REPORT No. : SZ14070043S01A

FCC SAR TEST REPORT

APPLICANT	:	Life Alert Emergency Response, Inc.
PRODUCT NAME	:	Mobile/Feature Phone
MODEL NAME	:	Life Alert HELP PENDANT (913)
TRADE NAME	:	Life Alert HELP PENDANT (913)
BRAND NAME	:	Life Alert HELP PENDANT
FCC ID	:	2ABZ7-913
STANDARD(S)	:	47CFR 2.1093 IEEE 1528-2013
ISSUE DATE	:	2014-10-20

SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

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DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	2014-10-20	First edition

TEST REPORT DECLARATION

Applicant	Life Alert Emergency Response, Inc.		
Applicant Address	16027 Ventura Blvd. Suite 400, Encino, CA 91436 USA		
Manufacturer	Life Alert Emergency Response, Inc.		
Manufacturer Address	16027 Ventura Blvd. Suite 400, Encino, CA 91436 USA		
Product Name	Mobile/Feature Phone		
Model Name	Life Alert HELP PENDANT (913)		
Brand Name	Life Alert HELP PENDANT		
HW Version	V. 913		
SW Version	913: V1.00		
Test Standards	47CFR 2.1093; IEEE 1528-2013		
Test Date	2014-09-18 to 2014-09-19		
The Highest Reported 1g-SAR(W/kg)	Head	1.443W/kg	Limit(W/kg): 1.6W/kg
	Body	1.506W/kg	

Tested by : Zou Jian

Zou Jian

Reviewed by : Peng Huarui

Peng Huarui

Approved by : Zeng Dexin

Zeng Dexin

1.TECHNICAL INFORMATION

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

1.1 Identification of Applicant

Company Name:	Life Alert Emergency Response, Inc.
Address:	16027 Ventura Blvd. Suite 400, Encino, CA 91436 USA

1.2 Identification of Manufacturer

Company Name:	Life Alert Emergency Response, Inc.
Address:	16027 Ventura Blvd. Suite 400, Encino, CA 91436 USA

1.3 Equipment Under Test (EUT)

Model Name:	Life Alert HELP PENDANT (913)
Trade Name:	Life Alert HELP PENDANT (913)
Brand Name:	Life Alert HELP PENDANT
Hardware Version:	V. 913
Software Version:	913: V1.00
Tx Frequency Bands:	GSM 850: 824-849 MHz; GSM 1900: 1850-1910 MHz; WCDMA Band II : 1850-1910MHz; WCDMA Band V: 824-849 MHz;
Uplink Modulations:	GSM/GPRS: GMSK; EDGE: GMSK/8PSK; WCDMA:QPSK
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:	CR15H270
Battery specification:	800mAh 2X3V
Hotspot function:	Not Support

1.3.1 Photographs of the EUT

Please refer to the External Photos for the Photos of the EUT

1.3.2 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#	V. 913	913: V1.00

1.4 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**	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
3	**KDB 447498 D01v05r01**	General RF Exposure Guidance
4	**KDB 865664 D01v01r01**	SAR Measurement 100 MHz to 6 GHz
5	**KDB 865664 D02v01r01**	SAR Reporting
6	**KDB 941225 D01v02**	SAR Measurement Procedures for 3G Devices
7	**KDB 941225 D03v01**	SAR Test Reduction GSM GPRS EDGE
8	**KDB 941225 D04v01**	SAR for GSM E GPRS Dual Xfer Mode

1.5 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.

1.6 Test Environment/Conditions

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

During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established.
The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 125, 190 and 251 respectively in the case of GSM 850 MHz, or to 512, 661 and 810 respectively in the case of PCS 1900 MHz, or to 4132, 4175 and 4233 respectively in the case of WCDMA 850 MHz, or to 9262, 9400 and 9538 respectively in the case of WCDMA 1900 MHz, 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.

2. SPECIFIC ABSORPTION RATE (SAR)

2.1 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.

2.2 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.

3. SAR MEASUREMENT SETUP

3.1 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.

3.2 Probe

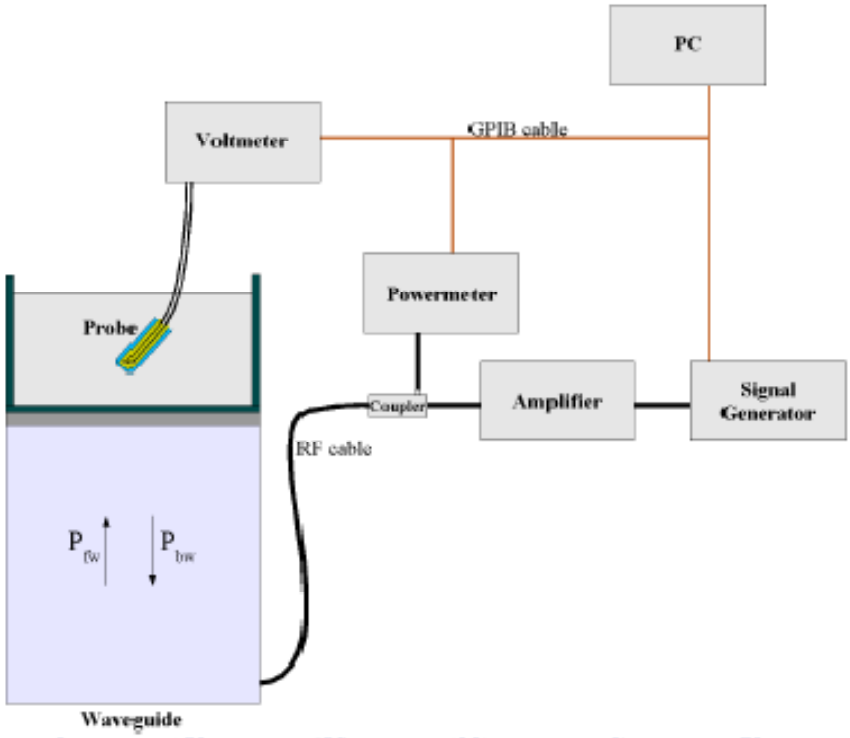
For the measurements the Specific Dosimetric E-Field Probe SN 37/08 EP80 with Following specifications is used

- 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.



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

Where :

Pfw = Forward Power

Pbw = Backward Power

a and b = Waveguide dimensions

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.

3.3 Probe Calibration Process

3.3.1 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/cm^2) using an with CALISAR, Antenna proprietary calibration system.

3.3.2 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/cm^2.

3.3.3 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,

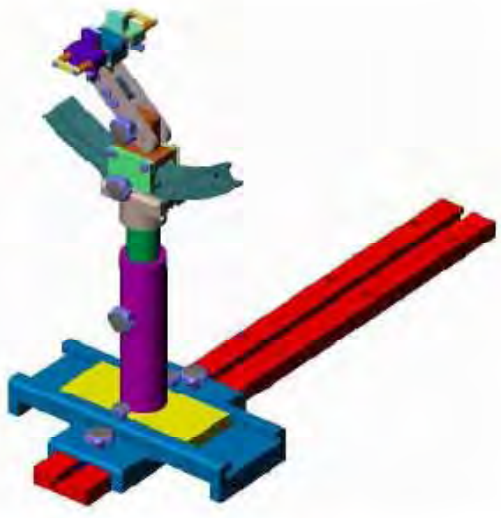
ρ = Tissue density (1.25 g/cm³ for brain tissue)

3.4 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.

3.5 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

4. 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	
Tissue Type	Head	Body	Head	Body
Ingredients (% by weight)				
Deionised Water	50.36	50.20	54.90	40.40
Salt(NaCl)	1.25	0.90	0.18	0.50
Sugar	0.00	48.50	0.00	58.00
Tween 20	48.39	0.00	0.00	0.00
HEC	0.00	0.20	0.00	1.00
Bactericide	0.00	0.20	0.00	0.10
Triton X-100	0.00	0.00	0.00	0.00
DGBE	0.00	0.00	44.92	0.00
Diethylenglycol monohexylether	0.00	0.00	0.00	0.00
Measured dielectric parameters				
Dielectric Constant	41.50	56.10	39.90	53.30
Conductivity (S/m)	0.90	0.95	1.42	1.52

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±(%)**
2014/9/18	Head 835	Relative Permittivity(εr):	41.37	41.50	-0.31	5
		Conductivity(σ):	0.88	0.90	-2.22	5
	Body 835	Relative Permittivity(εr):	55.16	56.10	-1.68	5
		Conductivity(σ):	0.93	0.95	-2.11	5
2014/9/19	Head 1900	Relative Permittivity(εr):	40.12	39.90	0.55	5
		Conductivity(σ):	1.38	1.42	-2.82	5
	Body 1900	Relative Permittivity(εr):	53.21	53.30	-0.17	5
		Conductivity(σ):	1.53	1.52	0.66	5

5. UNCERTAINTY ASSESSMENT

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

5.1 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	1.15	∞
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	∞
Test sample Related									
Test sample positioning	E.4.2.1	0.03	N	1	1	1	0.03	0.03	N-1
Device Holder Uncertainty	E.4.1.	5.00	N	1	1	1	5.00	5.0	N-

	1							0	1
Output power Power drift - SAR drift measurement	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	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	

5.2 UNCERTAINTY FOR SYSTEM PERFORMANCE CHECK

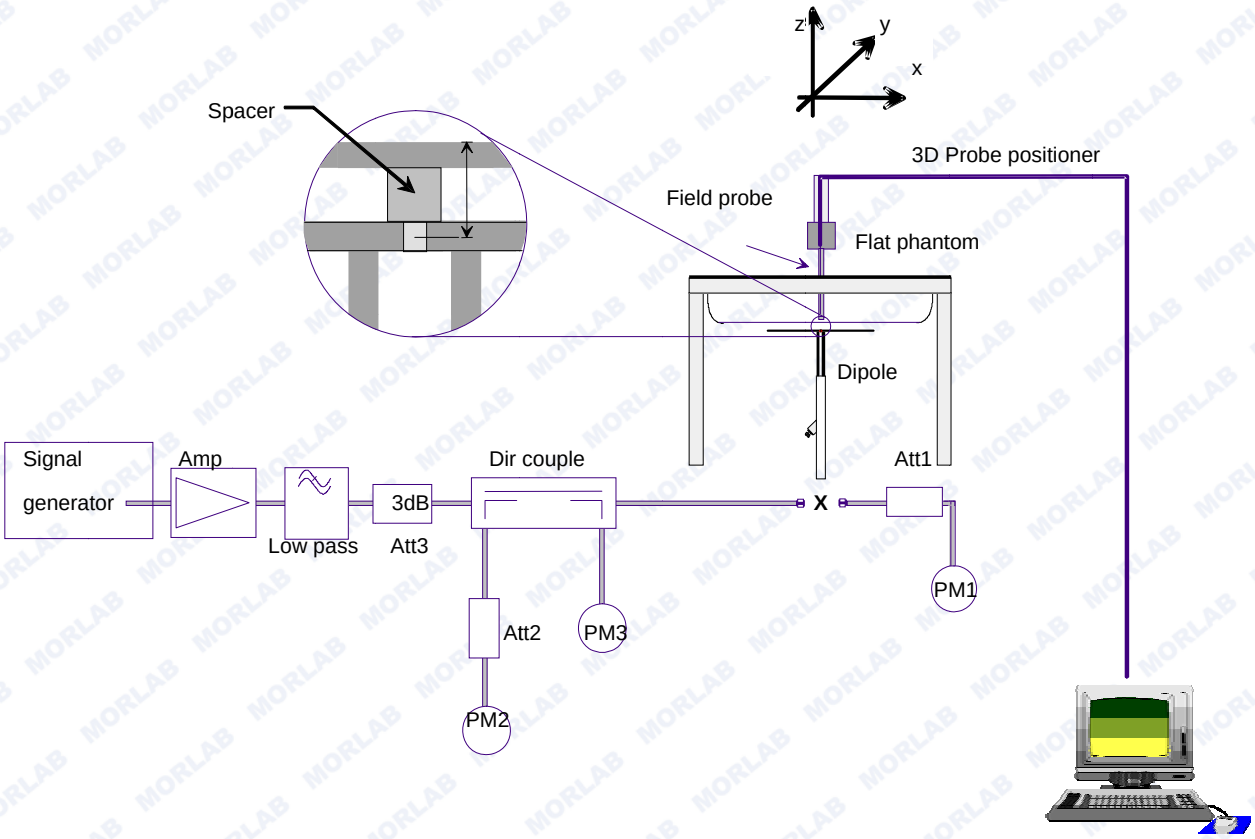
a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	4.76	N	1	1	1	4.76	4.7	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	0.7	0.7	1.01	1.0	∞
Hemispherical Isotropy	E.2.2	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	

6. SAR MEASUREMENT EVALUATION

6.1 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.

6.2 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 1W (1g)	9.71 W/Kg	10.02 W/Kg	39.39 W/Kg	42.33 W/Kg
Test value 1g (250 mW input power)	2.392 W/Kg (9.18)	2.446 W/Kg (9.18)	9.775 W/Kg (9.19)	9.987 W/Kg (9.19)
Normalized to 1W value(1g)	9.568 W/Kg	9.784 W/Kg	39.100 W/Kg	39.948 W/Kg

Note: System checks the specific test data please see 124~131.

7. OPERATIONAL CONDITIONS DURING TEST

7.1 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.

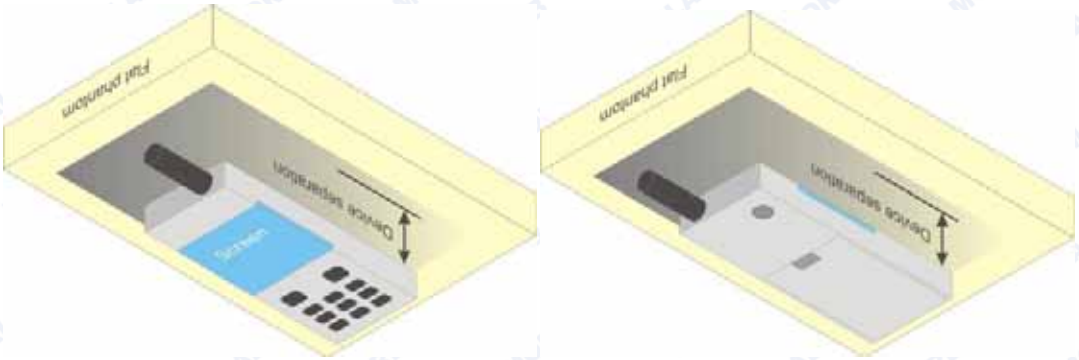


Illustration for Body Worn Position

7.3 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 cannot 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.

7.4 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.

8. MEASUREMENT OF CONDUCTED OUTPUT POWER

1. GSM Conducted peak output power

Band	Channel	Frequency (MHz)	Output Power (dBm)
GSM 850	128	824.2	32.26
	190	836.6	32.81
	251	848.8	33.29
PCS 1900	512	1850.2	29.39
	661	1880.0	30.27
	810	1909.8	30.76

2. 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	28.73	27.62	26.89	26.47
	190	836.6	29.32	28.21	27.48	27.06
	251	848.8	29.98	28.87	28.14	27.79
PCS 1900	512	1850.2	27.96	27.25	26.92	26.54
	661	1880.0	28.83	27.78	27.11	26.77
	810	1909.8	29.34	28.03	27.26	27.08

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	19.70	21.60	22.63	23.46
	190	836.6	20.29	22.19	23.22	24.05
	251	848.8	20.95	22.85	23.88	24.78
PCS 1900	512	1850.2	18.93	21.23	22.66	23.53
	661	1880.0	19.80	21.76	22.85	23.76
	810	1909.8	20.31	22.01	23.00	24.07

Timeslot consignations:

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

3. EDGE 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	28.65	27.51	26.79	26.38
	190	836.6	29.31	28.17	27.45	27.04
	251	848.8	29.97	28.83	28.11	27.70
PCS 1900	512	1850.2	28.23	27.64	26.95	26.52
	661	1880.0	28.94	27.80	27.08	26.67
	810	1909.8	29.62	28.24	27.57	27.06

EDGE Time-based Average Power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	19.62	21.49	22.53	23.37
	190	836.6	20.28	22.15	23.19	24.03
	251	848.8	20.94	22.81	23.85	24.69
PCS 1900	512	1850.2	19.20	21.62	22.69	23.51
	661	1880.0	19.91	21.78	22.82	23.66
	810	1909.8	20.59	22.22	23.31	24.05

4. WCDMA mode conducted output power values

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4132	4175	4233	9262	9400	9538
	subtest	dBm			dBm		
5.2(WCDMA)	non	23.47	23.67	24.36	23.44	23.65	23.11
Note:	The Conducted RF Output Power test of WCDMA was tested by power meter.						

9. 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
Body (5mm Separation)	GSM (Hold to face)	Front upward	128	0.396	1.331	0.527
			190	0.906	1.172	1.062
			251	1.374	1.050	1.443
	GPRS (Body worn)	Back upward	251	0.752	1.050	0.790
		Front upward	128	0.473	1.422	0.673
			190	0.616	1.242	0.765
			251	0.811	1.050	0.865
		Edge A	251	0.319	1.050	0.335
		Edge B		0.375		0.394
		Edge C		0.162		0.170

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
Body (5mm Separation)	GSM (Hold to face)	Front upward	810	0.532	1.005	0.535
	GPRS (Body worn)	Back upward	512	1.208	1.219	1.473
			661	1.139	1.130	1.287
			810	1.079	1.005	1.084
		Front upward	512	1.219	1.219	1.486
			661	0.864	1.130	0.976
			810	1.014	1.005	1.019
		Edge A	810	0.364	1.005	0.366
		Edge B		0.766		0.770
		Edge C	512	1.206	1.219	1.470
			661	1.333	1.130	1.506
			810	1.404	1.005	1.411

Note:

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

Band	Channel	Slots	Power level	Duty Cycle
GPRS850	251	4	5	1:2
GPRS1900	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
Body (5mm Separation)	Hold to face	Front upward	4132	1.130	1.268	1.433
			4175	1.183	1.211	1.433
			4233	1.230	1.033	1.271
	Body worn	Back upward	4132	1.113	1.268	1.411
			4175	1.074	1.211	1.301
			4233	0.940	1.033	0.971
		Edge A	4132	0.956	1.268	1.212
			4175	0.977	1.211	1.183
			4233	0.868	1.033	0.897
		Edge B	4233	0.642	1.033	0.663
		Edge C		0.509		0.526

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
Body (5mm Separation)	Hold to face	Front upward	9262	1.238	1.138	1.409
			9400	0.838	1.084	0.908
			9538	0.824	1.227	1.011
	Body worn	Back upward	9262	1.111	1.138	1.264
			9400	0.971	1.084	1.053
			9538	0.813	1.227	0.998
		Edge A	9400	0.585	1.084	0.634
		Edge B		0.783		0.849
		Edge C		0.743		0.805

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 v05r02)

   ≤ 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 EUT doesn't support close to ear voice, so the voice is tested with 5mm distance to flat phantom filled with head equivalent liquid.

3. IEEE Std 1528-2013 require the middle channel to be tested first. This generally applies to wireless devices that are designed to operate in technologies with tight tolerances for maximum output power variations across channels in the band. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.

4. Per KDB 447498, when the SAR procedures require multiple channels to be tested and the 1-g SAR for the highest output channel is less than 0.8 W/kg and peak SAR is less than 1.6W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

5. Scaling Factor calculation

Band	Tune-up power tolerance(dBm)	SAR test channel Power (dBm)	Scaling Factor
GSM 850	PCL = 5, PWR =33+-0.5	32.26	1.331
		32.81	1.172
		33.29	1.050
GPRS 850	PCL = 5, PWR =27.5+-0.5(4 slots)	26.47	1.422
		27.06	1.242
		27.79	1.050
GSM1900	PCL = 0, PWR =30.5+-0.5	30.76	1.057
GPRS 1900	PCL= 0, PWR = 26.6+-0.5(4 slots)	26.24	1.219
		26.57	1.130
		27.08	1.005
WCDMA 850	Max output power =23.5(+1/-2)	23.47	1.268
		23.67	1.211
		24.36	1.033
WCDMA 1900	Max output power =23(+1/-2)	23.44	1.138
		23.65	1.084
		23.11	1.227

10. REPEATED SAR MEASUREMENT

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Band	Test Position	Test Channel	Meas.SAR(W/kg)		Largest to Smallest SAR Ratio
			Original	Repeated	
GSM850	Body	251	1.374	1.329	1.03
GSM1900	Body	810	1.404	1.403	1.00
WCDMA850	Body	4233	1.230	1.156	1.06
WCDMA1900	Body	9262	1.238	1.148	1.08

ANNEX A GRAPH TEST RESULTS

BAND	PARAMETERS
GSM850	Measurement 1: Flat Plane with Body device position on Low Channel in GSM mode Measurement 2: Flat Plane with Body device position on Middle Channel in GSM mode Measurement 3: Flat Plane with Body device position on High Channel in GSM mode Measurement 4: Flat Plane with Body device position on High Channel in GPRS mode Measurement 5: Flat Plane with Body device position on Low Channel in GPRS mode Measurement 6: Flat Plane with Body device position on Middle Channel in GPRS mode Measurement 7: Flat Plane with Body device position on High Channel in GPRS mode Measurement 8: Flat Plane with Body device position on High Channel in GPRS mode Measurement 9: Flat Plane with Body device position on High Channel in GPRS mode Measurement 10: Flat Plane with Body device position on High Channel in GPRS mode Measurement 11: Flat Plane with Body device position on High Channel in GPRS mode
GSM1900	Measurement 12: Flat Plane with Body device position on High Channel in GSM mode Measurement 13: Flat Plane with Body device position on Low Channel in GPRS mode Measurement 14: Flat Plane with Body device position on Middle Channel in GPRS mode Measurement 15: Flat Plane with Body device position on High Channel in GPRS mode Measurement 16: Flat Plane with Body device position on Low Channel in GPRS mode Measurement 17: Flat Plane with Body device position on Middle Channel in GPRS mode

	Measurement 18: Flat Plane with Body device position on High Channel in GPRS mode Measurement 19: Flat Plane with Body device position on High 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 Low Channel in GPRS mode Measurement 22: Flat Plane with Body device position on Middle 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 GPRS mode
WCDMA 850	Measurement 25: Flat Plane with Body device position on Low Channel in WCDMA mode Measurement 26: Flat Plane with Body device position on Middle Channel in WCDMA mode Measurement 27: Flat Plane with Body device position on High Channel in WCDMA mode Measurement 28: Flat Plane with Body device position on Low Channel in WCDMA mode Measurement 29: Flat Plane with Body device position on Middle Channel in WCDMA mode Measurement 30: Flat Plane with Body device position on High 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 Middle Channel in WCDMA mode Measurement 33: Flat Plane with Body device position on High Channel in WCDMA mode Measurement 34: Flat Plane with Body device position on High Channel in WCDMA mode Measurement 35: Flat Plane with Body device position on High Channel in WCDMA mode Measurement 36: Flat Plane with Body device position on High Channel in WCDMA mode

WCDMA 1900	Measurement 37: Flat Plane with Body device position on Low Channel in WCDMA mode Measurement 38: Flat Plane with Body device position on Middle Channel in WCDMA mode Measurement 39: Flat Plane with Body device position on High Channel in WCMA mode Measurement 40: Flat Plane with Body device position on Low Channel in WCDMA mode Measurement 41: Flat Plane with Body device position on Middle Channel in WCDMA mode Measurement 42: Flat Plane with Body device position on High Channel in WCMA mode Measurement 43: Flat Plane with Body device position on Middle Channel in WCDMA mode Measurement 44: Flat Plane with Body device position on Middle Channel in WCDMA mode Measurement 45: Flat Plane with Body device position on Middle Channel in WCDMA mode Measurement 46: Flat Plane with Body device position on Low Channel in WCDMA 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: 2014.9.18

Measurement duration: 9 minutes 36 seconds

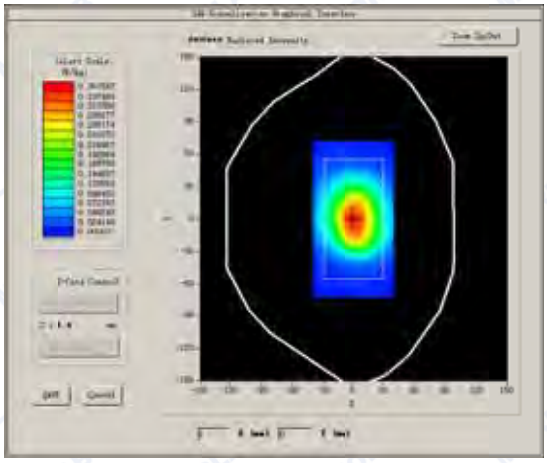
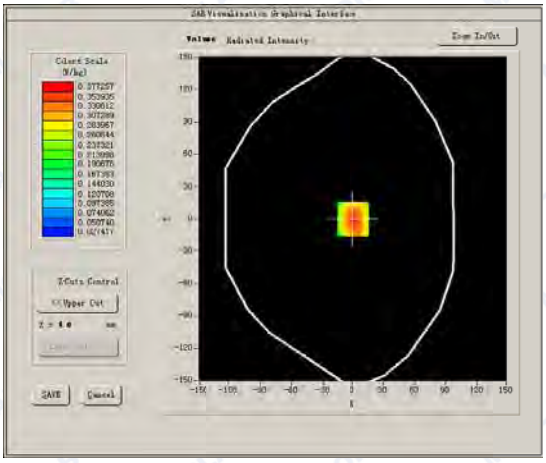
A. Experimental conditions.

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):

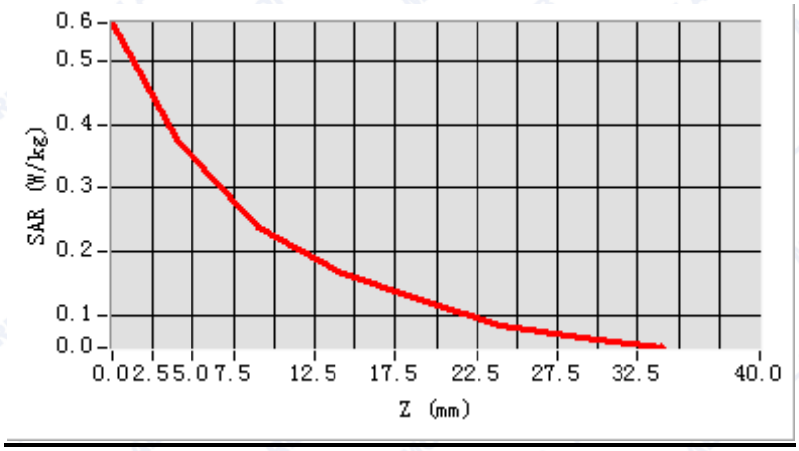
Frequency (MHz)	824.200000
Relative permittivity (real part)	41.368462
Conductivity (S/m)	0.876285
Power drift(%)	1.940000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:8

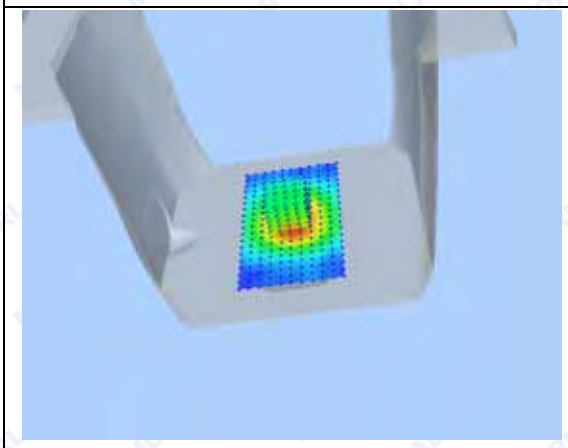
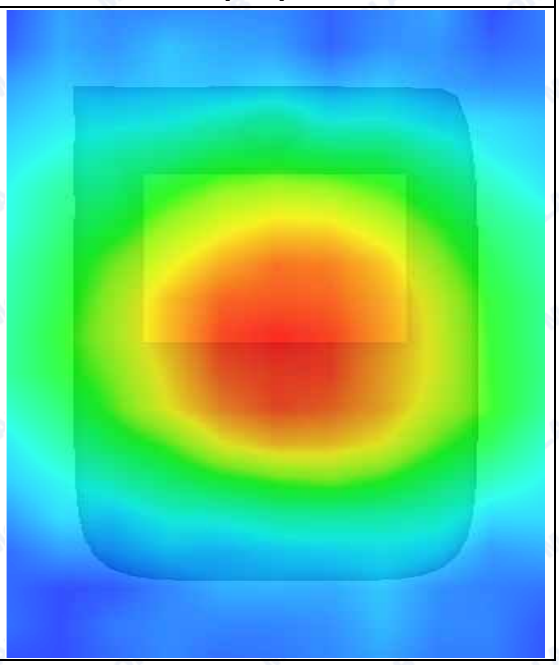
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 0.61 W/kg

SAR 10g (W/Kg)	0.247755
SAR 1g (W/Kg)	0.396057

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: 2014.9.18

Measurement duration: 9 minutes 36 seconds

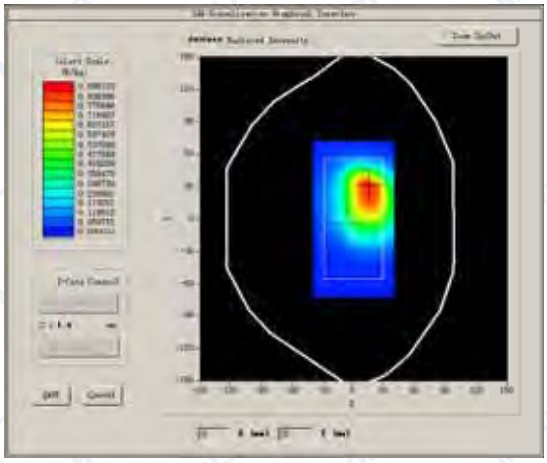
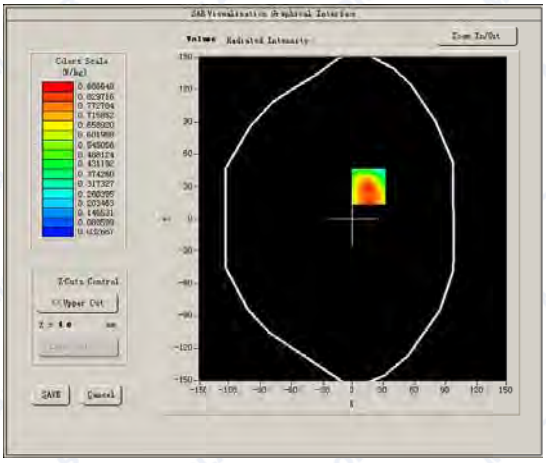
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 190):

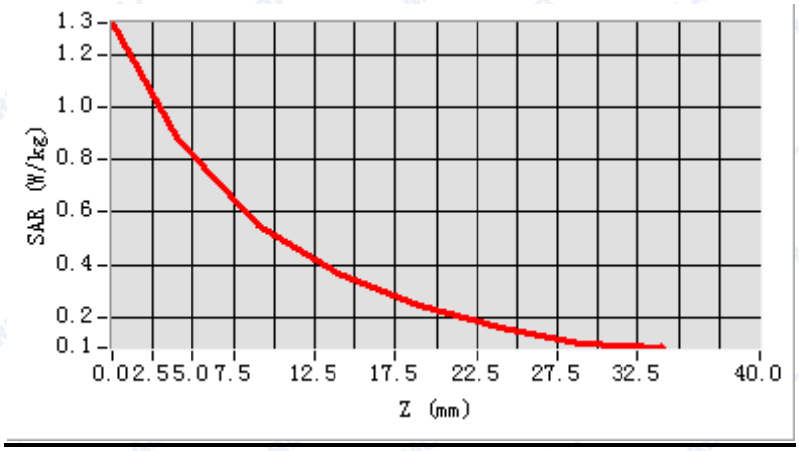
Frequency (MHz)	836.600000
Relative permittivity (real part)	41.368462
Conductivity (S/m)	0.876285
Power drift(%)	-1.020000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:8

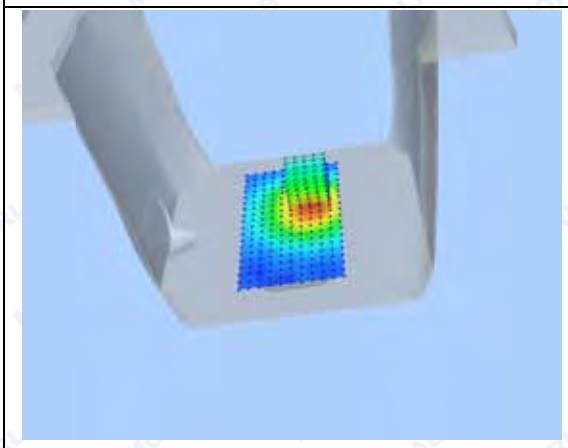
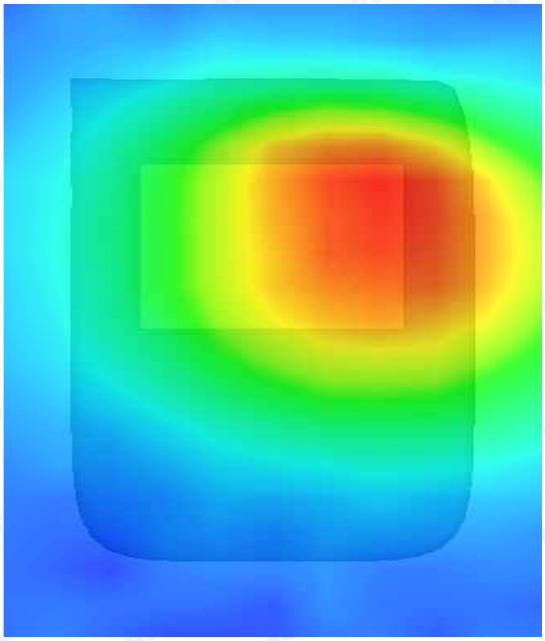
SURFACE SAR	VOLUME SAR
	

Maximum location: X=16.00, Y=30.00
SAR Peak: 1.43 W/kg

SAR 10g (W/Kg)	0.559973
SAR 1g (W/Kg)	0.905585

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: 2014.9.18

Measurement duration: 9 minutes 36 seconds

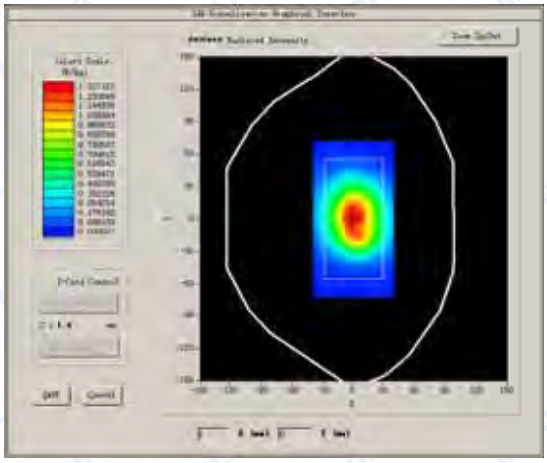
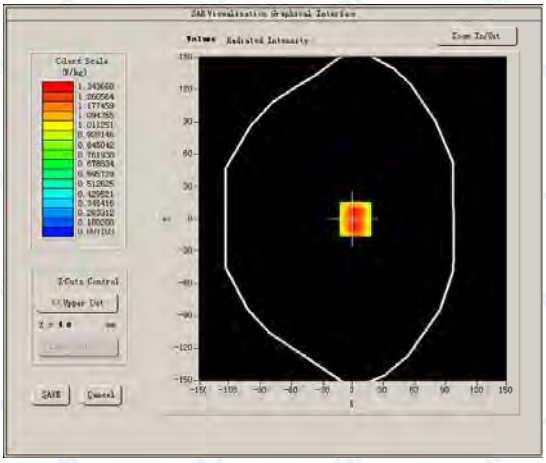
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 251):

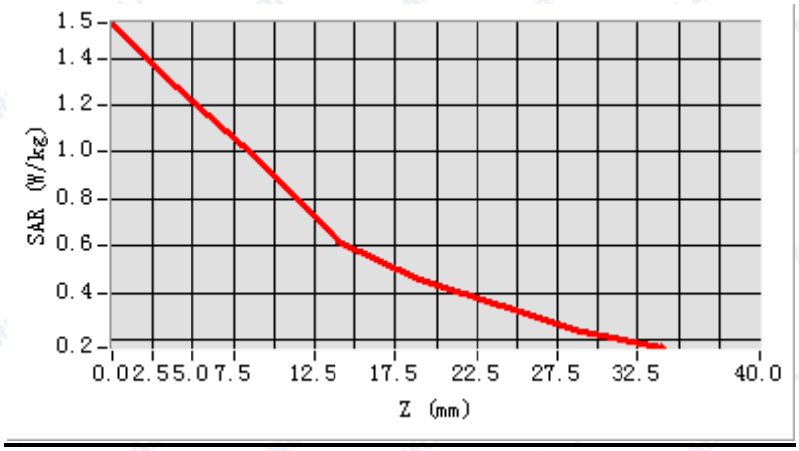
Frequency (MHz)	848.800000
Relative permittivity (real part)	41.368462
Conductivity (S/m)	0.876285
Power drift(%)	1.270000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:8

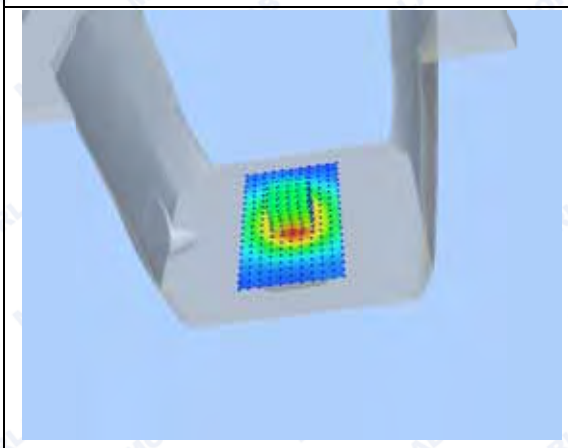
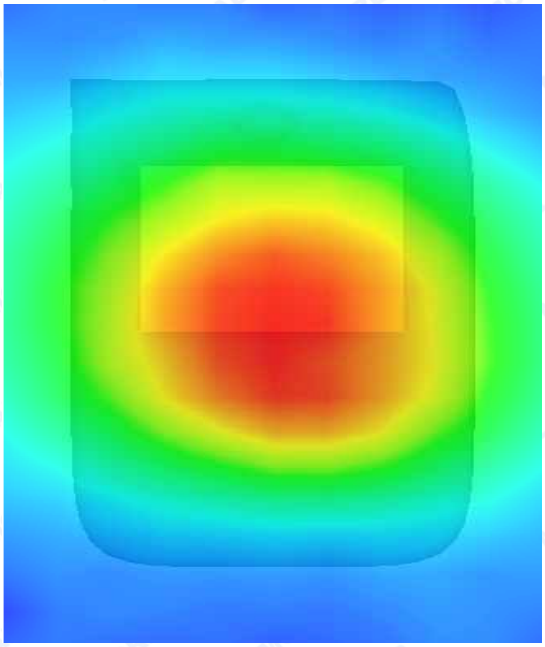
SURFACE SAR	VOLUME SAR
	

Maximum location: X=2.00, Y=0.00
SAR Peak: 2.09 W/kg

SAR 10g (W/Kg)	0.895668
SAR 1g (W/Kg)	1.374378

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: 2014.9.18

Measurement duration: 9 minutes 30 seconds

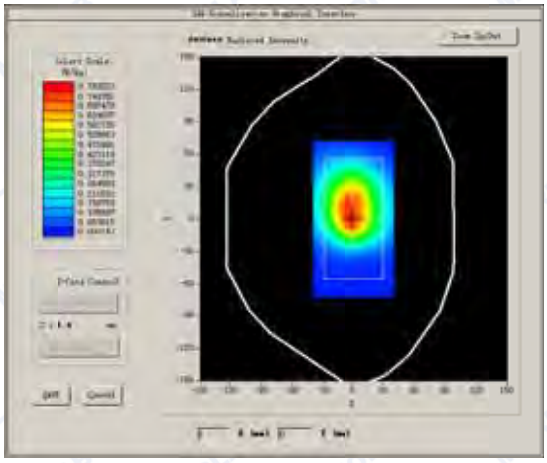
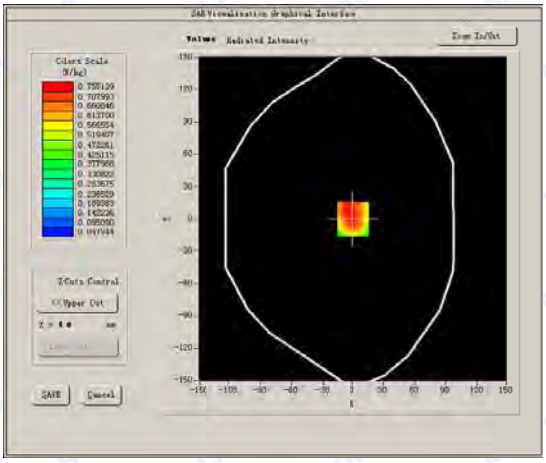
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 251):

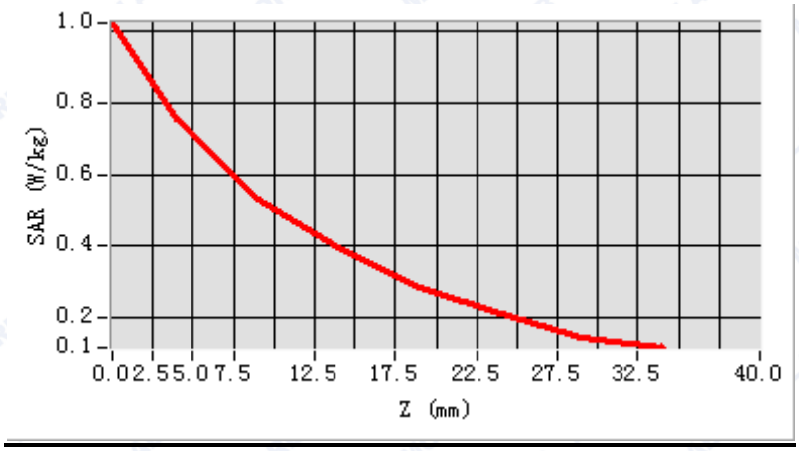
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift(%)	-0.560000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

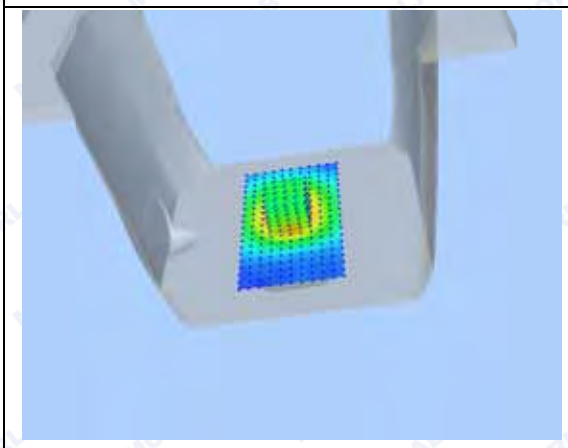
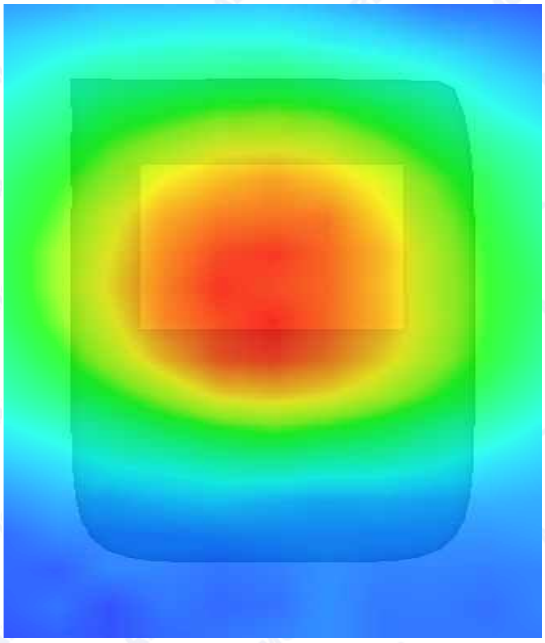
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=0.00
SAR Peak: 1.03 W/kg

SAR 10g (W/Kg)	0.512707
SAR 1g (W/Kg)	0.752102

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: 2014.9.18

Measurement duration: 9 minutes 31 seconds

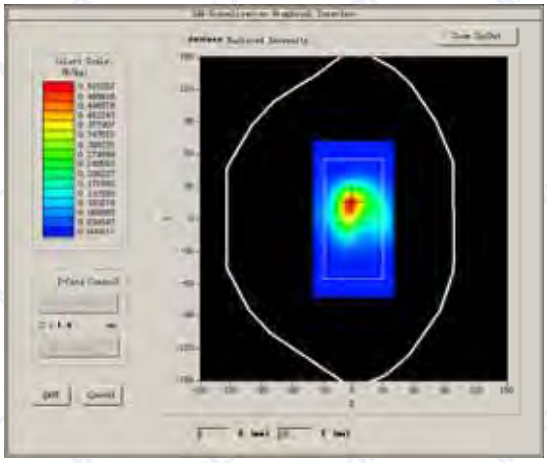
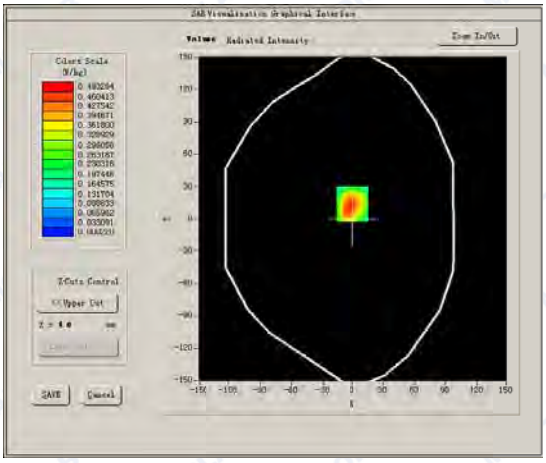
A. Experimental conditions.

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):

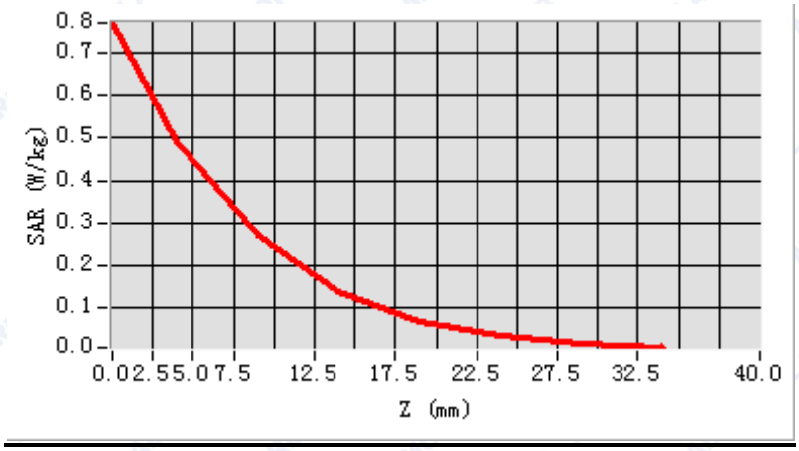
Frequency (MHz)	824.200000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift(%)	0.550000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

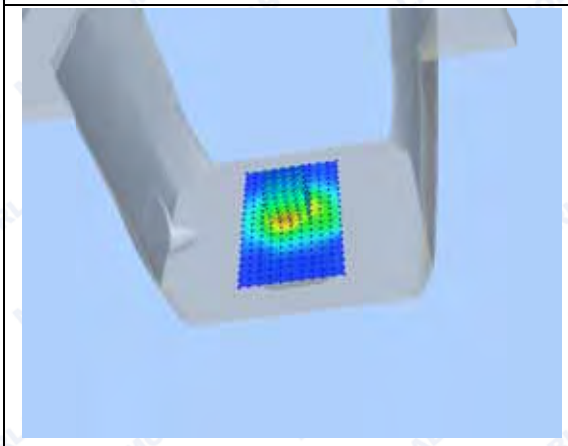
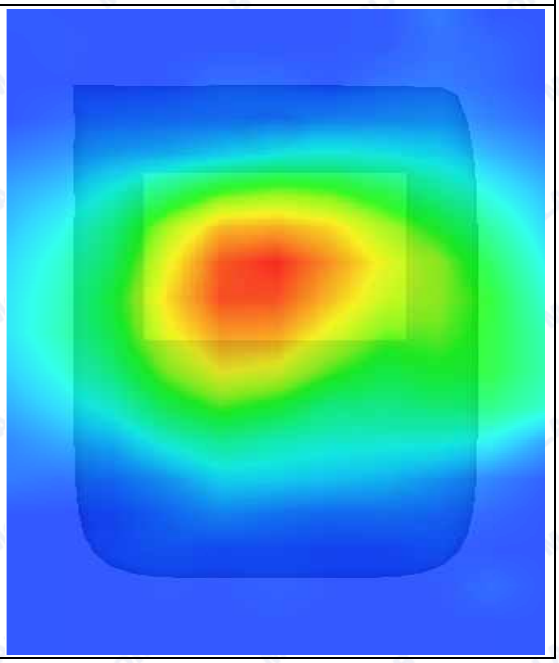
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=14.00
SAR Peak: 0.80 W/kg

SAR 10g (W/Kg)	0.242527
SAR 1g (W/Kg)	0.472615

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: 2014.9.18

Measurement duration: 9 minutes 28 seconds

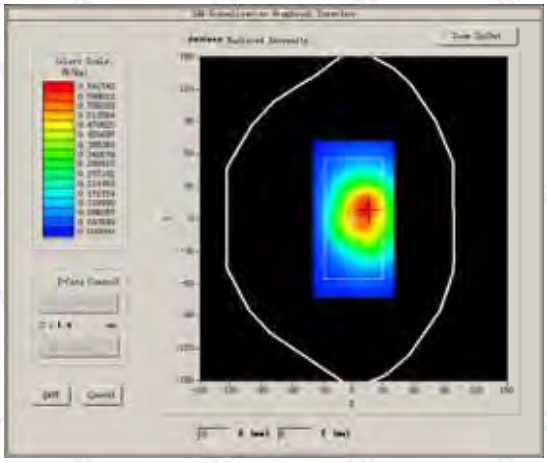
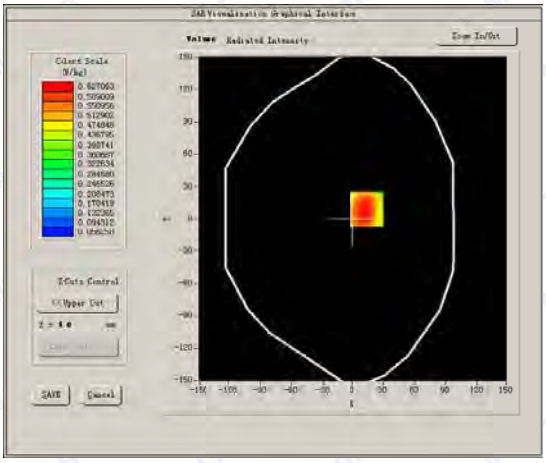
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 190):

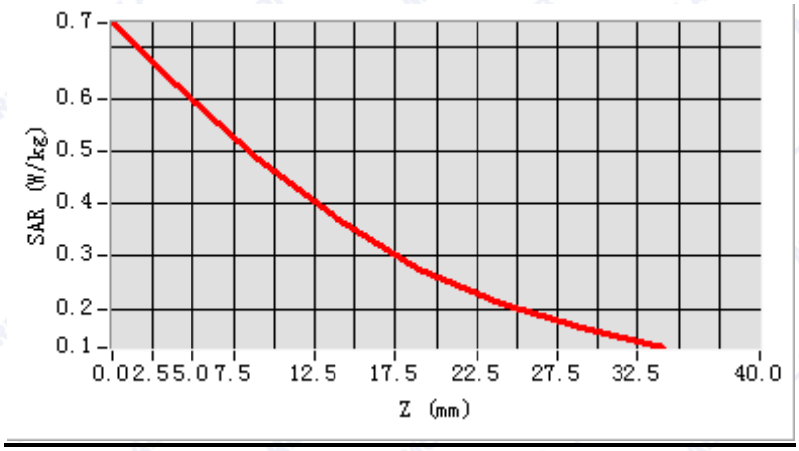
Frequency (MHz)	836.600000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift(%)	-1.630000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

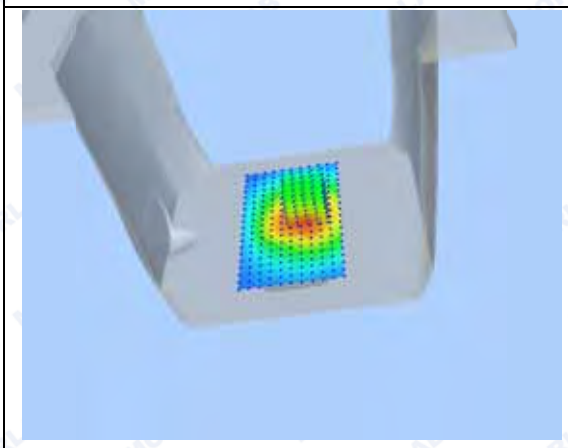
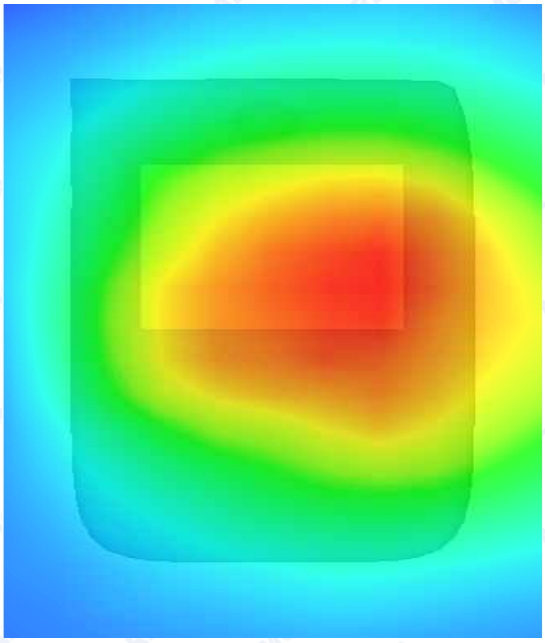
SURFACE SAR	VOLUME SAR
	

Maximum location: X=14.00, Y=9.00
SAR Peak: 0.83 W/kg

SAR 10g (W/Kg)	0.440688
SAR 1g (W/Kg)	0.615470

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: 2014.9.18

Measurement duration: 9 minutes 38 seconds

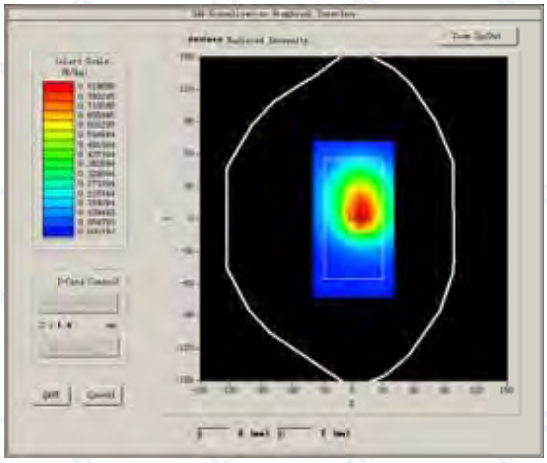
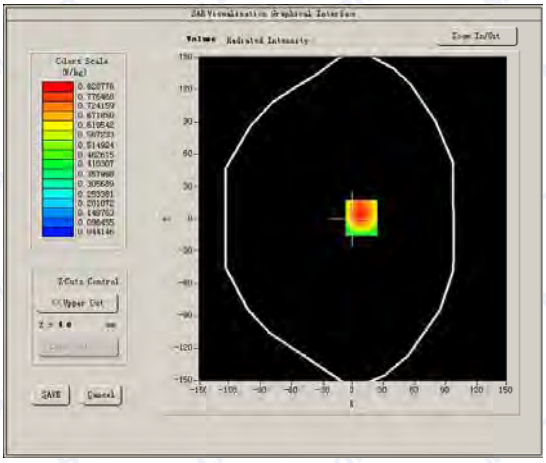
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 251):

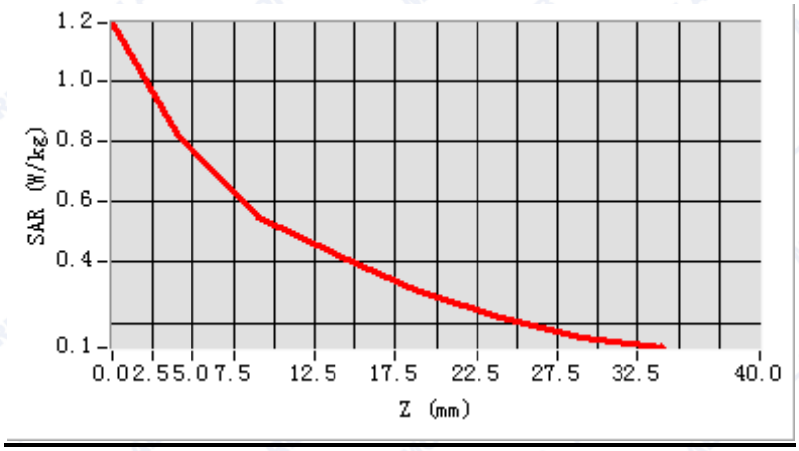
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	-2.400000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

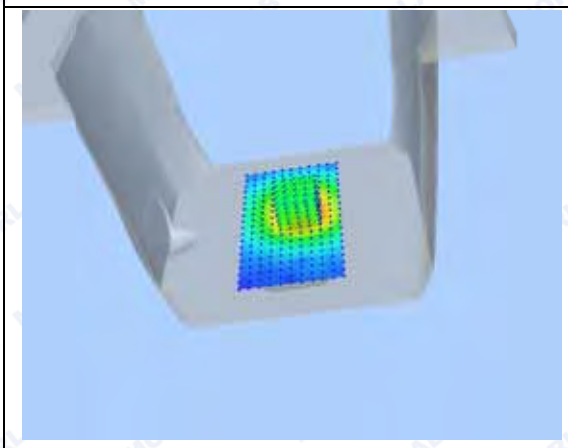
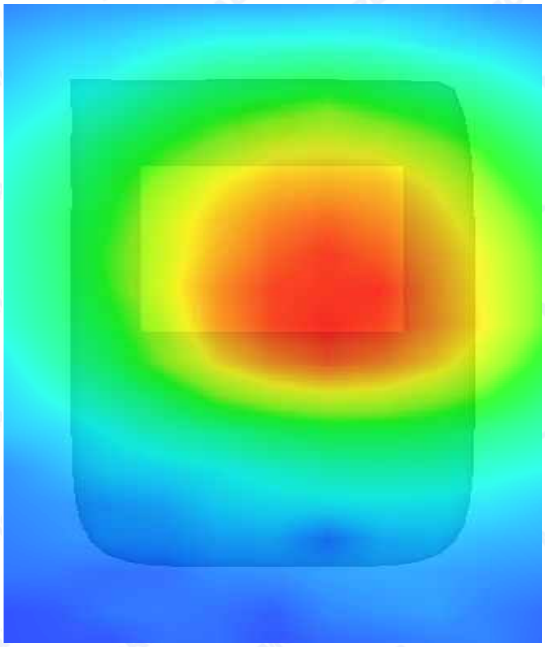
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=1.00
SAR Peak: 1.18 W/kg

SAR 10g (W/Kg)	0.534231
SAR 1g (W/Kg)	0.811005

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: 2014.9.18

Measurement duration: 9 minutes 33 seconds

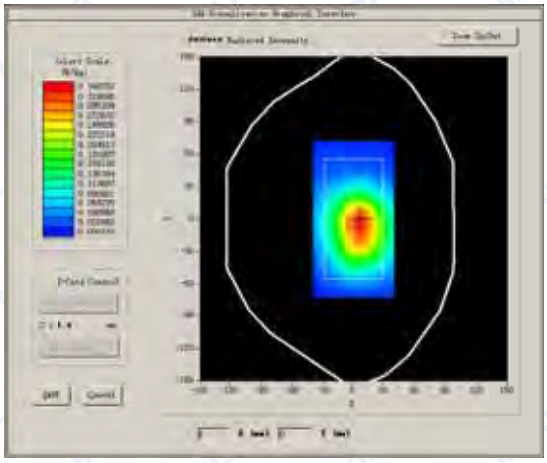
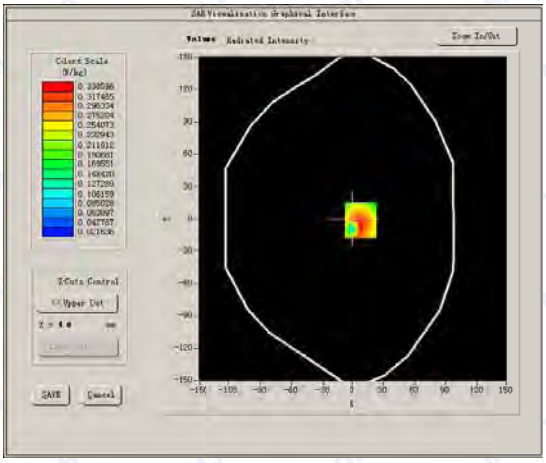
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 251):

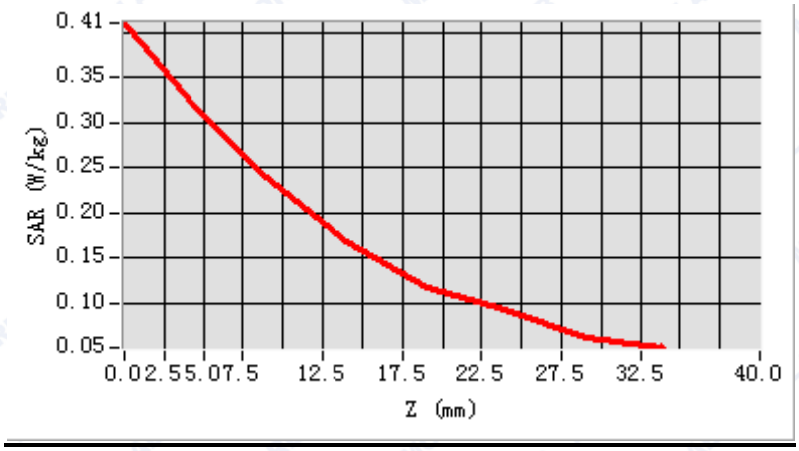
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift(%)	-3.380000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

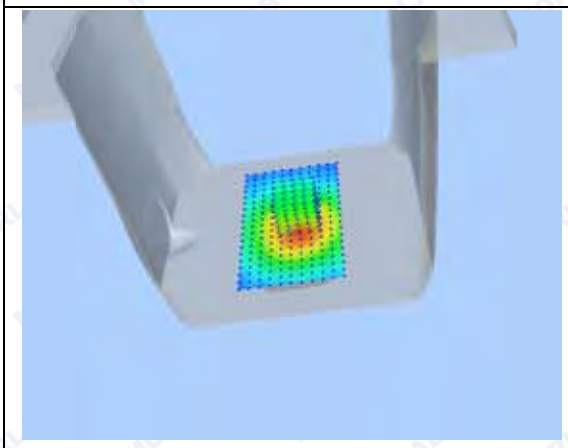
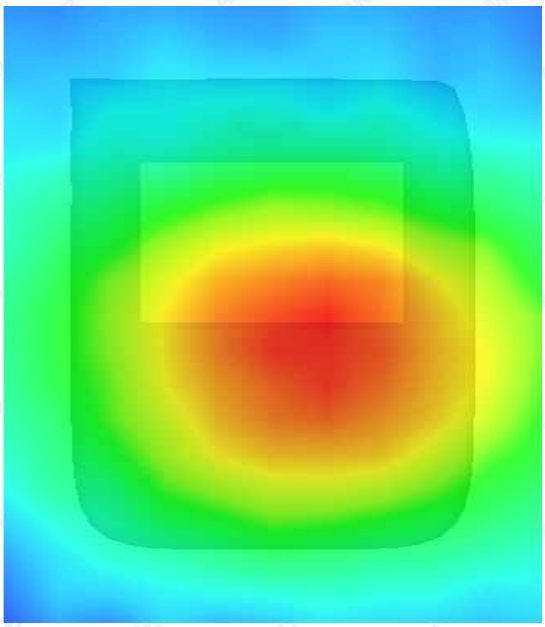
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=-1.00
SAR Peak: 0.50 W/kg

SAR 10g (W/Kg)	0.203942
SAR 1g (W/Kg)	0.319228

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: 2014.9.18

Measurement duration: 9 minutes 31 seconds

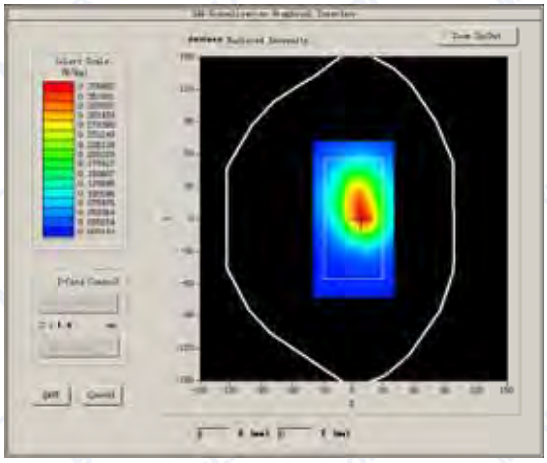
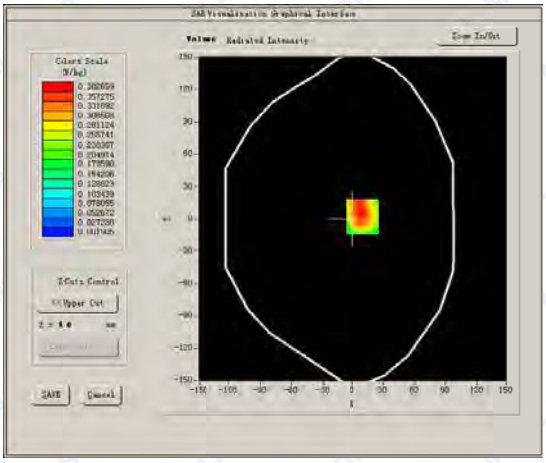
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 251):

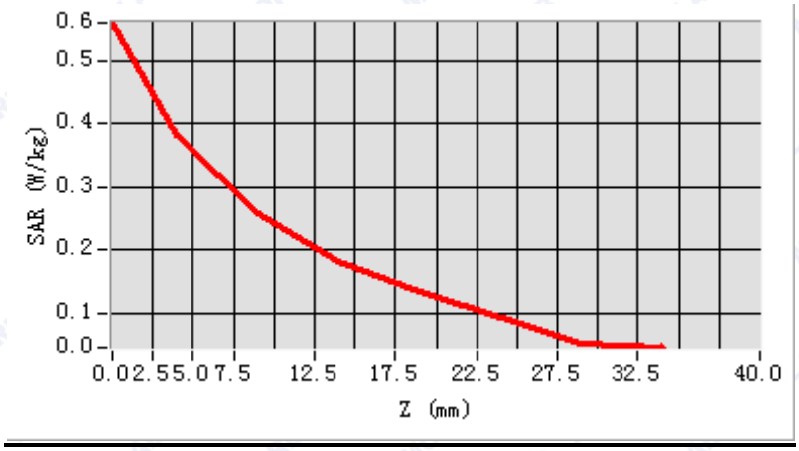
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift(%)	-1.630000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

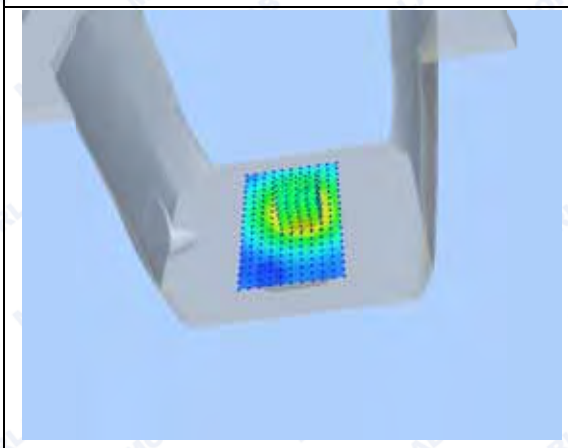
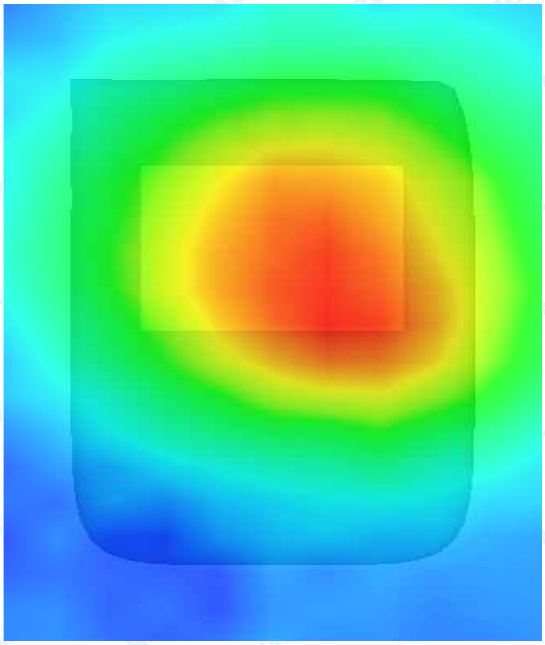
SURFACE SAR	VOLUME SAR
	

Maximum location: X=9.00, Y=2.00
SAR Peak: 0.55 W/kg

SAR 10g (W/Kg)	0.234547
SAR 1g (W/Kg)	0.375472

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: 2014.9.18

Measurement duration: 9 minutes 32 seconds

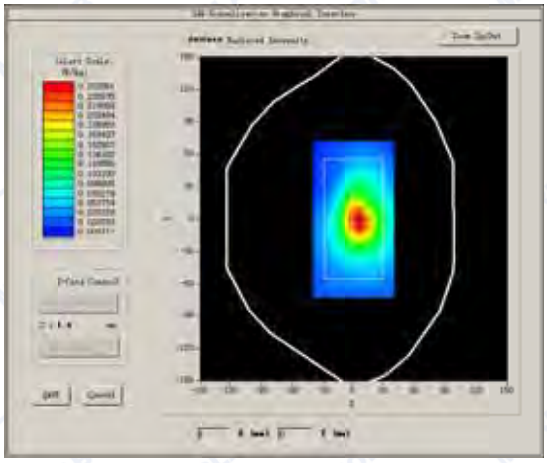
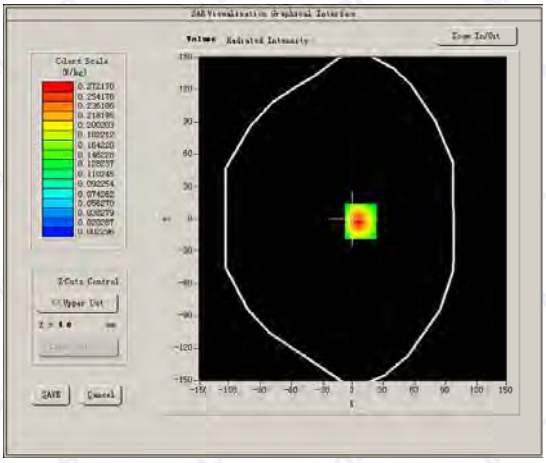
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 251):

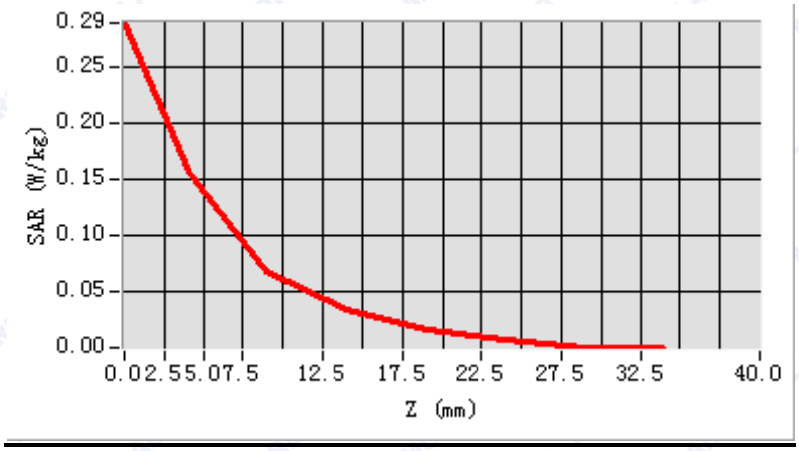
Frequency (MHz)	848.800000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift(%)	-1.630000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:2

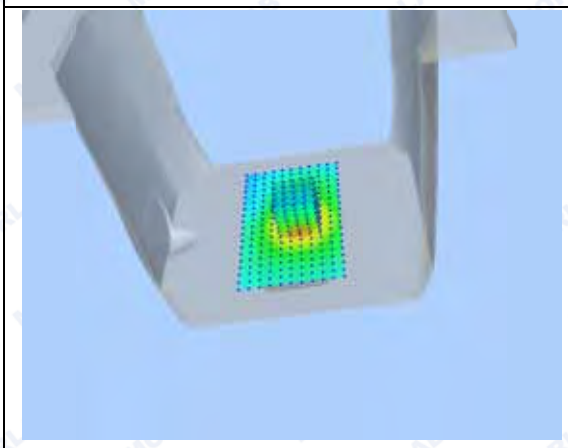
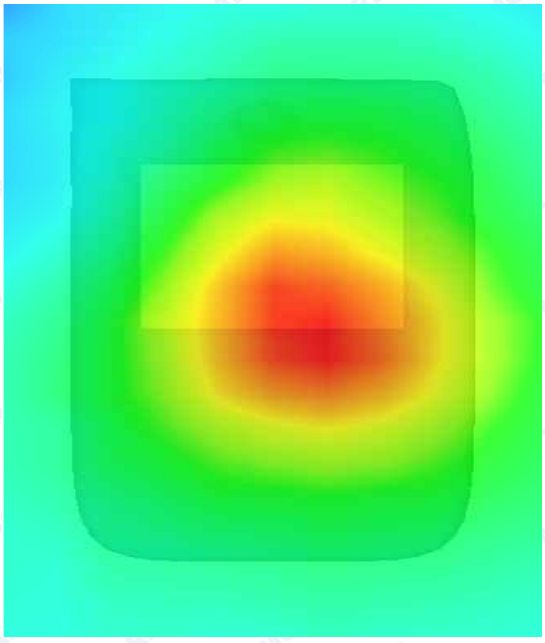
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=-2.00
SAR Peak: 0.49 W/kg

SAR 10g (W/Kg)	0.0.75268
SAR 1g (W/Kg)	0.161876

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: 2014.9.18

Measurement duration: 9 minutes 36 seconds

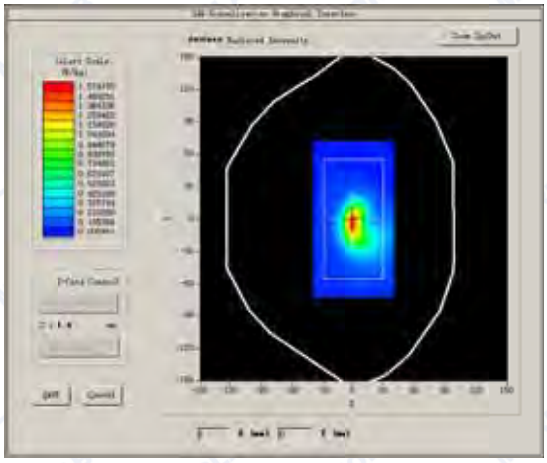
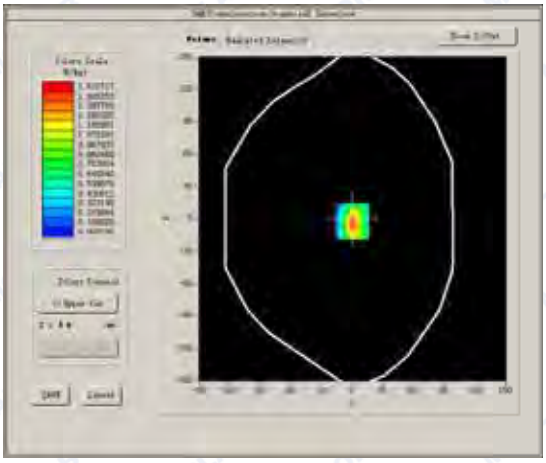
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 251):

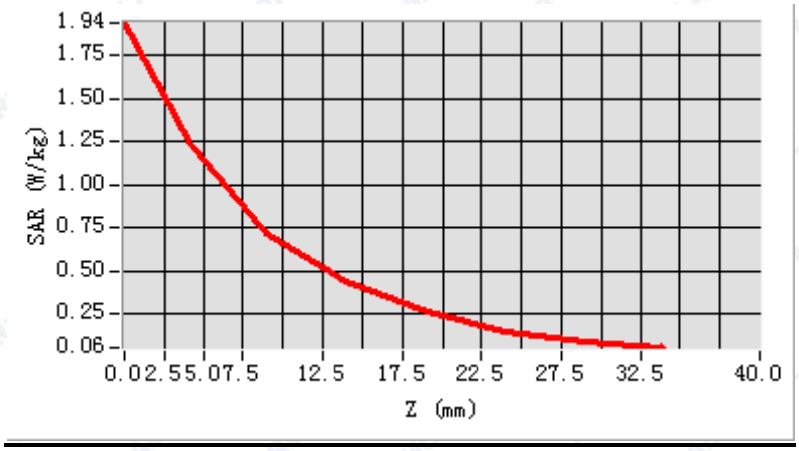
Frequency (MHz)	848.800000
Relative permittivity (real part)	41.368462
Conductivity (S/m)	0.876285
Power drift(%)	1.270000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:8

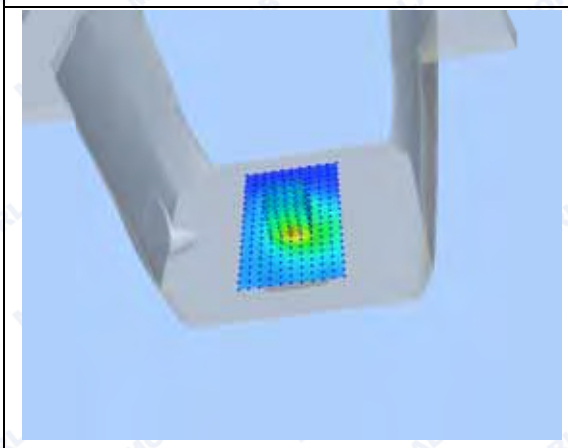
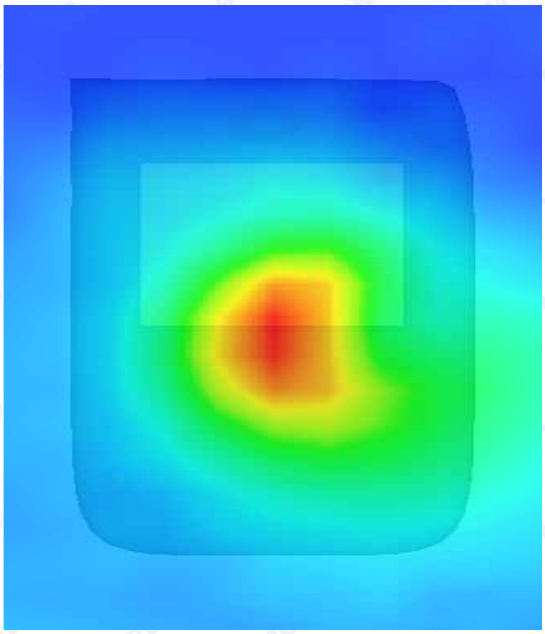
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-2.00
SAR Peak: 2.05 W/kg

SAR 10g (W/Kg)	0.739643
SAR 1g (W/Kg)	1.329491

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: 2014.9.19

Measurement duration: 9 minutes 38 seconds

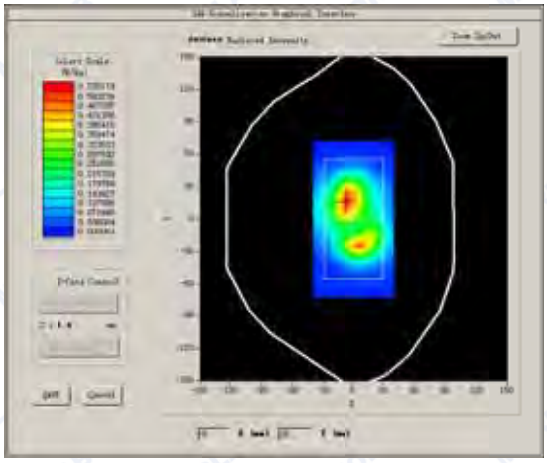
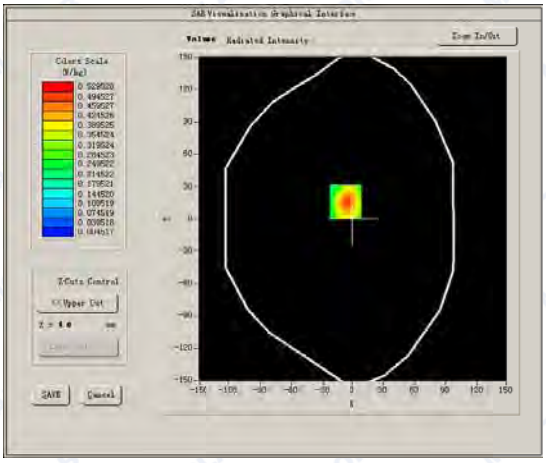
A. Experimental conditions.

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):

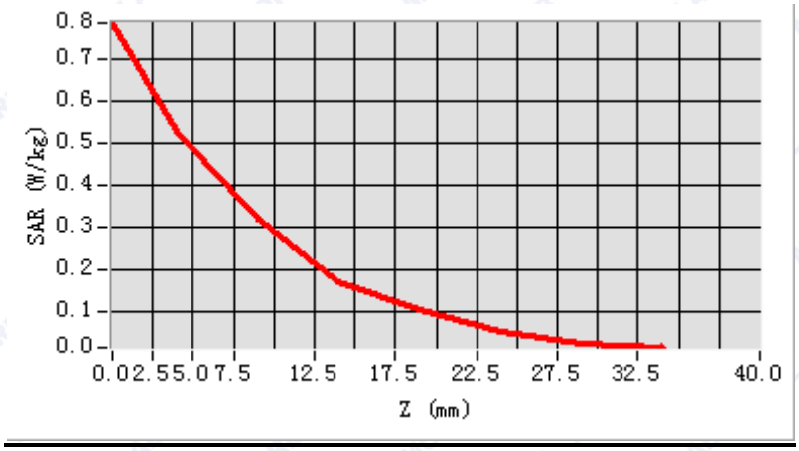
Frequency (MHz)	1909.800000
Relative permittivity (real part)	40.124068
Conductivity (S/m)	1.376284
Power drift(%)	3.370000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:8

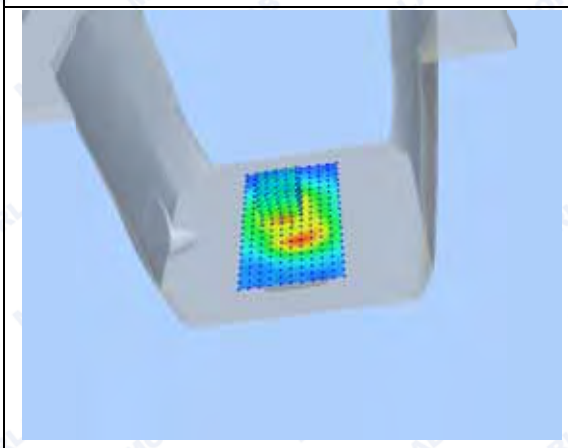
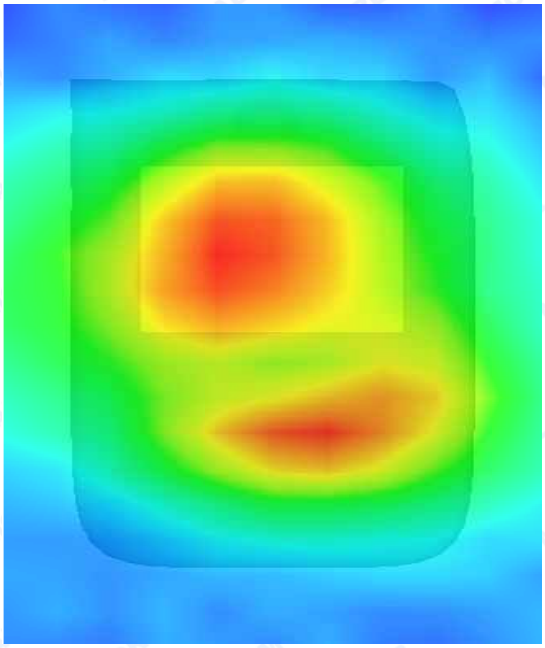
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-7.00, Y=16.00
SAR Peak: 0.85 W/kg

SAR 10g (W/Kg)	0.291560
SAR 1g (W/Kg)	0.531992

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: 2014.9.19

Measurement duration: 9 minutes 36 seconds

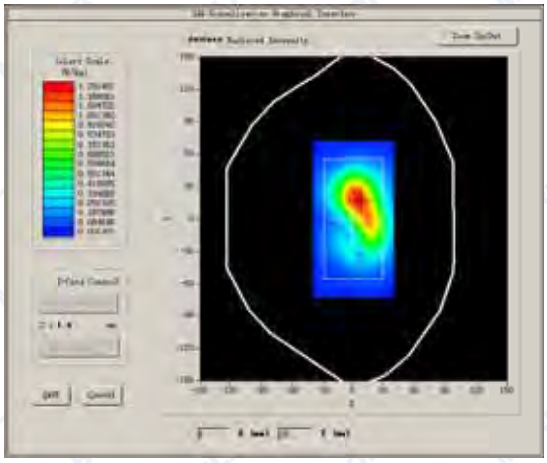
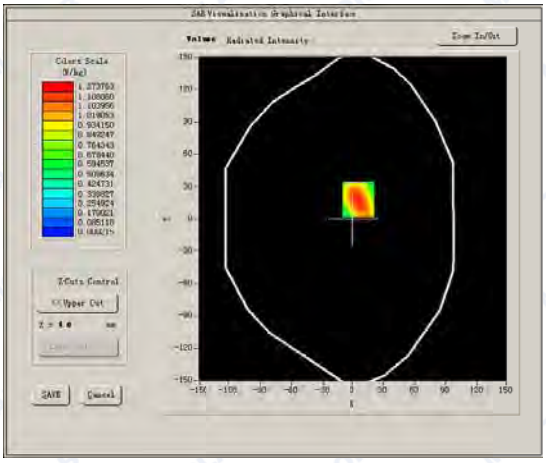
A. Experimental conditions.

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):

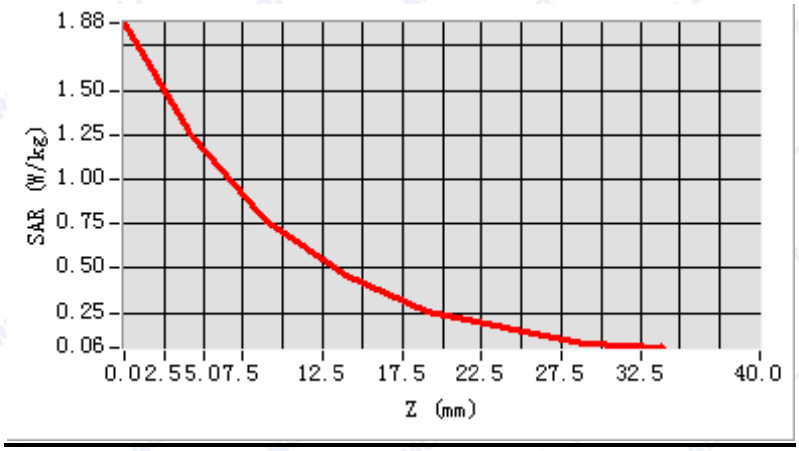
Frequency (MHz)	1850.200000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	0.530000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

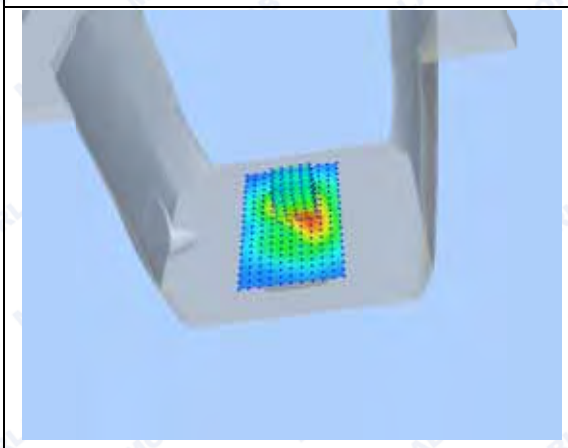
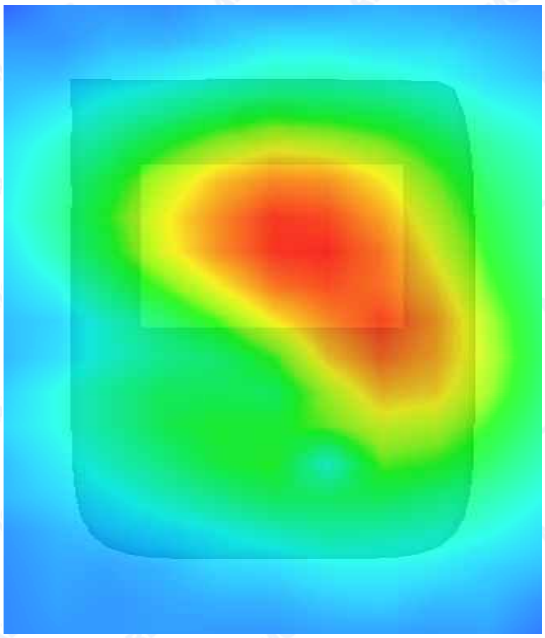
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=18.00
SAR Peak: 1.88 W/kg

SAR 10g (W/Kg)	0.687919
SAR 1g (W/Kg)	1.207564

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: 2014.9.19

Measurement duration: 9 minutes 37 seconds

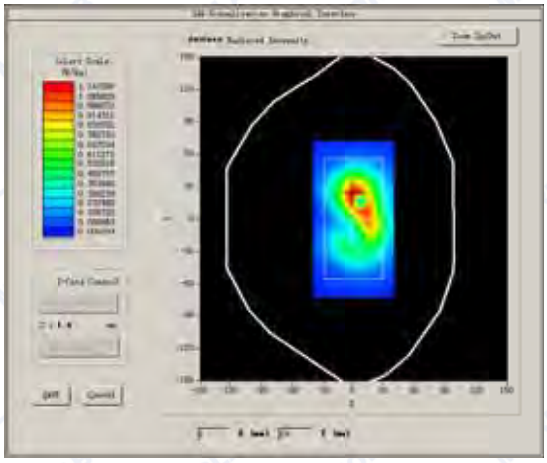
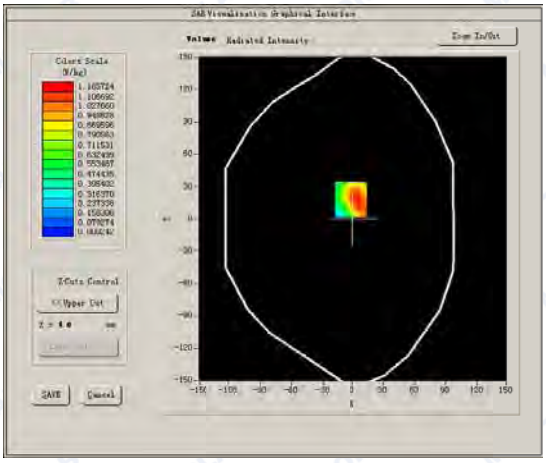
A. Experimental conditions.

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):

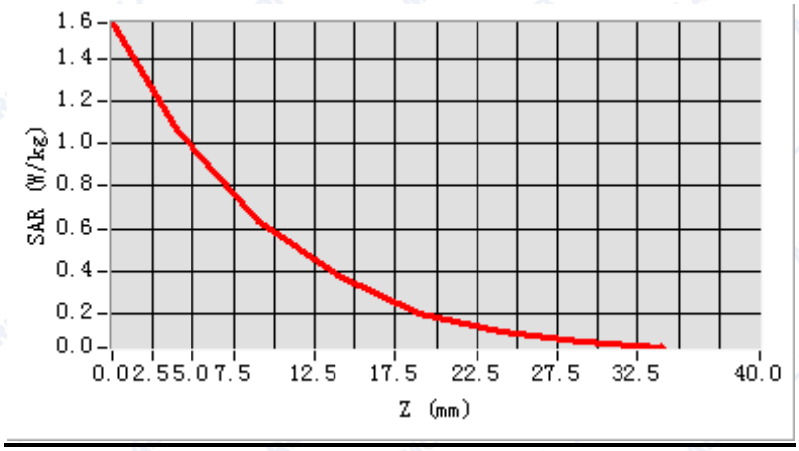
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-2.870000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

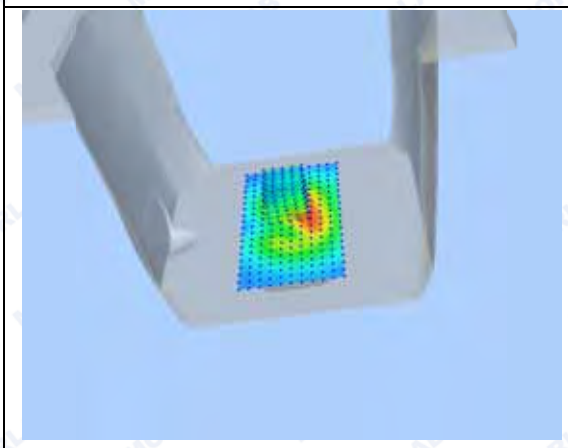
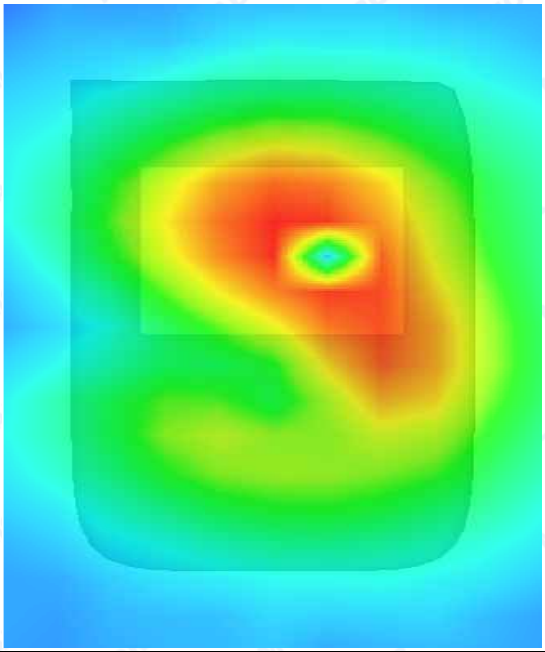
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-2.00, Y=18.00
SAR Peak: 1.75 W/kg

SAR 10g (W/Kg)	0.635646
SAR 1g (W/Kg)	1.139153

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: 2014.9.19

Measurement duration: 9 minutes 38 seconds

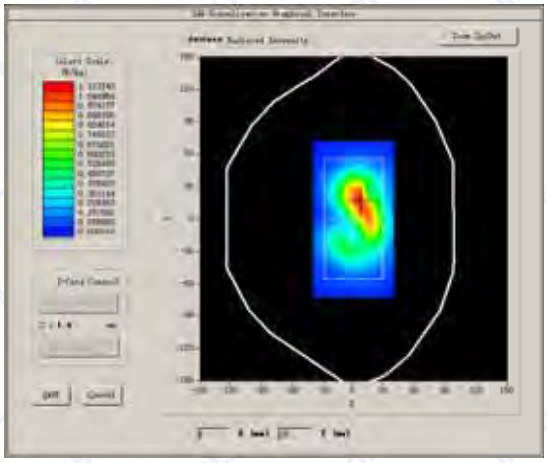
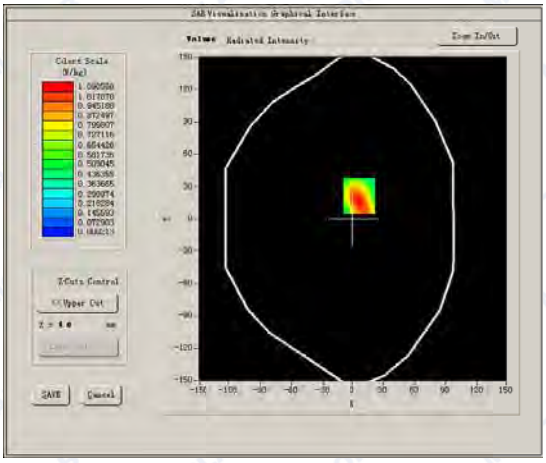
A. Experimental conditions.

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):

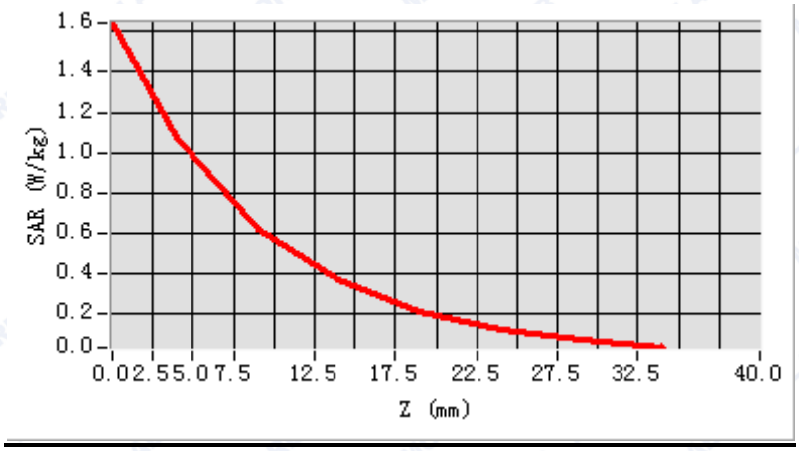
Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	1.470000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

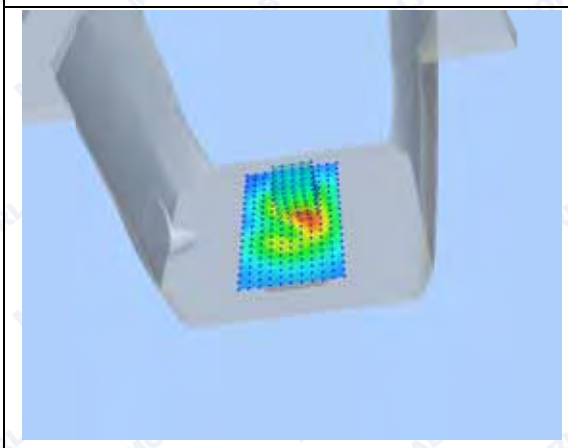
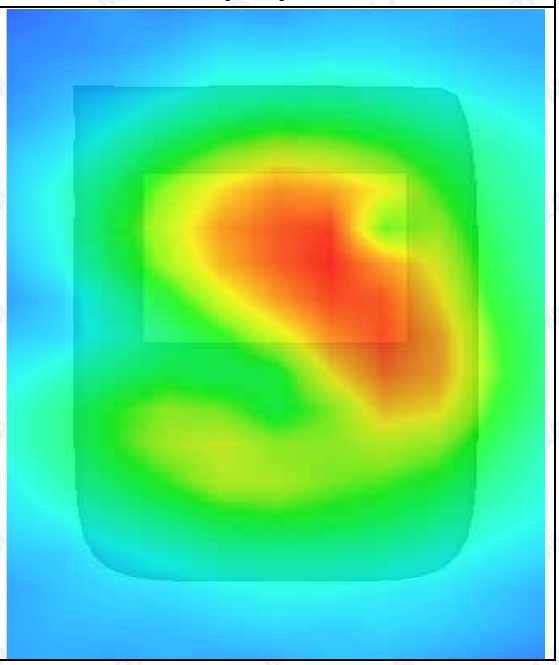
SURFACE SAR	VOLUME SAR
	

Maximum location: X=6.00, Y=21.00
SAR Peak: 1.71 W/kg

SAR 10g (W/Kg)	0.582507
SAR 1g (W/Kg)	1.078517

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: 2014.9.19

Measurement duration: 9 minutes 38 seconds

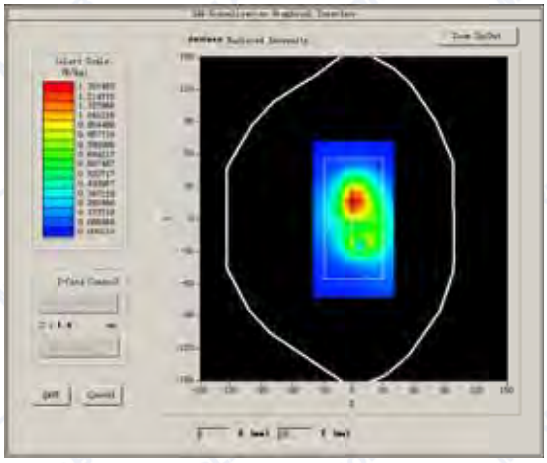
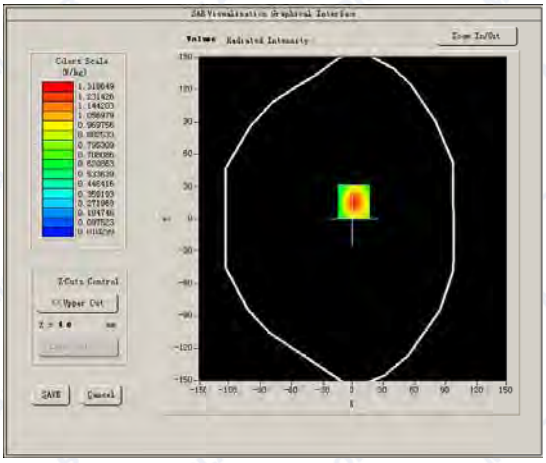
A. Experimental conditions.

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):

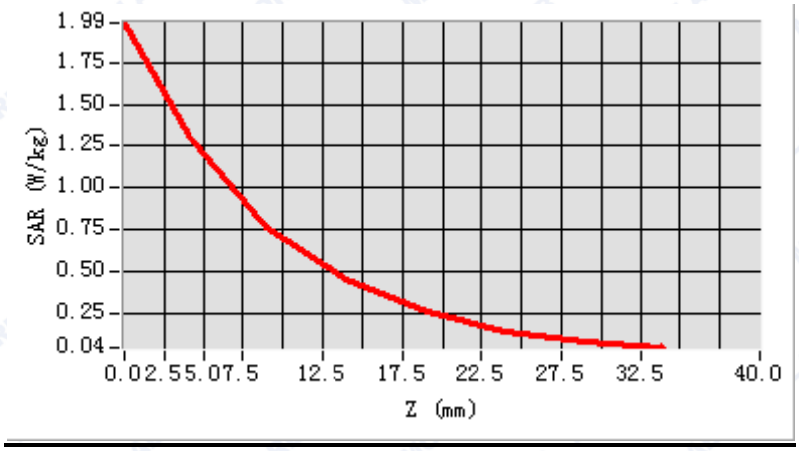
Frequency (MHz)	1850.200000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-3.390000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

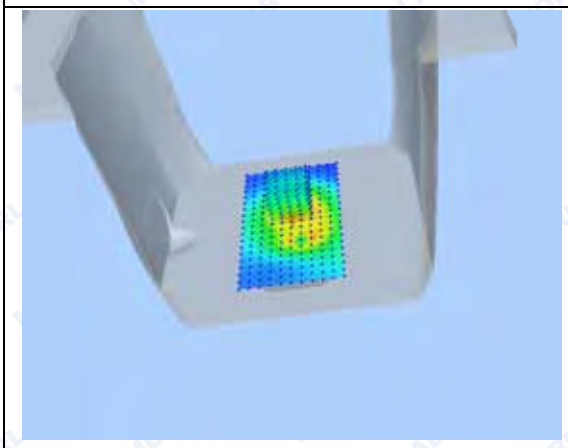
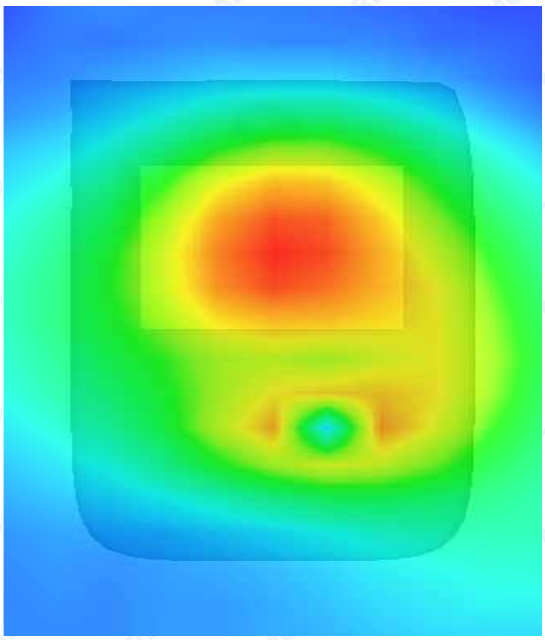
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=16.00
SAR Peak: 1.99 W/kg

SAR 10g (W/Kg)	0.688121
SAR 1g (W/Kg)	1.218890

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: 2014.9.19

Measurement duration: 9 minutes 39 seconds

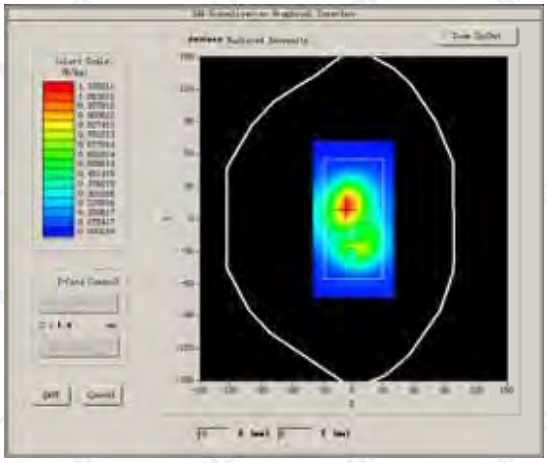
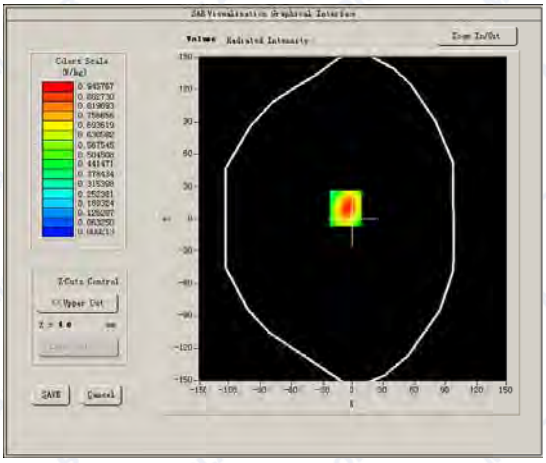
A. Experimental conditions.

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):

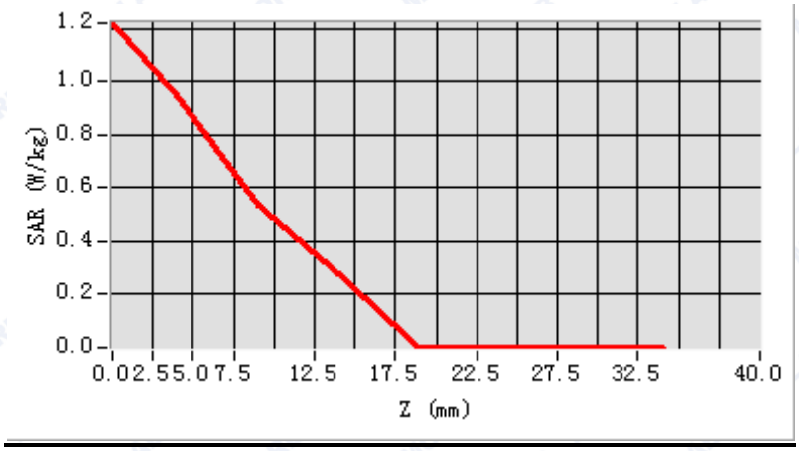
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-2.290000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

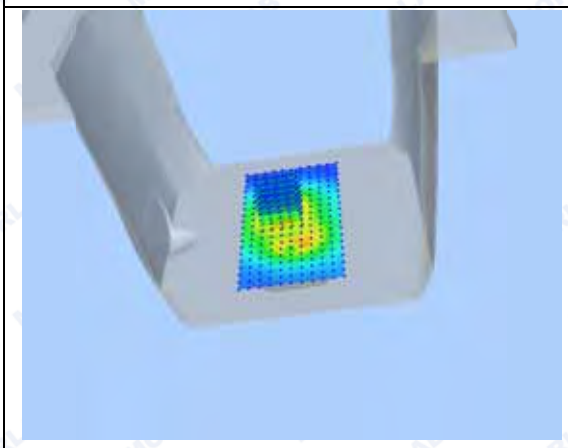
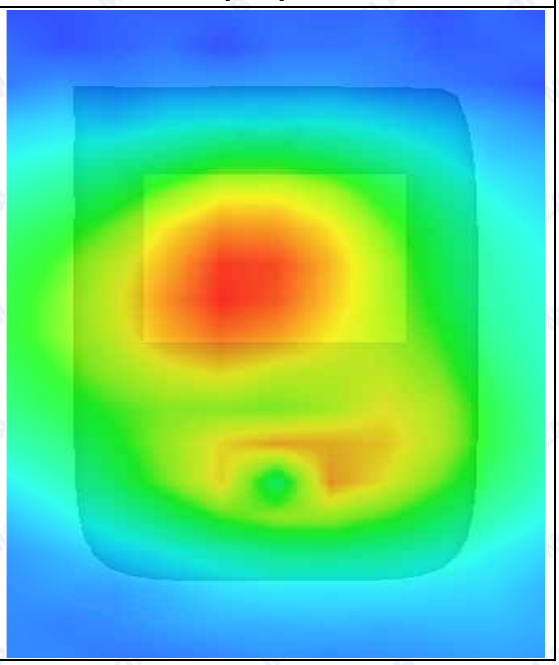
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-7.00, Y=10.00
SAR Peak: 1.33 W/kg

SAR 10g (W/Kg)	0.427774
SAR 1g (W/Kg)	0.863638

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: 2014.9.19

Measurement duration: 9 minutes 38 seconds

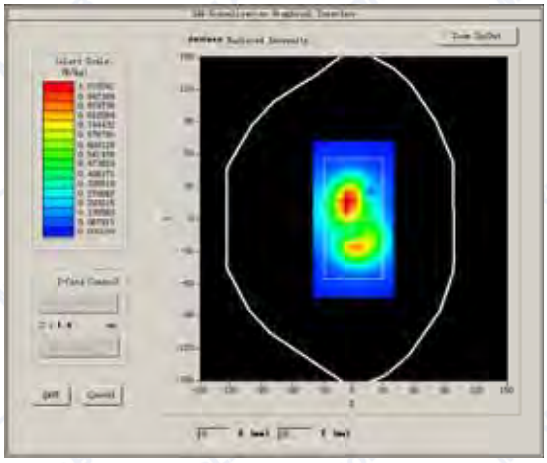
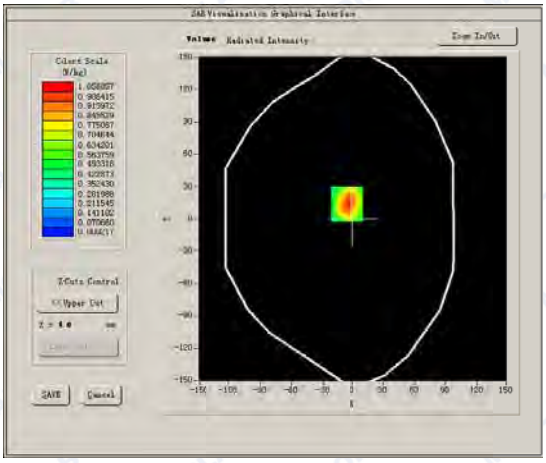
A. Experimental conditions.

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):

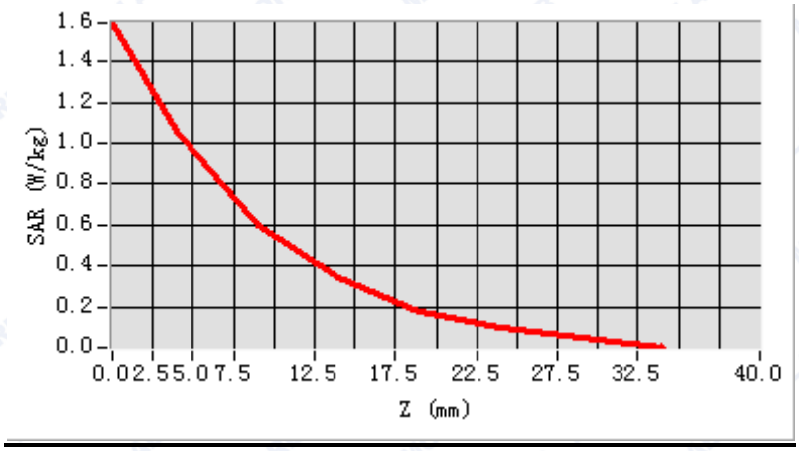
Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-3.780000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

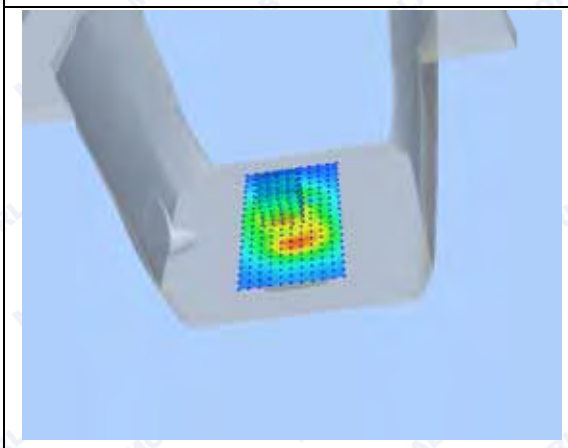
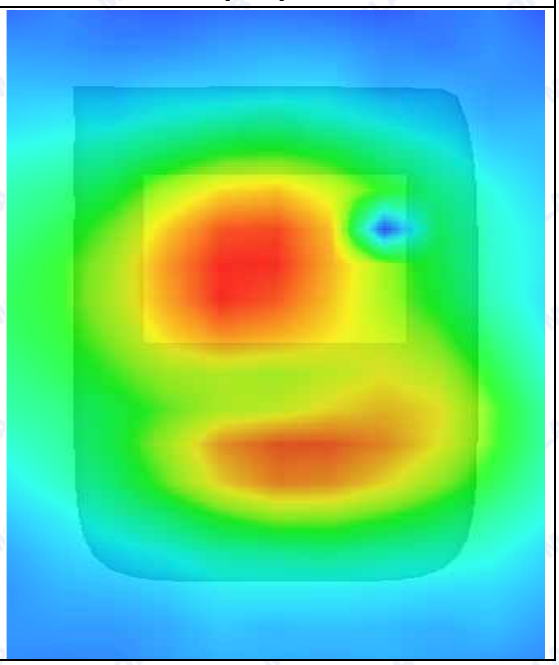
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-6.00, Y=14.00
SAR Peak: 1.59 W/kg

SAR 10g (W/Kg)	0.536481
SAR 1g (W/Kg)	1.013507

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: 2014.9.19

Measurement duration: 9 minutes 40 seconds

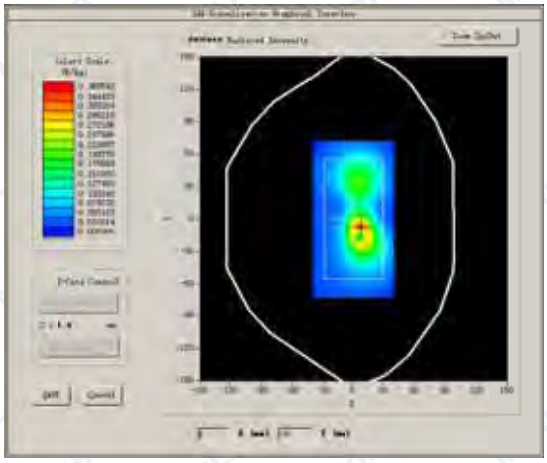
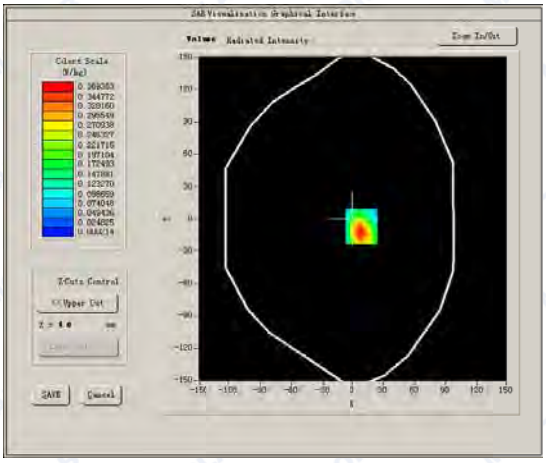
A. Experimental conditions.

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):

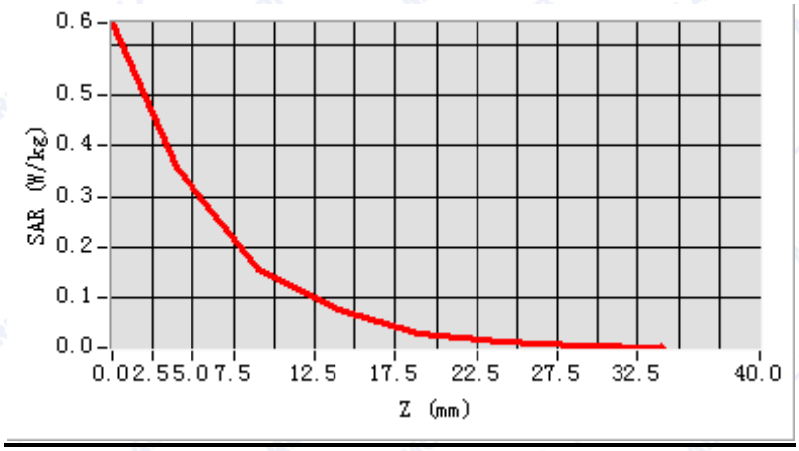
Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-3.820000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

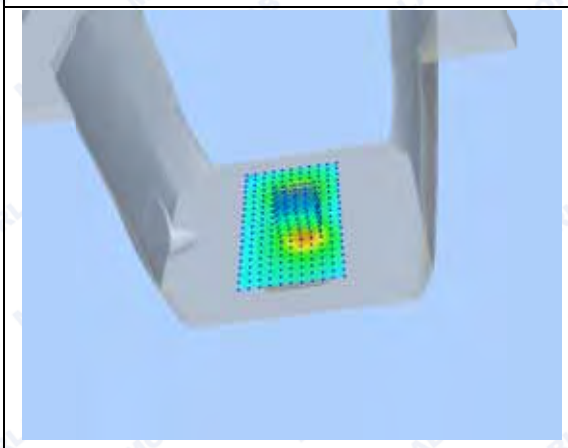
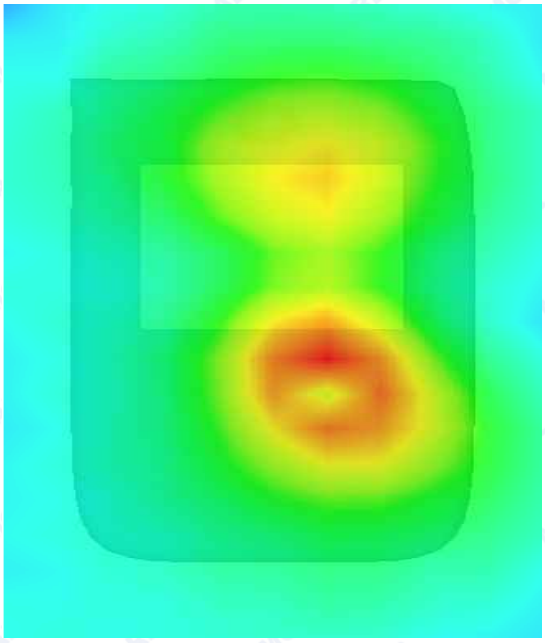
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=-7.00
SAR Peak: 0.67 W/kg

SAR 10g (W/Kg)	0.161344
SAR 1g (W/Kg)	0.364249

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: 2014.9.19

Measurement duration: 9 minutes 53 seconds

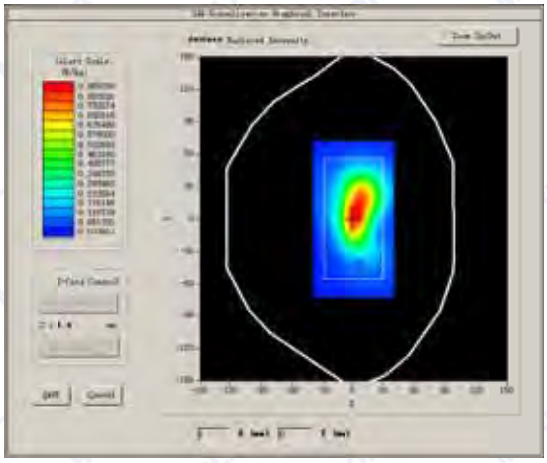
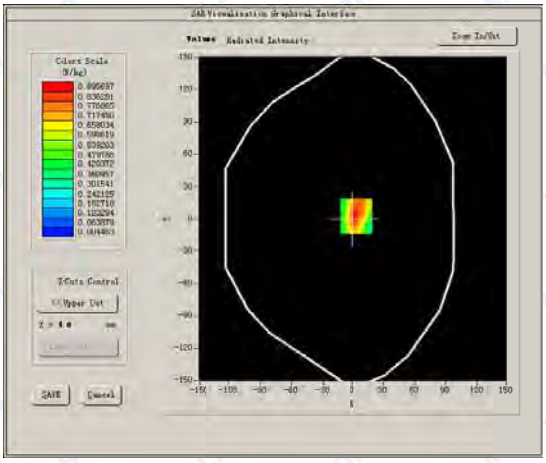
A. Experimental conditions.

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):

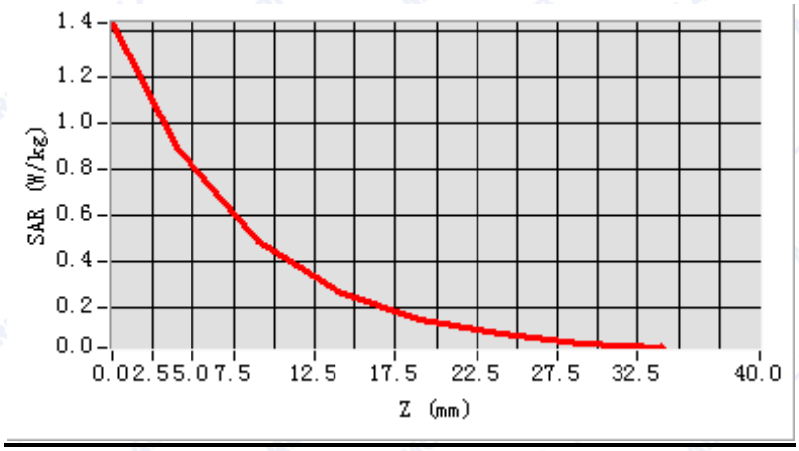
Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-0.340000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

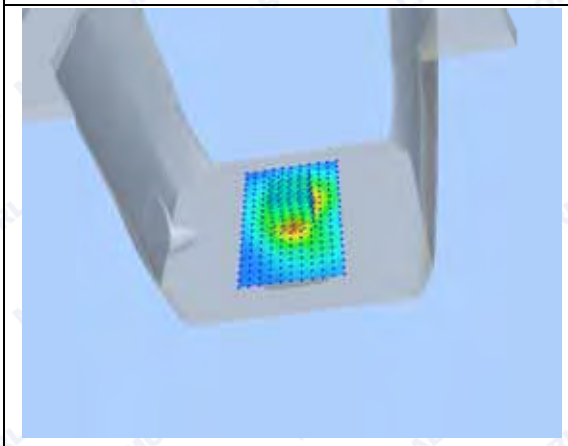
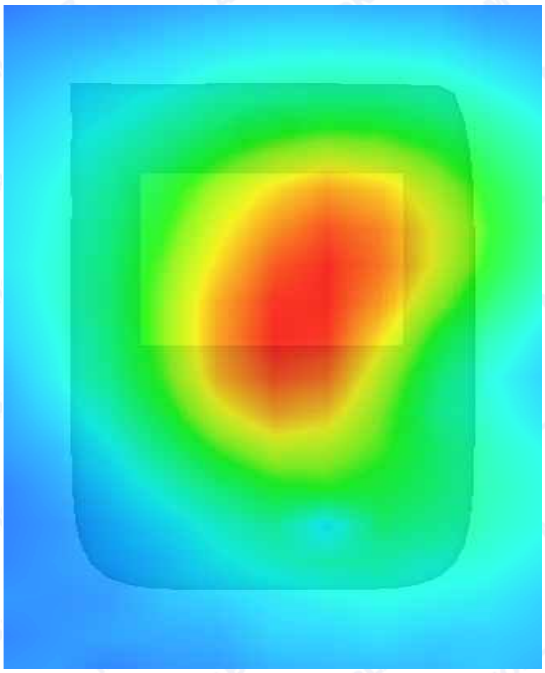
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=3.00
SAR Peak: 1.42 W/kg

SAR 10g (W/Kg)	0.458566
SAR 1g (W/Kg)	0.766103

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: 2014.9.19

Measurement duration: 9 minutes 42 seconds

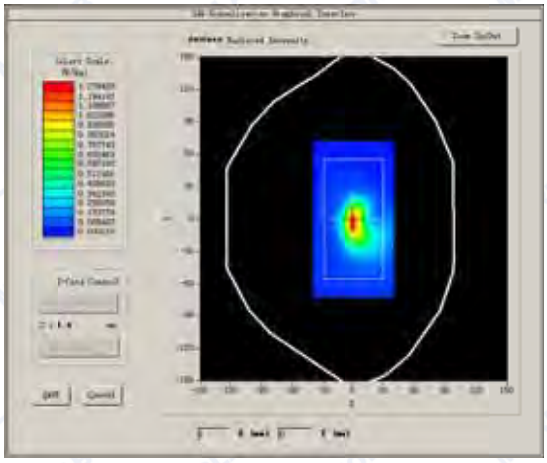
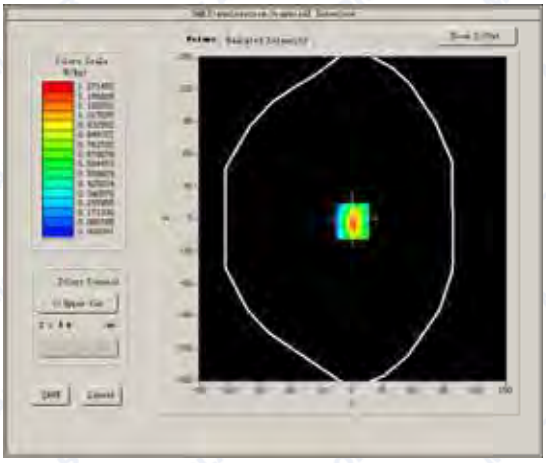
A. Experimental conditions.

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):

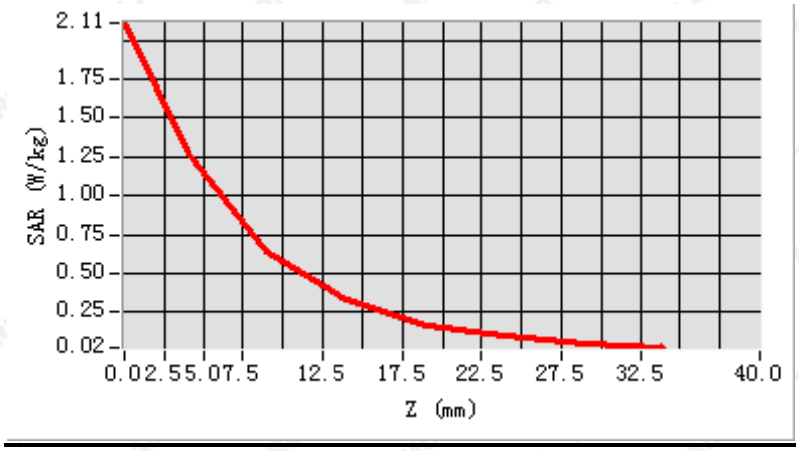
Frequency (MHz)	1850.200000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-0.540000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

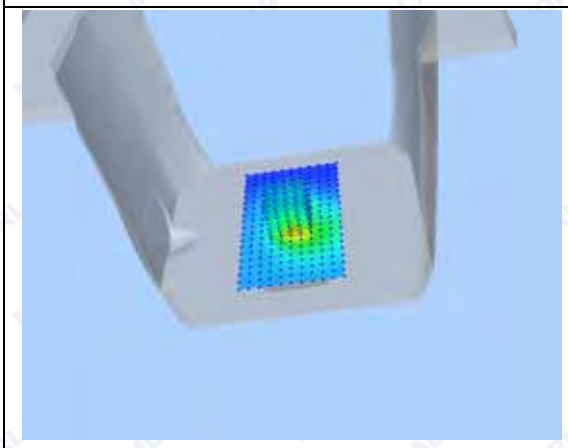
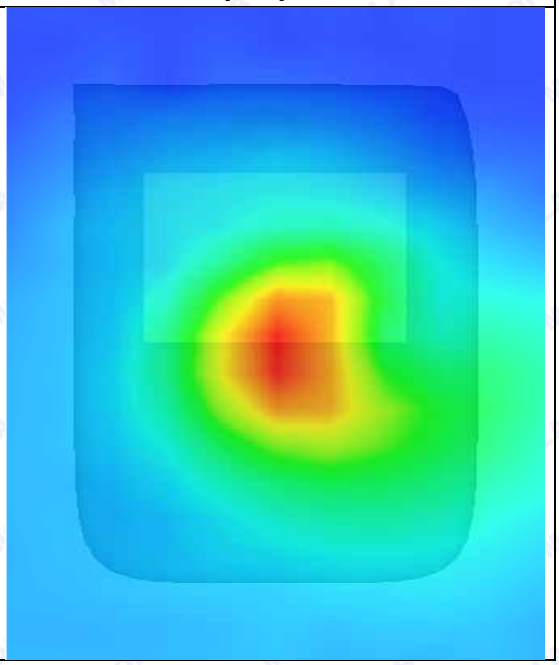
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-2.00
SAR Peak: 2.15 W/kg

SAR 10g (W/Kg)	0.544425
SAR 1g (W/Kg)	1.205929

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: 2014.9.19

Measurement duration: 9 minutes 56 seconds

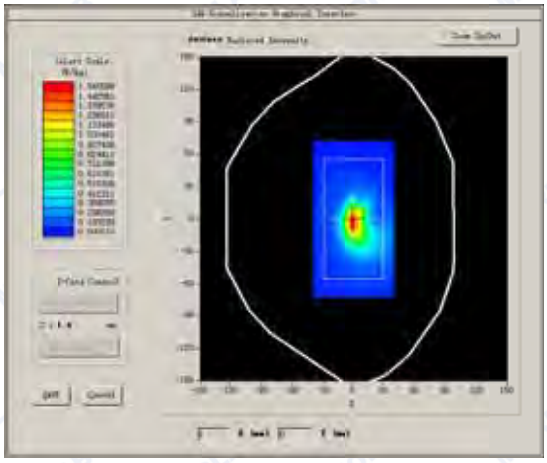
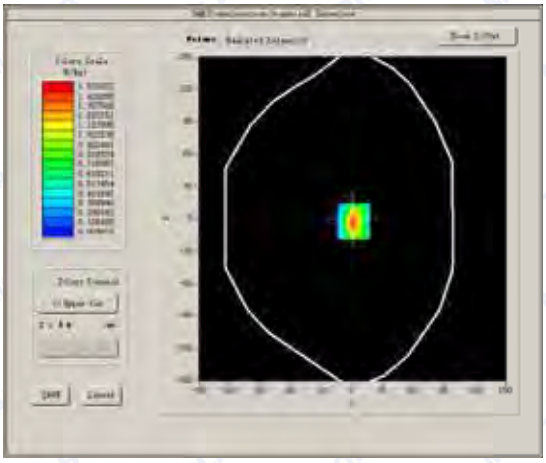
A. Experimental conditions.

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):

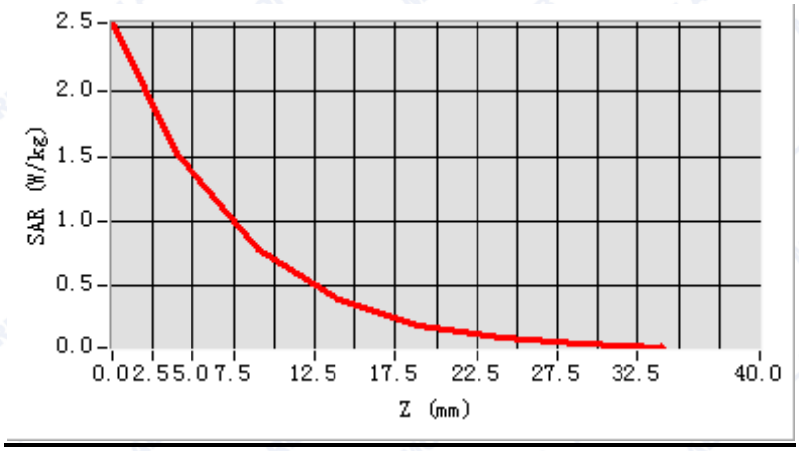
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-3.940000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

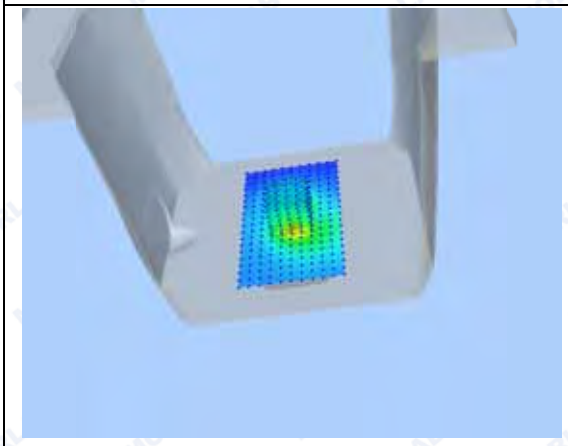
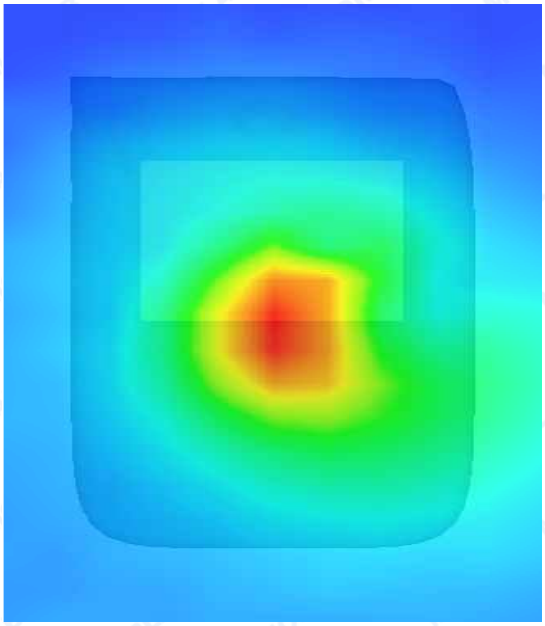
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=-2.00
SAR Peak: 2.55 W/kg

SAR 10g (W/Kg)	0.649832
SAR 1g (W/Kg)	1.333200

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: 2014.9.19

Measurement duration: 9 minutes 58 seconds

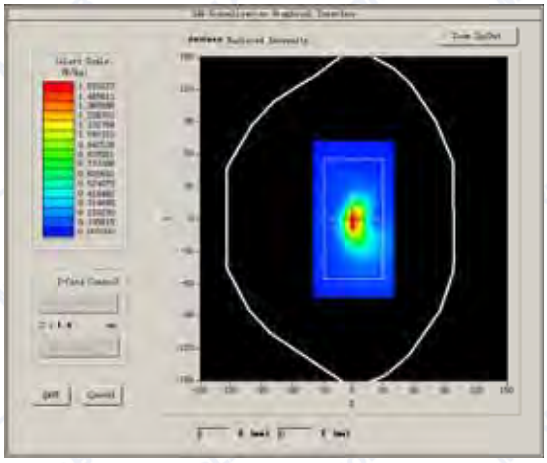
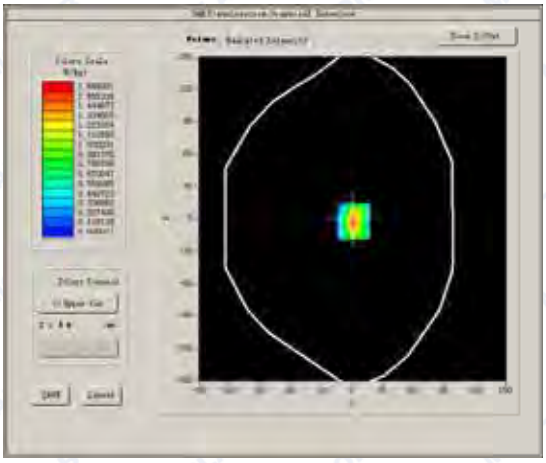
A. Experimental conditions.

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):

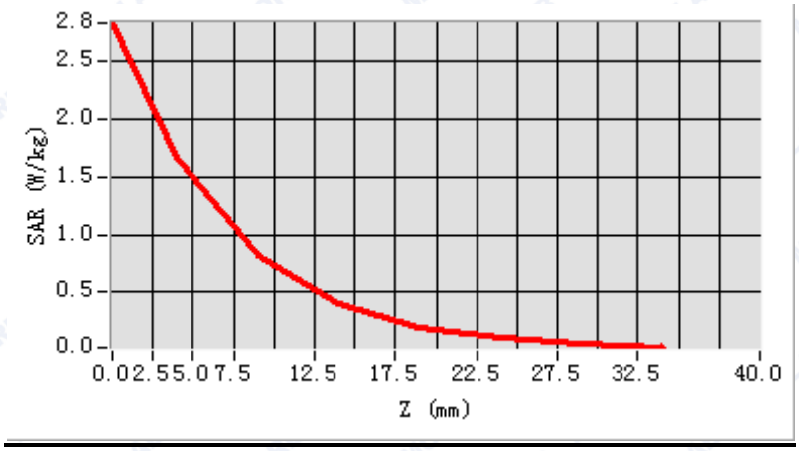
Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-2.740000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

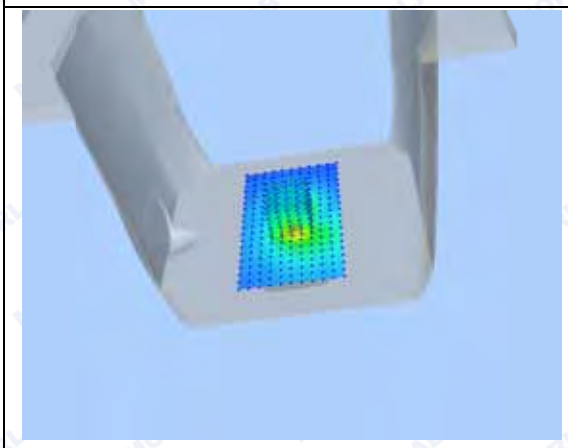
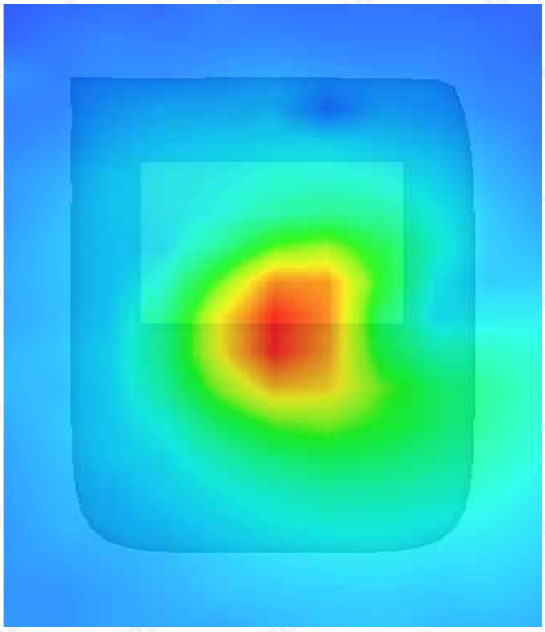
SURFACE SAR	VOLUME SAR
	

Maximum location: X=1.00, Y=-2.00
SAR Peak: 2.97 W/kg

SAR 10g (W/Kg)	0.666646
SAR 1g (W/Kg)	1.404371

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: 2014.9.19

Measurement duration: 9 minutes 58 seconds

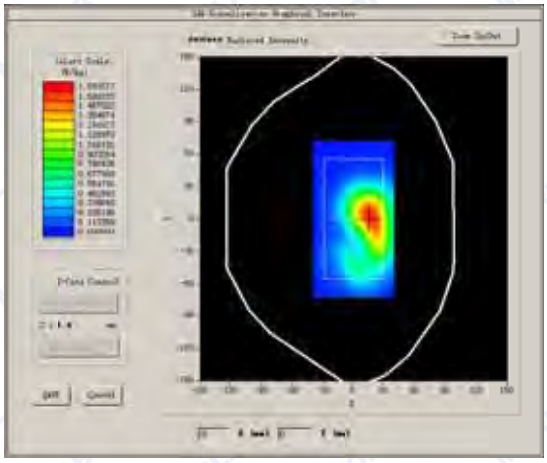
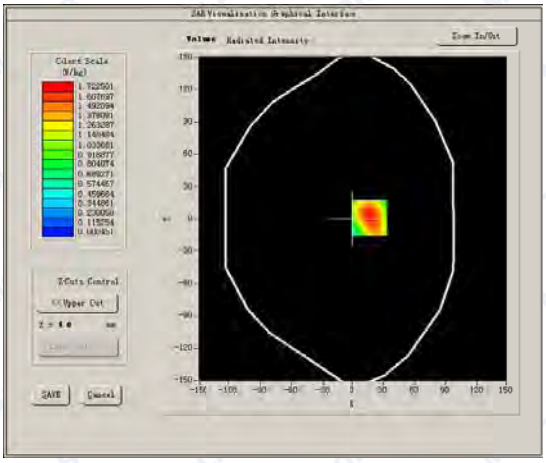
A. Experimental conditions.

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):

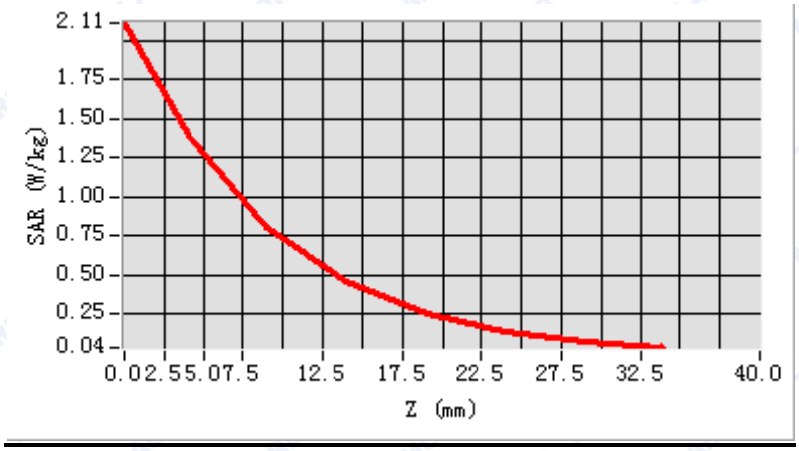
Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.211726
Conductivity (S/m)	1.532845
Power drift(%)	-3.890000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:2

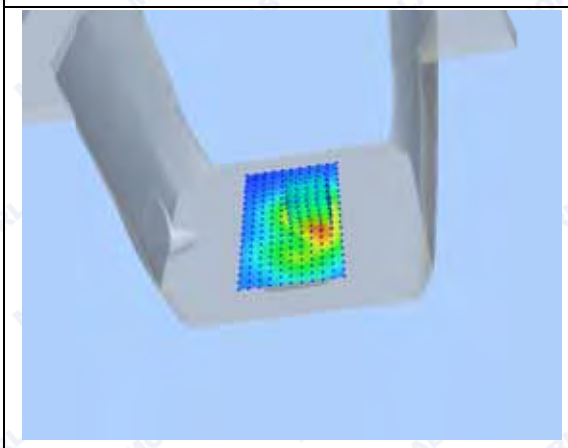
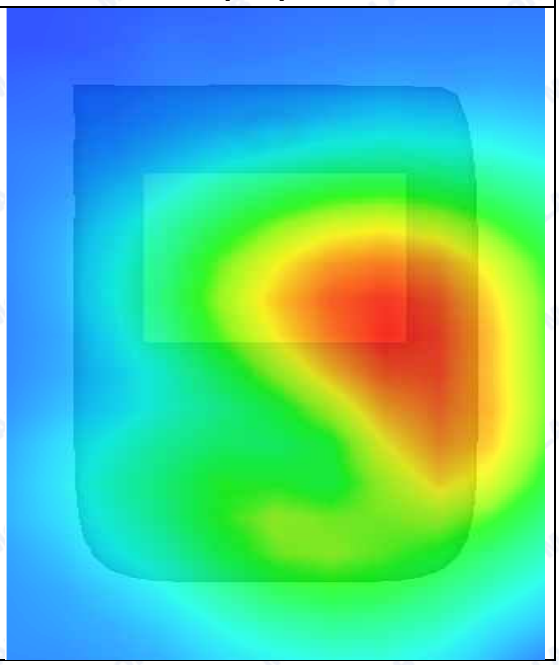
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=-16.00
SAR Peak: 2.06 W/kg

SAR 10g (W/Kg)	0.743925
SAR 1g (W/Kg)	1.402516

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: 2014.9.18

Measurement duration: 9 minutes 30 seconds

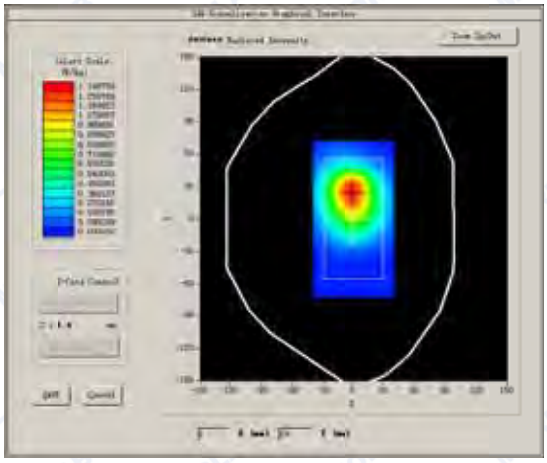
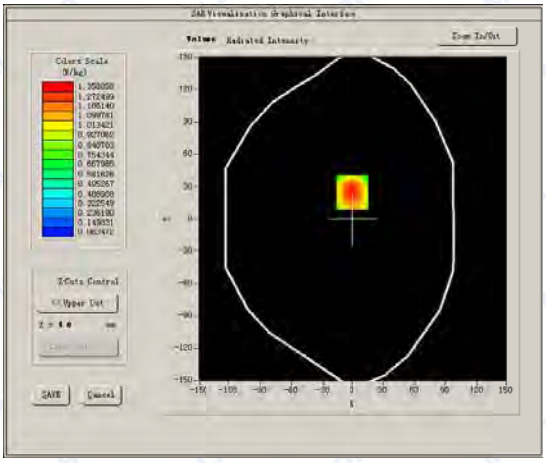
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 4132):

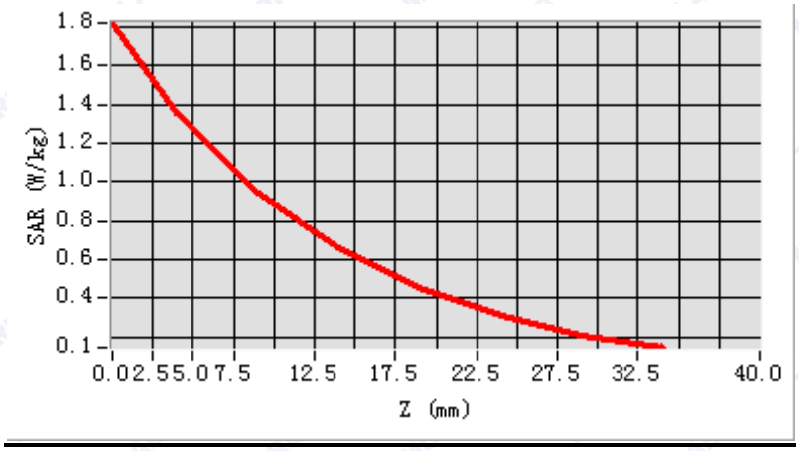
Frequency (MHz)	826.400000
Relative permittivity (real part)	41.368462
Conductivity (S/m)	0.876285
Power drift (%)	-1.260000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:1

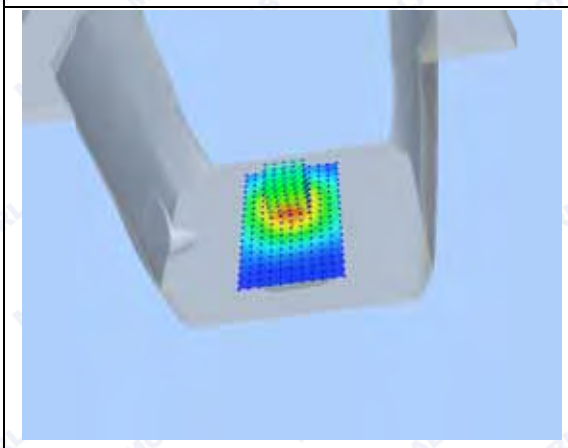
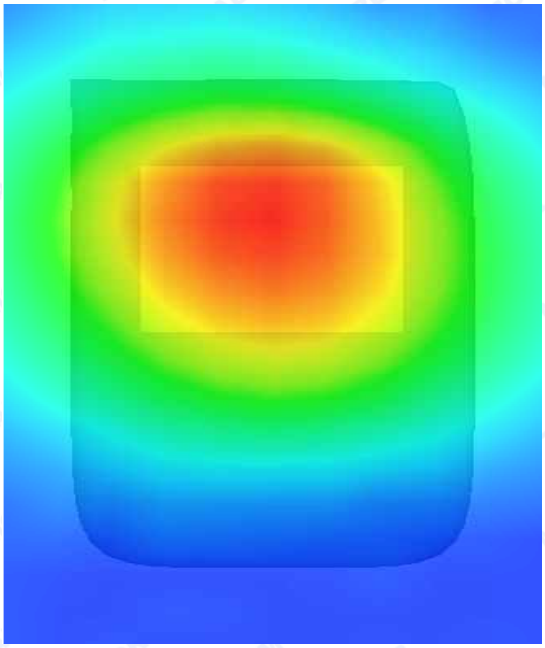
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=25.00
SAR Peak: 2.04 W/kg

SAR 10g (W/Kg)	0.921412
SAR 1g (W/Kg)	1.129516

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: 2014.9.18

Measurement duration: 9 minutes 29 seconds

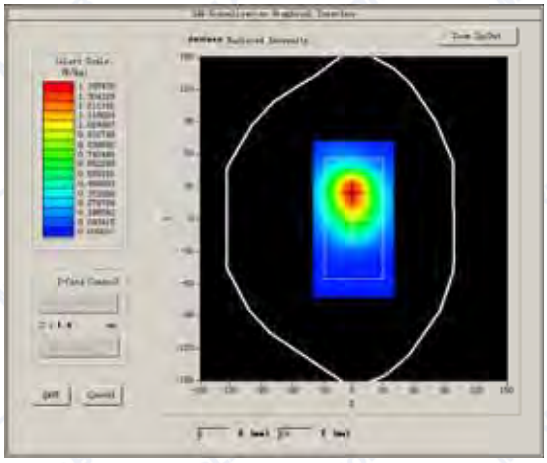
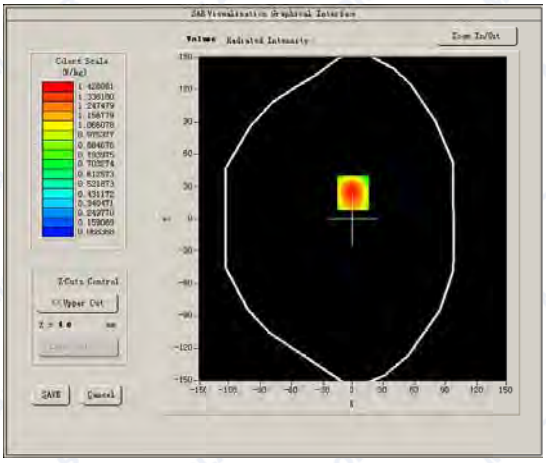
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 4175):

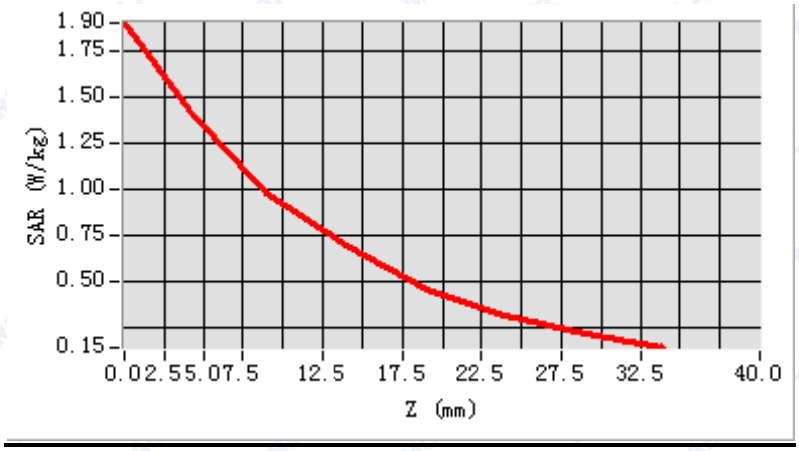
Frequency (MHz)	835.000000
Relative permittivity (real part)	41.368462
Conductivity (S/m)	0.876285
Power drift (%)	1.390000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:1

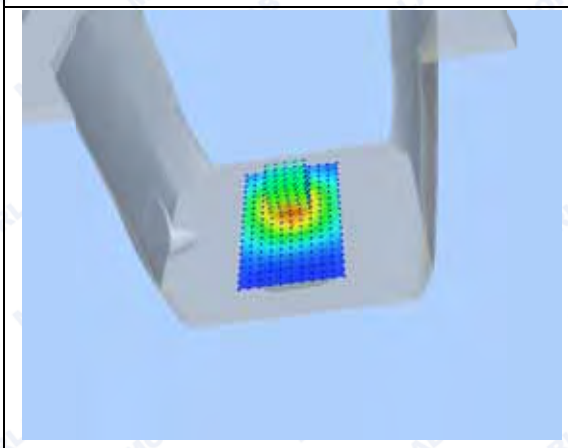
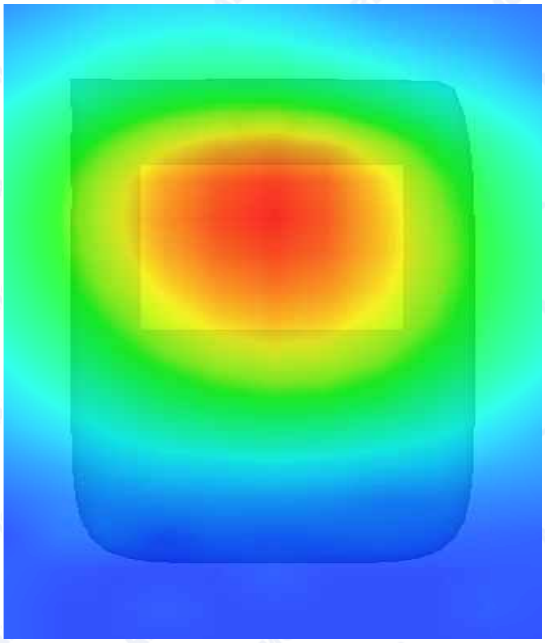
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=24.00
SAR Peak: 2.06 W/kg

SAR 10g (W/Kg)	0.950491
SAR 1g (W/Kg)	1.183337

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: 2014.9.18

Measurement duration: 9 minutes 31 seconds

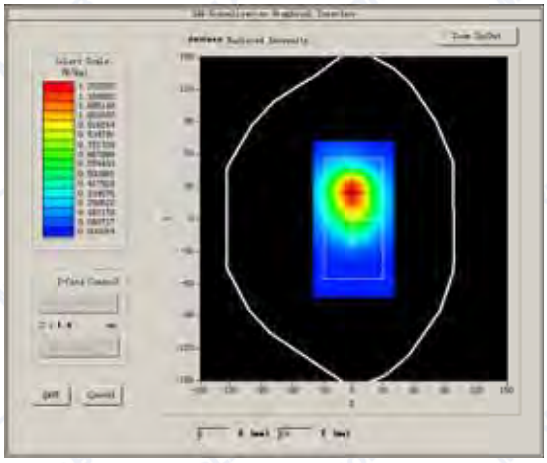
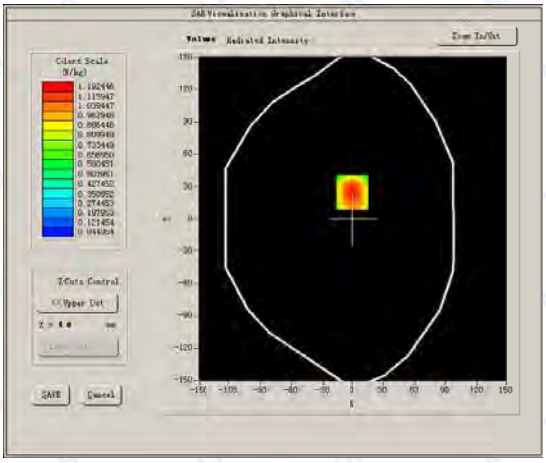
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 4233):

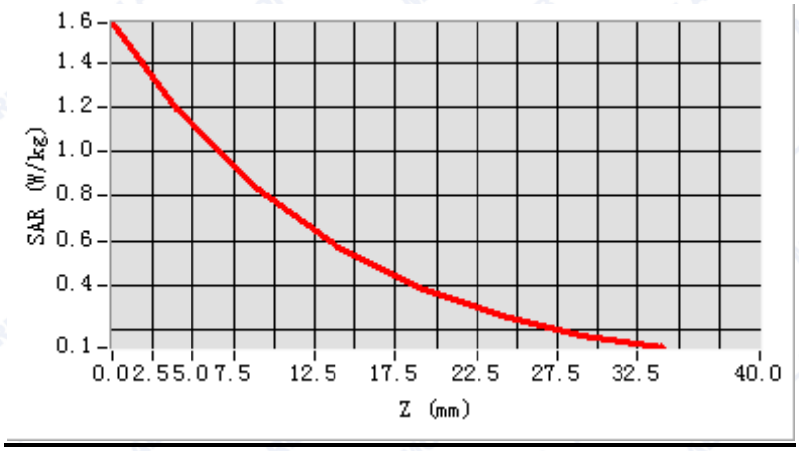
Frequency (MHz)	846.600000
Relative permittivity (real part)	41.368462
Conductivity (S/m)	0.876285
Power drift (%)	-3.430000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:1

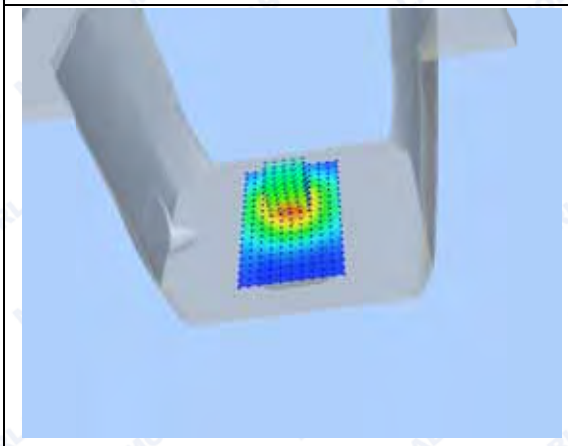
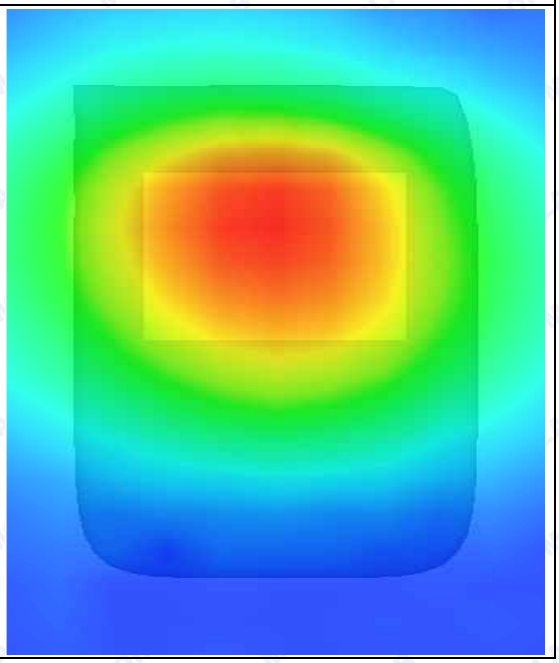
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-1.00, Y=25.00
SAR Peak: 1.76 W/kg

SAR 10g (W/Kg)	0.793116
SAR 1g (W/Kg)	1.230152

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: 2014.9.18

Measurement duration: 9 minutes 55 seconds

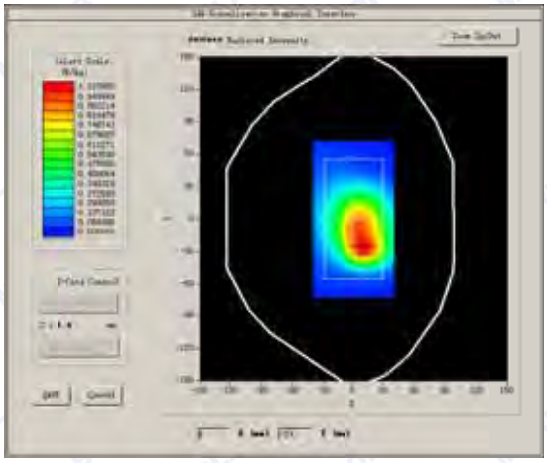
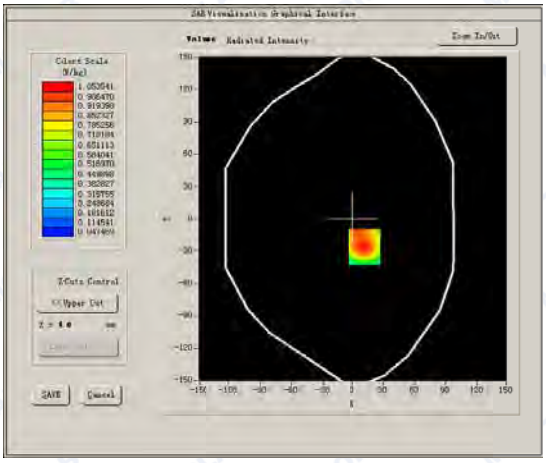
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 4132):

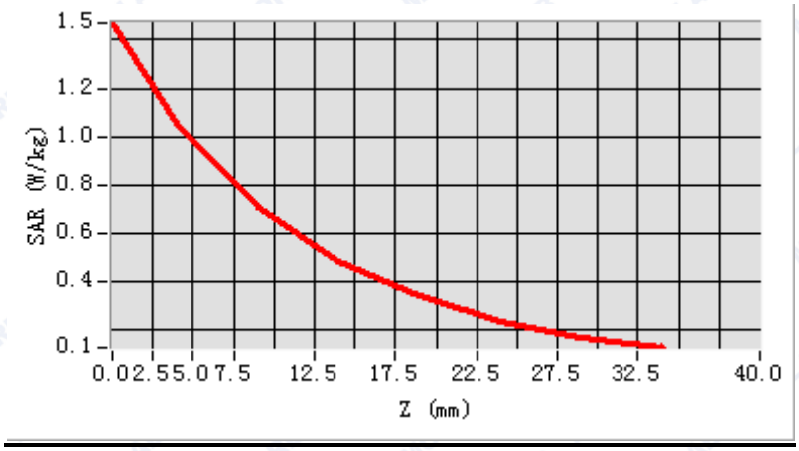
Frequency (MHz)	826.400000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	0.010000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

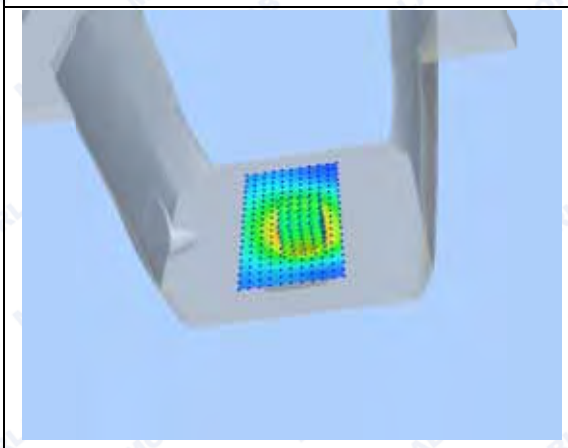
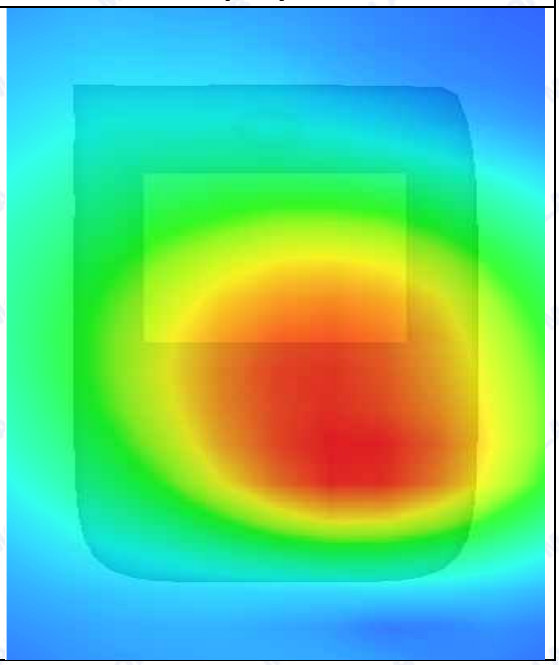
SURFACE SAR	VOLUME SAR
	

Maximum location: X=11.00, Y=-26.00
SAR Peak: 1.66 W/kg

SAR 10g (W/Kg)	0.712330
SAR 1g (W/Kg)	1.112813

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: 2014.9.18

Measurement duration: 10 minutes 7 seconds

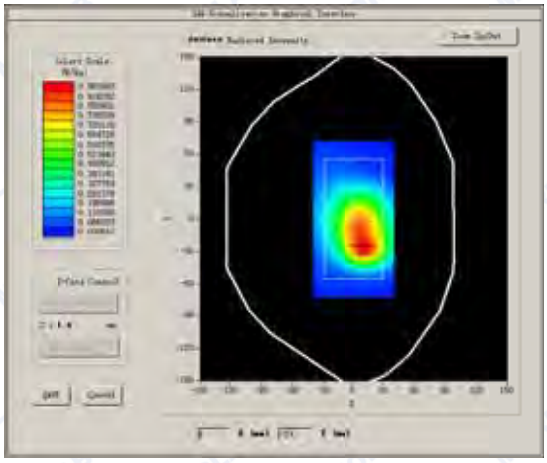
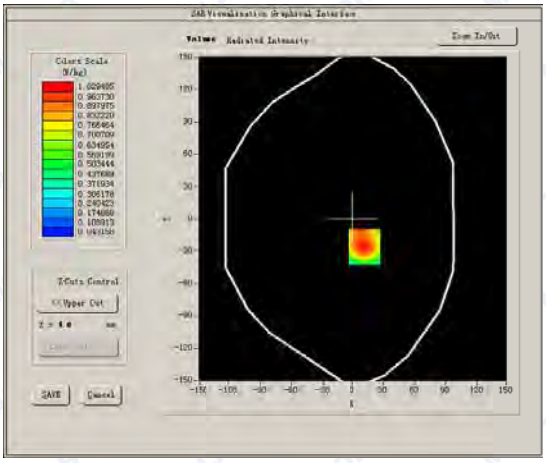
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 4175):

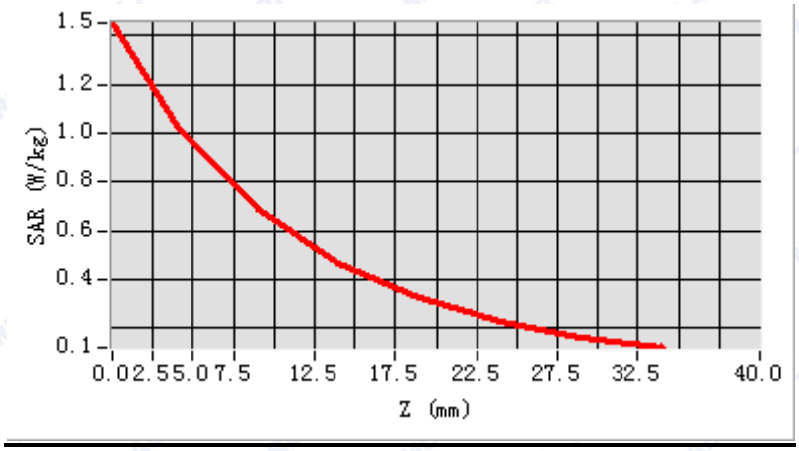
Frequency (MHz)	835.000000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	0.840000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

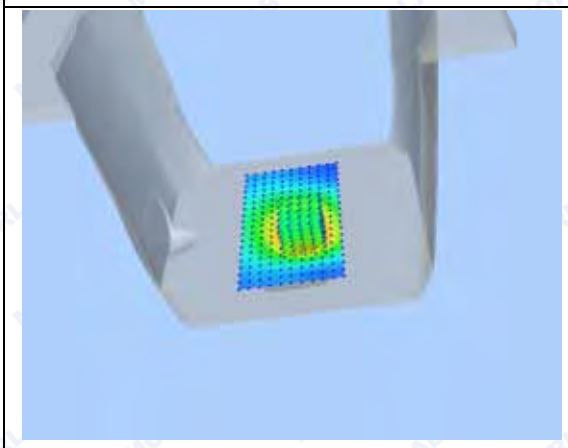
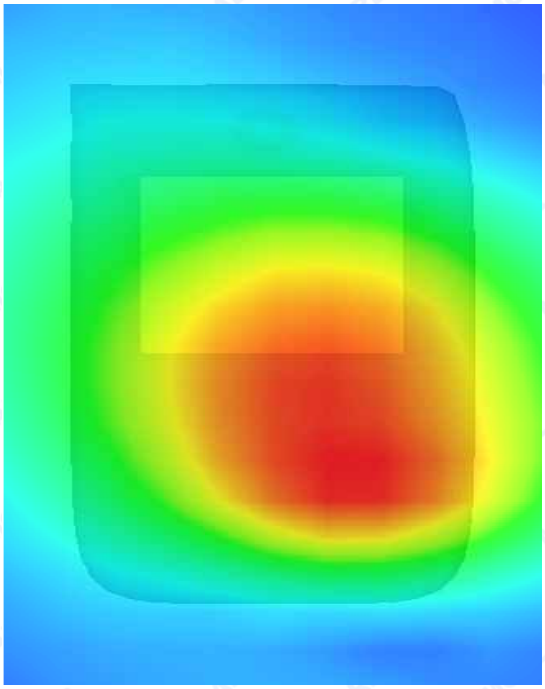
SURFACE SAR	VOLUME SAR
	

Maximum location: X=11.00, Y=-26.00
SAR Peak: 1.63 W/kg

SAR 10g (W/Kg)	0.680689
SAR 1g (W/Kg)	1.074181

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: 2014.9.18

Measurement duration: 9 minutes 56 seconds

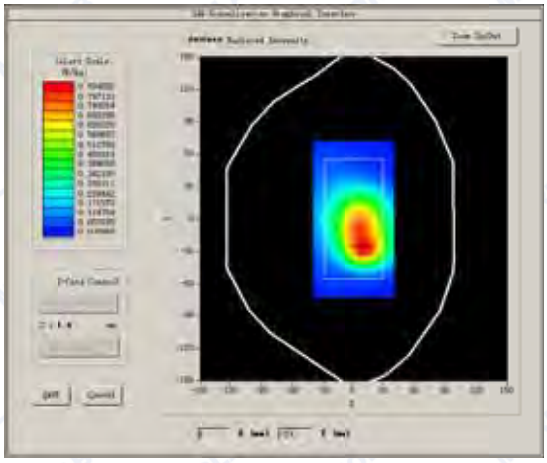
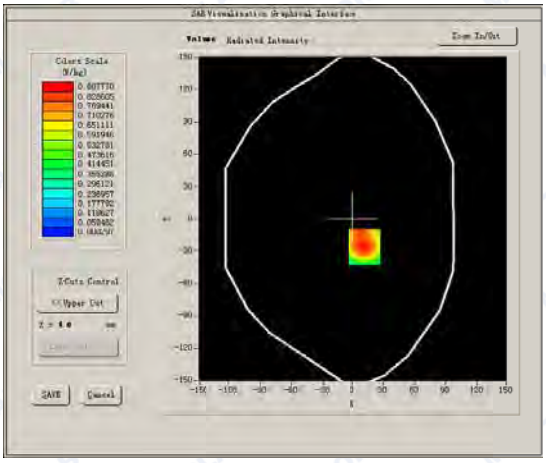
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 4233):

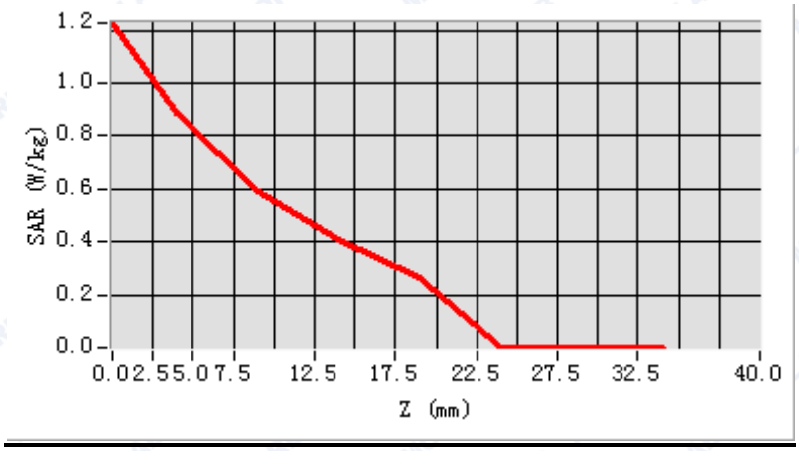
Frequency (MHz)	846.600000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	-2.940000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

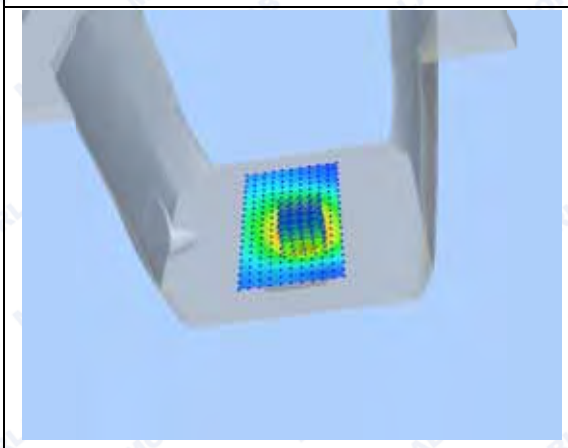
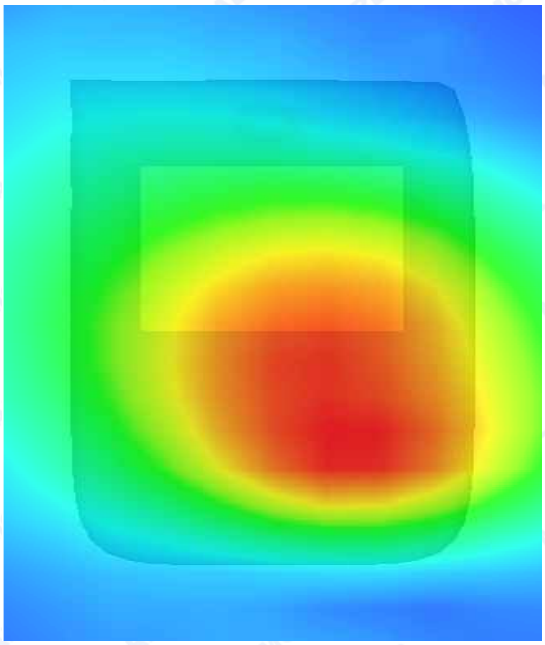
SURFACE SAR	VOLUME SAR
	

Maximum location: X=11.00, Y=-26.00
SAR Peak: 1.38 W/kg

SAR 10g (W/Kg)	0.565784
SAR 1g (W/Kg)	0.940188

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: 2014.9.18

Measurement duration: 9 minutes 30 seconds

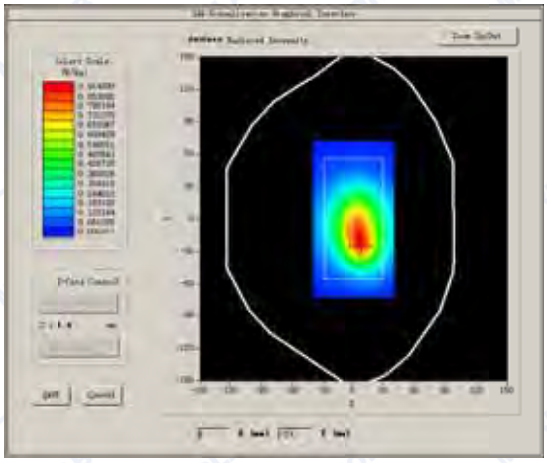
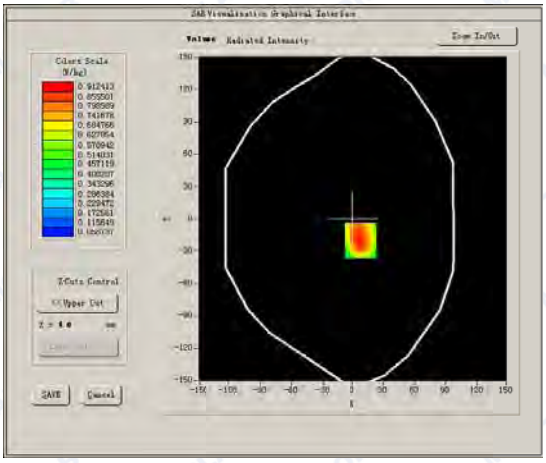
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 4132):

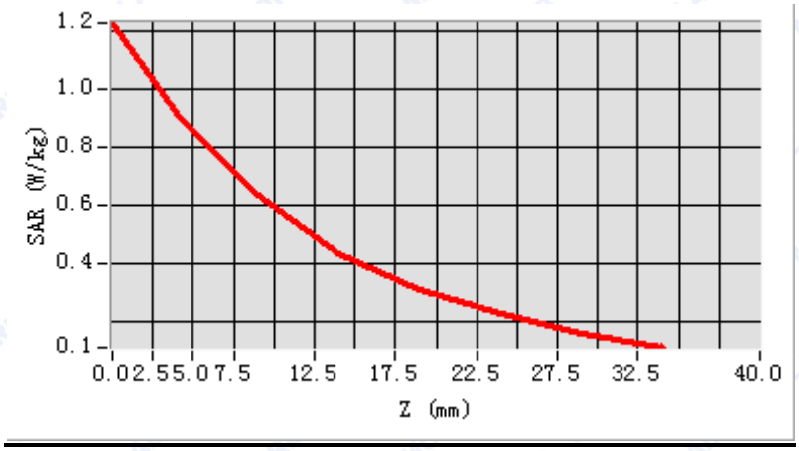
Frequency (MHz)	826.400000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	-3.100000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

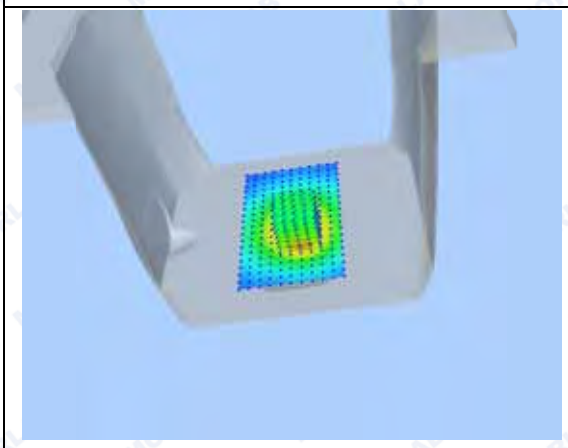
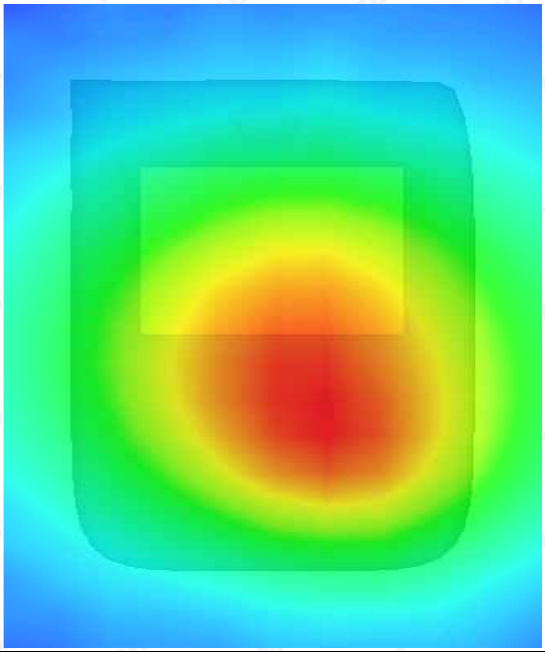
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=-20.00
SAR Peak: 1.39 W/kg

SAR 10g (W/Kg)	0.616098
SAR 1g (W/Kg)	0.955723

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: 2014.9.18

Measurement duration: 9 minutes 30 seconds

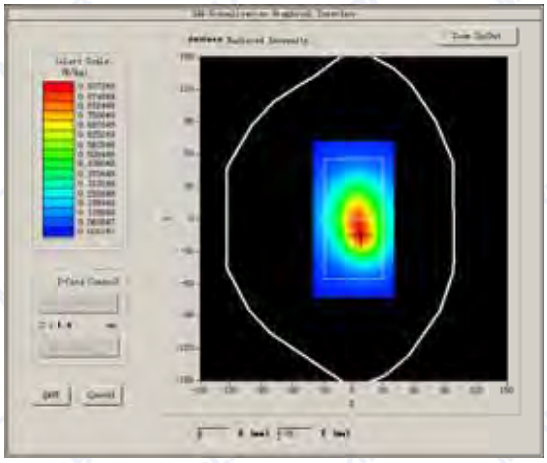
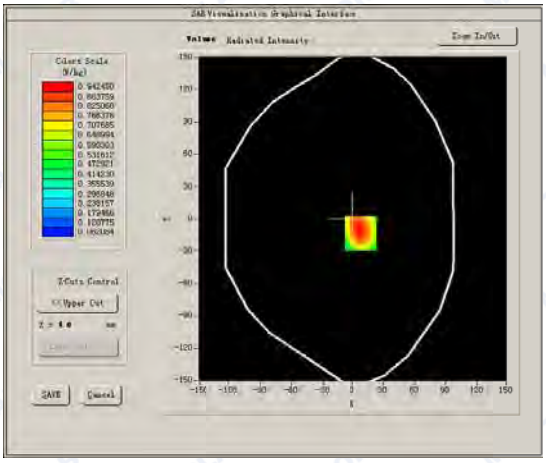
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 4175):

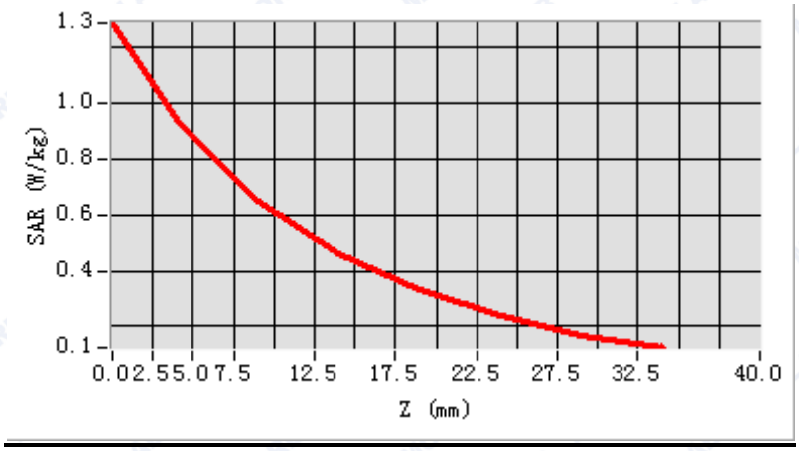
Frequency (MHz)	835.000000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	0.920000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

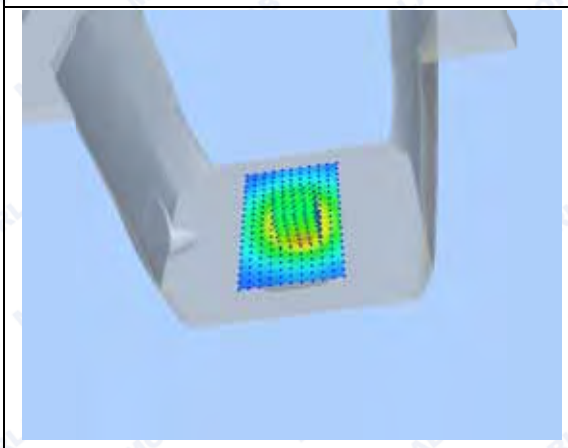
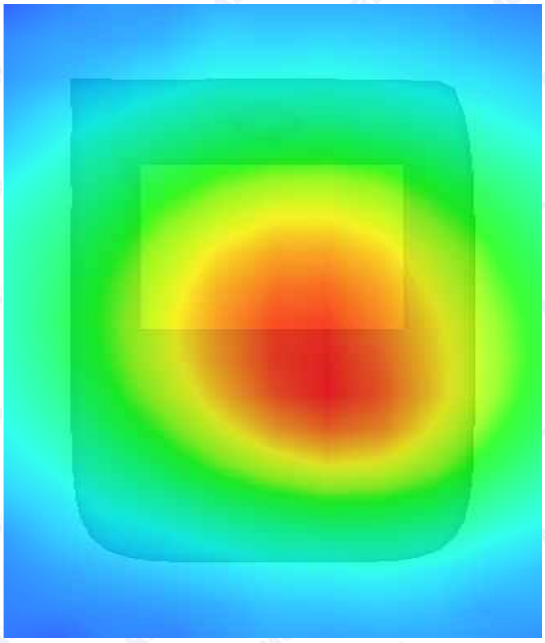
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=-13.00
SAR Peak: 1.40 W/kg

SAR 10g (W/Kg)	0.641665
SAR 1g (W/Kg)	0.976743

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: 2014.9.18

Measurement duration: 9 minutes 29 seconds

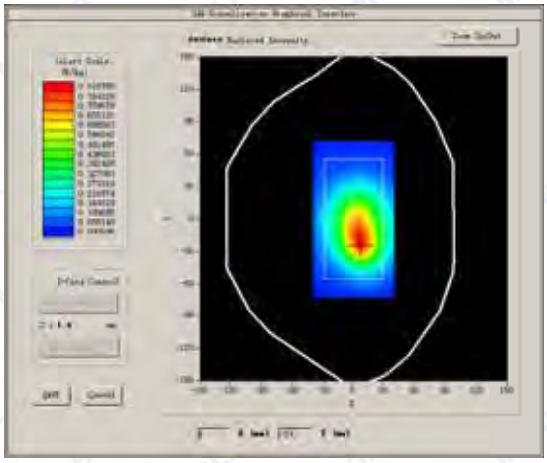
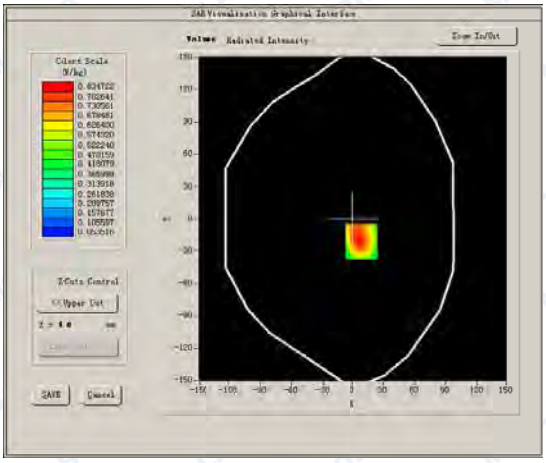
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 4233):

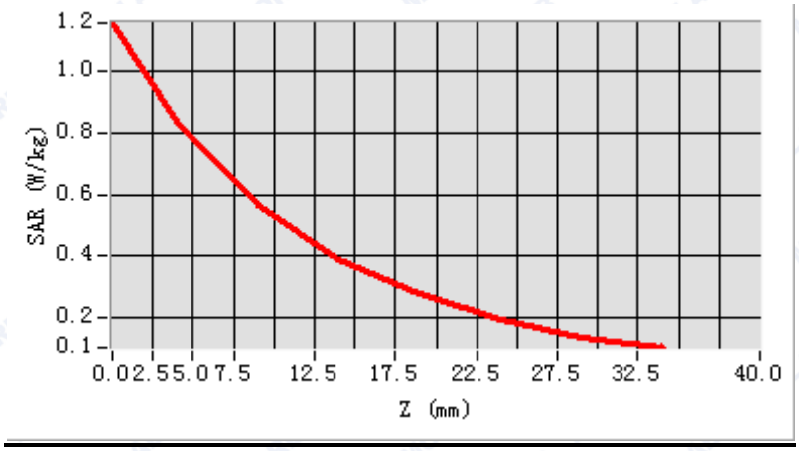
Frequency (MHz)	846.600000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	2.720000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

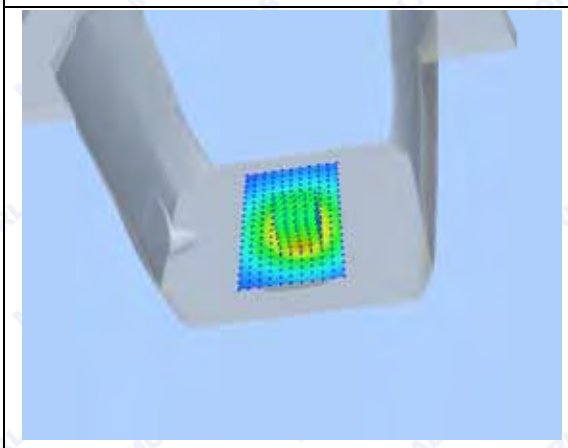
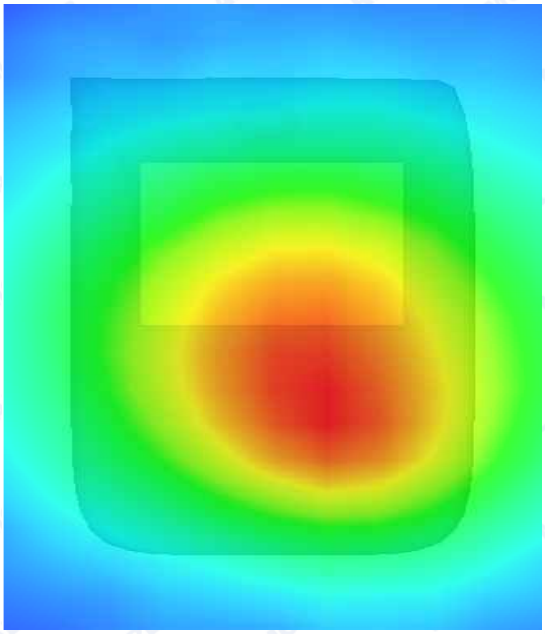
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=-21.00
SAR Peak: 1.27 W/kg

SAR 10g (W/Kg)	0.558256
SAR 1g (W/Kg)	0.867926

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: 2014.9.18

Measurement duration: 9 minutes 30 seconds

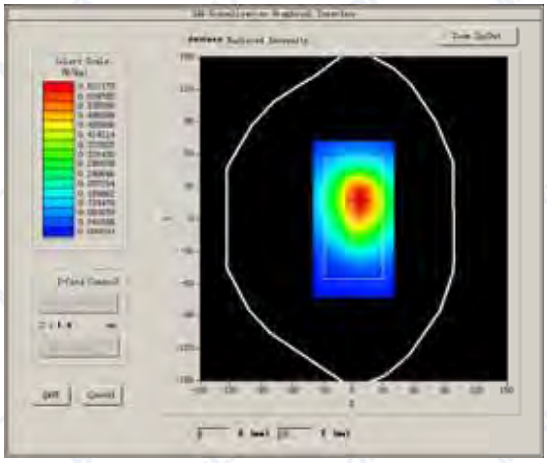
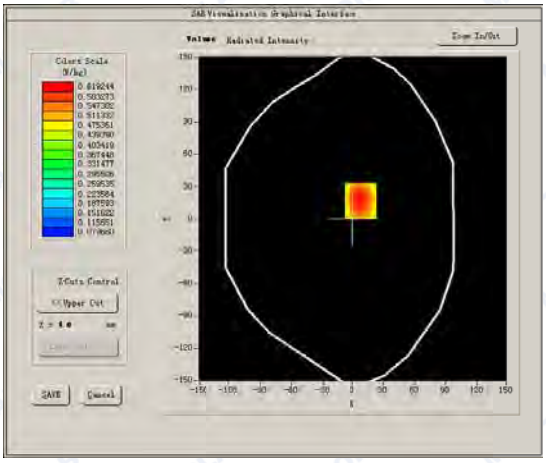
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 4233):

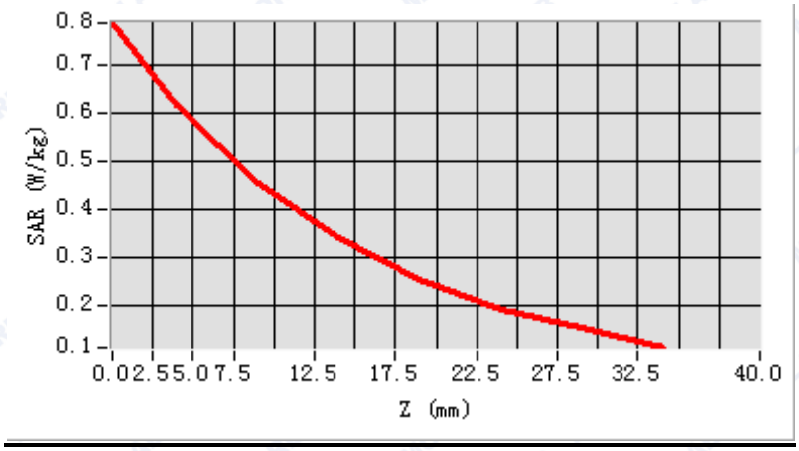
Frequency (MHz)	846.600000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	-0.670000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

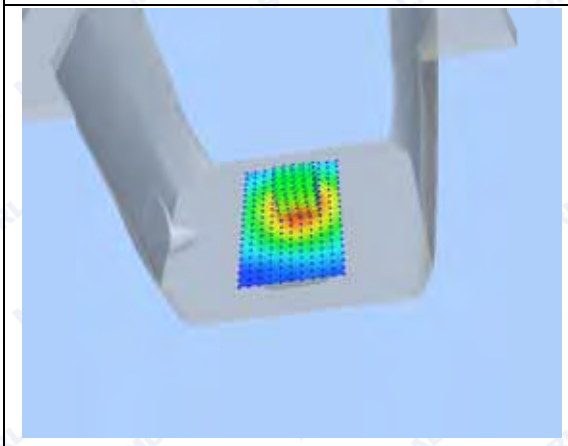
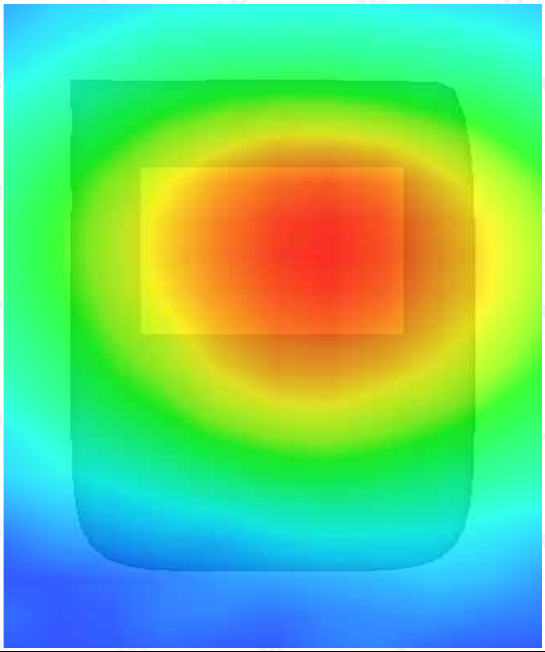
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=17.00
SAR Peak: 0.86 W/kg

SAR 10g (W/Kg)	0.449863
SAR 1g (W/Kg)	0.642472

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: 2014.9.18

Measurement duration: 9 minutes 30 seconds

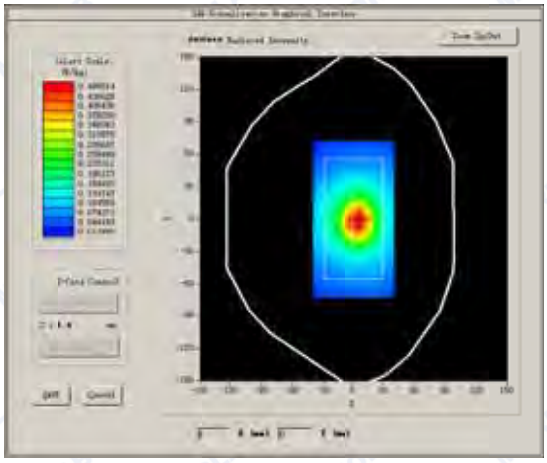
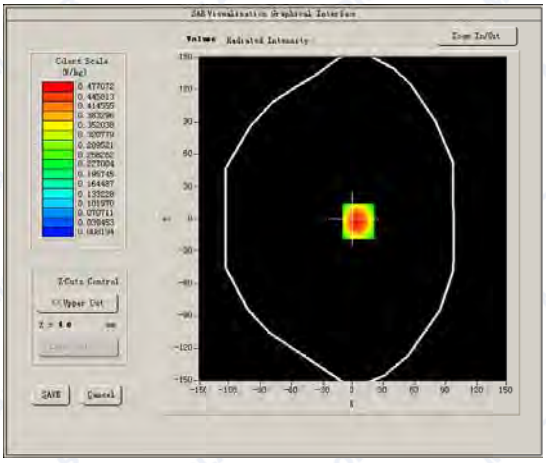
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 4233):

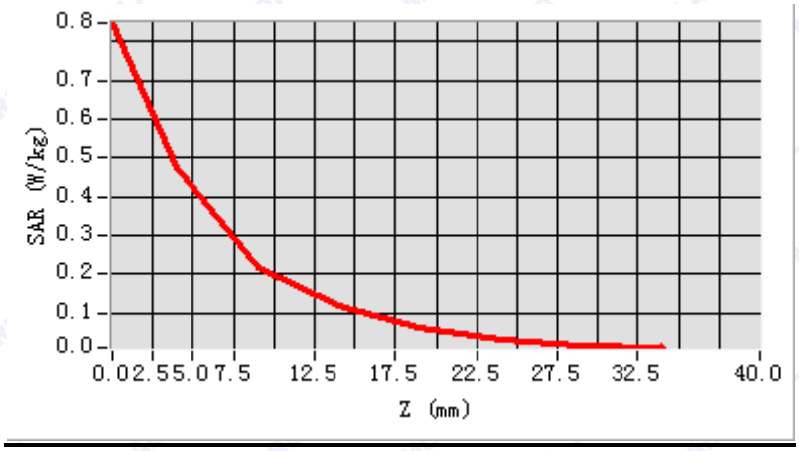
Frequency (MHz)	846.600000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	-0.020000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

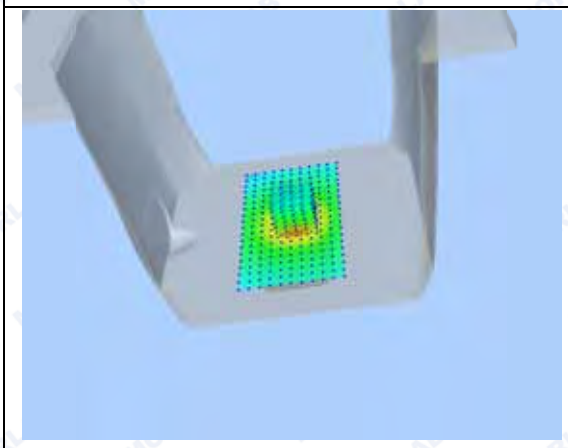
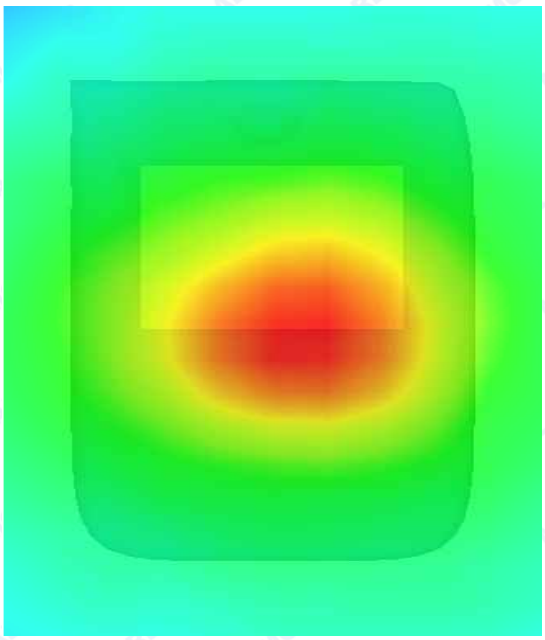
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=-2.00
SAR Peak: 0.90 W/kg

SAR 10g (W/Kg)	0.269593
SAR 1g (W/Kg)	0.508973

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: 2014.9.18

Measurement duration: 9 minutes 30 seconds

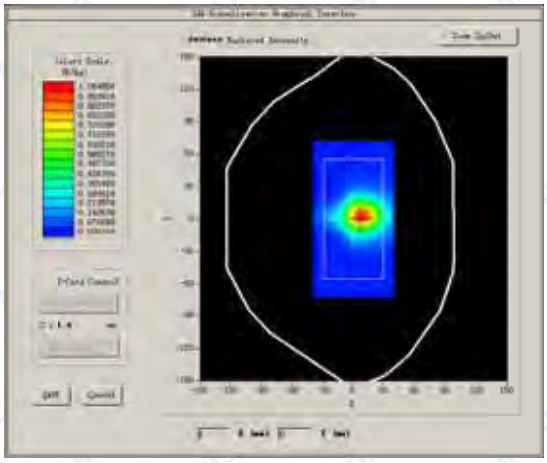
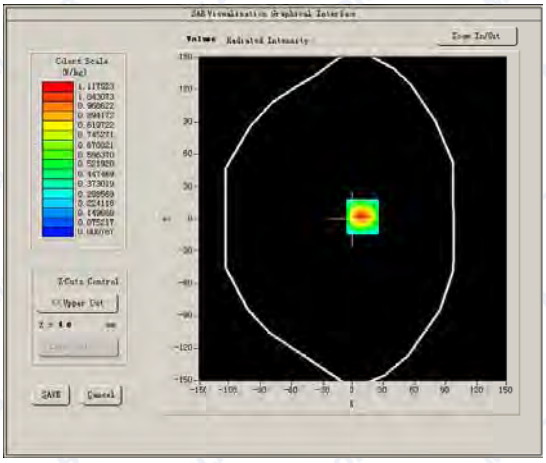
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 4233):

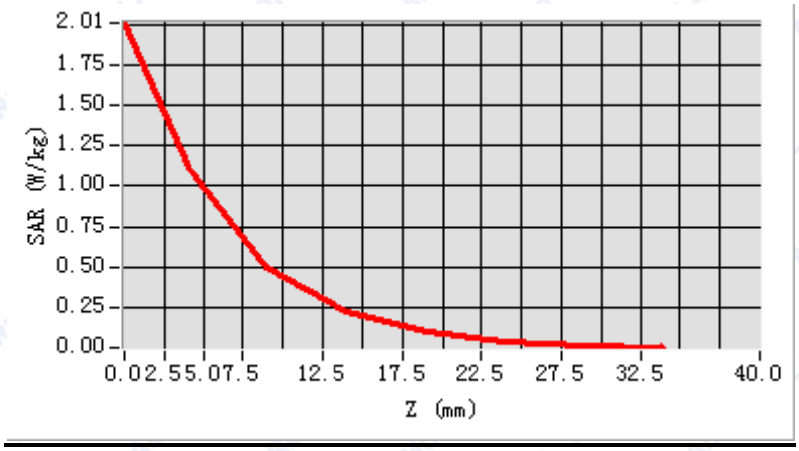
Frequency (MHz)	846.600000
Relative permittivity (real part)	41.368462
Conductivity (S/m)	0.876285
Power drift (%)	-0.410000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:1

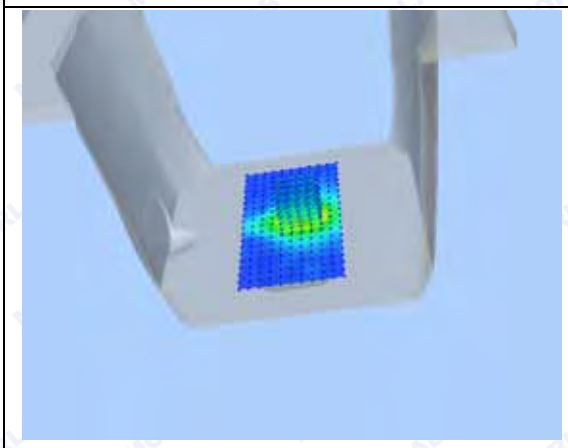
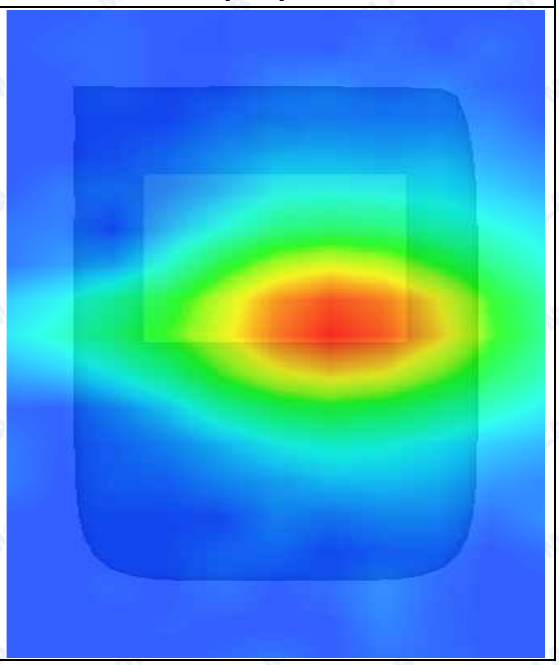
SURFACE SAR	VOLUME SAR
	

Maximum location: X=9.00, Y=2.00
SAR Peak: 2.17 W/kg

SAR 10g (W/Kg)	0.507811
SAR 1g (W/Kg)	1.155636

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: 2014.9.19

Measurement duration: 9 minutes 35 seconds

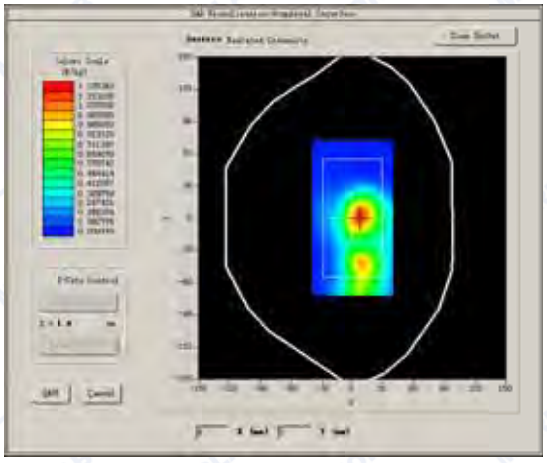
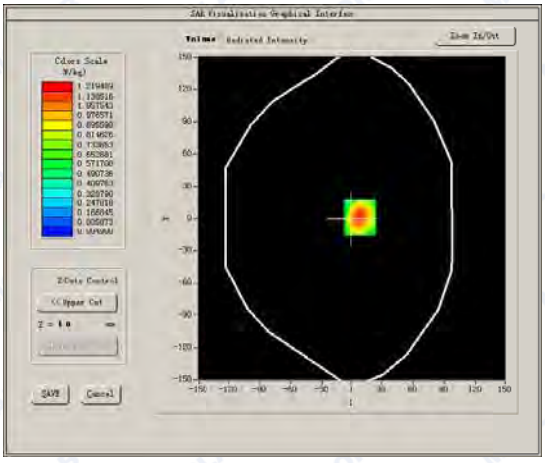
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 9262):

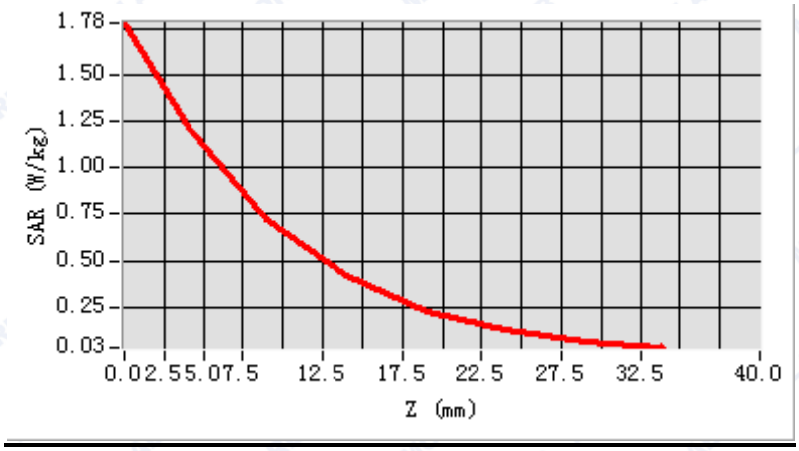
Frequency (MHz)	1852.400000
Relative permittivity (real part)	40.124068
Conductivity (S/m)	1.376284
Power drift (%)	0.250000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:1

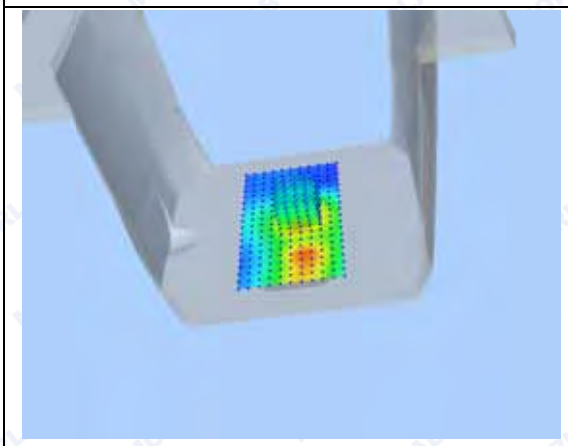
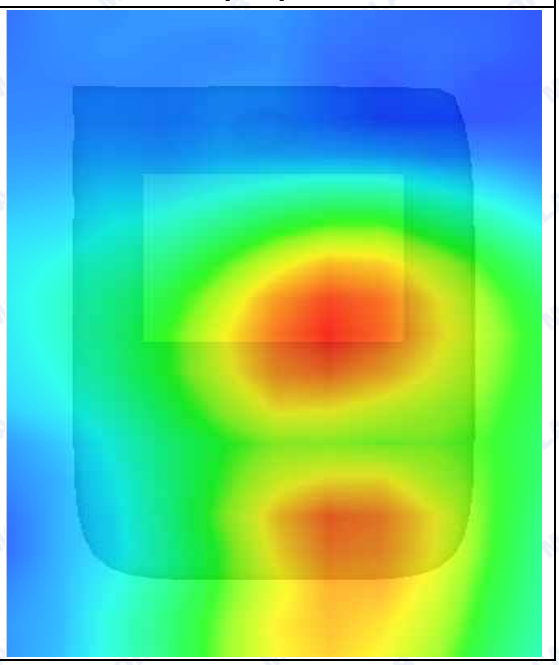
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=1.00
SAR Peak: 1.95 W/kg

SAR 10g (W/Kg)	0.665960
SAR 1g (W/Kg)	1.237971

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: 2014.9.19

Measurement duration: 9 minutes 33 seconds

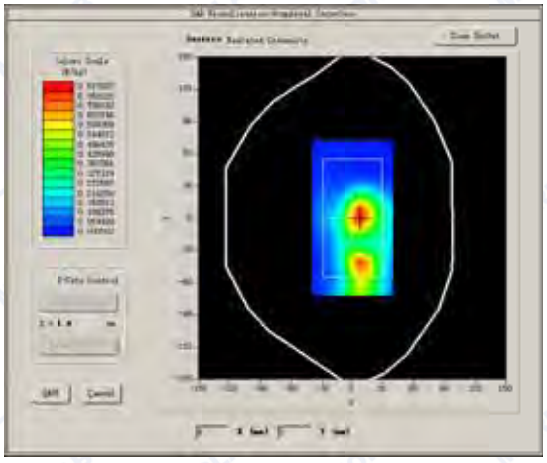
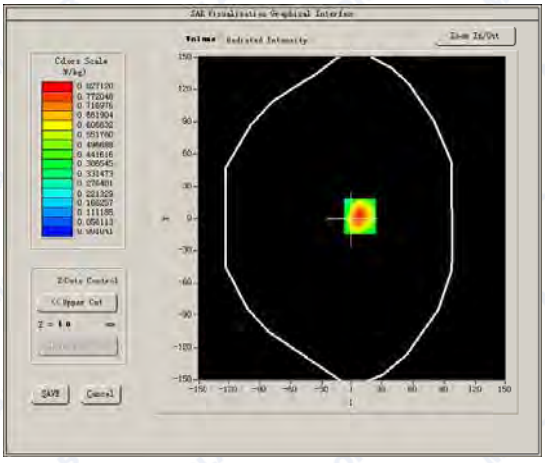
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

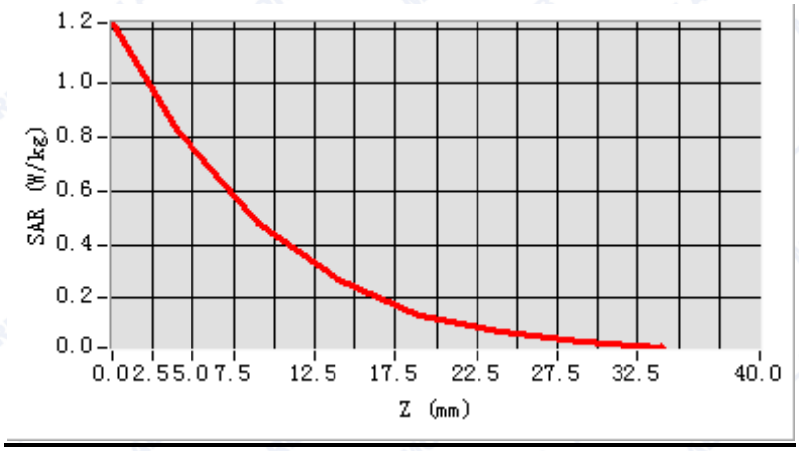
Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.124068
Conductivity (S/m)	1.376284
Power drift (%)	-2.080000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:1

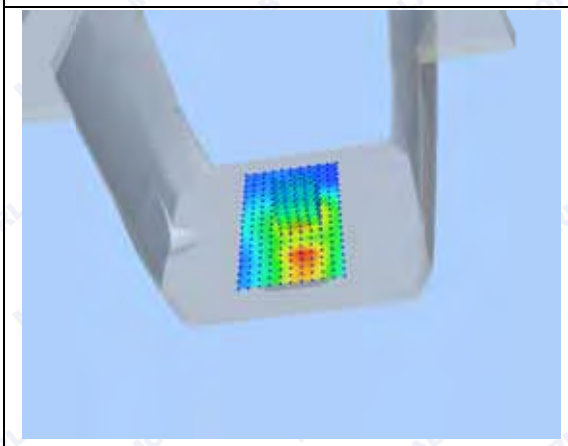
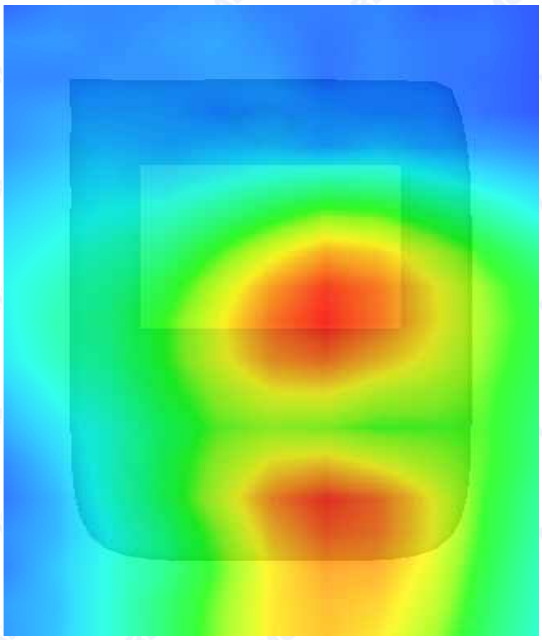
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=2.00
SAR Peak: 1.33 W/kg

SAR 10g (W/Kg)	0.442335
SAR 1g (W/Kg)	0.837551

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: 2014.9.19

Measurement duration: 9 minutes 30 seconds

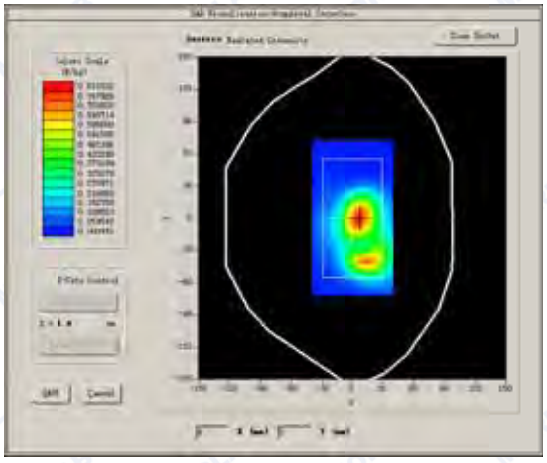
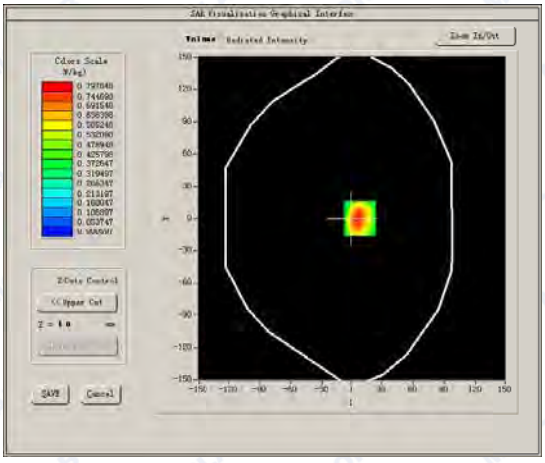
A. Experimental conditions.

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):

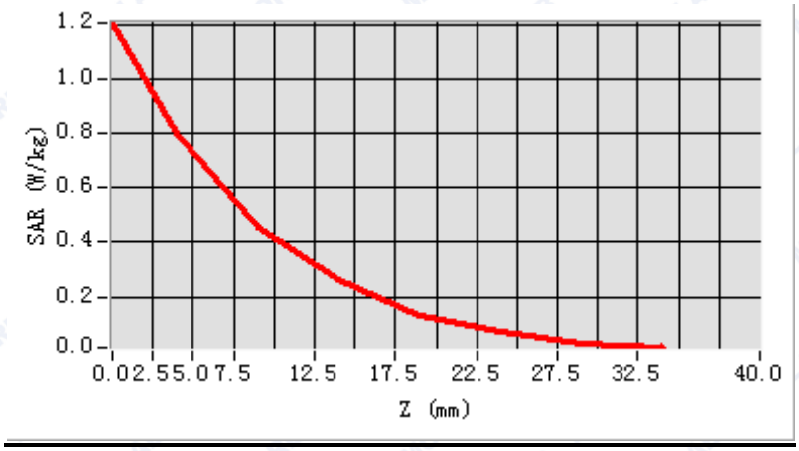
Frequency (MHz)	1907.600000
Relative permittivity (real part)	40.124068
Conductivity (S/m)	1.376284
Power drift (%)	-3.440000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:1

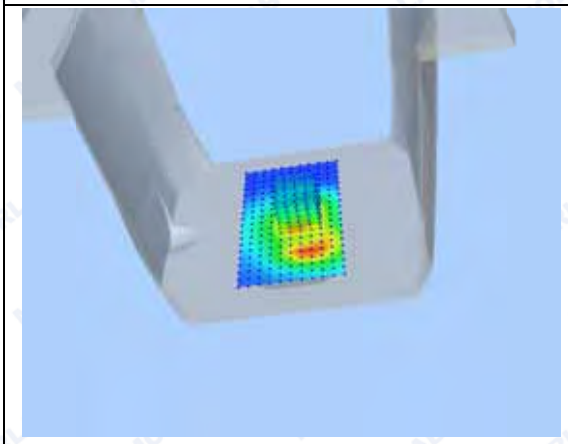
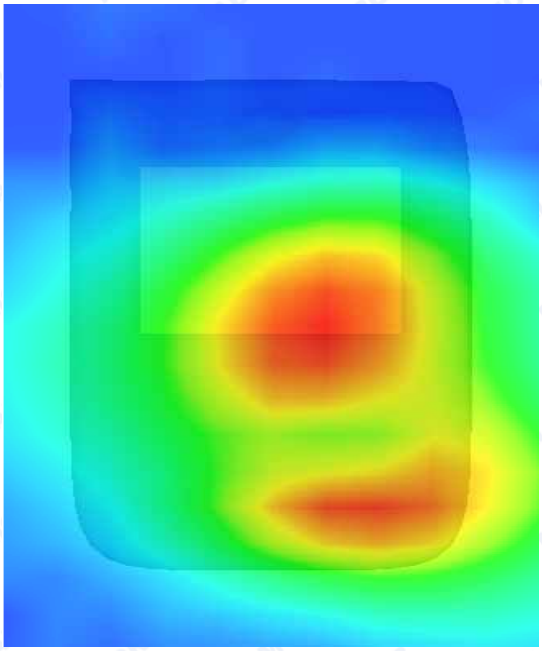
SURFACE SAR	VOLUME SAR
	

Maximum location: X=8.00, Y=0.00
SAR Peak: 1.34 W/kg

SAR 10g (W/Kg)	0.433237
SAR 1g (W/Kg)	0.824032

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: 2014.9.19

Measurement duration: 9 minutes 25 seconds

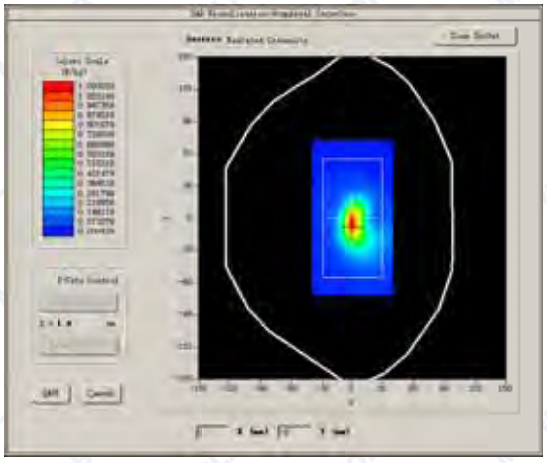
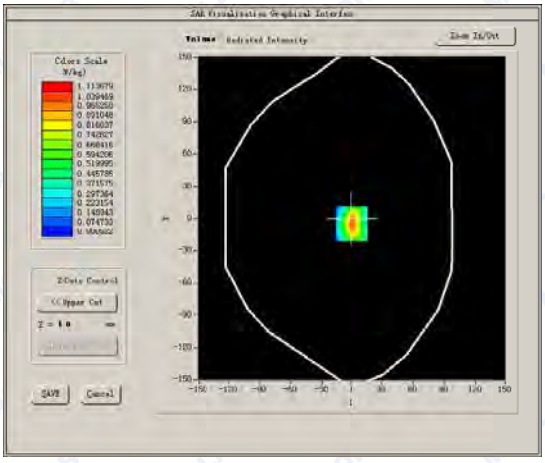
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 9262):

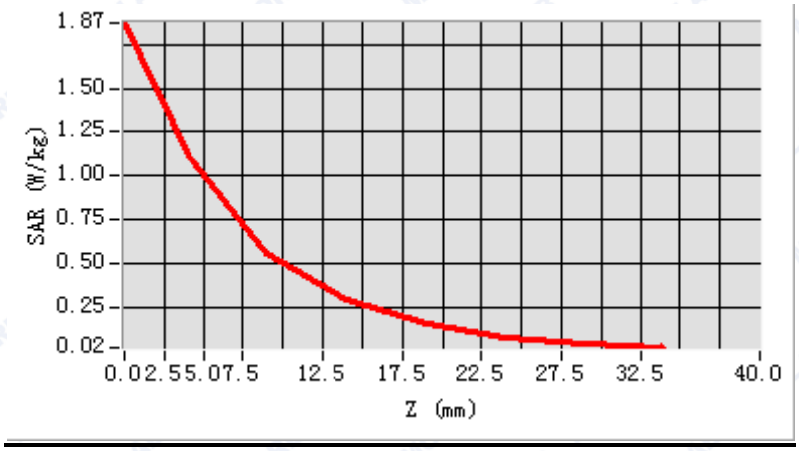
Frequency (MHz)	1852.400000
Relative permittivity (real part)	53.206724
Conductivity (S/m)	1.532867
Power drift (%)	1.730000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

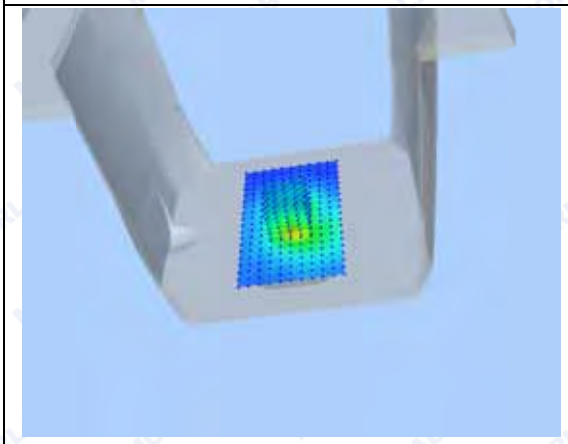
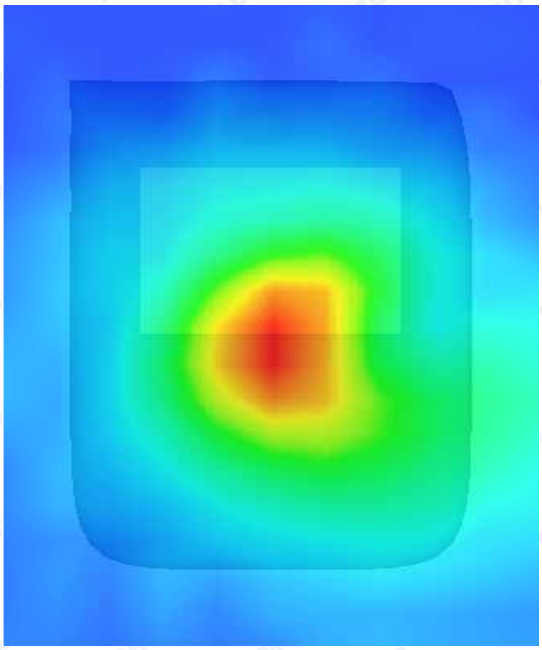
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-5.00
SAR Peak: 2.01 W/kg

SAR 10g (W/Kg)	0.506153
SAR 1g (W/Kg)	1.111454

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=8mm, dy=8mm, dz=5mm

Date of measurement: 2014.9.19

Measurement duration: 9 minutes 33 seconds

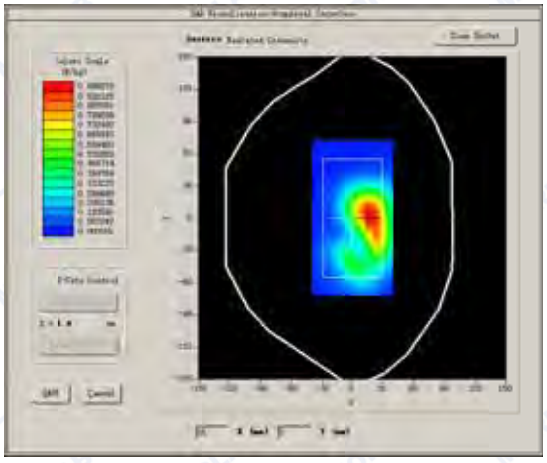
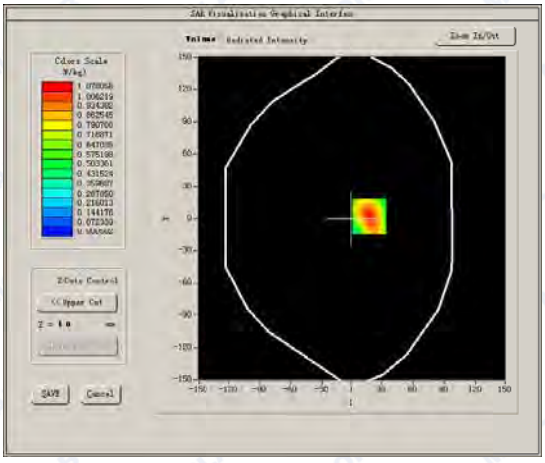
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

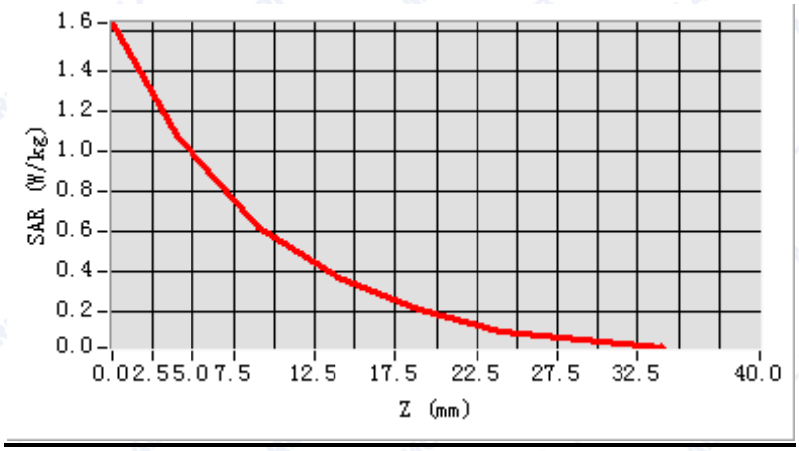
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.206724
Conductivity (S/m)	1.532867
Power drift (%)	1.320000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

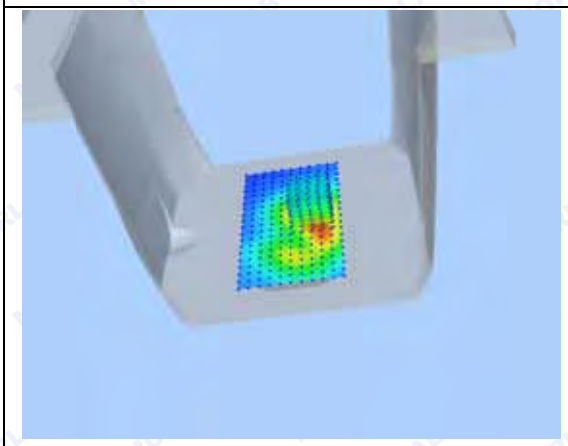
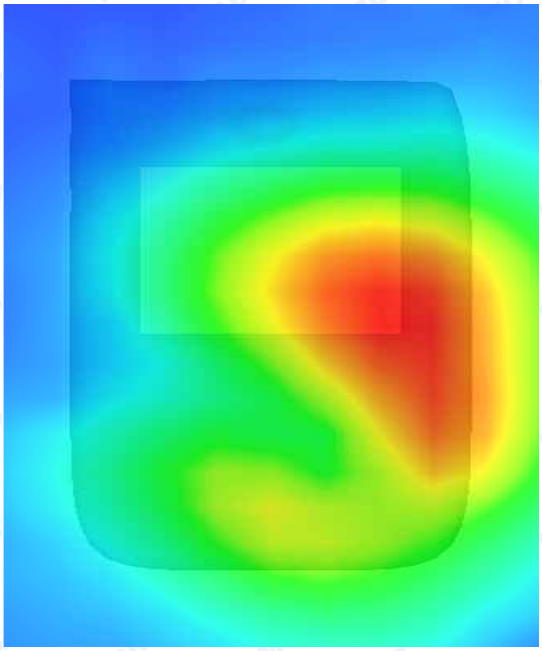
SURFACE SAR	VOLUME SAR
	

Maximum location: X=18.00, Y=2.00
SAR Peak: 1.56 W/kg

SAR 10g (W/Kg)	0.613018
SAR 1g (W/Kg)	0.971427

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=8mm, dy=8mm, dz=5mm

Date of measurement: 2014.9.19

Measurement duration: 9 minutes 56 seconds

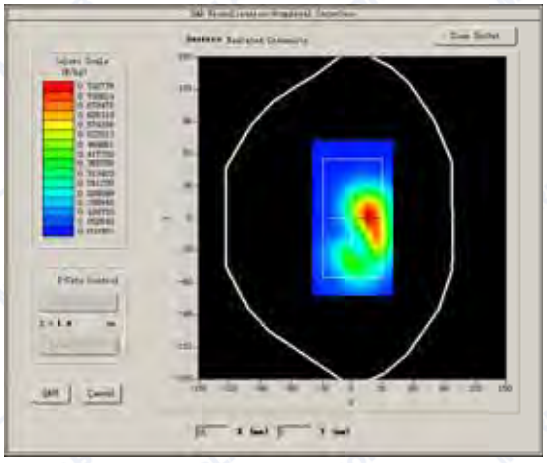
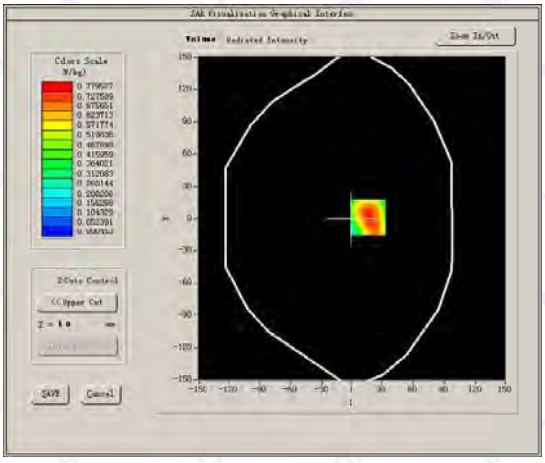
A. Experimental conditions.

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):

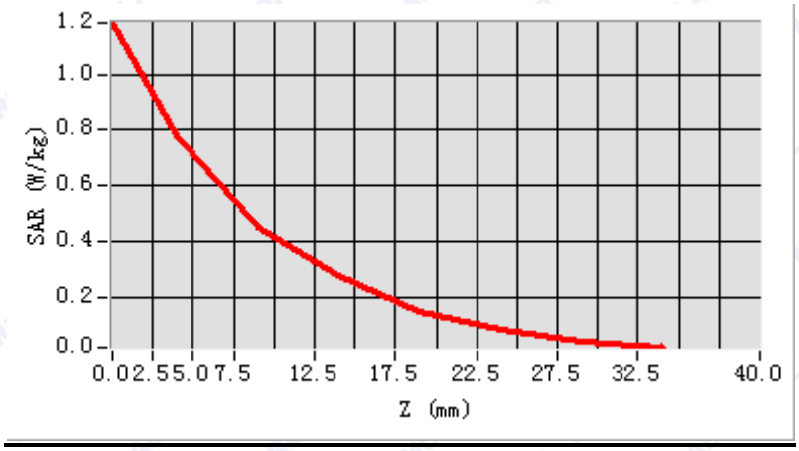
Frequency (MHz)	1907.600000
Relative permittivity (real part)	53.206724
Conductivity (S/m)	1.532867
Power drift (%)	1.580000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

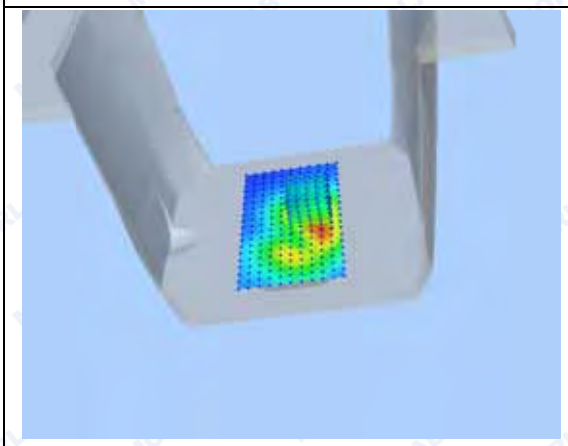
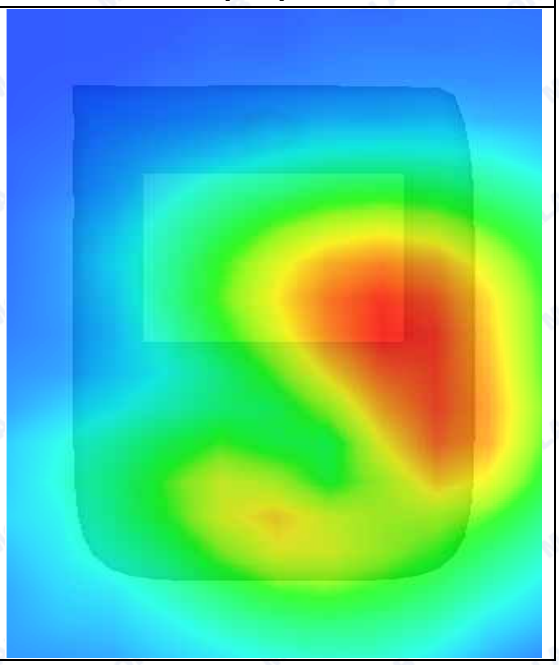
SURFACE SAR	VOLUME SAR
	

Maximum location: X=17.00, Y=1.00
SAR Peak: 1.30 W/kg

SAR 10g (W/Kg)	0.447446
SAR 1g (W/Kg)	0.812770

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=8mm, dy=8mm, dz=5mm

Date of measurement: 2014.9.19

Measurement duration: 9 minutes 32 seconds

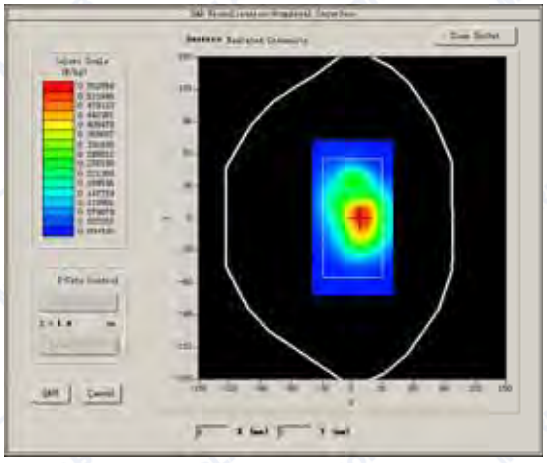
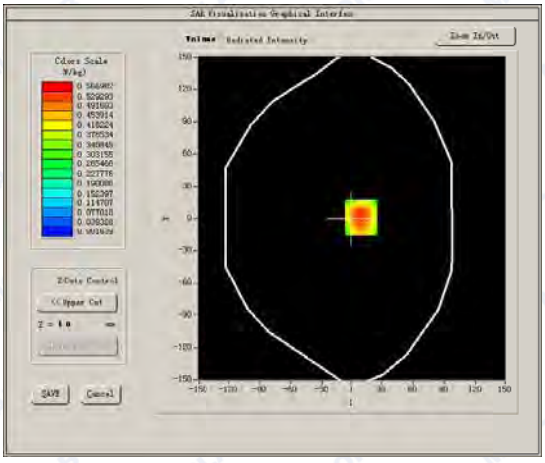
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

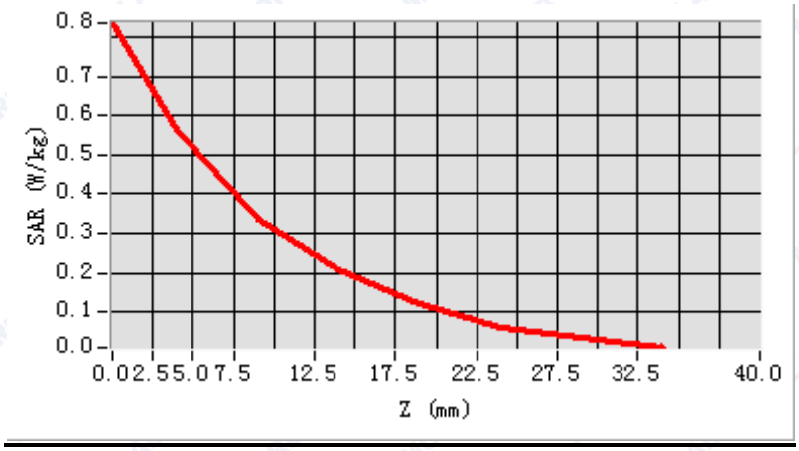
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.206724
Conductivity (S/m)	1.532867
Power drift (%)	-3.690000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

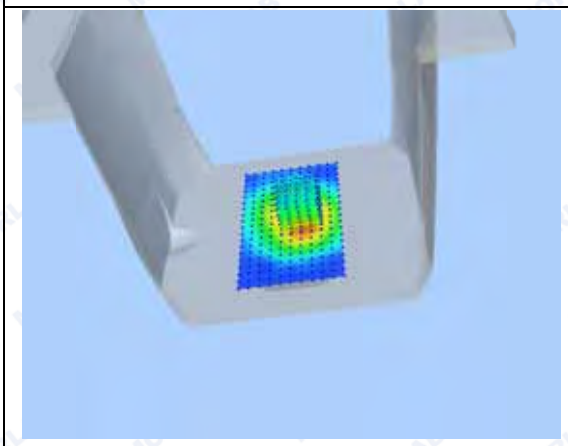
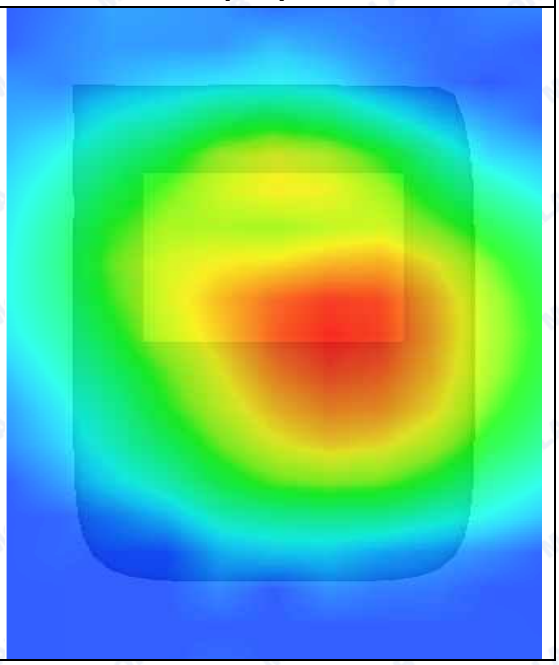
SURFACE SAR	VOLUME SAR
	

Maximum location: X=9.00, Y=1.00
SAR Peak: 0.92 W/kg

SAR 10g (W/Kg)	0.333950
SAR 1g (W/Kg)	0.585206

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=8mm, dy=8mm, dz=5mm

Date of measurement: 2014.9.19

Measurement duration: 10 minutes 5 seconds

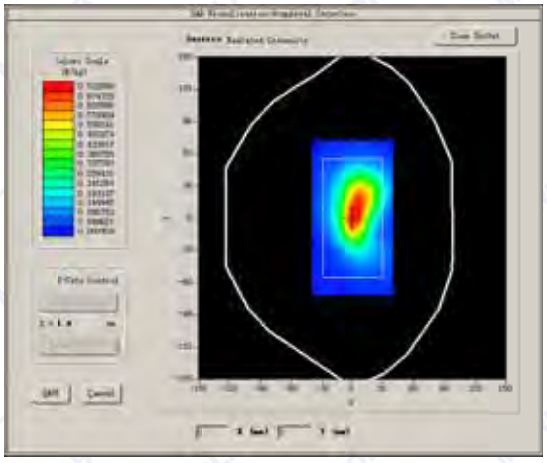
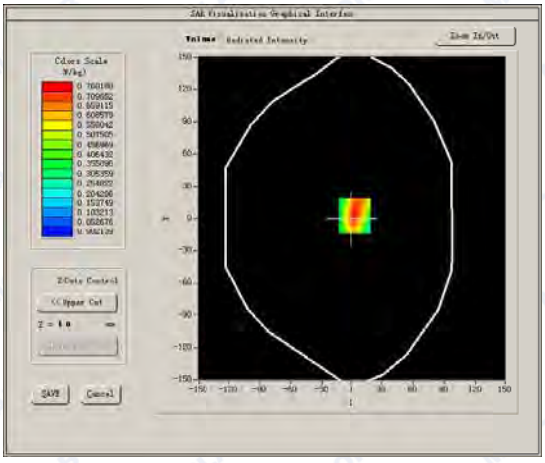
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

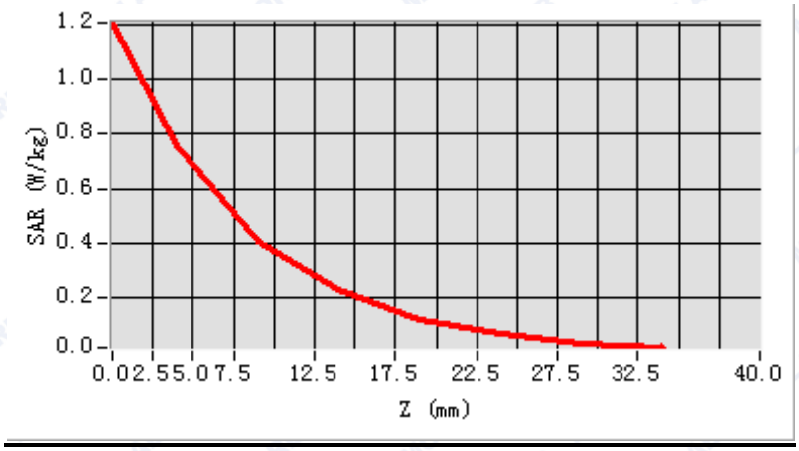
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.206724
Conductivity (S/m)	1.532867
Power drift (%)	-0.240000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

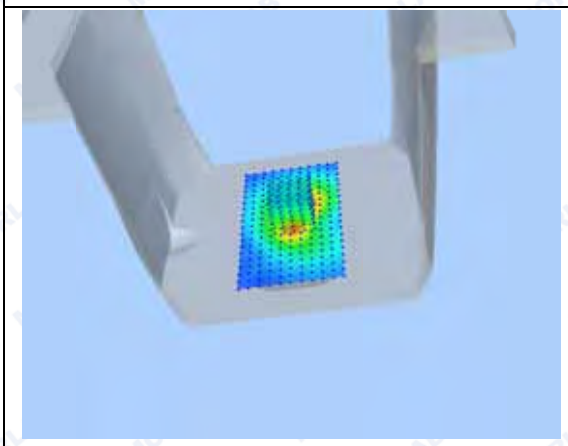
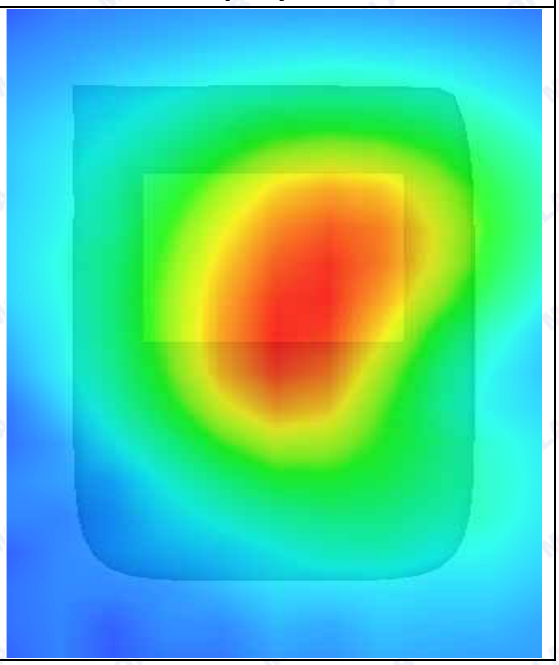
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=3.00
SAR Peak: 1.31 W/kg

SAR 10g (W/Kg)	0.415805
SAR 1g (W/Kg)	0.782554

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=8mm, dy=8mm, dz=5mm

Date of measurement: 2014.9.19

Measurement duration: 9 minutes 29 seconds

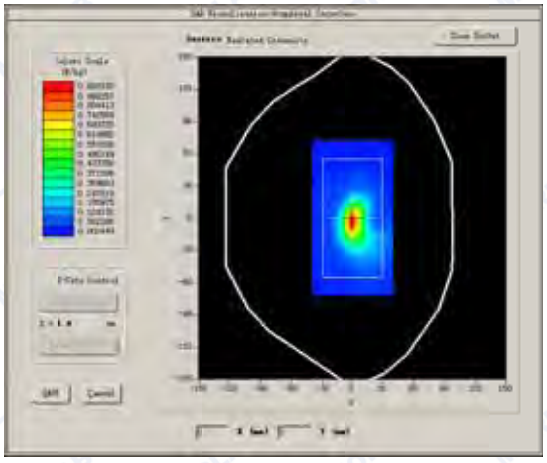
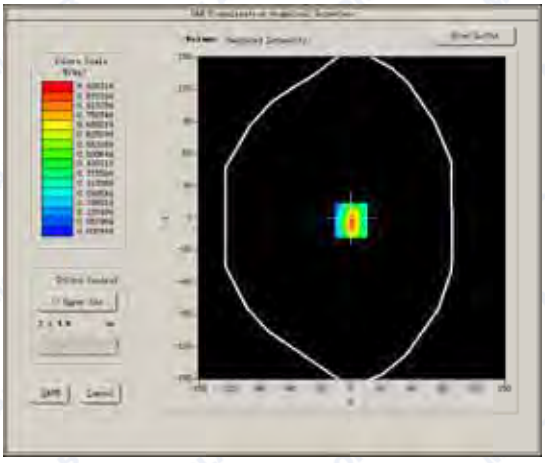
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

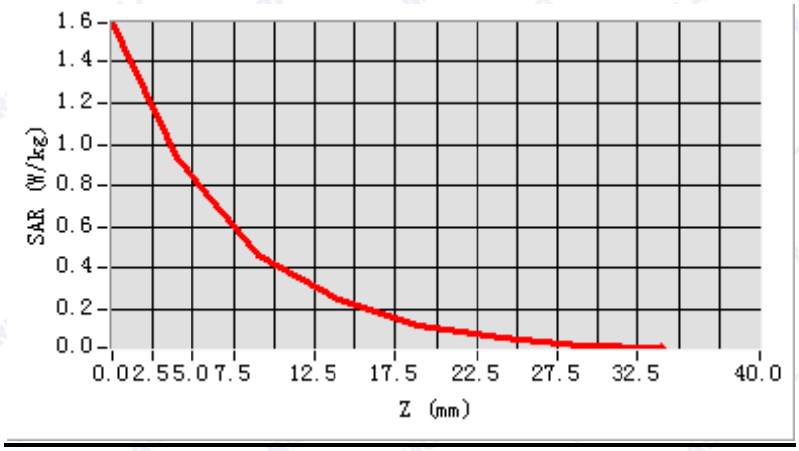
Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.206724
Conductivity (S/m)	1.532867
Power drift (%)	1.370000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

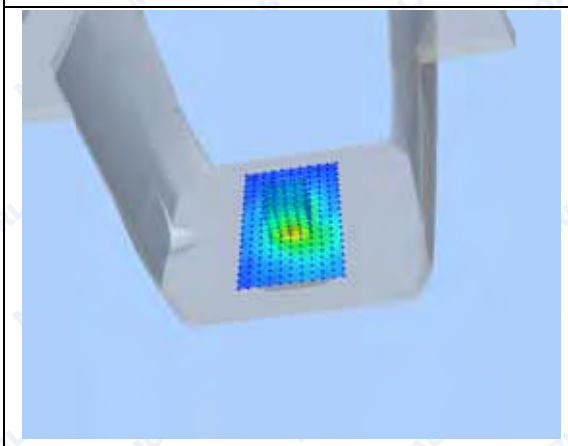
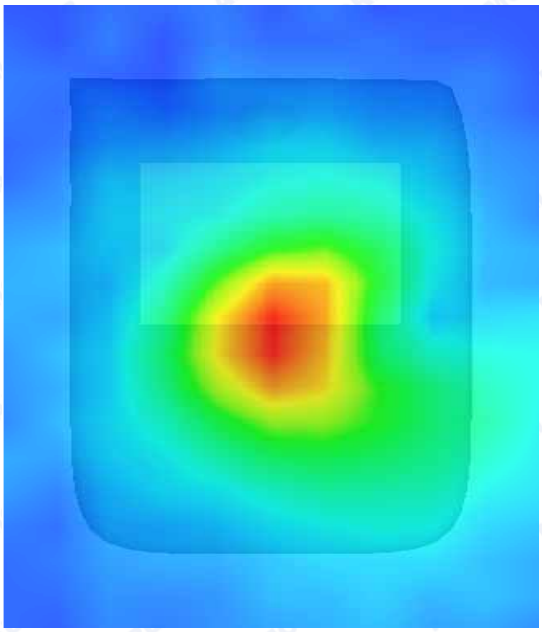
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=-2.00
SAR Peak: 1.73 W/kg

SAR 10g (W/Kg)	0.423395
SAR 1g (W/Kg)	0.942969

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=8mm, dy=8mm, dz=5mm

Date of measurement: 2014.9.19

Measurement duration: 9 minutes 35 seconds

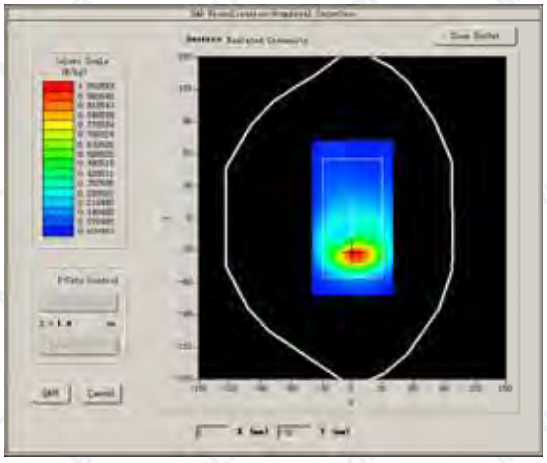
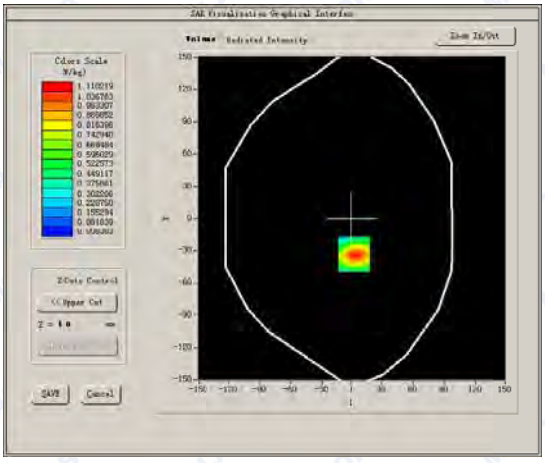
A. Experimental conditions.

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

B. SAR Measurement Results

Low Band SAR (Channel 9262):

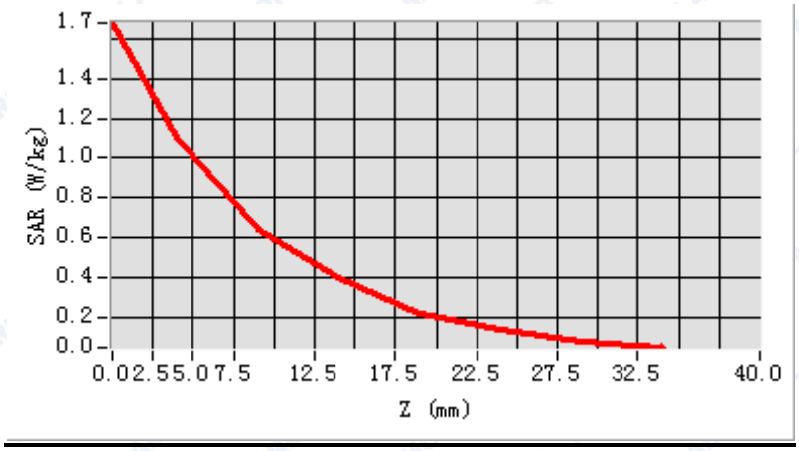
Frequency (MHz)	1852.400000
Relative permittivity (real part)	53.206724
Conductivity (S/m)	1.532867
Power drift (%)	0.250000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

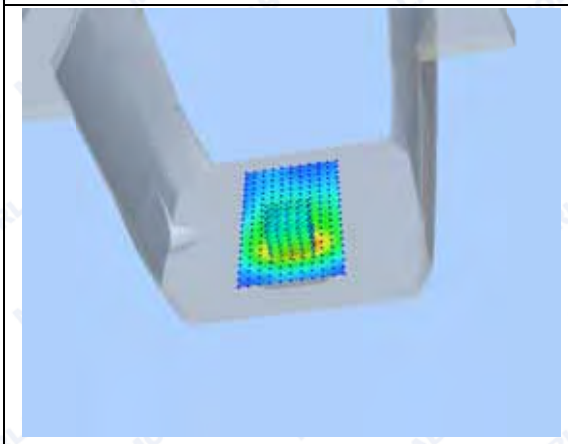
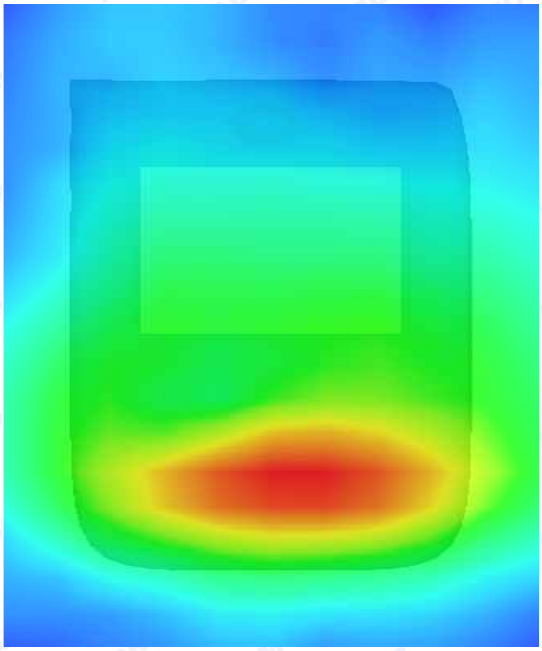
SURFACE SAR	VOLUME SAR
	

Maximum location: X=2.00, Y=-33.00
SAR Peak: 1.72 W/kg

SAR 10g (W/Kg)	0.607645
SAR 1g (W/Kg)	1.147628

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: 2014.9.18

Measurement duration: 13 minutes 31 seconds

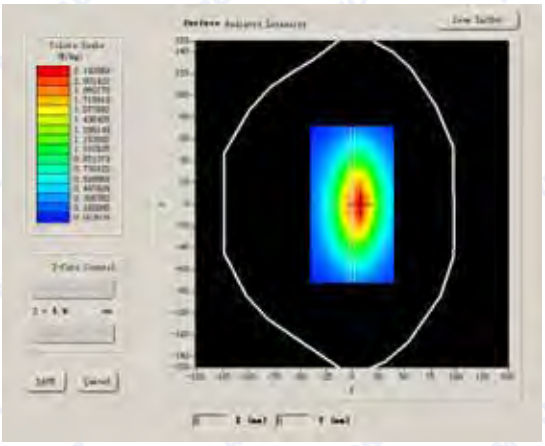
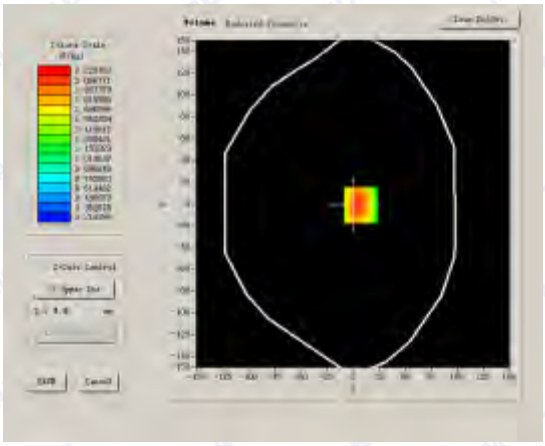
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	41.368462
Conductivity (S/m)	0.876285
Power drift (%)	1.060000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.73
Crest factor:	1:1

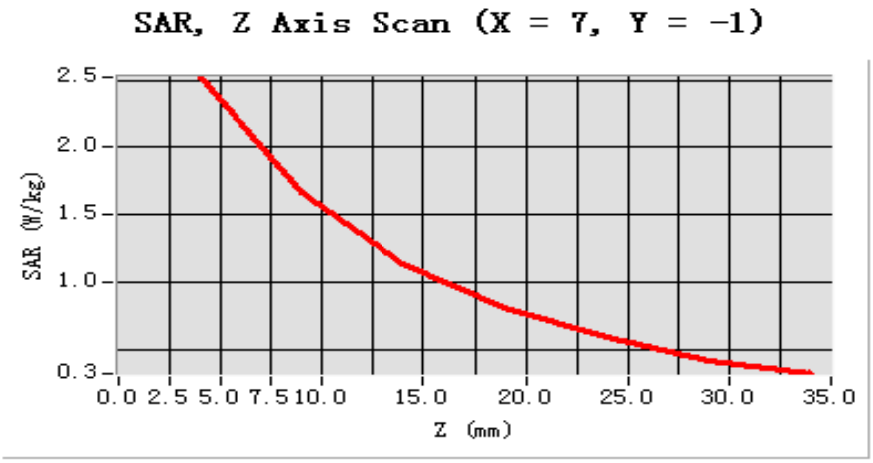
SURFACE SAR	VOLUME SAR
	

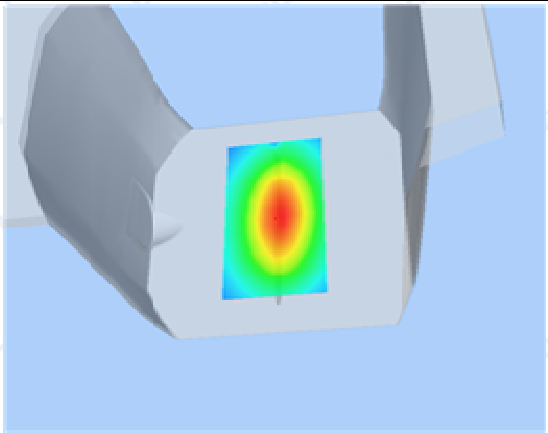
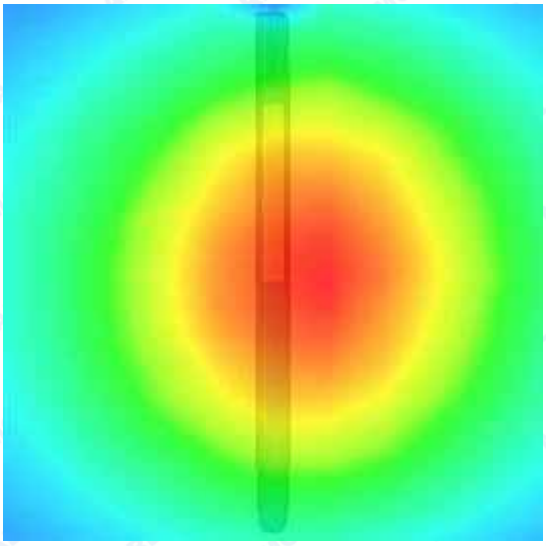
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.278645
SAR 1g (W/Kg)	2.391637

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: 2014.9.18

Measurement duration: 13 minutes 29 seconds

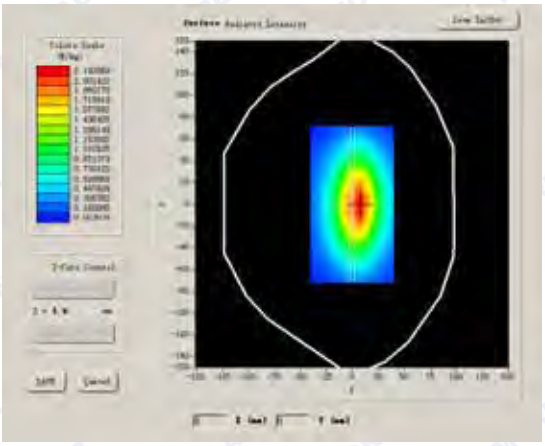
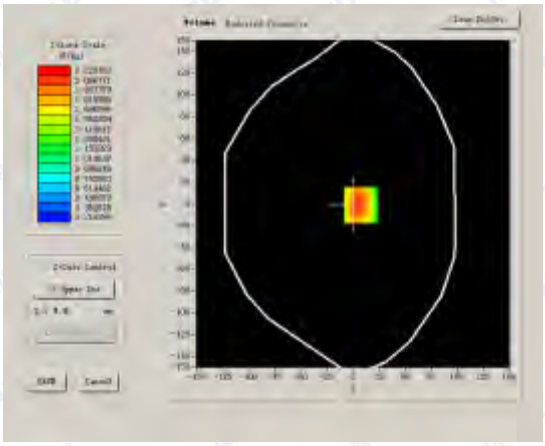
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	55.157528
Conductivity (S/m)	0.931058
Power drift (%)	0.420000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.99
Crest factor:	1:1

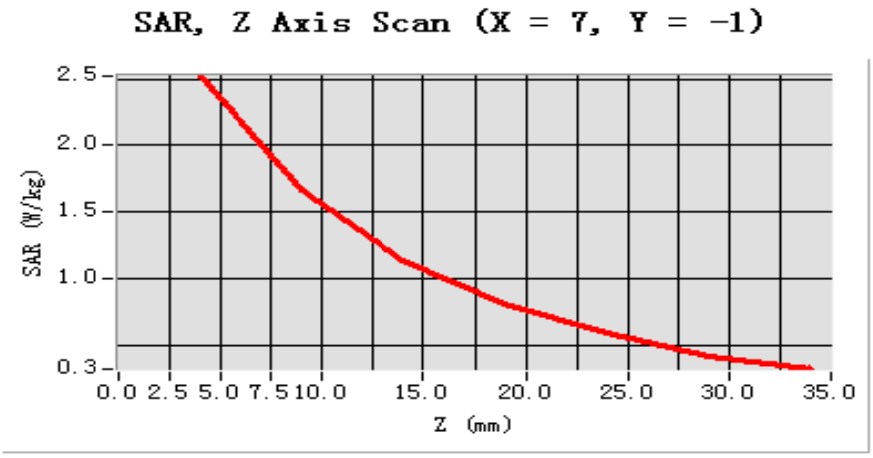
SURFACE SAR	VOLUME SAR
	

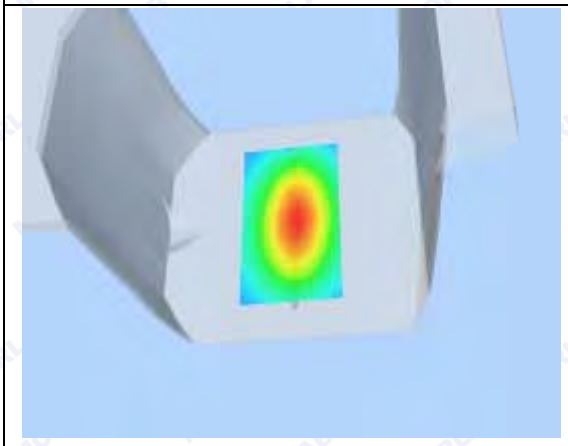
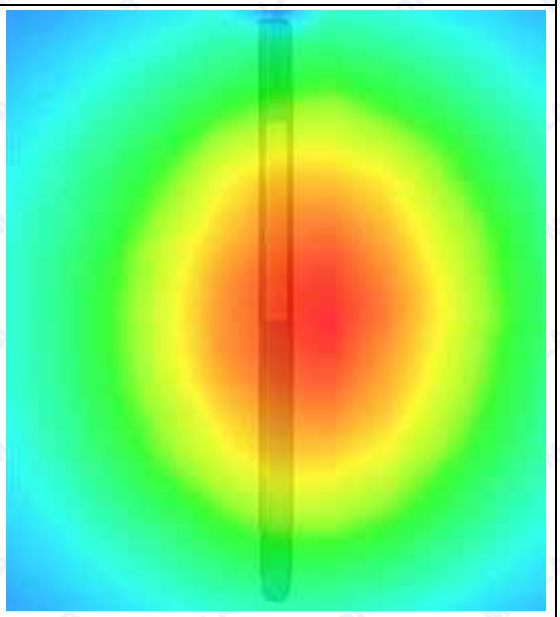
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.297682
SAR 1g (W/Kg)	2.445892

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: 2014.9.19

Measurement duration: 13 minutes 28 seconds

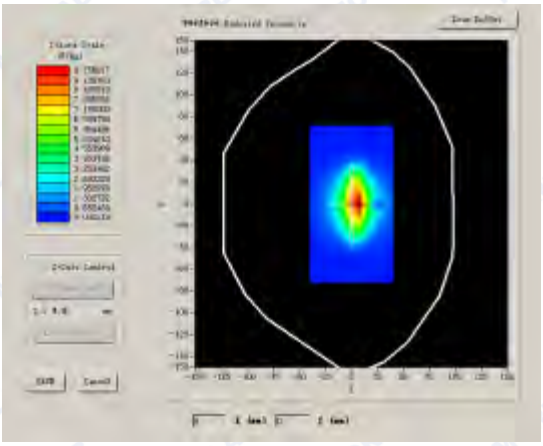
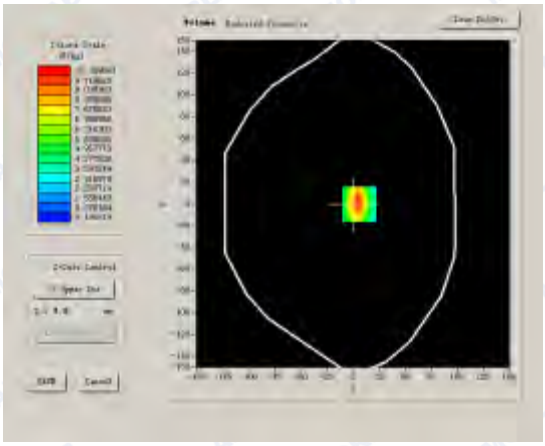
A. Experimental conditions.

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)	40.124068
Conductivity (S/m)	1.376284
Power drift (%)	2.130000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.00
Crest factor:	1:1

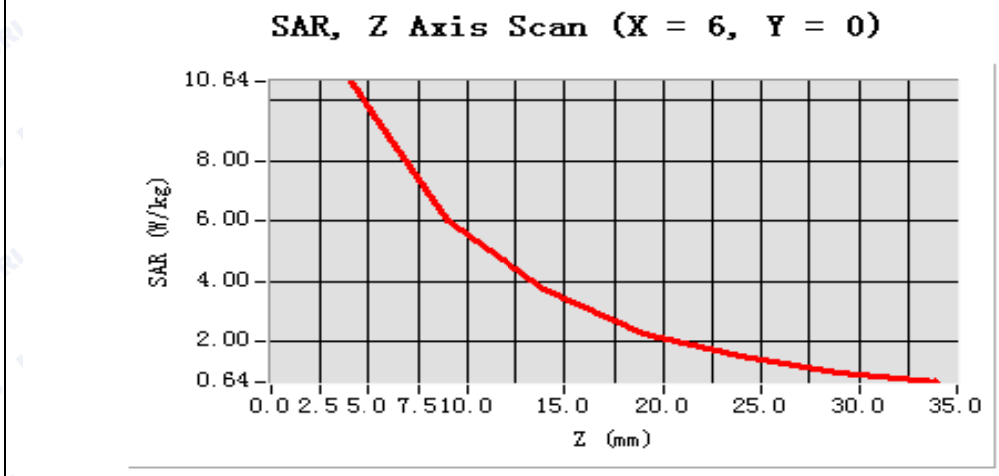
SURFACE SAR	VOLUME SAR
	

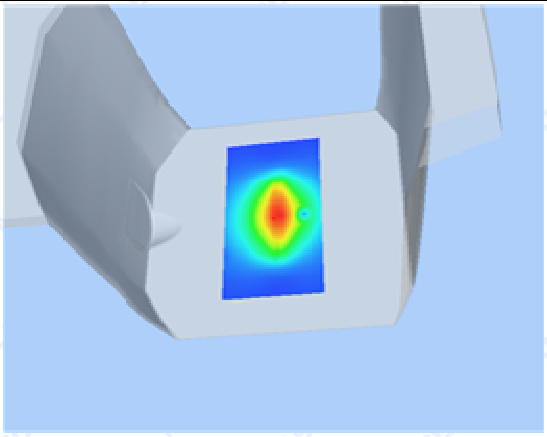
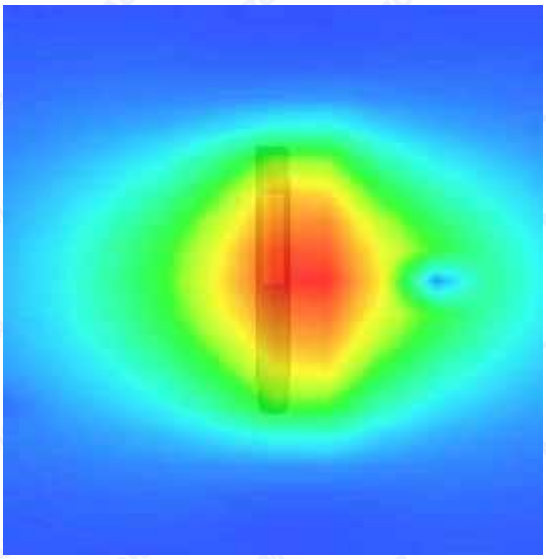
Maximum location: X=6.00, Y=0.00

SAR 10g (W/Kg)	6.354286
SAR 1g (W/Kg)	9.774862

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: 2014.9.19

Measurement duration: 13 minutes 26 seconds

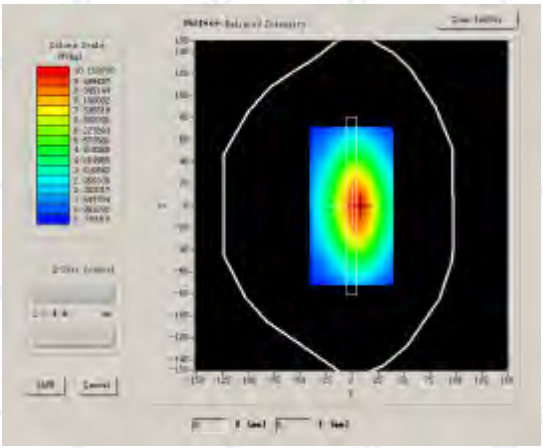
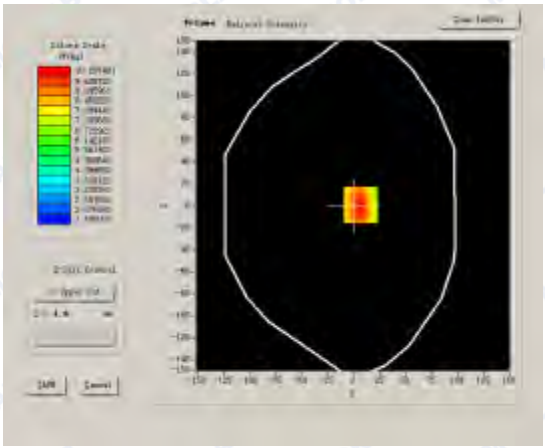
A. Experimental conditions.

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)	53.206724
Conductivity (S/m)	1.532867
Power drift (%)	-1.110000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	6.17
Crest factor:	1:1

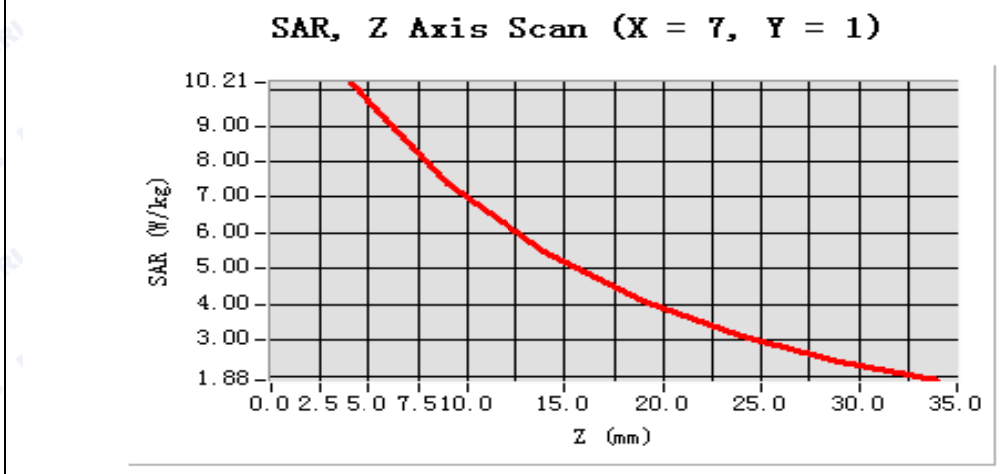
SURFACE SAR	VOLUME SAR
	

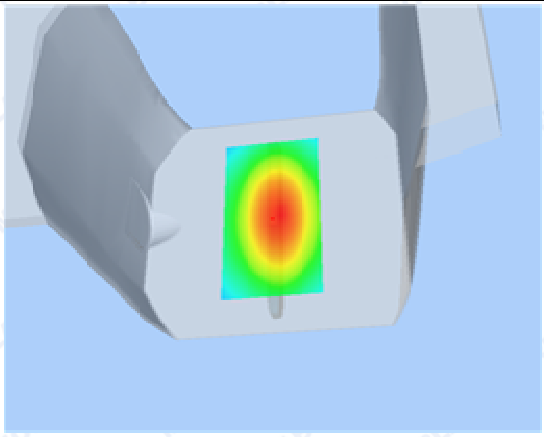
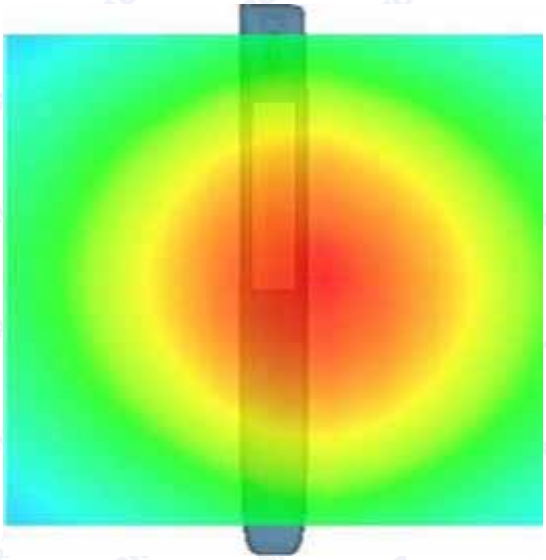
Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	6.762849
SAR 1g (W/Kg)	9.986674

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
	

ANNEX B GENERAL INFORMATION

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Responsible Test Lab Manager:	Mr. Su Feng
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. 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

3. Accreditation Certificate

Accredited Testing Laboratory: CNAS No. L3572
(Shenzhen Morlab Communications Technology Co., Ltd.)

4. 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)	2014-5-07	1year
8	Power Sensor	Agilent (N8482A, SN:MY41091706)	2014-5-07	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: 2014-9-18 to 2014-9-19)	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

***** END OF REPORT *****