FCC SAR

TEST REPORT

of

Odin

Model Name:	MG758/MG75X/MG75875075X MG752/E750
Trade Name:	UniStrong
Report No.:	SH10110004S01
FCC ID.:	YYEMG75875075X

prepared for

Beijing UniStrong Science & Technology Co., Ltd
6F East, A2 Building, #9 Jiuxianqiao East Road, Chaoyang District,
Beijing 100015, China

pidrepared by

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LAB CODE 20081223-00

Contents

1. General Information

1.1. Notes

The test results of this test report relate exclusively to the information specified in section 3.3. Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the identification. The test report may only be reproduced or published in full. Reproduction or publications of extracts from the test report requires the prior written approval of Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory. The test report shall be invalid without all the signatures of testing the Project Manager, the Deputy Project Manager and the Test Lab Manager. Any objections must be raised to Morlab within 30 days since the date when the report is received. It will not be taken into consideration beyond this limit.

1.2. Organization item

Report No.:	SH10110004S01
Date of Issue:	Dec. 16, 2010
Date of Tests:	Dec. 14, 2010 –Dec. 16, 2010
Responsible for Accreditation:	Wei Bei
Project Manager:	Zhang Jun
Deputy Project Manager:	Shi Feng

1.3. Conclusion

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory has verified that all tests as listed in the section 10 of this report have been performed successfully with the tested equipment.

Shi Feng

Shi Feng
Tested by
(Responsible for the Test Report)

Zhang Jun

Zhang Jun
Reviewed by
(Verification of the Test Report)

Wei Bei

Wei Bei
Approved by
(Responsible Test Lab Manager)

2. Testing Laboratory

2.1. 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

2.2. 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

2.3. Accreditation Certificate

Accredited Testing Laboratory:	No. CNAS L1659

2.4. 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)	2010-9-26	1year
3	Voltmeter	Keithley (2000, SN:1000572)	2010-9-24	1year
4	Synthetizer	Rohde&Schwarz (SML_03, SN:101868)	2010-9-24	1year
5	Amplifier	Nucl udes (ALB216, SN:10800)	2010-9-24	1year
6	Power Meter	Rohde&Schwarz (NRVD, SN:101066)	2010-9-24	1year
7	Probe	Antennessa (SN:SN_3708_EP80)	2010-9-24	1year
8	Phantom	Antennessa (SN:SN_36_08_SAM62)	2010-9-24	1year
9	Liquid	Antennessa (Last Calibration:21 08 08)	2010-8-21	1year
10	Dipole Validation Kit	SATIMO (SN 36/08 DIPC99)	2010-9-23	1year
11	Dipole Validation Kit	SATIMO (SN 36/08 DIPF101)	2010-9-23	1year
12	Dipole Validation Kit	SATIMO (SN 36/08 DIPJ103)	2010-9-24	1year

3. Technical Information

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

3.1. Identification of Applicant

Company Name:	Beijing UniStrong Science & Technology Co., Ltd
Address:	6F East, A2 Building, #9 Jiuxianqiao East Road, Chaoyang District, Beijing 100015, China

3.2. Identification of Manufacturer

Company Name:	Beijing UniStrong Science & Technology Co., Ltd
Address:	6F East, A2 Building, #9 Jiuxianqiao East Road, Chaoyang District, Beijing 100015, China

3.3. Equipment Under Test (EUT)

Brand Name:	UniStrong
Type Name:	UniStrong
Marking Name:	MG758/MG75X/MG75875075X/MG752/E750
Hardware Version:	v2.0
Software Version:	01.001.1chs
Frequency Bands:	GSM 850MHz (channel 128:824.20MHz,channel 190:836.59MHz, channel 251:848.29MHz) PCS 1900MHz (channel 512:1850.19MHz,channel 661:1880.00MHz, channel 810:1909.80MHz) WiFi 802.11b/g(channel 1: 2412MHz,channel 6: 2437MHz,channel 11: 2462MHz)
Modulation Mode:	GSM / GPRS : GMSK EDGE：8PSK WiFi : DSSS/OFDM
Multislot Class	GPRS: Multislot Class 10;EDGE:Class 10
GPRS operation mode:	Class B
Antenna type:	Fixed Internal Antenna
Development Stage:	Identical prototype
Battery Model:	MG-4LH
Battery specification:	3000mAh 3.7V

3.3.1. Photographs of the EUT

Please see for photographs of the EUT.

3.3.2. Identification of all used EUTs

The EUT Identity consists of numerical and letter characters (see the table below), the first five numerical characters indicates the Type of the EUT defined by Morlab, the next letter character indicates the test sample, and the following two numerical characters indicates the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	v2.0	01.001.1chs

3.4. 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 Techuiques.
5	**KDB648474 D01 SAR Handsets Multi Xmiter and Ant, v01r05**	SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas.
6	**KDB248227**	SAR measurement procedures for 802.11abg transmitters. It specifies the measurement method for demonstration of compliance with the SAR limits for such equipments.
7	**KDB Publication 447498**	Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Polices

3.5. Device Category and SAR Limits

This device belongs to portable device category bec**ause** 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.

3.6. Test Environment/Conditions

Normal Temperature (NT):	20 ... 25 °C		
Relative Humidity:	30 ... 75 %		
Air Pressure:	980 ... 1020 hPa		
Details of Power Supply:	220V/50Hz AC		
Extreme Temperature:	Low Temperature (LT)	=	-10°C
	High Temperature (HT)	=	60°C
Extreme Voltage of the EUT:	Normal Voltage (NV)	=	3.70V
	Low Voltage (LV)	=	3.60V
	High Voltage (HV)	=	4.20V
Test frequency:	GSM 850MHz		
	PCS 1900MHz		
	WiFi 802.11b/g		
Operation mode:	Call established		
Power Level:	GSM 850 MHz Maximum output power(level 5)		
	PCS 1900 MHz Maximum output power(level 0)		

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, The EUT, 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 lower than the output power level of the handset by at least 35 dB.
For SAR testing, EUT is in GPRS link mode, its crest factor is 4, because EUT is set in GPRS multi-slot class 10 with 2 uplink slots.

4. Specific Absorption Rate (SAR)

4.1 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.

4.2 SAR Definition

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

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

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

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

, 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

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

, 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.

5. SAR Measurement Setup

5.1. 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.

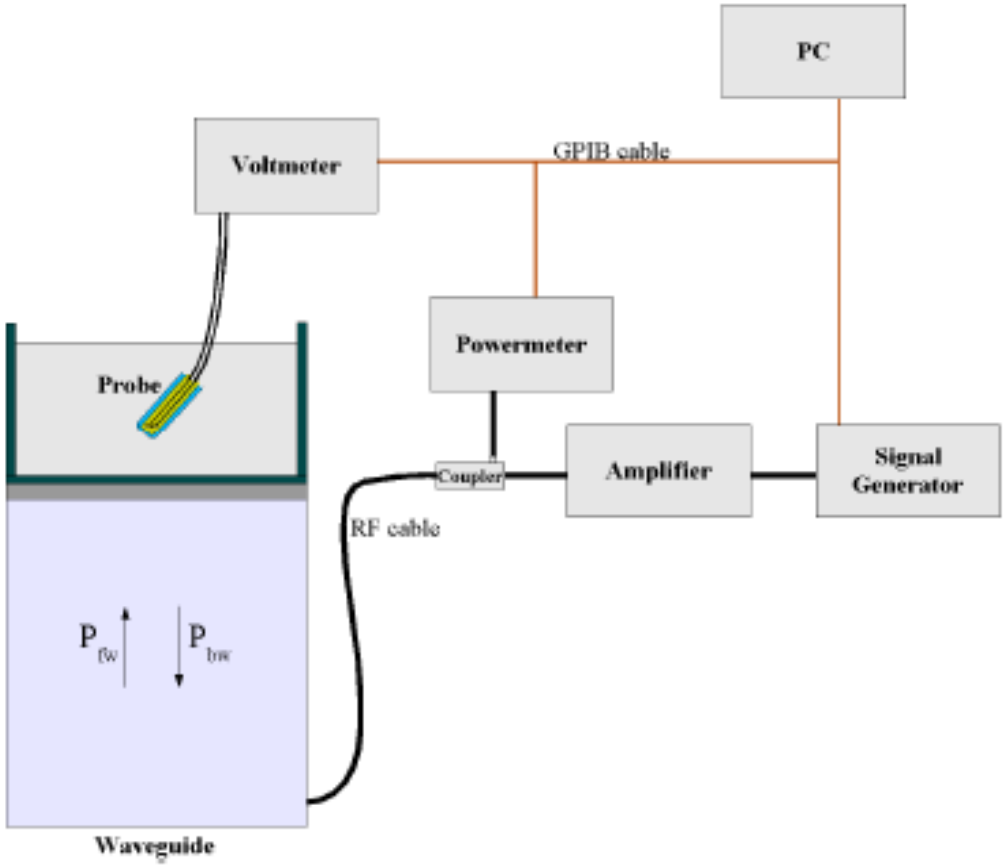
5.2. Probe

For the measurements the COMOSAR SEPT ISOTROPIC E-FIELD PROBE 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 62209 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) (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)) (N=1,2,3)

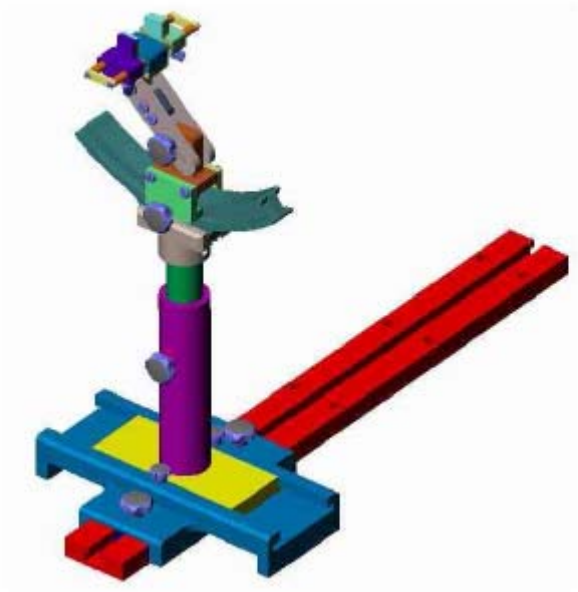
where DCP is the diode compression point in mV.

5.3. 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.

5.4. 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

6. Tissue Simulating Liquids

Simulant liquids that are used for testing at frequencies of GSM 800MHz PCS 1900MHz, which 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 15 cm.

Table 6.1 gives the recipes for one liter of head and body tissue simulating liquid for frequency band 850MHz and 1900 MHz.

Ingredients (% by weight)	Frequency Band 835MHz		Frequency Band 1900MHz		Frequency Band 2450MHz	
Tissue Type	Head	Body	Head	Body	Head	Body
Water	41.45	52.4	54.9	40.4	62.7	73.2
Salt(NaCl)	1.45	1.4	0.18	0.5	0.5	0.04
Sugar	56.0	45.0	0.0	58.0	0.0	0.0
HEC	1.0	1.0	0.0	1.0	0.0	0.0
Bactericide	0.1	0.1	0.0	0.1	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	36.8	0.0
DGBE	0.0	0.0	44.92	0.0	0.0	26.7
Dielectric Constant	42.45	56.1	39.9	54.0	39.8	52.5
Conductivity (S/m)	0.91	0.95	1.42	1.45	1.88	1.78

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.

Table 1: Dielectric Performance of Head Tissue Simulating Liquid

Temperature: 23.0~23.8°C, humidity: 54~60%.			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHZ	41.5	0.90
Validation value (Dec. 14)	835 MHZ	40.669998	0.888655

Target value	1900 MHZ	40	1.40
Validation value (Dec. 14)	1900 MHZ	38.509998	1.436111

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

Table 2: 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. 14)	835 MHz	55.709999	0.988874
Target value	1900 MHz	53.3	1.52
Validation value (Dec. 14)	1900 MHz	51.540001	1.573978
Target value	2450 MHz	52.7	1.95
Validation value (Dec. 14)	2450 MHz	54.55	1.94

7. Uncertainty Assessment

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

7.1. 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 (+-%)	V i
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	
Axial Isotropy	E.2.2	2.5	R				1.02	1.02	
Hemispherical Isotropy	E.2.2	4.0	R				1.63	1.63	
Boundary effect	E.2.3	1.0	R		1	1	0.58	0.58	
Linearity	E.2.4	5.0	R		1	1	2.89	2.89	
System detection limits	E.2.5	1.0	R		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		1	1	1.73	1.73	
Integration Time	E.2.8	2.0	R		1	1	1.15	1.15	
RF ambient Conditions	E.6.1	3.0	R		1	1	1.73	1.73	
Probe positioner Mechanical Tolerance	E.6.2	2.0	R		1	1	1.15	1.15	
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R		1	1	0.03	0.03	
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	5.0	R		1	1	2.89	2.89	
Test sample Related									
Test sample positioning	E.4.2.1	0.03	N	1	1	1	0.03	0.03	N-1
Device Holder Uncertainty	E.4.1.1	5.00	N	1	1	1	5.00	5.00	
Output power Power Drift - SAR drift measurement	6.6.2	4.04	R		1	1	2.33	2.33	
Phantom and Tissue Parameters									

Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R		1	1	0.03	0.03	
Liquid conductivity - deviation from target value	E.3.2	4.57	R		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		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				11.23	10.70	
Expanded Uncertainty (95% Confidence interval)			k				21.91	20.86	

7.2. 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 (+-%)	V i
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	
Axial Isotropy	E.2.2	2.5	R				1.02	1.02	
Hemispherical Isotropy	E.2.2	4.0	R				1.63	1.63	
Boundary effect	E.2.3	1.0	R		1	1	0.58	0.58	
Linearity	E.2.4	5.0	R		1	1	2.89	2.89	
System detection limits	E.2.5	1.0	R		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		1	1	1.73	1.73	
Integration Time	E.2.8	2.0	R		1	1	1.15	1.15	
RF ambient Conditions	E.6.1	3.0	R		1	1	1.73	1.73	
Probe positioner Mechanical Tolerance	E.6.2	2.0	R		1	1	1.15	1.15	
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R		1	1	0.03	0.03	
Extrapolation, interpolation and integration Algoritms for Max.	E.5.2	5.0	R		1	1	2.89	2.89	

SAR Evaluation									
Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.00	N		1	1	0.58	0.58	N-1
Input power and SAR drift measurement	8,6.6.2	4.04	R		1	1	2.33	2.33	
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R		1	1	0.03	0.03	
Liquid conductivity - deviation from target value	E.3.2	4.57	R		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		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				10.08	9.47	
Expanded Uncertainty (95% Confidence interval)			k				19.65	18.47	

8. SAR Measurement Evaluation

8.1. 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 DIPC99 1800MHz:SN 36/08 DIPF101 2450MHZ:SN 36/08 DIPJ103

8.2. Validation Results

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

Frequency	835MHz	1900MHz	2450MHz
Target value（1g）	9.5 W/Kg	39.7 W/Kg	52.4 W/Kg
250 mW input power	2.458 W/Kg	9.436 W/Kg	12.900 W/Kg
Test value（1g）	9.832 W/Kg	37.744 W/Kg	55.600 W/Kg

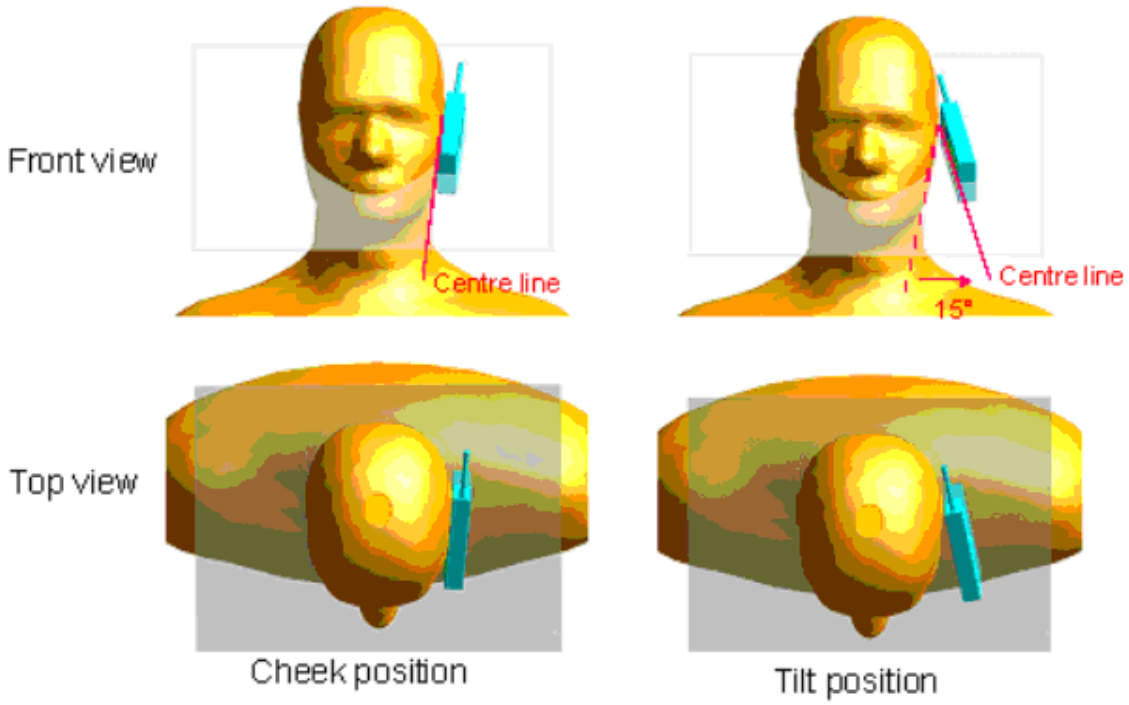
Note: System checks the specific test data please see page 182-193.

9. Operational Conditions During Test

9.1. Informations on the testing

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

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



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

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

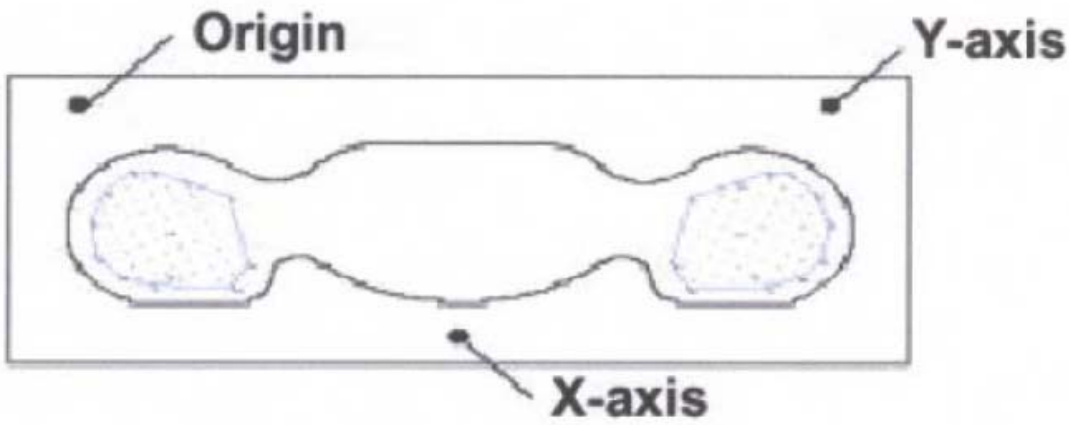
Remark: Please refer to Appendix B for the test setup photos.

9.2. Body-worn Configurations

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

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

9.3. 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.

9.4. 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.

10. Test Results List

10.1.Summary of Measurement Results (GSM/GPRS/EGPRS 850/1900)

SAR Values (GSM 850MHz Band), Measured against the head.

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Right head, Touch cheek, Channel Low	0.330	32.68
Right head, Touch cheek, Channel Middle	0.240	32.88
Right head, Touch cheek, Channel High	0.202	33.04
Right head, Tilt 15 Degree, Channel Middle	0.143	32.88
Left head, Touch cheek, Channel Middle	0.219	32.88
Left head, Tilt 15 Degree, Channel Middle	0.102	32.88

SAR Values (GSM 1900MHz Band), Measured against the head.

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Right head, Touch cheek, Channel Low	0.547	30.04
Right head, Touch cheek, Channel Middle	0.576	29.76
Right head, Touch cheek, Channel High	0.496	29.70
Right head, Tilt 15 Degree, Channel Middle	0.184	29.76
Left head, Touch cheek, Channel Middle	0.370	29.76
Left head, Tilt 15 Degree, Channel Middle	0.145	29.76

SAR Values (GSM 850MHz Band), Measured against the body.

Temperature: 23.0~23.8°C, humidity: 54~60%.	
Limit of SAR (W/kg)	1 g Average
	1.6
Test Case	Measurement Result (W/kg)

	1 g Average (W/kg)	Power level (dBm)
Side, Low frequency GPRS mode Back towards the phantom	1.059	32.52
Side, Middle frequency GPRS mode Back towards the phantom	1.157	32.68
Side, High frequency GPRS mode Back towards the phantom	1.135	32.91
Side, Middle frequency GPRS mode Keyboard towards the phantom	0.876	32.68
Side, Middle frequency EDGE mode Back towards the phantom	1.035	29.17
Side, Middle frequency GSM mode Back towards the phantom	0.488	32.88

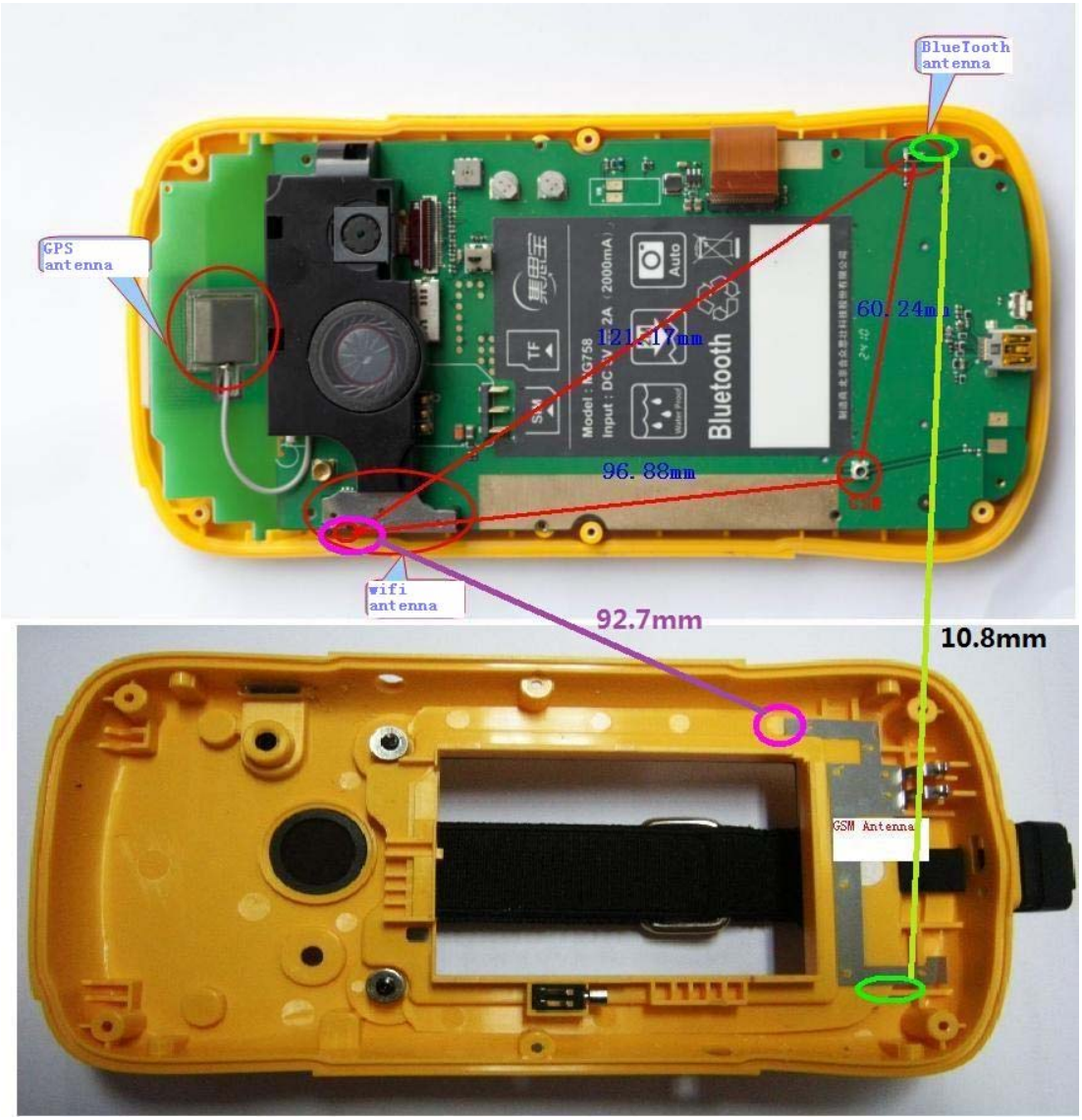
SAR Values (GSM 1900MHz Band), Measured against the body.

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Side, Low frequency GPRS mode Back towards the phantom	1.194	29.45
Side, Middle frequency GPRS mode Back towards the phantom	1.178	29.31
Side, High frequency GPRS mode Back towards the phantom	0.942	29.08
Side, Low frequency GPRS mode Keyboard towards the phantom	0.933	29.45
Side, Low frequency EDGE mode Back towards the phantom	0.895	29.36
Side, Low frequency GSM mode Back towards the phantom	0.247	30.04

10.2.Summary of Measurement Results (WiFi and Bluetooth function)

The distance between BT antenna and GSM antenna is 10.8mm<2.5cm.
The distance between WiFi antenna and GSM antenna is 92.7mm＞5cm. The location of the antennas

inside mobile phone is shown below:



The conducted power for BT antenna is 0.63dBm.
The conducted power for WiFi is as following:

802.11b/data rate	Conducted Power (dBm)		
	2412MHz	2437MHz	2462MHz
1M	15.33	15.12	15.07
2M	15.24	14.98	14.77
5.5M	15.48	15.27	15.13
11M	**15.61**	**15.48**	**15.35**
802.11g/data rate	Conducted Power (dBm)		
	2412MHz	2437MHz	2462MHz
6M	19.11	19.05	18.94

9M	19.07	19.01	18.82
12M	19.23	19.12	19.01
18M	19.01	18.91	18.85
24M	19.25	19.13	19.04
36M	19.15	19.01	18.92
48M	19.04	18.94	18.80
54M	**19.30**	**19.25**	**19.19**

The BT conduct Power is 1.16mW<12mW(PRef).And BT antenna and GSM antenna can Simultaneous Transmission. Because of 'Stand-alone SAR is not required for an unlicensed transmitter with output power ≤ PRef mW when either the output power or 1-g SAR for each of the other antennas within 2.5 cm of that unlicensed transmitting antenna is ≤ PRef mW or < 1.2 W/kg.' in KDB 648474, SAR for BT is not required.

The conducted power for WiFi transmitter is 85mW>24mW(2PRef) and its antenna is ＞5cm from other antenna. we can draw the conclusion that: When the output of an unlicensed transmitter is ≤ 2PRef and its antenna(s) is ≥ 5.0 cm from other antennas, stand-alone SAR evaluation is also not required for that unlicensed transmitter. Because the conducted power for WiFi transmitter is ＞ 2PRef and its antenna is ＞5cm from other antenna, stand-alone SAR for WiFi should be performed. Then, simultaneous transmission SAR for WiFi is considered with measurement results of GSM and WiFi.

Summary of Measurement Results

Table 1: SAR Values (802.11b 11M data rate- Body)

Temperature: 21.0~23.5°C, Relative Humidity: 60~65%.		
Limit of SAR (W/kg)	**1 g Average**	
	1.6	
Test Configuration	**Measurement Result (W/kg)**	
	1 g Average(W/kg)	**Power level (dBm)**
Frontside Towards phantom with 2412MHz	0.027	15.61
Frontside Towards phantom with 2437MHz	0.020	15.48
Frontside Towards phantom with 2462MHz	0.018	15.35
Backside Towards phantom with 2412MHz	0.111	15.61
Backside Towards phantom with 2437MHz	0.061	15.48
Backside Towards phantom with 2462MHz	0.074	15.35
Rightside Towards phantom with 2412MHz	0.058	15.61

Rightside Towards phantom with 2437MHz	0.039	15.48
Rightside Towards phantom with 2462MHz	0.058	15.35
Topside Towards phantom with 2412MHz	0.014	15.61
Topside Towards phantom with 2437MHz	0.009	15.48
Topside Towards phantom with 2462MHz	0.009	15.35

Table 2: SAR Values (802.11g 54M data rate- Body)

Temperature: 21.0~23.5°C, Relative Humidity: 60~65%.		
Limit of SAR (W/kg)	**1 g Average**	
	1.6	
Test Configuration	**Measurement Result (W/kg)**	
	1 g Average(W/kg)	**Power level (dBm)**
Frontside Towards phantom with 2412MHz	0.012	19.30
Frontside Towards phantom with 2437MHz	0.012	19.25
Frontside Towards phantom with 2462MHz	0.031	19.19
Backside Towards phantom with 2412MHz	0.051	19.30
Backside Towards phantom with 2437MHz	0.037	19.25
Backside Towards phantom with 2462MHz	0.031	19.19
Rightside Towards phantom with 2412MHz	0.023	19.30
Rightside Towards phantom with 2437MHz	0.023	19.25
Rightside Towards phantom with 2462MHz	0.021	19.19
Topside Towards phantom with 2412MHz	0.006	19.30
Topside Towards phantom with 2437MHz	0.007	19.25
Topside Towards phantom with 2462MHz	0.007	19.19

According to the above tables, the sum of SAR values for GSM and WiFi ＜1.6W/kg. So simultaneous transmission SAR are not required for WiFi transmitter.

Annex A Accreditation Certificate

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(No. CNAS L3572)

China National Accreditation Service for Conformity Assessment has accredited

Morlab Laboratory Shenzhen Morlab Communications Technology Co., Ltd.

3/F, Electronic Testing Building, Shahe Road, Xili,Nanshan District, Shenzhen, Guangdong, China

to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing and/or calibration.

The scope of accreditation is detailed in the attached schedule bearing the same accreditation number as above. The schedule forms an integral part of this certificate.

Date of Issue: 2008-07-01

Date of Expiry: 2011-06-30

Date of Initial Accreditation: 2008-07-01

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation systems for conformity assessment. CNAS is the signatory to International Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (ILAC MRA), and the signatory to Asia Pacific Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (APLAC MRA).

Annex B Photographs of the EUT

1 EUT Left Head Touch Cheek Position

2 EUT Left Head Tilt15 Position

3 EUT Right Head Touch Cheek Position

4 EUT Right Head Tilt15 Position

5 EUT Backside Position

6 EUT Frontside Position

7 EUT Rightside Position

8 EUT Topside Position

Liquid Level Photo

Sample Photograph

Annex C Graph Test Results

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

		position on Low Channel in GPRS mode Measurement 20: Validation Plane with Body device position on Middle Channel in GPRS mode Measurement 21Validation Plane with Body device position on High Channel in GPRS mode Measurement 22: Validation Plane with Body device position on Middle Channel in GPRS mode Measurement 23: Validation Plane with Body device position on Middle Channel in EDGE mode Measurement 24: Validation Plane with Body device position on Middle Channel in GSM mode
	WLAN **2450MHz**	Measurement 25: Validation Plane with Body device position on Low Channel in 802.11b mode(Back) Measurement 26: Validation Plane with Body device position on Middle Channel in 802.11b mode(Back) Measurement 27: Validation Plane with Body device position on High Channel in 802.11b mode(Back) Measurement 28: Validation Plane with Body device position on Low Channel in 802.11b mode(Front) Measurement 29: Validation Plane with Body device position on Middle Channel in 802.11b mode(Front) Measurement 30: Validation Plane with Body device position on High Channel in 802.11b mode(Front) Measurement 31: Validation Plane with Body device position on Low Channel in 802.11b mode(Right) Measurement 32: Validation Plane with Body device position on Middle Channel in 802.11b mode(Right) Measurement 33: Validation Plane with Body device position on High Channel in 802.11b mode(Right) Measurement 34: Validation Plane with Body device position on Low Channel in 802.11b mode (Top) Measurement 35: Validation Plane with Body device position on Middle Channel in 802.11b mode(Top) Measurement 36: Validation Plane with Body device position on High Channel in 802.11b mode(Top) Measurement 37: Validation Plane with Body device position on Low Channel in 802.11g mode(Back) Measurement 38: Validation Plane with Body device position on Middle Channel in 802.11g mode(Back) Measurement 39: Validation Plane with Body device position on High Channel in 802.11g mode(Back)

		Measurement 40: Validation Plane with Body device position on Low Channel in 802.11g mode(Front) Measurement 41: Validation Plane with Body device position on Middle Channel in 802.11g mode(Front) Measurement 42: Validation Plane with Body device position on High Channel in 802.11g mode(Front) Measurement 43: Validation Plane with Body device position on Low Channel in 802.11g mode(Right) Measurement 44: Validation Plane with Body device position on Middle Channel in 802.11g mode(Right) Measurement 45: Validation Plane with Body device position on High Channel in 802.11g mode(Right) Measurement 46: Validation Plane with Body device position on Low Channel in 802.11g mode (Top) Measurement 47: Validation Plane with Body device position on Middle Channel in 802.11g mode(Top) Measurement 48: Validation Plane with Body device position on High Channel in 802.11g mode(Top)

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: 15/12/2010

Measurement duration: 8 minutes 04 seconds

A. Experimental conditions.

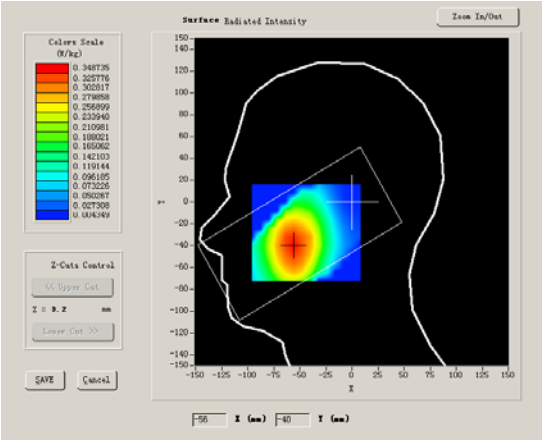
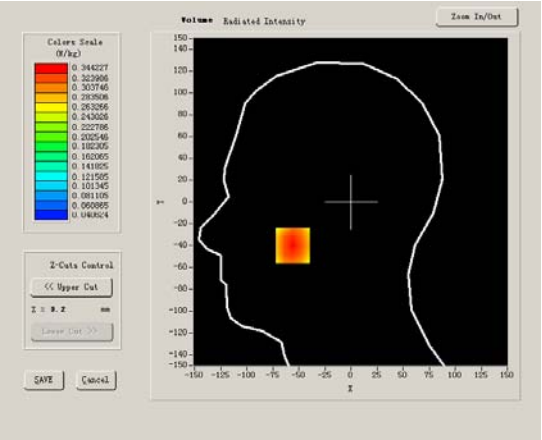
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	824.200012
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250

Conductivity (S/m)	0.866612
Variation (%)	-0.390000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

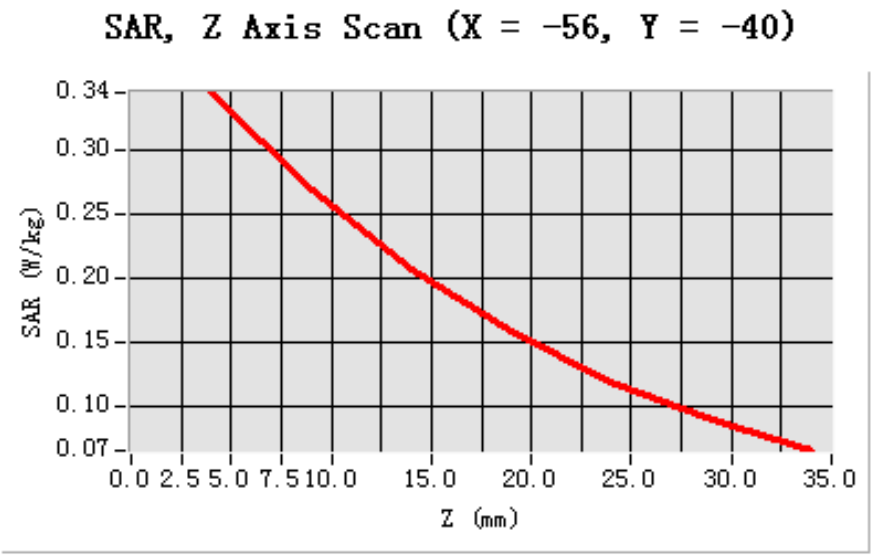
SURFACE SAR	VOLUME SAR
	

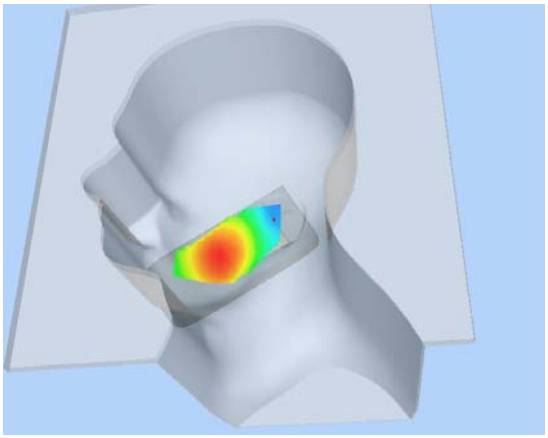
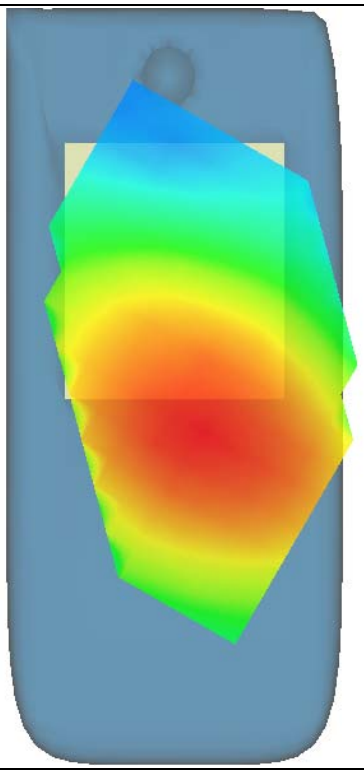
Maximum location: X=-56.00, Y=-40.00

SAR 10g (W/Kg)	0.244105
SAR 1g (W/Kg)	0.329669

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3442	0.2686	0.2073	0.1583	0.1202	0.0902



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: 15/12/2010

Measurement duration: 7 minutes 59 seconds

A. Experimental conditions.

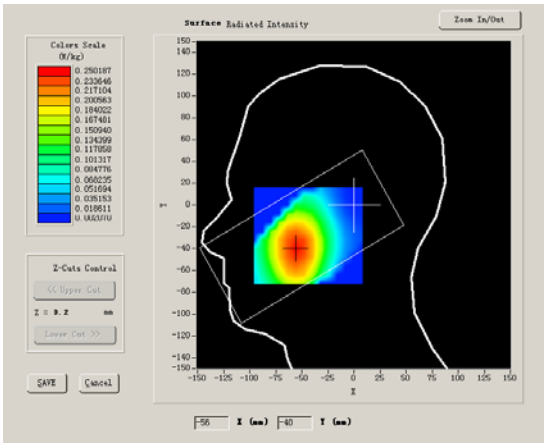
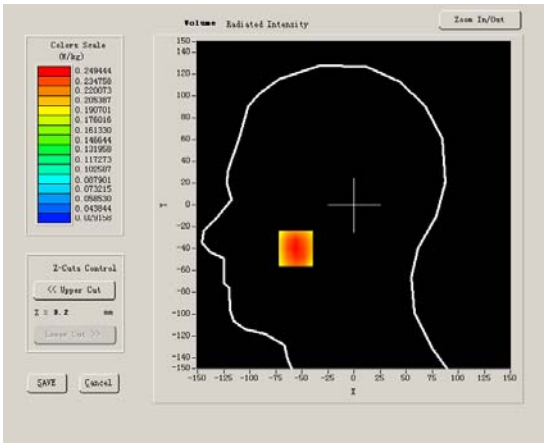
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	40.669998
Relative permittivity	19.120001

Conductivity (S/m)	0.888655
Variation (%)	-0.500000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

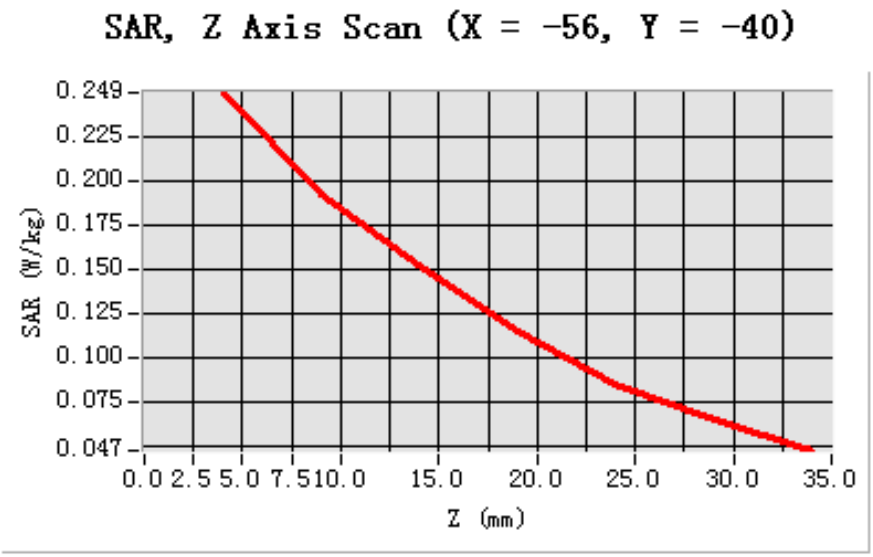
SURFACE SAR	**VOLUME SAR**
	

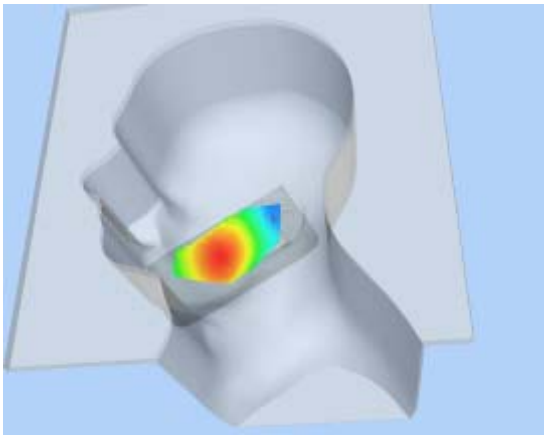
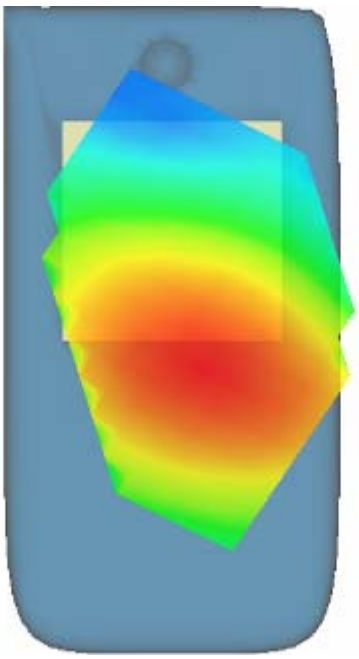
Maximum location: X=-56.00, Y=-40.00

SAR 10g (W/Kg)	0.175875
SAR 1g (W/Kg)	0.240376

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2494	0.1924	0.1514	0.1140	0.0849	0.0641



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: 15/12/2010

Measurement duration: 7 minutes 59 seconds

A. Experimental conditions.

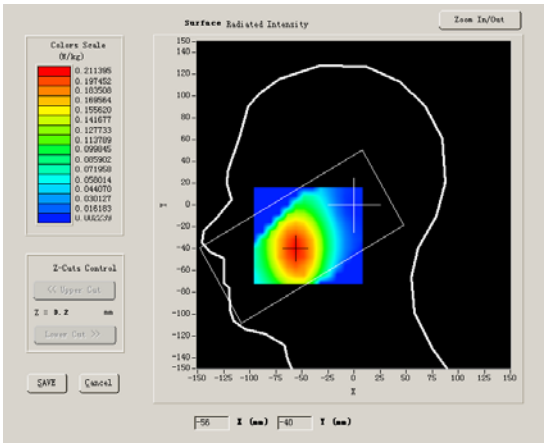
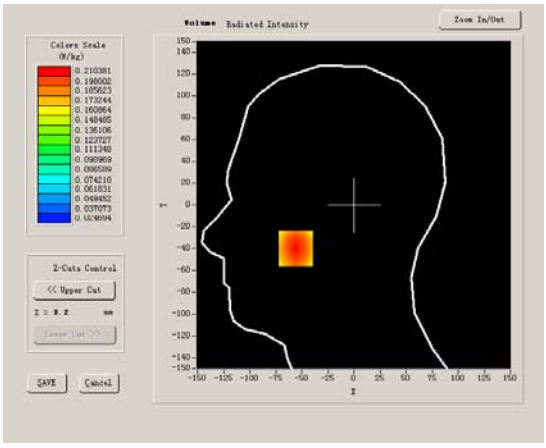
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	848.799988
Relative permittivity (real part)	41.675999
Relative permittivity	18.967199

Conductivity (S/m)	0.894409
Variation (%)	-0.590000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

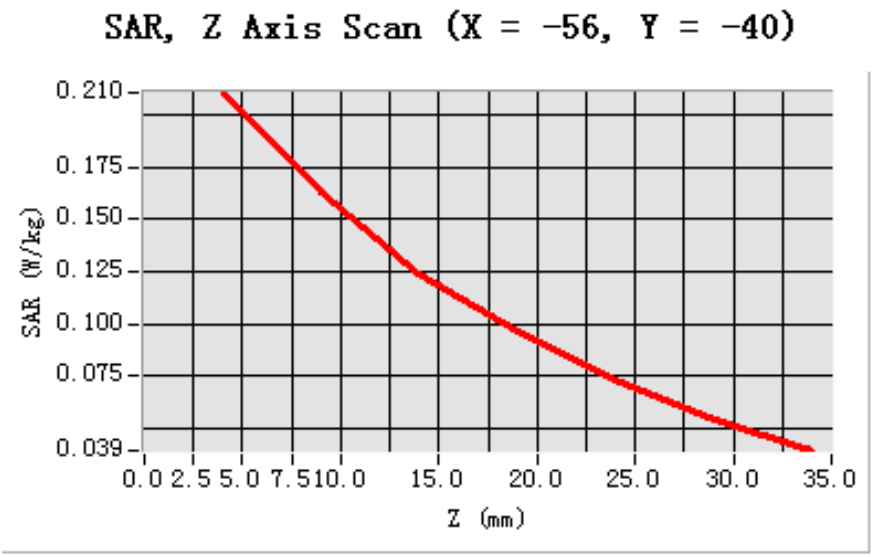
SURFACE SAR	VOLUME SAR
	

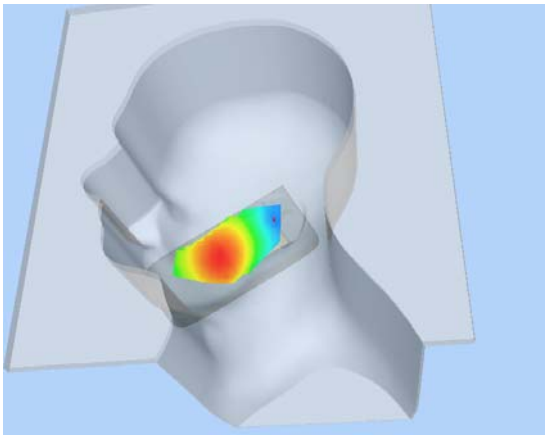
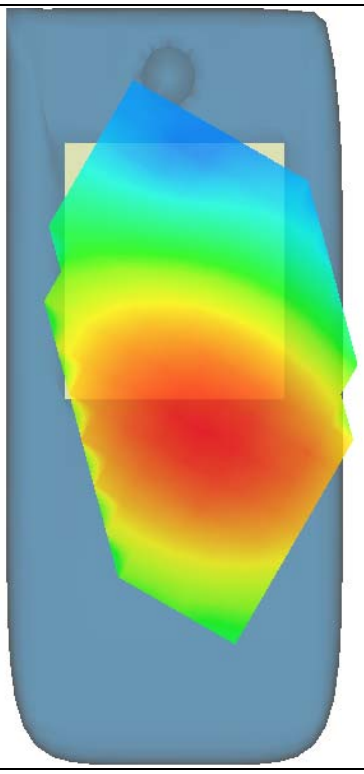
Maximum location: X=-56.00, Y=-40.00

SAR 10g (W/Kg)	0.148728
SAR 1g (W/Kg)	0.202339

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2104	0.1634	0.1243	0.0961	0.0732	0.0543



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: 15/12/2010

Measurement duration: 7 minutes 43 seconds

A. Experimental conditions.

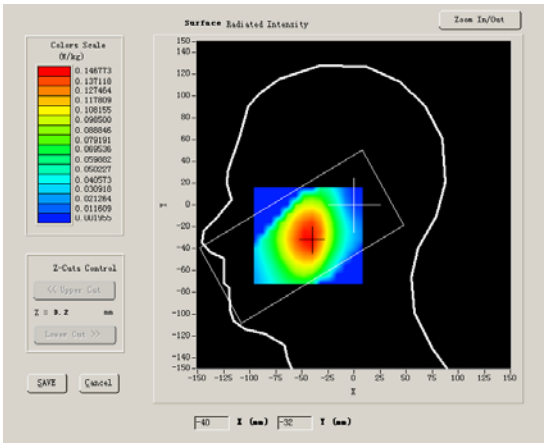
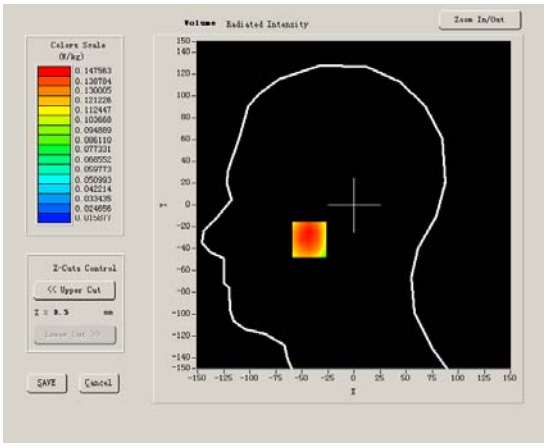
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	40.669998
Relative permittivity	19.120001

Conductivity (S/m)	0.888655
Variation (%)	0.030000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

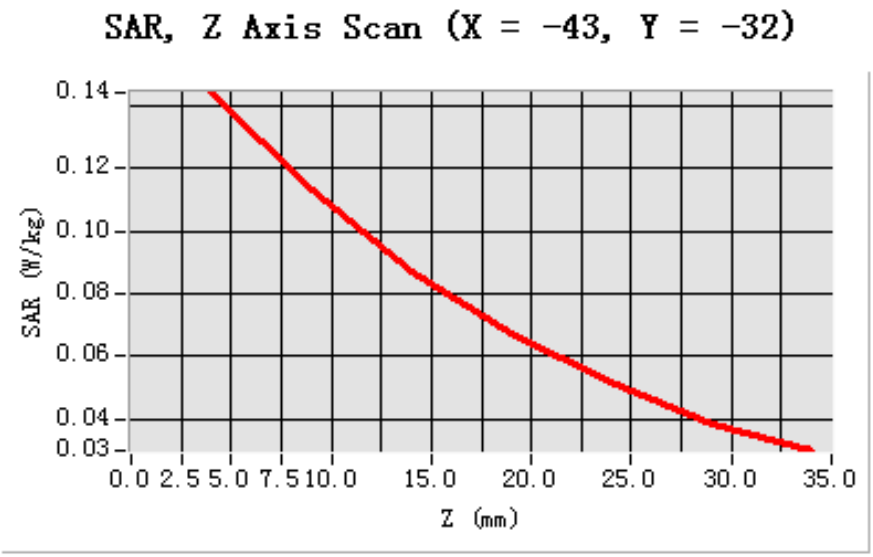
SURFACE SAR	VOLUME SAR
	

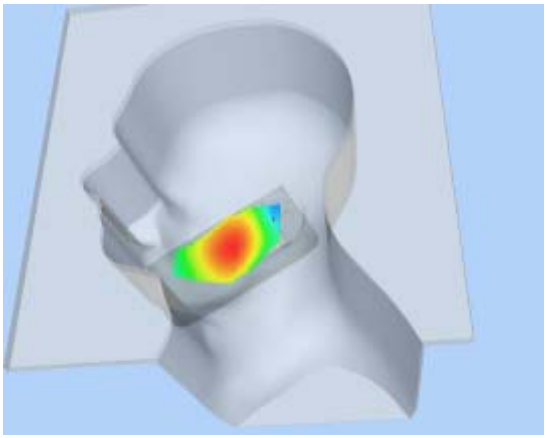
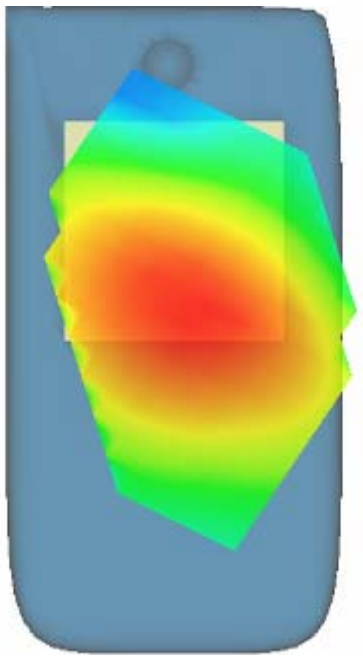
Maximum location: X=-43.00, Y=-32.00

SAR 10g (W/Kg)	0.104567
SAR 1g (W/Kg)	0.142956

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1443	0.1135	0.0875	0.0672	0.0517	0.0386



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: 15/12/2010

Measurement duration: 8 minutes 4 seconds

A. Experimental conditions.

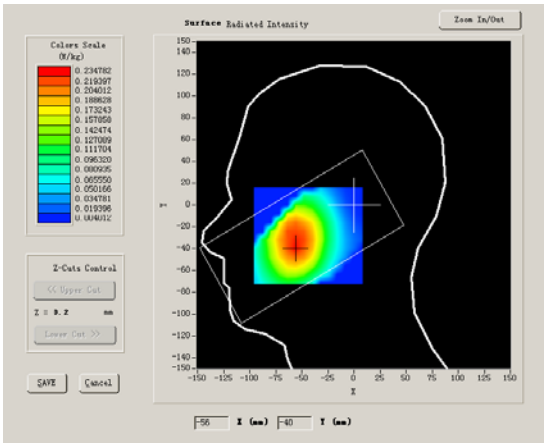
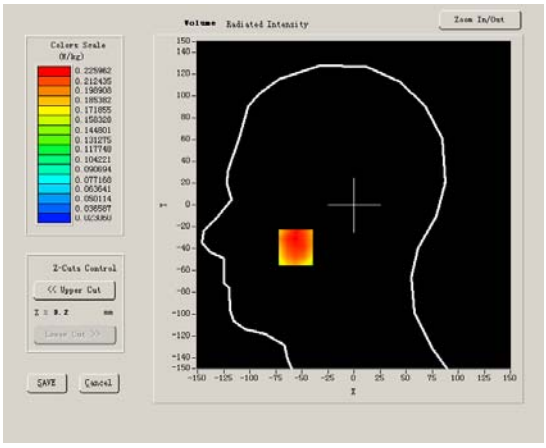
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	40.669998
Relative permittivity	19.120001

Conductivity (S/m)	0.888655
Variation (%)	-3.130000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

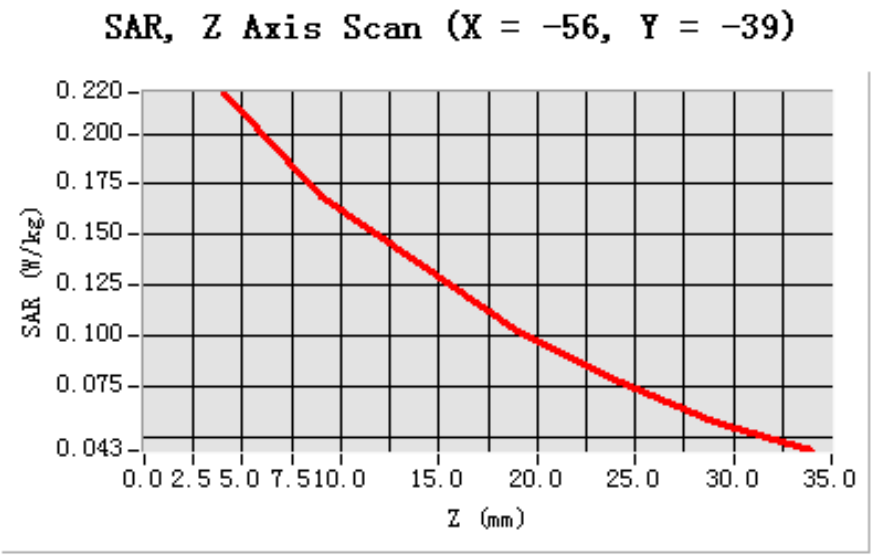
SURFACE SAR	VOLUME SAR
	

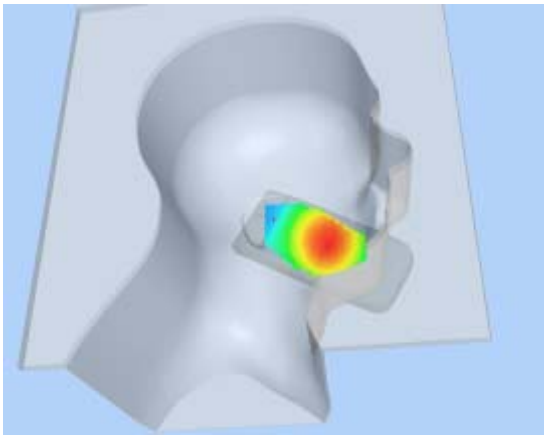
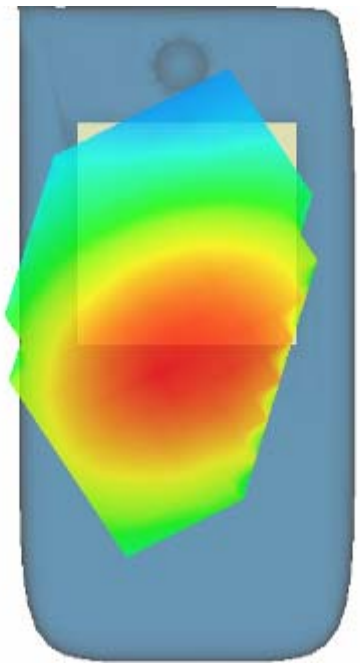
Maximum location: X=-56.00, Y=-39.00

SAR 10g (W/Kg)	0.161365
SAR 1g (W/Kg)	0.218793

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2202	0.1688	0.1362	0.1020	0.0784	0.0570



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: 15/12/2010

Measurement duration: 7 minutes 42 seconds

A. Experimental conditions.

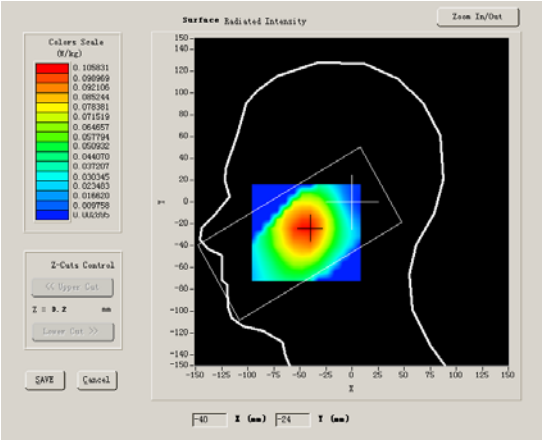
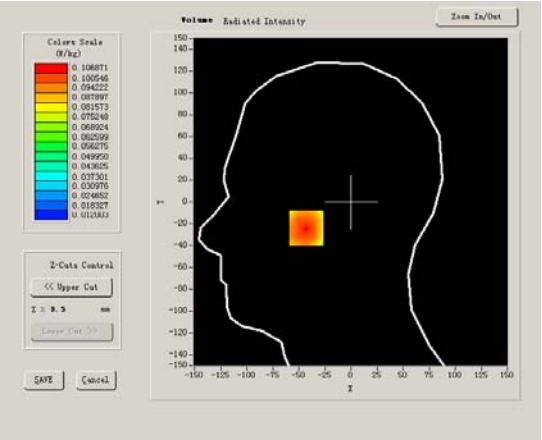
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	40.669998
Relative permittivity	19.120001

Conductivity (S/m)	0.888655
Variation (%)	-1.950000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

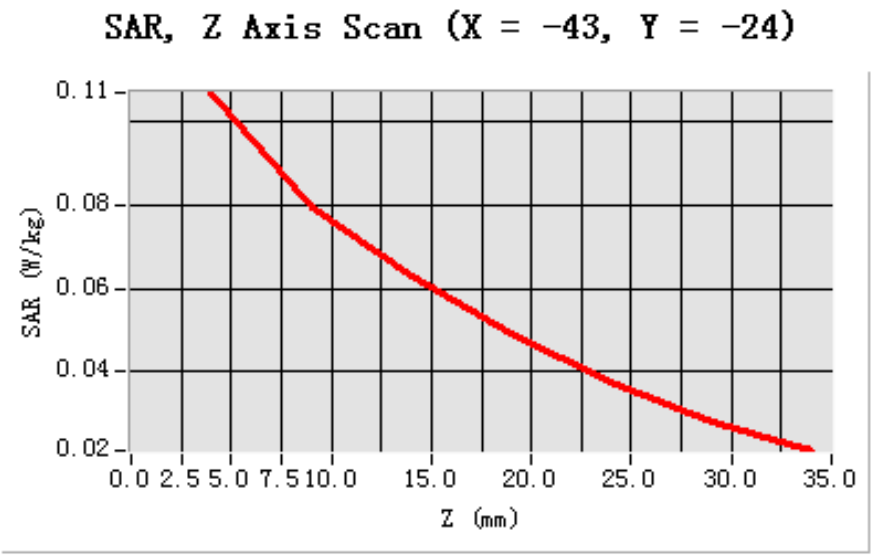
SURFACE SAR	VOLUME SAR
	

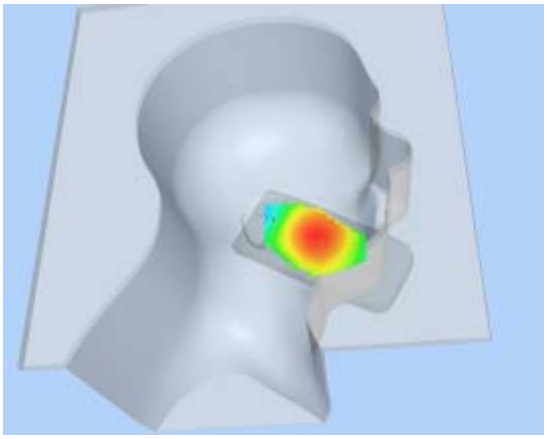
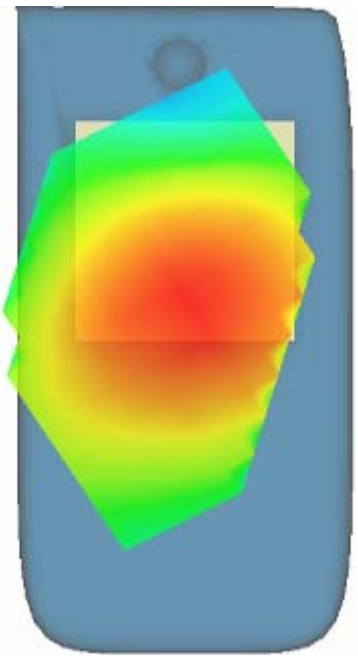
Maximum location: X=-43.00, Y=-24.00

SAR 10g (W/Kg)	0.074955
SAR 1g (W/Kg)	0.102407

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1069	0.0796	0.0631	0.0490	0.0373	0.0282



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: 15/12/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

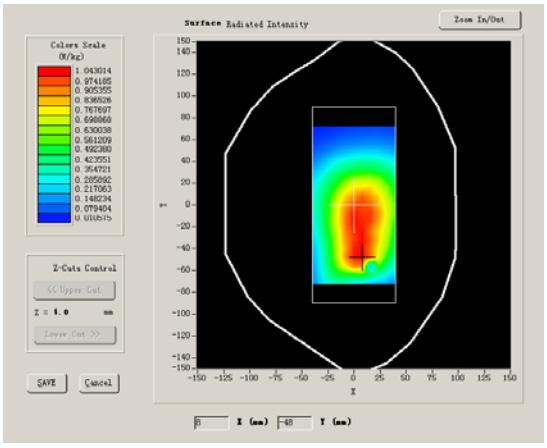
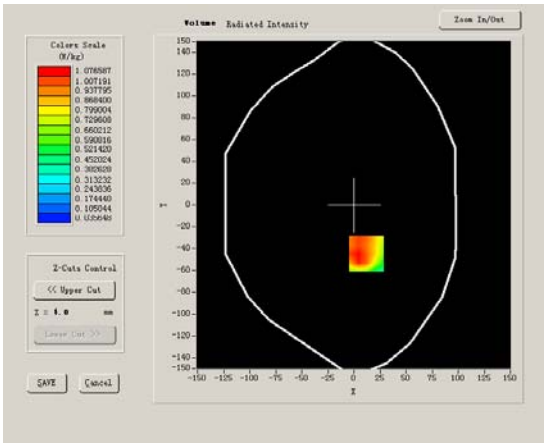
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 128):

Frequency (MHz)	824.200012
Relative permittivity (real part)	55.709999
Relative permittivity	18.926250

Conductivity (S/m)	0.988874
Variation (%)	0.520000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:4

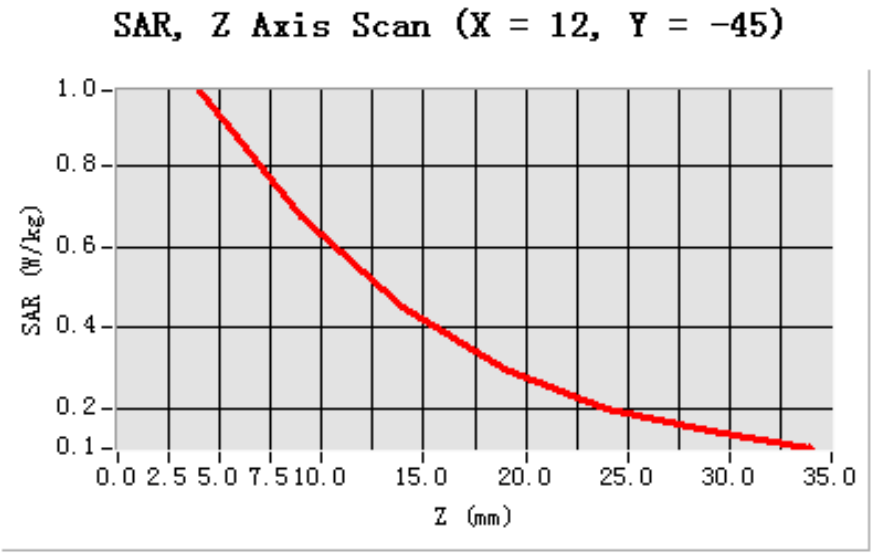
SURFACE SAR	**VOLUME SAR**
	

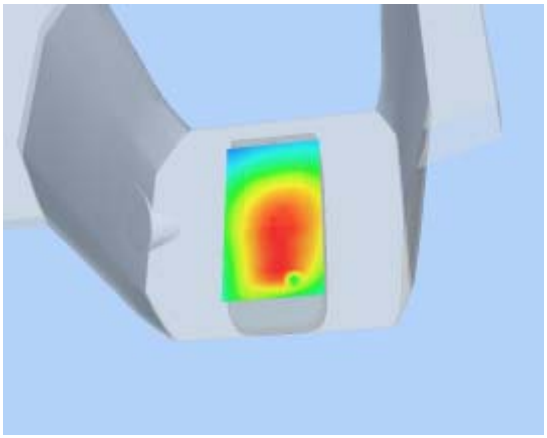
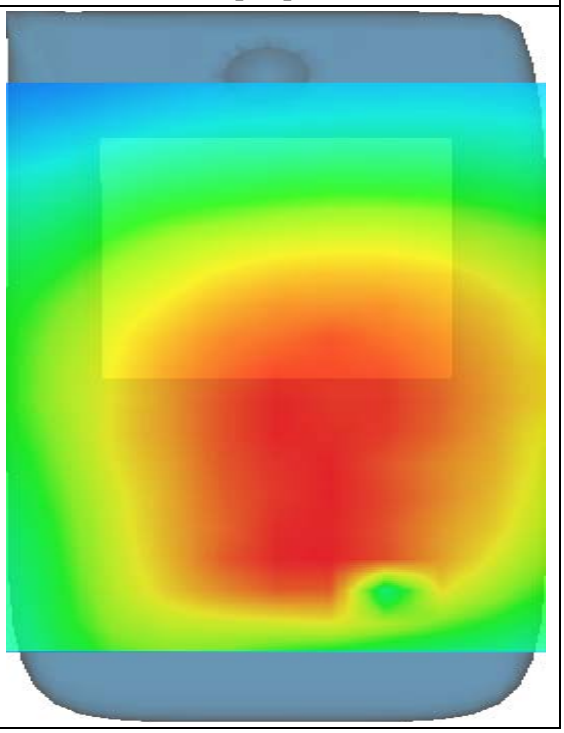
Maximum location: X=12.00, Y=-45.00

SAR 10g (W/Kg)	0.671709
SAR 1g (W/Kg)	1.058559

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9831	0.6762	0.4495	0.3018	0.2033	0.1462



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: 15/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

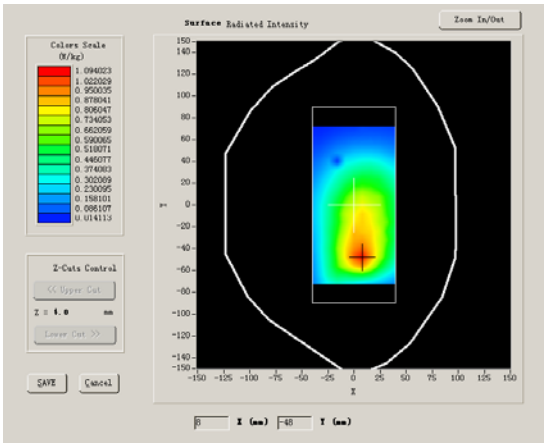
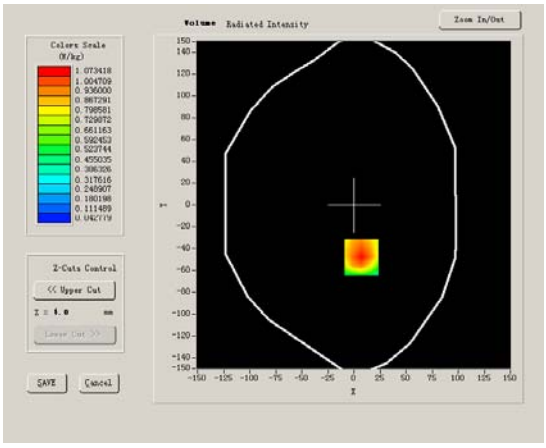
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	55.709999
Relative permittivity	19.120001

Conductivity (S/m)	0.988874
Variation (%)	0.170000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:4

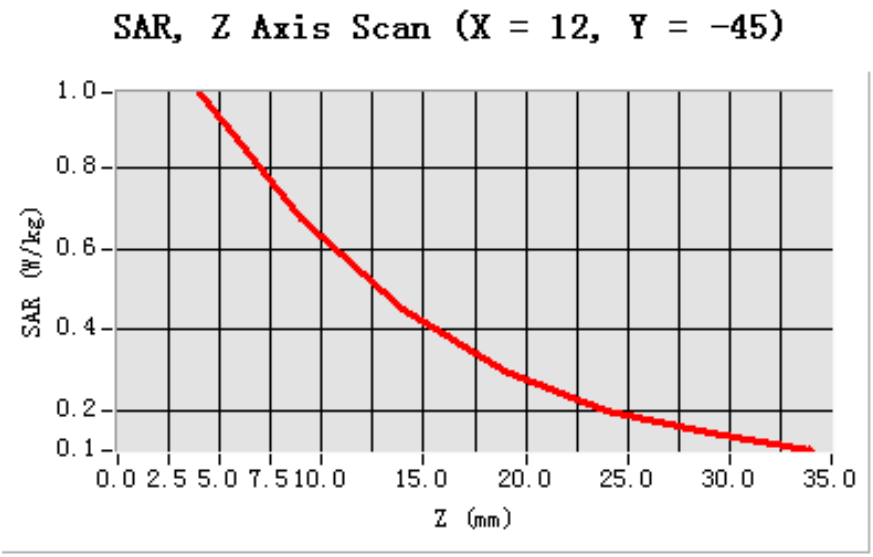
SURFACE SAR	**VOLUME SAR**
	

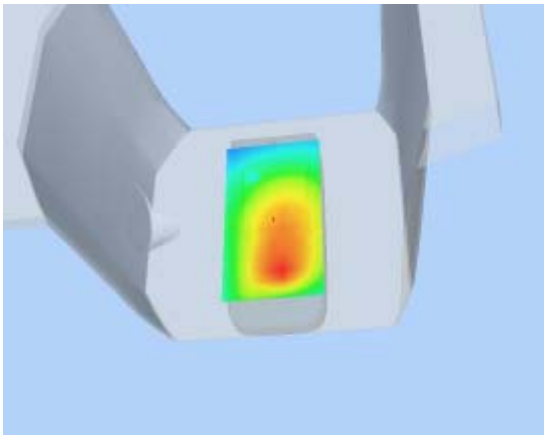
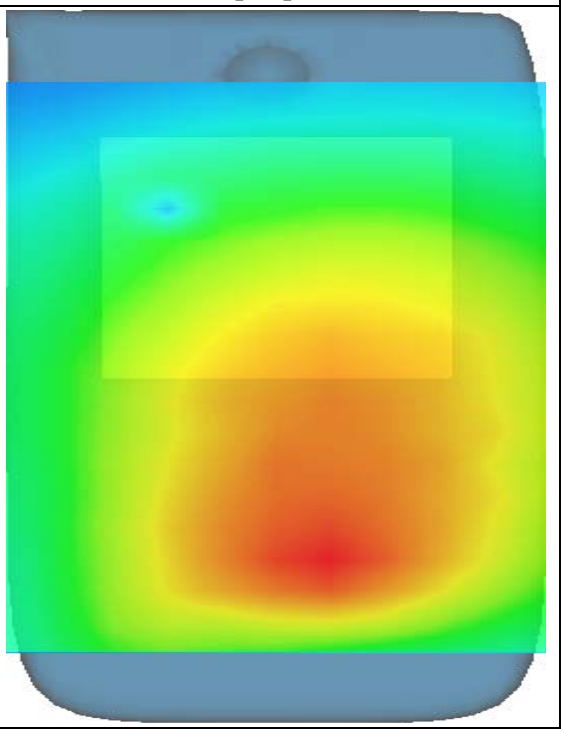
Maximum location: X=7.00, Y=-48.00

SAR 10g (W/Kg)	0.651902
SAR 1g (W/Kg)	1.159336

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0734	0.0528	0.4463	0.3012	0.1973	0.1369



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: 15/12/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

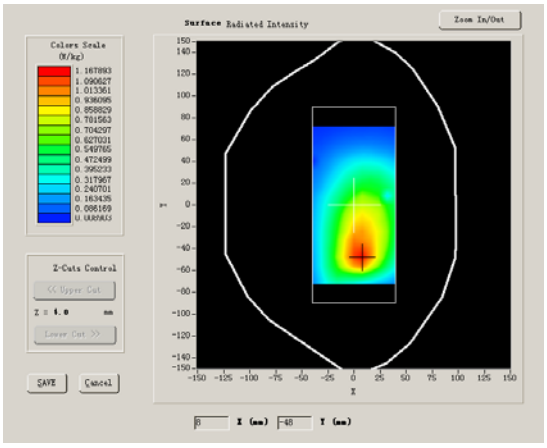
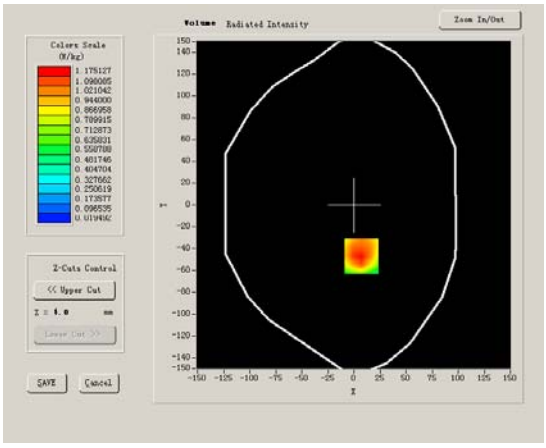
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GPRS

B. SAR Measurement Results

Higher Band SAR (Channel 251):

Frequency (MHz)	848.799988
Relative permittivity (real part)	55.709999
Relative permittivity	18.967199

Conductivity (S/m)	0.988874
Variation (%)	-0.030000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:4

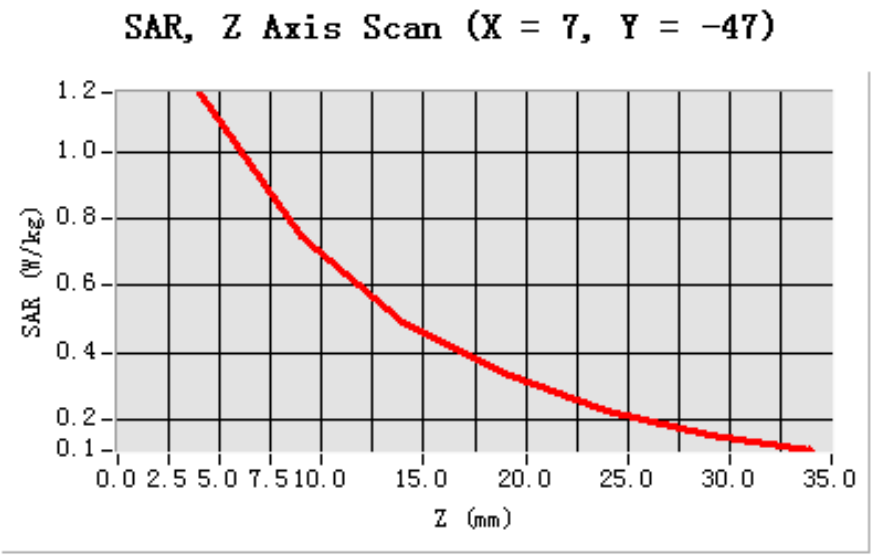
SURFACE SAR	**VOLUME SAR**
	

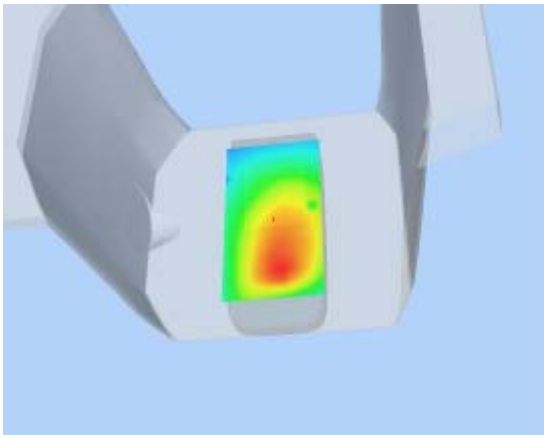
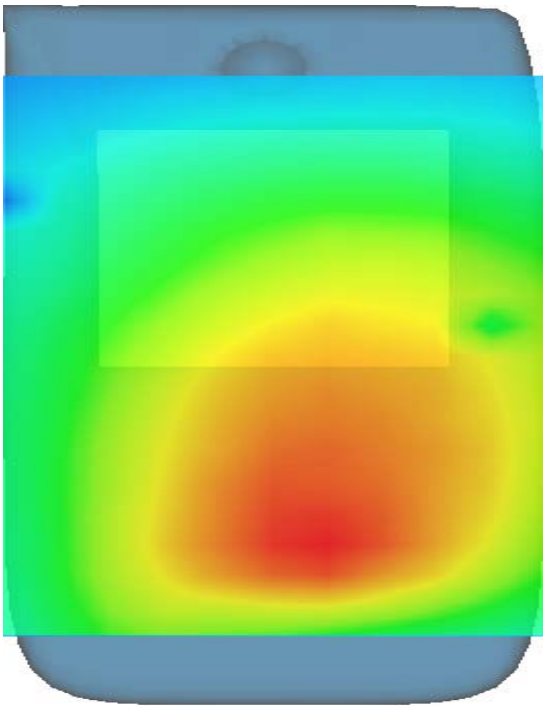
Maximum location: X=7.00, Y=-47.00

SAR 10g (W/Kg)	0.714540
SAR 1g (W/Kg)	1.135289

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.1751	0.7487	0.4922	0.3384	0.2288	0.1548



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: 15/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

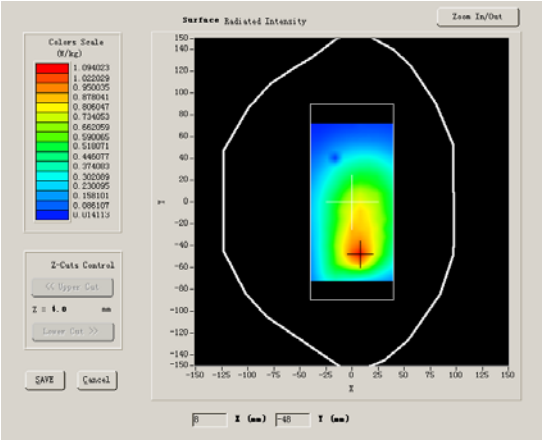
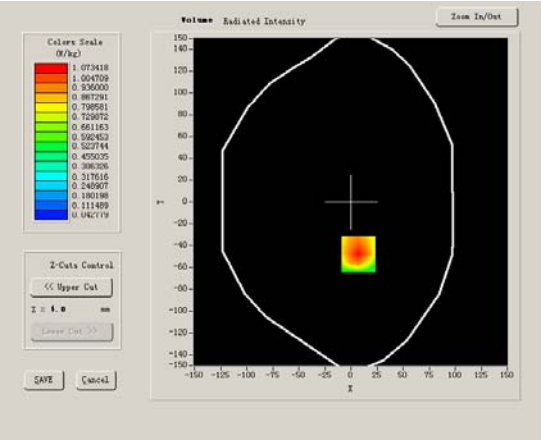
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	55.709999
Relative permittivity	19.120001

Conductivity (S/m)	0.988874
Variation (%)	0.170000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:4

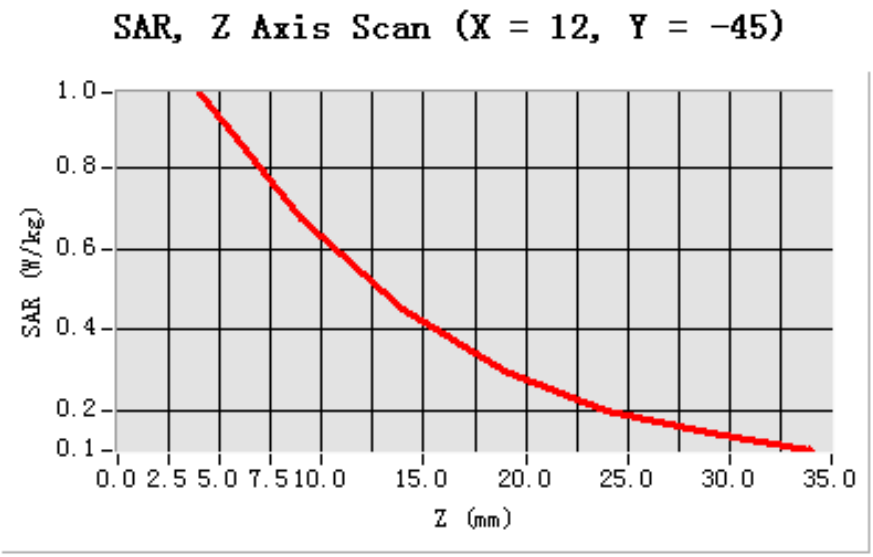
SURFACE SAR	VOLUME SAR
	

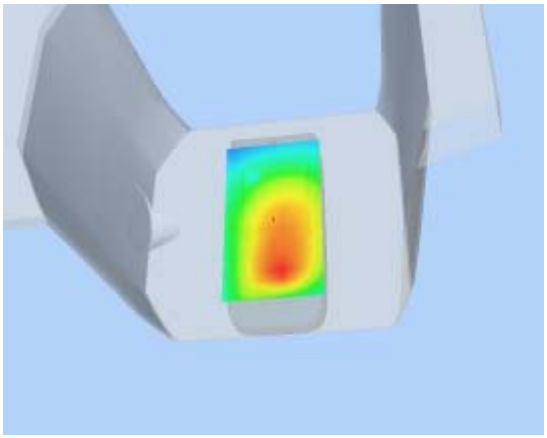
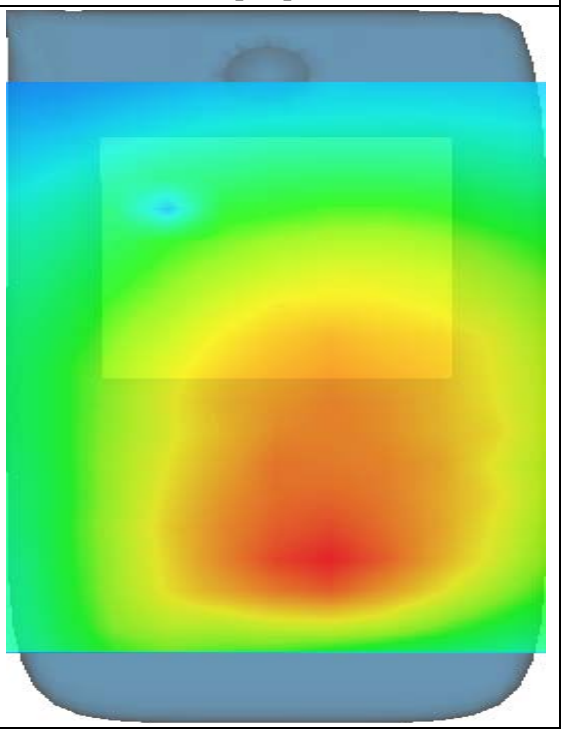
Maximum location: X=7.00, Y=-48.00

SAR 10g (W/Kg)	0.472353
SAR 1g (W/Kg)	0.876422

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0734	0.0528	0.4463	0.3012	0.1973	0.1369



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: 15/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

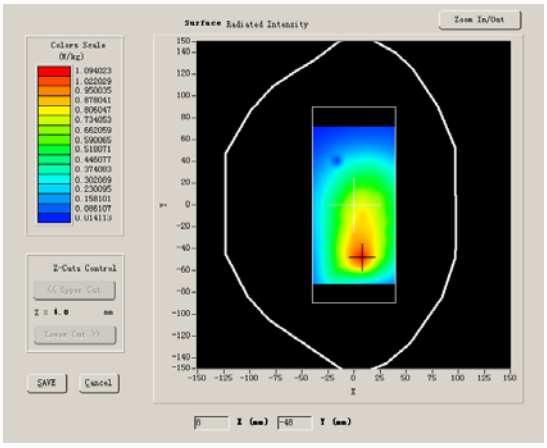
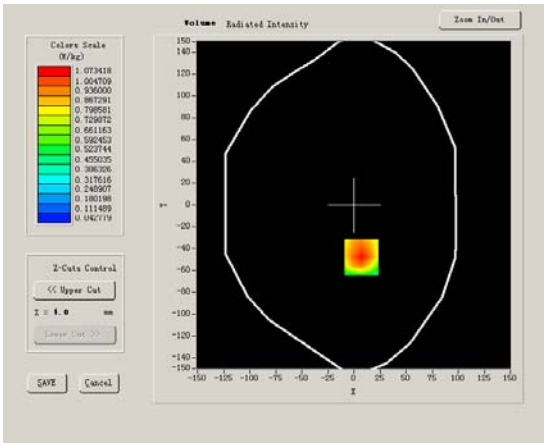
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	EDGE

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	55.709999
Relative permittivity	19.120001

Conductivity (S/m)	0.988874
Variation (%)	0.170000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:4

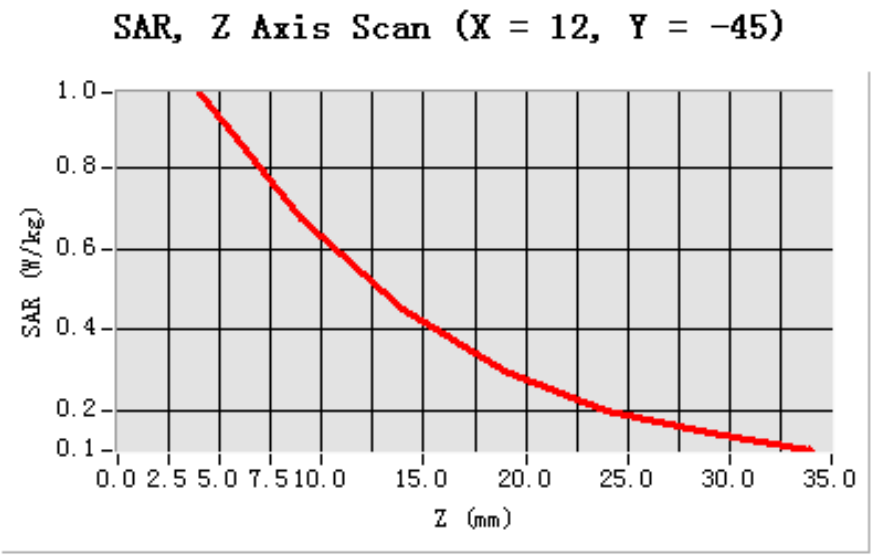
SURFACE SAR	**VOLUME SAR**
	

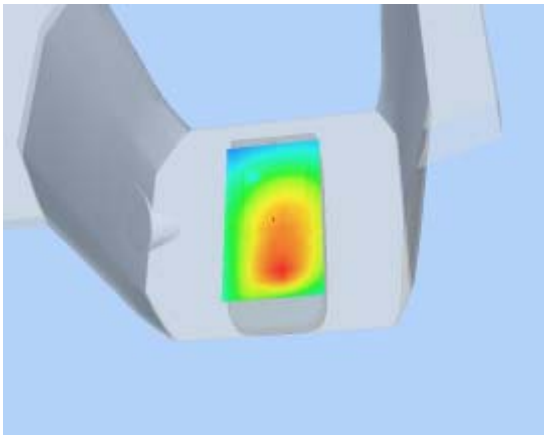
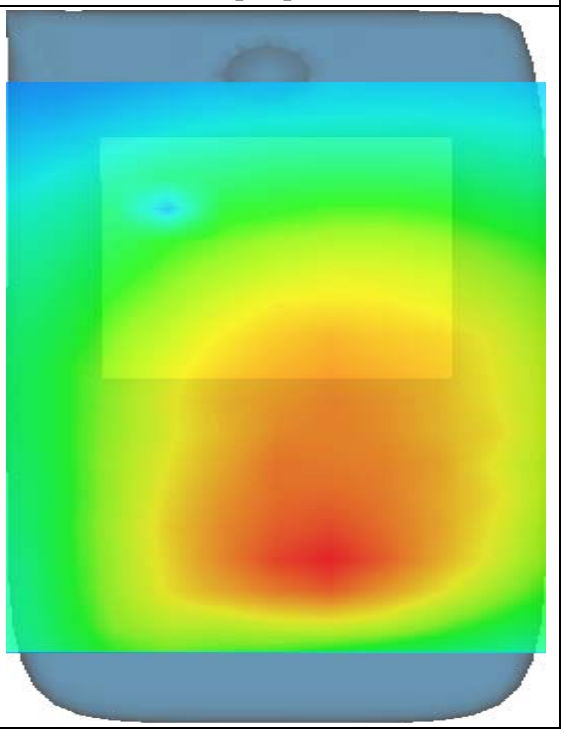
Maximum location: X=7.00, Y=-48.00

SAR 10g (W/Kg)	0.594765
SAR 1g (W/Kg)	1.034622

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0734	0.0528	0.4463	0.3012	0.1973	0.1369



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: 15/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

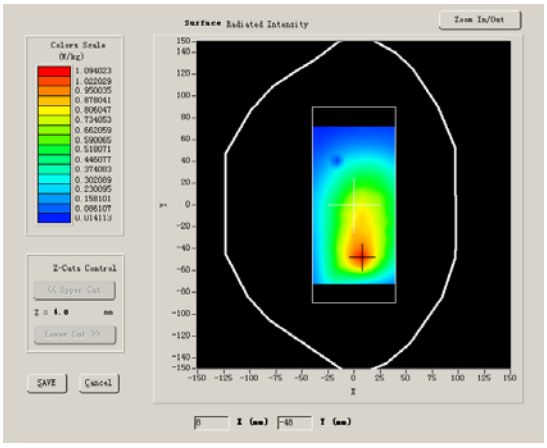
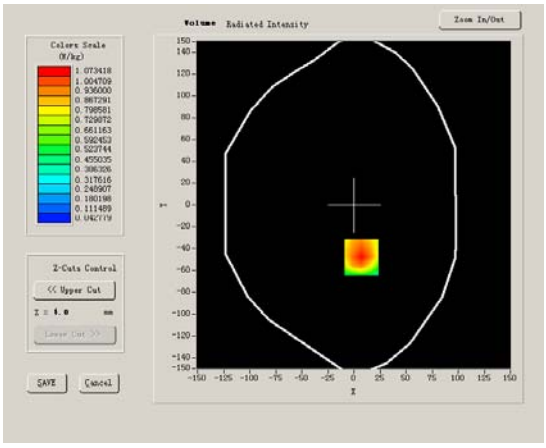
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	55.709999
Relative permittivity	19.120001

Conductivity (S/m)	0.988874
Variation (%)	0.170000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:8

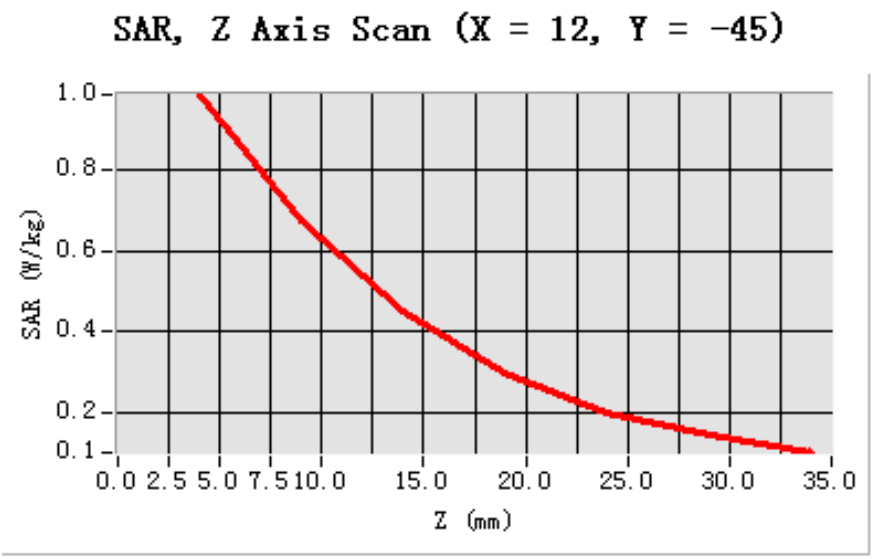
SURFACE SAR	VOLUME SAR
	

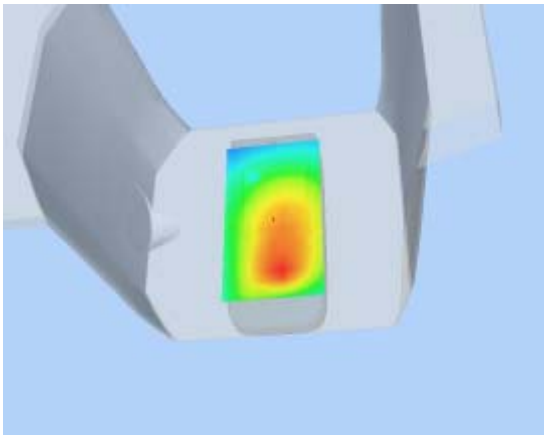
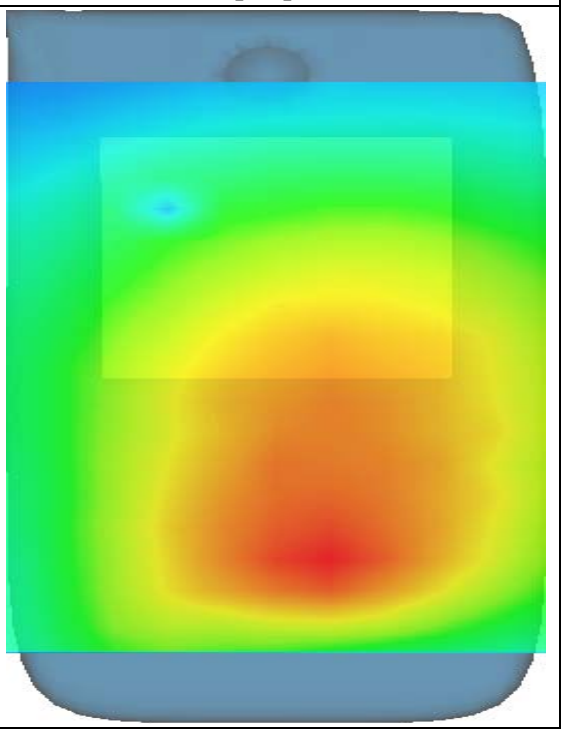
Maximum location: X=7.00, Y=-48.00

SAR 10g (W/Kg)	0.241264
SAR 1g (W/Kg)	0.487855

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0734	0.0528	0.4463	0.3012	0.1973	0.1369



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: 15/12/2010

Measurement duration: 8 minutes 20 seconds

A. Experimental conditions.

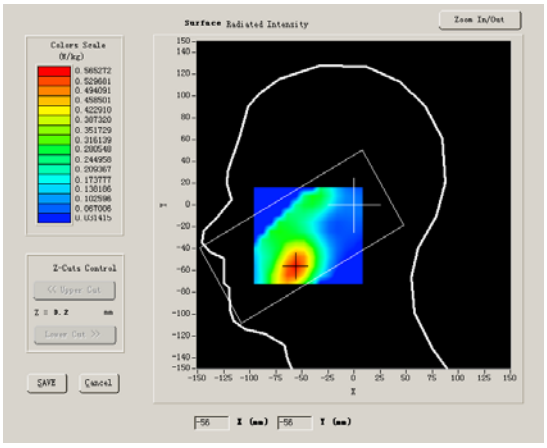
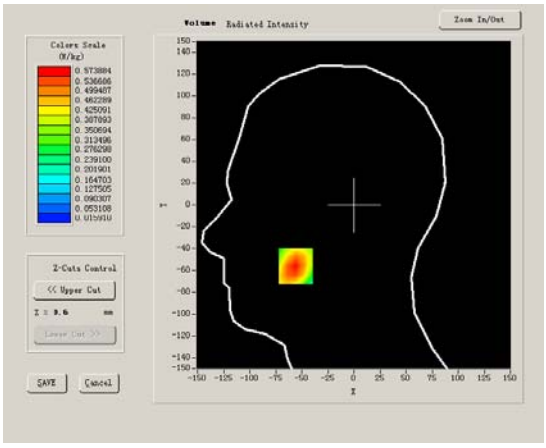
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	39.993999
Relative permittivity	12.991650

Conductivity (S/m)	1.335397
Variation (%)	-1.480000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

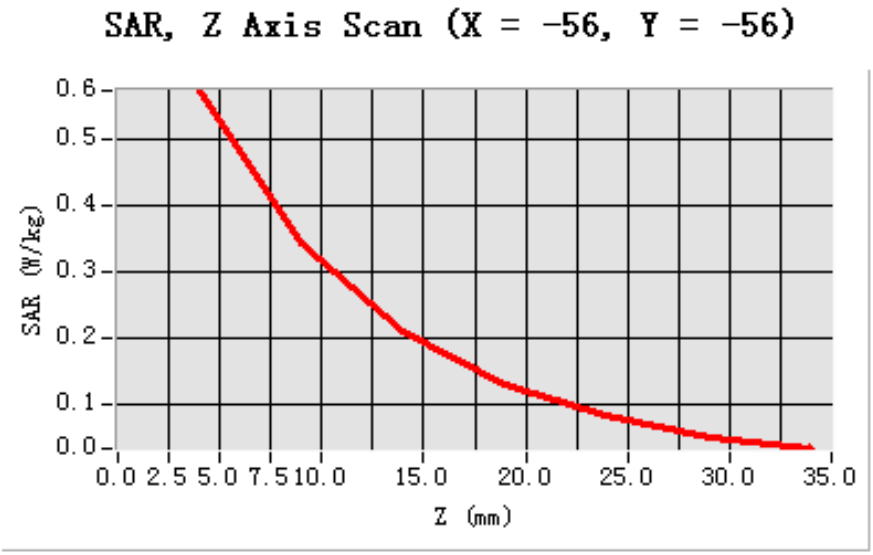
SURFACE SAR	VOLUME SAR
	

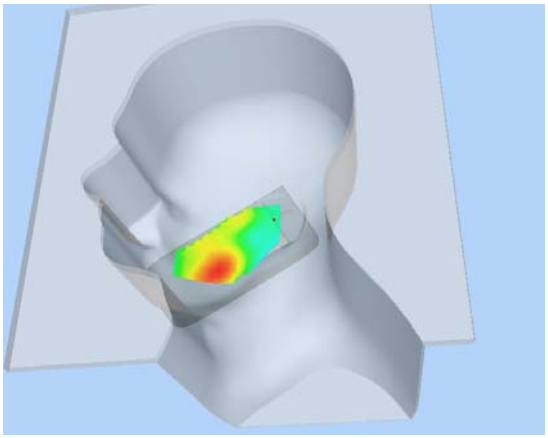
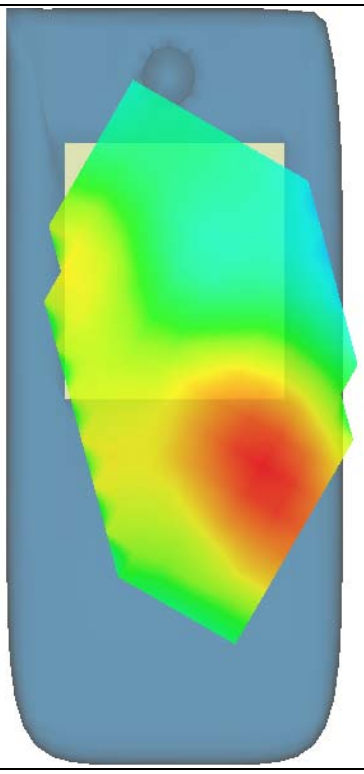
Maximum location: X=-56.00, Y=-56.00

SAR 10g (W/Kg)	0.325879
SAR 1g (W/Kg)	0.547382

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5739	0.3439	0.2104	0.1310	0.0831	0.0504



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: 15/12/2010

Measurement duration: 8 minutes 22 seconds

A. Experimental conditions.

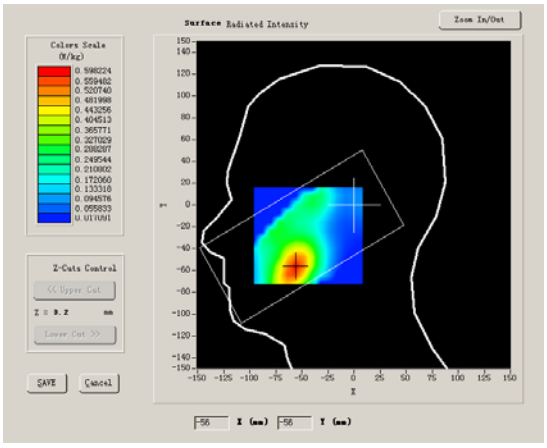
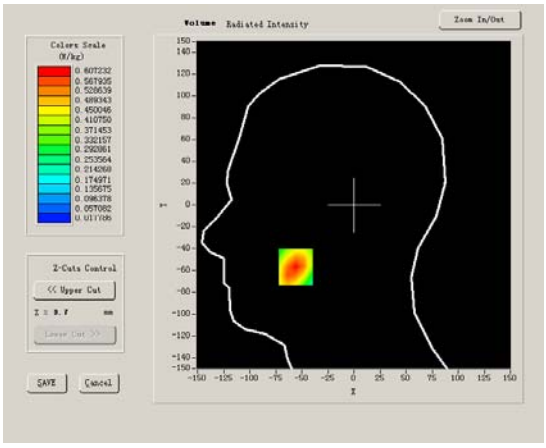
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.509998
Relative permittivity	13.750000

Conductivity (S/m)	1.436111
Variation (%)	-1.780000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

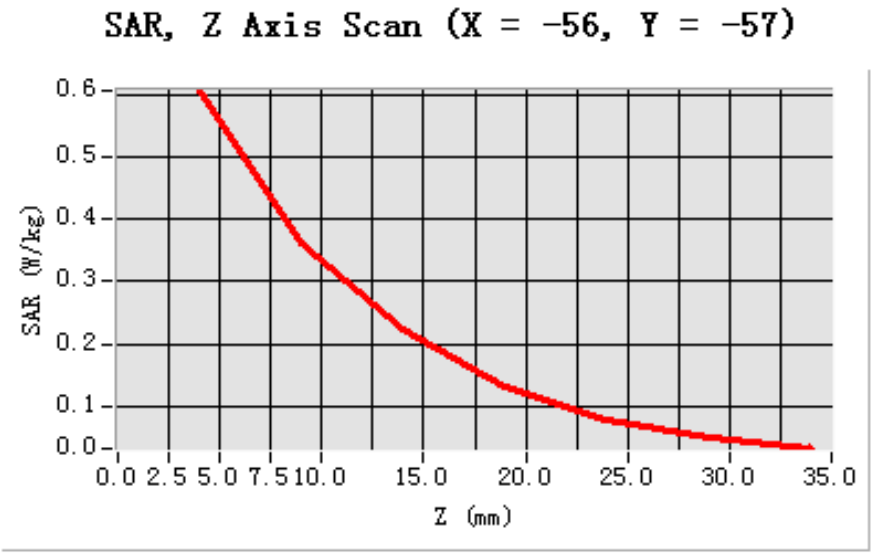
SURFACE SAR	VOLUME SAR
	

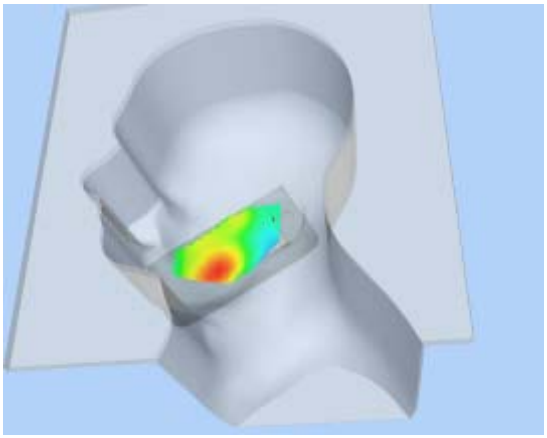
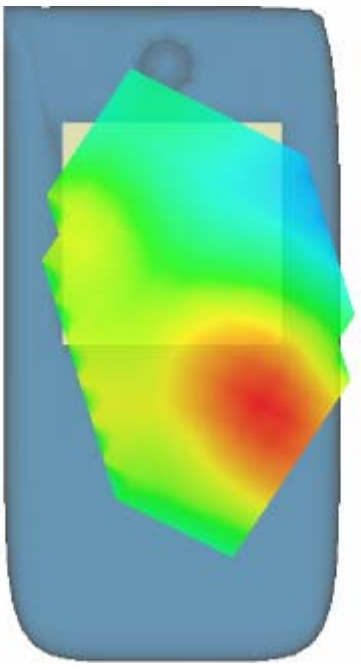
Maximum location: X=-56.00, Y=-57.00

SAR 10g (W/Kg)	0.338643
SAR 1g (W/Kg)	0.575734

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6072	0.3634	0.2236	0.1306	0.0785	0.0494



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: 15/12/2010

Measurement duration: 8 minutes 21 seconds

A. Experimental conditions.

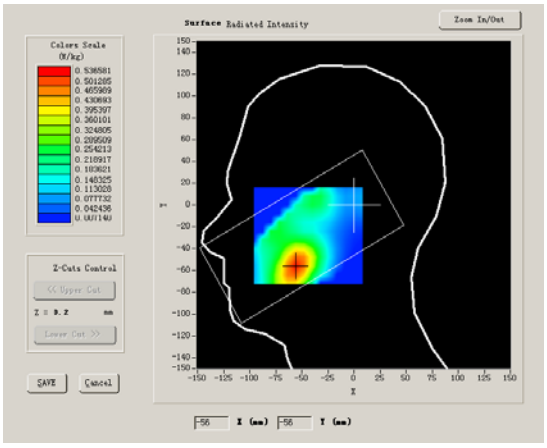
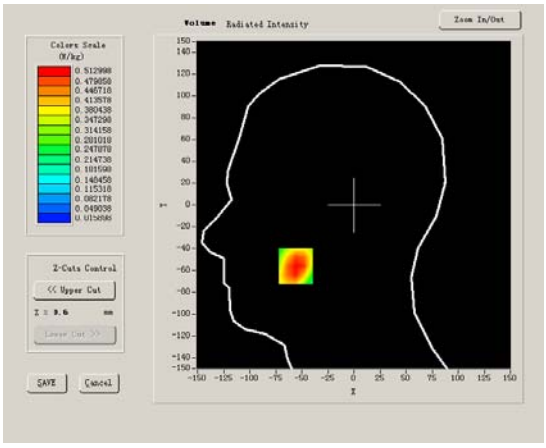
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	39.929001
Relative permittivity	13.156500

Conductivity (S/m)	1.395905
Variation (%)	-0.490000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

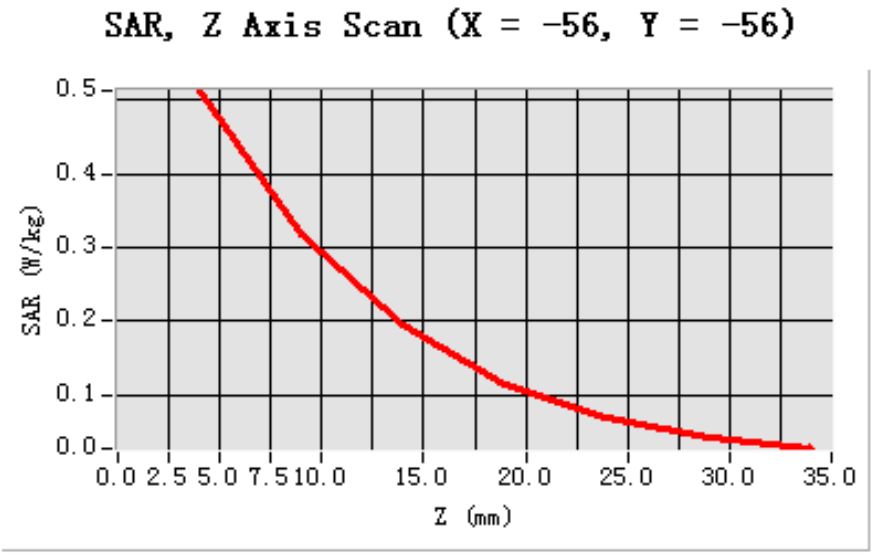
SURFACE SAR	VOLUME SAR
	

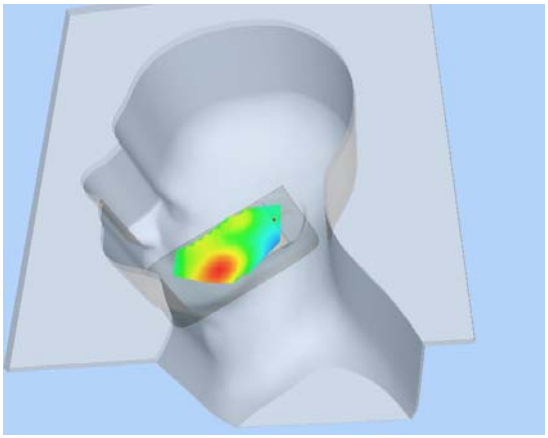
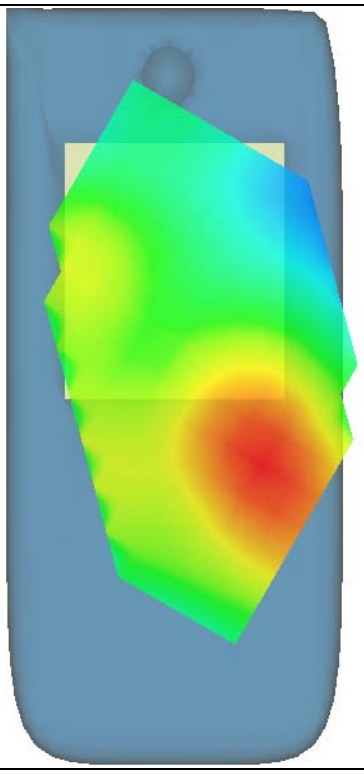
Maximum location: X=-56.00, Y=-56.00

SAR 10g (W/Kg)	0.294025
SAR 1g (W/Kg)	0.496458

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5130	0.3174	0.1948	0.1140	0.0691	0.0409



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: 15/12/2010

Measurement duration: 7 minutes 40 seconds

A. Experimental conditions.

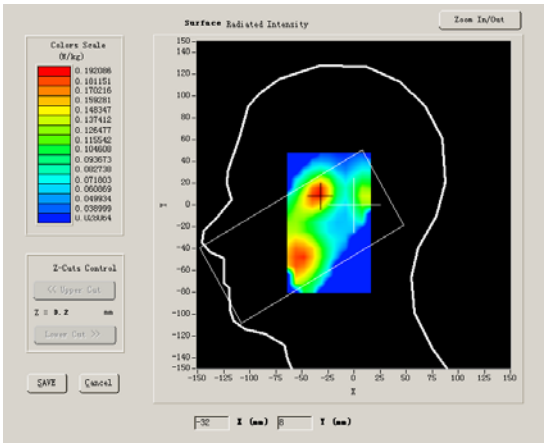
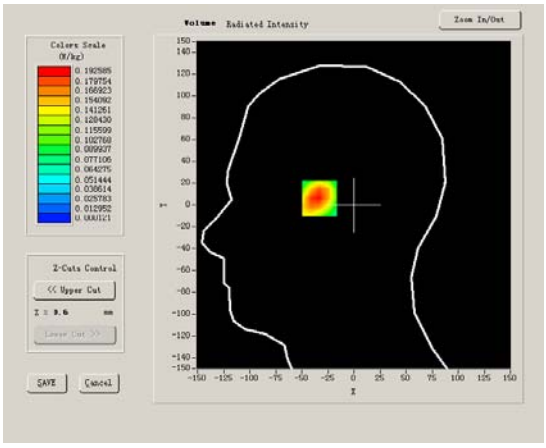
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.509998
Relative permittivity	13.750000

Conductivity (S/m)	1.436111
Variation (%)	-2.030000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

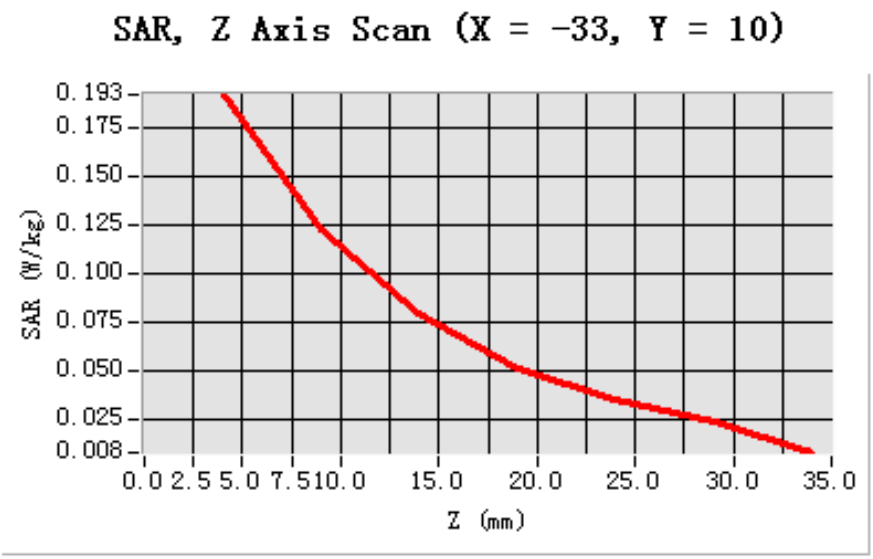
SURFACE SAR	VOLUME SAR
	

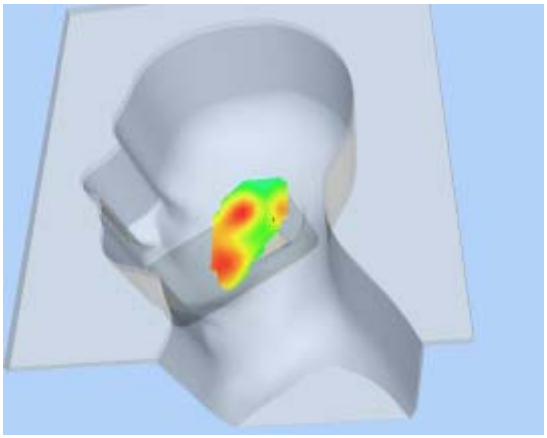
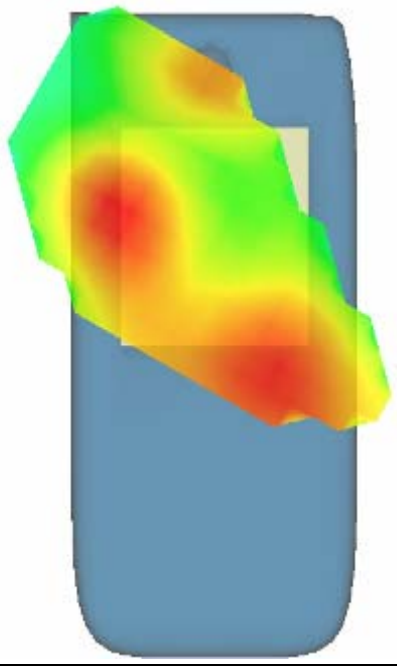
Maximum location: X=-33.00, Y=10.00

SAR 10g (W/Kg)	0.109962
SAR 1g (W/Kg)	0.183501

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1926	0.1227	0.0798	0.0515	0.0347	0.0237



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: 15/12/2010

Measurement duration: 8 minutes 45 seconds

A. Experimental conditions.

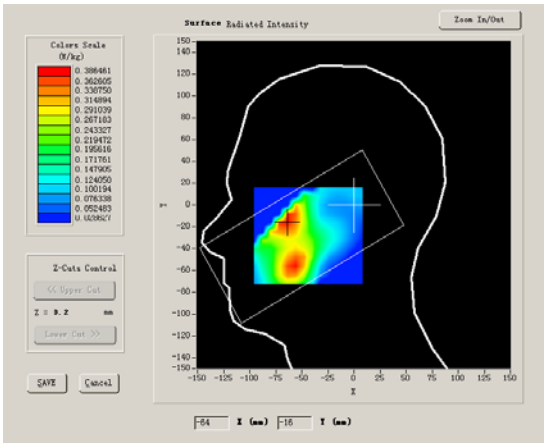
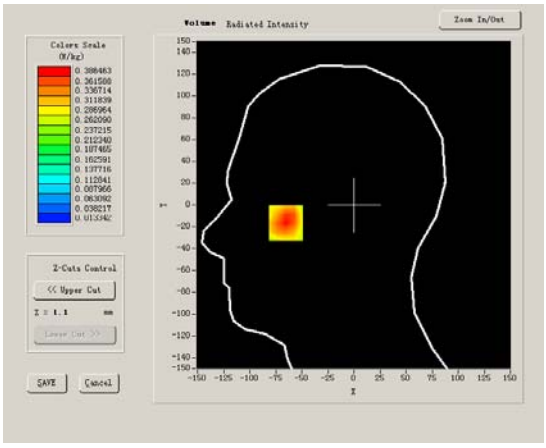
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.509998
Relative permittivity	13.750000

Conductivity (S/m)	1.436111
Variation (%)	0.370000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

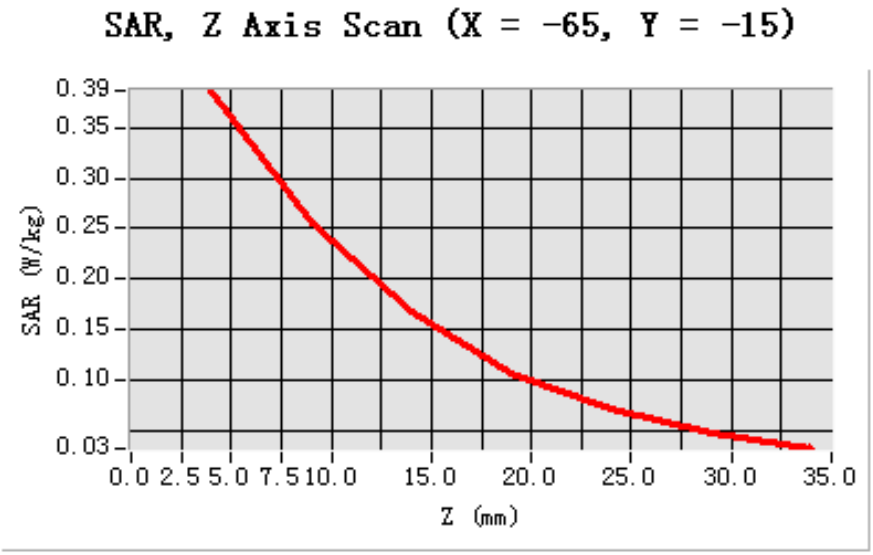
SURFACE SAR	VOLUME SAR
	

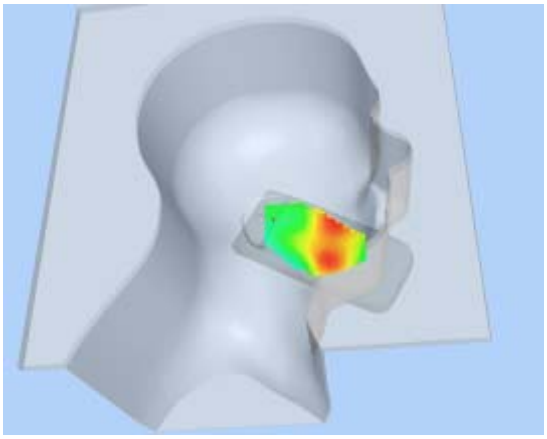
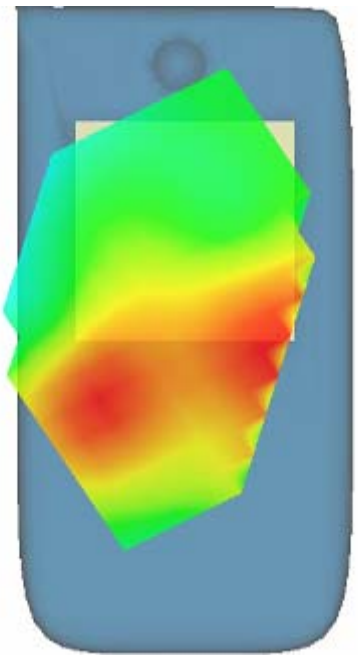
Maximum location: X=-65.00, Y=-15.00

SAR 10g (W/Kg)	0.230358
SAR 1g (W/Kg)	0.370350

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3865	0.2543	0.1667	0.1072	0.0717	0.0463



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: 15/12/2010

Measurement duration: 7 minutes 32 seconds

A. Experimental conditions.

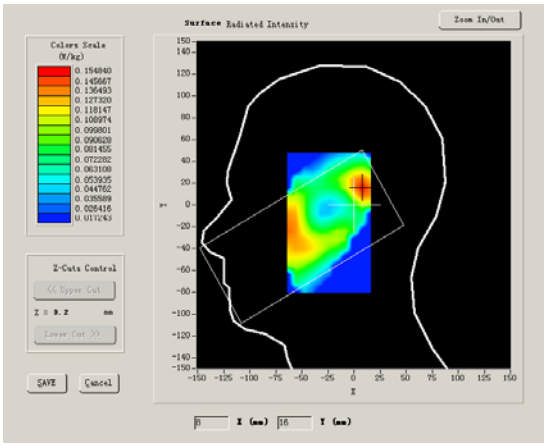
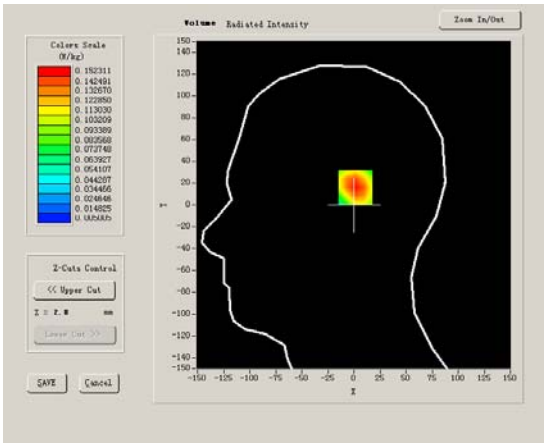
Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.509998
Relative permittivity	13.750000

Conductivity (S/m)	1.436111
Variation (%)	-0.520000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

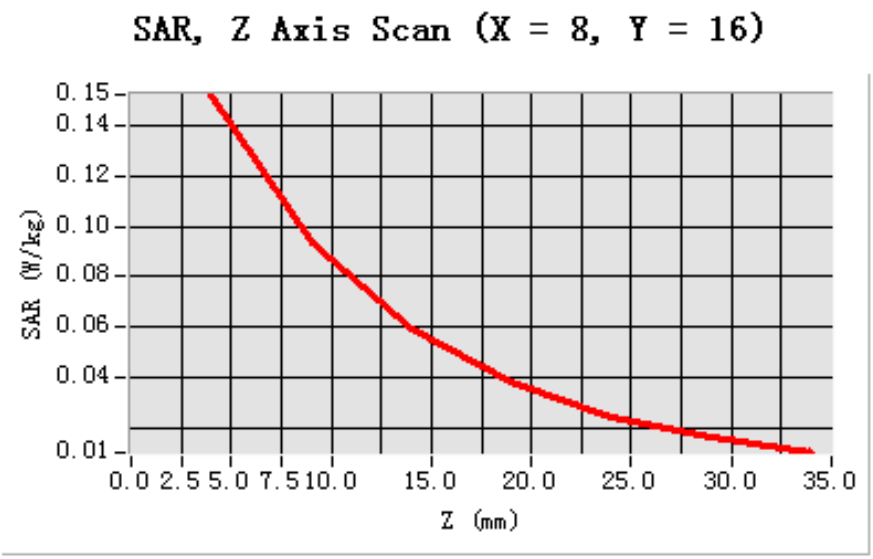
SURFACE SAR	**VOLUME SAR**
	

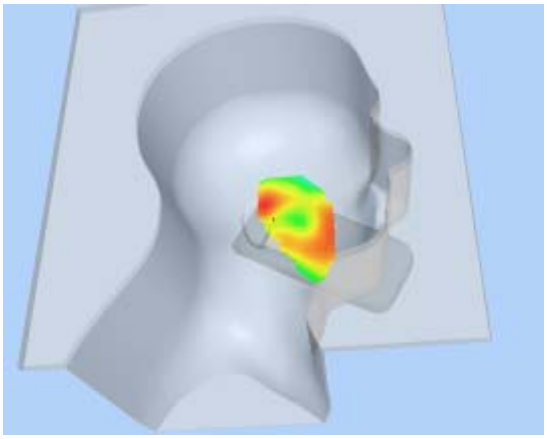
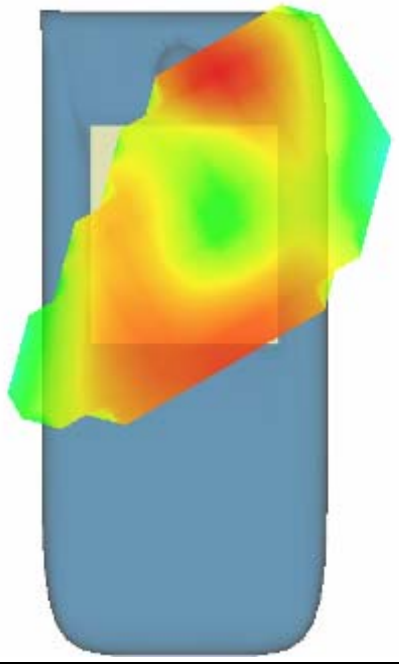
Maximum location: X=8.00, Y=16.00

SAR 10g (W/Kg)	0.087980
SAR 1g (W/Kg)	0.145245

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1523	0.0930	0.0588	0.0379	0.0243	0.0156



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

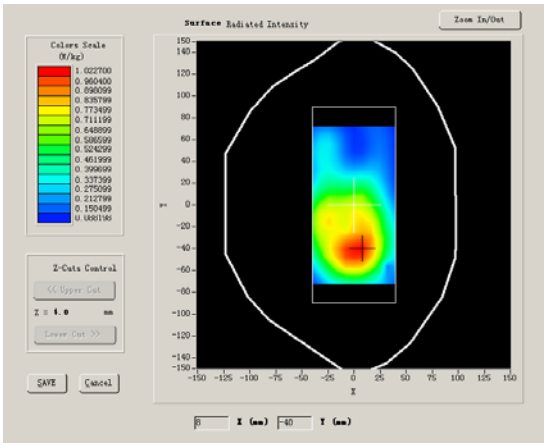
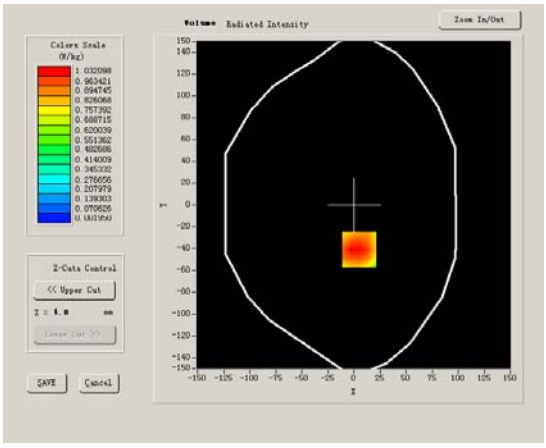
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	51.540001
Relative permittivity	12.991650

Conductivity (S/m)	1.335397
Variation (%)	1.780000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:4

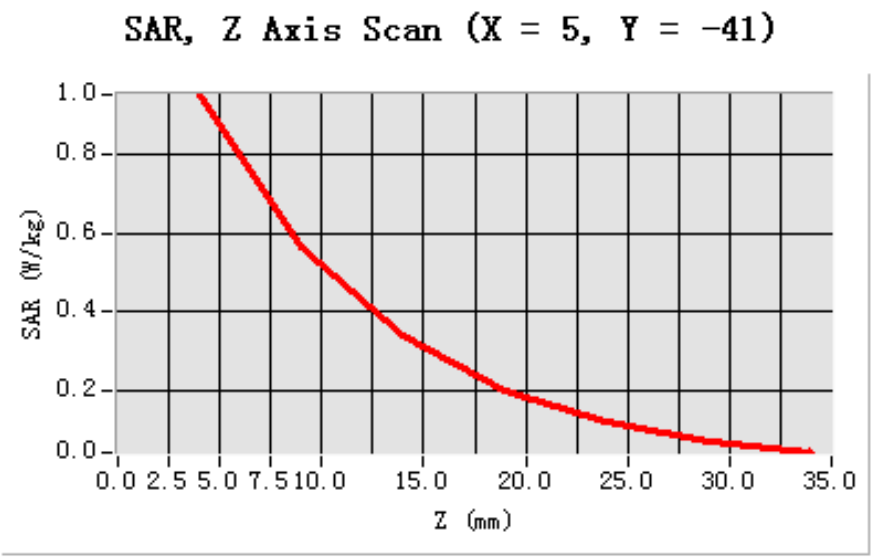
SURFACE SAR	VOLUME SAR
	

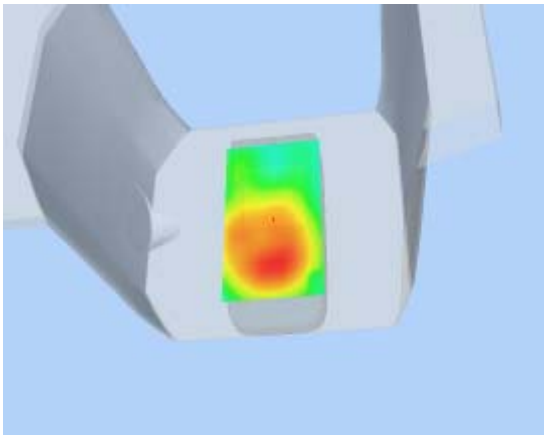
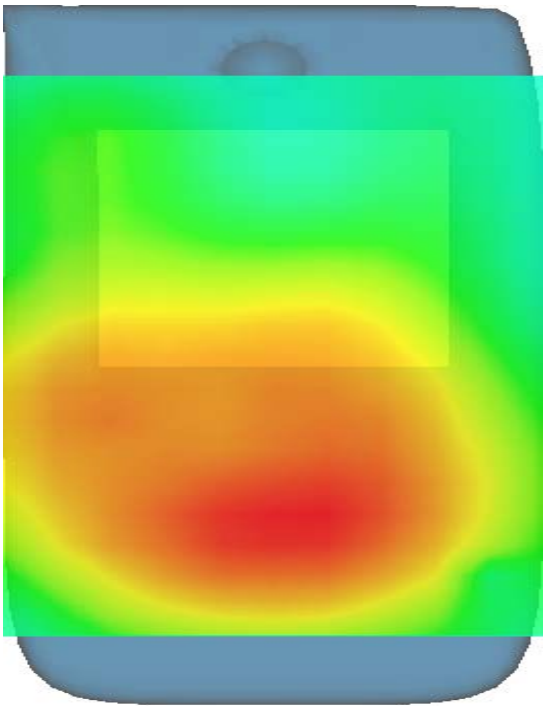
Maximum location: X=5.00, Y=-41.00

SAR 10g (W/Kg)	0.627118
SAR 1g (W/Kg)	1.193833

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9528	0.5678	0.3390	0.2018	0.1193	0.0724



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

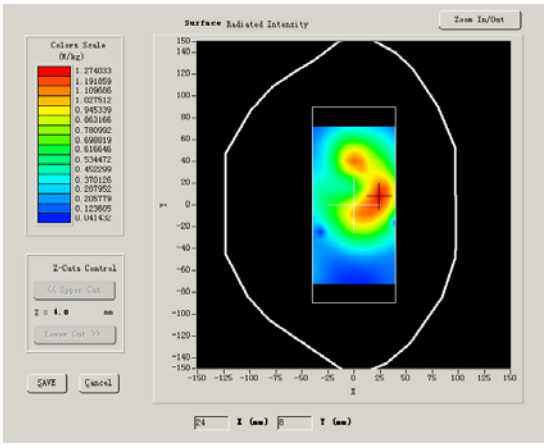
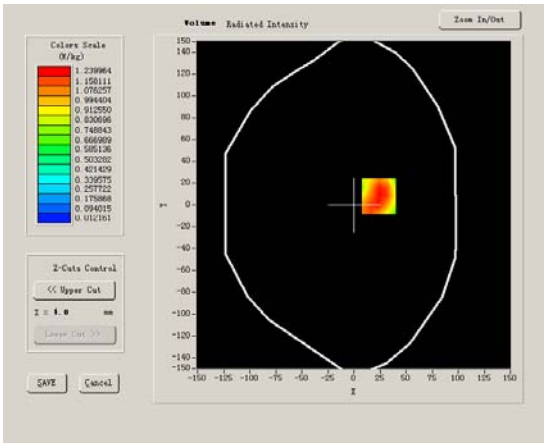
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	51.540001
Relative permittivity	15.070000

Conductivity (S/m)	1.573978
Variation (%)	-2.210000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:4

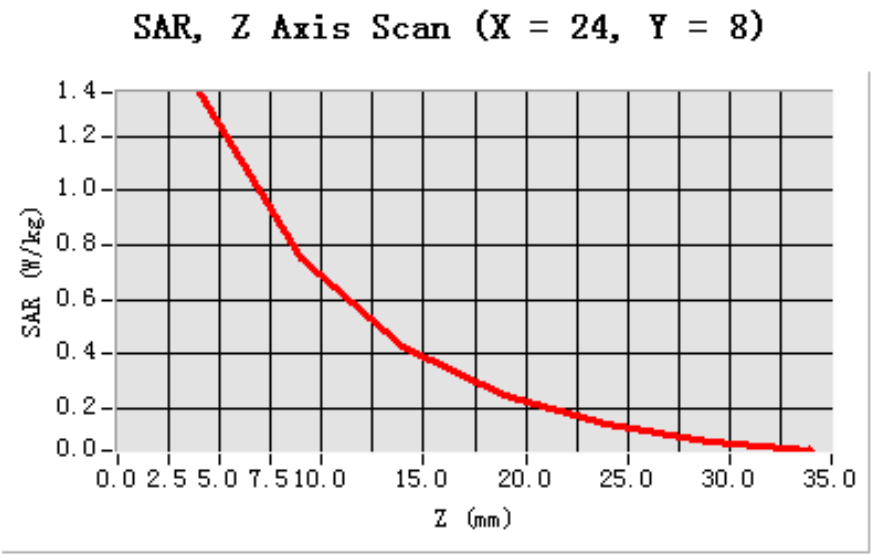
SURFACE SAR	**VOLUME SAR**
	

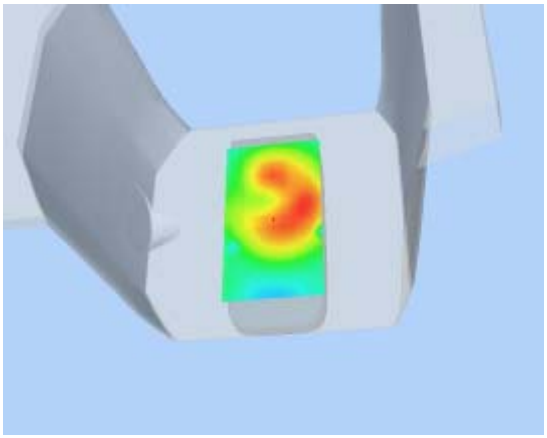
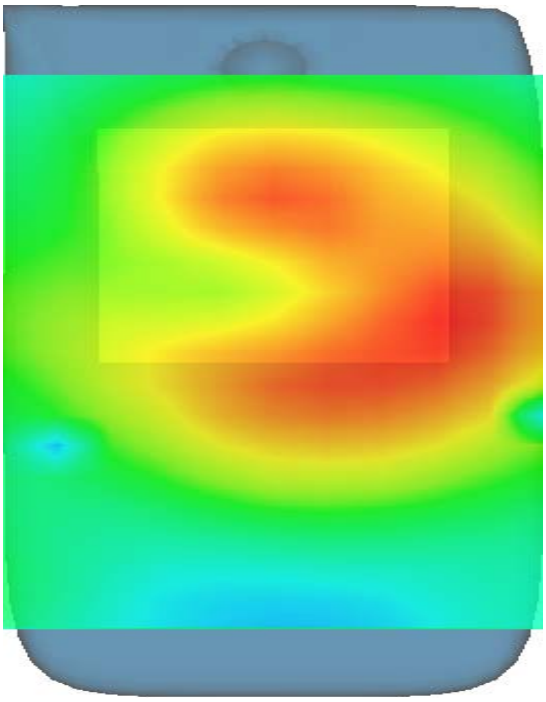
Maximum location: X=24.00, Y=8.00

SAR 10g (W/Kg)	0.604442
SAR 1g (W/Kg)	1.178232

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3590	0.7515	0.4260	0.2530	0.1428	0.0807



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

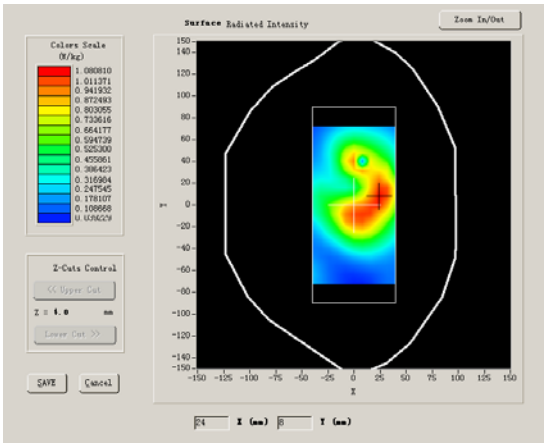
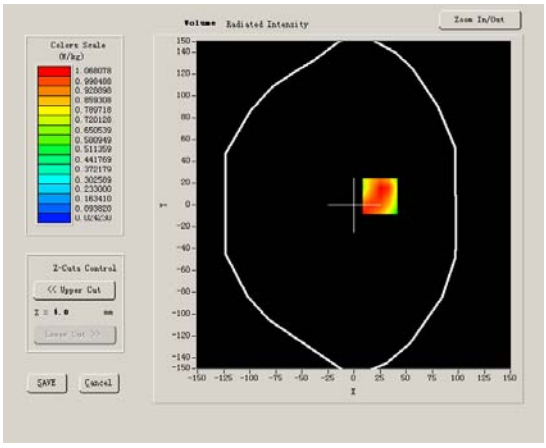
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GPRS

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	51.540001
Relative permittivity	12.000000

Conductivity (S/m)	1.273200
Variation (%)	0.010000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:4

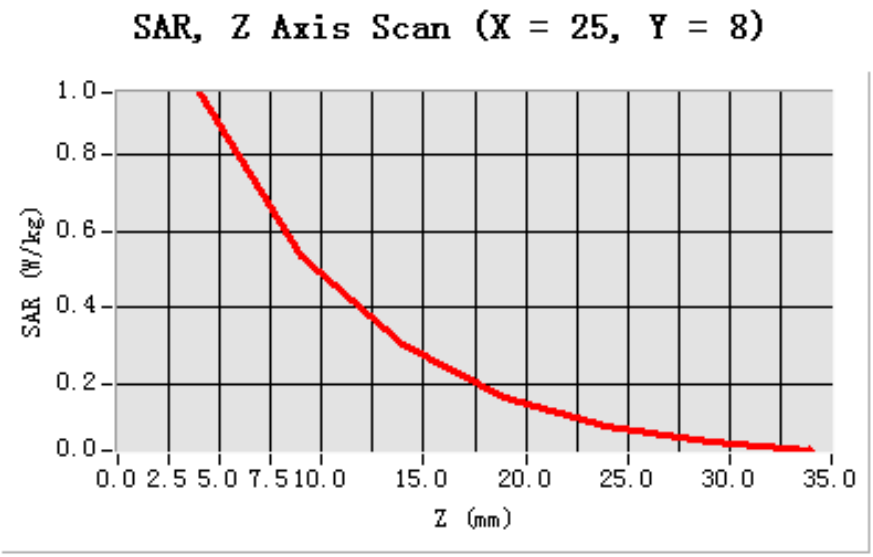
SURFACE SAR	VOLUME SAR
	

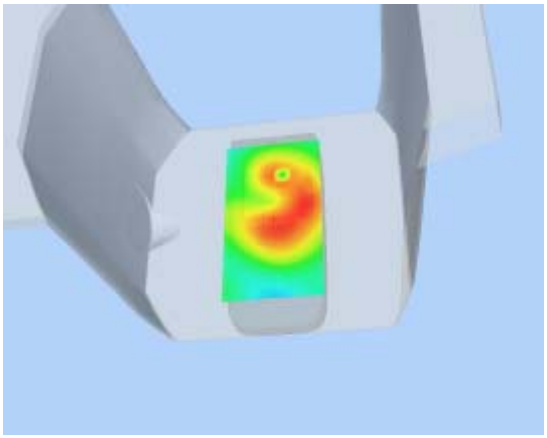
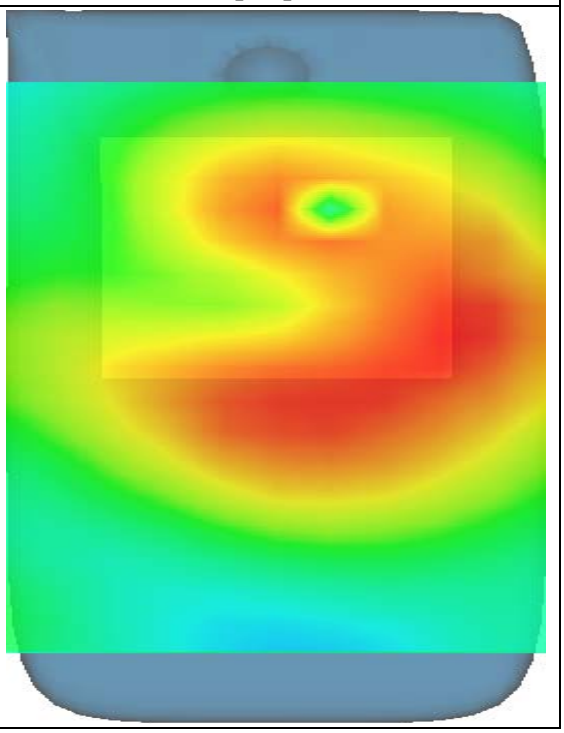
Maximum location: X=25.00, Y=8.00

SAR 10g (W/Kg)	0.540524
SAR 1g (W/Kg)	0.941612

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9587	0.5329	0.3065	0.1682	0.0951	0.0541



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

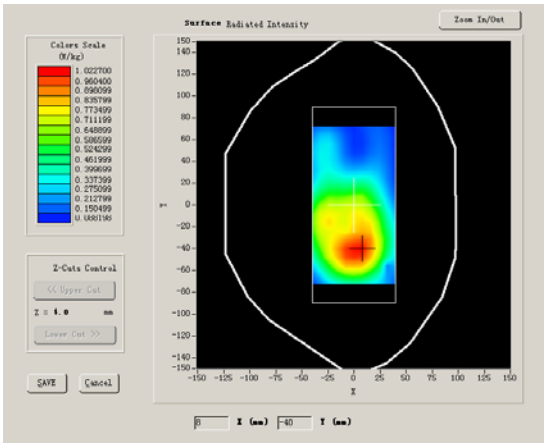
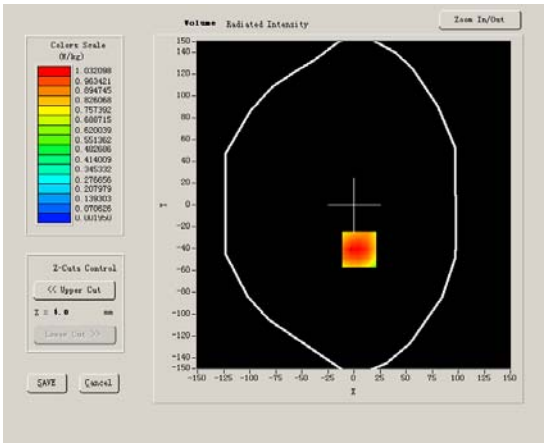
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	51.540001
Relative permittivity	12.000000

Conductivity (S/m)	1.233467
Variation (%)	-1.060000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:4

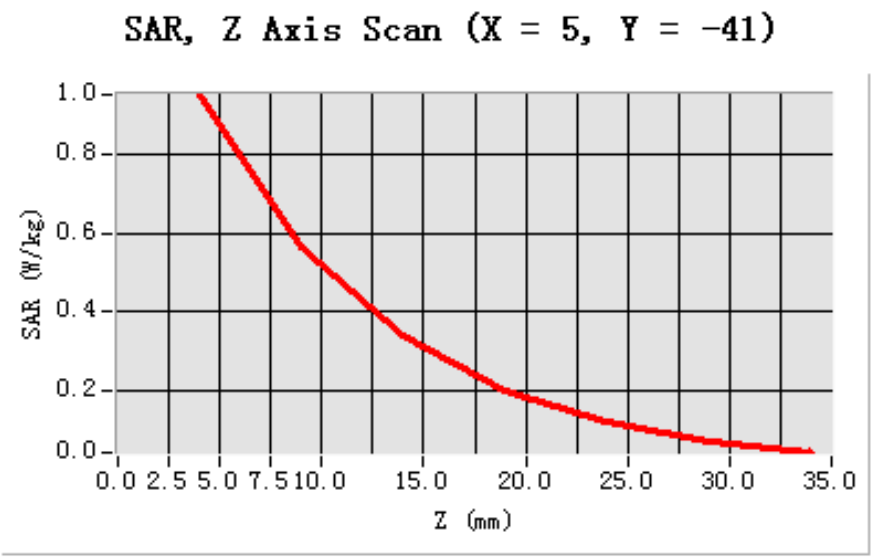
SURFACE SAR	VOLUME SAR
	

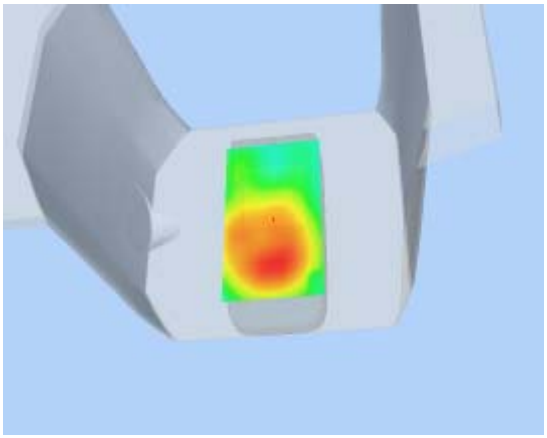
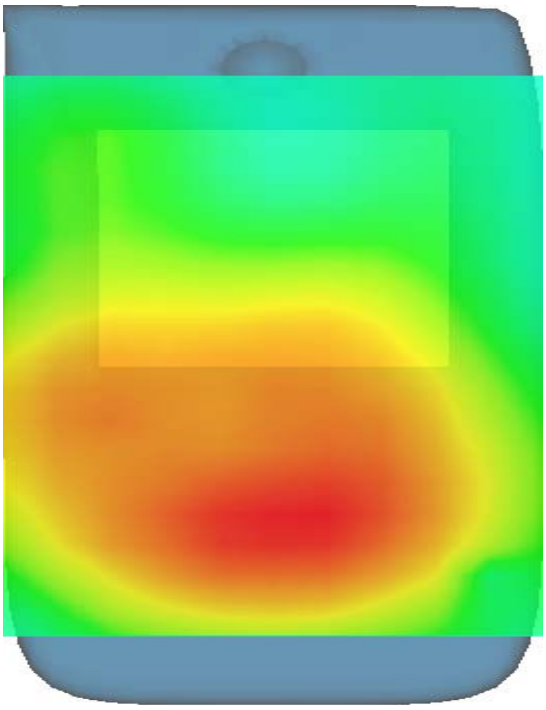
Maximum location: X=5.00, Y=-41.00

SAR 10g (W/Kg)	0.559314
SAR 1g (W/Kg)	0.932764

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9528	0.5678	0.3390	0.2018	0.1193	0.0724



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

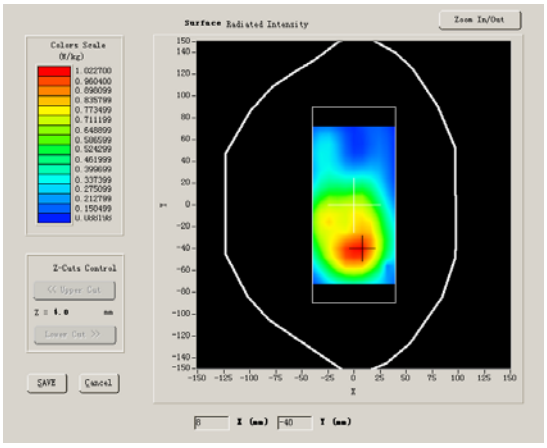
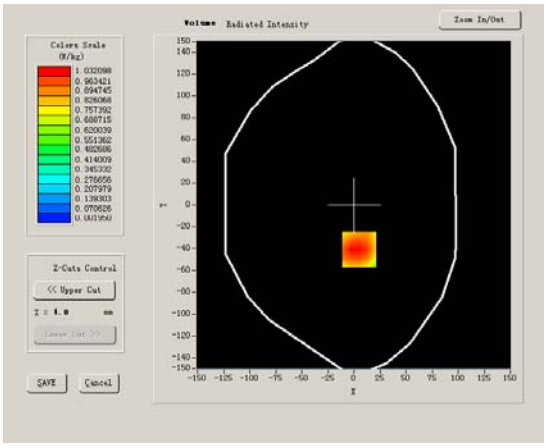
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	EDGE

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	51.540001
Relative permittivity	12.000000

Conductivity (S/m)	1.233467
Variation (%)	-1.060000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:4

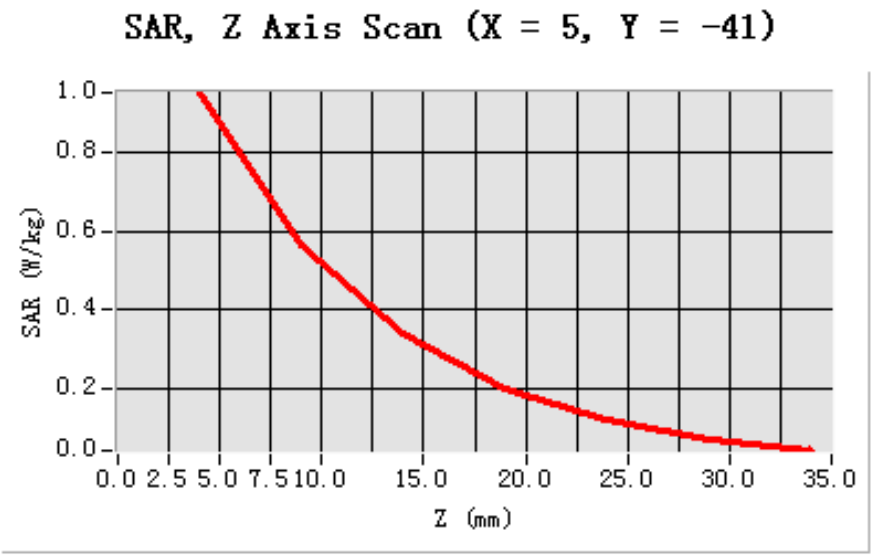
SURFACE SAR	VOLUME SAR
	

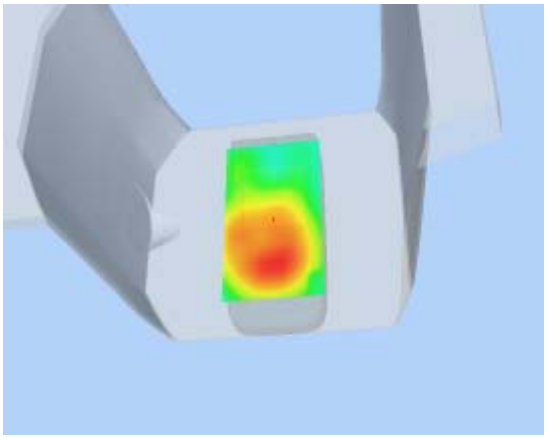
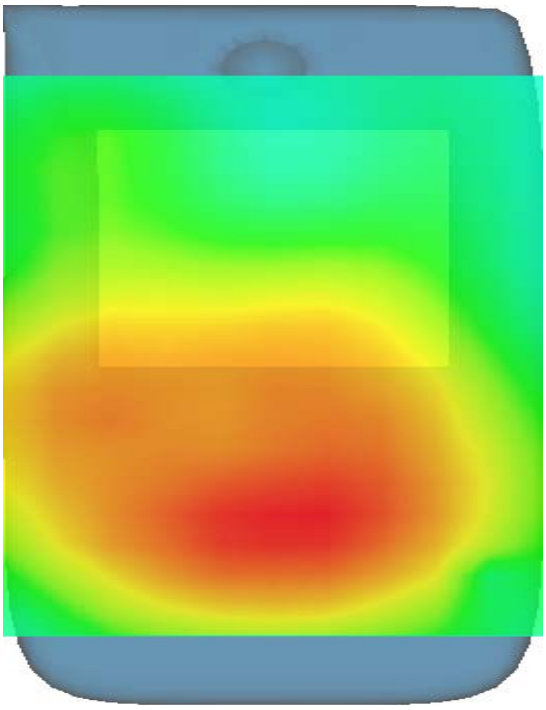
Maximum location: X=5.00, Y=-41.00

SAR 10g (W/Kg)	0.451272
SAR 1g (W/Kg)	0.894655

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9528	0.5678	0.3390	0.2018	0.1193	0.0724



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

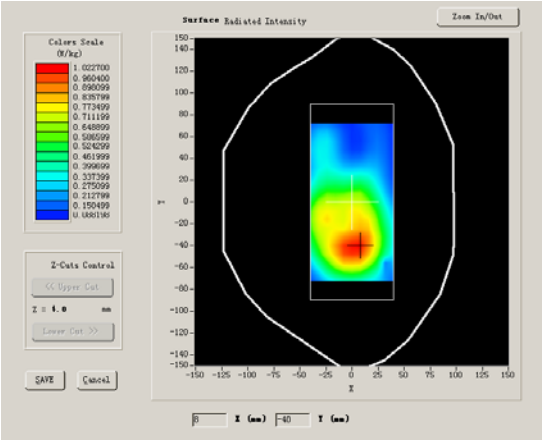
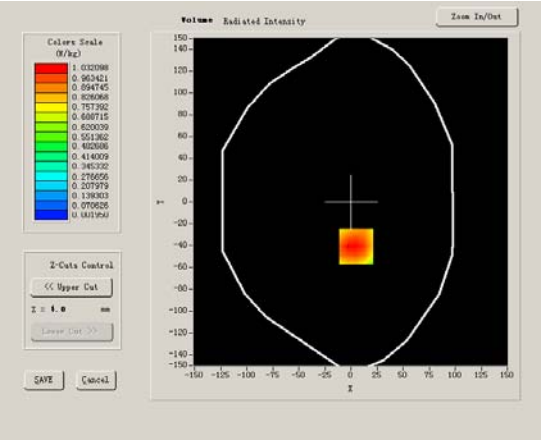
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	51.540001
Relative permittivity	12.000000

Conductivity (S/m)	1.233467
Variation (%)	-1.060000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:8

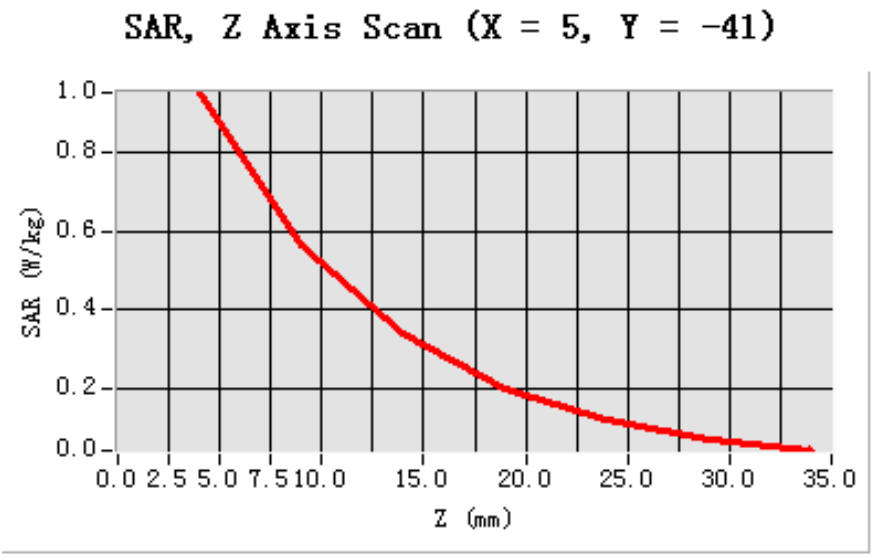
SURFACE SAR	VOLUME SAR
	

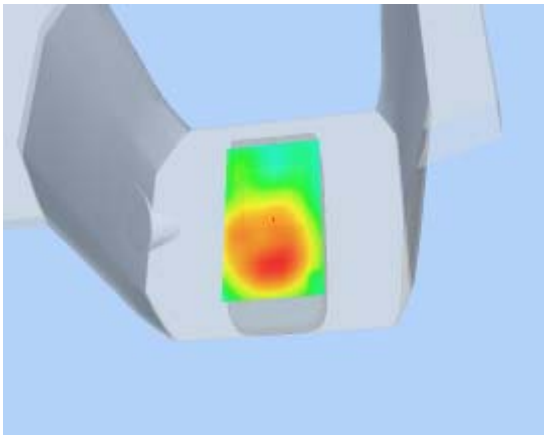
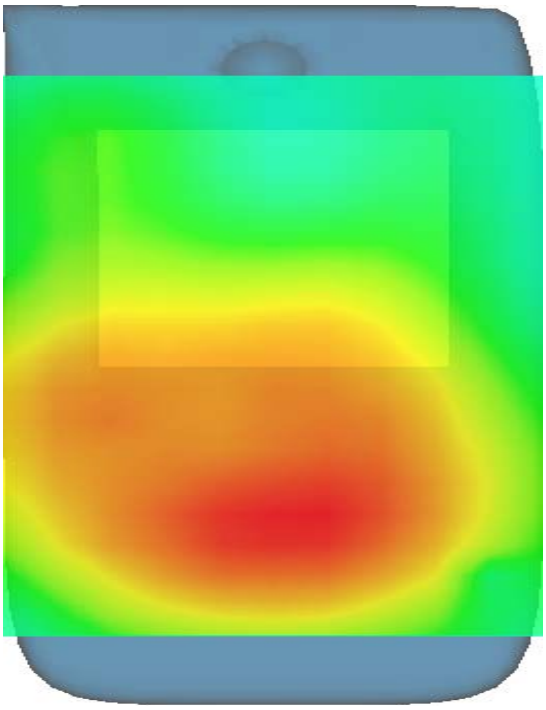
Maximum location: X=5.00, Y=-41.00

SAR 10g (W/Kg)	0.136275
SAR 1g (W/Kg)	0.246854

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9528	0.5678	0.3390	0.2018	0.1193	0.0724



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

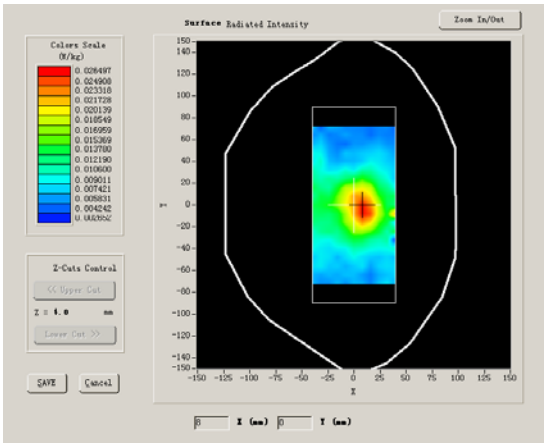
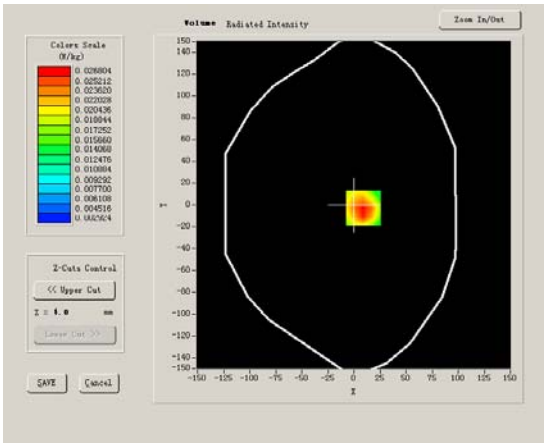
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Low
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 1):

Frequency (MHz)	2412.000000
Relative permittivity (real part)	53.340001
Relative permittivity	13.500000

Conductivity (S/m)	1.929000
Variation (%)	-1.780000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

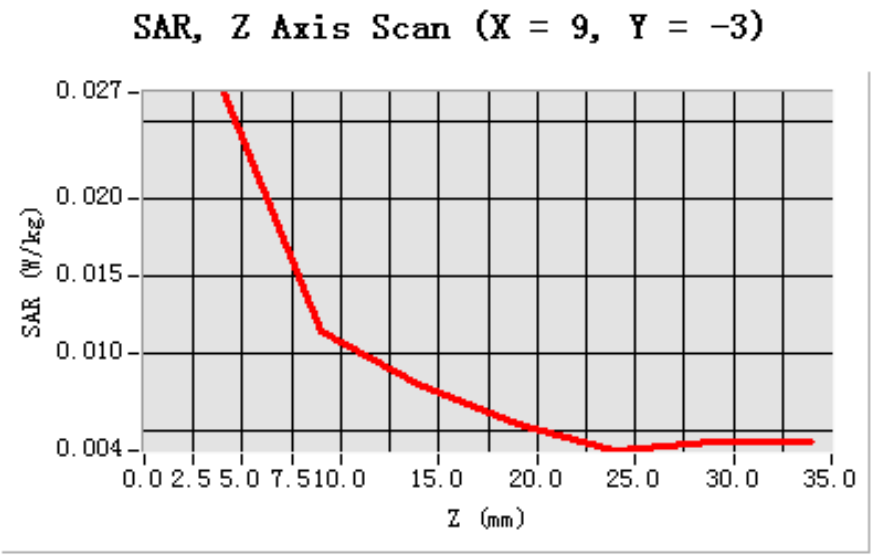
SURFACE SAR	VOLUME SAR
	

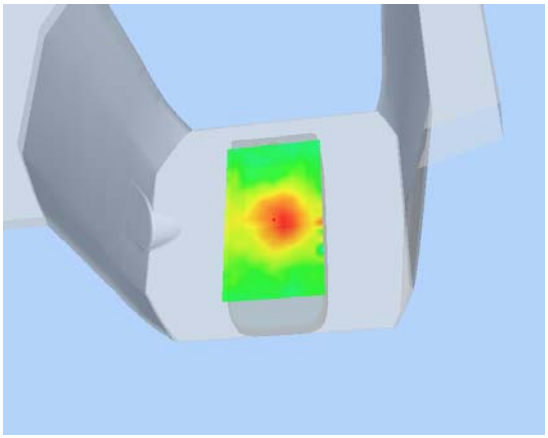
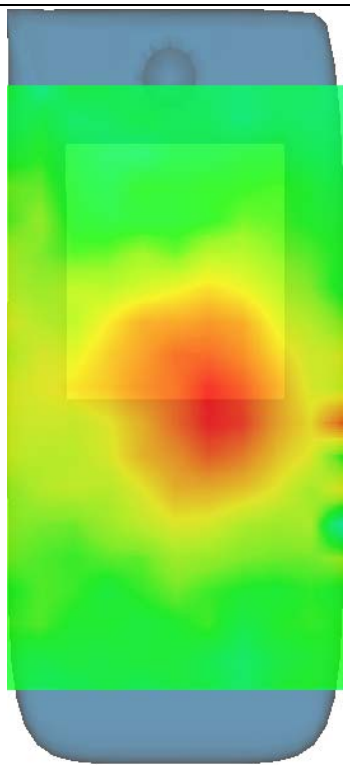
Maximum location: X=9.00, Y=-3.00

SAR 10g (W/Kg)	0.015113
SAR 1g (W/Kg)	0.026752

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0268	0.0113	0.0080	0.0054	0.0037	0.0042



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

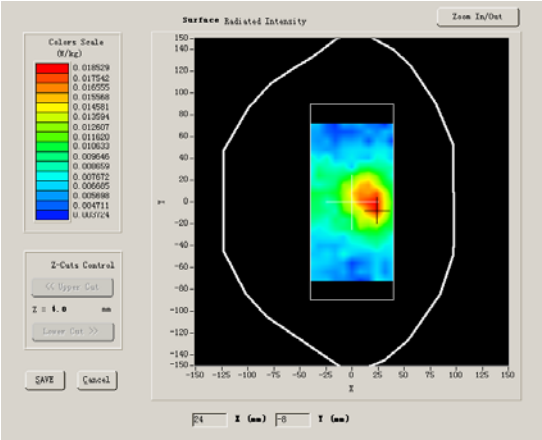
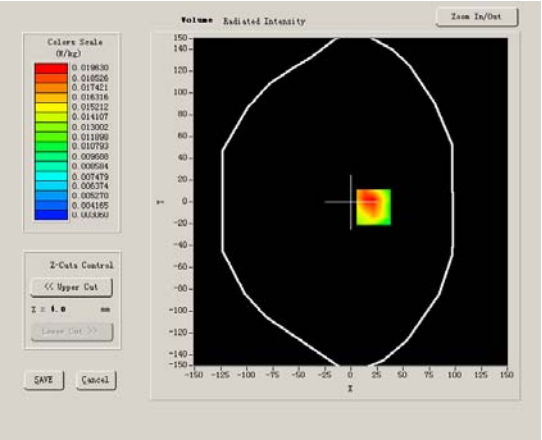
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Middle
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	54.550001
Relative permittivity	11.100000

Conductivity (S/m)	1.947750
Variation (%)	-2.070000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

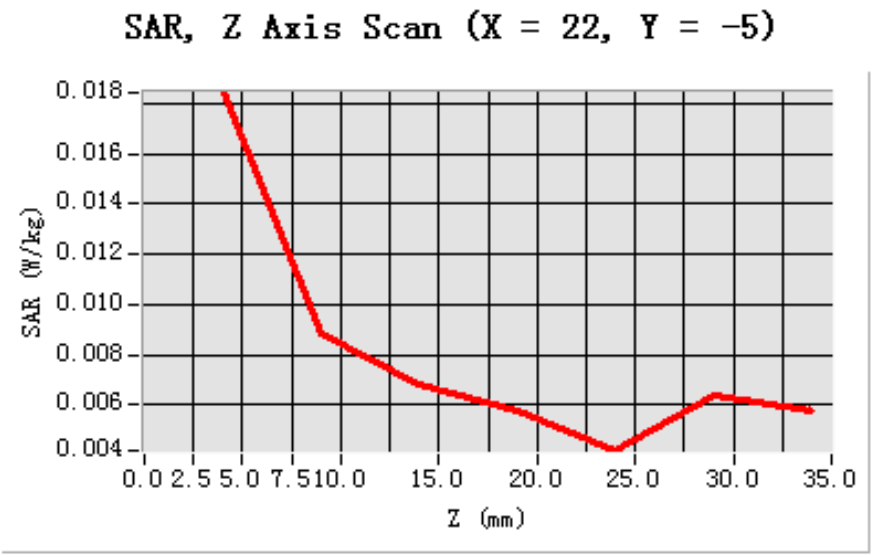
SURFACE SAR	VOLUME SAR
	

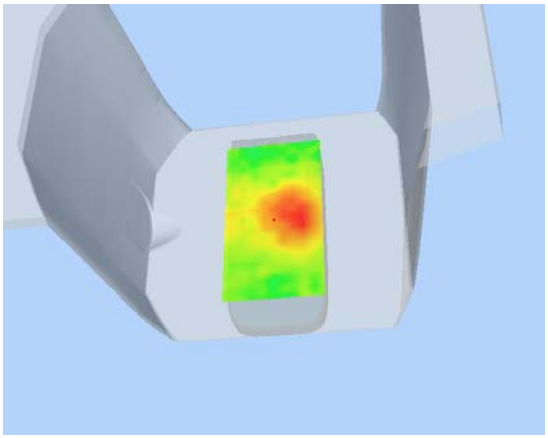
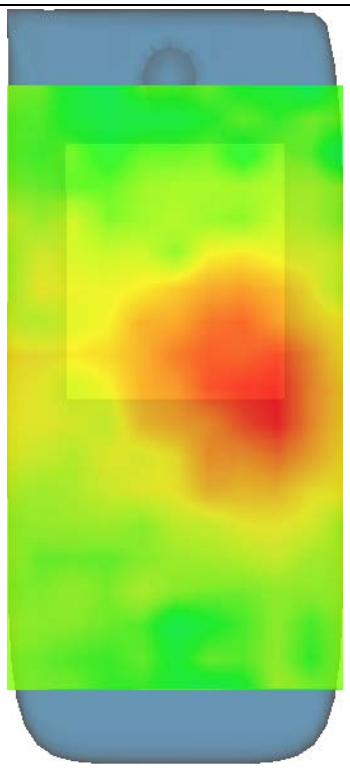
Maximum location: X=22.00, Y=-5.00

SAR 10g (W/Kg)	0.011549
SAR 1g (W/Kg)	0.019750

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0184	0.0089	0.0068	0.0057	0.0042	0.0064



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

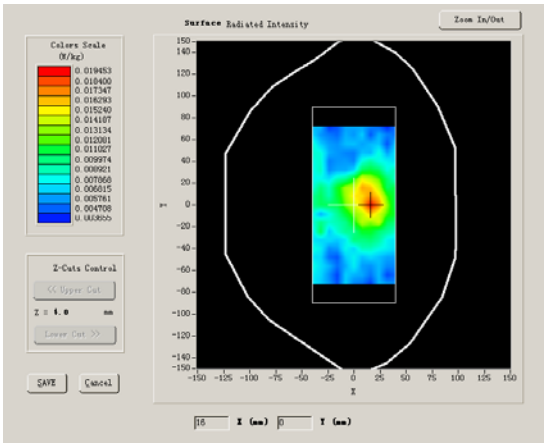
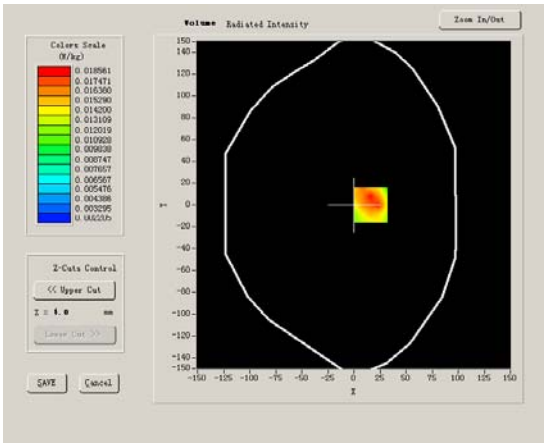
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	High
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.130001
Relative permittivity	7.500000

Conductivity (S/m)	1.973200
Variation (%)	-3.630000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

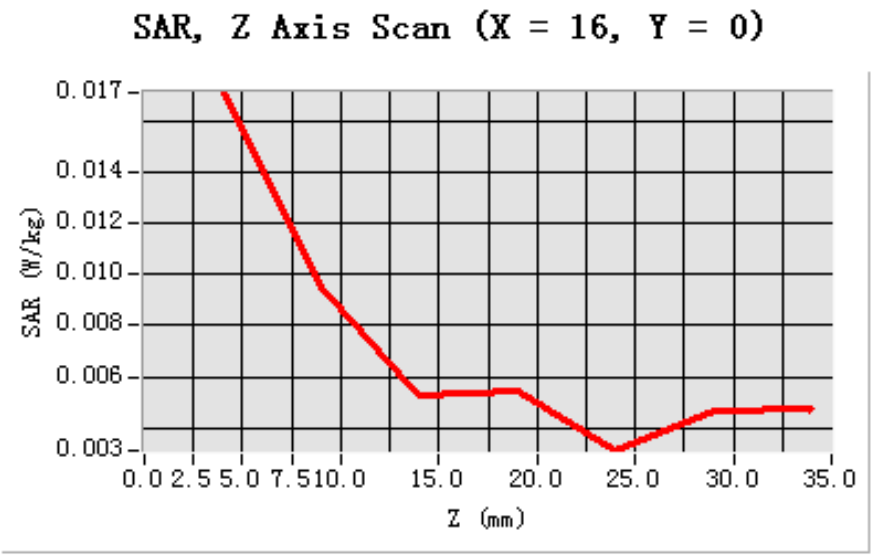
SURFACE SAR	VOLUME SAR
	

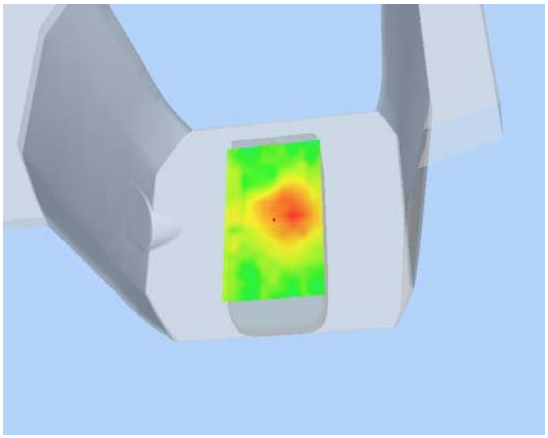
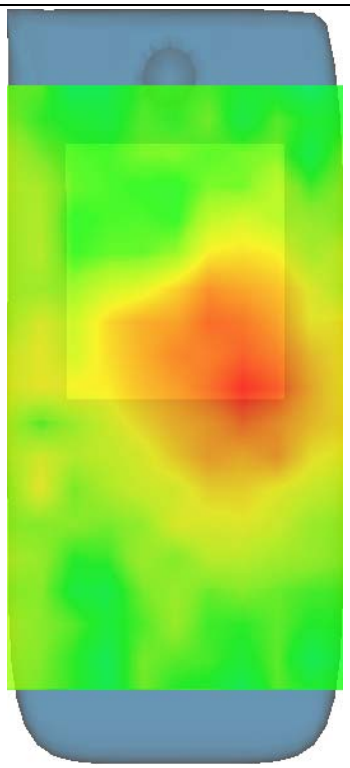
Maximum location: X=16.00, Y=0.00

SAR 10g (W/Kg)	0.011035
SAR 1g (W/Kg)	0.018394

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0171	0.0095	0.0053	0.0054	0.0031	0.0046



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

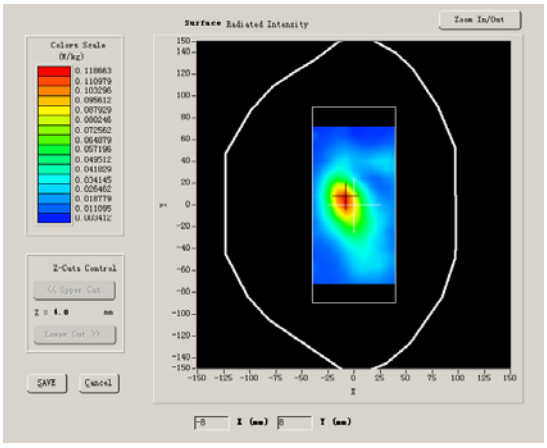
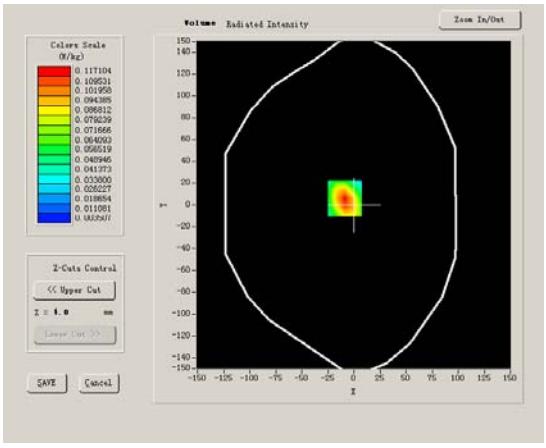
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Low
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 1):

Frequency (MHz)	2412.000000
Relative permittivity (real part)	53.340001
Relative permittivity	6.500000

Conductivity (S/m)	1.929000
Variation (%)	-1.840000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

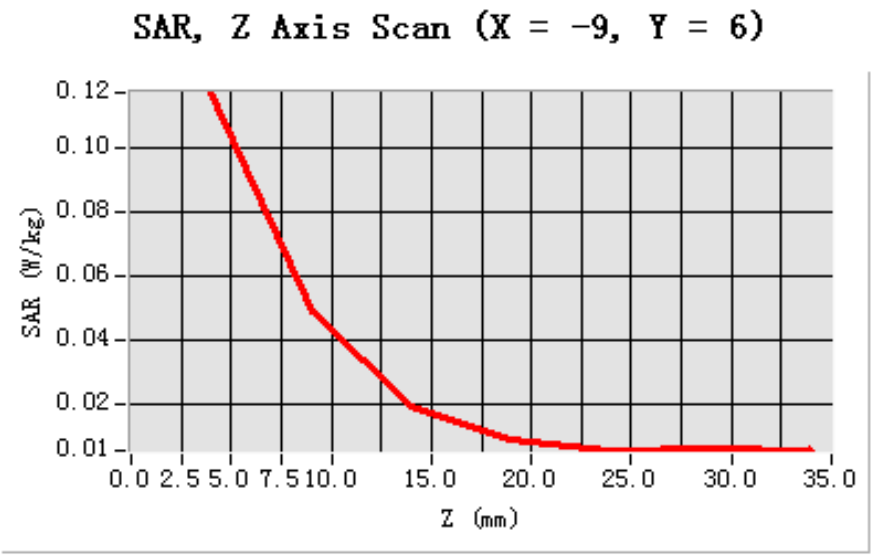
SURFACE SAR	VOLUME SAR
	

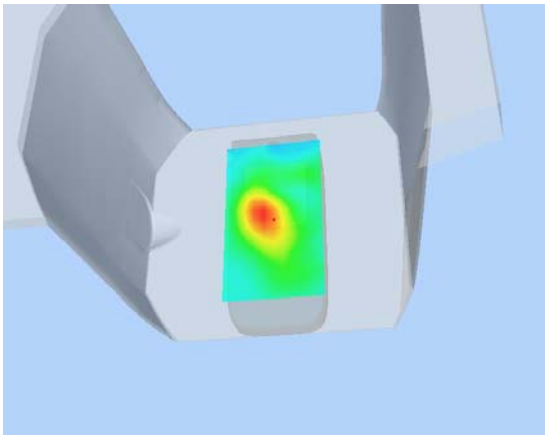
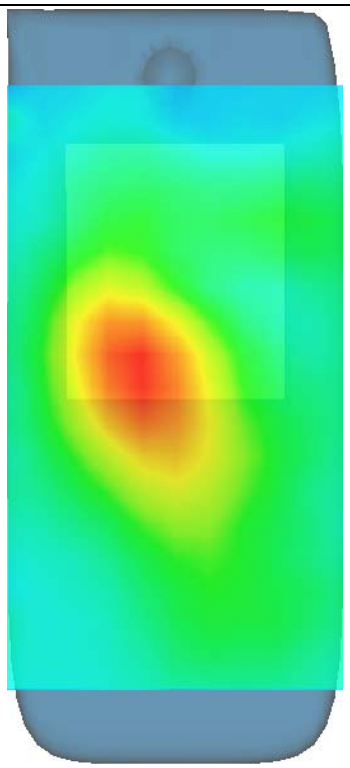
Maximum location: X=-9.00, Y=6.00

SAR 10g (W/Kg)	0.052845
SAR 1g (W/Kg)	0.110678

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1171	0.0487	0.0190	0.0089	0.0053	0.0057



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

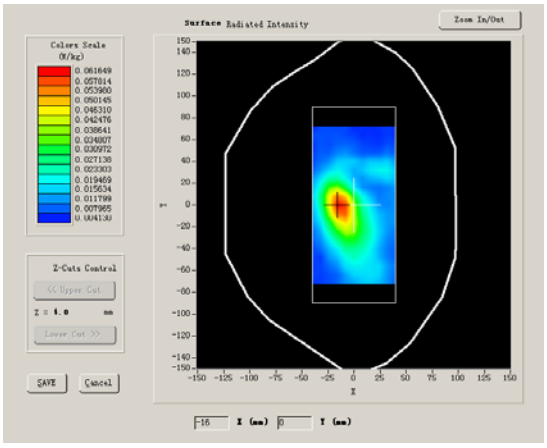
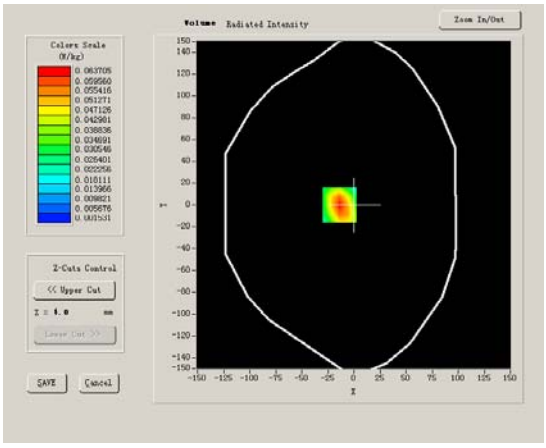
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Middle
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	54.550001
Relative permittivity	-11.500000

Conductivity (S/m)	1.947750
Variation (%)	0.130000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

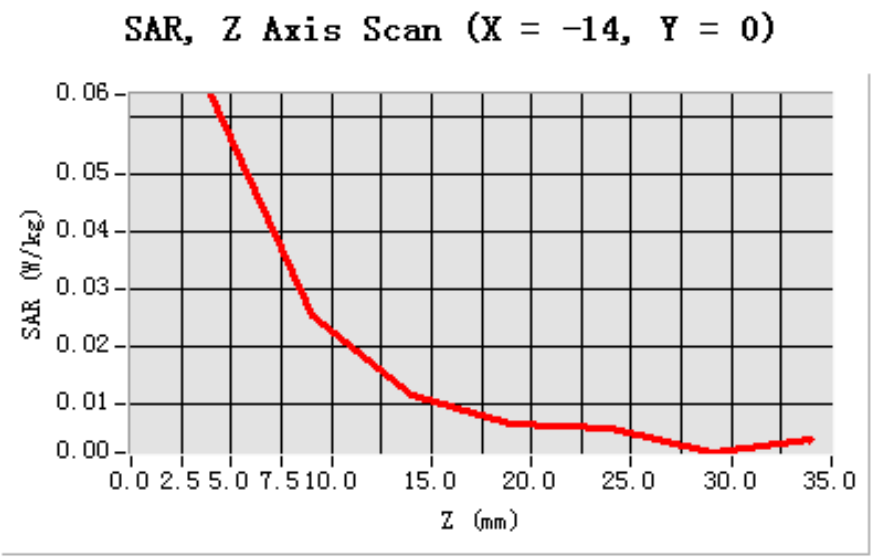
SURFACE SAR	VOLUME SAR
	

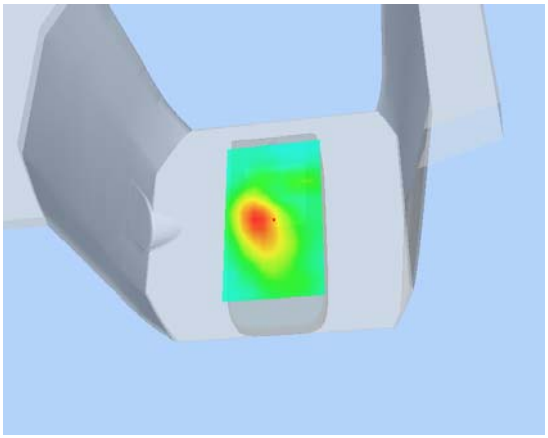
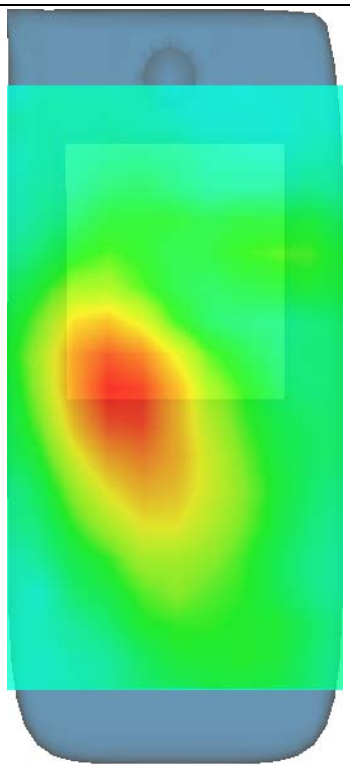
Maximum location: X=-14.00, Y=0.00

SAR 10g (W/Kg)	0.029517
SAR 1g (W/Kg)	0.060645

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0637	0.0255	0.0114	0.0063	0.0058	0.0015



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

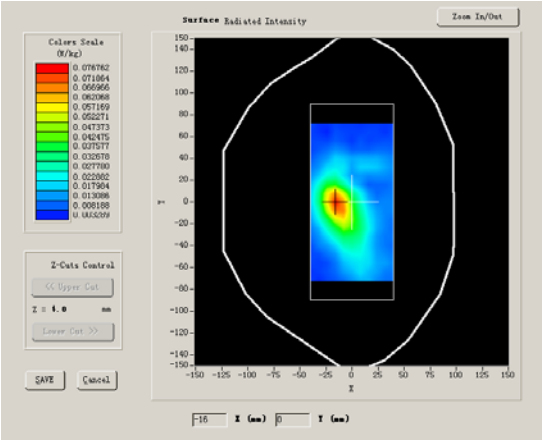
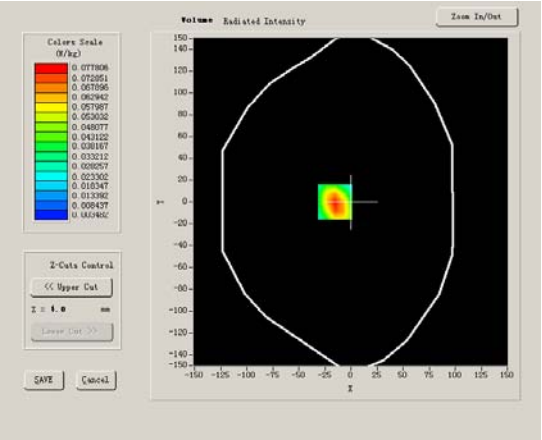
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	High
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.130001
Relative permittivity	-7.800000

Conductivity (S/m)	1.973200
Variation (%)	0.420000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

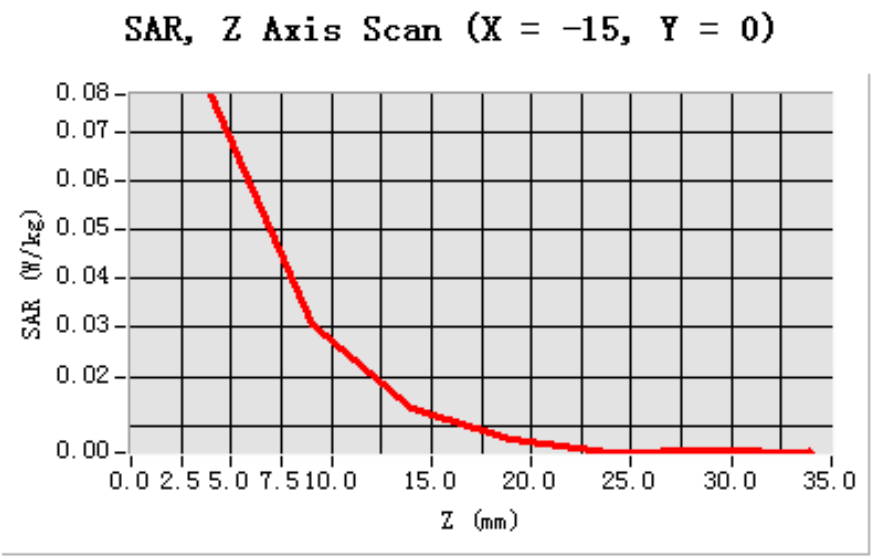
SURFACE SAR	VOLUME SAR
	

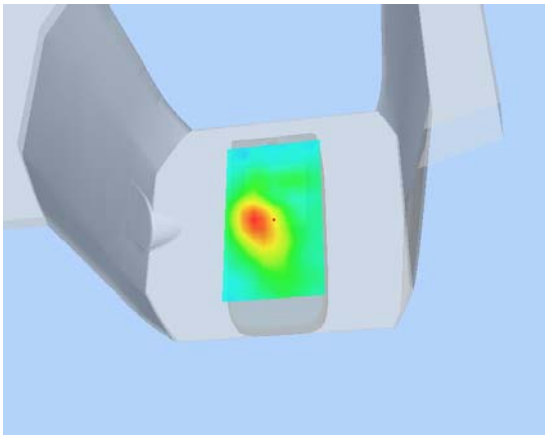
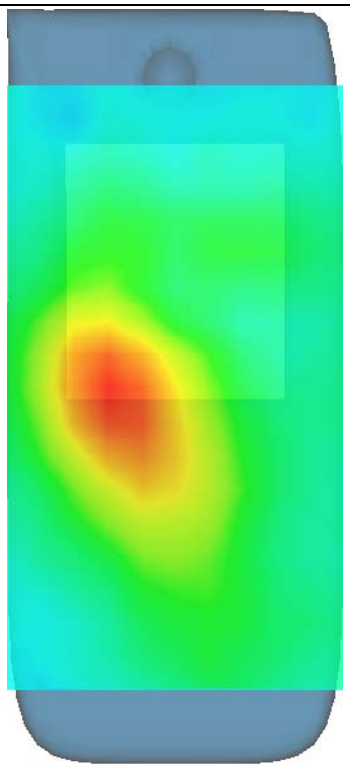
Maximum location: X=-15.00, Y=0.00

SAR 10g (W/Kg)	0.035729
SAR 1g (W/Kg)	0.074455

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0778	0.0305	0.0136	0.0070	0.0044	0.0049



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

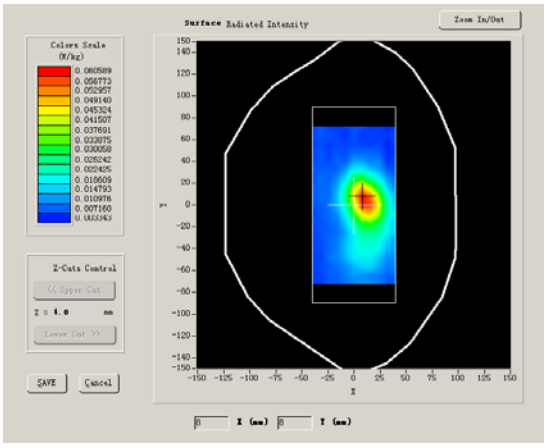
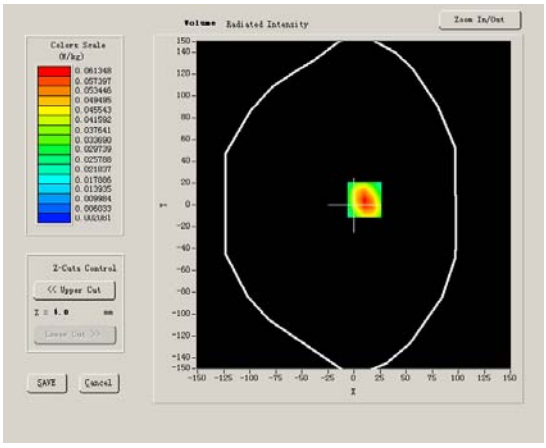
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Low
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 1):

Frequency (MHz)	2412.000000
Relative permittivity (real part)	53.340001
Relative permittivity	-11.300000

Conductivity (S/m)	1.929000
Variation (%)	1.770000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.4°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

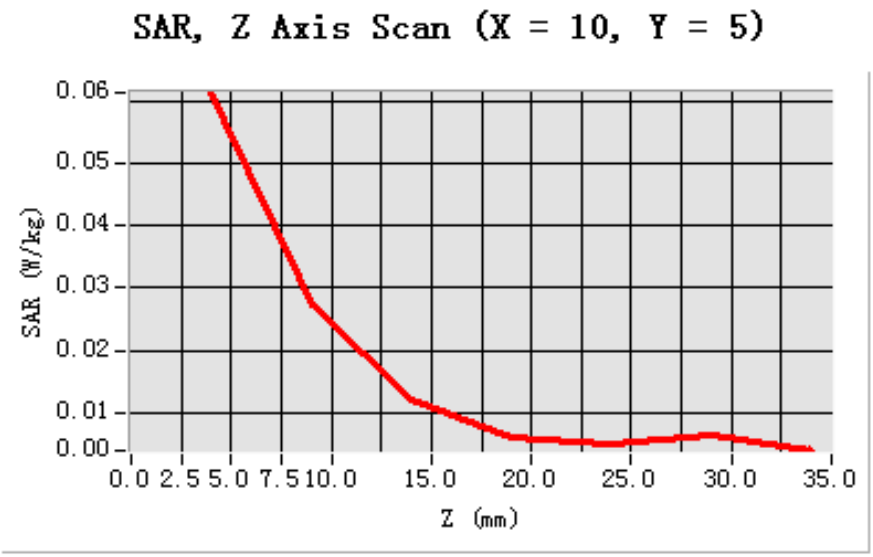
SURFACE SAR	VOLUME SAR
	

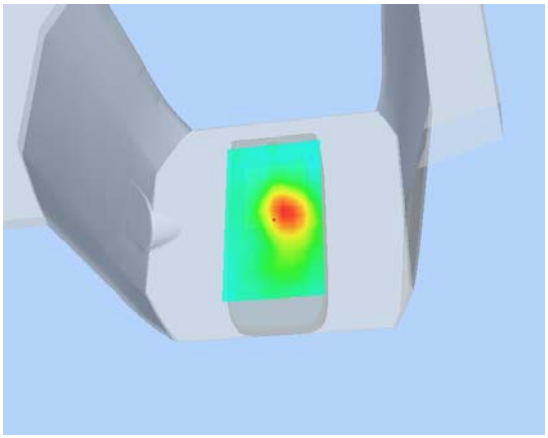
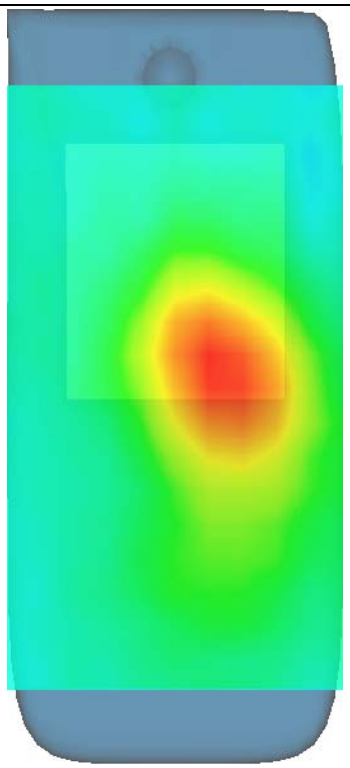
Maximum location: X=10.00, Y=5.00

SAR 10g (W/Kg)	0.028853
SAR 1g (W/Kg)	0.058189

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0613	0.0274	0.0121	0.0061	0.0050	0.0063



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

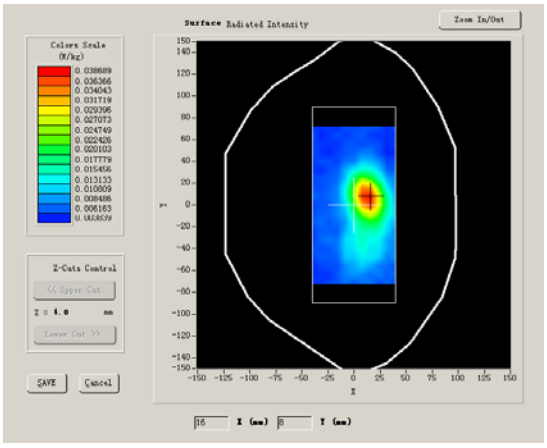
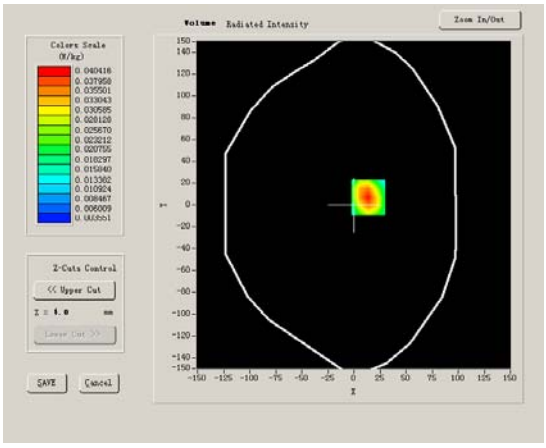
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Middle
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	54.550001
Relative permittivity	-14.200000

Conductivity (S/m)	1.947750
Variation (%)	1.040000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.3°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

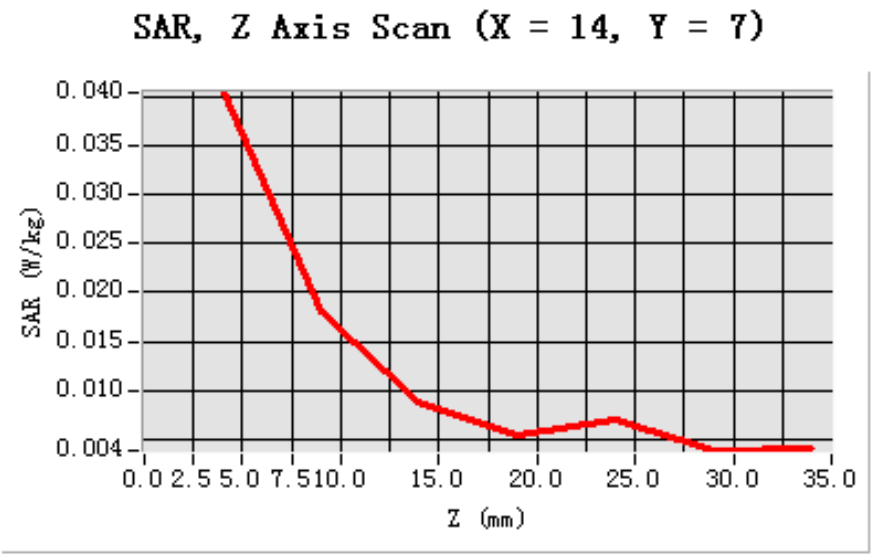
SURFACE SAR	VOLUME SAR
	

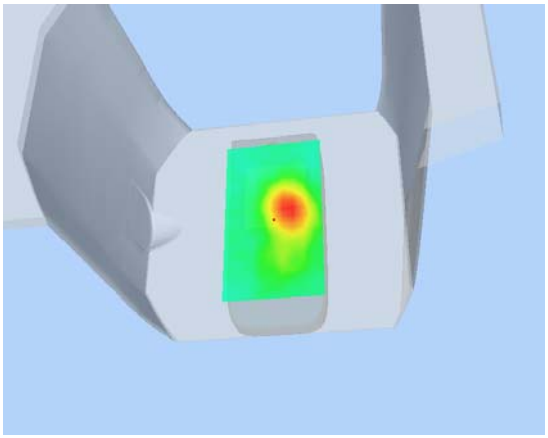
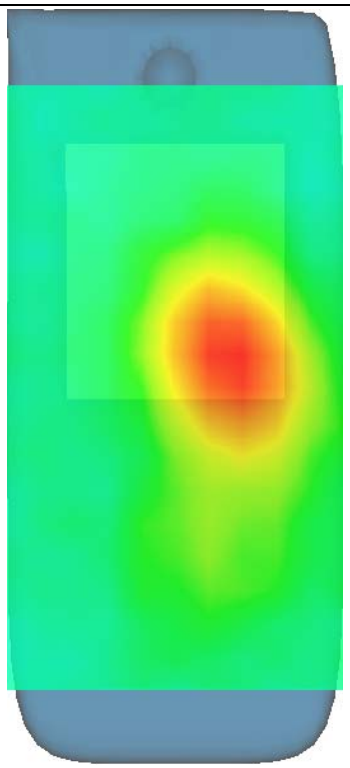
Maximum location: X=14.00, Y=7.00

SAR 10g (W/Kg)	0.019717
SAR 1g (W/Kg)	0.038657

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0404	0.0180	0.0088	0.0055	0.0071	0.0039



3D sceen 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: 15/12/2010

Measurement duration: 8 minutes 58 seconds

A. Experimental conditions.

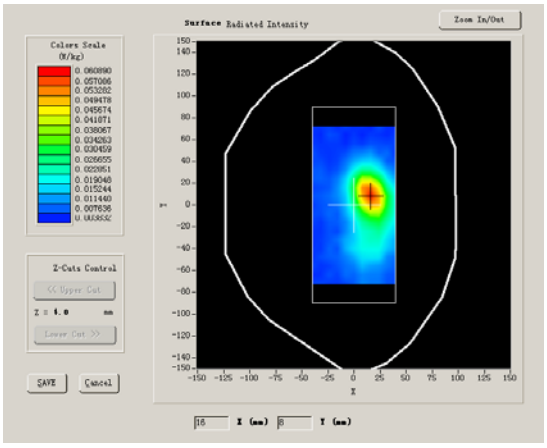
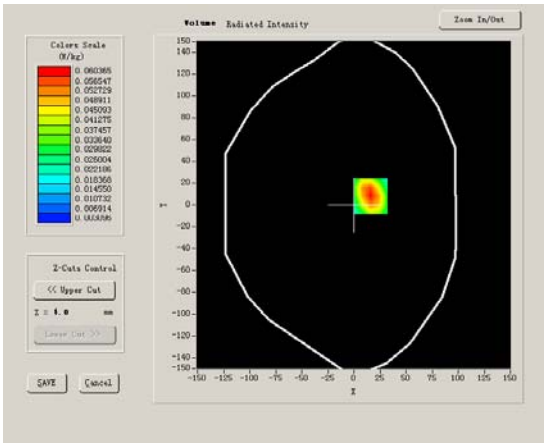
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	High
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.130001
Relative permittivity	8.320000

Conductivity (S/m)	1.973200
Variation (%)	0.330000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

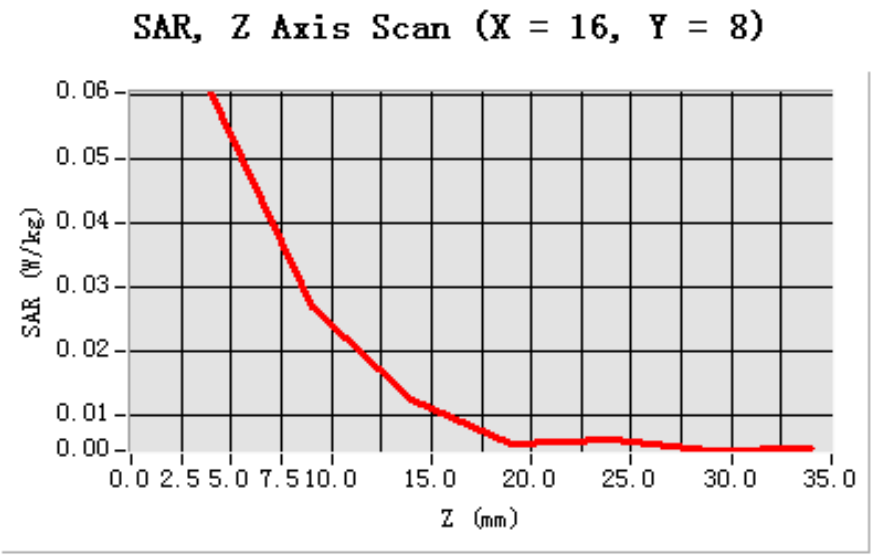
SURFACE SAR	VOLUME SAR
	

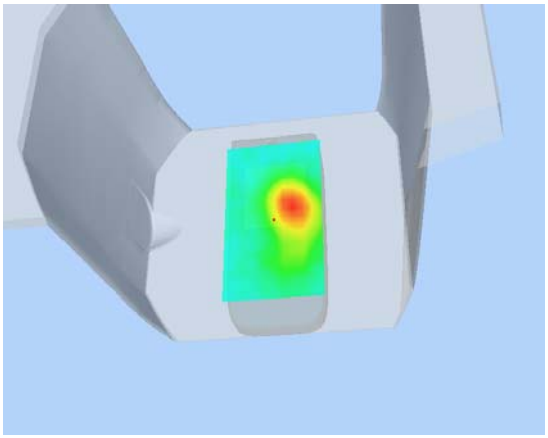
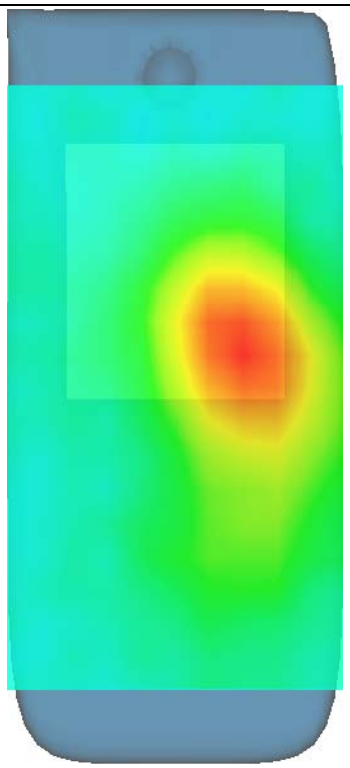
Maximum location: X=16.00, Y=8.00

SAR 10g (W/Kg)	0.028517
SAR 1g (W/Kg)	0.057512

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0604	0.0269	0.0126	0.0058	0.0063	0.0046



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

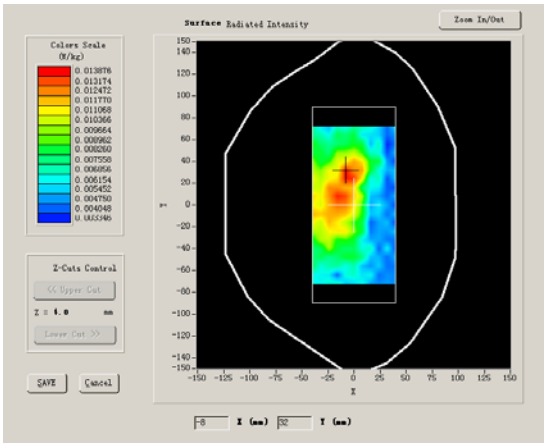
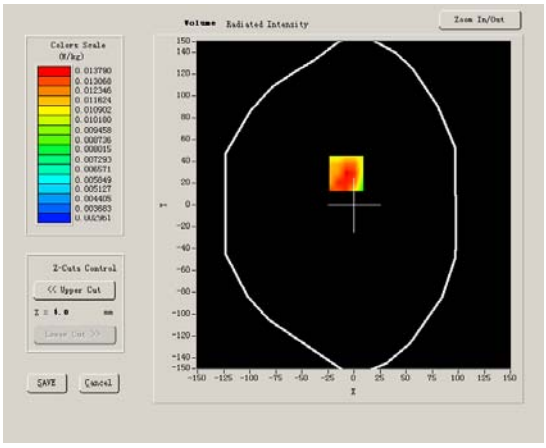
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Low
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 1):

Frequency (MHz)	2412.000000
Relative permittivity (real part)	54.130001
Relative permittivity	15.200000

Conductivity (S/m)	1.973200
Variation (%)	-1.540000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

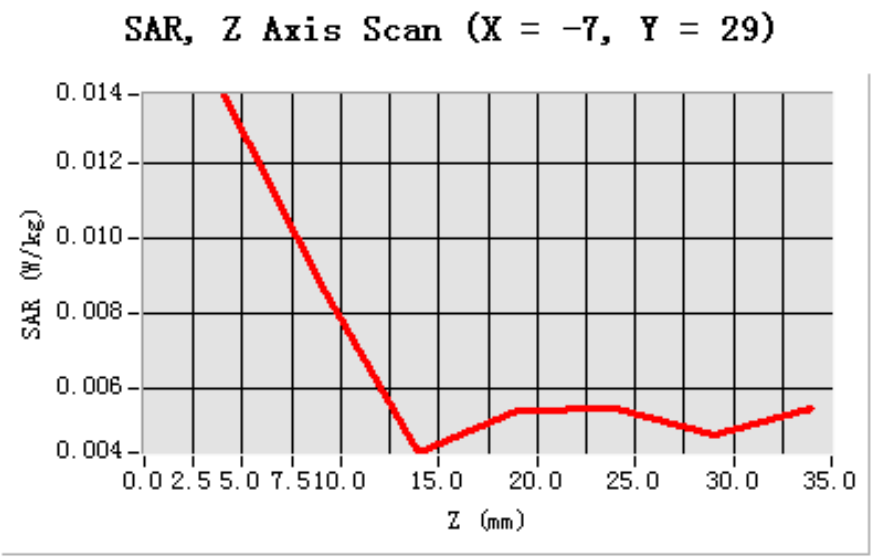
SURFACE SAR	VOLUME SAR
	

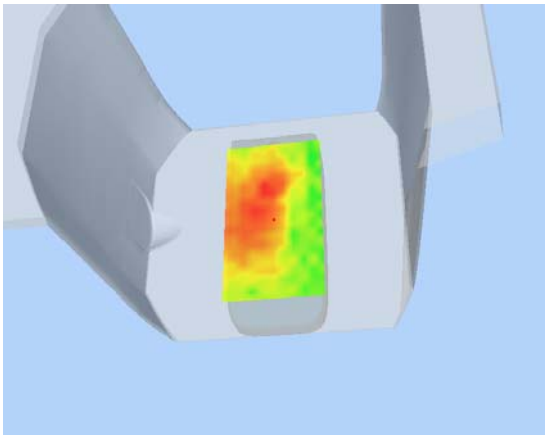
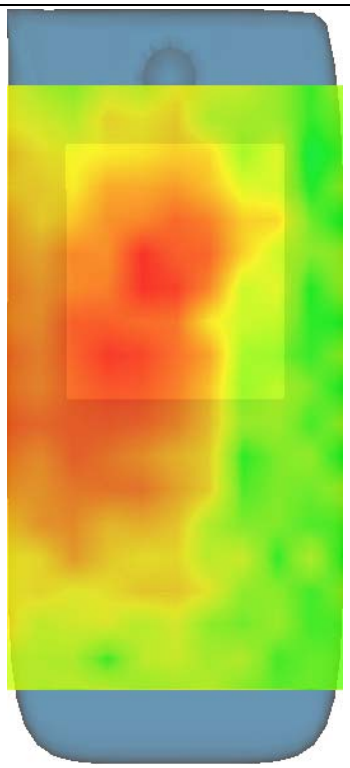
Maximum location: X=-7.00, Y=29.00

SAR 10g (W/Kg)	0.009288
SAR 1g (W/Kg)	0.014483

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0138	0.0088	0.0043	0.0055	0.0055	0.0048



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

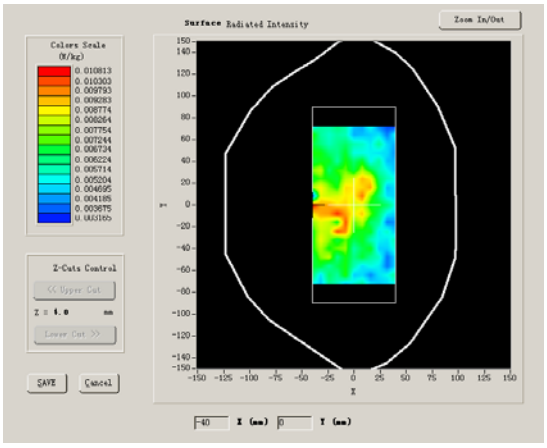
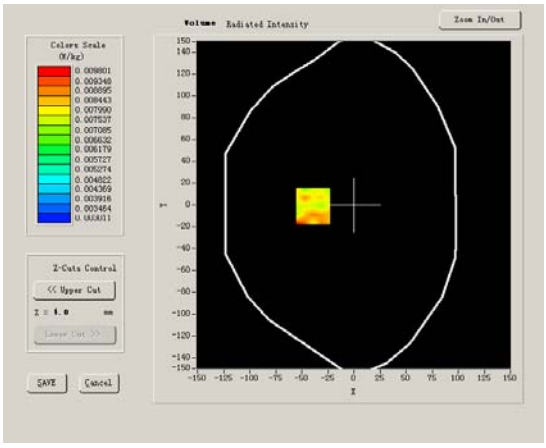
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Middle
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	54.550001
Relative permittivity	-8.500000

Conductivity (S/m)	1.947750
Variation (%)	-1.030000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

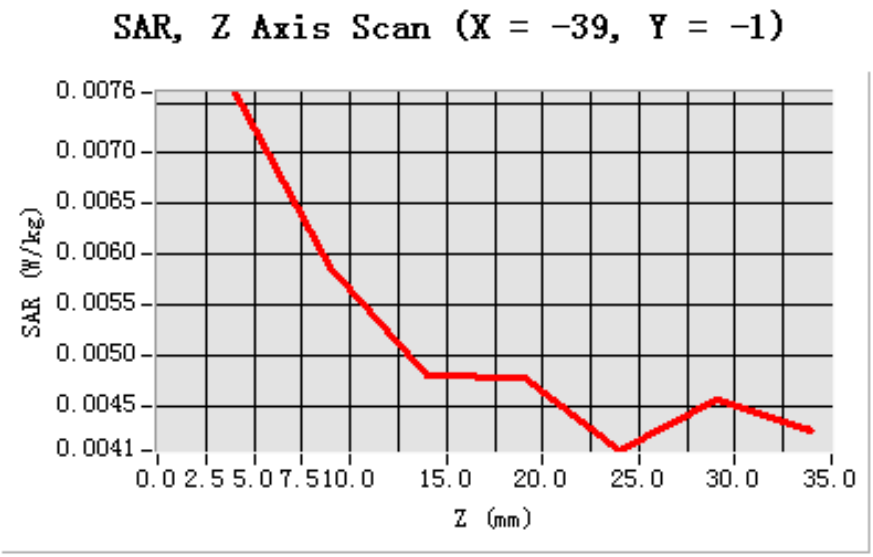
SURFACE SAR	VOLUME SAR
	

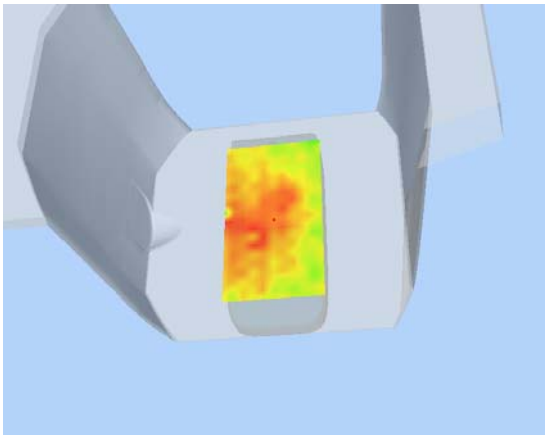
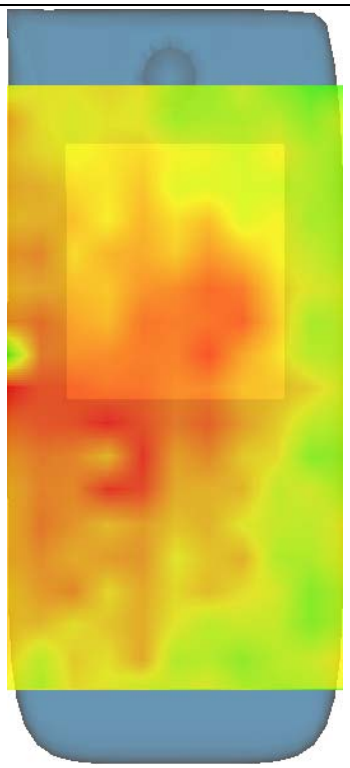
Maximum location: X=-39.00, Y=-1.00

SAR 10g (W/Kg)	0.006469
SAR 1g (W/Kg)	0.008680

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0076	0.0059	0.0048	0.0048	0.0041	0.0045



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

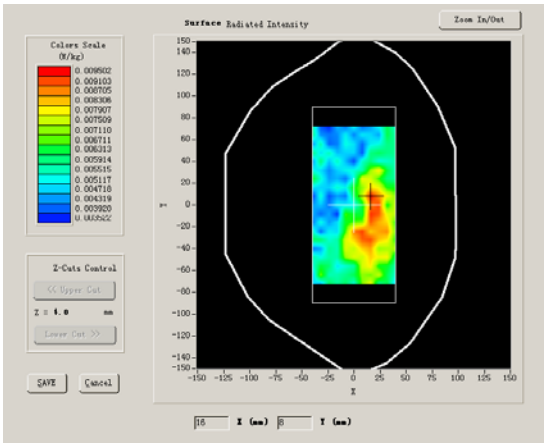
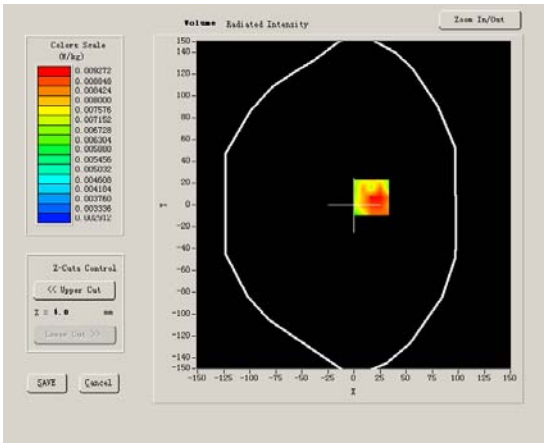
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	High
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.130001
Relative permittivity	16.100000

Conductivity (S/m)	1.973200
Variation (%)	-1.110000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

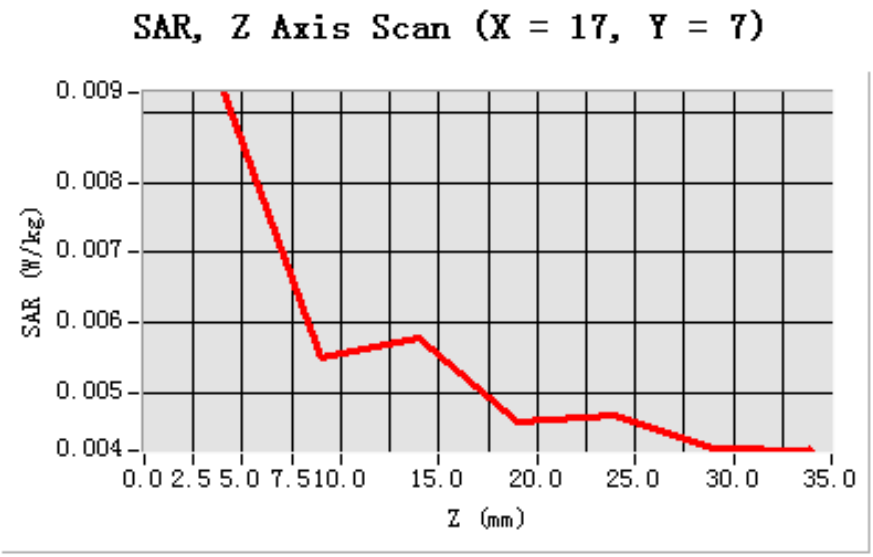
SURFACE SAR	VOLUME SAR
	

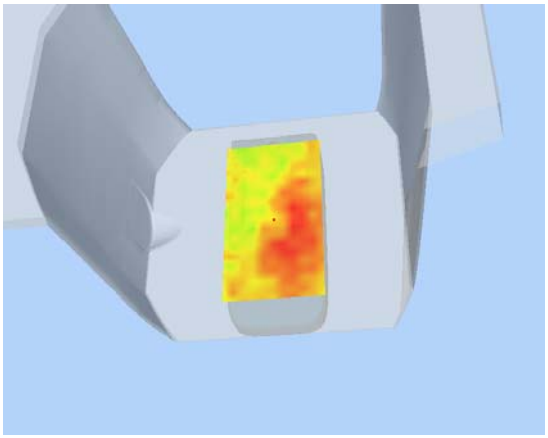
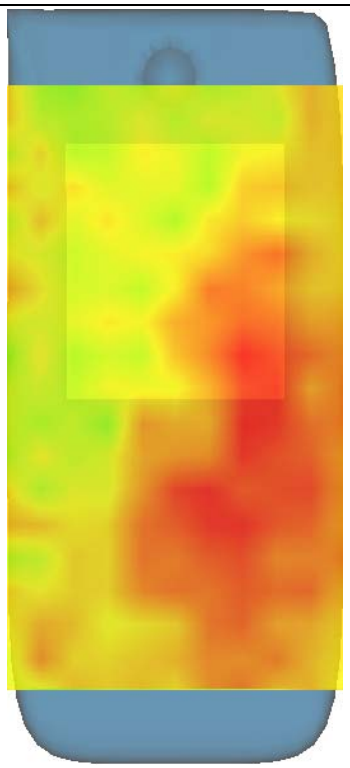
Maximum location: X=17.00, Y=7.00

SAR 10g (W/Kg)	0.006968
SAR 1g (W/Kg)	0.009209

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0093	0.0055	0.0058	0.0046	0.0047	0.0042



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

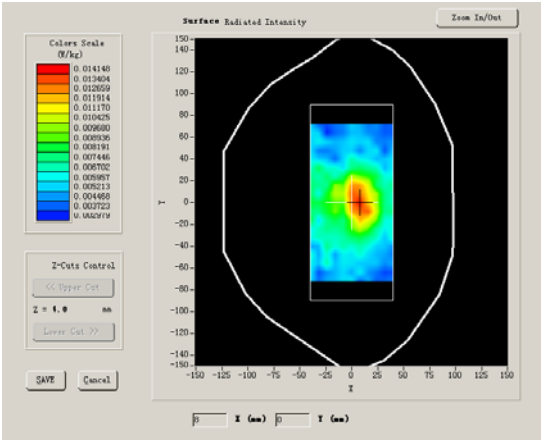
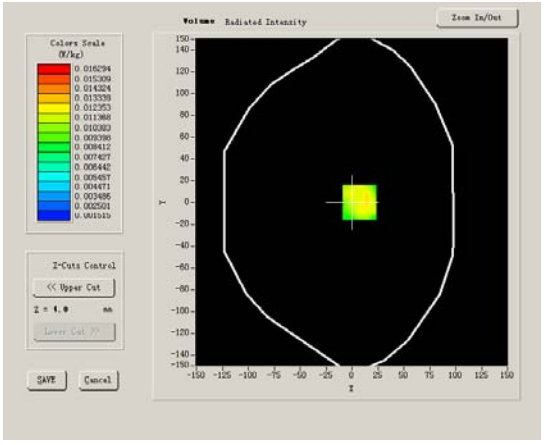
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Low
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 1):

Frequency (MHz)	2412.000000
Relative permittivity (real part)	53.340001
Relative permittivity	-14.365000

Conductivity (S/m)	1.929000
Variation (%)	-2.950000
Ambient Temperature:	22.2°C
Liquid Temperature:	22.4°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

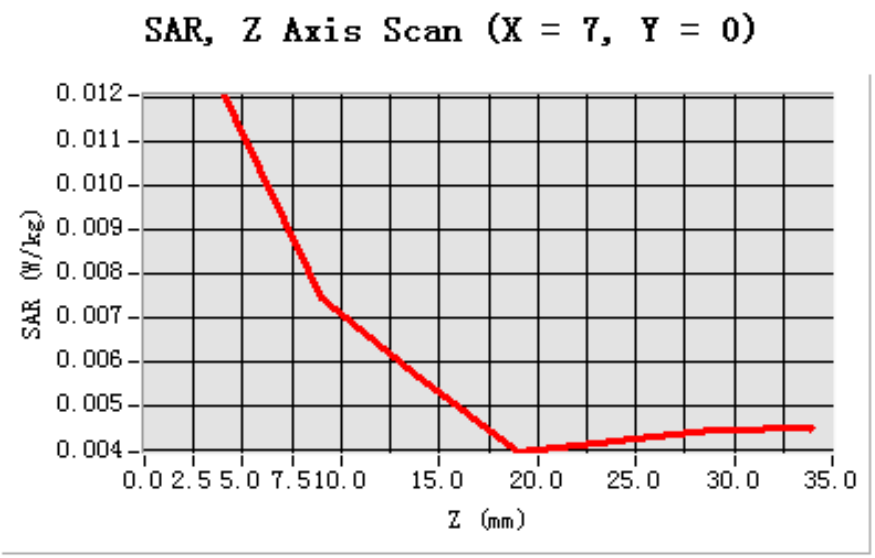
SURFACE SAR	VOLUME SAR
	

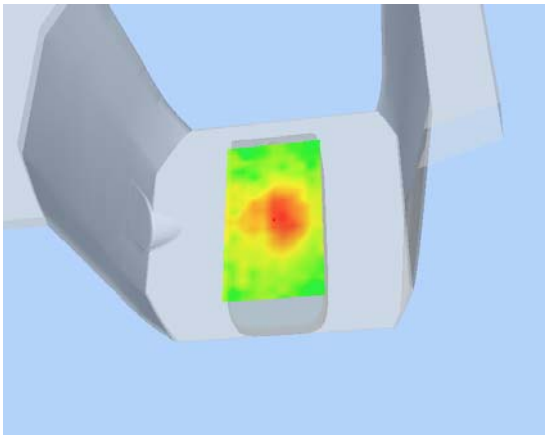
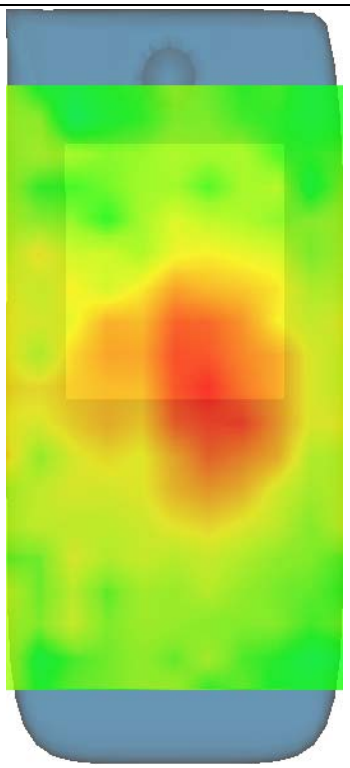
Maximum location: X=7.00, Y=0.00

SAR 10g (W/Kg)	0.008372
SAR 1g (W/Kg)	0.012466

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0120	0.0074	0.0056	0.0040	0.0042	0.0045



3D sceen 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: 16/12/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

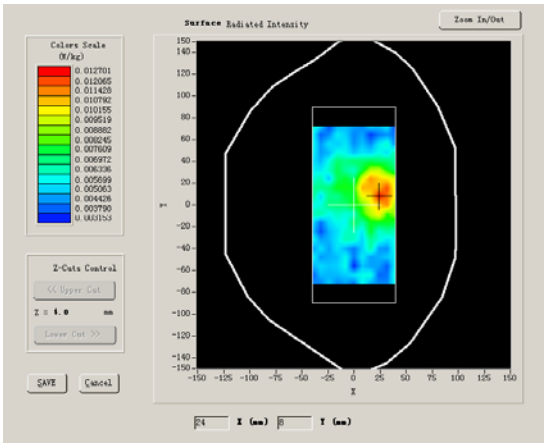
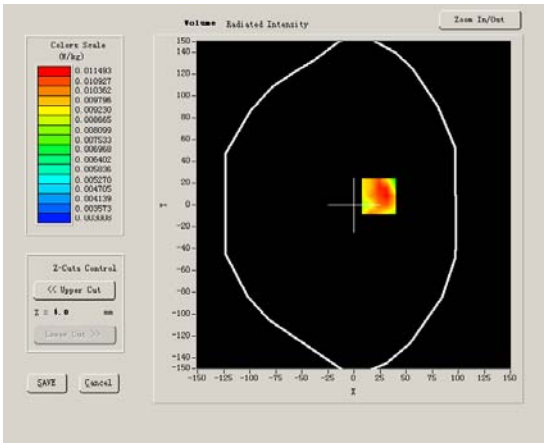
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Middle
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	54.550001
Relative permittivity	14.140000

Conductivity (S/m)	1.947750
Variation (%)	-1.960000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

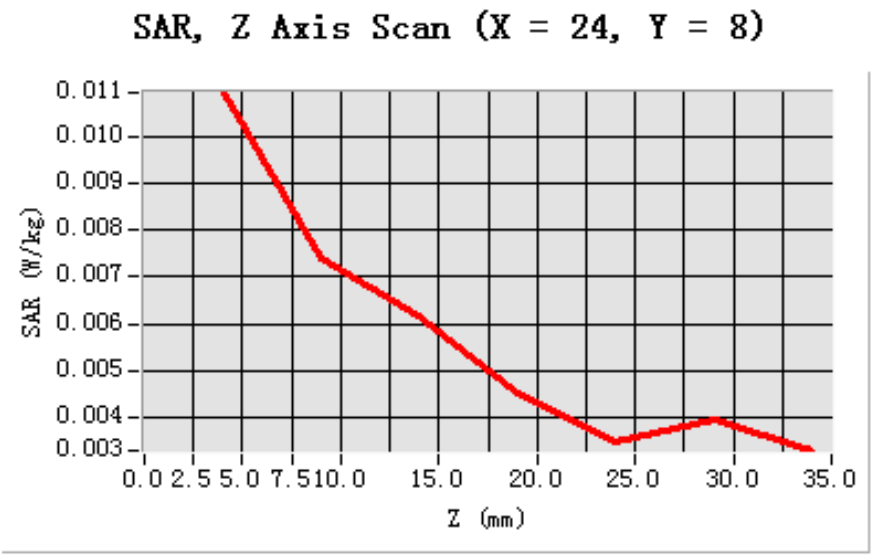
SURFACE SAR	VOLUME SAR
	

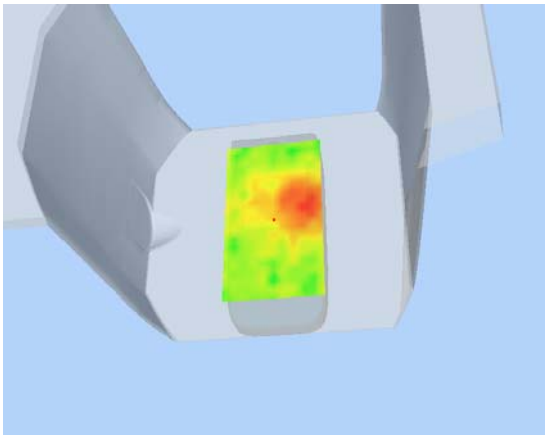
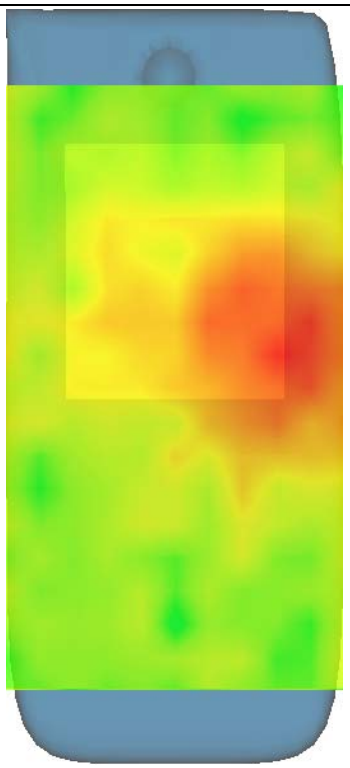
Maximum location: X=24.00, Y=8.00

SAR 10g (W/Kg)	0.007645
SAR 1g (W/Kg)	0.011537

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0110	0.0074	0.0062	0.0045	0.0034	0.0039



3D sceen 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: 16/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

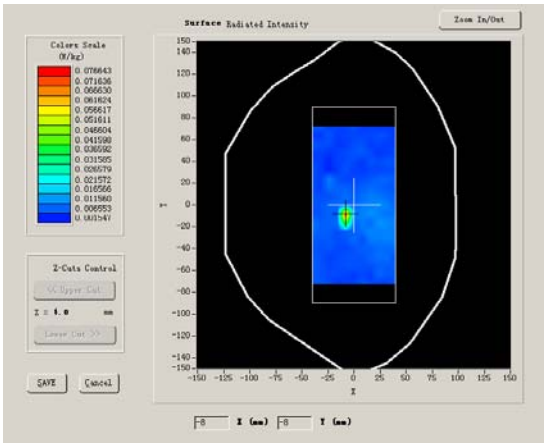
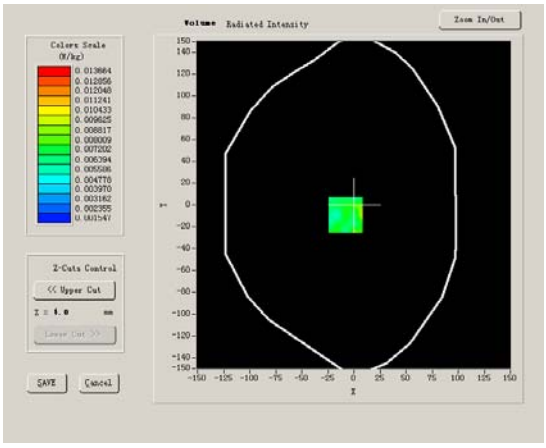
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	High
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.130001
Relative permittivity	9.220000

Conductivity (S/m)	1.973200
Variation (%)	-1.089996
Ambient Temperature:	22.0°C
Liquid Temperature:	22.1°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

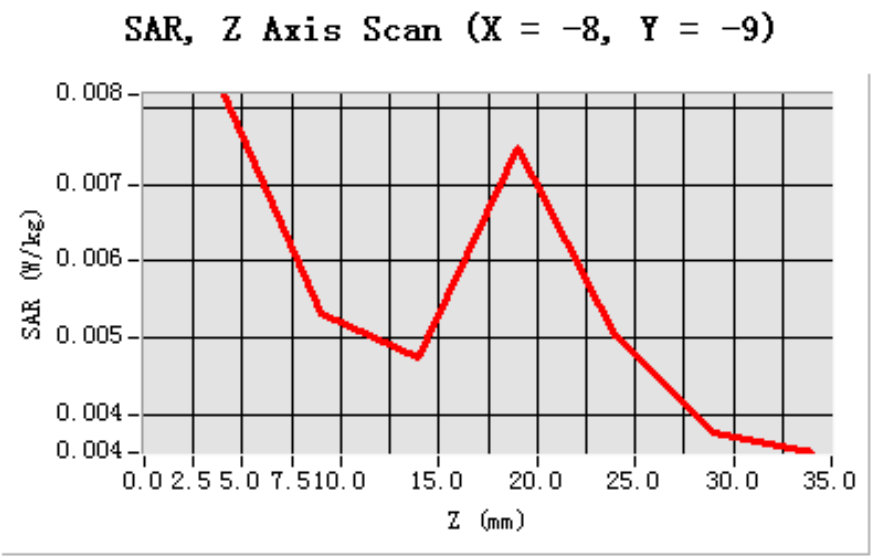
SURFACE SAR	VOLUME SAR
	

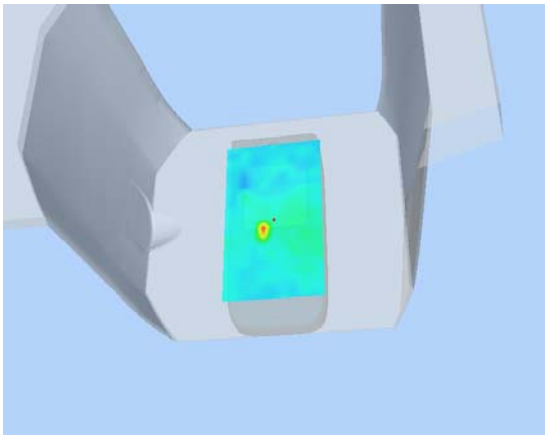
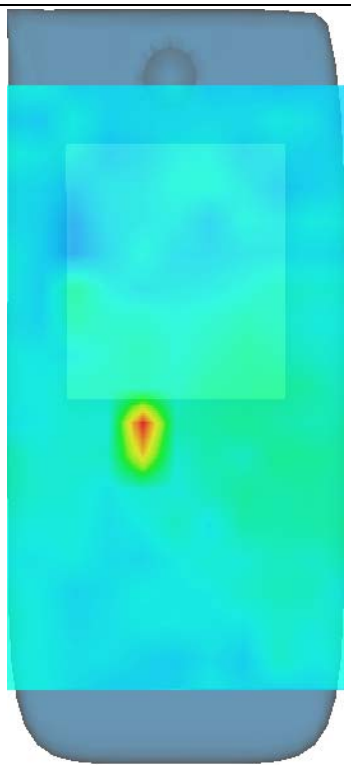
Maximum location: X=-8.00, Y=-9.00

SAR 10g (W/Kg)	0.006630
SAR 1g (W/Kg)	0.008821

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0082	0.0053	0.0047	0.0075	0.0050	0.0038



3D sceen 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: 16/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

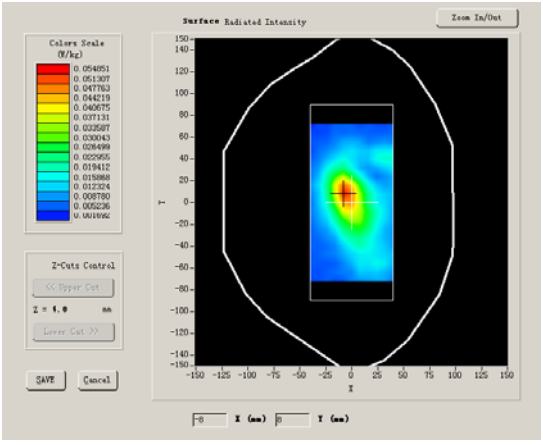
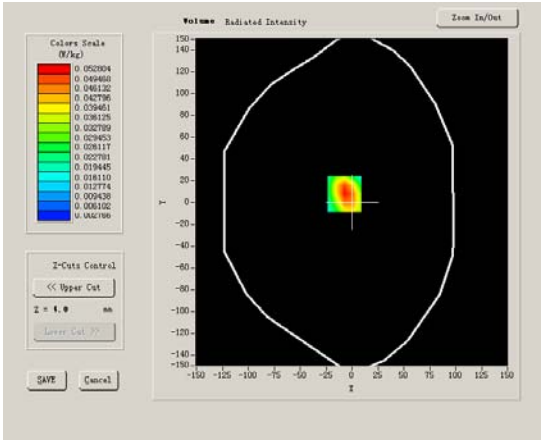
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Low
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 1):

Frequency (MHz)	2412.000000
Relative permittivity (real part)	53.340001
Relative permittivity	12.140000

Conductivity (S/m)	1.929000
Variation (%)	-2.810000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

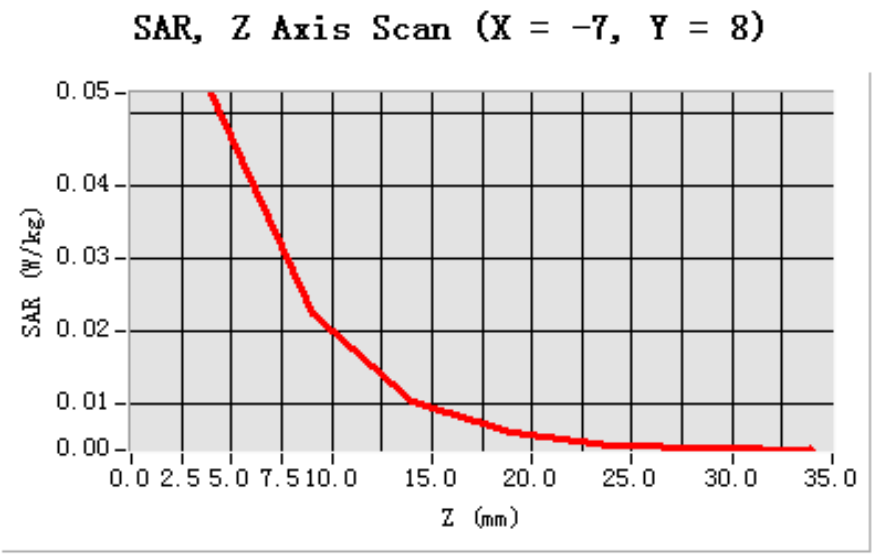
SURFACE SAR	VOLUME SAR
	

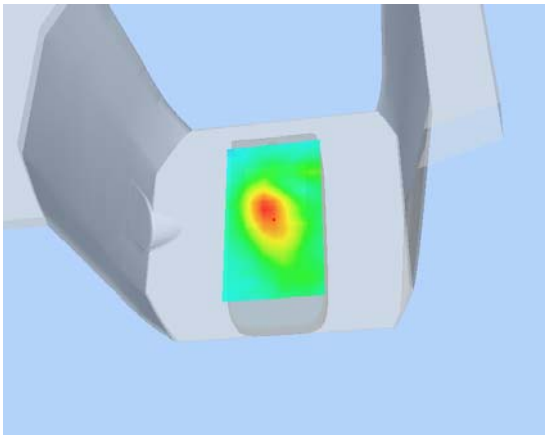
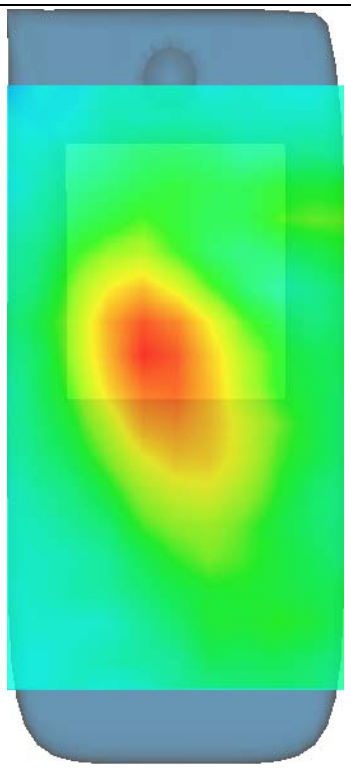
Maximum location: X=-7.00, Y=8.00

SAR 10g (W/Kg)	0.025099
SAR 1g (W/Kg)	0.050997

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0528	0.0224	0.0103	0.0060	0.0043	0.0041



3D sceen 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: 16/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

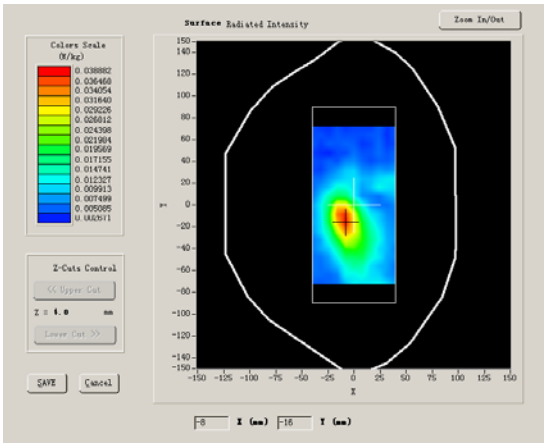
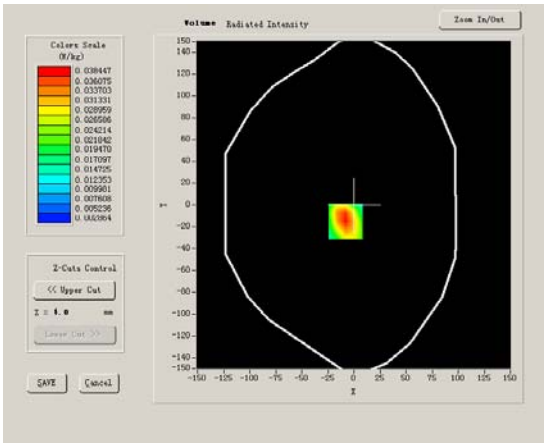
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Middle
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	54.550001
Relative permittivity	-13.300000

Conductivity (S/m)	1.947750
Variation (%)	-2.180000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

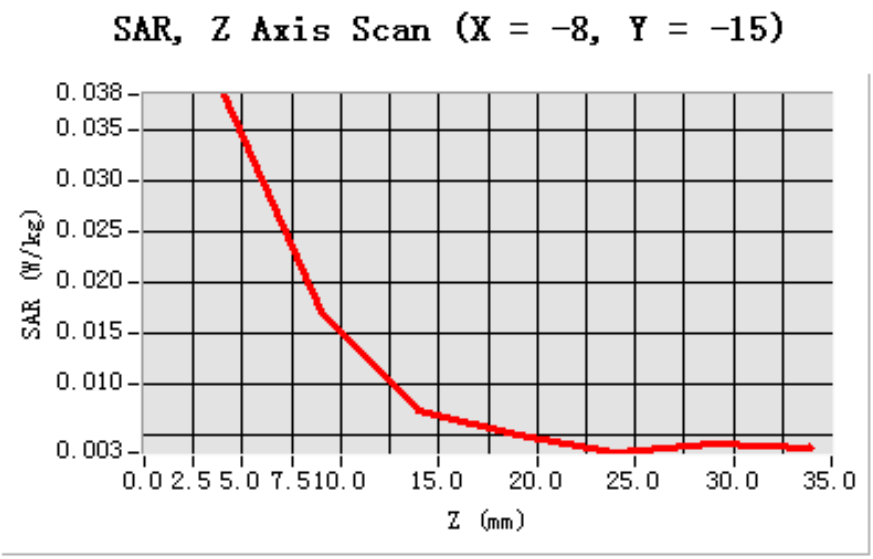
SURFACE SAR	VOLUME SAR
	

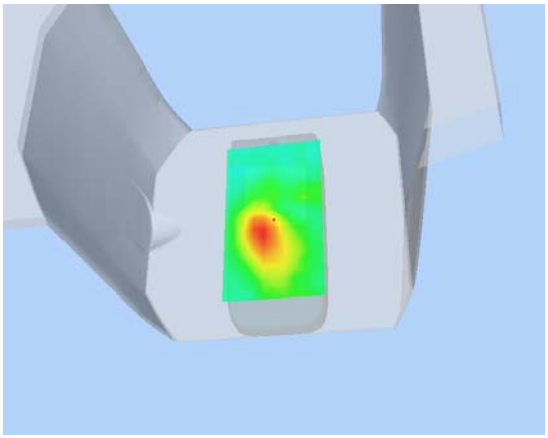
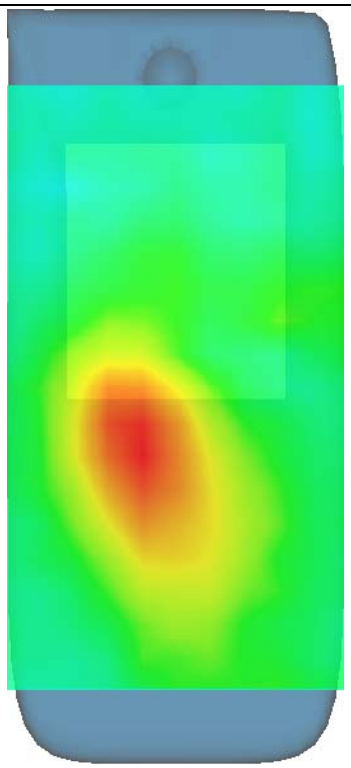
Maximum location: X=-8.00, Y=-15.00

SAR 10g (W/Kg)	0.018762
SAR 1g (W/Kg)	0.037024

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0384	0.0172	0.0075	0.0050	0.0033	0.0043



3D sceen 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: 16/12/2010

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

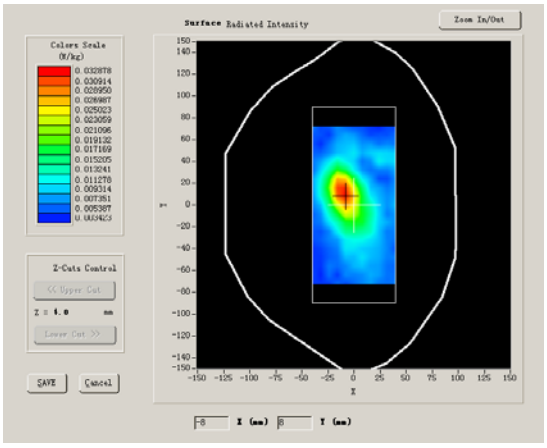
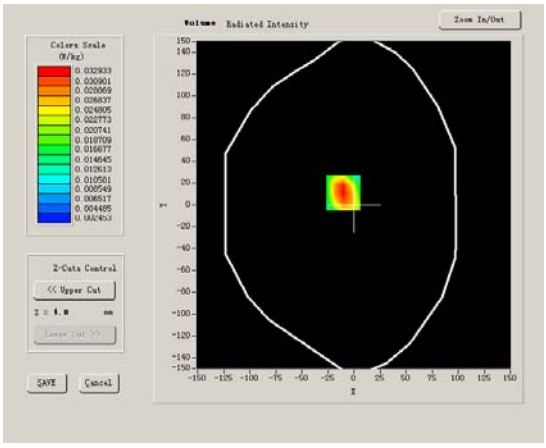
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	High
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.130001
Relative permittivity	-17.100000

Conductivity (S/m)	1.973200
Variation (%)	1.790000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.5°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

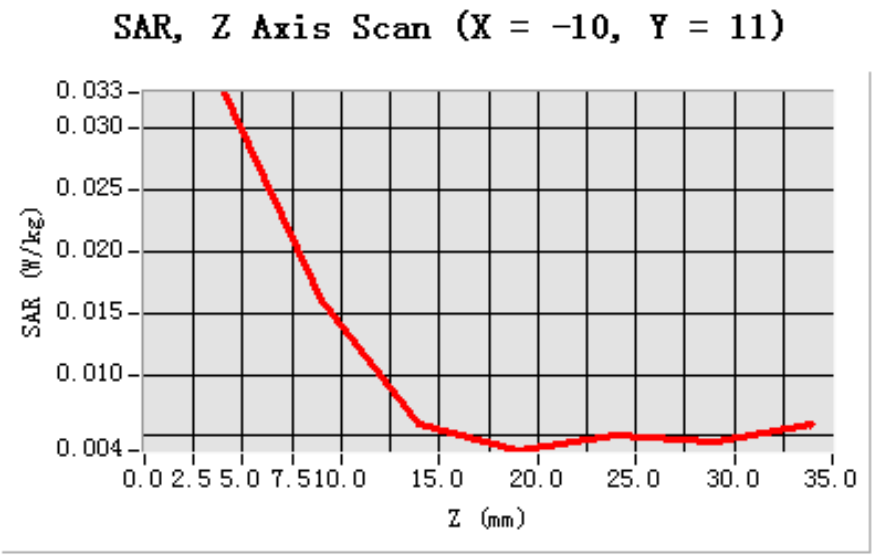
SURFACE SAR	VOLUME SAR
	

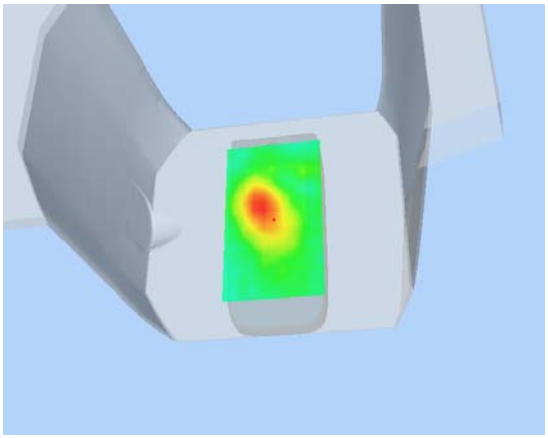
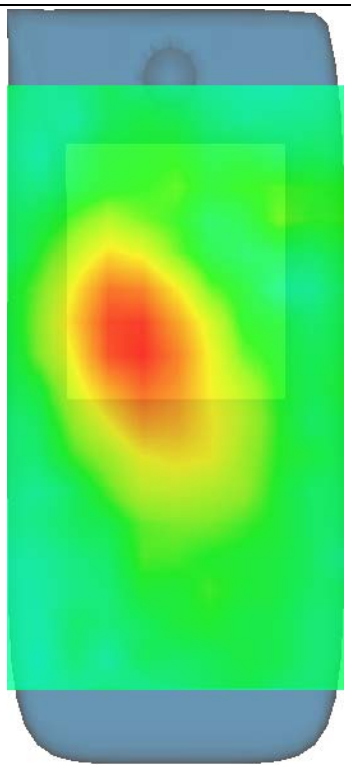
Maximum location: X=-10.00, Y=11.00

SAR 10g (W/Kg)	0.016054
SAR 1g (W/Kg)	0.031438

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0329	0.0160	0.0060	0.0038	0.0050	0.0045



3D sceen 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: 16/12/2010

Measurement duration: 9 minutes 4 seconds

A. Experimental conditions.

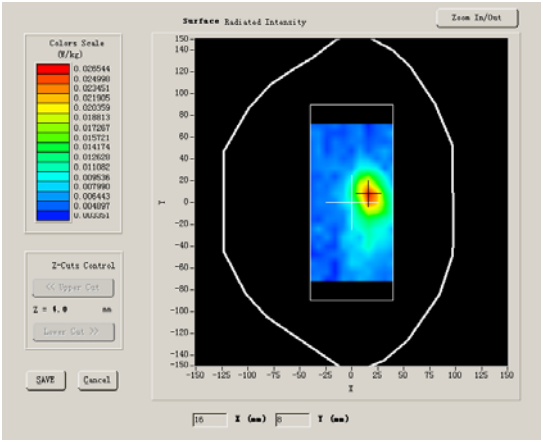
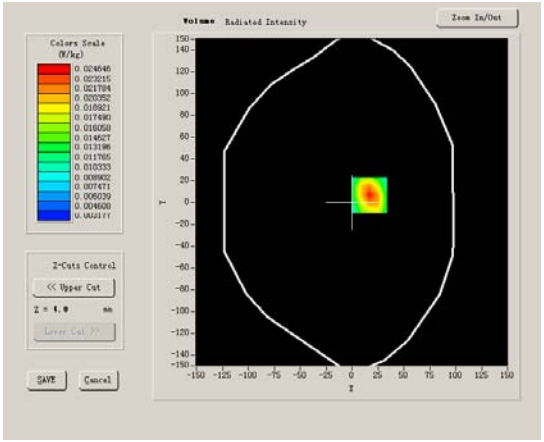
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Low
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 1):

Frequency (MHz)	2412.000000
Relative permittivity (real part)	53.340001
Relative permittivity	-9.300000

Conductivity (S/m)	1.929000
Variation (%)	1.580000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.4°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

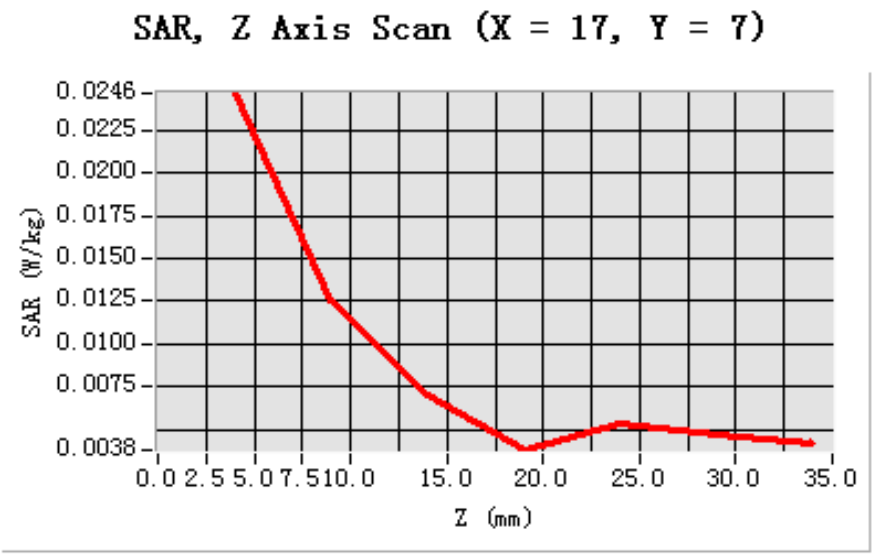
SURFACE SAR	VOLUME SAR
	

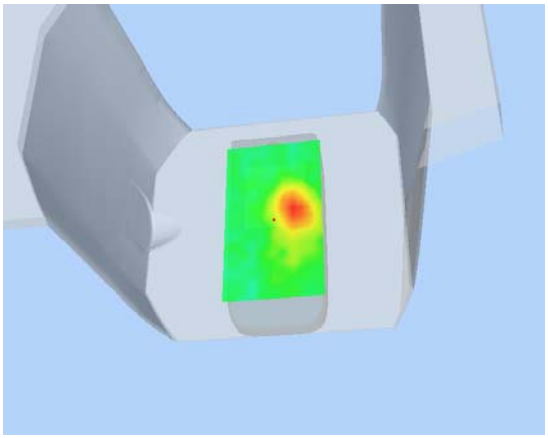
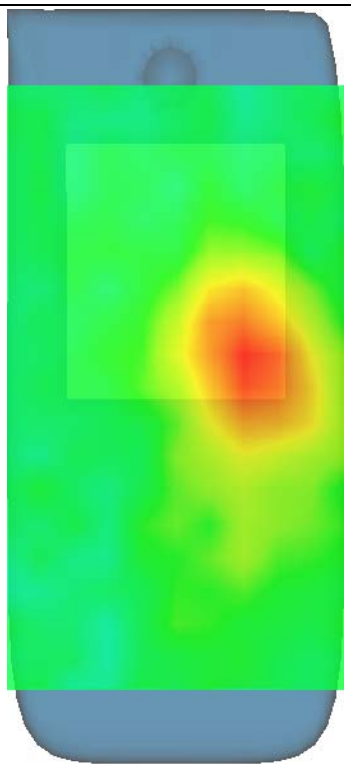
Maximum location: X=17.00, Y=7.00

SAR 10g (W/Kg)	0.012820
SAR 1g (W/Kg)	0.023284

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0246	0.0125	0.0070	0.0038	0.0053	0.0047



3D sceen 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: 16/12/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

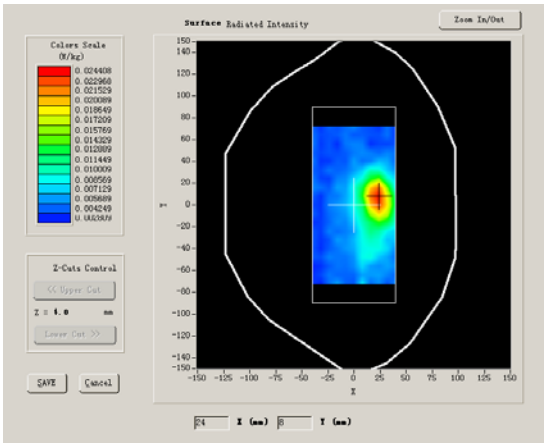
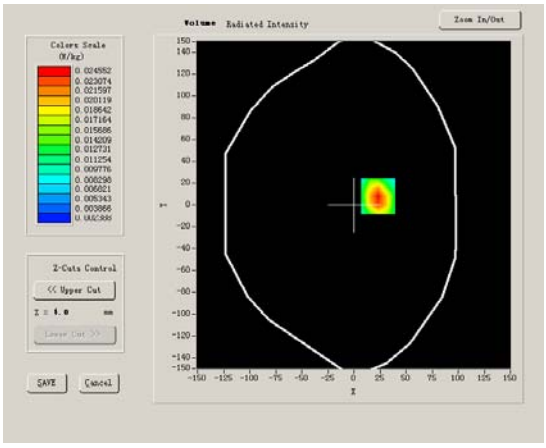
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Middle
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	54.550001
Relative permittivity	-10.230000

Conductivity (S/m)	1.947750
Variation (%)	2.220000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.4°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

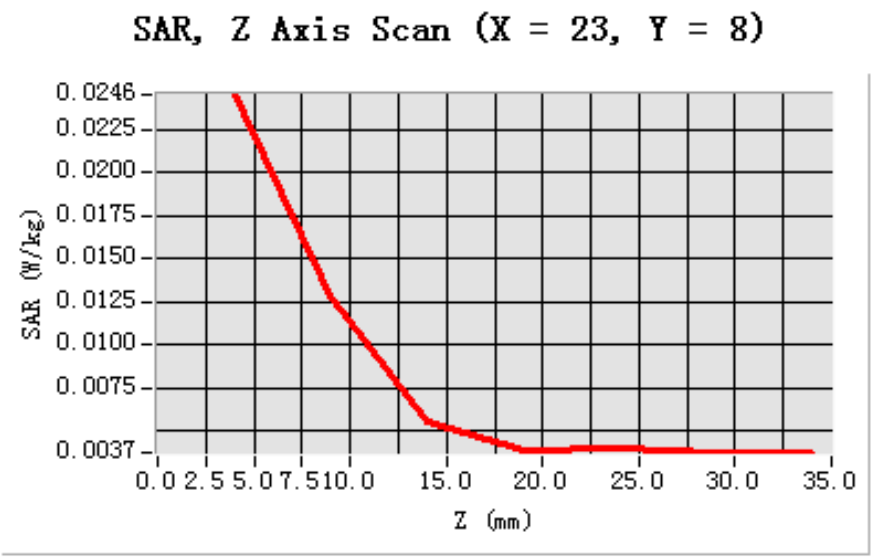
SURFACE SAR	VOLUME SAR
	

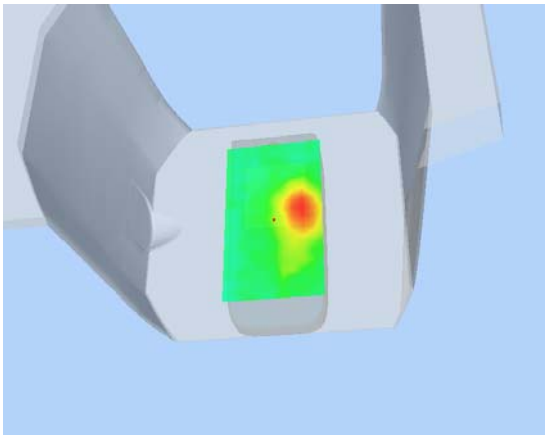
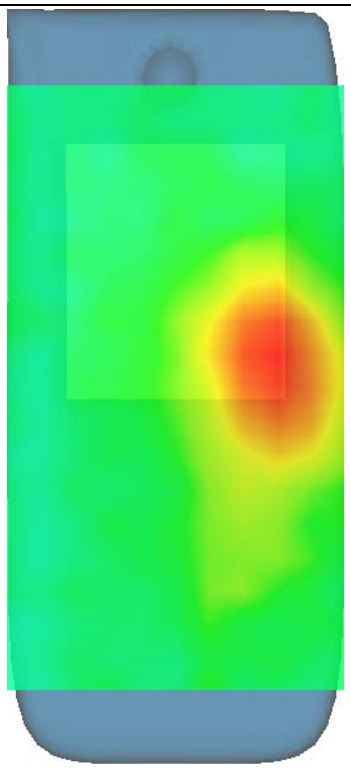
Maximum location: X=23.00, Y=8.00

SAR 10g (W/Kg)	0.012378
SAR 1g (W/Kg)	0.023494

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0246	0.0128	0.0056	0.0039	0.0040	0.0037



3D sceen 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: 16/12/2010

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

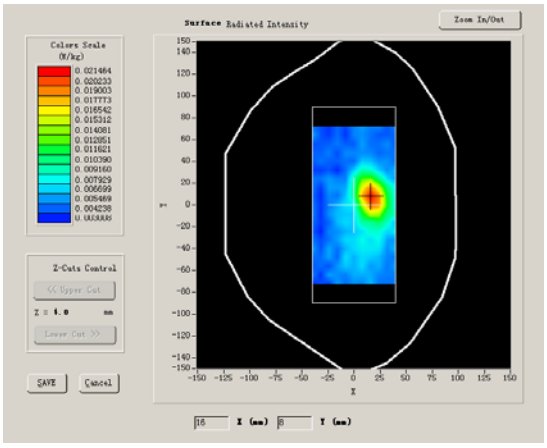
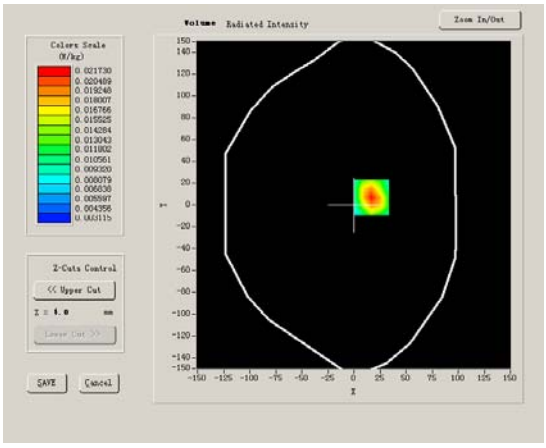
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Low
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	2412.000000
Relative permittivity (real part)	38.810001
Relative permittivity	10.020000

Conductivity (S/m)	1.809000
Variation (%)	1.460000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

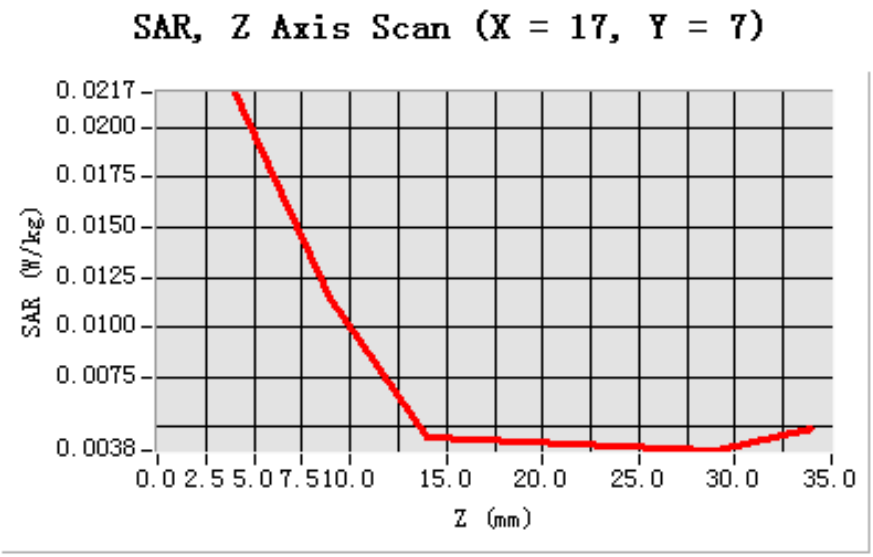
SURFACE SAR	VOLUME SAR
	

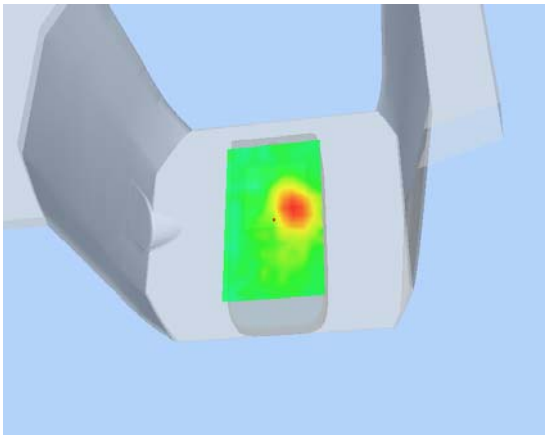
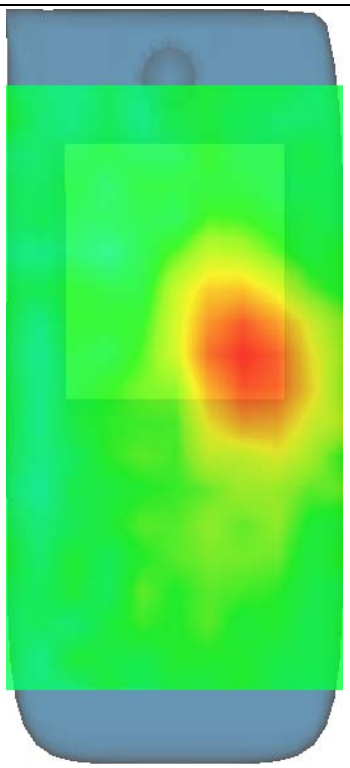
Maximum location: X=17.00, Y=7.00

SAR 10g (W/Kg)	0.011405
SAR 1g (W/Kg)	0.020645

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0217	0.0114	0.0045	0.0043	0.0041	0.0038



3D sceen 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: 15/12/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

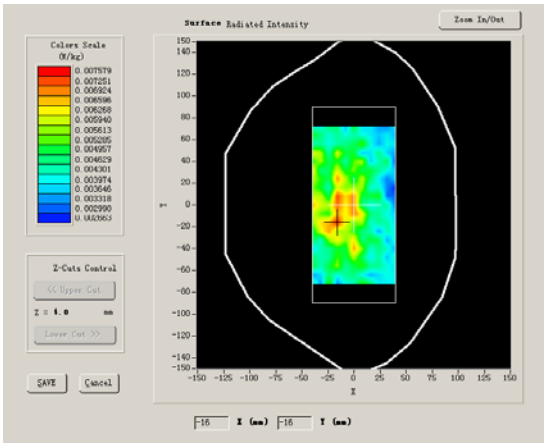
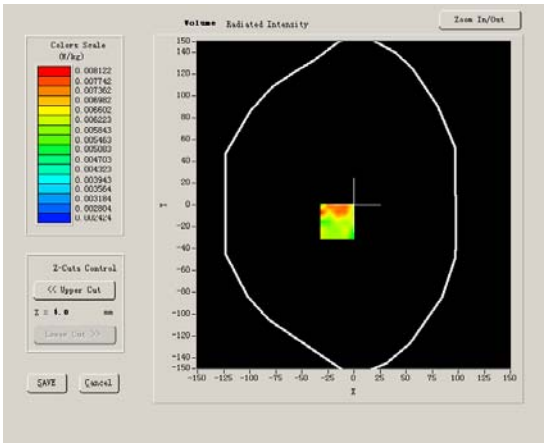
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Low
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 1):

Frequency (MHz)	2412.000000
Relative permittivity (real part)	54.130001
Relative permittivity	-11.280000

Conductivity (S/m)	1.973200
Variation (%)	-1.100000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

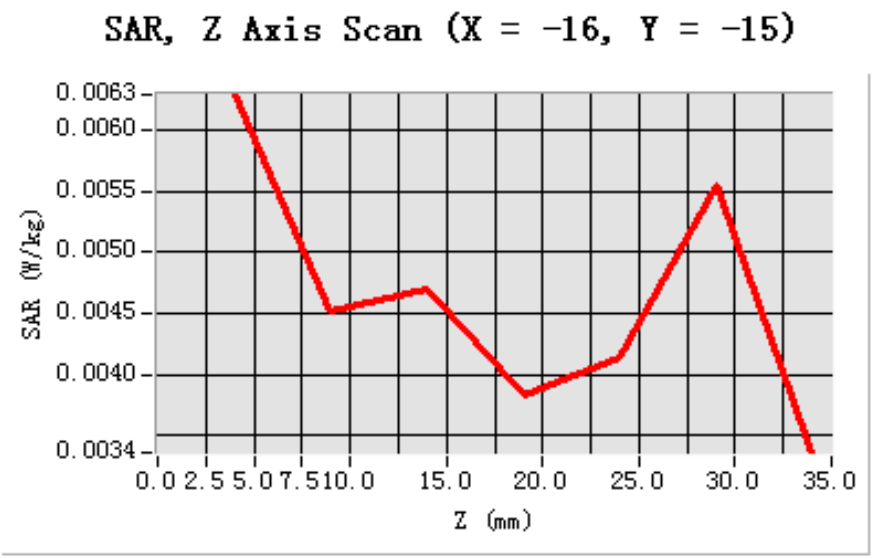
SURFACE SAR	VOLUME SAR
	

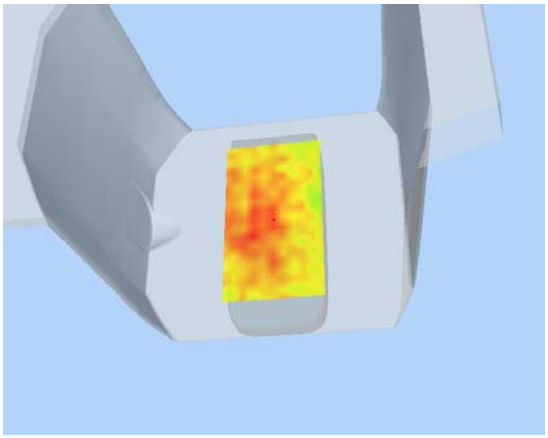
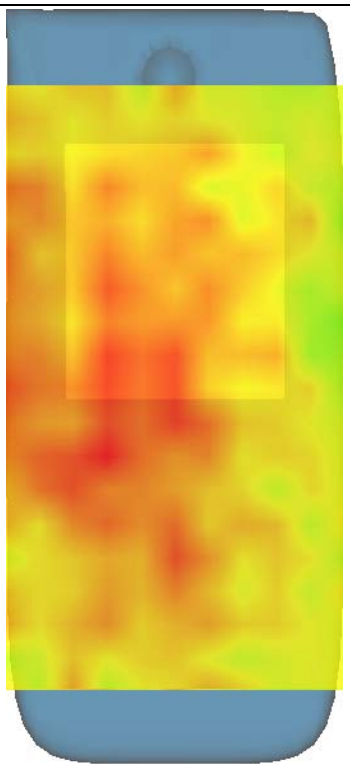
Maximum location: X=-16.00, Y=-15.00

SAR 10g (W/Kg)	0.005302
SAR 1g (W/Kg)	0.006350

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0063	0.0045	0.0047	0.0038	0.0041	0.0056



3D sceen shot	Hot spot position
	

MEASUREMENT 47

Type: Phone measurement (Complete)

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

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

Date of measurement: 16/12/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

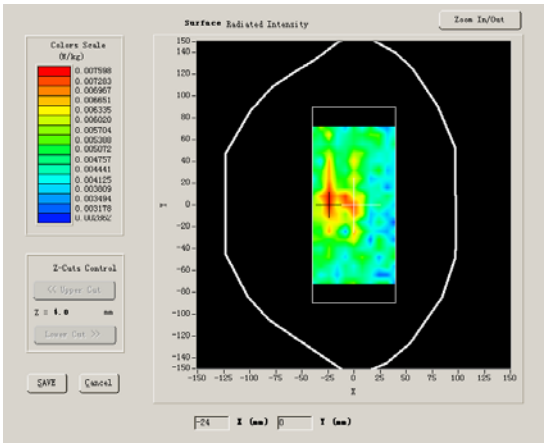
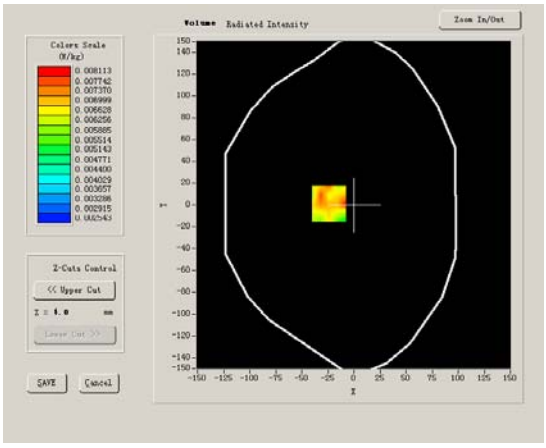
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	Middle
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 6):

Frequency (MHz)	2437.000000
Relative permittivity (real part)	54.550001
Relative permittivity	-16.200000

Conductivity (S/m)	1.947750
Variation (%)	-2.230000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

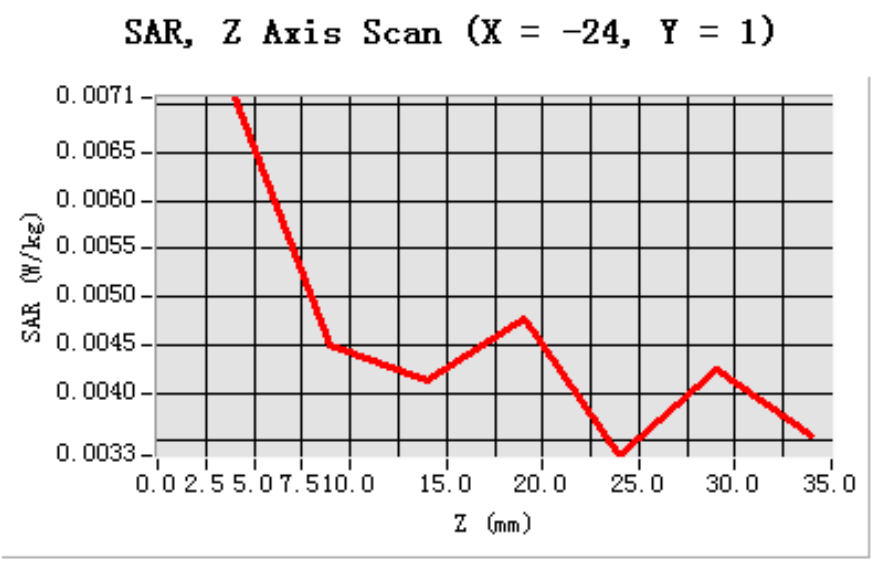
SURFACE SAR	VOLUME SAR
	

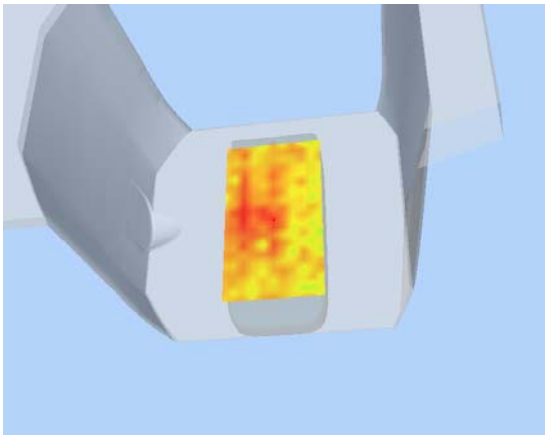
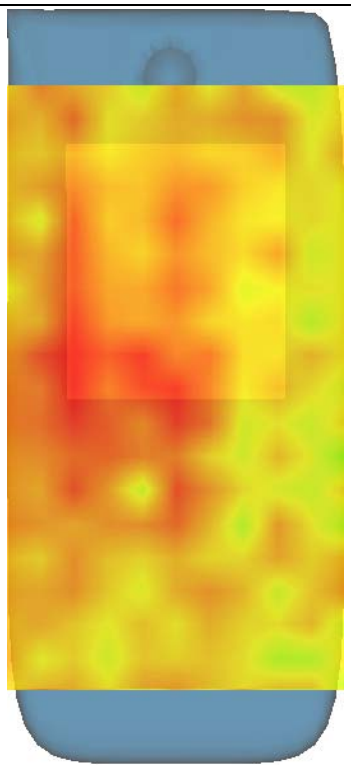
Maximum location: X=-24.00, Y=1.00

SAR 10g (W/Kg)	0.005575
SAR 1g (W/Kg)	0.007174

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0071	0.0045	0.0041	0.0048	0.0033	0.0042



3D sceen shot	Hot spot position
	

MEASUREMENT 48

Type: Phone measurement (Complete)

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

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

Date of measurement: 16/12/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

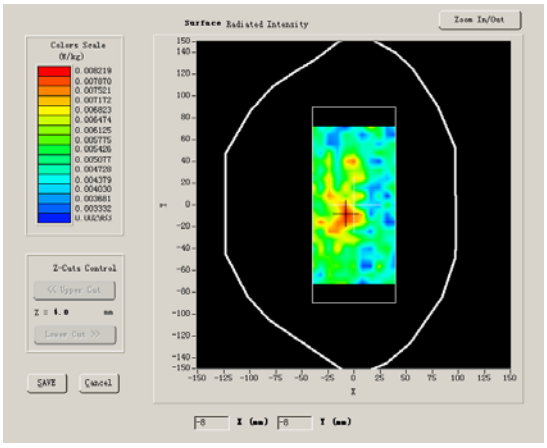
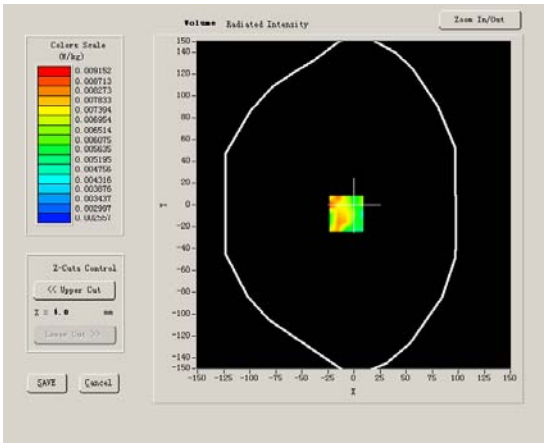
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CUSTOM (2450)
Channels	High
Signal	Duty Cycle: 1.00

B. SAR Measurement Results

Lower Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.130001
Relative permittivity	14.120000

Conductivity (S/m)	1.973200
Variation (%)	-2.050000
Ambient Temperature:	22.2°C
Liquid Temperature:	22.5°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

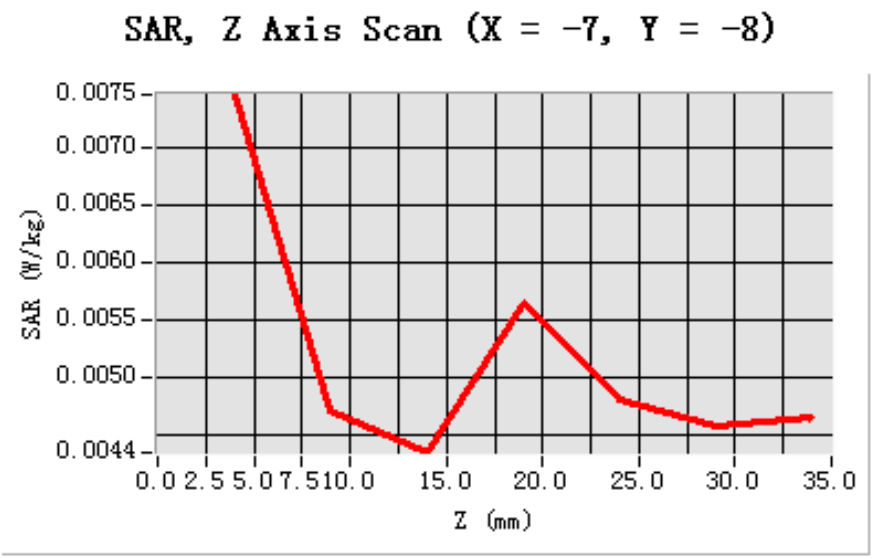
SURFACE SAR	VOLUME SAR
	

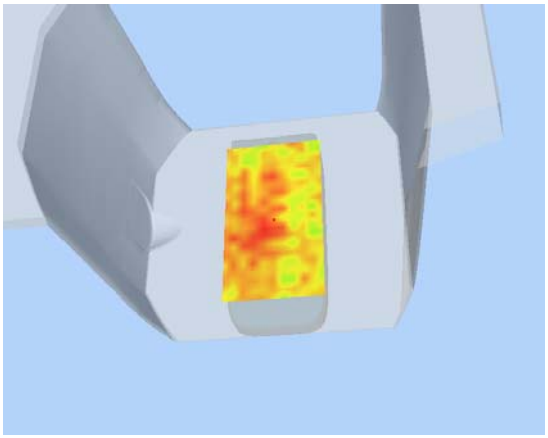
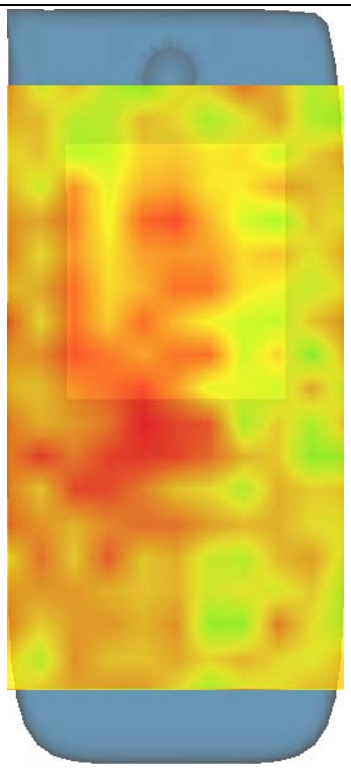
Maximum location: X=-7.00, Y=-8.00

SAR 10g (W/Kg)	0.005883
SAR 1g (W/Kg)	0.007224

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0075	0.0047	0.0044	0.0057	0.0048	0.0046



3D sceen shot	Hot spot position
	

System Performance Check Data

Type: Phone measurement (Complete)

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

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

Date of measurement: 14/12/2010

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

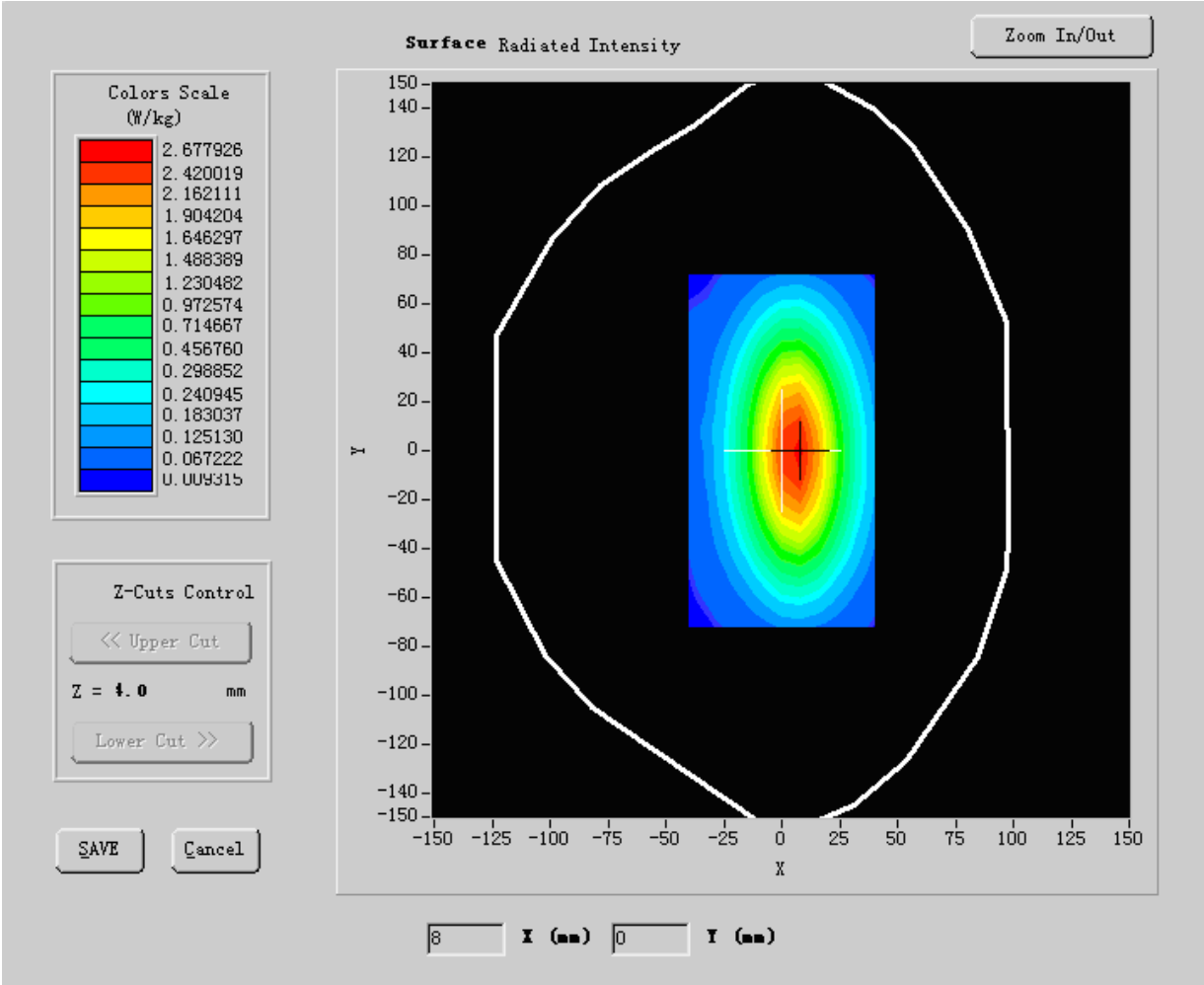
B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.669998
Relative permittivity	15.070000
Conductivity (S/m)	0.888655
Power Drift (%)	-0.050000

Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

SURFACE SAR

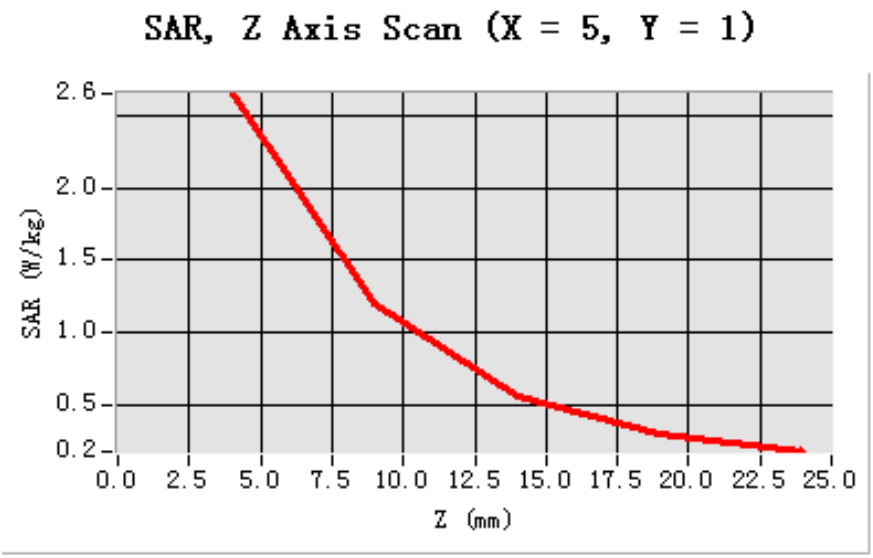


Maximum location: X=8.00, Y=1.00

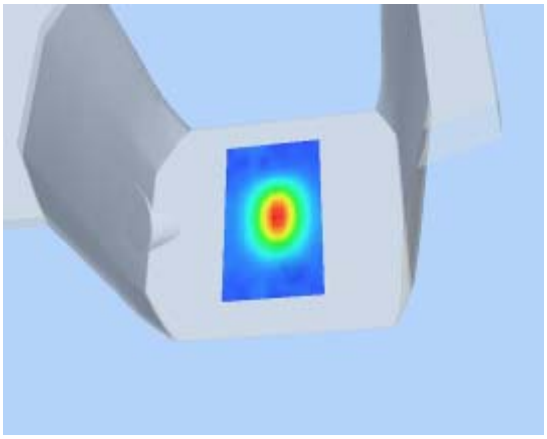
SAR 10g (W/Kg)	1.392223
SAR 1g (W/Kg)	2.458231

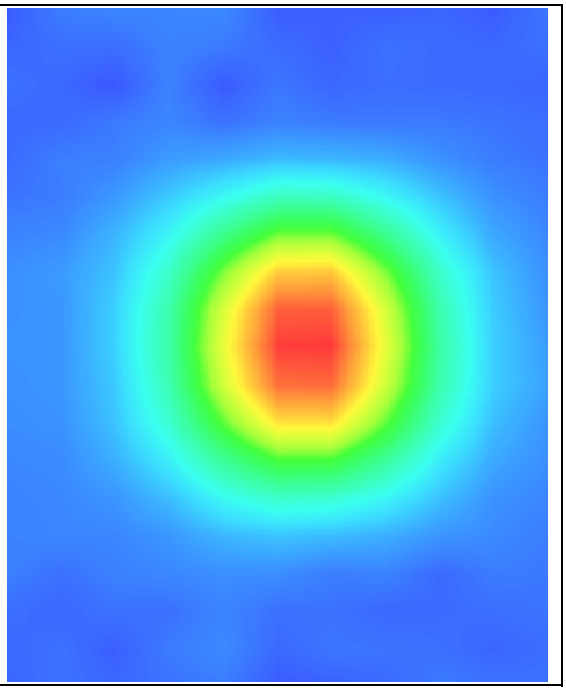
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	2.6486	1.2069	0.5583	0.3002



3D sceen shot	Hot spot position





System Performance Check Data

Type: Phone measurement (Complete)

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

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

Date of measurement: 14/12/2010

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

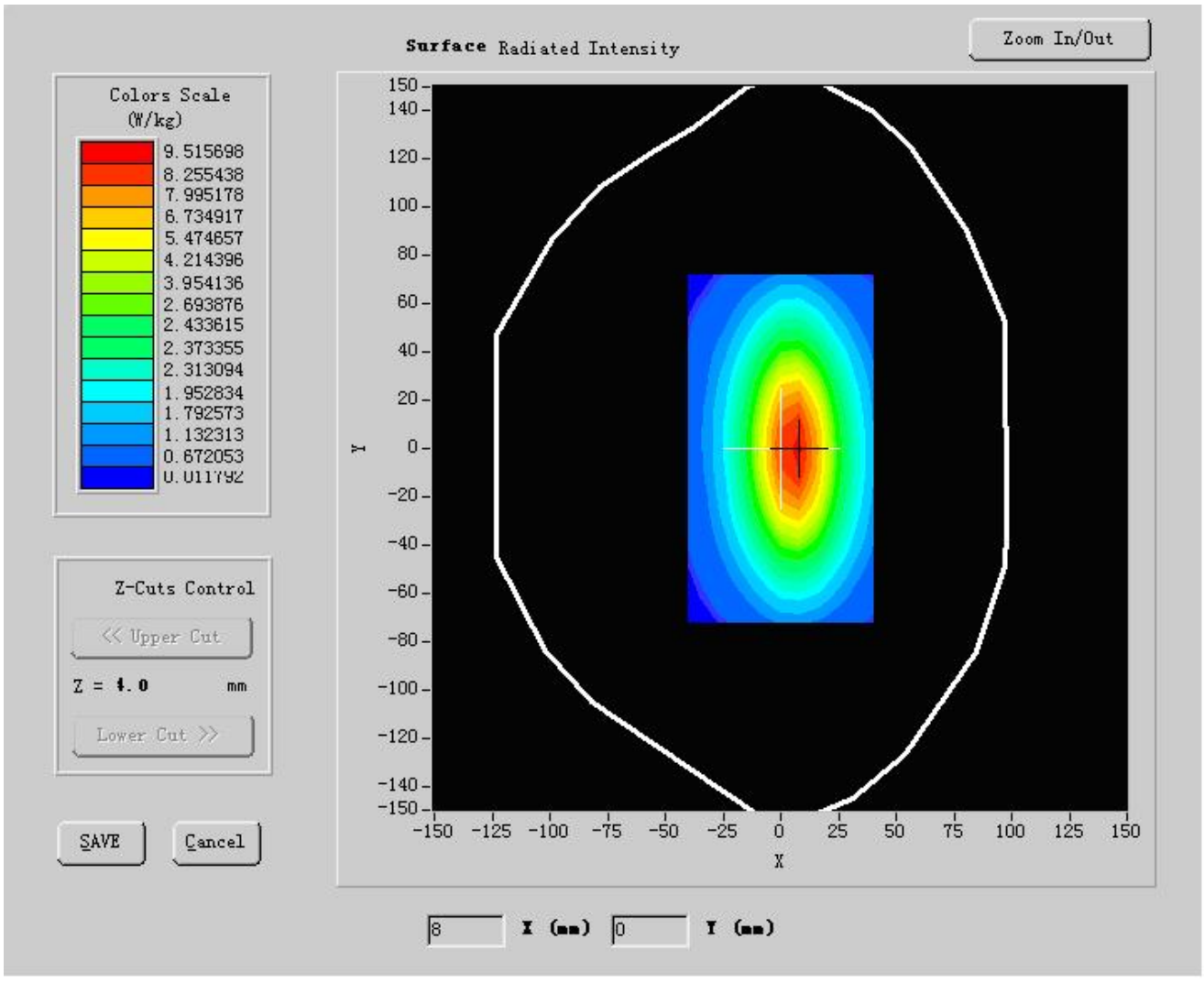
B. SAR Measurement Results

Band SAR:

Frequency (MHz)	1900.000000
Relative permittivity (real part)	38.509998
Relative permittivity	15.070000
Conductivity (S/m)	1.436111
Power Drift (%)	-0.140000

Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:1

SURFACE SAR

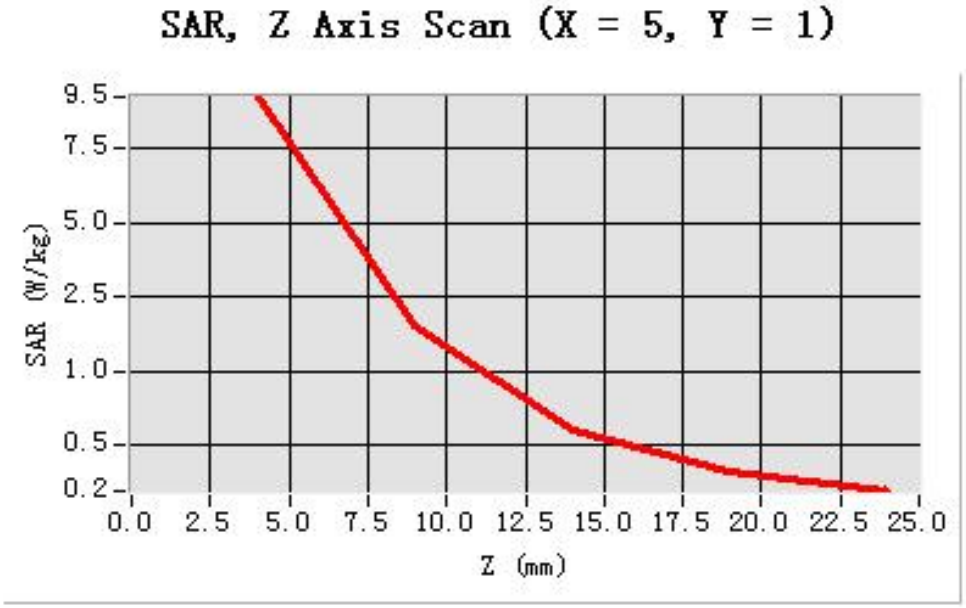


Maximum location: X=5.00, Y=1.00

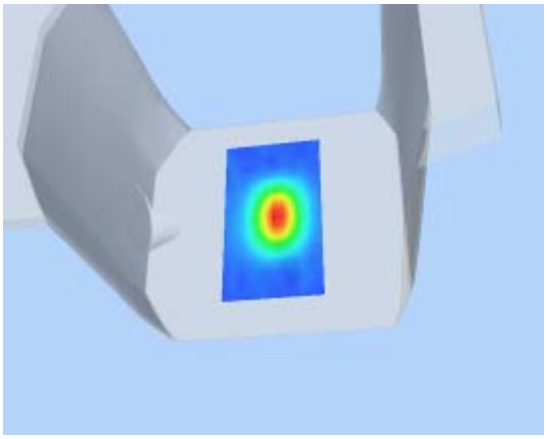
SAR 10g (W/Kg)	5.010003
SAR 1g (W/Kg)	9.435521

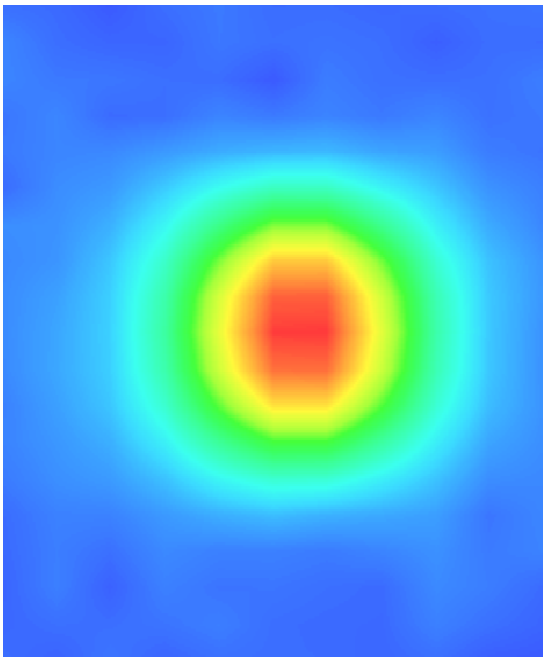
Z Axis Scan

0.00	**4.00**	**9.00**	**14.00**	**19.00**	**0.00**
0.0000	**9.8536**	**5.3061**	**3.6041**	**1.3211**	**0.0000**



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: 14/12/2010

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

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

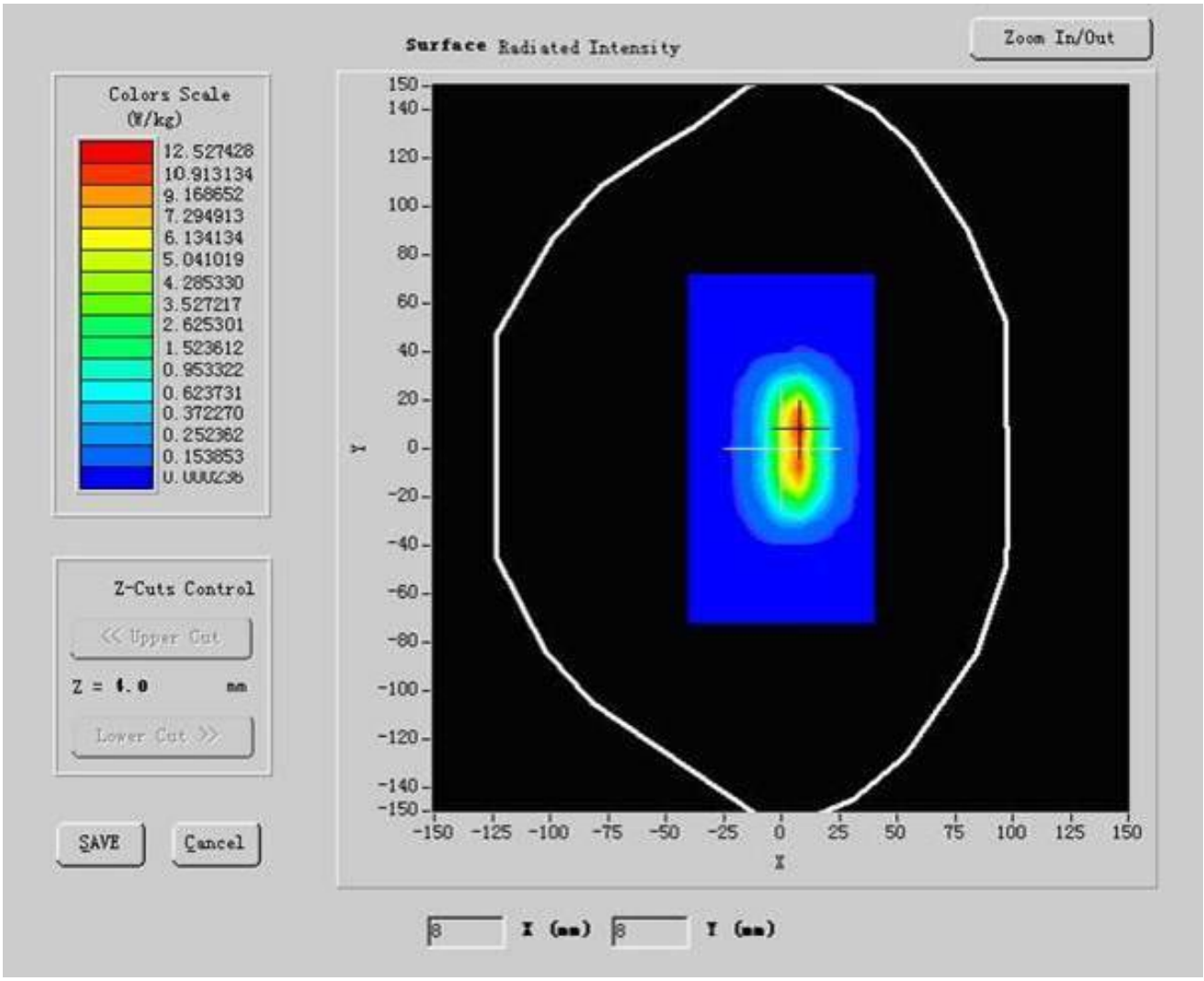
B. SAR Measurement Results

Band SAR:

Frequency (MHz)	2450.000000
Relative permittivity (real part)	54.548876
Relative permittivity	12.991650
Conductivity (S/m)	1.941411
Variation (%)	0.570000

Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	39.772,33.946,37.835
Crest factor：	1:1

SURFACE SAR

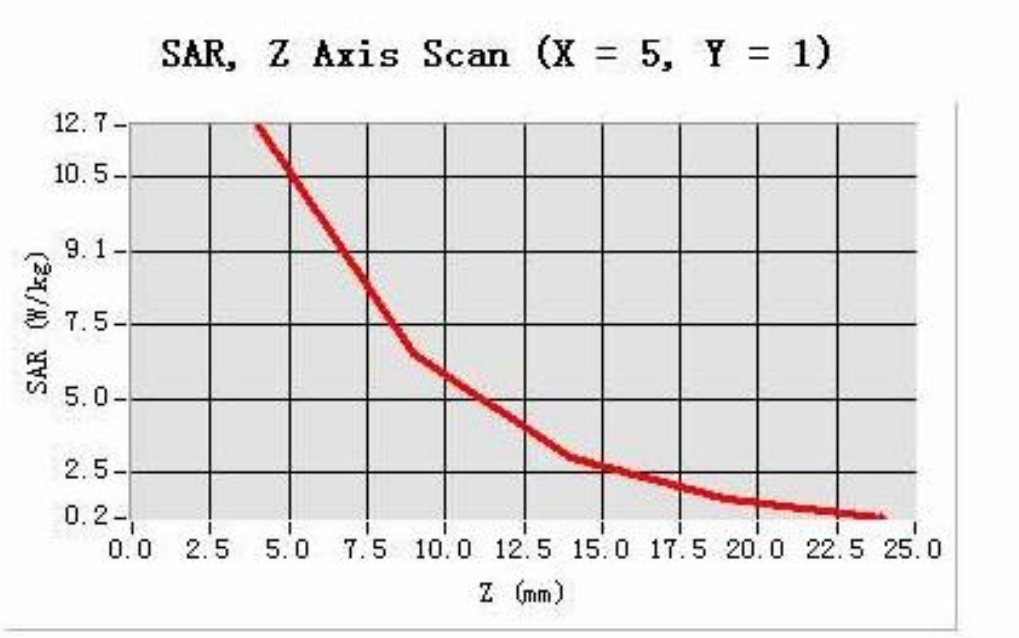


Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	7.036266
SAR 1g (W/Kg)	12.900441

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	12.8936	9.4155	6.3415	3.1488



3D sceen shot	Hot spot position