SAR TEST REPORT

Issued to

TCT Mobile Limited

For

HSPA USB Modem

Model Name	:	One Touch X300Y
Trade Name	:	Alcatel
Brand Name	:	Alcatel
FCC ID	:	RAD263
Standard	:	FCC Oet65 Supplement C Jun.2001 47CFR 2.1093 ANSI C95.1-1999 IEEE 1528-2003
MAX SAR	:	Body: 0.783W/kg
Test date	:	2011-12-13
Issue date	:	2011-12-21

Shenzhen MORLAB Communication Technology Co., Ltd.

Tested by Zhu Zhan	*Approved by* Zeng Dexin	*Review by* Samuel. Peng
Zhu Zhan	Zeng Dexin	Samuel. Peng
Date 2011.12.21	*Date* 2011.12.21	*Date* 2011.12.21

DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	Dec. 21, 2011	First edition

1. Testing Laboratory

1.1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	3/F, Electronic Testing Building, Shahe Road, Nanshan District, Shenzhen, 518055 P. R. China
Responsible Test Lab Manager:	Mr. Shu Luan
Telephone:	+86 755 86130268
Facsimile:	+86 755 86130218

1.2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	3/F, Electronic Testing Building, Shahe Road, Nanshan District, Shenzhen, 518055 P. R. China

1.3. Accreditation Certificate

Accredited Testing Laboratory:	No. CNAS L3572

1.4. 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	Rohde&Schwarz (CMU200, SN:105894)	2011-9-26	1year
3	Voltmeter	Keithley (2000, SN:1000572)	2011-9-24	1year
4	Synthetizer	Rohde&Schwarz (SML_03, SN:101868)	2011-9-24	1year
5	Amplifier	Nucl udes (ALB216, SN:10800)	2011-9-24	1year
6	Power Meter	Rohde&Schwarz (NRVD, SN:101066)	2011-9-24	1year
7	Probe	Satimo (SN:SN_3708_EP80)	2011-9-24	1year
8	Phantom	Satimo (SN:SN_36_08_SAM62)	2011-9-24	1year
9	Liquid	Satimo (Last Calibration: 2011-12-13)	N/A	N.A
10	Dipole 835MHz	Satimo (SN 36/08 DIPC 99)	2011-9-24	1year
11	Dipole 1900MHz	Satimo (SN 36/08 DIPF 102)	2011-9-24	1year

2. Technical Information

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

2.1. Identification of Applicant

Company Name:	TCT Mobile Limited
Address:	5F, E building, No. 232, LiangJing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203

2.2. Identification of Manufacturer

Company Name:	TCL COMMUNICATION TECHNOLOGY HOLDINGS LIMITED
Address:	70 Huifeng 4rd,ZhongKai Hi-tech Development District ,Huizhou, Guangdong 516006 P.R.China （TCL Mobile Communication Co., LTD. Huizhou）

2.3. Equipment Under Test (EUT)

Model Name:	One Touch X300Y
Trade Name:	Alcatel
Brand Name:	Alcatel
Hardware Version:	PIO
Software Version:	S1_B15001S_1110000_B10001S
Frequency Bands:	GSM 850MHz / PCS 1900MHz; WCDMA 850MHz/1900MHz;
Modulation Mode:	GPRS: GMSK; EDGE: 8PSK WCDMA:CDMA
WCDMA release:	Rel-6
Multislot Class:	GPRS: Multislot Class 12; EDGE: Multislot Class 12
Antenna type:	Fixed Internal Antenna
Development Stage:	Identical prototype

2.3.1. Photographs of the EUT

Please see for photographs of the EUT.

2.3.2. Identification of all used EUT

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

EUT Identity	Hardware Version	Software Version
1#	PIO	S1_B15001S_1110000_B10001S

2.4. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	**47 CFR§2.1O93**	Radiofrequency Radiation Exposure Evaluation: Portable Devices
2	**FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01)**	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields
3	**ANSI C95.1-1999**	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz
4	**IEEE 1528-2003**	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.

2.5. Device Category and SAR Limits

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

2.6. Test Environment/Conditions

Normal Temperature (NT):	20 ... 25 °C
Relative Humidity:	30 ... 75 %
Air Pressure:	980 ... 1020 hPa
Test frequency:	GSM 850MHz PCS 1900MHz WCDMA 850MHz WCDMA1900MHz
Operation mode:	Call established
Power Level:	GSM 850 MHz Maximum output power(level 5) PCS 1900 MHz Maximum output power(level 0) WCDMA Maximum output power(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 9262, 9400 and 9538 respectively in the case of WCDMA 19000, or to 4132, 4182 and 4233 respectively in the case of WCDMA 850. 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. 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 lower than the output power level of the handset by at least 35 dB.
For SAR testing, EUT is in GPRS/EDGE or WCDMA link mode. In GPRS/EDGE link mode, its crest factor is 2, because EUT is set in GPRS/EDGE multi-slot class 12 with 4 uplink slots. In WCDMA link mode, its crest factor is 1.

3. Specific Absorption Rate (SAR)

3.1. Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

3.2. SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density. ρ). The equation description is as below:

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

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

$$\mathrm{SAR} = C\frac{\delta T}{\delta t}$$

, where C is the specific head capacity, δ T is the temperature rise and δ t the exposure duration, or related to the electrical field in the tissue by

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

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

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

4. SAR Measurement Setup

4.1. The Measurement System

Comosar is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The Comosar system consists of the following items:

- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

The following figure shows the system.

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

4.2. Probe

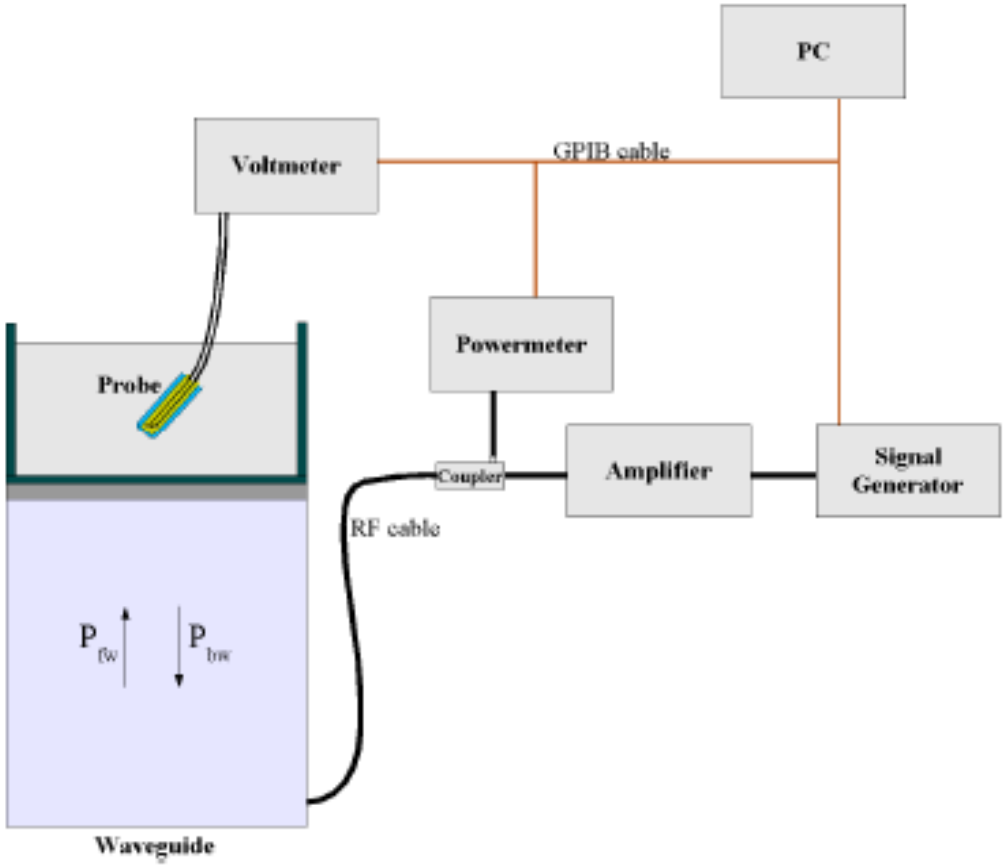
For the measurements the Specific Dosimetric E-Field Probe SN 37/08 EP80 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Tip Diameter : 6.5 mm
- Distance between probe tip and sensor center: 2.5mm
- Distance between sensor center and the inner phantom surface: 4 mm
  (repeatability better than +/- 1mm)

- Probe linearity: ＜0.25 dB
- Axial Isotropy: ＜0.25 dB
- Spherical Isotropy: ＜0.25 dB
- Calibration range: 835to 2500MHz for head & body simulating liquid.

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

Probe calibration is realized, in compliance with CENELEC EN 62209 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 622091 annexe technique using reference guide at the five frequencies.



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

Where :
Pfw = Forward Power
Pbw = Backward Power
a and b = Waveguide dimensions
ı = Skin depth
Keithley configuration:

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

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

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

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

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

where DCP is the diode compression point in mV.

4.3. Phantom

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

4.4. Device Holder

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

Device holder

System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

5. Tissue Simulating Liquids

Simulating liquids used for testing at frequencies of 850MHz and 1900MHz, are made mainly of sugar, salt and water solutions may be left in the phantoms. Approximately 20litres are needed for an upright head compared to about 25 litres for a horizontal bath phantom. The liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is (head SAR)or from the flat phantom to the liquid top surface (body SAR) is 15cm.

Following are the recipes for one liter of body tissue simulating liquid for frequency band 835 MHz and 1900 MHz.

Ingredients (% by weight)	Frequency Band 835MHz	Frequency Band 1900MHz
Tissue Type	Body	Body
Water	52.4	40.4
Salt(NaCl)	1.4	0.5
Sugar	45.0	58.0
HEC	1.0	1.0
Bactericide	0.1	0.1
Triton	0.0	0.0
DGBE	0.0	0.0
Acticide SPX	0.0	0.0
Dielectric Constant	56.1	54.0
Conductivity (S/m)	0.95	1.45

Recipes for Tissue Simulating Liquid

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

For body-worn measurements, the device was tested against flat phantom representing the user body. Under measurement phone was put on in the phone holder.

Table 1: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 23.0~23.8°C, humidity: 54~60%.			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHz	55.2	0.97
Validation value (Dec.13)	835 MHz	55.709999	1.009033
Target value	1900 MHz	53.3	1.52
Validation value (Dec.13)	1900 MHz	52.548876	1.573978

6. Uncertainty Assessment

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

6.1. UNCERTAINTY EVALUATION FOR HANDSET 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	4.76	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	0.7	0.7	1.01	1.01	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	0.7	0.7	1.62	1.62	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	∞
Reponse Time	E.2.7	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
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.4.1.1	5.00	N	1	1	1	5.00	5.00	N-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	

6.2. UNCERTAINTY FOR SYSTEM PERFORMANCE CHECK

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	4.76	N	1	1	1	4.76	4.76	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	0.7	0.7	1.01	1.01	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	0.7	0.7	1.62	1.62	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	∞
Reponse Time	E.2.7	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.00	N	$\sqrt{3}$	1	1	0.58	0.58	∞

Input power and SAR drift measurement	8,6.6.2	4.04	R	$\sqrt{3}$	1	1	2.33	2.33	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Liquid conductivity - deviation from target value	E.3.2	4.57	R	$\sqrt{3}$	0.64	0.43	1.69	1.13	∞
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	$\sqrt{3}$	0.64	0.43	1.85	1.24	M
Liquid permittivity - deviation from target value	E.3.2	3.69	R	$\sqrt{3}$	0.6	0.49	1.28	1.04	∞
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	$\sqrt{3}$	0.6	0.49	3.46	2.83	M
Combined Standard Uncertainty			RSS				8.83	8.37	
Expanded Uncertainty (95% Confidence interval)			K=2				17.66	16.73	

7. SAR Measurement Evaluation

7.1. System Setup

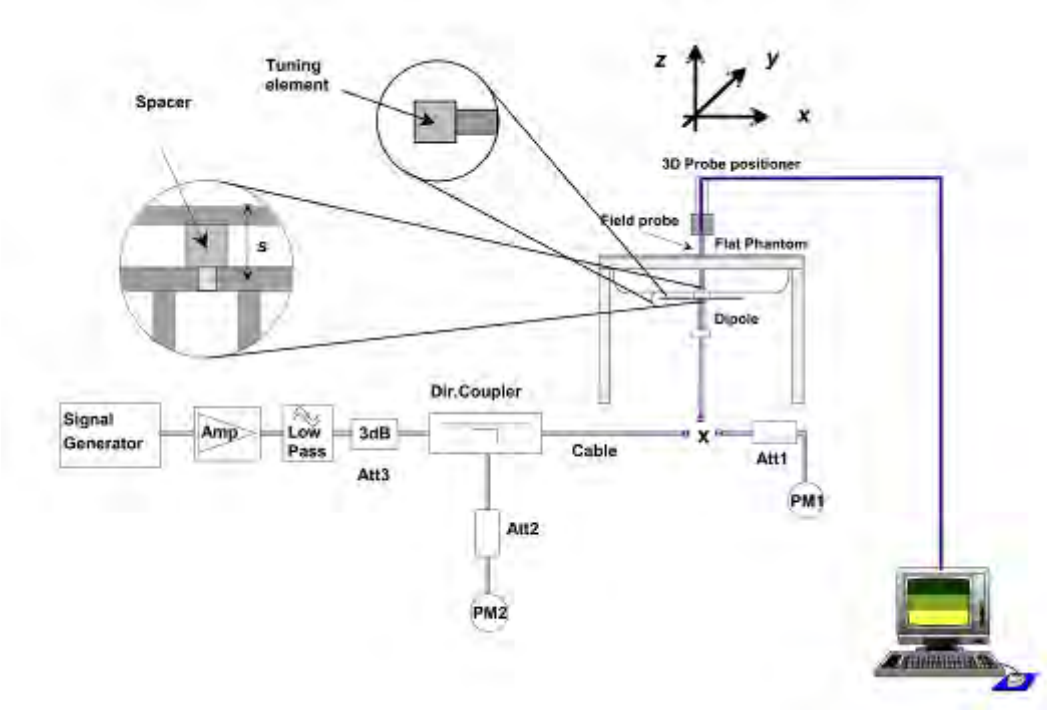
In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave which comes from a signal generator at frequency 835 MHz and 1900 MHz. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin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

Equipments :

name	Type and specification
Signal generator	E4433B
Directional coupler	450MHz-3GHz
Amplifier	3W 502(10-2500MHz)
Reference dipole	835MHz:SN 36/08 DIPC 99 1900MHz:SN 36/08 DIPF 102

7.2. Validation Results

System Verification Setup Block Diagram



Comparing to the original SAR value provided by SPEAG, the validation data should be within its specification of 10 %.

Frequency	835MHz	1900MHz
Target value（1g）	9.2 W/Kg	39.7 W/Kg
250 mW input power	2.386 W/Kg	9.340 W/Kg
Test value（1g）	9.544 W/Kg	37.360 W/Kg

Note: System checks the specific test data please see page 65-68.

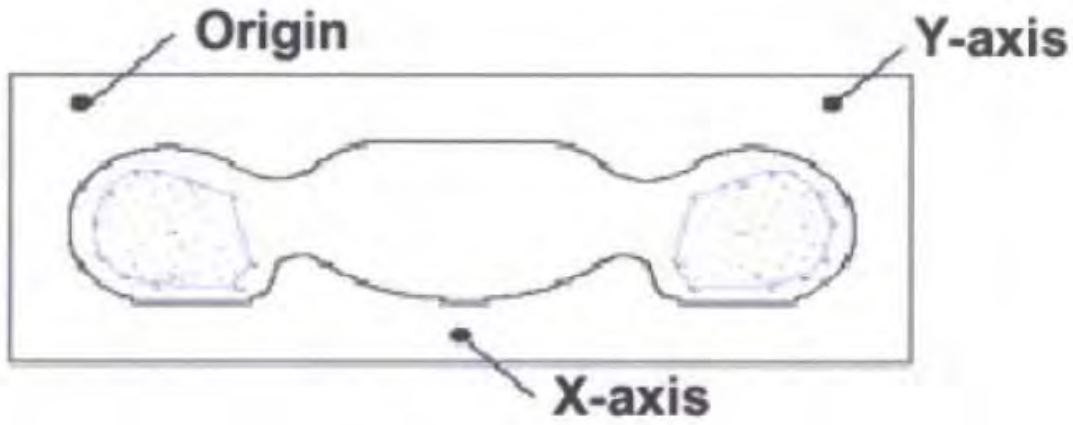
8. Operational Conditions During Test

8.1. 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.

The depth of the body tissue was 15.1cm. The distance between the back of the device and the bottom of the flat phantom is 1.5cm(taking into account of the IEEE 1528 and the place of the antenna)

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.



SAR Measurement Points in Area Scan

8.2. Measurement procedure

The following steps are used for each test position

- 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
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to16 mm and a constant distance to the inner surface of the phantom. Since the sensors can not directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

8.3. Description of interpolation/extrapolation scheme

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

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

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

9. 3G MEASUREMENT PROCEDURES

9.1. Procedures Used To Establish Test Signal

The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluating SAR. SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement software calculates a reference point at the start and end of the test to check for power drifts. If conducted power deviations of more then 5% occurred, the tests were repeated.

9.2. SAR Measurement Conditions for WCDMA

These procedures were followed according to FCC KDB 941225, October, 2007.

9.3. Output Power Verification

Maximum output power is verified on the High, Middle and Low channels according to the general descriptions in section 5.2 of 3GPP TS 34.121, using the appropriate RMC or AMR with TPC(transmit power control) set to all “1s”. Results for all applicable physical channel configurations (DPCCH, DPDCHn and spreading codes) should be tabulated in the test report. All configurations that are not supported by the EUT or cannot be measured due to technical or equipment limitations should be clearly identified.

9.4. Measurement Of Conducted Peak Output Power.

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4357	4400	4458	9662	9800	9938
	subtest	dBm			dBm		
5.2(WCDMA)	non	21.78	22.03	21.98	21.56	21.55	21.78
Power drift(%)		/		/	/	/	
HSDPA	1	21.34	21.67	21.67	21.35	21.27	21.42
	2	21.37	21.67	21.64	21.34	21.26	21.46
	3	20.82	21.15	21.17	20.82	20.73	20.86
	4	20.84	21.16	21.13	20.83	21.75	20.88
HSUPA	1	21.38	21.65	21.67	21.55	21.27	21.72
	2	19.37	19.57	19.84	19.70	19.66	19.76
	3	20.42	20.35	20.57	20.42	20.33	20.46
	4	19.44	19.46	19.73	19.53	19.35	19.48
	5	21.31	21.43	21.68	21.52	21.20	21.69

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4357	4400	4458	9662	9800	9938
Conducted Power		21.78	22.03	21.98	21.56	21.55	21.78
Power drift	(%)	/	-2.07	/	/	/	-1.96

GPRS Mode

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	32.85	30.04	27.94	27.09
	190	836.6	32.78	30.24	28.36	27.45
	251	848.8	32.94	30.26	27.86	27.35
PCS 1900	512	1850.2	30.33	27.37	25.51	24.43
	661	1880.0	29.88	26.33	24.93	23.97
	810	1909.8	29.09	26.04	24.16	23.14

GPRS Mode Time-based Average Power

Band	Channel	Frequency (MHz)	Output Power(dBm)				Power drift(%)
			Slot 1	Slot 2	Slot 3	Slot 4	Slot 4
GSM 850	128	824.2	23.85	24.02	23.68	24.08	/
	190	836.6	23.78	24.22	24.10	24.44	-2.59
	251	848.8	23.94	24.24	23.60	24.34	/
PCS 1900	512	1850.2	21.33	21.35	21.25	21.42	-3.01
	661	1880.0	20.88	20.31	20.67	20.96	/
	810	1909.8	20.09	20.02	19.90	20.13	/

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	-9.00dB	-6.02dB	-4.26dB	-3.01dB

EGPRS Mode

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	32.51	29.76	27.77	26.92
	190	836.6	32.82	29.53	28.61	27.81
	251	848.8	32.72	29.67	28.41	27.32
PCS 1900	512	1850.2	29.94	27.49	25.55	24.65
	661	1880.0	29.94	27.19	25.02	24.22
	810	1909.8	29.13	26.29	24.23	24.16

EGPRS Mode Time-based Average Power

Band	Channel	Frequency (MHz)	Output Power(dBm)				Power drift(%)
			Slot 1	Slot 2	Slot 3	Slot 4	Slot 4
GSM 850	128	824.2	23.51	23.74	23.51	23.91	/
	190	836.6	23.82	23.53	24.35	24.80	1.01
	251	848.8	23.72	23.65	24.15	24.31	/
PCS 1900	512	1850.2	20.94	21.47	21.29	21.64	-0.12
	661	1880.0	20.94	21.17	20.76	21.21	/
	810	1909.8	20.13	20.27	19.97	21.15	/

10.Test Results List

Summary of Measurement Results (GSM 850MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.						
Phantom Configurations		Device Test Positions	Antenna Positions	SAR(W/Kg)		
				Device Test channel,		
				Channel 128	Channel 190	Channel 251
Body (5mm Separation)	GPRS	Horizontal-Up	Internal	/	0.517	/
		Horizontal-Down	Internal	/	0.581	/
		Vertical-Front	Internal	/	0.362	/
		Vertical-Back	Internal	/	0.297	/
	EDGE	Horizontal-Down	Internal	/	/	0.544

Summary of Measurement Results (GSM 1900MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.						
Phantom Configurations		Device Test Positions	Antenna Positions	SAR(W/Kg)		
				Device Test channel,		
				Channel 512	Channel 661	Channel 810
Body (5mm Separation)	GPRS	Horizontal-Up	Internal	0.271	/	/
		Horizontal-Down	Internal	0.290	/	/
		Vertical-Front	Internal	0.073	/	/
		Vertical-Back	Internal	0.244	/	/
	EDGE	Horizontal-Down	Internal	0.277	/	/

Summary of Measurement Results (WCDMA 850MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg) 1g		
			Device Test channel		
			Channel 4132	Channel 4182	Channel 4233
Body (5mm Separation)	Horizontal-Up	Internal	/	0.457	
	Horizontal-Down	Internal	/	0.439	
	Vertical-Front	Internal	/	0.392	
	Vertical-Back	Internal	/	0.203	/

Summary of Measurement Results (WCDMA 1900MHz Band)

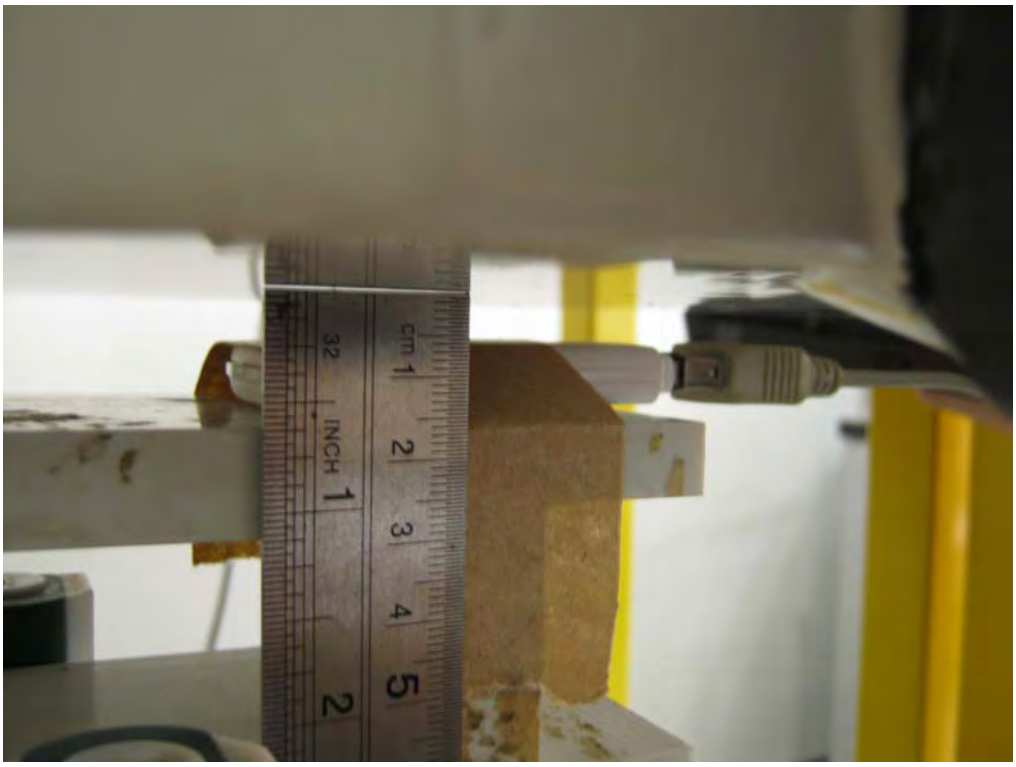
Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg) 1g		
			Device Test channel		
			Channel 9262	Channel 9400	Channel 9538
Body (5mm Separation)	Horizontal-Up	Internal	/	/	0.731
	Horizontal-Down	Internal	/	/	0.783
	Vertical-Front	Internal	/	/	0.252
	Vertical-Back	Internal	/	/	0.769

Note: 1. Refer 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.

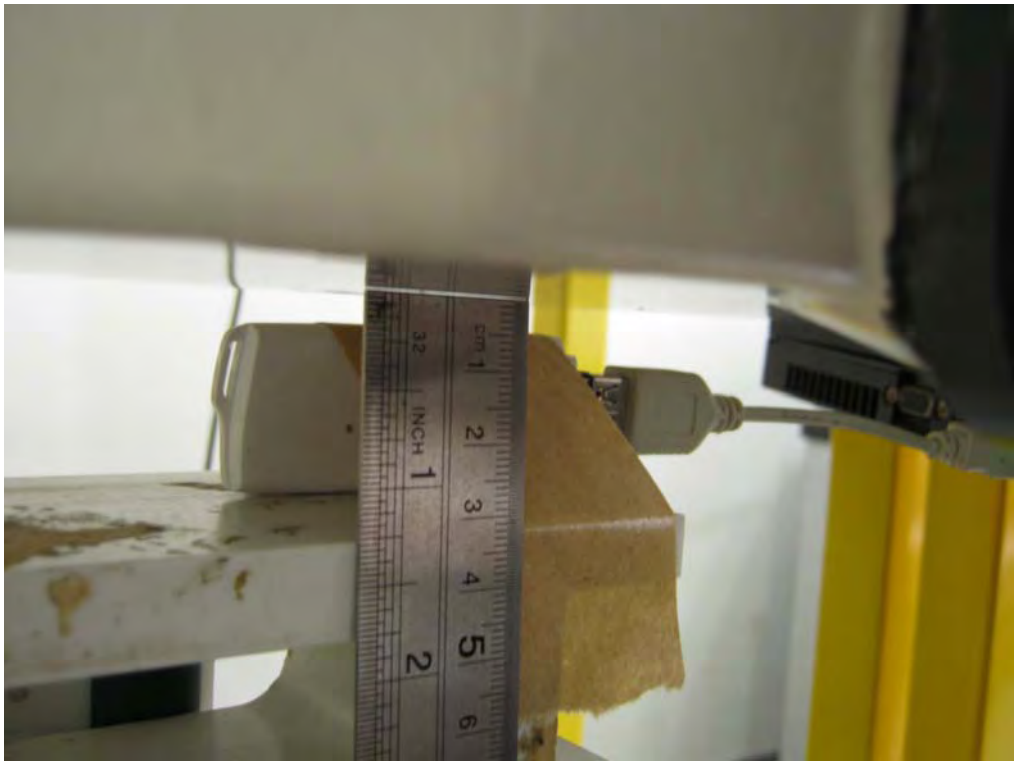
Annex A EUT Setup Photos

1 Horizontal-Up

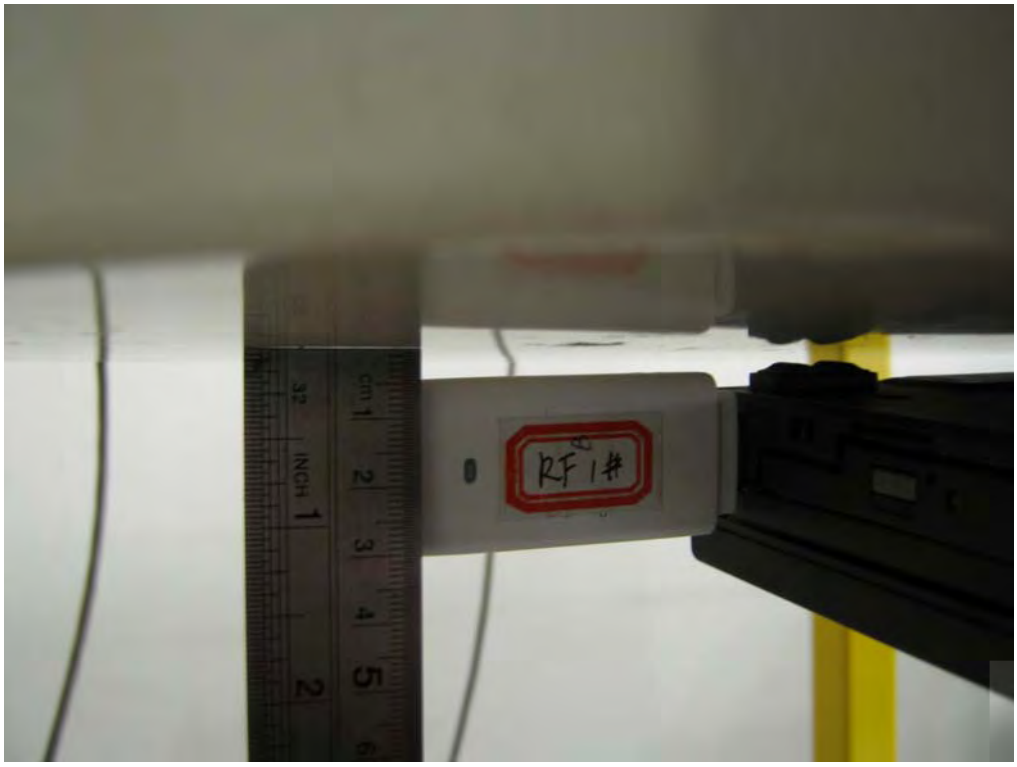
2 Horizontal-Down



3 Vertical-Front



4 Vertical-Back



Liquid Level Photo

Annex B Graph Test Results

BAND	PARAMETERS
GSM850	Measurement 1: Validation Plane with Body device position on Middle Channel in GPRS mode （**Horizontal-Up**） Measurement 2: Validation Plane with Body device position on Middle Channel in GPRS mode （**Horizontal-Down**） Measurement 3: Validation Plane with Body device position on Middle Channel in GPRS mode （**Vertical-Front**） Measurement 4: Validation Plane with Body device position on Middle Channel in GPRS mode （**Vertical-Back**） Measurement 5: Validation Plane with Body device position on High Channel in EDGE mode （**Horizontal-Down**）
GSM1900	Measurement 6: Validation Plane with Body device position on Low Channel in GPRS mode （**Horizontal-Up**） Measurement 7: Validation Plane with Body device position on Low Channel in GPRS mode （**Horizontal-Down**） Measurement 8: Validation Plane with Body device position on Low Channel in GPRS mode （**Vertical-Front**） Measurement 9: Validation Plane with Body device position on Low Channel in GPRS mode （**Vertical-Back**） Measurement 10: Validation Plane with Body device position on Low Channel in EDGE mode （**Horizontal-Down**）
WCDMA 850	Measurement 11: Validation Plane with Body device position on Middle Channel in CDMA mode （**Horizontal-Up**） Measurement 12: Validation Plane with Body device position on Middle Channel in CDMA mode （**Horizontal-Down**） Measurement 13: Validation Plane with Body device position on Middle Channel in CDMA mode （**Vertical-Front**）

	Measurement 14: Validation Plane with Body device position on Middle Channel in CDMA mode （**Vertical-Back**）
WCDMA 1900	Measurement 15: Validation Plane with Body device position on High Channel in CDMA mode （**Horizontal-Up**） Measurement 16: Validation Plane with Body device position on High Channel in CDMA mode （**Horizontal-Down**） Measurement 17: Validation Plane with Body device position on High Channel in CDMA mode （**Vertical-Front**） Measurement 18: Validation Plane with Body device position on High Channel in CDMA mode （**Vertical-Back**）

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: 13/12/2011
Measurement duration: 9 minutes 7 seconds

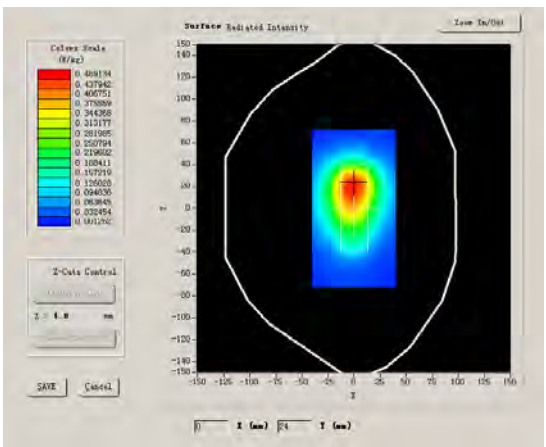
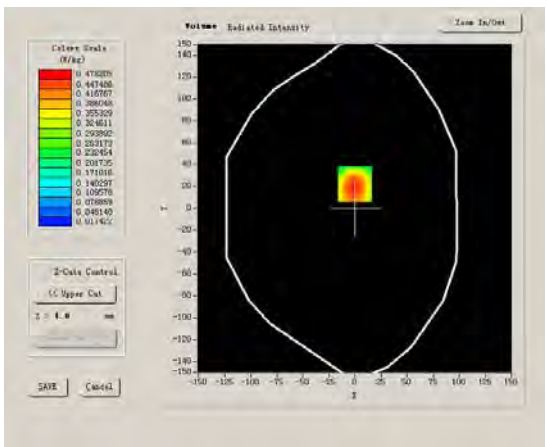
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	55.709999
Relative permittivity	21.709999
Conductivity (S/m)	1.009033
Power drift (%)	-0.280000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:2

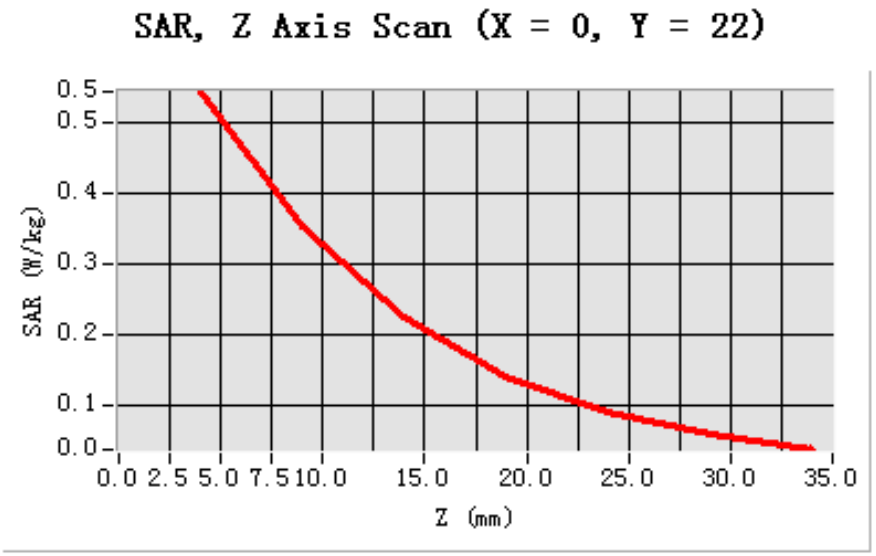
SURFACE SAR	VOLUME SAR
	

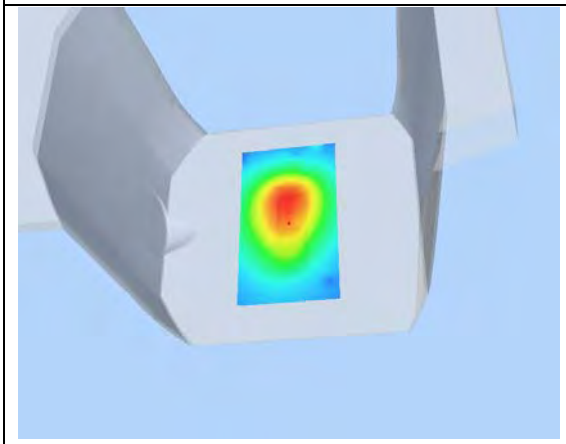
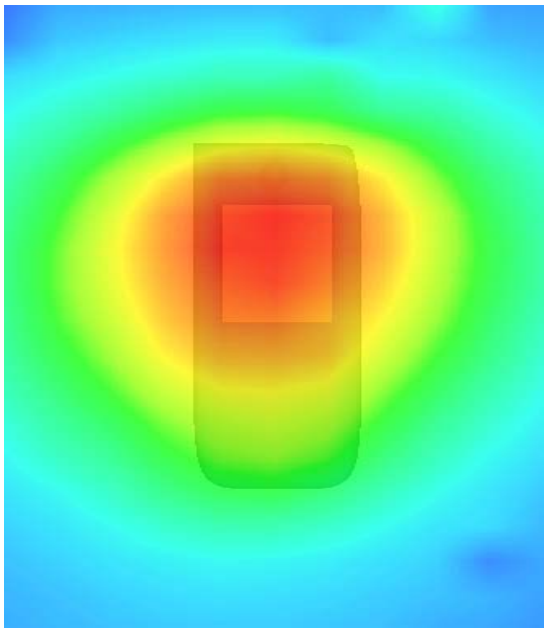
Maximum location: X=0.00, Y=22.00

SAR 10g (W/Kg)	0.322666
SAR 1g (W/Kg)	0.517093

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5430	0.3533	0.2239	0.1415	0.0917	0.0596



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 10 seconds

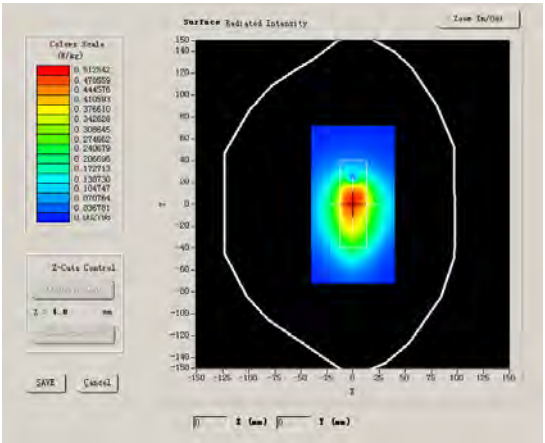
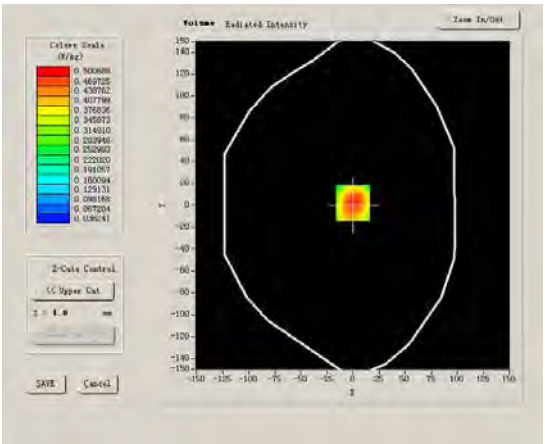
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	55.709999
Relative permittivity	21.709999
Conductivity (S/m)	1.009033
Power drift (%)	-2.590000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:2

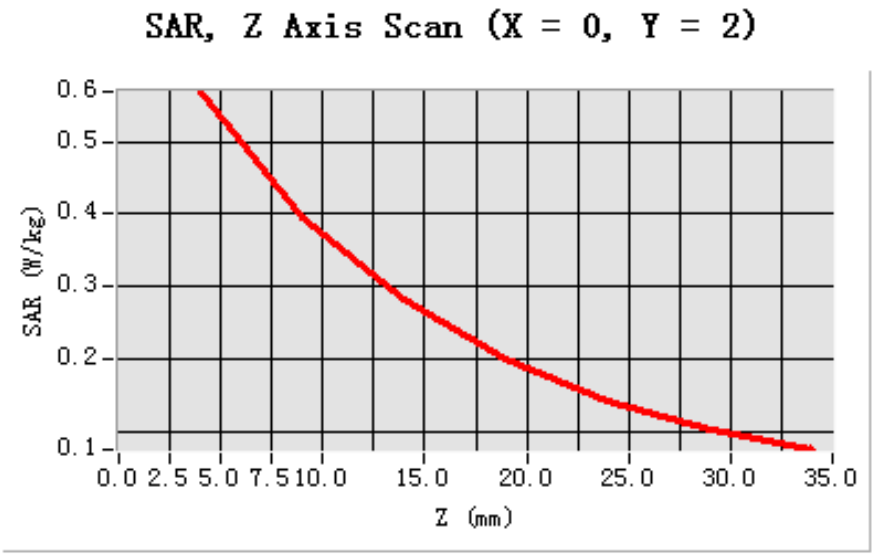
SURFACE SAR	VOLUME SAR
	

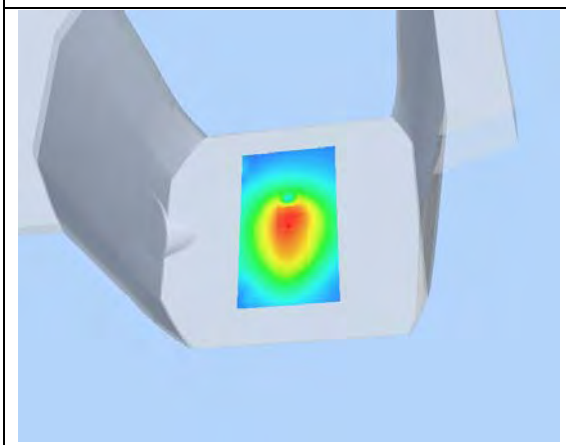
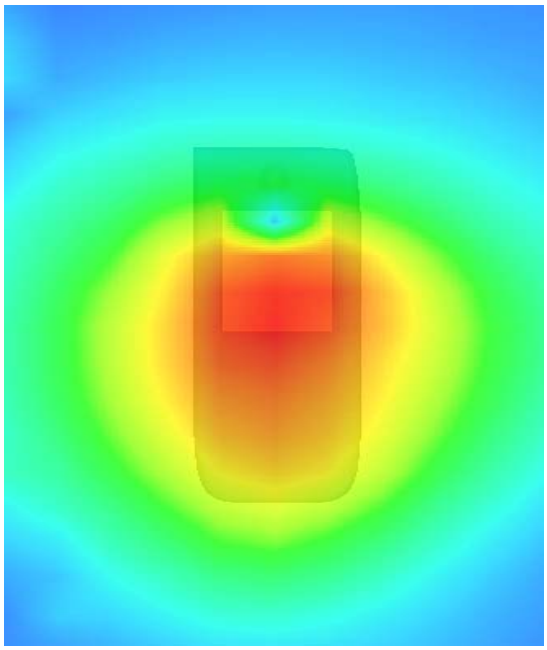
Maximum location: X=0.00, Y=2.00

SAR 10g (W/Kg)	0.356973
SAR 1g (W/Kg)	0.580866

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5685	0.3941	0.2835	0.2018	0.1430	0.1049



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 9 seconds

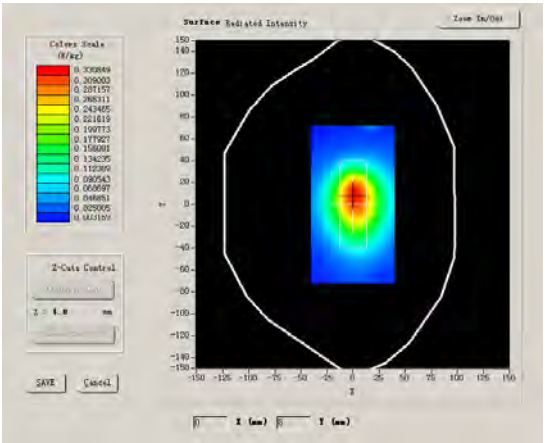
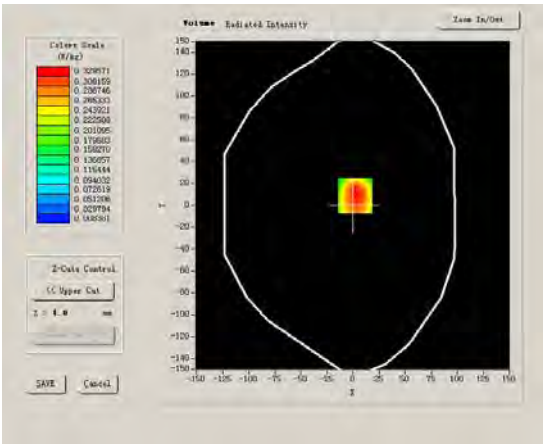
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	55.709999
Relative permittivity	21.709999
Conductivity (S/m)	1.009033
Power drift (%)	-0.690000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:2

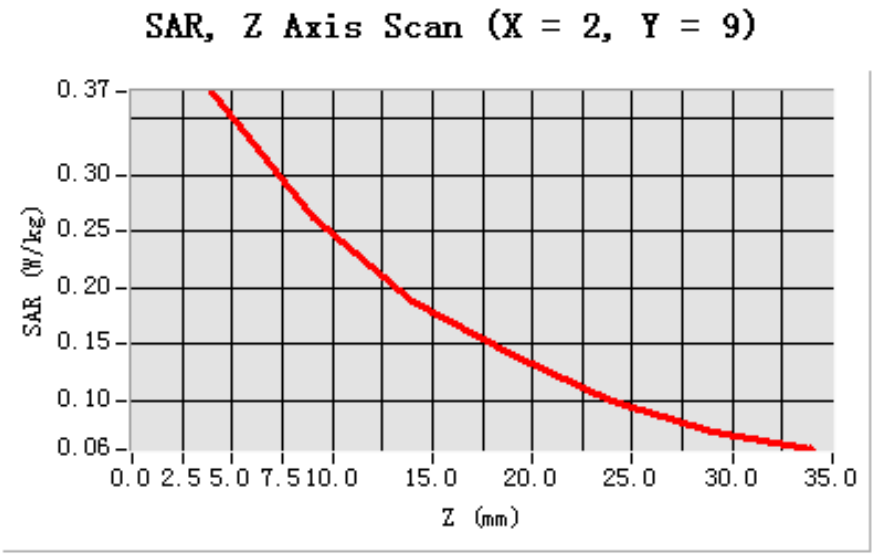
SURFACE SAR	VOLUME SAR
	

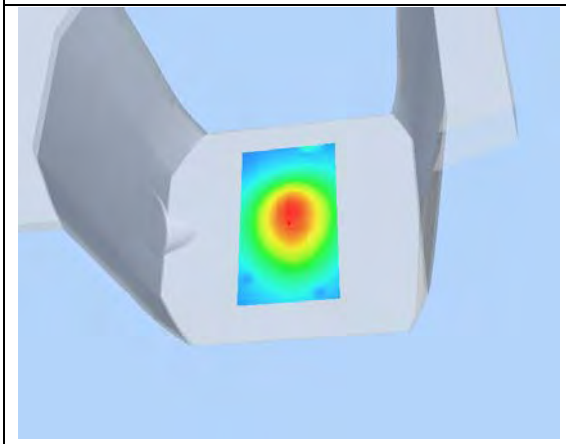
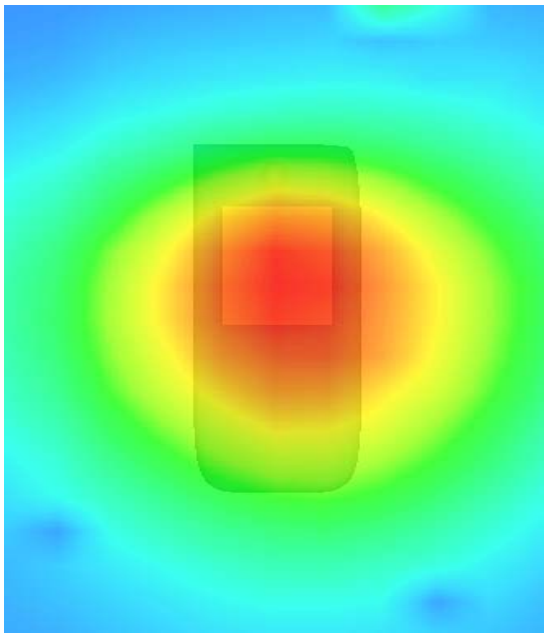
Maximum location: X=2.00, Y=9.00

SAR 10g (W/Kg)	0.240944
SAR 1g (W/Kg)	0.362302

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3742	0.2632	0.1879	0.1413	0.1001	0.0726



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 11 seconds

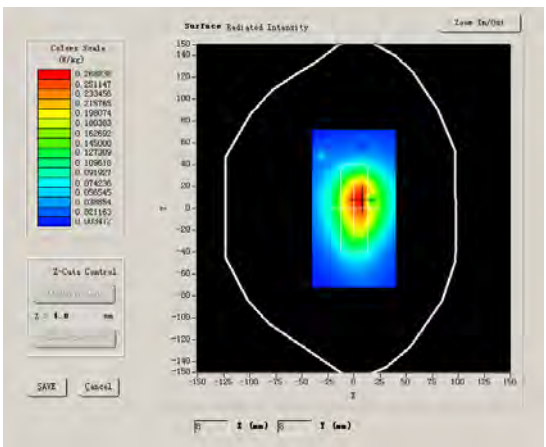
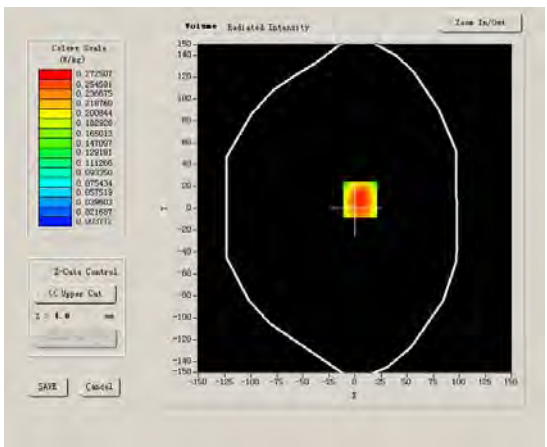
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	55.709999
Relative permittivity	21.709999
Conductivity (S/m)	1.009033
Power drift (%)	0.310000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:2

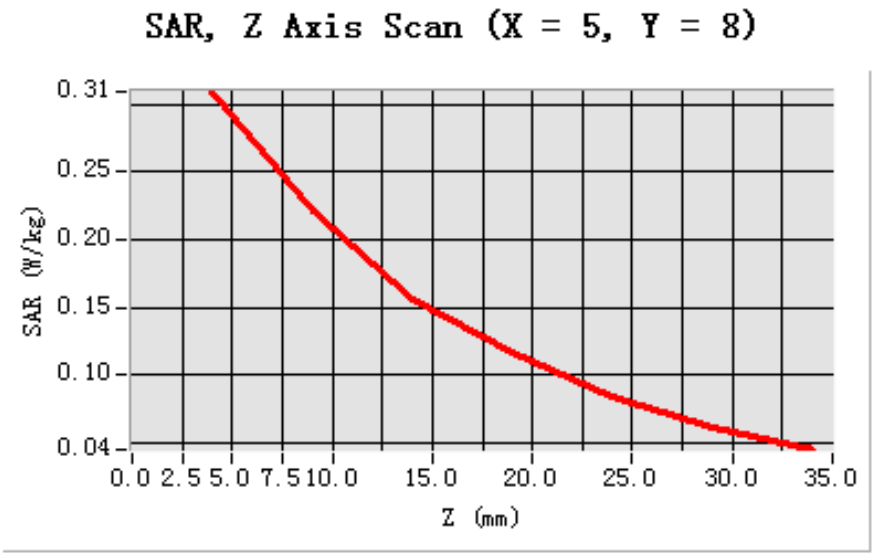
SURFACE SAR	VOLUME SAR
	

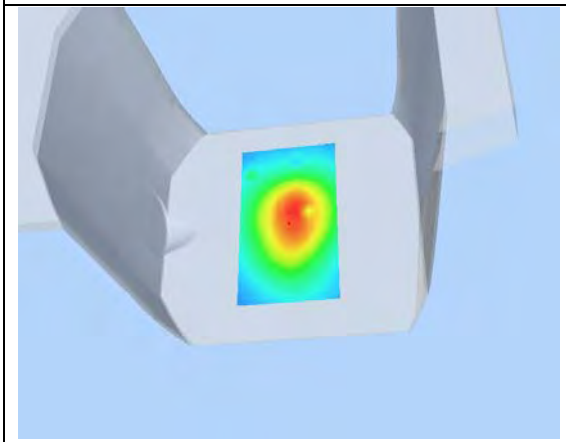
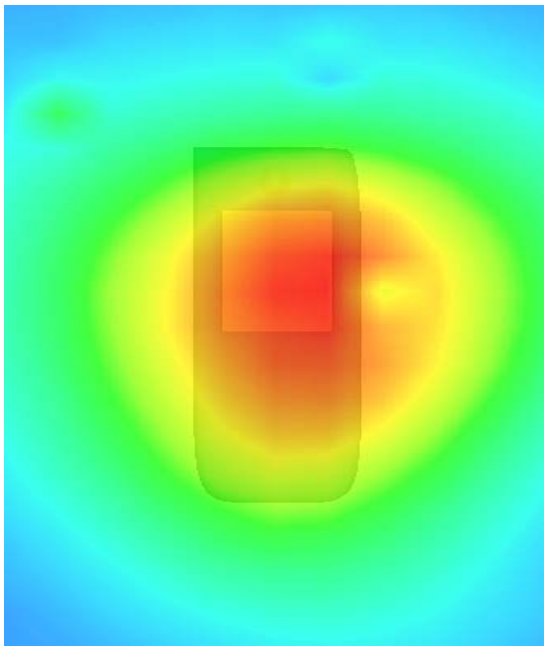
Maximum location: X=5.00, Y=8.00

SAR 10g (W/Kg)	0.200789
SAR 1g (W/Kg)	0.297130

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3094	0.2215	0.1562	0.1162	0.0833	0.0618



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 11 seconds

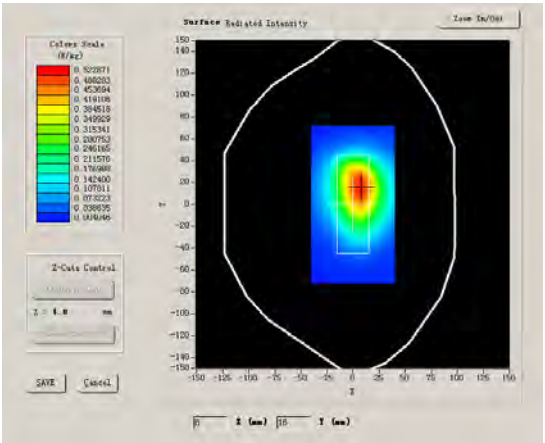
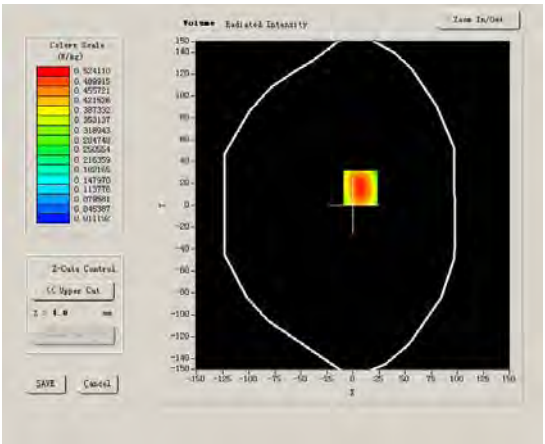
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	EDGE

B. SAR Measurement Results

High Band SAR (Channel 251):

Frequency (MHz)	848.799988
Relative permittivity (real part)	54.014999
Relative permittivity	21.332850
Conductivity (S/m)	1.005962
Power drift (%)	1.010000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:2

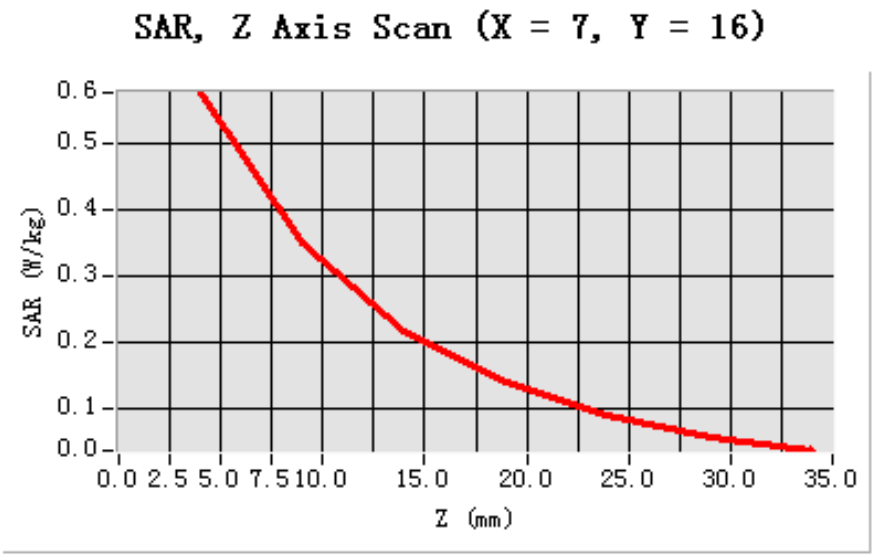
SURFACE SAR	VOLUME SAR
	

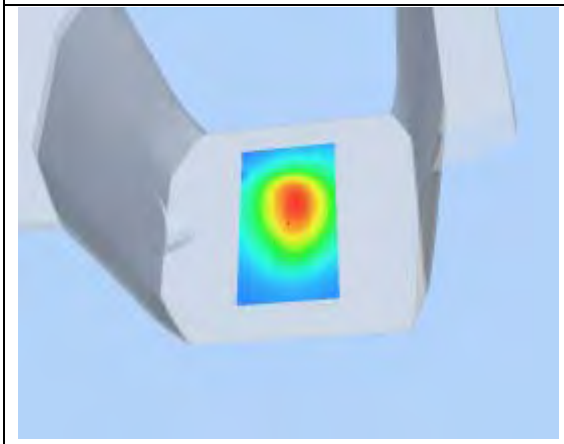
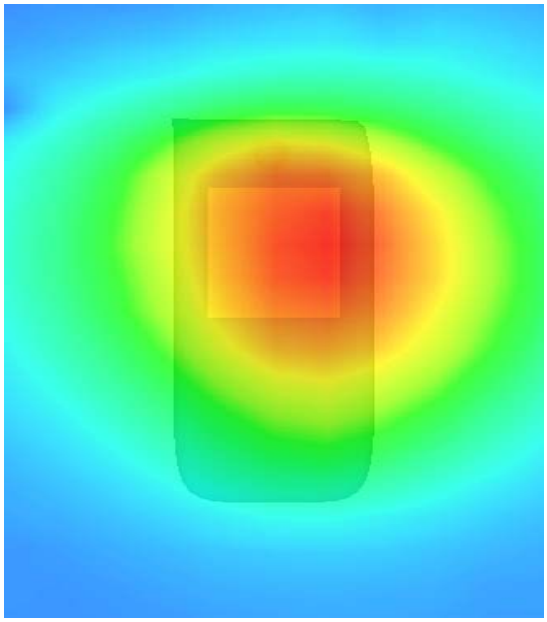
Maximum location: X=7.00, Y=16.00

SAR 10g (W/Kg)	0.329800
SAR 1g (W/Kg)	0.544210

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5754	0.3499	0.2188	0.1416	0.0900	0.0574



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 8 seconds

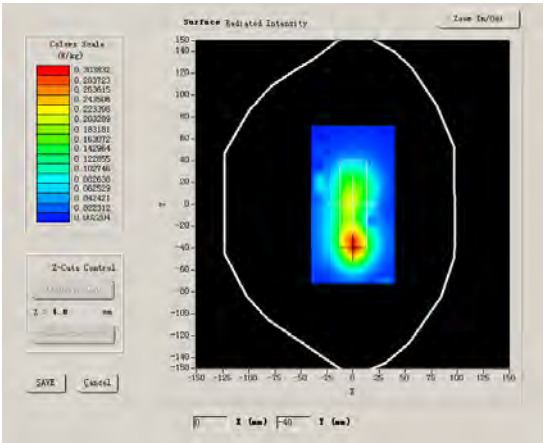
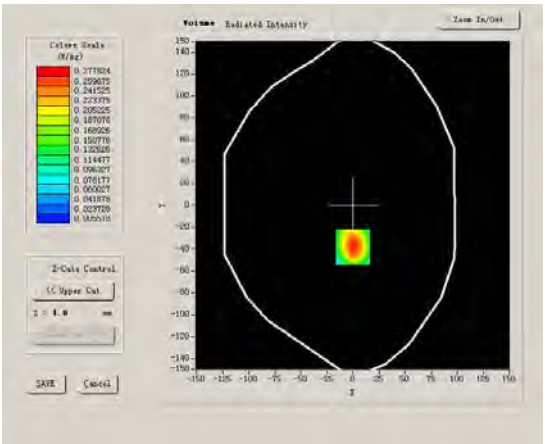
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	52.540001
Relative permittivity	14.070000
Conductivity (S/m)	1.469533
Power drift (%)	-1.290000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2

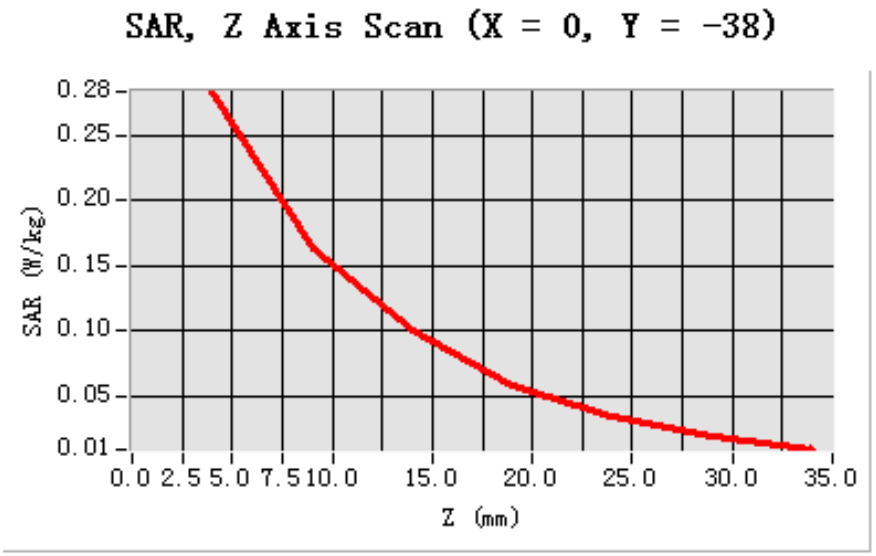
SURFACE SAR	VOLUME SAR
	

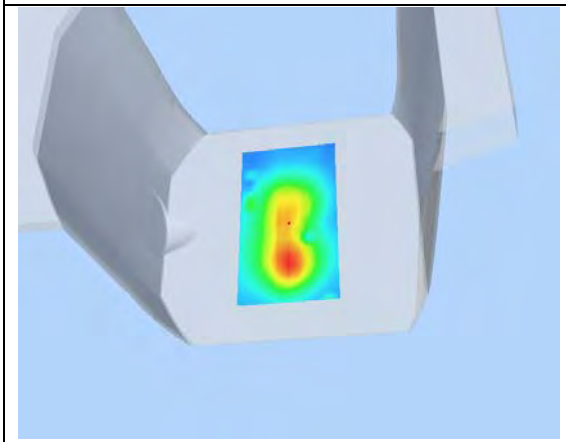
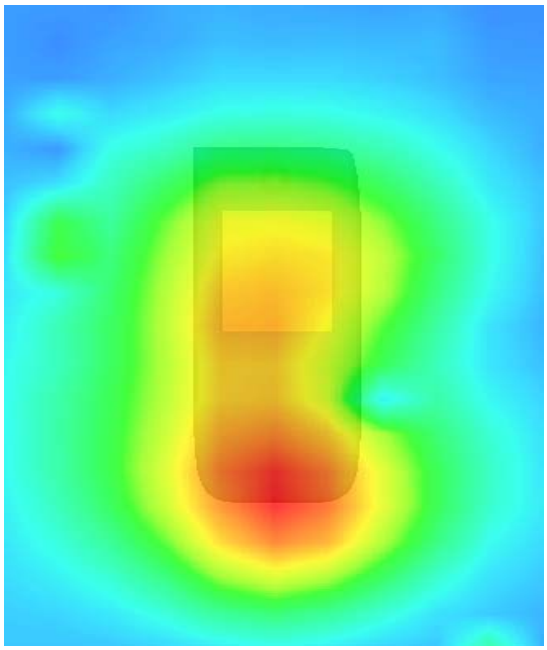
Maximum location: X=0.00, Y=-38.00

SAR 10g (W/Kg)	0.150098
SAR 1g (W/Kg)	0.270513

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2843	0.1637	0.1000	0.0572	0.0332	0.0193



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 8 seconds

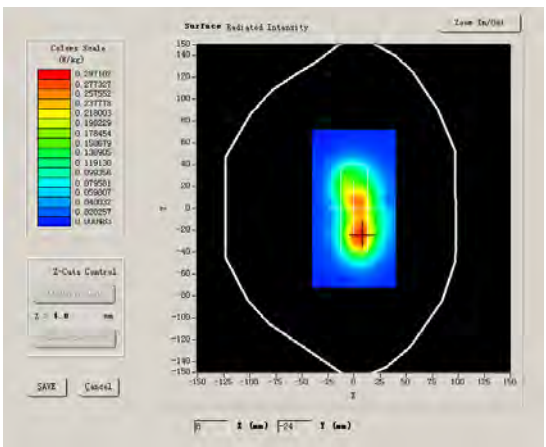
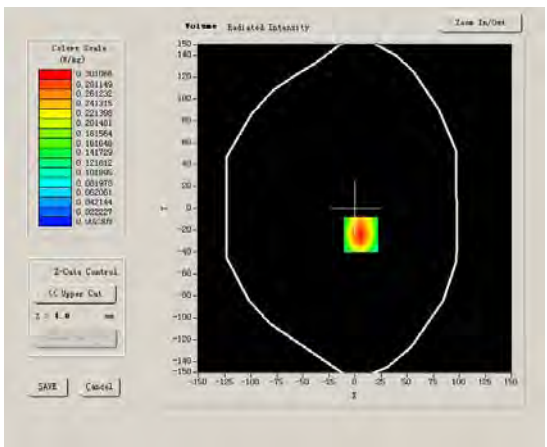
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	52.540001
Relative permittivity	14.070000
Conductivity (S/m)	1.469533
Power drift (%)	-3.010000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2

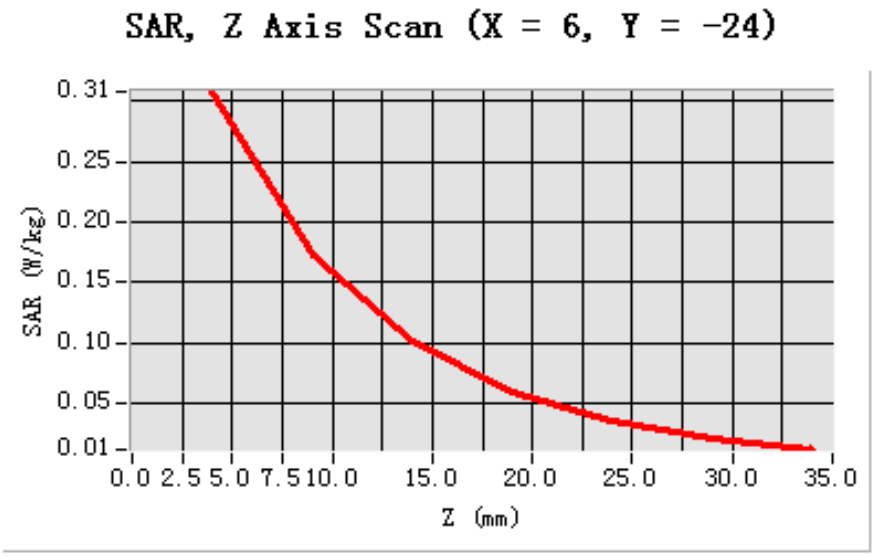
SURFACE SAR	VOLUME SAR
	

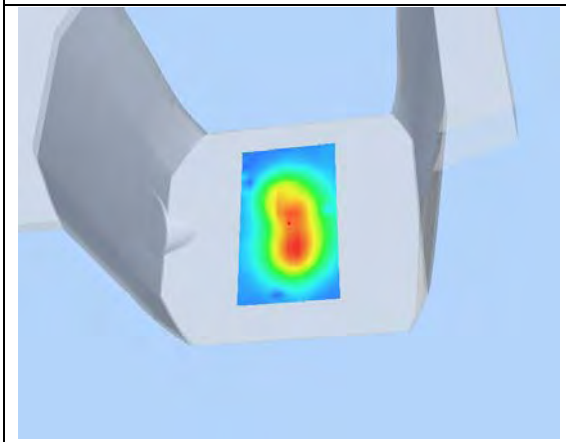
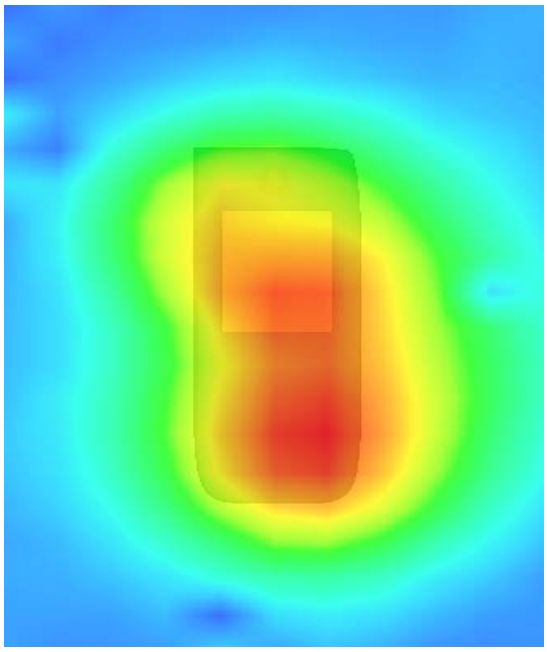
Maximum location: X=6.00, Y=-24.00

SAR 10g (W/Kg)	0.160265
SAR 1g (W/Kg)	0.290459

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3081	0.1728	0.1018	0.0598	0.0353	0.0213



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 10 seconds

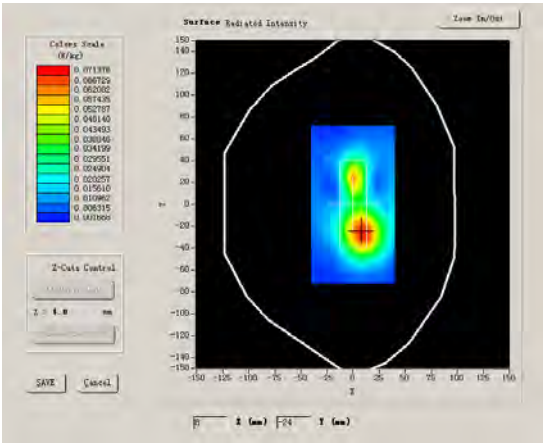
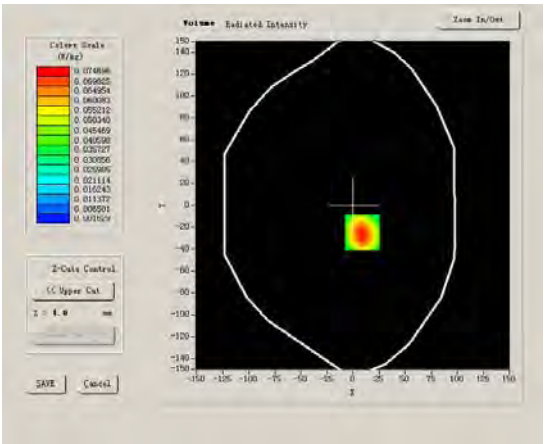
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 661):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	52.540001
Relative permittivity	14.070000
Conductivity (S/m)	1.469533
Power drift (%)	1.270000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2

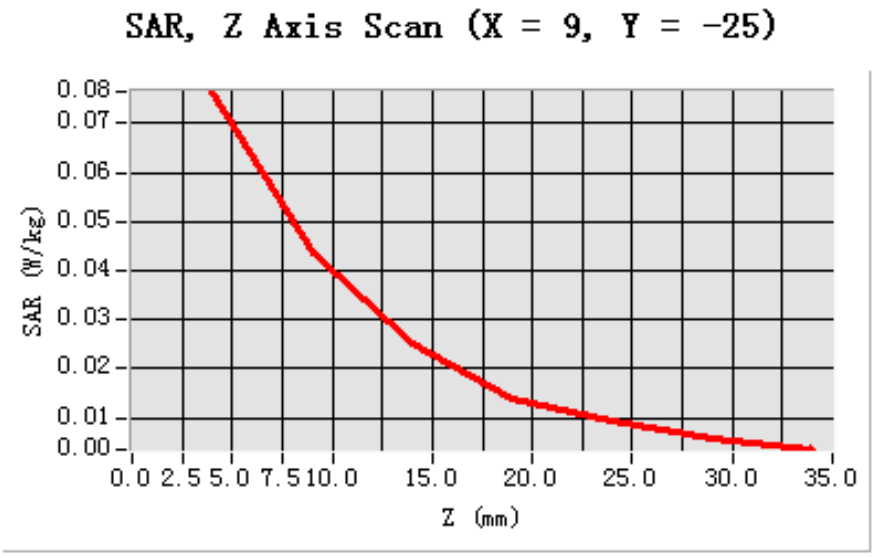
SURFACE SAR	VOLUME SAR
	

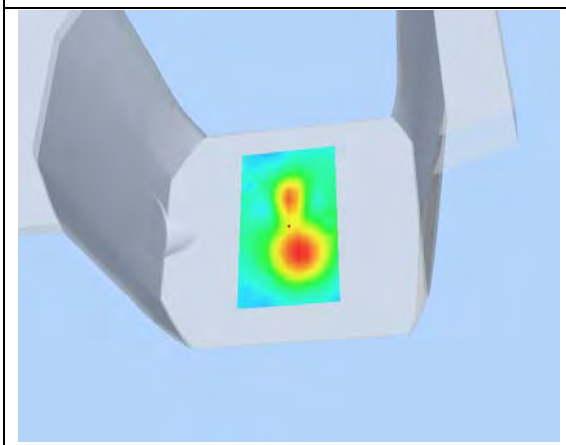
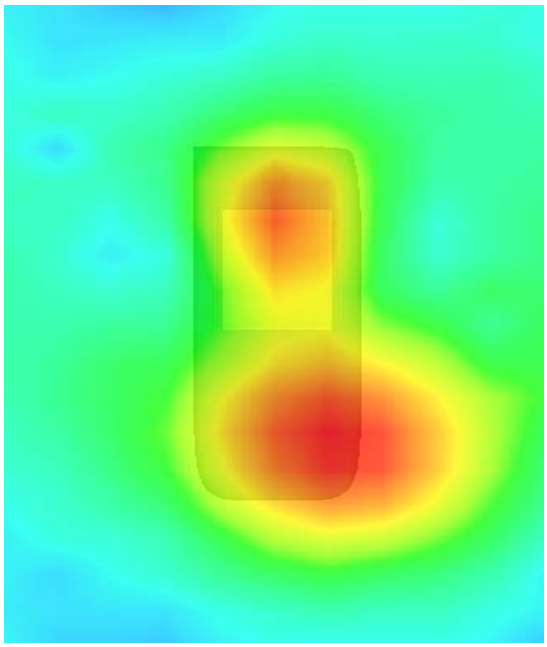
Maximum location: X=9.00, Y=-25.00

SAR 10g (W/Kg)	0.040482
SAR 1g (W/Kg)	0.072772

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0764	0.0435	0.0251	0.0138	0.0096	0.0056



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 10 seconds

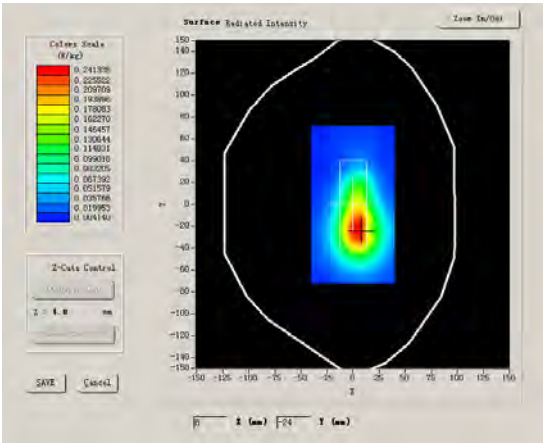
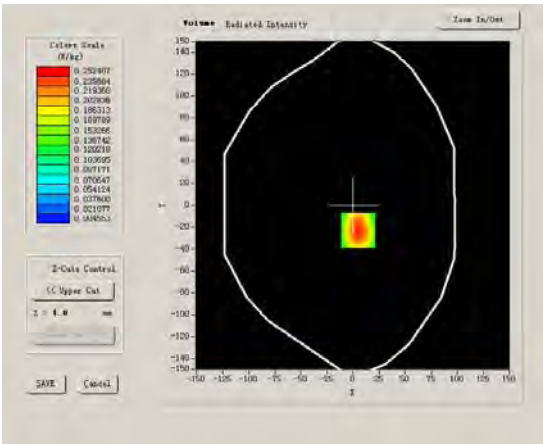
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	52.540001
Relative permittivity	14.070000
Conductivity (S/m)	1.469533
Power drift (%)	-0.050000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2

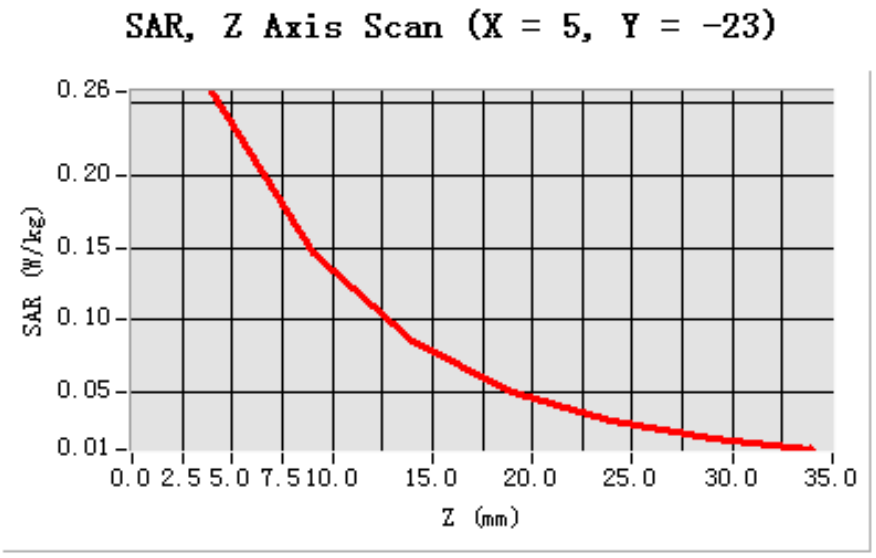
SURFACE SAR	VOLUME SAR
	

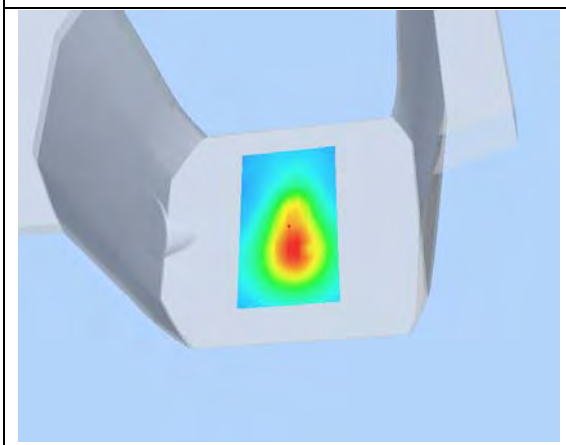
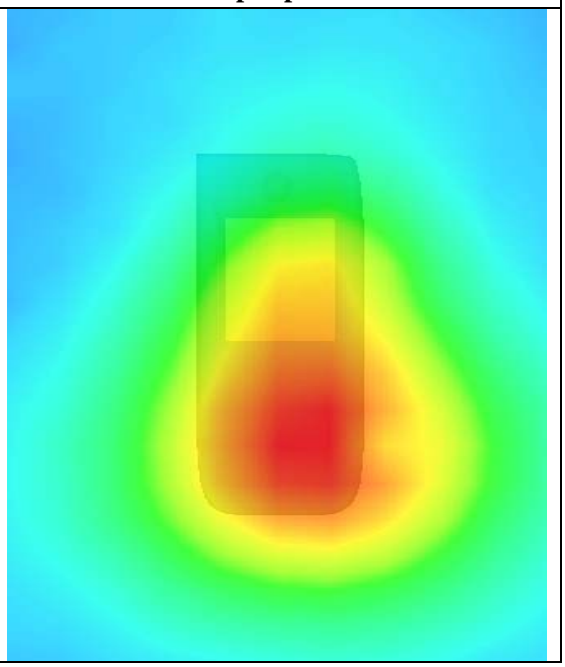
Maximum location: X=5.00, Y=-23.00

SAR 10g (W/Kg)	0.138390
SAR 1g (W/Kg)	0.243646

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2583	0.1459	0.0849	0.0488	0.0292	0.0174



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 10 seconds

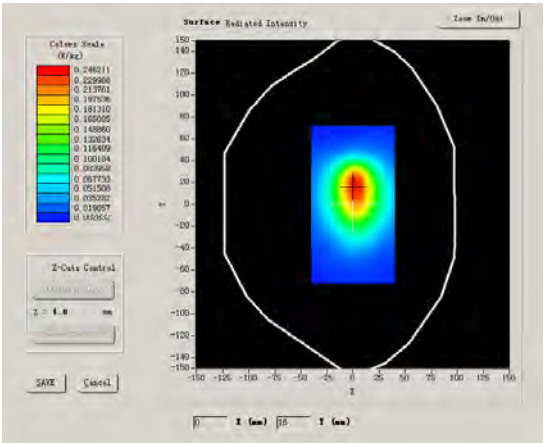
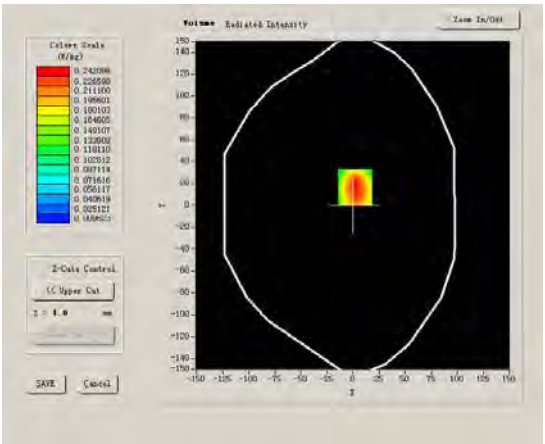
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	EDGE

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	52.540001
Relative permittivity	14.070000
Conductivity (S/m)	1.469533
Power drift (%)	-0.120000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2

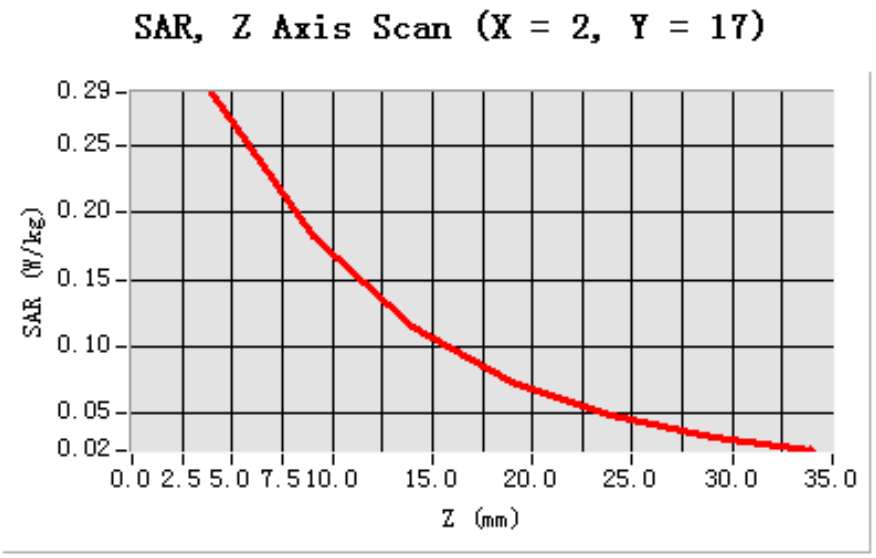
SURFACE SAR	VOLUME SAR
	

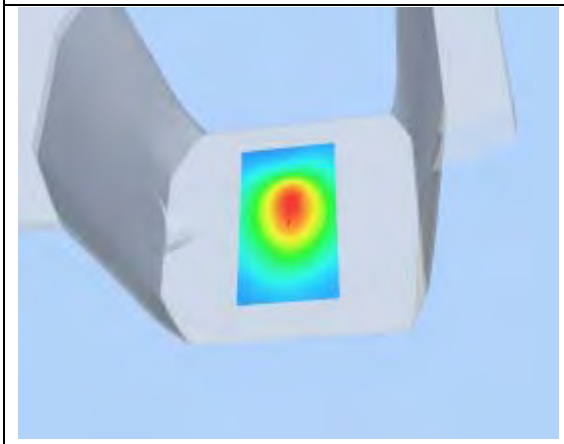
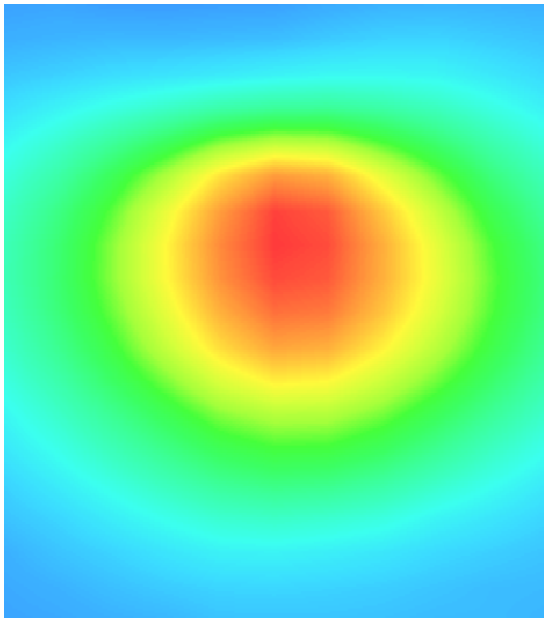
Maximum location: X=2.00, Y=17.00

SAR 10g (W/Kg)	0.167794
SAR 1g (W/Kg)	0.276978

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2905	0.1823	0.1145	0.0734	0.0478	0.0310



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 7 seconds

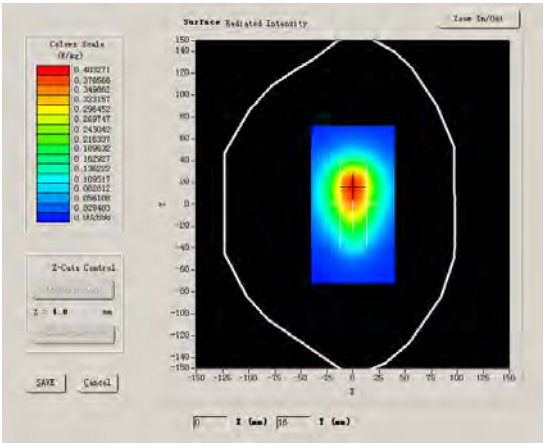
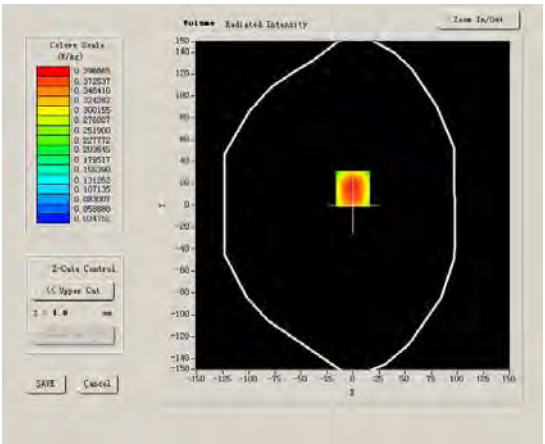
A. Experimental conditions.

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 4182):

Frequency (MHz)	836.000000
Relative permittivity (real part)	39.910000
Relative permittivity	13.230000
Conductivity (S/m)	0.614460
Power drift (%)	0.390000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:2

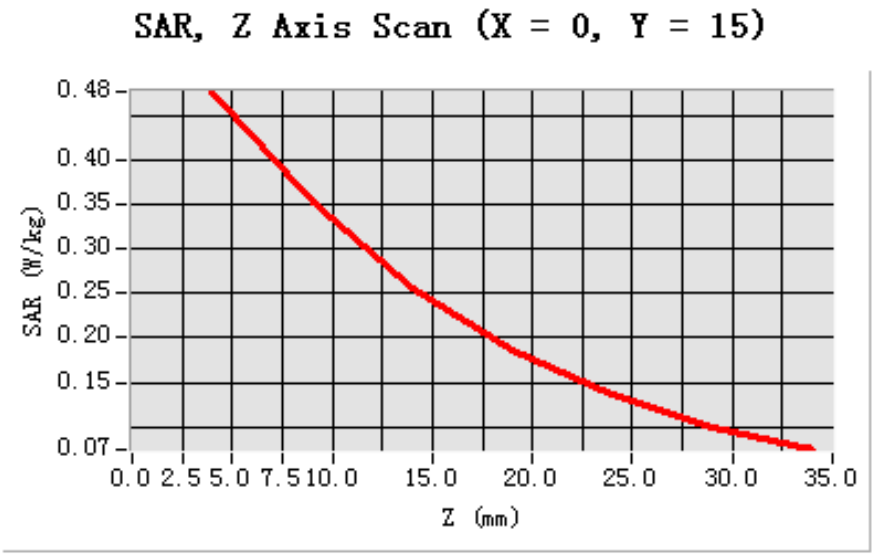
SURFACE SAR	VOLUME SAR
	

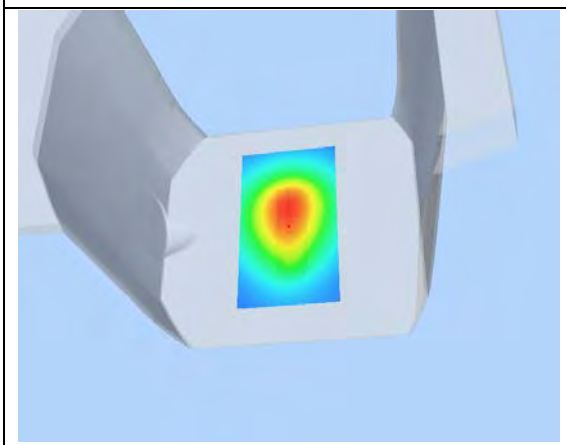
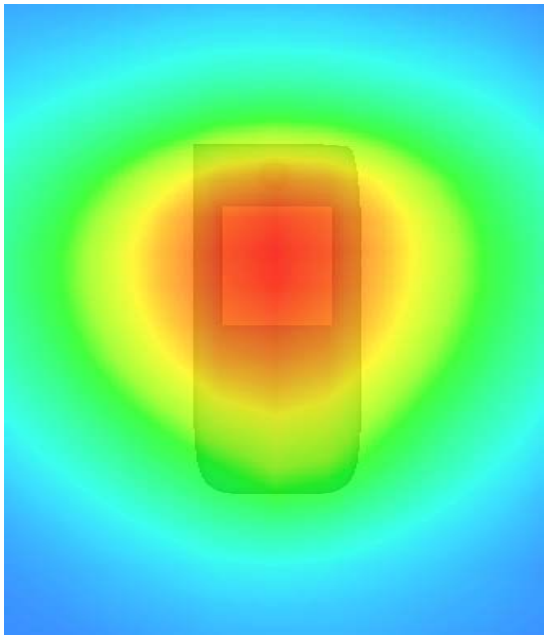
Maximum location: X=0.00, Y=15.00

SAR 10g (W/Kg)	0.314463
SAR 1g (W/Kg)	0.457050

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4760	0.3510	0.2558	0.1868	0.1369	0.0999



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 7 seconds

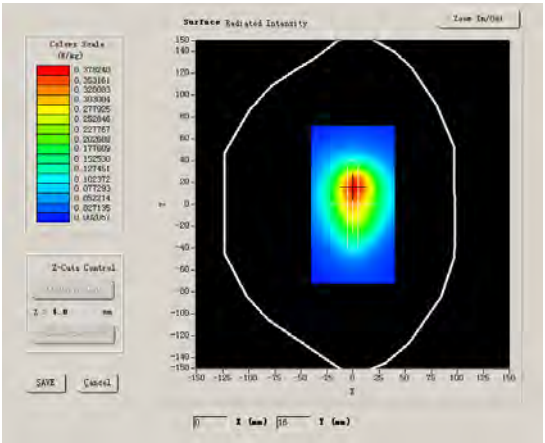
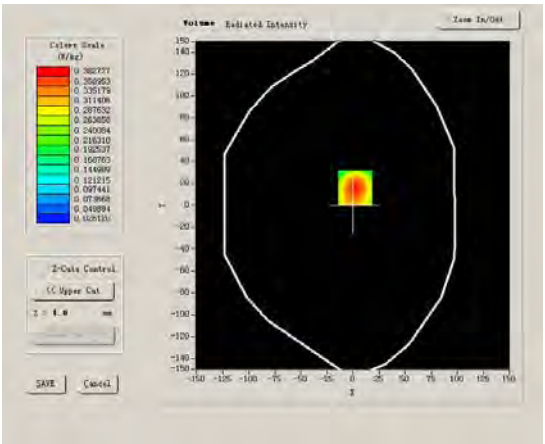
A. Experimental conditions.

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 4182):

Frequency (MHz)	836.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050
Conductivity (S/m)	0.737401
Power drift (%)	-0.890000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:2

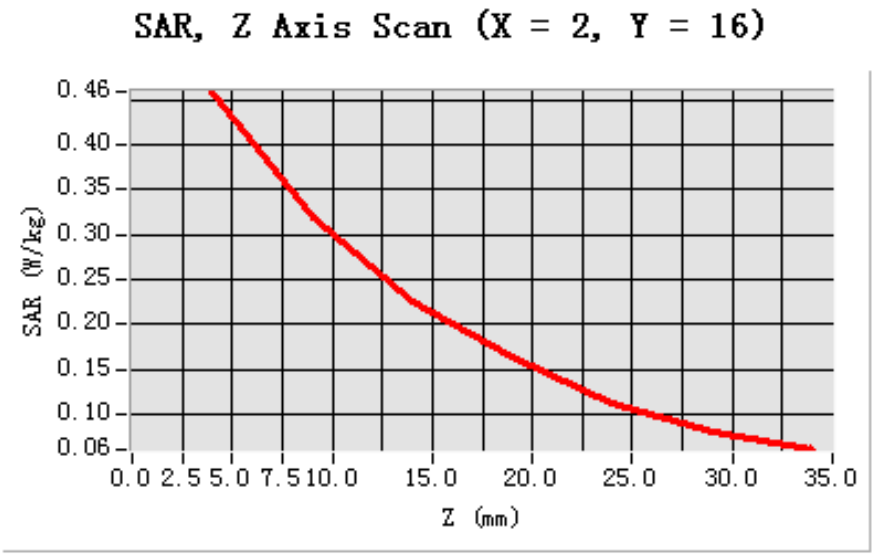
SURFACE SAR	VOLUME SAR
	

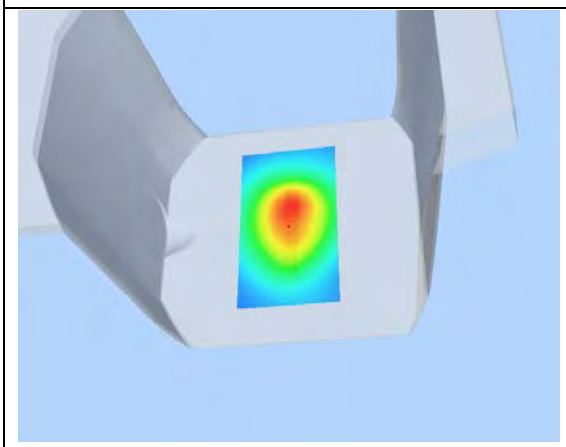
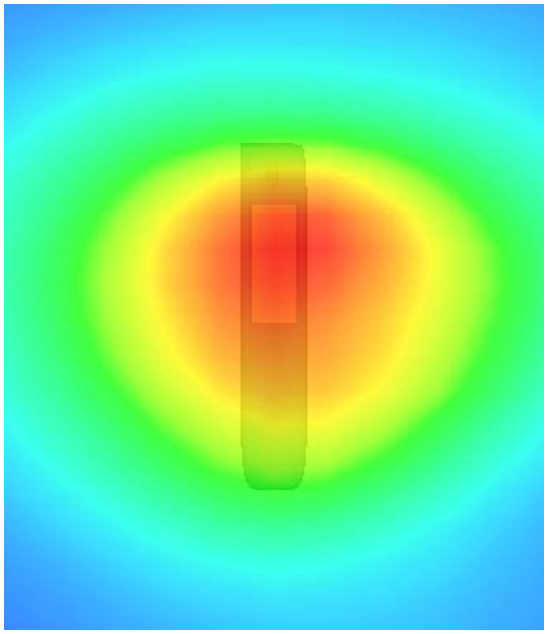
Maximum location: X=2.00, Y=16.00

SAR 10g (W/Kg)	0.292855
SAR 1g (W/Kg)	0.439173

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4593	0.3197	0.2246	0.1627	0.1127	0.0812



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 4 seconds

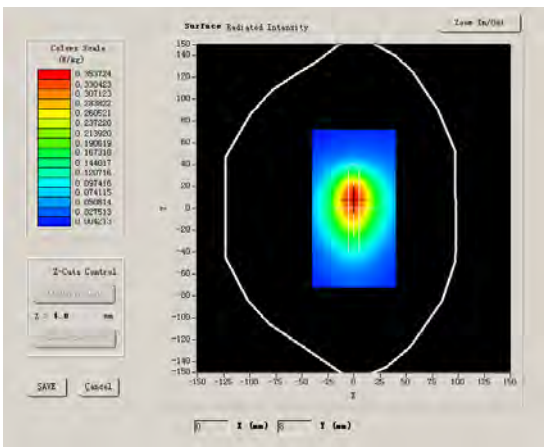
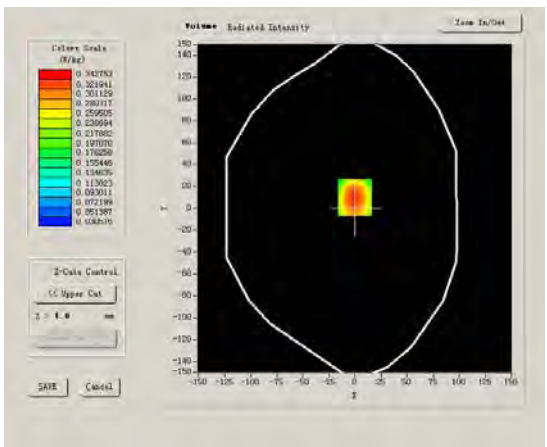
A. Experimental conditions.

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 4182):

Frequency (MHz)	836.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050
Conductivity (S/m)	0.737401
Power drift (%)	-1.780000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:2

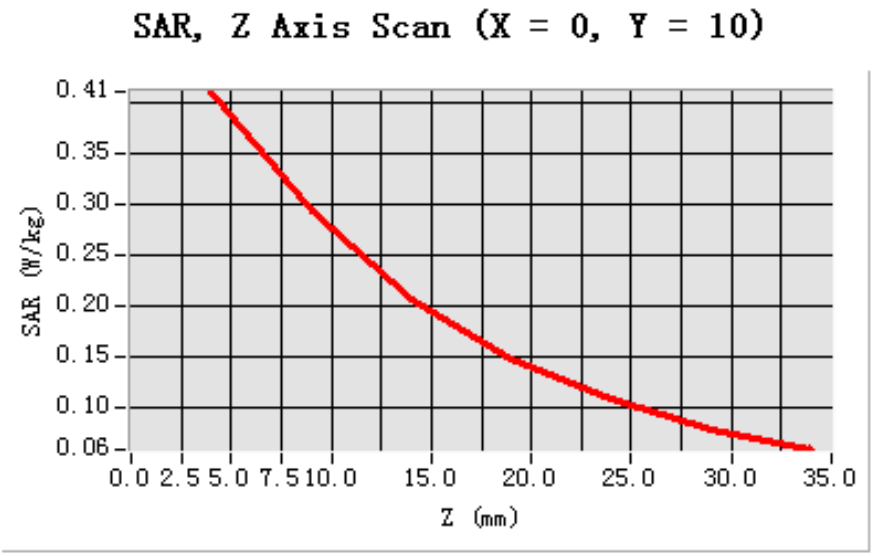
SURFACE SAR	VOLUME SAR
	

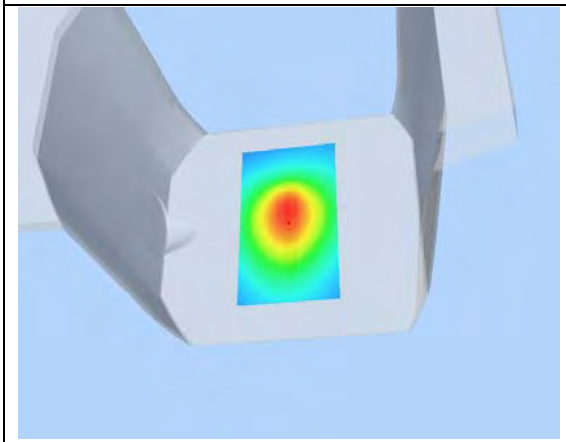
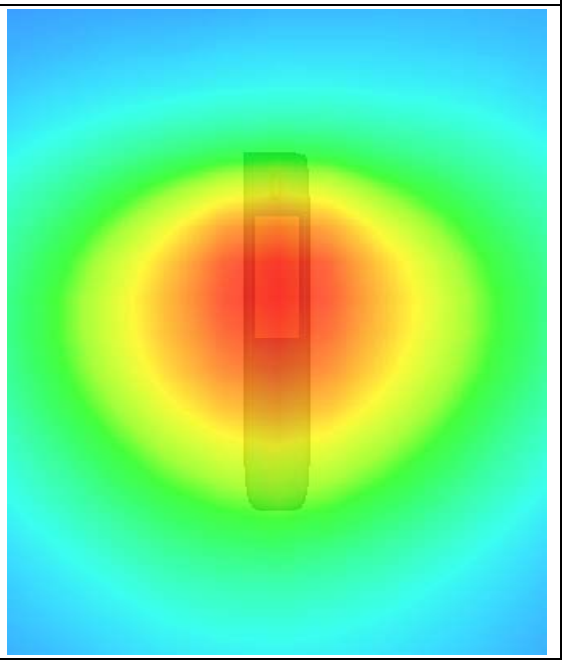
Maximum location: X=0.00, Y=10.00

SAR 10g (W/Kg)	0.262440
SAR 1g (W/Kg)	0.391672

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4113	0.2936	0.2075	0.1480	0.1084	0.0786



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 7 seconds

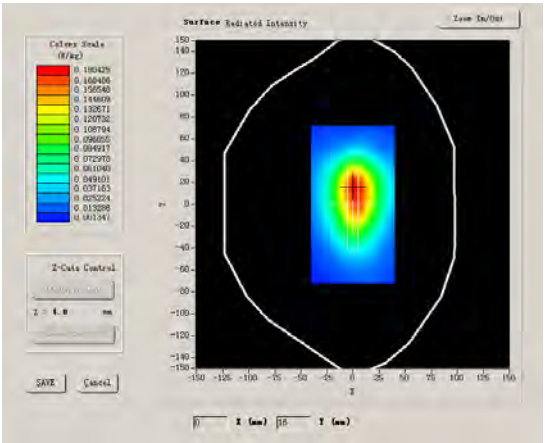
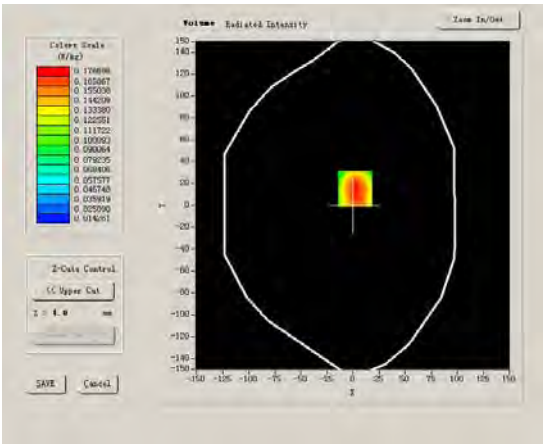
A. Experimental conditions.

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 4182):

Frequency (MHz)	836.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050
Conductivity (S/m)	0.737401
Power drift (%)	-2.070000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:2

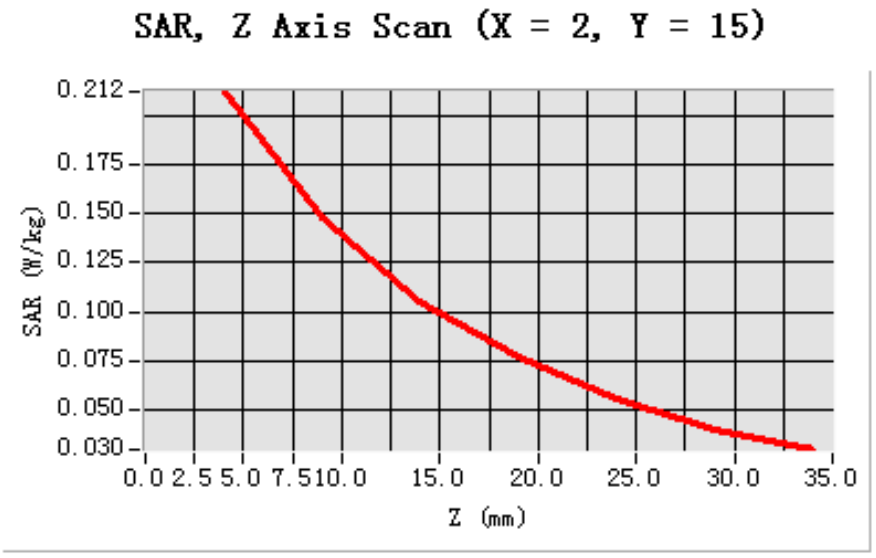
SURFACE SAR	VOLUME SAR
	

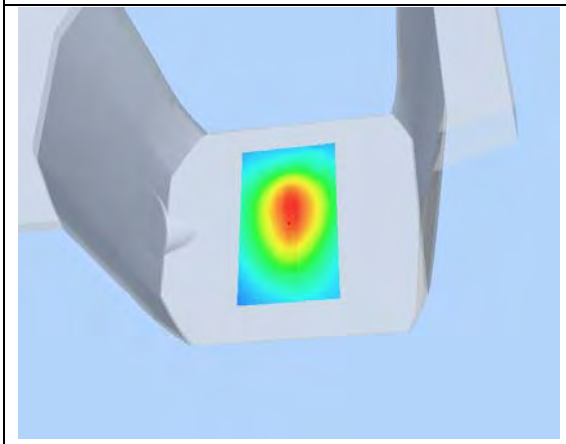
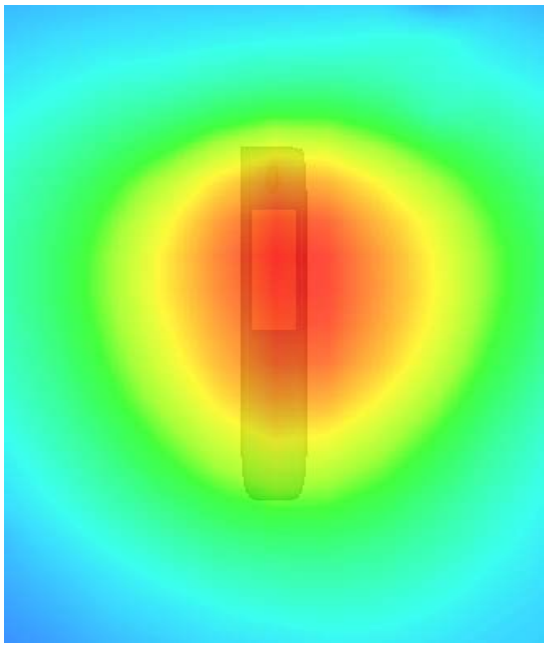
Maximum location: X=2.00, Y=15.00

SAR 10g (W/Kg)	0.138137
SAR 1g (W/Kg)	0.203360

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2120	0.1484	0.1053	0.0767	0.0556	0.0403



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 10 seconds

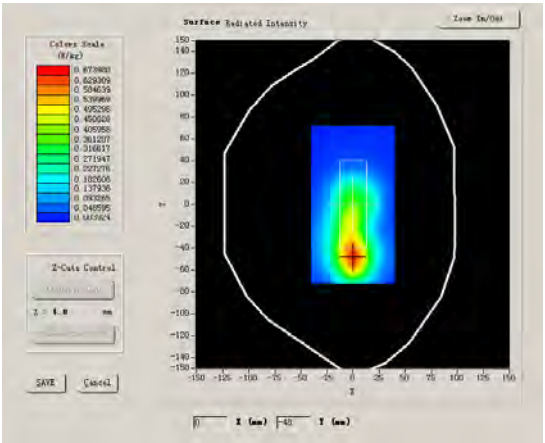
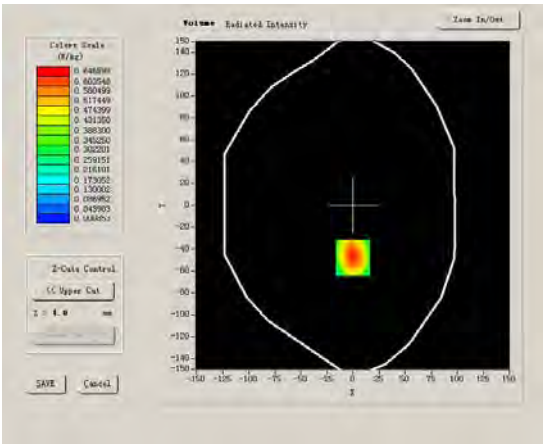
A. Experimental conditions.

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

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.000000
Relative permittivity (real part)	52.663472
Relative permittivity	15.877050
Conductivity (S/m)	1.542600
Power drift (%)	-1.000000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

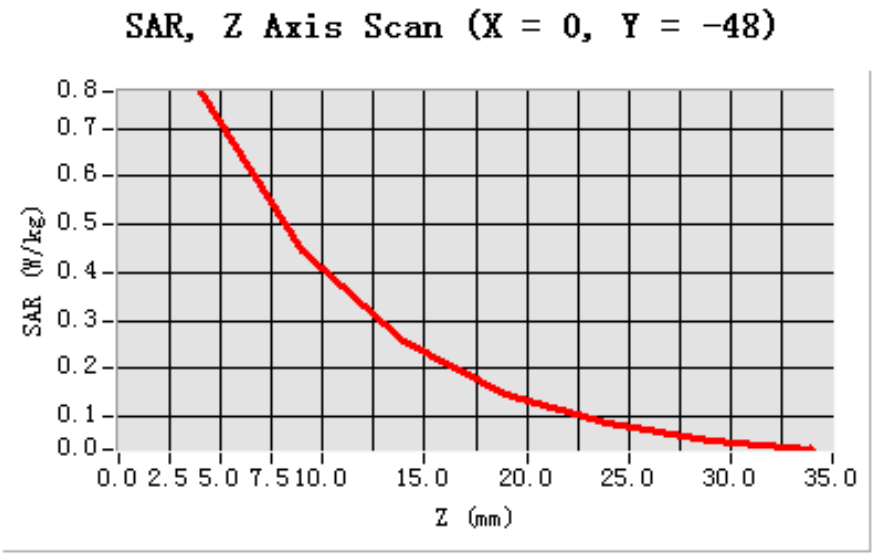
SURFACE SAR	VOLUME SAR
	

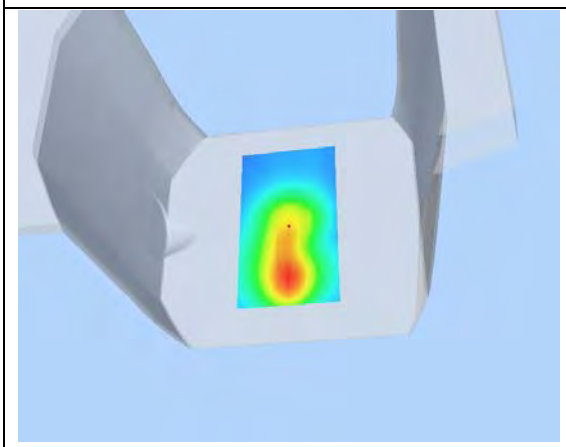
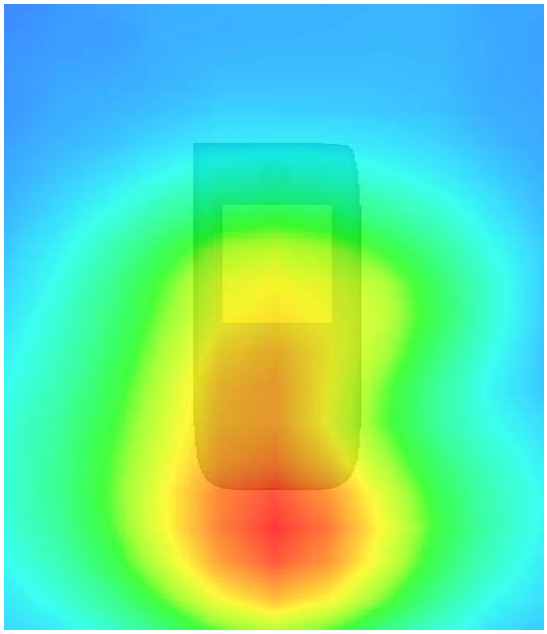
Maximum location: X=0.00, Y=-48.00

SAR 10g (W/Kg)	0.407085
SAR 1g (W/Kg)	0.731315

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7760	0.4443	0.2572	0.1483	0.0863	0.0527



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 7 seconds

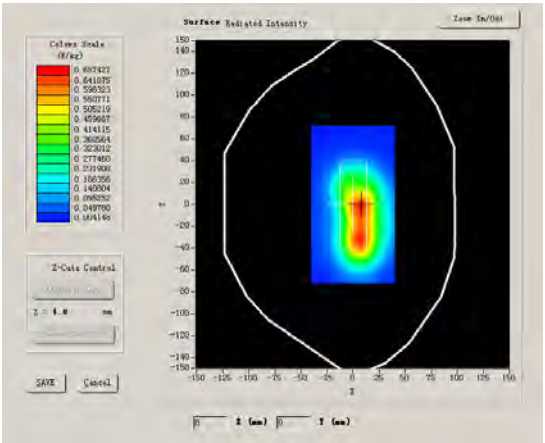
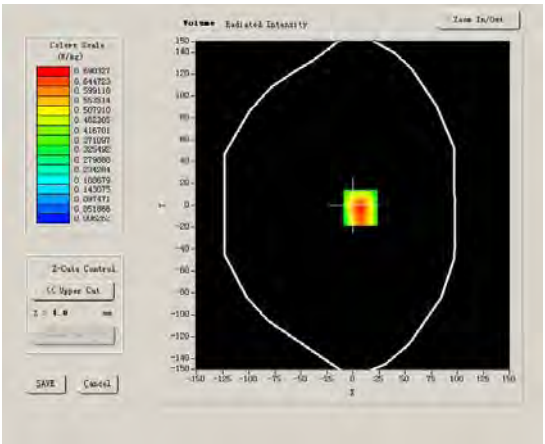
A. Experimental conditions.

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

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.000000
Relative permittivity (real part)	52.663472
Relative permittivity	15.877050
Conductivity (S/m)	1.542600
Power drift (%)	-1.960000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

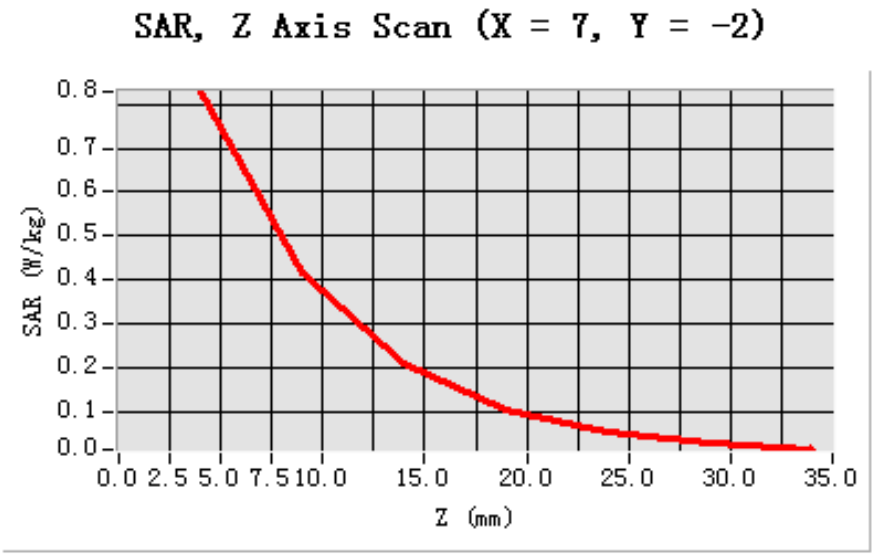
SURFACE SAR	VOLUME SAR
	

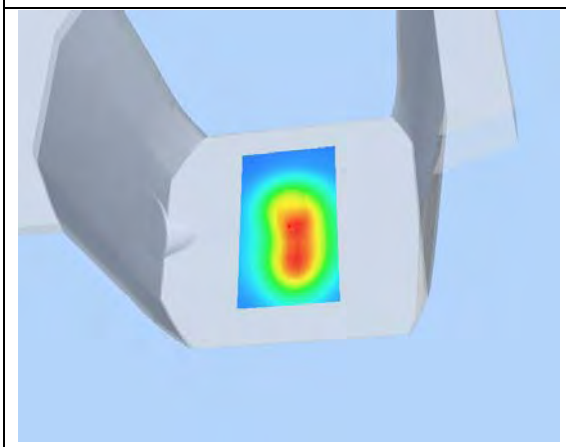
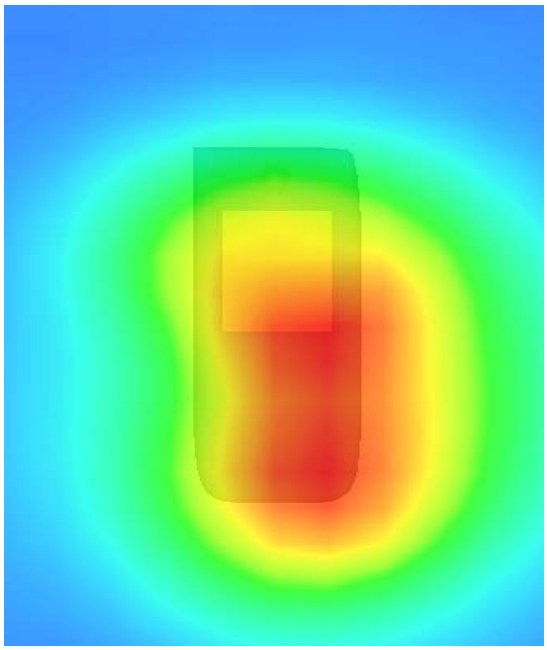
Maximum location: X=7.00, Y=-2.00

SAR 10g (W/Kg)	0.422511
SAR 1g (W/Kg)	0.782998

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8284	0.4171	0.2124	0.1078	0.0551	0.0277



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 12 seconds

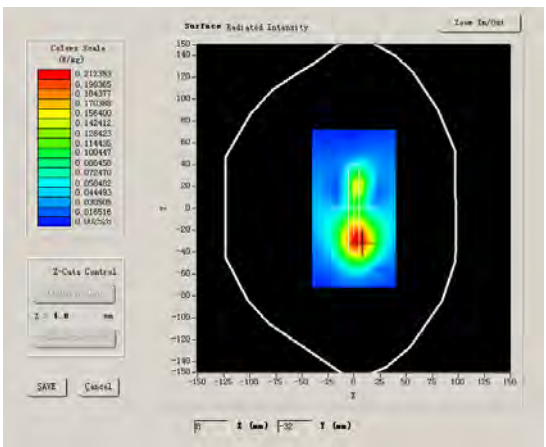
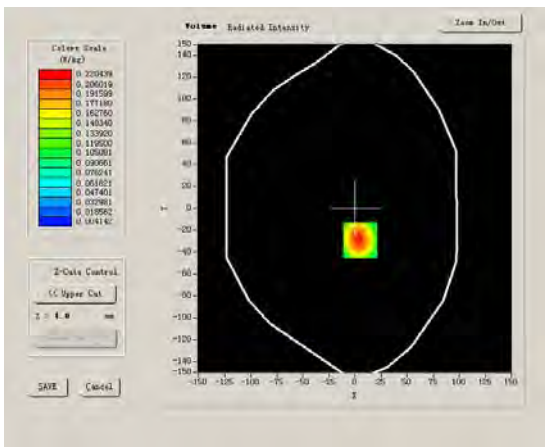
A. Experimental conditions.

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

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.000000
Relative permittivity (real part)	52.663472
Relative permittivity	15.877050
Conductivity (S/m)	1.542600
Power drift (%)	-1.230000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

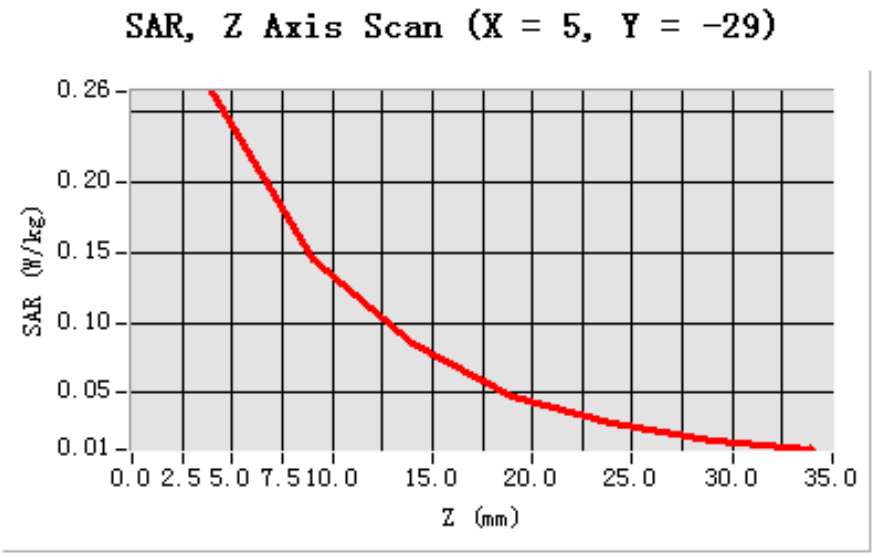
SURFACE SAR	VOLUME SAR
	

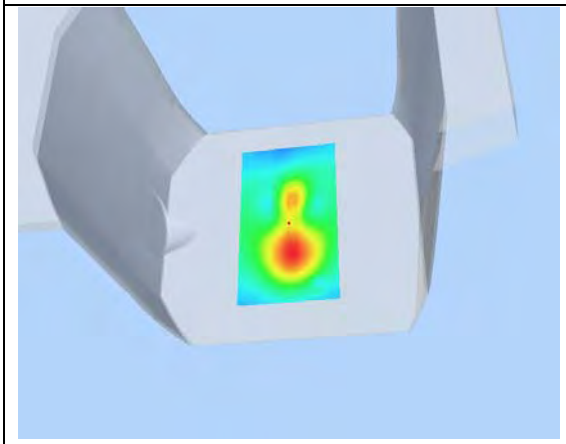
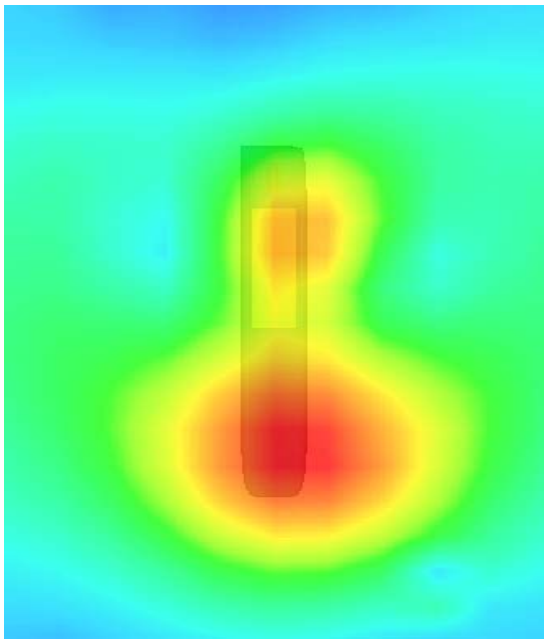
Maximum location: X=5.00, Y=-29.00

SAR 10g (W/Kg)	0.139588
SAR 1g (W/Kg)	0.251533

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2645	0.1458	0.0850	0.0476	0.0282	0.0161



3D sceen 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: 13/12/2011
Measurement duration: 9 minutes 7 seconds

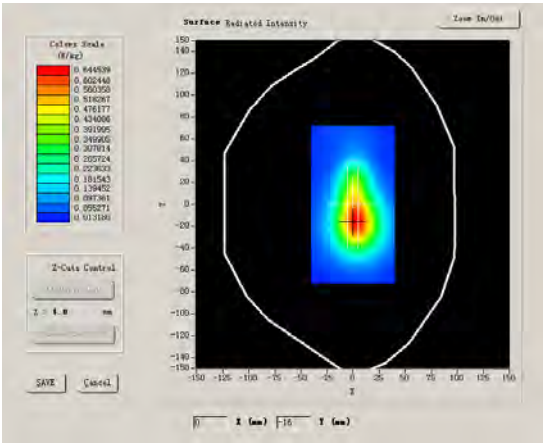
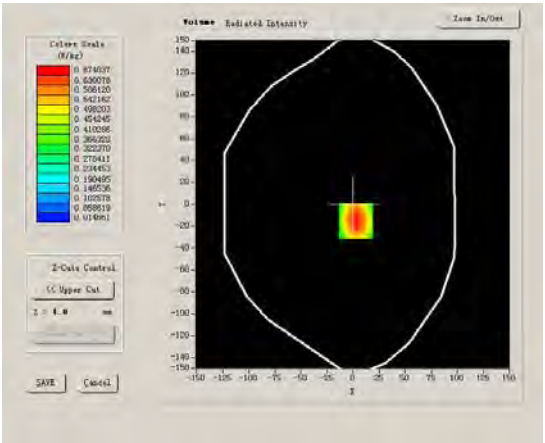
A. Experimental conditions.

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

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.000000
Relative permittivity (real part)	52.663472
Relative permittivity	15.877050
Conductivity (S/m)	1.542600
Power drift (%)	1.160000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

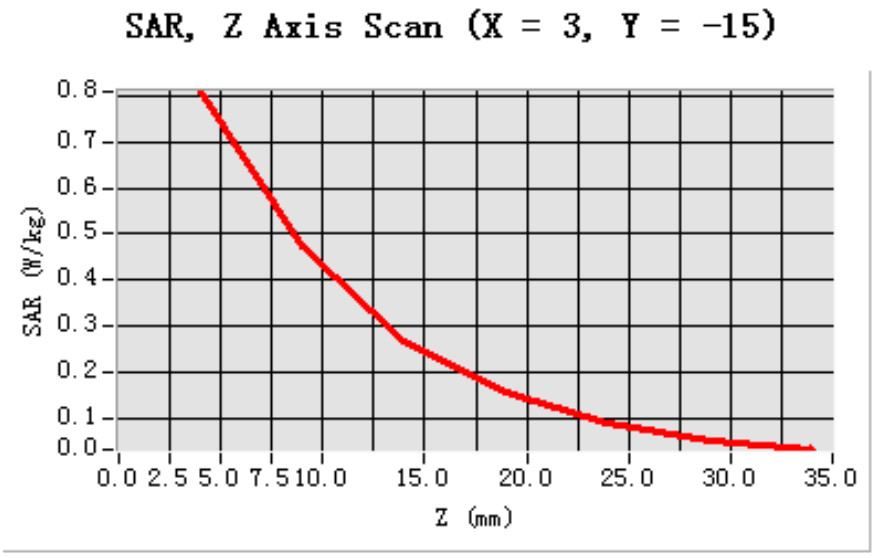
SURFACE SAR	VOLUME SAR
	

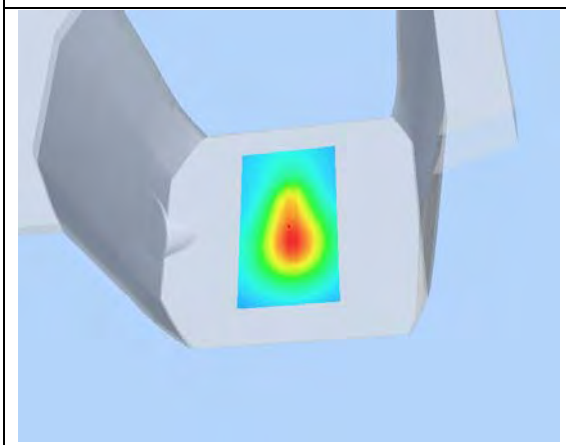
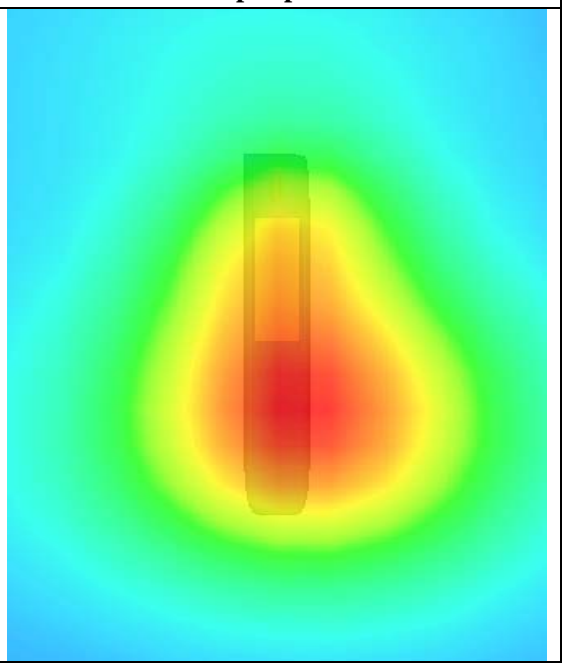
Maximum location: X=3.00, Y=-15.00

SAR 10g (W/Kg)	0.440969
SAR 1g (W/Kg)	0.768569

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8089	0.4714	0.2696	0.1586	0.0927	0.0539



3D sceen shot	Hot spot position
	

System Performance Check Data(835MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 13/12/2011
Measurement duration: 13 minutes 27 seconds

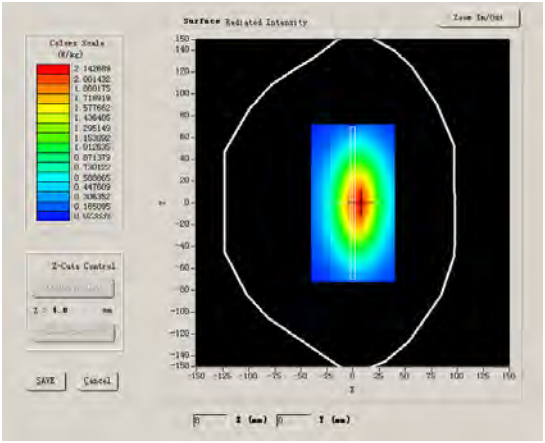
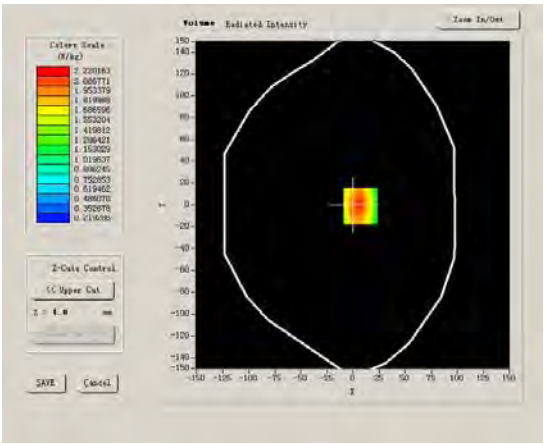
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	835MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	55.709999
Relative permittivity	21.709999
Conductivity (S/m)	1.009033
Power drift (%)	-0.170000
Ambient Temperature:	22.6°C
Liquid Temperature:	21.2°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:1

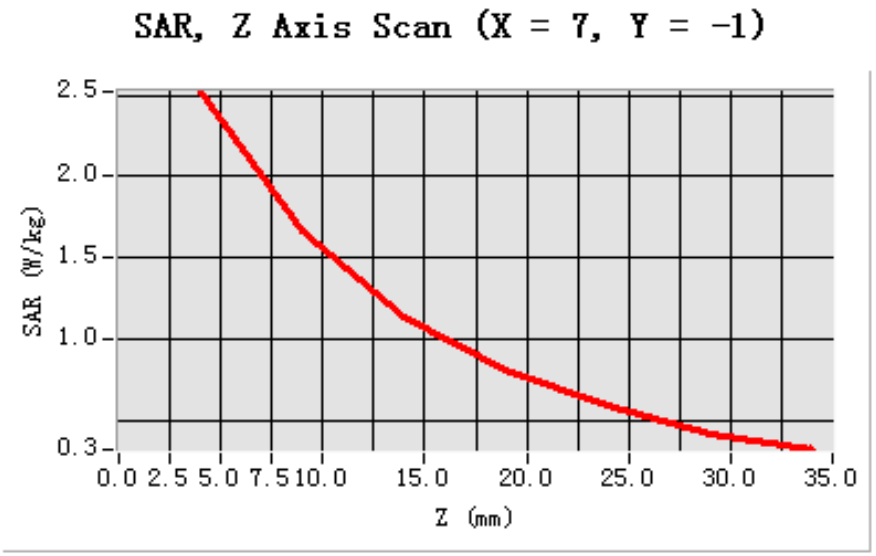
SURFACE SAR	VOLUME SAR
	

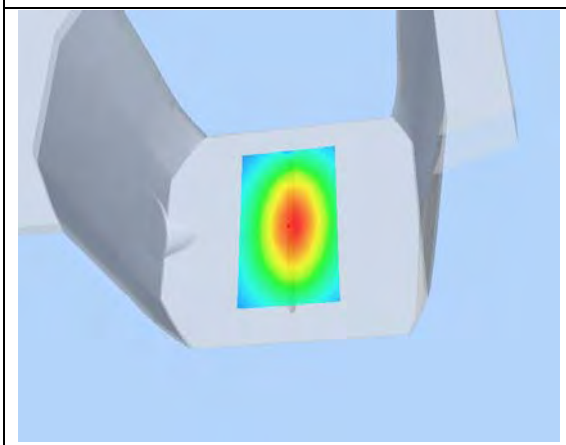
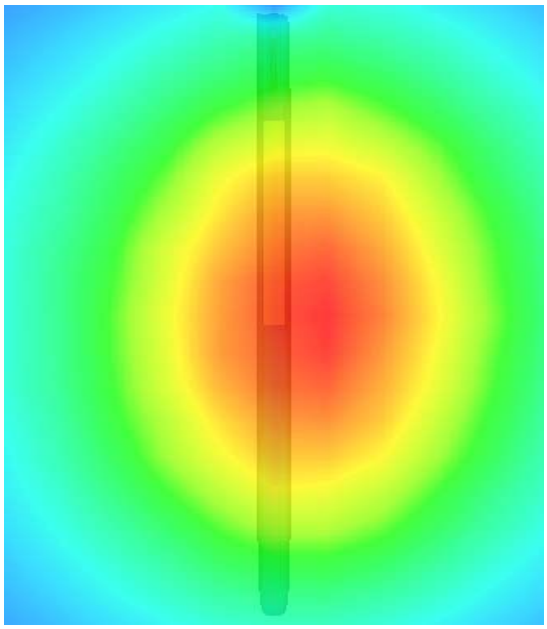
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.539476
SAR 1g (W/Kg)	2.385979

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(1900MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 13/12/2011
Measurement duration: 13 minutes 27 seconds

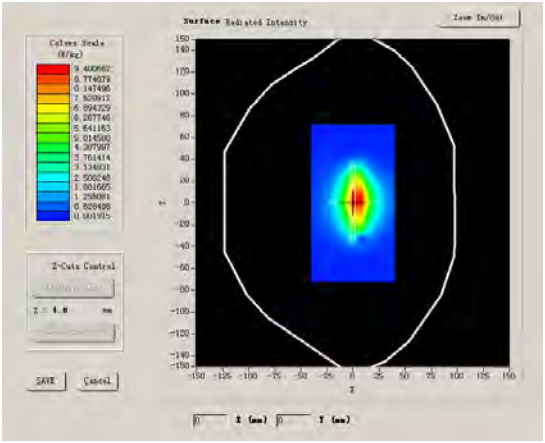
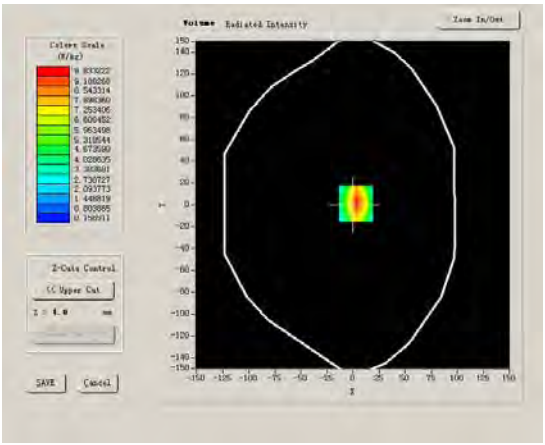
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	1900MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	1900.000000
Relative permittivity (real part)	52.540001
Relative permittivity	14.070000
Conductivity (S/m)	1.469533
Power drift (%)	-0.230000
Ambient Temperature:	22.1°C
Liquid Temperature:	22.4°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

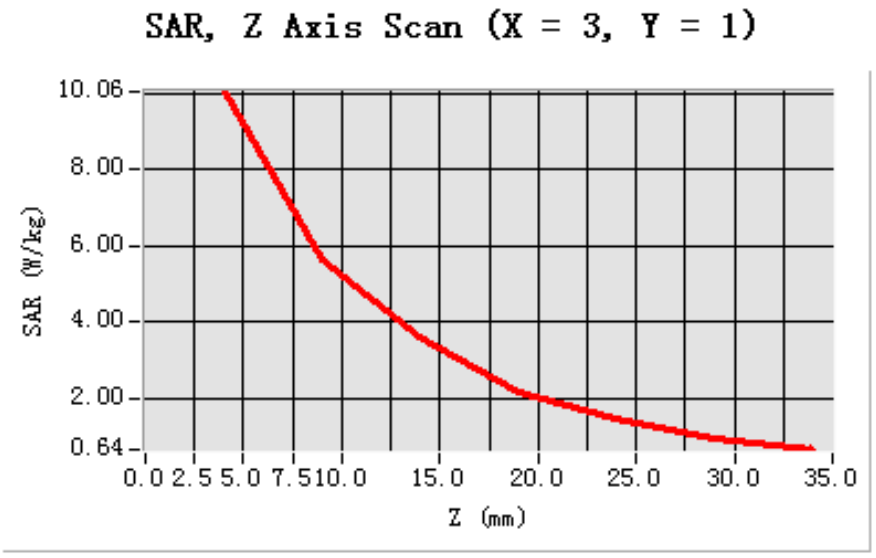
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=1.00

SAR 10g (W/Kg)	4.981611
SAR 1g (W/Kg)	9.340177

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.0621	5.6445	3.6226	2.1642	1.4521	0.9078



3D sceen shot	Hot spot position