



FCC SAR

TEST REPORT

of

Wireless N USB adapter

Model Name: M-WN823N

Trade Name: PROWARE

Report No.: SZ10040031S01

FCC ID: WWMDN523V1

prepared for

Proware Technologies Co., Ltd.

4/F, Building 7, Section 2, Honghualing Industrial Park, Xili, Nanshan District,
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CTIA Authorized Test Lab

LAB CODE 20081223-00

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1. General Information

1.1. Notes

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

1.2. Organization item

Report No.:	SZ10040031S01
Date of Issue:	May. 13, 2010
Date of Tests:	Apr. 13, 2010 –May. 13, 2010
Responsible for Accreditation:	Shu Luan
Project Manager:	Li Lei
Deputy Project Manager:	Chen Chao

1.3. Conclusion

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory has verified that all tests as listed in the section 4.6 of this report haven been performed successfully with the tested equipment.

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

2. Testing Laboratory

2.1. Identification of the Responsible Testing Laboratory

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

2.2. Identification of the Responsible Testing Location

Name: Shenzhen Electronic Product Quality Testing Center Morlab Laboratory
Address: 3/F, Electronic Testing Building, Shahe Road, Nanshan District, Shenzhen, 518055 P. R. China

2.3. Accreditation Certificate

Accredited Testing Laboratory: No. CNAS L1659 (see Annex A)

2.4. List of Test Equipments

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

3. Technical Information

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

3.1. Identification of Applicant

Company Name: Proware Technologies Co., Ltd.
Address: 4/F,Building 7,Section 2, Honghualing Industrial Park, Xili, Nanshan District, Shenzhen, P.R.C.

3.2. Identification of Manufacturer

Company Name: Proware Technologies Co., Ltd.
Address: 4/F,Building 7,Section 2, Honghualing Industrial Park, Xili, Nanshan District, Shenzhen, P.R.C.

3.3. Equipment Under Test (EUT)

Brand Name: PROWARE
Type Name: PROWARE
Marking Name: WWMDN523V1
Hardware Version: 1.0
Software Version: (n.a)
Frequency Bands:
data rate: WIFI 802.11 b/g/n
802.11b: 11/ 5.5/ 2/ 1Mbps
802.11g: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6Mbps
Draft 802.11n (20MHz):
130/117/104/78/65/58.5/52/39/26/19.5/13/6.5Mbps
Draft 802.11n (40MHz): 270/ 243/ 216/
162/135/121.5/108/81/54/40.5/27/13.5Mbps
Antenna type: Build inside
Development Stage: Identical prototype
CLASSIFICATION: Portable device, production unit
802.11b: 17.48 dBm / Ch 1: 2437MHz, 18.39 dBm / Ch 6: 2437MHz
17.42 dBm / Ch 11: 2437MHz
Channel Frequencies Under Test And Output Power: 802.11g: 19.46 dBm / Ch 1: 2437MHz, 19.64 dBm / Ch 6: 2437MHz
19.15 dBm / Ch 11: 2437MHz
802.11n(20MHz): 18.10 dBm / Ch 1: 2437MHz,
18.52 dBm / Ch 6: 2437MHz, 18.06 dBm / Ch 11: 2437MHz
802.11n(40MHz): 18.40 dBm / Ch 3: 2437MHz
18.67 dBm / Ch 6: 2437MHz, 18.97 dBm / Ch 9: 2437MHz

3.3.1. Photographs of the EUT

Please see for photographs of the EUT.

3.3.2. Identification of all used EUTs

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

EUT Identity	Hardware Version	Software Version
1#	1.0	(n.a)

4. Test Results

4.1. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	47 CFR § 2. 1093	Radiofrequency Radiation Exposure Evaluation: Portable Devices
2	FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01)	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields
3	ANSI C95.1-1999	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz
4	IEEE 1528-2003	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techuiques.

4.2. Test Environment/Conditions

Normal Temperature (NT):	20 ... 25 °C
Relative Humidity:	30 ... 75 %
Air Pressure:	980 ... 1020 hPa
Details of Power Supply:	5Vdc from host equipment
Extreme Temperature:	Low Temperature (LT) = -10°C
	High Temperature (HT) = 55°C
Test frequency:	802.11 b/g/n

Test tool is Art provided by client. It can control EUT to transmit continuously at specific channel, output power level, data rates and 100 % duty signal.

Comparing output power of all modulations and data rates of each mode can find the lowest data rates has max output power. Therefore, EUT will set under lowest data rates to test.

4.3. Operational Conditions During Test

4.3.1. Informations On The Testing

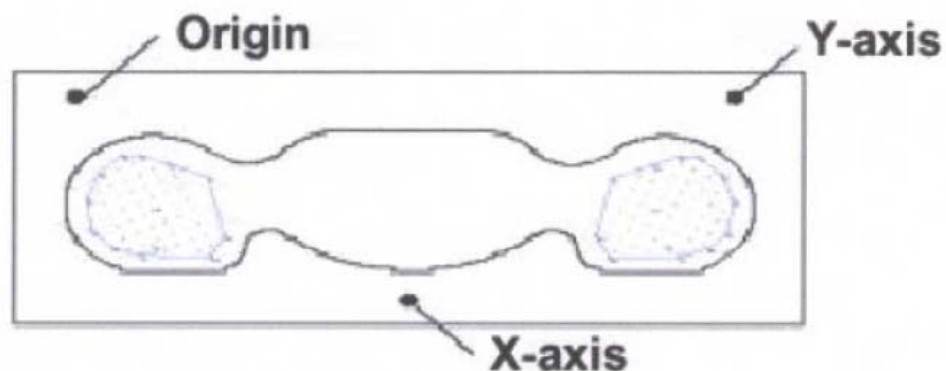
4.3.1.1 Body-worn Configurations

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 0.5cm(taking into account of the IEEE 1528 and the place of the antenna)

4.3.1.2 Phantom Requirements

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.



Picture A: SAR Measurement Points in Area Scan

4.3.1.3 Test to be Performed

For devices with retractable antenna the SAR test shall be performed with the antenna fully extended and fully retracted. Other factors that may affect the exposure shall also be tested. For example, optional antennas or optional battery packs which may significantly change the volume, lengths, flip open/closed, etc. Of the device, or any other accessories which might have the potential to considerably increase the peak spatial-average SAR value.

The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at the middle channel for each test configuration is at least 3.0dB lower than the SAR limit, testing at the high and low channels is optional.

4.3.2. The Measurement System

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

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

The following figure shows the system.



COMOSAR bench

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

II.1. Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2 mm +/- 0,2 mm. It enables the dosimetric evaluation of left and right hand phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.

II.2. Probe

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

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

- Distance between probe tip and sensor center : 2.5 mm
- Distance between sensor center and the inner phantom surface: 4 mm (repeatability better than +/- 1mm).
- Probe linearity : <0.25 dB
- Axial Isotropy : <0.25 dB
- Spherical Isotropy : <0.50 dB
- Calibration range : 835 to 2500 MHz for head & body simulating liquid
- Angle between probe axis (evaluation axis) and surface normal line : less than 30°

II.3. Measurement procedure

The following steps are used for each test position

- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16 mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors can not directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8 * 4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

II.4 Description of interpolation/extrapolation scheme

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

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

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

4.3.3. Uncertainty Assessment

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

The values are determined by Antenna.

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

Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	M
Liquid permittivity - deviation from target value	E.3.2	3.66	R	$\sqrt{3}$	0.6	0.49	1.27	1.04	∞
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	M
Combined Standard Uncertainty			RSS				11.28	10.78	
Expanded Uncertainty (95% Confidence interval)			k				21.99	21.03	

4.3.4. Equipments and results of validation testing

Equipments :

name	Type and specification
Signal generator	E4433B
Directional coupler	450MHz-3GHz
Amplifier	3W 502(10-2500MHz)
Reference dipole	SN 36/08 DIPJ103

Results:

Frequency	2450 MHz
Target value (1g)	52.4 W/Kg(body)
250 mW input power	12.9 W/Kg (body)
Test value (1g)	51.6 W/Kg (body)

Note:Please refer to check the system performance data, the first 121-133 page.

4.3.5. Dielectric Performance

The measured 1-gram averaged SAR values of the device against the head and the body are provided in Tables 1 and 2 respectively. The humidity and ambient temperature of test facility were 54% ~60% and 23.0 °C ~23.8°C respectively. The SAM head phantom (SN 0381 SH) were full of the head tissue simulating liquid. The depth of the body tissue was 15.1cm. The distance between the back of the device and the bottom of the flat phantom is 1.5cm (taking into account of the IEEE 1528 and the place of the antenna). A base station simulator was used to control the device during the SAR measurement. The phone was supplied with full-charged battery for each measurement.

For head measurement, the device was tested at the lowest, middle and highest frequencies in the transmit band.

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

Table 1: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 22.0~23.8°C, humidity: 54~60%.			
/	Frequency	Permittivity ϵ	Conductivity σ (S/m)
Target value	2450 MHz	39.2	1.80
Validation value (Apr. 13)	2450 MHz	39.54	1.72
Validation value (May. 11)	2450 MHz	39.58	1.71
Validation value (May. 13)	2450 MHz	39.56	1.70

4.3.6. Simulant liquids

Simulant liquids that are used for testing at frequencies of 2450MHz, which are made mainly of sugar, salt and water solutions may be left in the phantoms. Approximately 20litres are needed for an upright head compared to about 20litres for a horizontal bath phantom.

Ingredients (% by weight)	Frequency Band
	2450MHz
Tissue Type	Body
Water	52.4
Salt(NaCl)	1.4
Sugar	45.0
HEC	1.0
Bactericide	0.1
Triton	0.0
DGBE	0.0
Acticide SPX	0.0
Dielectric Constant	52.7
Conductivity (S/m)	1.95

4.4. SAR Limits

HUMAN EXPOSURE	SAR (W/kg)	
	(GENERAL POPULATION / UNCONTROLLED EXPOSURE ENVIRONMENT)	(OCCUPATIONAL / CONTROLLED EXPOSURE ENVIRONMENT)
Spatial Average (whole body)	0.08	0.4
Spatial Peak (averaged over 1 g)	1.6	8.0
Spatial Peak (hands / wrists / feet / ankles averaged over 10 g)	4.0	20.0

NOTE:

1. This limits accord to 47 CFR 2.1093 – Safety Limit.
2. The EUT property been complied with the partial body exposure limit under the general population environment

4.5. Items used in the Test Results List

Terms in the column “Verdict” for the test results list of the section 4.6:

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

4.6. Test Results List

Summary of Measurement Results (WIFI 802.11b)

SAR Values (WIFI 802.11b), 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)	
	1g Average (W/kg)	Power level (dBm)
Validation Plane with Body device position on Channel Middle Data Rate 1 (Horizontal-Up)	0.241	18.39
Validation Plane with Body device position on Channel Middle Data Rate 1 (Horizontal-Down)	0.254	18.39
Validation Plane with Body device position on Channel Middle Data Rate 1 (Vertical-Front)	0.111	18.39
Validation Plane with Body device position on Channel Middle Data Rate 1 (Vertical-Back)	0.126	18.39
Validation Plane with Body device position on Channel Middle Data Rate 2 (Horizontal-Down)	0.228	18.32
Validation Plane with Body device position on Channel Middle Data Rate 5.5 (Horizontal-Down)	0.216	18.26
Validation Plane with Body device position on Channel Middle Data Rate 11 (Horizontal-Down)	0.200	18.21
Validation Plane with Body device position on Channel Low Data Rate 1 (Horizontal-Down)	0.215	17.48
Validation Plane with Body device position on Channel High Data Rate 1 (Horizontal-Down)	0.217	17.42

Summary of Measurement Results (WIFI 802.11g)

SAR Values (WIFI 802.11g), 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)	
	1g Average (W/kg)	Power level (dBm)
Validation Plane with Body device position on Channel Middle Data Rate 6 (Horizontal-Up)	0.173	19.64

Validation Plane with Body device position on Channel Middle Data Rate 6 (Horizontal-Down)	0.214	19.64
Validation Plane with Body device position on Channel Middle Data Rate 6 (Vertical-Front)	0.070	19.64
Validation Plane with Body device position on Channel Middle Data Rate 6 (Vertical-Back)	0.119	19.64
Validation Plane with Body device position on Channel Middle Data Rate 9 (Horizontal-Down)	0.211	19.60
Validation Plane with Body device position on Channel Middle Data Rate 12 (Horizontal-Down)	0.205	19.52
Validation Plane with Body device position on Channel Middle Data Rate 18 (Horizontal-Down)	0.206	19.50
Validation Plane with Body device position on Channel Middle Data Rate 24 (Horizontal-Down)	0.198	19.47
Validation Plane with Body device position on Channel Middle Data Rate 36 (Horizontal-Down)	0.186	19.43
Validation Plane with Body device position on Channel Middle Data Rate 48 (Horizontal-Down)	0.195	19.42
Validation Plane with Body device position on Channel Middle Data Rate 54 (Horizontal-Down)	0.179	19.41
Validation Plane with Body device position on Channel Low Data Rate 6 (Horizontal-Down)	0.210	19.46
Validation Plane with Body device position on Channel High Data Rate 6 (Horizontal-Down)	0.201	19.15

Summary of Measurement Results (WIFI 802.11 n)

SAR Values (WIFI 802.11 n), 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)	
	1g Average (W/kg)	Power level (dBm)
Validation Plane with Body device position on Channel Middle Data Rate 13.5 (Horizontal-Up)	0.173	18.67
Validation Plane with Body device position on Channel Middle Data Rate 13.5 (Horizontal-Down)	0.258	18.67
Validation Plane with Body device position on Channel Middle Data Rate 13.5 (Vertical-Front)	0.185	18.67
Validation Plane with Body device position on Channel Middle Data Rate 13.5 (Vertical-Back)	0.170	18.67

Validation Plane with Body device position on Channel Middle Data Rate 27 (Horizontal-Down)	0.244	18.64
Validation Plane with Body device position on Channel Middle Data Rate 40.5 (Horizontal-Down)	0.241	18.59
Validation Plane with Body device position on Channel Middle Data Rate 54 (Horizontal-Down)	0.234	18.57
Validation Plane with Body device position on Channel Middle Data Rate 81 (Horizontal-Down)	0.221	18.51
Validation Plane with Body device position on Channel Middle Data Rate 108 (Horizontal-Down)	0.215	18.43
Validation Plane with Body device position on Channel Middle Data Rate 121.5 (Horizontal-Down)	0.211	18.40
Validation Plane with Body device position on Channel Middle Data Rate 135 (Horizontal-Down)	0.200	18.32
Validation Plane with Body device position on Channel Middle Data Rate 162 (Horizontal-Down)	0.191	18.27
Validation Plane with Body device position on Channel Middle Data Rate 216 (Horizontal-Down)	0.186	18.20
Validation Plane with Body device position on Channel Middle Data Rate 243 (Horizontal-Down)	0.183	18.14
Validation Plane with Body device position on Channel Middle Data Rate 270 (Horizontal-Down)	0.180	18.10
Validation Plane with Body device position on Channel Low Data Rate 13.5 (Horizontal-Down)	0.241	18.40
Validation Plane with Body device position on Channel High Data Rate 13.5 (Horizontal-Down)	0.266	18.97

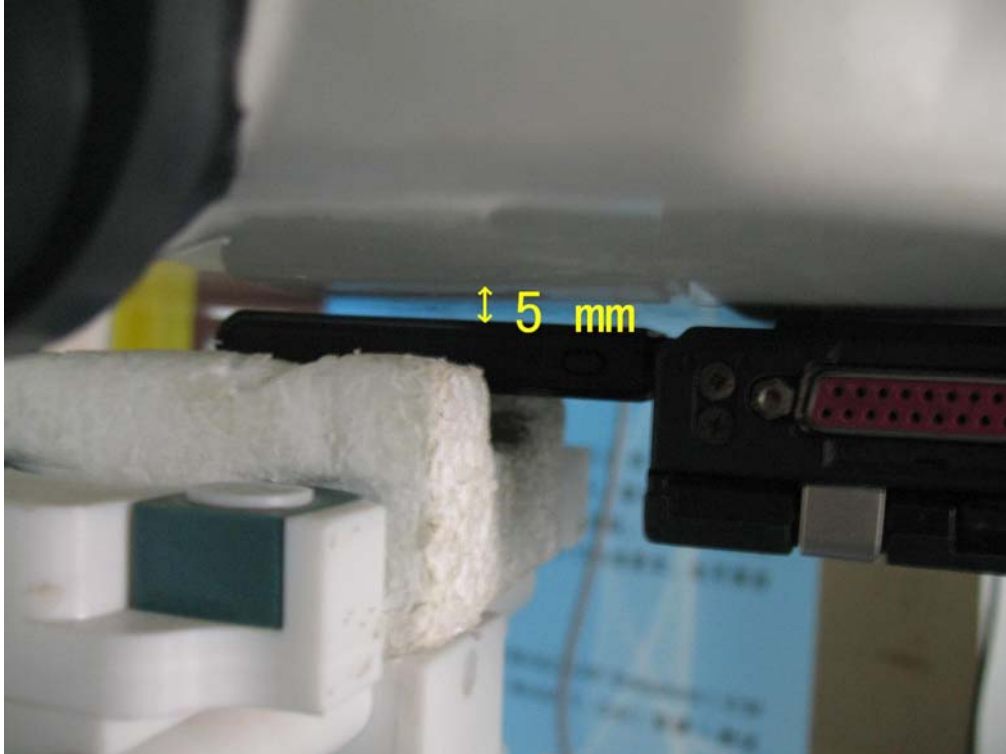
Annex A Accreditation Certificate

 
China National Accreditation Service for Conformity Assessment
LABORATORY ACCREDITATION CERTIFICATE
(No. CNAS L1659)
<i>China National Accreditation Service for Conformity Assessment has accredited</i>
Shenzhen Electronic Product Quality Testing Center
<u>Electronic Testing Building, Shahe Road, Xili, Nanshan District,</u> <u>Shenzhen, Guangdong, China</u>
<i>to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing and calibration.</i>
<i>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.</i>
Date of Issue: 2009-09-29
Date of Expiry: 2012-09-28
Date of Initial Accreditation: 1999-08-03

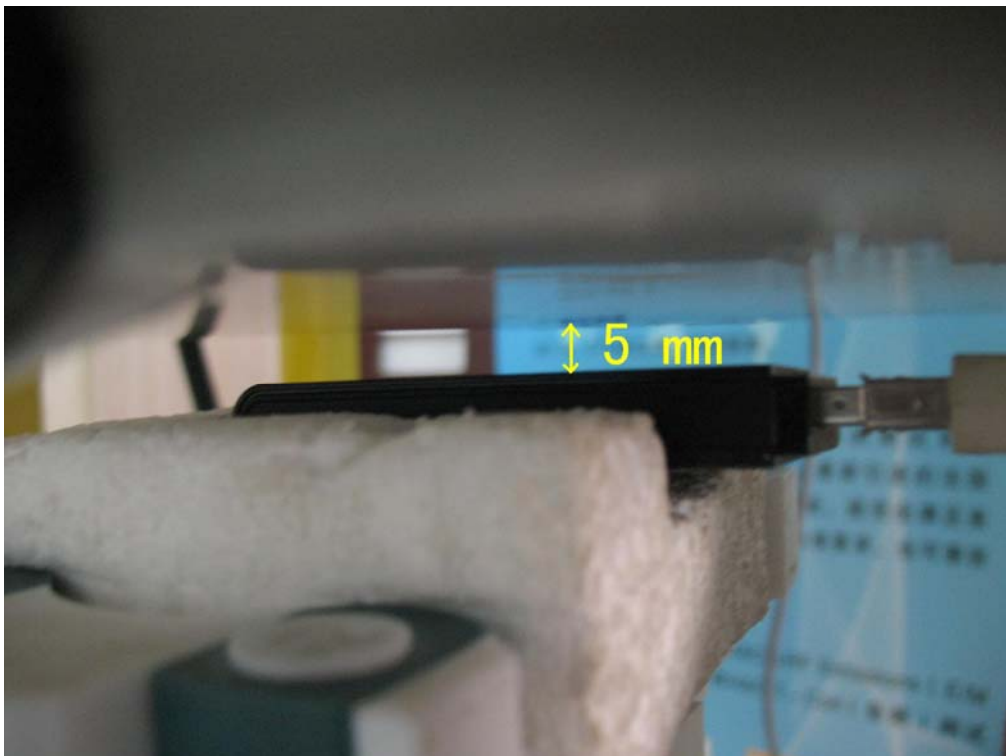
Signed on behalf of China National Accreditation Service for Conformity Assessment
<small>China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation 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).</small>

Annex B Photographs of the EUT

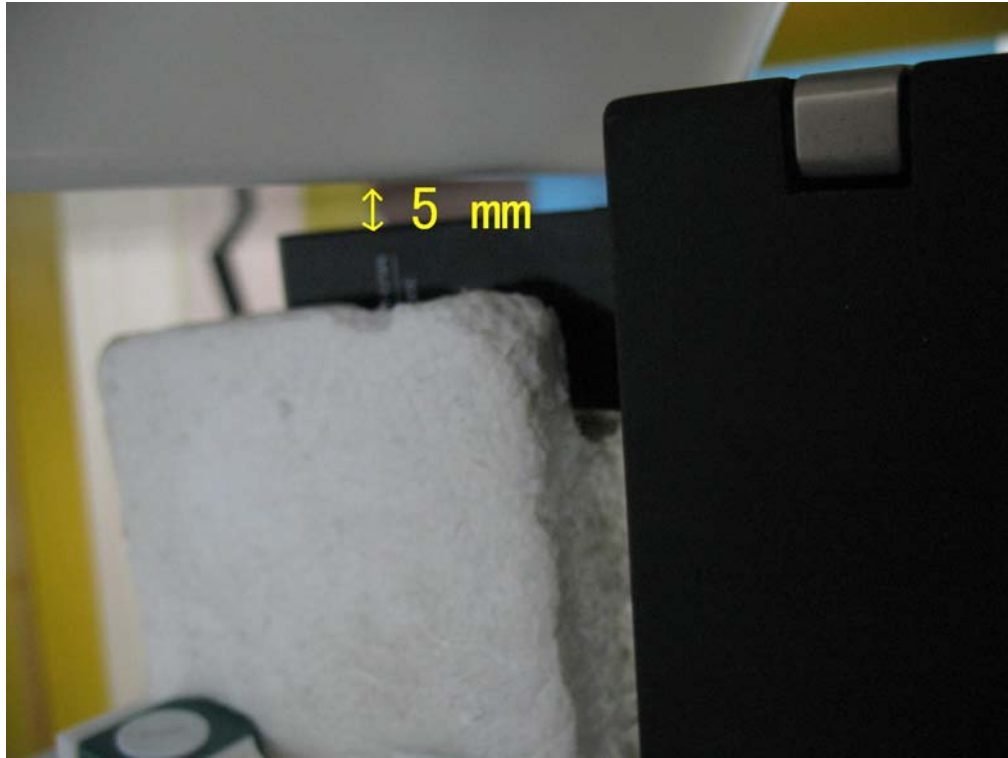
1 EUT Horizontal-Up



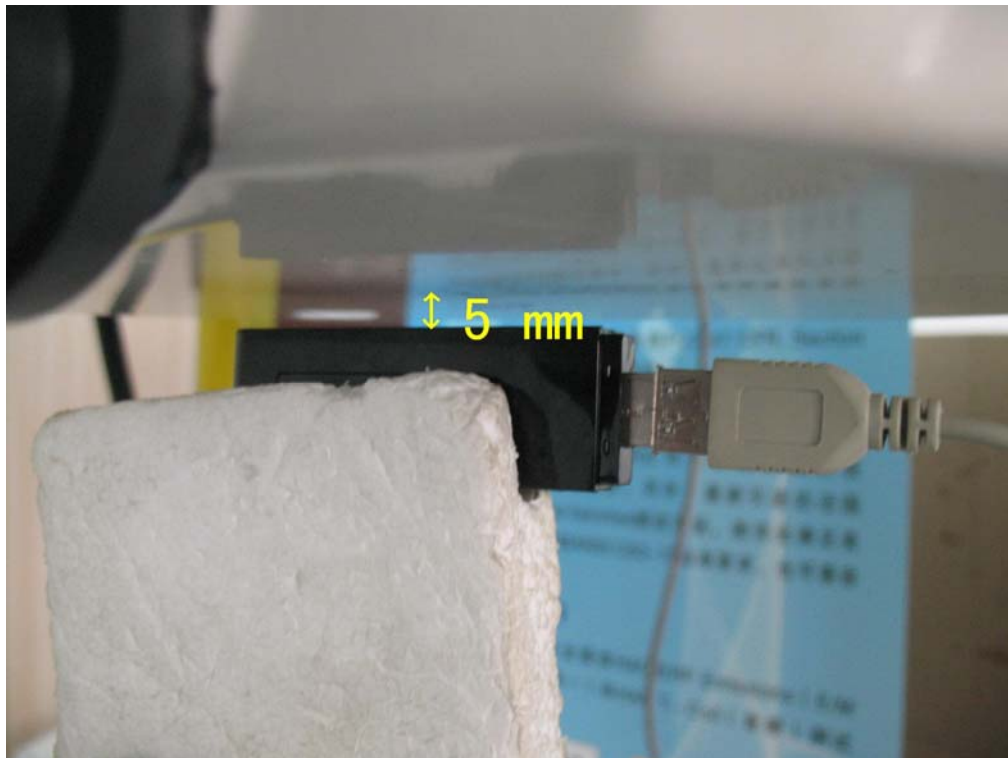
2 EUT Horizontal-Down



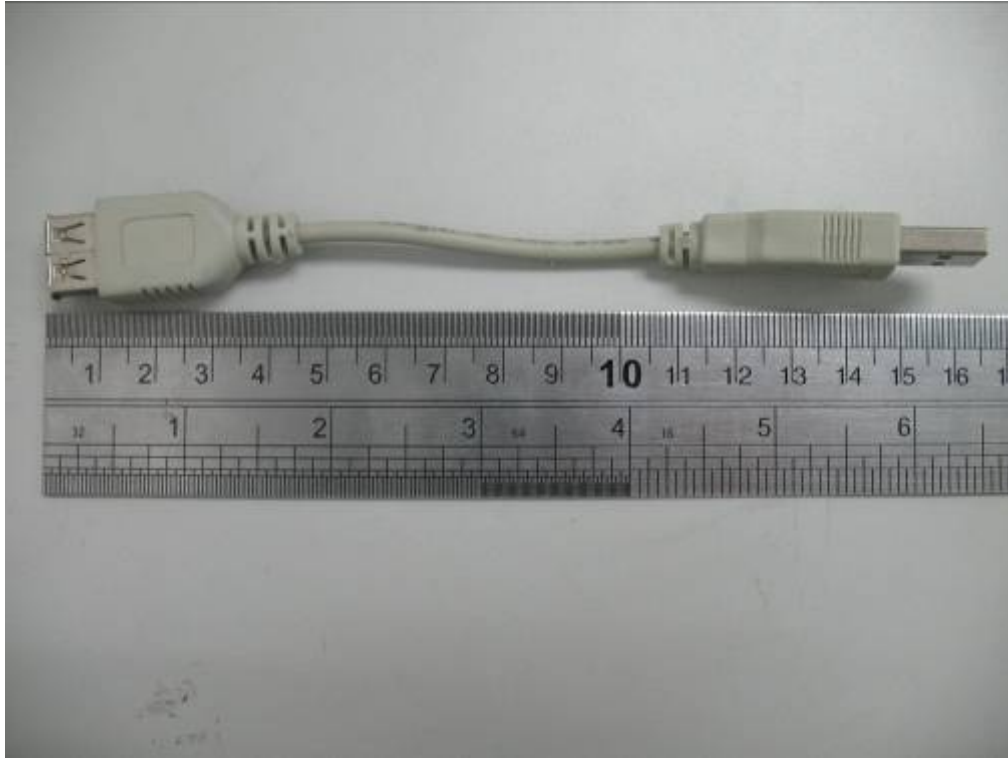
3 EUT Vertical-Front



4 EUT Vertical-Back



5 Data line



6 Liquid Level Photo



Note: 1. The depth of the body tissue was 15.1cm. with a device to phantom separation distance of 0.5 mm (taking into account of the IEEE 1528 and the place of the antenna).

Annex C Graph Test Results

<u>TYPE</u>	<u>BAND</u>	<u>PARAMETERS</u>
	<u>802.11 b</u>	<p><u>Measurement 1:</u> Validation Plane with Body device position on Data Rate 1 (Horizontal-Up)</p> <p><u>Measurement 2:</u> Validation Plane with Body device position on Data Rate 1 (Horizontal-Down)</p> <p><u>Measurement 3:</u> Validation Plane with Body device position on Data Rate 1 (Vertical-Front)</p> <p><u>Measurement 4:</u> Validation Plane with Body device position on Data Rate 1 (Vertical-Back)</p> <p><u>Measurement 5:</u> Validation Plane with Body device position on Data Rate 2 (Horizontal-Up)</p> <p><u>Measurement 6:</u> Validation Plane with Body device position on Data Rate 5.5 (Horizontal-Up)</p> <p><u>Measurement 7:</u> Validation Plane with Body device position on Data Rate 11 (Horizontal-Up)</p>
	<u>802.11 g</u>	<p><u>Measurement 8:</u> Validation Plane with Body device position on Data Rate 6 (Horizontal-Up)</p> <p><u>Measurement 9:</u> Validation Plane with Body device position on Data Rate 6 (Horizontal-Down)</p> <p><u>Measurement 10:</u> Validation Plane with Body device position on Data Rate 6 (Vertical-Front)</p> <p><u>Measurement 11:</u> Validation Plane with Body device position on Data Rate 6 (Vertical-Back)</p> <p><u>Measurement 12:</u> Validation Plane with Body device position on Data Rate 9 (Horizontal-Up)</p> <p><u>Measurement 13:</u> Validation Plane with Body device position on Data Rate 12 (Horizontal-Up)</p> <p><u>Measurement 14:</u> Validation Plane with Body device position on Data Rate 18 (Horizontal-Up)</p> <p><u>Measurement 15:</u> Validation Plane with Body device position on Data Rate 24 (Horizontal-Up)</p> <p><u>Measurement 16:</u> Validation Plane with Body device position on Data Rate 36 (Horizontal-Up)</p> <p><u>Measurement 17:</u> Validation Plane with Body device position on Data Rate 48 (Horizontal-Up)</p> <p><u>Measurement 18:</u> Validation Plane with Body device position on Data Rate 54 (Horizontal-Up)</p>

	<u>802.11 n</u>	<p><u>Measurement 19:</u> Validation Plane with Body device position on Data Rate 13.5 (Horizontal-Up)</p> <p><u>Measurement 20:</u> Validation Plane with Body device position on Data Rate 13.5 (Horizontal-Down)</p> <p><u>Measurement 21:</u> Validation Plane with Body device position on Data Rate 13.5 (Vertical-Front)</p> <p><u>Measurement 22:</u> Validation Plane with Body device position on Data Rate 13.5 (Vertical-Back)</p> <p><u>Measurement 23:</u> Validation Plane with Body device position on Data Rate 27 (Horizontal-Up)</p> <p><u>Measurement 24:</u> Validation Plane with Body device position on Data Rate 40.5 (Horizontal-Up)</p> <p><u>Measurement 25:</u> Validation Plane with Body device position on Data Rate 54 (Horizontal-Up)</p> <p><u>Measurement 26:</u> Validation Plane with Body device position on Data Rate 81 (Horizontal-Up)</p> <p><u>Measurement 27:</u> Validation Plane with Body device position on Data Rate 108 (Horizontal-Up)</p> <p><u>Measurement 28:</u> Validation Plane with Body device position on Data Rate 121.5 (Horizontal-Up)</p> <p><u>Measurement 29:</u> Validation Plane with Body device position on Data Rate 135 (Horizontal-Up)</p>
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MEASUREMENT 1

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 8 seconds

A. Experimental conditions.

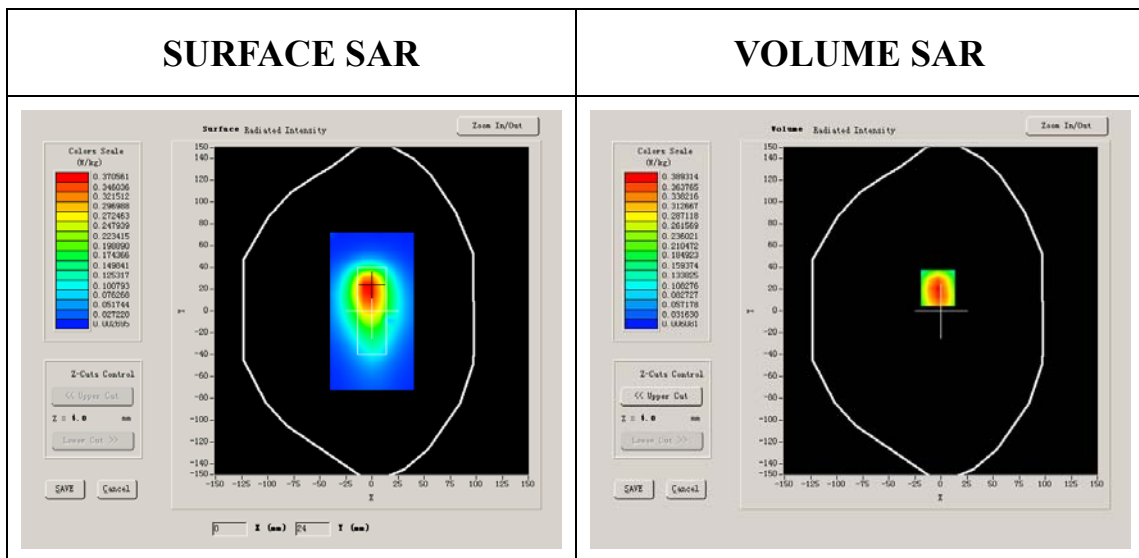
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 b
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.000000

Conductivity (S/m)	1.720014
Variation (%)	1.360000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.3°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

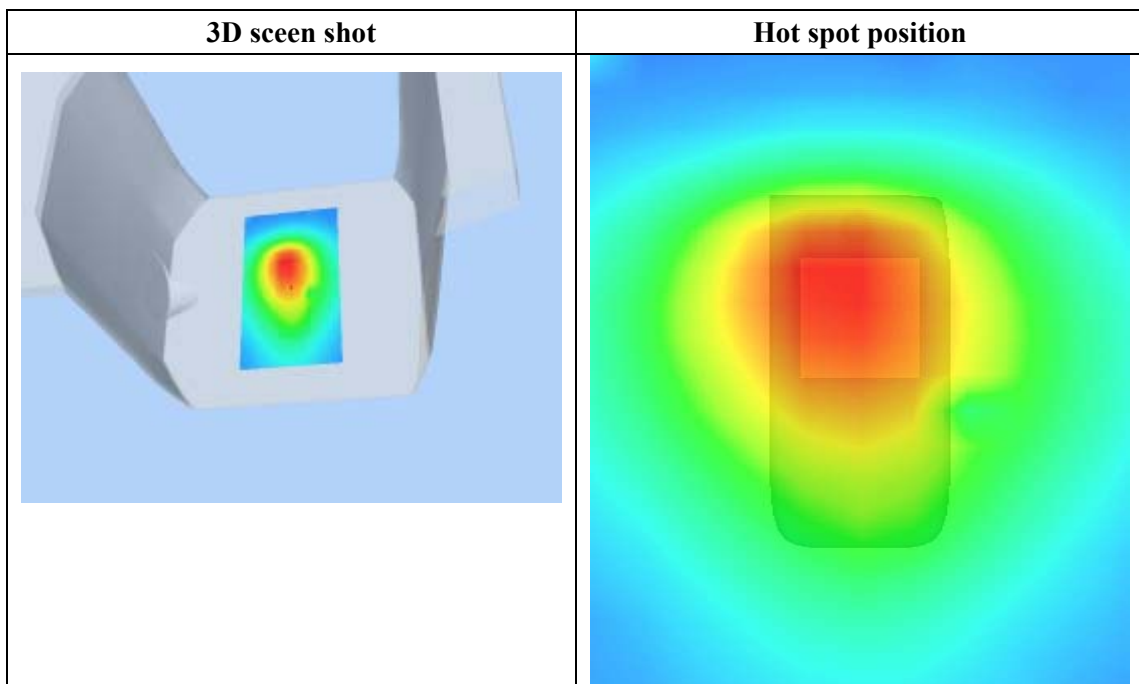
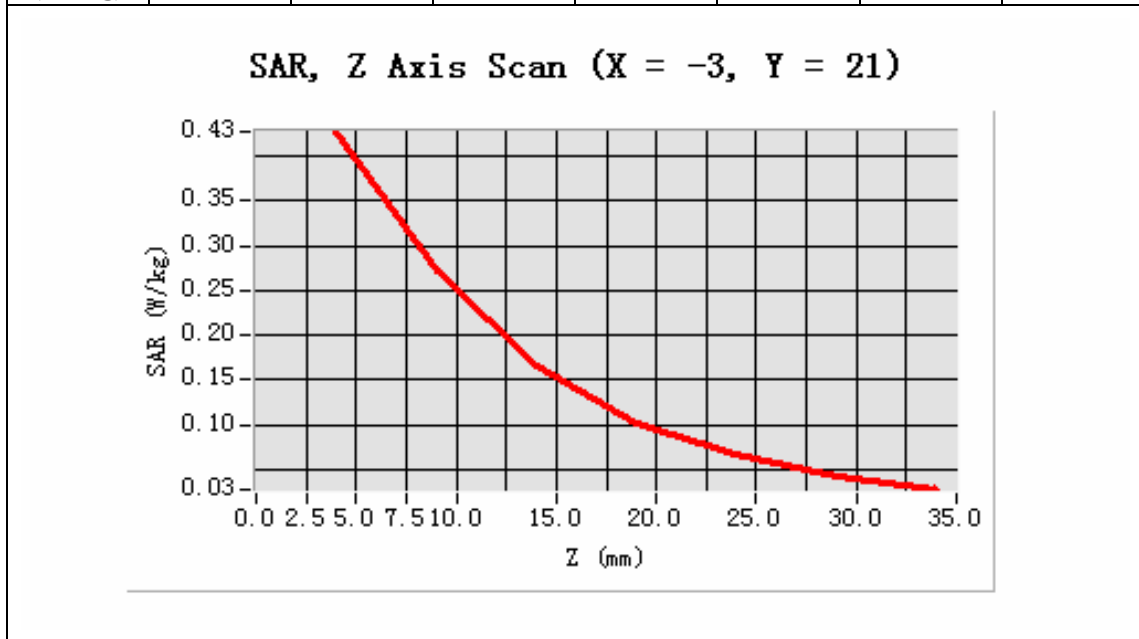


Maximum location: X=-3.00, Y=21.00

SAR 10g (W/Kg)	0.141003
SAR 1g (W/Kg)	0.241334

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4274	0.2715	0.1650	0.1015	0.0665	0.0425



MEASUREMENT 2

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 9 seconds

A. Experimental conditions.

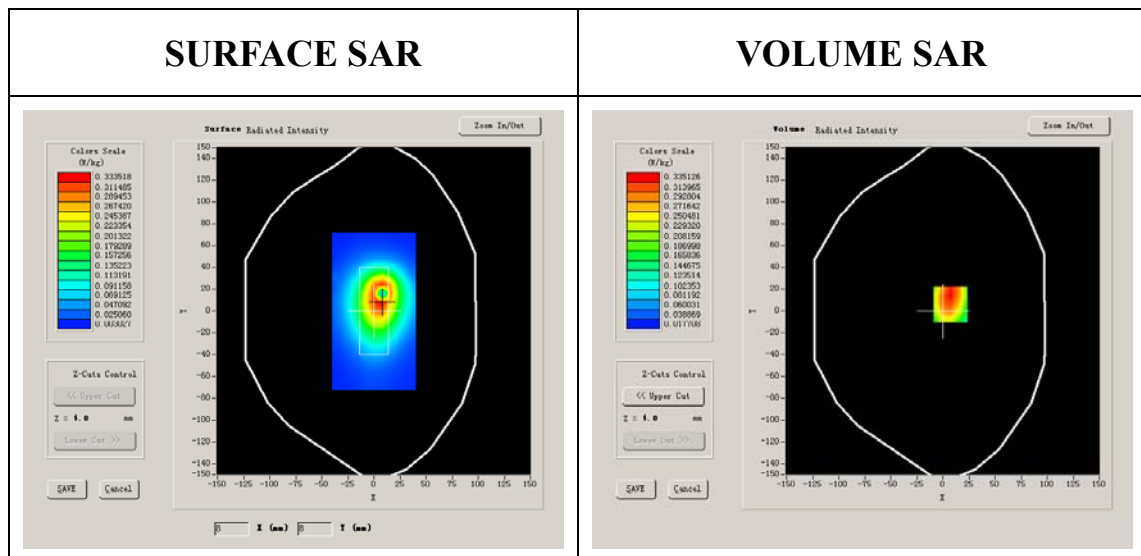
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 b
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.000000

Conductivity (S/m)	1.720014
Variation (%)	-3.940000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.3°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



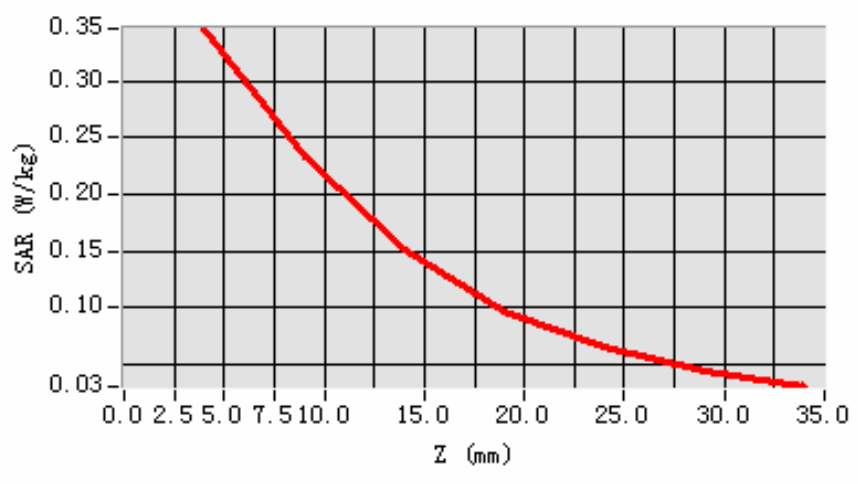
Maximum location: X=7.00, Y=6.00

SAR 10g (W/Kg)	0.136313
SAR 1g (W/Kg)	0.254388

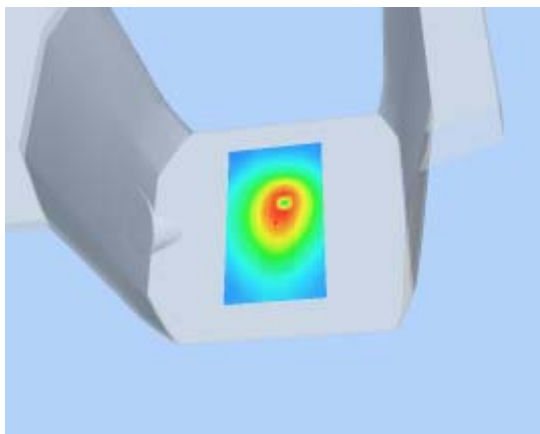
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3461	0.2328	0.1506	0.0969	0.0654	0.0436

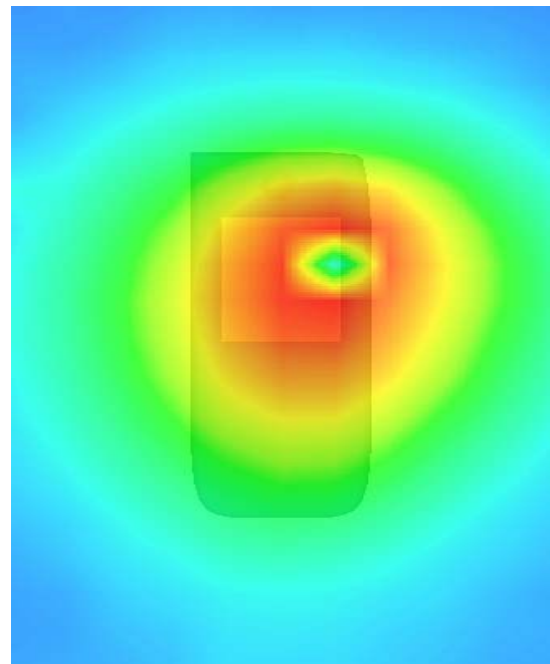
SAR, Z Axis Scan (X = 7, Y = 6)



3D scene shot



Hot spot position



MEASUREMENT 3

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

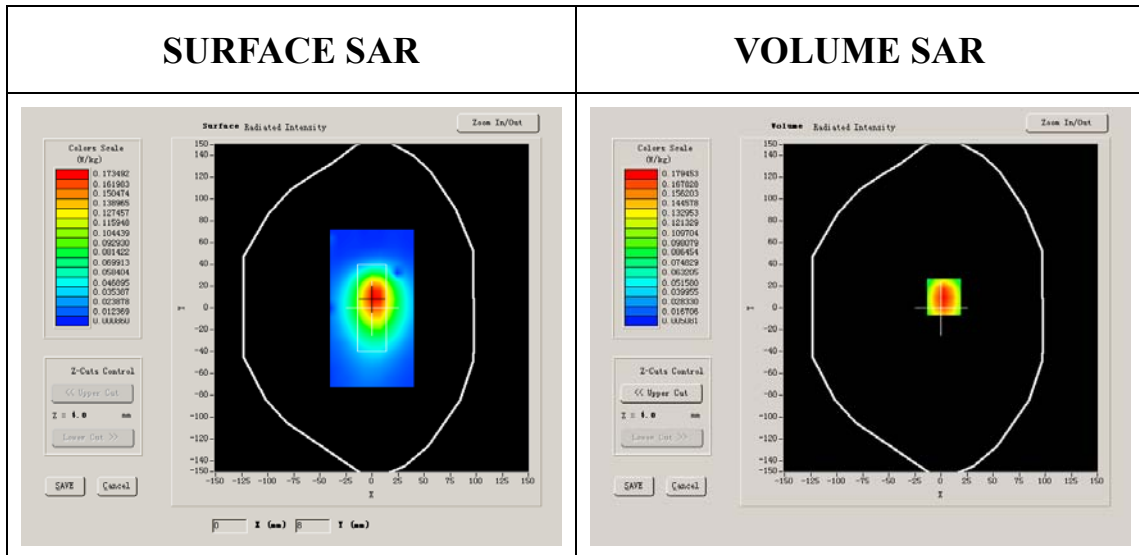
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 b
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.000000

Conductivity (S/m)	1.720014
Variation (%)	-0.790000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.3°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



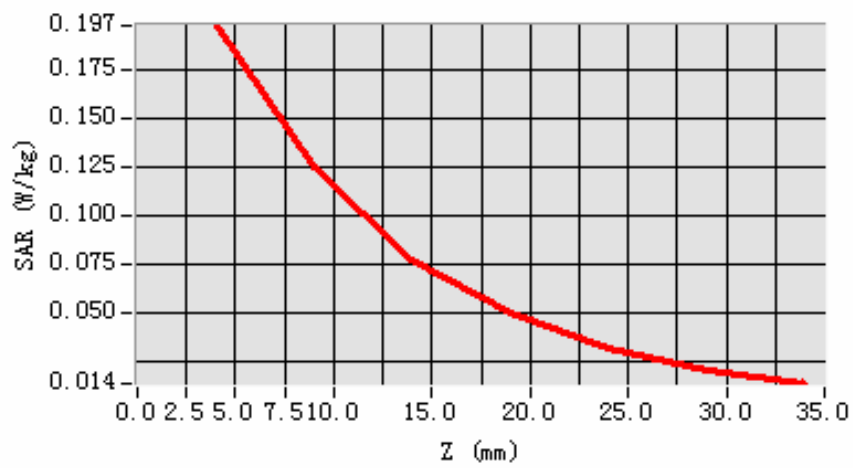
Maximum location: X=3.00, Y=10.00

SAR 10g (W/Kg)	0.074367
SAR 1g (W/Kg)	0.111292

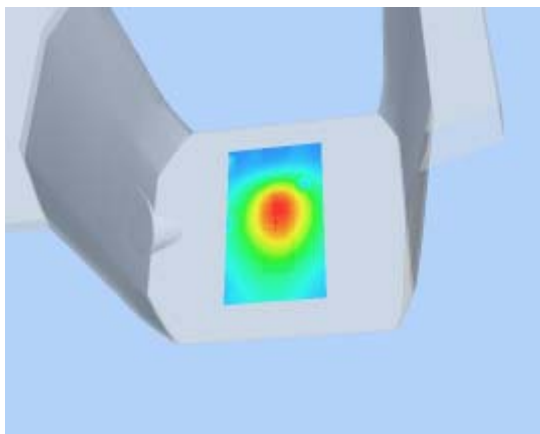
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1970	0.1248	0.0779	0.0503	0.0327	0.0208

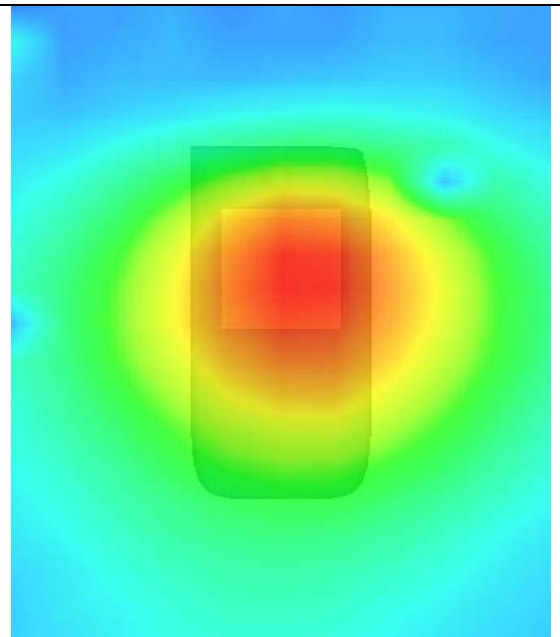
SAR, Z Axis Scan (X = 3, Y = 10)



3D scene shot



Hot spot position



MEASUREMENT 4

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 8 seconds

A. Experimental conditions.

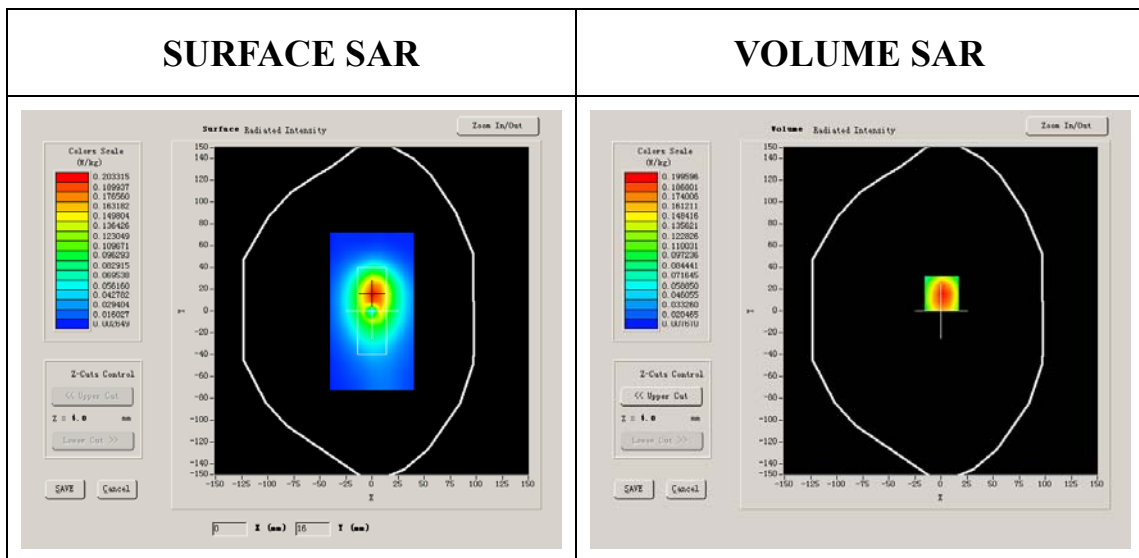
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 b
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.000000

Conductivity (S/m)	1.720014
Variation (%)	-0.870000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.3°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



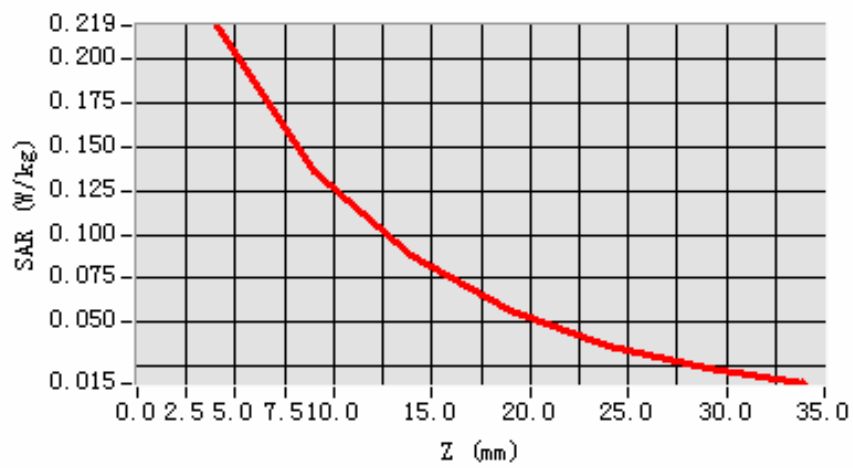
Maximum location: X=1.00, Y=16.00

SAR 10g (W/Kg)	0.080355
SAR 1g (W/Kg)	0.125743

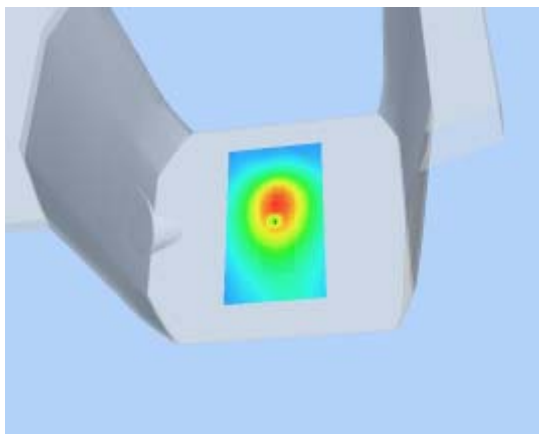
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2191	0.1357	0.0880	0.0563	0.0363	0.0238

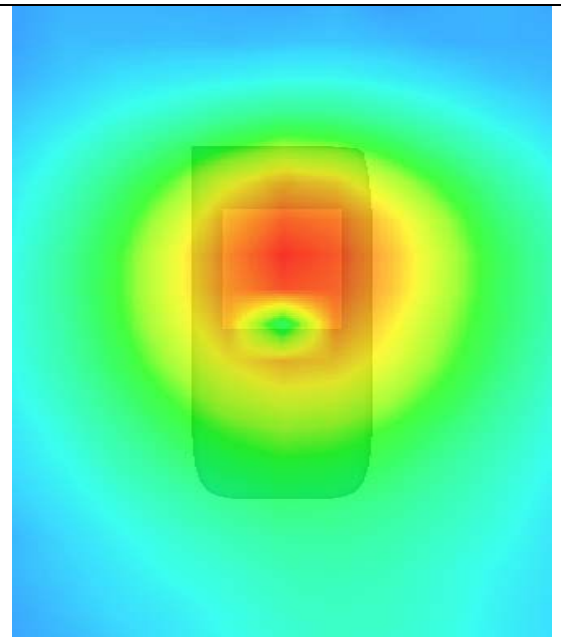
SAR, Z Axis Scan (X = 1, Y = 16)



3D scene shot



Hot spot position



MEASUREMENT 5

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 8 seconds

A. Experimental conditions.

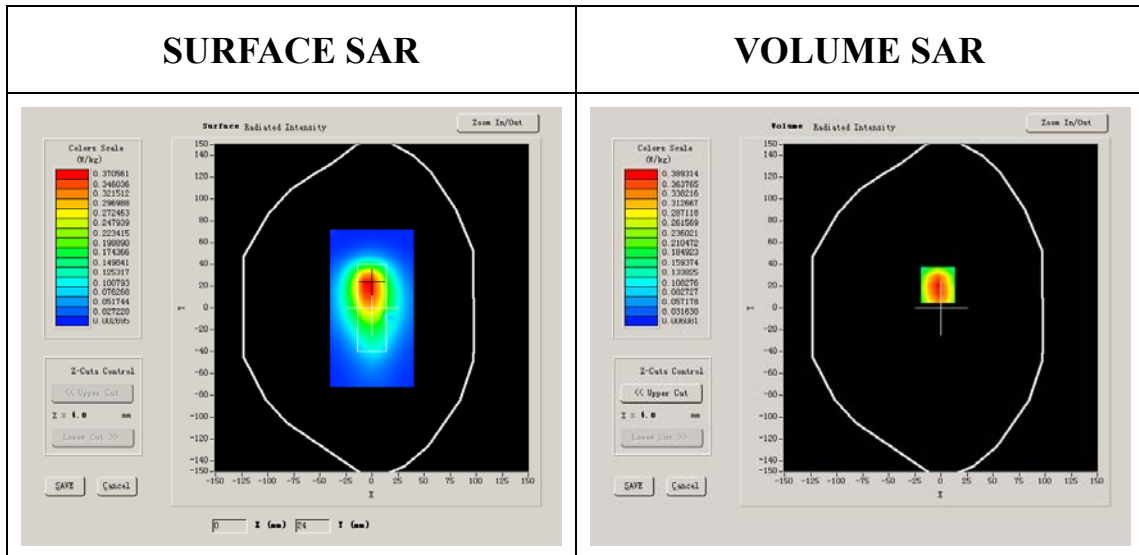
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 b
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.000000

Conductivity (S/m)	1.720014
Variation (%)	1.360000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.3°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

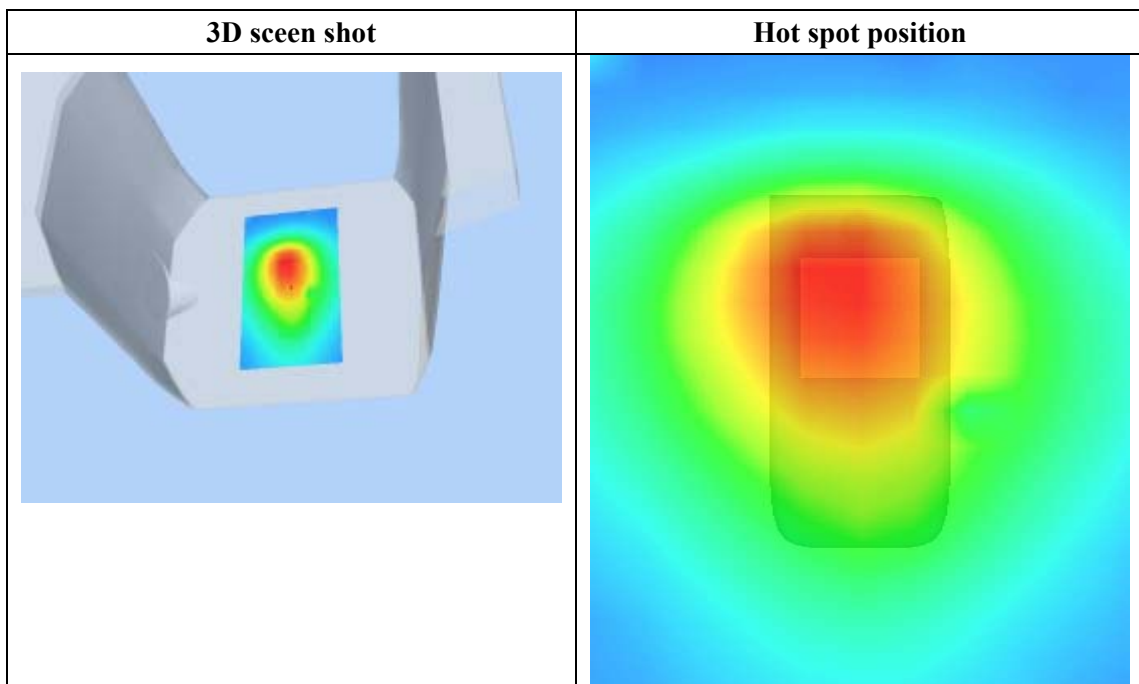
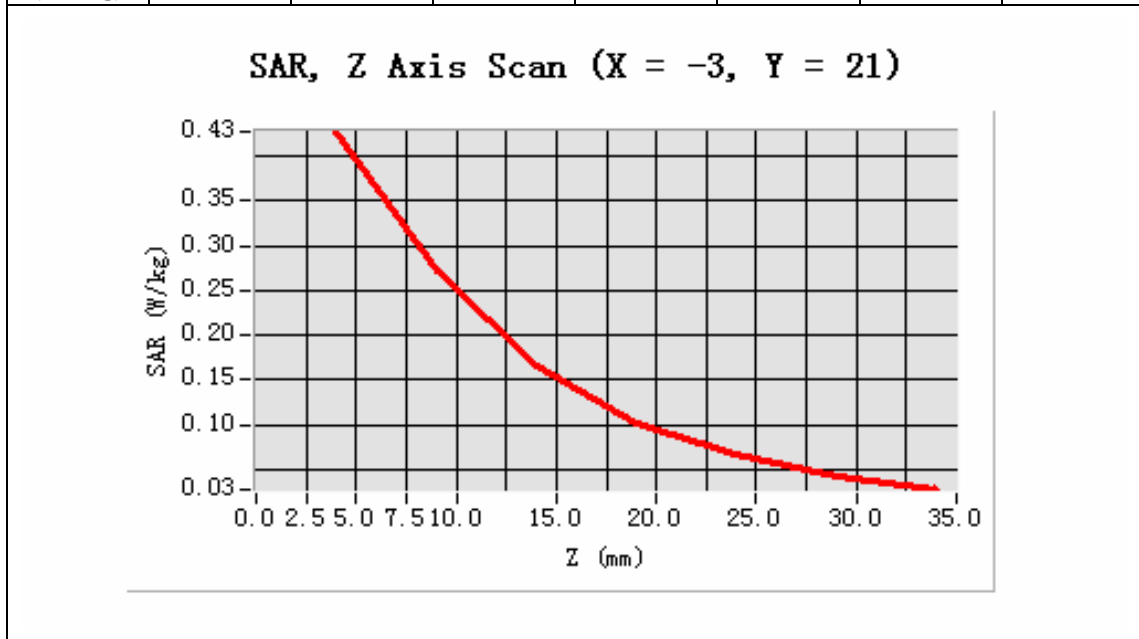


Maximum location: X=-3.00, Y=21.00

SAR 10g (W/Kg)	0.141441
SAR 1g (W/Kg)	0.228459

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4274	0.2715	0.1650	0.1015	0.0665	0.0425



MEASUREMENT 6

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 8 seconds

A. Experimental conditions.

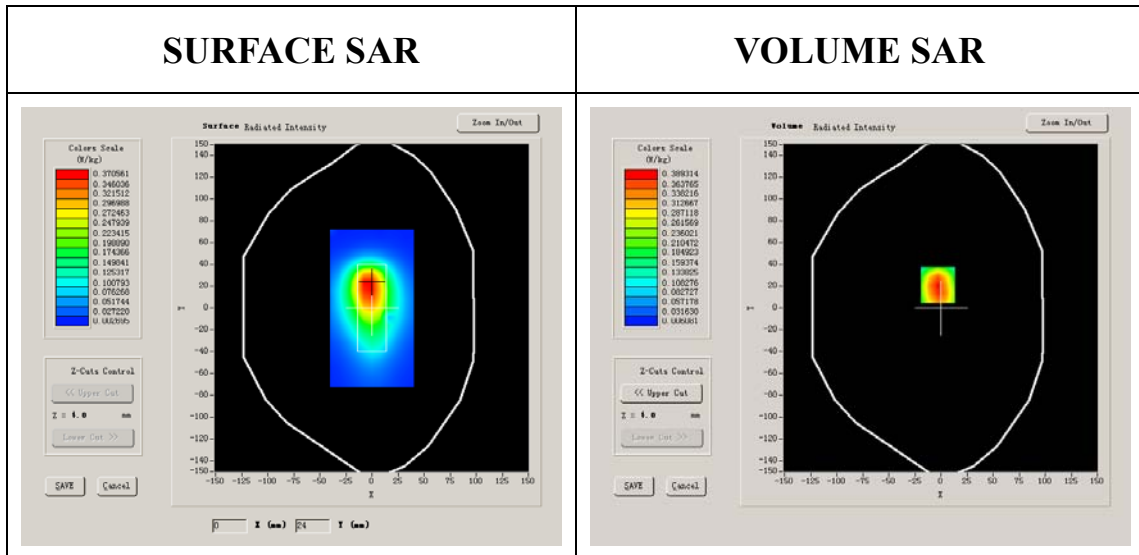
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 b
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.000000

Conductivity (S/m)	1.720014
Variation (%)	1.360000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.3°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

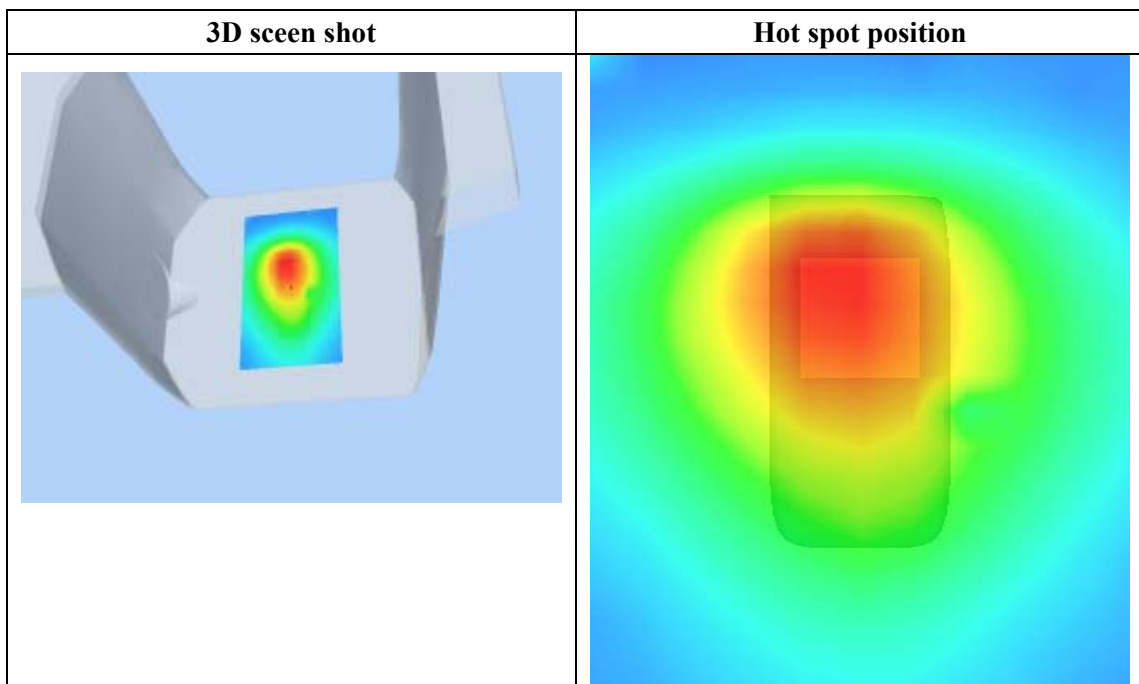
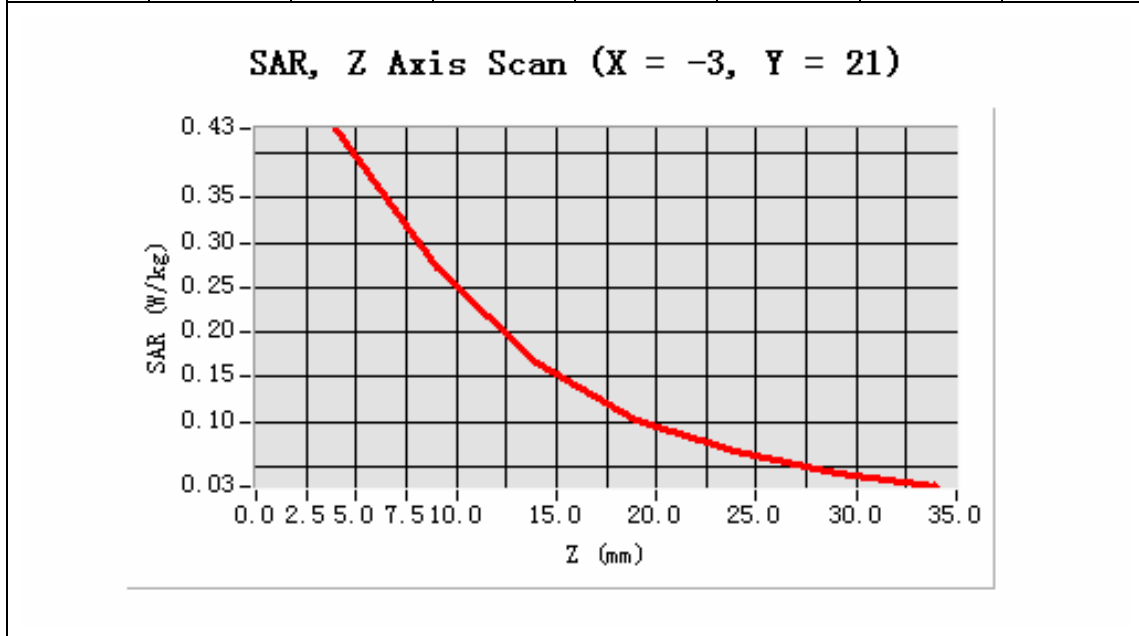


Maximum location: X=-3.00, Y=21.00

SAR 10g (W/Kg)	0.146459
SAR 1g (W/Kg)	0.216881

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4274	0.2715	0.1650	0.1015	0.0665	0.0425



MEASUREMENT 7

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 8 seconds

A. Experimental conditions.

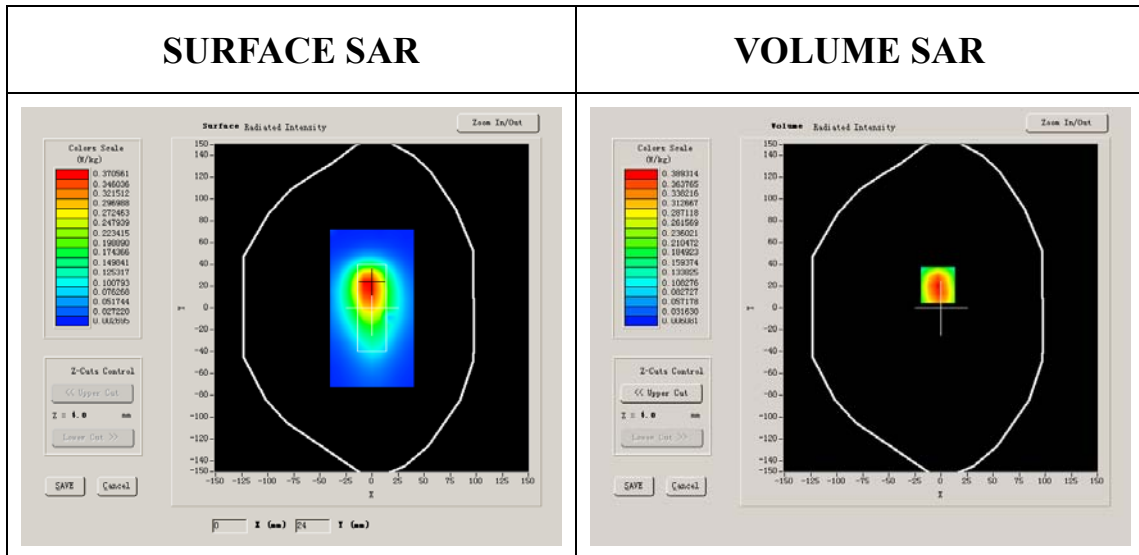
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 b
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.000000

Conductivity (S/m)	1.720014
Variation (%)	1.360000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.3°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

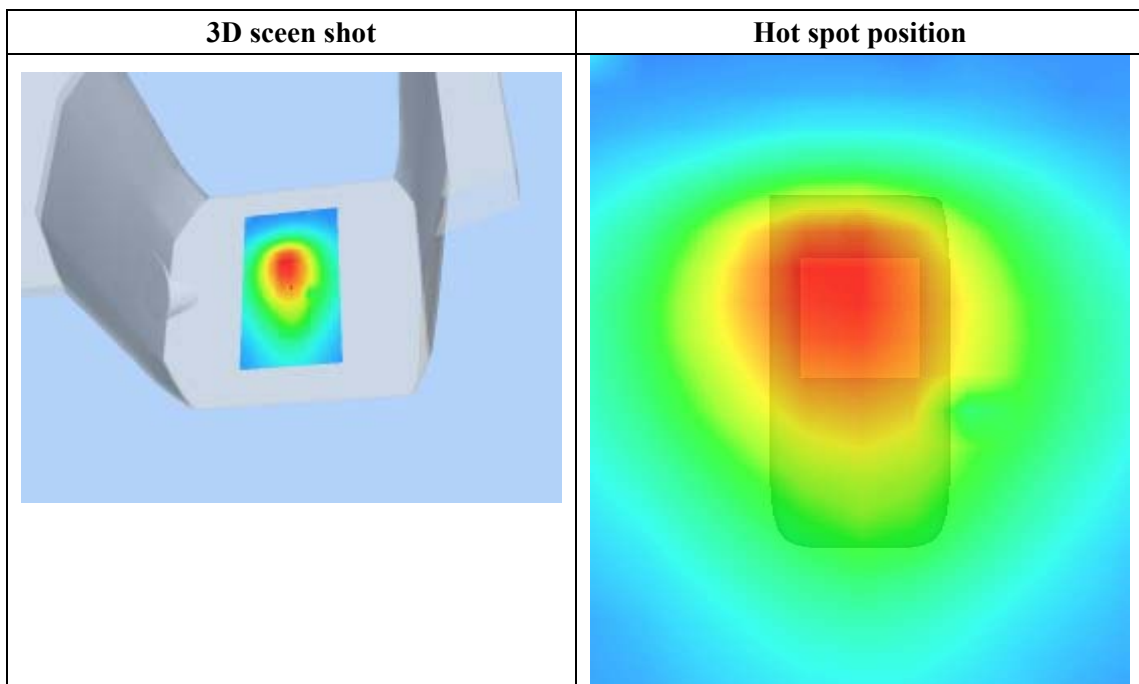
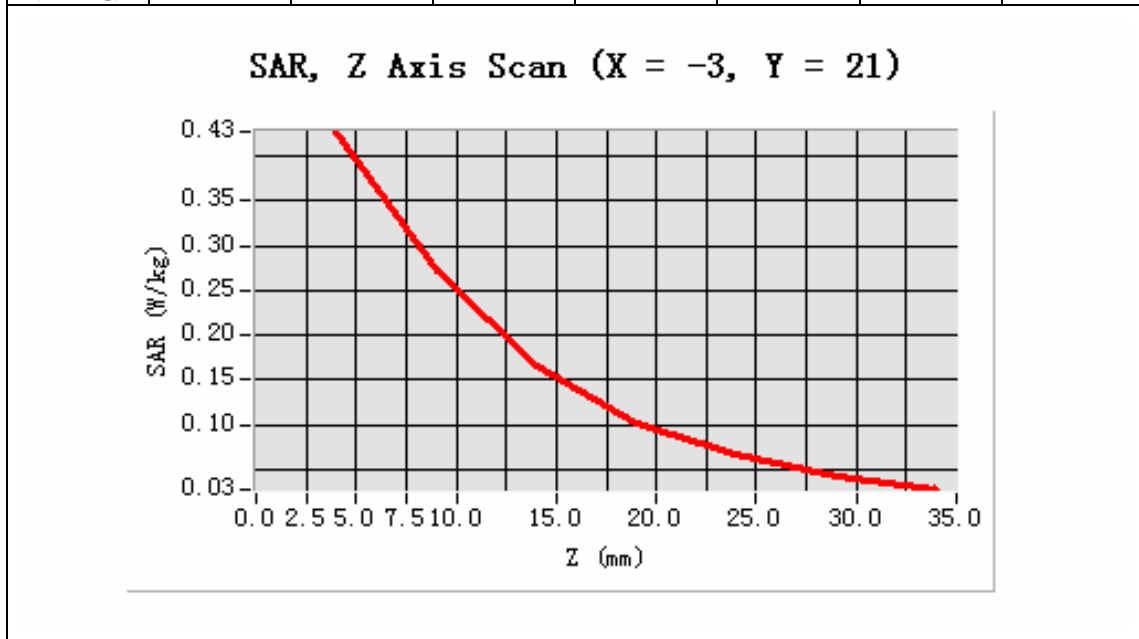


Maximum location: X=-3.00, Y=21.00

SAR 10g (W/Kg)	0.138459
SAR 1g (W/Kg)	0.200881

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4274	0.2715	0.1650	0.1015	0.0665	0.0425



MEASUREMENT 8

Type: Phone measurement (Complete)

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

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

Date of measurement: 11/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

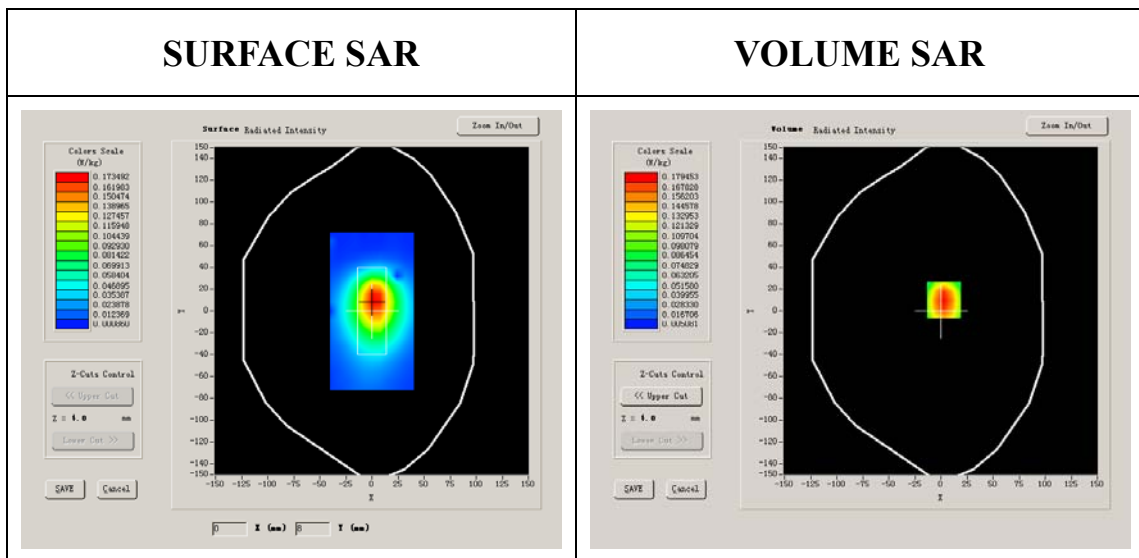
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 b
Channels	Low
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2412.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.000000

Conductivity (S/m)	1.720014
Variation (%)	-0.790000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.3°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



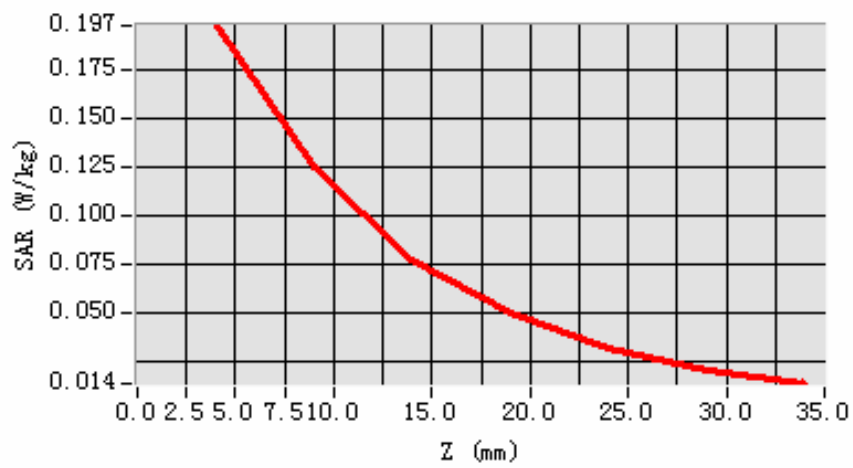
Maximum location: X=3.00, Y=10.00

SAR 10g (W/Kg)	0.127466
SAR 1g (W/Kg)	0.215664

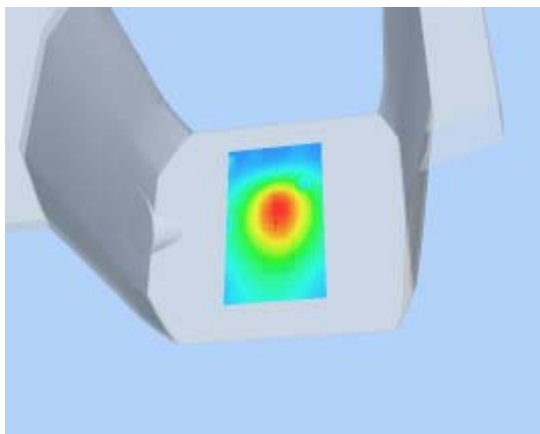
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1970	0.1248	0.0779	0.0503	0.0327	0.0208

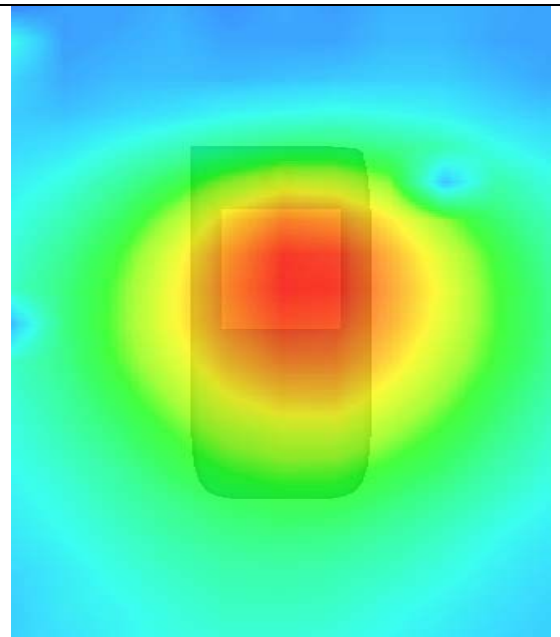
SAR, Z Axis Scan (X = 3, Y = 10)



3D scene shot



Hot spot position



MEASUREMENT 9

Type: Phone measurement (Complete)

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

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

Date of measurement: 11/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

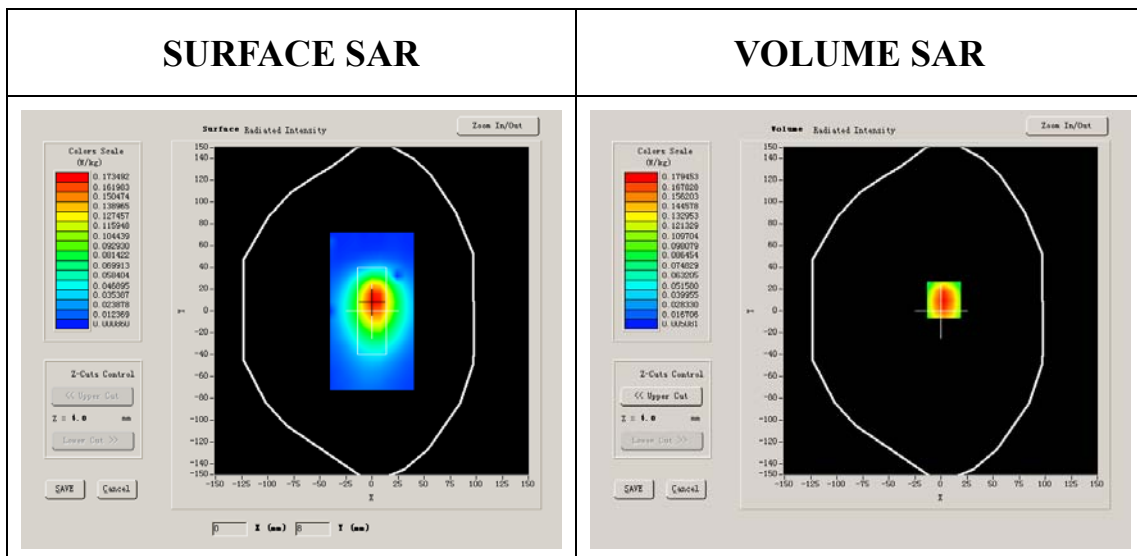
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 b
Channels	High
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2462.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.000000

Conductivity (S/m)	1.720014
Variation (%)	-0.790000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.3°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



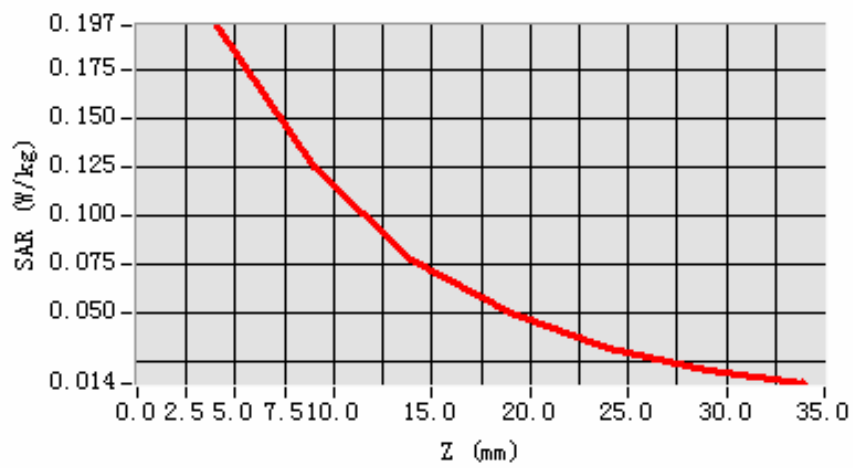
Maximum location: X=3.00, Y=10.00

SAR 10g (W/Kg)	0.128499
SAR 1g (W/Kg)	0.217307

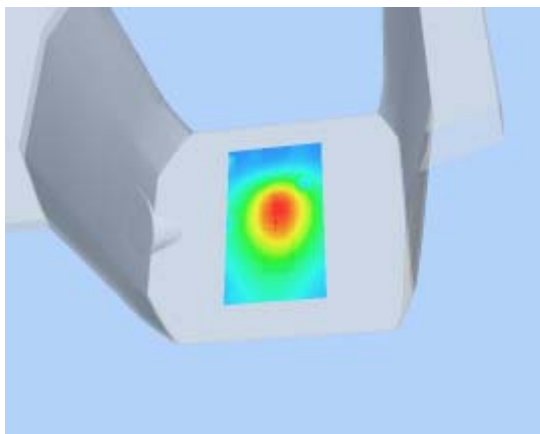
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1970	0.1248	0.0779	0.0503	0.0327	0.0208

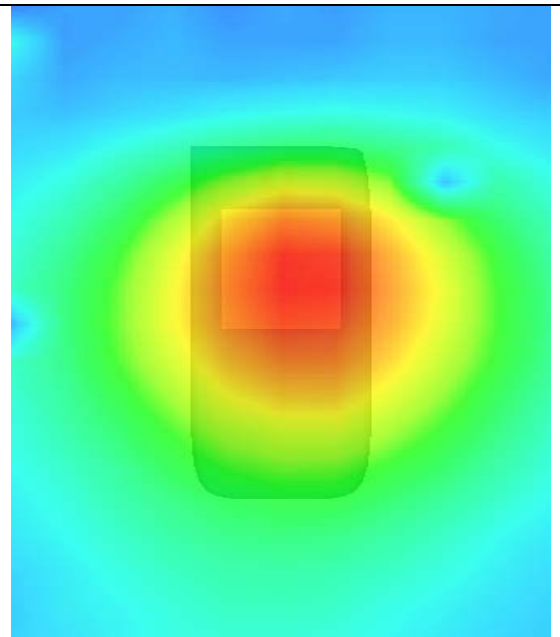
SAR, Z Axis Scan (X = 3, Y = 10)



3D scene shot



Hot spot position



MEASUREMENT 10

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

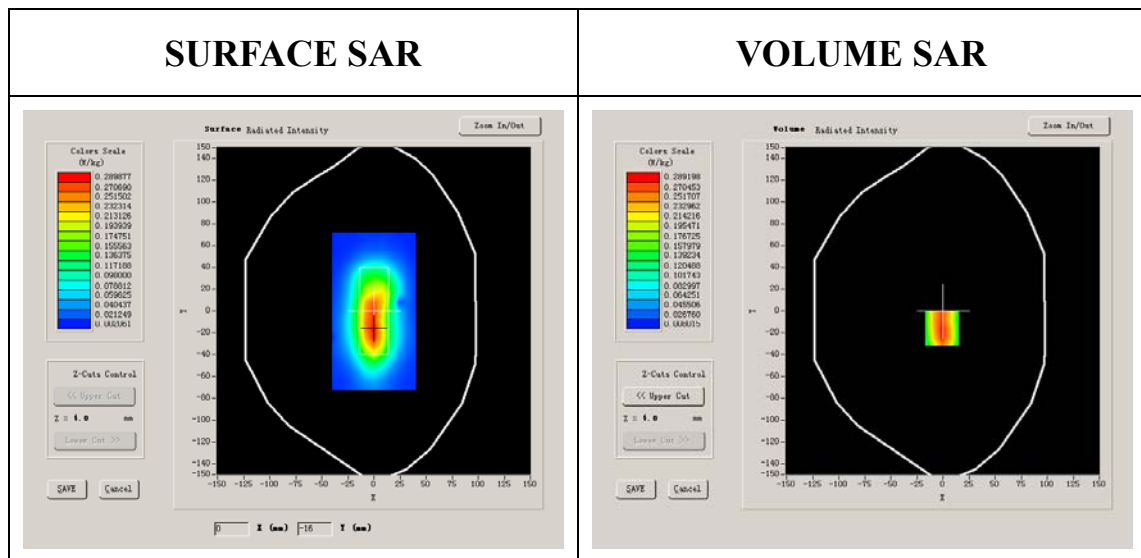
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-1.510000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



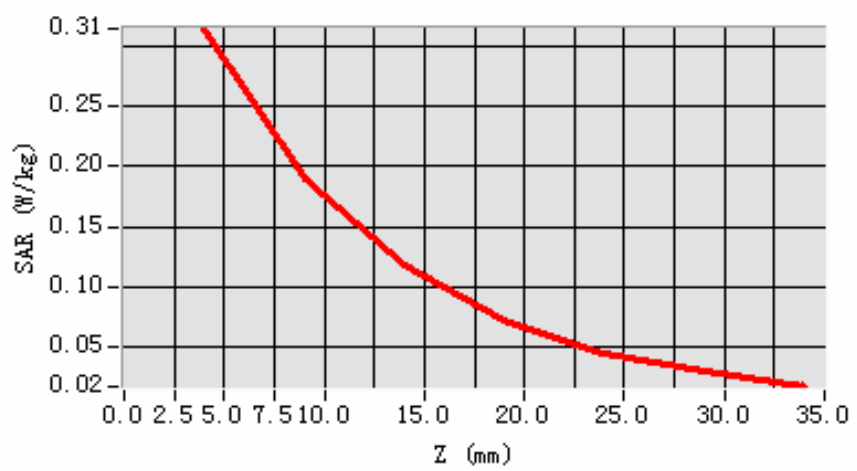
Maximum location: X=-1.00, Y=-16.00

SAR 10g (W/Kg)	0.092882
SAR 1g (W/Kg)	0.173862

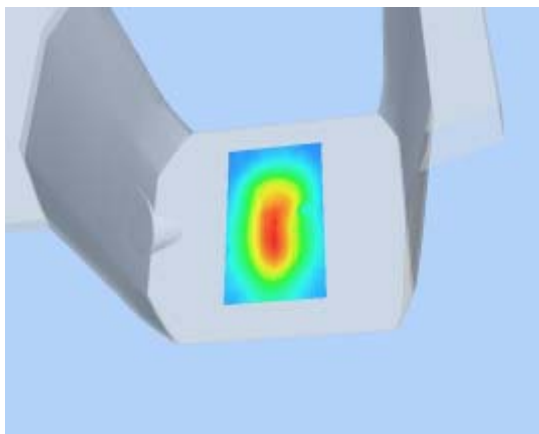
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3149	0.1901	0.1178	0.0726	0.0447	0.0291

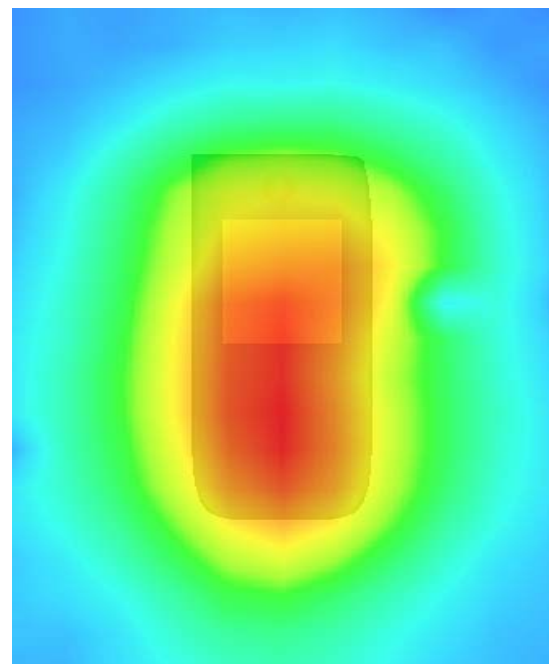
SAR, Z Axis Scan (X = -1, Y = -16)



3D scene shot



Hot spot position



MEASUREMENT 11

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

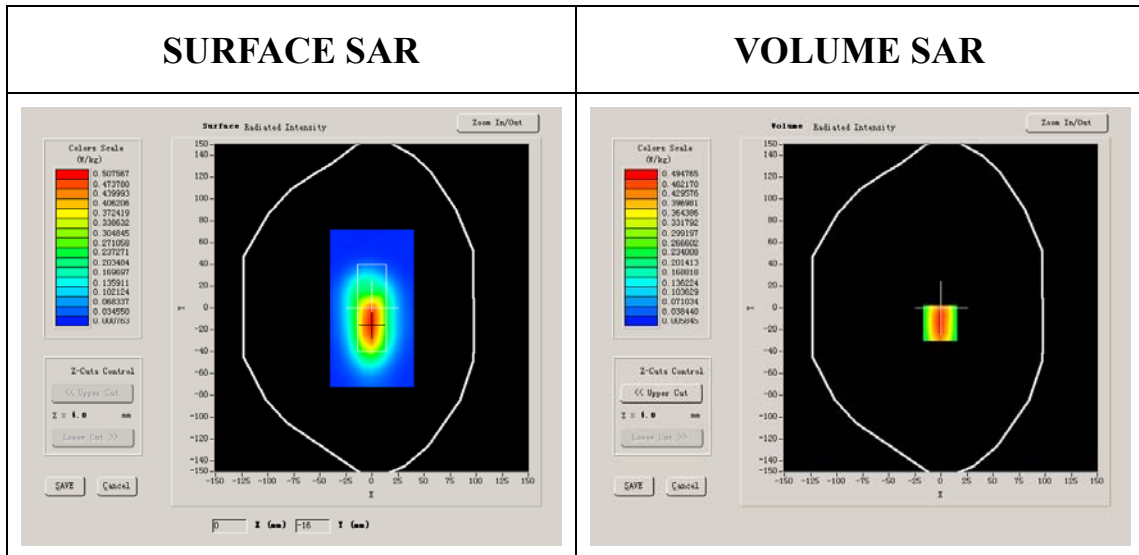
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



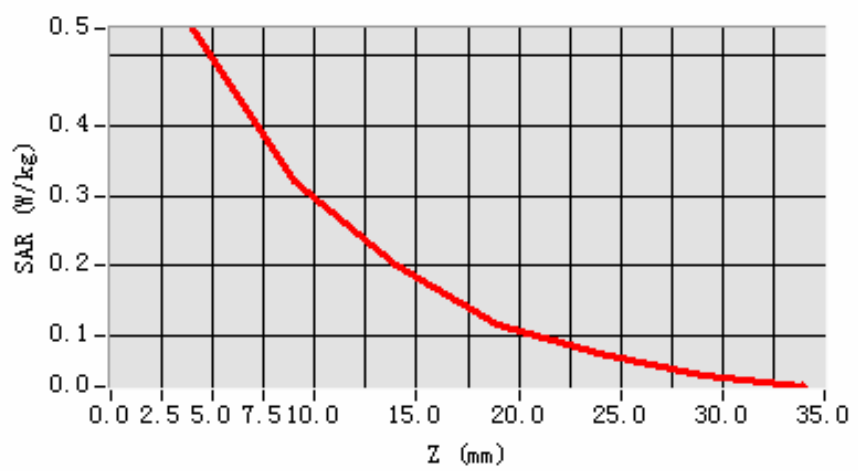
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.136626
SAR 1g (W/Kg)	0.214686

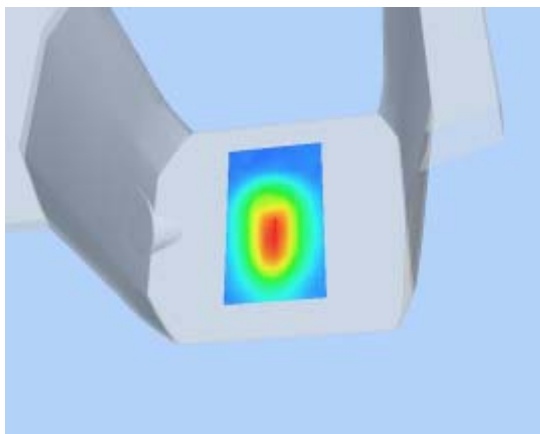
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

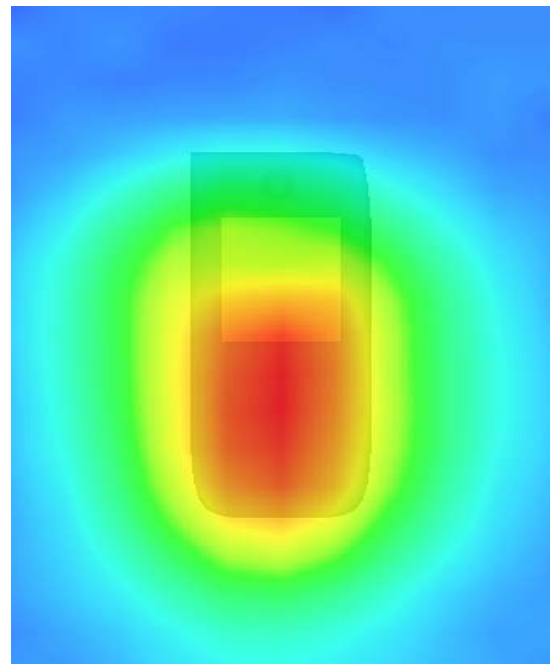
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 12

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 8 seconds

A. Experimental conditions.

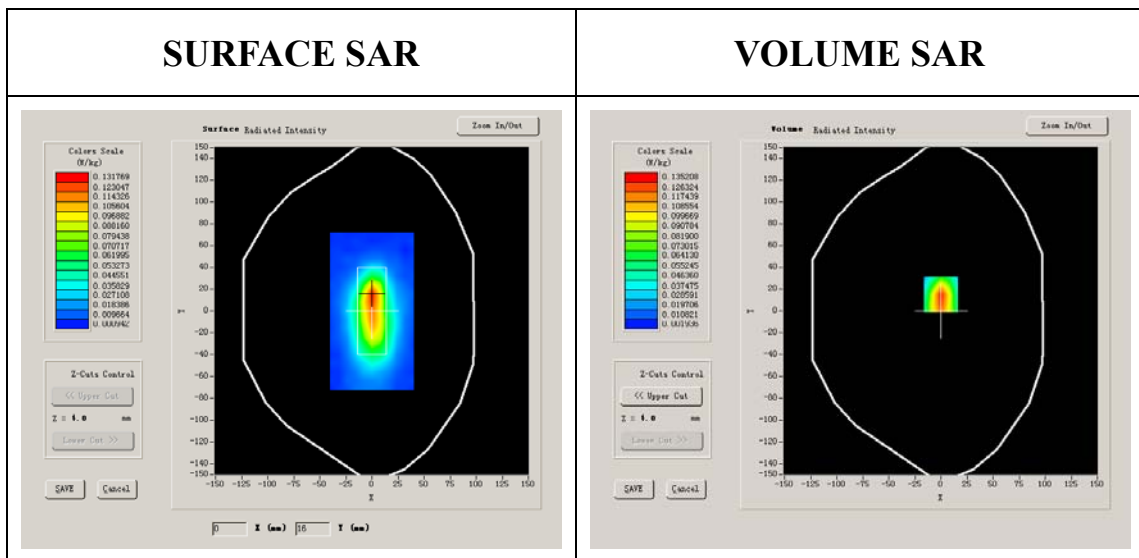
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	0.240000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



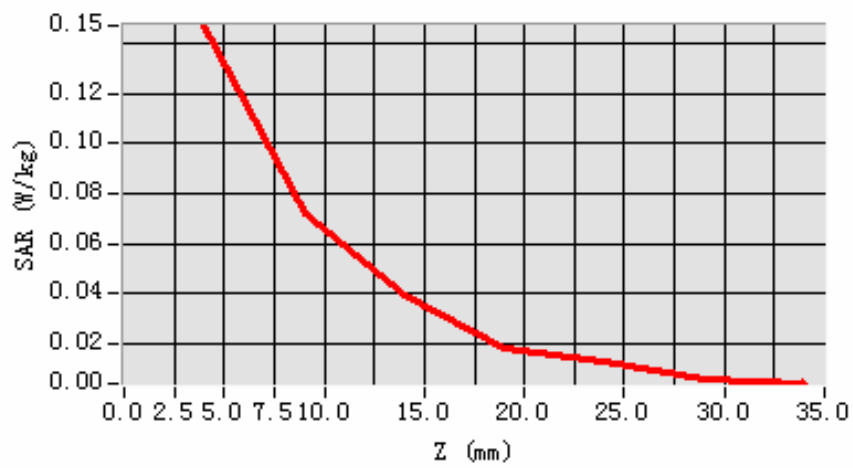
Maximum location: X=0.00, Y=15.00

SAR 10g (W/Kg)	0.041857
SAR 1g (W/Kg)	0.070152

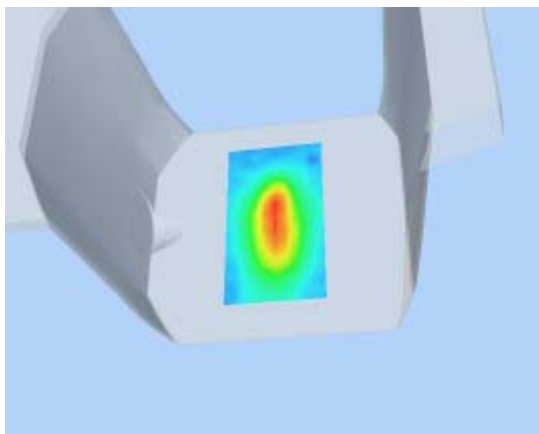
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1472	0.0721	0.0391	0.0183	0.0133	0.0060

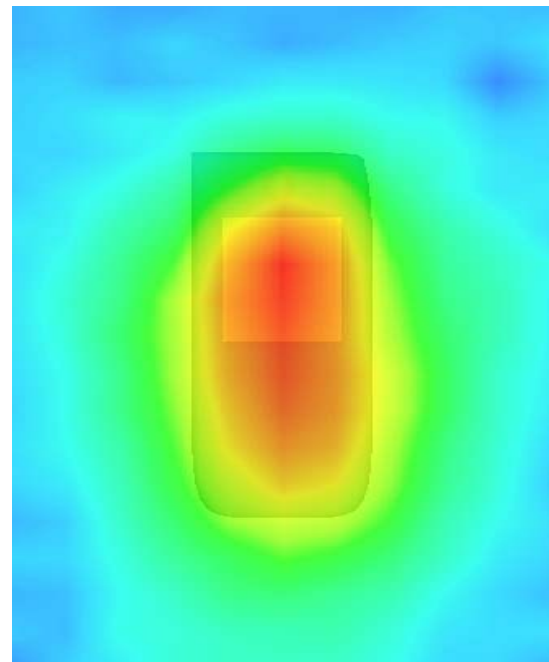
SAR, Z Axis Scan (X = 0, Y = 15)



3D scene shot



Hot spot position



MEASUREMENT 13

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 9 seconds

A. Experimental conditions.

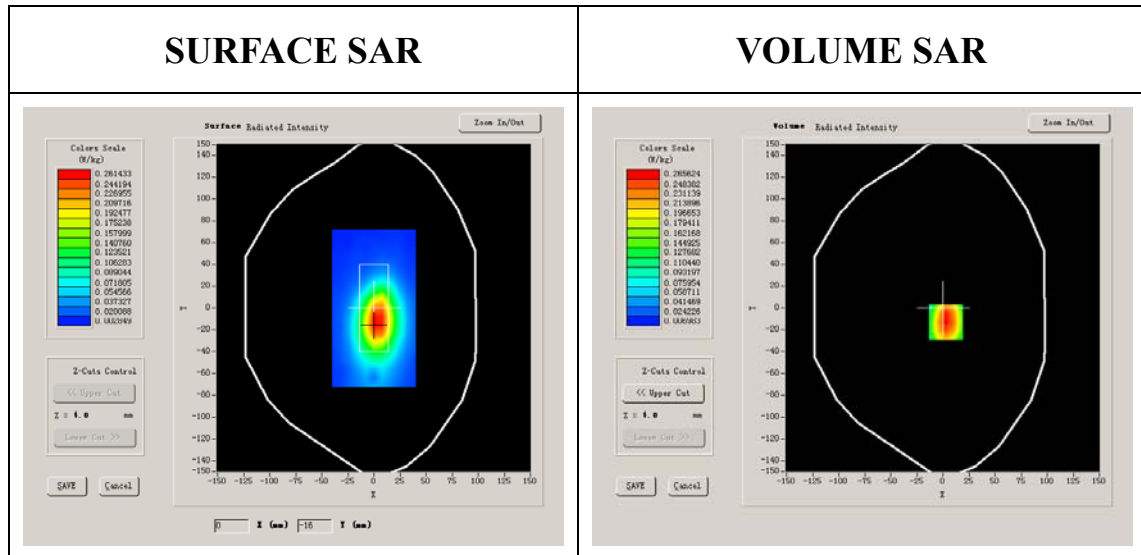
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-1.360000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

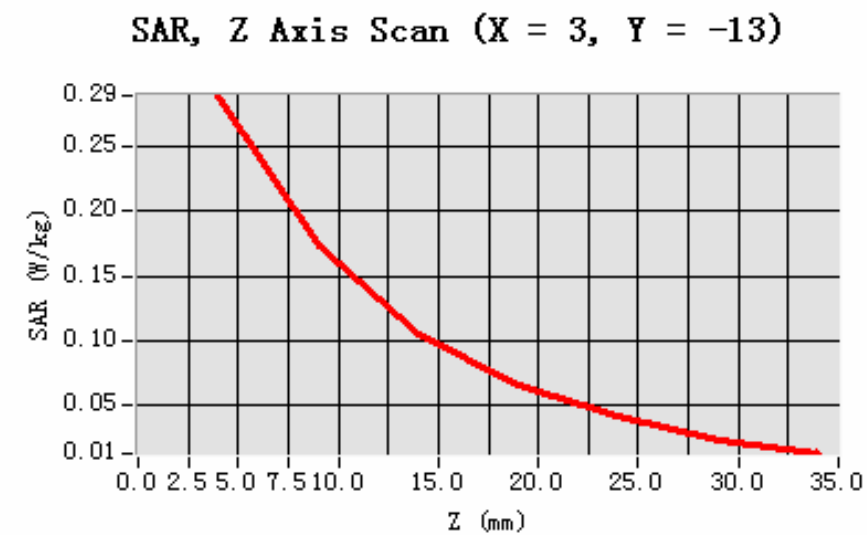


Maximum location: X=3.00, Y=-13.00

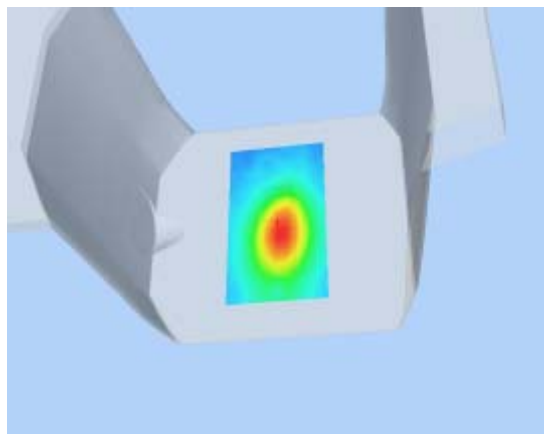
SAR 10g (W/Kg)	0.078963
SAR 1g (W/Kg)	0.119146

Z Axis Scan

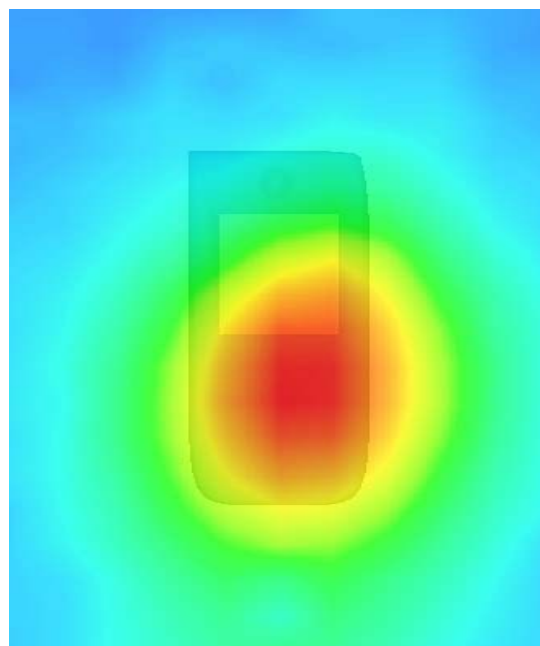
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2892	0.1734	0.1053	0.0660	0.0421	0.0228



3D scene shot



Hot spot position



MEASUREMENT 14

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

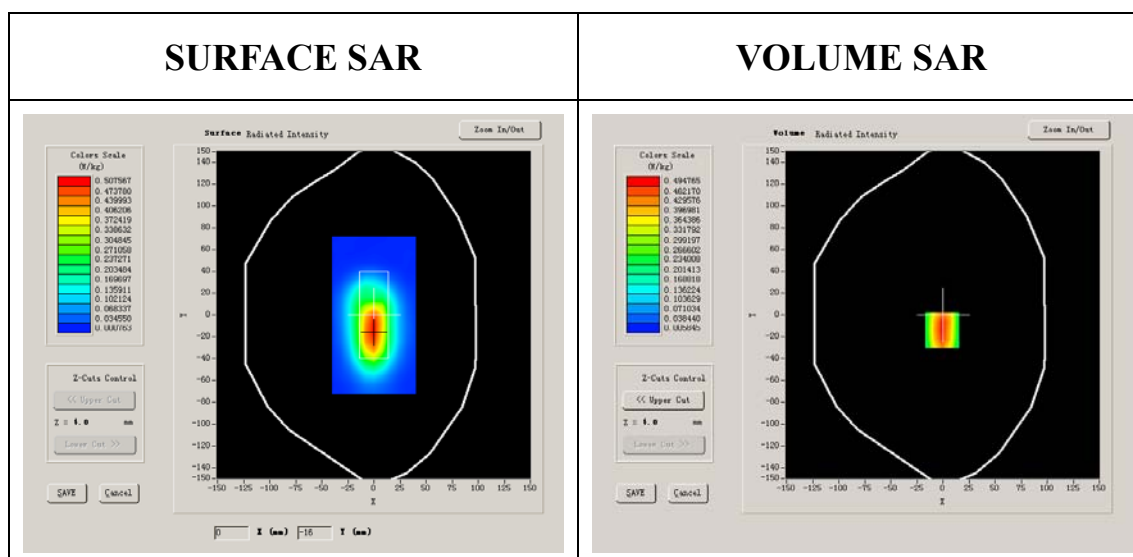
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



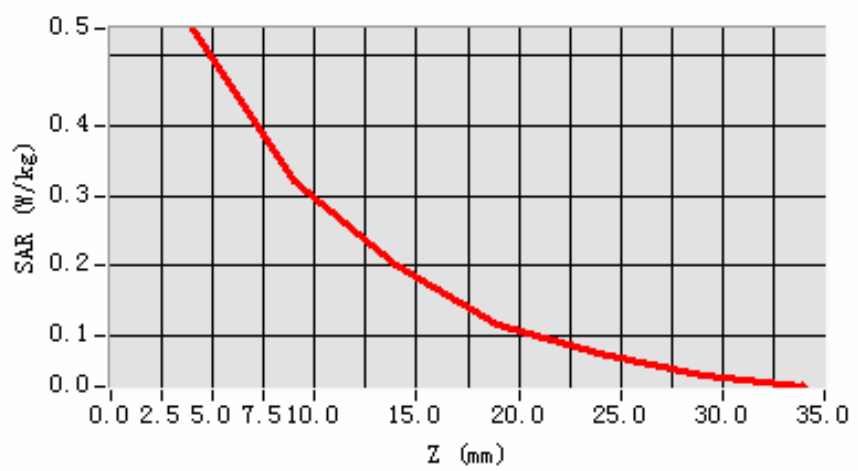
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.141050
SAR 1g (W/Kg)	0.211510

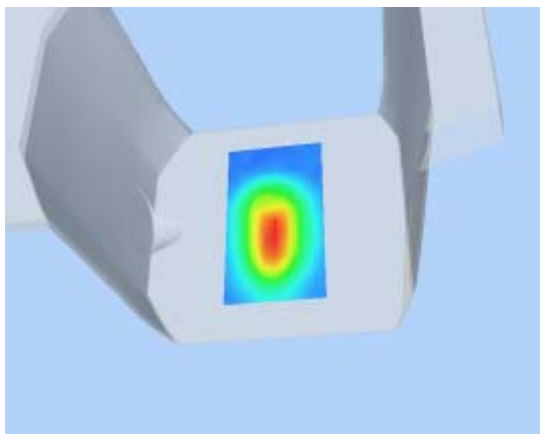
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

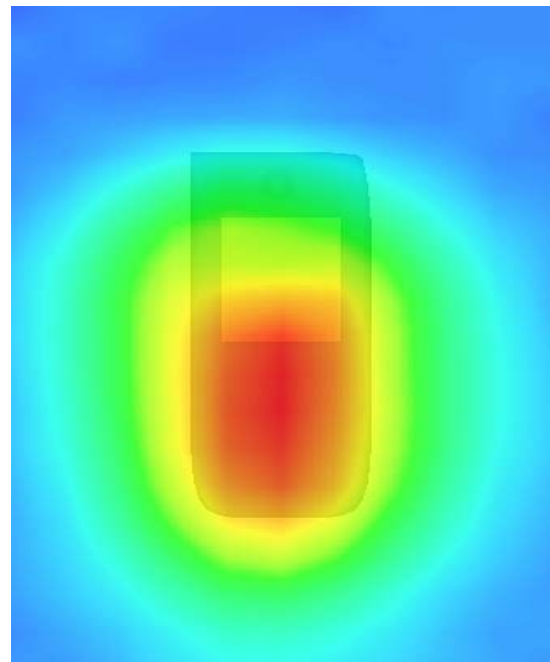
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 15

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

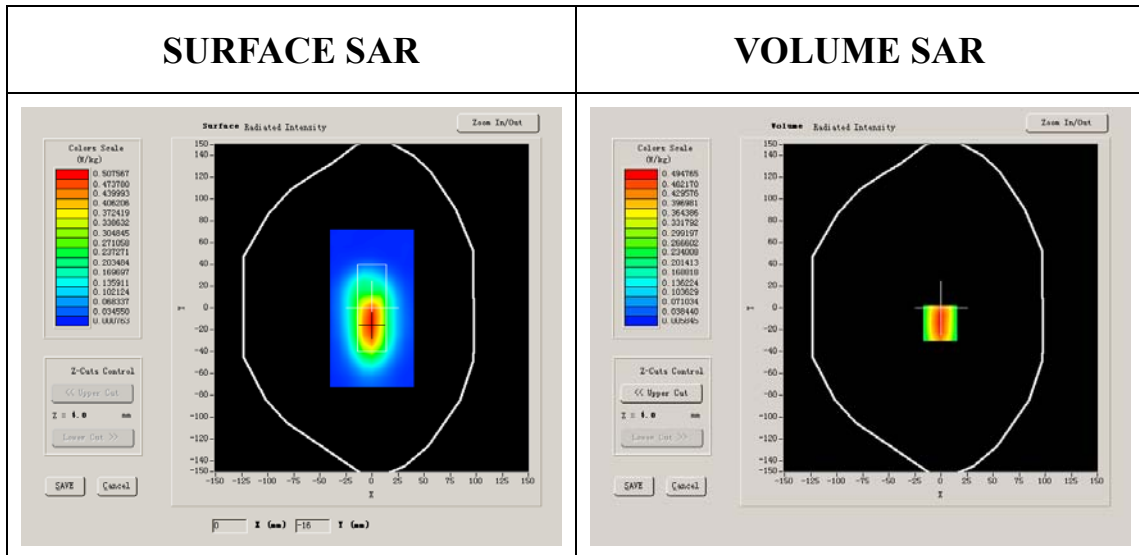
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



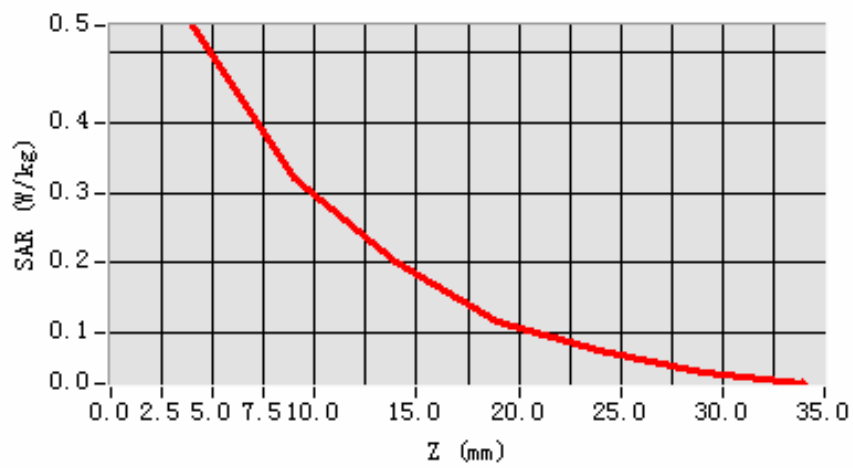
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.137050
SAR 1g (W/Kg)	0.205510

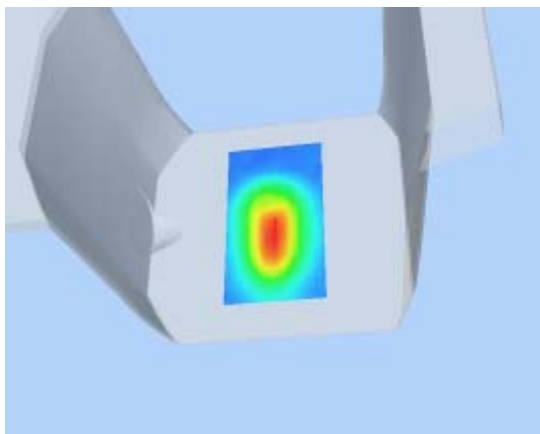
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

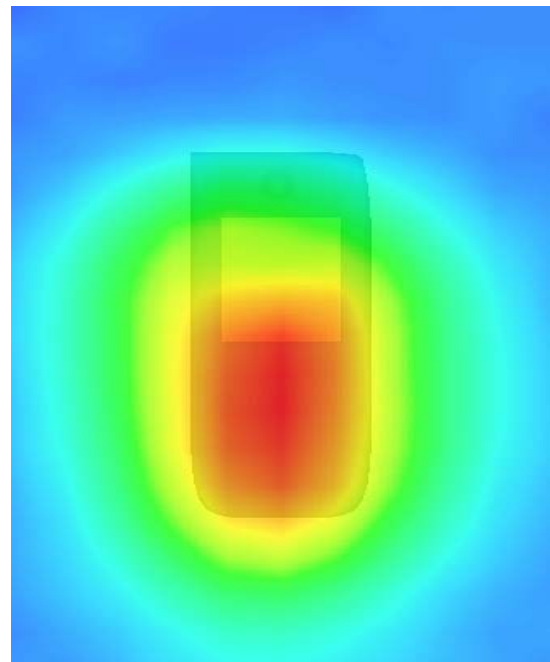
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 16

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

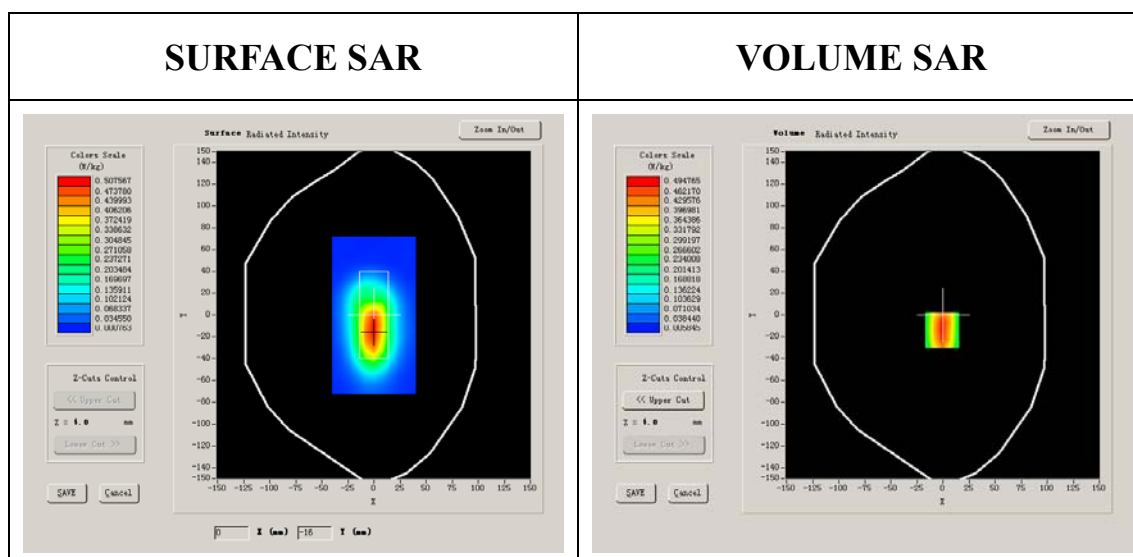
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



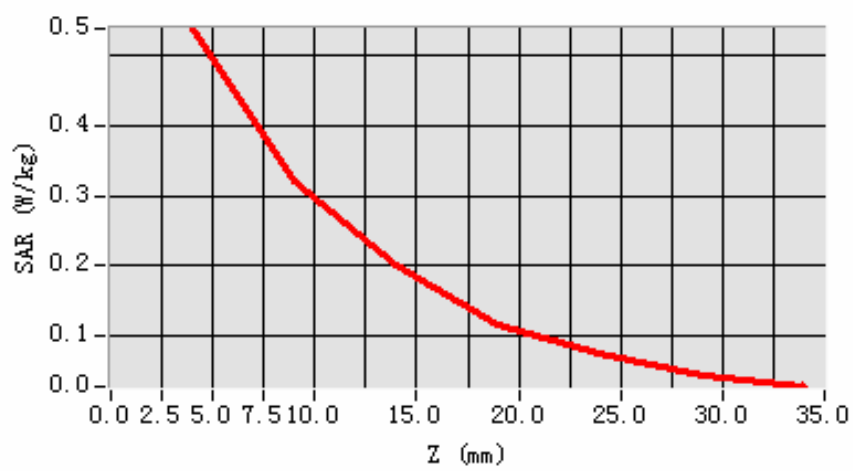
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.135050
SAR 1g (W/Kg)	0.206510

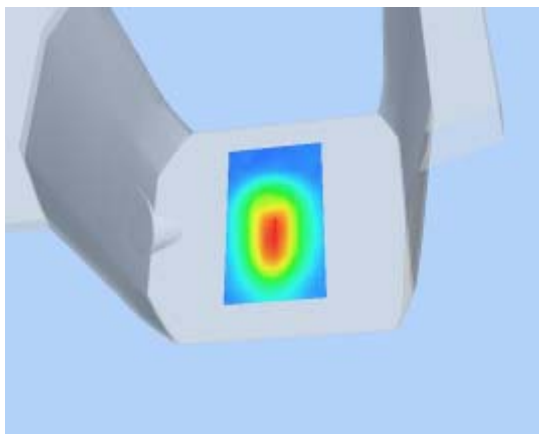
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

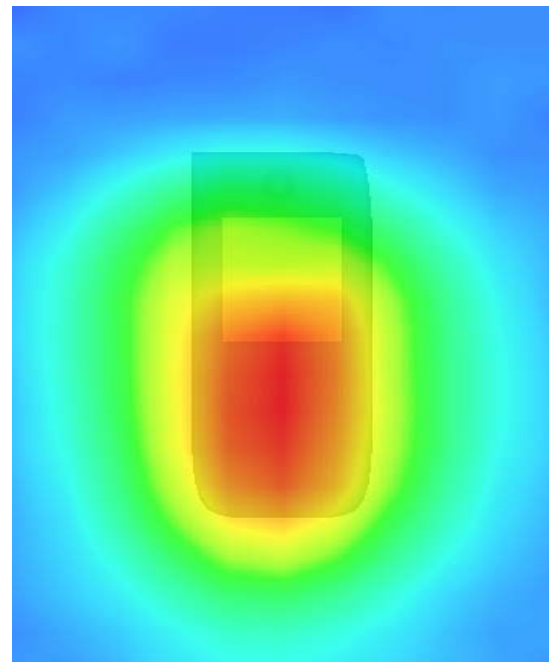
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 17

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

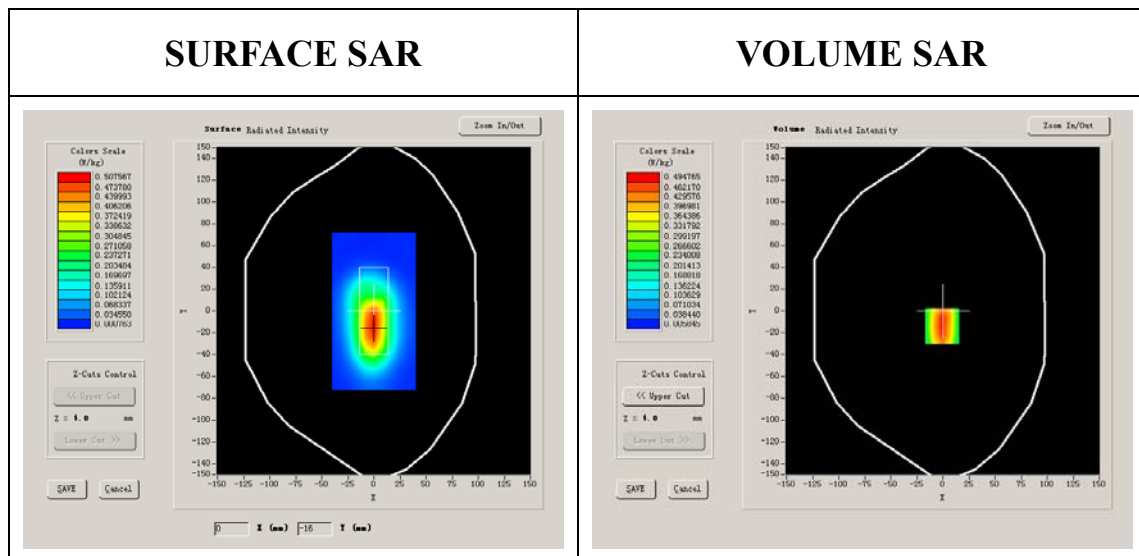
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



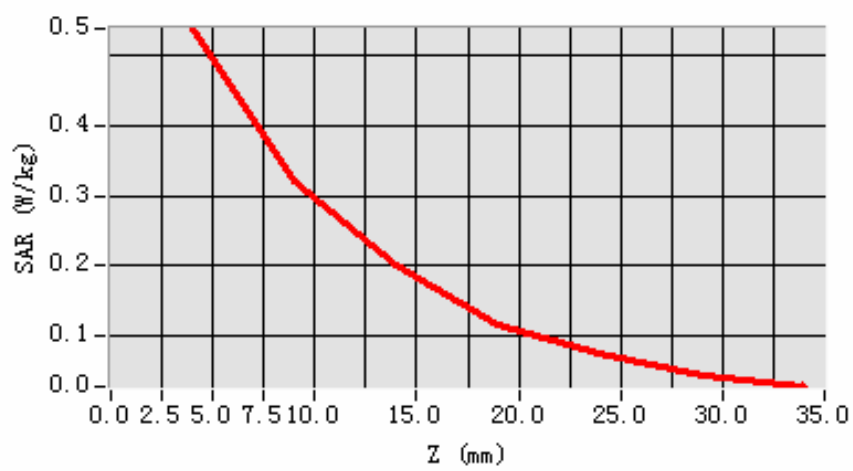
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.119044
SAR 1g (W/Kg)	0.198510

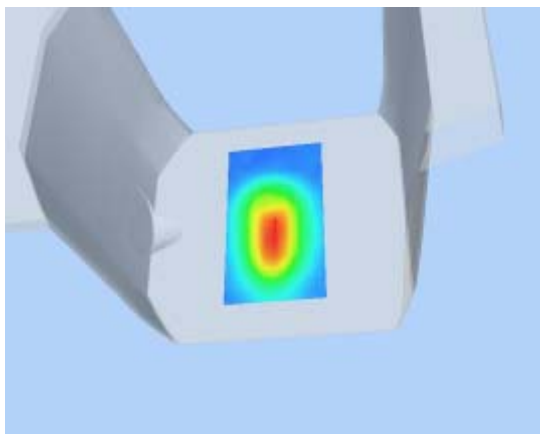
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

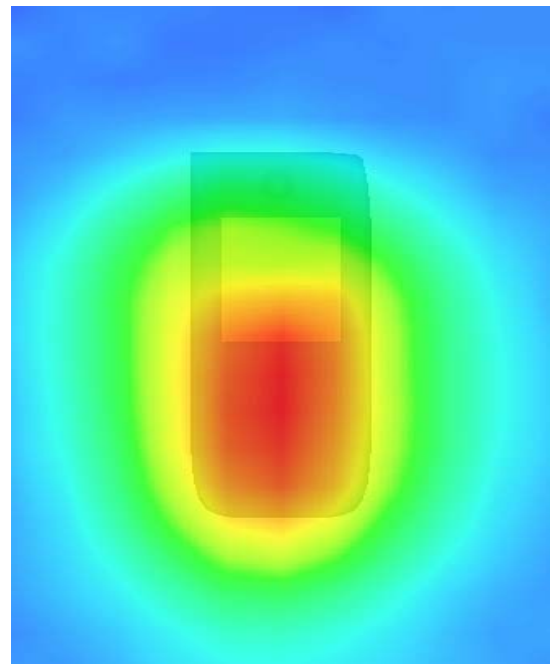
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 18

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

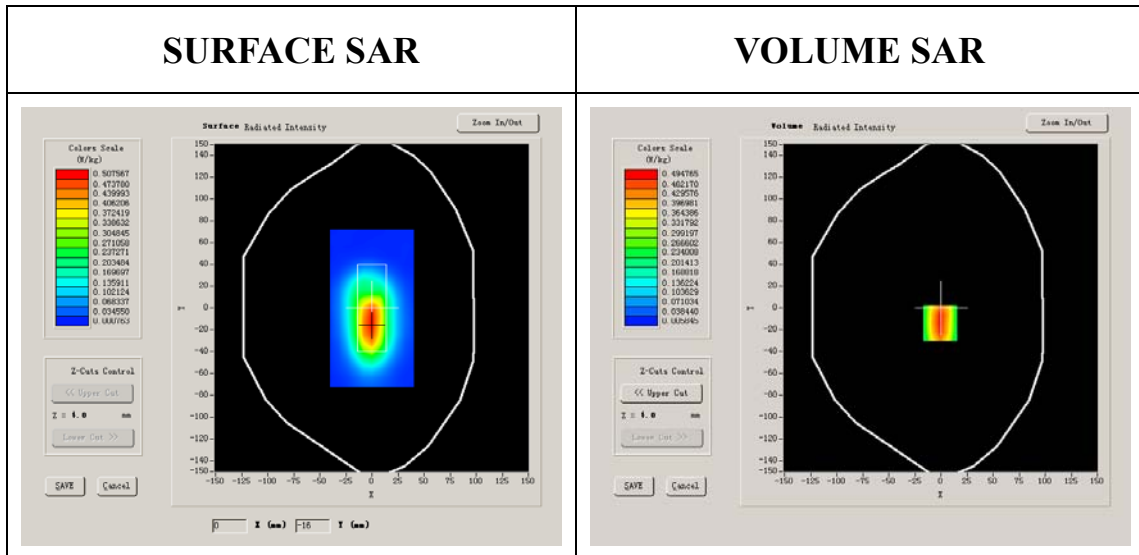
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



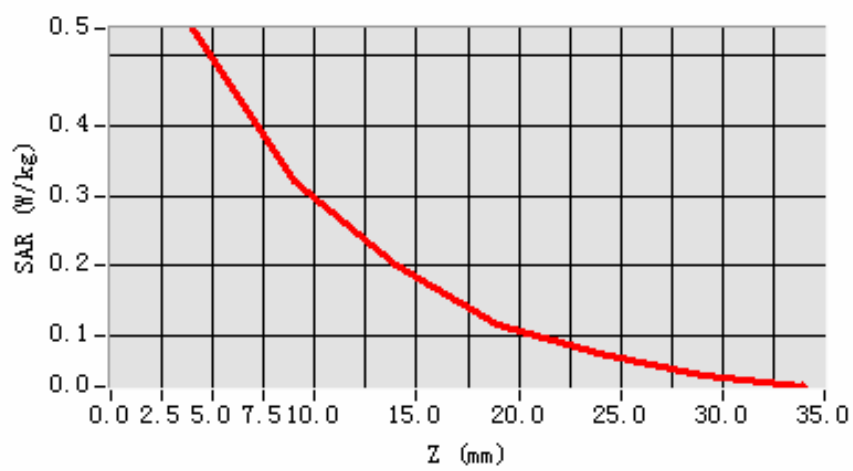
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.100050
SAR 1g (W/Kg)	0.186510

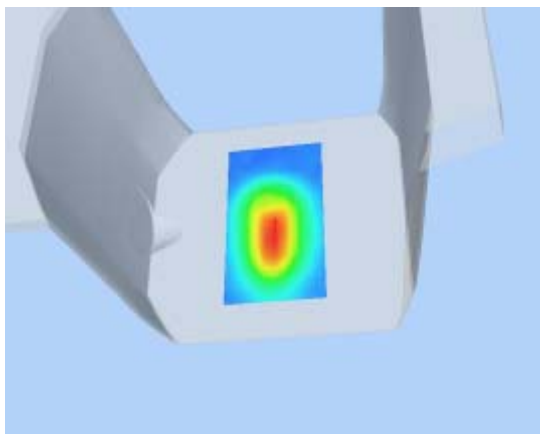
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

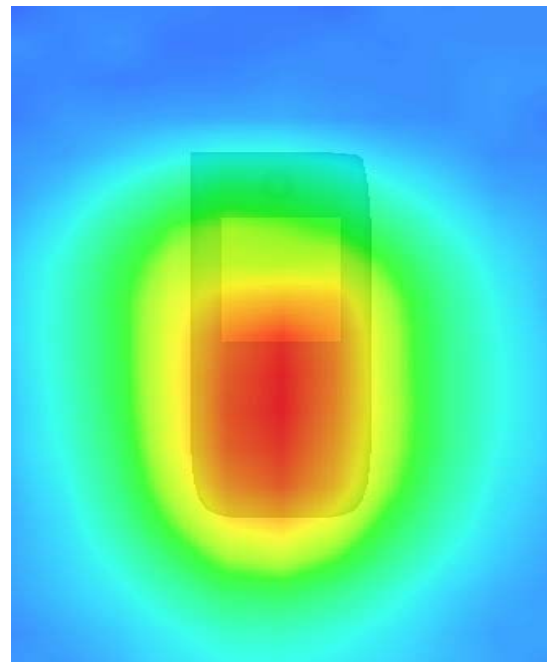
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 19

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

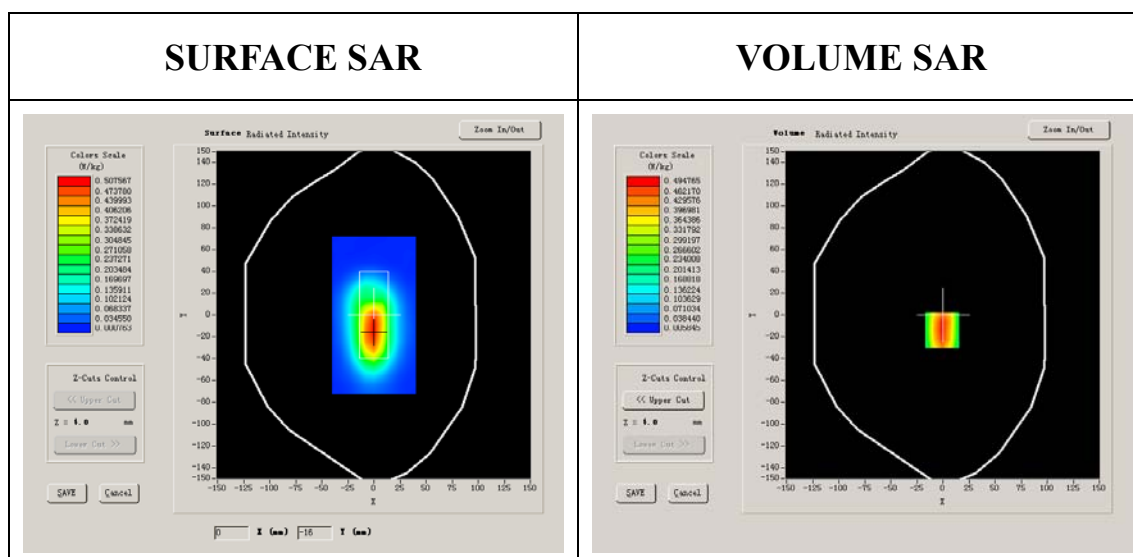
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



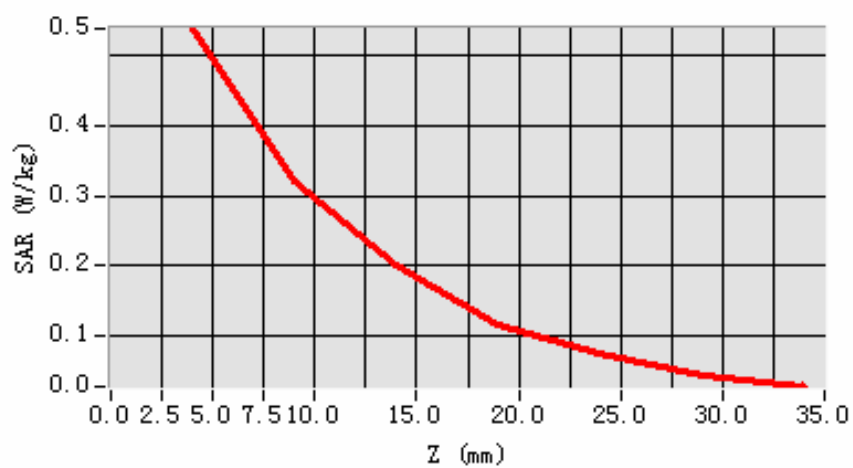
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.110105
SAR 1g (W/Kg)	0.195510

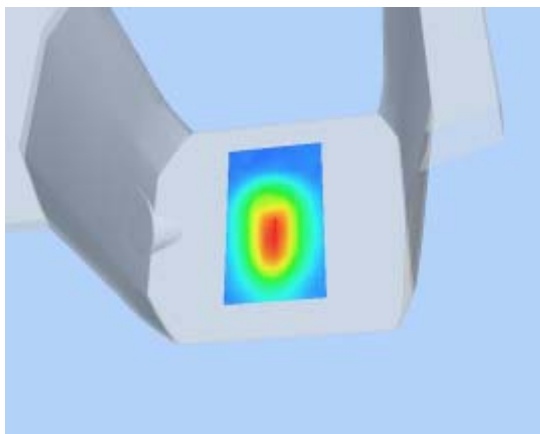
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

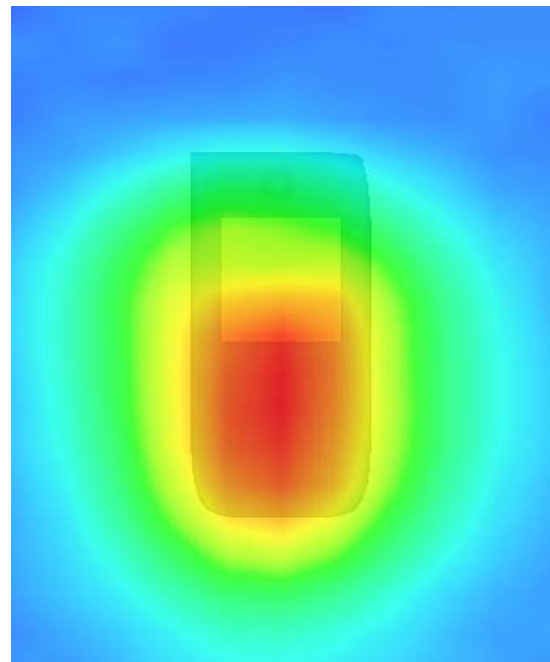
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 20

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

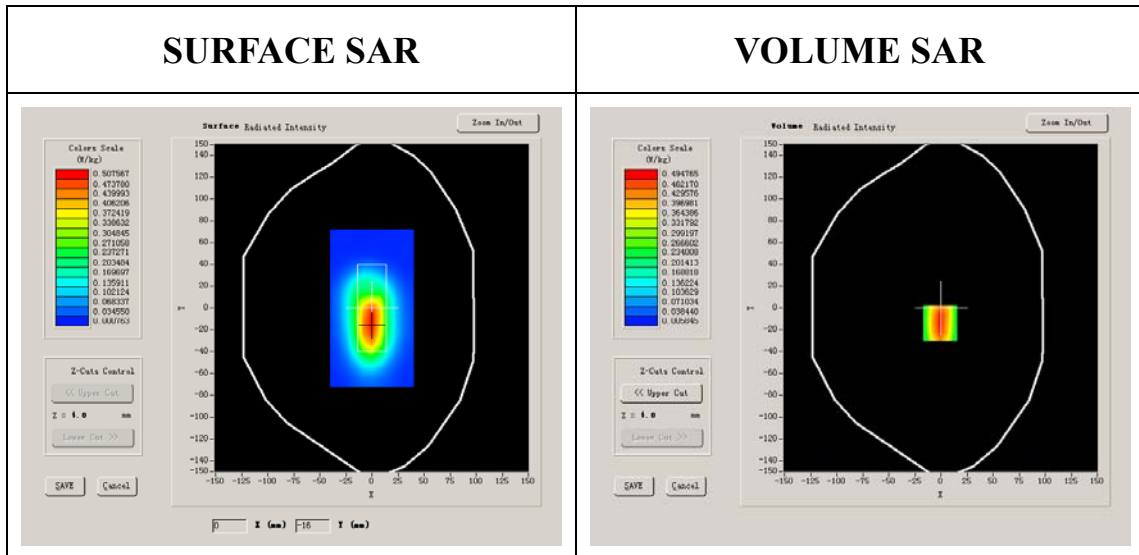
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



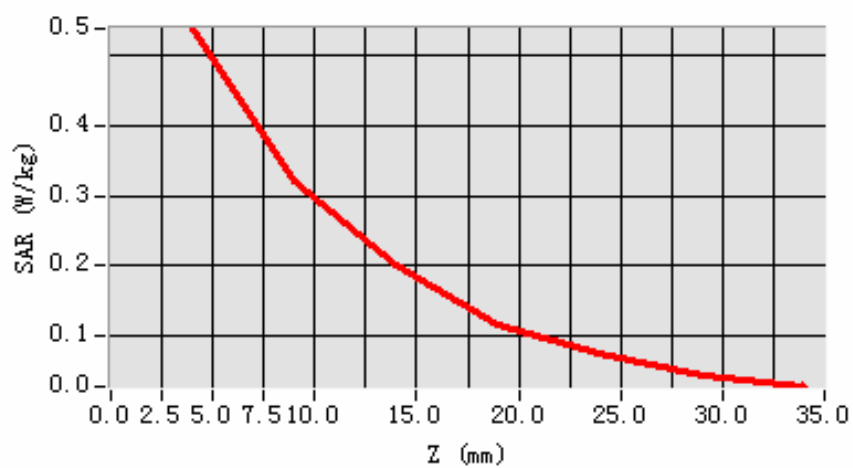
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.097050
SAR 1g (W/Kg)	0.179510

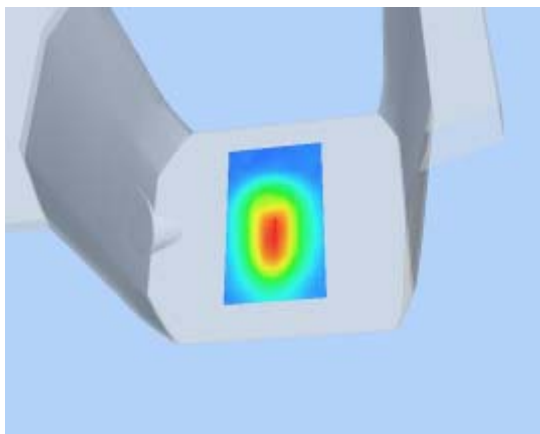
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

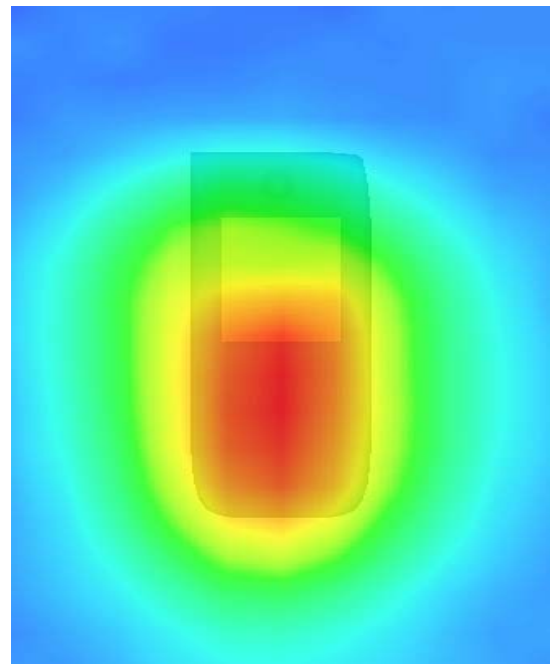
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 21

Type: Phone measurement (Complete)

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

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

Date of measurement: 11/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

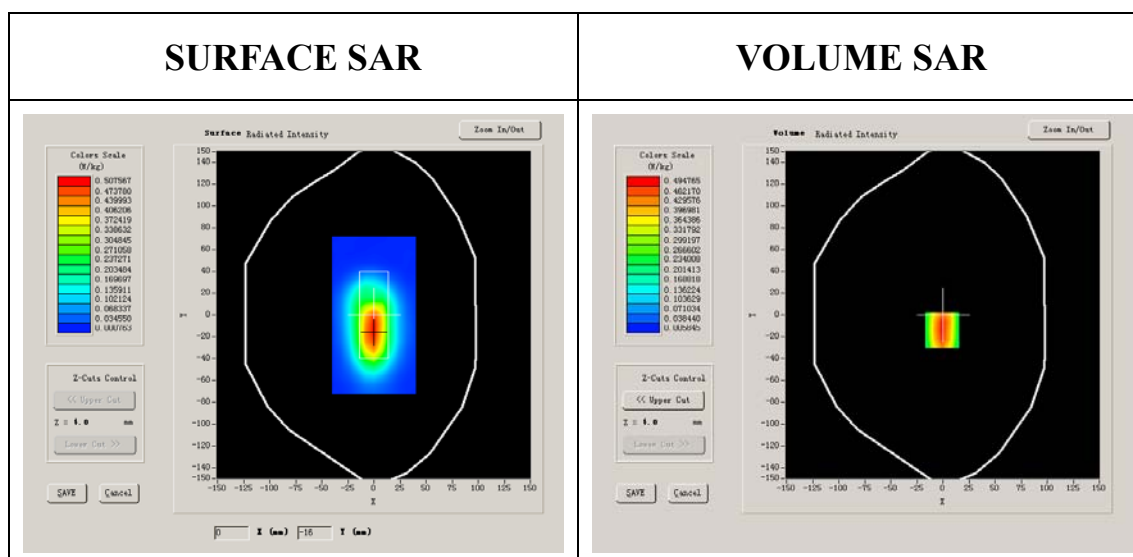
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	Low
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2412.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



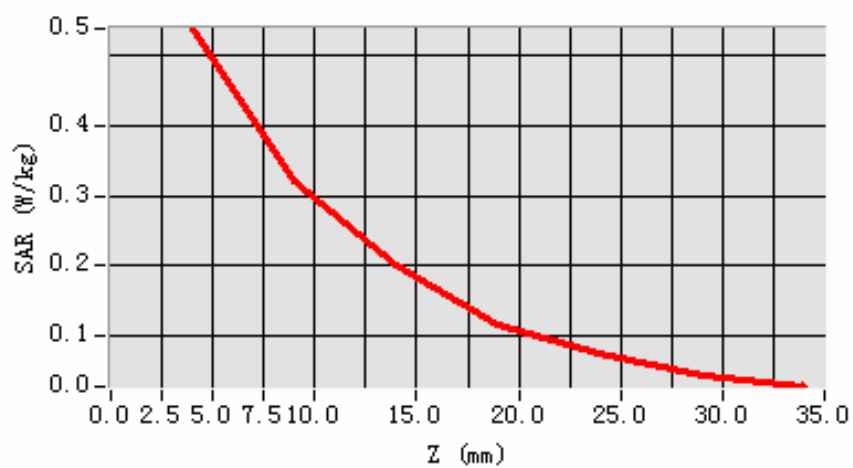
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.131885
SAR 1g (W/Kg)	0.210046

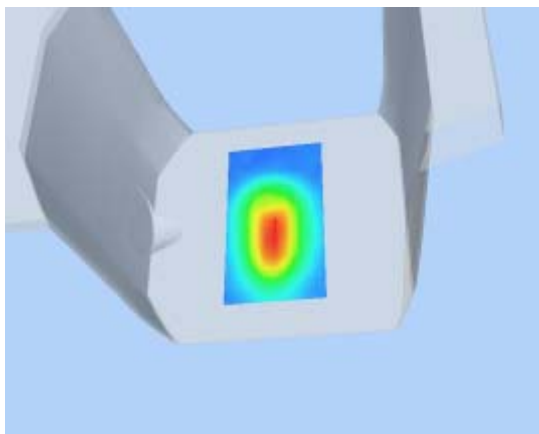
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

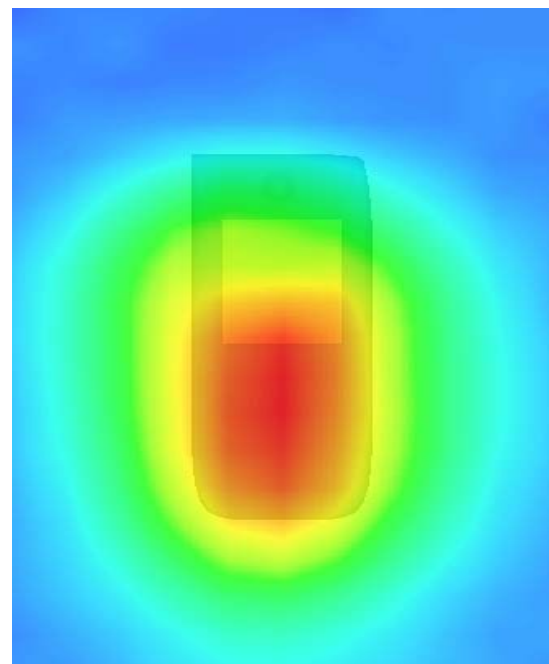
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 22

Type: Phone measurement (Complete)

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

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

Date of measurement: 11/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

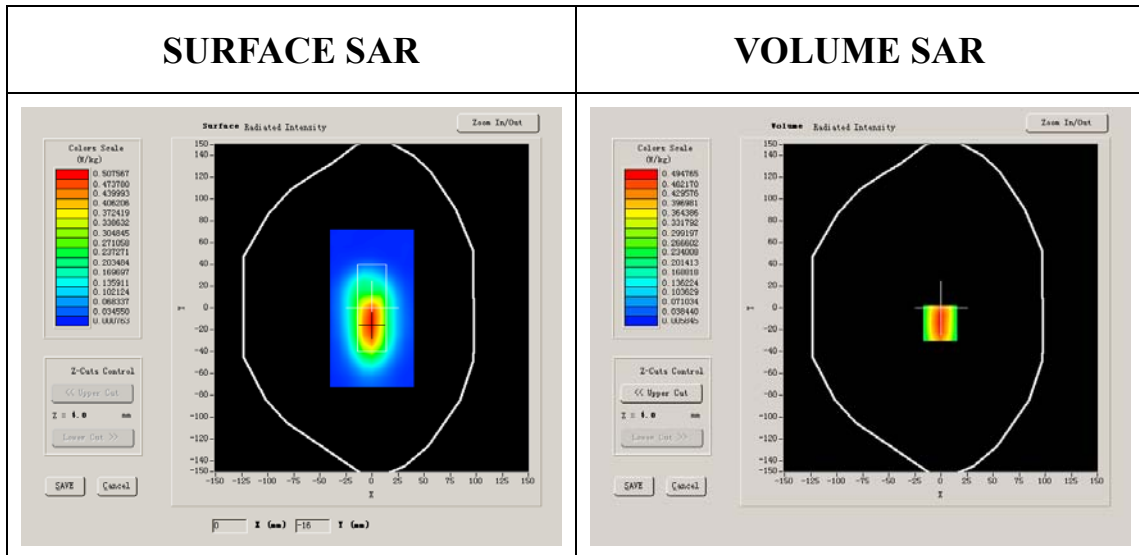
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 G
Channels	High
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2462.000000
Relative permittivity (real part)	39.548876
Relative permittivity	14.820000

Conductivity (S/m)	1.720014
Variation (%)	-2.800000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



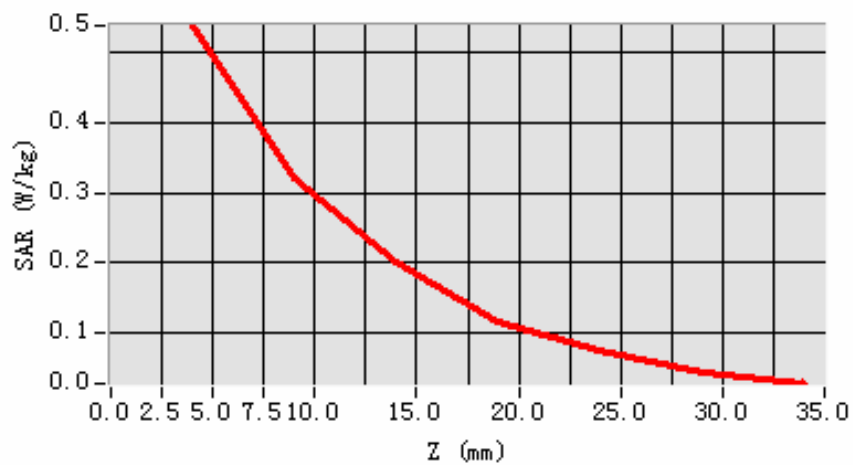
Maximum location: X=-1.00, Y=-14.00

SAR 10g (W/Kg)	0.131163
SAR 1g (W/Kg)	0.201645

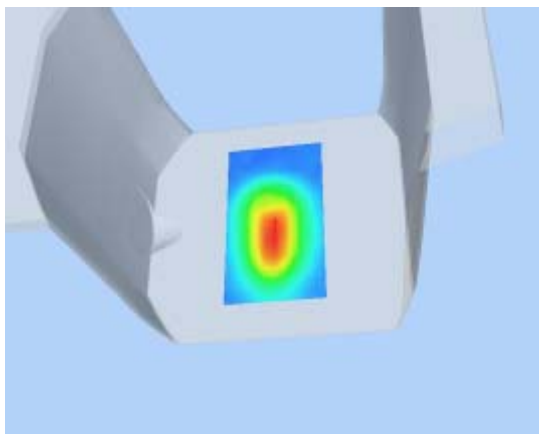
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5388	0.3204	0.2015	0.1166	0.0745	0.0431

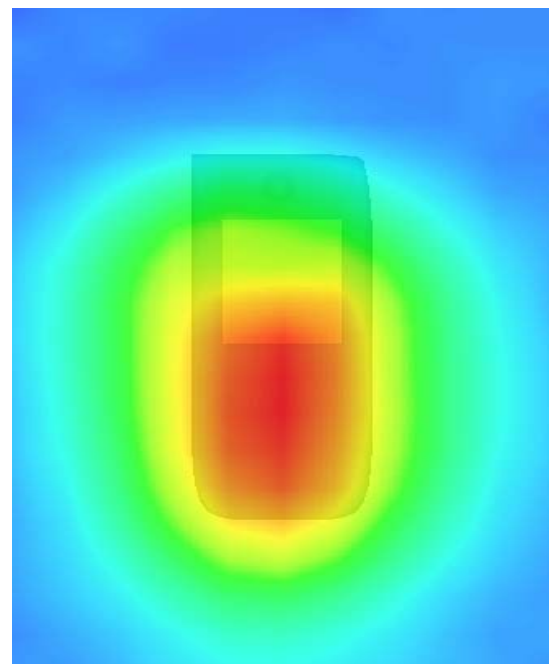
SAR, Z Axis Scan (X = -1, Y = -14)



3D scene shot



Hot spot position



MEASUREMENT 23

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 9 seconds

A. Experimental conditions.

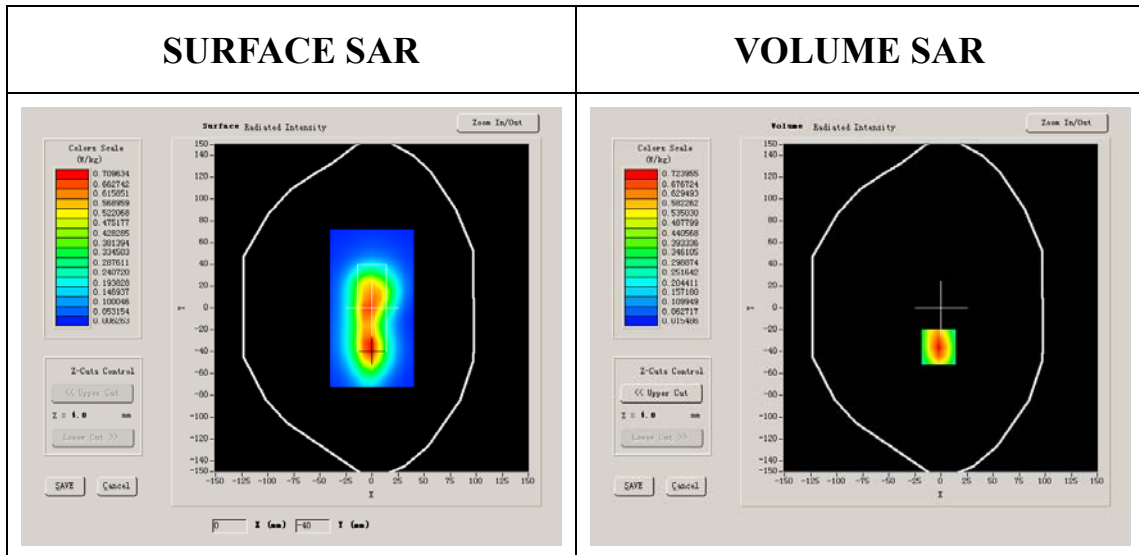
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	0.130000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



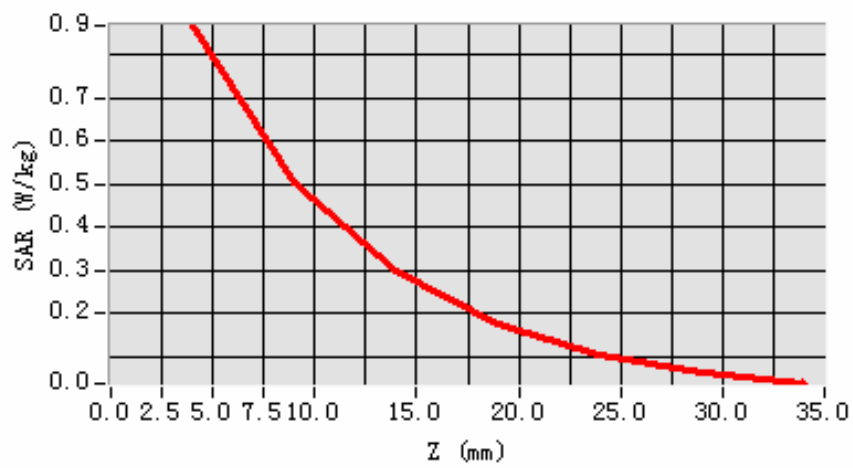
Maximum location: X=-2.00, Y=-36.00

SAR 10g (W/Kg)	0.095774
SAR 1g (W/Kg)	0.173265

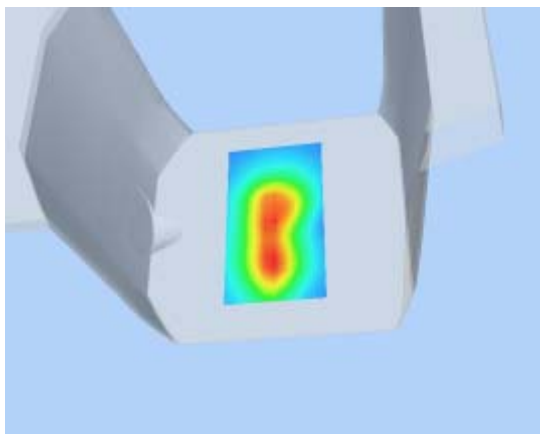
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8688	0.5047	0.2991	0.1753	0.1054	0.0628

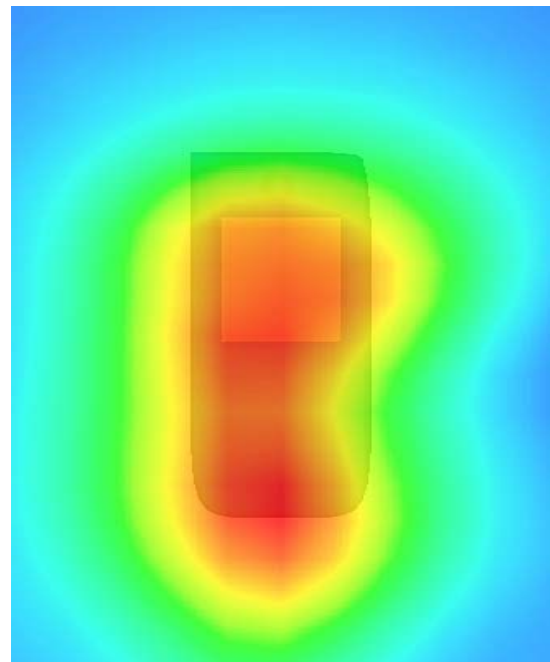
SAR, Z Axis Scan (X = -2, Y = -36)



3D scene shot



Hot spot position



MEASUREMENT 24

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration:13 minutes 7 seconds

A. Experimental conditions.

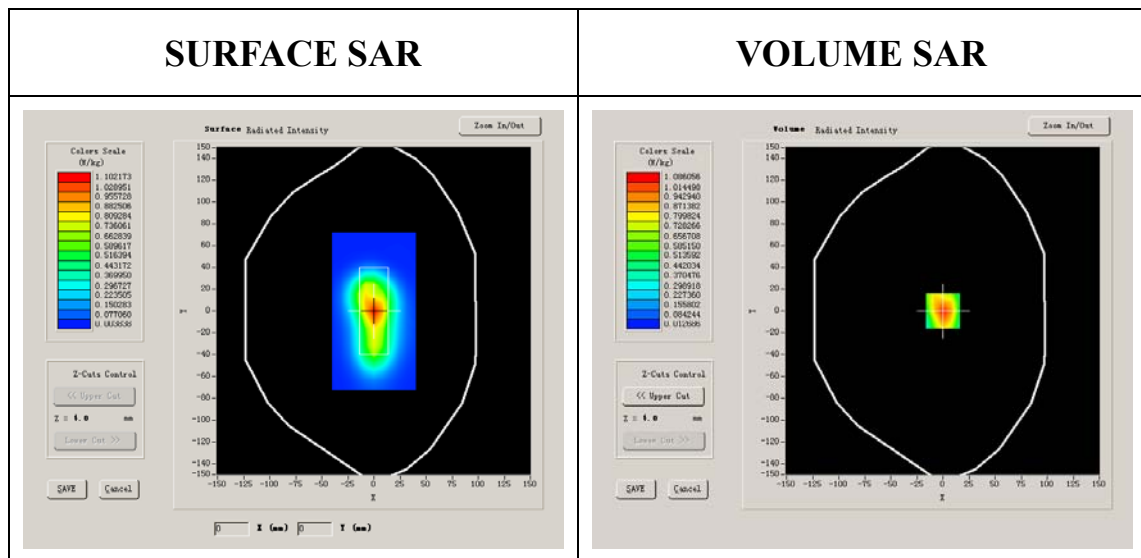
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

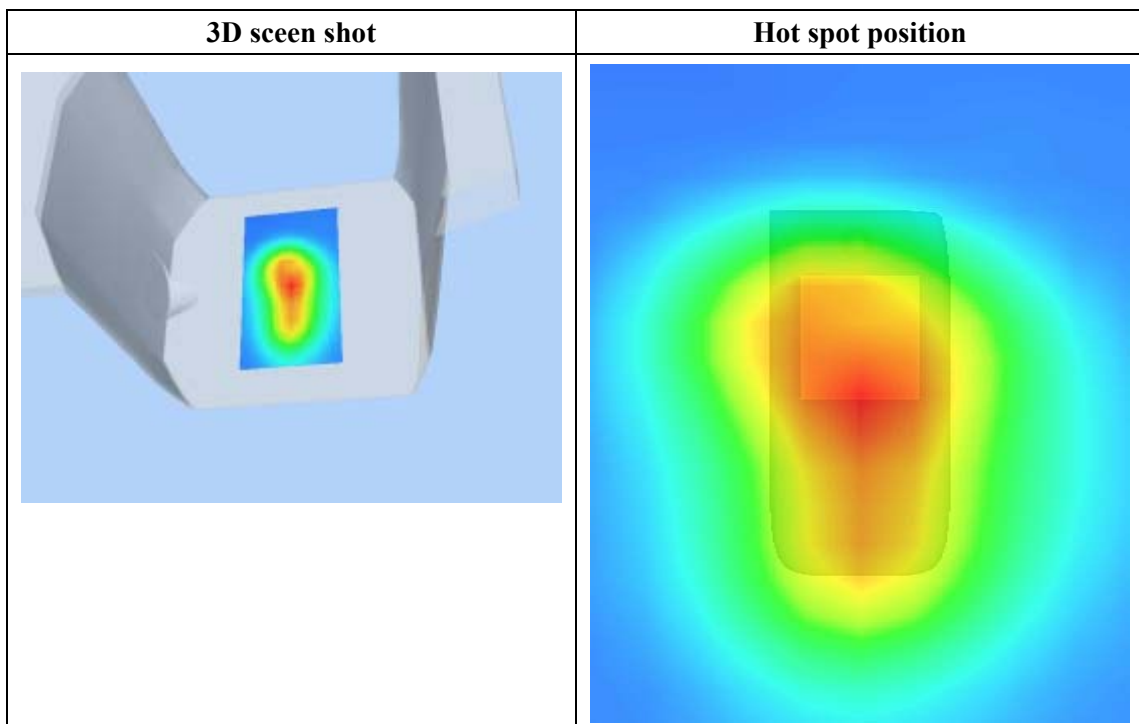
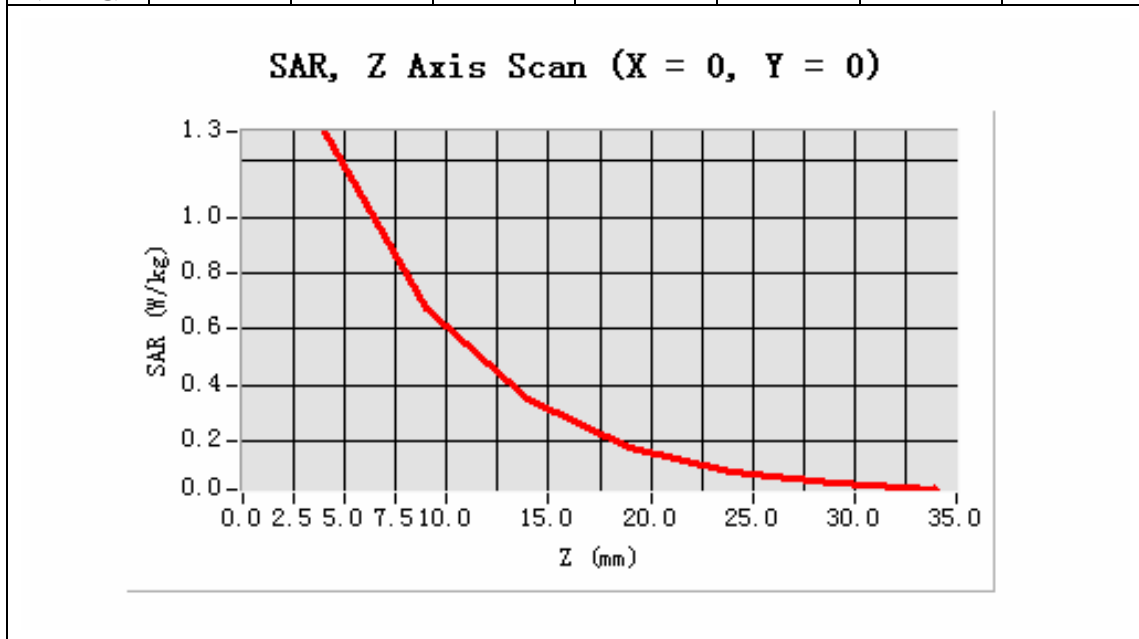


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.163882
SAR 1g (W/Kg)	0.258255

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 25

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 15 seconds

A. Experimental conditions.

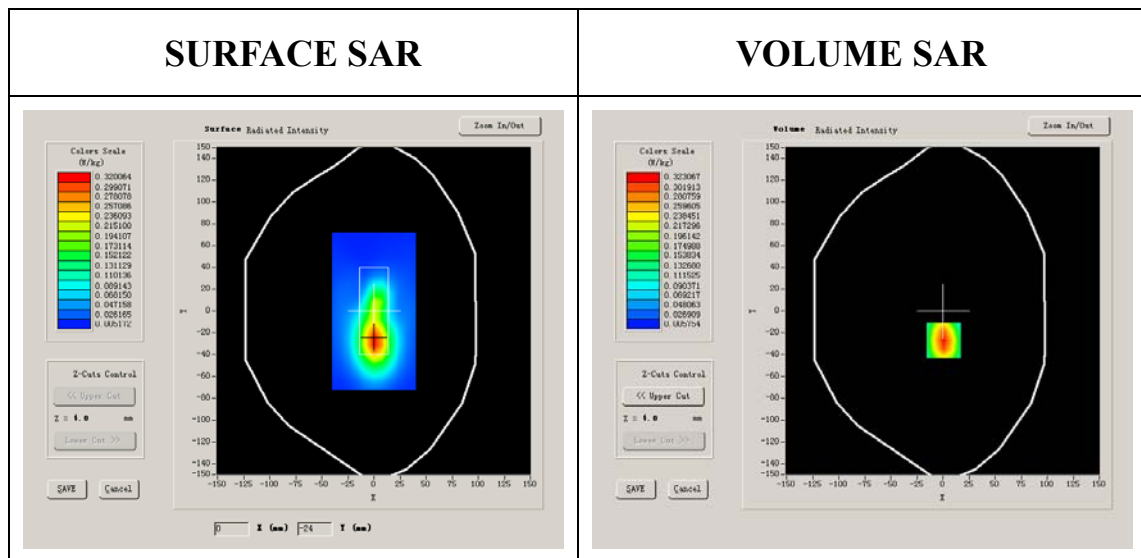
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.330000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



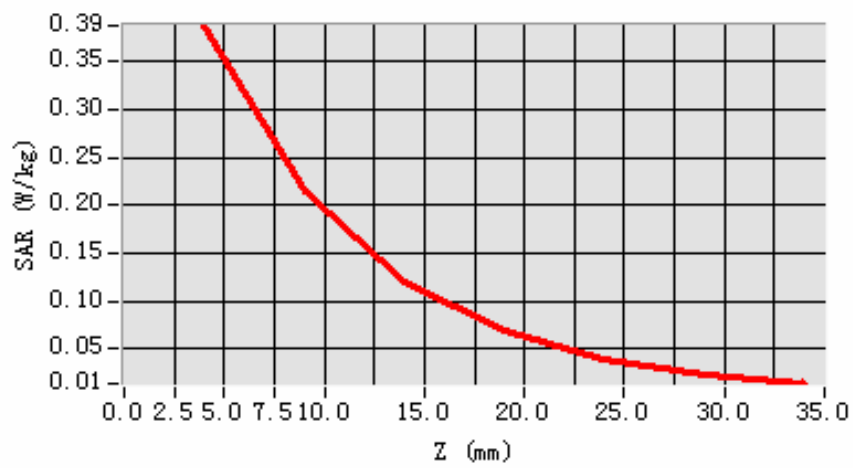
Maximum location: X=1.00, Y=-27.00

SAR 10g (W/Kg)	0.095888
SAR 1g (W/Kg)	0.185255

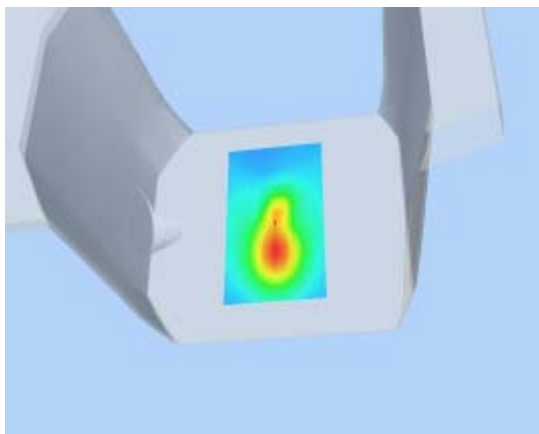
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3877	0.2140	0.1210	0.0694	0.0383	0.0236

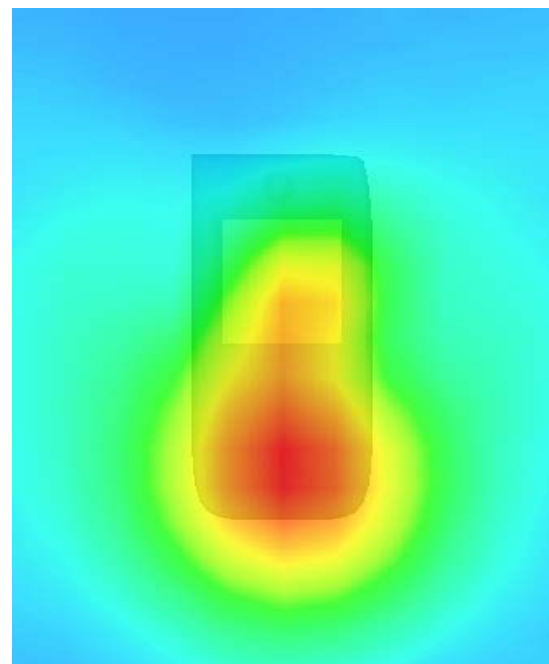
SAR, Z Axis Scan (X = 1, Y = -27)



3D scene shot



Hot spot position



MEASUREMENT 26

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 4 seconds

A. Experimental conditions.

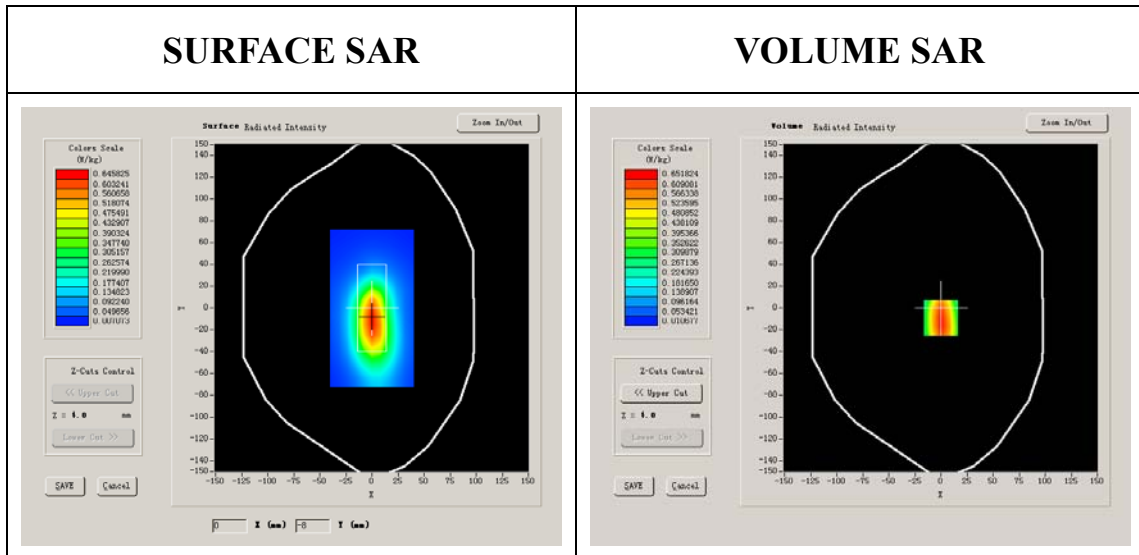
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	1.210000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



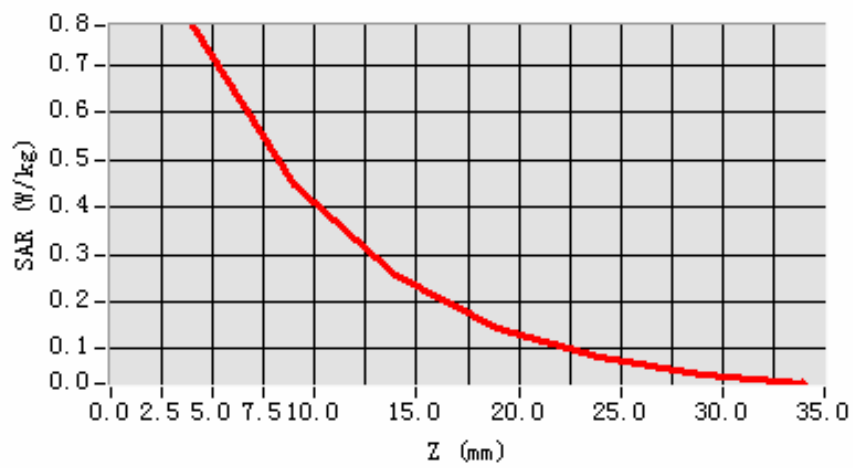
Maximum location: X=0.00, Y=-9.00

SAR 10g (W/Kg)	0.099957
SAR 1g (W/Kg)	0.170574

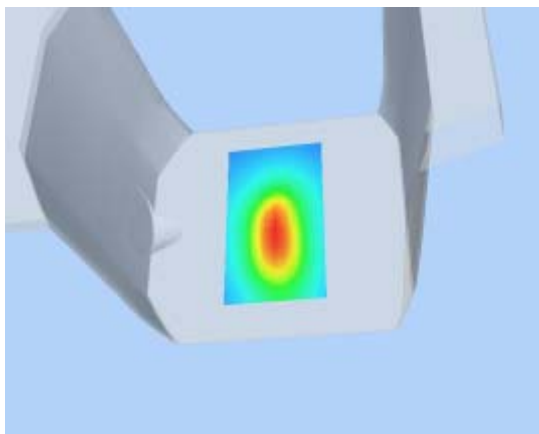
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7818	0.4463	0.2548	0.1439	0.0833	0.0485

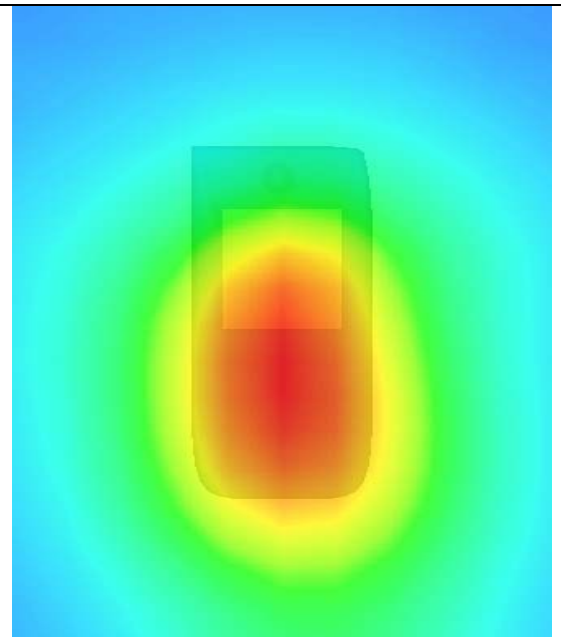
SAR, Z Axis Scan (X = 0, Y = -9)



3D scene shot



Hot spot position



MEASUREMENT 27

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

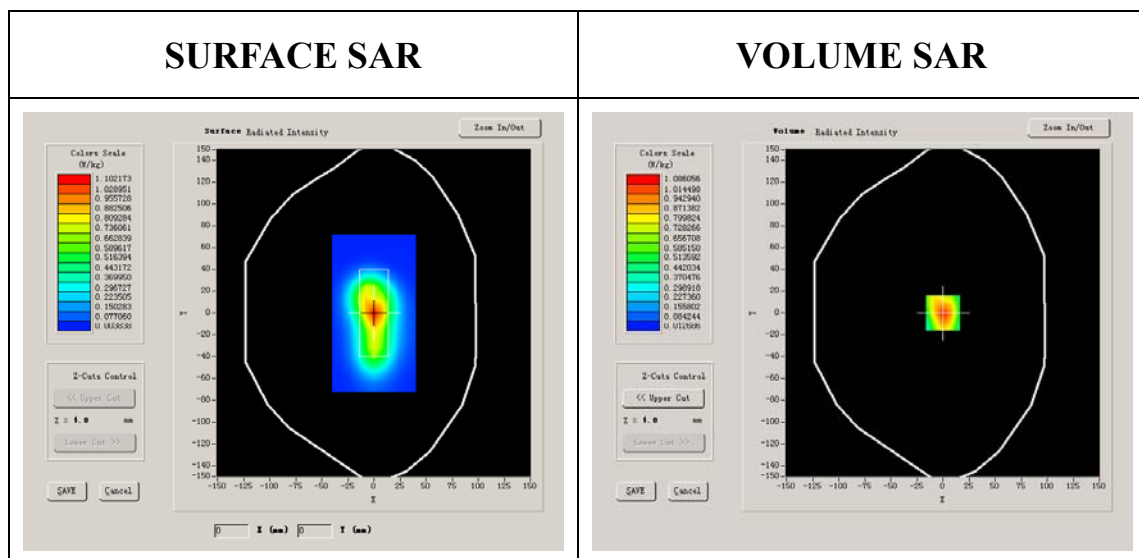
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

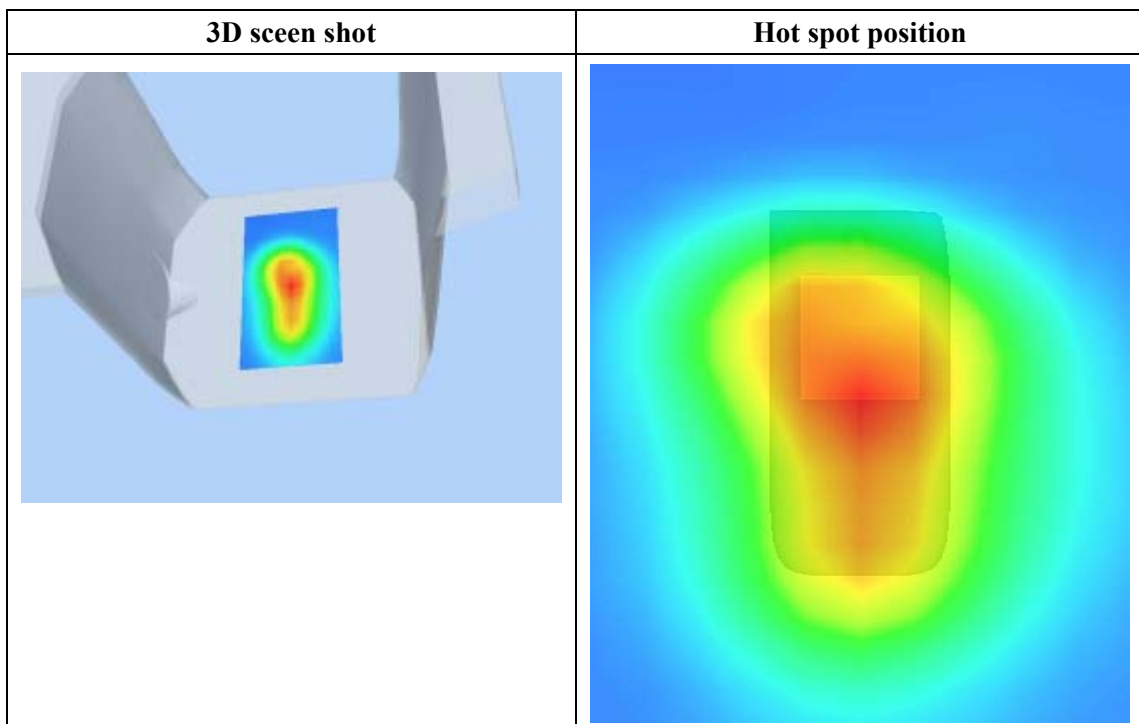
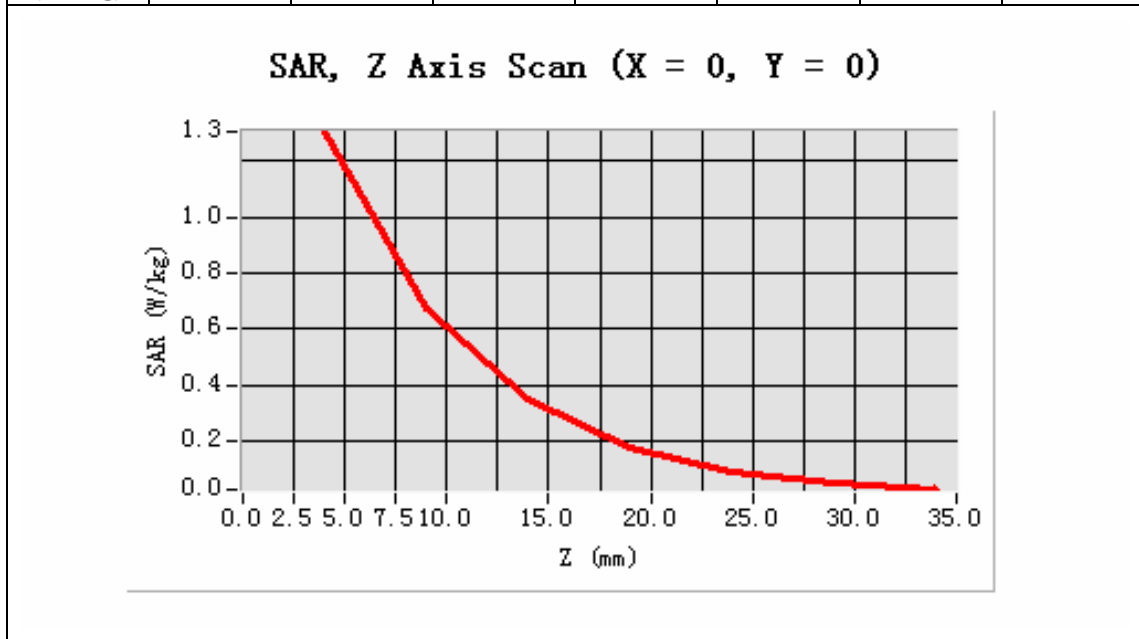


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.136644
SAR 1g (W/Kg)	0.244177

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 28

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

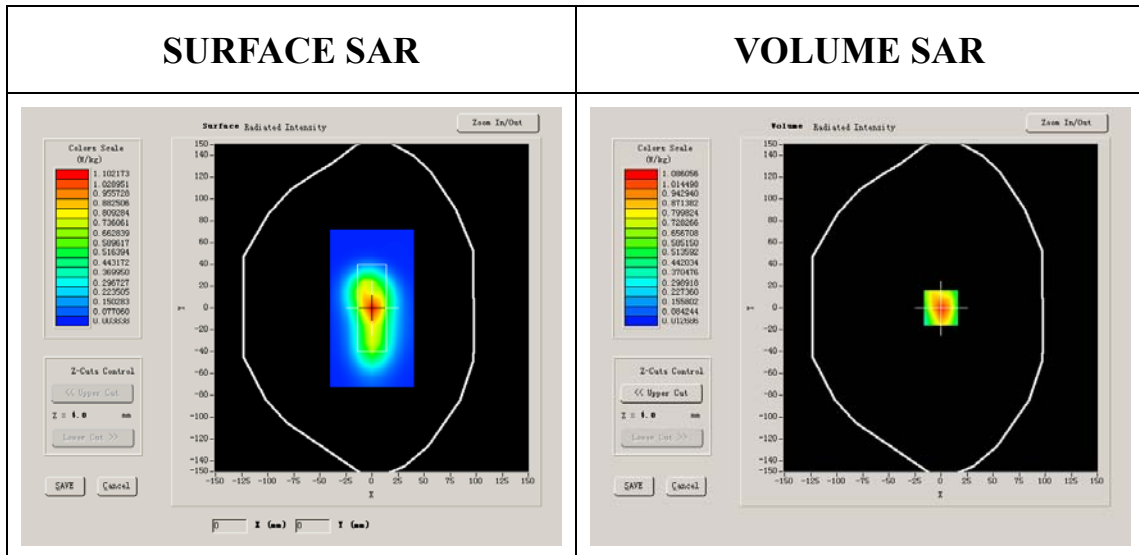
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

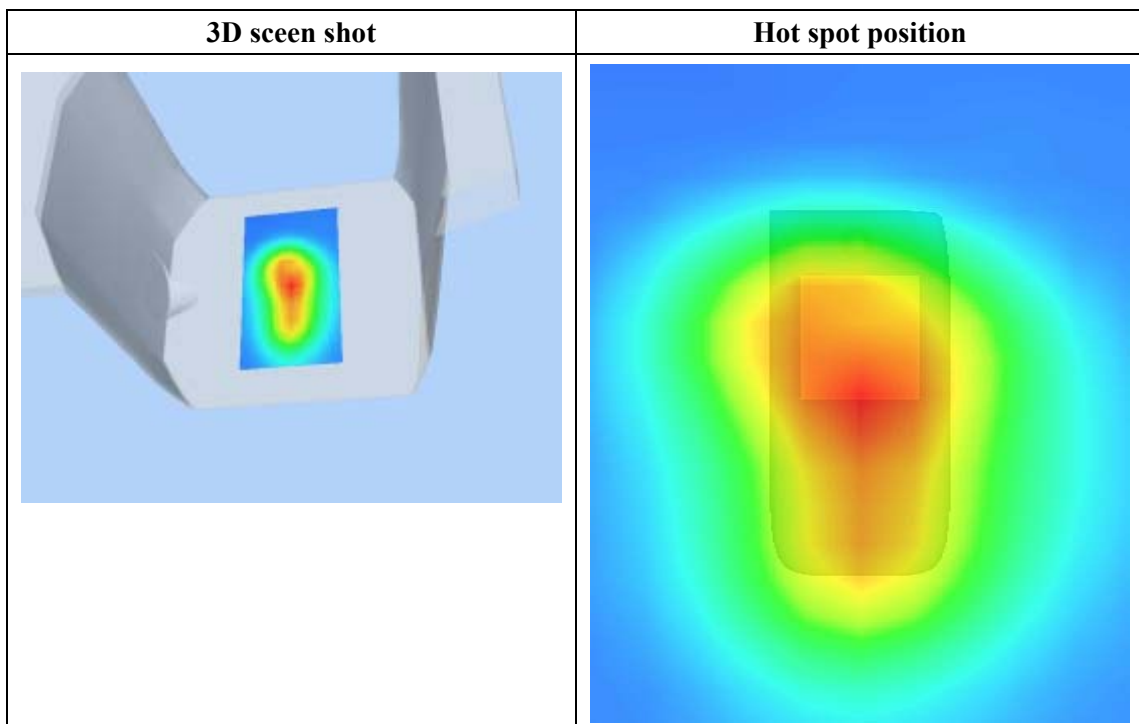
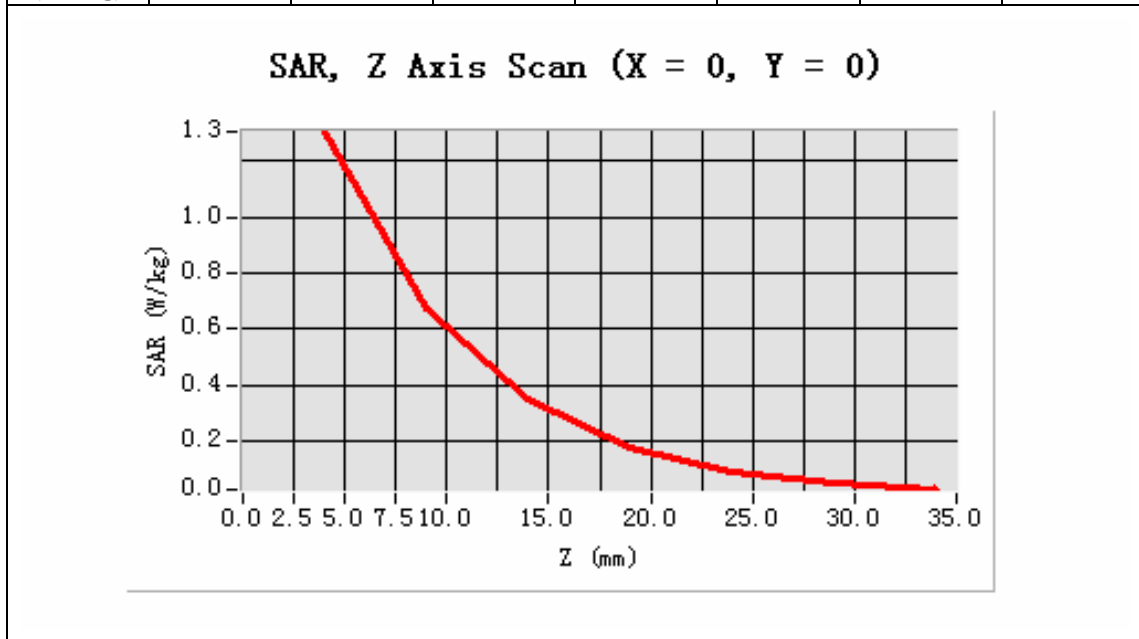


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.135177
SAR 1g (W/Kg)	0.241166

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 29

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

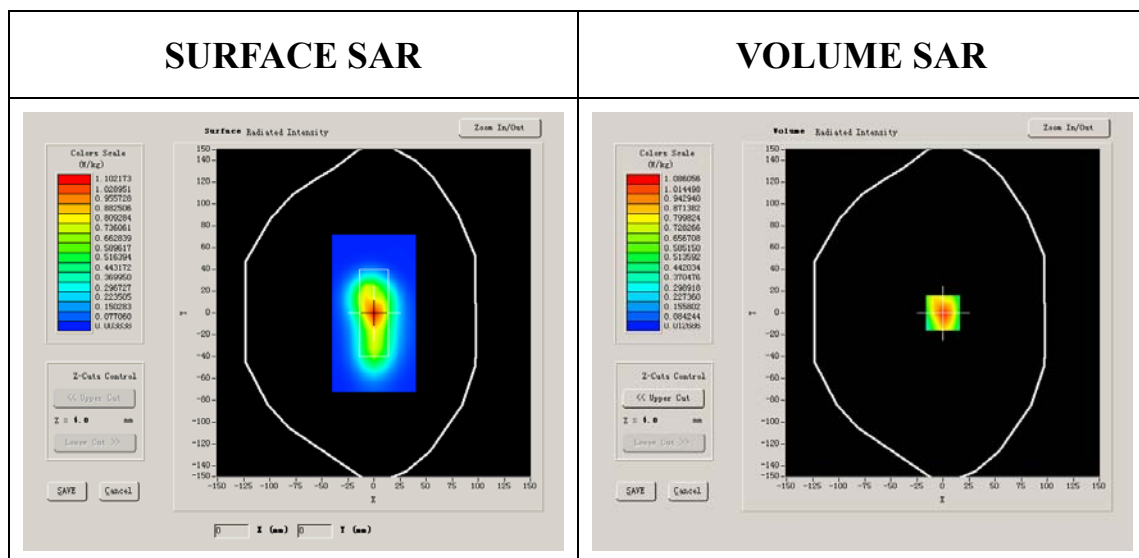
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

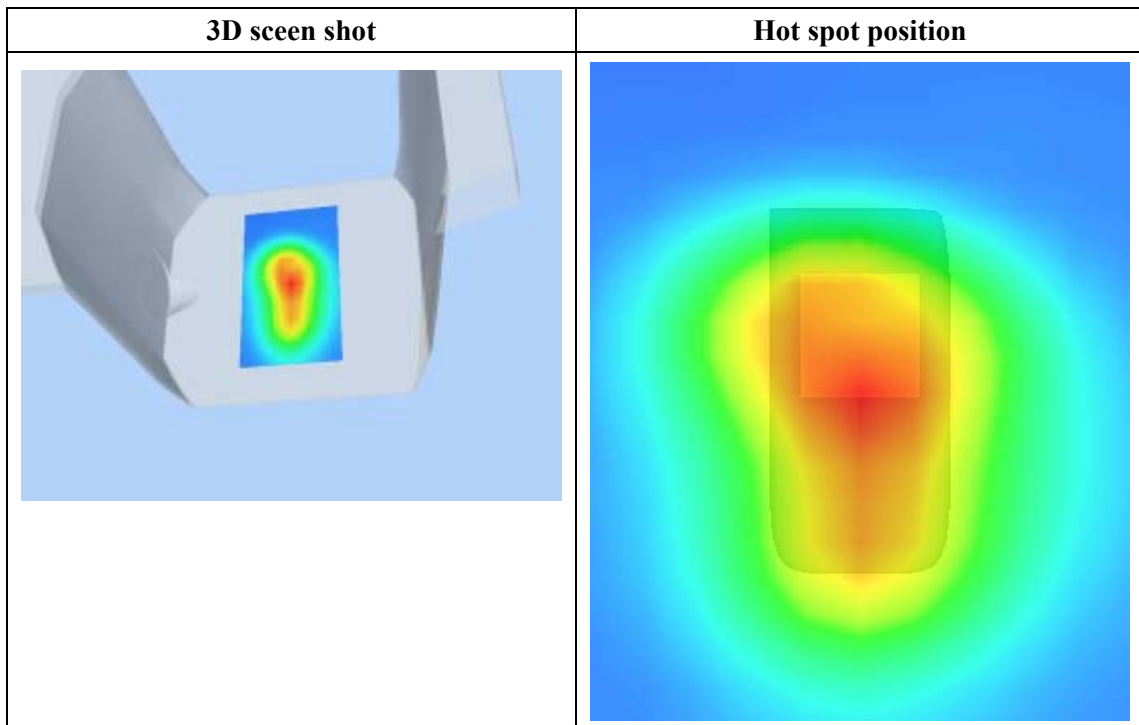
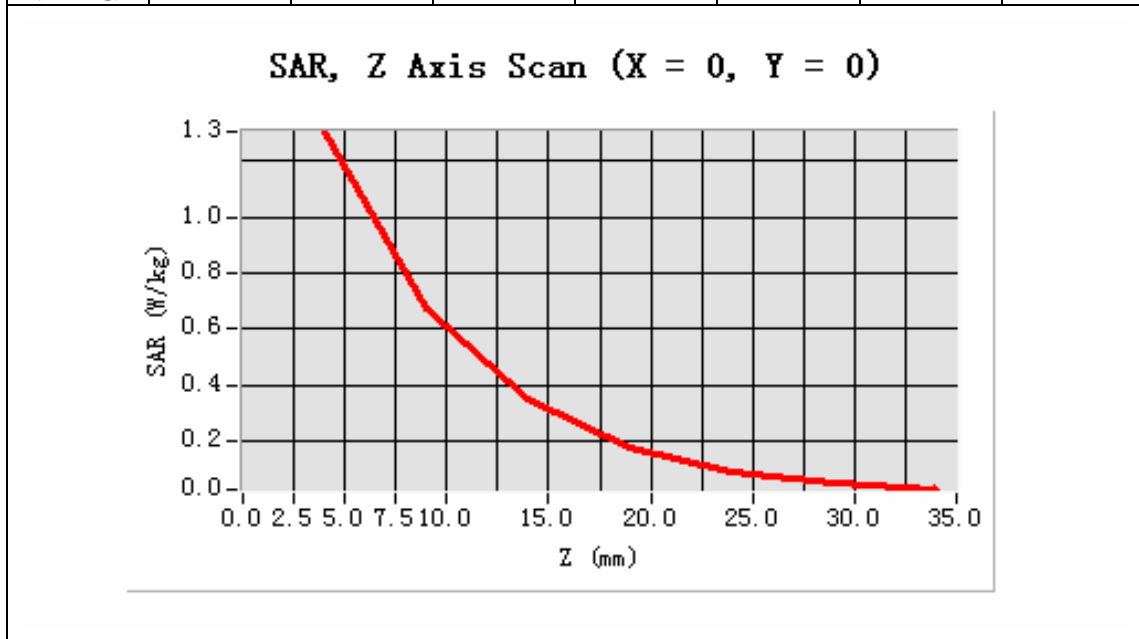


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.129444
SAR 1g (W/Kg)	0.234155

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 30

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

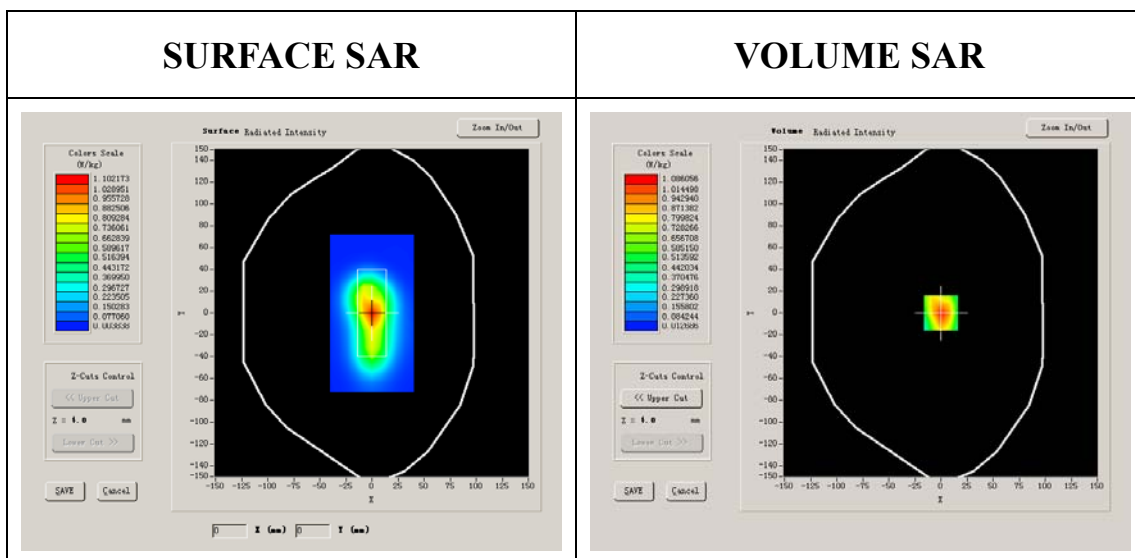
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

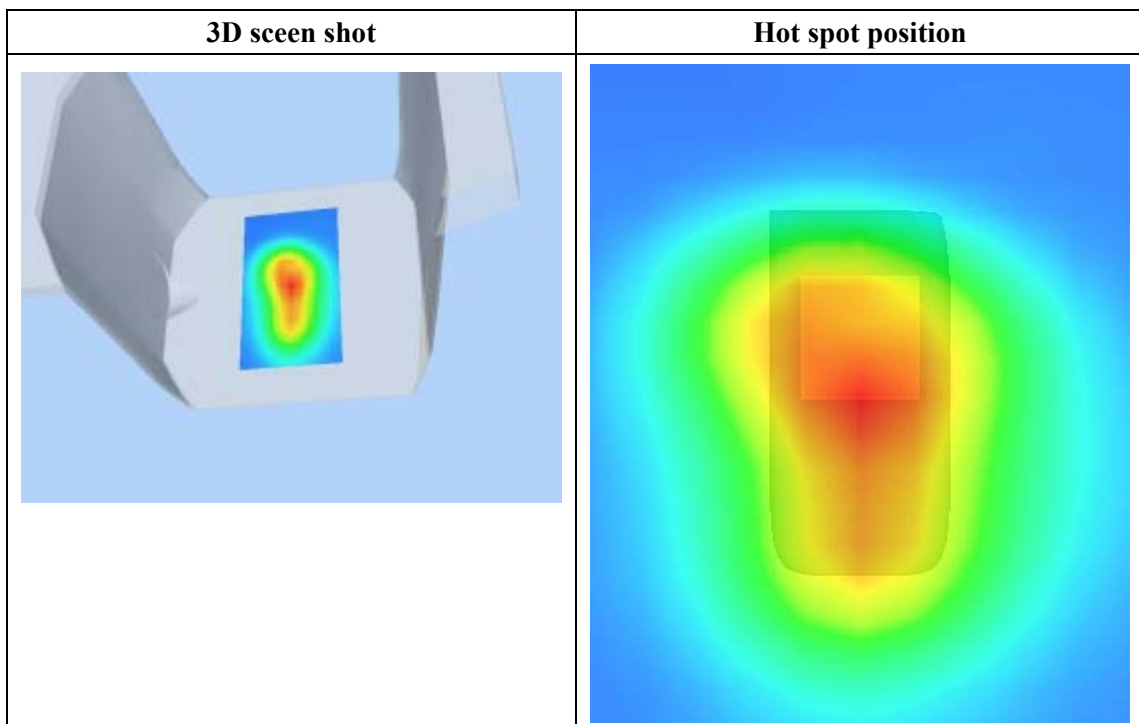
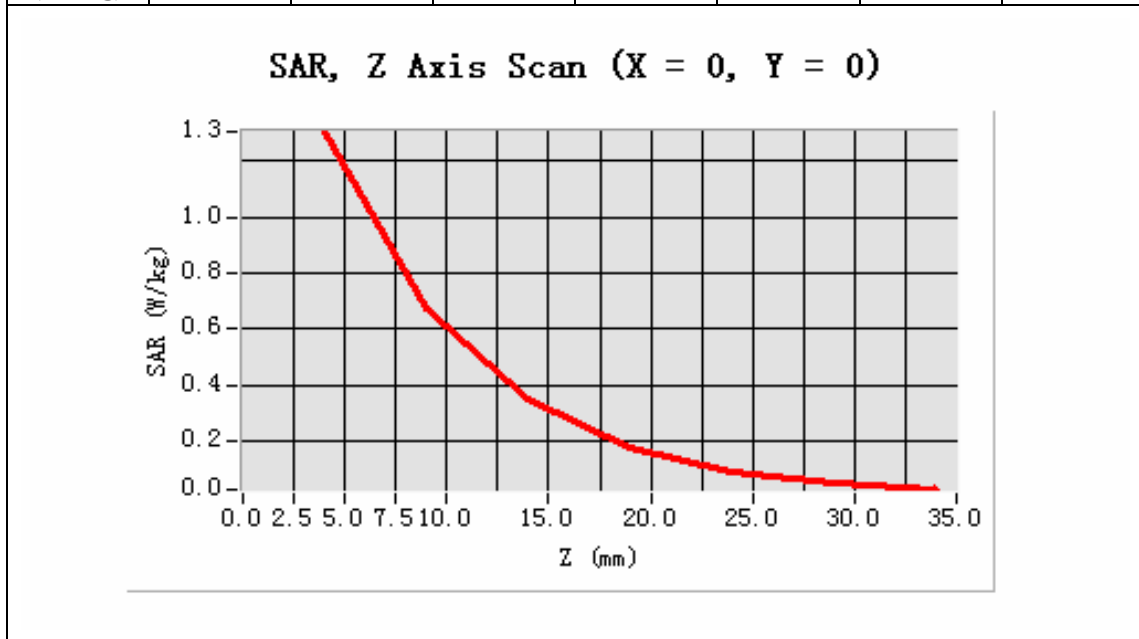


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.117464
SAR 1g (W/Kg)	0.221524

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 31

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

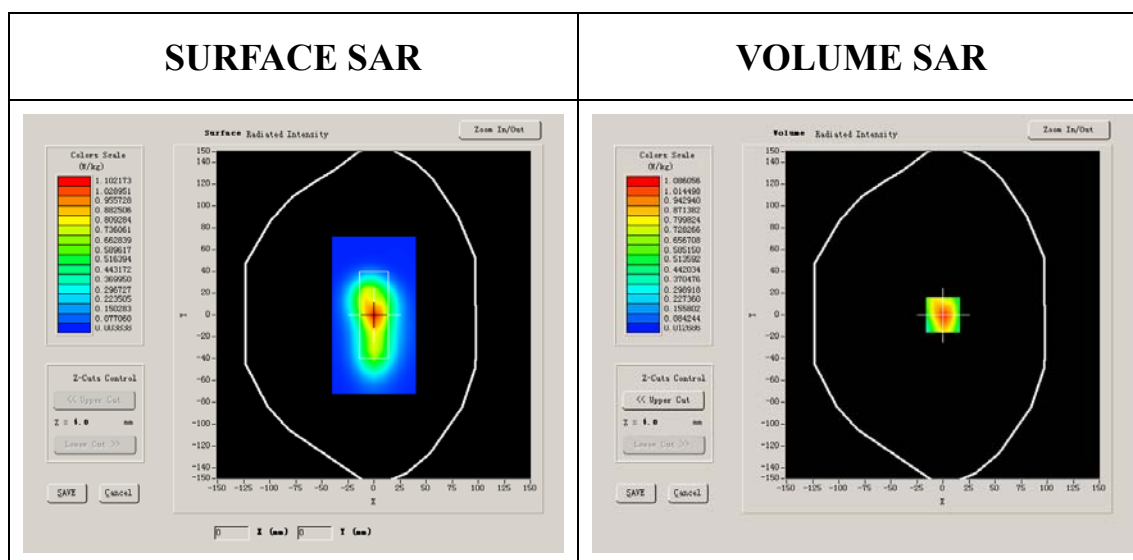
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

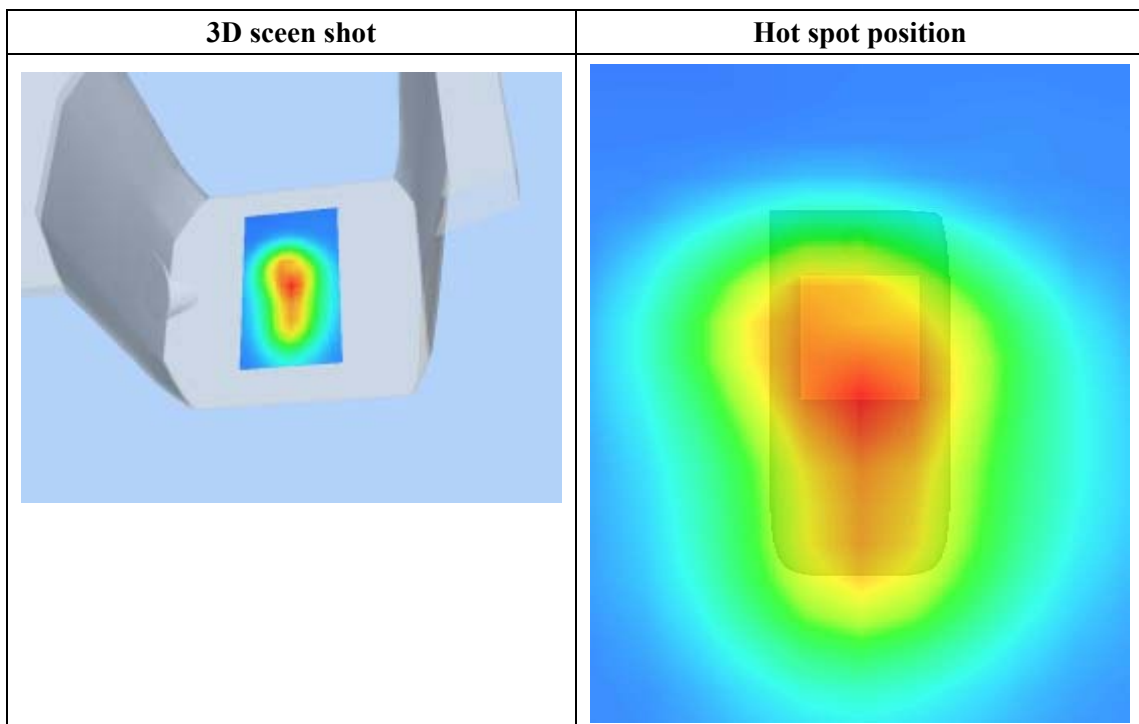
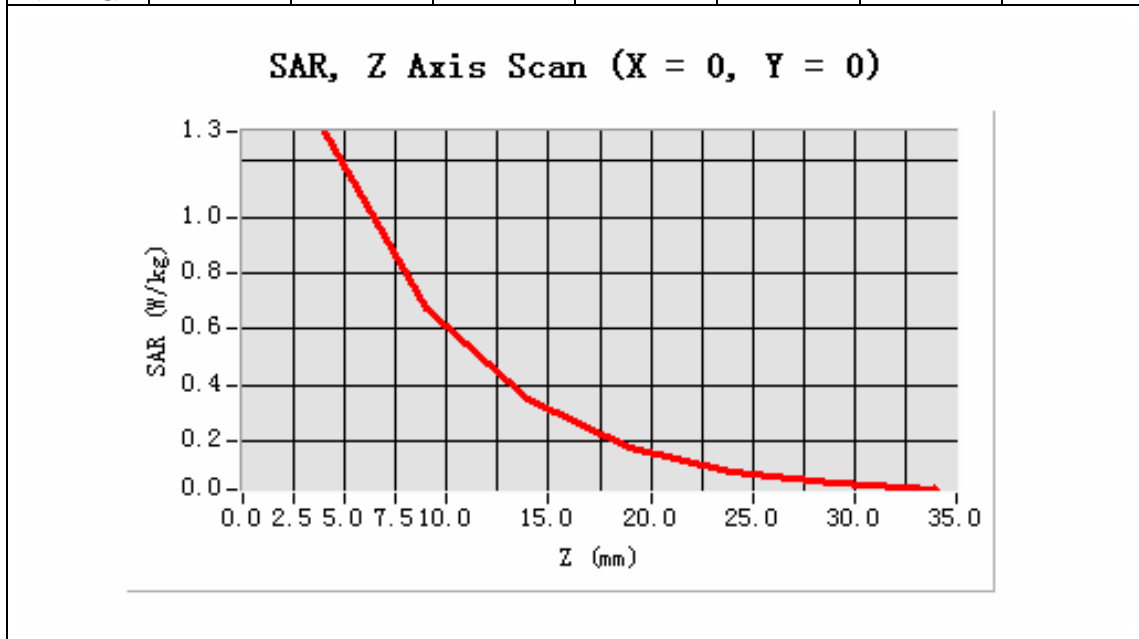


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.107886
SAR 1g (W/Kg)	0.215266

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 32

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

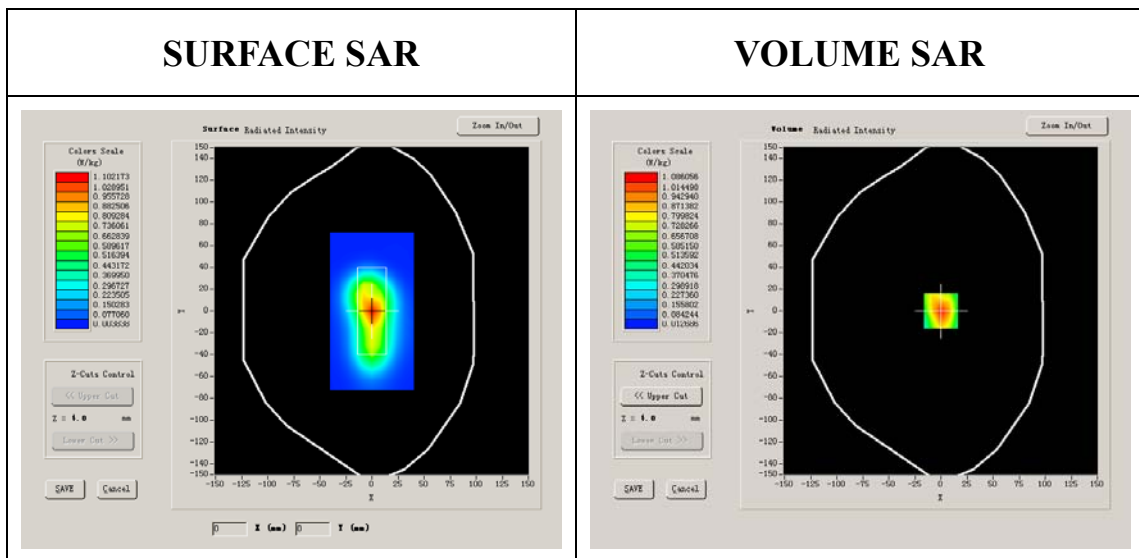
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

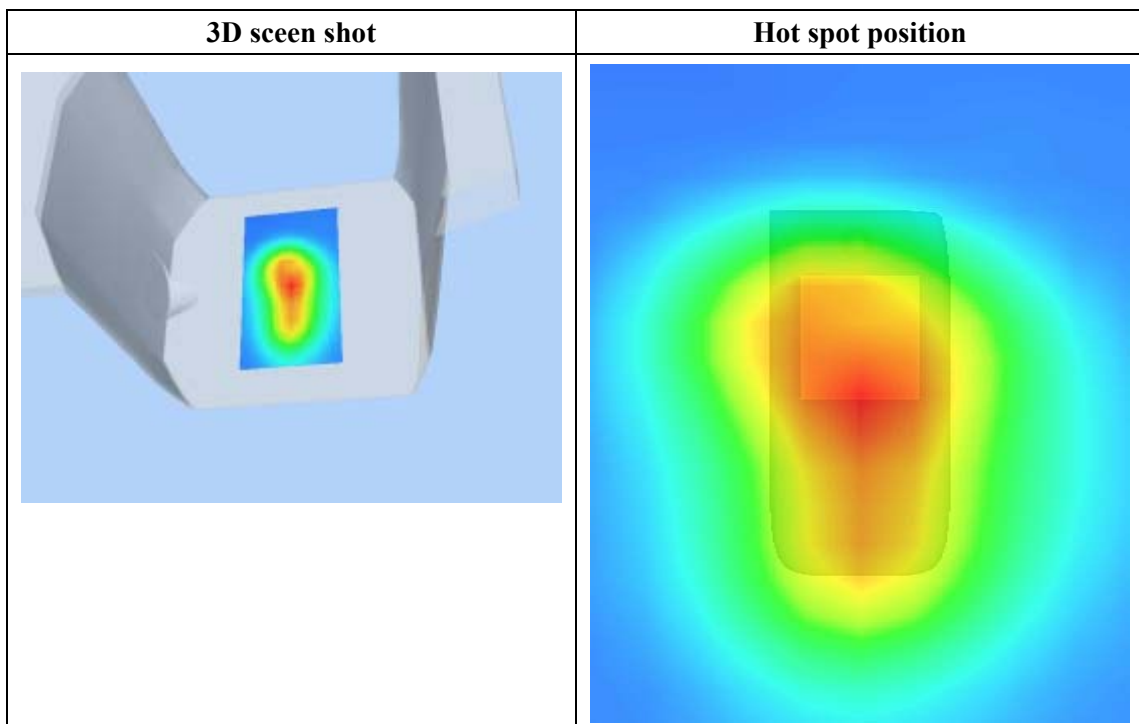
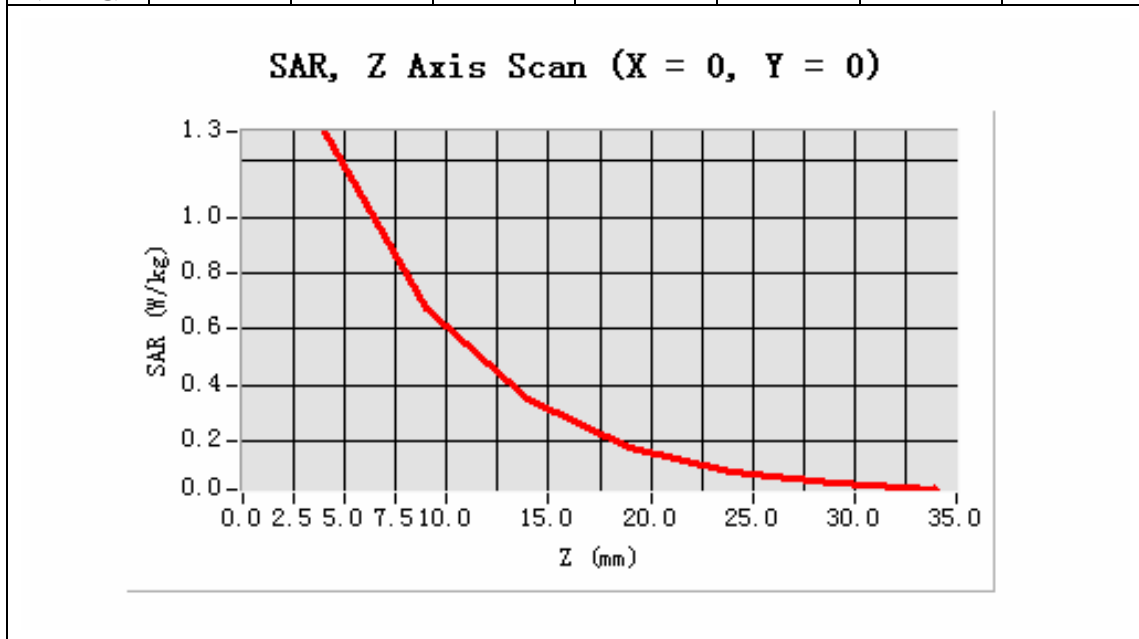


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.105446
SAR 1g (W/Kg)	0.211664

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 33

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

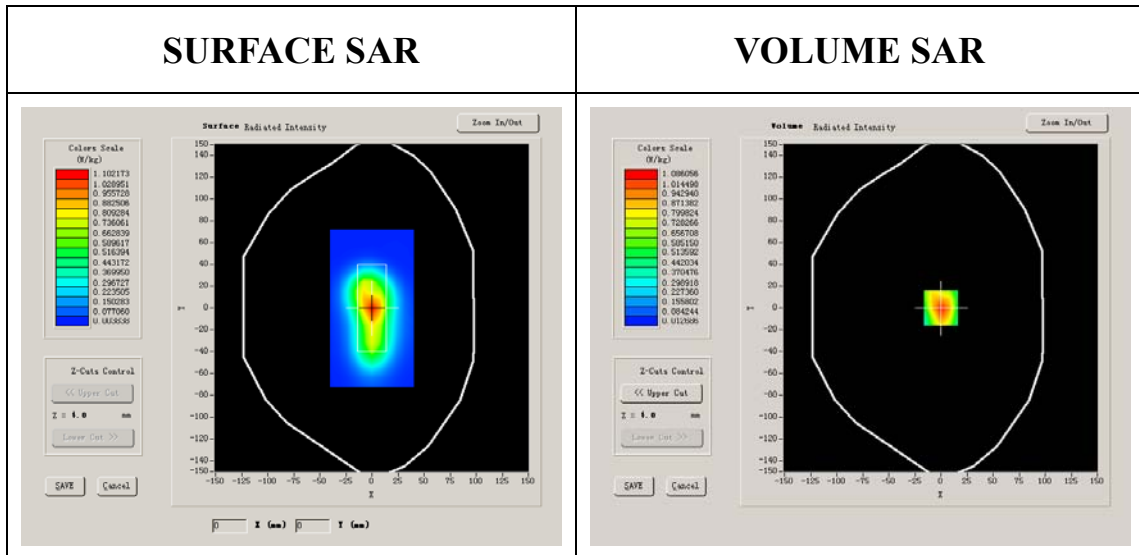
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

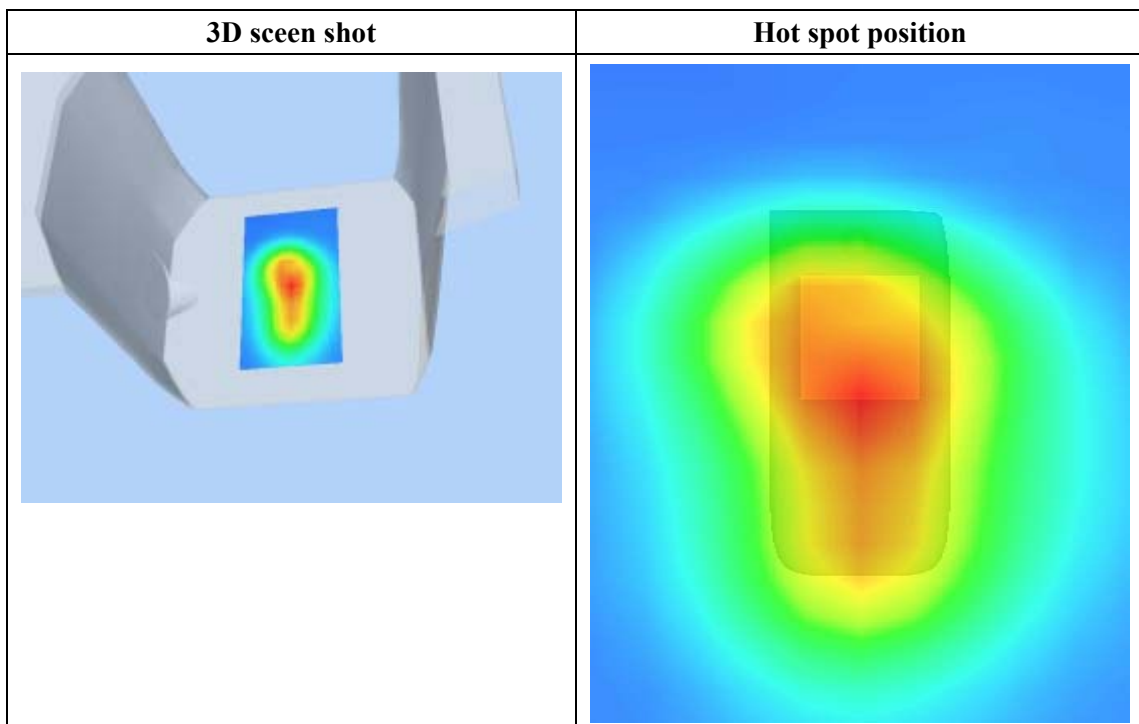
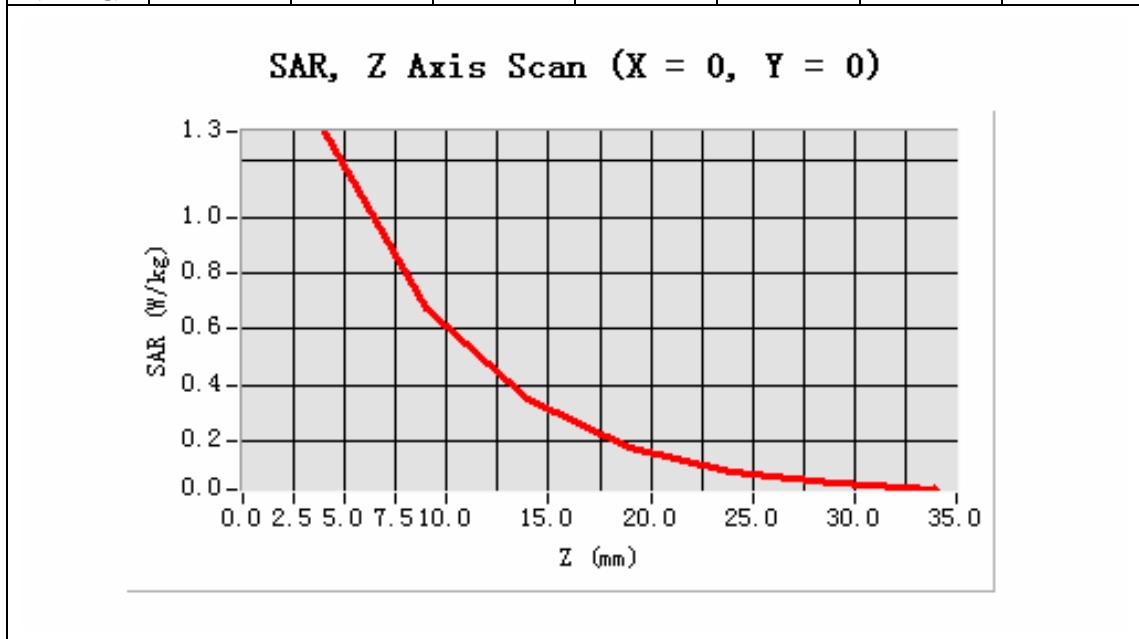


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.105768
SAR 1g (W/Kg)	0.200685

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 34

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

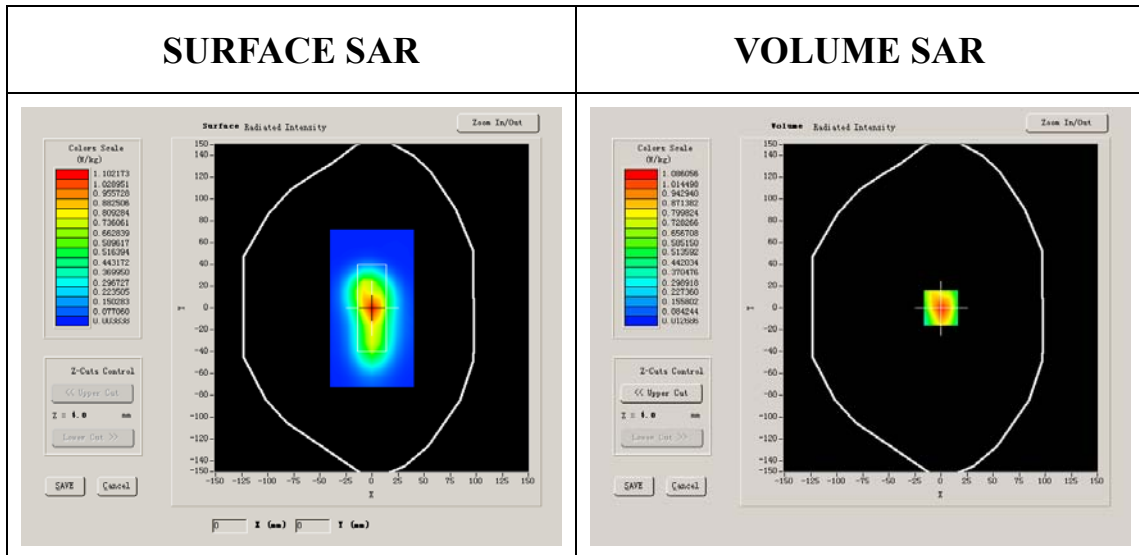
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



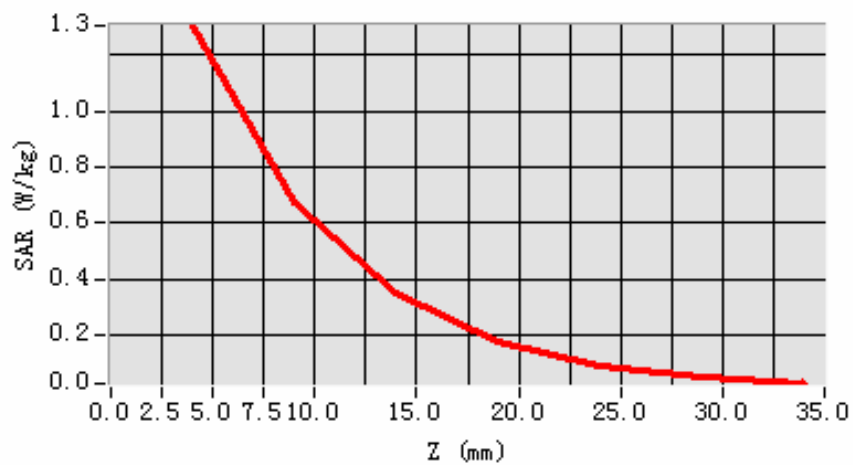
Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.094663
SAR 1g (W/Kg)	0.191535

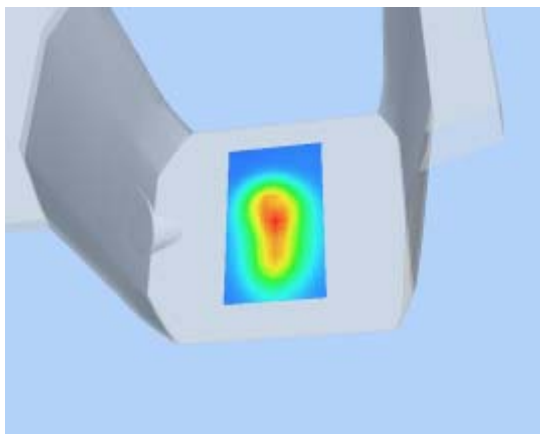
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494

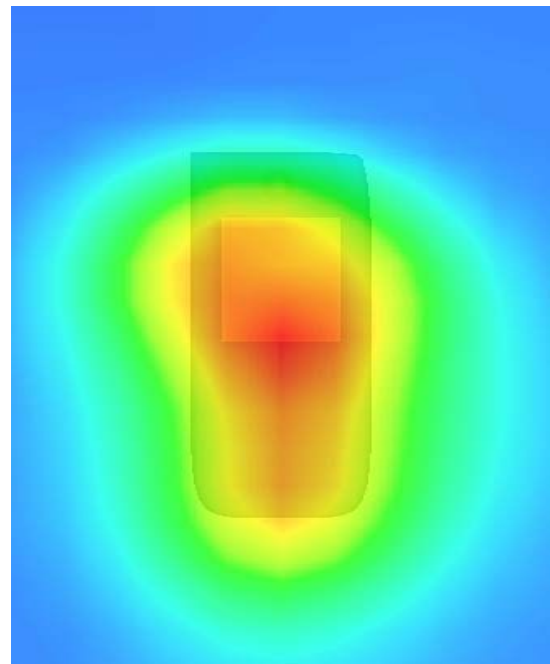
SAR, Z Axis Scan (X = 0, Y = 0)



3D scene shot



Hot spot position



MEASUREMENT 35

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

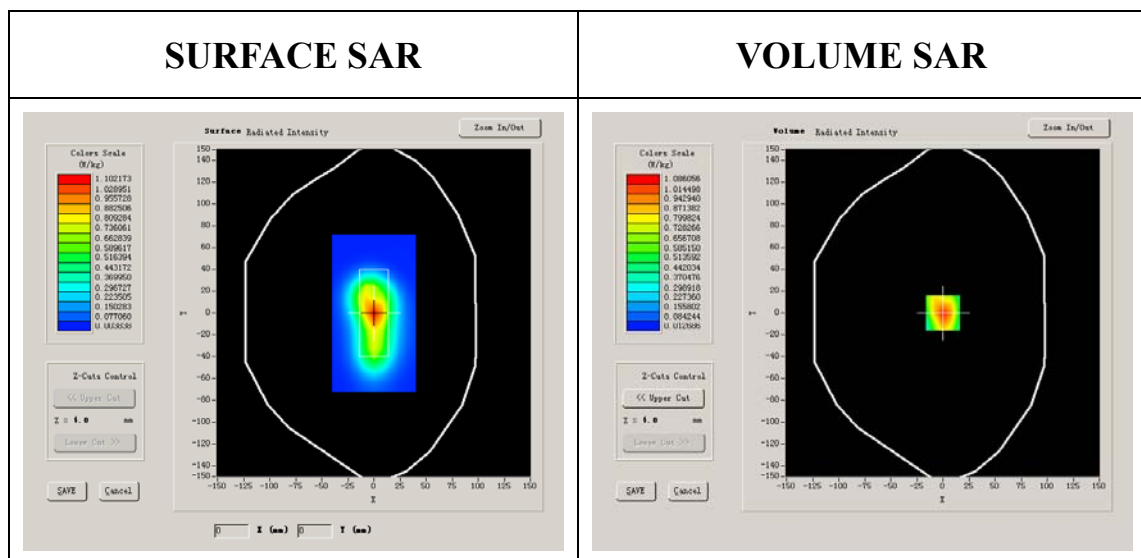
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

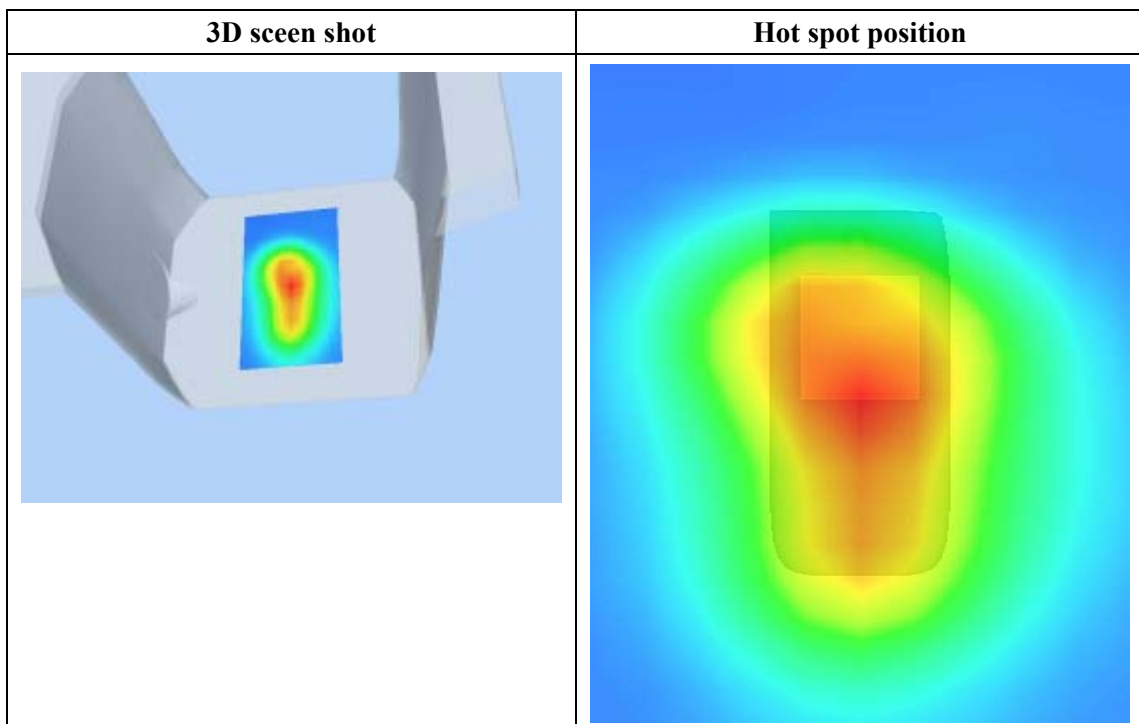
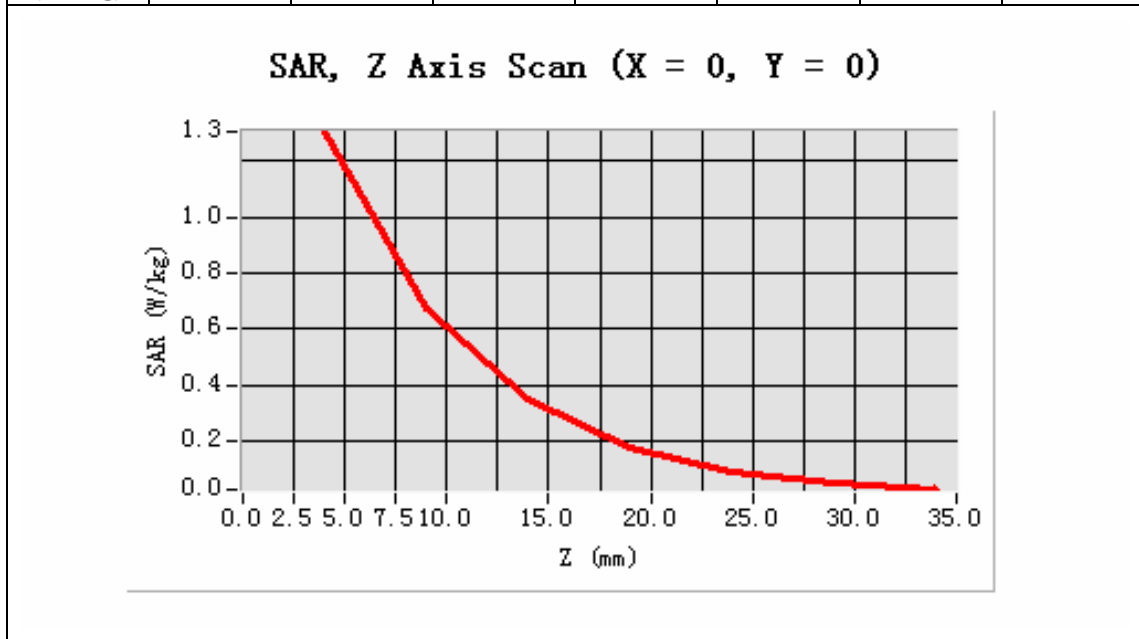


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.093155
SAR 1g (W/Kg)	0.186353

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 36

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

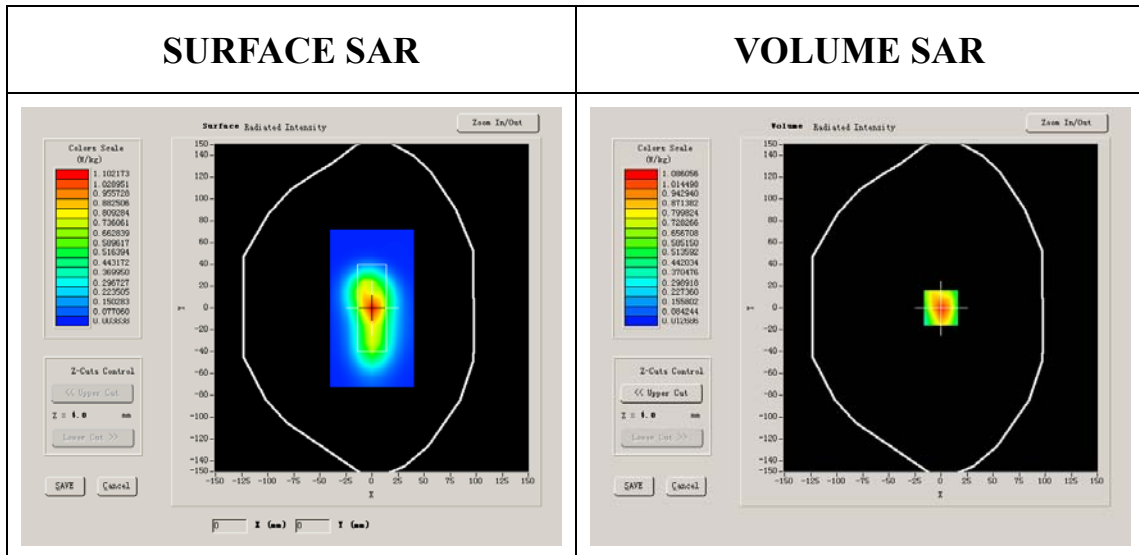
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

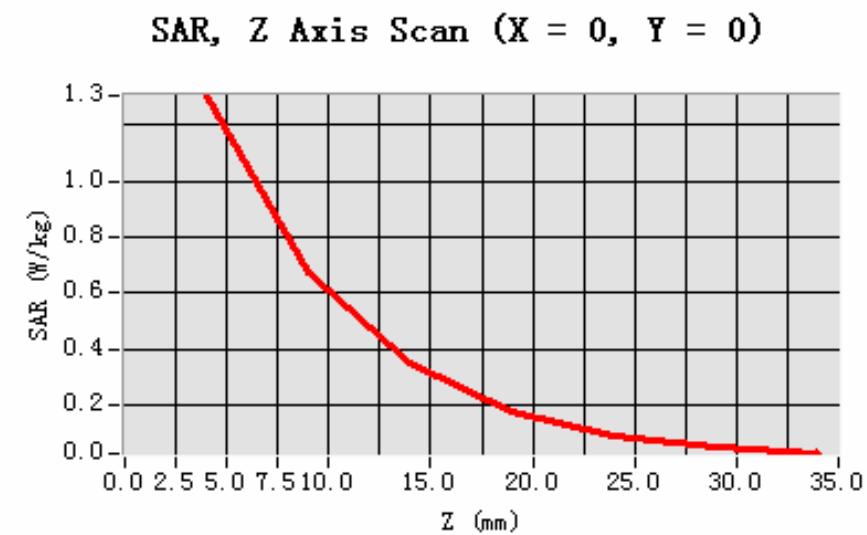


Maximum location: X=0.00, Y=0.00

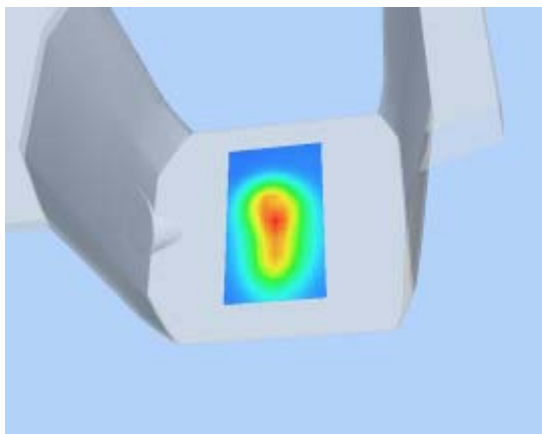
SAR 10g (W/Kg)	0.093242
SAR 1g (W/Kg)	0.183645

Z Axis Scan

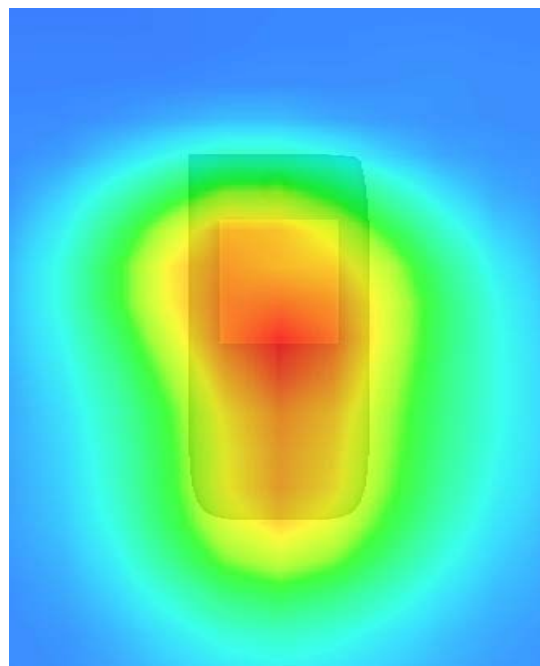
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



3D scene shot



Hot spot position



MEASUREMENT 37

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

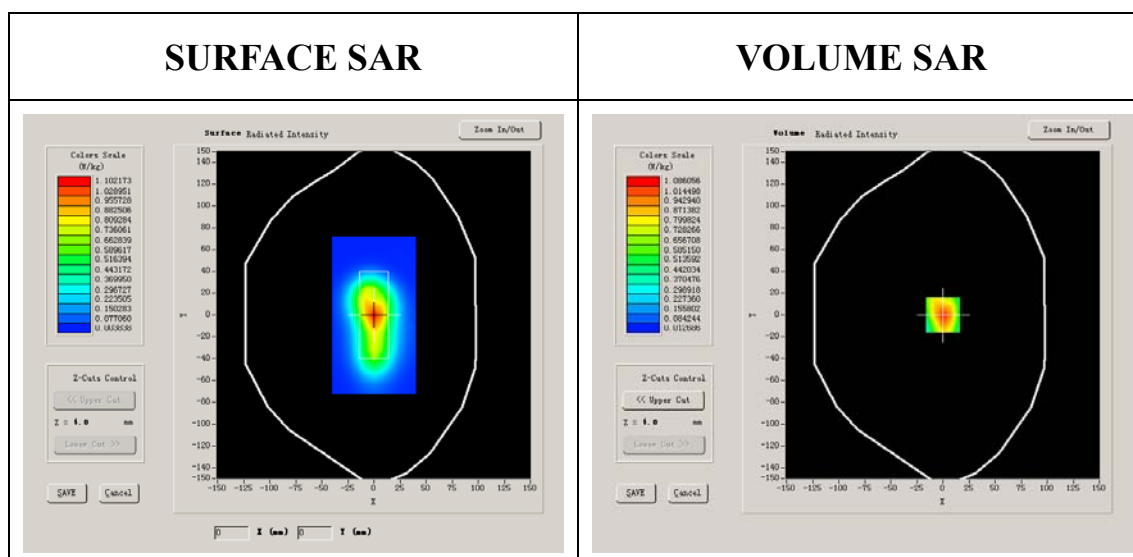
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Middle
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

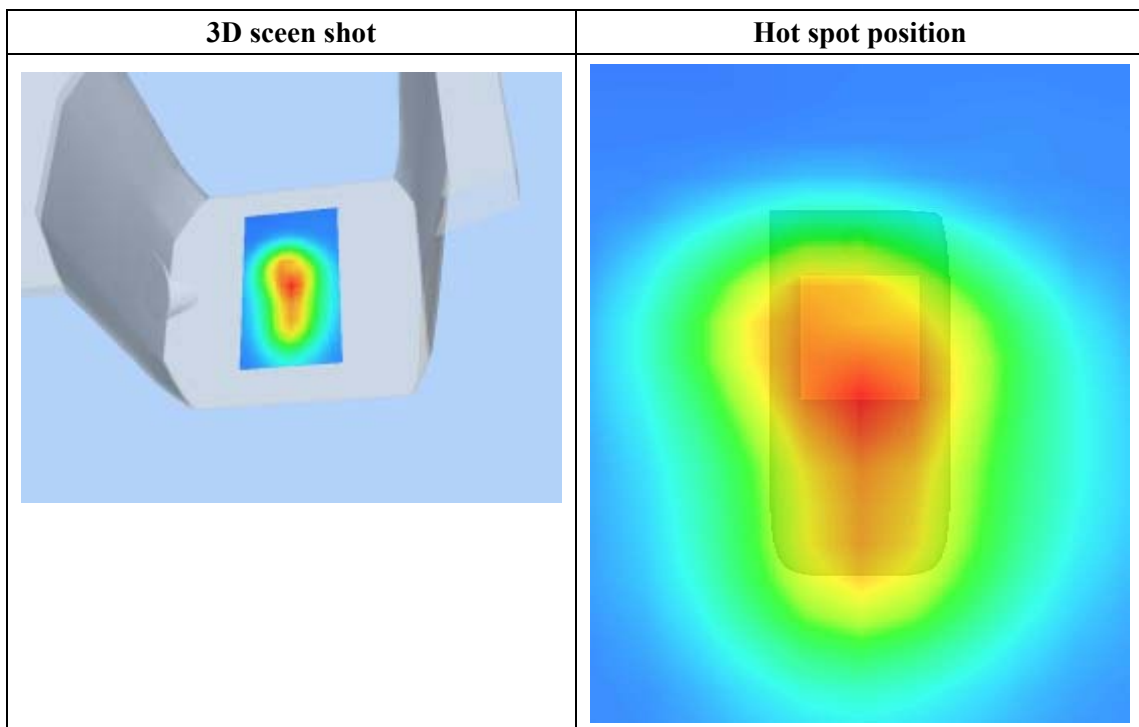
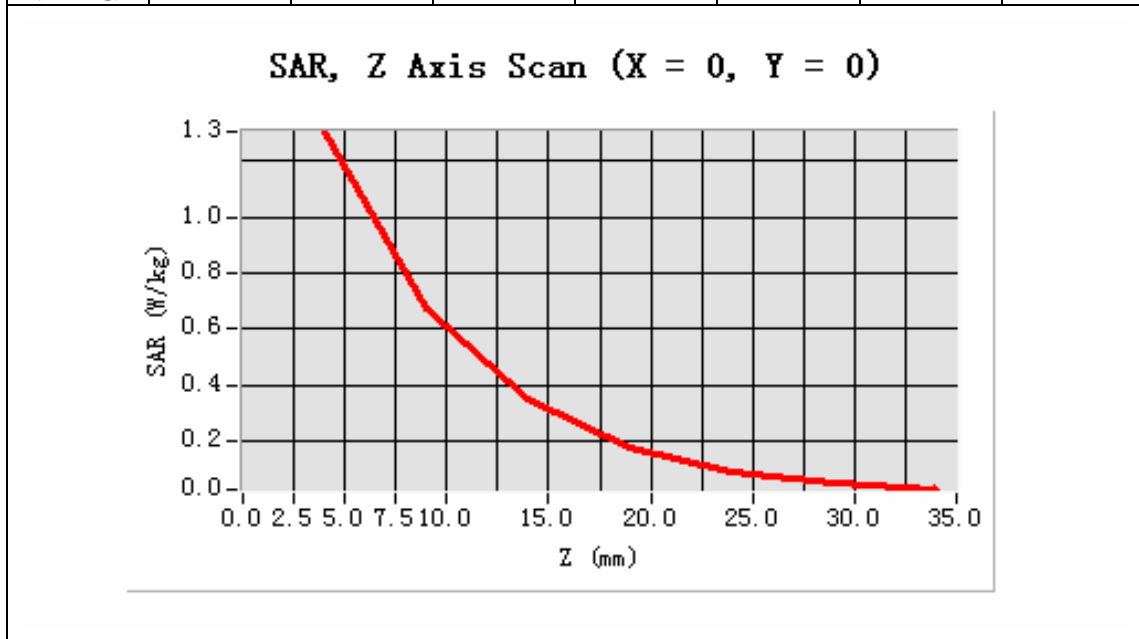


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.092285
SAR 1g (W/Kg)	0.180141

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 38

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

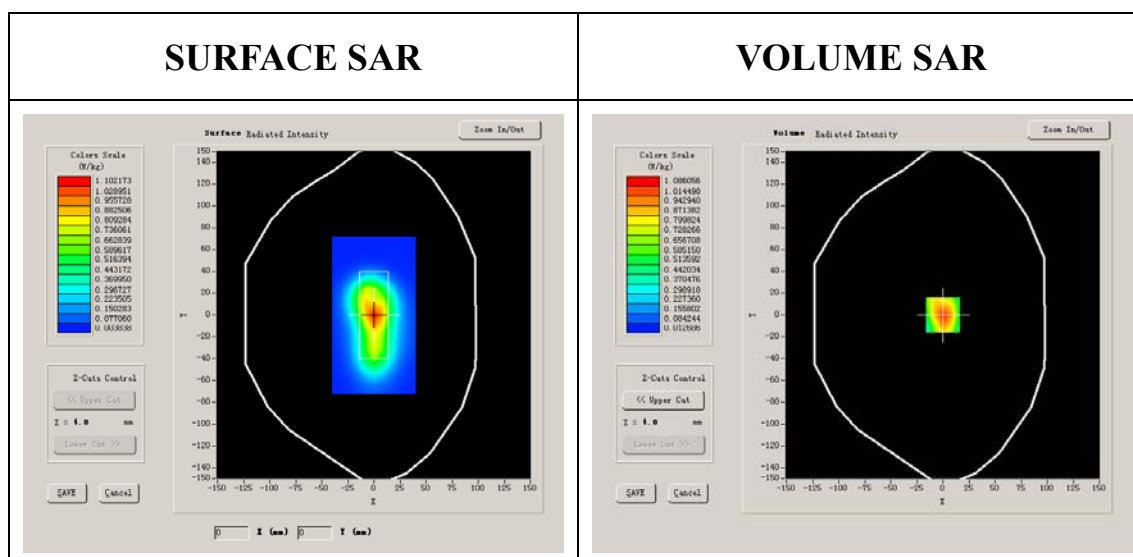
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	Low
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2422.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

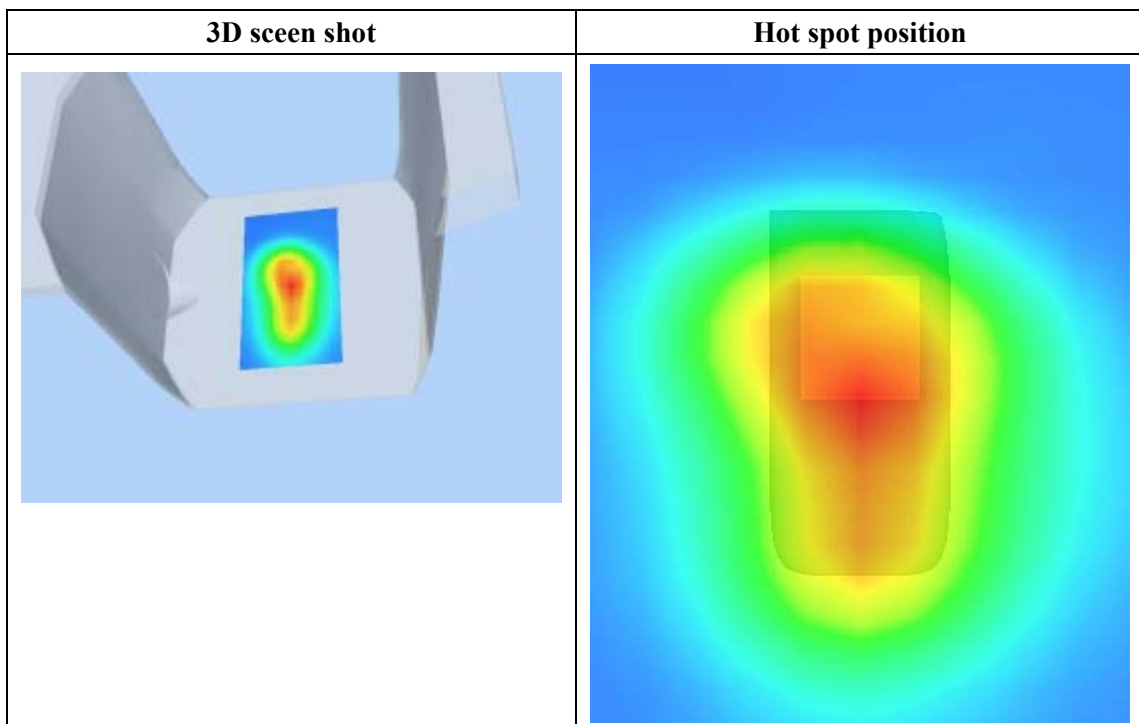
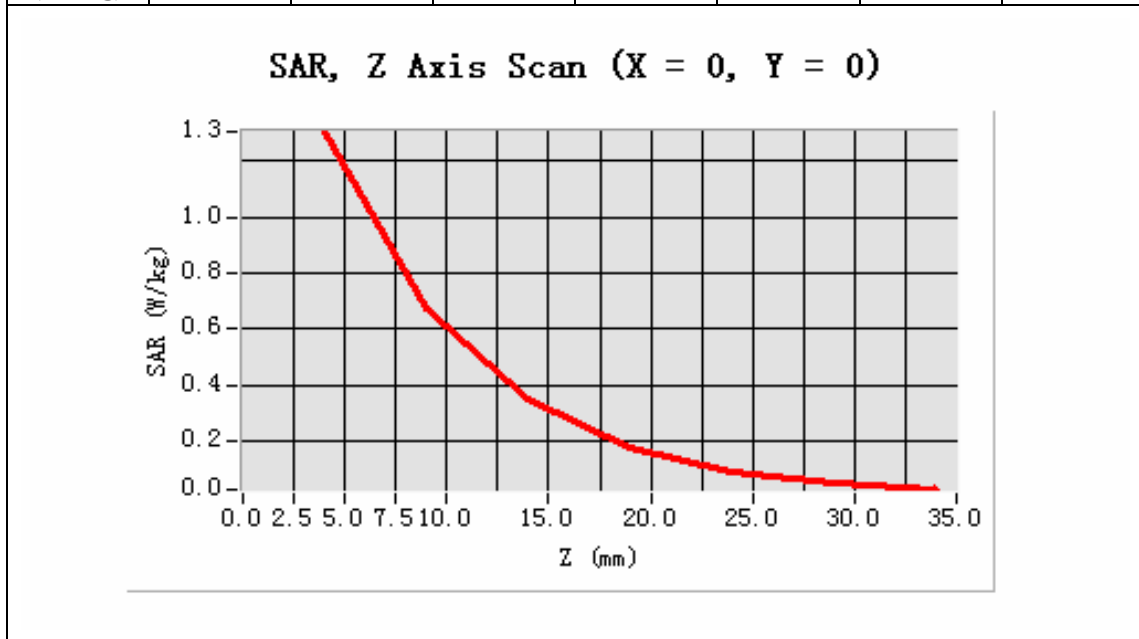


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.141317
SAR 1g (W/Kg)	0.241224

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



MEASUREMENT 39

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/5/2010

Measurement duration: 13 minutes 7 seconds

A. Experimental conditions.

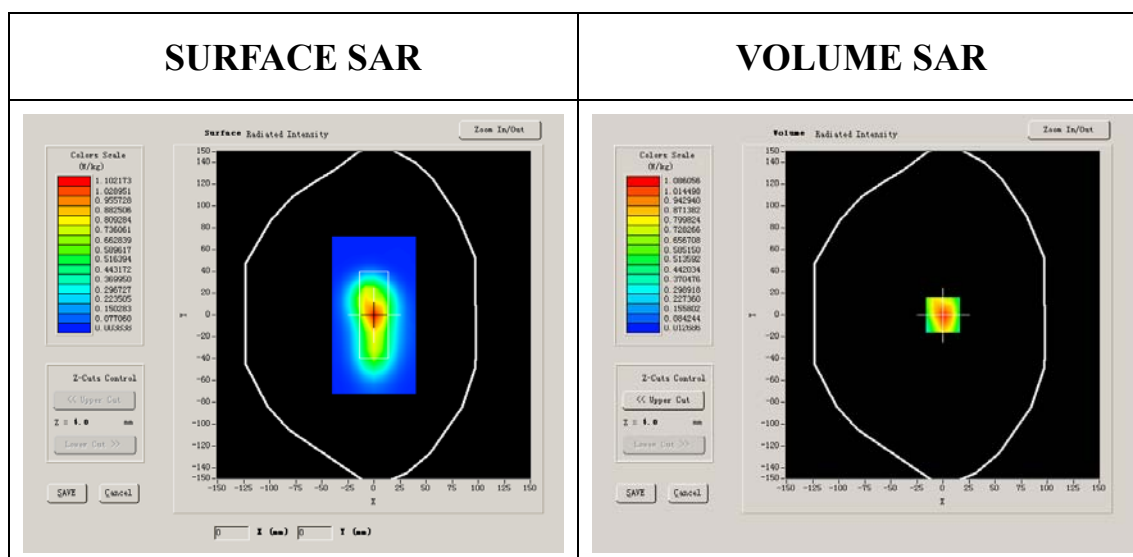
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11 N
Channels	High
Signal	CW

B. SAR Measurement Results

Middle Band SAR:

Frequency (MHz)	2452.000000
Relative permittivity (real part)	51.341000
Relative permittivity	15.877050

Conductivity (S/m)	1.720014
Variation (%)	-0.670000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.4°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

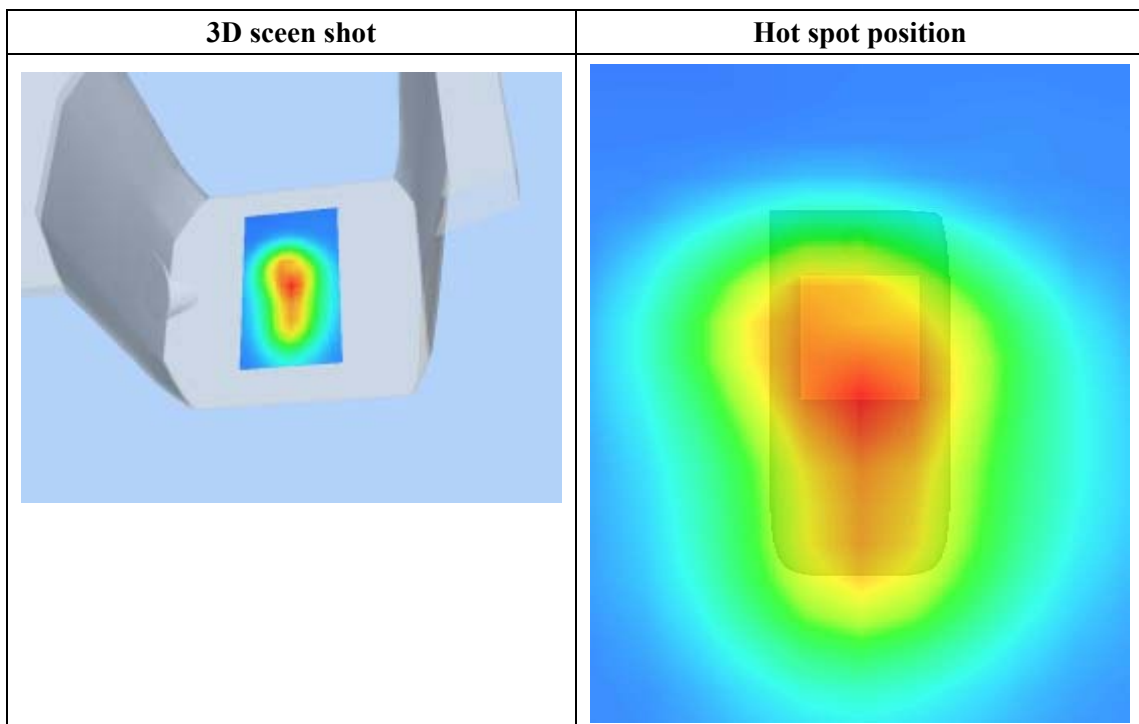
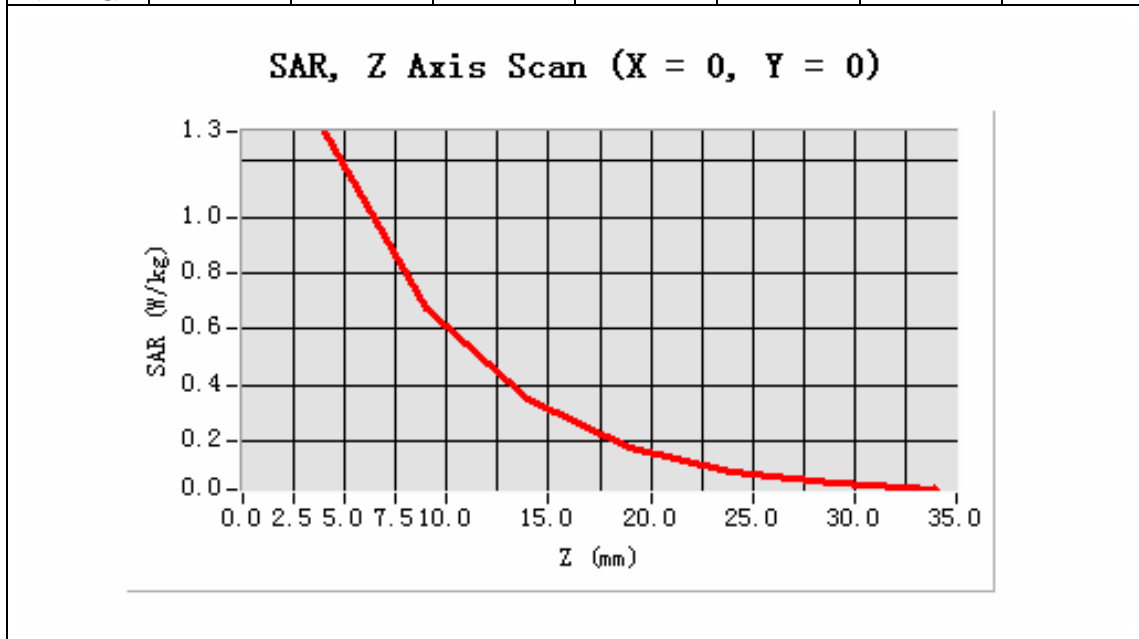


Maximum location: X=0.00, Y=0.00

SAR 10g (W/Kg)	0.152442
SAR 1g (W/Kg)	0.266585

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.3034	0.6704	0.3466	0.1765	0.0915	0.0494



System Performance Check Data(2450MHz Body)

Type: Phone measurement (Complete)

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

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

Date of measurement: 13/4/2010

Measurement duration: 9 minutes 27 seconds

A. Experimental conditions.

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

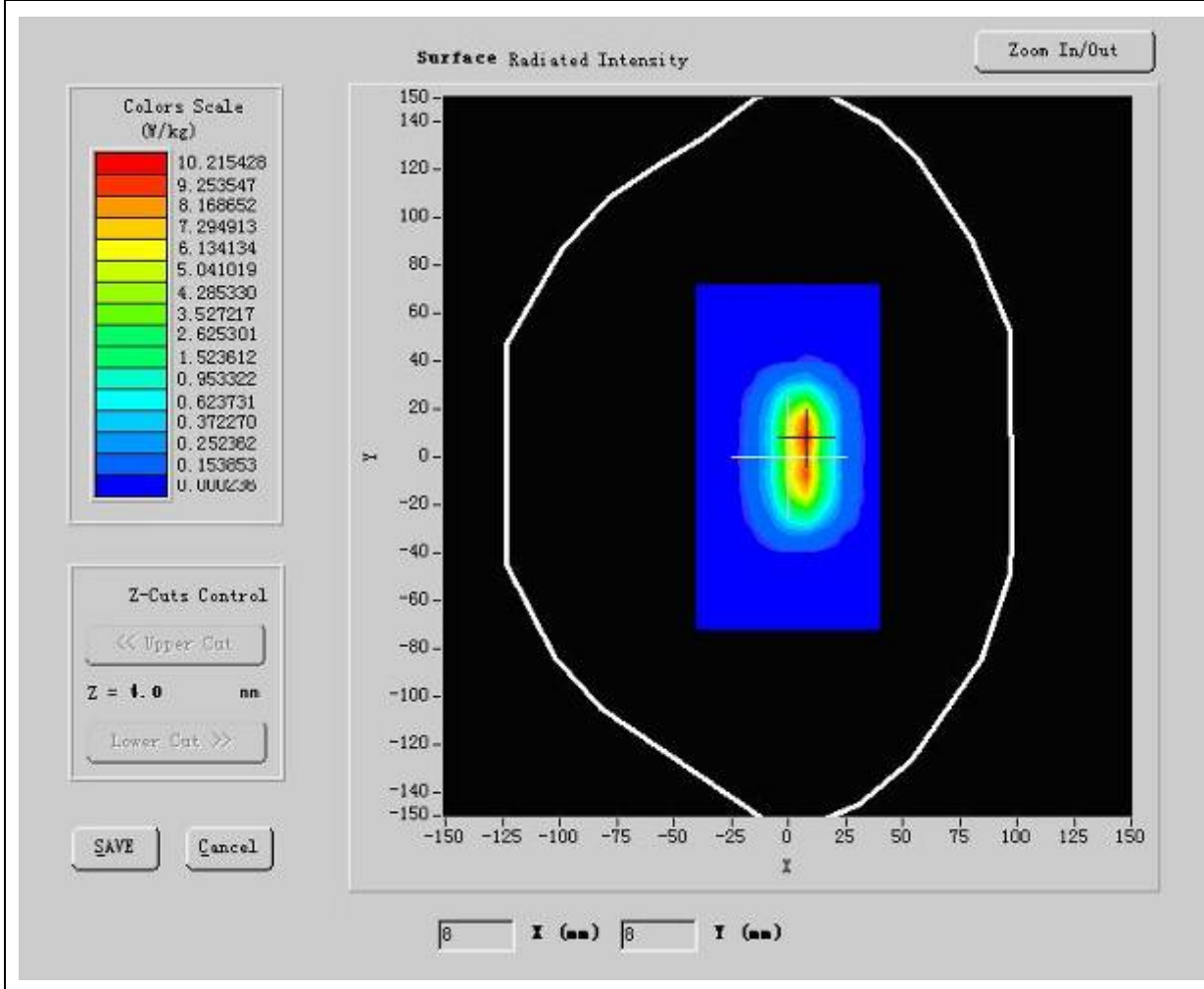
B. SAR Measurement Results

Lower Band SAR:

Frequency (MHz)	2450.000000
Relative permittivity (real part)	39.548876
Relative permittivity	12.991650

Conductivity (S/m)	1.720014
Variation (%)	0.570000
Ambient Temperature:	23.5°C
Liquid Temperature:	22.8°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

SURFACE SAR



Maximum location: X=7.00, Y=8.00

SAR 10g (W/Kg)	7.077634
SAR 1g (W/Kg)	12.988772

Z Axis Scan

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

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

