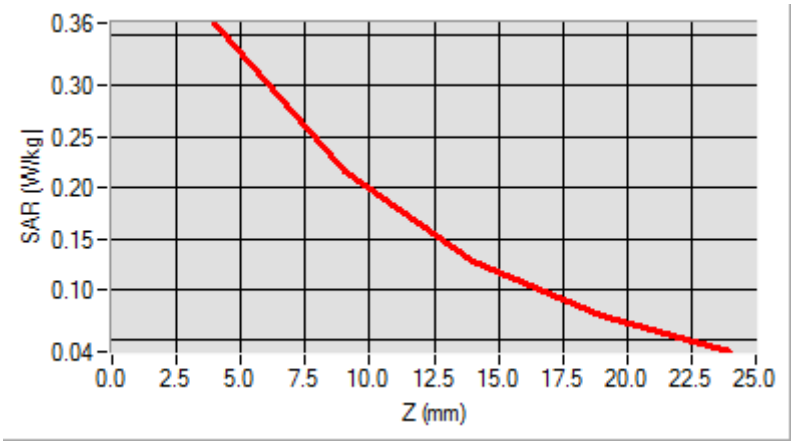
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	1.474622
Ambient Temperature	21.1
Liquid Temperature	21.3

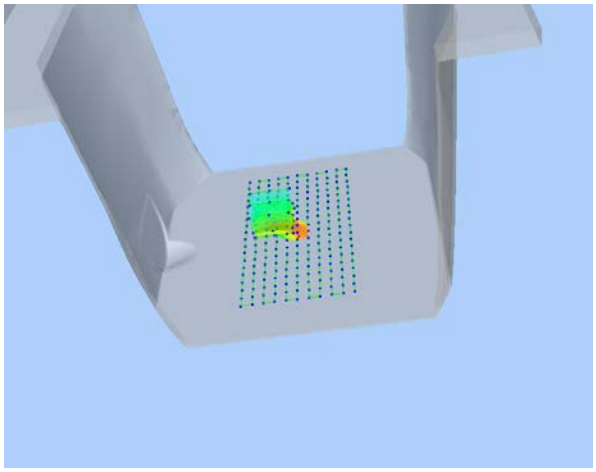
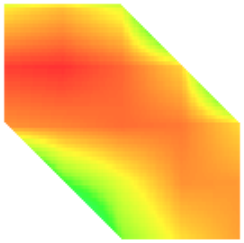
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-18.00, Y=15.00

SAR 10g (W/Kg)	0.208361
SAR 1g (W/Kg)	0.385862

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.3614	0.2166	0.1272	0.0735



3D screen shot	Hot spot position
	

MEASUREMENT 17

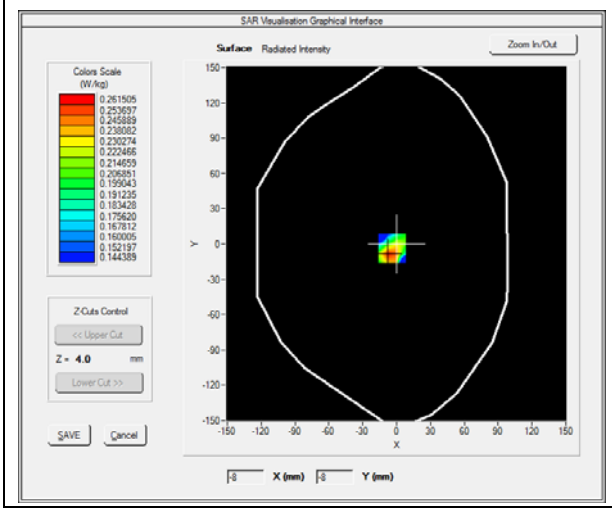
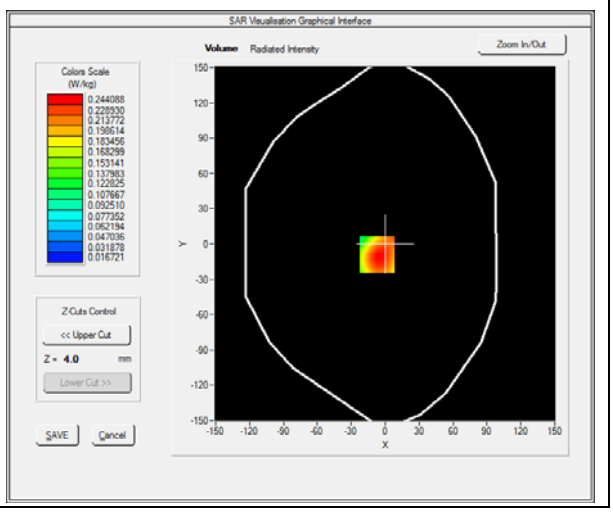
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front(Body-worn)
Band	GSM1900
Channels	Middle
Signal	TDMA (Crest factor: 8.0)

B. SAR Measurement Results

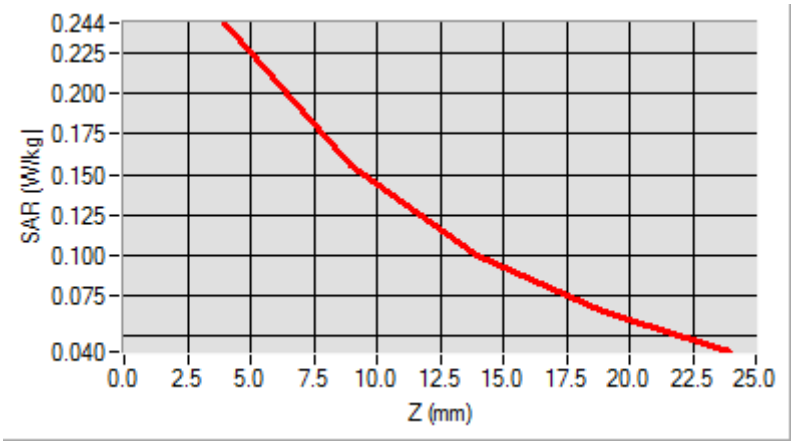
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	0.553453
Ambient Temperature	21.1
Liquid Temperature	21.3

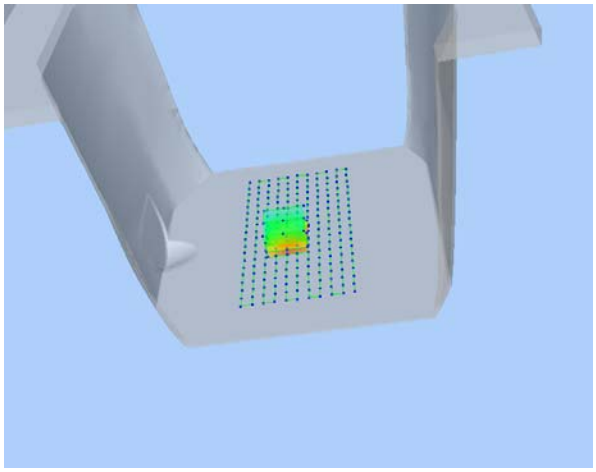
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-7.00, Y=-9.00

SAR 10g (W/Kg)	0.167688
SAR 1g (W/Kg)	0.273843

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2441	0.1559	0.0996	0.0641



3D screen shot	Hot spot position
	

MEASUREMENT 18

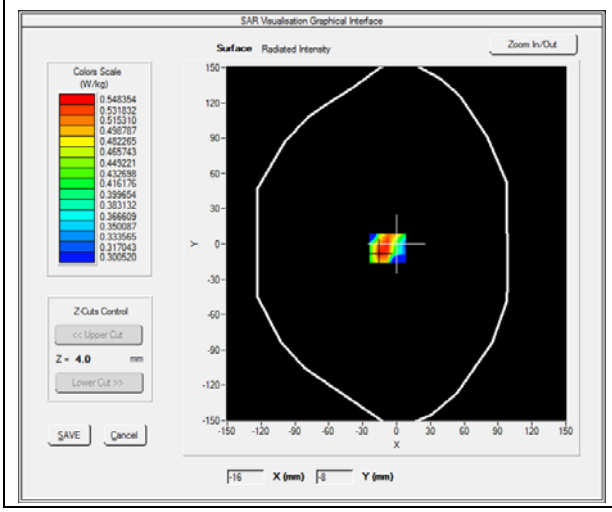
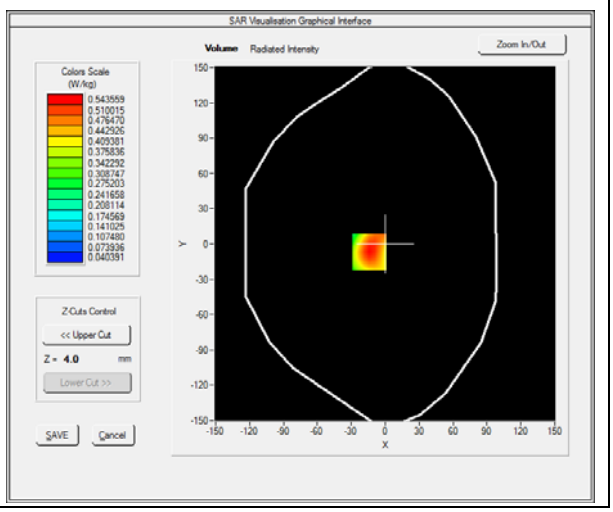
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Back
Band	GPRS1900_4TX
Channels	High
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

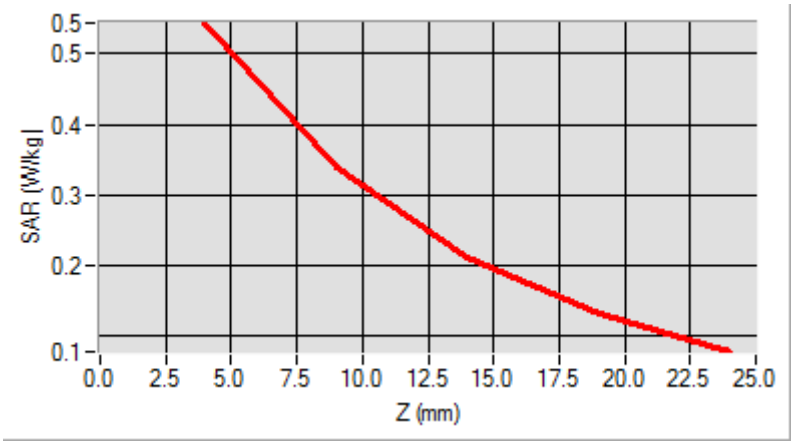
Frequency (MHz)	1909.800000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	1.534645
Ambient Temperature	21.1
Liquid Temperature	21.3

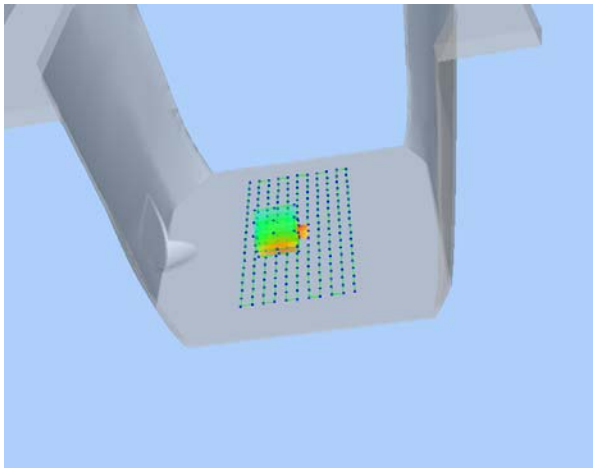
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-14.00, Y=-7.00

SAR 10g (W/Kg)	0.307250
SAR 1g (W/Kg)	0.510531

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.5436	0.3391	0.2107	0.1317



3D screen shot	Hot spot position
	

MEASUREMENT 19

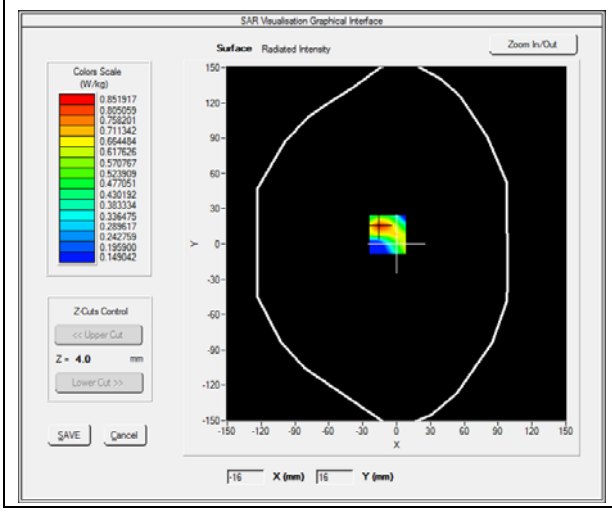
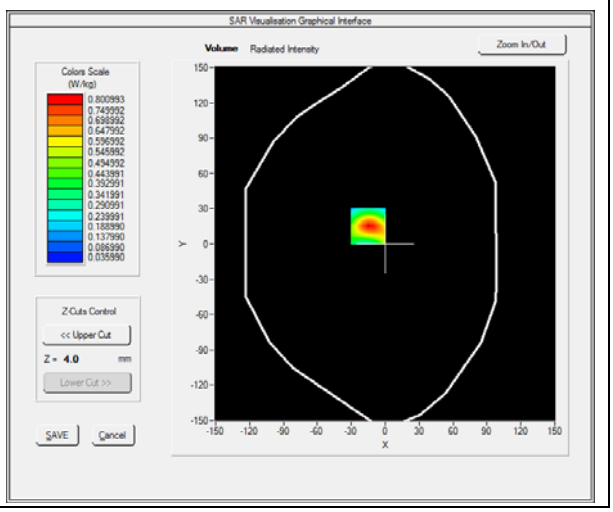
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Front
Band	GPRS1900_4TX
Channels	High
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

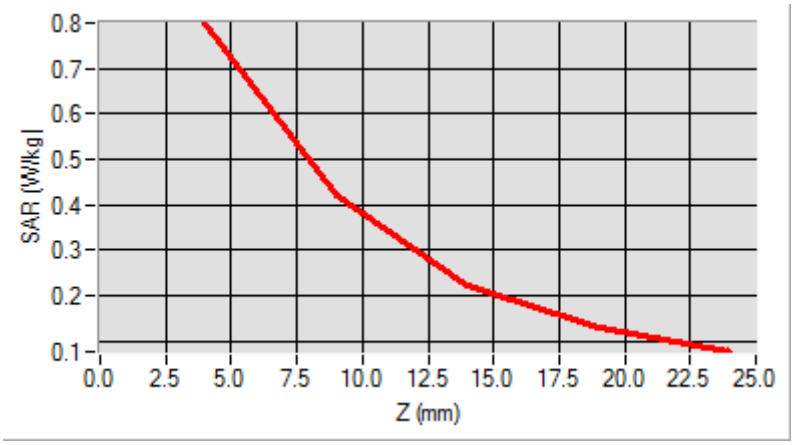
Frequency (MHz)	1909.800000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	0.967457
Ambient Temperature	21.1
Liquid Temperature	21.3

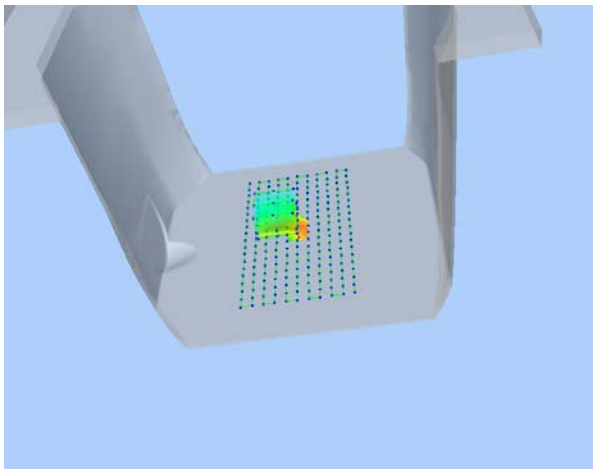
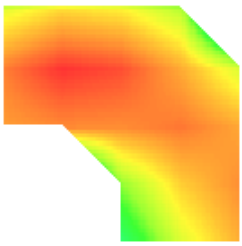
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-15.00, Y=15.00

SAR 10g (W/Kg)	0.380507
SAR 1g (W/Kg)	0.731125

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.8010	0.4204	0.2240	0.1292



3D screen shot	Hot spot position
	

MEASUREMENT 20

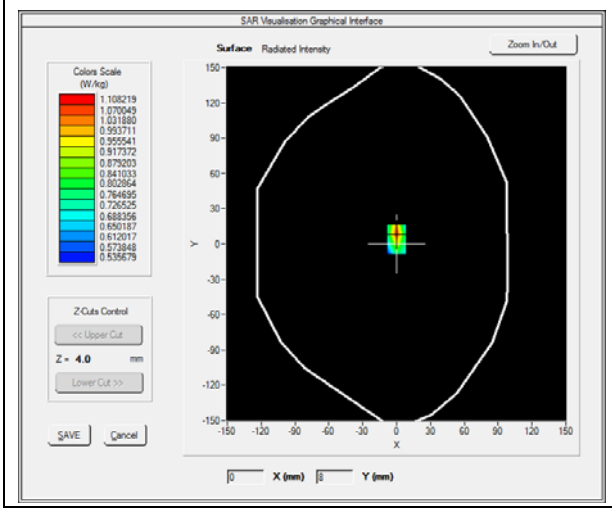
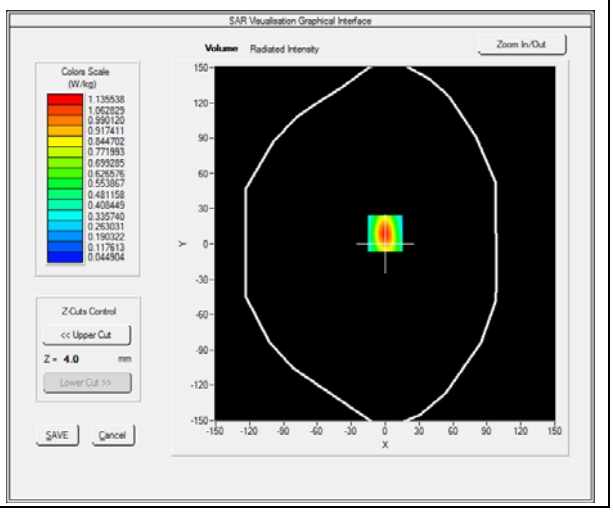
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Bottom
Band	GPRS1900_4TX
Channels	High
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

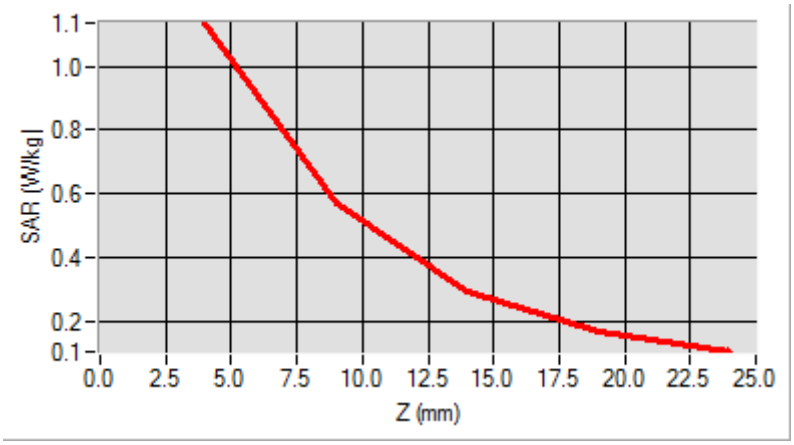
Frequency (MHz)	1909.800000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	2.483762
Ambient Temperature	21.1
Liquid Temperature	21.3

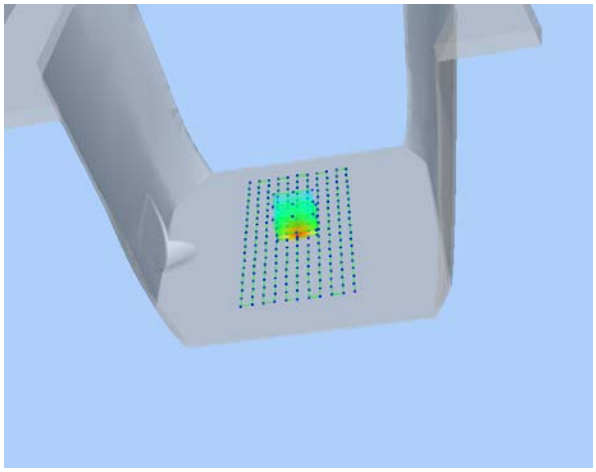
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=9.00

SAR 10g (W/Kg)	0.515386
SAR 1g (W/Kg)	1.026686

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.1355	0.5710	0.2946	0.1707



3D screen shot	Hot spot position
	

MEASUREMENT 21

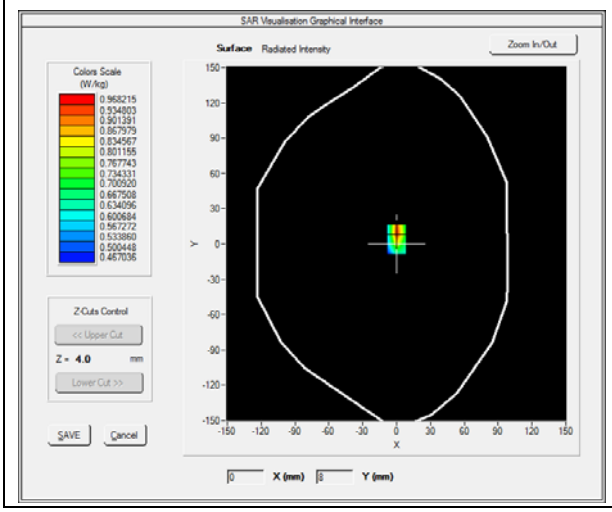
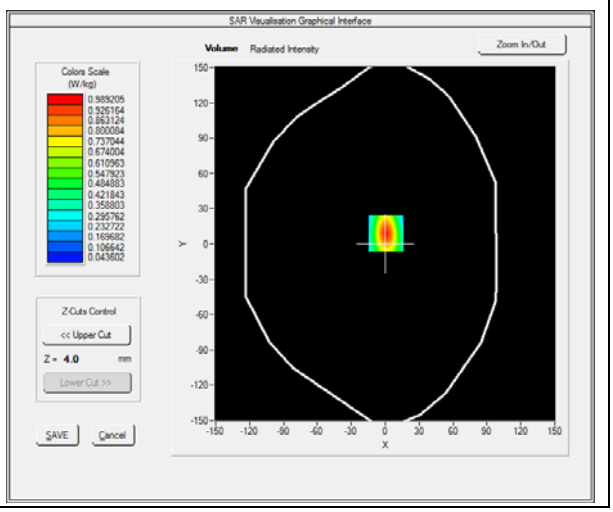
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Bottom
Band	GPRS1900_4TX
Channels	Low
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

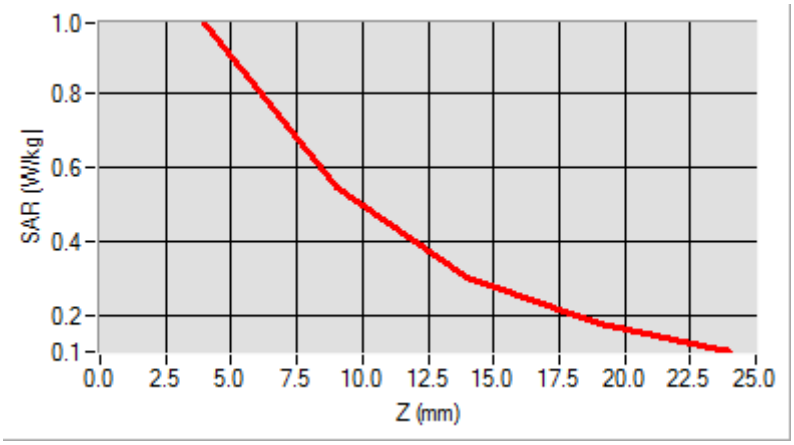
Frequency (MHz)	1850.200000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	2.483762
Ambient Temperature	21.1
Liquid Temperature	21.3

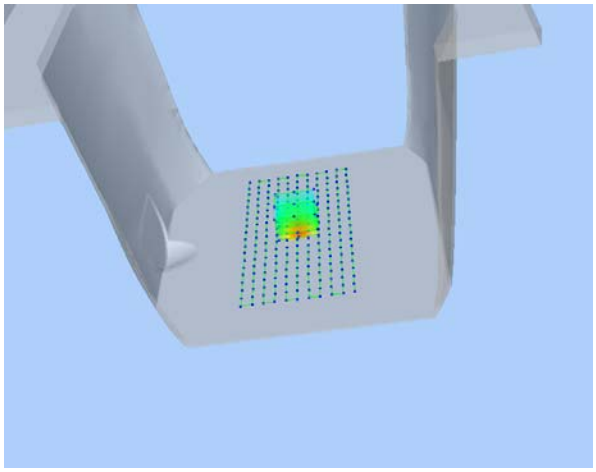
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=9.00

SAR 10g (W/Kg)	0.466277
SAR 1g (W/Kg)	0.895141

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.9892	0.5461	0.3045	0.1791



3D screen shot	Hot spot position
	

MEASUREMENT 22

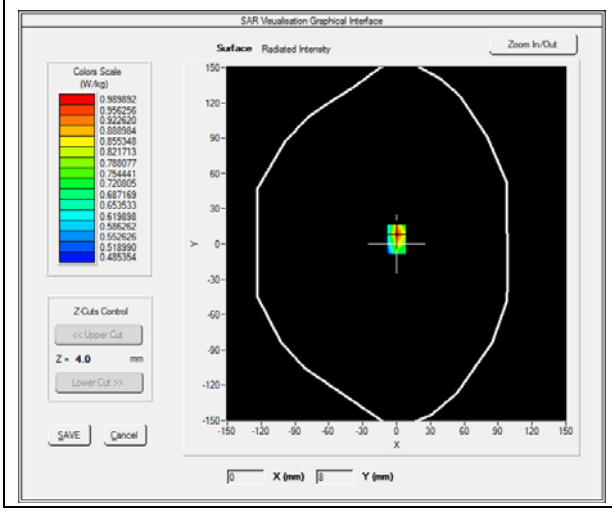
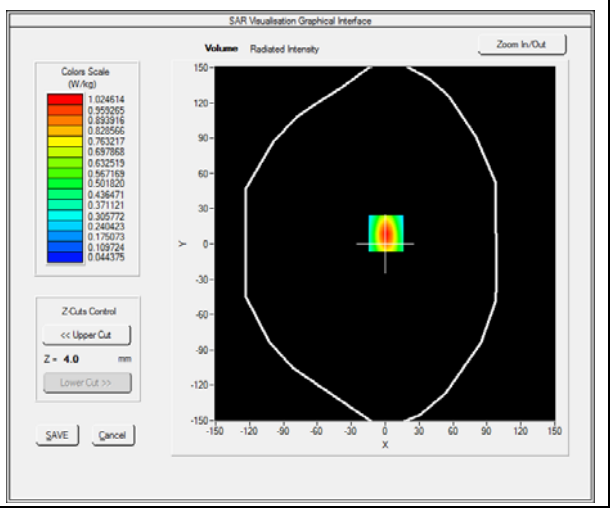
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Bottom
Band	GPRS1900_4TX
Channels	Middle
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

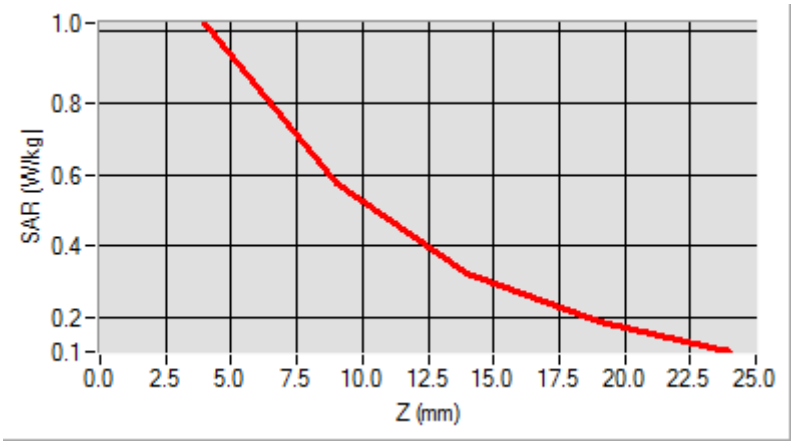
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	2.483762
Ambient Temperature	21.1
Liquid Temperature	21.3

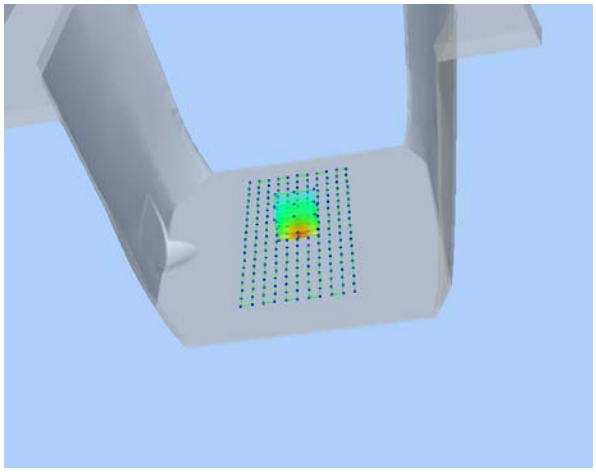
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=9.00

SAR 10g (W/Kg)	0.486637
SAR 1g (W/Kg)	0.928243

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.0246	0.5765	0.3232	0.1859



3D screen shot	Hot spot position
	

MEASUREMENT 23

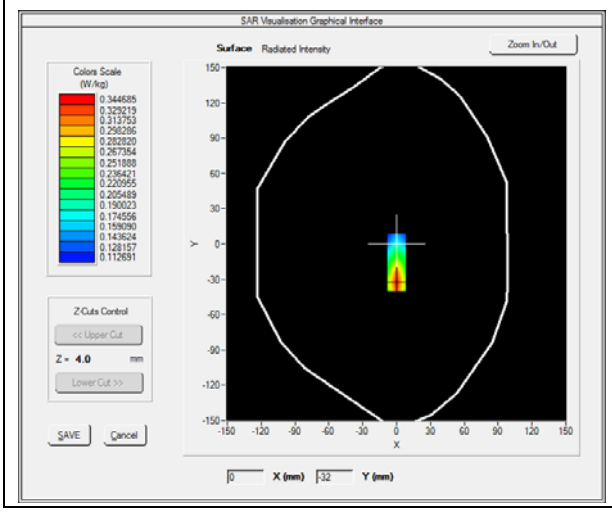
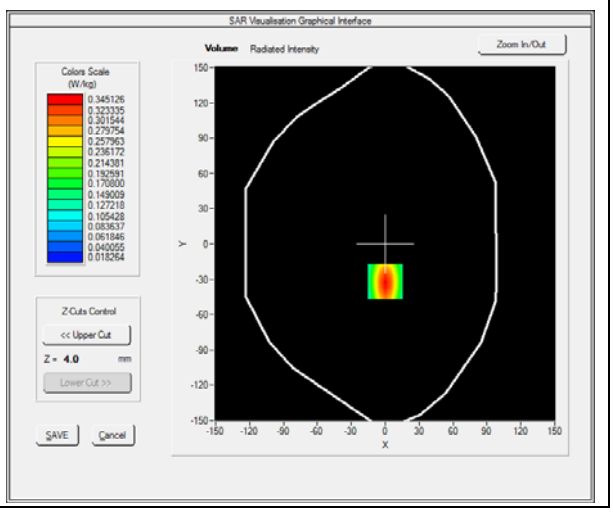
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Right side
Band	GPRS1900_4TX
Channels	High
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

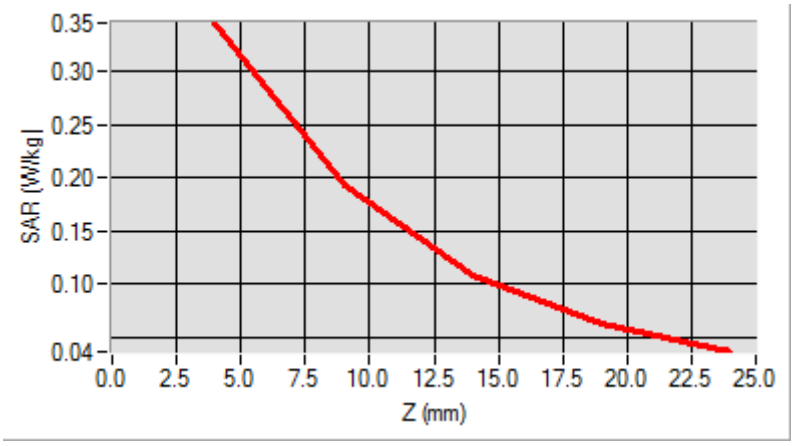
Frequency (MHz)	1909.800000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	1.957265
Ambient Temperature	21.1
Liquid Temperature	21.3

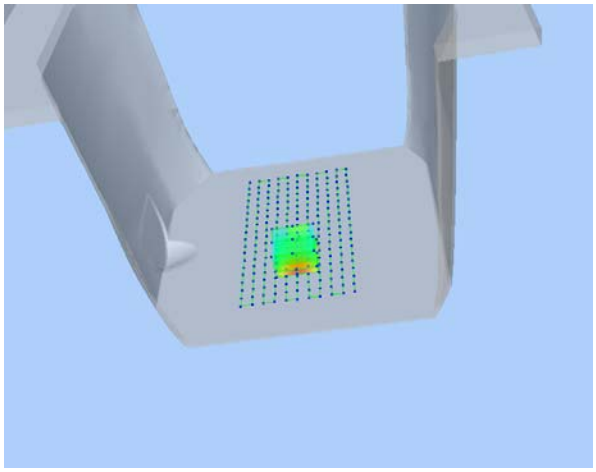
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-32.00

SAR 10g (W/Kg)	0.173444
SAR 1g (W/Kg)	0.318712

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.3451	0.1925	0.1081	0.0635



3D screen shot	Hot spot position
	

MEASUREMENT 24

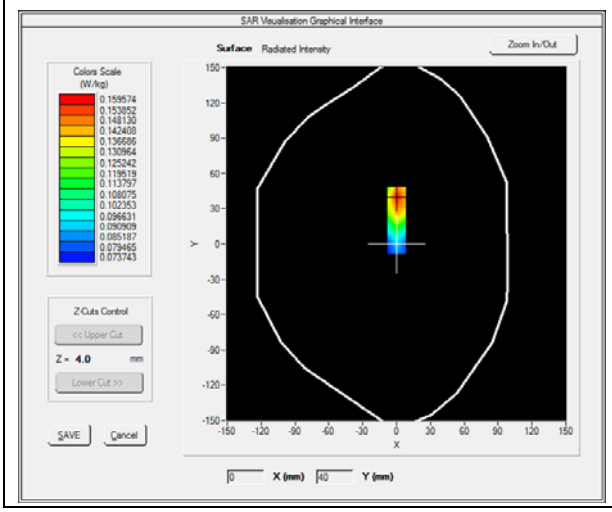
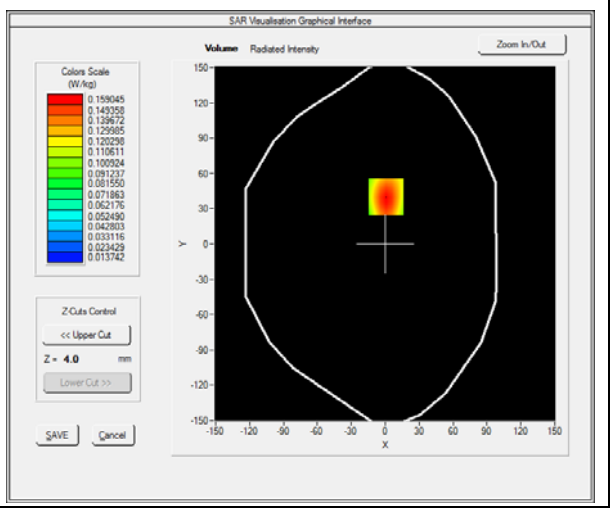
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat plane
Device Position	Left side
Band	GPRS1900_4TX
Channels	High
Signal	Duty Cycle: 3.00 (Crest factor: 3.0)

B. SAR Measurement Results

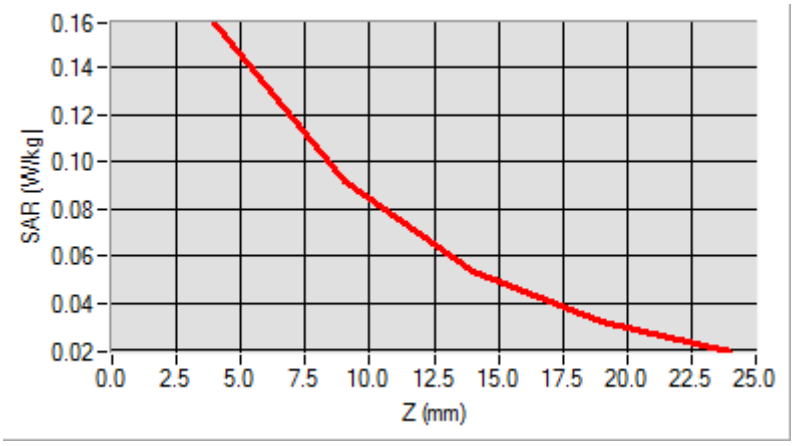
Frequency (MHz)	1909.800000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	2.184564
Ambient Temperature	21.1
Liquid Temperature	21.3

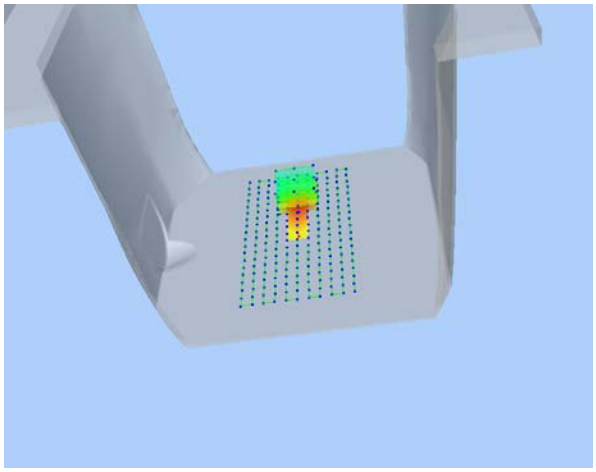
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=40.00

SAR 10g (W/Kg)	**0.088671**
SAR 1g (W/Kg)	**0.149997**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.0000**	**0.1590**	**0.0915**	**0.0532**	**0.0324**



3D screen shot	**Hot spot position**
	

MEASUREMENT 25

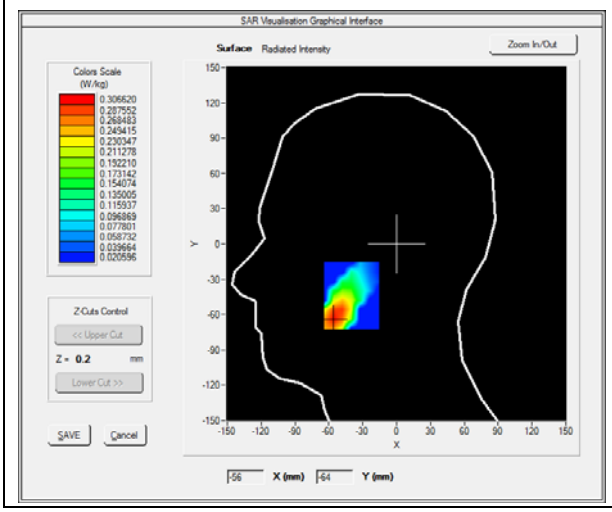
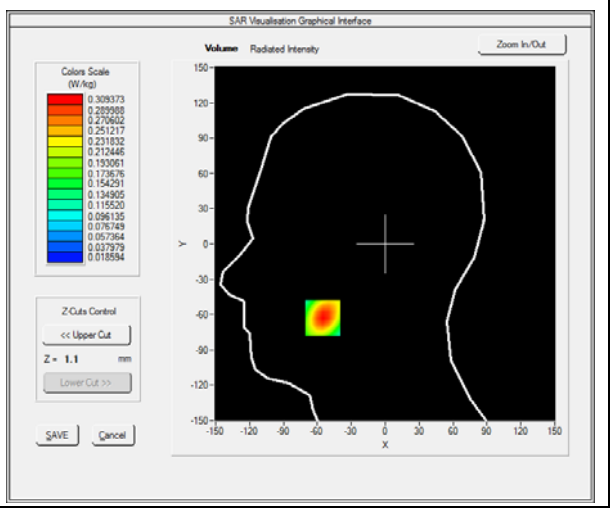
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.35; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

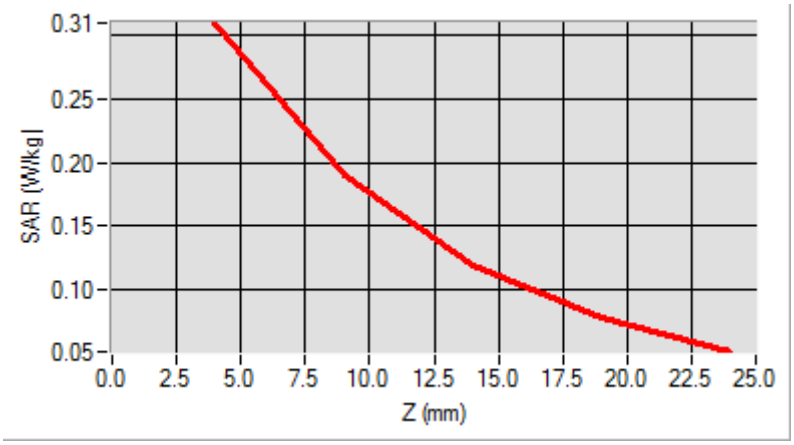
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.524540
Ambient Temperature	21.1
Liquid Temperature	21.3

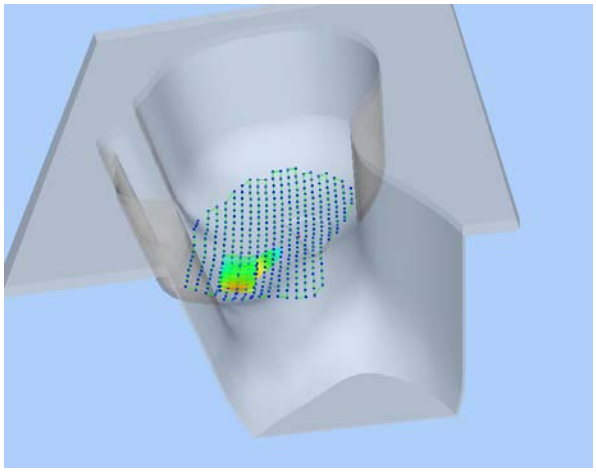
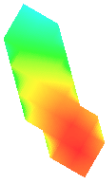
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-55.00, Y=-63.00

SAR 10g (W/Kg)	0.169889
SAR 1g (W/Kg)	0.288052

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.3094	0.1901	0.1193	0.0785



3D screen shot	Hot spot position
	

MEASUREMENT 26

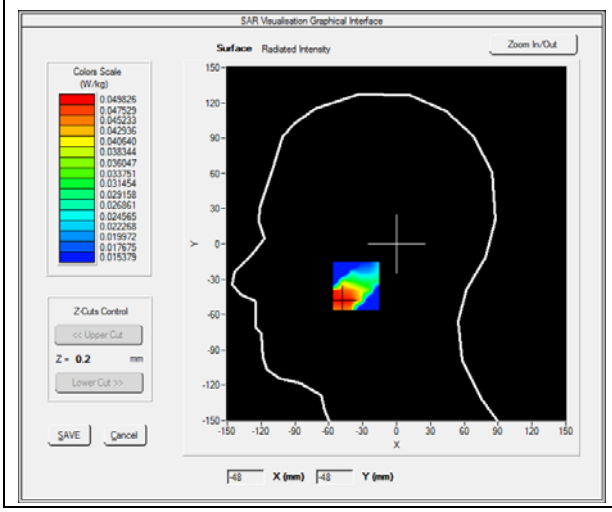
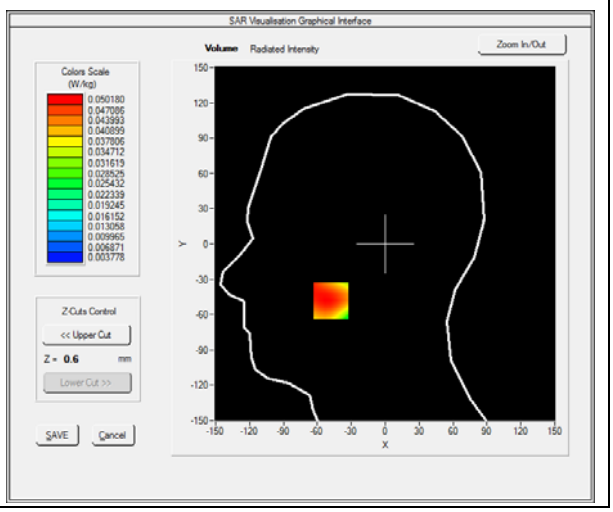
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.35; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	WCDMA1900_ RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

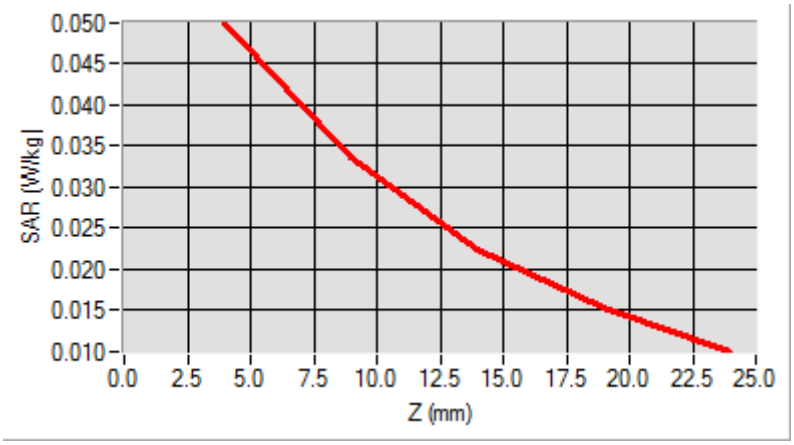
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.324565
Ambient Temperature	21.1
Liquid Temperature	21.3

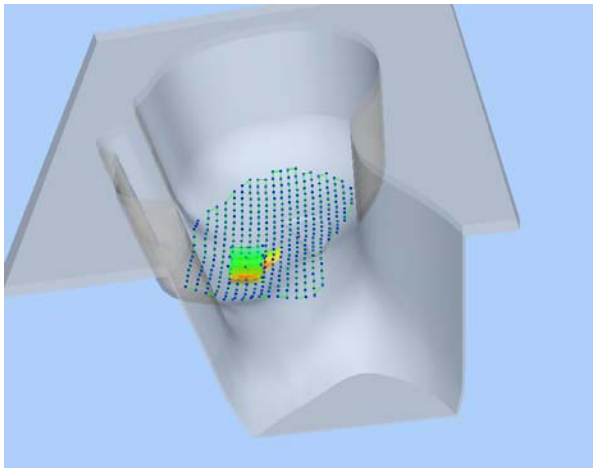
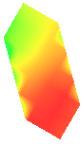
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-48.00, Y=-48.00

SAR 10g (W/Kg)	**0.031151**
SAR 1g (W/Kg)	**0.048188**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.0000**	**0.0499**	**0.0335**	**0.0225**	**0.0152**



3D screen shot	**Hot spot position**
	

MEASUREMENT 27

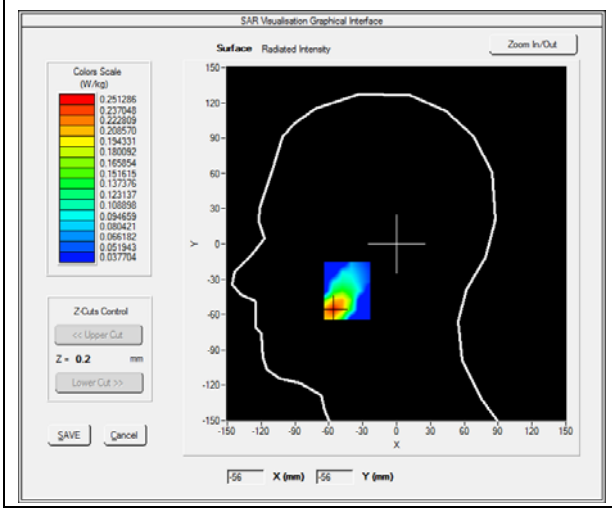
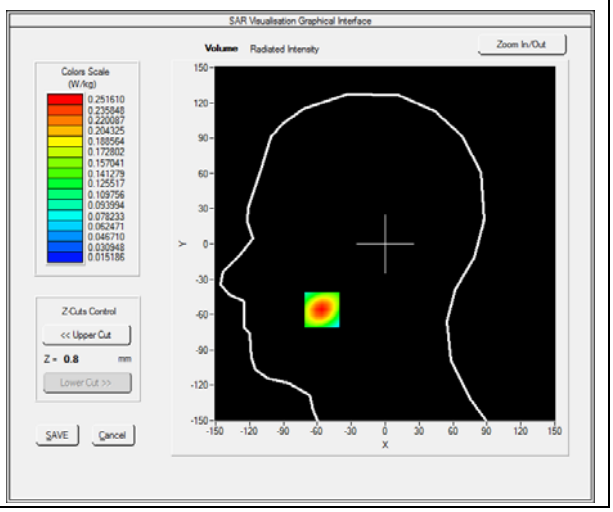
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.35; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

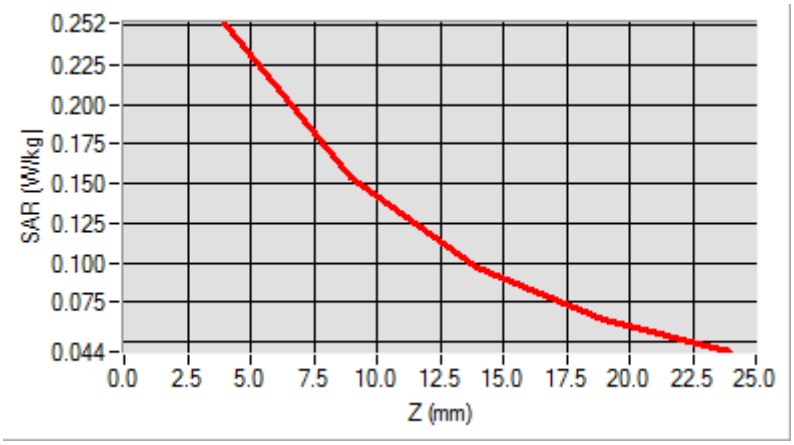
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.653352
Ambient Temperature	21.1
Liquid Temperature	21.3

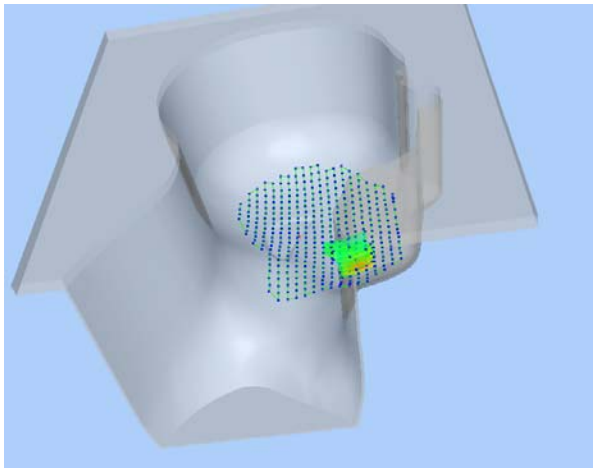
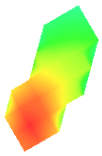
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-56.00, Y=-56.00

SAR 10g (W/Kg)	0.133653
SAR 1g (W/Kg)	0.231472

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2516	0.1537	0.0966	0.0645



3D screen shot	Hot spot position
	

MEASUREMENT 28

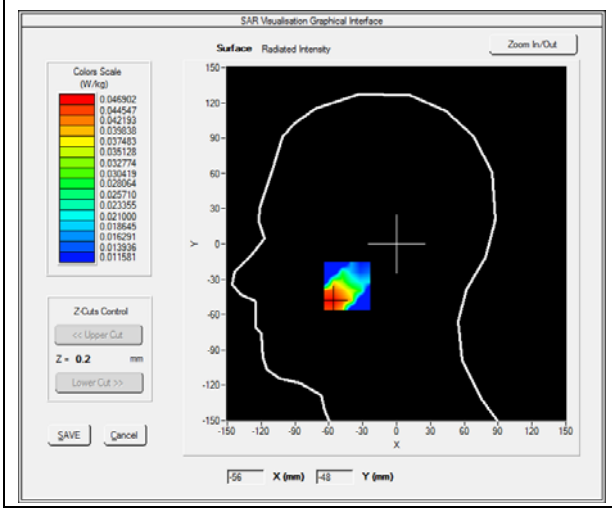
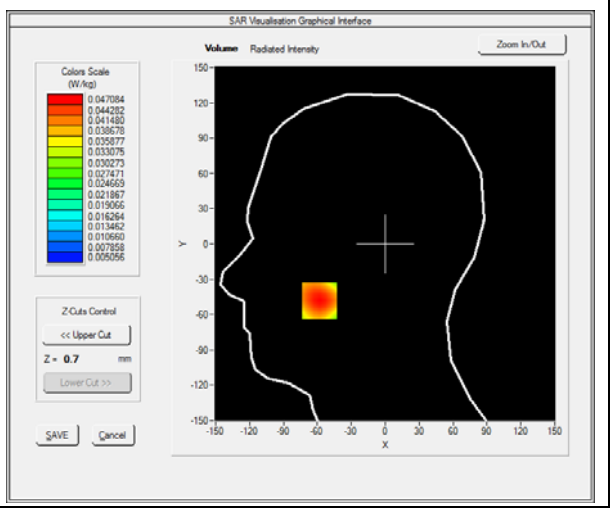
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.35; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

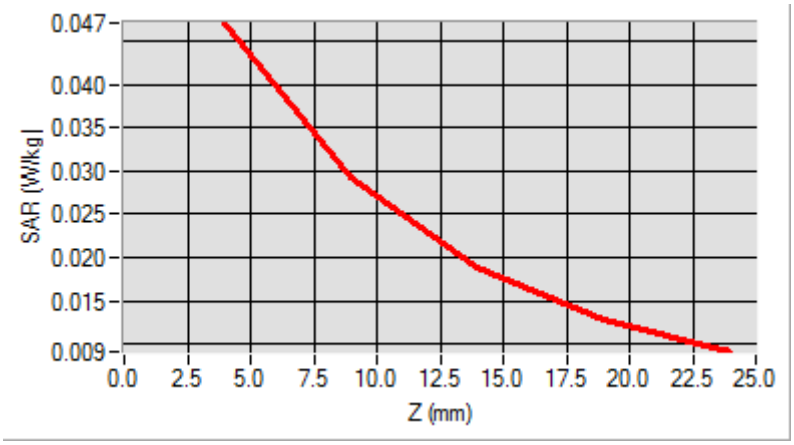
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	38.560124
Conductivity (S/m)	1.380369
Power Variation (%)	1.532452
Ambient Temperature	21.1
Liquid Temperature	21.3

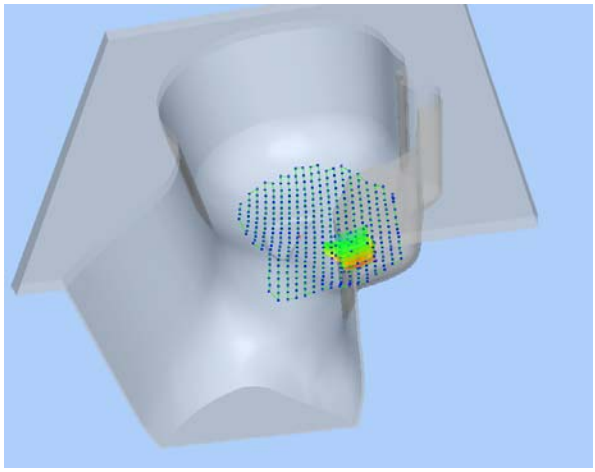
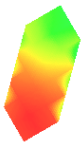
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-58.00, Y=-48.00

SAR 10g (W/Kg)	0.028850
SAR 1g (W/Kg)	0.044843

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0471	0.0292	0.0187	0.0129



3D screen shot	Hot spot position
	

MEASUREMENT 29

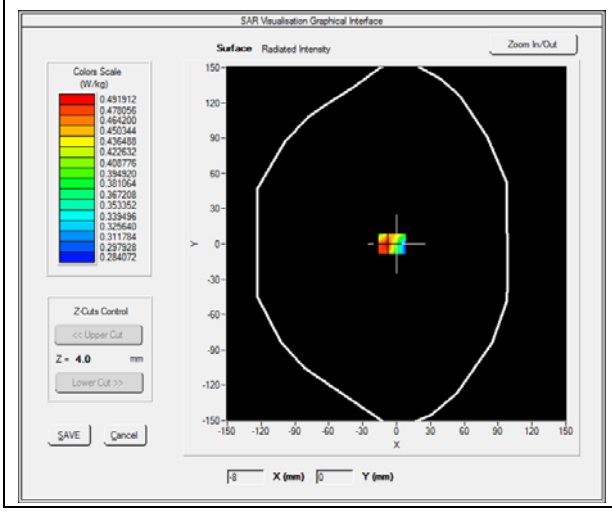
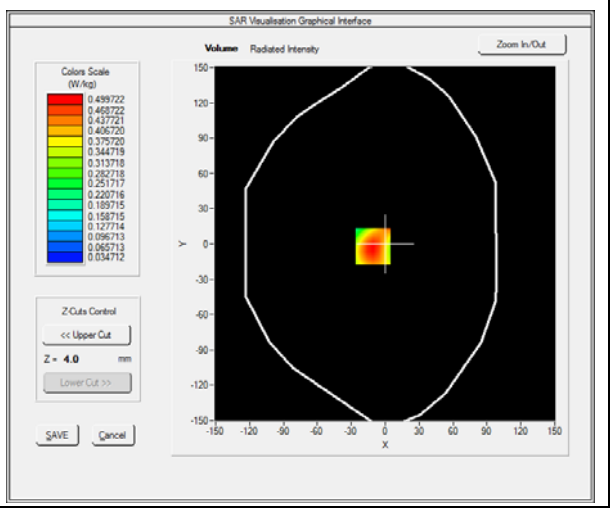
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Back
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

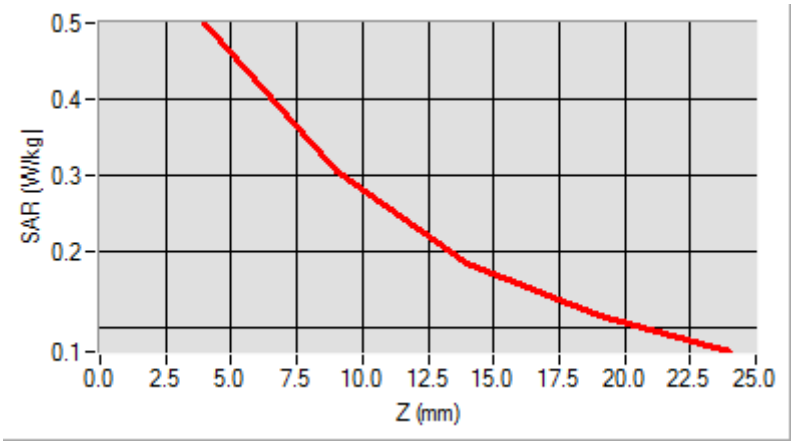
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	1.534242
Ambient Temperature	21.1
Liquid Temperature	21.3

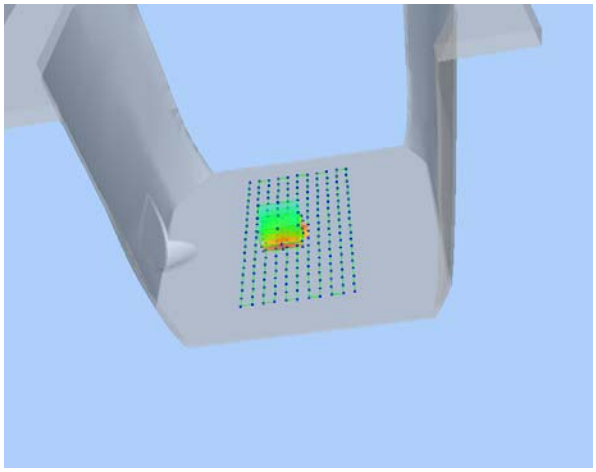
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-11.00, Y=-2.00

SAR 10g (W/Kg)	0.280794
SAR 1g (W/Kg)	0.470133

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.4997	0.3048	0.1863	0.1160



3D screen shot	Hot spot position
	

MEASUREMENT 30

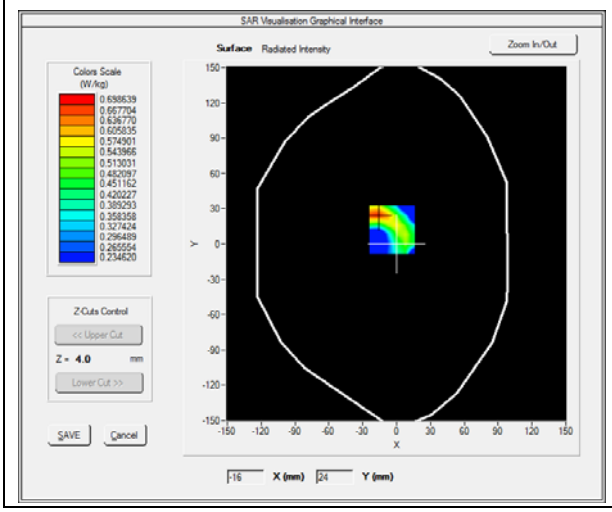
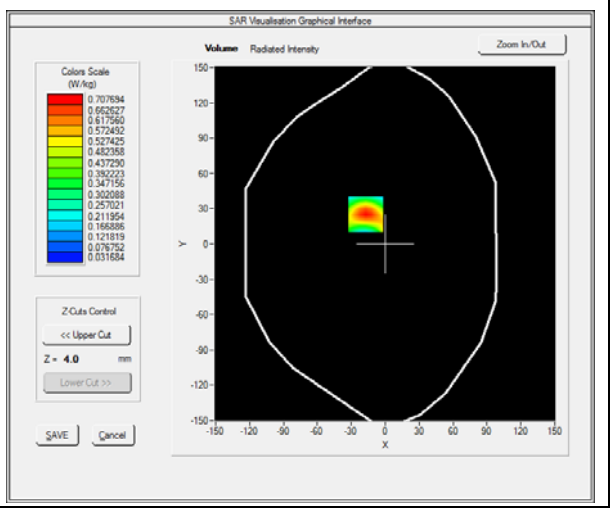
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Front
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

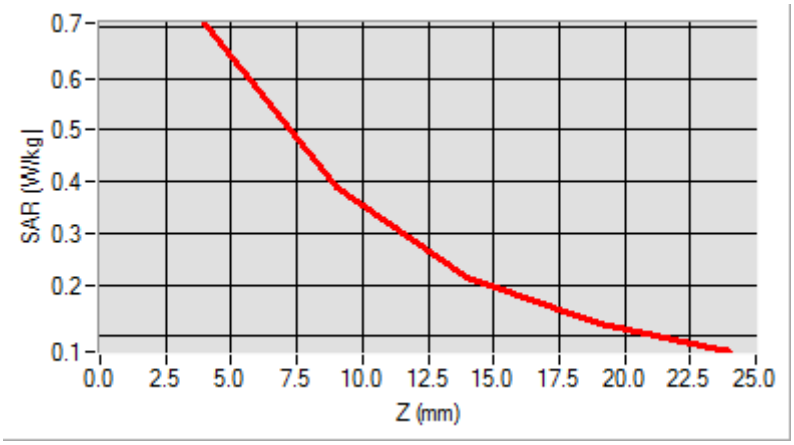
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	0.906634
Ambient Temperature	21.1
Liquid Temperature	21.3

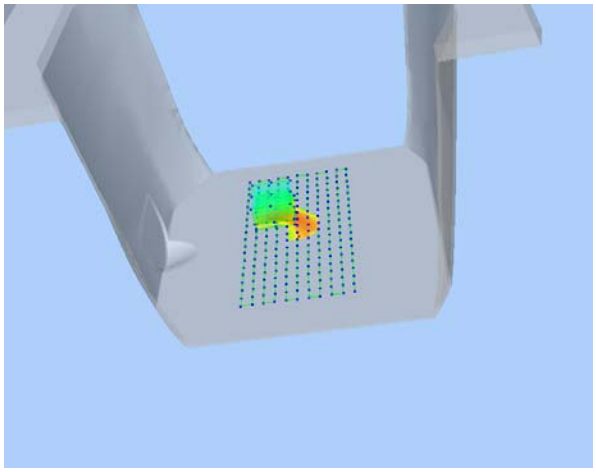
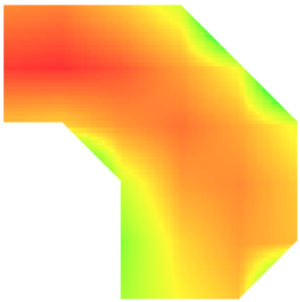
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-17.00, Y=25.00

SAR 10g (W/Kg)	0.340380
SAR 1g (W/Kg)	0.643825

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.7077	0.3900	0.2158	0.1247



3D screen shot	Hot spot position
	

MEASUREMENT 31

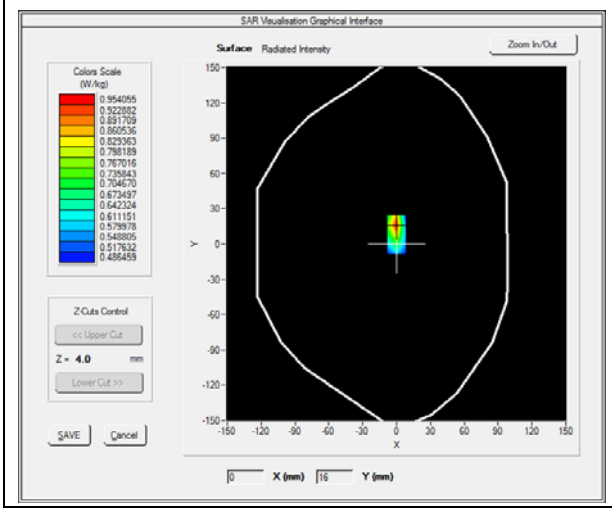
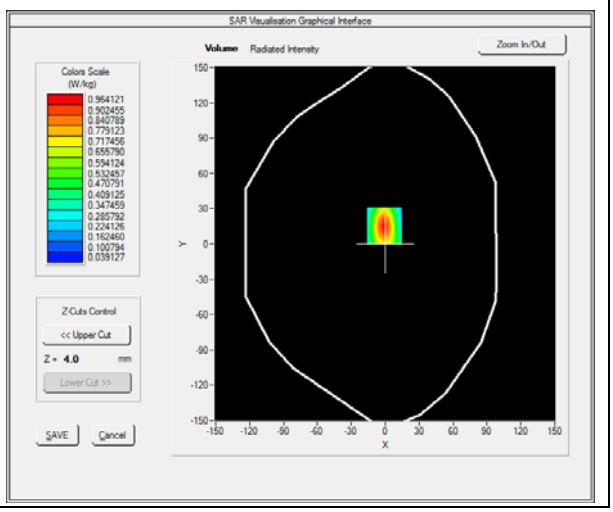
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Bottom
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

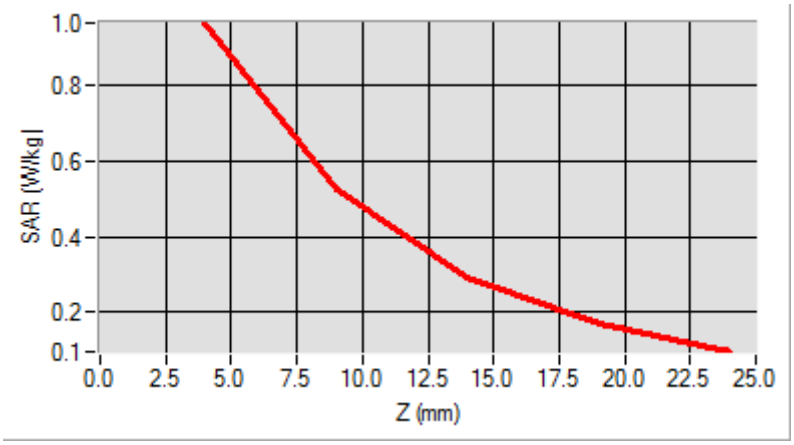
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	1.847552
Ambient Temperature	21.1
Liquid Temperature	21.3

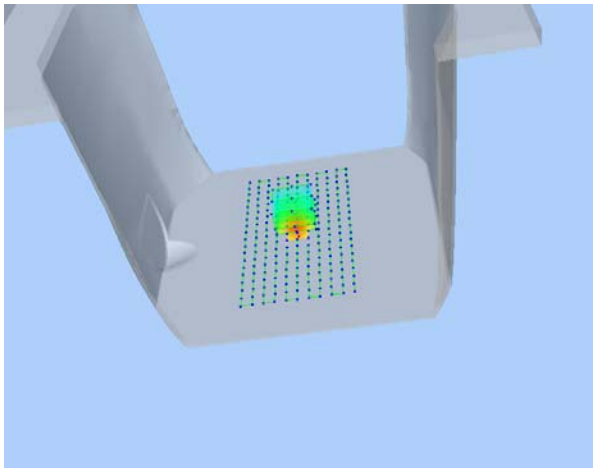
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=16.00

SAR 10g (W/Kg)	0.453267
SAR 1g (W/Kg)	0.870970

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.9641	0.5277	0.2908	0.1685



3D screen shot	Hot spot position
	

MEASUREMENT 32

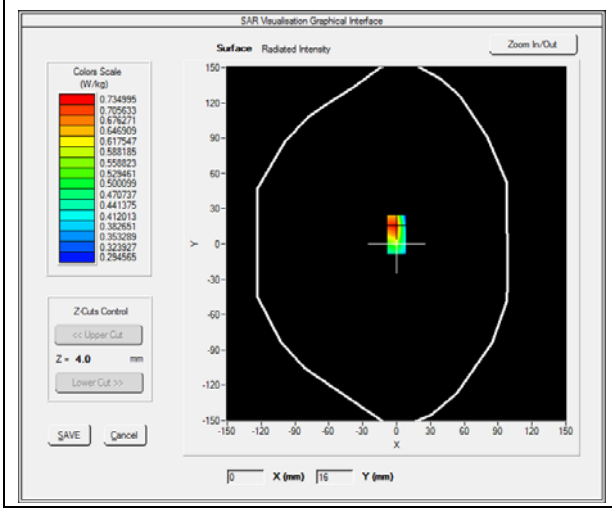
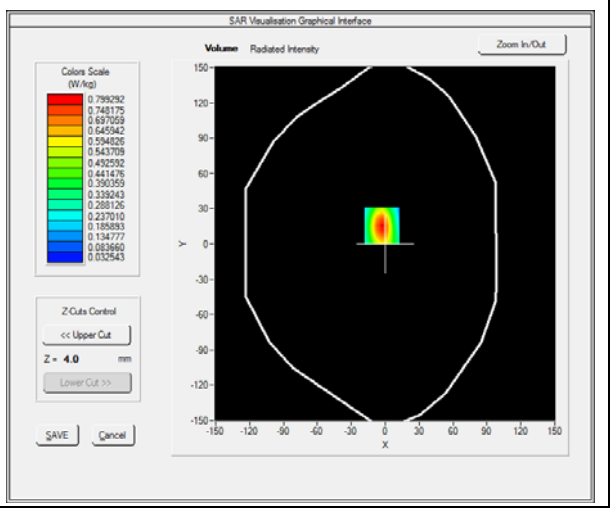
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Bottom
Band	WCDMA1900_RMC
Channels	Low
Signal	Duty Cycle 1:1

B. SAR Measurement Results

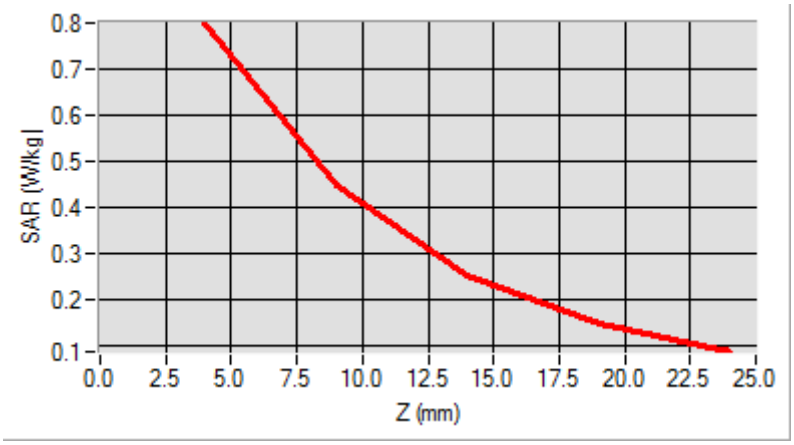
Frequency (MHz)	1852.400000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	1.847552
Ambient Temperature	21.1
Liquid Temperature	21.3

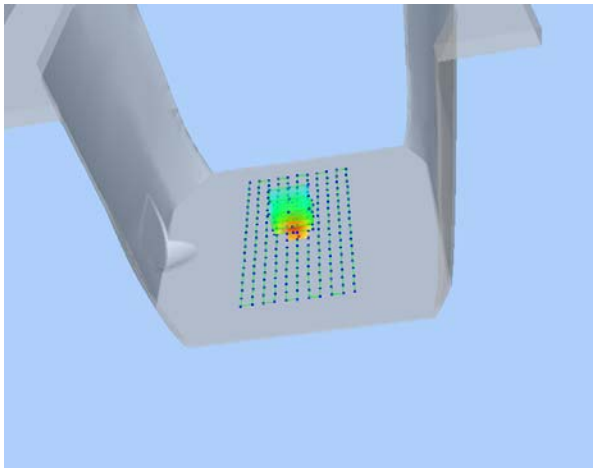
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-3.00, Y=16.00

SAR 10g (W/Kg)	0.378820
SAR 1g (W/Kg)	0.721592

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.7993	0.4453	0.2501	0.1474



3D screen shot	Hot spot position
	

MEASUREMENT 33

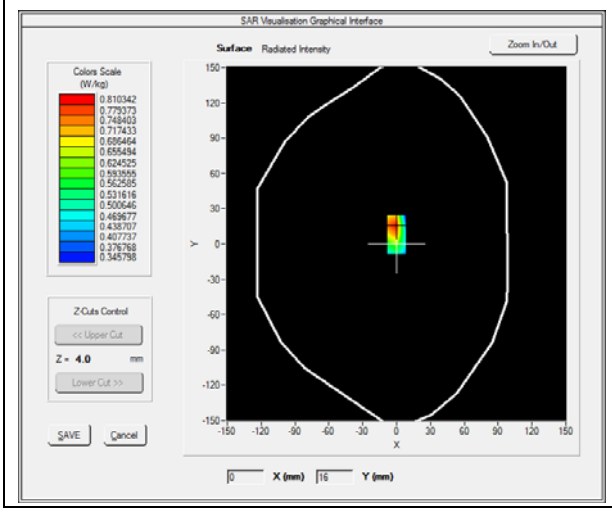
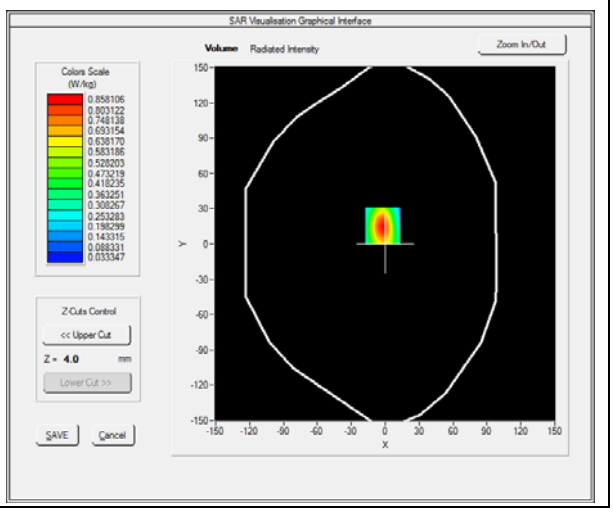
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Bottom
Band	WCDMA1900_RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

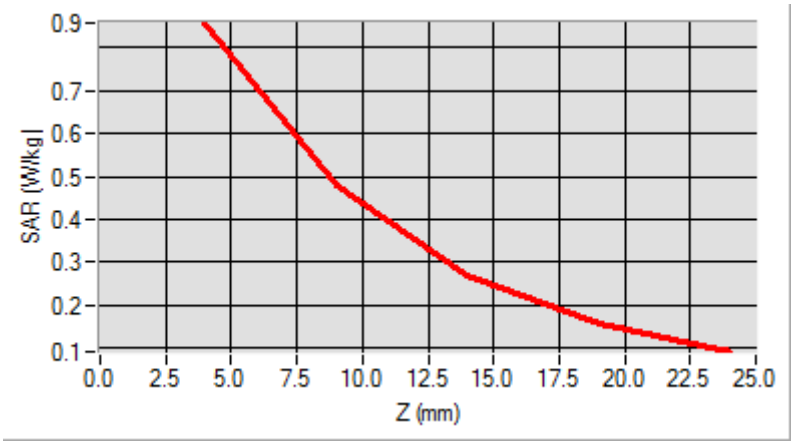
Frequency (MHz)	1880.000000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	1.847552
Ambient Temperature	21.1
Liquid Temperature	21.3

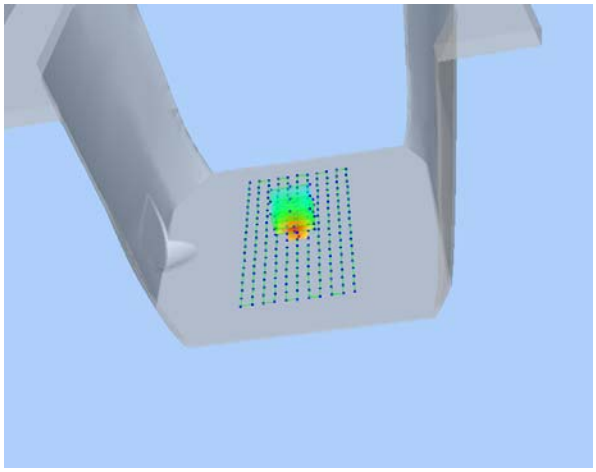
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-2.00, Y=16.00

SAR 10g (W/Kg)	0.410922
SAR 1g (W/Kg)	0.781248

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.8581	0.4797	0.2699	0.1587



3D screen shot	Hot spot position
	

MEASUREMENT 34

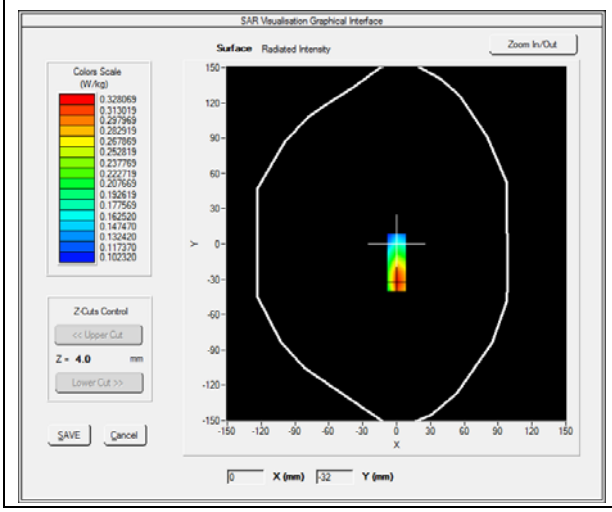
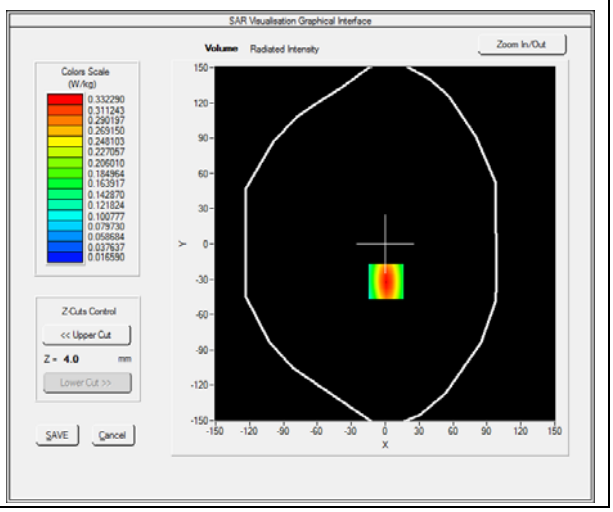
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Right side
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

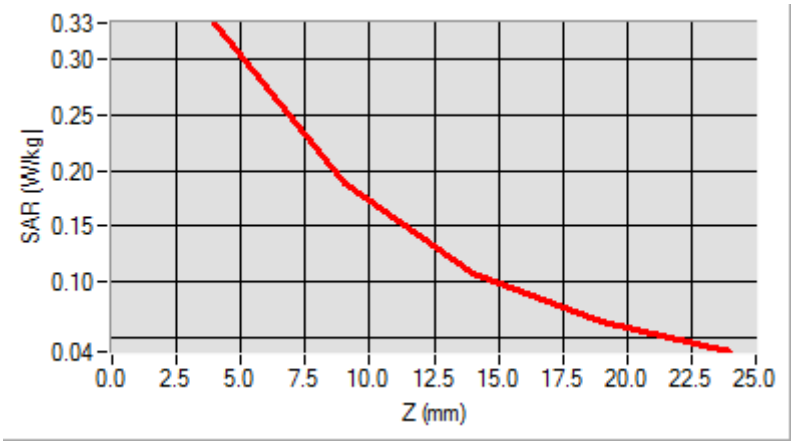
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	1.583732
Ambient Temperature	21.1
Liquid Temperature	21.3

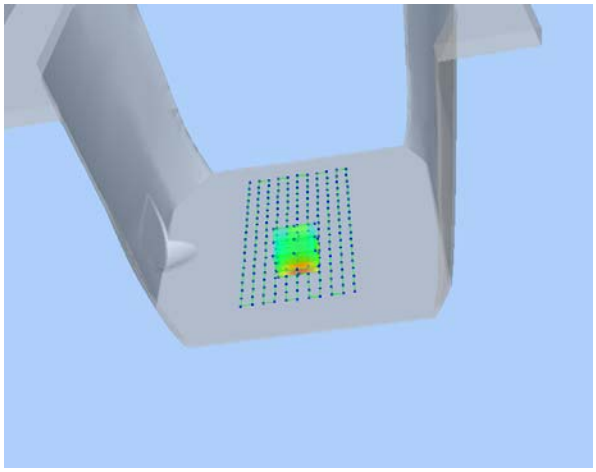
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=-32.00

SAR 10g (W/Kg)	0.170325
SAR 1g (W/Kg)	0.307217

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.3323	0.1892	0.1083	0.0644



3D screen shot	Hot spot position
	

MEASUREMENT 35

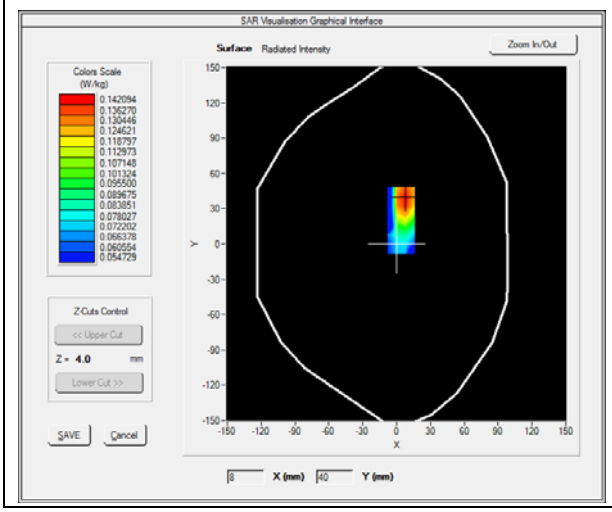
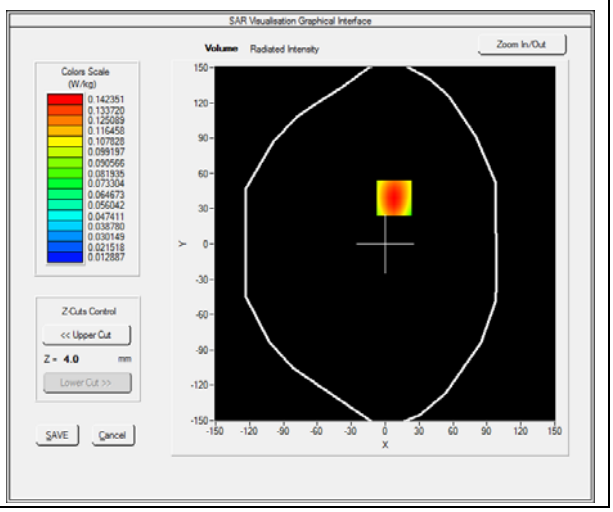
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.55; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Flat Plane
Device Position	Left side
Band	WCDMA1900_RMC
Channels	High
Signal	Duty Cycle 1:1

B. SAR Measurement Results

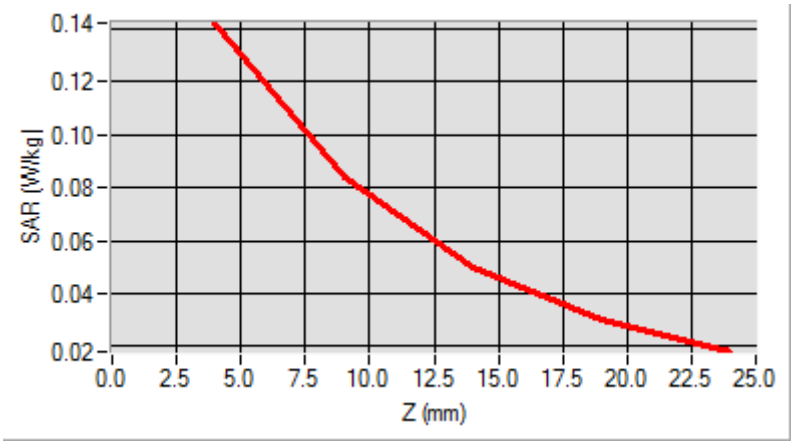
Frequency (MHz)	1907.600000
Relative Permittivity (real part)	52.420415
Conductivity (S/m)	1.501966
Power Variation (%)	2.232134
Ambient Temperature	21.1
Liquid Temperature	21.3

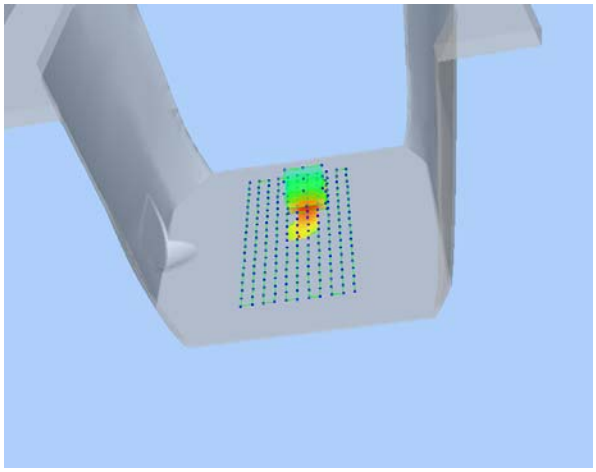
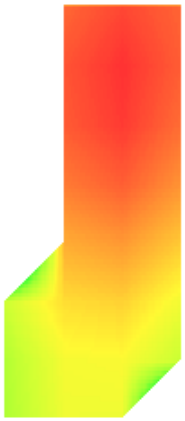
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=39.00

SAR 10g (W/Kg)	**0.080222**
SAR 1g (W/Kg)	**0.134114**

Z (mm)	**0.00**	**4.00**	**9.00**	**14.00**	**19.00**
SAR (W/Kg)	**0.0000**	**0.1424**	**0.0843**	**0.0501**	**0.0305**



3D screen shot	**Hot spot position**
	

MEASUREMENT 36

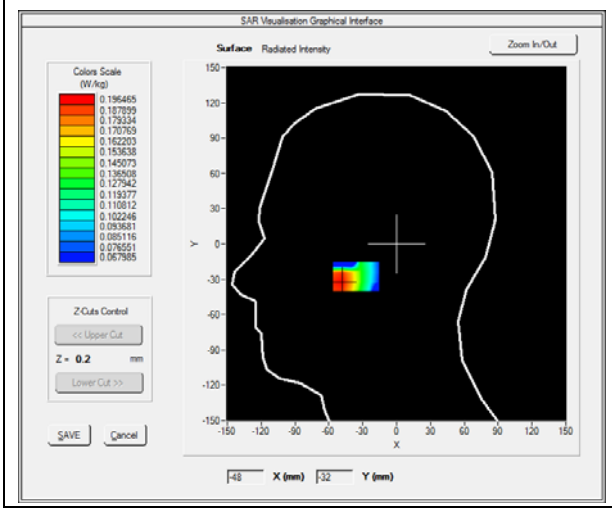
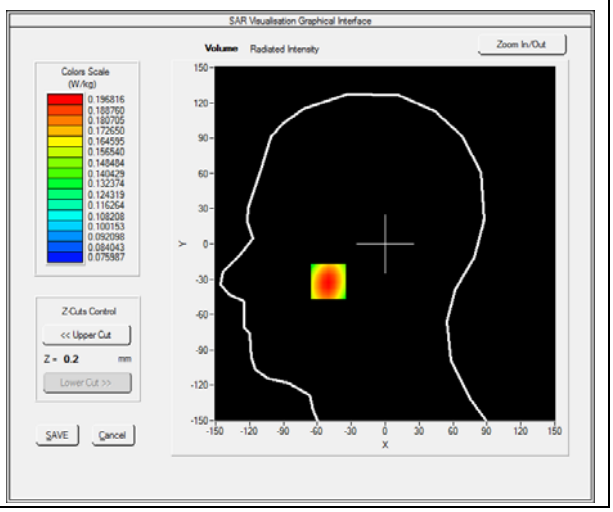
Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.93; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA850_RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

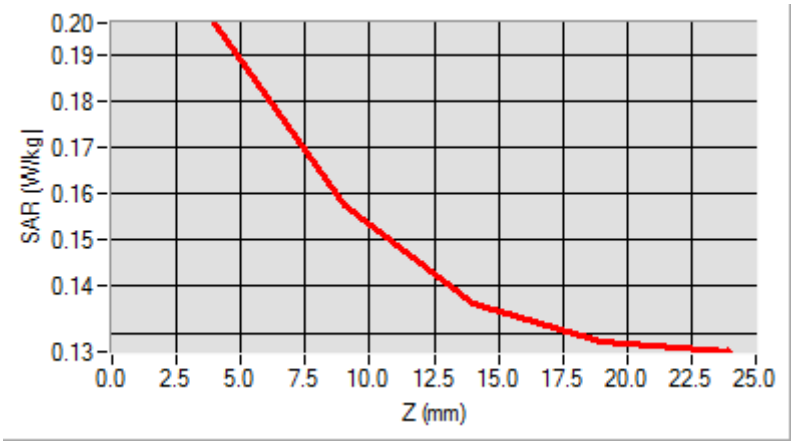
Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	1.342427
Ambient Temperature	21.1
Liquid Temperature	21.3

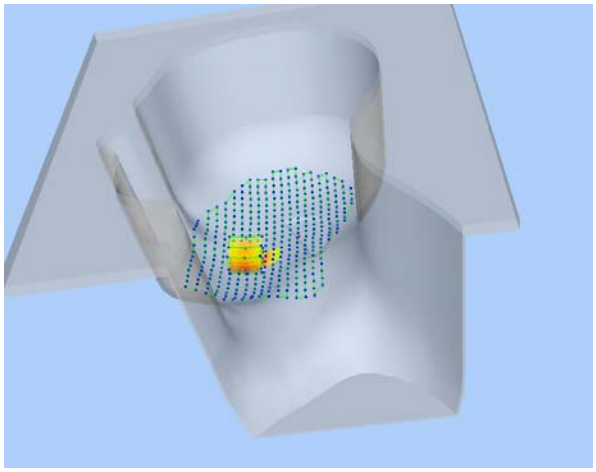
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-50.00, Y=-32.00

SAR 10g (W/Kg)	0.150928
SAR 1g (W/Kg)	0.189902

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1968	0.1575	0.1363	0.1281



3D screen shot	Hot spot position
	

MEASUREMENT 37

Type: Phone measurement (Complete)
Date of measurement: 10/10/2015
Measurement duration: 12 minutes 3 seconds
E-field Probe: SSE5 - SN 09/13 EP168; ConvF: 6.93; Calibrated: 06/03/2015

A. Experimental conditions

Area Scan	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	WCDMA850_ RMC
Channels	Middle
Signal	Duty Cycle 1:1

B. SAR Measurement Results

Frequency (MHz)	836.600000
Relative Permittivity (real part)	41.110245
Conductivity (S/m)	0.871245
Power Variation (%)	1.452324
Ambient Temperature	21.1
Liquid Temperature	21.3

SURFACE SAR	VOLUME SAR