

FCC SAR TEST REPORT



Issued to

ZTE Corporation

For

WCDMA Digital Mobile Phone

Model Name : ZTE V7883M
Trade Name : ZTE
Brand Name : ZTE
FCC ID : SRQ-V883M
Standard : 47CFR 2.1093
ANSI C95.1-1999
IEEE 1528-2003
MAX SAR : Head: 0.586W/kg
Body: 1.197W/kg
Test date : 2013-10-15 to 2013-10-17
Issue date : 2013-10-29

by

Shenzhen Morlab Communications Technology Co., Ltd.

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Date 2013.10.29

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Date 2013.10.29

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Date 2013.10.29



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Change History		
Issue	Date	Reason for change
1.0	Oct. 29, 2013	First edition

1. TESTING LABORATORY

1.1 Identification of the Responsible Testing Location

Name: Shenzhen Morlab Communications Technology Co., Ltd.
Morlab Laboratory
Address: FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China 518101

1.2 Accreditation Certificate

Accredited Testing Laboratory: No. CNAS L3572

1.3 List of Test Equipments

No.	Instrument	Type	Cal. Date	Cal. Due
1	PC	Dell (Pentium IV 2.4GHz, SN:X10-23533)	(n.a)	(n.a)
2	Network Emulator	Aglient (8960, SN:10752)	2013-9-26	1year
3	Network Analyzer	Agilent(E5071B ,SN:MY42404762)	2013-9-26	1year
4	Voltmeter	Keithley (2000, SN:1000572)	2013-9-24	1year
5	Signal Generator	Rohde&Schwarz (SMP_02)	2013-9-24	1year
6	Power Amplifier	PRANA (Ap32 SV125AZ)	2013-9-24	1year
7	Power Meter	Agilent (E4416A, SN:MY45102093)	2013-5-07	1year
8	Power Sensor	Agilent (N8482A, SN:MY41091706)	2013-5-07	1year
9	Directional coupler	Giga-tronics(SN:1829112)	2013-9-24	1year
10	Probe	Satimo (SN:SN 37/08 EP80)	2013-9-25	1year
11	Dielectric Probe Kit	Agilent (85033E)	2013-9-24	1year
12	Phantom	Satimo (SN:SN_36_08_SAM62)	2013-9-24	1year
13	Liquid	Satimo(Last Calibration: 2013-10-15 to 2013-10-17)	N/A	N/A
14	Dipole 835MHz	Satimo (SN 20/08 DIPC 99)	2013-9-25	1year
15	Dipole 1900MHz	Satimo (SN 30/13 DIP1G900-261)	2013-9-25	1year
16	Dipole 2450MHz	Satimo (SN 30/13 DIP2G450-263)	2013-9-25	1year

2. TECHNICAL INFORMATION

Note: the Following data is based on the information by the applicant.

2.1 Identification of Applicant

Company Name:	ZTE Corporation
Address:	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China.

2.2 Identification of Manufacturer

Company Name:	ZTE Corporation
Address:	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China.

2.3 Equipment Under Test (EUT)

Model Name:	ZTE V883M
Trade Name:	ZTE
Brand Name:	ZTE
Hardware Version:	N/A
Software Version:	N/A
Frequency Bands:	GSM 850MHz/PCS1900MHz; WCDMA 850MHZ/1900MHz; (Band II, V) Bluetooth; Wifi802.11B/G/N (2.4GHz)
Modulation Mode:	GSM/GPRS: GMSK; EDGE:8PSK; WCDMA/HSDPA/HSUPA: QPSK; WIFI802.11B: DSSS; WIFI802.11G: OFDM WIFI 802.11N: OFDM; BT: GFSK/π/4-DQPSK /8-DPSK
Multislot Class:	GPRS:Class 12; EDGE:Class 12
GPRS Class:	Class B
DTM:	Not support
Antenna type:	Fixed Internal Antenna
Development Stage:	Identical prototype
Battery Model:	Li3715T42P3h634254
Battery specification:	1500mAh3.7V
3GPP Version:	Release 7
Hotspot function:	Support

2.3.1 Photographs of the EUT

Please see for photographs of the EUT.

2.3.2 Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the Following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	N/A	N/A

2.4 Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	47 CFR§2.1093	Radiofrequency Radiation Exposure Evaluation: Portable Devices
2	ANSI C95.1-1999	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz
3	IEEE 1528-2003	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.
4	KDB 447498 D1	General RF Exposure Guidance v05r01
5	KDB 648474 D1	SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas
6	KDB 248227 D1	SAR Measurement Procedures for 802.11 a/b/g Transmitters
7	KDB 941225 D1	SAR Measurement Procedures for 3G Devices
8	KDB 941225 D6	Hot Spot SAR v01
9	KDB 865664 D1	SAR Measurement 100 MHz to 6 GHz v01r01
10	KDB 865664 D2	SAR Reporting v01r01

2.5 Device Category and SAR Limits

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user. Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

2.6 Test Environment/Conditions

Normal Temperature (NT):	20 ... 25 °C
Relative Humidity:	30 ... 75 %
Air Pressure:	980 ... 1020 hPa
Test frequency:	GSM 850MHz /PCS1900MHz; WCDMA 850MHz/WCDMA1900MHz; 802.11B(2.4GHz);
Operation mode:	Call established
Power Level:	GSM 850 MHz Maximum output power(level 5) PCS1900 MHz Maximum output power(level 0) WCDMA 850MHz Maximum output power(All up bits) WCDMA 1900MHz Maximum output power(All up bits) 802.11B Maximum output power(2.4GHz)

During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established.

The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 125, 190 and 251 respectively in the case of GSM 850 MHz, or to 512, 661 and 810 respectively in the case of PCS 1900 MHz, or to 9262, 9400 and 9538 respectively in the case of WCDMA 1900, or to 4175, 4175 and 4233 respectively in the case of WCDMA 850MHz, or to 1, 6, 11 respectively in the case of 802.11B (2.4GHz). The EUT is commanded to operate at maximum transmitting power.

The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset.

The signal transmitted by the simulator to the antenna feeding point shall be Middle than the output power level of the handset by at least 35 dB.

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 techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are Middle 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:

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

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

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

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

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

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

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

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

4. SAR MEASUREMENT SETUP

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

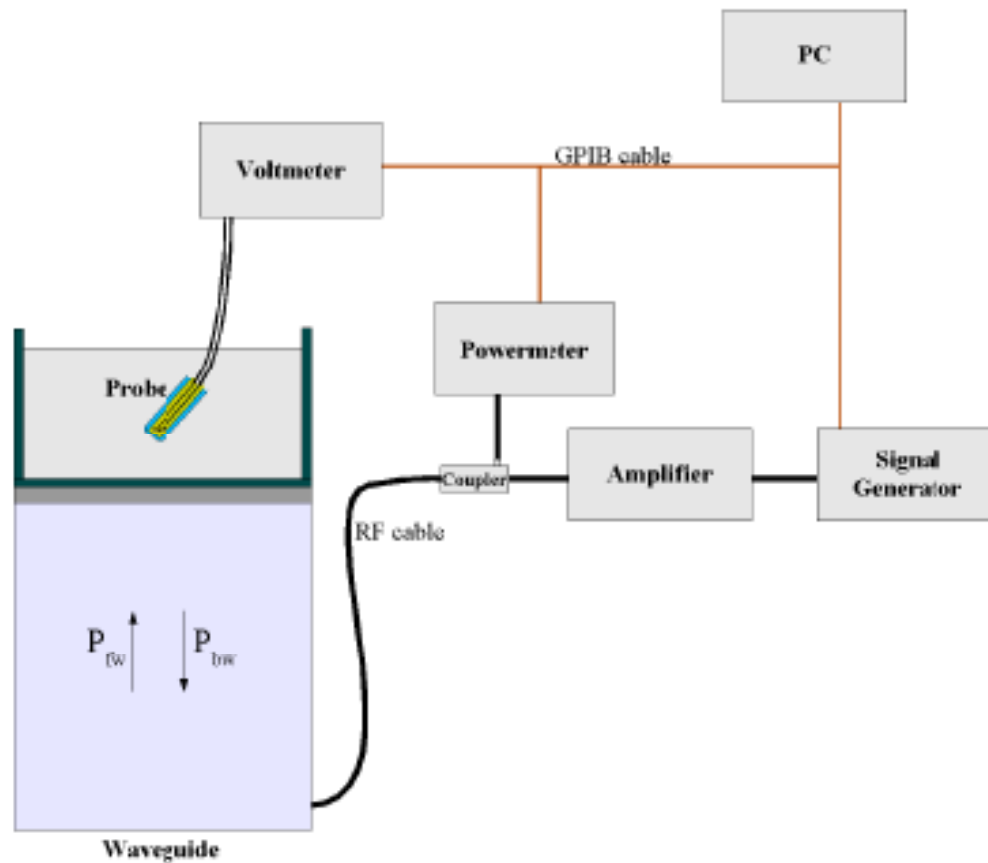
For the measurements the Specific Dosimetric E-Field Probe SN 37/08 EP80 with Following specifications is used

- Dynamic range: 0.01-100 W/kg
- Tip Diameter : 6.5 mm
- Distance between probe tip and sensor center: 2.5mm

- Distance between sensor center and the inner phantom surface: 4 mm
(repeatability better than +/- 1mm)
- Probe linearity: < 0.25 dB
- Axial Isotropy: < 0.25 dB
- Spherical Isotropy: < 0.25 dB
- Calibration range: 835 to 2500 MHz for head & body simulating liquid.

Angle between probe axis (evaluation axis) and surface normal line: less than 30°

Probe calibration is realized, in compliance with CENELEC EN 62209 and IEEE 1528 std, with CALISAR, Antennasoft proprietary calibration system. The calibration is performed with the EN 622091 annex 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 :

P_{fw} = Forward Power

P_{bw} = Backward Power

a and b = Waveguide dimensions

δ = 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:

$$CF(N)=SAR(N)/V_{lin}(N) \quad (N=1,2,3)$$

The linearised output voltage $V_{lin}(N)$ is obtained from the displayed output voltage $V(N)$ using

$$V_{lin}(N)=V(N)*(1+V(N)/DCP(N)) \quad (N=1,2,3)$$

Where DCP is the diode compression point in mV.

4.3 Probe Calibration Process

4.3.1 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.

4.3.2 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 1 mW/cm².

4.3.3 Temperature Assessment Procedure

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulating 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.

Where:

δt = exposure time (30 seconds),

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

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.

Where:

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

σ = simulated tissue conductivity,

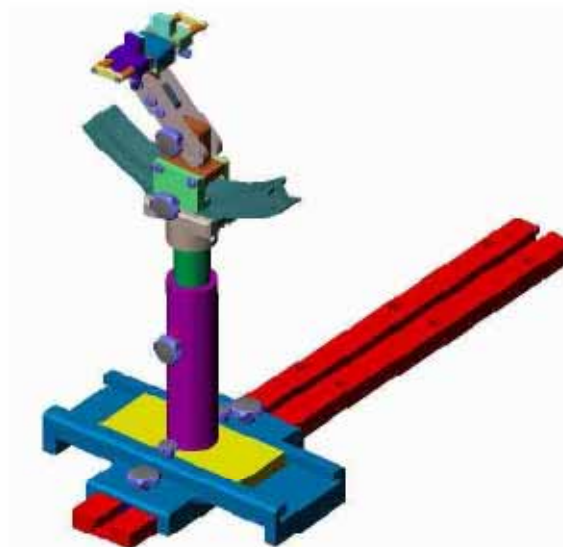
ρ = Tissue density (1.25 g/cm³ for brain tissue)

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 Middle than 1°.



Device holder

System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

5. TISSUE SIMULATING LIQUIDS

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

The following table gives the recipes for tissue simulating liquids

Ingredients (% by weight)	Frequency Band		Frequency Band		Frequency Band	
	835MHz		1900MHz		2450MHz	
Tissue Type	Head	Body	Head	Body	Head	Body
Water	41.45	52.4	54.9	40.4	62.7	73.2
Salt(NaCl)	1.45	1.4	0.18	0.5	0.5	0.04
Sugar	56.0	45.0	0.0	58.0	0.0	0.0
HEC	1.0	1.0	0.0	1.0	0.0	0.0
Bactericide	0.1	0.1	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	44.92	0.0	36.8	0.0
Acticide SPX	0.0	0.0	0.0	0.0	0.0	26.7
Dielectric Constant	41.50	55.2	40.0	53.3	39.2	52.7
Conductivity (S/m)	0.90	0.97	1.40	1.52	1.80	1.97

The dielectric properties of the tissue simulating liquids were verified prior to the SAR evaluation using an Agilent 85033E Dielectric Probe Kit and an Agilent Network Analyzer.

Table 1: Dielectric Performance of Tissue Simulating Liquid

Temperature: 22.0~23.8°C, humidity: 54~60%.						
Date	Freq.(MHz)	Liquid Parameters	Meas.	Target	Delta(%)	Limit±(%)
2013/10/15	Head 835	Relative Permittivity(ϵ_r):	42.10	41.5	1.45	5
		Conductivity(σ):	0.88	0.90	-2.22	5
	Body 835	Relative Permittivity(ϵ_r):	55.21	55.2	0.02	5
		Conductivity(σ):	0.98	0.97	1.03	5
2013/10/16	Head 1900	Relative Permittivity(ϵ_r):	41.12	40	2.80	5
		Conductivity(σ):	1.39	1.40	-0.71	5
	Body 1900	Relative Permittivity(ϵ_r):	53.32	53.3	0.04	5
		Conductivity(σ):	1.50	1.52	-1.32	5
2013/10/17	Head 2450	Relative Permittivity(ϵ_r):	40.07	39.2	2.22	5
		Conductivity(σ):	1.77	1.80	-1.67	5
	Body2450	Relative Permittivity(ϵ_r):	52.52	52.7	-0.34	5
		Conductivity(σ):	1.91	1.95	-2.05	5

6. UNCERTAINTY ASSESSMENT

The Following table includes the uncertainty table of the IEEE 1528. The values are determined by Antennessa.

6.1 UNCERTAINTY EVALUATION 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	4.76	N	1	1	1	4.76	4.7	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	0.7	0.7	1.01	1.0	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	0.7	0.7	1.62	1.6	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.5	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.8	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.58	0.5	∞
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.0	∞
Reponse Time	E.2.7	3.0	R	$\sqrt{3}$	1	1	1.73	1.7	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.15	1.1	∞
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.7	∞
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.15	1.1 5	∞
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	$\sqrt{3}$	1	1	0.03	0.0 3	∞
Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation	E.5.2	5.0	R	$\sqrt{3}$	1	1	2.89	2.8 9	∞
Test sample Related									
Test sample positioning	E.4.2. 1	0.03	N	1	1	1	0.03	0.0 3	N- 1
Device Holder Uncertainty	E.4.1. 1	5.00	N	1	1	1	5.00	5.0 0	N- 1
Output power Power drift -	6.6.2	4.04	R	$\sqrt{3}$	1	1	2.33	2.3	∞

SAR drift measurement								3	
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Liquid conductivity - deviation from target value	E.3.2	4.57	R	$\sqrt{3}$	0.64	0.43	1.69	1.13	∞
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	M
Liquid permittivity - deviation from target value	E.3.2	3.69	R	$\sqrt{3}$	0.6	0.49	1.28	1.04	∞
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	M
Combined Standard Uncertainty			RSS				11.55	10.67	
Expanded Uncertainty (95% Confidence interval)			K=2				23.11	21.33	

6.2 UNCERTAINTY FOR SYSTEM PERFORMANCE CHECK

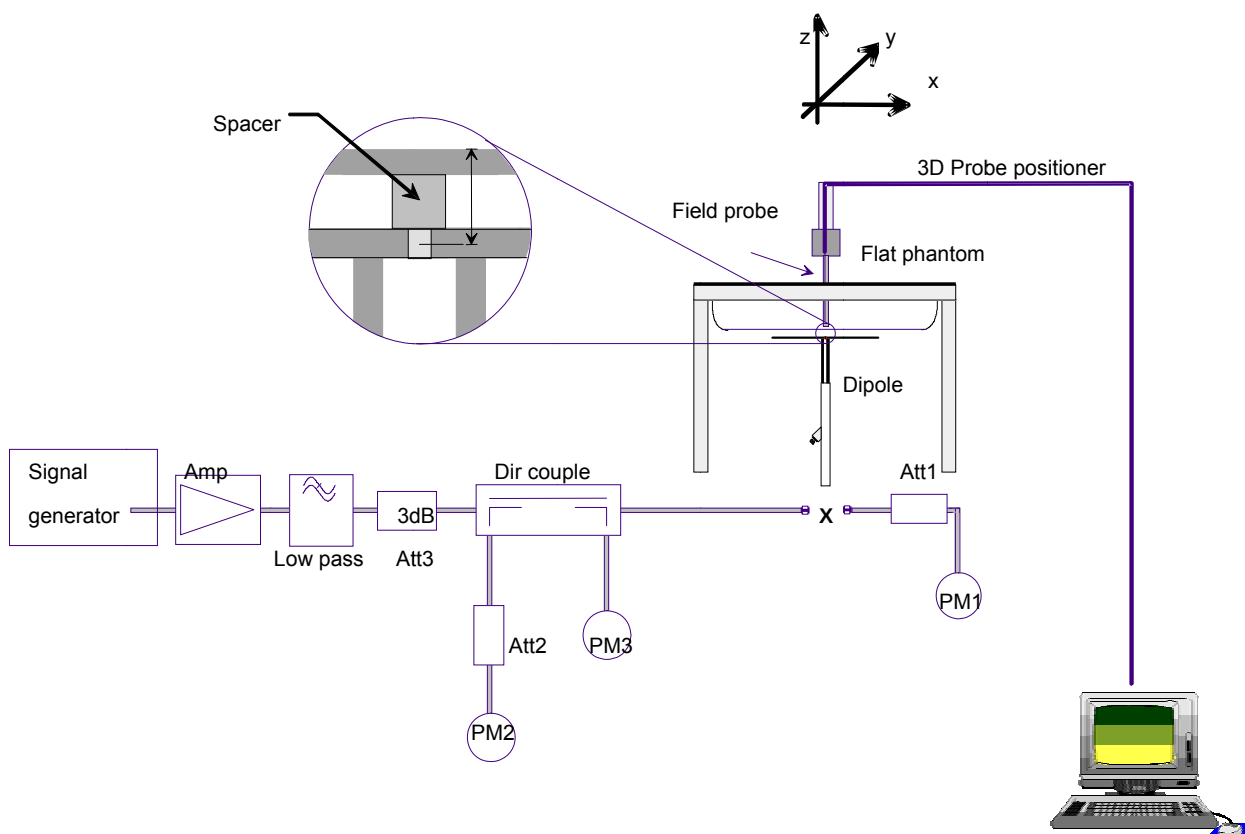
a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/ e	k
Uncertainty Component	Sec.	Tol (+-%)	Prob Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	4.76	N	1	1	1	4.76	4.7	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	0.7	0.7	1.01	1.0	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	0.7	0.7	1.62	1.6	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.5	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.8	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.58	0.5	∞
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.0	∞
Reponse Time	E.2.7	3.0	R	$\sqrt{3}$	1	1	1.73	1.7	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.15	1.1	∞
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.7	∞

Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation	E.5.2	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.00	N	$\sqrt{3}$	1	1	0.58	0.58	∞
Input power and SAR drift measurement	8,6.6.2	4.04	R	$\sqrt{3}$	1	1	2.33	2.33	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Liquid conductivity - deviation from target value	E.3.2	4.57	R	$\sqrt{3}$	0.64	0.43	1.69	1.13	∞
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	$\sqrt{3}$	0.64	0.43	1.85	1.24	M
Liquid permittivity - deviation from target value	E.3.2	3.69	R	$\sqrt{3}$	0.6	0.49	1.28	1.04	∞
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	$\sqrt{3}$	0.6	0.49	3.46	2.83	M
Combined Standard Uncertainty			RSS				8.83	8.37	
Expanded Uncertainty (95% Confidence interval)			K=2				17.66	16.73	

7. SAR MEASUREMENT EVALUATION

7.1 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave which comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The system check verifies that the system operates within its specifications. It is performed daily or before every SAR measurement. The system check uses normal SAR measurements in the flat section of the phantom with a matched dipole at a specified distance. The system verification setup is shown as below.



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

7.2 Validation Results

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

Frequency	835MHz(H)	835MHz(B)	1900MHz(H)	1900MHz(B)
Target value (1g)	9.710 W/Kg	10.020 W/Kg	39.390 W/Kg	42.330 W/Kg
Test value (1g 250 mW input)	2.415 W/Kg (10.15)	2.482 W/Kg (10.15)	9.657 W/Kg (10.16)	9.895 W/Kg (10.16)
Normalized value (1g)	9.660 W/Kg	9.928 W/Kg	38.628 W/Kg	39.580 W/Kg

Frequency	2450MHz(H)	2450MHz(B)
Target value (1g)	54.77 W/Kg	56.090 W/Kg
Test value (1g 250 mW input)	12.586 W/Kg (10.17)	12.894 W/Kg (10.17)
Normalized value (1g)	50.344 W/Kg	51.576 W/Kg

Note: System checks the specific test data please see page 151~162

8. OPERATIONAL CONDITIONS DURING TEST

8.1 Information on the testing

The mobile phone antenna and battery are those specified by the manufacturer. The battery is fully charged before each measurement. The output power and frequency are controlled using a base station simulator. The mobile phone is set to transmit at its Highest output peak power level.

The mobile phone is test in the “cheek” and “tilted” positions on the left and right sides of the phantom. The mobile phone is placed with the vertical centre line of the body of the mobile phone and the horizontal line crossing the centre of the earpiece in a plane parallel to the sagittal plane of the phantom.

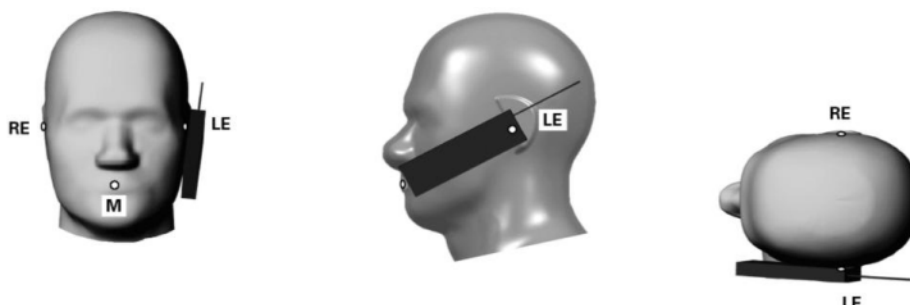


Illustration for Cheek Position



Illustration for Tilted Position

Description of the “cheek” position:

The mobile phone is well placed in the reference plane and the earpiece is in contact with the ear. Then the mobile phone is moved until any point on the front side get in contact with the cheek of the phantom or until contact with the ear is lost.

Description of the “tilted” position:

The mobile phone is well placed in the “cheek” position as described above. Then the mobile phone is moved outward away from the month by an angle of 15 degrees or until contact with the ear lost.

Remark: Please refer to Appendix B for the test setup photos.

8.2 Body-worn Configurations

The body-worn configurations shall be tested with the supplied accessories (belt-clips, holsters, etc.) attached to the device in normal use configuration.

For body-worn and other configurations a flat phantom shall be used which is comprised of material with electrical properties similar to the corresponding tissues.

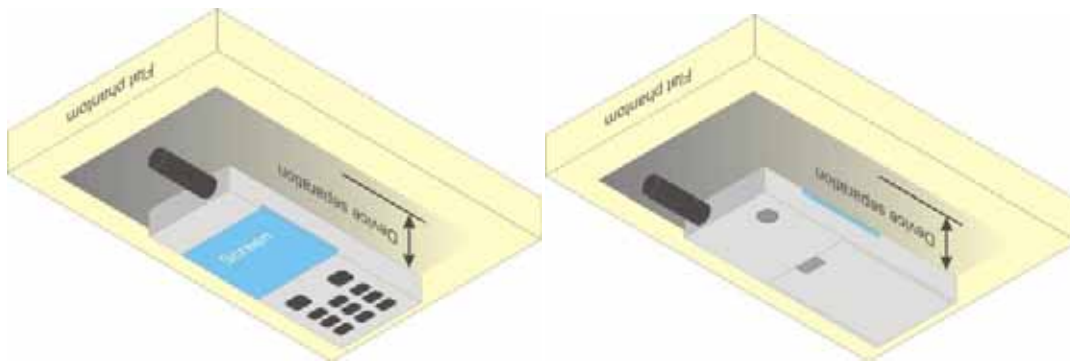


Illustration for Body Worn Position

8.3 Measurement procedure

The Following steps are used for each test position

1. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface.
2. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
3. Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors can not directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
4. Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

8.4 Description of interpolation/extrapolation scheme

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 10 grams and 1 gram requires a very fine resolution in the three dimensional scanned data array.

9. MEASUREMENT OF CONDUCTED PEAK OUTPUT POWER

1. WCDMA Conducted peak output power

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4175	4175	4233	9262	9400	9538
	subtest	dBm			dBm		
5.2(WCDMA)	non	24.94	24.02	24.75	23.23	23.00	23.52
HSDPA	1	24.92	24.00	24.74	23.19	22.98	23.51
	2	24.93	24.00	24.72	23.20	22.97	23.50
	3	24.44	23.51	24.23	22.73	22.48	23.00
	4	24.42	23.54	24.24	22.71	22.49	23.98
HSUPA	1	24.91	23.89	24.50	23.12	22.89	23.47
	2	22.95	21.95	22.54	21.25	20.95	21.51
	3	23.93	22.06	23.51	22.23	21.97	22.54
	4	22.94	21.94	22.55	21.24	20.96	21.53
	5	24.88	23.82	24.47	23.11	22.87	23.46
Note: The Conducted RF Output Power test of WCDMA /HSDPA /HSUPA was tested by power meter.							

2. GSM Conducted peak output power

Band	Channel	Frequency (MHz)	Output Power (dBm)
GSM 850	128	824.2	32.35
	190	836.6	32.53
	251	848.8	32.56
PCS 1900	512	1850.2	29.21
	661	1880.0	29.66
	810	1909.8	28.61

3. GPRS Mode Conducted peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	31.50	30.08	29.14	28.64
	190	836.6	31.71	30.29	29.35	28.85
	251	848.8	31.75	30.33	29.39	28.89
PCS 1900	512	1850.2	28.34	26.92	25.98	25.48
	661	1880.0	28.99	27.57	26.63	26.13
	810	1909.8	28.02	26.60	25.66	25.16

GPRS Time-based Average Power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	22.47	24.06	24.88	25.63
	190	836.6	22.68	24.27	25.09	25.84
	251	848.8	22.72	24.31	25.13	25.88
PCS 1900	512	1850.2	19.31	20.90	21.72	22.47
	661	1880.0	19.96	21.55	22.37	23.12
	810	1909.8	18.99	20.58	21.40	22.15

4. EGPRS Mode Conducted peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	32.10	30.78	29.90	29.42
	190	836.6	32.36	31.04	30.16	29.68
	251	848.8	32.46	31.14	30.26	29.78
PCS 1900	512	1850.2	28.82	27.50	26.62	26.14
	661	1880.0	28.93	27.61	26.73	26.25
	810	1909.8	28.61	27.29	26.41	25.93

EGPRS Time-based Average Power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	23.07	24.76	25.64	26.41
	190	836.6	23.33	25.02	25.9	26.67
	251	848.8	23.43	25.12	26.00	26.77
PCS 1900	512	1850.2	19.79	21.48	22.36	23.13
	661	1880.0	19.90	21.59	22.47	23.24
	810	1909.8	19.58	21.27	22.15	22.92

Timeslot consignations:

No. Of Slots	Slot 1	Slot 2	Slot 3	Slot 4
Slot Consignation	1Up4Down	2Up2Down	3Up2Down	4Up1Down
Duty Cycle	1:8	1:2	1:2.67	1:2
Correct Factor	-9.03dB	-6.02dB	-4.26dB	-3.01dB

5. Wifi peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)		
			802.11B (DSSS)	802.11G (OFDM)	802.11N20 (OFDM)
Wifi	1	2412	17.25	14.2	14.27
	6	2437	17.22	13.89	14.16
	11	2462	16.95	13.63	13.75

Band	Channel	Frequency (MHz)	Output Power(dBm)
			802.11N40 (OFDM)
Wifi	3	2422	13.83
	6	2437	13.60
	9	2452	13.58

6. Bluetooth peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)		
			GFSK	$\pi/4$ -DQPSK	8-DPSK
BT	0	2402	8.767	8.104	8.116
	39	2441	9.372	8.568	8.645
	78	2480	10.76	10.06	10.06

Band	Channel	Frequency (MHz)	Output Power(dBm)
			GFSK
BT	0	2402	2.955
	19	2440	3.378
	39	2480	3.418

10. TEST RESULTS LIST

Summary of Measurement Results (GSM 850MHz Band)

Temperature: 21.0~23.8℃, humidity: 54~60%.						
Phantom Configurations		Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head		Cheek/Touch	251	0.529	1.107	0.586
		Ear/Tilt		0.410		0.454
Left Side Of Head		Cheek/Touch		0.472		0.523
		Ear/Tilt		0.343		0.380
Body (10mm Separation)	GSM	Back upward		0.721		0.798
		Front upward		0.609		0.674
	EDGE	Back upward	128	1.102	1.086	1.197
			190	1.023	1.035	1.059
			251	0.906	1.026	0.930
		Front upward	251	0.751	1.026	0.771
		Edge A		0.746		0.765
		Edge B		0.278		0.285
		Edge C		0.719		0.738
	GPRS	Back upward	0.757	1.052	0.796	

Summary of Measurement Results (GSM 1900MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.						
Phantom Configurations		Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head		Cheek/Touch	661	0.331	1.009	0.334
		Ear/Tilt		0.066		0.067
Left Side Of Head		Cheek/Touch		0.157		0.158
		Ear/Tilt		0.068		0.069
Body (10mm Separation)	GSM	Back upward		0.339	1.089	0.342
		Front upward		0.369		0.372
	EDGE	Back upward		0.594		0.647
		Front upward		0.531		0.578
		Edge A		0.134		0.146
		Edge B		0.542		0.590
		Edge C		0.226		0.246
	GPRS	Back upward		0.624	1.059	0.661

Note:

1. GPRS/EDGE test Scenario(Based on the Max. Time-based Average Power)

Band	Channel	Slots	Power level	Duty Cycle
GPRS850	251	4	5	1:2
EDGE850	251	4	5	1:2
GPRS1900	661	4	0	1:2
EDGE1900	661	4	0	1:2

Summary of Measurement Results (WCDMA 850MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head	Cheek/Touch	4132	0.484	1.014	0.491
	Ear/Tilt		0.323		0.328
Left Side Of Head	Cheek/Touch		0.405		0.411
	Ear/Tilt		0.255		0.259
Body (10mm Separation)	Back upward		0.785		0.796
	Front upward		0.570		0.578
	Edge A		0.607		0.615
	Edge B		0.131		0.133
	Edge C		0.373		0.378

Summary of Measurement Results (WCDMA 1900MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head	Cheek/Touch	9538	0.436	1.042	0.454
	Ear/Tilt		0.082		0.085
Left Side Of Head	Cheek/Touch		0.188		0.196
	Ear/Tilt		0.093		0.097
Body (10mm Separation)	Back upward		0.577		0.601
	Front upward		0.453		0.472
	Edge A		0.090		0.094
	Edge B		0.460		0.479
	Edge C		0.174		0.181

Summary of Measurement Results (WLAN 802.11B Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head	Cheek/Touch	1	0.168	1.059	0.178
	Ear/Tilt		0.066		0.070
Left Side Of Head	Cheek/Touch		0.091		0.096
	Ear/Tilt		0.061		0.065
Body (10mm Separation)	Back upward		0.066		0.070
	Front upward		0.033		0.035
	Edge C		0.042		0.044
	Edge D		0.021		0.022

Summary of Measurement Results (Bluetooth Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head	Cheek/Touch	78	0.062	1.057	0.066
	Ear/Tilt		0.016		0.017
Left Side Of Head	Cheek/Touch		0.056		0.059
	Ear/Tilt		0.020		0.021

Note:

- When the 1-g SAR for the mid-band channel or the channel with the Highest output power satisfy the following conditions, testing of the other channels in the band is not required. (Per KDB 447498 D01 General RF Exposure Guidance v05)
 - ≤ 0.8 W/kg and transmission band ≤ 100 MHz
 - ≤ 0.6 W/kg and, 100 MHz $<$ transmission bandwidth ≤ 200 MHz
 - ≤ 0.4 W/kg and transmission band > 200 MHz
- After pre-scan test ,the SIM Card 1 was the worst case ,so we did the testing and recorded the results according to SIM card 1.

3. The WCDMA mode is test with 12.2kbps RMC and TPC set to all "1", if maximum SAR for 12.2kbps RMC is $\leq 75\%$ of the SAR limit (i.e. 1.2W/Kg 1g) and maximum average output of each RF channel with HSDPA/HSUPA active is less than 1/4 dB Middle than that measured without HSDPA/HSUPA using 12.2kbps RMC, according to KDB 941225D01v02, SAR is not required for this handset with HSPA capabilities.
4. BT&wifi SAR test is conducted according to section 12 stand-alone SAR evaluation of this report.
- 5.. During 802.11b(2.4GHz) testing, engineering testing software installed on the EUT can provide continuous transmitting RF signal. The RF signal utilized in SAR measurement has almost 100% duty cycle, and its crest factor is 1.
- 6.. Scaling Factor calculation

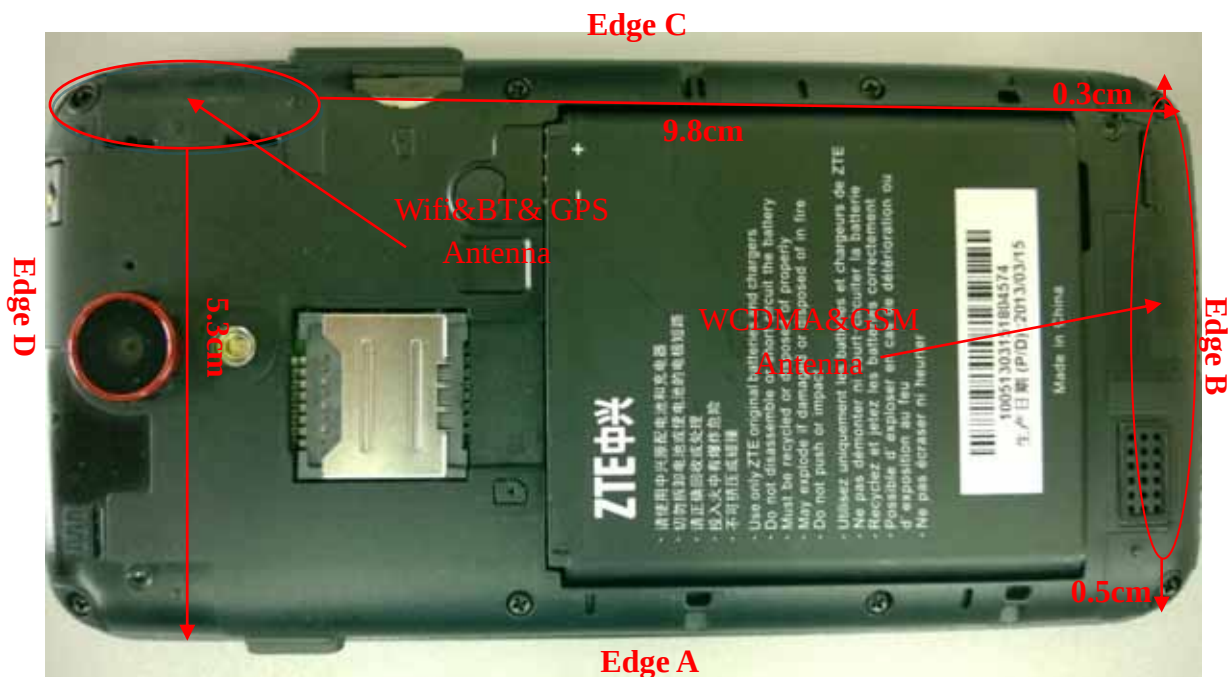
Band	Tune-up power tolerance (dBm)	SAR test channel Power (dBm)	Scaling Factor
GSM 850	PCL = 5, PWR = 32.5+-0.5	32.56	1.107
GPRS 850	PCL = 5, PWR =28.5+-0.5(4 slots)	28.64	1.086
		28.85	1.035
		28.89	1.026
EDGE 850	PCL = 5, PWR =29.5+-0.5(4 slots)	29.78	1.052
PCS 1900	PCL = 0, PWR = 29.2+-0.5	29.66	1.009
GPRS 1900	PCL=0, PWR= 26+-0.5(4 slots)	26.13	1.089
EDGE 1900	PCL=0, PWR= 26+-0.5(4 slots)	26.25	1.059
WCDMA 850	Max output power =24(+1/-2)	24.94	1.014
WCDMA 1900	Max output power =23 (+0.7/-2)	23.52	1.042
802.11(2.4GHz)	Max output power =17+-0.5	17.25	1.059
BT	Max output power =10.5+-0.5	10.76	1.057

11. HOTSPOT MODE EVALUATION PROCEDURE

The SAR evaluation procedures for Portable Devices with Wireless Router function is according to KDB 941225 D06 Hot Spot SAR v01.

SAR must be tested for all surfaces and edges (side) with a transmitting antenna with in 2.5 cm from that surface or edge, at a test separation distance of 10 mm, in the wireless modes that support wireless routing.

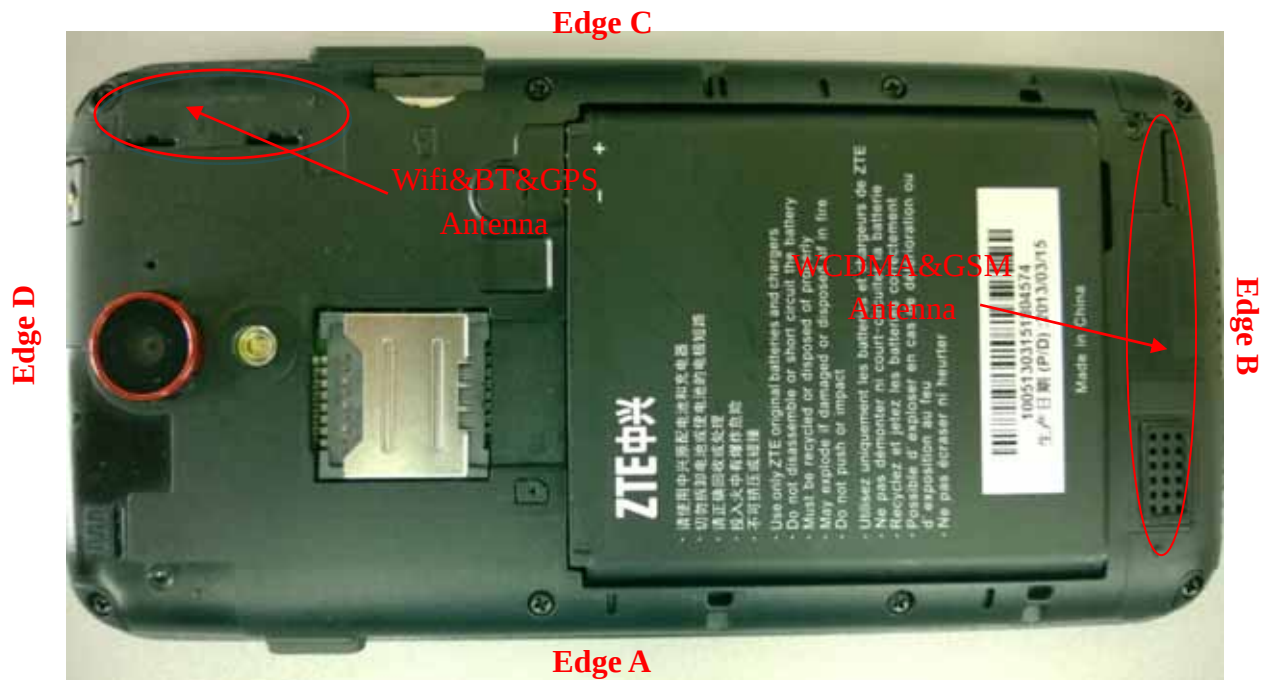
Edge configurations:



Assessment		Hotspot side for SAR				
		Test distance: 10mm				
Antennas	Back	Front	Edge A	Edge B	Edge C	Edge D
WCDMA/GSM	Yes	Yes	Yes	Yes	Yes	No
WLAN&BT	Yes	Yes	No	No	Yes	Yes

12. MULTIPLE TRANSMITTERS EVALUATION

The are two transmitters build in EUT, as following:



Stand-alone SAR

Test distance: 5mm		
Band	SAR Test Exclusion Threshold(mW) Per KDB 447498 D01v05r01	Highest power(mW) Per tune up
WIFI(2.4G)	10	56.234
BT	10	11.912

Test distance: 10mm(for body)		
Band	SAR Test Exclusion Threshold(mW) Per KDB 447498 D01v05r01	Highest power(mW) Per tune up
WIFI(2.4G)	19	56.234
BT	19	11.912

According to the chart above, WIFI2.4G is required for Stand-alone SAR test, BT SAR is required for head, and BT body SAR is not required.

The SAR test for 802.11b(2.4GHz) is required, 802.11g/HT20/HT40 is not required, for the maximum

average output power is less than 1/4 dB Higher than measured on the corresponding 802.11b channels.
As per KDB 248227

The SAR test for BT is not required for highest power is not exceed the power threshold for 2450MHz at the test distance of 5mm.

The BT stand-alone body SAR is not required, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

$(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})} / x]$
W/kg for test separation distances ≤ 50 mm;

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

(Max power= 11.912 mW(per tune up) ; min. test separation distance= 10mm for body; $f=2.4\text{GHz}$)

BT estimated Body SAR = 0.246W/Kg (1g)

Simultaneous SAR

Description of Simultaneous Transmit Capabilities				
No.	Transmitter Combinations	Scenario Supported ?	Supported for Mobile Hotspot ?	Explanation
1	GSM(Voice)+GSM(Data)	No	No	Note 1
2	WCDMA(Voice)+WCDMA(Data)	Yes	Yes	
3	GSM(Voice)+WCDMA(Data)	No	No	
4	WCDMA(Voice)+GSM(Data)	No	No	
5	GSM(Data)+WCDMA(Voice)	No	No	
6	GSM(Voice)+WCDMA(Voice)	No	No	
7	GSM(Voice)+WiFi (/ BT)	Yes	No	Note 2
8	WCDMA(Voice)+WiFi (/BT)	Yes	No	
9	WCDMA(Voice)+WCDMA(Data)+WiFi	Yes	Yes	Note 3
10	GSM(Data)+WiFi	Yes	Yes	
11	WCDMA(Data)+WiFi	Yes	Yes	

Not applicable	Applicable	Head	Body-worn	Hotspot
1,3,4,5,6	2,7,8,9,10,11	2,7,8,9	2,7,8,9	2,9,10,11

Note:

- EUT system architecture does not support simultaneous voice and data (except on WCDMA), multiple voice channels, or multiple data channels during a single session on the cellular net work.
- Supported for voice plus background data.
- Support for mobile hotspot operation.

4. When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WiFi transmitter and another licensed transmitter. Both transmitter often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The "Portable Hotspot" feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.
5. The hotspot SAR result may overlap with the body-worn accessory SAR requirements, per KDB 941225 D06, the more conservative configurations can be considered, thus excluding some unnecessary body-worn accessory SAR tests.
6. GSM supports voice and data transmission, though not simultaneously. WCDMA supports voice and data transmission simultaneously.
7. Simultaneous Transmission SAR evaluation is not required for BT and WiFi, because the software mechanism have been incorporated to guarantee that the WLAN and Bluetooth transmitters would not simultaneously operate.
8. For Scenario **No.2,8,9,11**, WCDMA and WiFi is tested separately, the WCDMA mode is test with 12.2kbps RMC and TPC set to all "1", if maximum SAR for 12.2kbps RMC is $\leq 75\%$ of the SAR limit (i.e. 1.2W/Kg 1g) and maximum average output of each RF channel with HSDPA/HSUPA active is less than 1/4 dB Middle than that measured without HSDPA/HSUPA using 12.2kbps RMC, according to KDB 941225D01v02, SAR is not required for this handset with HSPA capabilities.
9. For Scenario **No.7,10**, GSM and WiFi is tested separately, the GSM mode do not supports voice and data transmission simultaneously, voice (GSM) and data (GPRS/EDGE) is tested separately.

1. Applicable Multiple Scenario Evaluation

Test Position	WCDMA&GSM SARMax (W/Kg)	Bluetooth SAR(W/Kg)	WiFi SARMax(W/Kg)	Σ 1-g SARMax(W/Kg)	
				BT&Main Ant	WiFi&Main Ant
Head SAR	0.586	0.066	0.178	0.652	0.244
Body SAR	1.197	0.261	0.070	1.458	1.267

Simultaneous Transmission SAR evaluation is not required for Wifi and WCDMA&GSM, because the sum of 1g SARMax is **1.267W/Kg** < 1.6W/Kg for Wifi and WCDMA&GSM.

Simultaneous Transmission SAR evaluation is not required for BT and WCDMA&GSM, because the sum of 1g SARMax is **1.458W/Kg** < 1.6W/Kg for BT and WCDMA&GSM.

(According to KDB 447498D01v05, the sum of the Highest reported SAR of each antenna does not exceed the limit, simultaneous transmission SAR evaluation is not required.)

ANNEX A GRAPH TEST RESULTS

BAND	PARAMETERS
<u>GSM850</u>	<u>Measurement 1:</u> Right Head with Cheek device position on High Channel in GSM mode <u>Measurement 2:</u> Right Head with Tilt device position on High Channel in GSM mode <u>Measurement 3:</u> Left Head with Cheek device position on High Channel in GSM mode <u>Measurement 4:</u> Left Head with Tilt device position on High Channel in GSM mode <u>Measurement 5:</u> Flat Plane with Body device position on High Channel in GSM mode <u>Measurement 6:</u> Flat Plane with Body device position on High Channel in GSM mode <u>Measurement 7:</u> Flat Plane with Body device position on Low Channel in EDGE mode <u>Measurement 8:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 9:</u> Flat Plane with Body device position on High Channel in EDGE mode <u>Measurement 10:</u> Flat Plane with Body device position on High Channel in EDGE mode <u>Measurement 11:</u> Flat Plane with Body device position on High Channel in EDGE mode <u>Measurement 12:</u> Flat Plane with Body device position on High Channel in EDGE mode <u>Measurement 13:</u> Flat Plane with Body device position on High Channel in EDGE mode <u>Measurement 14:</u> Flat Plane with Body device position on High Channel in GPRS mode
<u>GSM1900</u>	<u>Measurement 15:</u> Right Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 16:</u> Right Head with Tilt device position on Middle Channel in GSM mode <u>Measurement 17:</u> Left Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 18:</u> Left Head with Tilt device position on Middle Channel in GSM mode

	<u>Measurement 19:</u> Flat Plane with Body device position Middle Channel in GSM mode <u>Measurement 20:</u> Flat Plane with Body device position on Middle Channel in GSM mode <u>Measurement 21:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 22:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 23:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 24:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 25:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 26:</u> Flat Plane with Body device position on Middle Channel in GPRS mode
WCDMA <u>850</u>	<u>Measurement 27:</u> Right Head with Cheek device position on Low Channel in WCDMA mode <u>Measurement 28:</u> Right Head with Tilt device position on Low Channel in WCDMA mode <u>Measurement 29:</u> Left Head with Cheek device position on Low Channel in WCDMA mode <u>Measurement 30:</u> Left Head with Tilt device position on Low Channel in WCDMA mode <u>Measurement 31:</u> Flat Plane with Body device position on Low Channel in WCDMA mode <u>Measurement 32:</u> Flat Plane with Body device position on Low Channel in WCDMA mode <u>Measurement 33:</u> Flat Plane with Body device position on Low Channel in WCDMA mode <u>Measurement 34:</u> Flat Plane with Body device position on Low Channel in WCDMA mode <u>Measurement 35:</u> Flat Plane with Body device position on Low Channel in WCDMA mode
WCDMA <u>1900</u>	<u>Measurement 36:</u> Right Head with Cheek device position on High Channel in WCDMA mode <u>Measurement 37:</u> Right Head with Tilt device position on High Channel in WCDMA mode <u>Measurement 38:</u> Left Head with Cheek device position on High Channel in WCDMA mode

	<u>Measurement 39:</u> Left Head with Tilt device position on High Channel in WCDMA mode <u>Measurement 40:</u> Flat Plane with Body device position on High Channel in WCDMA mode <u>Measurement 41:</u> Flat Plane with Body device position on High Channel in WMA mode <u>Measurement 42:</u> Flat Plane with Body device position on High Channel in WCDMA mode <u>Measurement 43:</u> Flat Plane with Body device position on High Channel in WCDMA mode <u>Measurement 44:</u> Flat Plane with Body device position on High Channel in WCMA mode
<u>802.11B</u> <u>(2450)</u>	<u>Measurement 45:</u> Right Head with Cheek device position on Low Channel in DSSS mode <u>Measurement 46:</u> Right Head with Tilt device position on Low Channel in DSSS mode <u>Measurement 47:</u> Left Head with Cheek device position on Low Channel in DSSS mode <u>Measurement 48:</u> Left Head with Tilt device position on Low Channel in DSSS mode <u>Measurement 49:</u> Flat Plane with Body device position on Low Channel in DSSS mode <u>Measurement 50:</u> Flat Plane with Body device position on Low Channel in DSSS mode <u>Measurement 51:</u> Flat Plane with Body device position on Low Channel in DSSS mode <u>Measurement 52:</u> Flat Plane with Body device position on Low Channel in DSSS mode
<u>BT</u>	<u>Measurement 53:</u> Right Head with Cheek device position on Low Channel in GFSK mode <u>Measurement 54:</u> Right Head with Tilt device position on Low Channel in GFSK mode <u>Measurement 55:</u> Left Head with Cheek device position on Low Channel in GFSK mode <u>Measurement 56:</u> Left Head with Tilt device position on Low Channel in GFSK mode

MEASUREMENT 1

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 8 minutes 49 seconds

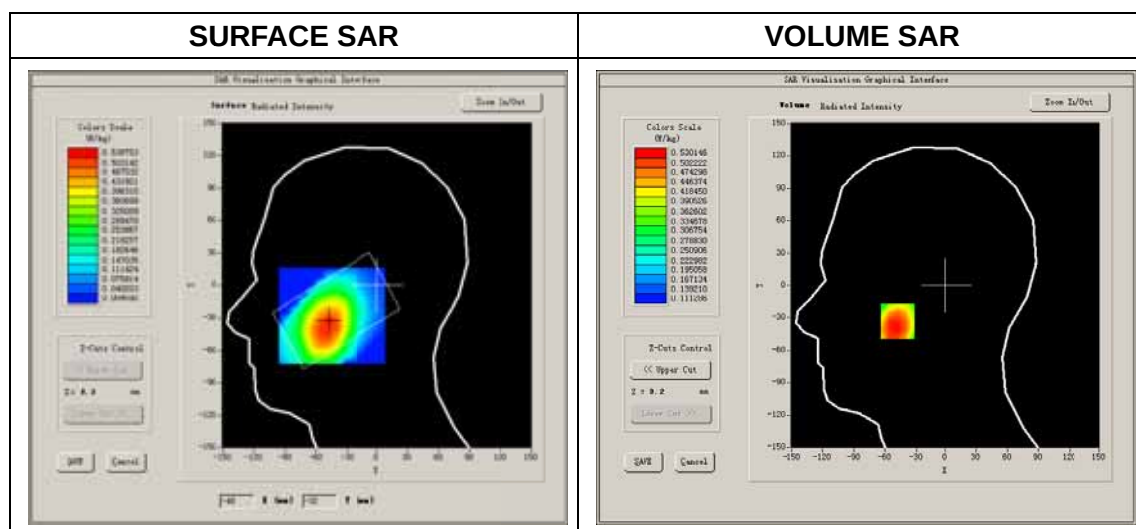
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

High Band SAR (Channel 251):

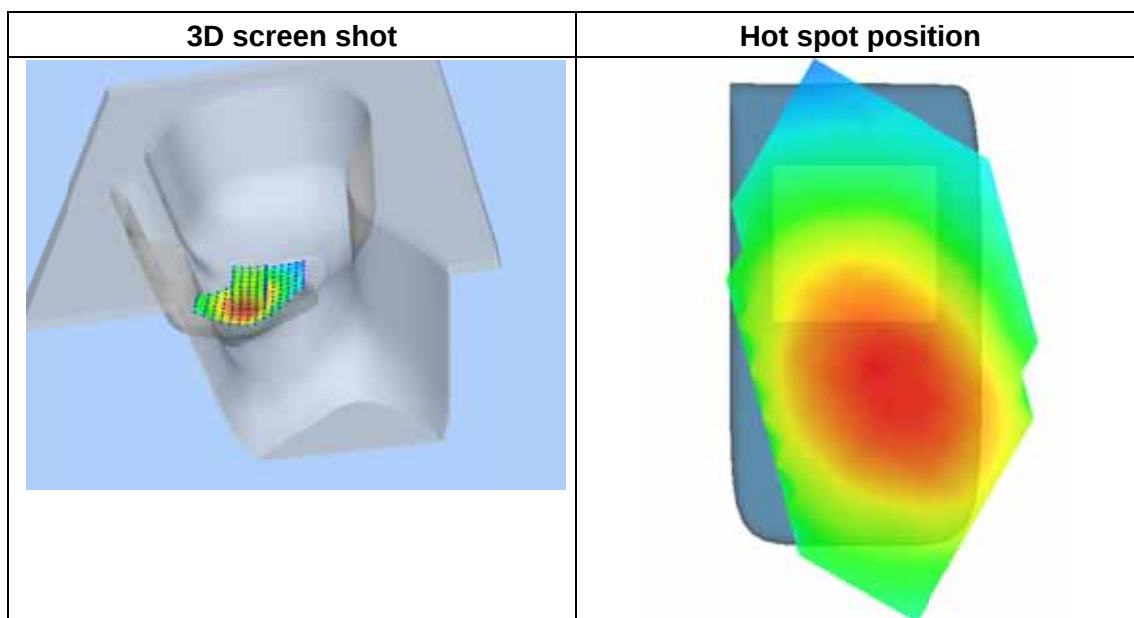
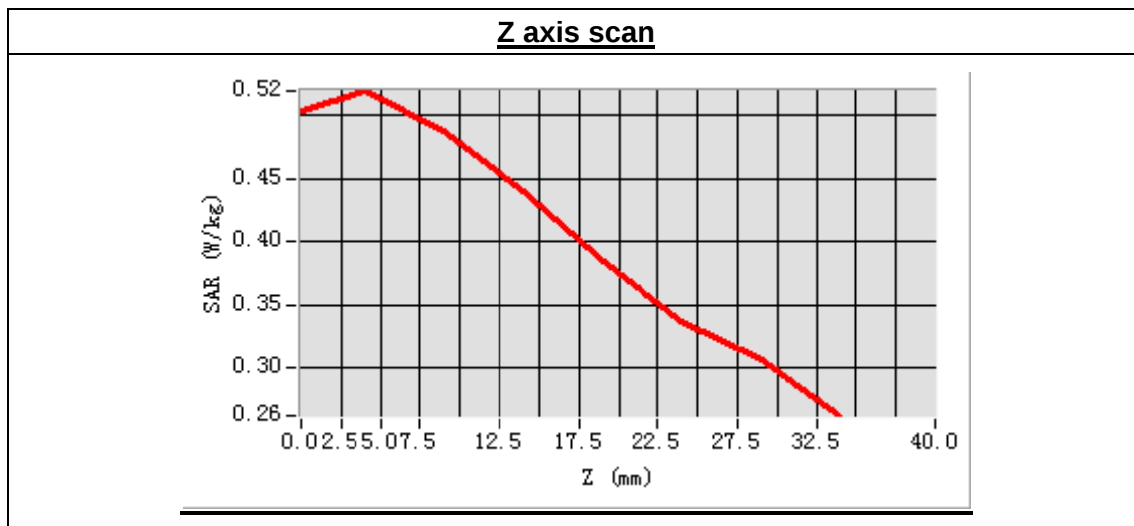
Frequency (MHz)	848.800000
Relative permittivity (real part)	42.104395
Conductivity (S/m)	0.876942
Power drift (%)	-0.560000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8



Maximum location: X=-48.00, Y=-33.00

SAR Peak: 0.62 W/kg

SAR 10g (W/Kg)	0.435032
SAR 1g (W/Kg)	0.528506



MEASUREMENT 2

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 8 minutes 16 seconds

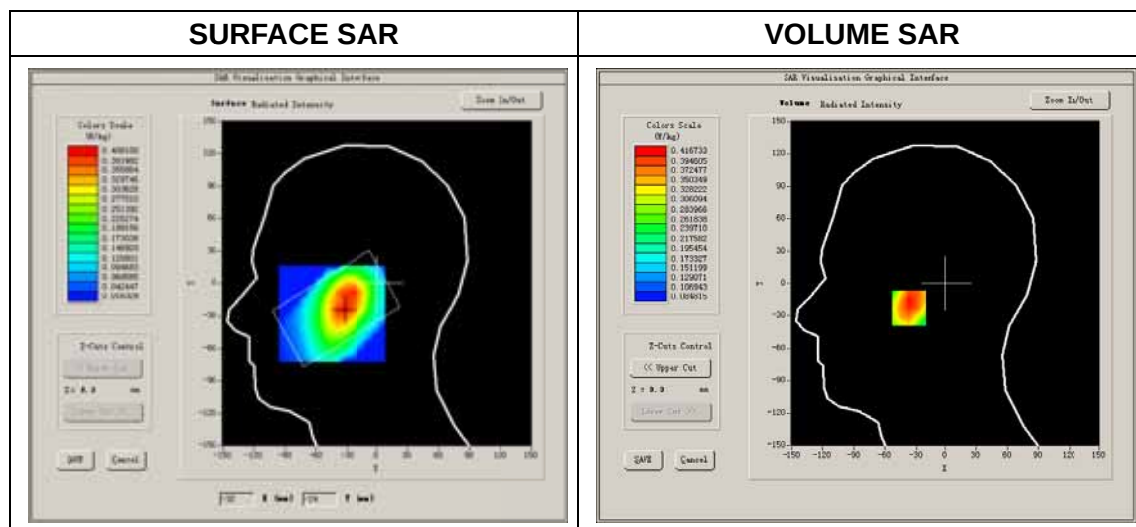
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

High Band SAR (Channel 251):

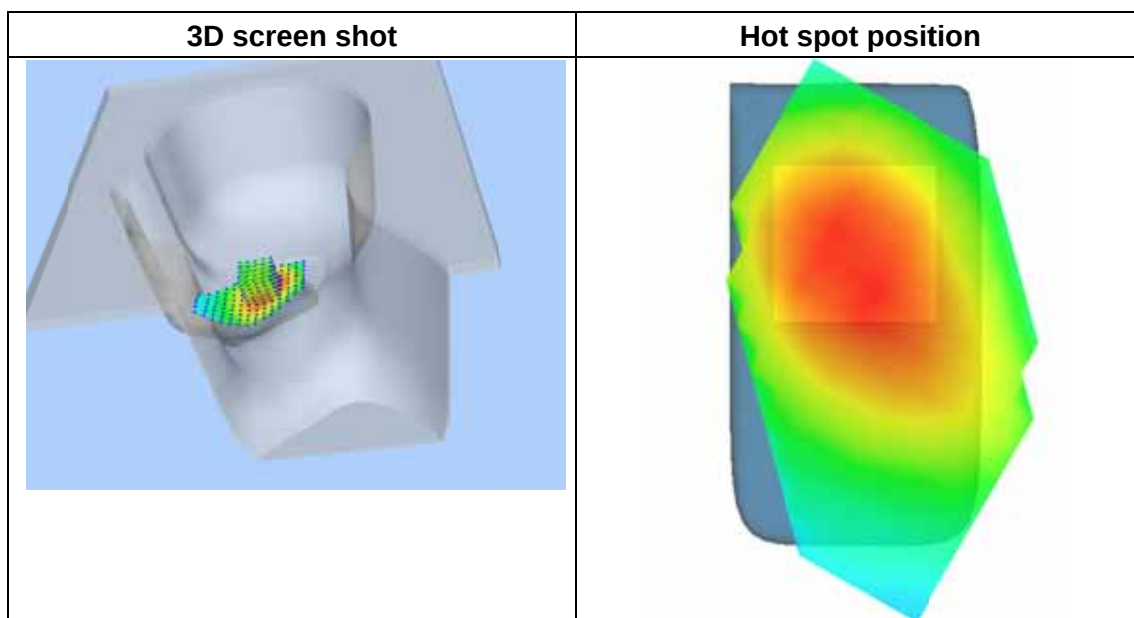
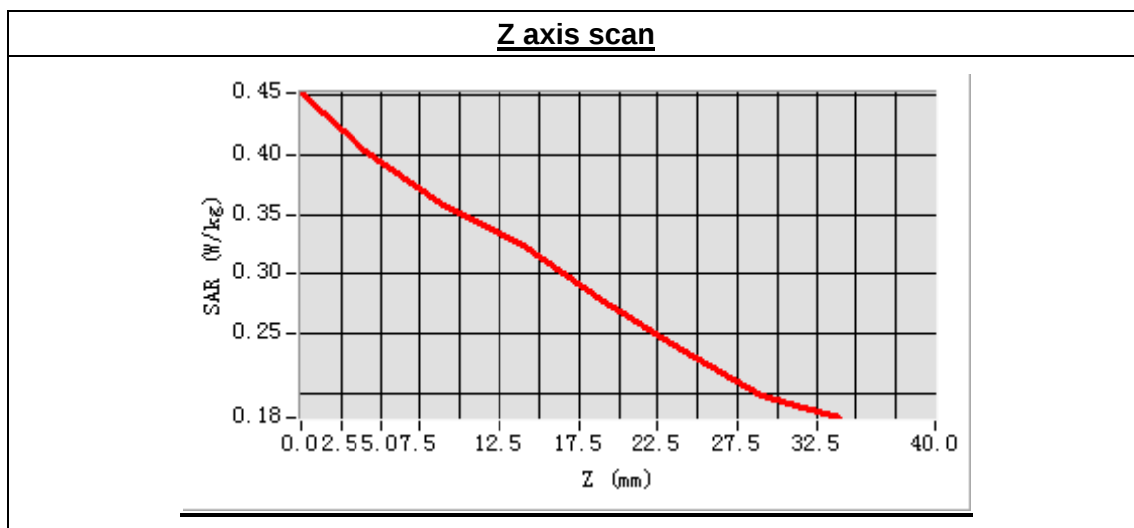
Frequency (MHz)	848.800000
Relative permittivity (real part)	42.104395
Conductivity (S/m)	0.876942
Power drift(%)	-0.560000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8



Maximum location: X=-33.00, Y=-23.00

SAR Peak: 0.50 W/kg

SAR 10g (W/Kg)	0.327348
SAR 1g (W/Kg)	0.410101



MEASUREMENT 3

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration:8 minutes 28 seconds

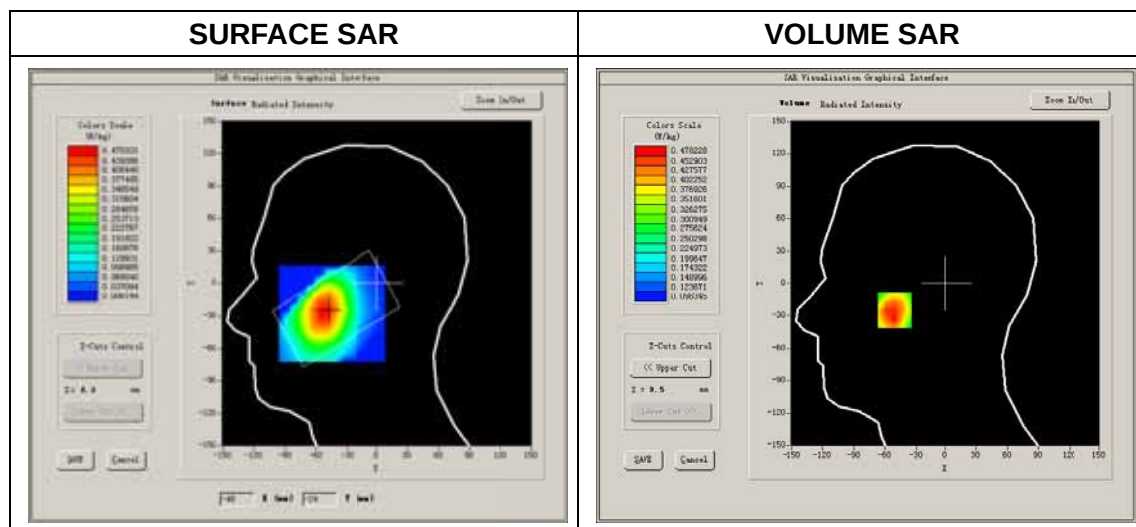
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

High Band SAR (Channel 251):

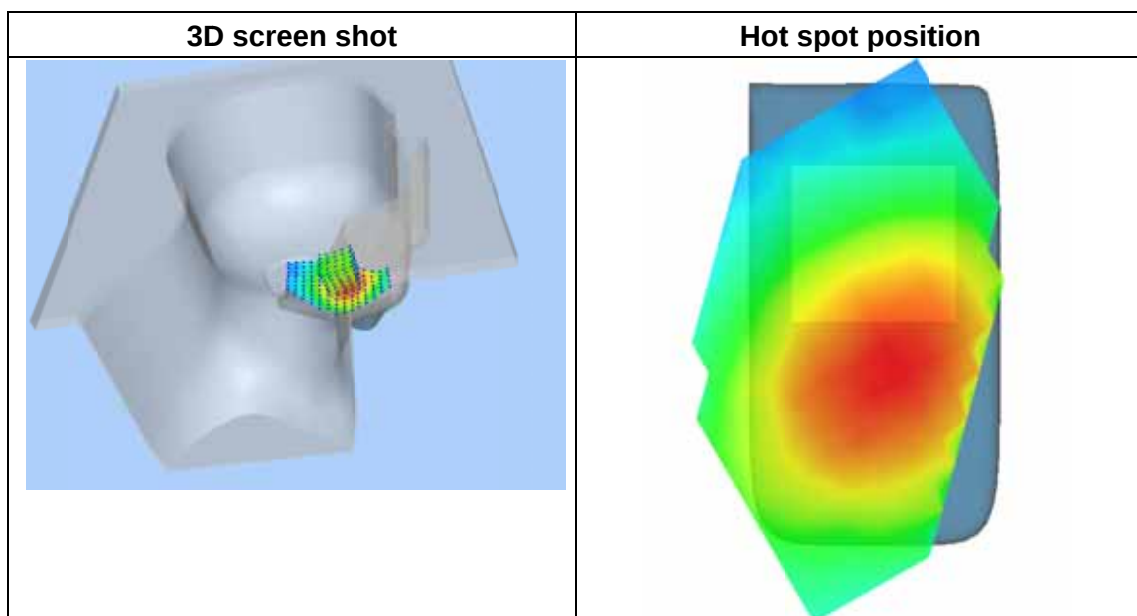
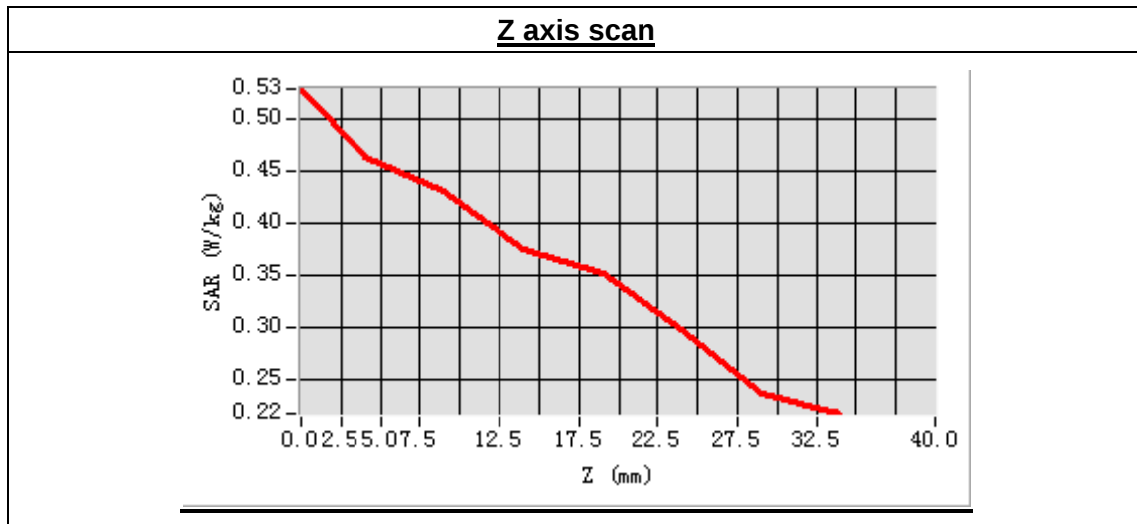
Frequency (MHz)	848.800000
Relative permittivity (real part)	42.104395
Conductivity (S/m)	0.876942
Power drift (%)	-1.680000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8



Maximum location: X=-51.00, Y=-25.00

SAR Peak: 0.56 W/kg

SAR 10g (W/Kg)	0.379866
SAR 1g (W/Kg)	0.472264



MEASUREMENT 4

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 8 minutes 12 seconds

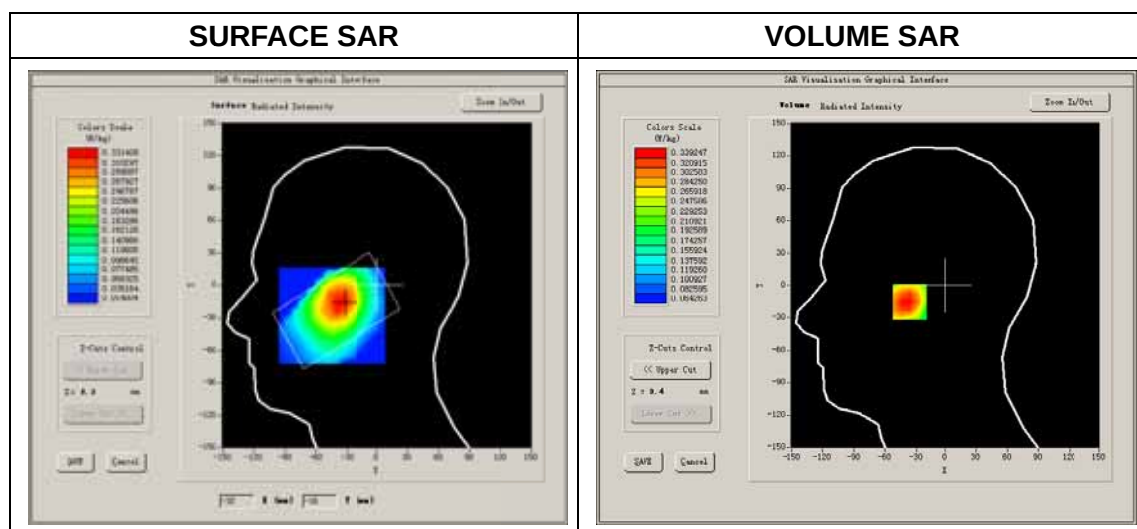
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

High Band SAR (Channel 251):

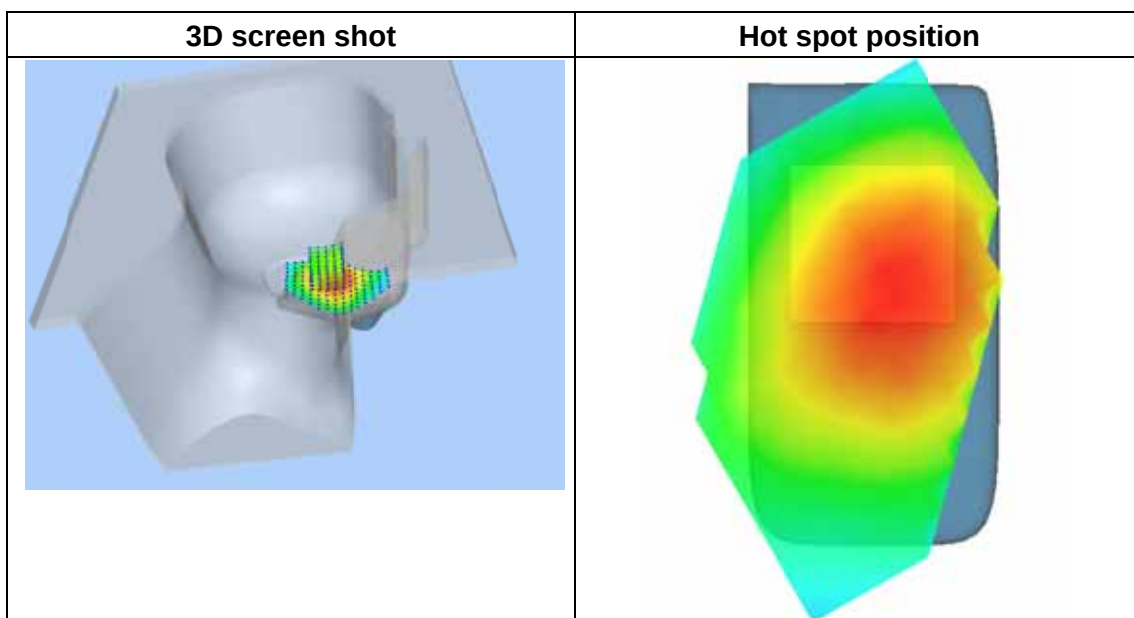
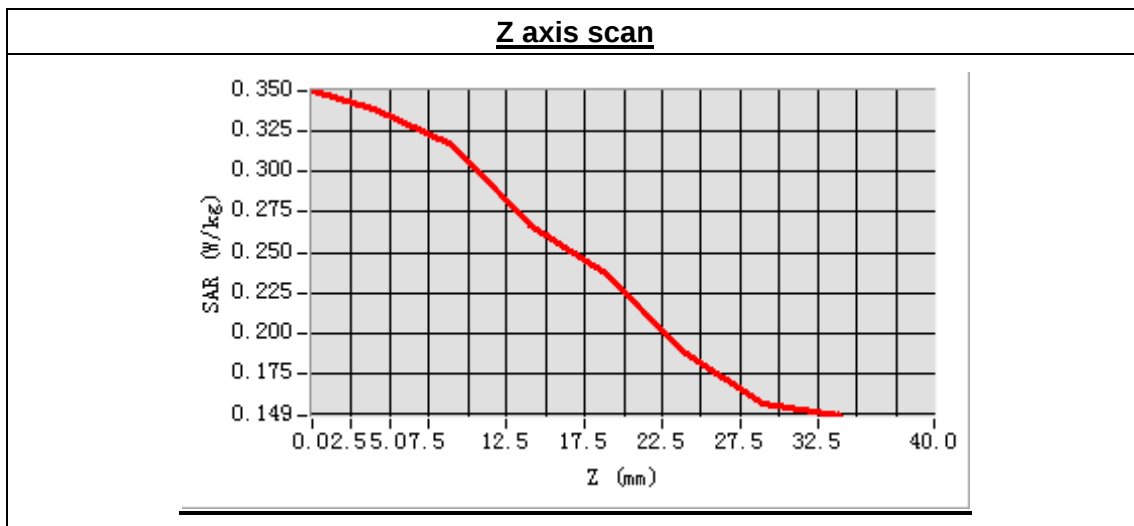
Frequency (MHz)	848.800000
Relative permittivity (real part)	42.104395
Conductivity (S/m)	0.876942
Power drift(%)	-0.360000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8



Maximum location: X=-34.00, Y=-15.00

SAR Peak: 0.42 W/kg

SAR 10g (W/Kg)	0.271796
SAR 1g (W/Kg)	0.342588



MEASUREMENT 5

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 25 seconds

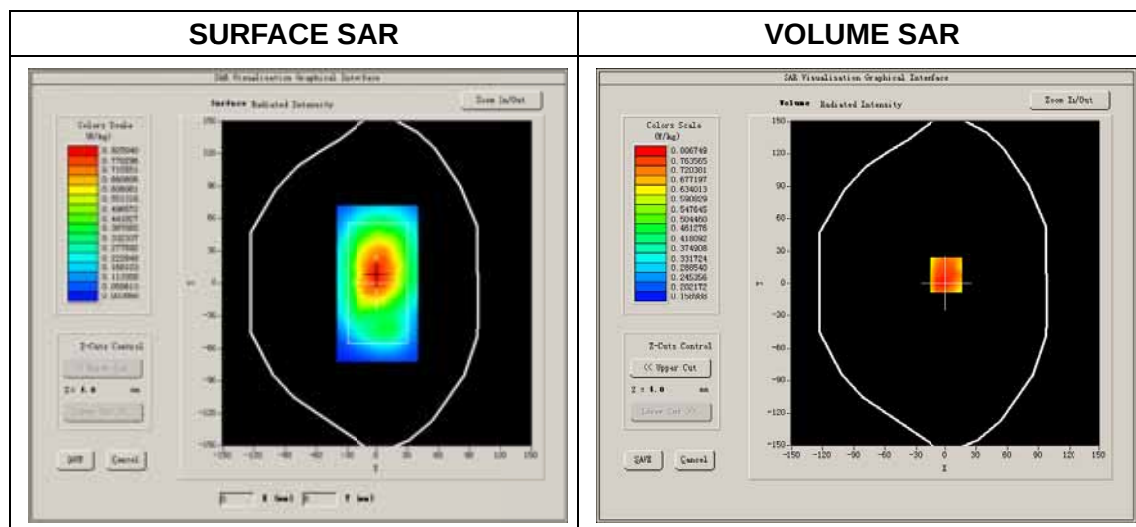
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

High Band SAR (Channel 251):

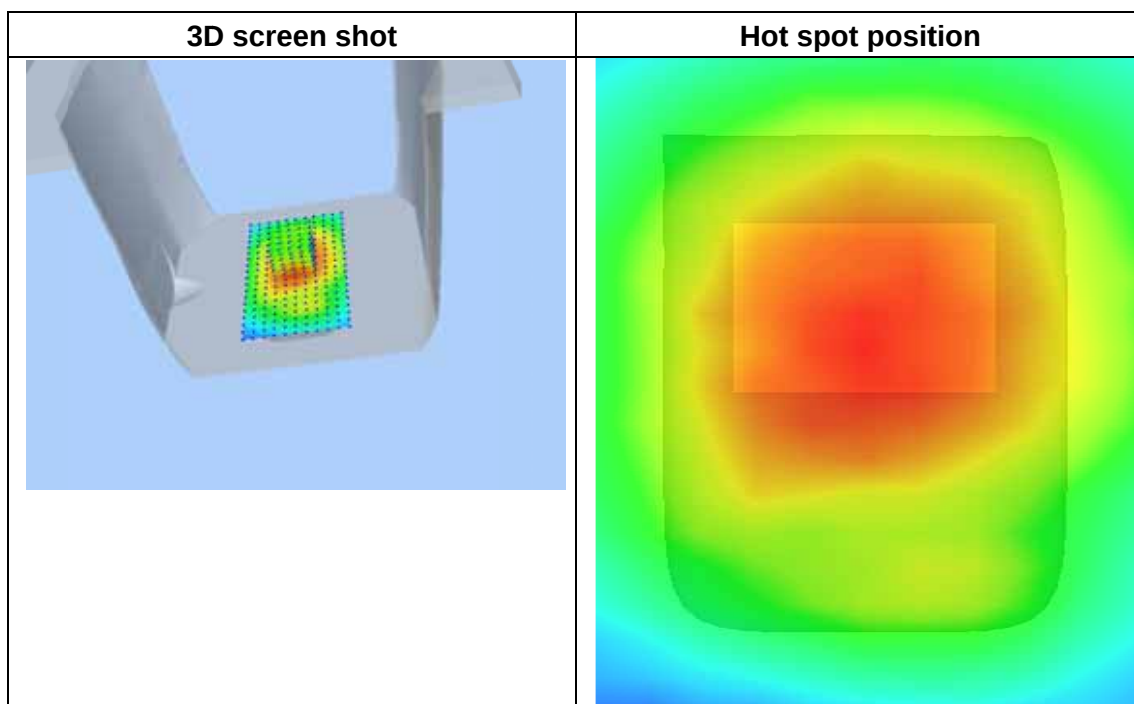
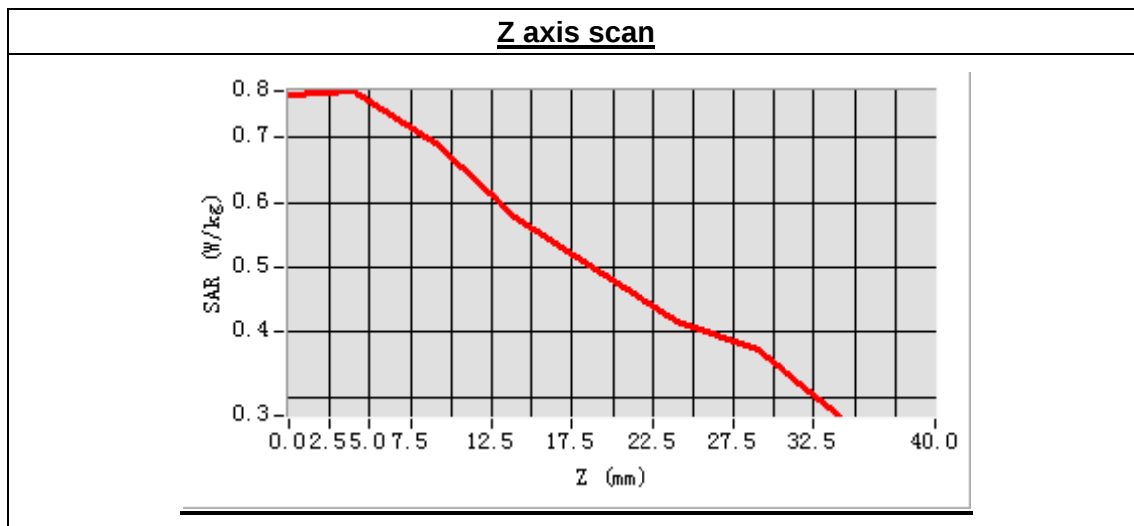
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift (%)	-4.010000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:8



Maximum location: X=0.00, Y=8.00

SAR Peak: 1.03 W/kg

SAR 10g (W/Kg)	0.668214
SAR 1g (W/Kg)	0.721418



MEASUREMENT 6

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 27 seconds

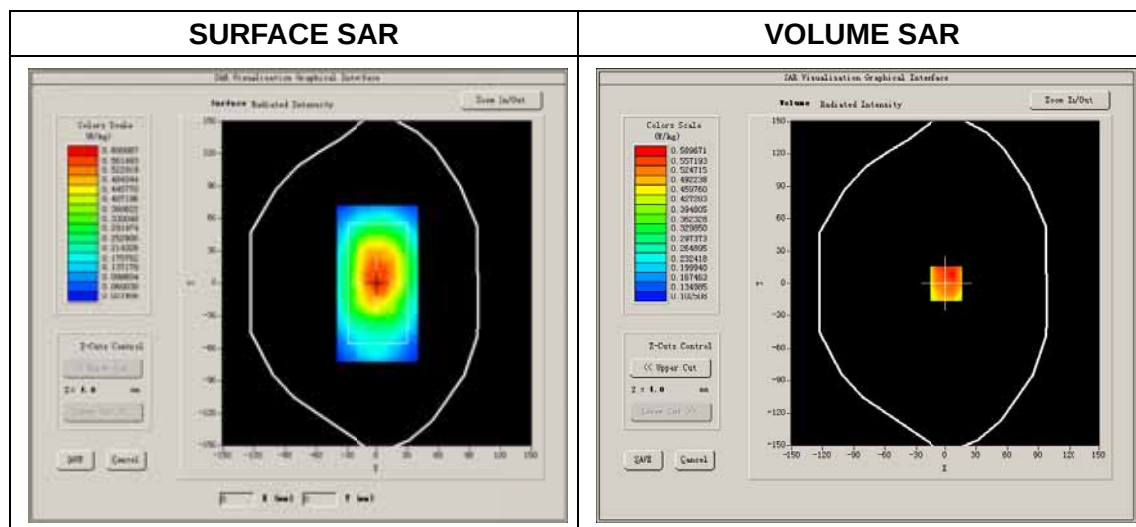
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

High Band SAR (Channel 251):

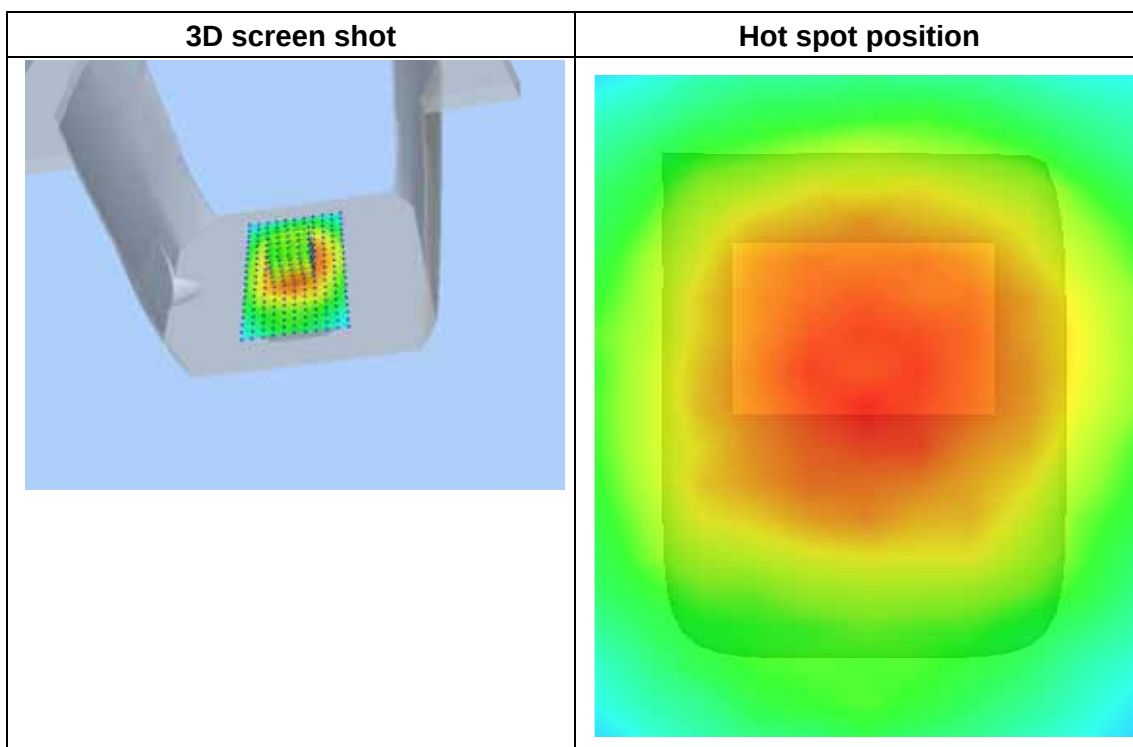
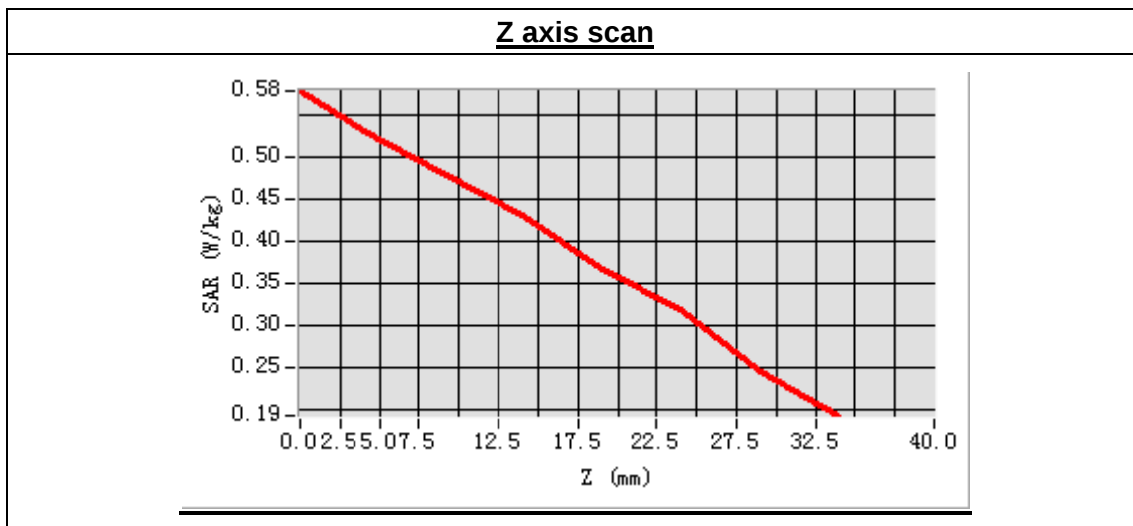
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift(%)	1.120000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:8



Maximum location: X=0.00, Y=0.00

SAR Peak: 0.78 W/kg

SAR 10g (W/Kg)	0.493809
SAR 1g (W/Kg)	0.608867



MEASUREMENT 7

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 26 seconds

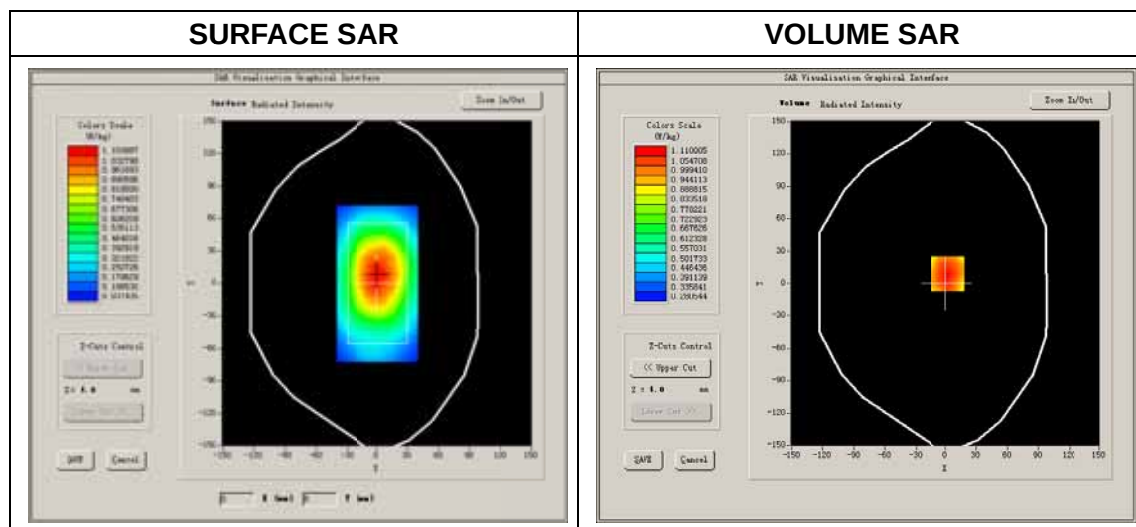
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	EDGE

B. SAR Measurement Results

Low Band SAR (Channel 128):

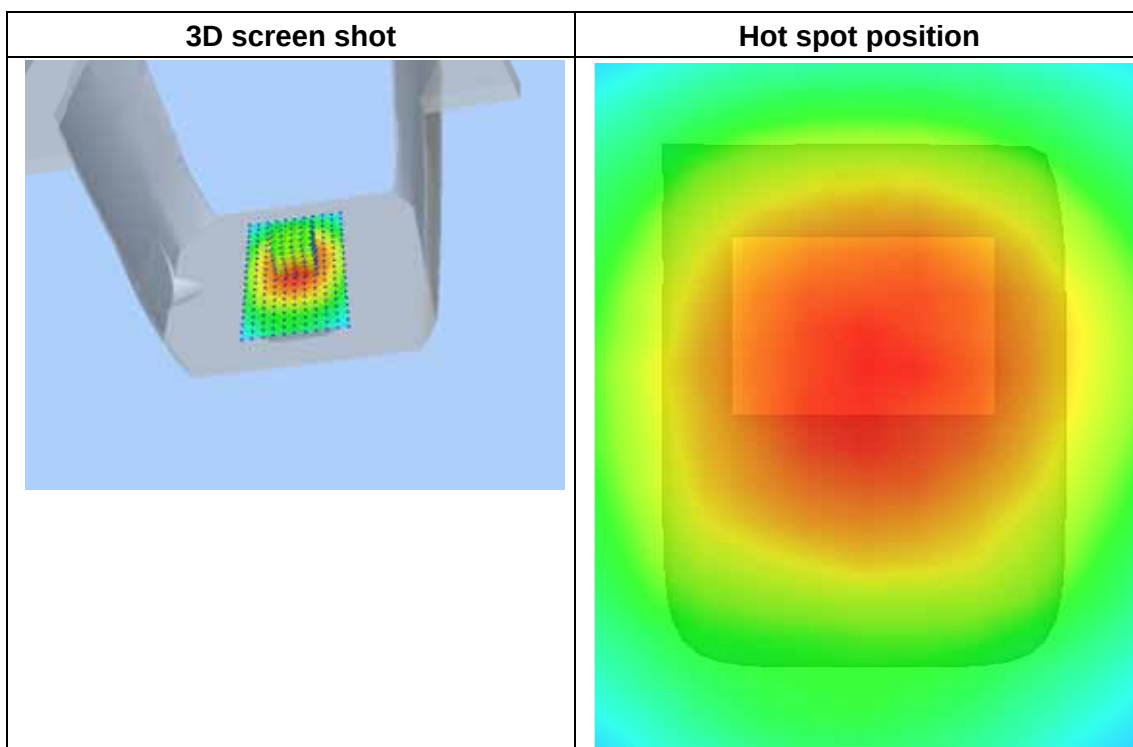
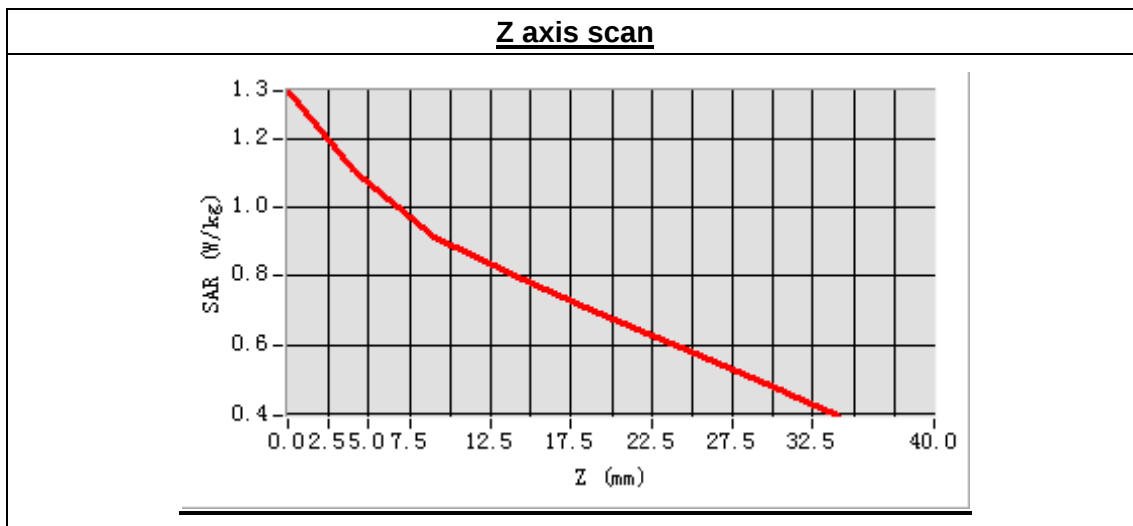
Frequency (MHz)	824.200000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift(%)	-0.480000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



Maximum location: X=2.00, Y=9.00

SAR Peak: 1.35 W/kg

SAR 10g (W/Kg)	0.872750
SAR 1g (W/Kg)	1.102459



MEASUREMENT 8

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 18 seconds

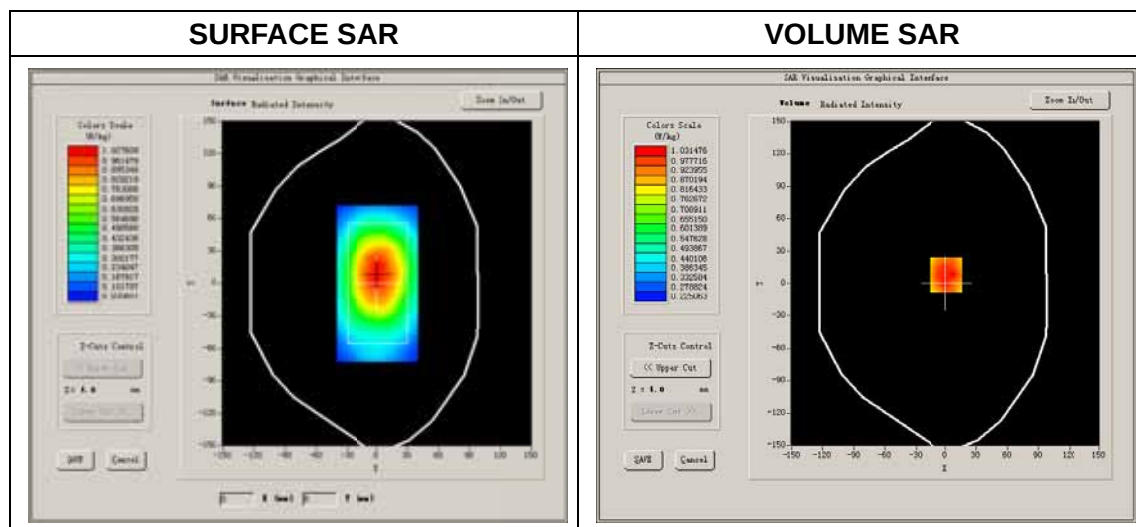
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	EDGE

B. SAR Measurement Results

Middle Band SAR (Channel 251):

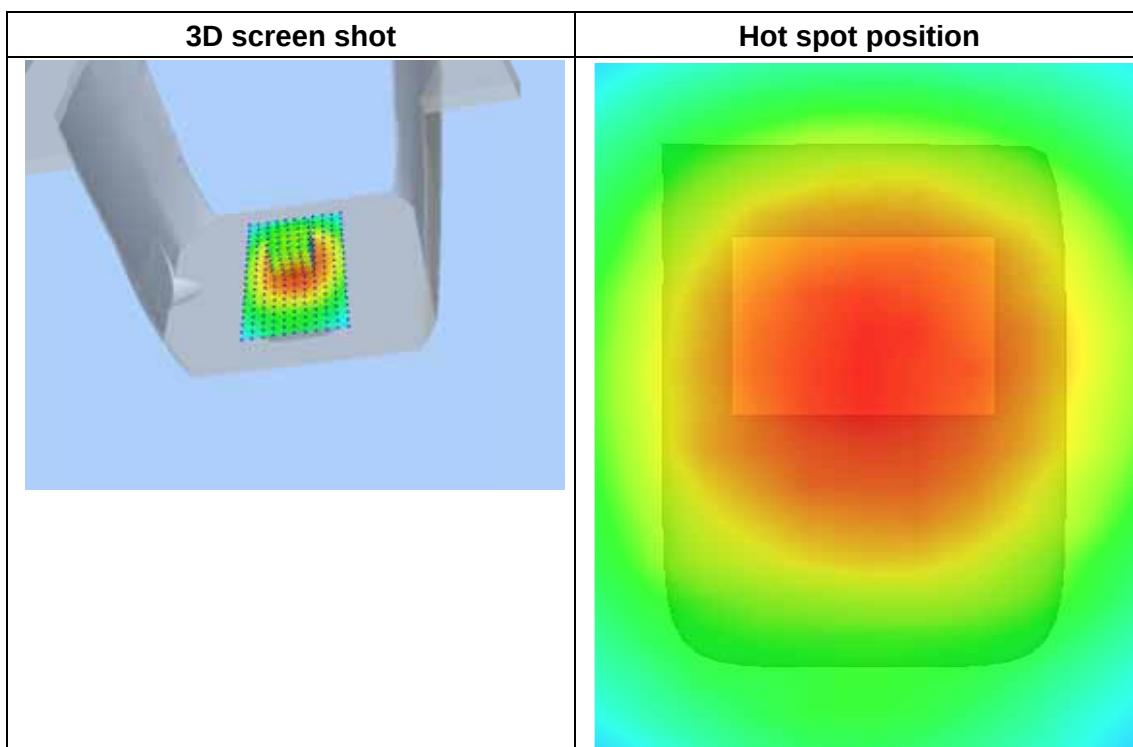
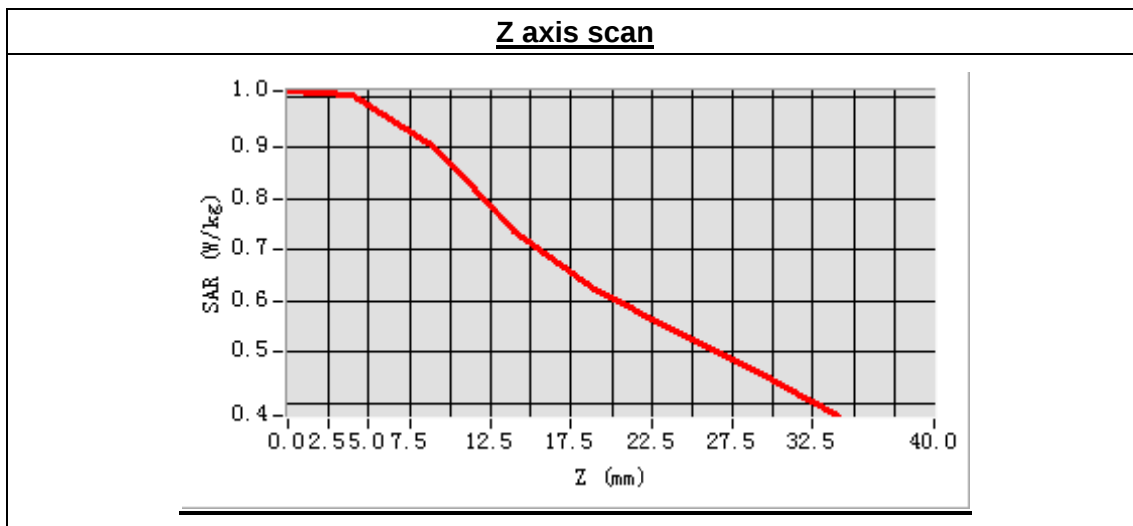
Frequency (MHz)	836.600000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift(%)	0.550000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



Maximum location: X=0.00, Y=8.00

SAR Peak: 1.28 W/kg

SAR 10g (W/Kg)	0.811043
SAR 1g (W/Kg)	1.022803



MEASUREMENT 9

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 25 seconds

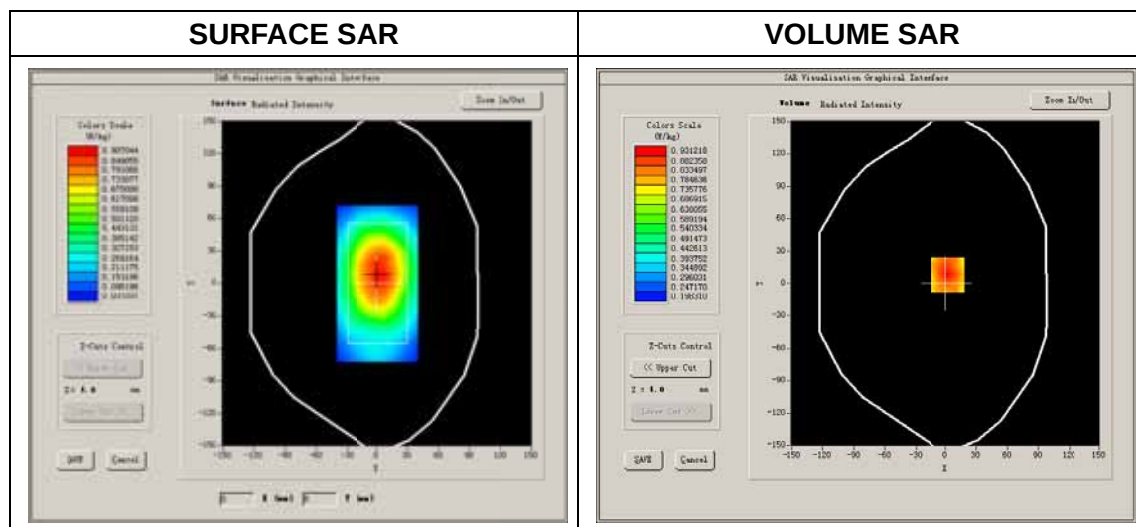
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	EDGE

B. SAR Measurement Results

Higher Band SAR (Channel 251):

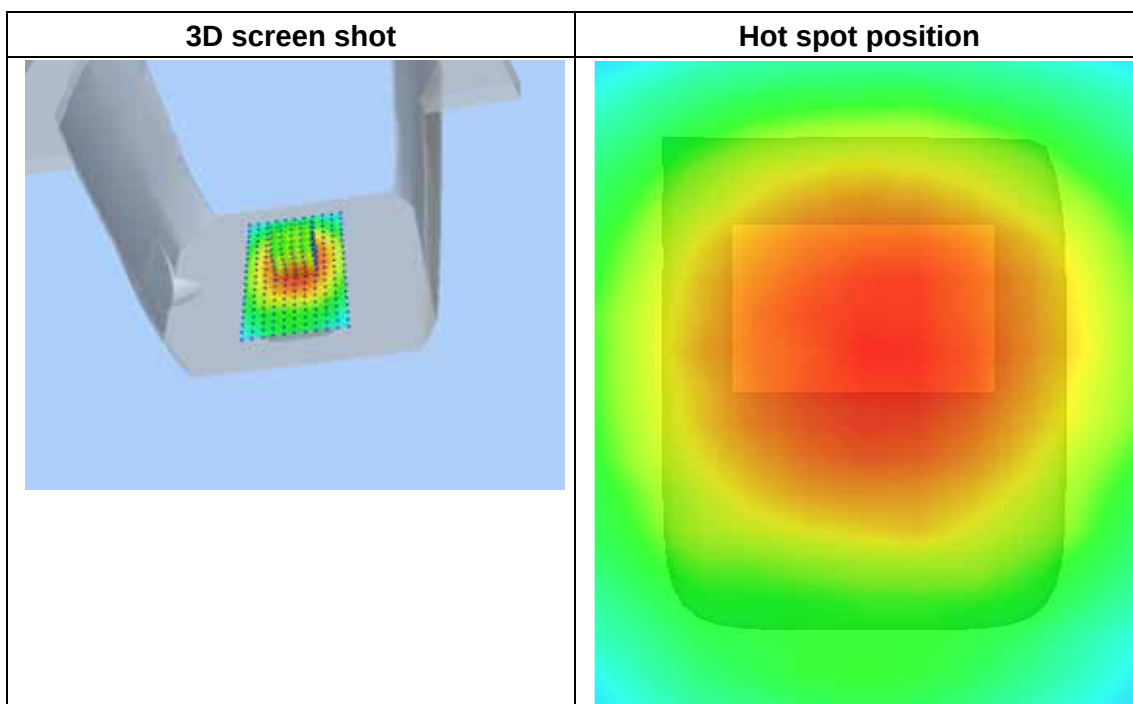
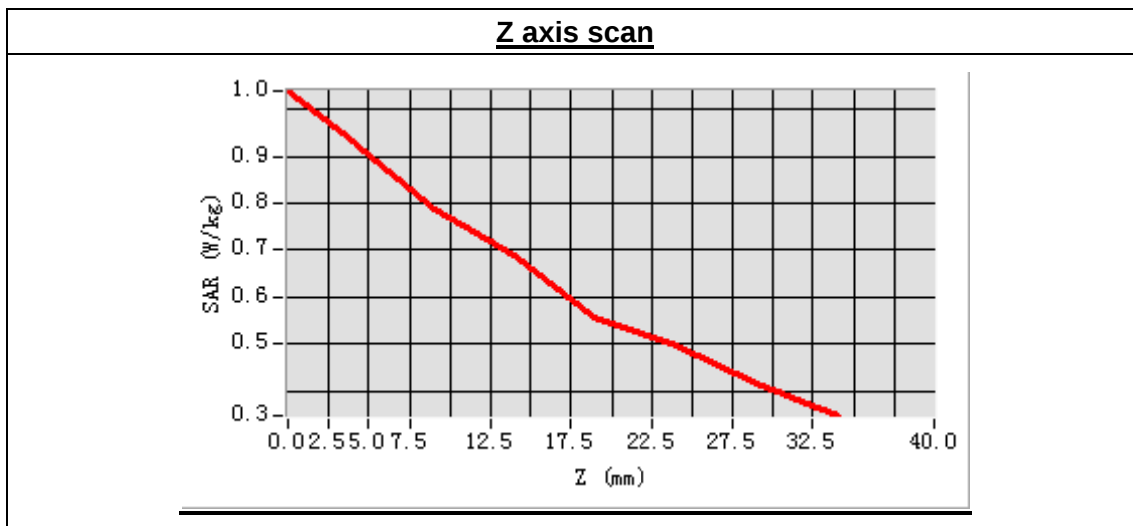
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift(%)	-0.040000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



Maximum location: X=2.00, Y=8.00

SAR Peak: 1.08 W/kg

SAR 10g (W/Kg)	0.714950
SAR 1g (W/Kg)	0.905910



MEASUREMENT 10

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 32 seconds

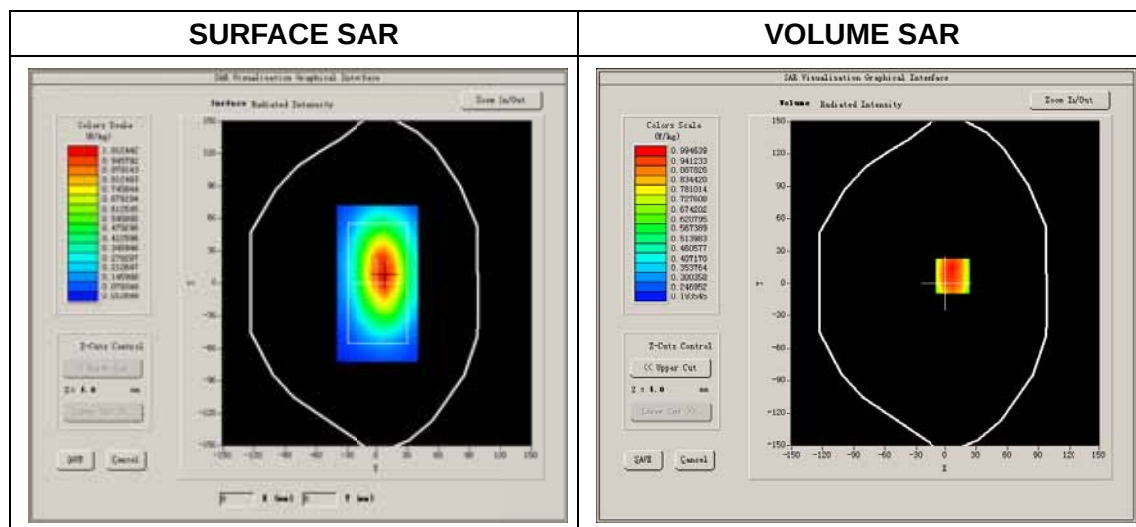
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	EDGE

B. SAR Measurement Results

High Band SAR (Channel 251):

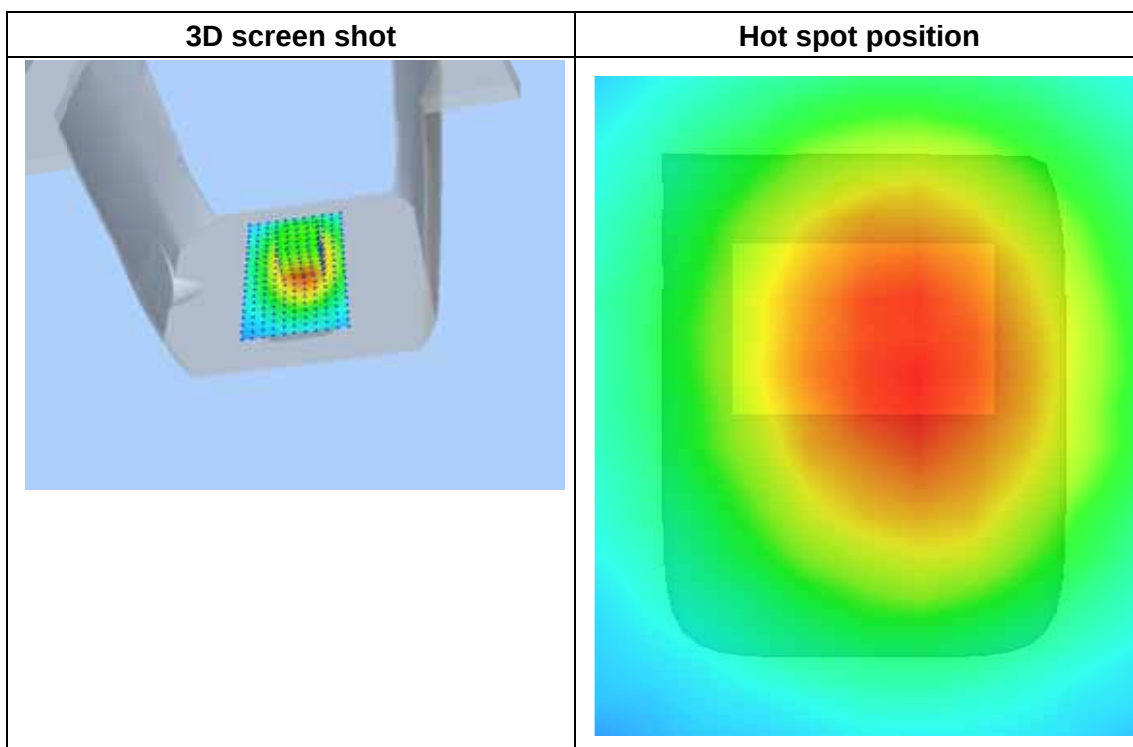
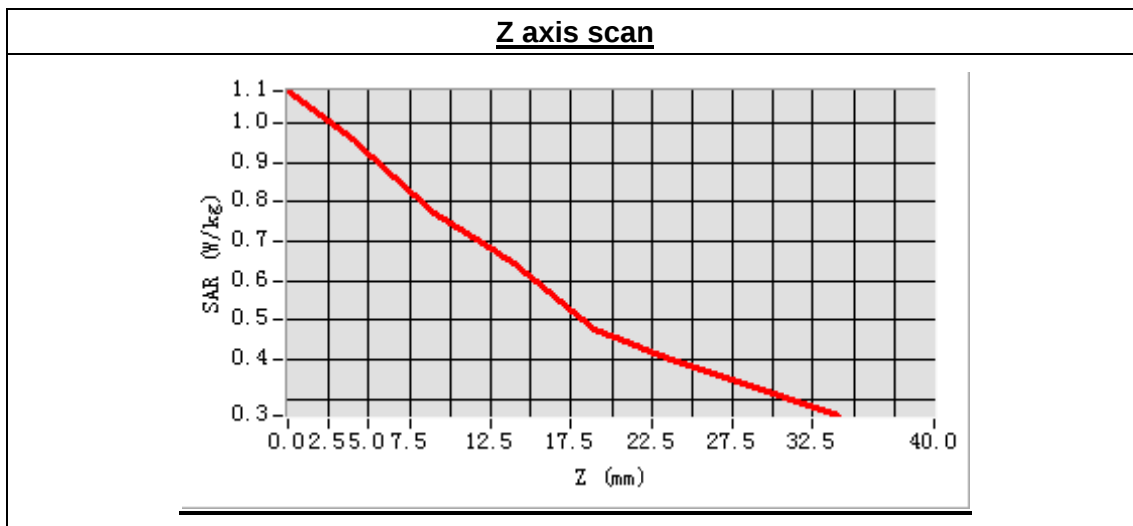
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift(%)	1.160000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



Maximum location: X=7.00, Y=7.00

SAR Peak: 1.14 W/kg

SAR 10g (W/Kg)	0.505596
SAR 1g (W/Kg)	0.751197



MEASUREMENT 11

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 10 seconds

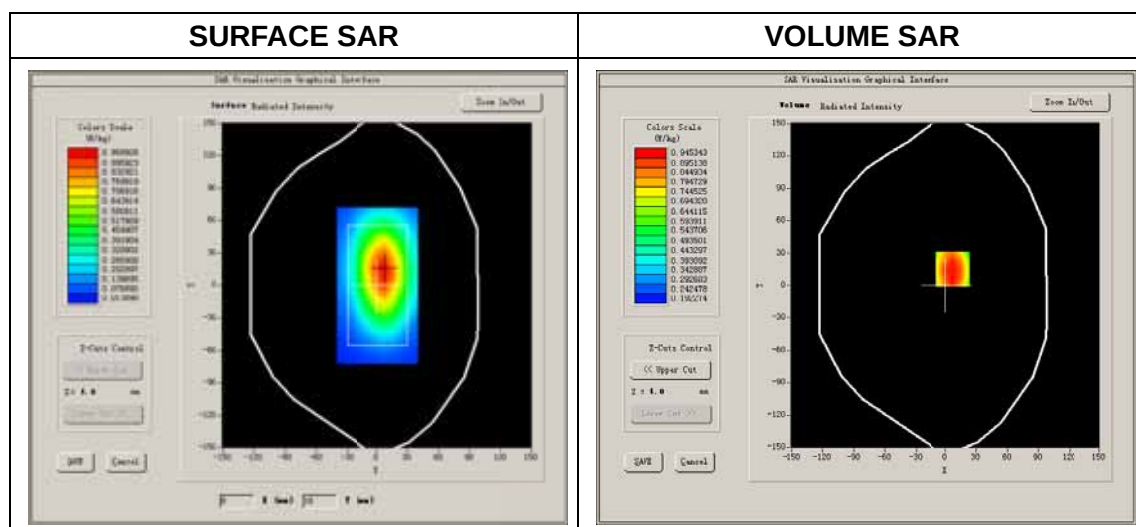
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	EDGE

B. SAR Measurement Results

High Band SAR (Channel 251):

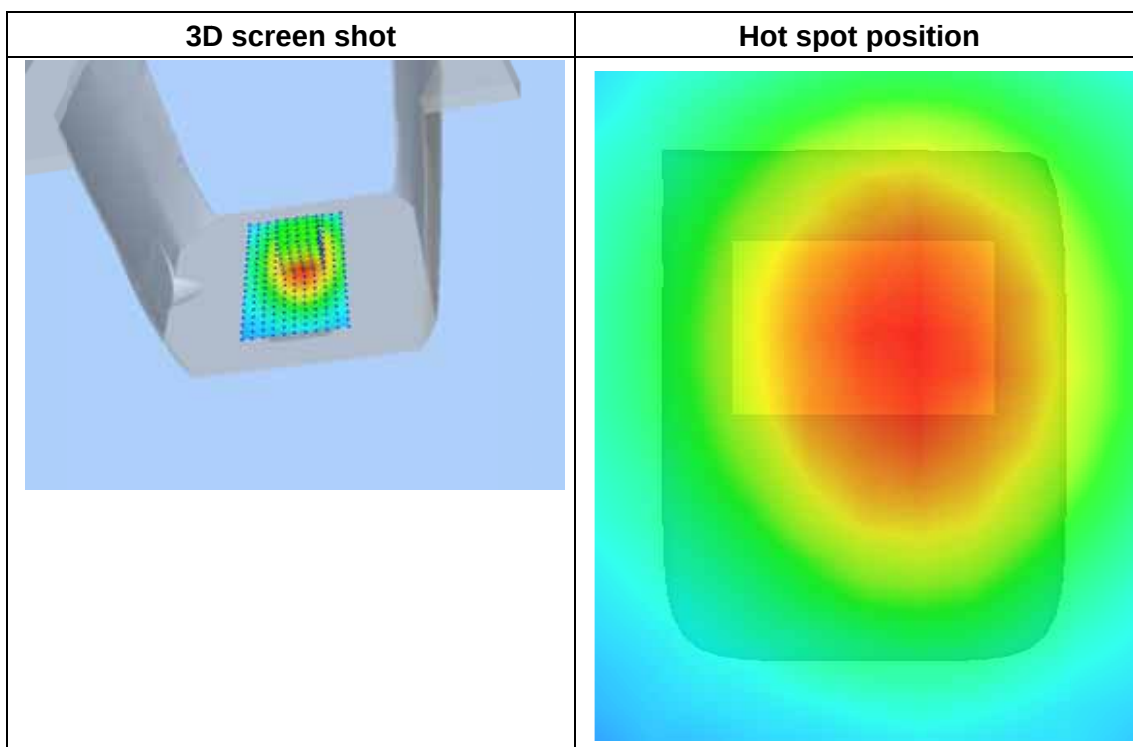
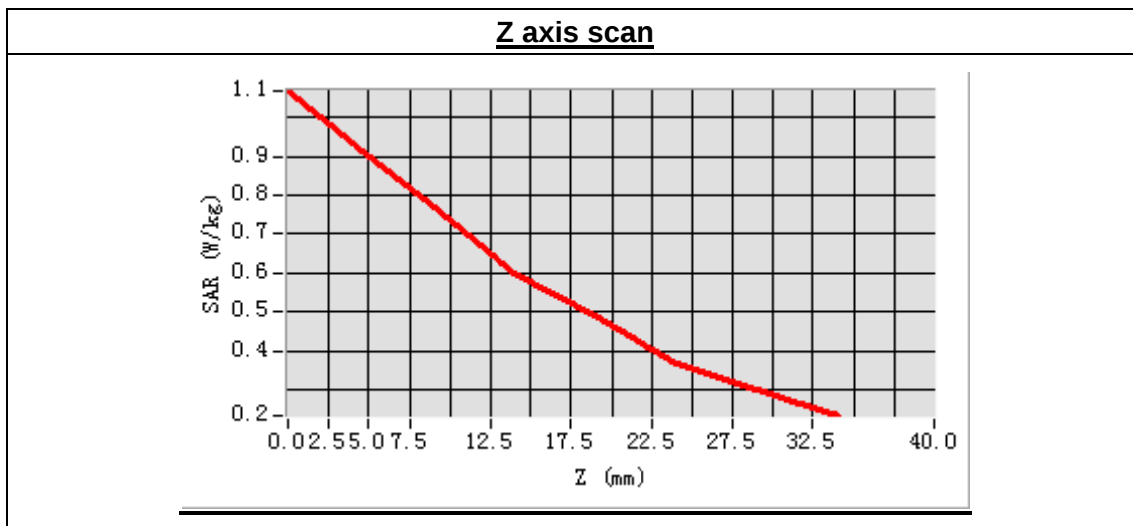
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift(%)	-0.780000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



Maximum location: X=7.00, Y=15.00

SAR Peak: 1.13 W/kg

SAR 10g (W/Kg)	0.586902
SAR 1g (W/Kg)	0.746509



MEASUREMENT 12

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 25 seconds

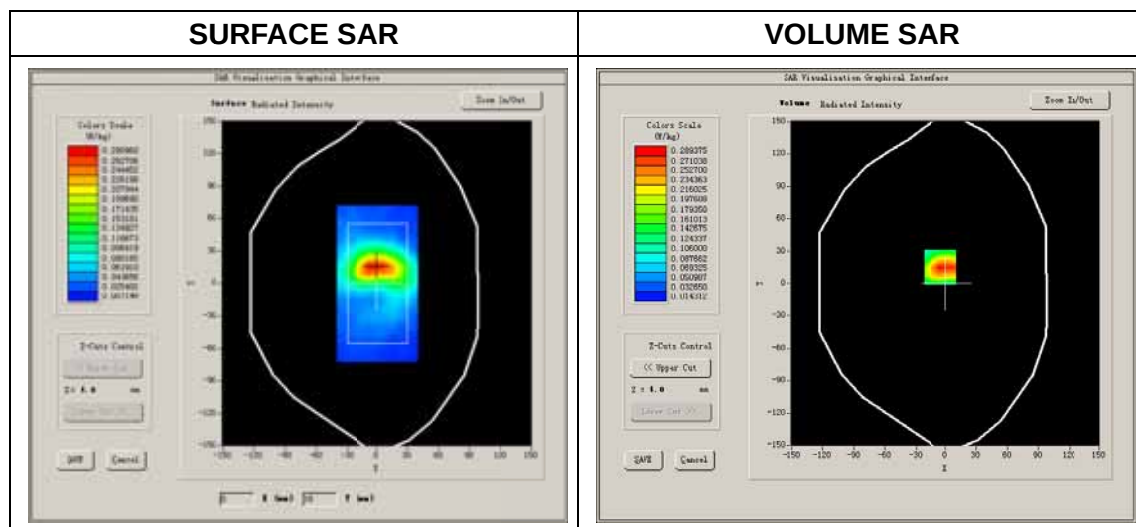
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	EDGE

B. SAR Measurement Results

High Band SAR (Channel 251):

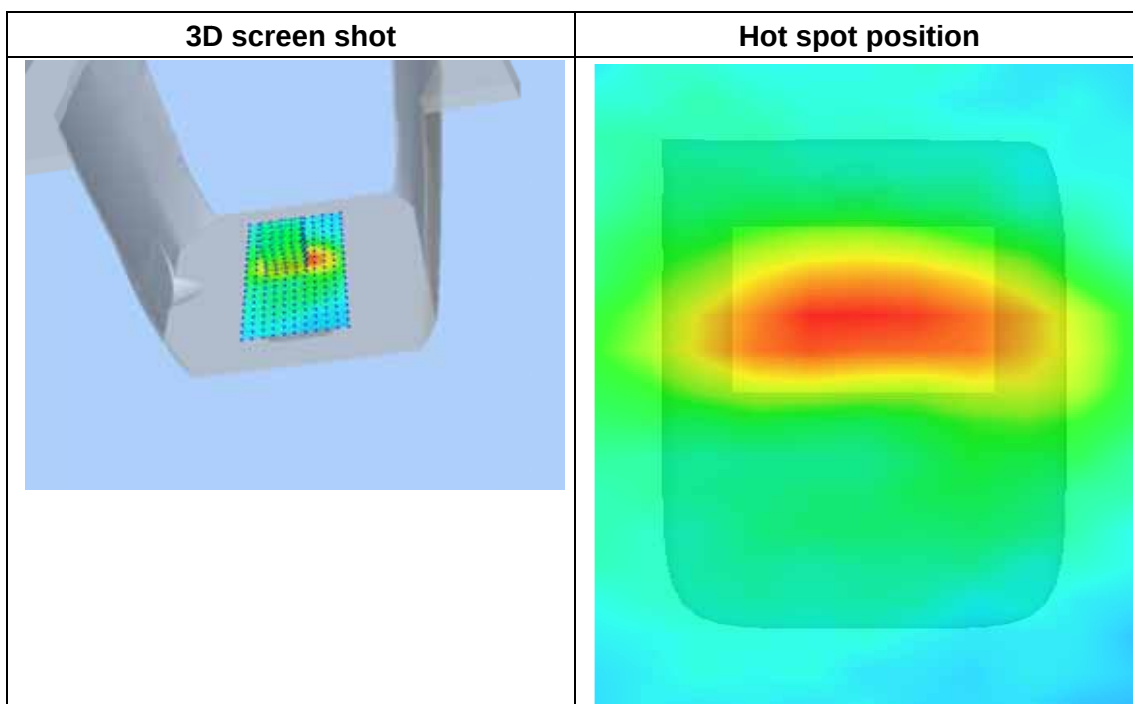
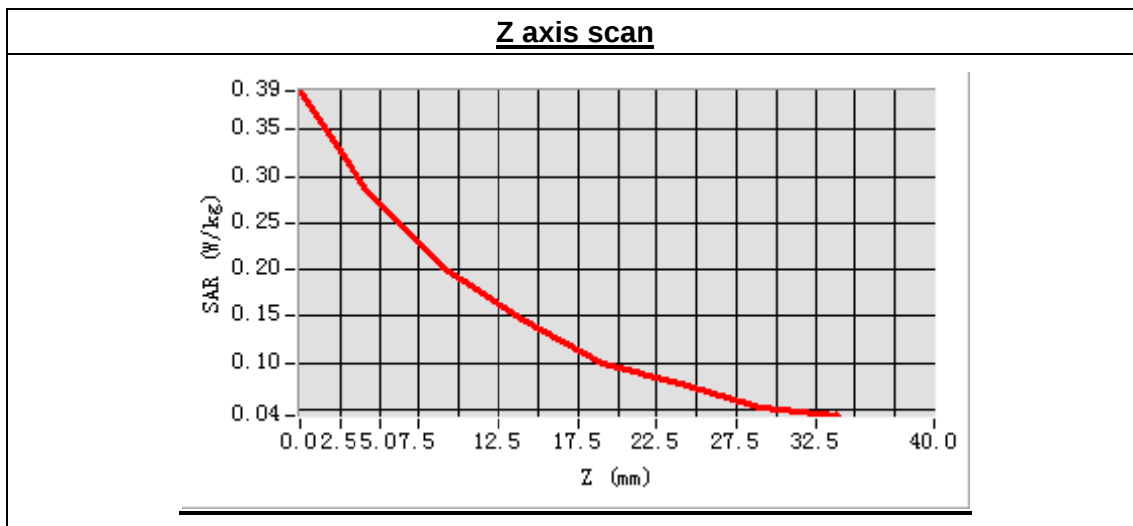
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift(%)	2.990000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



Maximum location: X=-6.00, Y=15.00

SAR Peak: 0.39 W/kg

SAR 10g (W/Kg)	0.172969
SAR 1g (W/Kg)	0.278277



MEASUREMENT 13

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 31 seconds

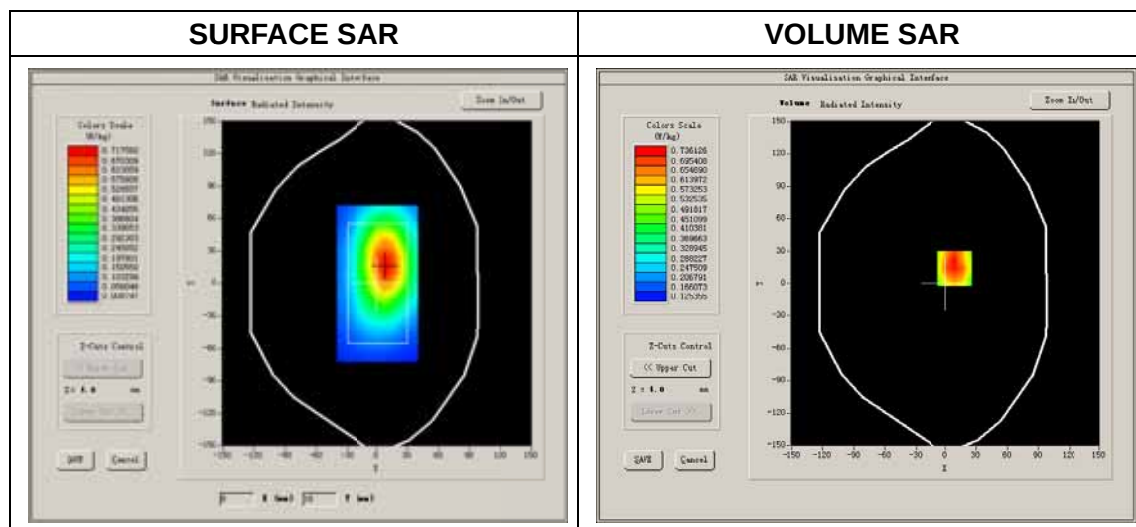
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	EDGE

B. SAR Measurement Results

High Band SAR (Channel 251):

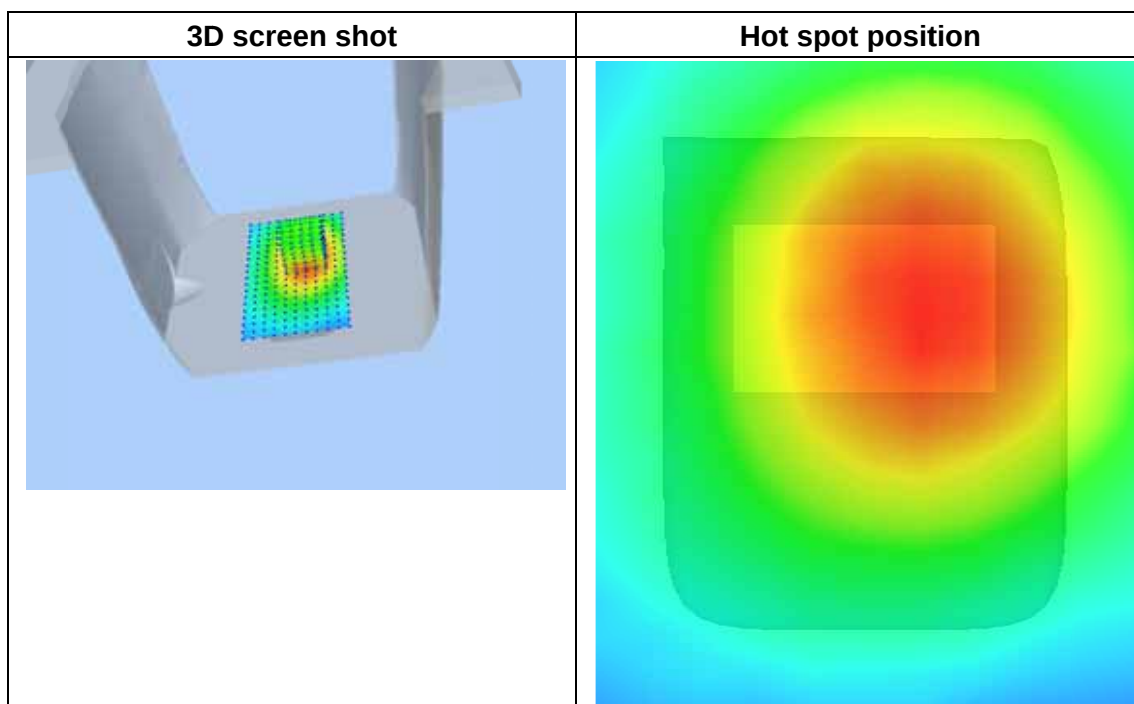
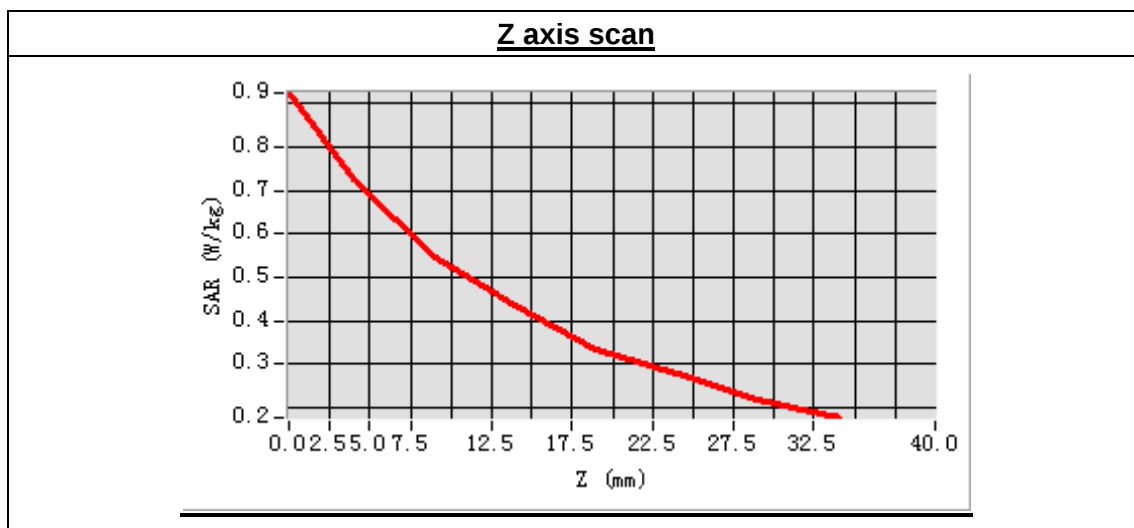
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift(%)	1.260000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



Maximum location: X=9.00, Y=14.00

SAR Peak: 0.93 W/kg

SAR 10g (W/Kg)	0.513413
SAR 1g (W/Kg)	0.719021



MEASUREMENT 14

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 28 seconds

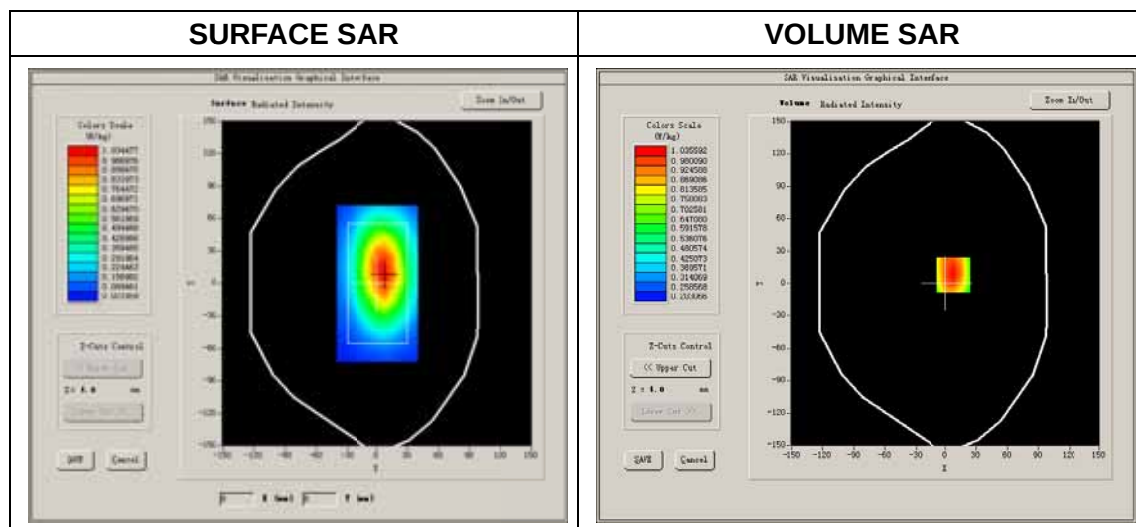
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GPRS

B. SAR Measurement Results

High Band SAR (Channel 251):

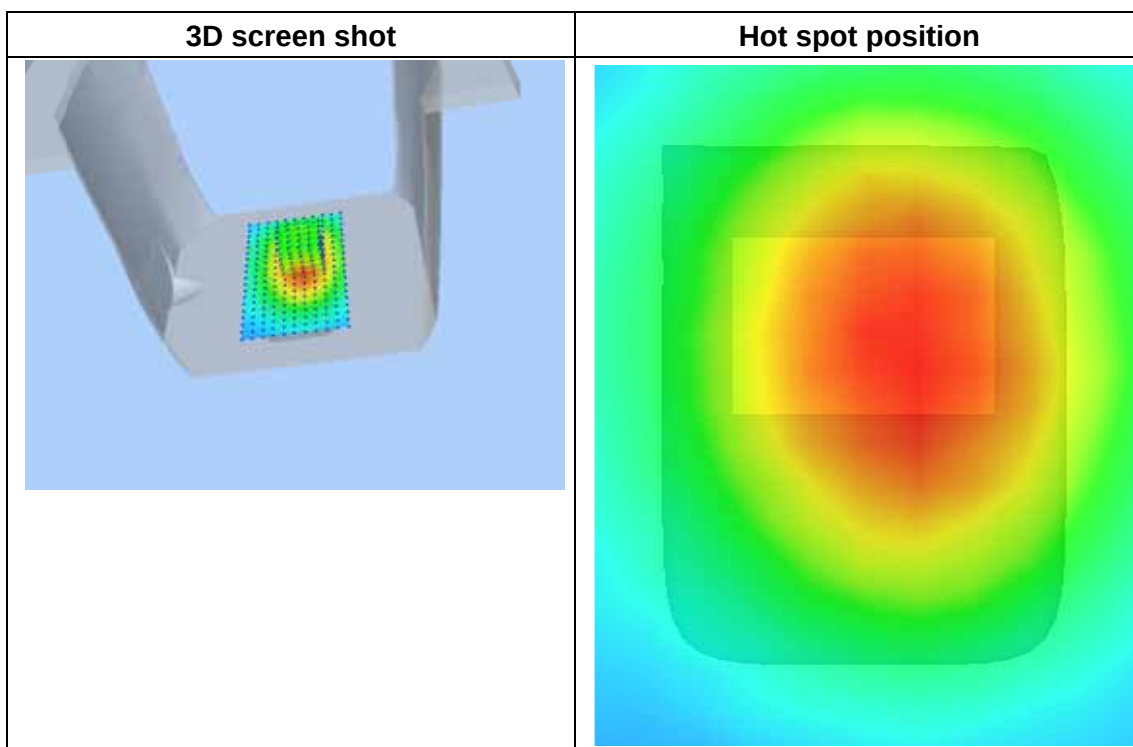
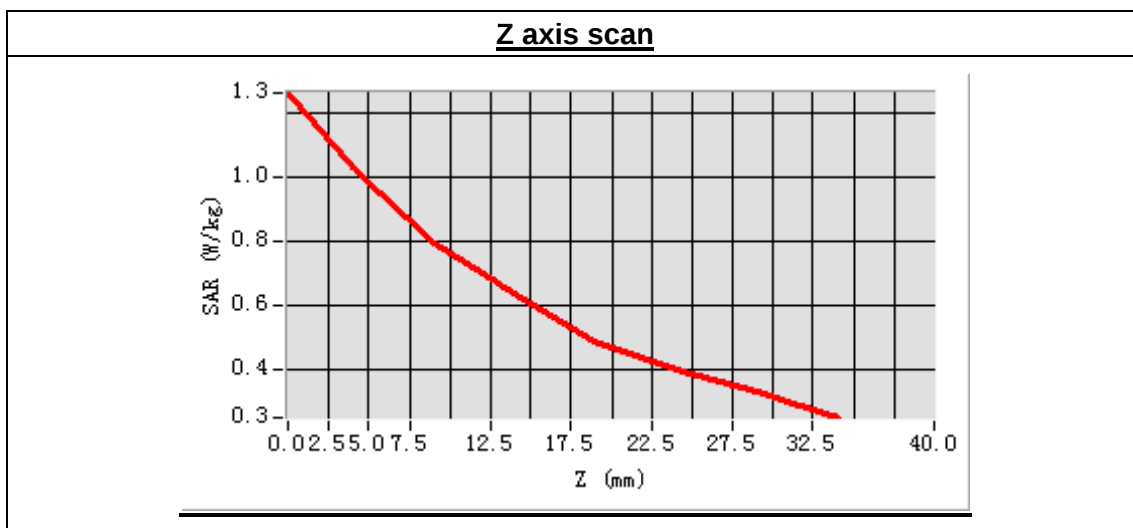
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift(%)	-3.040000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



Maximum location: X=8.00, Y=8.00

SAR Peak: 1.28 W/kg

SAR 10g (W/Kg)	0.628289
SAR 1g (W/Kg)	0.757380



MEASUREMENT 15

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 6 seconds

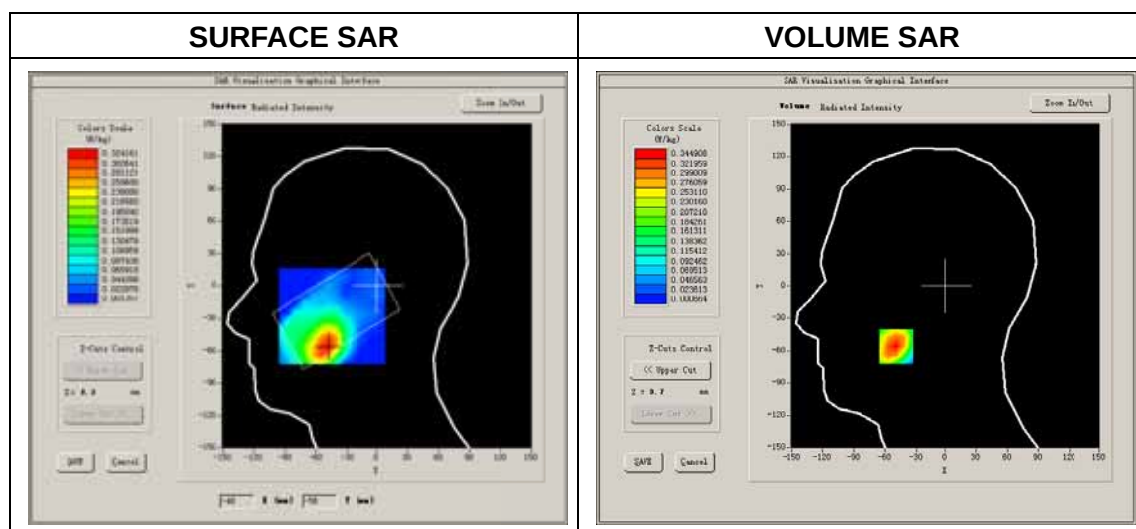
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

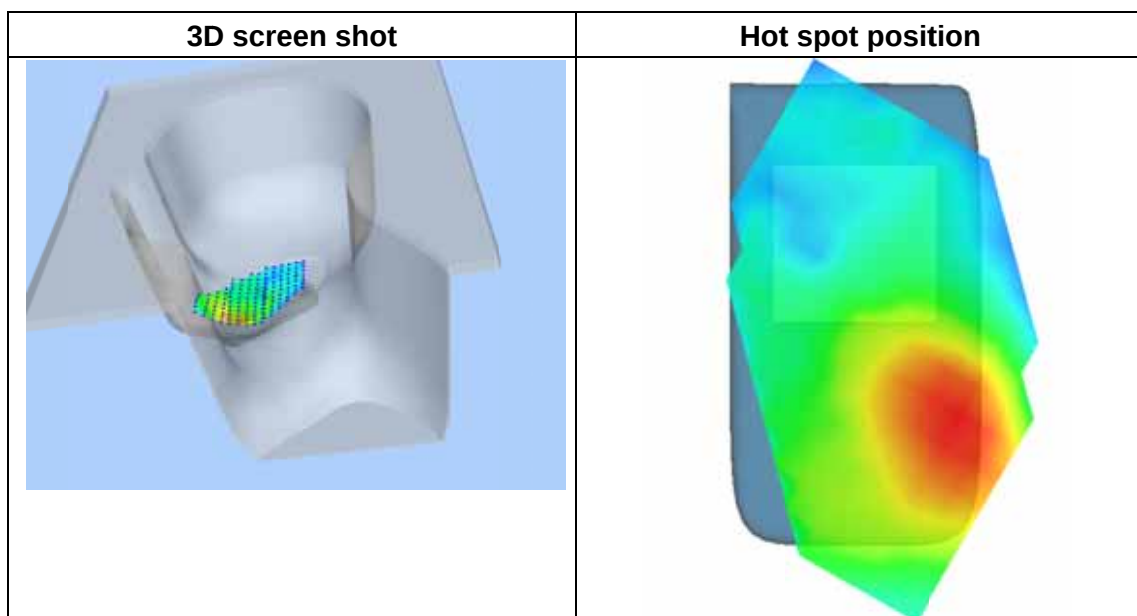
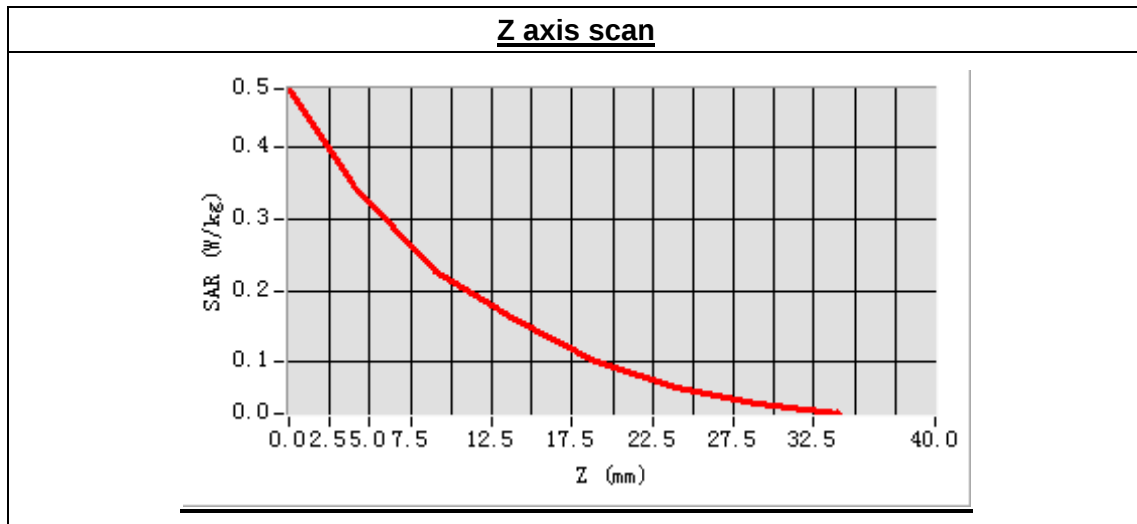
Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.118542
Conductivity (S/m)	1.389547
Power drift(%)	0.740000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



Maximum location: X=-49.00, Y=-56.00

SAR Peak: 0.50 W/kg

SAR 10g (W/Kg)	0.196466
SAR 1g (W/Kg)	0.330938



MEASUREMENT 16

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 7 minutes 33 seconds

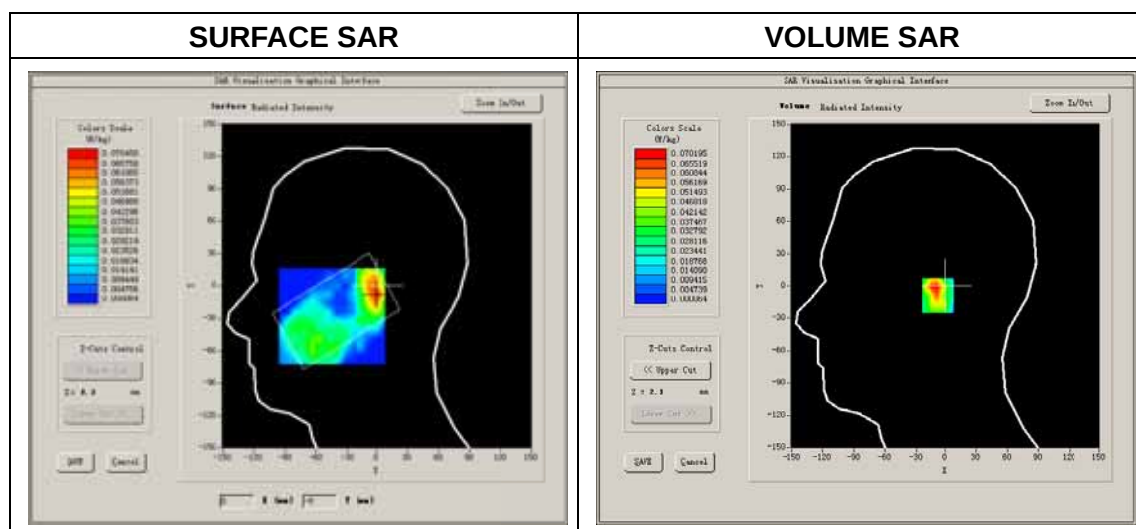
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

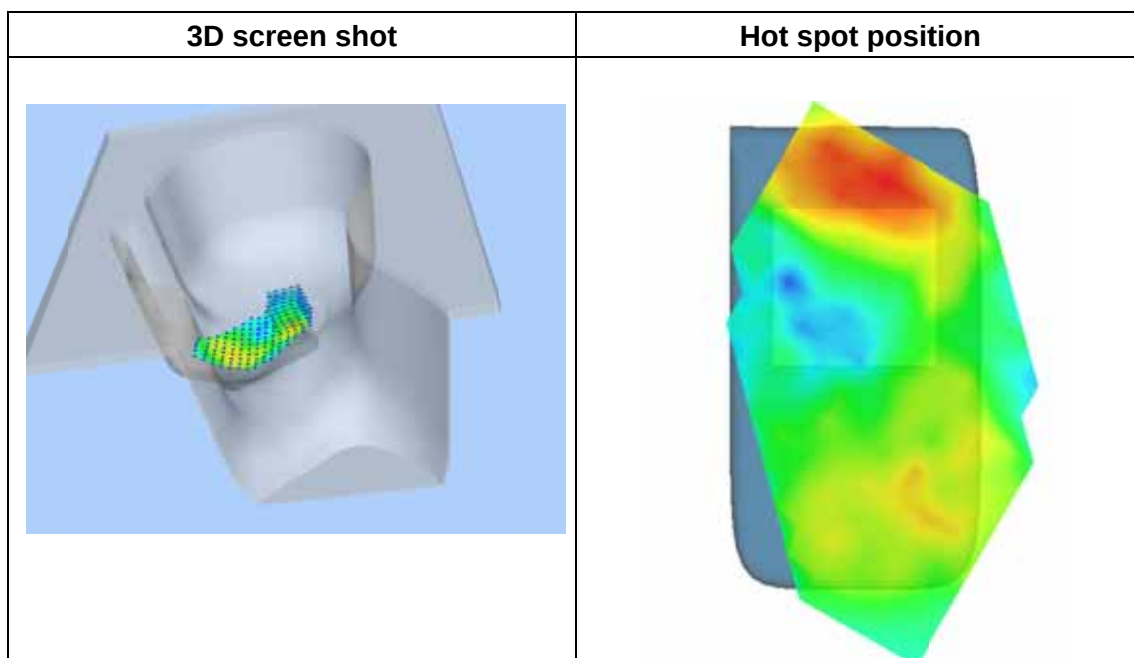
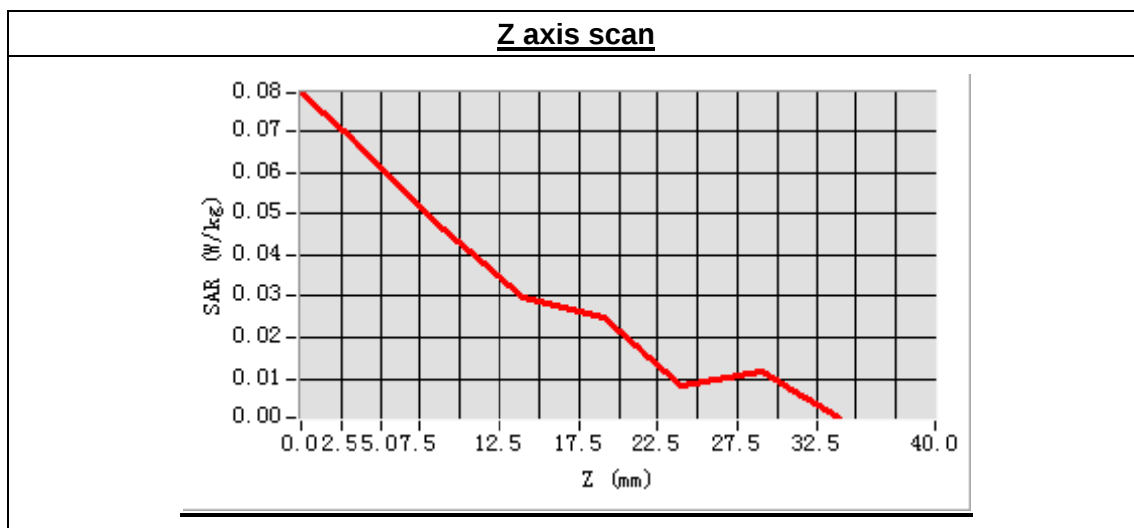
Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.118542
Conductivity (S/m)	1.389547
Power drift(%)	-3.430000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



Maximum location: X=0.00, Y=-9.00

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.035595
SAR 1g (W/Kg)	0.065591



MEASUREMENT 17

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 14 seconds

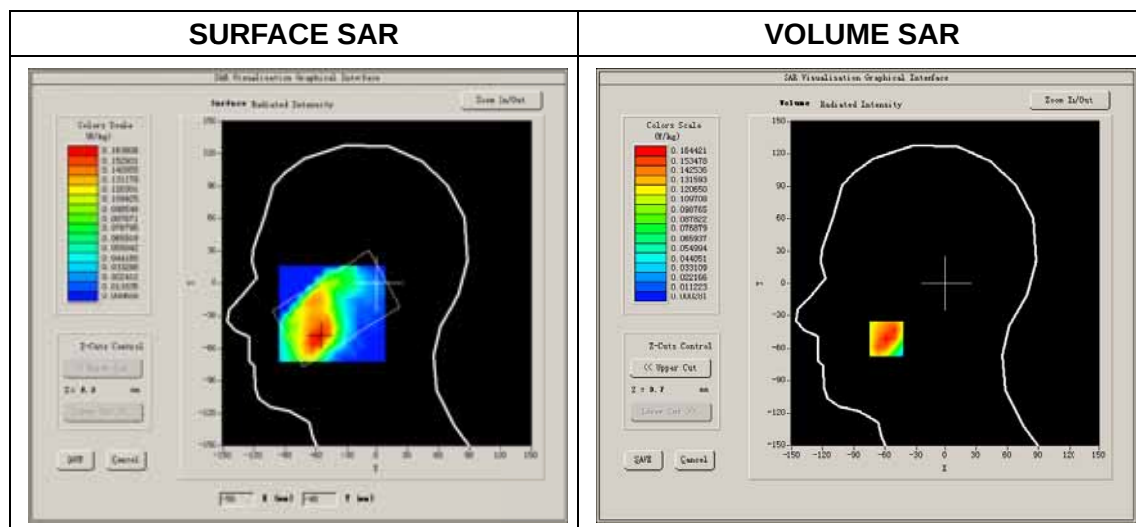
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

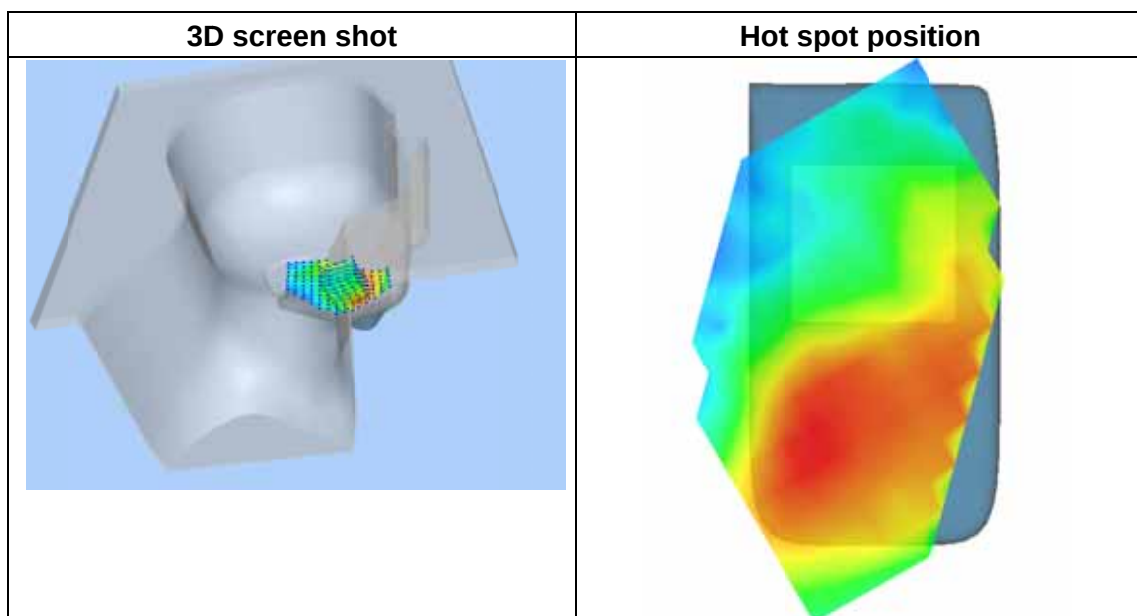
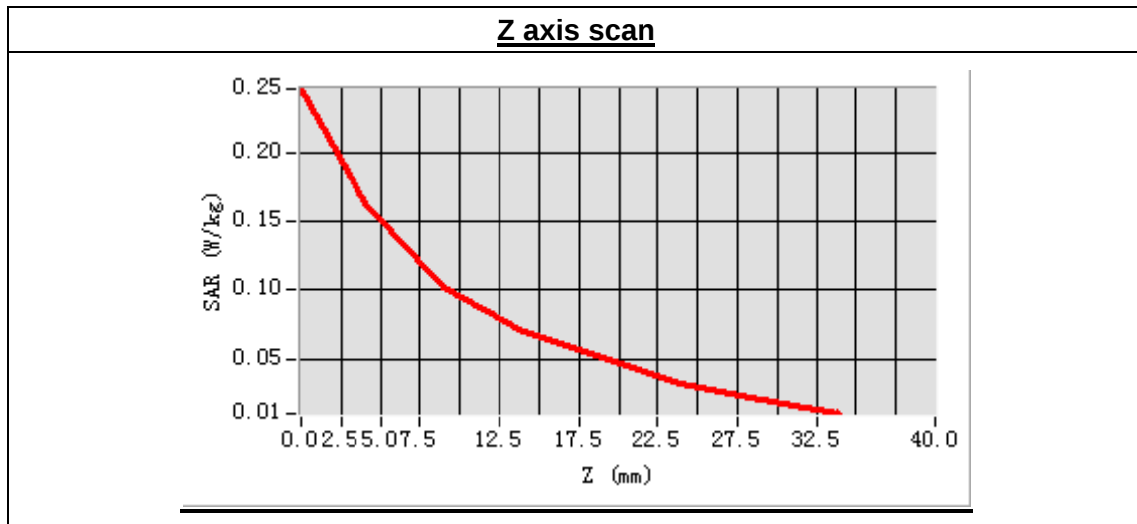
Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.118542
Conductivity (S/m)	1.389547
Power drift(%)	-0.600000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



Maximum location: X=-59.00, Y=-51.00

SAR Peak: 0.25 W/kg

SAR 10g (W/Kg)	0.094322
SAR 1g (W/Kg)	0.157176



MEASUREMENT 18

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 7 minutes 58 seconds

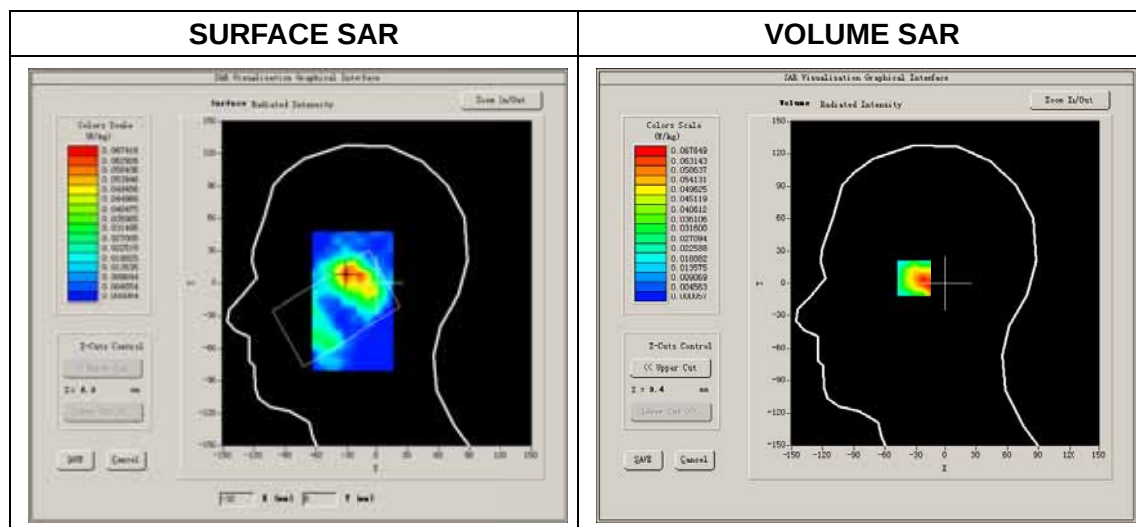
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

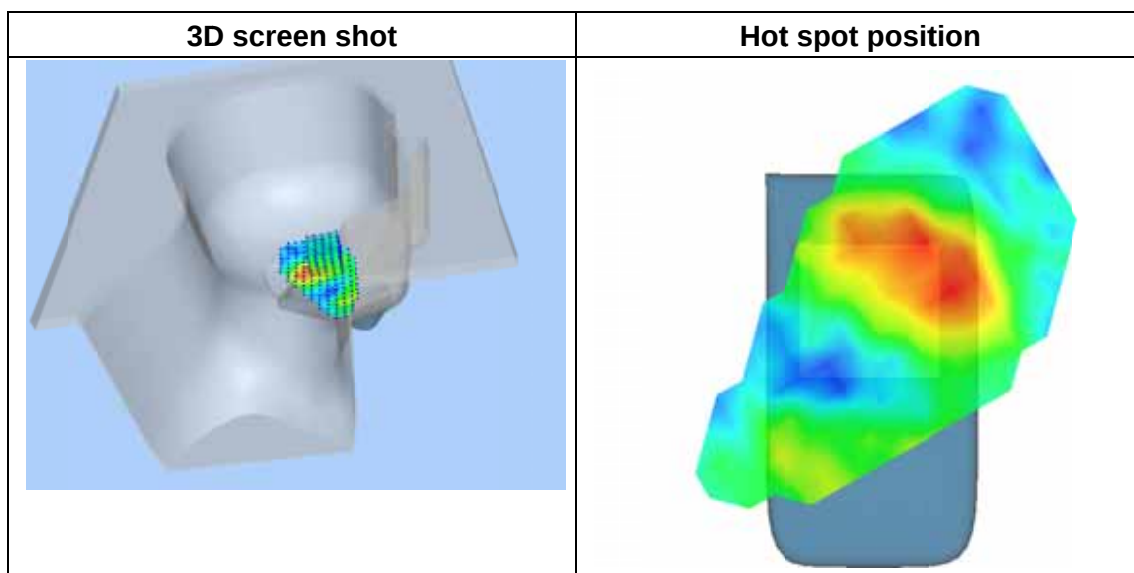
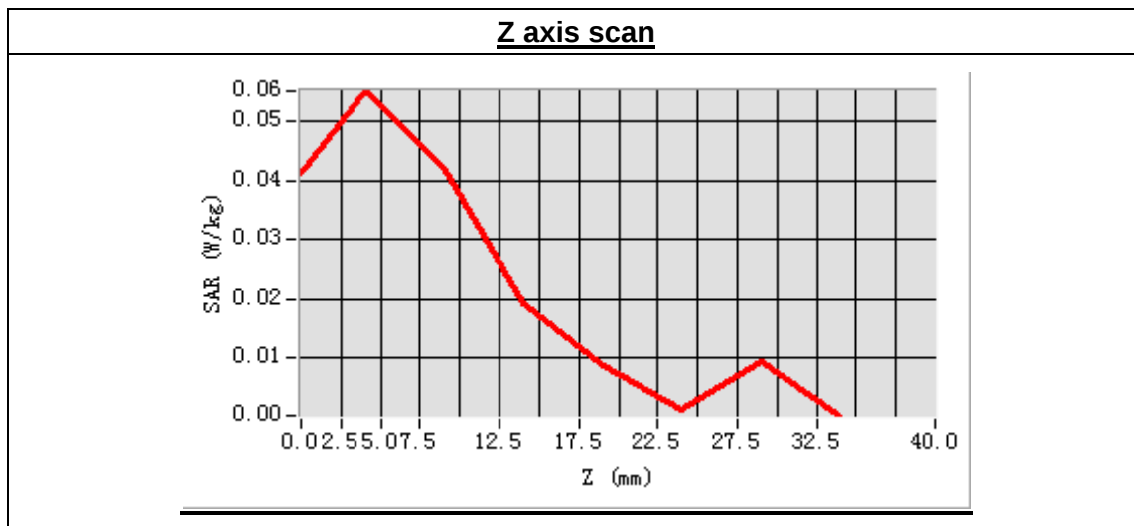
Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.118542
Conductivity (S/m)	1.389547
Power drift(%)	-3.290000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



Maximum location: X=-32.00, Y=8.00

SAR Peak: 0.13 W/kg

SAR 10g (W/Kg)	0.036474
SAR 1g (W/Kg)	0.067980



MEASUREMENT 19

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 25 seconds

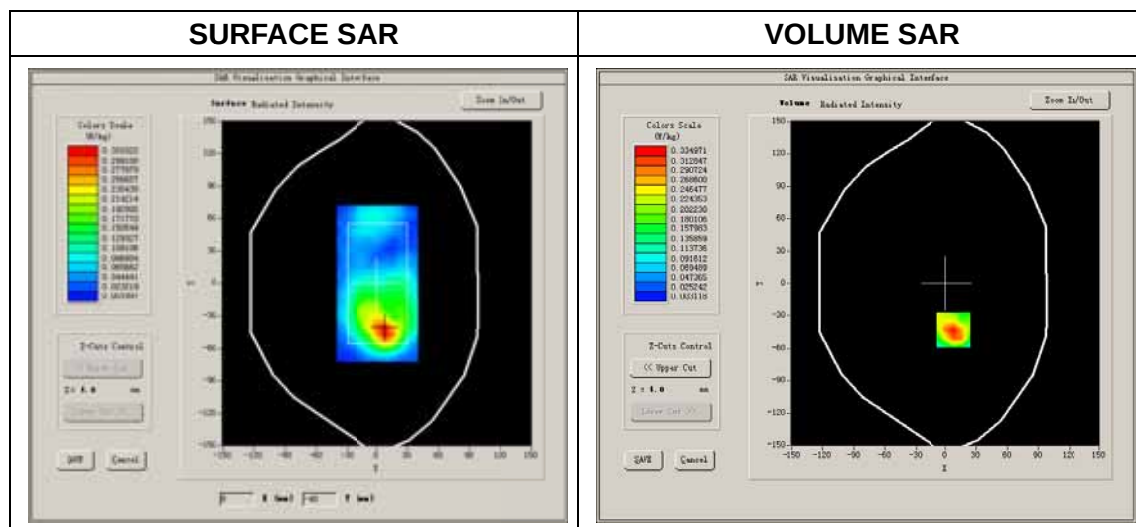
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

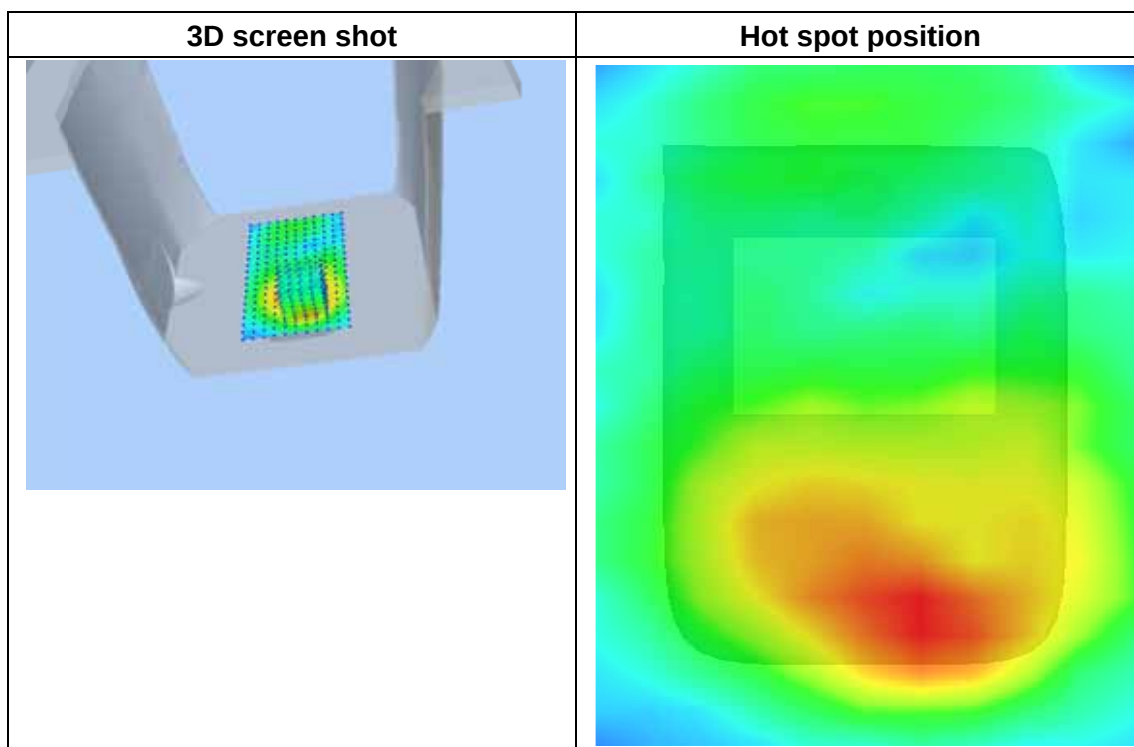
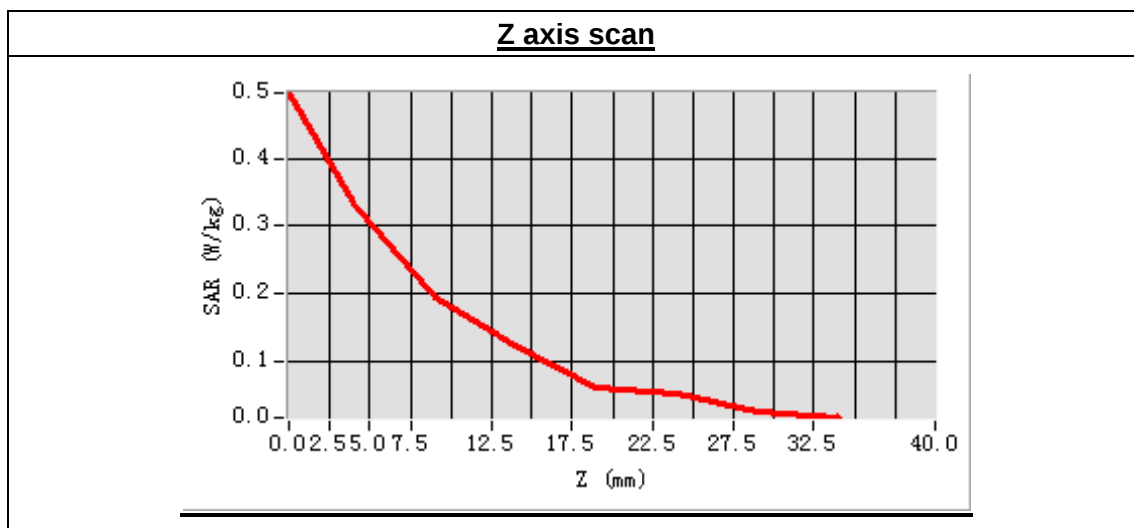
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift(%)	2.020000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:8



Maximum location: X=8.00, Y=-43.00

SAR Peak: 0.55 W/kg

SAR 10g (W/Kg)	0.182342
SAR 1g (W/Kg)	0.339440



MEASUREMENT 20

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 27seconds

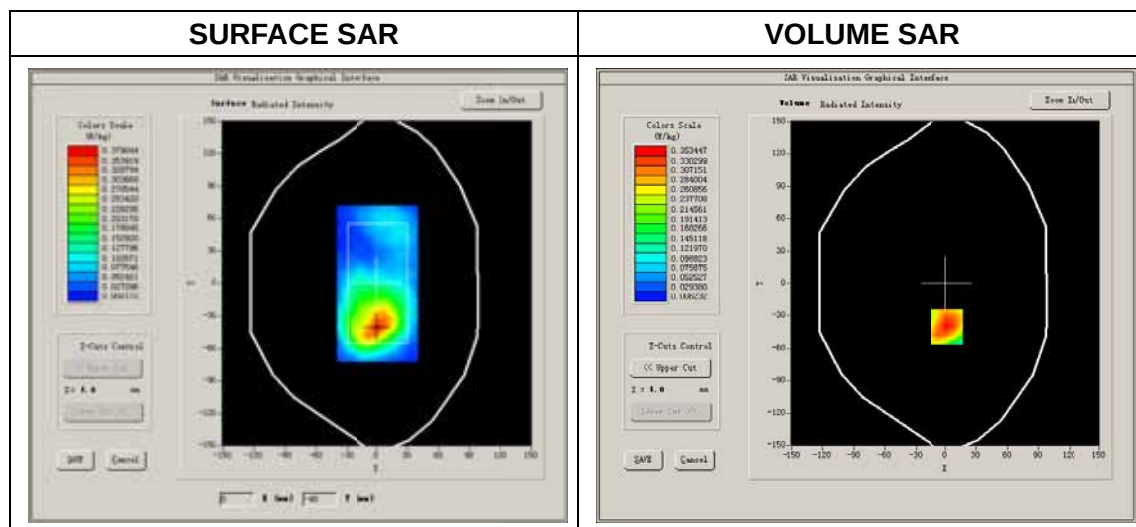
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

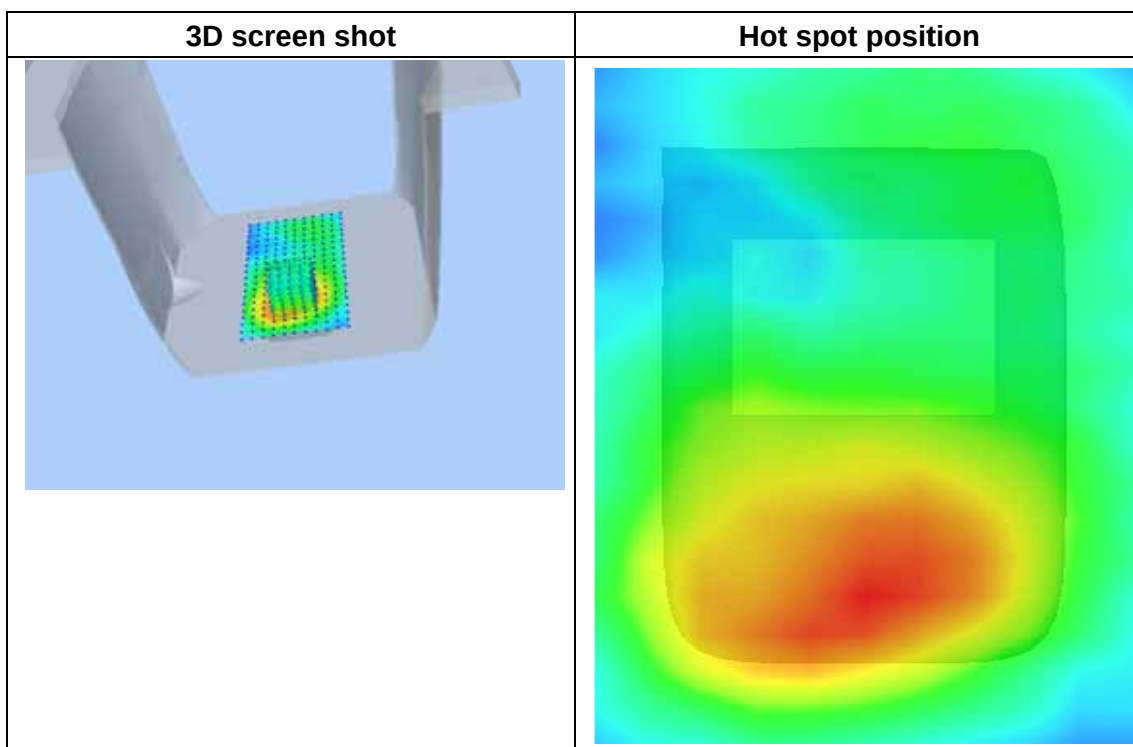
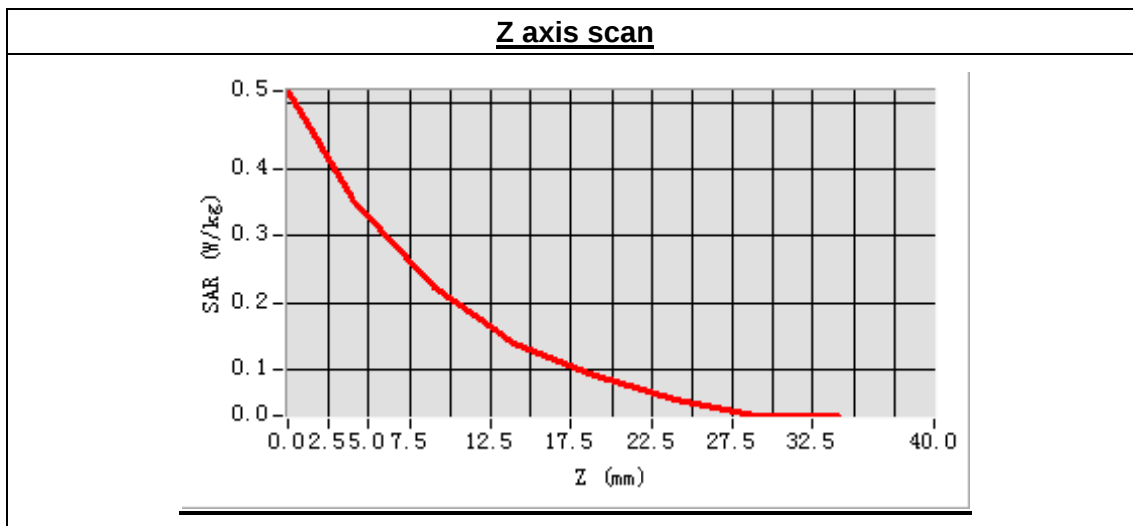
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift(%)	0.990000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:8



Maximum location: X=1.00, Y=-40.00

SAR Peak: 0.56 W/kg

SAR 10g (W/Kg)	0.219897
SAR 1g (W/Kg)	0.368594



MEASUREMENT 21

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 25 seconds

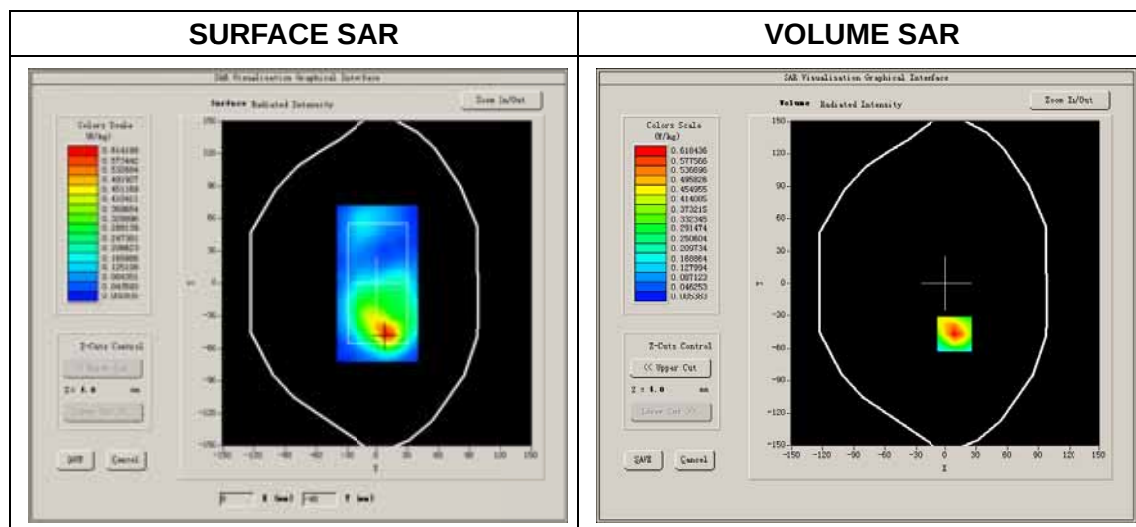
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	EDGE

B. SAR Measurement Results

Middle Band SAR (Channel 661):

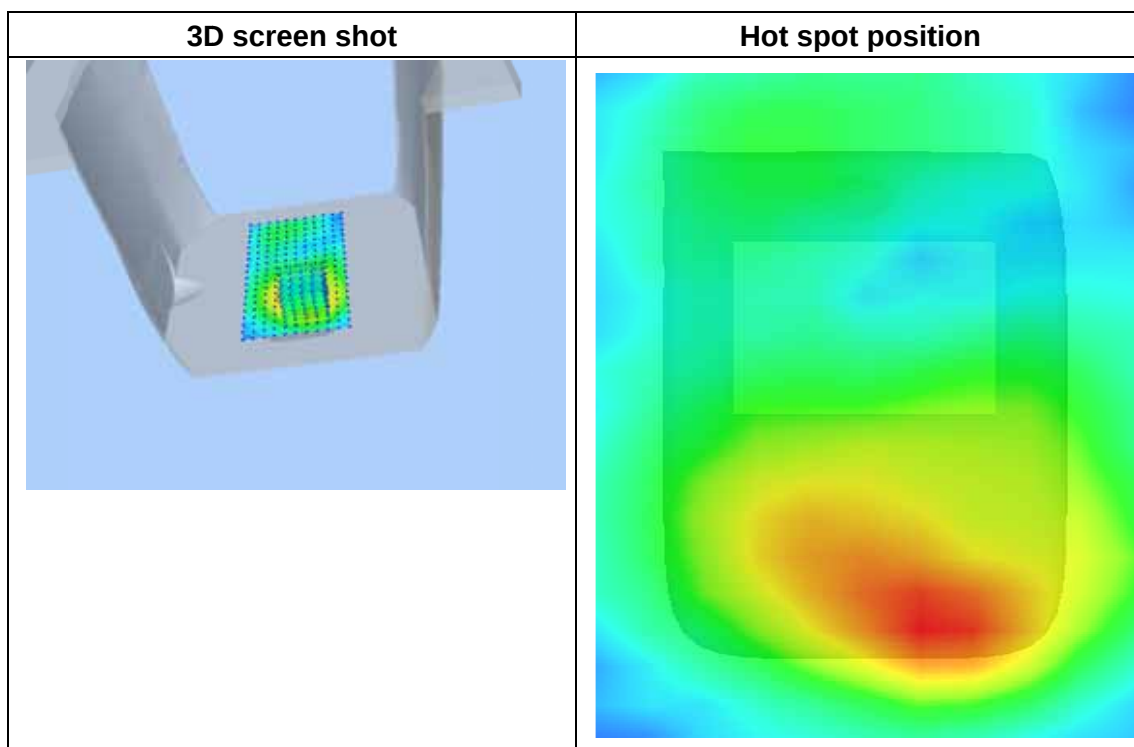
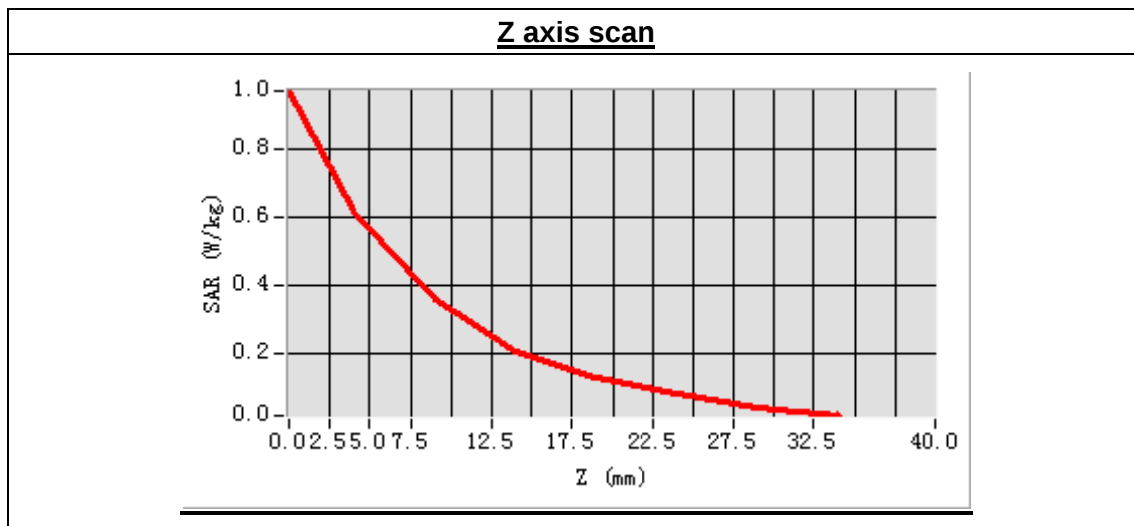
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift(%)	-1.950000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



Maximum location: X=9.00, Y=-47.00

SAR Peak: 0.97 W/kg

SAR 10g (W/Kg)	0.314497
SAR 1g (W/Kg)	0.594476



MEASUREMENT 22

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 27 seconds

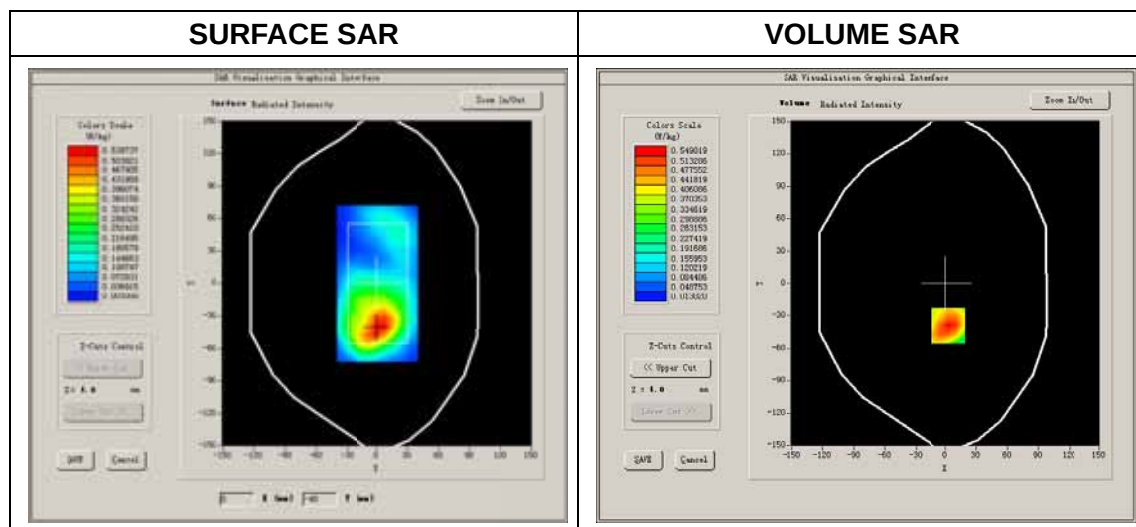
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	EDGE

B. SAR Measurement Results

Middle Band SAR (Channel 661):

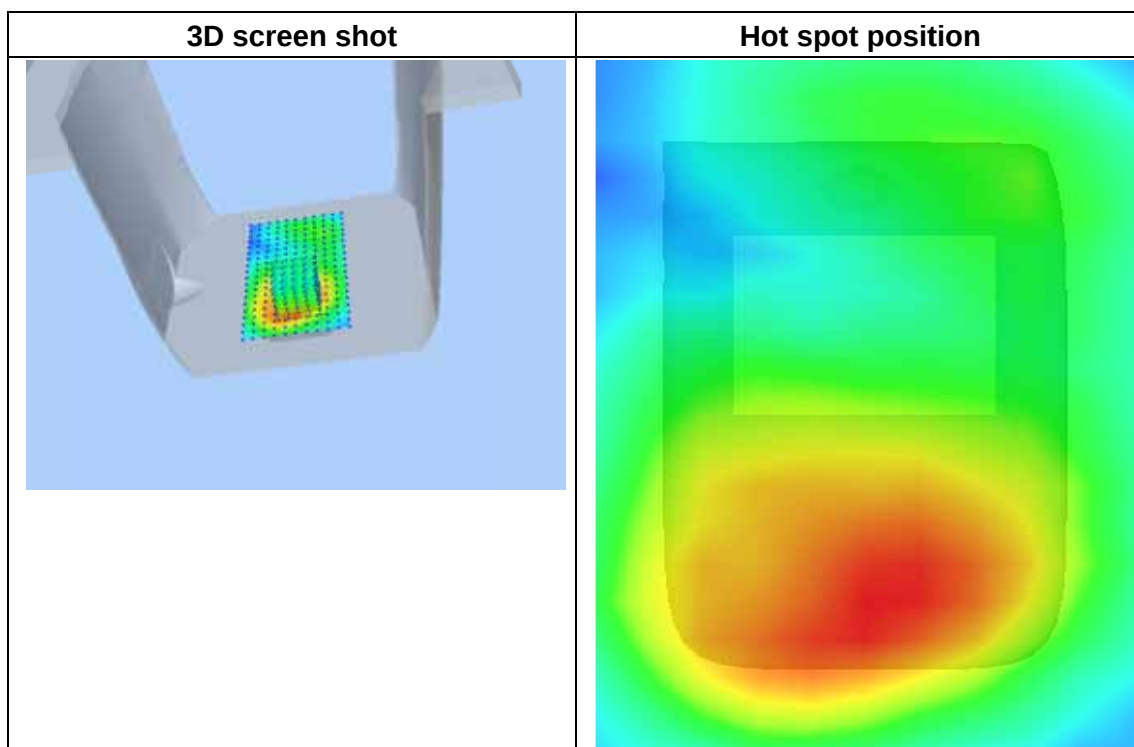
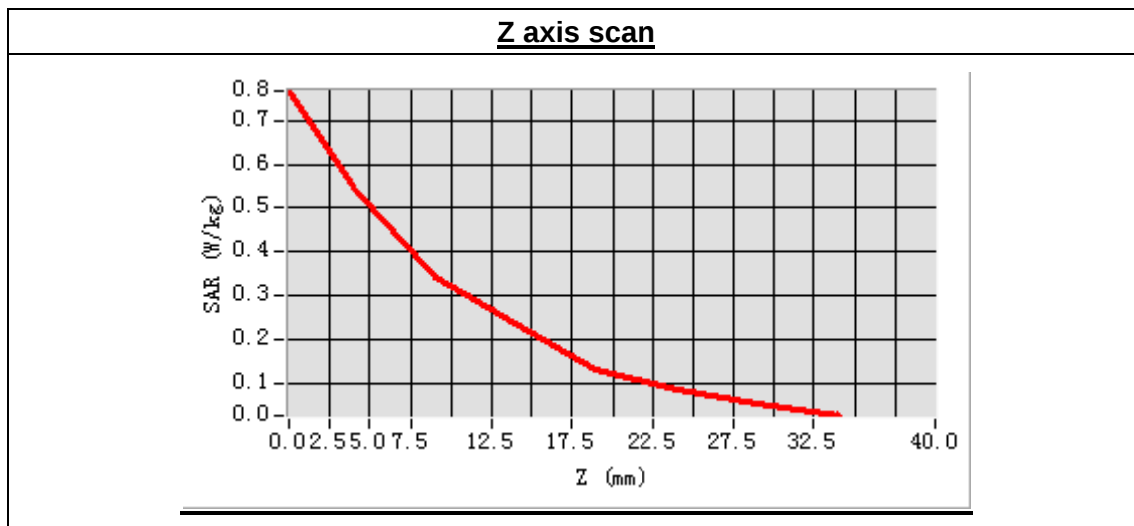
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift(%)	-1.860000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



Maximum location: X=3.00, Y=-39.00

SAR Peak: 0.79 W/kg

SAR 10g (W/Kg)	0.314271
SAR 1g (W/Kg)	0.531430



MEASUREMENT 23

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 29 seconds

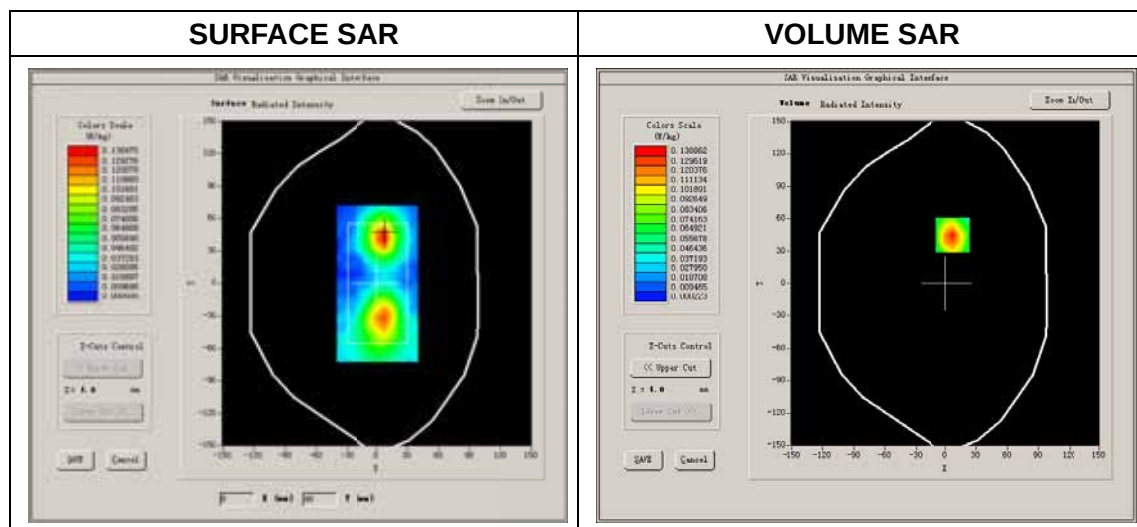
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	EDGE

B. SAR Measurement Results

Middle Band SAR (Channel 661):

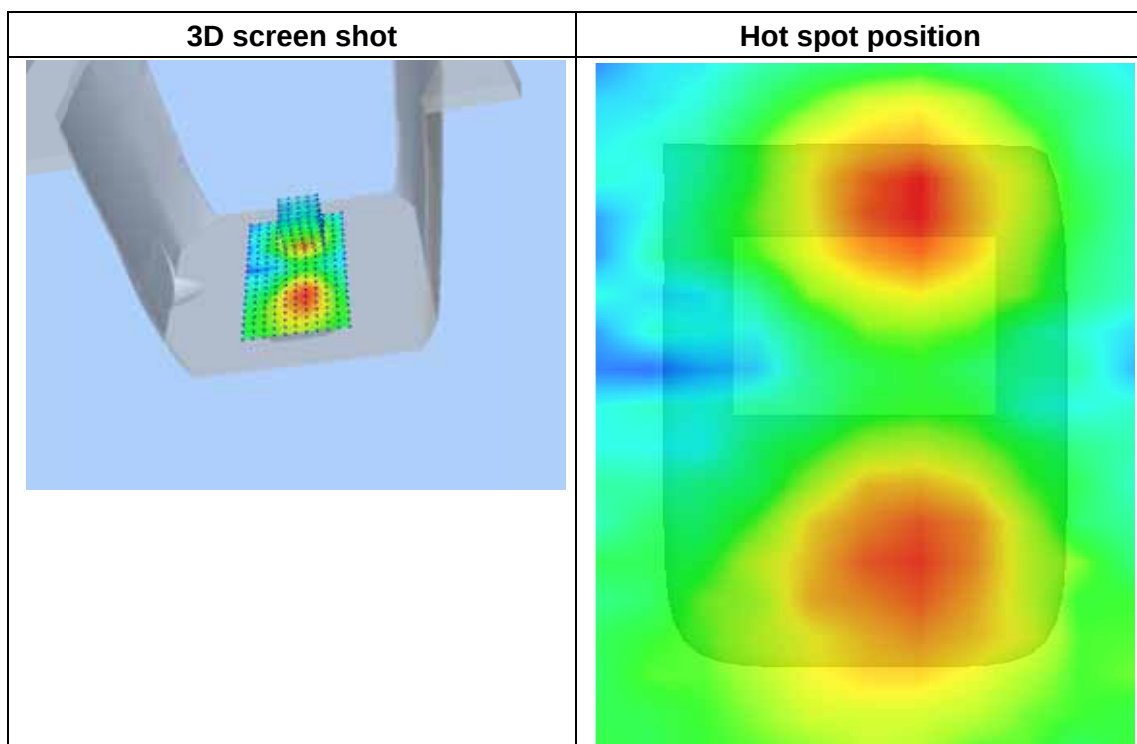
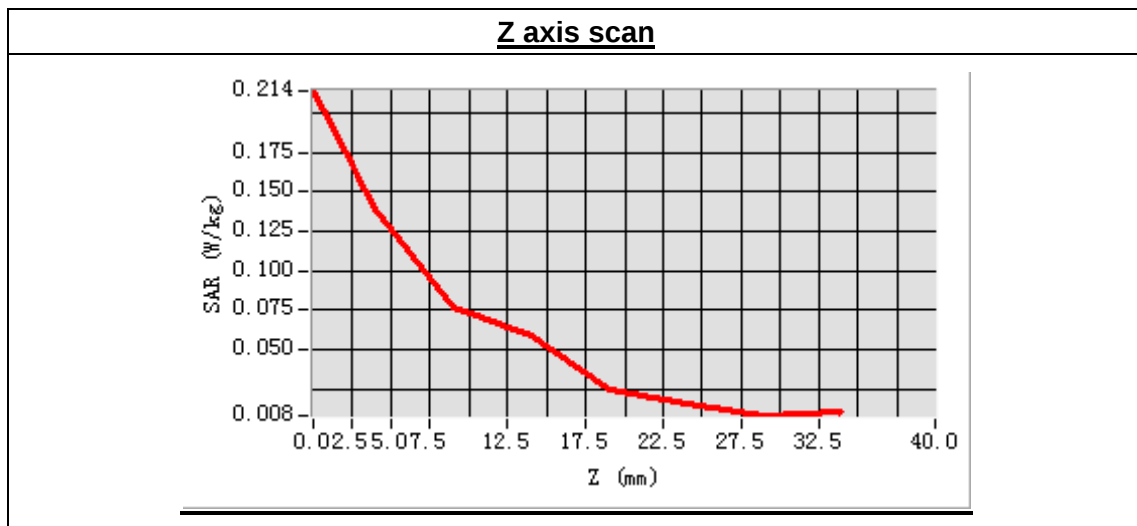
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift(%)	-1.130000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



Maximum location: X=7.00, Y=45.00

SAR Peak: 0.22 W/kg

SAR 10g (W/Kg)	0.071141
SAR 1g (W/Kg)	0.134013



MEASUREMENT 24

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 26 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	EDGE

B. SAR Measurement Result

Middle Band SAR (Channel 661):

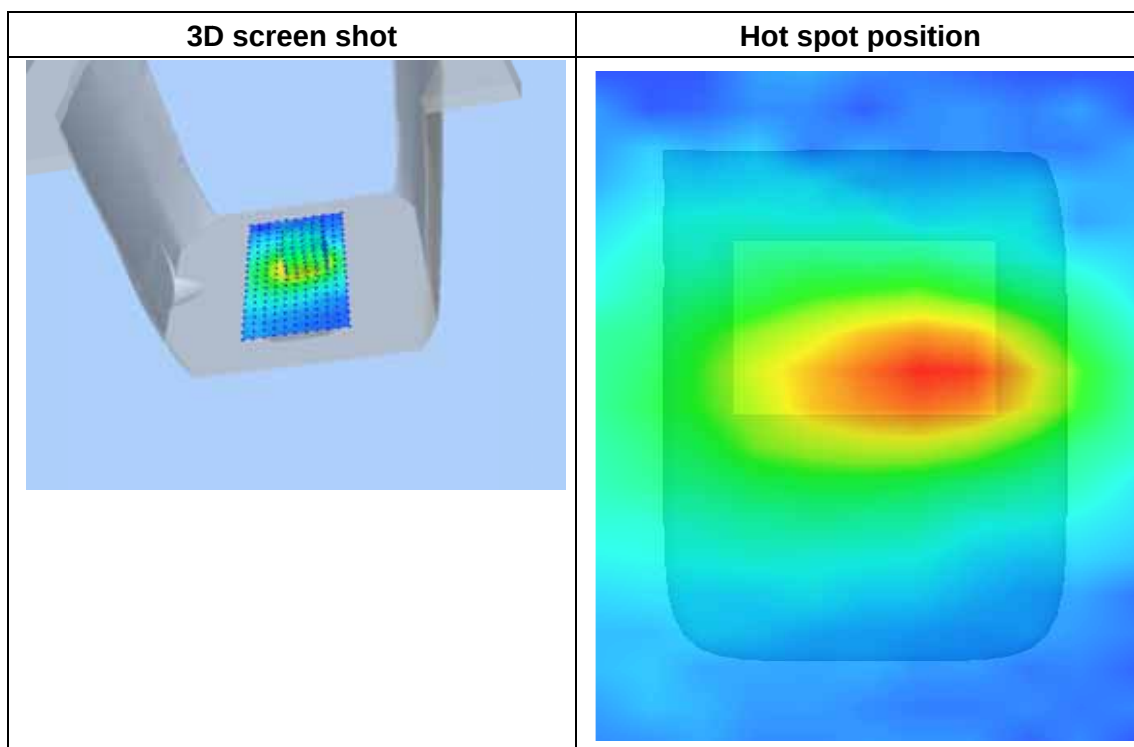
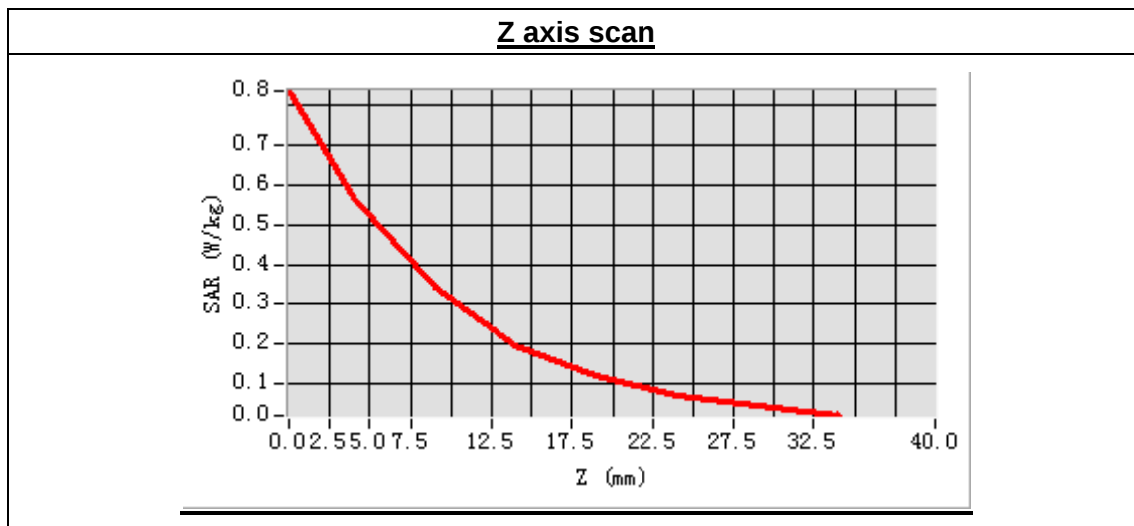
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift(%)	1.150000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



Maximum location: X=10.00, Y=7.00

SAR Peak: 0.84 W/kg

SAR 10g (W/Kg)	0.291044
SAR 1g (W/Kg)	0.541774



MEASUREMENT 25

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 30 seconds

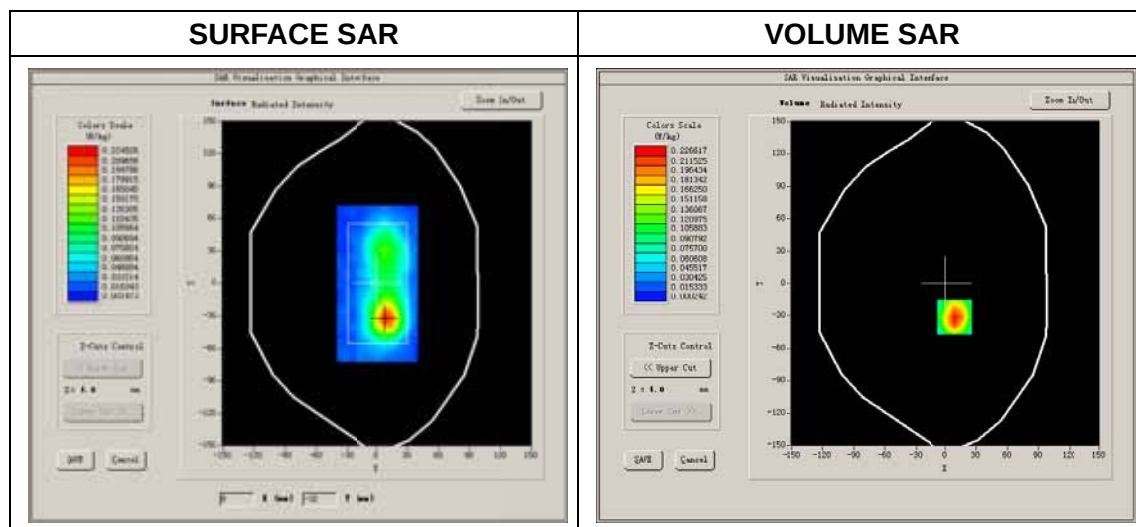
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	EDGE

B. SAR Measurement Results

Middle Band SAR (Channel 661):

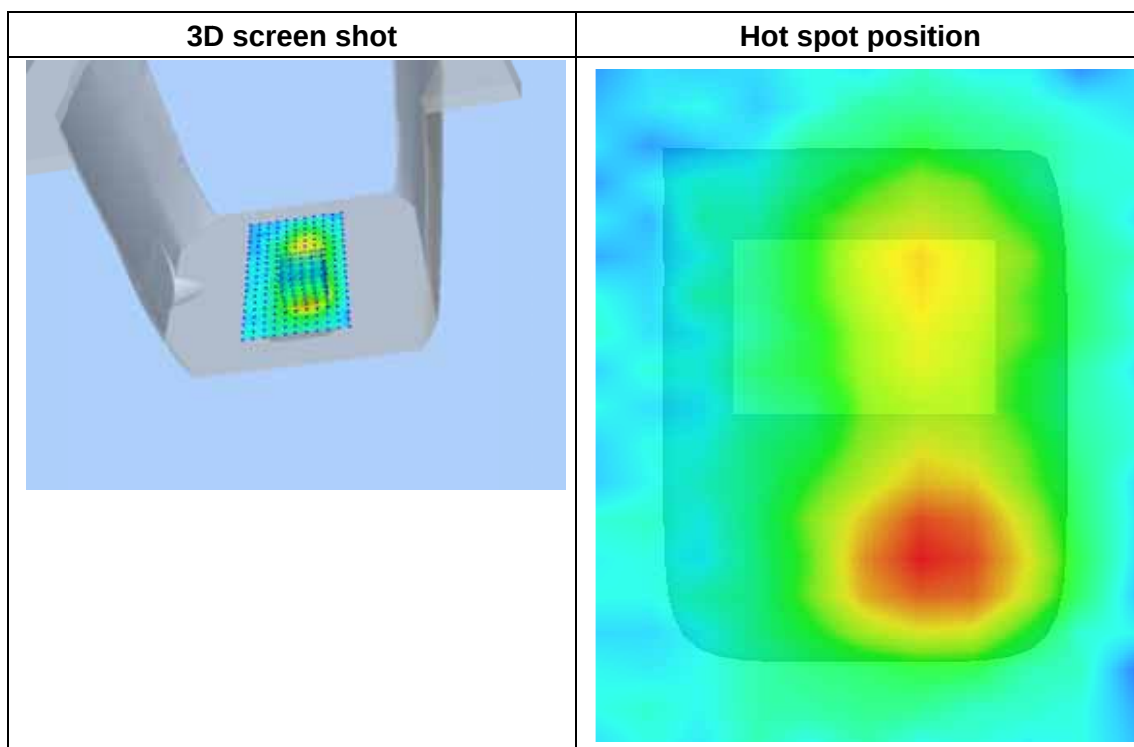
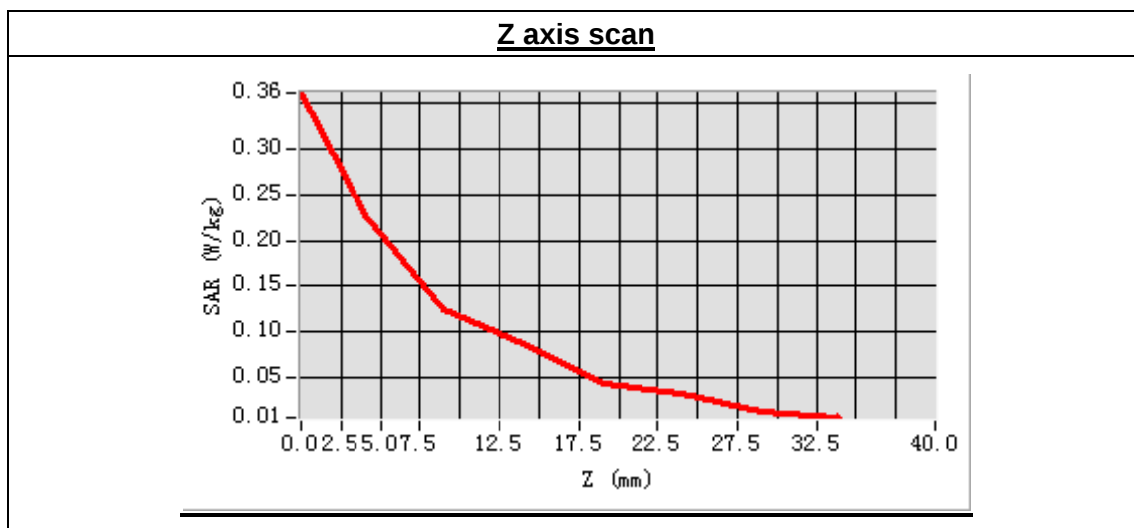
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift(%)	-1.800000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



Maximum location: X=9.00, Y=-31.00

SAR Peak: 0.37 W/kg

SAR 10g (W/Kg)	0.115142
SAR 1g (W/Kg)	0.225504



MEASUREMENT 26

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 33 seconds

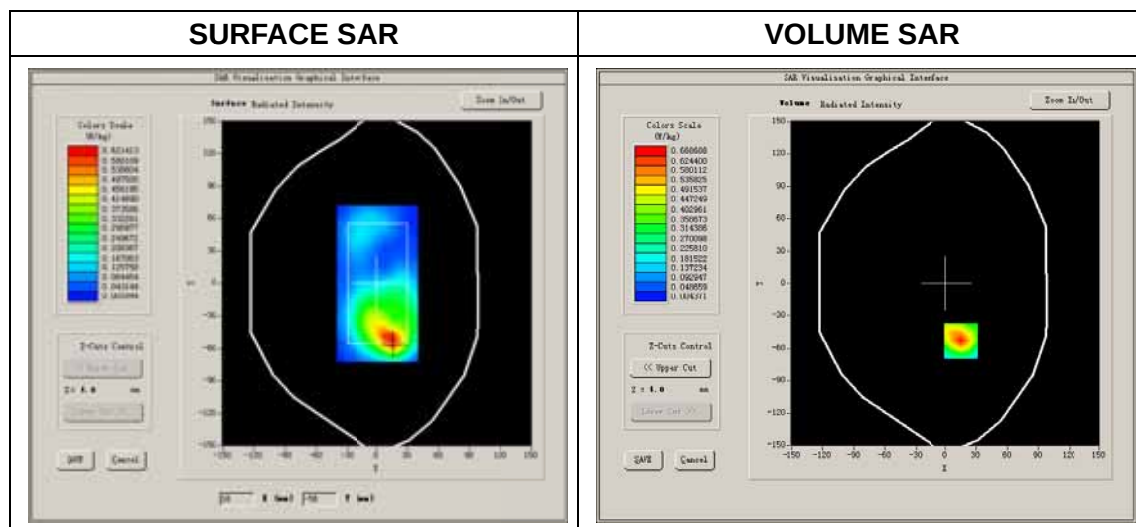
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 661):

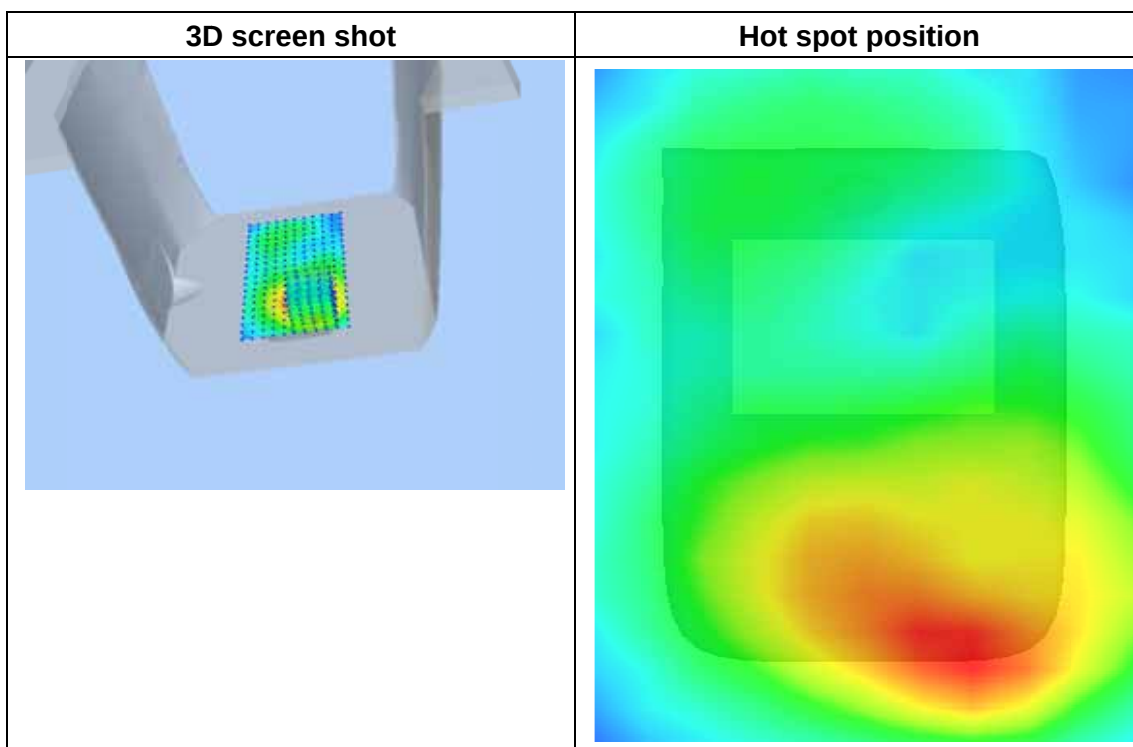
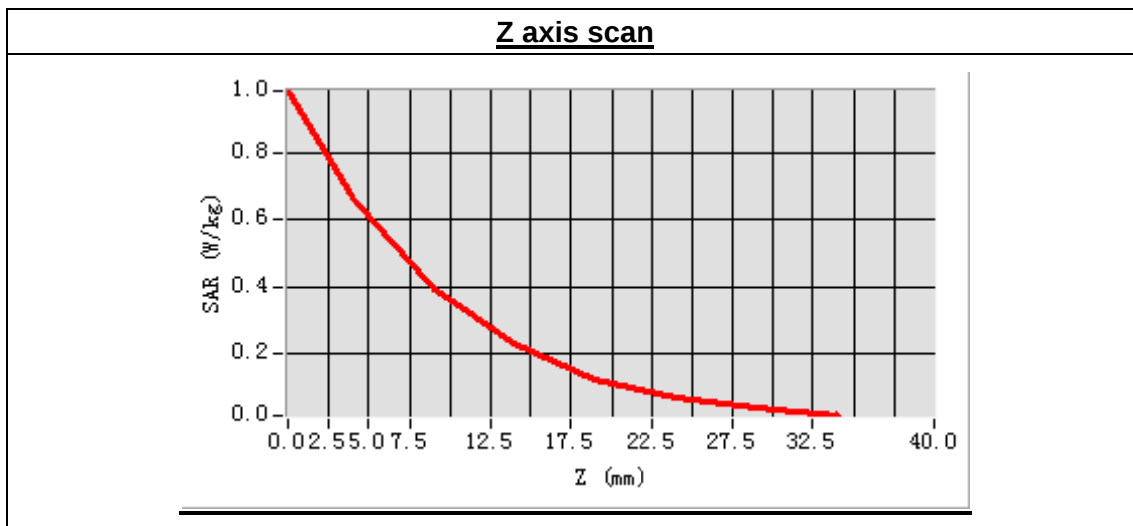
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift(%)	0.750000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



Maximum location: X=15.00, Y=-53.00

SAR Peak: 0.99 W/kg

SAR 10g (W/Kg)	0.334094
SAR 1g (W/Kg)	0.624224



MEASUREMENT 27

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 7 minutes 59 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Low Band SAR (Channel 4132):

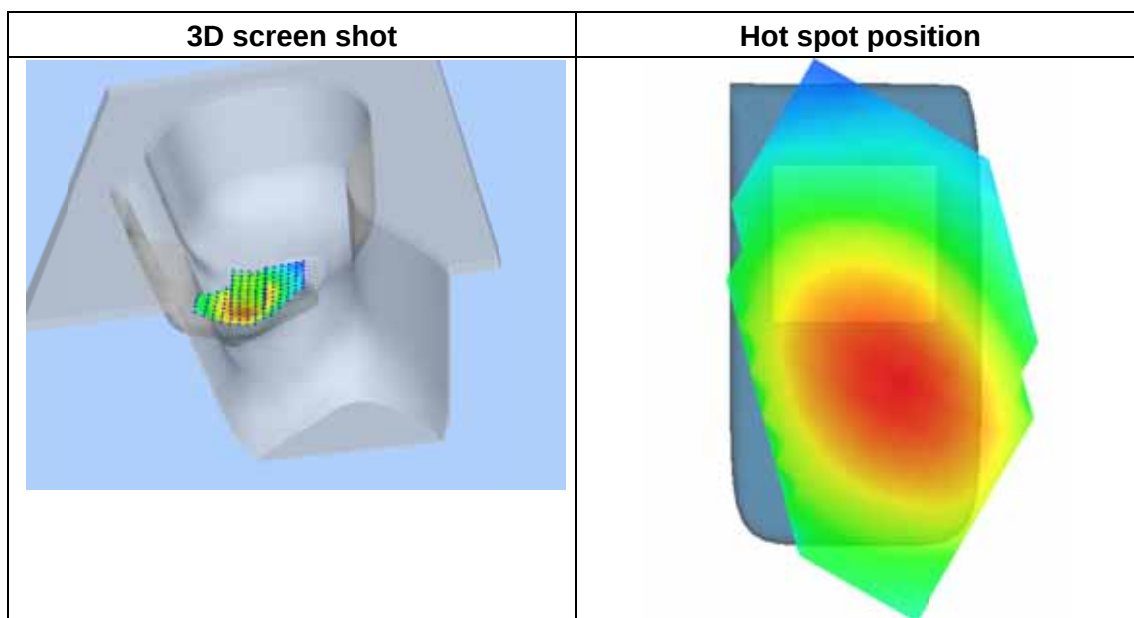
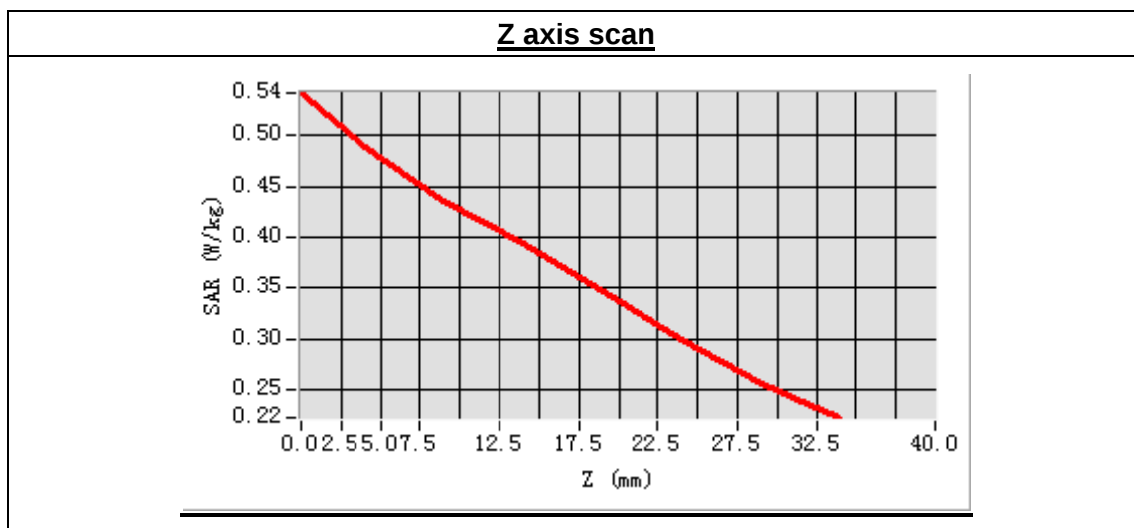
Frequency (MHz)	826.400000
Relative permittivity (real part)	42.104395
Conductivity (S/m)	0.876942
Power drift (%)	1.580000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



Maximum location: X=-49.00, Y=-40.00

SAR Peak: 0.57 W/kg

SAR 10g (W/Kg)	0.396772
SAR 1g (W/Kg)	0.484172



MEASUREMENT 28

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration:8 minutes 9 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	WCDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Low Band SAR (Channel 4132):

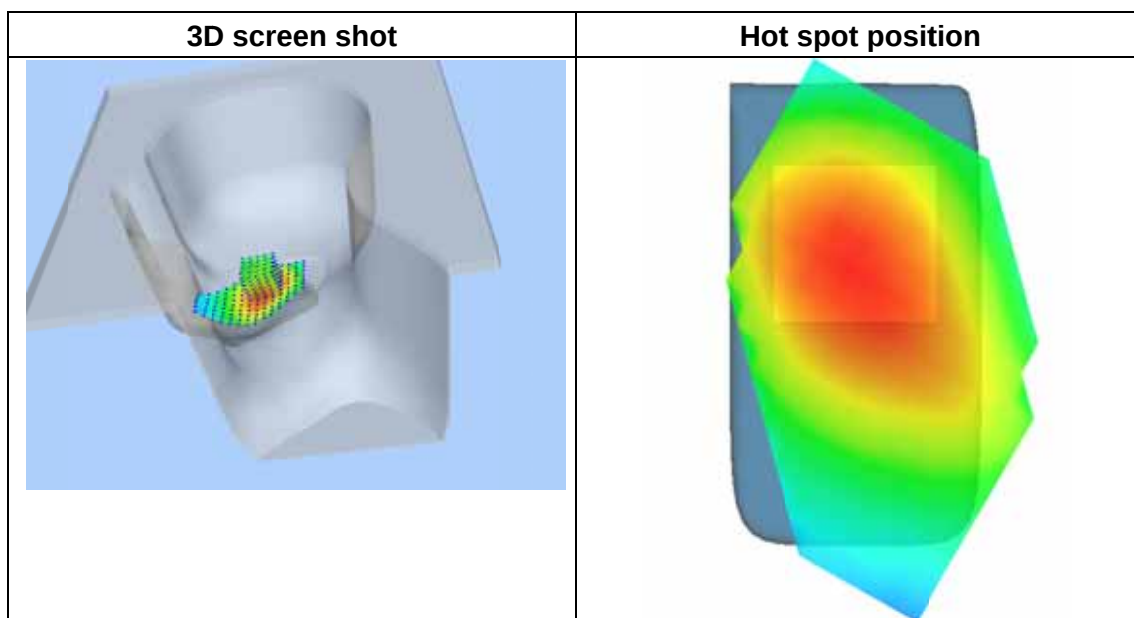
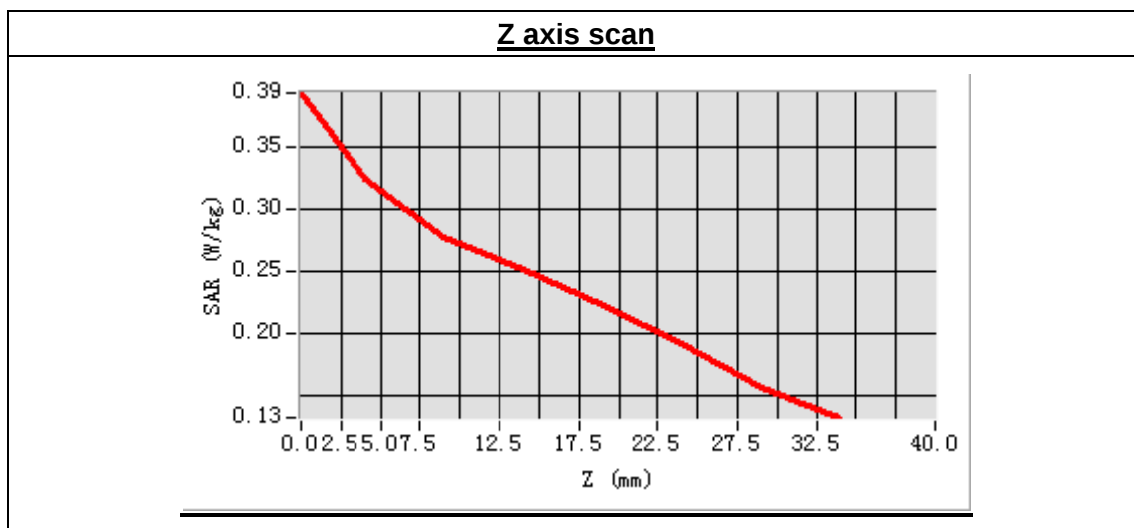
Frequency (MHz)	826.400000
Relative permittivity (real part)	42.104395
Conductivity (S/m)	0.876942
Power drift (%)	-0.600000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



Maximum location: X=-31.00, Y=-16.00

SAR Peak: 0.40 W/kg

SAR 10g (W/Kg)	0.258927
SAR 1g (W/Kg)	0.323226



MEASUREMENT 29

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 8 minutes 53 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Low Band SAR (Channel 4132):

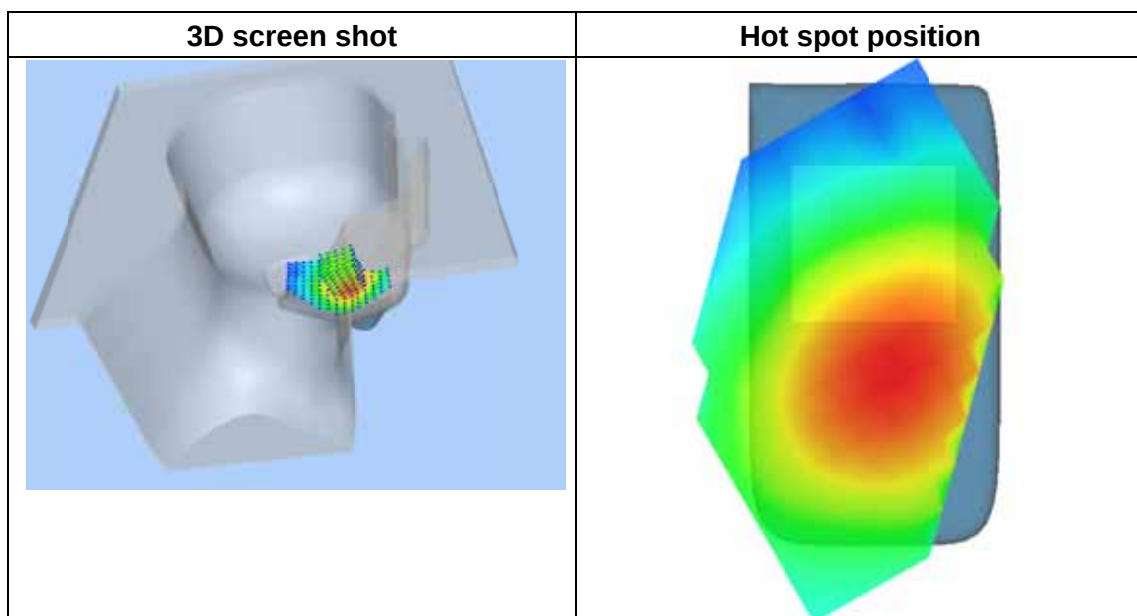
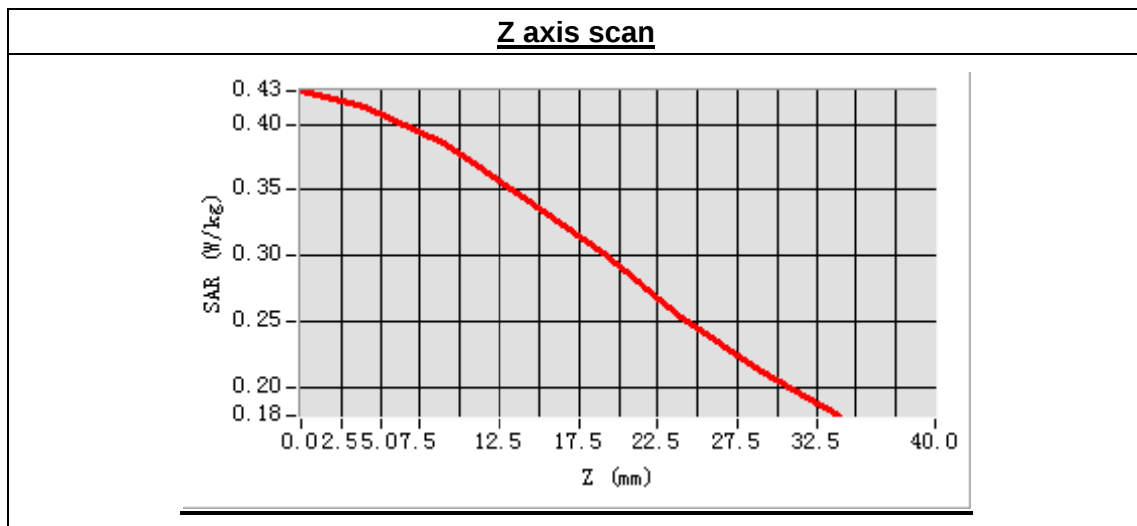
Frequency (MHz)	826.400000
Relative permittivity (real part)	42.104395
Conductivity (S/m)	0.876942
Power drift (%)	0.180000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



Maximum location: X=-54.00, Y=-25.00

SAR Peak: 0.45 W/kg

SAR 10g (W/Kg)	0.332629
SAR 1g (W/Kg)	0.405340



MEASUREMENT 30

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 7 minutes 40 seconds

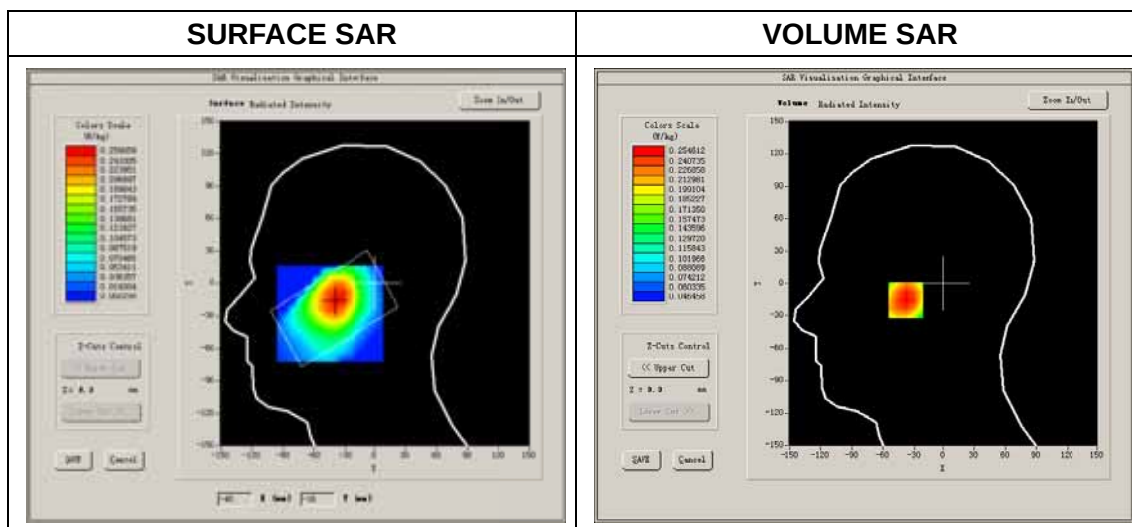
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	WCDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Low Band SAR (Channel 4132):

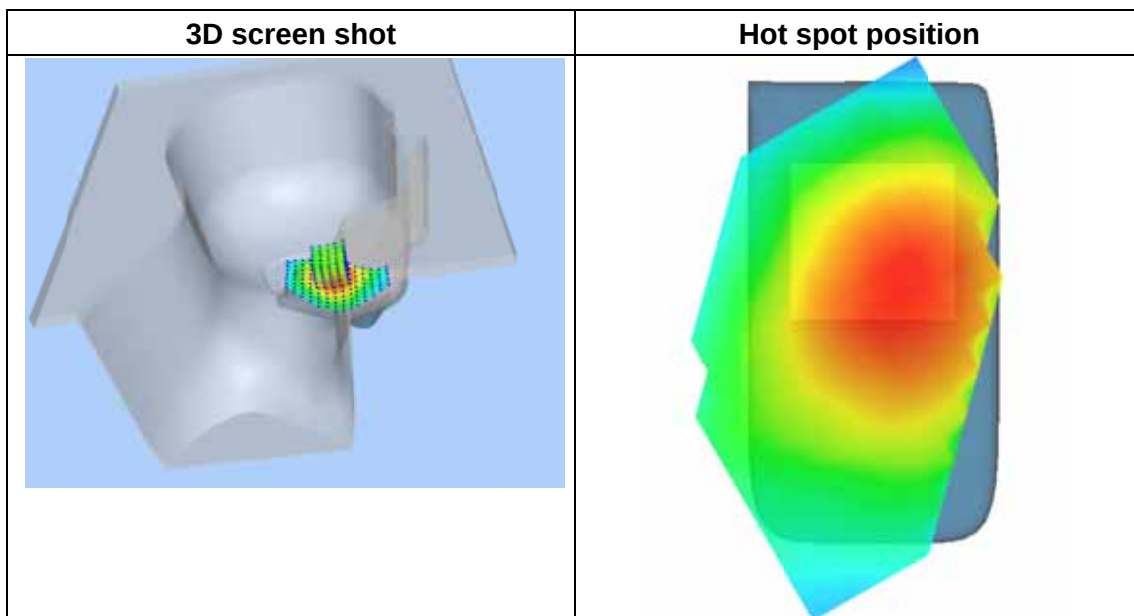
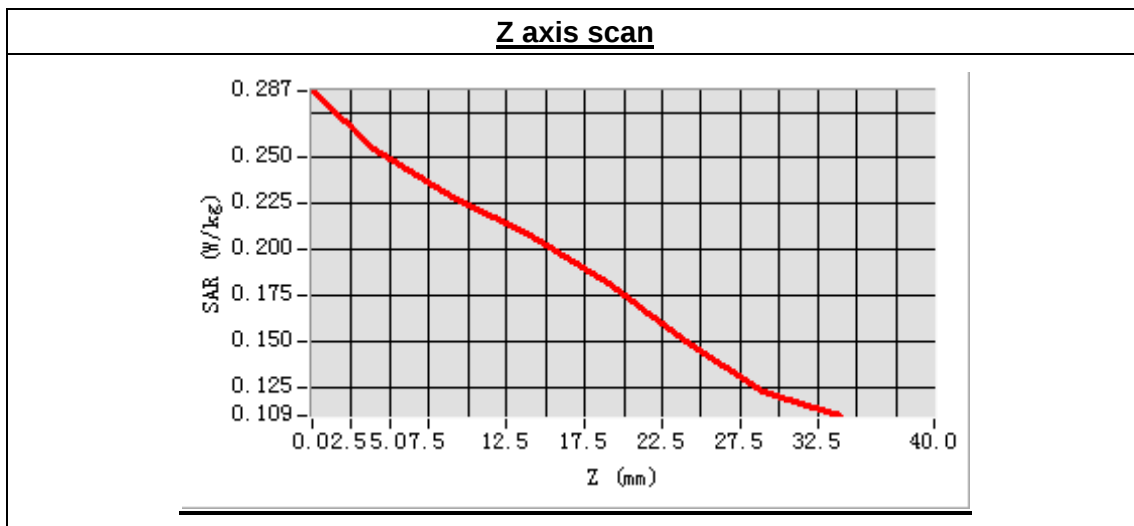
Frequency (MHz)	826.400000
Relative permittivity (real part)	42.104395
Conductivity (S/m)	0.876942
Power drift (%)	-1.410000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



Maximum location: X=-38.00, Y=-15.00

SAR Peak: 0.31 W/kg

SAR 10g (W/Kg)	0.206287
SAR 1g (W/Kg)	0.254913



MEASUREMENT 31

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 30 seconds

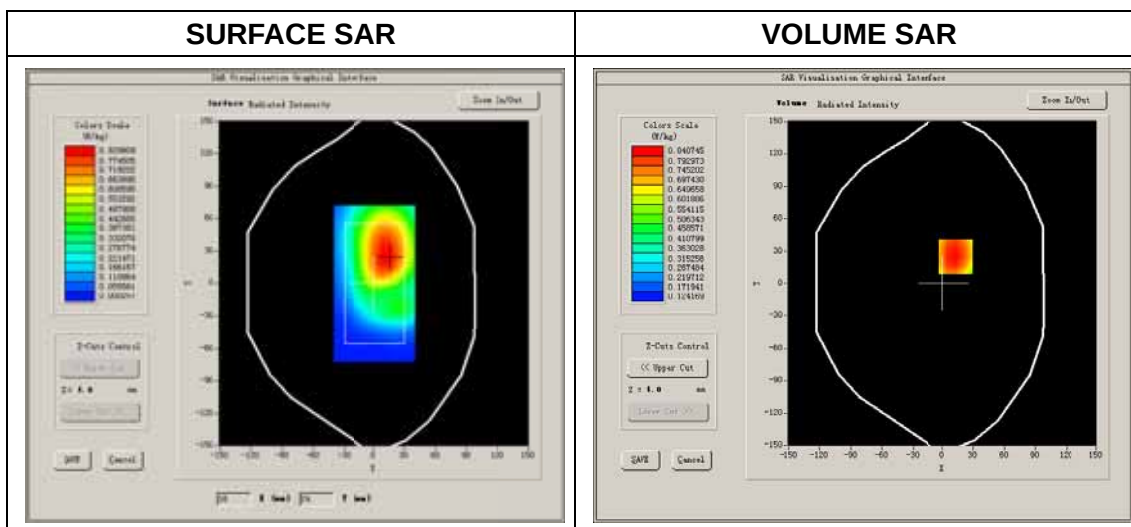
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Low Band SAR (Channel 4132):

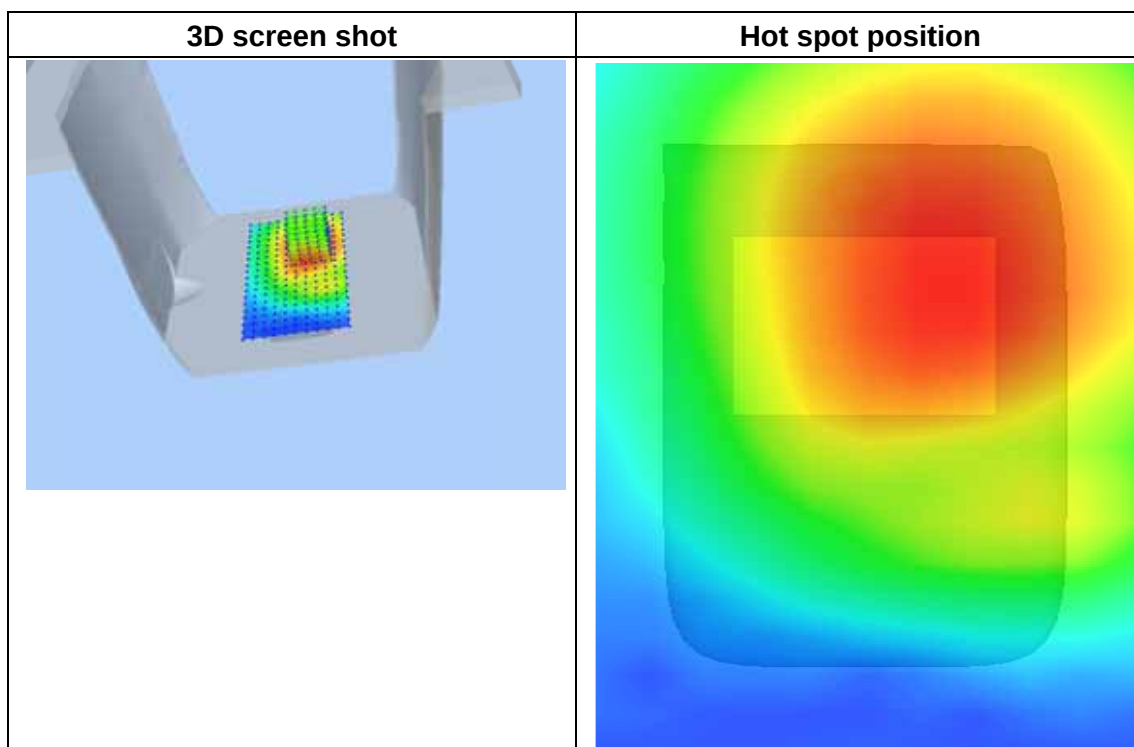
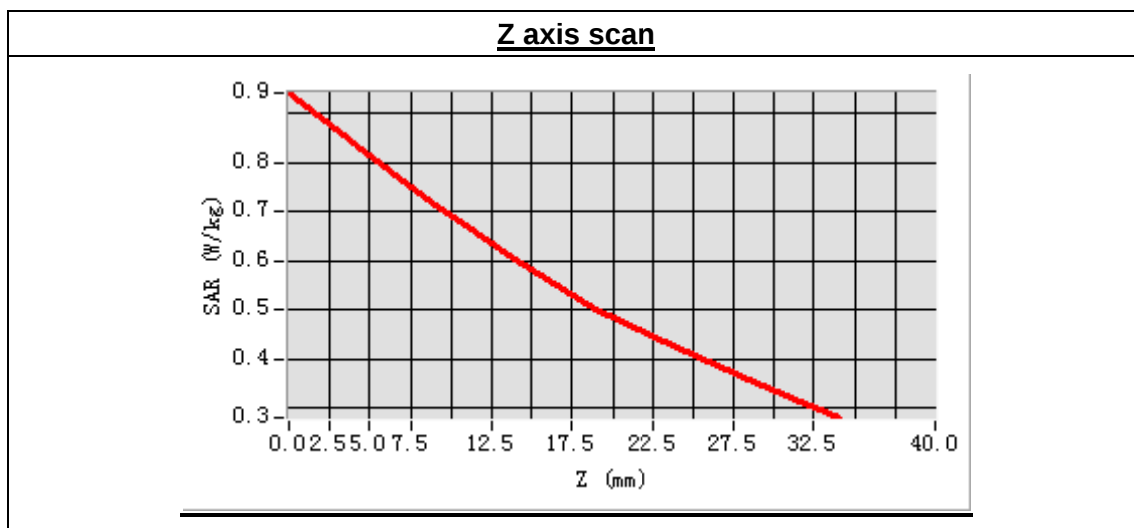
Frequency (MHz)	826.400000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift (%)	-1.460000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:1



Maximum location: X=13.00, Y=25.00

SAR Peak: 1.04 W/kg

SAR 10g (W/Kg)	0.603108
SAR 1g (W/Kg)	0.784611



MEASUREMENT 32

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 32 seconds

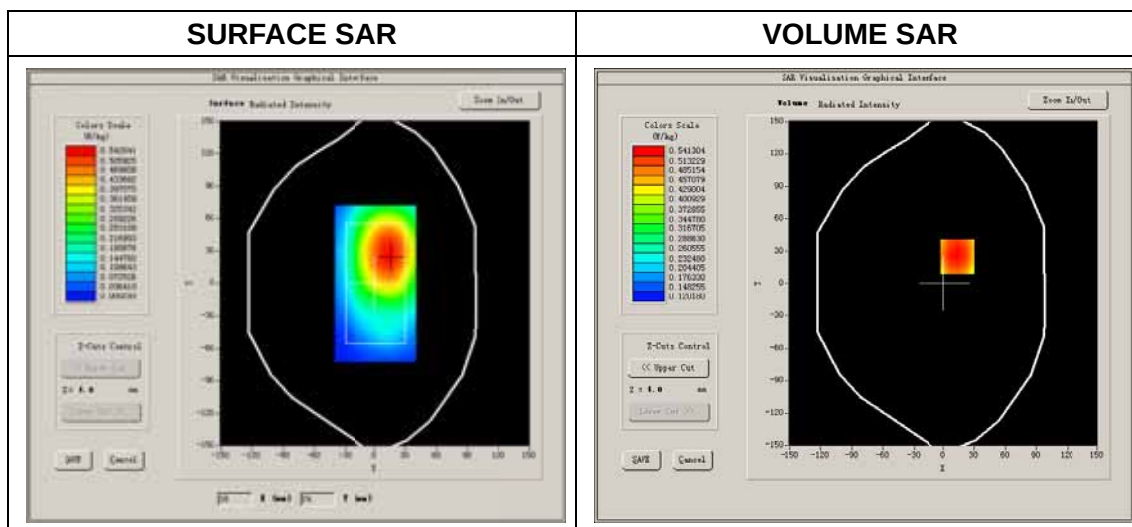
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Low Band SAR (Channel 4132):

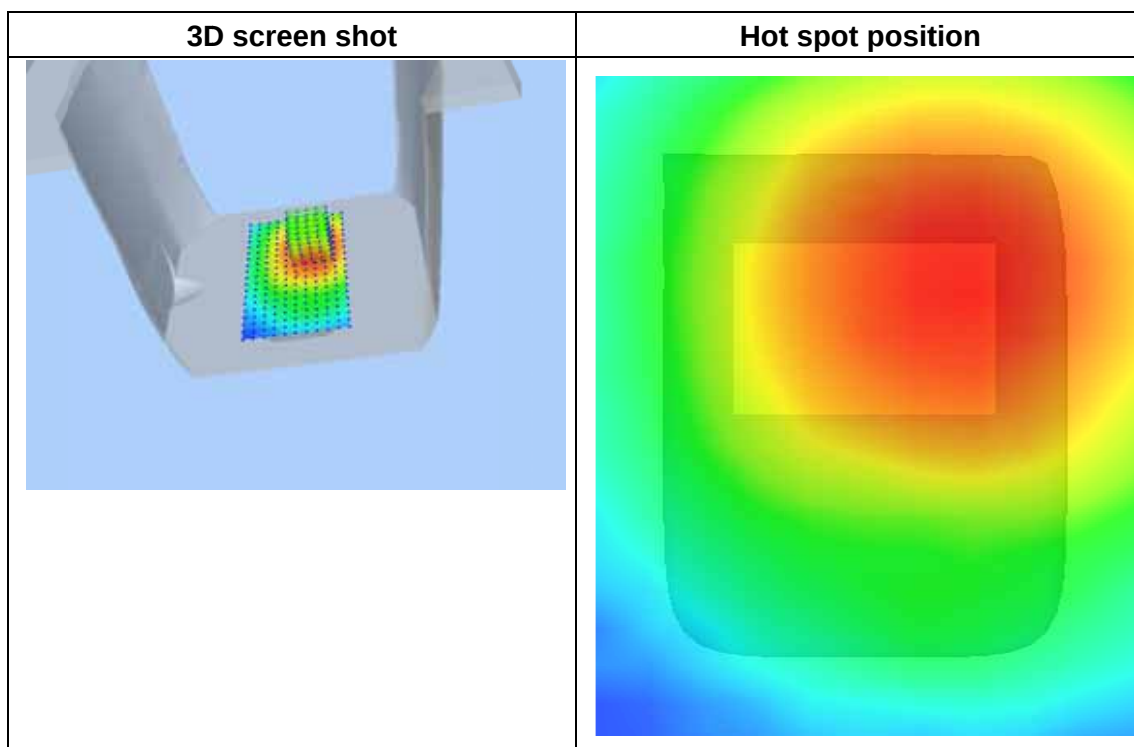
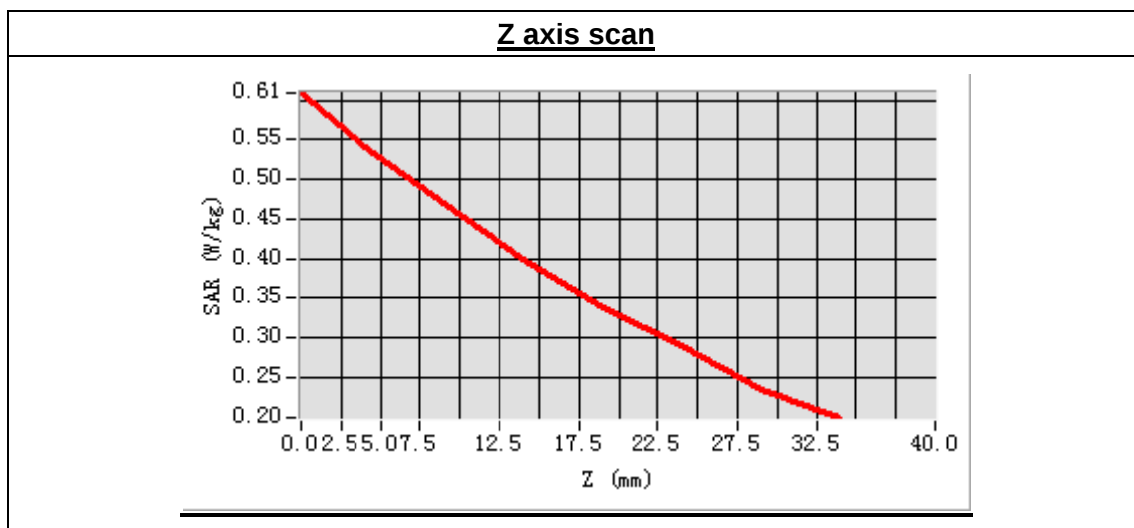
Frequency (MHz)	826.400000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift (%)	-2.200000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:1



Maximum location: X=14.00, Y=25.00

SAR Peak: 0.66 W/kg

SAR 10g (W/Kg)	0.461854
SAR 1g (W/Kg)	0.570282



MEASUREMENT 33

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 31seconds

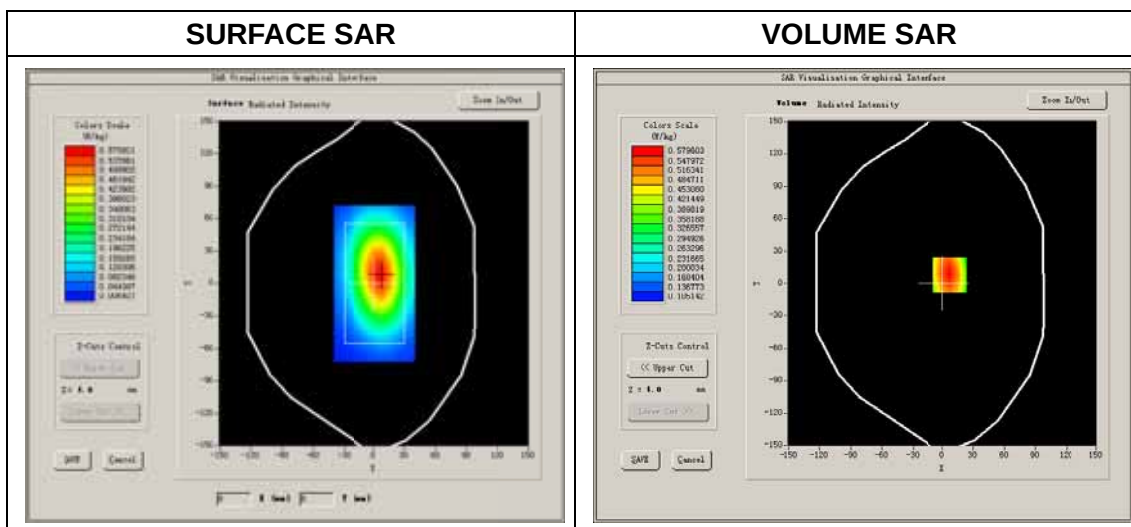
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Low Band SAR (Channel 4132):

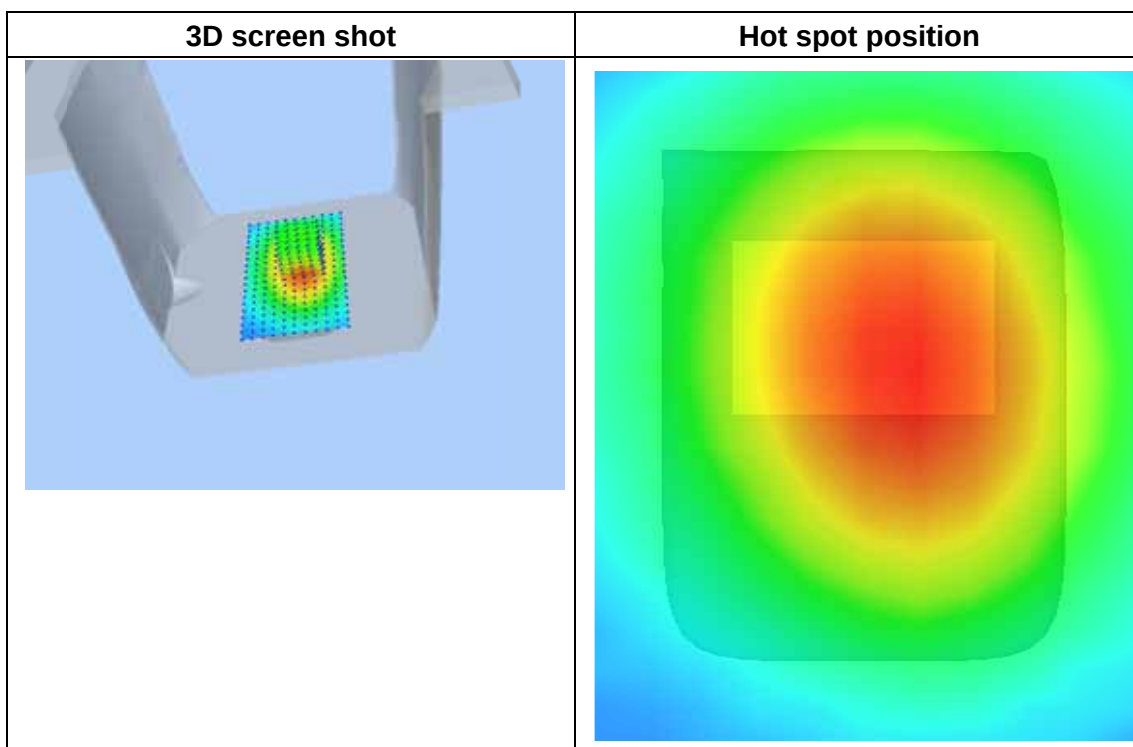
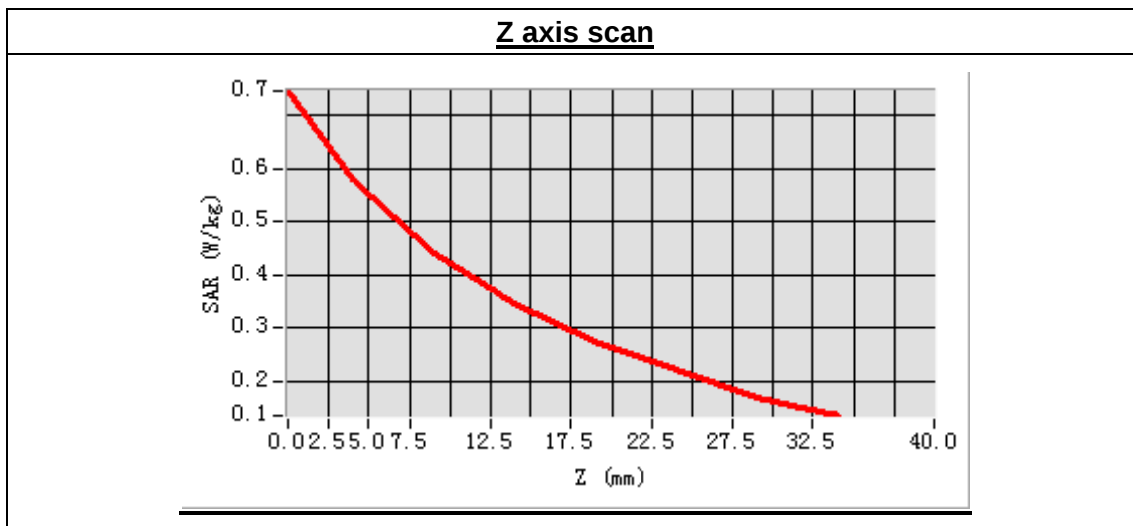
Frequency (MHz)	826.400000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift (%)	-0.980000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:1



Maximum location: X=7.00, Y=8.00

SAR Peak: 0.80 W/kg

SAR 10g (W/Kg)	0.438354
SAR 1g (W/Kg)	0.607061



MEASUREMENT 34

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 30 seconds

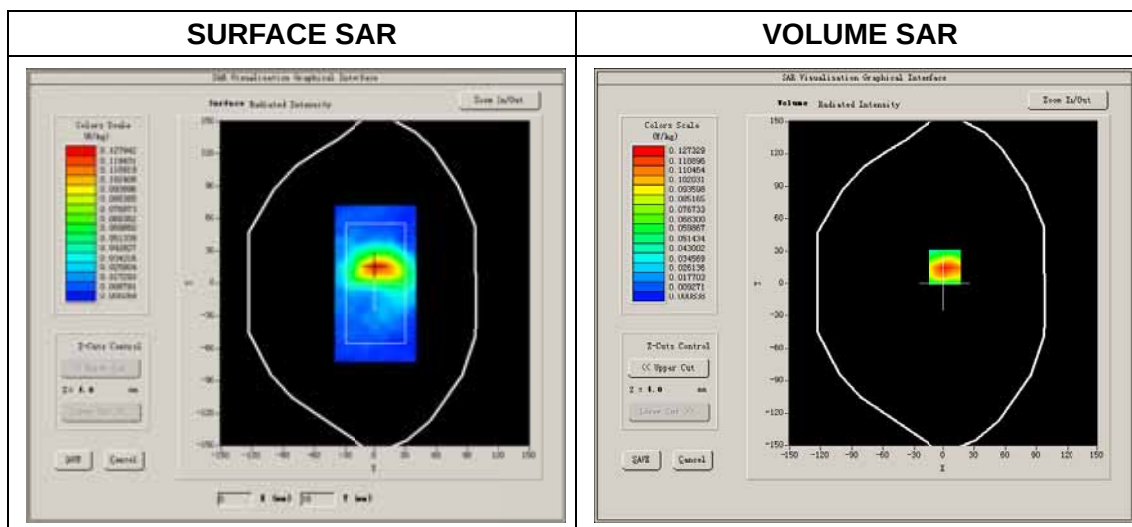
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Low Band SAR (Channel 4132):

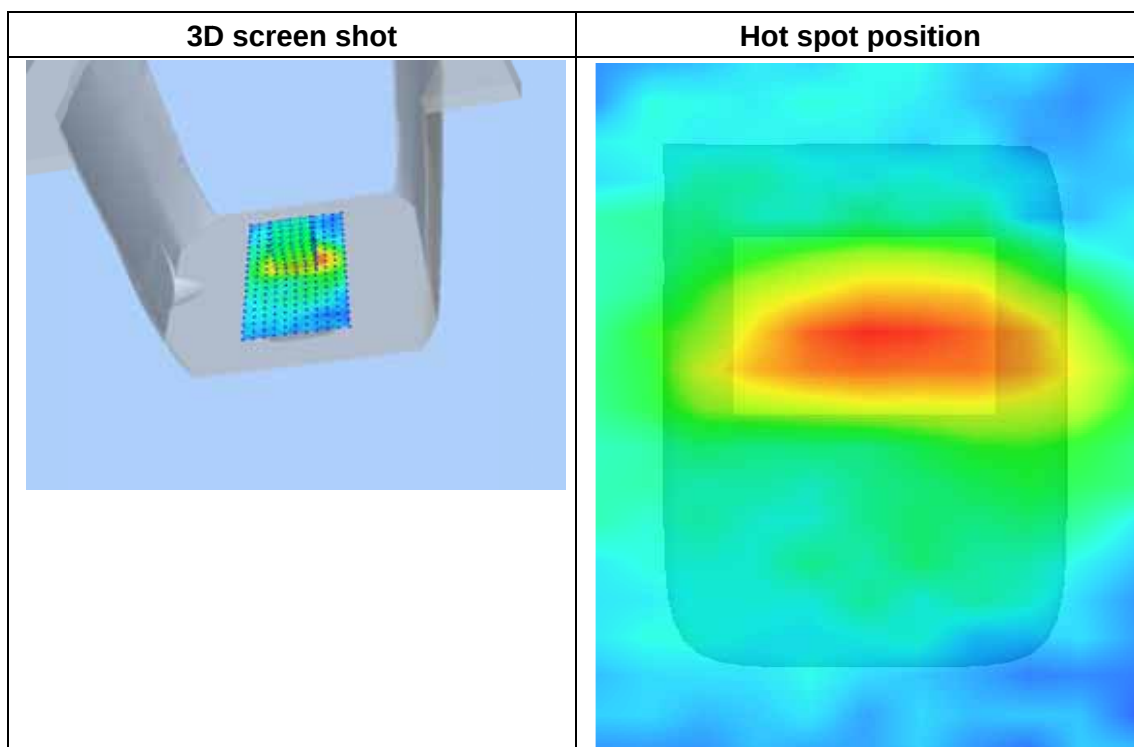
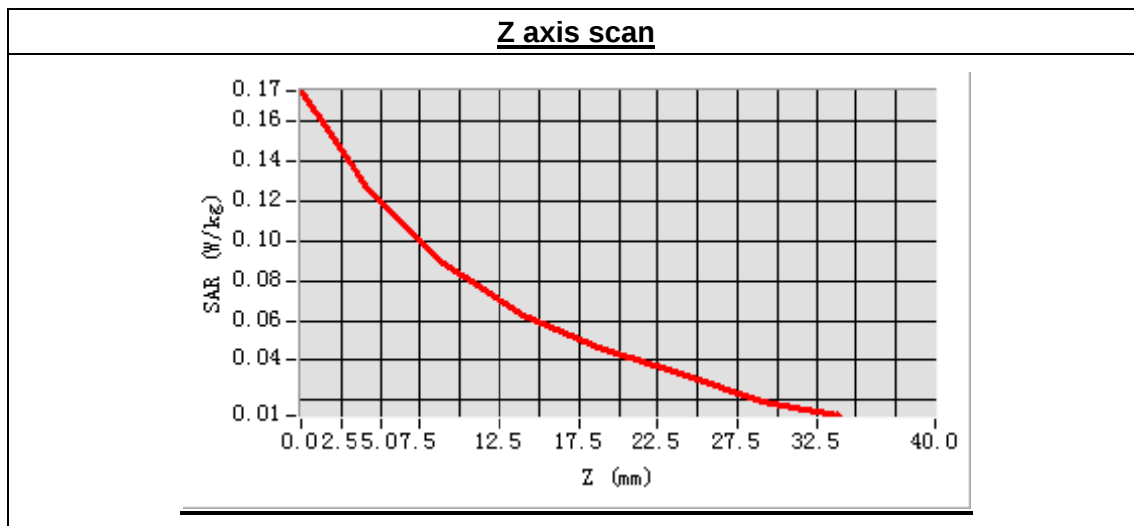
Frequency (MHz)	826.400000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift (%)	-0.750000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:1



Maximum location: X=1.00, Y=15.00

SAR Peak: 0.20 W/kg

SAR 10g (W/Kg)	0.078746
SAR 1g (W/Kg)	0.130653



MEASUREMENT 35

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 9 minutes 16 seconds

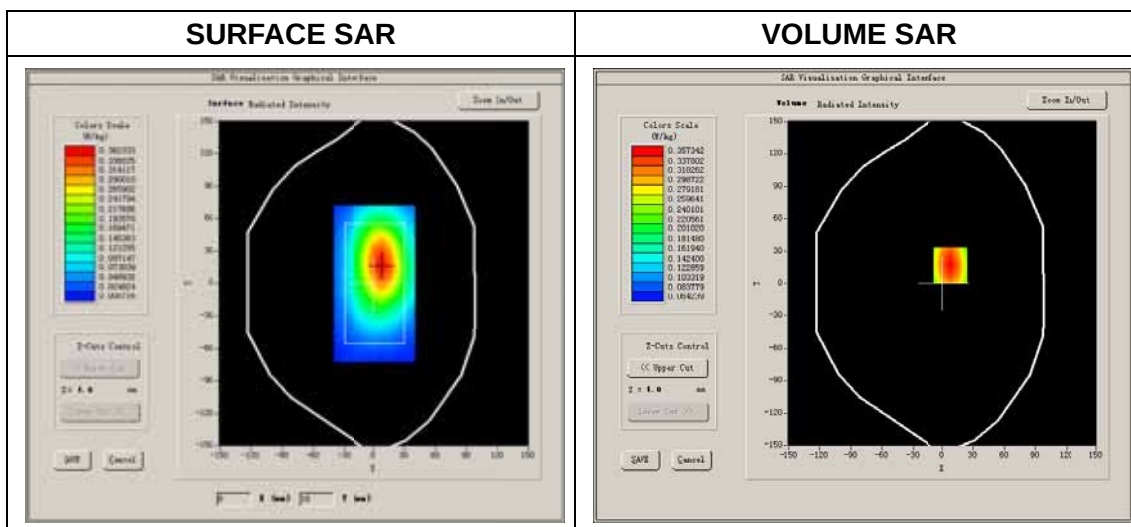
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Low Band SAR (Channel 4132):

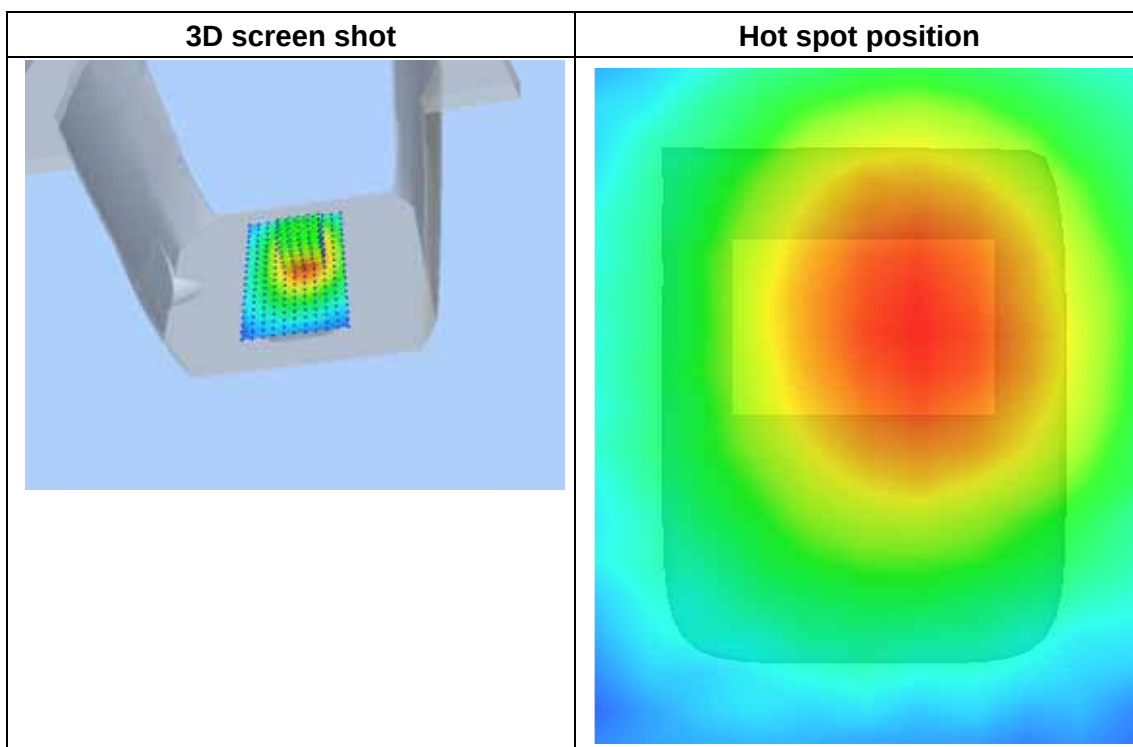
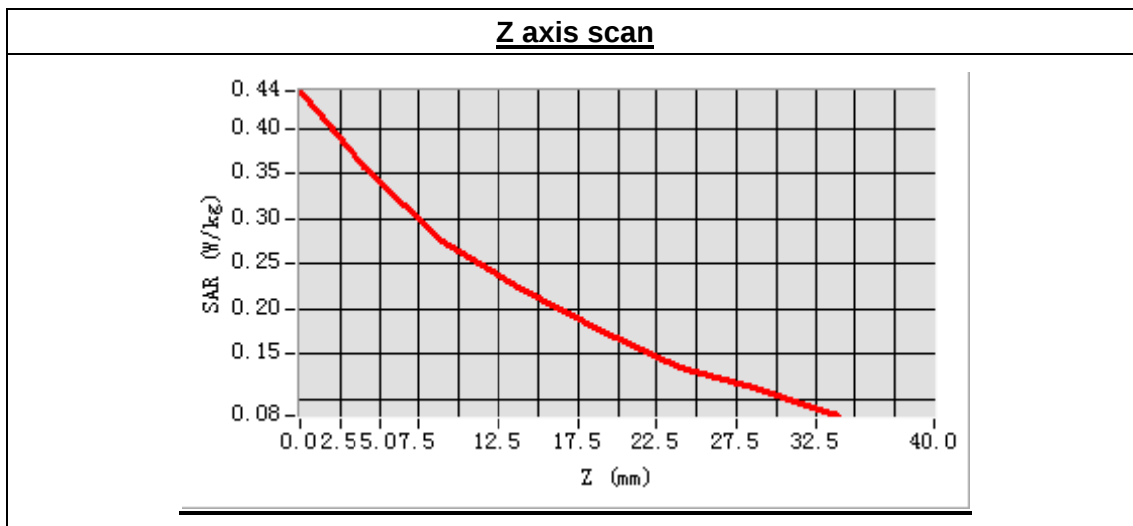
Frequency (MHz)	826.400000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift (%)	-2.430000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:1



Maximum location: X=8.00, Y=17.00

SAR Peak: 0.49 W/kg

SAR 10g (W/Kg)	0.271882
SAR 1g (W/Kg)	0.372704



MEASUREMENT 36

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 9 seconds

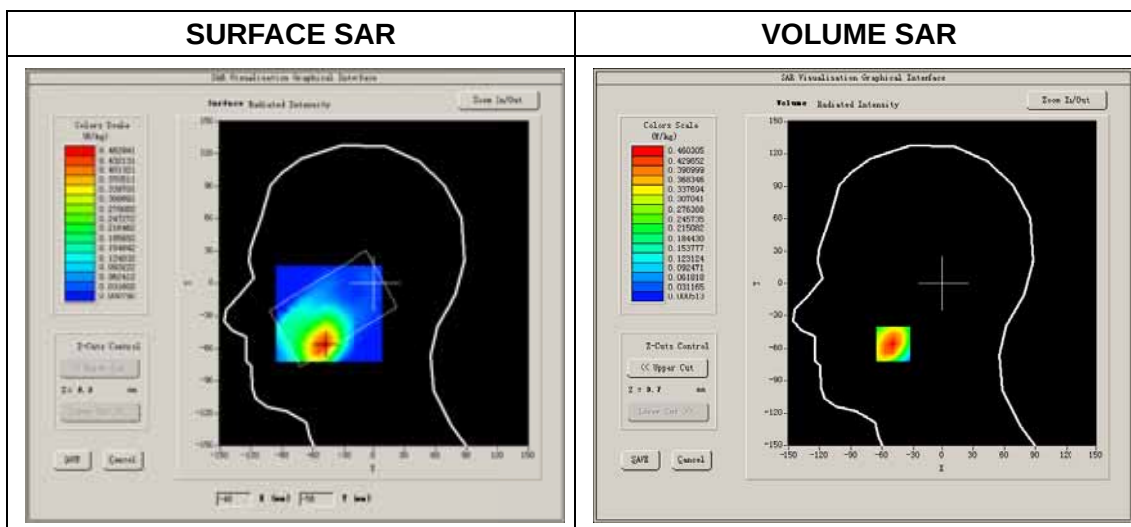
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

High Band SAR (Channel 9538):

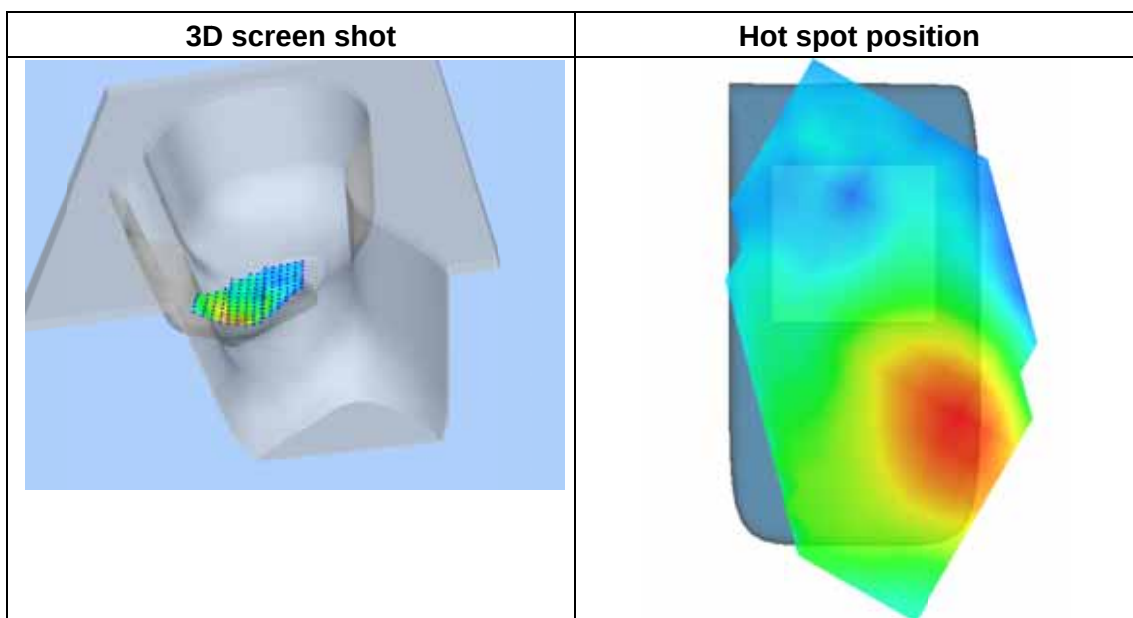
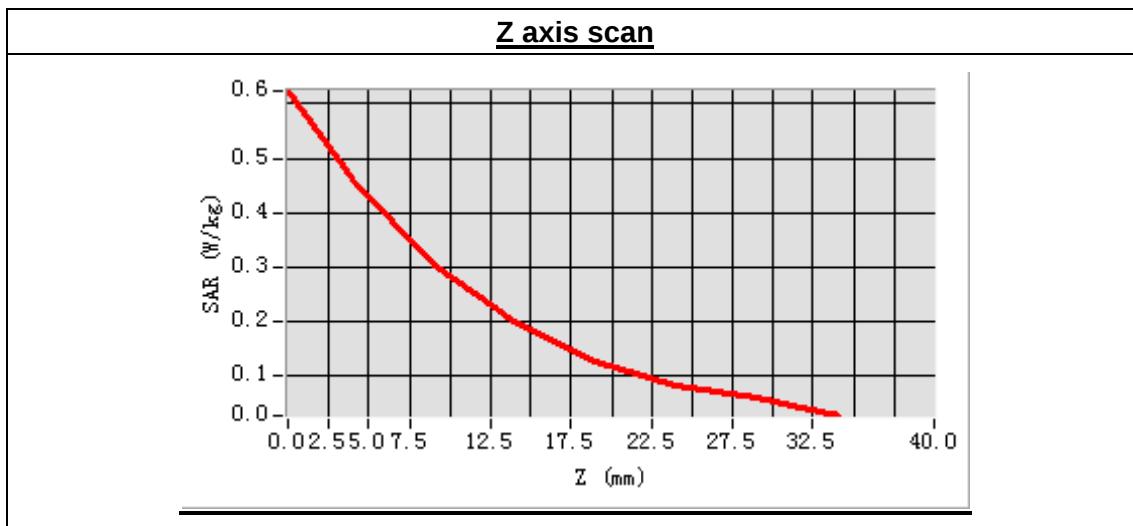
Frequency (MHz)	1907.600000
Relative permittivity (real part)	41.118542
Conductivity (S/m)	1.389547
Power drift (%)	-2.350000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



Maximum location: X=-49.00, Y=-56.00

SAR Peak: 0.66 W/kg

SAR 10g (W/Kg)	0.256506
SAR 1g (W/Kg)	0.436238



MEASUREMENT 37

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 7 minutes 59 seconds

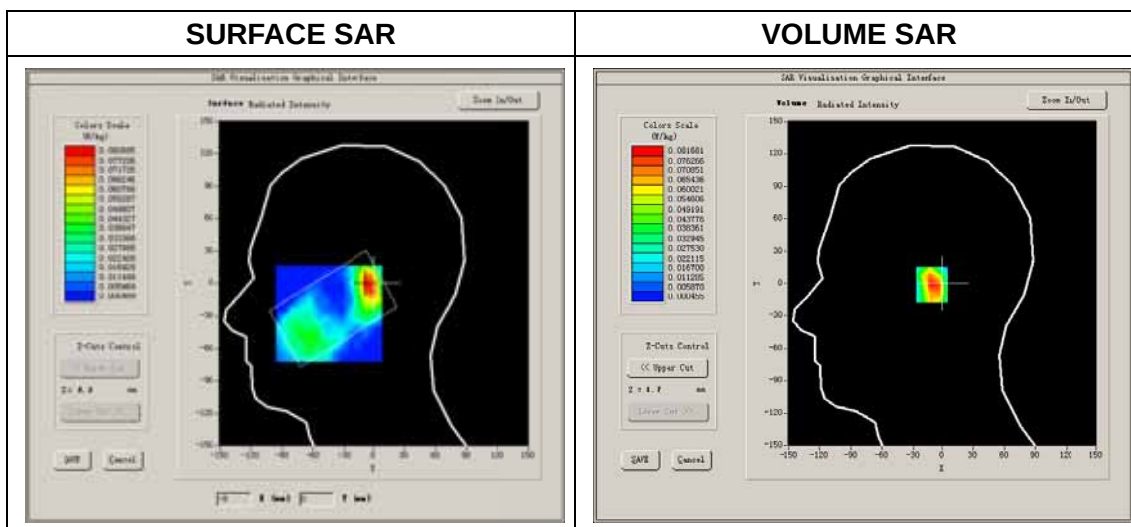
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

High Band SAR (Channel 9538):

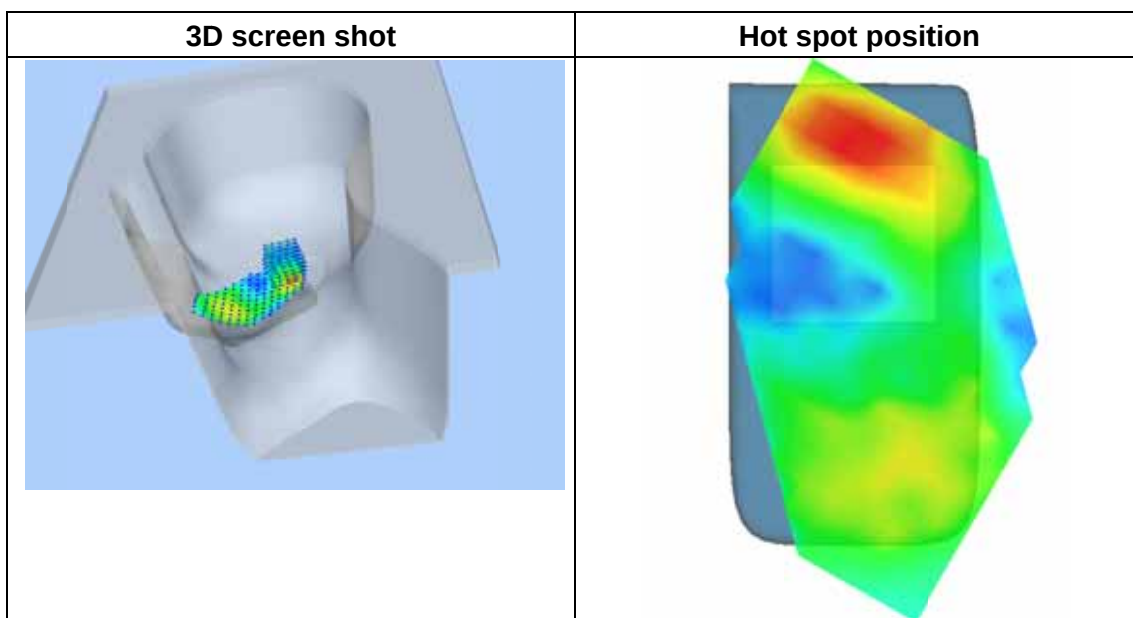
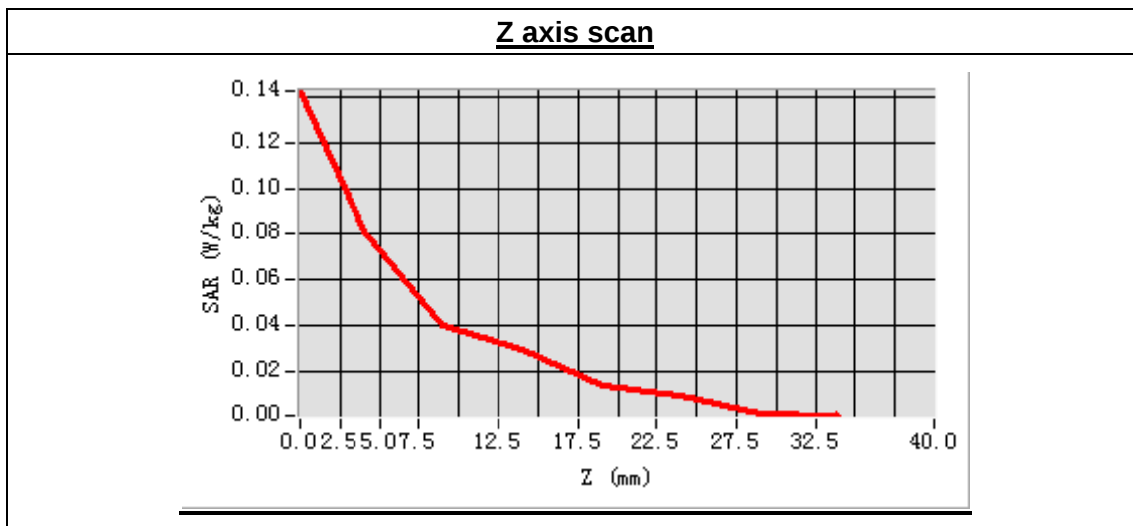
Frequency (MHz)	1907.600000
Relative permittivity (real part)	41.118542
Conductivity (S/m)	1.389547
Power drift (%)	-1.340000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



Maximum location: X=-5.00, Y=-1.00

SAR Peak: 0.16 W/kg

SAR 10g (W/Kg)	0.038478
SAR 1g (W/Kg)	0.082257



MEASUREMENT 38

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 7 seconds

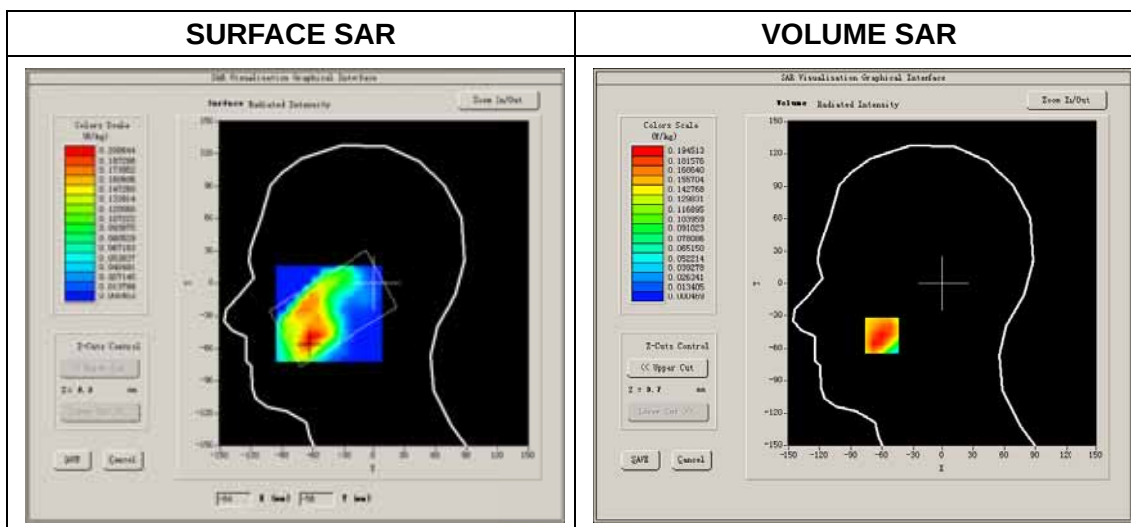
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

High Band SAR (Channel 9538):

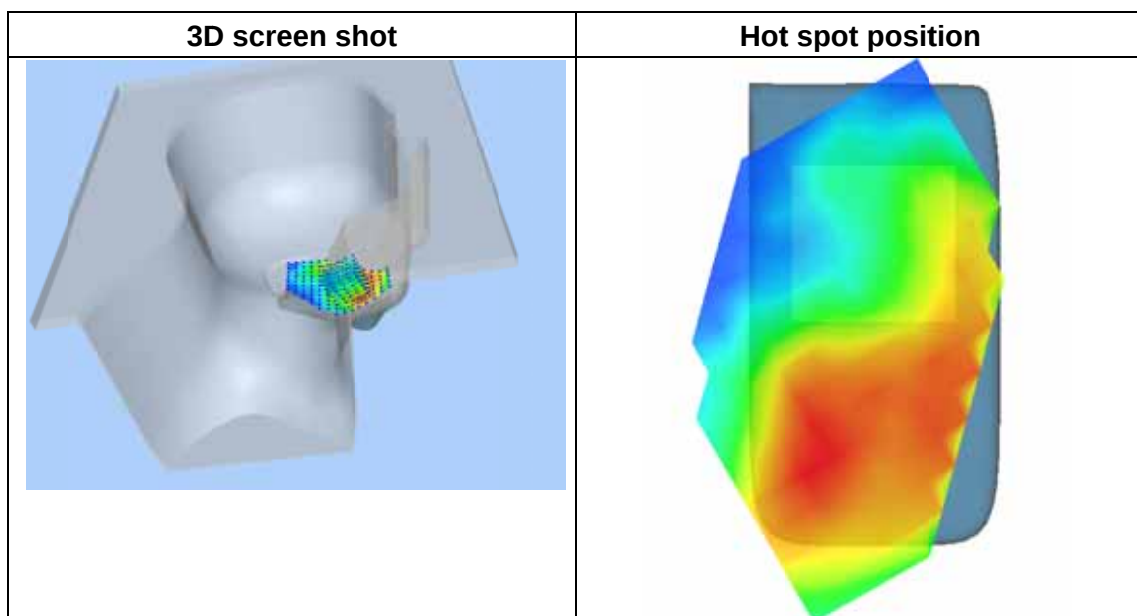
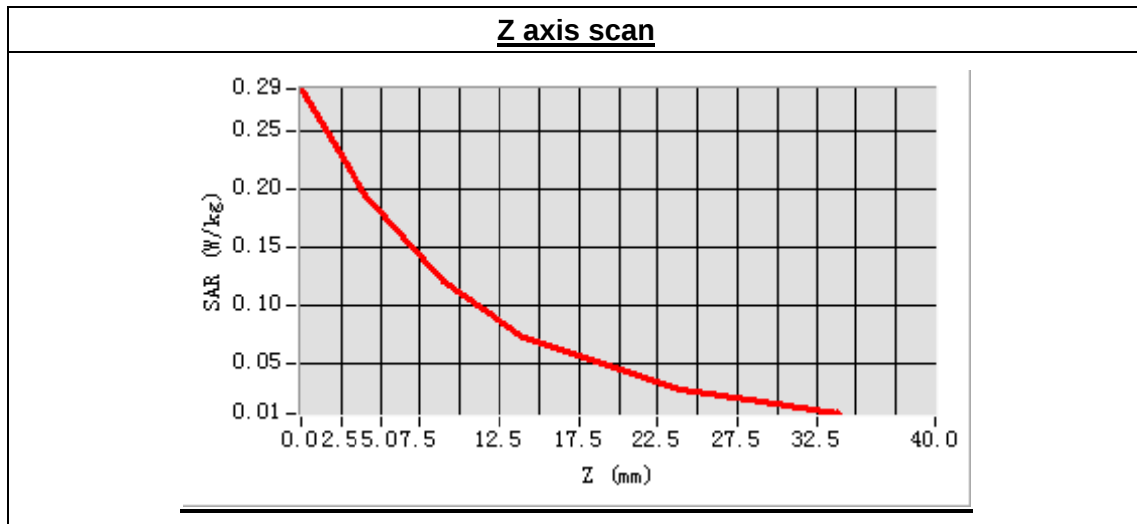
Frequency (MHz)	1907.600000
Relative permittivity (real part)	41.118542
Conductivity (S/m)	1.389547
Power drift (%)	-3.140000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



Maximum location: X=-60.00, Y=-48.00

SAR Peak: 0.30 W/kg

SAR 10g (W/Kg)	0.107986
SAR 1g (W/Kg)	0.188302



MEASUREMENT 39

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 8 minutes 30 seconds

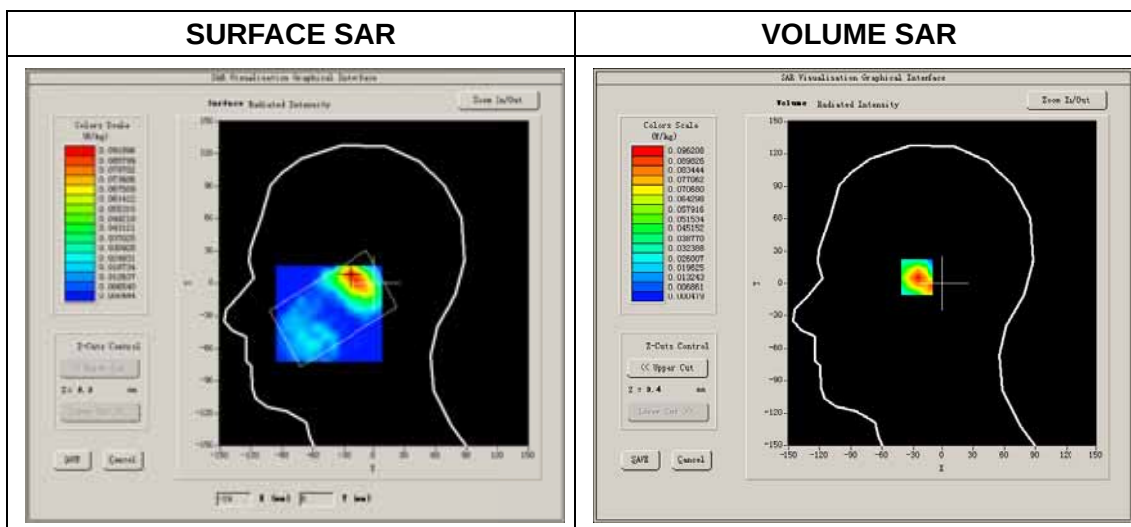
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

High Band SAR (Channel 9538):

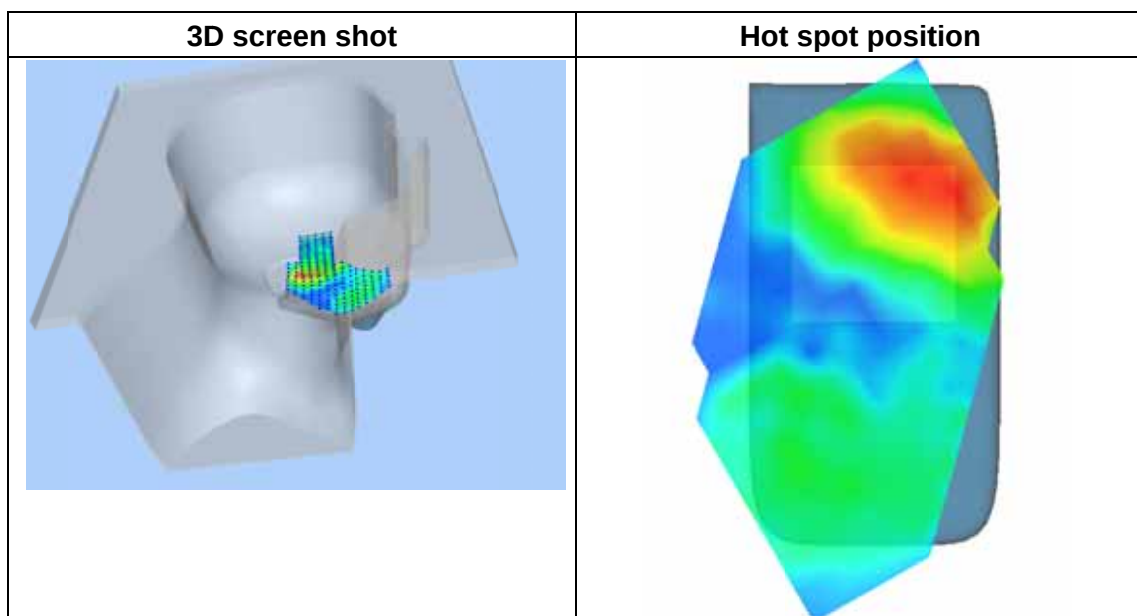
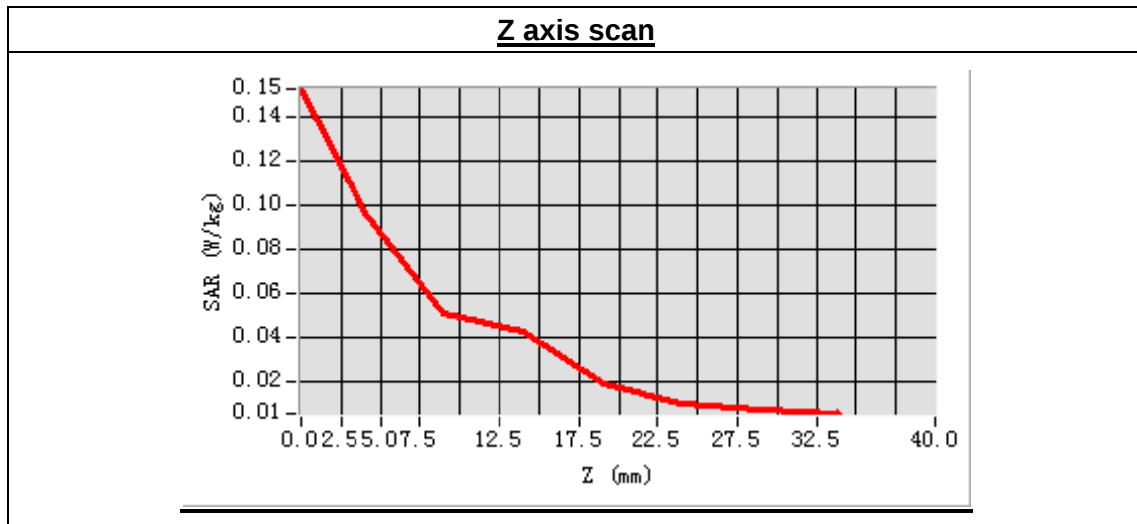
Frequency (MHz)	1907.600000
Relative permittivity (real part)	41.118542
Conductivity (S/m)	1.389547
Power drift (%)	1.450000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



Maximum location: X=-23.00, Y=7.00

SAR Peak: 0.16 W/kg

SAR 10g (W/Kg)	0.047573
SAR 1g (W/Kg)	0.092705



MEASUREMENT 40

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 37 seconds

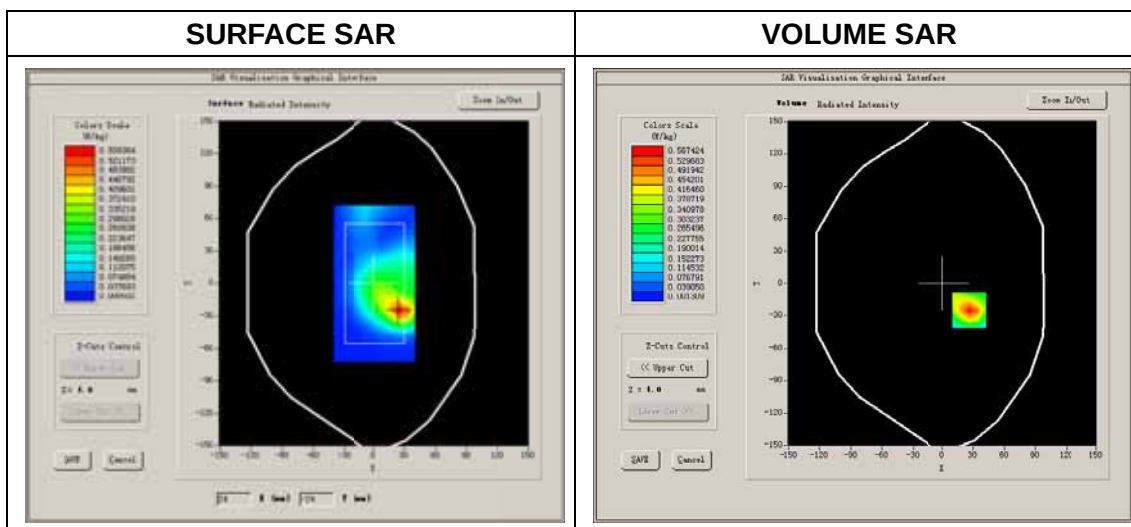
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

High Band SAR (Channel 9538):

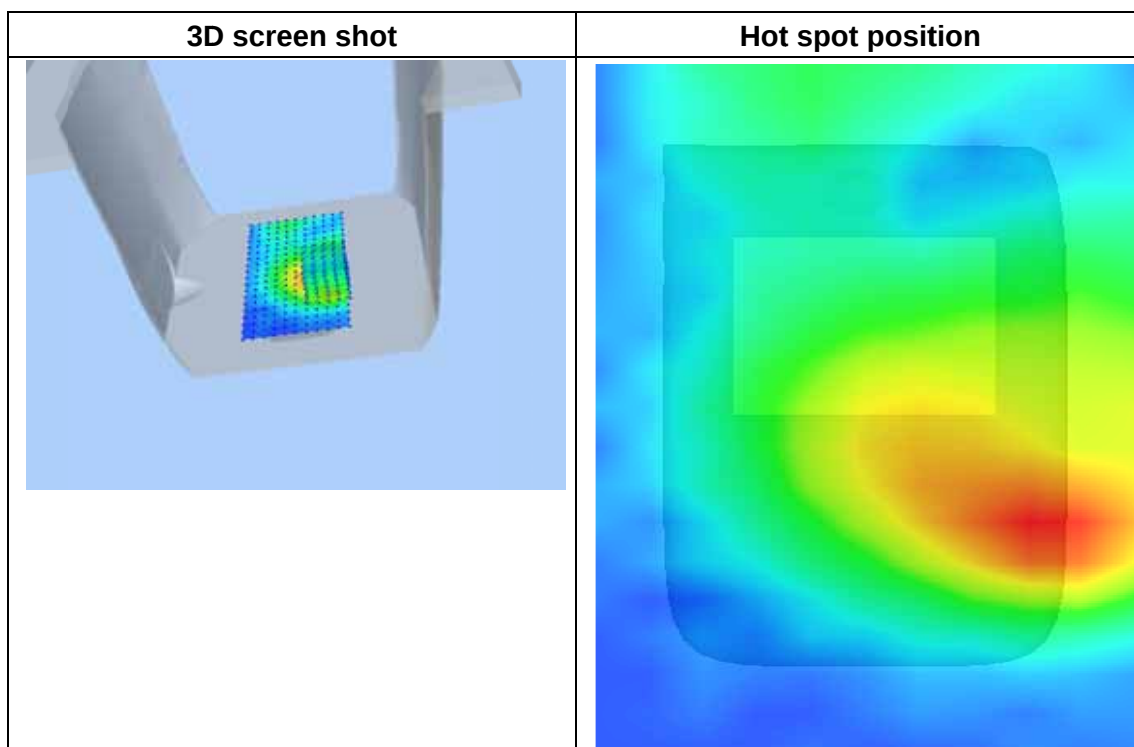
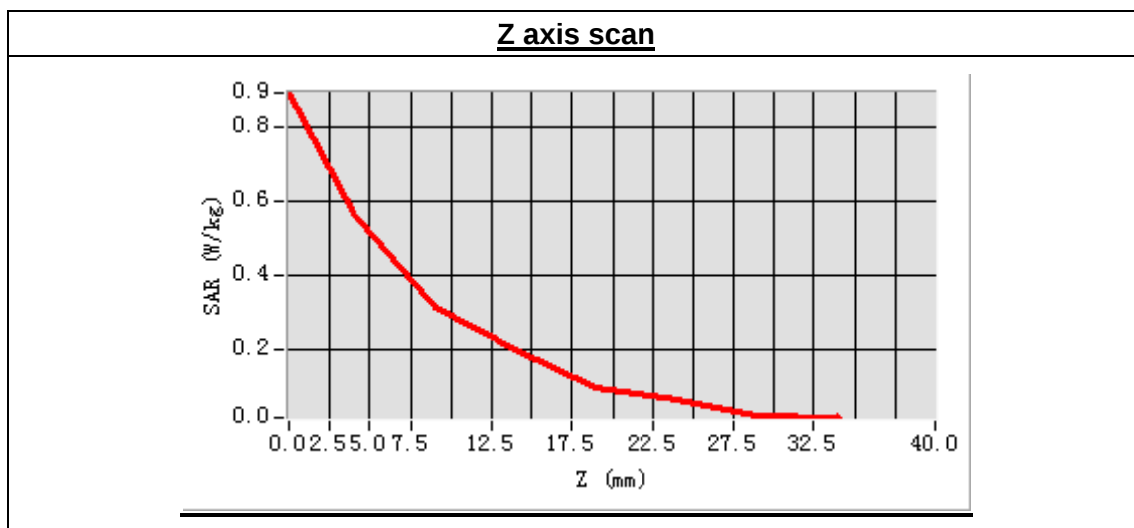
Frequency (MHz)	1907.600000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift (%)	-2.220000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1



Maximum location: X=26.00, Y=-25.00

SAR Peak: 0.96 W/kg

SAR 10g (W/Kg)	0.301937
SAR 1g (W/Kg)	0.576917



MEASUREMENT 41

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 33 seconds

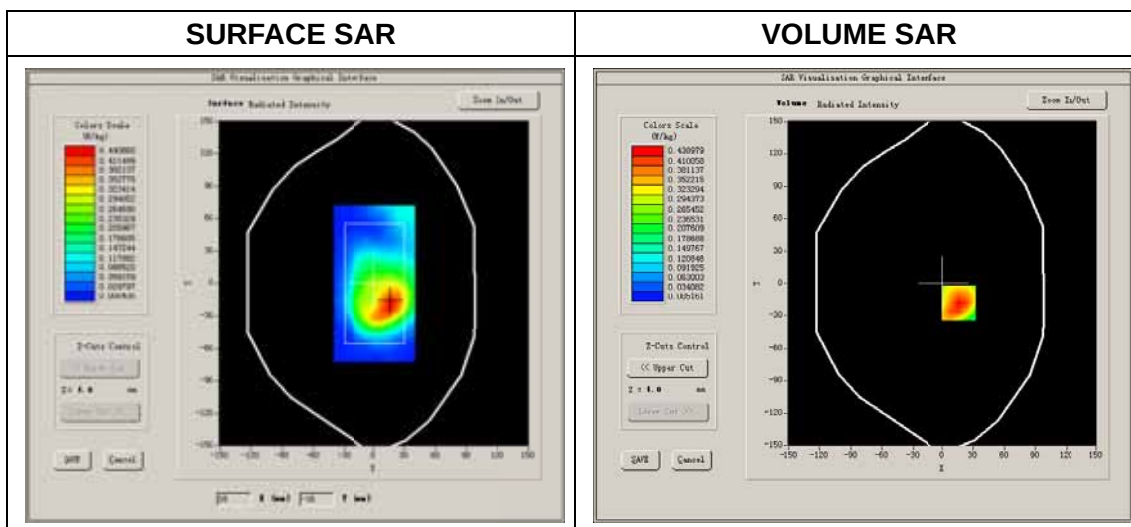
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

High Band SAR (Channel 9538):

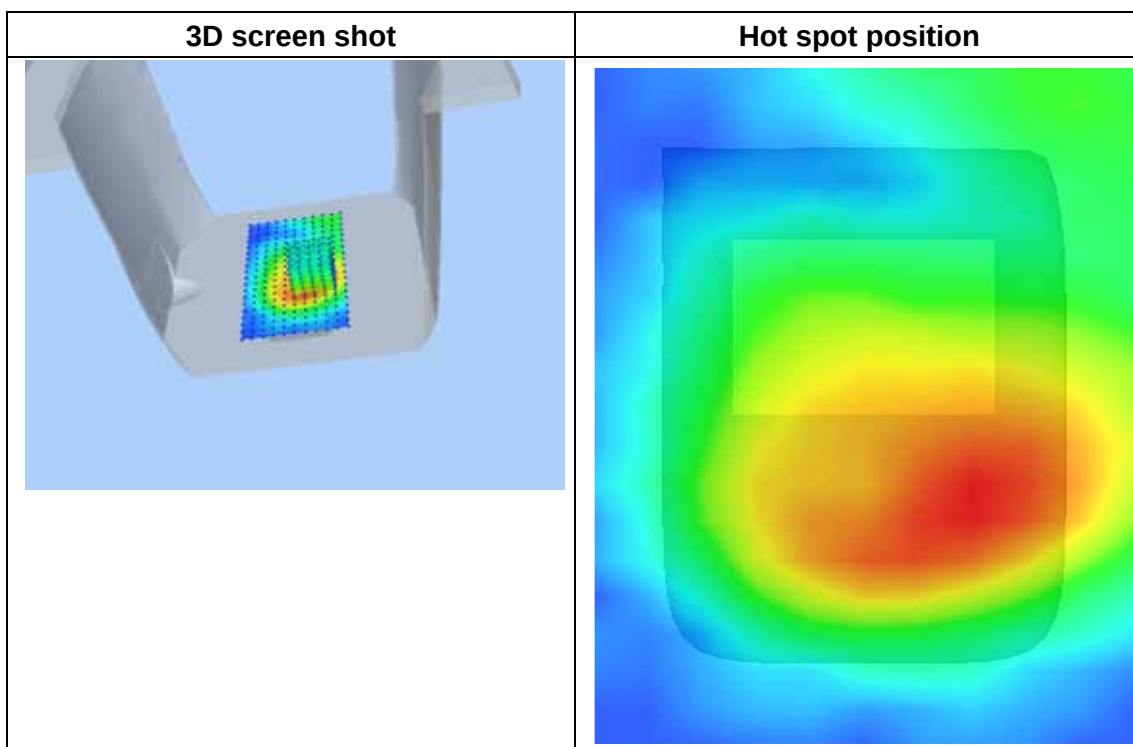
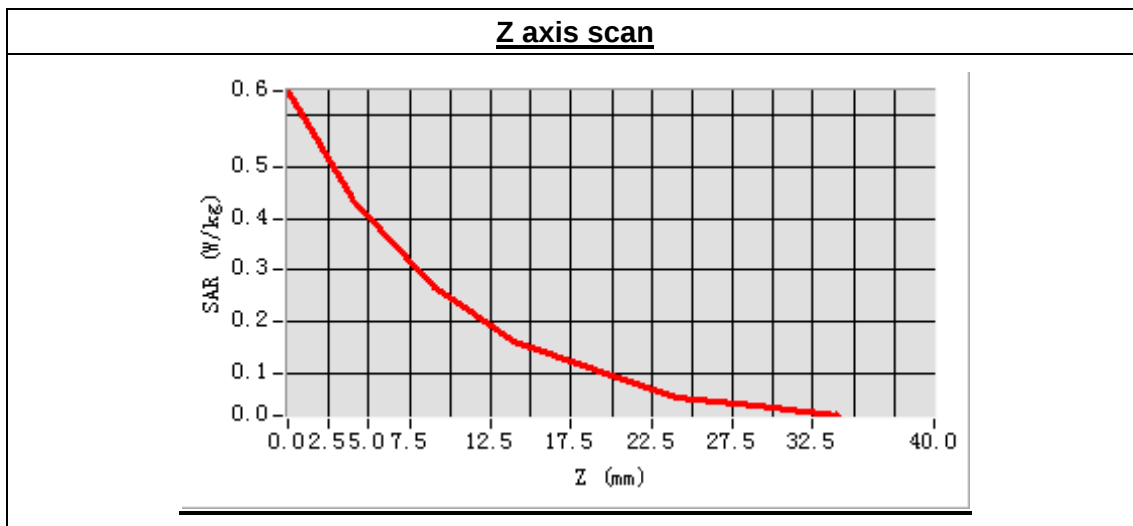
Frequency (MHz)	1907.600000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift (%)	-0.210000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1



Maximum location: X=16.00, Y=-18.00

SAR Peak: 0.71 W/kg

SAR 10g (W/Kg)	0.262633
SAR 1g (W/Kg)	0.453425



MEASUREMENT 42

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 29 seconds

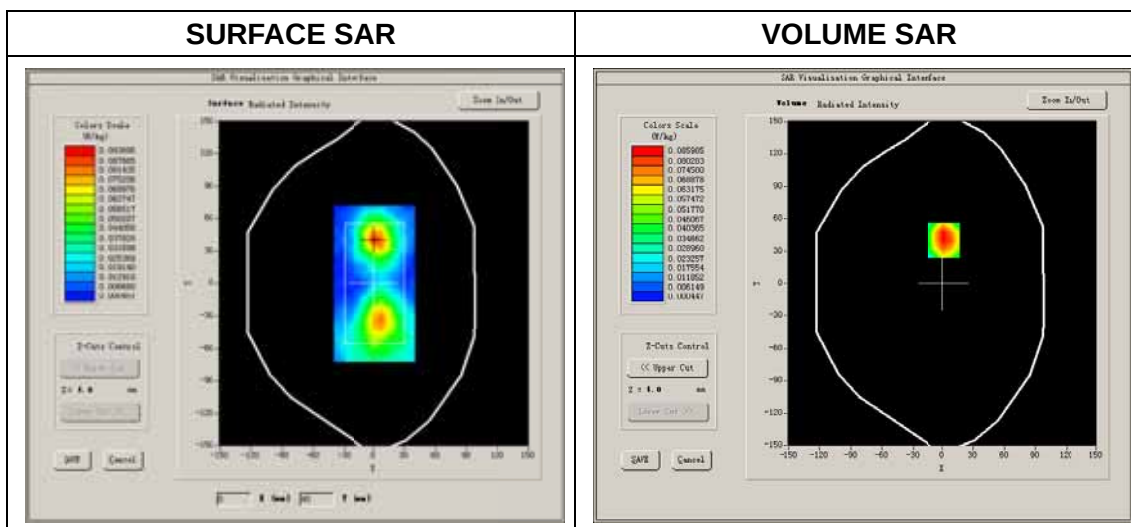
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

High Band SAR (Channel 9538):

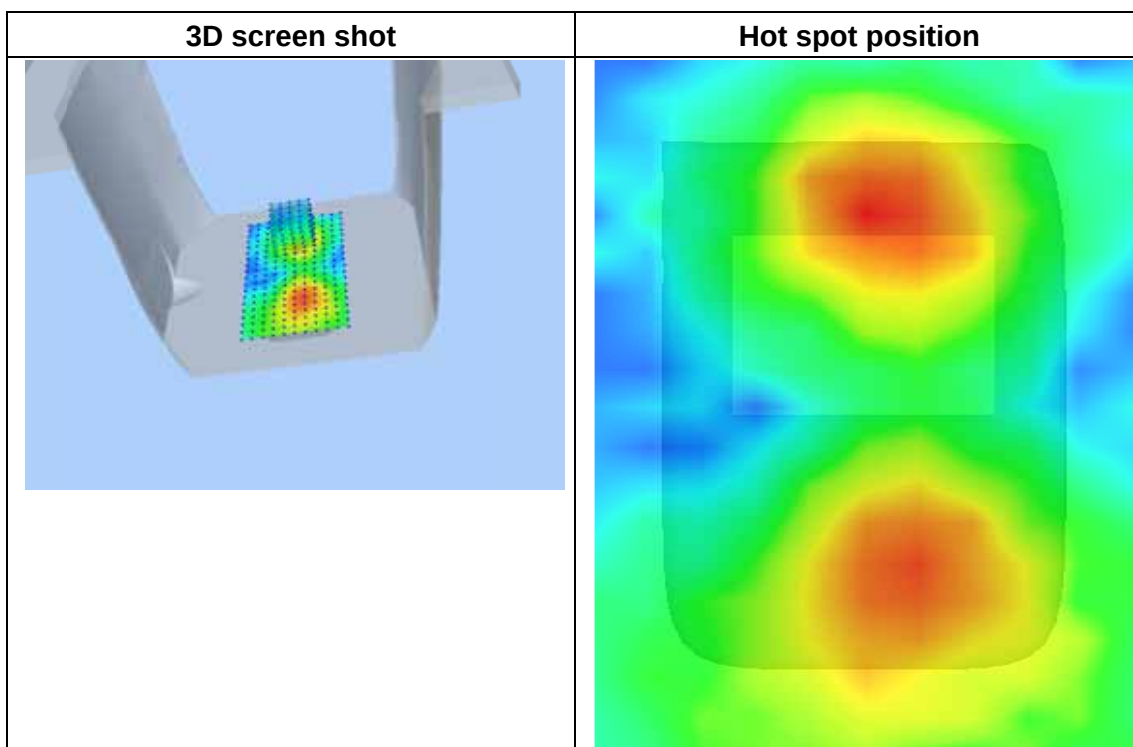
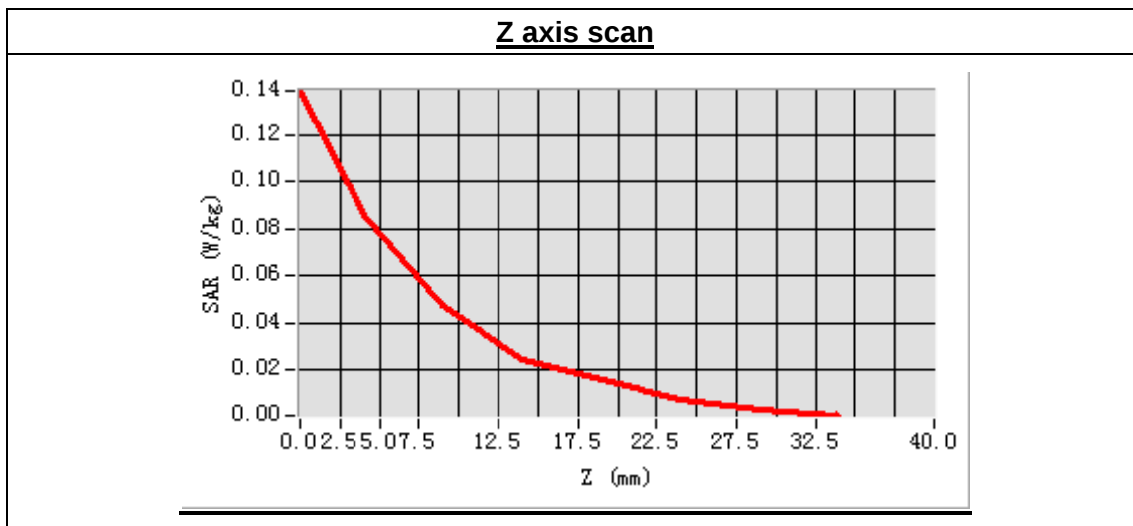
Frequency (MHz)	1907.600000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift (%)	-2.480000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1



Maximum location: X=1.00, Y=40.00

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	0.047591
SAR 1g (W/Kg)	0.090001



MEASUREMENT 43

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 28 seconds

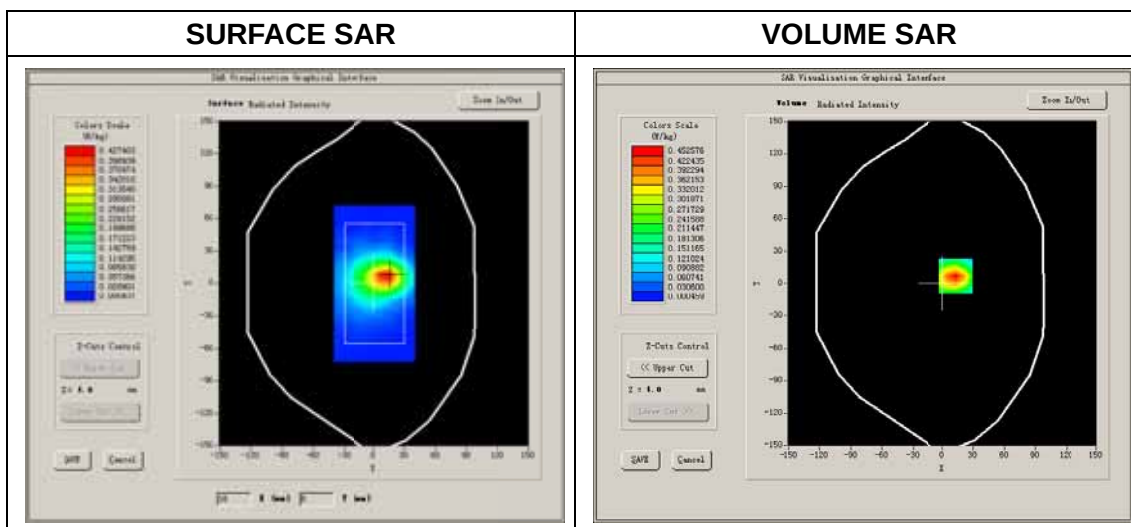
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

High Band SAR (Channel 9538):

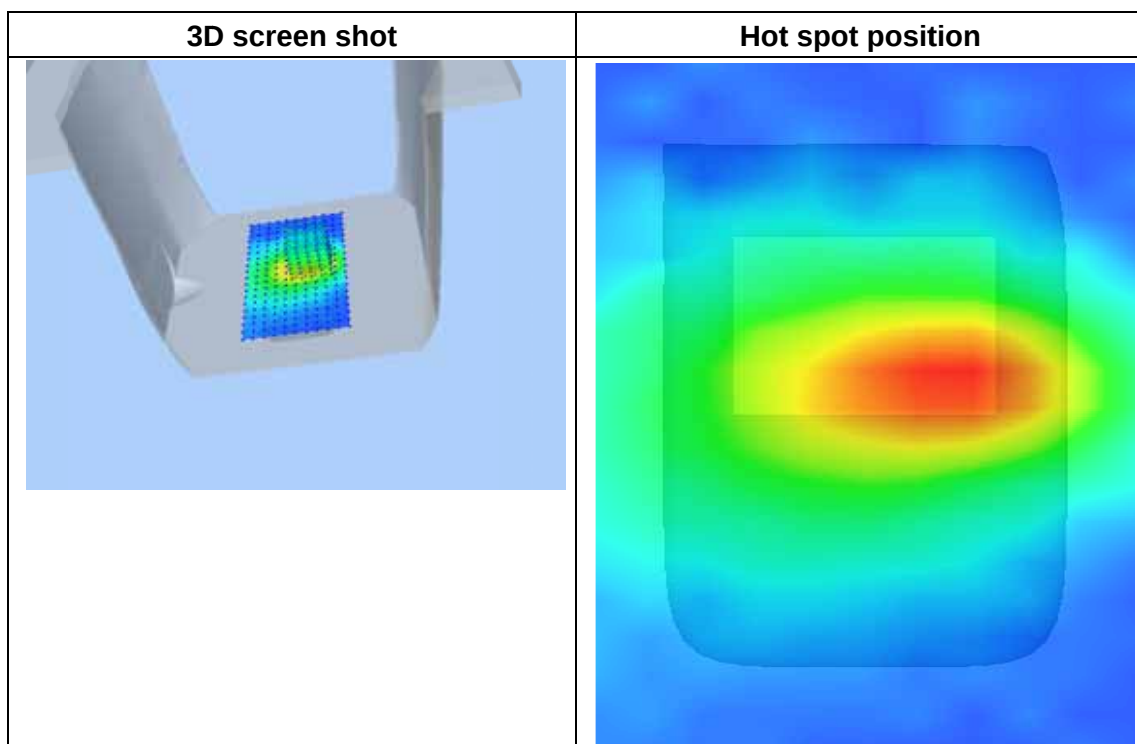
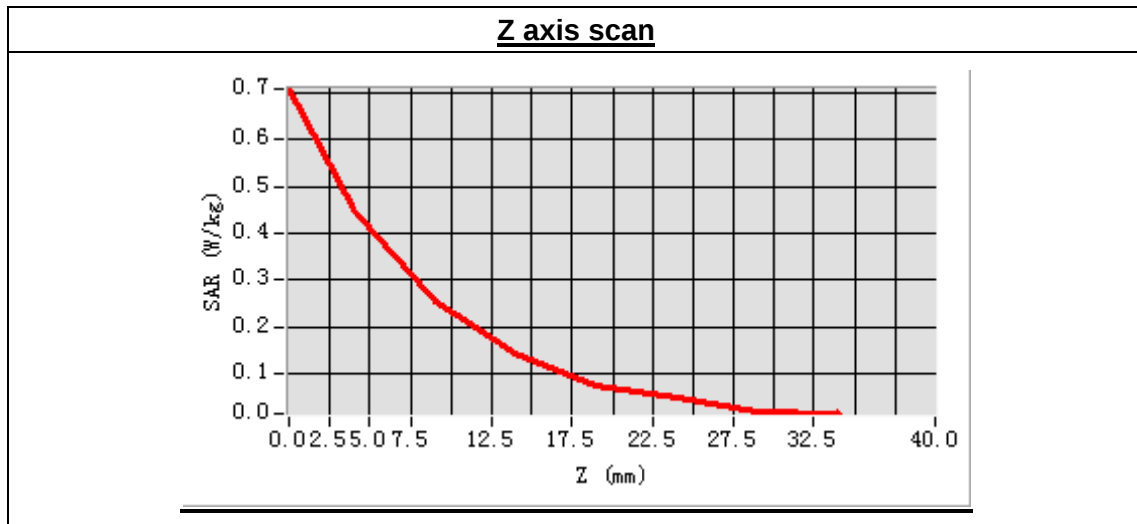
Frequency (MHz)	1907.600000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift (%)	0.450000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1



Maximum location: X=13.00, Y=7.00

SAR Peak: 0.77 W/kg

SAR 10g (W/Kg)	0.237174
SAR 1g (W/Kg)	0.459763



MEASUREMENT 44

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 9 minutes 32 seconds

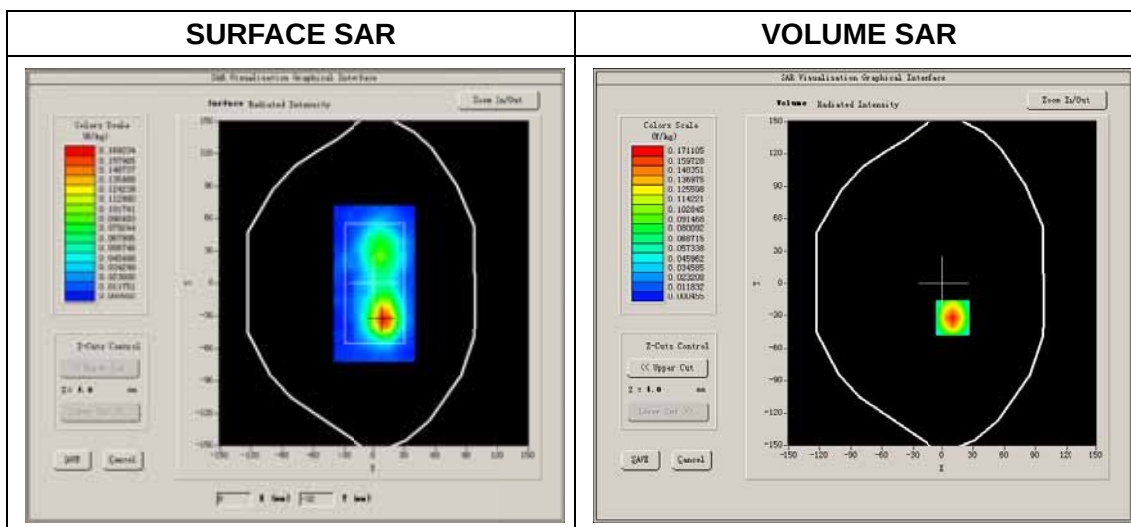
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

High Band SAR (Channel 9538):

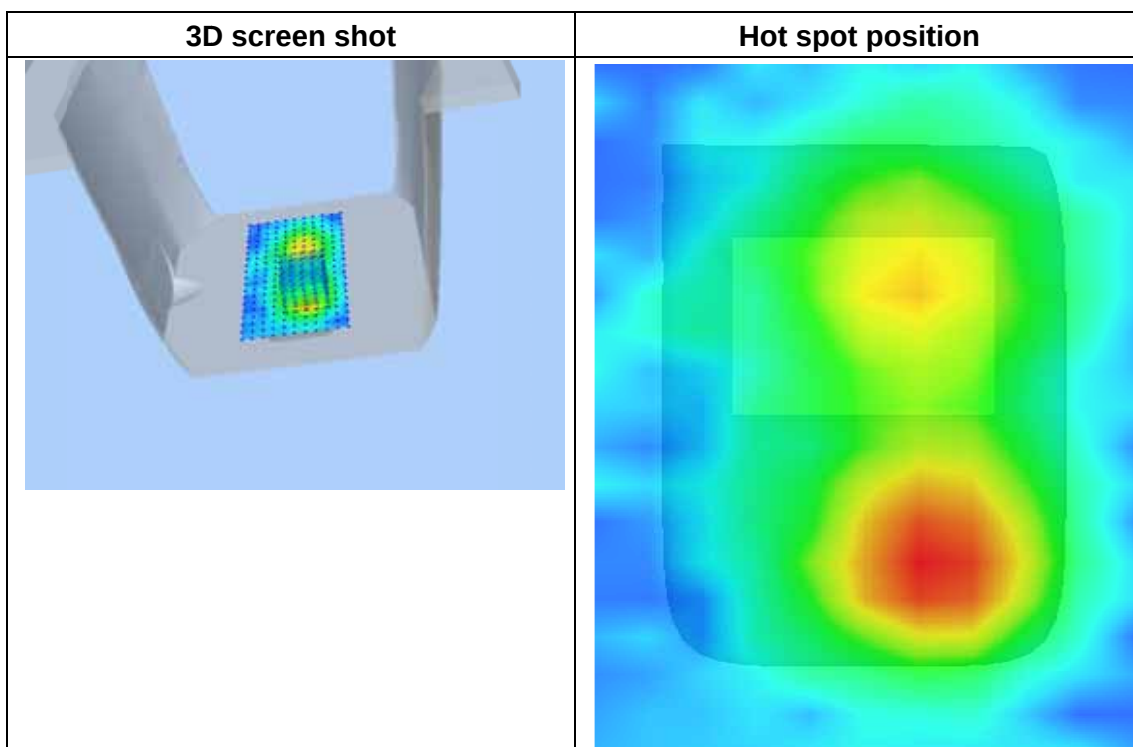
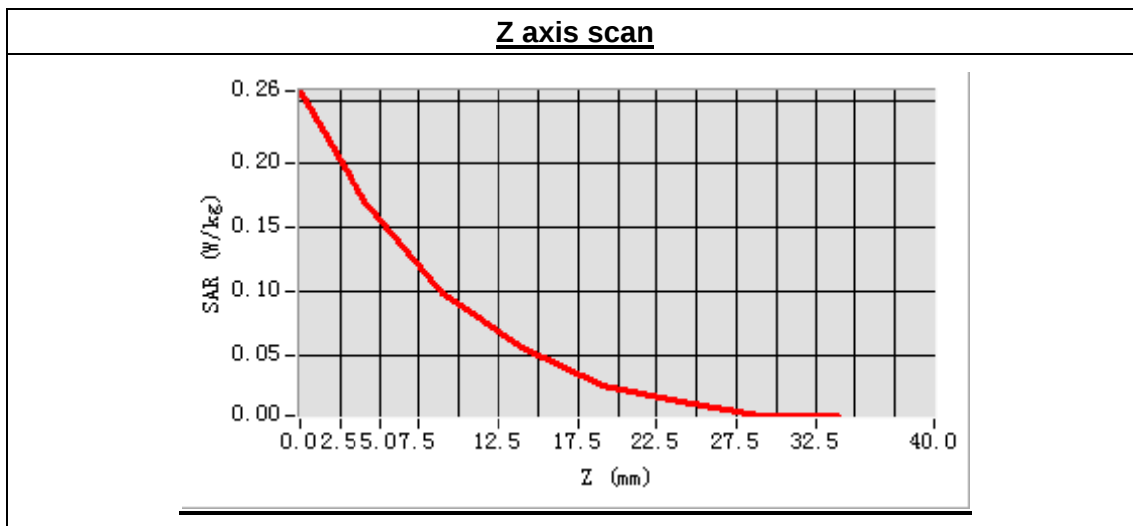
Frequency (MHz)	1907.600000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift (%)	-1.230000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1



Maximum location: X=10.00, Y=-32.00

SAR Peak: 0.28 W/kg

SAR 10g (W/Kg)	0.088097
SAR 1g (W/Kg)	0.173867



MEASUREMENT 45

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 8 minutes 0 seconds

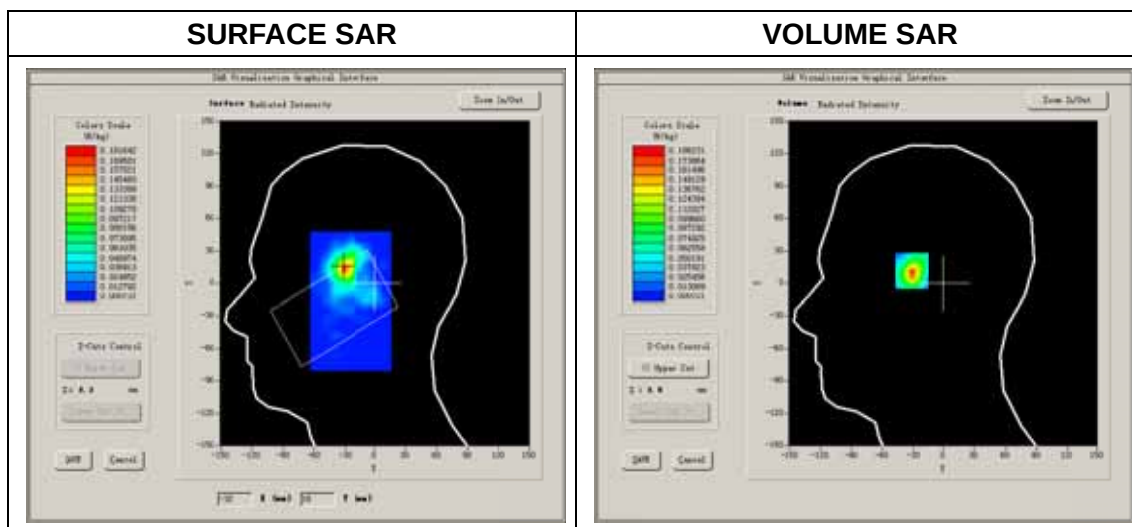
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Right head
Device Position	Cheek
Band	802.11B
Channels	Low
Signal	DSSS

B. SAR Measurement Results

Low Band SAR (Channel 1)

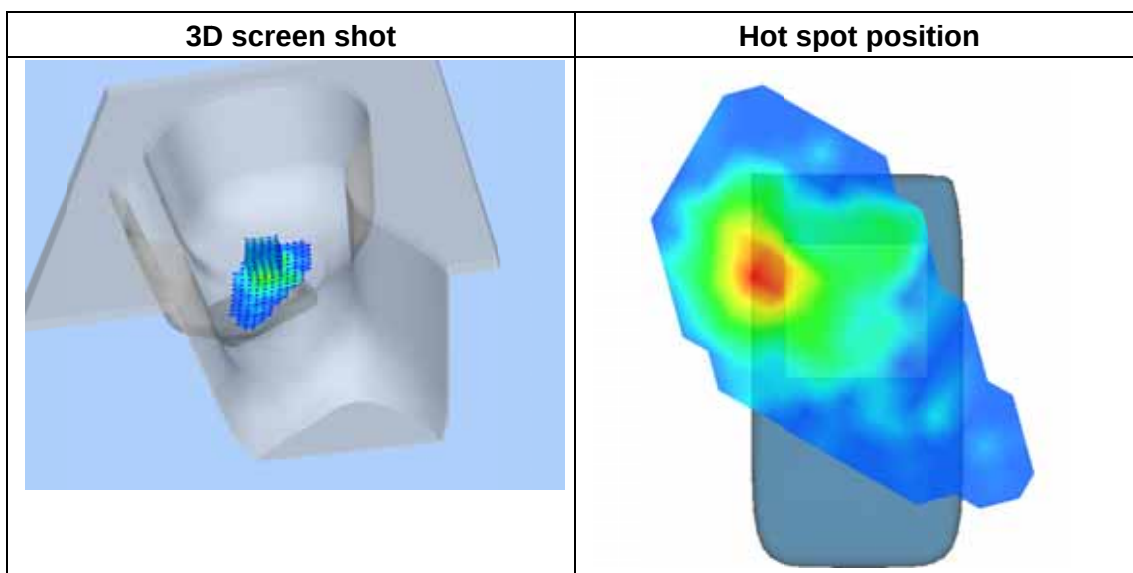
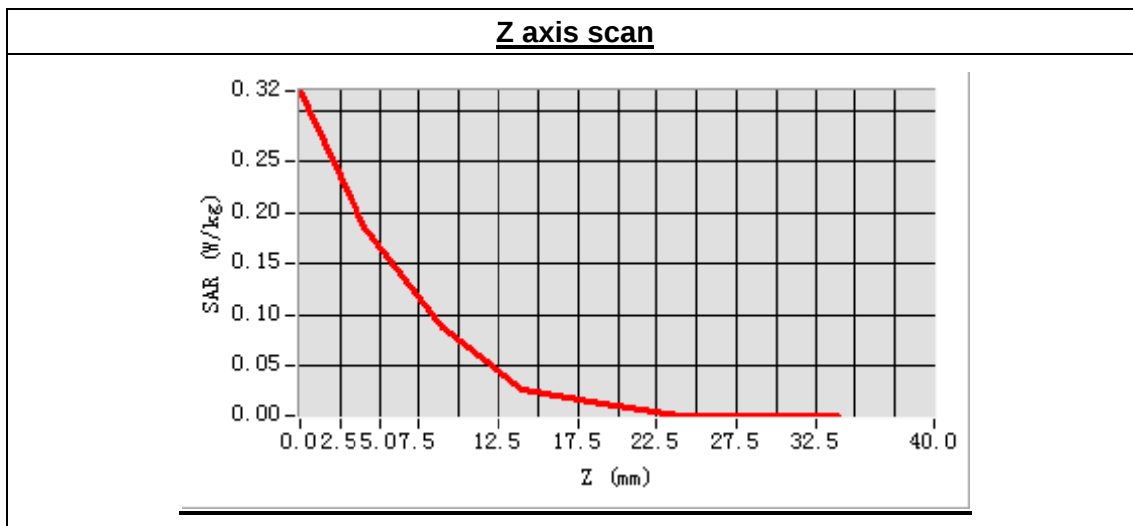
Frequency (MHz)	2412.000000
Relative permittivity (real part)	40.074318
Conductivity (S/m)	1.768492
Power drift (%)	3.480000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



Maximum location: X=-31.00, Y=15.00

SAR Peak: 0.34 W/kg

SAR 10g (W/Kg)	0.062125
SAR 1g (W/Kg)	0.167557



MEASUREMENT 46

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 8 minutes 10 seconds

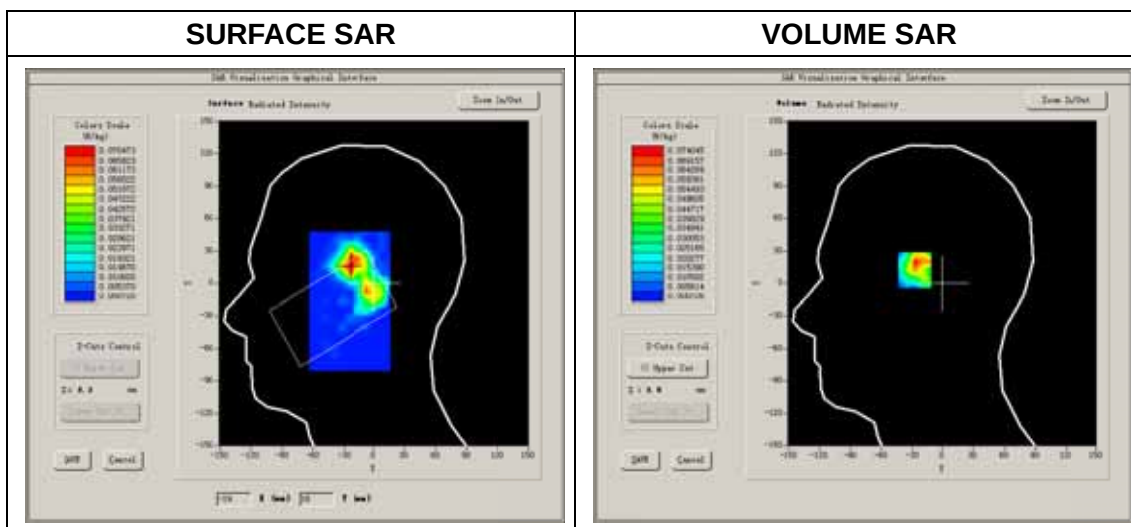
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Right head
Device Position	Tilt
Band	802.11B
Channels	Low
Signal	DSSS

B. SAR Measurement Results

Low Band SAR (Channel 1)

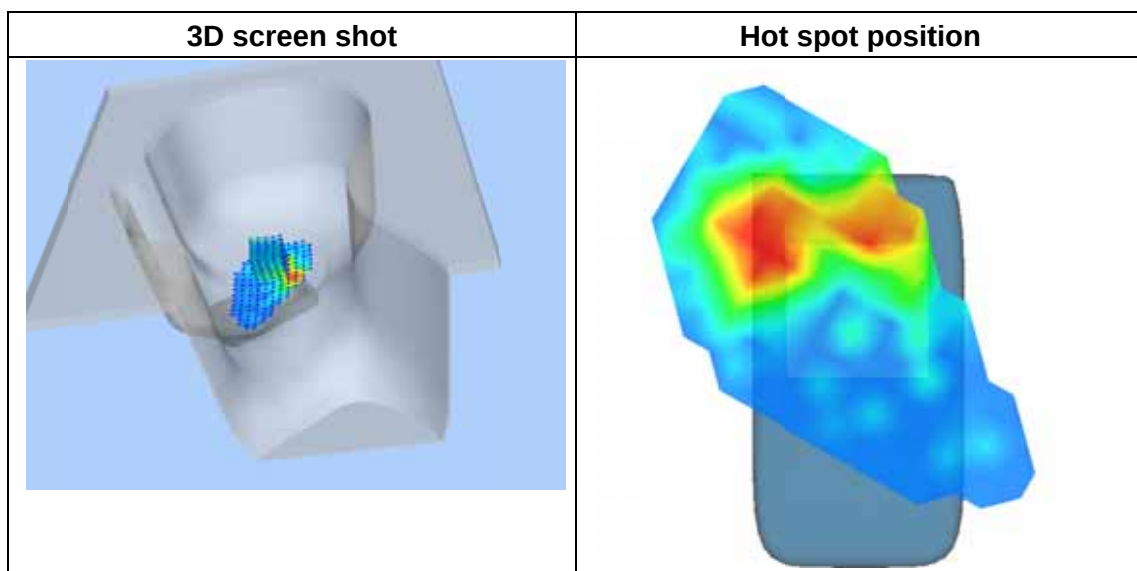
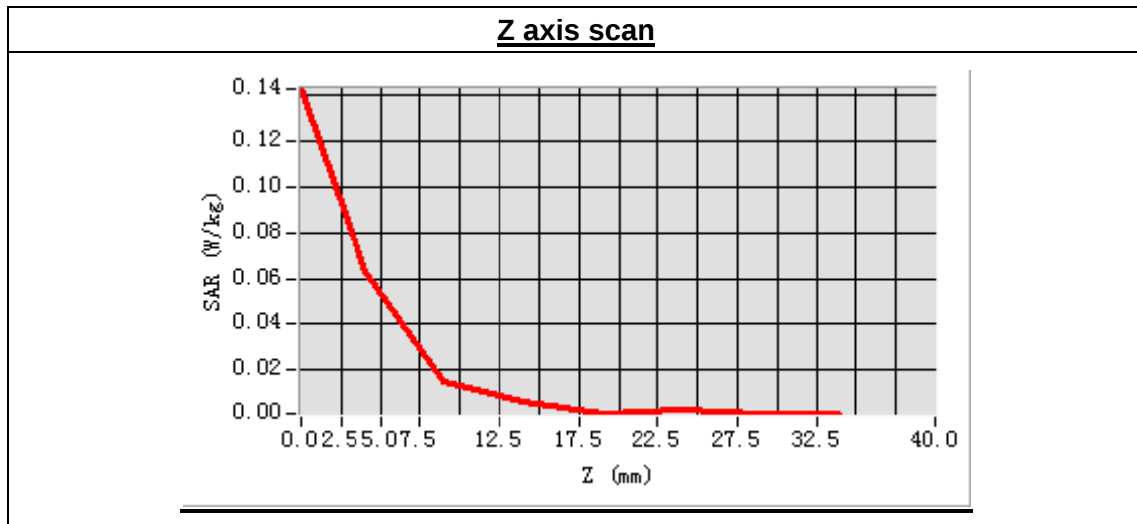
Frequency (MHz)	2412.000000
Relative permittivity (real part)	40.074318
Conductivity (S/m)	1.768492
Power drift (%)	-2.310000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



Maximum location: X=-26.00, Y=15.00

SAR Peak: 0.16 W/kg

SAR 10g (W/Kg)	0.026234
SAR 1g (W/Kg)	0.066168



MEASUREMENT 47

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 7 minutes 53 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Left head
Device Position	Cheek
Band	802.11B
Channels	Low
Signal	DSSS

B. SAR Measurement Results

Low Band SAR (Channel 1)

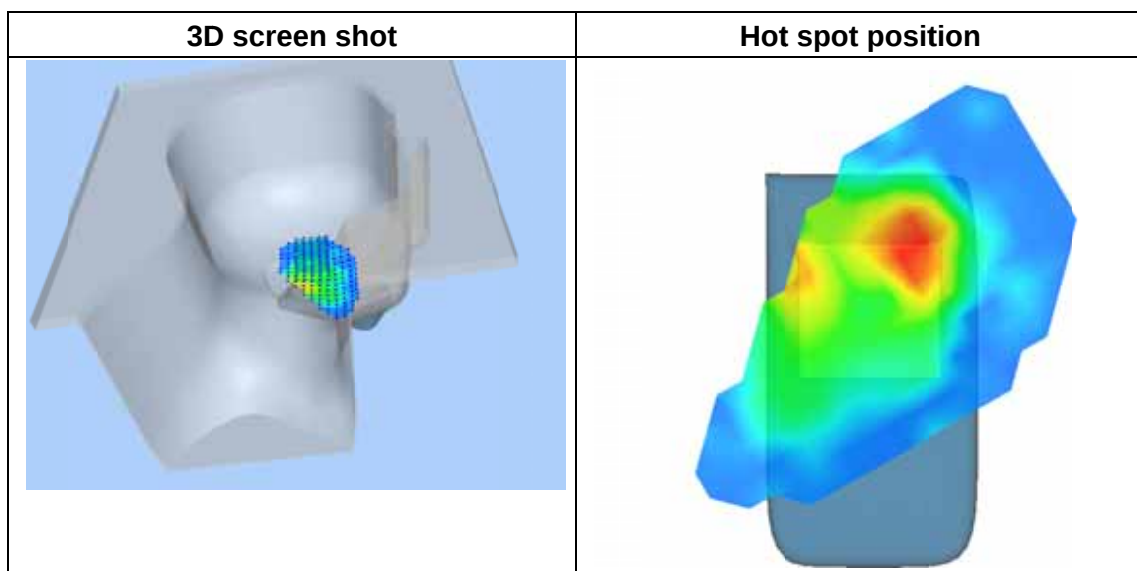
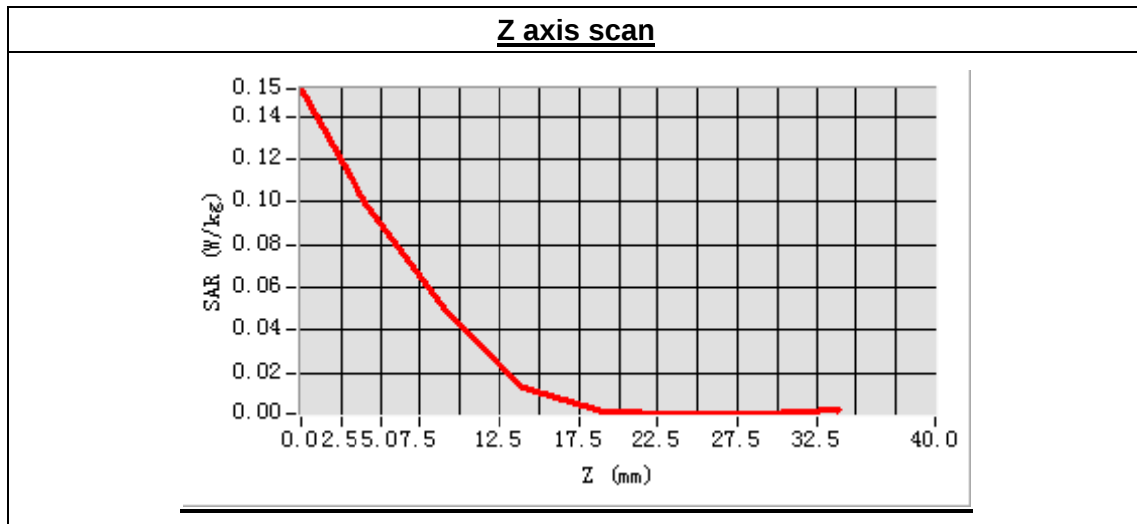
Frequency (MHz)	2412.000000
Relative permittivity (real part)	40.074318
Conductivity (S/m)	1.768492
Power drift (%)	-2.130000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



Maximum location: X=-17.00, Y=2.00

SAR Peak: 0.18 W/kg

SAR 10g (W/Kg)	0.032648
SAR 1g (W/Kg)	0.090659



MEASUREMENT 48

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 7 minutes 50 seconds

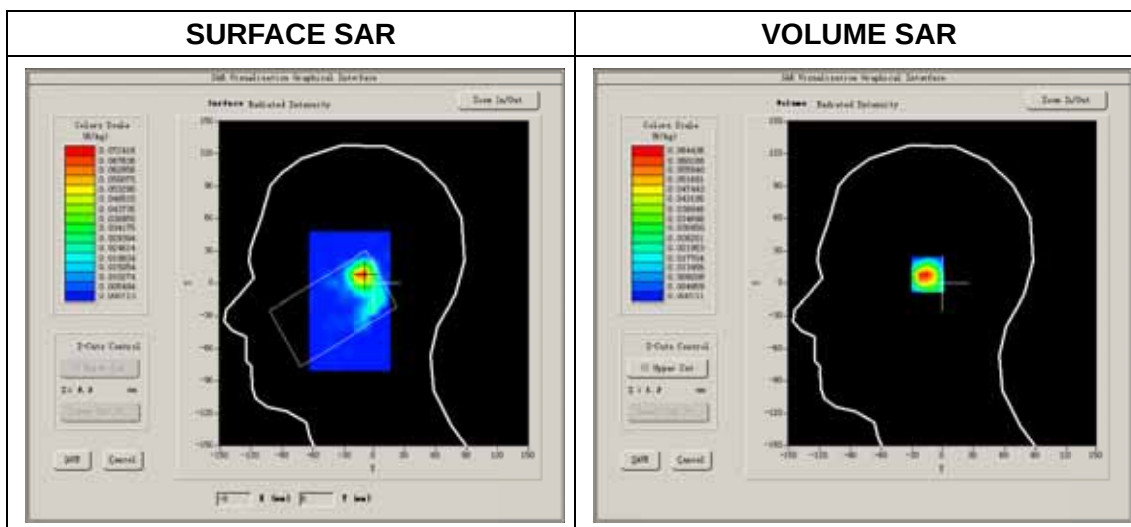
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Left head
Device Position	Tilt
Band	802.11B
Channels	Low
Signal	DSSS

B. SAR Measurement Results

Low Band SAR (Channel 1)

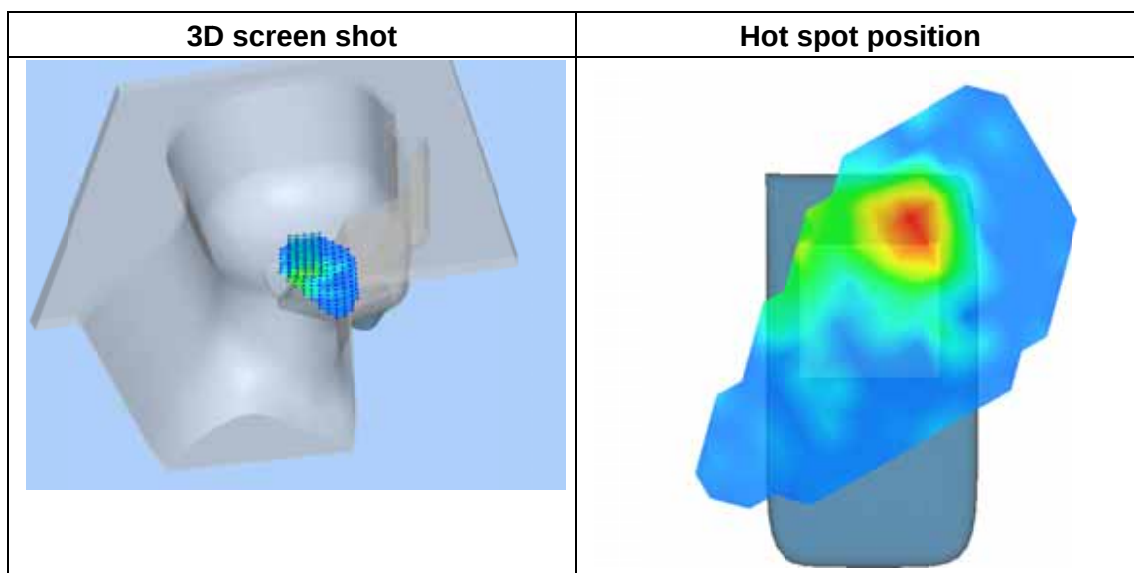
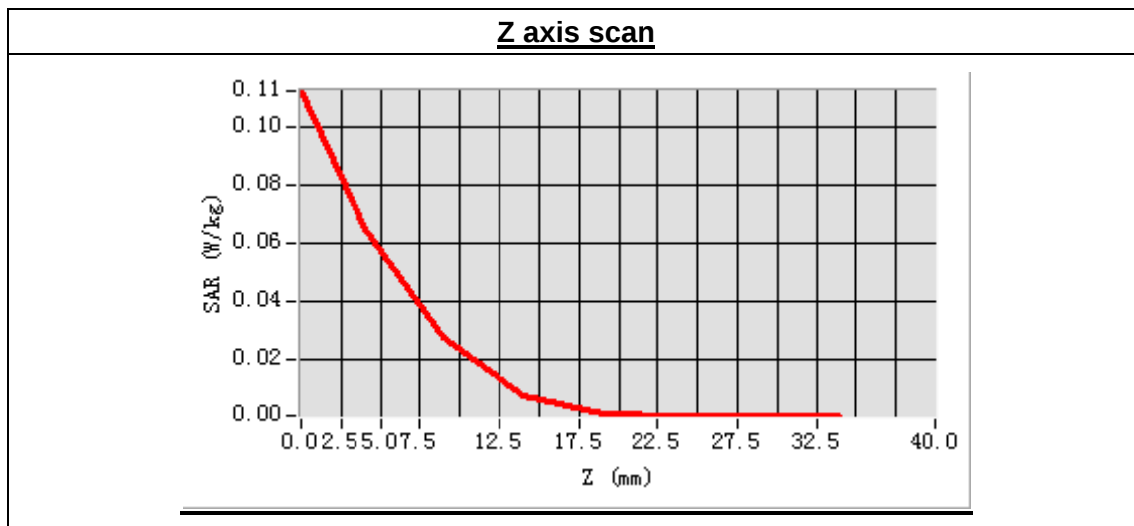
Frequency (MHz)	2412.000000
Relative permittivity (real part)	40.074318
Conductivity (S/m)	1.768492
Power drift (%)	-3.910000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



Maximum location: X=-10.00, Y=8.00

SAR Peak: 0.12 W/kg

SAR 10g (W/Kg)	0.022831
SAR 1g (W/Kg)	0.061424



MEASUREMENT 49

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 9 minutes 35 seconds

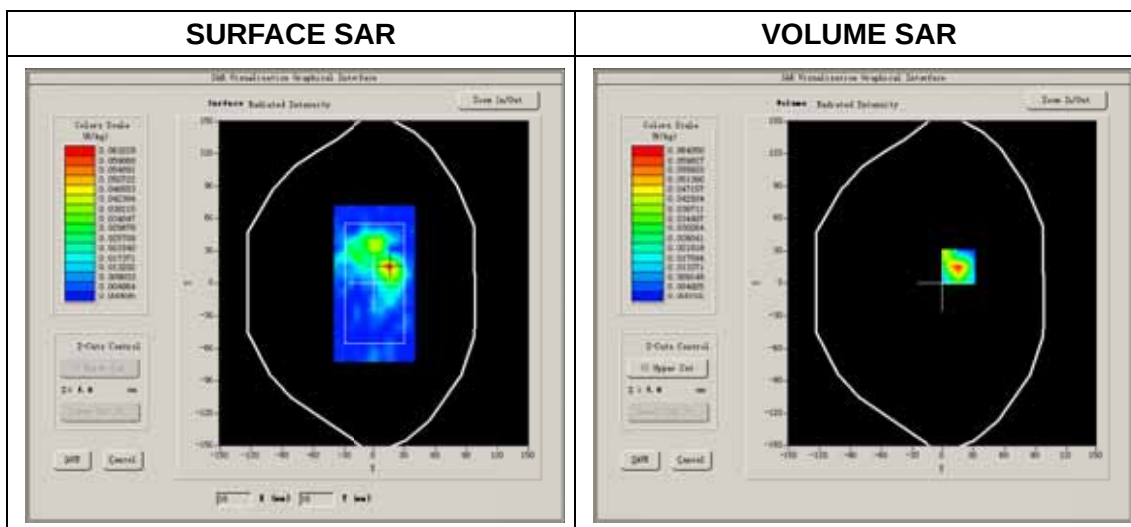
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11B
Channels	Low
Signal	DSSS

B. SAR Measurement Results

Low Band SAR (Channel 1)

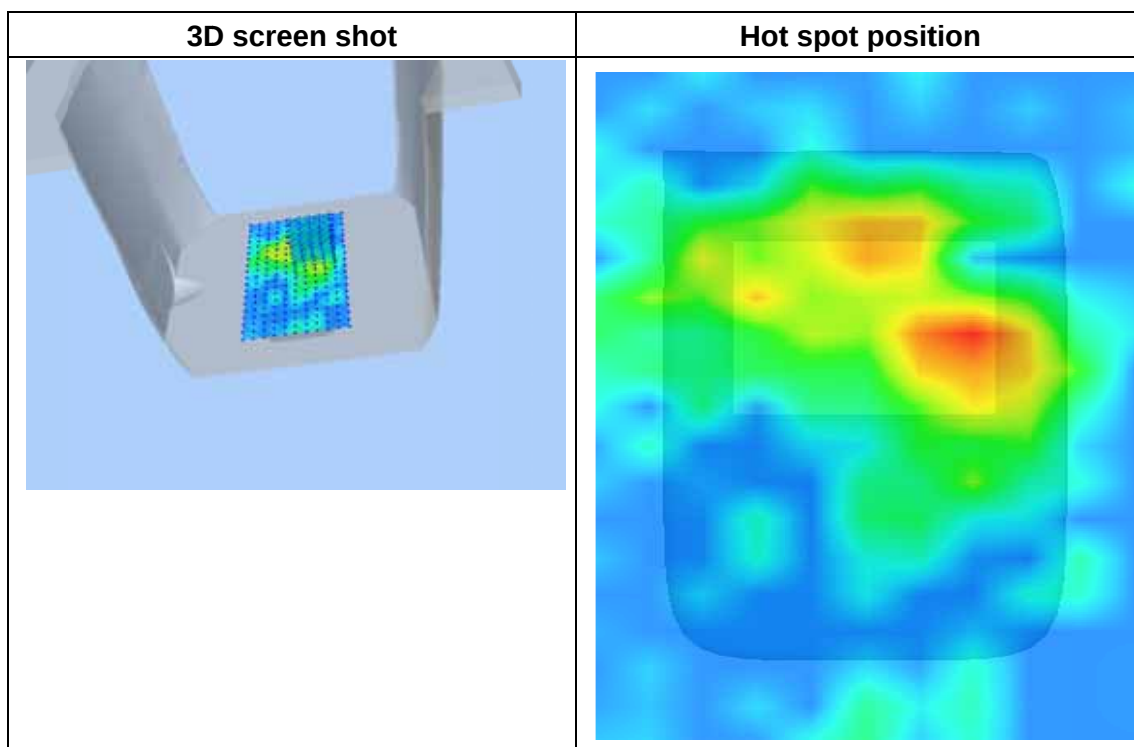
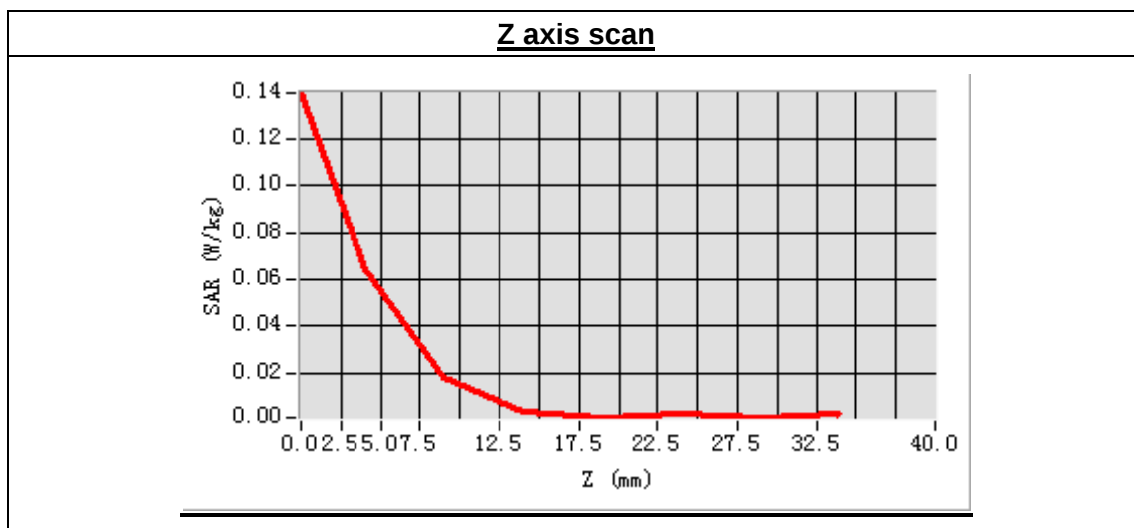
Frequency (MHz)	2412.000000
Relative permittivity (real part)	52.524381
Conductivity (S/m)	1.914385
Power drift (%)	-3.330000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1



Maximum location: X=16.00, Y=15.00

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	0.022775
SAR 1g (W/Kg)	0.065635



MEASUREMENT 50

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 9 minutes 36 seconds

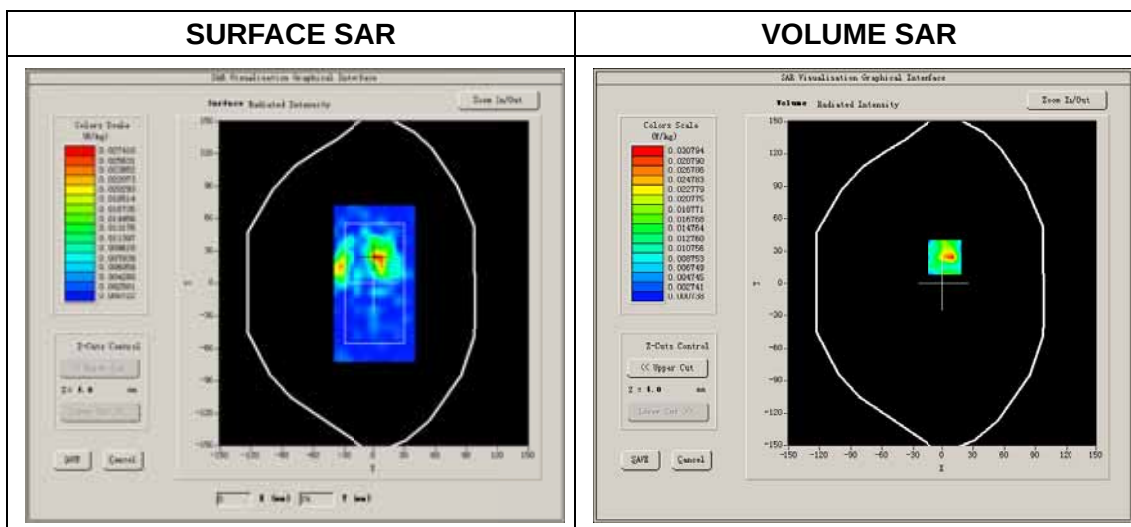
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11B
Channels	Low
Signal	DSSS

B. SAR Measurement Results

Low Band SAR (Channel 1)

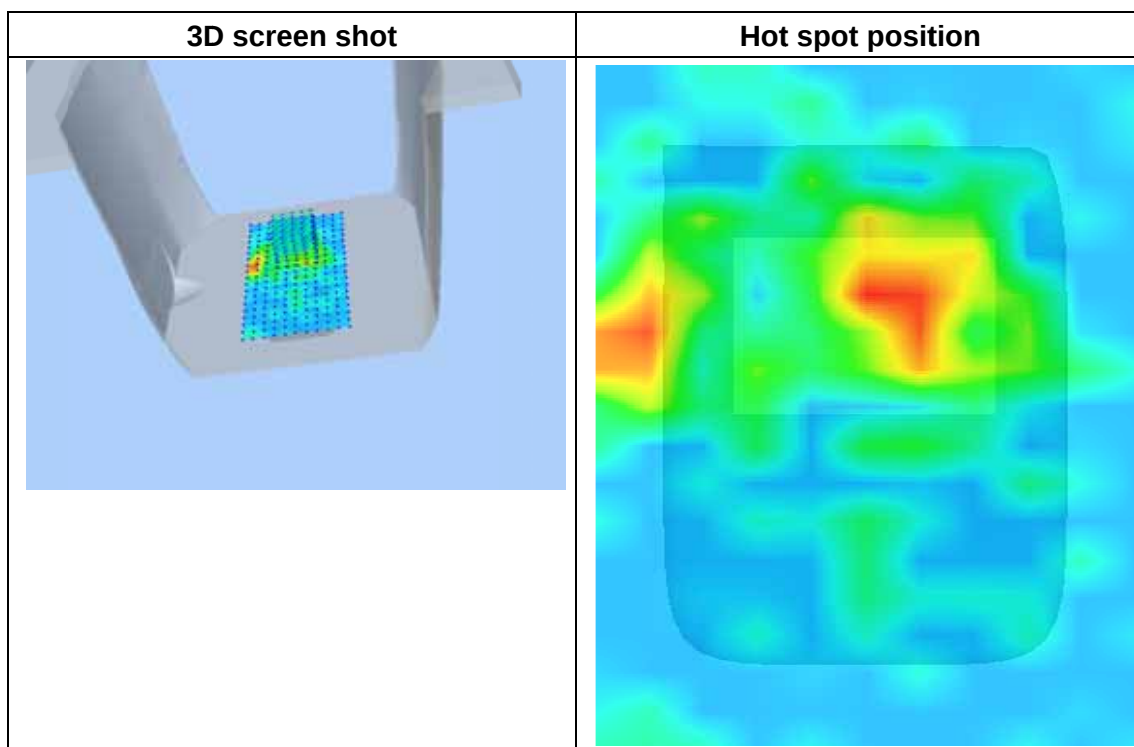
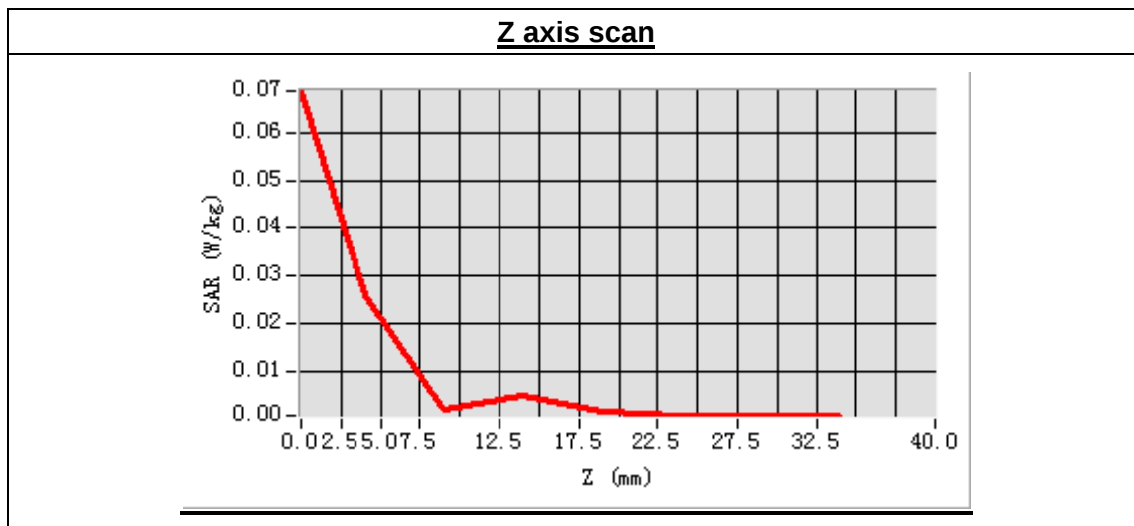
Frequency (MHz)	2412.000000
Relative permittivity (real part)	52.524381
Conductivity (S/m)	1.914385
Power drift (%)	-1.490000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1



Maximum location: X=2.00, Y=24.00

SAR Peak: 0.10 W/kg

SAR 10g (W/Kg)	0.010229
SAR 1g (W/Kg)	0.033337



MEASUREMENT 51

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 9 minutes 34 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11B
Channels	Low
Signal	DSSS

B. SAR Measurement Results

Low Band SAR (Channel 1)

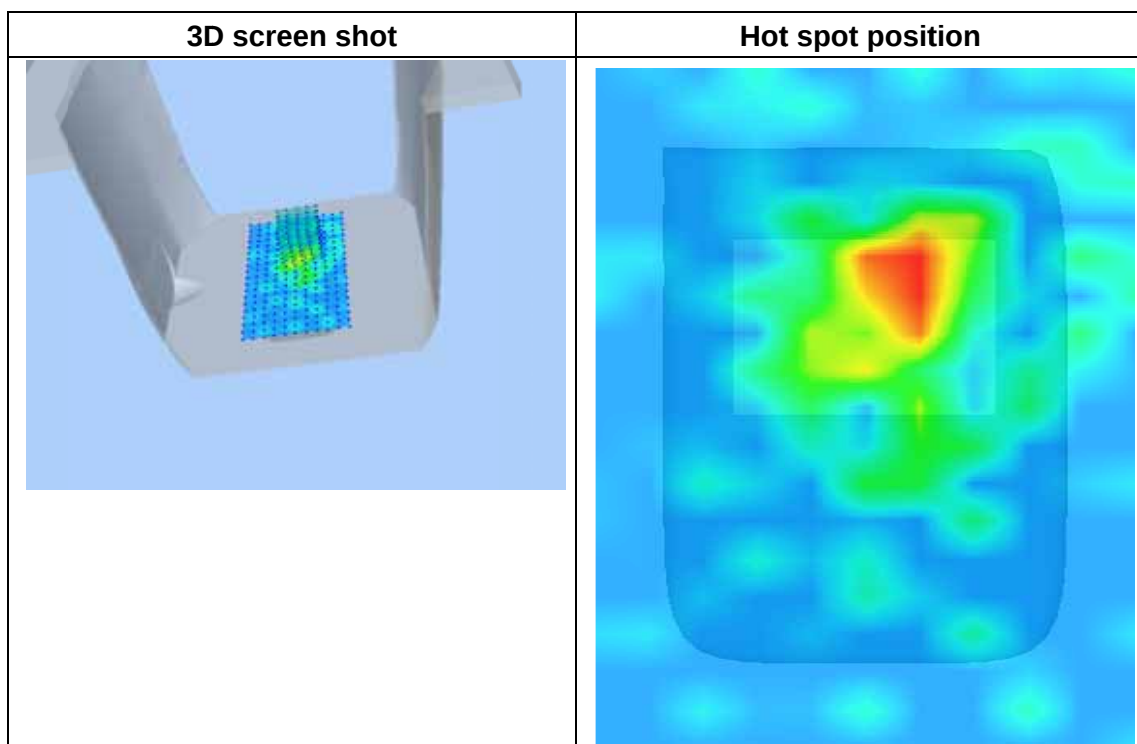
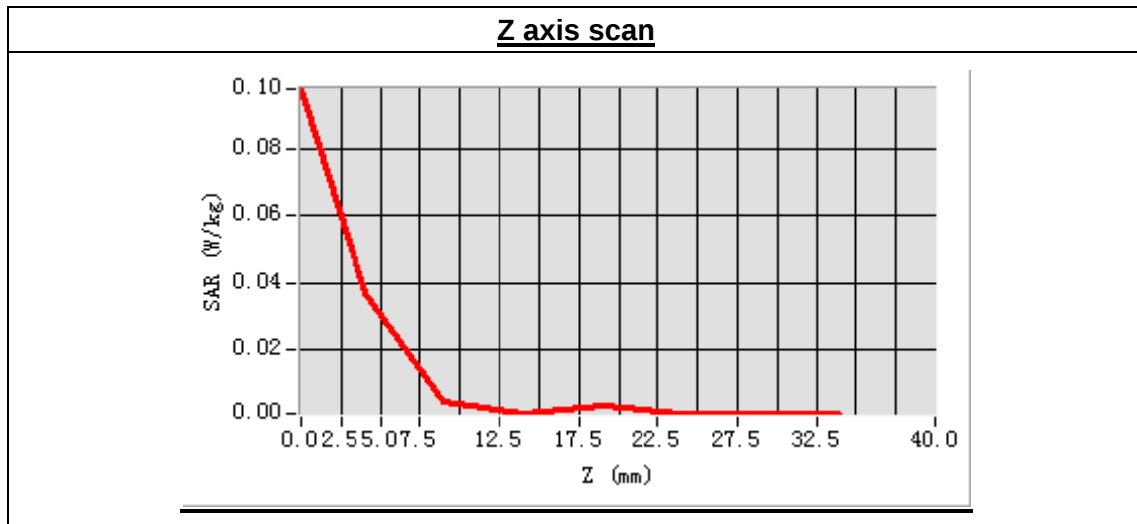
Frequency (MHz)	2412.000000
Relative permittivity (real part)	52.524381
Conductivity (S/m)	1.914385
Power drift (%)	-2.110000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1



Maximum location: X=6.00, Y=29.00

SAR Peak: 0.12 W/kg

SAR 10g (W/Kg)	0.012361
SAR 1g (W/Kg)	0.041651



MEASUREMENT 52

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 9 minutes 34 seconds

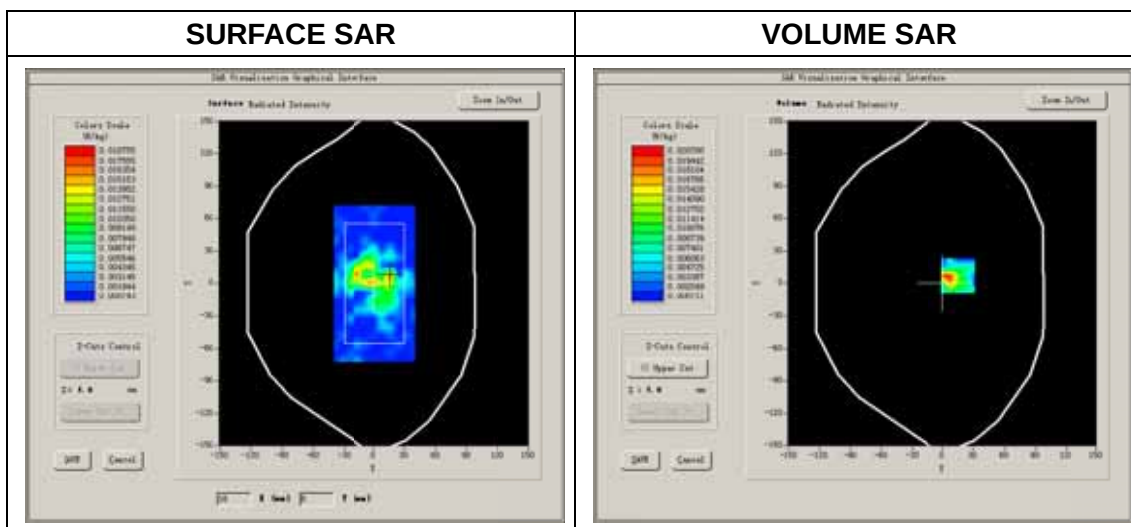
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11B
Channels	Low
Signal	DSSS

B. SAR Measurement Results

Low Band SAR (Channel 1)

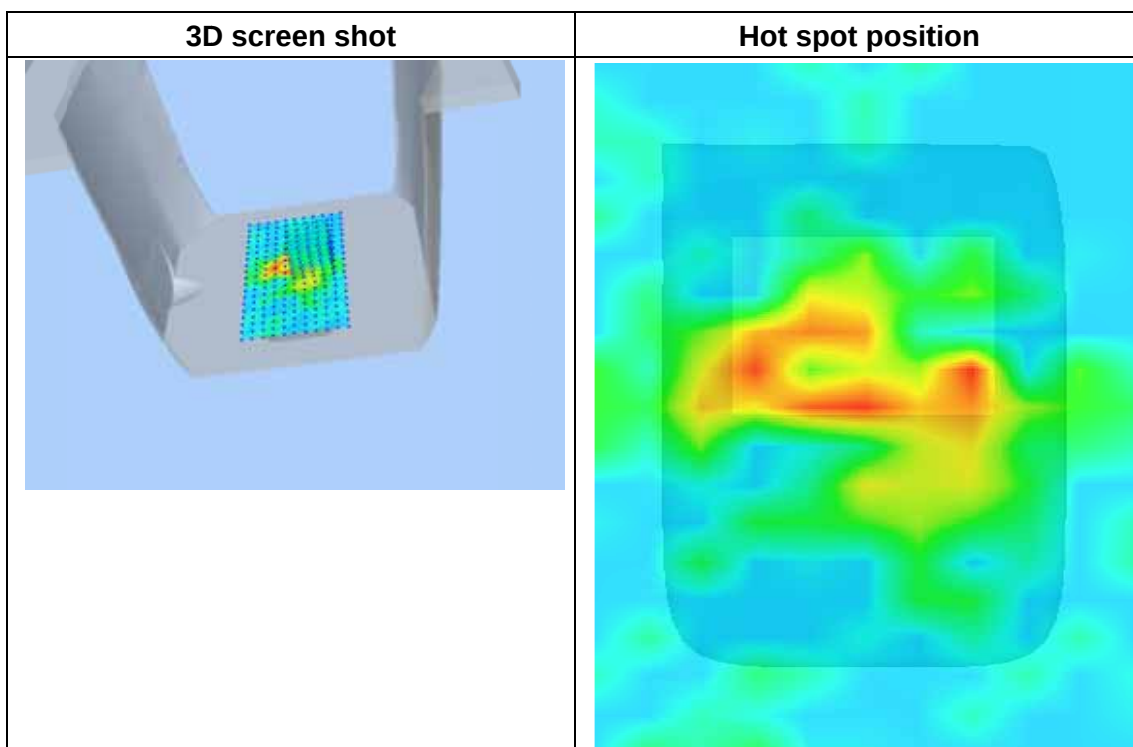
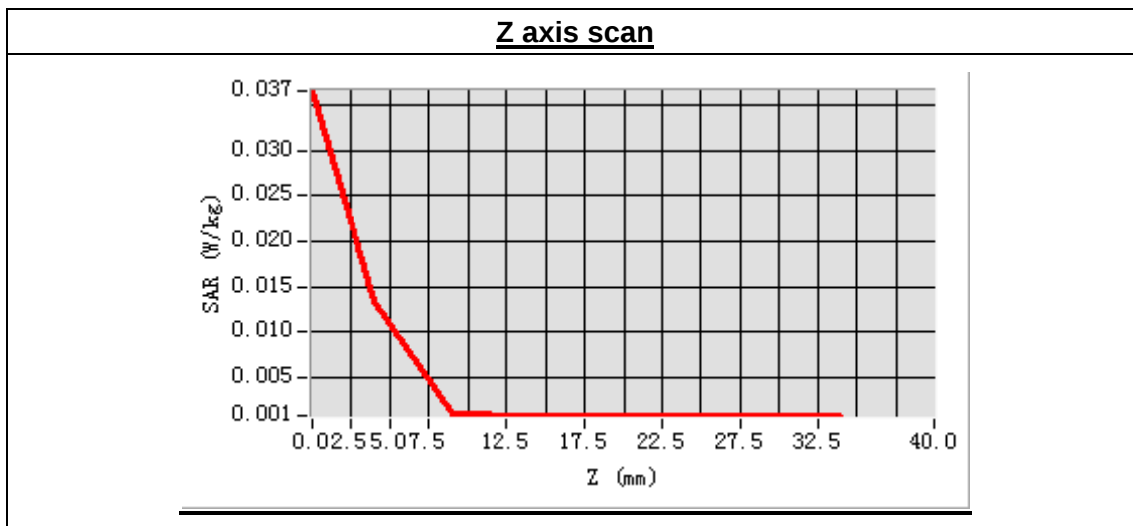
Frequency (MHz)	2412.000000
Relative permittivity (real part)	52.524381
Conductivity (S/m)	1.914385
Power drift (%)	-2.570000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1



Maximum location: X=15.00, Y=7.00

SAR Peak: 0.05 W/kg

SAR 10g (W/Kg)	0.007904
SAR 1g (W/Kg)	0.021267



MEASUREMENT 53

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 8 minutes 0 seconds

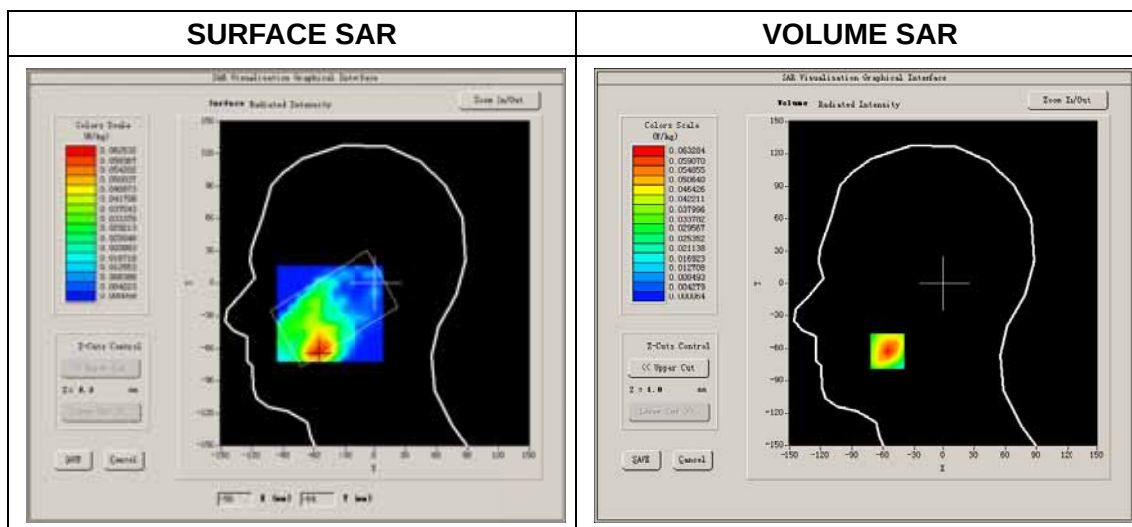
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Right head
Device Position	Cheek
Band	BT
Channels	High
Signal	GFSK

B. SAR Measurement Results

High Band SAR (Channel 78)

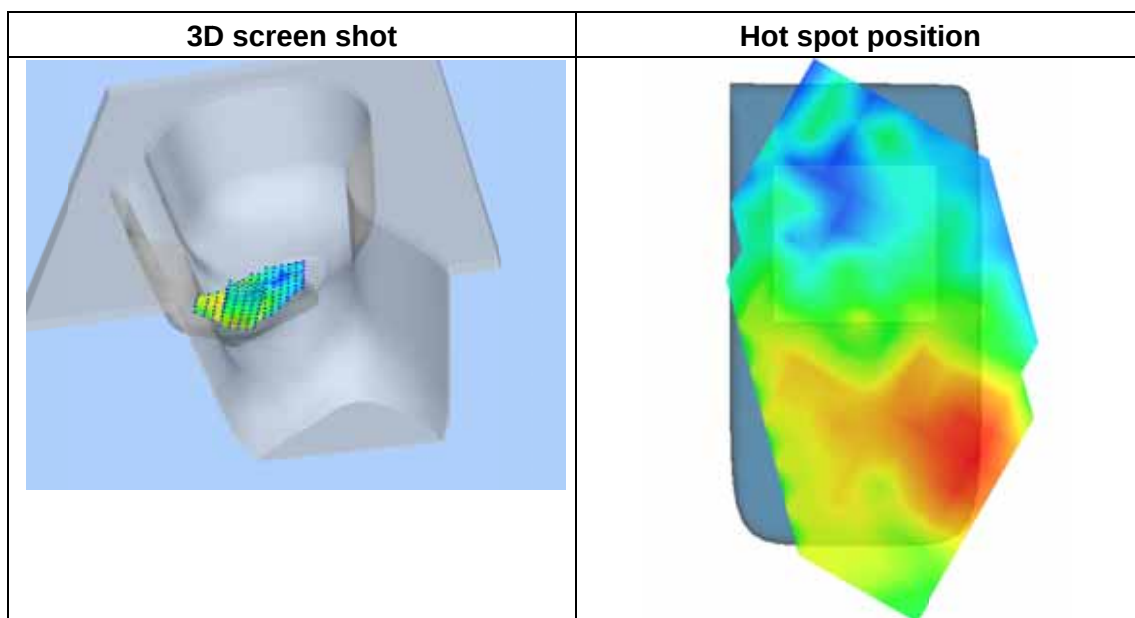
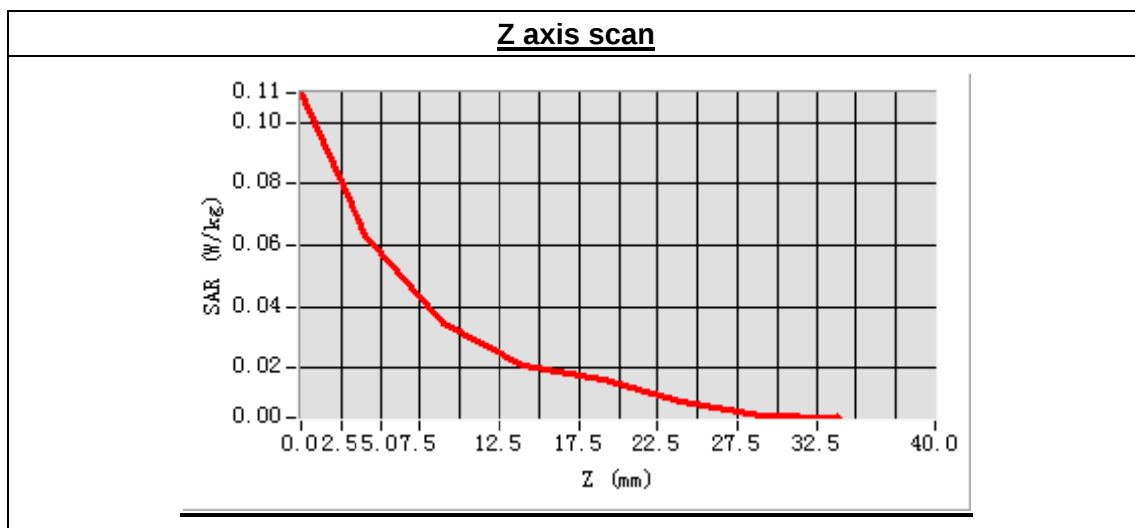
Frequency (MHz)	2480.000000
Relative permittivity (real part)	40.074318
Conductivity (S/m)	0.768492
Power drift (%)	3.480000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



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

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.033057
SAR 1g (W/Kg)	0.062062



MEASUREMENT 54

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 8 minutes 10 seconds

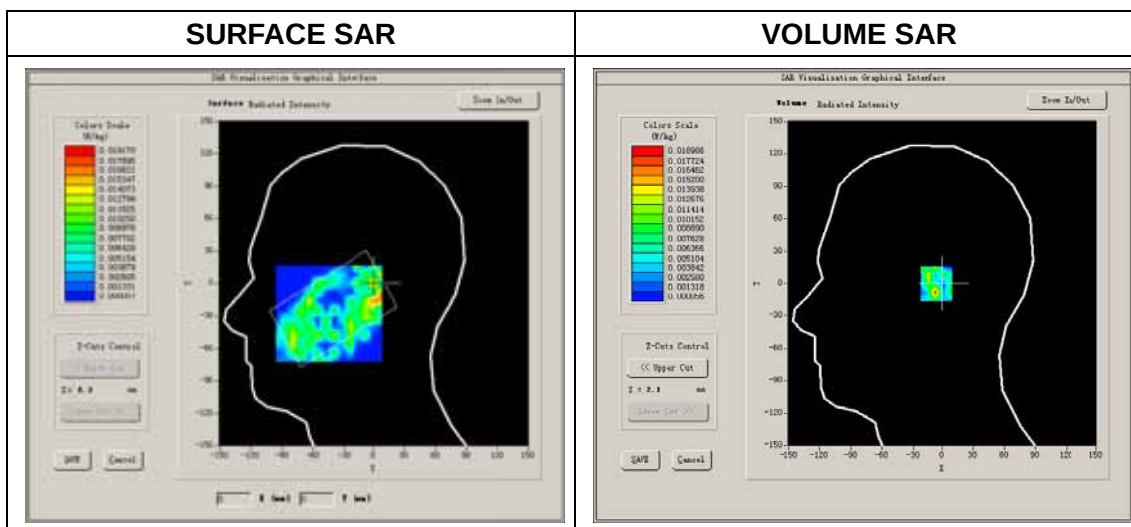
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Right head
Device Position	Tilt
Band	802.11B
Channels	Low
Signal	GFSK

B. SAR Measurement Results

High Band SAR (Channel 78)

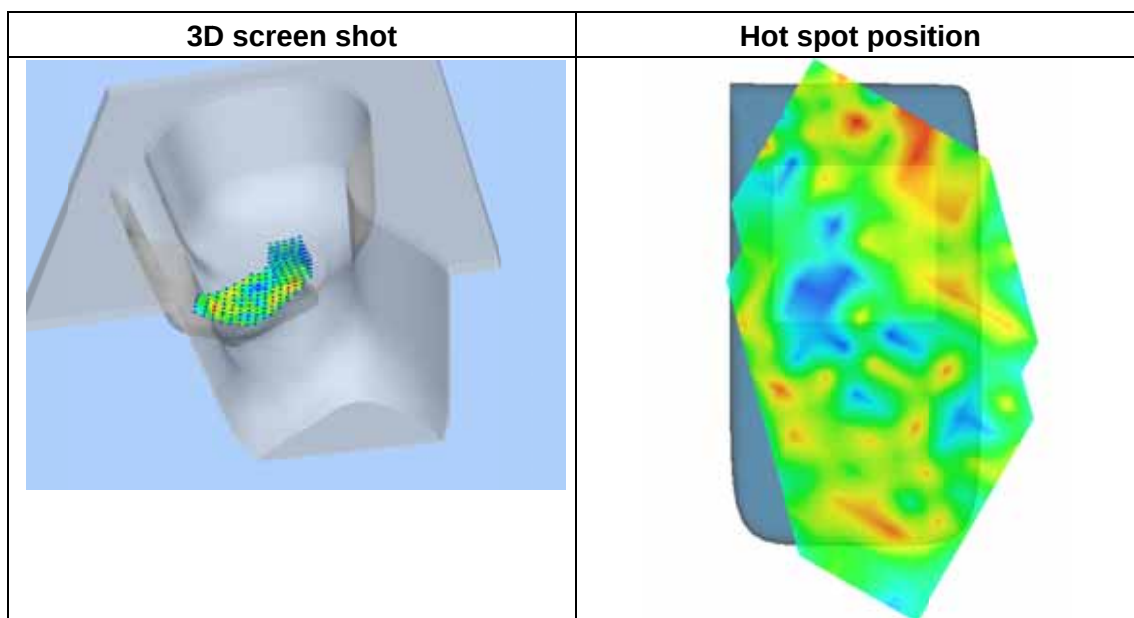
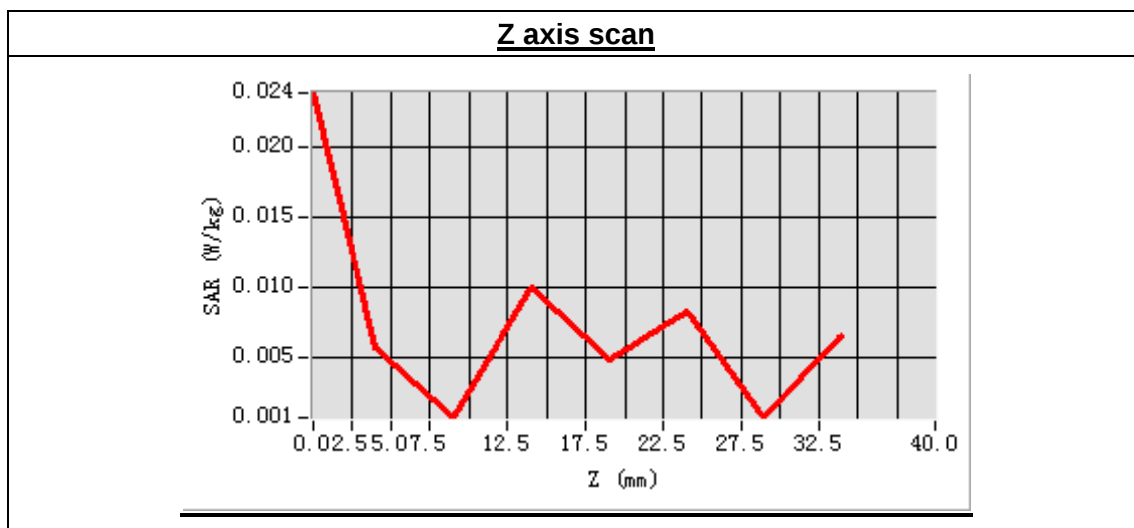
Frequency (MHz)	2480.000000
Relative permittivity (real part)	40.074318
Conductivity (S/m)	1.768492
Power drift (%)	-2.310000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



Maximum location: X=0.00, Y=0.00

SAR Peak: 0.05 W/kg

SAR 10g (W/Kg)	0.006031
SAR 1g (W/Kg)	0.015741



MEASUREMENT 55

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 7 minutes 53 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Left head
Device Position	Cheek
Band	802.11B
Channels	Low
Signal	GFSK

B. SAR Measurement Results

High Band SAR (Channel 78)

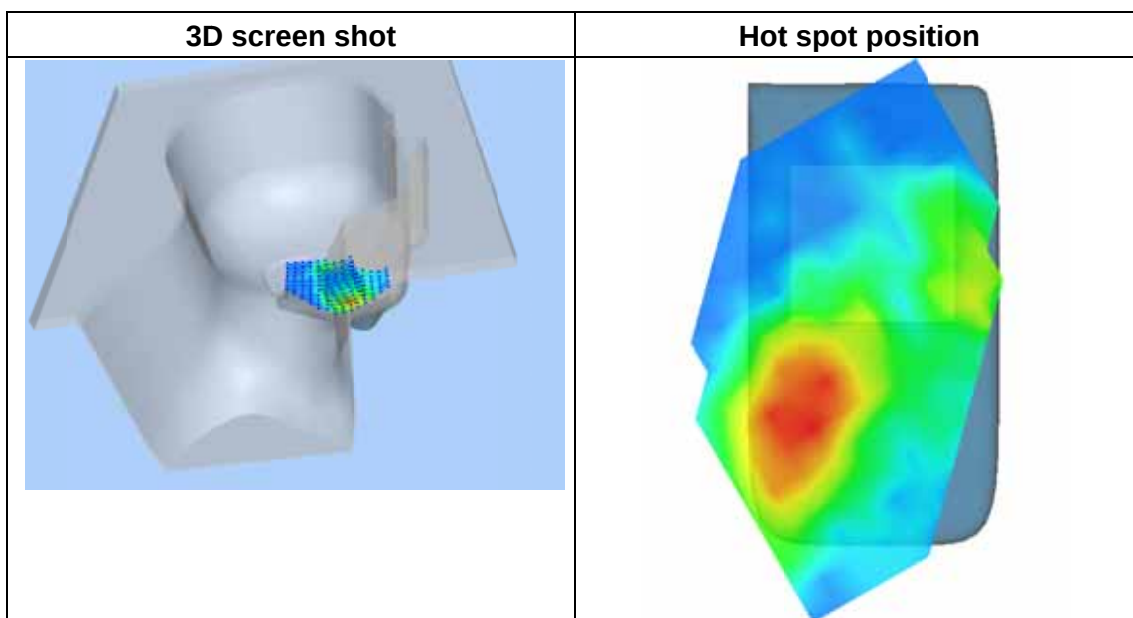
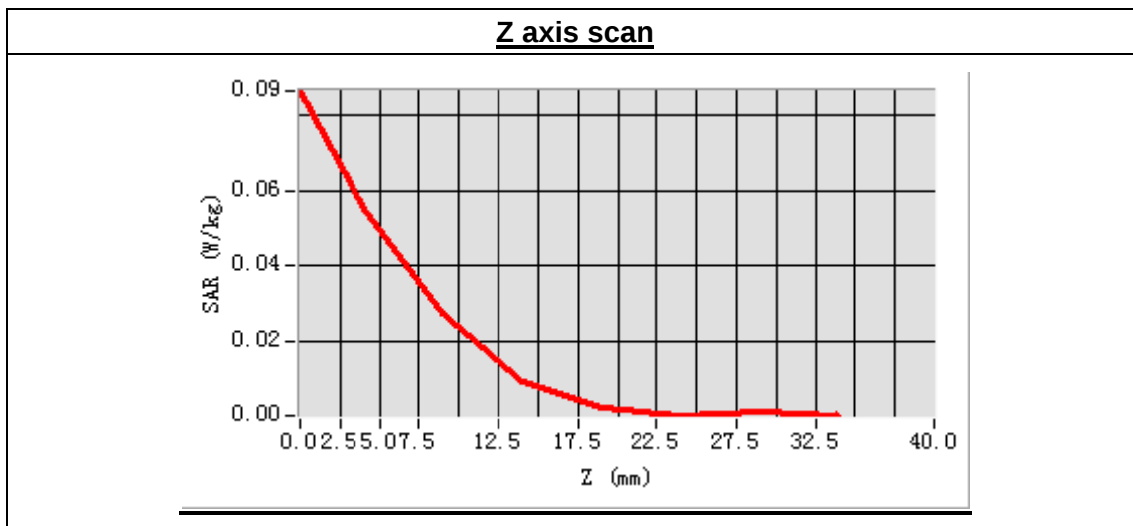
Frequency (MHz)	2480.000000
Relative permittivity (real part)	40.074318
Conductivity (S/m)	1.768492
Power drift (%)	-2.130000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



Maximum location: X=-55.00, Y=-48.00

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.023592
SAR 1g (W/Kg)	0.055825



MEASUREMENT 56

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 7 minutes 50 seconds

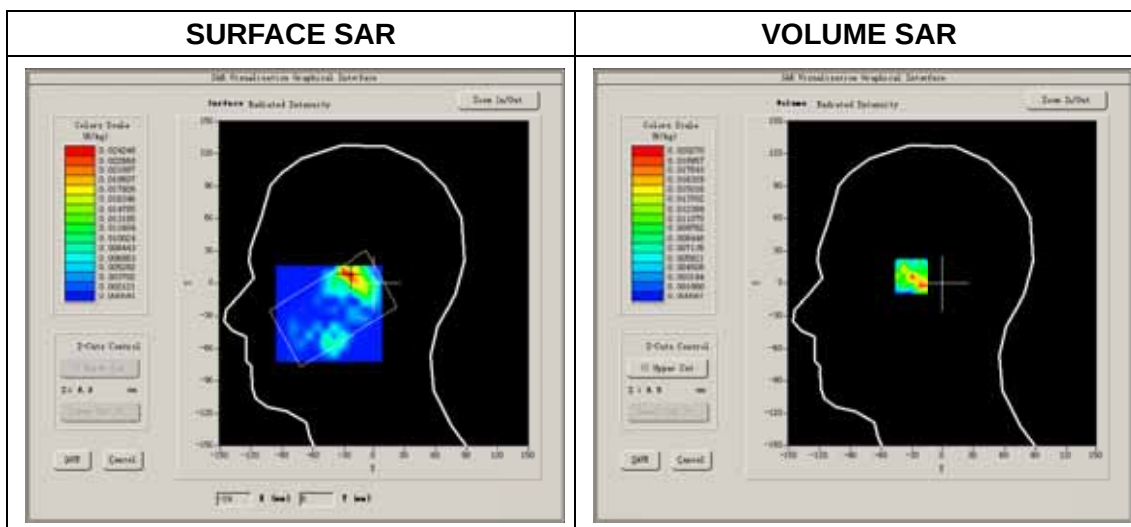
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Left head
Device Position	Tilt
Band	802.11B
Channels	High
Signal	GFSK

B. SAR Measurement Results

High Band SAR (Channel 78)

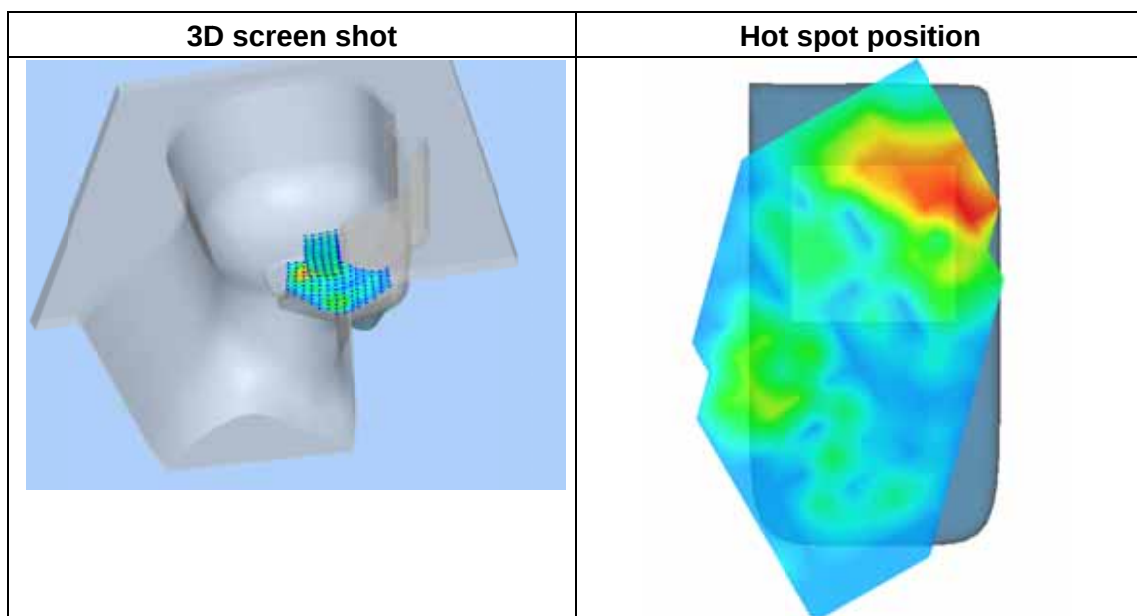
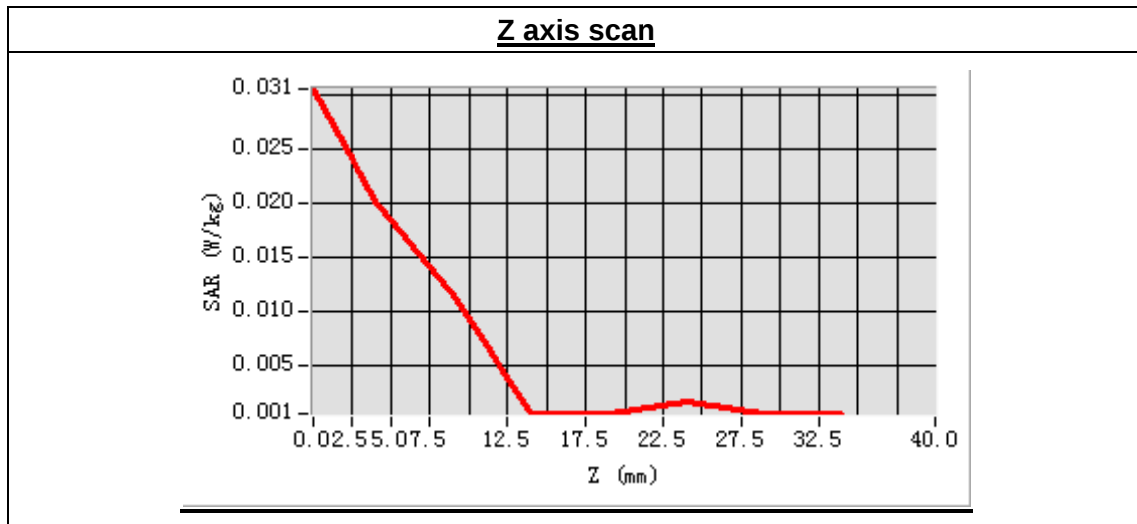
Frequency (MHz)	2480.000000
Relative permittivity (real part)	40.074318
Conductivity (S/m)	1.768492
Power drift (%)	-3.910000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



Maximum location: X=-30.00, Y=9.00

SAR Peak: 0.05 W/kg

SAR 10g (W/Kg)	0.007521
SAR 1g (W/Kg)	0.020034



System Performance Check Data(Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 13 minutes 27 seconds

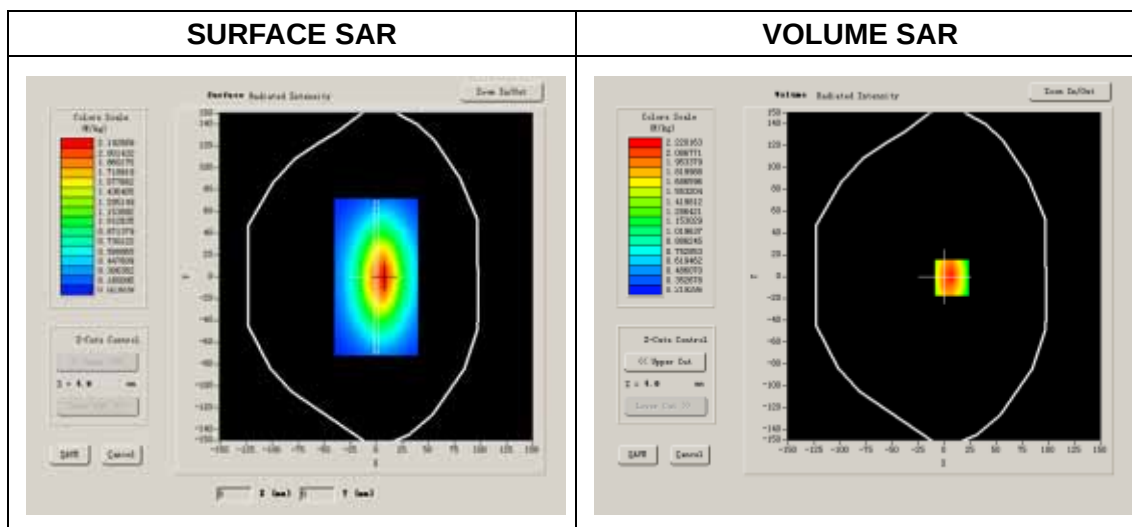
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	835MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	826.400000
Relative permittivity (real part)	42.104395
Conductivity (S/m)	0.876942
Power drift (%)	-0.310000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1



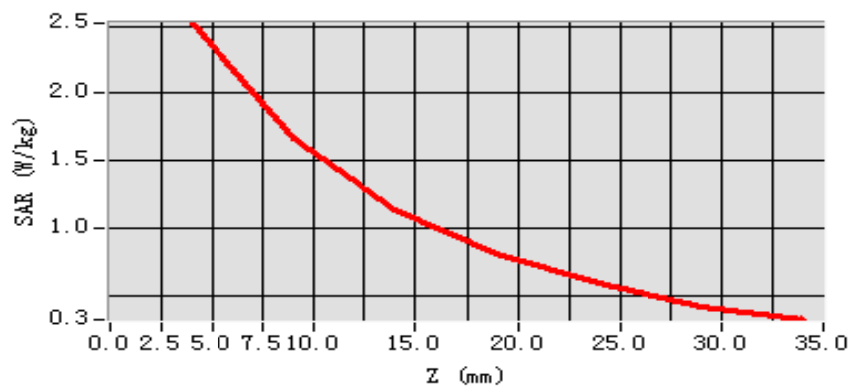
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.548464
SAR 1g (W/Kg)	2.415476

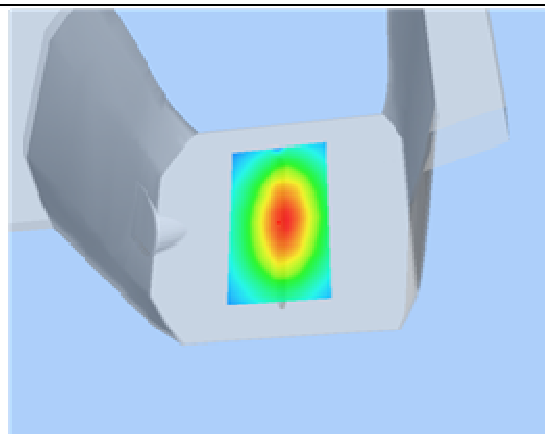
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.5209	1.6629	1.1437	0.8075	0.5889	0.4143

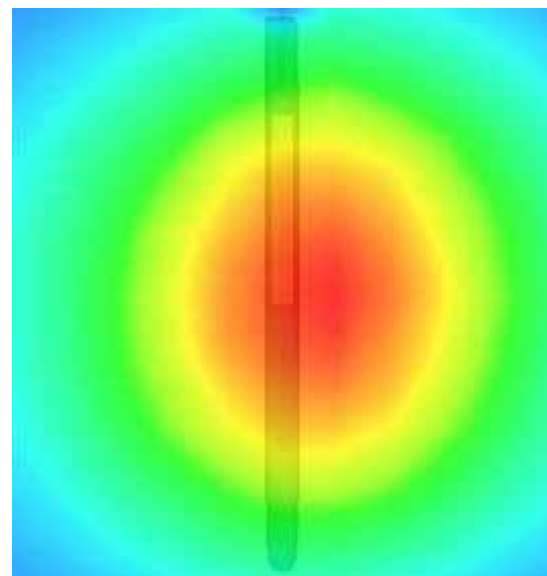
SAR, Z Axis Scan (X = 7, Y = -1)



3D scene shot



Hot spot position



System Performance Check Data(Body)

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.15

Measurement duration: 13 minutes 27 seconds

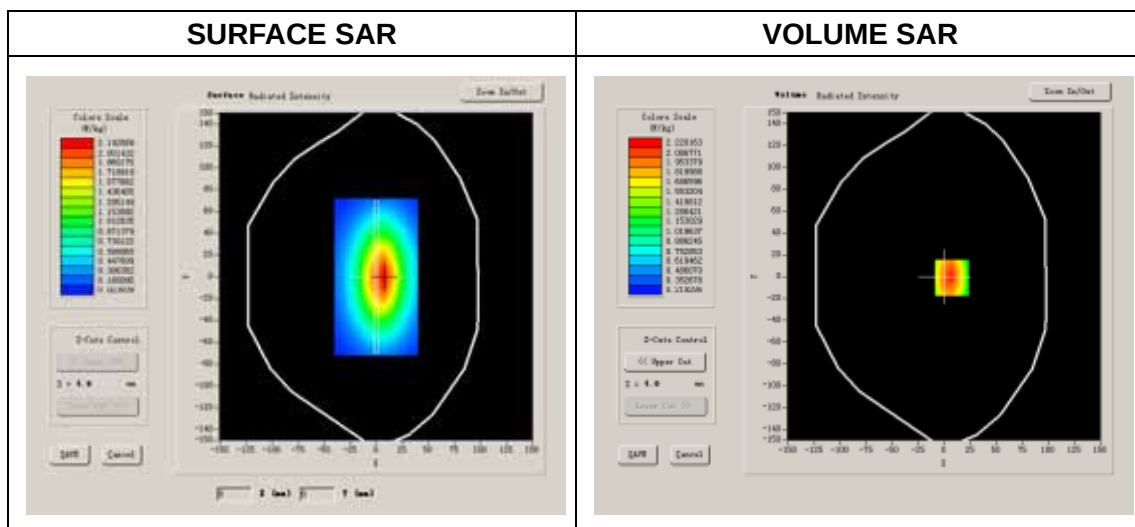
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	835MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	826.400000
Relative permittivity (real part)	55.214287
Conductivity (S/m)	0.984361
Power drift (%)	-1.700000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:1



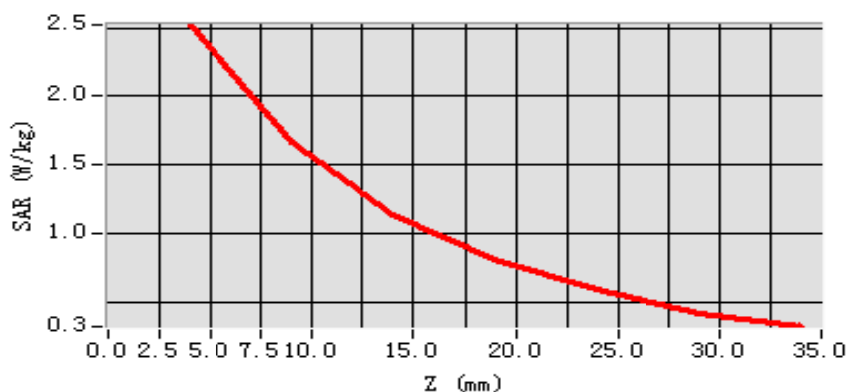
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.567132
SAR 1g (W/Kg)	2.482631

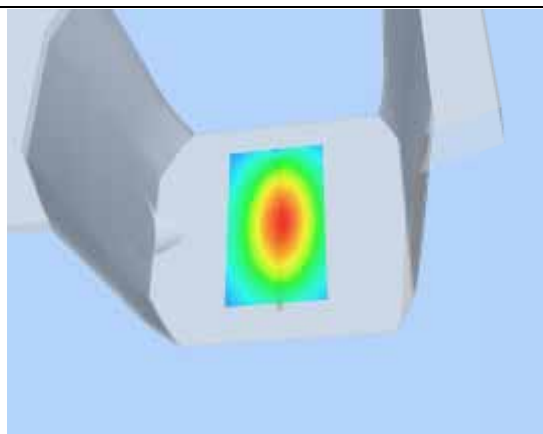
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.5209	1.6629	1.1437	0.8075	0.5889	0.4143

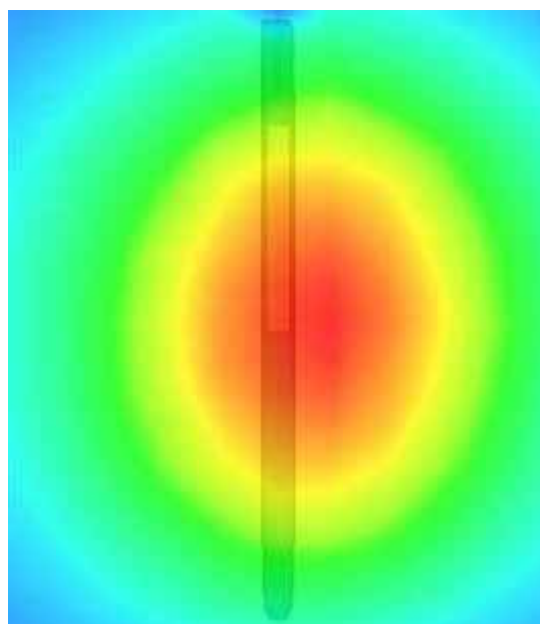
SAR, Z Axis Scan (X = 7, Y = -1)



3D scene shot



Hot spot position



System Performance Check Data(Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 13 minutes 27 seconds

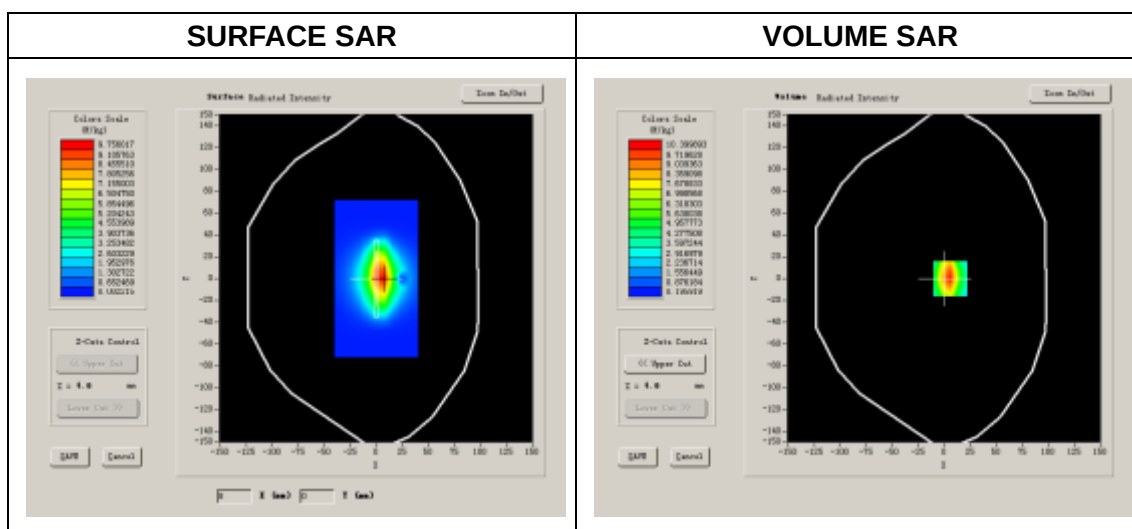
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	1900MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	1900.000000
Relative permittivity (real part)	41.118542
Conductivity (S/m)	1.389547
Power drift (%)	-0.290000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

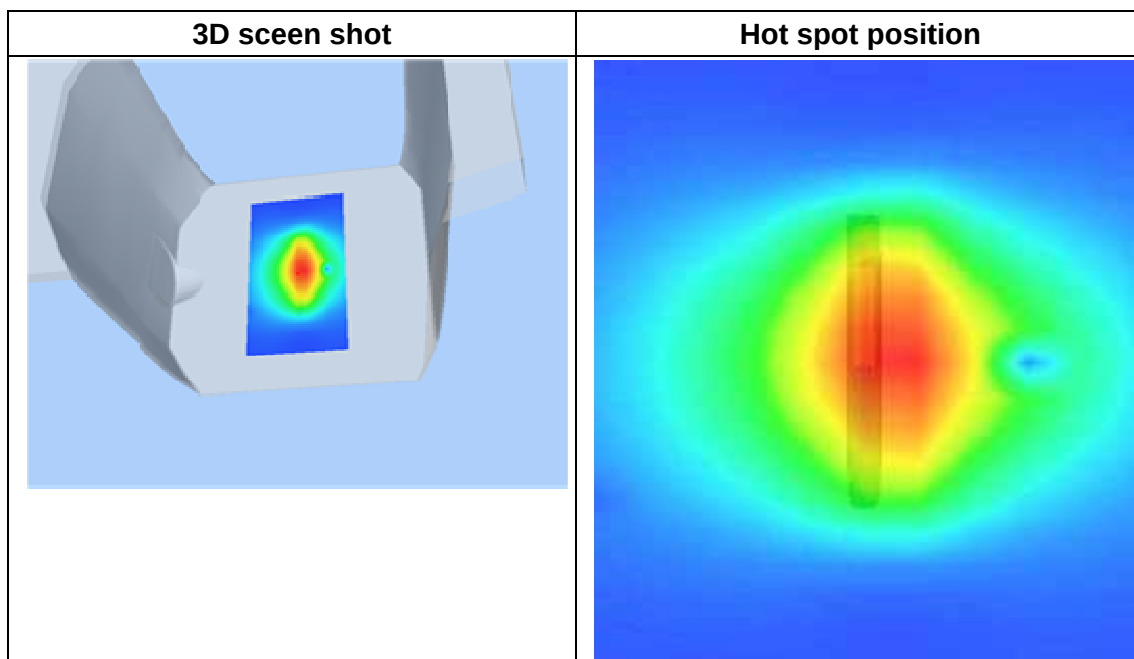
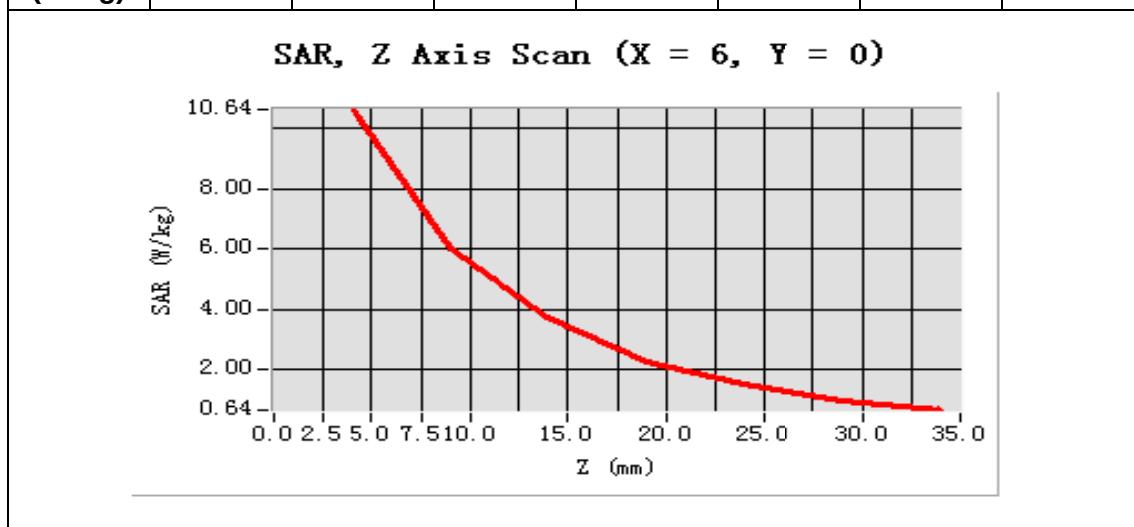


Maximum location: X=6.00, Y=0.00

SAR 10g (W/Kg)	6.325461
SAR 1g (W/Kg)	9.657133

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.6419	6.0043	3.7297	2.2606	1.5119	0.9792



System Performance Check Data(Body)

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2013.10.16

Measurement duration: 13 minutes 26 seconds

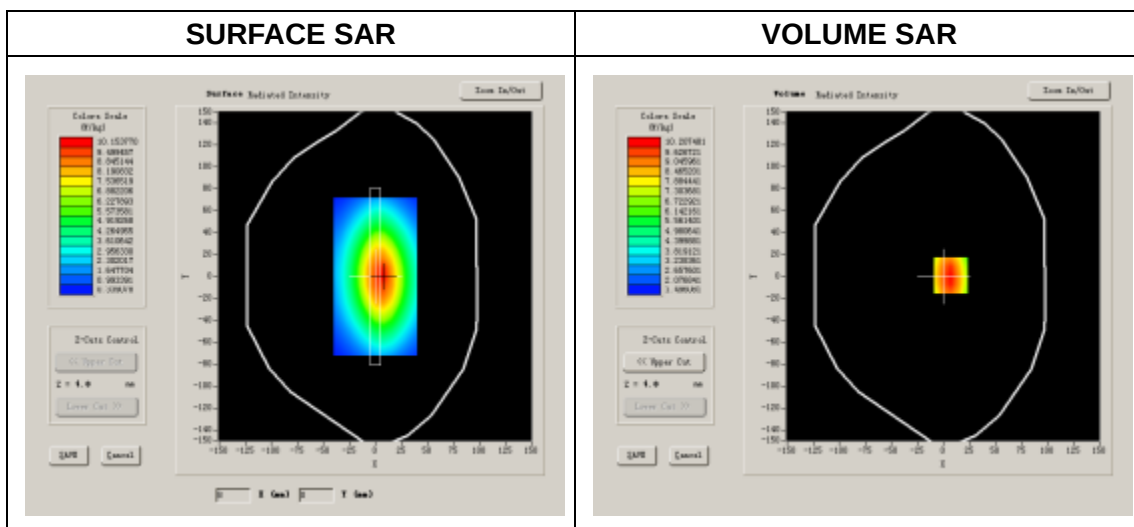
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	1900MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	1900.000000
Relative permittivity (real part)	53.324286
Conductivity (S/m)	1.504389
Power drift (%)	-0.520000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

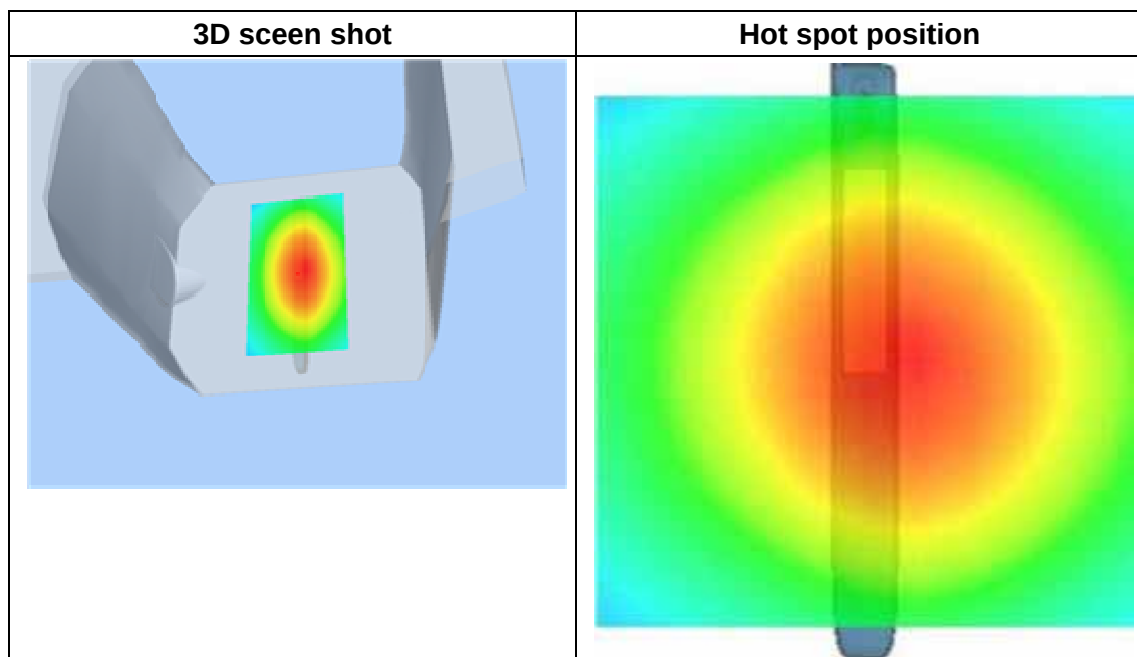
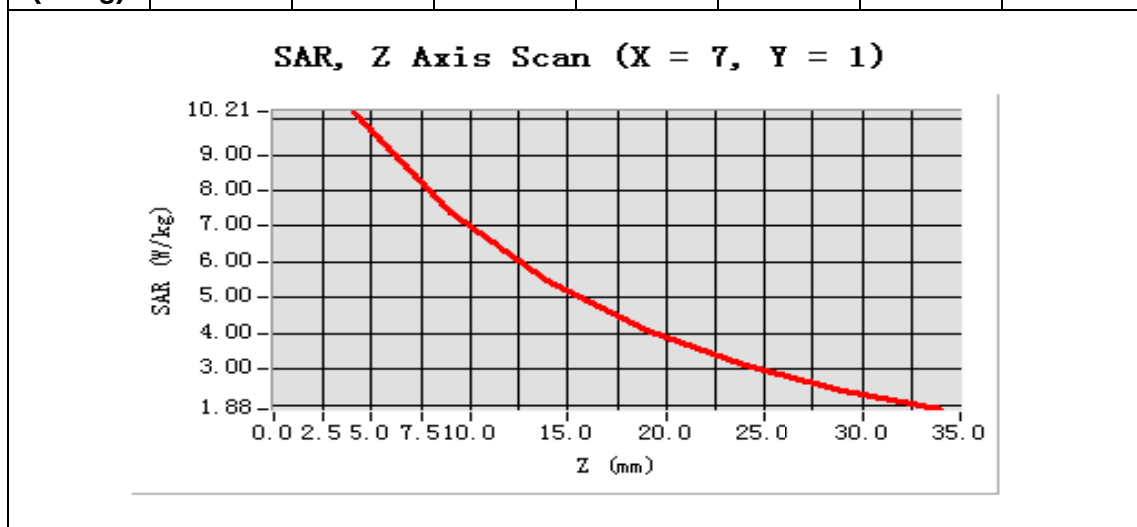


Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	6.478684
SAR 1g (W/Kg)	9.895432

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.2075	7.3996	5.4654	4.1101	3.1286	2.4128



System Performance Check Data(Head)

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	2450MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	2450.000000
Relative permittivity (real part)	40.074318
Conductivity (S/m)	1.768492
Power Drift (%)	-0.720000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

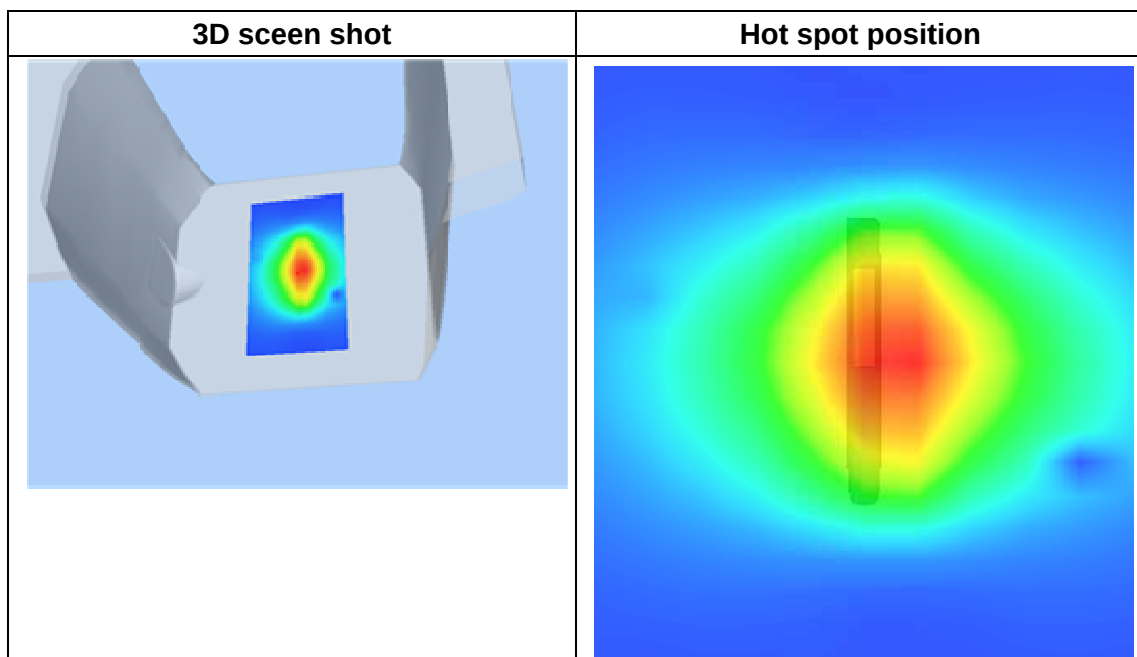
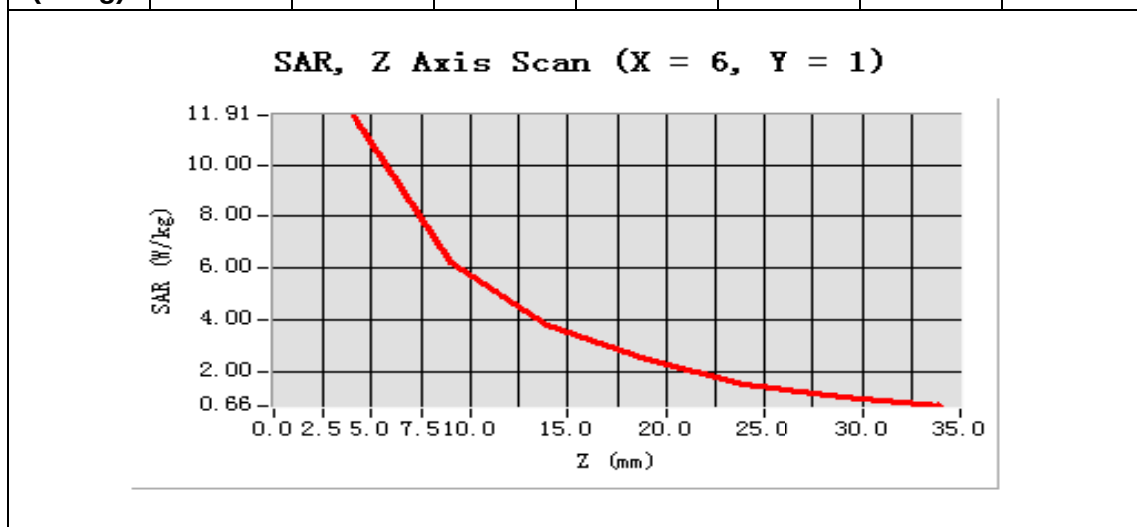


Maximum location: X=6.00, Y=1.00

SAR 10g (W/Kg)	7.659624
SAR 1g (W/Kg)	12.586484

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	11.9115	6.2096	3.8187	2.4504	1.5036	1.0219



System Performance Check Data(Body)

Type: Phone measurement (Complete)

Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm

Date of measurement: 2013.10.17

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	2450MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	2450.000000
Relative permittivity (real part)	52.524381
Conductivity (S/m)	1.914385
Power Drift (%)	-1.170000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1



Maximum location: X=-1.00, Y=-50.00

SAR 10g (W/Kg)	7.176849
SAR 1g (W/Kg)	12.894427

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	13.1279	6.8312	3.5991	1.3473

