FCC SAR TEST REPORT

TESTING
CNAS L3572

Issued to

VSN Technologies Inc.

For

Mobile phone

Model Name	:	V3001
Trade Name	:	Revel Mobile
Brand Name	:	Revel
FCC ID	:	2AA9WV3001
Standard	:	47CFR 2.1093
		IEEE 1528-2013
MAX SAR	:	Head: 0.542W/kg
		Body: 1.050W/kg
Test date	:	2014-4-16 to 2014-4-18
Issue date	:	2014-5-7

by

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

Tested by	Liu Jun	**Approved by**	Zeng Dexin	**Reviewed by**	Zhu Zhan
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	(Test Engineer)		(Chief Engineer)		(SAR Specialist)
Date	2014.5.7	**Date**	2014.5.7	**Date**	2014.5.7

DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	May 7, 2014	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)	2014-2-21	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: 2014-4-16 to 2014-4-18)	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:	VSN Technologies Inc.
Address:	1975 E Sunrise Blvd,Suite 400,Fort Lauderdale, Fl. 33304

2.2 Identification of Manufacturer

Company Name:	Beijing Benywave technology Co.,Ltd
Address:	No 55,Jiachuang second road, Zhongguancun Science Park OPTO-Mechatronics Industrial Park, Tongzhou District,Beijing,China

2.3 Equipment Under Test (EUT)

Model Name:	V3001
Trade Name:	Revel Mobile
Brand Name:	Revel
Hardware Version:	TBW9758B1_mainboard_p2
Software Version:	975813_9373_V006015
Frequency Bands:	GSM 850MHz/1900MHz; WCDMA 850MHZ/1900MHz; (Band II, V); Bluetooth; Wifi802.11b/g/n20 (2.4GHz);
Modulation Mode:	GSM/GPRS: GMSK; EDGE:8PSK; WCDMA/HSDPA/HSUPA/HSPA+: QPSK; WIFI802.11b: DSSS; WIFI802.11g: OFDM; WIFI 802.11n: OFDM; Bluetooth: 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:	TBT9703
Battery specification:	2600mAh3.7V
3GPP Version:	Release 8
Hotspot function:	Support

2.3.1 Photographs of the EUT

Please refer to the External Photos for the Photos of 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#	TBW9758B1_mainboard_p2	975813_9373_V006015

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	**IEEE 1528-2013**	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.
3	**KDB 447498 D01v05r02**	General RF Exposure Guidance
4	**KDB 648474 D04v01r02**	Handset SAR
5	**KDB 248227 D01v01r02**	SAR Measurement Procedures for 802.11 a/b/g Transmitters
6	**KDB 941225 D01v02**	SAR test for 3G devices
7	**KDB 941225 D02v02r02**	HSPA and 1x Advanced
8	**KDB 941225 D03v01**	SAR Test Reduction GSM GPRS EDGE
9	**KDB 941225 D06v01r01**	Hotspot Mode SAR
10	**KDB 865664 D01v01r03**	SAR Measurement 100 MHz to 6 GHz
11	**KDB 865664 D02v01r01**	RF Exposure Reporting

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 /1900MHz; 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 128, 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 MHz, or to 4132, 4182 and 4233 respectively in the case of WCDMA 850 MHz, 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:

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

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by,

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

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

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

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

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

4. SAR MEASUREMENT 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

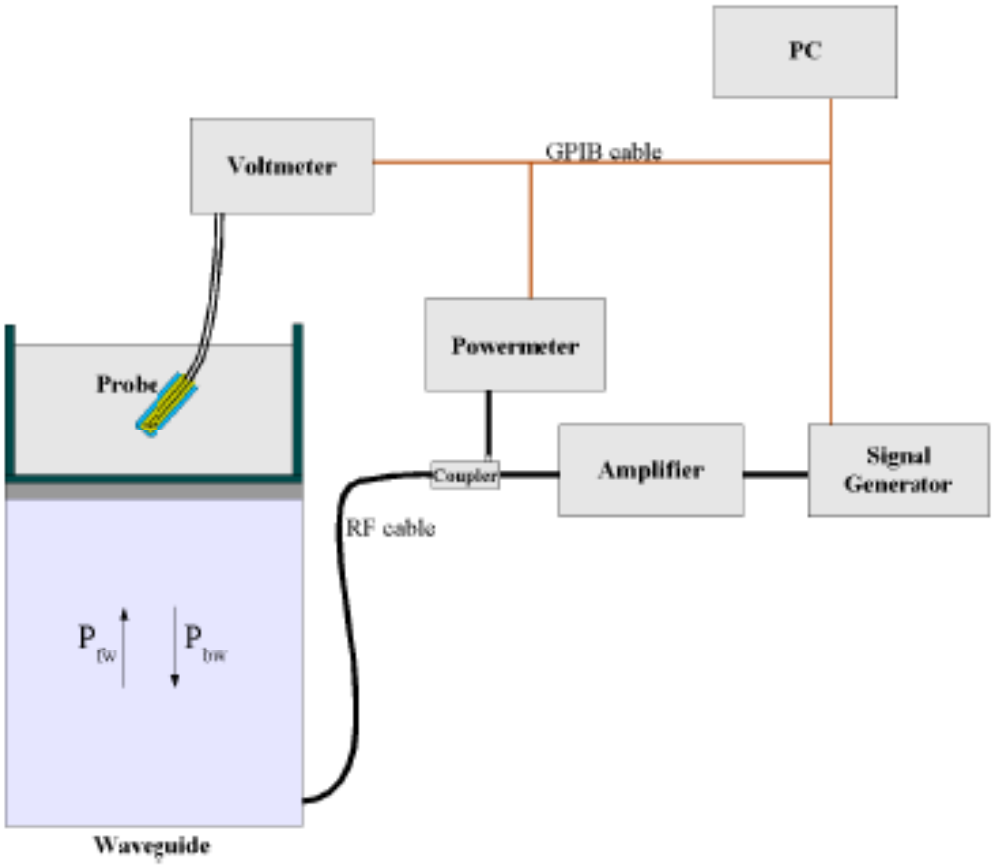
For the measurements the Specific Dosimetric E-Field Probe SN 37/08 EP80 with Following specifications is used

- 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 2500MHz 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, Antennessa 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 :

Pfw = Forward Power

Pbw = Backward Power

a and b = Waveguide dimensions

ı = Skin depth

Keithley configuration:

Rate = Medium; Filter =ON; RDGS=10; FILTER TYPE =MOVING AVERAGE; RANGE AUTO
After each calibration, a SAR measurement is performed on a validation dipole and compared with a NPL calibrated probe, to verify it.

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

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

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

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

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),

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

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

δT = temperature increase due to RF exposure.

SAR is proportional to ΔT/Δt, 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:

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

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

Frequency Band (MHz)	835		1900		2450	
Tissue Type	Head	Body	Head	Body	Head	Body
Ingredients (% by weight)						
Deionised Water	50.36	50.20	54.90	40.40	62.70	73.20
Salt(NaCl)	1.25	0.90	0.18	0.50	0.50	0.10
Sugar	0.00	48.50	0.00	58.00	0.00	0.00
Tween 20	48.39	0.00	0.00	0.00	0.00	0.00
HEC	0.00	0.20	0.00	1.00	0.00	0.00
Bactericide	0.00	0.20	0.00	0.10	0.00	0.00
Triton X-100	0.00	0.00	0.00	0.00	36.80	0.00
DGBE	0.00	0.00	44.92	0.00	0.00	26.70
Diethylenglycol monohexylether	0.00	0.00	0.00	0.00	0.00	0.00
Measured dielectric parameters						
Dielectric Constant	41.60	56.10	39.90	53.30	39.20	52.70
Conductivity (S/m)	0.90	0.95	1.42	1.52	1.80	1.95

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±(%)**
2014/4/16	Head 835	Relative Permittivity(εr):	41.25	41.60	-0.84	5
		Conductivity(σ):	0.88	0.90	-2.22	5
	Body 835	Relative Permittivity(εr):	56.35	56.10	0.45	5
		Conductivity(σ):	0.97	0.95	2.11	5
2014/4/17	Head 1900	Relative Permittivity(εr):	40.21	39.90	0.78	5
		Conductivity(σ):	1.38	1.42	-2.82	5
	Body 1900	Relative Permittivity(εr):	53.24	53.30	-0.11	5
		Conductivity(σ):	1.50	1.52	-1.32	5
2014/4/18	Head 2450	Relative Permittivity(εr):	39.52	39.20	0.82	5
		Conductivity(σ):	1.77	1.80	-1.67	5
	Body2450	Relative Permittivity(εr):	52.61	52.70	-0.17	5
		Conductivity(σ):	1.93	1.95	-1.03	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 Algoritms 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

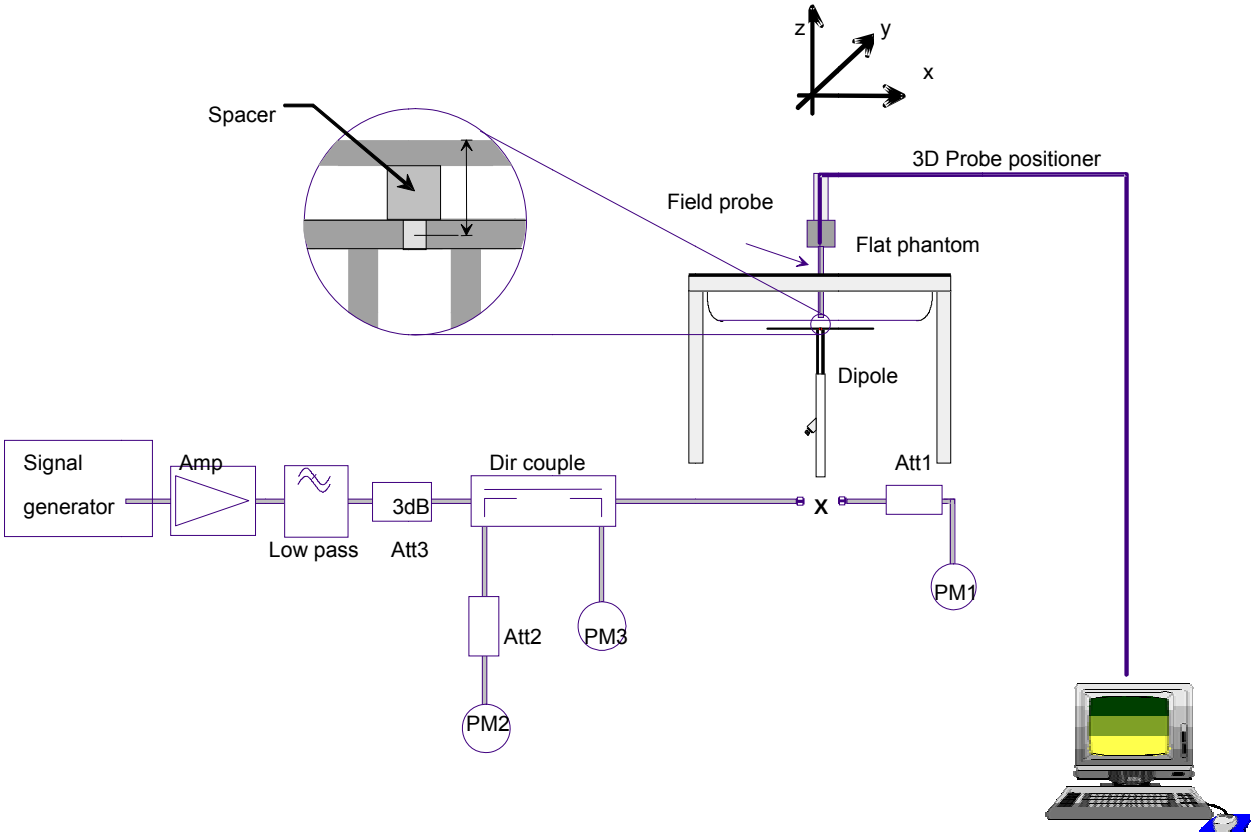
a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	4.76	N	1	1	1	4.76	4.7	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	0.7	0.7	1.01	1.0	∞
Hemispherical Isotropy	E.2.2	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 Algoritms 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)	2.416 W/Kg (4.16)	2.477 W/Kg (4.16)	9.652 W/Kg (4.17)	9.986W/Kg (4.17)
Normalized value (1g)	9.664 W/Kg	9.908 W/Kg	38.608 W/Kg	39.944 W/Kg

Frequency	2450MHz(H)	2450MHz(B)
Target value (1g)	54.77 W/Kg	56.090 W/Kg
Test value (1g 250 mW input)	12.658W/Kg (4.18)	12.964 W/Kg (4.18)
Normalized value (1g)	50.632 W/Kg	51.856 W/Kg

Note: System checks the specific test data please see page 133~144.

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.

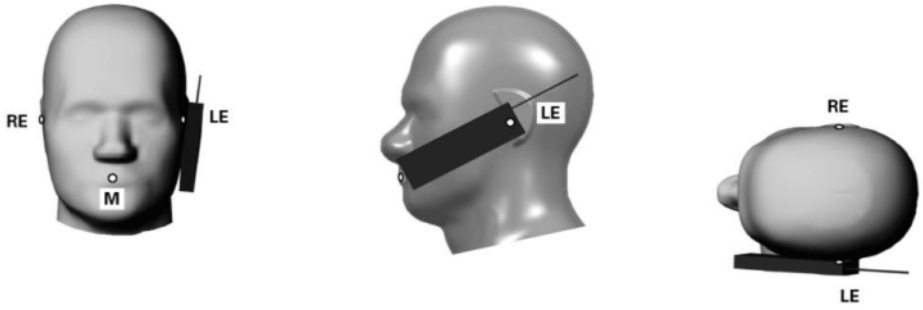


Illustration for Cheek Position

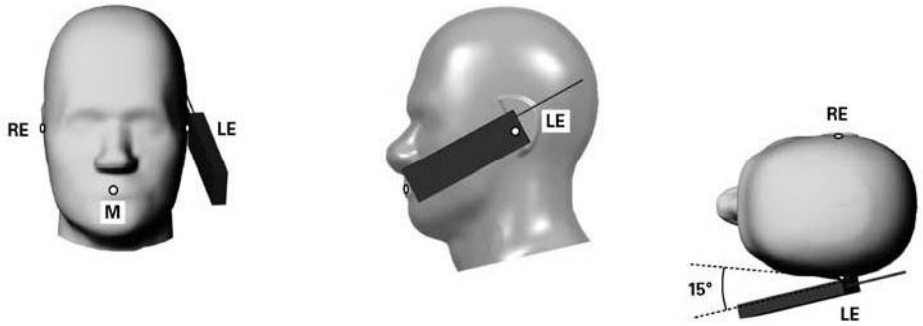


Illustration for Tilted Position

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.

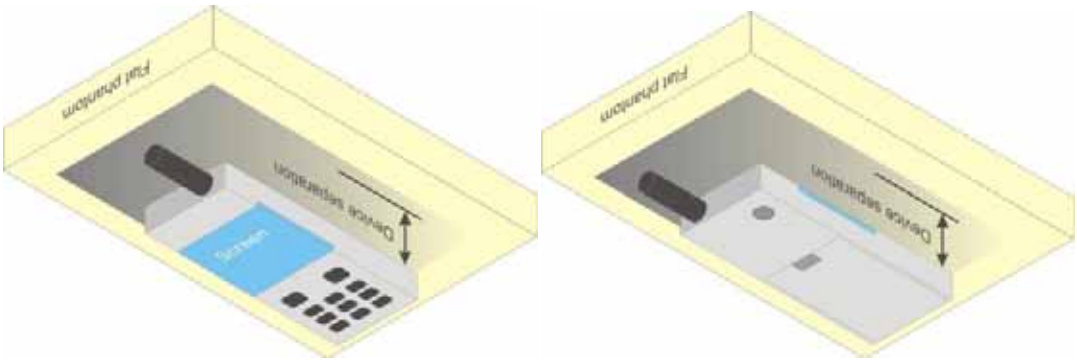


Illustration for Body Worn Position

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 to16 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	4132	4182	4233	9262	9400	9538
	subtest	dBm			dBm		
5.2(WCDMA)	non	23.48	23.38	23.32	23.09	22.74	23.30
HSDPA	1	22.91	22.77	22.52	22.22	22.34	22.97
	2	22.87	22.69	22.48	22.17	22.28	22.88
	3	22.41	22.27	22.02	21.72	21.84	22.47
	4	22.37	22.25	21.98	21.72	21.82	22.47
HSUPA	1	22.93	22.98.	22.82	22.55	21.30	22.55
	2	20.93	20.98	20.82	20.53	19.29	20.53
	3	21.92	21.97	21.80	21.54	20.28	21.52
	4	20.88	20.91	20.77	20.46	19.24	20.49
	5	22.86	22.93	22.79	22.49	21.27	22.50
HSPA+	1	22.96	22.92	22.78	22.59	22.21	23.03
Note: The Conducted RF Output Power test of WCDMA /HSDPA /HSUPA/HSPA+ was tested by power meter.							

2. GSM Conducted peak output power

Band	Channel	Frequency (MHz)	Output Power (dBm)
GSM 850	128	824.2	32.89
	190	836.6	32.85
	251	848.8	32.84
PCS 1900	512	1850.2	30.00
	661	1880.0	30.22
	810	1909.8	30.64

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	32.01	30.87	29.93	29.07
	190	836.6	31.98	30.84	29.90	29.04
	251	848.8	31.96	30.82	29.88	29.02
PCS 1900	512	1850.2	28.61	27.47	26.53	25.67
	661	1880.0	28.84	27.70	26.76	25.90
	810	1909.8	29.36	28.22	27.28	26.42

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	22.98	24.85	25.67	26.06
	190	836.6	22.95	24.82	25.64	26.03
	251	848.8	22.93	24.80	25.62	26.01
PCS 1900	512	1850.2	19.58	21.45	22.27	22.66
	661	1880.0	19.81	21.68	22.50	22.89
	810	1909.8	20.33	22.20	23.02	23.41

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	29.93	28.72	27.74	26.86
	190	836.6	29.85	28.64	27.66	26.78
	251	848.8	29.67	28.46	27.48	26.60
PCS 1900	512	1850.2	27.80	26.59	25.61	24.73
	661	1880.0	28.12	26.91	25.93	25.05
	810	1909.8	28.79	27.58	26.60	25.72

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	20.90	22.70	23.48	23.85
	190	836.6	20.82	22.62	23.40	23.77
	251	848.8	20.64	22.44	23.22	23.59
PCS 1900	512	1850.2	18.77	20.57	21.35	21.72
	661	1880.0	19.09	20.89	21.67	22.04
	810	1909.8	19.76	21.56	22.34	22.71

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	18.60	13.95	13.97
	6	2437	18.47	15.06	15.07
	11	2462	18.56	14.21	14.05

6. Bluetooth peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)		
			GFSK	π/4-DQPSK	8-DPSK
BT	0	2402	6.13	5.29	5.31
	39	2441	5.64	5.00	5.06
	78	2480	6.64	5.45	5.60

10. TEST RESULTS LIST

Summary of Measurement Results (GSM 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	128	0.078	1.026	0.080
		Ear/Tilt		0.035		0.036
Left Side Of Head		Cheek/Touch		0.083		0.085
		Ear/Tilt		0.047		0.048
Body (10mm Separation)	GSM	Back upward		0.227		0.233
		Front upward		0.082		0.084
	GPRS	Back upward		0.374	1.014	0.379
		Front upward		0.190		0.193
		Edge A		0.071		0.072
		Edge B		0.058		0.059
	EDGE	Back upward		0.266	1.033	0.275

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	810	0.121	1.014	0.123
		Ear/Tilt		0.068		0.069
Left Side Of Head		Cheek/Touch		0.224		0.227
		Ear/Tilt		0.080		0.081
Body (10mm Separation)	GSM	Back upward		0.549		0.557
		Front upward		0.209		0.212
	GPRS	Back upward	512	0.754	1.211	0.913
			661	0.839	1.148	0.963
			810	1.030	1.019	1.050
		Front upward		0.670		0.683
		Edge A		0.704		0.717
		Edge B		0.426		0.434
	EDGE	Back upward		0.743	1.067	0.793

Note:

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

Band	Channel	Slots	Power level	Duty Cycle
GPRS850	128	4	5	1:2
EDGE850	128	4	5	1:2
GPRS1900	810	4	0	1:2
EDGE1900	810	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	0.058	1.005	0.058
	Ear/Tilt		0.027		0.027
Left Side Of Head	Cheek/Touch		0.040		0.040
	Ear/Tilt		0.022		0.022
Body (10mm Separation)	Back upward		0.129		0.130
	Front upward		0.103		0.104
	Edge A		0.044		0.044
	Edge B		0.024		0.024

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	0.148	1.047	0.155
	Ear/Tilt		0.087		0.091
Left Side Of Head	Cheek/Touch		0.236		0.247
	Ear/Tilt		0.101		0.106
Body (10mm Separation)	Back upward		0.606		0.634
	Front upward		0.630		0.660
	Edge A		0.652		0.683
	Edge B		0.327		0.342

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	0.530	1.023	0.542
	Ear/Tilt		0.317		0.324
Left Side Of Head	Cheek/Touch		0.237		0.242
	Ear/Tilt		0.173		0.177
Body (10mm Separation)	Back upward		0.104		0.106
	Front upward		0.110		0.113
	Edge B		0.006		0.006
	Edge C		0.056		0.057

Note:

1. 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

2. The WCDMA mode is test with 12.2kbps RMC and TPC set to all "1", if maximum SAR for 12.2kbps RMC is ≤ 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.

3. BT&wifi SAR test is conducted according to section 12 stand-alone SAR evaluation of this report.

4. 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.

5. Scaling Factor calculation

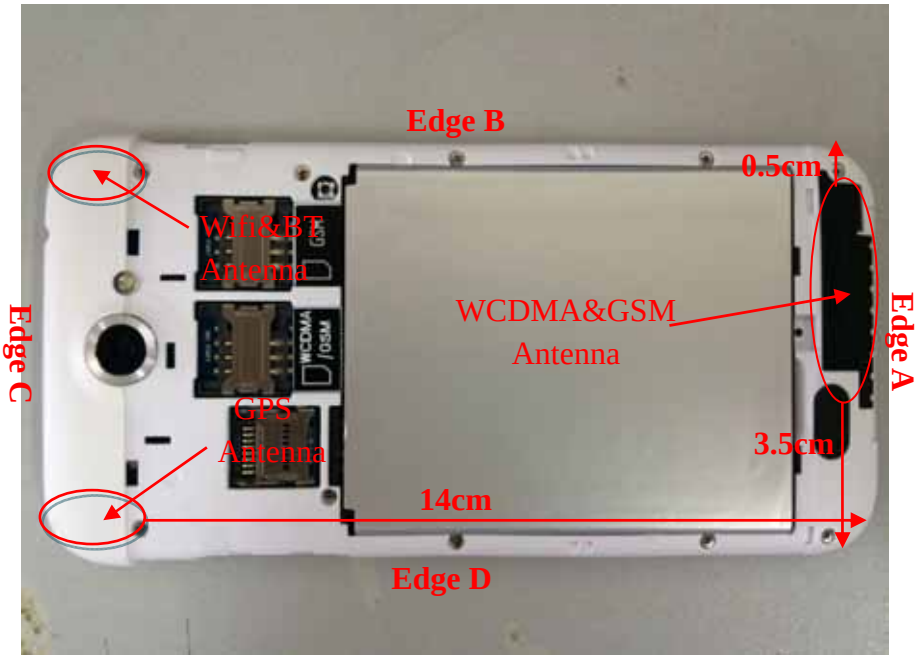
Band	Tune-up power tolerance (dBm)	SAR test channel Power (dBm)	Scaling Factor
GSM 850	PCL = 5, PWR = 32.5+-0.5	32.89	1.026
GPRS 850	PCL = 5, PWR =29+-0.5(4 slots)	29.07	1.104
EDGE 850	PCL = 5, PWR =26.5+-0.5(4 slots)	26.86	1.033
PCS 1900	PCL = 0, PWR = 30.2+-0.5	30.64	1.014
GPRS 1900	PCL=0, PWR= 26+-0.5(4 slots)	25.67	1.211
		25.90	1.148
		26.42	1.019
EDGE 1900	PCL=0, PWR= 25.5+-0.5(4 slots)	25.72	1.067
WCDMA 850	Max output power =23(+0.5/-1)	23.48	1.005
WCDMA 1900	Max output power =23 (+0.5/-1)	23.30	1.047
802.11(2.4GHz)	Max output power =18.2+-0.5	18.60	1.023

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 mode that support wireless routing.

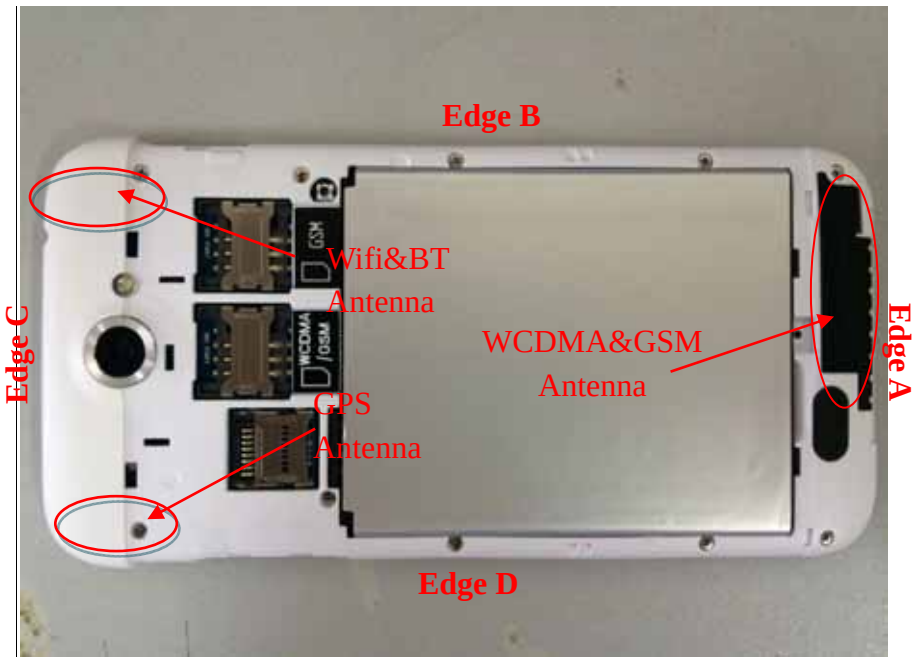
Edge configurations:



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**	No	No
WLAN&BT	**Yes**	**Yes**	No	**Yes**	**Yes**	No

12. MULTIPLE TRANSMITTERS EVALUATION

The are three transmitters build in EUT, as following:



Stand-alone SAR

Test distance: 5mm			
Band	**Highest power(mW) per tune up**	**1-g SAR test threshold**	**Test required?**
WIFI(2.4G)	74.13	[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] • [√f(GHz)] ≤ 3.0 for 1-g SAR	Yes
BT	5.01		No

Test distance: 10mm			
Band	**Highest power(mW) per tune up**	**1-g SAR test threshold**	**Test required?**
WIFI(2.4G)	74.13	[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] • [√f(GHz)] ≤ 3.0 for 1-g SAR	Yes
BT	5.01		No

According to the chart above, WIFI2.4G is required for Stand-alone SAR test, 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 and10mm.

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 BT stand-alone body SAR is not required, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
(*max. power of channel, including tune-up tolerance, mW*)/(*min. test separation distance, mm*)]·[√f(GHz)/*x*] W/kg for *test separation distances* ≤ 50 mm;
where *x* = 7.5 for 1-g SAR, and *x* = 18.75 for 10-g SAR.
(Max power= 5.01 mW ; *min. test separation distance*= 10mm for body; *f*=2.4GHz)
BT estimated Head SAR = 0.207W/Kg (1g); BT estimated Body SAR = 0.104W/Kg (1g)

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:
1. 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.
2. Supported for voice plus background data.
3. 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 ≤ 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)	∑1-g SARMax(W/Kg)	
				BT&Main Ant	WiFi&Main Ant
Head SAR	0.247	0.207	0.542	0.454	0.789
Body SAR	1.050	0.104	0.121	1.154	1.171

Simultaneous Transmission SAR evaluation is not required for Wifi and WCDMA&GSM, because the sum of 1g SARMax is **1.171**W/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 **1.154**W/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
GSM850	Measurement 1: Right Head with Cheek device position on Low Channel in GSM mode Measurement 2: Right Head with Tilt device position on Low Channel in GSM mode Measurement 3: Left Head with Cheek device position on Low Channel in GSM mode Measurement 4: Left Head with Tilt device position on Low Channel in GSM mode Measurement 5: Flat Plane with Body device position on Low Channel in GSM mode Measurement 6: Flat Plane with Body device position on Low Channel in GSM mode Measurement 7: Flat Plane with Body device position on Low Channel in GPRS mode Measurement 8: Flat Plane with Body device position on Low Channel in GPRS mode Measurement 9: Flat Plane with Body device position on Low Channel in GPRS mode Measurement 10: Flat Plane with Body device position on Low Channel in GPRS mode Measurement 11: Flat Plane with Body device position on Low Channel in EDGE mode
GSM1900	Measurement 12: Right Head with Cheek device position on High Channel in GSM mode Measurement 13: Right Head with Tilt device position on High Channel in GSM mode Measurement 14: Left Head with Cheek device position on High Channel in GSM mode Measurement 15: Left Head with Tilt device position on High Channel in GSM mode Measurement 16: Flat Plane with Body device position High Channel in GSM mode Measurement 17: Flat Plane with Body device position on High Channel in GSM mode Measurement 18: Flat Plane with Body device position on Low Channel in GPRS mode Measurement 19: Flat Plane with Body device position on Middle

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

	Channel in WCDMA mode Measurement 39: Flat Plane with Body device position on High Channel in WCDMA mode Measurement 40: Flat Plane with Body device position on High Channel in WCDMA mode
802.11b (2450)	Measurement 41: Right Head with Cheek device position on Low Channel in DSSS mode Measurement 42: Right Head with Tilt device position on Low Channel in DSSS mode Measurement 43: Left Head with Cheek device position on Low Channel in DSSS mode Measurement 44: Left Head with Tilt device position on Low Channel in DSSS mode Measurement 45: Flat Plane with Body device position on Low Channel in DSSS mode Measurement 46: Flat Plane with Body device position on Low Channel in DSSS mode Measurement 47: Flat Plane with Body device position on Low Channel in DSSS mode Measurement 48: Flat Plane with Body device position on Low Channel in DSSS 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: 2014.4.16

Measurement duration: 9 minutes 21 seconds

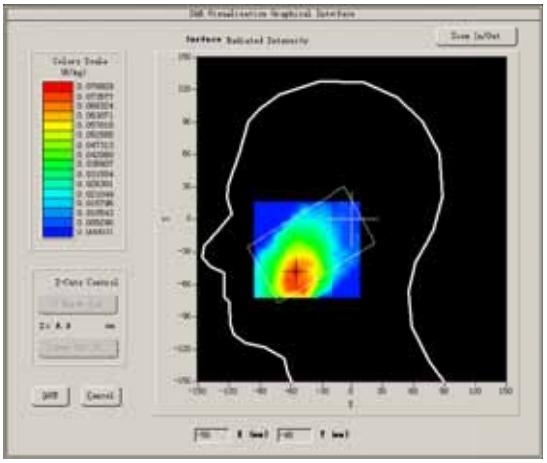
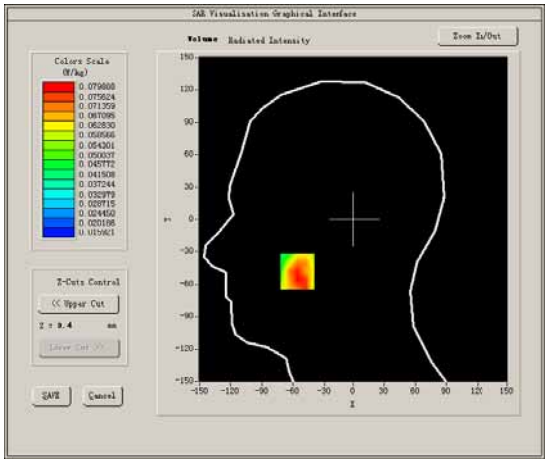
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 128):

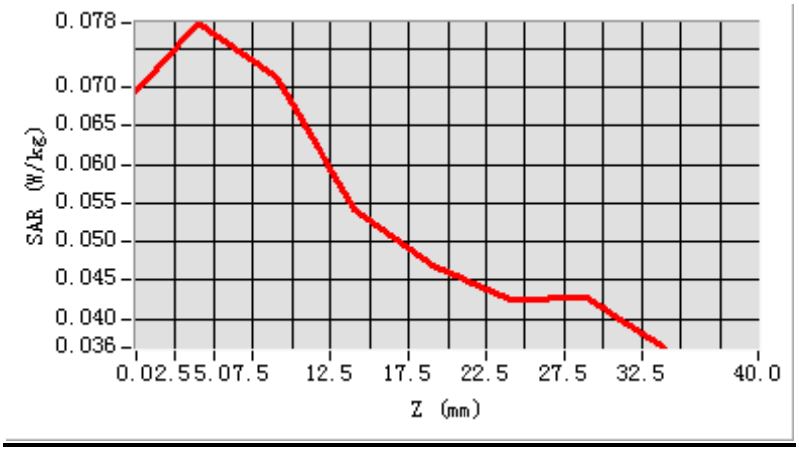
Frequency (MHz)	824.200000
Relative permittivity (real part)	41.254837
Conductivity (S/m)	0.875843
Power drift (%)	-2.210000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:8

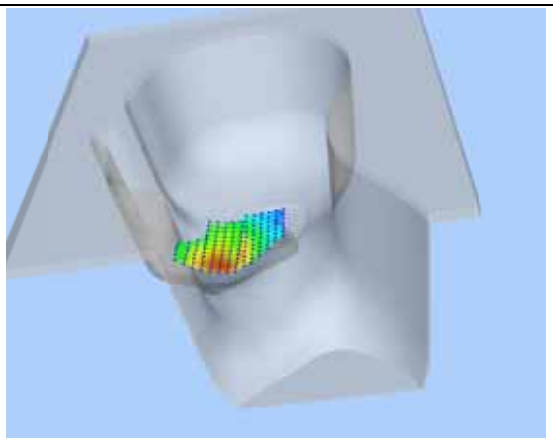
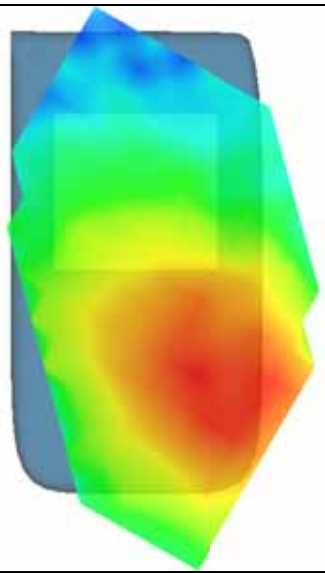
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-56.00, Y=-48.00
SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.061301
SAR 1g (W/Kg)	0.078176

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 8 minutes 27 seconds

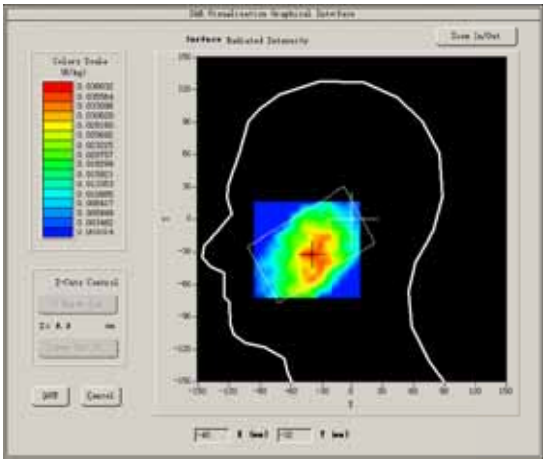
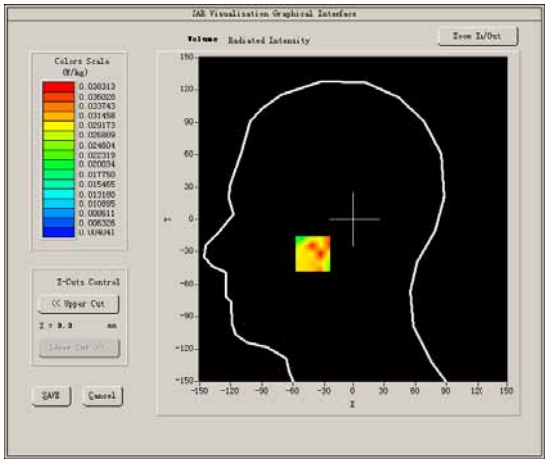
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 128):

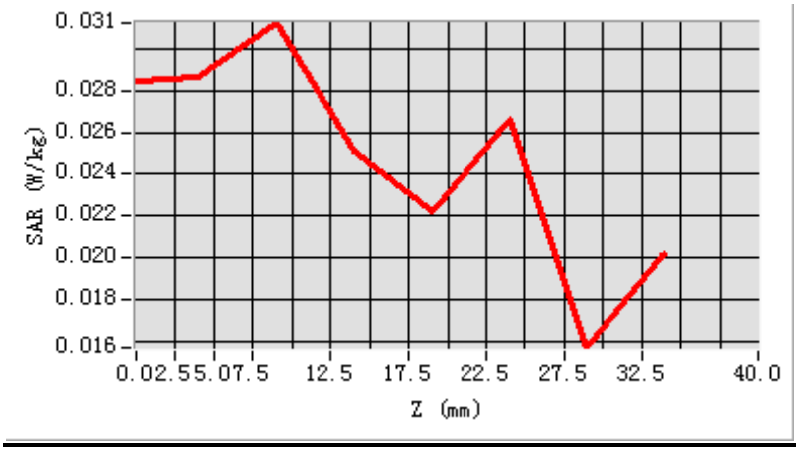
Frequency (MHz)	824.200000
Relative permittivity (real part)	41.254837
Conductivity (S/m)	0.875843
Power drift(%)	-2.050000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:8

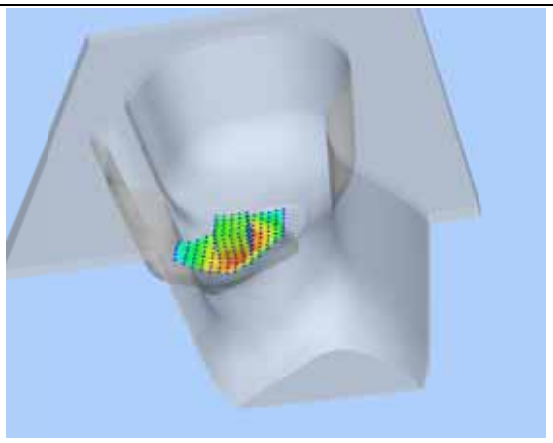
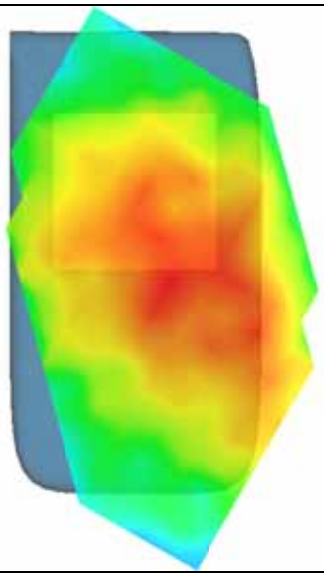
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-41.00, Y=-32.00
SAR Peak: 0.07 W/kg

SAR 10g (W/Kg)	0.027821
SAR 1g (W/Kg)	0.034573

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration:9 minutes 0 seconds

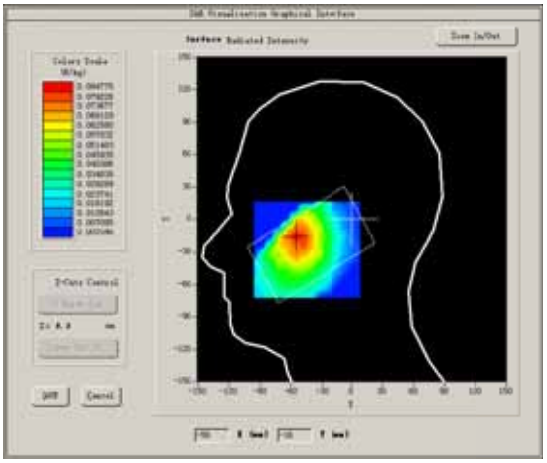
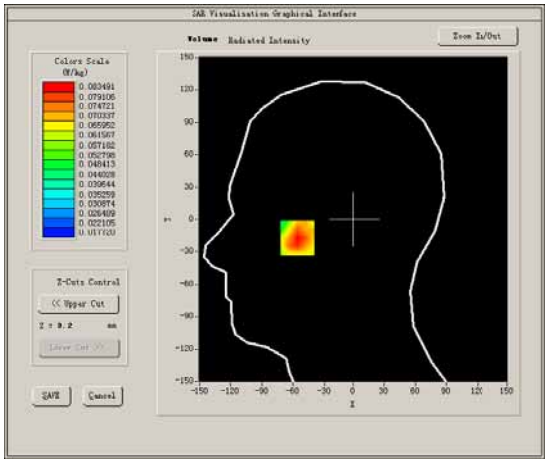
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 128):

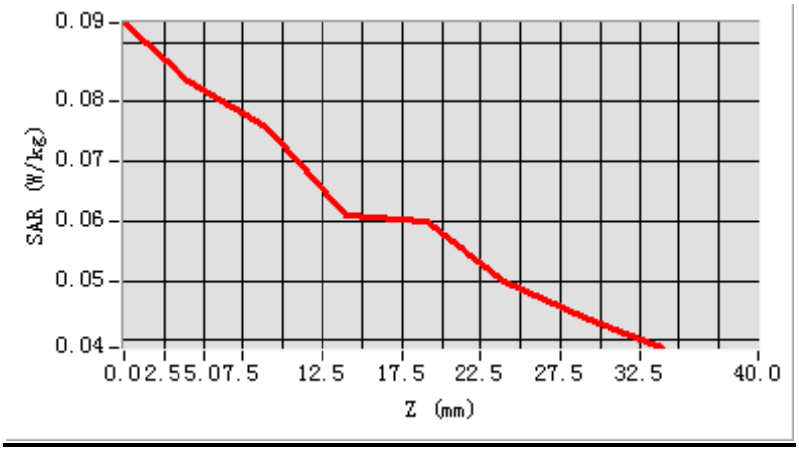
Frequency (MHz)	824.200000
Relative permittivity (real part)	41.254837
Conductivity (S/m)	0.875843
Power drift (%)	3.180000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:8

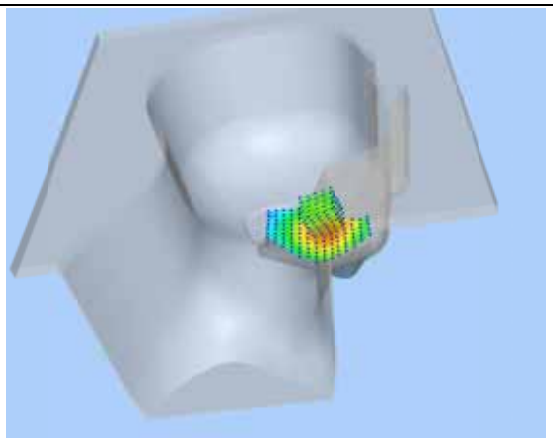
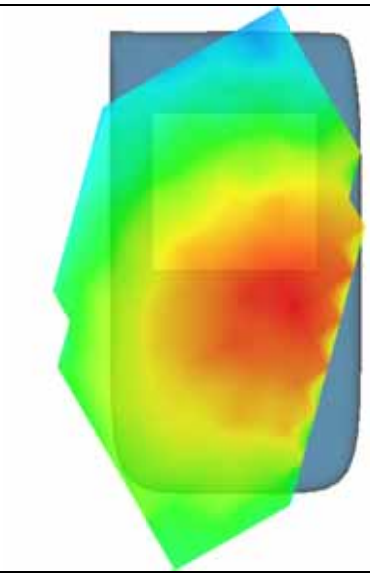
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-56.00, Y=-16.00
SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.064538
SAR 1g (W/Kg)	0.082603

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 8 minutes 7 seconds

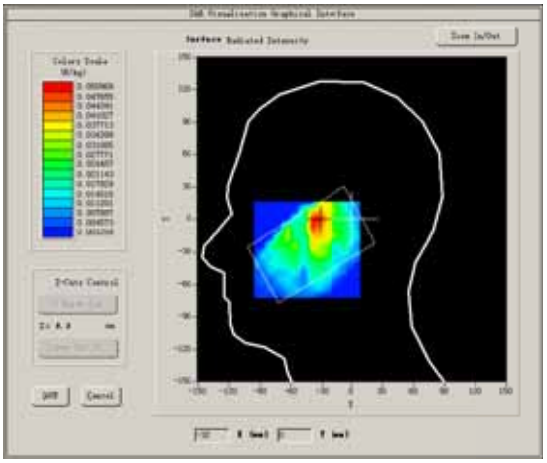
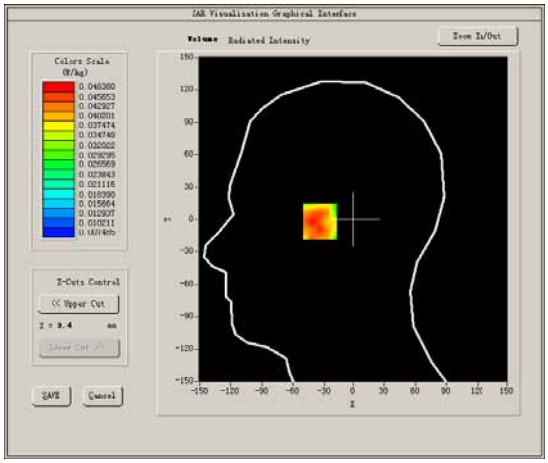
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 128):

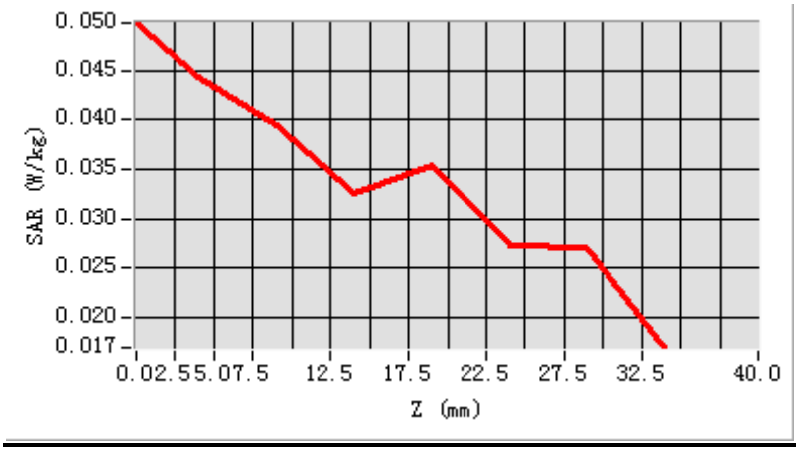
Frequency (MHz)	824.200000
Relative permittivity (real part)	41.254837
Conductivity (S/m)	0.875843
Power drift(%)	0.450000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:8

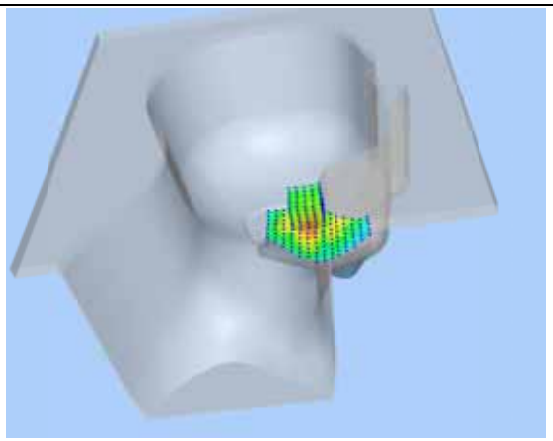
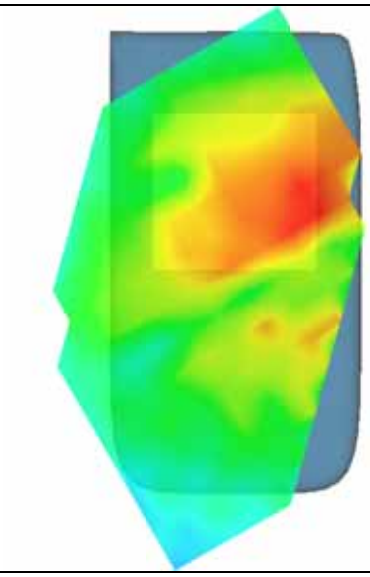
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-34.00, Y=0.00
SAR Peak: 0.07 W/kg

SAR 10g (W/Kg)	0.037857
SAR 1g (W/Kg)	0.047459

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 34 seconds

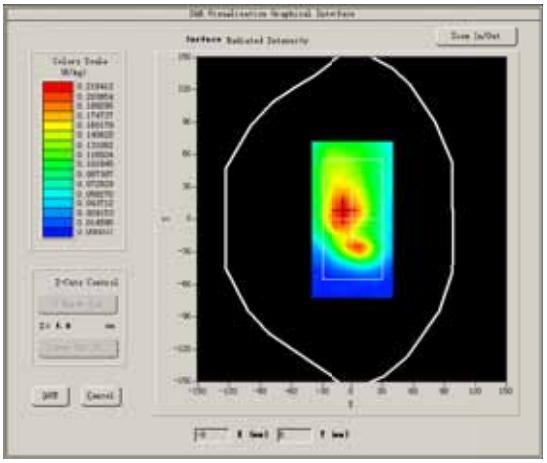
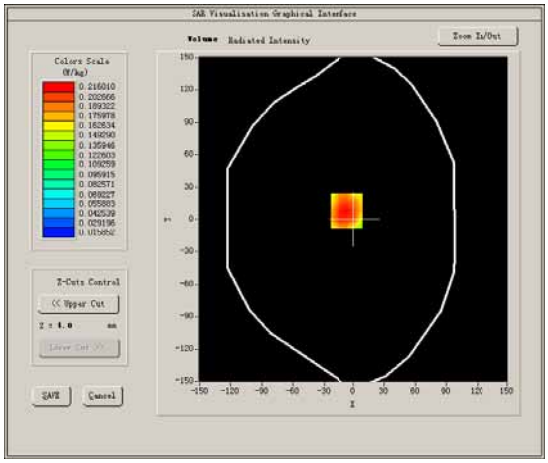
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	56.350478
Conductivity (S/m)	0.973341
Power drift (%)	-3.870000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:8

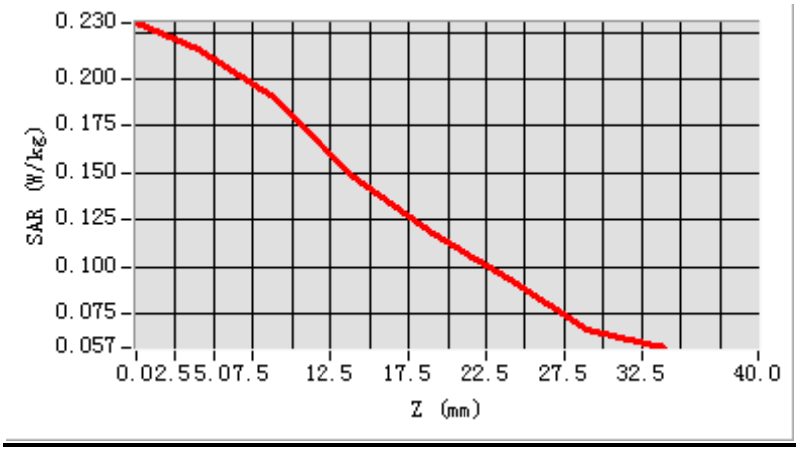
SURFACE SAR	VOLUME SAR
	

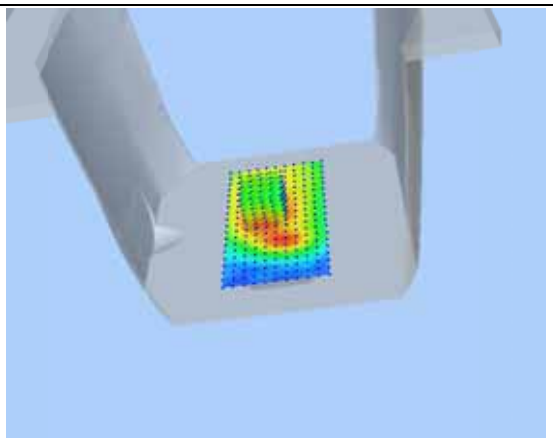
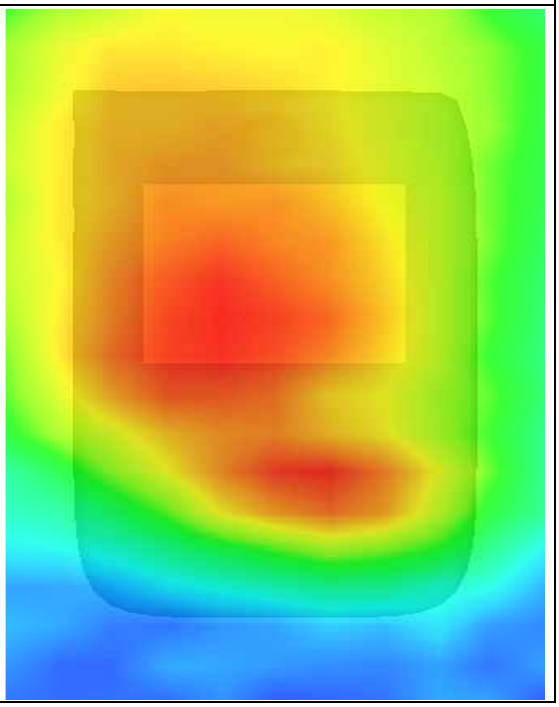
Maximum location: X=-7.00, Y=8.00

SAR Peak: 0.29 W/kg

SAR 10g (W/Kg)	0.173157
SAR 1g (W/Kg)	0.227416

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 33 seconds

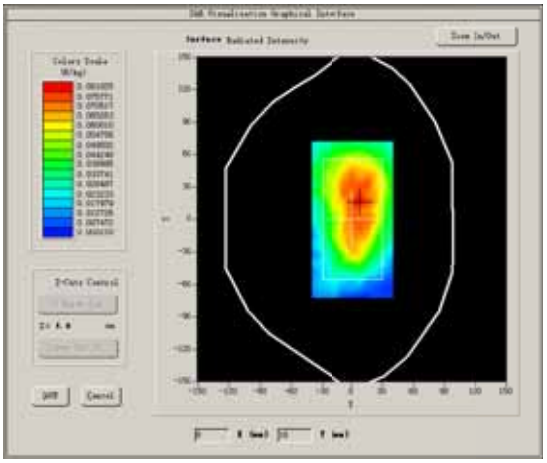
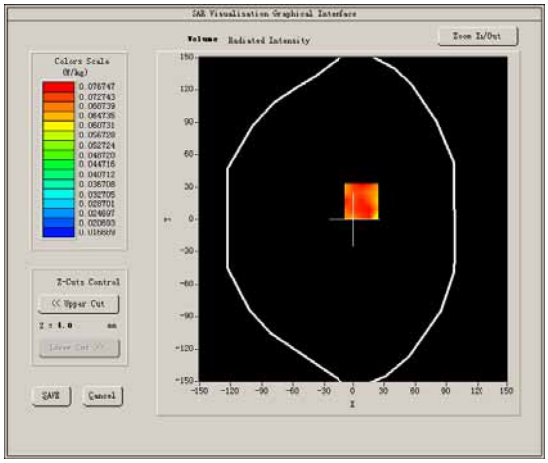
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	56.350478
Conductivity (S/m)	0.973341
Power drift(%)	0.190000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:8

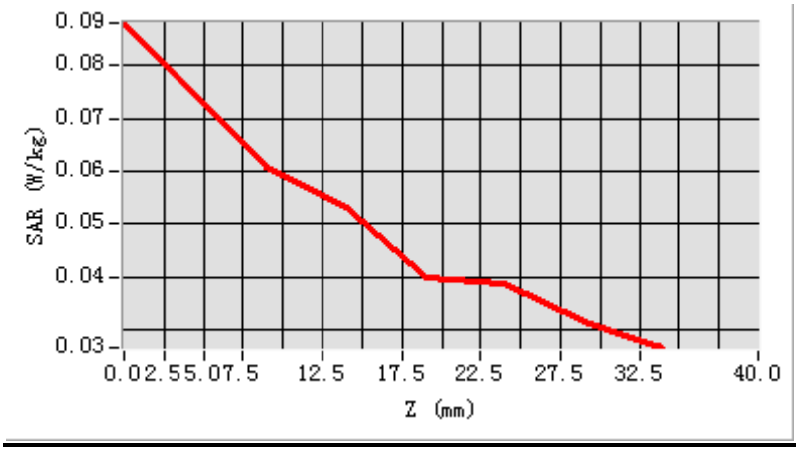
SURFACE SAR	VOLUME SAR
	

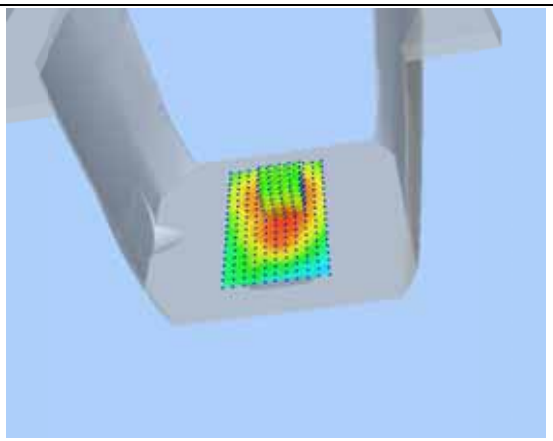
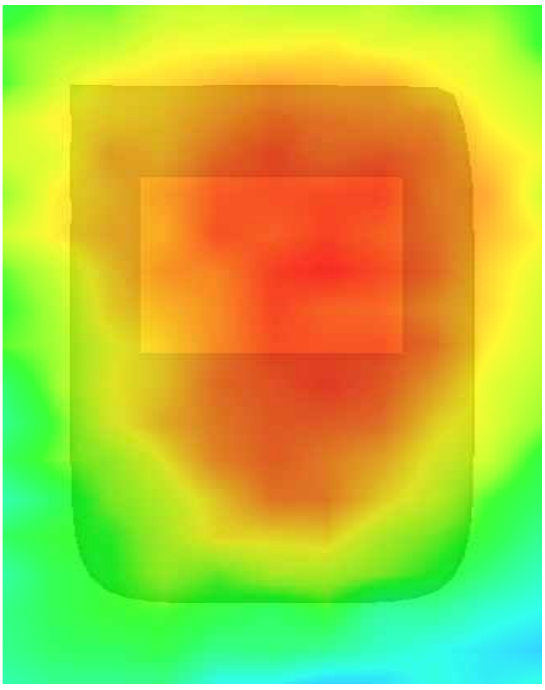
Maximum location: X=8.00, Y=17.00

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.063607
SAR 1g (W/Kg)	0.081523

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 34 seconds

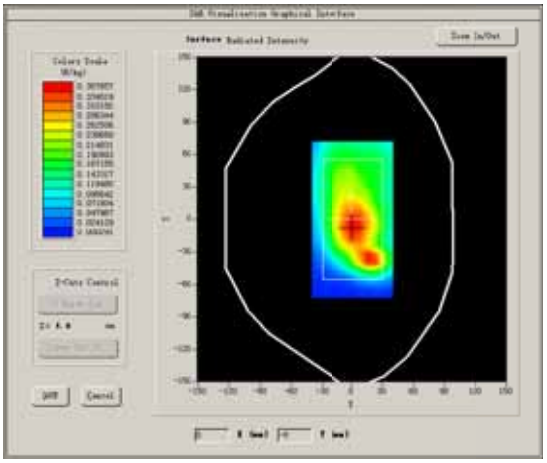
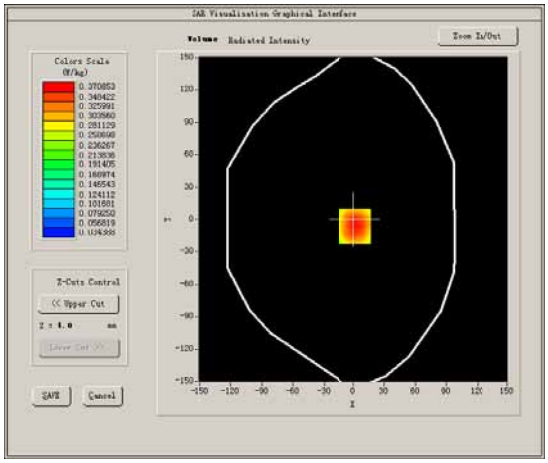
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	56.350478
Conductivity (S/m)	0.973341
Power drift(%)	-3.020000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

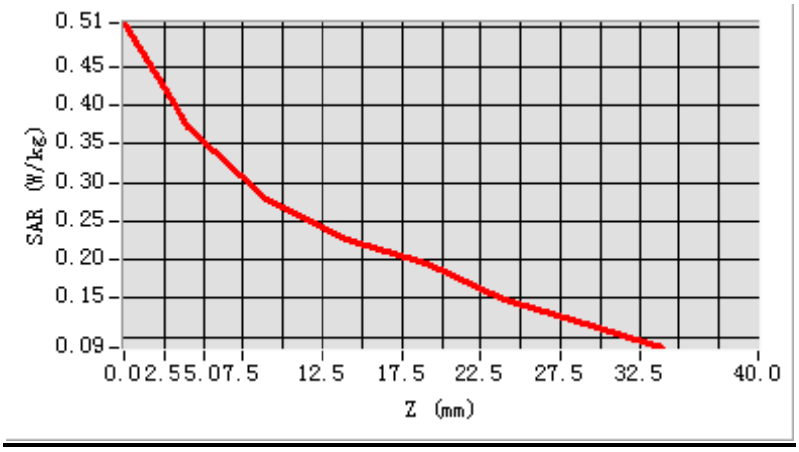
SURFACE SAR	VOLUME SAR
	

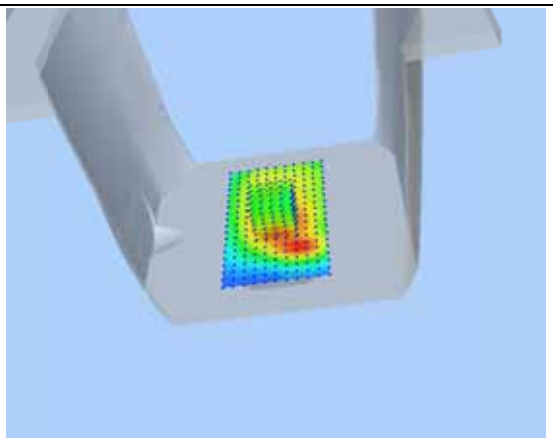
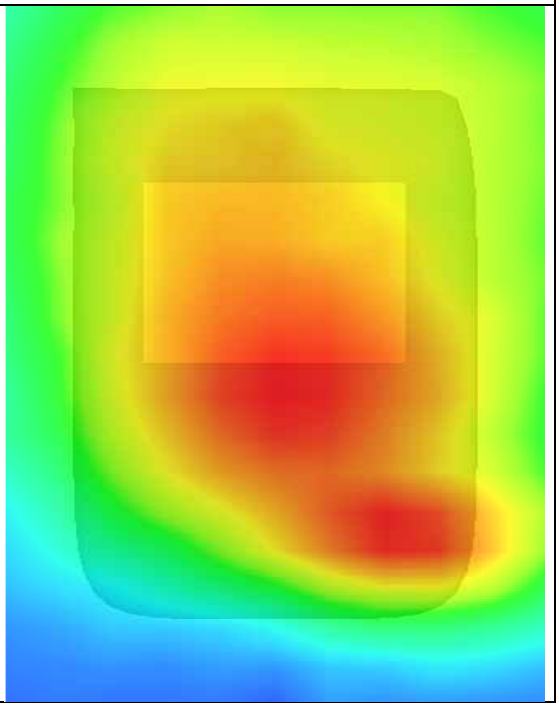
Maximum location: X=1.00, Y=-6.00

SAR Peak: 0.50 W/kg

SAR 10g (W/Kg)	0.270615
SAR 1g (W/Kg)	0.373731

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 40 seconds

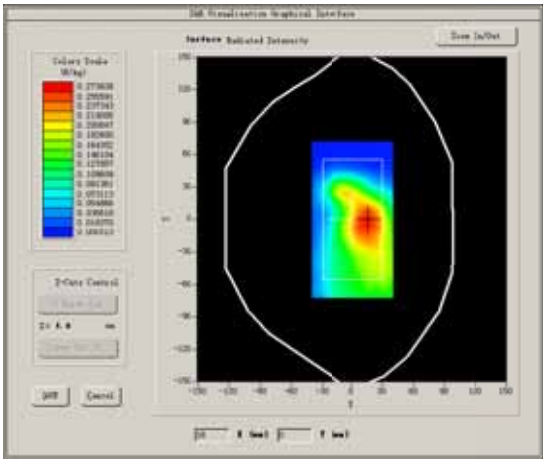
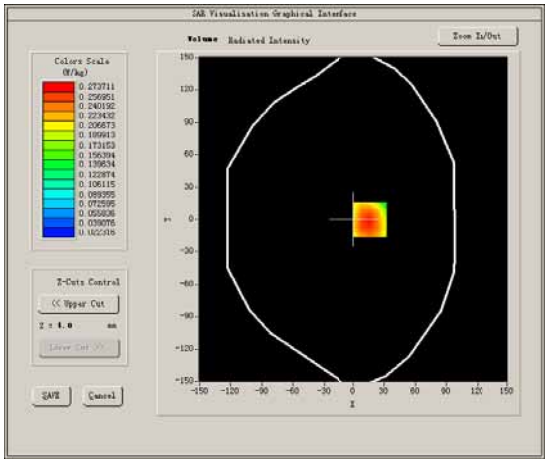
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	824.200000
Relative permittivity (real part)	56.350478
Conductivity (S/m)	0.973341
Power drift(%)	-2.000000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

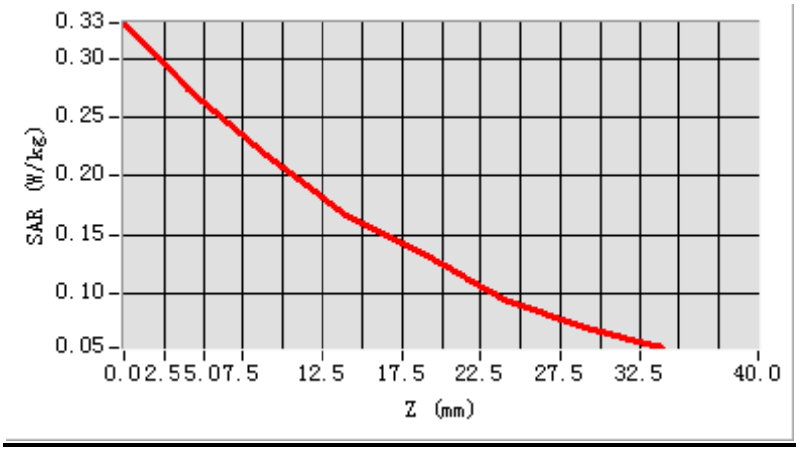
SURFACE SAR	VOLUME SAR
	

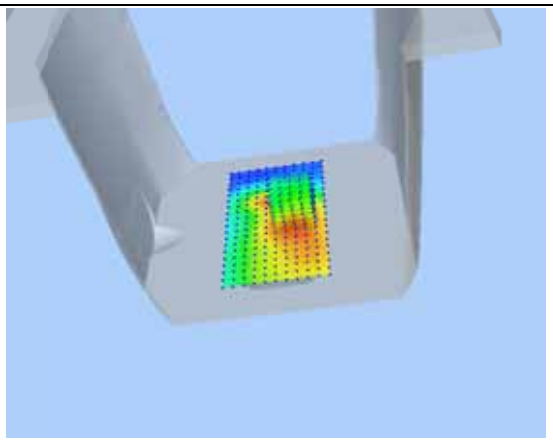
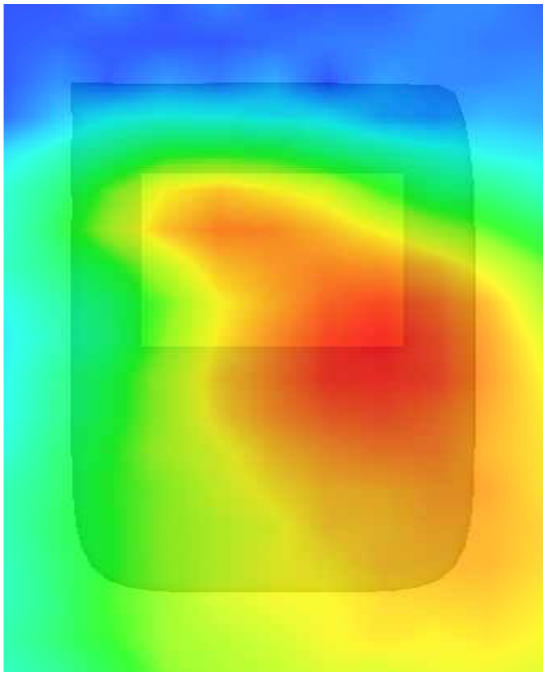
Maximum location: X=16.00, Y=0.00

SAR Peak: 0.33 W/kg

SAR 10g (W/Kg)	0.197462
SAR 1g (W/Kg)	0.266064

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 39 seconds

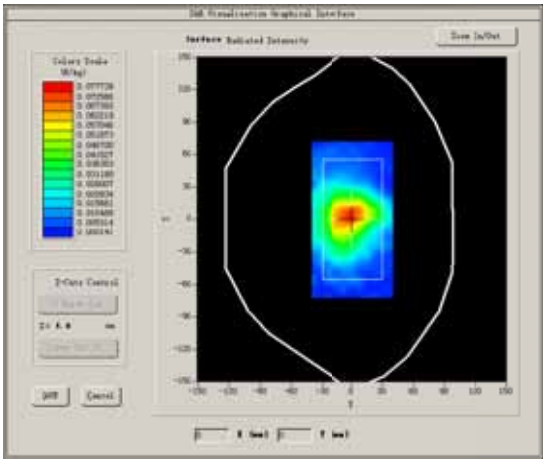
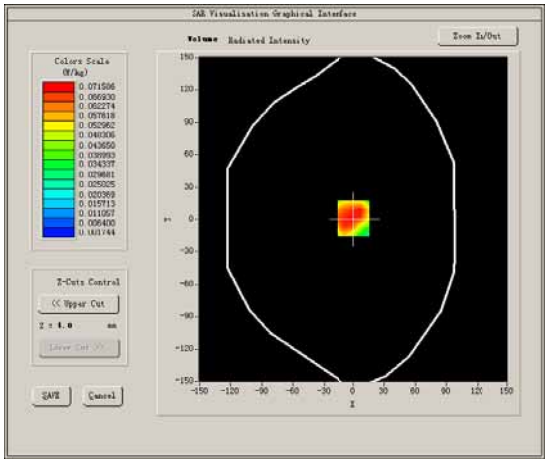
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 251):

Frequency (MHz)	824.200000
Relative permittivity (real part)	56.350478
Conductivity (S/m)	0.973341
Power drift(%)	-0.220000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

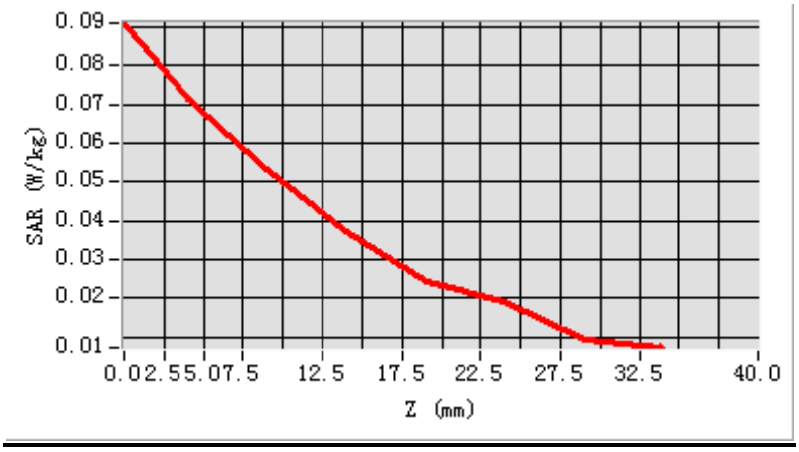
SURFACE SAR	VOLUME SAR
	

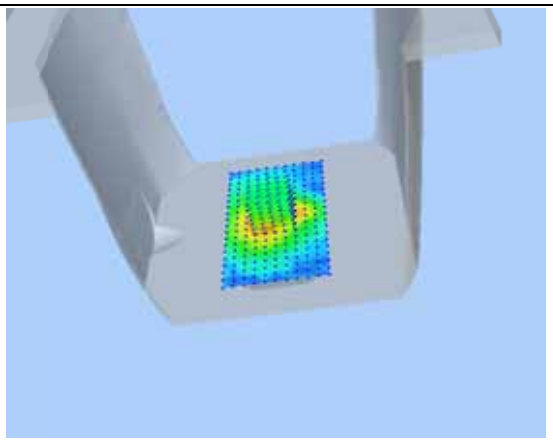
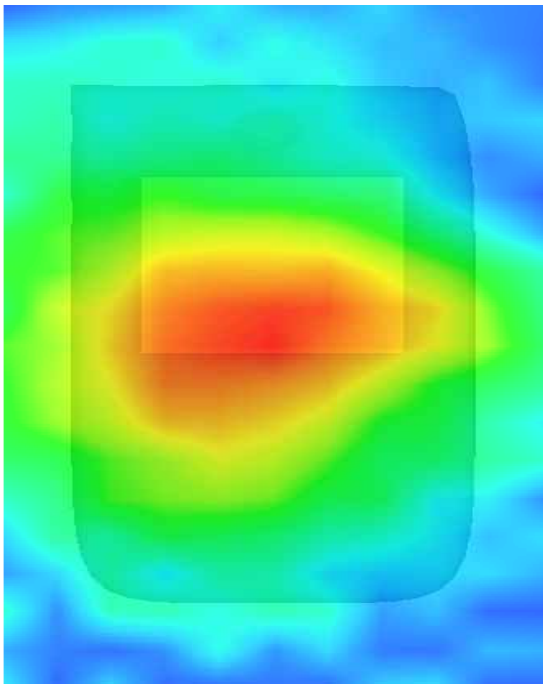
Maximum location: X=-1.00, Y=1.00

SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.045386
SAR 1g (W/Kg)	0.071062

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 38 seconds

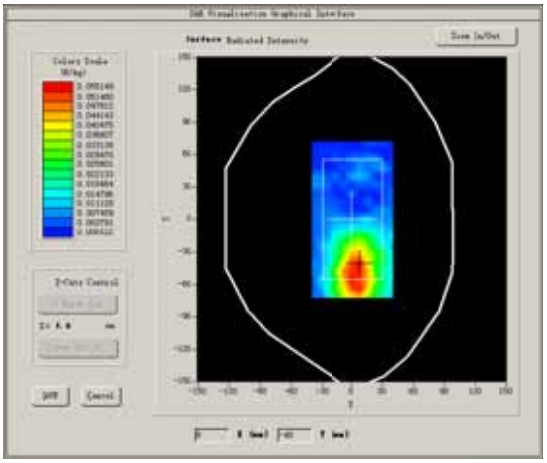
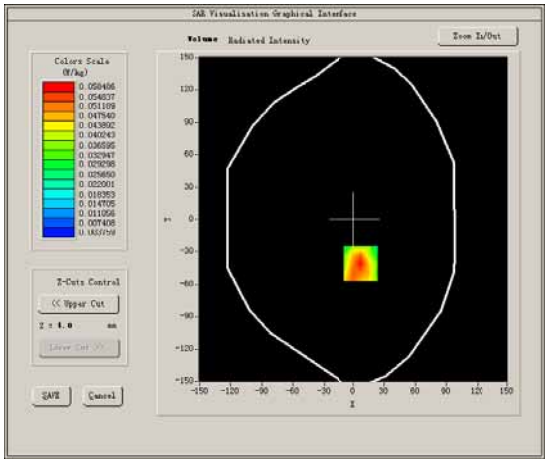
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 128):

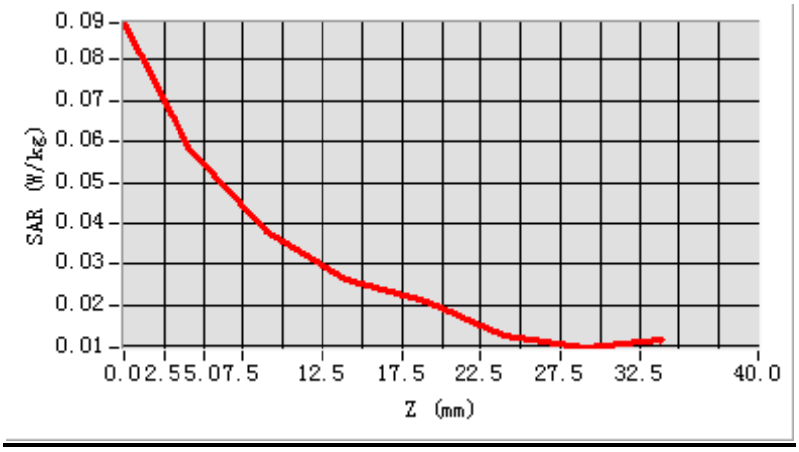
Frequency (MHz)	824.200000
Relative permittivity (real part)	56.350478
Conductivity (S/m)	0.973341
Power drift(%)	2.560000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

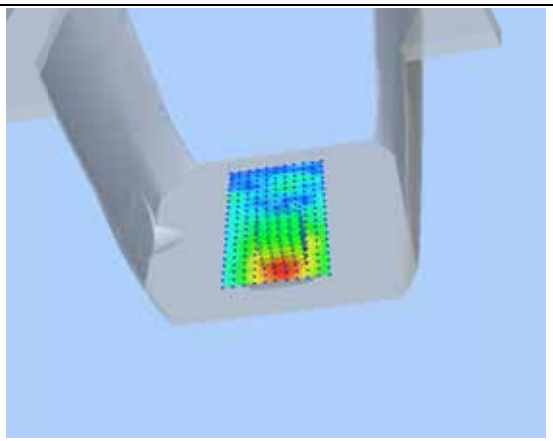
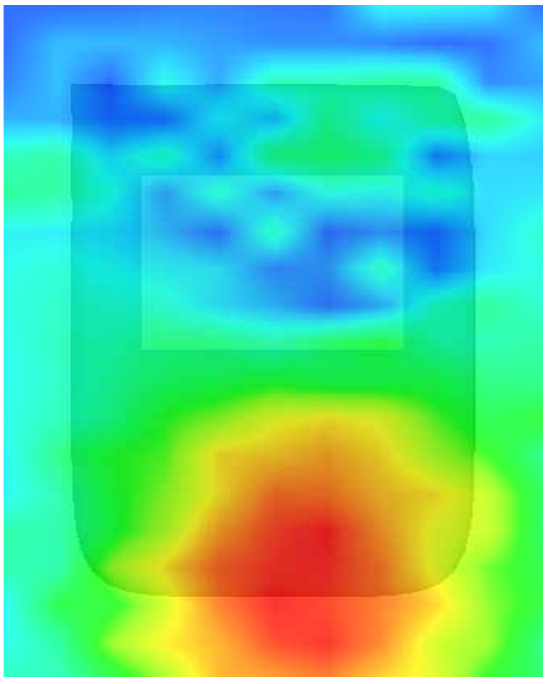
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=-41.00
SAR Peak: 0.10 W/kg

SAR 10g (W/Kg)	0.035817
SAR 1g (W/Kg)	0.058063

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 33 seconds

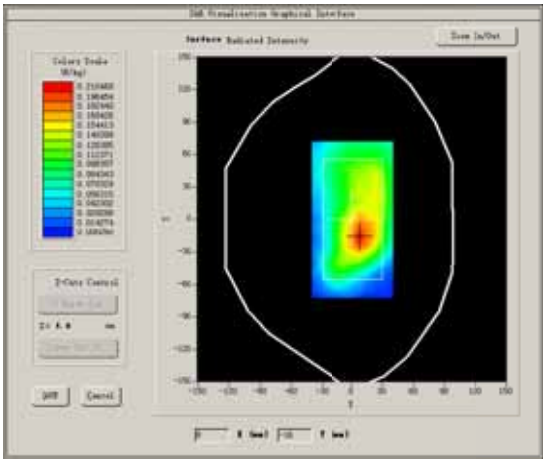
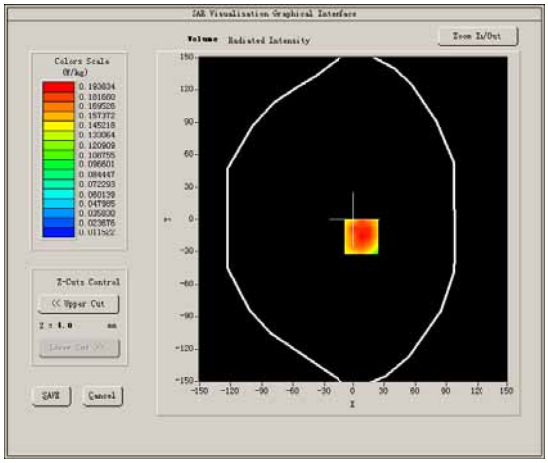
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	56.350478
Conductivity (S/m)	0.973341
Power drift(%)	-3.900000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

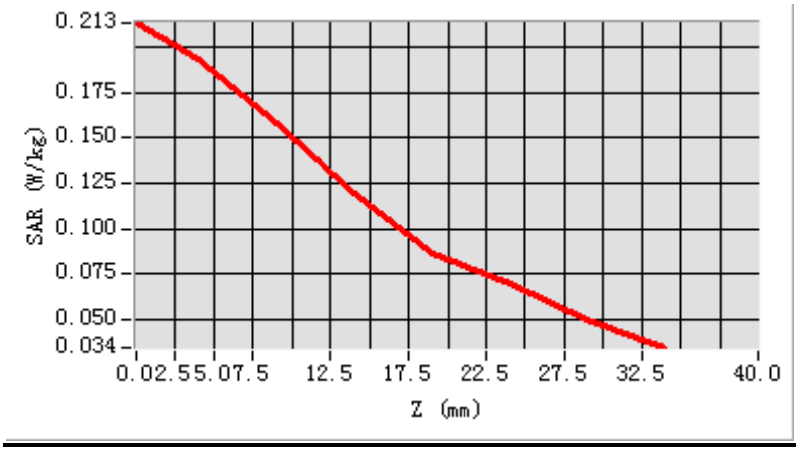
SURFACE SAR	VOLUME SAR
	

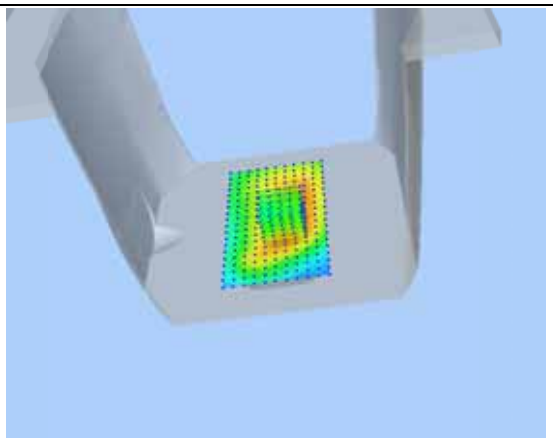
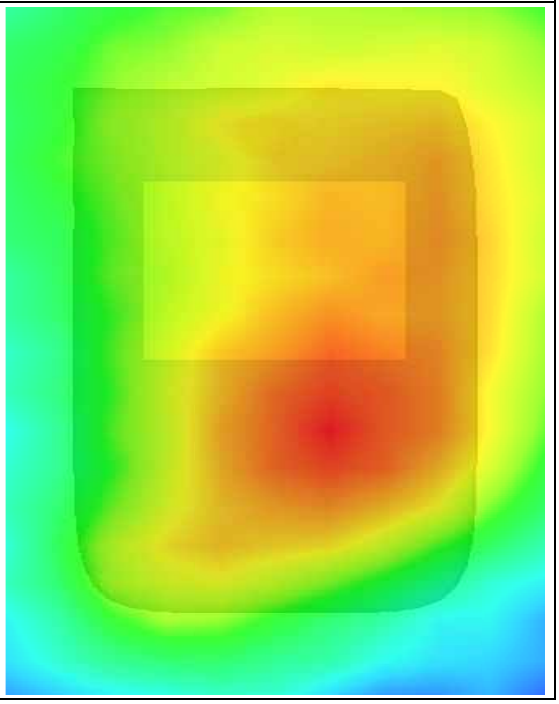
Maximum location: X=8.00, Y=-16.00

SAR Peak: 0.28 W/kg

SAR 10g (W/Kg)	0.142821
SAR 1g (W/Kg)	0.190115

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 10 minutes 27 seconds

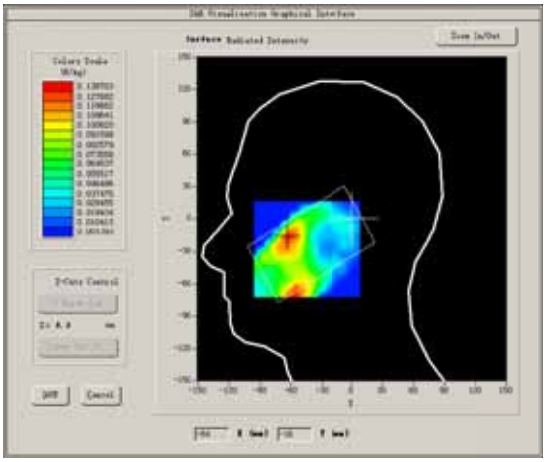
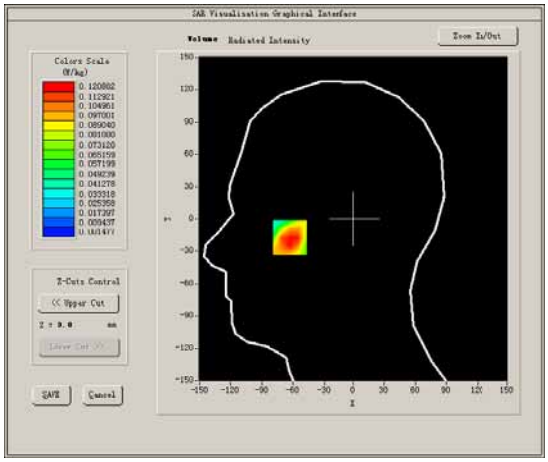
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	40.209571
Conductivity (S/m)	1.381448
Power drift(%)	1.030000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:8

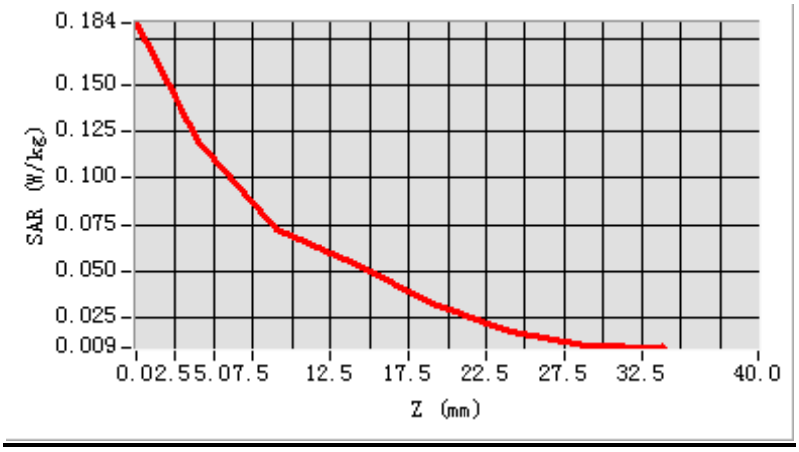
SURFACE SAR	VOLUME SAR
	

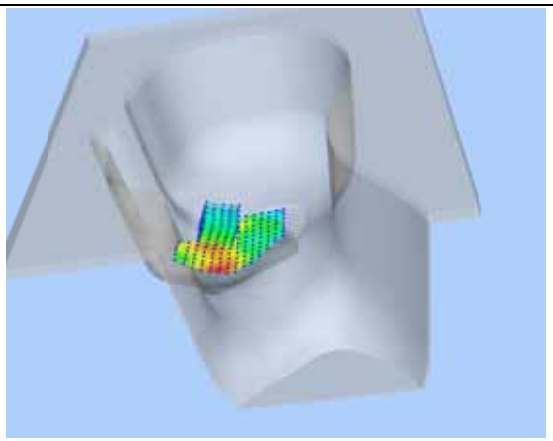
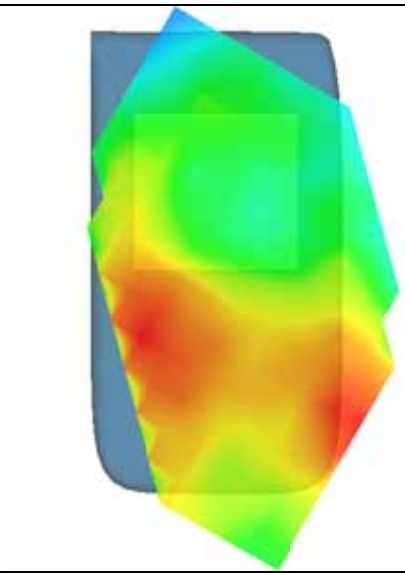
Maximum location: X=-63.00, Y=-16.00

SAR Peak: 0.20 W/kg

SAR 10g (W/Kg)	0.068998
SAR 1g (W/Kg)	0.121243

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 7 minutes 58 seconds

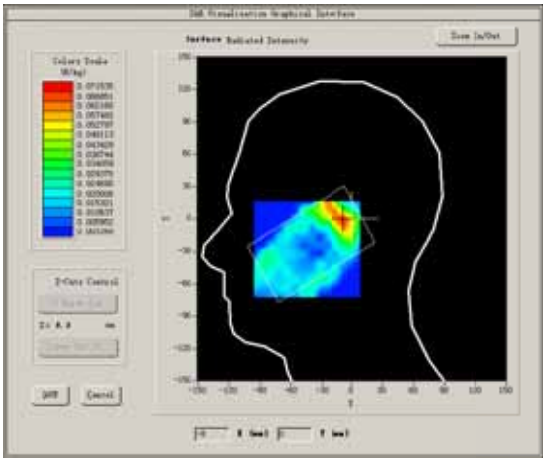
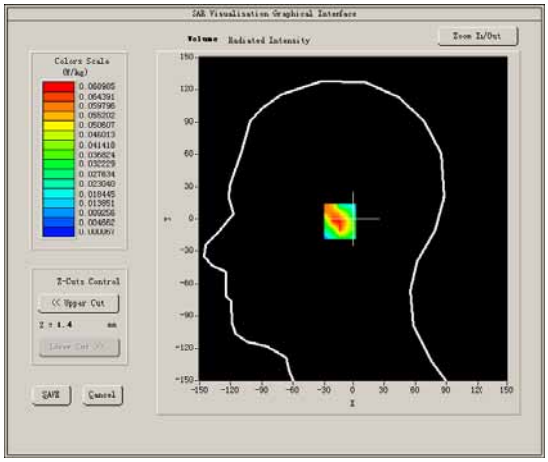
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

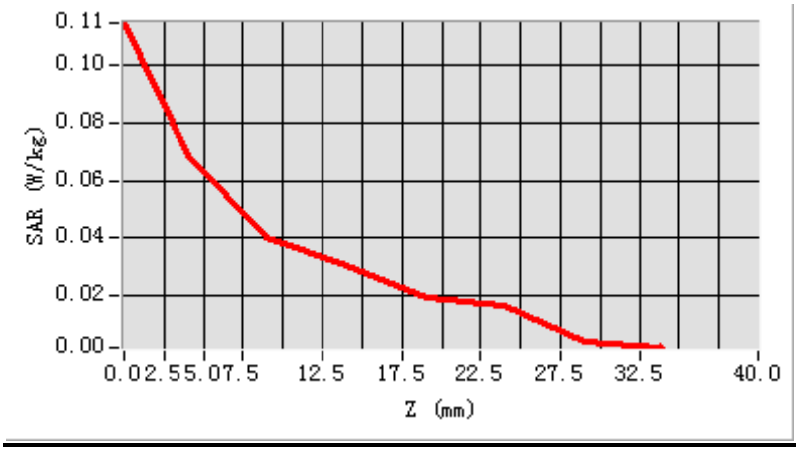
Frequency (MHz)	1909.800000
Relative permittivity (real part)	40.209571
Conductivity (S/m)	1.381448
Power drift(%)	2.000000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:8

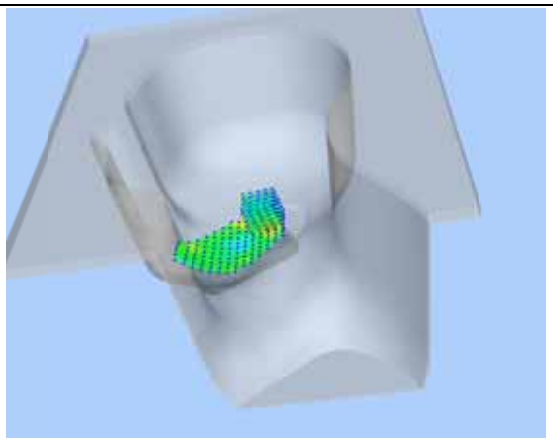
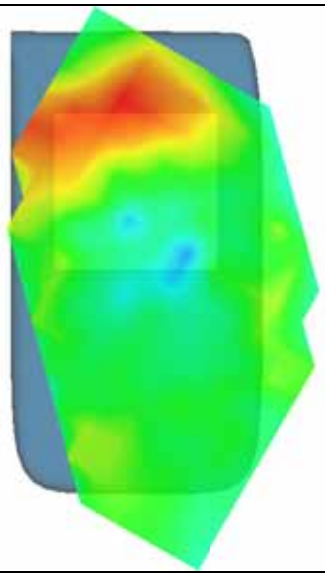
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=-2.00
SAR Peak: 0.11 W/kg

SAR 10g (W/Kg)	0.036138
SAR 1g (W/Kg)	0.067780

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 20 seconds

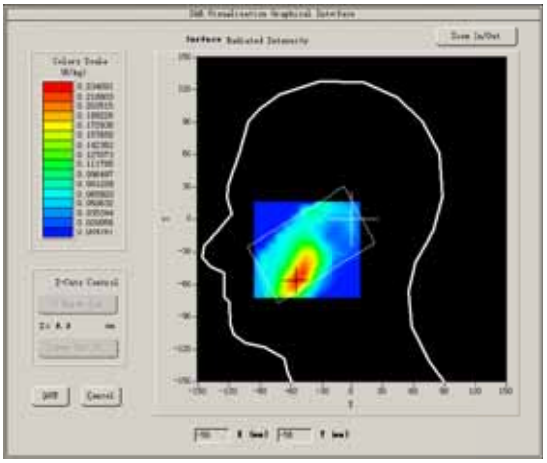
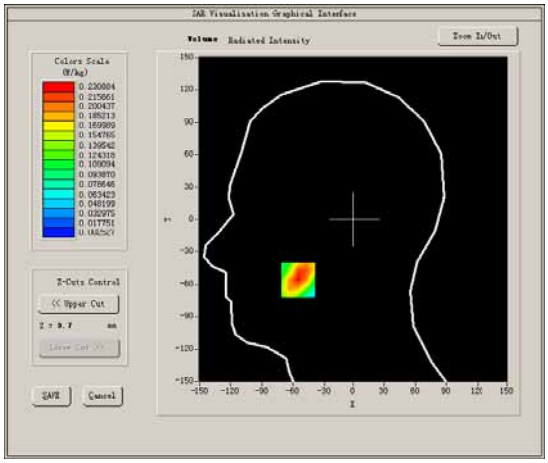
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	40.209571
Conductivity (S/m)	1.381448
Power drift(%)	2.650000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:8

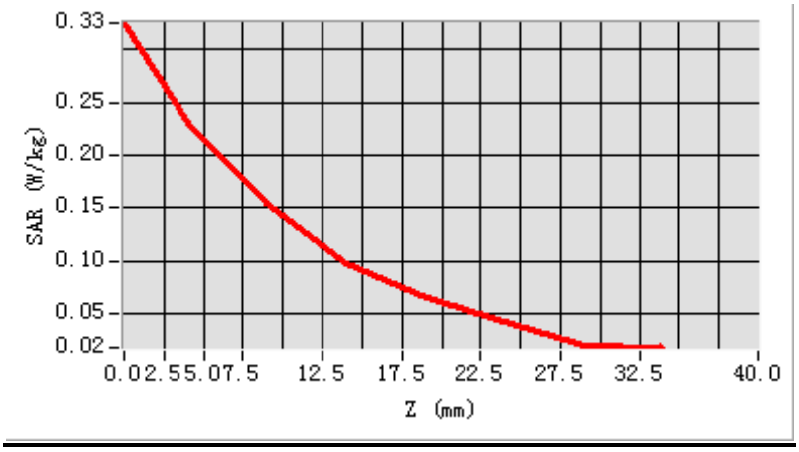
SURFACE SAR	VOLUME SAR
	

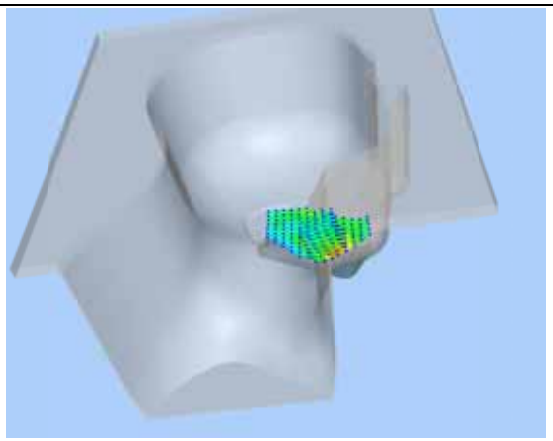
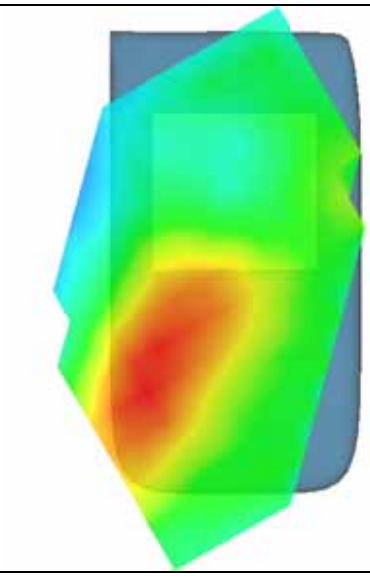
Maximum location: X=-55.00, Y=-56.00

SAR Peak: 0.35 W/kg

SAR 10g (W/Kg)	0.129612
SAR 1g (W/Kg)	0.223863

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 7 minutes 54 seconds

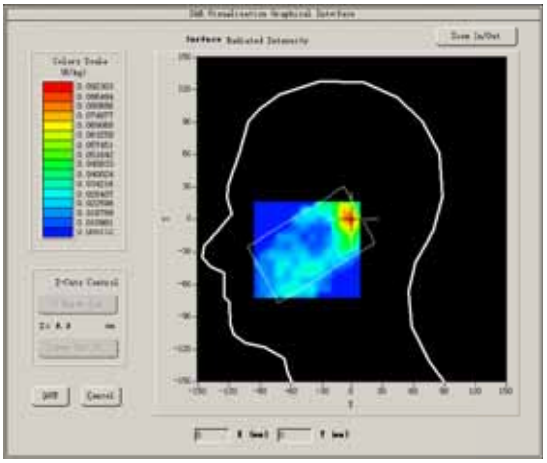
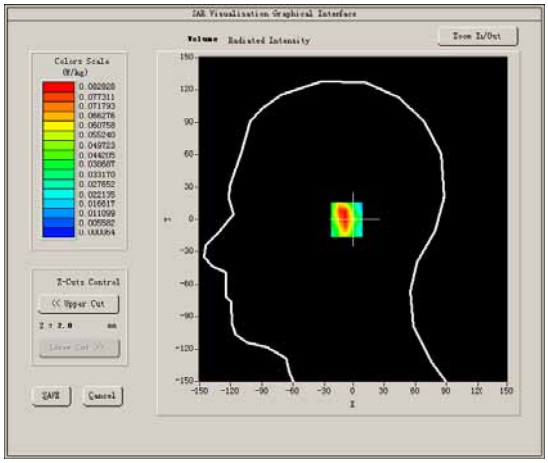
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	40.209571
Conductivity (S/m)	1.381448
Power drift(%)	-2.920000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:8

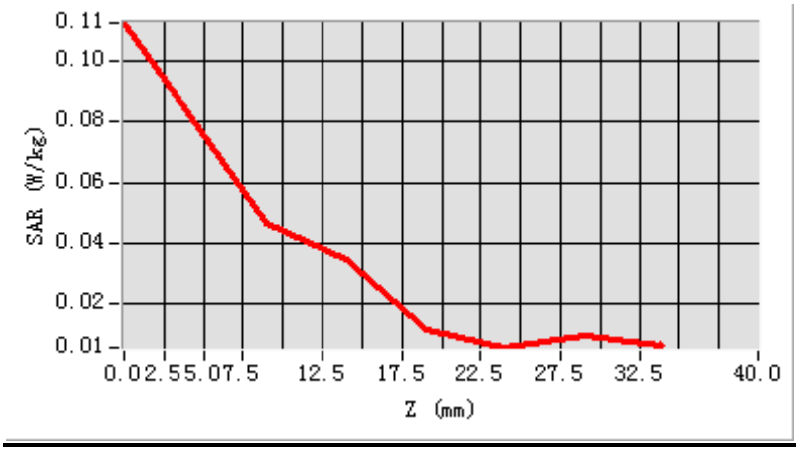
SURFACE SAR	VOLUME SAR
	

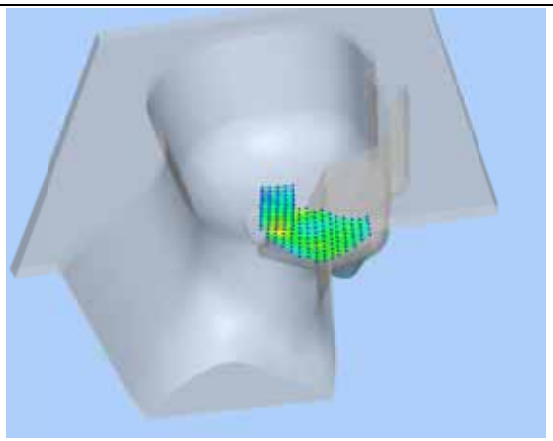
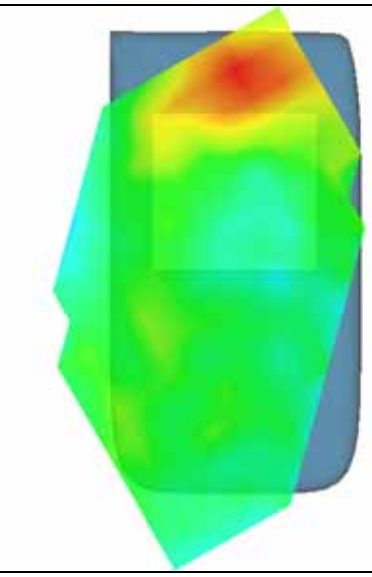
Maximum location: X=-1.00, Y=0.00

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	0.040416
SAR 1g (W/Kg)	0.080355

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 32 seconds

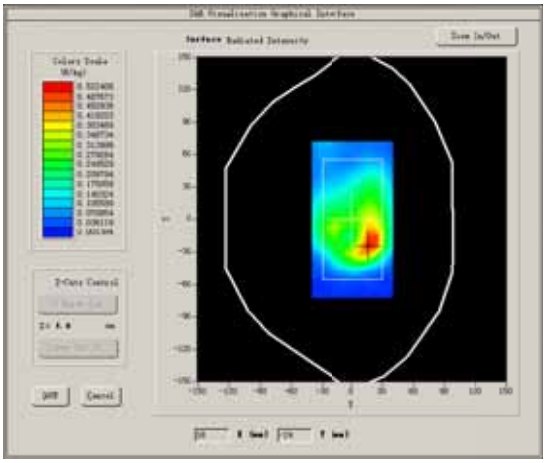
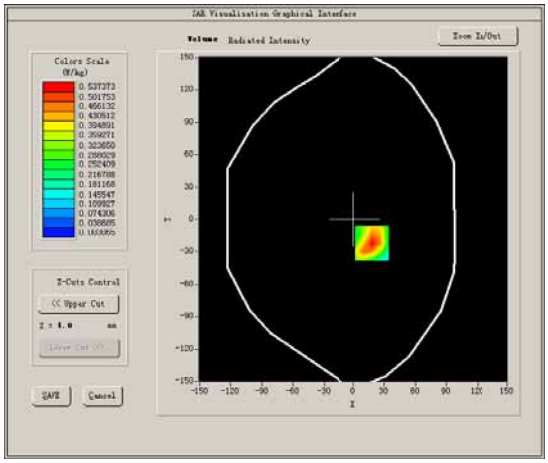
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift(%)	-3.220000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:8

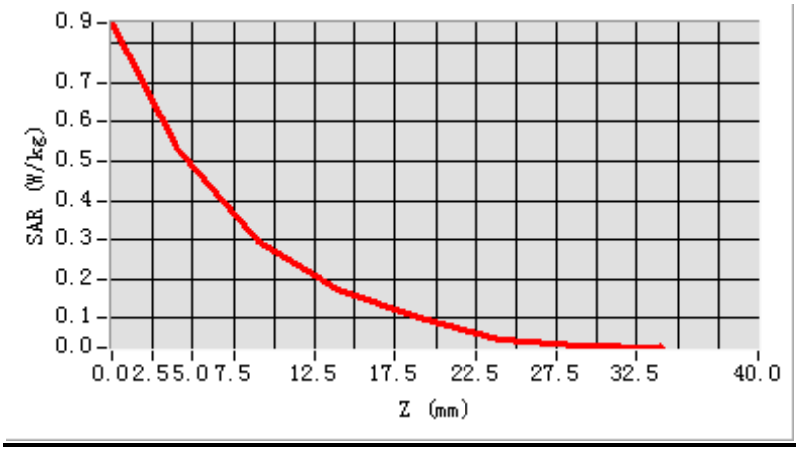
SURFACE SAR	VOLUME SAR
	

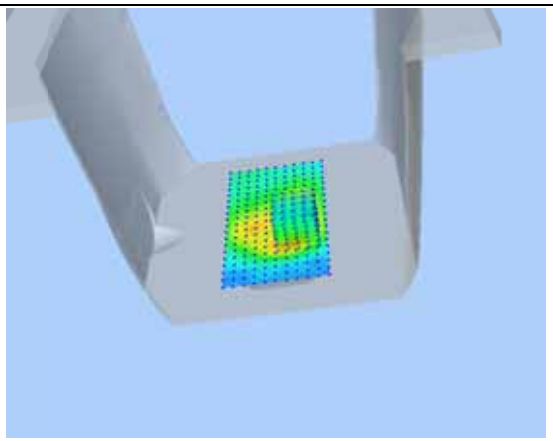
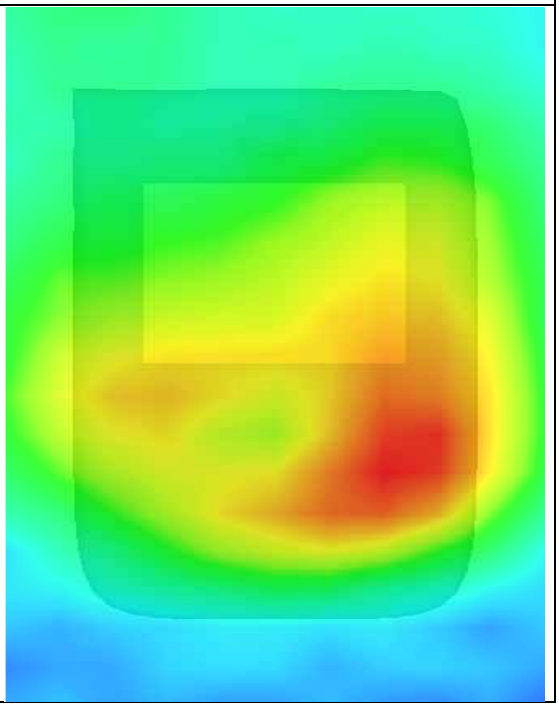
Maximum location: X=18.00, Y=-22.00

SAR Peak: 0.93 W/kg

SAR 10g (W/Kg)	0.287319
SAR 1g (W/Kg)	0.548894

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 30 seconds

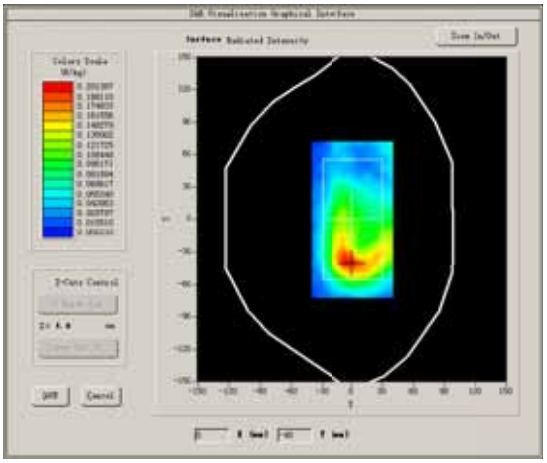
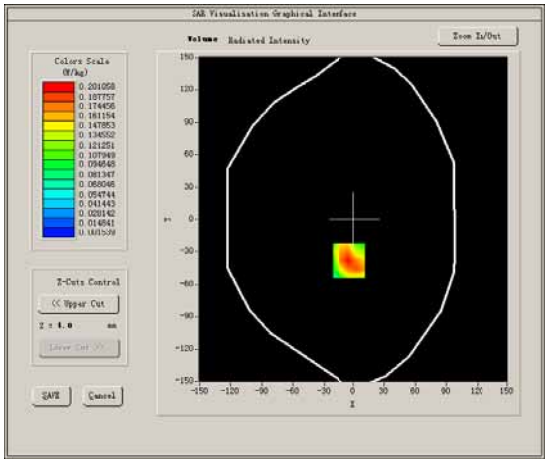
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift(%)	1.940000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:8

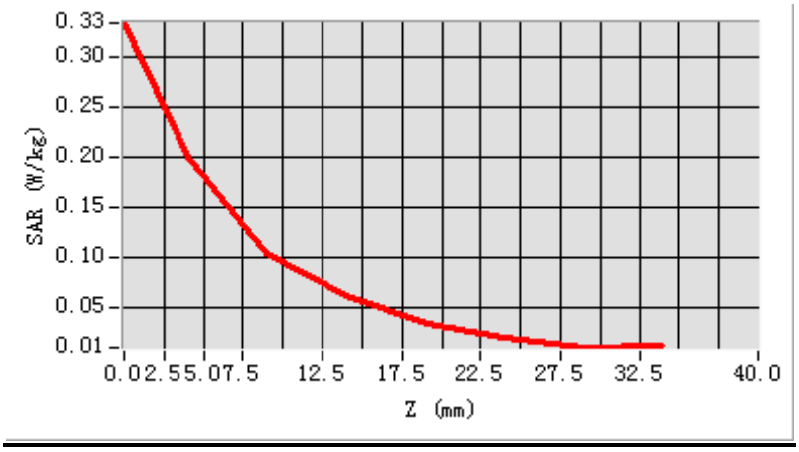
SURFACE SAR	VOLUME SAR
	

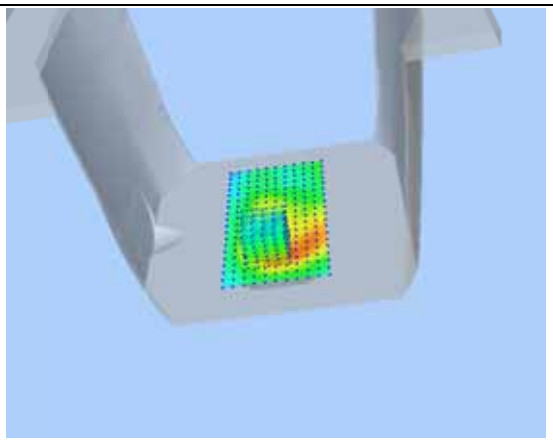
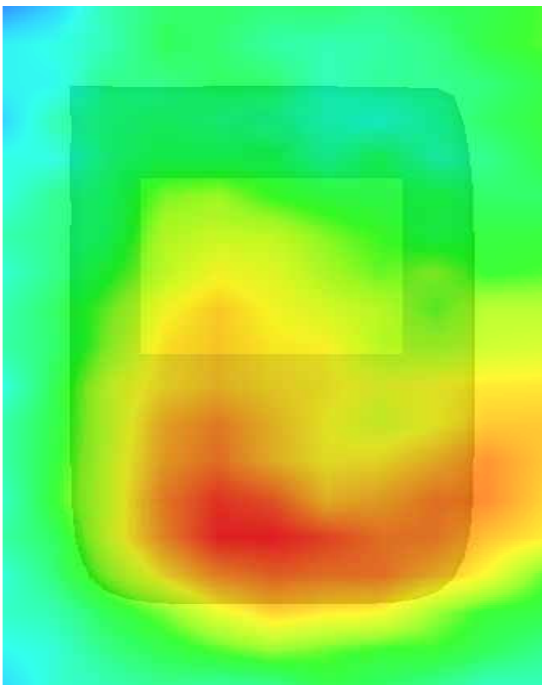
Maximum location: X=-5.00, Y=-38.00

SAR Peak: 0.36 W/kg

SAR 10g (W/Kg)	0.113188
SAR 1g (W/Kg)	0.208614

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 32 seconds

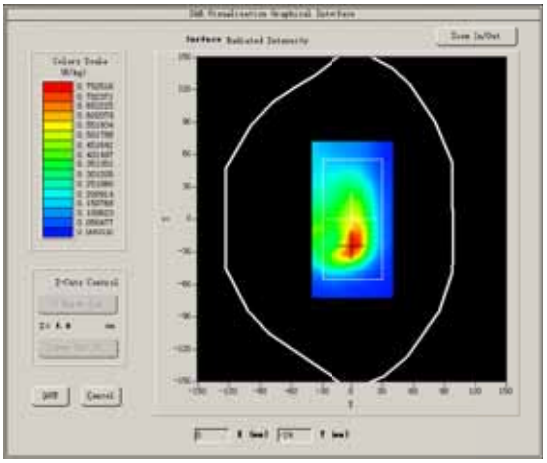
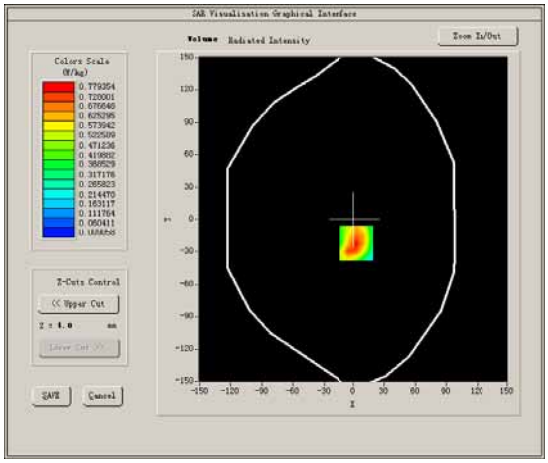
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift(%)	1.180000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

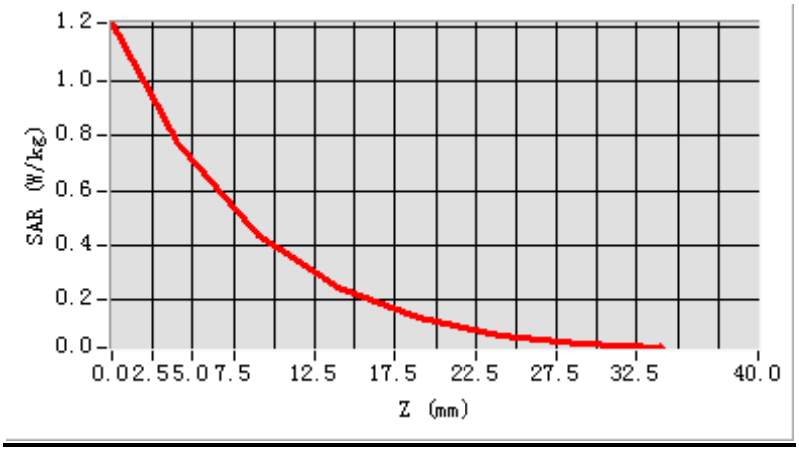
SURFACE SAR	VOLUME SAR
	

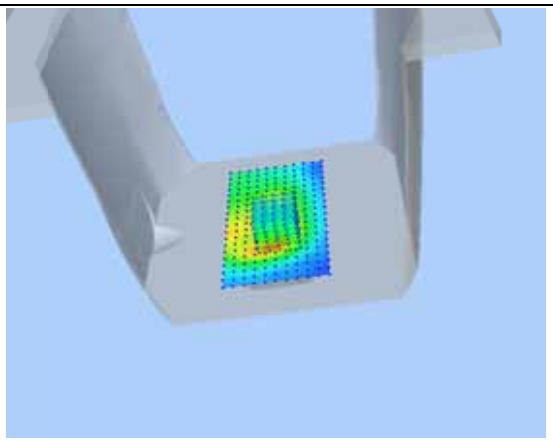
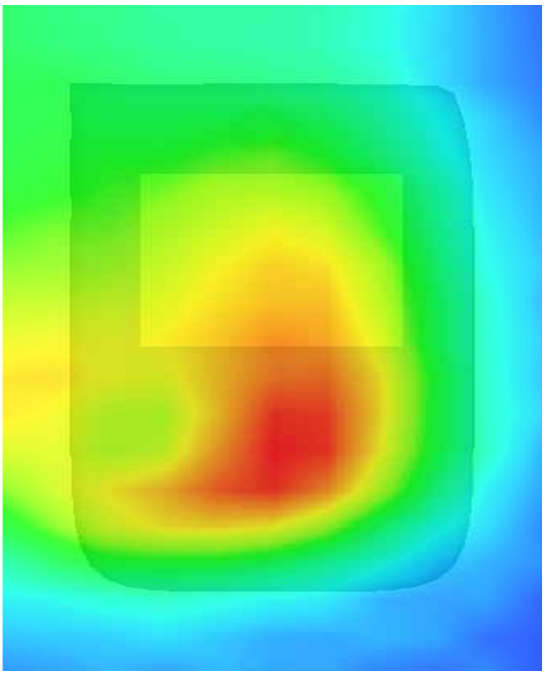
Maximum location: X=3.00, Y=-22.00

SAR Peak: 1.27 W/kg

SAR 10g (W/Kg)	0.386456
SAR 1g (W/Kg)	0.754090

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 33 seconds

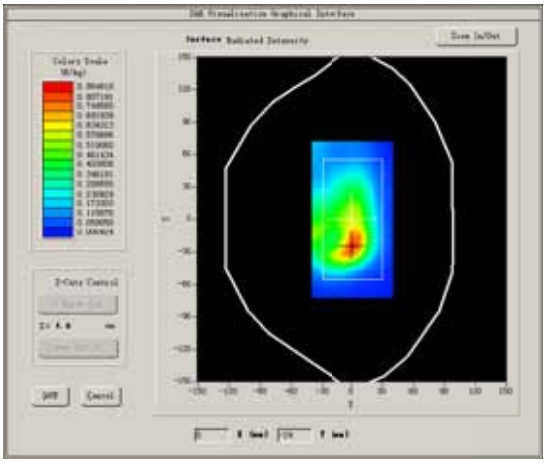
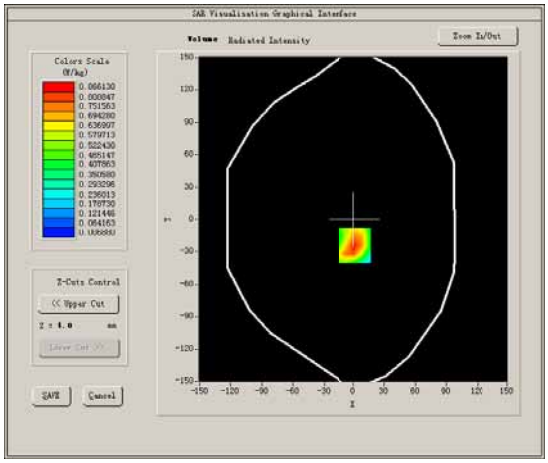
A. Experimental conditions.

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):

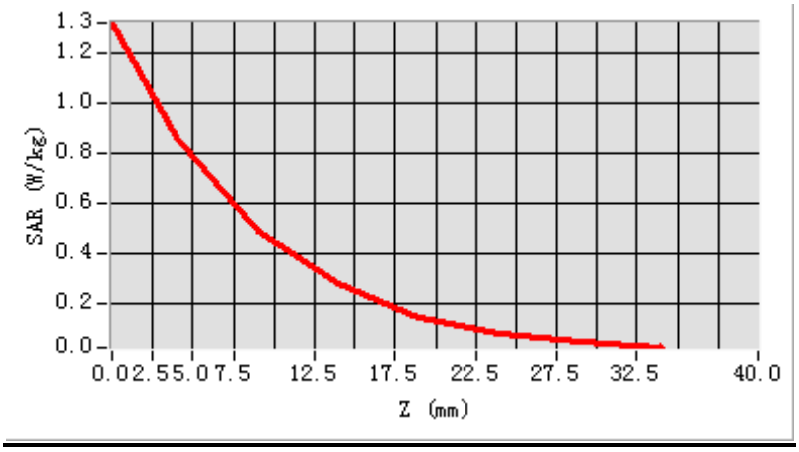
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift(%)	0.240000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

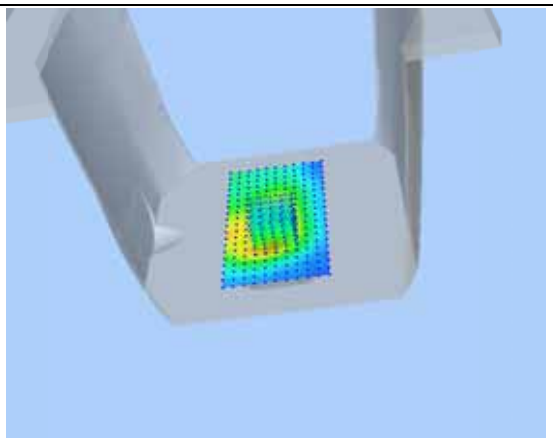
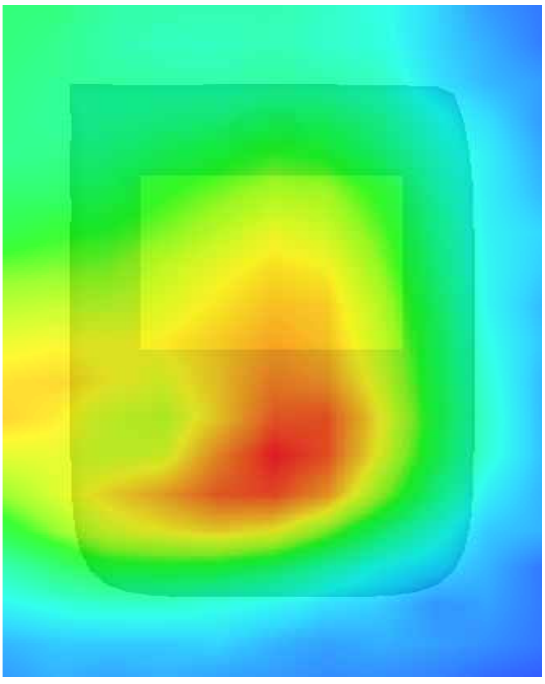
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=-24.00
SAR Peak: 1.37 W/kg

SAR 10g (W/Kg)	0.429179
SAR 1g (W/Kg)	0.839026

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 35 seconds

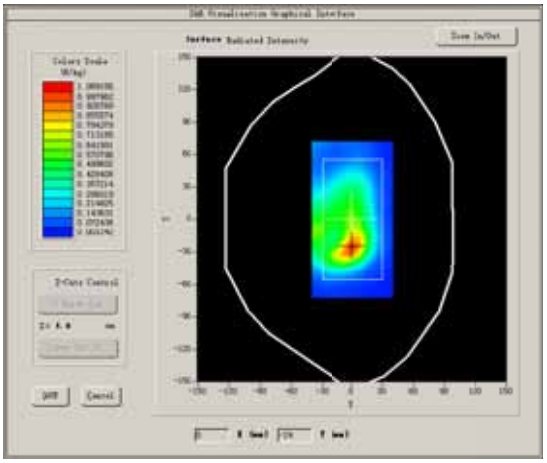
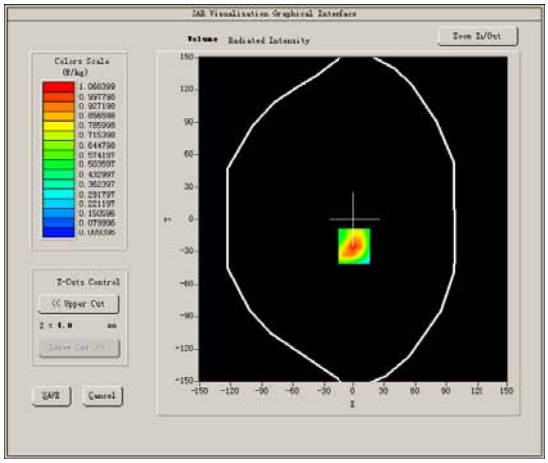
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift(%)	-3.190000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

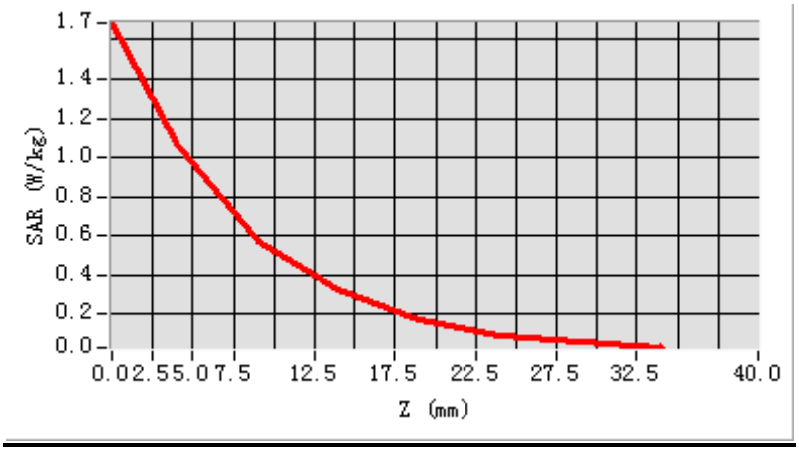
SURFACE SAR	VOLUME SAR
	

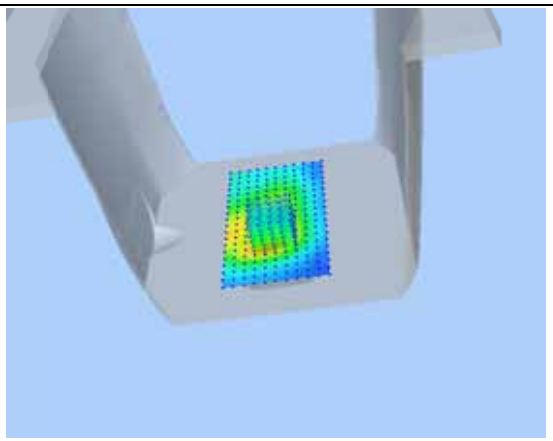
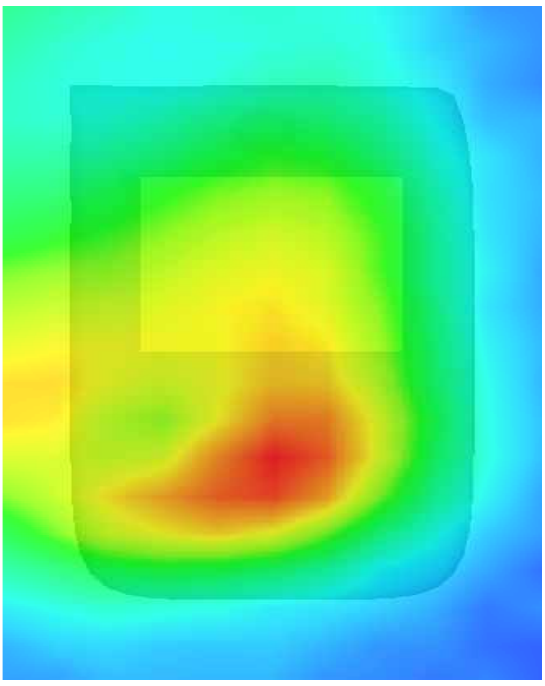
Maximum location: X=0.00, Y=-25.00

SAR Peak: 1.70 W/kg

SAR 10g (W/Kg)	0.519961
SAR 1g (W/Kg)	1.030495

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 35 seconds

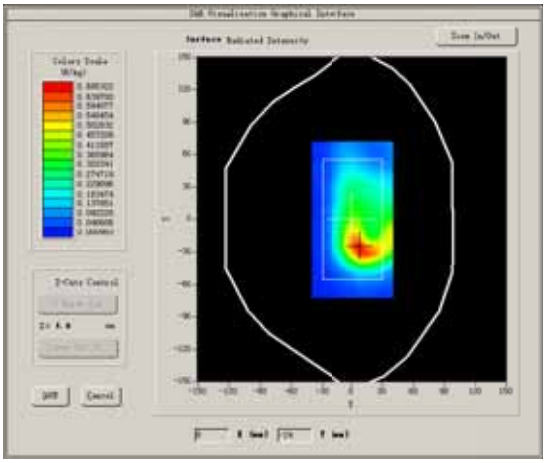
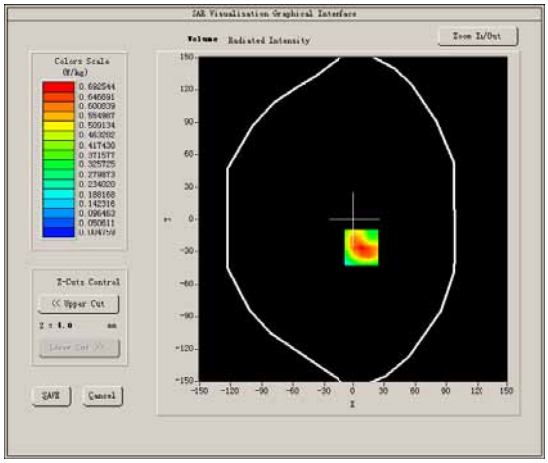
A. Experimental conditions.

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

B. SAR Measurement Result

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift(%)	-0.510000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

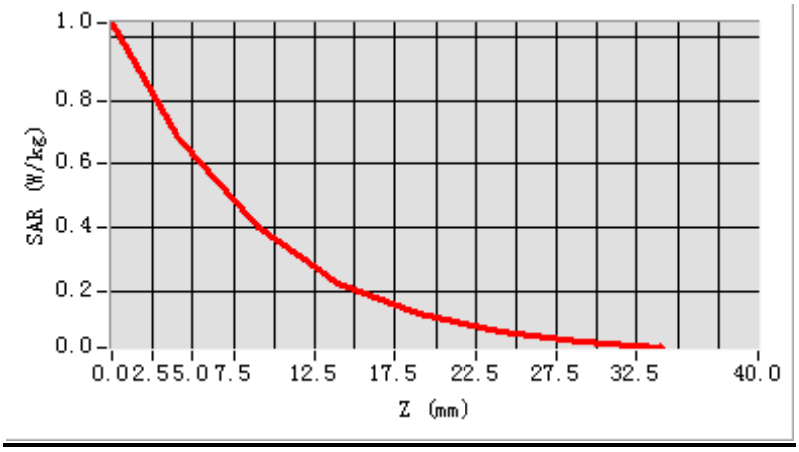
SURFACE SAR	VOLUME SAR
	

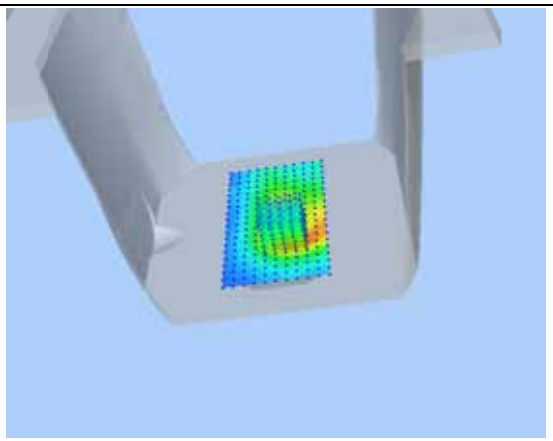
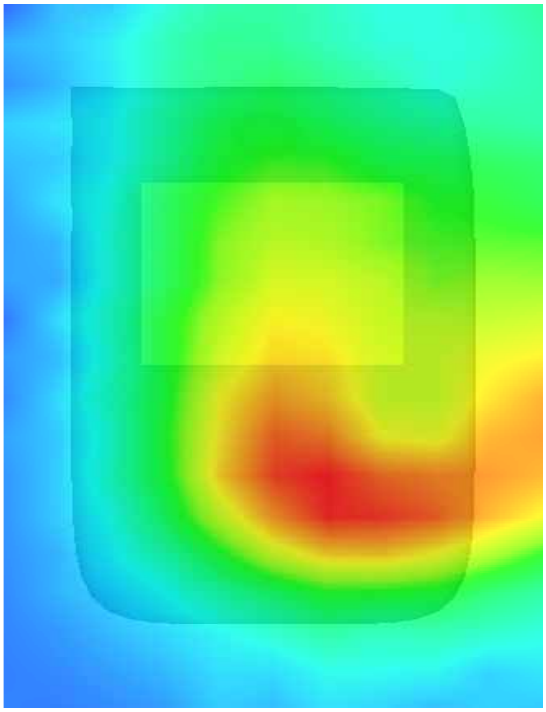
Maximum location: X=8.00, Y=-26.00

SAR Peak: 1.09 W/kg

SAR 10g (W/Kg)	0.352439
SAR 1g (W/Kg)	0.670261

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 43 seconds

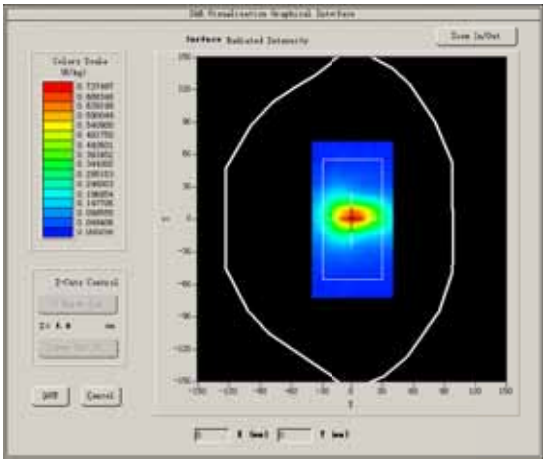
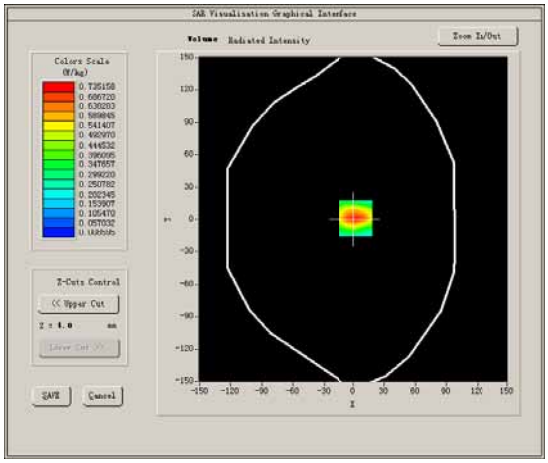
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift(%)	-1.530000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

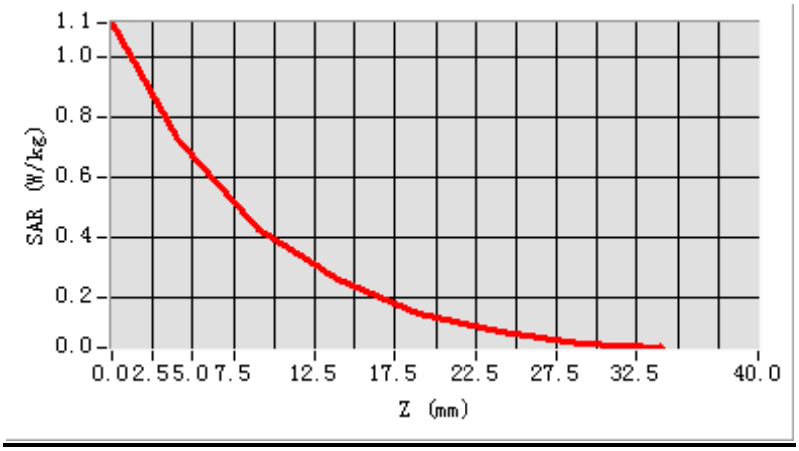
SURFACE SAR	VOLUME SAR
	

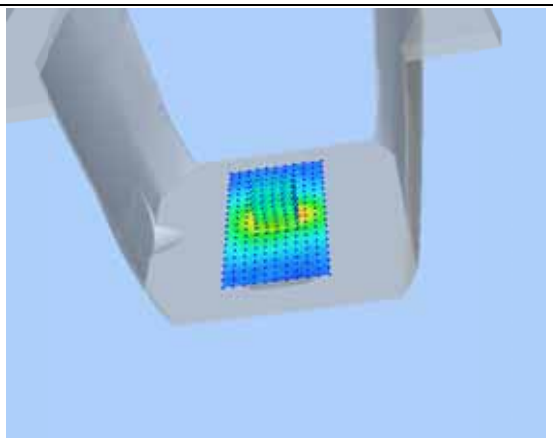
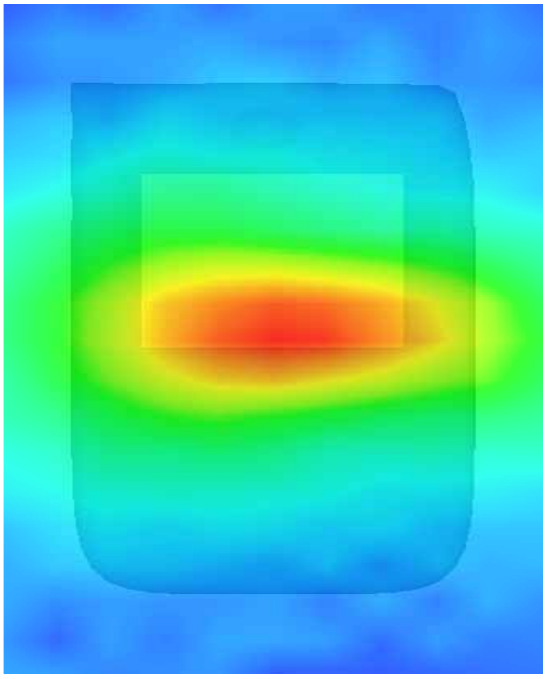
Maximum location: X=2.00, Y=1.00

SAR Peak: 1.13 W/kg

SAR 10g (W/Kg)	0.372390
SAR 1g (W/Kg)	0.704098

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 41 seconds

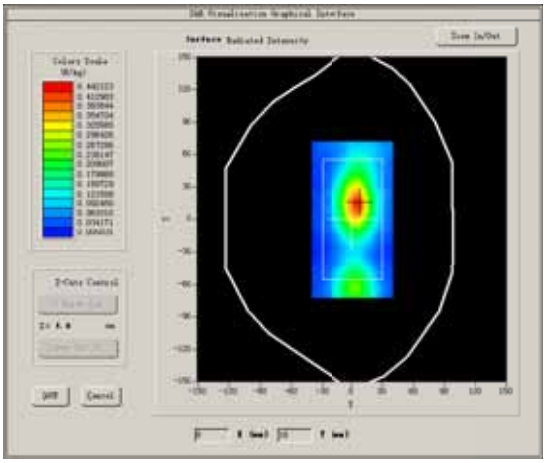
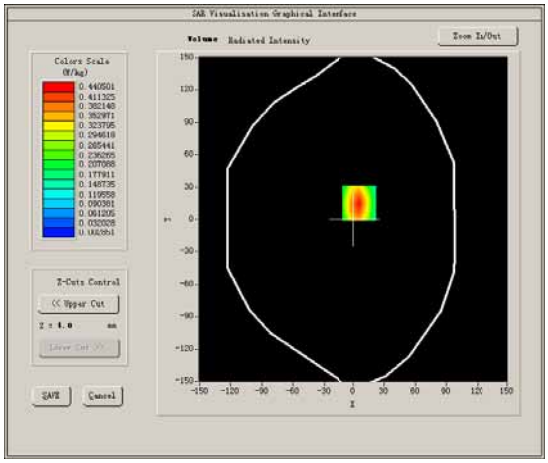
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift(%)	-1.770000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

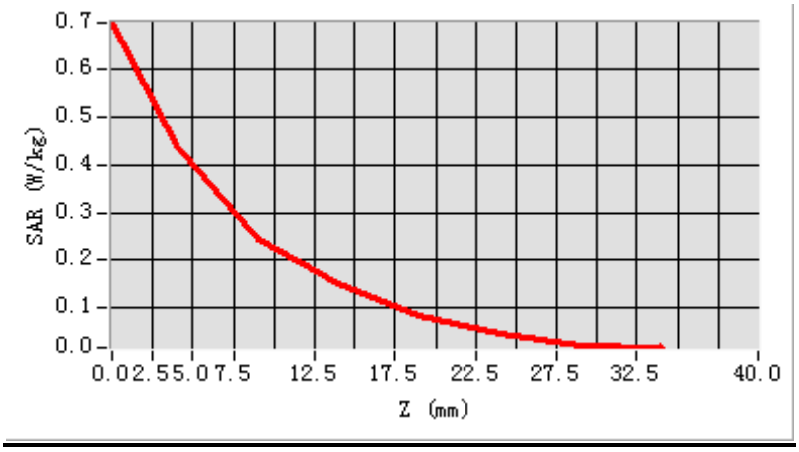
SURFACE SAR	VOLUME SAR
	

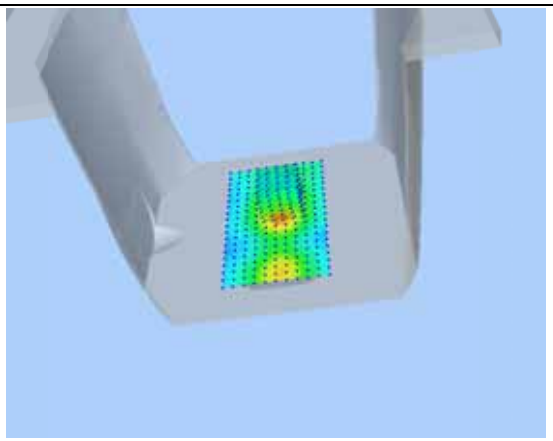
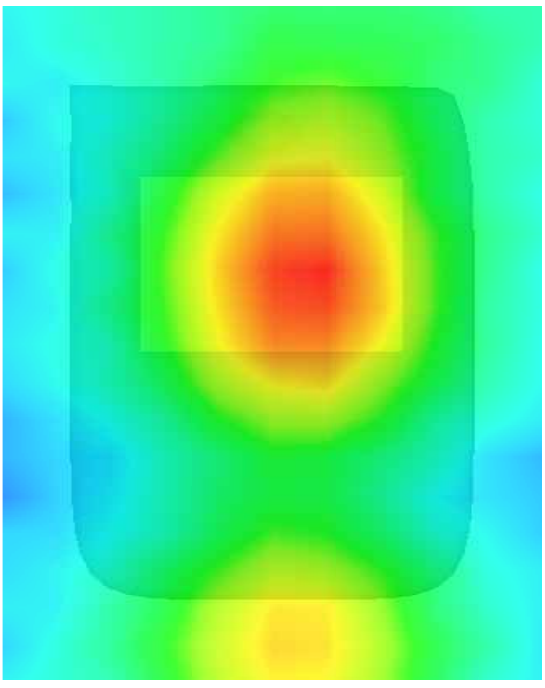
Maximum location: X=6.00, Y=15.00

SAR Peak: 0.69 W/kg

SAR 10g (W/Kg)	0.228802
SAR 1g (W/Kg)	0.426097

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 43 seconds

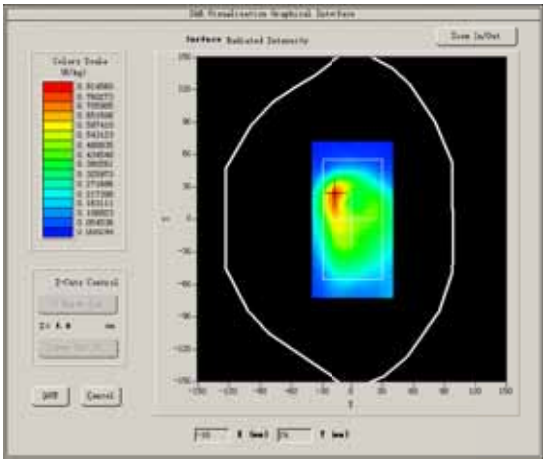
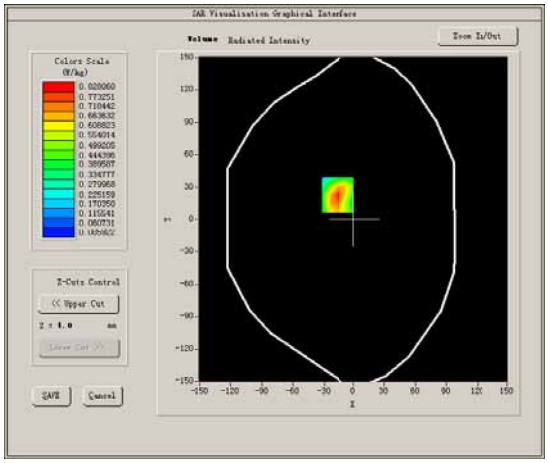
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift(%)	-0.830000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

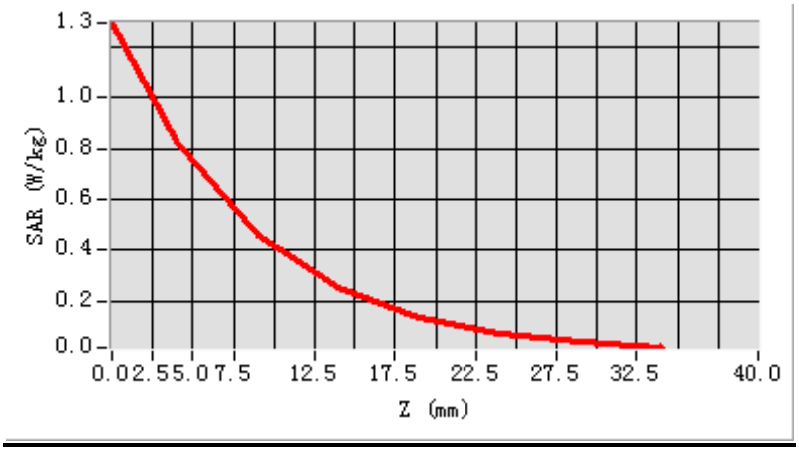
SURFACE SAR	VOLUME SAR
	

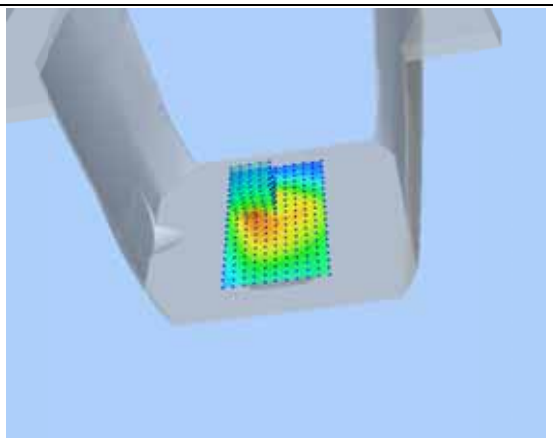
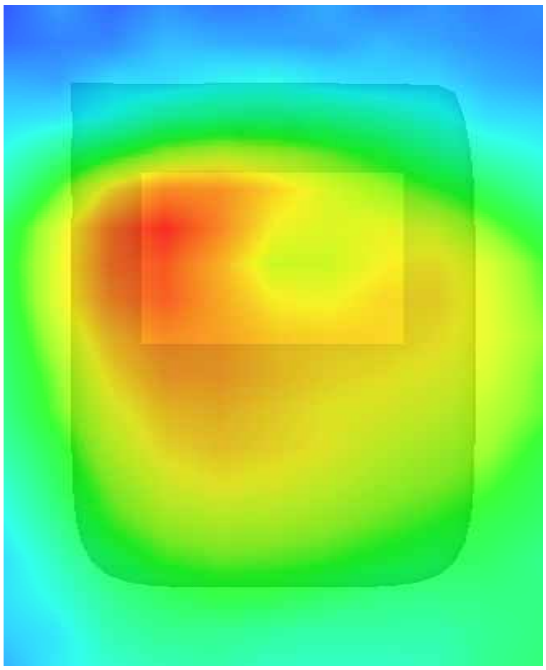
Maximum location: X=-16.00, Y=23.00

SAR Peak: 1.29 W/kg

SAR 10g (W/Kg)	0.404560
SAR 1g (W/Kg)	0.743101

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 38 seconds

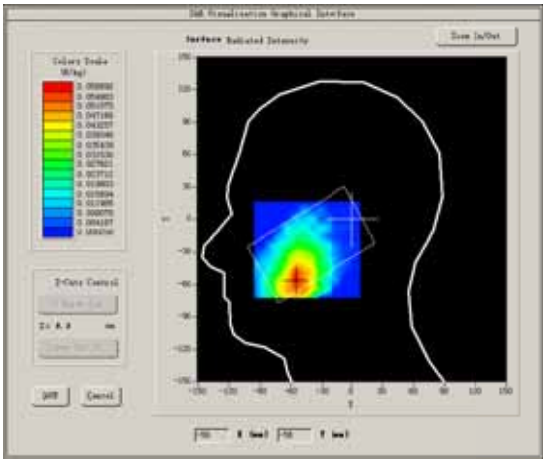
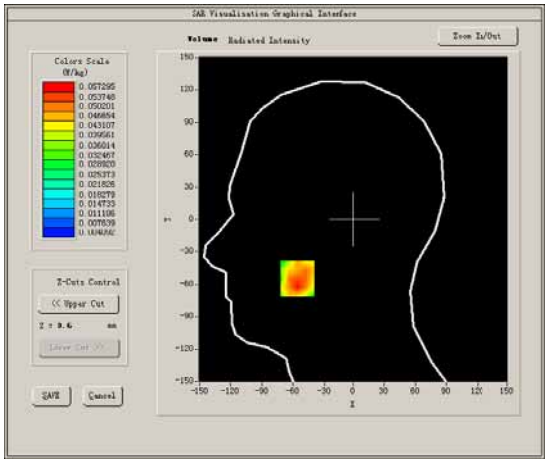
A. Experimental conditions.

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):

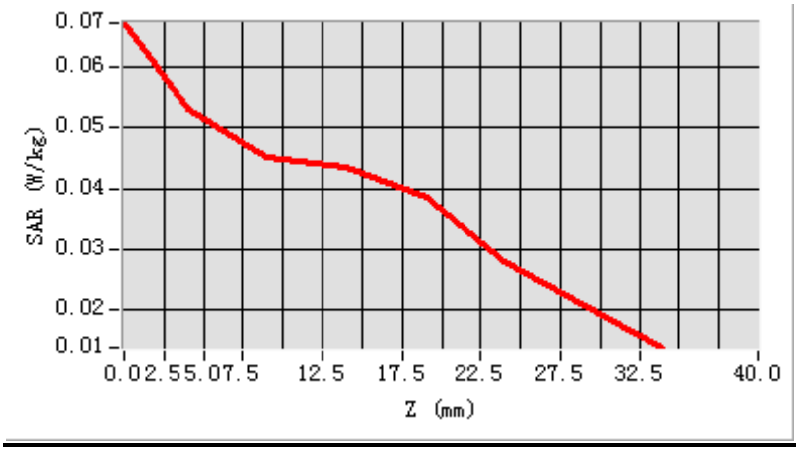
Frequency (MHz)	826.400000
Relative permittivity (real part)	41.254837
Conductivity (S/m)	0.875843
Power drift (%)	-2.030000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:1

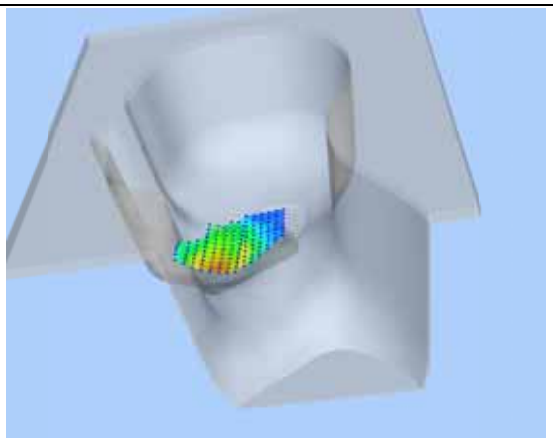
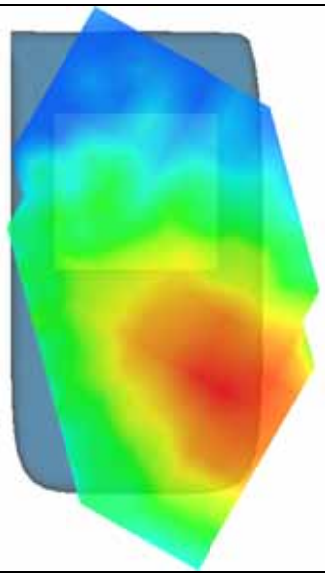
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-56.00, Y=-55.00
SAR Peak: 0.08 W/kg

SAR 10g (W/Kg)	0.042122
SAR 1g (W/Kg)	0.057898

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration:8 minutes 48 seconds

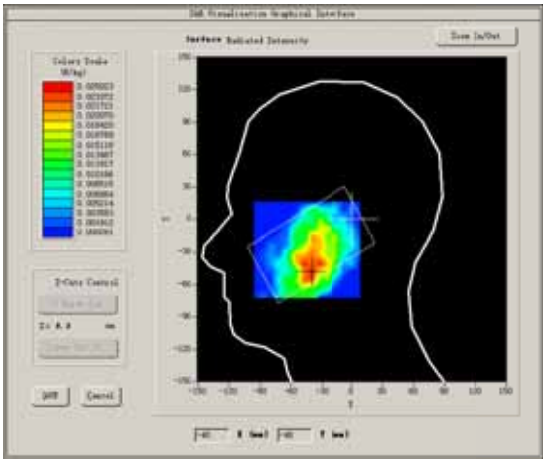
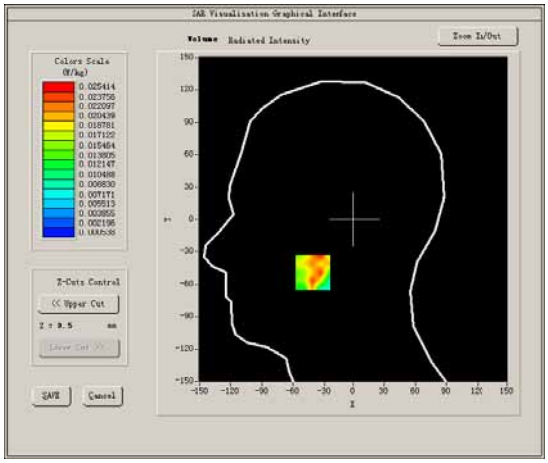
A. Experimental conditions.

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):

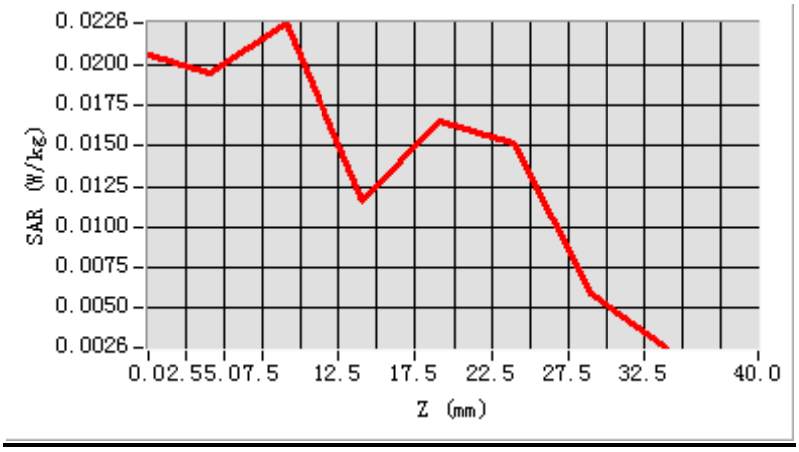
Frequency (MHz)	826.400000
Relative permittivity (real part)	41.254837
Conductivity (S/m)	0.875843
Power drift (%)	3.280000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:1

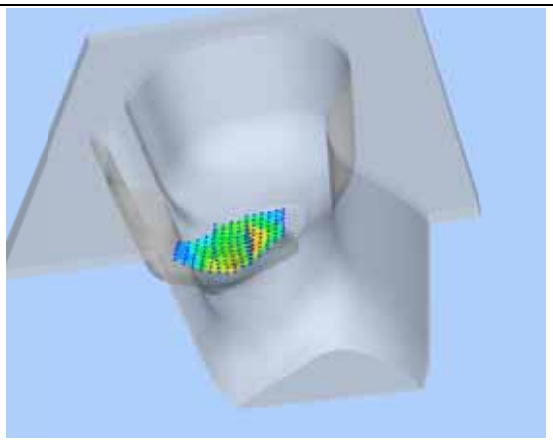
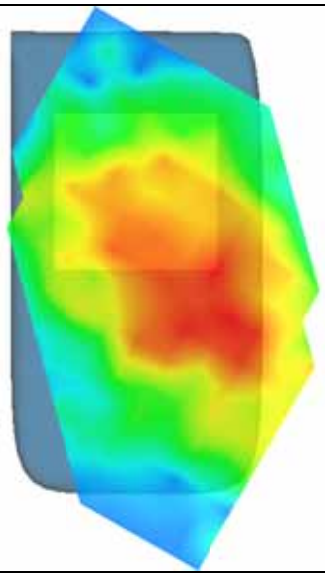
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-41.00, Y=-49.00
SAR Peak: 0.05 W/kg

SAR 10g (W/Kg)	0.016815
SAR 1g (W/Kg)	0.026650

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 4 seconds

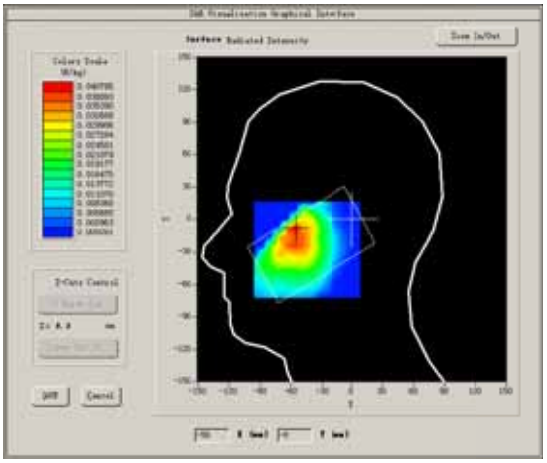
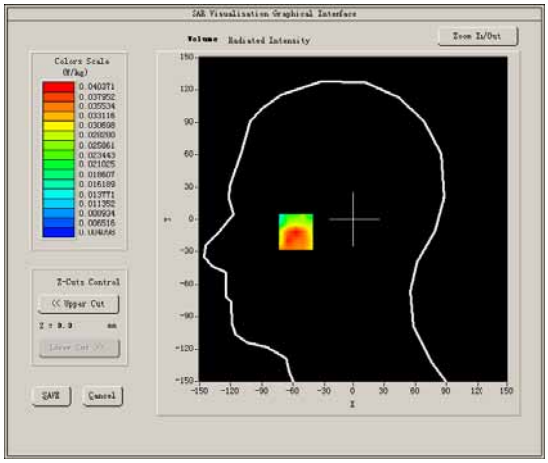
A. Experimental conditions.

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):

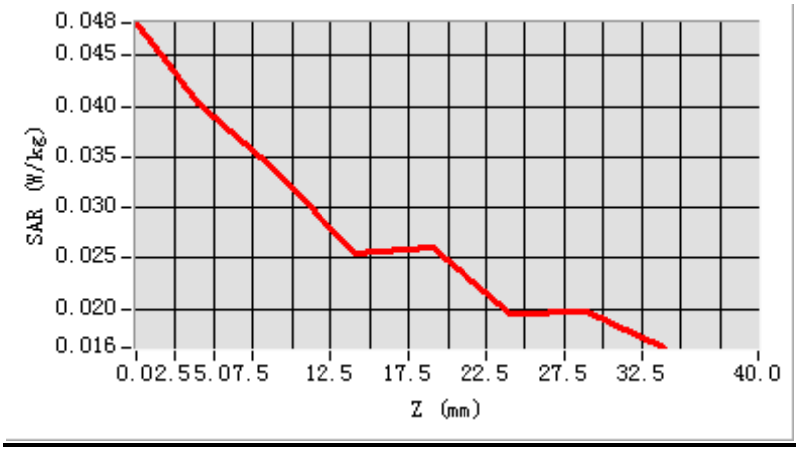
Frequency (MHz)	826.400000
Relative permittivity (real part)	41.254837
Conductivity (S/m)	0.875843
Power drift (%)	0.730000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:1

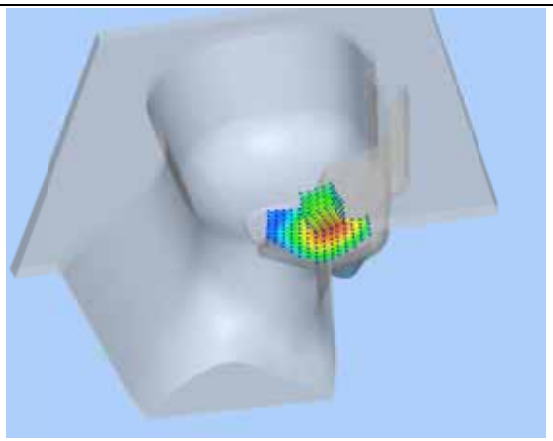
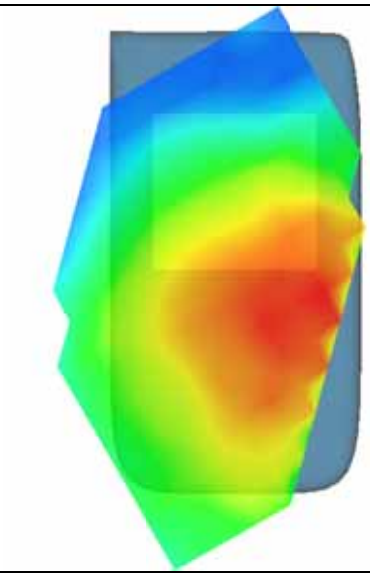
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-57.00, Y=-9.00
SAR Peak: 0.06 W/kg

SAR 10g (W/Kg)	0.030144
SAR 1g (W/Kg)	0.039743

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 8 minutes 21 seconds

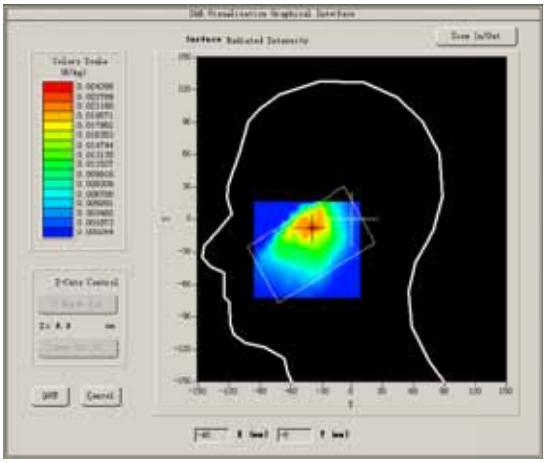
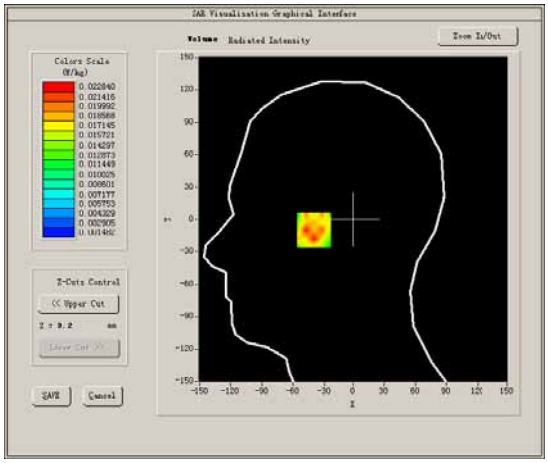
A. Experimental conditions.

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):

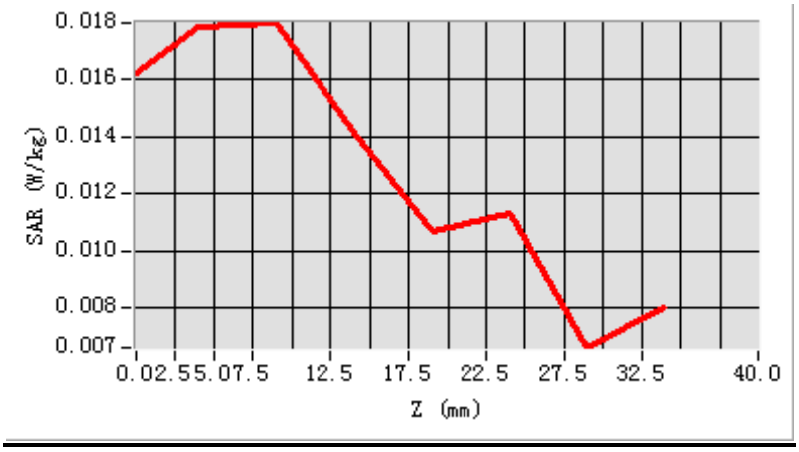
Frequency (MHz)	826.400000
Relative permittivity (real part)	41.254837
Conductivity (S/m)	0.875843
Power drift (%)	4.400000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:1

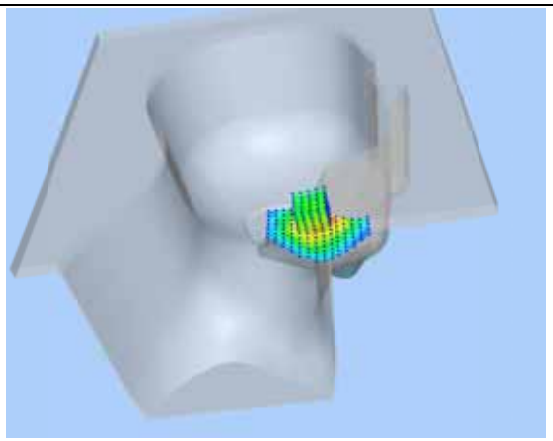
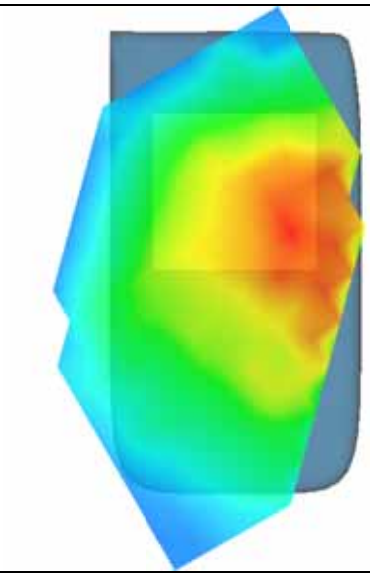
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-40.00, Y=-8.00
SAR Peak: 0.04 W/kg

SAR 10g (W/Kg)	0.015538
SAR 1g (W/Kg)	0.022261

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 36 seconds

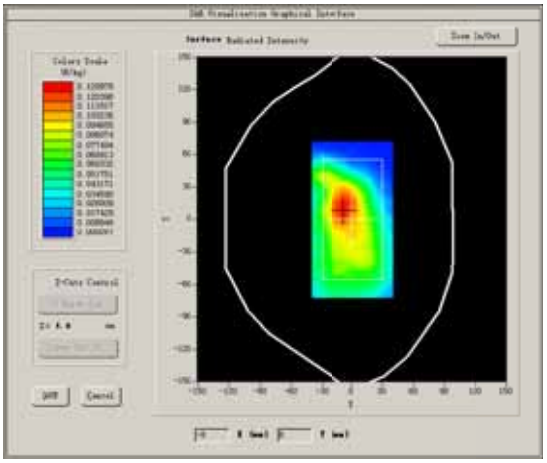
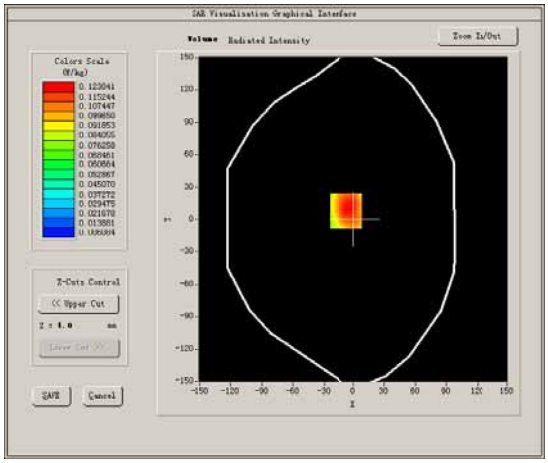
A. Experimental conditions.

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)	56.350478
Conductivity (S/m)	0.973341
Power drift (%)	-3.100000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

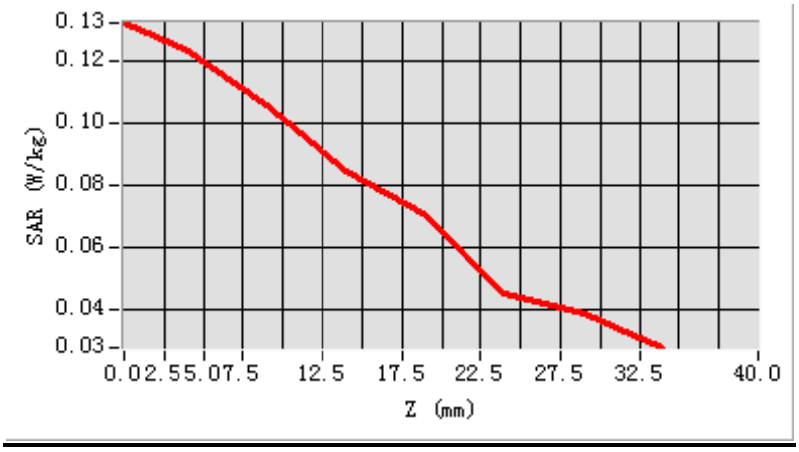
SURFACE SAR	VOLUME SAR
	

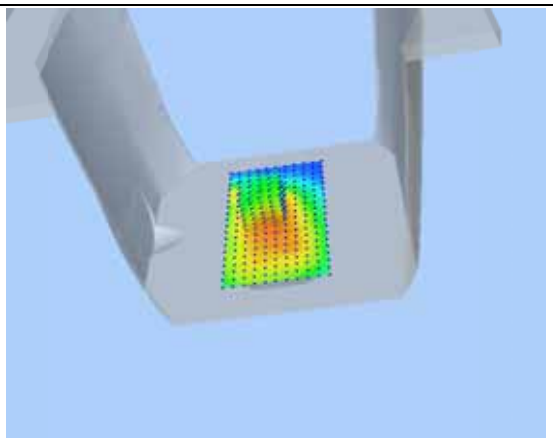
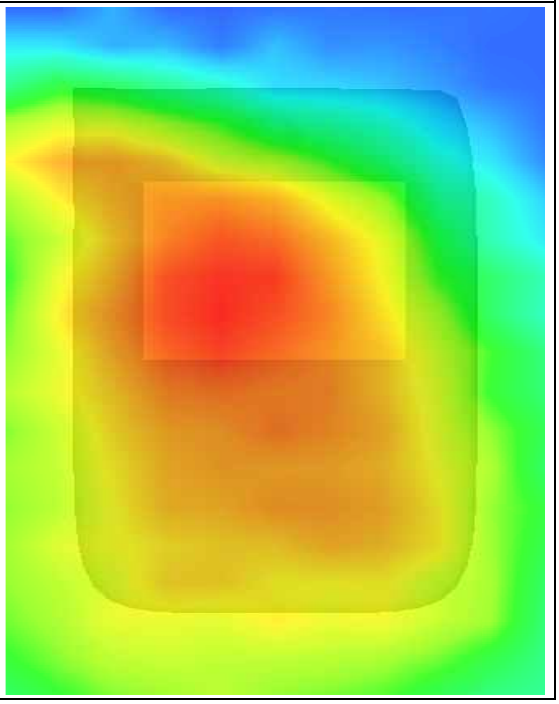
Maximum location: X=-8.00, Y=8.00

SAR Peak: 0.16 W/kg

SAR 10g (W/Kg)	0.101463
SAR 1g (W/Kg)	0.129059

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 40 seconds

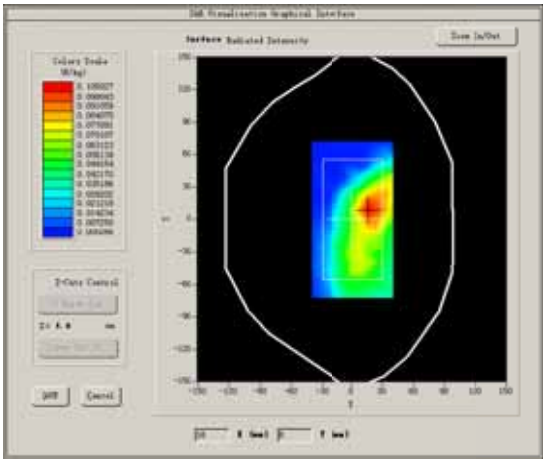
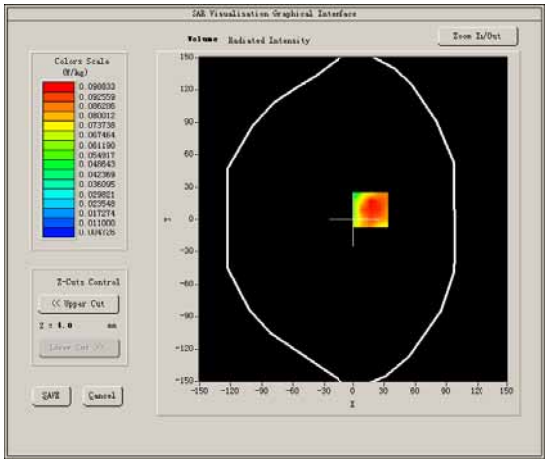
A. Experimental conditions.

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)	56.350478
Conductivity (S/m)	0.973341
Power drift (%)	3.470000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

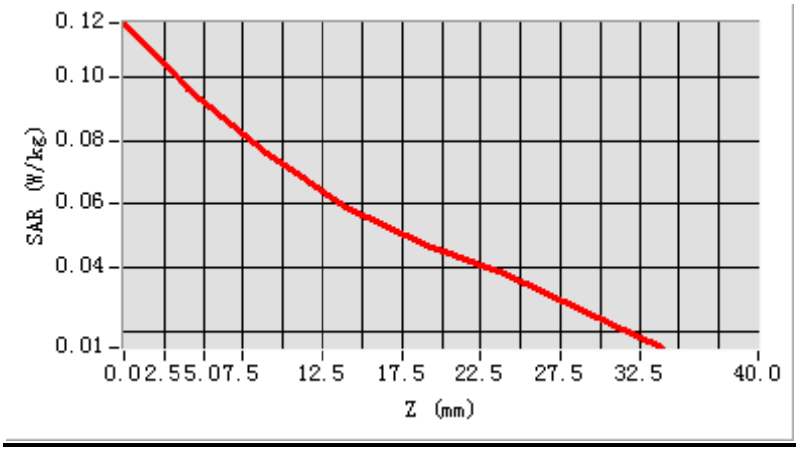
SURFACE SAR	VOLUME SAR
	

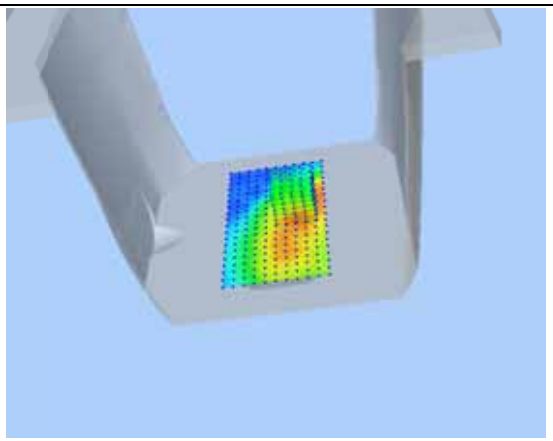
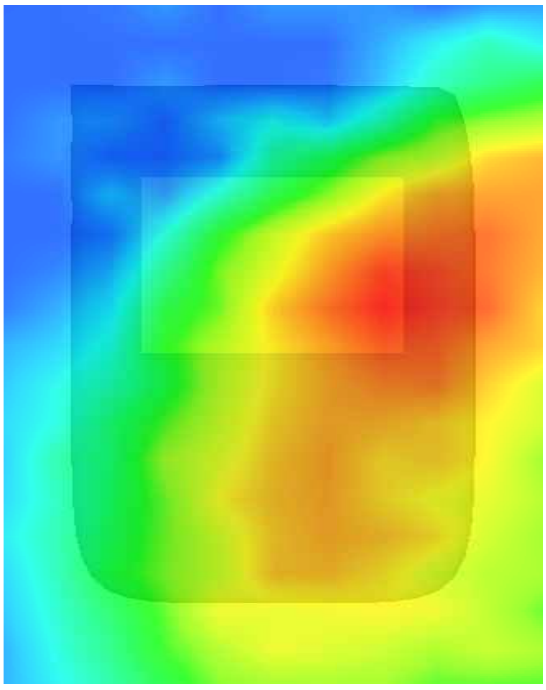
Maximum location: X=17.00, Y=9.00

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	0.074128
SAR 1g (W/Kg)	0.103380

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 31seconds

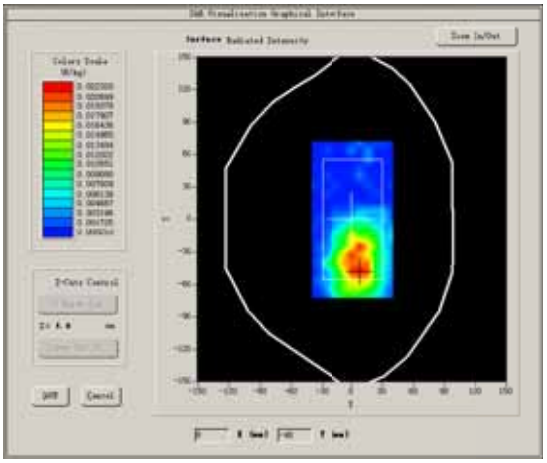
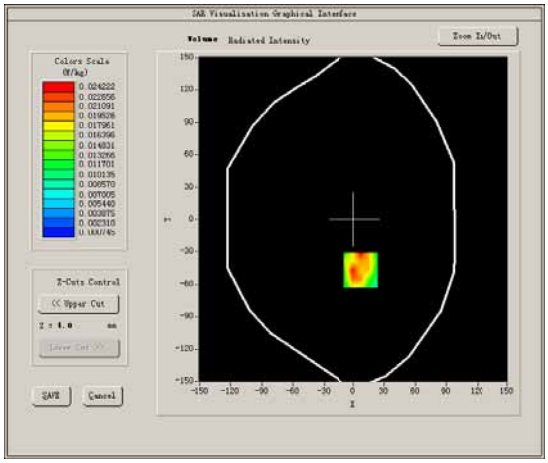
A. Experimental conditions.

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)	56.350478
Conductivity (S/m)	0.973341
Power drift (%)	-1.980000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

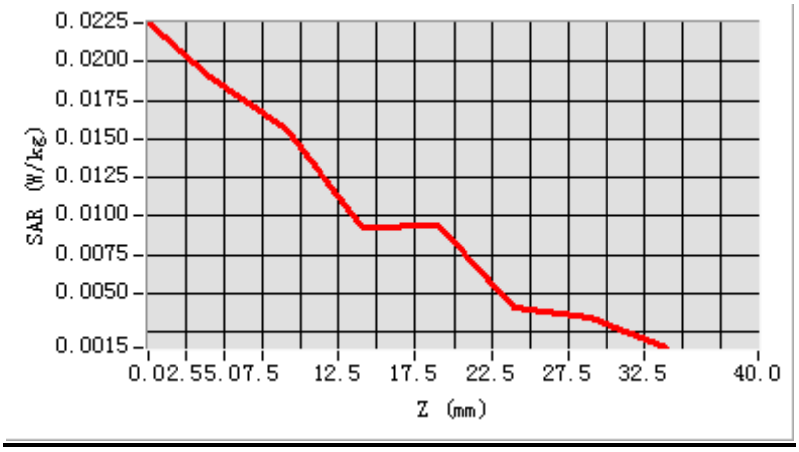
SURFACE SAR	VOLUME SAR
	

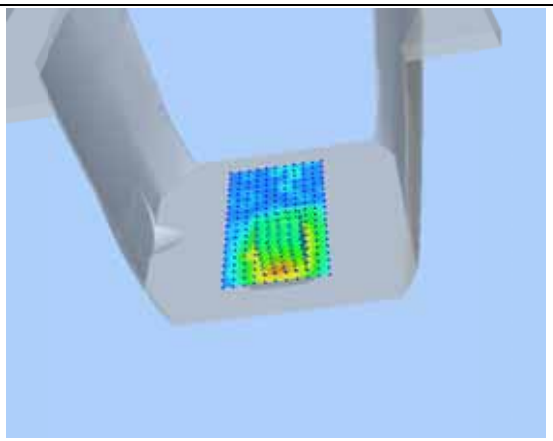
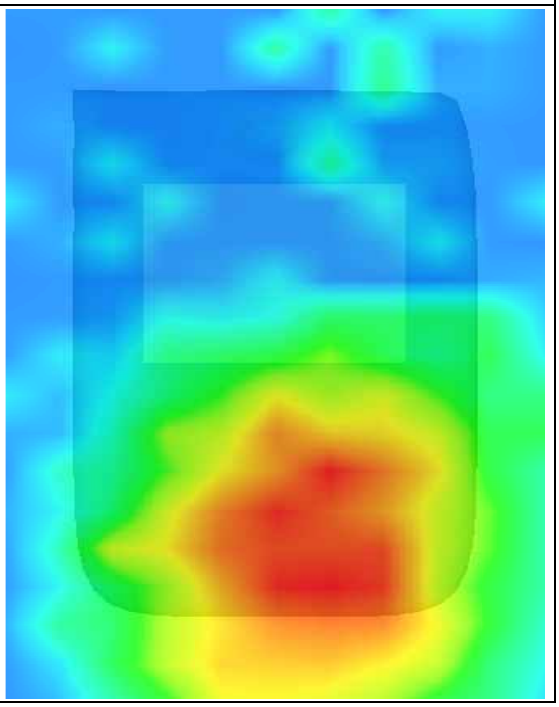
Maximum location: X=7.00, Y=-47.00

SAR Peak: 0.05 W/kg

SAR 10g (W/Kg)	0.014214
SAR 1g (W/Kg)	0.024453

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.16

Measurement duration: 9 minutes 36 seconds

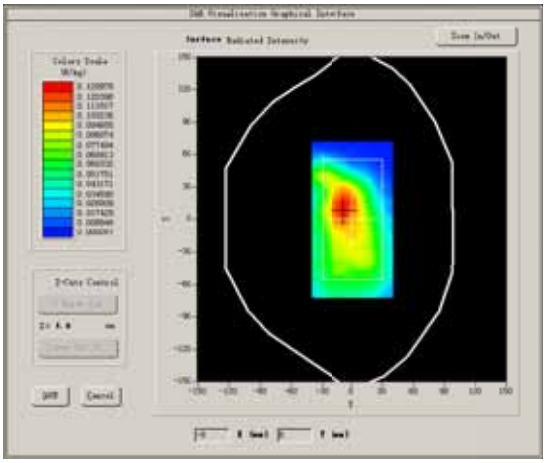
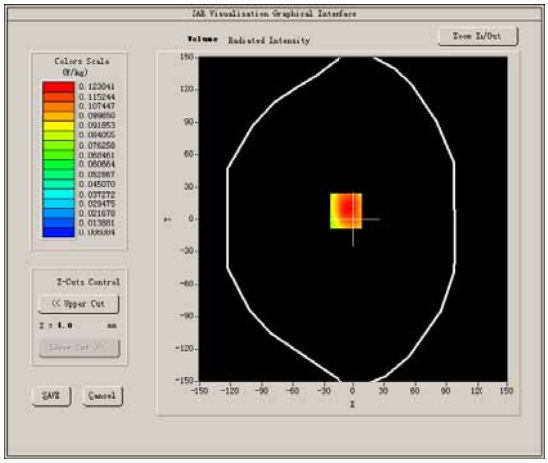
A. Experimental conditions.

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)	56.350478
Conductivity (S/m)	0.973341
Power drift (%)	-2.120000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

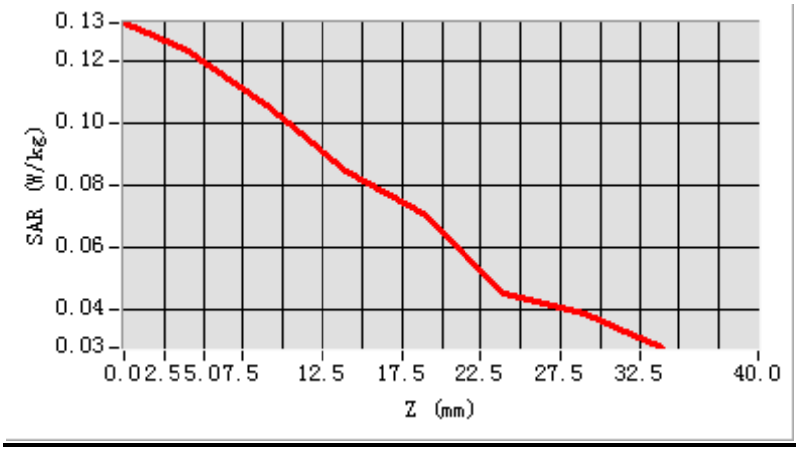
SURFACE SAR	VOLUME SAR
	

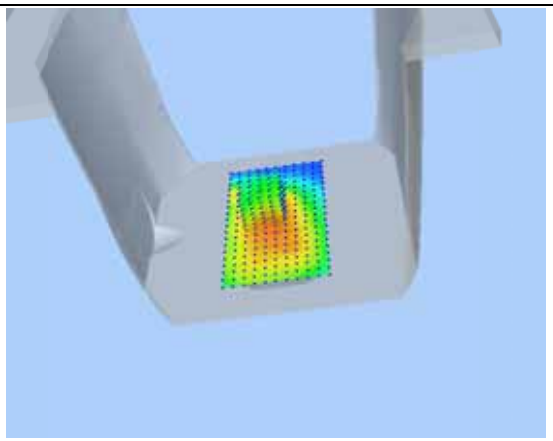
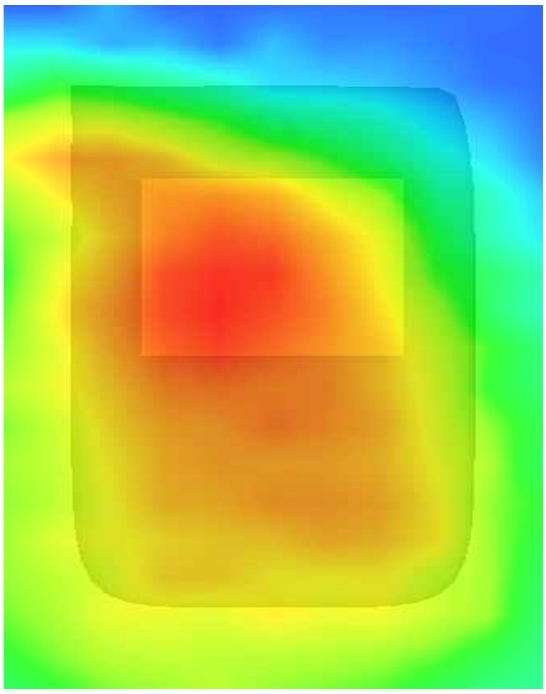
Maximum location: X=-8.00, Y=8.00

SAR Peak: 0.16 W/kg

SAR 10g (W/Kg)	0.101463
SAR 1g (W/Kg)	0.129059

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 17 seconds

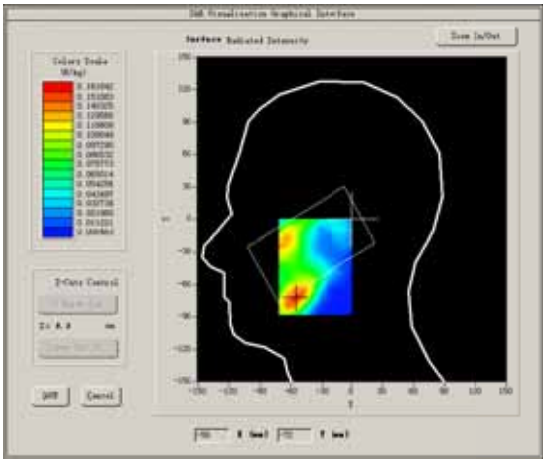
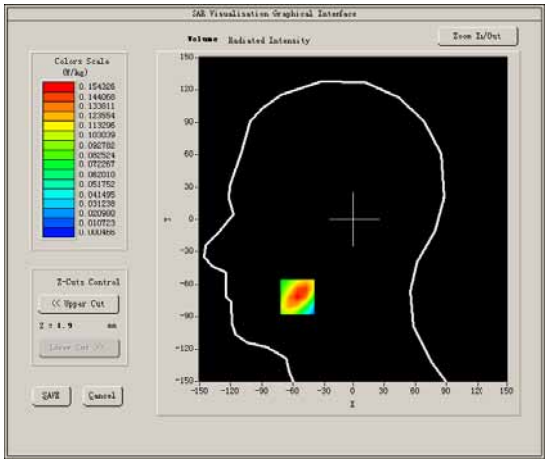
A. Experimental conditions.

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)	40.209571
Conductivity (S/m)	1.381448
Power drift (%)	-2.010000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:1

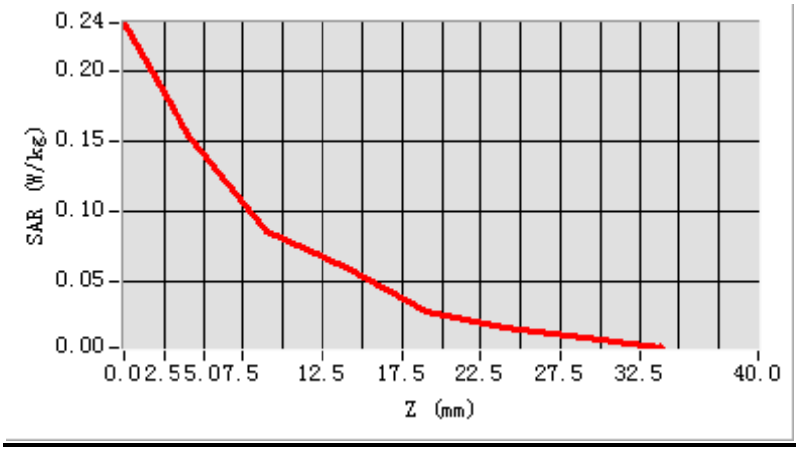
SURFACE SAR	VOLUME SAR
	

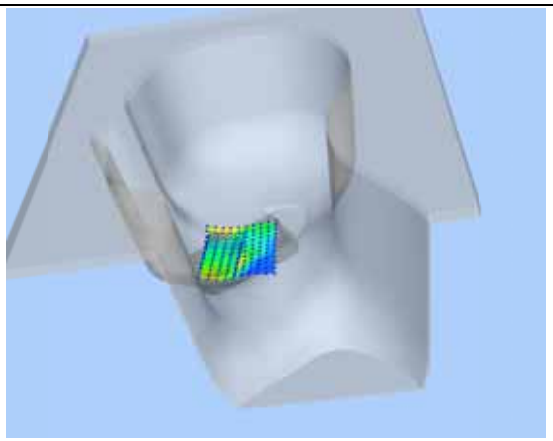
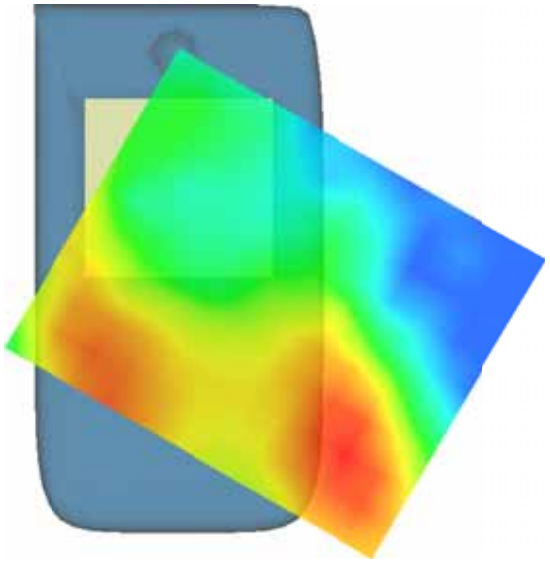
Maximum location: X=-56.00, Y=-72.00

SAR Peak: 0.25 W/kg

SAR 10g (W/Kg)	0.078917
SAR 1g (W/Kg)	0.148402

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 7 minutes 56 seconds

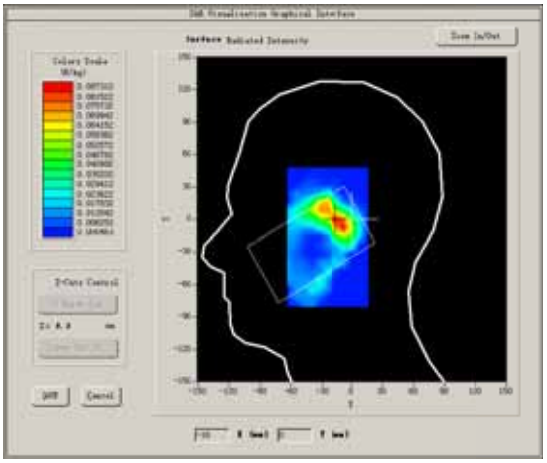
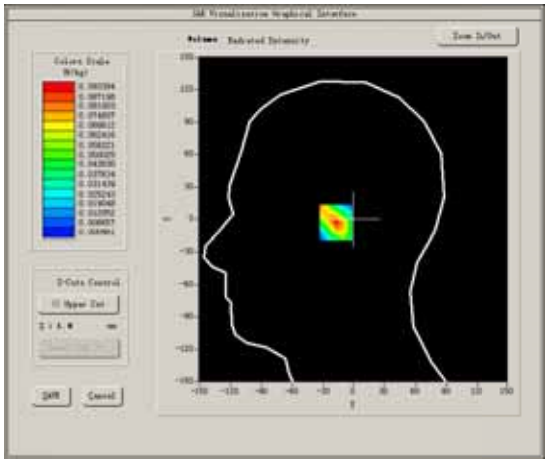
A. Experimental conditions.

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)	40.209571
Conductivity (S/m)	1.381448
Power drift (%)	-1.190000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:1

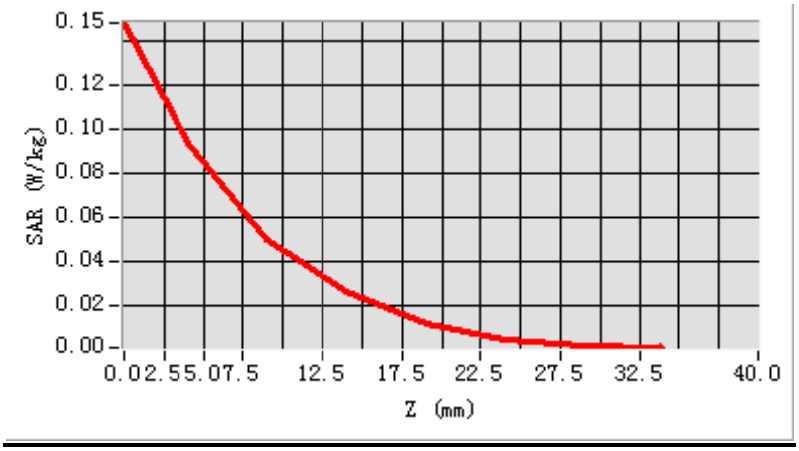
SURFACE SAR	VOLUME SAR
	

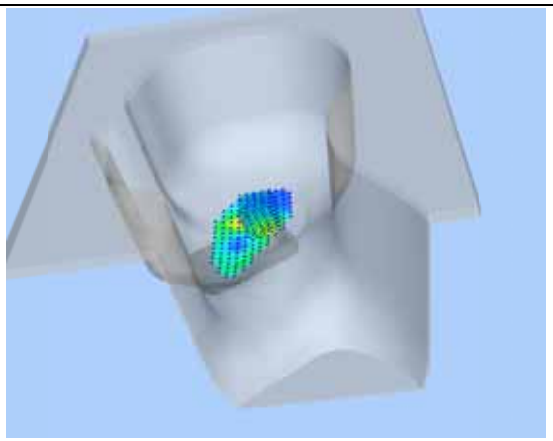
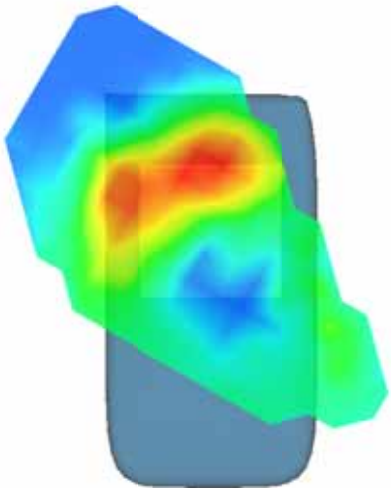
Maximum location: X=-12.00, Y=-3.00

SAR Peak: 0.15 W/kg

SAR 10g (W/Kg)	0.040528
SAR 1g (W/Kg)	0.087175

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 9 seconds

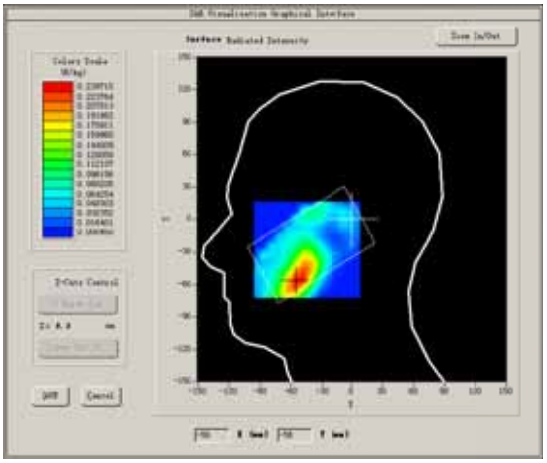
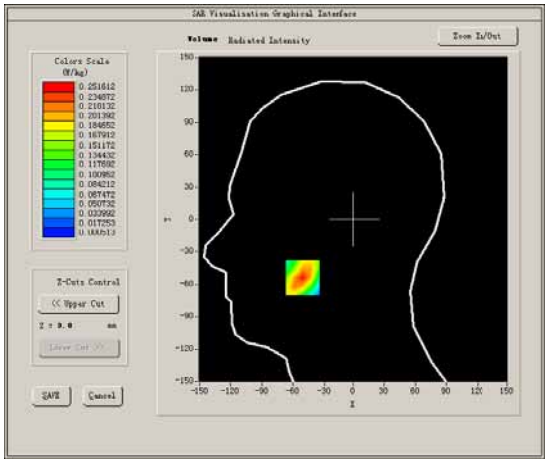
A. Experimental conditions.

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):

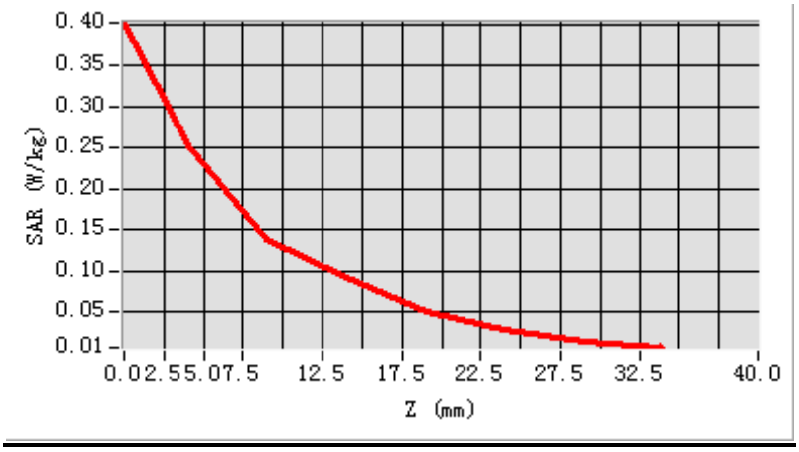
Frequency (MHz)	1907.600000
Relative permittivity (real part)	40.209571
Conductivity (S/m)	1.381448
Power drift (%)	0.250000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:1

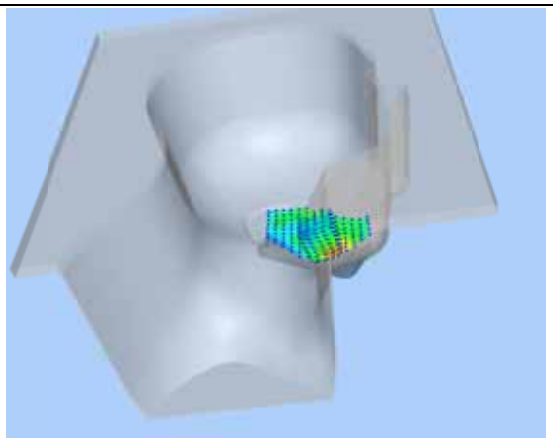
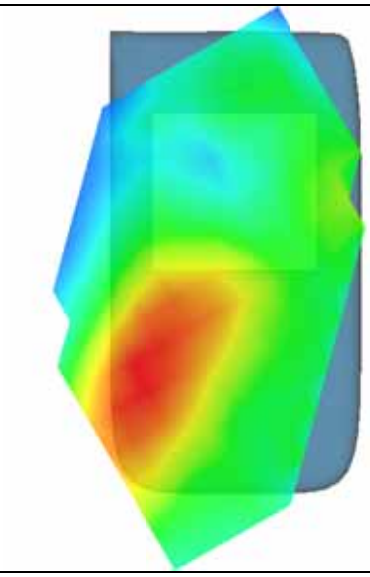
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-51.00, Y=-54.00
SAR Peak: 0.40 W/kg

SAR 10g (W/Kg)	0.125455
SAR 1g (W/Kg)	0.235801

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration:7 minutes 54 seconds

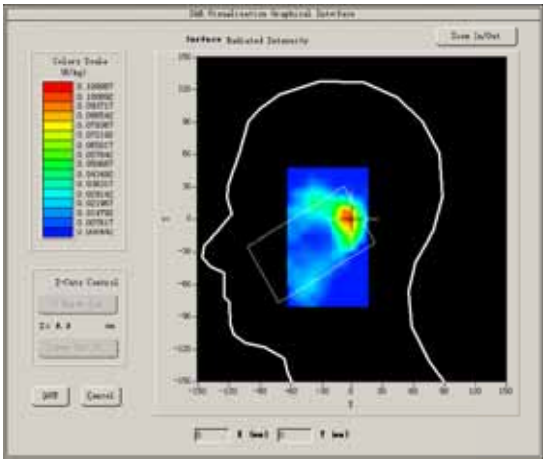
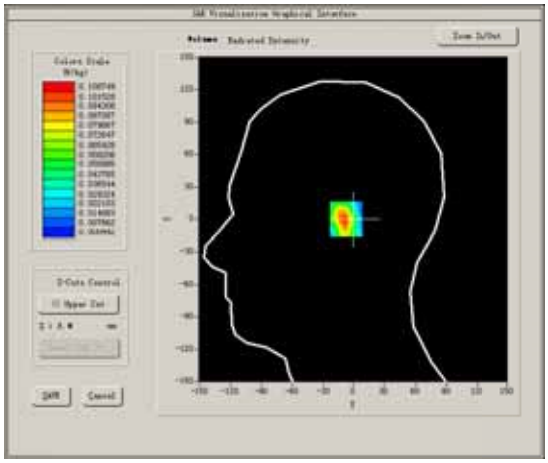
A. Experimental conditions.

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):

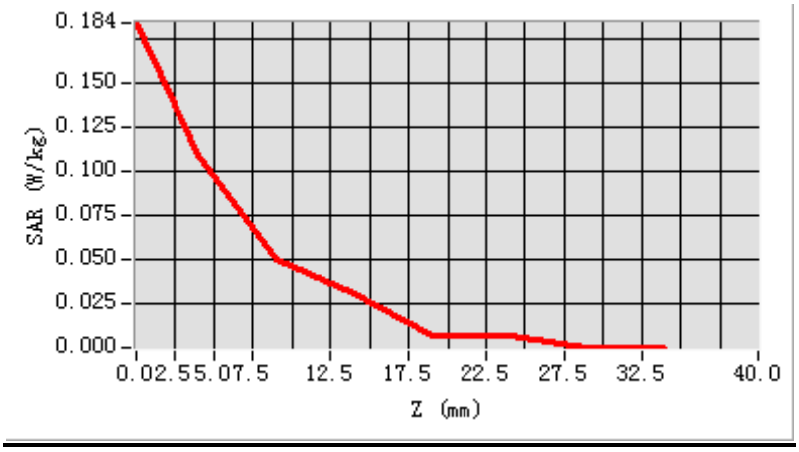
Frequency (MHz)	1907.600000
Relative permittivity (real part)	40.209571
Conductivity (S/m)	1.381448
Power drift (%)	2.740000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:1

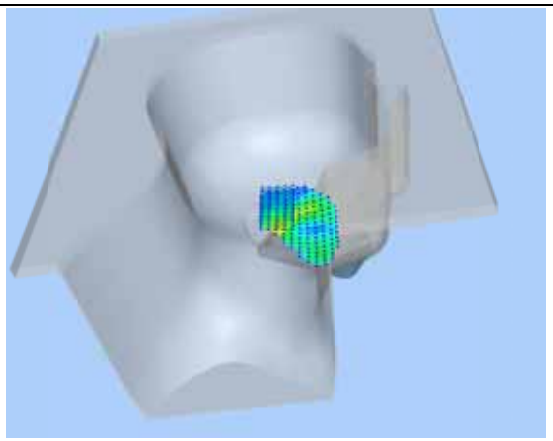
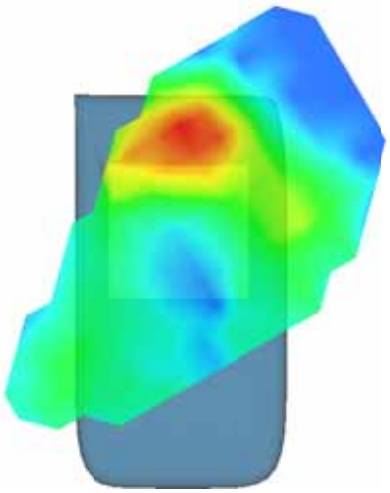
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=0.00
SAR Peak: 0.19 W/kg

SAR 10g (W/Kg)	0.045981
SAR 1g (W/Kg)	0.100993

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 39 seconds

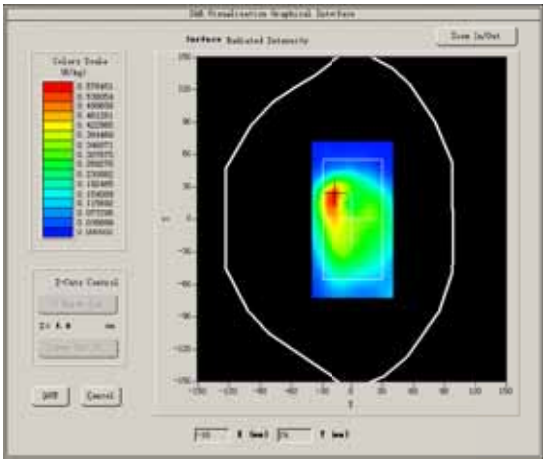
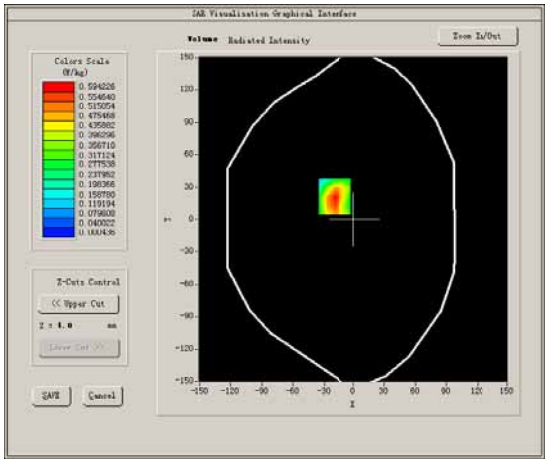
A. Experimental conditions.

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)	53.242346
Conductivity (S/m)	1.502154
Power drift (%)	-2.180000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

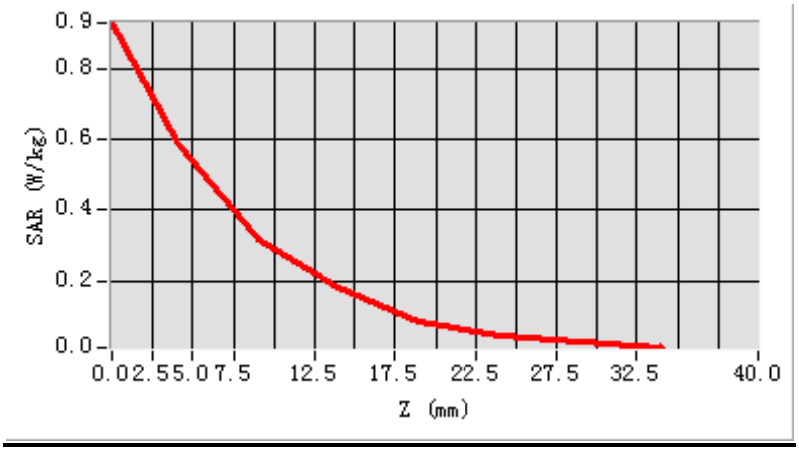
SURFACE SAR	VOLUME SAR
	

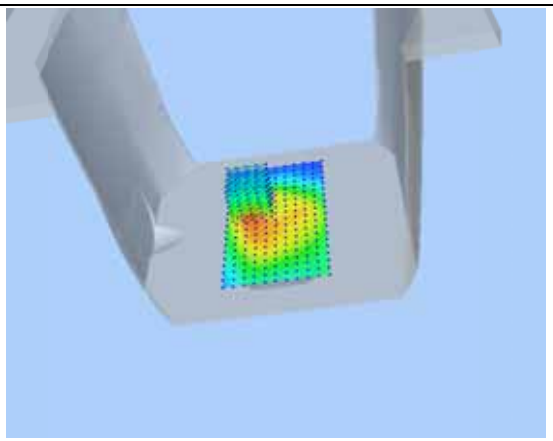
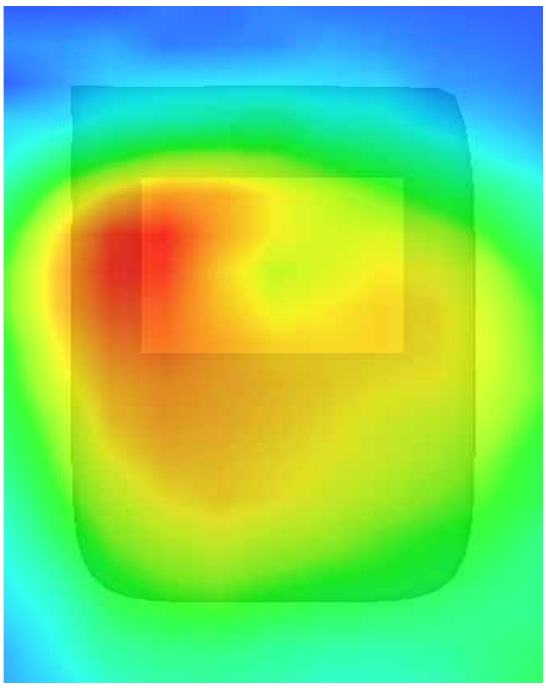
Maximum location: X=-19.00, Y=21.00

SAR Peak: 1.01 W/kg

SAR 10g (W/Kg)	0.316051
SAR 1g (W/Kg)	0.606081

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 39 seconds

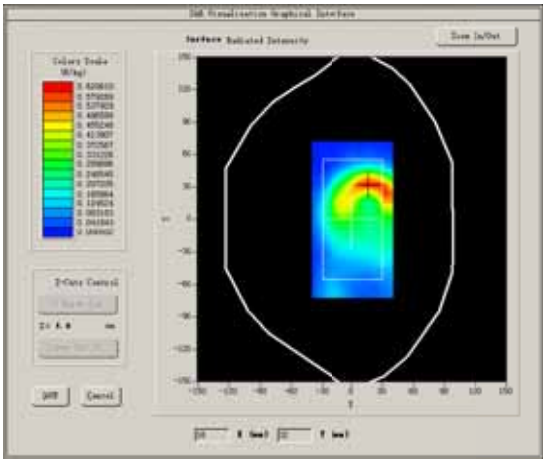
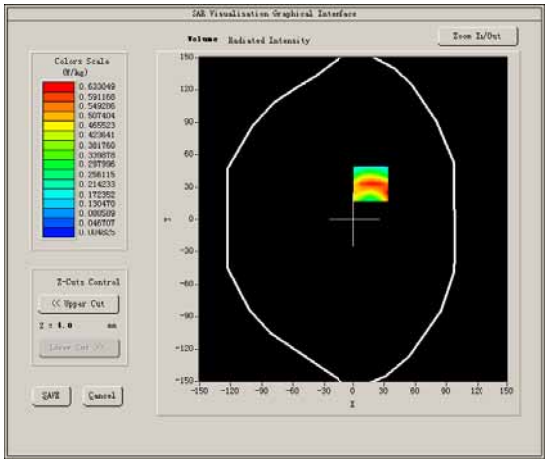
A. Experimental conditions.

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):

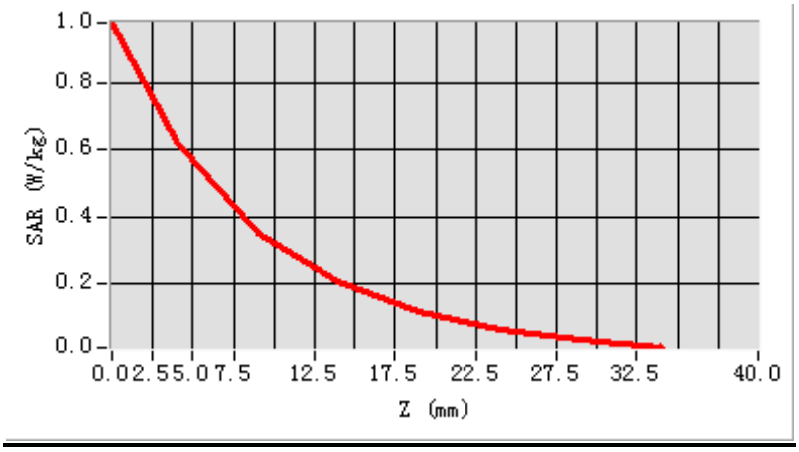
Frequency (MHz)	1907.600000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift (%)	-1.900000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

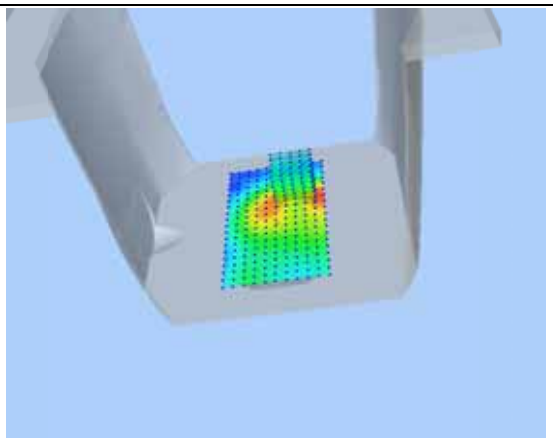
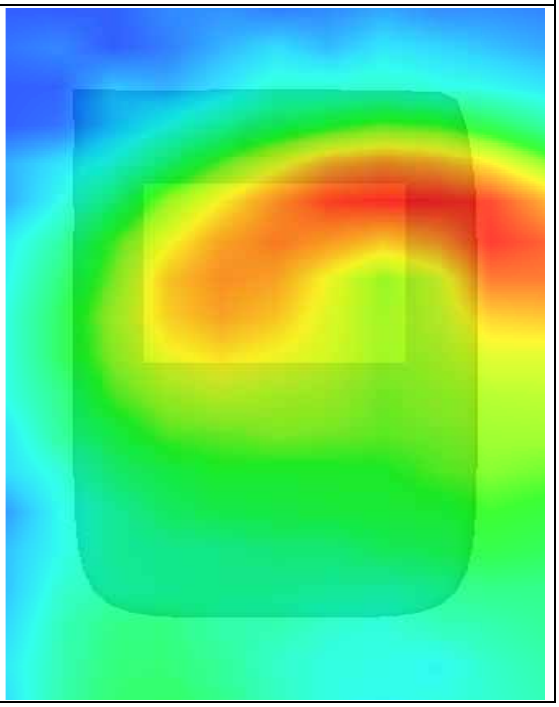
SURFACE SAR	VOLUME SAR
	

Maximum location: X=17.00, Y=33.00
SAR Peak: 1.14 W/kg

SAR 10g (W/Kg)	0.328284
SAR 1g (W/Kg)	0.630250

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 44seconds

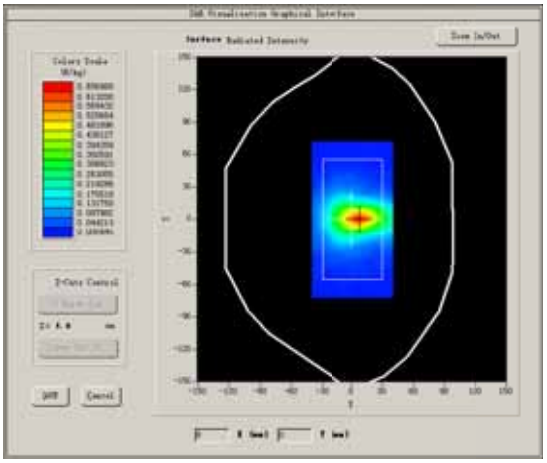
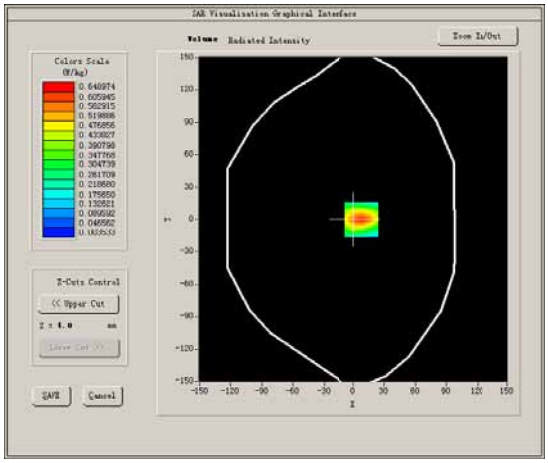
A. Experimental conditions.

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)	53.242346
Conductivity (S/m)	1.502154
Power drift (%)	-1.760000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

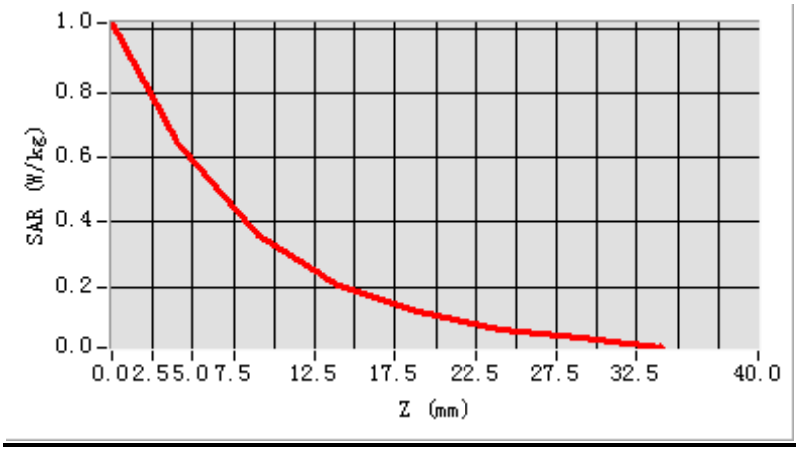
SURFACE SAR	VOLUME SAR
	

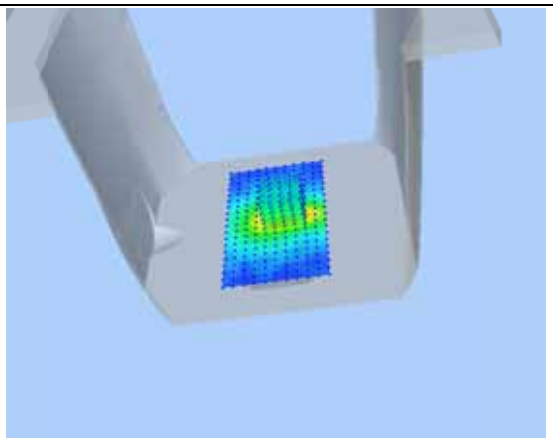
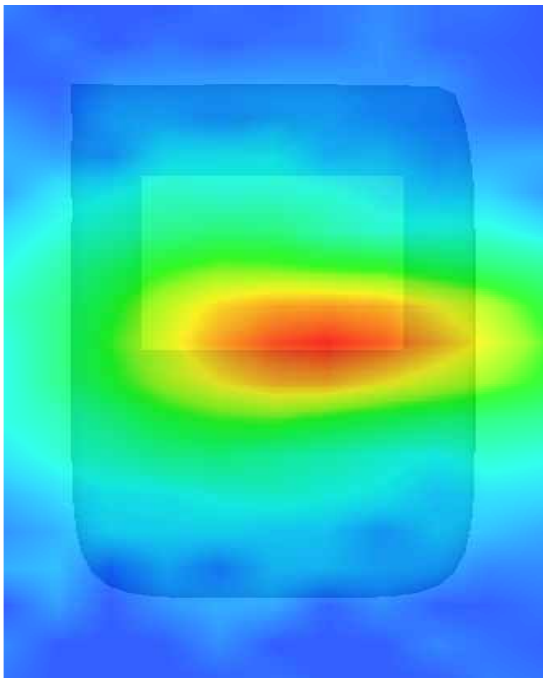
Maximum location: X=8.00, Y=0.00

SAR Peak: 1.10 W/kg

SAR 10g (W/Kg)	0.336064
SAR 1g (W/Kg)	0.651866

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.17

Measurement duration: 9 minutes 44 seconds

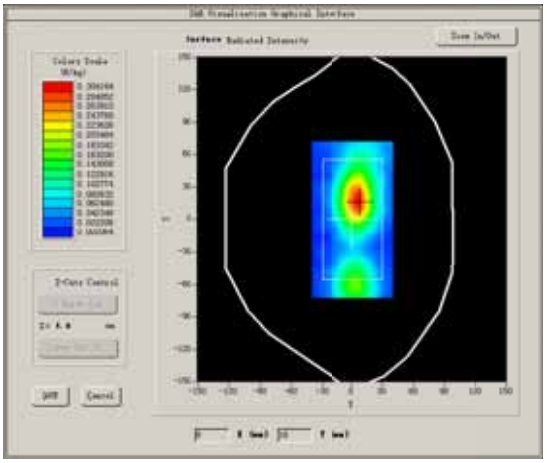
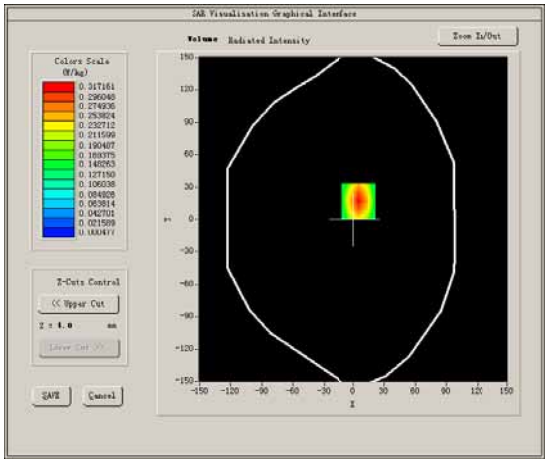
A. Experimental conditions.

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):

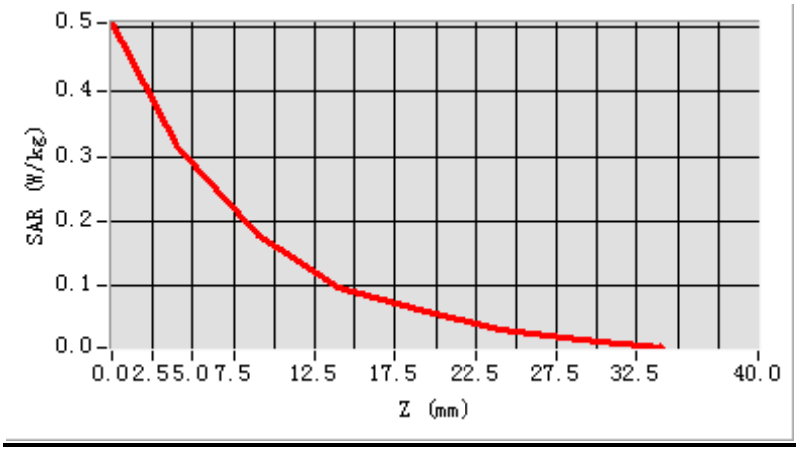
Frequency (MHz)	1907.600000
Relative permittivity (real part)	53.242346
Conductivity (S/m)	1.502154
Power drift (%)	-2.070000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

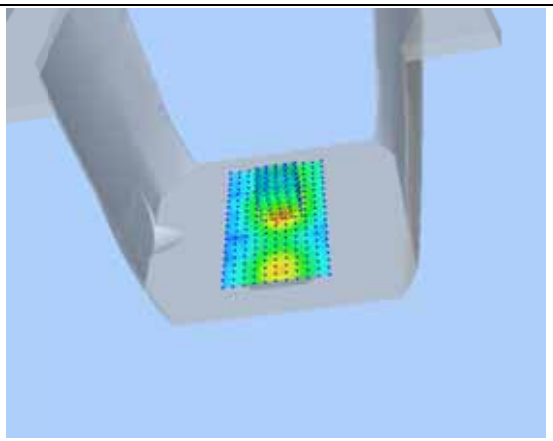
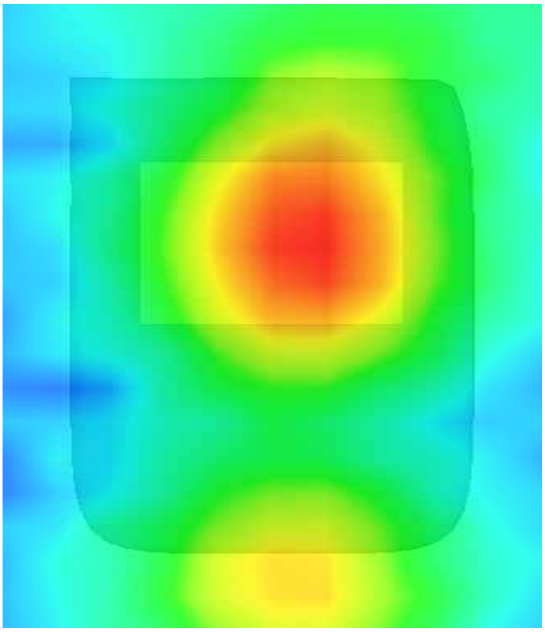
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=17.00
SAR Peak: 0.54 W/kg

SAR 10g (W/Kg)	0.174003
SAR 1g (W/Kg)	0.326520

Z axis scan



3D screen shot	Hot spot position
	

MEASUREMENT 41

Type: Phone measurement (Complete)

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

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

Date of measurement: 2014.4.18

Measurement duration:7 minutes 57 seconds

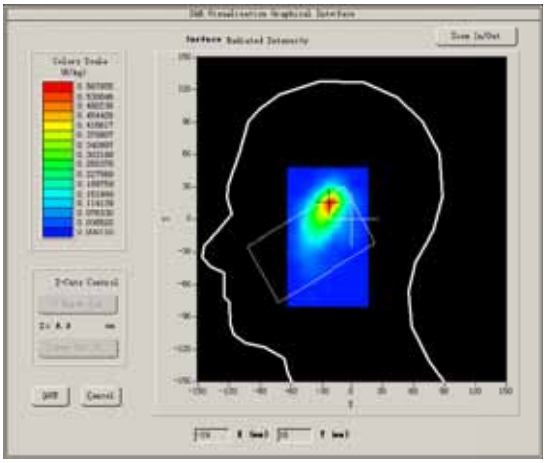
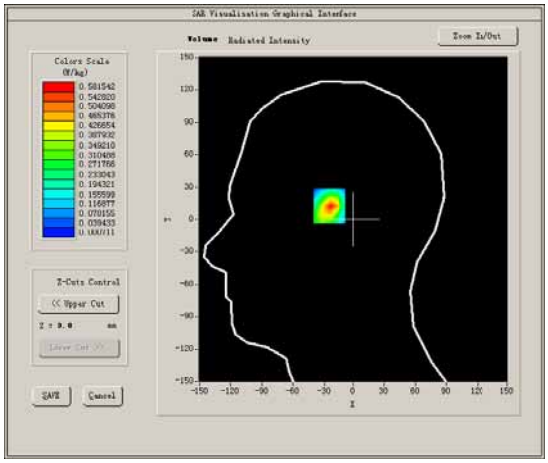
A. Experimental conditions.

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)	39.518865
Conductivity (S/m)	1.770434
Power drift (%)	3.430000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	4.80
Crest factor:	1:1

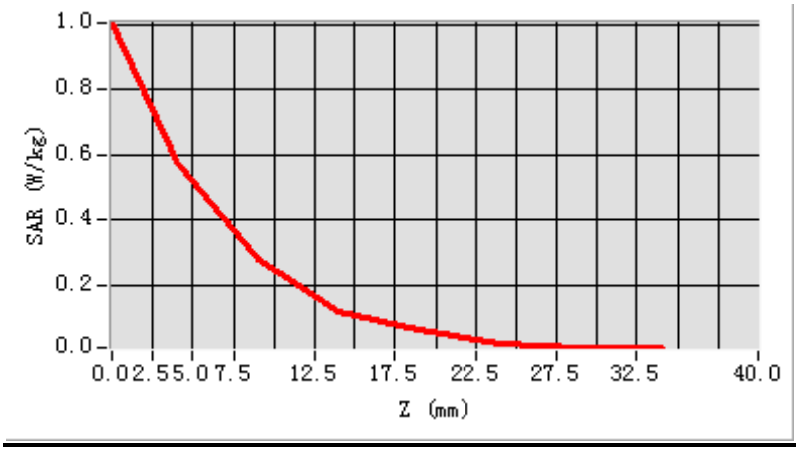
SURFACE SAR	VOLUME SAR
	

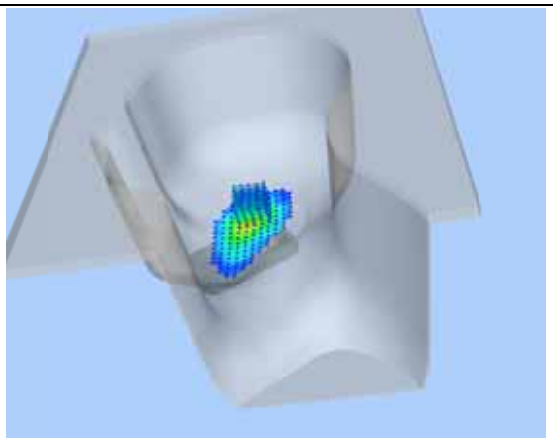
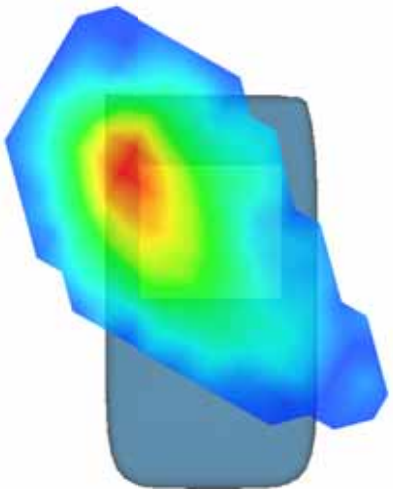
Maximum location: X=-22.00, Y=15.00

SAR Peak: 1.00 W/kg

SAR 10g (W/Kg)	0.226907
SAR 1g (W/Kg)	0.530409

Z axis scan



3D screen shot	Hot spot position
	

MEASUREMENT 42

Type: Phone measurement (Complete)

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

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

Date of measurement: 2014.4.18

Measurement duration: 7 minutes 56 seconds

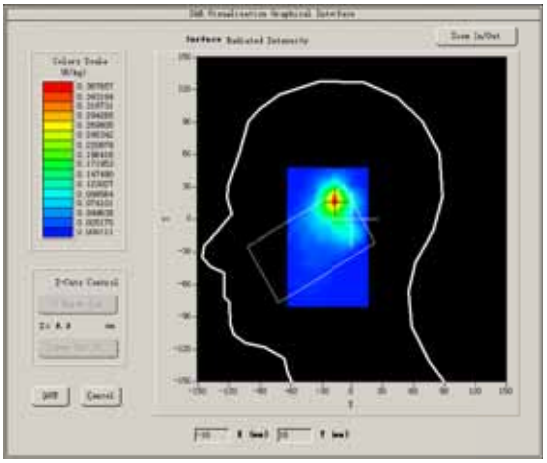
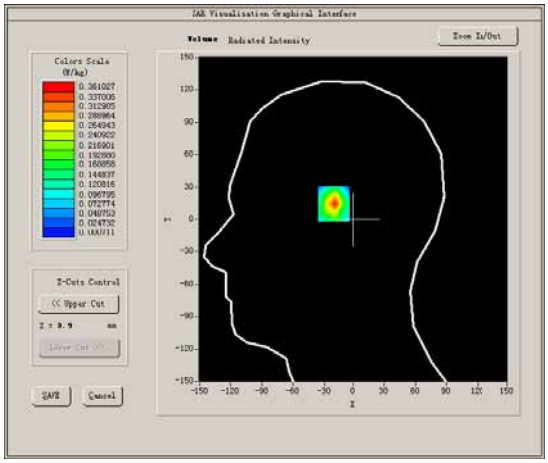
A. Experimental conditions.

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)	39.518865
Conductivity (S/m)	1.770434
Power drift (%)	-2.710000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	4.80
Crest factor:	1:1

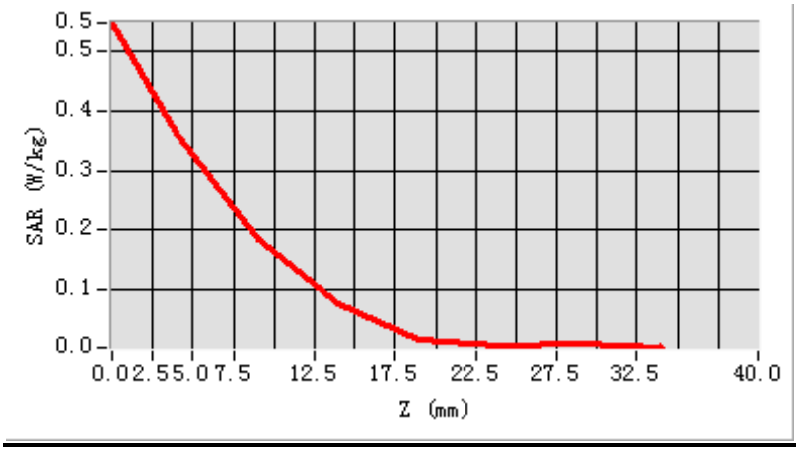
SURFACE SAR	VOLUME SAR
	

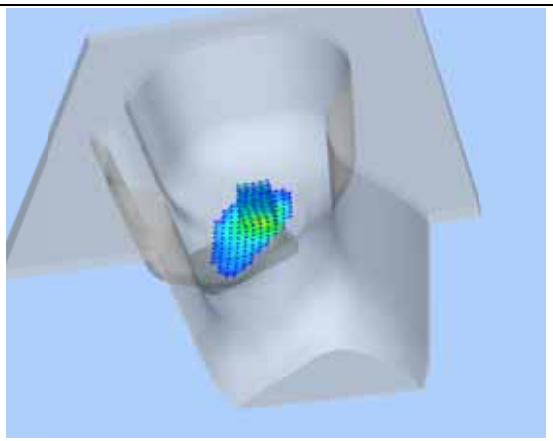
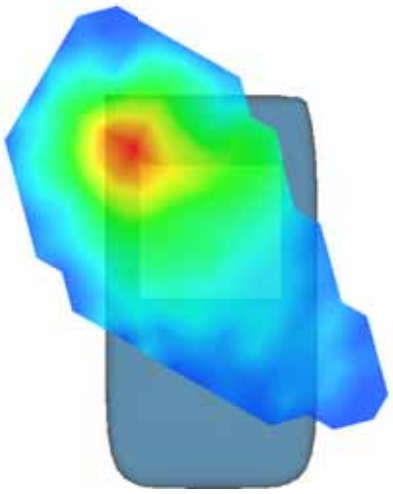
Maximum location: X=-17.00, Y=17.00

SAR Peak: 0.56 W/kg

SAR 10g (W/Kg)	0.133797
SAR 1g (W/Kg)	0.317107

Z axis scan



3D screen shot	Hot spot position
	

MEASUREMENT 43

Type: Phone measurement (Complete)

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

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

Date of measurement: 2014.4.18

Measurement duration: 7 minutes 58 seconds

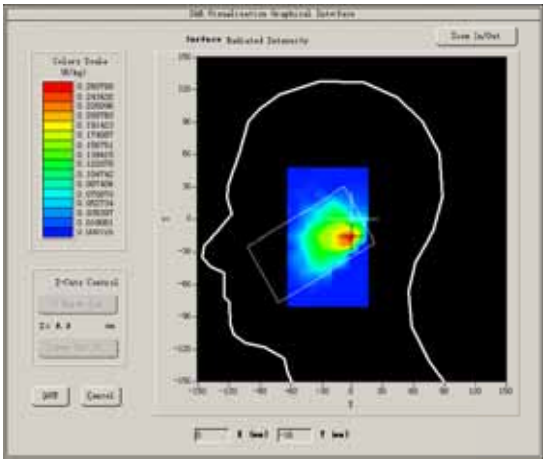
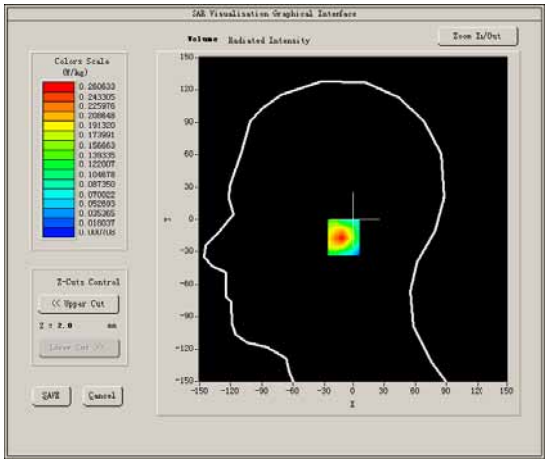
A. Experimental conditions.

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)

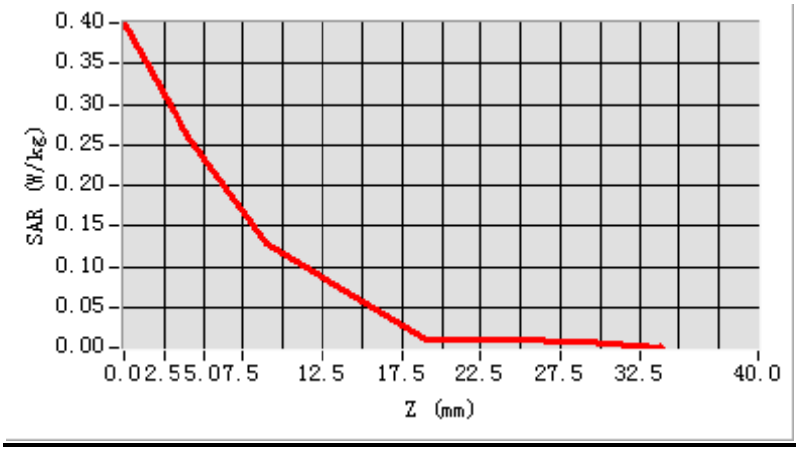
Frequency (MHz)	2412.000000
Relative permittivity (real part)	39.518865
Conductivity (S/m)	1.770434
Power drift (%)	-2.890000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	4.80
Crest factor:	1:1

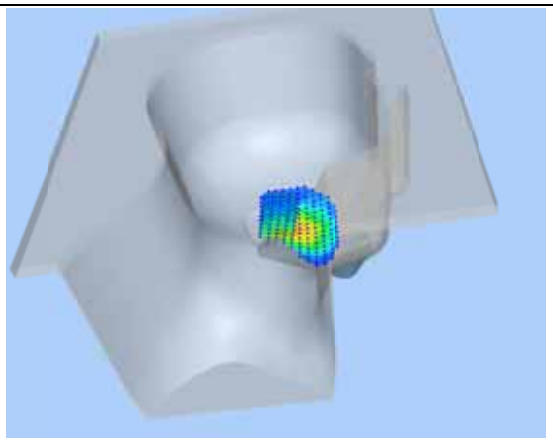
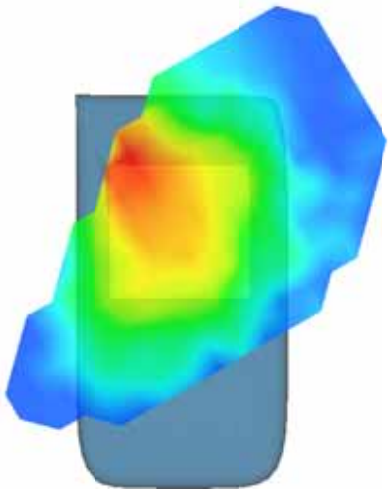
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=-17.00
SAR Peak: 0.40 W/kg

SAR 10g (W/Kg)	0.112012
SAR 1g (W/Kg)	0.236604

Z axis scan



3D screen shot	Hot spot position
	

MEASUREMENT 44

Type: Phone measurement (Complete)

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

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

Date of measurement: 2014.4.18

Measurement duration: 8 minutes 0 seconds

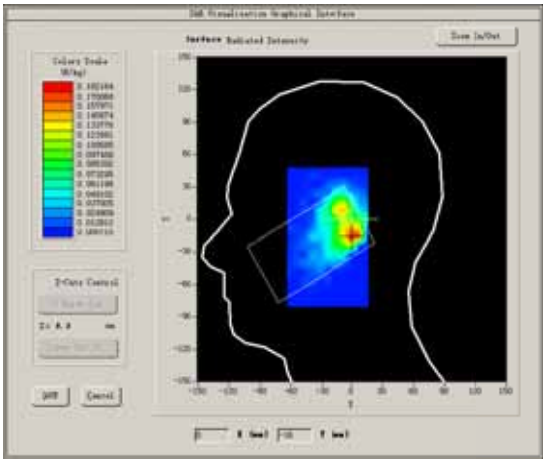
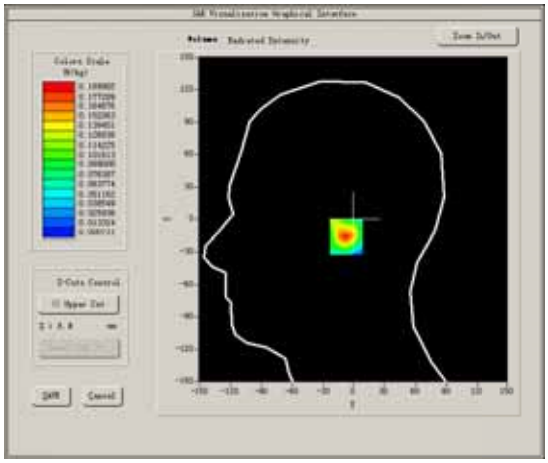
A. Experimental conditions.

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)

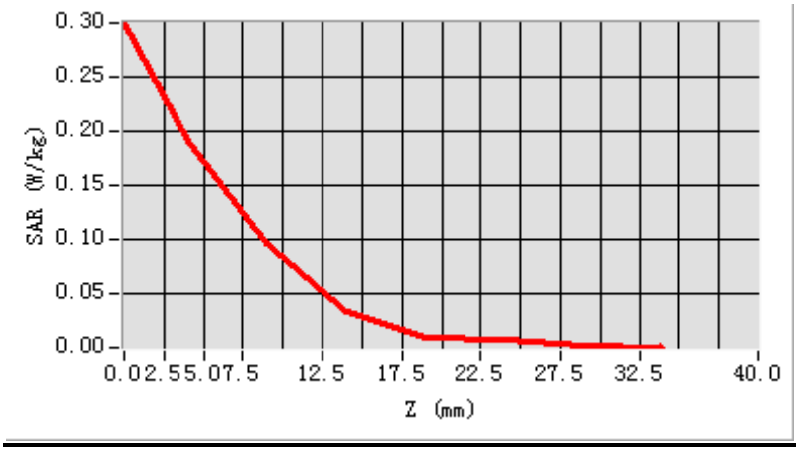
Frequency (MHz)	2412.000000
Relative permittivity (real part)	39.518865
Conductivity (S/m)	1.770434
Power drift (%)	-1.980000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	4.80
Crest factor:	1:1

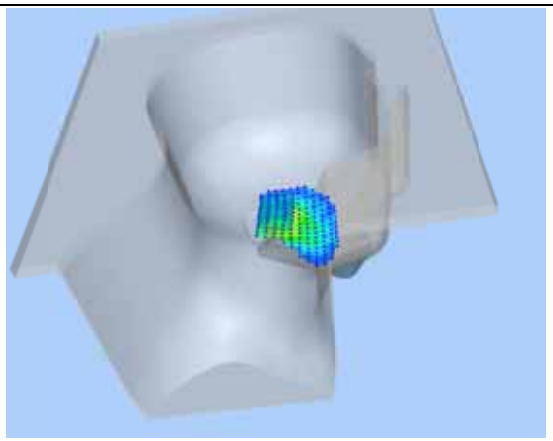
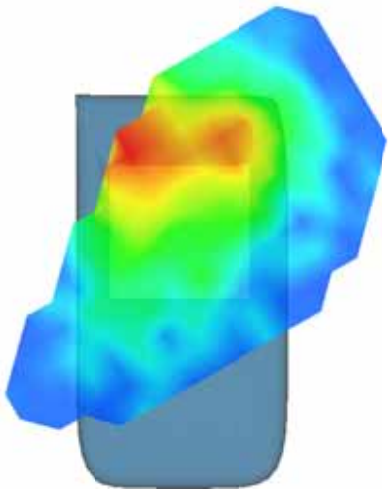
SURFACE SAR	VOLUME SAR
	

Maximum location: X=2.00, Y=-16.00
SAR Peak: 0.32 W/kg

SAR 10g (W/Kg)	0.075020
SAR 1g (W/Kg)	0.172632

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.18

Measurement duration: 9 minutes 40 seconds

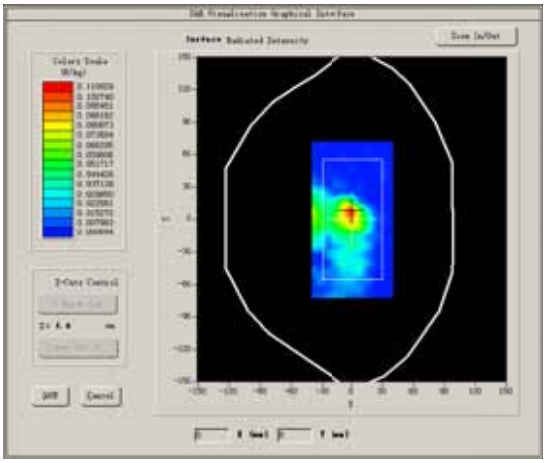
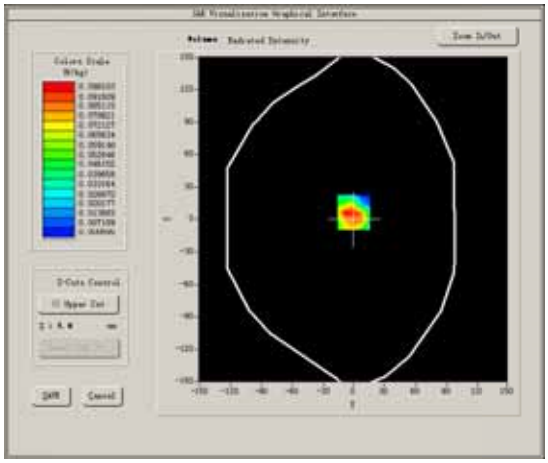
A. Experimental conditions.

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)	52.613457
Conductivity (S/m)	1.928667
Power drift (%)	-3.600000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	4.96
Crest factor:	1:1

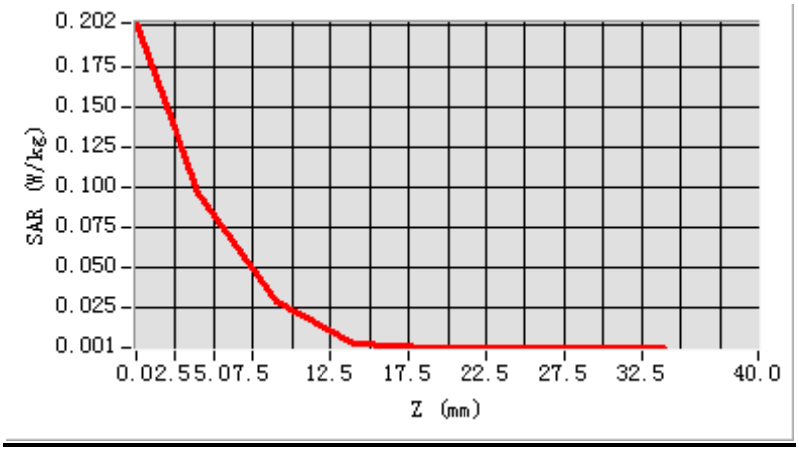
SURFACE SAR	VOLUME SAR
	

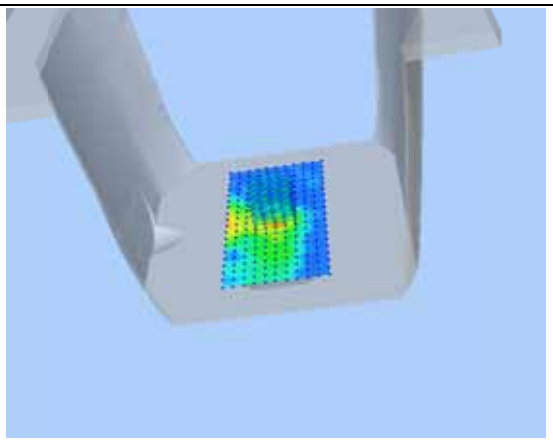
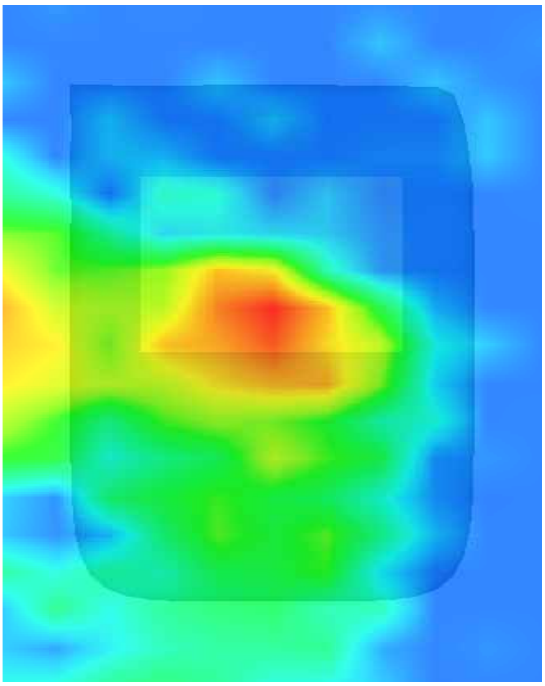
Maximum location: X=0.00, Y=6.00

SAR Peak: 0.23 W/kg

SAR 10g (W/Kg)	0.040956
SAR 1g (W/Kg)	0.103831

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.18

Measurement duration: 9 minutes 39 seconds

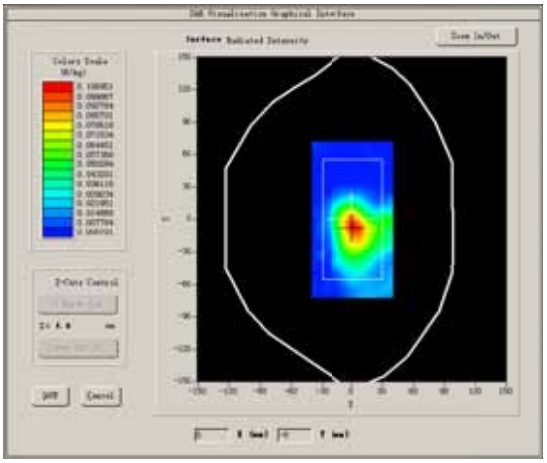
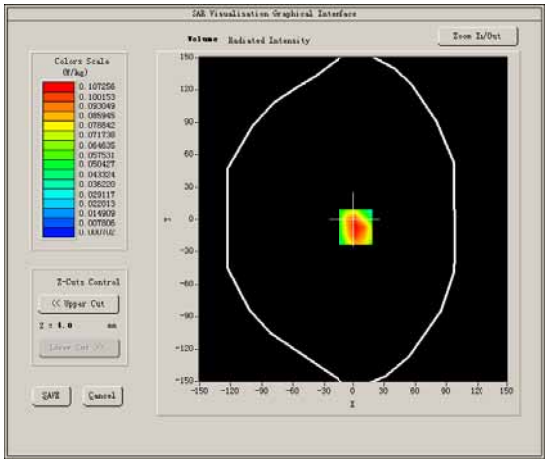
A. Experimental conditions.

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)	52.613457
Conductivity (S/m)	1.928667
Power drift (%)	-3.100000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	4.96
Crest factor:	1:1

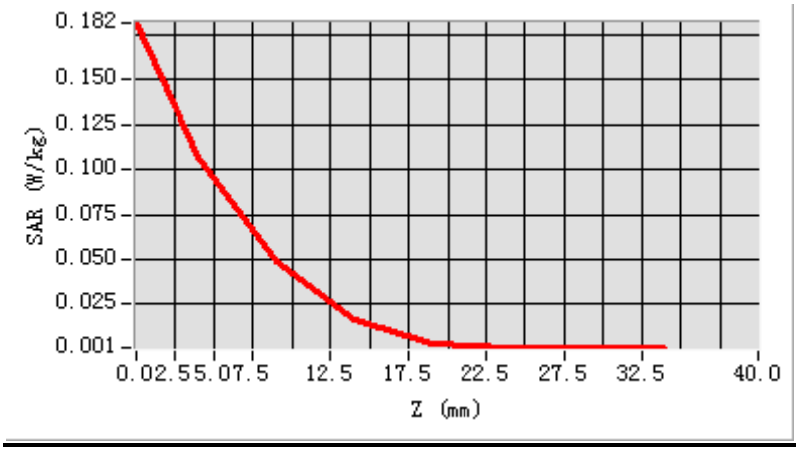
SURFACE SAR	VOLUME SAR
	

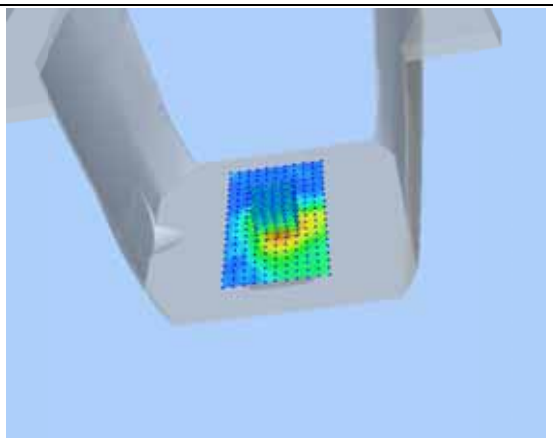
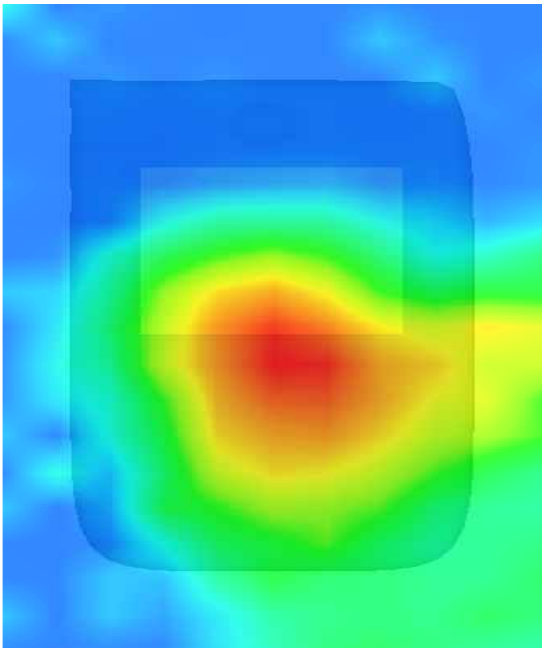
Maximum location: X=2.00, Y=-7.00

SAR Peak: 0.20 W/kg

SAR 10g (W/Kg)	0.050216
SAR 1g (W/Kg)	0.109534

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.18

Measurement duration: 9 minutes 42 seconds

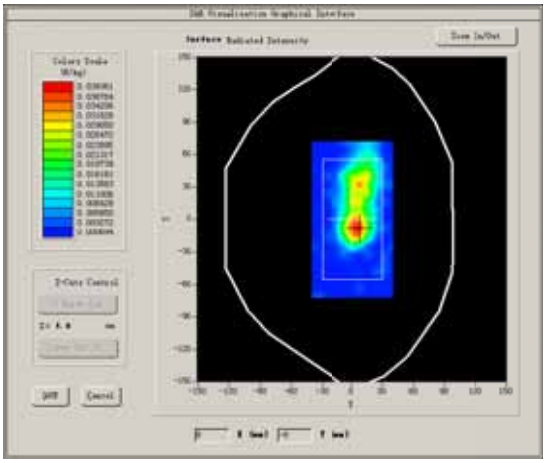
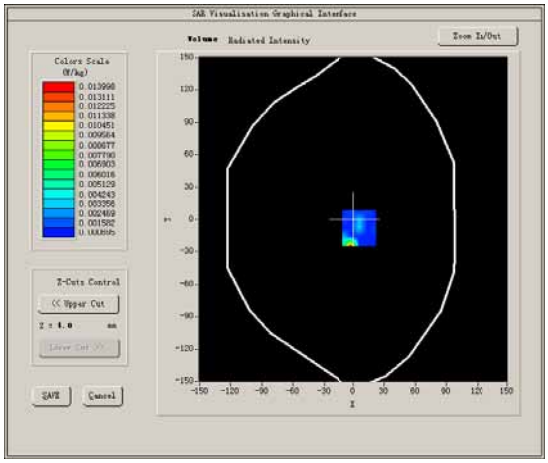
A. Experimental conditions.

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)	52.613457
Conductivity (S/m)	1.928667
Power drift (%)	-1.560000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	4.96
Crest factor:	1:1

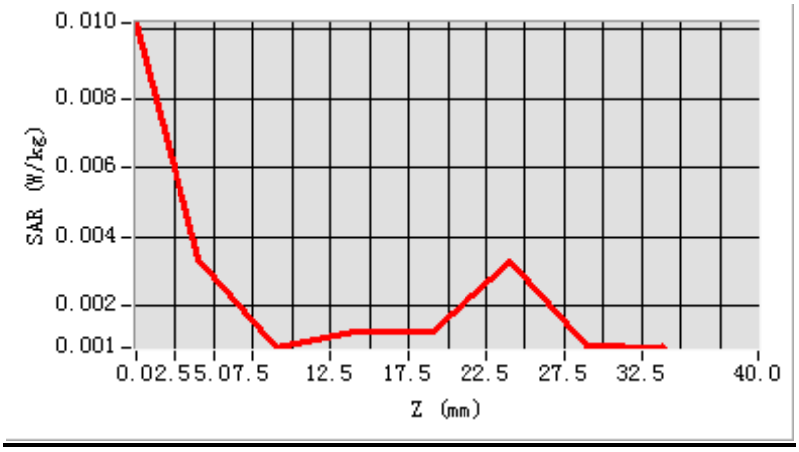
SURFACE SAR	VOLUME SAR
	

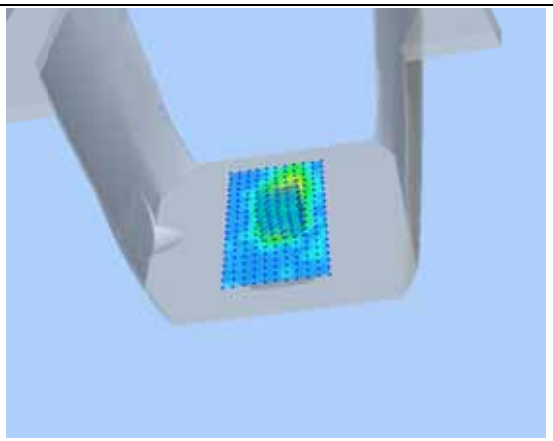
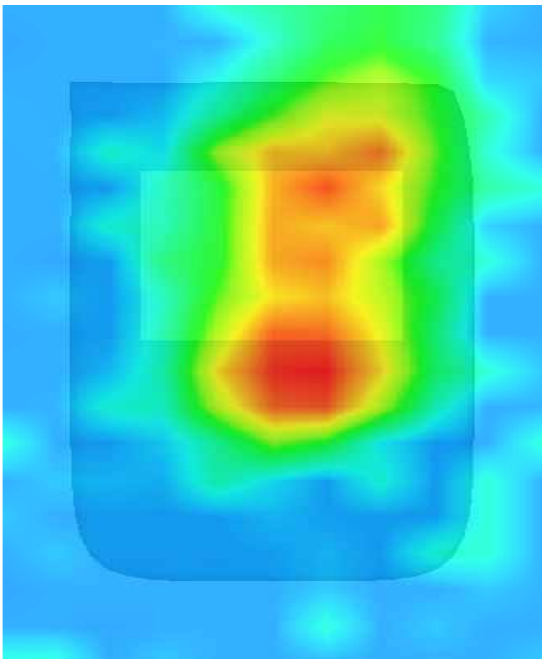
Maximum location: X=6.00, Y=-8.00

SAR Peak: 0.04 W/kg

SAR 10g (W/Kg)	0.002153
SAR 1g (W/Kg)	0.005966

Z axis scan



3D screen shot	Hot spot position
	

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: 2014.4.18

Measurement duration: 9 minutes 41 seconds

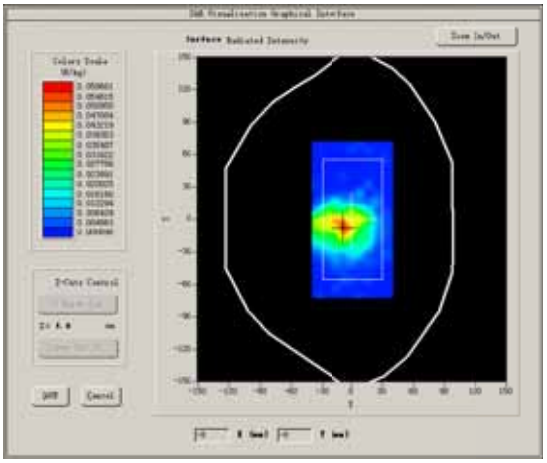
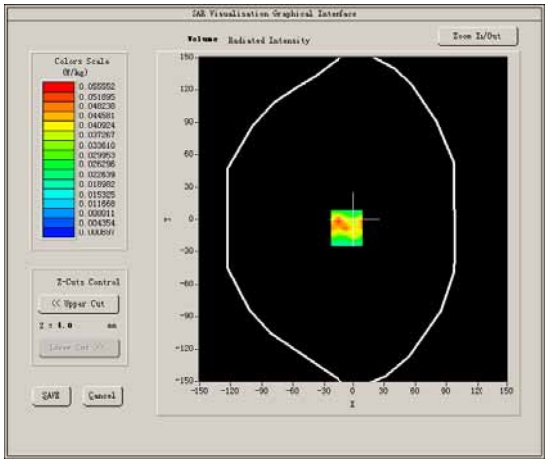
A. Experimental conditions.

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)

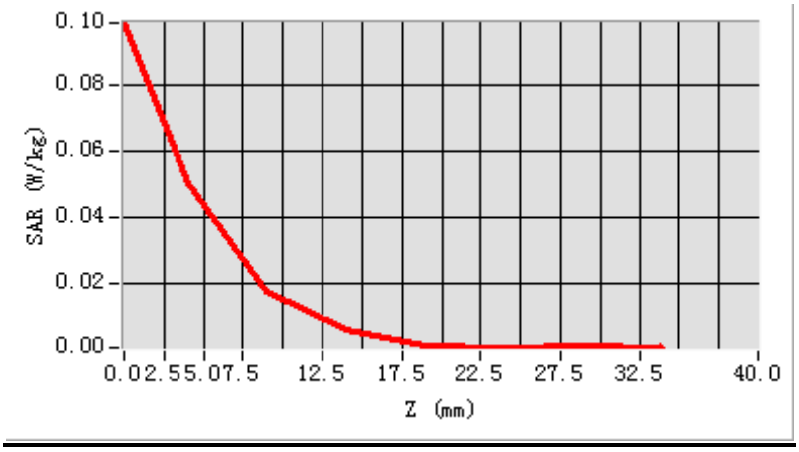
Frequency (MHz)	2412.000000
Relative permittivity (real part)	52.613457
Conductivity (S/m)	1.928667
Power drift (%)	-1.580000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	4.96
Crest factor:	1:1

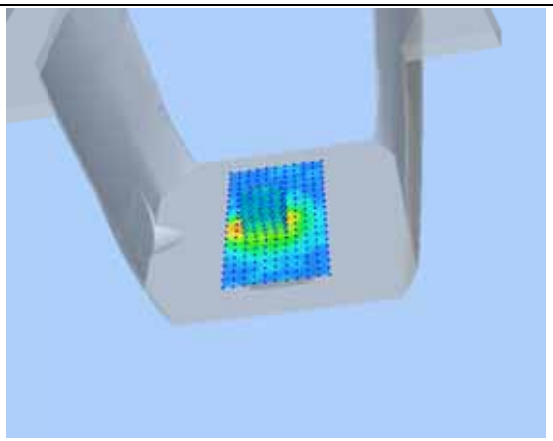
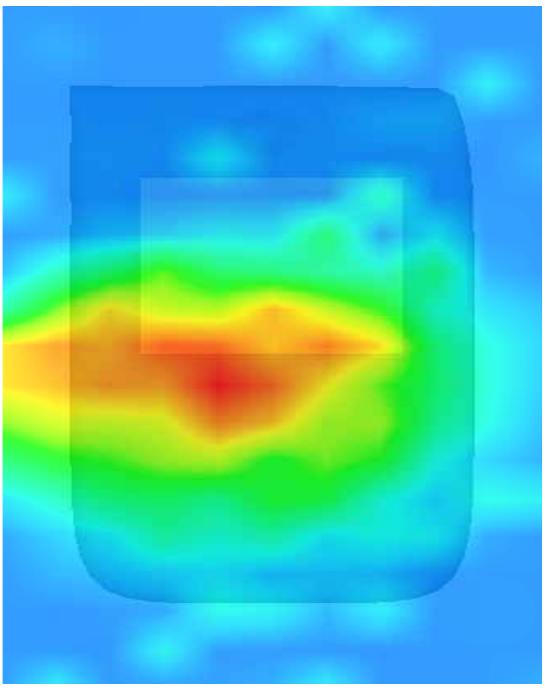
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-7.00, Y=-8.00
SAR Peak: 0.12 W/kg

SAR 10g (W/Kg)	0.023833
SAR 1g (W/Kg)	0.055757

Z axis scan



3D screen 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: 2014.4.16

Measurement duration: 13 minutes 27 seconds

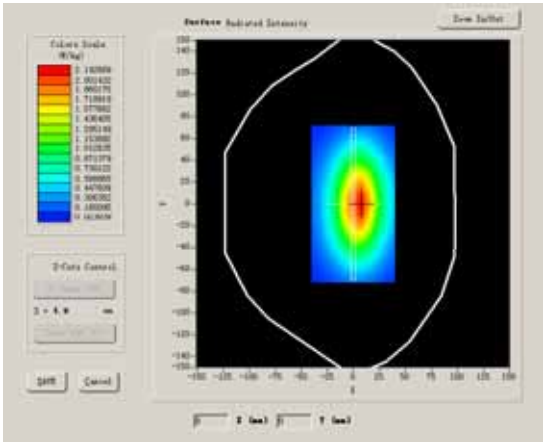
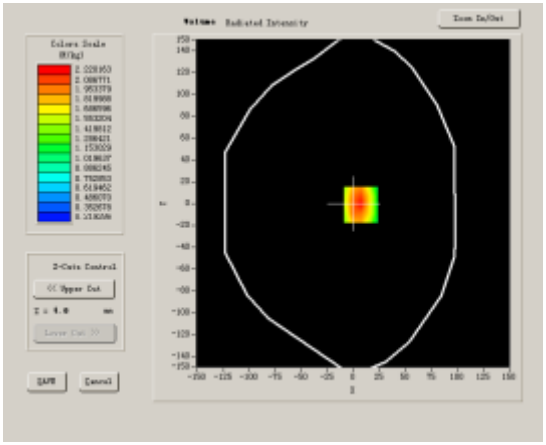
A. Experimental conditions.

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)	41.254837
Conductivity (S/m)	0.875843
Power drift (%)	-1.840000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

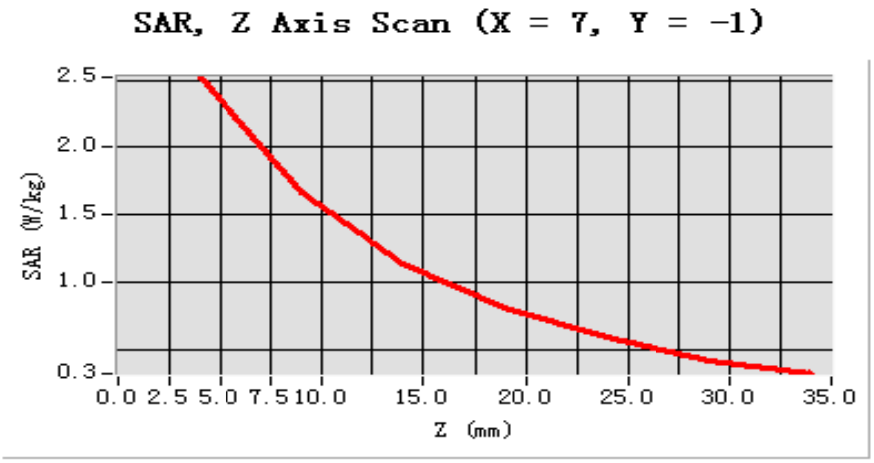
SURFACE SAR	VOLUME SAR
	

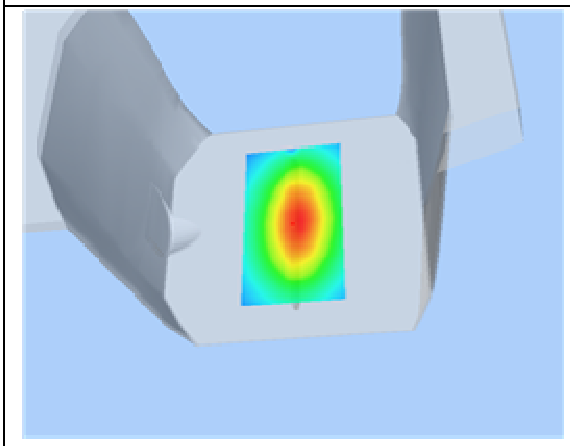
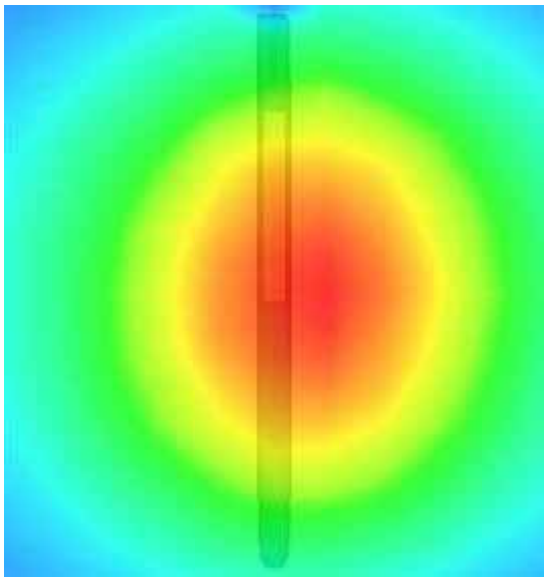
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.646014
SAR 1g (W/Kg)	2.415668

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



3D sceen 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: 2014.4.16

Measurement duration: 13 minutes 27 seconds

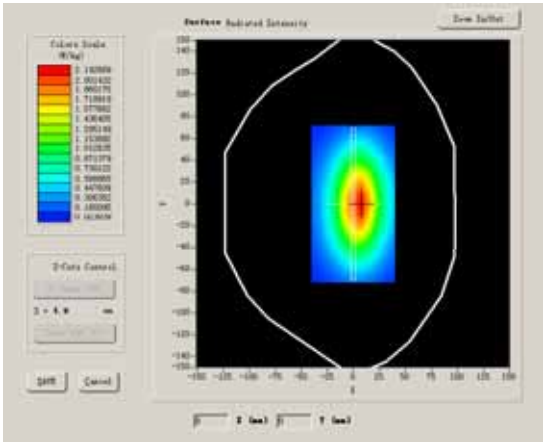
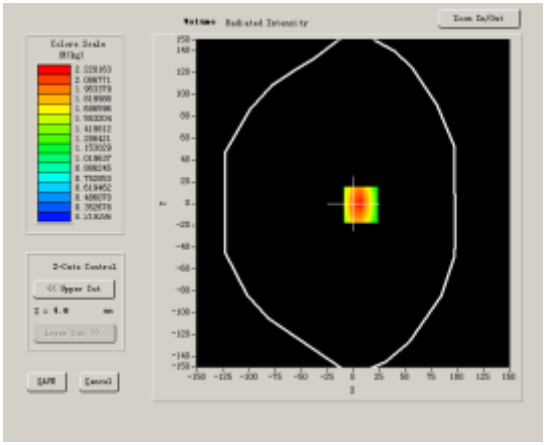
A. Experimental conditions.

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)	56.350478
Conductivity (S/m)	0.973341
Power drift (%)	-1.300000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:1

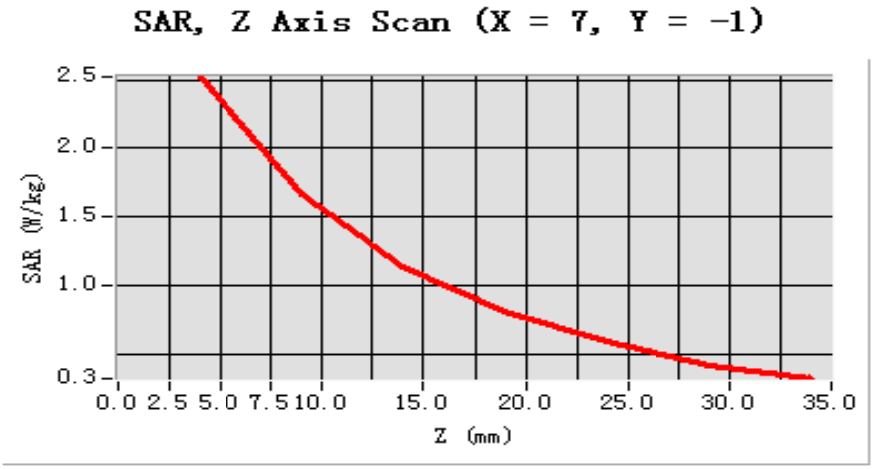
SURFACE SAR	VOLUME SAR
	

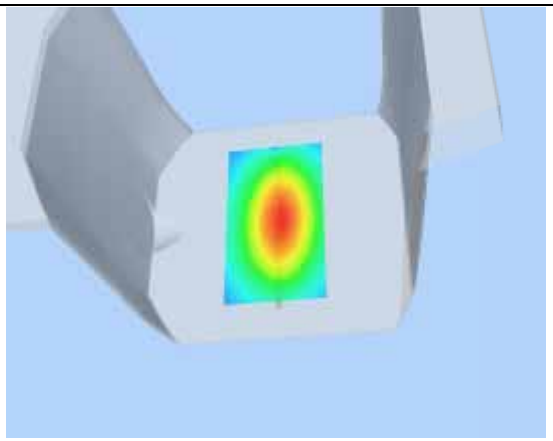
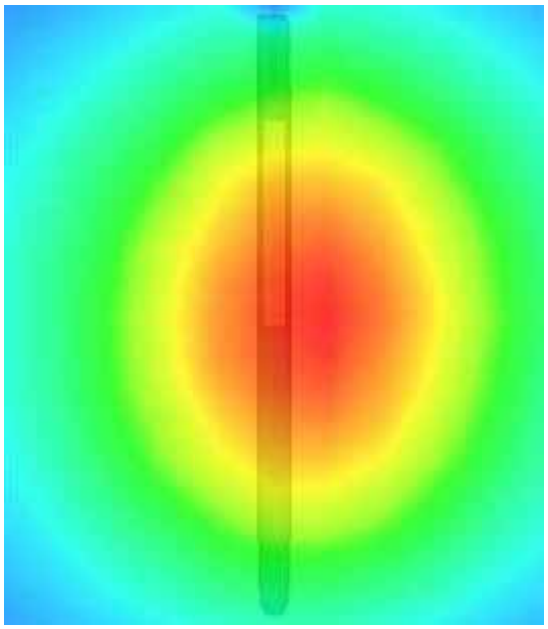
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.5334671
SAR 1g (W/Kg)	2.477204

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



3D sceen 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: 2014.4.17

Measurement duration: 13 minutes 27 seconds

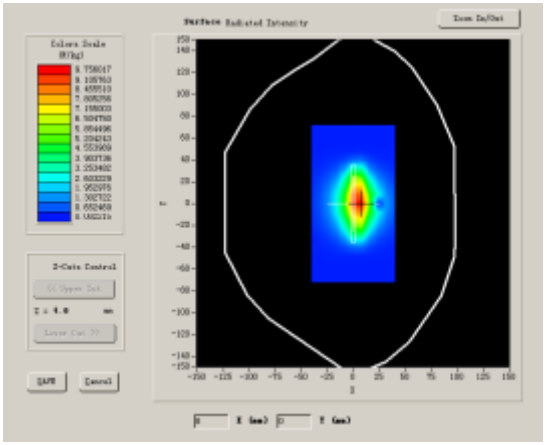
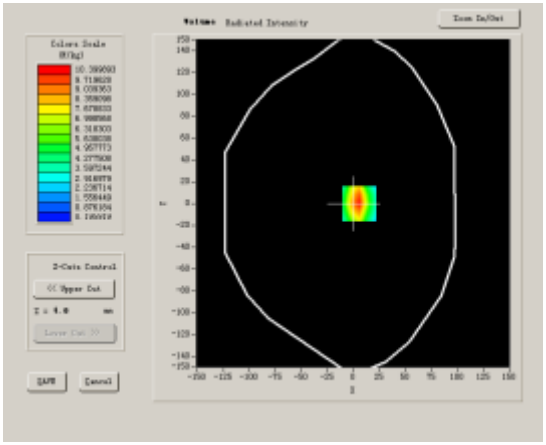
A. Experimental conditions.

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)	40.209571
Conductivity (S/m)	1.381448
Power drift (%)	1.010000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

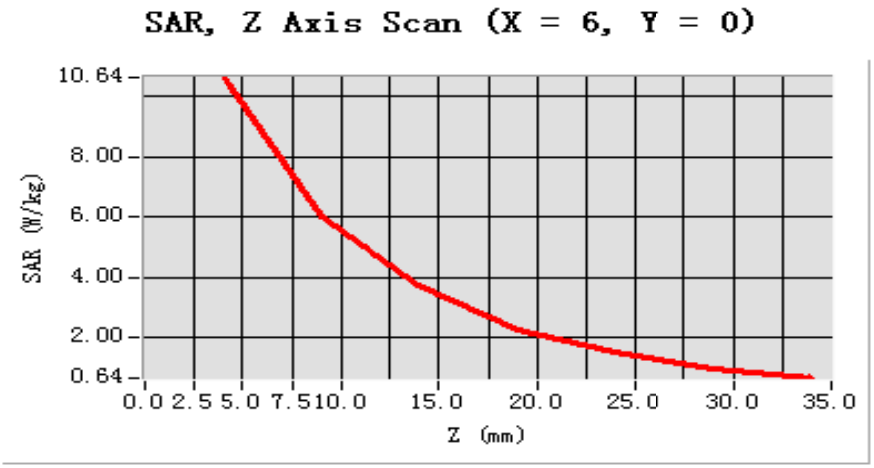
SURFACE SAR	VOLUME SAR
	

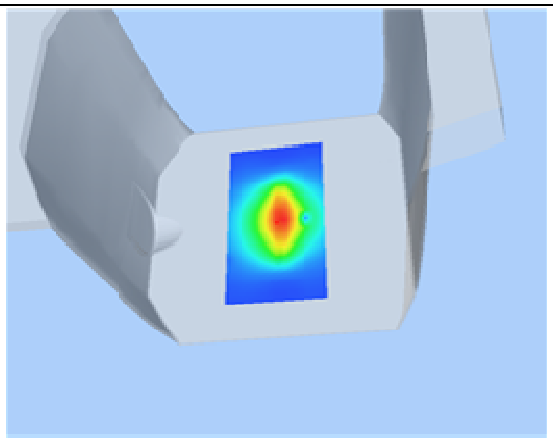
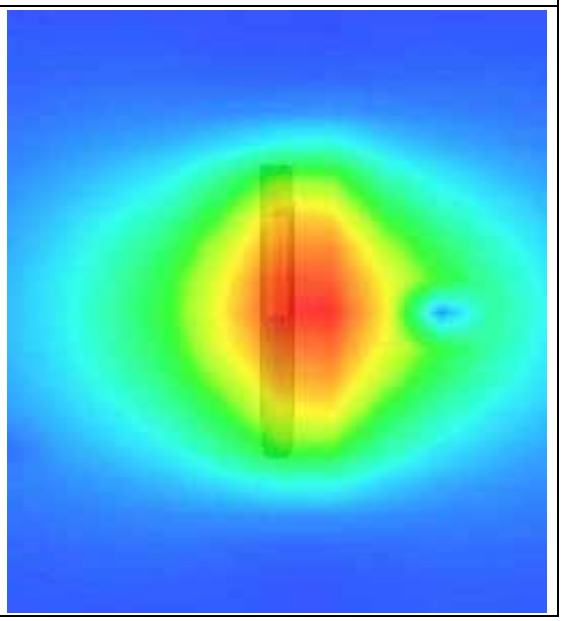
Maximum location: X=6.00, Y=0.00

SAR 10g (W/Kg)	6.316154
SAR 1g (W/Kg)	9.652246

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



3D sceen 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: 2014.4.17

Measurement duration: 13 minutes 26 seconds

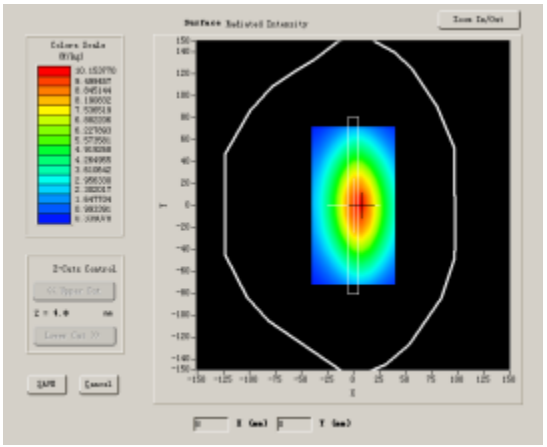
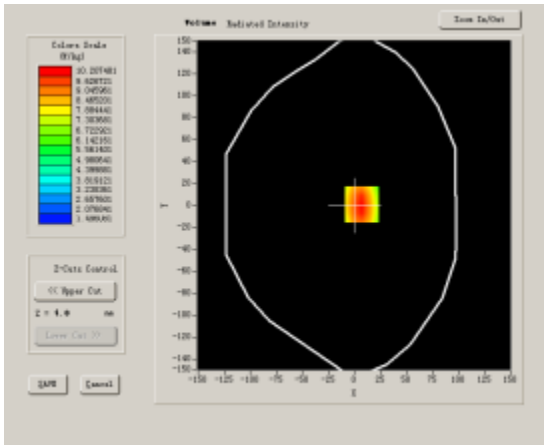
A. Experimental conditions.

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)	53.242346
Conductivity (S/m)	1.502154
Power drift (%)	-0.320000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

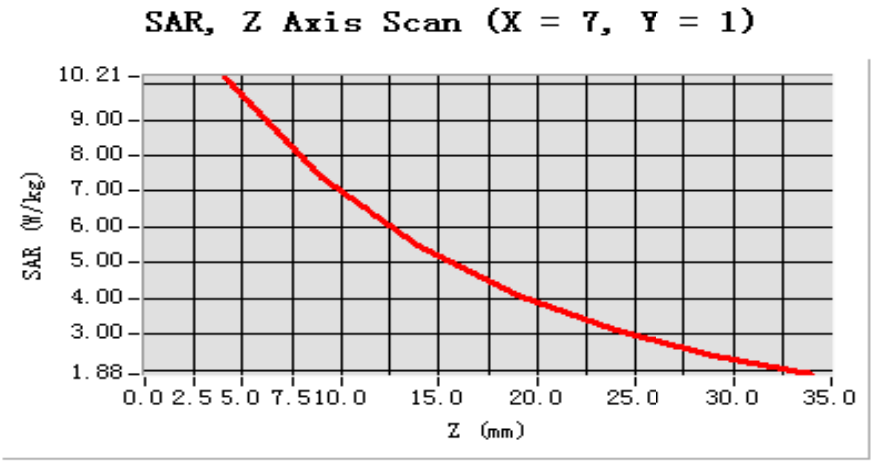
SURFACE SAR	VOLUME SAR
	

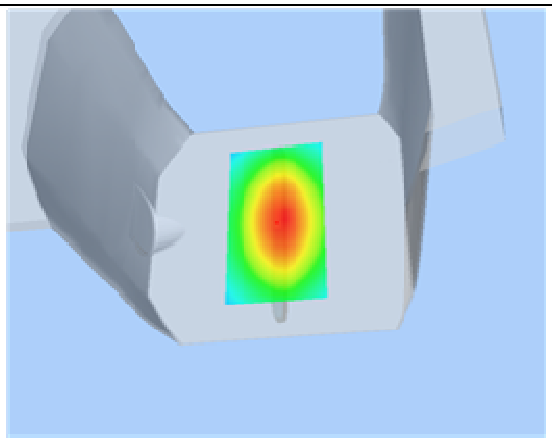
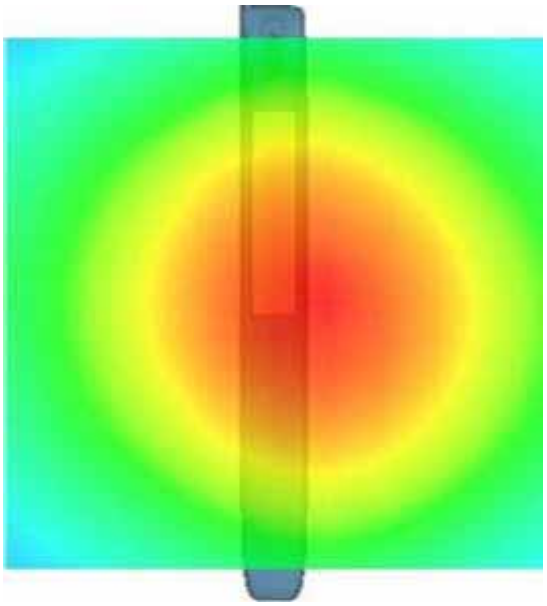
Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	6.462194
SAR 1g (W/Kg)	9.985587

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



3D sceen shot	Hot spot position
	

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: 2014.4.18

Measurement duration: 13 minutes 27 seconds

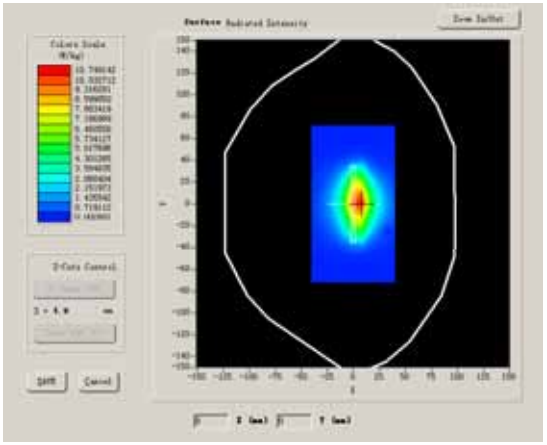
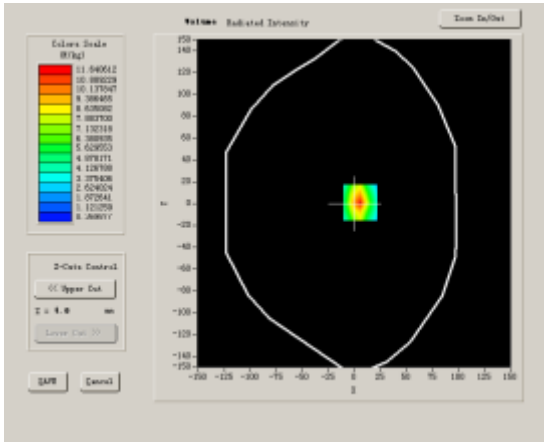
A. Experimental conditions.

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)	39.518865
Conductivity (S/m)	1.770434
Power Drift (%)	-1.090000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

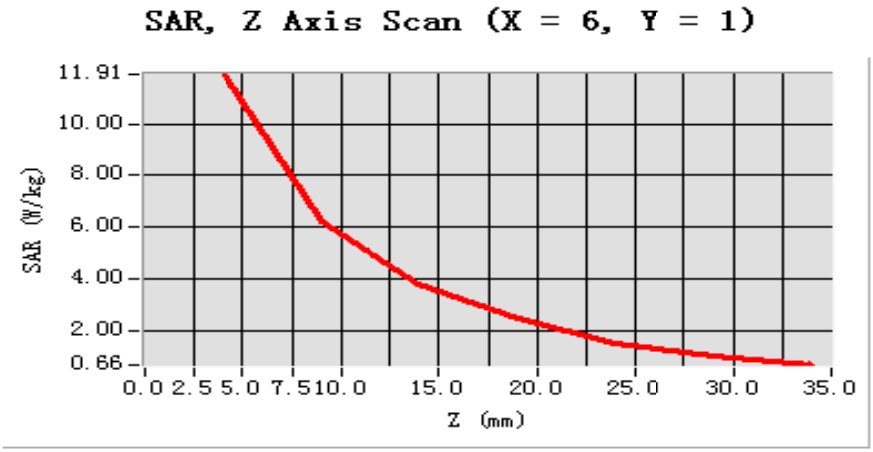
SURFACE SAR	VOLUME SAR
	

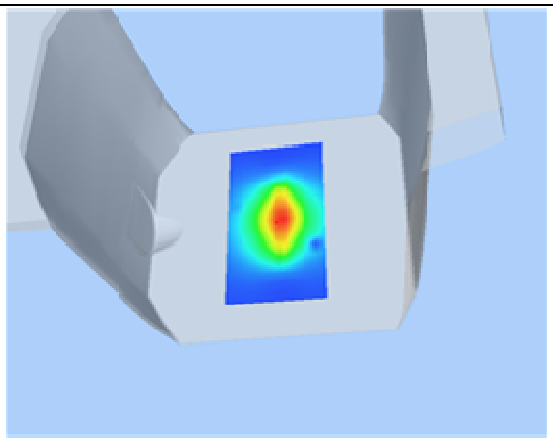
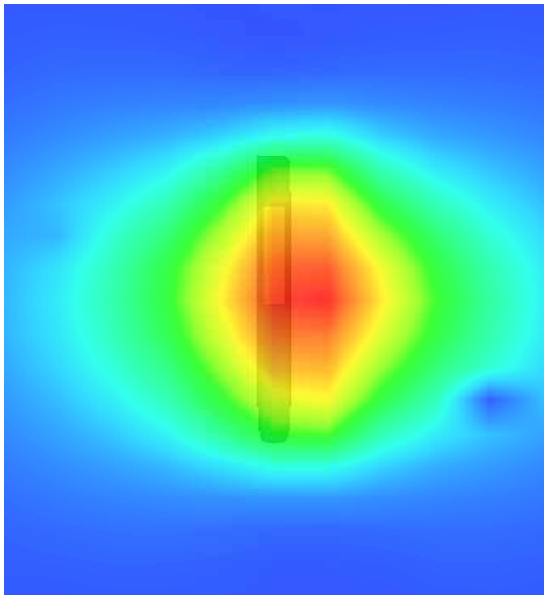
Maximum location: X=6.00, Y=1.00

SAR 10g (W/Kg)	7.640735
SAR 1g (W/Kg)	12.658415

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



3D sceen shot	Hot spot position
	

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: 2014.4.18

Measurement duration: 13 minutes 27 seconds

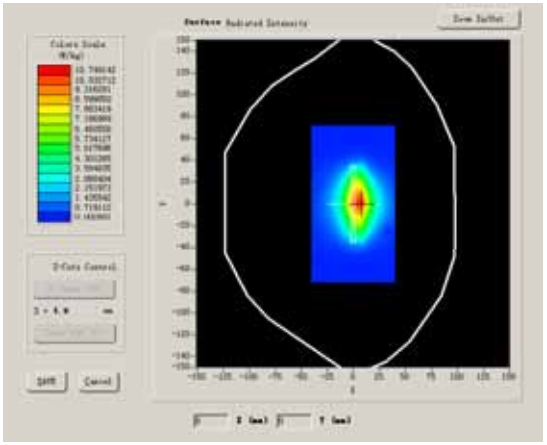
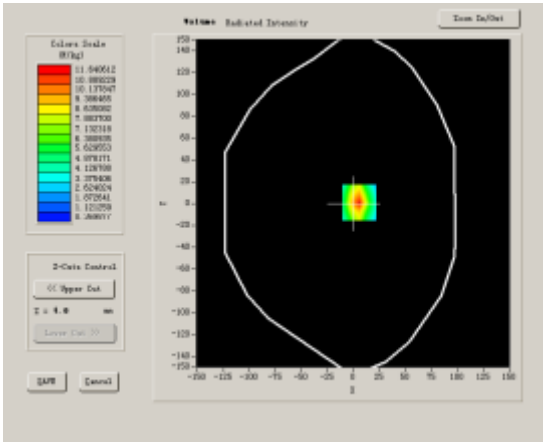
A. Experimental conditions.

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)	52.613457
Conductivity (S/m)	1.928667
Power Drift (%)	-1.120000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

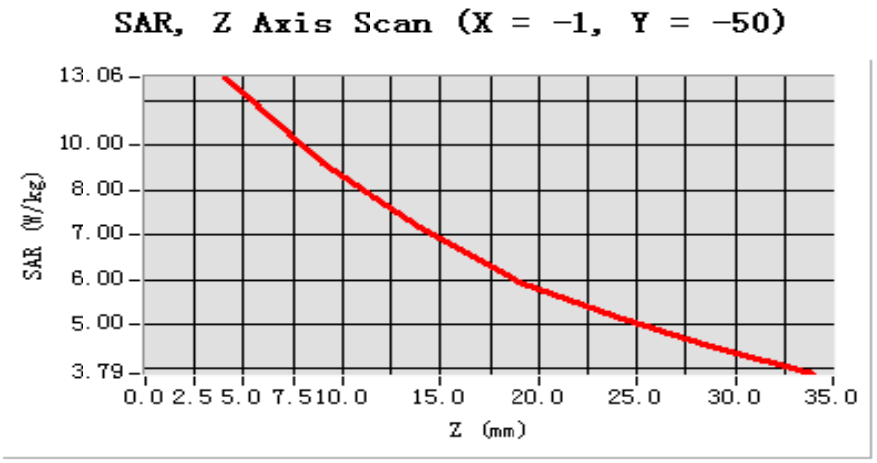
SURFACE SAR	VOLUME SAR
	

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

SAR 10g (W/Kg)	7.190413
SAR 1g (W/Kg)	12.964168

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



3D sceen shot	Hot spot position