FCC SAR

TEST REPORT

of

GPS TRACKER

Model Name: GS200
Trade Name: QUECTEL
Report No.: SZ10010097S01
FCC ID.: XMR-16182010001

prepared for

Quectel Wireless Solutions Co.,Ltd
Room 801, Building E, No 1618 Yishan Road, Shanghai,China,201103

pidrepared by

Shenzhen Electronic Product Quality Testing Center
Morlab Laboratory
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Contents

General Information

1.1. Notes

The test results of this test report relate exclusively to the information specified in section 3.3. Shenzhen Electronic Product Quality Testing Center 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 Electronic Product Quality Testing Center 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.:	SZ10010097S01
Date of Issue:	Feb 3, 2010
Date of Tests:	Jan 29, 2010 –Jan 29, 2010
Responsible for Accreditation:	Shu Luan
Project Manager:	Li Lei
Deputy Project Manager:	Chen Chao

1.3. Conclusion

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory has verified that all tests as listed in the section 4.5 of this report haven been performed succ essfully with the tested equipment.

Chen Chao
Tested by
(Responsible for the Test Report)

Li Lei
Reviewed by
(Verification of the Test Report)

Shu Luan
Approved by
(Responsible Test Lab Manager)

2. Testing Laboratory

2.1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Electronic Product Quality Testing Center
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 Electronic Product Quality Testing Center 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 (see 0)

2.4. List of Test Equipments

No.	Instrument	Type
1	PC	Dell (Pentium IV 2.4GHz, SN:X10-23533)
2	Network Emulator	Rohde&Schwarz (CMU200, SN:105894)
3	Voltmeter	Keithley (2000, SN:1000572)
4	Synthetizer	Rohde&Schwarz (SML_03, SN:101868)
5	Amplifier	Nucl udes (ALB216, SN:10800)
6	Power Meter	Rohde&Schwarz (NRVD, SN:101066)
7	Probe	Antennessa (SN:SN_3708_EP80)
8	Phantom	Antennessa (SN:SN_36_08_SAM62)
9	Liquid	Antennessa (Last Calibration:21 08 04)

3. Technical Information

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

3.1. Identification of Applicant

Company Name:	Quectel Wireless Solutions Co.,Ltd
Address:	Room 801, Building E, No 1618 Yishan Road, Shanghai, China,201103

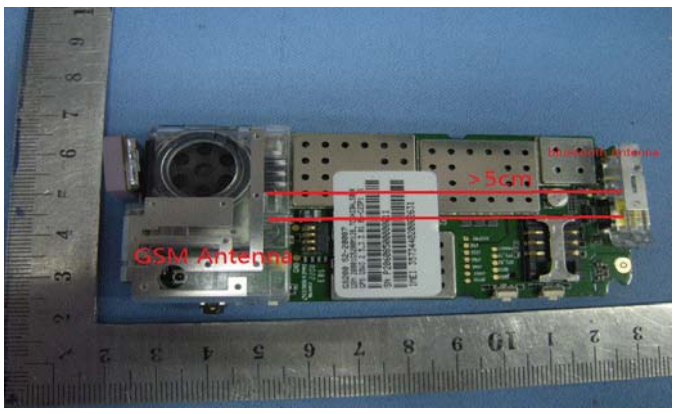
3.2. Identification of Manufacturer

Company Name:	Quectel Wireless Solutions Co.,Ltd
Address:	Room 801, Building E, No 1618 Yishan Road, Shanghai, China,201103

3.3. Equipment Under Test (EUT)

Brand Name:	QUECTEL	Type Name:	QUECTEL
Marking Name:	GS200	Modulation Mode:	GMSK
Hardware Version:	V1.02	Antenna type:	Build inside
Software Version:	B03	Development Stage:	Identical prototype
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)		
Battery Model:	GS200		
Battery specification:	1150mAh 3.7V		
Development Stage	Identical prototype		
Antenna distance :	Bluetooth and GSM distance is greater than 5cm		

Note:
So just did the BT and GSM simultaneously SAR test with the request of the client.



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#	V1.02	B03

4. Test Results

4.1. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	**47 CFR § 2. 1093**	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.

4.2. Test Environment/Conditions

Normal Temperature (NT):	20 ... 25 °C		
Relative Humidity:	30 ... 75 %		
Air Pressure:	980 ... 1020 hPa		
Details of Power Supply:	100-240V/50Hz AC		
Extreme Temperature:	Low Temperature (LT)	=	-10°C
	High Temperature (HT)	=	55°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		
Operation mode:	Call established		
Power Level:	GSM 850 MHz Maximum output power(level 5)		
	PCS 1900 MHz Maximum output power(level 0)		
	GPRS Class 12 Maximum output power(1down 4up)		

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.

4.3.Operational Conditions During Test

4.3.1. Informations On The Testing

I. INFORMATIONS ON THE TESTING

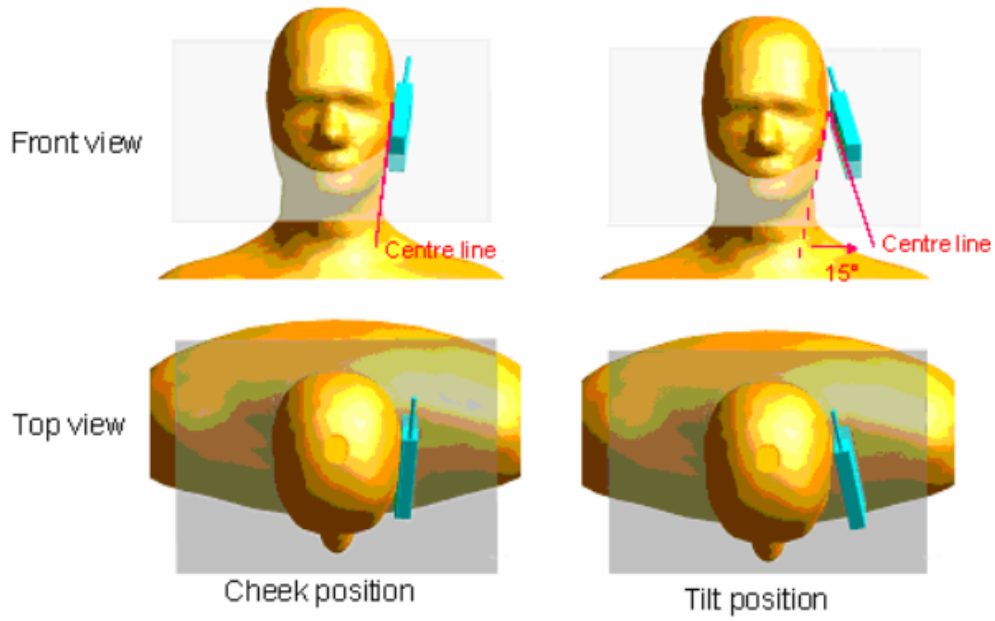
I.1. Normative reference

IEEE 1528: Recommended Practice for determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques. Institute of Electrical and Electronics Engineers, INC., 2003.

I.3. Positions and test conditions of the mobile phone under test

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 place in the "cheek" position as described above. Then the mobile phone is moved outward away from the mouth by an angle of 15 degrees or until contact with the ear lost.

4.3.2. 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.

COMOSAR bench

The mobile phone 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 10 g mass.

II.1. 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 2 mm +/- 0,2 mm. It enables the dosimetric evaluation of left and right hand 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.

II.2. Probe

For the measurements the Specific Dosimetric E-Field Probe SSE5 with following specifications is used.

- Dynamic range: 0.01-100 W/kg
- Tip Diameter : 5 mm

- Distance between probe tip and sensor center : 2.5 mm
- 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 : <0.50 dB
- Calibration range : 835 to 2500 MHz for head & body simulating liquid
- Angle between probe axis (evaluation axis) and suface normal line : less than 30°

II.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 16 mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors can not directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- 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.

II.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 minimise 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 1 mm 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.

4.3.3. Uncertainty Assessment

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

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	$(1\cdot Cp)^{1/2}$	$(1\cdot Cp)^{1/2}$	1.02	1.02	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	$\sqrt{Cp}$	$\sqrt{Cp}$	1.63	1.63	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	∞
Reponse Time	E.2.7	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Test sample Related									
Test sample positioning	E.4.2.1	0.03	N	1	1	1	0.03	0.03	N-1
Device Holder Uncertainty	E.4.1.1	5.00	N	1	1	1	5.00	5.00	
Output power Variation - SAR drift measurement	6.6.2	4.76	R	$\sqrt{3}$	1	1	2.75	2.75	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	∞
Liquid conductivity - deviation from target value	E.3.2	0.57	R	$\sqrt{3}$	0.64	0.43	0.21	0.14	∞
Liquid conductivity -	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	M

measurement uncertainty									
Liquid permittivity - deviation from target value	E.3.2	3.66	R	$\sqrt{3}$	0.6	0.49	1.27	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				11.28	10.78	
Expanded Uncertainty (95% Confidence interval)			k				21.99	21.03	

4.3.4. Equipments and results of validation testing

Equipments :

name	Type and specification
Signal generator	E4433B
Directional coupler	450MHz-3GHz
Amplifier	3W 502(10-2500MHz)
Reference dipole	SN 36/08 DIPF 101

Results:

Frequency	835MHz	1900MHz
Target value（1g）	10.8 W/Kg(body)	39.7 W/Kg
250 mW input power	2.627 W/Kg (head) 2.711 W/Kg (body)	9.903 W/Kg (head) 9.835 W/Kg (body)
Test value（1g）	10.508 W/Kg (head) 10.844 W/Kg (body)	39.612 W/Kg (head) 39.34 W/Kg (body)

Note:Please refer to check the system performance data, the first 132-143 page. 250 mW input power

4.3.5. Dielectric Performance

The measured 1-gram averaged SAR values of the device against the head and the body are provided in Tables 1 and 2 respectively. The humidity and ambient temperature of test facility were 54% ~60% and 23.0 °C ~23.8°C respectively. The SAM head phantom（SN 0381 SH）were full of the head tissue simulating liquid. 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). A base station simulator was used to control the device during the SAR measurement. The phone was supplied with full-charged battery for each measurement.
For head measurement, the device was tested at the lowest, middle and highest frequencies in the transmit band.

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 (Jan 29)	835 MHZ	41.675999	0.894409
Target value	1900 MHZ	40	1.40
Validation value (Jan 29)	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 (Jan 29)	835 MHz	55.709999	1.009033
Target value	1900 MHz	53.3	1.52

Validation value (Jan 29)	1900 MHz	52.548876	1.573978

4.3.6. Simulant liquids

Simulant liquids that are used for testing at frequencies of GSM 850MHz and GSM 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 20litres for a horizontal bath phantom.

Ingredients (% by weight)	Frequency Band 835MHz		Frequency Band 1900MHz	
Tissue Type	Head	Body	Head	Body
Water	41.45	52.4	55.36	40.4
Salt(NaCl)	1.45	1.4	0.35	0.5
Sugar	56.0	45.0	30.45	58.0
HEC	1.0	1.0	0.0	1.0
Bactericide	0.1	0.1	0.0	0.1
Triton	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	13.84	0.0
Acticide SPX	0.0	0.0	0.0	0.0
Dielectric Constant	42.45	56.1	41.00	54.0
Conductivity (S/m)	0.91	0.95	1.38	1.45

4.4. Items used in the Test Results List

Terms in the column “Verdict” for the test results list of the section 4.5:

Verdict	Description
PASS	EUT passed this test case
FAIL	EUT failed this test case
INC.	EUT did not pass and did not fail this test case, therefore the verdict is inconclusive
Decl.	“Declaration”: Morlab has received documents from the applicant and/or manufacturer which show conformity to the applied standards for this test case.
N/A	Test case not applicable for the EUT, see the column “Note” for detailed

4.5. Test Results List

Summary of Measurement Results (GSM 850MHz Band)
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)
Left head, Touch cheek, Channel Low	0.508	30.99
Left head, Touch cheek, Channel Middle	0.498	30.88
Left head, Touch cheek, Channel High	0.450	30.81
Left head, Tilt 15 Degree, Channel Low	0.310	30.99
Left head, Tilt 15 Degree, Channel Middle	0.304	30.88
Left head, Tilt 15 Degree, Channel High	0.302	30.81
Right head, Touch cheek, Channel Low	0.526	30.99
Right head, Touch cheek, Channel Middle	0.509	30.88
Right head, Touch cheek, Channel High	0.457	30.81
Right head, Tilt 15 Degree, Channel Low	0.302	30.99
Right head, Tilt 15 Degree, Channel Middle	0.301	30.88
Right head, Tilt 15 Degree, Channel High	0.192	30.81

Summary of Measurement Results (GSM 1900MHz Band)
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)
Left head, Touch cheek, Channel Low	0.316	27.55
Left head, Touch cheek, Channel Middle	0.415	27.79
Left head, Touch cheek, Channel High	0.367	27.61
Left head, Tilt 15 Degree, Channel Low	0.134	27.55
Left head, Tilt 15 Degree, Channel Middle	0.167	27.79
Left head, Tilt 15 Degree, Channel High	0.114	27.61
Right head, Touch cheek, Channel Low	0.315	27.55

Right head, Touch cheek, Channel Middle	0.344	27.79
Right head, Touch cheek, Channel High	0.336	27.61
Right head, Tilt 15 Degree, Channel Low	0.112	27.55
Right head, Tilt 15 Degree, Channel Middle	0.193	27.79
Right head, Tilt 15 Degree, Channel High	0.173	27.61

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	0.409	30.99
Side, Middle frequency	0.463	30.88
Side, High frequency	0.414	30.81
Side, Middle frequency (back)	0.321	30.88
Side, Middle frequency (with GPRS)	0.985	30.88
Side, Middle frequency (with earphone)	0.418	30.88
Side, Middle frequency (with Bluetooth headset)	0.356	30.88

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	0.284	27.55
Side, Middle frequency	0.297	27.79
Side, High frequency	0.242	27.61
Side, Middle frequency (back)	0.150	27.79
Side, Middle frequency (with GPRS)	0.566	27.79
Side, Middle frequency (with earphone)	0.296	27.79
Side, Middle frequency (with Bluetooth headset)	0.187	27.79

Note: 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)

Annex A Accreditation Certificate

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(No. CNAS L1659)

China National Accreditation Service for Conformity Assessment has accredited

Shenzhen Electronic Product Quality Testing Center

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 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: 2009-09-29

Date of Expiry: 2012-09-28

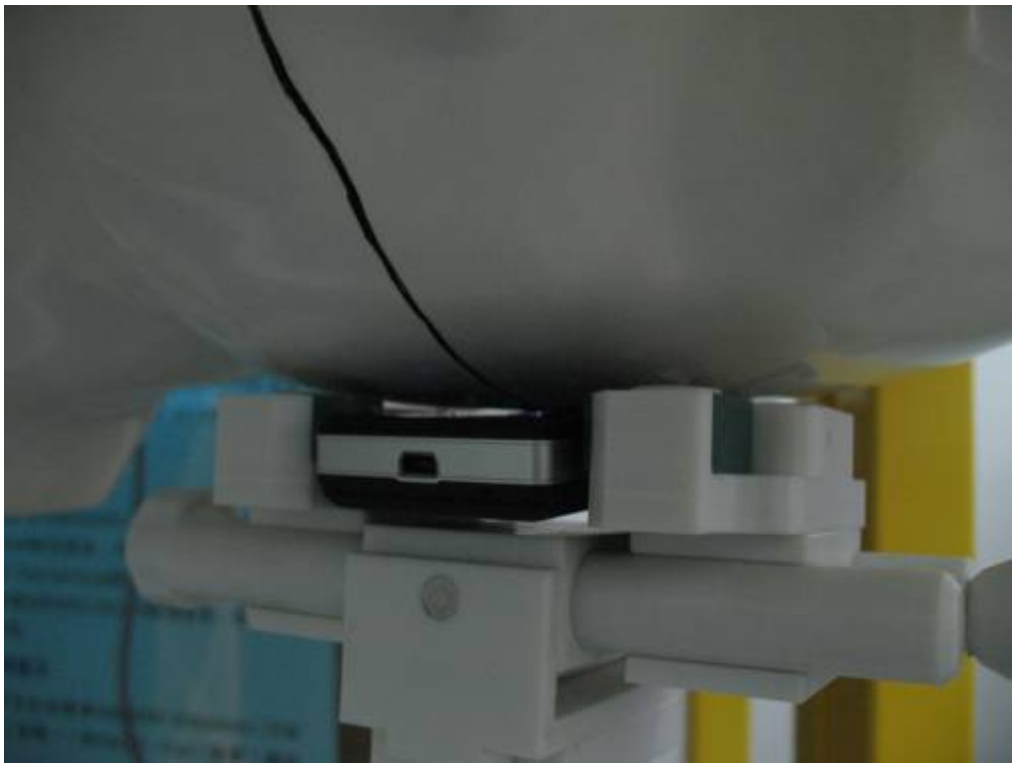
Date of Initial Accreditation: 1999-08-03

Signed on behalf of China National Accreditation Service for Conformity Assessment

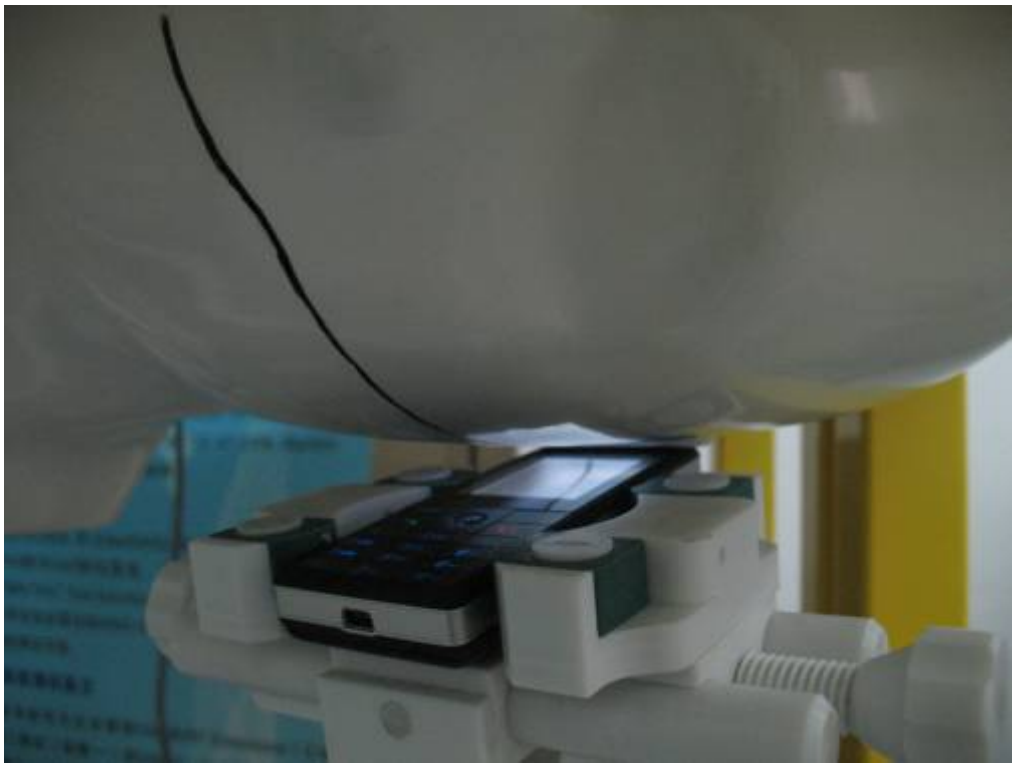
China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation systems for conformity assessment. CNAS is the signatory to International Laboratory Accreditation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

Annex B Photographs of the EUT

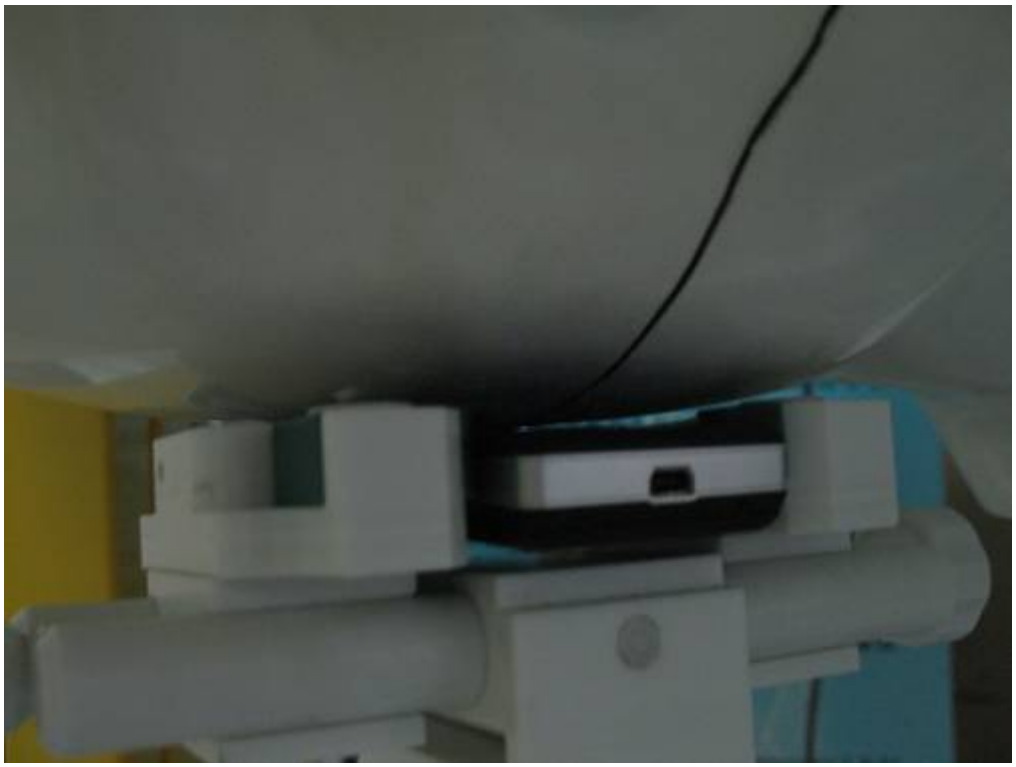
1 EUT Left Head Touch Cheek Position



2 EUT Left Head Tilt15 Position

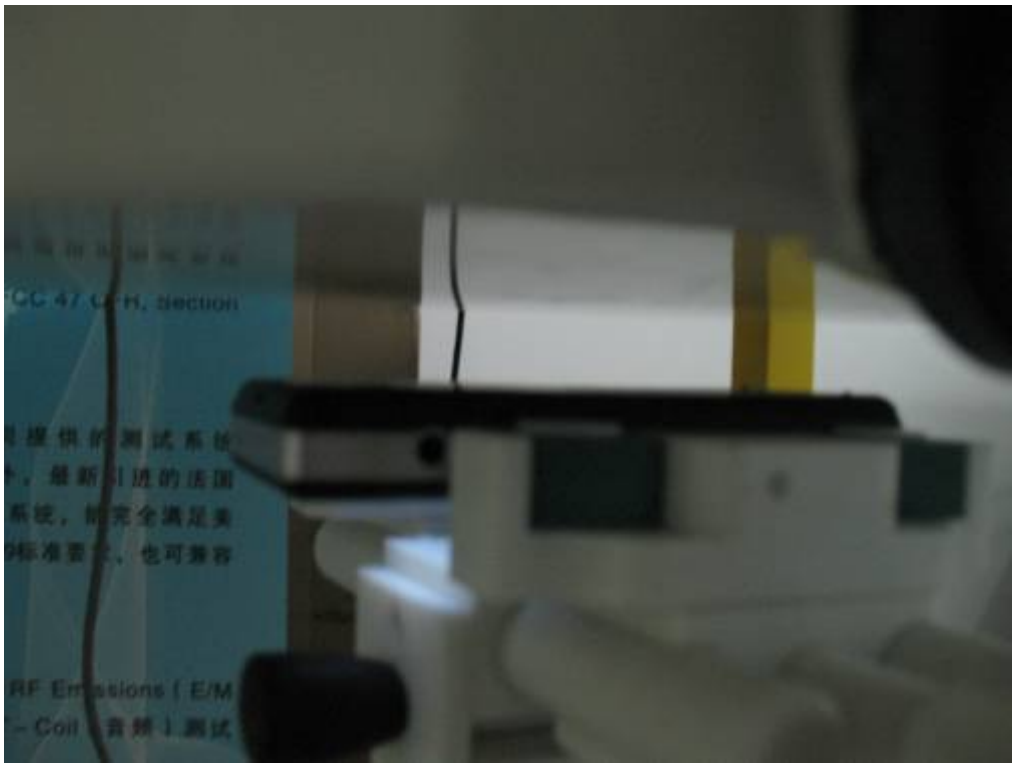


3 EUT Right Head Touch Cheek Position

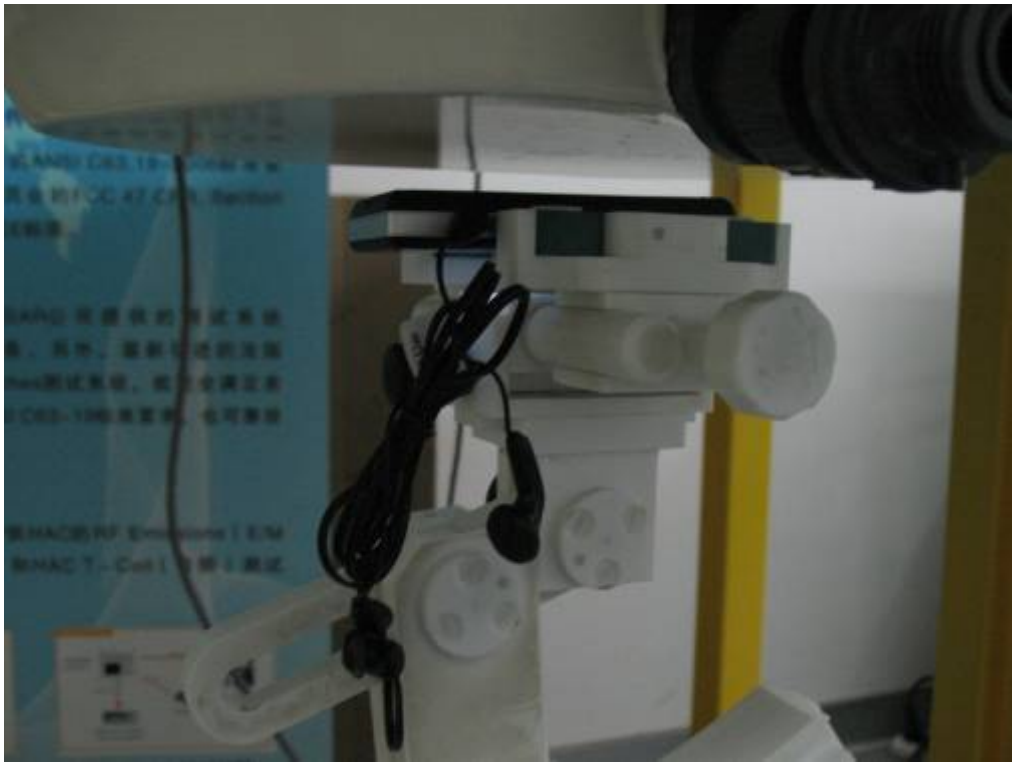


4 EUT Right Head Tilt15 Position

5 Side Position



6 With Headphone



Annex C Graph Test Results

	BAND	PARAMETERS
TYPE	**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 Low Channel in GSM mode Measurement 5: Right Head with Tilt device position on Middle Channel in GSM mode Measurement 6: Right Head with Tilt device position on High Channel in GSM mode Measurement 7: Left Head with Cheek device position on Low Channel in GSM mode Measurement 8: Left Head with Cheek device position on Middle Channel in GSM mode Measurement 9: Left Head with Cheek device position on High Channel in GSM mode Measurement 10: Left Head with Tilt device position on Low Channel in GSM mode Measurement 11: Left Head with Tilt device position on Middle Channel in GSM mode Measurement 12: Left Head with Tilt device position on High Channel in GSM mode Measurement 13: Validation Plane with Body device position on Low Channel in GSM mode Measurement 14: Validation Plane with Body device position on Middle Channel in GSM mode Measurement 15: Validation Plane with Body device position on High Channel in GSM mode Measurement 16: Validation Plane with Body device position on Low Channel in GSM mode（back） Measurement 17: Validation Plane with Body device position on Low Channel in GSM mode（with GPRS） Measurement 18: Validation Plane with Body device position on Low Channel in GSM mode（with earphone）

	GSM 1900	Measurement 19: Right Head with Cheek device position on Low Channel in GSM mode Measurement 20: Right Head with Cheek device position on Middle Channel in GSM mode Measurement 21: Right Head with Cheek device position on High Channel in GSM mode Measurement 22: Right Head with Tilt device position on Low Channel in GSM mode Measurement 23: Right Head with Tilt device position on Middle Channel in GSM mode Measurement 24: Right Head with Tilt device position on High Channel in GSM mode Measurement 25: Left Head with Cheek device position on Low Channel in GSM mode Measurement 26: Left Head with Cheek device position on Middle Channel in GSM mode Measurement 27: Left Head with Cheek device position on High Channel in GSM mode Measurement 28: Left Head with Tilt device position on Low Channel in GSM mode Measurement 29: Left Head with Tilt device position on Middle Channel in GSM mode Measurement 30: Left Head with Tilt device position on High Channel in GSM mode Measurement 31: Validation Plane with Body device position on Low Channel in GSM mode Measurement 32: Validation Plane with Body device position on Middle Channel in GSM mode Measurement 33: Validation Plane with Body device position on High Channel in GSM mode Measurement 34: Validation Plane with Body device position on Middle Channel in GSM mode（back） Measurement 35: Validation Plane with Body device position on Middle Channel in GSM mode（with GPRS） Measurement 36: Validation Plane with Body device position on Middle Channel in GSM mode（with earphone）

With Bluetooth headset

GSM850 : Measurement 37: Validation Plane with Body device position on Middle Channel in GSM mode（With Bluetooth headset）

GSM1900: Measurement 38: Validation Plane with Body device position on Middle Channel in GSM mode（With Bluetooth headset）

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: 29/1/2010

Measurement duration: 7 minutes 34 seconds

A. Experimental conditions.

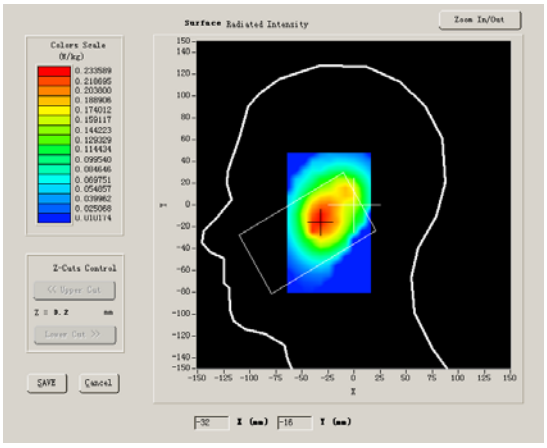
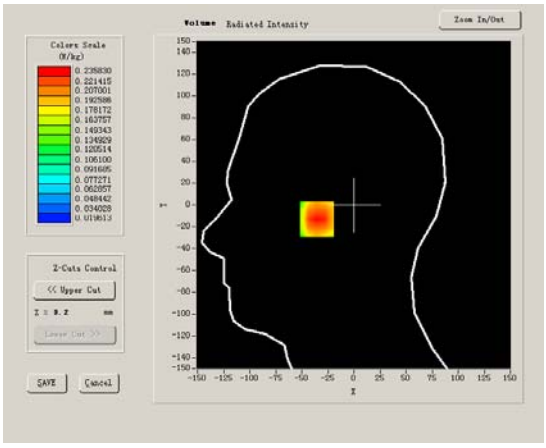
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

Conductivity (S/m)	0.866612
Variation (%)	-2.330000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

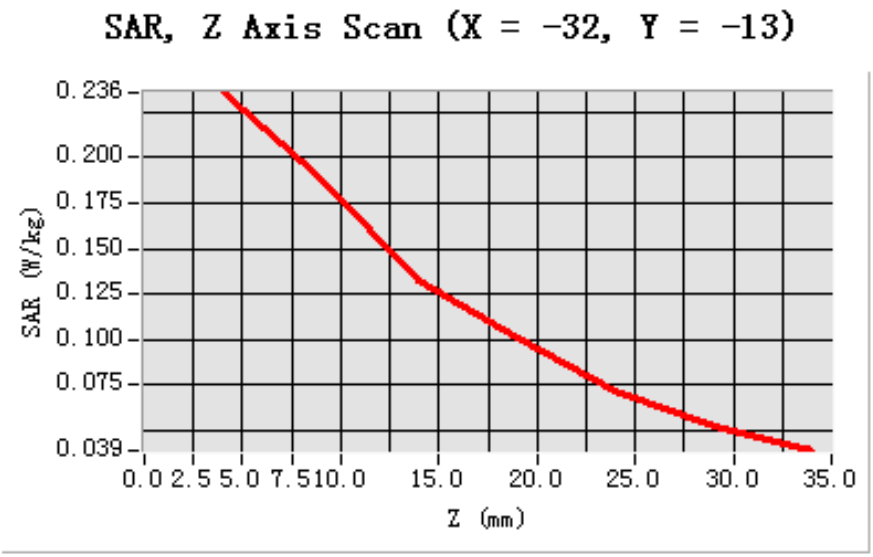
SURFACE SAR	**VOLUME SAR**
	

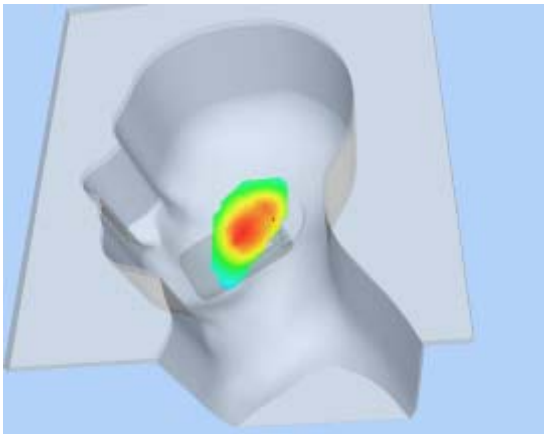
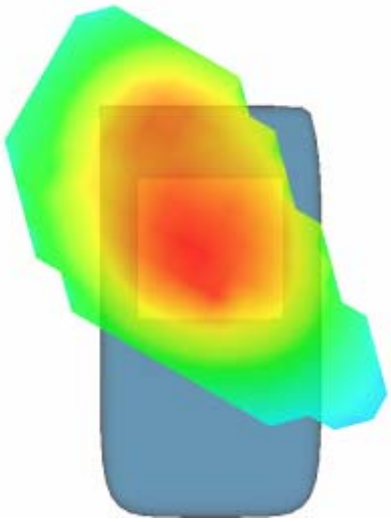
Maximum location: X=-32.00, Y=-13.00

SAR 10g (W/Kg)	0.359271
SAR 1g (W/Kg)	0.525543

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2358	0.1880	0.1325	0.1004	0.0715	0.0524



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: 29/1/2010

Measurement duration: 7 minutes 35 seconds

A. Experimental conditions.

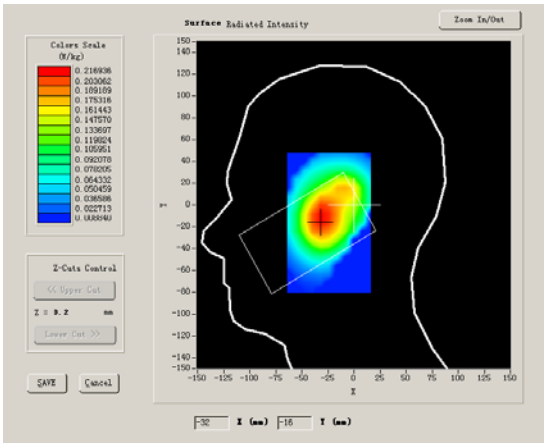
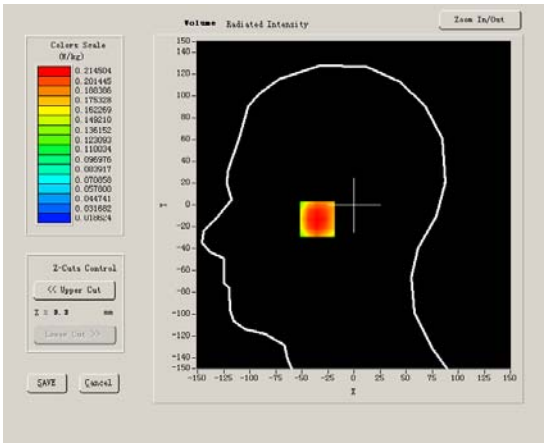
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	GSM

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 (%)	0.190000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

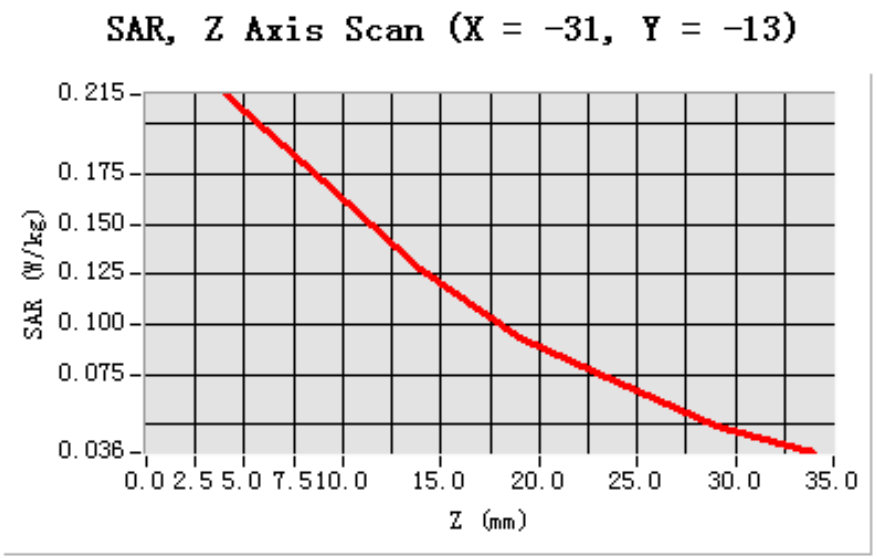
SURFACE SAR	**VOLUME SAR**
	

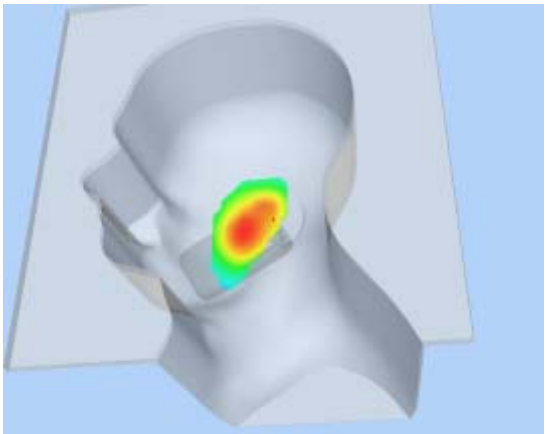
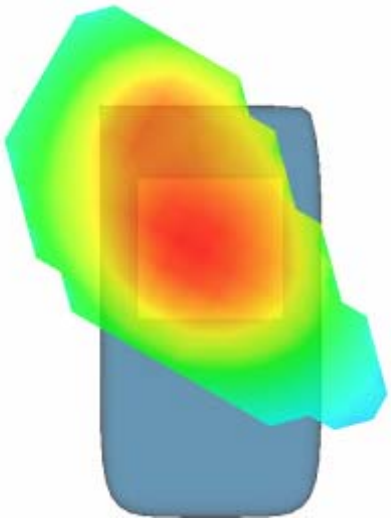
Maximum location: X=-31.00, Y=-13.00

SAR 10g (W/Kg)	0.349621
SAR 1g (W/Kg)	0.508723

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2145	0.1716	0.1276	0.0933	0.0713	0.0497



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: 29/1/2010

Measurement duration: 7 minutes 33 seconds

A. Experimental conditions.

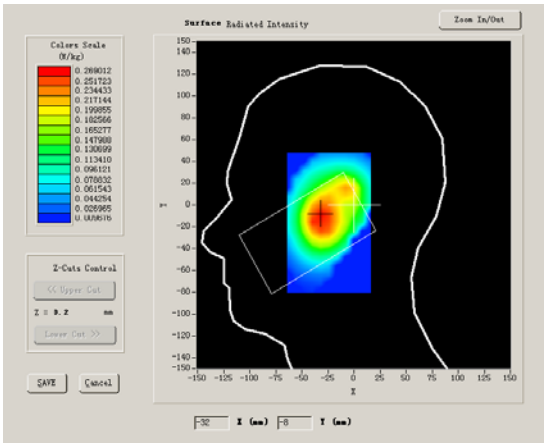
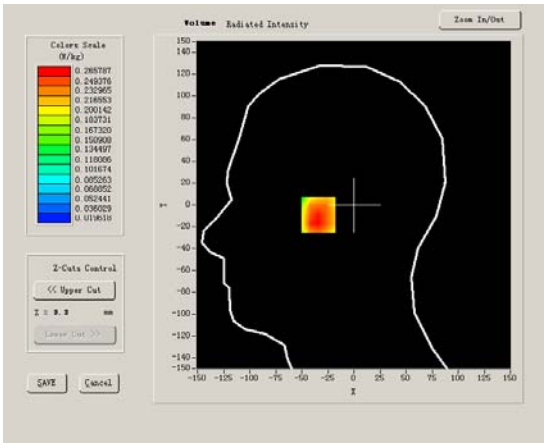
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	0.894409
Variation (%)	-2.200000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

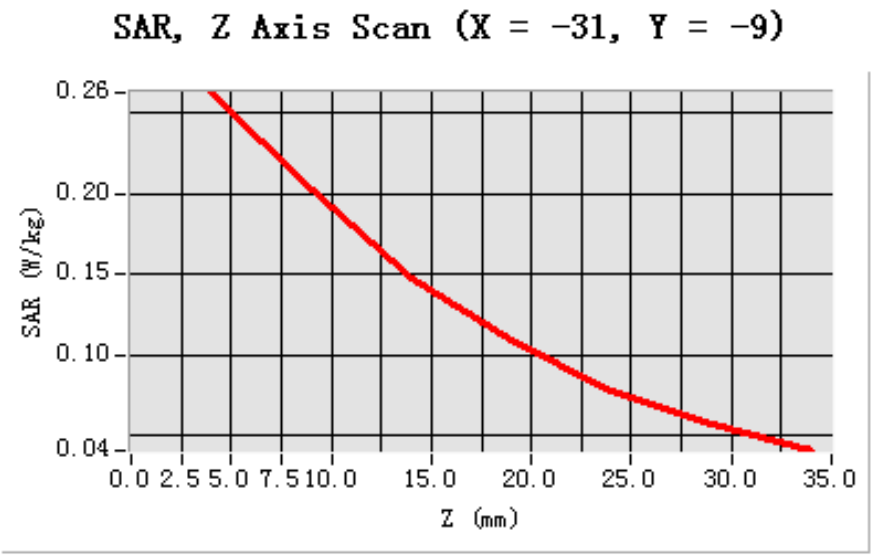
SURFACE SAR	**VOLUME SAR**
	

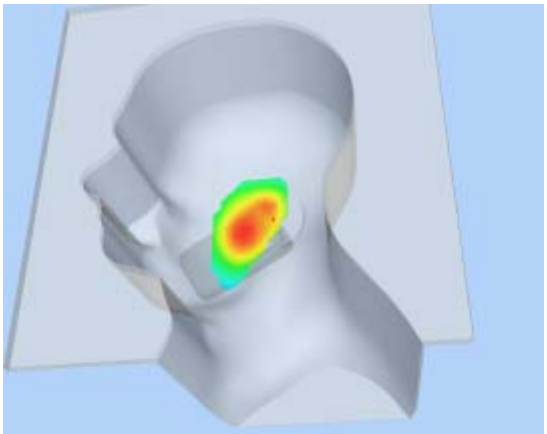
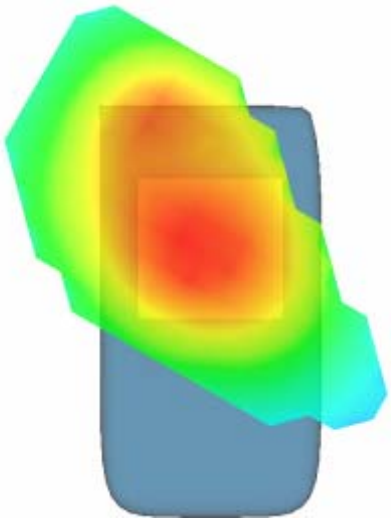
Maximum location: X=-31.00, Y=-9.00

SAR 10g (W/Kg)	0.281047
SAR 1g (W/Kg)	0.456670

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2630	0.2024	0.1480	0.1095	0.0785	0.0573



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: 29/1/2010

Measurement duration: 7 minutes 26 seconds

A. Experimental conditions.

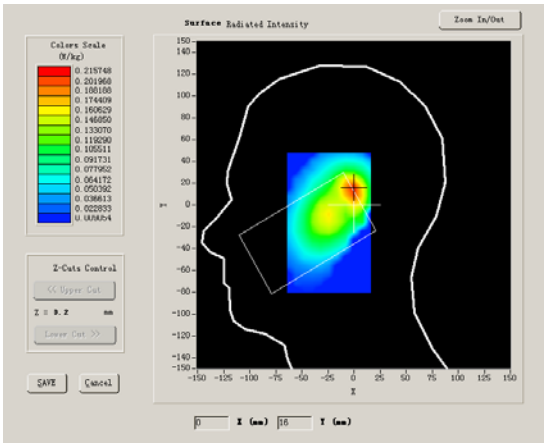
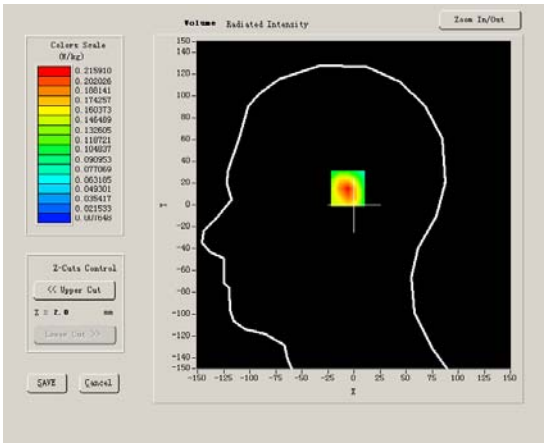
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

Conductivity (S/m)	0.866612
Variation (%)	-2.580000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

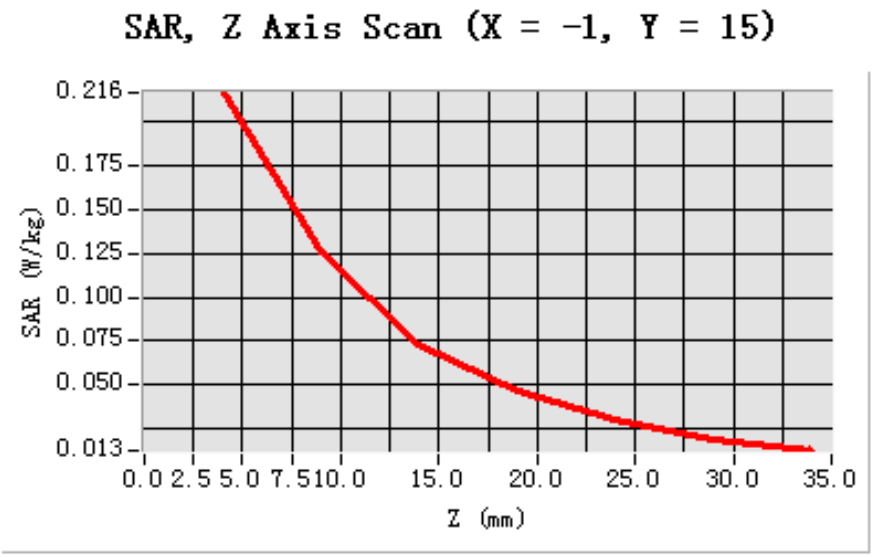
SURFACE SAR	**VOLUME SAR**
	

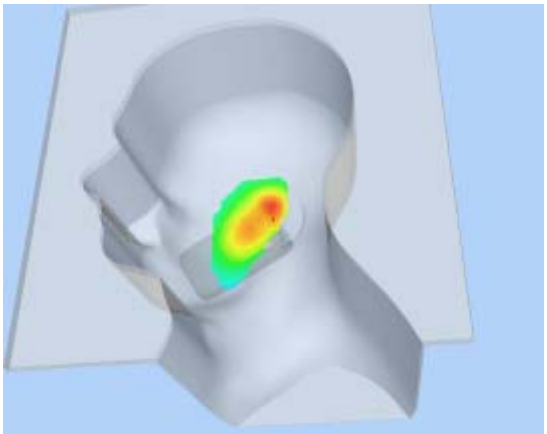
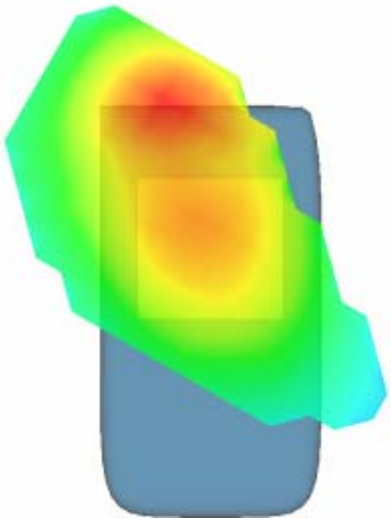
Maximum location: X=-1.00, Y=15.00

SAR 10g (W/Kg)	0.218940
SAR 1g (W/Kg)	0.301673

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2159	0.1260	0.0731	0.0467	0.0305	0.0195



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: 29/1/2010

Measurement duration: 7 minutes 24 seconds

A. Experimental conditions.

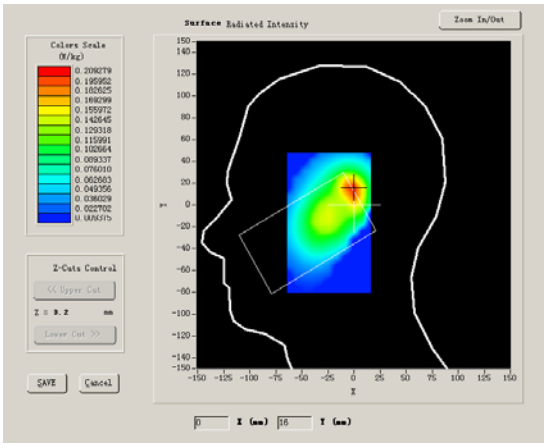
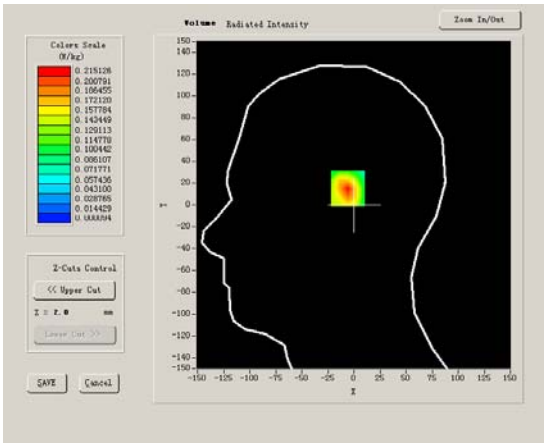
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	GSM

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 (%)	-1.480000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

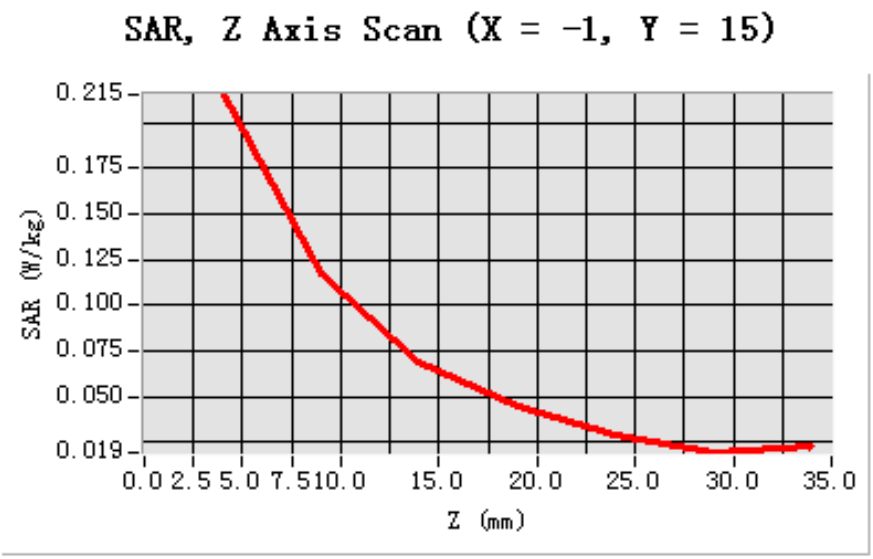
SURFACE SAR	**VOLUME SAR**
	

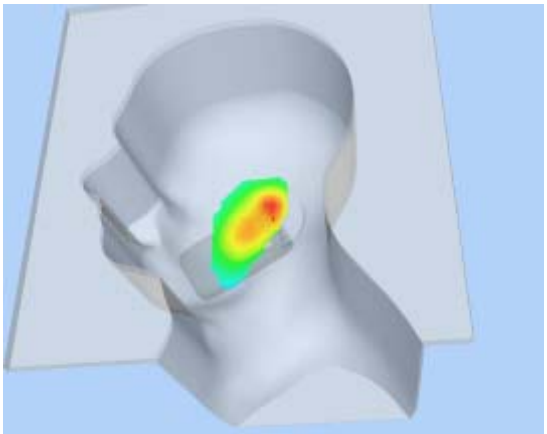
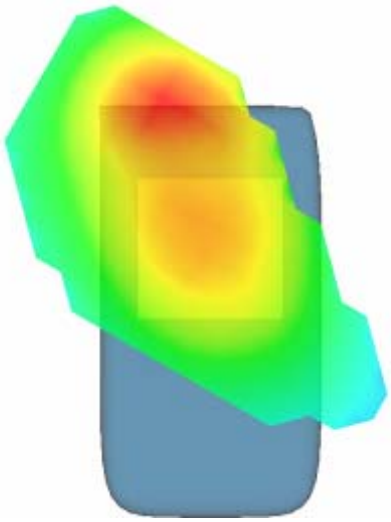
Maximum location: X=-1.00, Y=15.00

SAR 10g (W/Kg)	0.214850
SAR 1g (W/Kg)	0.300863

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2151	0.1166	0.0690	0.0444	0.0287	0.0192



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: 29/1/2010

Measurement duration: 7 minutes 24 seconds

A. Experimental conditions.

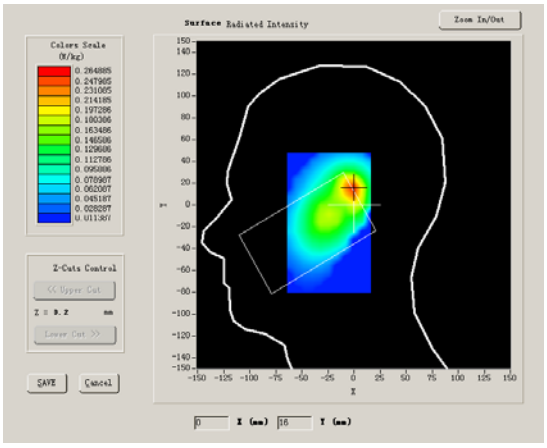
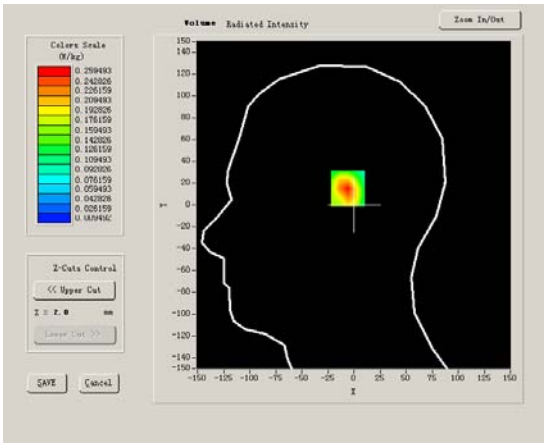
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	0.894409
Variation (%)	-0.930000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

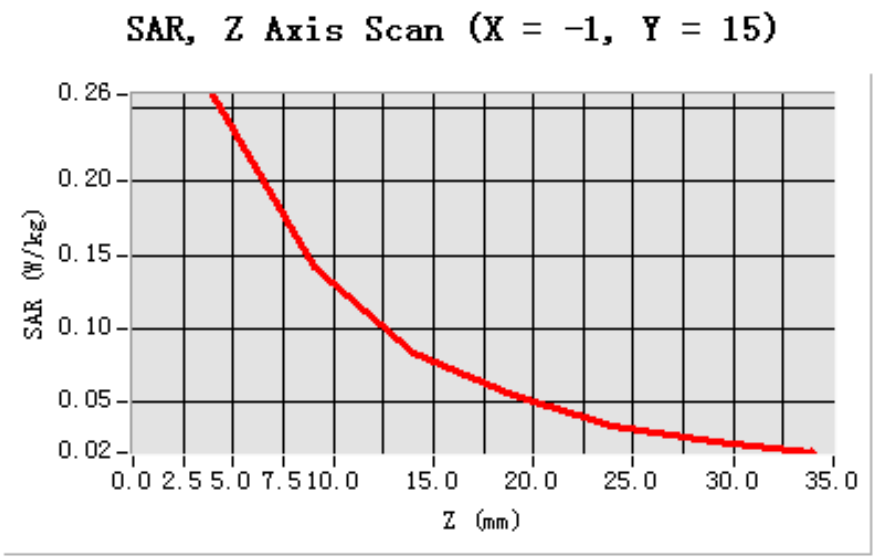
SURFACE SAR	**VOLUME SAR**
	

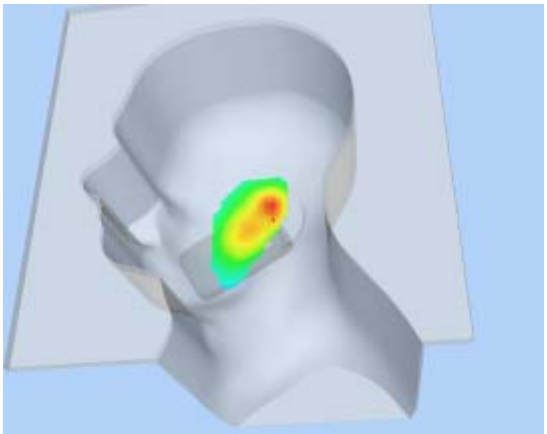
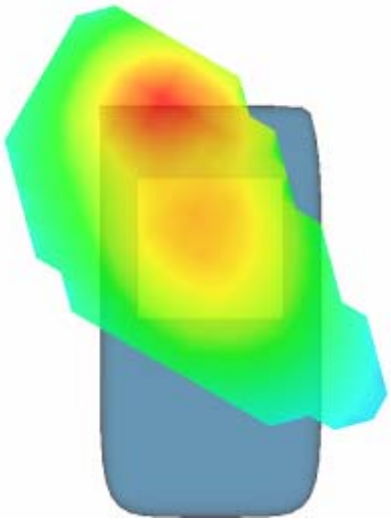
Maximum location: X=-1.00, Y=15.00

SAR 10g (W/Kg)	0.128620
SAR 1g (W/Kg)	0.192283

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2595	0.1420	0.0826	0.0536	0.0338	0.0228



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: 29/1/2010

Measurement duration: 7 minutes 32 seconds

A. Experimental conditions.

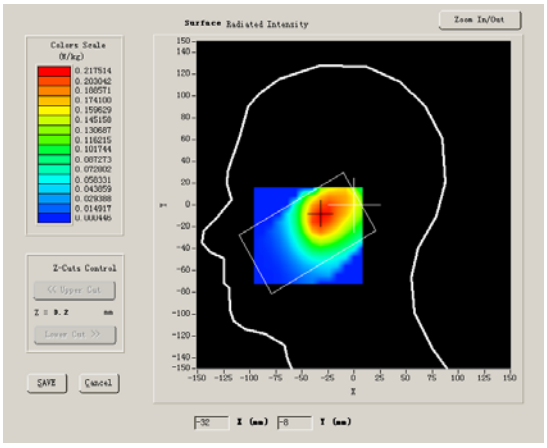
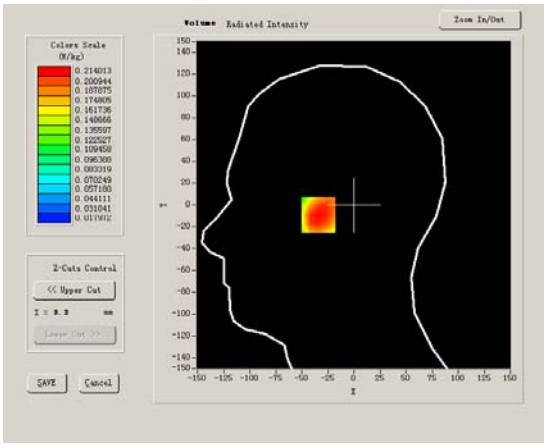
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

Conductivity (S/m)	0.866612
Variation (%)	-0.050000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

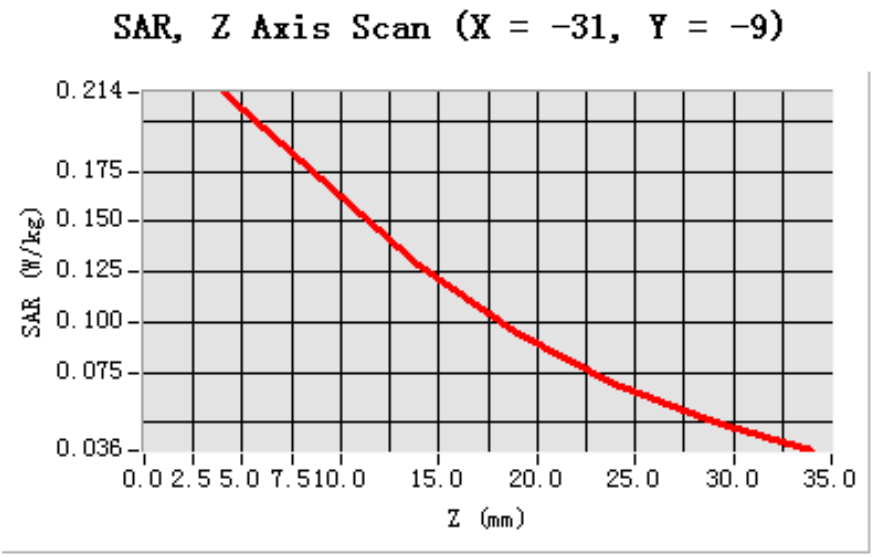
SURFACE SAR	**VOLUME SAR**
	

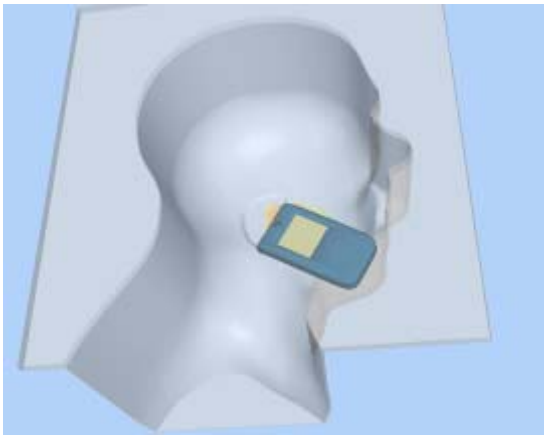
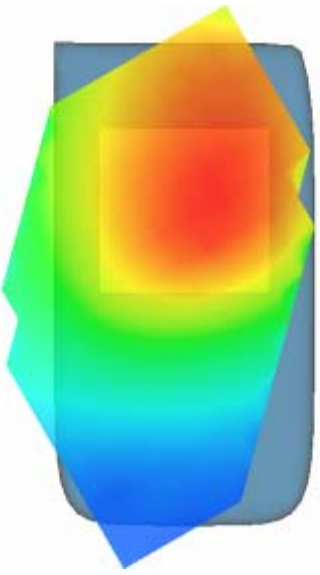
Maximum location: X=-31.00, Y=-9.00

SAR 10g (W/Kg)	0.348017
SAR 1g (W/Kg)	0.507596

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2140	0.1715	0.1285	0.0948	0.0693	0.0503



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: 29/1/2010

Measurement duration: 7 minutes 30 seconds

A. Experimental conditions.

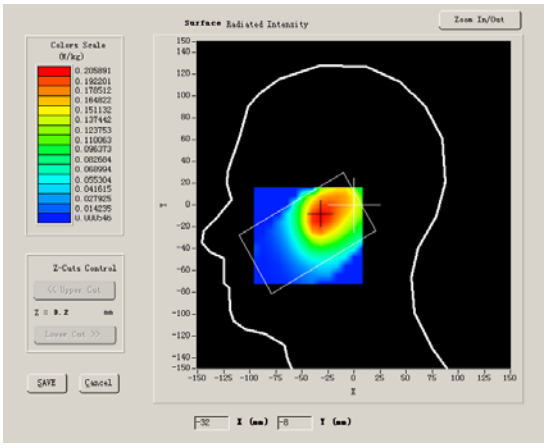
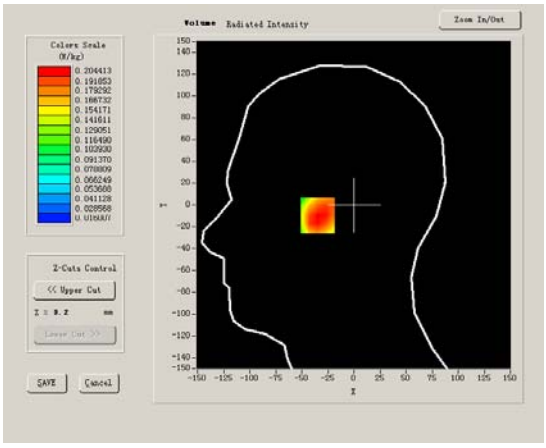
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	GSM

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 (%)	-0.050000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

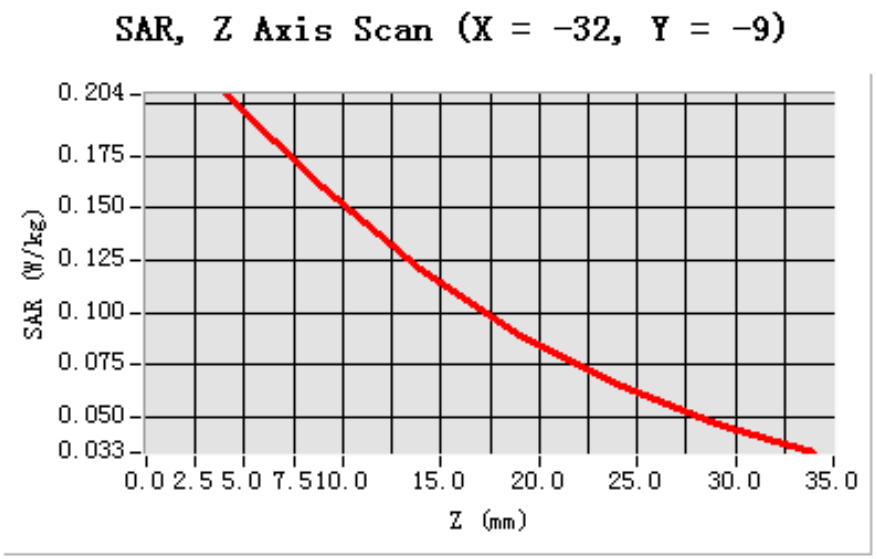
SURFACE SAR	**VOLUME SAR**
	

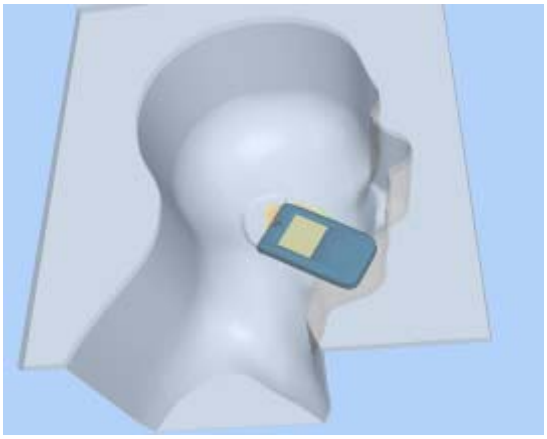
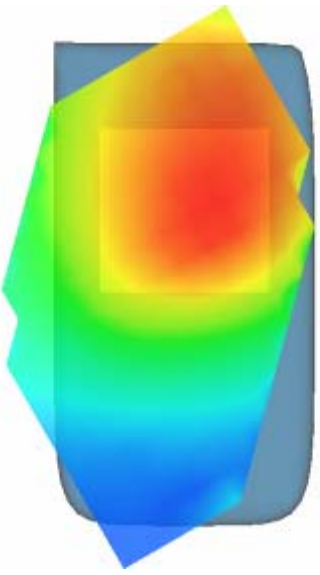
Maximum location: X=-32.00, Y=-9.00

SAR 10g (W/Kg)	0.240134
SAR 1g (W/Kg)	0.498381

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2044	0.1600	0.1213	0.0889	0.0655	0.0469



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: 29/1/2010

Measurement duration: 7 minutes 29 seconds

A. Experimental conditions.

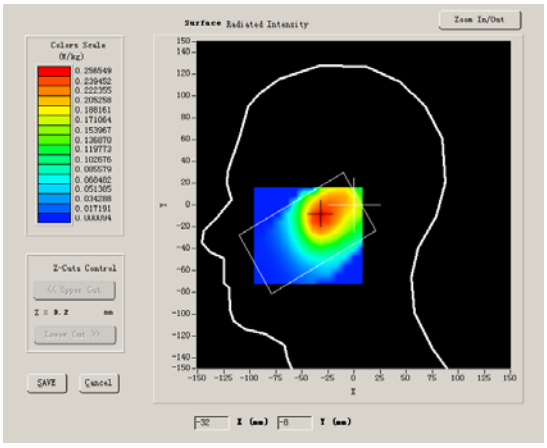
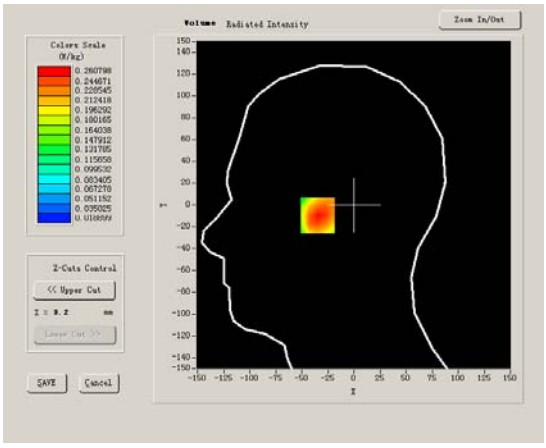
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	0.894409
Variation (%)	-0.410000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

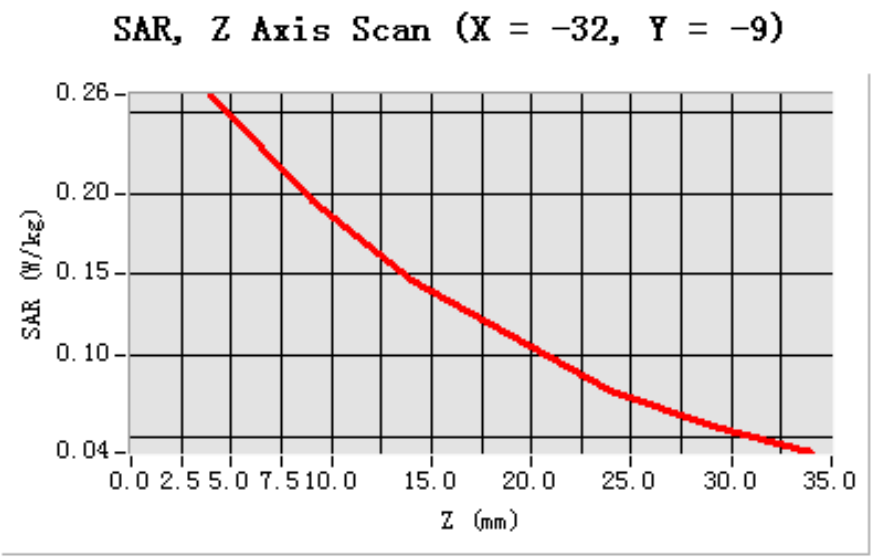
SURFACE SAR	**VOLUME SAR**
	

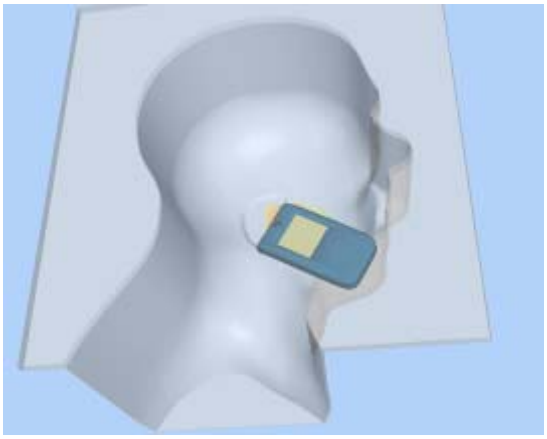
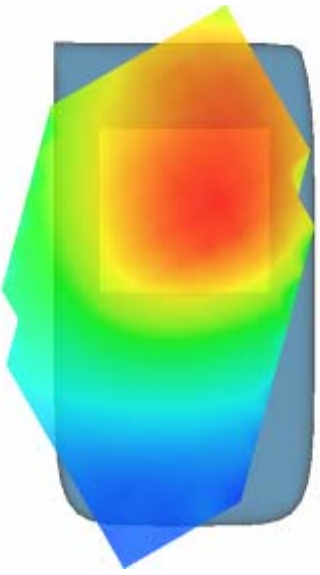
Maximum location: X=-32.00, Y=-9.00

SAR 10g (W/Kg)	0.275476
SAR 1g (W/Kg)	0.450174

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2608	0.1952	0.1465	0.1120	0.0787	0.0568



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: 29/1/2010

Measurement duration: 7 minutes 24 seconds

A. Experimental conditions.

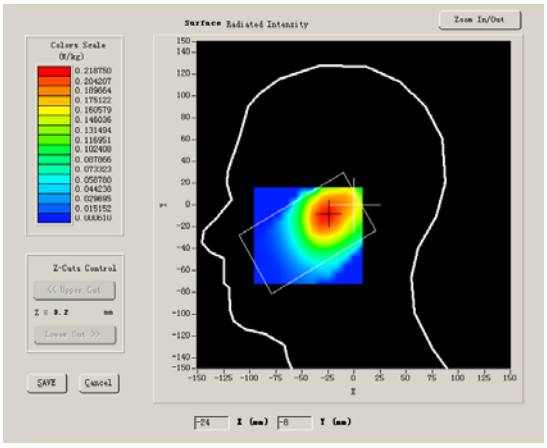
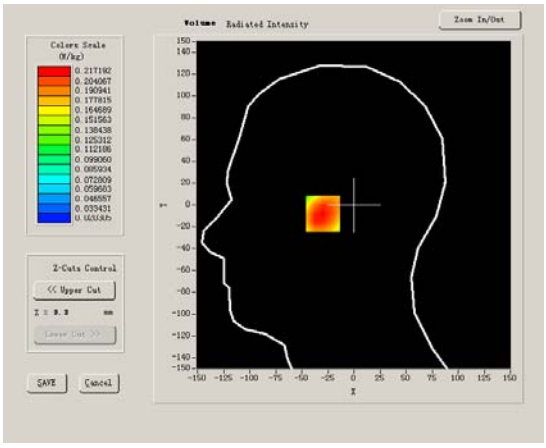
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

Conductivity (S/m)	0.866612
Variation (%)	-0.460000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

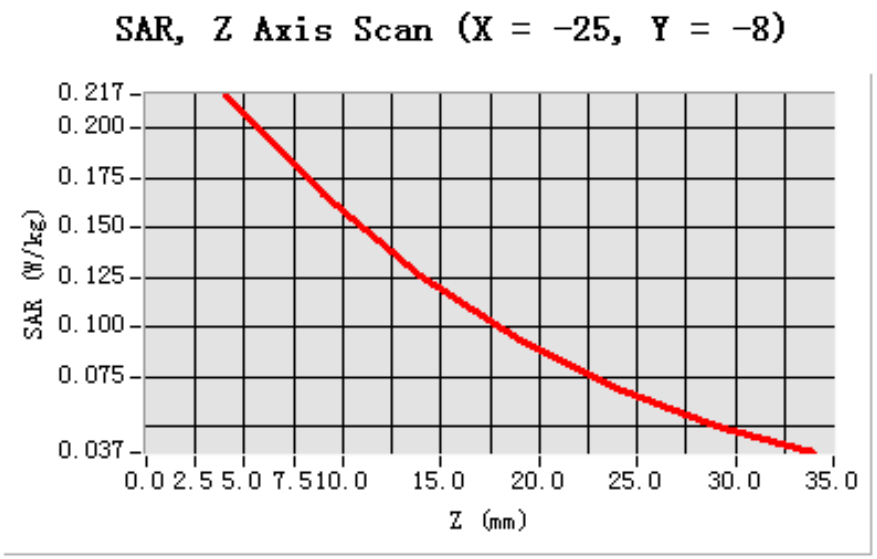
SURFACE SAR	**VOLUME SAR**
	

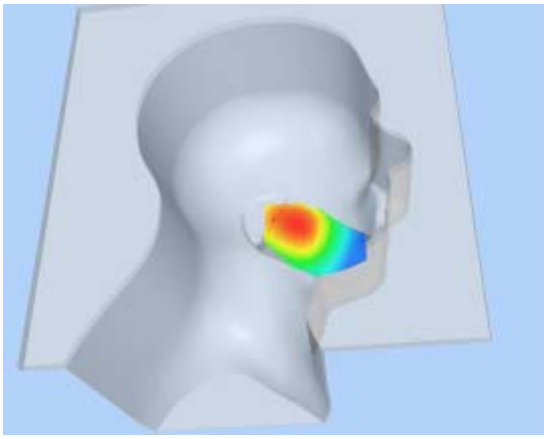
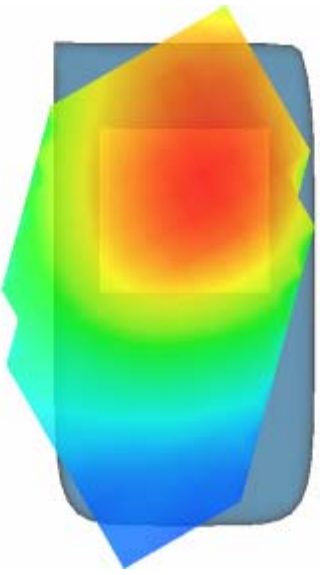
Maximum location: X=-25.00, Y=-8.00

SAR 10g (W/Kg)	0.150285
SAR 1g (W/Kg)	0.309825

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2172	0.1671	0.1259	0.0940	0.0692	0.0508



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: 29/1/2010

Measurement duration: 7 minutes 28 seconds

A. Experimental conditions.

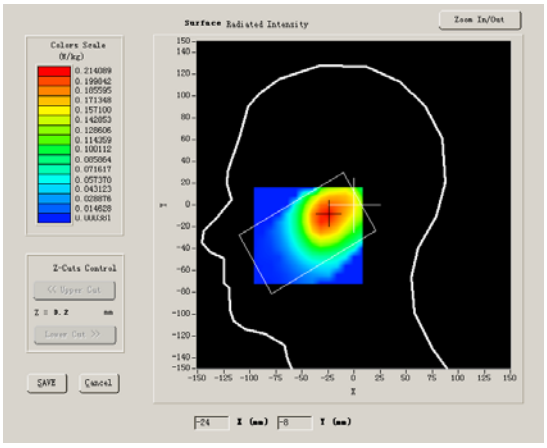
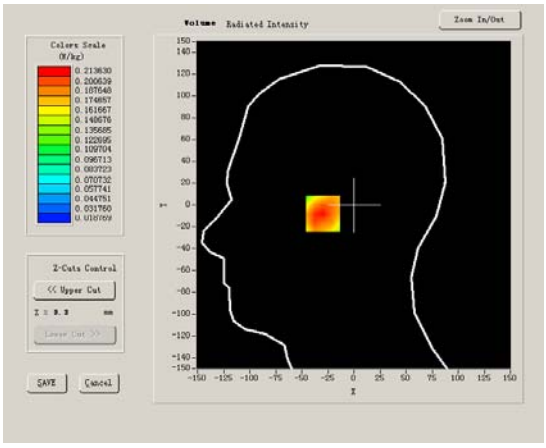
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	GSM

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 (%)	-1.360000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

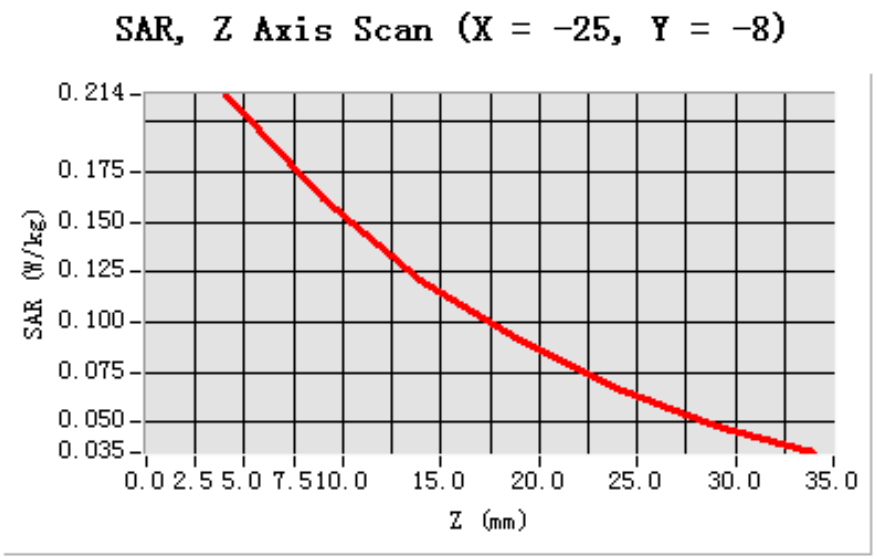
SURFACE SAR	**VOLUME SAR**
	

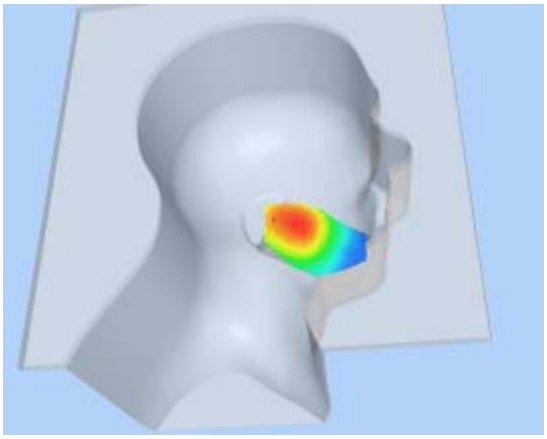
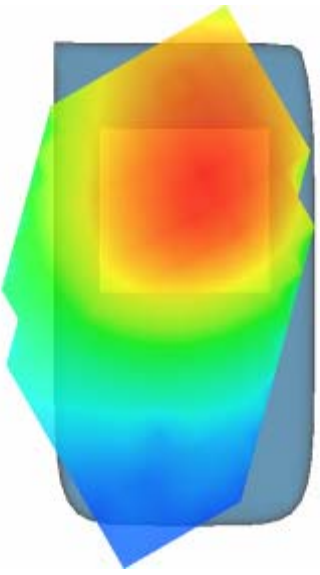
Maximum location: X=-25.00, Y=-8.00

SAR 10g (W/Kg)	0.145380
SAR 1g (W/Kg)	0.304453

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2136	0.1616	0.1214	0.0908	0.0666	0.0484



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: 29/1/2010

Measurement duration: 7 minutes 20 seconds

A. Experimental conditions.

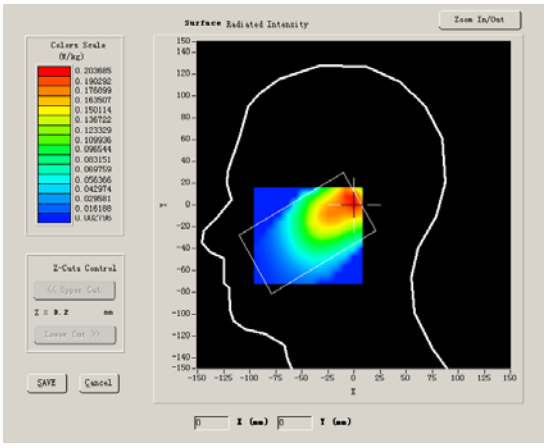
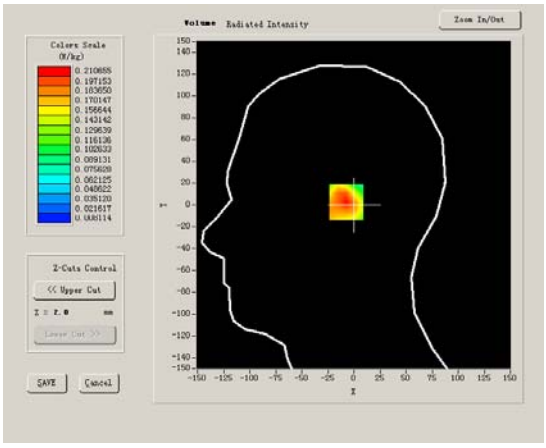
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	0.894409
Variation (%)	0.120000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:8

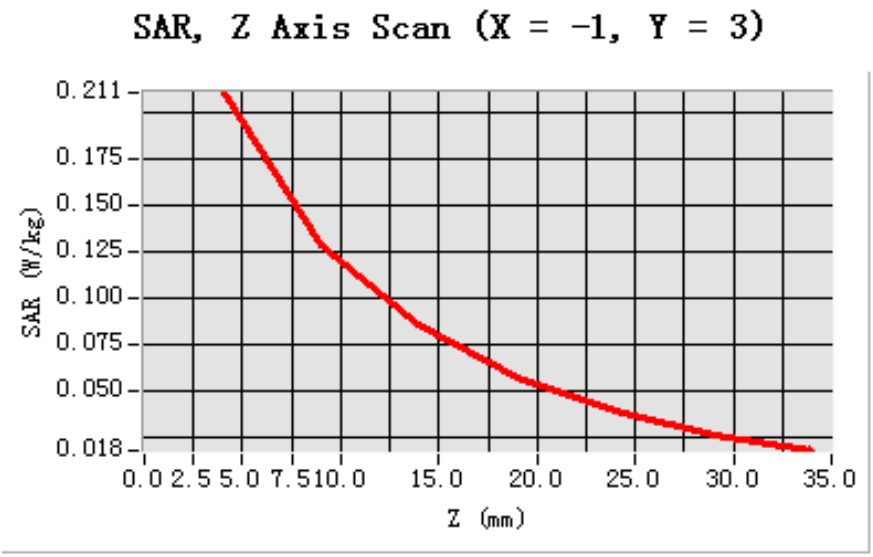
SURFACE SAR	**VOLUME SAR**
	

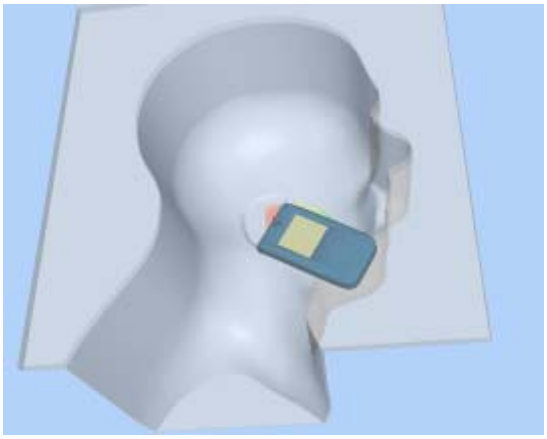
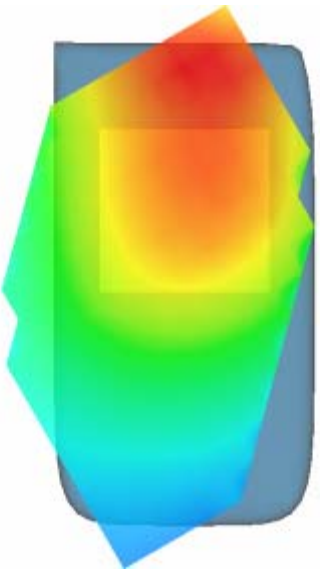
Maximum location: X=-1.00, Y=3.00

SAR 10g (W/Kg)	0.154466
SAR 1g (W/Kg)	0.301731

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2107	0.1292	0.0863	0.0577	0.0401	0.0272



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: 29/1/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

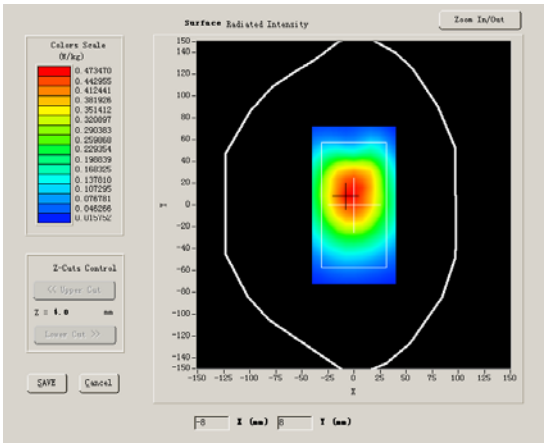
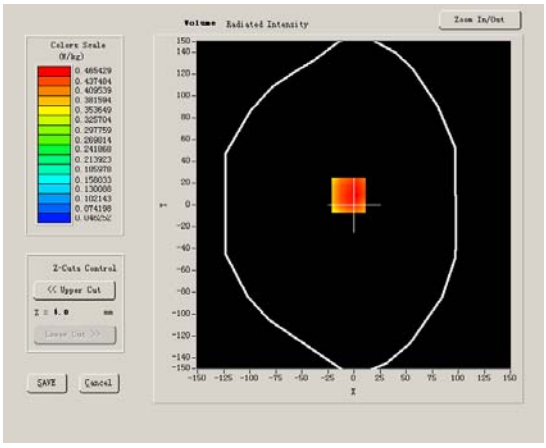
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 128):

Frequency (MHz)	824.200012
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550

Conductivity (S/m)	0.974596
Variation (%)	-1.960000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:8

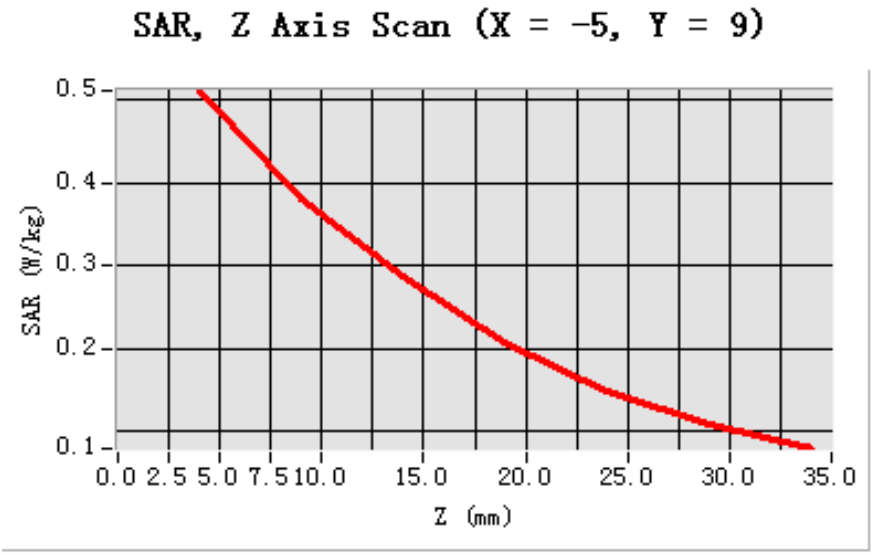
SURFACE SAR	**VOLUME SAR**
	

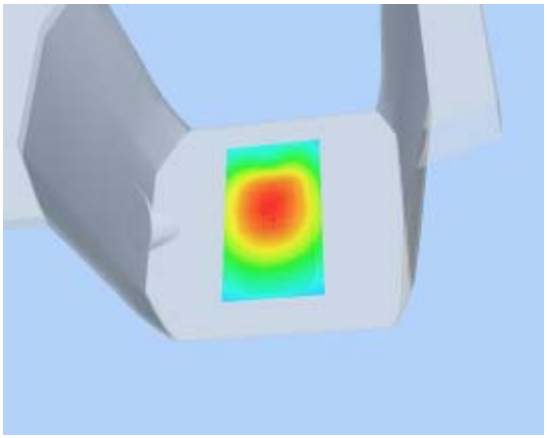
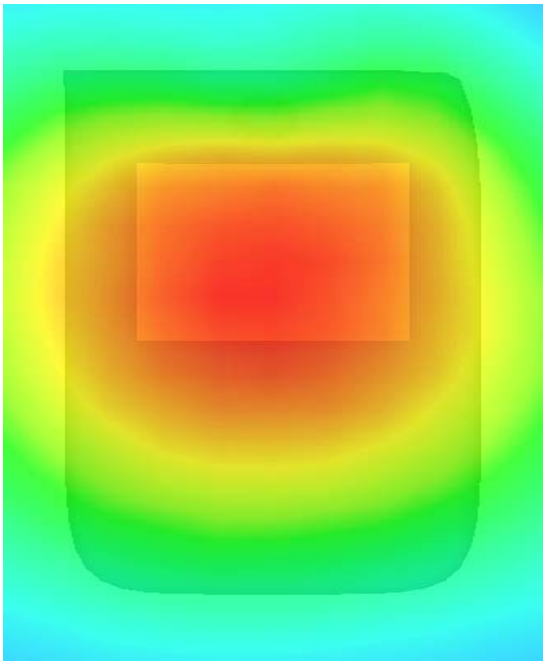
Maximum location: X=-5.00, Y=9.00

SAR 10g (W/Kg)	0.258968
SAR 1g (W/Kg)	0.408702

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5108	0.3799	0.2858	0.2058	0.1492	0.1083



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: 29/1/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

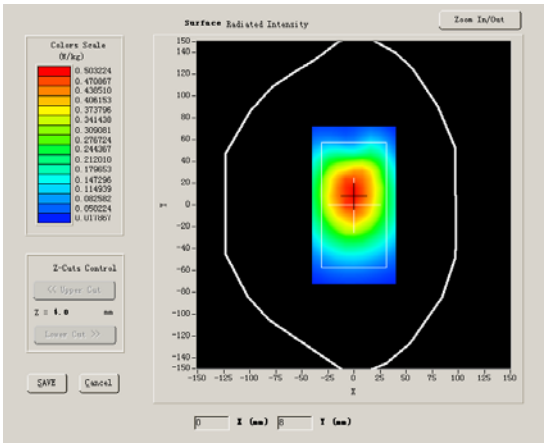
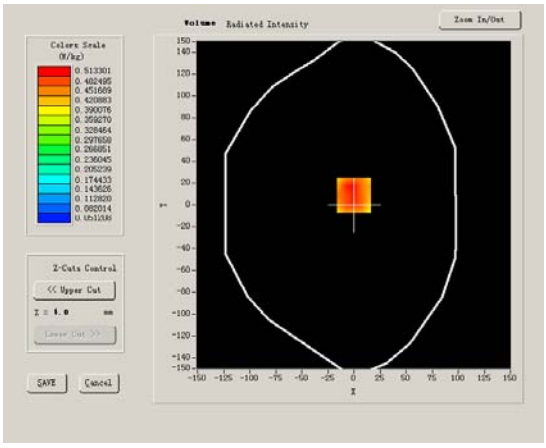
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.599976
Relative permittivity (real part)	55.709999
Relative permittivity	21.709999

Conductivity (S/m)	1.009033
Variation (%)	-0.480000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:8

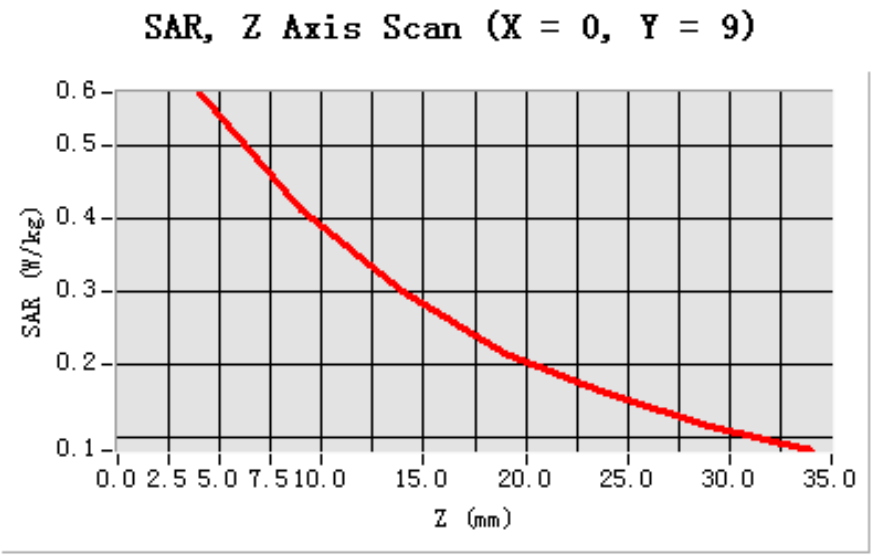
SURFACE SAR	**VOLUME SAR**
	

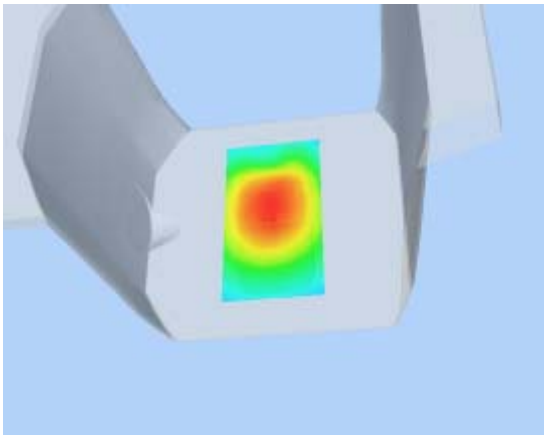
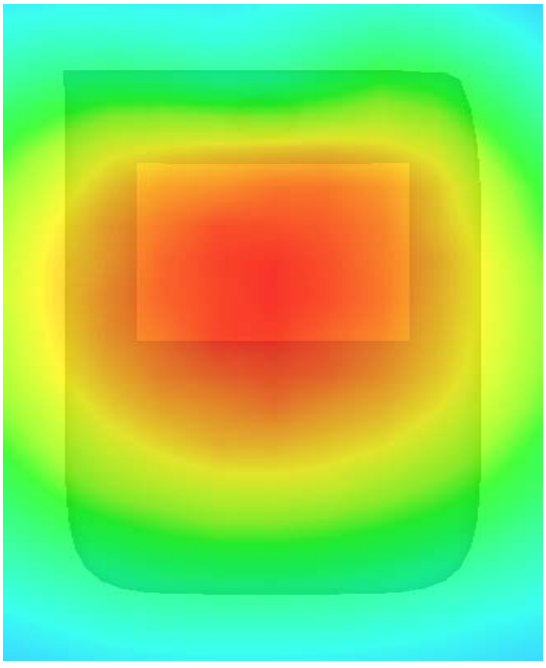
Maximum location: X=0.00, Y=9.00

SAR 10g (W/Kg)	0.287915
SAR 1g (W/Kg)	0.463017

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5717	0.4126	0.2980	0.2155	0.1592	0.1156



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: 29/1/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

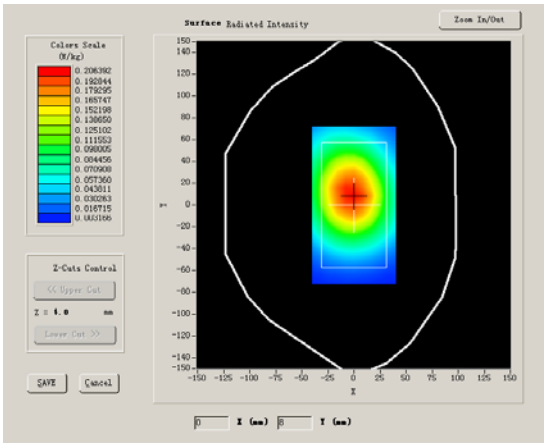
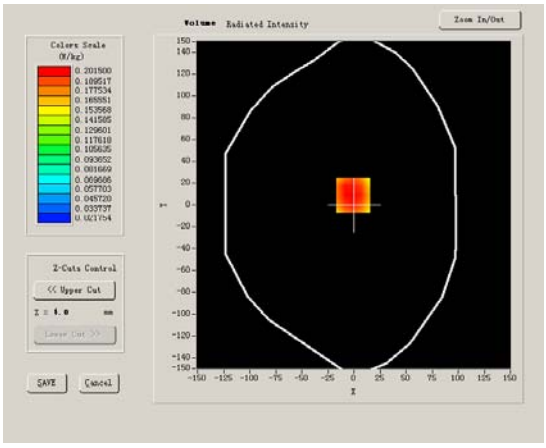
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

Frequency (MHz)	848.799988
Relative permittivity (real part)	54.014999
Relative permittivity	21.332850

Conductivity (S/m)	1.005962
Variation (%)	-0.970000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:8

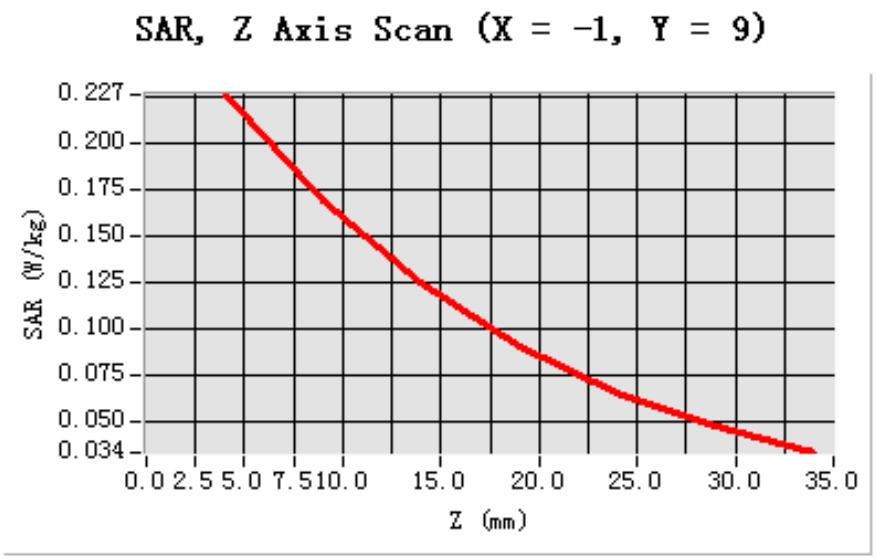
SURFACE SAR	**VOLUME SAR**
	

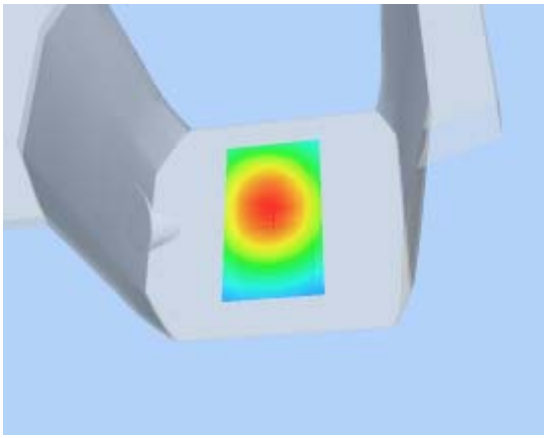
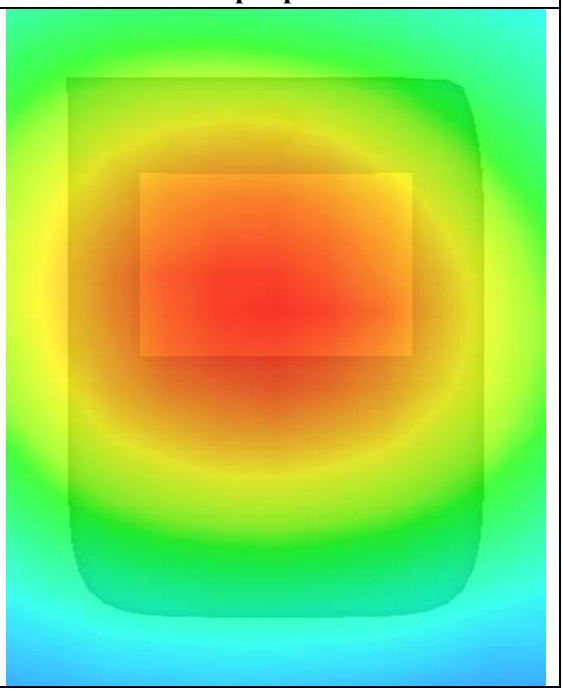
Maximum location: X=-1.00, Y=9.00

SAR 10g (W/Kg)	0.256666
SAR 1g (W/Kg)	0.414890

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2266	0.1697	0.1256	0.0911	0.0659	0.0480



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: 29/1/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

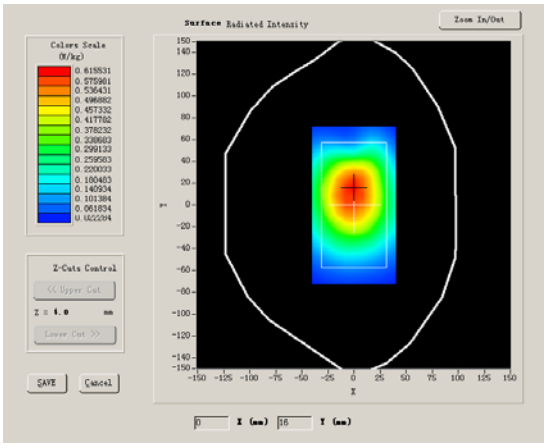
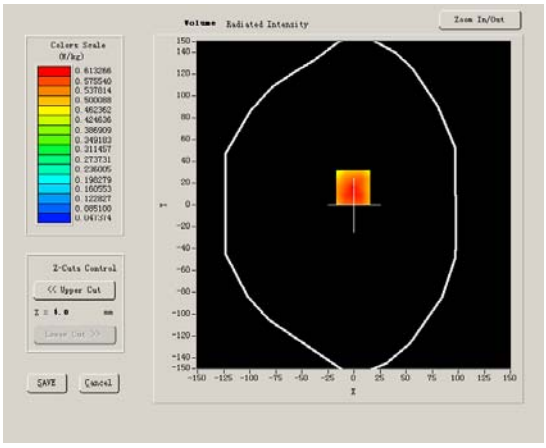
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

Frequency (MHz)	848.799988
Relative permittivity (real part)	54.014999
Relative permittivity	21.332850

Conductivity (S/m)	1.005962
Variation (%)	-2.400000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:8

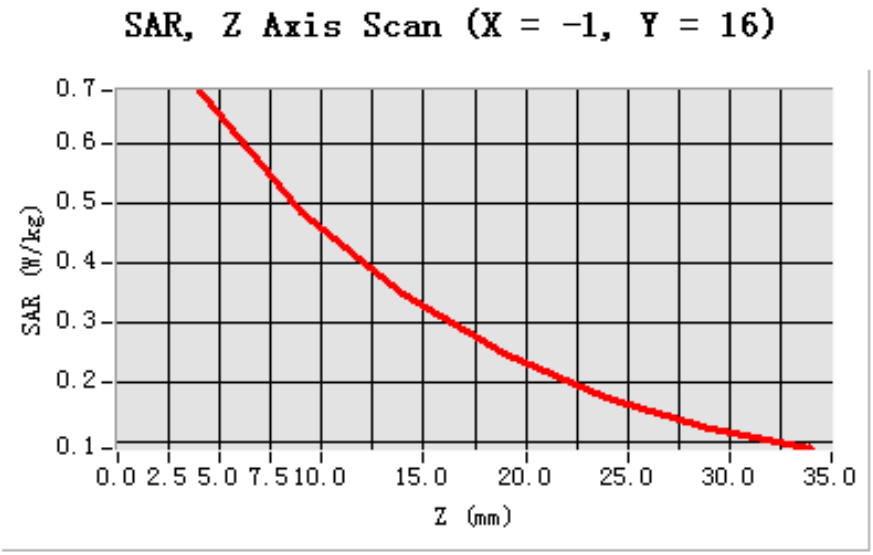
SURFACE SAR	**VOLUME SAR**
	

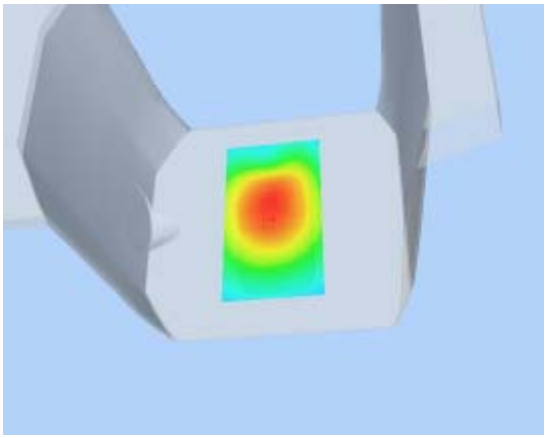
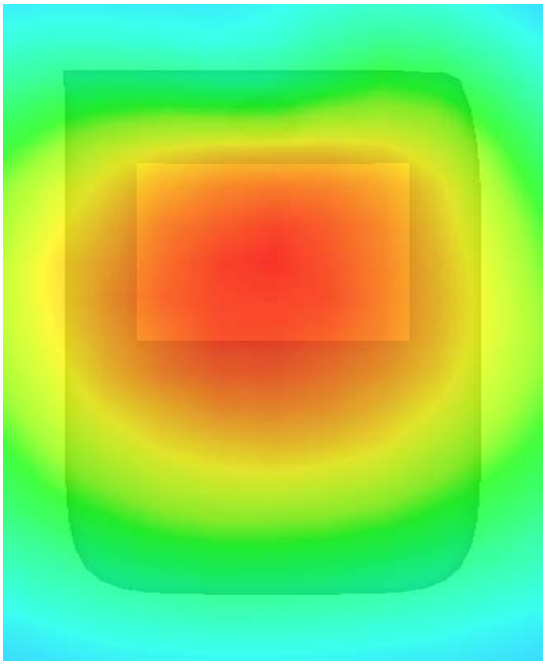
Maximum location: X=-1.00, Y=16.00

SAR 10g (W/Kg)	0.179942
SAR 1g (W/Kg)	0.321255

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6898	0.4852	0.3474	0.2483	0.1734	0.1212



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: 29/1/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

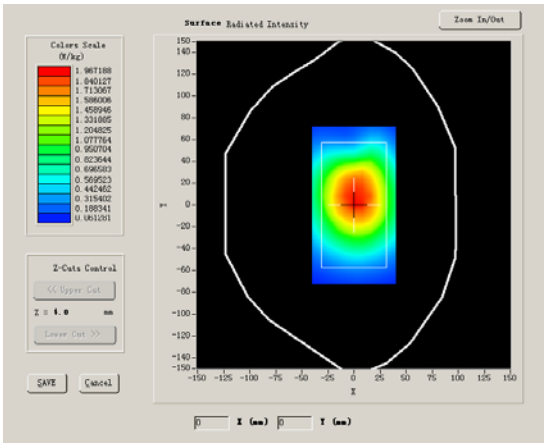
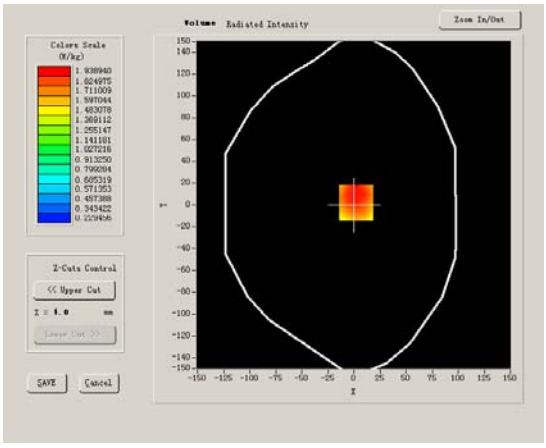
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GPRS

B. SAR Measurement Results

Higher Band SAR (Channel 251):

Frequency (MHz)	848.799988
Relative permittivity (real part)	54.014999
Relative permittivity	21.332850

Conductivity (S/m)	1.005962
Variation (%)	-3.620000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:2

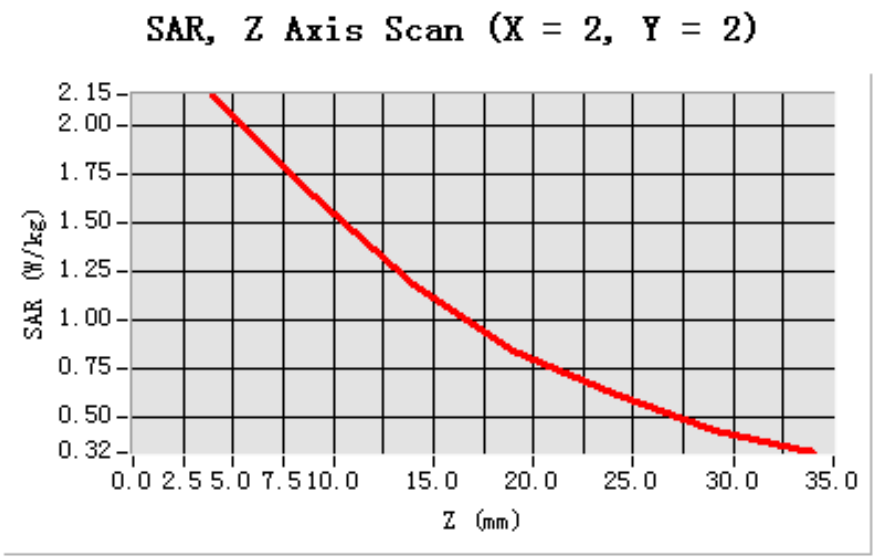
SURFACE SAR	**VOLUME SAR**
	

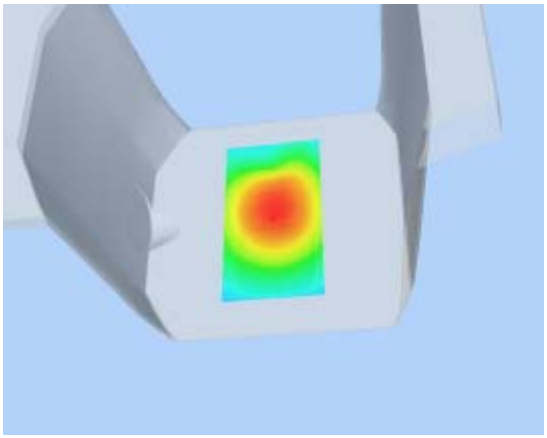
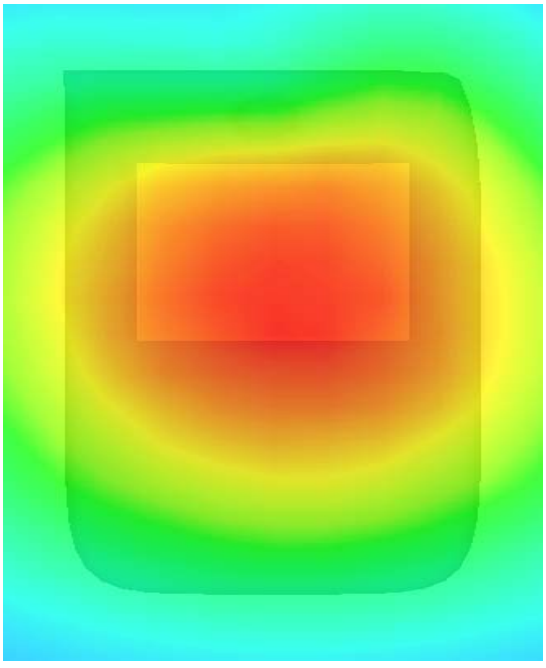
Maximum location: X=2.00, Y=2.00

SAR 10g (W/Kg)	0.496519
SAR 1g (W/Kg)	0.985781

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.1526	1.6326	1.1794	0.8391	0.6285	0.4430



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: 29/1/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

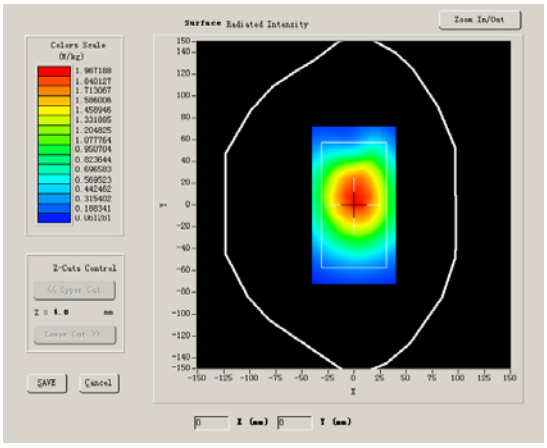
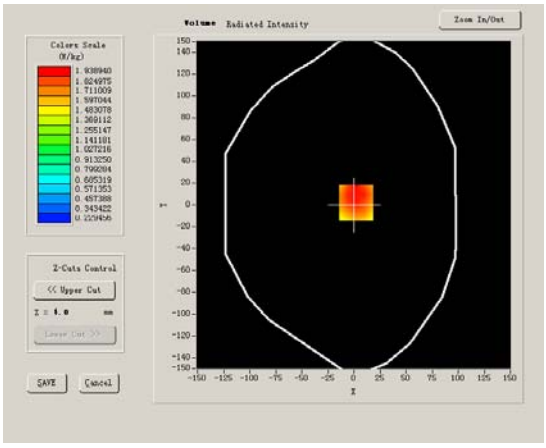
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

Frequency (MHz)	848.799988
Relative permittivity (real part)	54.014999
Relative permittivity	21.332850

Conductivity (S/m)	1.005962
Variation (%)	-3.620000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:8

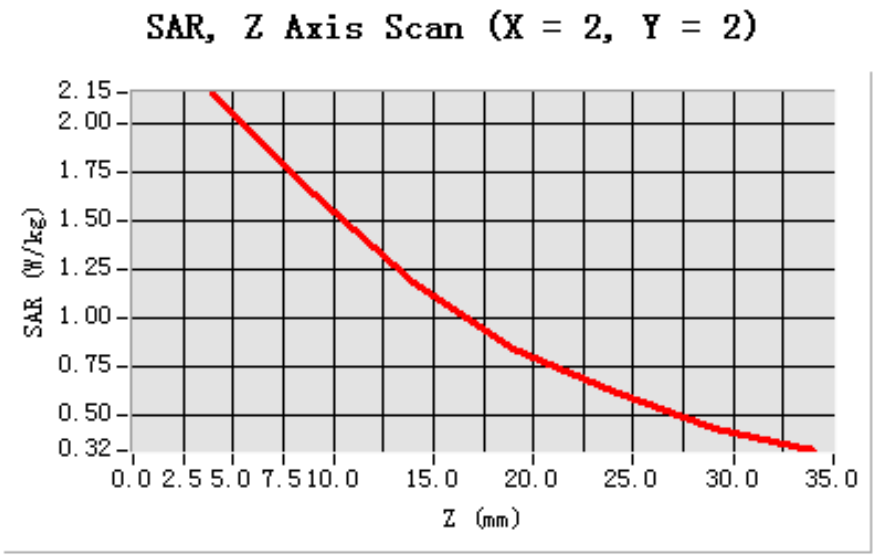
SURFACE SAR	**VOLUME SAR**
	

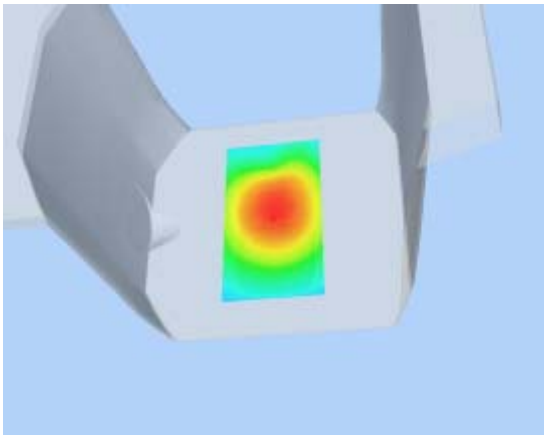
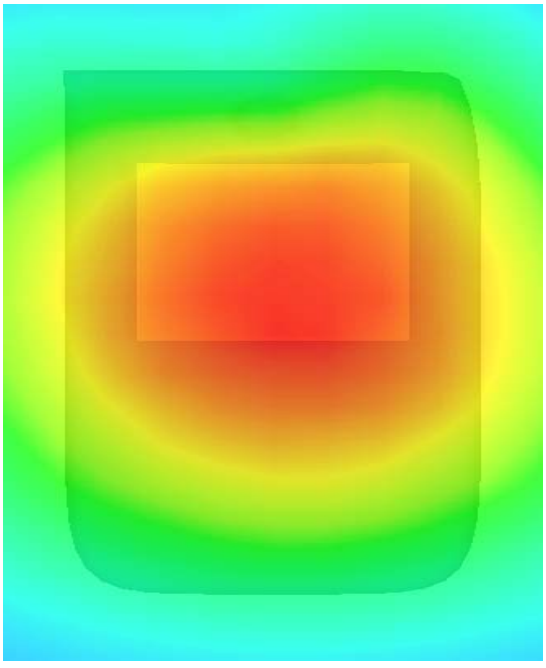
Maximum location: X=2.00, Y=2.00

SAR 10g (W/Kg)	0.210057
SAR 1g (W/Kg)	0.418846

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.1526	1.6326	1.1794	0.8391	0.6285	0.4430



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: 29/1/2010

Measurement duration: 7 minutes 22 seconds

A. Experimental conditions.

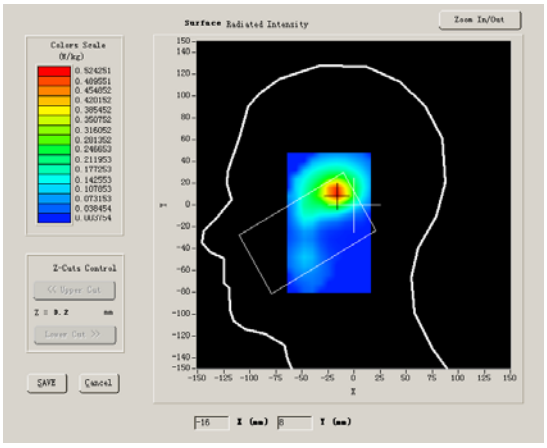
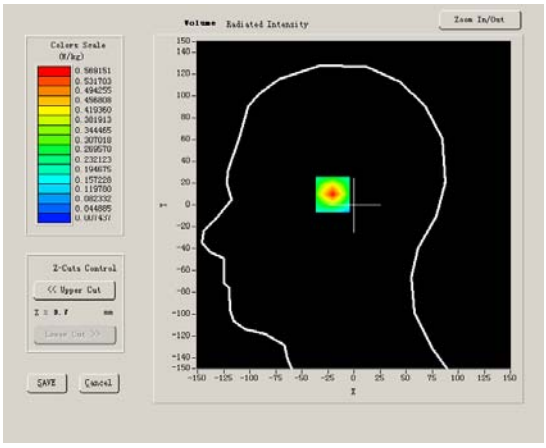
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

Conductivity (S/m)	1.335397
Variation (%)	-0.720000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

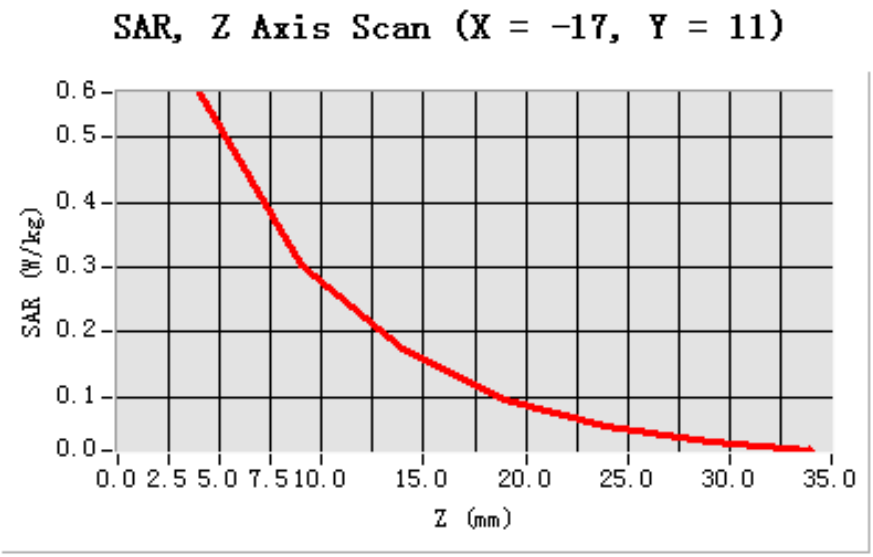
SURFACE SAR	**VOLUME SAR**
	

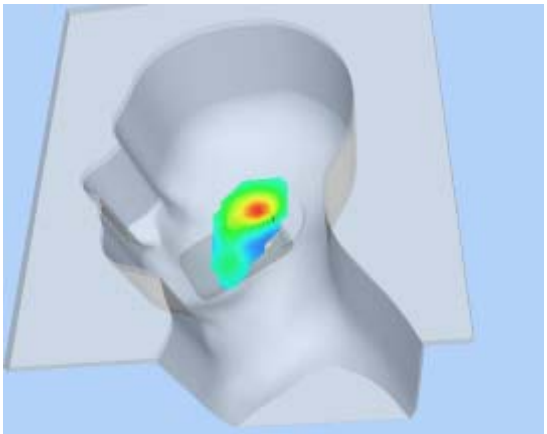
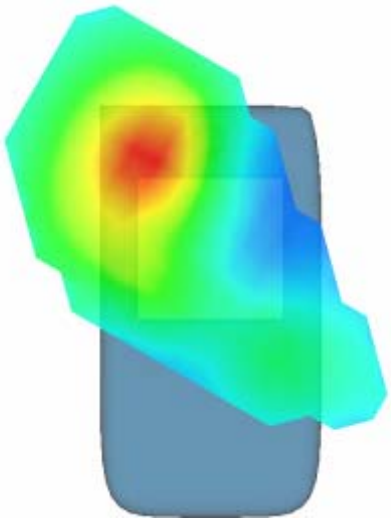
Maximum location: X=-17.00, Y=11.00

SAR 10g (W/Kg)	0.158100
SAR 1g (W/Kg)	0.314560

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5692	0.3040	0.1721	0.0939	0.0530	0.0300



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: 29/1/2010

Measurement duration: 7 minutes 25 seconds

A. Experimental conditions.

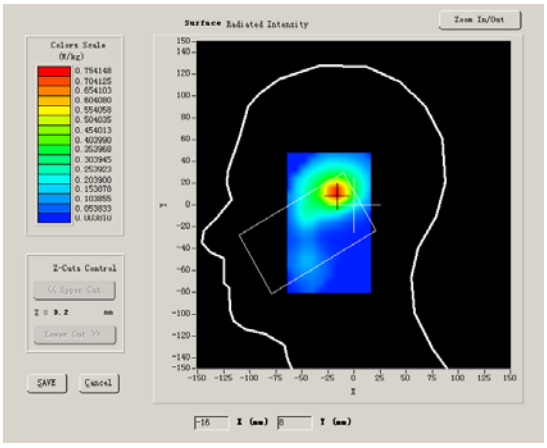
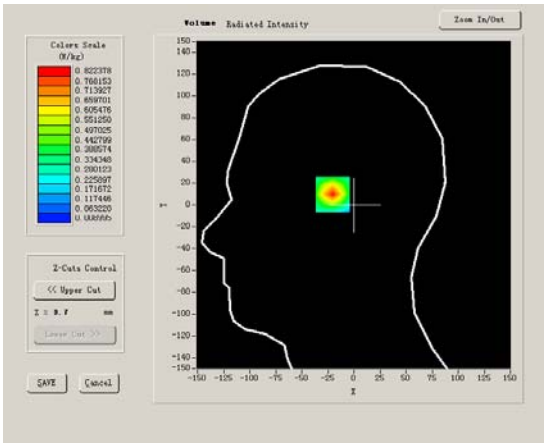
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	0.410000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

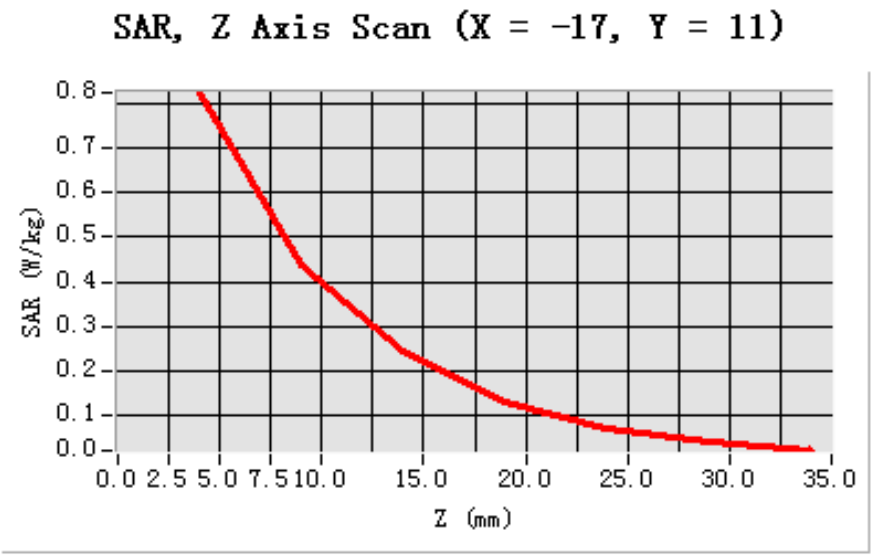
SURFACE SAR	**VOLUME SAR**
	

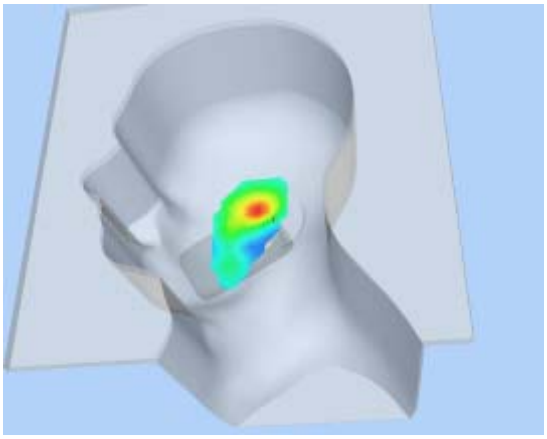
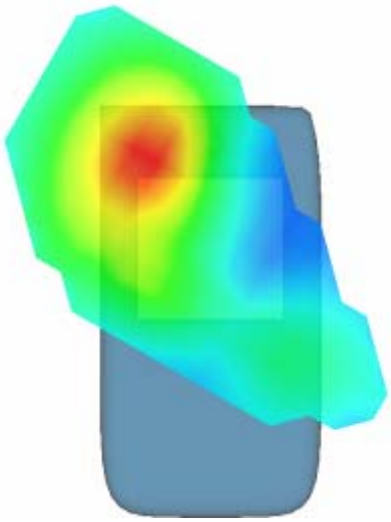
Maximum location: X=-17.00, Y=11.00

SAR 10g (W/Kg)	0.171495
SAR 1g (W/Kg)	0.343853

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8224	0.4390	0.2426	0.1329	0.0719	0.0410



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: 29/1/2010

Measurement duration: 7 minutes 26 seconds

A. Experimental conditions.

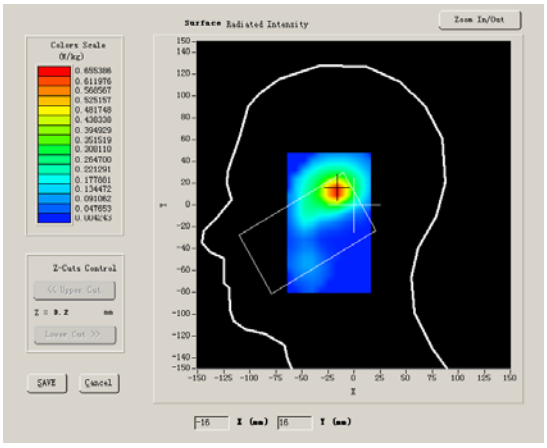
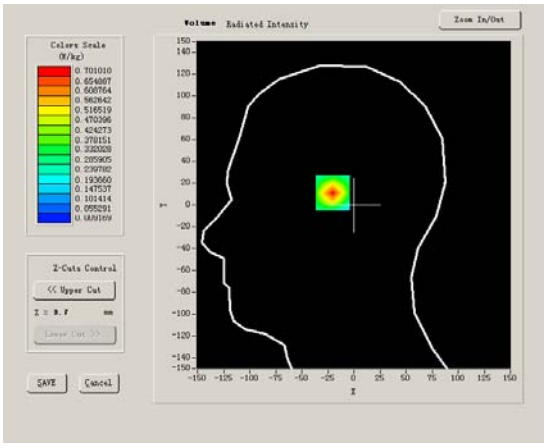
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

Conductivity (S/m)	1.395905
Variation (%)	-0.510000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

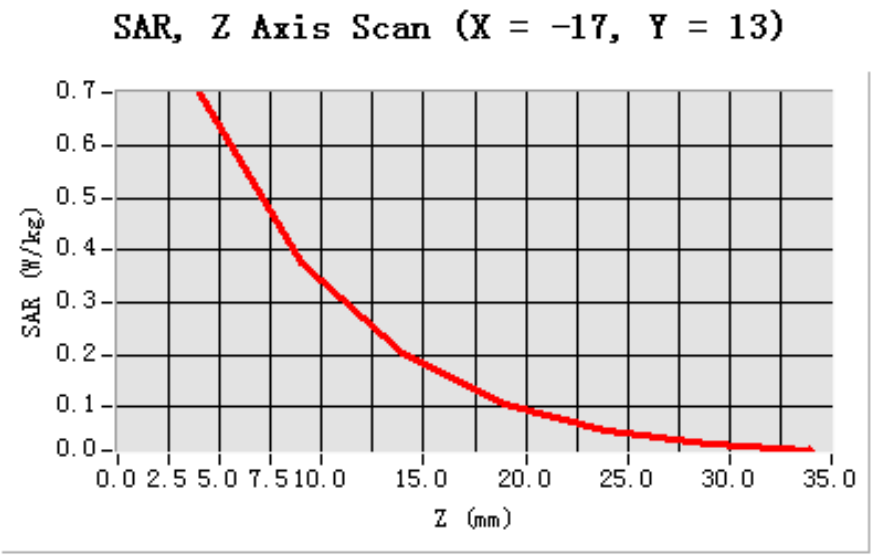
SURFACE SAR	**VOLUME SAR**
	

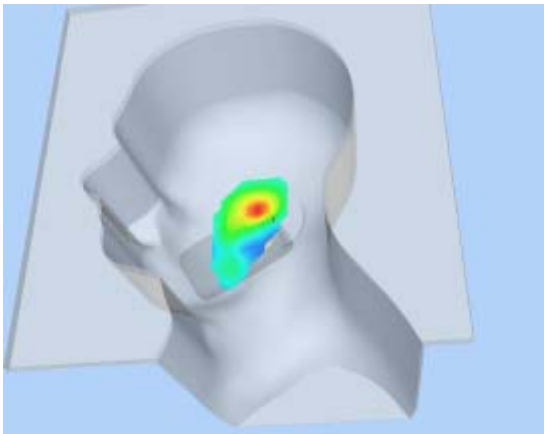
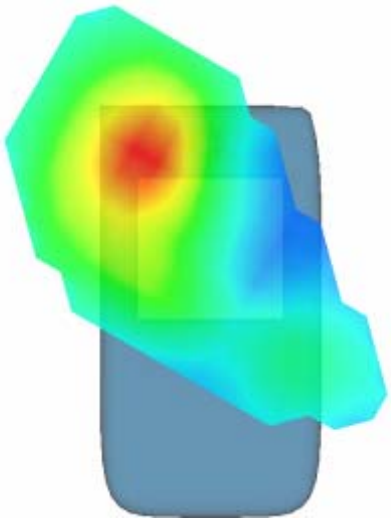
Maximum location: X=-17.00, Y=13.00

SAR 10g (W/Kg)	0.167756
SAR 1g (W/Kg)	0.335531

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7010	0.3758	0.2019	0.1061	0.0575	0.0310



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: 29/1/2010

Measurement duration: 7 minutes 23 seconds

A. Experimental conditions.

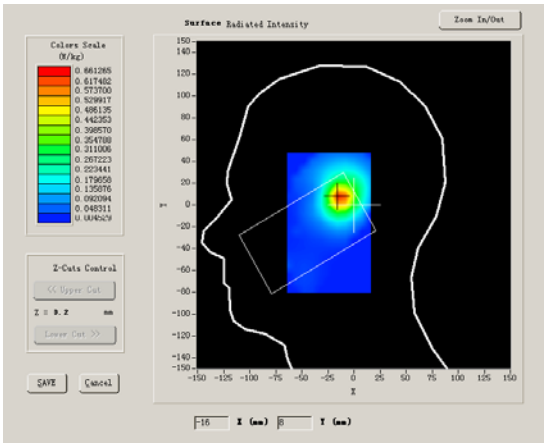
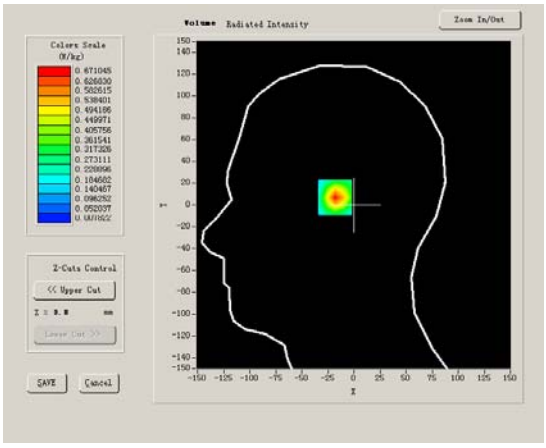
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

Conductivity (S/m)	1.335397
Variation (%)	-1.110000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

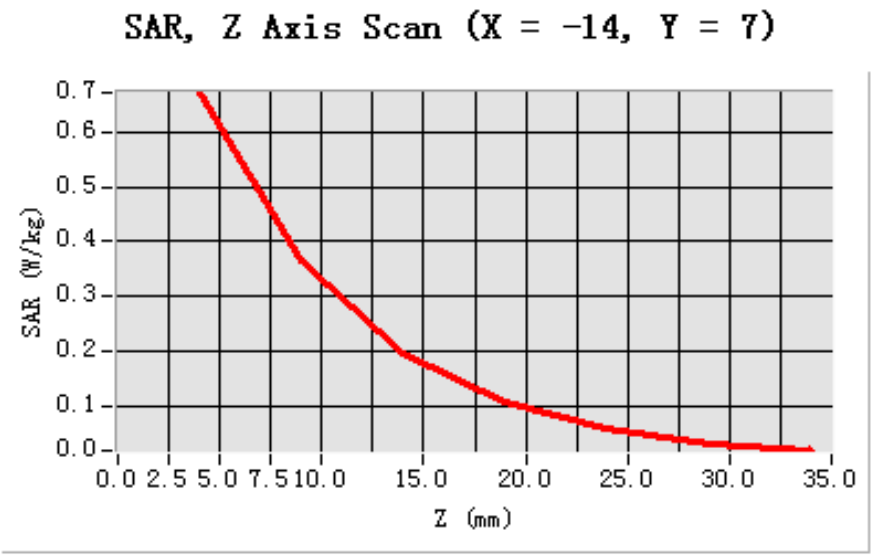
SURFACE SAR	**VOLUME SAR**
	

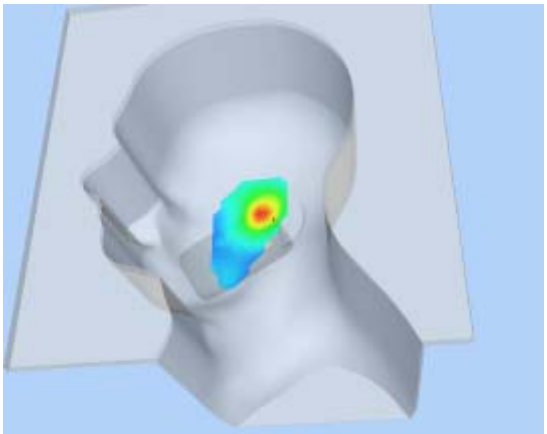
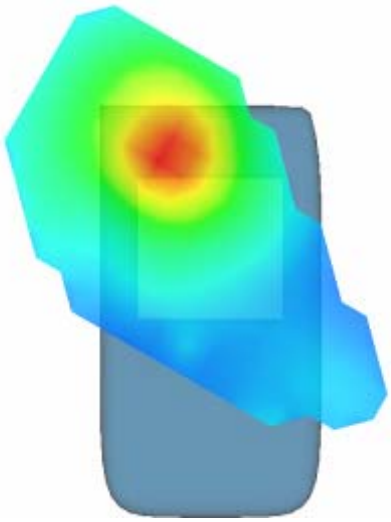
Maximum location: X=-14.00, Y=7.00

SAR 10g (W/Kg)	0.075573
SAR 1g (W/Kg)	0.111774

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6710	0.3675	0.1959	0.1074	0.0602	0.0325



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: 29/1/2010

Measurement duration: 7 minutes 23 seconds

A. Experimental conditions.

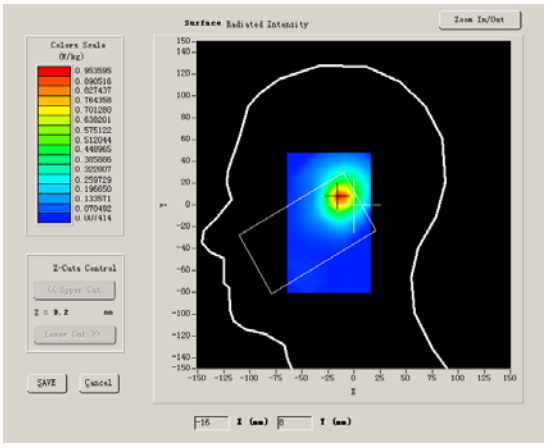
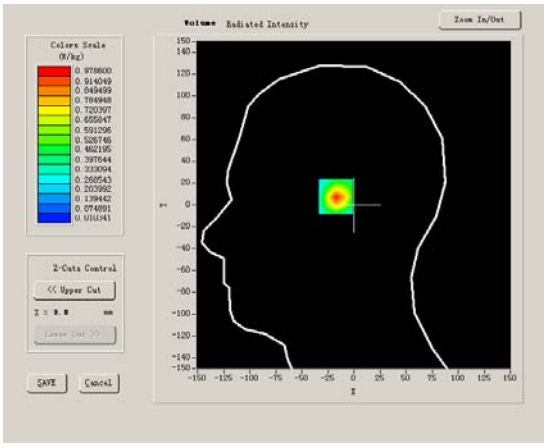
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	-0.080000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

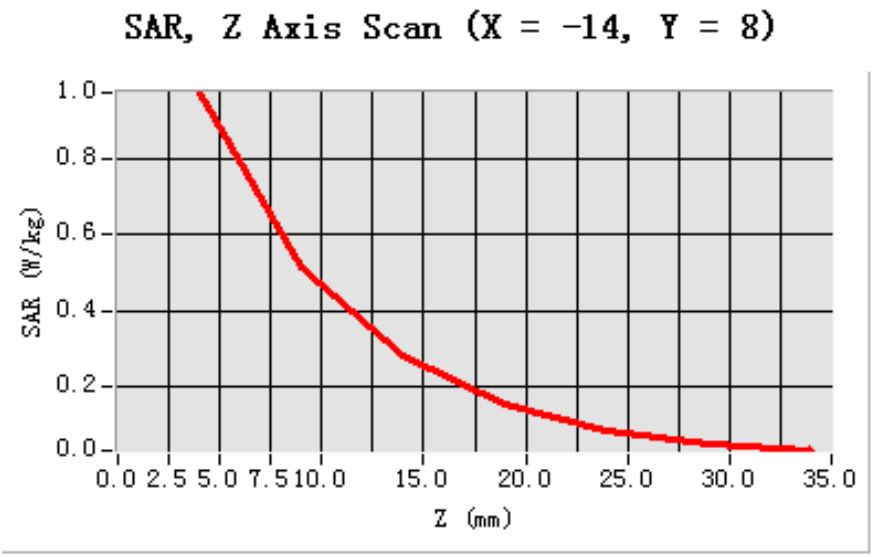
SURFACE SAR	**VOLUME SAR**
	

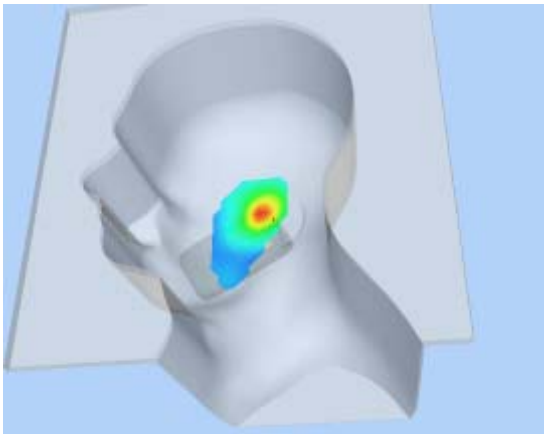
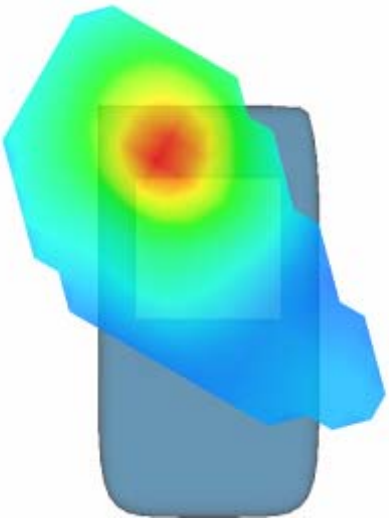
Maximum location: X=-14.00, Y=8.00

SAR 10g (W/Kg)	0.094619
SAR 1g (W/Kg)	0.192526

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9786	0.5127	0.2815	0.1499	0.0827	0.0458



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: 29/1/2010

Measurement duration: 7 minutes 24 seconds

A. Experimental conditions.

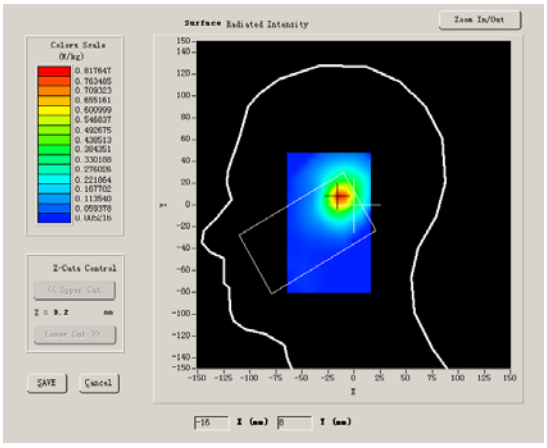
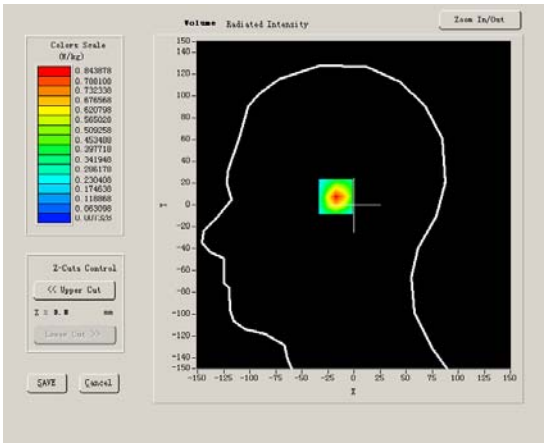
Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

Conductivity (S/m)	1.395905
Variation (%)	-0.280000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

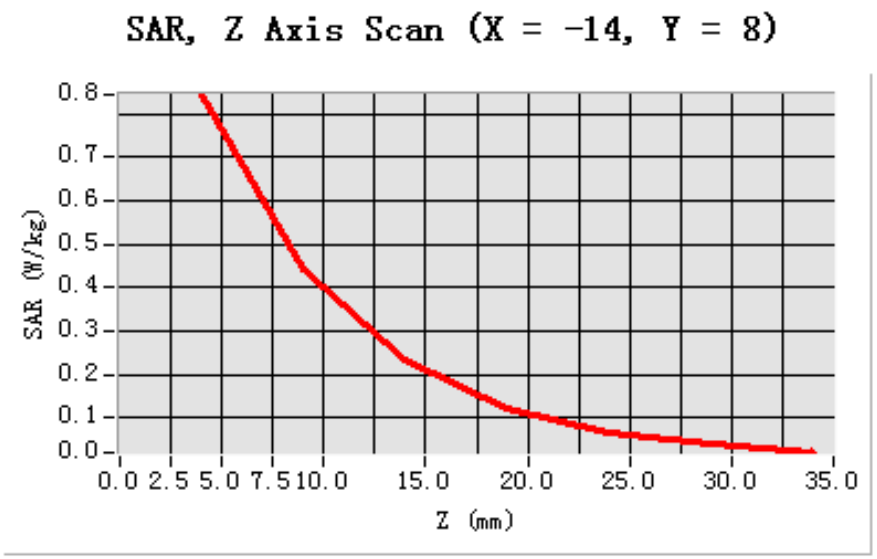
SURFACE SAR	**VOLUME SAR**
	

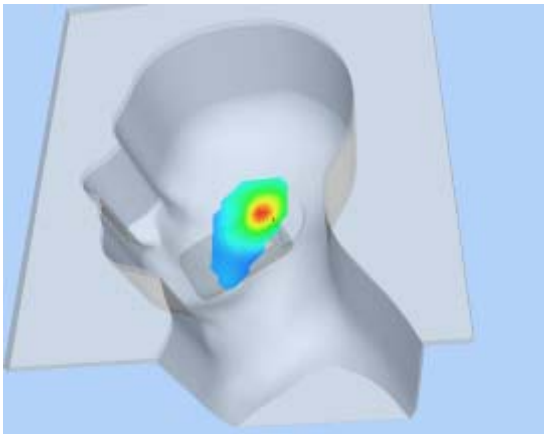
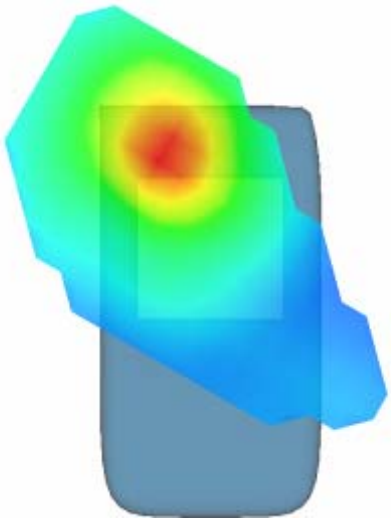
Maximum location: X=-14.00, Y=8.00

SAR 10g (W/Kg)	0.083119
SAR 1g (W/Kg)	0.172923

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8439	0.4418	0.2320	0.1234	0.0679	0.0376



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: 29/1/2010

Measurement duration: 7 minutes 22 seconds

A. Experimental conditions.

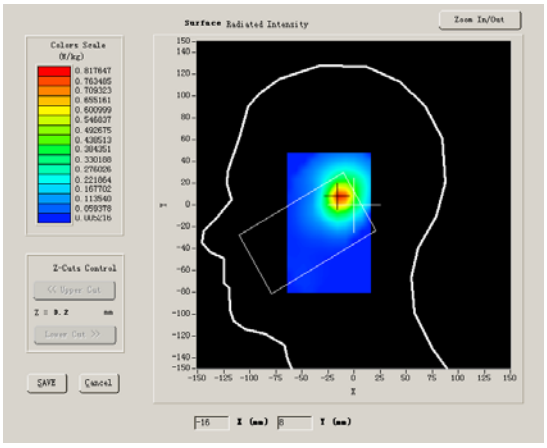
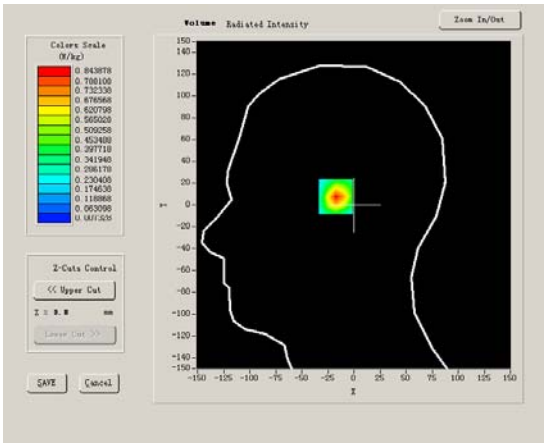
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

Conductivity (S/m)	1.335397
Variation (%)	-2.040000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

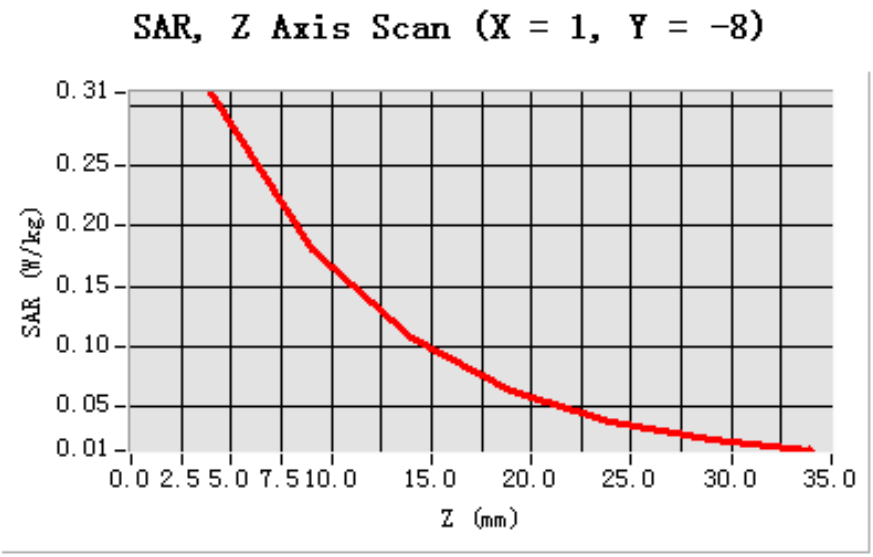
SURFACE SAR	**VOLUME SAR**
	

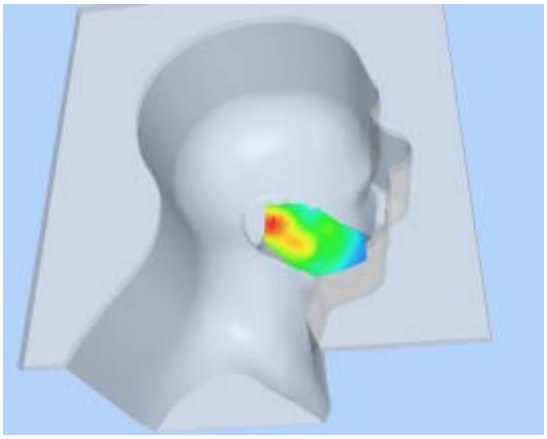
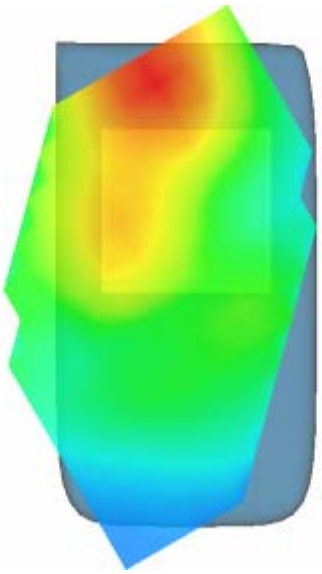
Maximum location: X=1.00, Y=-8.00

SAR 10g (W/Kg)	0.174955
SAR 1g (W/Kg)	0.316616

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8439	0.4418	0.2320	0.1234	0.0679	0.0376



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: 29/1/2010

Measurement duration: 7 minutes 23 seconds

A. Experimental conditions.

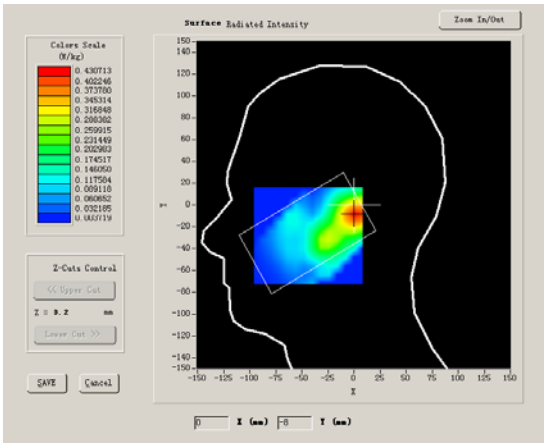
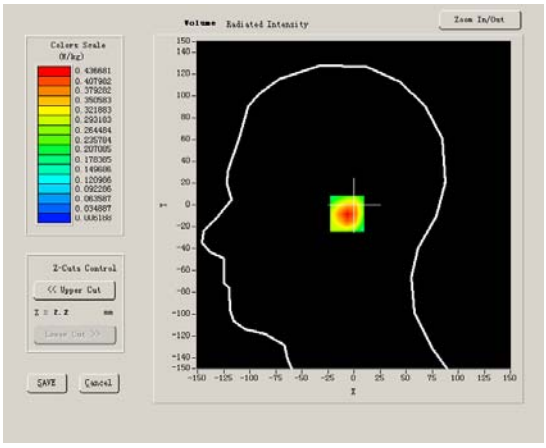
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	-0.770000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

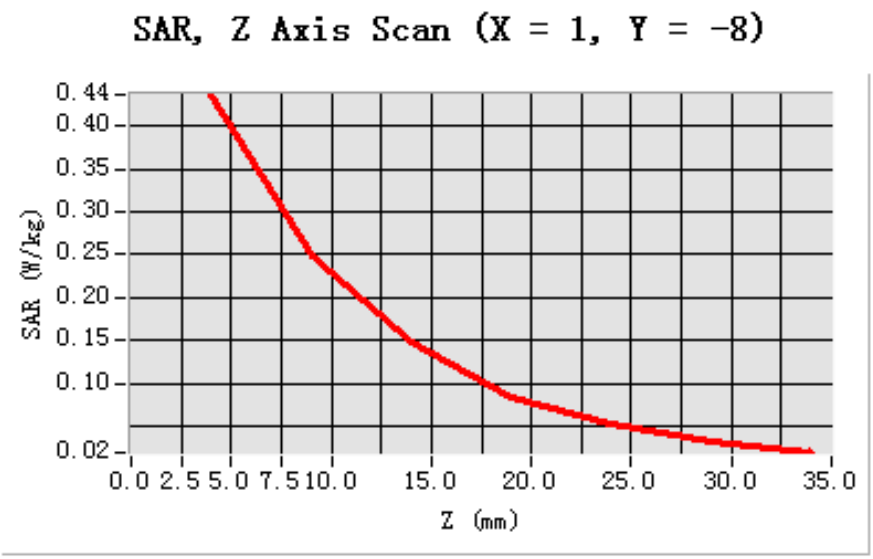
SURFACE SAR	**VOLUME SAR**
	

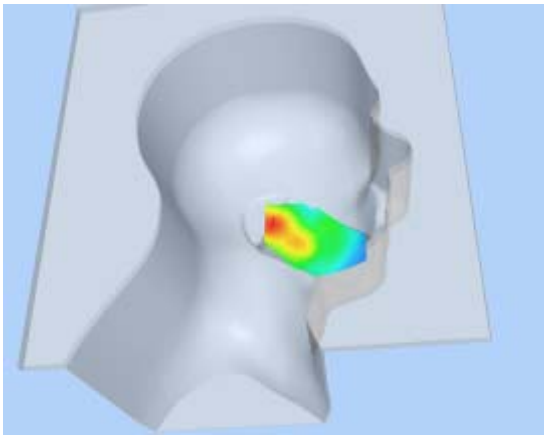
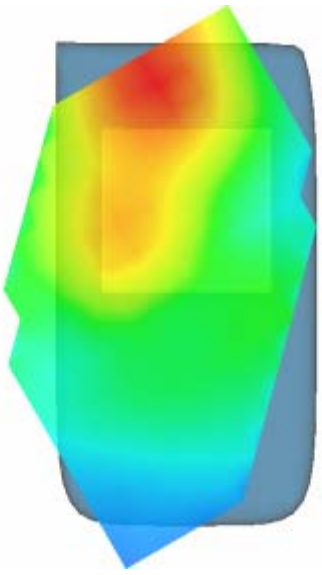
Maximum location: X=1.00, Y=-8.00

SAR 10g (W/Kg)	0.234527
SAR 1g (W/Kg)	0.415268

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4367	0.2477	0.1471	0.0836	0.0516	0.0313



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: 29/1/2010

Measurement duration: 7 minutes 23 seconds

A. Experimental conditions.

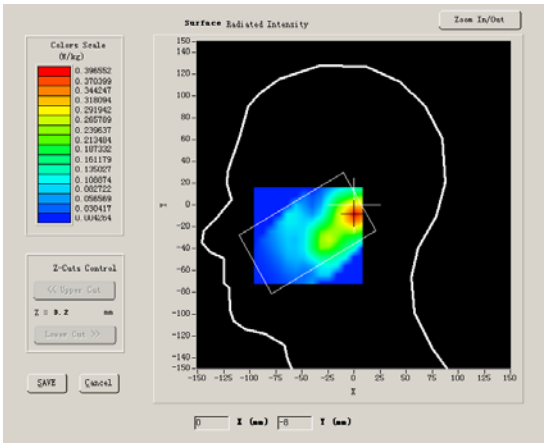
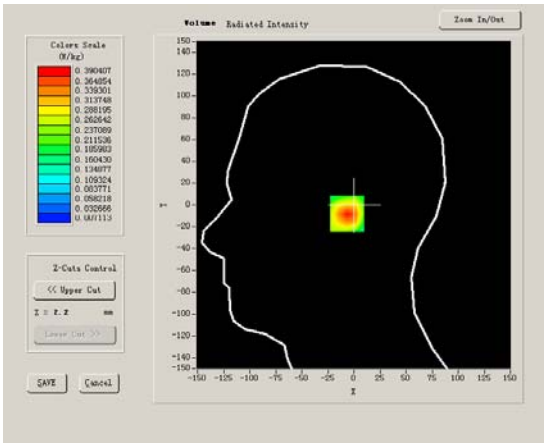
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

Conductivity (S/m)	1.395905
Variation (%)	-2.930000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

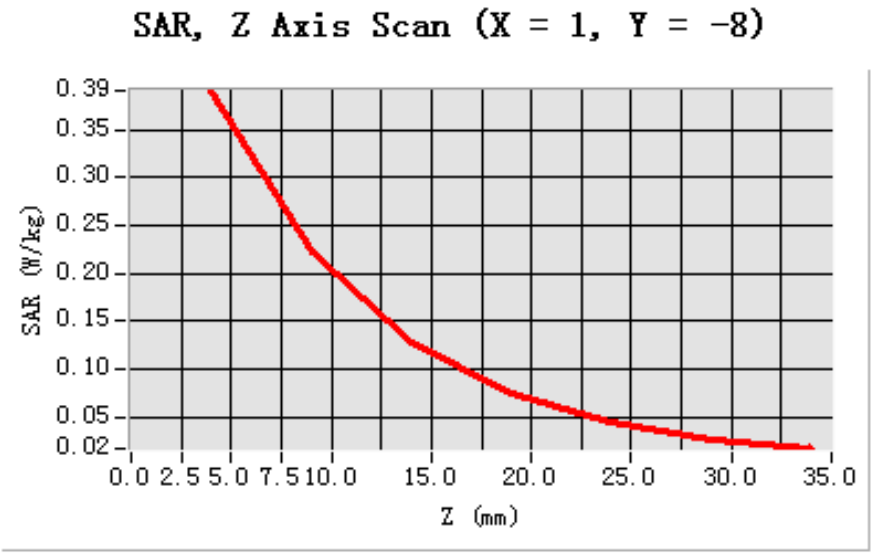
SURFACE SAR	**VOLUME SAR**
	

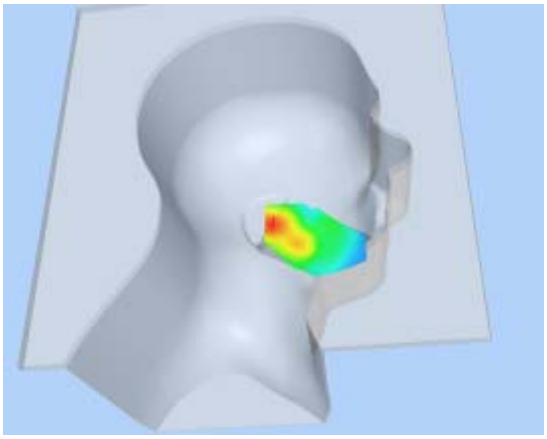
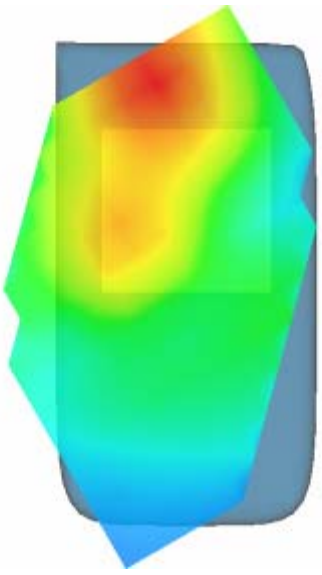
Maximum location: X=1.00, Y=-8.00

SAR 10g (W/Kg)	0.206086
SAR 1g (W/Kg)	0.366715

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3904	0.2210	0.1278	0.0743	0.0440	0.0256



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: 29/1/2010

Measurement duration: 7 minutes 29 seconds

A. Experimental conditions.

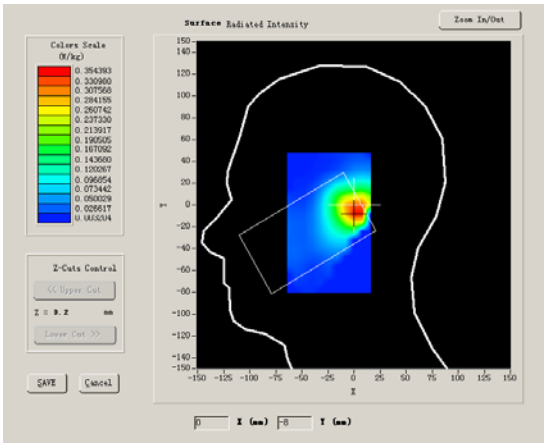
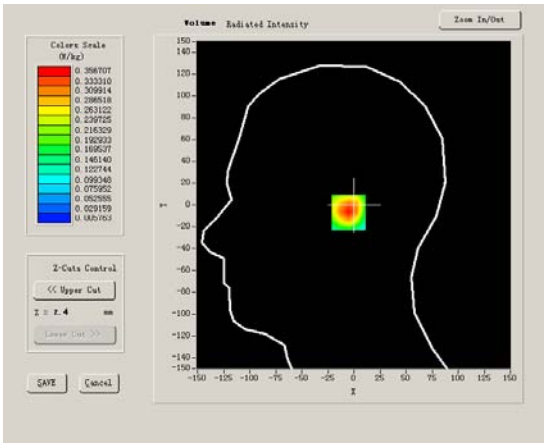
Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

Conductivity (S/m)	1.335397
Variation (%)	0.100000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

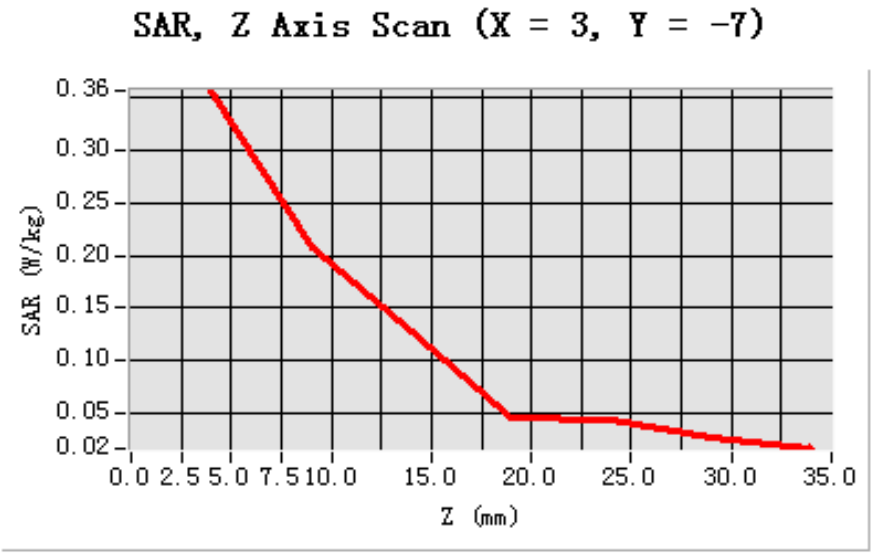
SURFACE SAR	**VOLUME SAR**
	

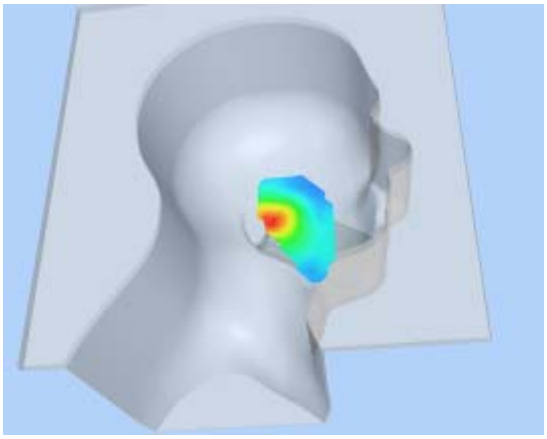
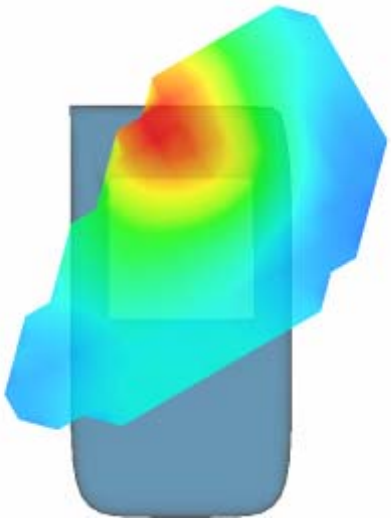
Maximum location: X=3.00, Y=-7.00

SAR 10g (W/Kg)	0.090462
SAR 1g (W/Kg)	0.133842

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3567	0.2081	0.1273	0.0458	0.0443	0.0267



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: 29/1/2010

Measurement duration: 7 minutes 26 seconds

A. Experimental conditions.

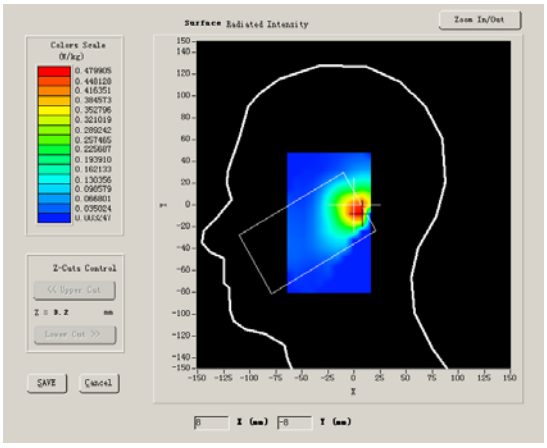
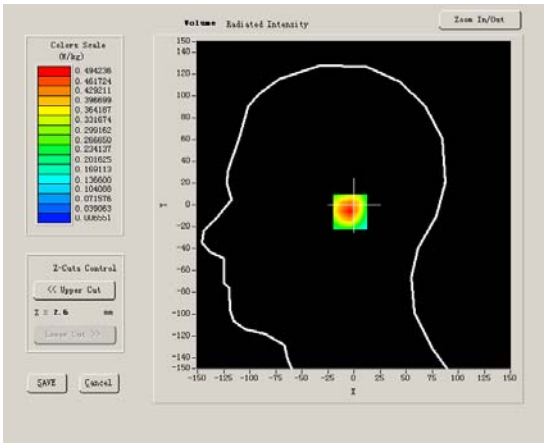
Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	-1.790000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

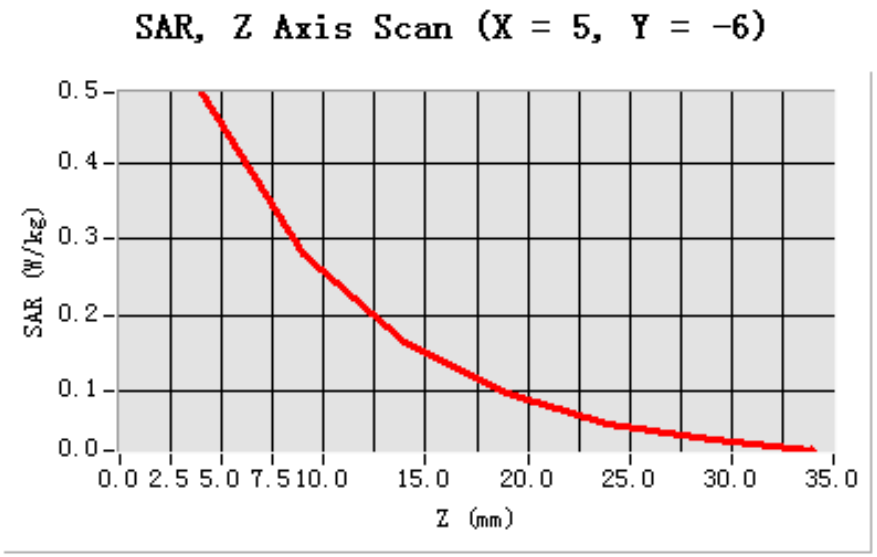
SURFACE SAR	**VOLUME SAR**
	

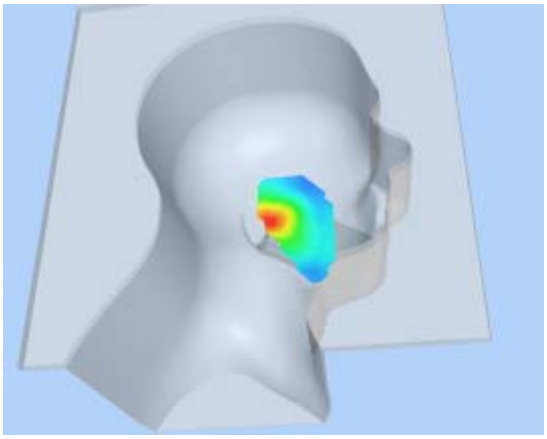
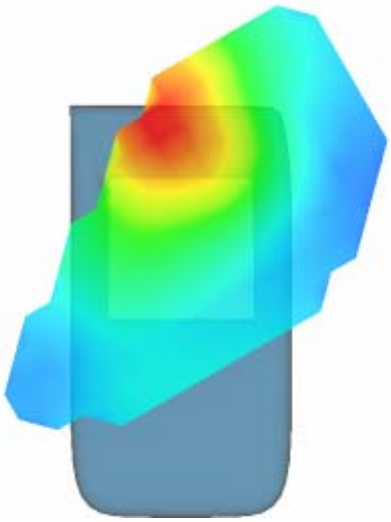
Maximum location: X=5.00, Y=-6.00

SAR 10g (W/Kg)	0.082825
SAR 1g (W/Kg)	0.166834

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4942	0.2804	0.1646	0.0978	0.0545	0.0354



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: 29/1/2010

Measurement duration: 7 minutes 19 seconds

A. Experimental conditions.

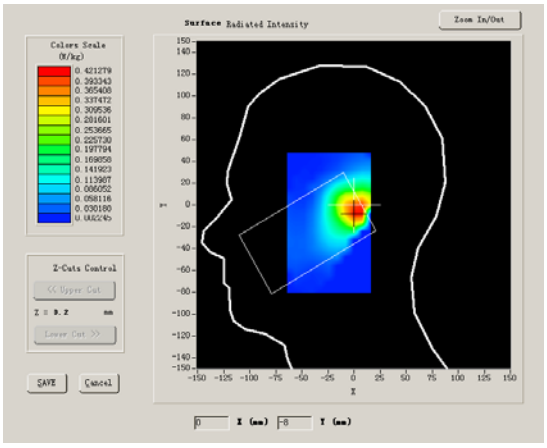
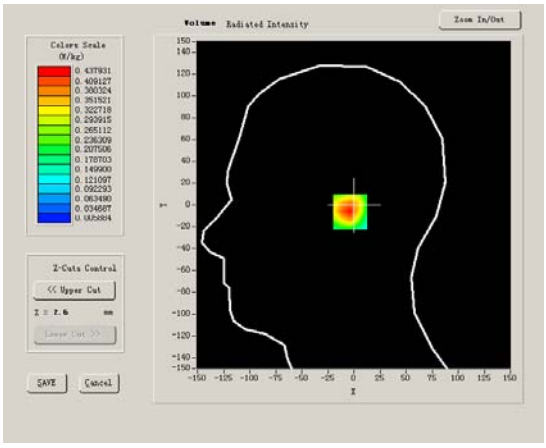
Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

Conductivity (S/m)	1.395905
Variation (%)	0.800000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:8

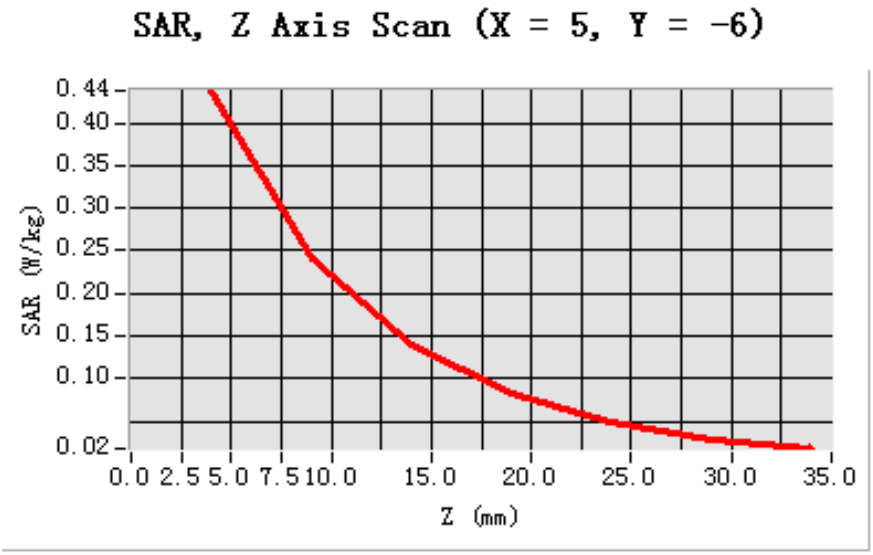
SURFACE SAR	**VOLUME SAR**
	

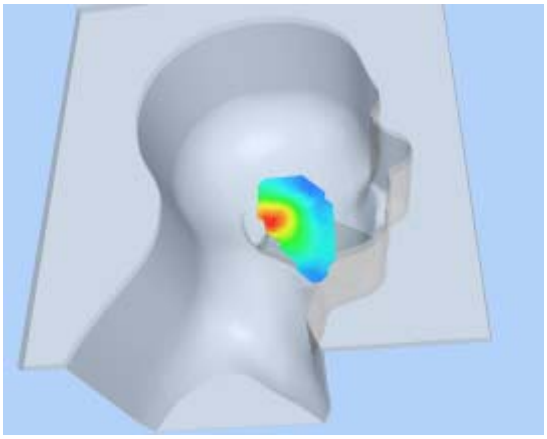
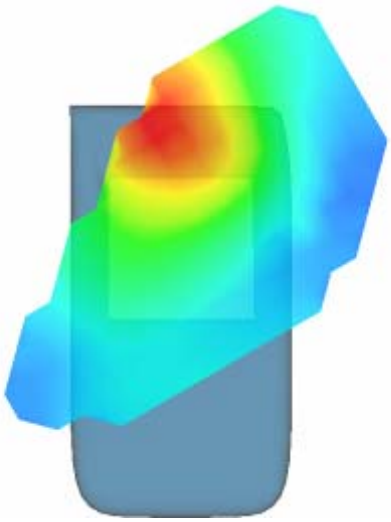
Maximum location: X=5.00, Y=-6.00

SAR 10g (W/Kg)	0.091414
SAR 1g (W/Kg)	0.114335

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4379	0.2406	0.1398	0.0837	0.0477	0.0293



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: 29/1/2010

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

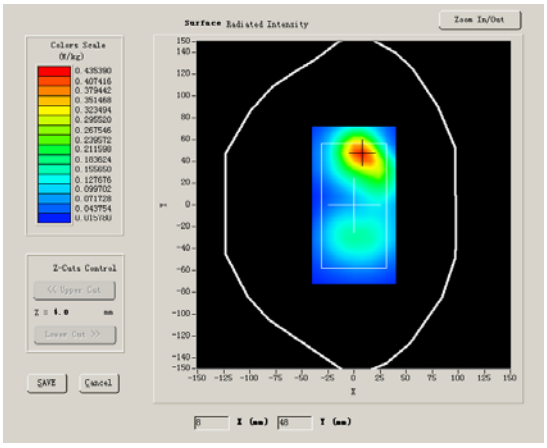
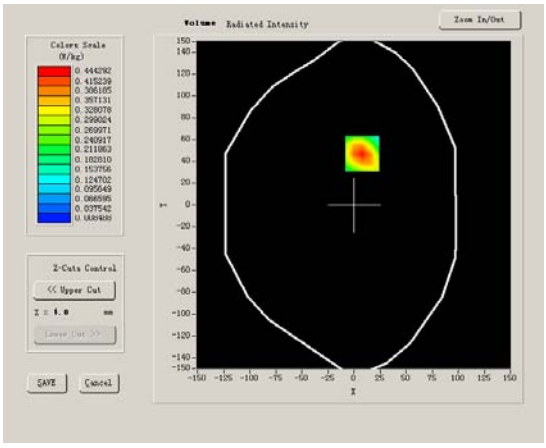
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	10.000000
Relative permittivity	12.000000

Conductivity (S/m)	1.233467
Variation (%)	0.960000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:8

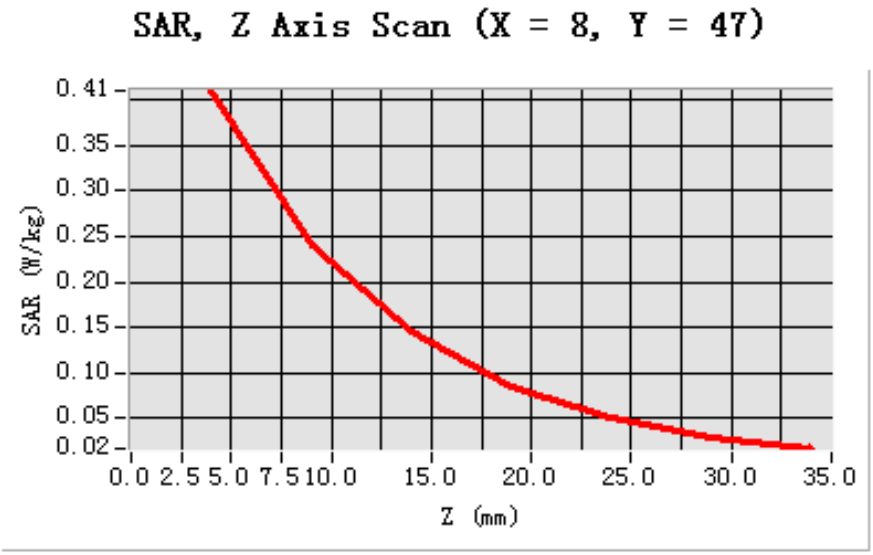
SURFACE SAR	**VOLUME SAR**
	

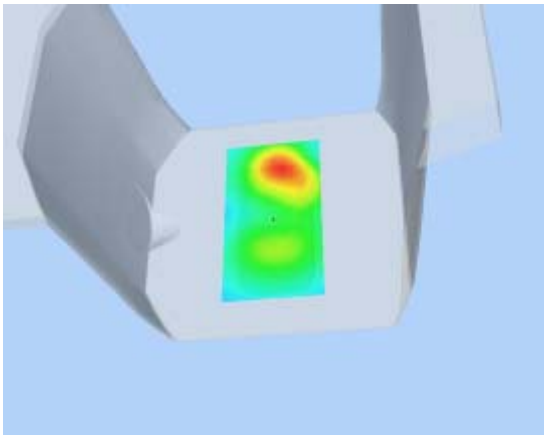
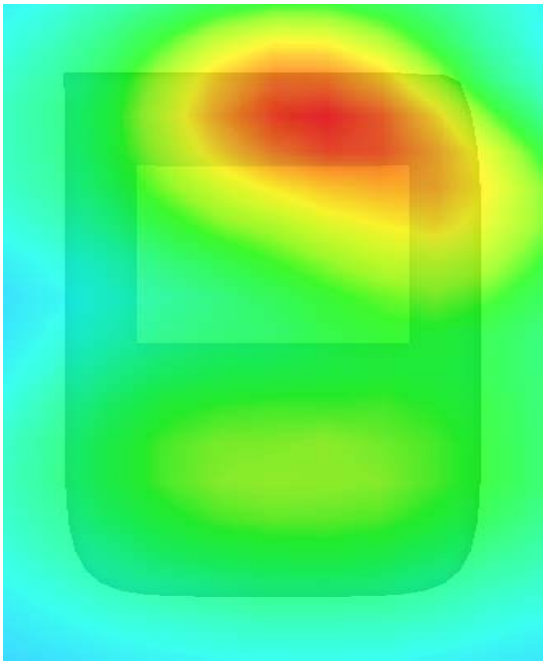
Maximum location: X=8.00, Y=47.00

SAR 10g (W/Kg)	0.176539
SAR 1g (W/Kg)	0.284449

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4104	0.2407	0.1444	0.0847	0.0502	0.0294



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: 29/1/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

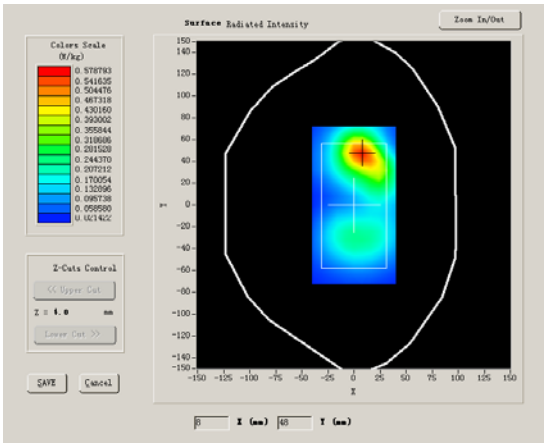
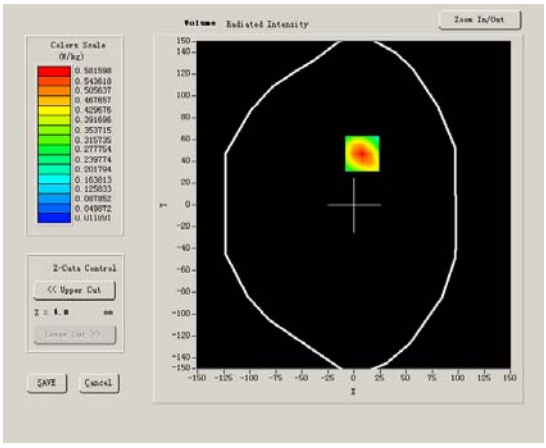
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

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 (%)	-0.090000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:8

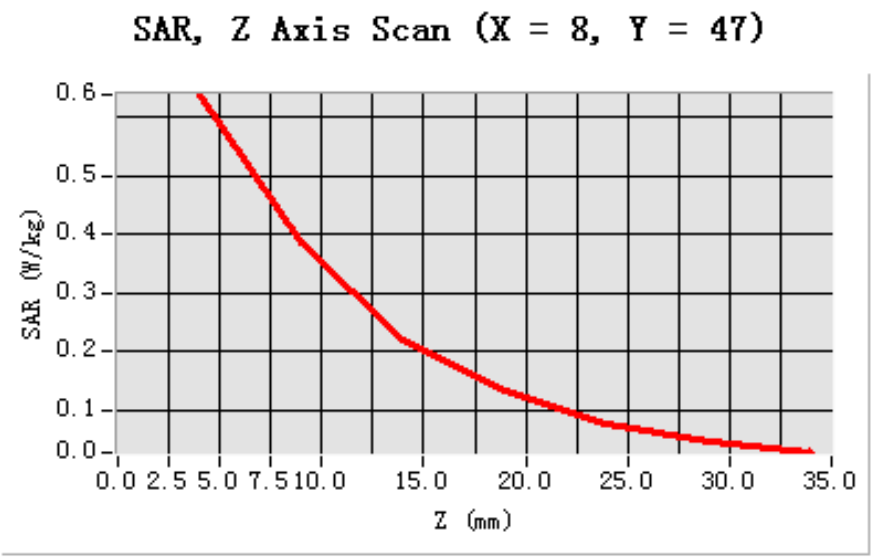
SURFACE SAR	**VOLUME SAR**
	

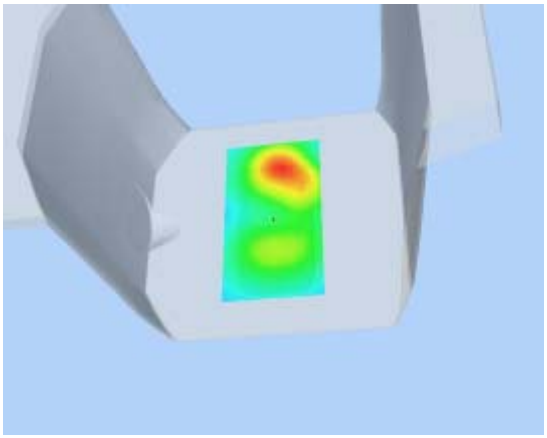
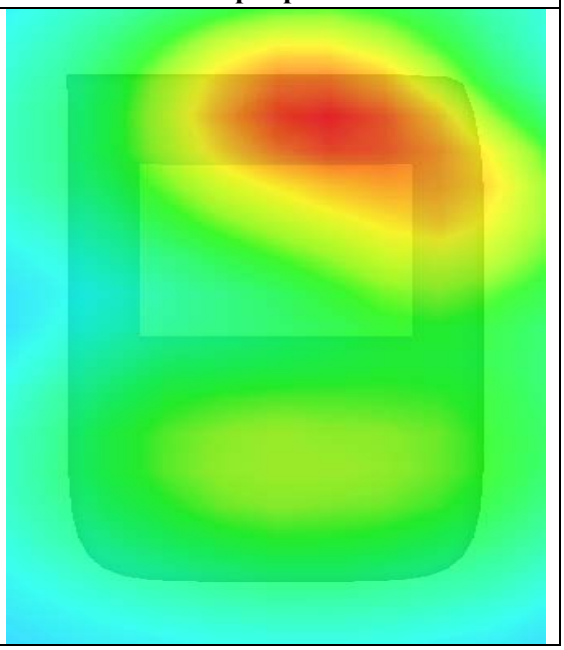
Maximum location: X=8.00, Y=47.00

SAR 10g (W/Kg)	0.168725
SAR 1g (W/Kg)	0.297452

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6374	0.3857	0.2202	0.1333	0.0760	0.0457



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: 29/1/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

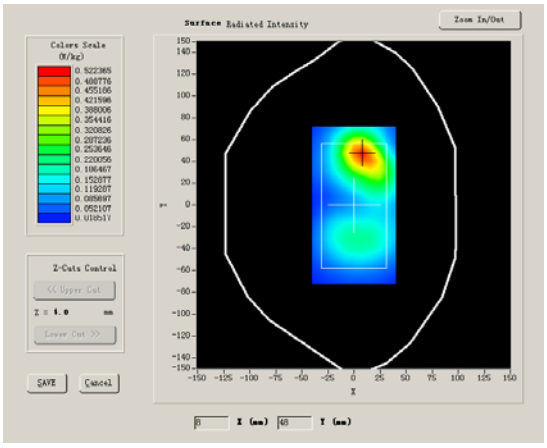
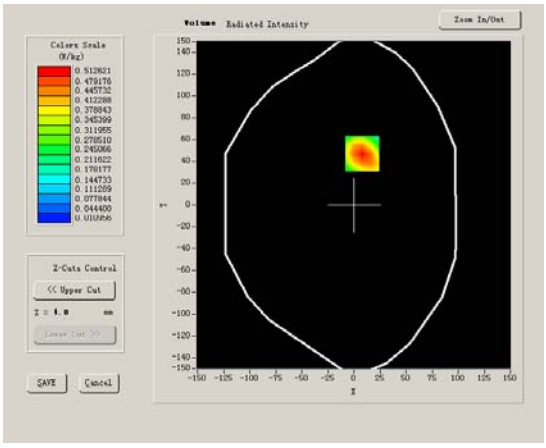
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	10.000000
Relative permittivity	12.000000

Conductivity (S/m)	1.273200
Variation (%)	-0.700000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:8

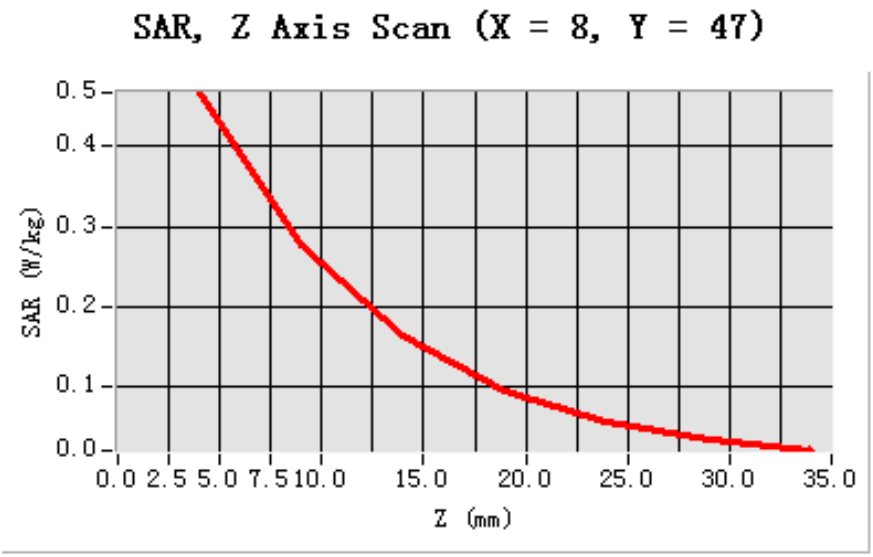
SURFACE SAR	**VOLUME SAR**
	

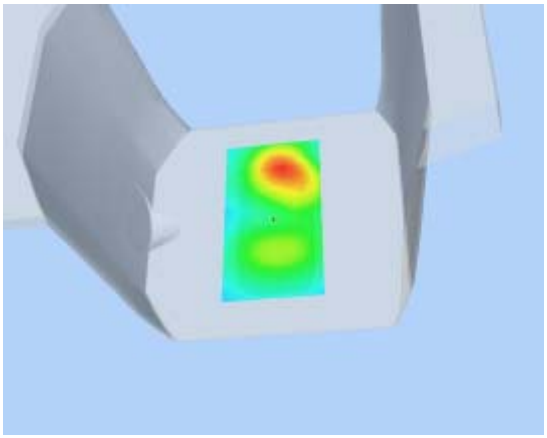
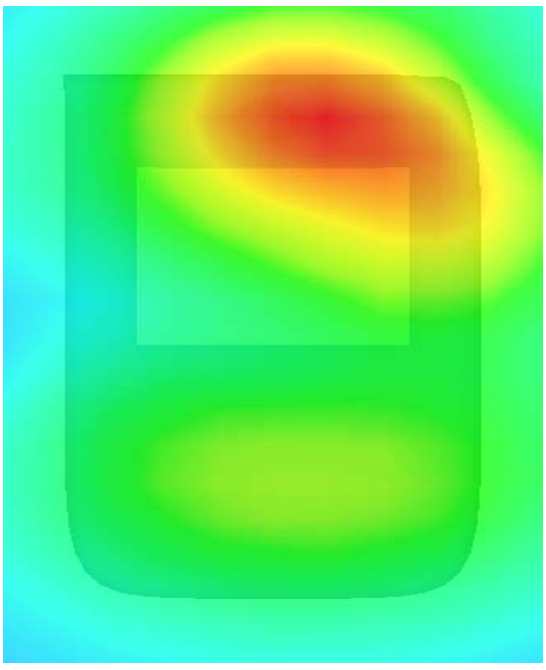
Maximum location: X=8.00, Y=47.00

SAR 10g (W/Kg)	0.153159
SAR 1g (W/Kg)	0.241518

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4676	0.2771	0.1640	0.0961	0.0574	0.0334



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: 29/1/2010

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

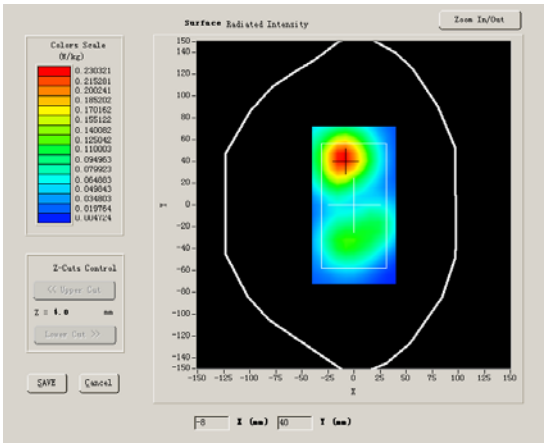
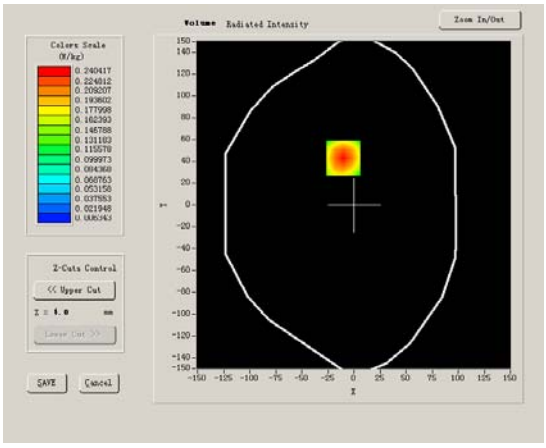
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.573978
Variation (%)	-0.180000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:8

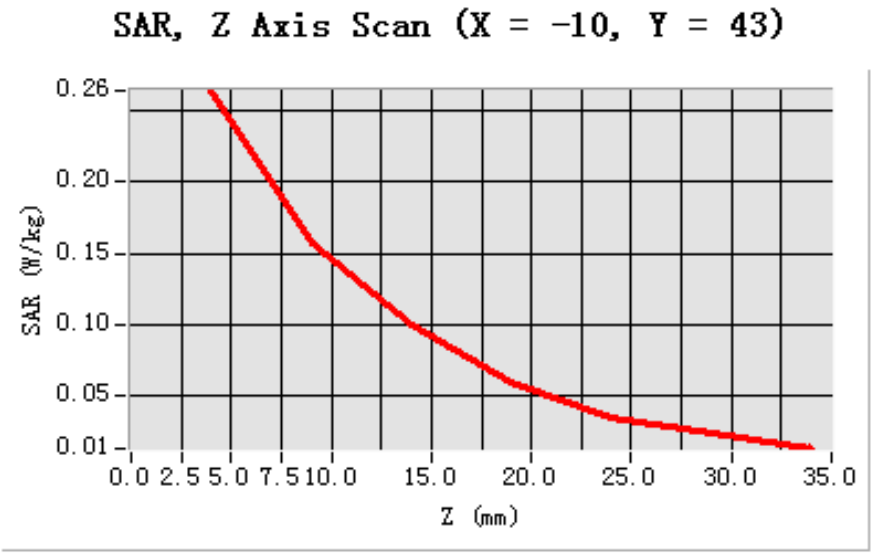
SURFACE SAR	**VOLUME SAR**
	

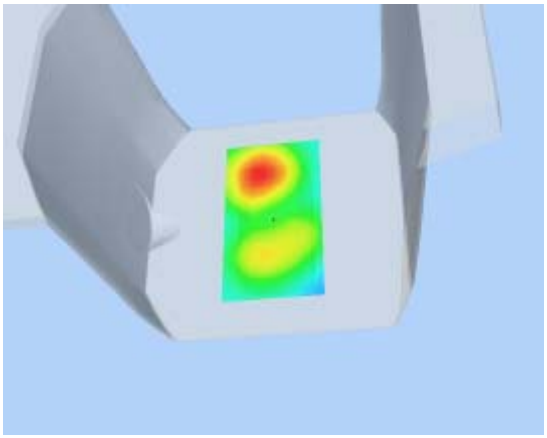
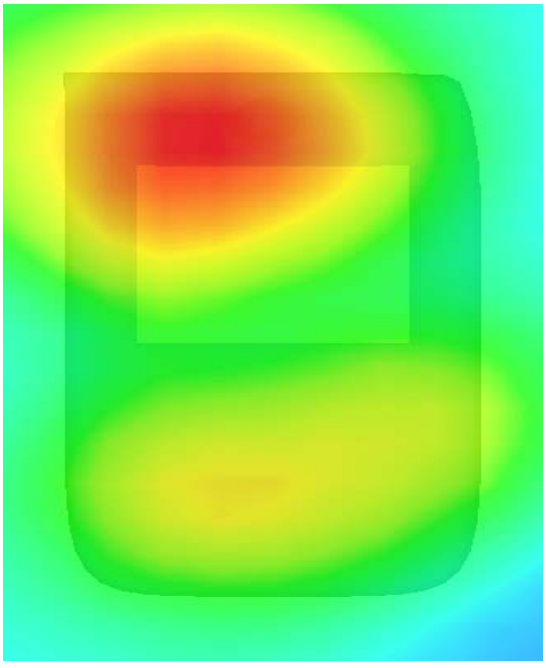
Maximum location: X=-10.00, Y=43.00

SAR 10g (W/Kg)	0.088448
SAR 1g (W/Kg)	0.149510

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2635	0.1565	0.0997	0.0601	0.0354	0.0246



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: 29/1/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

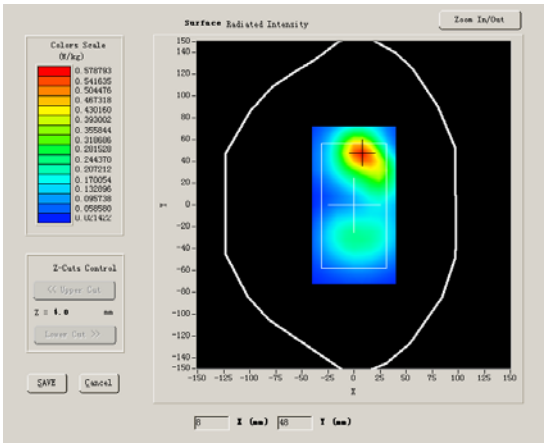
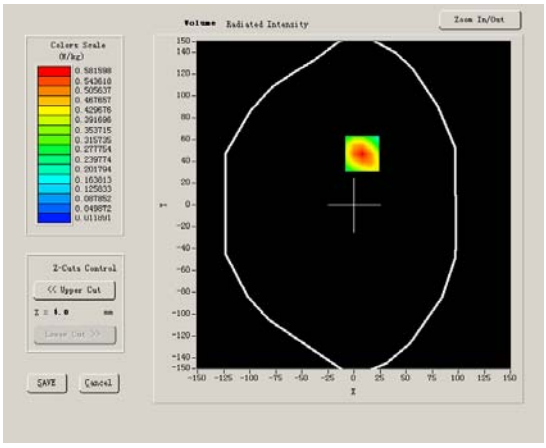
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GPRS

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 (%)	-0.090000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:2

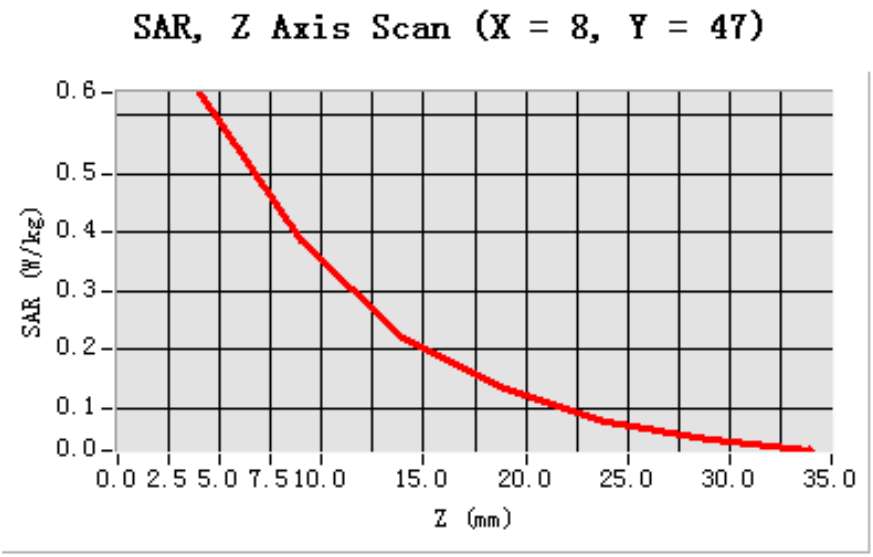
SURFACE SAR	**VOLUME SAR**
	

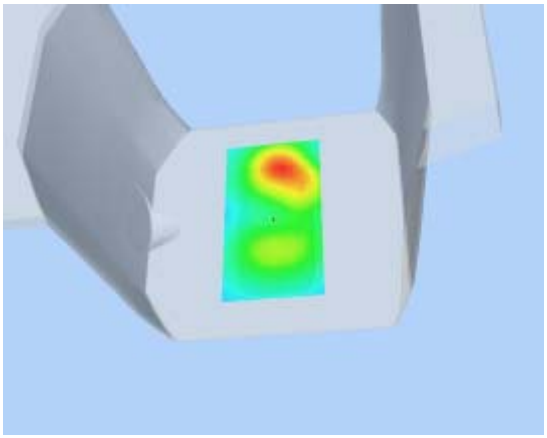
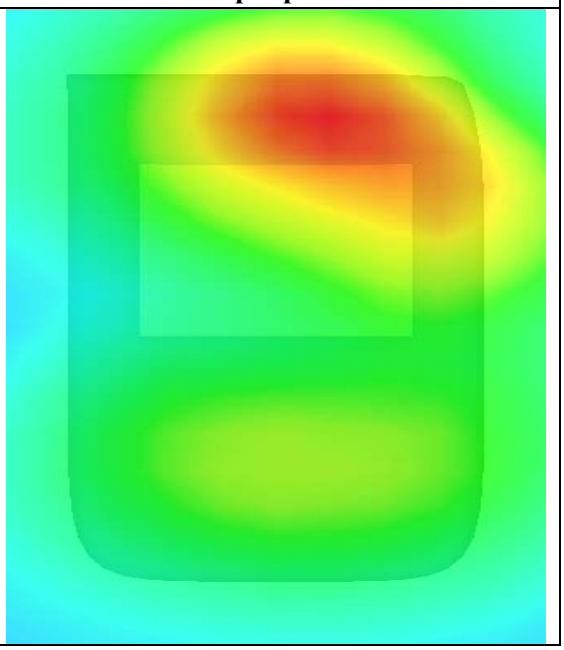
Maximum location: X=8.00, Y=47.00

SAR 10g (W/Kg)	0.335531
SAR 1g (W/Kg)	0.566141

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6374	0.3857	0.2202	0.1333	0.0760	0.0457



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: 29/1/2010

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

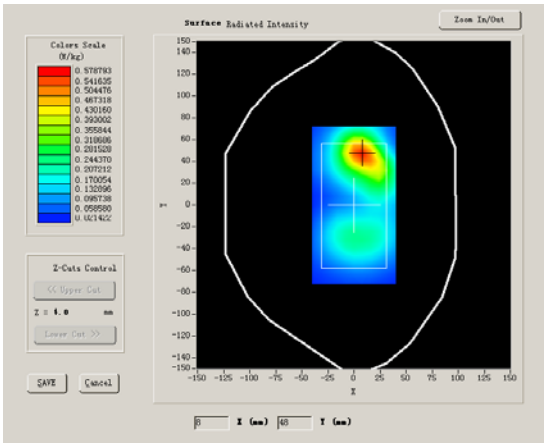
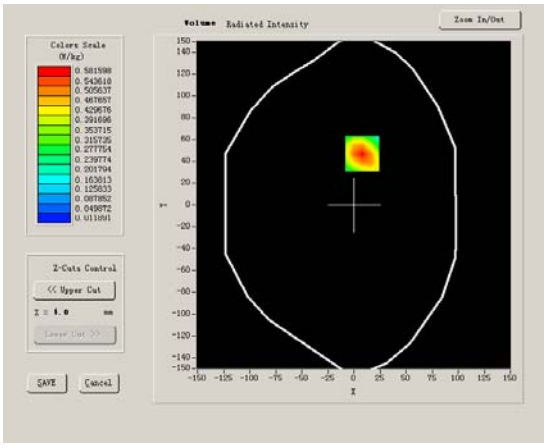
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

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 (%)	-0.090000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:8

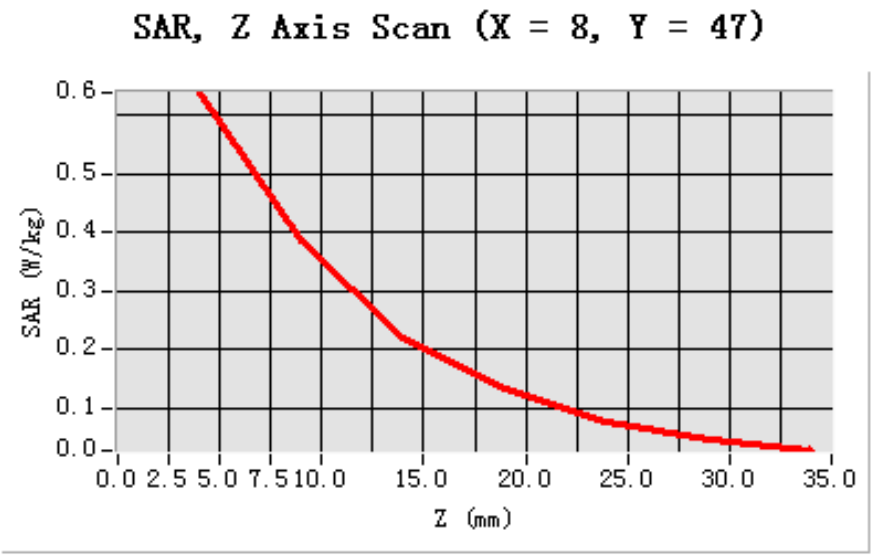
SURFACE SAR	**VOLUME SAR**
	

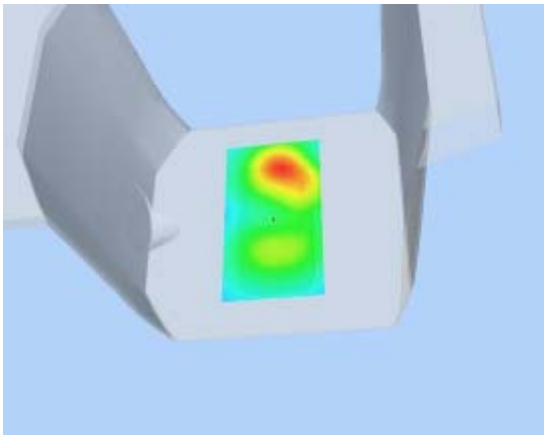
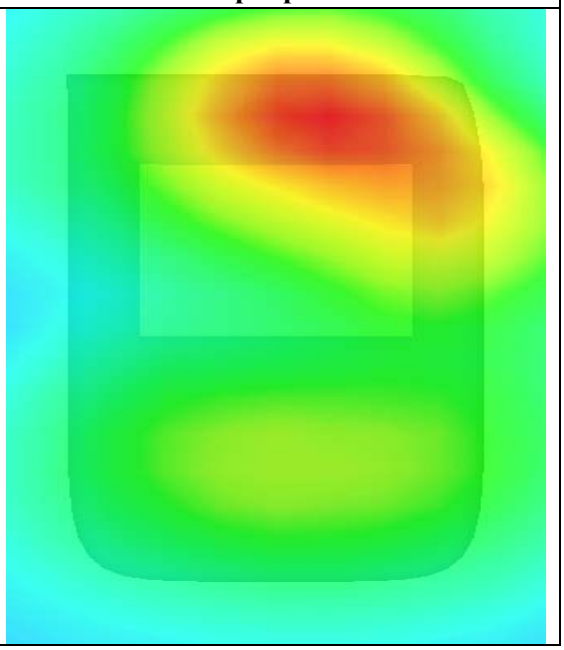
Maximum location: X=8.00, Y=47.00

SAR 10g (W/Kg)	0.176275
SAR 1g (W/Kg)	0.296242

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6374	0.3857	0.2202	0.1333	0.0760	0.0457



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: 29/1/2010

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

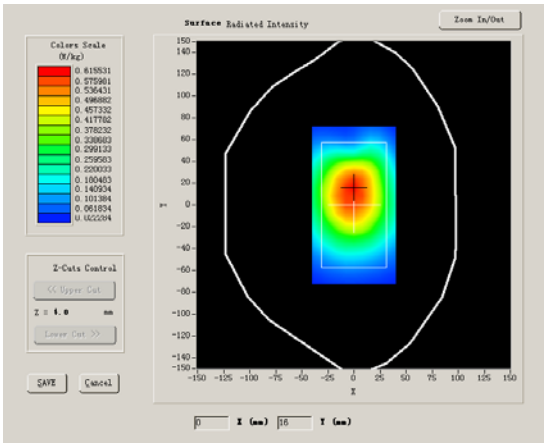
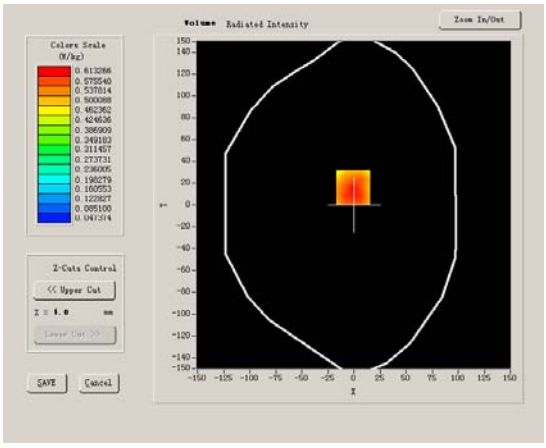
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GSM(With Bluetooth headset)

B. SAR Measurement Results

Higher Band SAR (Channel 251):

Frequency (MHz)	848.799988
Relative permittivity (real part)	54.014999
Relative permittivity	21.332850

Conductivity (S/m)	1.005962
Variation (%)	-1.700000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:8

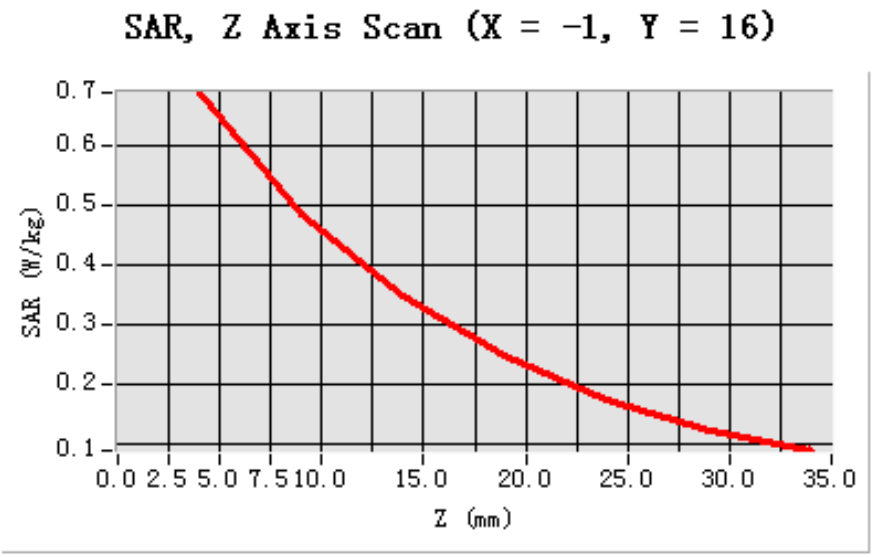
SURFACE SAR	**VOLUME SAR**
	

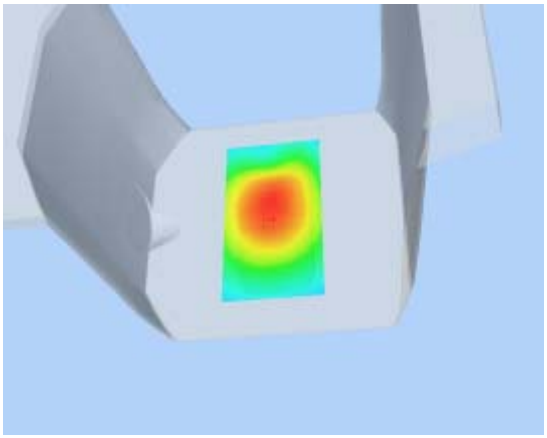
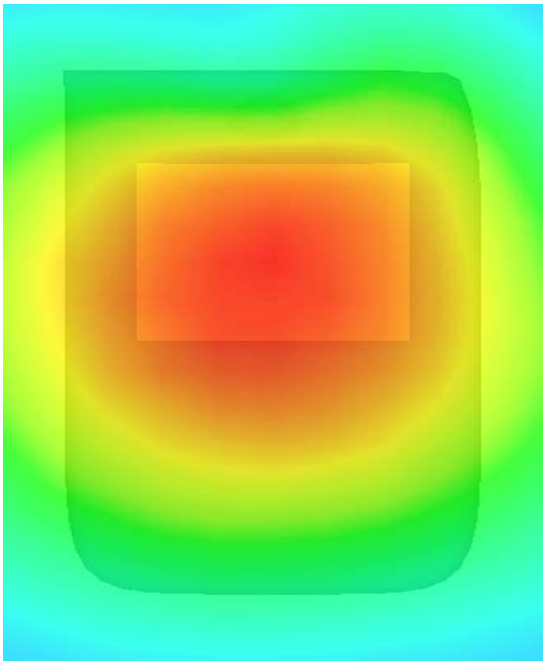
Maximum location: X=-1.00, Y=16.00

SAR 10g (W/Kg)	0.197712
SAR 1g (W/Kg)	0.356432

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6948	0.4907	0.3532	0.2612	0.1868	0.1393



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: 29/1/2010

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

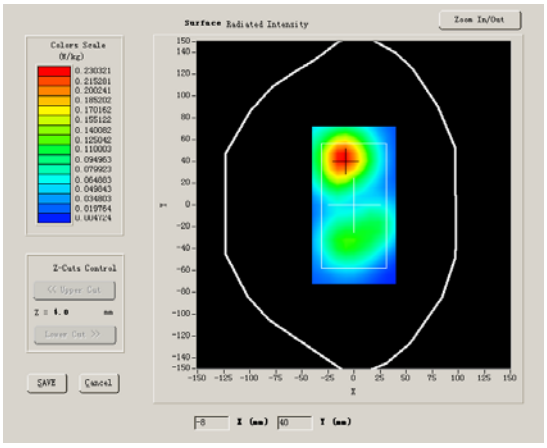
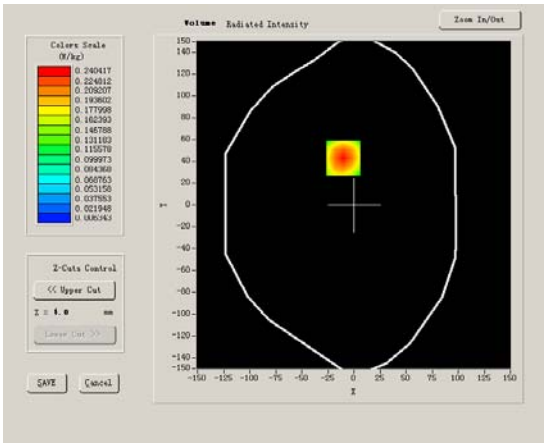
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM (With Bluetooth headset)

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 (%)	-0.150000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:8

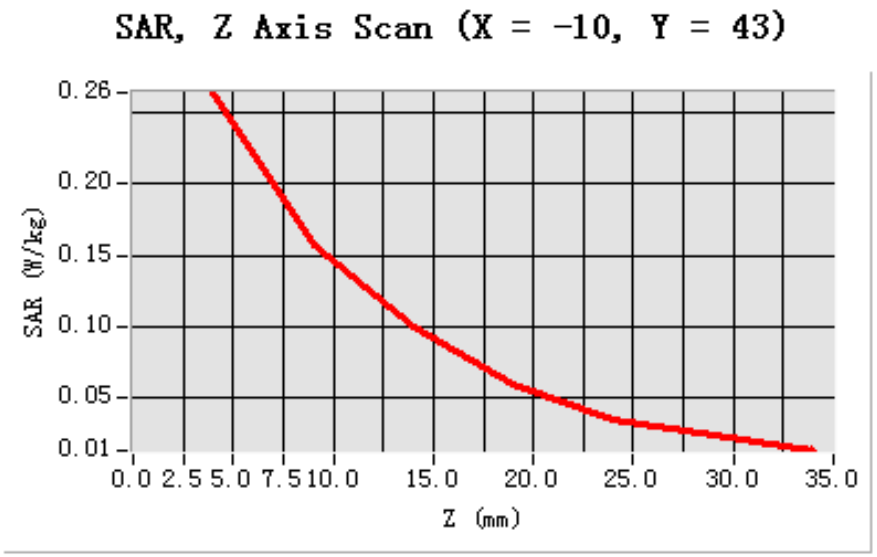
SURFACE SAR	**VOLUME SAR**
	

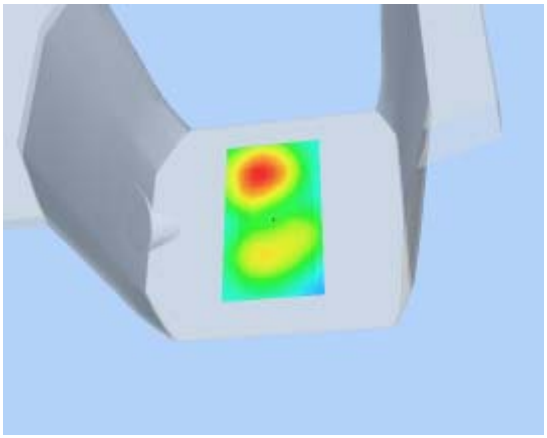
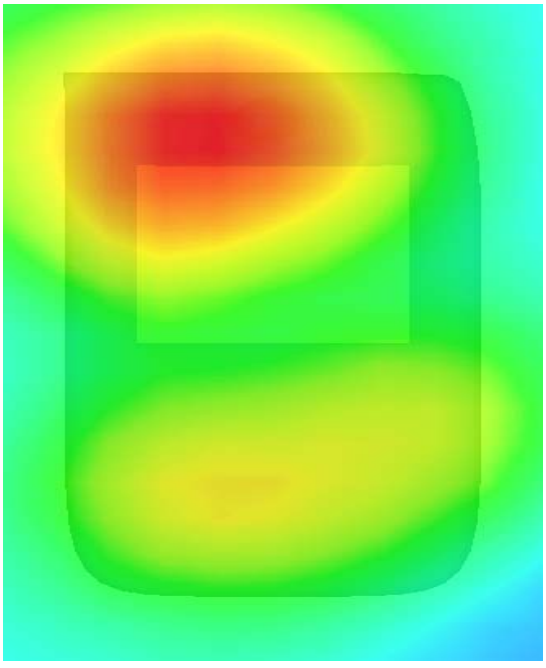
Maximum location: X=-10.00, Y=43.00

SAR 10g (W/Kg)	0.097365
SAR 1g (W/Kg)	0.187132

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2649	0.1588	0.1002	0.0641	0.0385	0.0267



3D sceen shot	Hot spot position
	

System Performance Check Data(835MHz Head)

Type: Phone measurement (Complete)

Date of measurement: 29/1/2010

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

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

A. Experimental conditions.

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

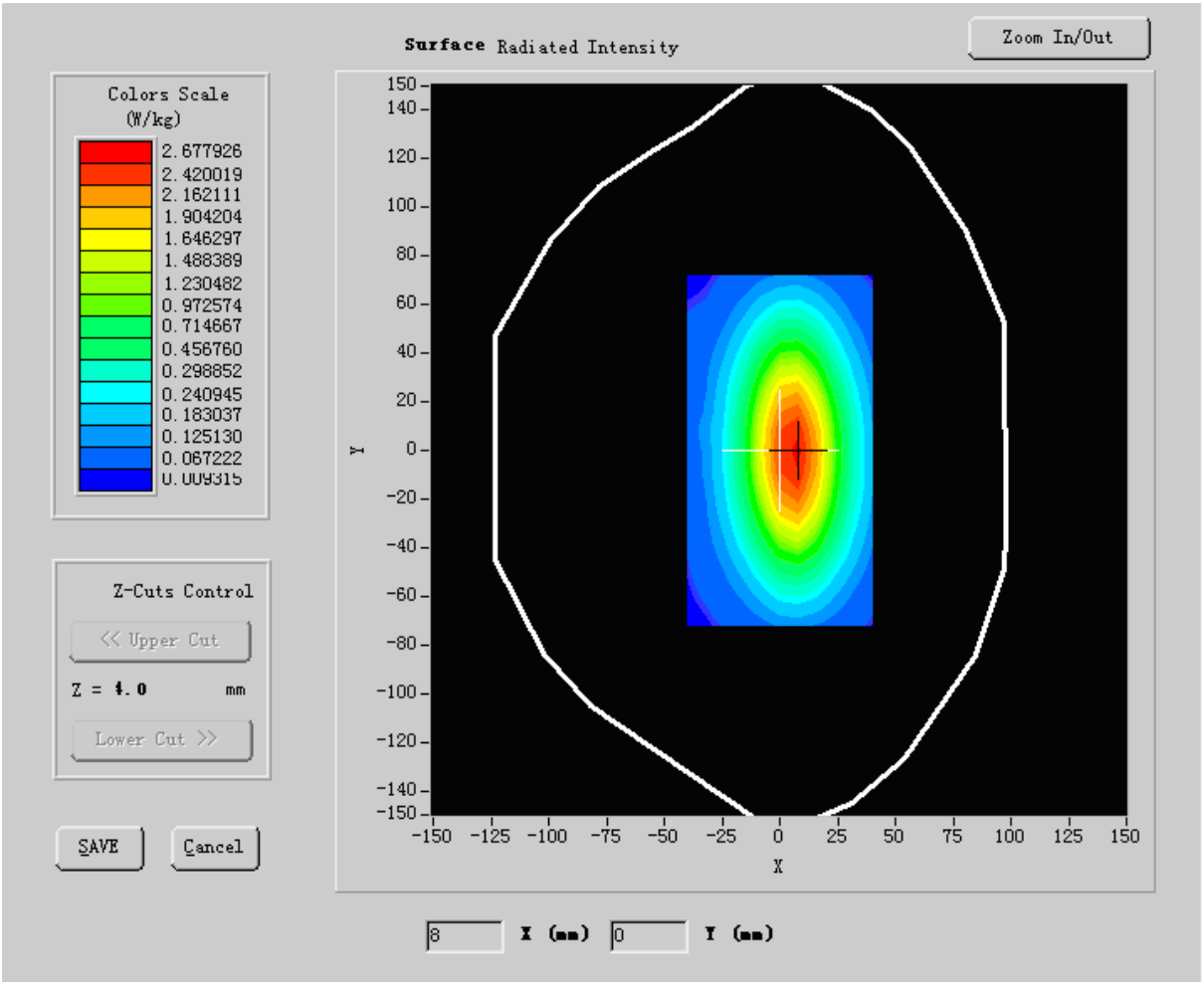
B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	835.00000
Relative permittivity (real part)	41.675999
Relative permittivity	18.926250
Conductivity (S/m)	0.894409

Variation (%)	-0.050000
Ambient Temperature:	23.5°C
Liquid Temperature:	22.8°C
ConvF:	28.479,25.214,27.196
Crest factor：	1:1

SURFACE SAR

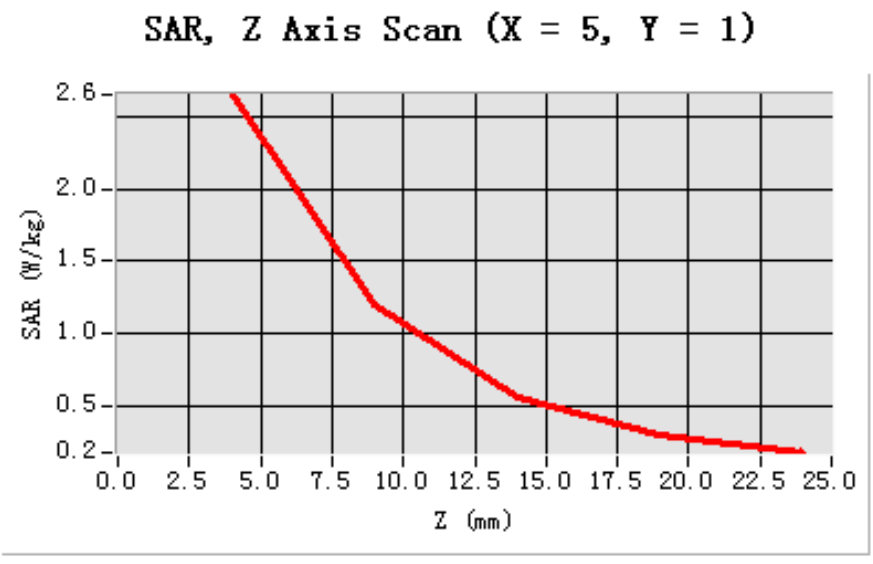


Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	1.875252
SAR 1g (W/Kg)	2.627422

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



System Performance Check Data(835MHz Body)

Type: Phone measurement (Complete)

Date of measurement: 29/1/2010

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

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

A. Experimental conditions.

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

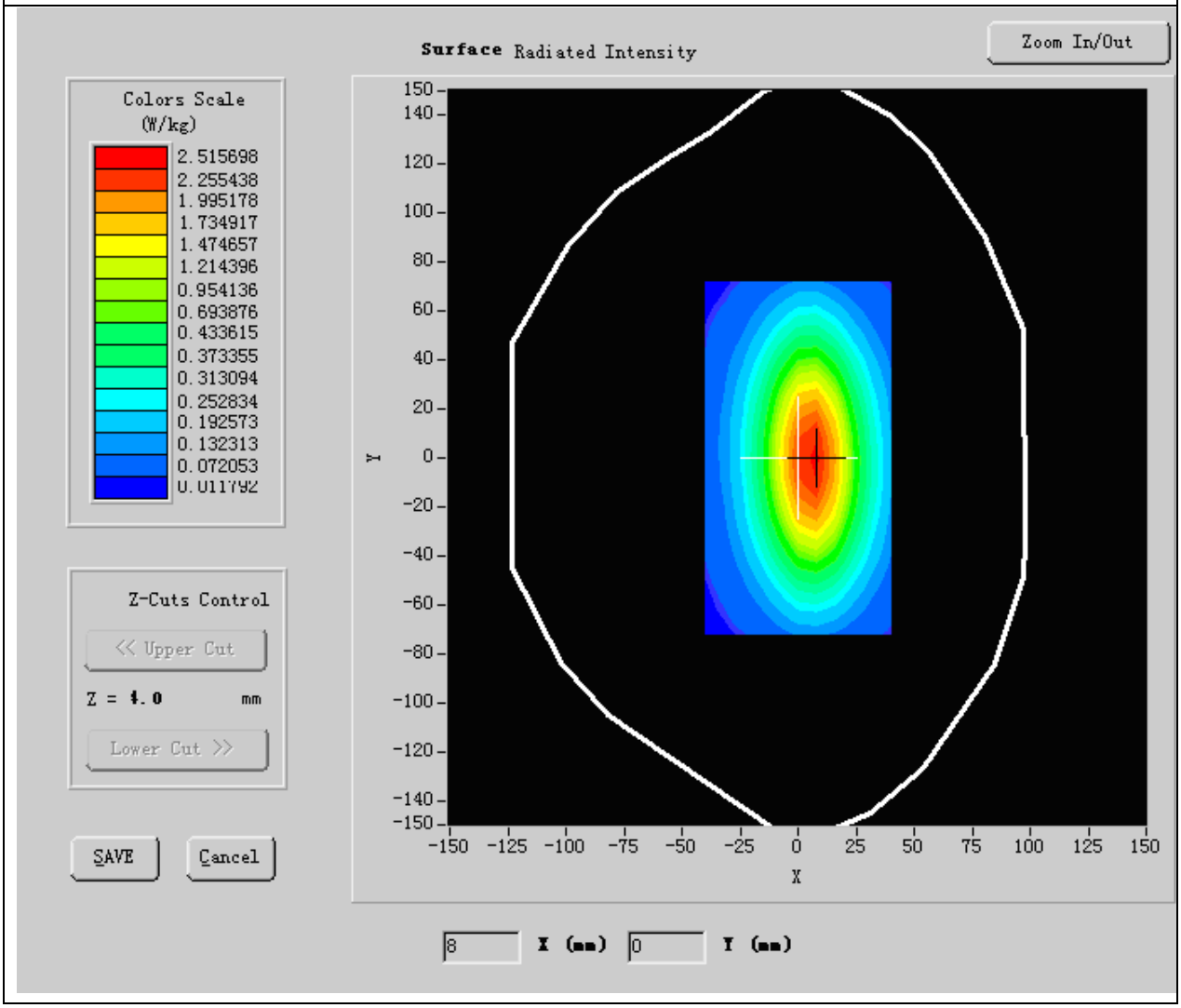
B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	835.000000
Relative permittivity (real part)	55.709999
Relative permittivity	15.070000
Conductivity (S/m)	1.009033

Variation (%)	-0.140000
Ambient Temperature:	23.5°C
Liquid Temperature:	22.8°C
ConvF:	28.559,25.681,27.588
Crest factor：	1:1

SURFACE SAR

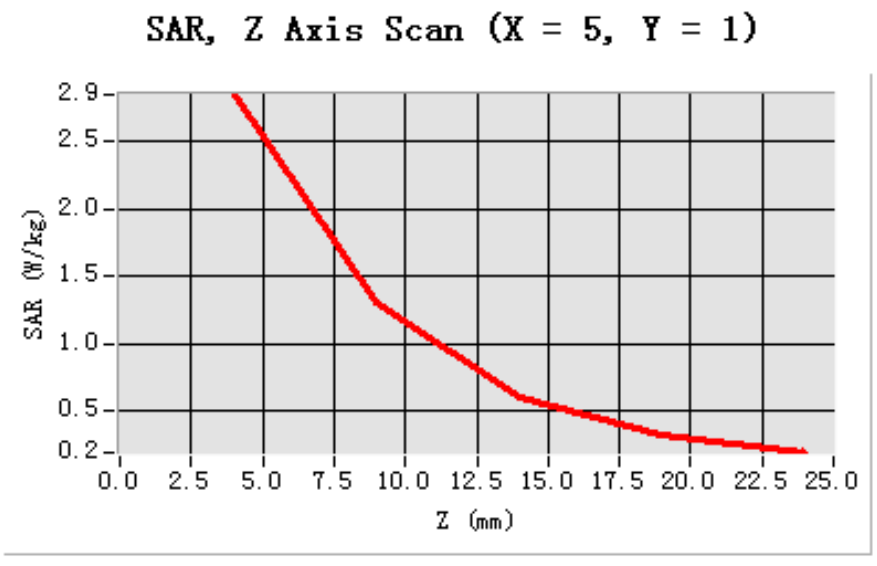


Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	1.652852
SAR 1g (W/Kg)	2.711584

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	2.8536	1.3061	0.6041	0.3211



System Performance Check Data(1900MHz Head)

Type: Phone measurement (Complete)

Date of measurement: 29/1/2010

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

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

A. Experimental conditions.

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

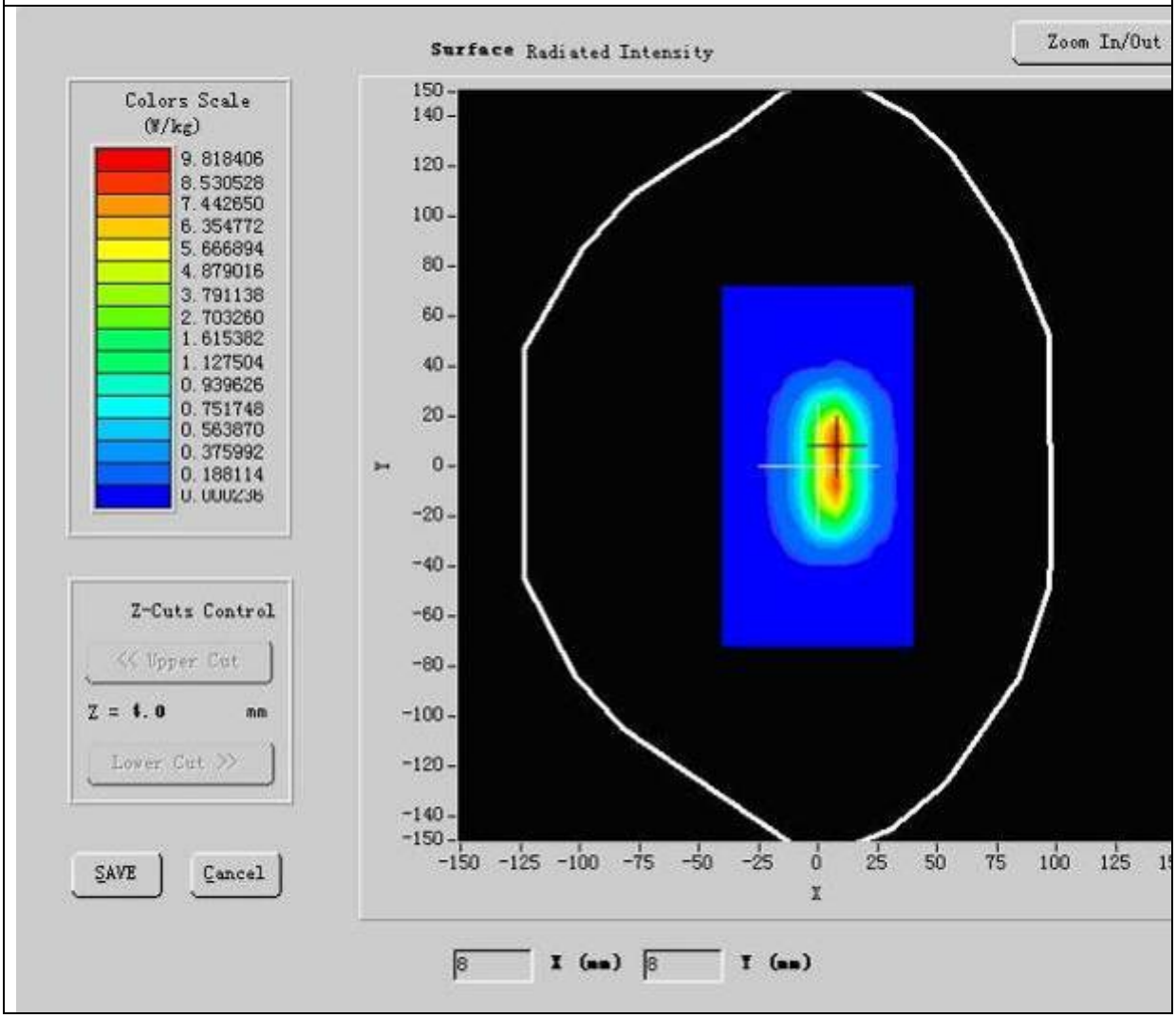
B. SAR Measurement Results

Lower Band SAR:

Frequency (MHz)	1900.000000
Relative permittivity (real part)	38.509998
Relative permittivity	12.991650
Conductivity (S/m)	1.436111

Variation (%)	0.570000
Ambient Temperature:	23.5°C
Liquid Temperature:	22.8°C
ConvF:	40.136,34.843,38.721
Crest factor：	1:1

SURFACE SAR

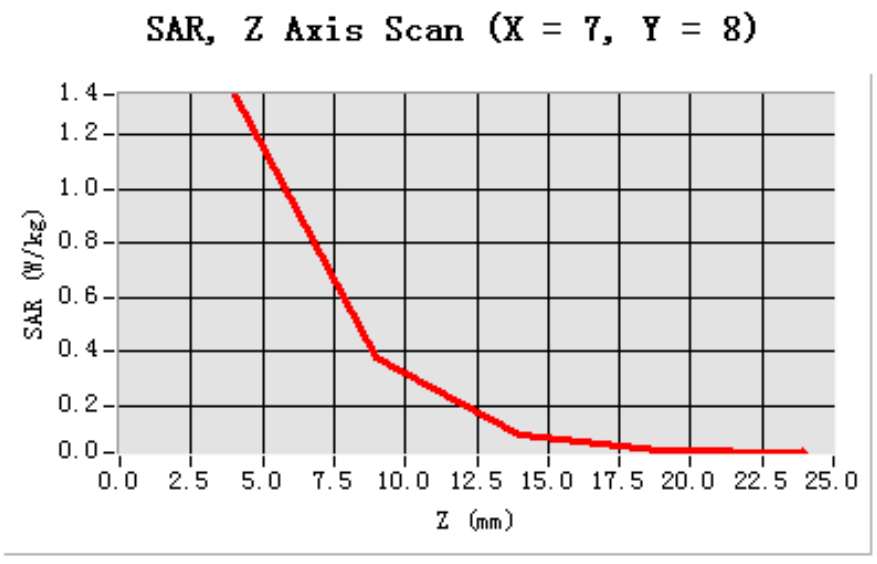


Maximum location: X=7.00, Y=8.00

SAR 10g (W/Kg)	5.873331
SAR 1g (W/Kg)	9.903451

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.3503	0.3791	0.0904	0.0338



System Performance Check Data(1900MHz Body)

Type: Phone measurement (Complete)

Date of measurement: 29/1/2010

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

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

A. Experimental conditions.

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

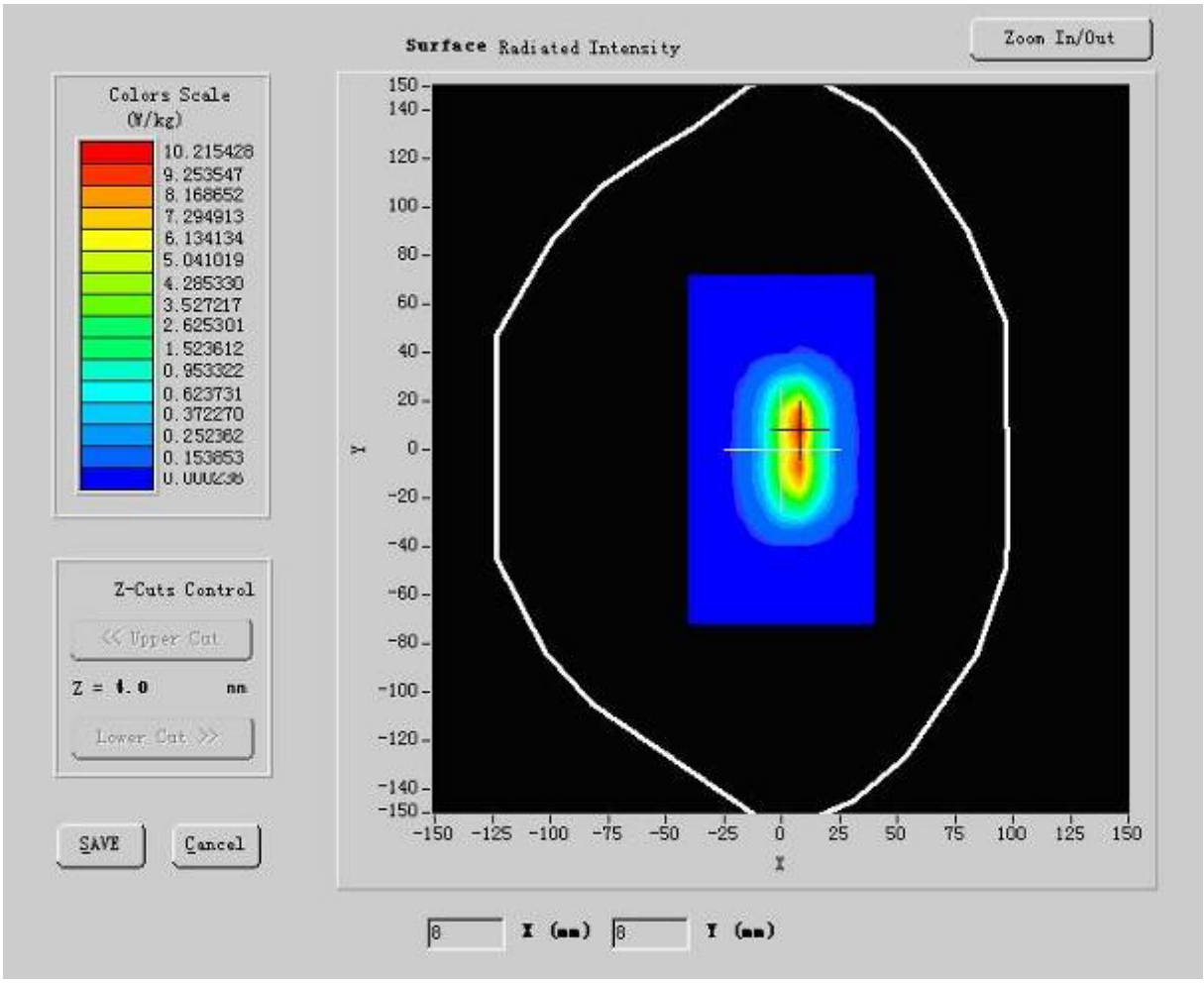
B. SAR Measurement Results

Lower Band SAR:

Frequency (MHz)	1900.000000
Relative permittivity (real part)	52.548876
Relative permittivity (imaginary part)	12.991650

Conductivity (S/m)	1.573978
Variation (%)	0.570000
Ambient Temperature:	23.5°C
Liquid Temperature:	22.8°C
ConvF:	40.625,34.773,38.535
Crest factor：	1:1

SURFACE SAR



Maximum location: X=7.00, Y=8.00

SAR 10g (W/Kg)	5.487222
SAR 1g (W/Kg)	9.83541

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.3503	0.3791	0.0904	0.0338