

FCC SAR

TEST REPORT

of

USB Modem

Model Name: Flying Angel
Trade Name: TechFaith
Report No.: SZ09030017S01
FCC ID: UJQ-FLYANGEL

prepared for

TechFaith Wireless Technology Group Limited.
Building 1, No 13, Yongchang North Road, BDA District, Beijing,
China (100176)

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Morlab Laboratory**

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General Information

1.1. Notes

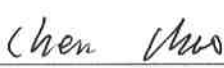
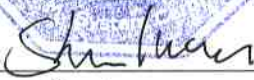
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1.2. Organization item

Report No.:	SZ09030017S01
Date of Issue:	Jul 21, 2009
Date of Tests:	Jul 21, 2009 – Jul 21, 2009
Responsible for Accreditation:	Shu luan
Project Manager:	Chenchao
Deputy Project Manager:	Li Lei

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.

		
Chenchao		Li Lei
Tested by		Reviewed by
(Responsible for the Test Report)		(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
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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: TechFaith Wireless Technology Group Limited.
Address: Building 1, No 13, Yongchang North Road, BDA District, Beijing, China (100176)
Contact Person: David Peng
Telephone: 010-58228411
Facsimile: 010-58227200
E-mail: pengxy@techfaith.cn

3.2. Identification of Manufacturer

Company Name: TechFaith Wireless Technology Group Limited.
Address: Building 1, No 13, Yongchang North Road, BDA District, Beijing, China (100176)
Contact Person: David Peng
Telephone: 010-58228411
Facsimile: 010-58227200
E-mail: pengxy@techfaith.cn

3.3. Equipment Under Test (EUT)

Brand Name: TechFaith
Type Name: TechFaith
Marking Name: Flying Angel
Hardware Version: 8420002T300
Software Version: Flying Lark 0.08
Frequency Bands: GSM 850MHz(channel 128:824.20MHz, channel 190:836.60MHz, channel 251:848.80MHz,)
GSM 1900MHz(channel 512:1850.20MHz, channel 661:1880.00MHz, channel 810:1909.80MHz,)
WCDMA 850MHz(channel 4132: 826.00MHz, channel 4182:836.00MHz, channel 4233: 846.00MHz,)
WCDMA 1900MHz(channel 9262: 1852.00MHz, channel 9400: 1880.00MHz, channel 9538: 1907.00MHz,)
Modulation Mode: GSM 850MHz,GSM 1900MHz,WCDMA 850MHz,WCDMA 1900MHz

Antenna type: Build inside

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	ESN	Hardware Version	Software Version
1#	00000000	8420002T300	Flying Lark 0.08
2#	00000000	8420002T300	Flying Lark 0.08

4. Test Results

4.1. Applied Reference Documents

Leading reference documents for testing:

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

4.2. Test Environment/Conditions

Normal Temperature (NT):	20 ... 25 °C
Relative Humidity:	30 ... 75 %
Air Pressure:	980 ... 1020 hPa
Details of Power Supply:	220V/50Hz AC
Extreme Temperature:	Low Temperature (LT) = -10°C
	High Temperature (HT) = 55°C
Extreme Voltage of the EUT:	Normal Voltage (NV) = 4.75V
	Low Voltage (LV) = 5.0V
	High Voltage (HV) = 5.25V
Test frequency:	GSM 850MHz,GSM 1900MHz, WCDMA 850MHz,WCDMA 1900MHz
Operation mode:	Call established
Power Level:	Maximum output power

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

The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 128, 190 and 251 respectively in the case of GSM 850MHz or is allocated to 512, 661 and 810 respectively in the case of GSM 1900MHz or is allocated to 4132, 4182 and 4233 respectively in the case of WCDMA 850MHz and is allocated to 9262, 9400 and 9538 respectively in the case of WCDMA 1900MHz, The EUT is commanded to operate at maximum transmitting power.

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

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

4.3.Operational Conditions During Test

4.3.1. Informations On The Testing

I. INFORMATIONS ON THE TESTING

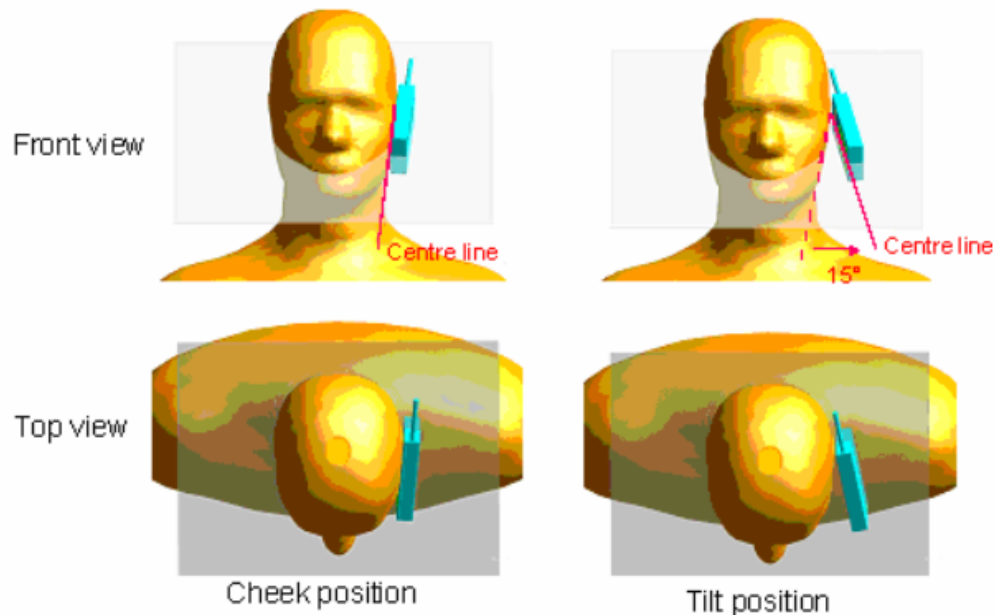
I.1. Normative reference

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

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

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

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



Description of the « cheek » position:

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

Description of the « tilted » position:

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

4.3.2. The Measurement System

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

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

The following figure shows the system.



COMOSAR bench

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

II.1. Phantom

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

II.2. Probe

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

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

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

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

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

4.3.4. Equipments and results of validation testing

Equipments :

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

Results:

Frequency	835MHz	1900MHz
Target value (1g)	10.8 W/Kg(body)	39.7 W/Kg
250 mW input power	2.48 W/Kg (body)	9.84 W/Kg (body)
Test value (1g)	9.92 W/Kg (body)	39.37 W/Kg (body)

Note:Please refer to check the system performance data, the first 194-199 page. 250 mW input power

4.3.5. Dielectric Performance

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

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

transmit band.

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: 23.0~23.8°C, humidity: 54~60%.			
/	Frequency	Permittivity ϵ	Conductivity σ (S/m)
Target value	835 MHz	56.1	0.95
Validation value (Jul 21)	835 MHz	54.540001	0.975187
Target value	1900 MHz	54	1.45
Validation value (Jul 21)	1900 MHz	53.345554	1.428747

4.3.6. Simulant liquids

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

Ingredients (% by weight)	Frequency Band		Frequency Band	
	835MHz		1900MHz	
Tissue Type	Head	Body	Head	Body
Water	41.45	52.4	55.36	40.4
Salt(NaCl)	1.45	1.4	0.35	0.5
Sugar	56.0	45.0	30.45	58.0
HEC	1.0	1.0	0.0	1.0
Bactericide	0.1	0.1	0.0	0.1
Triton	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	13.84	0.0
Acticide SPX	0.0	0.0	0.0	0.0
Dielectric Constant	42.45	56.1	41.00	54.0
Conductivity (S/m)	0.91	0.95	0.38	1.45

4.4. 3G MEASUREMENT PROCEDURES

4.4.1. Procedures Used To Establish Test Signal

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

4.4.2. SAR Measurement Conditions for WCDMA

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

4.4.3. Output Power Verification

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

4.4.4. Body SAR Measurement

SAR for body exposure configurations is measured using the 12.2 kbps RMC with TPC bits configured to all "1s".

4.4.5. USB Dongle with HSUPA

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

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4132	4175	4233	9262	9400	9538
	subtest						
5.2(WCDMA)	non	23.01	22.71	24.17	21.62	21.57	22.44
5.2AA(HSDPA)	1	22.37	22.12	22.58	20.21	19.74	19.32
	2	22.23	22.05	22.46	20.33	19.67	19.88
	3	21.99	21.71	22.06	20.1	19.54	19.3
	4	22.34	22.13	22.73	20.11	19.6	19.28
5.2B(HSUPA)	1	22.94	22.74	22.85	21.05	20.89	21.00
	2	21.12	20.88	21.01	19.21	19.07	19.19
	3	21.84	21.65	21.72	20.18	20.07	20.21
	4	20.81	20.71	21.00	19.07	18.91	19.15
	5	22.96	22.69	22.88	20.96	20.87	20.87

Note: KDB inquiry number (297053)

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 (GSM 850MHz Band)

SAR Values (GSM 850MHz Band), Measured against the body0.

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.2	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Validation Plane with Body device position on Low Channel in GSM mode (Horizontal-Up)	0.228	31.36
Validation Plane with Body device position on Middle Channel in GSM mode (Horizontal-Up)	0.272	31.7
Validation Plane with Body device position on High Channel in GSM mode (Horizontal-Up)	0.342	32.05
Validation Plane with Body device position on Low Channel in GSM mode (Horizontal-Down)	0.305	31.36
Validation Plane with Body device position on Middle Channel in GSM mode (Horizontal-Down)	0.360	31.7
Validation Plane with Body device position on High Channel in GSM mode (Horizontal-Down)	0.385	32.05
Validation Plane with Body device position on Low Channel in GSM mode (Vertical-Front)	0.129	31.36
Validation Plane with Body device position on Middle Channel in GSM mode (Vertical-Front)	0.209	31.7
Validation Plane with Body device position on High Channel in GSM mode (Vertical-Front)	0.283	32.05
Validation Plane with Body device position on Low Channel in GSM mode (Vertical-Back)	0.142	31.36
Validation Plane with Body device position on Middle Channel in GSM mode (Vertical-Back)	0.204	31.7
Validation Plane with Body device position on High Channel in GSM mode (Vertical-Back)	0.252	32.05
Validation Plane with Body device position on High Channel in GSM mode with GPRS (Horizontal-Down)	0.392	32.05
Validation Plane with Body device position on High Channel in GSM mode with EDGE (Horizontal-Down)	0.364	32.05

Summary of Measurement Results (GSM 1900MHz Band)

SAR Values (GSM 1900MHz Band), Measured against the body0.

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.2	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Validation Plane with Body device position on Low Channel in GSM mode (Horizontal-Up)	0.449	31.51
Validation Plane with Body device position on Middle Channel in GSM mode (Horizontal-Up)	0.628	31.9
Validation Plane with Body device position on High Channel in GSM mode (Horizontal-Up)	0.461	31.48
Validation Plane with Body device position on Low Channel in GSM mode (Horizontal-Down)	0.184	31.51
Validation Plane with Body device position on Middle Channel in GSM mode (Horizontal-Down)	0.828	31.9
Validation Plane with Body device position on High Channel in GSM mode (Horizontal-Down)	0.682	31.48
Validation Plane with Body device position on Low Channel in GSM mode (Vertical-Front)	0.525	31.51
Validation Plane with Body device position on Middle Channel in GSM mode (Vertical-Front)	0.494	31.9
Validation Plane with Body device position on High Channel in GSM mode (Vertical-Front)	0.517	31.48
Validation Plane with Body device position on Low Channel in GSM mode (Vertical-Back)	0.365	31.51
Validation Plane with Body device position on Middle Channel in GSM mode (Vertical-Back)	0.279	31.9
Validation Plane with Body device position on High Channel in GSM mode (Vertical-Back)	0.299	31.48
Validation Plane with Body device position on Middle Channel in GSM mode with GPRS (Horizontal-Down)	0.735	31.9
Validation Plane with Body device position on Middle Channel in GSM mode with EDGE (Horizontal-Down)	0.644	31.9

Summary of Measurement Results (WCDMA 850MHz Band)

SAR Values (WCDMA 850MHz Band), Measured against the body0.

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.2	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Validation Plane with Body device position on Low Channel in WCDMA mode (Horizontal-Up)	0.187	23.1
Validation Plane with Body device position on Middle Channel in WCDMA mode (Horizontal-Up)	0.322	22.71
Validation Plane with Body device position on High Channel in WCDMA mode (Horizontal-Up)	0.245	24.17
Validation Plane with Body device position on Low Channel in WCDMA mode (Horizontal-Down)	0.232	23.1
Validation Plane with Body device position on Middle Channel in WCDMA mode (Horizontal-Down)	0.392	22.71
Validation Plane with Body device position on High Channel in WCDMA mode (Horizontal-Down)	0.273	24.17
Validation Plane with Body device position on Low Channel in WCDMA mode (Vertical-Front)	0.108	23.1
Validation Plane with Body device position on Middle Channel in WCDMA mode (Vertical-Front)	0.198	22.71
Validation Plane with Body device position on High Channel in WCDMA mode (Vertical-Front)	0.166	24.17
Validation Plane with Body device position on Low Channel in WCDMA mode (Vertical-Back)	0.114	23.1
Validation Plane with Body device position on Middle Channel in WCDMA mode (Vertical-Back)	0.217	22.71
Validation Plane with Body device position on High Channel in WCDMA mode (Vertical-Back)	0.175	24.17
Validation Plane with Body device position on Middle Channel in WCDMA mode with HSDPA (Horizontal-Down)	0.419	22.71
Validation Plane with Body device position on Middle Channel in WCDMA mode with HSUPA (Horizontal-Down)	0.422	22.71

Summary of Measurement Results (WCDMA 1900MHz Band)

SAR Values (WCDMA 1900MHz Band), Measured against the body0.

Temperature: 23.0~23.8°C, humidity: 54~60%.		
Limit of SAR (W/kg)	1 g Average	
	1.2	
Test Case	Measurement Result (W/kg)	
	1 g Average (W/kg)	Power level (dBm)
Validation Plane with Body device position on Low Channel in WCDMA mode (Horizontal-Up)	0.337	21.62
Validation Plane with Body device position on Middle Channel in WCDMA mode (Horizontal-Up)	0.387	21.57
Validation Plane with Body device position on High Channel in WCDMA mode (Horizontal-Up)	0.400	22.44
Validation Plane with Body device position on Low Channel in WCDMA mode (Horizontal-Down)	0.338	21.62
Validation Plane with Body device position on Middle Channel in WCDMA mode (Horizontal-Down)	0.431	21.57
Validation Plane with Body device position on High Channel in WCDMA mode (Horizontal-Down)	0.423	22.44
Validation Plane with Body device position on Low Channel in WCDMA mode (Vertical-Front)	0.287	21.62
Validation Plane with Body device position on Middle Channel in WCDMA mode (Vertical-Front)	0.371	21.57
Validation Plane with Body device position on High Channel in WCDMA mode (Vertical-Front)	0.348	22.44
Validation Plane with Body device position on Low Channel in WCDMA mode (Vertical-Back)	0.189	21.62
Validation Plane with Body device position on Middle Channel in WCDMA mode (Vertical-Back)	0.196	21.57
Validation Plane with Body device position on High Channel in WCDMA mode (Vertical-Back)	0.186	22.44
Validation Plane with Body device position on Middle Channel in WCDMA mode with HSDPA (Horizontal-Down)	0.417	21.57
Validation Plane with Body device position on Middle Channel in WCDMA mode with HSUPA (Horizontal-Down)	0.464	21.57

Note: 1. 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)

2. The separation distance is determined according to FCC KDB 447498 D01 Section 2(b)(ii)(1) states, the SAR value of 5mm distance is less than 50% of initial touching position.

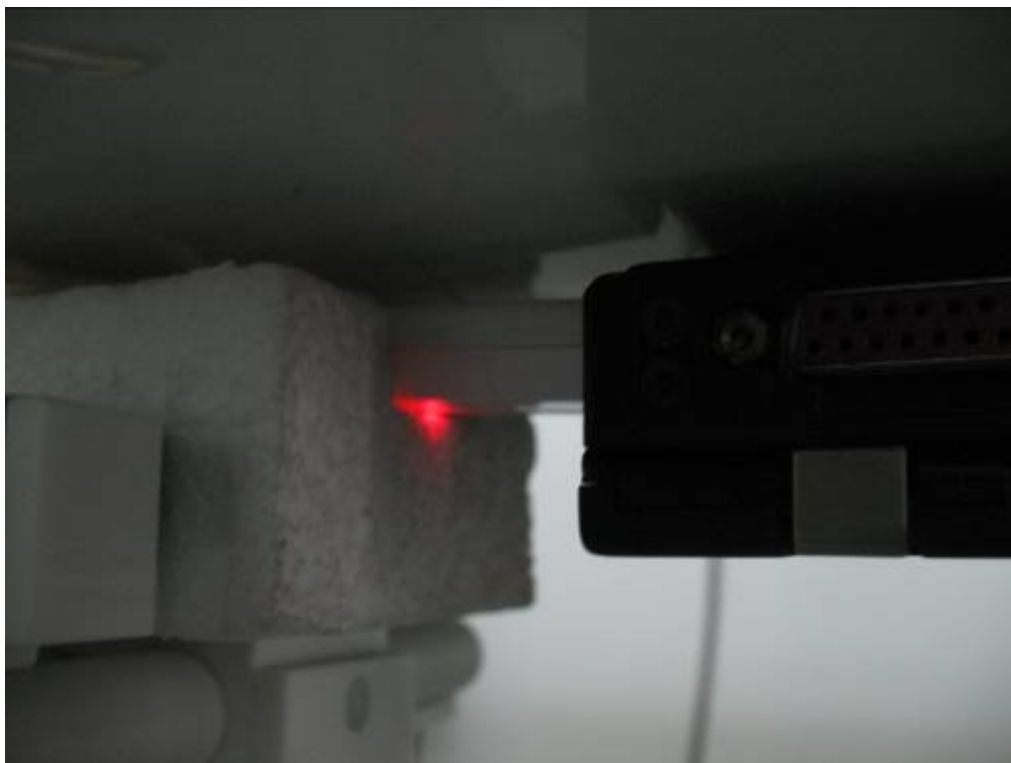
Annex A Accreditation Certificate

 
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
(CQCS Testing Co. Ltd.)
<u>Electronic Testing Building Wenguang Road, Shahe West, Xili Town, Nanshan</u>
<u>District, Shenzhen, Guangdong, China</u>
<i>to ISO/IEC 17025:1999 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing and calibration.</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: 2007-01-17
Date of Expiry: 2009-10-08
Date of Initial Accreditation: 1999-08-03

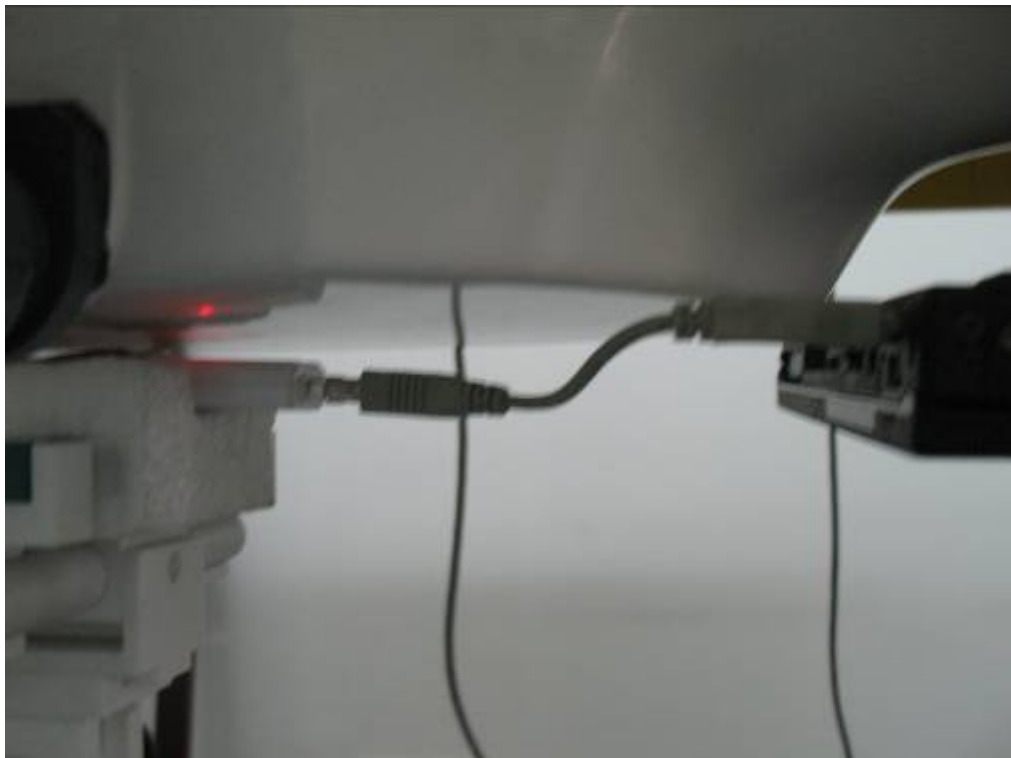
Signed on behalf of China National Accreditation Service for Conformity Assessment
China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation systems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

Annex B Photographs of the EUT

1 EUT Horizontal-Up(PC:IBM T42)



2 EUT Horizontal-Down



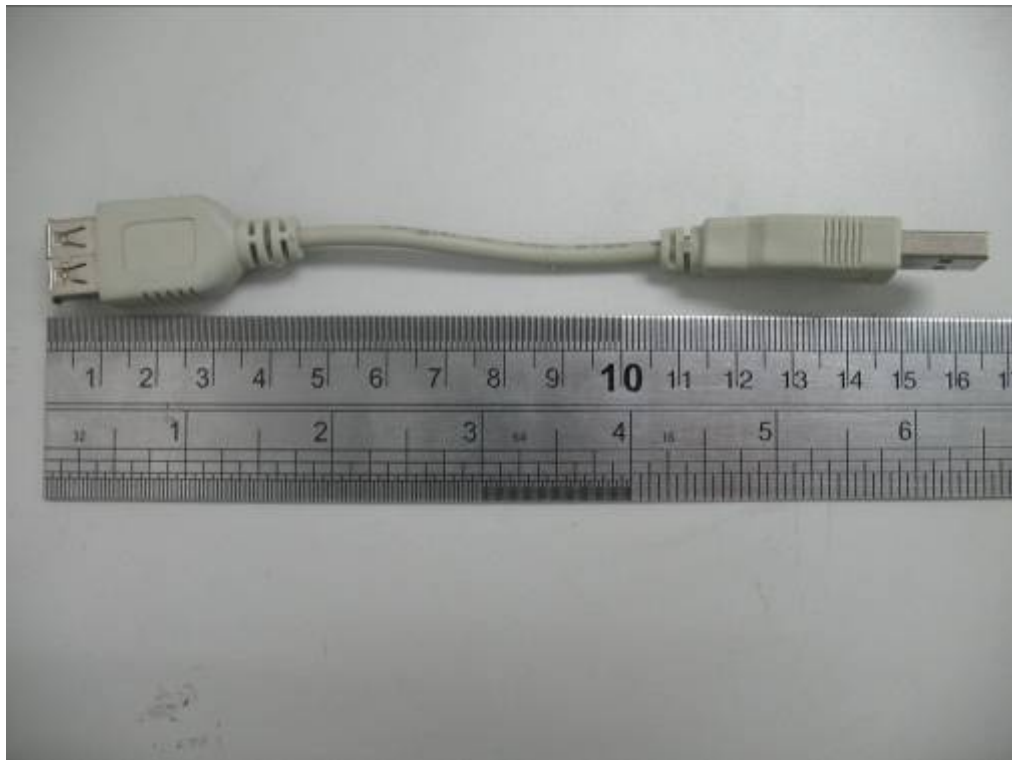
3 EUT Vertical-Front(PC:IBM T20)



4 EUT Vertical-Back



5 Data line



Annex C Graph Test Results

		Measurement 1: Validation Plane with Body device position on Low Channel in GSM mode (Horizontal-Up) Measurement 2: Validation Plane with Body device position on Middle Channel in GSM mode (Horizontal-Up) Measurement 3: Validation Plane with Body device position on High Channel in GSM mode (Horizontal-Up) Measurement 4: Validation Plane with Body device position on Low Channel in GSM mode (Horizontal-Down) Measurement 5: Validation Plane with Body device position on Middle Channel in GSM mode (Horizontal-Down) Measurement 6: Validation Plane with Body device position on High Channel in GSM mode (Horizontal-Down) Measurement 7: Validation Plane with Body device position on Low Channel in GSM mode (Vertical-Front) Measurement 8: Validation Plane with Body device position on Middle Channel in GSM mode (Vertical-Front) Measurement 9: Validation Plane with Body device position on High Channel in GSM mode (Vertical-Front) Measurement 10: Validation Plane with Body device position on Low Channel in GSM mode (Vertical-Back) Measurement 11: Validation Plane with Body device position on Middle Channel in GSM mode (Vertical-Back) Measurement 12: Validation Plane with Body device position on High Channel in GSM mode (Vertical-Back) Measurement 13: Validation Plane with Body device position on High Channel in GSM mode with GPRS (Horizontal-Down)
	GSM 850	

		Measurement 14: Validation Plane with Body device position on High Channel in GSM mode with EDGE (Horizontal-Down)
	GSM 1900	Measurement 15: Validation Plane with Body device position on Low Channel in GSM mode (Horizontal-Up) Measurement 16: Validation Plane with Body device position on Middle Channel in GSM mode (Horizontal-Up) Measurement 17: Validation Plane with Body device position on High Channel in GSM mode (Horizontal-Up) Measurement 18: Validation Plane with Body device position on Low Channel in GSM mode (Horizontal-Down) Measurement 19: Validation Plane with Body device position on Middle Channel in GSM mode (Horizontal-Down) Measurement 20: Validation Plane with Body device position on High Channel in GSM mode (Horizontal-Down) Measurement 21: Validation Plane with Body device position on Low Channel in GSM mode (Vertical-Front) Measurement 22: Validation Plane with Body device position on Middle Channel in GSM mode (Vertical-Front) Measurement 23: Validation Plane with Body device position on High Channel in GSM mode (Vertical-Front) Measurement 24: Validation Plane with Body device position on Low Channel in GSM mode (Vertical-Back) Measurement 25: Validation Plane with Body device position on Middle Channel in GSM mode (Vertical-Back) Measurement 26: Validation Plane with Body device position on High Channel in GSM mode (Vertical-Back) Measurement 27: Validation Plane with Body device position on Middle Channel in GSM mode with GPRS

		(Horizontal-Down) Measurement 28: Validation Plane with Body device position on Middle Channel in GSM mode with EDGE (Horizontal-Down)
	WCDMA 850MHz	Validation Plane with Body device position on Low Channel in WCDMA mode (Horizontal-Up) Validation Plane with Body device position on Middle Channel in WCDMA mode (Horizontal-Up) Validation Plane with Body device position on High Channel in WCDMA mode (Horizontal-Up) Validation Plane with Body device position on Low Channel in WCDMA mode (Horizontal-Down) Validation Plane with Body device position on Middle Channel in WCDMA mode (Horizontal-Down) Validation Plane with Body device position on Back Channel in WCDMA mode (Horizontal-Down) Validation Plane with Body device position on Low Channel in WCDMA mode (Vertical-Front) Validation Plane with Body device position on Middle Channel in WCDMA mode (Vertical-Front) Validation Plane with Body device position on High Channel in WCDMA mode (Vertical-Front) Validation Plane with Body device position on Low Channel in WCDMA mode (Vertical-Back) Validation Plane with Body device position on Middle Channel in WCDMA mode (Vertical-Back) Validation Plane with Body device position on High Channel in WCDMA mode (Vertical-Back) Validation Plane with Body device position on Middle Channel in WCDMA mode with HSDPA (Horizontal-Down) Validation Plane with Body device position on Middle Channel in WCDMA mode with HSUPA (Horizontal-Down)
	WCDMA 1900MHz	Validation Plane with Body device position on Low Channel in WCDMA mode (Horizontal-Up) Validation Plane with Body device position on Middle Channel in WCDMA mode (Horizontal-Up) Validation Plane with Body device position on High Channel in WCDMA mode (Horizontal-Up) Validation Plane with Body device position on Low

		Channel in WCDMA mode (Horizontal-Down) Validation Plane with Body device position on Middle Channel in WCDMA mode (Horizontal-Down) Validation Plane with Body device position on Back Channel in WCDMA mode (Horizontal-Down) Validation Plane with Body device position on Low Channel in WCDMA mode (Vertical-Front) Validation Plane with Body device position on Middle Channel in WCDMA mode (Vertical-Front) Validation Plane with Body device position on High Channel in WCDMA mode (Vertical-Front) Validation Plane with Body device position on Low Channel in WCDMA mode (Vertical-Back) Validation Plane with Body device position on Middle Channel in WCDMA mode (Vertical-Back) Validation Plane with Body device position on High Channel in WCDMA mode (Vertical-Back) Validation Plane with Body device position on Middle Channel in WCDMA mode with HSDPA (Horizontal-Down) Validation Plane with Body device position on Middle Channel in WCDMA mode with HSUPA (Horizontal-Down)
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Note: 1.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 5mm (taking into account of the IEEE 1528 and the place of the antenna)。

2. The separation distance is determined corrodng to FCC KDB 447498 D01 Section 2(b)(ii)(1) states, the SAR value of 5mm distance is less than 50% of initial touching position.

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: 21/7/2009

Measurement duration: 9 minutes 45 seconds

A. Experimental conditions.

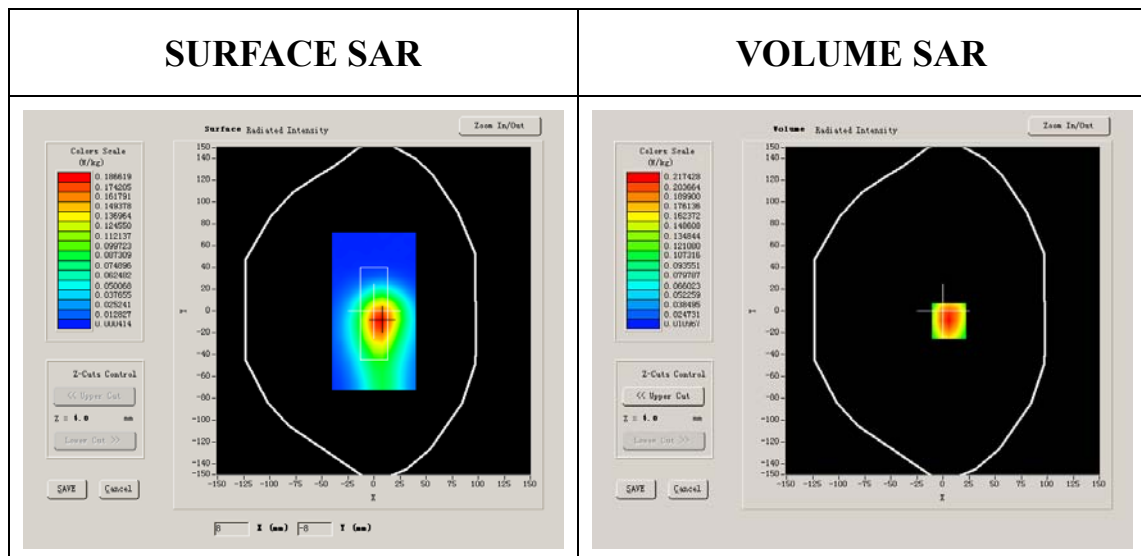
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GSM

C. SAR Measurement Results

Lower Band SAR (Channel 128):

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

Conductivity (S/m)	0.974596
Variation (%)	15.890000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



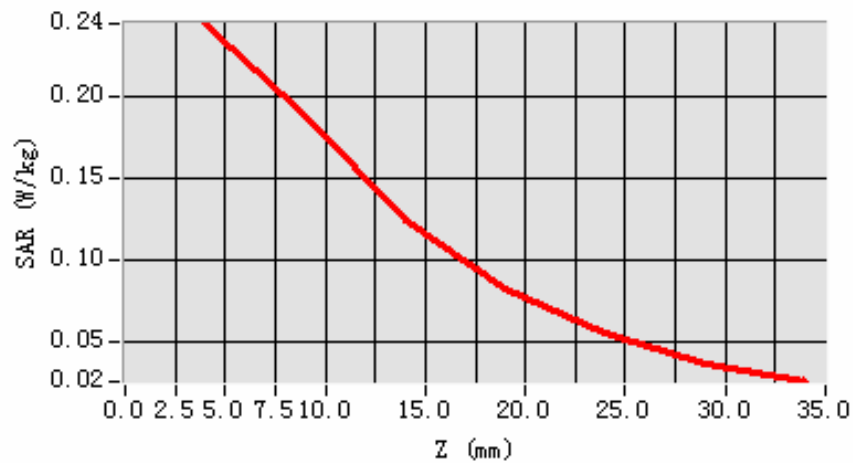
Maximum location: X=6.00, Y=-9.00

SAR 10g (W/Kg)	0.151215
SAR 1g (W/Kg)	0.228348

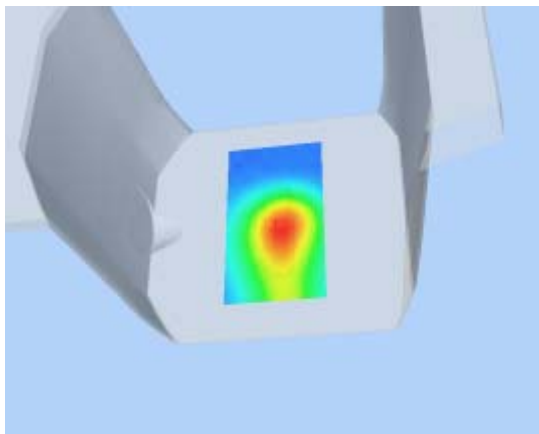
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2445	0.1877	0.1238	0.0815	0.0545	0.0353

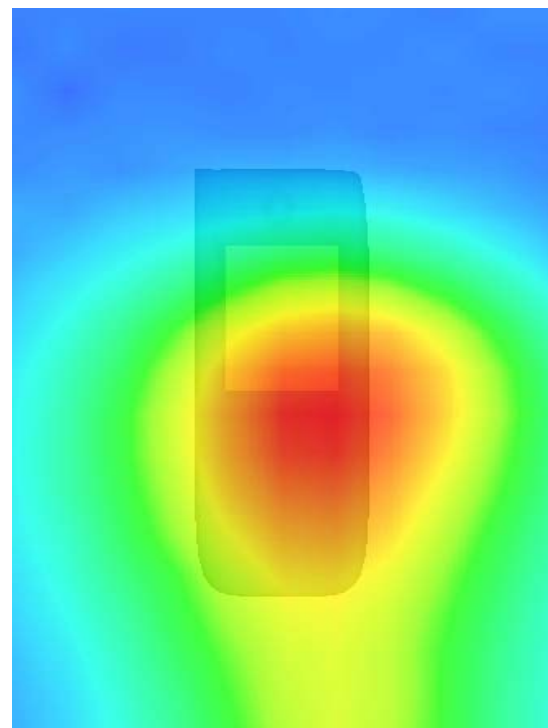
SAR, Z Axis Scan (X = 6, Y = -9)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

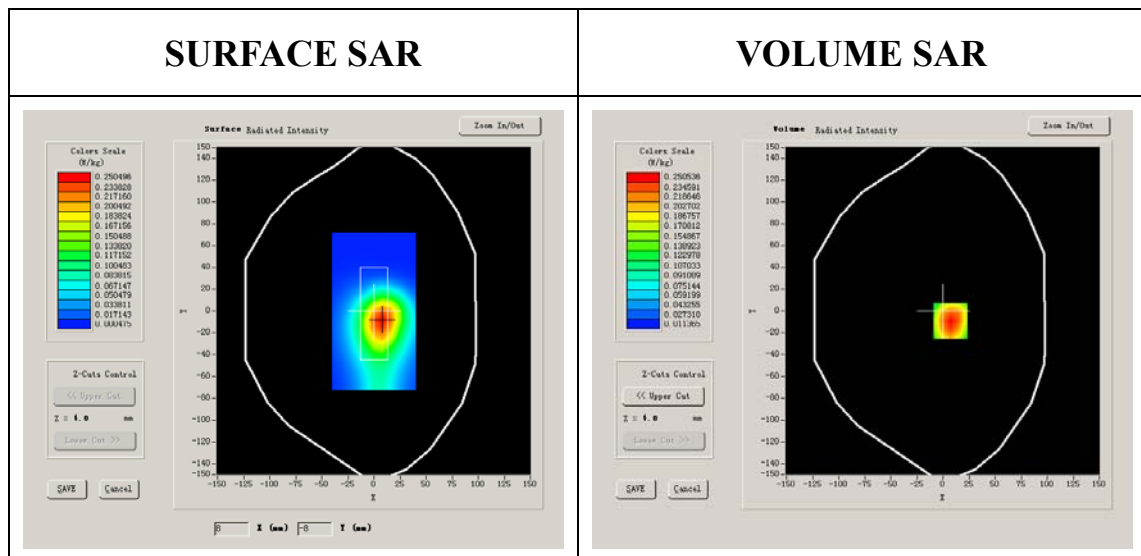
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	1.009033
Variation (%)	0.290000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



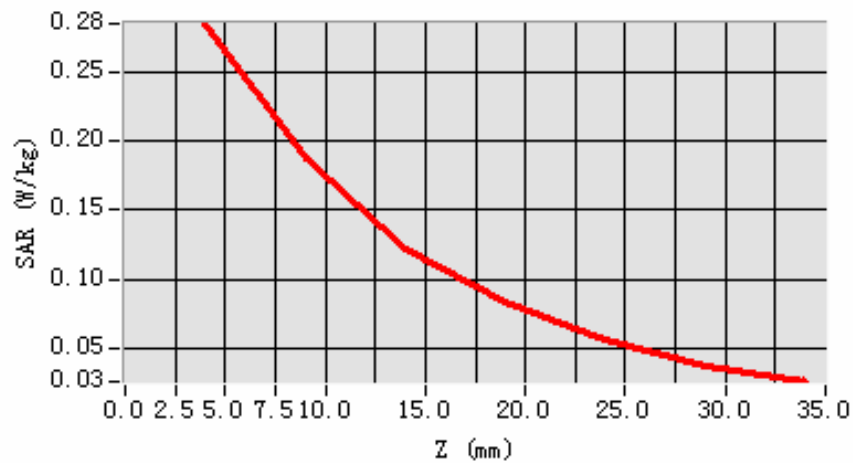
Maximum location: X=7.00, Y=-9.00

SAR 10g (W/Kg)	0.172311
SAR 1g (W/Kg)	0.271677

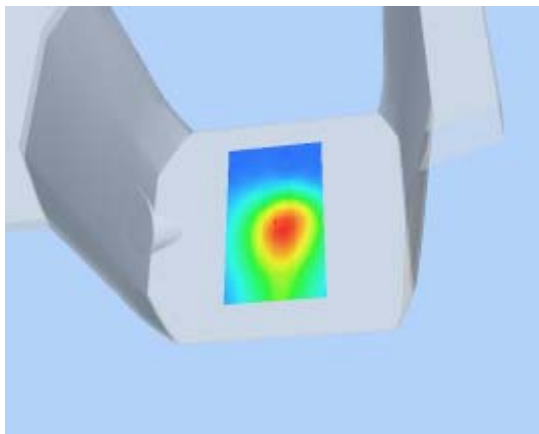
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2845	0.1872	0.1223	0.0839	0.0569	0.0380

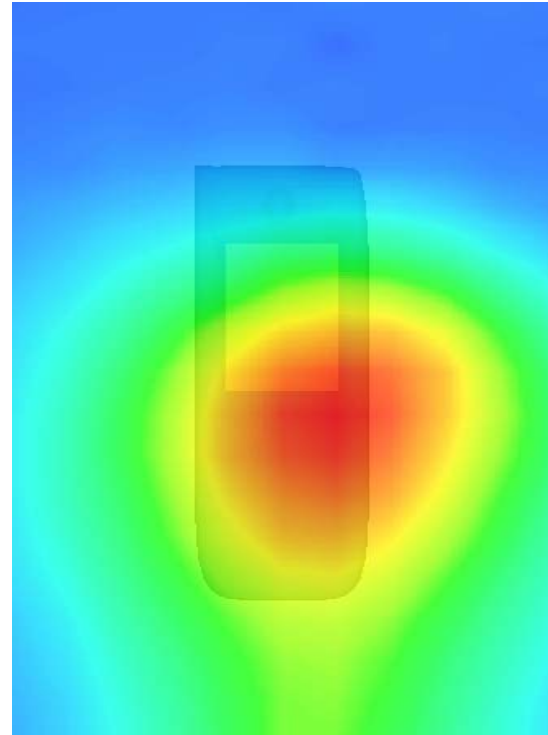
SAR, Z Axis Scan (X = 7, Y = -9)



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: 21/7/2009

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

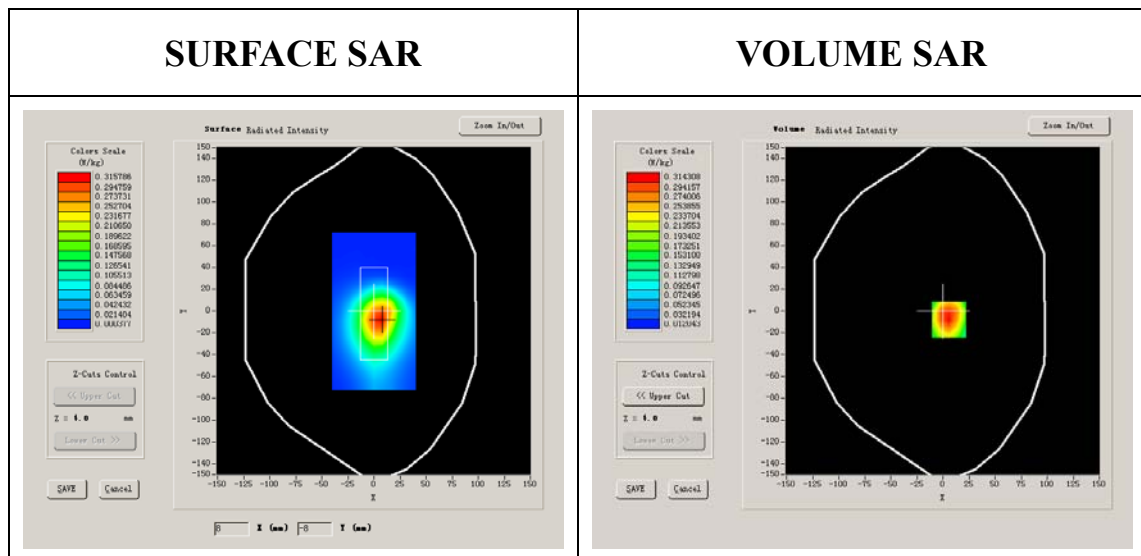
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	1.005962
Variation (%)	-4.590000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



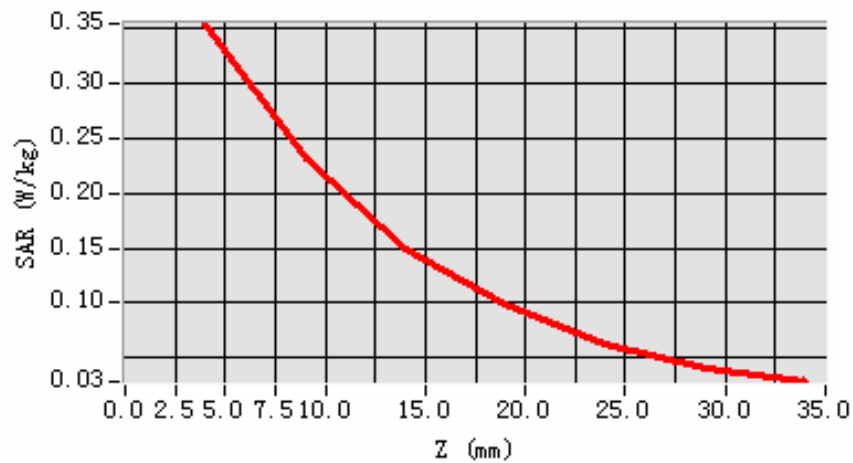
Maximum location: X=6.00, Y=-8.00

SAR 10g (W/Kg)	0.206550
SAR 1g (W/Kg)	0.342481

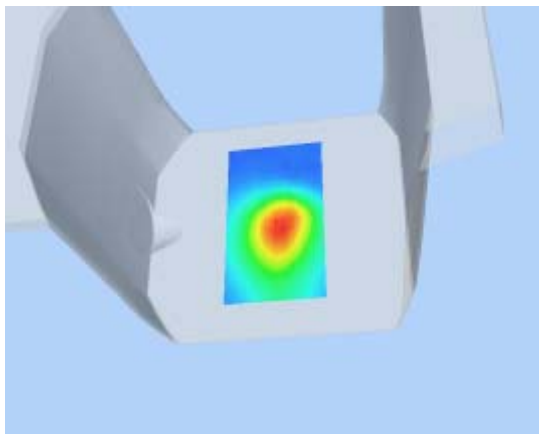
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3535	0.2315	0.1487	0.0993	0.0636	0.0416

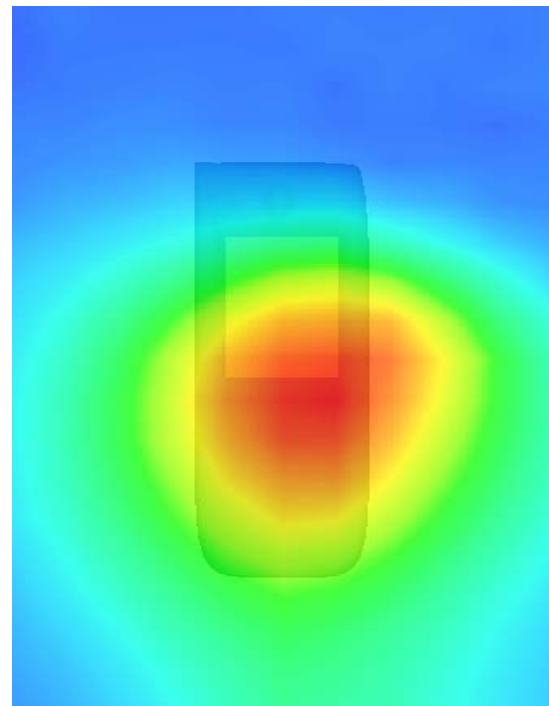
SAR, Z Axis Scan (X = 6, Y = -8)



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: 21/7/2009

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

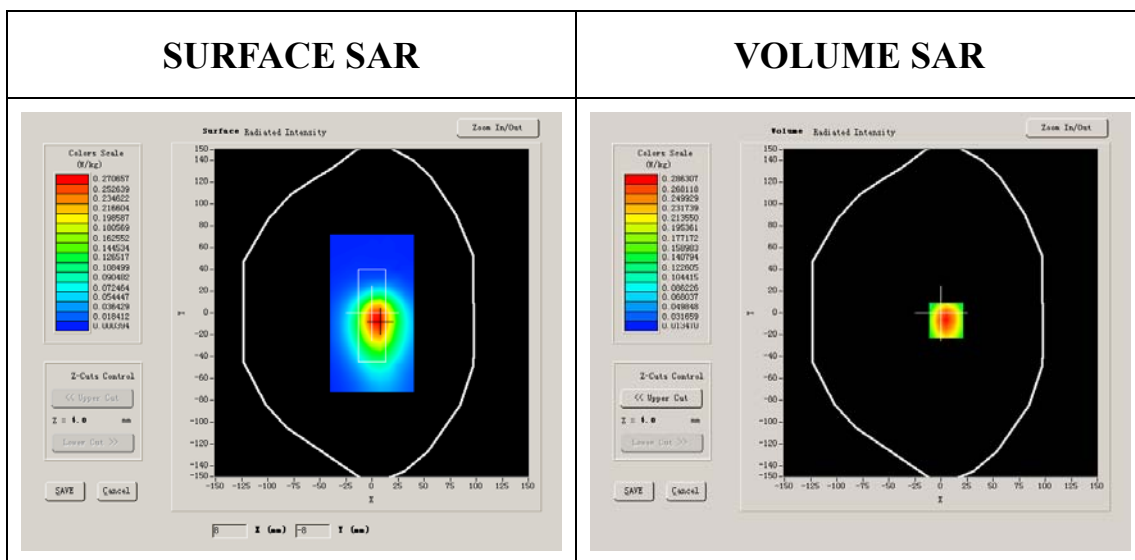
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

Conductivity (S/m)	0.974596
Variation (%)	2.040000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



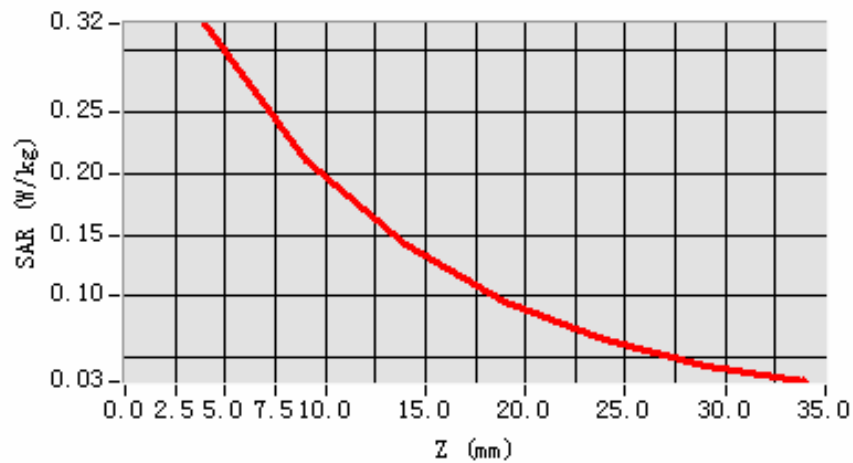
Maximum location: X=5.00, Y=-7.00

SAR 10g (W/Kg)	0.190036
SAR 1g (W/Kg)	0.305491

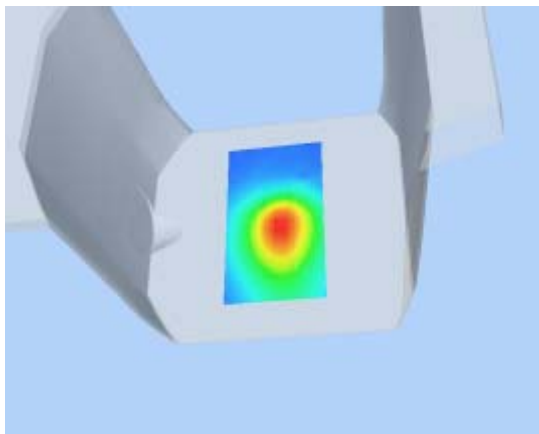
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3220	0.2111	0.1424	0.0959	0.0653	0.0429

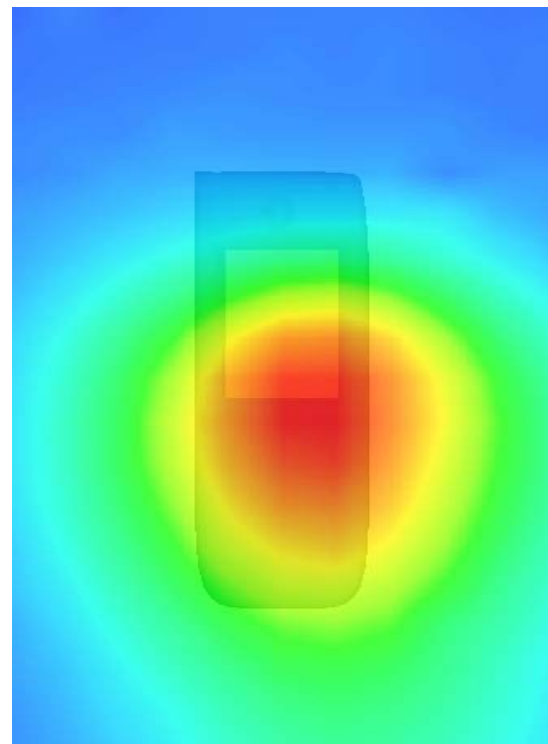
SAR, Z Axis Scan (X = 5, Y = -7)



3D scene shot



Hot spot position



MEASUREMENT 5

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

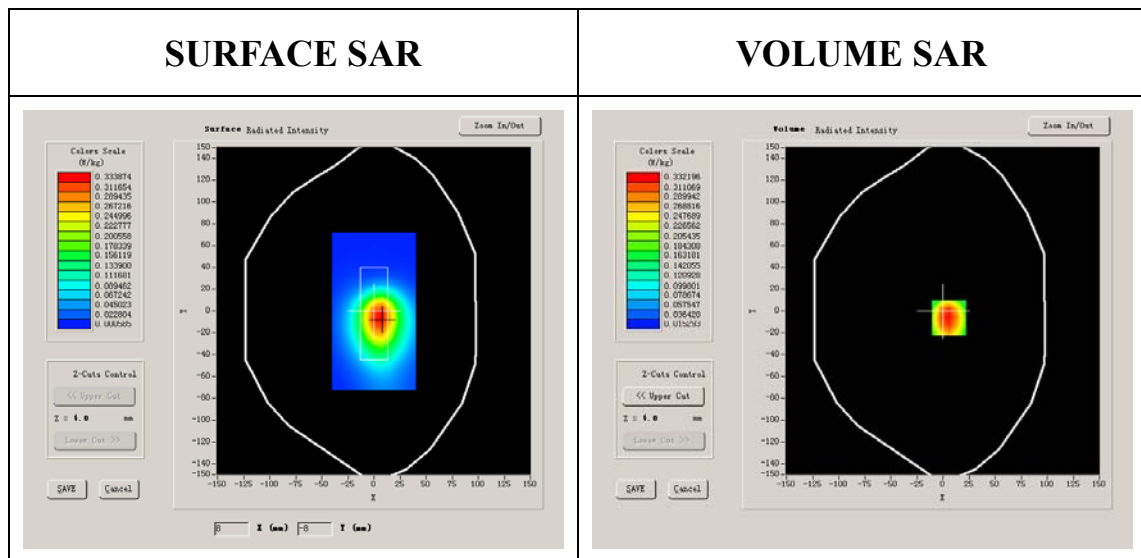
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	1.009033
Variation (%)	-1.030000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1

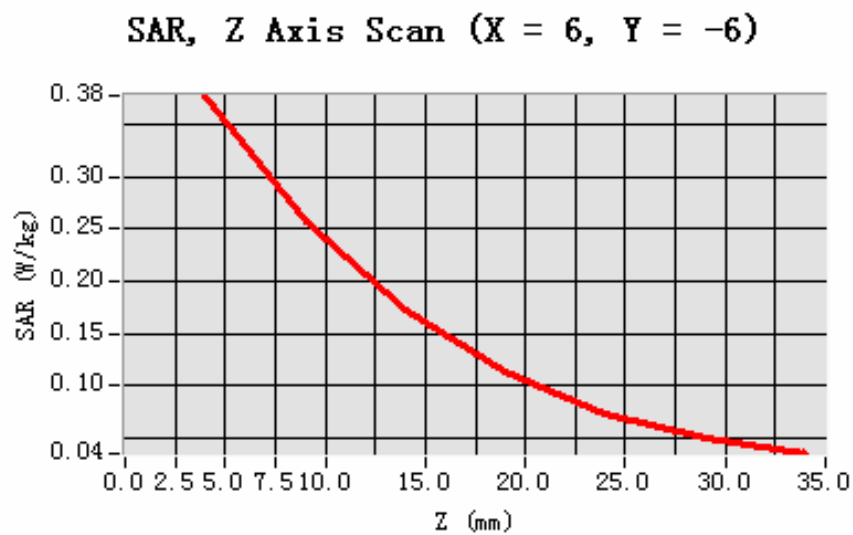


Maximum location: X=6.00, Y=-6.00

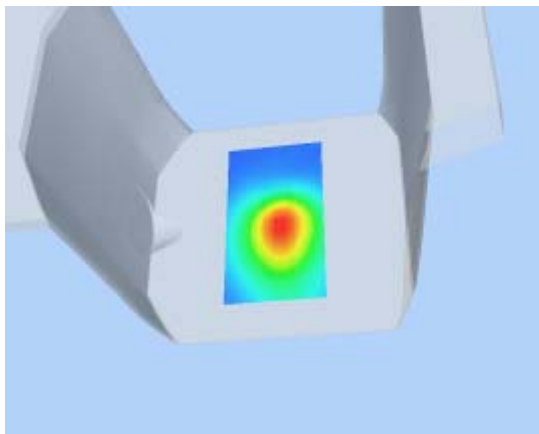
SAR 10g (W/Kg)	0.225325
SAR 1g (W/Kg)	0.360436

Z Axis Scan

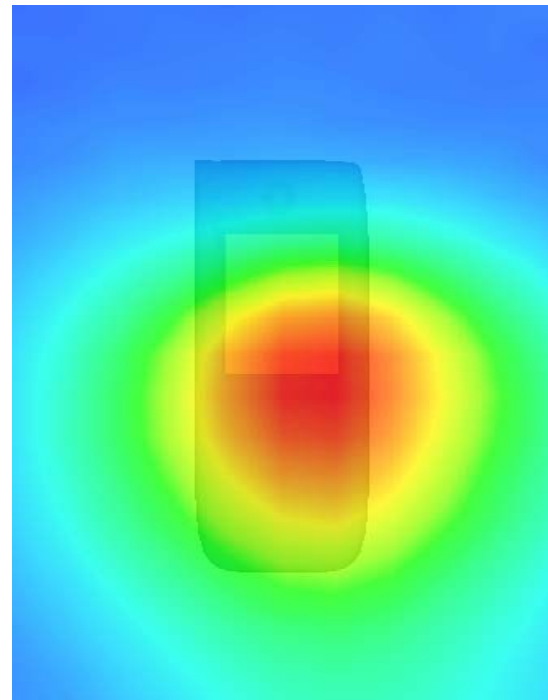
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3772	0.2564	0.1725	0.1128	0.0742	0.0506



3D sceen shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

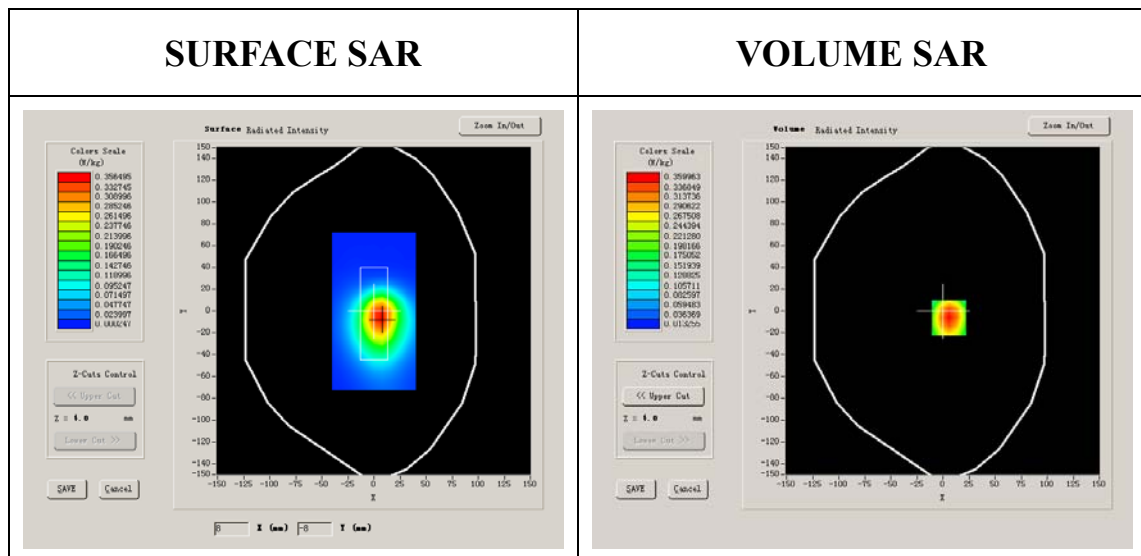
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	1.005962
Variation (%)	-0.770000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



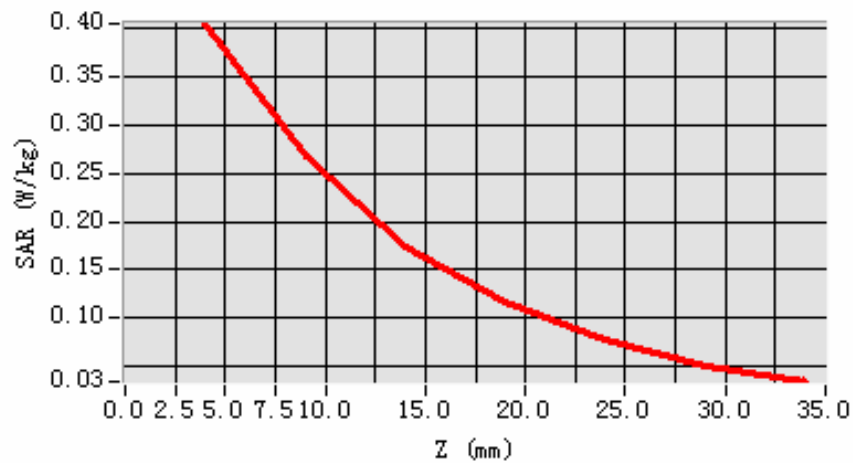
Maximum location: X=6.00, Y=-6.00

SAR 10g (W/Kg)	0.239271
SAR 1g (W/Kg)	0.384569

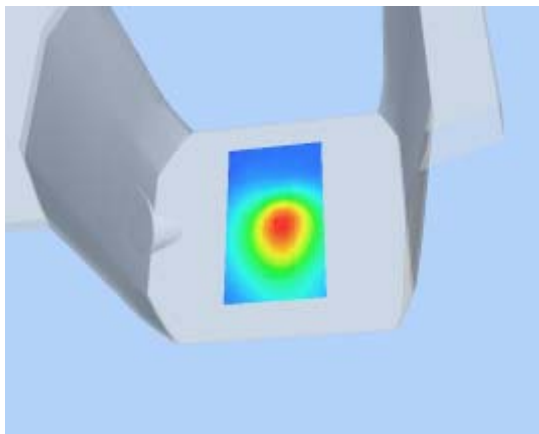
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4049	0.2678	0.1741	0.1168	0.0772	0.0500

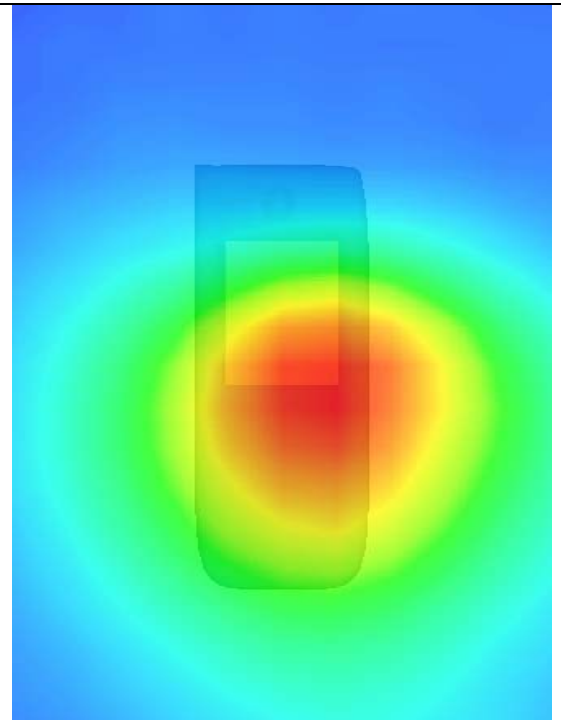
SAR, Z Axis Scan (X = 6, Y = -6)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 4 seconds

A. Experimental conditions.

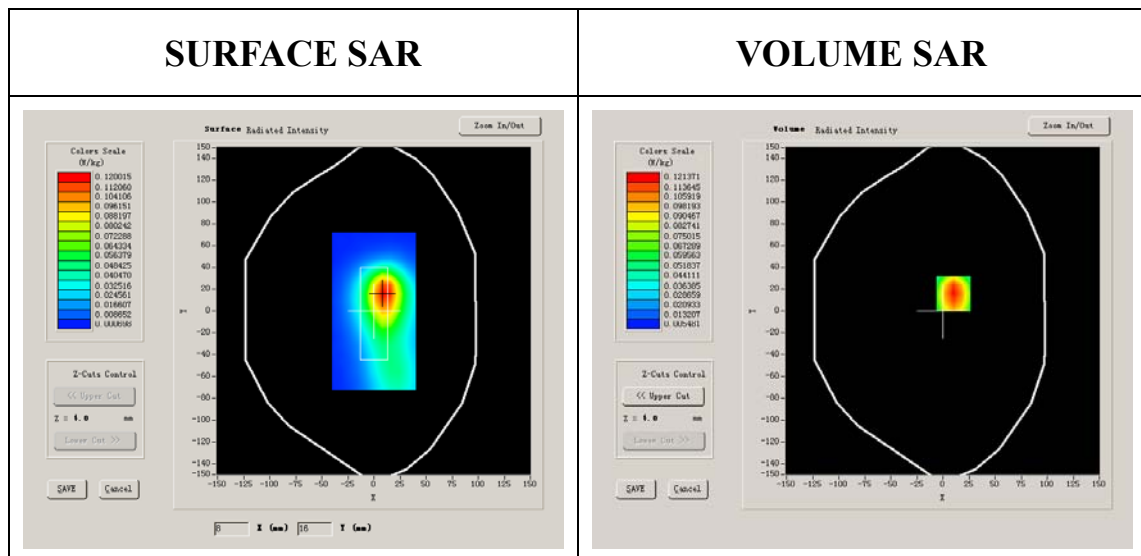
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

Conductivity (S/m)	0.974596
Variation (%)	0.600000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



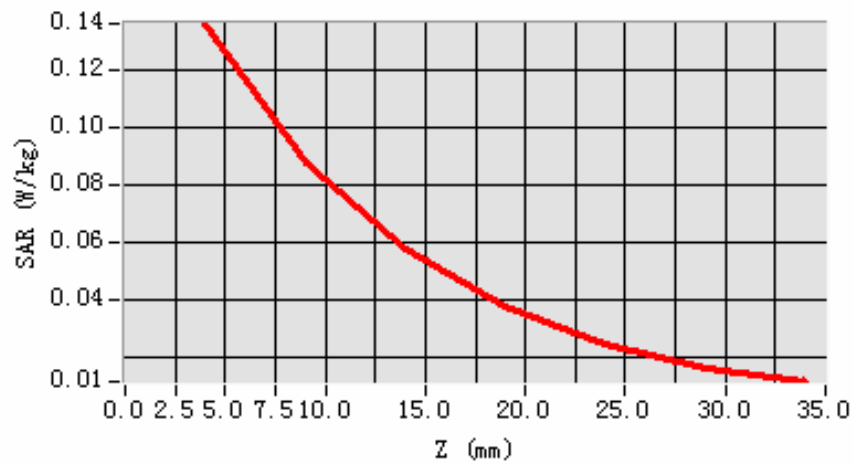
Maximum location: X=10.00, Y=16.00

SAR 10g (W/Kg)	0.079221
SAR 1g (W/Kg)	0.129241

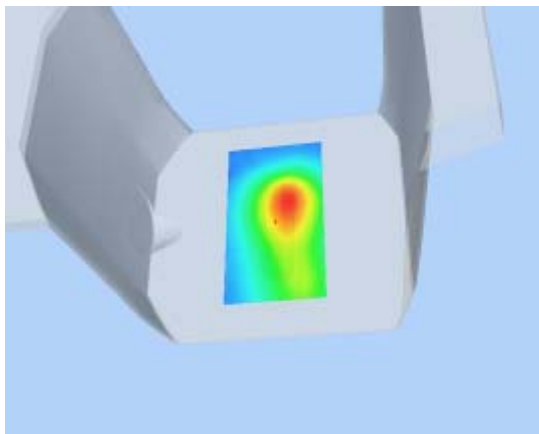
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1365	0.0883	0.0584	0.0382	0.0253	0.0165

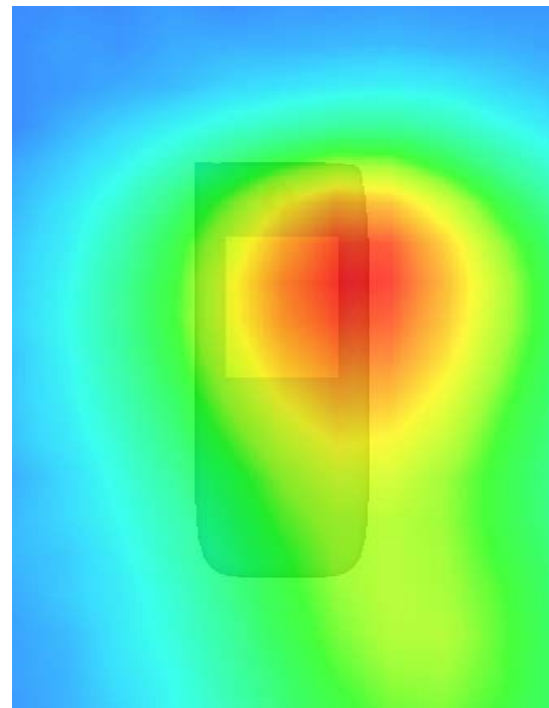
SAR, Z Axis Scan (X = 10, Y = 16)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

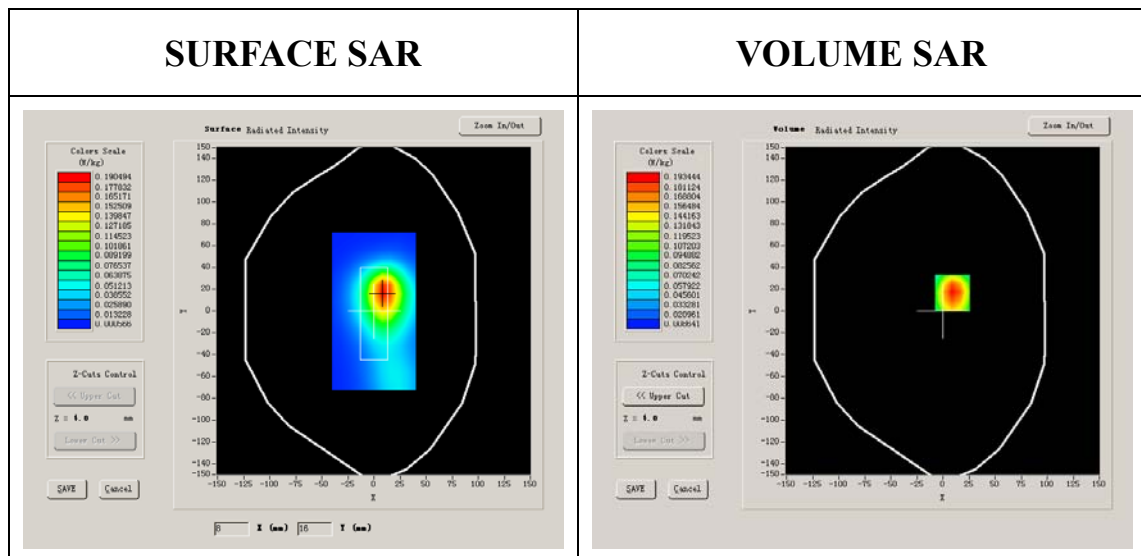
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	1.009033
Variation (%)	-1.390000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



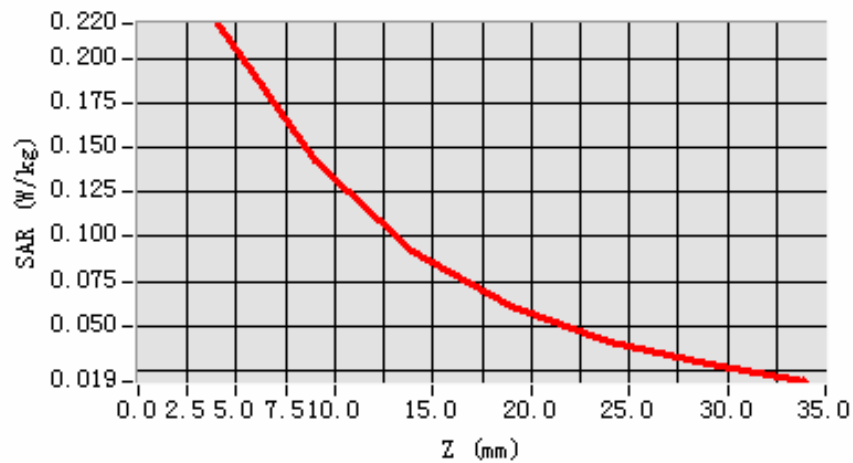
Maximum location: X=9.00, Y=17.00

SAR 10g (W/Kg)	0.126206
SAR 1g (W/Kg)	0.208759

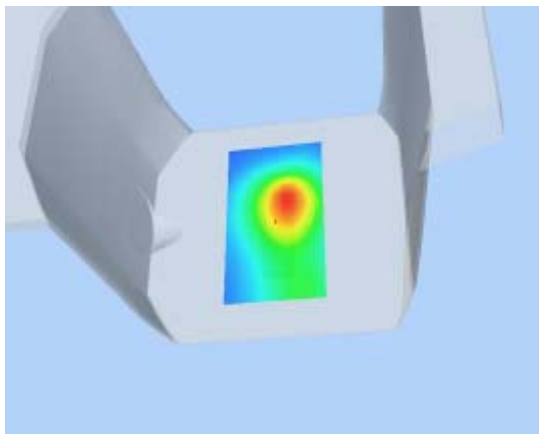
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2196	0.1424	0.0921	0.0612	0.0406	0.0279

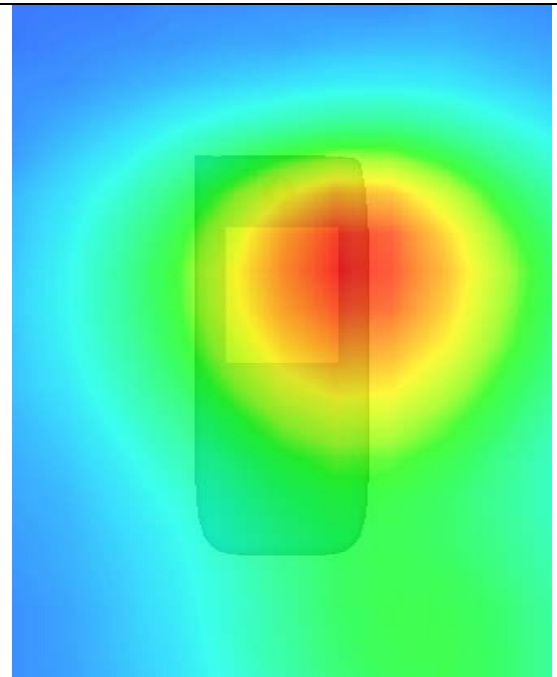
SAR, Z Axis Scan (X = 9, Y = 17)



3D sceen shot



Hot spot position



MEASUREMENT 9

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 3 seconds

A. Experimental conditions.

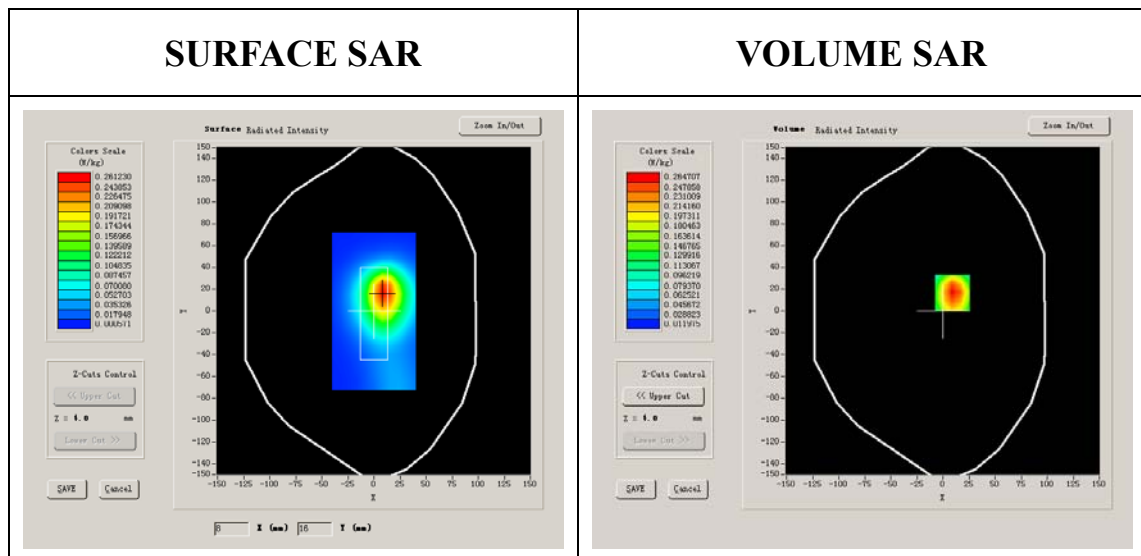
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	1.005962
Variation (%)	-0.500000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



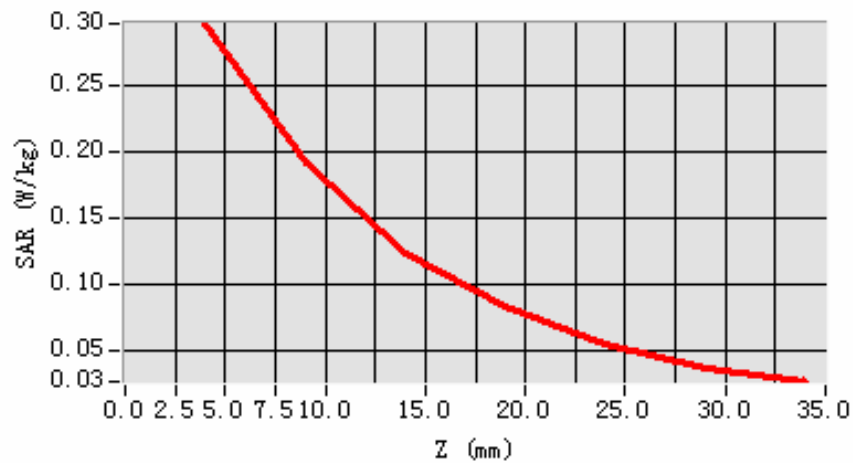
Maximum location: X=9.00, Y=17.00

SAR 10g (W/Kg)	0.171274
SAR 1g (W/Kg)	0.283738

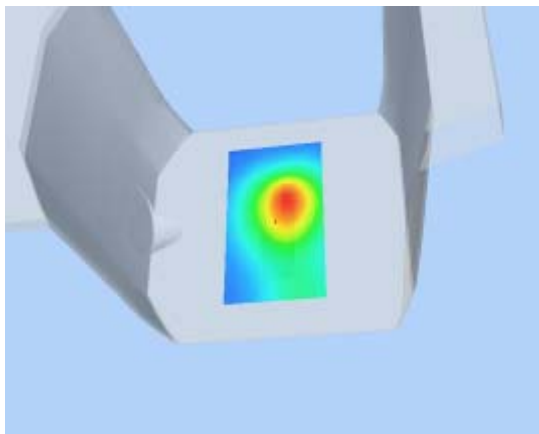
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2977	0.1927	0.1241	0.0840	0.0552	0.0365

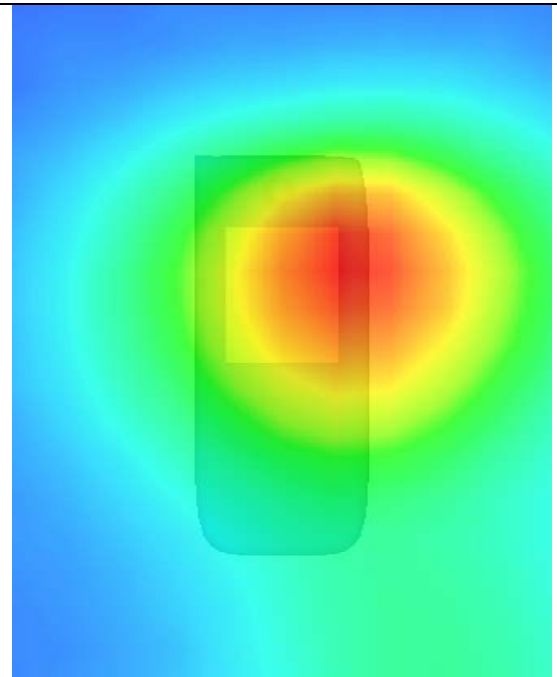
SAR, Z Axis Scan (X = 9, Y = 17)



3D sceen shot



Hot spot position



MEASUREMENT 10

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 4 seconds

A. Experimental conditions.

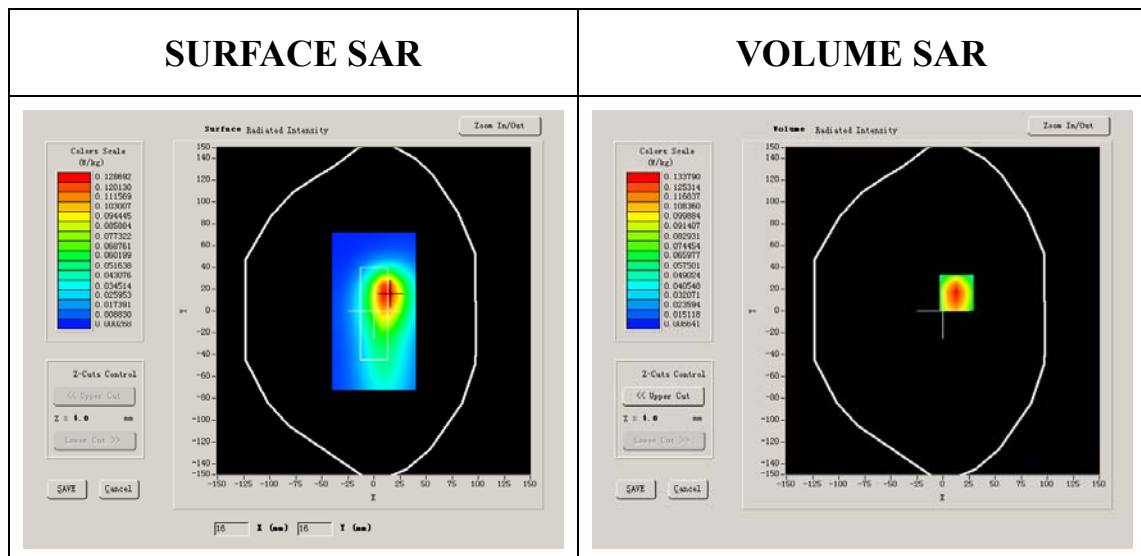
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 128):

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

Conductivity (S/m)	0.974596
Variation (%)	-1.070000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



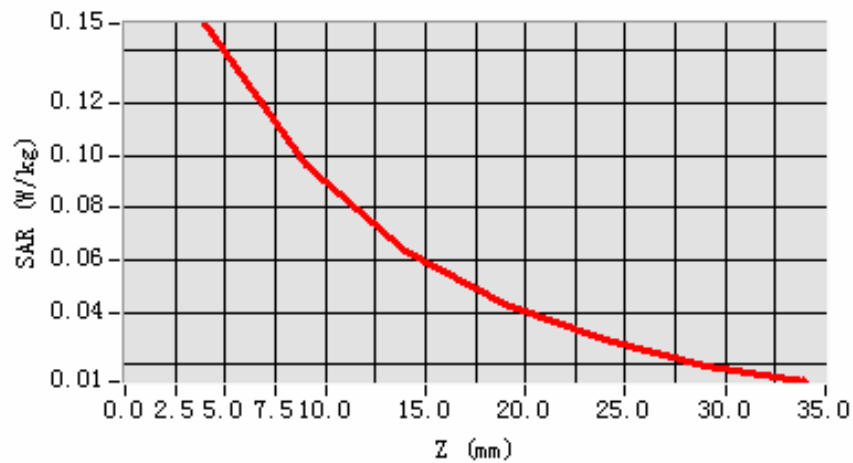
Maximum location: X=13.00, Y=17.00

SAR 10g (W/Kg)	0.087488
SAR 1g (W/Kg)	0.142347

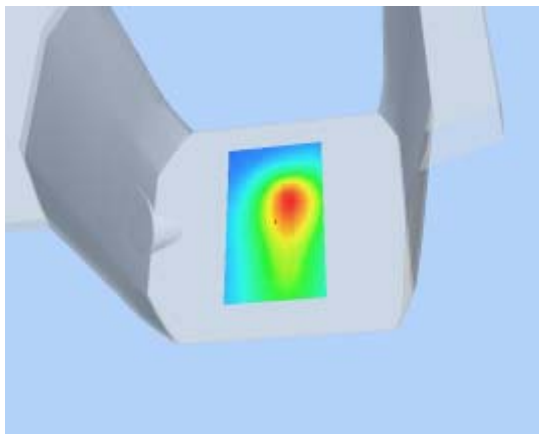
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1505	0.0967	0.0634	0.0434	0.0291	0.0193

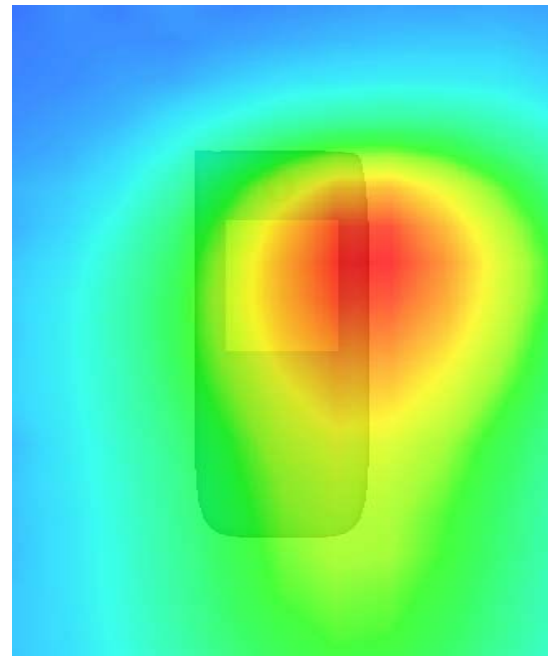
SAR, Z Axis Scan (X = 13, Y = 17)



3D sceen shot



Hot spot position



MEASUREMENT 11

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 8 minutes 54 seconds

A. Experimental conditions.

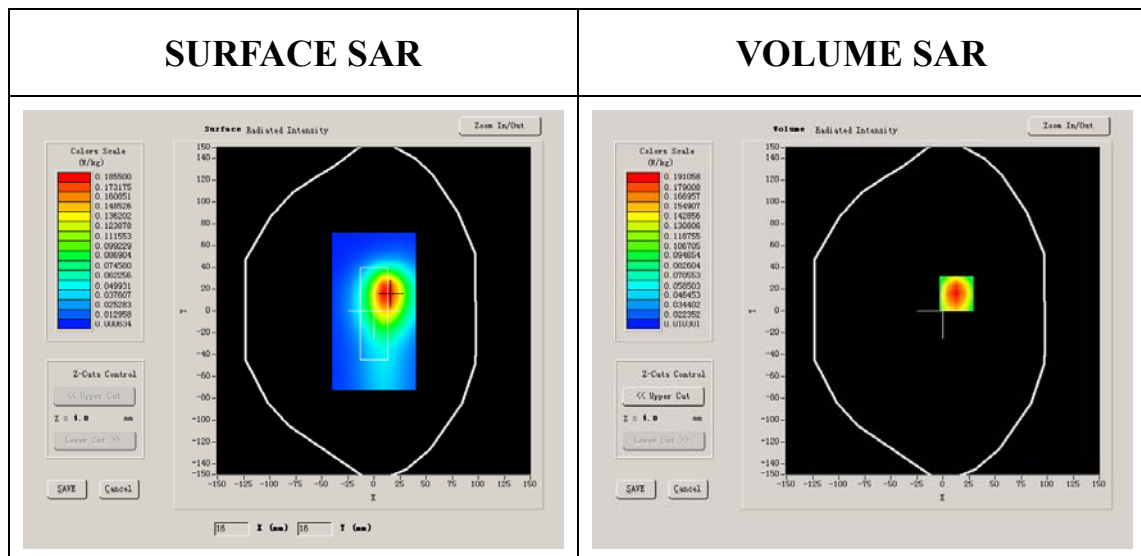
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 190):

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

Conductivity (S/m)	1.009033
Variation (%)	0.250000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



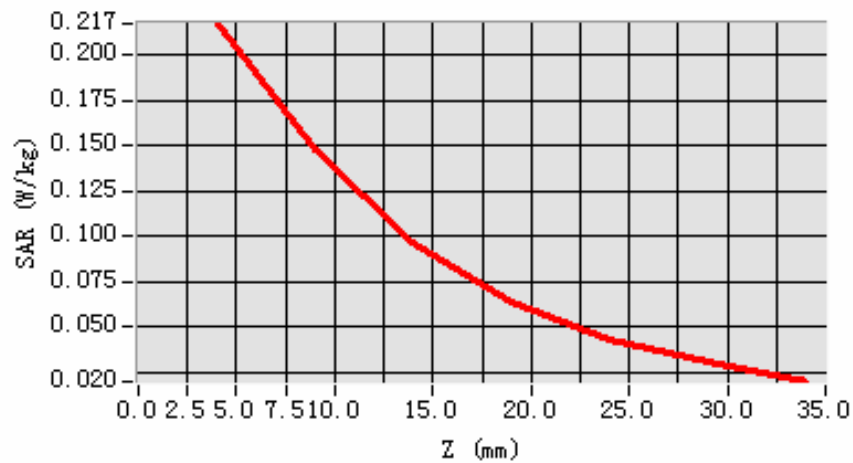
Maximum location: X=13.00, Y=16.00

SAR 10g (W/Kg)	0.127655
SAR 1g (W/Kg)	0.204615

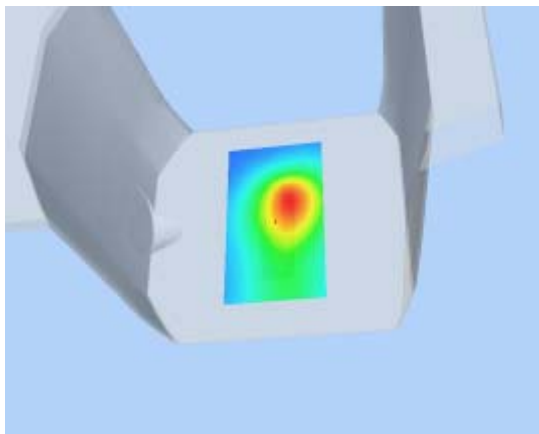
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2169	0.1479	0.0962	0.0645	0.0438	0.0308

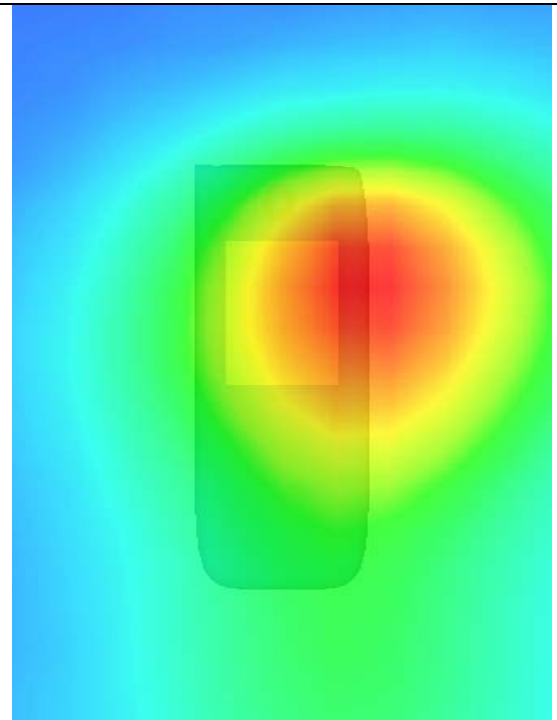
SAR, Z Axis Scan (X = 13, Y = 16)



3D sceen 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: 21/7/2009

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

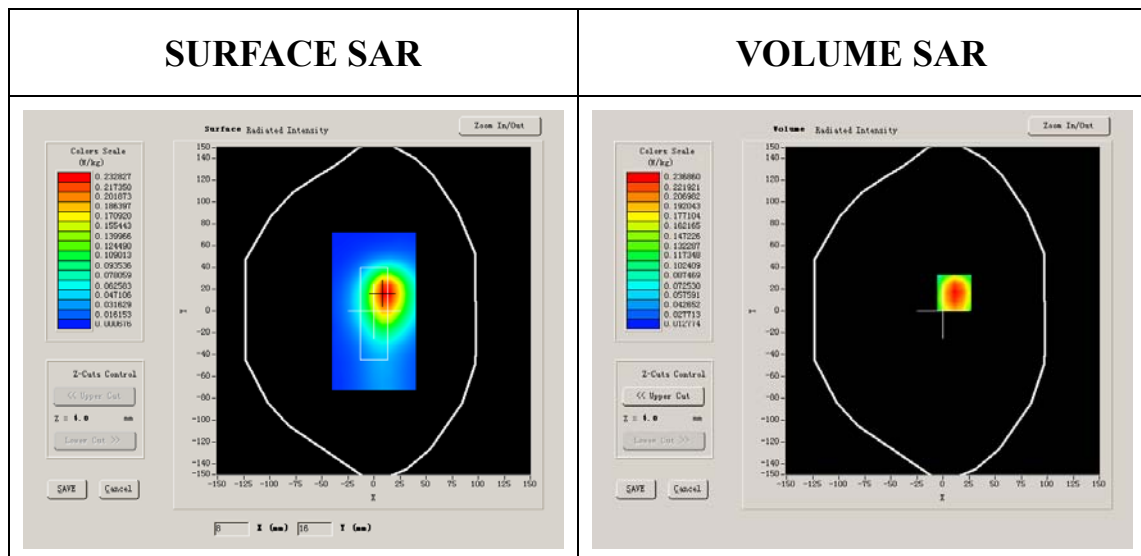
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	1.005962
Variation (%)	-0.080000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



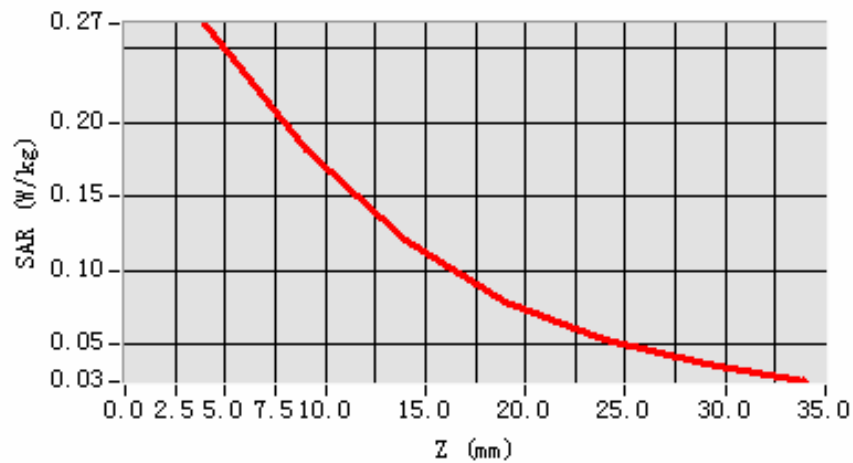
Maximum location: X=11.00, Y=17.00

SAR 10g (W/Kg)	0.159061
SAR 1g (W/Kg)	0.252436

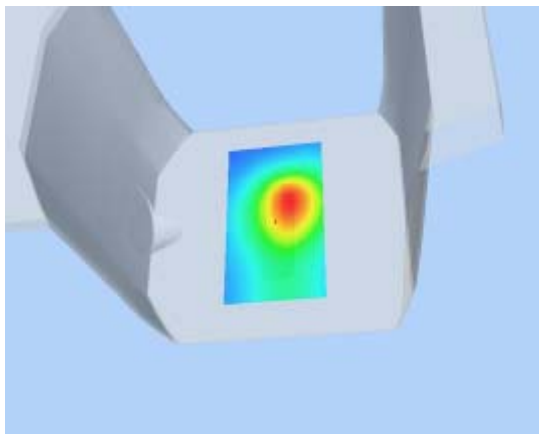
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2664	0.1810	0.1199	0.0796	0.0538	0.0369

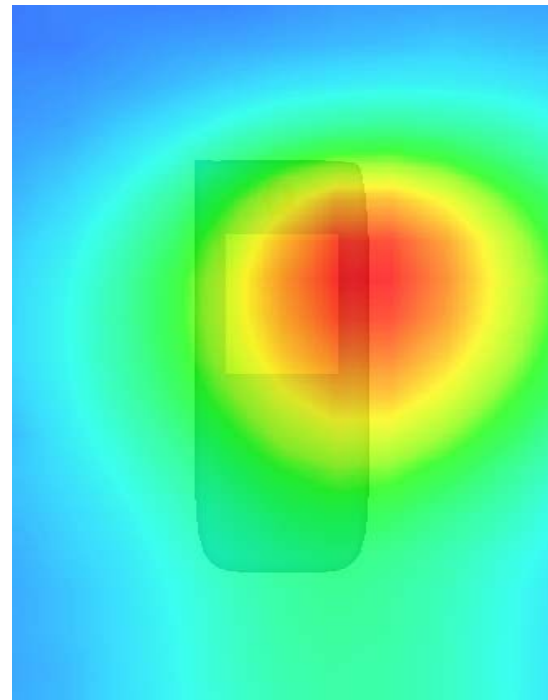
SAR, Z Axis Scan (X = 11, Y = 17)



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: 21/7/2009

Measurement duration: 9 minutes 3 seconds

A. Experimental conditions.

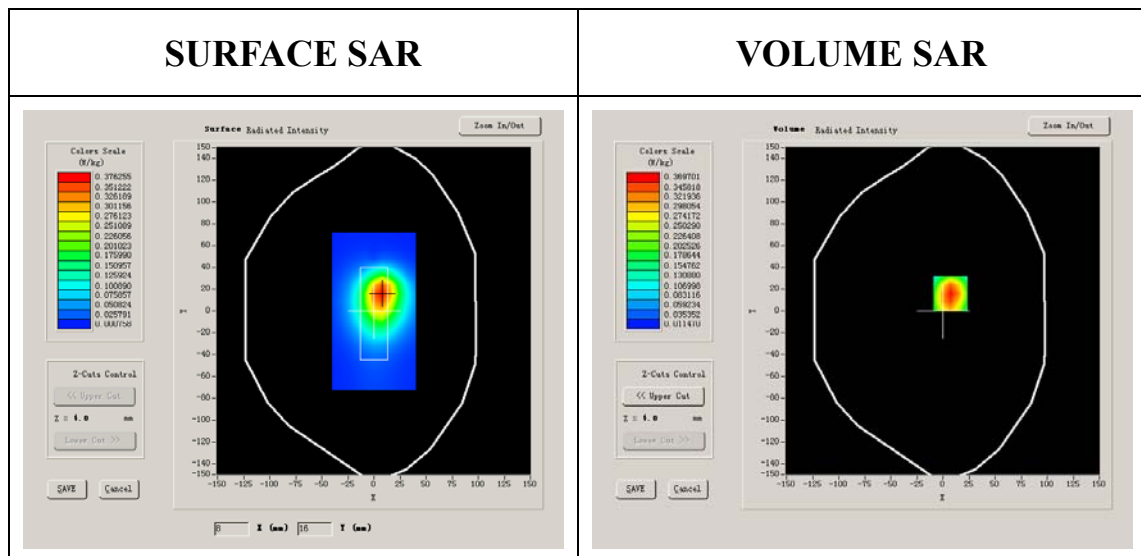
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GPRS

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	1.005962
Variation (%)	-1.640000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:2.0



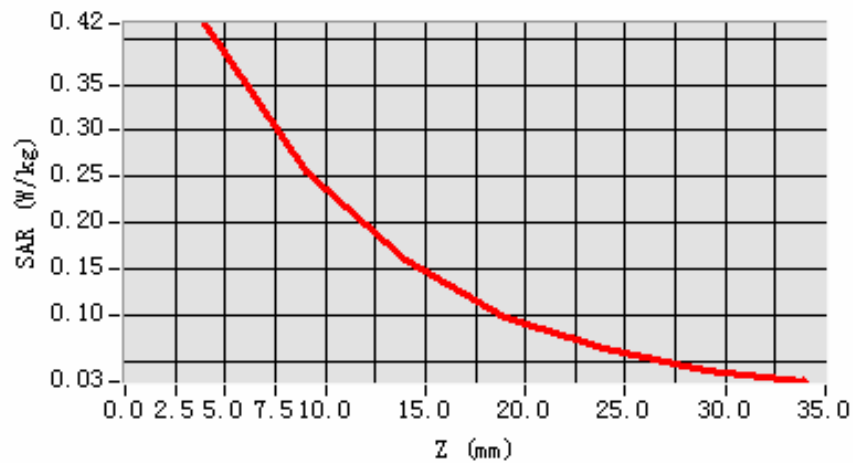
Maximum location: X=7.00, Y=16.00

SAR 10g (W/Kg)	0.228530
SAR 1g (W/Kg)	0.392125

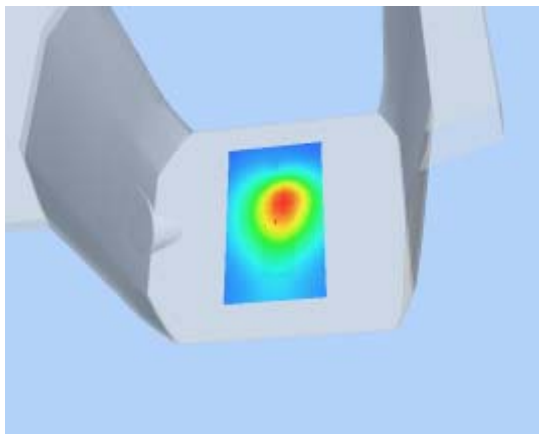
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4158	0.2554	0.1589	0.0982	0.0637	0.0410

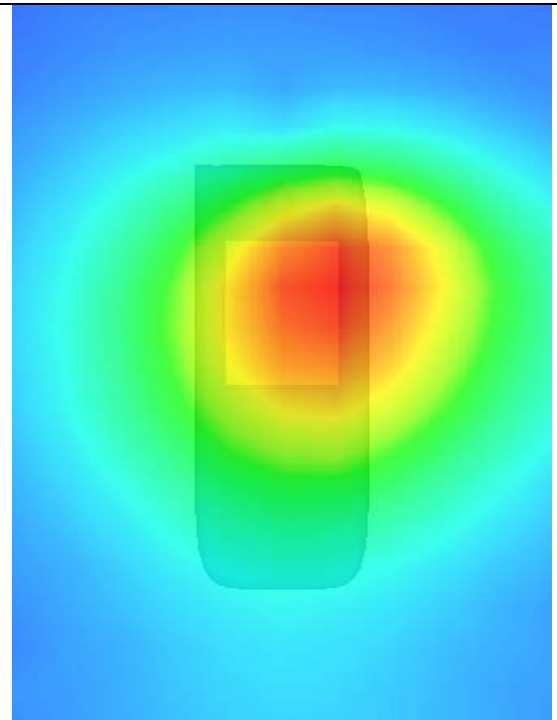
SAR, Z Axis Scan (X = 7, Y = 16)



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: 21/7/2009

Measurement duration: 9 minutes 3 seconds

A. Experimental conditions.

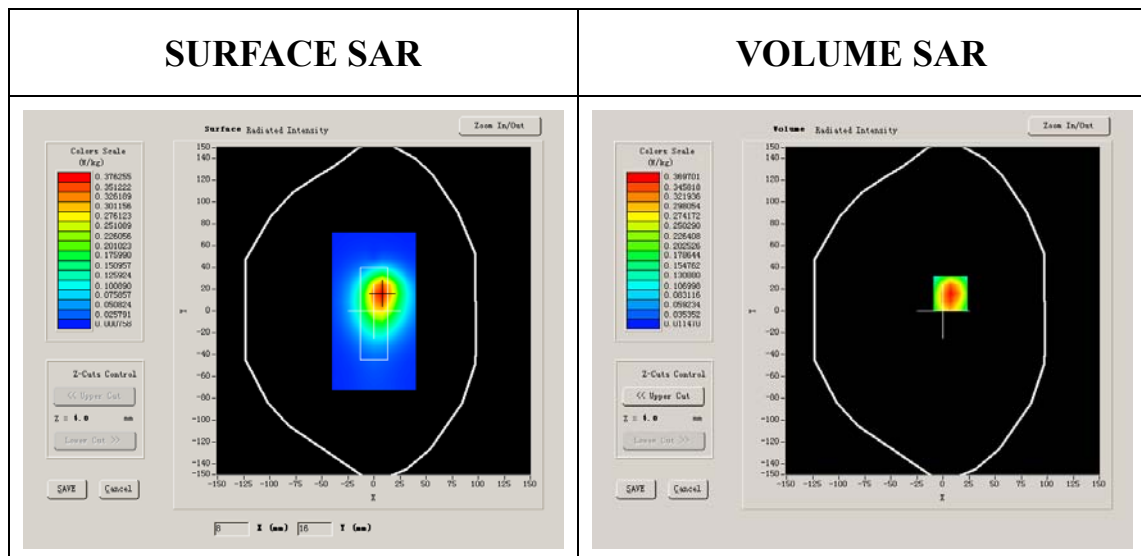
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 251):

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

Conductivity (S/m)	1.005962
Variation (%)	-1.640000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.9°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



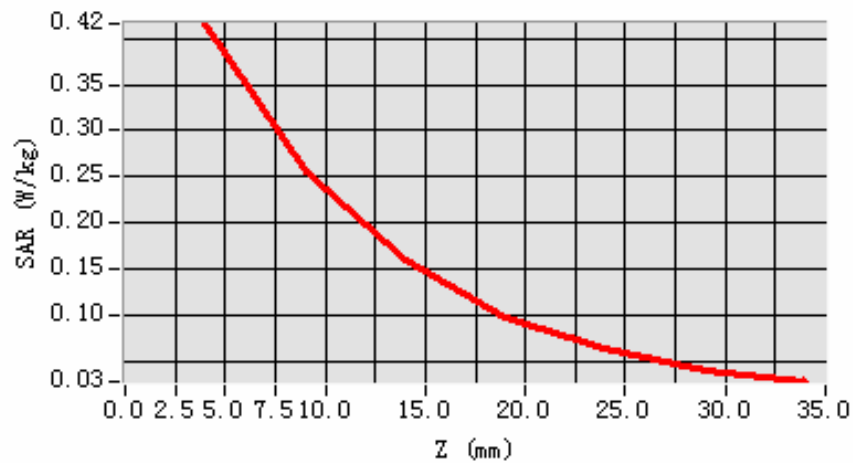
Maximum location: X=7.00, Y=16.00

SAR 10g (W/Kg)	0.217744
SAR 1g (W/Kg)	0.364455

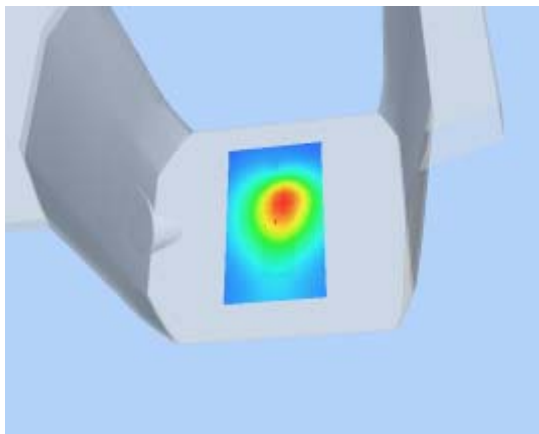
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4158	0.2554	0.1589	0.0982	0.0637	0.0410

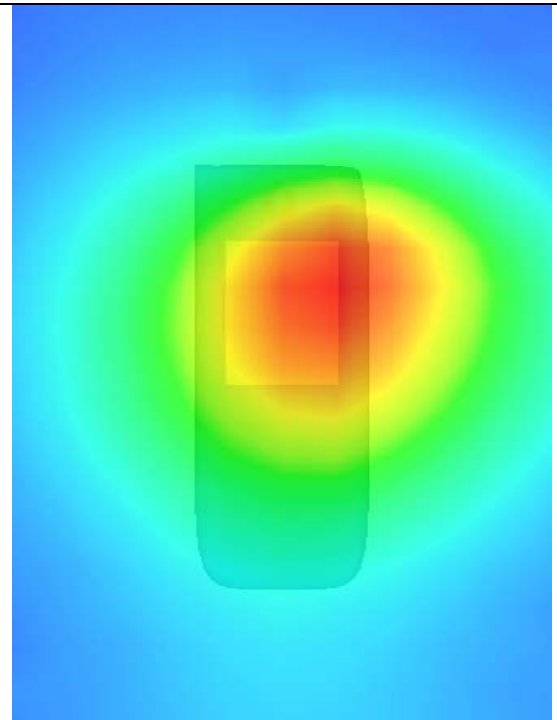
SAR, Z Axis Scan (X = 7, Y = 16)



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: 21/7/2009

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

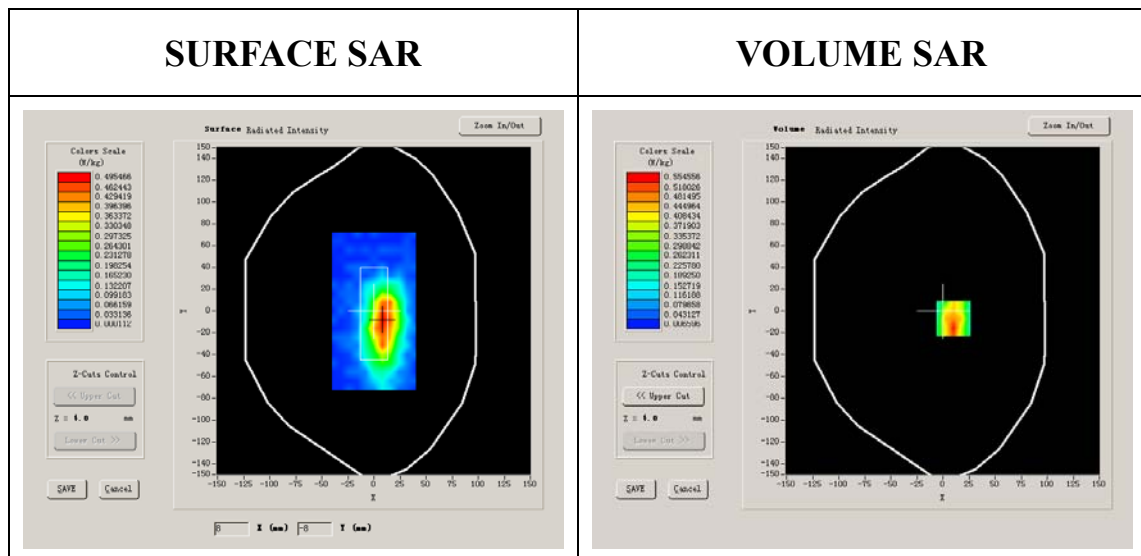
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	39.993999
Relative permittivity	12.000000

Conductivity (S/m)	1.233467
Variation (%)	-2.900000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



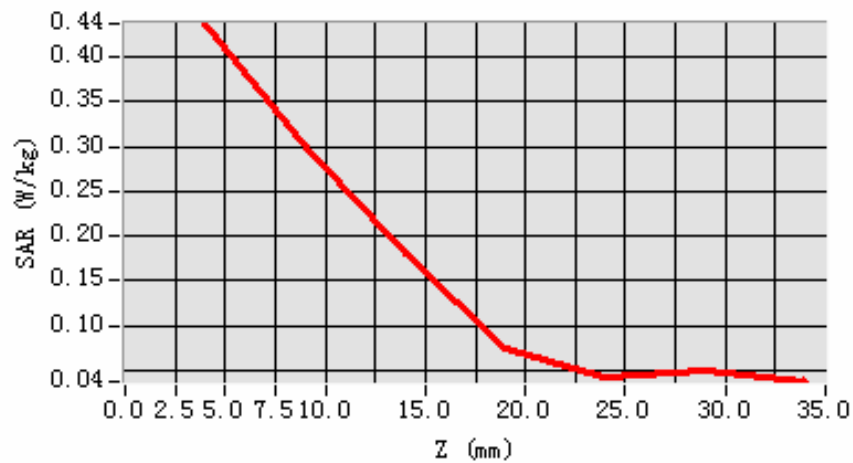
Maximum location: X=10.00, Y=-7.00

SAR 10g (W/Kg)	0.254088
SAR 1g (W/Kg)	0.448722

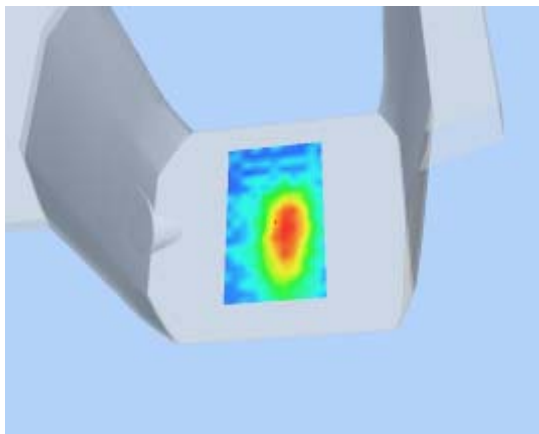
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4377	0.2999	0.1809	0.0735	0.0435	0.0501

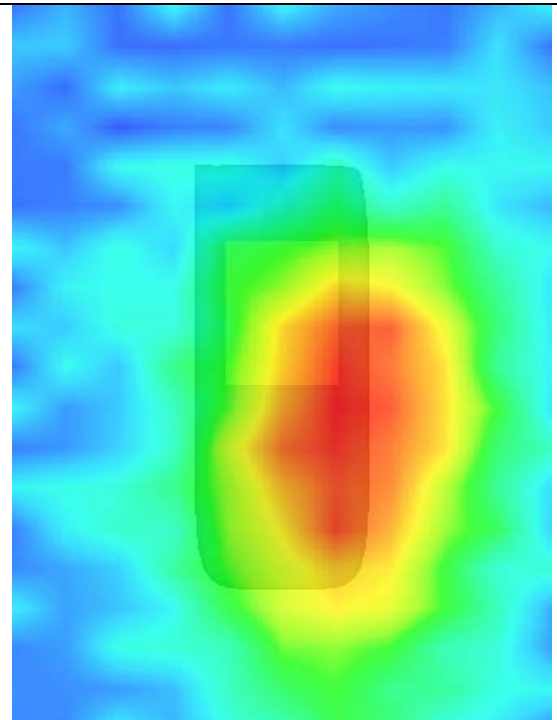
SAR, Z Axis Scan (X = 10, Y = -7)



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: 21/7/2009

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

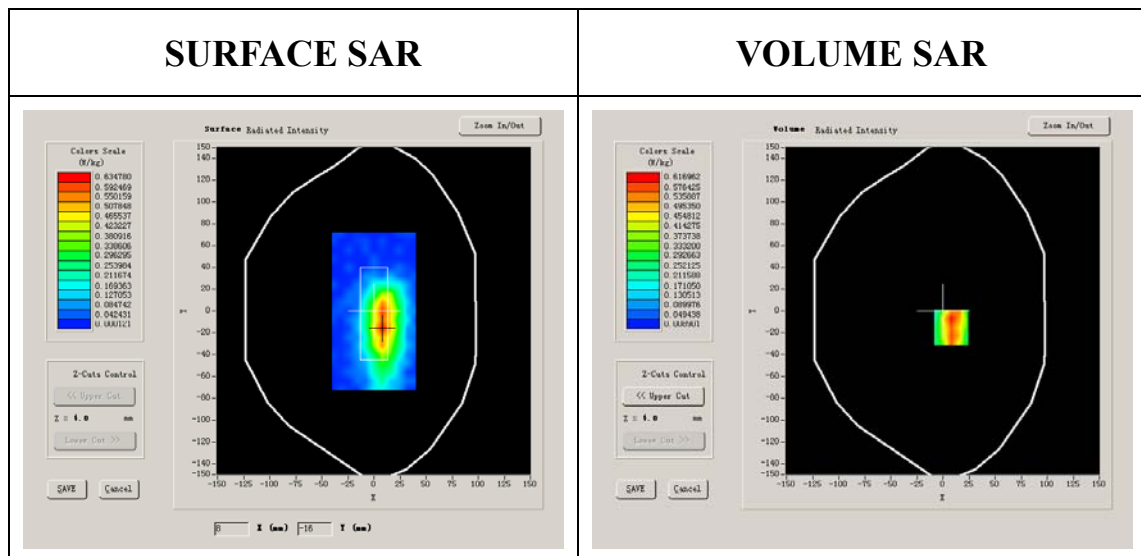
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.573978
Variation (%)	-2.600000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



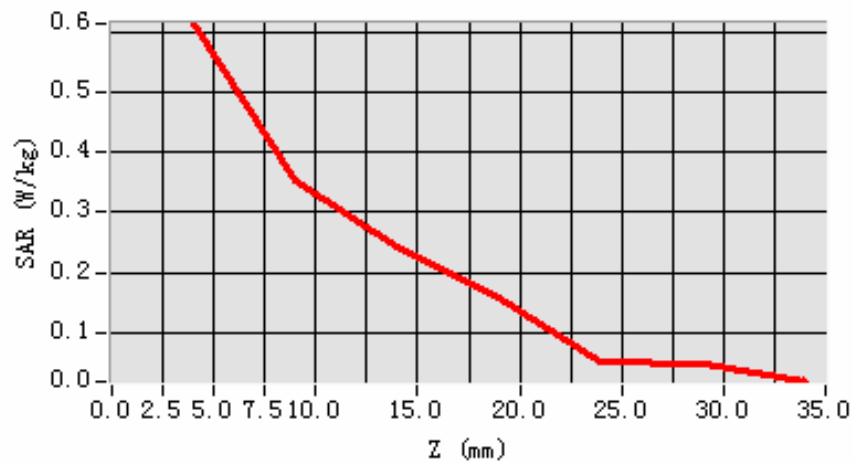
Maximum location: X=8.00, Y=-15.00

SAR 10g (W/Kg)	0.343071
SAR 1g (W/Kg)	0.628169

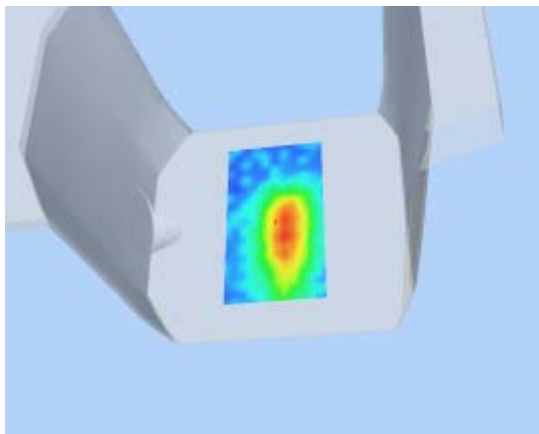
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6141	0.3542	0.2419	0.1579	0.0510	0.0493

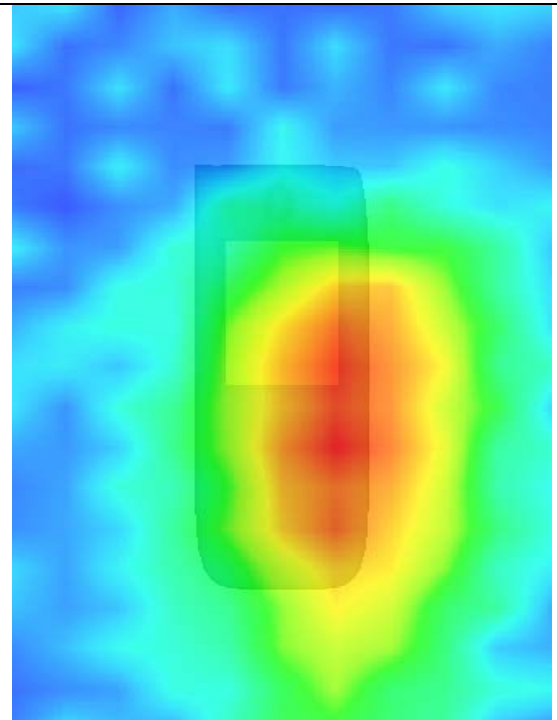
SAR, Z Axis Scan (X = 8, Y = -15)



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: 21/7/2009

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

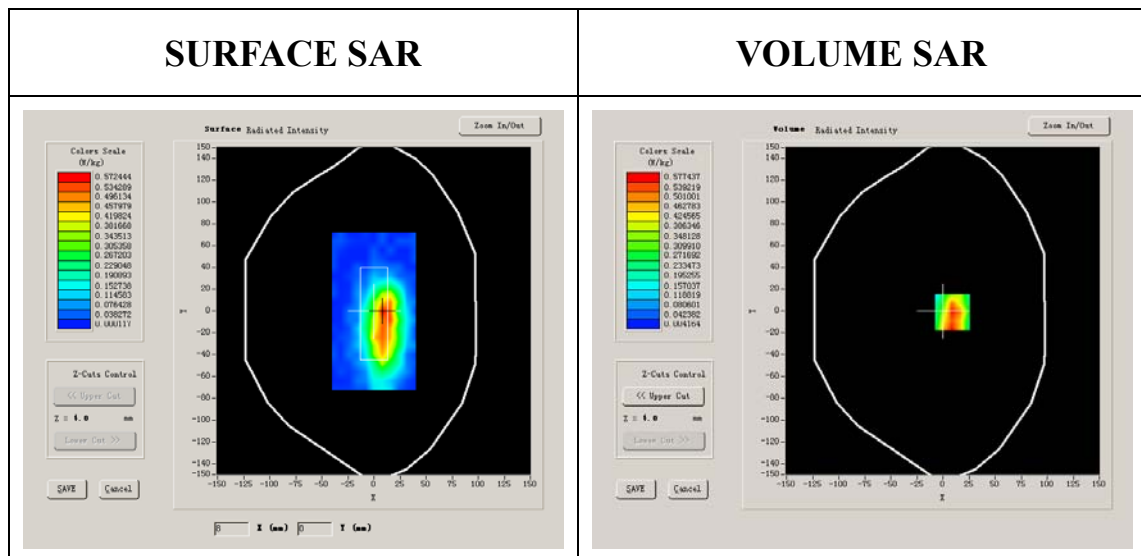
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	38.509998
Relative permittivity	12.000000

Conductivity (S/m)	1.273200
Variation (%)	-2.790000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



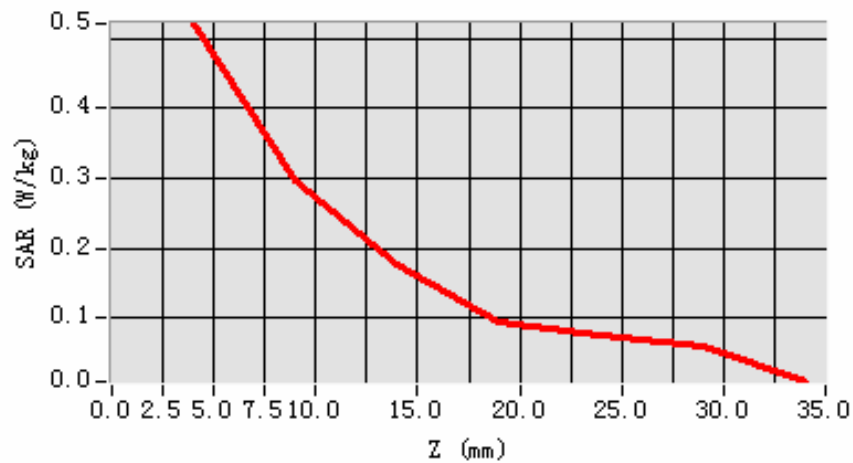
Maximum location: X=9.00, Y=-1.00

SAR 10g (W/Kg)	0.257775
SAR 1g (W/Kg)	0.461014

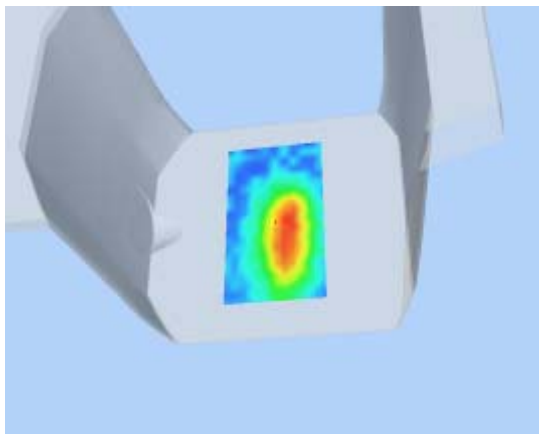
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5208	0.2969	0.1769	0.0954	0.0759	0.0581

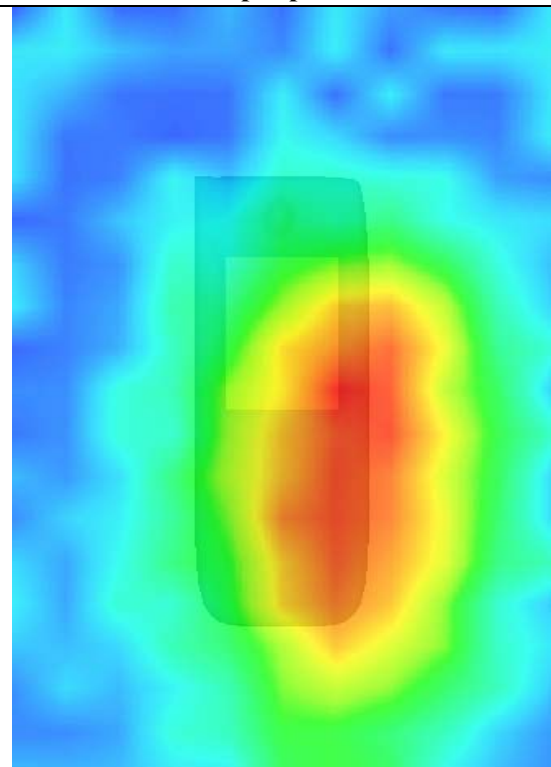
SAR, Z Axis Scan (X = 9, Y = -1)



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: 21/7/2009

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

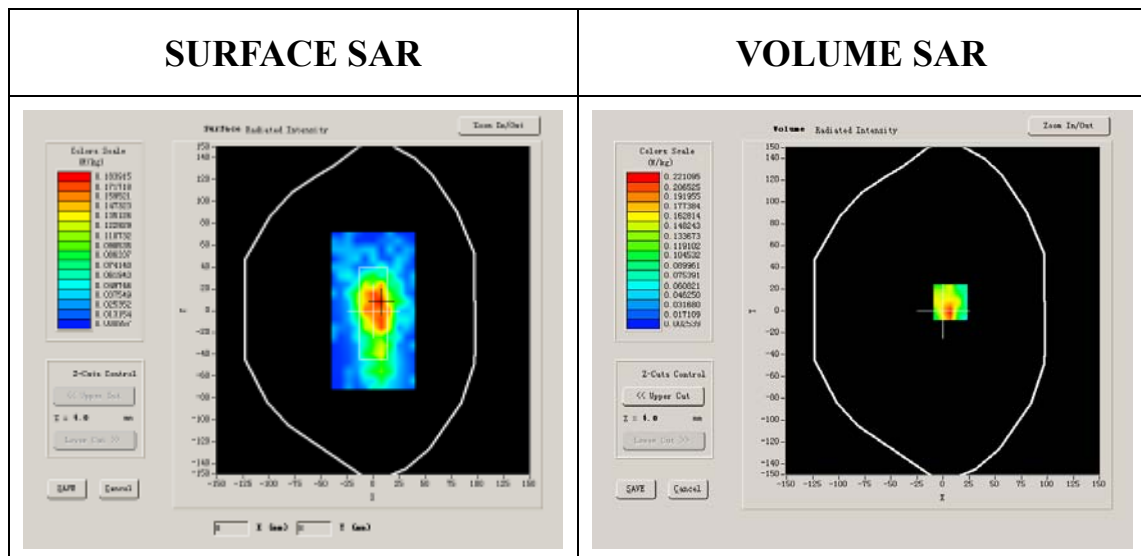
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

Conductivity (S/m)	1.335397
Variation (%)	-5.130000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



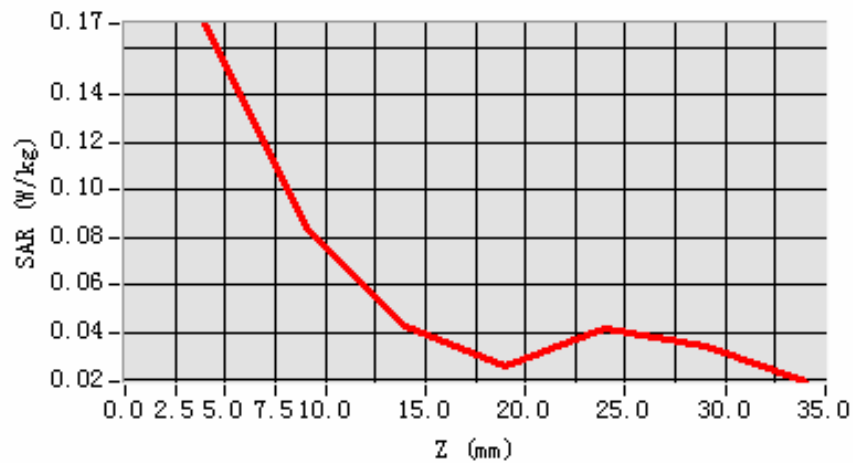
Maximum location: X=7.00, Y=8.00

SAR 10g (W/Kg)	0.102141
SAR 1g (W/Kg)	0.183616

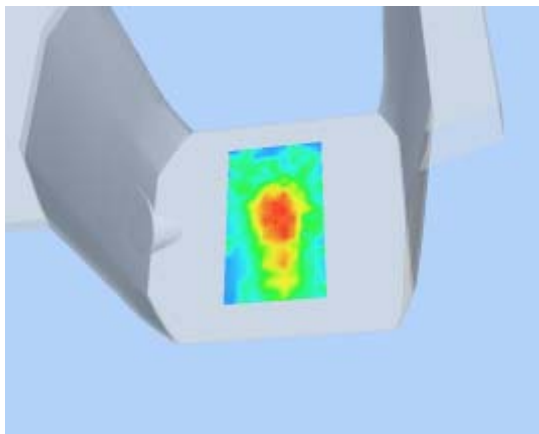
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1700	0.0847	0.0421	0.0262	0.0414	0.0341

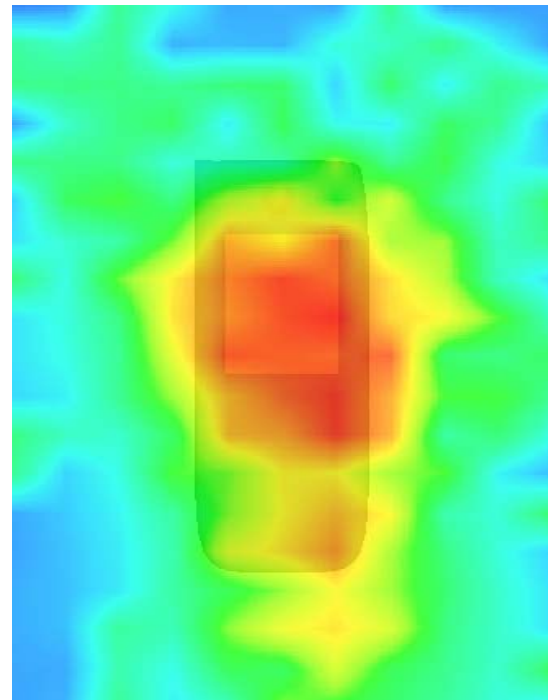
SAR, Z Axis Scan (X = 7, Y = 8)



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: 21/7/2009

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

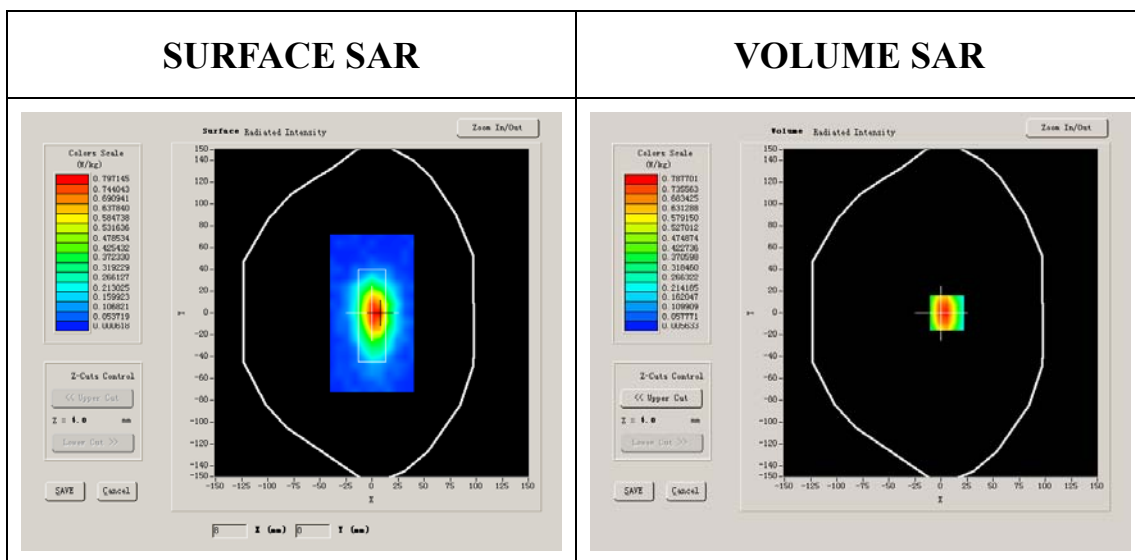
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.573978
Variation (%)	-1.630000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



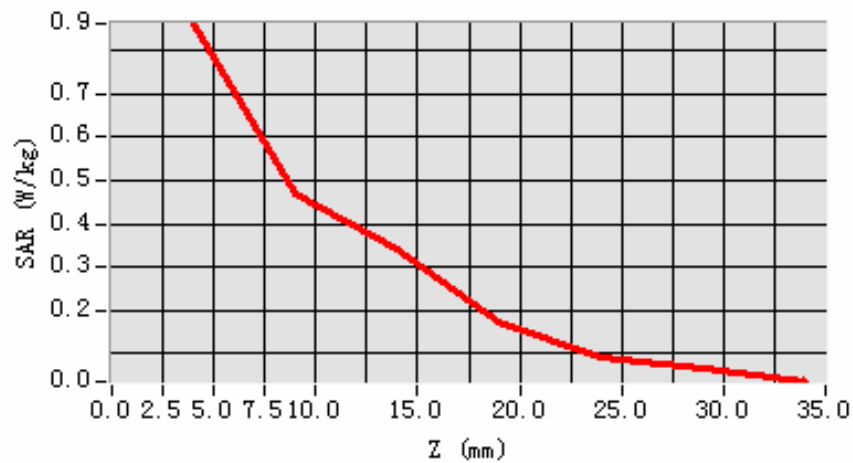
Maximum location: X=6.00, Y=0.00

SAR 10g (W/Kg)	0.454062
SAR 1g (W/Kg)	0.828159

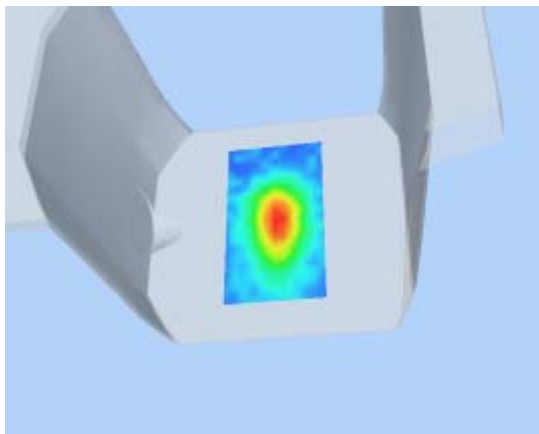
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8633	0.4698	0.3419	0.1732	0.0908	0.0642

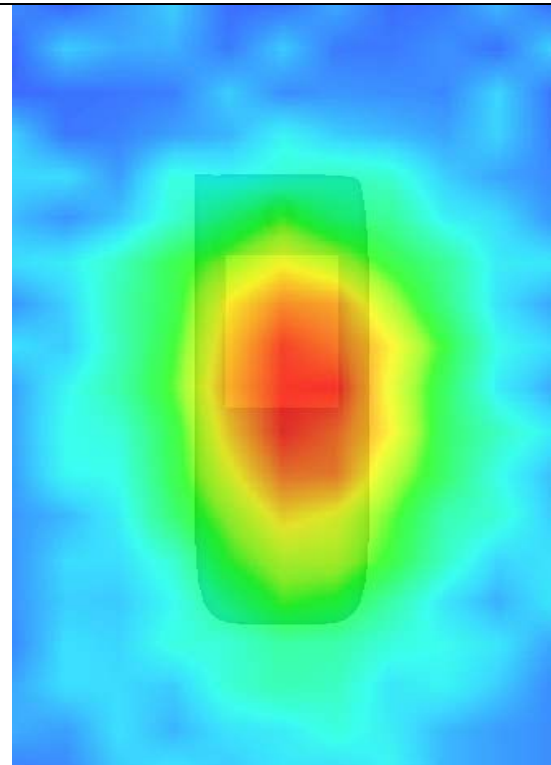
SAR, Z Axis Scan (X = 6, Y = 0)



3D sceen 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: 21/7/2009

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

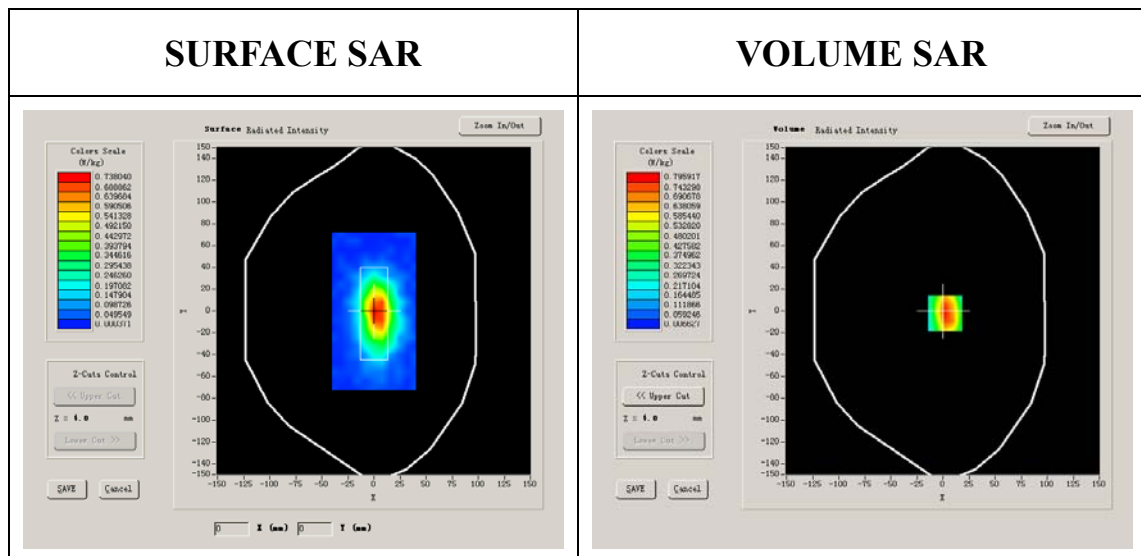
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800049
Relative permittivity (real part)	38.509998
Relative permittivity	12.000000

Conductivity (S/m)	1.273200
Variation (%)	-3.350000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



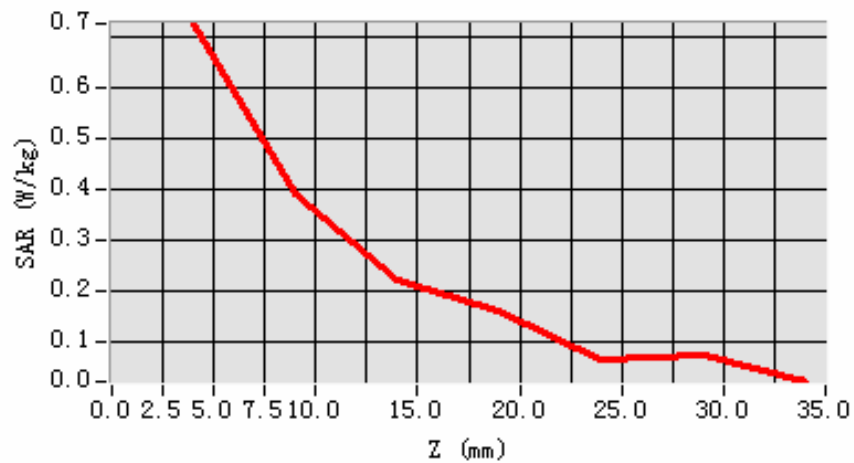
Maximum location: X=2.00, Y=-2.00

SAR 10g (W/Kg)	0.369184
SAR 1g (W/Kg)	0.682583

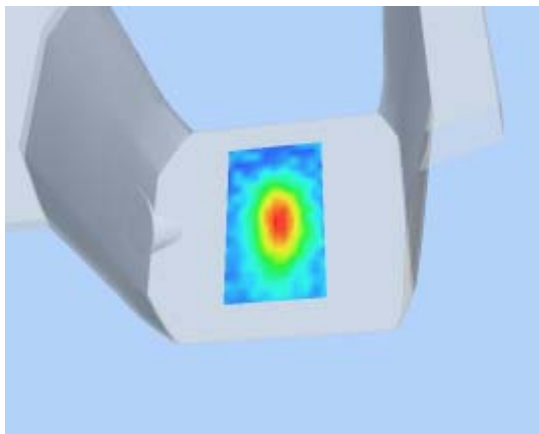
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7260	0.3917	0.2210	0.1590	0.0656	0.0738

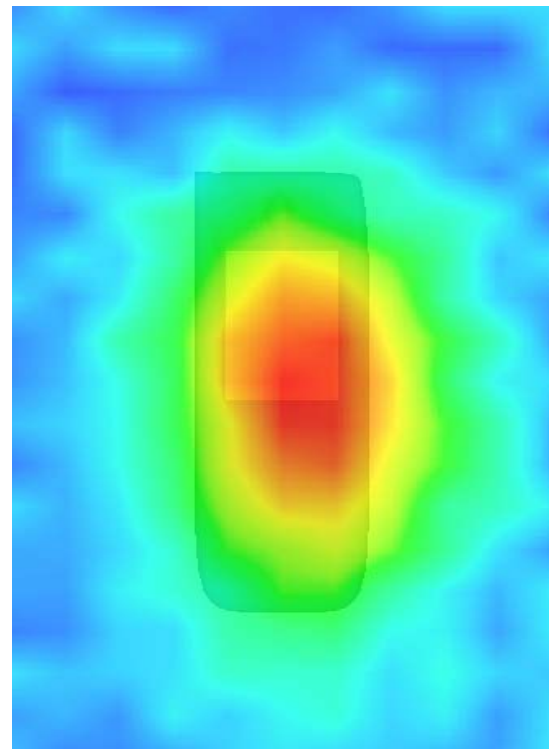
SAR, Z Axis Scan (X = 2, Y = -2)



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: 21/7/2009

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

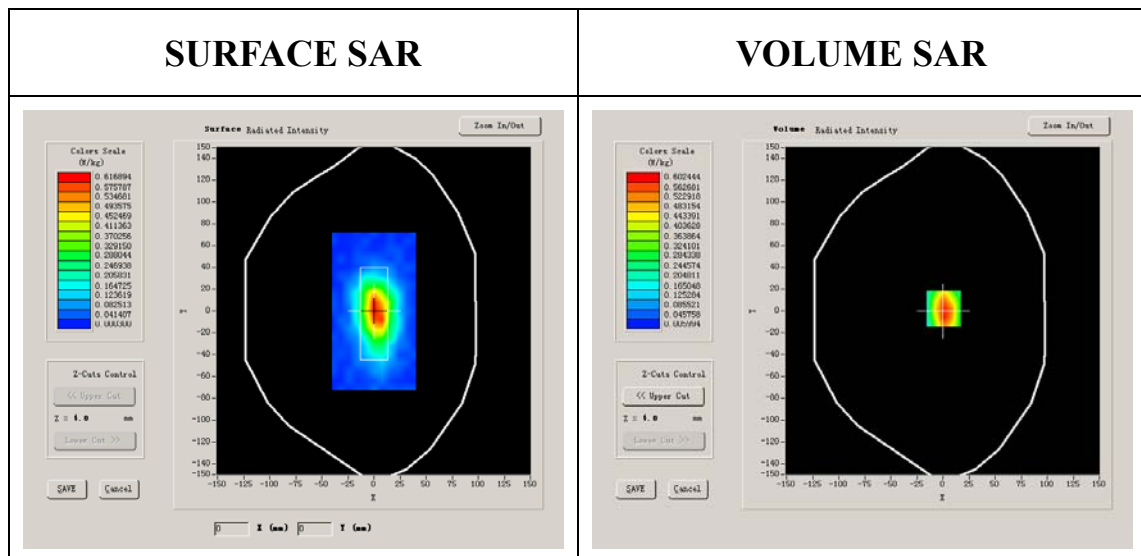
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.199951
Relative permittivity (real part)	39.993999
Relative permittivity	12.000000

Conductivity (S/m)	1.233467
Variation (%)	-4.880000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



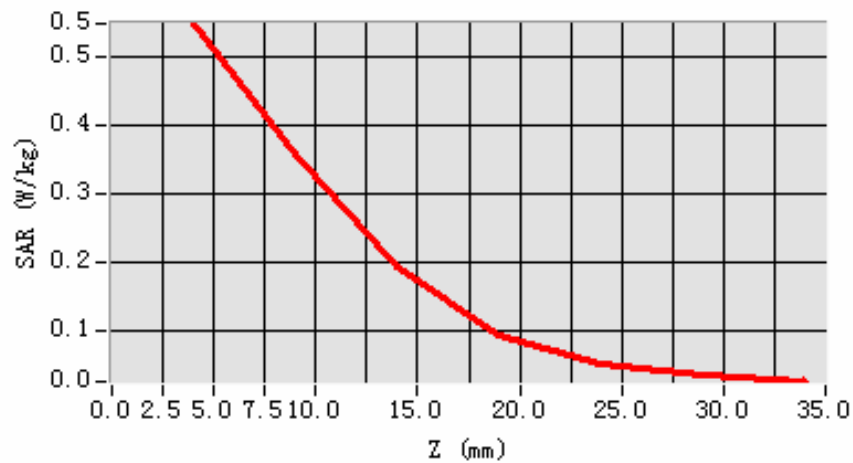
Maximum location: X=1.00, Y=2.00

SAR 10g (W/Kg)	0.293739
SAR 1g (W/Kg)	0.525366

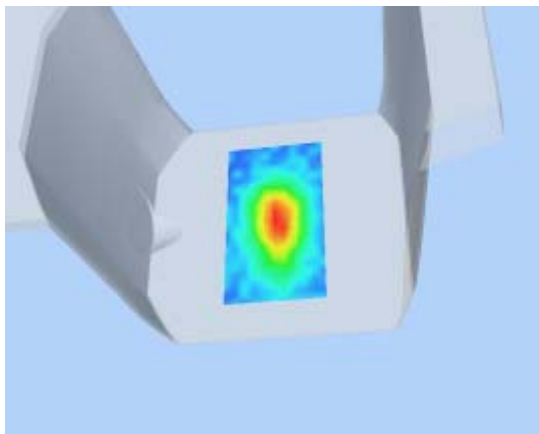
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5484	0.3590	0.1936	0.0930	0.0514	0.0345

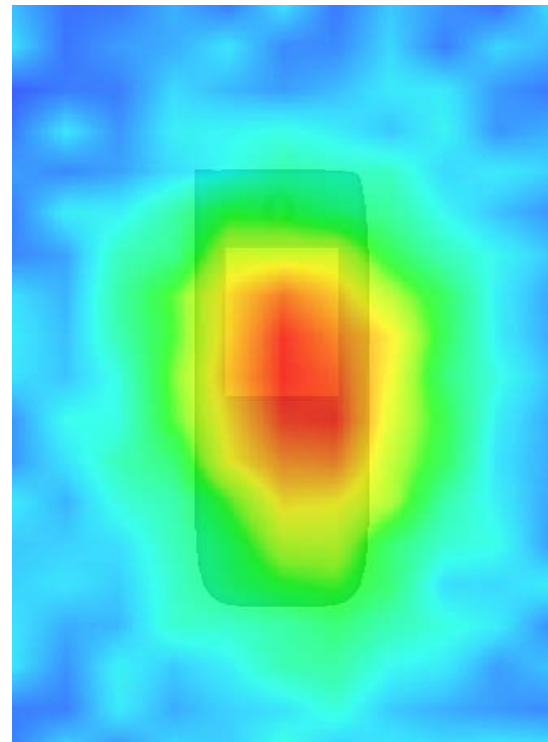
SAR, Z Axis Scan (X = 1, Y = 2)



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: 21/7/2009

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

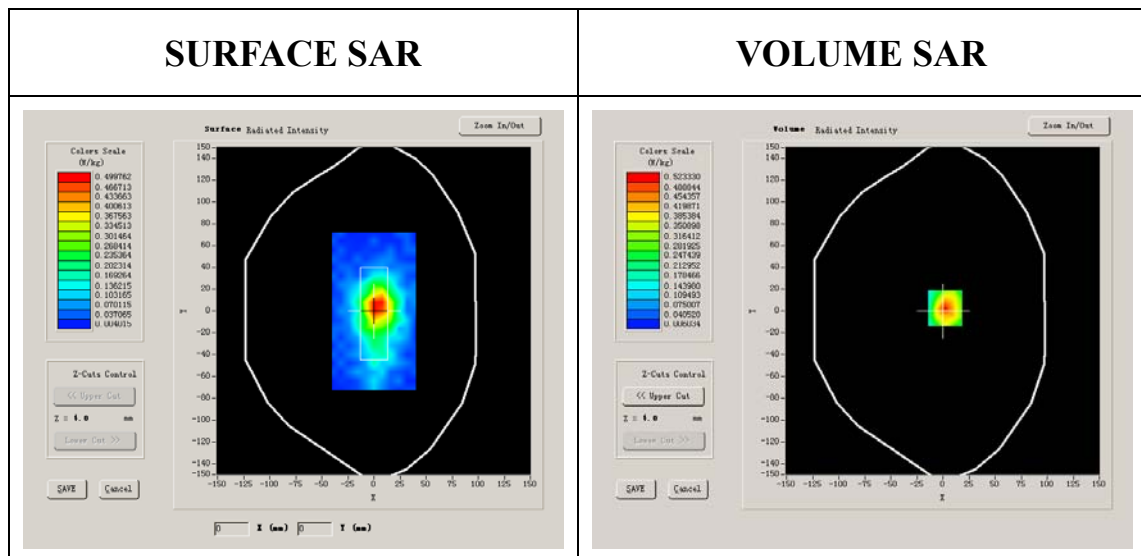
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	-2.650000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



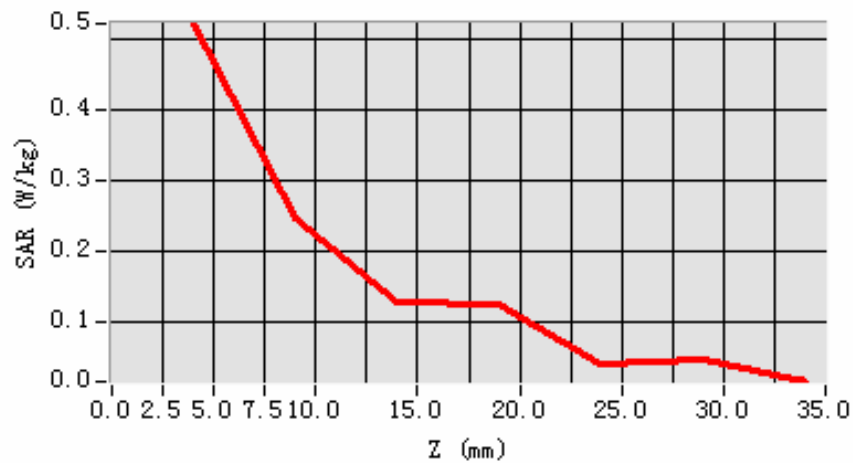
Maximum location: X=2.00, Y=3.00

SAR 10g (W/Kg)	0.253586
SAR 1g (W/Kg)	0.494739

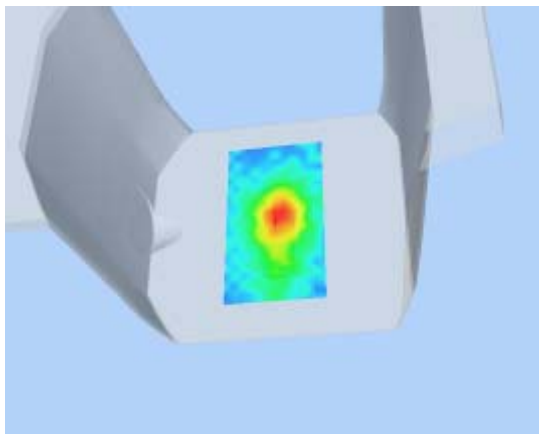
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5233	0.2454	0.1281	0.1236	0.0382	0.0455

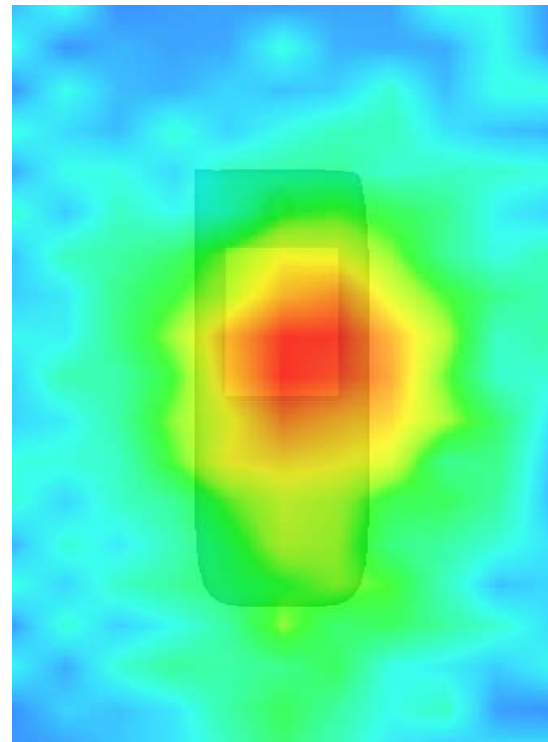
SAR, Z Axis Scan (X = 2, Y = 3)



3D scene shot



Hot spot position



MEASUREMENT 23

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 26 seconds

A. Experimental conditions.

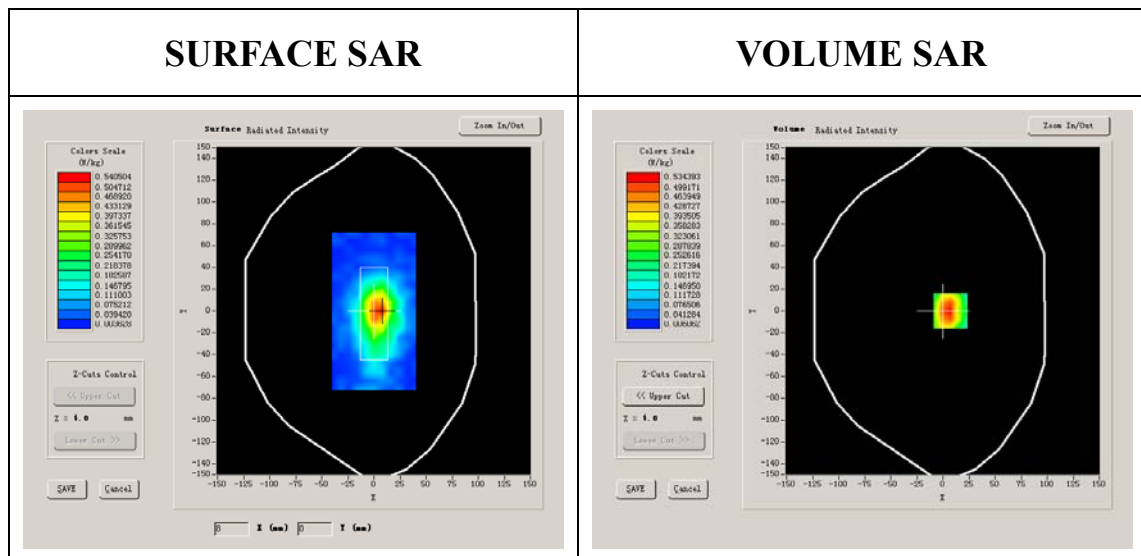
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

Conductivity (S/m)	1.395905
Variation (%)	-4.470000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



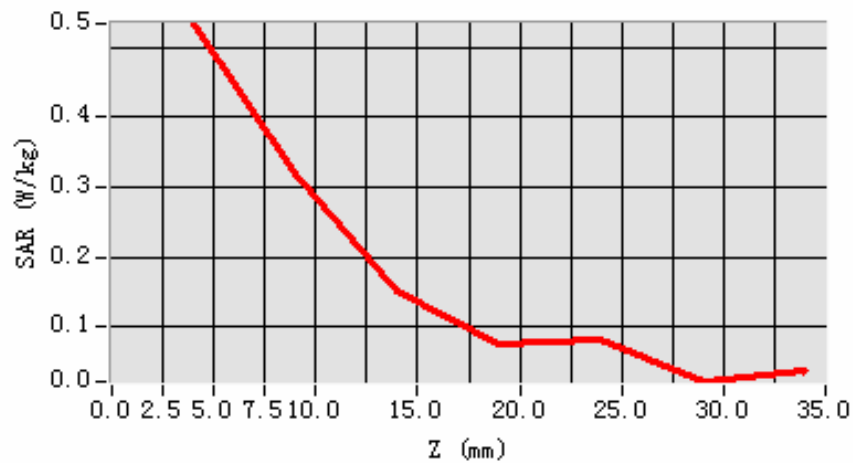
Maximum location: X=7.00, Y=0.00

SAR 10g (W/Kg)	0.273379
SAR 1g (W/Kg)	0.517888

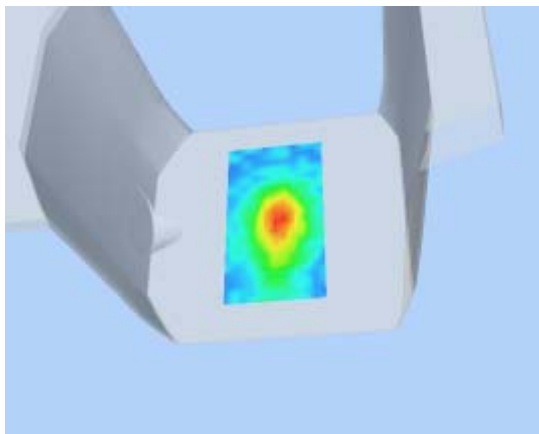
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5344	0.3182	0.1524	0.0753	0.0820	0.0220

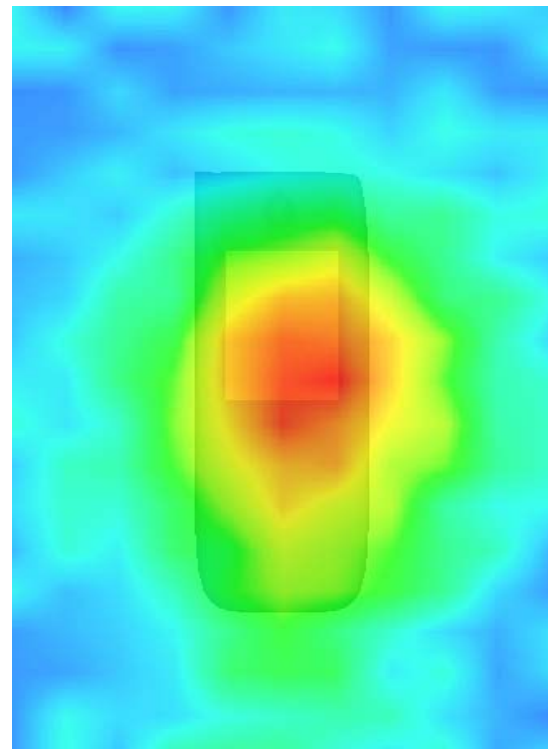
SAR, Z Axis Scan (X = 7, Y = 0)



3D sceen shot



Hot spot position



MEASUREMENT 24

Type: P Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

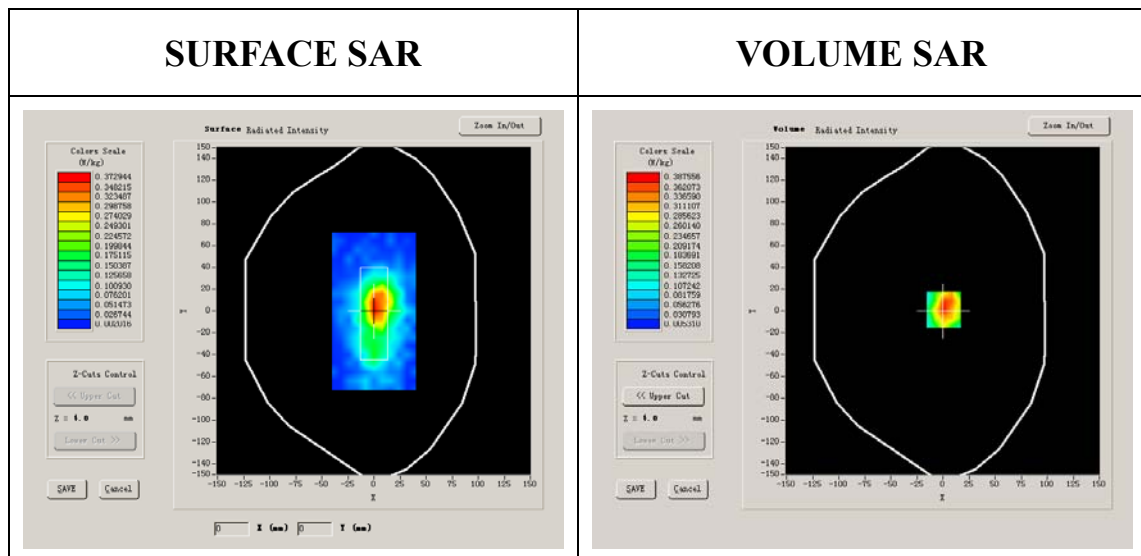
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

Lower Band SAR (Channel 512):

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

Conductivity (S/m)	1.335397
Variation (%)	-2.630000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



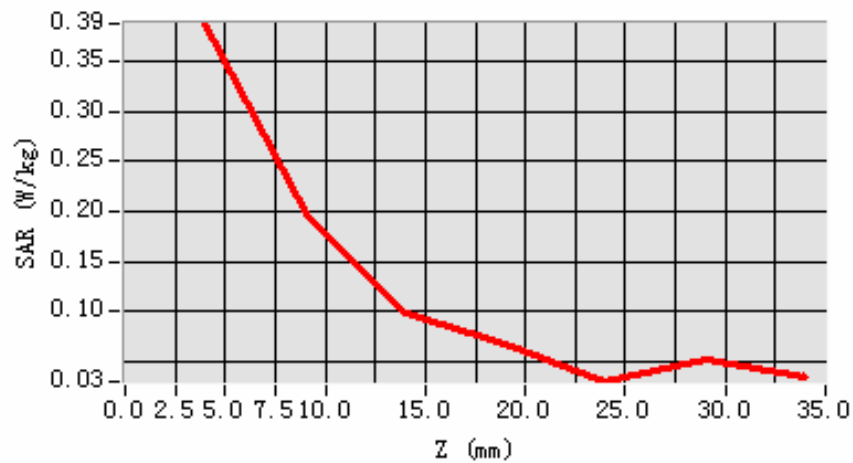
Maximum location: X=1.00, Y=1.00

SAR 10g (W/Kg)	0.195419
SAR 1g (W/Kg)	0.365235

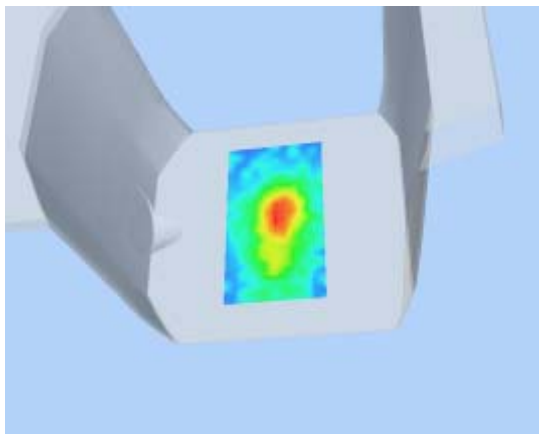
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3876	0.1982	0.0987	0.0672	0.0305	0.0529

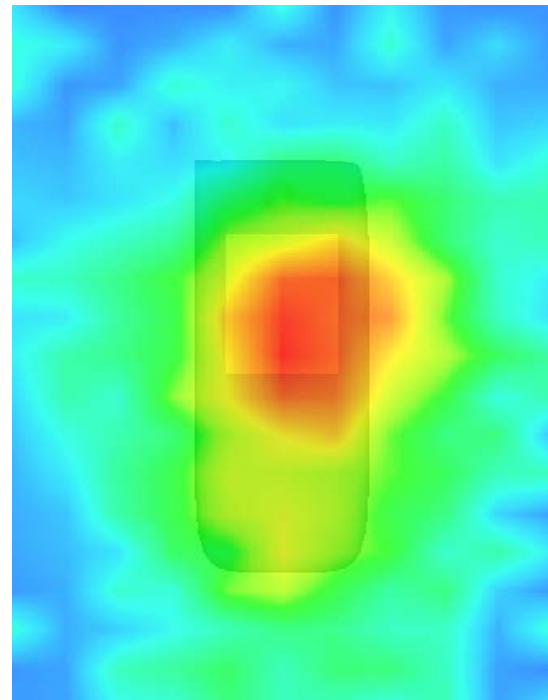
SAR, Z Axis Scan (X = 1, Y = 1)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 28 seconds

A. Experimental conditions.

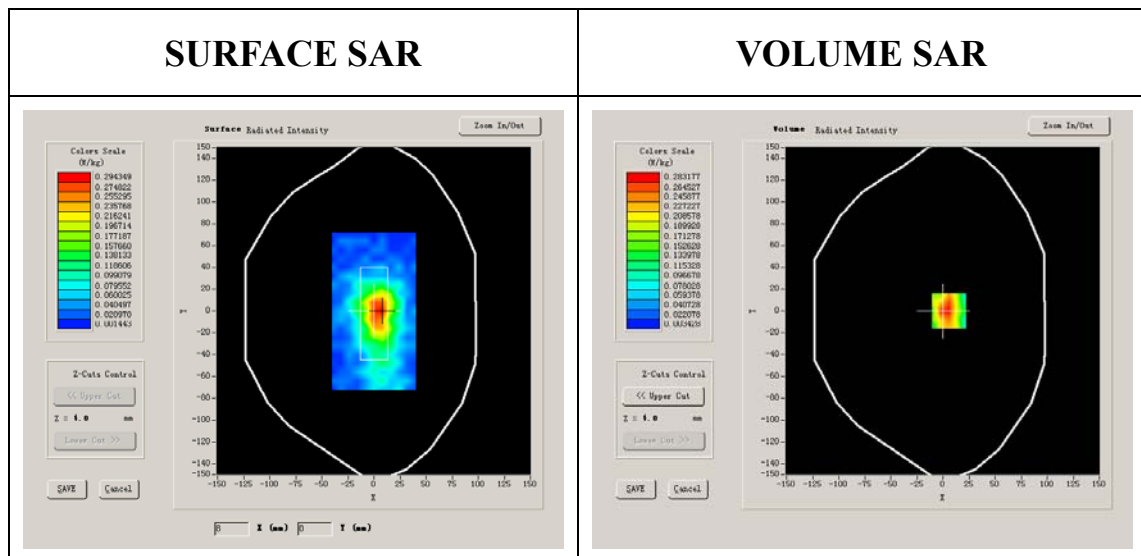
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	-1.710000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



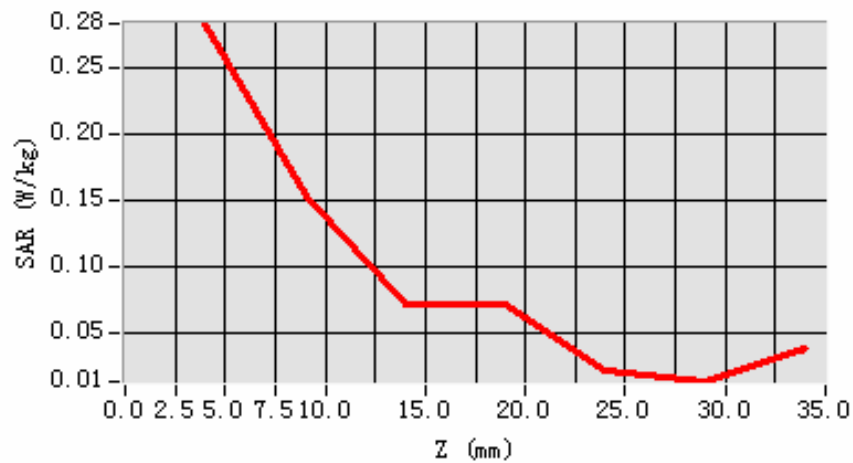
Maximum location: X=6.00, Y=0.00

SAR 10g (W/Kg)	0.144569
SAR 1g (W/Kg)	0.279530

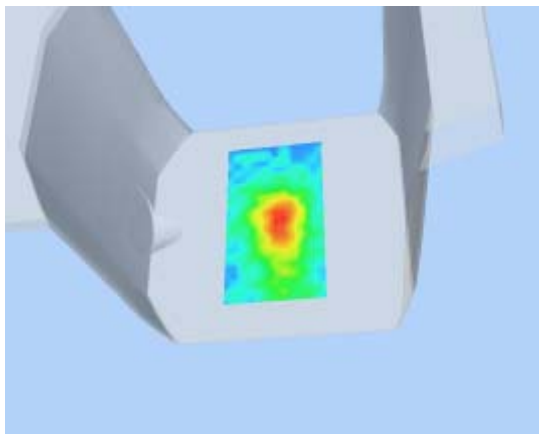
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2832	0.1521	0.0713	0.0707	0.0200	0.0124

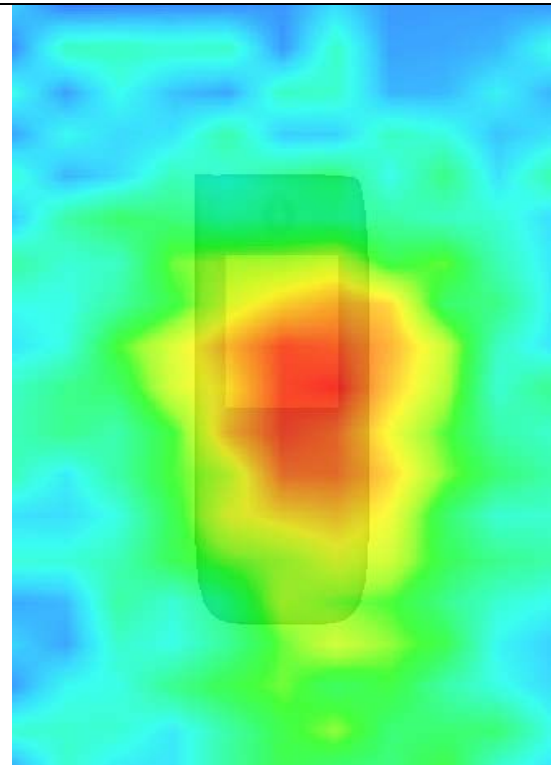
SAR, Z Axis Scan (X = 6, Y = 0)



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: 21/7/2009

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

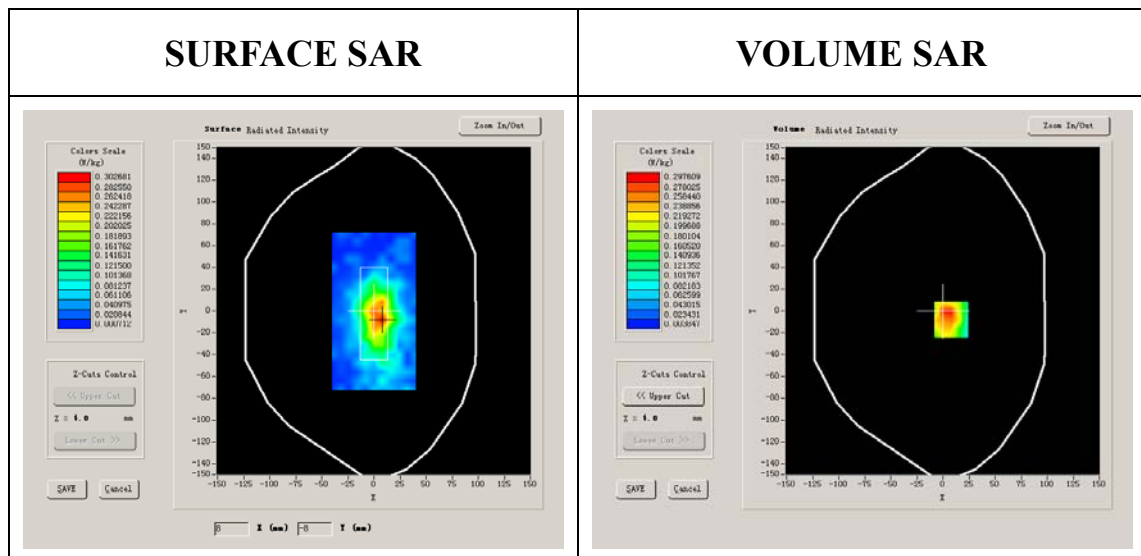
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

Higher Band SAR (Channel 810):

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

Conductivity (S/m)	1.395905
Variation (%)	2.890000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



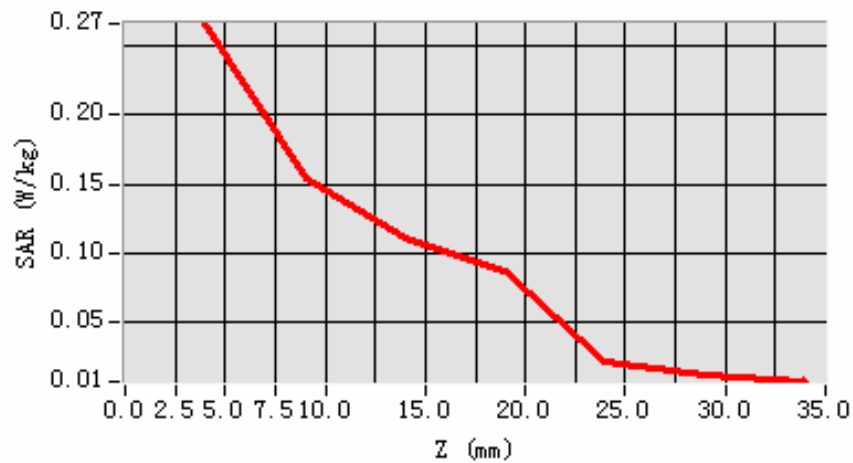
Maximum location: X=8.00, Y=-8.00

SAR 10g (W/Kg)	0.155186
SAR 1g (W/Kg)	0.299651

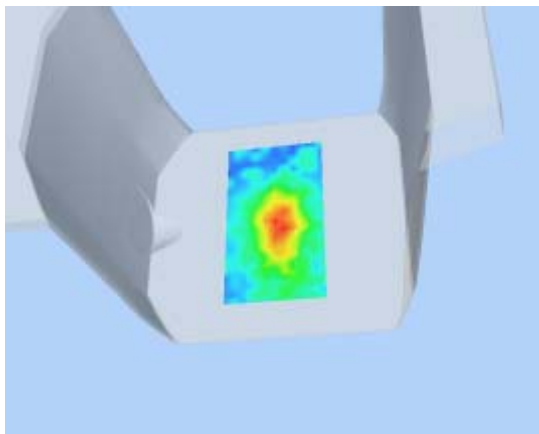
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2659	0.1551	0.1116	0.0868	0.0221	0.0126

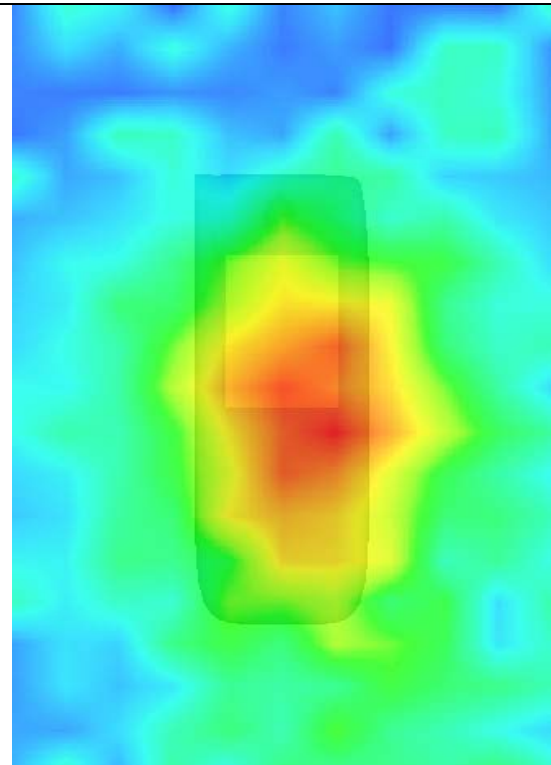
SAR, Z Axis Scan (X = 8, Y = -8)



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: 21/7/2009

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

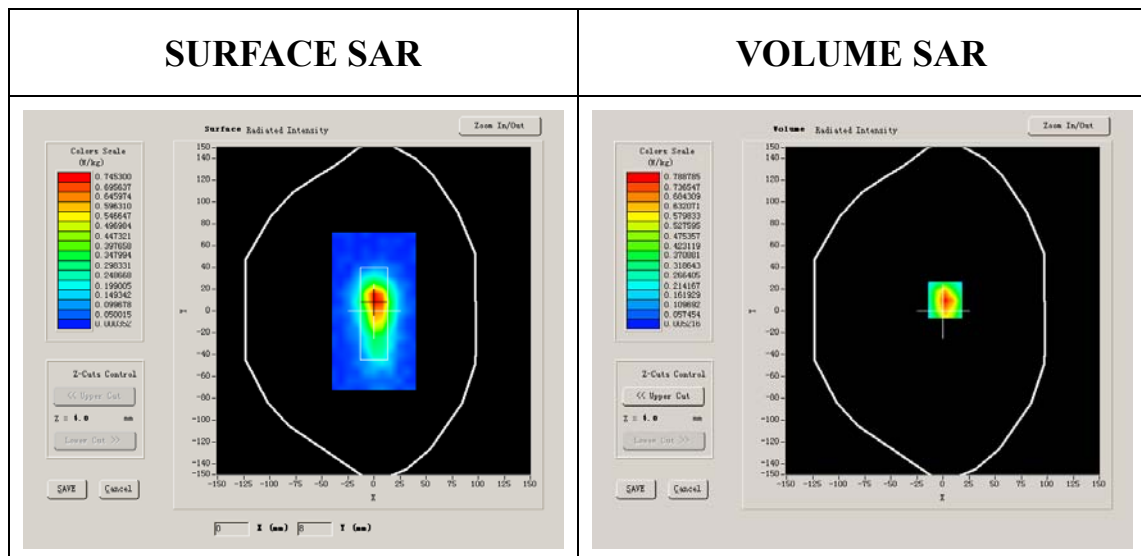
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	3.140000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:2.0



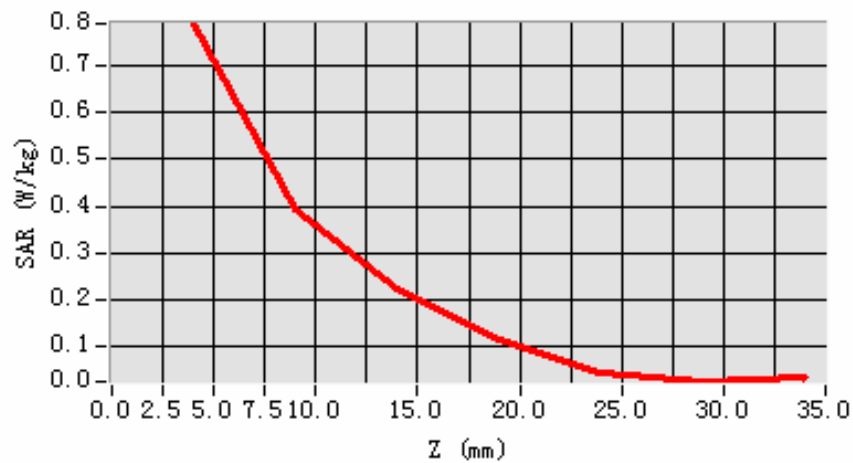
Maximum location: X=2.00, Y=10.00

SAR 10g (W/Kg)	0.369718
SAR 1g (W/Kg)	0.735848

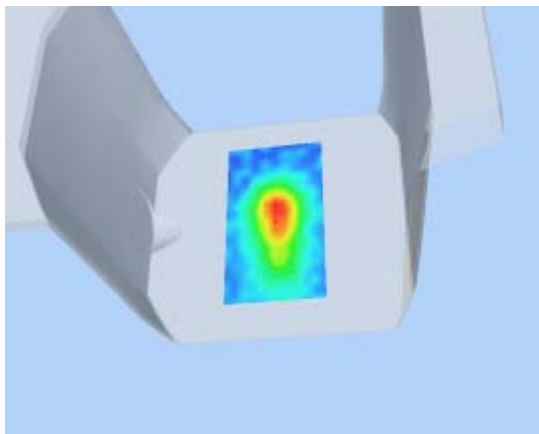
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7888	0.3936	0.2258	0.1174	0.0453	0.0258

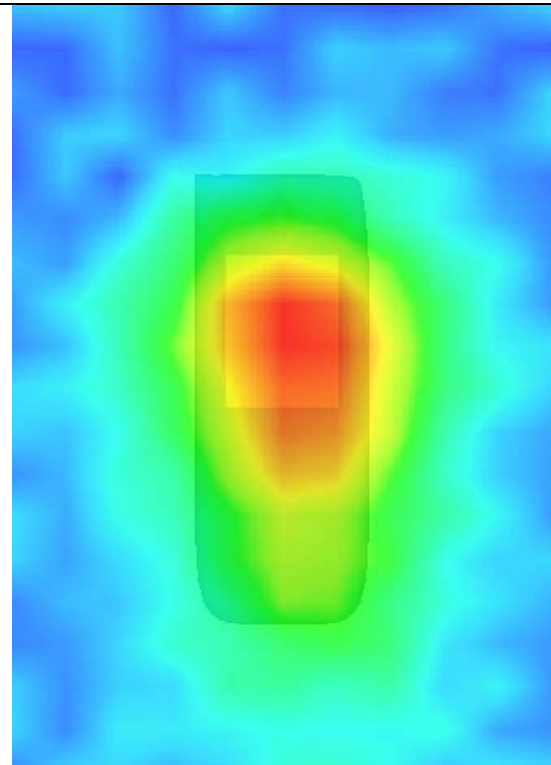
SAR, Z Axis Scan (X = 2, Y = 10)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

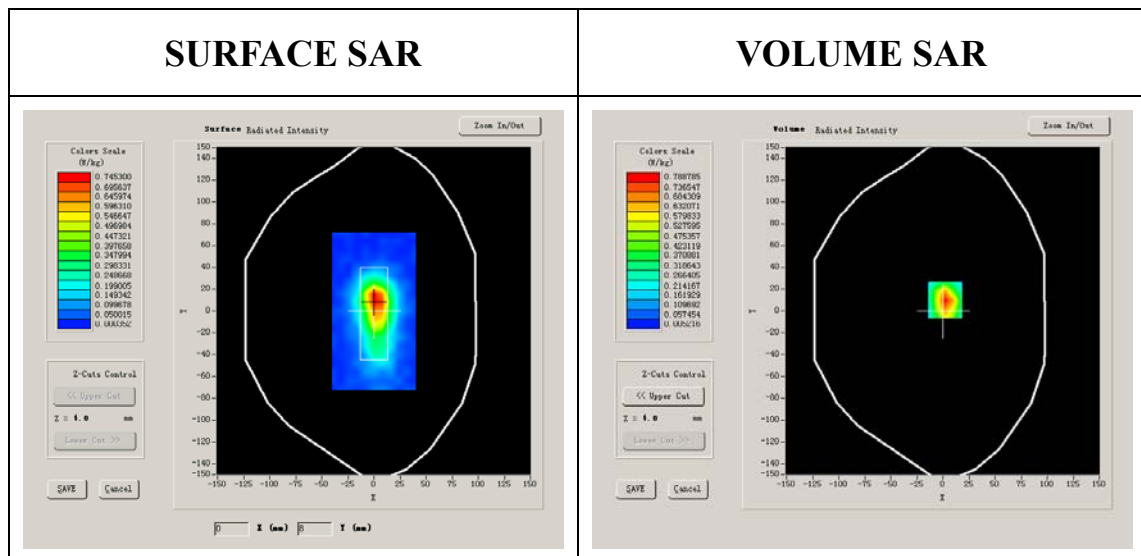
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

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

Conductivity (S/m)	1.436111
Variation (%)	3.140000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.7°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1



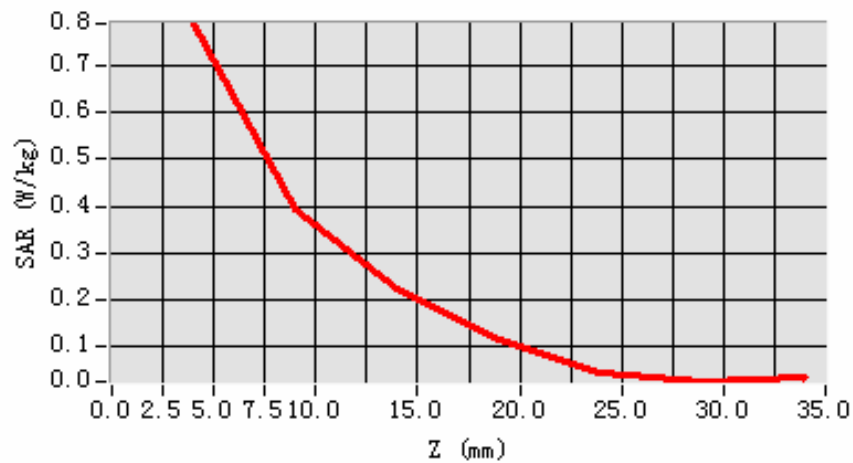
Maximum location: X=2.00, Y=10.00

SAR 10g (W/Kg)	0.316644
SAR 1g (W/Kg)	0.644522

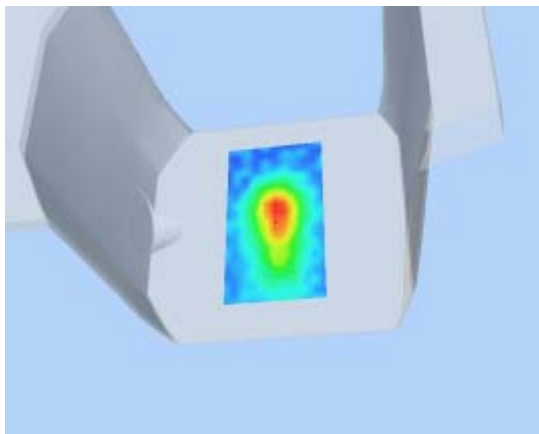
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7888	0.3936	0.2258	0.1174	0.0453	0.0258

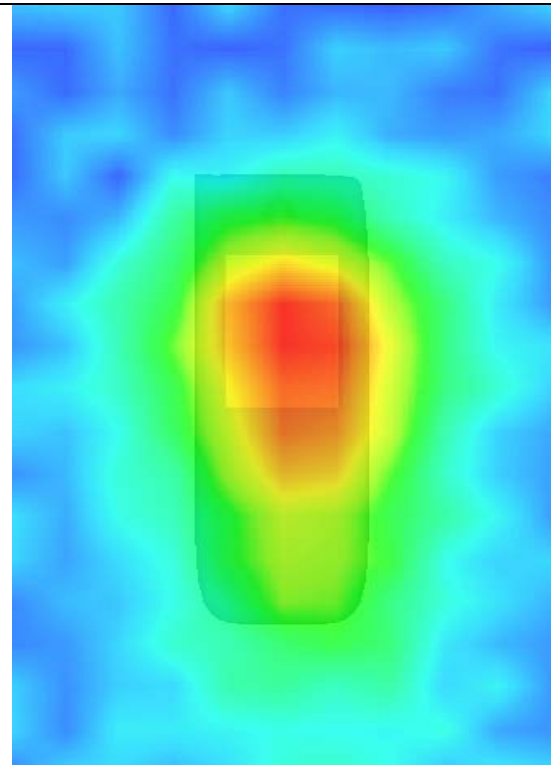
SAR, Z Axis Scan (X = 2, Y = 10)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 3 seconds

A. Experimental conditions.

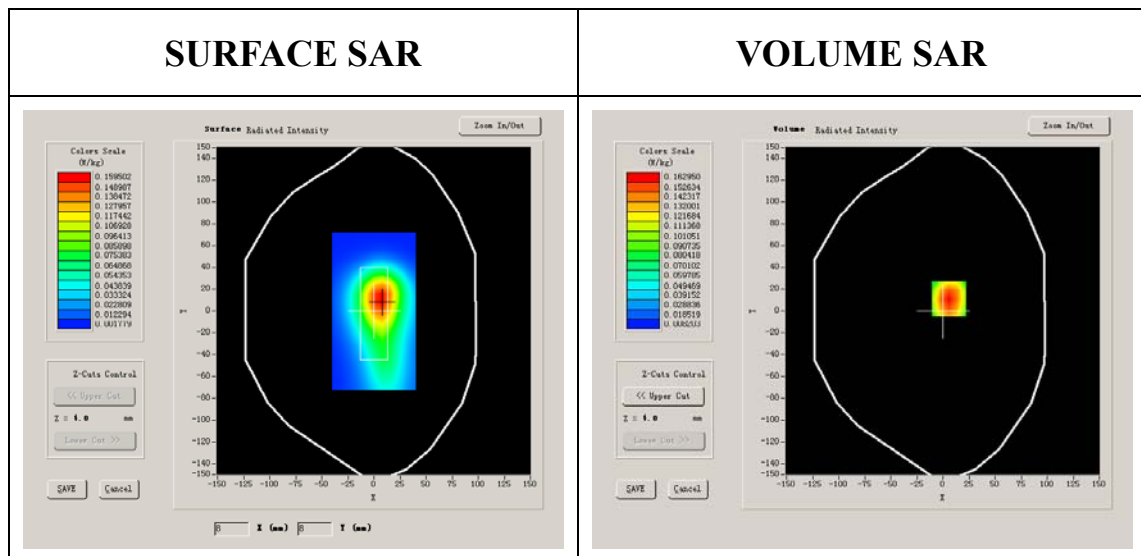
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 4132):

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

Conductivity (S/m)	0.728580
Variation (%)	0.240000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



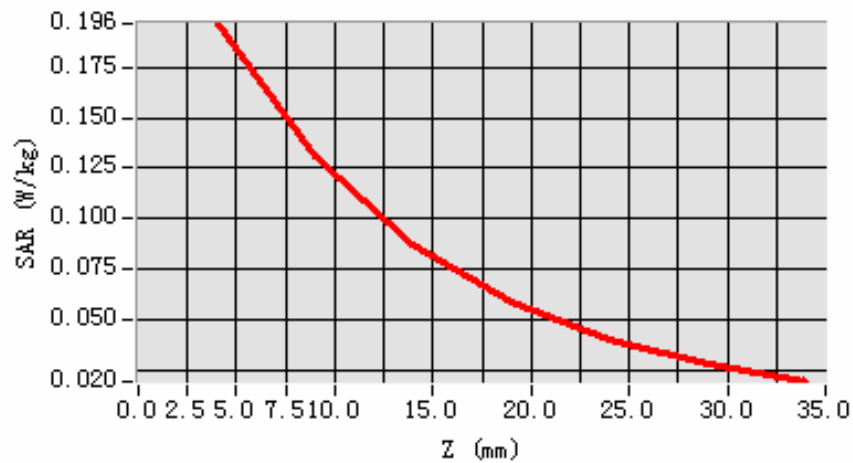
Maximum location: X=6.00, Y=11.00

SAR 10g (W/Kg)	0.119518
SAR 1g (W/Kg)	0.187208

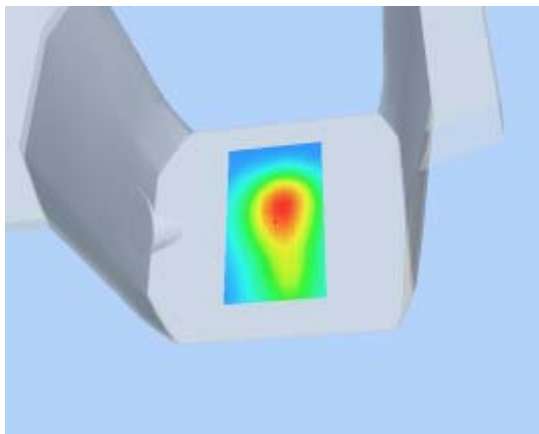
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1964	0.1306	0.0873	0.0592	0.0405	0.0279

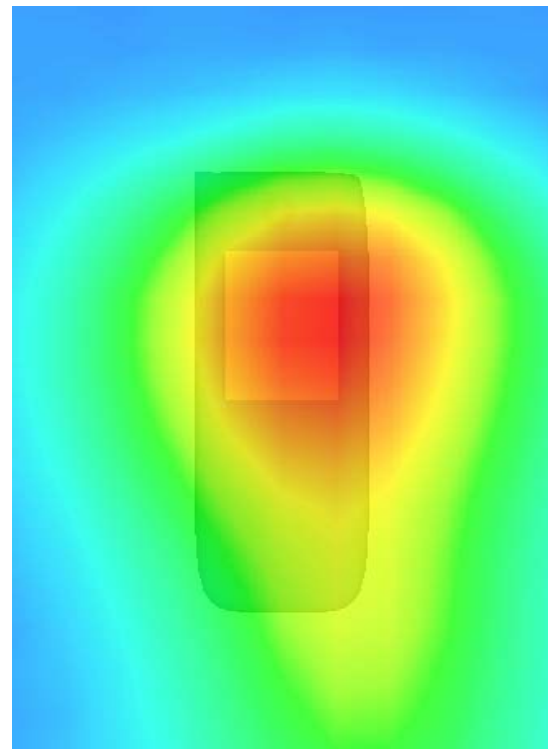
SAR, Z Axis Scan (X = 6, Y = 11)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 3 seconds

A. Experimental conditions.

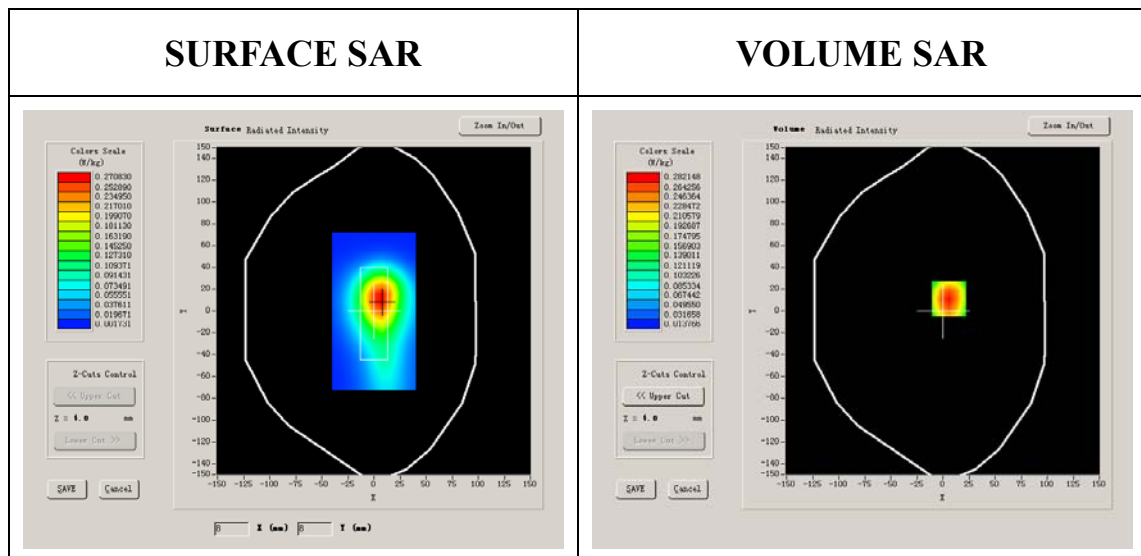
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

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

Conductivity (S/m)	0.737401
Variation (%)	1.030000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



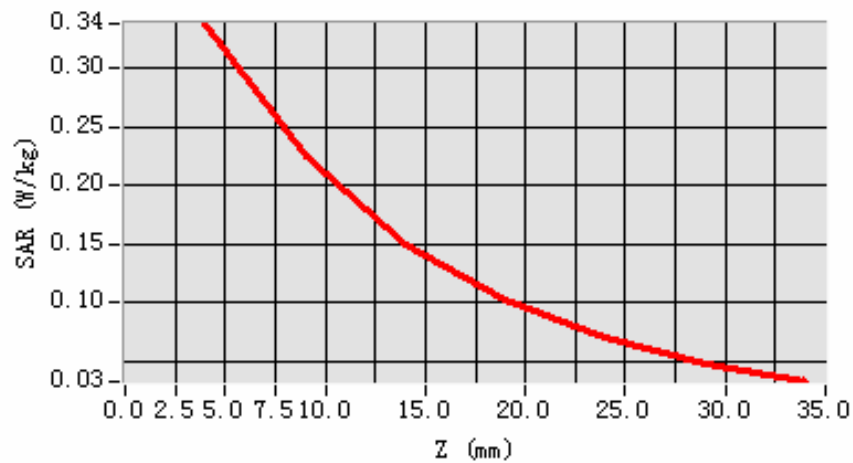
Maximum location: X=6.00, Y=11.00

SAR 10g (W/Kg)	0.204815
SAR 1g (W/Kg)	0.322835

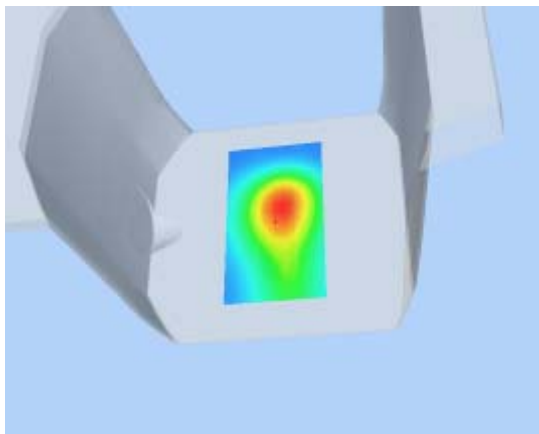
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3386	0.2246	0.1505	0.1029	0.0698	0.0476

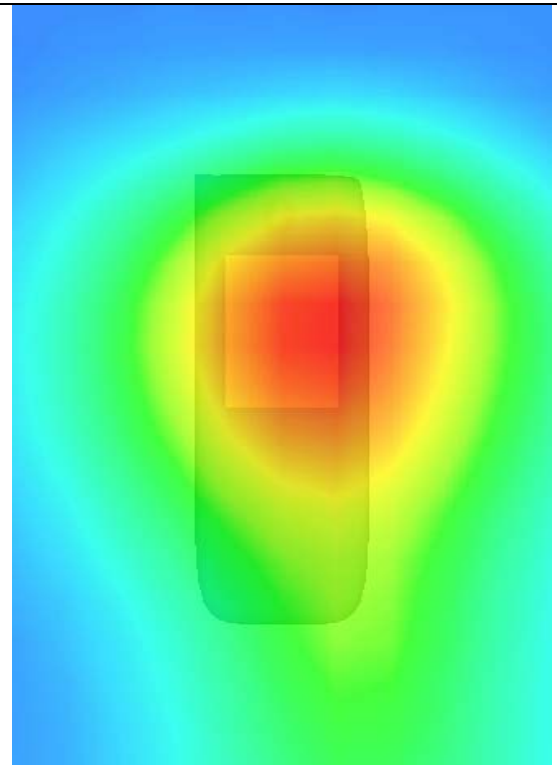
SAR, Z Axis Scan (X = 6, Y = 11)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

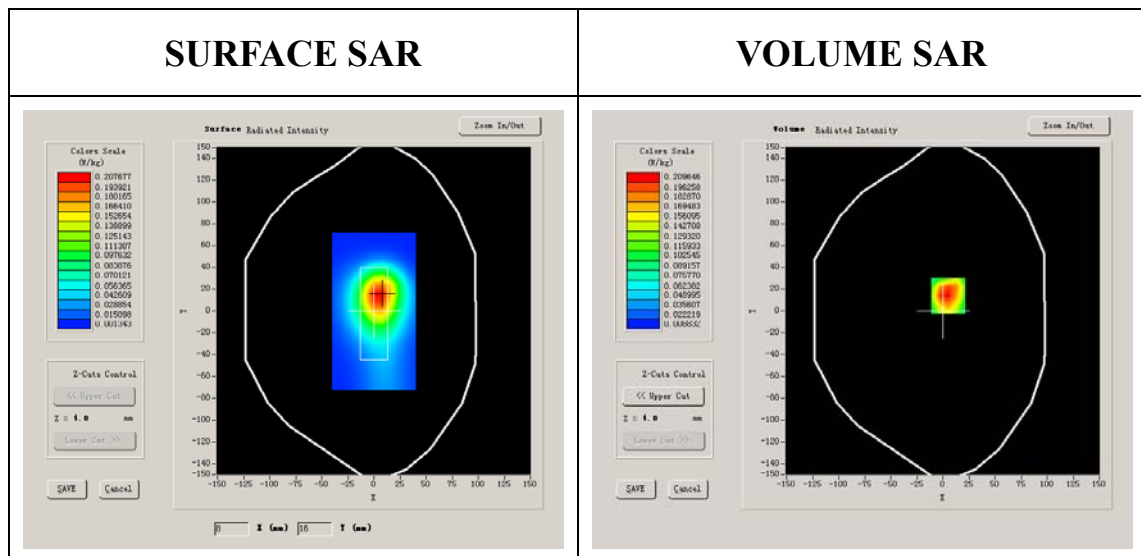
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 4233):

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

Conductivity (S/m)	0.746221
Variation (%)	-3.510000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



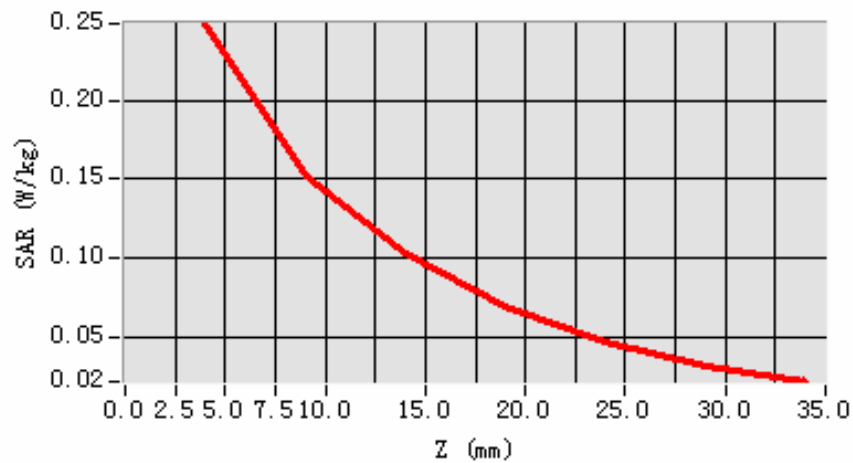
Maximum location: X=5.00, Y=14.00

SAR 10g (W/Kg)	0.146397
SAR 1g (W/Kg)	0.245944

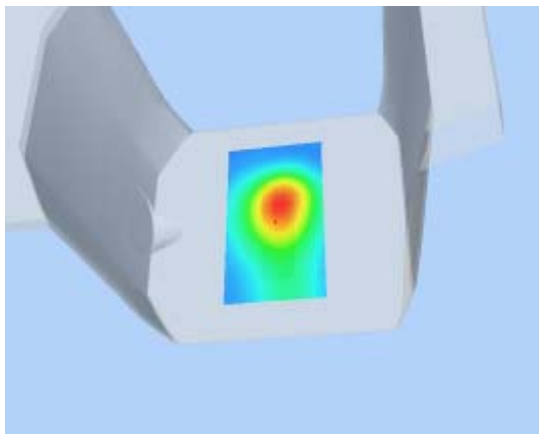
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2488	0.1521	0.1022	0.0690	0.0464	0.0316

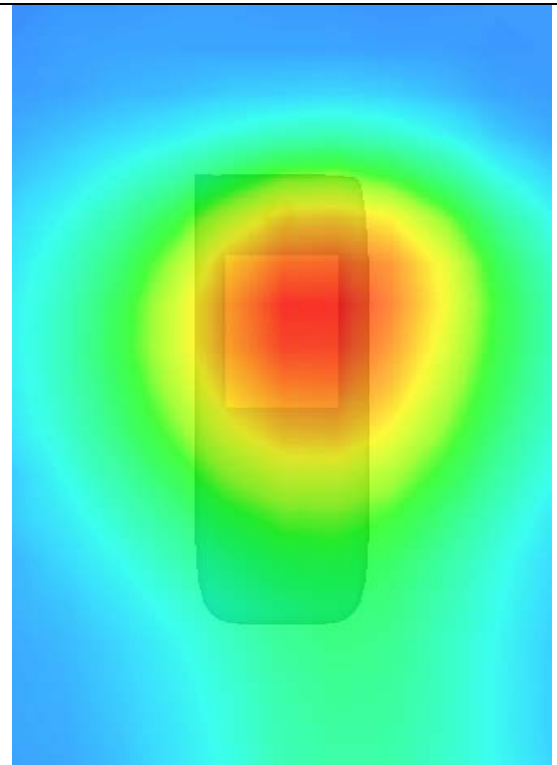
SAR, Z Axis Scan (X = 5, Y = 14)



3D sceen shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 4 seconds

A. Experimental conditions.

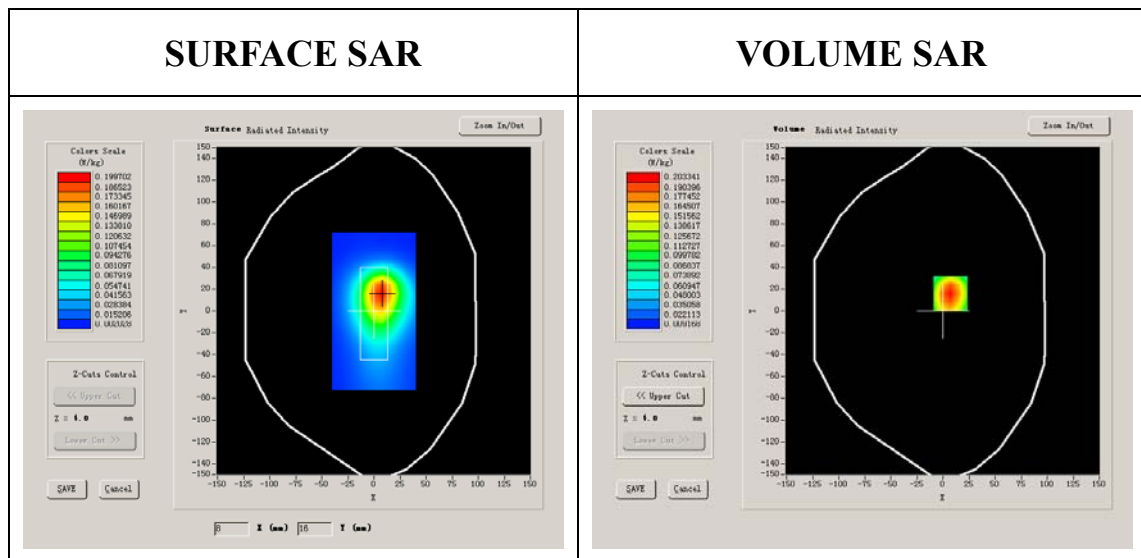
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 4132):

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

Conductivity (S/m)	0.728580
Variation (%)	2.280000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



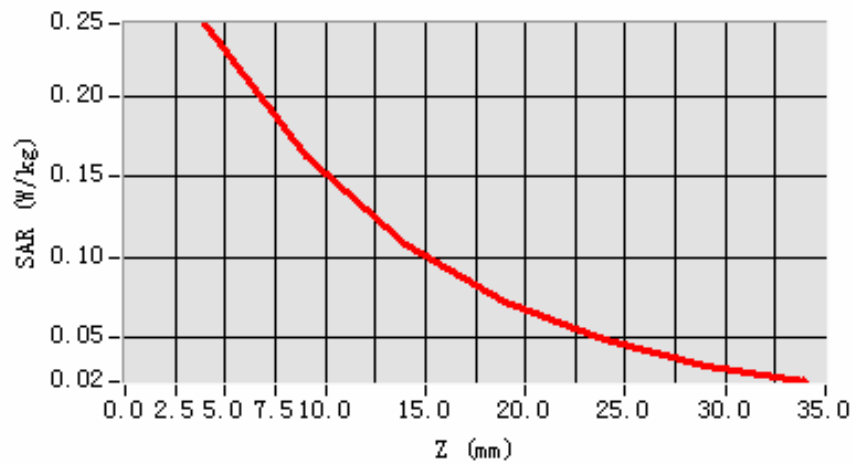
Maximum location: X=7.00, Y=16.00

SAR 10g (W/Kg)	0.145011
SAR 1g (W/Kg)	0.232782

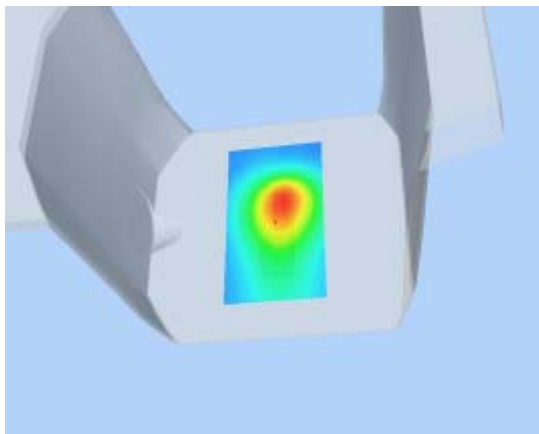
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2451	0.1621	0.1072	0.0717	0.0482	0.0328

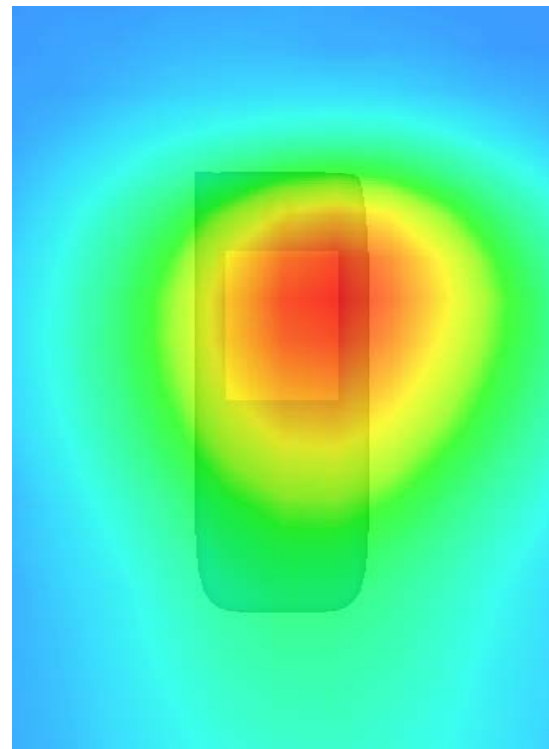
SAR, Z Axis Scan (X = 7, Y = 16)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

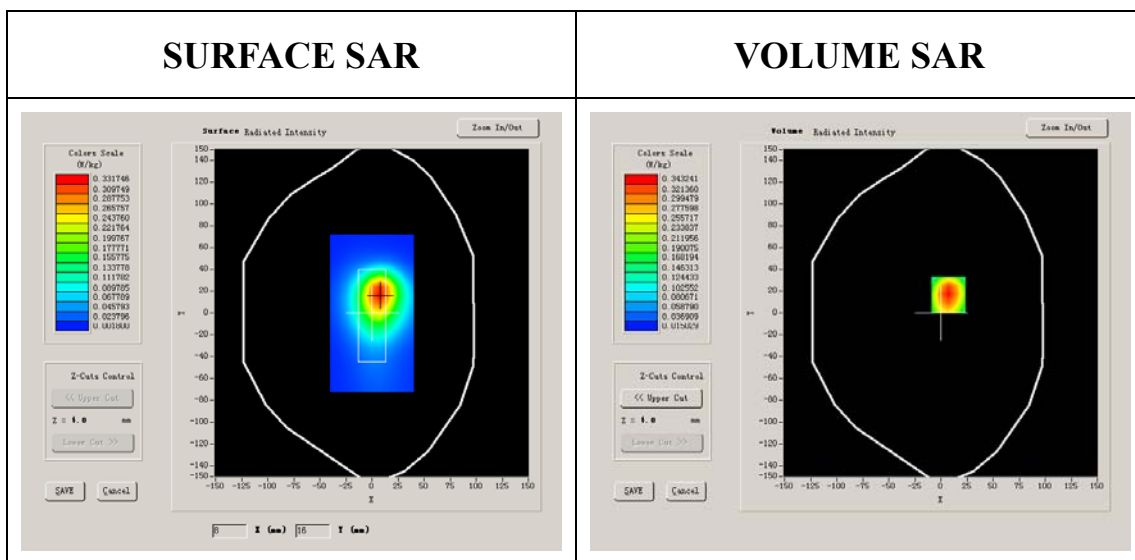
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

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

Conductivity (S/m)	0.737401
Variation (%)	3.450000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



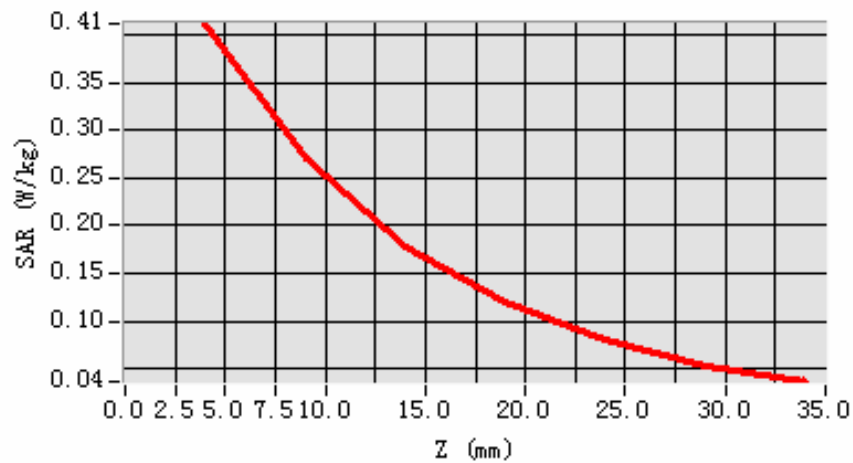
Maximum location: X=7.00, Y=17.00

SAR 10g (W/Kg)	0.240972
SAR 1g (W/Kg)	0.392063

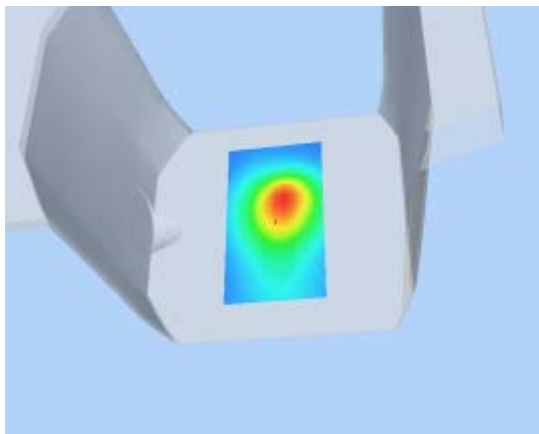
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4119	0.2714	0.1784	0.1200	0.0802	0.0534

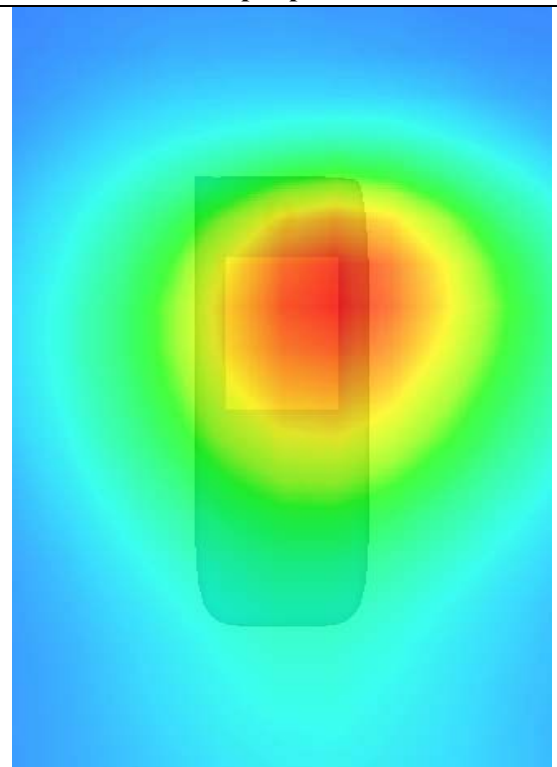
SAR, Z Axis Scan (X = 7, Y = 17)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

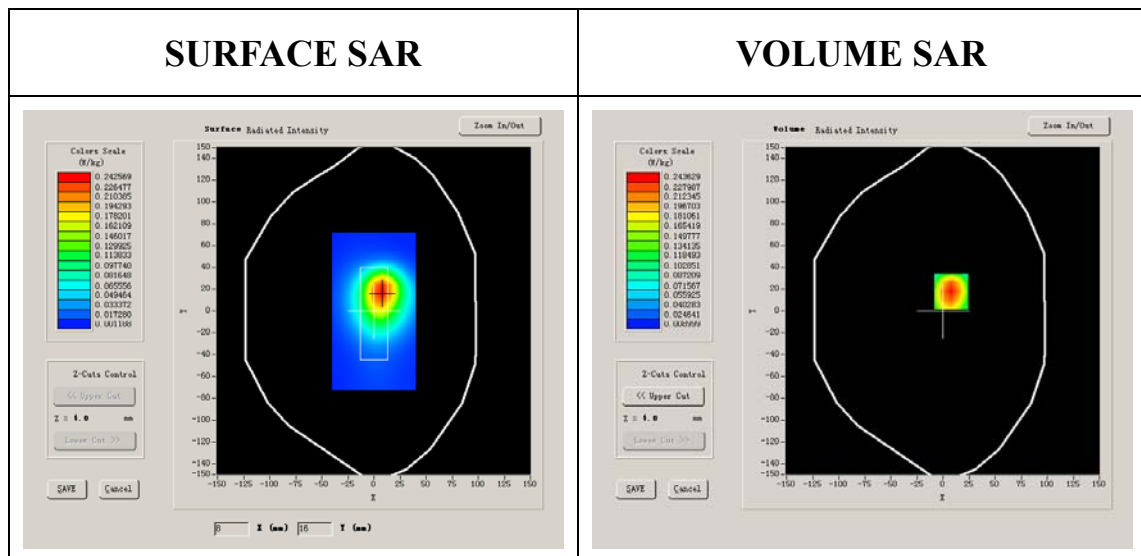
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 4233):

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

Conductivity (S/m)	0.746221
Variation (%)	-2.090000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



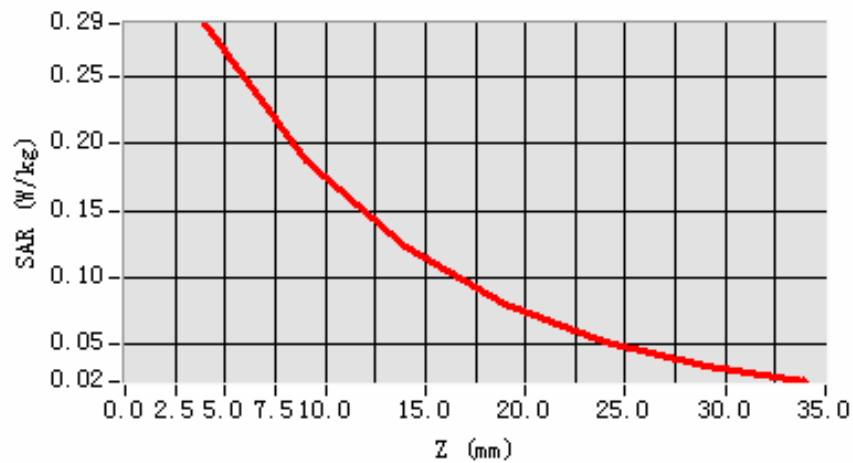
Maximum location: X=8.00, Y=18.00

SAR 10g (W/Kg)	0.166251
SAR 1g (W/Kg)	0.273657

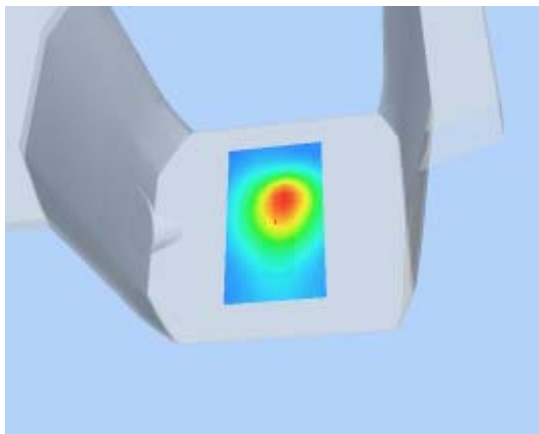
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2891	0.1873	0.1221	0.0792	0.0515	0.0340

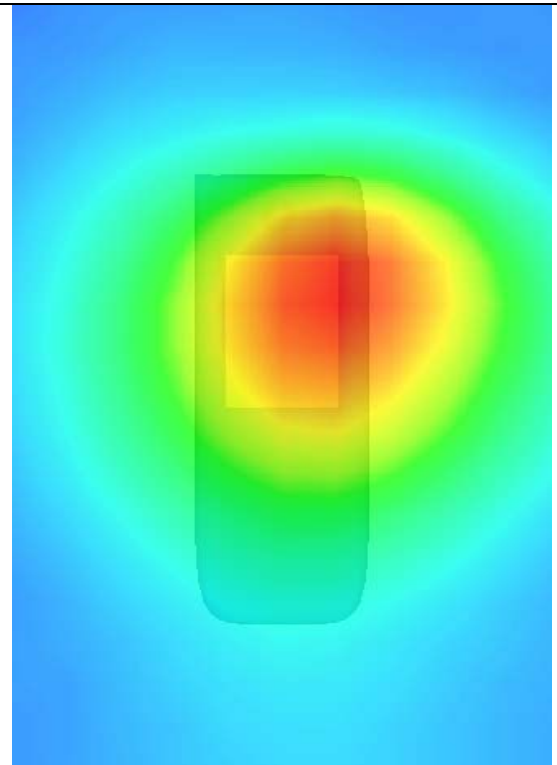
SAR, Z Axis Scan (X = 8, Y = 18)



3D sceen 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: 21/7/2009

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

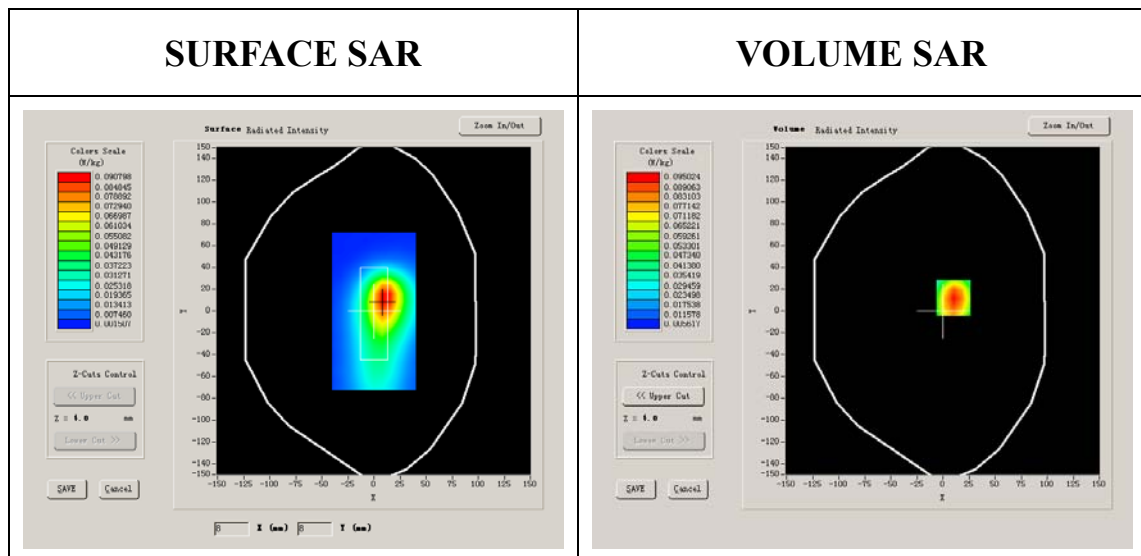
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 4132):

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

Conductivity (S/m)	0.728580
Variation (%)	0.360000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



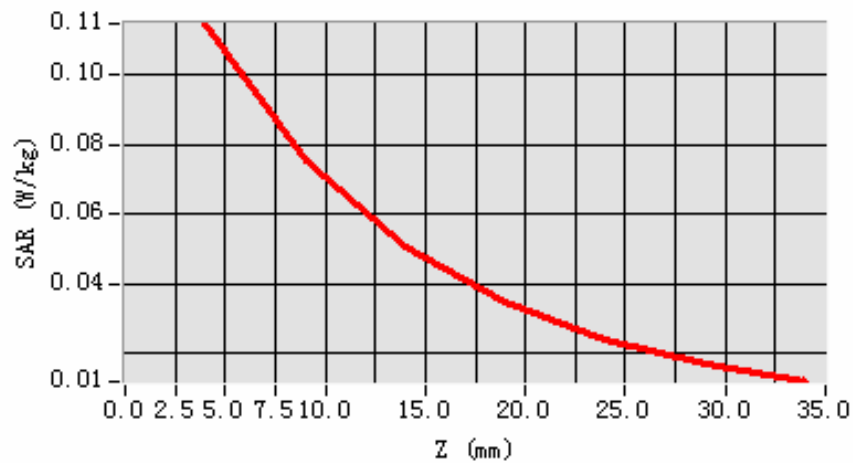
Maximum location: X=10.00, Y=12.00

SAR 10g (W/Kg)	0.067801
SAR 1g (W/Kg)	0.108460

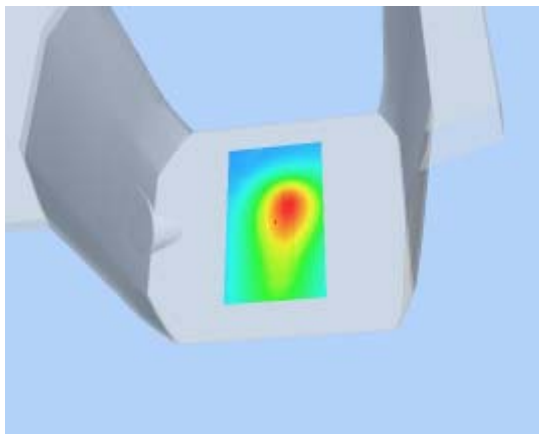
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1146	0.0754	0.0504	0.0347	0.0241	0.0168

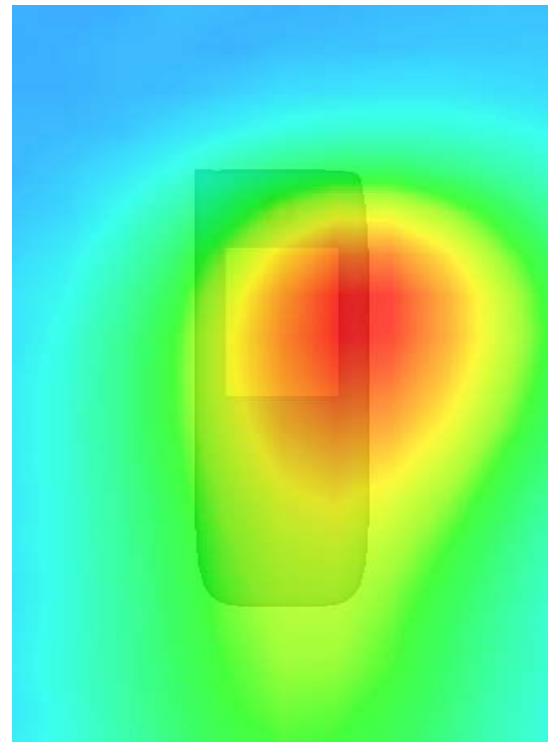
SAR, Z Axis Scan (X = 10, Y = 12)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

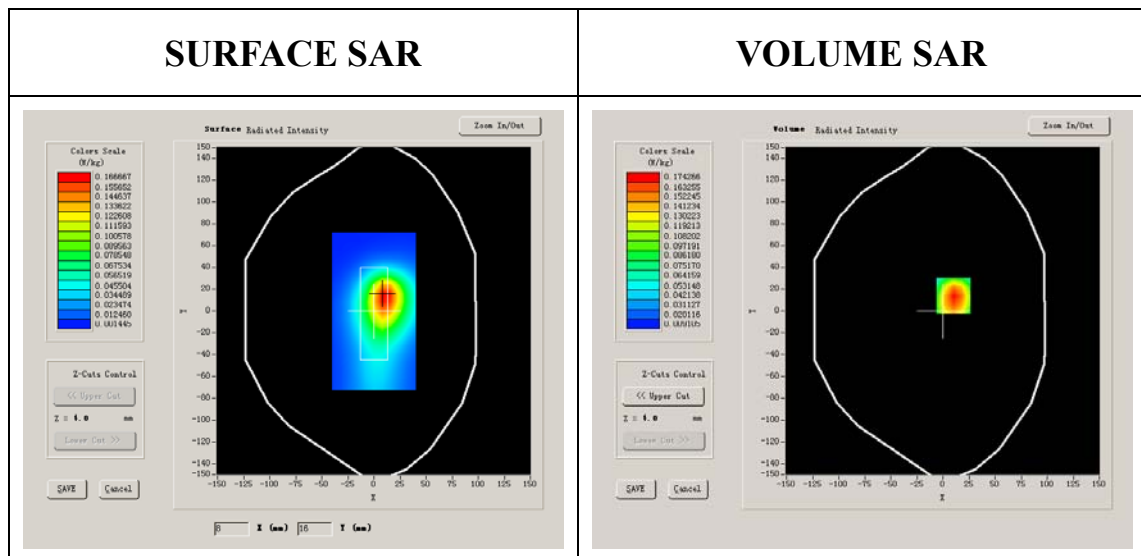
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

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

Conductivity (S/m)	0.737401
Variation (%)	0.640000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



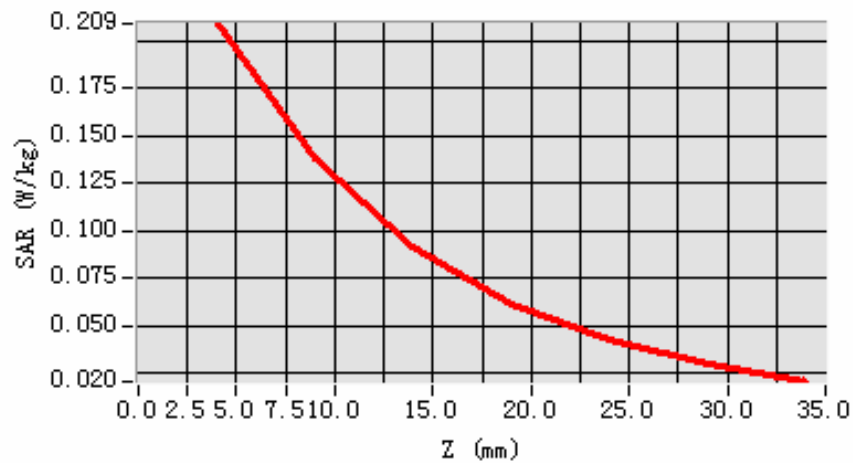
Maximum location: X=10.00, Y=14.00

SAR 10g (W/Kg)	0.123442
SAR 1g (W/Kg)	0.198027

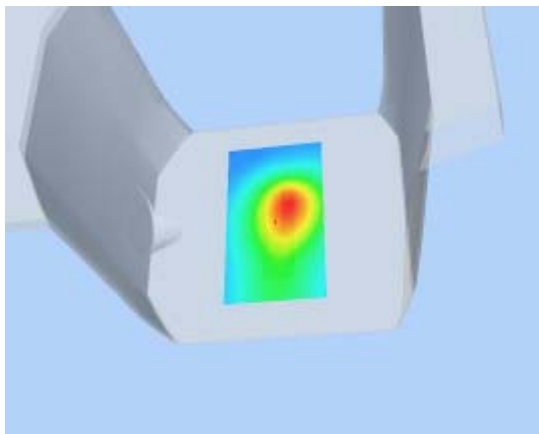
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2091	0.1375	0.0909	0.0612	0.0420	0.0293

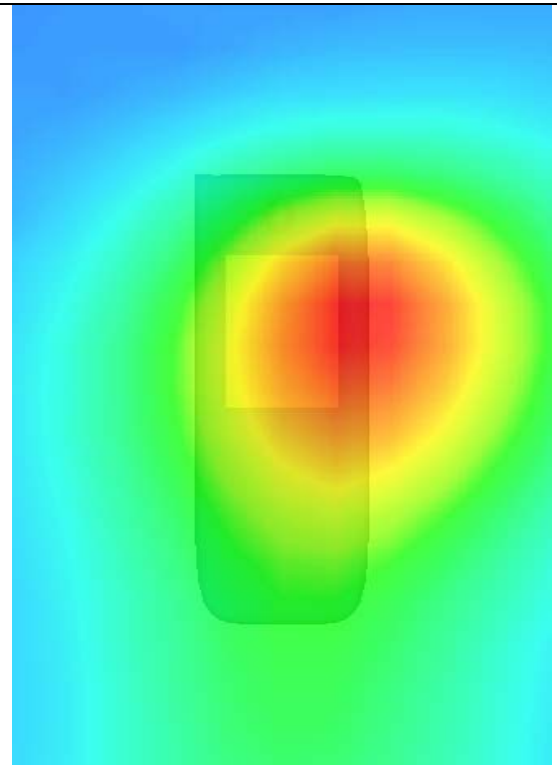
SAR, Z Axis Scan (X = 10, Y = 14)



3D sceen 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: 21/7/2009

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

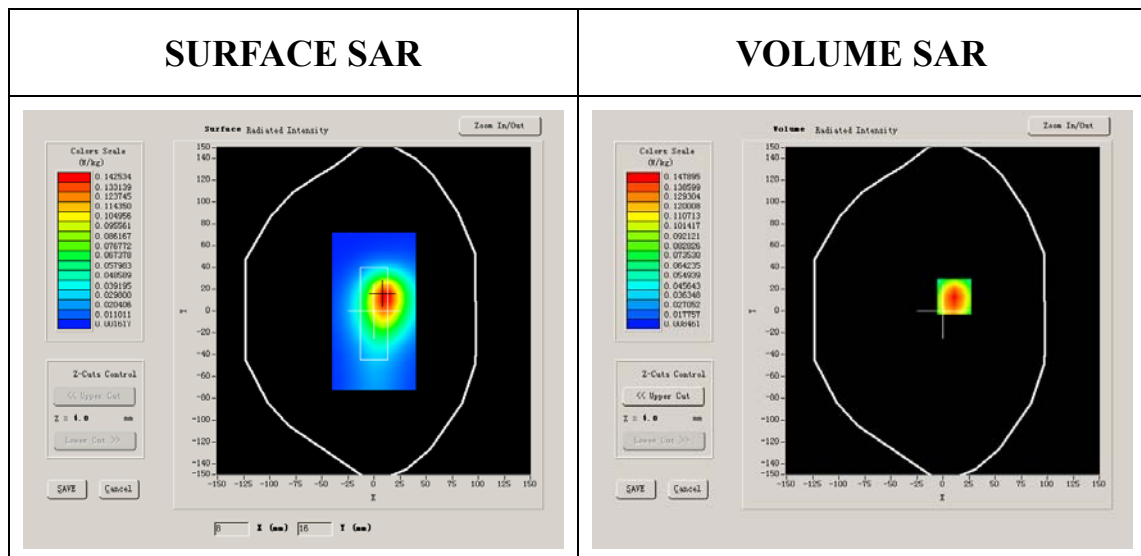
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 4233):

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

Conductivity (S/m)	0.746221
Variation (%)	0.500000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



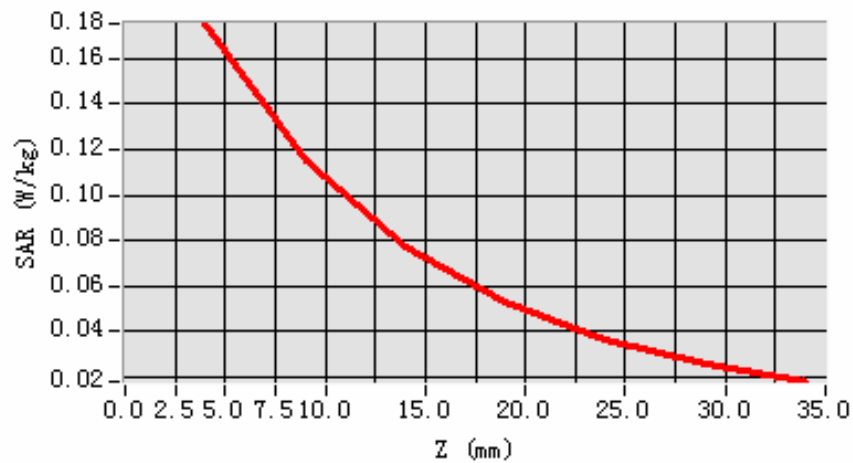
Maximum location: X=11.00, Y=13.00

SAR 10g (W/Kg)	0.104670
SAR 1g (W/Kg)	0.166646

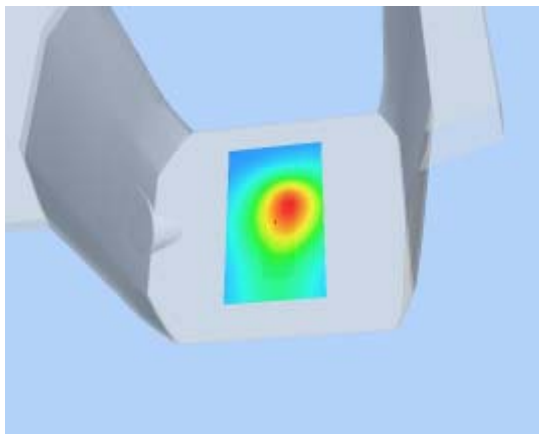
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1755	0.1154	0.0772	0.0533	0.0361	0.0255

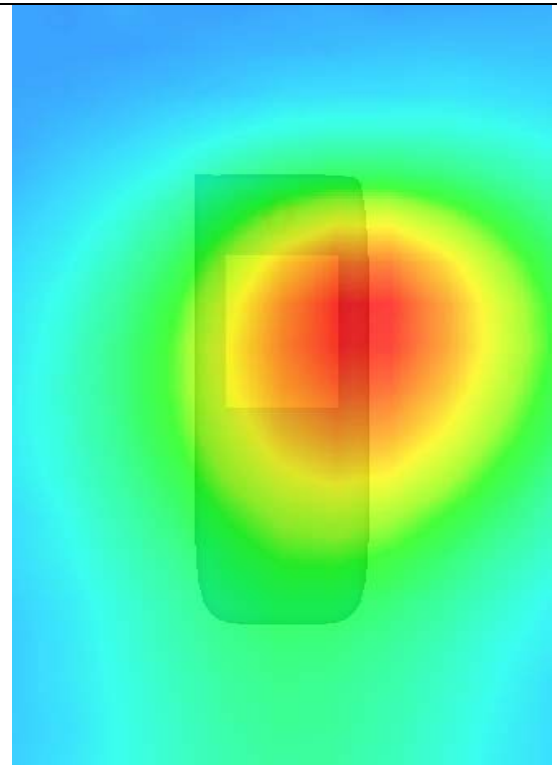
SAR, Z Axis Scan (X = 11, Y = 13)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

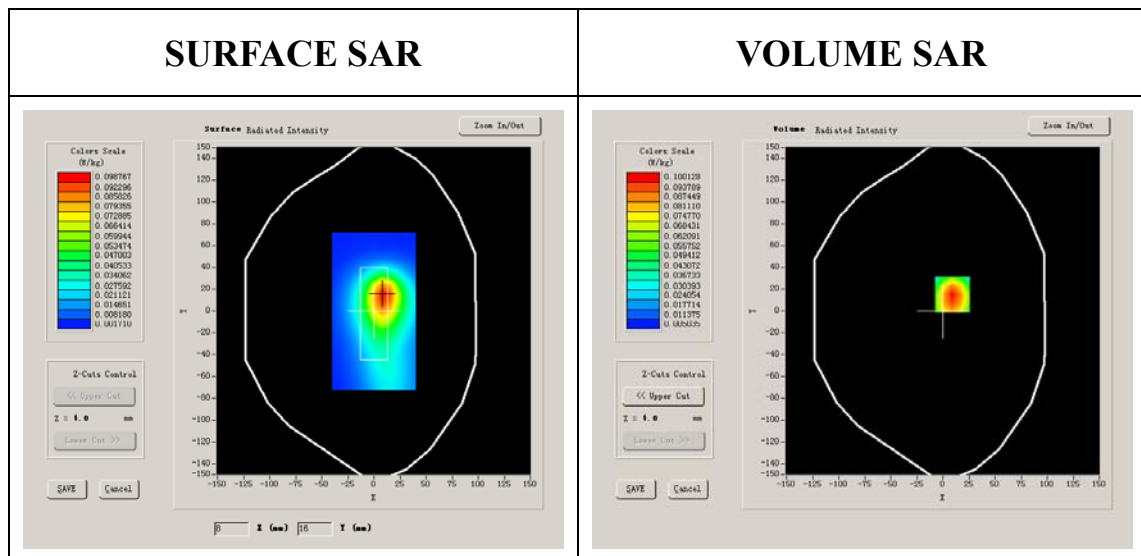
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

C. SAR Measurement Results

Lower Band SAR (Channel 4132):

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

Conductivity (S/m)	0.728580
Variation (%)	-0.420000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



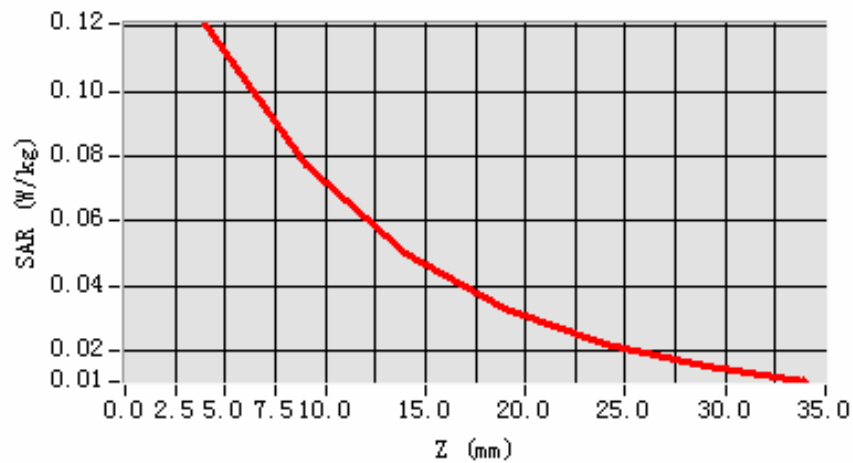
Maximum location: X=9.00, Y=15.00

SAR 10g (W/Kg)	0.070349
SAR 1g (W/Kg)	0.114278

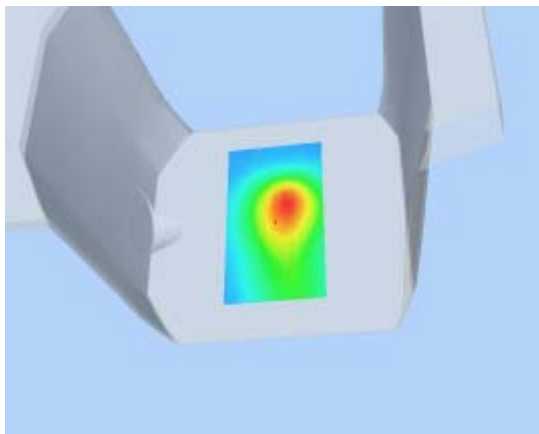
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1207	0.0771	0.0498	0.0331	0.0225	0.0154

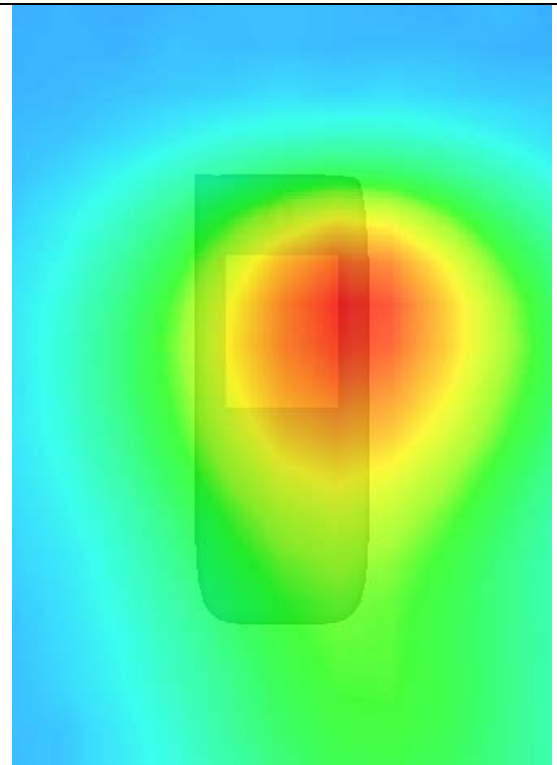
SAR, Z Axis Scan (X = 9, Y = 15)



3D scene shot



Hot spot position



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: 21/7/2009

Measurement duration: 9 minutes 20 seconds

A. Experimental conditions.

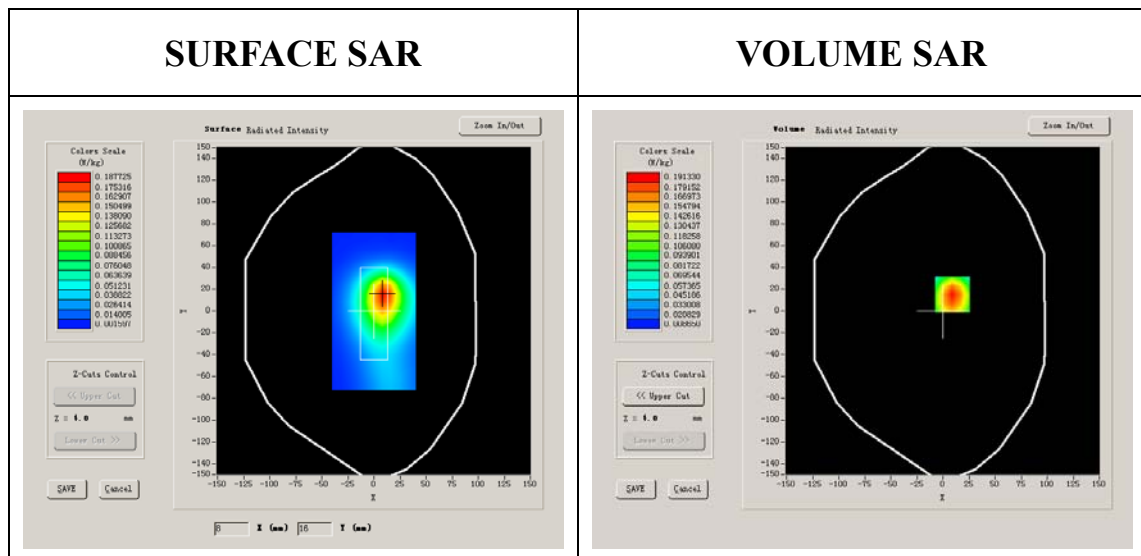
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

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

Conductivity (S/m)	0.737401
Variation (%)	1.080000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



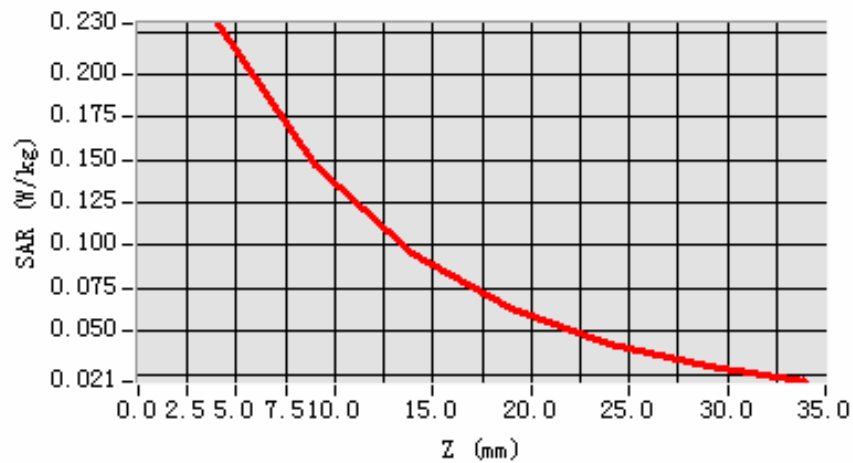
Maximum location: X=9.00, Y=15.00

SAR 10g (W/Kg)	0.132750
SAR 1g (W/Kg)	0.217020

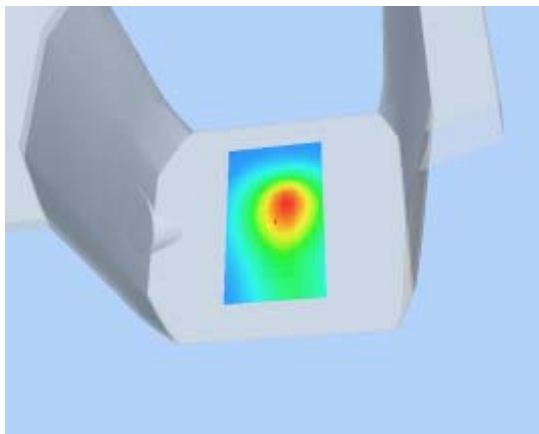
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2296	0.1469	0.0956	0.0634	0.0427	0.0295

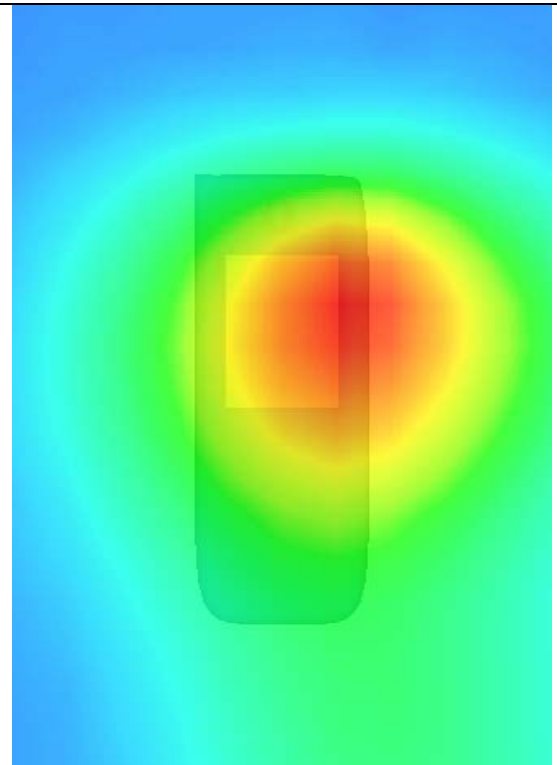
SAR, Z Axis Scan (X = 9, Y = 15)



3D scene shot



Hot spot position



MEASUREMENT 40

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

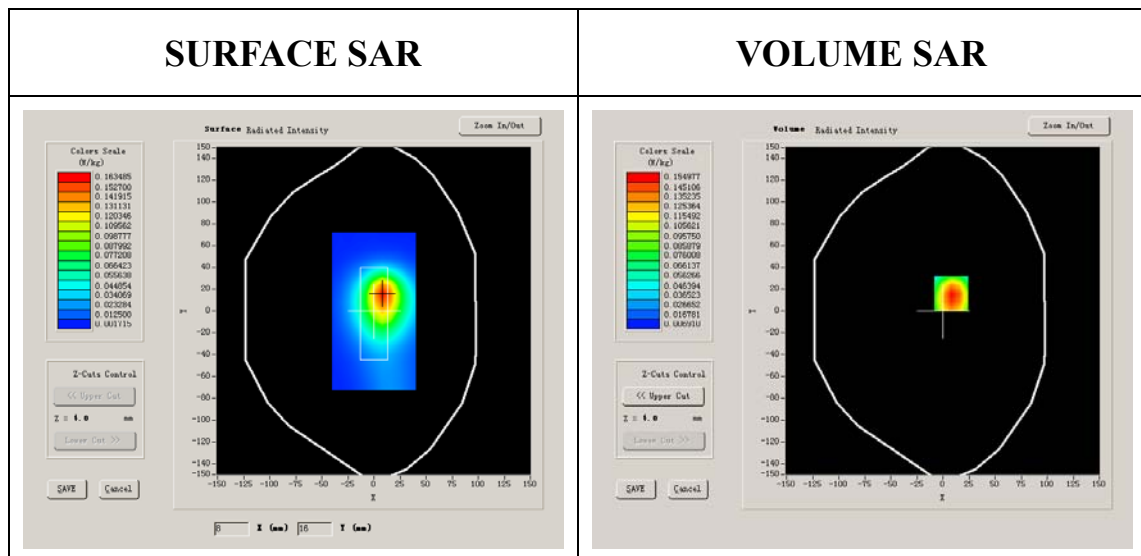
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 4233):

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

Conductivity (S/m)	0.746221
Variation (%)	-2.580000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



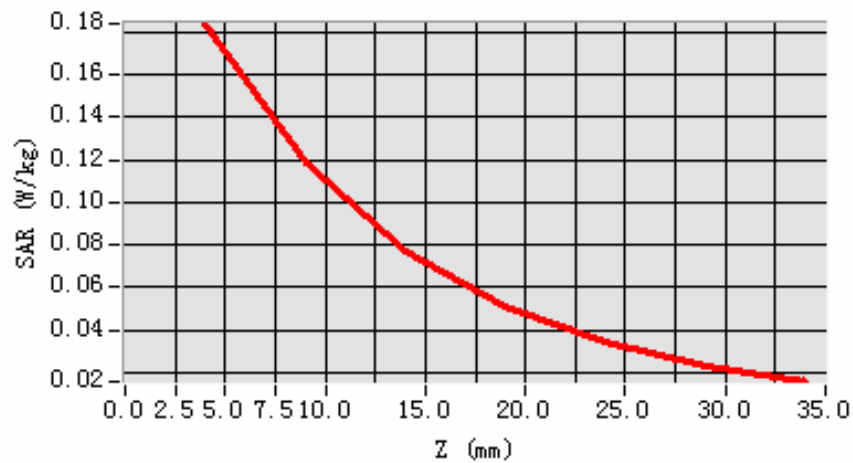
Maximum location: X=8.00, Y=16.00

SAR 10g (W/Kg)	0.108395
SAR 1g (W/Kg)	0.175797

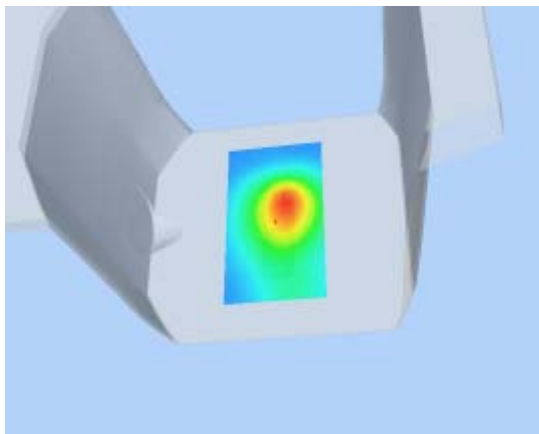
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1839	0.1183	0.0765	0.0515	0.0342	0.0235

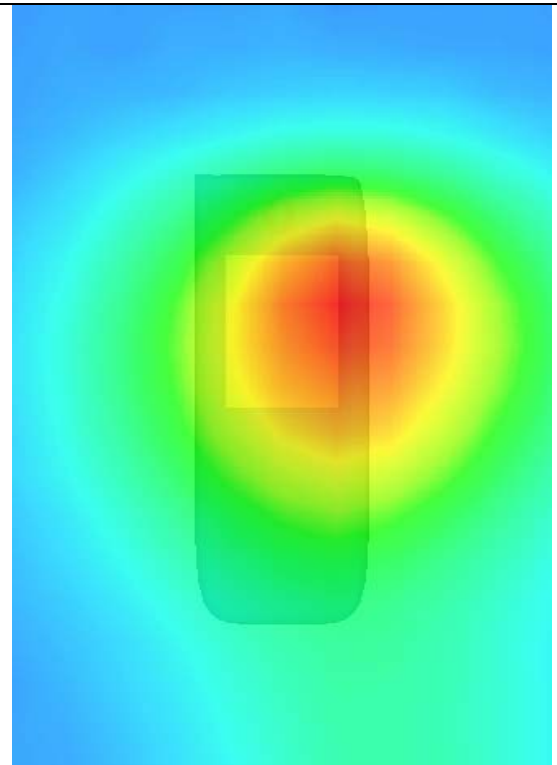
SAR, Z Axis Scan (X = 8, Y = 16)



3D scene shot



Hot spot position



MEASUREMENT 41

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

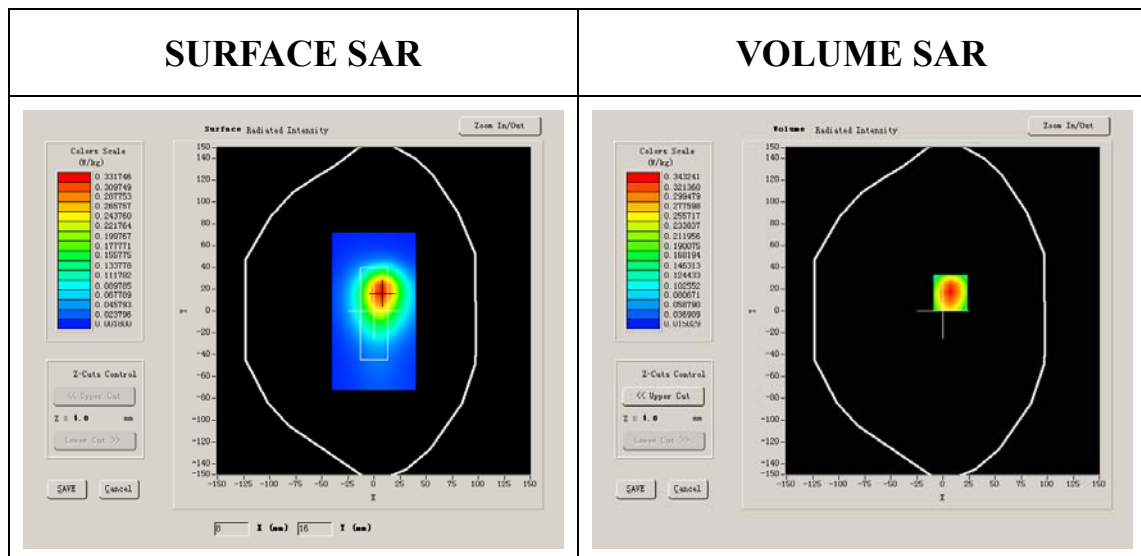
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

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

Conductivity (S/m)	0.737401
Variation (%)	3.450000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



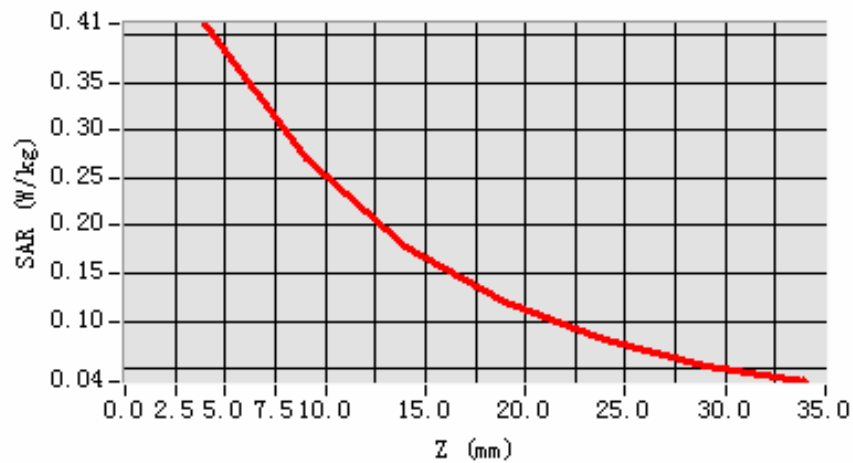
Maximum location: X=7.00, Y=17.00

SAR 10g (W/Kg)	0.280057
SAR 1g (W/Kg)	0.419503

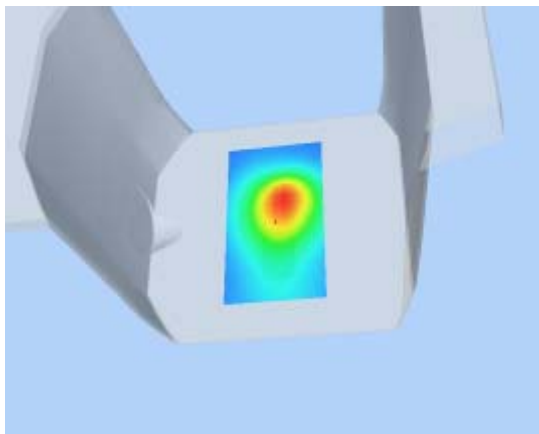
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4119	0.2714	0.1784	0.1200	0.0802	0.0534

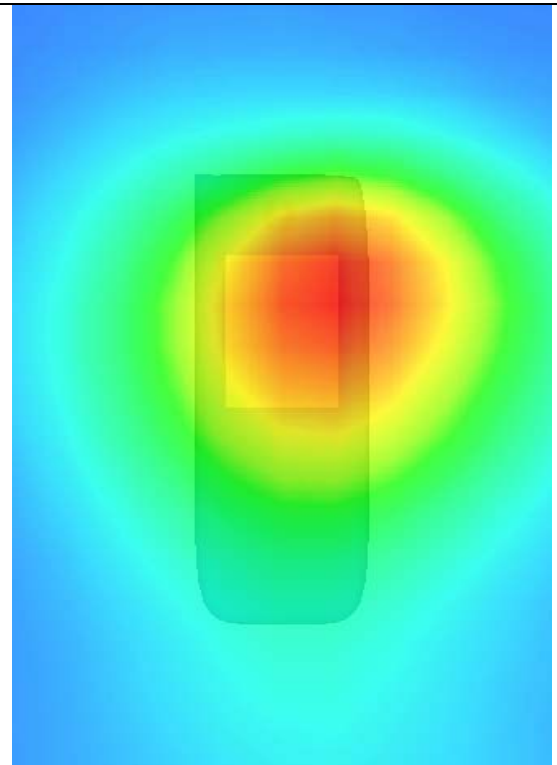
SAR, Z Axis Scan (X = 7, Y = 17)



3D scene shot



Hot spot position



MEASUREMENT 42

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

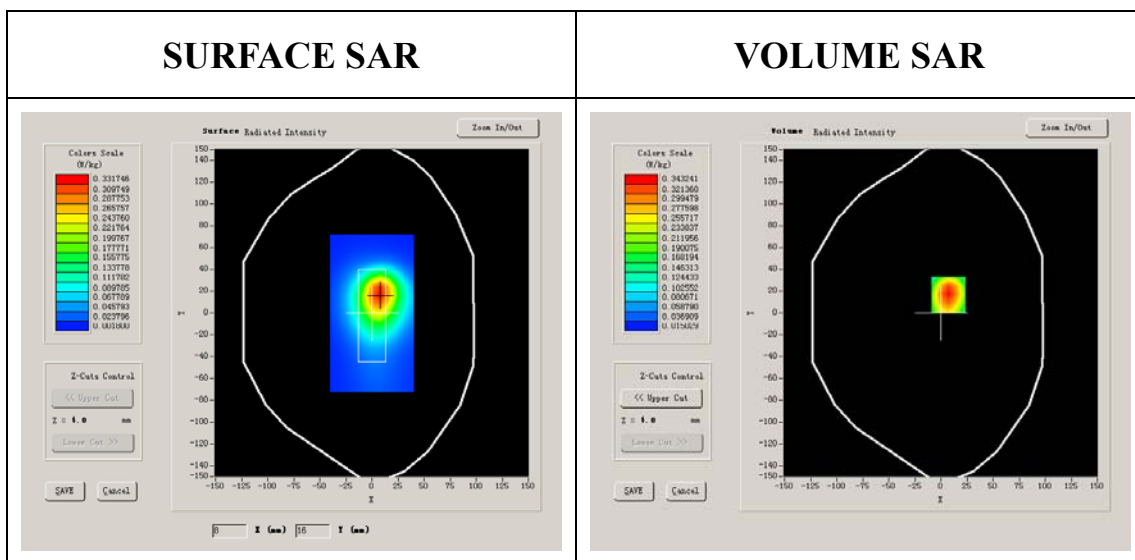
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4182):

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

Conductivity (S/m)	0.737401
Variation (%)	3.450000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



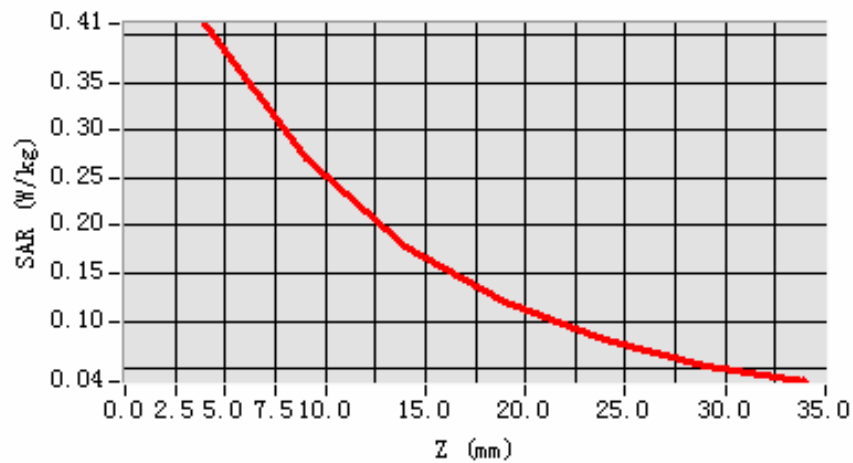
Maximum location: X=7.00, Y=17.00

SAR 10g (W/Kg)	0.285556
SAR 1g (W/Kg)	0.422478

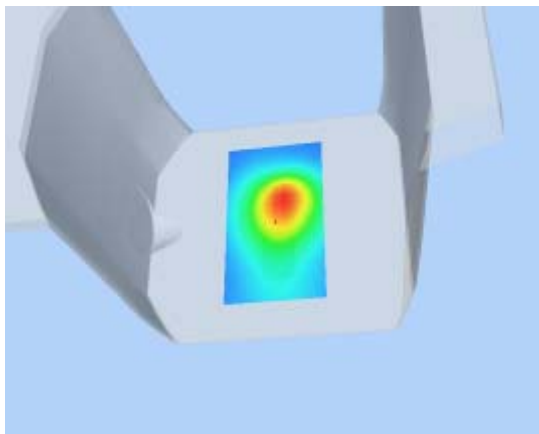
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4119	0.2714	0.1784	0.1200	0.0802	0.0534

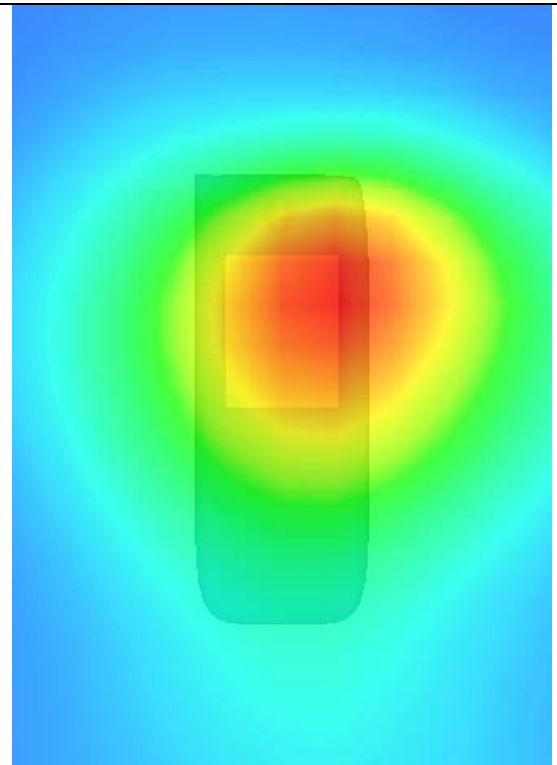
SAR, Z Axis Scan (X = 7, Y = 17)



3D scene shot



Hot spot position



MEASUREMENT 43

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

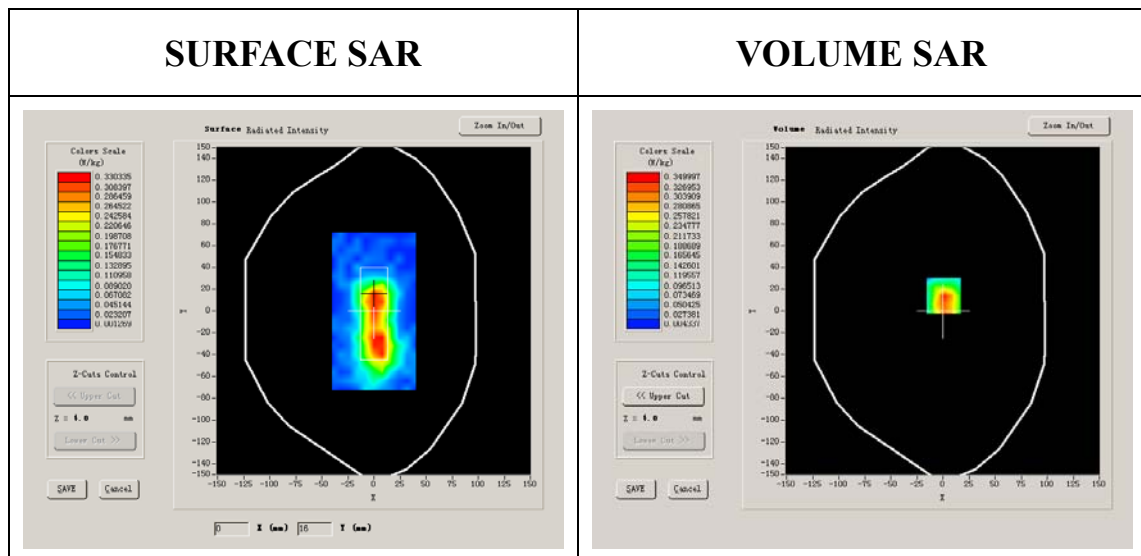
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.000000
Relative permittivity (real part)	39.980000
Relative permittivity	13.170000

Conductivity (S/m)	1.355047
Variation (%)	-2.980000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



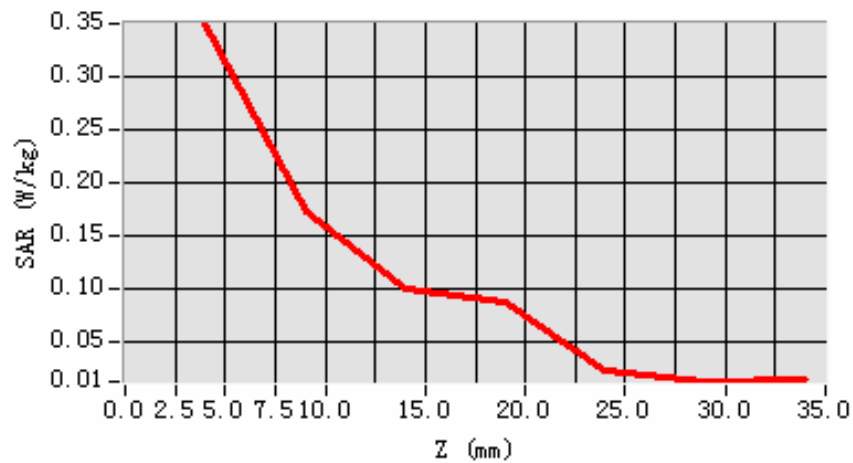
Maximum location: X=1.00, Y=14.00

SAR 10g (W/Kg)	0.172083
SAR 1g (W/Kg)	0.337273

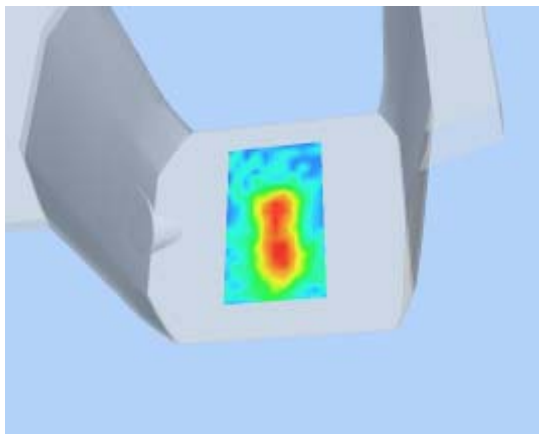
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3500	0.1715	0.0999	0.0867	0.0212	0.0118

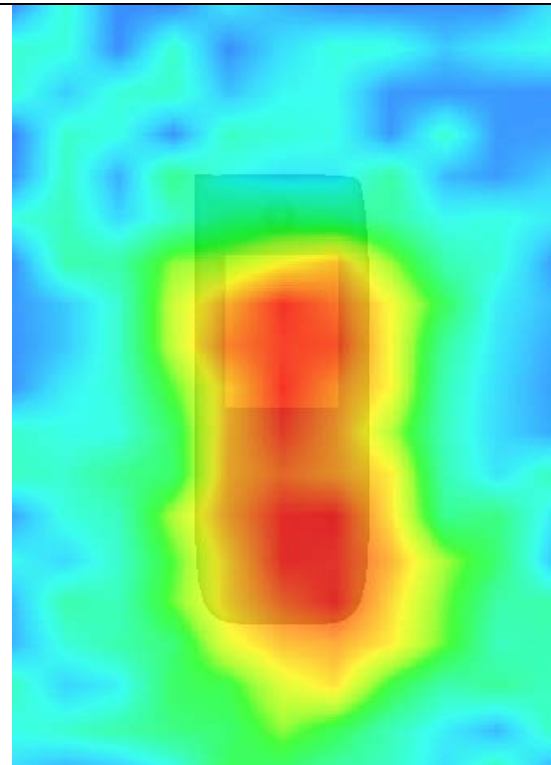
SAR, Z Axis Scan (X = 1, Y = 14)



3D sceen shot



Hot spot position



MEASUREMENT 44

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

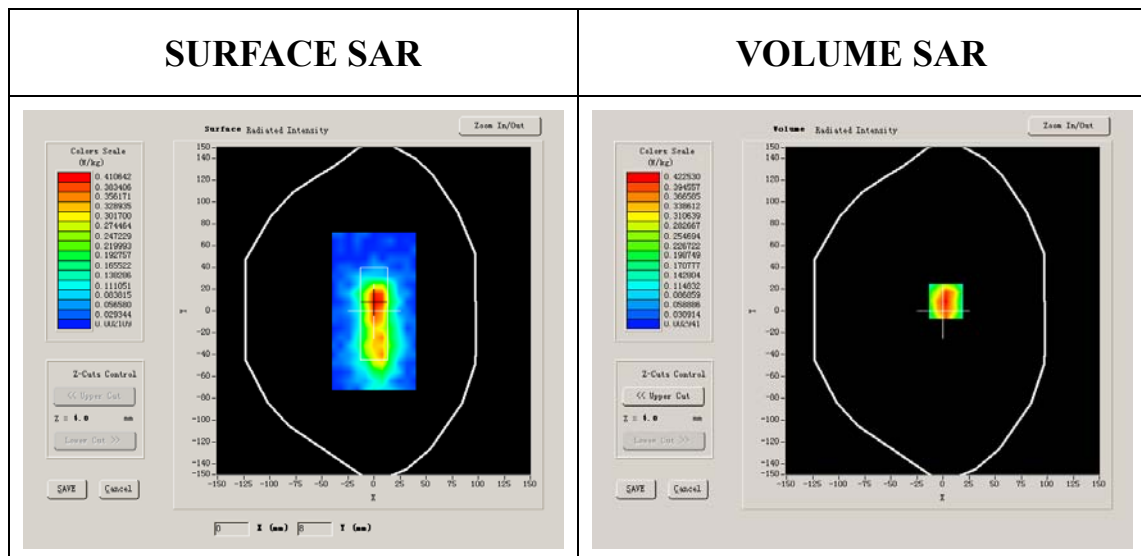
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

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

Conductivity (S/m)	1.381800
Variation (%)	0.290000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



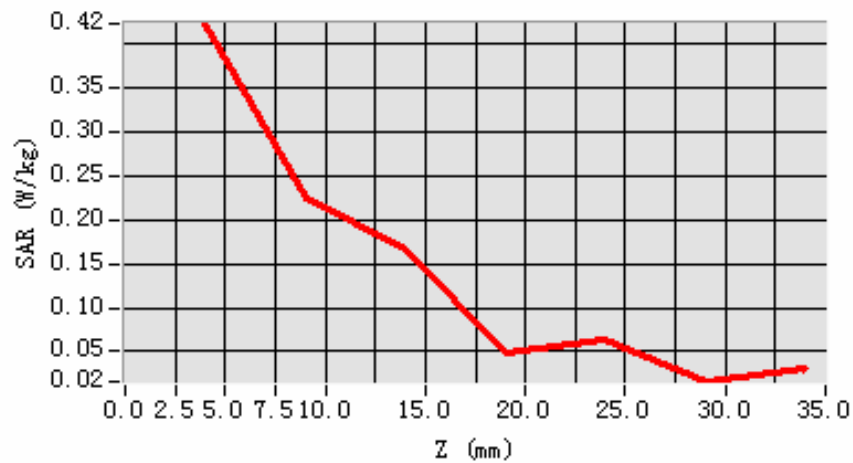
Maximum location: X=3.00, Y=9.00

SAR 10g (W/Kg)	0.213896
SAR 1g (W/Kg)	0.387305

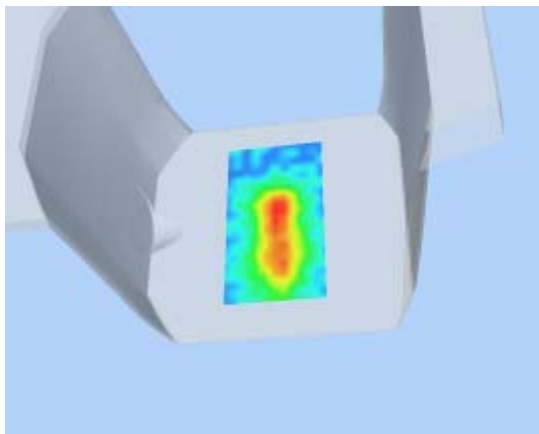
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4225	0.2232	0.1657	0.0493	0.0625	0.0160

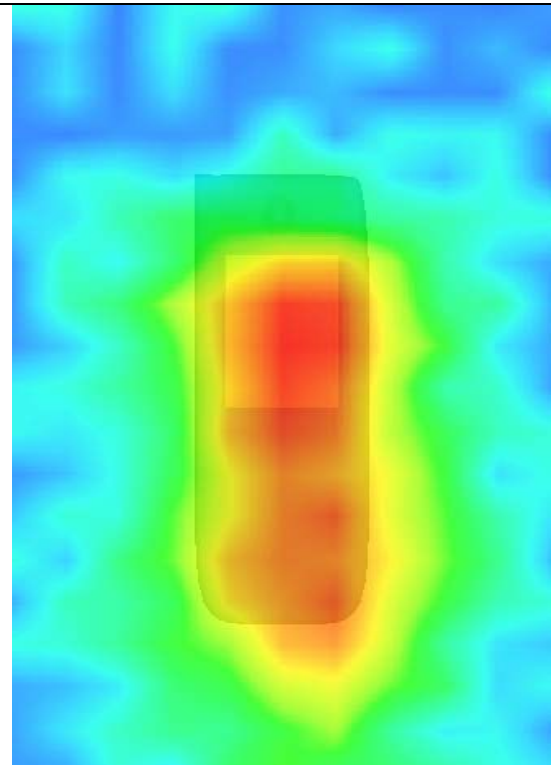
SAR, Z Axis Scan (X = 3, Y = 9)



3D scene shot



Hot spot position



MEASUREMENT 45

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

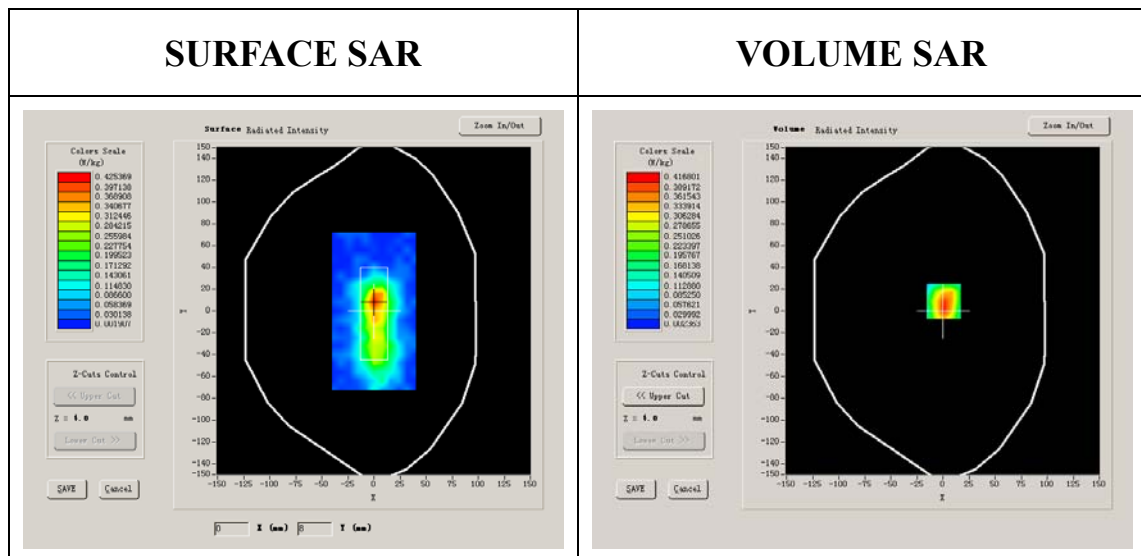
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.000000
Relative permittivity (real part)	39.799999
Relative permittivity	13.380000

Conductivity (S/m)	1.417537
Variation (%)	-4.970000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



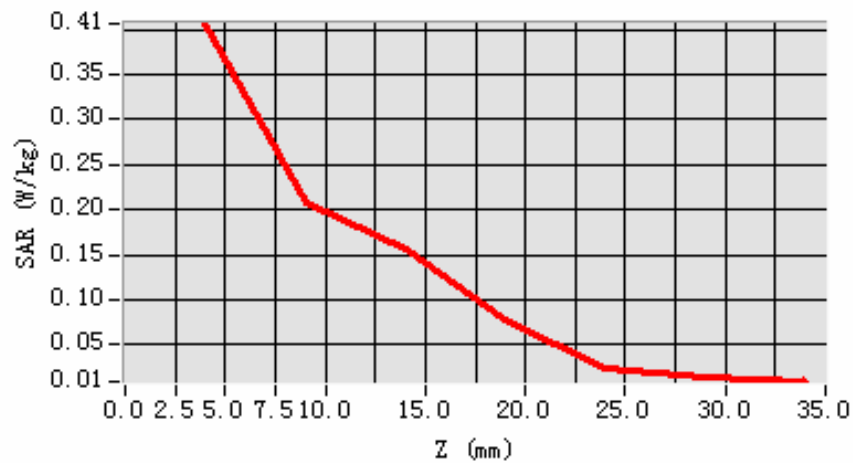
Maximum location: X=1.00, Y=9.00

SAR 10g (W/Kg)	0.211139
SAR 1g (W/Kg)	0.400192

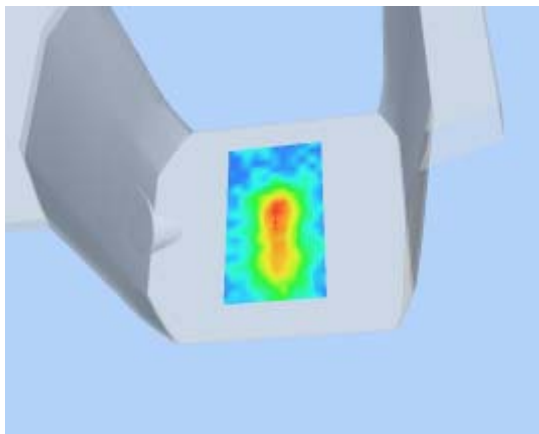
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4063	0.2076	0.1560	0.0788	0.0249	0.0146

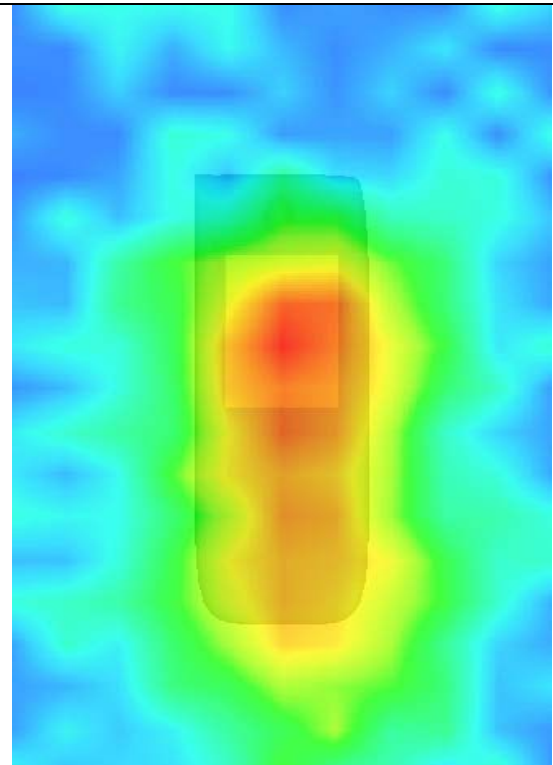
SAR, Z Axis Scan (X = 1, Y = 9)



3D scene shot



Hot spot position



MEASUREMENT 46

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

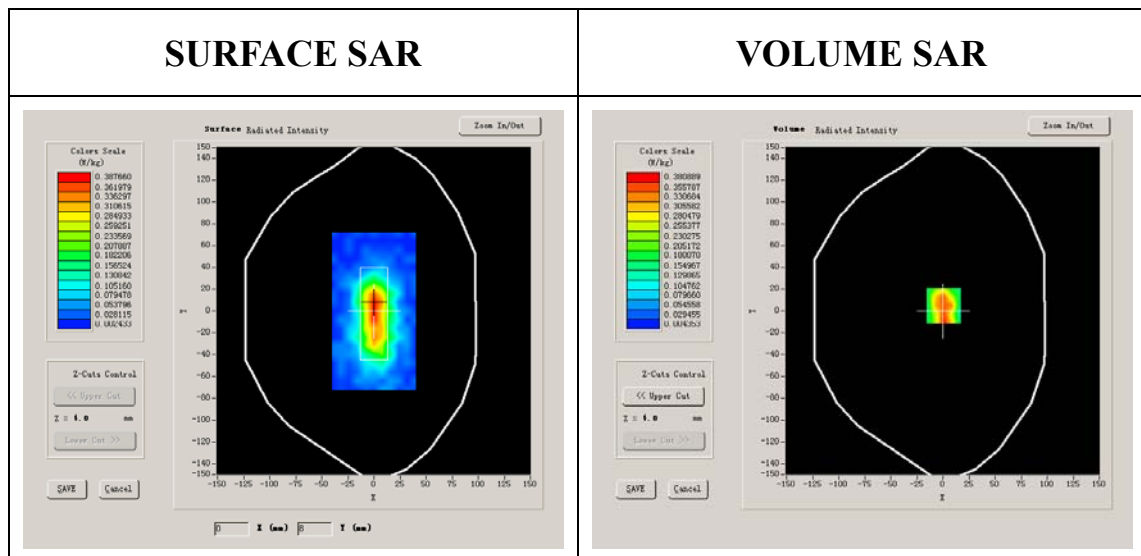
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.000000
Relative permittivity (real part)	39.980000
Relative permittivity	13.170000

Conductivity (S/m)	1.355047
Variation (%)	0.140000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



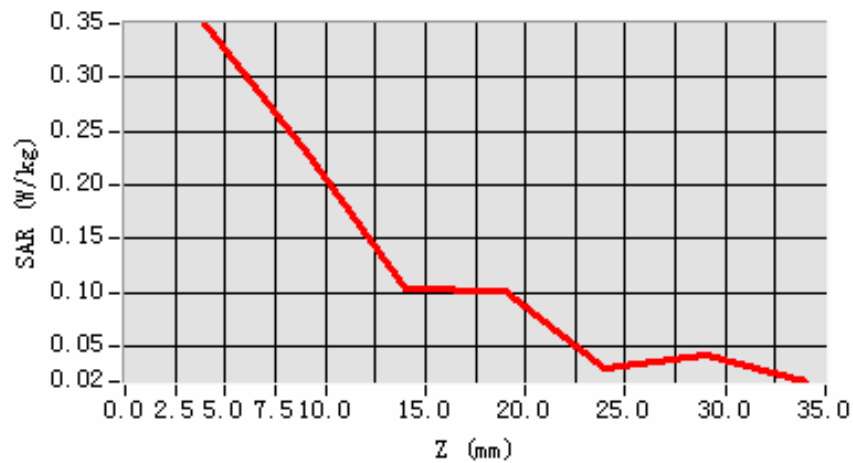
Maximum location: X=1.00, Y=5.00

SAR 10g (W/Kg)	0.196394
SAR 1g (W/Kg)	0.338734

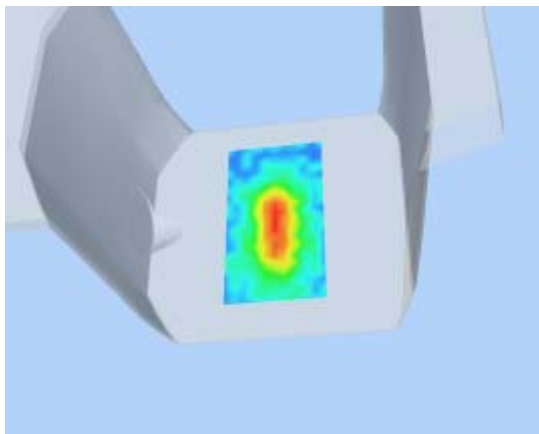
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3501	0.2302	0.1030	0.1005	0.0286	0.0423

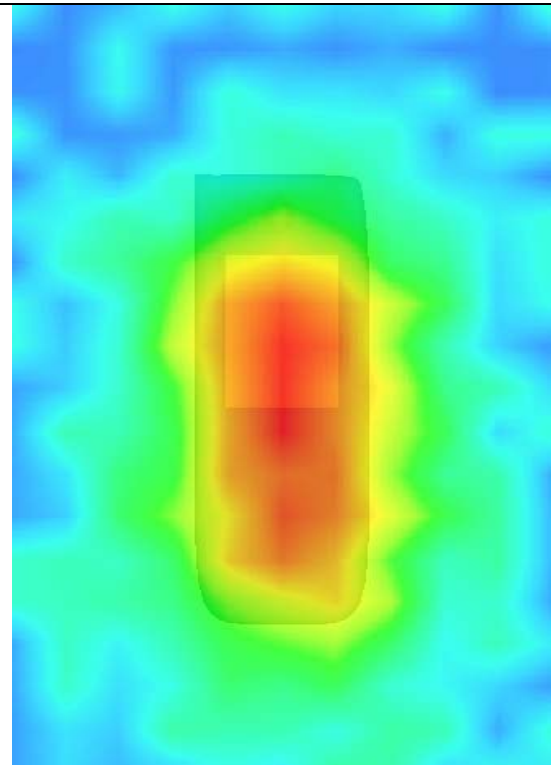
SAR, Z Axis Scan (X = 1, Y = 5)



3D sceen shot



Hot spot position



MEASUREMENT 47

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

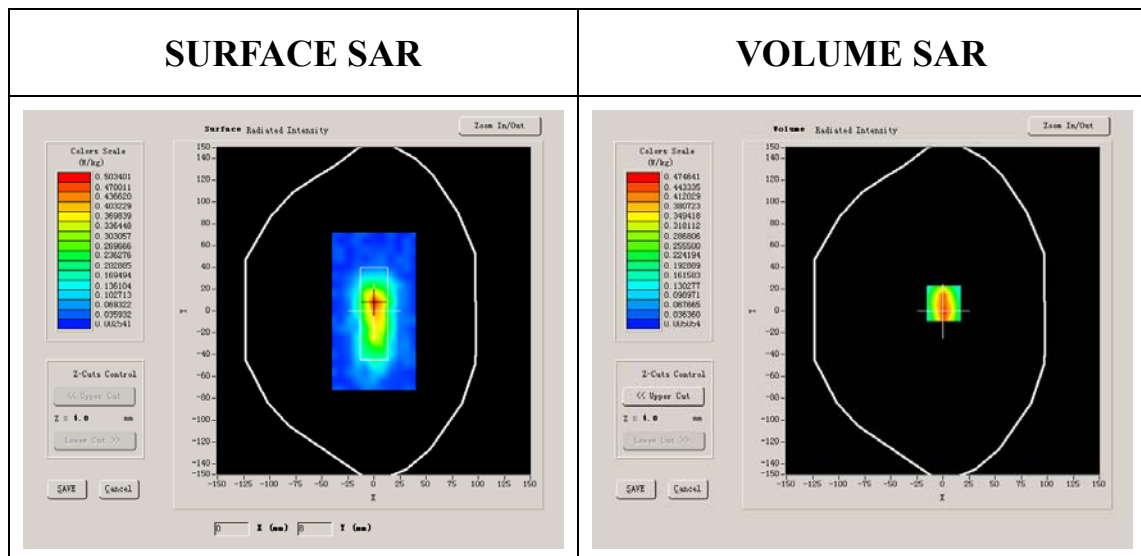
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

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

Conductivity (S/m)	1.381800
Variation (%)	-0.930000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



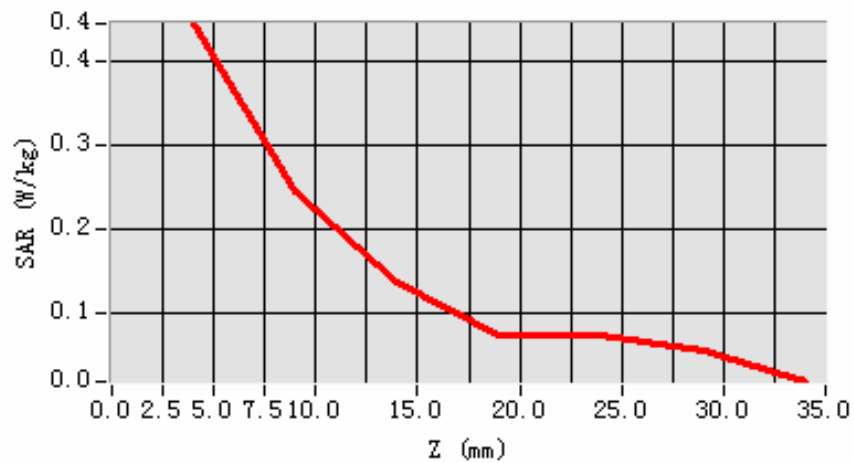
Maximum location: X=1.00, Y=7.00

SAR 10g (W/Kg)	0.232527
SAR 1g (W/Kg)	0.431880

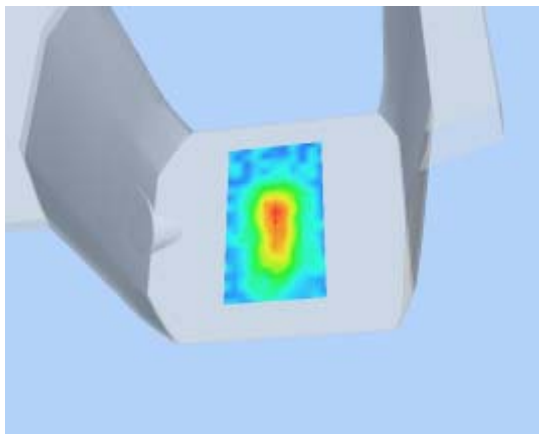
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4449	0.2441	0.1366	0.0740	0.0738	0.0532

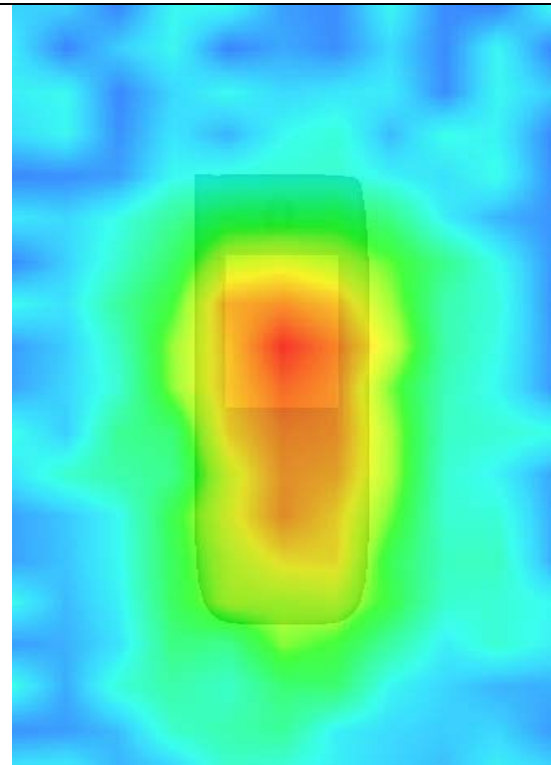
SAR, Z Axis Scan (X = 1, Y = 7)



3D scene shot



Hot spot position



MEASUREMENT 48

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

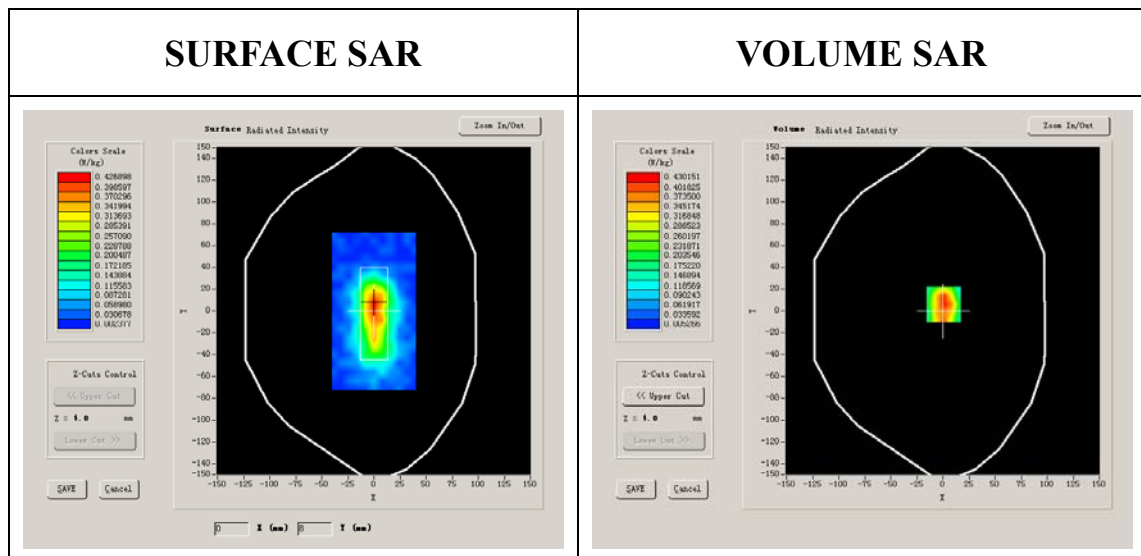
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

C. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.000000
Relative permittivity (real part)	39.799999
Relative permittivity	13.380000

Conductivity (S/m)	1.417537
Variation (%)	2.110000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



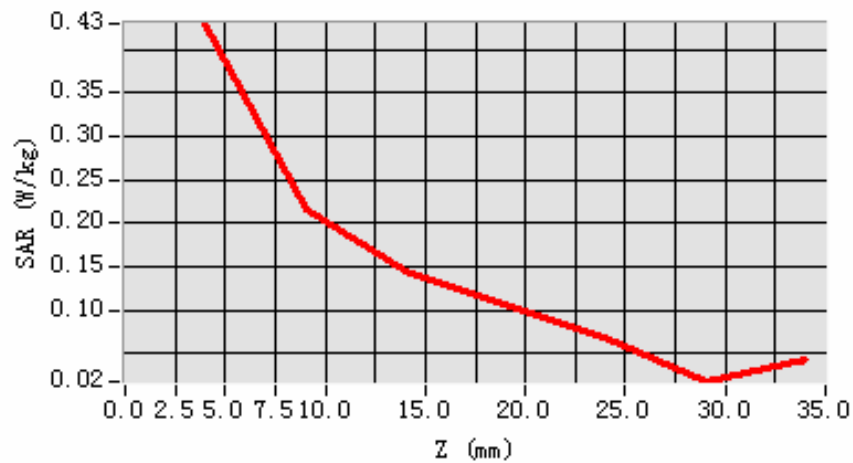
Maximum location: X=1.00, Y=6.00

SAR 10g (W/Kg)	0.215925
SAR 1g (W/Kg)	0.423088

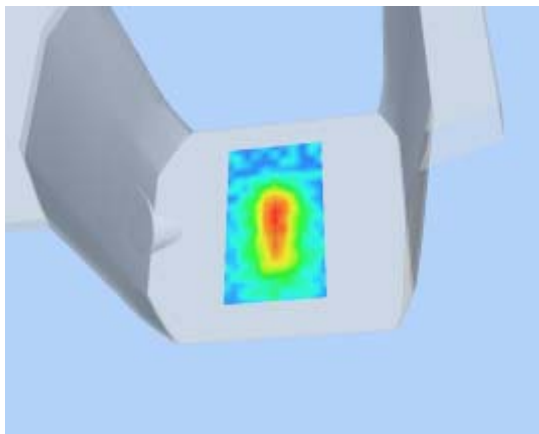
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4302	0.2169	0.1439	0.1053	0.0686	0.0174

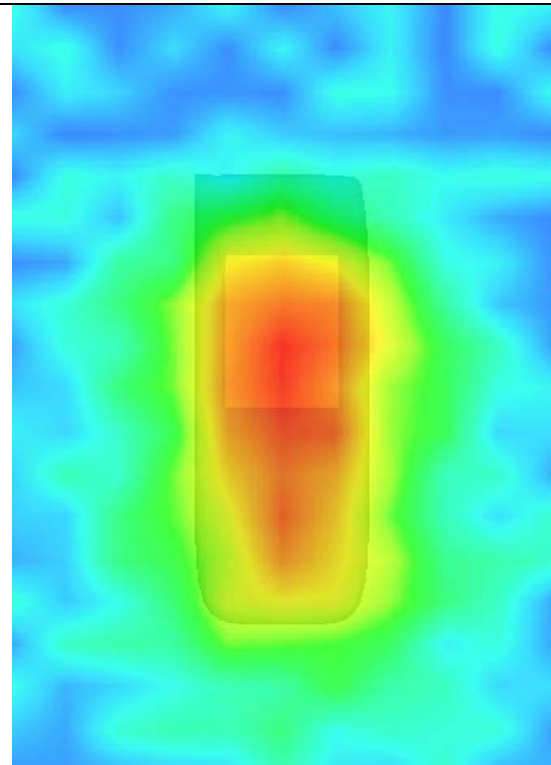
SAR, Z Axis Scan (X = 1, Y = 6)



3D scene shot



Hot spot position



MEASUREMENT 49

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

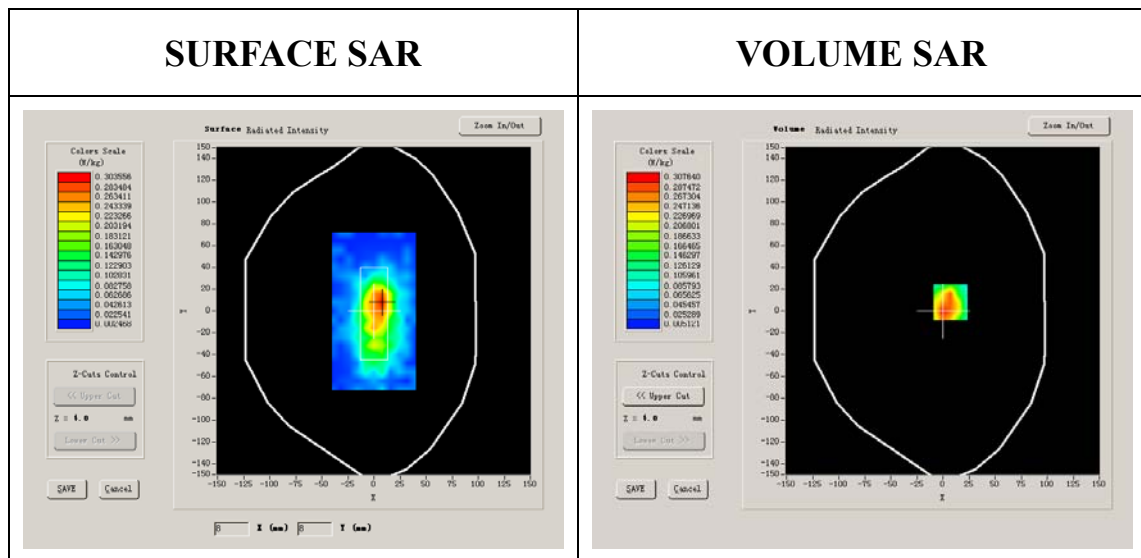
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.000000
Relative permittivity (real part)	39.980000
Relative permittivity	13.170000

Conductivity (S/m)	1.355047
Variation (%)	1.710000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



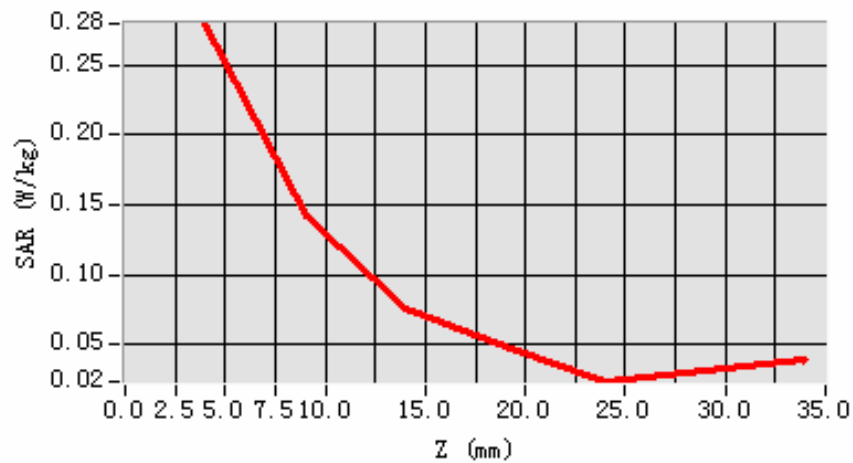
Maximum location: X=7.00, Y=8.00

SAR 10g (W/Kg)	0.161088
SAR 1g (W/Kg)	0.287679

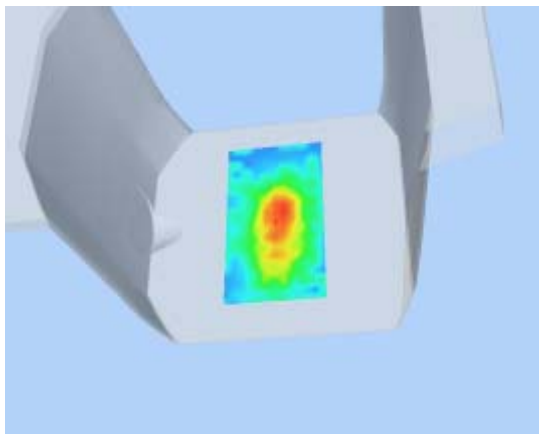
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2798	0.1424	0.0762	0.0479	0.0234	0.0307

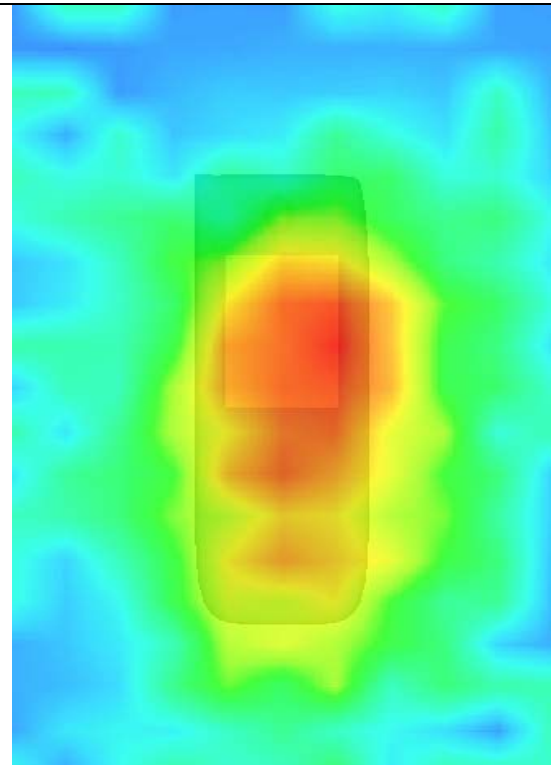
SAR, Z Axis Scan (X = 7, Y = 8)



3D scene shot



Hot spot position



MEASUREMENT 50

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

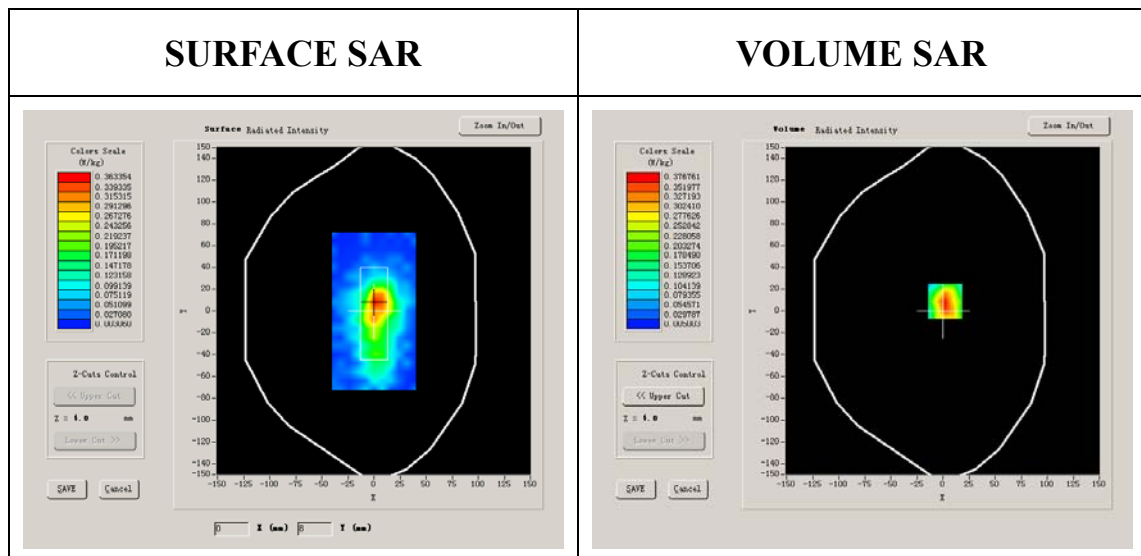
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

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

Conductivity (S/m)	1.381800
Variation (%)	1.340000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



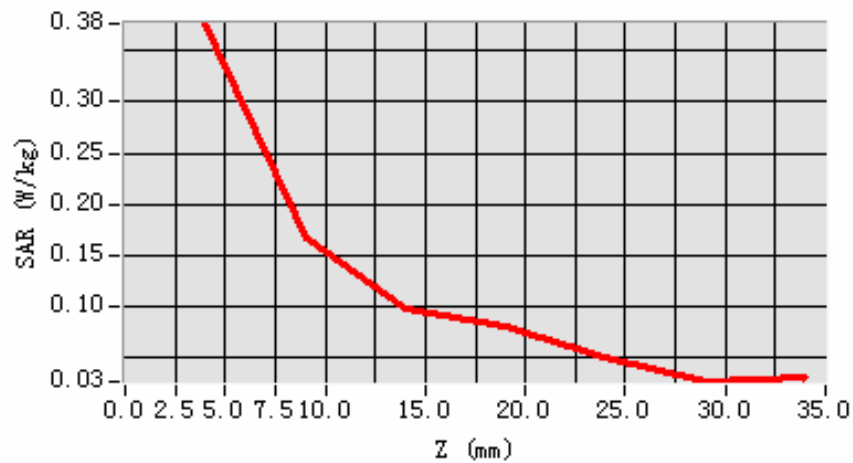
Maximum location: X=2.00, Y=9.00

SAR 10g (W/Kg)	0.193740
SAR 1g (W/Kg)	0.371368

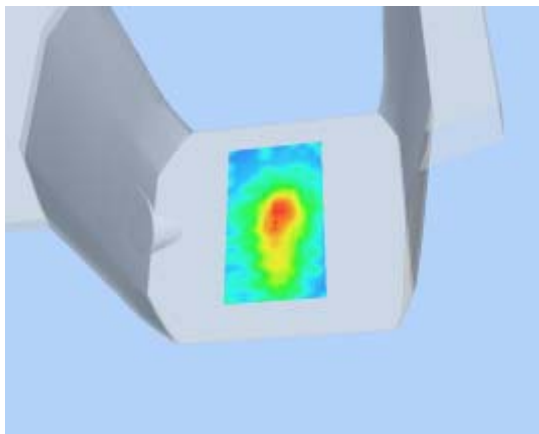
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3768	0.1672	0.0967	0.0814	0.0506	0.0263

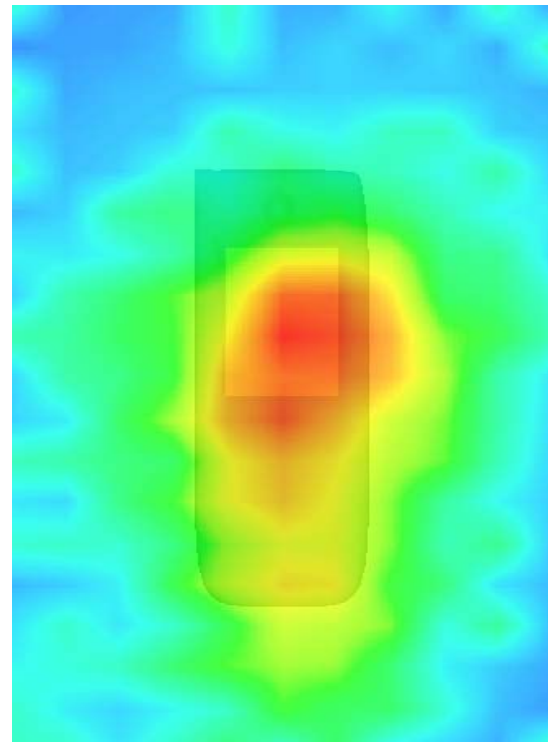
SAR, Z Axis Scan (X = 2, Y = 9)



3D scene shot



Hot spot position



MEASUREMENT 51

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

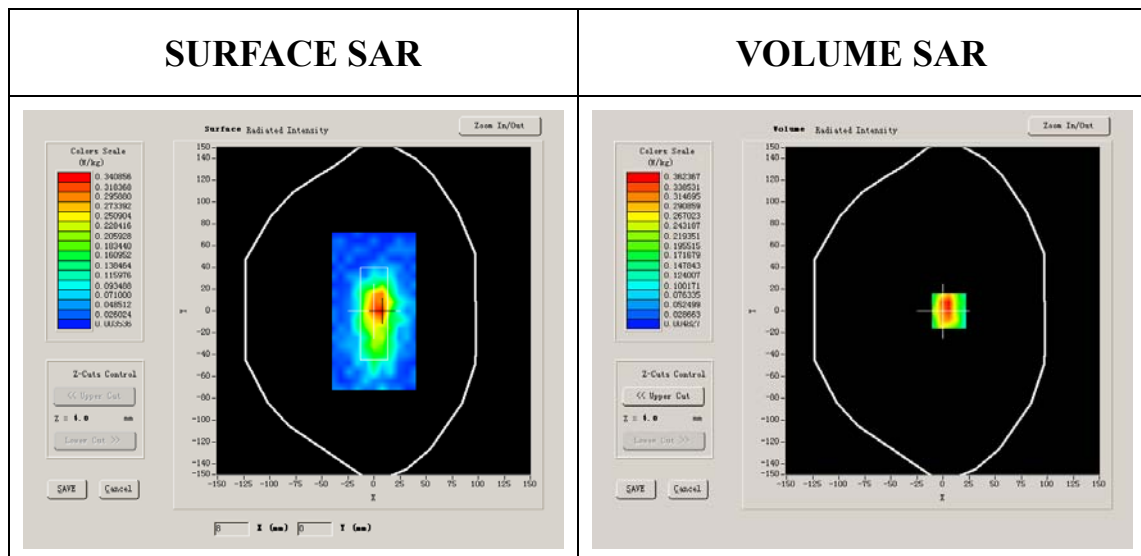
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.000000
Relative permittivity (real part)	39.799999
Relative permittivity	13.380000

Conductivity (S/m)	1.417537
Variation (%)	0.450000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



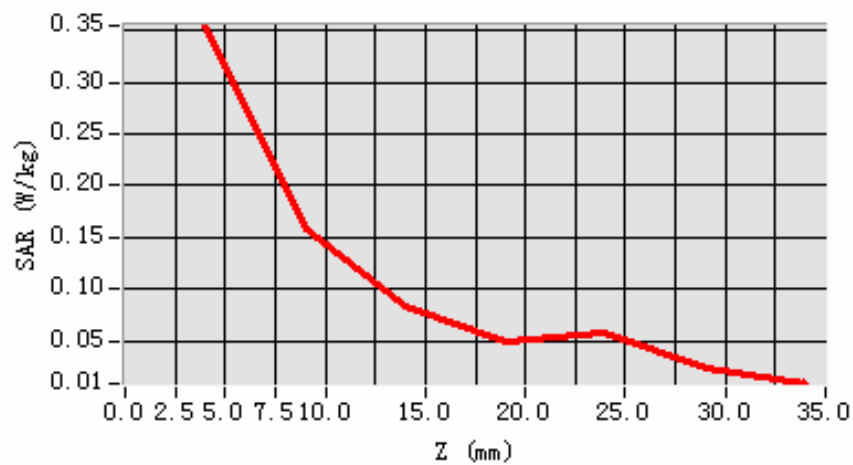
Maximum location: X=6.00, Y=0.00

SAR 10g (W/Kg)	0.180586
SAR 1g (W/Kg)	0.348890

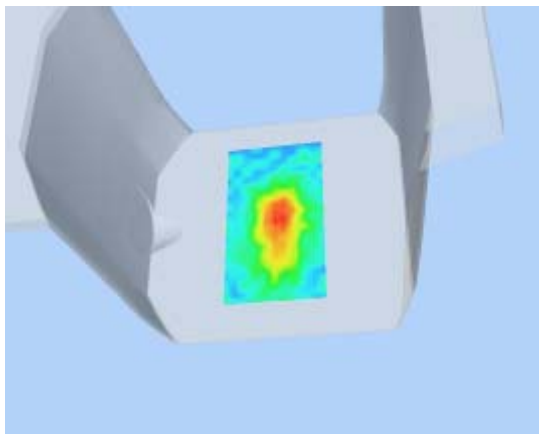
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3544	0.1592	0.0845	0.0505	0.0593	0.0243

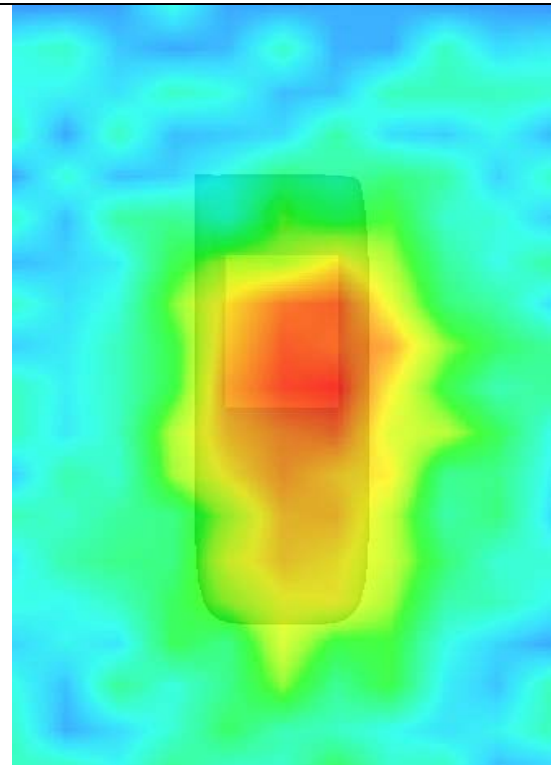
SAR, Z Axis Scan (X = 6, Y = 0)



3D scene shot



Hot spot position



MEASUREMENT 52

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

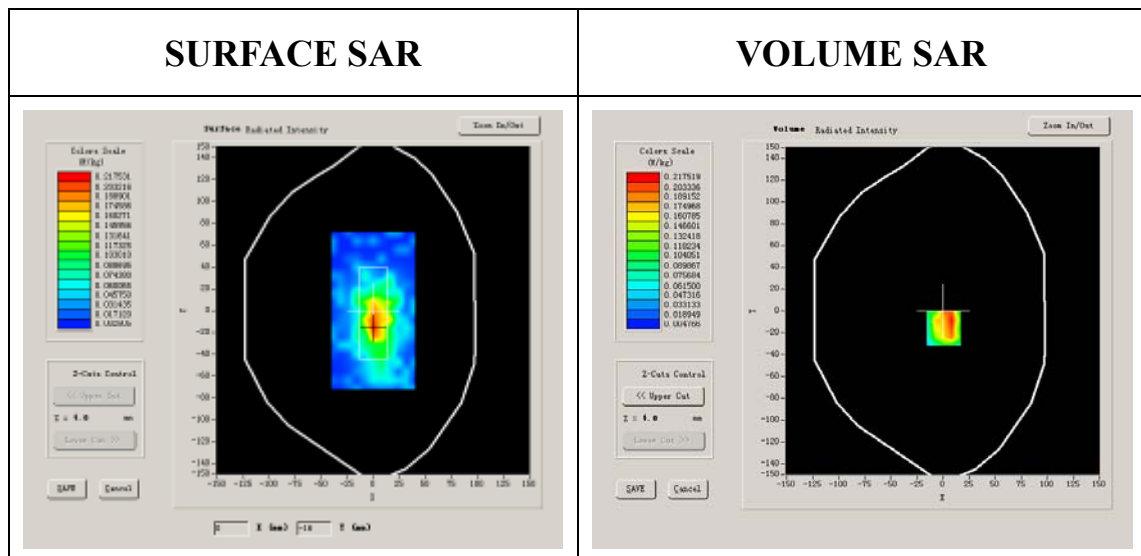
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.000000
Relative permittivity (real part)	39.980000
Relative permittivity	13.170000

Conductivity (S/m)	1.355047
Variation (%)	-0.910000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



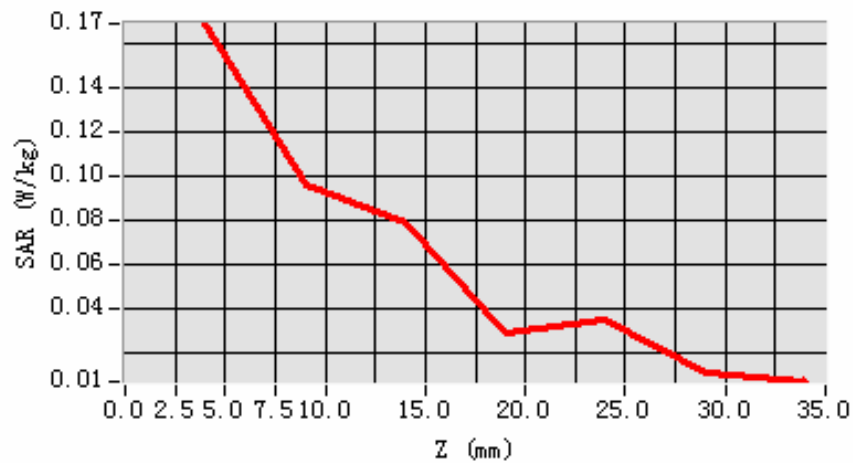
Maximum location: X=1.00, Y=-16.00

SAR 10g (W/Kg)	0.106348
SAR 1g (W/Kg)	0.189067

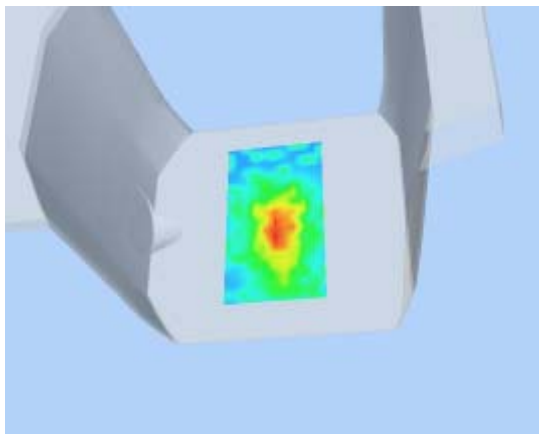
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1690	0.0956	0.0792	0.0291	0.0355	0.0107

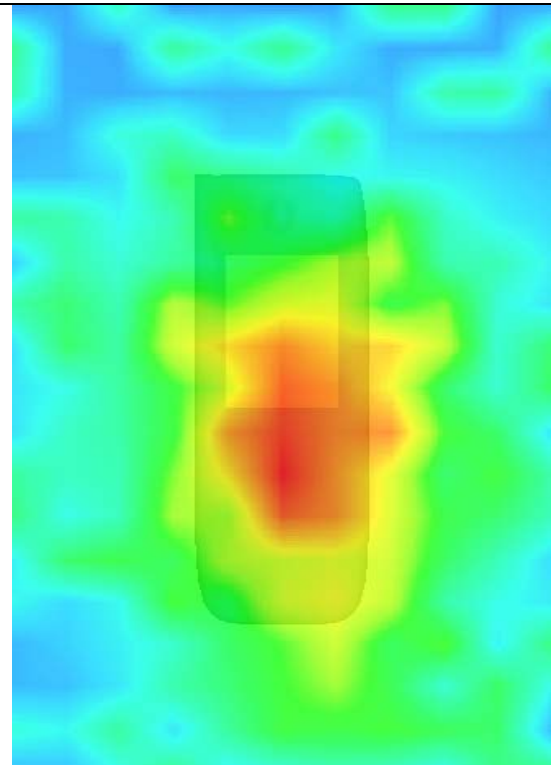
SAR, Z Axis Scan (X = 1, Y = -16)



3D scene shot



Hot spot position



MEASUREMENT 53

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

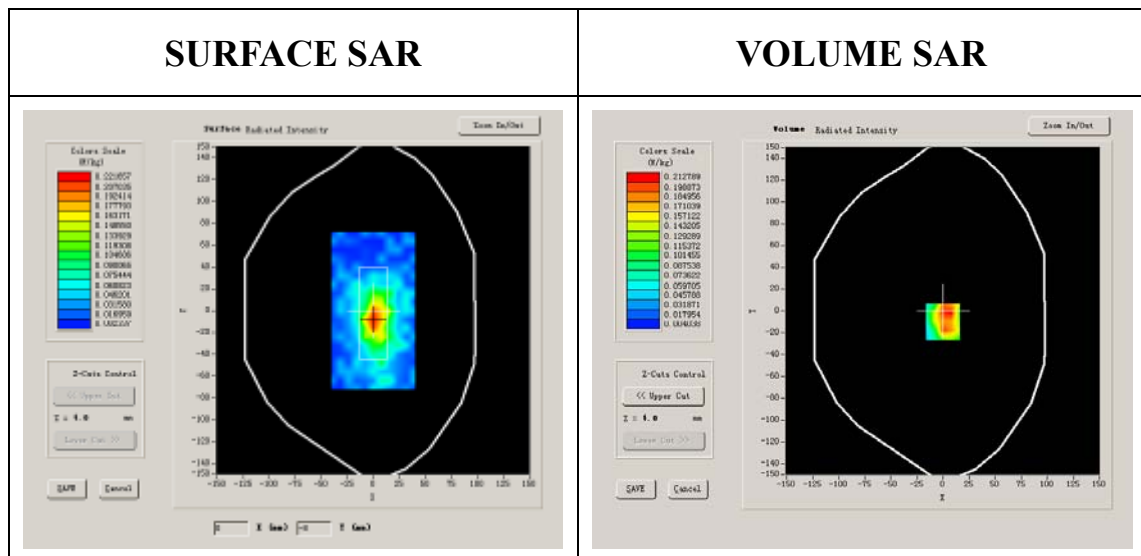
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

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

Conductivity (S/m)	1.381800
Variation (%)	-1.190000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



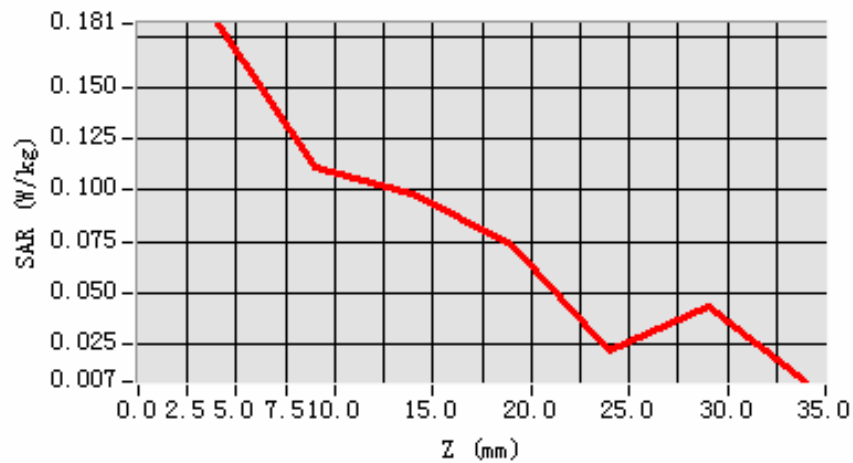
Maximum location: X=0.00, Y=-10.00

SAR 10g (W/Kg)	0.106449
SAR 1g (W/Kg)	0.196179

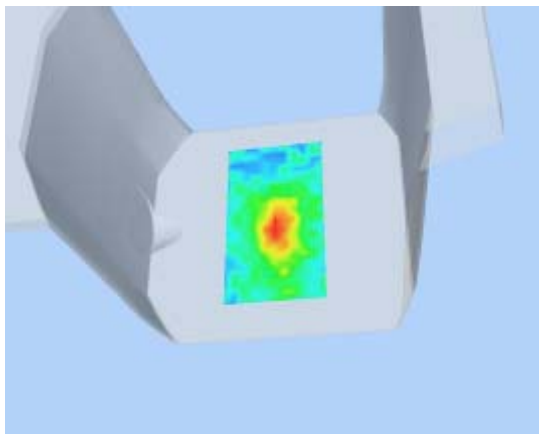
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1811	0.1115	0.0979	0.0732	0.0223	0.0438

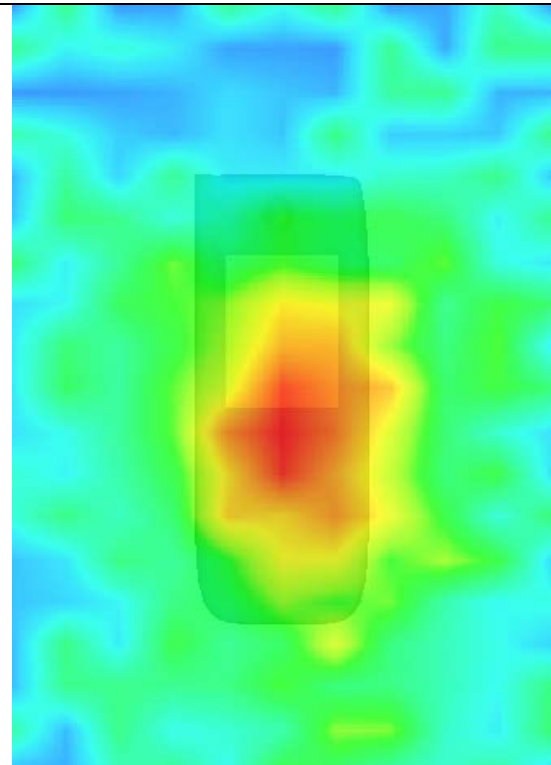
SAR, Z Axis Scan (X = 0, Y = -10)



3D scene shot



Hot spot position



MEASUREMENT 54

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

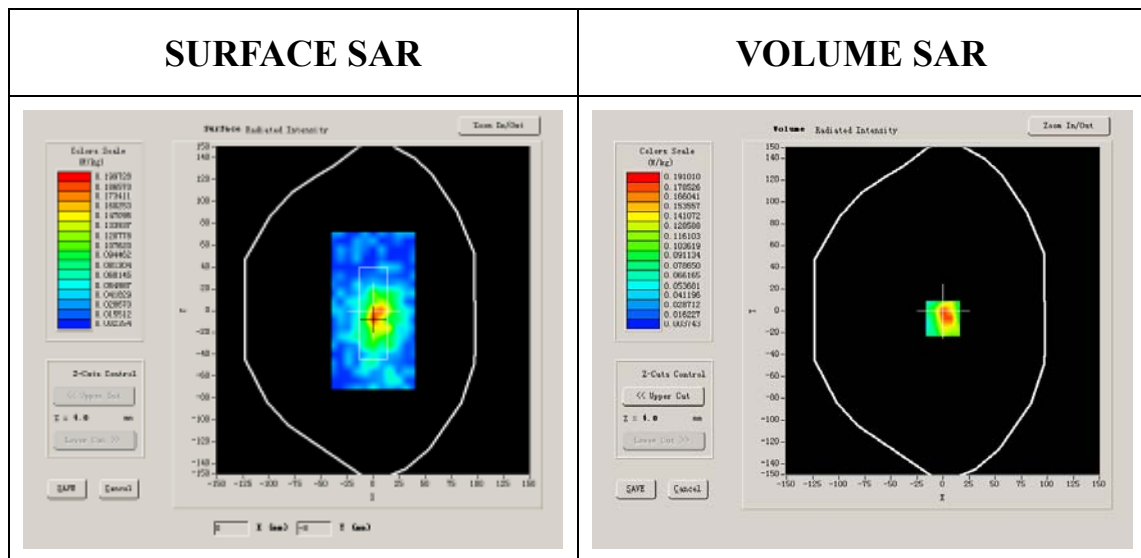
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.000000
Relative permittivity (real part)	39.799999
Relative permittivity	13.380000

Conductivity (S/m)	1.417537
Variation (%)	-1.900000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



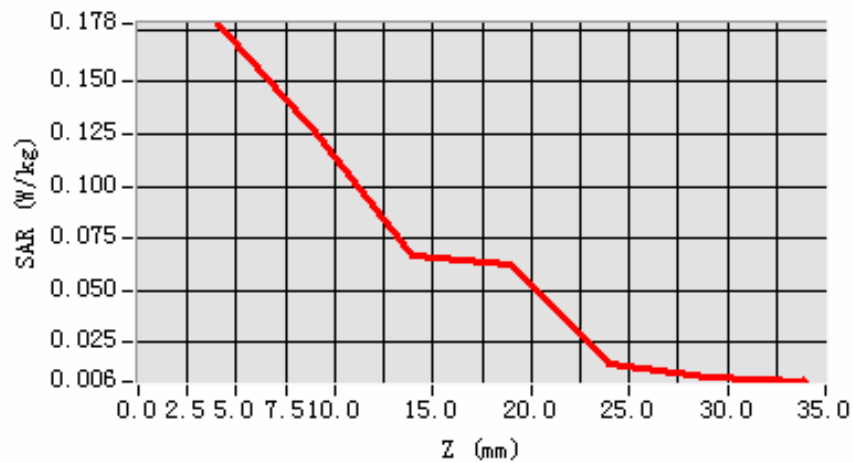
Maximum location: X=0.00, Y=-7.00

SAR 10g (W/Kg)	0.093197
SAR 1g (W/Kg)	0.186937

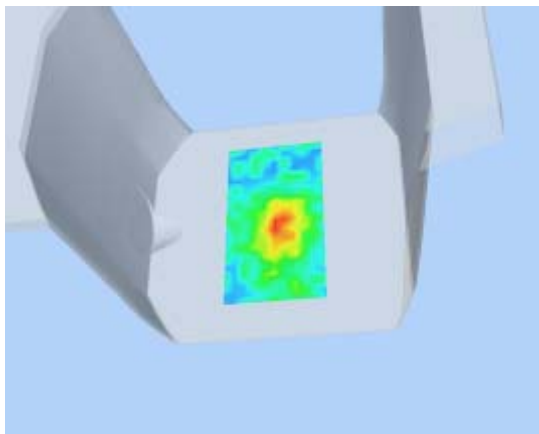
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1780	0.1255	0.0661	0.0620	0.0150	0.0086

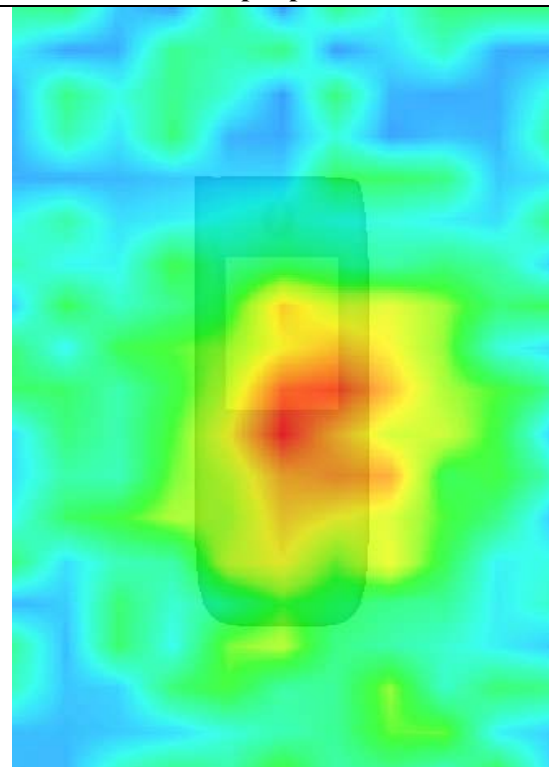
SAR, Z Axis Scan (X = 0, Y = -7)



3D scene shot



Hot spot position



MEASUREMENT 55

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

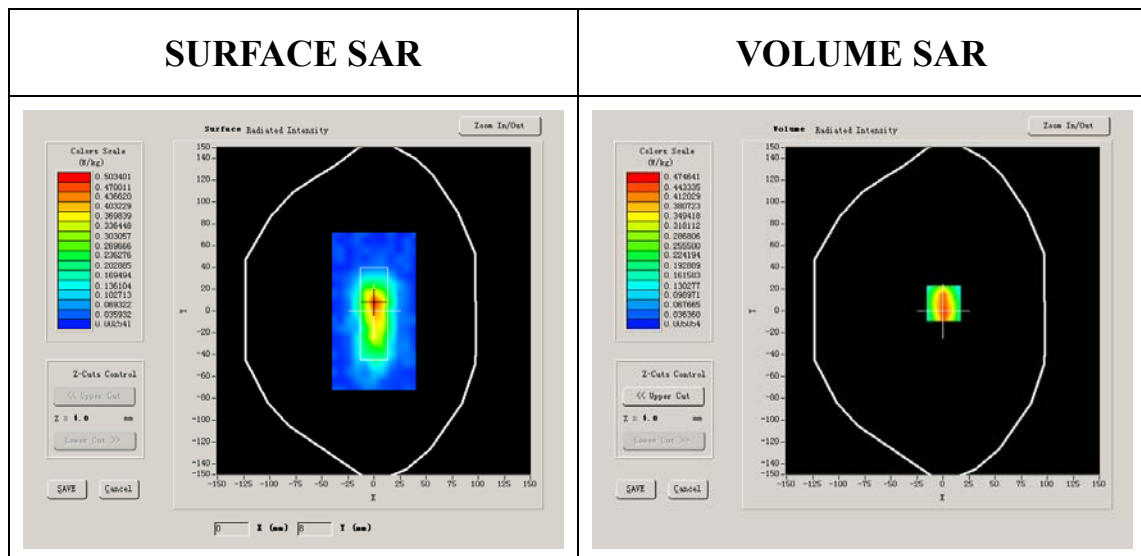
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

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

Conductivity (S/m)	1.381800
Variation (%)	-0.930000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



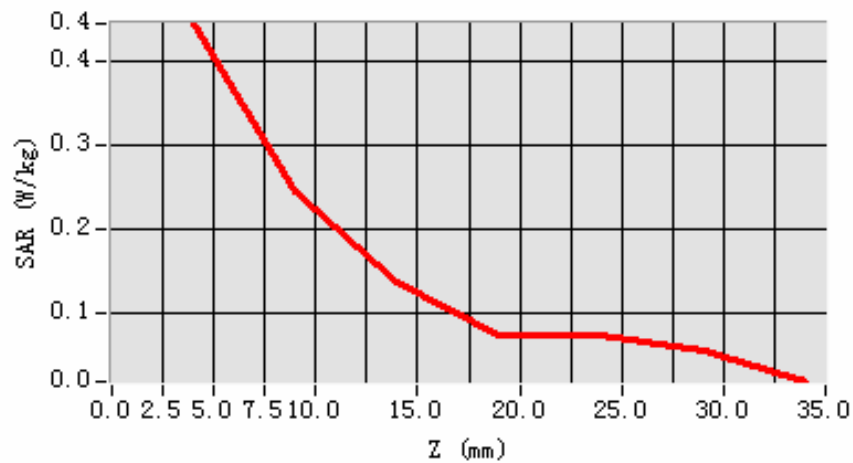
Maximum location: X=1.00, Y=7.00

SAR 10g (W/Kg)	0.281495
SAR 1g (W/Kg)	0.417346

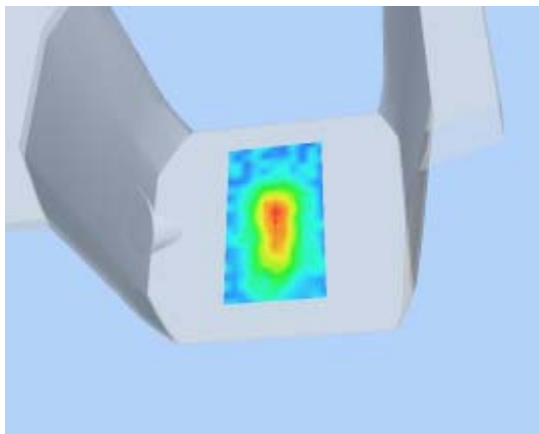
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4449	0.2441	0.1366	0.0740	0.0738	0.0532

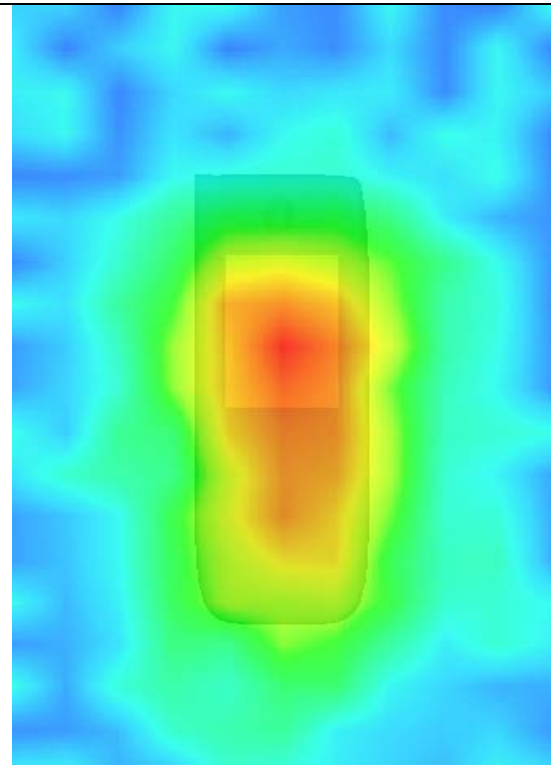
SAR, Z Axis Scan (X = 1, Y = 7)



3D sceen shot



Hot spot position



MEASUREMENT 56

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

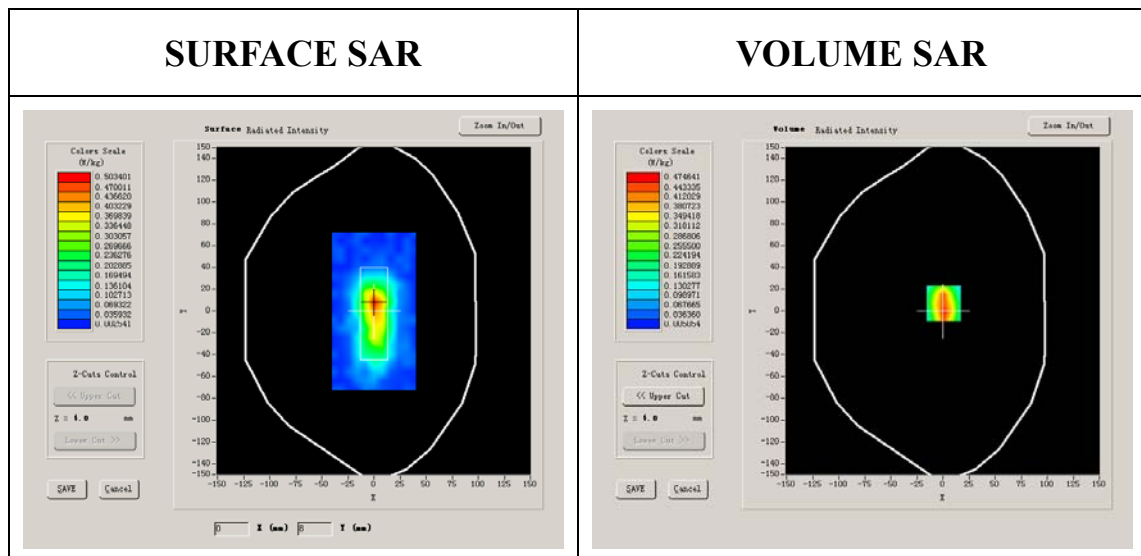
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

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

Conductivity (S/m)	1.381800
Variation (%)	-0.930000
Ambient Temperature:	21.9°C
Liquid Temperature:	21.3°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:1



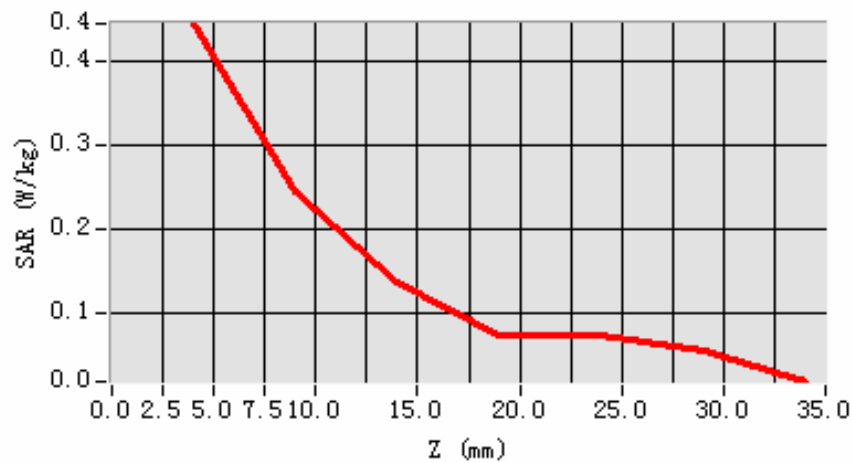
Maximum location: X=1.00, Y=7.00

SAR 10g (W/Kg)	0.286672
SAR 1g (W/Kg)	0.464450

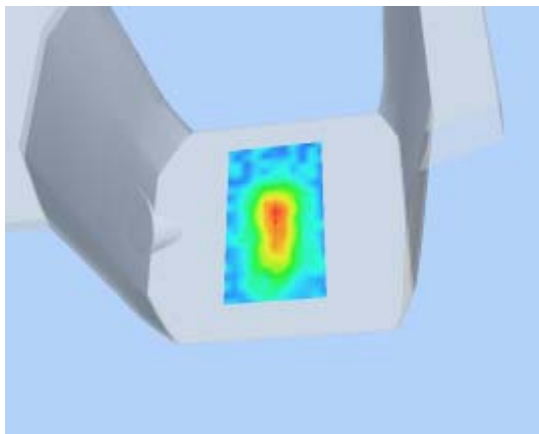
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4449	0.2441	0.1366	0.0740	0.0738	0.0532

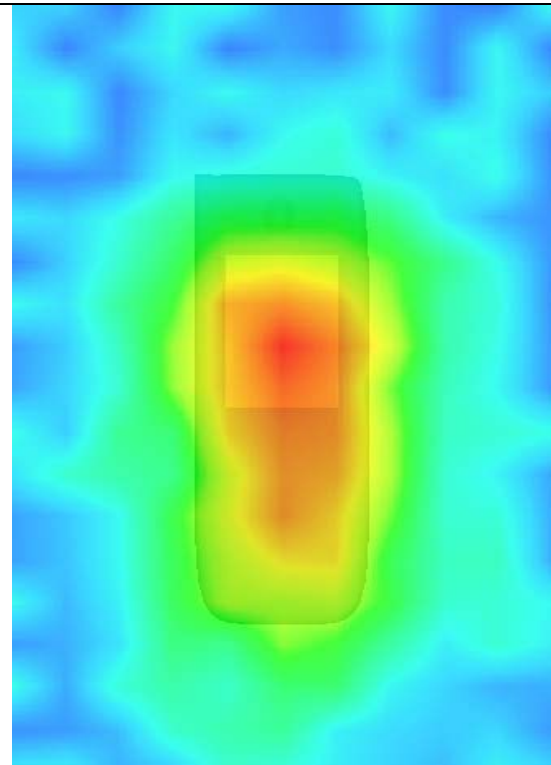
SAR, Z Axis Scan (X = 1, Y = 7)



3D sceen shot



Hot spot position



System Performance Check Data(Body)

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 27 seconds

A. Experimental conditions.

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

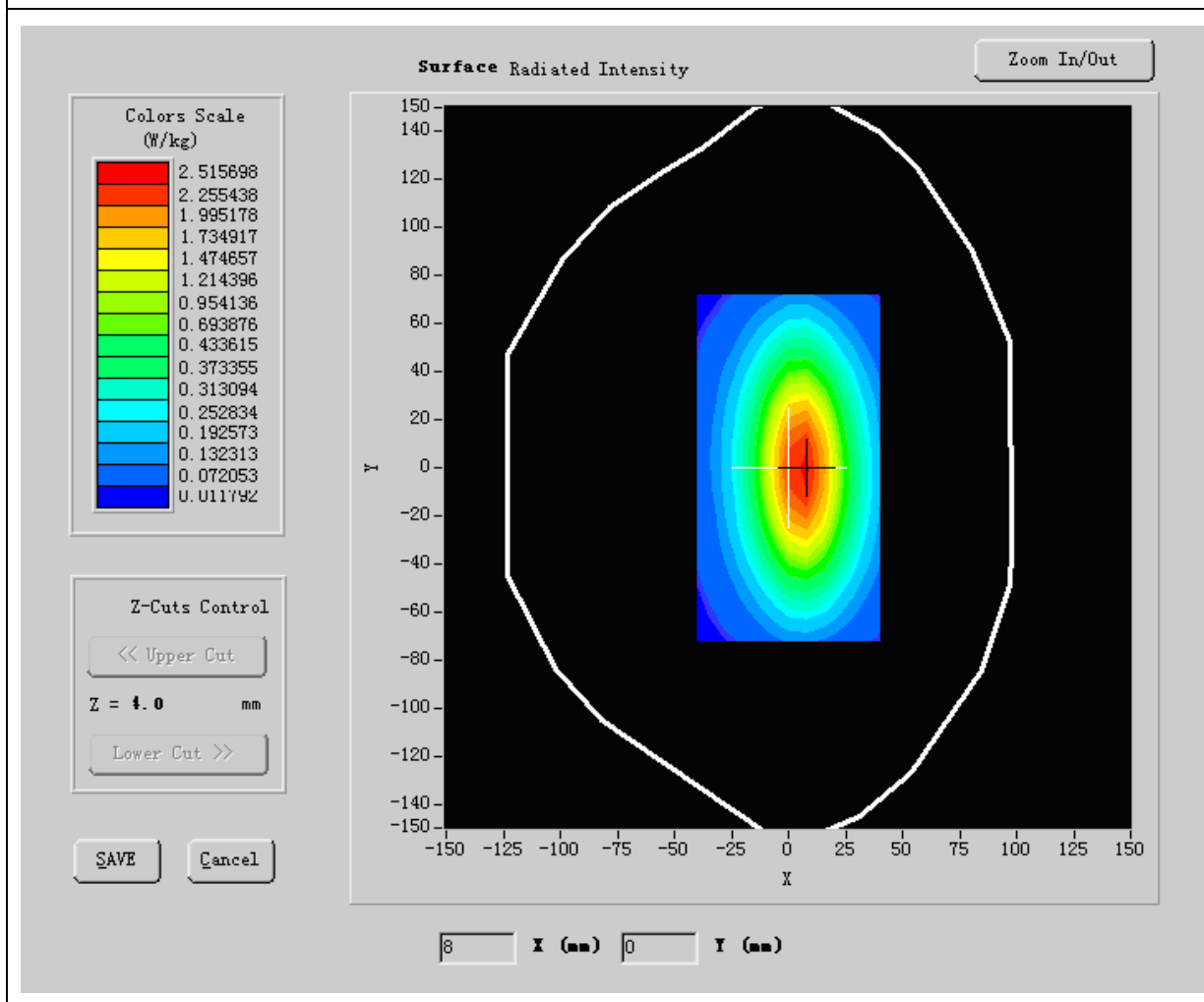
B. SAR Measurement Results

Band SAR:

Frequency (MHz)	835.000000
Relative permittivity (real part)	54.540001
Relative permittivity	15.070000

Conductivity (S/m)	0.975187
Variation (%)	-0.140000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1

VOLUME SAR



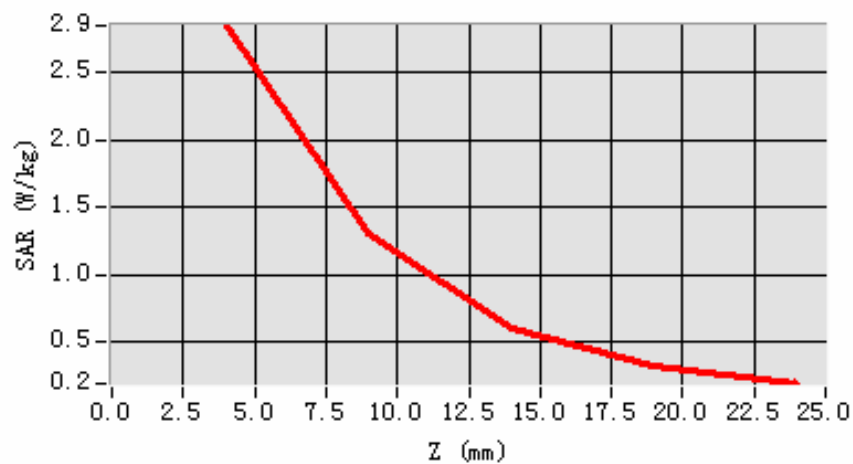
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	1.398753
SAR 1g (W/Kg)	2.487349

Z Axis Scan

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

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



System Performance Check Data(Body)

Type: Phone measurement (Complete)

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

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

Date of measurement: 21/7/2009

Measurement duration: 9 minutes 27 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	GSM 1900
Channels	
Signal	GSM

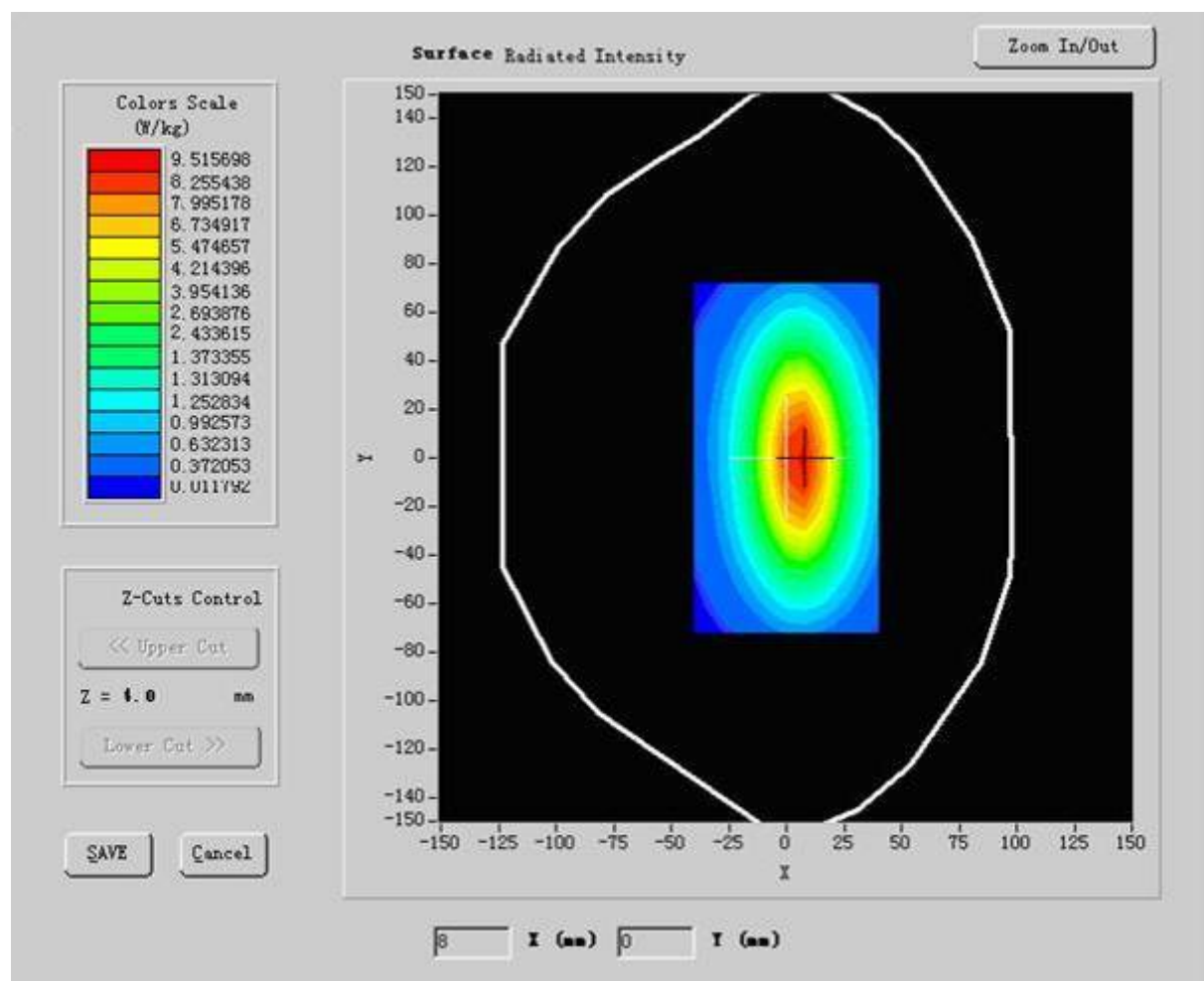
B. SAR Measurement Results

Band SAR

Frequency (MHz)	1900.00MHz
Relative permittivity (real part)	53.345554
Relative permittivity	15.070000

Conductivity (S/m)	1.428747
Variation (%)	-0.140000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.1°C
Probe Serial Number:	SN_3708_EP80
Crest factor:	1:8.1

VOLUME SAR



Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	5.004387
SAR 1g (W/Kg)	9.847544

Z Axis Scan

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

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

