



FCC SAR

TEST REPORT

of

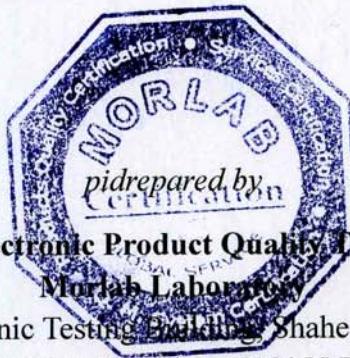
Ellipse Mobile Phone

Model Name: Ellipse
Trade Name: Neo Ellipse
Report No.: SZ08100119S01
FCC ID: WWF-NEOELLIPSE

prepared for

Neo DWC-LLC

Dubai Media City, Building #4, Office #314 Dubai, UAE P.O.Box-502266



Shenzhen Electronic Product Quality Testing Center

Morlab Laboratory
3/F, Electronic Testing Building, Shahe Road, Xili,
Nanshan District, Shenzhen, 518055 P. R. China

Tel: +86 755 86130398

Fax: +86 755 86130218



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1. 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

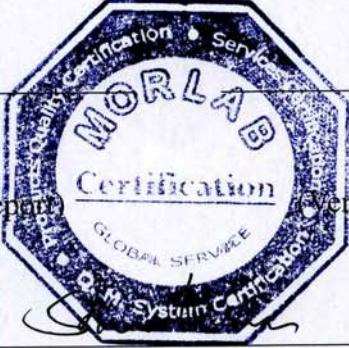
Report No.:	SZ08100119S01
Date of Issue:	Nov 28, 2008
Date of Tests:	Nov 18, 2008 – Nov 18, 2008
Responsible for Accreditation:	Mr. Shu Luan
Project Manager:	Li Lei
Deputy Project Manager:	Liao Jianming

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 have been performed successfully with the tested equipment.

li lei _____ *Jm lns* _____

Li Lei **Tested by**
(Responsible for the Test Report) Liao Jianming **Reviewed by**
(Verification of the Test Report)

A blue ink octagonal stamp with the text "MORLAB" in the center. Around the center, it says "Quality Certification • Service", "Certification", "GLOBAL SERVICE", and "System Certification". There are signatures over the lines on either side of the stamp.

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	Nuclides (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: Neo DWC-LLC
Address: Dubai Media City, Building #4, Office #314 Dubai, UAE
P.O.Box-502266
Contact Person: Amjad Ali
Telephone: +97143903921
Facsimile: +97143908280
E-mail: pallav@stuffbyneo.com

3.2. Identification of Manufacturer

Company Name: Neo DWC-LLC
Address: Dubai Media City, Building #4, Office #314 Dubai, UAE
P.O.Box-502266
Contact Person: Amjad Ali
Telephone: +97143903921
Facsimile: +97143908280
E-mail: pallav@stuffbyneo.com

3.3. Equipment Under Test (EUT)

Brand Name: Neo
Type Name: Neo Ellipse
Marking Name: Ellipse
Hardware Version: 819main 080807-00
Software Version: EL_JAV_AGEF_GO_OV_SP_V1_27
Frequency Bands: GSM 1900MHz
Modulation Mode: GMSK
Antenna type: Build inside
Accessories: Charger; Battery
Battery Model: TONGDA
Battery specification: 500mAh 3.7V
Development Stage: Identical Prototype

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	Serial Number	Hardware Version	Software Version
1#	/	819main 080807-00	EL_JAV_AGEF_GO_OV_SP_V1_27
2#	/	819main 080807-00	EL_JAV_AGEF_GO_OV_SP_V1_27
3#	/	819main 080807-00	EL_JAV_AGEF_GO_OV_SP_V1_27

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 Techniques.

4.2. Test Environment/Conditions

Normal Temperature (NT):	20 ... 25 °C
Relative Humidity:	30 ... 75 %
Air Pressure:	980 ... 1020 hPa
Normal Voltage of the EUT:	Normal Voltage (NV) = 3.70V
Test frequency:	GSM 1900MHz (Low/Mid/High Channel: 1850.2MHz,1880MHz,1909.8MHz)
Operation mode:	Call established
Power Level:	Maximum output power(PCL 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 512, 661 and 810 respectively in the case of GSM 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

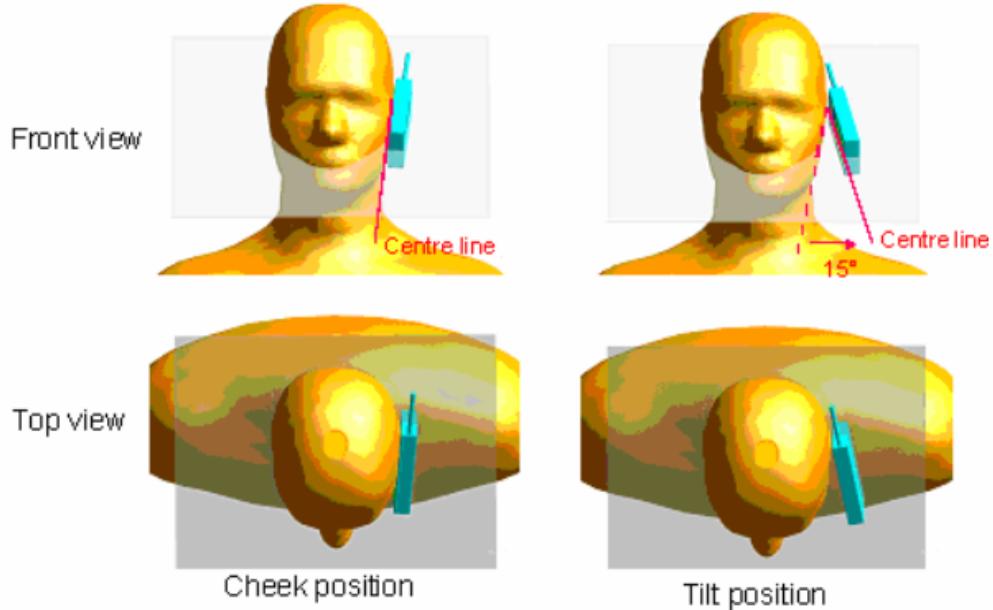
I.1. Normative reference

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:

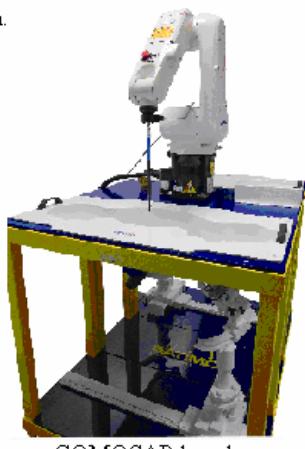
The mobile phone is well place in the “cheek” position as described above. Then the mobile phone is moved outward away from the mouth by an angle of 15 degrees or until contact with the ear lost.

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.



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.

III.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.

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

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

4.3.3. Uncertainty Assessment

The following table includes the uncertainty table of the IEEE 1528.

The values are determined by Antennessa.

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	$(1 \cdot c_p)^{1/2}$	$(1 \cdot c_p)^{1/2}$	1.02	1.02	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	$\sqrt{c_p}$	$\sqrt{c_p}$	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 Algorithms 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)	
1900MHz	39.7 W/Kg	42.00(head)	41.28body)

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	1900 MHZ	40	1.40
Validation value (Nov 18)	1900 MHZ	39.993999	1.436111

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

Table 2: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 23.0~23.8°C, humidity: 54~60%.			
/	Frequency	Permittivity ϵ	Conductivity σ (S/m)
Target value	1900 MHz	53.3	1.52
Validation value (Nov 18)	1900 MHz	51.540001	1.573978

4.3.6. Simulant liquids

Simulant liquids that are used for testing at frequencies of GSM 1900MHz, which are made mainly of sugar, salt and water solutions may be left in the phantoms. Approximately 20litres are needed for an upright head compared to about 20litres for a horizontal bath phantom.

Ingredients (% by weight)	Frequency Band	
	1900MHz	
Tissue Type	Head	Body
Water	55.36	40.4
Salt(NaCl)	0.35	0.5
Sugar	0.0	58.0
HEC	0.0	1.0
Triton	30.45	0.0
DGBE	13.84	0.0
Acticide SPX	0.0	0.0
Dielectric Constant	39.13	52.99
Conductivity (S/m)	1.43	1.32

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

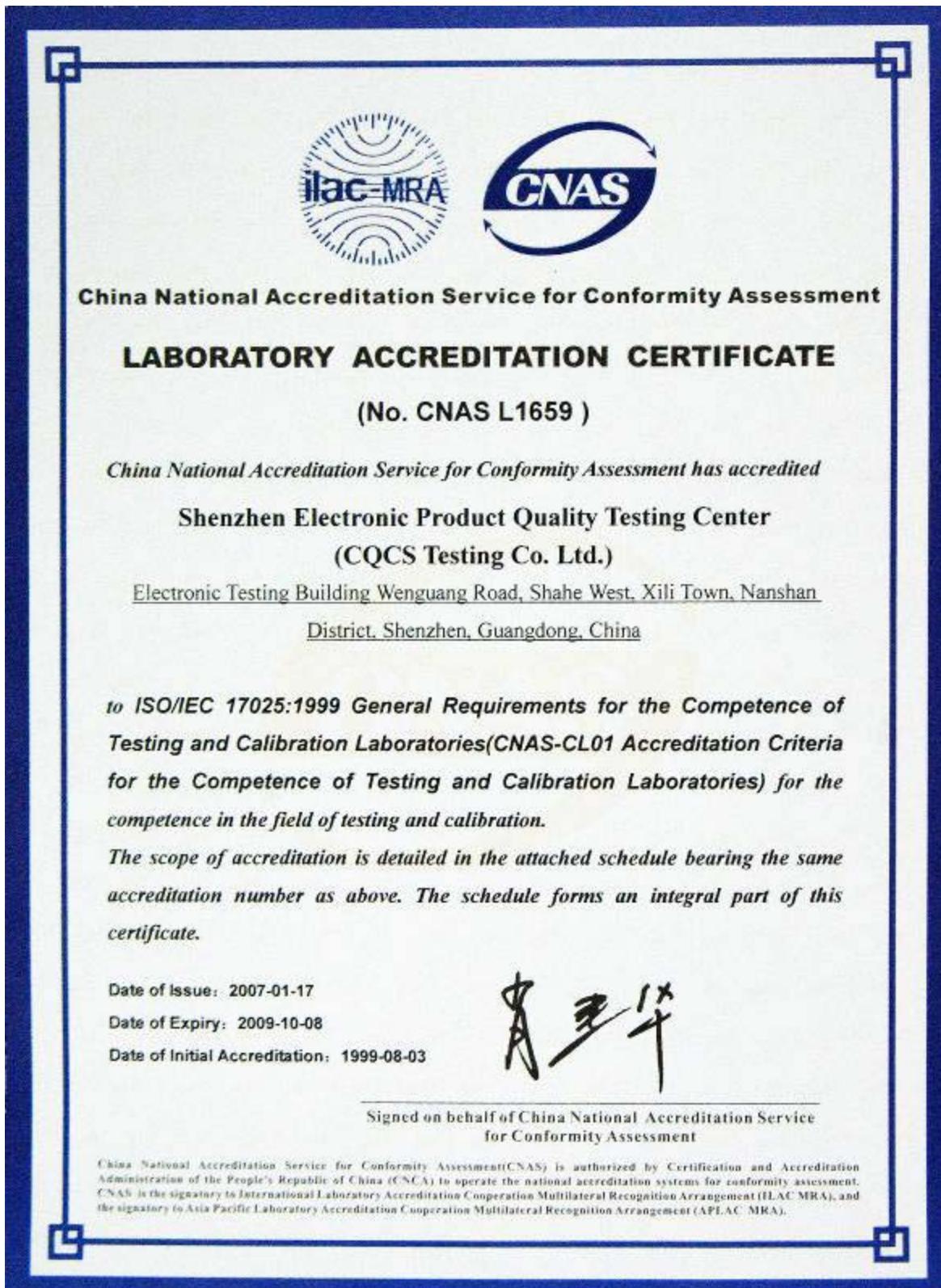
Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
Left head, Touch cheek, Channel Low	1.193	27.93
Left head, Touch cheek, Channel Middle	1.457	27.97
Left head, Touch cheek, Channel High	1.386	28.58
Left head, Tilt 15 Degree, Channel Low	1.052	27.93
Left head, Tilt 15 Degree, Channel Middle	1.201	27.97
Left head, Tilt 15 Degree, Channel High	1.026	28.58
Right head, Touch cheek, Channel Low	1.065	27.93
Right head, Touch cheek, Channel Middle	1.379	27.97
Right head, Touch cheek, Channel High	1.364	28.58
Right head, Tilt 15 Degree, Channel Low	0.757	27.93
Right head, Tilt 15 Degree, Channel Middle	1.043	27.97
Right head, Tilt 15 Degree, Channel High	0.863	28.58
Left head, Touch cheek, Channel Middle (with GPRS)	1.175	27.97

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

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
Side, Low frequency	1 g Average (W/kg)	Power level (dBm)
Side, Middle frequency	0.894	27.97
Side, High frequency	0.831	28.58
Side , Middle frequency(with Headphone)	0.295	27.97
Side , Middle frequency(back)	0.345	27.97

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



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



7 Side Position EUT with Headphone



Annex C Graph Test Results

<u>TYPE</u>	<u>BAND</u>	<u>PARAMETERS</u>
	--	
	--	
GSM1900		<p><u>Measurement 1:</u> Right Head with Cheek device position on Low Channel in TDMA mode</p> <p><u>Measurement 2:</u> Right Head with Cheek device position on Middle Channel in TDMA mode</p> <p><u>Measurement 3:</u> Right Head with Cheek device position on High Channel in TDMA mode</p> <p><u>Measurement 4:</u> Right Head with Tilt device position on Low Channel in TDMA mode</p> <p><u>Measurement 5:</u> Right Head with Tilt device position on Middle Channel in TDMA mode</p> <p><u>Measurement 6:</u> Right Head with Tilt device position on High Channel in TDMA mode</p> <p><u>Measurement 7:</u> Left Head with Cheek device position on Low Channel in TDMA mode</p> <p><u>Measurement 8:</u> Left Head with Cheek device position on Middle Channel in TDMA mode</p> <p><u>Measurement 9:</u> Left Head with Cheek device position on High Channel in TDMA mode</p> <p><u>Measurement 10:</u> Left Head with Tilt device position on Low Channel in TDMA mode</p> <p><u>Measurement 11:</u> Left Head with Tilt device position on Middle Channel in TDMA mode</p> <p><u>Measurement 12:</u> Left Head with Tilt device position on High Channel in TDMA mode</p> <p><u>Measurement 13:</u> Right Head with Cheek device position on Middle Channel in TDMA mode (with GPRS)</p> <p><u>Measurement 14:</u> Validation Plane with Body device position on Low Channel in TDMA mode</p> <p><u>Measurement 15:</u> Validation Plane with Body device position on Middle Channel in TDMA mode</p> <p><u>Measurement 16:</u> Validation Plane with Body device position on High Channel in TDMA mode</p> <p><u>Measurement 17:</u> Validation Plane with Body device</p>

	position on High Channel in TDMA mode (with Headphone) (back) <u>Measurement 18:</u> 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: 18/11/2008

Measurement duration: 3 minutes 45 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

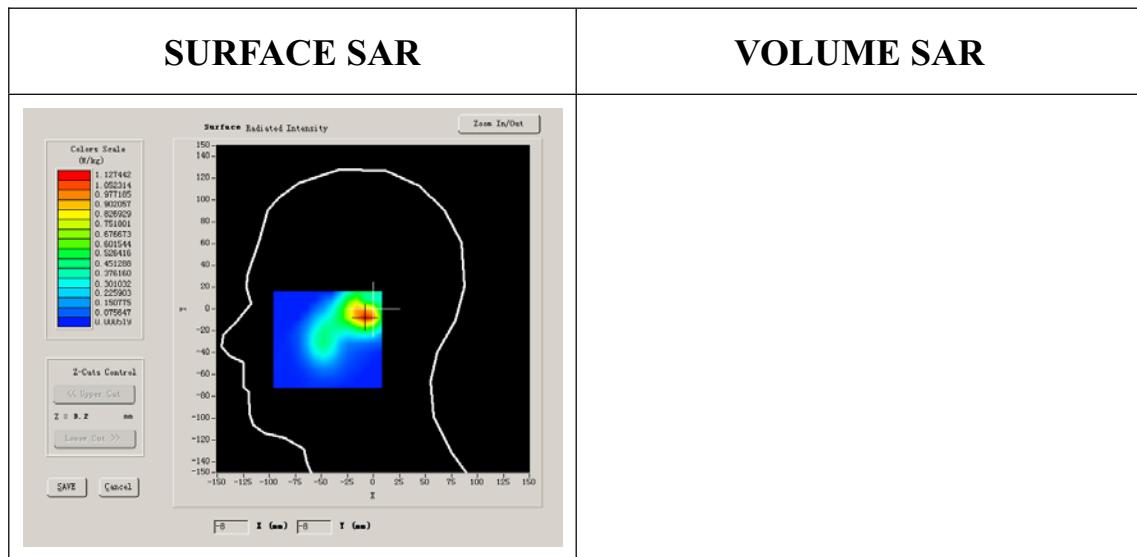
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.400024
Relative permittivity (real part)	39.993999
Relative permittivity (imaginary)	12.991650

part)	
Conductivity (S/m)	1.335542
Variation (%)	0.180000



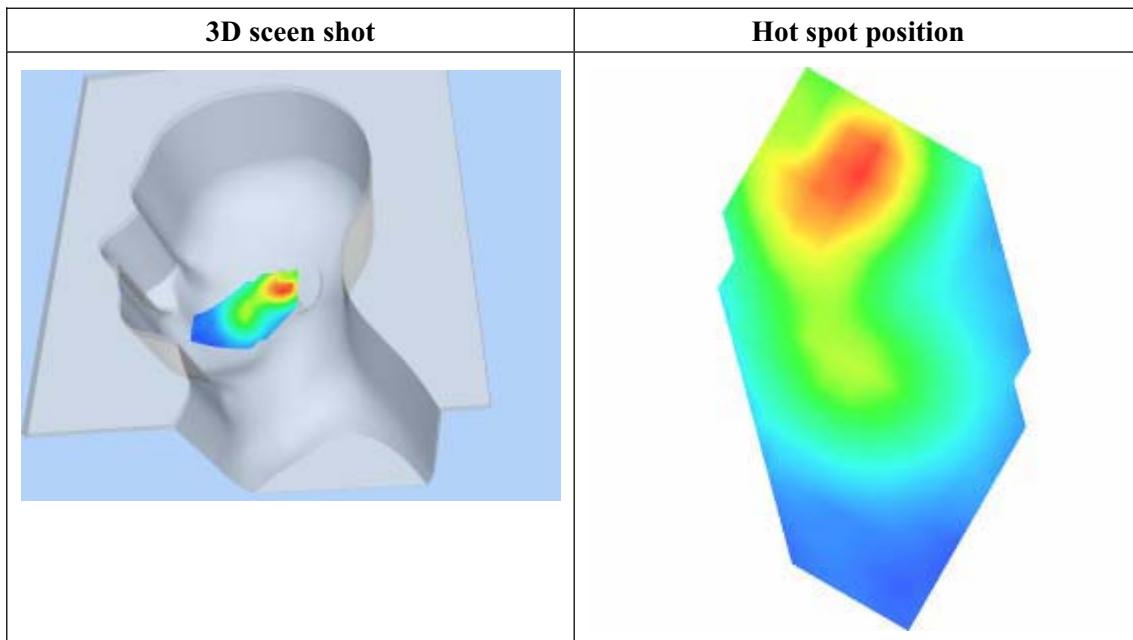
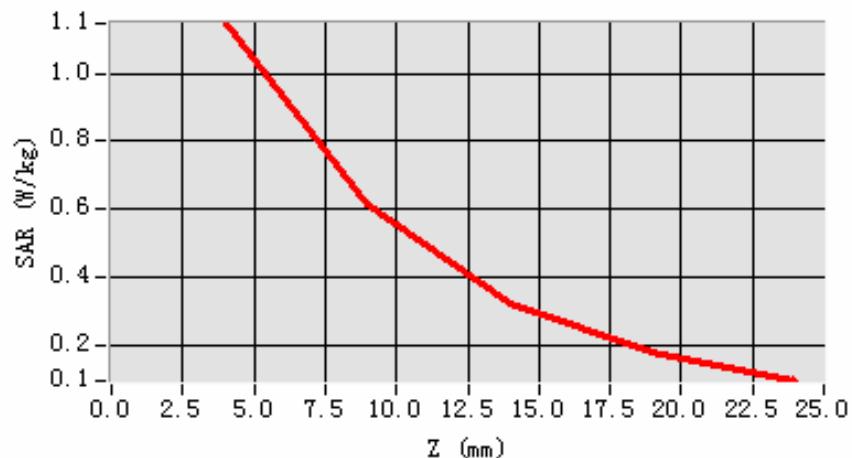
Maximum location: X=-7.00, Y=-7.00

SAR 10g (W/Kg)	0.553902
SAR 1g (W/Kg)	1.065618

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.1456	0.6133	0.3276	0.1824

SAR, Z Axis Scan (X = -7, Y = -7)



MEASUREMENT 2

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 44 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

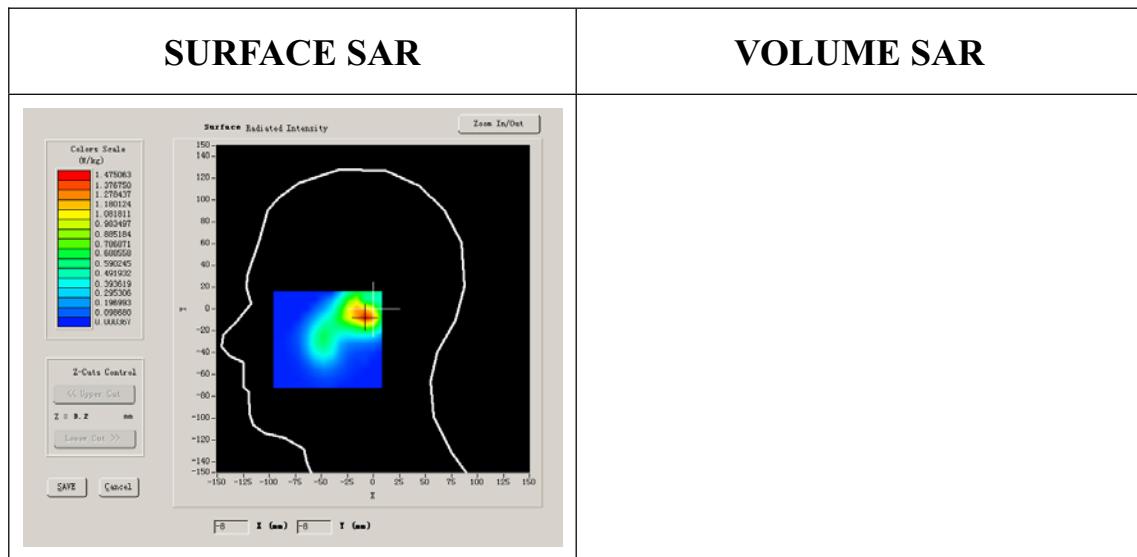
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

part)	
Conductivity (S/m)	1.436111
Variation (%)	-1.310000

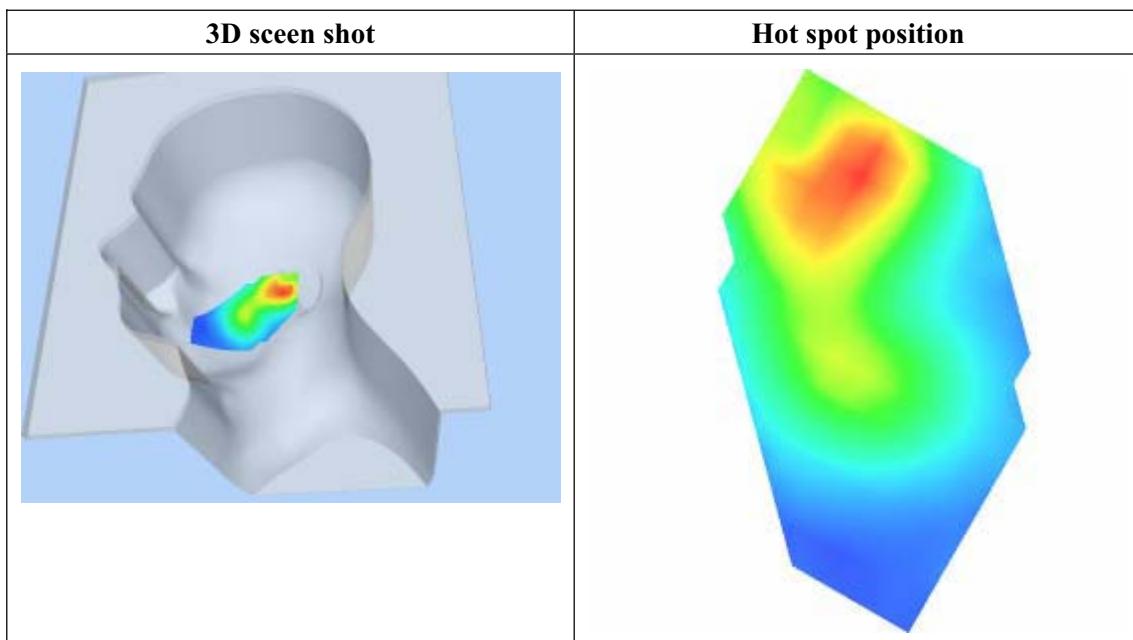
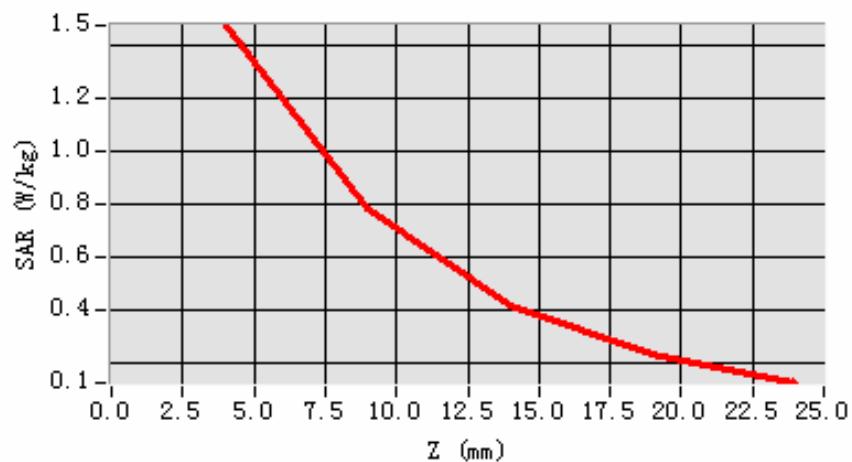


Maximum location: X=-8.00, Y=-7.00

SAR 10g (W/Kg)	0.720610
SAR 1g (W/Kg)	1.379045

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.4718	0.7817	0.4137	0.2282

SAR, Z Axis Scan (X = -8, Y = -7)

MEASUREMENT 3

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 45 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

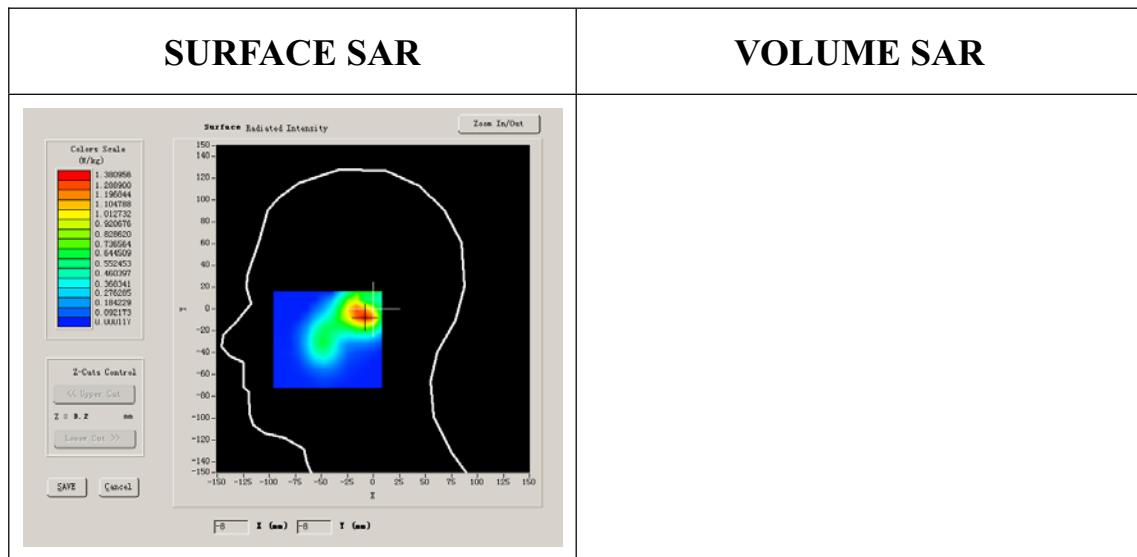
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	39.929001
Relative permittivity (imaginary)	13.156500

part)	
Conductivity (S/m)	1.395758
Variation (%)	-0.520000

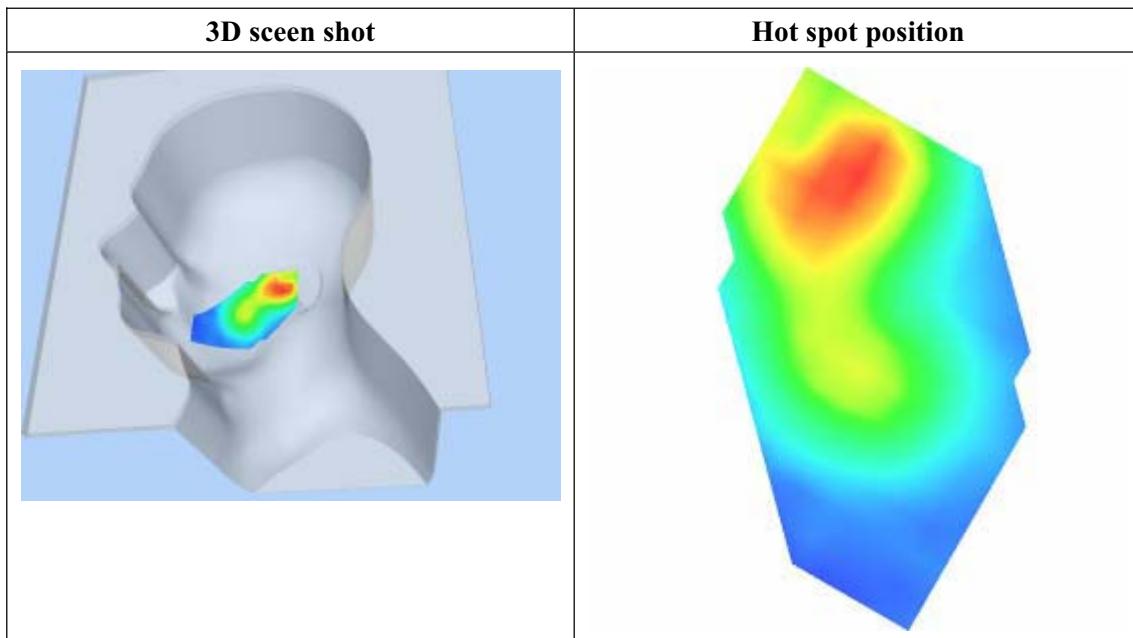
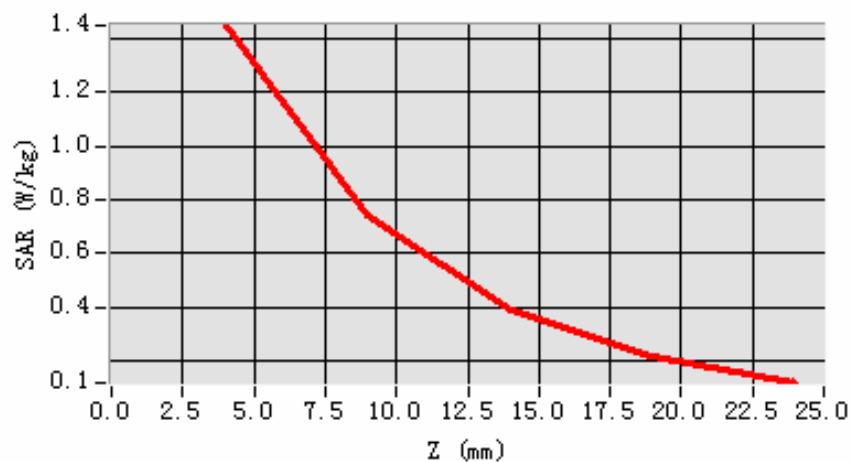


Maximum location: X=-8.00, Y=-7.00

SAR 10g (W/Kg)	0.708355
SAR 1g (W/Kg)	1.364086

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.4464	0.7463	0.3870	0.2148

SAR, Z Axis Scan (X = -8, Y = -7)

MEASUREMENT 4

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 46 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

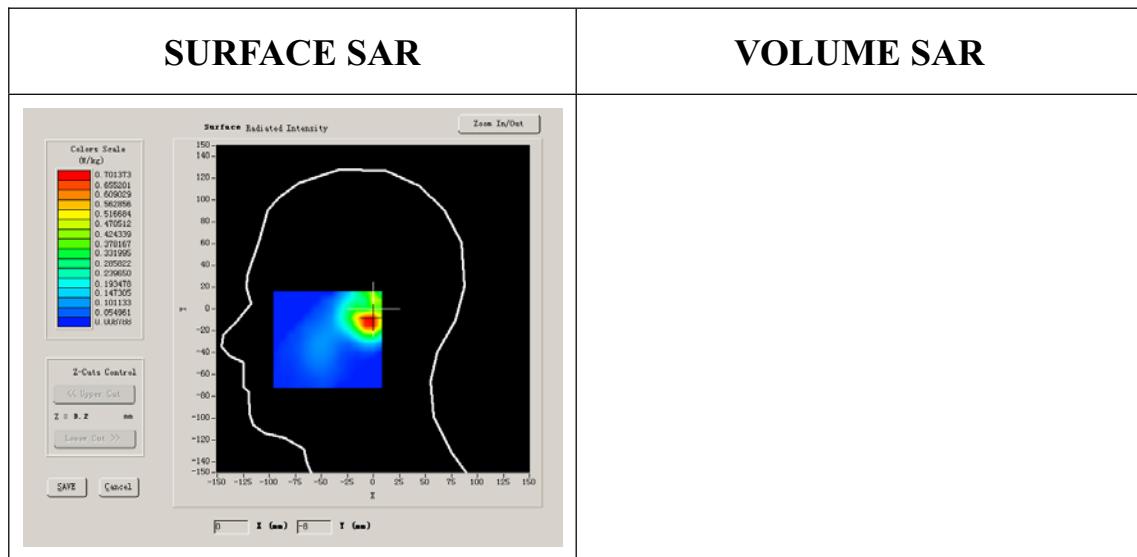
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.400024
Relative permittivity (real part)	39.993999
Relative permittivity (imaginary)	12.991650

part)	
Conductivity (S/m)	1.335542
Variation (%)	0.410000

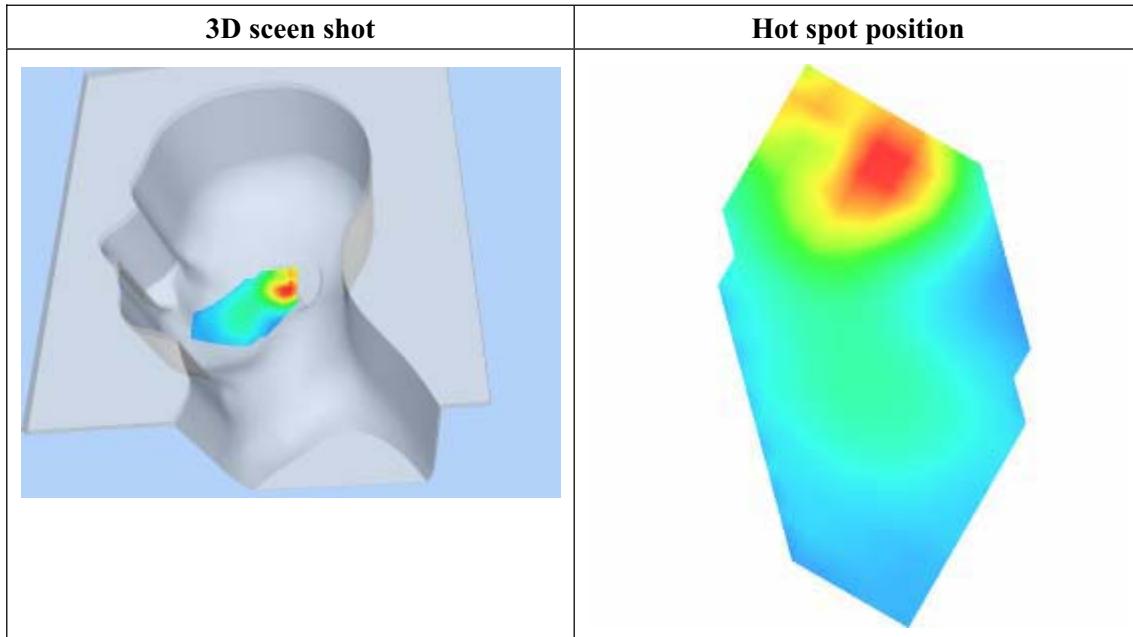
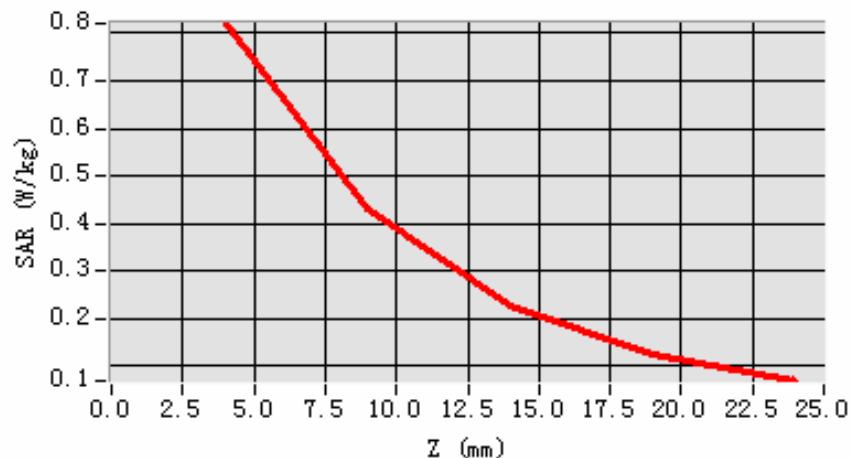


Maximum location: X=-3.00, Y=-11.00

SAR 10g (W/Kg)	0.376269
SAR 1g (W/Kg)	0.757855

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.8206	0.4315	0.2269	0.1257

SAR, Z Axis Scan (X = -3, Y = -11)

MEASUREMENT 5

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 47 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

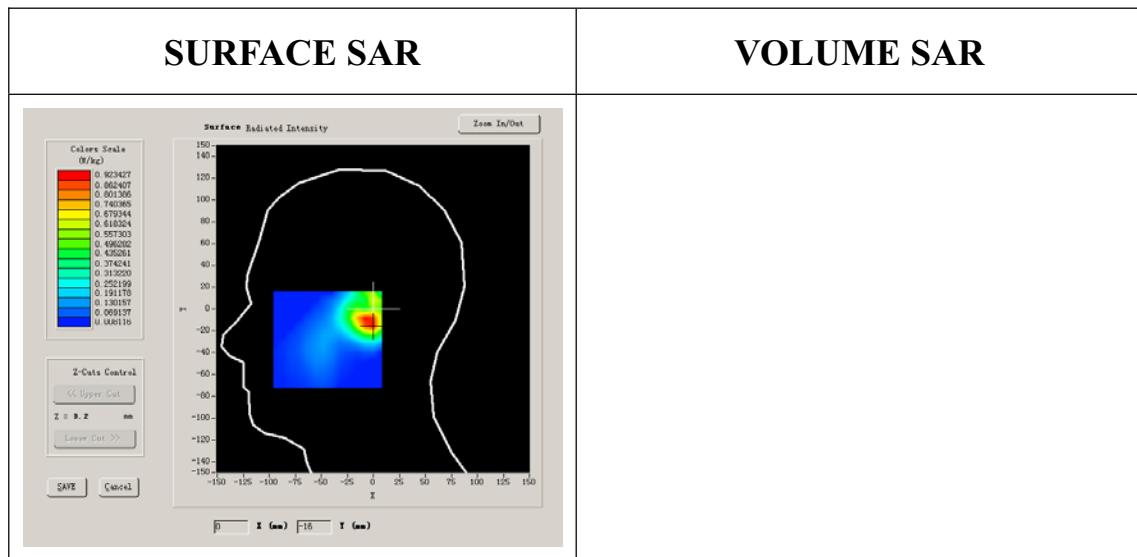
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA

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 (%)	0.460000

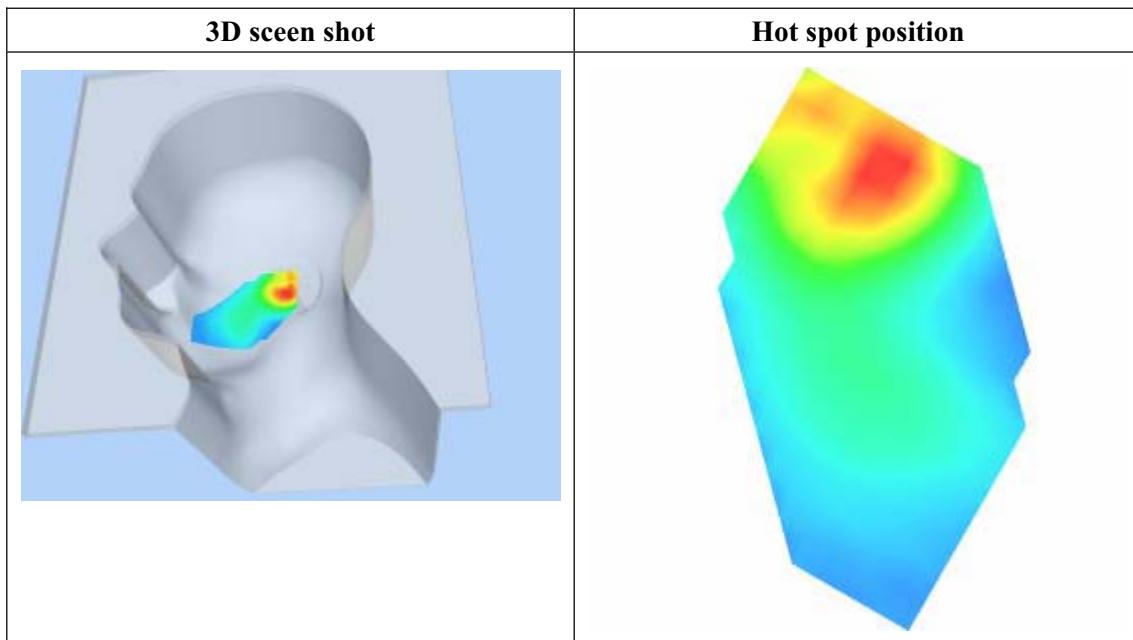
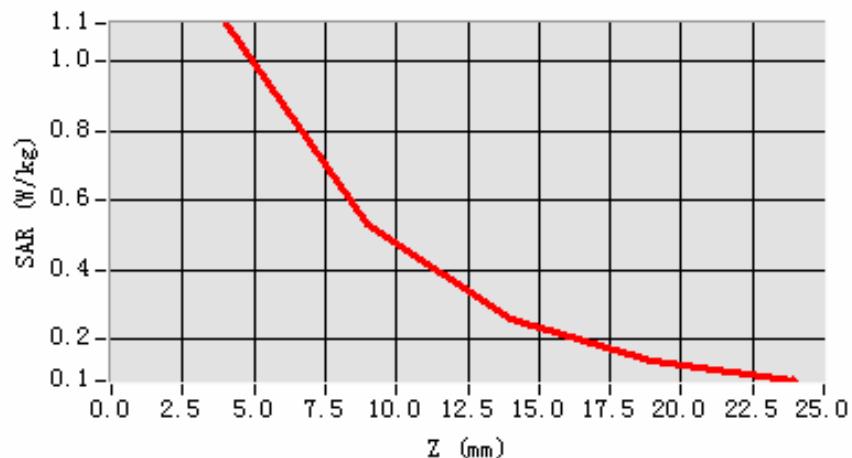


Maximum location: X=-2.00, Y=-13.00

SAR 10g (W/Kg)	0.504450
SAR 1g (W/Kg)	1.043825

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.1104	0.5329	0.2582	0.1397

SAR, Z Axis Scan (X = -2, Y = -13)

MEASUREMENT 6

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 46 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

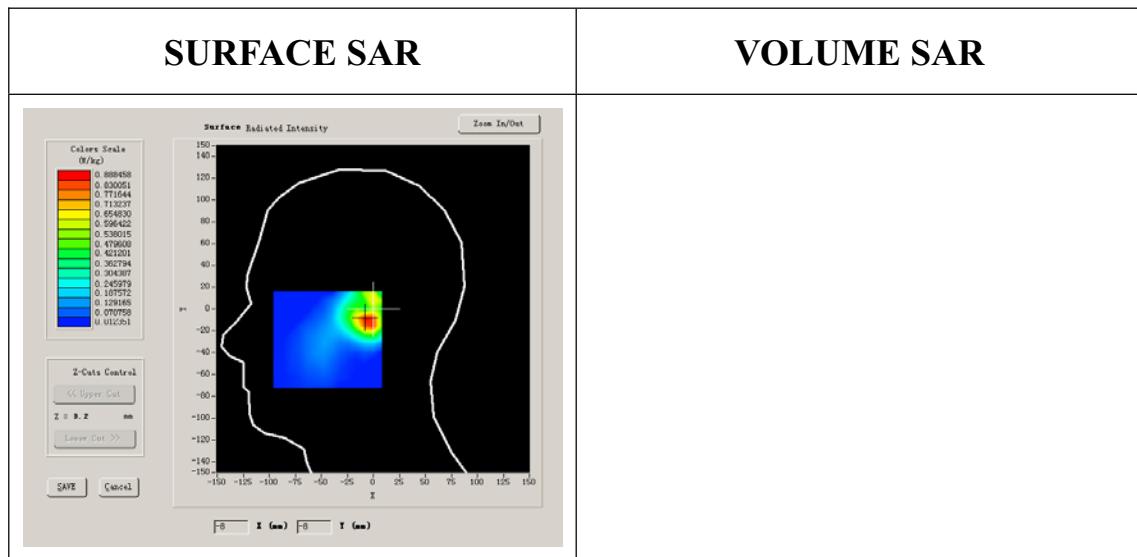
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	39.929001
Relative permittivity (imaginary)	13.156500

part)	
Conductivity (S/m)	1.395758
Variation (%)	-0.690000

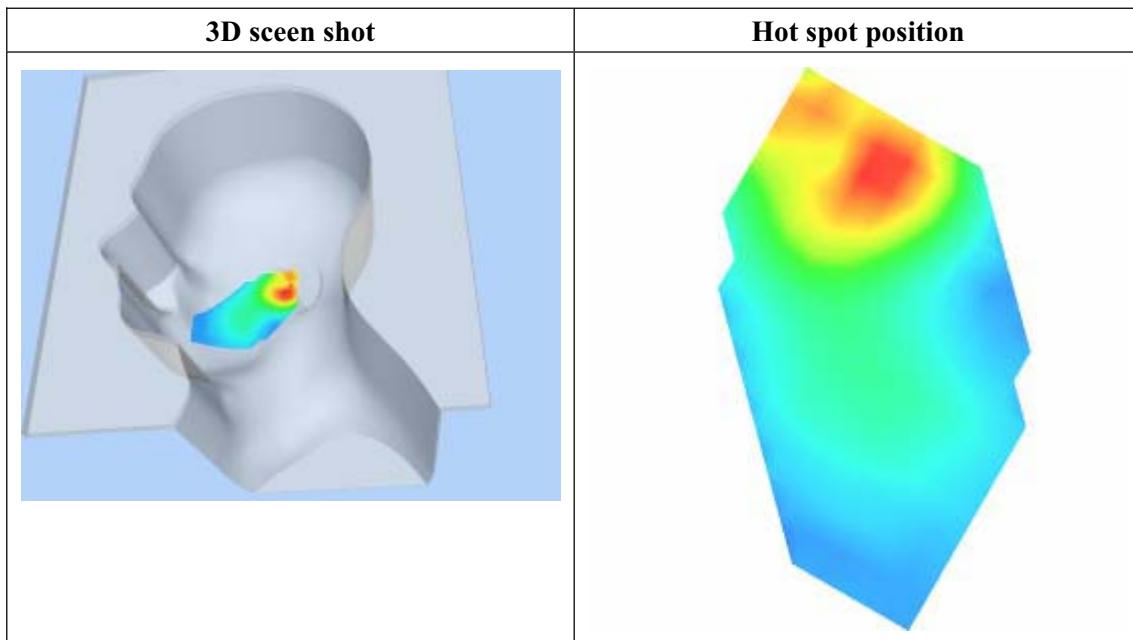
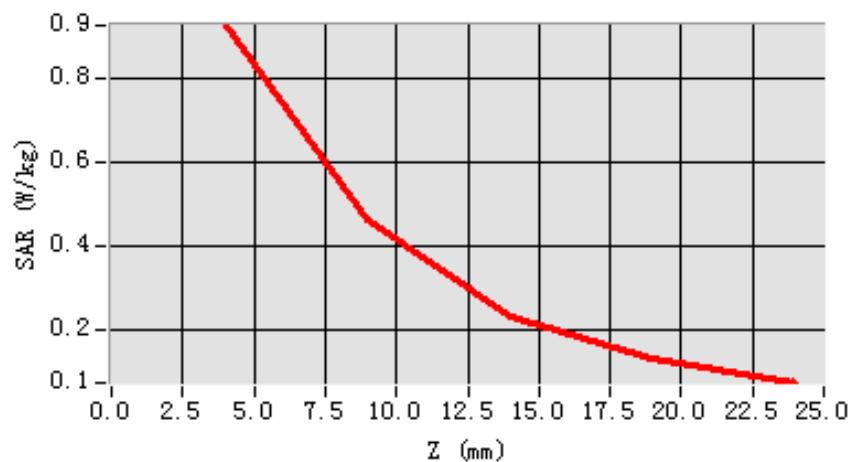


Maximum location: X=-6.00, Y=-10.00

SAR 10g (W/Kg)	0.438038
SAR 1g (W/Kg)	0.863100

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.9237	0.4622	0.2334	0.1289

SAR, Z Axis Scan (X = -6, Y = -10)

MEASUREMENT 7

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 47 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

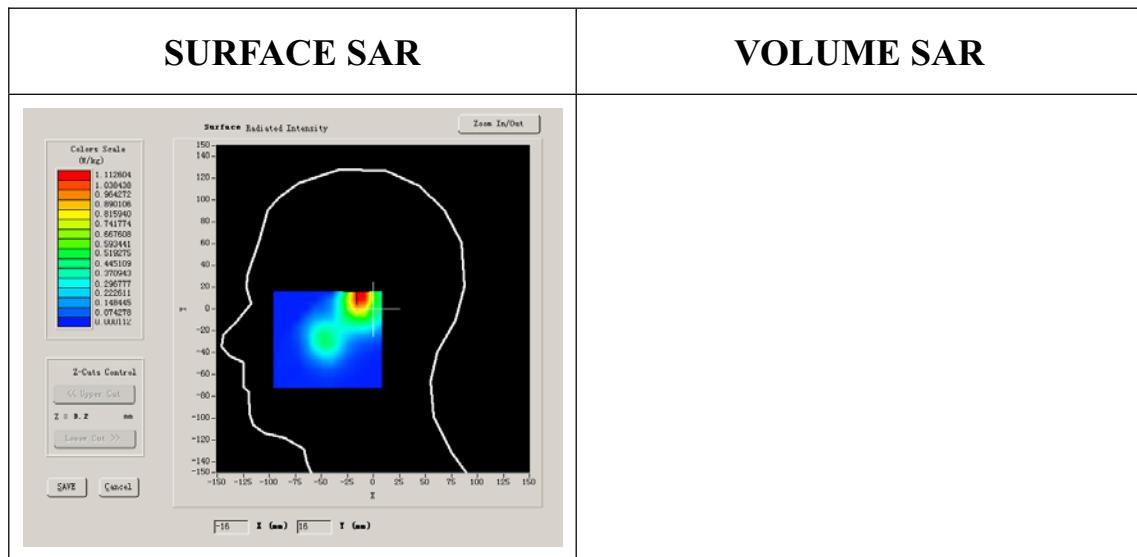
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.400024
Relative permittivity (real part)	39.993999
Relative permittivity (imaginary)	12.991650

part)	
Conductivity (S/m)	1.335542
Variation (%)	-1.630000

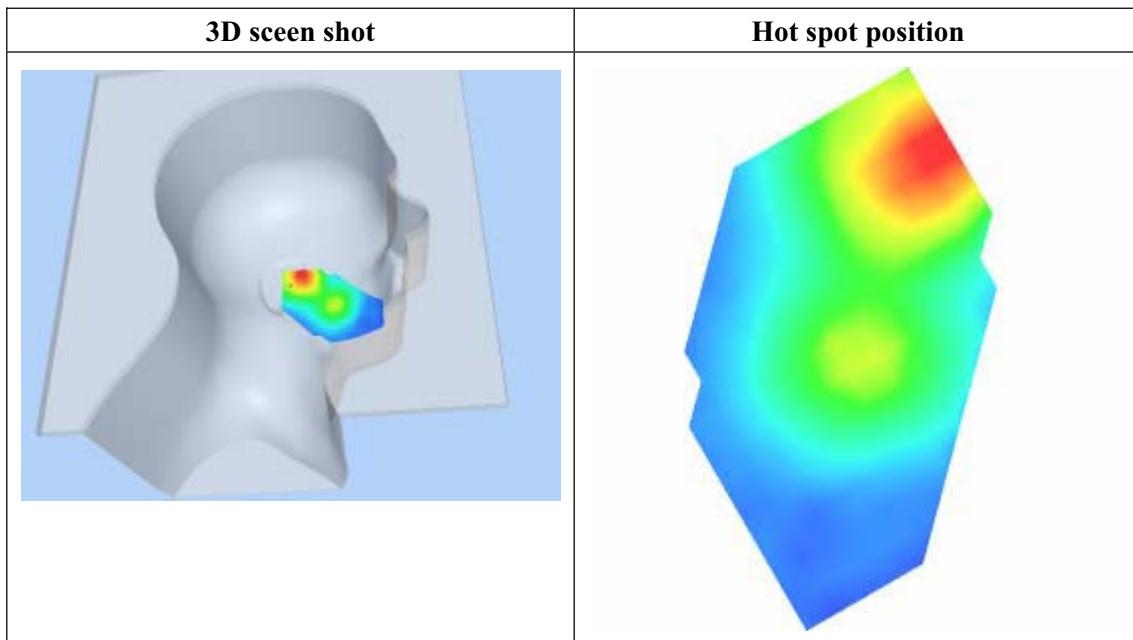
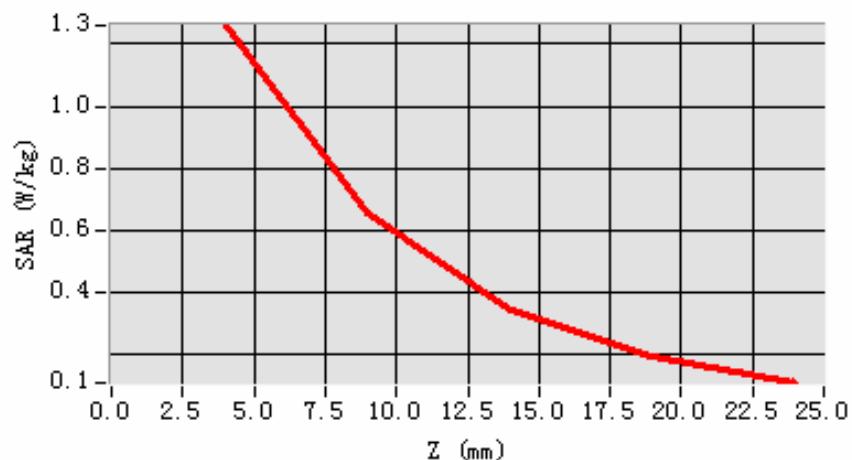


Maximum location: X=-13.00, Y=14.00

SAR 10g (W/Kg)	0.593207
SAR 1g (W/Kg)	1.193490

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.2602	0.6561	0.3430	0.1910

SAR, Z Axis Scan (X = -13, Y = 14)

MEASUREMENT 8

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 45 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

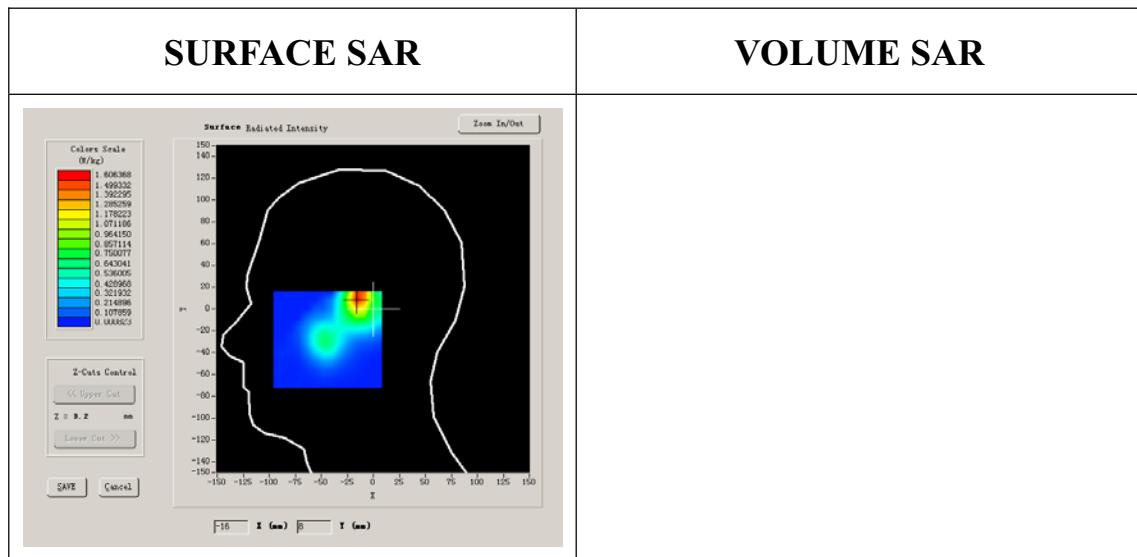
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA

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 (%)	-0.190000

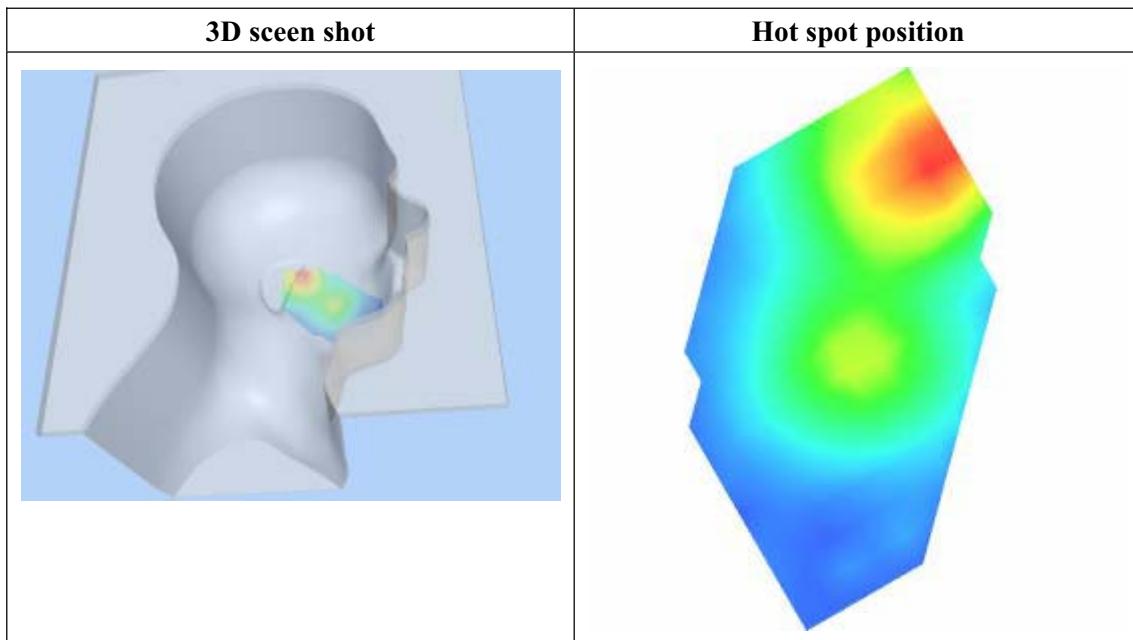
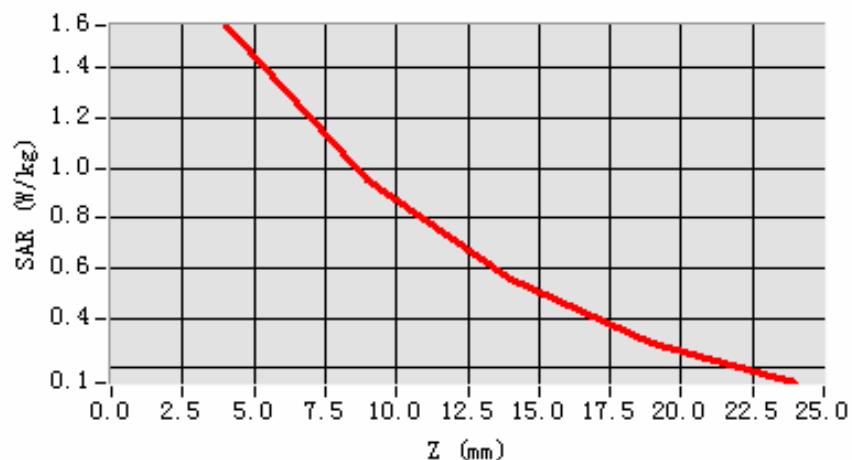


Maximum location: X=-15.00, Y=10.00

SAR 10g (W/Kg)	0.783012
SAR 1g (W/Kg)	1.457688

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.5704	0.9540	0.5550	0.3043

SAR, Z Axis Scan (X = -15, Y = 10)

MEASUREMENT 9

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 46 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

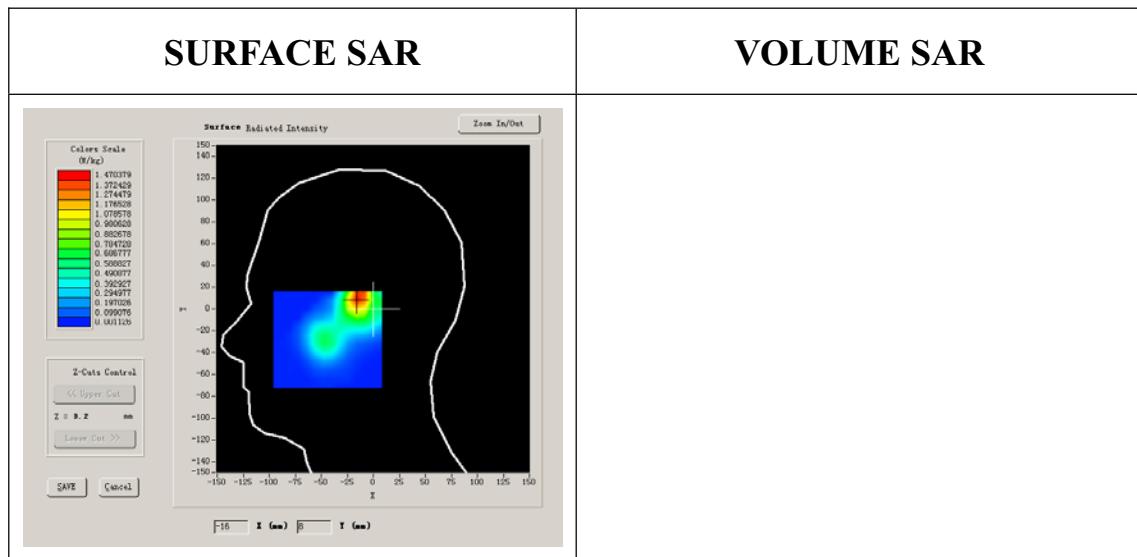
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	39.929001
Relative permittivity (imaginary)	13.156500

part)	
Conductivity (S/m)	1.395758
Variation (%)	1.860000

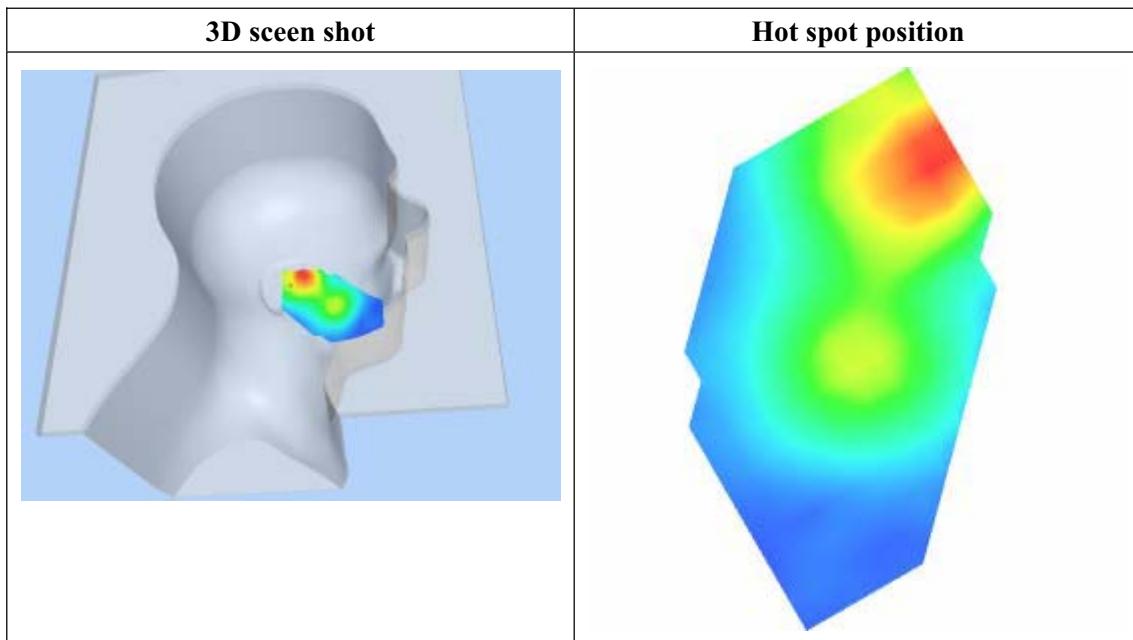
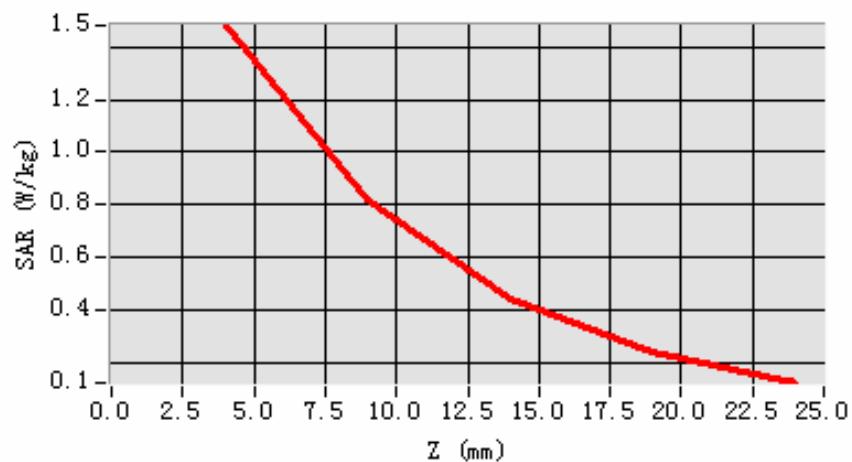


Maximum location: X=-14.00, Y=11.00

SAR 10g (W/Kg)	0.717337
SAR 1g (W/Kg)	1.386318

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.4811	0.8157	0.4421	0.2415

SAR, Z Axis Scan (X = -14, Y = 11)

MEASUREMENT 10

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 46 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

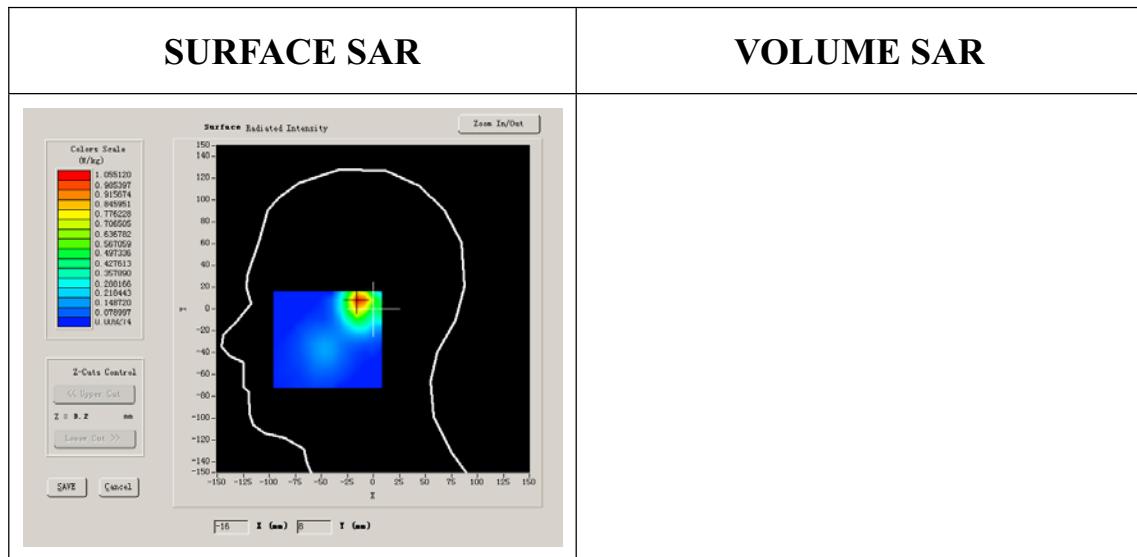
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.400024
Relative permittivity (real part)	39.993999
Relative permittivity (imaginary)	12.991650

part)	
Conductivity (S/m)	1.335542
Variation (%)	-0.440000



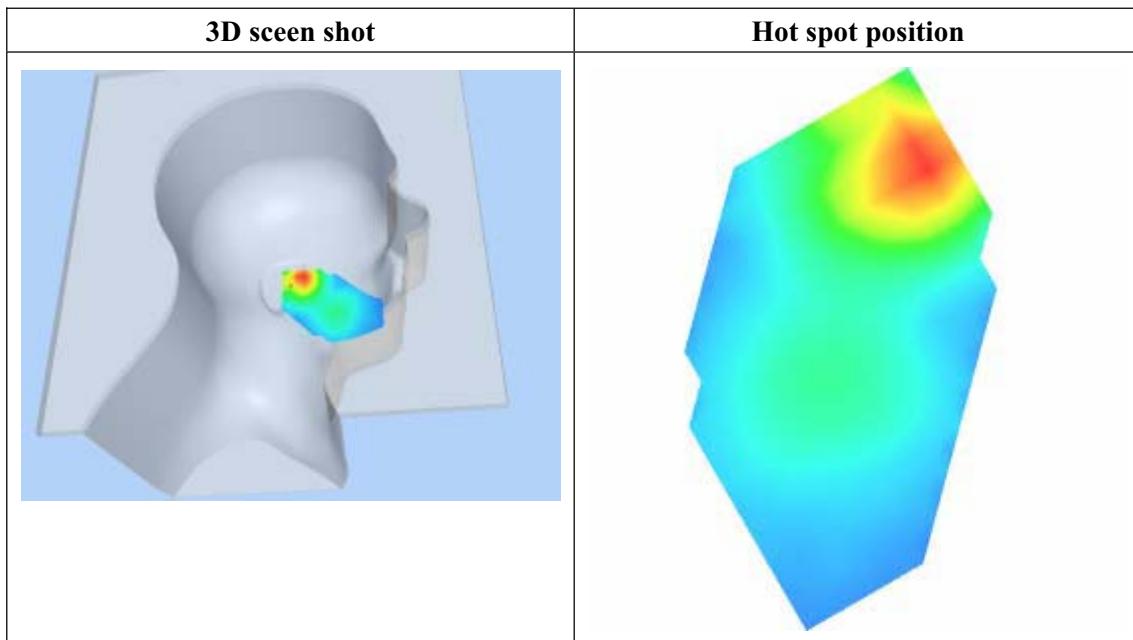
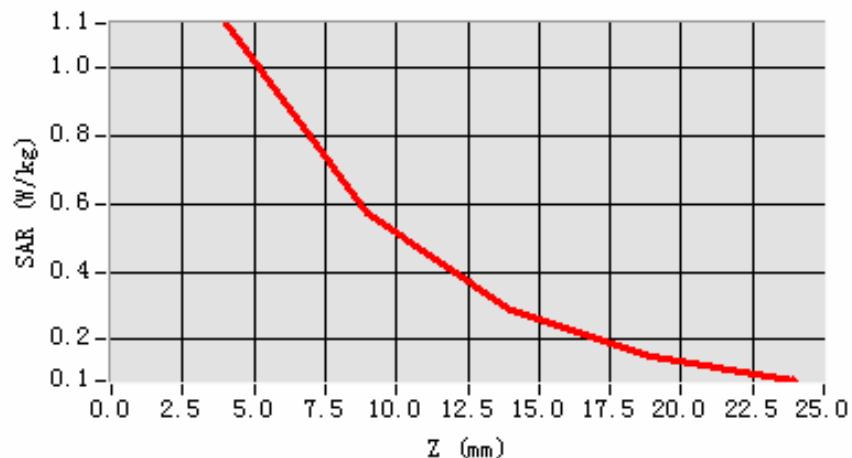
Maximum location: X=-14.00, Y=8.00

SAR 10g (W/Kg)	0.511037
SAR 1g (W/Kg)	1.052468

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.1297	0.5706	0.2865	0.1523

SAR, Z Axis Scan (X = -14, Y = 8)



MEASUREMENT 11

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 48 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

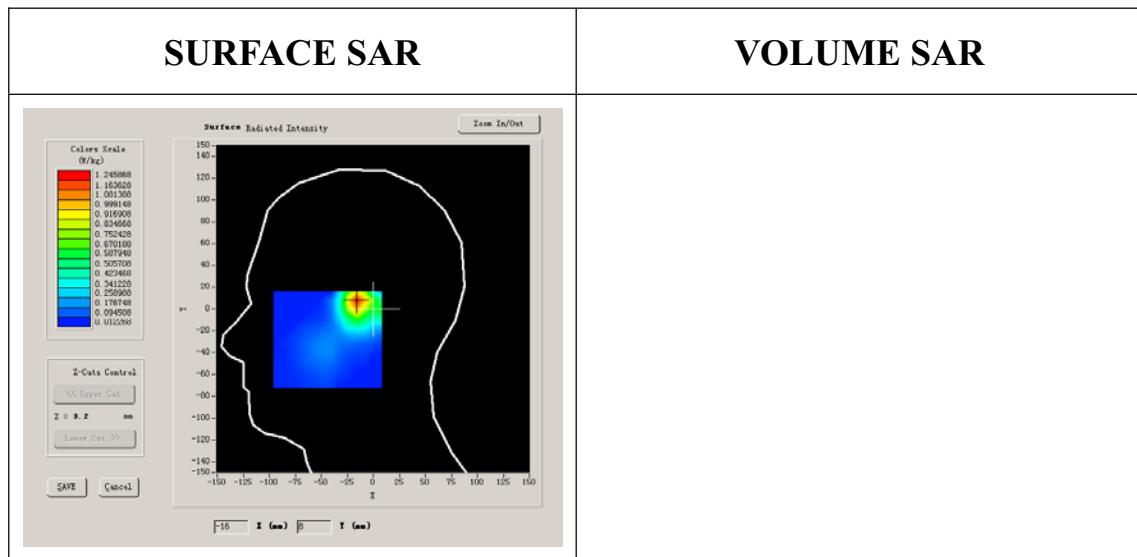
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA

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 (%)	-0.350000

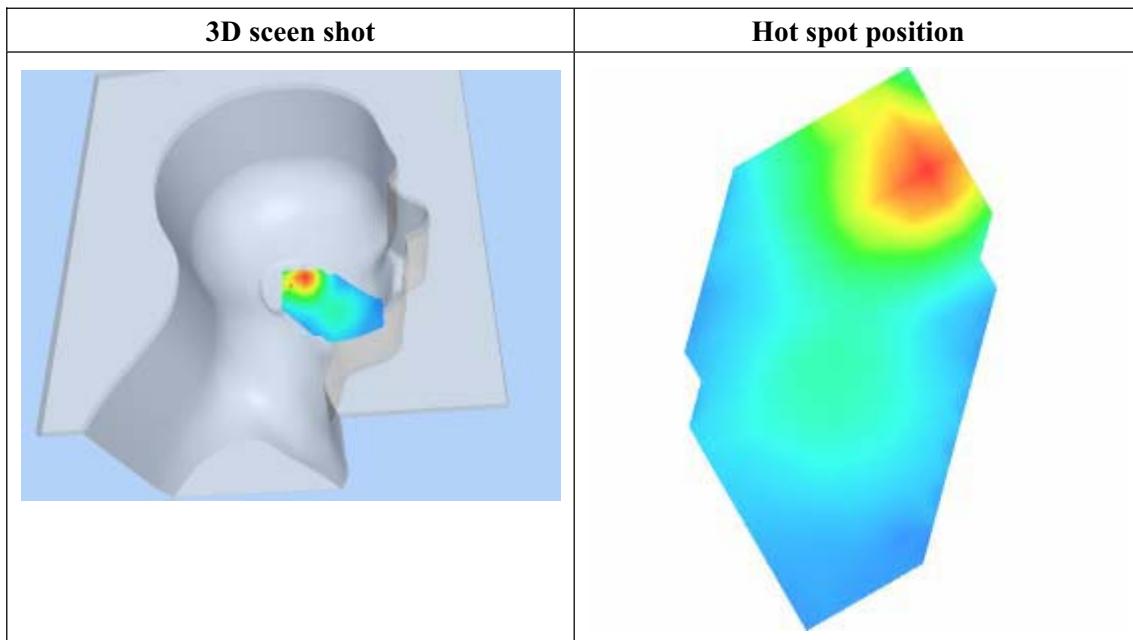
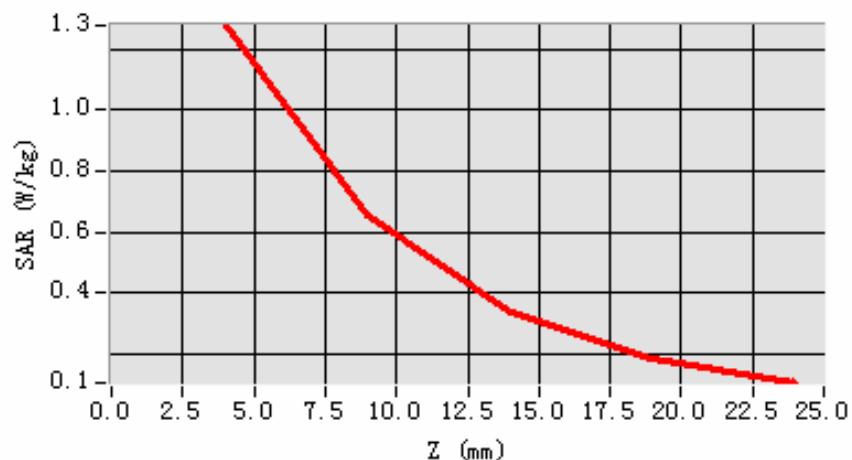


Maximum location: X=-16.00, Y=8.00

SAR 10g (W/Kg)	0.594362
SAR 1g (W/Kg)	1.201499

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.2766	0.6540	0.3377	0.1882

SAR, Z Axis Scan (X = -16, Y = 8)

MEASUREMENT 12

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 46 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

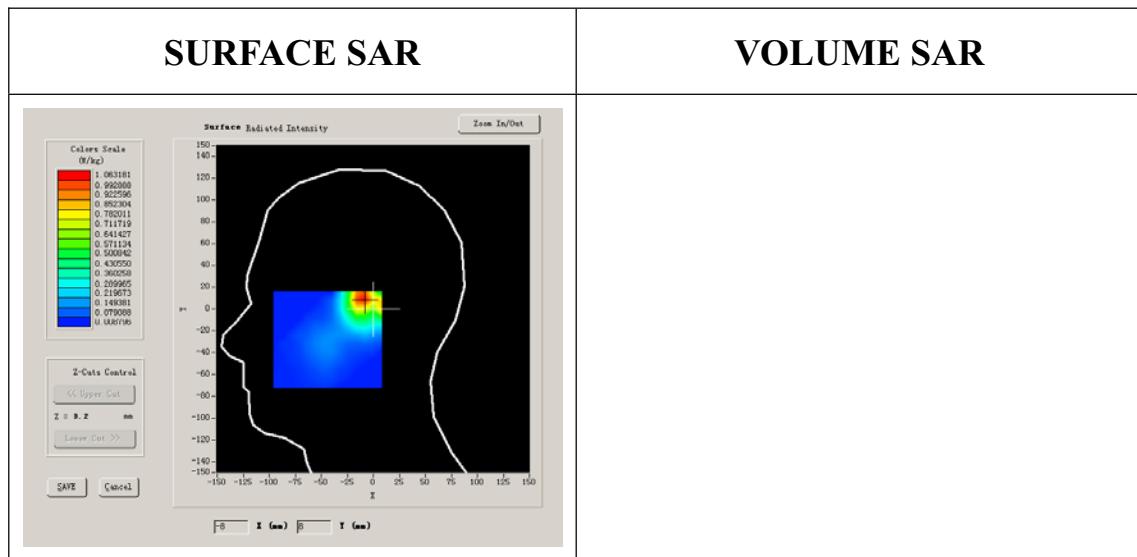
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	39.929001
Relative permittivity (imaginary)	13.156500

part)	
Conductivity (S/m)	1.395758
Variation (%)	0.410000

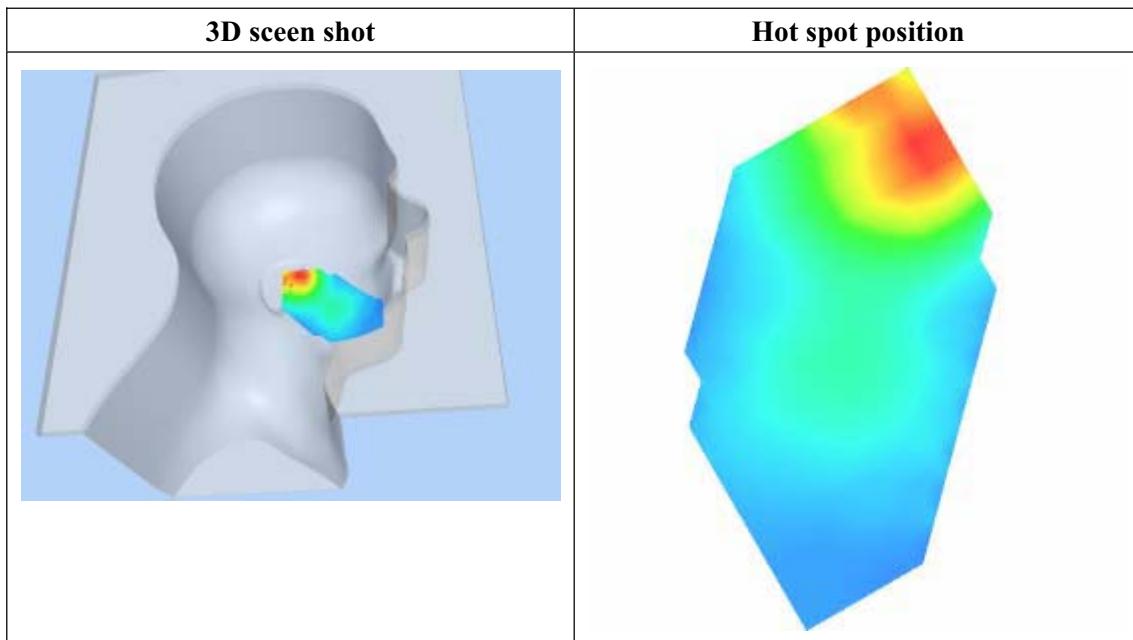
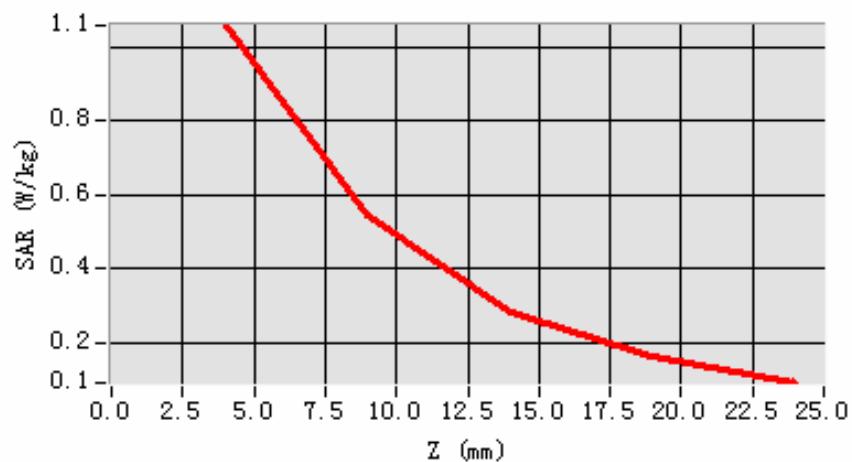


Maximum location: X=-10.00, Y=10.00

SAR 10g (W/Kg)	0.528583
SAR 1g (W/Kg)	1.026083

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.0582	0.5473	0.2859	0.1612

SAR, Z Axis Scan (X = -10, Y = 10)

MEASUREMENT 13(with GPRS)

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

Date of measurement: 18/11/2008

Measurement duration: 3 minutes 45 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

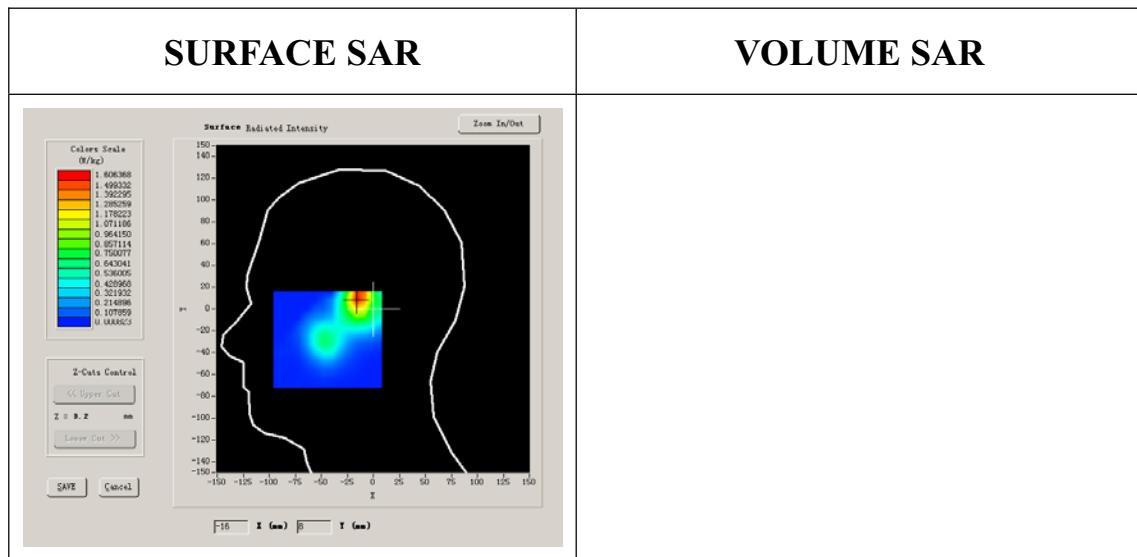
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA

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 (%)	-0.190000

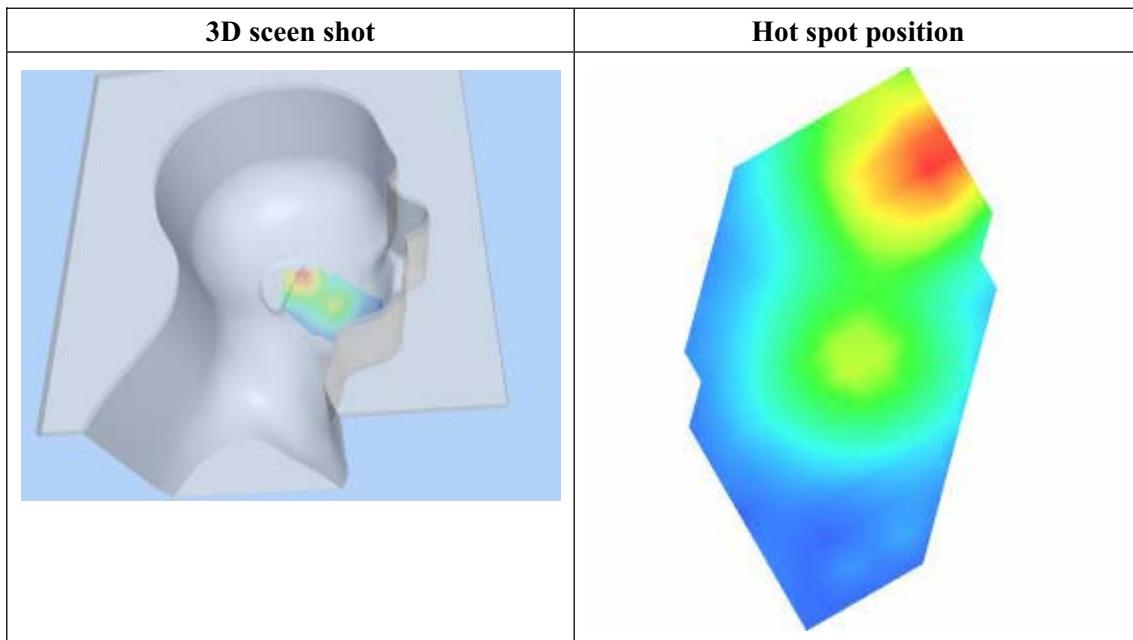
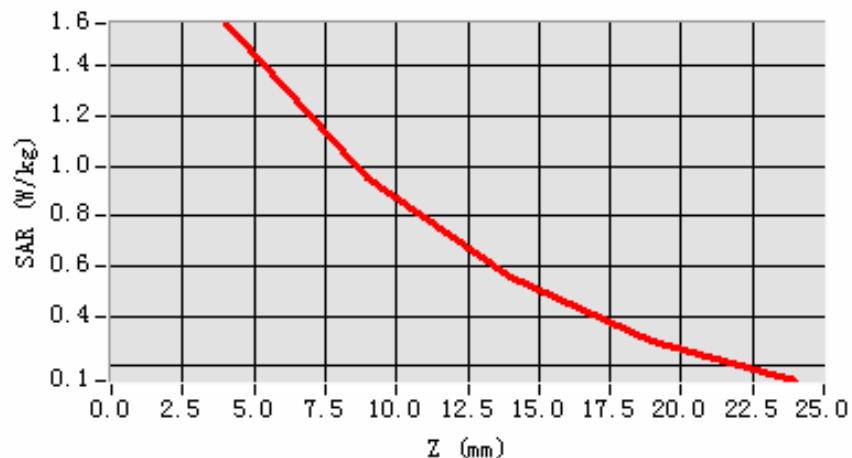


Maximum location: X=-15.00, Y=10.00

SAR 10g (W/Kg)	0.563044
SAR 1g (W/Kg)	1.175885

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	1.5704	0.9540	0.5550	0.3043

SAR, Z Axis Scan (X = -15, Y = 10)

MEASUREMENT 14

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

Date of measurement: 18/11/2008

Measurement duration: 5 minutes 30 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

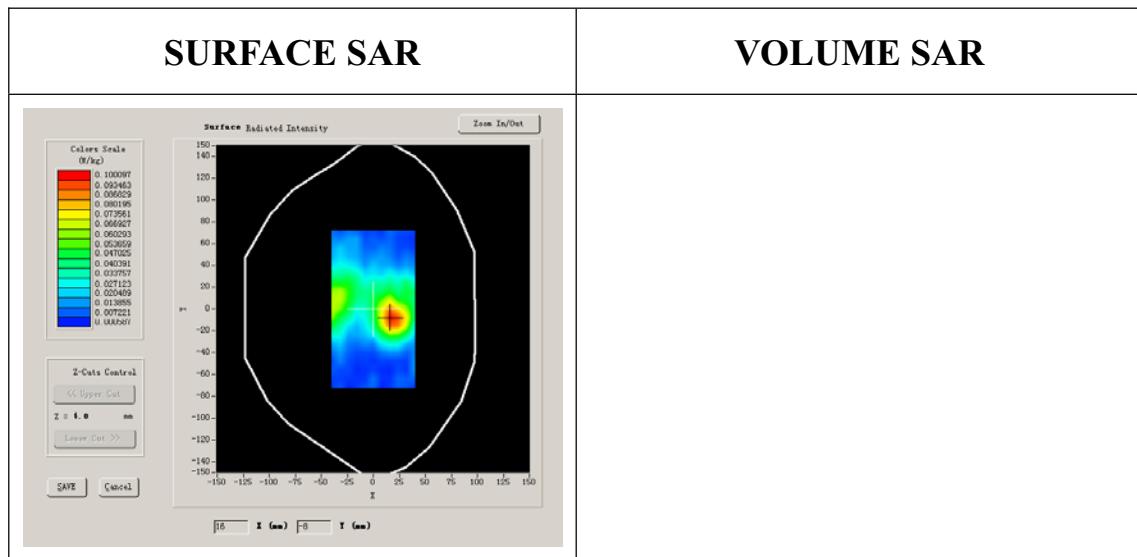
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	TDMA

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.400024
Relative permittivity (real part)	51.540001
Relative permittivity (imaginary)	12.000000

part)	
Conductivity (S/m)	1.233600
Variation (%)	0.540000



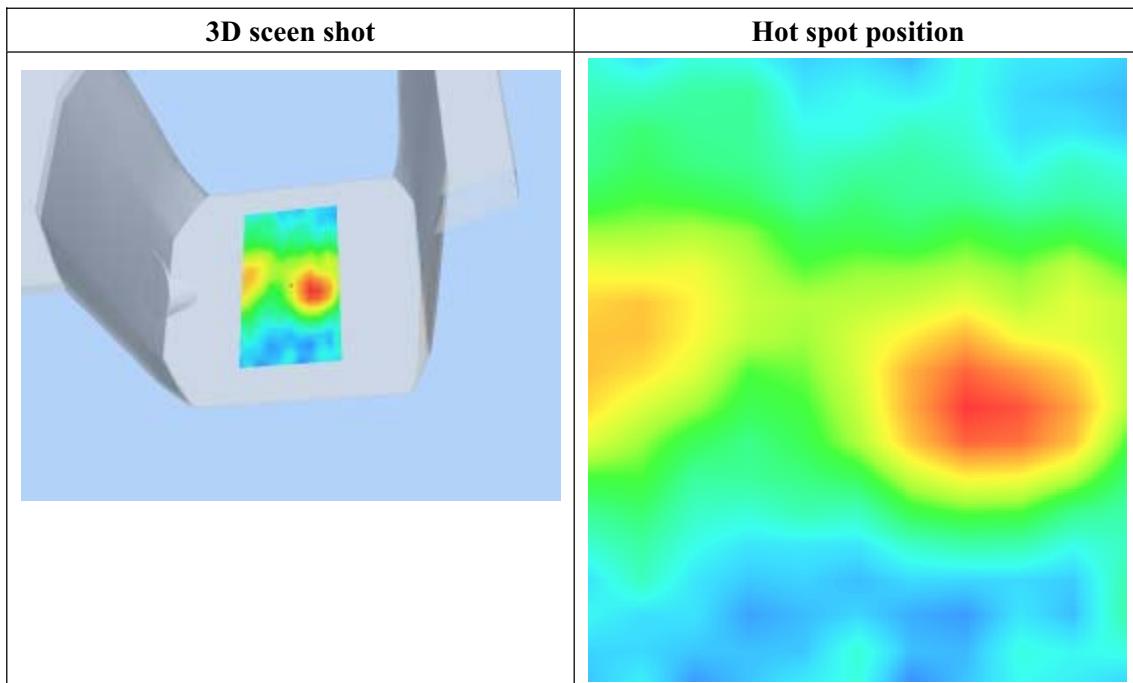
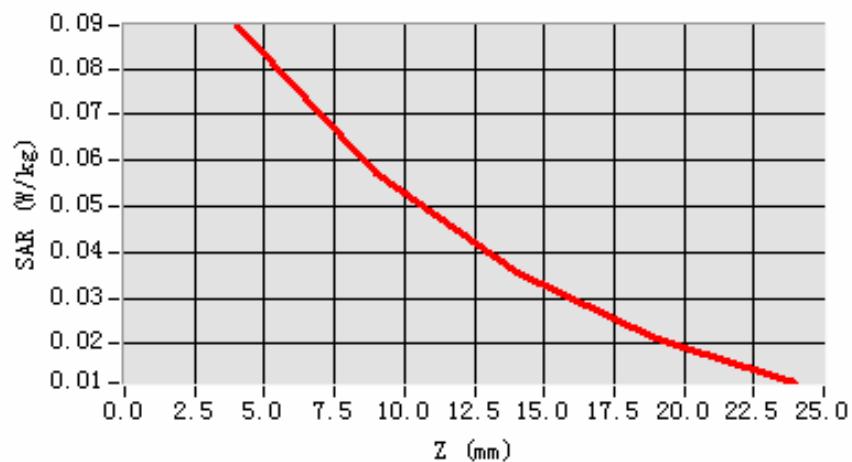
Maximum location: X=18.00, Y=-8.00

SAR 10g (W/Kg)	0.469825
SAR 1g (W/Kg)	0.883702

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.0894	0.0570	0.0355	0.0213

SAR, Z Axis Scan (X = 18, Y = -8)



MEASUREMENT 15

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

Date of measurement: 18/11/2008

Measurement duration: 5 minutes 24 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

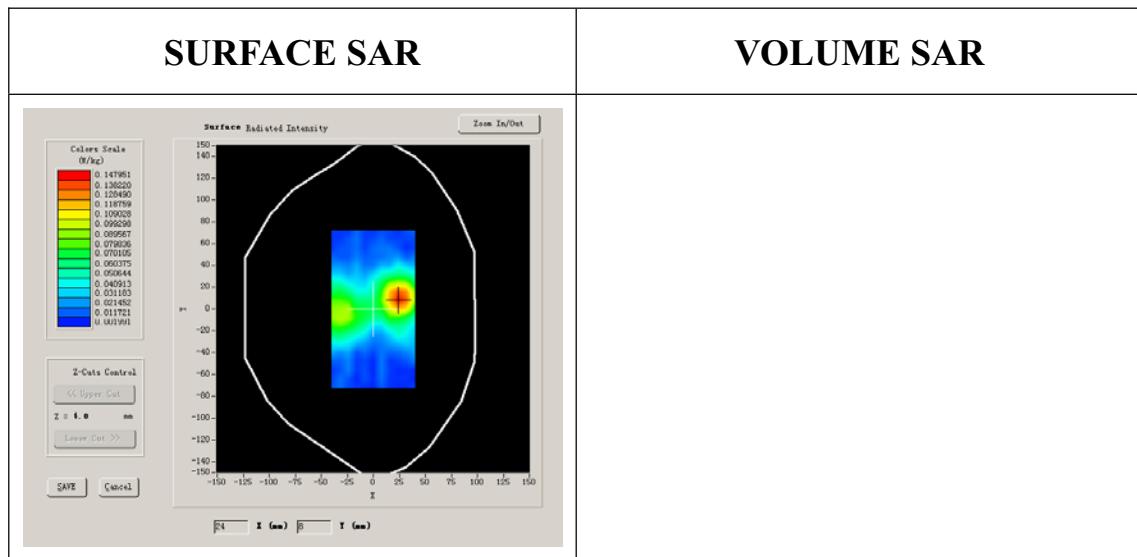
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

part)	
Conductivity (S/m)	1.573978
Variation (%)	0.530020

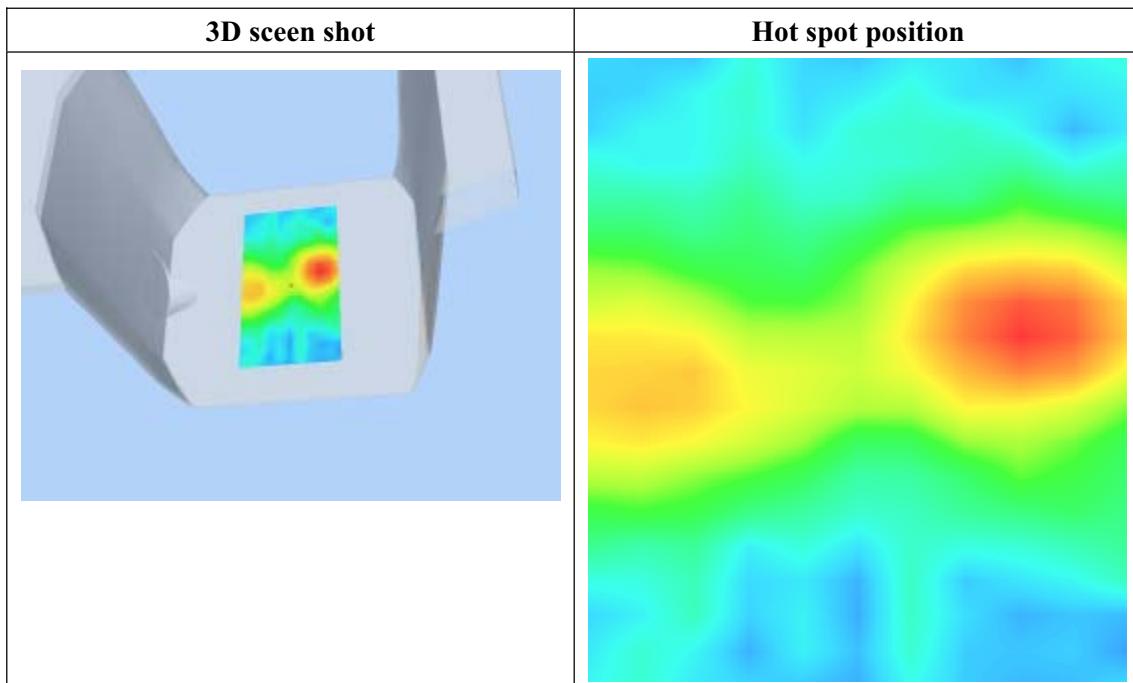
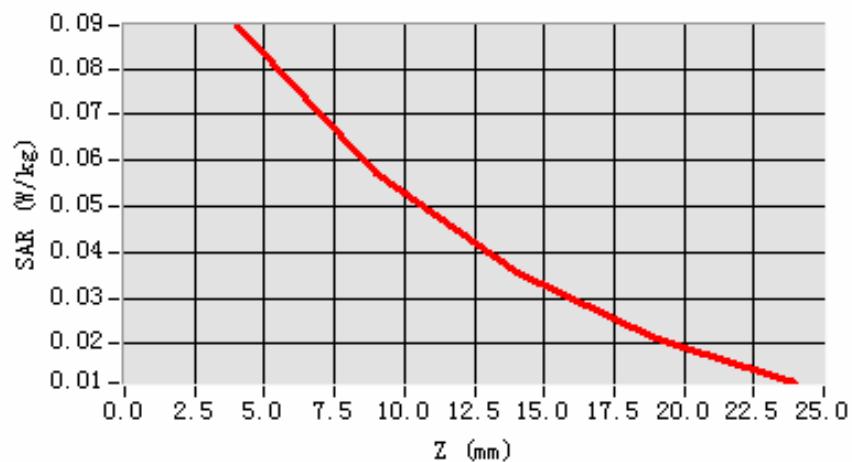


Maximum location: X=25.00, Y=9.00

SAR 10g (W/Kg)	0.480060
SAR 1g (W/Kg)	0.894237

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1537	0.0034	0.0020	0.0000

SAR, Z Axis Scan (X = 18, Y = -8)

MEASUREMENT 16

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

Date of measurement: 18/11/2008

Measurement duration: 5 minutes 26 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

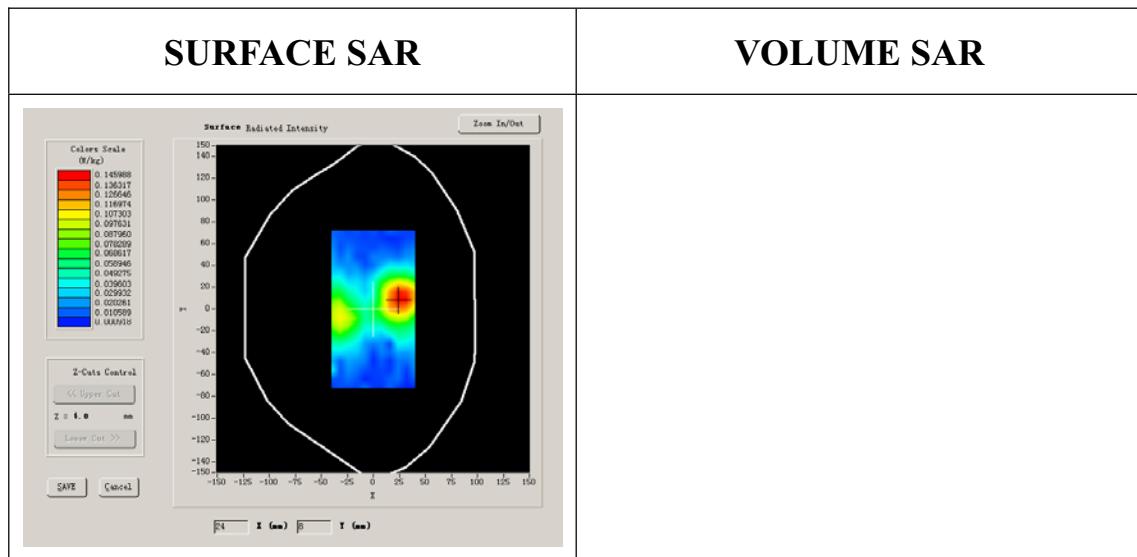
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	TDMA

B SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	51.540001
Relative permittivity (imaginary)	12.000000

part)	
Conductivity (S/m)	1.273067
Variation (%)	-2.620000



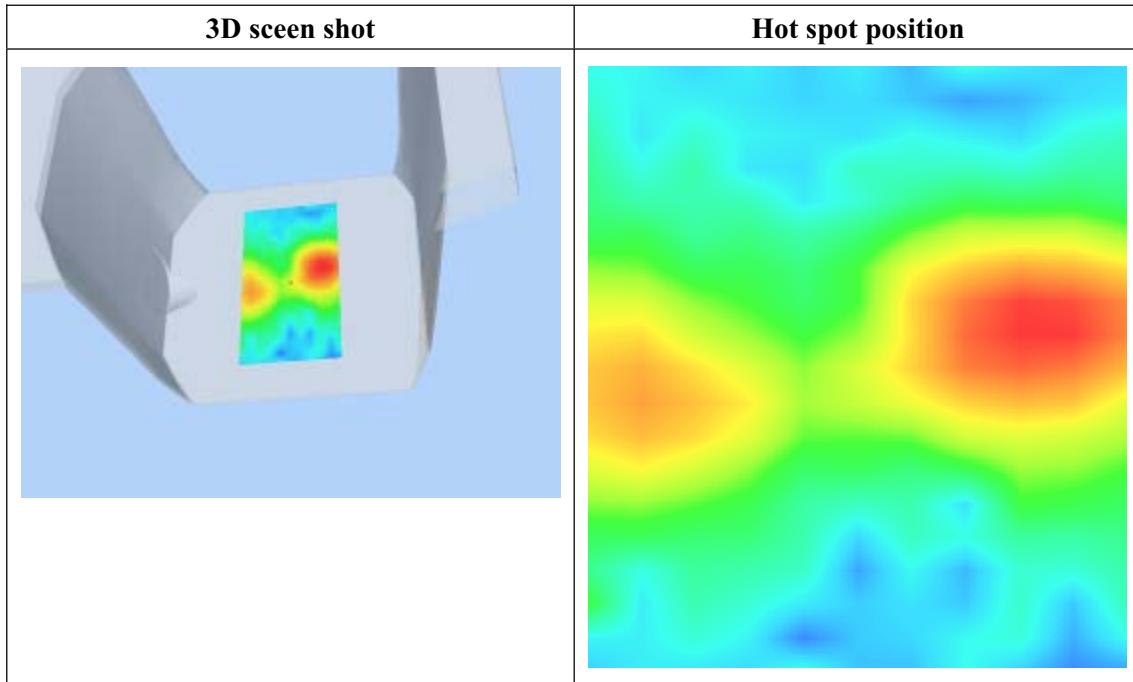
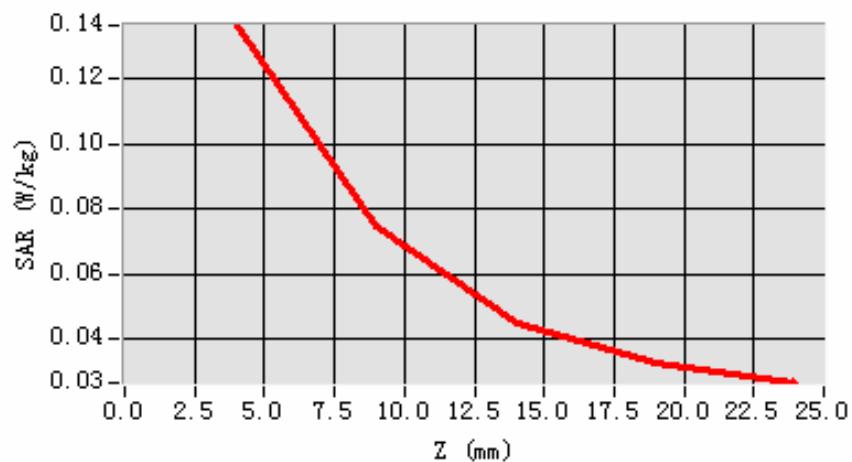
Maximum location: X=27.00, Y=10.00

SAR 10g (W/Kg)	0.476202
SAR 1g (W/Kg)	0.831312

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.1365	0.0749	0.0450	0.0325

SAR, Z Axis Scan (X = 27, Y = 10)



MEASUREMENT 17

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

Date of measurement: 18/11/2008

Measurement duration: 5 minutes 24 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

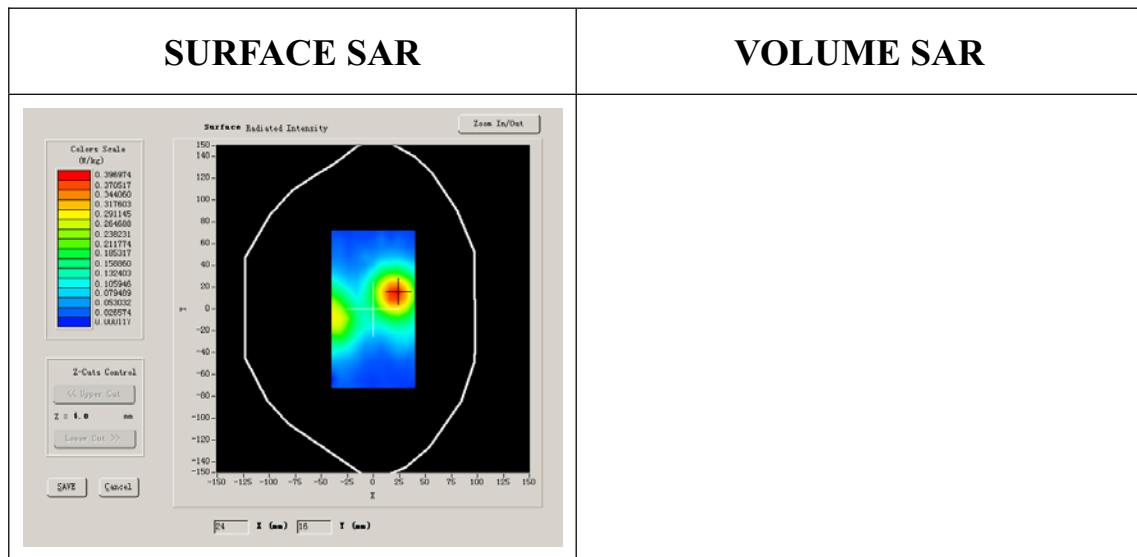
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	51.540001
Relative permittivity (imaginary)	12.000000

part)	
Conductivity (S/m)	1.273067
Variation (%)	-0.790000

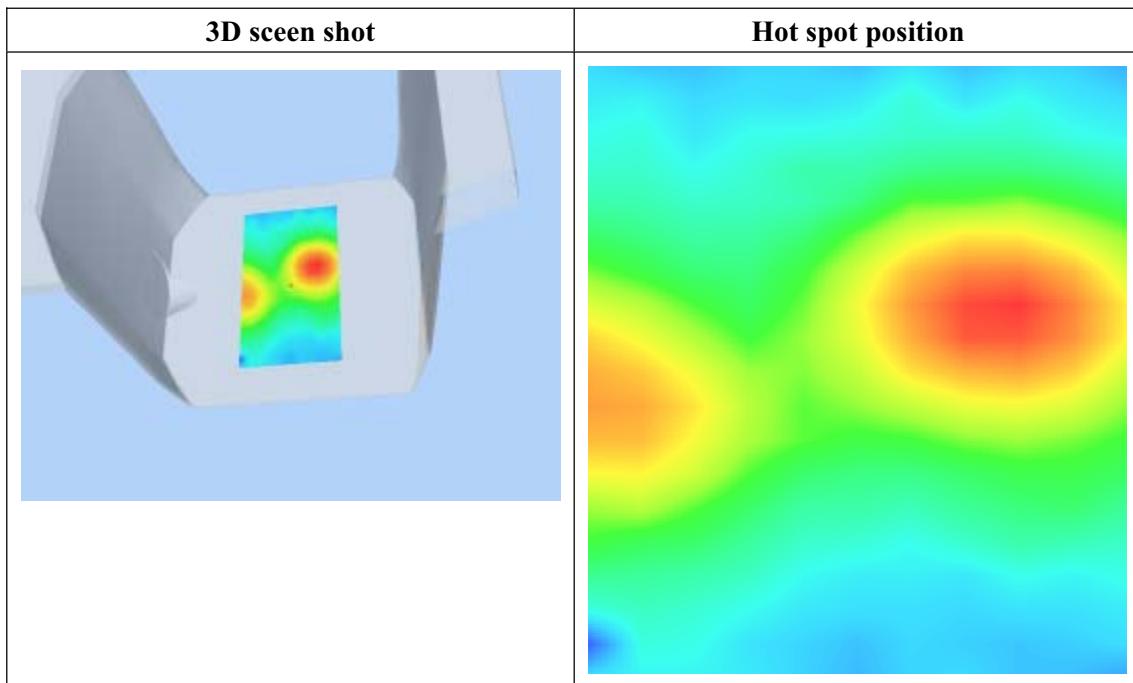
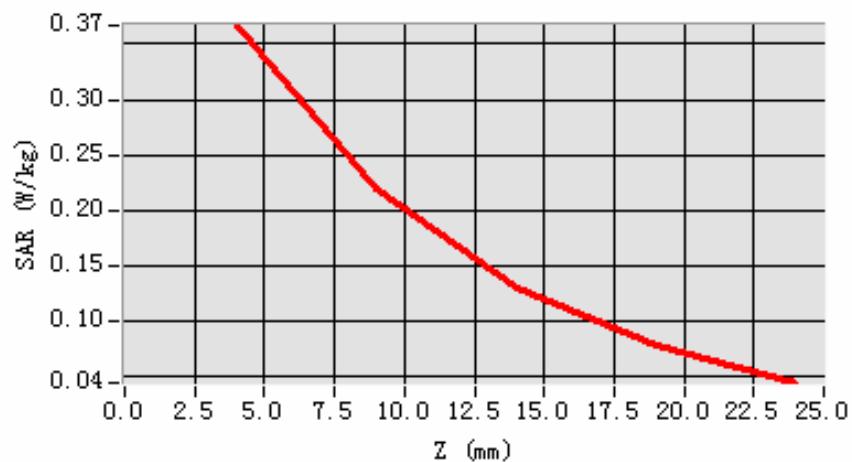


Maximum location: X=22.00, Y=15.00

SAR 10g (W/Kg)	0.157457
SAR 1g (W/Kg)	0.295624

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.3667	0.2191	0.1302	0.0782

SAR, Z Axis Scan (X = 22, Y = 15)

MEASUREMENT 18

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

Date of measurement: 18/11/2008

Measurement duration: 5 minutes 24 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

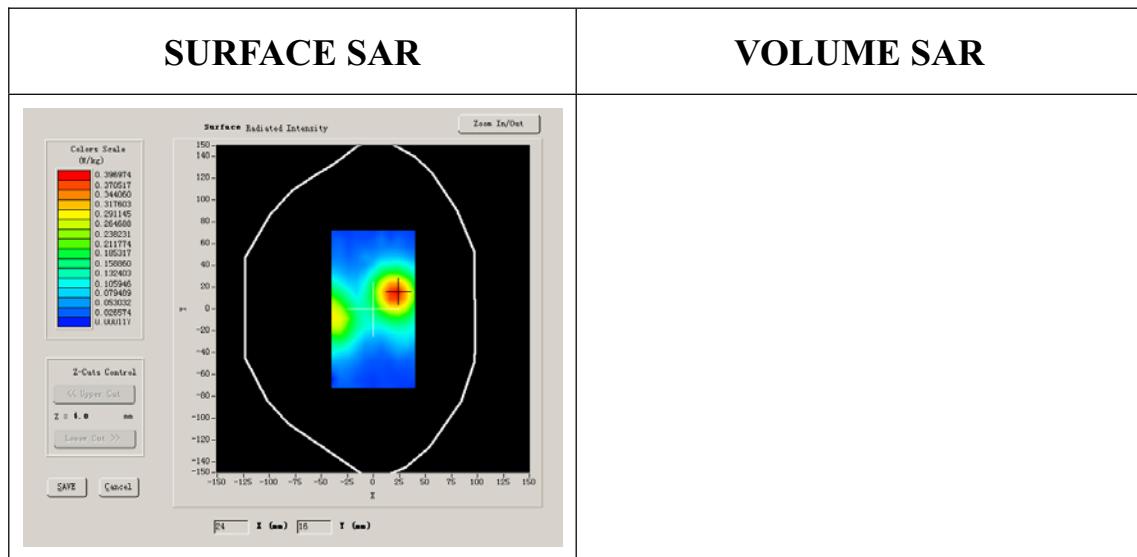
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	TDMA

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.599976
Relative permittivity (real part)	51.540001
Relative permittivity (imaginary)	12.000000

part)	
Conductivity (S/m)	1.273067
Variation (%)	-0.790000

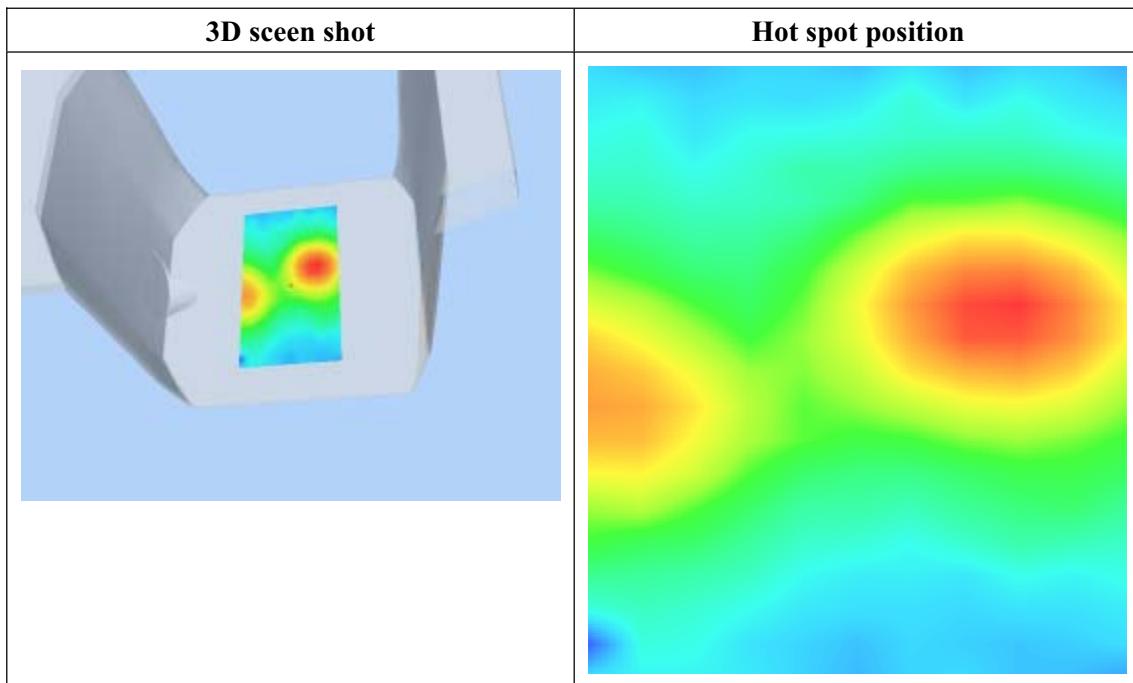
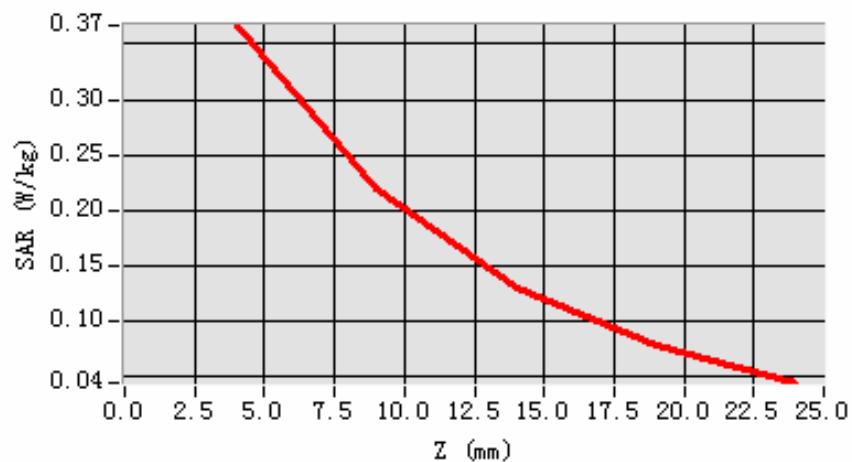


Maximum location: X=22.00, Y=15.00

SAR 10g (W/Kg)	0.197118
SAR 1g (W/Kg)	0.345692

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	0.3667	0.2191	0.1302	0.0782

SAR, Z Axis Scan (X = 22, Y = 15)

System Performance Check Data(Head)

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

Date of measurement: 18/11/2008

Measurement duration: 5 minutes 27 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

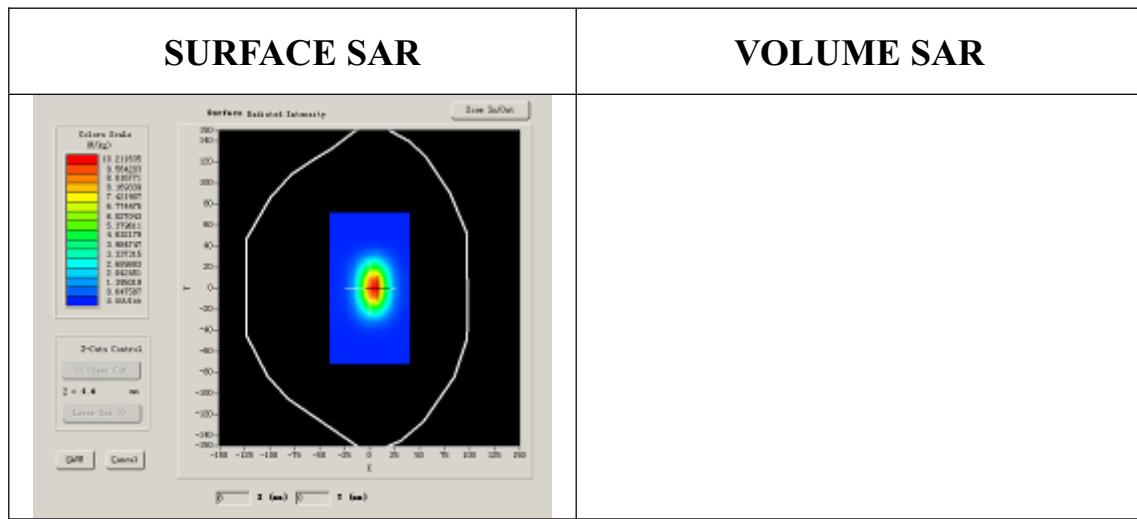
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

part)	
Conductivity (S/m)	1.573978
Variation (%)	-0.050000

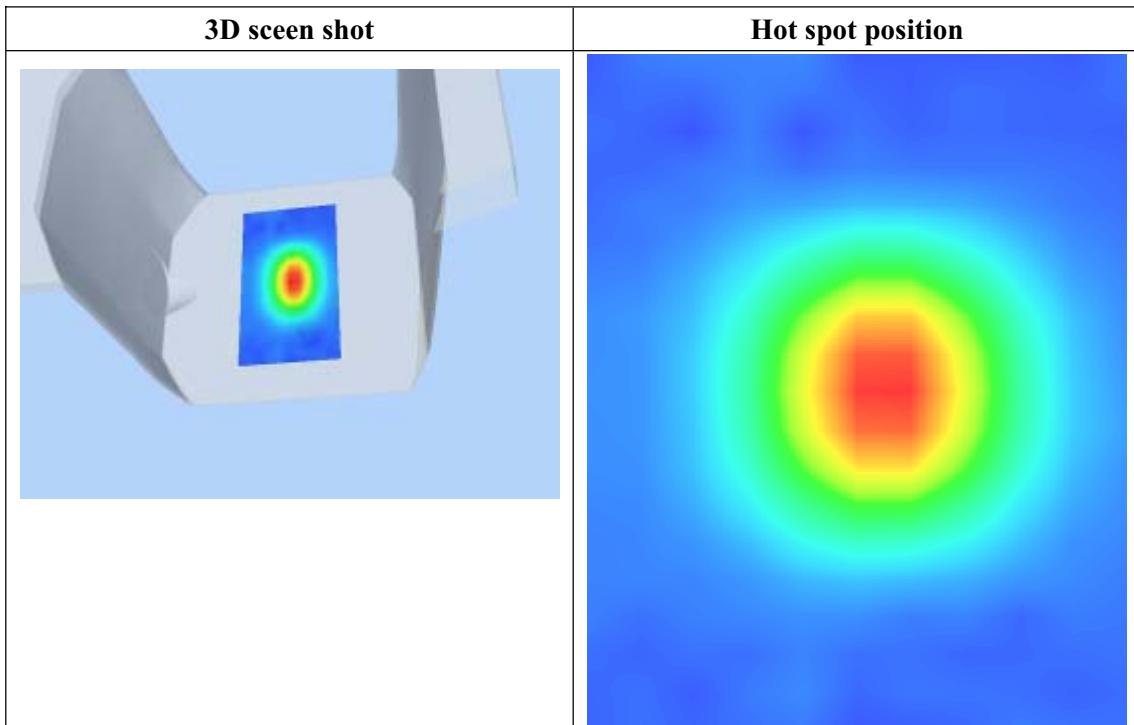
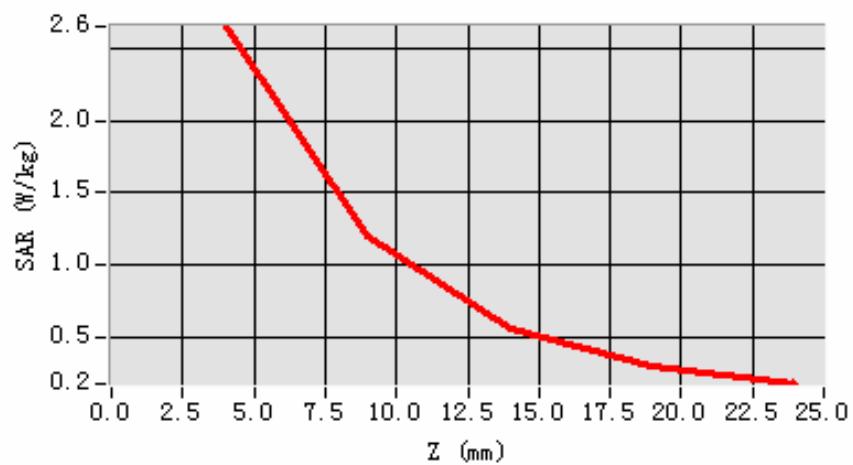


Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	5.149500
SAR 1g (W/Kg)	10.50142

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

SAR, Z Axis Scan (X = 5, Y = 1)

System Performance Check Data(Body)

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

Date of measurement: 18/11/2008

Measurement duration: 5 minutes 27 seconds

Mobile Phone IMEI number: --

A. Experimental conditions.

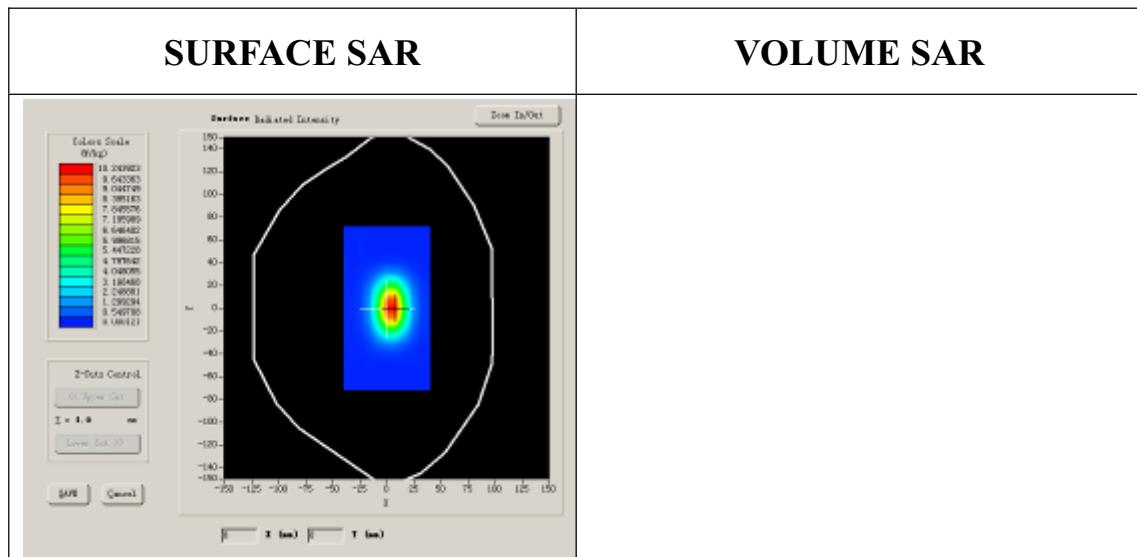
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

part)	
Conductivity (S/m)	1.573978
Variation (%)	-0.140000



Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	5.236559
SAR 1g (W/Kg)	10.328234

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

SAR, Z Axis Scan (X = 5, Y = 1)