



FCC SAR

TEST REPORT

of

3G Mobile Phone

Model Name: C8093, C8093P, ADR2100,

ADR2100GT, ADR2100CL, ADR2100CLB, ADR2100CLR, ADR2100AL, ADR2100PO, ADR2100CA, ADR2100EN, ADR2100PR, ADR2100AR, ADR2100CP, ADR2100PA, ADR2100SV, ADR2100MV, ADR2100NI, ADR2100MX, ADR2100OM, ADR2100PE

Trade Name: PCD, Cellon

Report No.: SZ11010075S01

FCC ID.: T38PCD8093P

prepared for

Cellon Communications Technology(ShenZhen)Co., Ltd.

13/F, Skyworth Building C Gaoxin S. Ave. 1st, High-Tech industrial Park NanShan, ShenZhen

prepared by

Shenzhen Morlab Communications Technology Co., Ltd.

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



CTIA Authorized Test Lab

LAB CODE 20081223-00

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Change History		
Issue	Date	Reason for change
1.0	Mar. 24, 2011	First edition

1. General Information

1.1. Notes



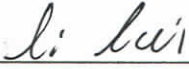
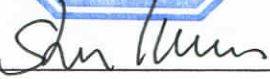
The test results of this test report relate exclusively to the information specified in section 3.3. Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens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

1.2. Organization item

Report No.:	SZ11010075S01
Date of Issue:	Mar. 24, 2011
Date of Tests:	Jan.22, 2011
Responsible for Accreditation:	Shu Luan
Project Manager:	Li Lei
Deputy Project Manager:	Samuel Peng

1.3. Conclusion

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory has verified that all tests as listed in the section 11 of this report have been performed successfully with the tested equipment.

 Samuel Peng Tested by (Responsible for the Test Report)		 Li Lei Reviewed by (Verification of the Test Report)
 Shu Luan Approved by (Responsible Test Lab Manager)		

2. Testing Laboratory

2.1. Identification of the Responsible Testing Laboratory

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

2.2. Identification of the Responsible Testing Location

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

2.3. Accreditation Certificate

Accredited Testing Laboratory: No. CNAS L3572

2.4. List of Test Equipments

No.	Instrument	Type	Cal. Date	Cal. Due
1	PC	Dell (Pentium IV 2.4GHz, SN:X10-23533)	(n.a)	(n.a)
2	Network Emulator	Rohde&Schwarz (CMU200, SN:105894)	2010-9-26	1year
3	Voltmeter	Keithley (2000, SN:1000572)	2010-9-24	1year
4	Synthesizer	Rohde&Schwarz (SML_03, SN:101868)	2010-9-24	1year
5	Amplifier	Nucl udes (ALB216, SN:10800)	2010-9-24	1year
6	Power Meter	Rohde&Schwarz (NRVD, SN:101066)	2010-9-24	1year
7	Probe	Antennessa (SN:SN_3708_EP80)	2010-9-24	1year
8	Phantom	Antennessa (SN:SN_36_08_SAM62)	2010-9-24	1year
9	Liquid	Antennessa (Last Calibration:21 08 08)	2010-8-21	1year

3. Technical Information

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

3.1. Identification of Applicant

Company Name: Cellon Communications Technology(ShenZhen)Co., Ltd.
Address: 13/F, Skyworth Building C Gaoxin S. Ave. 1st, High-Tech industrial Park NanShan, ShenZhen

3.2. Identification of Manufacturer

Company Name: Cellon Communications Technology(ShenZhen)Co., Ltd.
Address: 13/F, Skyworth Building C Gaoxin S. Ave. 1st, High-Tech industrial Park NanShan, ShenZhen

3.3. Equipment Under Test (EUT)

Brand Name: PCD, Cellon
Type Name: PCD, Cellon
Marking Name: C8093, C8093P, ADR2100, ADR2100GT, ADR2100CL, ADR2100CLB, ADR2100CLR, ADR2100AL, ADR2100PO, ADR2100CA, ADR2100EN, ADR2100PR, ADR2100AR, ADR2100CP, ADR2100PA, ADR2100SV, ADR2100MV, ADR2100NI, ADR2100MX, ADR2100OM, ADR2100PE
Hardware Version: C8093 Main PCB P4
Software Version: 20110106
Frequency Bands: GSM 850MHz DCS 1900MHz
WCDMA 850MHz WCDMA 1900MHz
Modulation Mode: GSM / GPRS : GMSK
EDGE : 8PSK
WCDMA / CDMA2000 : QPSK
HSDPA : QPSK / 16QAM
Multislot Class: GPRS: Multislot Class 12: EDGE: Multislot Class 12
GPRS operation mode: Class B
HS-DSCH categories: Category 8
Antenna type: Fixed Internal Antenna
Development Stage: Identical prototype
Battery Model: BTR8093
Battery specification: 1200mAh 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, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	C8093 Main PCB P4	20110106

3.4. 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.

3.5. Device Category and SAR Limits

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

3.6. Test Environment/Conditions

Normal Temperature (NT):	20 ... 25 °C
Relative Humidity:	30 ... 75 %
Air Pressure:	980 ... 1020 hPa
Details of Power Supply:	220V/50Hz AC
Extreme Temperature:	Low Temperature (LT) = -10°C High Temperature (HT) = 55°C
Extreme Voltage of the EUT:	Normal Voltage (NV) = 3.70V Low Voltage (LV) = 3.60V High Voltage (HV) = 4.20V
Test frequency:	GSM 850MHz,GSM 1900MHz, WCDMA 850MHz,WCDMA 1900MHz
Operation mode:	Call established
Power Level:	GSM 850 MHz Maximum output power(level 5) PCS 1900 MHz Maximum output power(level 0) WCDMA Maximum output power

During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established.

The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 125, 190 and 251 respectively in the case of GSM 850 MHz, or to 512, 661 and 810 respectively in the case of PCS 1900 MHz or is allocated to 4132, 4182 and 4233 respectively in the case of WCDMA 850MHz and is allocated to 9262, 9400 and 9538 respectively in the case of WCDMA 1900MHz, The EUT is commanded to operate at maximum transmitting power.

The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset.

The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the handset by at least 35 dB.

For SAR testing, EUT is in GPRS/EDGE or WCDMA/HSDPA/HSUPA link mode. In GPRS/EDGE link mode, its crest factor is 2, because EUT is set in GPRS/EDGE multi-slot class 12 with 4 uplink slots. In WCDMA/HSDPA/HSUPA link mode, its crest factor is 1.

4. Specific Absorption Rate (SAR)

4.1 Introduction

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

4.2 SAR Definition

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

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

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be either related to the temperature elevation in tissue by

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

, where C is the specific heat capacity, δT is the temperature rise and δt the exposure duration, or related to the electrical field in the tissue by

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

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

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

5. SAR Measurement Setup

5.1. The Measurement System

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

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

The following figure shows the system.



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

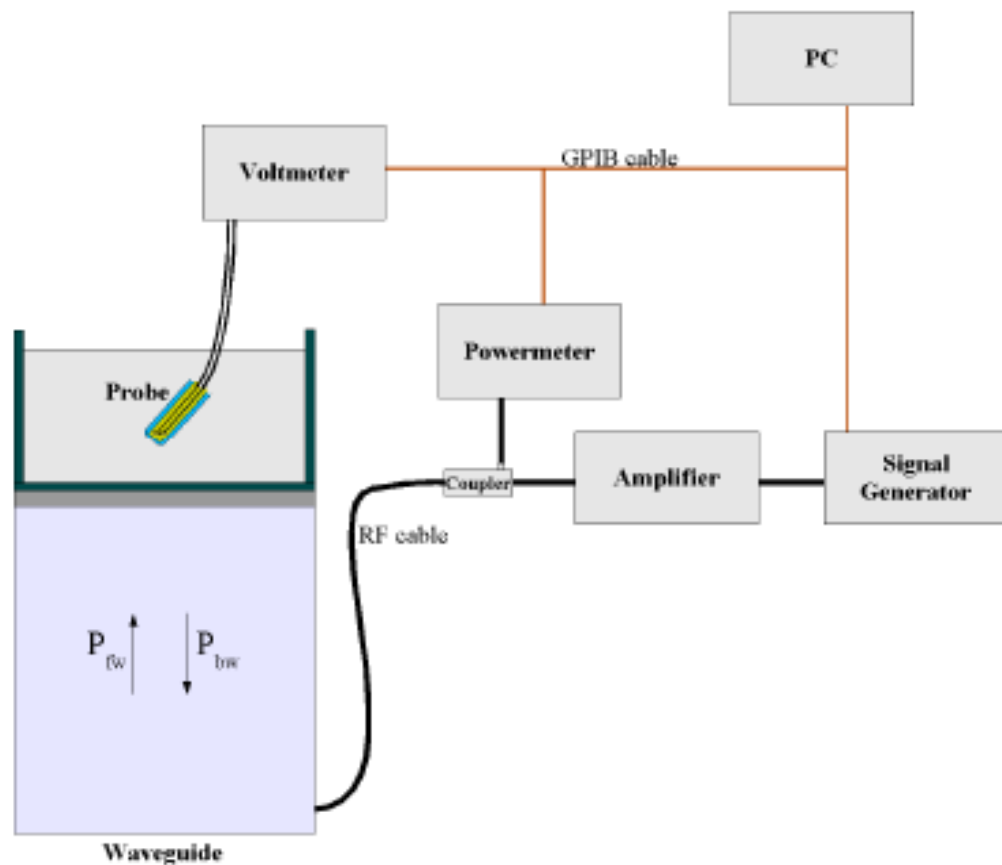
5.2. Probe

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

- Dynamic range: 0.01-100 W/kg
- Tip Diameter : 6.5 mm
- Distance between probe tip and sensor center: 2.5mm
- Distance between sensor center and the inner phantom surface: 4 mm
(repeatability better than +/- 1mm)
- Probe linearity: <0.25 dB
- Axial Isotropy: <0.25 dB
- Spherical Isotropy: <0.25 dB
- Calibration range: 835to 2500MHz for head & body simulating liquid.

Angle between probe axis (evaluation axis) and surface normal line: less than 30°

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



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

Where :

P_{fw} = Forward Power

P_{bw} = Backward Power

a and b = Waveguide dimensions

δ = Skin depth

Keithley configuration:

Rate = Medium; Filter = ON; RDGS=10; FILTER TYPE = MOVING AVERAGE; RANGE AUTO

After each calibration, a SAR measurement is performed on a validation dipole and compared with a NPL calibrated probe, to verify it.

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

$$CF(N) = SAR(N)/V_{lin}(N) \quad (N=1,2,3)$$

The linearised output voltage V_{lin}(N) is obtained from the displayed output voltage V(N) using

$$V_{lin}(N) = V(N) * (1 + V(N)/DCP(N)) \quad (N=1,2,3)$$

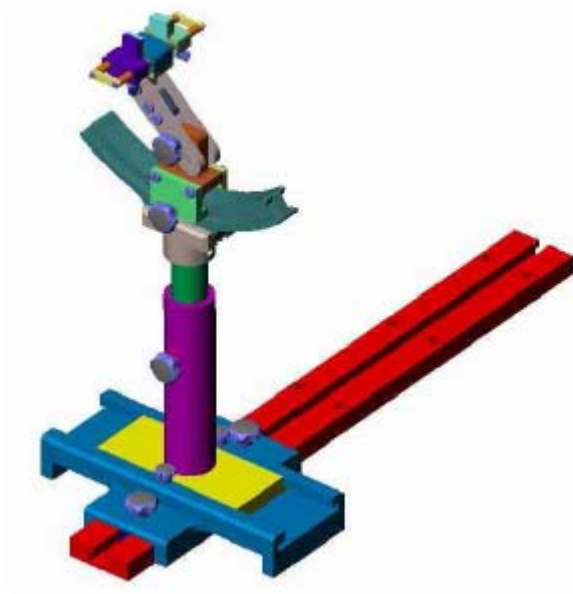
where DCP is the diode compression point in mV.

5.3. Phantom

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

5.4. Device Holder

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



Device holder

System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

6. Tissue Simulating Liquids

Simulant liquids that are used for testing at frequencies of GSM 850MHz PCS 1900MHz WCDMA 850 WCDMA1900, which are made mainly of sugar, salt and water solutions may be left in the phantoms. Approximately 20litres are needed for an upright head compared to about 25 litres for a horizontal bath phantom. The liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is (head SAR) or from the flat phantom to the liquid top surface (body SAR) is 15 cm.

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

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

Recipes for Tissue Simulating Liquid

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

Table 1: Dielectric Performance of Head Tissue Simulating Liquid

Temperature: 23.0~23.8°C, humidity: 54~60%.			
/	Frequency	Permittivity ϵ	Conductivity σ (S/m)
Target value	835 MHZ	41.5	0.90
Validation value (Jan. 22)	835 MHZ	41.675999	0.894409

Target value	1900 MHZ	40	1. 40
Validation value (Jan. 22)	1900 MHZ	38. 509998	1. 436111

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

Table 2: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 23.0~23.8°C, humidity: 54~60%.			
/	Frequency	Permittivity ϵ	Conductivity σ (S/m)
Target value	835 MHz	55. 2	0.97
Validation value (Jan. 22)	835 MHz	55. 709999	1. 009033
Target value	1900 MHz	53. 3	1. 52
Validation value (Jan. 22)	1900 MHz	52. 548876	1. 573978

7. Uncertainty Assessment

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

7.1. UNCERTAINTY EVALUATION FOR HANDSET SAR TEST

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	V i
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	
Axial Isotropy	E.2.2	2.5	R				1.02	1.02	
Hemispherical Isotropy	E.2.2	4.0	R				1.63	1.63	
Boundary effect	E.2.3	1.0	R		1	1	0.58	0.58	
Linearity	E.2.4	5.0	R		1	1	2.89	2.89	
System detection limits	E.2.5	1.0	R		1	1	0.58	0.58	
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	
Reponse Time	E.2.7	3.0	R		1	1	1.73	1.73	
Integration Time	E.2.8	2.0	R		1	1	1.15	1.15	
RF ambient Conditions	E.6.1	3.0	R		1	1	1.73	1.73	
Probe positioner Mechanical Tolerance	E.6.2	2.0	R		1	1	1.15	1.15	
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R		1	1	0.03	0.03	
Extrapolation, interpolation and integration Algorithms for Max. SAR Evaluation	E.5.2	5.0	R		1	1	2.89	2.89	
Test sample Related									
Test sample positioning	E.4.2.1	0.03	N	1	1	1	0.03	0.03	N - 1
Device Holder Uncertainty	E.4.1.1	5.00	N	1	1	1	5.00	5.00	
Output power Variation - SAR drift measurement	6.6.2	4.04	R		1	1	2.33	2.33	
Phantom and Tissue Parameters									

Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R		1	1	0.03	0.03	
Liquid conductivity - deviation from target value	E.3.2	4.57	R		0.64	0.43	1.69	1.13	
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	M
Liquid permittivity - deviation from target value	E.3.2	3.69	R		0.6	0.49	1.28	1.04	
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	M
Combined Standard Uncertainty			RSS				11.23	10.70	
Expanded Uncertainty (95% Confidence interval)			k				21.91	20.86	

7.2. UNCERTAINTY FOR SYSTEM PERFORMANCE CHECK

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	V i
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	
Axial Isotropy	E.2.2	2.5	R				1.02	1.02	
Hemispherical Isotropy	E.2.2	4.0	R				1.63	1.63	
Boundary effect	E.2.3	1.0	R		1	1	0.58	0.58	
Linearity	E.2.4	5.0	R		1	1	2.89	2.89	
System detection limits	E.2.5	1.0	R		1	1	0.58	0.58	
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	
Reponse Time	E.2.7	3.0	R		1	1	1.73	1.73	
Integration Time	E.2.8	2.0	R		1	1	1.15	1.15	
RF ambient Conditions	E.6.1	3.0	R		1	1	1.73	1.73	
Probe positioner Mechanical Tolerance	E.6.2	2.0	R		1	1	1.15	1.15	
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R		1	1	0.03	0.03	
Extrapolation, interpolation and integration Algorithms for Max.	E.5.2	5.0	R		1	1	2.89	2.89	

SAR Evaluation									
Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.00	N		1	1	0.58	0.58	N - 1
Input power and SAR drift measurement	8,6.6.2	4.04	R		1	1	2.33	2.33	
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R		1	1	0.03	0.03	
Liquid conductivity - deviation from target value	E.3.2	4.57	R		0.64	0.43	1.69	1.13	
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	M
Liquid permittivity - deviation from target value	E.3.2	3.69	R		0.6	0.49	1.28	1.04	
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	M
Combined Standard Uncertainty			RSS				10.08	9.47	
Expanded Uncertainty (95% Confidence interval)			k				19.65	18.47	

8. SAR Measurement Evaluation

8.1. System Setup

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

Equipments :

name	Type and specification
Signal generator	E4433B
Directional coupler	450MHz-3GHz
Amplifier	3W 502(10-2500MHz)
Reference dipole	835MHz:SN 36/08 DIPC 99 1800MHz:SN 36/08 DIPF 101

8.2. Validation Results

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

Frequency	835MHz	1900MHz
Target value (1g)	9.5 W/Kg	38.1 W/Kg
250 mW input power	2.627 W/Kg (head) 2.711 W/Kg (body)	9.903 W/Kg (head) 9.835 W/Kg (body)
Test value (1g)	10.508 W/Kg (head) 10.844 W/Kg (body)	39.612 W/Kg (head) 39.34 W/Kg (body)

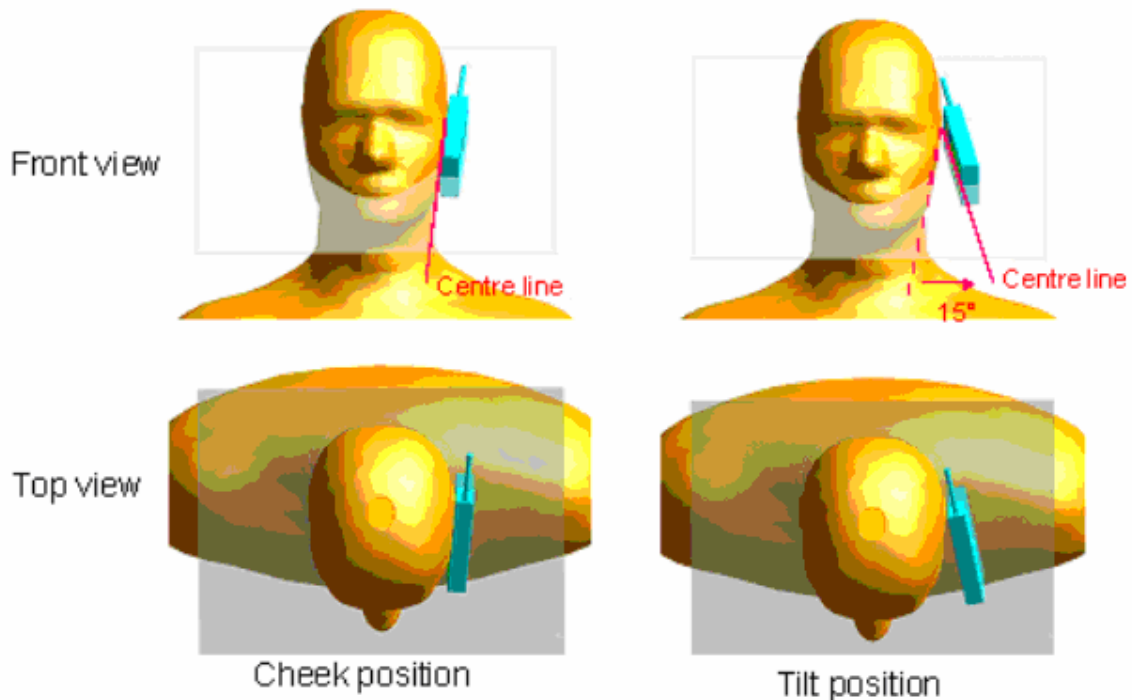
Note: System checks the specific test data please see page 161-174

9. Operational Conditions During Test

9.1. Informations on the testing

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

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



Description of the “cheek” position:

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

Description of the “tilted” position:

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

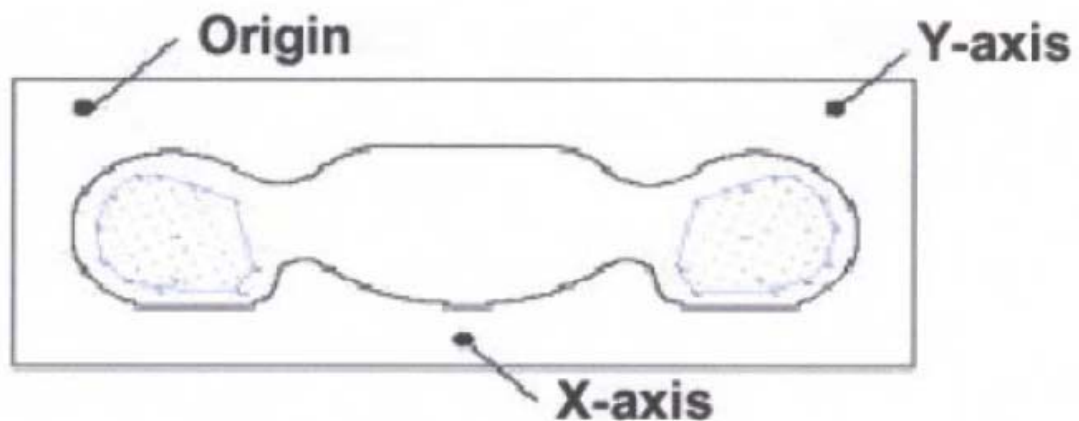
Remark: Please refer to Appendix B for the test setup photos.

9.2. Body-worn Configurations

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

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

For body-worn and other configurations a flat phantom shall be used which is comprised of material with electrical properties similar to the corresponding tissues.



SAR Measurement Points in Area Scan

9.3. Measurement procedure

The following steps are used for each test position

- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16mm * 8 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.

9.4. Description of interpolation/extrapolation scheme

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

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

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

10. 3G MEASUREMENT PROCEDURES

10.1.Procedures Used To Establish Test Signal

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

10.2.SAR Measurement Conditions for WCDMA

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

10.3.Output Power Verification

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

10.4.USB Dongle with HSDPA

Body SAR is also measured for HSDPA when the maximum average output of each RF channel with HSDPA active is at least 1/4 dB higher than that measured without HSUPA using 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is above 75% of the SAR limit. Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration in 12.2kbps RMC without HSD-PA

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4132	4175	4233	9262	9400	9538
	subtest						
5.2(WCDMA)	non	24.93	24.43	24.79	24.31	23.87	24.09
5.2AA(HSDPA)	1	24.37	24.38	24.46	23.10	22.90	23.02
	2	24.69	24.41	24.54	23.10	22.99	23.08
	3	24.19	23.80	23.99	22.61	22.46	22.48
	4	24.15	23.71	23.81	22.56	22.37	22.51

GPRS/EDGE modes conducted output power values

Band	Channel	Frequency (MHz)	Measured Output Power(dBm)	Rated Output Power	
				dBm	Tolerance (dB)
GSM 850MHz	128	824.2	31.35	33	±2
	190	836.6	31.72		
	251	848.8	31.97		
GSM 1900MHz	512	1850.2	28.30	30	±2
	661	1880.0	28.33		
	810	1909.8	29.18		
GPRS 850MHz	128	824.2	32.23	33	±2
	190	836.6	31.64		
	251	848.8	32.00		
GPRS 1900MHz	512	1850.2	28.72	30	±2
	661	1880.0	28.44		
	810	1909.8	28.34		
EDGE 850MHz	128	824.2	30.15	33	±2
	190	836.6	30.74		
	251	848.8	31.15		
EDGE 1900MHz	512	1850.2	28.67	30	±2
	661	1880.0	28.49		
	810	1909.8	28.52		

11. 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)
Right head, Touch cheek, Channel Middle	0.514	31.72
Right head, Tilt 15 Degree, Channel Middle	0.380	31.72
Left head, Touch cheek, Channel Middle	0.597	31.72
Left head, Tilt 15 Degree, Channel Middle	0.381	31.72

Summary of Measurement Results (GSM 1900MHz Band)

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

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Right head, Touch cheek, Channel Middle	0.299	28.33
Right head, Tilt 15 Degree, Channel Middle	0.077	28.33
Left head, Touch cheek, Channel Middle	0.359	28.33
Left head, Tilt 15 Degree, Channel Middle	0.091	28.33

Summary of Measurement Results (WCDMA 850MHz Band)

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

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Right head, Touch cheek, Channel Middle	0.227	24.43
Right head, Tilt 15 Degree, Channel Middle	0.138	24.43
Left head, Touch cheek, Channel Middle	0.211	24.43

Left head, Tilt 15 Degree, Channel Middle	0.137	24.43
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Summary of Measurement Results (WCDMA 1900MHz Band)

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

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Right head, Touch cheek, Channel Middle	0.304	23.87
Right head, Tilt 15 Degree, Channel Middle	0.091	23.87
Left head, Touch cheek, Channel Middle	0.289	23.87
Left head, Tilt 15 Degree, Channel Middle	0.075	23.87

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

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Side, Low frequency GPRS mode Back towards the phantom	0.976	32.23
Side, Middle frequency GPRS mode Back towards the phantom	1.048	31.64
Side, High frequency GPRS mode Back towards the phantom	0.893	32.00
Side, Middle frequency GPRS mode Keyboard towards the phantom	0.546	31.64
Side, Middle frequency GSM mode Back towards the phantom	0.351	31.72
Side, Middle frequency GSM mode Back towards the Phantom With Headphone	0.339	31.72
Side, Middle frequency EDGE mode Back towards the Phantom With Headphone	0.516	30.74

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

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Side, Low frequency GPRS mode Back towards the phantom	0.253	28.72
Side, Middle frequency GPRS mode Back towards the phantom	0.286	28.44
Side, High frequency GPRS mode Back towards the phantom	0.389	28.34
Side, High frequency GPRS mode Keyboard towards the phantom	0.271	28.34
Side, High frequency GSM mode Back towards the phantom	0.156	29.18
Side, High frequency GSM mode Back towards the Phantom With Headphone	0.158	29.18
Side, High frequency EDGE mode Back towards the Phantom With Headphone	0.269	28.52

SAR Values (WCDMA 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 WCDMA mode Back towards the phantom	0.691	24.93
Side, Middle frequency WCDMA mode Back towards the phantom	0.577	24.43
Side, High frequency WCDMA mode Back towards the phantom	0.850	24.79
Side, High frequency WCDMA mode Keyboard towards the phantom	0.410	24.79
Side, High frequency HSDPA mode Back towards the phantom	0.373	24.54
Side, High frequency WCDMA mode Back towards the	0.396	24.79

phantom with earphone

SAR Values (WCDMA 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 WCDMA mode Back towards the phantom	0.585	24.31
Side, Middle frequency WCDMA mode Back towards the phantom	0.386	23.87
Side, High frequency WCDMA mode Back towards the phantom	0.487	24.09
Side, Low frequency WCDMA mode Keyboard towards the phantom	0.329	24.31
Side, Low frequency HSDPA mode Back towards the phantom	0.313	23.10
Side, Low frequency WCDMA mode Back towards the phantom with earphone	0.327	24.31

1. Per KDB 648474, when the SAR procedures require multiple channels to be tested and the 1-g SAR for the highest output channel is less than 0.8 W/kg and peak SAR is less than 1.6W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.
2. EUT with Bluetooth, but Bluetooth Peak Output power is 2.67dBm, very low, so the test does not consider the Bluetooth status.
3. EUT with WIFI, but WIFI Peak Output power is 11.51dBm, very low, so the test does not consider the WIFI status.
4. As the power of the BT and WLAN is below the low threshold, no simultaneous SAR is required. SAR on only the cellular part will be sufficient. Response to pre-TCB KDB inquiry to FCC (Tracking Number 724636)

Annex A Accreditation Certificate

The image shows a formal accreditation certificate from the China National Accreditation Service for Conformity Assessment (CNAS). The certificate is titled 'LABORATORY ACCREDITATION CERTIFICATE' and is numbered 'CNAS L3572'. It accredits 'Morlab Laboratory Shenzhen Morlab Communications Technology Co., Ltd.' for testing and calibration services according to ISO/IEC 17025:2005. The certificate includes the date of issue (2008-07-01), the date of expiry (2011-06-30), and the date of initial accreditation (2008-07-01). It also features the CNAS logo, the ILAC-MRA logo, and a signature of the representative of the China National Accreditation Service for Conformity Assessment.

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(No. CNAS L3572)

China National Accreditation Service for Conformity Assessment has accredited

**Morlab Laboratory Shenzhen Morlab Communications
Technology Co., Ltd.**

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

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

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

Date of Issue: 2008-07-01
Date of Expiry: 2011-06-30
Date of Initial Accreditation: 2008-07-01



Signed on behalf of China National Accreditation Service
for Conformity Assessment

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

Annex B Photographs of the EUT

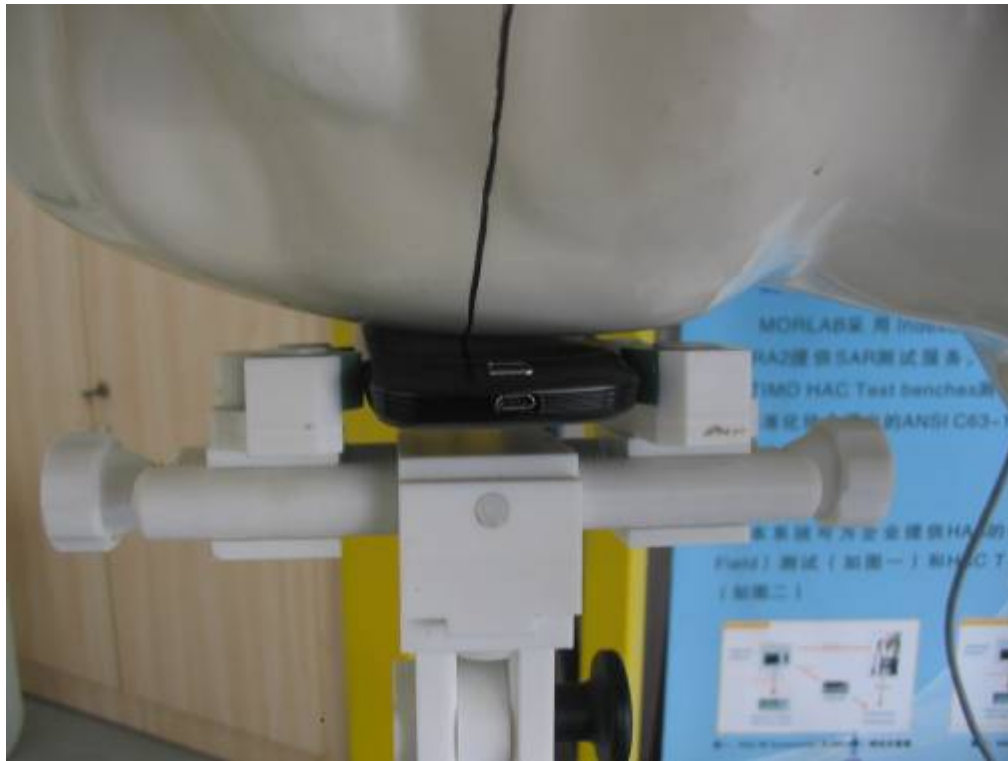
1 EUT Left Head Touch Cheek Position



2 EUT Left Head Tilt15 Position



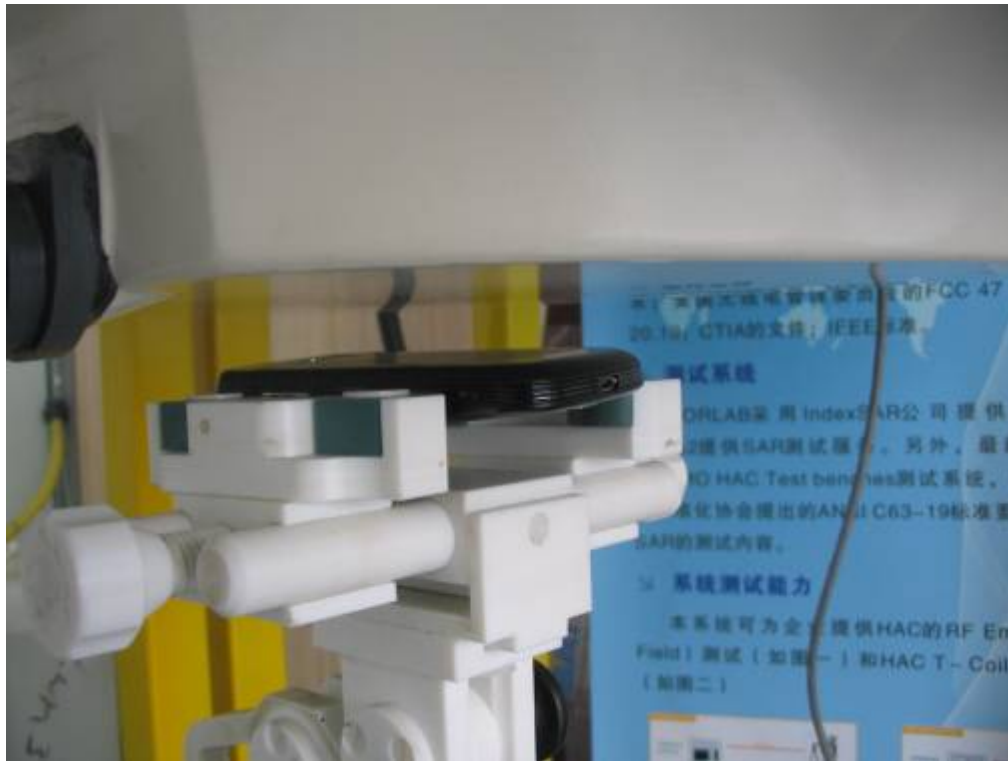
3 EUT Right Head Touch Cheek Position



4 EUT Right Head Tilt15 Position



5 Side Position



6 With Headphone



Liquid Level Photo



Annex C Graph Test Results

<u>TYPE</u>	BAND	<u>PARAMETERS</u>
	<u>GSM850</u>	<u>Measurement 1:</u> Right Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 2:</u> Right Head with Tilt device position on Middle Channel in GSM mode <u>Measurement 3:</u> Left Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 4:</u> Left Head with Tilt device position on Middle Channel in GSM mode <u>Measurement 5:</u> Validation Plane with Body device position on Low Channel in GPRS mode <u>Measurement 6:</u> Validation Plane with Body device position on Middle Channel in GPRS mode <u>Measurement 7:</u> Validation Plane with Body device position on High Channel in GPRS mode <u>Measurement 8:</u> Validation Plane with Body device position on Middle Channel in GPRS mode <u>Measurement 9:</u> Validation Plane with Body device position on Middle Channel in GSM mode <u>Measurement 10:</u> Validation Plane with Body device position on Middle Channel in GSM mode <u>Measurement 11:</u> Validation Plane with Body device position on Middle Channel in EDGE mode
	<u>GSM</u> <u>1900</u>	<u>Measurement 12:</u> Right Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 13:</u> Right Head with Tilt device position on Middle Channel in GSM mode <u>Measurement 14:</u> Left Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 15:</u> Left Head with Tilt device position on Middle Channel in GSM mode <u>Measurement 16:</u> Validation Plane with Body device position on Low Channel in GPRS mode <u>Measurement 17:</u> Validation Plane with Body device position on Middle Channel in GPRS mode <u>Measurement 18:</u> Validation Plane with Body device position on High Channel in GPRS mode <u>Measurement 19:</u> Validation Plane with Body device

		<p>position on High Channel in GPRS mode</p> <p><u>Measurement 20:</u> Validation Plane with Body device position on High Channel in GSM mode</p> <p><u>Measurement 21:</u> Validation Plane with Body device position on High Channel in GSM mode</p> <p><u>Measurement 22:</u> Validation Plane with Body device position on High Channel in EDGE mode</p>
	<p><u>WCDMA</u></p> <p><u>850</u></p>	<p><u>Measurement 23:</u> Right Head with Cheek device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 24:</u> Right Head with Tilt device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 25:</u> Left Head with Cheek device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 26:</u> Left Head with Tilt device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 27:</u> Validation Plane with Body device position on Low Channel in WCDMA mode</p> <p><u>Measurement 28:</u> Validation Plane with Body device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 29:</u> Validation Plane with Body device position on High Channel in WCDMA mode</p> <p><u>Measurement 30:</u> Validation Plane with Body device position on High Channel in WCDMA mode</p> <p><u>Measurement 31:</u> Validation Plane with Body device position on High Channel in HSDPA mode</p> <p><u>Measurement 32:</u> Validation Plane with Body device position on High Channel in WCDMA mode</p>
	<p><u>WCDMA</u></p> <p><u>1900</u></p>	<p><u>Measurement 33:</u> Right Head with Cheek device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 34:</u> Right Head with Tilt device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 35:</u> Left Head with Cheek device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 36:</u> Left Head with Tilt device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 37:</u> Validation Plane with Body device position on Low Channel in WCDMA mode</p> <p><u>Measurement 38:</u> Validation Plane with Body device position on Middle Channel in WCDMA mode</p> <p><u>Measurement 39:</u> Validation Plane with Body device position on High Channel in WCDMA mode</p>

		<u>Measurement 40:</u> Validation Plane with Body device position on Low Channel in WCDMA mode <u>Measurement 41:</u> Validation Plane with Body device position on Low Channel in HSDPA mode <u>Measurement 42:</u> Validation Plane with Body device position on Low Channel in WCDMA mode
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MEASUREMENT 1

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 8 minutes 1 seconds

A. Experimental conditions.

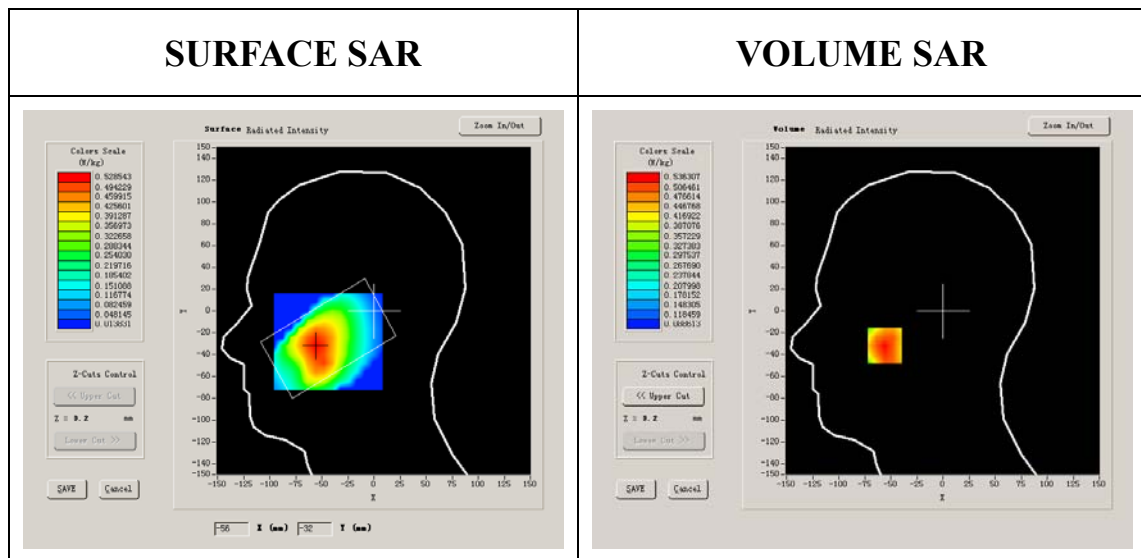
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	0.888655
Variation (%)	-0.480000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:8

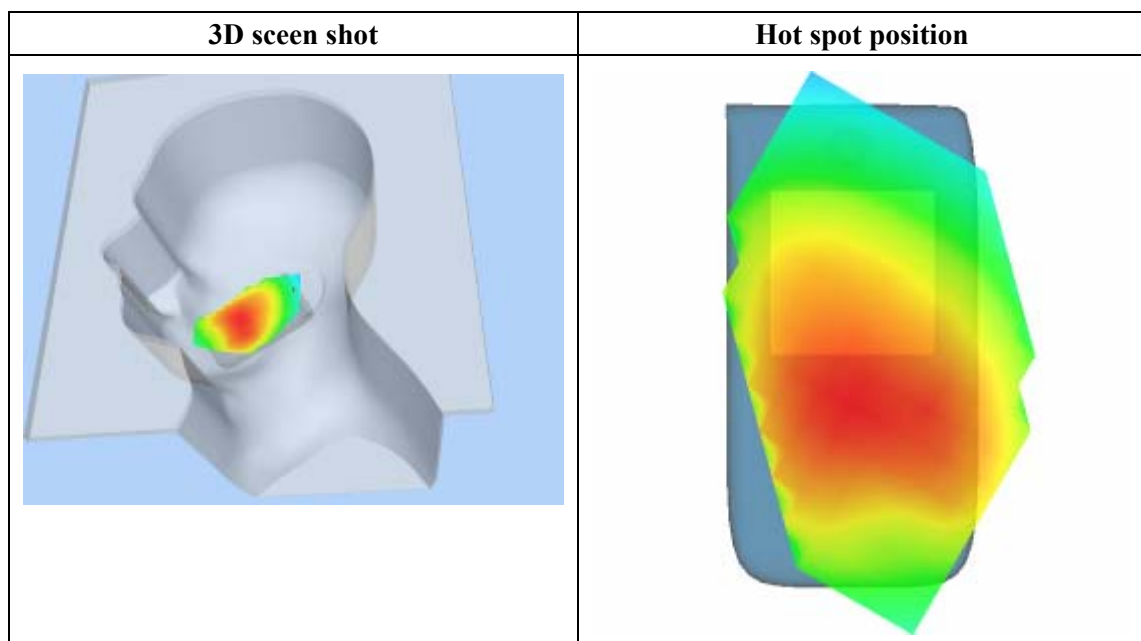
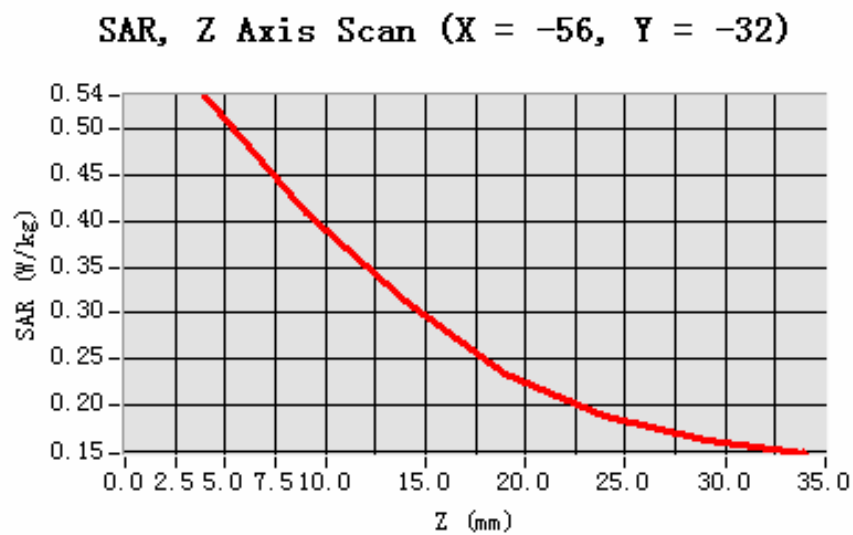


Maximum location: X=-56.00, Y=-32.00

SAR 10g (W/Kg)	0.376908
SAR 1g (W/Kg)	0.513551

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5363	0.4087	0.3118	0.2342	0.1882	0.1614



MEASUREMENT 2

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 7 minutes 37 seconds

A. Experimental conditions.

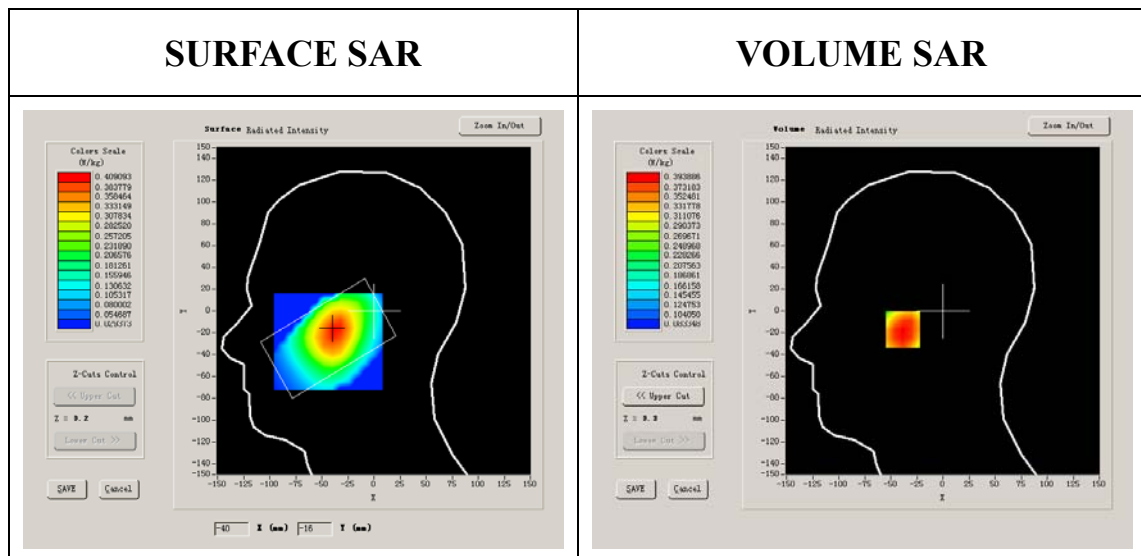
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	0.888655
Variation (%)	-1.440000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:8

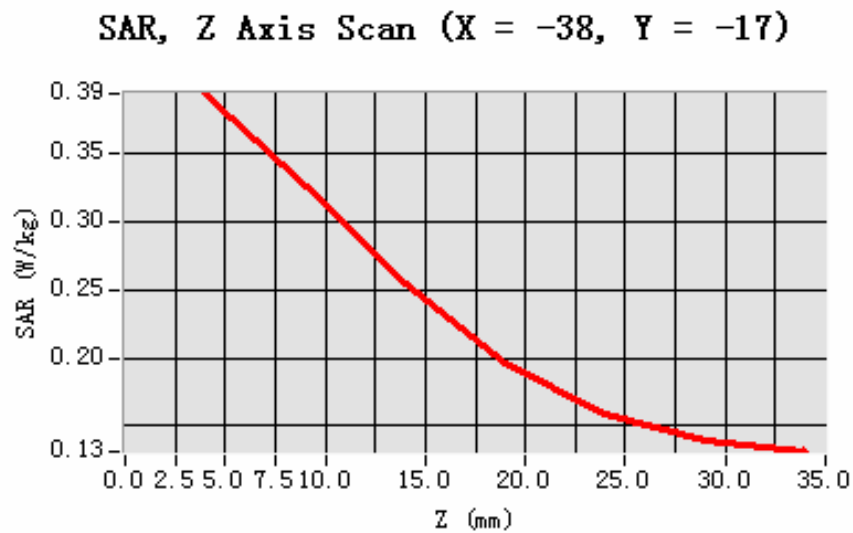


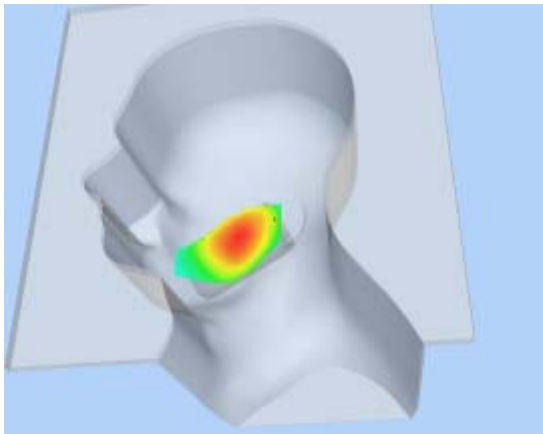
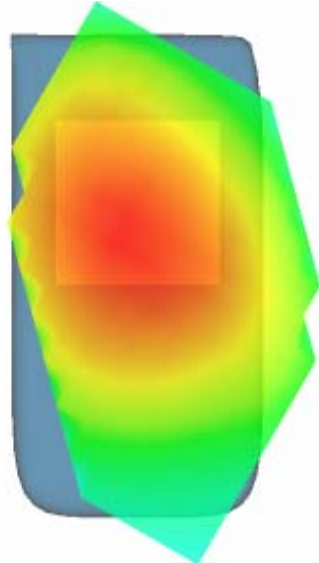
Maximum location: X=-38.00, Y=-17.00

SAR 10g (W/Kg)	0.289343
SAR 1g (W/Kg)	0.379853

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3939	0.3258	0.2546	0.1955	0.1592	0.1400



3D scene shot	Hot spot position
	

MEASUREMENT 3

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 7 minutes 56 seconds

A. Experimental conditions.

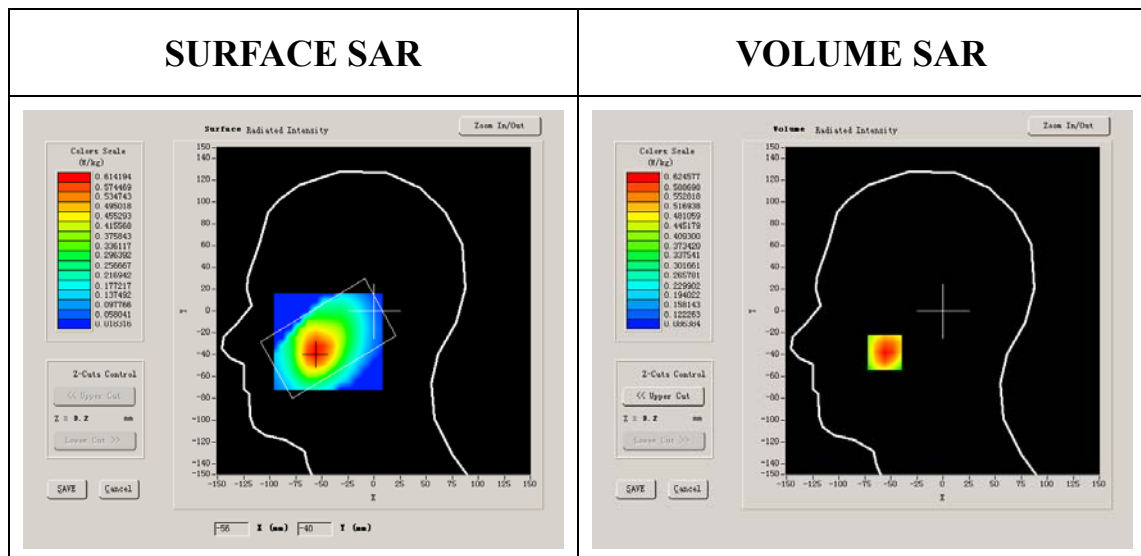
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	0.888655
Variation (%)	0.870000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:8

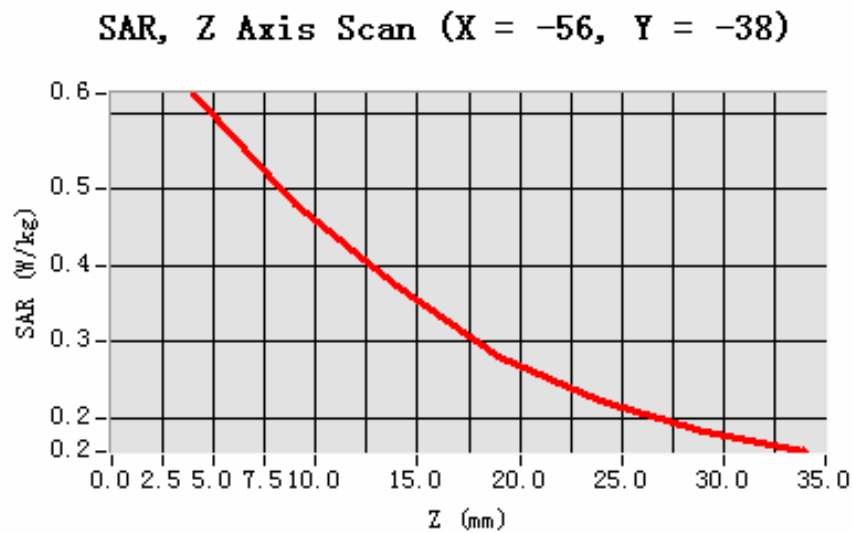


Maximum location: X=-56.00, Y=-38.00

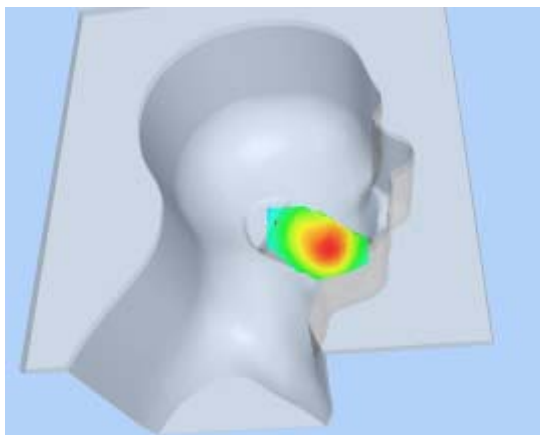
SAR 10g (W/Kg)	0.428315
SAR 1g (W/Kg)	0.597427

Z Axis Scan

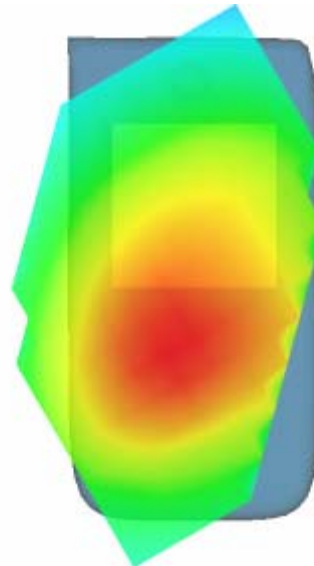
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6246	0.4814	0.3726	0.2802	0.2230	0.1834



3D scene shot



Hot spot position



MEASUREMENT 4

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 7 minutes 37 seconds

A. Experimental conditions.

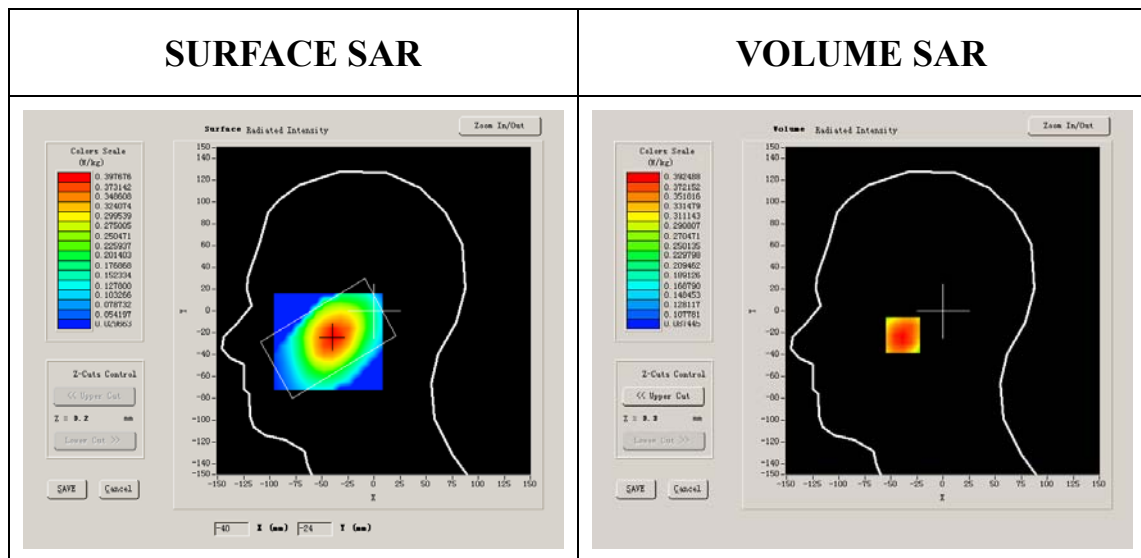
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	0.888655
Variation (%)	0.660000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:8

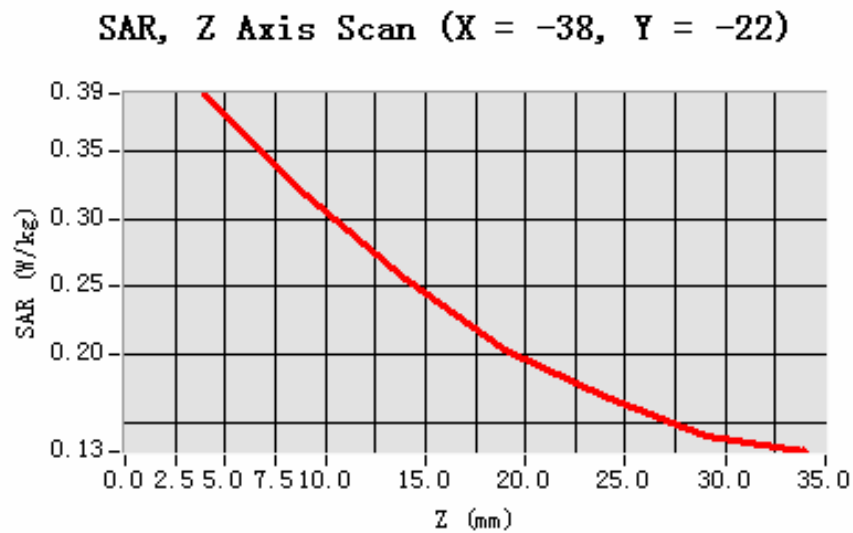


Maximum location: X=-38.00, Y=-22.00

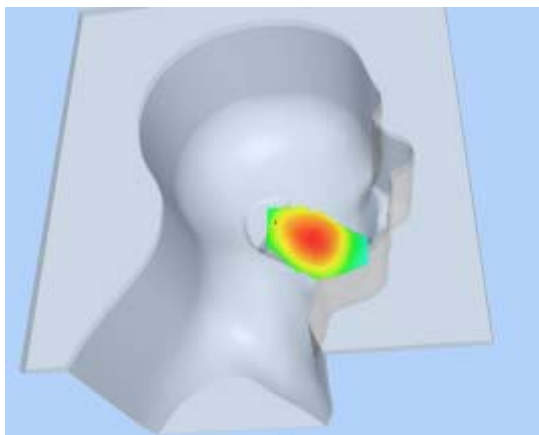
SAR 10g (W/Kg)	0.290987
SAR 1g (W/Kg)	0.380766

Z Axis Scan

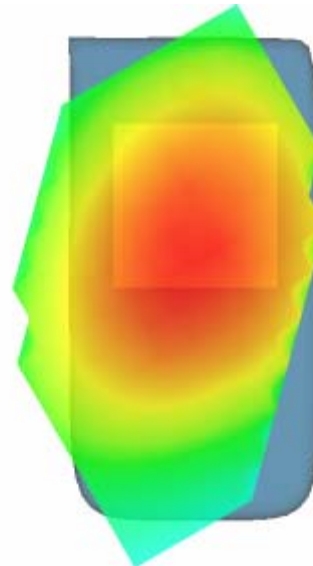
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3925	0.3181	0.2547	0.2040	0.1682	0.1398



3D scene shot



Hot spot position



MEASUREMENT 5

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

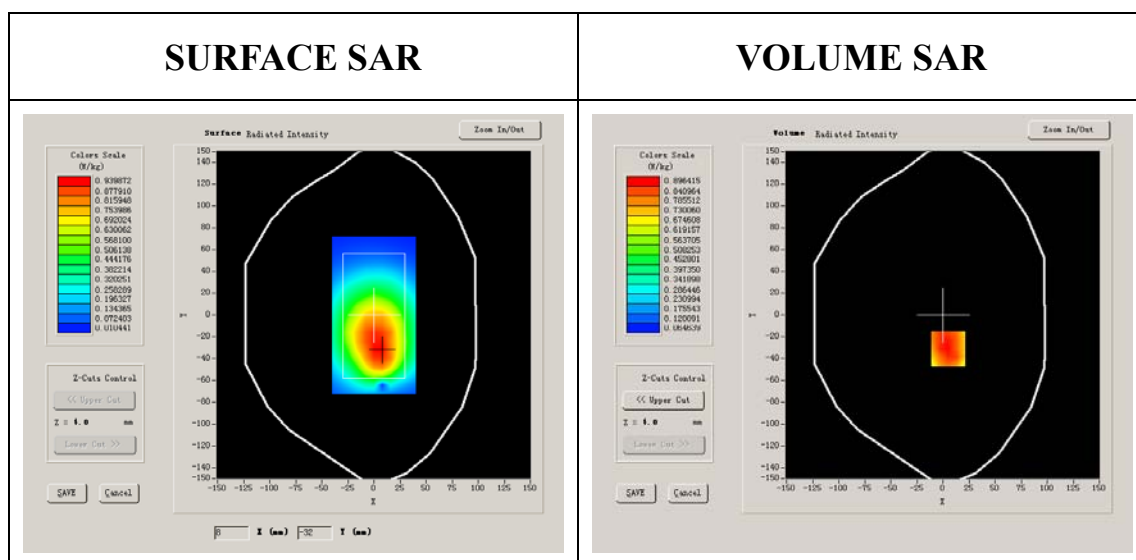
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

Conductivity (S/m)	0.974596
Variation (%)	-4.420000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:2



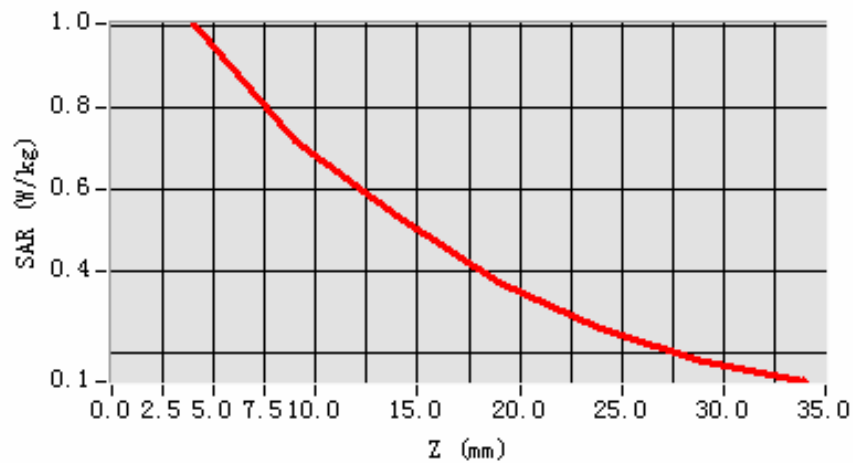
Maximum location: X=5.00, Y=-31.00

SAR 10g (W/Kg)	0.679283
SAR 1g (W/Kg)	0.976479

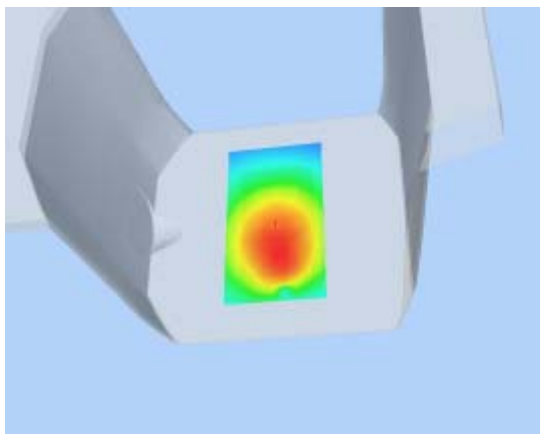
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0081	0.7195	0.5343	0.3718	0.2592	0.1785

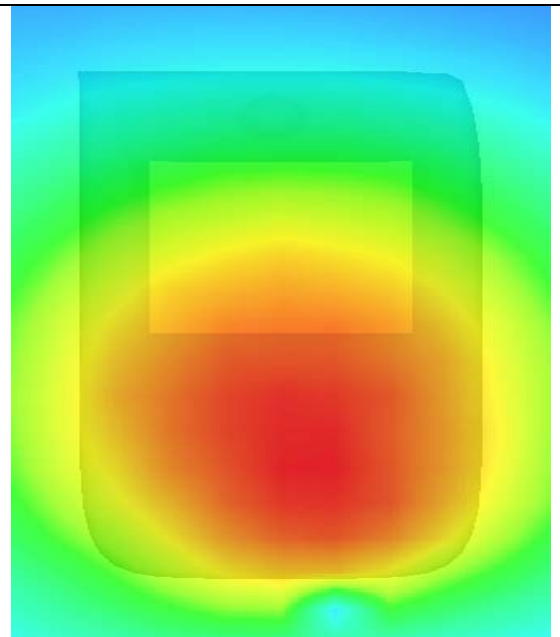
SAR, Z Axis Scan (X = 5, Y = -31)



3D scene shot



Hot spot position



MEASUREMENT 6

Type: Phone measurement (Complete)

Area scan resolution: $dx=8\text{mm}, dy=8\text{mm}$

Zoom scan resolution: $dx=8\text{mm}, dy=8\text{mm}, dz=5\text{mm}$

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

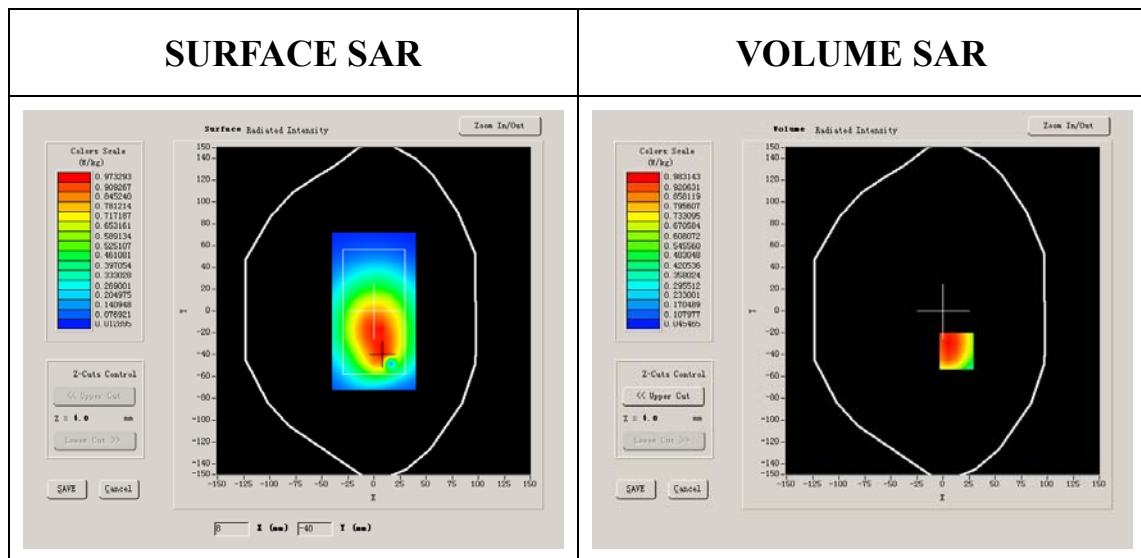
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	1.009033
Variation (%)	-0.100000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:2



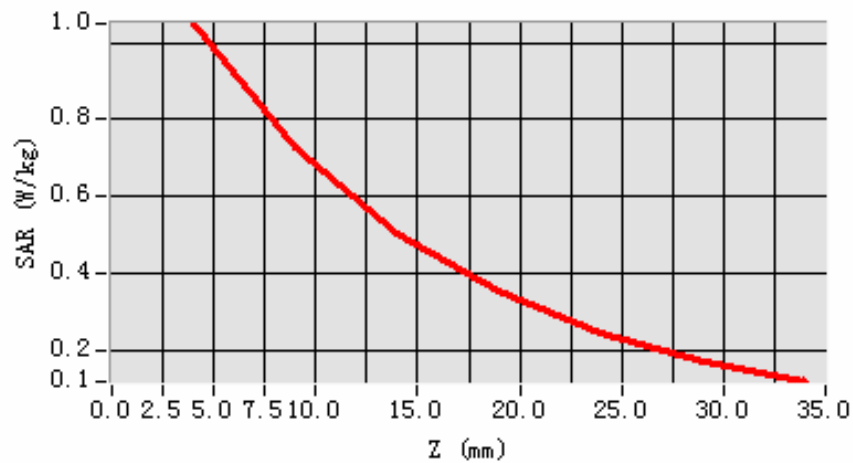
Maximum location: X=13.00, Y=-37.00

SAR 10g (W/Kg)	0.719030
SAR 1g (W/Kg)	1.048418

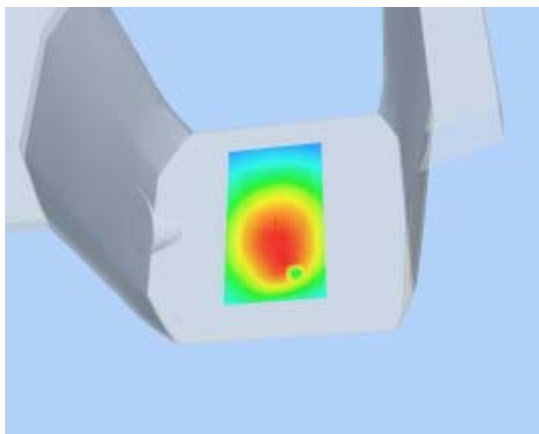
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0490	0.7260	0.5044	0.3574	0.2482	0.1737

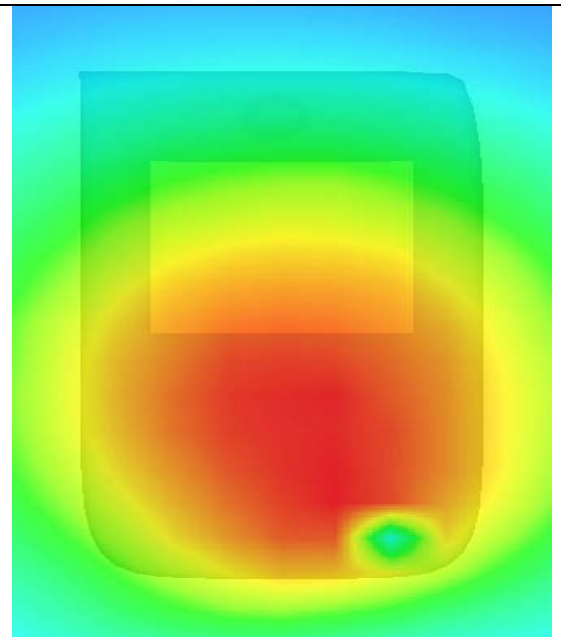
SAR, Z Axis Scan (X = 13, Y = -37)



3D scene shot



Hot spot position



MEASUREMENT 7

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

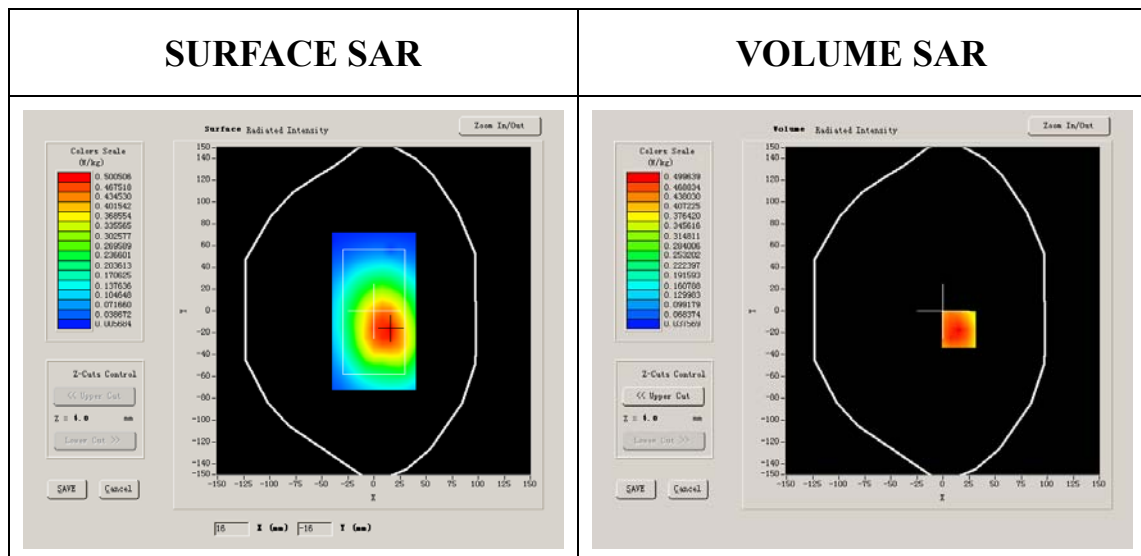
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GPRS

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	1.005962
Variation (%)	1.000000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:2

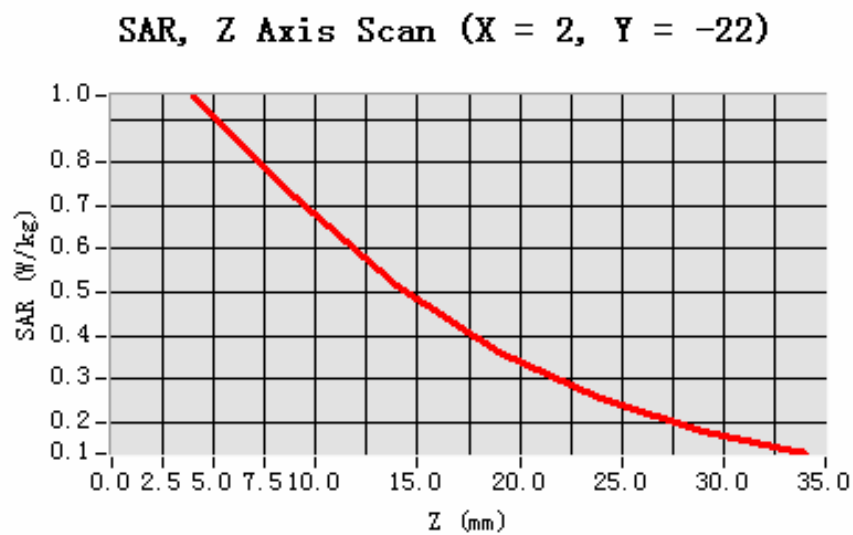


Maximum location: X=15.00, Y=-17.00

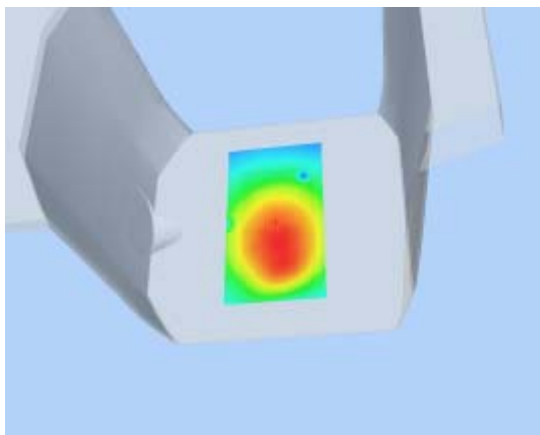
SAR 10g (W/Kg)	0.645787
SAR 1g (W/Kg)	0.892888

Z Axis Scan

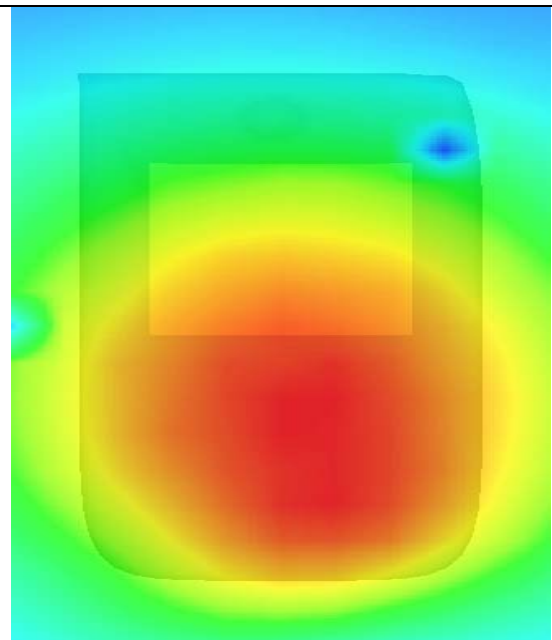
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9539	0.7170	0.5158	0.3632	0.2559	0.1811



3D scene shot



Hot spot position



MEASUREMENT 8

Type: Phone measurement (Complete)

Area scan resolution: $dx=8\text{mm}, dy=8\text{mm}$

Zoom scan resolution: $dx=8\text{mm}, dy=8\text{mm}, dz=5\text{mm}$

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

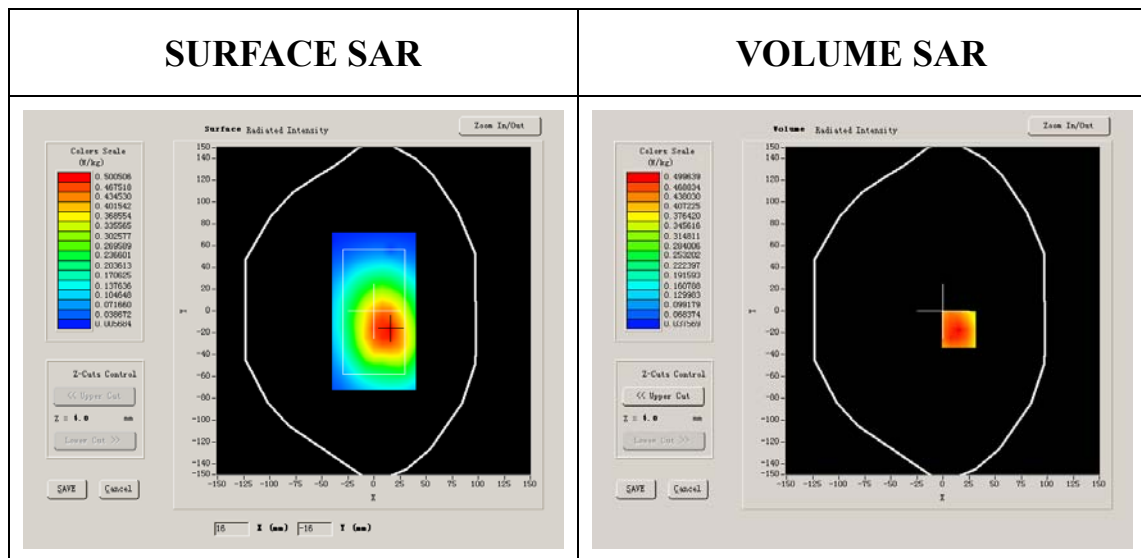
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	1.009033
Variation (%)	-1.610000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:2



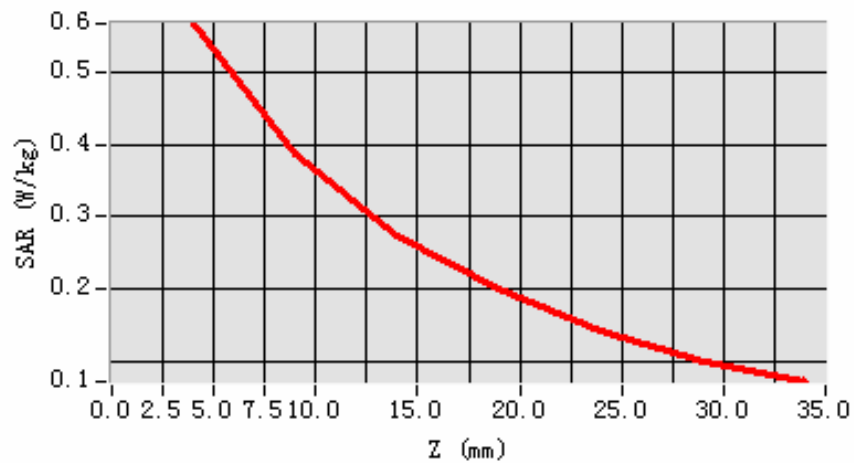
Maximum location: X=15.00, Y=-17.00

SAR 10g (W/Kg)	0.371355
SAR 1g (W/Kg)	0.545819

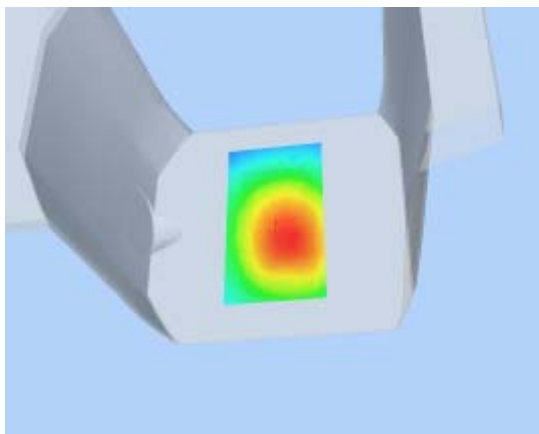
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5673	0.3861	0.2722	0.1990	0.1418	0.0976

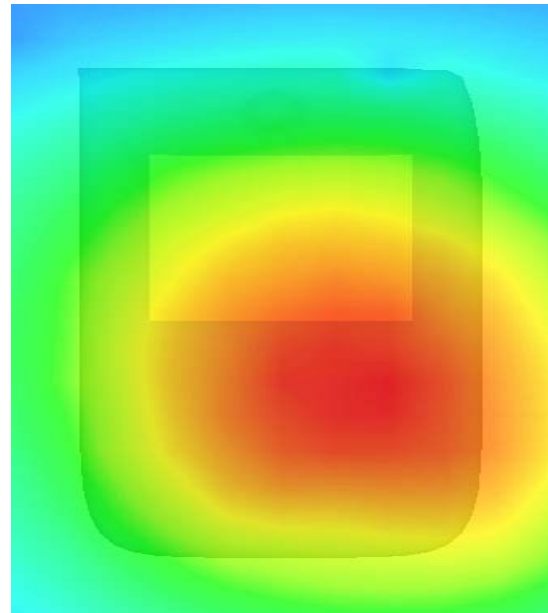
SAR, Z Axis Scan (X = 15, Y = -17)



3D scene shot



Hot spot position



MEASUREMENT 9

Type: Phone measurement (Complete)

Area scan resolution: $dx=8\text{mm}, dy=8\text{mm}$

Zoom scan resolution: $dx=8\text{mm}, dy=8\text{mm}, dz=5\text{mm}$

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

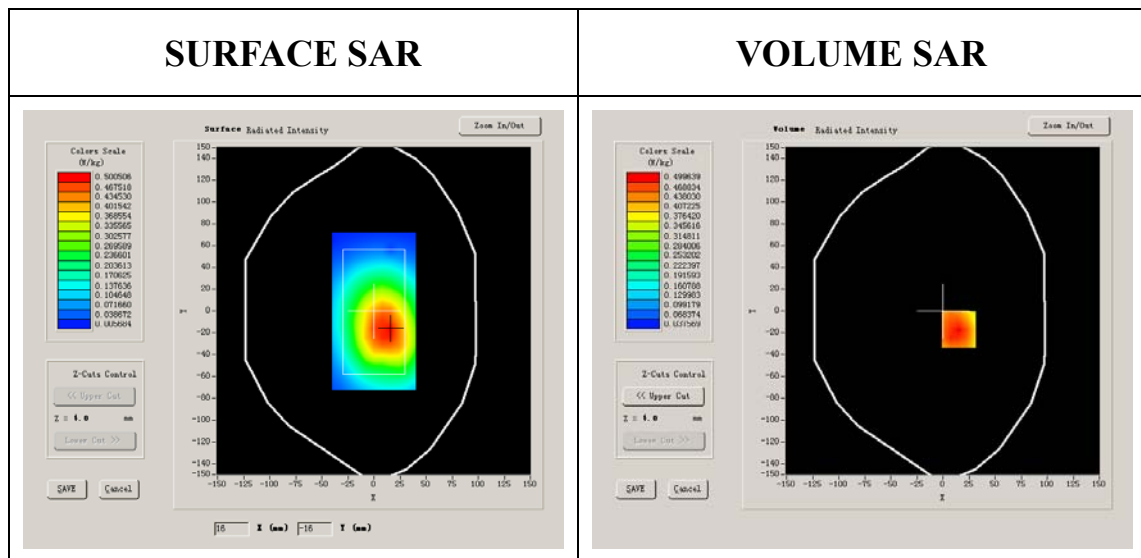
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	1.009033
Variation (%)	-1.610000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:8



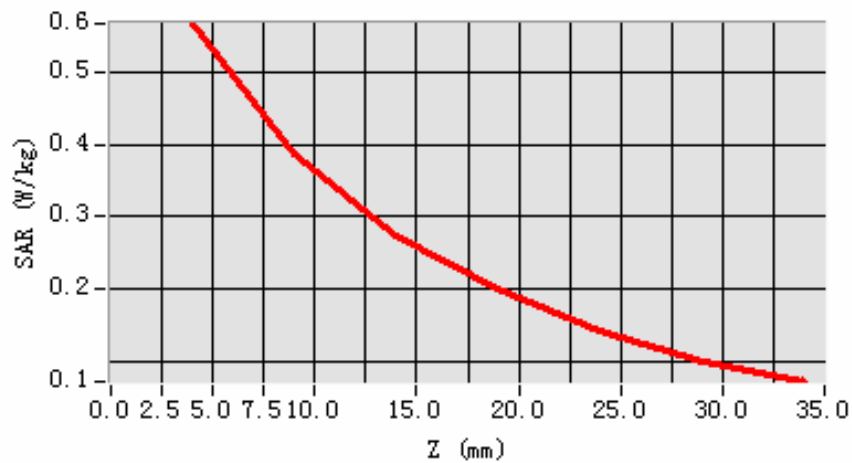
Maximum location: X=15.00, Y=-17.00

SAR 10g (W/Kg)	0.163577
SAR 1g (W/Kg)	0.351222

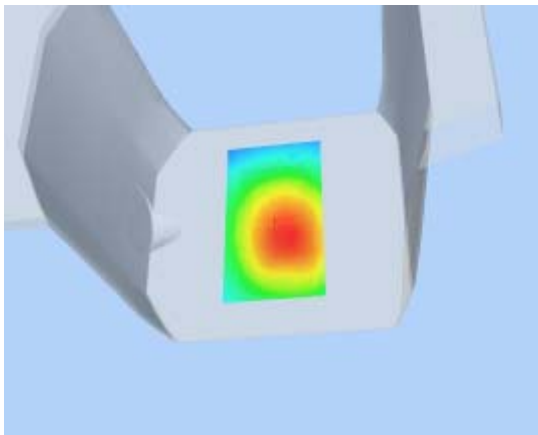
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5673	0.3861	0.2722	0.1990	0.1418	0.0976

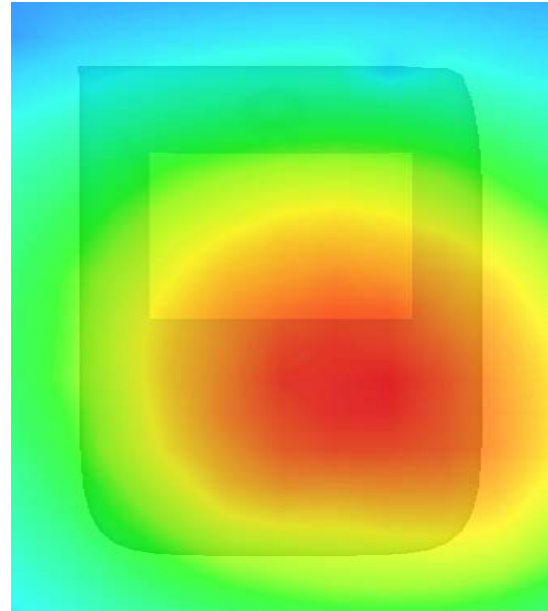
SAR, Z Axis Scan (X = 15, Y = -17)



3D scene shot



Hot spot position



MEASUREMENT 10

Type: Phone measurement (Complete)

Area scan resolution: $dx=8\text{mm}, dy=8\text{mm}$

Zoom scan resolution: $dx=8\text{mm}, dy=8\text{mm}, dz=5\text{mm}$

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

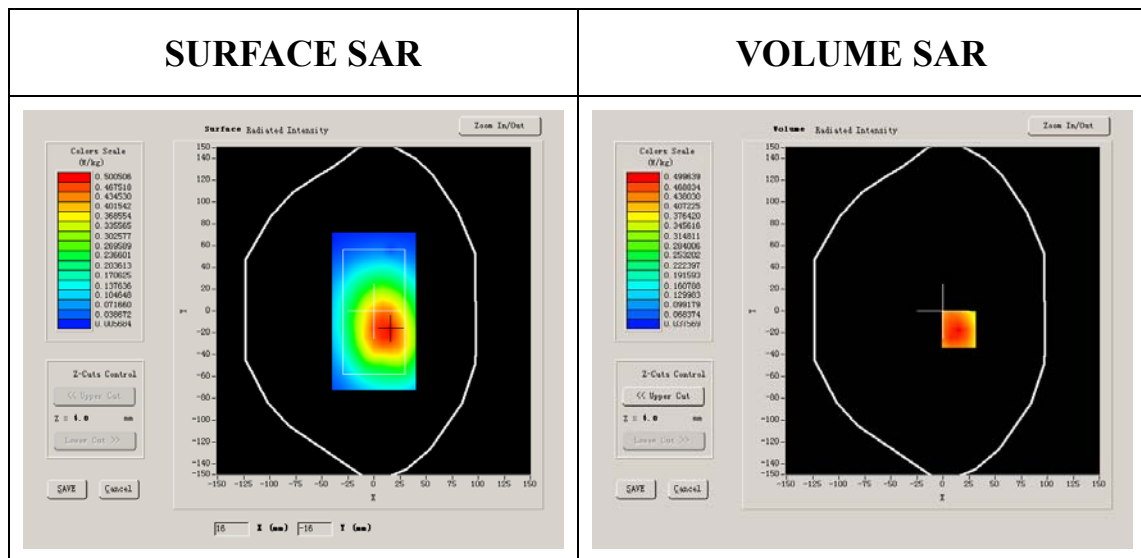
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	1.009033
Variation (%)	-1.610000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:8



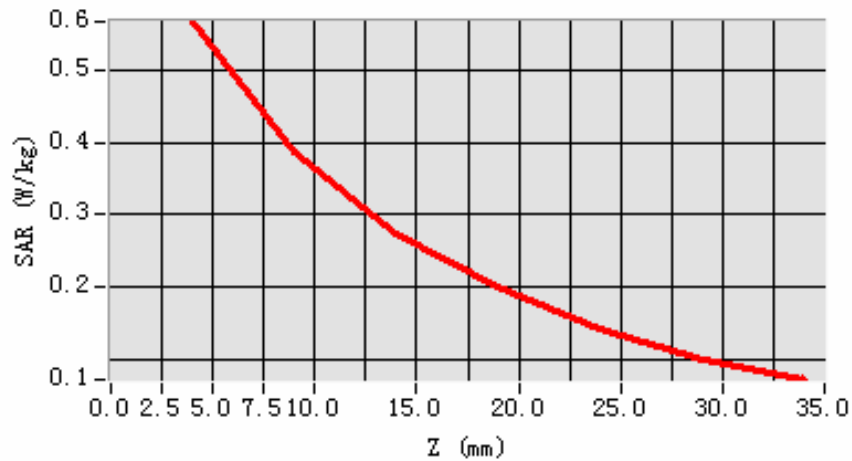
Maximum location: X=15.00, Y=-17.00

SAR 10g (W/Kg)	0.158732
SAR 1g (W/Kg)	0.339456

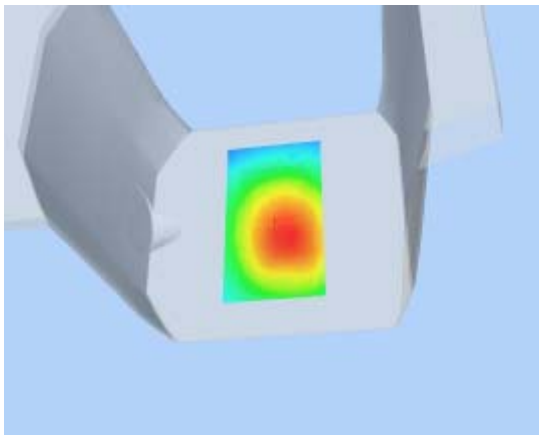
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5673	0.3861	0.2722	0.1990	0.1418	0.0976

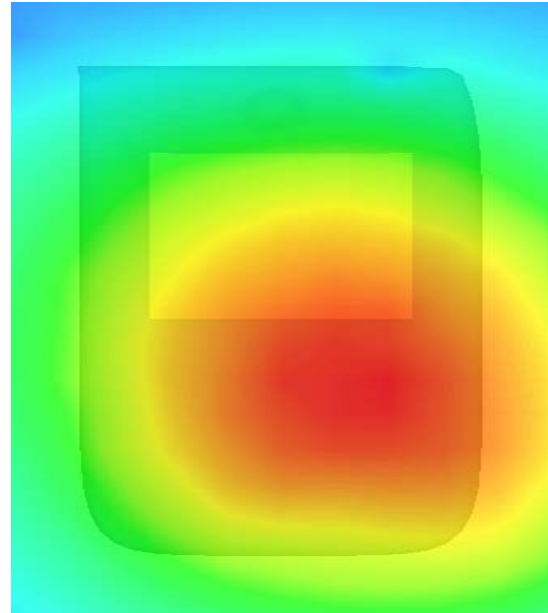
SAR, Z Axis Scan (X = 15, Y = -17)



3D scene shot



Hot spot position



MEASUREMENT 11

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

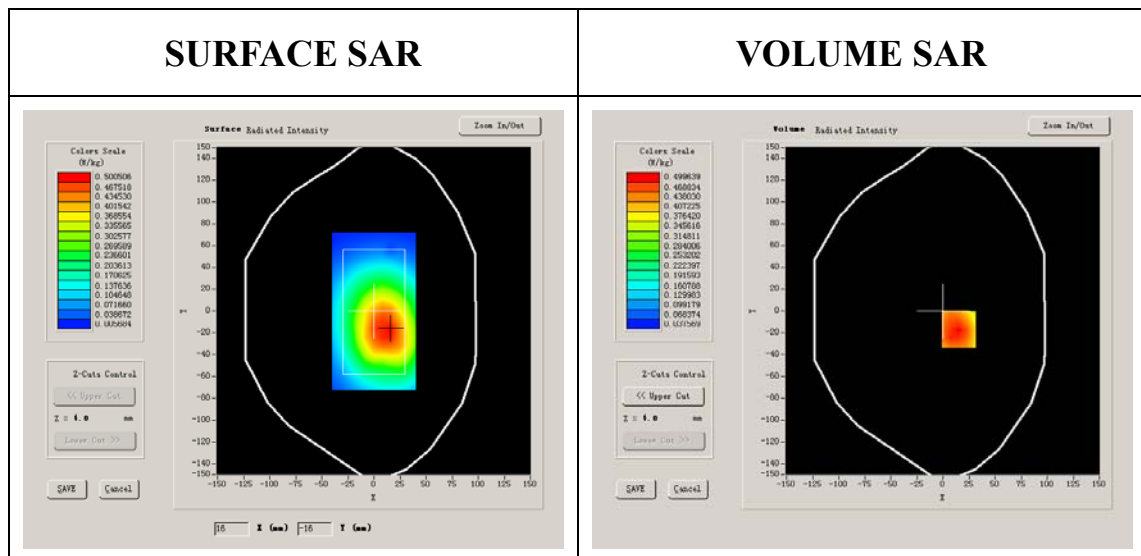
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	EDGE

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	1.009033
Variation (%)	-1.610000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:2



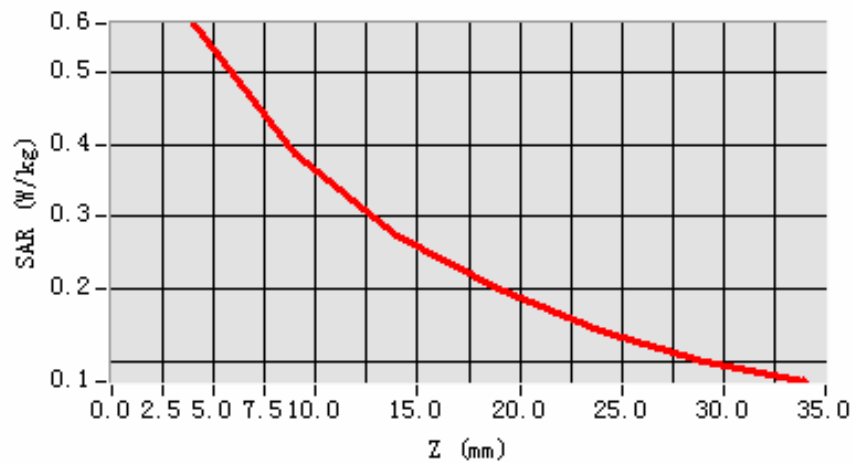
Maximum location: X=15.00, Y=-17.00

SAR 10g (W/Kg)	0.341662
SAR 1g (W/Kg)	0.515526

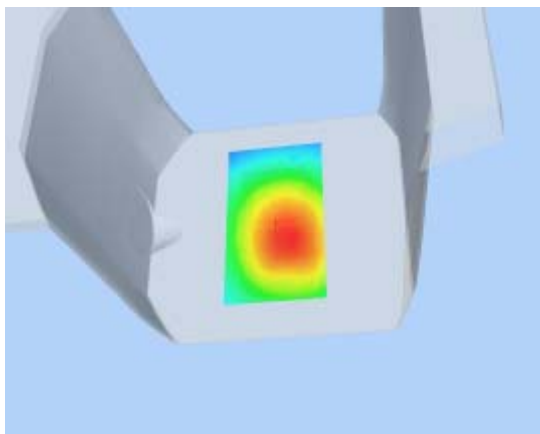
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5673	0.3861	0.2722	0.1990	0.1418	0.0976

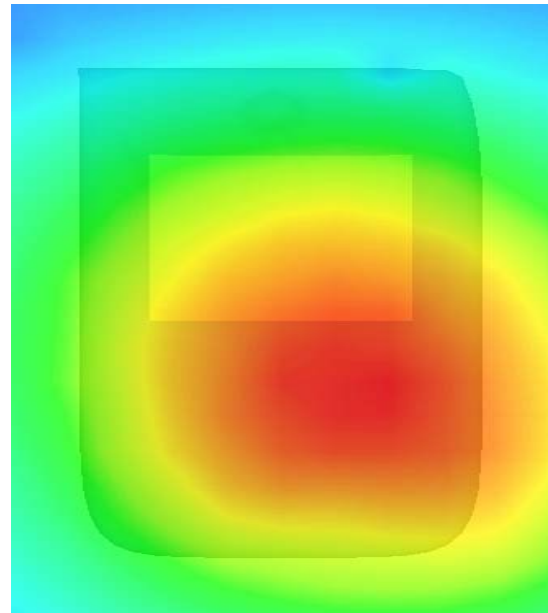
SAR, Z Axis Scan (X = 15, Y = -17)



3D scene shot



Hot spot position



MEASUREMENT 12

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 8 minutes 11 seconds

A. Experimental conditions.

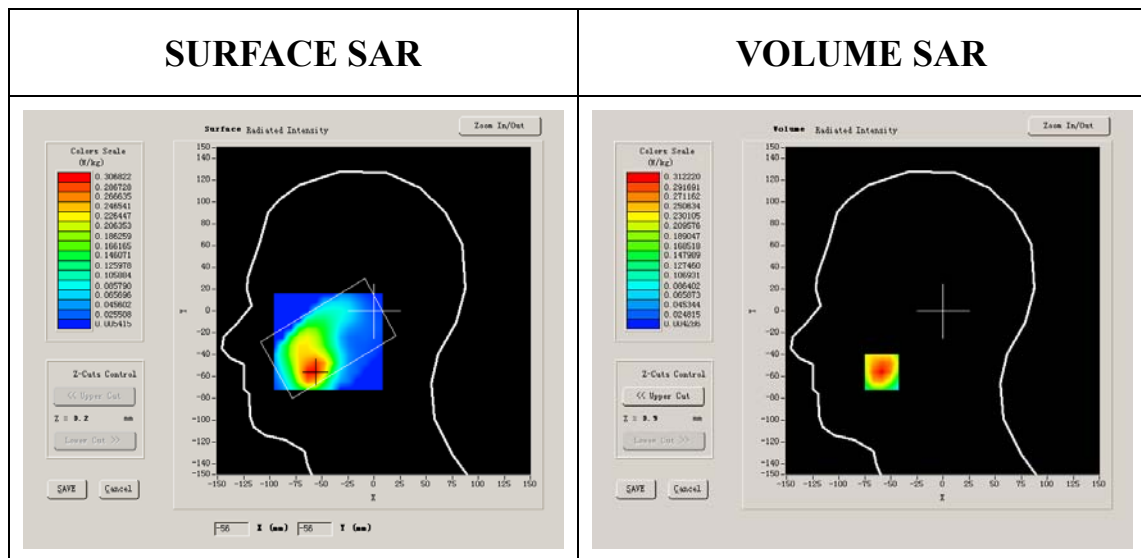
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	0.540000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

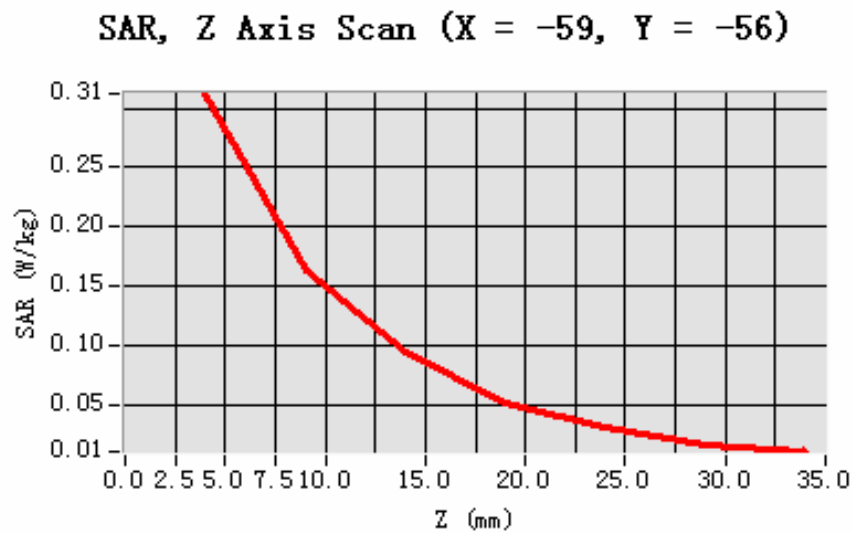


Maximum location: X=-59.00, Y=-56.00

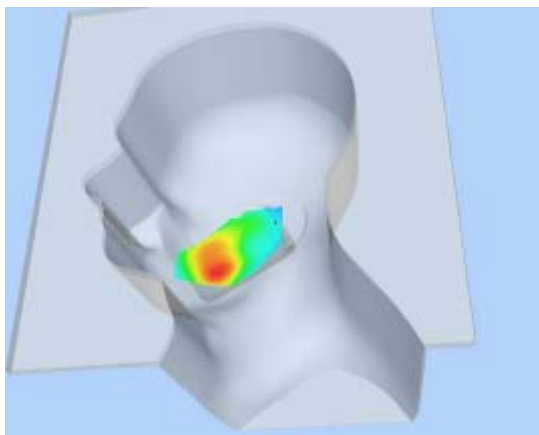
SAR 10g (W/Kg)	0.166692
SAR 1g (W/Kg)	0.299163

Z Axis Scan

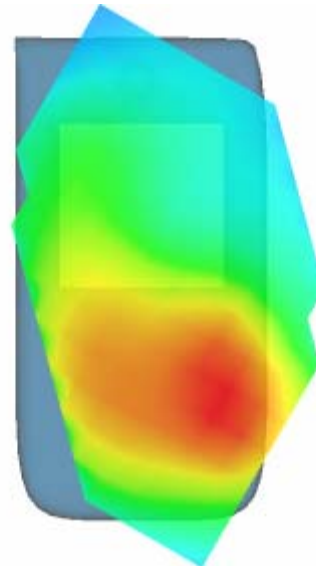
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3122	0.1629	0.0947	0.0523	0.0303	0.0170



3D scene shot



Hot spot position



MEASUREMENT 13

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 7 minutes 32 seconds

A. Experimental conditions.

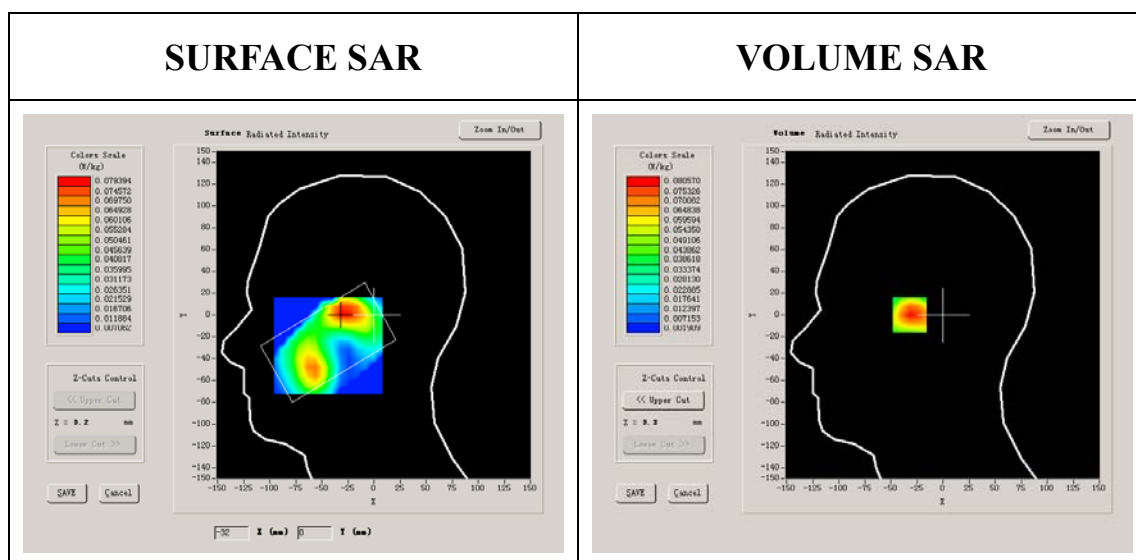
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	-1.130000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



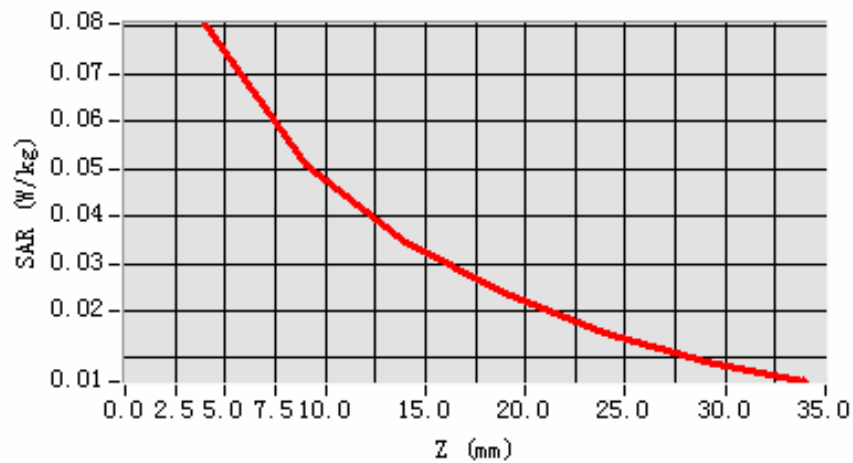
Maximum location: X=-30.00, Y=2.00

SAR 10g (W/Kg)	0.047273
SAR 1g (W/Kg)	0.077333

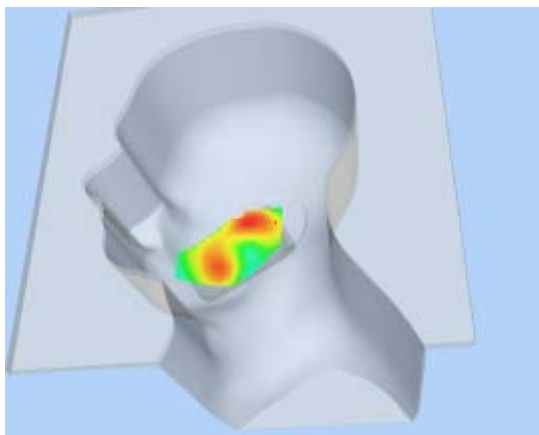
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0806	0.0508	0.0346	0.0236	0.0154	0.0094

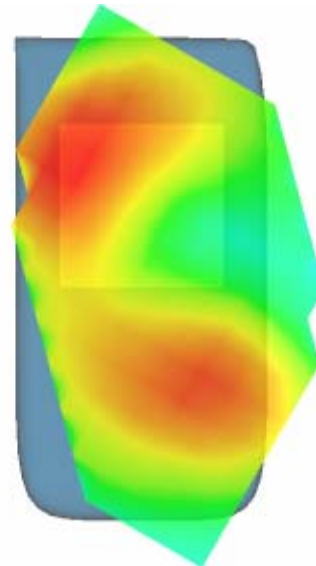
SAR, Z Axis Scan (X = -30, Y = 2)



3D scene shot



Hot spot position



MEASUREMENT 14

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 8 minutes 2 seconds

A. Experimental conditions.

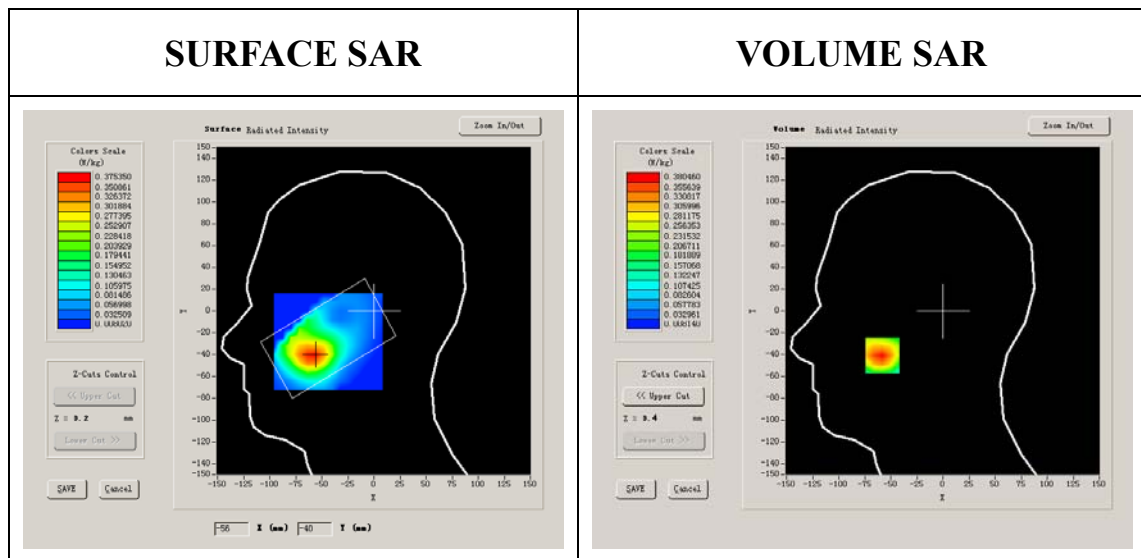
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	-1.390000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

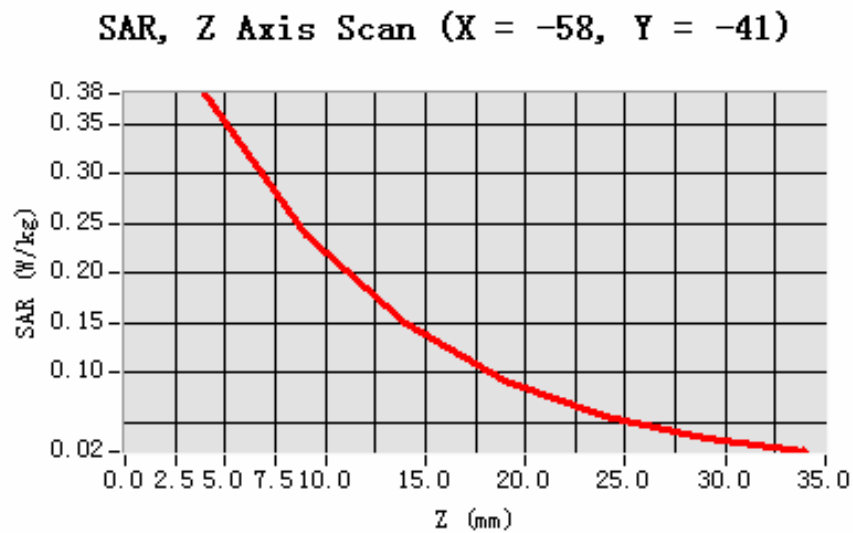


Maximum location: X=-58.00, Y=-41.00

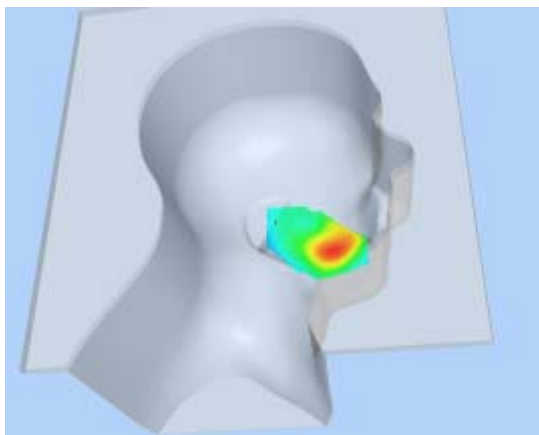
SAR 10g (W/Kg)	0.210801
SAR 1g (W/Kg)	0.358755

Z Axis Scan

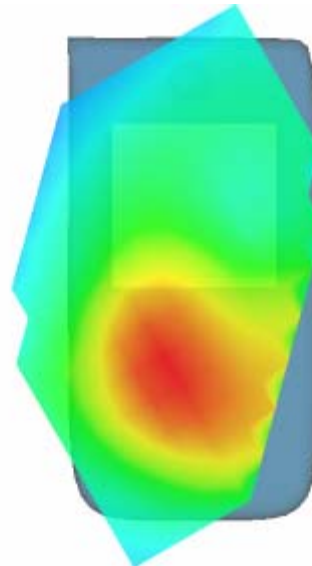
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3805	0.2387	0.1493	0.0919	0.0557	0.0330



3D scene shot



Hot spot position



MEASUREMENT 15

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 7 minutes 19 seconds

A. Experimental conditions.

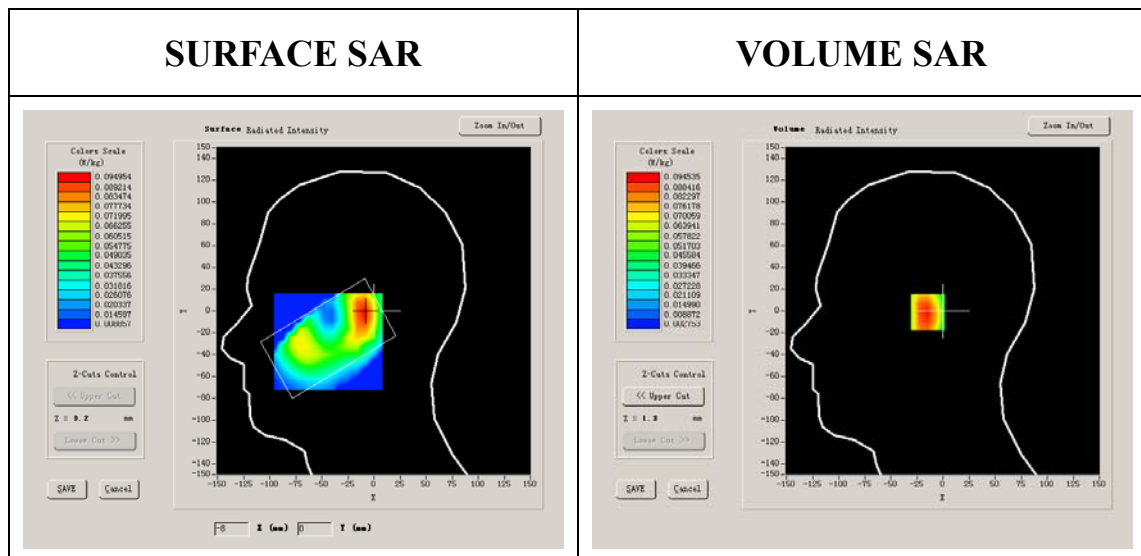
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	TDMA

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	-0.720000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

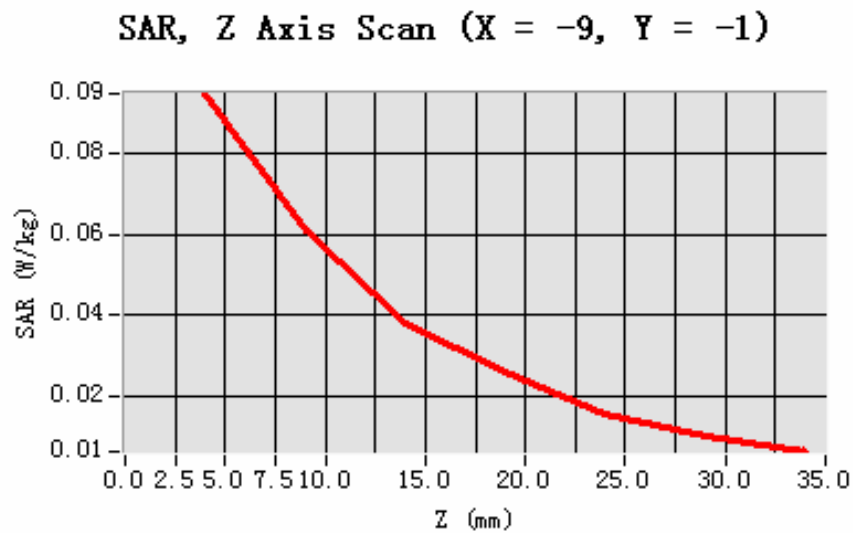


Maximum location: X=-9.00, Y=-1.00

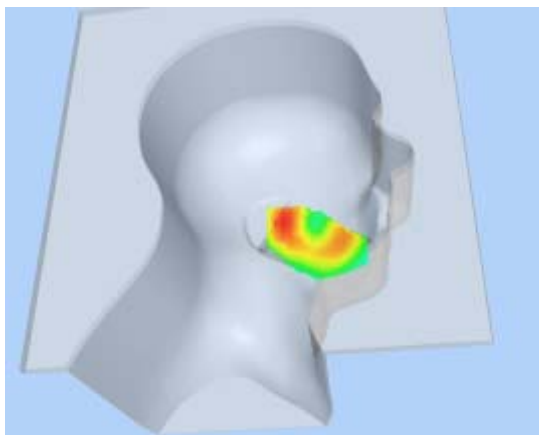
SAR 10g (W/Kg)	0.056180
SAR 1g (W/Kg)	0.090807

Z Axis Scan

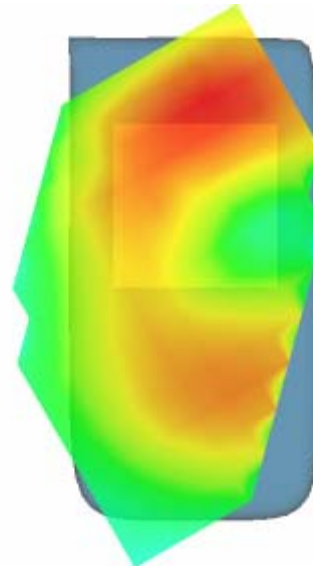
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0945	0.0606	0.0380	0.0257	0.0157	0.0105



3D scene shot



Hot spot position



MEASUREMENT 16

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 13 seconds

A. Experimental conditions.

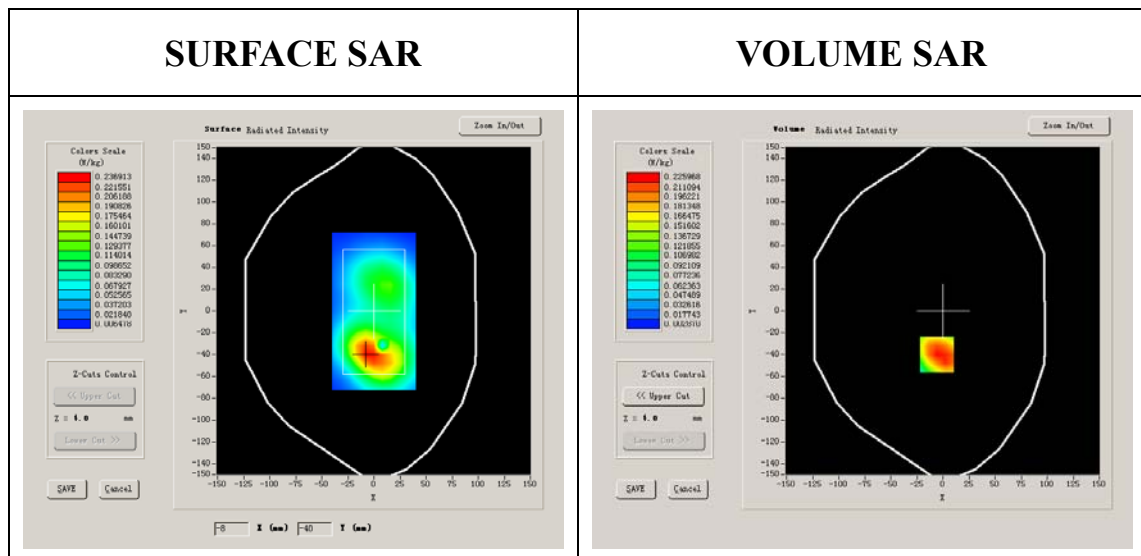
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	51.540001
Relative permittivity	15.070000

Conductivity (S/m)	1.549029
Variation (%)	-3.640000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:2



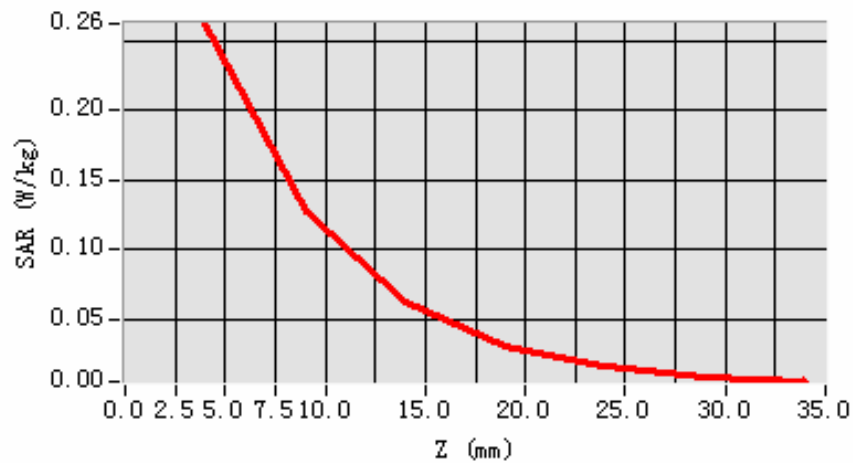
Maximum location: X=-6.00, Y=-40.00

SAR 10g (W/Kg)	0.134953
SAR 1g (W/Kg)	0.253145

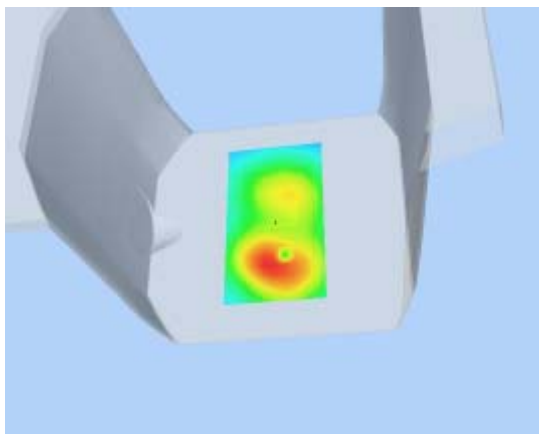
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2621	0.1275	0.0612	0.0296	0.0157	0.0084

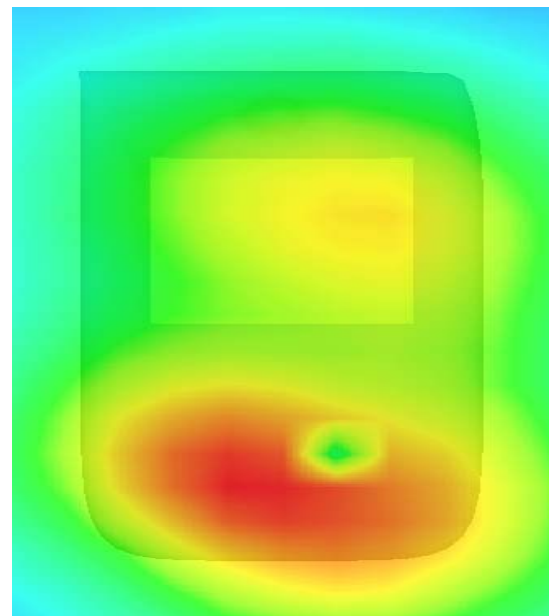
SAR, Z Axis Scan (X = -6, Y = -40)



3D scene shot



Hot spot position



MEASUREMENT 17

Type: Phone measurement (Complete)

Area scan resolution: $dx=8\text{mm}, dy=8\text{mm}$

Zoom scan resolution: $dx=8\text{mm}, dy=8\text{mm}, dz=5\text{mm}$

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 11 seconds

A. Experimental conditions.

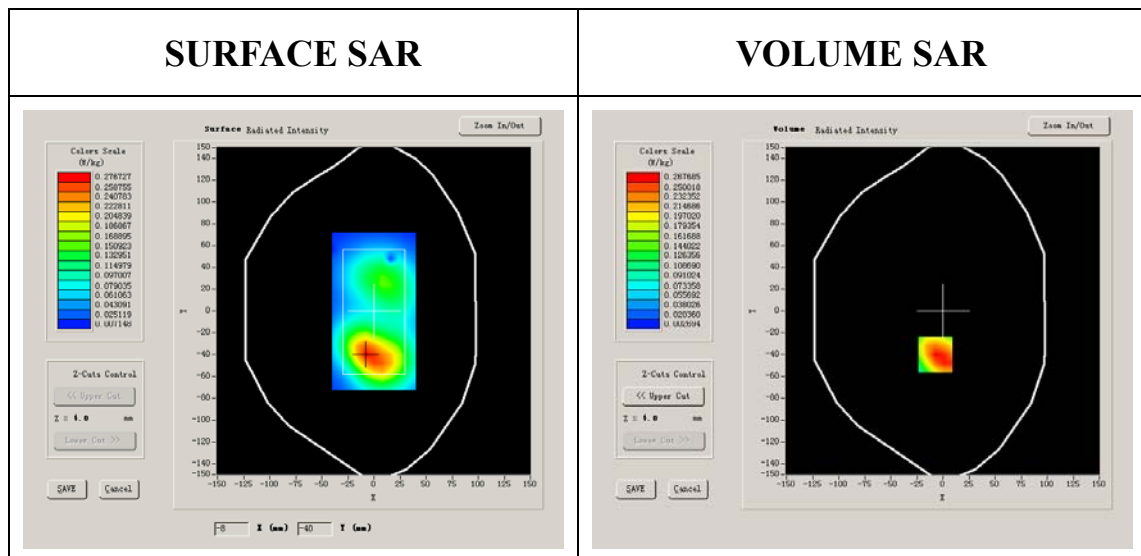
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.573978
Variation (%)	-1.720000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:2



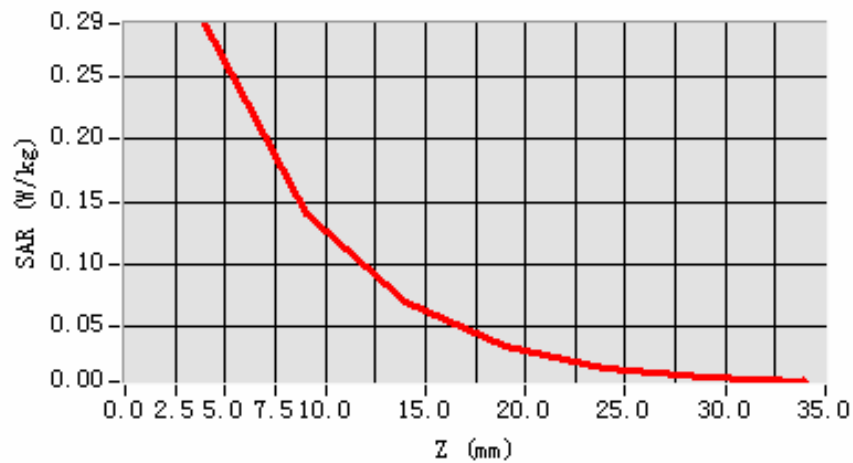
Maximum location: X=-7.00, Y=-40.00

SAR 10g (W/Kg)	0.151733
SAR 1g (W/Kg)	0.286316

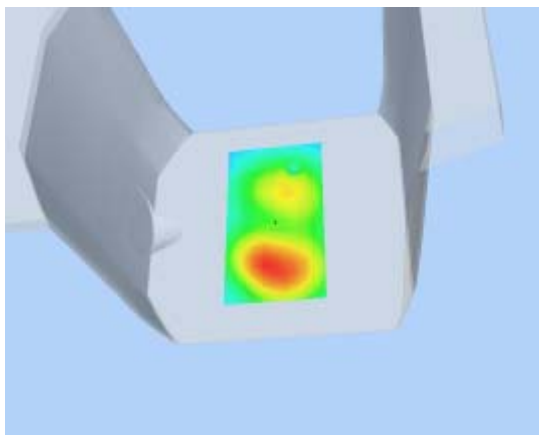
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2934	0.1394	0.0689	0.0335	0.0157	0.0090

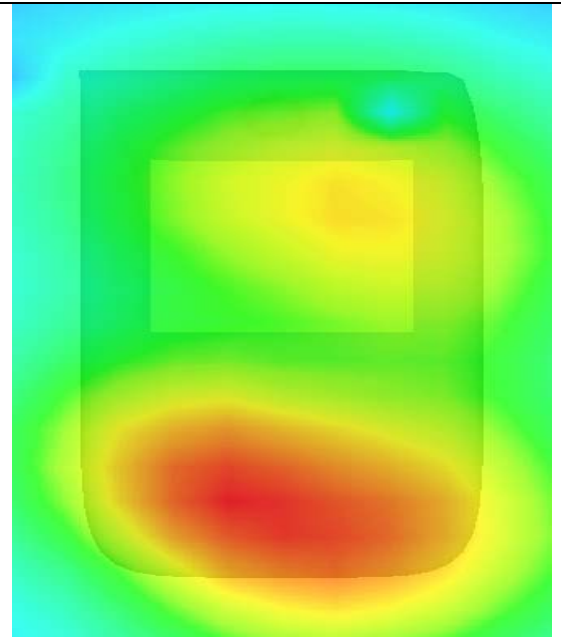
SAR, Z Axis Scan (X = -7, Y = -40)



3D scene shot



Hot spot position



MEASUREMENT 18

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

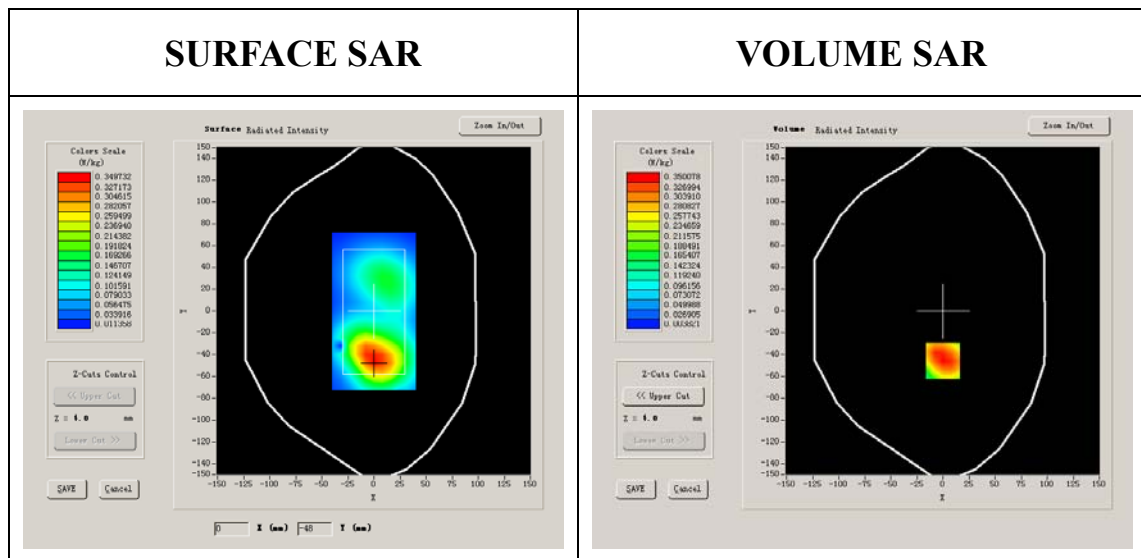
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GPRS

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	51.540001
Relative permittivity	15.070000

Conductivity (S/m)	1.598927
Variation (%)	-2.080000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:2

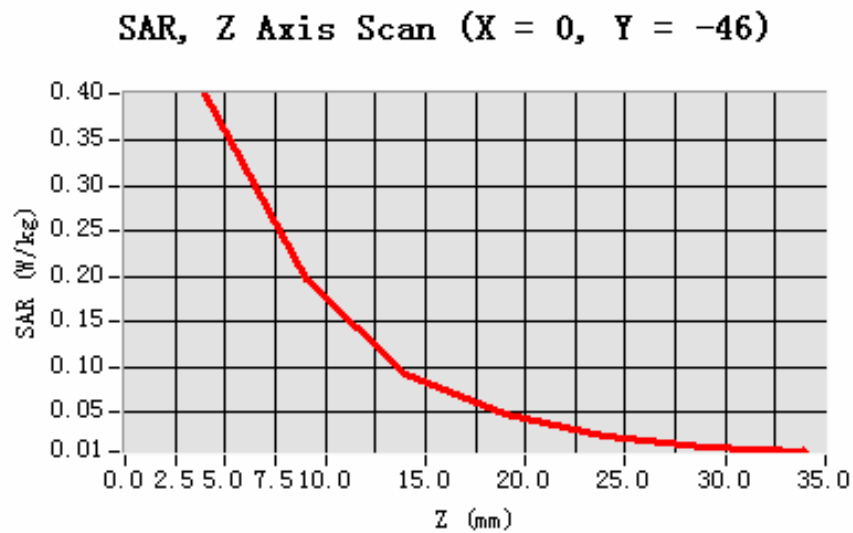


Maximum location: X=0.00, Y=-46.00

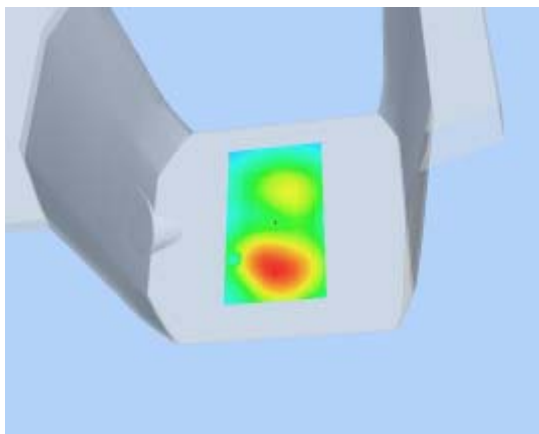
SAR 10g (W/Kg)	0.206664
SAR 1g (W/Kg)	0.389041

Z Axis Scan

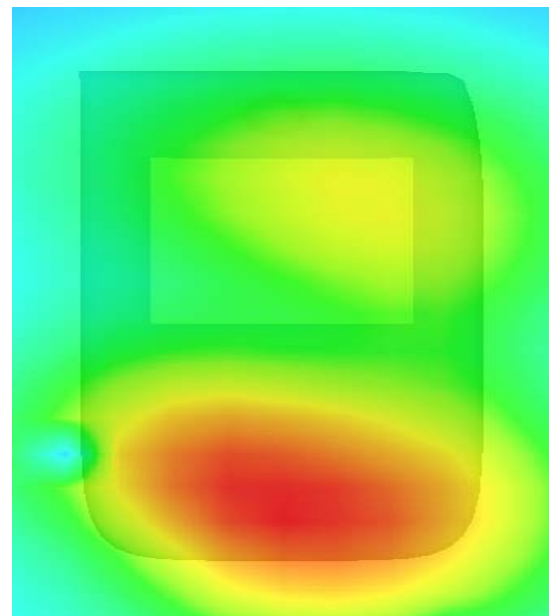
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4010	0.1958	0.0930	0.0482	0.0247	0.0127



3D scene shot



Hot spot position



MEASUREMENT 19

Type: Phone measurement (Complete)

Area scan resolution: $dx=8\text{mm}, dy=8\text{mm}$

Zoom scan resolution: $dx=8\text{mm}, dy=8\text{mm}, dz=5\text{mm}$

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 13 seconds

A. Experimental conditions.

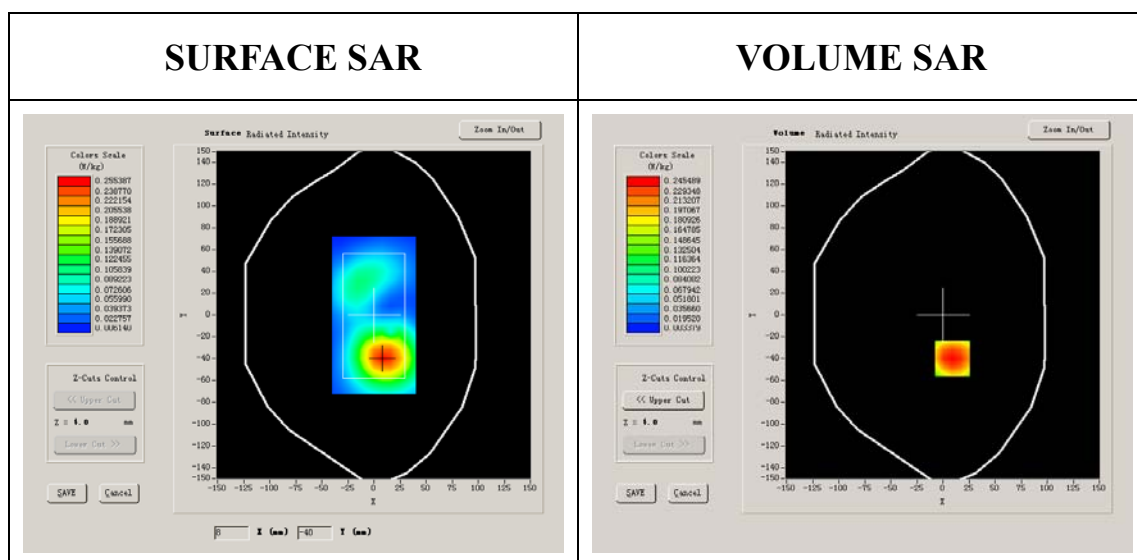
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GPRS

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	51.540001
Relative permittivity	15.070000

Conductivity (S/m)	1.598927
Variation (%)	-1.310000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:2

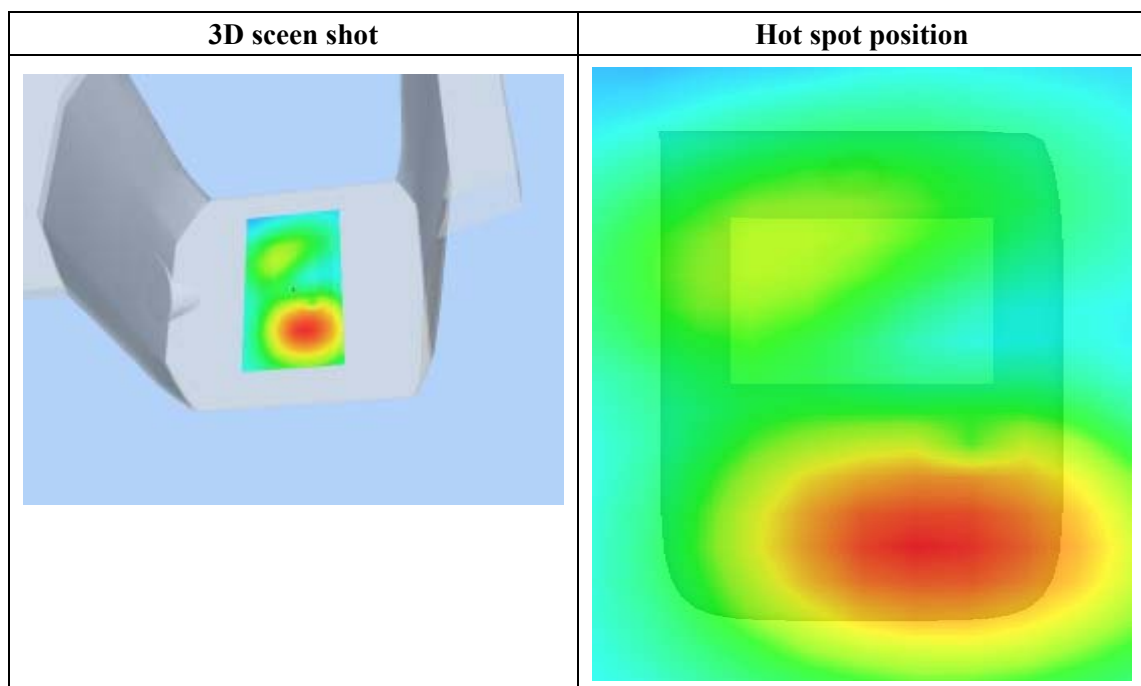
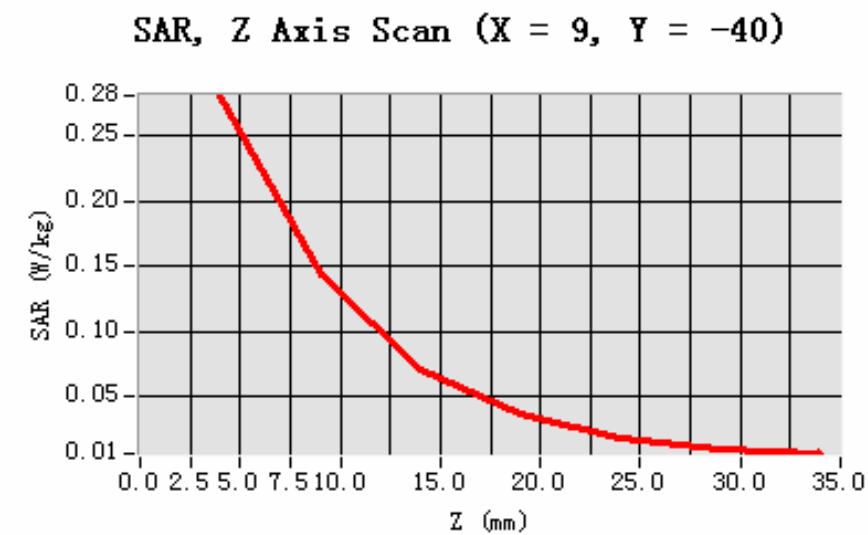


Maximum location: X=9.00, Y=-40.00

SAR 10g (W/Kg)	0.147795
SAR 1g (W/Kg)	0.271387

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2812	0.1430	0.0703	0.0363	0.0180	0.0101



MEASUREMENT 20

Type: Phone measurement (Complete)

Area scan resolution: $dx=8\text{mm}, dy=8\text{mm}$

Zoom scan resolution: $dx=8\text{mm}, dy=8\text{mm}, dz=5\text{mm}$

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 13 seconds

A. Experimental conditions.

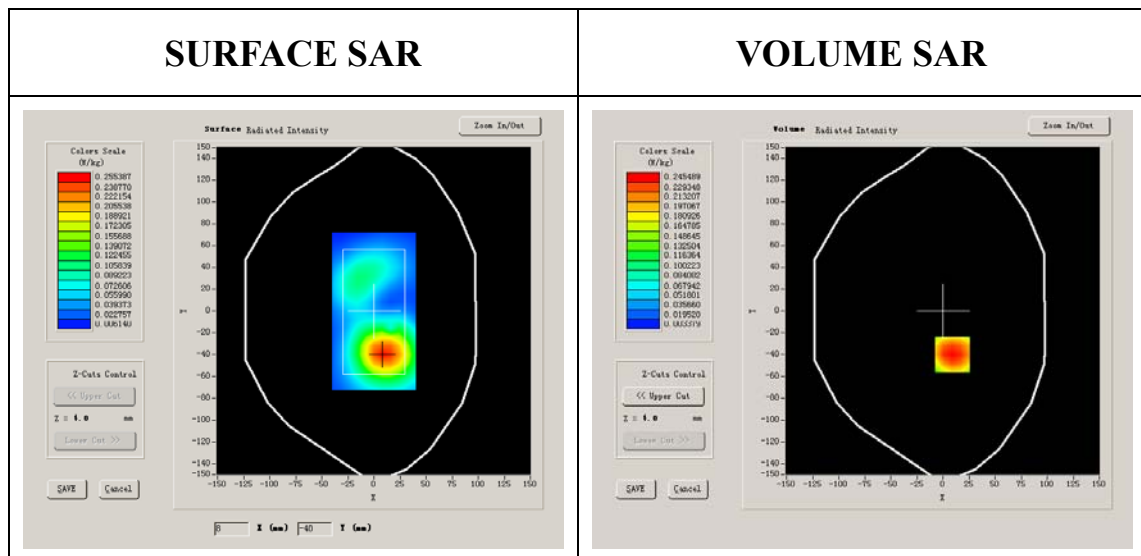
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	51.540001
Relative permittivity	15.070000

Conductivity (S/m)	1.598927
Variation (%)	-1.310000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

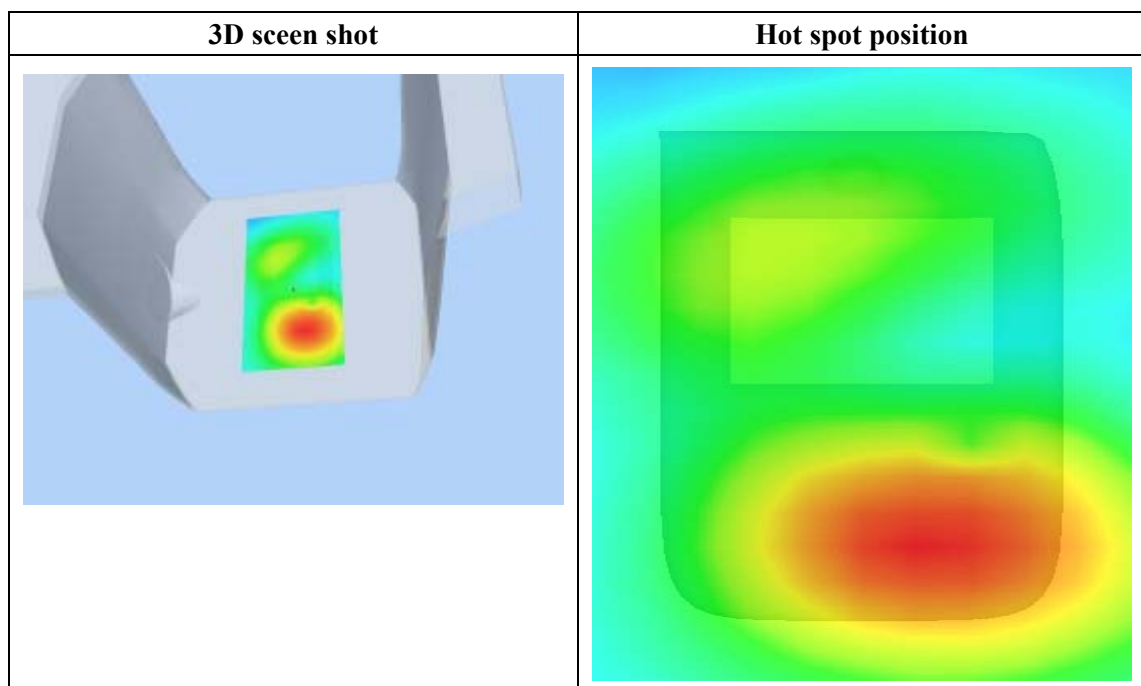
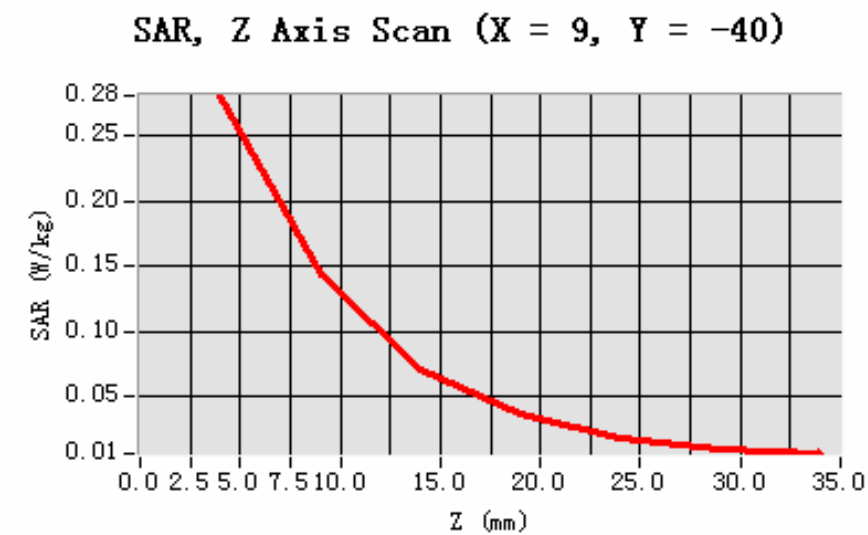


Maximum location: X=9.00, Y=-40.00

SAR 10g (W/Kg)	0.097785
SAR 1g (W/Kg)	0.156366

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2812	0.1430	0.0703	0.0363	0.0180	0.0101



MEASUREMENT 21

Type: Phone measurement (Complete)

Area scan resolution: $dx=8\text{mm}, dy=8\text{mm}$

Zoom scan resolution: $dx=8\text{mm}, dy=8\text{mm}, dz=5\text{mm}$

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 13 seconds

A. Experimental conditions.

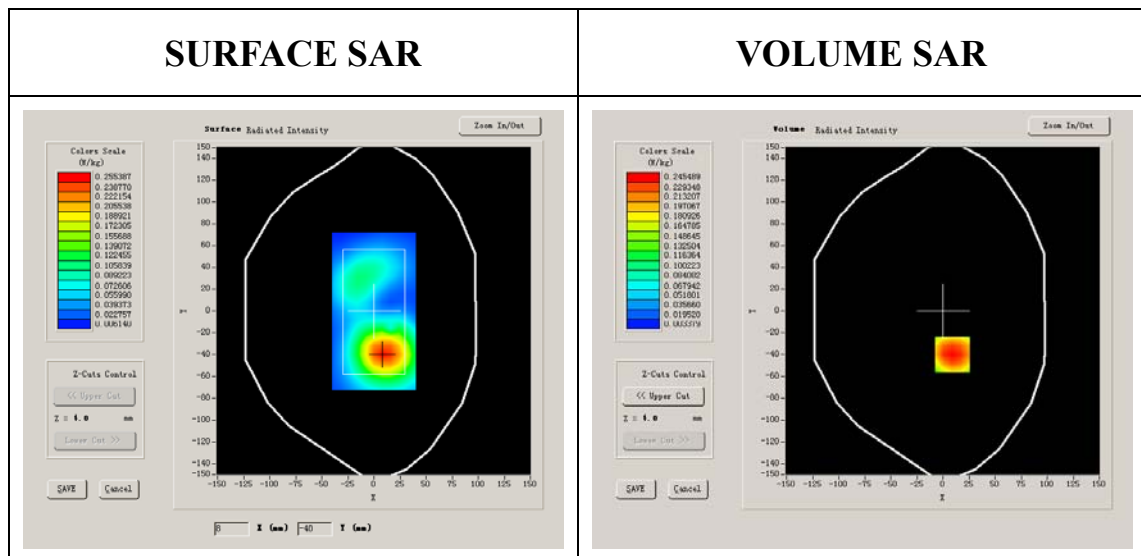
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	51.540001
Relative permittivity	15.070000

Conductivity (S/m)	1.598927
Variation (%)	-1.310000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

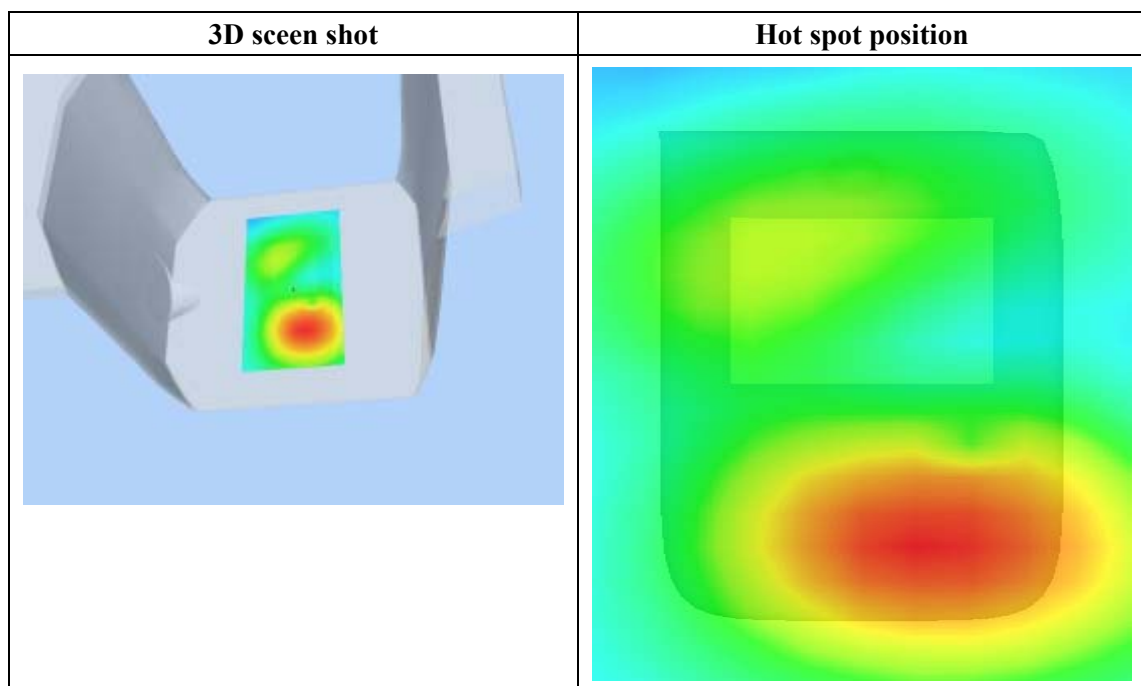
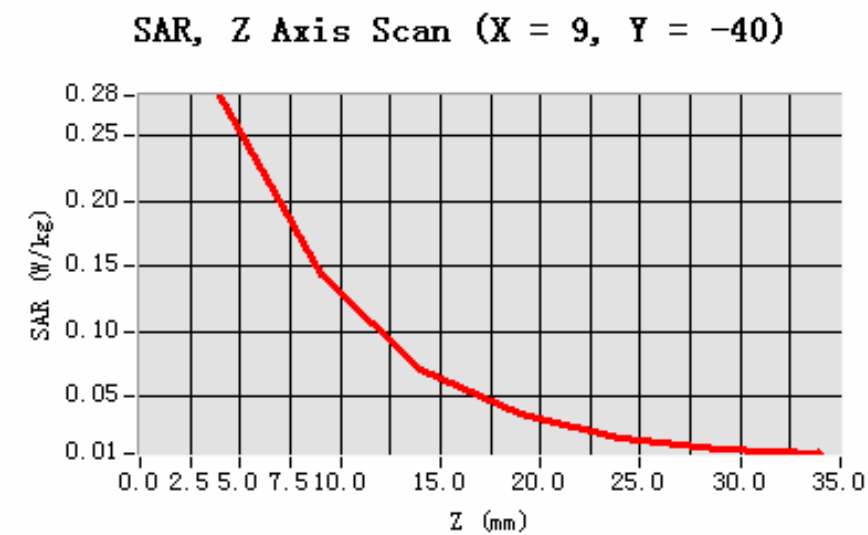


Maximum location: X=9.00, Y=-40.00

SAR 10g (W/Kg)	0.089945
SAR 1g (W/Kg)	0.157733

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2812	0.1430	0.0703	0.0363	0.0180	0.0101



MEASUREMENT 22

Type: Phone measurement (Complete)

Area scan resolution: $dx=8\text{mm}, dy=8\text{mm}$

Zoom scan resolution: $dx=8\text{mm}, dy=8\text{mm}, dz=5\text{mm}$

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 13 seconds

A. Experimental conditions.

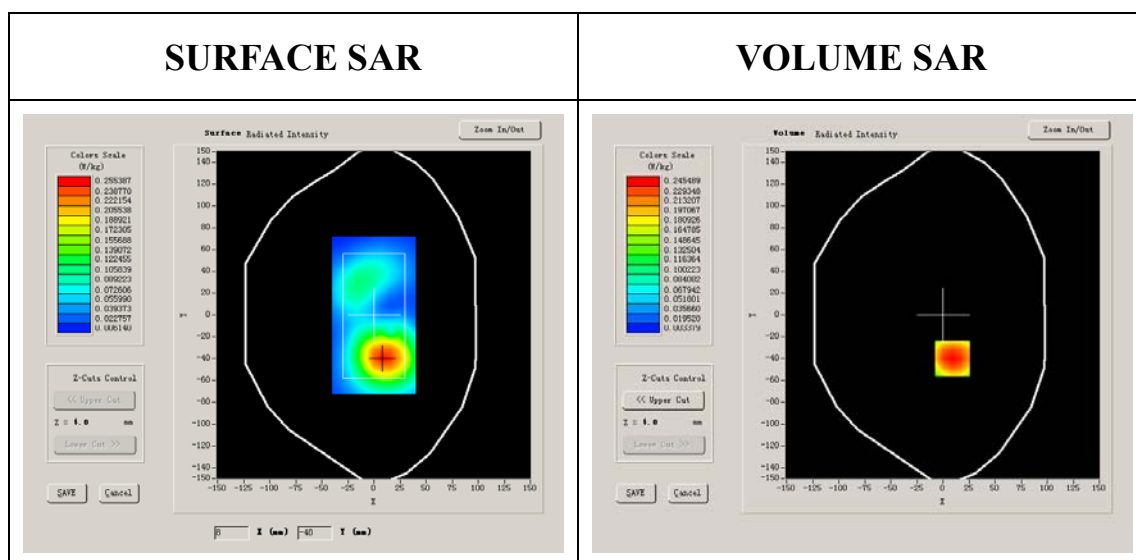
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	EDGE

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	51.540001
Relative permittivity	15.070000

Conductivity (S/m)	1.598927
Variation (%)	-1.310000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:2

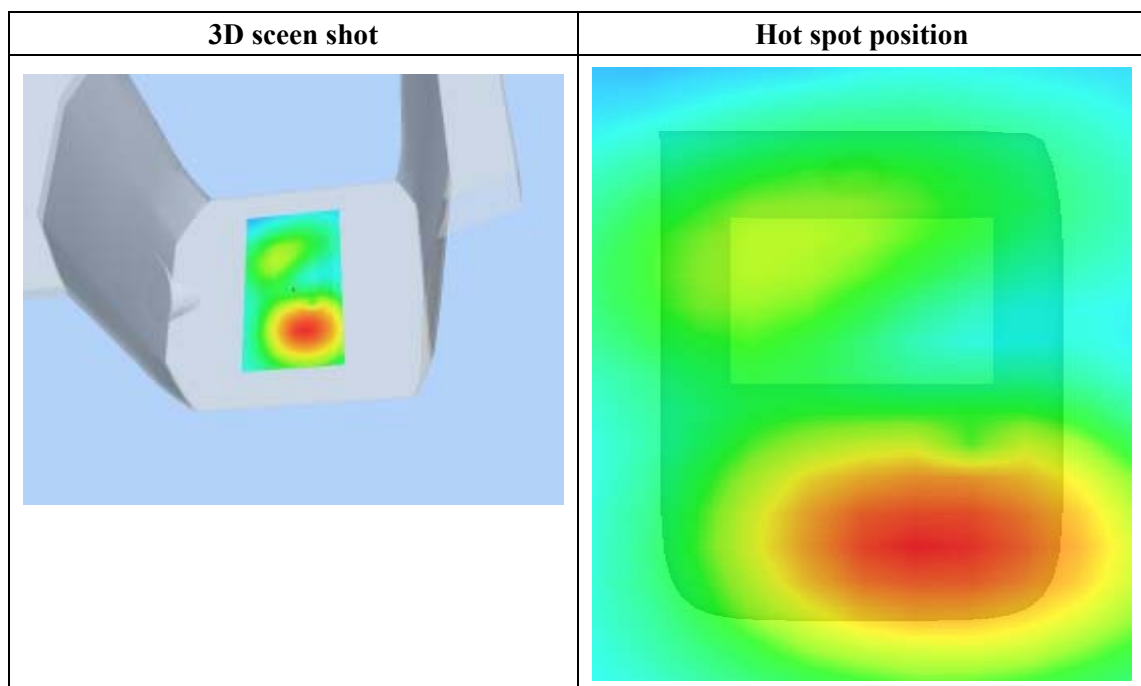
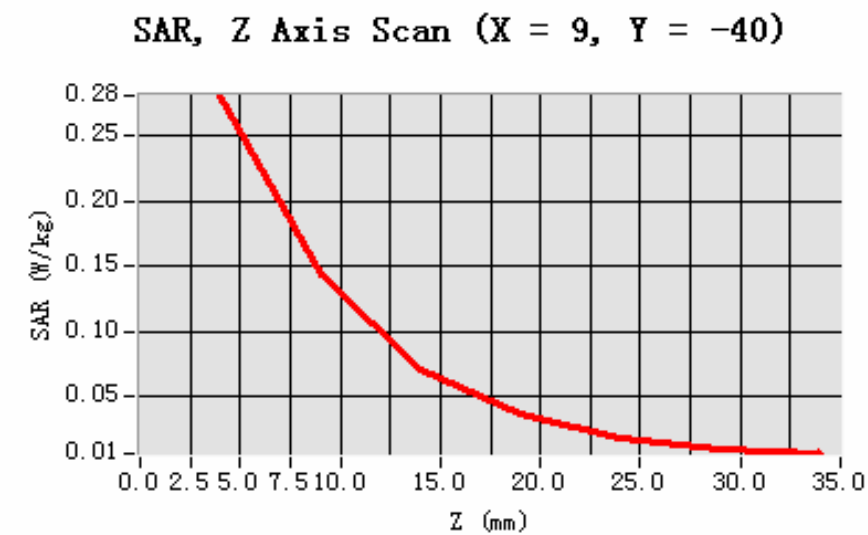


Maximum location: X=9.00, Y=-40.00

SAR 10g (W/Kg)	0.141233
SAR 1g (W/Kg)	0.269344

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2812	0.1430	0.0703	0.0363	0.0180	0.0101



MEASUREMENT 23

Type: Phone measurement (Complete)

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

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

Date of measurement: 27/1/2011

Measurement duration: 7 minutes 53 seconds

A. Experimental conditions.

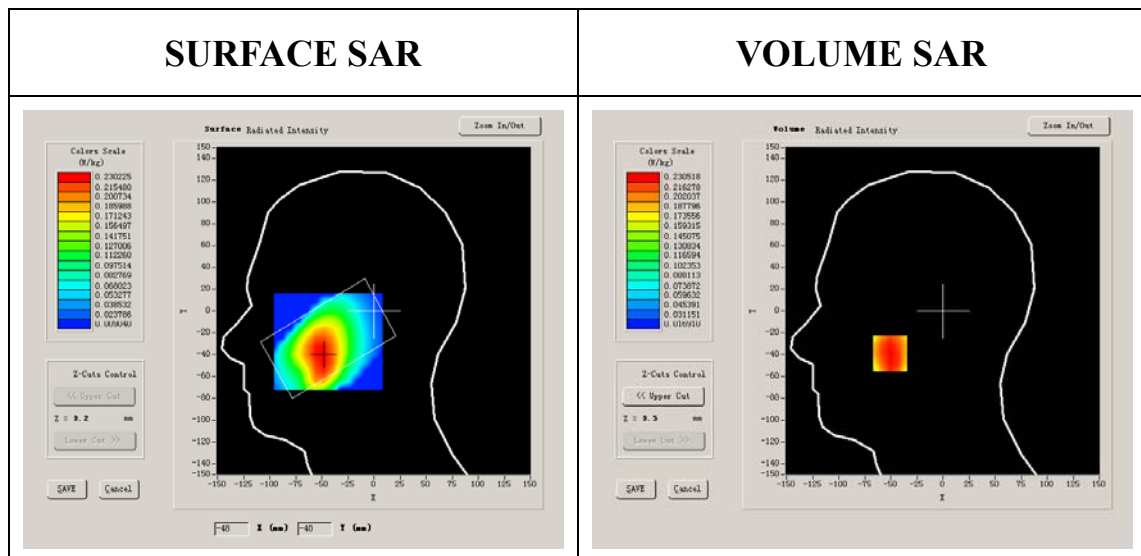
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

Frequency (MHz)	836.000000
Relative permittivity (real part)	39.910000
Relative permittivity	13.230000

Conductivity (S/m)	0.614460
Variation (%)	0.420000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

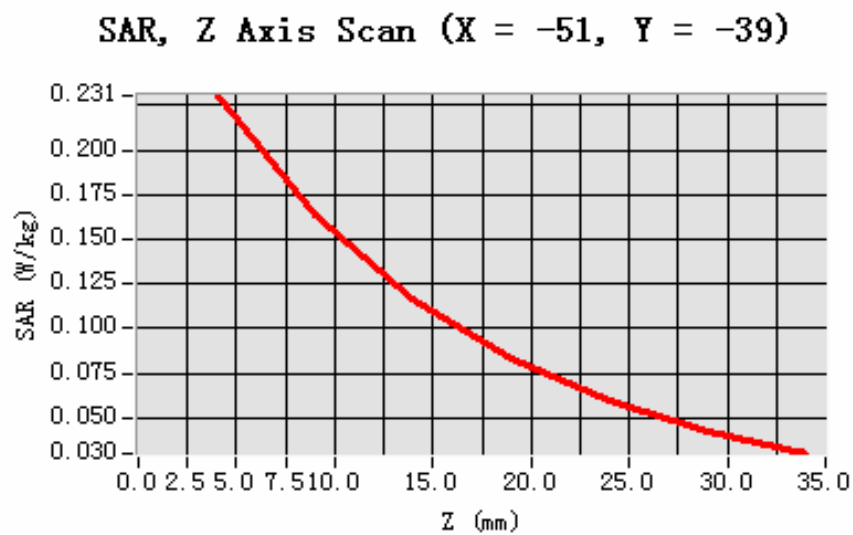


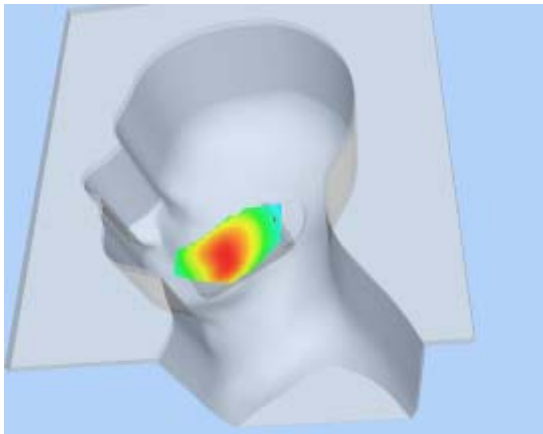
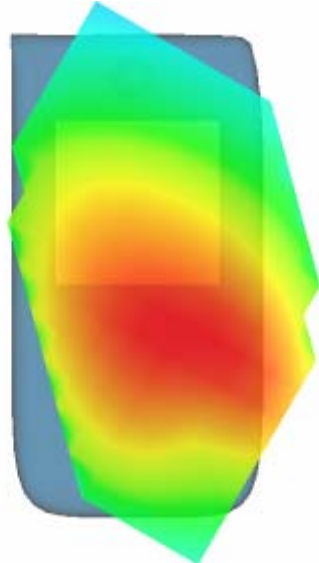
Maximum location: X=-51.00, Y=-39.00

SAR 10g (W/Kg)	0.158163
SAR 1g (W/Kg)	0.227016

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2305	0.1635	0.1170	0.0835	0.0598	0.0421



3D scene shot	Hot spot position
	

MEASUREMENT 24

Type: Phone measurement (Complete)

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

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

Date of measurement: 27/1/2011

Measurement duration: 7 minutes 38 seconds

A. Experimental conditions.

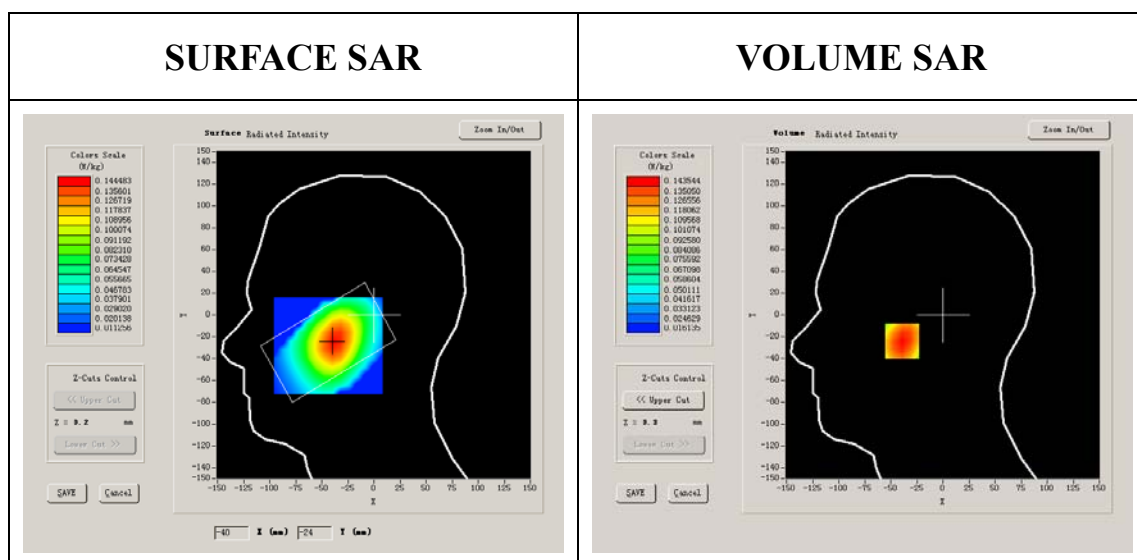
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

Frequency (MHz)	836.000000
Relative permittivity (real part)	39.910000
Relative permittivity	13.230000

Conductivity (S/m)	0.614460
Variation (%)	-0.200000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

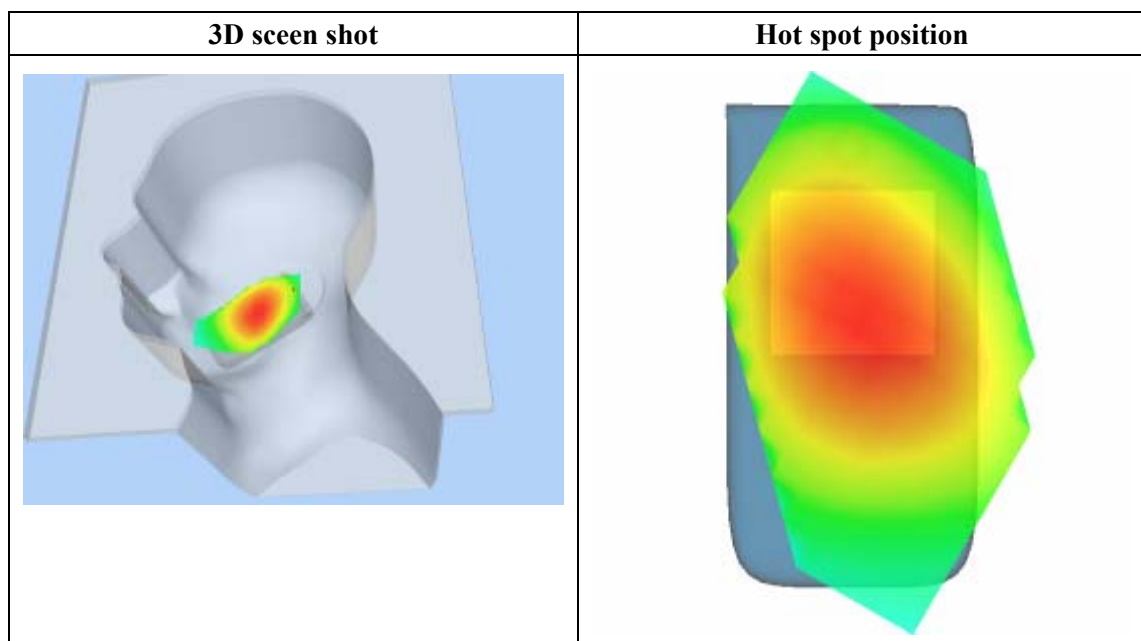
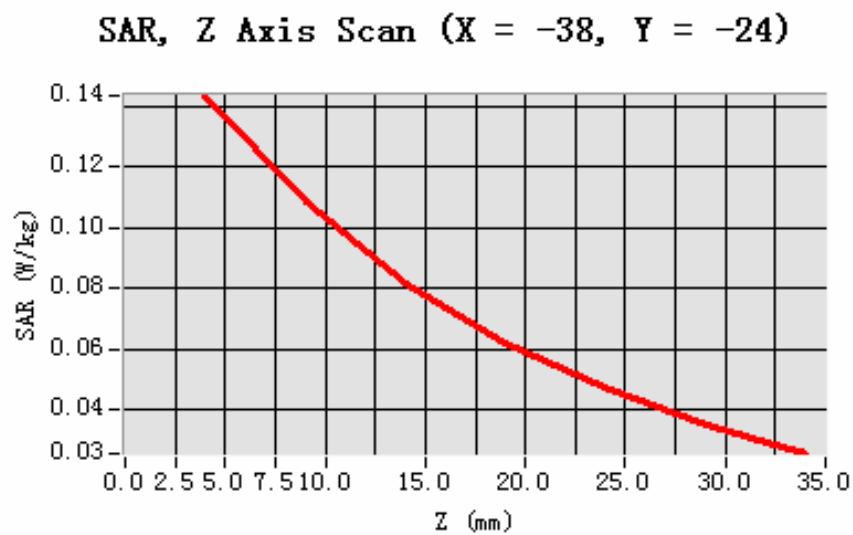


Maximum location: X=-38.00, Y=-24.00

SAR 10g (W/Kg)	0.099569
SAR 1g (W/Kg)	0.138402

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1435	0.1083	0.0817	0.0623	0.0475	0.0352



MEASUREMENT 25

Type: Phone measurement (Complete)

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

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

Date of measurement: 30/1/2011

Measurement duration: 8 minutes 5 seconds

A. Experimental conditions.

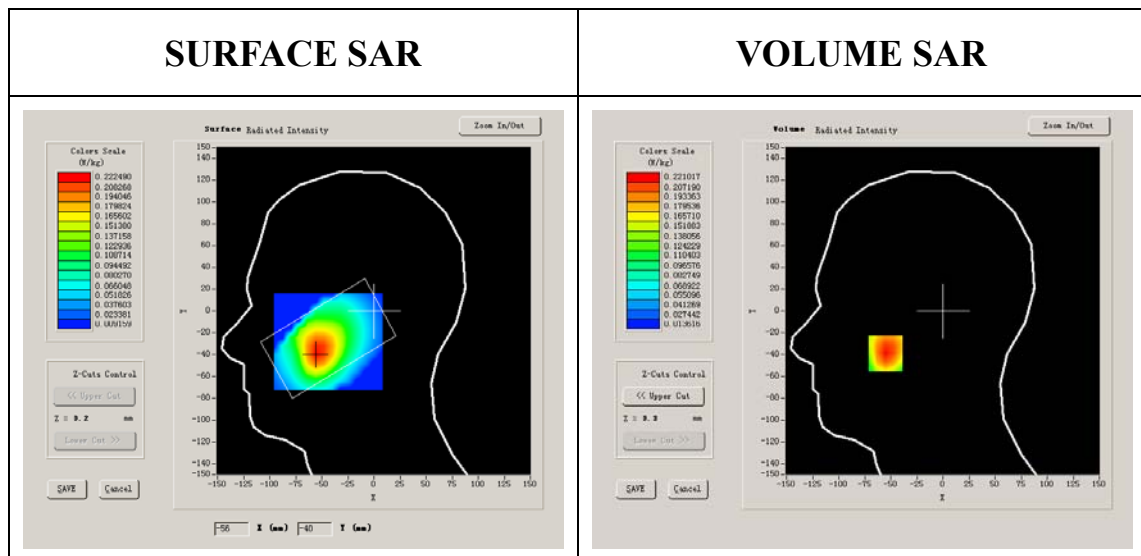
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

Frequency (MHz)	836.000000
Relative permittivity (real part)	39.910000
Relative permittivity	13.230000

Conductivity (S/m)	0.614460
Variation (%)	-0.630000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

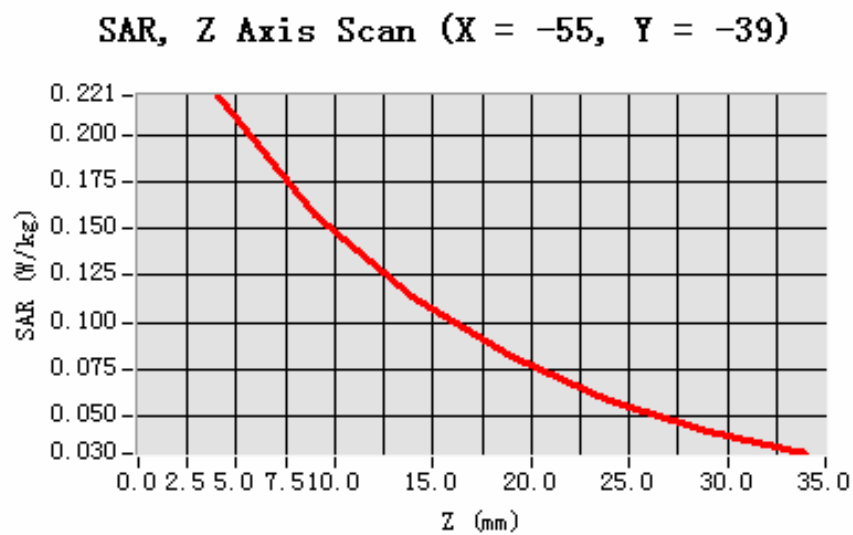


Maximum location: X=-55.00, Y=-39.00

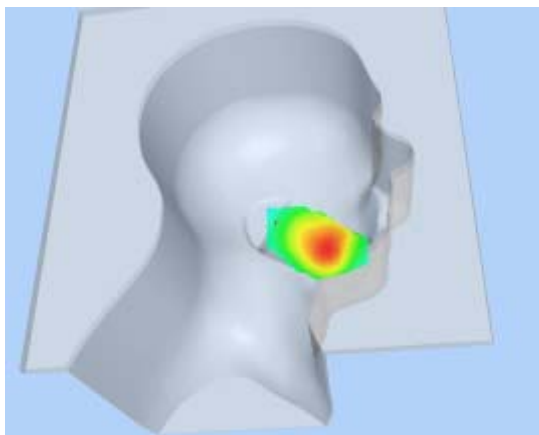
SAR 10g (W/Kg)	0.144000
SAR 1g (W/Kg)	0.211406

Z Axis Scan

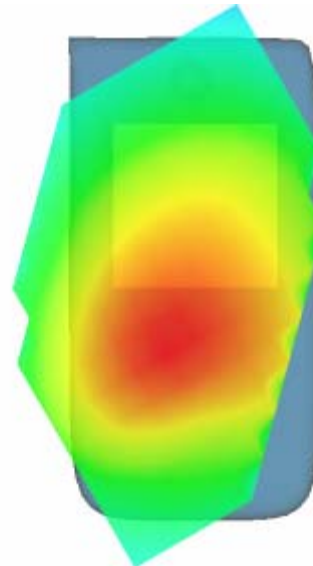
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2210	0.1569	0.1138	0.0816	0.0586	0.0421



3D scene shot



Hot spot position



MEASUREMENT 26

Type: Phone measurement (Complete)

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

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

Date of measurement: 30/1/2011

Measurement duration: 7 minutes 37 seconds

A. Experimental conditions.

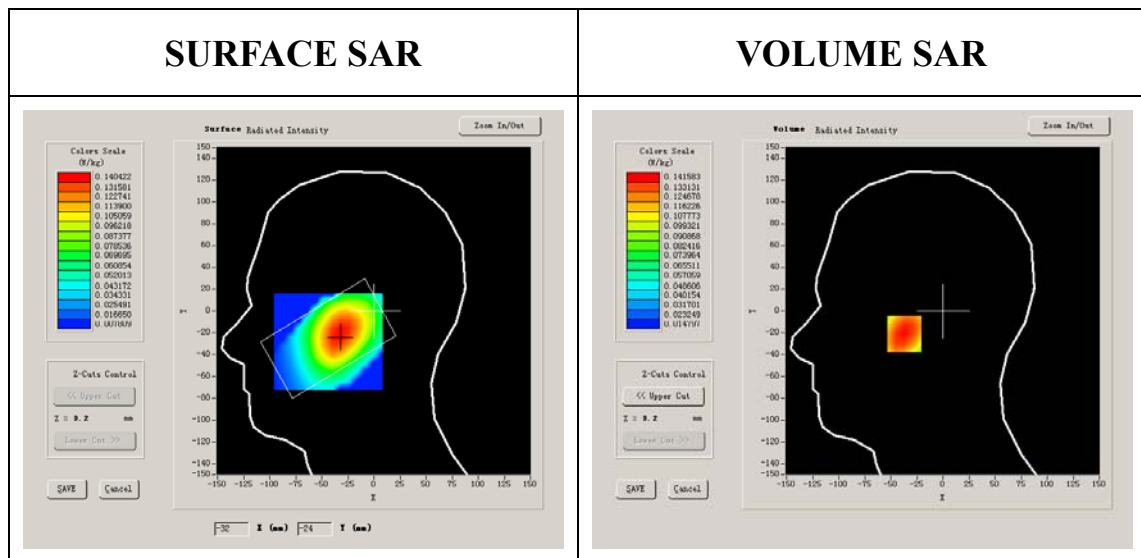
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

Frequency (MHz)	836.000000
Relative permittivity (real part)	39.910000
Relative permittivity	13.230000

Conductivity (S/m)	0.614460
Variation (%)	0.140000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

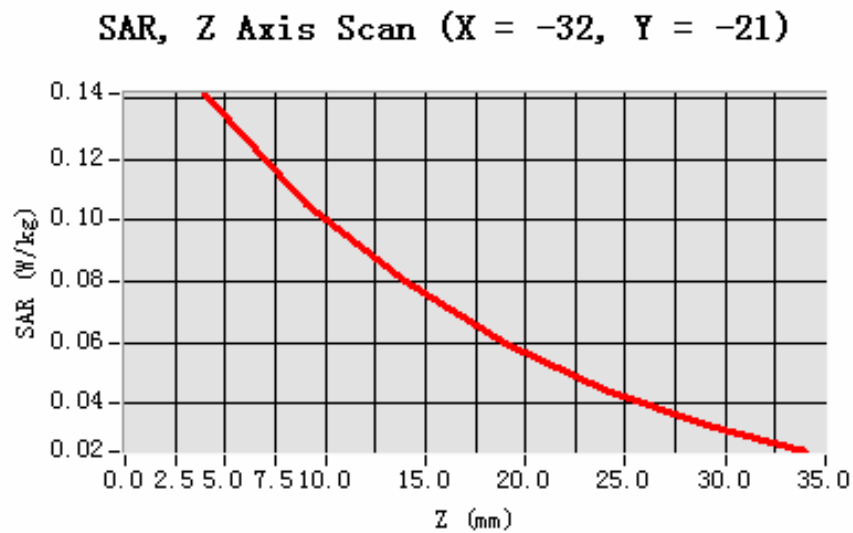


Maximum location: X=-32.00, Y=-21.00

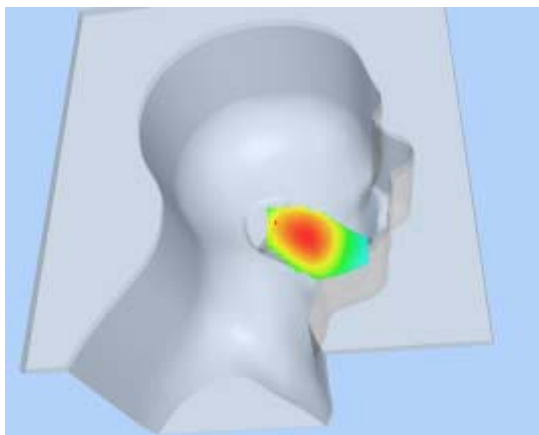
SAR 10g (W/Kg)	0.098150
SAR 1g (W/Kg)	0.137035

Z Axis Scan

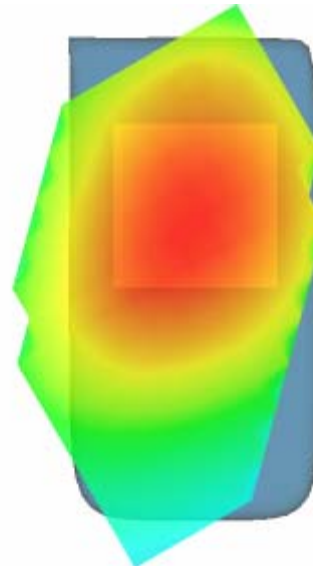
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1416	0.1051	0.0800	0.0601	0.0447	0.0331



3D scene shot



Hot spot position



MEASUREMENT 27

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

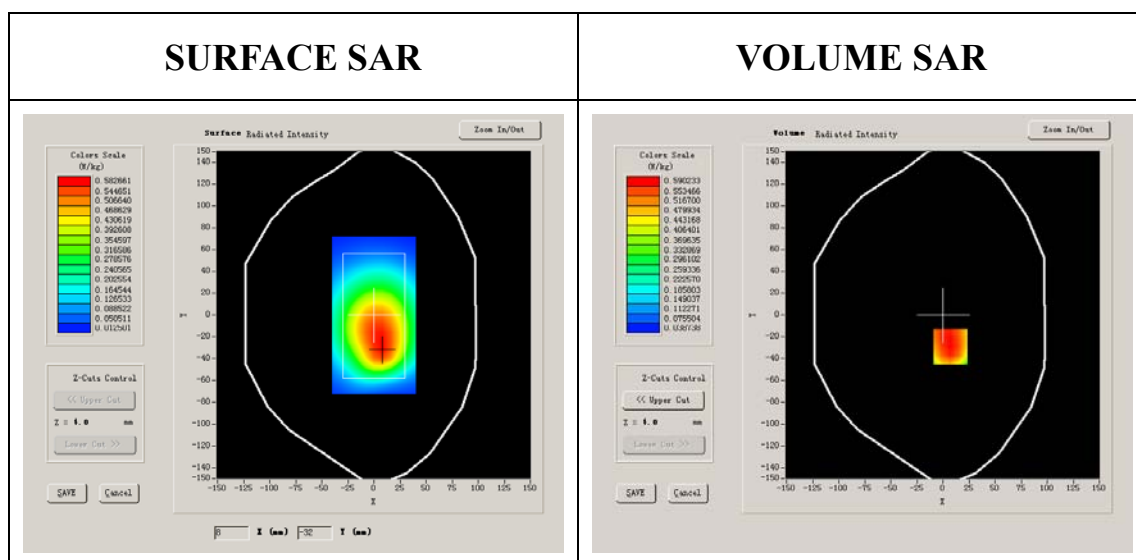
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 4132):

Frequency (MHz)	826.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	0.728580
Variation (%)	1.040000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

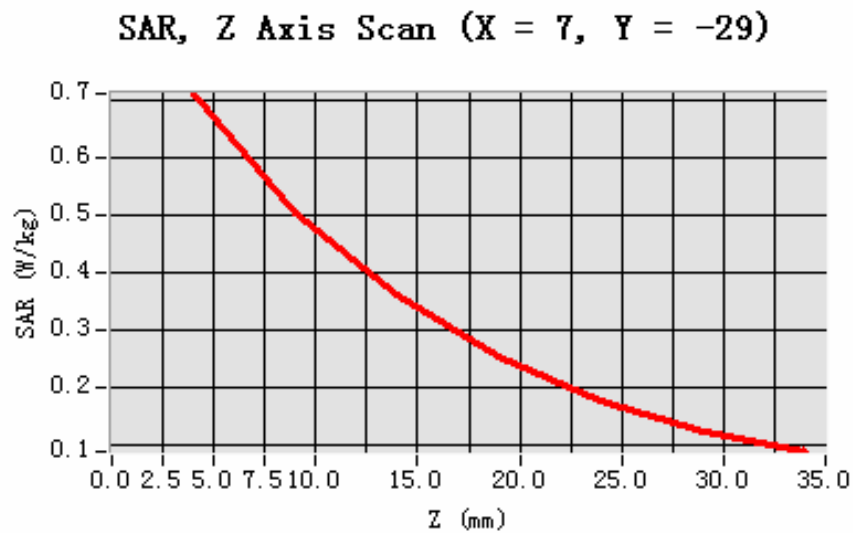


Maximum location: X=7.00, Y=-29.00

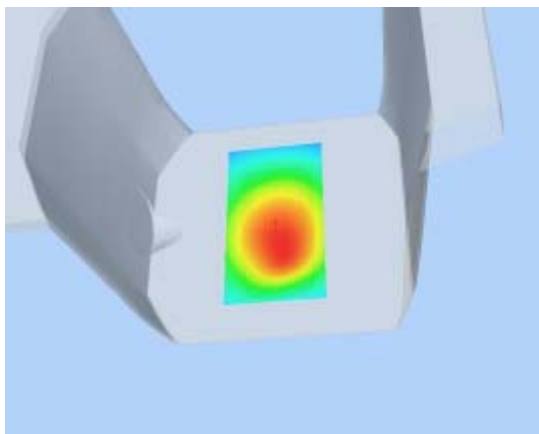
SAR 10g (W/Kg)	0.478260
SAR 1g (W/Kg)	0.691250

Z Axis Scan

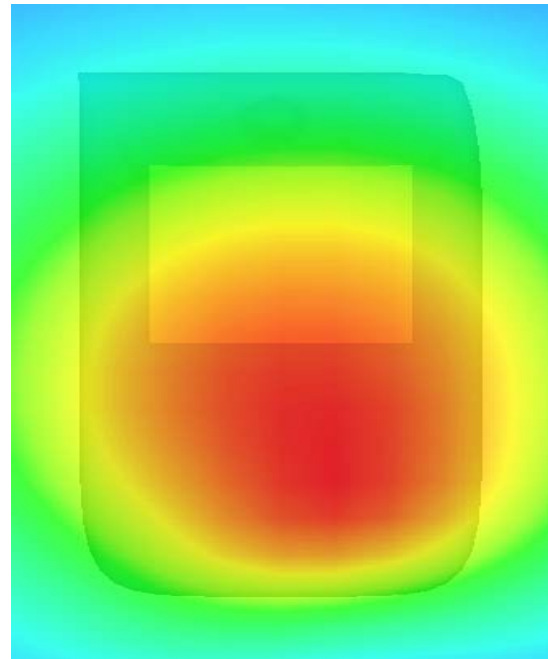
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7116	0.5051	0.3610	0.2519	0.1761	0.1229



3D scene shot



Hot spot position



MEASUREMENT 28

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

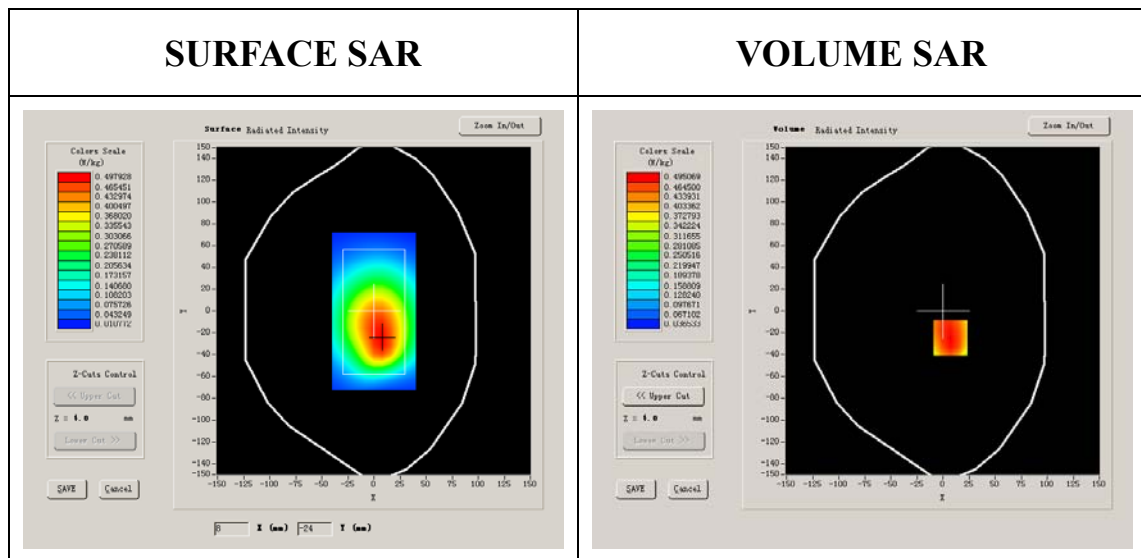
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

Frequency (MHz)	836.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	0.737401
Variation (%)	-0.400000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

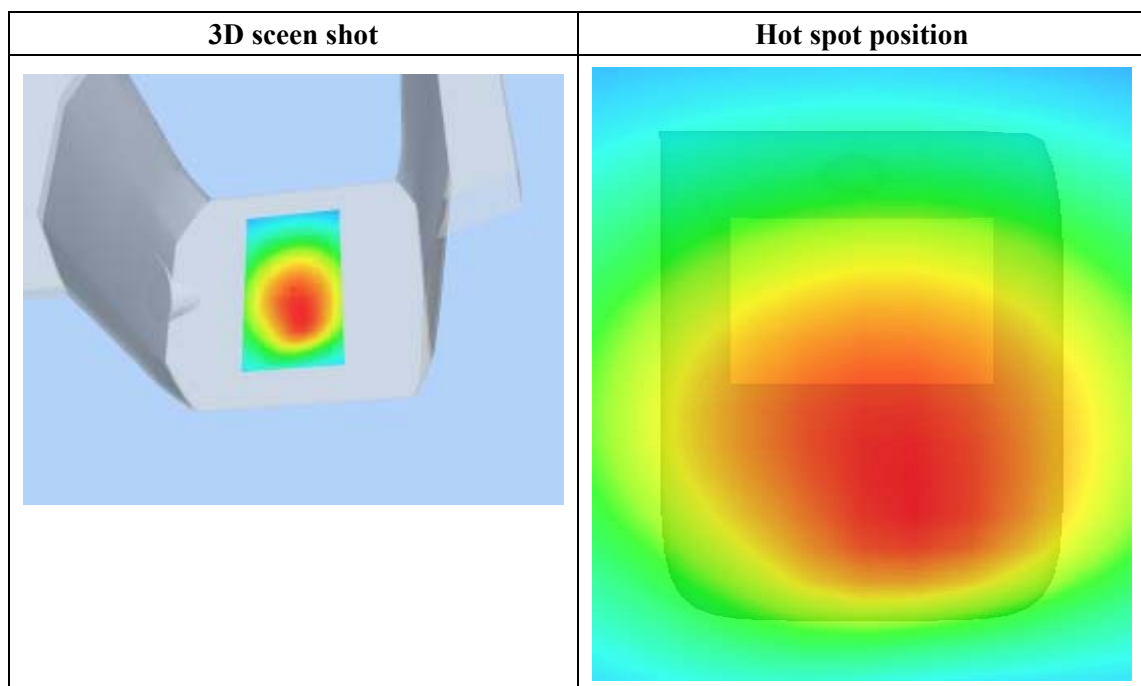
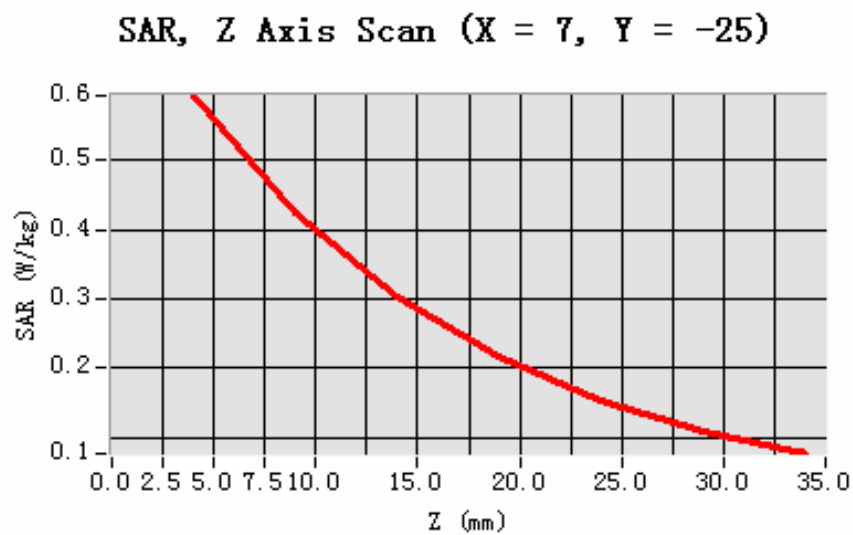


Maximum location: X=7.00, Y=-25.00

SAR 10g (W/Kg)	0.402488
SAR 1g (W/Kg)	0.577313

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5941	0.4250	0.3044	0.2181	0.1526	0.1080



MEASUREMENT 29

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

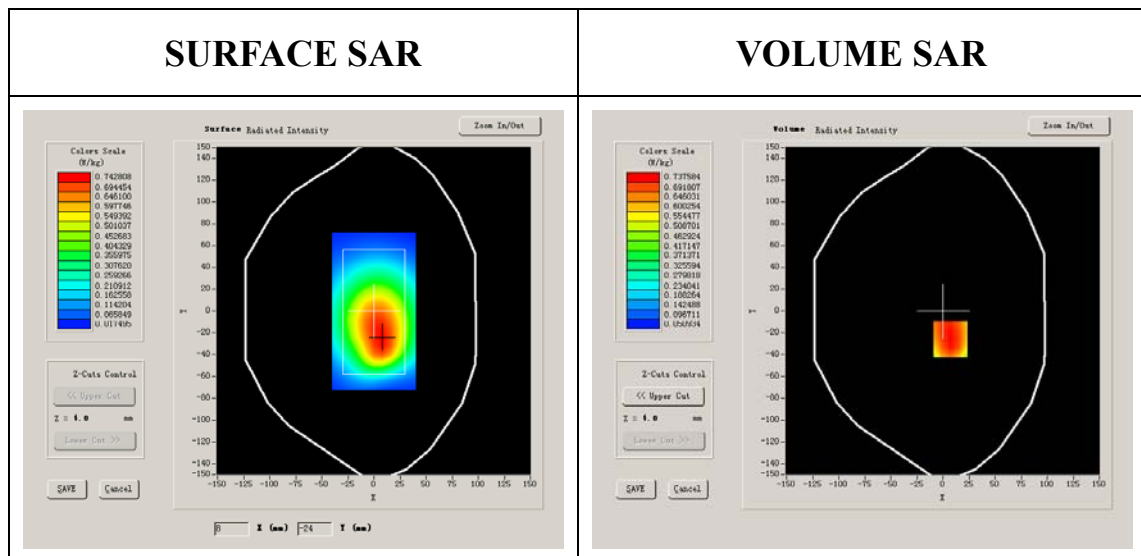
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 4233):

Frequency (MHz)	846.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	0.746221
Variation (%)	-0.370000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1



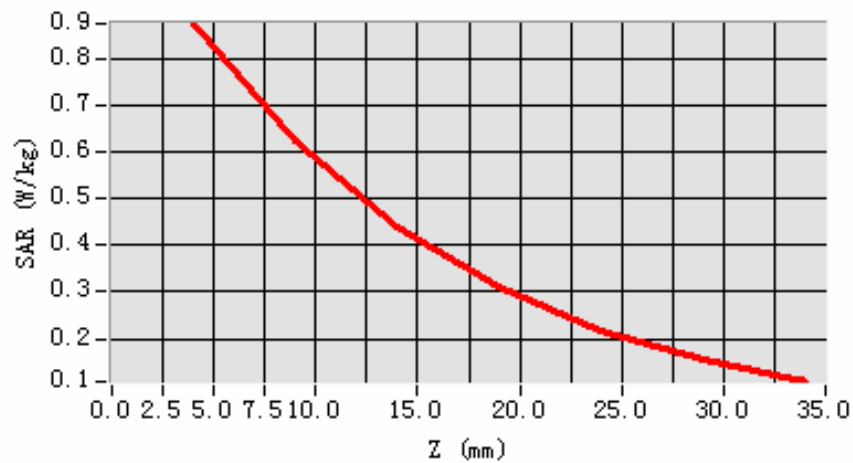
Maximum location: X=7.00, Y=-26.00

SAR 10g (W/Kg)	0.587729
SAR 1g (W/Kg)	0.849994

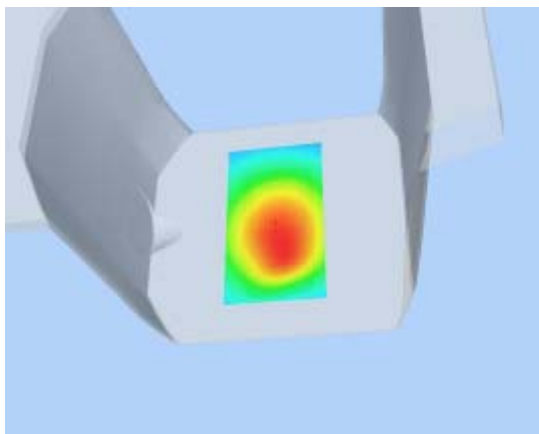
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8752	0.6227	0.4393	0.3115	0.2153	0.1537

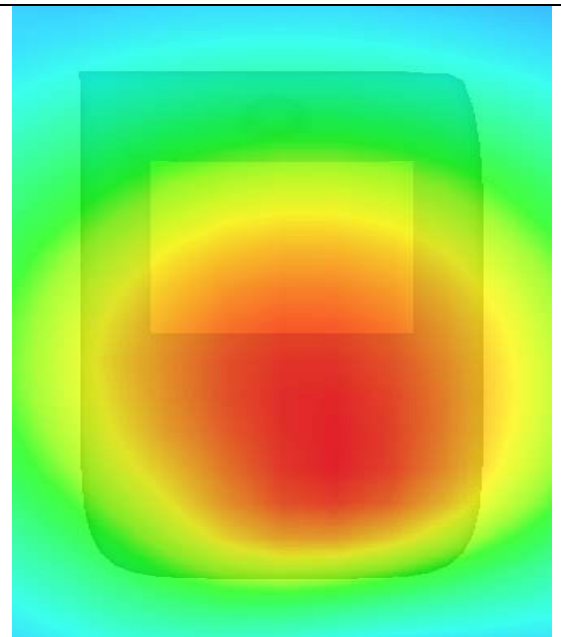
SAR, Z Axis Scan (X = 7, Y = -26)



3D scene shot



Hot spot position



MEASUREMENT 30

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

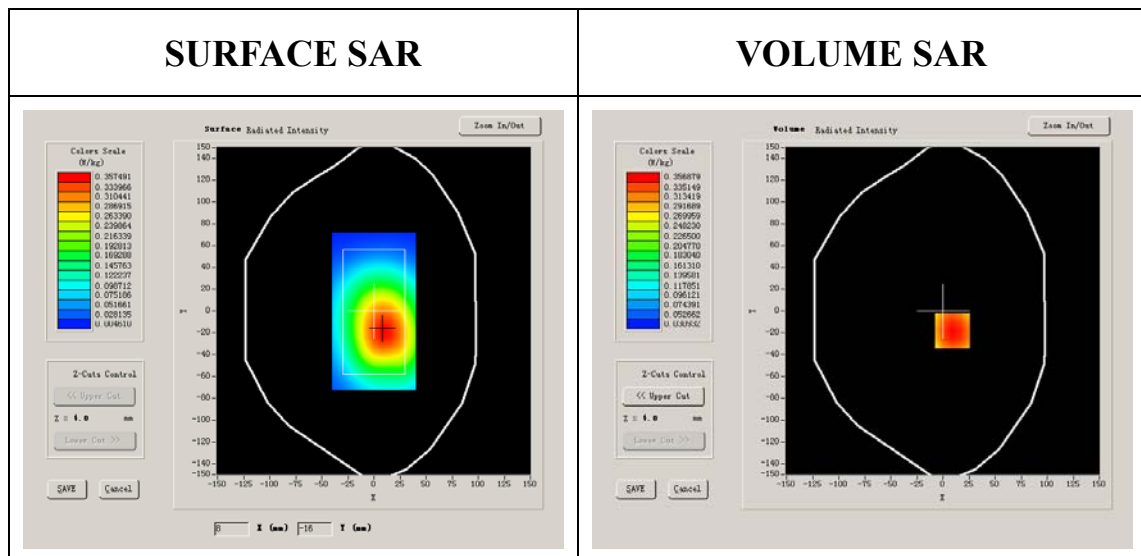
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 4233):

Frequency (MHz)	846.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	0.746221
Variation (%)	-0.260000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

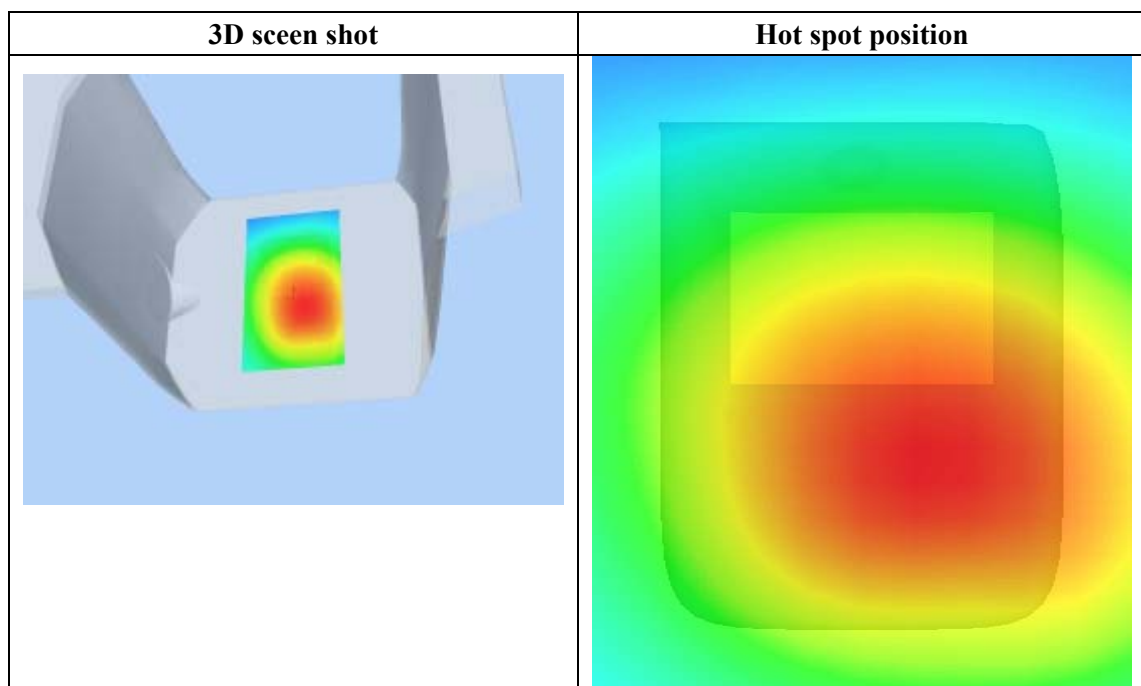
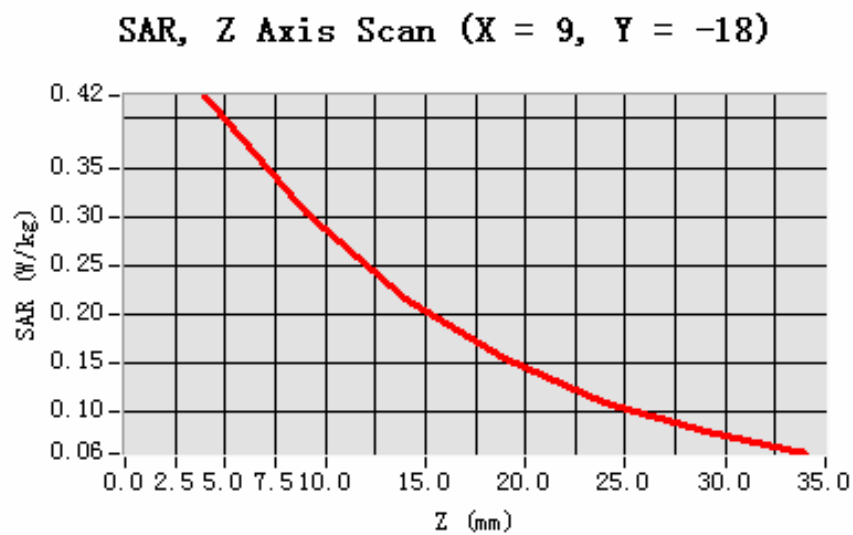


Maximum location: X=9.00, Y=-18.00

SAR 10g (W/Kg)	0.284962
SAR 1g (W/Kg)	0.409886

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4235	0.3033	0.2160	0.1545	0.1103	0.0799



MEASUREMENT 31

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

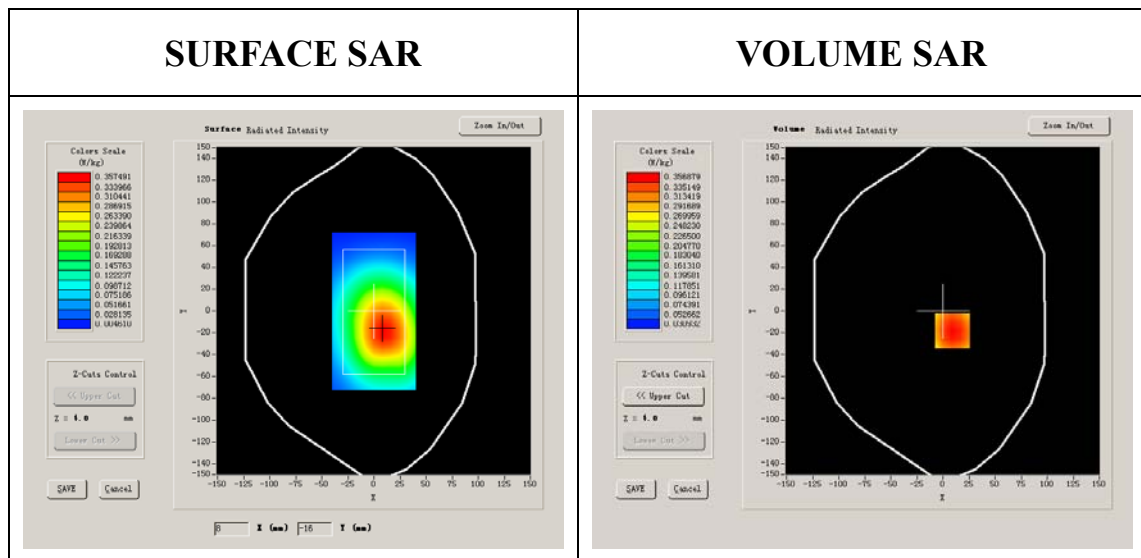
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 4233):

Frequency (MHz)	846.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	0.746221
Variation (%)	-0.260000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

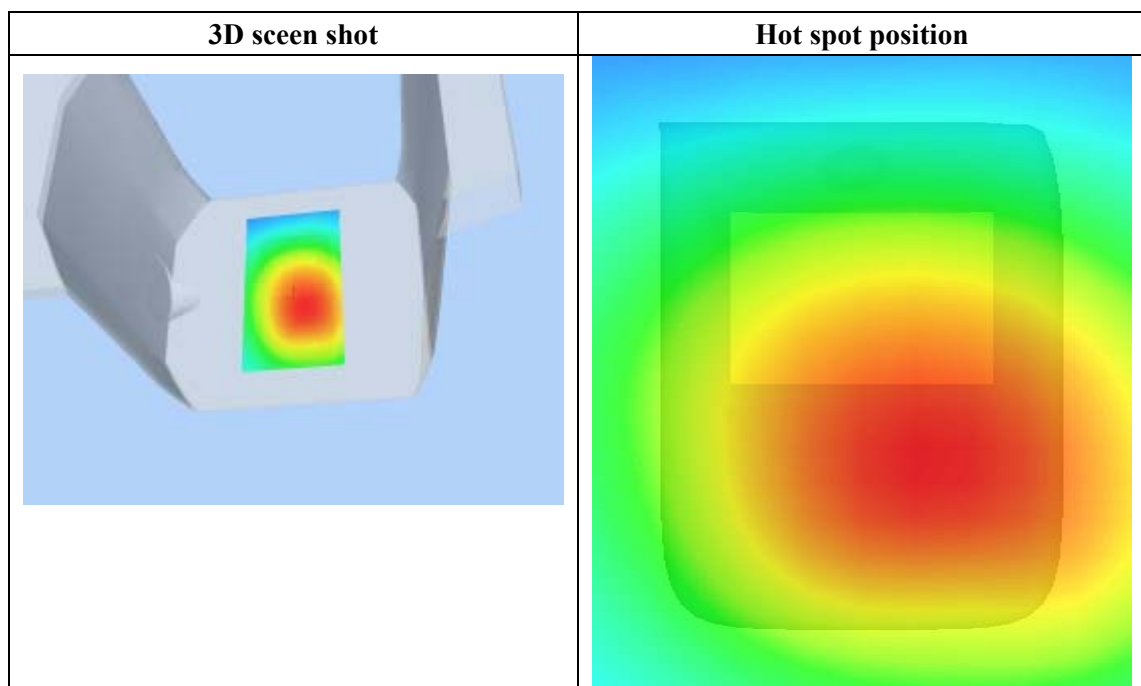
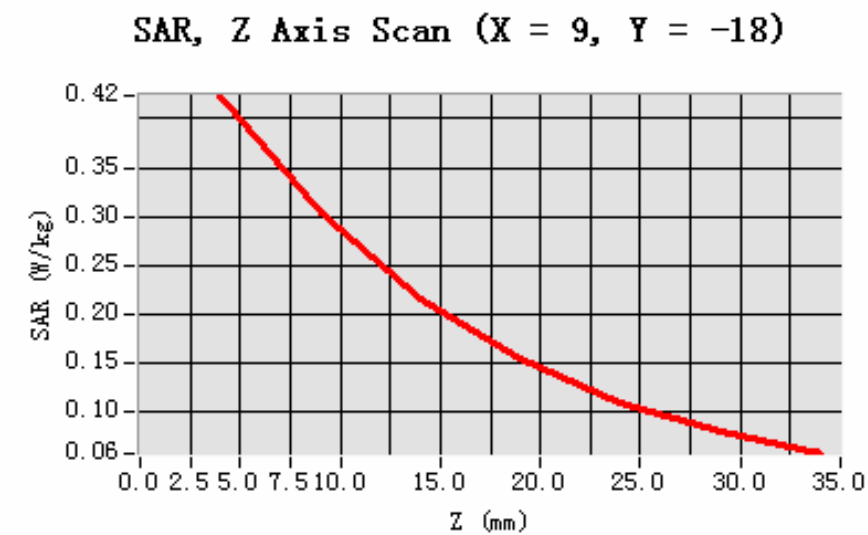


Maximum location: X=9.00, Y=-18.00

SAR 10g (W/Kg)	0.241644
SAR 1g (W/Kg)	0.373455

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4235	0.3033	0.2160	0.1545	0.1103	0.0799



MEASUREMENT 32

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

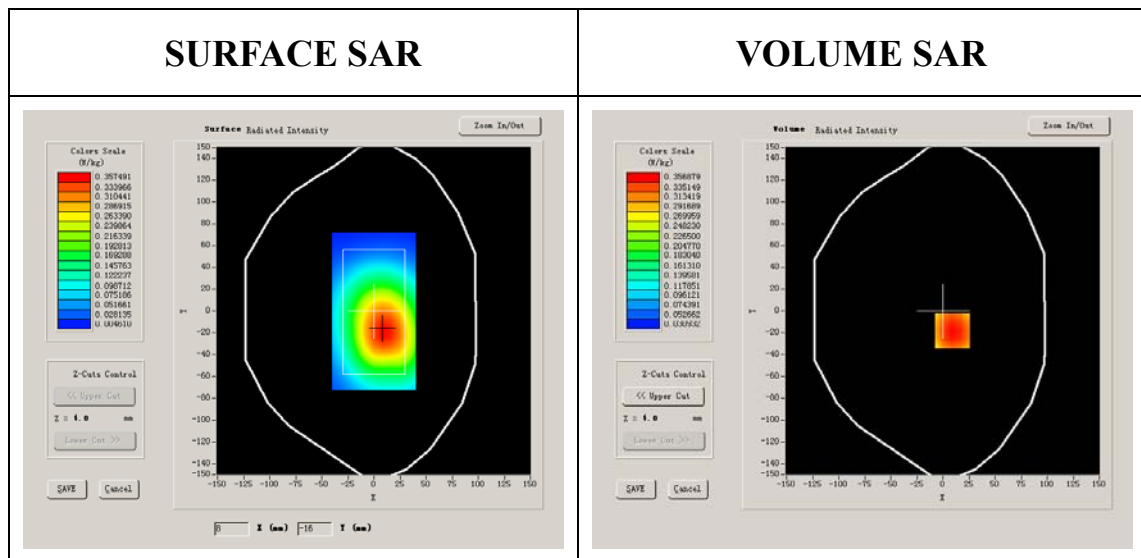
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 4233):

Frequency (MHz)	846.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	0.746221
Variation (%)	-0.260000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

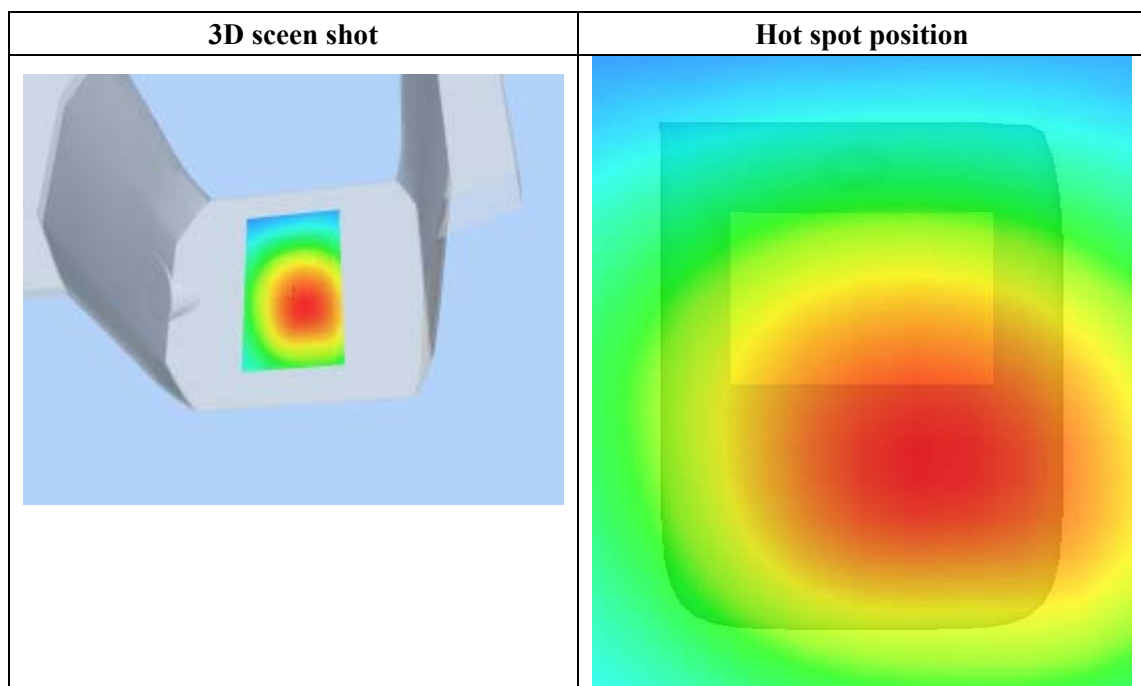
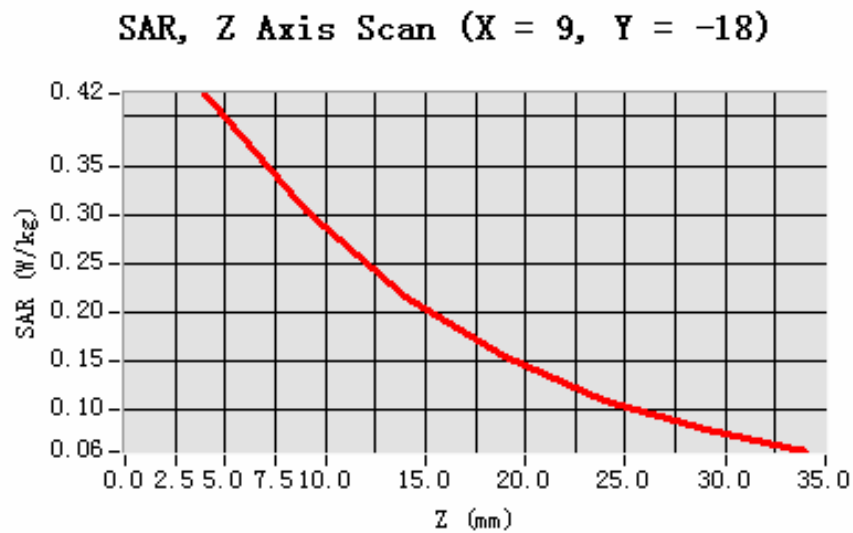


Maximum location: X=9.00, Y=-18.00

SAR 10g (W/Kg)	0.241422
SAR 1g (W/Kg)	0.395678

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4235	0.3033	0.2160	0.1545	0.1103	0.0799



MEASUREMENT 33

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 8 minutes 12 seconds

A. Experimental conditions.

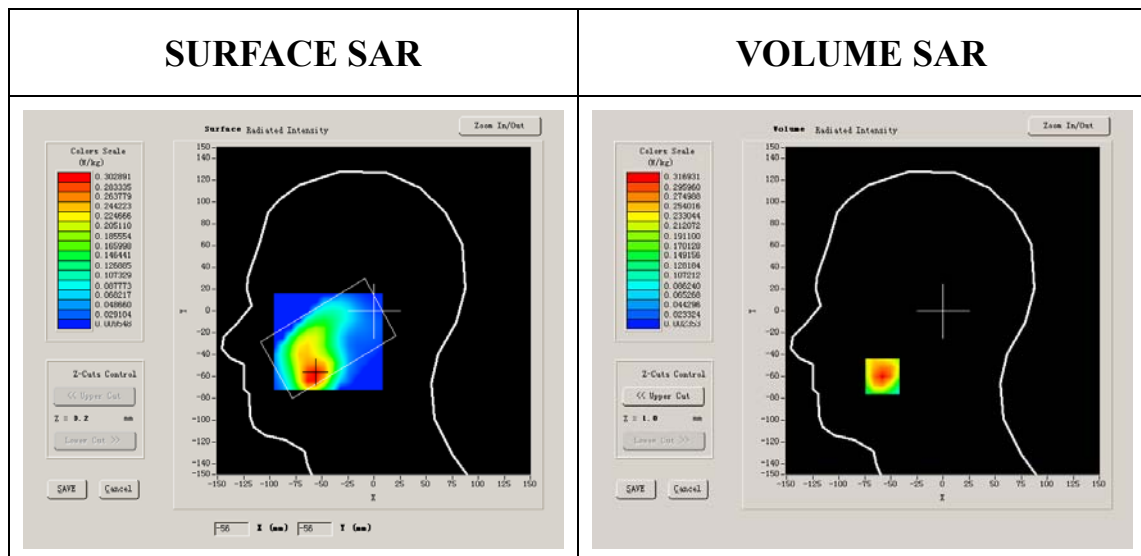
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	39.910000
Relative permittivity	13.230000

Conductivity (S/m)	1.381800
Variation (%)	-0.500000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

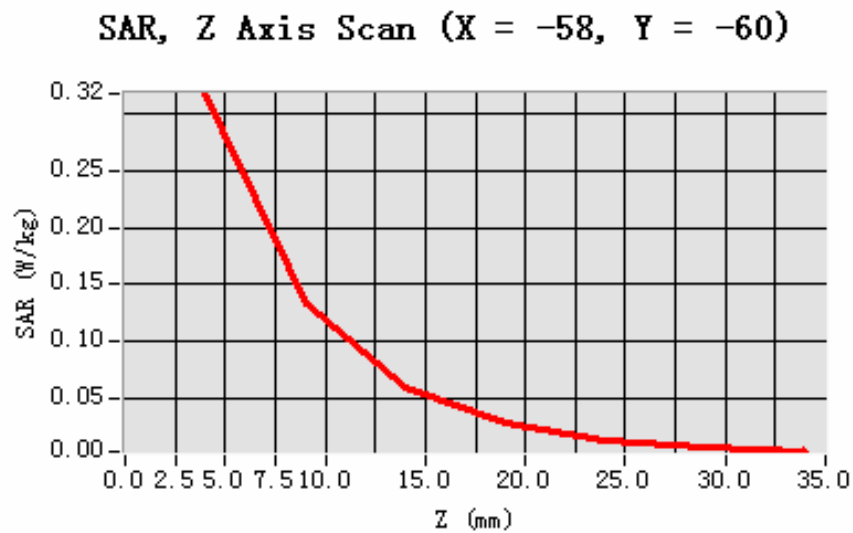


Maximum location: X=-58.00, Y=-60.00

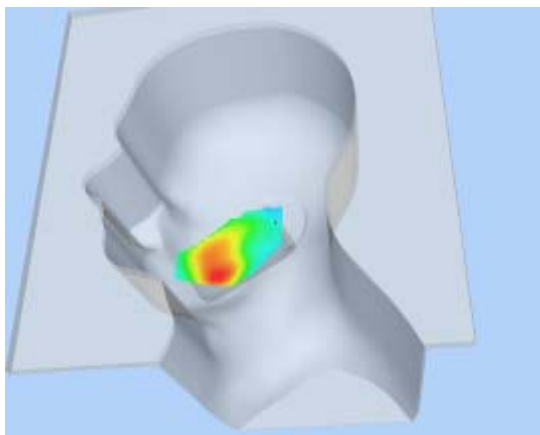
SAR 10g (W/Kg)	0.152450
SAR 1g (W/Kg)	0.304320

Z Axis Scan

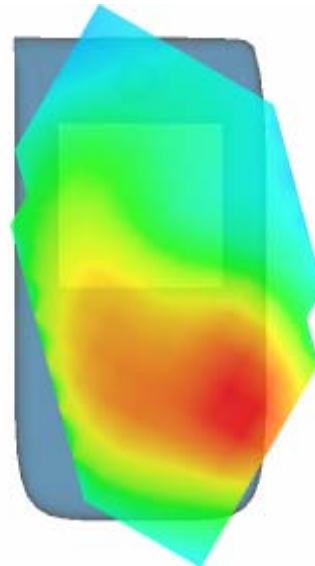
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3169	0.1327	0.0598	0.0288	0.0145	0.0080



3D scene shot



Hot spot position



MEASUREMENT 34

Type: Phone measurement (Complete)

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

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

Date of measurement: 30/1/2011

Measurement duration: 7 minutes 34 seconds

A. Experimental conditions.

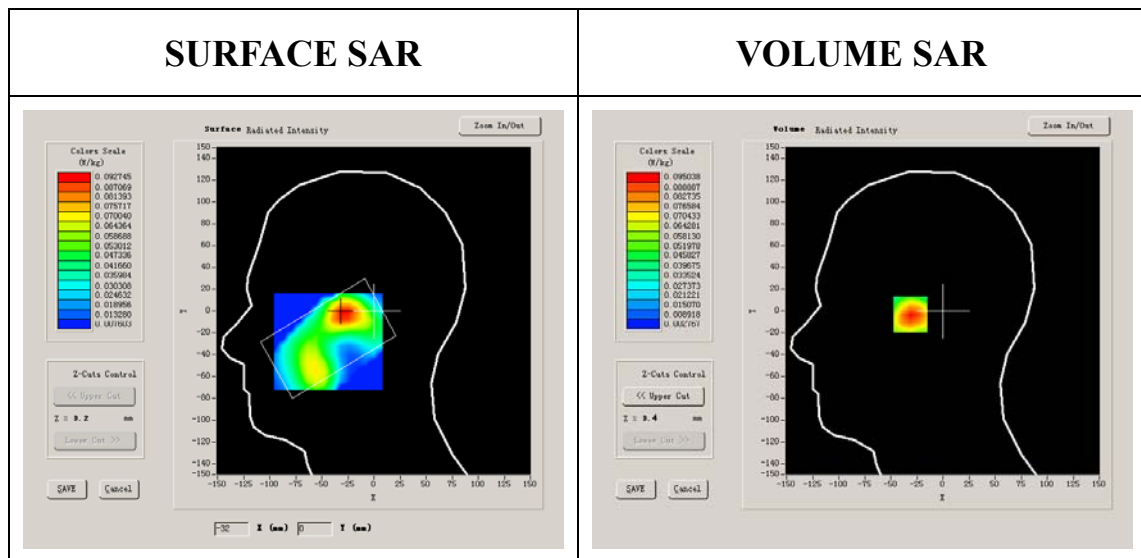
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	39.910000
Relative permittivity	13.230000

Conductivity (S/m)	1.381800
Variation (%)	0.240000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



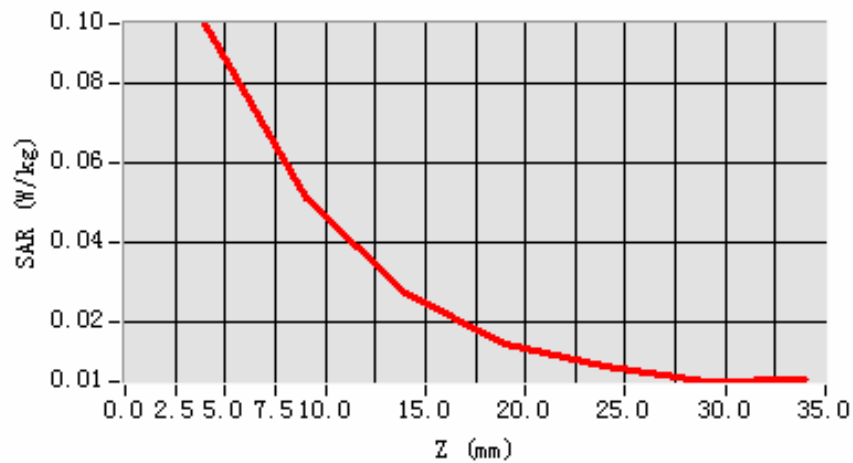
Maximum location: X=-29.00, Y=-2.00

SAR 10g (W/Kg)	0.049561
SAR 1g (W/Kg)	0.090867

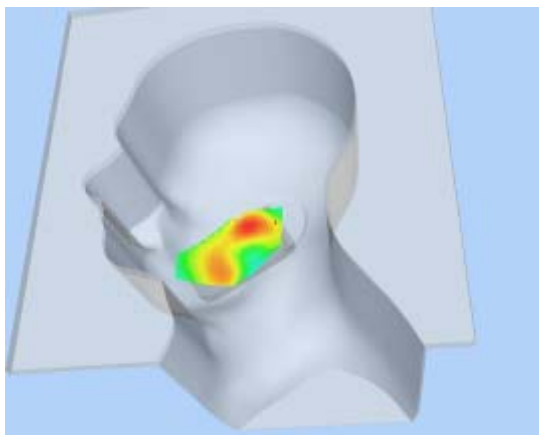
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0950	0.0511	0.0273	0.0146	0.0089	0.0051

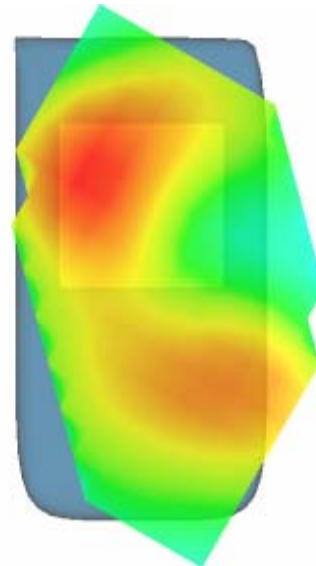
SAR, Z Axis Scan (X = -29, Y = -2)



3D scene shot



Hot spot position



MEASUREMENT 35

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 8 minutes 7 seconds

A. Experimental conditions.

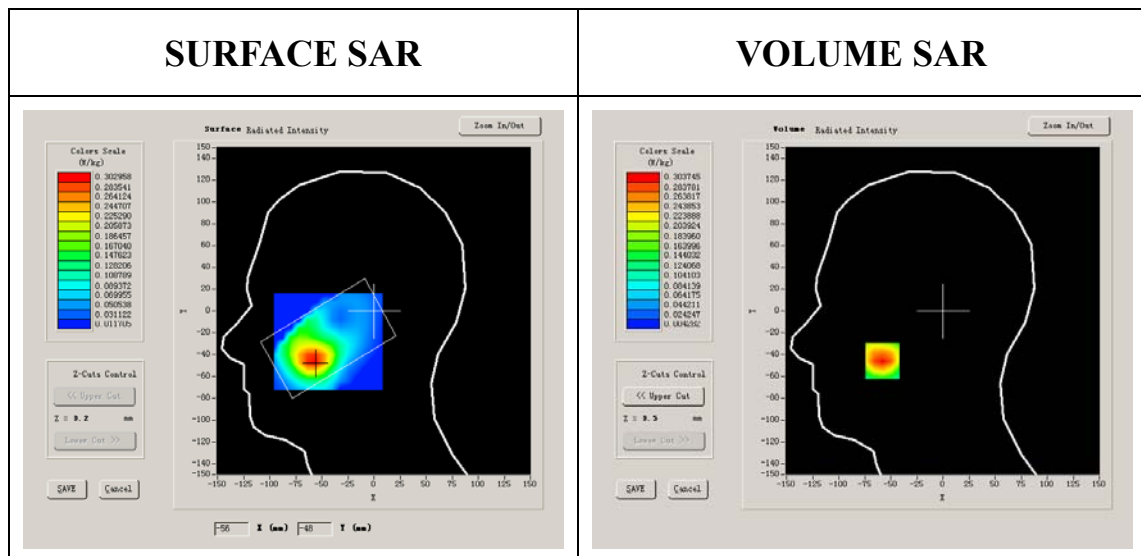
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	39.910000
Relative permittivity	13.230000

Conductivity (S/m)	1.381800
Variation (%)	-1.450000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

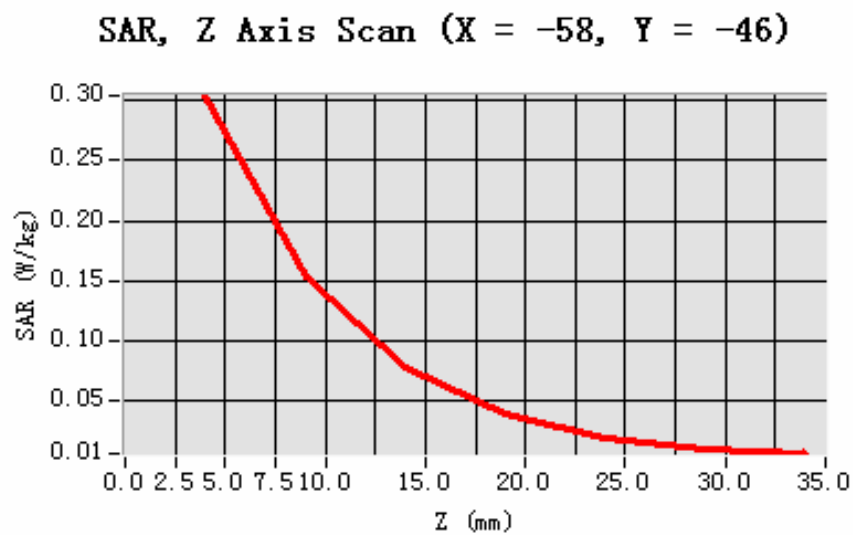


Maximum location: X=-58.00, Y=-46.00

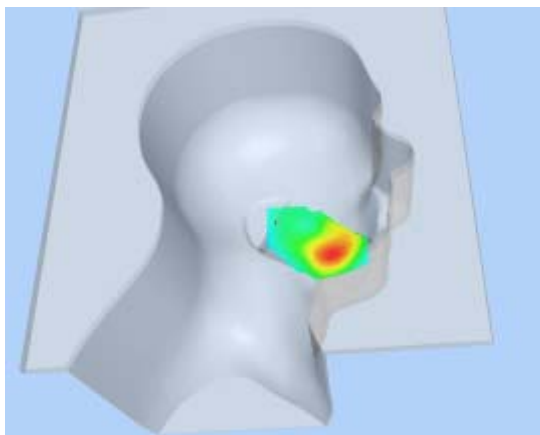
SAR 10g (W/Kg)	0.152087
SAR 1g (W/Kg)	0.289085

Z Axis Scan

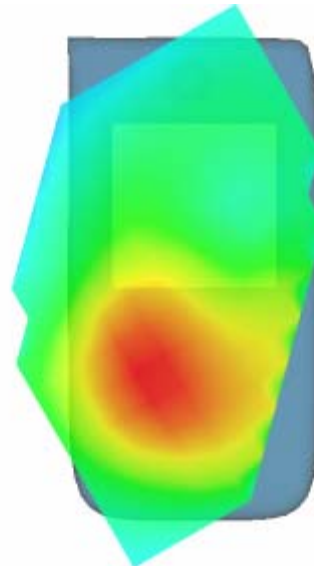
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3037	0.1538	0.0775	0.0397	0.0200	0.0102



3D scene shot



Hot spot position



MEASUREMENT 36

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 7 minutes 26 seconds

A. Experimental conditions.

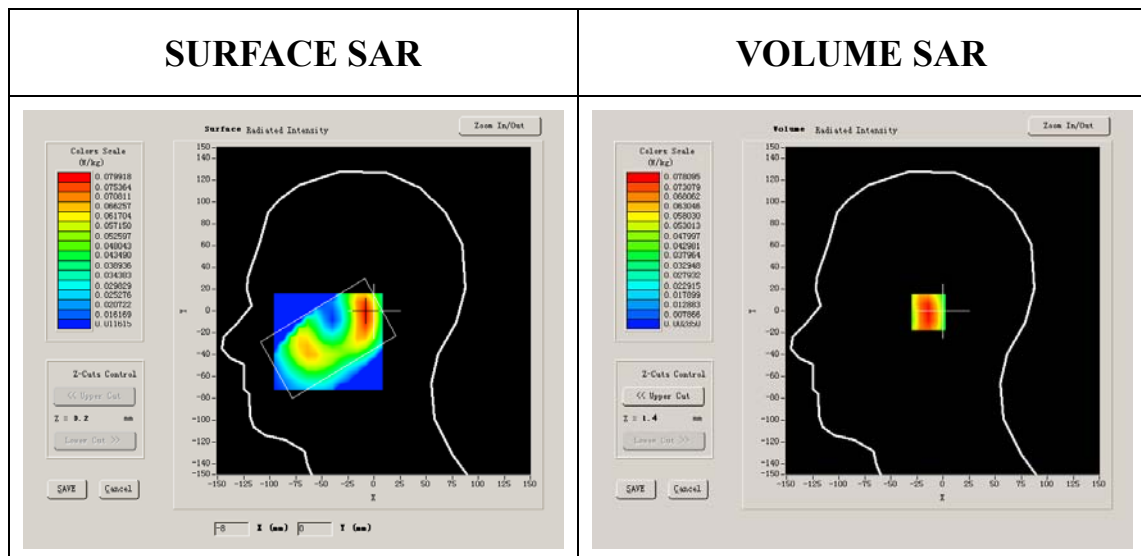
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	39.910000
Relative permittivity	13.230000

Conductivity (S/m)	1.381800
Variation (%)	-0.560000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

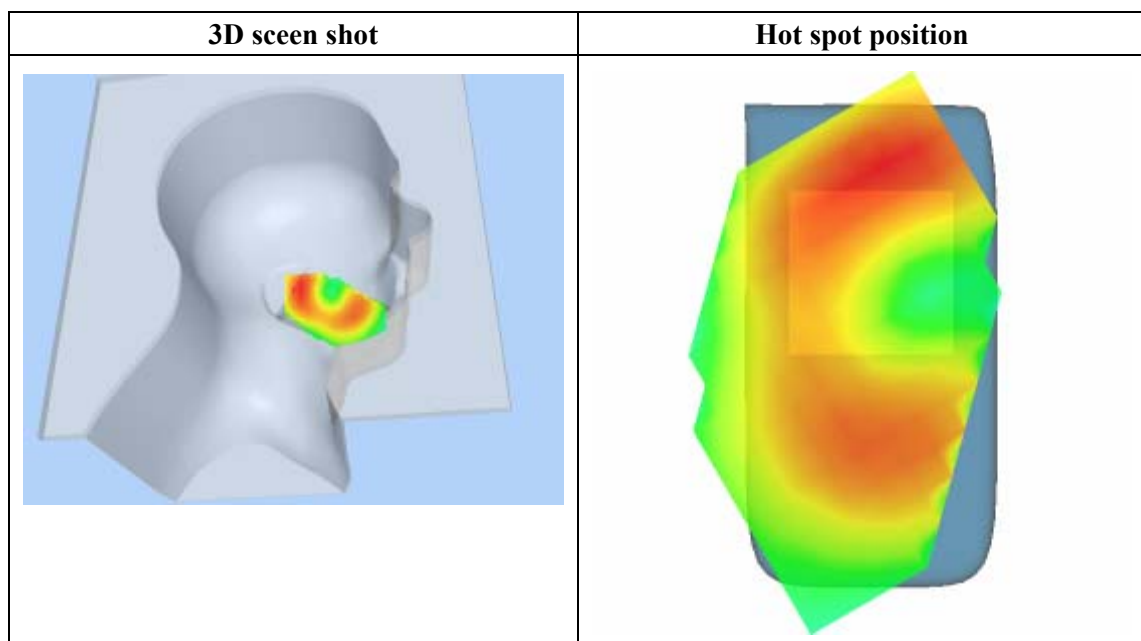
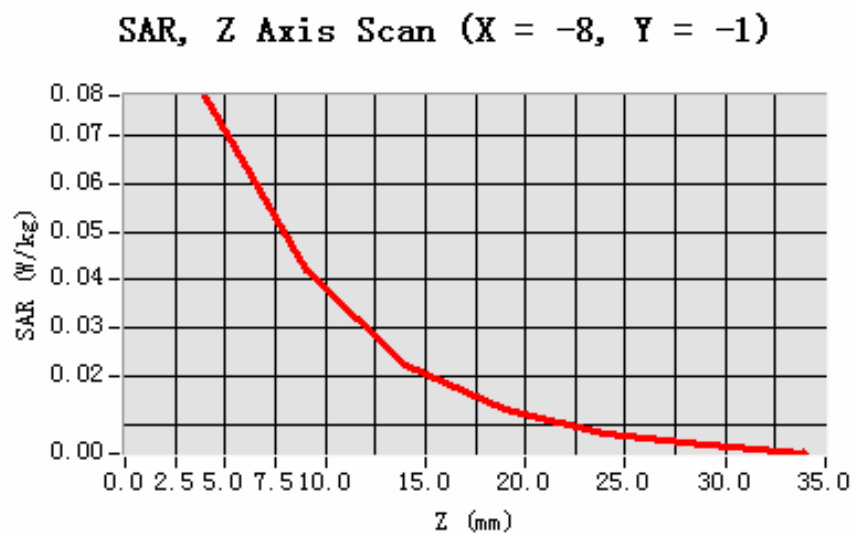


Maximum location: X=-8.00, Y=-1.00

SAR 10g (W/Kg)	0.041512
SAR 1g (W/Kg)	0.074622

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0781	0.0419	0.0226	0.0134	0.0083	0.0060



MEASUREMENT 37

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

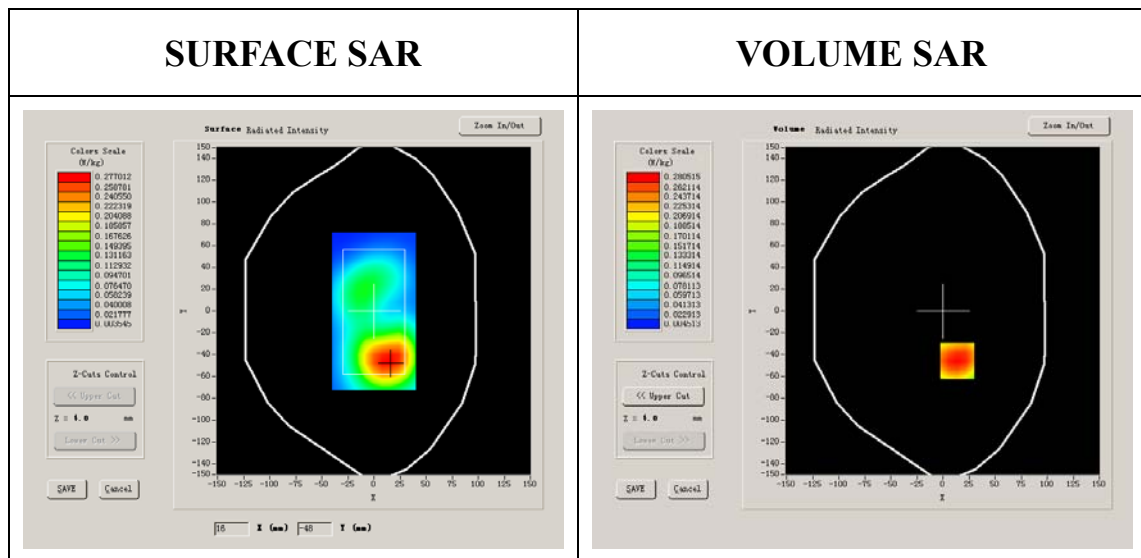
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.633572
Variation (%)	0.280000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



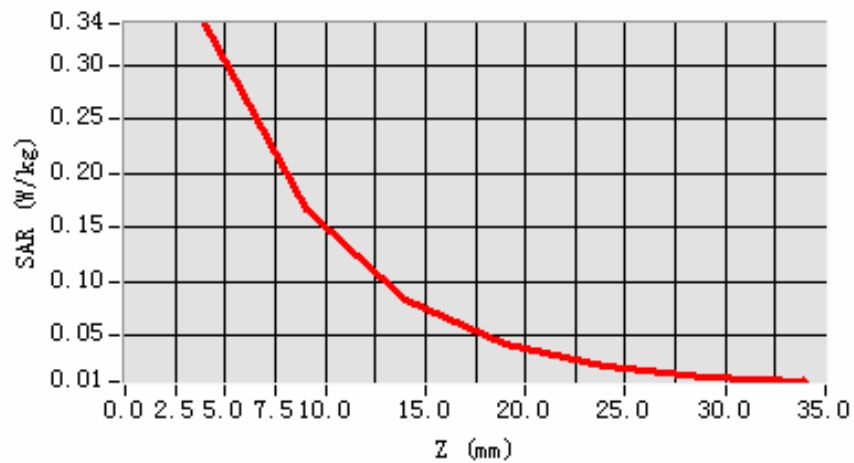
Maximum location: X=14.00, Y=-46.00

SAR 10g (W/Kg)	0.362333
SAR 1g (W/Kg)	0.585123

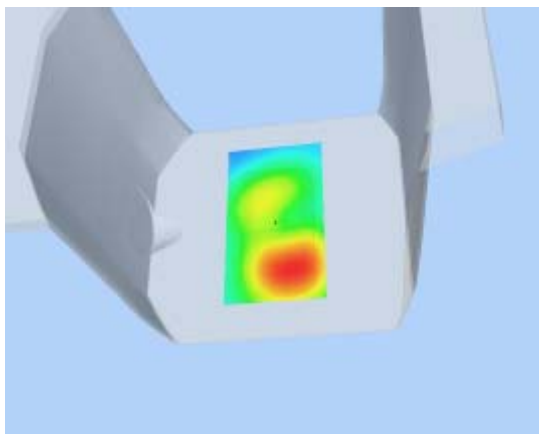
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3382	0.1657	0.0837	0.0421	0.0218	0.0123

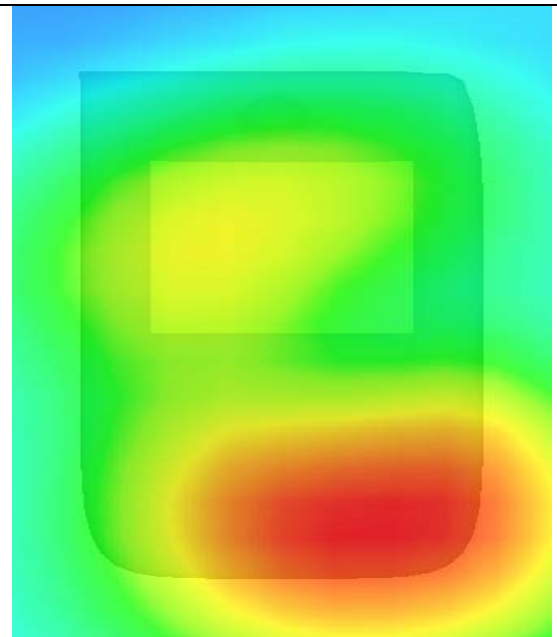
SAR, Z Axis Scan (X = 14, Y = -46)



3D scene shot



Hot spot position



MEASUREMENT 38

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

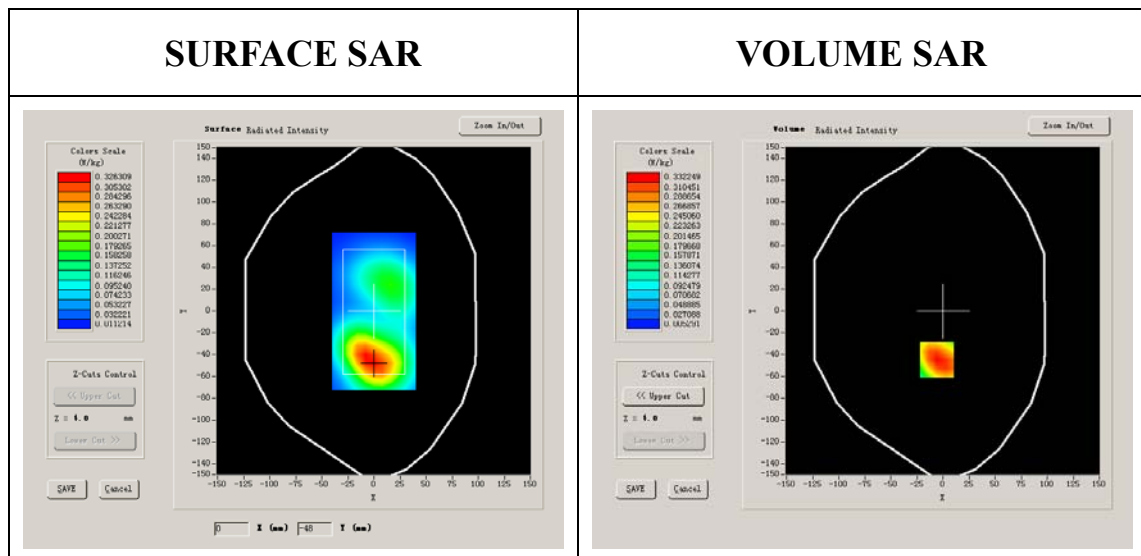
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.658270
Variation (%)	0.750000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



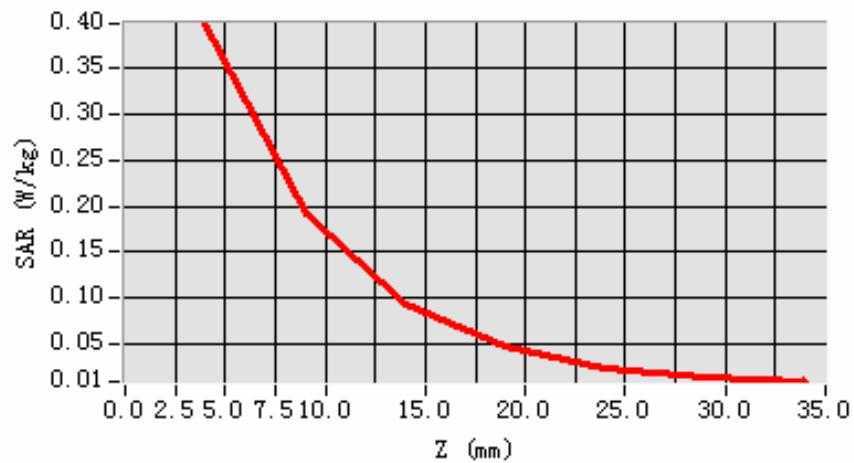
Maximum location: X=-6.00, Y=-45.00

SAR 10g (W/Kg)	0.207646
SAR 1g (W/Kg)	0.385959

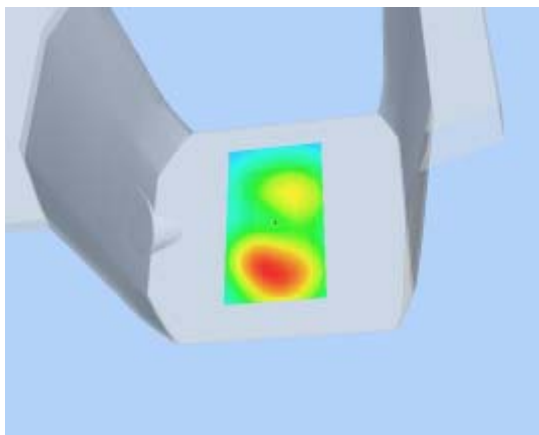
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3987	0.1917	0.0924	0.0473	0.0235	0.0135

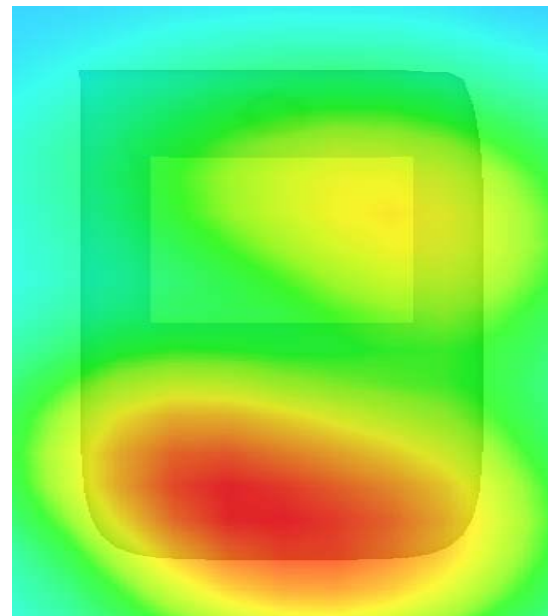
SAR, Z Axis Scan (X = -6, Y = -45)



3D scene shot



Hot spot position



MEASUREMENT 39

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

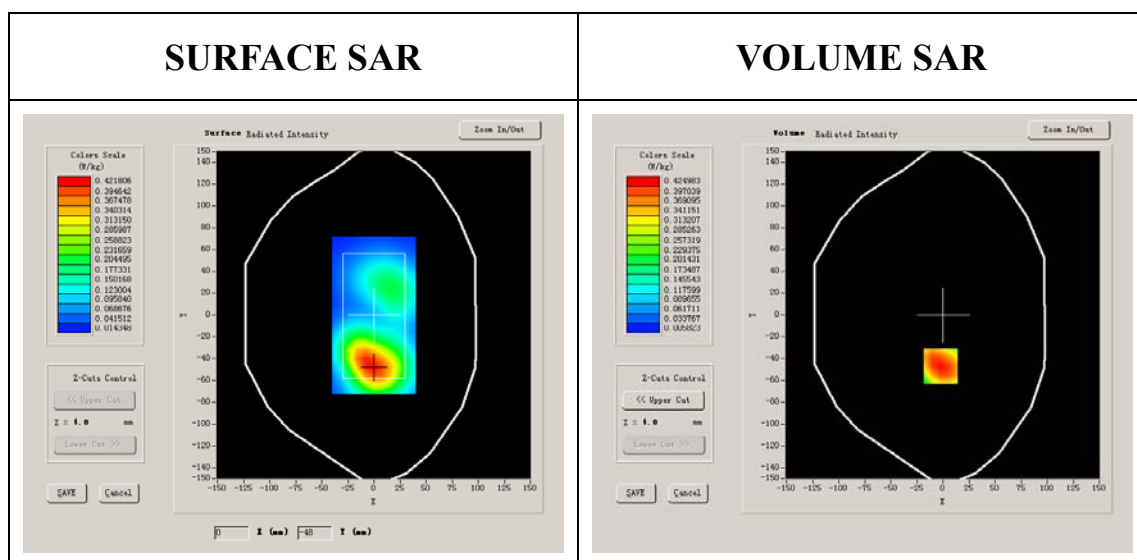
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.682085
Variation (%)	0.280000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



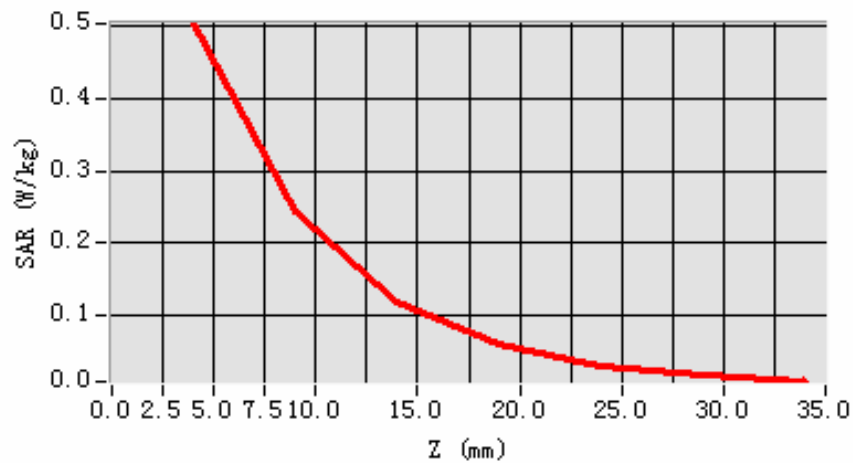
Maximum location: X=-2.00, Y=-47.00

SAR 10g (W/Kg)	0.262242
SAR 1g (W/Kg)	0.486652

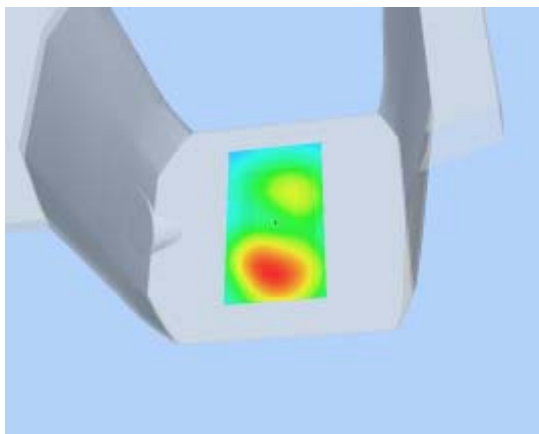
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5043	0.2436	0.1198	0.0601	0.0296	0.0163

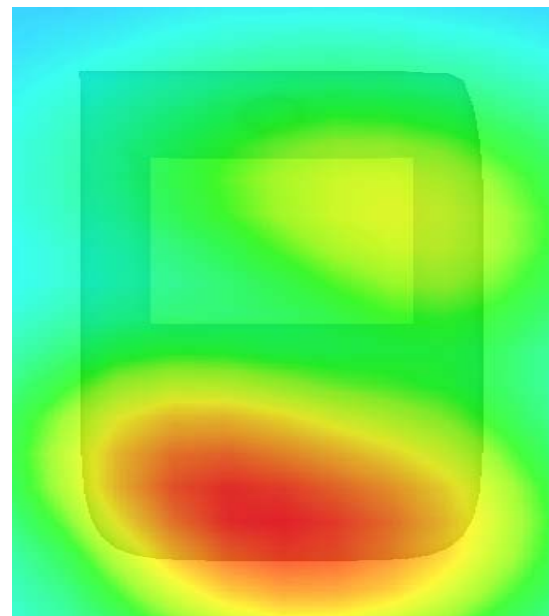
SAR, Z Axis Scan (X = -2, Y = -47)



3D scene shot



Hot spot position



MEASUREMENT 40

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

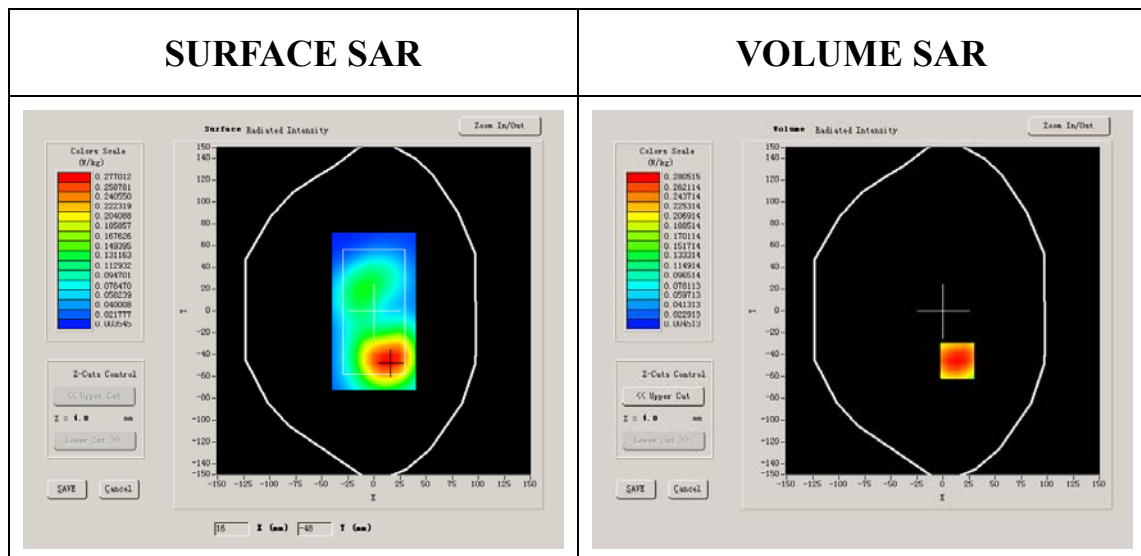
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.633572
Variation (%)	0.280000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



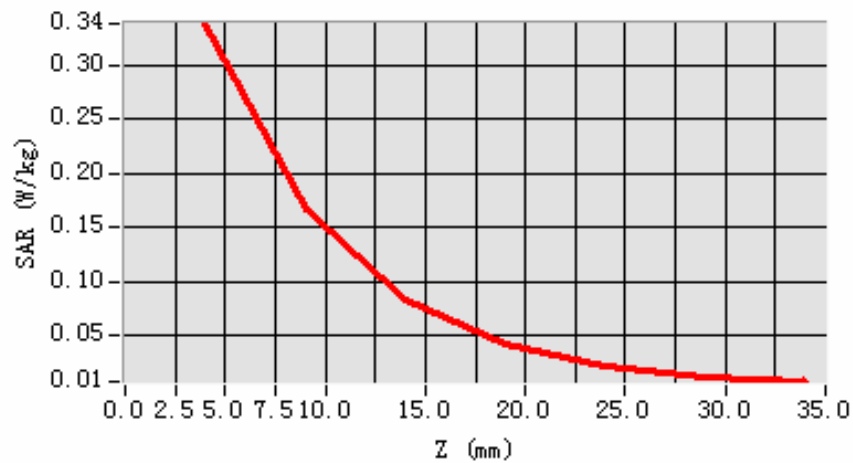
Maximum location: X=14.00, Y=-46.00

SAR 10g (W/Kg)	0.180114
SAR 1g (W/Kg)	0.328516

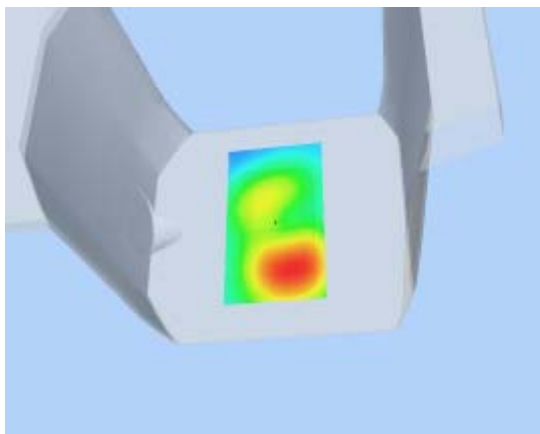
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3382	0.1657	0.0837	0.0421	0.0218	0.0123

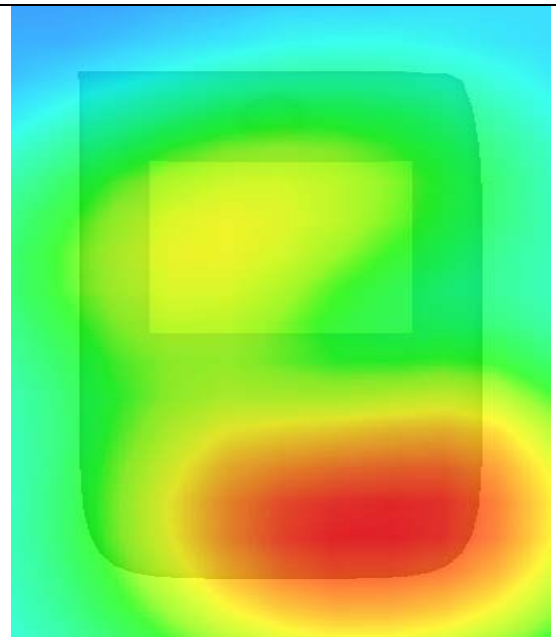
SAR, Z Axis Scan (X = 14, Y = -46)



3D scene shot



Hot spot position



MEASUREMENT 41

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

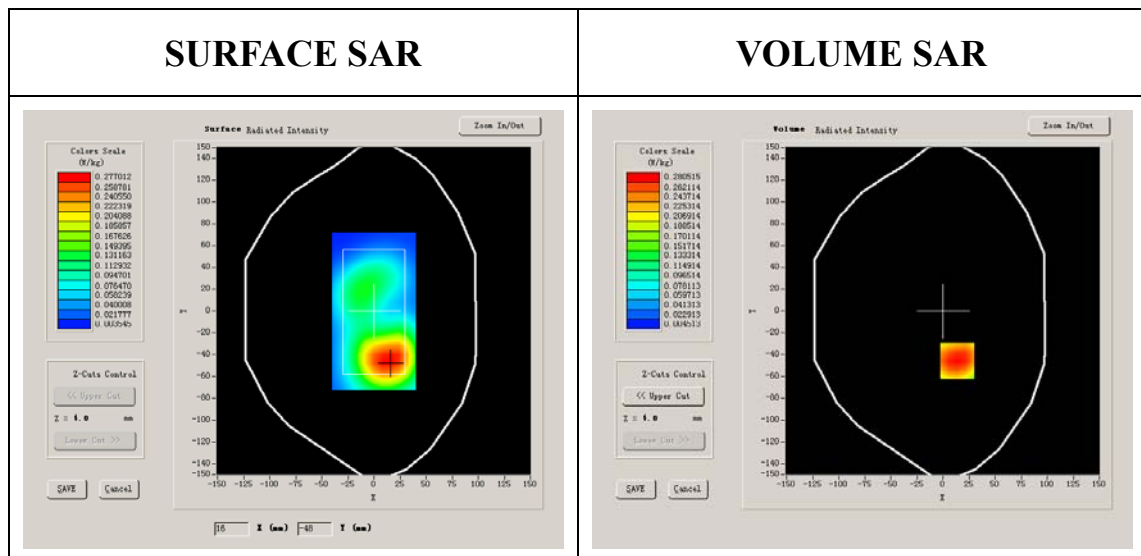
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.633572
Variation (%)	0.280000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



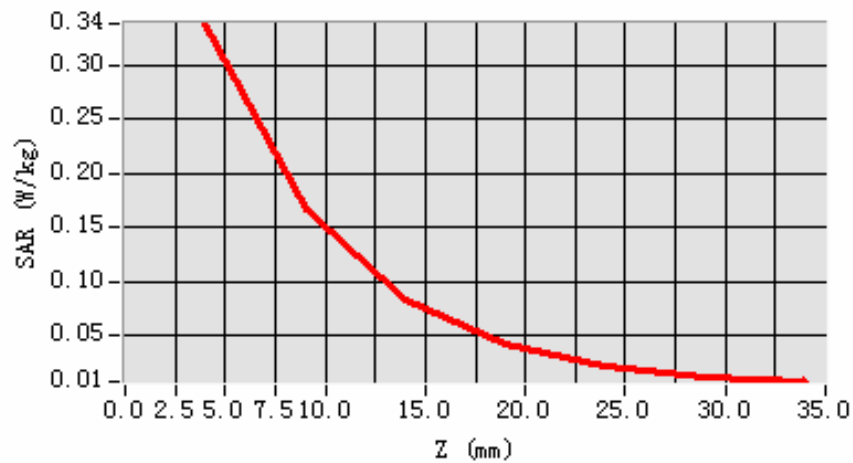
Maximum location: X=14.00, Y=-46.00

SAR 10g (W/Kg)	0.157488
SAR 1g (W/Kg)	0.313455

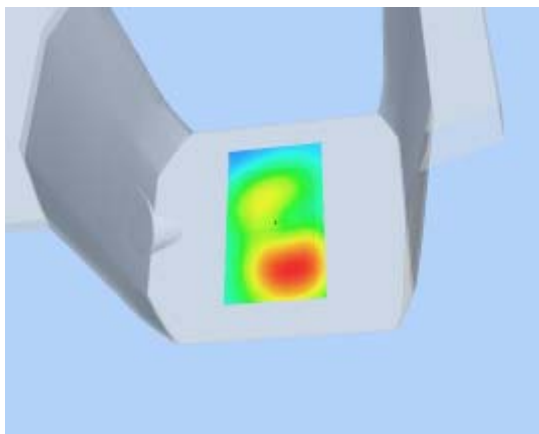
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3382	0.1657	0.0837	0.0421	0.0218	0.0123

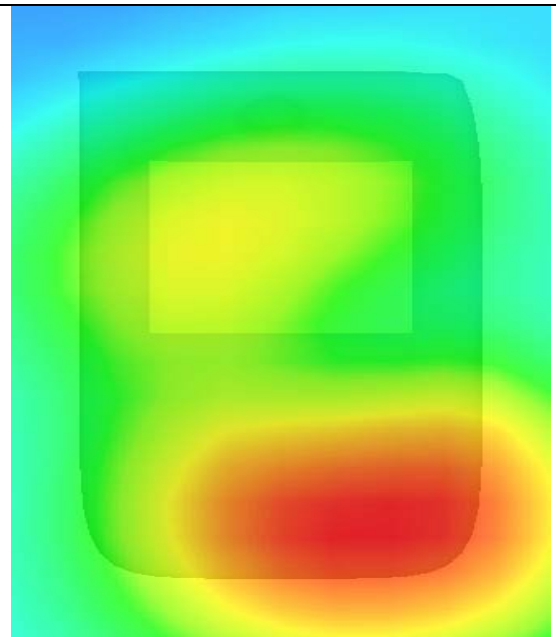
SAR, Z Axis Scan (X = 14, Y = -46)



3D scene shot



Hot spot position



MEASUREMENT 42

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

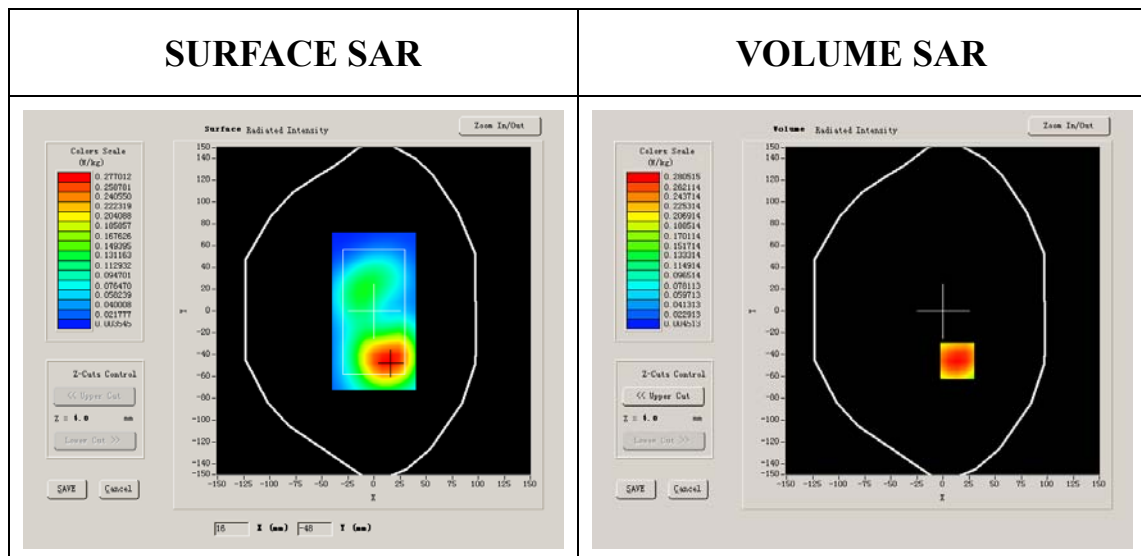
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.633572
Variation (%)	0.280000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



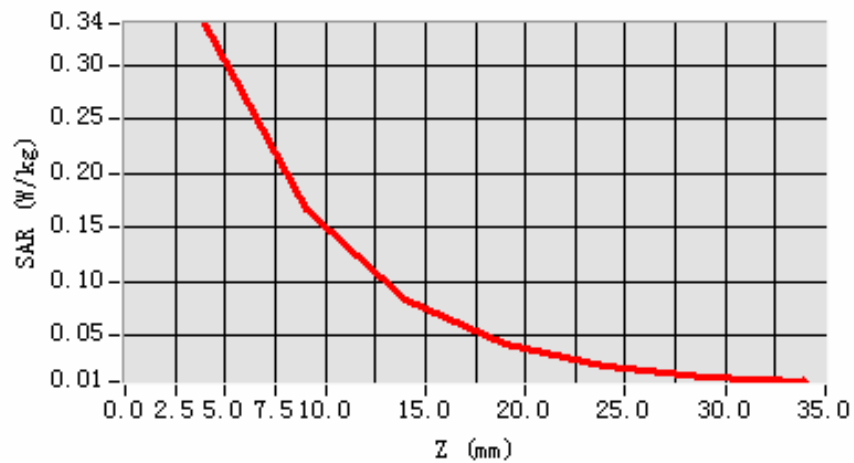
Maximum location: X=14.00, Y=-46.00

SAR 10g (W/Kg)	0.178455
SAR 1g (W/Kg)	0.327346

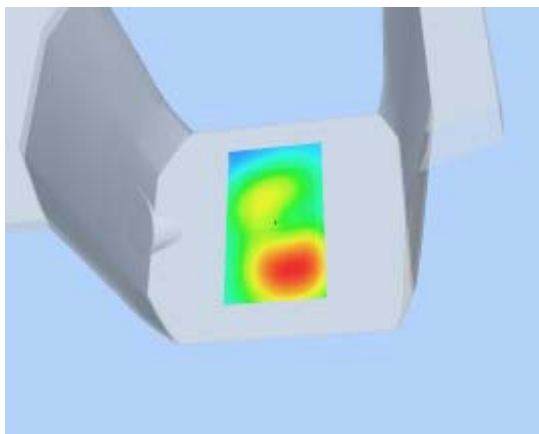
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3382	0.1657	0.0837	0.0421	0.0218	0.0123

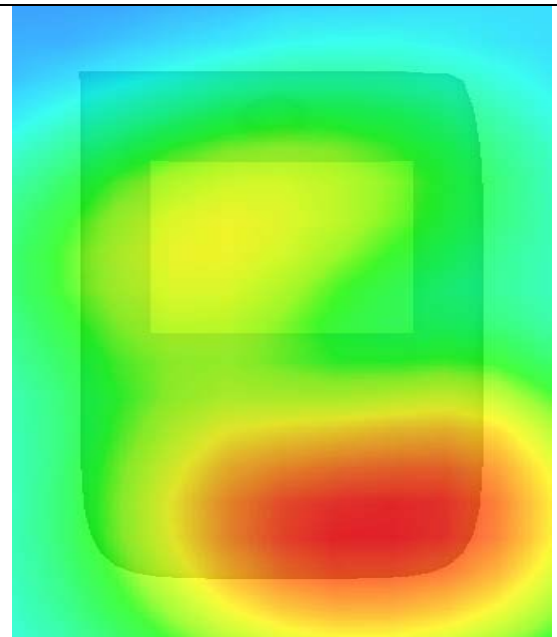
SAR, Z Axis Scan (X = 14, Y = -46)



3D scene shot



Hot spot position



System Performance Check Data(Head)

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

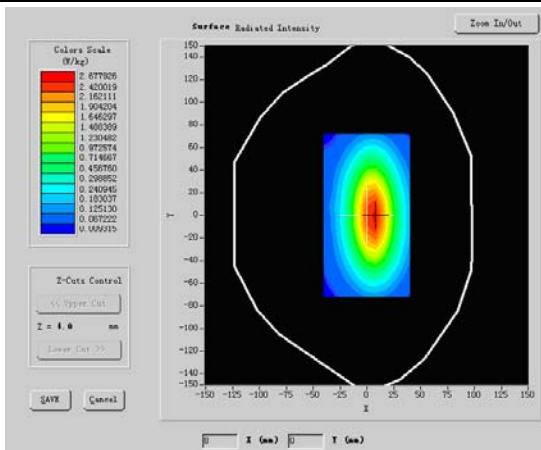
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	835MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.490002
Relative permittivity	15.070000

Conductivity (S/m)	0.983918
Variation (%)	-0.050000
Ambient Temperature:	23.6°C
Liquid Temperature:	23.4°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

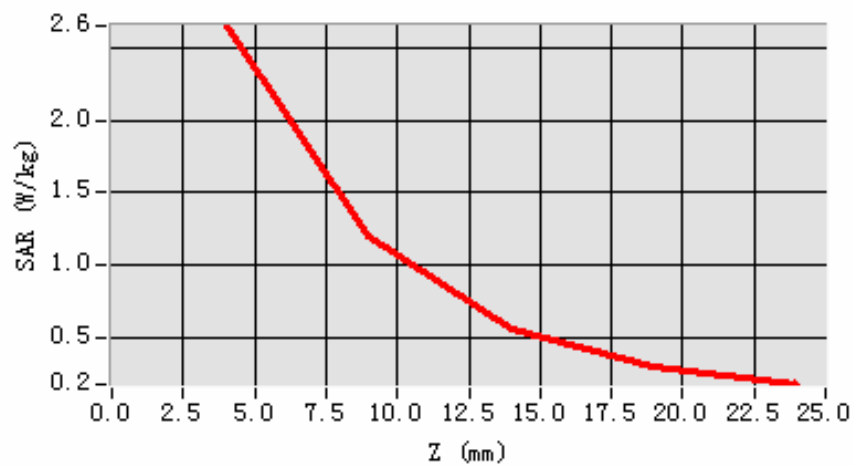
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	1.715223
SAR 1g (W/Kg)	2.677926

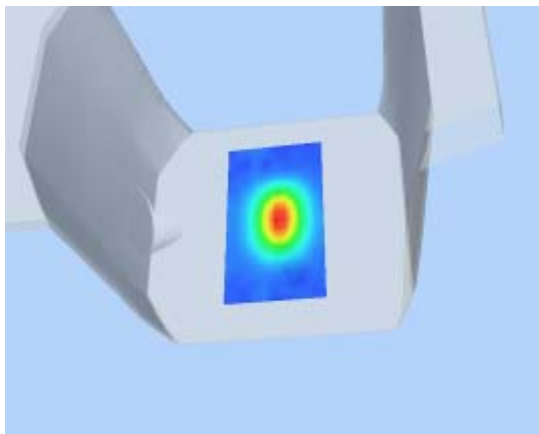
Z Axis Scan

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

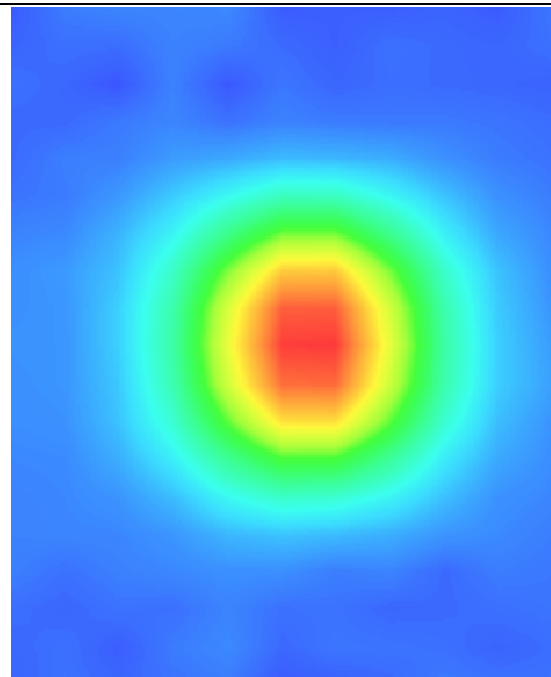
SAR, Z Axis Scan (X = 5, Y = 1)



3D sceen shot



Hot spot position



System Performance Check Data(Head)

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

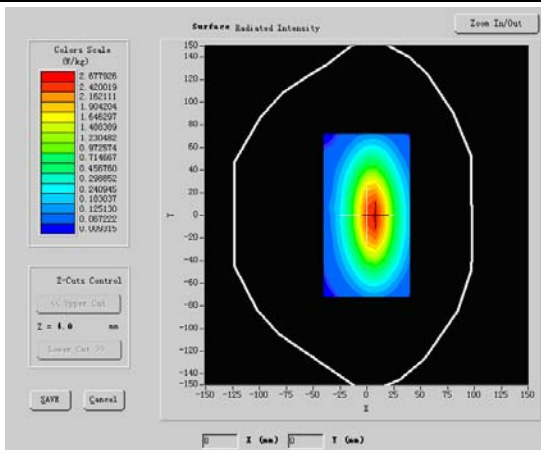
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	835MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.490002
Relative permittivity	15.070000

Conductivity (S/m)	0.983918
Variation (%)	-0.050000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

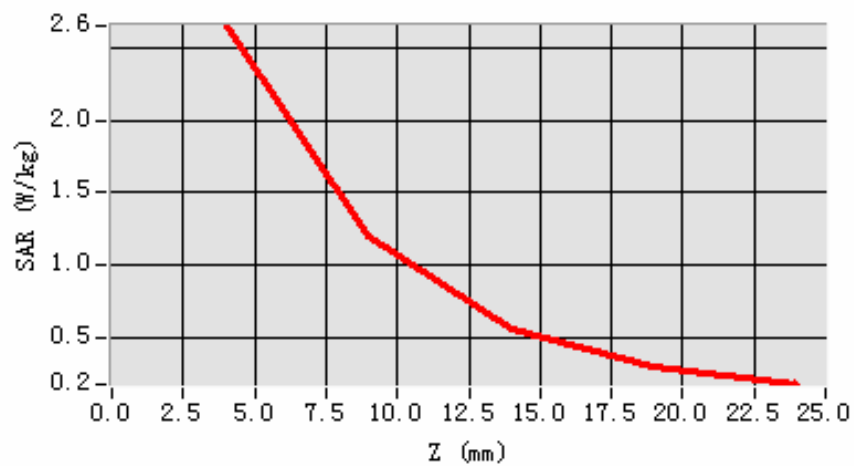
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	1.715223
SAR 1g (W/Kg)	2.677926

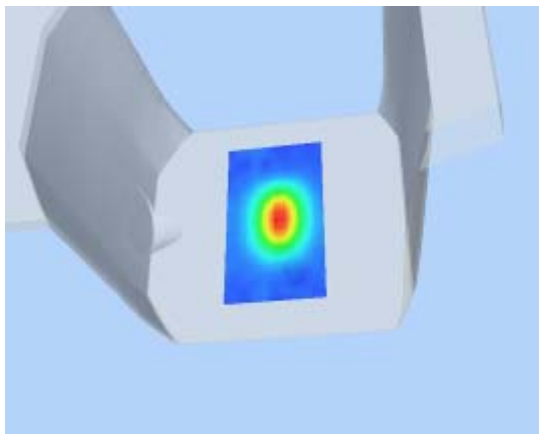
Z Axis Scan

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

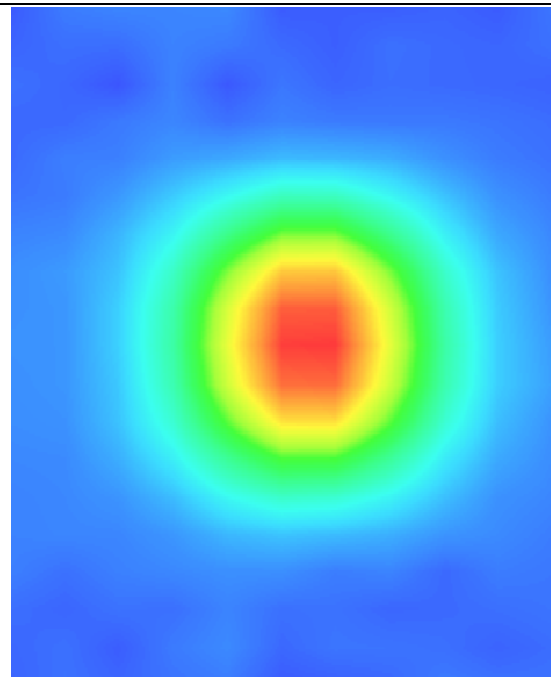
SAR, Z Axis Scan (X = 5, Y = 1)



3D sceen shot



Hot spot position



System Performance Check Data(Head)

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

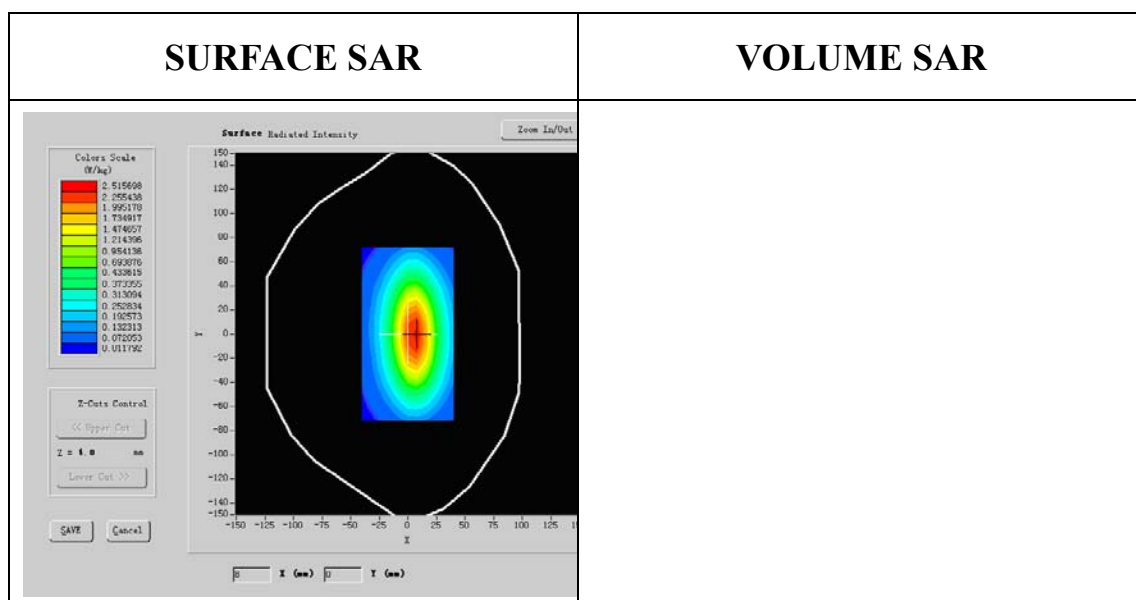
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	1800MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR:

Frequency (MHz)	1800.000000
Relative permittivity (real part)	38.930000
Relative permittivity	15.070000

Conductivity (S/m)	1.321229
Variation (%)	-0.140000
Ambient Temperature:	23.1°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



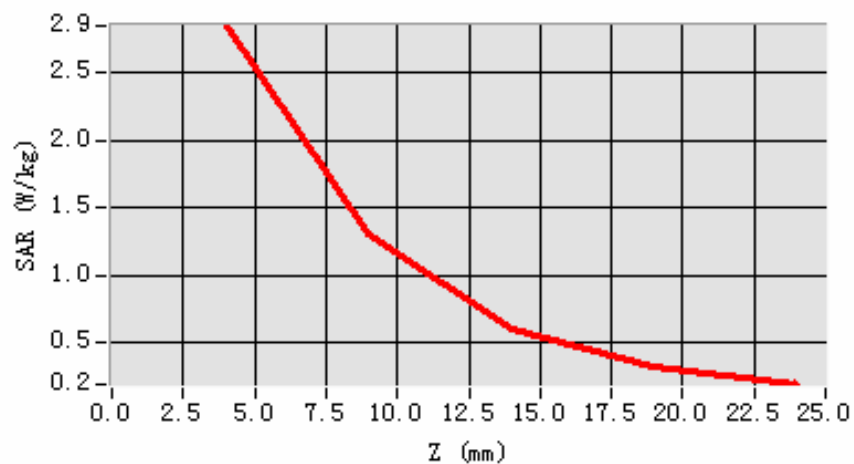
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	4.910003
SAR 1g (W/Kg)	8.455521

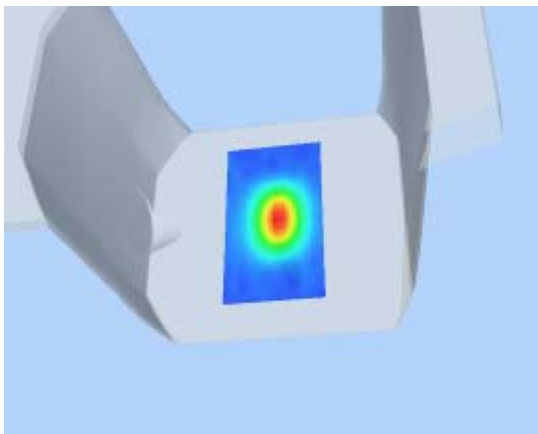
Z Axis Scan

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

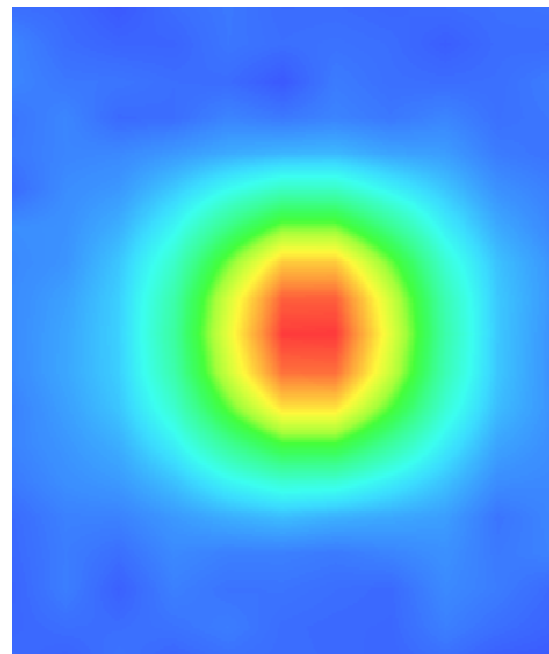
SAR, Z Axis Scan (X = 5, Y = 1)



3D sceen shot



Hot spot position



System Performance Check Data(Body)

Type: Phone measurement (Complete)

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

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

Date of measurement: 22/1/2011

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

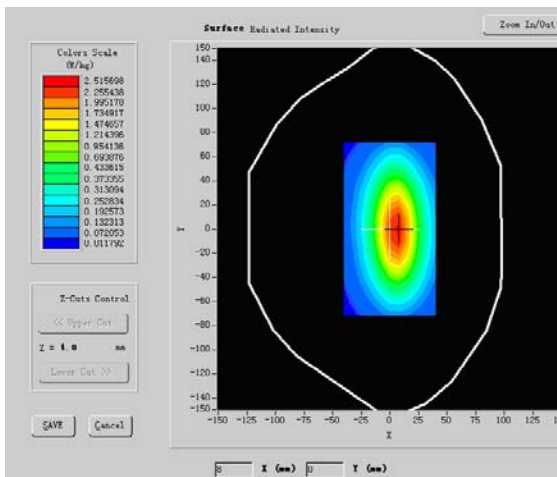
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	1800MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR:

Frequency (MHz)	1800.000000
Relative permittivity (real part)	38.930000
Relative permittivity	15.070000

Conductivity (S/m)	1.321229
Variation (%)	-0.140000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

SURFACE SAR	VOLUME SAR
	

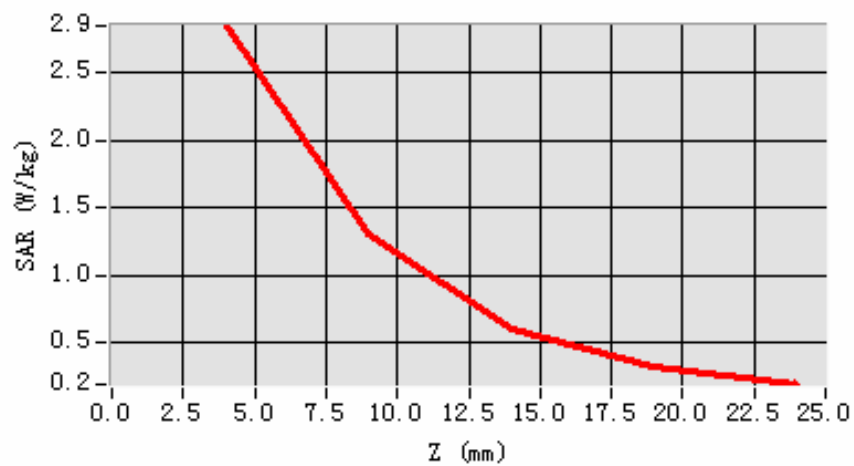
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	4.910003
SAR 1g (W/Kg)	8.455521

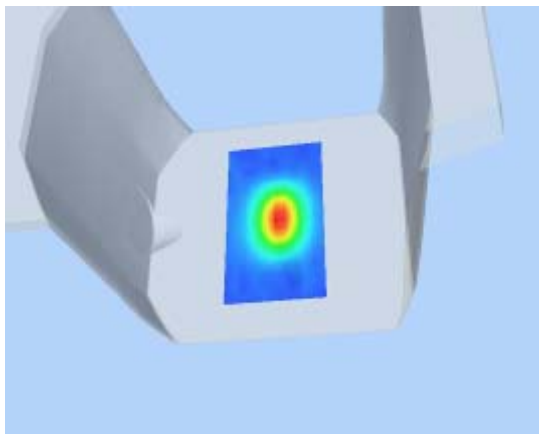
Z Axis Scan

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)



3D sceen shot



Hot spot position

