FCC SAR

TEST REPORT

of

mobile telephone

Model Name: S13
Trade Name: SKYZEN
Report No.: SZ08120055S01
FCC ID: WY8Z6150CS13

prepared for

WINGTECH GROUP INCORPORATION LIMITED
6th Floor,G area,No.668,East Beijing Road,HuangPu District,Shanghai

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.:	SZ08120055S01
Date of Issue:	Jan 4, 2008
Date of Tests:	Dec 22, 2008 – Jan 4, 2008
Responsible for Accreditation:	Shu luan
Project Manager:	Li Lei
Deputy Project Manager:	Liao Jianming

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 successfully with the tested equipment.

Li Lei
Tested by
(Responsible for the Test Report)

Liao Jianming
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 Annex A)

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:	WINGTECH GROUP INCORPORATION LIMITED
Address:	6th Floor, G area,No.668,East Beijing Road, HuangPu District, Shanghai
Contact Person:	Cao heng
Telephone:	86-21-53529900*4160
Facsimile:	86-21-51571290
E-mail:	caoheng@wingtech.com

3.2. Identification of Manufacturer

Company Name:	WINGTECH GROUP INCORPORATION LIMITED
Address:	6th Floor, G area,No.668,East Beijing Road, HuangPu District, Shanghai
Contact Person:	Cao heng
Telephone:	86-21-53529900*4160
Facsimile:	86-21-51571290
E-mail:	caoheng@wingtech.com

3.3. Equipment Under Test (EUT)

Brand Name:	SKYZEN
Type Name:	SKYZEN
Marking Name:	S13
Hardware Version:	6185-1-30
Software Version:	6150C_V011_SK_SPAN
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)
Modulation Mode:	GSM
Antenna type:	Build inside
Accessories:	Charger; Battery
Battery Model:	HUIYE
Battery specification:	600mAh 3.7V

3.3.1. Photographs of the EUT

Please see for photographs of the EUT.

3.3.2. Identification of all used EUTs

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

EUT Identity	IMEI	Hardware Version	Software Version
1#	N.A	6185-1-30	6150C_V011_SK_SPAN
2#	N.A	6185-1-30	6150C_V011_SK_SPAN

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:	220V/50Hz AC		
Extreme Temperature:	Low Temperature (LT)	=	-10°C
	High Temperature (HT)	=	55°C
Extreme Voltage of the EUT:	Normal Voltage (NV)	=	3.80V
	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)		

During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established.
The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 128, 190 and 251 respectively in the case of GSM 850MHz or to 512, 661 and 810 respectively in the case of PCS 1900 MHz, The EUT is commanded to operate at maximum transmitting power.
The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset.
The signal transmitted by the simulator to the antenna feeding point shall be 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

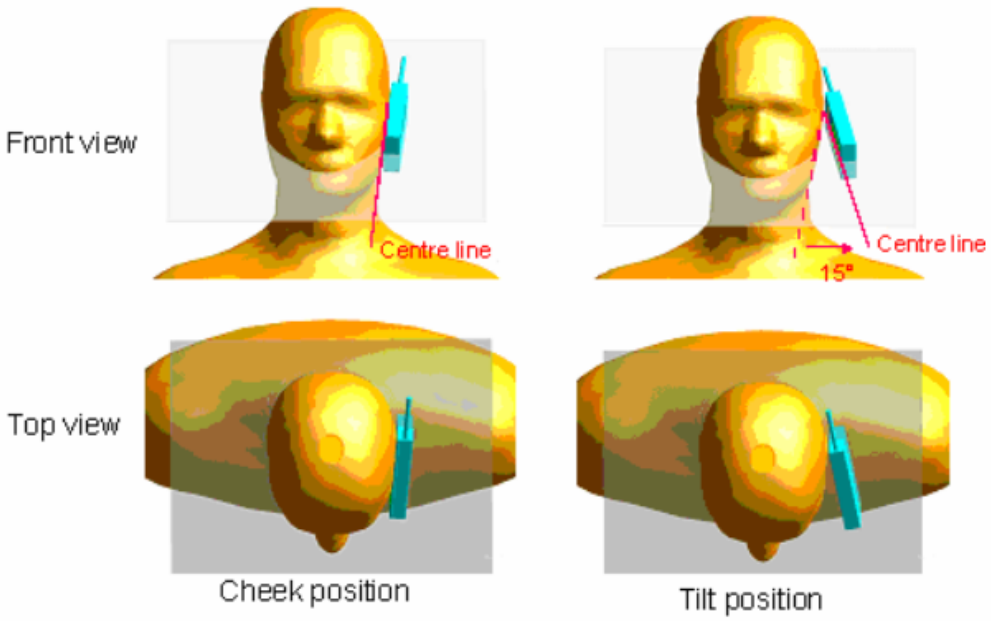
I.1. Normative reference

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:

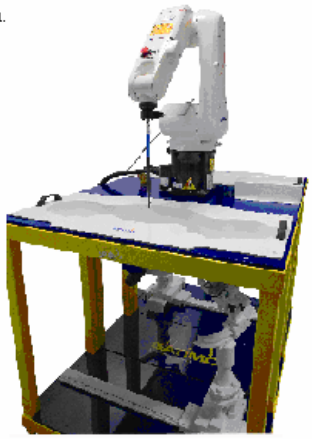
The mobile phone is well place in the “cheek” position as described above. Then the mobile phone is moved outward away from the mouth by an angle of 15 degrees or until contact with the ear lost.

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	$\sqrt{3}$	$(1\ Cp)^{1/2}$	$(1\ Cp)^{1/2}$	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 - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	M
Liquid permittivity - deviation from target value	E.3.2	3.66	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	Target value (1g)	Test value (1g)	
835MHz	10.8W/Kg	11.92(head)	10.6(body)
1900MHz	39.7W/Kg	42.16(head)	40.09(body)

Note:Please refer to check the system performance data, the first 128-139 page.

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 (Dec 22)	835 MHZ	41.675999	0.894409
Target value	1900 MHZ	40.0	1.40
Validation value (Dec 22)	1900 MHZ	38.509998	1.335397

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	55.0	1.05
Validation value (Dec 22)	835 MHZ	54.014999	0.974596
Target value	1900 MHz	53.3	1.52

Validation value (Dec 22)	1900 MHZ	53.116001	1.433467

Table 3: 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 4)	835 MHZ	42.002541	0.922145
Target value	1900 MHZ	40.0	1.40
Validation value (Jan 4)	1900 MHZ	39.521552	1.400251

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 4: 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	55.0	1.05
Validation value (Jan 4)	835 MHZ	51.254412	0.9552364
Target value	1900 MHz	53.3	1.52
Validation value (Jan 4)	1900 MHZ	52.548876	1.395712

4.3.6. Simulant liquids

Simulant liquids that are used for testing at frequencies of GSM 850MHz, 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	0.38	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	0.172	30.73
Left head, Touch cheek, Channel Middle	0.194	30.61
Left head, Touch cheek, Channel High	0.210	30.61
Left head, Tilt 15 Degree, Channel Low	0.093	30.73
Left head, Tilt 15 Degree, Channel Middle	0.105	30.61
Left head, Tilt 15 Degree, Channel High	0.113	30.61
Right head, Touch cheek, Channel Low	0.199	30.73
Right head, Touch cheek, Channel Middle	0.215	30.61
Right head, Touch cheek, Channel High	0.244	30.61
Right head, Tilt 15 Degree, Channel Low	0.107	30.73
Right head, Tilt 15 Degree, Channel Middle	0.123	30.61
Right head, Tilt 15 Degree, Channel High	0.123	30.61

Summary of Measurement Results (PCS 1900MHz Band)
SAR Values (PCS 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	0.055	27.58
Left head, Touch cheek, Channel Middle	0.065	28.05
Left head, Touch cheek, Channel High	0.078	28.15
Left head, Tilt 15 Degree, Channel Low	0.038	27.58
Left head, Tilt 15 Degree, Channel Middle	0.051	28.05
Left head, Tilt 15 Degree, Channel High	0.061	28.15
Right head, Touch cheek, Channel Low	0.086	27.58

Right head, Touch cheek, Channel Middle	0.109	28.05
Right head, Touch cheek, Channel High	0.126	28.15
Right head, Tilt 15 Degree, Channel Low	0.079	27.58
Right head, Tilt 15 Degree, Channel Middle	0.086	28.05
Right head, Tilt 15 Degree, Channel High	0.051	28.15

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	0.084	30.73
Side, Middle frequency	0.092	30.61
Side, High frequency	0.093	30.61
Side, Middle frequency(back)	0.171	30.61
Side, High frequency (with Headphone)	0.044	30.61

SAR Values (PCS 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	0.036	27.58
Side, Middle frequency	0.042	28.05
Side, High frequency	0.075	28.15
Side, High frequency(back)	0.056	28.15

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

(CQCS Testing Co. Ltd.)

Electronic Testing Building Wenguang Road, Shahe West, Xili Town, Nanshan District, Shenzhen, Guangdong, China

to ISO/IEC 17025:1999 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: 2007-01-17

Date of Expiry: 2009-10-08

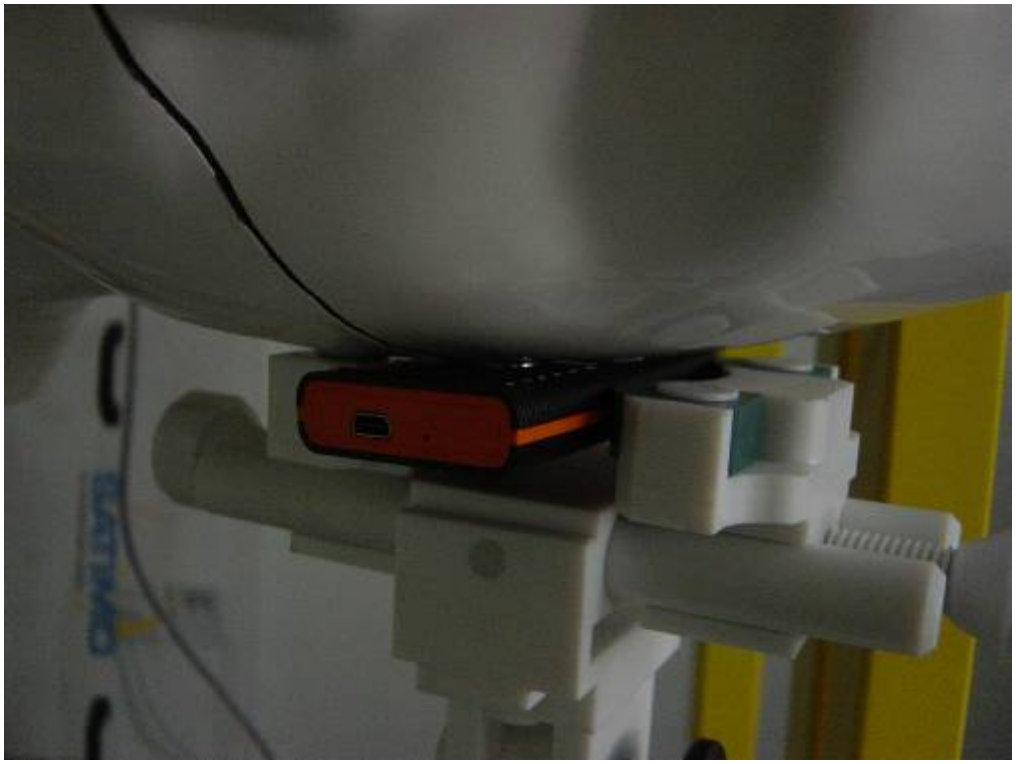
Date of Initial Accreditation: 1999-08-03

Signed on behalf of China National Accreditation Service for Conformity Assessment

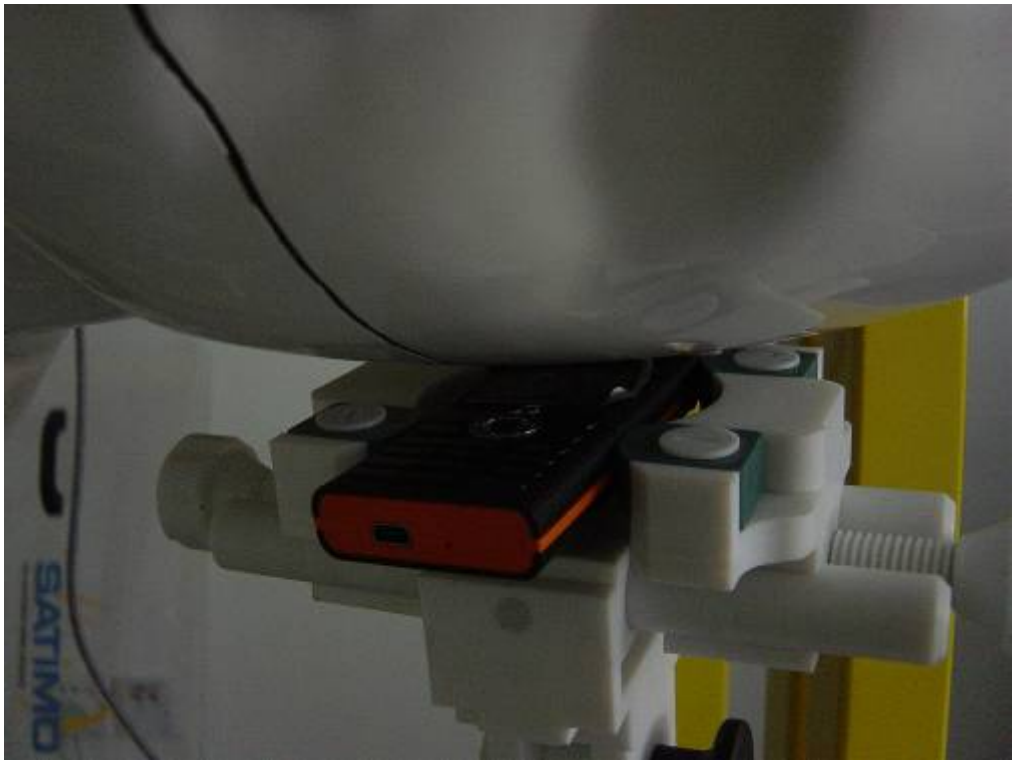
China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation systems for conformity assessment. CNAS is the signatory to International Laboratory Accreditation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

Annex B Photographs of the EUT

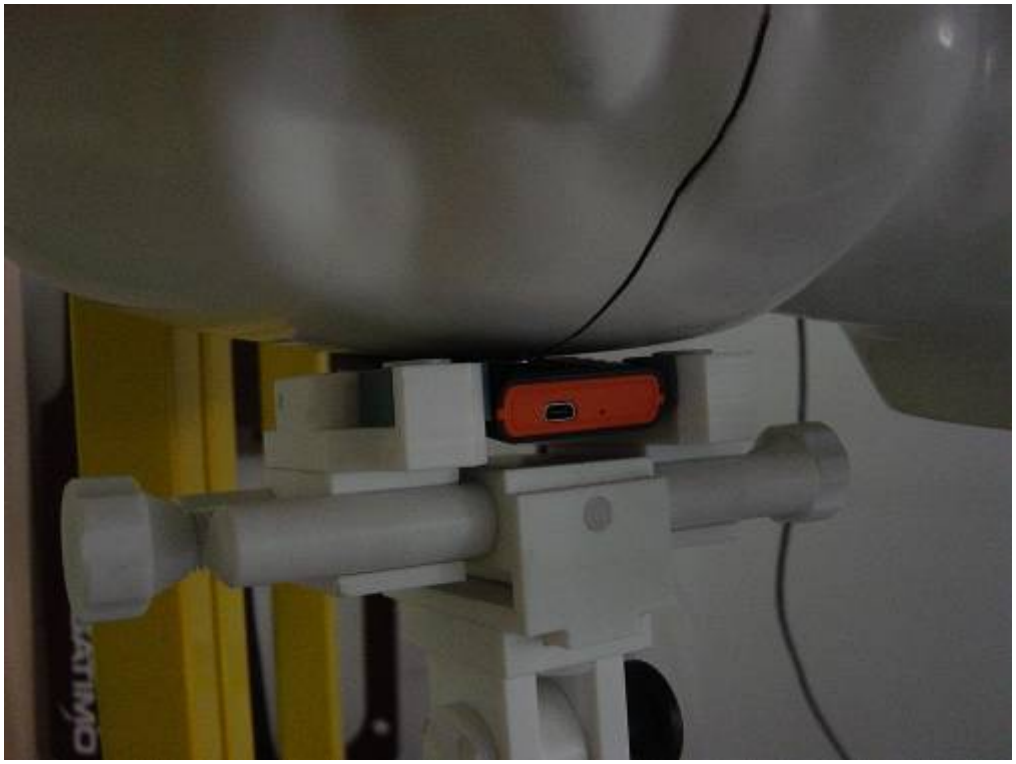
1 EUT Left Head Touch Cheek Position



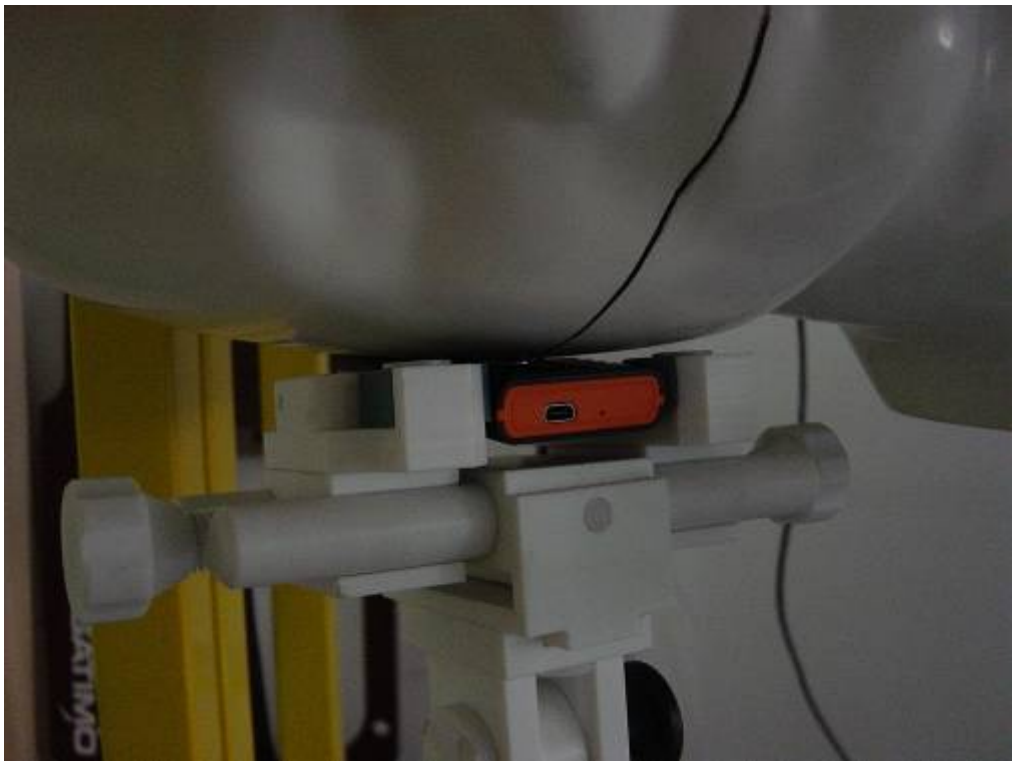
2 EUT Left Head Tilt15 Position



3 EUT Right Head Touch Cheek Position



4 EUT Right Head Tilt15 Position



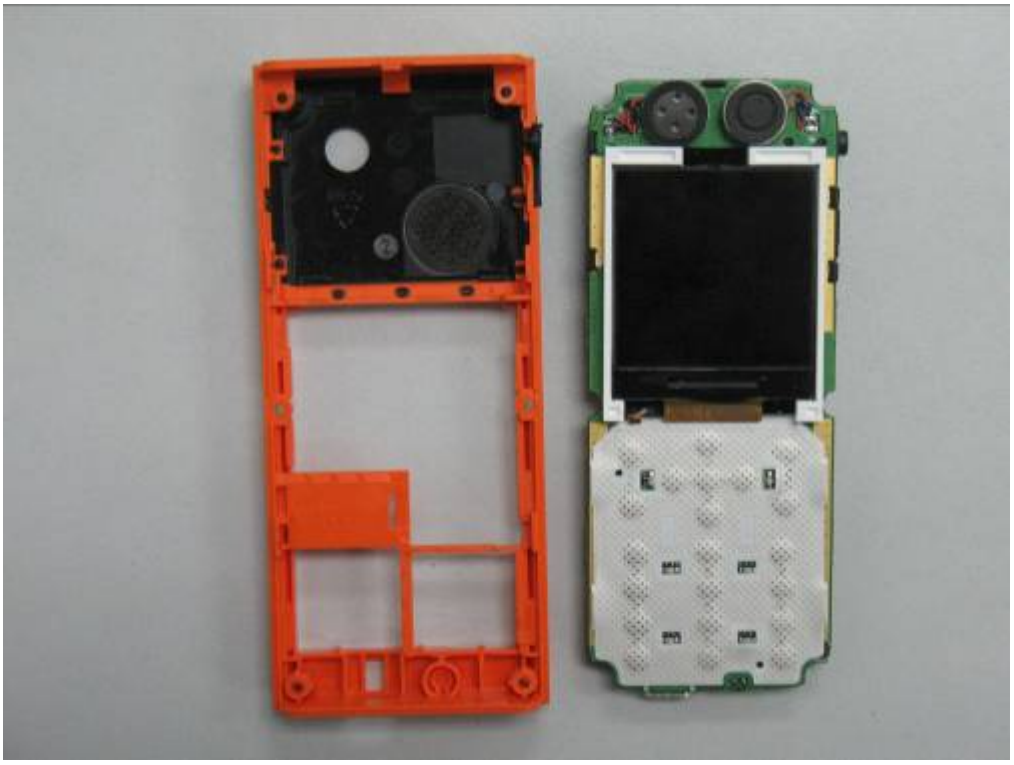
5 spacer 1.5cm

6 Side Position

7Side Position EUT with Headphone


SKYZEN


PLAYER
MP3




SN:08811120107000016

Annex C Graph Test Results

TYPE	BAND	PARAMETERS
	--	--
	--	--
Noise	**GSM850**	Measurement 1: Right Head with Cheek device position on Low Channel in TDMA mode Measurement 2: Right Head with Cheek device position on Middle Channel in TDMA mode Measurement 3: Right Head with Cheek device position on High Channel in TDMA mode Measurement 4: Right Head with Tilt device position on Low Channel in TDMA mode Measurement 5: Right Head with Tilt device position on Middle Channel in TDMA mode Measurement 6: Right Head with Tilt device position on High Channel in TDMA mode Measurement 7: Left Head with Cheek device position on Low Channel in TDMA mode Measurement 8: Left Head with Cheek device position on Middle Channel in TDMA mode Measurement 9: Left Head with Cheek device position on High Channel in TDMA mode Measurement 10: Left Head with Tilt device position on Low Channel in TDMA mode Measurement 11: Left Head with Tilt device position on Middle Channel in TDMA mode Measurement 12: Left Head with Tilt device position on High Channel in TDMA mode Measurement 13: Validation Plane with Body device position on Low Channel in TDMA mode Measurement 14: Validation Plane with Body device position on Middle Channel in TDMA mode Measurement 15: Validation Plane with Body device position on High Channel in TDMA mode Measurement 16: Validation Plane with Body device position on High Channel in TDMA mode(back)

		Measurement 17: Validation Plane with Body device position on High Channel in TDMA mode (with Headphone)
	GSM1900	Measurement 18: Right Head with Cheek device position on Low Channel in TDMA mode Measurement 19: Right Head with Cheek device position on Middle Channel in TDMA mode Measurement 20: Right Head with Cheek device position on High Channel in TDMA mode Measurement 21: Right Head with Tilt device position on Low Channel in TDMA mode Measurement 22: Right Head with Tilt device position on Middle Channel in TDMA mode Measurement 23: Right Head with Tilt device position on High Channel in TDMA mode Measurement 24: Left Head with Cheek device position on Low Channel in TDMA mode Measurement 25: Left Head with Cheek device position on Middle Channel in TDMA mode Measurement 26: Left Head with Cheek device position on High Channel in TDMA mode Measurement 27: Left Head with Tilt device position on Low Channel in TDMA mode Measurement 28: Left Head with Tilt device position on Middle Channel in TDMA mode Measurement 29: Left Head with Tilt device position on High Channel in TDMA mode Measurement 30: Validation Plane with Body device position on Low Channel in TDMA mode Measurement 31: Validation Plane with Body device position on Low Channel in TDMA mode Measurement 32: Validation Plane with Body device position on High Channel in TDMA mode(back) Measurement 33: Validation Plane with Body device position on High Channel in TDMA mode(back)

MEASUREMENT 1

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 57 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

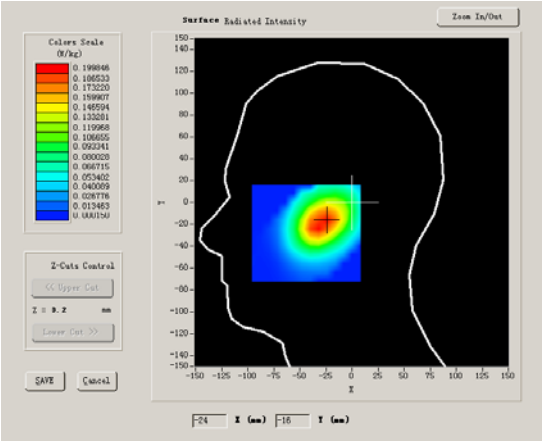
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

part)	
Conductivity (S/m)	0.866612
Variation (%)	0.270000

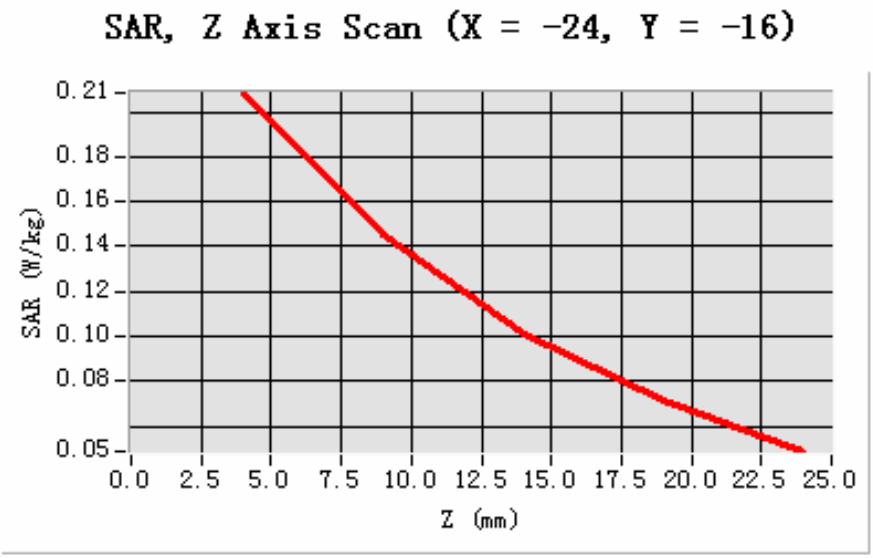
SURFACE SAR	VOLUME SAR
	

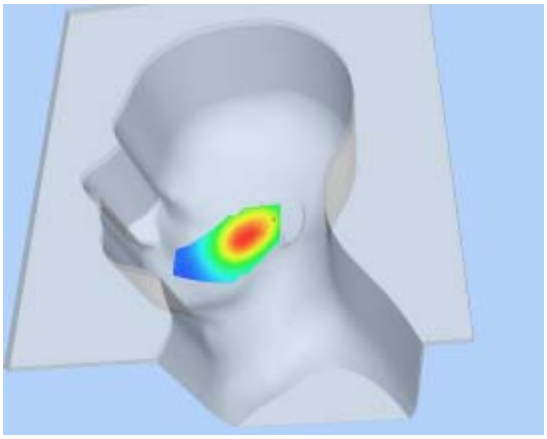
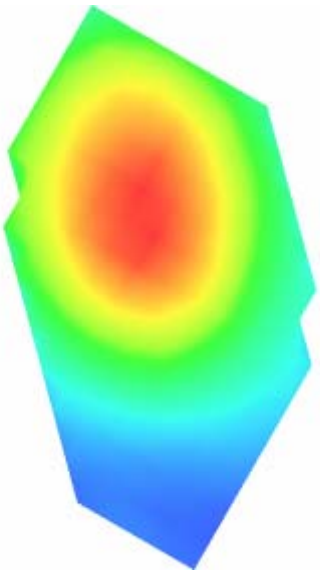
Maximum location: X=-24.00, Y=-16.00

SAR 10g (W/Kg)	0.130034
SAR 1g (W/Kg)	0.198585

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2084	0.1453	0.1016	0.0714



3D sceen shot	Hot spot position
	

MEASUREMENT 2

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 52 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

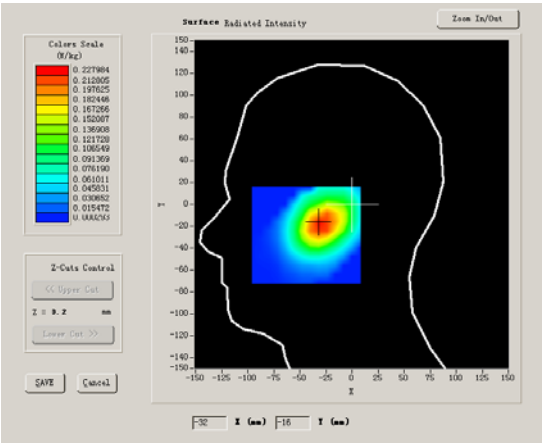
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

part)	
Conductivity (S/m)	0.888655
Variation (%)	0.930000

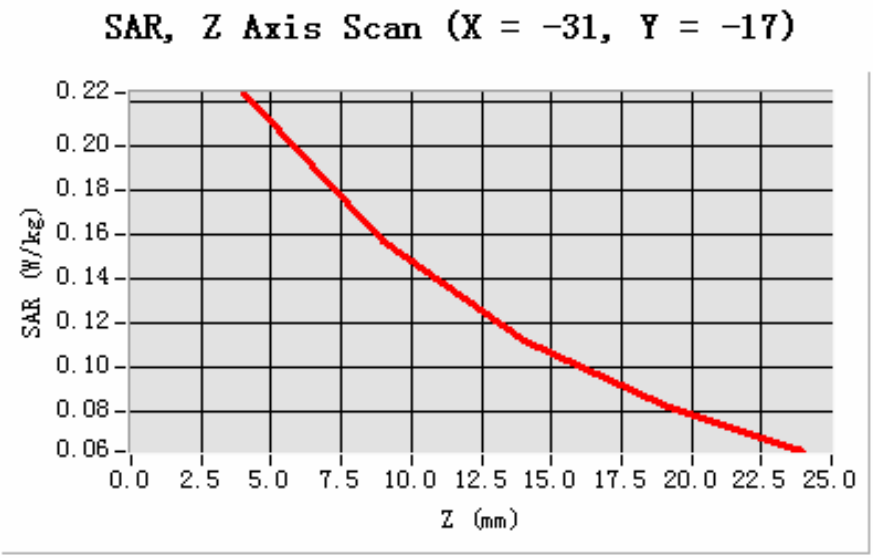
SURFACE SAR	VOLUME SAR
	

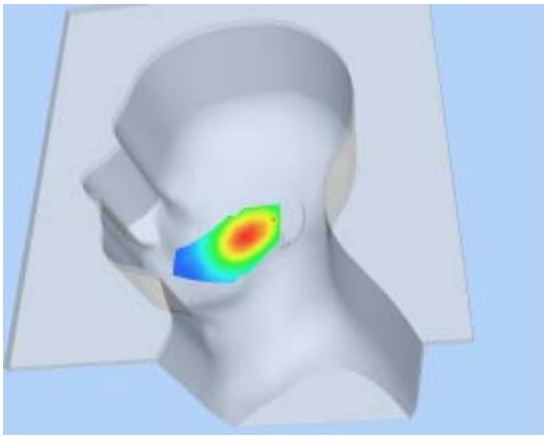
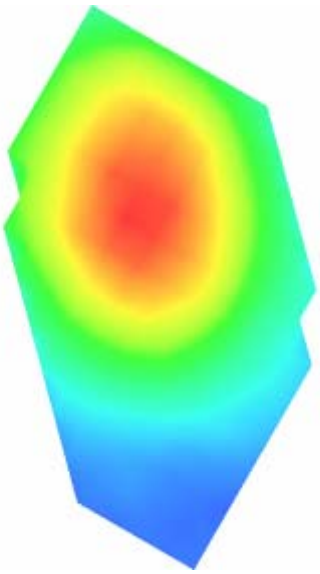
Maximum location: X=-31.00, Y=-17.00

SAR 10g (W/Kg)	0.142818
SAR 1g (W/Kg)	0.215377

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2236	0.1564	0.1120	0.0830



3D sceen shot	Hot spot position
	

MEASUREMENT 3

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 48 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

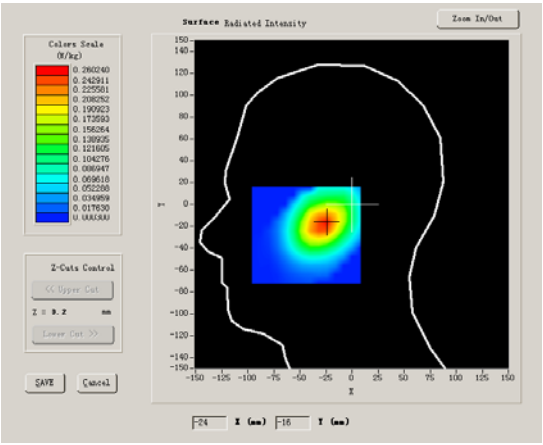
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

part)	
Conductivity (S/m)	0.894409
Variation (%)	-1.050000

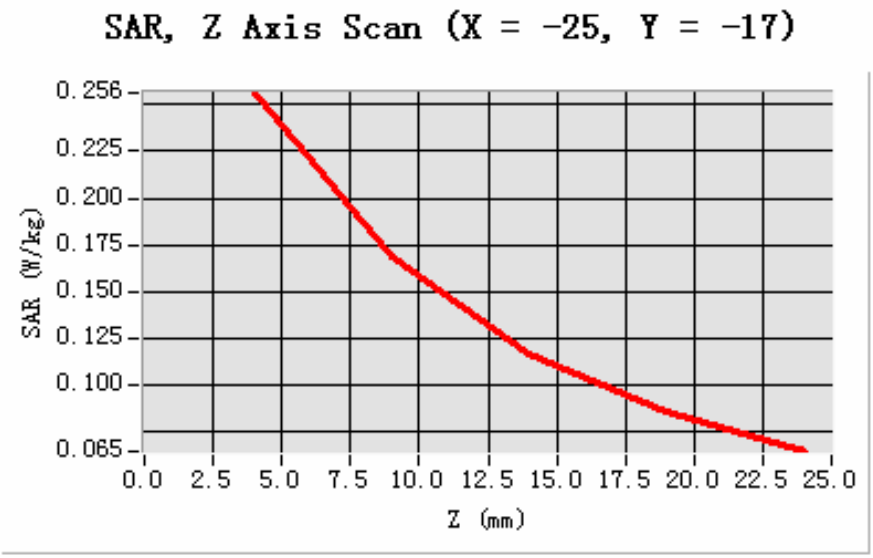
SURFACE SAR	VOLUME SAR
	

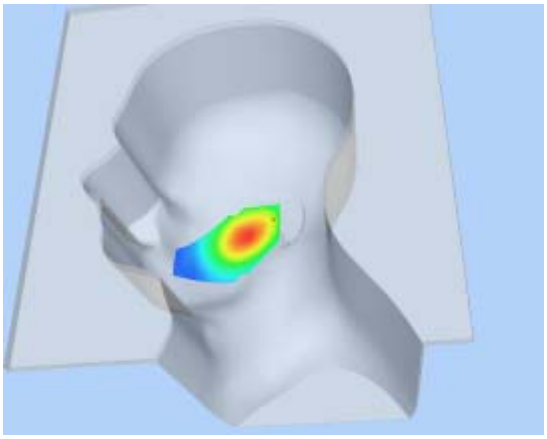
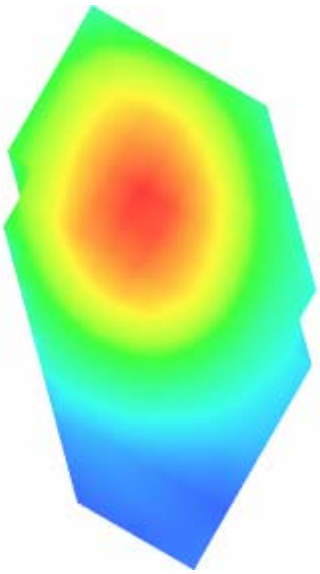
Maximum location: X=-25.00, Y=-17.00

SAR 10g (W/Kg)	0.158463
SAR 1g (W/Kg)	0.244340

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2562	0.1693	0.1166	0.0857



3D sceen shot	Hot spot position
	

MEASUREMENT 4

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 48 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

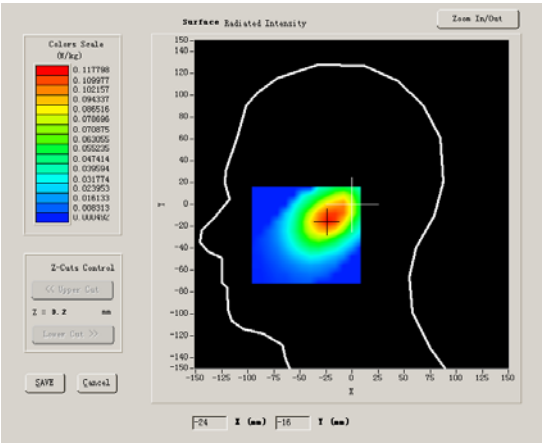
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

part)	
Conductivity (S/m)	0.866612
Variation (%)	-1.730000

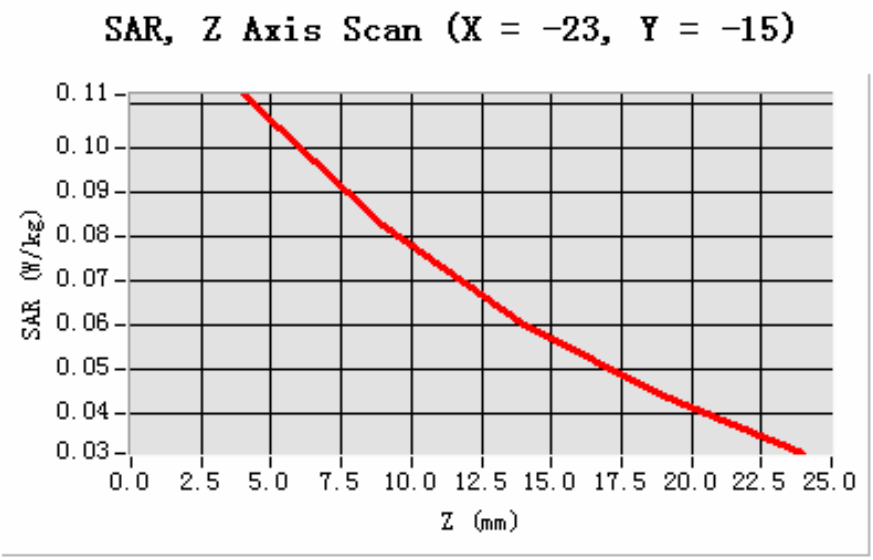
SURFACE SAR	VOLUME SAR
	

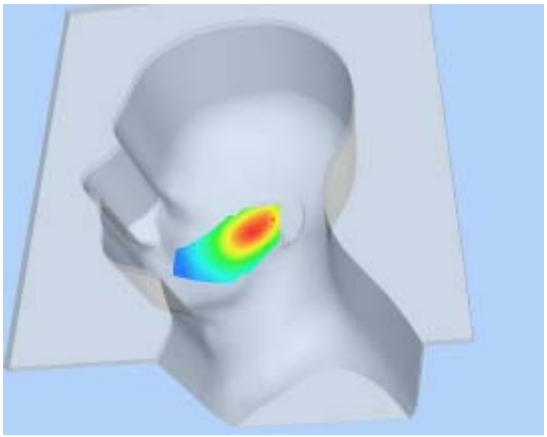
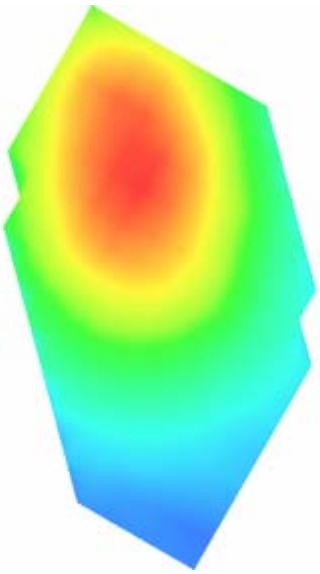
Maximum location: X=-23.00, Y=-15.00

SAR 10g (W/Kg)	0.073352
SAR 1g (W/Kg)	0.107482

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1119	0.0823	0.0603	0.0440



3D sceen shot	Hot spot position
	

MEASUREMENT 5

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 48 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

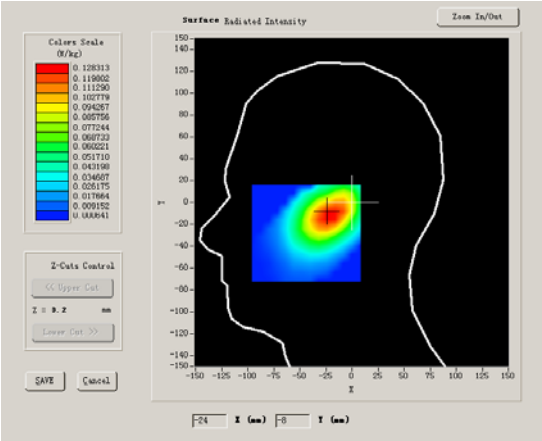
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

part)	
Conductivity (S/m)	0.888655
Variation (%)	0.970000

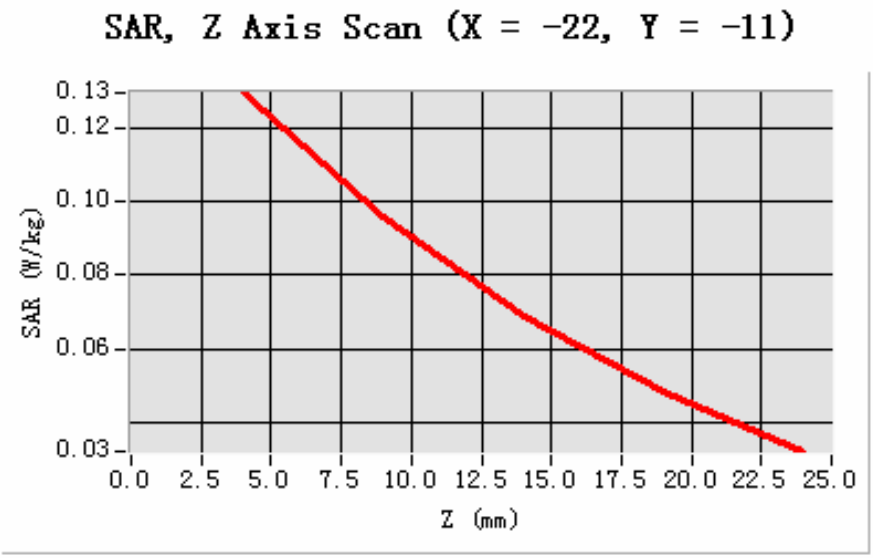
SURFACE SAR	VOLUME SAR
	

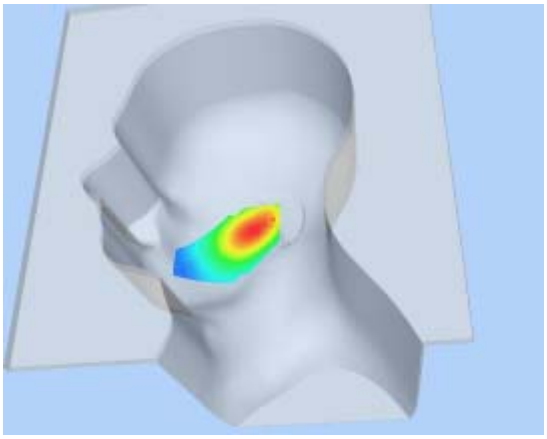
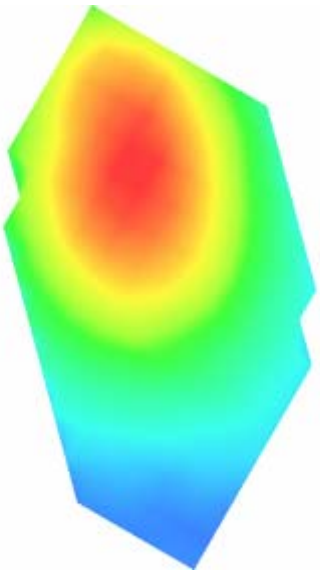
Maximum location: X=-22.00, Y=-11.00

SAR 10g (W/Kg)	0.083191
SAR 1g (W/Kg)	0.122940

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1296	0.0956	0.0690	0.0483



3D sceen shot	Hot spot position
	

MEASUREMENT 6

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 50 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

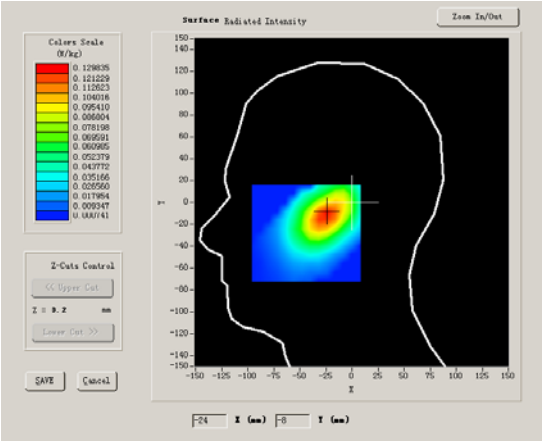
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

part)	
Conductivity (S/m)	0.894409
Variation (%)	-1.940000

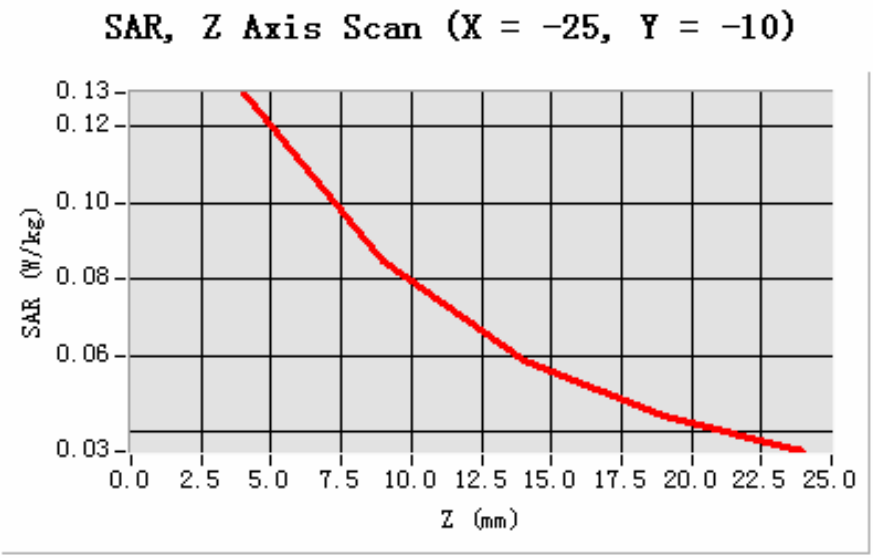
SURFACE SAR	VOLUME SAR
	

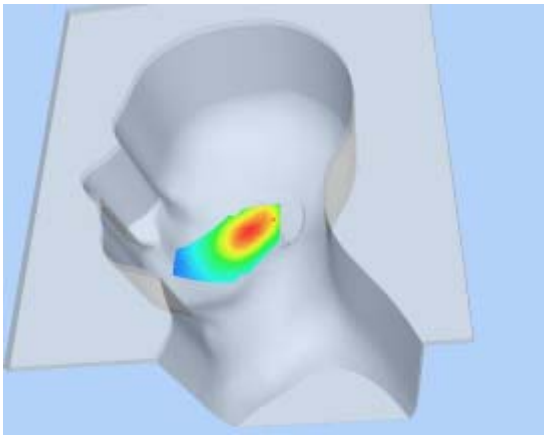
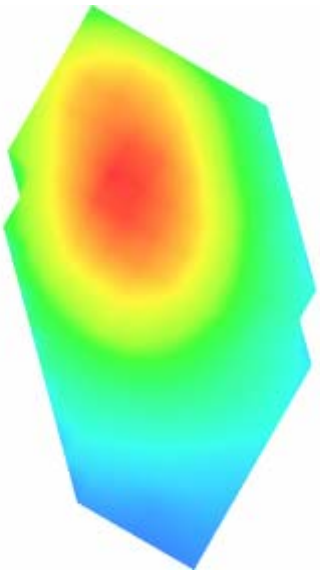
Maximum location: X=-25.00, Y=-10.00

SAR 10g (W/Kg)	0.080344
SAR 1g (W/Kg)	0.123477

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1288	0.0848	0.0589	0.0444



3D sceen shot	Hot spot position
	

MEASUREMENT 7

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 53 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

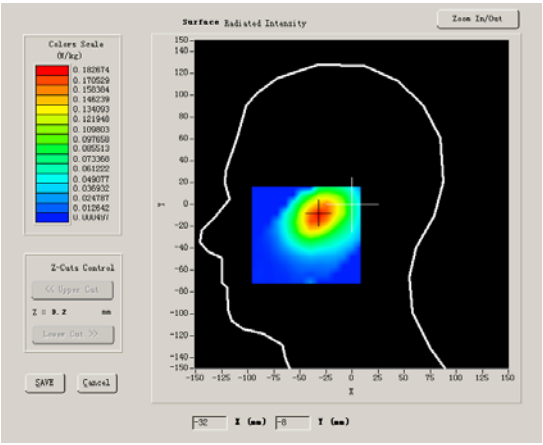
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

part)	
Conductivity (S/m)	0.866612
Variation (%)	-2.000000

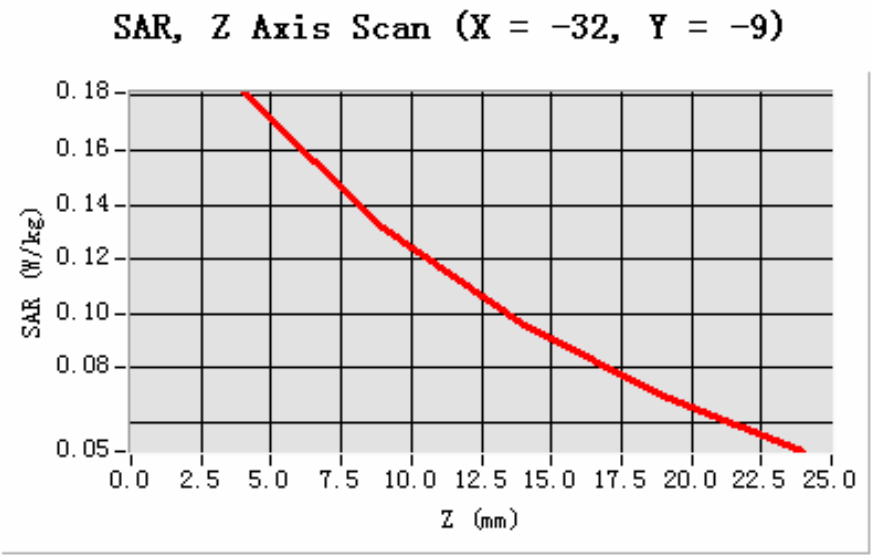
SURFACE SAR	VOLUME SAR
	

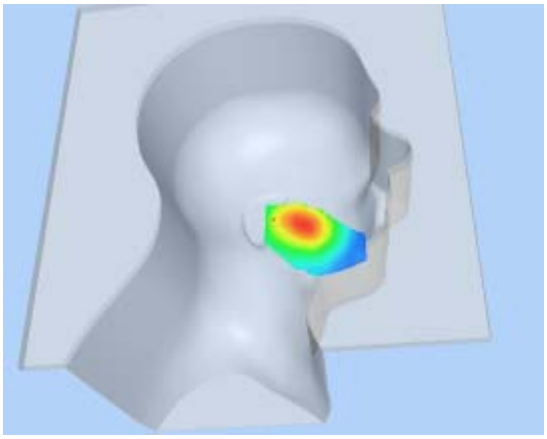
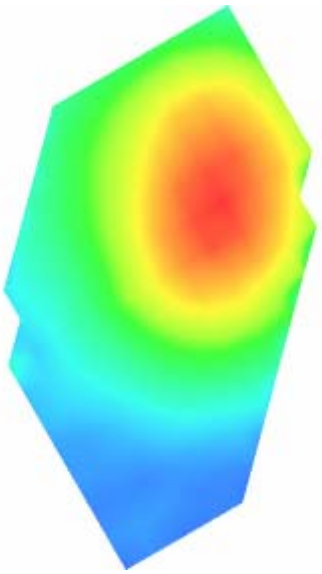
Maximum location: X=-32.00, Y=-9.00

SAR 10g (W/Kg)	0.114971
SAR 1g (W/Kg)	0.171596

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1811	0.1316	0.0956	0.0695



3D sceen shot	Hot spot position
	

MEASUREMENT 8

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 49 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

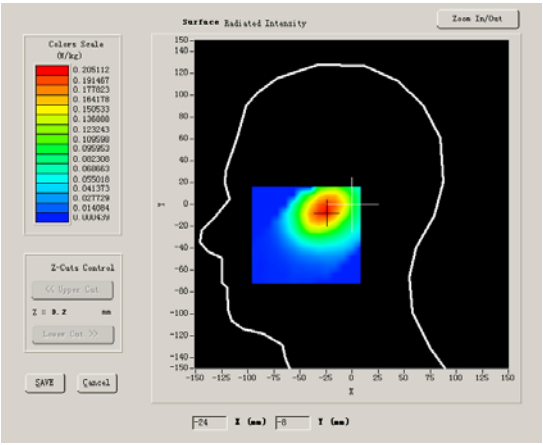
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

part)	
Conductivity (S/m)	0.888655
Variation (%)	-0.770000

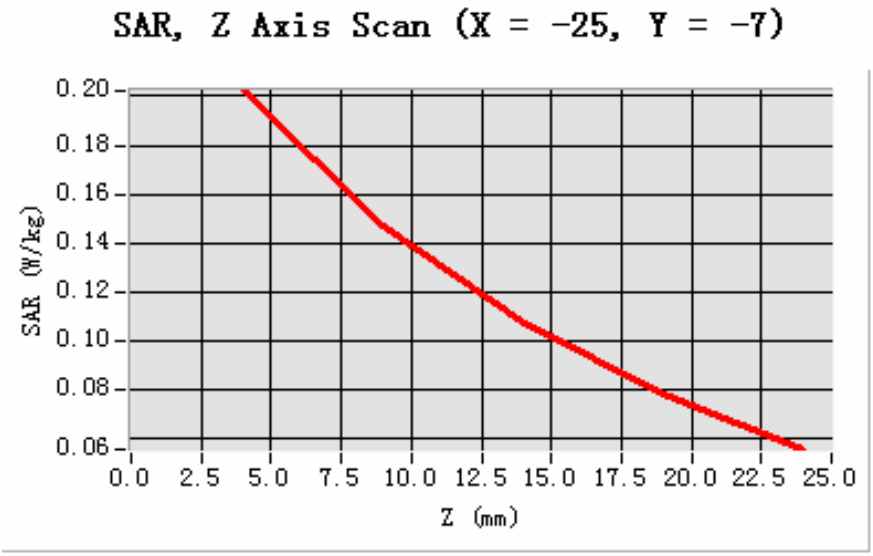
SURFACE SAR	VOLUME SAR
	

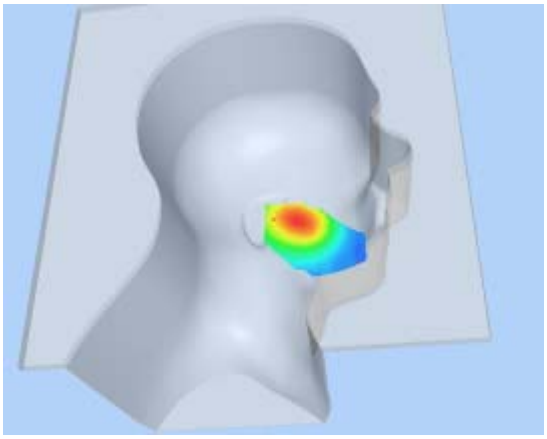
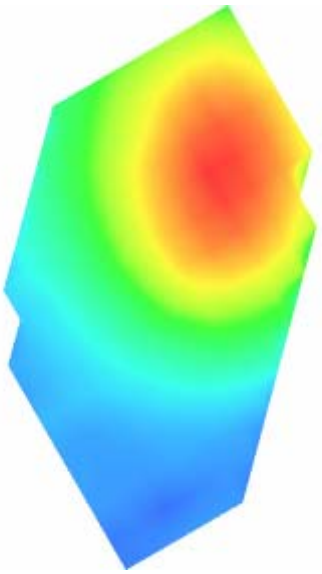
Maximum location: X=-25.00, Y=-7.00

SAR 10g (W/Kg)	0.131376
SAR 1g (W/Kg)	0.193569

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2022	0.1472	0.1072	0.0781



3D sceen shot	Hot spot position
	

MEASUREMENT 9

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 49 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

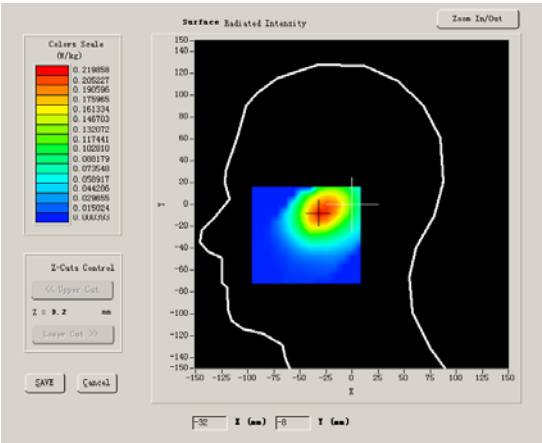
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

part)	
Conductivity (S/m)	0.894409
Variation (%)	-0.900000

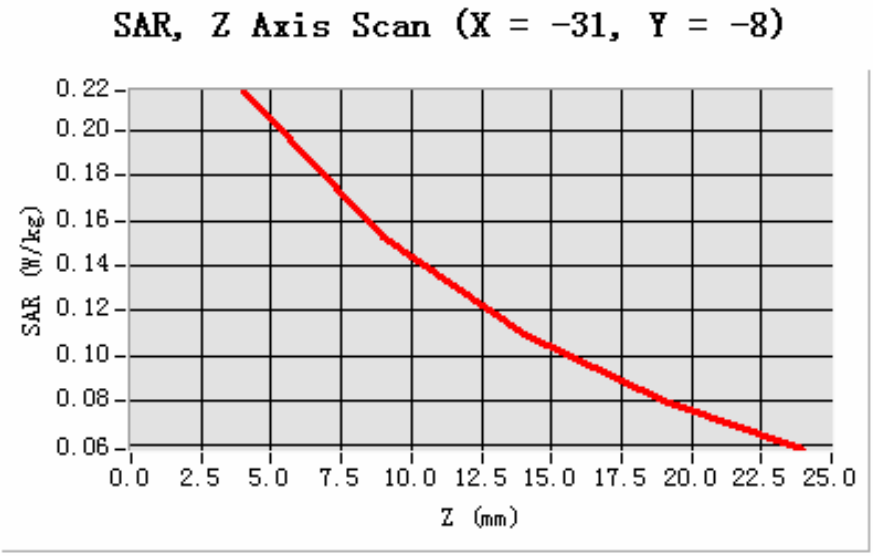
SURFACE SAR	VOLUME SAR
	

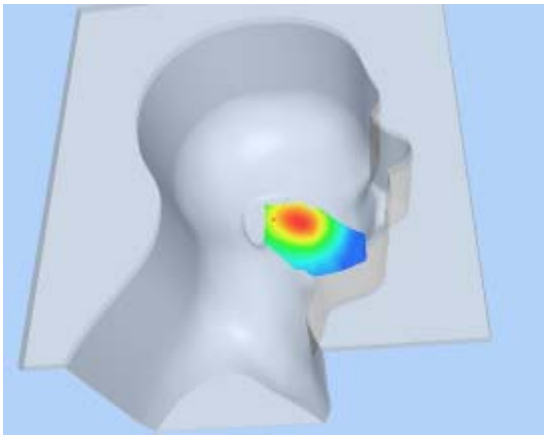
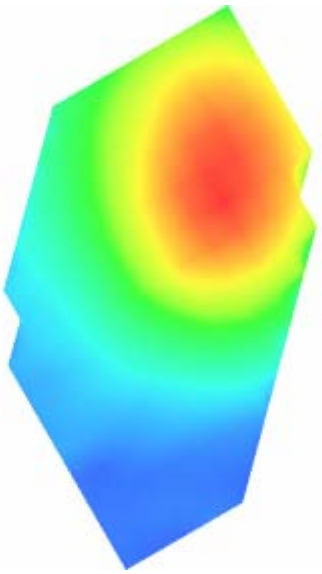
Maximum location: X=-31.00, Y=-8.00

SAR 10g (W/Kg)	0.138761
SAR 1g (W/Kg)	0.209968

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.2179	0.1530	0.1092	0.0799



3D sceen shot	Hot spot position
	

MEASUREMENT 10

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 49 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

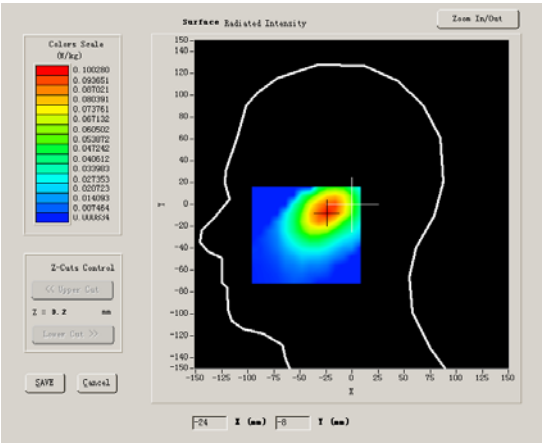
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

part)	
Conductivity (S/m)	0.866612
Variation (%)	-4.740000

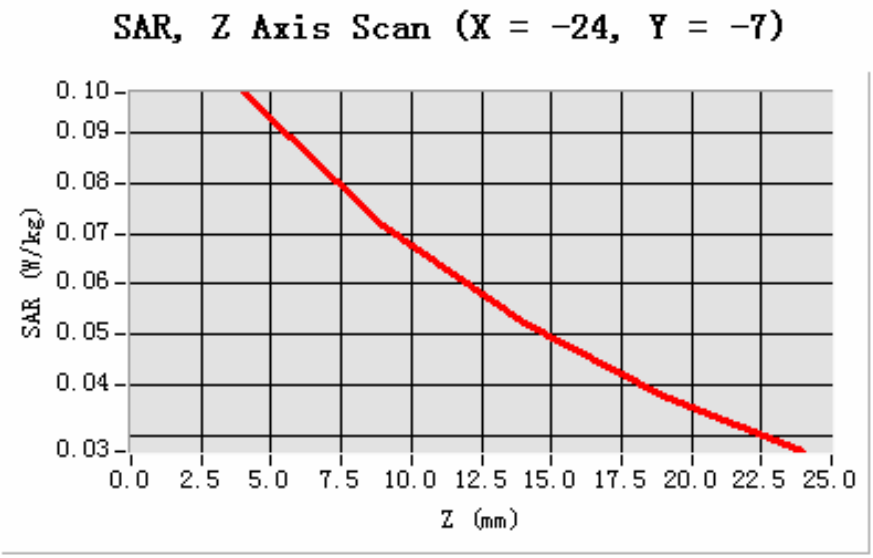
SURFACE SAR	VOLUME SAR
	

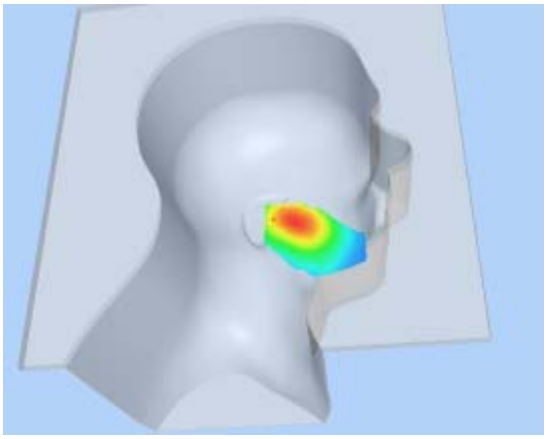
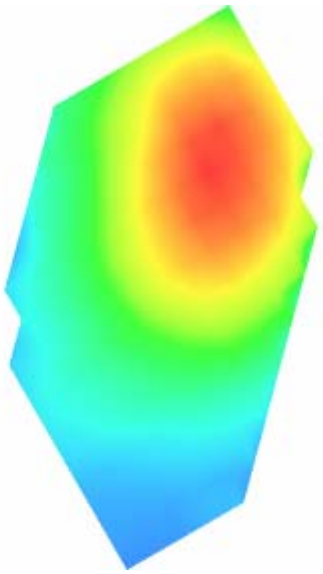
Maximum location: X=-24.00, Y=-7.00

SAR 10g (W/Kg)	0.063529
SAR 1g (W/Kg)	0.093085

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0976	0.0716	0.0524	0.0382



3D sceen shot	Hot spot position
	

MEASUREMENT 11

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 44 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

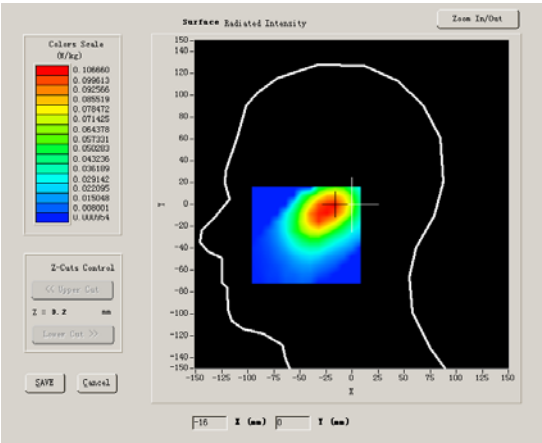
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

part)	
Conductivity (S/m)	0.888655
Variation (%)	0.320000

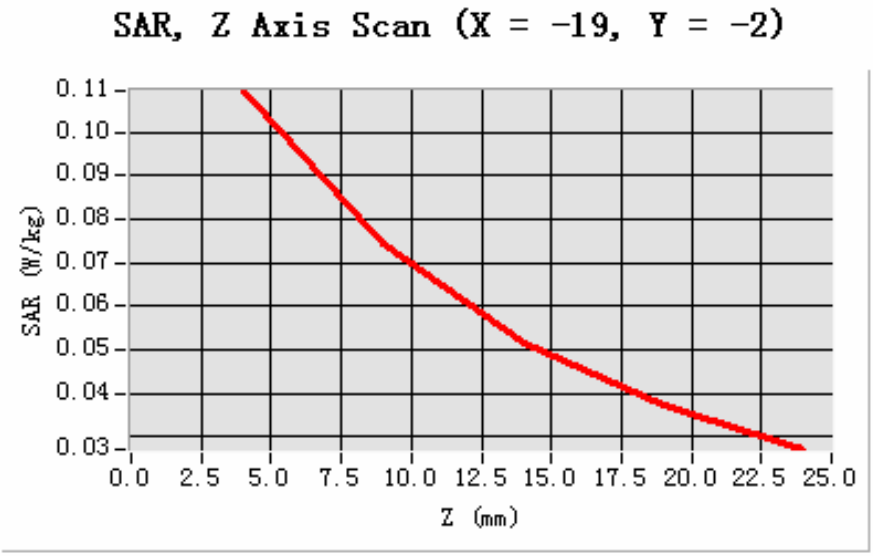
SURFACE SAR	VOLUME SAR
	

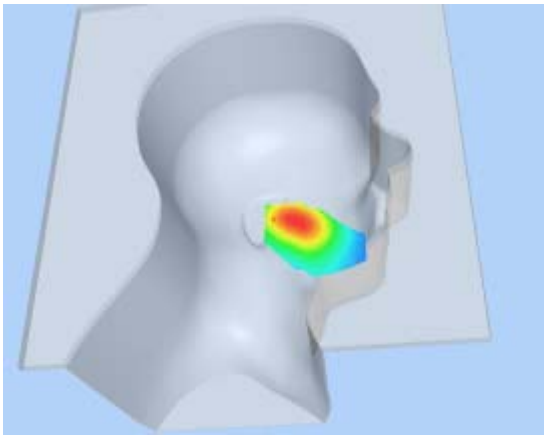
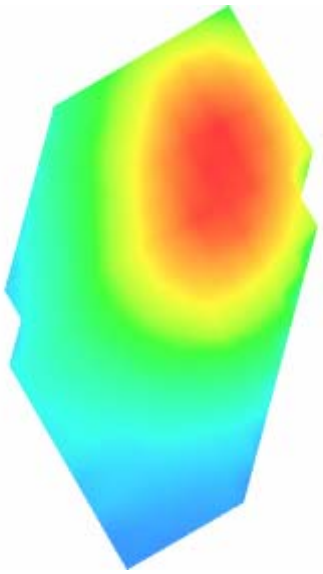
Maximum location: X=-19.00, Y=-2.00

SAR 10g (W/Kg)	0.069412
SAR 1g (W/Kg)	0.105244

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1094	0.0742	0.0516	0.0373



3D sceen shot	Hot spot position
	

MEASUREMENT 12

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 51 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

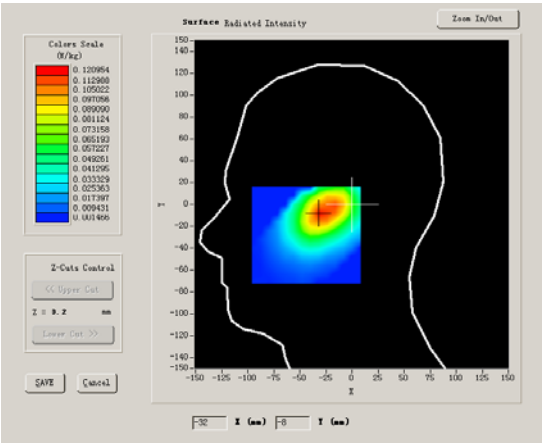
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

part)	
Conductivity (S/m)	0.894409
Variation (%)	-1.710000

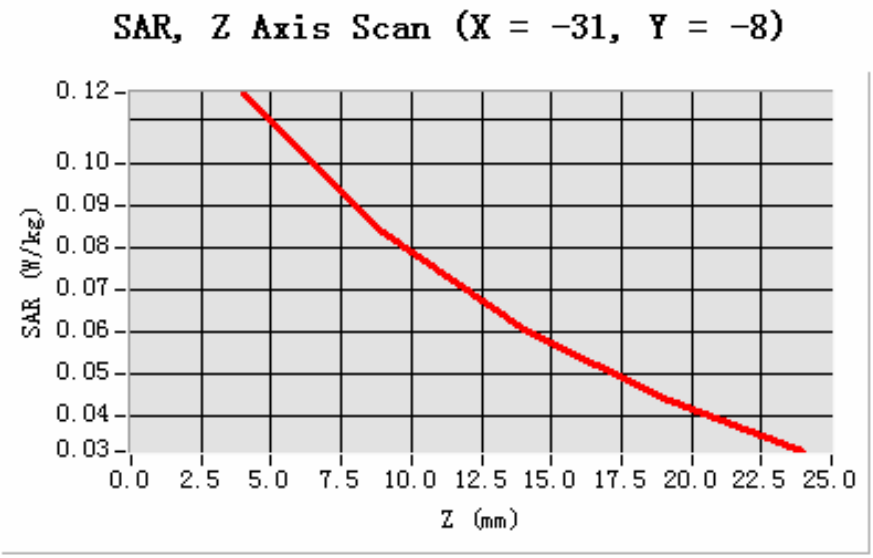
SURFACE SAR	VOLUME SAR
	

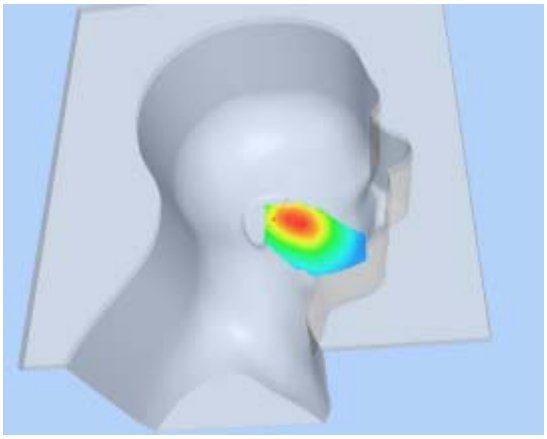
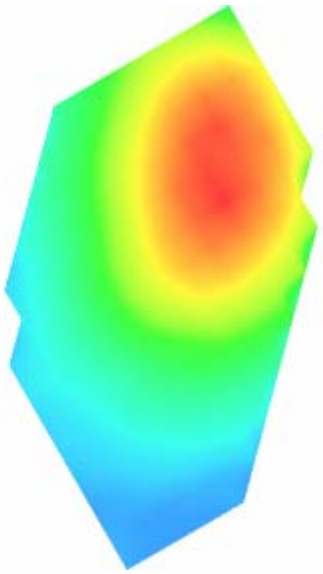
Maximum location: X=-31.00, Y=-8.00

SAR 10g (W/Kg)	0.075874
SAR 1g (W/Kg)	0.113279

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1165	0.0835	0.0603	0.0440



3D sceen shot	Hot spot position
	

MEASUREMENT 13

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 5 minutes 22 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

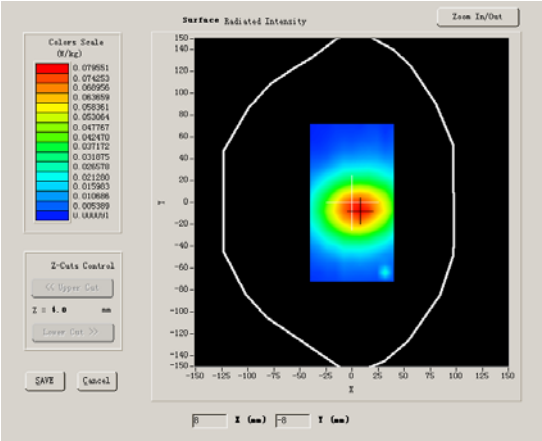
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

part)	
Conductivity (S/m)	0.974596
Variation (%)	1.440000

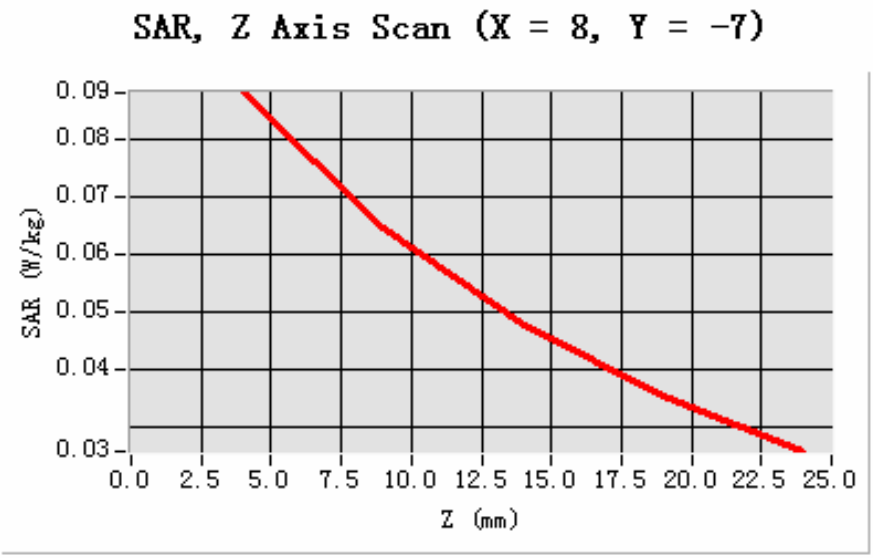
SURFACE SAR	VOLUME SAR
	

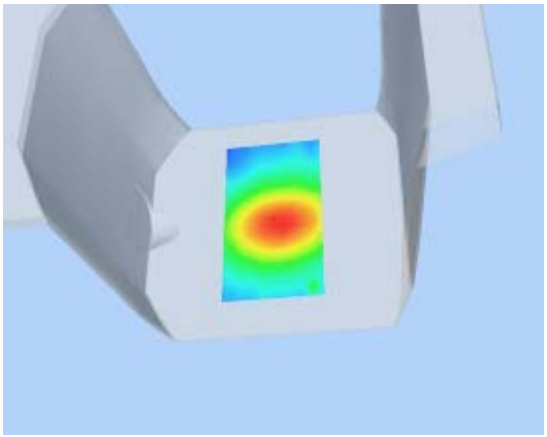
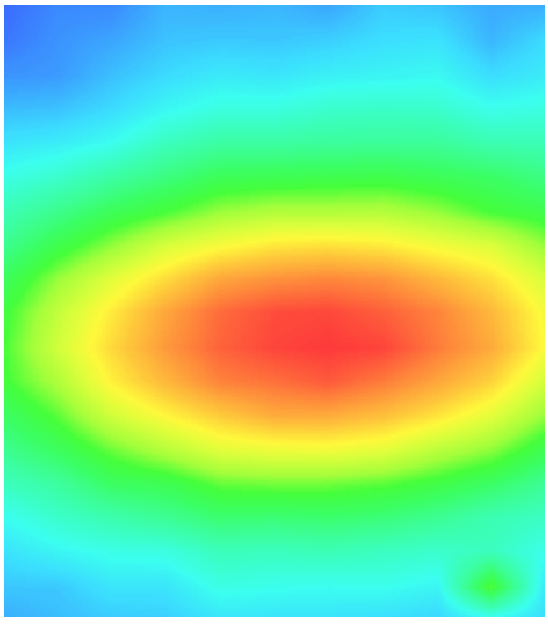
Maximum location: X=8.00, Y=-7.00

SAR 10g (W/Kg)	0.059190
SAR 1g (W/Kg)	0.084395

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0880	0.0647	0.0477	0.0353



3D sceen shot	Hot spot position
	

MEASUREMENT 14

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 5 minutes 28 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

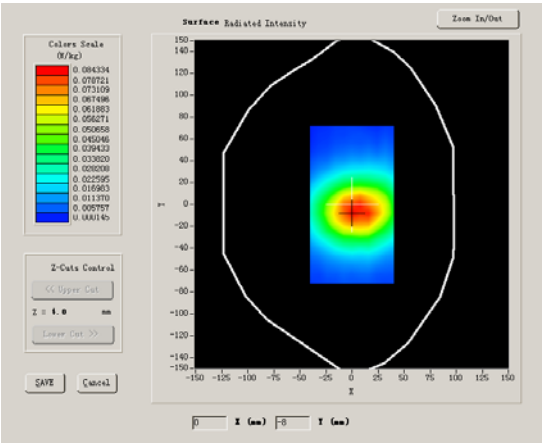
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

part)	
Conductivity (S/m)	1.009033
Variation (%)	-0.950000

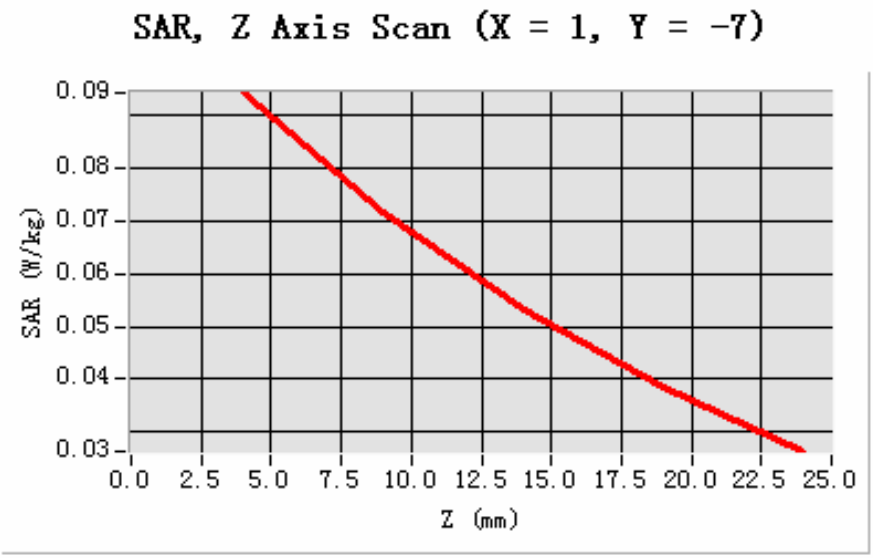
SURFACE SAR	VOLUME SAR
	

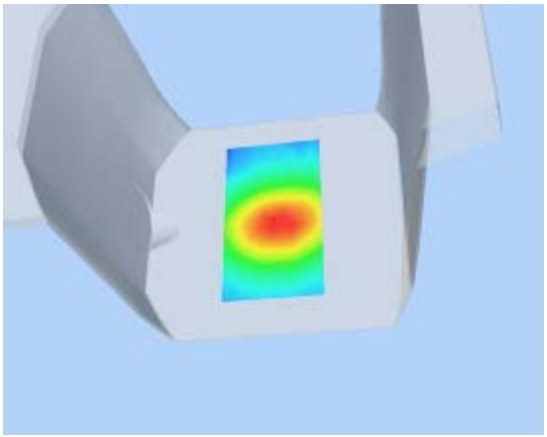
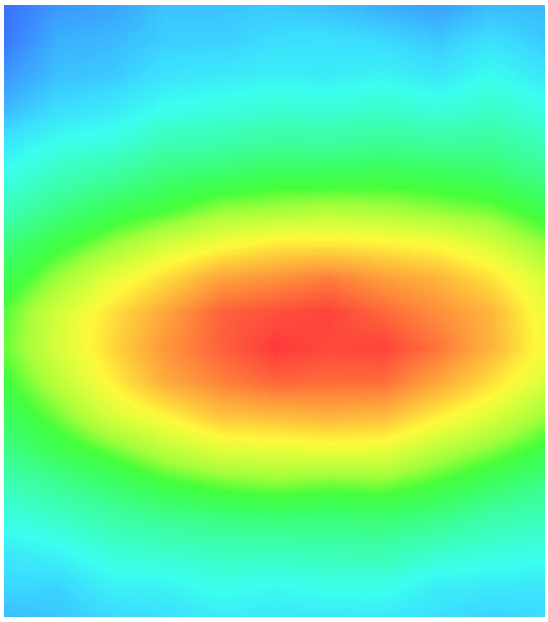
Maximum location: X=1.00, Y=-7.00

SAR 10g (W/Kg)	0.064350
SAR 1g (W/Kg)	0.091912

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0941	0.0716	0.0532	0.0384



3D sceen shot	Hot spot position
	

MEASUREMENT 15

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 5 minutes 32 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

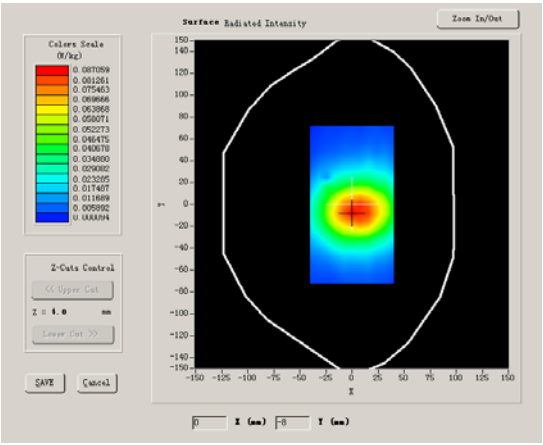
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

part)	
Conductivity (S/m)	1.005962
Variation (%)	-1.240000

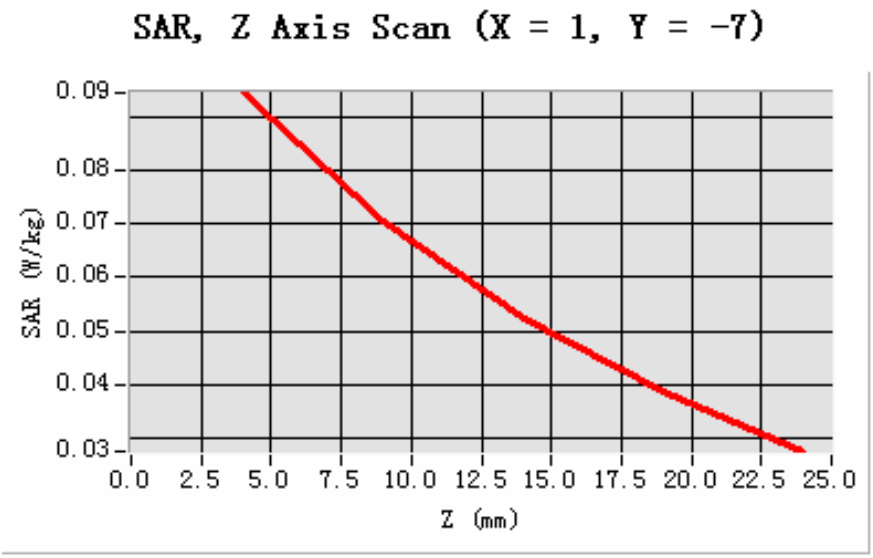
SURFACE SAR	VOLUME SAR
	

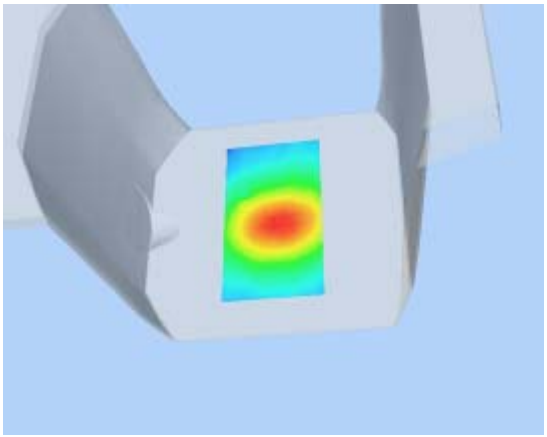
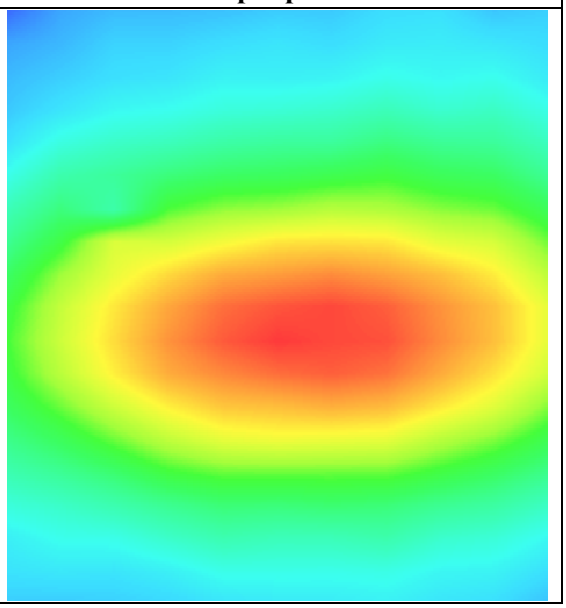
Maximum location: X=1.00, Y=-7.00

SAR 10g (W/Kg)	0.064260
SAR 1g (W/Kg)	0.092516

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0944	0.0705	0.0524	0.0386



3D sceen shot	Hot spot position
	

MEASUREMENT 16

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 5 minutes 31 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

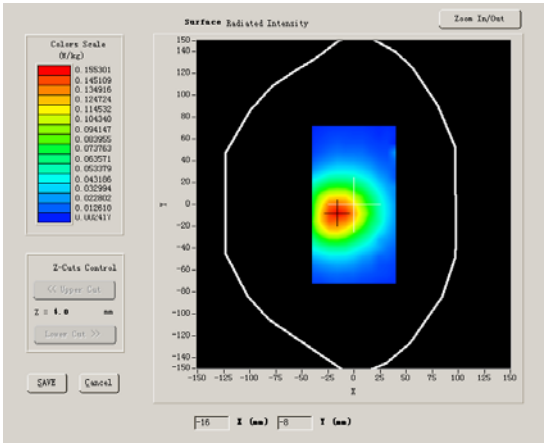
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

part)	
Conductivity (S/m)	1.005962
Variation (%)	-1.840000

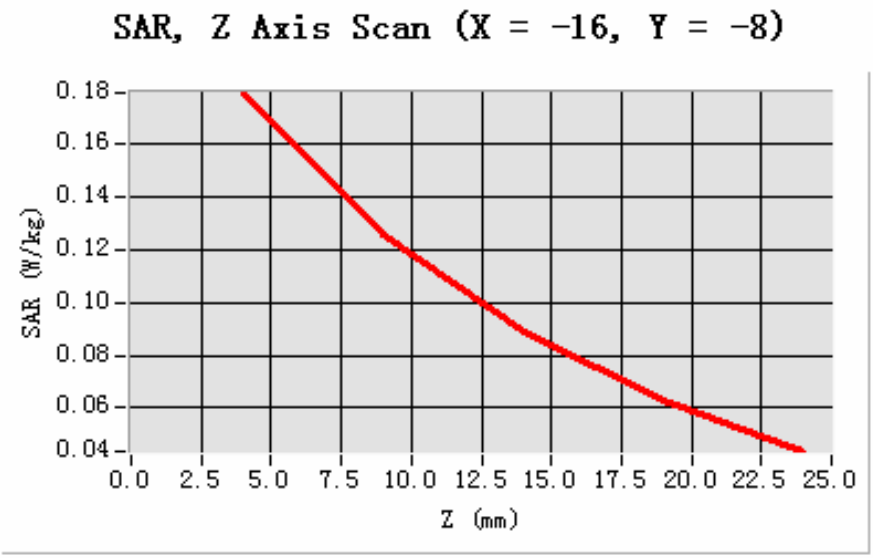
SURFACE SAR	VOLUME SAR
	

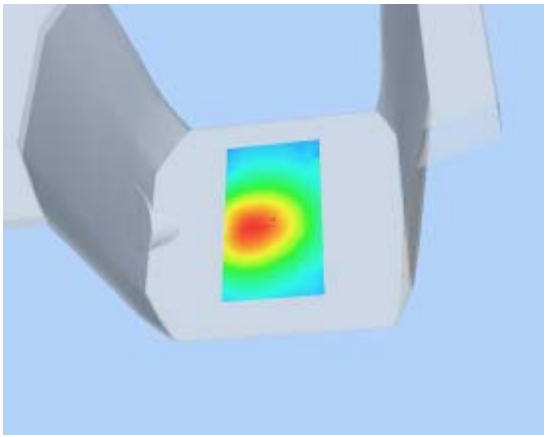
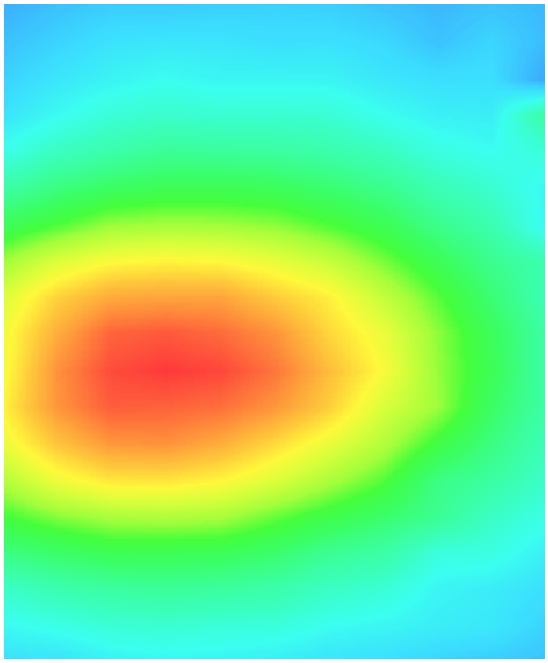
Maximum location: X=-16.00, Y=-8.00

SAR 10g (W/Kg)	0.113475
SAR 1g (W/Kg)	0.170544

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1790	0.1257	0.0886	0.0629



3D sceen shot	Hot spot position
	

MEASUREMENT 17（with Headphone）

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 4/1/2009

Measurement duration: 5 minutes 26 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

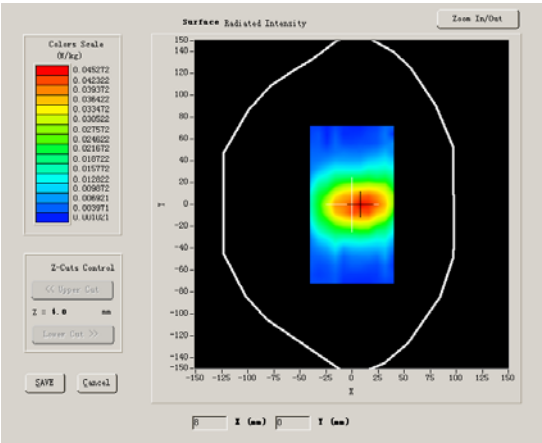
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

part)	
Conductivity (S/m)	0.894409
Variation (%)	4.930000

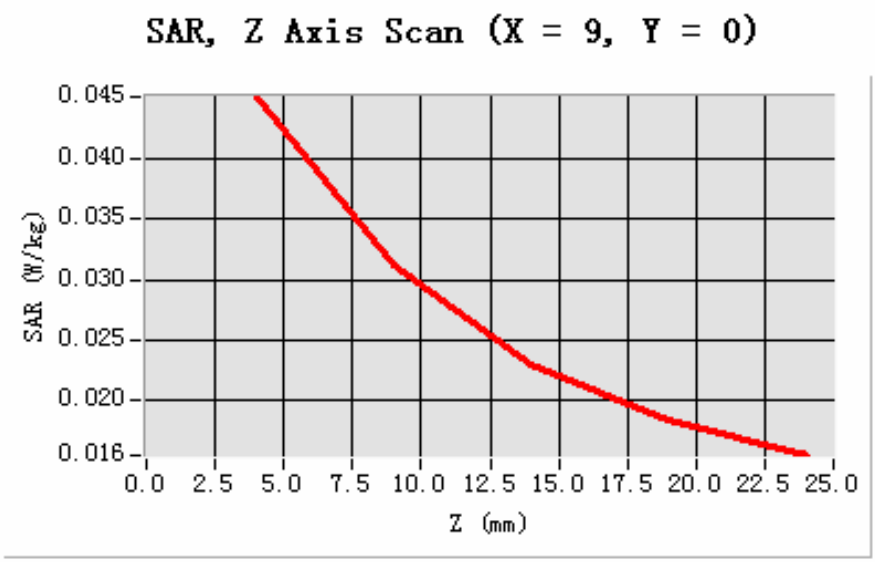
SURFACE SAR	VOLUME SAR
	

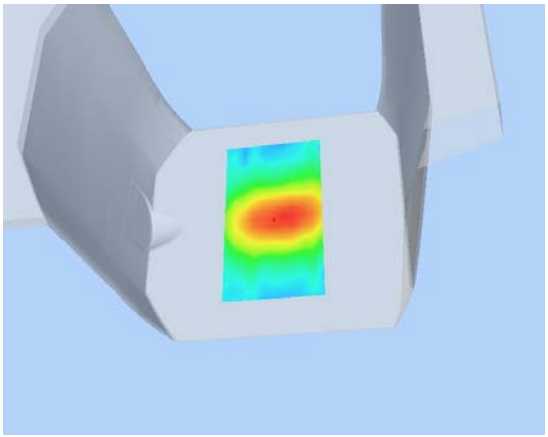
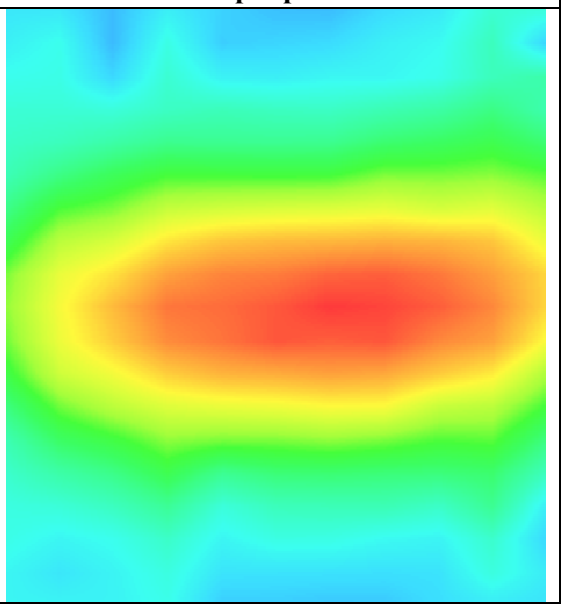
Maximum location: X=9.00, Y=0.00

SAR 10g (W/Kg)	0.033418
SAR 1g (W/Kg)	0.044962

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0451	0.0312	0.0230	0.0185



3D sceen shot	Hot spot position
	

MEASUREMENT 18

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 4 minutes 51 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

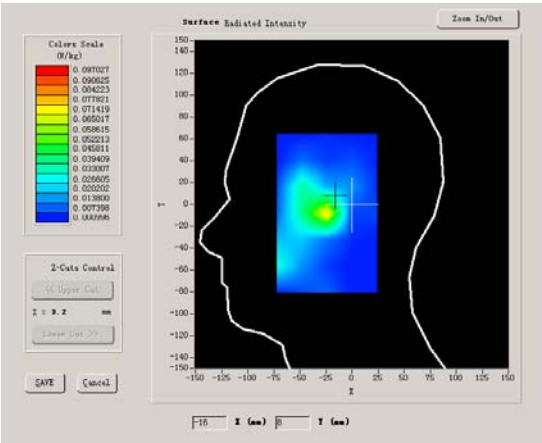
Phantom File	zinf5.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

part)	
Conductivity (S/m)	1.335397
Variation (%)	-0.710000

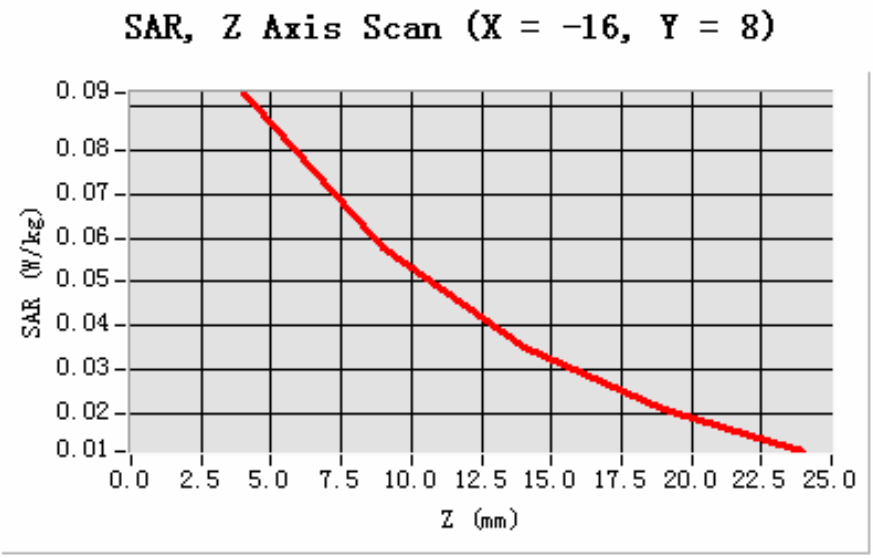
SURFACE SAR	VOLUME SAR
	

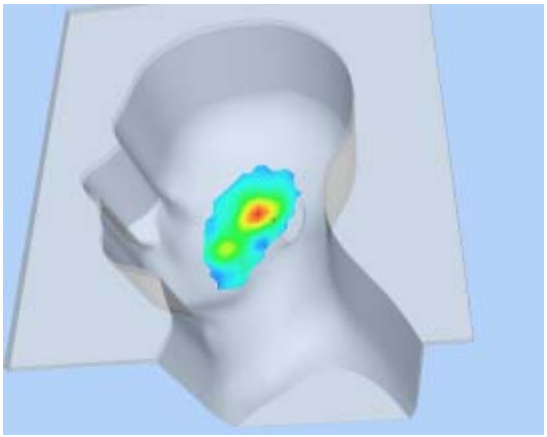
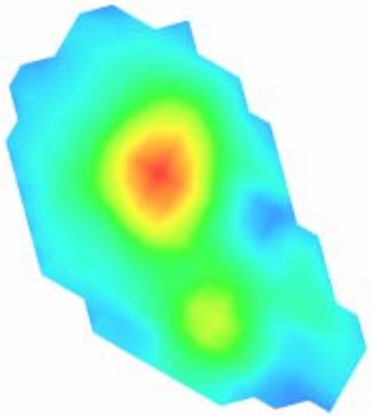
Maximum location: X=-16.00, Y=8.00

SAR 10g (W/Kg)	0.047463
SAR 1g (W/Kg)	0.085899

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0932	0.0580	0.0353	0.0209



3D sceen shot	Hot spot position
	

MEASUREMENT 19

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 4 minutes 49 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

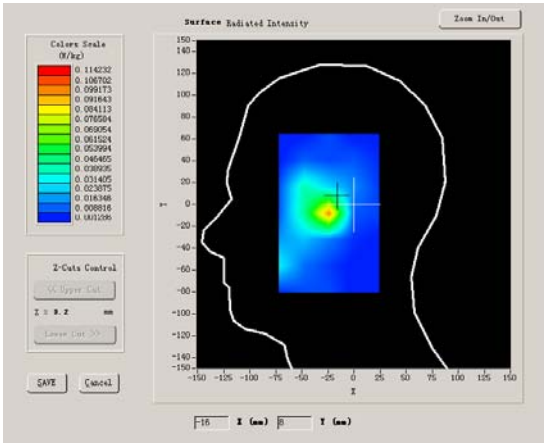
Phantom File	zinf5.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

part)	
Conductivity (S/m)	1.436111
Variation (%)	1.570000

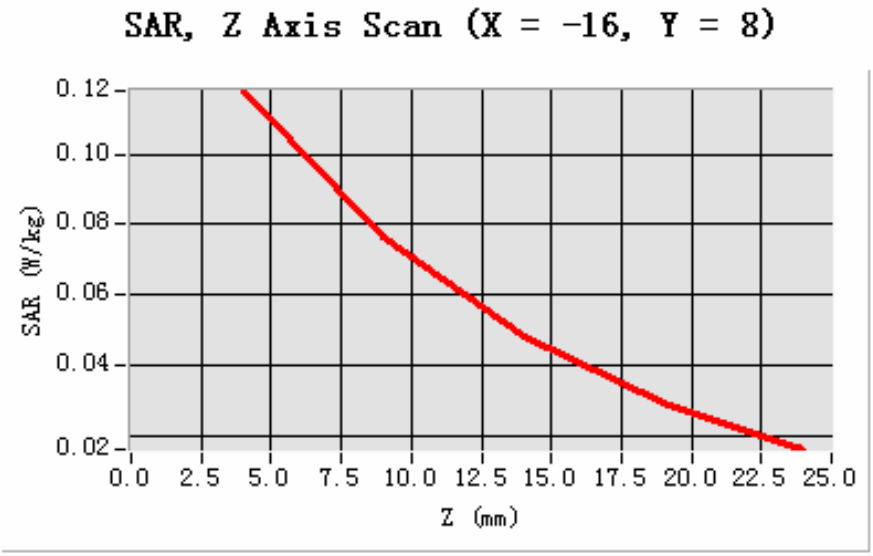
SURFACE SAR	VOLUME SAR
	

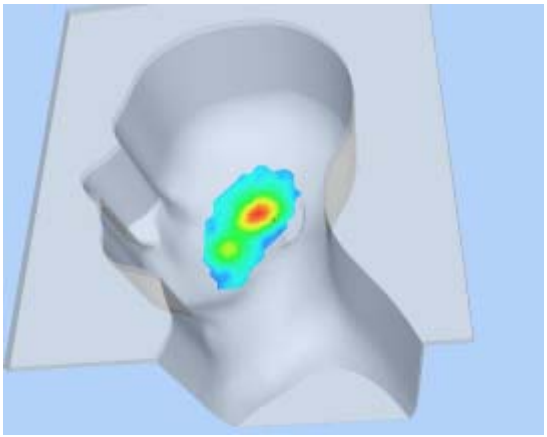
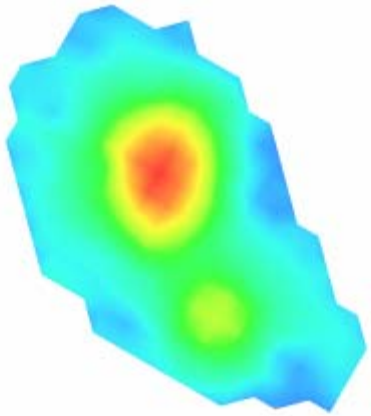
Maximum location: X=-16.00, Y=8.00

SAR 10g (W/Kg)	0.061618
SAR 1g (W/Kg)	0.108625

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1179	0.0767	0.0485	0.0295



3D sceen shot	Hot spot position
	

MEASUREMENT 20

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 4 minutes 49 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

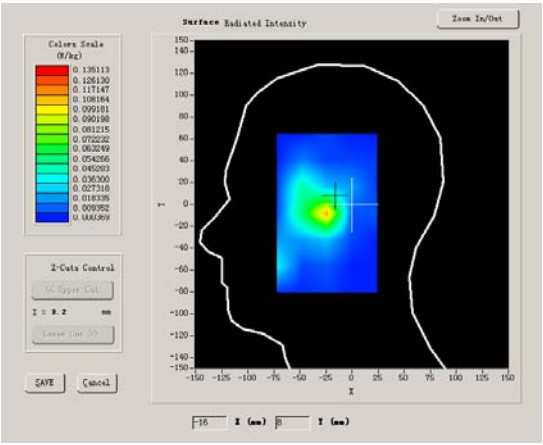
Phantom File	zinf5.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

part)	
Conductivity (S/m)	1.395905
Variation (%)	-3.540000

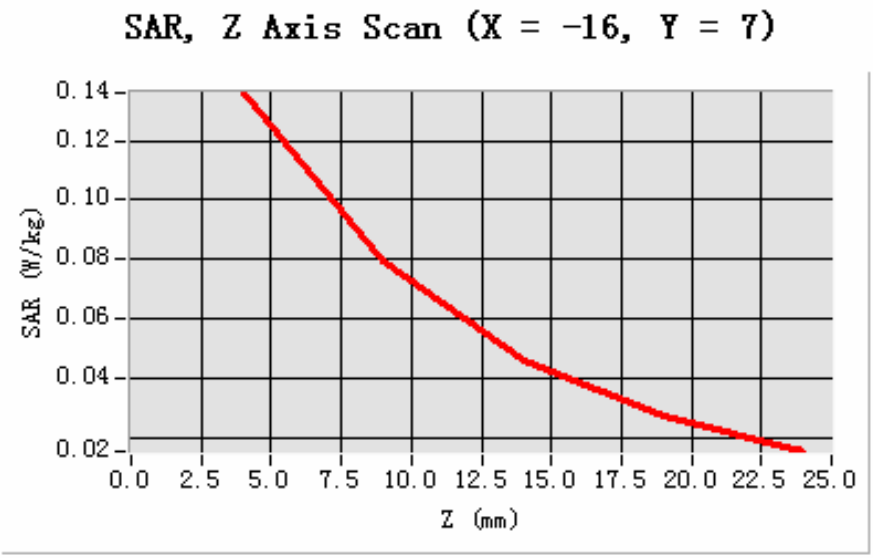
SURFACE SAR	VOLUME SAR
	

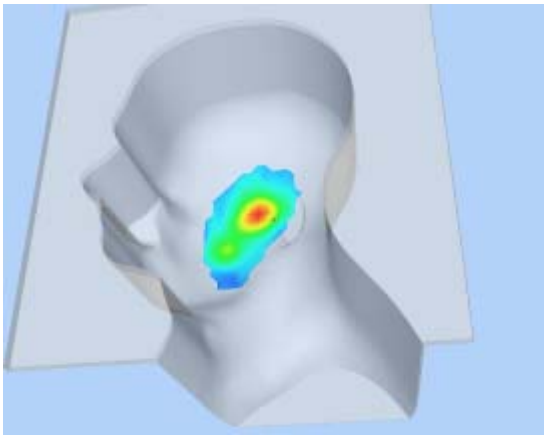
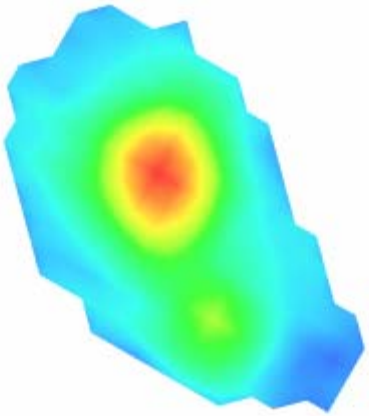
Maximum location: X=-16.00, Y=7.00

SAR 10g (W/Kg)	0.067046
SAR 1g (W/Kg)	0.125855

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1361	0.0792	0.0459	0.0272



3D sceen shot	Hot spot position
	

MEASUREMENT 21

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 4 minutes 55 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

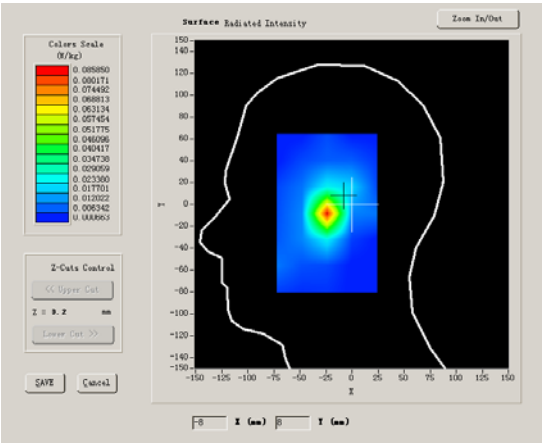
Phantom File	zinf5.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

part)	
Conductivity (S/m)	1.335397
Variation (%)	-2.020000

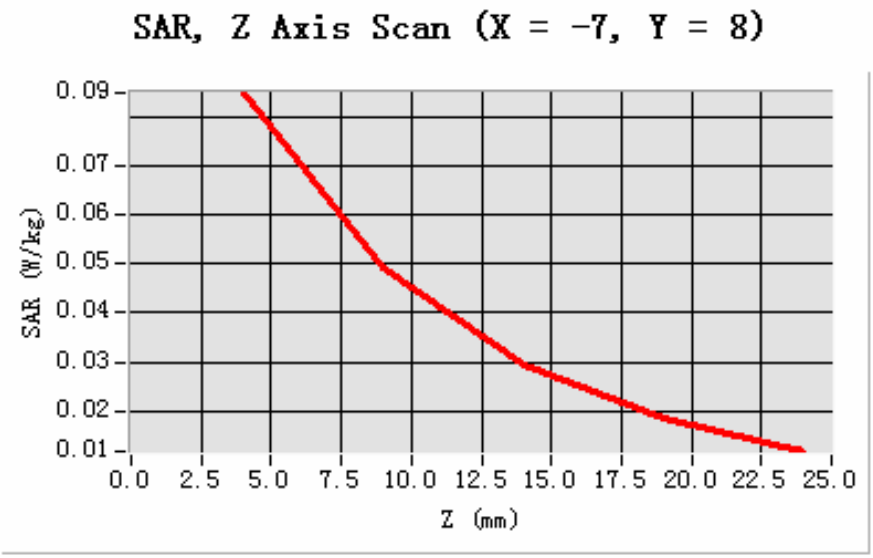
SURFACE SAR	VOLUME SAR
	

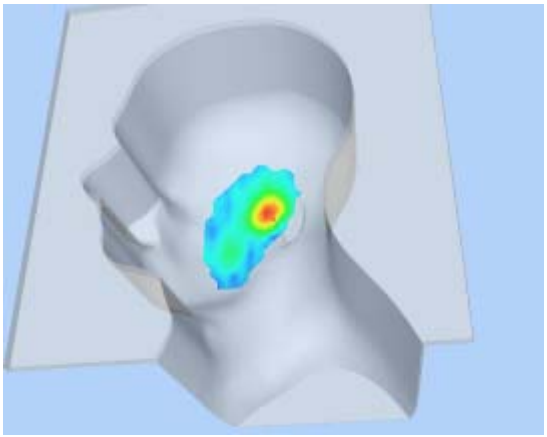
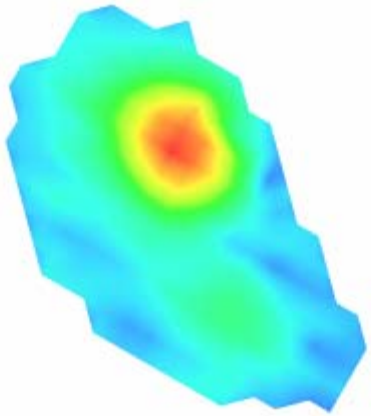
Maximum location: X=-7.00, Y=8.00

SAR 10g (W/Kg)	0.042990
SAR 1g (W/Kg)	0.079373

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0851	0.0494	0.0293	0.0184



3D sceen shot	Hot spot position
	

MEASUREMENT 22

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 4 minutes 49 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

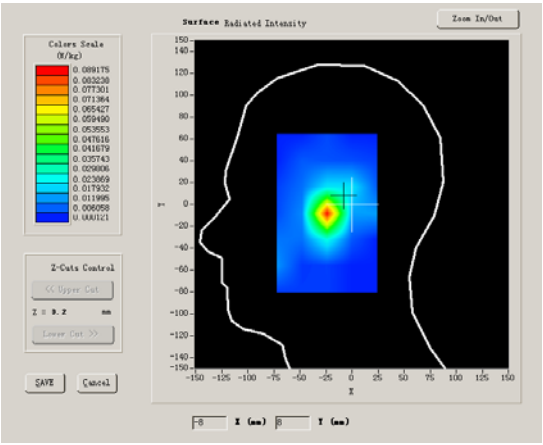
Phantom File	zinf5.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

part)	
Conductivity (S/m)	1.436111
Variation (%)	-0.030000

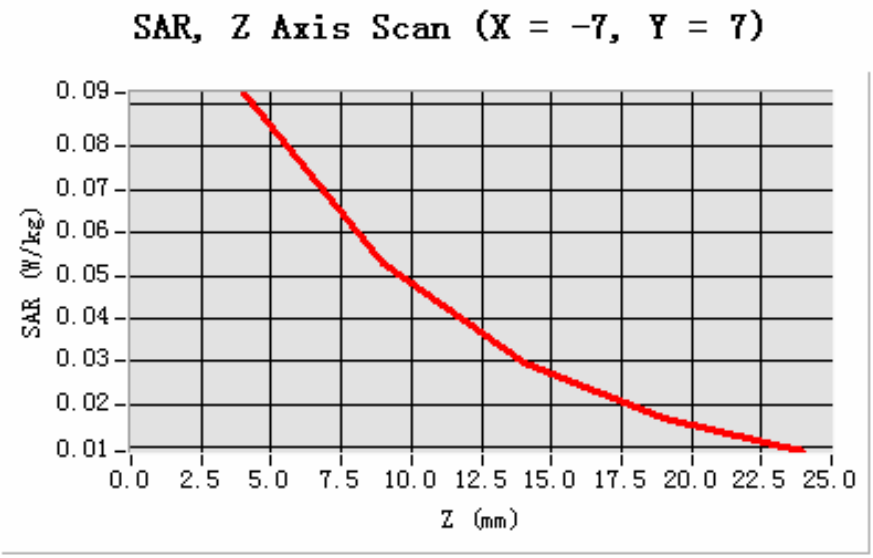
SURFACE SAR	VOLUME SAR
	

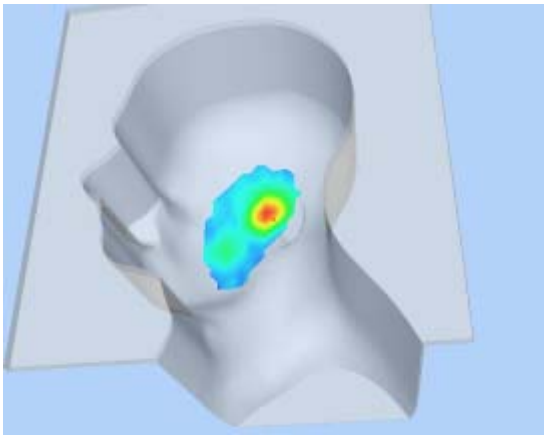
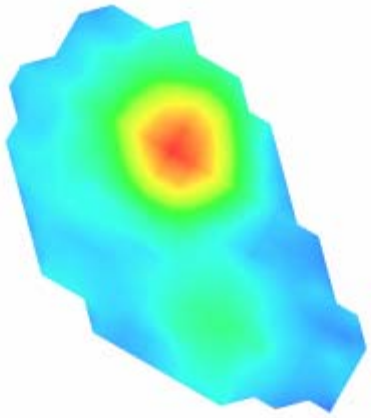
Maximum location: X=-7.00, Y=7.00

SAR 10g (W/Kg)	0.045118
SAR 1g (W/Kg)	0.085887

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0925	0.0527	0.0297	0.0170



3D sceen shot	Hot spot position
	

MEASUREMENT 23

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 4 minutes 54 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

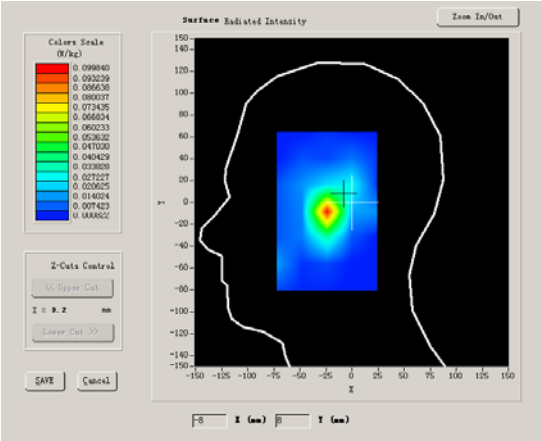
Phantom File	zinf5.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

part)	
Conductivity (S/m)	1.395905
Variation (%)	1.020000

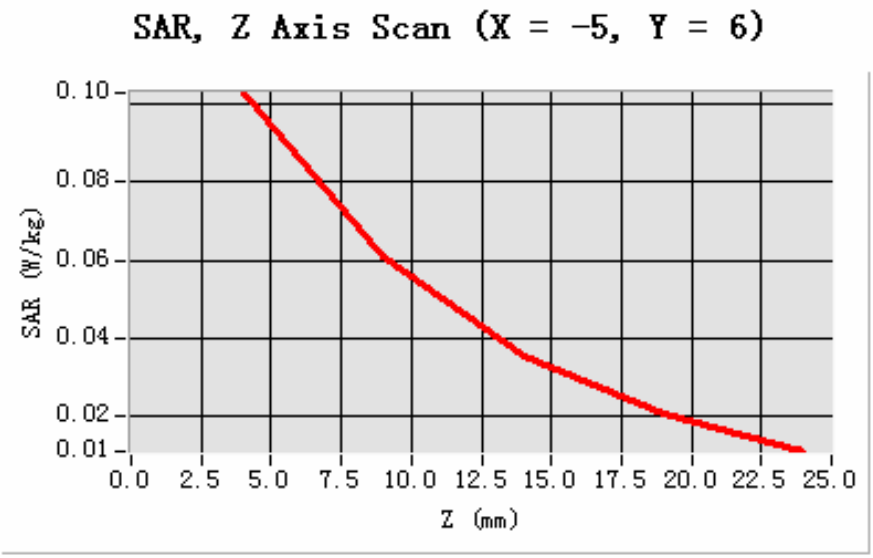
SURFACE SAR	VOLUME SAR
	

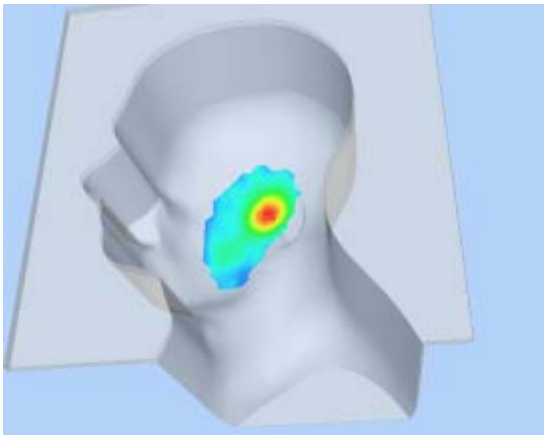
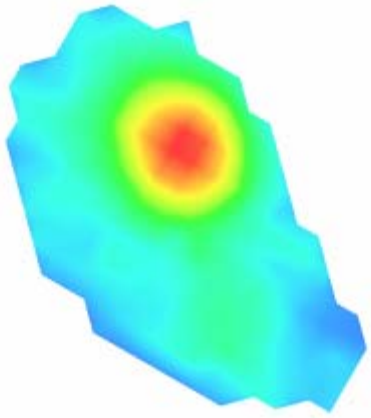
Maximum location: X=-5.00, Y=6.00

SAR 10g (W/Kg)	0.051467
SAR 1g (W/Kg)	0.094924

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1028	0.0607	0.0354	0.0206



3D sceen shot	Hot spot position
	

MEASUREMENT 24

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 50 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

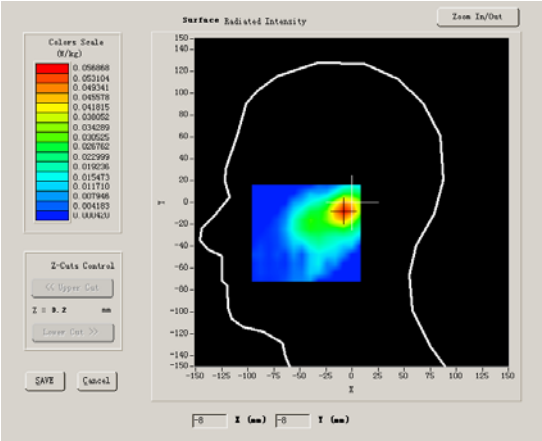
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

part)	
Conductivity (S/m)	1.335397
Variation (%)	0.760000

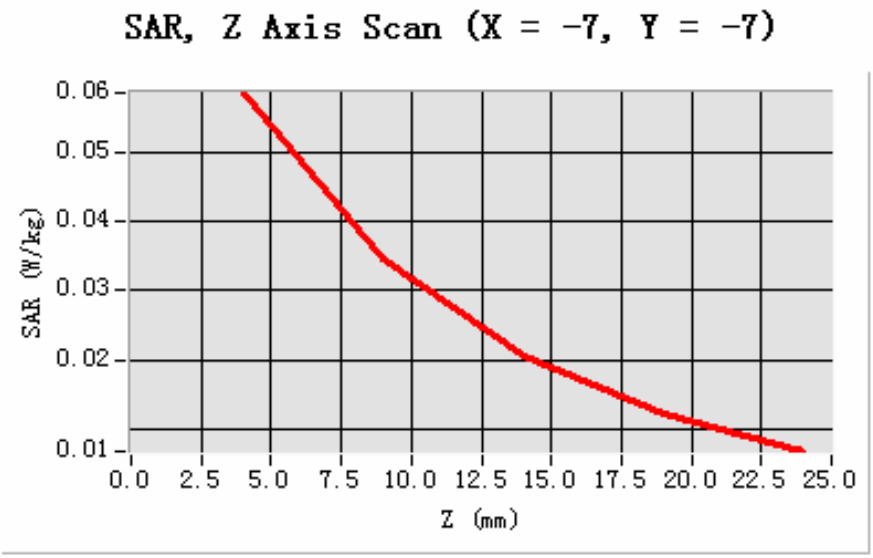
SURFACE SAR	VOLUME SAR
	

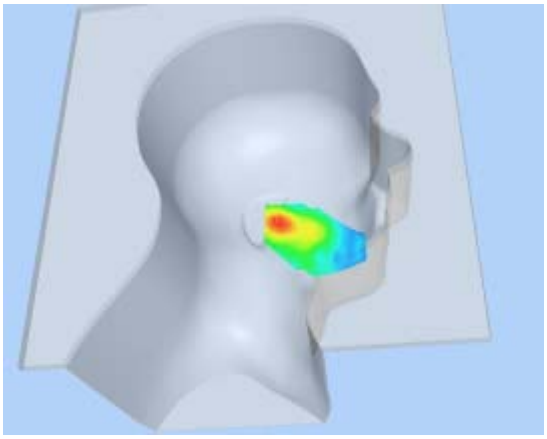
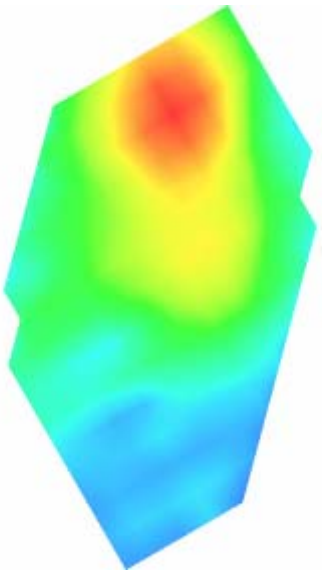
Maximum location: X=-7.00, Y=-7.00

SAR 10g (W/Kg)	0.030193
SAR 1g (W/Kg)	0.054621

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0585	0.0347	0.0205	0.0122



3D sceen shot	Hot spot position
	

MEASUREMENT 25

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 50 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

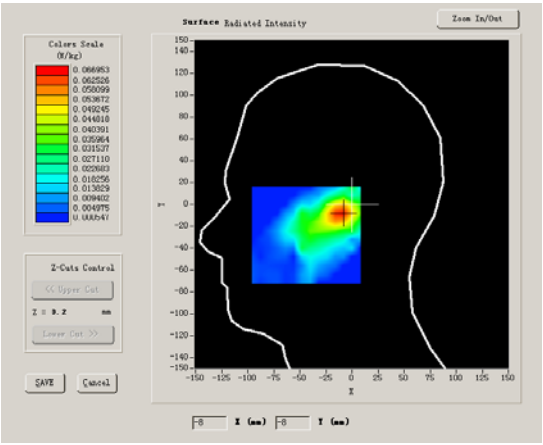
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

part)	
Conductivity (S/m)	1.436111
Variation (%)	1.020000

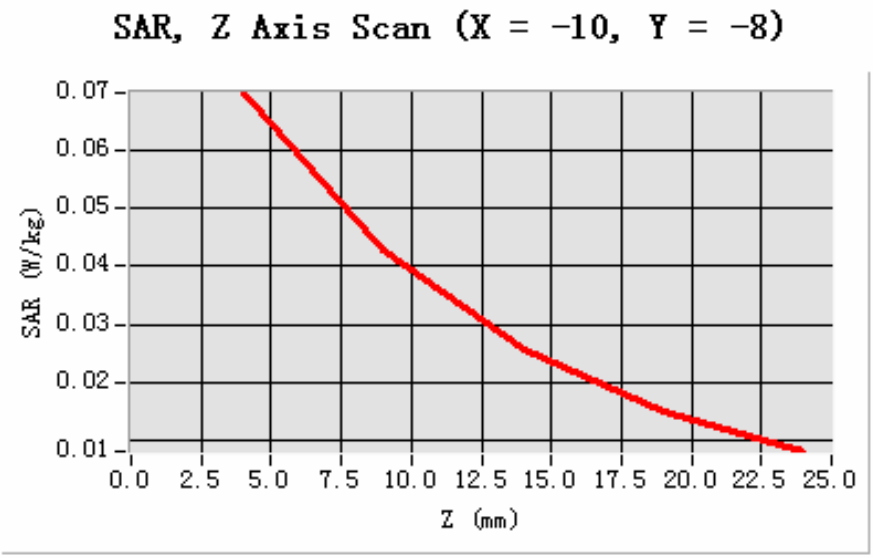
SURFACE SAR	VOLUME SAR
	

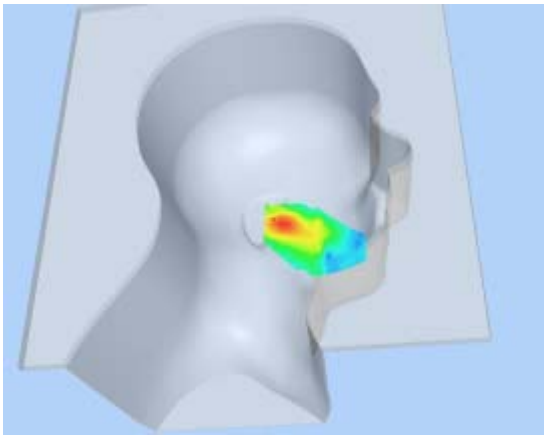
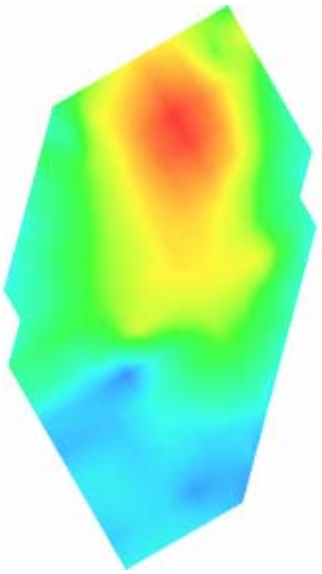
Maximum location: X=-10.00, Y=-8.00

SAR 10g (W/Kg)	0.036788
SAR 1g (W/Kg)	0.065414

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0699	0.0429	0.0257	0.0151



3D sceen shot	Hot spot position
	

MEASUREMENT 26

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 47 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

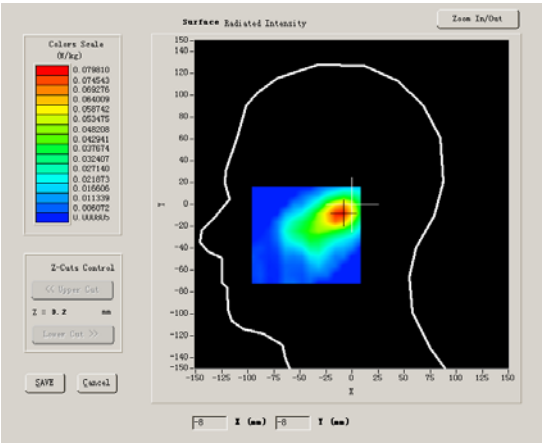
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

part)	
Conductivity (S/m)	1.395905
Variation (%)	-0.280000

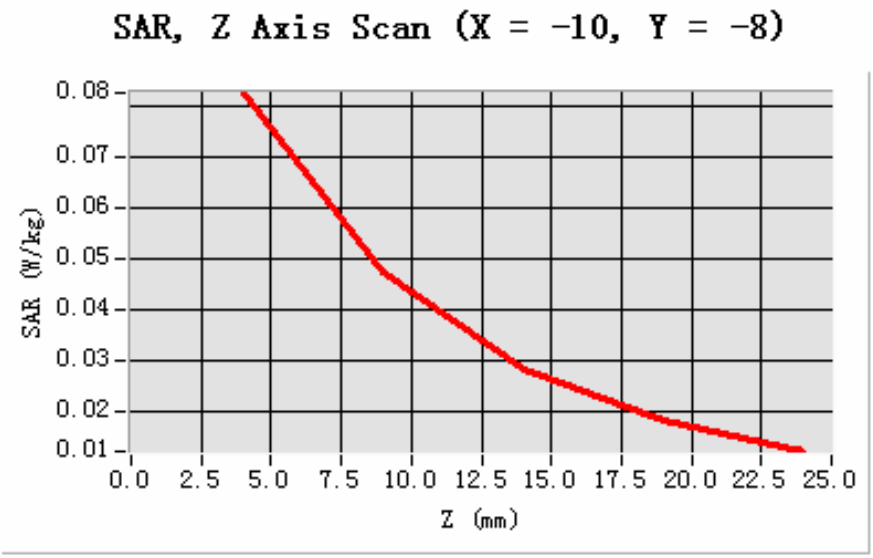
SURFACE SAR	VOLUME SAR
	

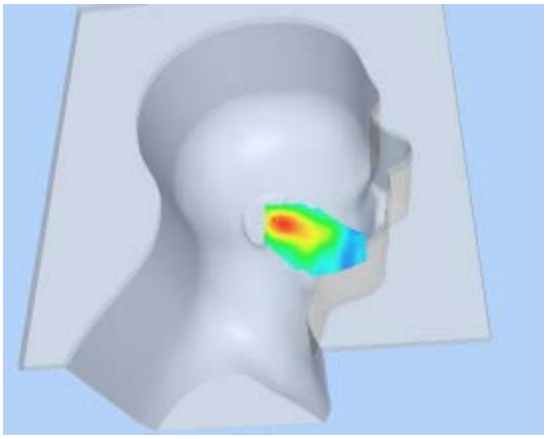
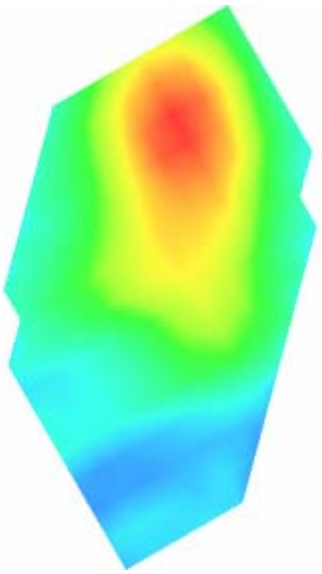
Maximum location: X=-10.00, Y=-8.00

SAR 10g (W/Kg)	0.042555
SAR 1g (W/Kg)	0.077590

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0825	0.0475	0.0283	0.0183



3D sceen shot	Hot spot position
	

MEASUREMENT 27

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 4 minutes 48 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

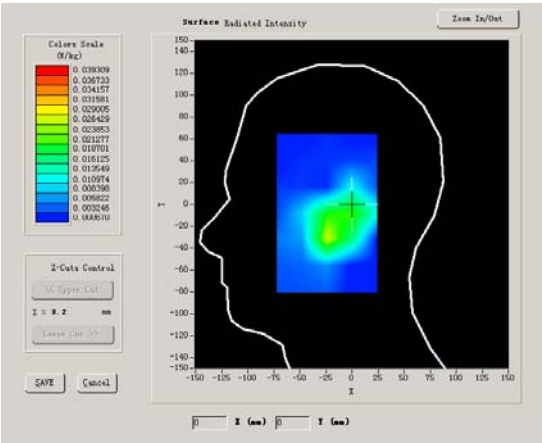
Phantom File	zinf5.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

part)	
Conductivity (S/m)	1.335397
Variation (%)	-0.110000

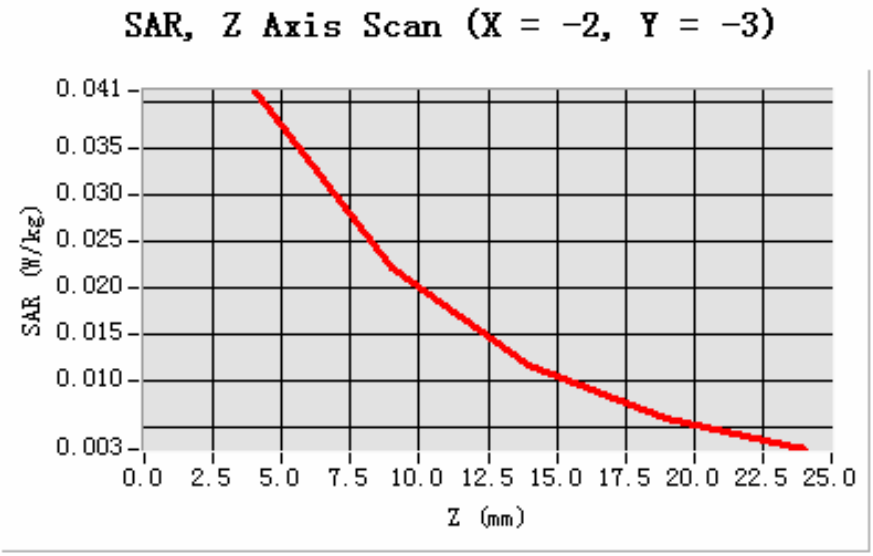
SURFACE SAR	VOLUME SAR
	

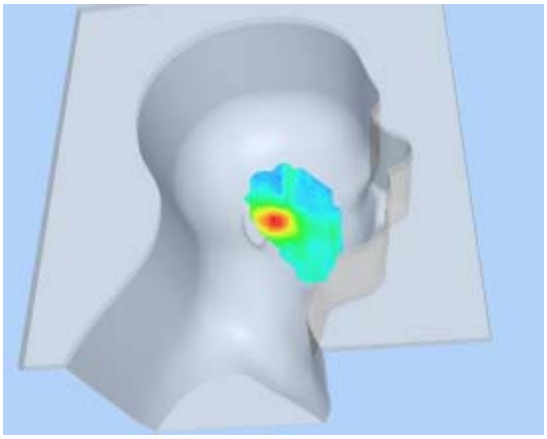
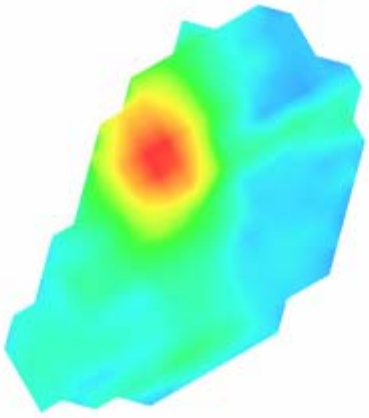
Maximum location: X=-2.00, Y=-3.00

SAR 10g (W/Kg)	0.019445
SAR 1g (W/Kg)	0.038104

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0412	0.0222	0.0115	0.0058



3D sceen shot	Hot spot position
	

MEASUREMENT 28

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 4 minutes 48 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

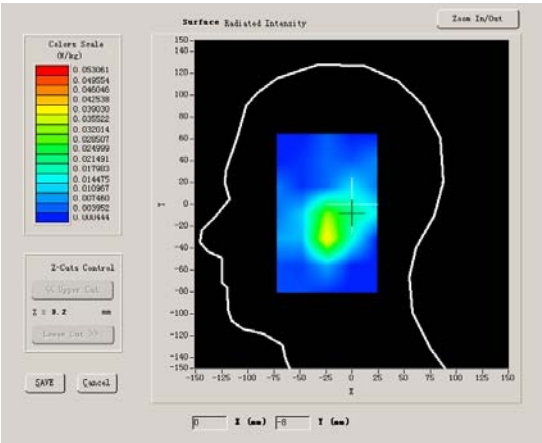
Phantom File	zinf5.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

part)	
Conductivity (S/m)	1.436111
Variation (%)	-0.730000

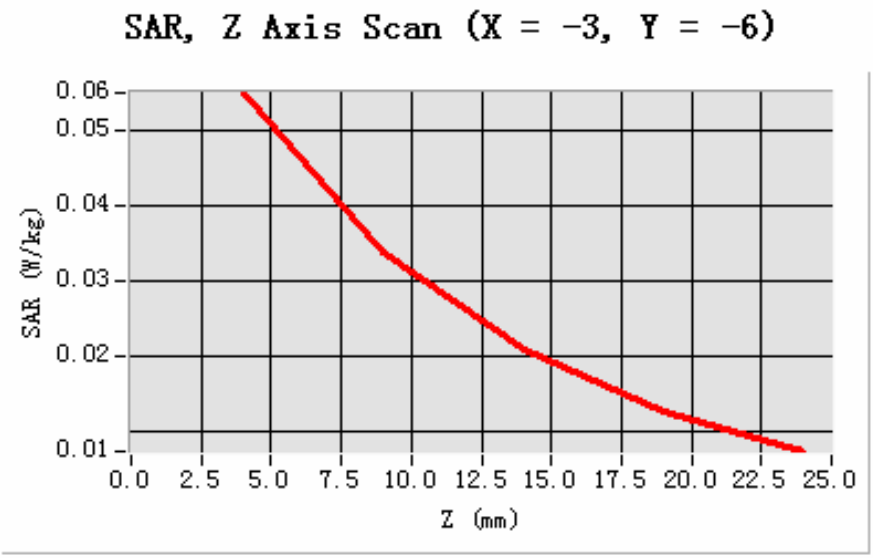
SURFACE SAR	VOLUME SAR
	

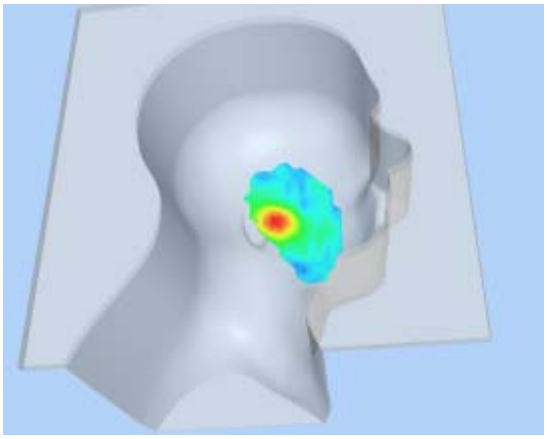
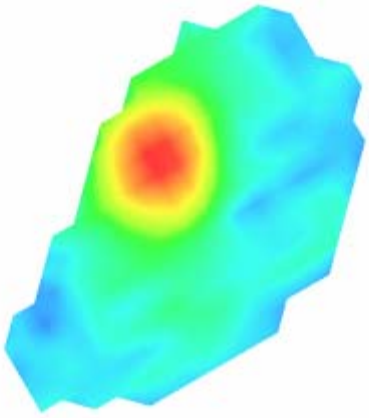
Maximum location: X=-3.00, Y=-6.00

SAR 10g (W/Kg)	0.028613
SAR 1g (W/Kg)	0.051093

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0551	0.0340	0.0208	0.0128



3D sceen shot	Hot spot position
	

MEASUREMENT 29

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 3 minutes 42 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

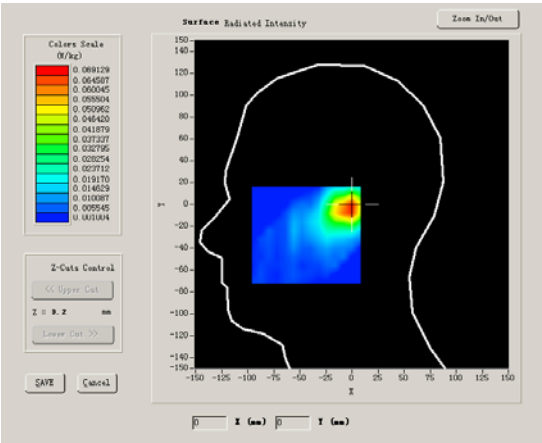
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

part)	
Conductivity (S/m)	1.395905
Variation (%)	-2.080000

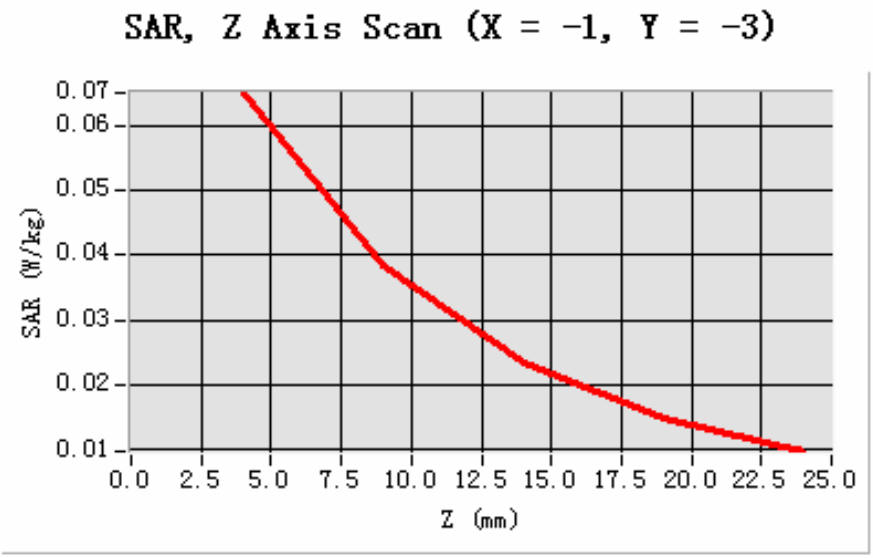
SURFACE SAR	VOLUME SAR
	

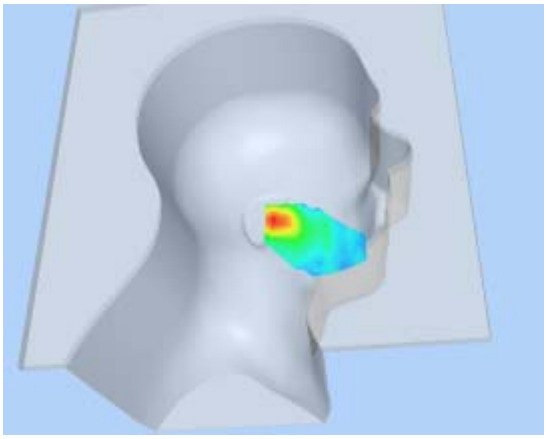
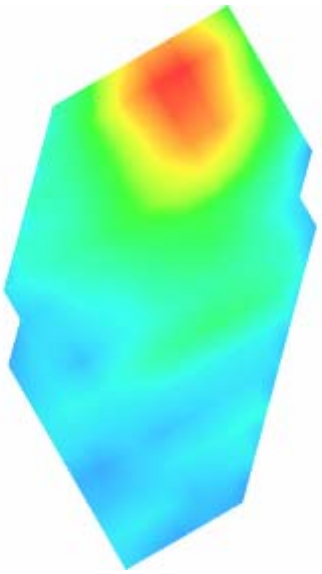
Maximum location: X=-1.00, Y=-3.00

SAR 10g (W/Kg)	0.033991
SAR 1g (W/Kg)	0.061184

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0651	0.0385	0.0233	0.0149



3D sceen shot	Hot spot position
	

MEASUREMENT 30

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 5 minutes 19 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

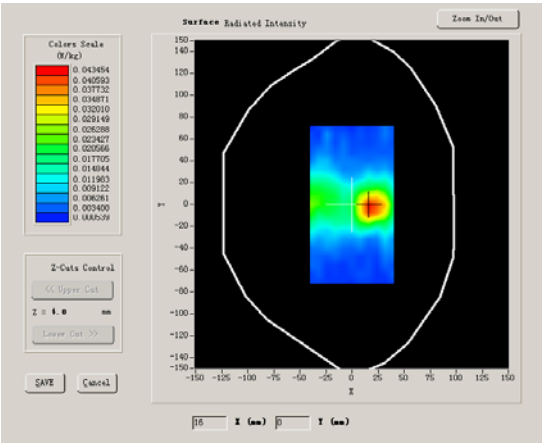
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	53.116001
Relative permittivity (imaginary	12.000000

part)	
Conductivity (S/m)	1.433467
Variation (%)	-3.470000

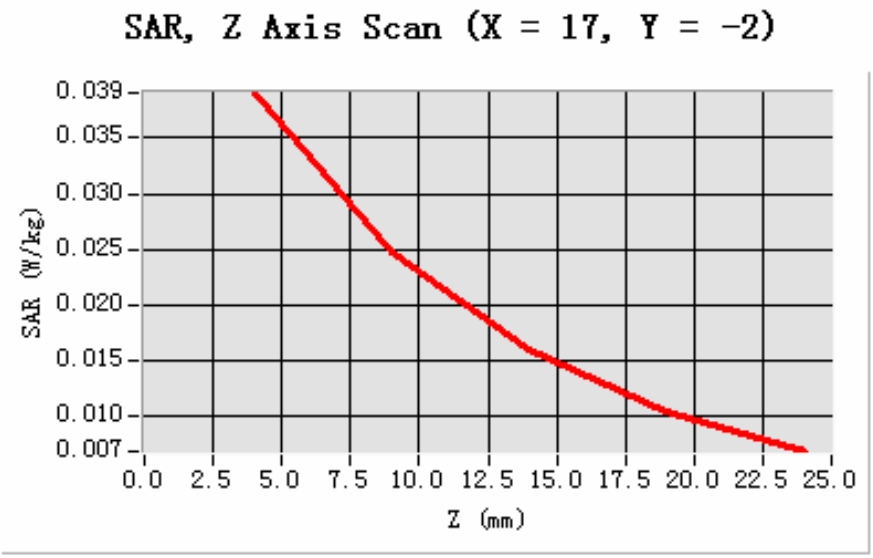
SURFACE SAR	VOLUME SAR
	

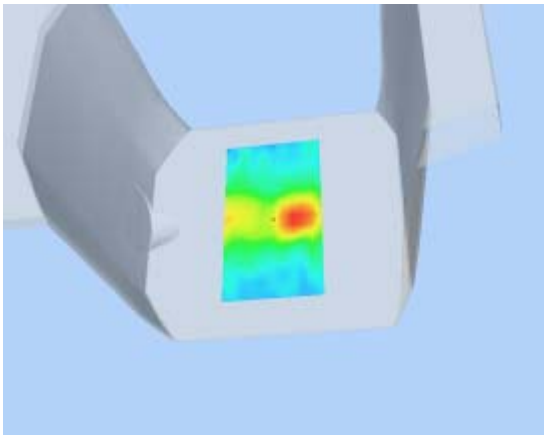
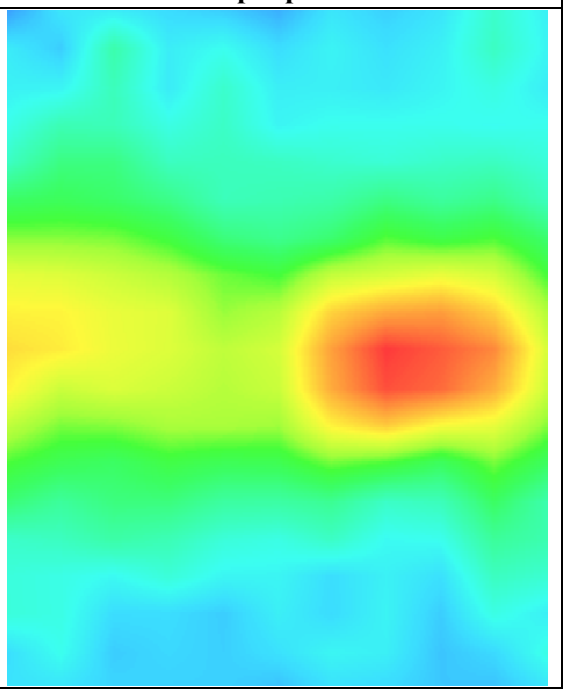
Maximum location: X=17.00, Y=-2.00

SAR 10g (W/Kg)	0.022764
SAR 1g (W/Kg)	0.036140

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0391	0.0248	0.0159	0.0105



3D sceen shot	Hot spot position
	

MEASUREMENT 31

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 5 minutes 30 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

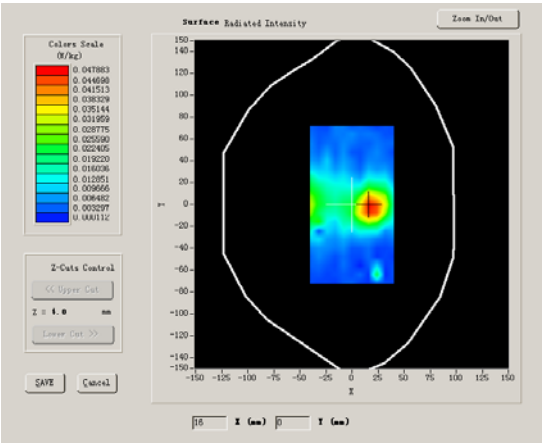
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.116001
Relative permittivity (imaginary	12.000000

part)	
Conductivity (S/m)	1.433467
Variation (%)	-4.470000

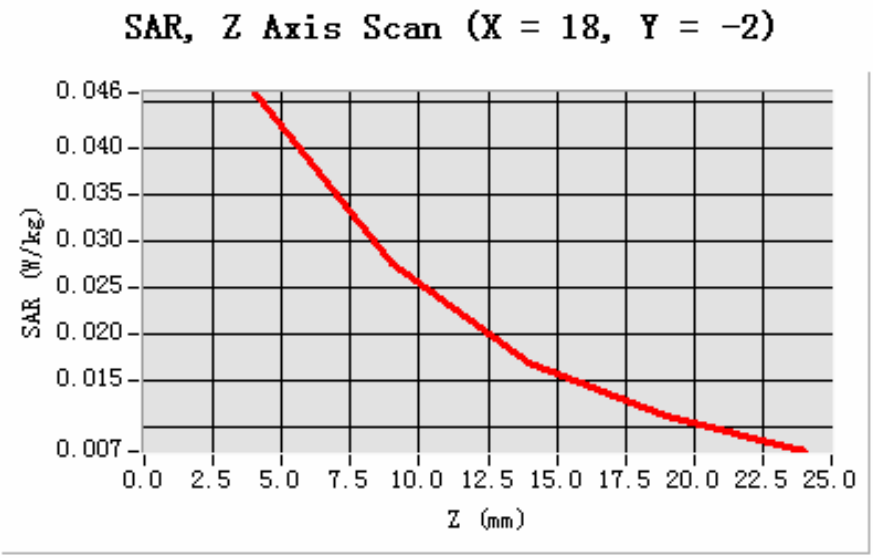
SURFACE SAR	VOLUME SAR
	

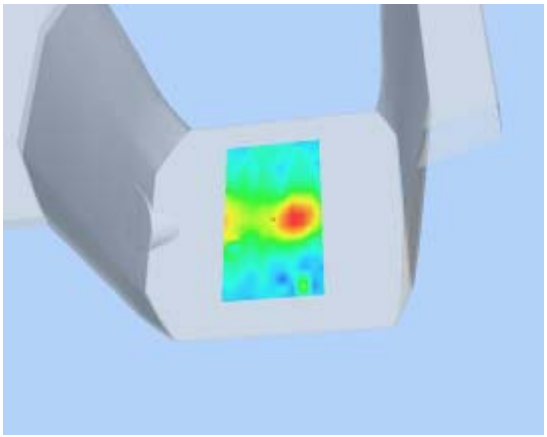
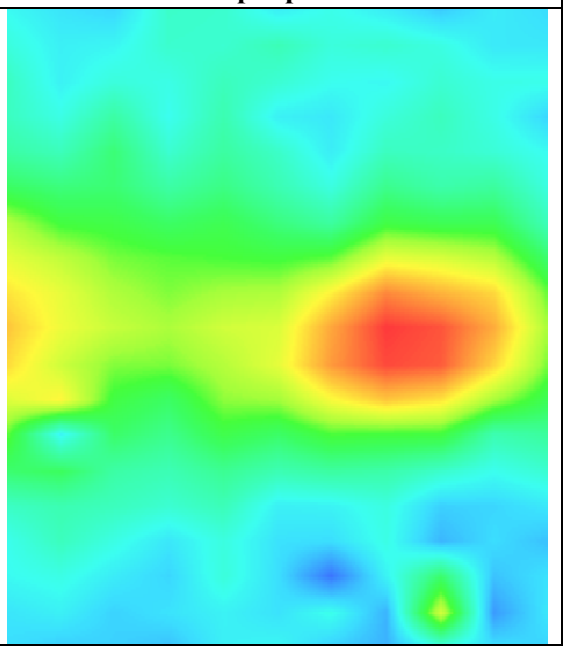
Maximum location: X=18.00, Y=-2.00

SAR 10g (W/Kg)	0.023827
SAR 1g (W/Kg)	0.042867

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0459	0.0275	0.0169	0.0110



3D sceen shot	Hot spot position
	

MEASUREMENT 32

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 5 minutes 19 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

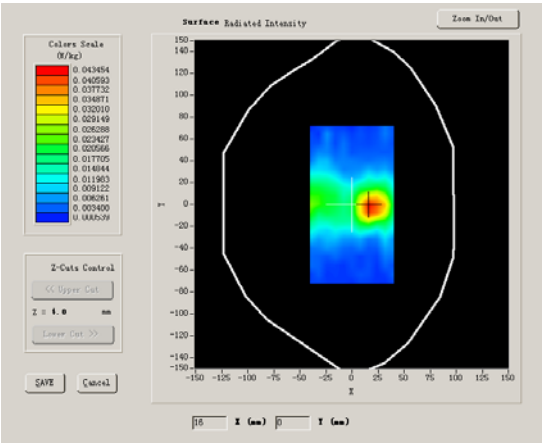
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	53.116001
Relative permittivity (imaginary	12.000000

part)	
Conductivity (S/m)	1.433467
Variation (%)	-3.470000

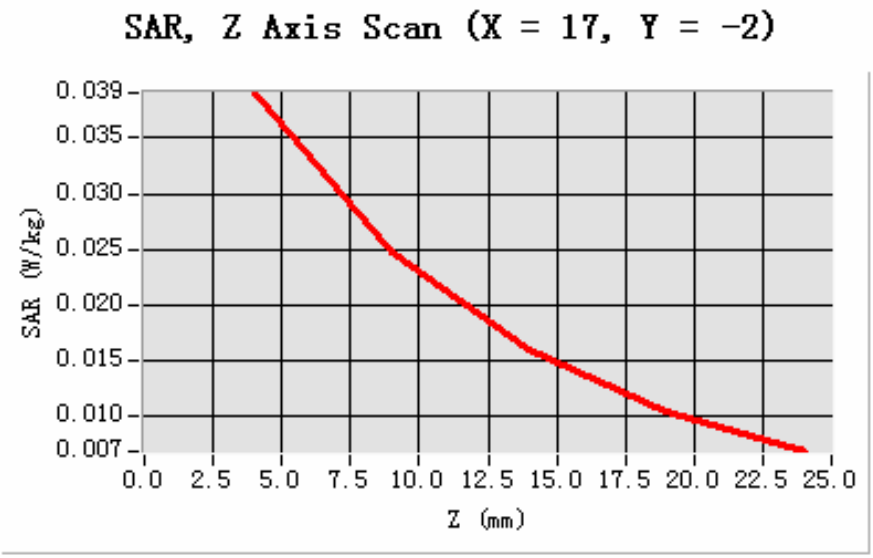
SURFACE SAR	VOLUME SAR
	

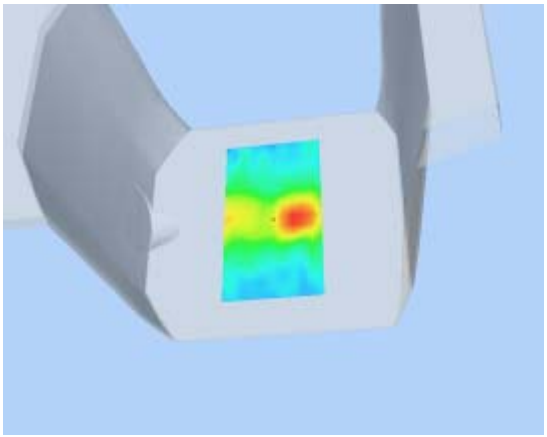
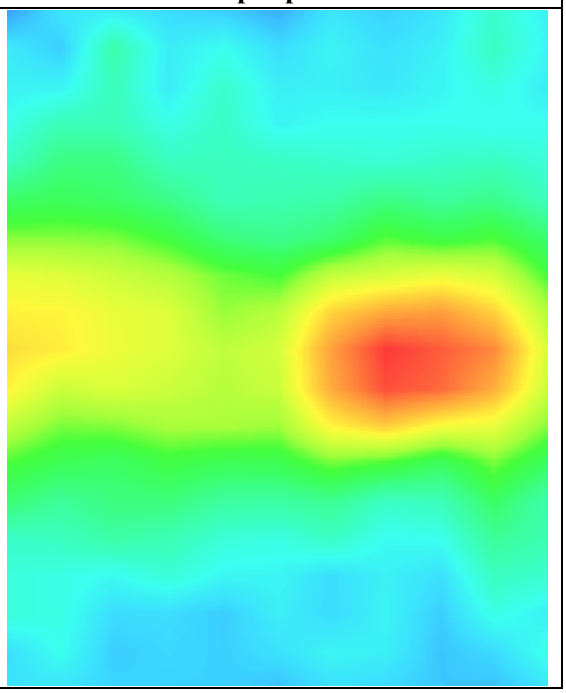
Maximum location: X=17.00, Y=-2.00

SAR 10g (W/Kg)	0.022764
SAR 1g (W/Kg)	0.075251

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0391	0.0248	0.0159	0.0105



3D sceen shot	Hot spot position
	

MEASUREMENT 33

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 22/12/2008

Measurement duration: 5 minutes 19 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

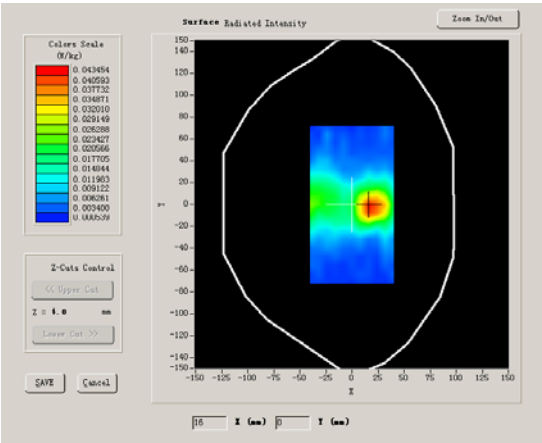
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	53.116001
Relative permittivity (imaginary	12.000000

part)	
Conductivity (S/m)	1.433467
Variation (%)	-3.470000

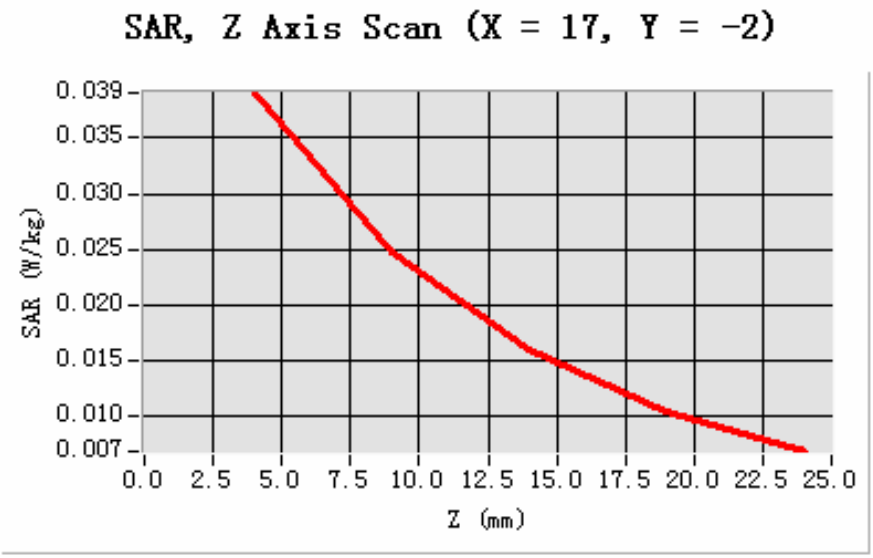
SURFACE SAR	VOLUME SAR
	

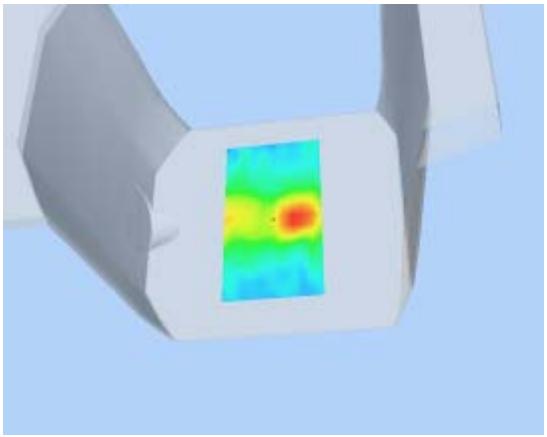
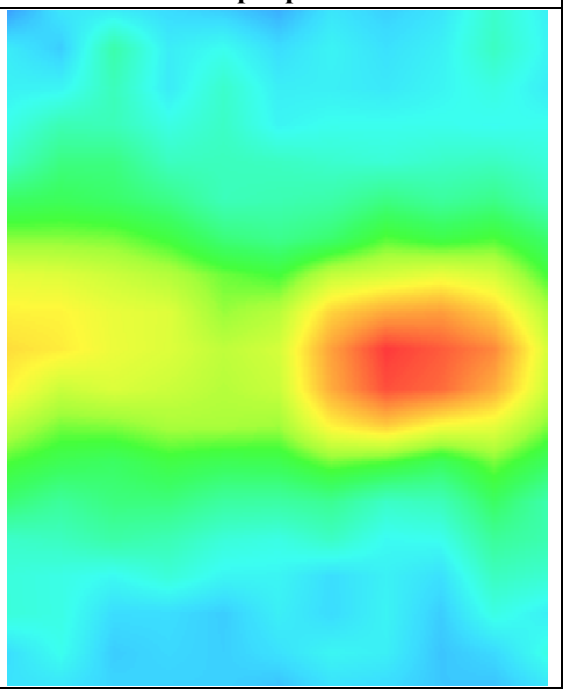
Maximum location: X=17.00, Y=-2.00

SAR 10g (W/Kg)	0.035514
SAR 1g (W/Kg)	0.056521

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0391	0.0248	0.0159	0.0105



3D sceen shot	Hot spot position
	

System Performance Check Data(835MHz Head)

Type: Validation measurement (Very fast, 27 points in the volume)

Date of measurement: 4/1/2009

Measurement duration: 5 minutes 27 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

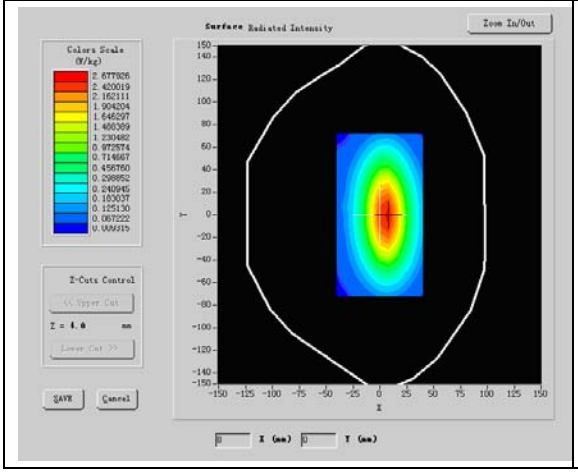
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM 835MHz
Channels	
Signal	GSM

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	835.00000
Relative permittivity (real part)	42.002541
Relative permittivity (imaginary	18.926250

part)	
Conductivity (S/m)	0.922145
Variation (%)	-0.050000

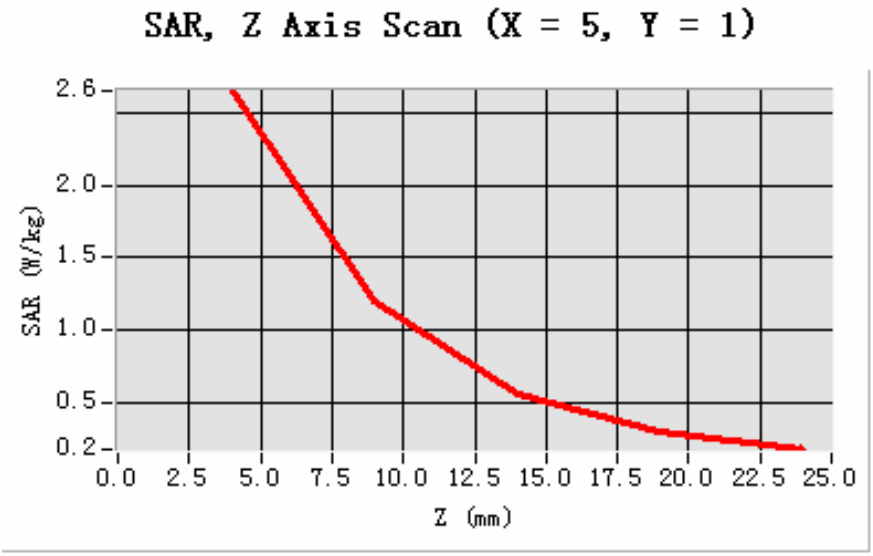
SURFACE SAR	VOLUME SAR
	

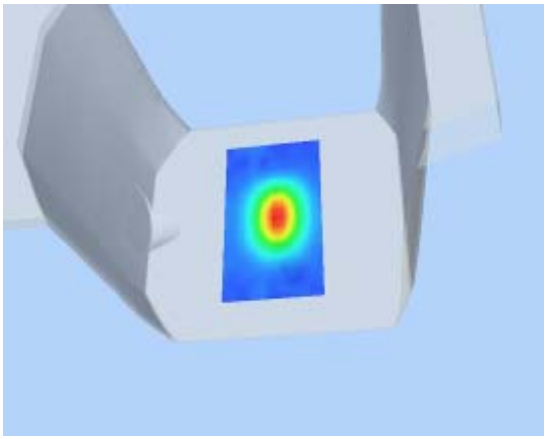
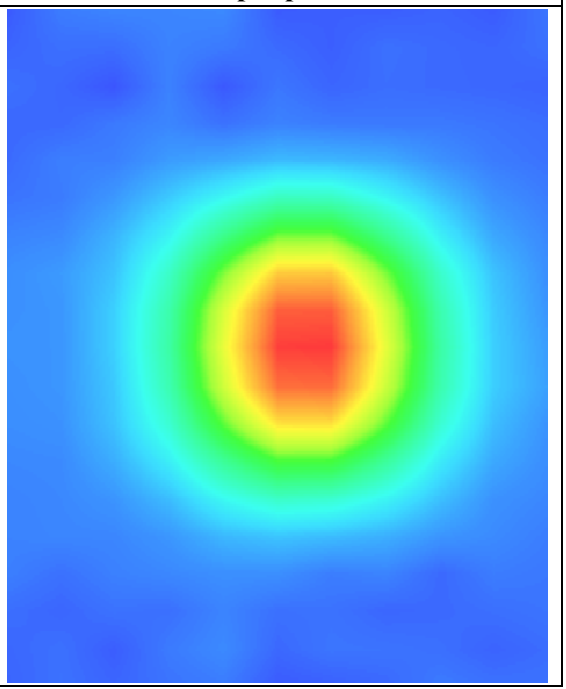
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	1.485212
SAR 1g (W/Kg)	2.824565

Z Axis Scan

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



3D sceen shot	Hot spot position
	

System Performance Check Data(835MHz Body)

Type: Validation measurement (Very fast, 27 points in the volume)

Date of measurement: 4/1/2009

Measurement duration: 5 minutes 27 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

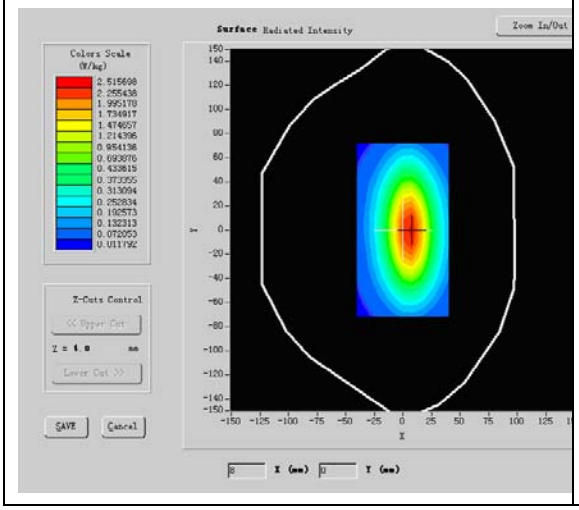
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM 835MHz
Channels	
Signal	GSM

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	835.000000
Relative permittivity (real part)	51.254412
Relative permittivity (imaginary	15.070000

part)	
Conductivity (S/m)	0.9552364
Variation (%)	-0.140000

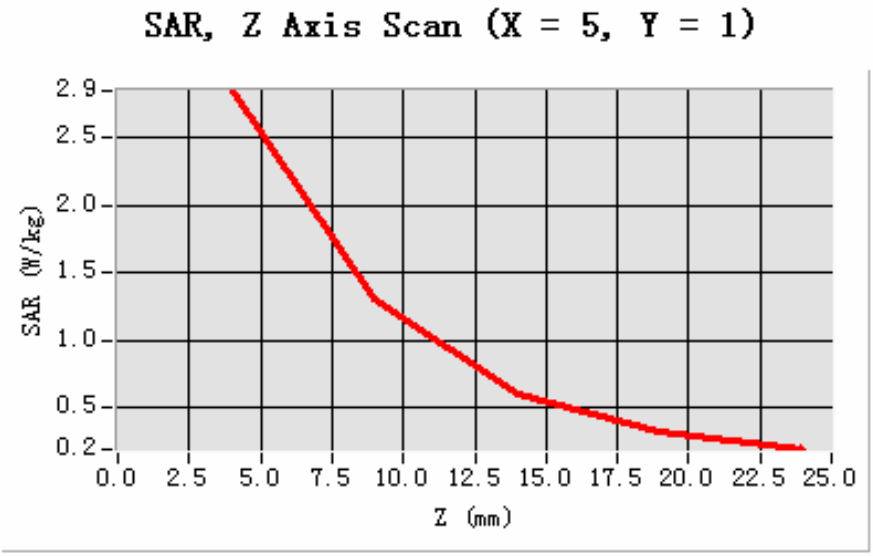
SURFACE SAR	VOLUME SAR
	

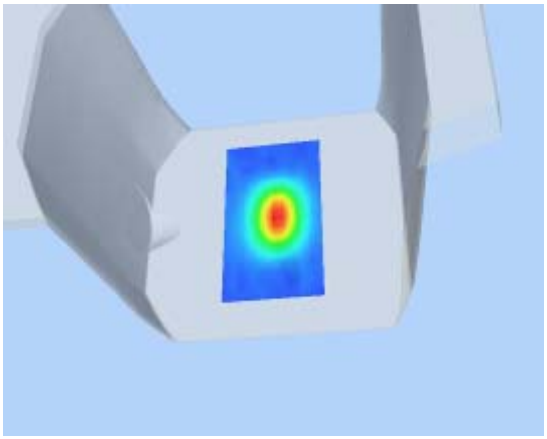
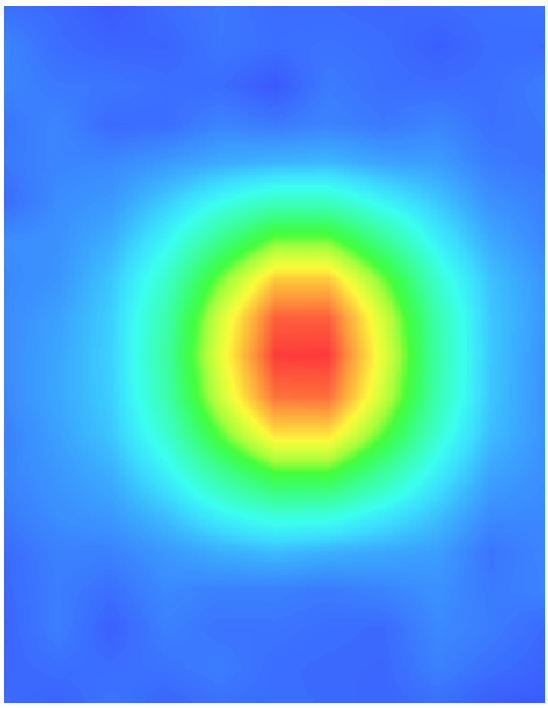
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	1.315524
SAR 1g (W/Kg)	2.655582

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



3D sceen shot	Hot spot position
	

System Performance Check Data(1900MHz Head)

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 4/1/2009

Measurement duration: 5 minutes 23 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

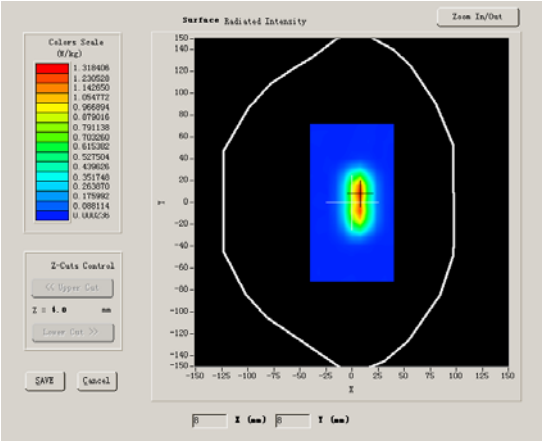
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	
Signal	GSM

B. SAR Measurement Results

Lower Band SAR:

Frequency (MHz)	1900.000000
Relative permittivity (real part)	39.521552
Relative permittivity (imaginary	12.991650

part)	
Conductivity (S/m)	1.400251
Variation (%)	0.570000

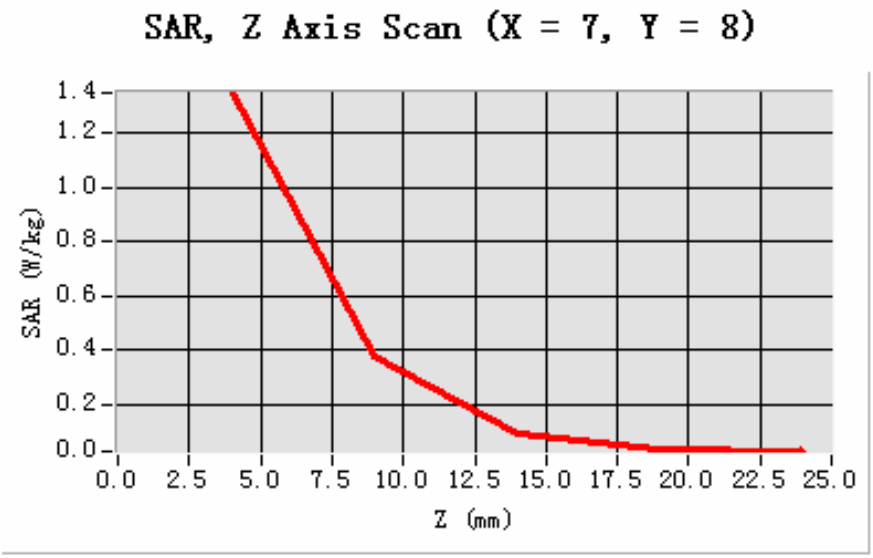
SURFACE SAR	VOLUME SAR
	

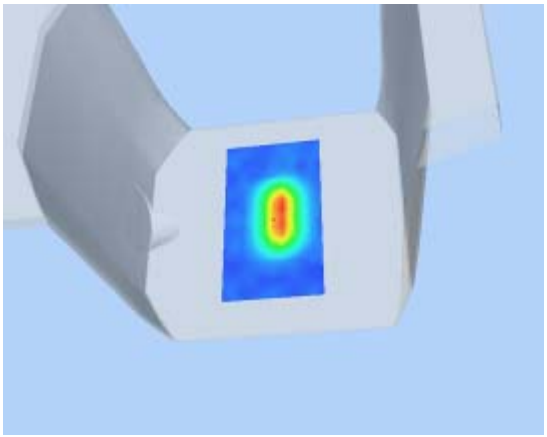
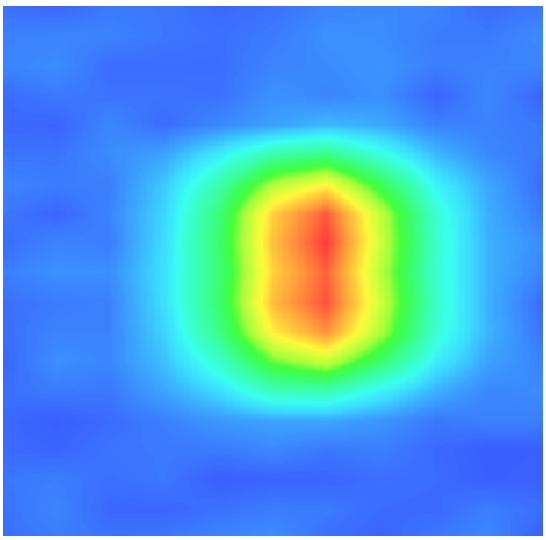
Maximum location: X=7.00, Y=8.00

SAR 10g (W/Kg)	6.558142
SAR 1g (W/Kg)	10.542022

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



3D sceen shot	Hot spot position
	

System Performance Check Data(1900MHz Body)

Type: Phone measurement (Very fast, 27 points in the volume)

Date of measurement: 4/1/2009

Measurement duration: 5 minutes 23 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

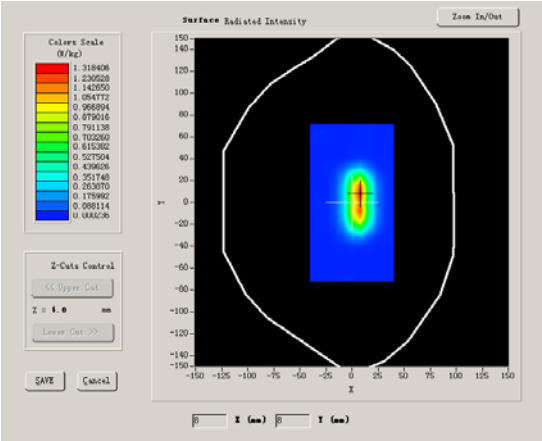
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR:

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

part)	
Conductivity (S/m)	1.395712
Variation (%)	0.570000

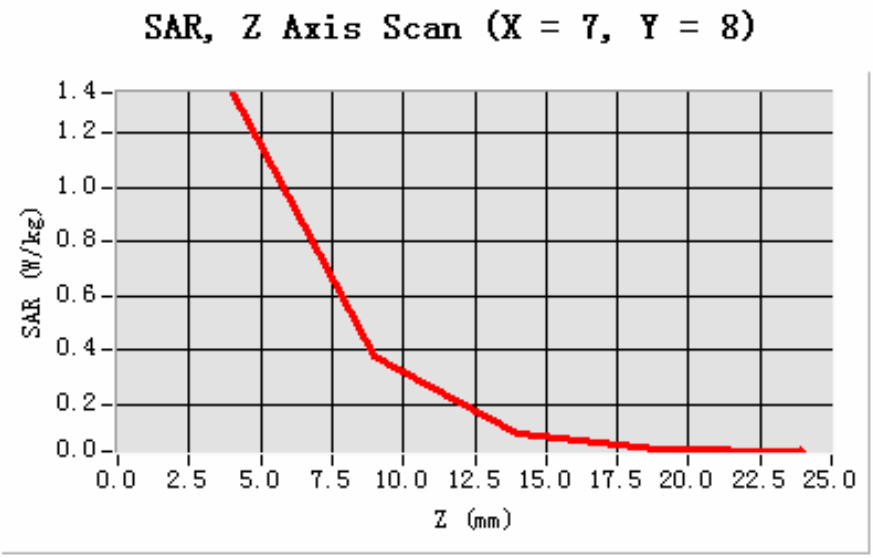
SURFACE SAR	VOLUME SAR
	

Maximum location: X=7.00, Y=8.00

SAR 10g (W/Kg)	6.025532
SAR 1g (W/Kg)	10.022512

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



3D sceen shot	Hot spot position