



Report No.: SZ12100107S01



SAR TEST REPORT

Issued to

ZTE Corporation

For

GSM Dual-Band GPRS Digital Mobile phone

Model Name : ZTE F310
Trade Name : ZTE 中兴
Brand Name : ZTE 中兴
FCC ID : Q78-F310
Standard : FCC Oet65 Supplement C Jun.2001
47CFR 2.1093
ANSI C95.1-1999
IEEE 1528-2003
MAX SAR : Head: 0.998 W/kg
Body: 1.074 W/kg
Test date : 2012-11-2
Issue date : 2012-11-14



Shenzhen MORLAB Communication Technology Co., Ltd.

Tested by Zhu Zhan
Zhu Zhan

Approved by Wu Xuewen
Wu Xuewen

Review by Samuel Peng
Samuel Peng

Date 2012.11.14

Date 2012.11.14

Date 2012.11.14

CTIA Authorized Test Lab
LAB CODE 20081223-00
IEEE 1725

OFTA
電訊管理局



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FCC
Reg. No.
741109

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Change History		
Issue	Date	Reason for change
1.0	Nov. 14, 2012	First edition

Testing Laboratory

1.1. Identification of the Responsible Testing Laboratory

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

1.2. Identification of the Responsible Testing Location

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

1.3. Accreditation Certificate

Accredited Testing Laboratory: No. CNAS L3572

1.4. List of Test Equipments

No.	Instrument	Type	Cal. Date	Cal. Due
1	PC	Dell (Pentium IV 2.4GHz, SN:X10-23533)	(n.a)	(n.a)
2	Network Emulator	Rohde&Schwarz (CMU200, SN:105894)	2012-9-26	1year
3	Network Analyzer	Agilent(E5071B ,SN:MY42404762)	2012-9-26	1year
4	Voltmeter	Keithley (2000, SN:1000572)	2012-9-24	1year
5	Signal Generator	Rohde&Schwarz (SMP_02)	2012-9-24	1year
6	Power Amplifier	PRANA (Ap32 SV125AZ)	2012-9-24	1year
7	Power Meter	Agilent (E4416A, SN:MY45102093)	2012-5-07	1year
8	Power Sensor	Agilent (N8482A, SN:MY41091706)	2012-5-07	1year
9	Directional coupler	Giga-tronics(SN:1829112)	2012-9-24	1year
10	Probe	Satimo (SN:SN_3708_EP80)	2012-10-04	1year
11	DAE	Satimo (SN 35/08 SUPR31)	2012-9-24	1year
12	Dielectric Probe Kit	Agilent (85033E)	2012-9-24	1year
13	Phantom	Satimo (SN:SN_36_08_SAM62)	2012-9-24	1year
14	Liquid	Satimo(Last Calibration: 2012-11-2)	N/A	N/A
15	Dipole 835MHz	Satimo (SN 36/08 DIPC 99)	2012-10-05	1year
16	Dipole 1900MHz	Satimo (SN 36/08 DIPF 102)	2012-10-05	1year
17	Dipole 2450MHz	Satimo (SN 36/08 DIPJ 103)	2012-10-05	1year

2. Technical Information

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

2.1. Identification of Applicant

Company Name: ZTE Corporation
Address: ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China

2.2. Identification of Manufacturer

Company Name: ZTE Corporation
Address: ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China

2.3. Equipment Under Test (EUT)

Model Name: ZTE F310
Trade Name: ZTE 中兴
Brand Name: ZTE 中兴
Hardware Version: F310_V1_Z0_S_G2CL103
Software Version: F310_V1AMB_A
Frequency Bands: GSM 850MHz / PCS 1900MHz; WCDMA 850MHz/ 1900MHz; Bluetooth; Wifi802.11B/G/N
Modulation Mode: GSM/GPRS: GMSK; EDGE:8PSK; WCDMA: CDMA HSDPA/ HSUPA: QPSK; WIFI802.11B: DSSS; WIFI802.11G: OFDM WIFI 802.11N: OFDM; BT: GFSK/Π/4-DQPSK/8-DPSK
Multislot Class: GPRS:Class 12; EDGE:Class 12
GPRS Class: Class B
DTM: Not support
Antenna type: Fixed Internal Antenna
Development Stage: Identical prototype
Battery Model: Li3709T42P3h504047
Battery specification: 900mAh3.7V
3GPP Version: Release 6
Hotspot function: Not support

2.3.1. Photographs of the EUT

Please see for photographs of the EUT.

2.3.2. Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
1#	F310_V1_Z0_S_G2CL103	F310_V1AMB_A

2.4. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	47 CFR§2.1093	Radiofrequency Radiation Exposure Evaluation: Portable Devices
2	FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01)	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields
3	ANSI C95.1-1999	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz
4	IEEE 1528-2003	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.
5	KDB 648474 D1	SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas
6	KDB 248227 D1	SAR Measurement Procedures for 802.11 a/b/g Transmitters
7	KDB 450824 D1	SAR Probe Calibration and System Verification Considerations for Measurements at 150MHz-3GHz
8	KDB 941225 D1	SAR Measurement Procedures for 3G Devices

2.5. Device Category and SAR Limits

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

2.6. Test Environment/Conditions

Normal Temperature (NT):	20 ... 25 °C
Relative Humidity:	30 ... 75 %
Air Pressure:	980 ... 1020 hPa
Test frequency:	GSM 850MHz /PCS 1900MHz; WCDMA 850MHz/ WCDMA 1900MHz; 802.11B
Operation mode:	Call established
Power Level:	GSM 850 MHz Maximum output power(level 5) PCS 1900 MHz Maximum output power(level 0) WCDMA 850MHz Maximum output power(All up bits) WCDMA 1900MHz Maximum output power(All up bits) 802.11B Maximum output power

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

The Absolute Radio Frequency Channel Number (ARFCN) is allocated to 125, 190 and 251 respectively in the case of GSM 850 MHz, or to 512, 661 and 810 respectively in the case of PCS 1900 MHz, or to 9262, 9400 and 9538 respectively in the case of WCDMA 1900, or to 4132, 4182 and 4233 respectively in the case of WCDMA 850, or to 1, 6, 11 respectively in the case of 802.11B.

The EUT is commanded to operate at maximum transmitting power.

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

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

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

3. Specific Absorption Rate (SAR)

3.1. Introduction

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

3.2. SAR Definition

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

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

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

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

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

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

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

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

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

4. SAR Measurement Setup

4.1. The Measurement System

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

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

The following figure shows the system.



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

4.2. Probe

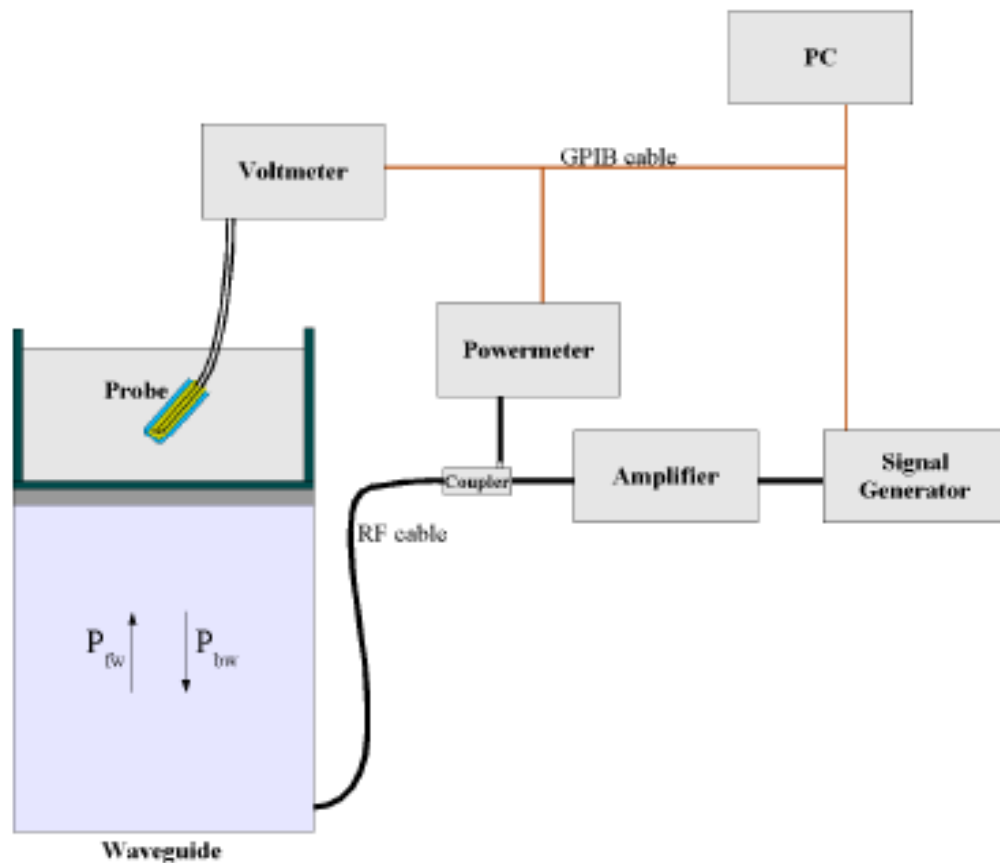
For the measurements the Specific Dosimetric E-Field Probe SN 37/08 EP80 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Tip Diameter : 6.5 mm
- Distance between probe tip and sensor center: 2.5mm
- Distance between sensor center and the inner phantom surface: 4 mm
(repeatability better than +/- 1mm)

- Probe linearity: <0.25 dB
- Axial Isotropy: <0.25 dB
- Spherical Isotropy: <0.25 dB
- Calibration range: 835to 2500MHz for head & body simulating liquid.

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

Probe calibration is realized, in compliance with CENELEC EN 62209 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 622091 annexe technique using reference guide at the five frequencies.



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

Where :

P_{fw} = Forward Power

P_{bw} = Backward Power

a and b = Waveguide dimensions

δ = Skin depth

Keithley configuration:

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

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

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

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

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

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

where DCP is the diode compression point in mV.

4.3. Probe Calibration Process

4.3.1 Dosimetric Assessment Procedure

Each E-Probe/Probe Amplifier combination has unique calibration parameters. SATIMO Probe calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm²) using an with CALISAR, Antenna proprietary calibration system.

4.3.2 Free Space Assessment Procedure

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and in a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1 mW/cm².

4.3.2 Temperature Assessment Procedure

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated head tissue. The E-field in the medium correlates with the temperature rise in the dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

Where:

$$SAR = C \frac{\Delta T}{\Delta t}$$

Δt = exposure time (30 seconds),

C = heat capacity of tissue (brain or muscle),

ΔT = temperature increase due to RF exposure.

SAR is proportional to $\Delta T / \Delta t$, the initial rate of tissue heating, before thermal diffusion takes place. The electric field in the simulated tissue can be used to estimate SAR by equating the thermally derived SAR to that with the E- field component.

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

Where:

σ = simulated tissue conductivity,

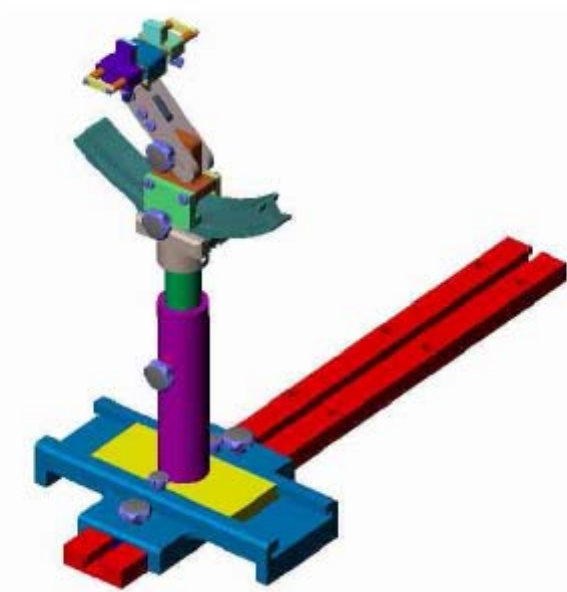
ρ = Tissue density (1.25 g/cm³ for brain tissue)

4.4. Phantom

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

4.5. Device Holder

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



Device holder

System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

5. Tissue Simulating Liquids

Simulant liquids used for testing at frequencies of 835MHz, 1900MHz and 2450MHz, are made mainly of sugar, salt and water solutions may be left in the phantoms. Approximately 20litres are needed for an upright head compared to about 25 litres for a horizontal bath phantom. The liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is or from the flat phantom to the liquid top surface is 15cm.

Following are the recipes for head and body tissue simulating liquid for frequency band 835 MHz , 1900 MHz and 2450MHz .

Ingredients (% by weight)	Frequency Band		Frequency Band		Frequency Band	
	835MHz		1900MHz		2450MHz	
Tissue Type	Head	Body	Head	Body	Head	Body
Water	41.45	52.4	54.9	40.4	62.7	73.2
Salt(NaCl)	1.45	1.4	0.18	0.5	0.5	0.04
Sugar	56.0	45.0	0.0	58.0	0.0	0.0
HEC	1.0	1.0	0.0	1.0	0.0	0.0
Bactericide	0.1	0.1	0.0	0.1	0.0	0.0
Triton	0.0	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	44.92	0.0	36.8	0.0
Acticide SPX	0.0	0.0	0.0	0.0	0.0	26.7
Dielectric Constant	42.45	56.1	39.9	54.0	39.8	52.5
Conductivity (S/m)	0.91	0.95	1.42	1.45	1.88	1.97

Recipes for Tissue Simulating Liquid

Table 1: Dielectric Performance of Head Tissue Simulating Liquid

Temperature: 22.0~23.8°C, humidity: 54~60%.			
Frequency	Description	Permittivity ϵ	Conductivity σ (S/m)
835 MHz	Reference result per OET65 $\pm 5\%$ window	41.5 39.425 to 43.575	0.90 0.855 to 0.945
	Reference result per probe calibration $\pm 5\%$ window	41.5 39.425 to 43.575	0.90 0.855 to 0.945
	Validation value (Nov. 2)	40.324182	0.893241
1900 MHz	Reference result per OET65 $\pm 5\%$ window	40 38 to 42	1.40 1.33 to 1.47
	Reference result per probe calibration $\pm 5\%$ window	42 39.9 to 44.1	1.40 1.33 to 1.47
	Validation value (Nov. 2)	41.275617	1.415831

2450 MHz	Reference result per OET65 $\pm 5\%$ window	39.2 37.24 to 41.16	1.80 1.71 to 1.89
	Reference result per probe calibration $\pm 5\%$ window	39.2 37.24 to 41.16	1.80 1.71 to 1.89
	Validation value (Nov. 2)	40.153896	1.794313

Table 2: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 22.0~23.8°C, humidity: 54~60%.			
Frequency	Description	Permittivity ϵ	Conductivity σ (S/m)
835 MHz	Reference result per OET65 $\pm 5\%$ window	55.2 52.44 to 57.96	0.97 0.9215 to 1.0185
	Reference result per probe calibration $\pm 5\%$ window	56.1 53.295 to 58.905	0.95 0.905 to 0.998
	Validation value (Nov. 2)	53.683123	0.942714
1900 MHz	Reference result per OET65 $\pm 5\%$ window	53.3 50.635 to 55.965	1.52 1.444 to 1.596
	Reference result per probe calibration $\pm 5\%$ window	54 51.3 to 56.7	1.45 1.378 to 1.523
	Validation value (Nov. 2)	53.623641	1.488263
2450 MHz	Reference result per OET65 $\pm 5\%$ window	52.7 50.635 to 55.965	1.95 1.853 to 2.048
	Reference result per probe calibration $\pm 5\%$ window	52.5 49.875 to 55.125	1.78 1.691 to 1.869
	Validation value (Nov. 2)	53.149069	1.882476

Note:1.The dielectric parameters of the liquids were verified prior to the SAR evaluation using an Agilent 85033E Dielectric Probe Kit and an Agilent Network Analyzer.

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

3.Per KDB 450824 D01, tissue used during test are within 5% tolerances of probe calibration report, and also within 5% of the target dielectric parameters for OET65.

"when the actual tissue dielectric parameters are recorded for the probe calibration, the differences for ϵ and σ between probe calibration and routine measurements should each be $\leq 5\%$ while satisfying the required $\pm 5\%$ tolerances in target dielectric parameters. "(KDB 450824 D01)

6. Uncertainty Assessment

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

6.1. UNCERTAINTY EVALUATION FOR EUT SAR TEST

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	lg Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	4.76	N	1	1	1	4.76	4.76	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	0.7	0.7	1.01	1.01	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	0.7	0.7	1.62	1.62	∞
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	N-1
Output power Power drift - SAR drift measurement	6.6.2	4.04	R	$\sqrt{3}$	1	1	2.33	2.33	∞
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	4.57	R	$\sqrt{3}$	0.64	0.43	1.69	1.13	∞
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	M
Liquid permittivity - deviation from target value	E.3.2	3.69	R	$\sqrt{3}$	0.6	0.49	1.28	1.04	∞
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	1	0.6	0.49	6.00	4.90	M
Combined Standard Uncertainty			RSS				11.55	10.67	
Expanded Uncertainty (95% Confidence interval)			K=2				23.11	21.33	

6.2. UNCERTAINTY FOR SYSTEM PERFORMANCE CHECK

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	4.76	N	1	1	1	4.76	4.76	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	0.7	0.7	1.01	1.01	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	0.7	0.7	1.62	1.62	∞
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	∞
Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.00	N	$\sqrt{3}$	1	1	0.58	0.58	∞

Input power and SAR drift measurement	8,6.6.2	4.04	R	$\sqrt{3}$	1	1	2.33	2.33	∞
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	4.57	R	$\sqrt{3}$	0.64	0.43	1.69	1.13	∞
Liquid conductivity - measurement uncertainty	E.3.3	5.00	N	$\sqrt{3}$	0.64	0.43	1.85	1.24	M
Liquid permittivity - deviation from target value	E.3.2	3.69	R	$\sqrt{3}$	0.6	0.49	1.28	1.04	∞
Liquid permittivity - measurement uncertainty	E.3.3	10.00	N	$\sqrt{3}$	0.6	0.49	3.46	2.83	M
Combined Standard Uncertainty			RSS				8.83	8.37	
Expanded Uncertainty (95% Confidence interval)			K=2				17.66	16.73	

7. SAR Measurement Evaluation

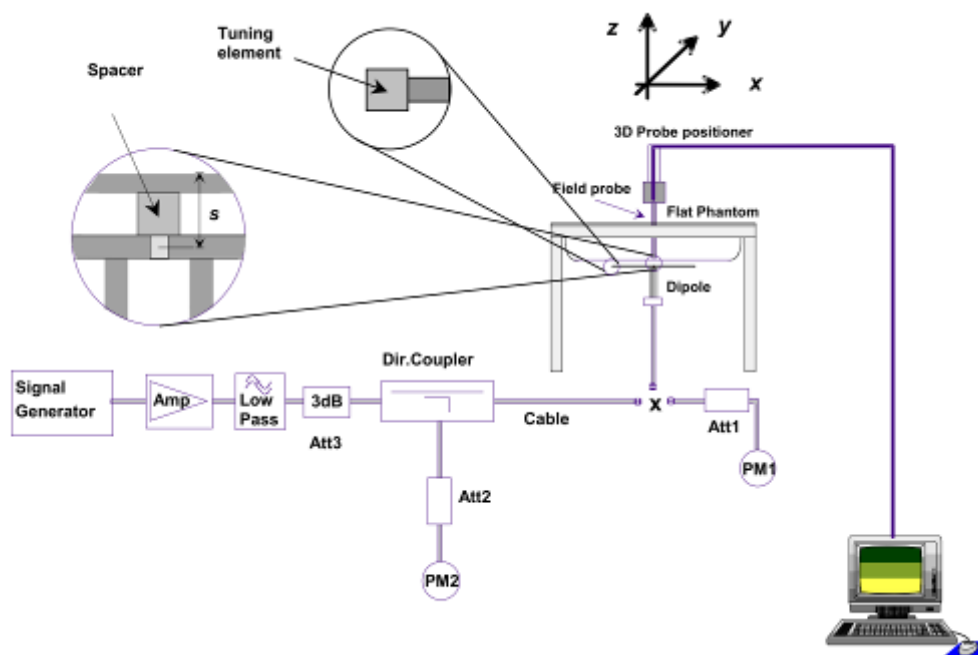
7.1. System Setup

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

Equipments:

name	Type and specification
Signal generator	Rohde&Schwarz (SMP_02)
Directional coupler	Giga-tronics(SN:1829112)
Amplifier	PRANA (Ap32 SV125AZ)
Reference dipole	835MHz:SN 36/08 DIPC 99 1900MHz:SN 36/08 DIPF 102 2450MHz:SN 36/08 DIPJ 103

System Verification Setup Block Diagram



7.2. Validation Results

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

Frequency	835MHz(Head)	835MHz(Body)	1900MHz(Head)	1900MHz(Body)
Target value (1g)	9.740 W/Kg	9.880 W/Kg	40.320 W/Kg	38.530 W/Kg
250 mW input power	2.386 W/Kg	2.380 W/Kg	9.791 W/Kg	9.746 W/Kg
Test value (1g)	9.544 W/Kg	9.520W/Kg	39.164 W/Kg	38.984 W/Kg

Frequency	2450MHz(Head)	2450MHz(Body)
Target value (1g)	50.450 W/Kg	53.590 W/Kg
250 mW input power	12.044 W/Kg	12.789 W/Kg
Test value (1g)	48.176 W/Kg	51.156W/Kg

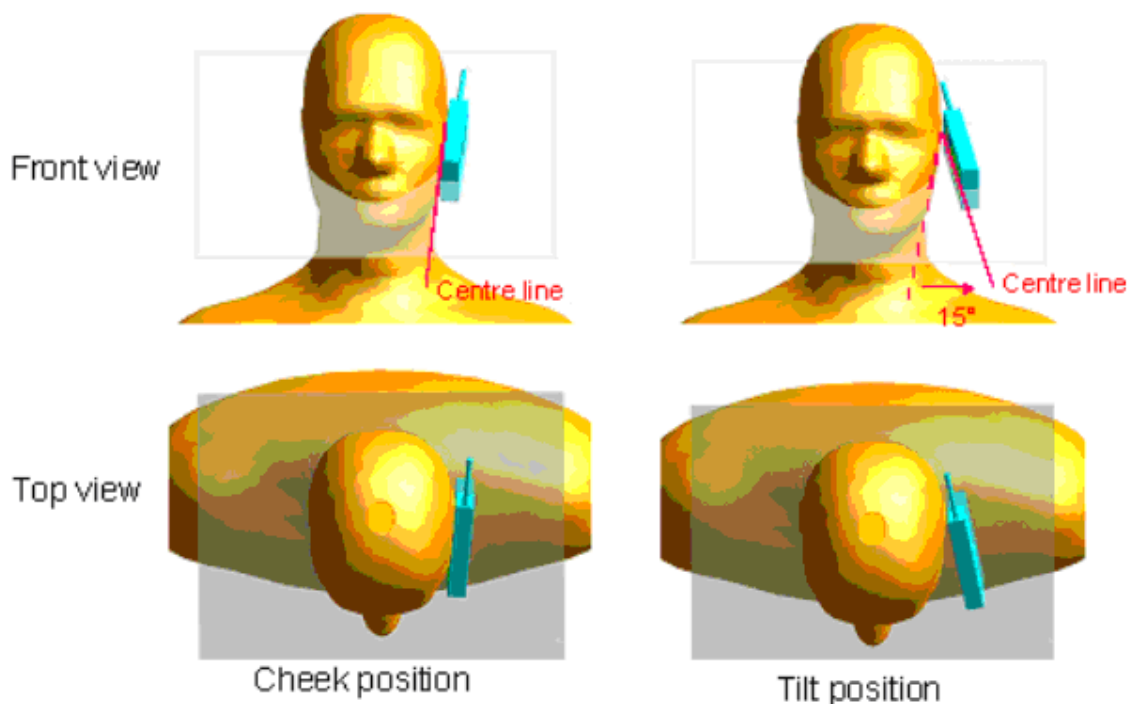
Note: System checks the specific test data please see page 142~153

8. Operational Conditions During Test

8.1. Informations on the testing

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

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



Description of the “cheek” position:

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

Description of the “tilted” position:

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

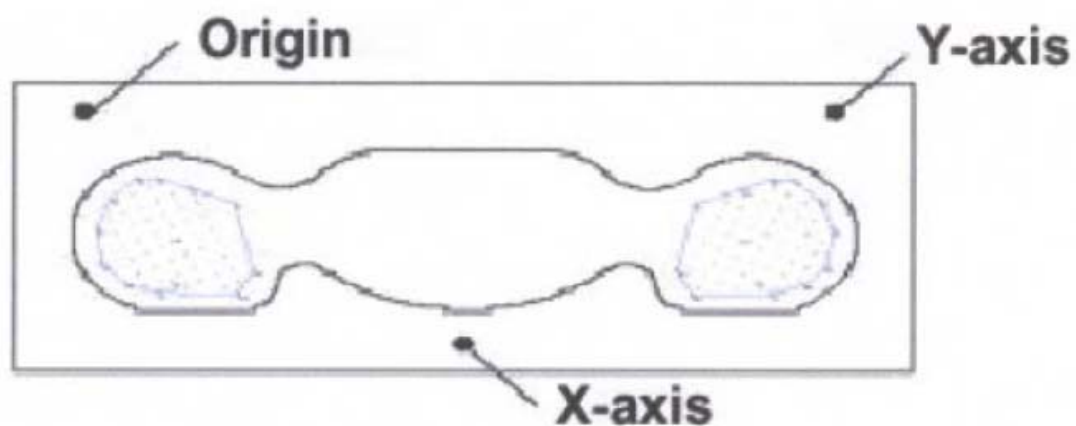
Remark: Please refer to Appendix B for the test setup photos.

8.2. Body-worn Configurations

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

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

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



SAR Measurement Points in Area Scan

8.3. Measurement procedure

The following steps are used for each test position

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

8.4. Description of interpolation/extrapolation scheme

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

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

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

9. Measurement Of Conducted Peak output power

1. WCDMA Conducted peak output power

Item	band	WCDMA 850			WCDMA 1900		
	ARFCN	4132	4175	4233	9262	9400	9538
	subtest	dBm			dBm		
5.2(WCDMA)	non	21.69	21.87	21.79	22.78	22.65	22.69
HSDPA	1	21.67	21.73	21.68	22.62	22.59	22.61
	2	21.65	21.61	21.69	22.59	22.57	22.62
	3	21.17	21.15	21.52	22.13	22.01	22.12
	4	21.16	21.11	21.58	22.09	22.03	22.11
HSUPA	1	21.65	21.55	21.65	22.59	22.55	22.56
	2	19.78	19.76	19.73	20.56	20.57	20.56
	3	20.59	20.52	20.63	21.57	21.56	21.55
	4	19.71	19.67	19.65	20.58	20.56	20.51
	5	21.61	21.51	21.57	22.57	22.53	22.59

2. GSM Conducted peak output power

Band	Channel	Frequency (MHz)	Output Power (dBm)
GSM 850	128	824.2	33.10
	190	836.6	32.74
	251	848.8	32.59
PCS 1900	512	1850.2	29.58
	661	1880.0	28.65
	810	1909.8	28.11

3. GPRS Mode Conducted peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	32.29	31.98	30.37	29.22
	190	836.6	31.92	31.24	30.30	29.15
	251	848.8	31.77	31.90	30.23	29.08
PCS 1900	512	1850.2	28.93	28.02	27.38	27.07
	661	1880.0	27.86	27.66	27.43	26.78
	810	1909.8	27.34	27.12	27.25	26.37

GPRS Time-based Average Power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	23.29	25.96	26.11	26.21
	190	836.6	22.92	25.22	26.04	26.14
	251	848.8	22.77	25.88	25.97	26.07
PCS 1900	512	1850.2	19.93	22.00	23.12	24.06
	661	1880.0	18.86	21.64	23.17	23.77
	810	1909.8	18.34	21.10	22.99	23.36

4. EDGE Mode Conducted peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	31.48	30.76	30.15	29.10
	190	836.6	31.31	30.92	30.22	29.18
	251	848.8	32.09	31.05	30.11	29.20
PCS 1900	512	1850.2	28.79	28.06	27.41	27.21
	661	1880.0	27.93	27.43	27.03	26.65
	810	1909.8	27.95	27.13	26.72	26.11

EDGE Time-based Average Power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	22.48	24.74	25.89	26.09
	190	836.6	22.31	24.90	25.96	26.17
	251	848.8	23.09	25.03	25.85	26.19
PCS 1900	512	1850.2	19.79	22.04	23.15	24.20
	661	1880.0	18.93	21.41	22.77	23.64
	810	1909.8	18.95	21.11	22.46	23.10

Timeslot consignations:

No. Of Slots	Slot 1	Slot 2	Slot 3	Slot 4
Slot Consignation	1Up4Down	2Up2Down	3Up2Down	4Up1Down
Duty Cycle	1:8	1:4	1:2.67	1:2
Correct Factor	-9.00dB	-6.02dB	-4.26dB	-3.01dB

5. Wifi peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)		
			802.11B (DSSS)	802.11G (OFDM)	802.11N20 (OFDM)
WiFi	1	2412	12.33	9.51	9.33
	6	2437	12.51	10.03	9.84
	11	2462	12.72	10.51	10.33

Band	Channel	Frequency (MHz)	Output Power(dBm)
			802.11N40 (OFDM)
WiFi	3	2422	10.95
	6	2437	11.39
	9	2452	11.65

6. Bluetooth peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)		
			GFSK	$\pi/4$ -DQPSK	8-DPSK
BT	0	2402	3.892	3.186	3.411
	38	2441	3.591	2.869	3.086
	79	2480	5.507	4.850	5.084

11. Test Results List

Summary of Measurement Results (GSM 850MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg), 1g Peak		
			Device Test channel,		
			Channel 128	Channel 190	Channel 251
Right Side Of Head	Cheek/Touch	Internal	0.946	0.921	0.911
	Ear/Tilt	Internal	0.572	/	/
Left Side Of Head	Cheek/Touch	Internal	0.940	0.946	0.925
	Ear/Tilt	Internal	0.407	/	/
Body (15mm Separation)	GSM	Back upward	0.482	/	/
		Face Upward	0.212	/	/
	GPRS	Back upward	1.018	1.074	1.007
		Face Upward	0.498	/	/
	EDGE	Back upward	/	/	0.678

Summary of Measurement Results (GSM 1900MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg), 1g Peak		
			Device Test channel,		
			Channel 512	Channel 661	Channel 810
Right Side Of Head	Cheek/Touch	Internal	0.813	0.795	0.819
	Ear/Tilt	Internal	0.302	/	/
Left Side Of Head	Cheek/Touch	Internal	0.798	0.719	0.876
	Ear/Tilt	Internal	0.307	/	/
Body (15mm Separation)	GSM	Back upward	0.608	/	/
		Face Upward	0.379	/	/
	GPRS	Back upward	0.947	0.941	0.923
		Face Upward	0.433	/	/
	EDGE	Back upward	0.672	/	/

Note:

The SAR test shall be performed at the high, middle and low frequency channels of each operating mode, when the SAR of highest power channel of each configurations is less than 0.8 W/kg, refer to KDB 648474, testing for the other channels is not required.

Summary of Measurement Results (WCDMA 850MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg), 1g Peak		
			Device Test channel		
			Channel 4132	Channel 4175	Channel 4233
Right Side Of Head	Cheek/Touch	Internal	/	0.653	/
	Ear/Tilt	Internal	/	0.262	/
Left Side Of Head	Cheek/Touch	Internal	/	0.592	/
	Ear/Tilt	Internal	/	0.215	/
Body (15mm Separation)	Back upward	Internal	/	0.374	/
	Face Upward	Internal	/	0.227	/

Note:

1. Maximum SAR for 12.2kbps RMC is 0.653 W/Kg $\leq$ 75% of the SAR limit (i.e. 1.2W/Kg 1g) and maximum average output of each RF channel with HSDPA active is less than 1/4 dB higher than that measured without HSDPA using 12.2kbps RMC, according to KDB 941225D01v02, SAR is not required for this handset with HSPA capabilities.

Summary of Measurement Results (WCDMA 1900MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg), 1g Peak		
			Device Test channel		
			Channel 9262	Channel 9400	Channel 9538
Right Side Of Head	Cheek/Touch	Internal	0.957	0.969	0.950
	Ear/Tilt	Internal	0.581	/	/
Left Side Of Head	Cheek/Touch	Internal	0.989	0.998	0.977
	Ear/Tilt	Internal	0.641	/	/
Body (15mm Separation)	Back upward	Internal	0.753	/	/
	Face Upward	Internal	0.406	/	/

Note

1.Maximum SAR for 12.2kbps RMC is 0.998 W/Kg $\leq$ 75% of the SAR limit (i.e. 1.2W/Kg 1g) and maximum average output of each RF channel with HSUPA/HSDPA active is less than 1/4 dB higher than that measured without HSDPA using 12.2kbps RMC, according to KDB 941225D01v02, SAR is not required for this handset with HSPA capabilities.

2.The handset doesn't support hotspot function.

Summary of Measurement Results (WLAN 802.11B Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg), 1g Peak		
			Device Test channel		
			Channel 1	Channel 6	Channel 11
Right Side Of Head	Cheek/Touch	Internal	/	/	0.138
	Ear/Tilt	Internal	/	/	0.040
Left Side Of Head	Cheek/Touch	Internal	/	/	0.085
	Ear/Tilt	Internal	/	/	0.039
Body (15mm Separation)	Back upward	Internal	/	/	0.098
	Face upward	Internal	/	/	0.072

12. Multiple Transmitters Evaluation

The are three transmitters build in EUT, As followed:



Stand-alone SAR

The output power of Wifi transmitter is 19mW > Pref (Pref= 12mW) , and the distance between Wifi antenna and main antenna is 1.5cm < 5cm , stand-alone SAR evaluation is required for Wifi.

The BT Max. Peak output power is 4mW < Pref (Pref= 12mW), and the distance between BT antenna and main antenna is 1.5cm < 2.5cm, and the Max. SAR of WCDMA&GSM is lower than 1.2W/Kg, so standalone SAR evaluation is not required for Bluetooth .

Simultaneous SAR

The BT and Wifi can't simultaneous transmitting.

Test Position	WCDMA&GSM SAR _{Max} (W/Kg)	Bluetooth SAR(W/Kg)	WiFi SAR(W/Kg)	$\sum 1\text{-g SAR}_{\text{Max}}(\text{W/Kg})$	
				BT&Main Ant	WiFi&Main Ant
Head SAR	0.998	0	0.138	0.998	1.136
Body SAR	1.074	0	0.098	1.074	1.172

Simultaneous Transmission SAR evaluation is not required for Wifi and WCDMA&GSM, because the sum of 1g SAR_{Max} is 1.172W/Kg < 1.6W/Kg for Wifi and WCDMA&GSM.

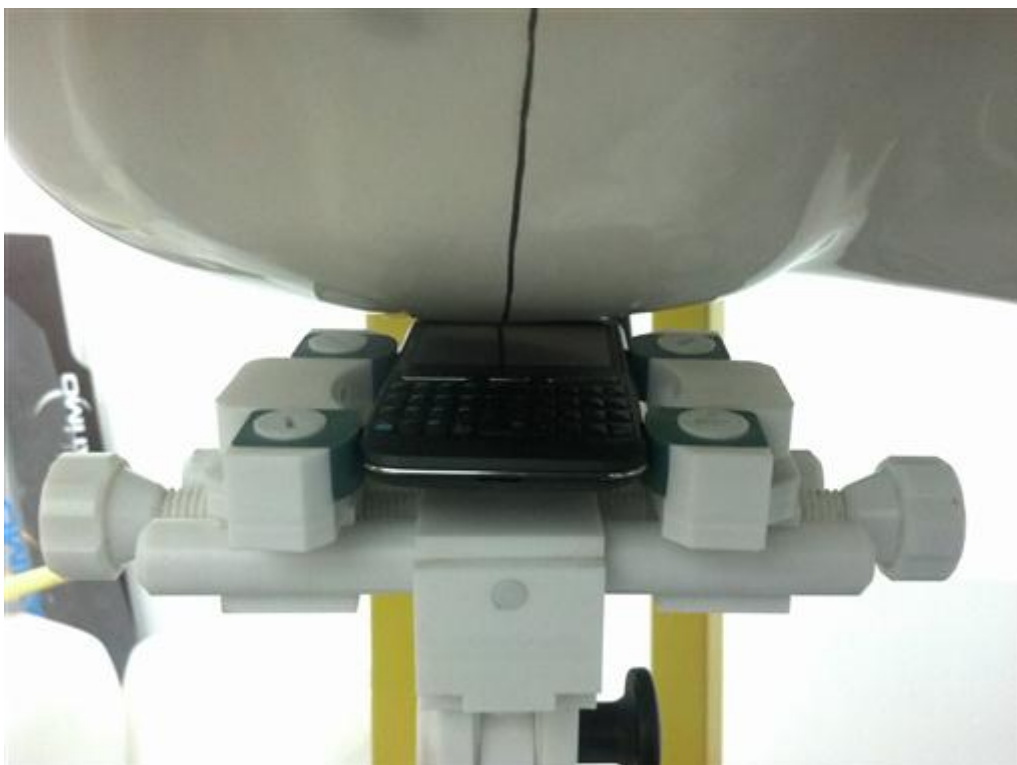
Simultaneous Transmission SAR evaluation is not required for BT and WCDMA&GSM, because the sum of 1g SAR_{Max} is 1.074W/Kg < 1.6W/Kg for BT and WCDMA&GSM.

Annex A EUT Setup Photos

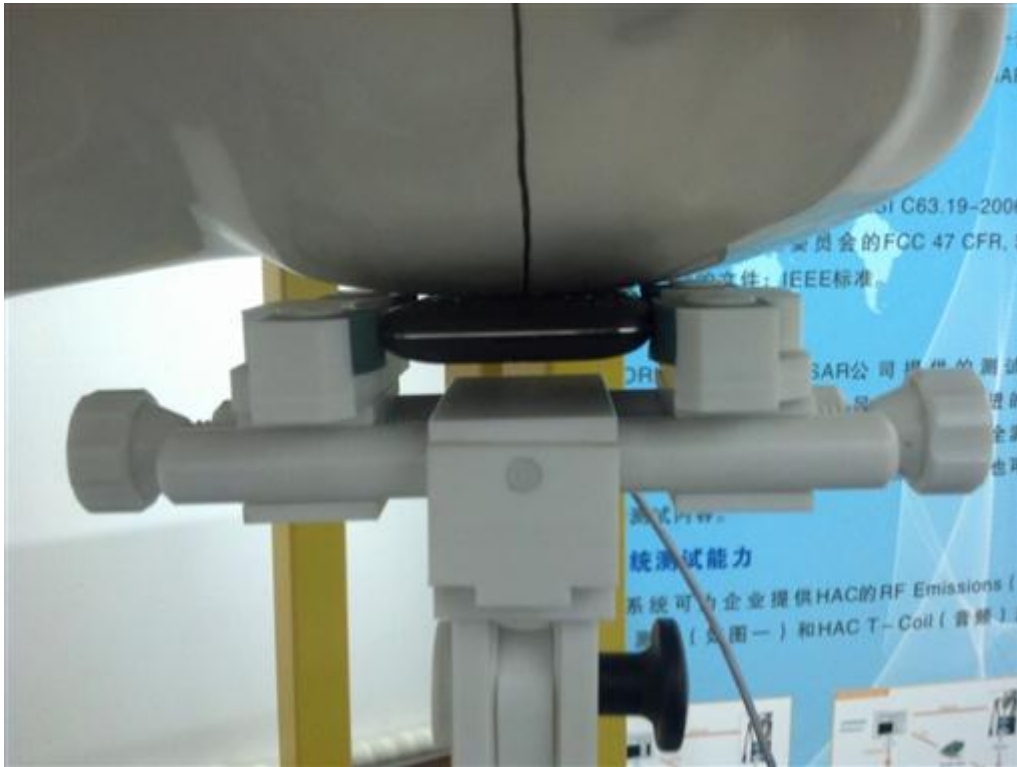
1 EUT Right Head Touch Cheek Position



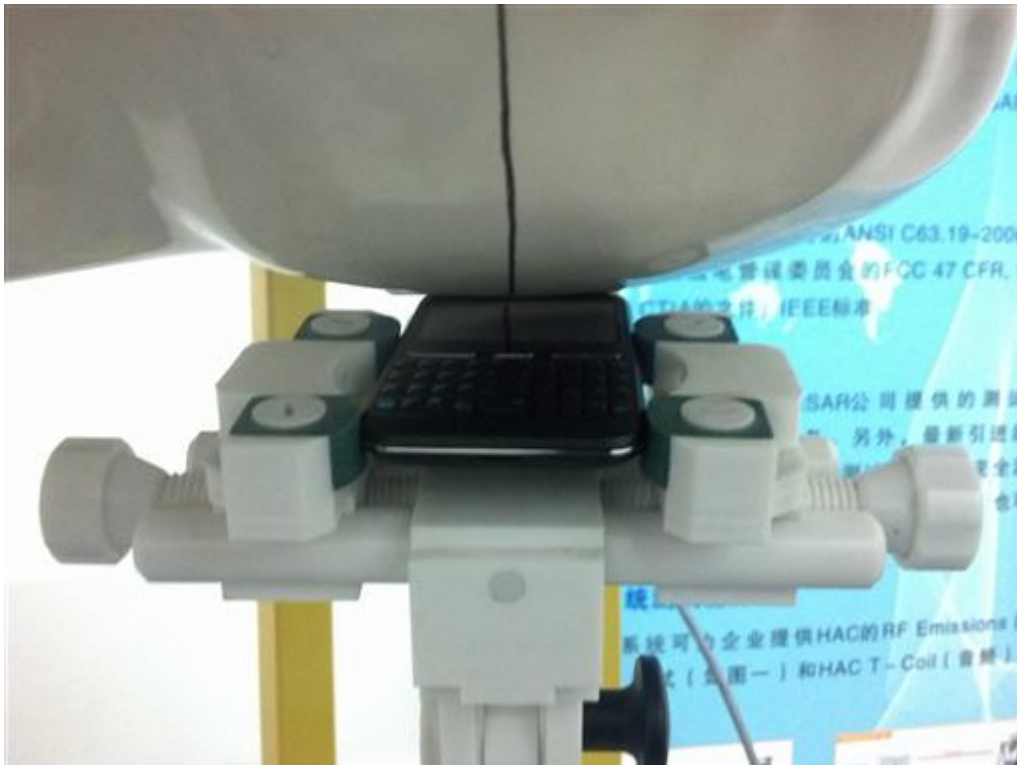
2 EUT Right Head Tilt15 Position



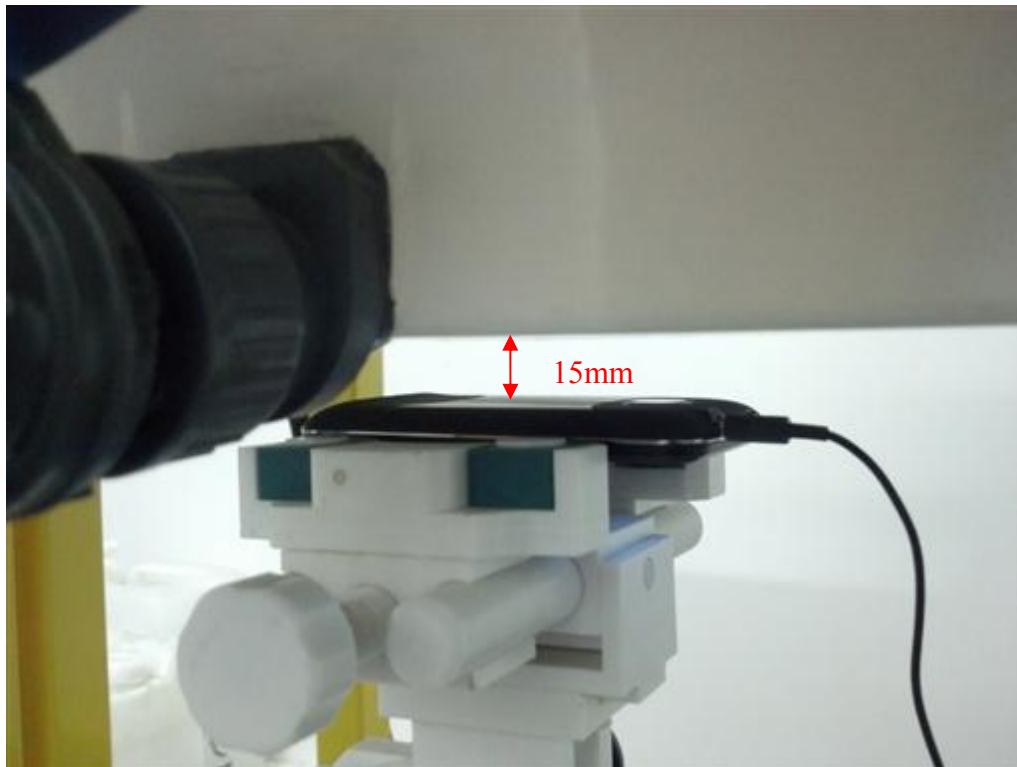
3 EUT Left Head Touch Cheek Position



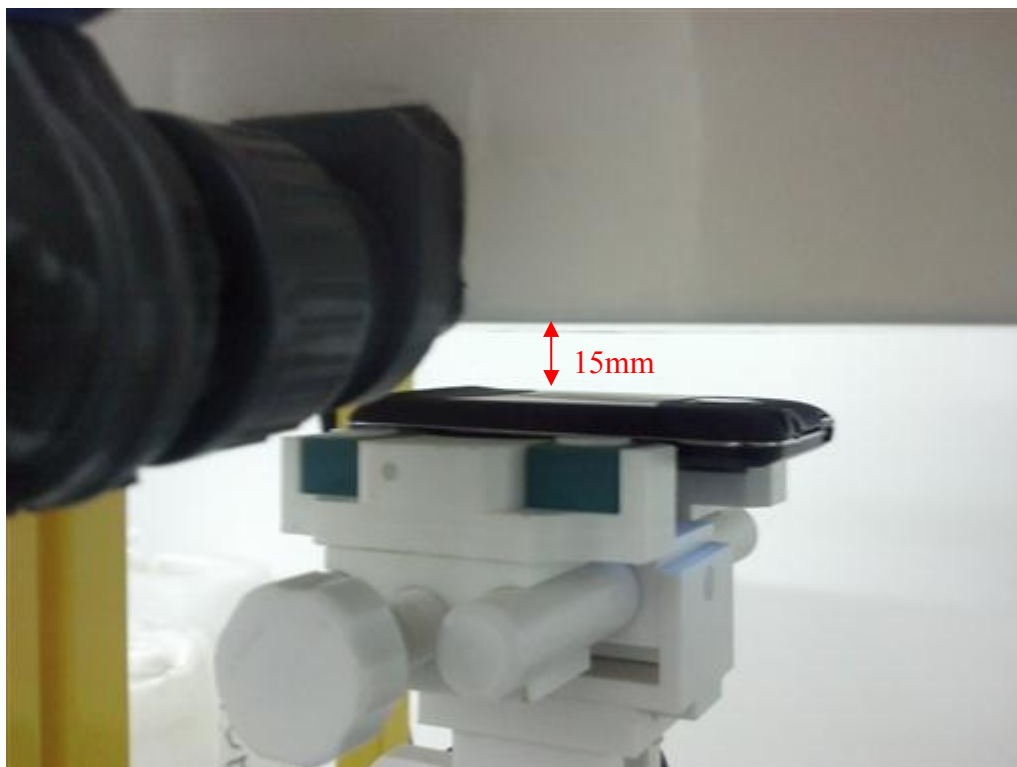
4 EUT Left Head Tilt15 Position



5 Side Position with earphone



6 Side Position



Liquid Level Photo



Liquid depth :15.5cm

Annex B Graph Test Results

BAND	PARAMETERS
<u>GSM850</u>	<u>Measurement 1:</u> Right Head with Cheek device position on Low Channel in GSM mode <u>Measurement 2:</u> Right Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 3:</u> Right Head with Cheek device position on High Channel in GSM mode <u>Measurement 4:</u> Right Head with Tilt device position on Low Channel in GSM mode <u>Measurement 5:</u> Left Head with Cheek device position on Low Channel in GSM mode <u>Measurement 6:</u> Left Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 7:</u> Left Head with Cheek device position on High Channel in GSM mode <u>Measurement 8:</u> Left Head with Tilt device position on Low Channel in GSM mode <u>Measurement 9:</u> Flat Plane with Body device position on Low Channel in GSM mode <u>Measurement 10:</u> Flat Plane with Body device position on Low Channel in GSM mode <u>Measurement 11:</u> Flat Plane with Body device position on Low Channel in GPRS mode <u>Measurement 12:</u> Flat Plane with Body device position on Middle Channel in GPRS mode <u>Measurement 13:</u> Flat Plane with Body device position on High Channel in GPRS mode <u>Measurement 14:</u> Flat Plane with Body device position on Low Channel in GPRS mode <u>Measurement 15:</u> Flat Plane with Body device position on High Channel in EDGE mode
<u>GSM1900</u>	<u>Measurement 16:</u> Right Head with Cheek device position on Low Channel in GSM mode <u>Measurement 17:</u> Right Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 18:</u> Right Head with Cheek device position on High Channel in GSM mode <u>Measurement 19:</u> Right Head with Tilt device position on Low Channel in GSM mode <u>Measurement 20:</u> Left Head with Cheek device position on Low Channel in GSM mode

	<u>Measurement 21:</u> Left Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 22:</u> Left Head with Cheek device position on High Channel in GSM mode <u>Measurement 23:</u> Left Head with Tilt device position on Low Channel in GSM mode <u>Measurement 24:</u> Flat Plane with Body device position Low Channel in GSM mode <u>Measurement 25:</u> Flat Plane with Body device position on Low Channel in GSM mode <u>Measurement 26:</u> Flat Plane with Body device position on Low Channel in GPRS mode <u>Measurement 27:</u> Flat Plane with Body device position on Middle Channel in GPRS mode <u>Measurement 28:</u> Flat Plane with Body device position on High Channel in GPRS mode <u>Measurement 29:</u> Flat Plane with Body device position on Low Channel in GPRS mode <u>Measurement 30:</u> Flat Plane with Body device position on Low Channel in EDGE mode
<u>WCDMA 850</u>	<u>Measurement 31:</u> Right Head with Cheek device position on Middle Channel in WCDMA mode <u>Measurement 32:</u> Right Head with Tilt device position on Middle Channel in WCDMA mode <u>Measurement 33:</u> Left Head with Cheek device position on Middle Channel in WCDMA mode <u>Measurement 34:</u> Left Head with Tilt device position on Middle Channel in WCDMA mode <u>Measurement 35:</u> Flat Plane with Body device position on Middle Channel in WCDMA mode <u>Measurement 36:</u> Flat Plane with Body device position on Middle Channel in WCDMA mode
<u>WCDMA 1900</u>	<u>Measurement 37:</u> Right Head with Cheek device position on Low Channel in WCDMA mode <u>Measurement 38:</u> Right Head with Cheek device position on Middle Channel in WCDMA mode <u>Measurement 39:</u> Right Head with Cheek device position on High Channel in WCDMA mode <u>Measurement 40:</u> Right Head with Tilt device position on Low Channel in WCDMA mode <u>Measurement 41:</u> Left Head with Cheek device position on Low Channel in WCDMA mode <u>Measurement 42:</u> Left Head with Cheek device position on Middle Channel in WCDMA mode

	<u>Measurement 43:</u> Left Head with Cheek device position on High Channel in WCDMA mode <u>Measurement 44:</u> Left Head with Tilt device position on Low Channel in WCDMA mode <u>Measurement 45:</u> Flat Plane with Body device position on Low Channel in WCDMA mode <u>Measurement 46:</u> Flat Plane with Body device position on Low Channel in WCDMA mode
<u>802.11B</u>	<u>Measurement 47:</u> Right Head with Cheek device position on High Channel in DSSS mode <u>Measurement 48:</u> Right Head with Tilt device position on High Channel in DSSS mode <u>Measurement 49:</u> Left Head with Cheek device position on High Channel in DSSS mode <u>Measurement 50:</u> Left Head with Tilt device position on High Channel in DSSS mode <u>Measurement 51:</u> Flat Plane with Body device position on High Channel in DSSS mode <u>Measurement 52:</u> Flat Plane with Body device position on High Channel in DSSS mode

MEASUREMENT 1

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 49 seconds

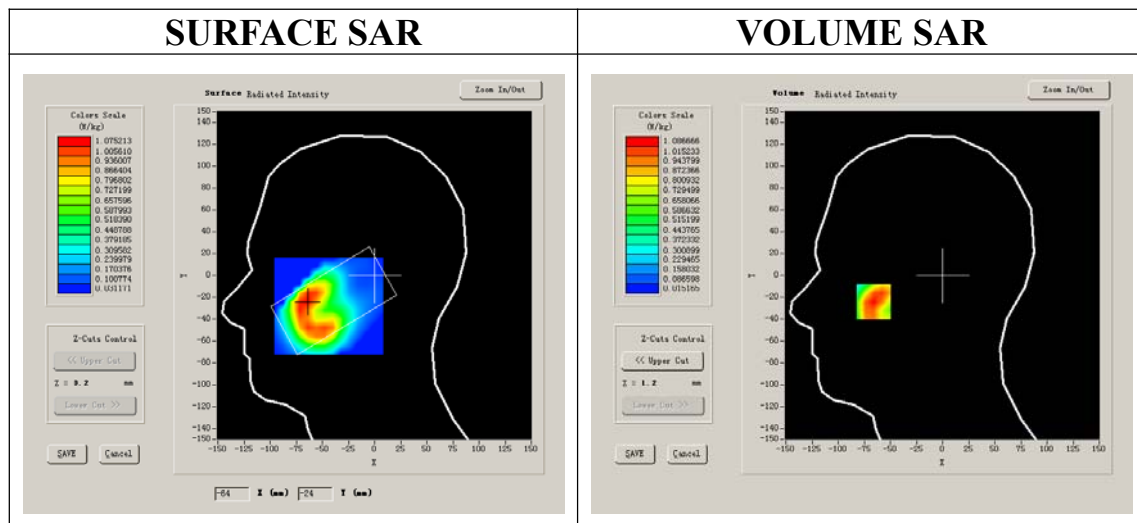
A. Experimental conditions.

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

B. SAR Measurement Results

Lower Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	40.324182
Relative permittivity	15.070000
Conductivity (S/m)	0.893241
Power drift(%)	-1.210000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8



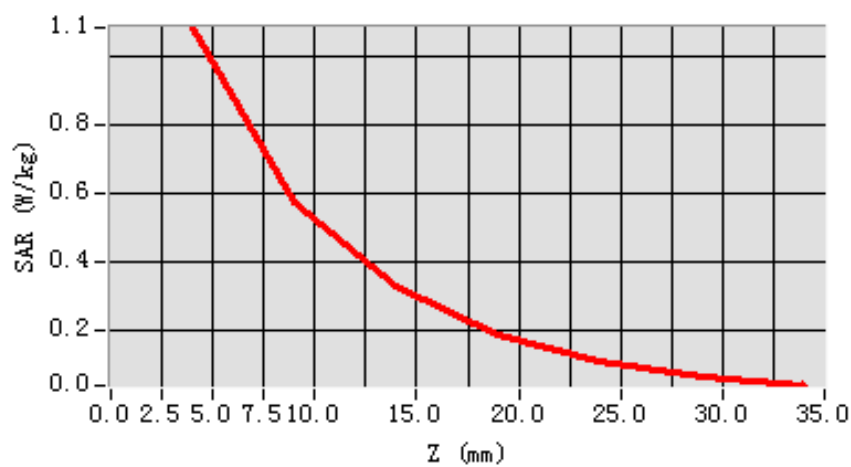
Maximum location: X=-66.00, Y=-24.00

SAR 10g (W/Kg)	0.572734
SAR 1g (W/Kg)	0.946378

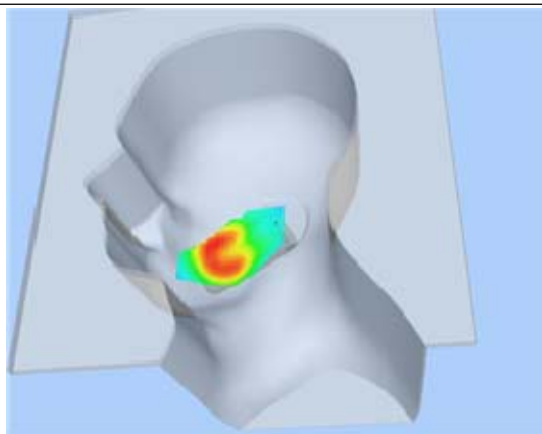
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0867	0.5733	0.3307	0.1874	0.1099	0.0633

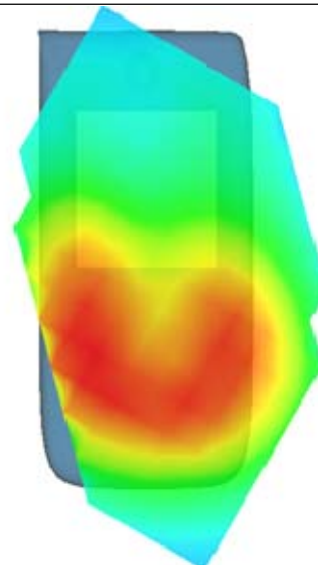
SAR, Z Axis Scan (X = -66, Y = -24)



3D scene shot



Hot spot position



MEASUREMENT 2

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 49 seconds

A. Experimental conditions.

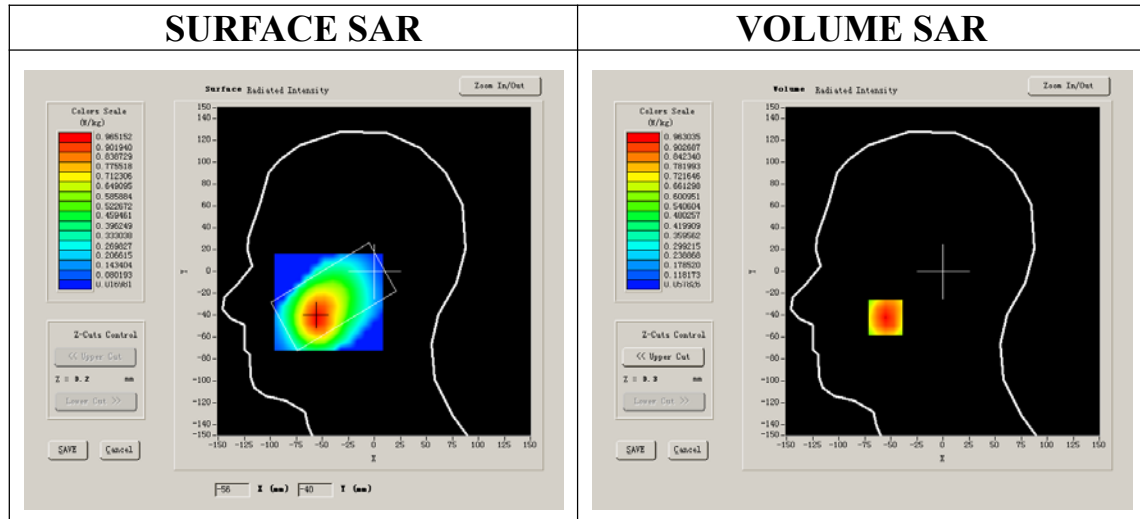
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

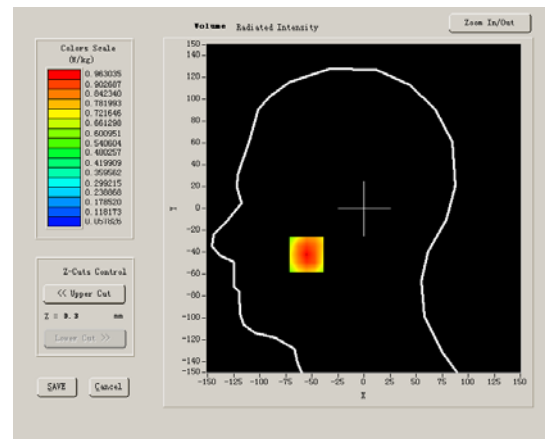
Middle Band SAR (Channel 190):

Frequency (MHz)	836.600000
Relative permittivity (real part)	40.324182
Relative permittivity	15.070000
Conductivity (S/m)	0.893241
Power drift(%)	-0.760000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



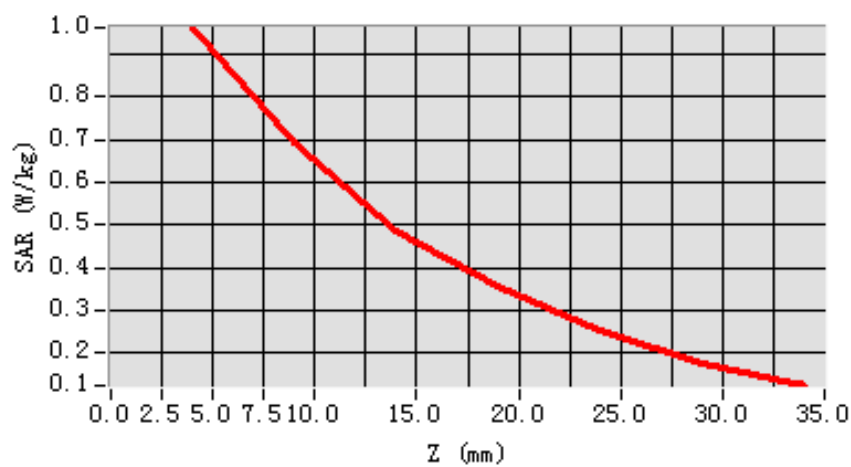
Maximum location: X=-55.00, Y=-42.00

SAR 10g (W/Kg)	0.631045
SAR 1g (W/Kg)	0.920795

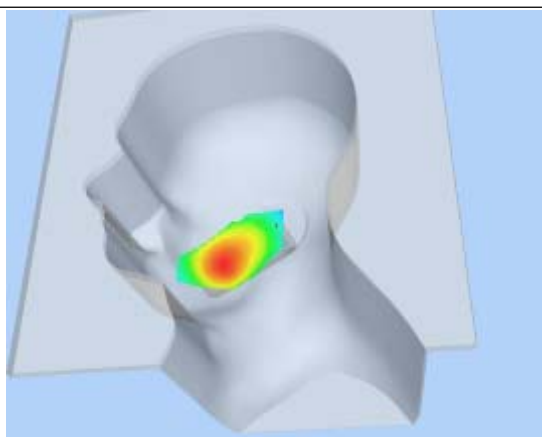
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9630	0.6938	0.4841	0.3586	0.2511	0.1751

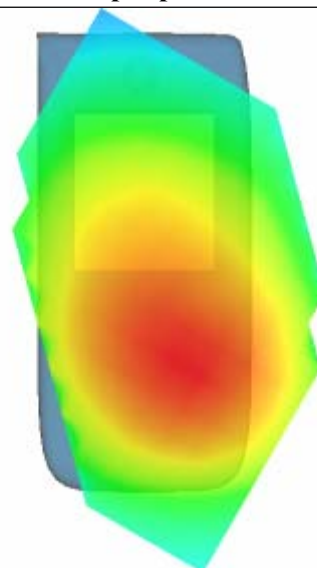
SAR, Z Axis Scan (X = -55, Y = -42)



3D scene shot



Hot spot position



MEASUREMENT 3

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 49 seconds

A. Experimental conditions.

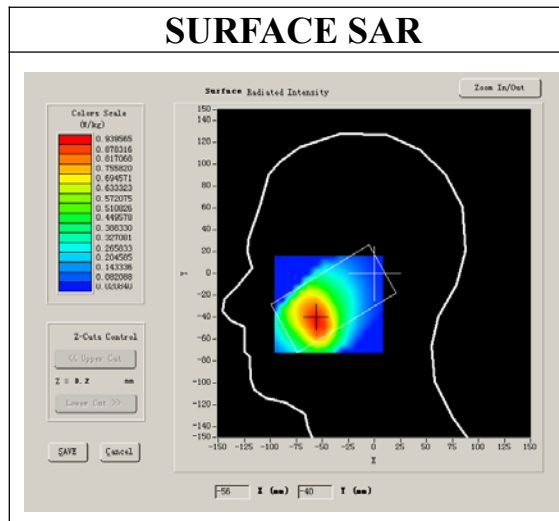
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

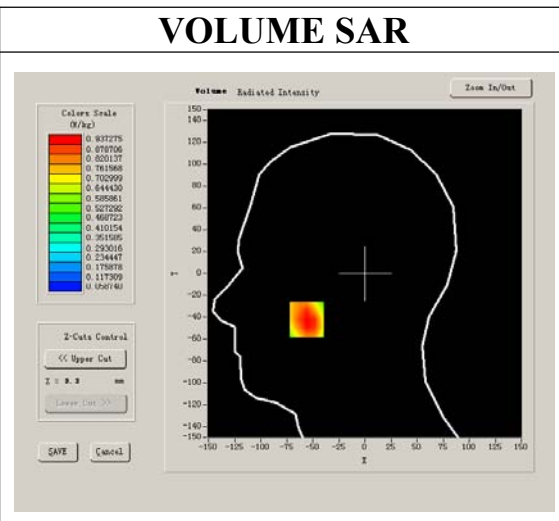
Higher Band SAR (Channel 251):

Frequency (MHz)	848.800000
Relative permittivity (real part)	40.324182
Relative permittivity	15.070000
Conductivity (S/m)	0.893241
Power drift(%)	-0.760000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



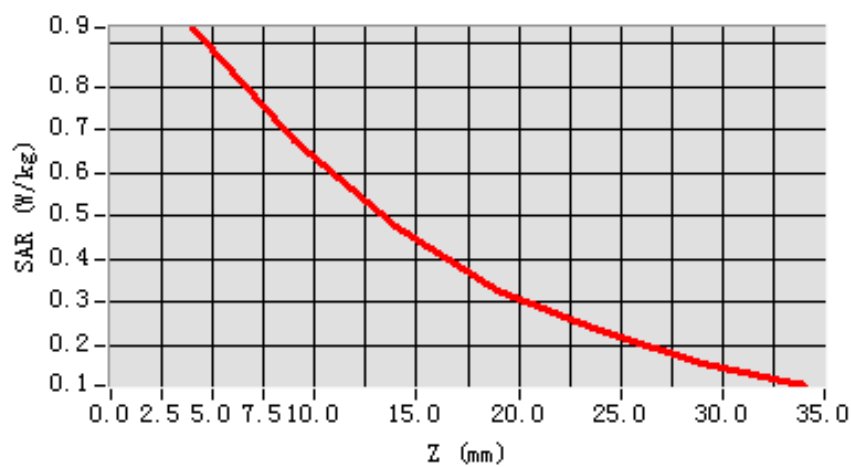
Maximum location: X=-56.00, Y=-42.00

SAR 10g (W/Kg)	0.603725
SAR 1g (W/Kg)	0.911627

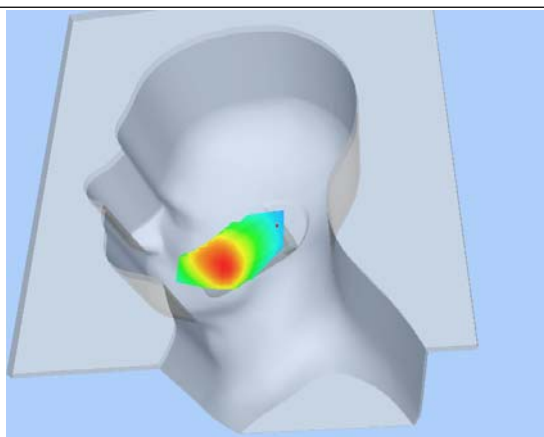
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9373	0.6779	0.4777	0.3272	0.2324	0.1585

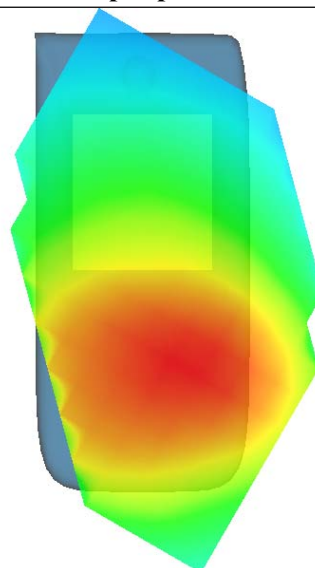
SAR, Z Axis Scan (X = -56, Y = -42)



3D scene shot



Hot spot position



MEASUREMENT 4

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 33 seconds

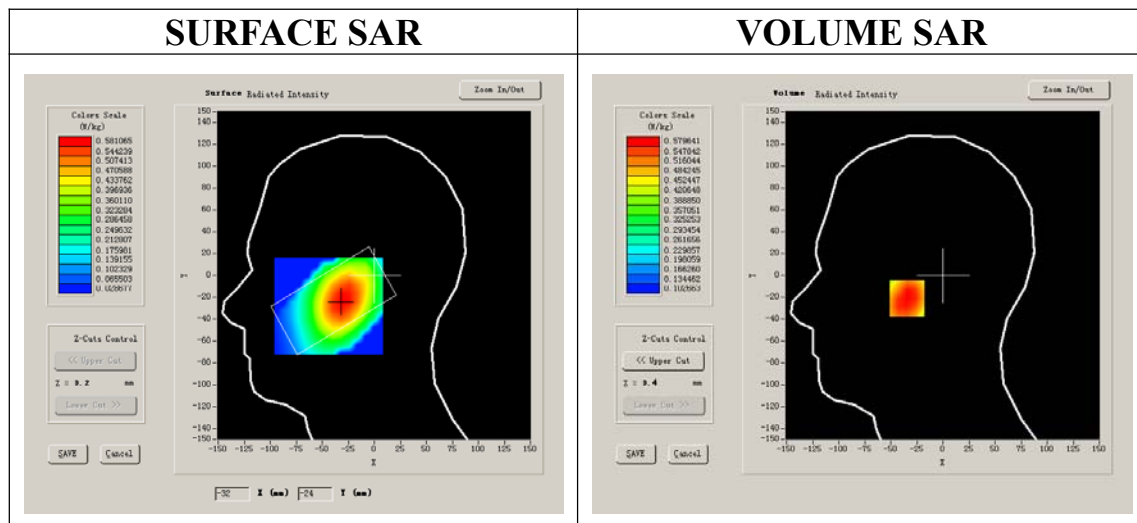
A. Experimental conditions.

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

B. SAR Measurement Results

Lower Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	40.324182
Relative permittivity	19.120001
Conductivity (S/m)	0.893241
Power drift(%)	-1.510000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8



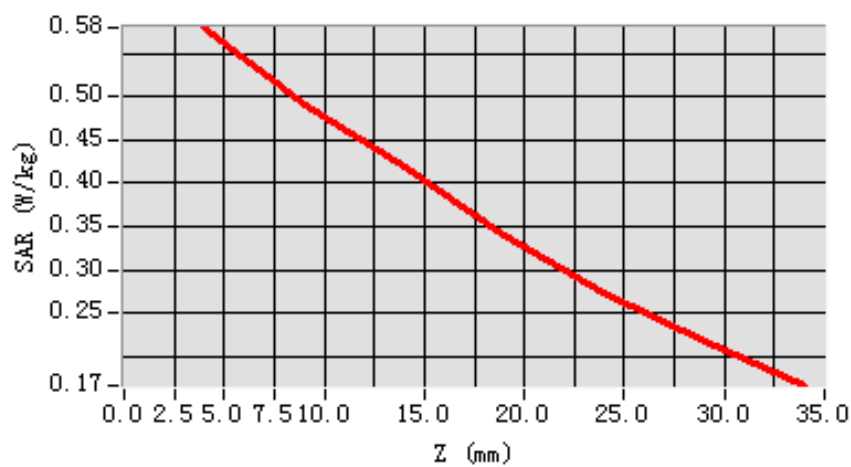
Maximum location: X=-29.00, Y=-21.00

SAR 10g (W/Kg)	0.450509
SAR 1g (W/Kg)	0.571642

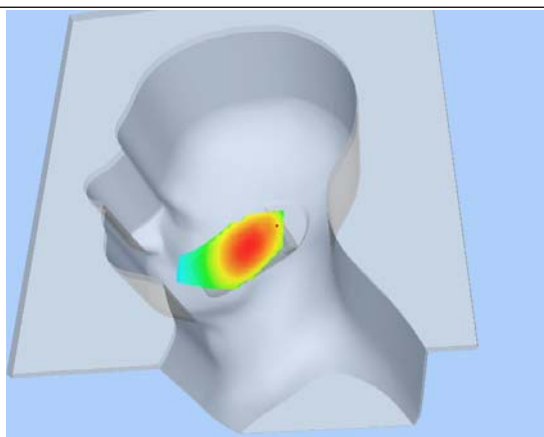
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5796	0.4893	0.4190	0.3388	0.2740	0.2171

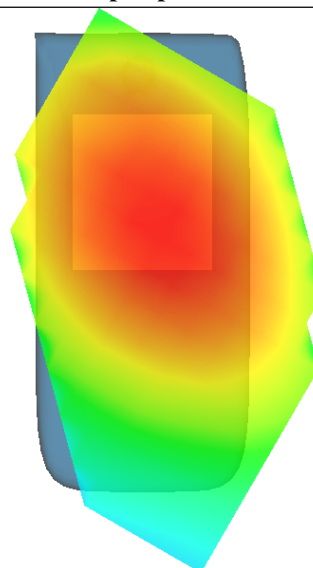
SAR, Z Axis Scan (X = -29, Y = -21)



3D scene shot



Hot spot position



MEASUREMENT 5

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 47 seconds

A. Experimental conditions.

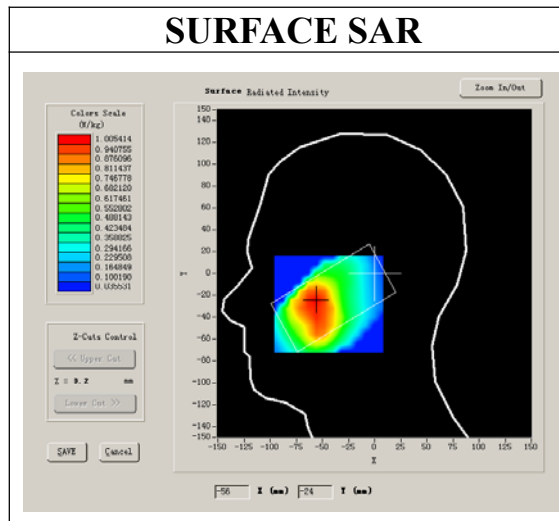
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

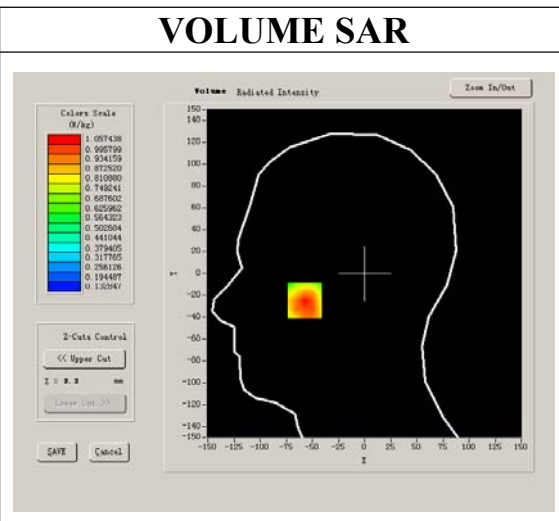
Lower Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	40.324182
Relative permittivity	19.120001
Conductivity (S/m)	0.893241
Power drift(%)	-2.130000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



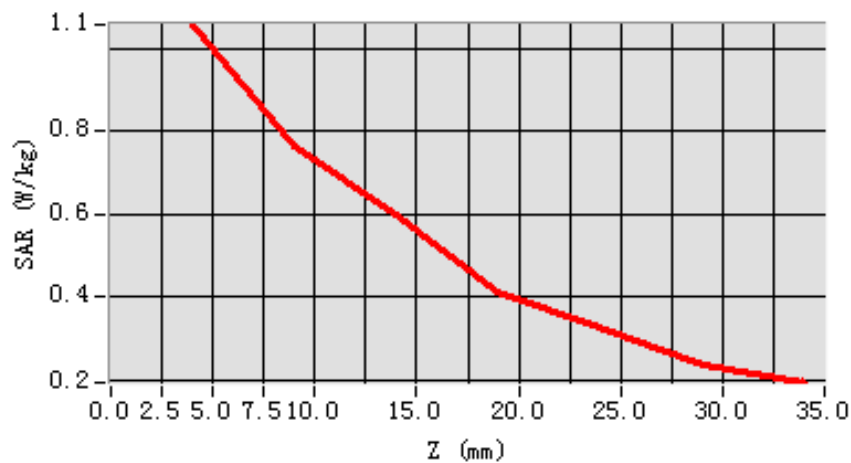
Maximum location: X=-57.00, Y=-25.00

SAR 10g (W/Kg)	0.697730
SAR 1g (W/Kg)	0.939982

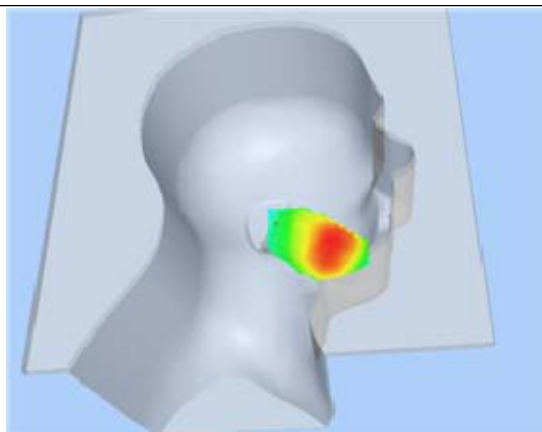
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0574	0.7632	0.5989	0.4116	0.3299	0.2377

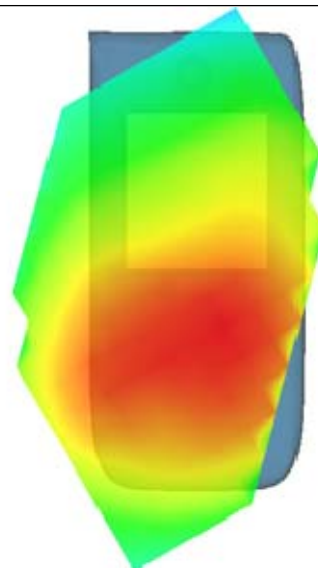
SAR, Z Axis Scan (X = -57, Y = -25)



3D scene shot



Hot spot position



MEASUREMENT 6

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 47 seconds

A. Experimental conditions.

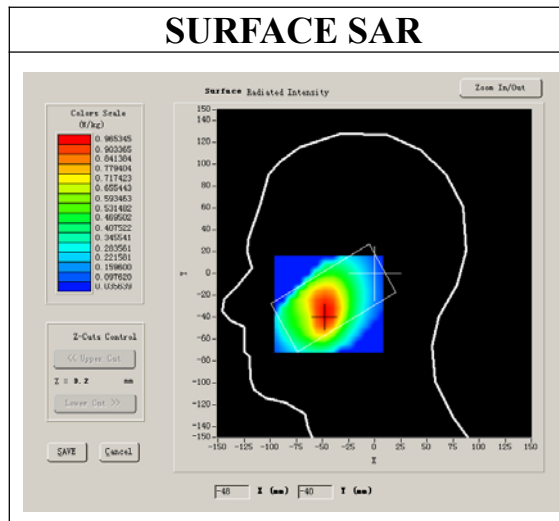
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	GSM

B. SAR Measurement Results

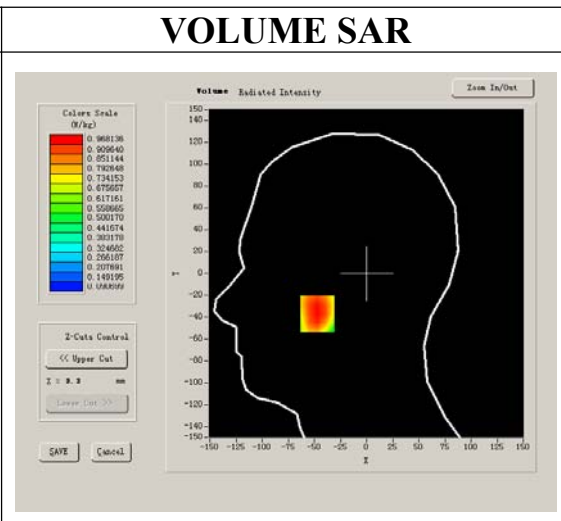
Middle Band SAR (Channel 190):

Frequency (MHz)	836.600000
Relative permittivity (real part)	40.324182
Relative permittivity	19.120001
Conductivity (S/m)	0.893241
Power drift(%)	-1.080000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



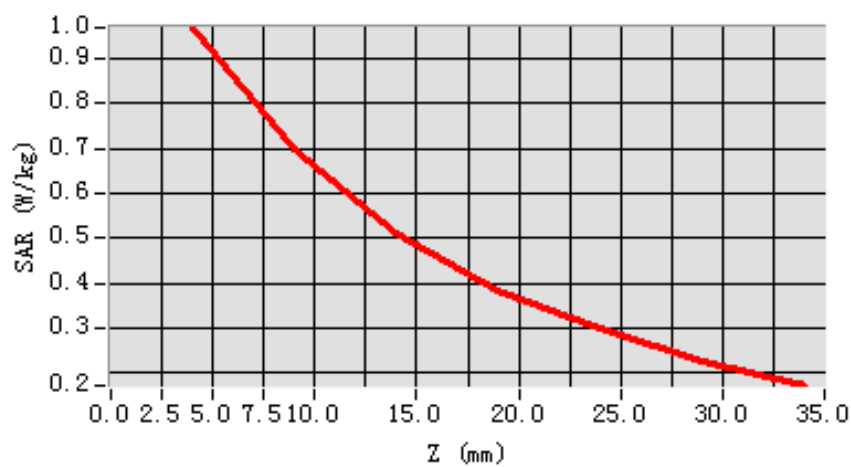
Maximum location: X=-47.00, Y=-37.00

SAR 10g (W/Kg)	0.673411
SAR 1g (W/Kg)	0.946011

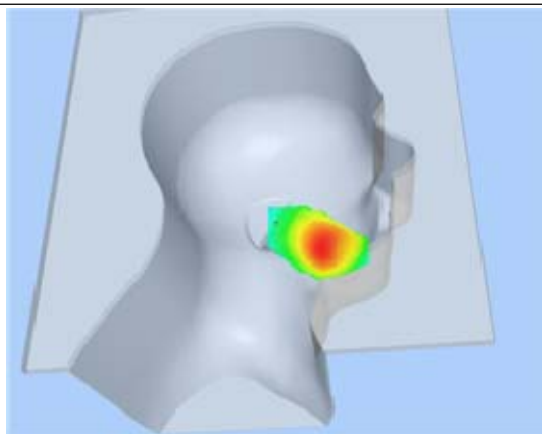
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9681	0.6978	0.5104	0.3816	0.2985	0.2273

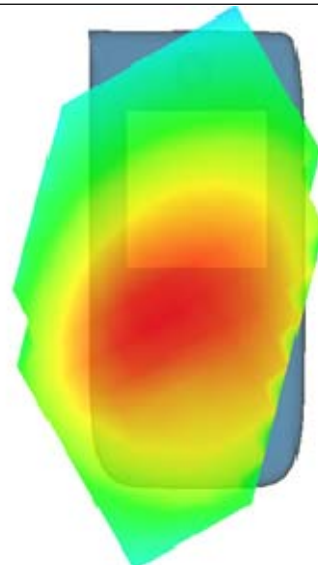
SAR, Z Axis Scan (X = -47, Y = -37)



3D scene shot



Hot spot position



MEASUREMENT 7

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 47 seconds

A. Experimental conditions.

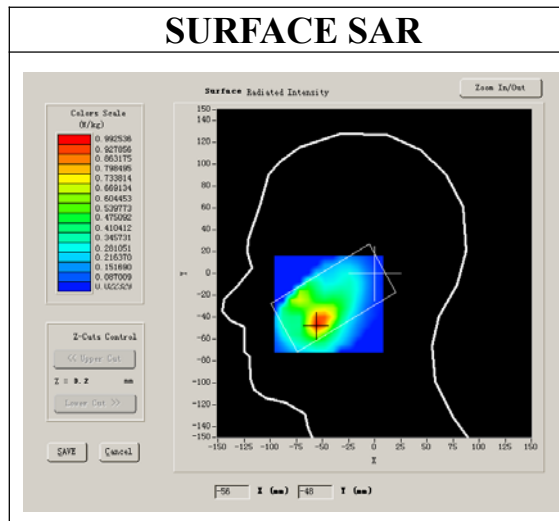
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	GSM

B. SAR Measurement Results

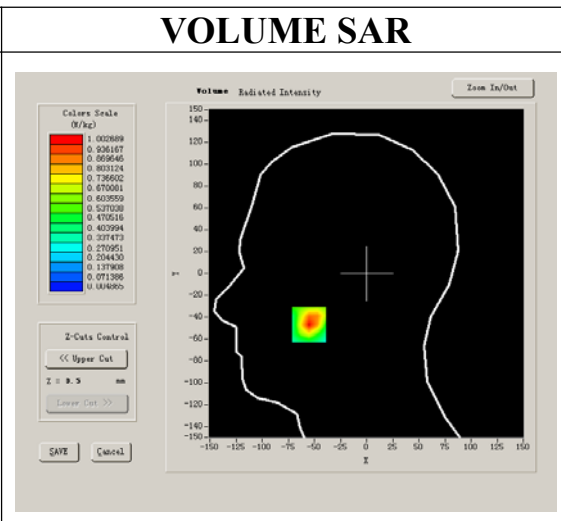
Higher Band SAR (Channel 251):

Frequency (MHz)	848.800000
Relative permittivity (real part)	40.324182
Relative permittivity	19.120001
Conductivity (S/m)	0.893241
Power drift(%)	-1.080000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



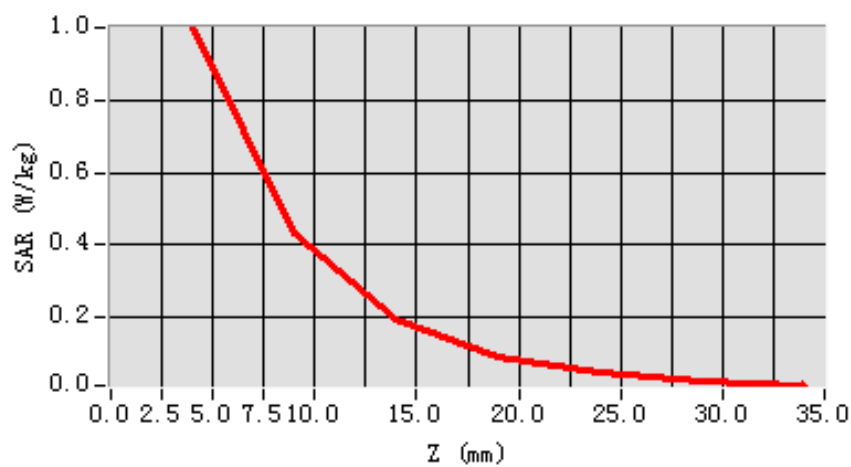
Maximum location: X=-55.00, Y=-47.00

SAR 10g (W/Kg)	0.444982
SAR 1g (W/Kg)	0.925458

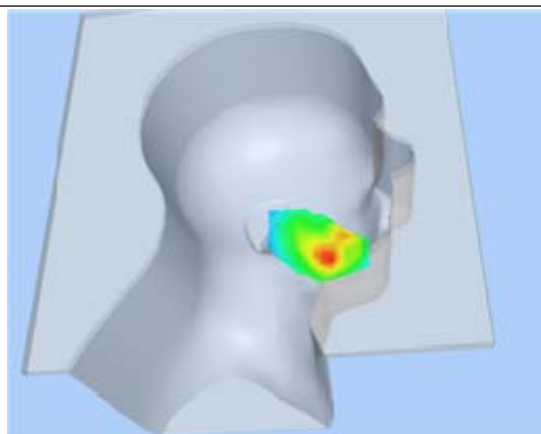
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9827	0.4302	0.1911	0.0854	0.0422	0.0218

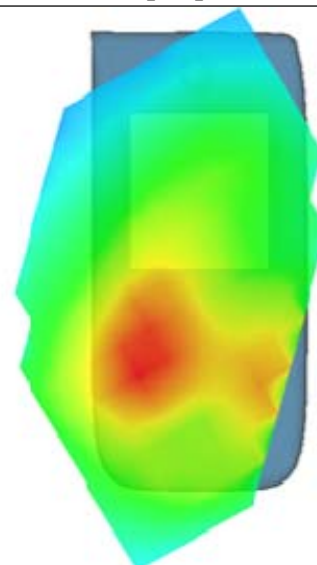
SAR, Z Axis Scan (X = -55, Y = -47)



3D scene shot



Hot spot position



MEASUREMENT 8

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 33 seconds

A. Experimental conditions.

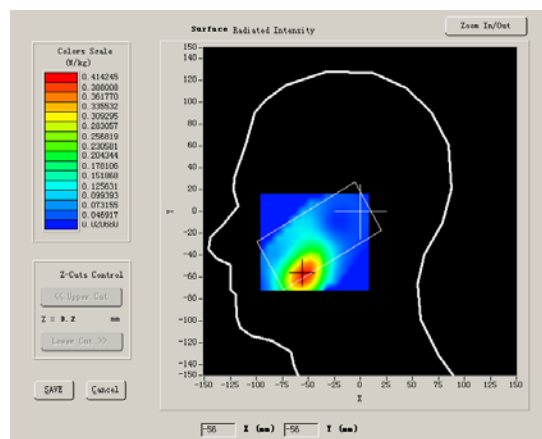
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

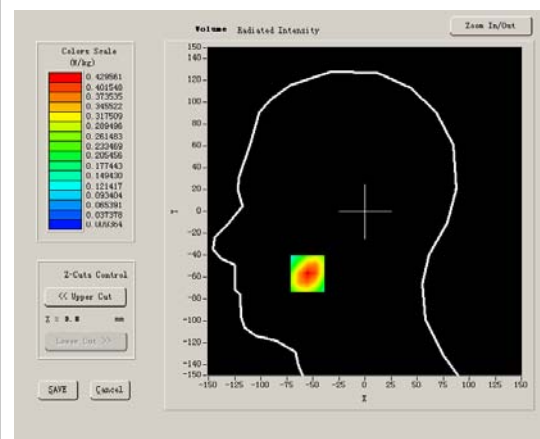
Lower Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	40.324182
Relative permittivity	19.120001
Conductivity (S/m)	0.893241
Power drift(%)	-1.480000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



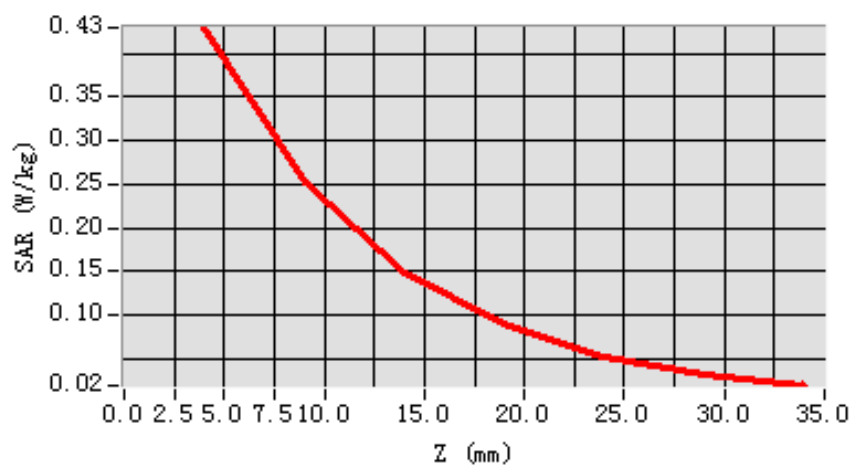
Maximum location: X=-55.00, Y=-57.00

SAR 10g (W/Kg)	0.231418
SAR 1g (W/Kg)	0.406812

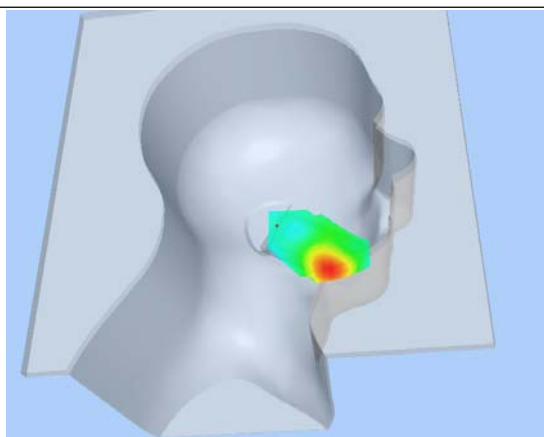
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4296	0.2534	0.1491	0.0892	0.0526	0.0306

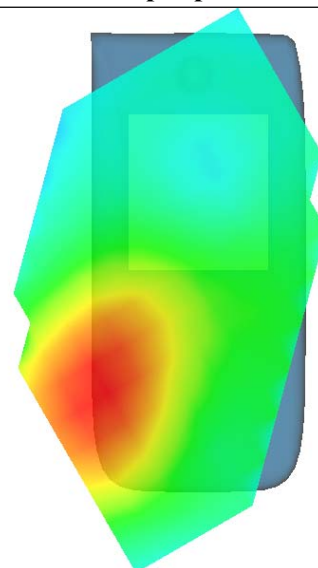
SAR, Z Axis Scan (X = -55, Y = -57)



3D scene shot



Hot spot position



MEASUREMENT 9

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 11 seconds

A. Experimental conditions.

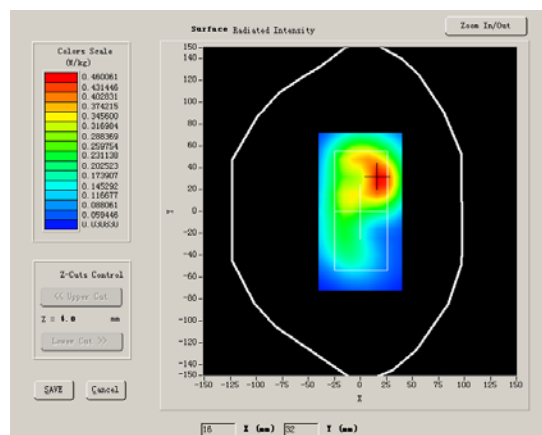
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

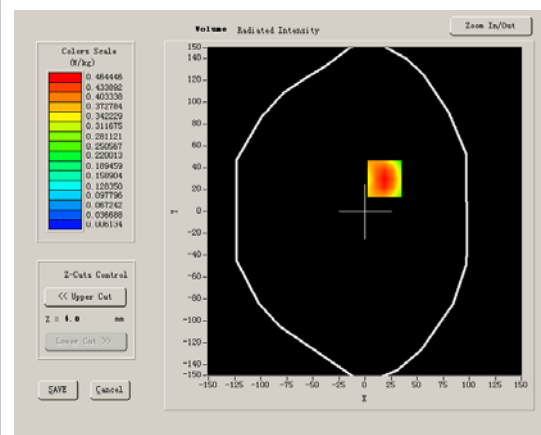
Lower Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.9427142
Power drift(%)	-1.310000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



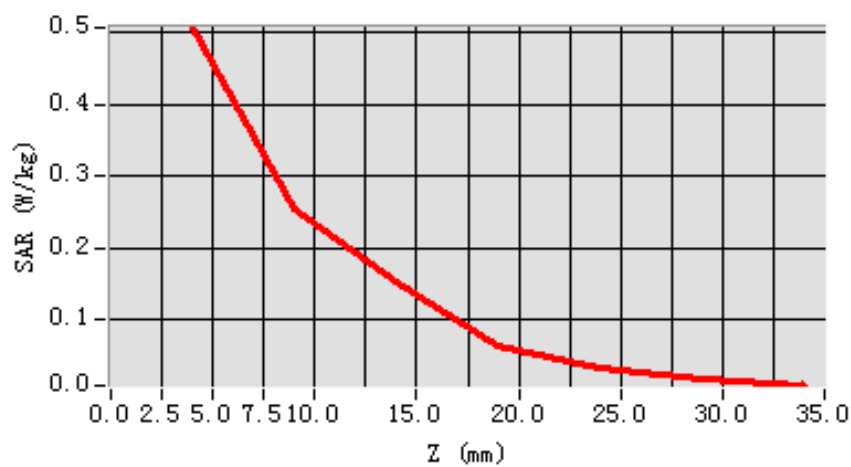
Maximum location: X=19.00, Y=30.00

SAR 10g (W/Kg)	0.264184
SAR 1g (W/Kg)	0.481997

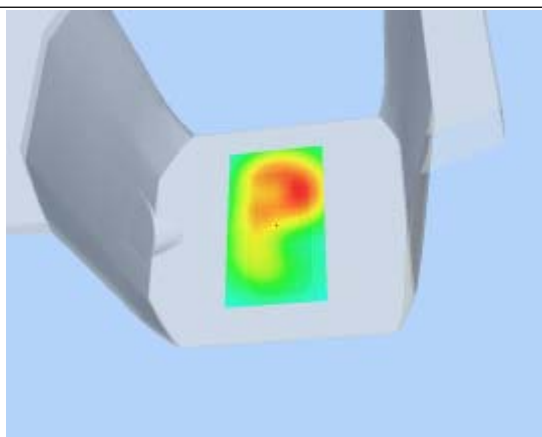
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5057	0.2553	0.1525	0.0647	0.0331	0.0188

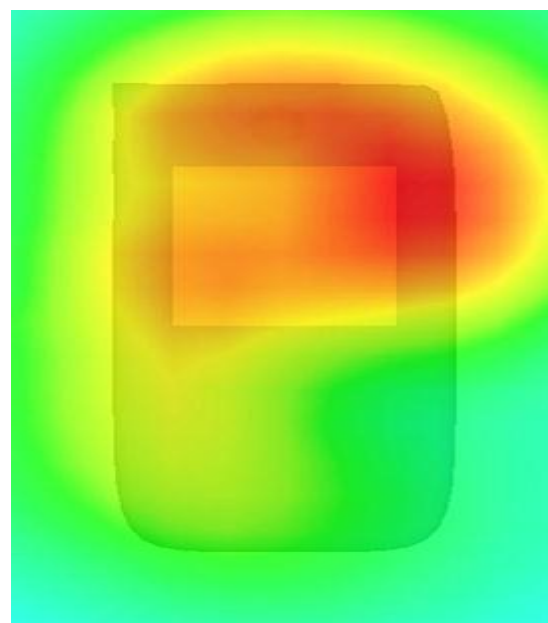
SAR, Z Axis Scan (X = 19, Y = 30)



3D scene shot



Hot spot position



MEASUREMENT 10

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

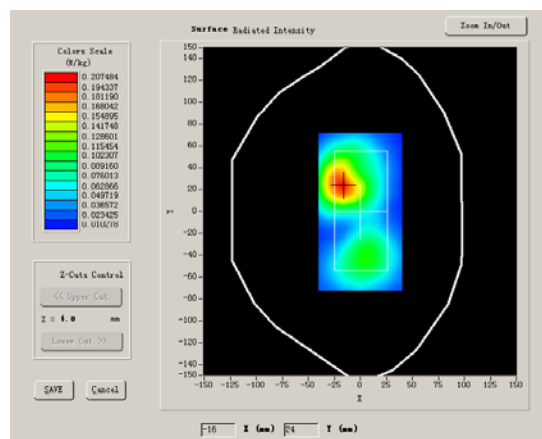
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GSM

B. SAR Measurement Results

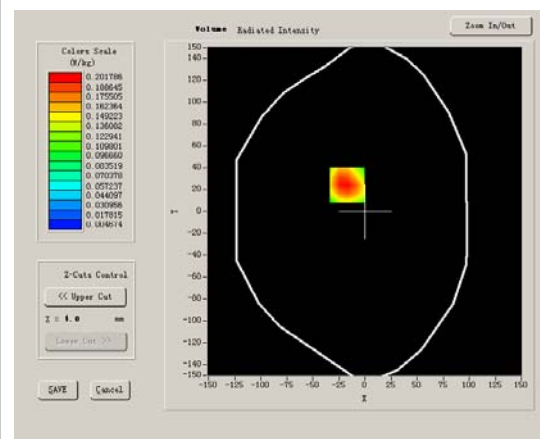
Lower Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.9427142
Power drift(%)	-0.790000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



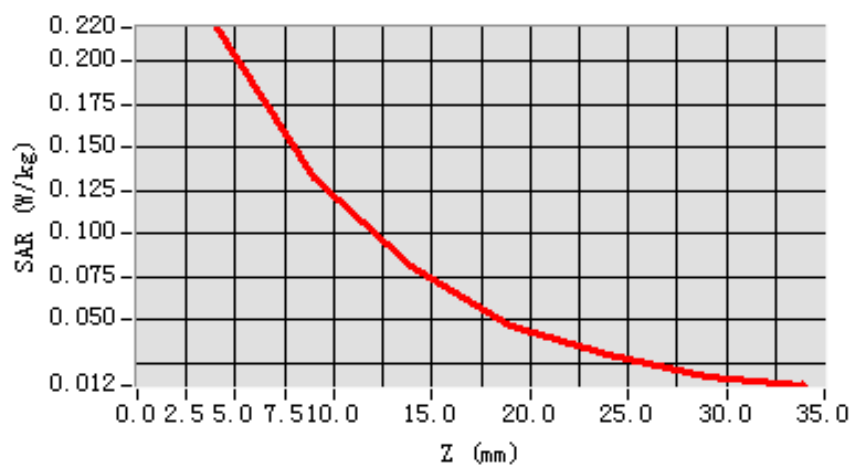
Maximum location: X=-17.00, Y=24.00

SAR 10g (W/Kg)	0.124256
SAR 1g (W/Kg)	0.211871

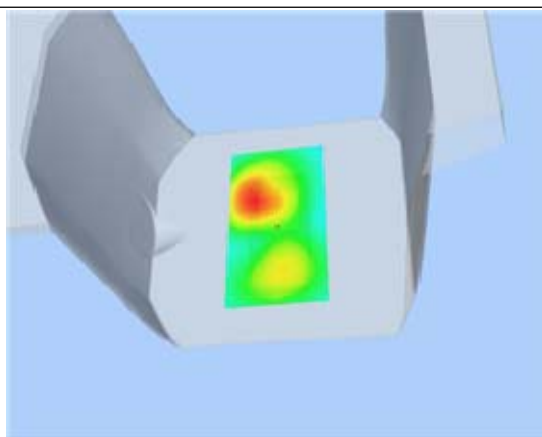
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2197	0.1322	0.0806	0.0465	0.0297	0.0163

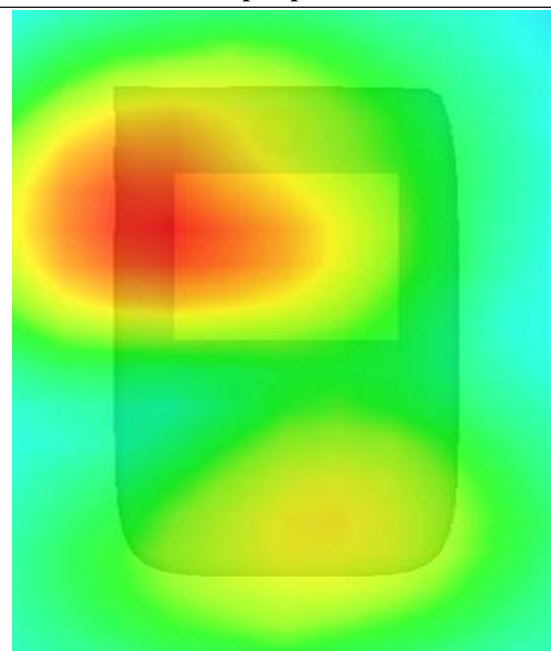
SAR, Z Axis Scan (X = -17, Y = 24)



3D scene shot



Hot spot position



MEASUREMENT 11

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 11 seconds

A. Experimental conditions.

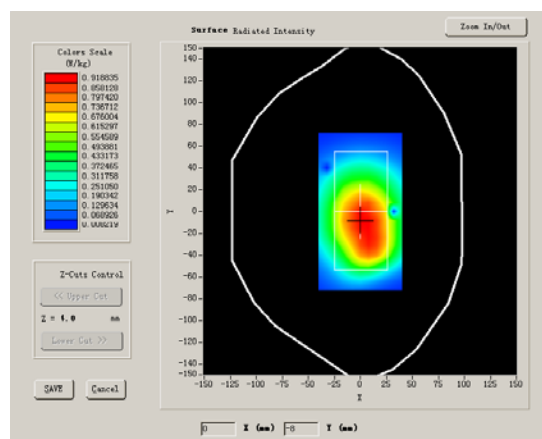
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GPRS

B. SAR Measurement Results

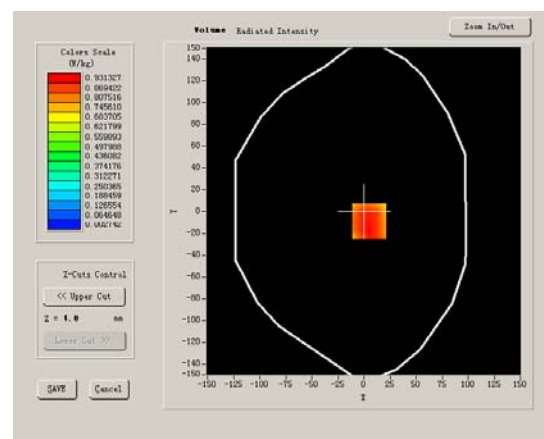
Lower Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.9427142
Power drift(%)	-0.810000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2

SURFACE SAR



VOLUME SAR



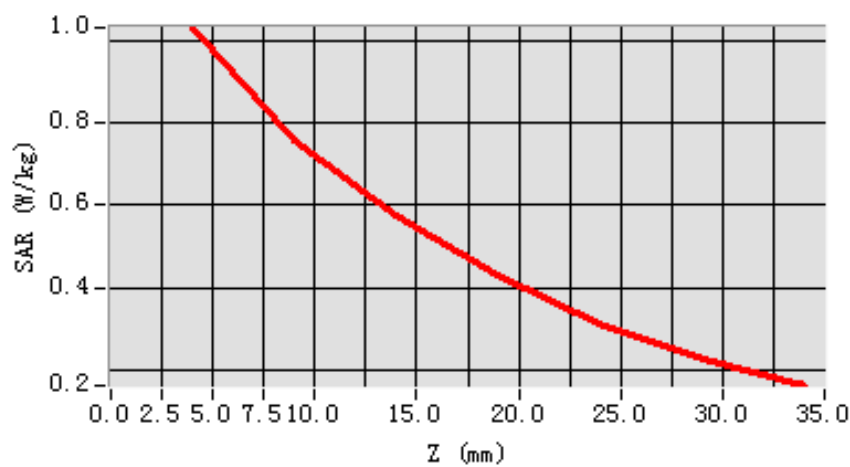
Maximum location: X=5.00, Y=-9.00

SAR 10g (W/Kg)	0.718668
SAR 1g (W/Kg)	1.018025

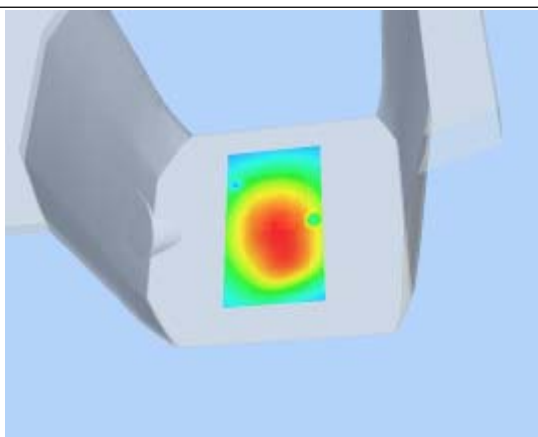
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0307	0.7586	0.5746	0.4307	0.3145	0.2272

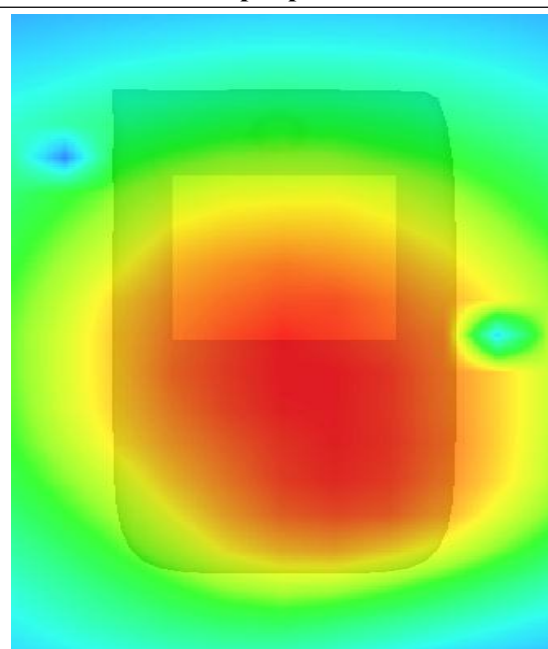
SAR, Z Axis Scan (X = 5, Y = -9)



3D scene shot



Hot spot position



MEASUREMENT 12

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 11 seconds

A. Experimental conditions.

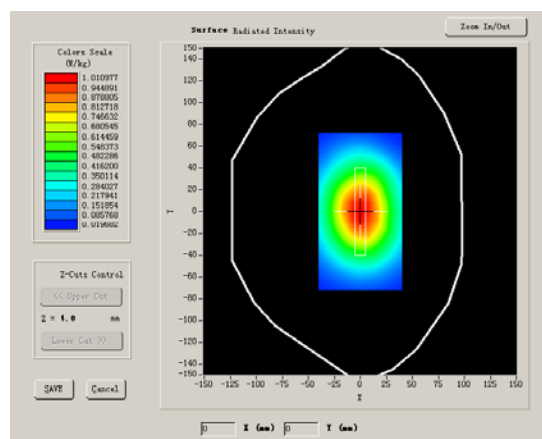
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	GPRS

B. SAR Measurement Results

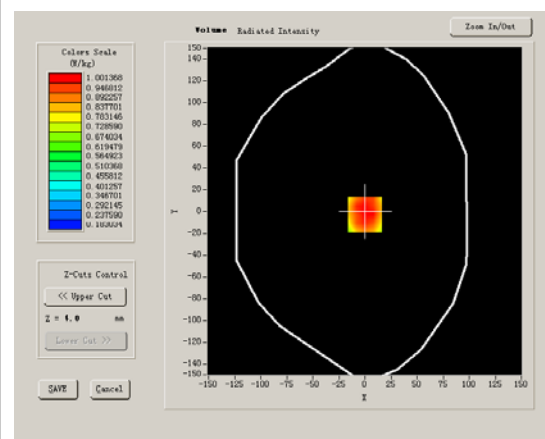
Middle Band SAR (Channel 190):

Frequency (MHz)	836.600000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.9427142
Power drift(%)	-1.200000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2

SURFACE SAR



VOLUME SAR



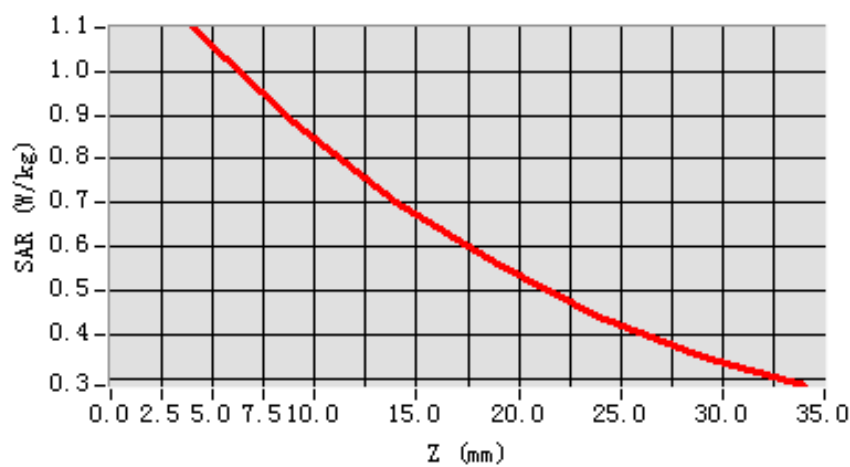
Maximum location: X=0.00, Y=-3.00

SAR 10g (W/Kg)	0.814238
SAR 1g (W/Kg)	1.074368

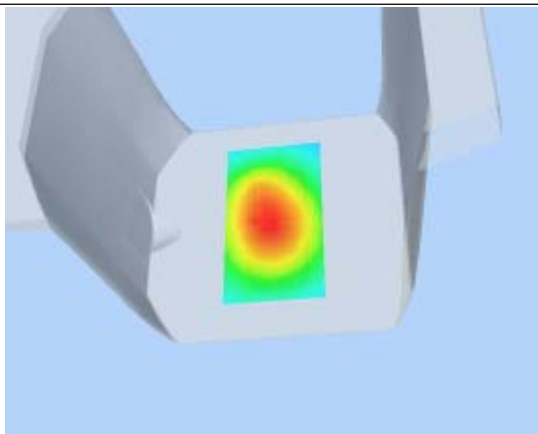
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0979	0.8831	0.7030	0.5637	0.4429	0.3495

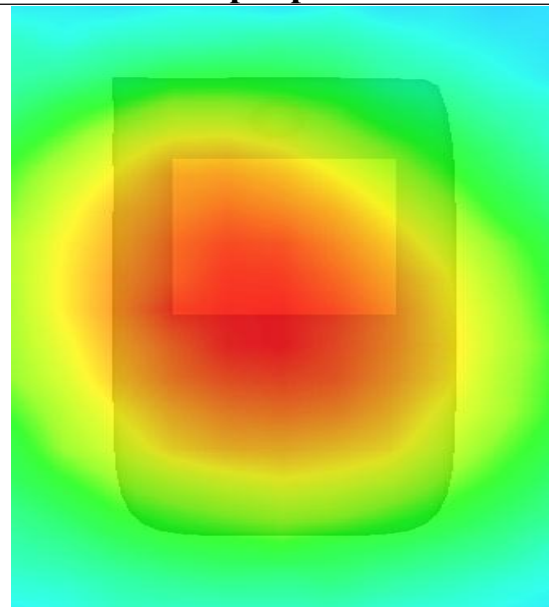
SAR, Z Axis Scan (X = 0, Y = -3)



3D scene shot



Hot spot position



MEASUREMENT 13

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 11 seconds

A. Experimental conditions.

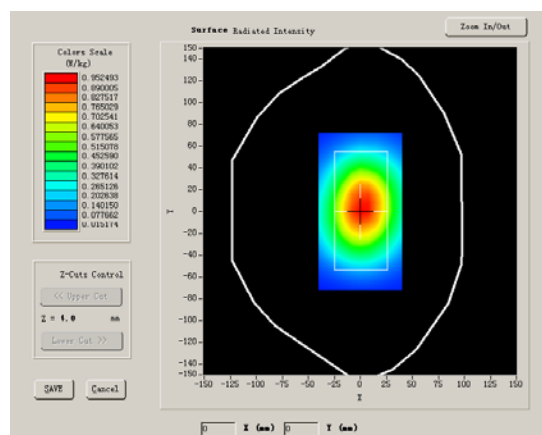
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	GPRS

B. SAR Measurement Results

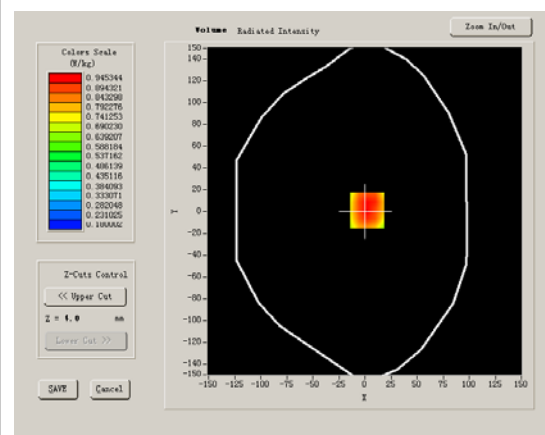
Higher Band SAR (Channel 251):

Frequency (MHz)	848.800000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.9427142
Power drift(%)	-1.200000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2

SURFACE SAR



VOLUME SAR



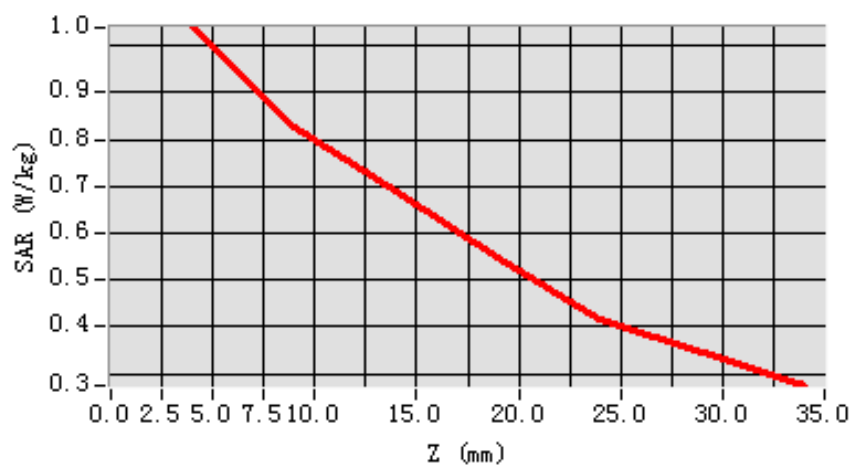
Maximum location: X=2.00, Y=1.00

SAR 10g (W/Kg)	0.766687
SAR 1g (W/Kg)	1.006756

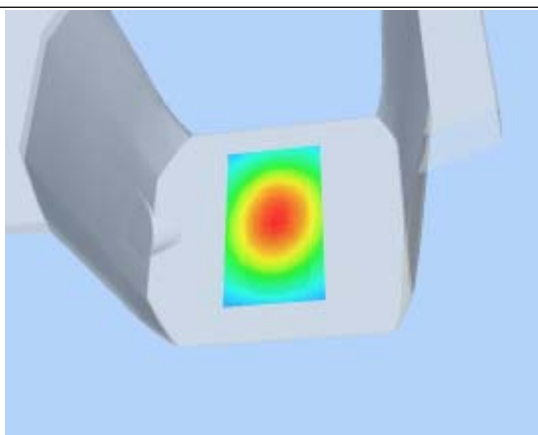
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0378	0.8262	0.6877	0.5473	0.4162	0.3437

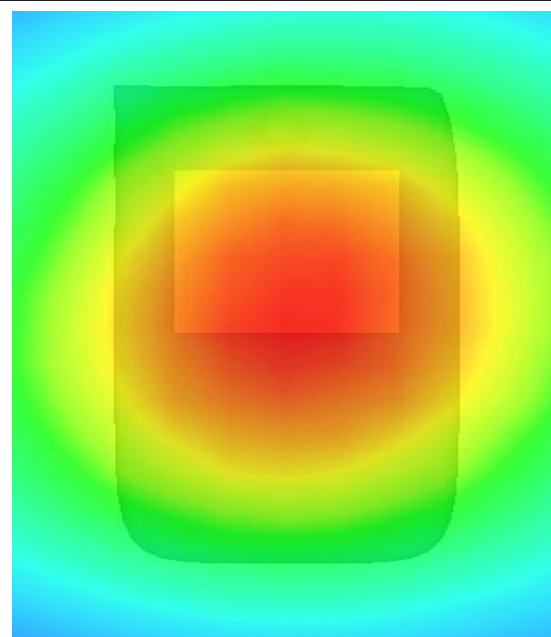
SAR, Z Axis Scan (X = 2, Y = 1)



3D scene shot



Hot spot position



MEASUREMENT 14

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

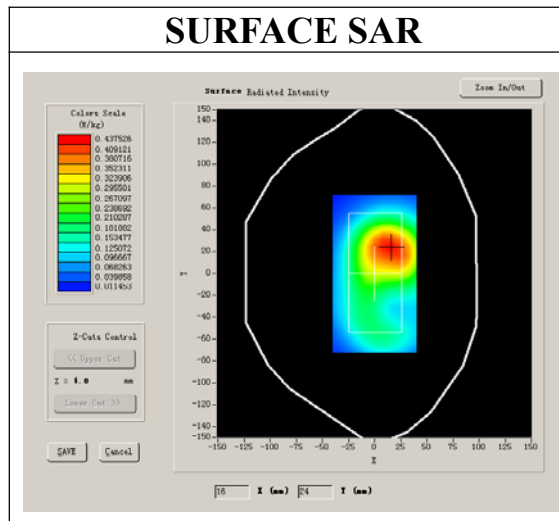
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	GPRS

B. SAR Measurement Results

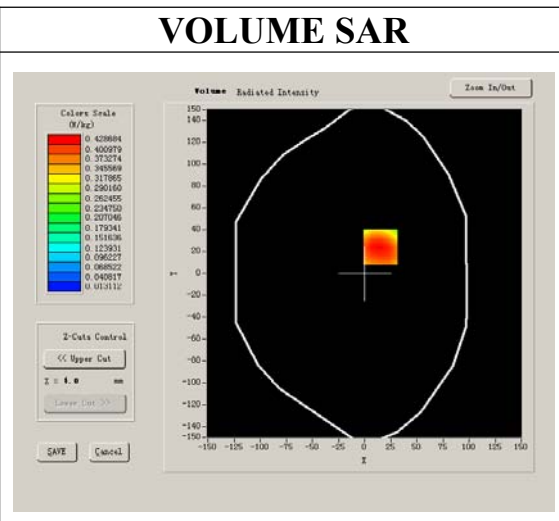
Lower Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.9427142
Power drift(%)	-0.590000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2

SURFACE SAR



VOLUME SAR



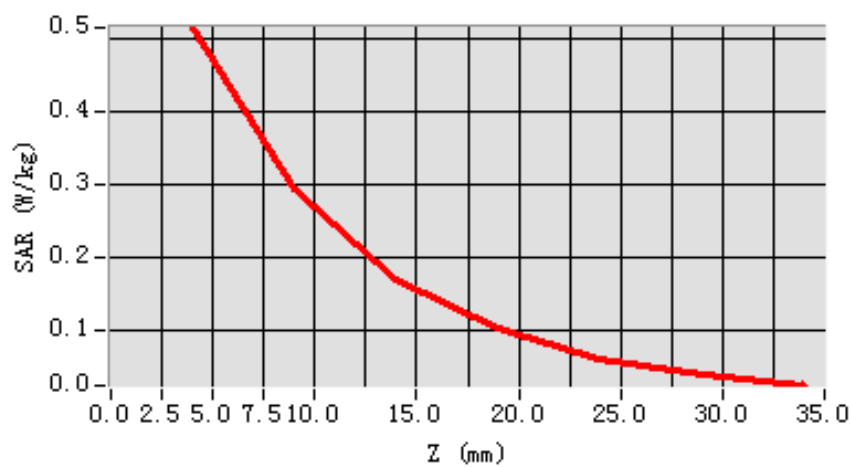
Maximum location: X=15.00, Y=24.00

SAR 10g (W/Kg)	0.296314
SAR 1g (W/Kg)	0.497556

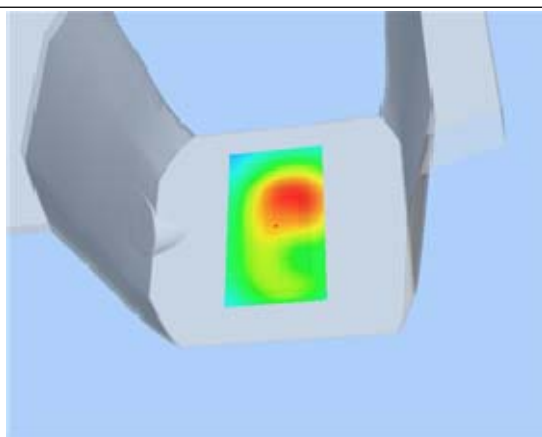
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5145	0.2939	0.1694	0.1017	0.0601	0.0367

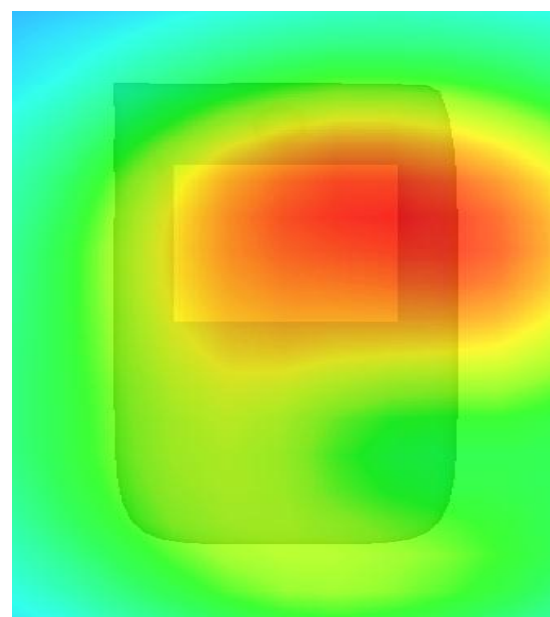
SAR, Z Axis Scan (X = 15, Y = 24)



3D scene shot



Hot spot position



MEASUREMENT 15

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 10 seconds

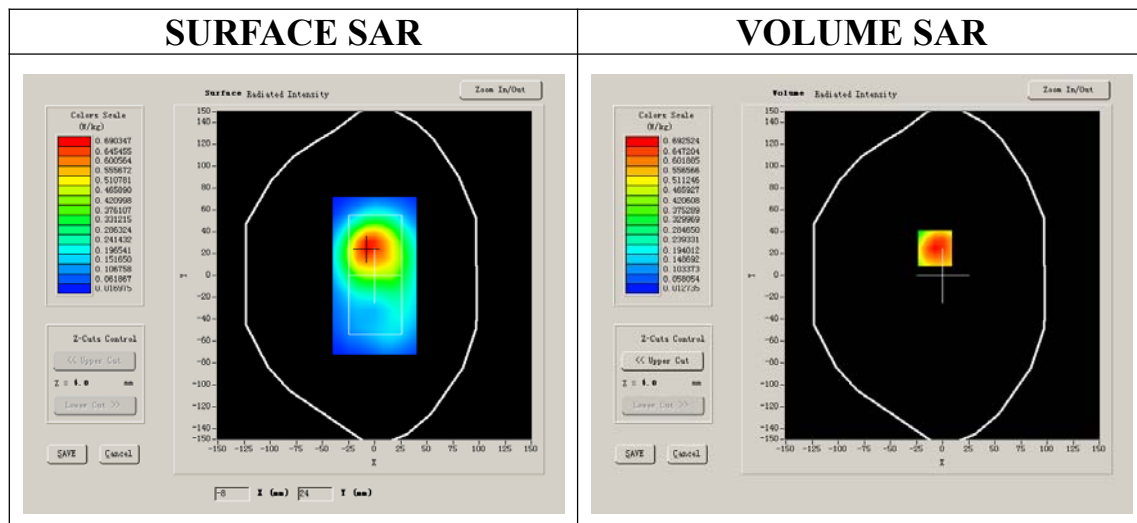
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM850
Channels	High
Signal	EDGE

B. SAR Measurement Results

Higher Band SAR (Channel 251):

Frequency (MHz)	848.800000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.9427142
Power drift(%)	-1.210000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



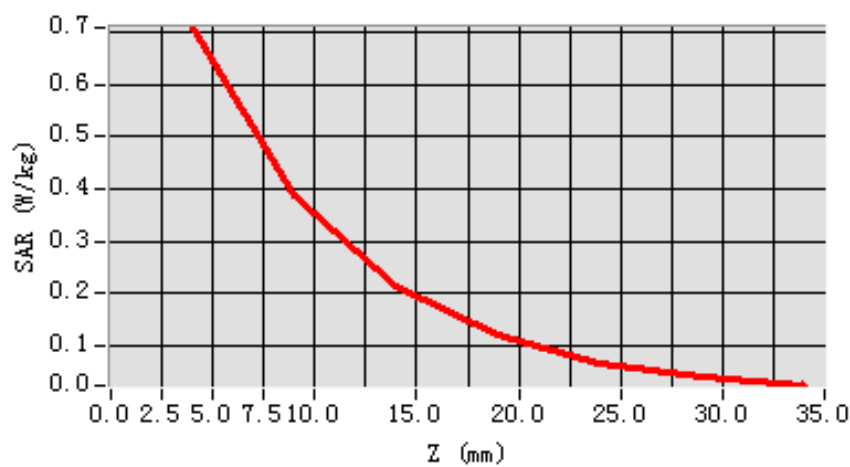
Maximum location: X=-7.00, Y=25.00

SAR 10g (W/Kg)	0.388186
SAR 1g (W/Kg)	0.677879

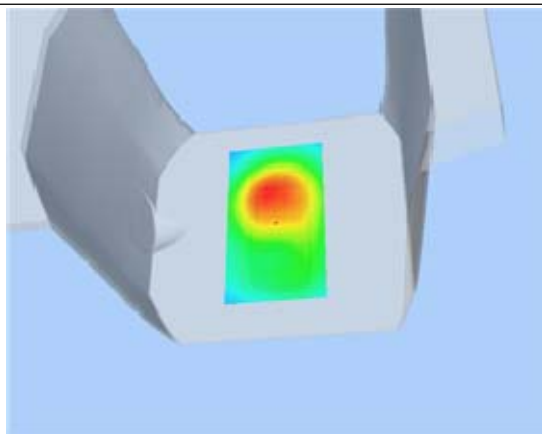
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7086	0.3864	0.2136	0.1209	0.0644	0.0380

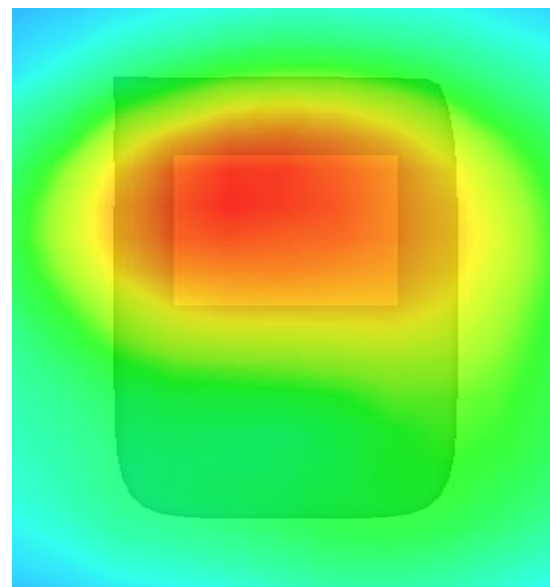
SAR, Z Axis Scan (X = -7, Y = 25)



3D scene shot



Hot spot position



MEASUREMENT 16

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 33 seconds

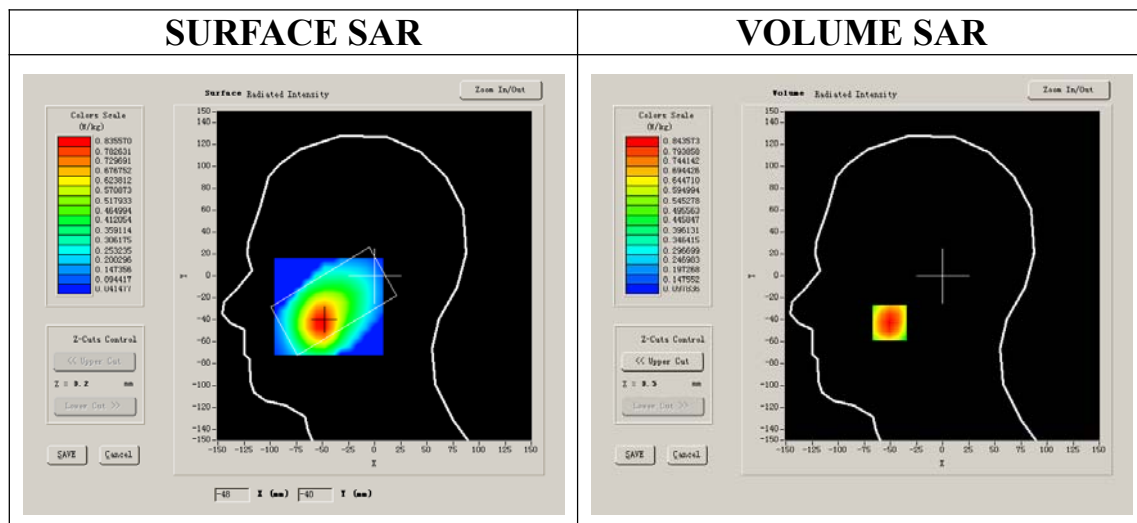
A. Experimental conditions.

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

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	41.275617
Relative permittivity	15.070000
Conductivity (S/m)	1.415831
Power drift(%)	-1.160000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



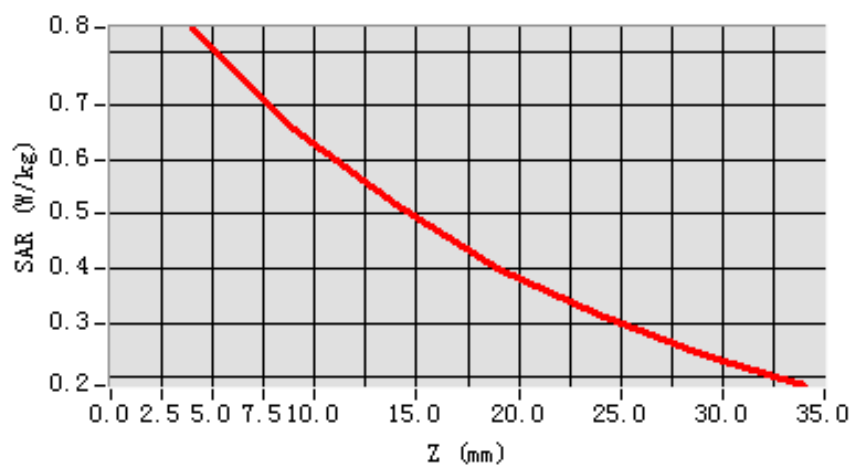
Maximum location: X=-51.00, Y=-43.00

SAR 10g (W/Kg)	0.596159
SAR 1g (W/Kg)	0.812863

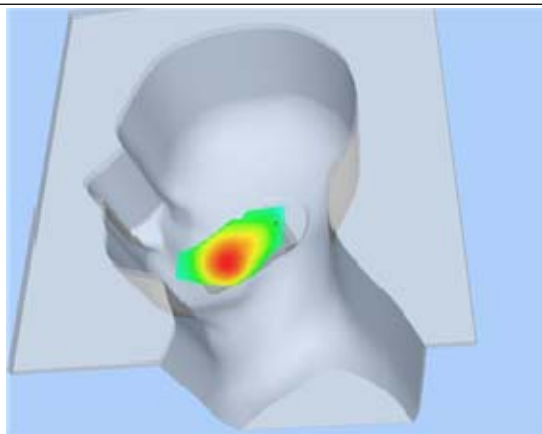
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8436	0.6578	0.5200	0.4013	0.3162	0.2409

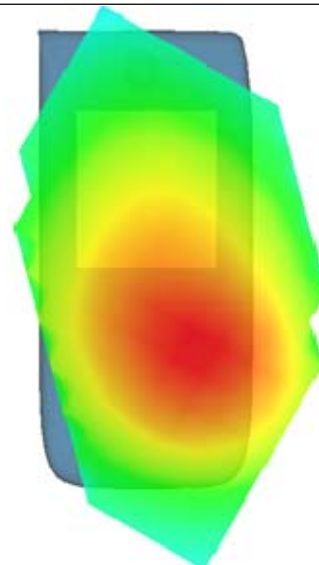
SAR, Z Axis Scan (X = -51, Y = -43)



3D scene shot



Hot spot position



MEASUREMENT 17

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 33 seconds

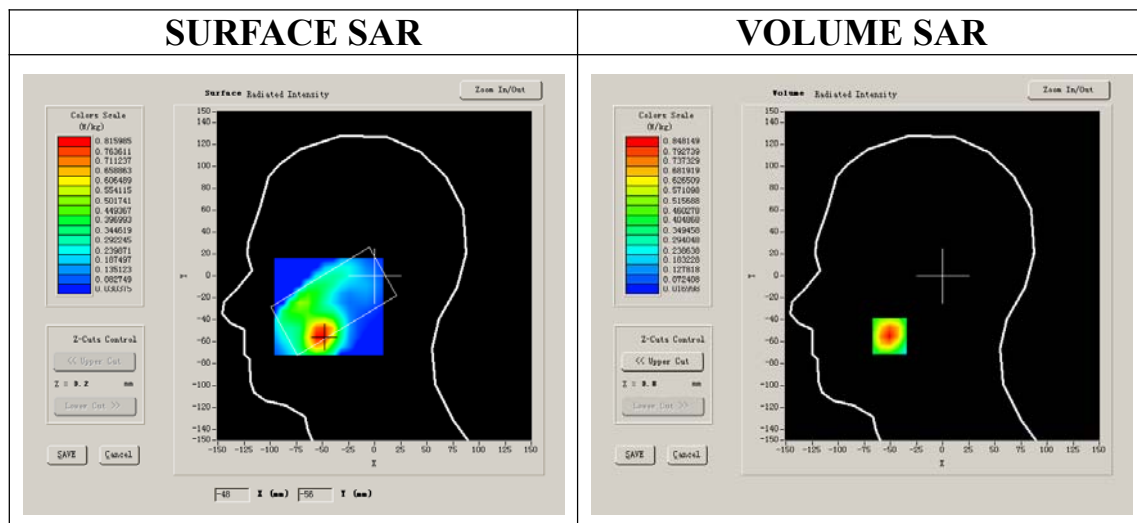
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.275617
Relative permittivity	15.070000
Conductivity (S/m)	1.415831
Power drift(%)	-0.680000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



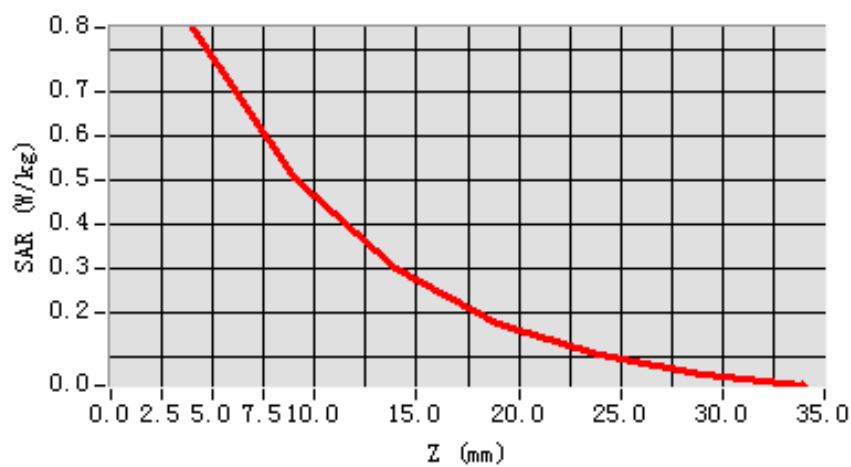
Maximum location: X=-51.00, Y=-55.00

SAR 10g (W/Kg)	0.445825
SAR 1g (W/Kg)	0.795202

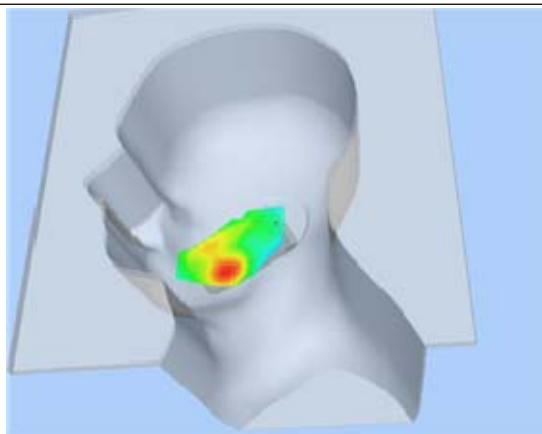
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8481	0.5044	0.3017	0.1722	0.1039	0.0586

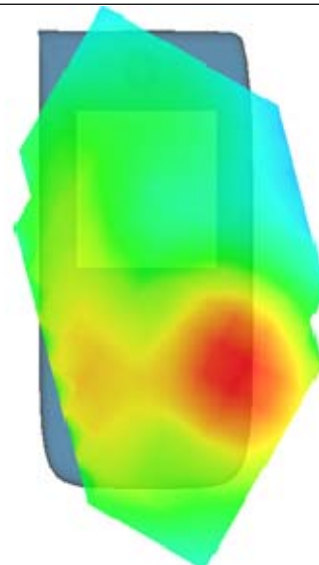
SAR, Z Axis Scan (X = -51, Y = -55)



3D scene shot



Hot spot position



MEASUREMENT 18

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 33 seconds

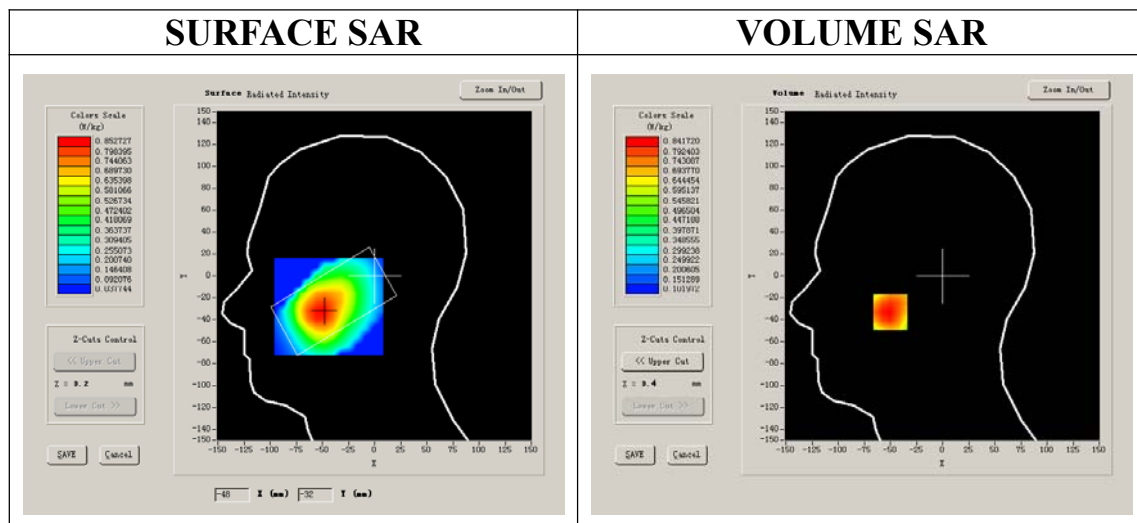
A. Experimental conditions.

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

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	41.275617
Relative permittivity	15.070000
Conductivity (S/m)	1.415831
Power drift(%)	-0.710000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



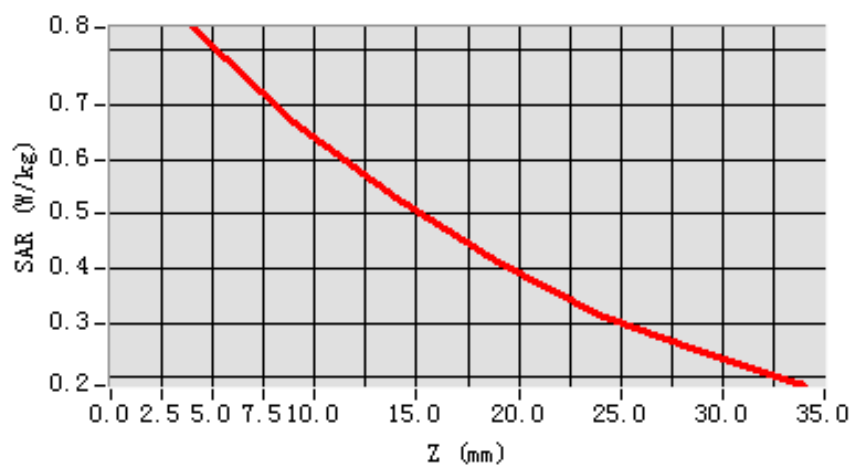
Maximum location: X=-50.00, Y=-33.00

SAR 10g (W/Kg)	0.612693
SAR 1g (W/Kg)	0.818724

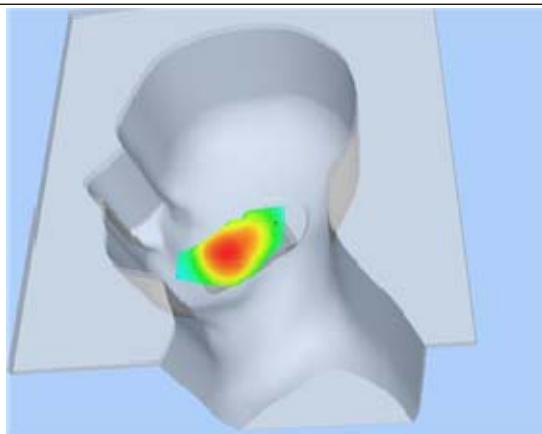
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8417	0.6658	0.5296	0.4127	0.3151	0.2444

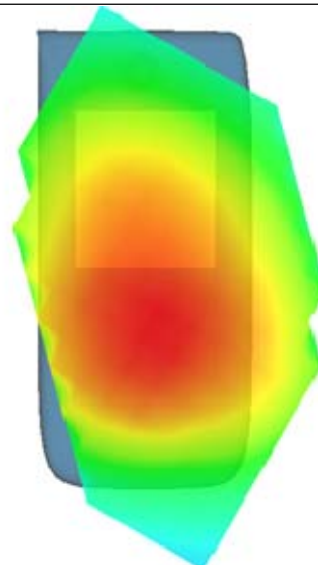
SAR, Z Axis Scan (X = -50, Y = -33)



3D scene shot



Hot spot position



MEASUREMENT 19

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 33 seconds

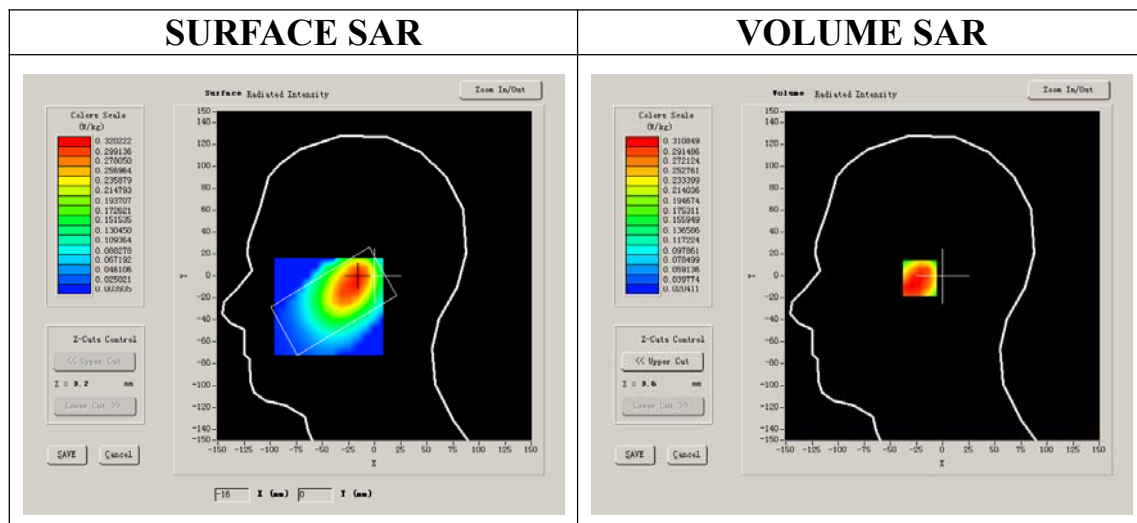
A. Experimental conditions.

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

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	41.275617
Relative permittivity	15.070000
Conductivity (S/m)	1.415831
Power drift(%)	-2.170000
Ambient Temperature:	22.8°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



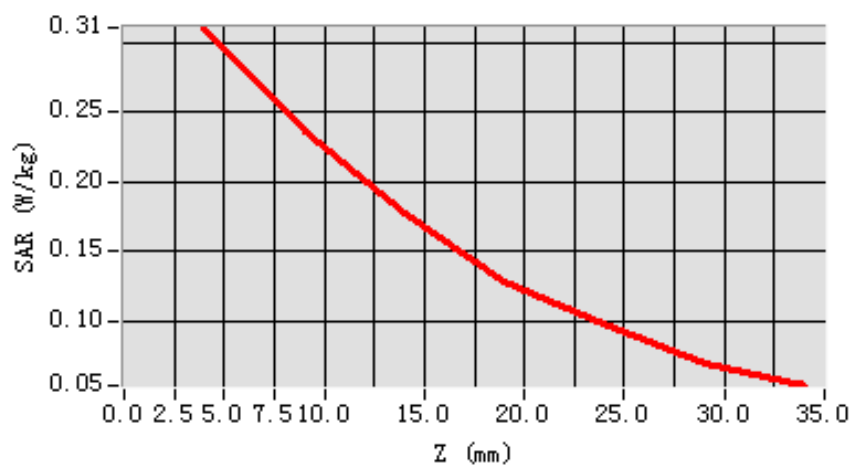
Maximum location: X=-17.00, Y=-2.00

SAR 10g (W/Kg)	0.217564
SAR 1g (W/Kg)	0.301770

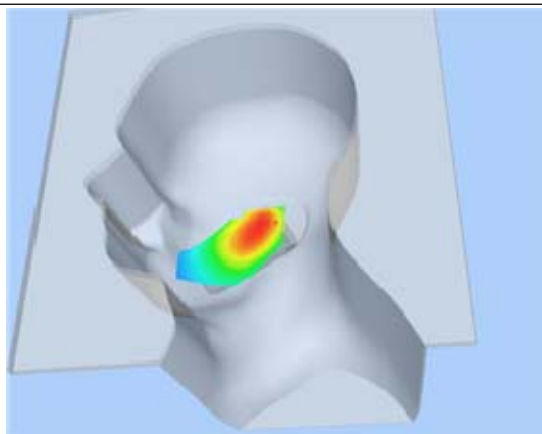
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3108	0.2358	0.1778	0.1278	0.0979	0.0697

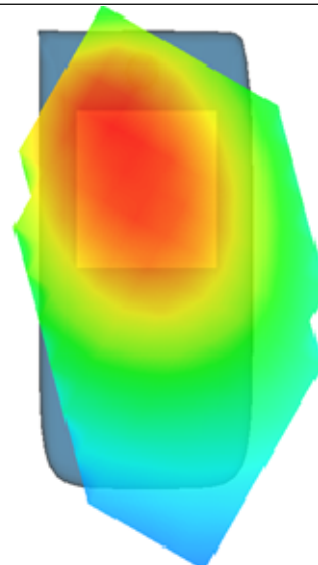
SAR, Z Axis Scan (X = -17, Y = -2)



3D scene shot



Hot spot position



MEASUREMENT 20

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 57 seconds

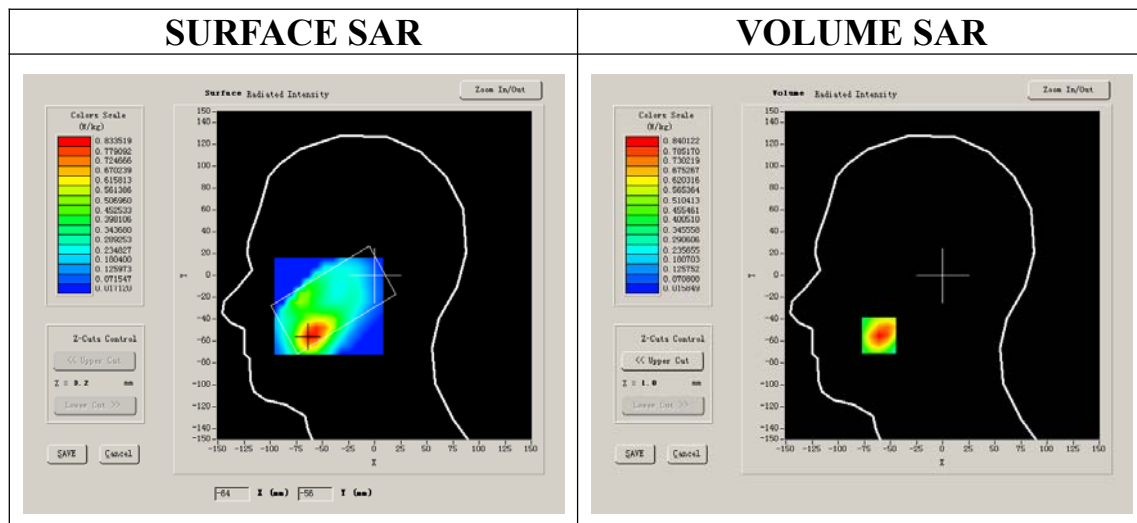
A. Experimental conditions.

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

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	41.275617
Relative permittivity	15.070000
Conductivity (S/m)	1.415831
Power drift(%)	-0.310000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



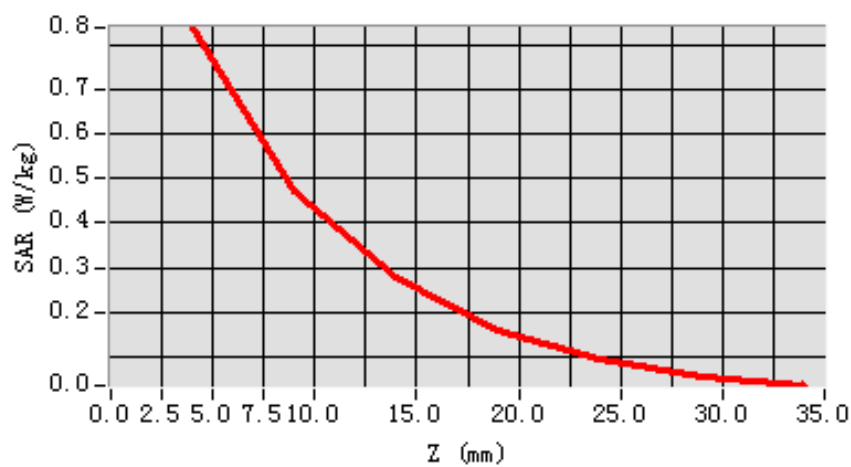
Maximum location: X=-61.00, Y=-55.00

SAR 10g (W/Kg)	0.448087
SAR 1g (W/Kg)	0.798160

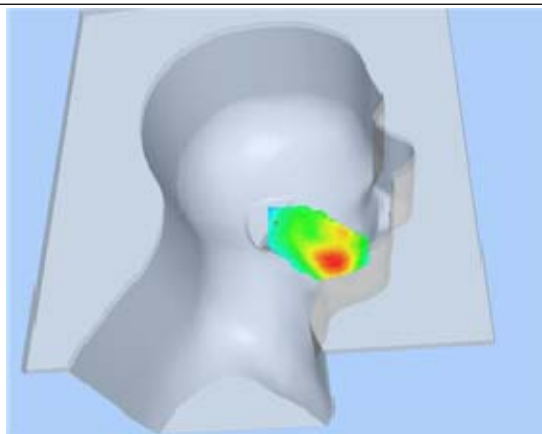
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8401	0.4737	0.2760	0.1585	0.0931	0.0548

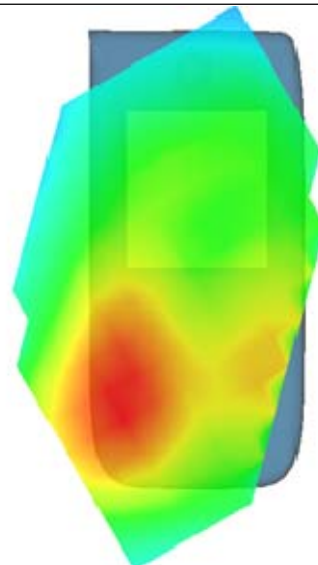
SAR, Z Axis Scan (X = -61, Y = -55)



3D scene shot



Hot spot position



MEASUREMENT 21

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 57 seconds

A. Experimental conditions.

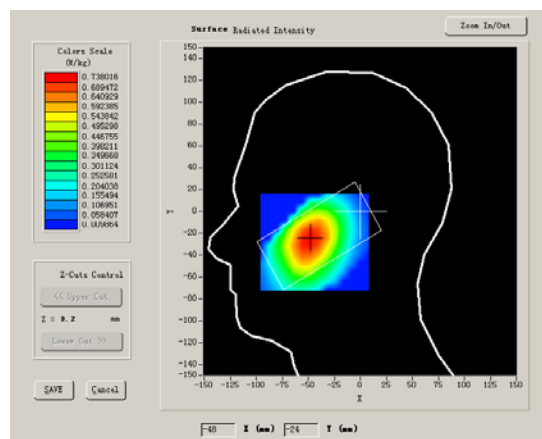
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

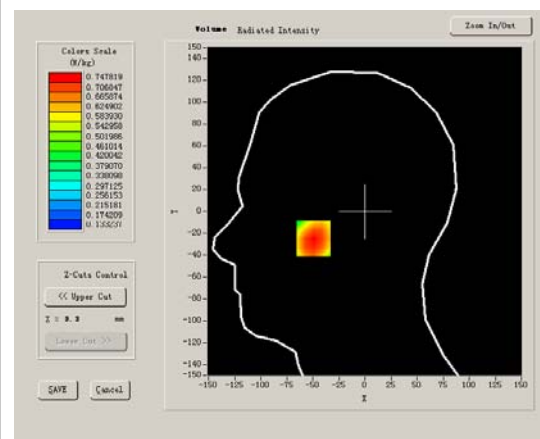
Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.275617
Relative permittivity	15.070000
Conductivity (S/m)	1.415831
Power drift(%)	-0.310000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



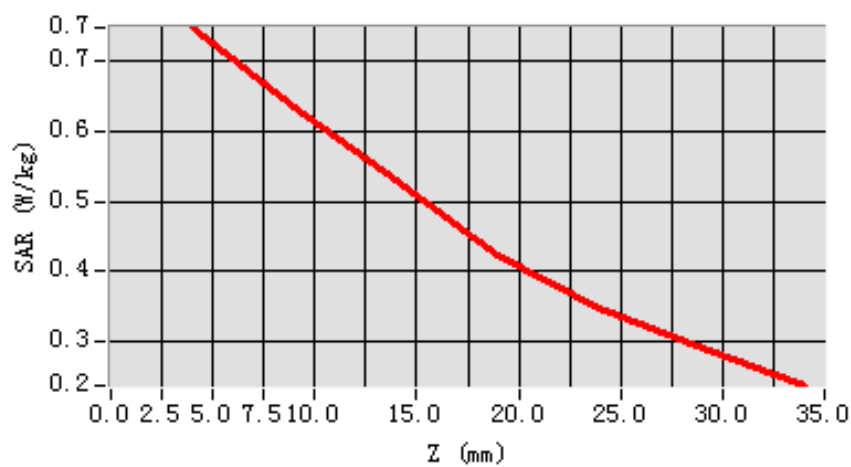
Maximum location: X=-49.00, Y=-25.00

SAR 10g (W/Kg)	0.561016
SAR 1g (W/Kg)	0.718724

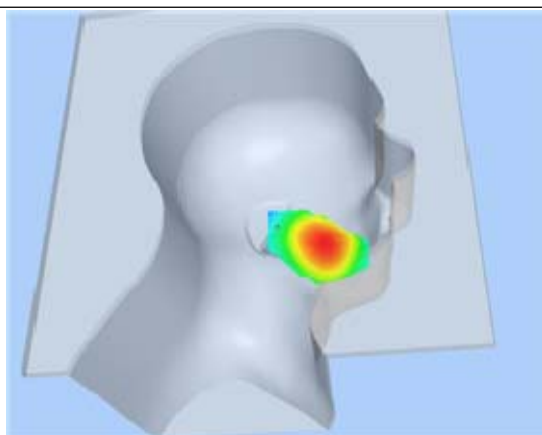
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7478	0.6358	0.5291	0.4235	0.3460	0.2915

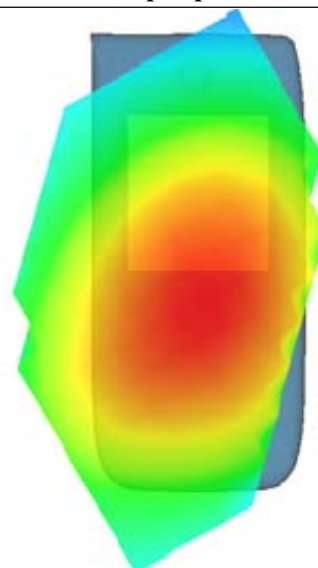
SAR, Z Axis Scan (X = -49, Y = -25)



3D scene shot



Hot spot position



MEASUREMENT 22

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 57 seconds

A. Experimental conditions.

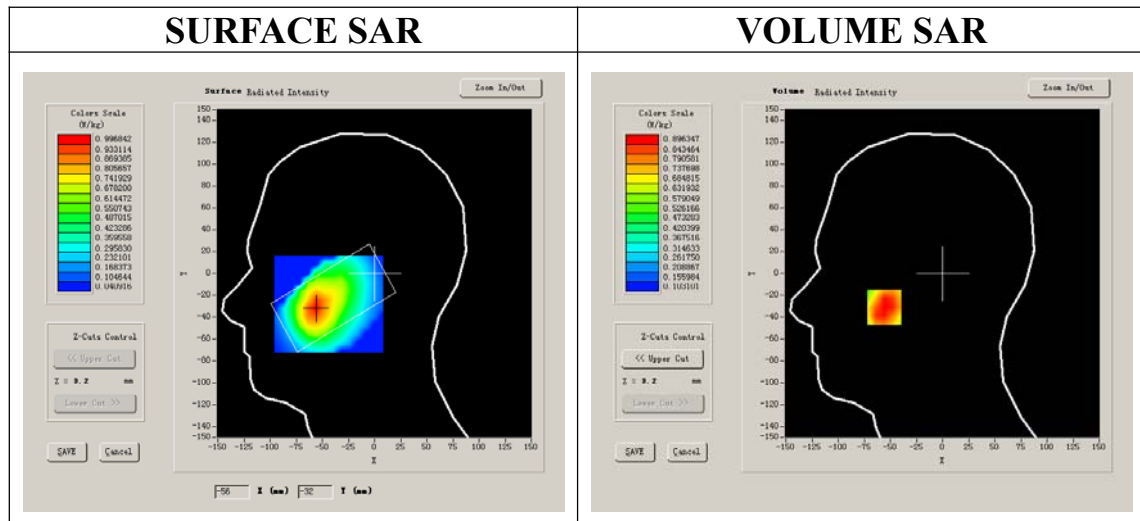
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	GSM1900
Channels	High
Signal	GSM

B. SAR Measurement Results

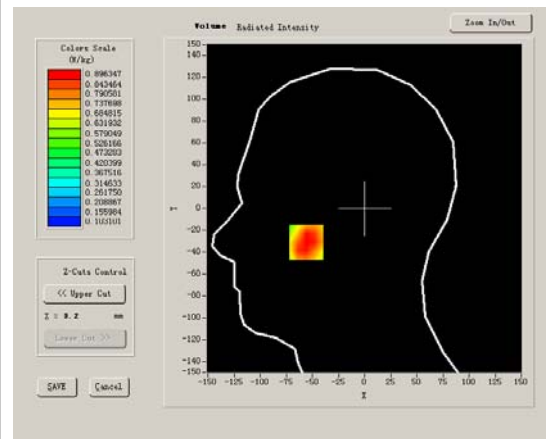
Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	41.275617
Relative permittivity	15.070000
Conductivity (S/m)	1.415831
Power drift(%)	-0.310000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



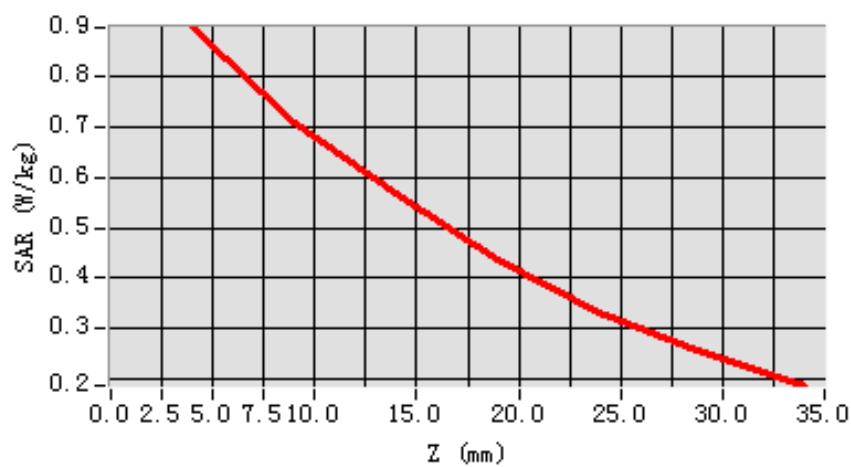
Maximum location: X=-56.00, Y=-31.00

SAR 10g (W/Kg)	0.642635
SAR 1g (W/Kg)	0.875602

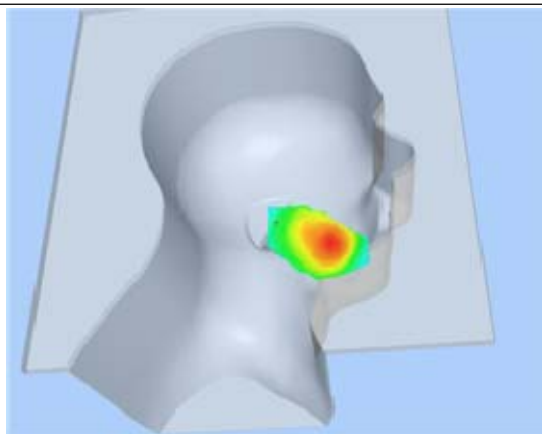
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8963	0.7061	0.5688	0.4352	0.3340	0.2531

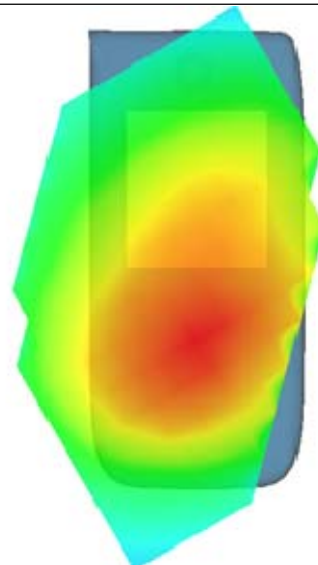
SAR, Z Axis Scan (X = -56, Y = -31)



3D scene shot



Hot spot position



MEASUREMENT 23

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 18 seconds

A. Experimental conditions.

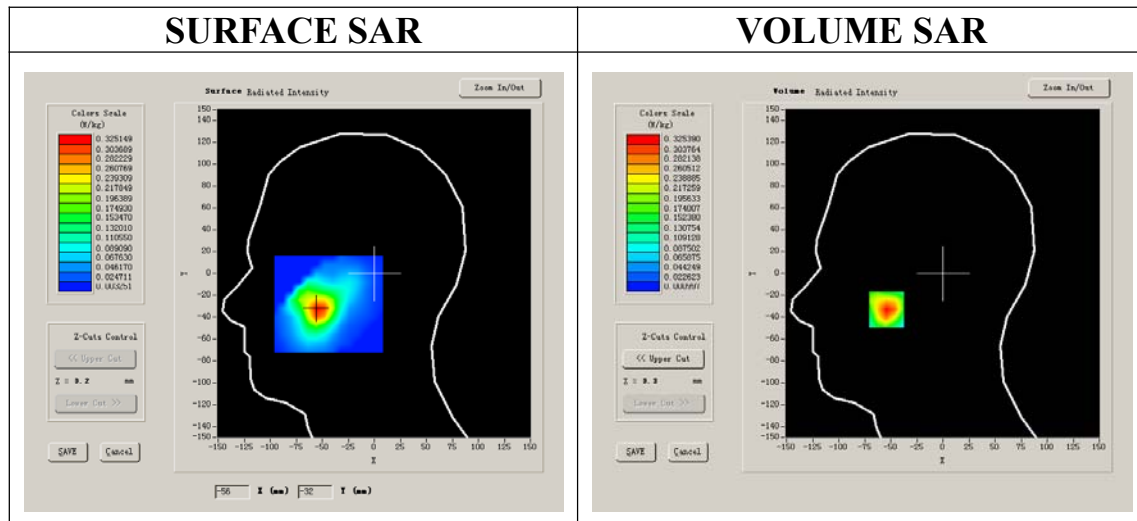
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

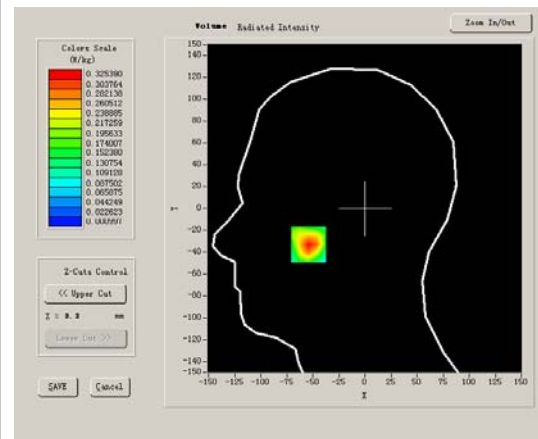
Lower Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	41.275617
Relative permittivity	15.070000
Conductivity (S/m)	1.415831
Power drift(%)	-0.620000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



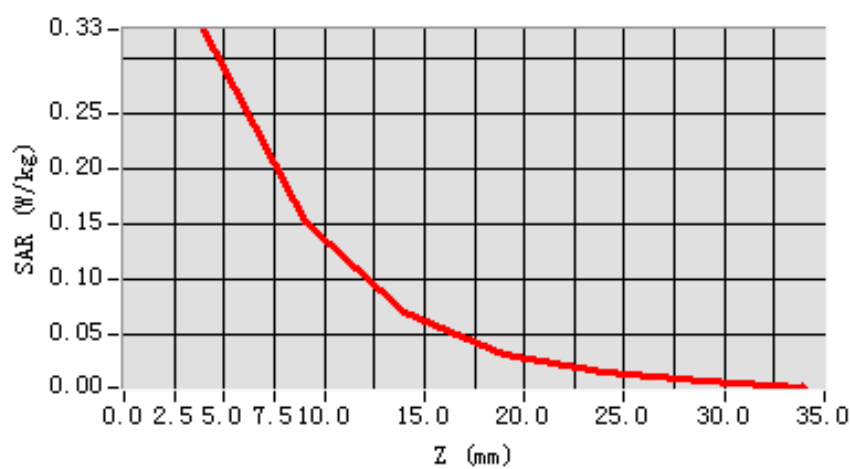
Maximum location: X=-54.00, Y=-33.00

SAR 10g (W/Kg)	0.148538
SAR 1g (W/Kg)	0.307296

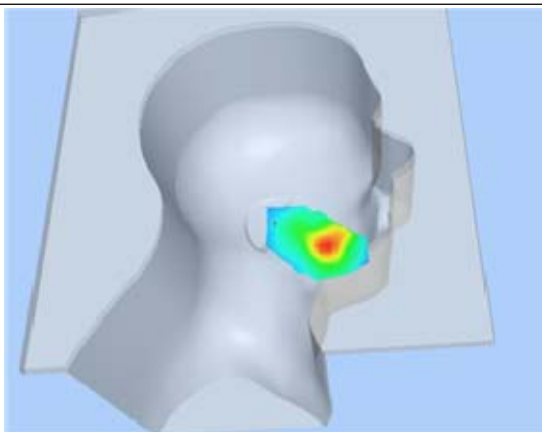
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3254	0.1526	0.0703	0.0314	0.0153	0.0083

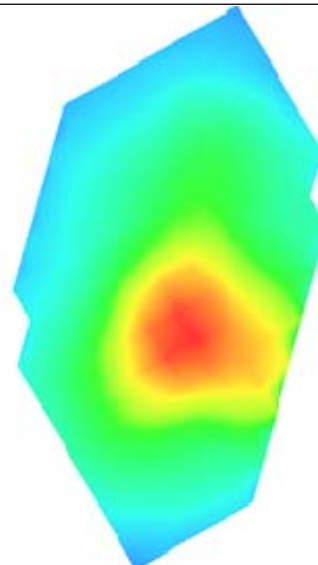
SAR, Z Axis Scan (X = -54, Y = -33)



3D scene shot



Hot spot position



MEASUREMENT 24

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

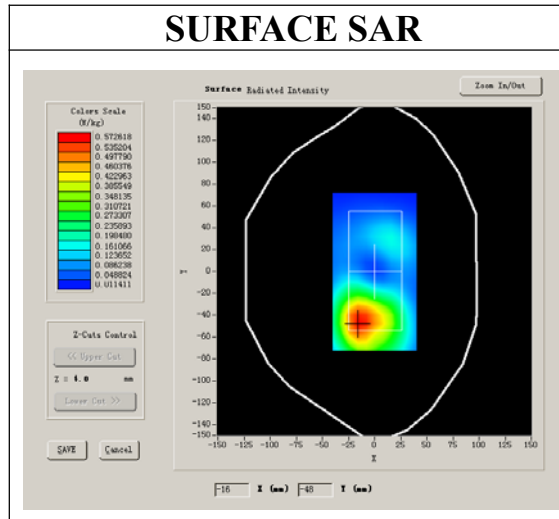
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

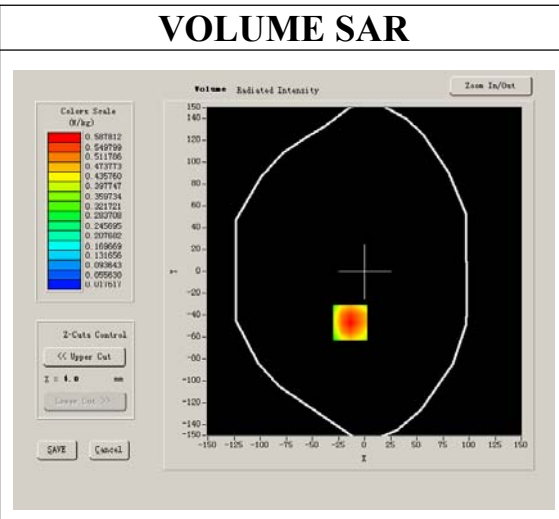
Lower Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	53.623641
Relative permittivity	14.070000
Conductivity (S/m)	1.488263
Power drift(%)	-0.480000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



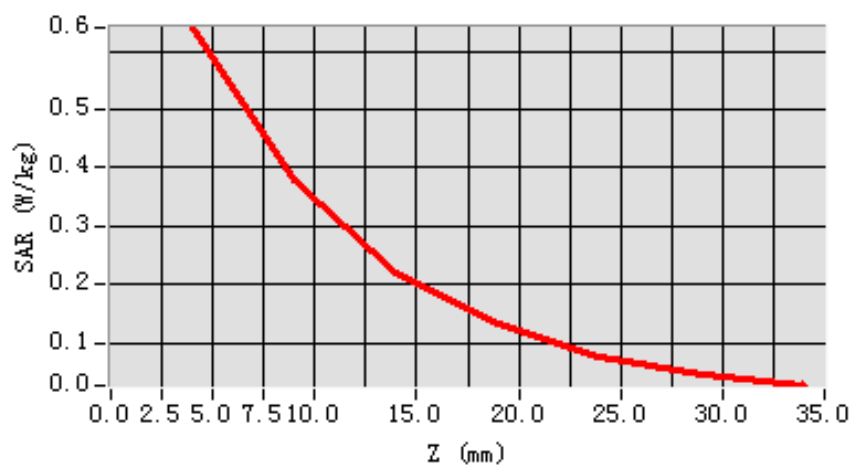
Maximum location: X=-14.00, Y=-47.00

SAR 10g (W/Kg)	0.358812
SAR 1g (W/Kg)	0.607713

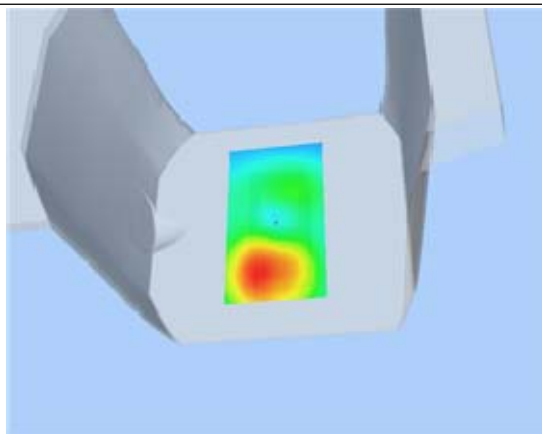
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6401	0.3784	0.2206	0.1318	0.0767	0.0457

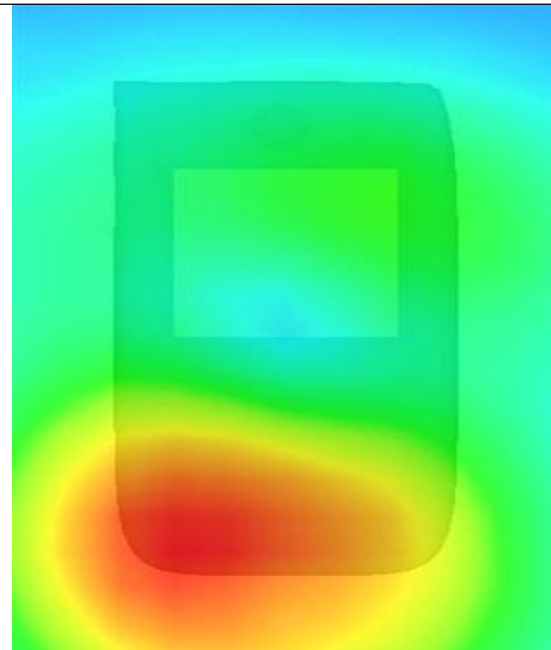
SAR, Z Axis Scan (X = -14, Y = -47)



3D scene shot



Hot spot position



MEASUREMENT 25

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

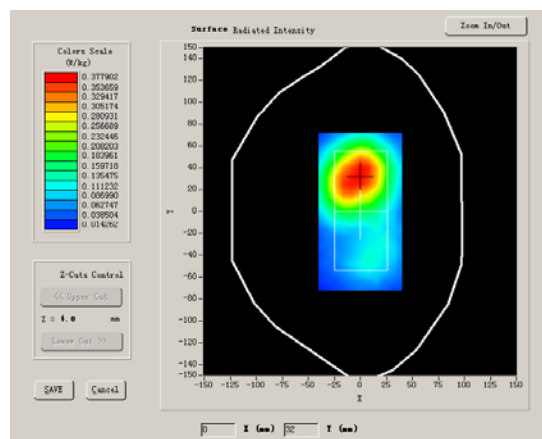
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GSM

B. SAR Measurement Results

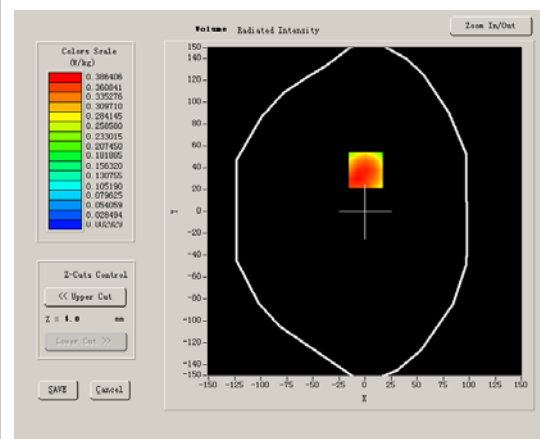
Lower Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	53.623641
Relative permittivity	14.070000
Conductivity (S/m)	1.488263
Power drift(%)	-0.240000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



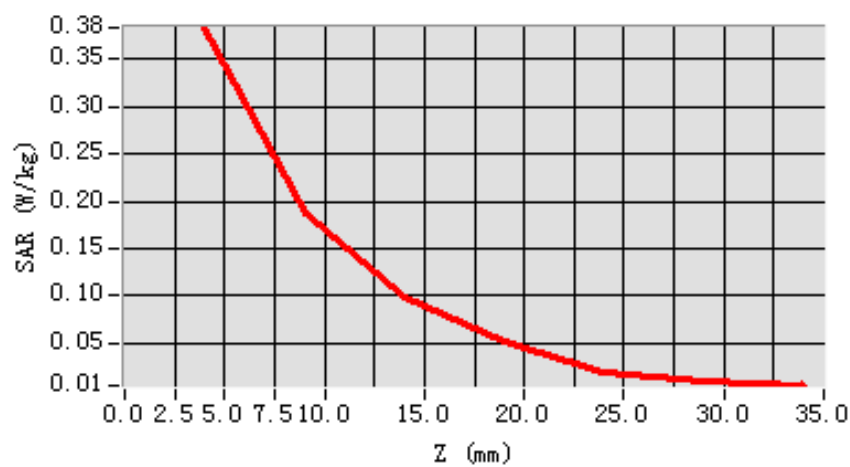
Maximum location: X=1.00, Y=38.00

SAR 10g (W/Kg)	0.208873
SAR 1g (W/Kg)	0.379165

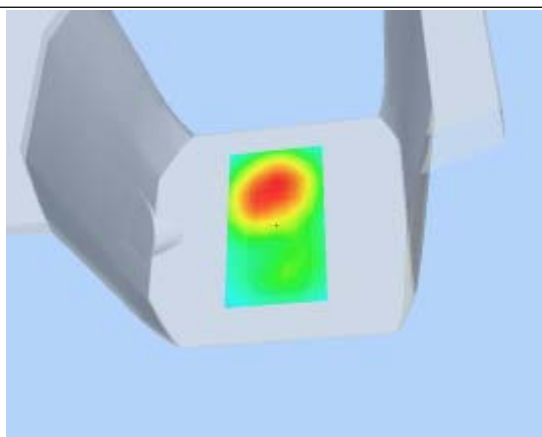
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3835	0.1870	0.0989	0.0513	0.0193	0.0104

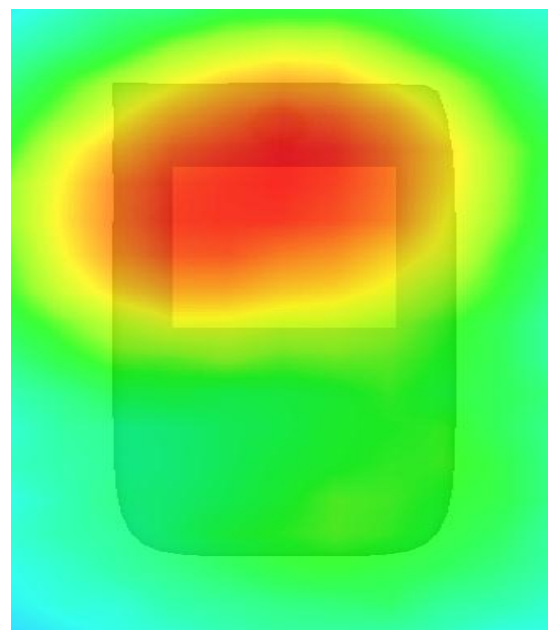
SAR, Z Axis Scan (X = 1, Y = 38)



3D scene shot



Hot spot position



MEASUREMENT 26

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 8 seconds

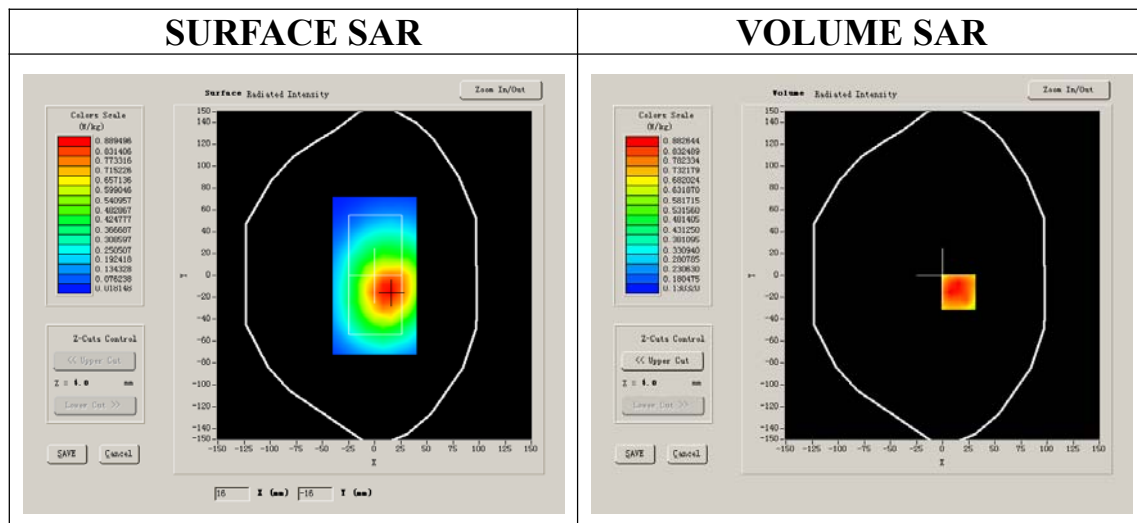
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	53.623641
Relative permittivity	14.070000
Conductivity (S/m)	1.488263
Power drift(%)	-1.500000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



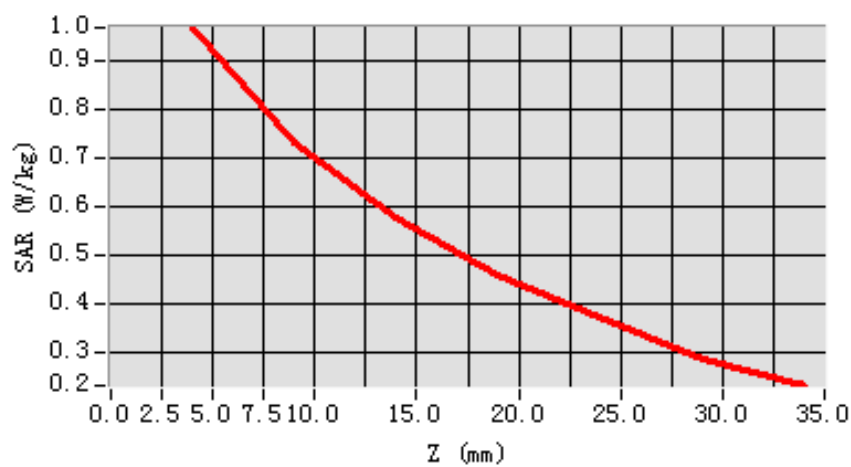
Maximum location: X=15.00, Y=-15.00

SAR 10g (W/Kg)	0.708093
SAR 1g (W/Kg)	0.947453

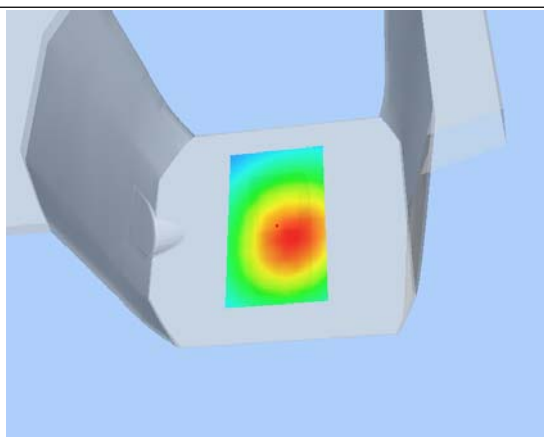
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9698	0.7342	0.5775	0.4600	0.3717	0.2841

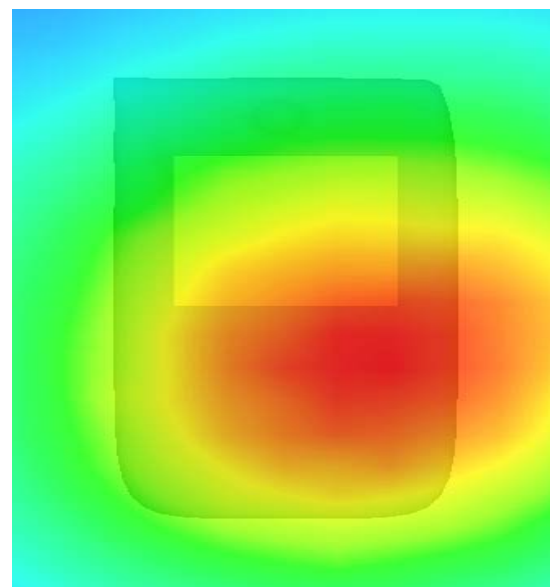
SAR, Z Axis Scan (X = 15, Y = -15)



3D scene shot



Hot spot position



MEASUREMENT 27

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 8 seconds

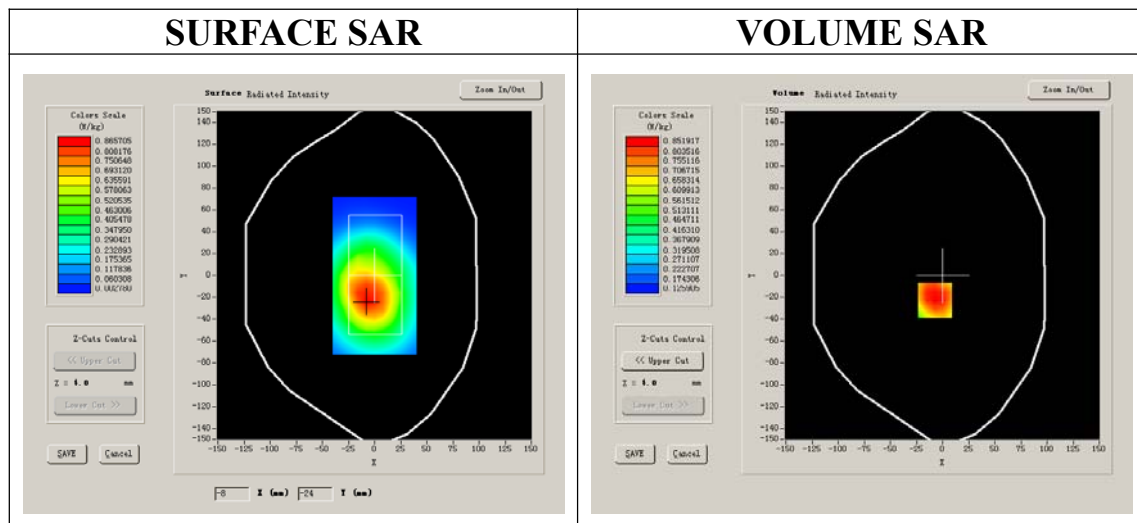
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat 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)	53.623641
Relative permittivity	14.070000
Conductivity (S/m)	1.488263
Power drift(%)	-1.210000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



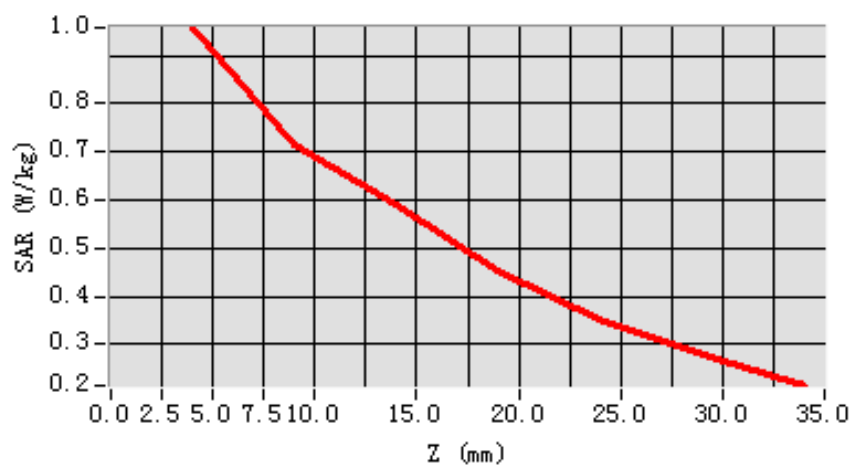
Maximum location: X=-7.00, Y=-23.00

SAR 10g (W/Kg)	0.684209
SAR 1g (W/Kg)	0.941391

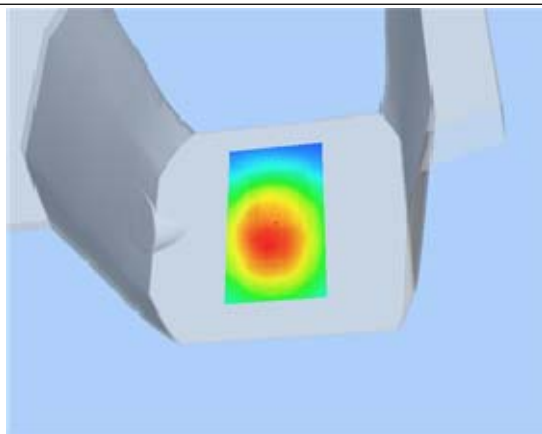
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9581	0.7134	0.5897	0.4551	0.3541	0.2795

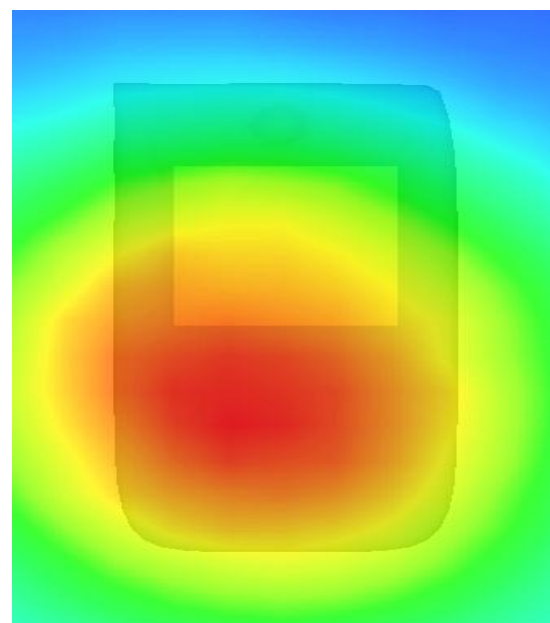
SAR, Z Axis Scan (X = -7, Y = -23)



3D scene shot



Hot spot position



MEASUREMENT 28

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 8 seconds

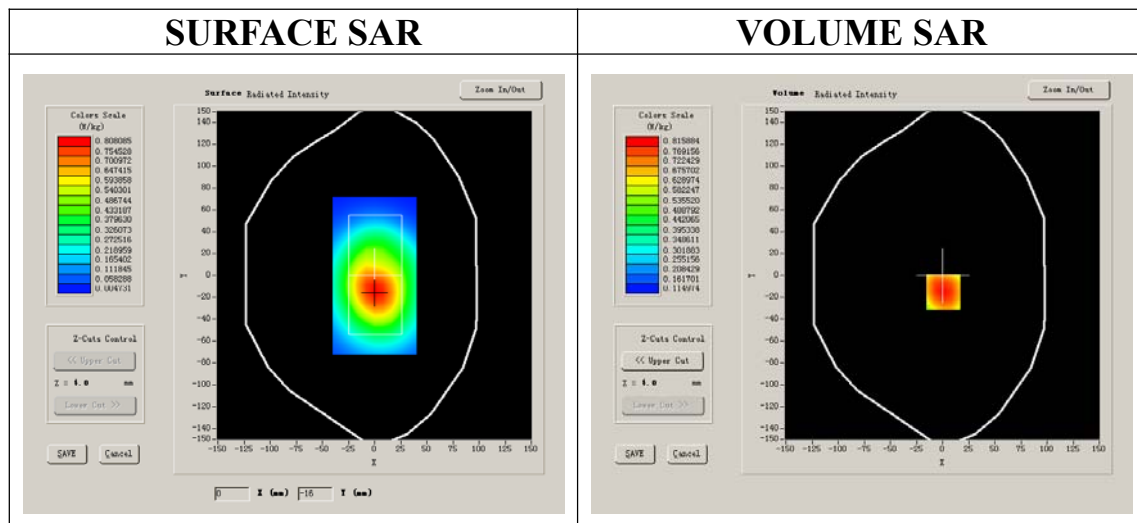
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	High
Signal	GPRS

B. SAR Measurement Results

Higher Band SAR (Channel 810):

Frequency (MHz)	1909.800000
Relative permittivity (real part)	53.623641
Relative permittivity	14.070000
Conductivity (S/m)	1.488263
Power drift(%)	-1.430000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



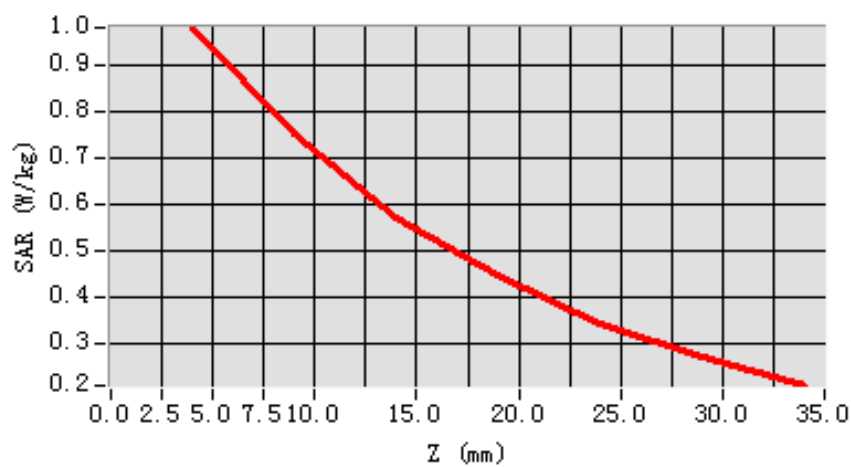
Maximum location: X=1.00, Y=-15.00

SAR 10g (W/Kg)	0.696276
SAR 1g (W/Kg)	0.923204

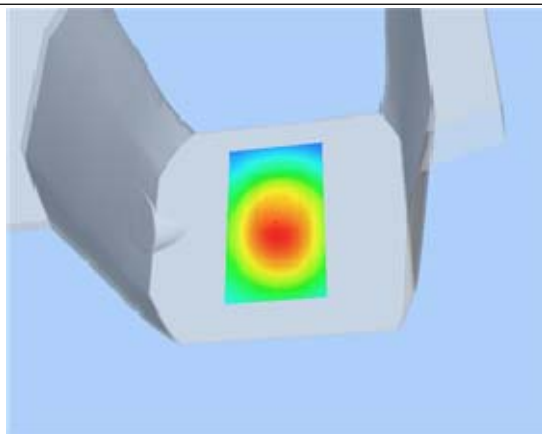
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9591	0.7519	0.5733	0.4469	0.3463	0.2713

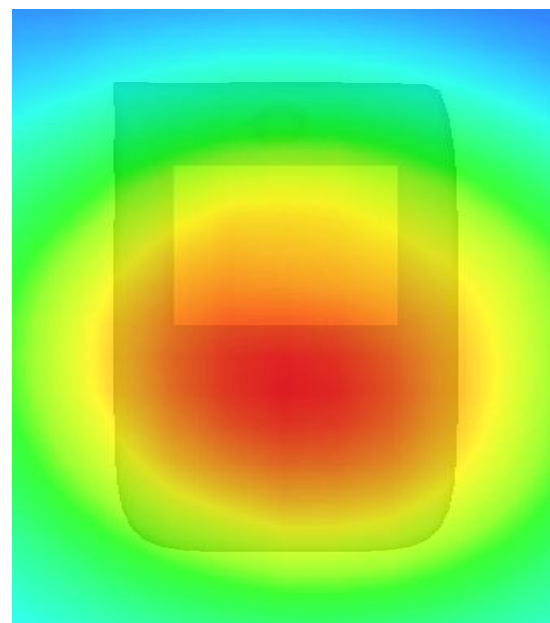
SAR, Z Axis Scan (X = 1, Y = -15)



3D scene shot



Hot spot position



MEASUREMENT 29

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 9 seconds

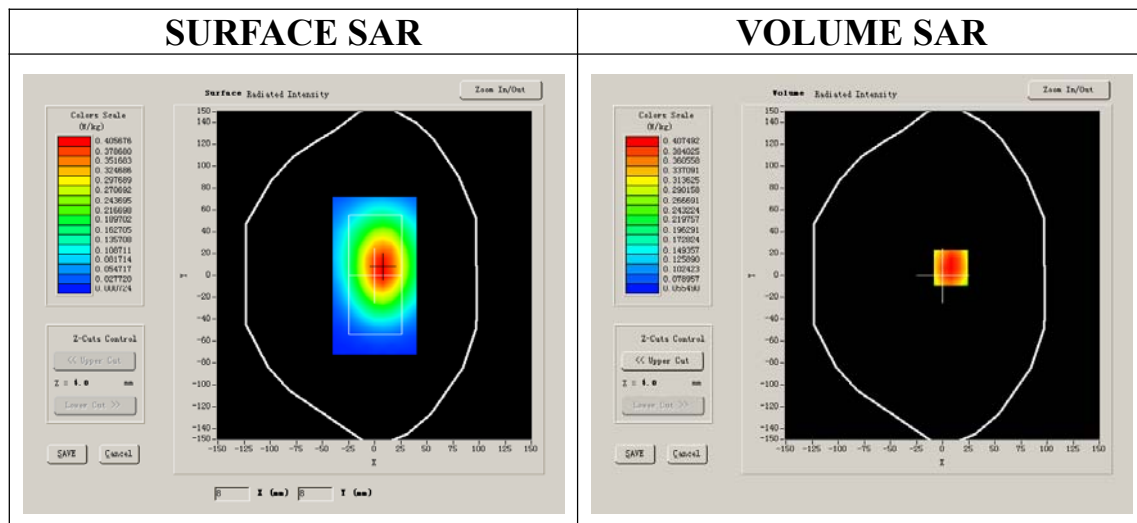
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	GPRS

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	53.623641
Relative permittivity	14.070000
Conductivity (S/m)	1.488263
Power drift(%)	-0.930000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



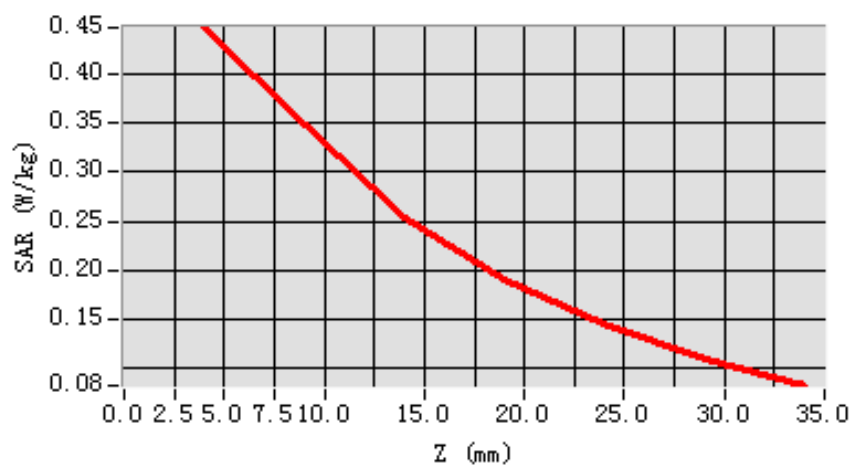
Maximum location: X=8.00, Y=7.00

SAR 10g (W/Kg)	0.309891
SAR 1g (W/Kg)	0.433300

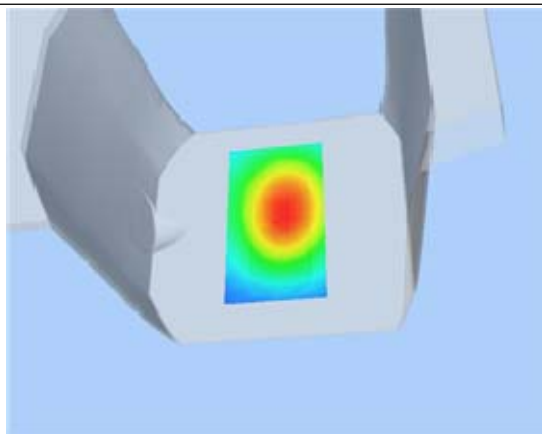
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4473	0.3490	0.2543	0.1912	0.1464	0.1105

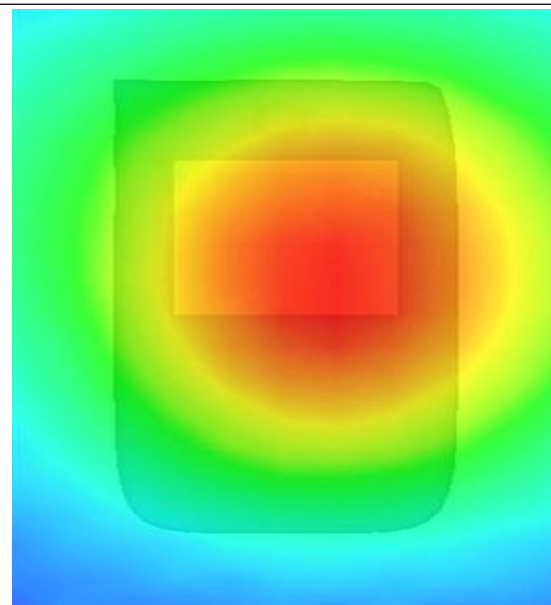
SAR, Z Axis Scan (X = 8, Y = 7)



3D scene shot



Hot spot position



MEASUREMENT 30

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 8 seconds

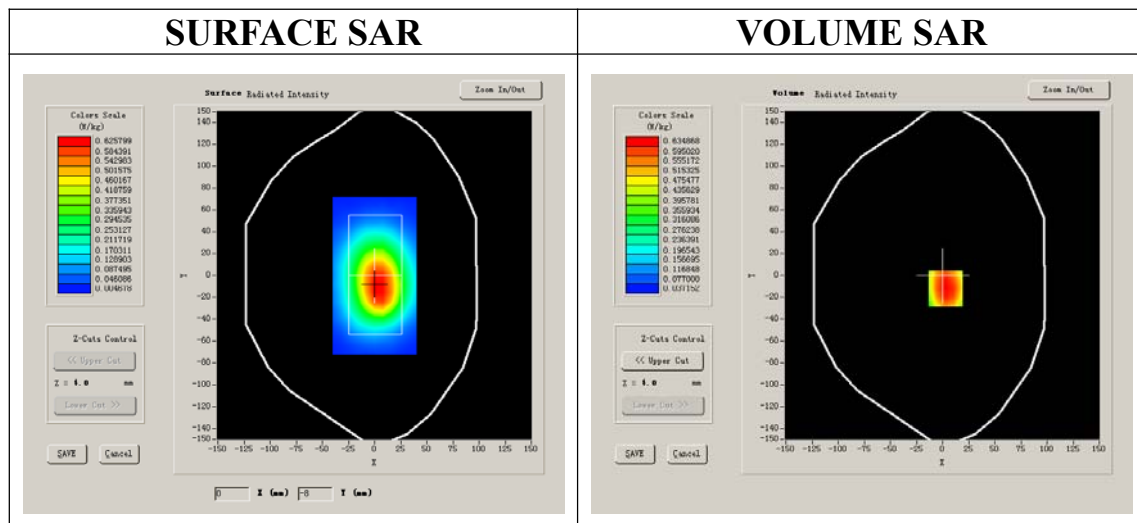
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	Body
Band	GSM1900
Channels	Low
Signal	EDGE

B. SAR Measurement Results

Lower Band SAR (Channel 512):

Frequency (MHz)	1850.200000
Relative permittivity (real part)	53.623641
Relative permittivity	14.070000
Conductivity (S/m)	1.488263
Power drift(%)	-0.810000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



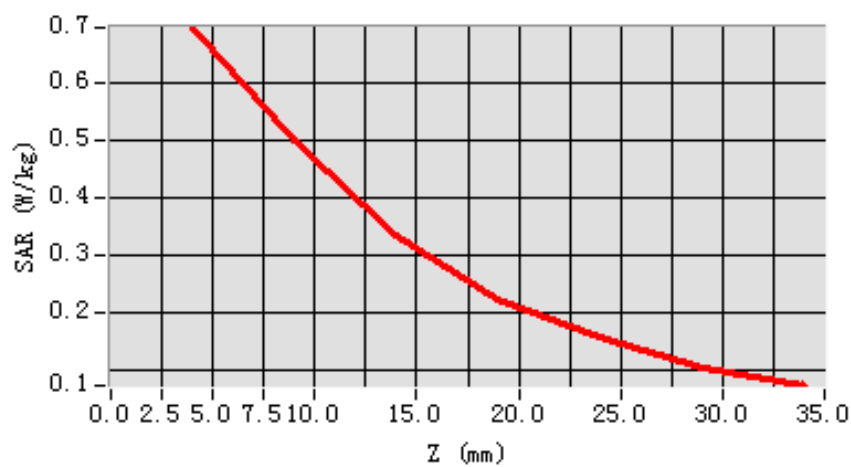
Maximum location: X=3.00, Y=-12.00

SAR 10g (W/Kg)	0.448027
SAR 1g (W/Kg)	0.671600

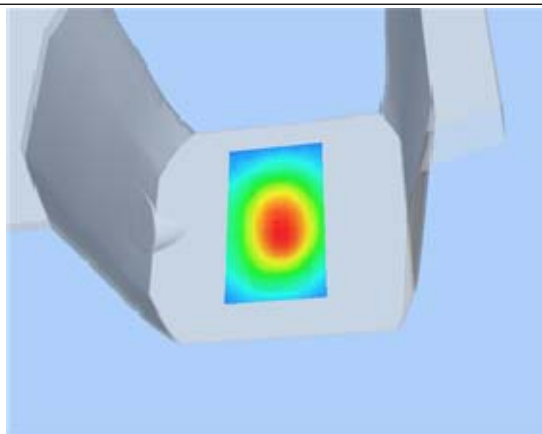
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6970	0.5012	0.3358	0.2248	0.1601	0.1056

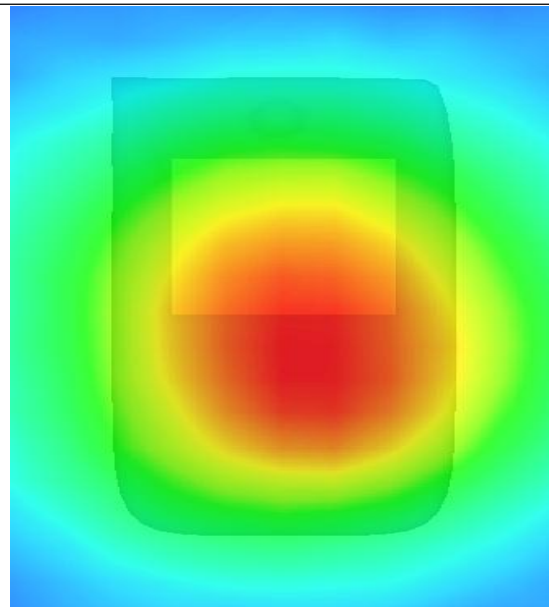
SAR, Z Axis Scan (X = 3, Y = -12)



3D scene shot



Hot spot position



MEASUREMENT 31

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 59 seconds

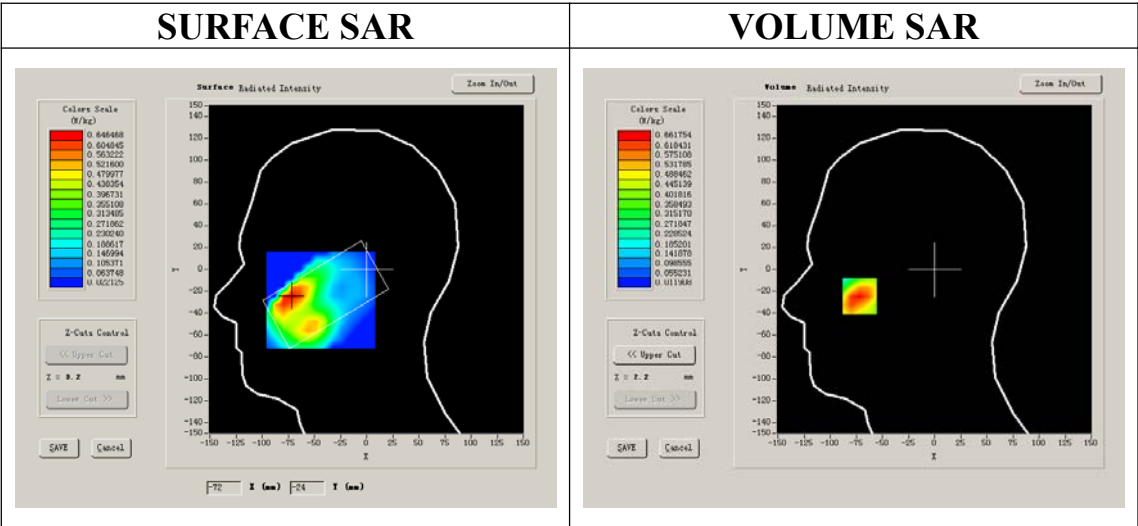
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4175):

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.324182
Relative permittivity	19.120001
Conductivity (S/m)	0.893241
Power drift (%)	0.450000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.8°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



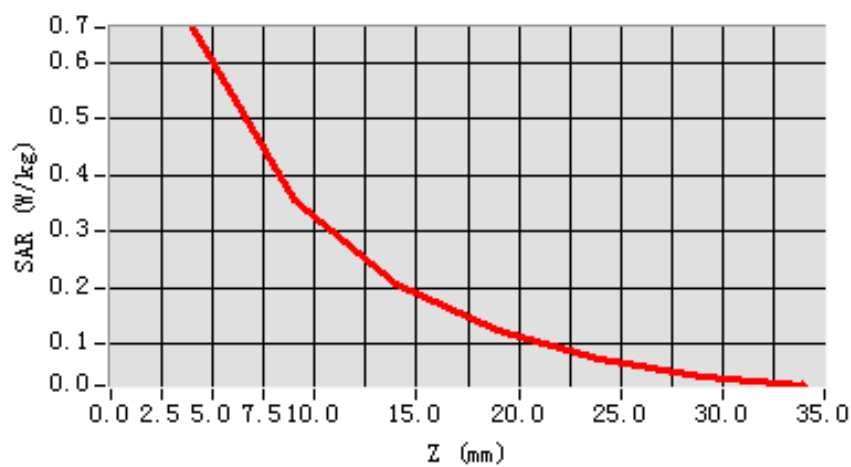
Maximum location: X=-72.00, Y=-24.00

SAR 10g (W/Kg)	0.353797
SAR 1g (W/Kg)	0.635312

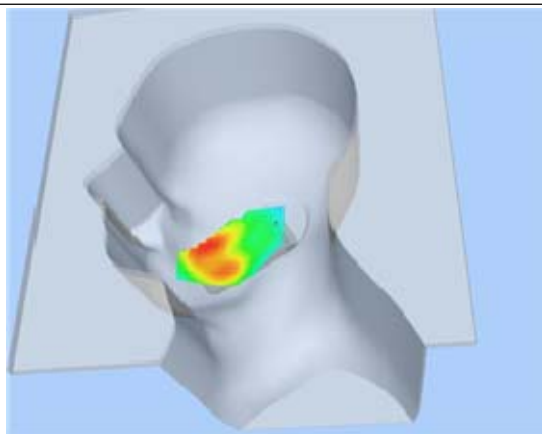
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6618	0.3555	0.2069	0.1241	0.0723	0.0444

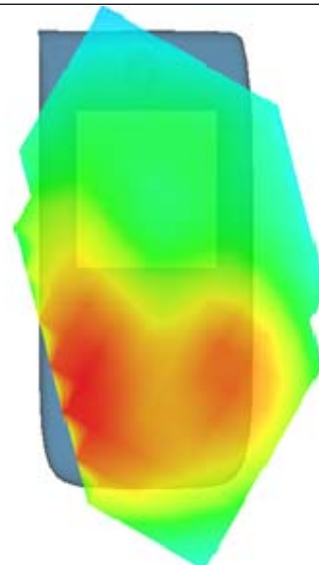
SAR, Z Axis Scan (X = -72, Y = -24)



3D scene shot



Hot spot position



MEASUREMENT 32

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 41 seconds

A. Experimental conditions.

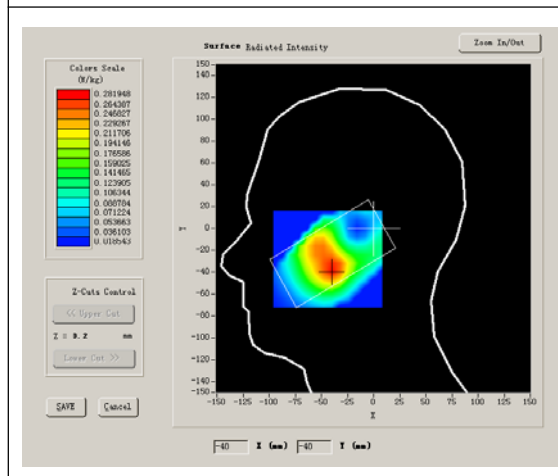
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	WCDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

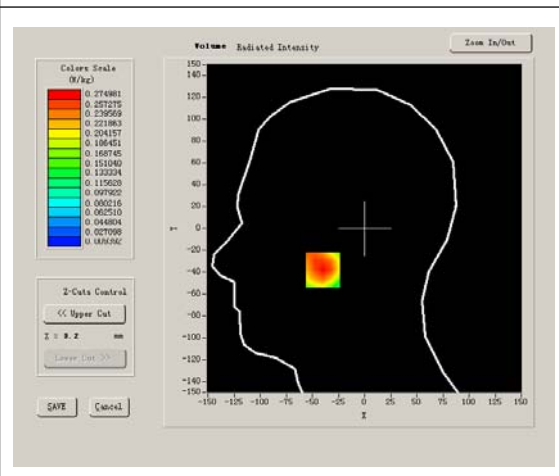
Middle Band SAR (Channel 4175):

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.324182
Relative permittivity	19.120001
Conductivity (S/m)	0.893241
Power drift (%)	0.020000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.8°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1

SURFACE SAR



VOLUME SAR

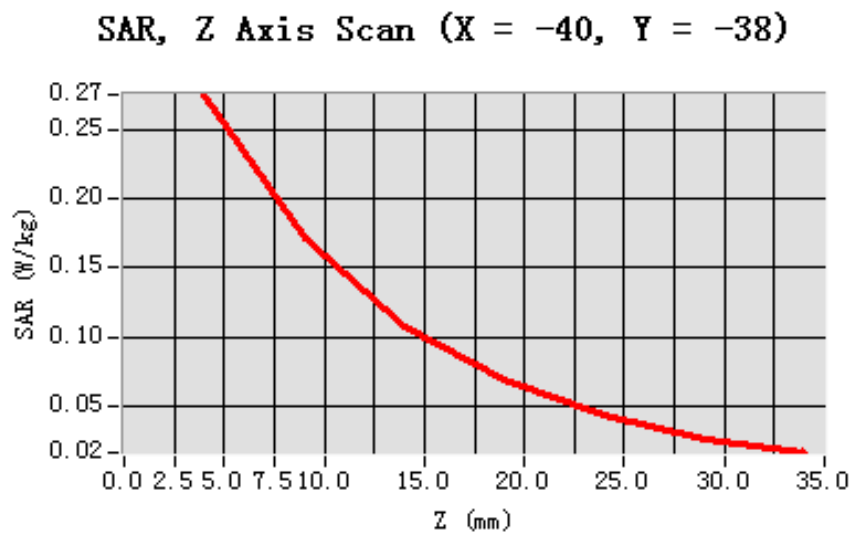


Maximum location: X=-40.00, Y=-38.00

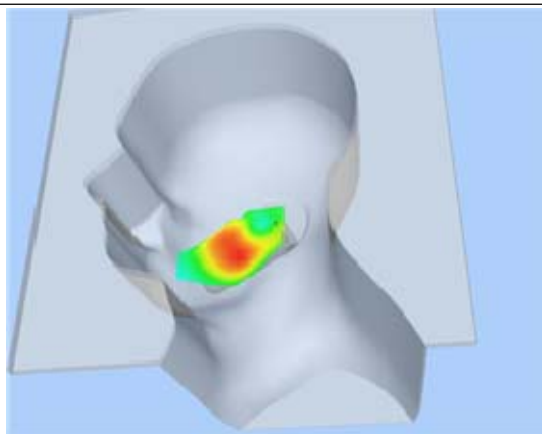
SAR 10g (W/Kg)	0.161214
SAR 1g (W/Kg)	0.262385

Z Axis Scan

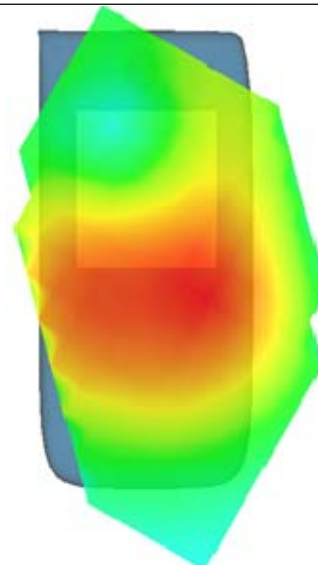
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2750	0.1715	0.1071	0.0688	0.0430	0.0267



3D sceen shot



Hot spot position



MEASUREMENT 33

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 53 seconds

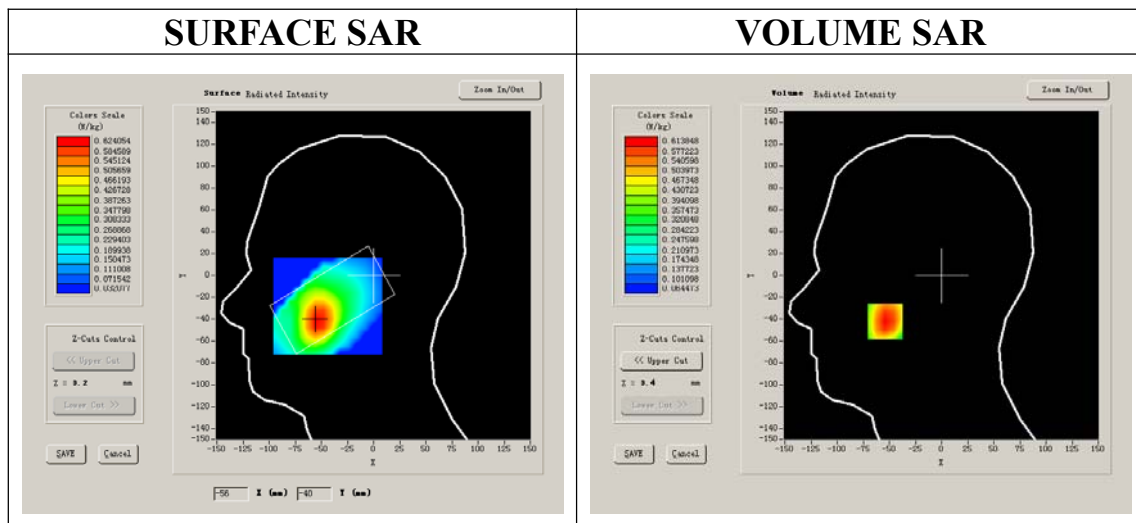
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 4175):

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.324182
Relative permittivity	19.120001
Conductivity (S/m)	0.893241
Power drift (%)	-0.500000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.8°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



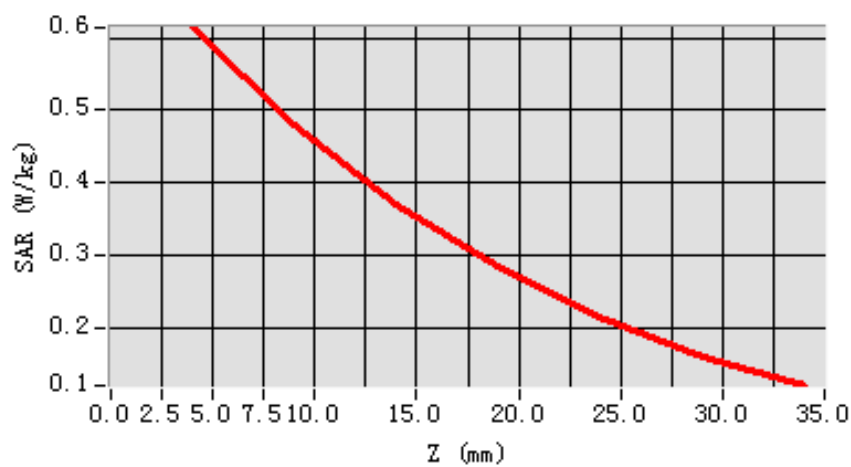
Maximum location: X=-54.00, Y=-42.00

SAR 10g (W/Kg)	0.425034
SAR 1g (W/Kg)	0.591731

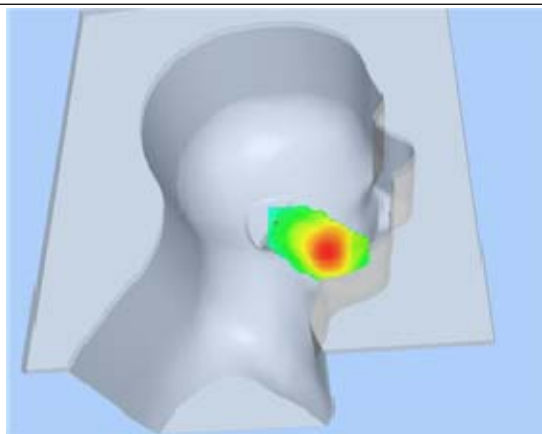
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6138	0.4781	0.3682	0.2852	0.2154	0.1591

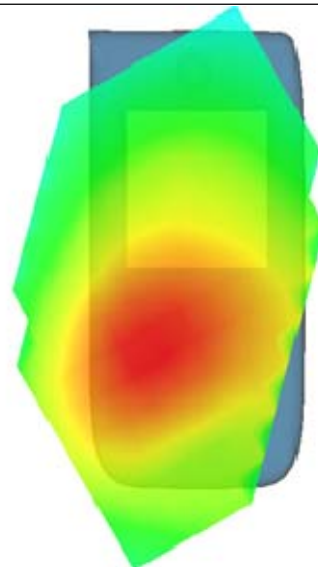
SAR, Z Axis Scan (X = -54, Y = -42)



3D scene shot



Hot spot position



MEASUREMENT 34

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 40 seconds

A. Experimental conditions.

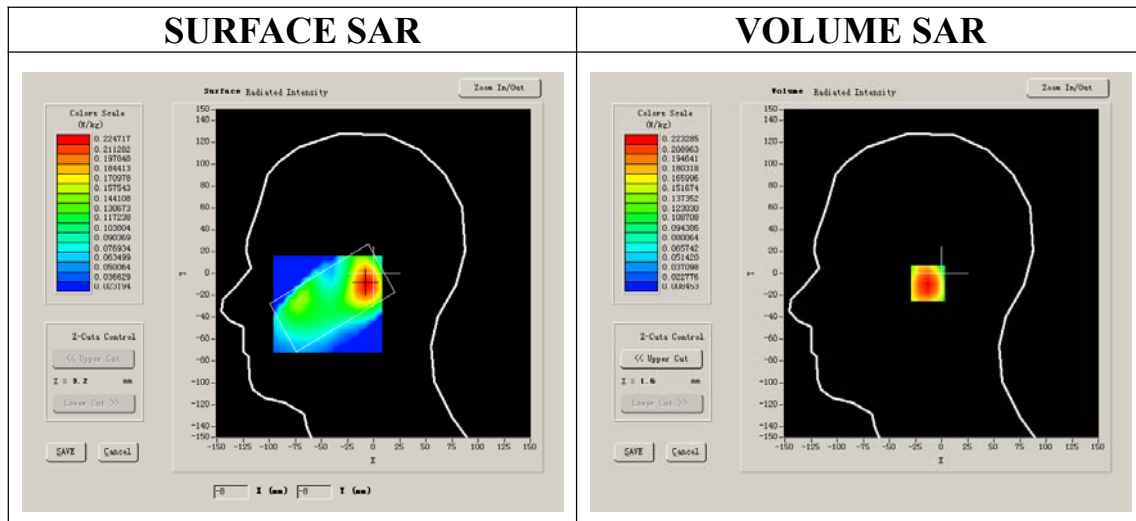
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	WCDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

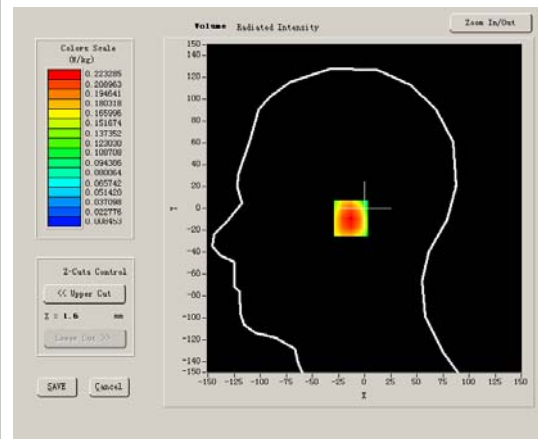
Middle Band SAR (Channel 4175):

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.324182
Relative permittivity	19.120001
Conductivity (S/m)	0.893241
Power drift (%)	-0.380000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.8°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



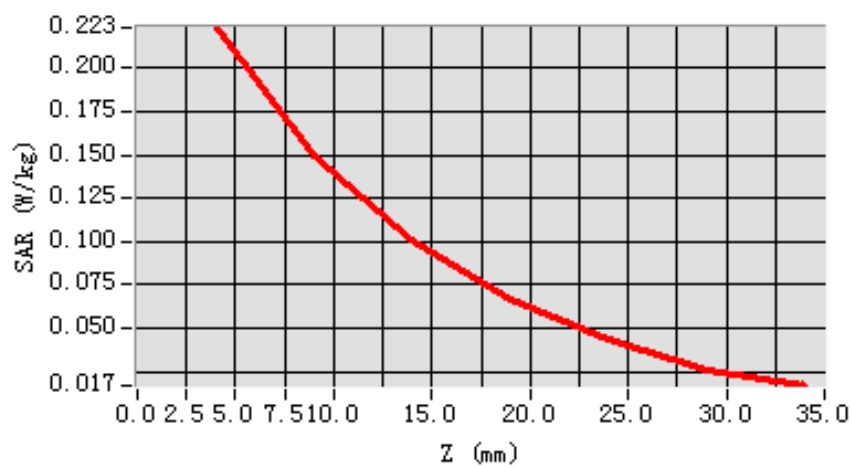
Maximum location: X=-6.00, Y=-9.00

SAR 10g (W/Kg)	0.135588
SAR 1g (W/Kg)	0.214723

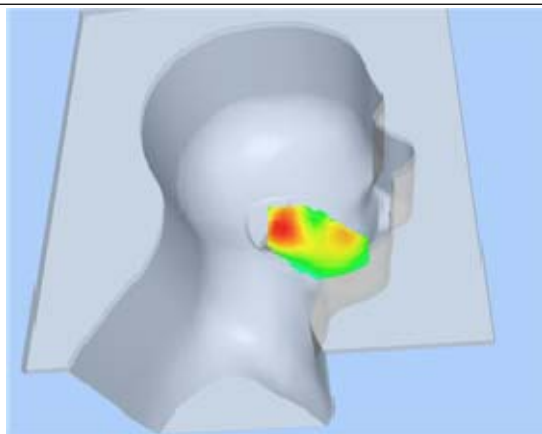
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2233	0.1500	0.1007	0.0670	0.0436	0.0260

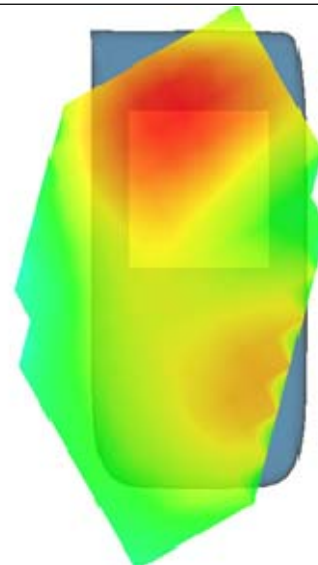
SAR, Z Axis Scan (X = -6, Y = -9)



3D scene shot



Hot spot position



MEASUREMENT 35

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 15 seconds

A. Experimental conditions.

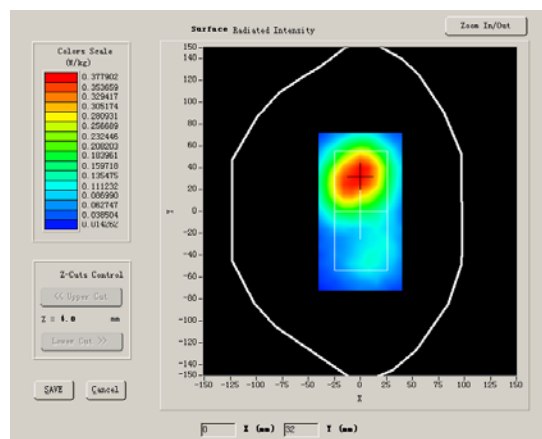
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

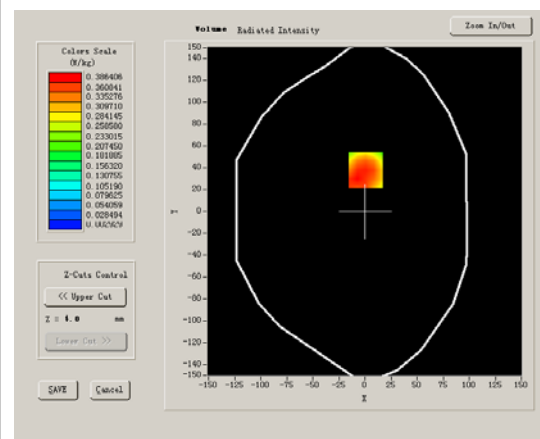
Middle Band SAR (Channel 4175):

Frequency (MHz)	835.000000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.942714
Power drift (%)	-0.030000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



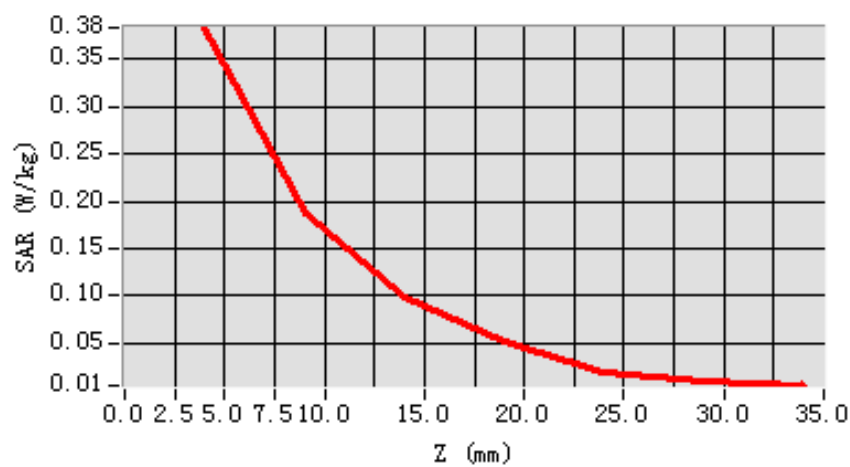
Maximum location: X=1.00, Y=38.00

SAR 10g (W/Kg)	0.208873
SAR 1g (W/Kg)	0.374165

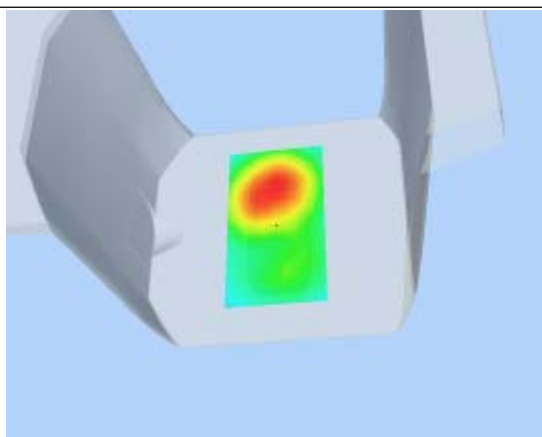
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3835	0.1870	0.0989	0.0513	0.0193	0.0104

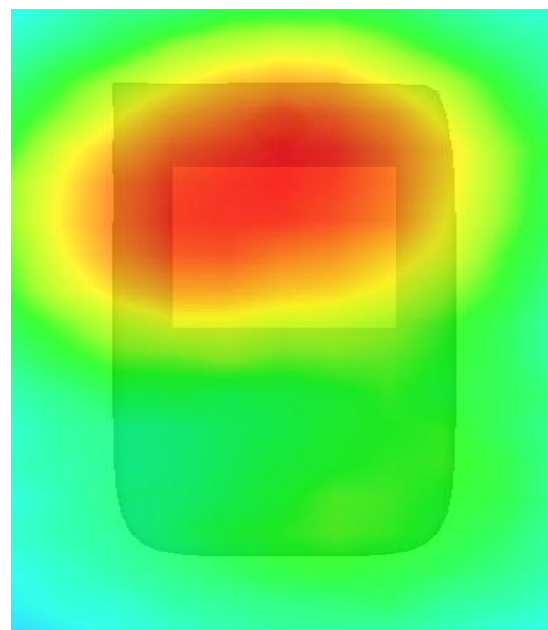
SAR, Z Axis Scan (X = 1, Y = 38)



3D scene shot



Hot spot position



MEASUREMENT 36

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 16 seconds

A. Experimental conditions.

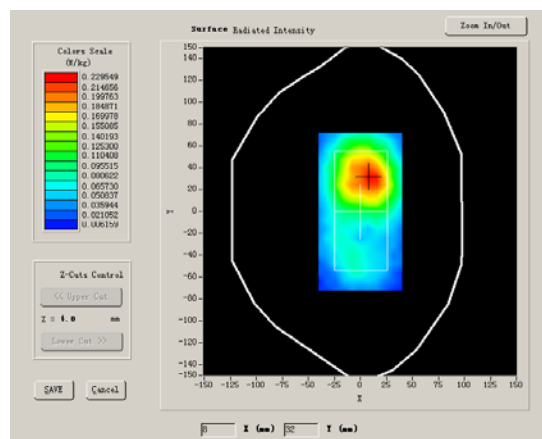
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

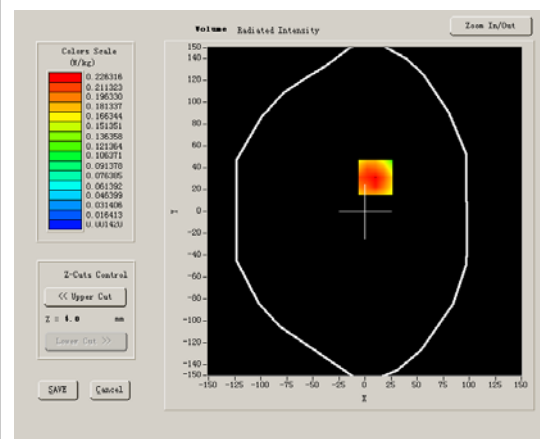
Middle Band SAR (Channel 4175):

Frequency (MHz)	835.000000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.942714
Power drift (%)	-1.390000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.8°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



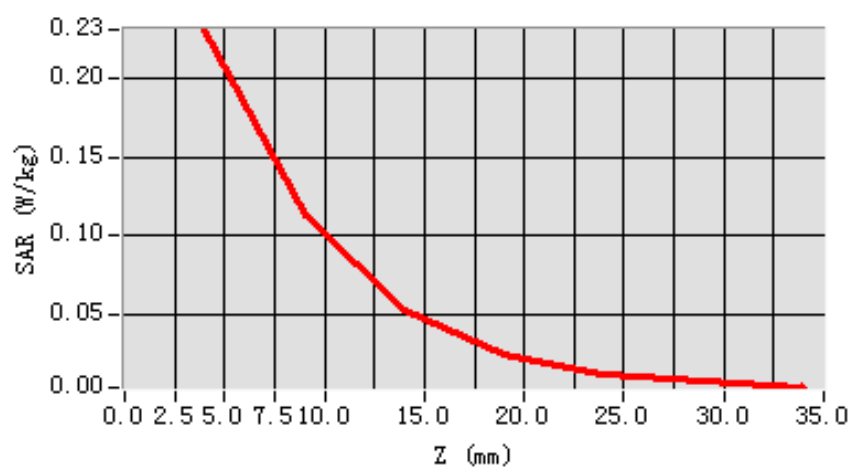
Maximum location: X=10.00, Y=31.00

SAR 10g (W/Kg)	0.119680
SAR 1g (W/Kg)	0.227116

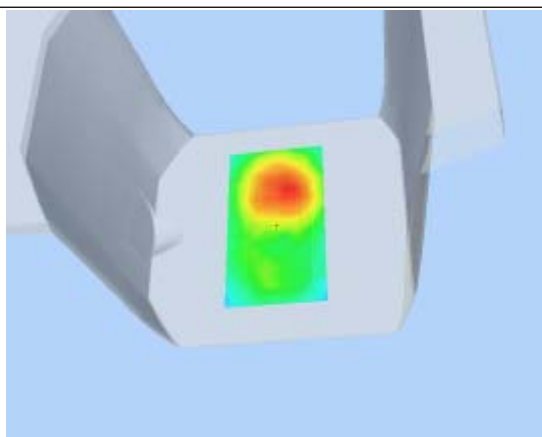
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2316	0.1126	0.0528	0.0237	0.0120	0.0068

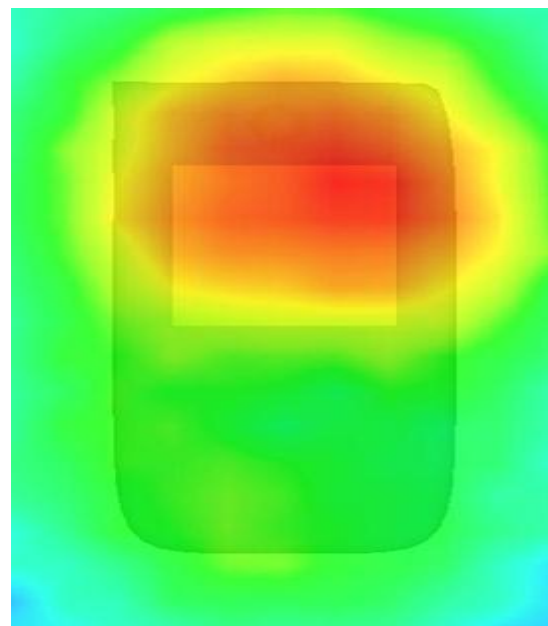
SAR, Z Axis Scan (X = 10, Y = 31)



3D scene shot



Hot spot position



MEASUREMENT 37

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 9 seconds

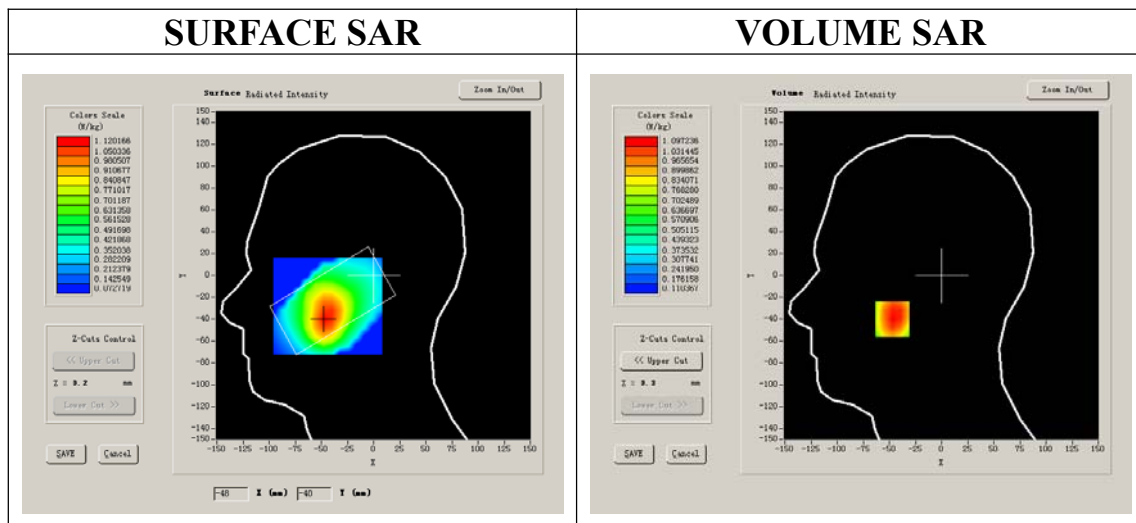
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA1900
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.400000
Relative permittivity (real part)	41.275617
Relative permittivity	13.230000
Conductivity (S/m)	1.415831
Power drift (%)	0.280000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



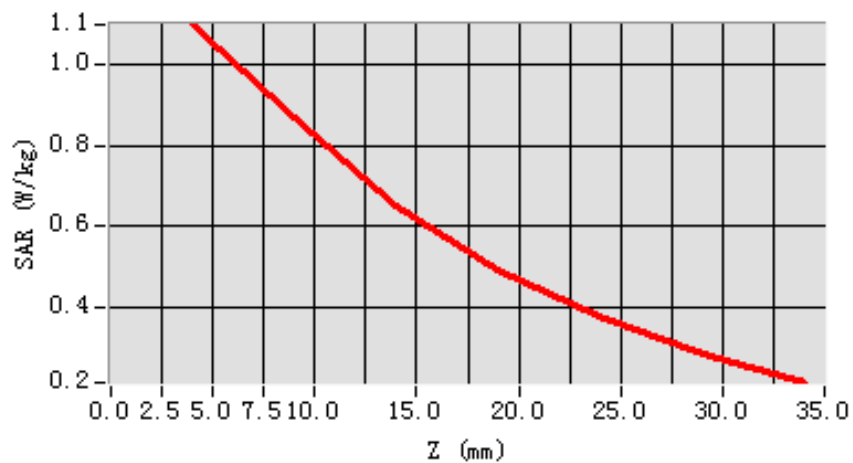
Maximum location: X=-47.00, Y=-40.00

SAR 10g (W/Kg)	0.779079
SAR 1g (W/Kg)	0.956514

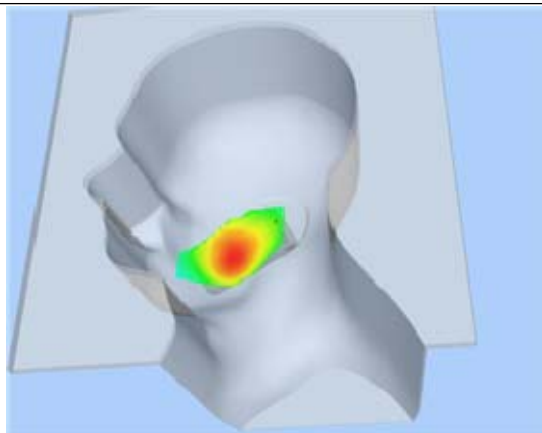
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0972	0.8663	0.6493	0.4949	0.3775	0.2863

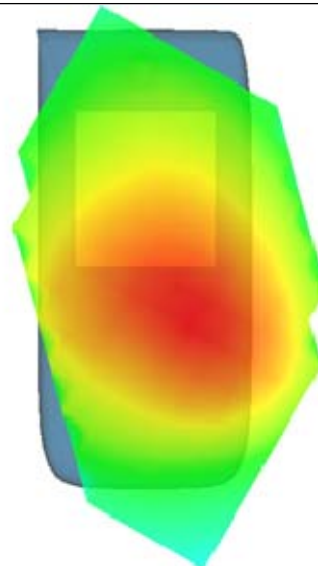
SAR, Z Axis Scan (X = -47, Y = -40)



3D scene shot



Hot spot position



MEASUREMENT 38

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 9 seconds

A. Experimental conditions.

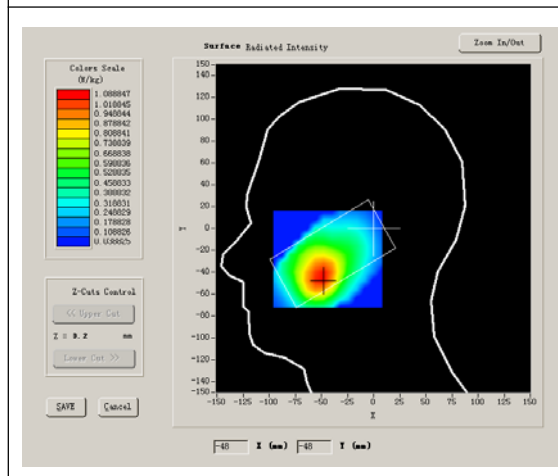
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA1900
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

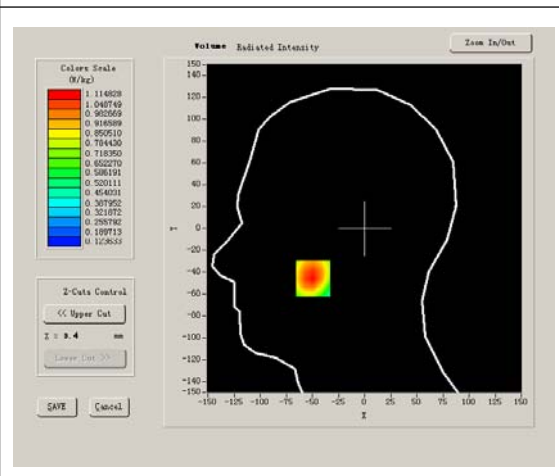
Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.275617
Relative permittivity	13.230000
Conductivity (S/m)	1.415831
Power drift (%)	0.280000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



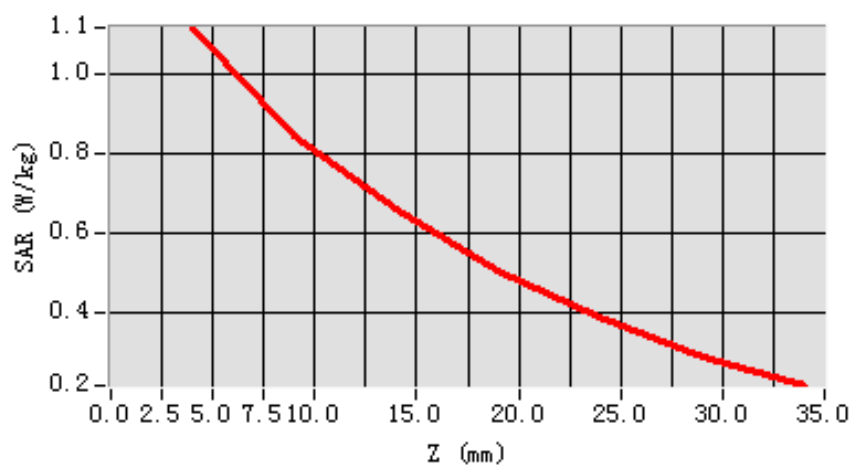
Maximum location: X=-49.00, Y=-46.00

SAR 10g (W/Kg)	0.765679
SAR 1g (W/Kg)	0.969074

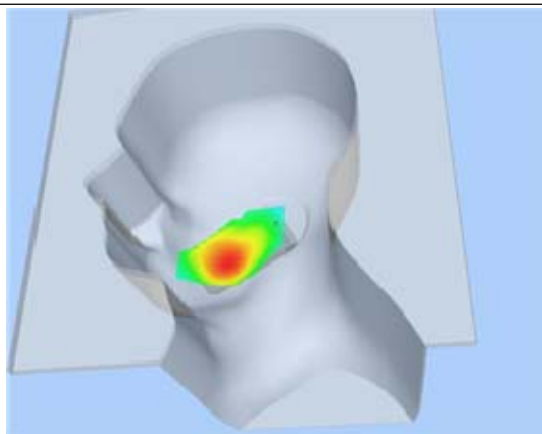
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0848	0.8454	0.6621	0.5096	0.3931	0.2931

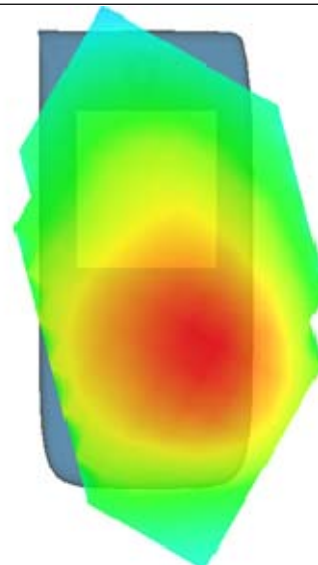
SAR, Z Axis Scan (X = -49, Y = -46)



3D scene shot



Hot spot position



MEASUREMENT 39

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 9 seconds

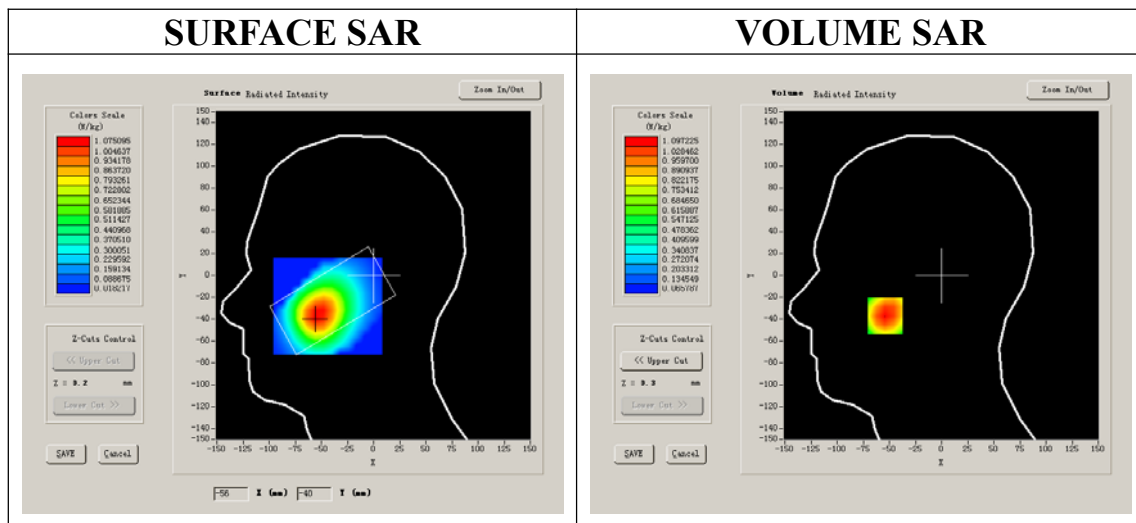
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.600000
Relative permittivity (real part)	41.275617
Relative permittivity	13.230000
Conductivity (S/m)	1.415831
Power drift (%)	0.280000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



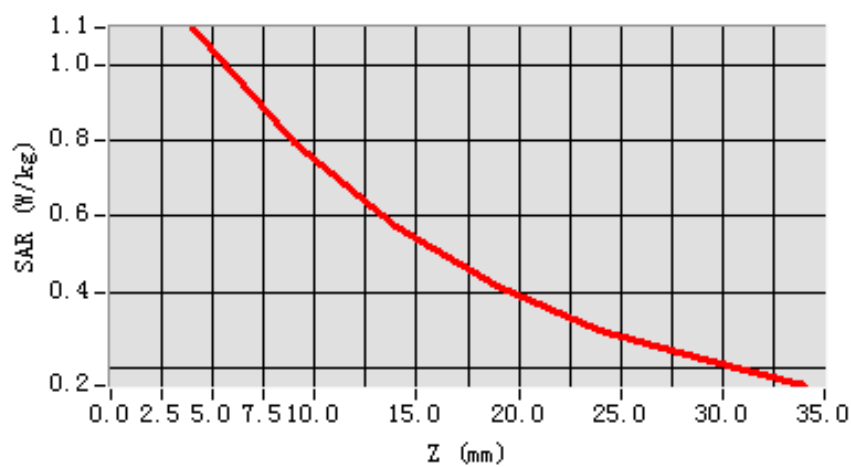
Maximum location: X=-54.00, Y=-37.00

SAR 10g (W/Kg)	0.720406
SAR 1g (W/Kg)	0.950231

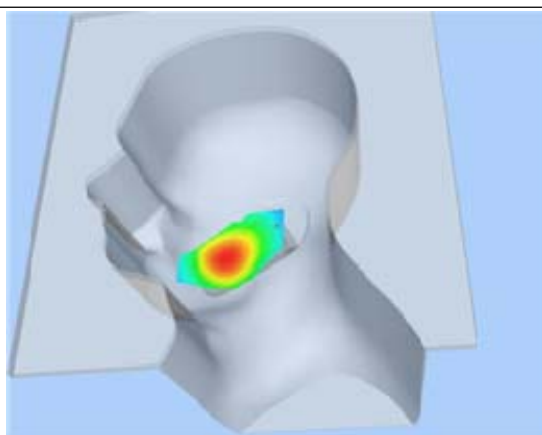
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0672	0.7933	0.5733	0.4162	0.3007	0.2217

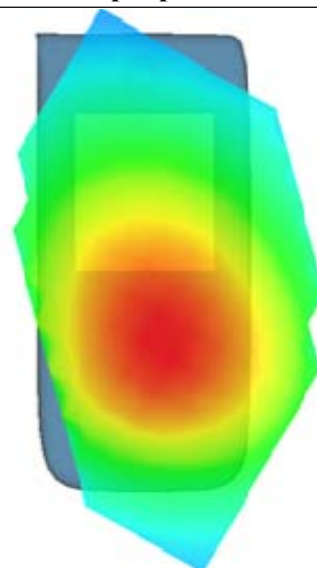
SAR, Z Axis Scan (X = -54, Y = -37)



3D scene shot



Hot spot position



MEASUREMENT 40

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 28 seconds

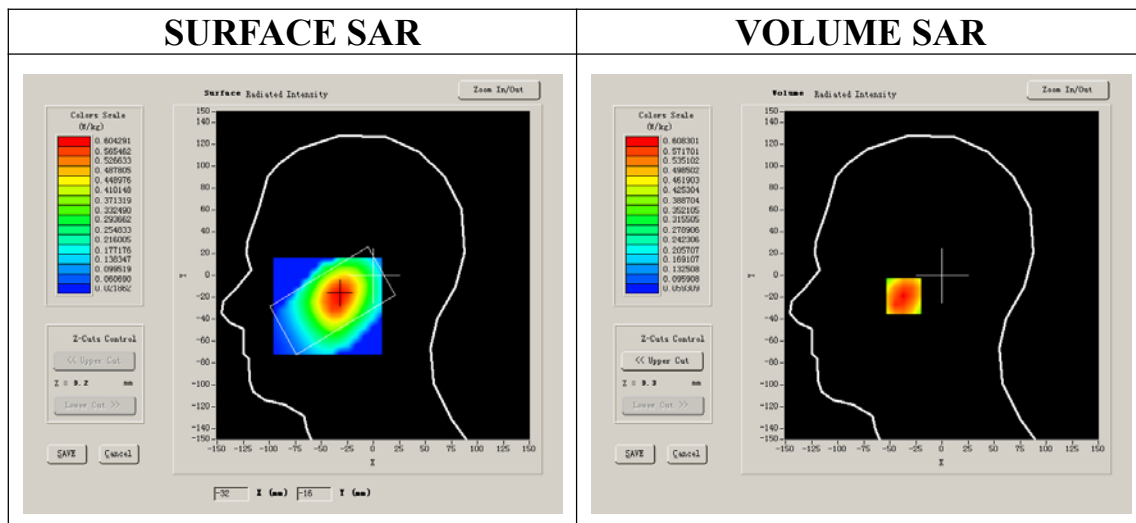
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	WCDMA1900
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.400000
Relative permittivity (real part)	41.275617
Relative permittivity	13.230000
Conductivity (S/m)	1.415831
Power drift (%)	0.160000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



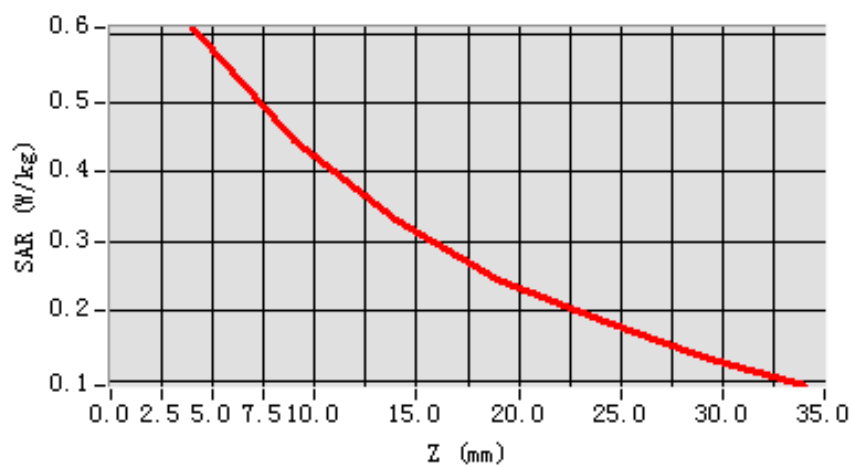
Maximum location: X=-33.00, Y=-19.00

SAR 10g (W/Kg)	0.409781
SAR 1g (W/Kg)	0.581118

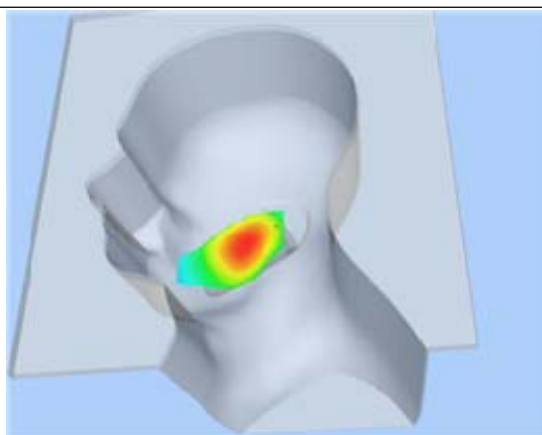
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6083	0.4455	0.3312	0.2455	0.1873	0.1350

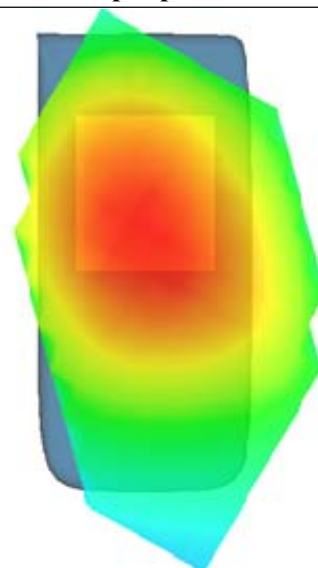
SAR, Z Axis Scan (X = -33, Y = -19)



3D scene shot



Hot spot position



MEASUREMENT 41

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 7 seconds

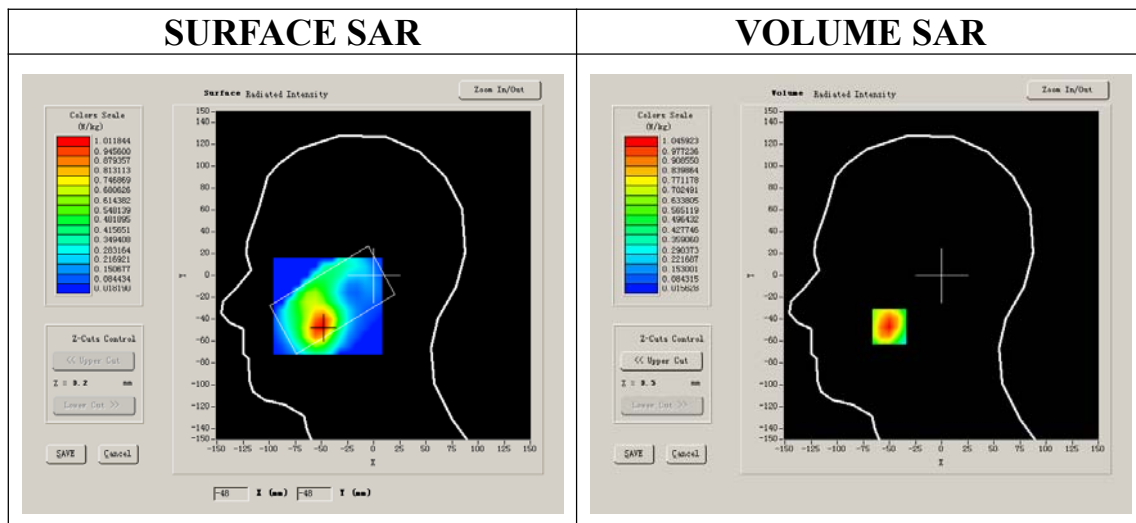
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA1900
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.400000
Relative permittivity (real part)	41.275617
Relative permittivity	13.230000
Conductivity (S/m)	1.415831
Power drift (%)	-0.500000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



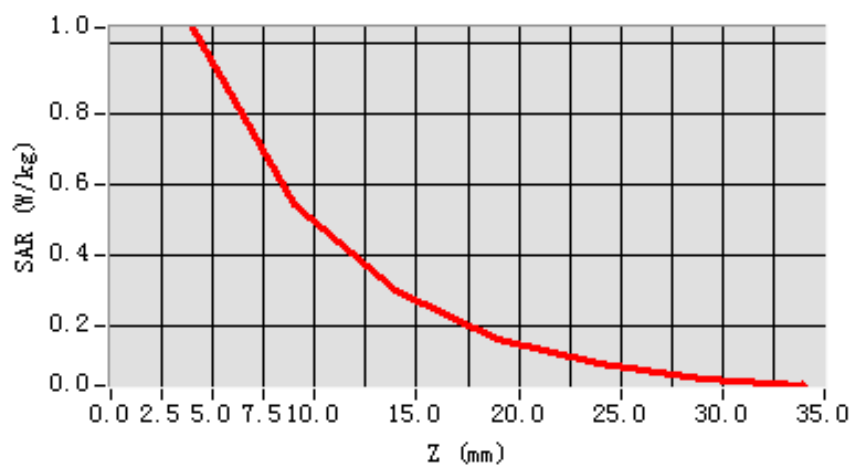
Maximum location: X=-50.00, Y=-47.00

SAR 10g (W/Kg)	0.532367
SAR 1g (W/Kg)	0.989122

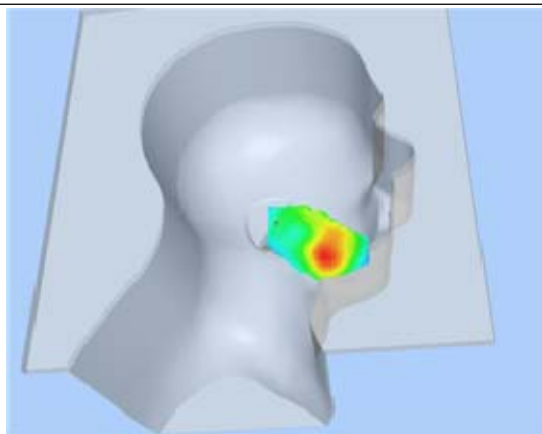
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0459	0.5430	0.3008	0.1636	0.0954	0.0542

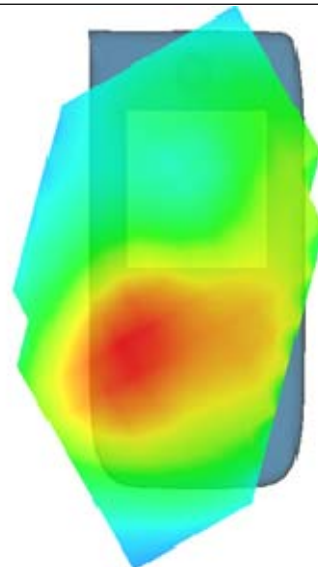
SAR, Z Axis Scan (X = -50, Y = -47)



3D scene shot



Hot spot position



MEASUREMENT 42

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 7 seconds

A. Experimental conditions.

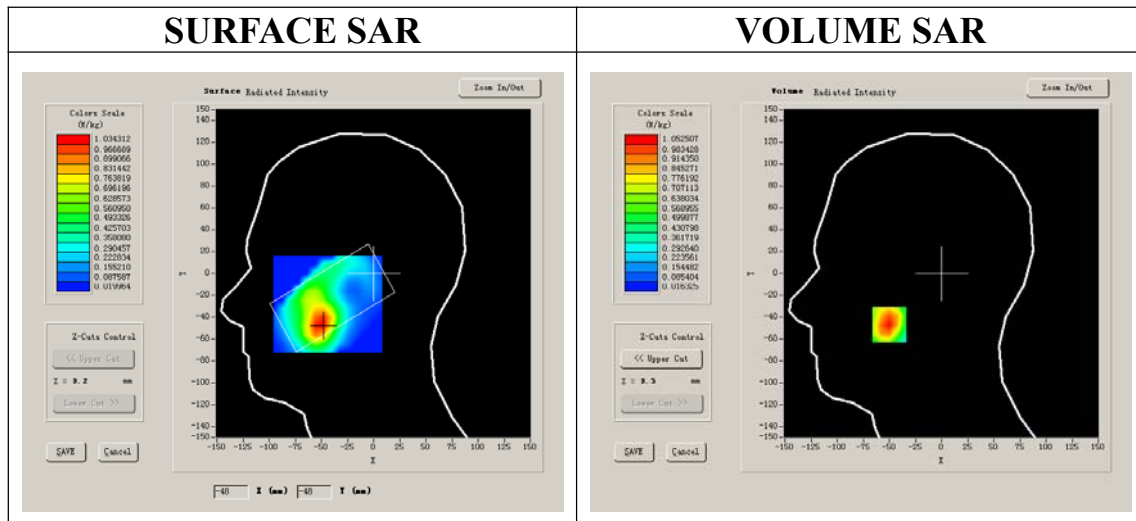
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA1900
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

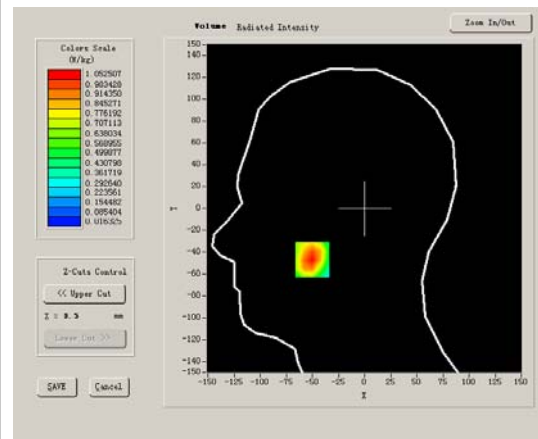
Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.275617
Relative permittivity	13.230000
Conductivity (S/m)	1.415831
Power drift (%)	-0.500000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



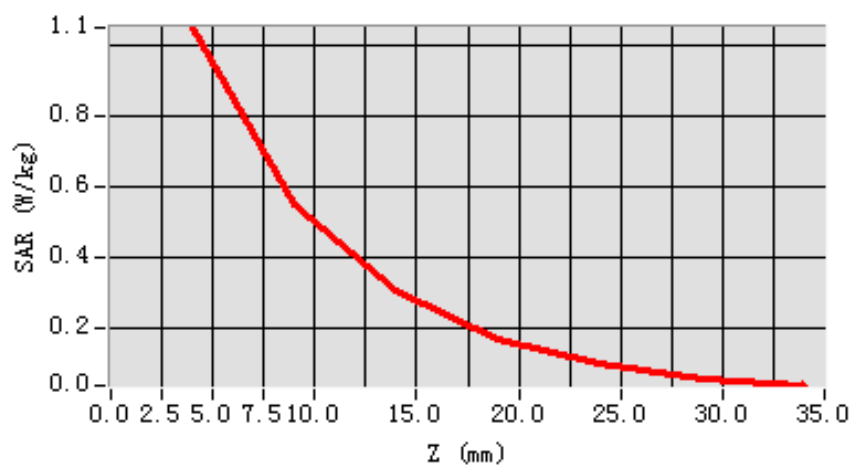
Maximum location: X=-50.00, Y=-47.00

SAR 10g (W/Kg)	0.538020
SAR 1g (W/Kg)	0.997506

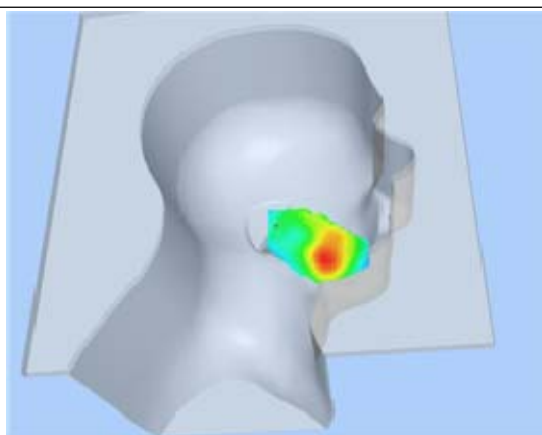
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0525	0.5497	0.3058	0.1682	0.0977	0.0542

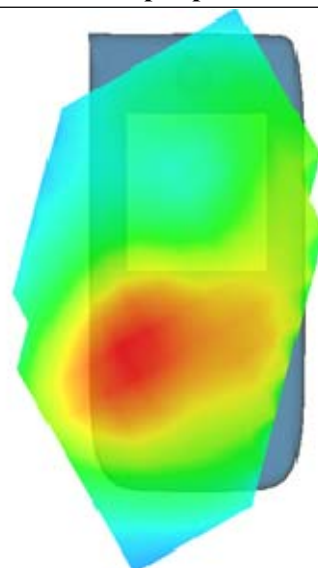
SAR, Z Axis Scan (X = -50, Y = -47)



3D scene shot



Hot spot position



MEASUREMENT 43

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 7 seconds

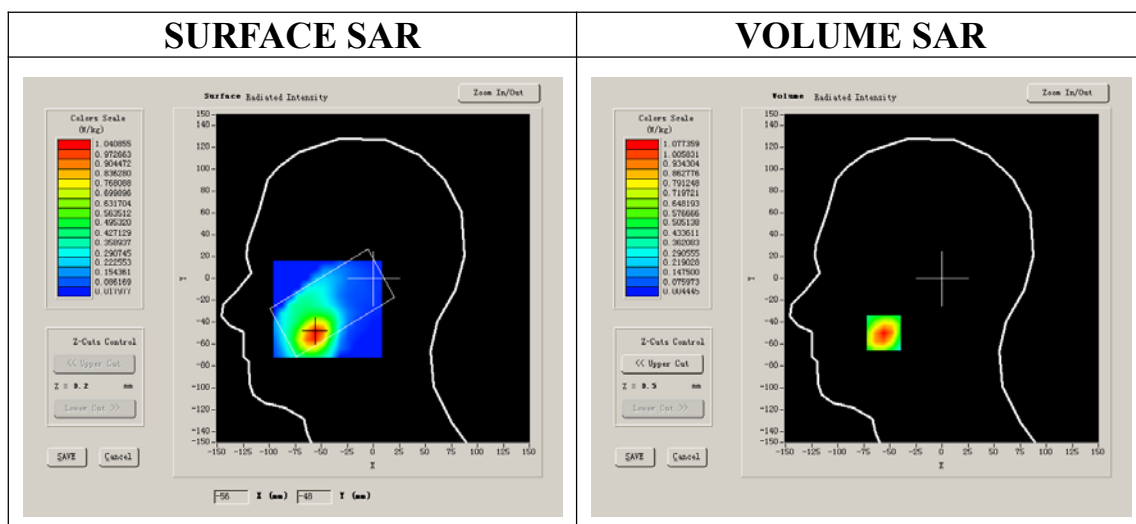
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA1900
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 9538):

Frequency (MHz)	1907.600000
Relative permittivity (real part)	41.275617
Relative permittivity	13.230000
Conductivity (S/m)	1.415831
Power drift (%)	-0.500000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



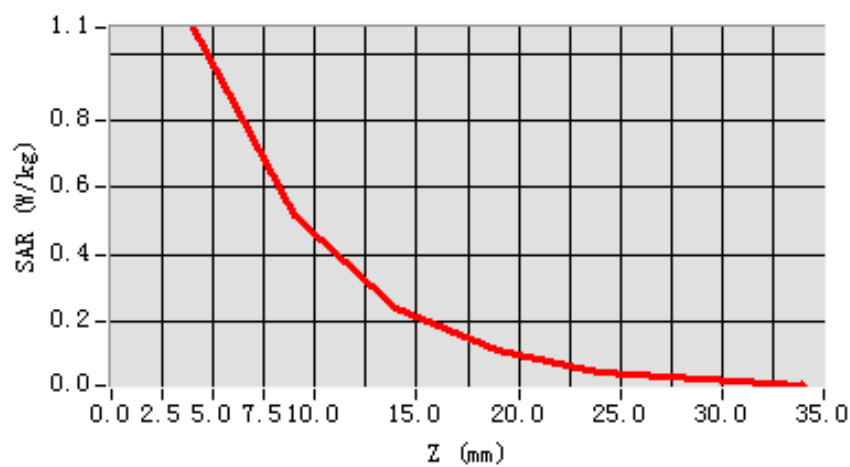
Maximum location: X=-56.00, Y=-50.00

SAR 10g (W/Kg)	0.503442
SAR 1g (W/Kg)	0.976870

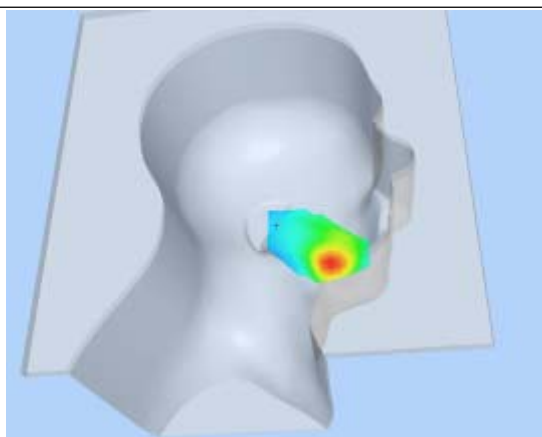
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0674	0.5170	0.2393	0.1141	0.0506	0.0325

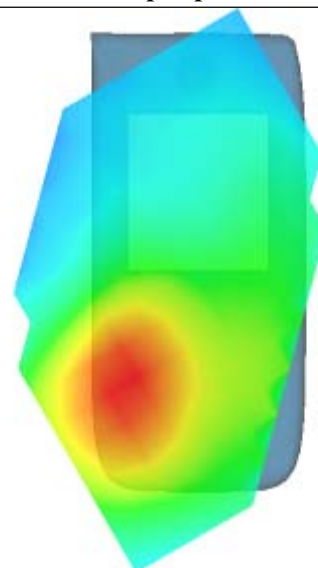
SAR, Z Axis Scan (X = -56, Y = -50)



3D sceen shot



Hot spot position



MEASUREMENT 44

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 7 minutes 30 seconds

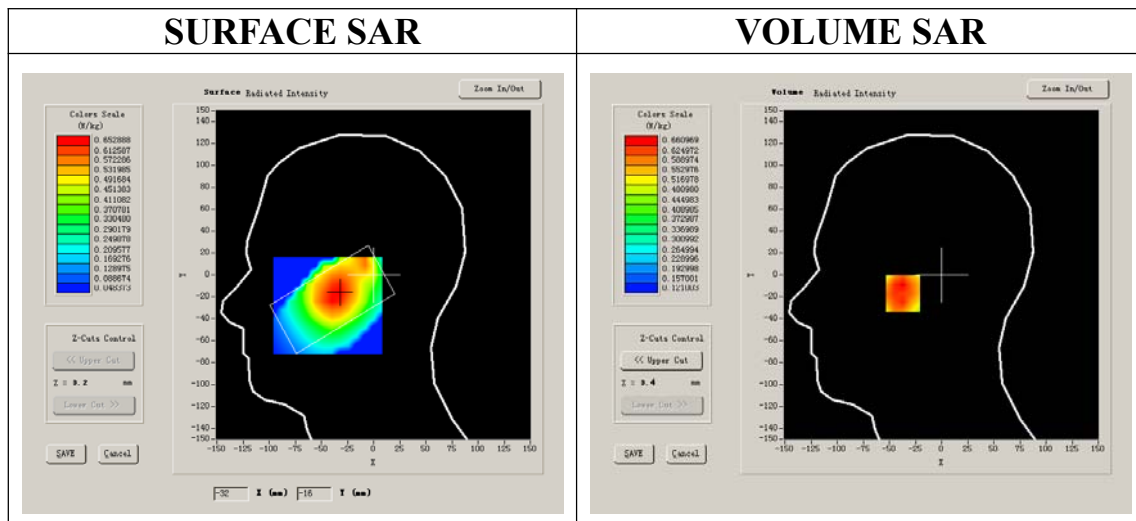
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	WCDMA1900
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.400000
Relative permittivity (real part)	41.275617
Relative permittivity	13.230000
Conductivity (S/m)	1.415831
Power drift (%)	0.190000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



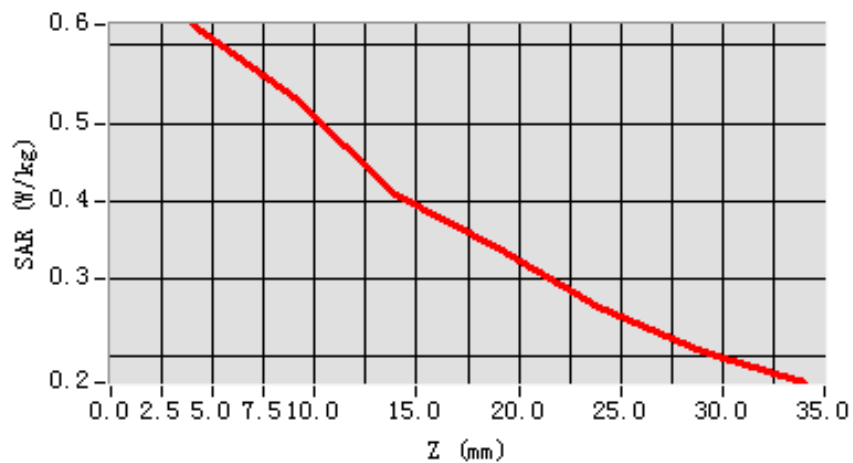
Maximum location: X=-34.00, Y=-17.00

SAR 10g (W/Kg)	0.482648
SAR 1g (W/Kg)	0.640831

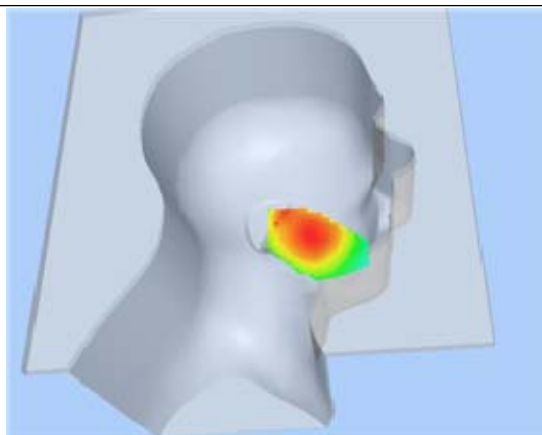
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6264	0.5326	0.4092	0.3399	0.2639	0.2060

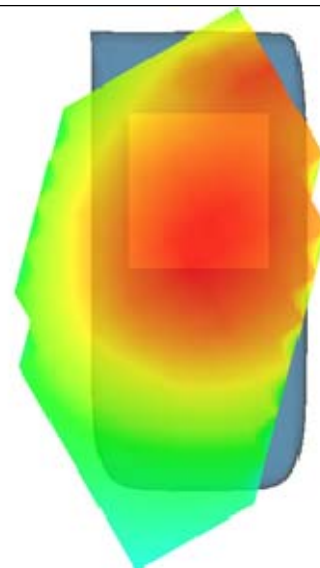
SAR, Z Axis Scan (X = -34, Y = -17)



3D scene shot



Hot spot position



MEASUREMENT 45

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

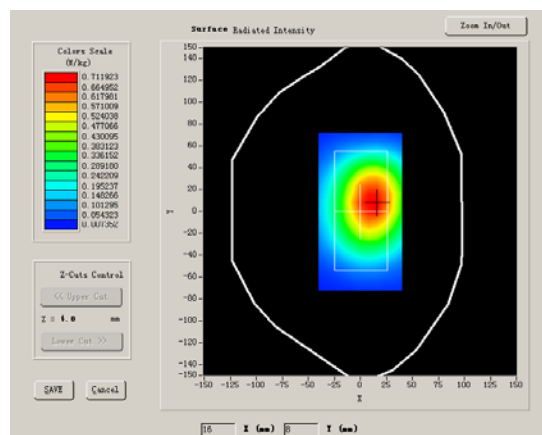
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA1900
Channels	Low
Signal	CDMA

B. SAR Measurement Results

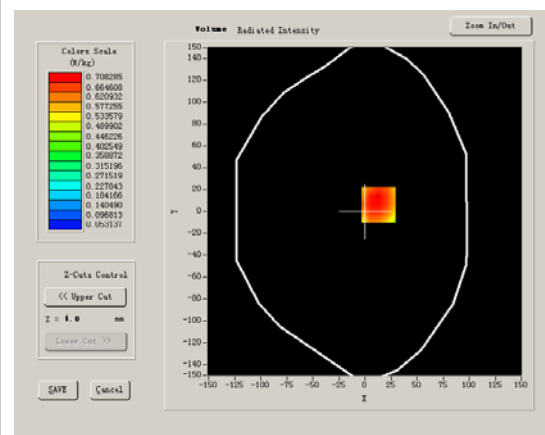
Lower Band SAR (Channel 9262):

Frequency (MHz)	1850.400000
Relative permittivity (real part)	53.623641
Relative permittivity	15.877050
Conductivity (S/m)	1.488263
Power drift (%)	0.060000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



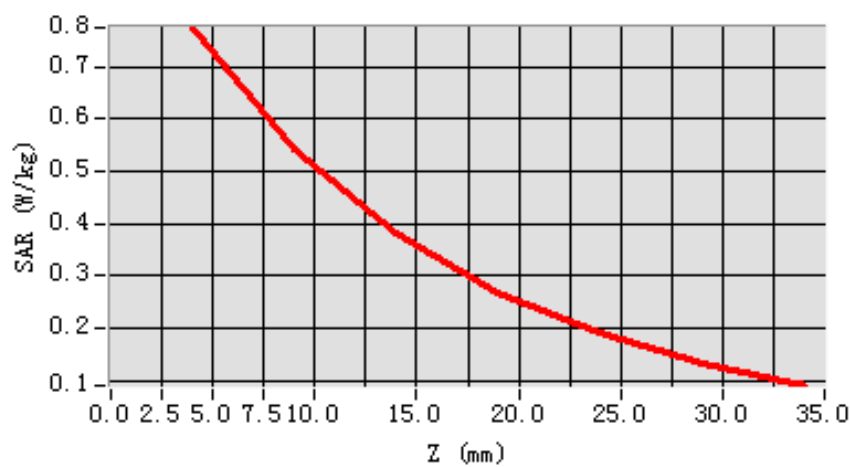
Maximum location: X=13.00, Y=6.00

SAR 10g (W/Kg)	0.502756
SAR 1g (W/Kg)	0.753016

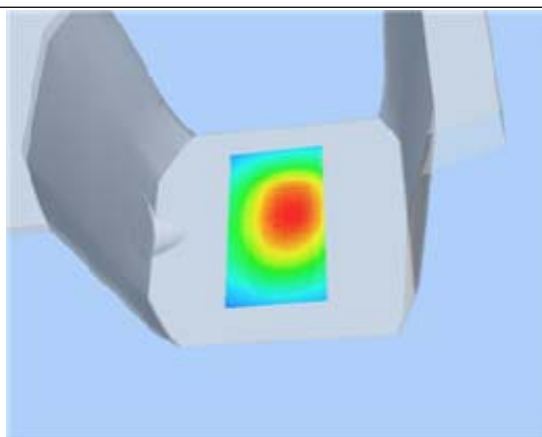
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7741	0.5425	0.3834	0.2668	0.1930	0.1334

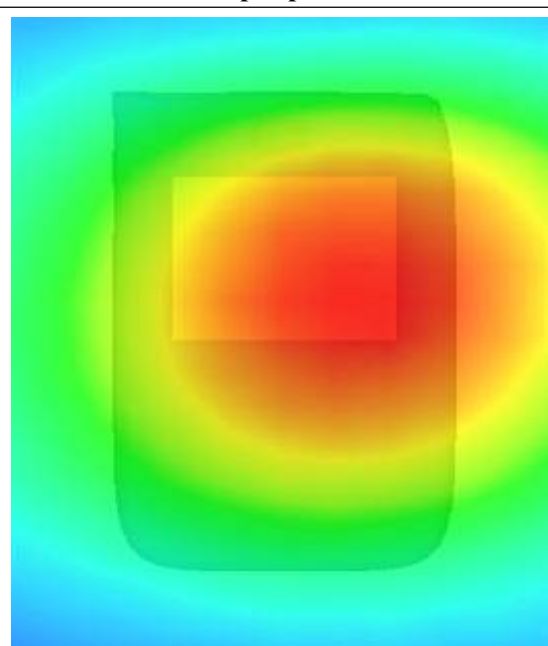
SAR, Z Axis Scan (X = 13, Y = 6)



3D scene shot



Hot spot position



MEASUREMENT 46

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 14 seconds

A. Experimental conditions.

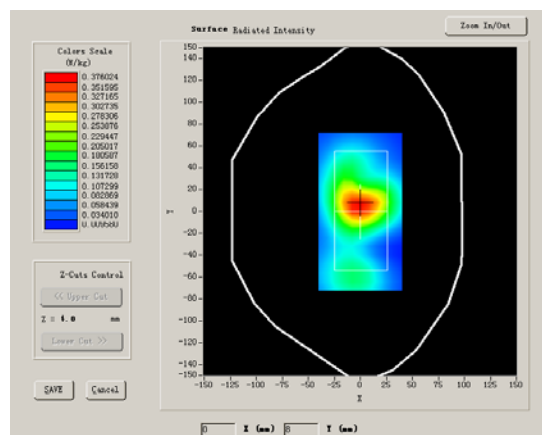
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA1900
Channels	Low
Signal	CDMA

B. SAR Measurement Results

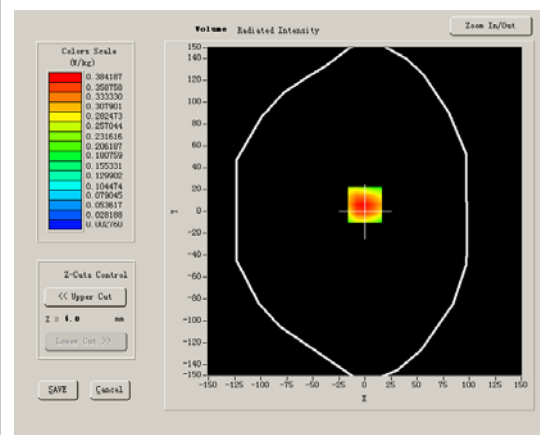
Lower Band SAR (Channel 9262):

Frequency (MHz)	1852.400000
Relative permittivity (real part)	53.623641
Relative permittivity	15.877050
Conductivity (S/m)	1.488263
Power drift (%)	0.080000
Ambient Temperature:	22.6°C
Liquid Temperature:	22.7°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



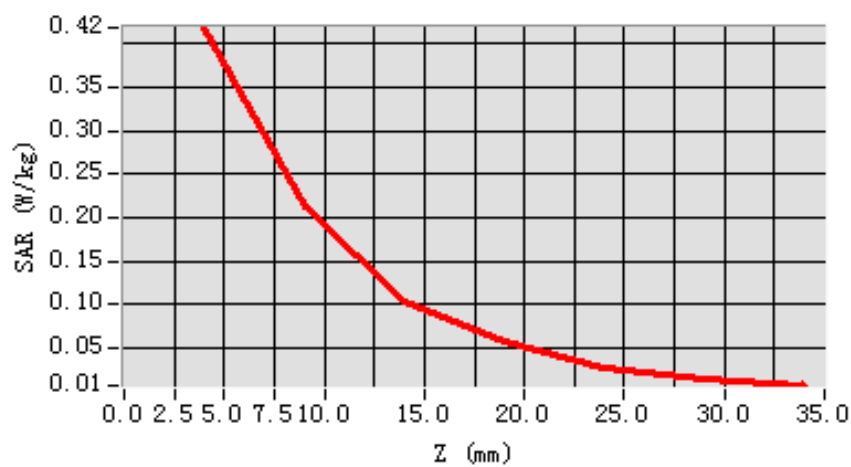
Maximum location: X=0.00, Y=6.00

SAR 10g (W/Kg)	0.218696
SAR 1g (W/Kg)	0.406177

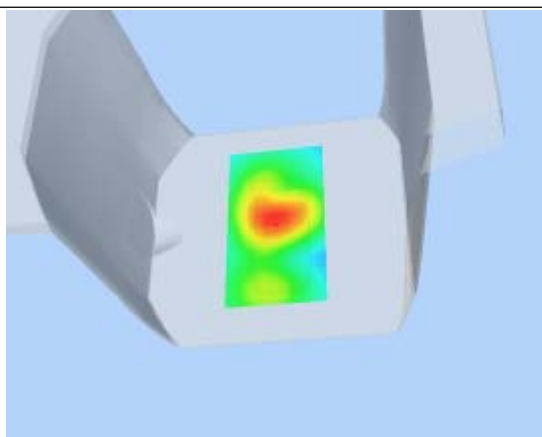
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4183	0.2127	0.1029	0.0574	0.0287	0.0140

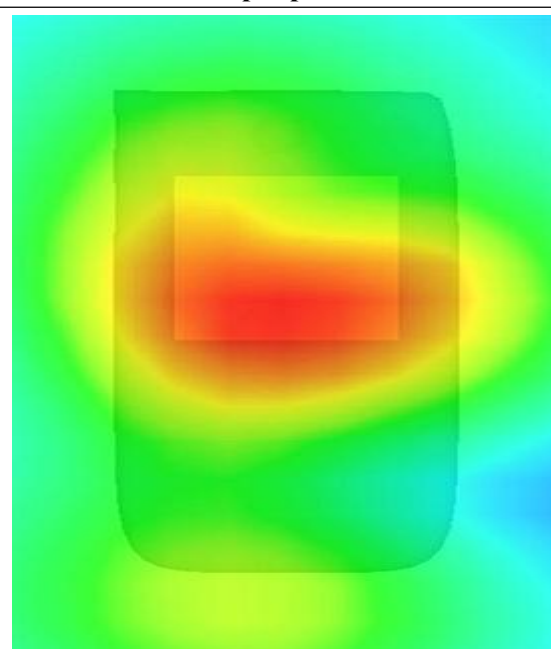
SAR, Z Axis Scan (X = 0, Y = 6)



3D scene shot



Hot spot position



MEASUREMENT 47

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 17 seconds

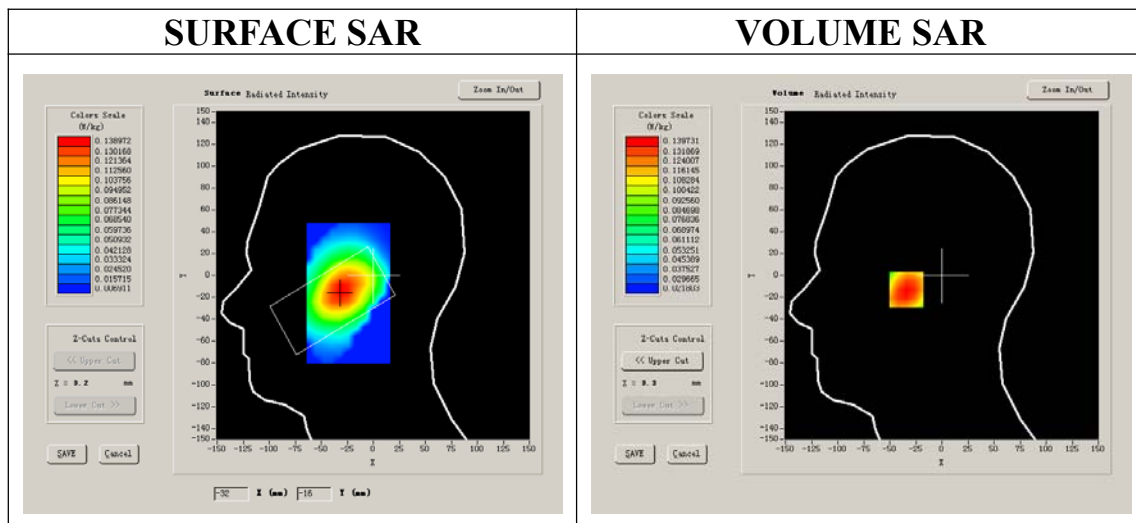
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Right head
Device Position	Cheek
Band	802.11B
Channels	High
Signal	DSSS

B. SAR Measurement Results

Higher Band SAR (Channel 11)

Frequency (MHz)	2462.000000
Relative permittivity (real part)	40.153896
Relative permittivity	12.991650
Conductivity (S/m)	1.794313
Power drift (%)	-0.430000
Ambient Temperature:	22.3°C
Liquid Temperature:	21.5°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



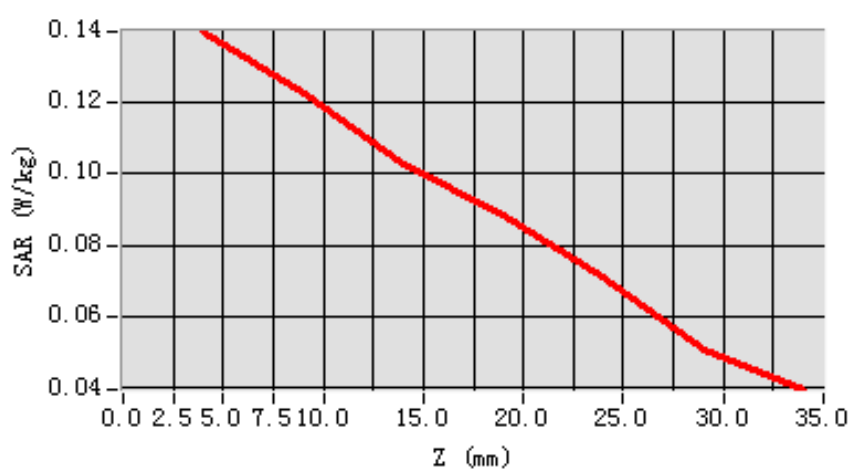
Maximum location: X=-30.00, Y=-13.00

SAR 10g (W/Kg)	0.110815
SAR 1g (W/Kg)	0.137899

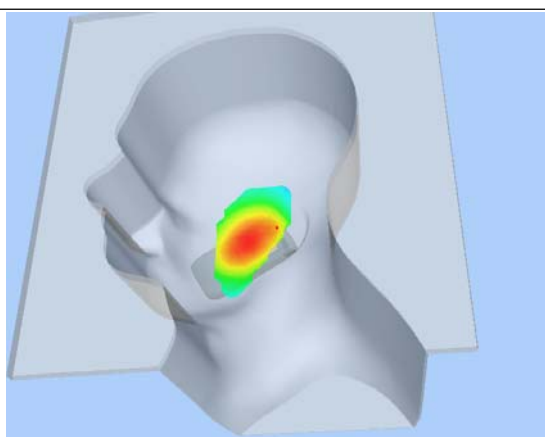
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1397	0.1223	0.1027	0.0886	0.0712	0.0508

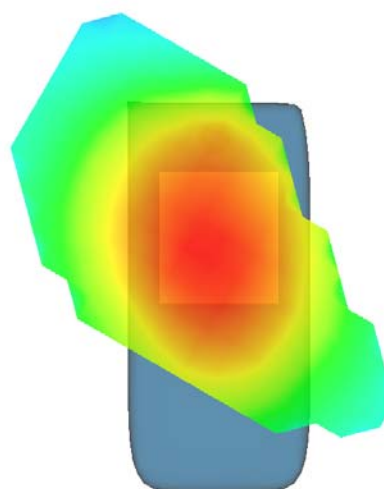
SAR, Z Axis Scan (X = -30, Y = -13)



3D scene shot



Hot spot position



MEASUREMENT 48

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 15 seconds

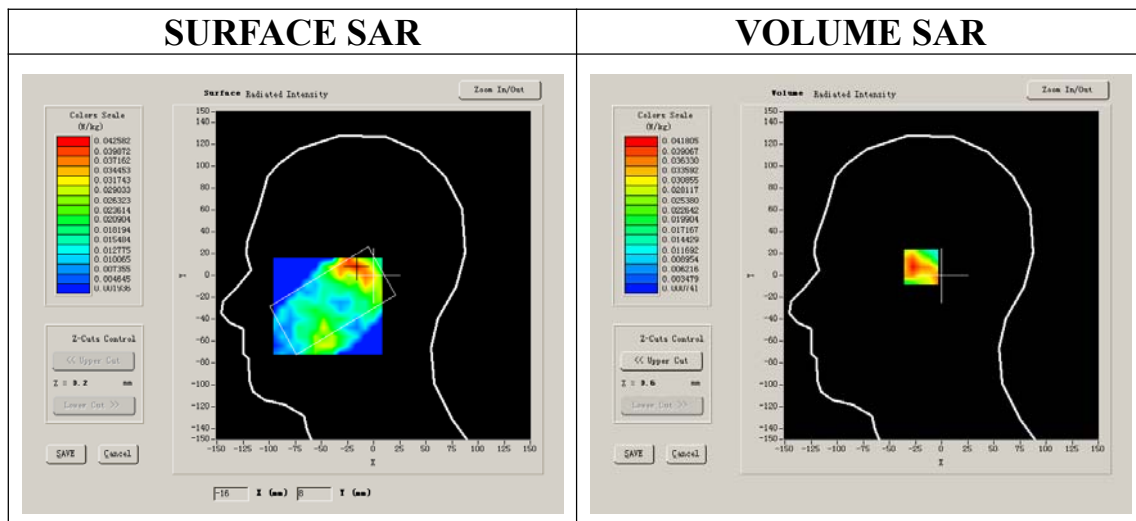
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Right head
Device Position	Tilt
Band	802.11B
Channels	High
Signal	DSSS

B. SAR Measurement Results

Higher Band SAR (Channel 11)

Frequency (MHz)	2462.000000
Relative permittivity (real part)	40.153896
Relative permittivity	12.991650
Conductivity (S/m)	1.794313
Power drift (%)	-0.630000
Ambient Temperature:	22.3°C
Liquid Temperature:	21.5°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1



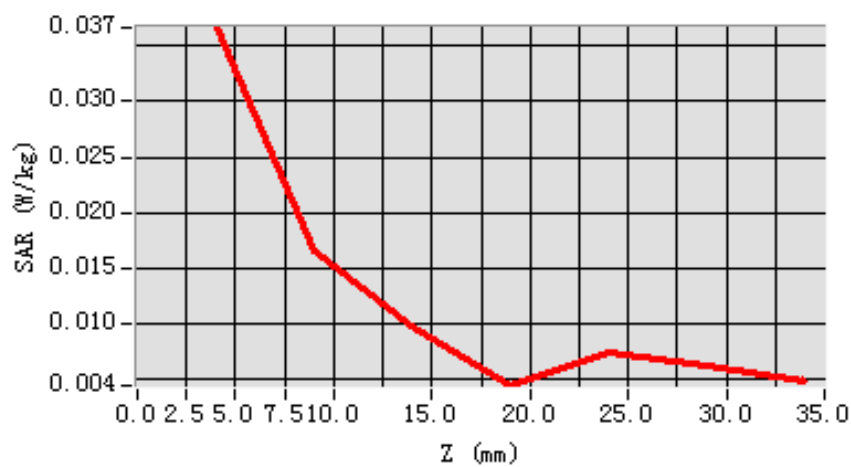
Maximum location: X=-16.00, Y=8.00

SAR 10g (W/Kg)	0.021193
SAR 1g (W/Kg)	0.039778

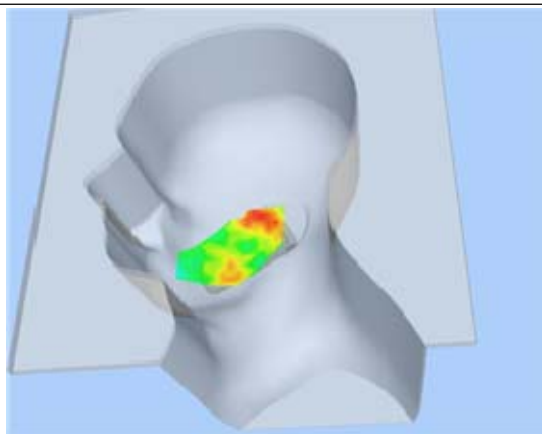
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0367	0.0166	0.0097	0.0044	0.0074	0.0061

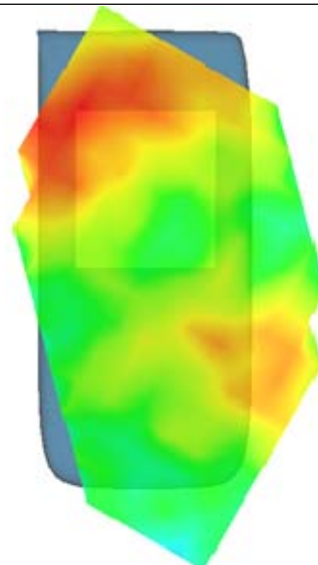
SAR, Z Axis Scan (X = -16, Y = 8)



3D sceen shot



Hot spot position



MEASUREMENT 49

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 17 seconds

A. Experimental conditions.

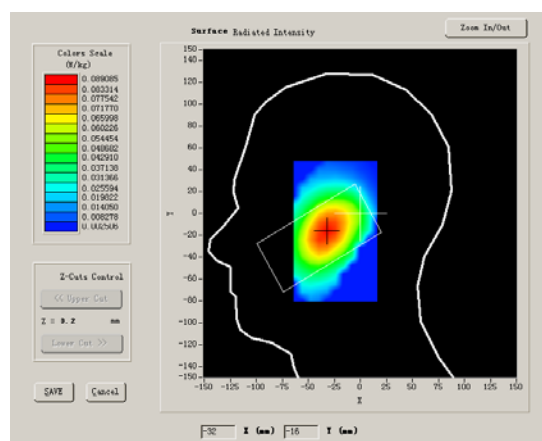
Phantom File	surf_sam_plan.txt
Phantom	Left head
Device Position	Cheek
Band	802.11B
Channels	High
Signal	DSSS

B. SAR Measurement Results

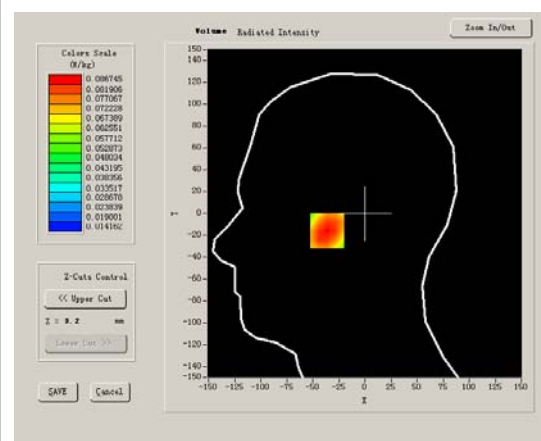
Higher Band SAR (Channel 11)

Frequency (MHz)	2462.000000
Relative permittivity (real part)	40.153896
Relative permittivity	12.991650
Conductivity (S/m)	1.794313
Power drift (%)	0.510000
Ambient Temperature:	22.3°C
Liquid Temperature:	21.5°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



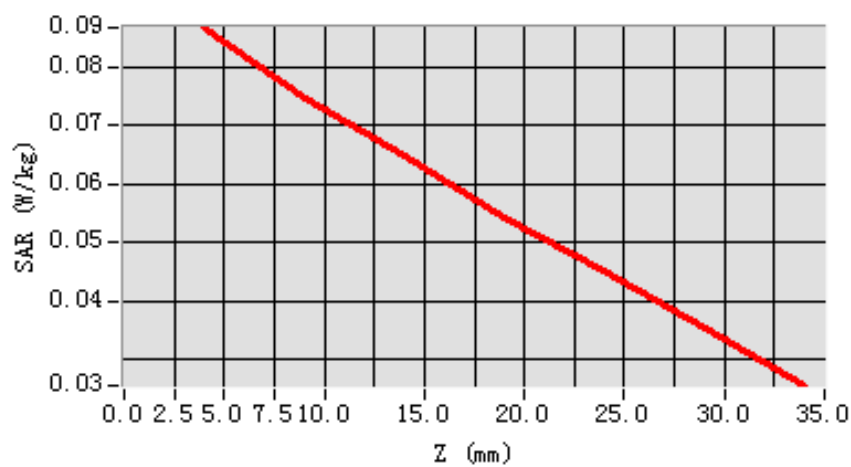
Maximum location: X=-32.00, Y=-16.00

SAR 10g (W/Kg)	0.068461
SAR 1g (W/Kg)	0.084536

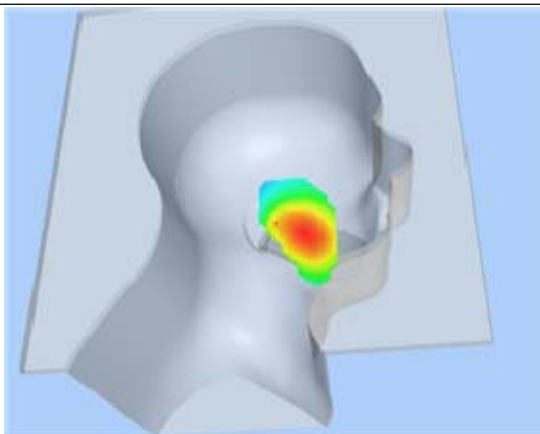
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0867	0.0748	0.0649	0.0542	0.0451	0.0352

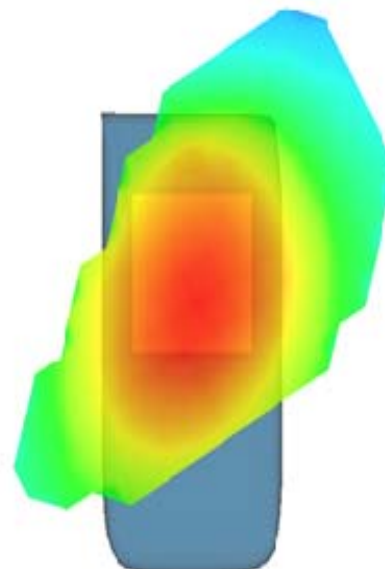
SAR, Z Axis Scan (X = -32, Y = -16)



3D scene shot



Hot spot position



MEASUREMENT 50

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 8 minutes 17 seconds

A. Experimental conditions.

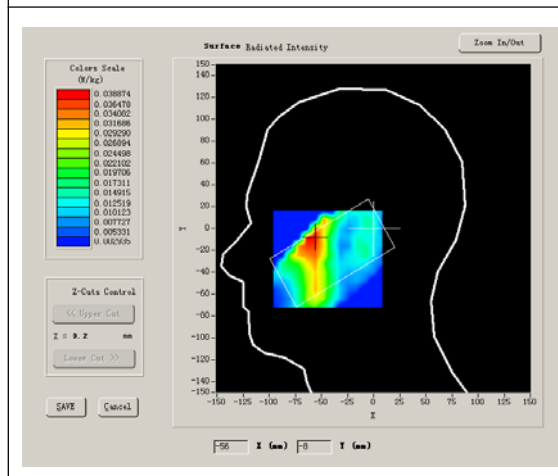
Phantom File	surf_sam_plan.txt
Phantom	Left head
Device Position	Tilt
Band	802.11B
Channels	High
Signal	DSSS

B. SAR Measurement Results

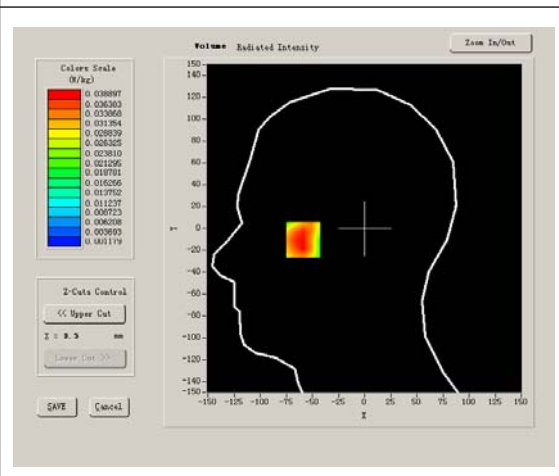
Higher Band SAR (Channel 11)

Frequency (MHz)	2462.000000
Relative permittivity (real part)	40.153896
Relative permittivity	12.991650
Conductivity (S/m)	1.794313
Power drift (%)	0.620000
Ambient Temperature:	22.3°C
Liquid Temperature:	21.5°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



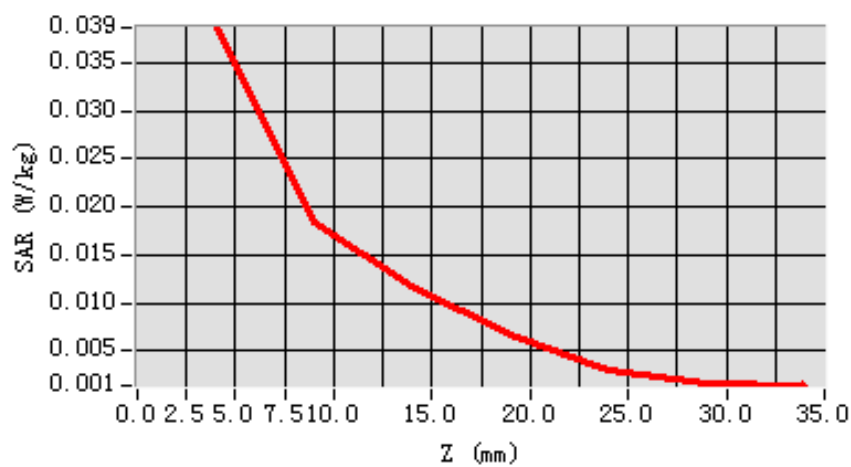
Maximum location: X=-59.00, Y=-8.00

SAR 10g (W/Kg)	0.020917
SAR 1g (W/Kg)	0.038799

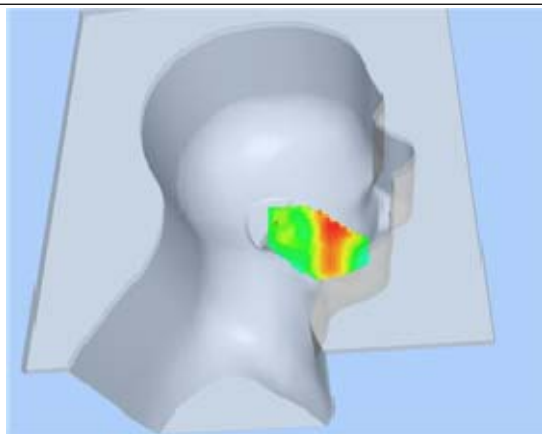
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0387	0.0184	0.0117	0.0067	0.0030	0.0016

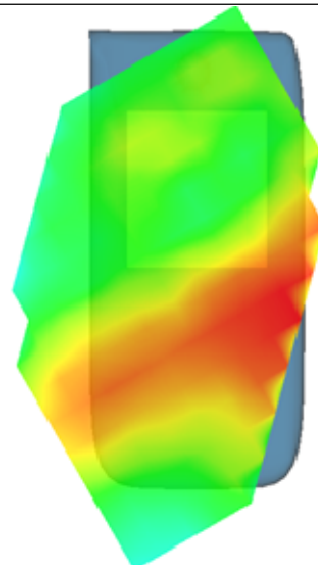
SAR, Z Axis Scan (X = -59, Y = -8)



3D scene shot



Hot spot position



MEASUREMENT 51

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

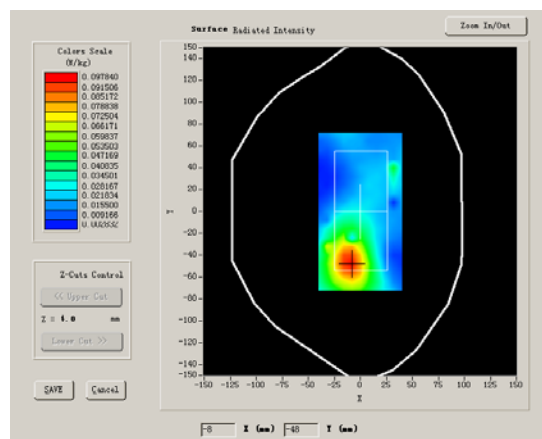
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11B
Channels	High
Signal	DSSS

B. SAR Measurement Results

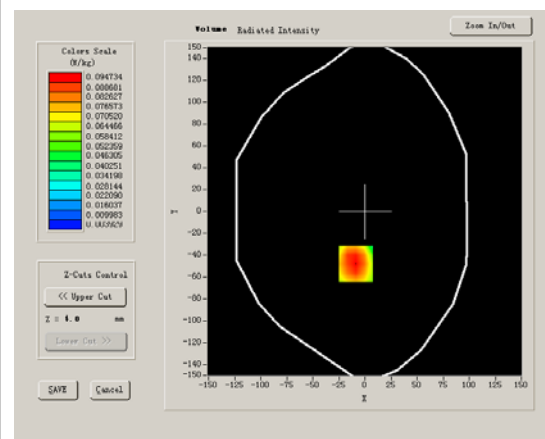
Higher Band SAR (Channel 11)

Frequency (MHz)	2462.000000
Relative permittivity (real part)	53.149069
Relative permittivity	12.991650
Conductivity (S/m)	1.882476
Power drift (%)	-1.710000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.8°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



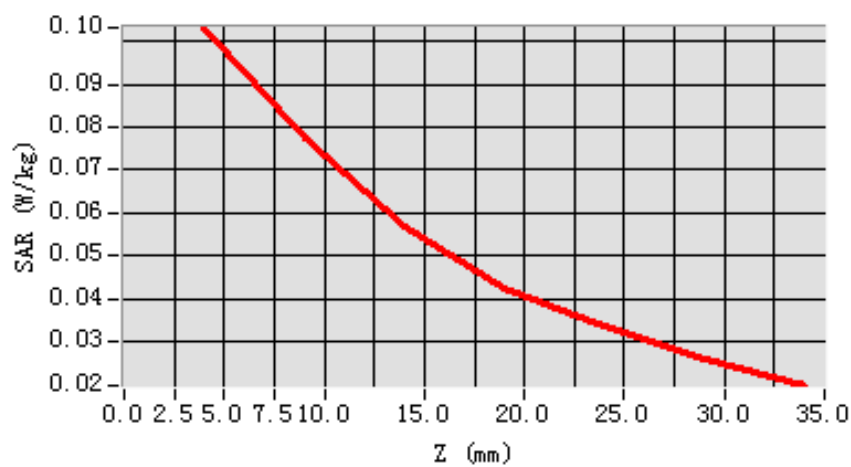
Maximum location: X=-9.00, Y=-48.00

SAR 10g (W/Kg)	0.068440
SAR 1g (W/Kg)	0.098294

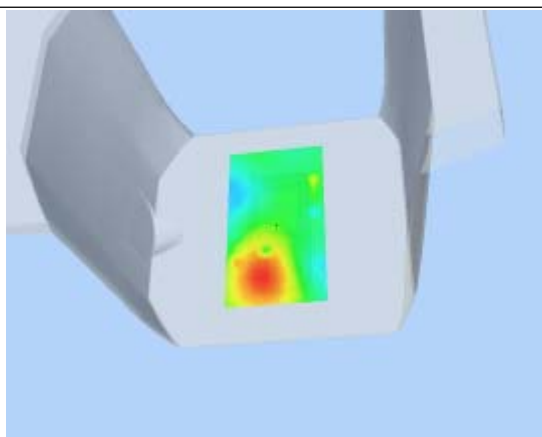
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1032	0.0773	0.0568	0.0424	0.0337	0.0260

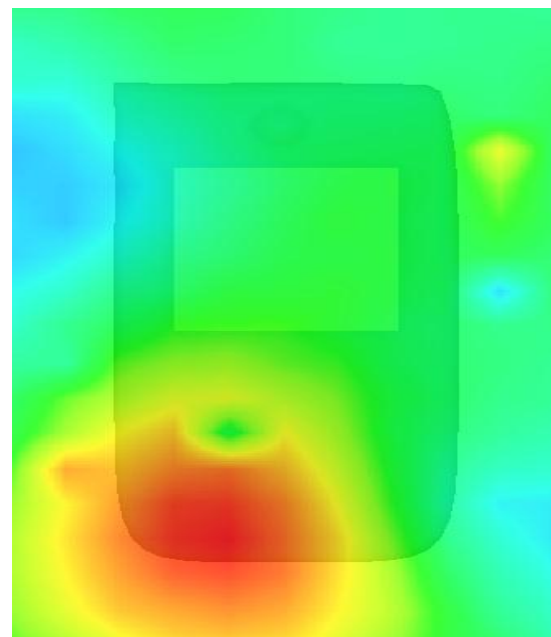
SAR, Z Axis Scan (X = -9, Y = -48)



3D scene shot



Hot spot position



MEASUREMENT 52

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

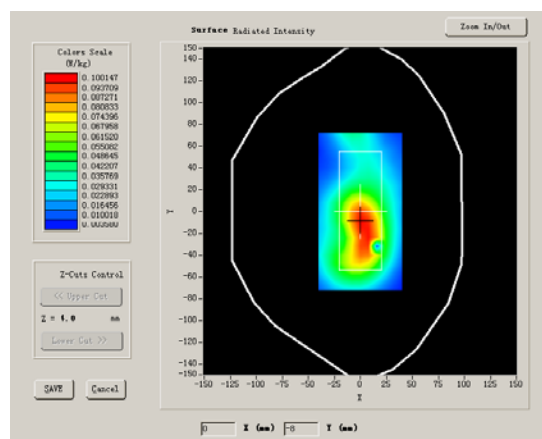
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	802.11B
Channels	High
Signal	DSSS

B. SAR Measurement Results

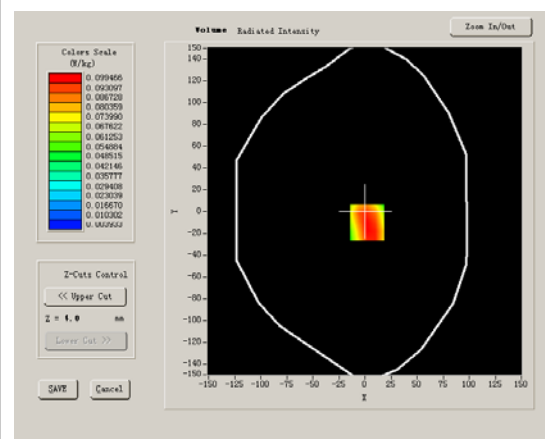
Higher Band SAR (Channel 11)

Frequency (MHz)	2462.000000
Relative permittivity (real part)	53.149069
Relative permittivity	12.991650
Conductivity (S/m)	1.882476
Power drift (%)	-1.520000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.8°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



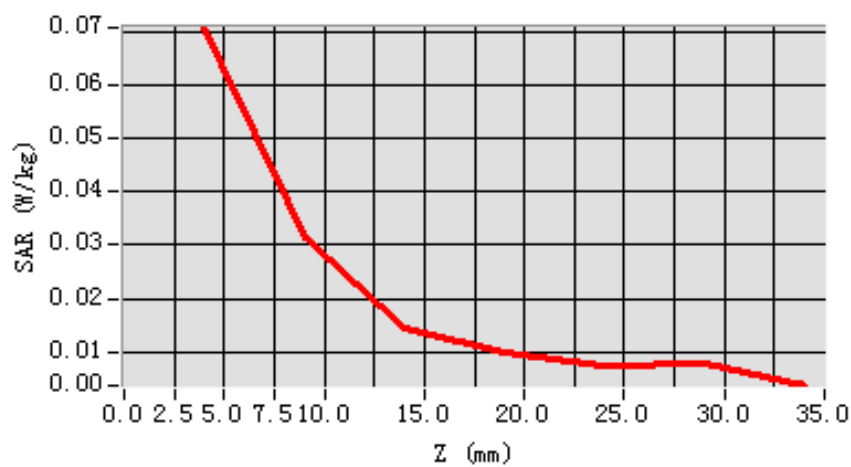
Maximum location: X=-8.00, Y=-1.00

SAR 10g (W/Kg)	0.039495
SAR 1g (W/Kg)	0.072247

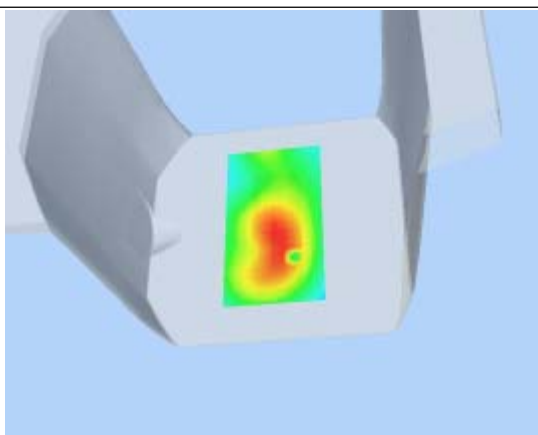
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0706	0.0314	0.0146	0.0099	0.0073	0.0078

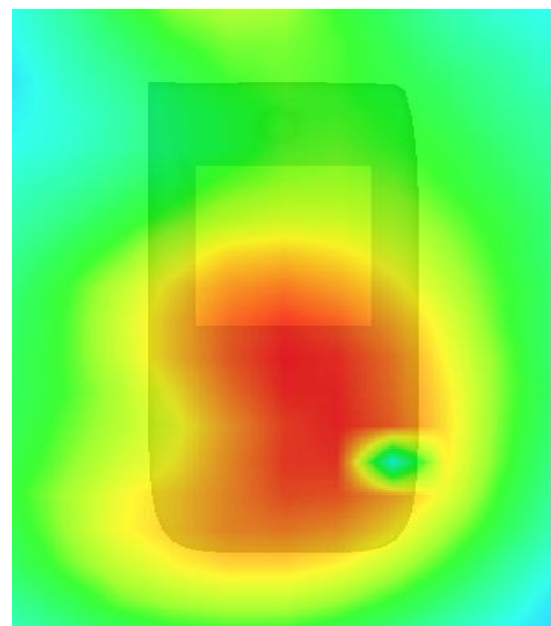
SAR, Z Axis Scan (X = -8, Y = -1)



3D scene shot



Hot spot position



System Performance Check Data(Head)

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

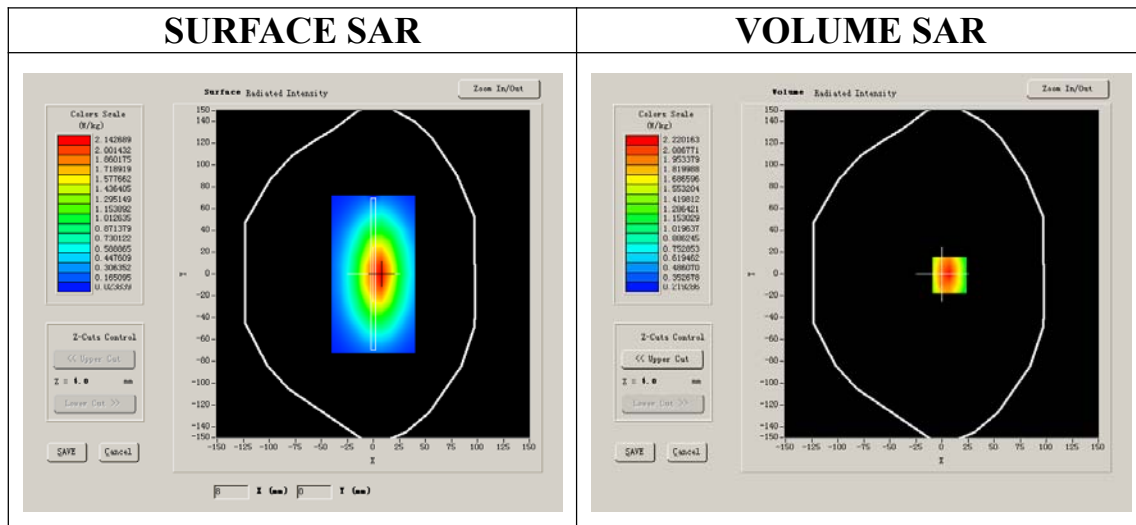
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	835MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.324182
Relative permittivity	15.070000
Conductivity (S/m)	0.893241
Power drift (%)	-0.310000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.5°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

SURFACE SAR



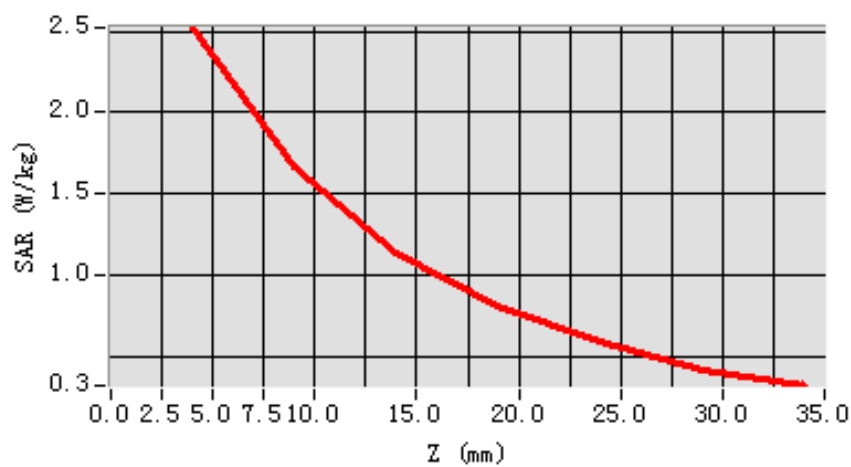
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.539476
SAR 1g (W/Kg)	2.385979

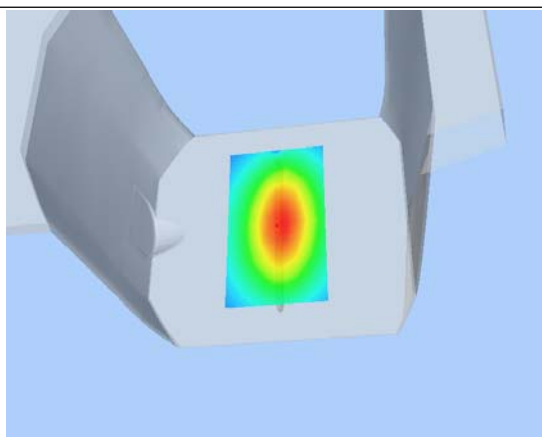
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.5209	1.6629	1.1437	0.8075	0.5889	0.4143

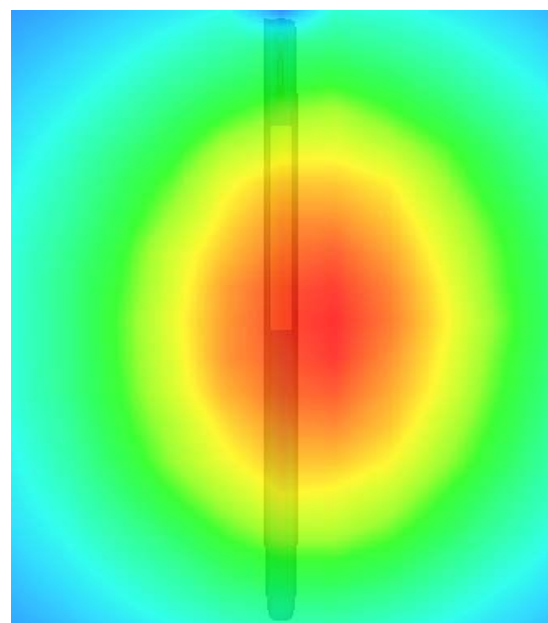
SAR, Z Axis Scan (X = 7, Y = -1)



3D scene 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: 2/11/2012

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

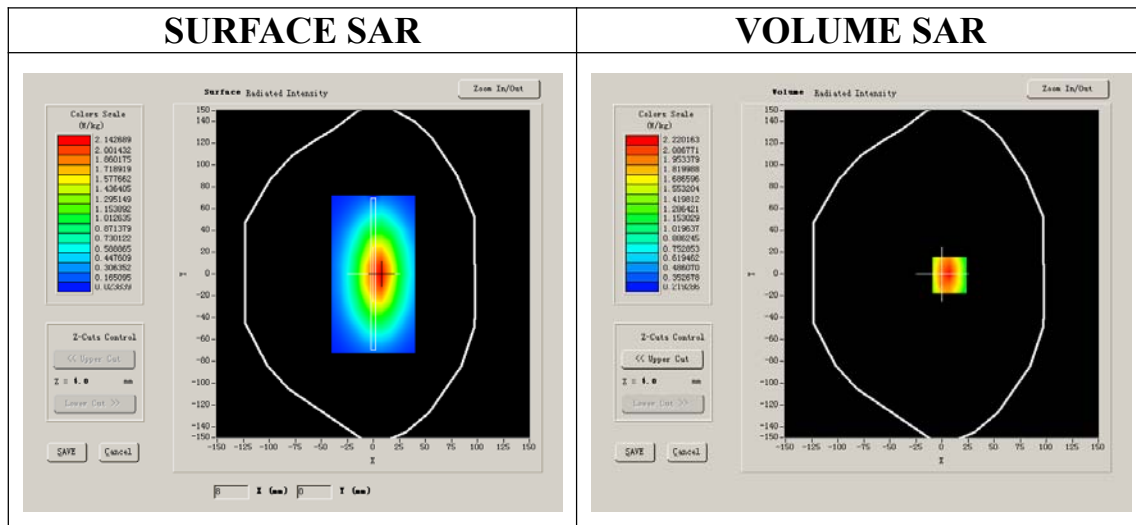
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	835MHz
Channels	
Signal	CW

B. SAR Measurement Results

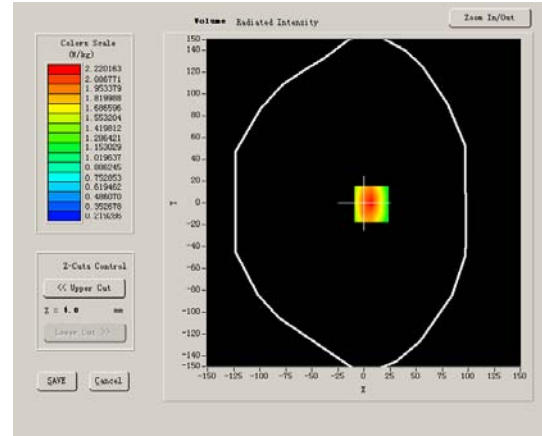
Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	53.683123
Relative permittivity	21.709999
Conductivity (S/m)	0.9427142
Power drift (%)	-0.170000
Ambient Temperature:	22.4°C
Liquid Temperature:	21.5°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



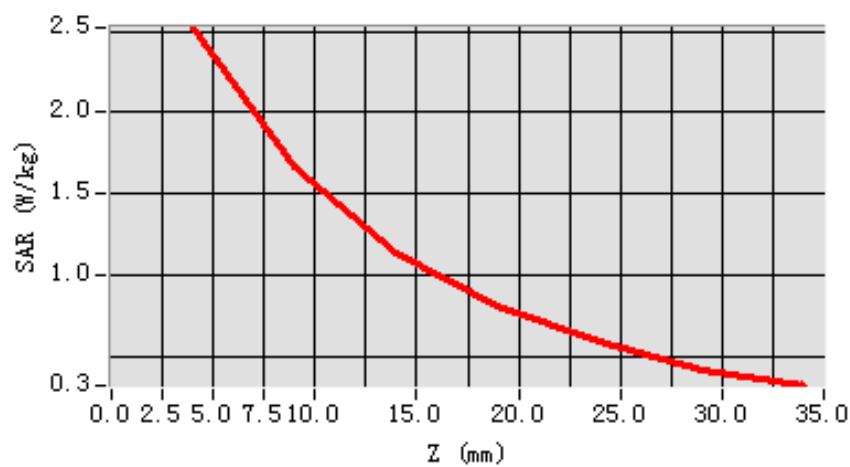
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.497122
SAR 1g (W/Kg)	2.379818

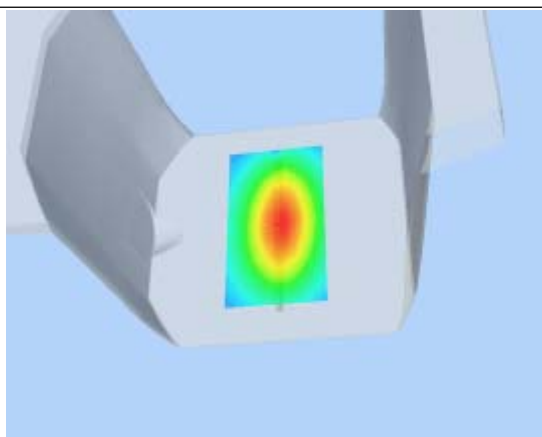
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	2.5209	1.6629	1.1437	0.8075	0.5889	0.4143

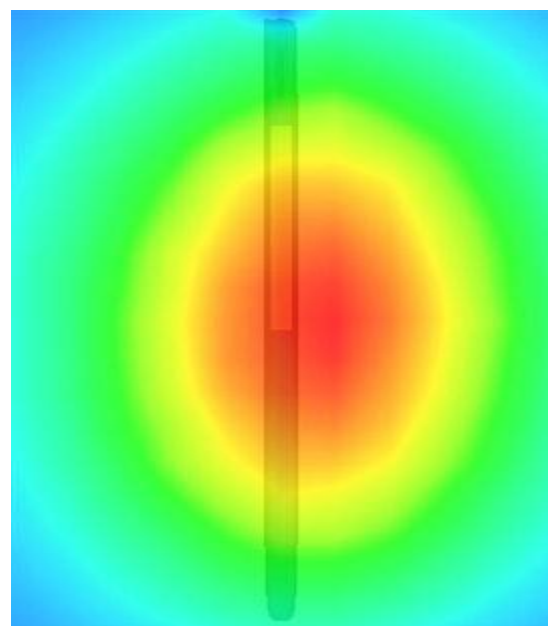
SAR, Z Axis Scan (X = 7, Y = -1)



3D scene shot



Hot spot position



System Performance Check Data(Head)

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

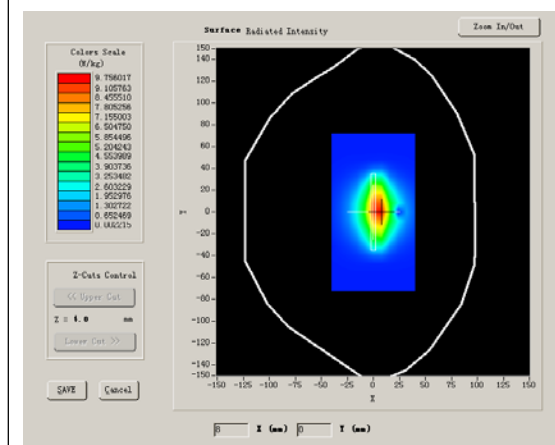
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	1900MHz
Channels	
Signal	CW

B. SAR Measurement Results

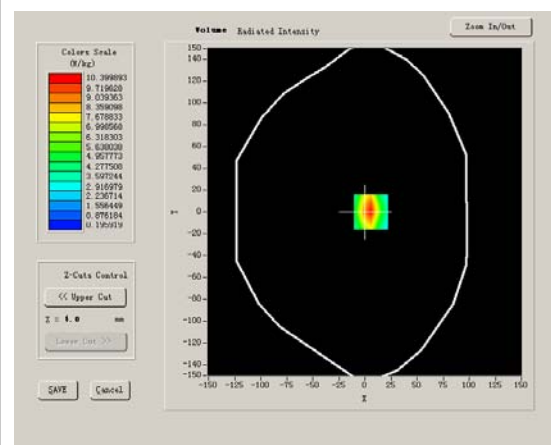
Band SAR

Frequency (MHz)	1900.000000
Relative permittivity (real part)	41.275617
Relative permittivity	15.070000
Conductivity (S/m)	1.415831
Power drift (%)	-0.140000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



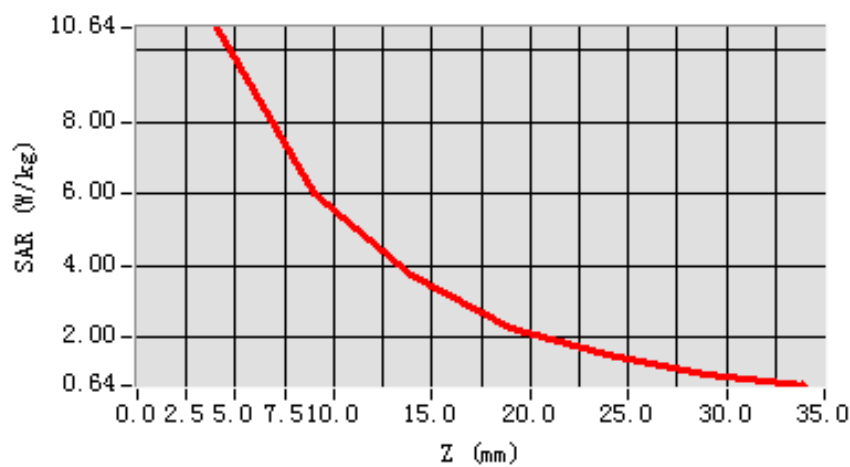
Maximum location: X=6.00, Y=0.00

SAR 10g (W/Kg)	6.145210
SAR 1g (W/Kg)	9.790543

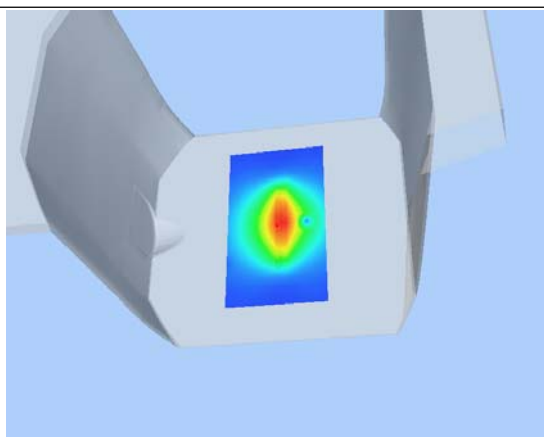
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.6419	6.0043	3.7297	2.2606	1.5119	0.9792

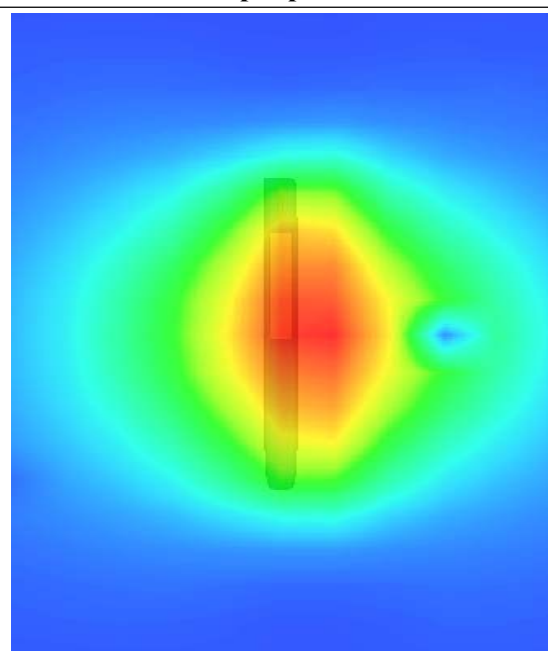
SAR, Z Axis Scan (X = 6, Y = 0)



3D scene 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: 2/11/2012

Measurement duration: 13 minutes 26 seconds

A. Experimental conditions.

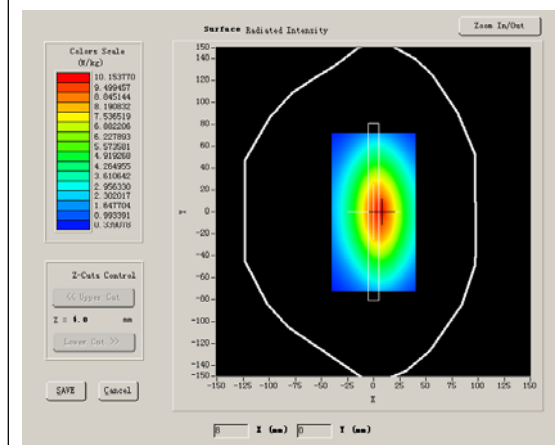
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	1900MHz
Channels	
Signal	CW

B. SAR Measurement Results

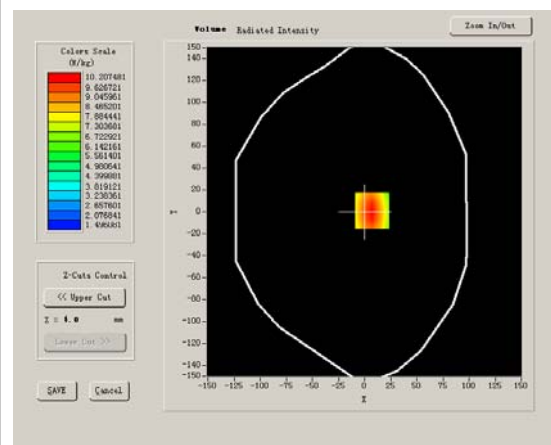
Band SAR

Frequency (MHz)	1900.000000
Relative permittivity (real part)	53.623641
Relative permittivity	14.070000
Conductivity (S/m)	1.488263
Power drift (%)	-0.030000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



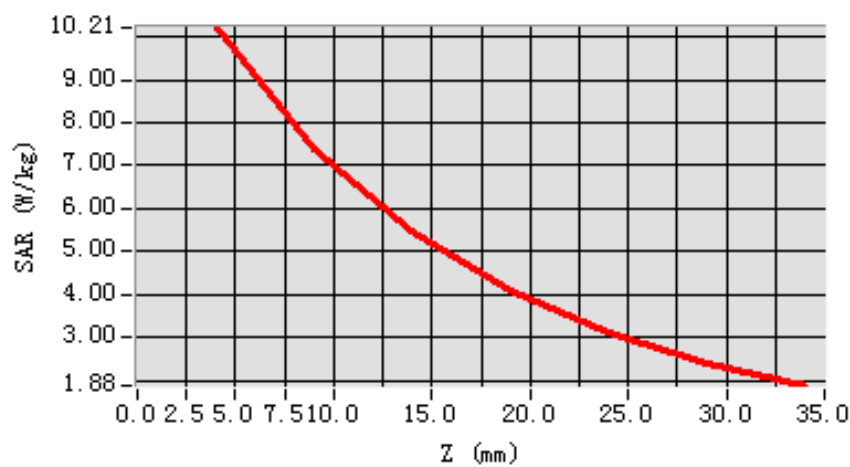
Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	6.628519
SAR 1g (W/Kg)	9.746173

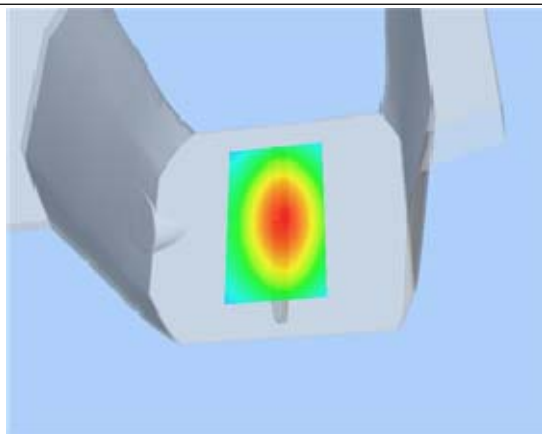
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.2075	7.3996	5.4654	4.1101	3.1286	2.4128

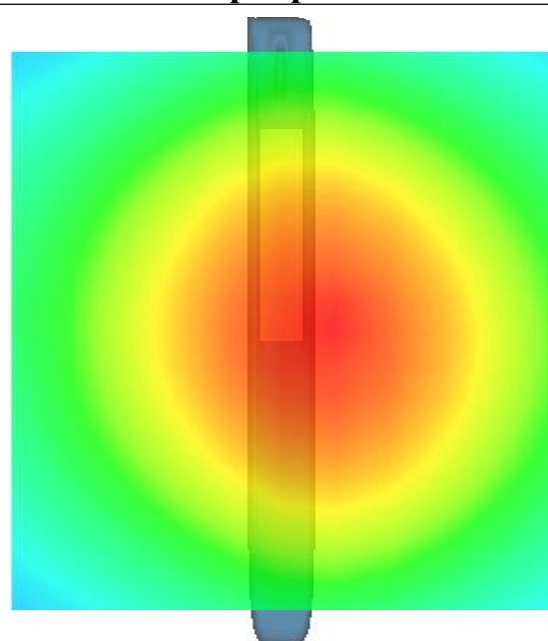
SAR, Z Axis Scan (X = 7, Y = 1)



3D scene shot



Hot spot position



System Performance Check Data(Head)

Type: Phone measurement (Complete)

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

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

Date of measurement: 2/11/2012

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

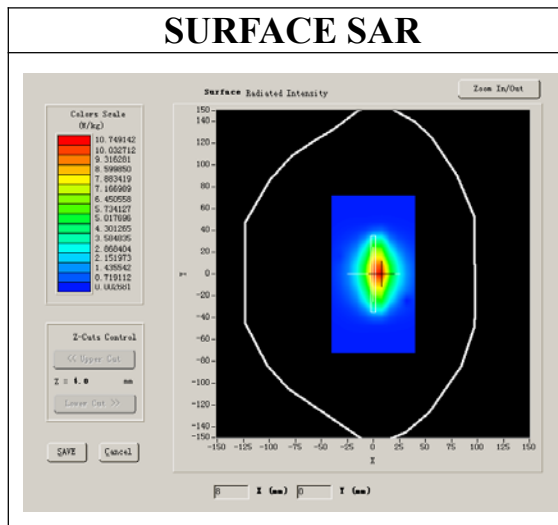
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	2450MHz
Channels	
Signal	CW

B. SAR Measurement Results

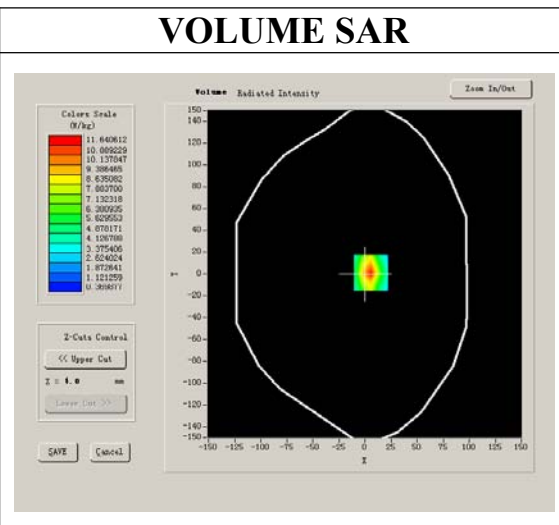
Band SAR

Frequency (MHz)	2450.000000
Relative permittivity (real part)	40.153896
Relative permittivity	12.991650
Conductivity (S/m)	1.794313
Power Drift (%)	0.560000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.8°C
ConvF:	39.563,33.614,37.677
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



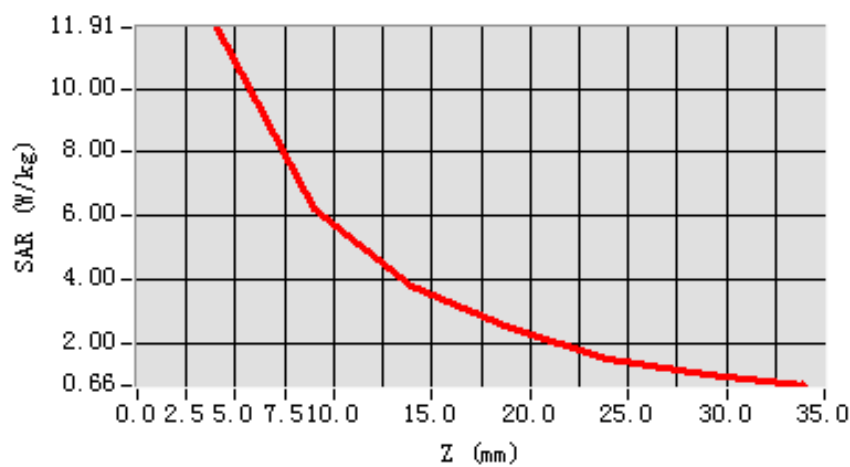
Maximum location: X=6.00, Y=1.00

SAR 10g (W/Kg)	7.638478
SAR 1g (W/Kg)	12.043675

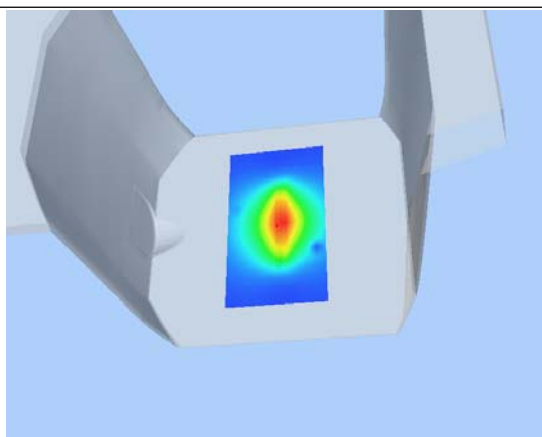
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	11.9115	6.2096	3.8187	2.4504	1.5036	1.0219

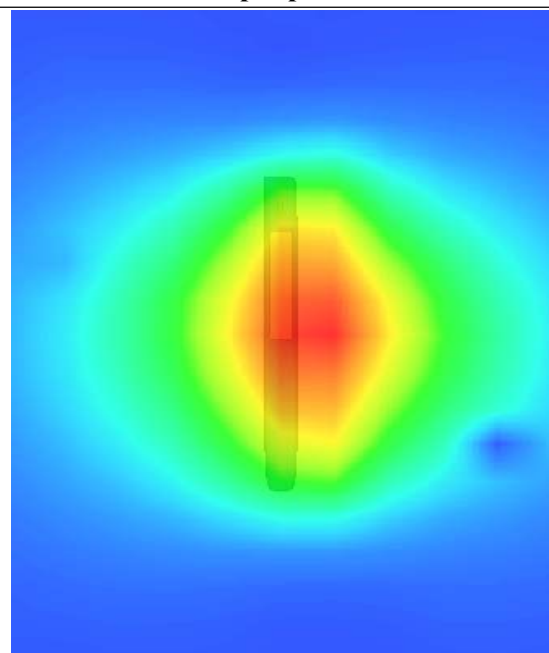
SAR, Z Axis Scan (X = 6, Y = 1)



3D scene 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: 2/11/2012

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

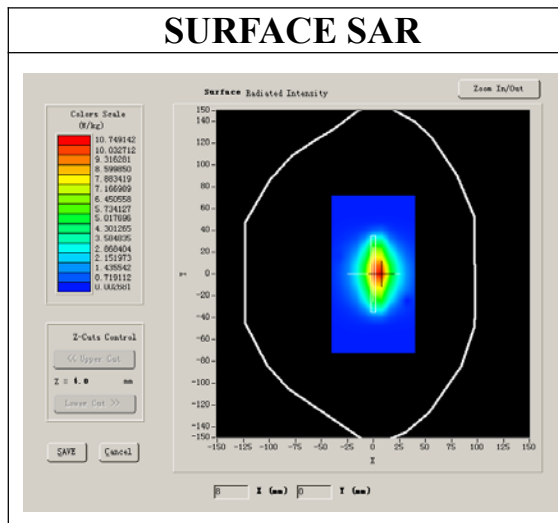
Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	2450MHz
Channels	
Signal	CW

B. SAR Measurement Results

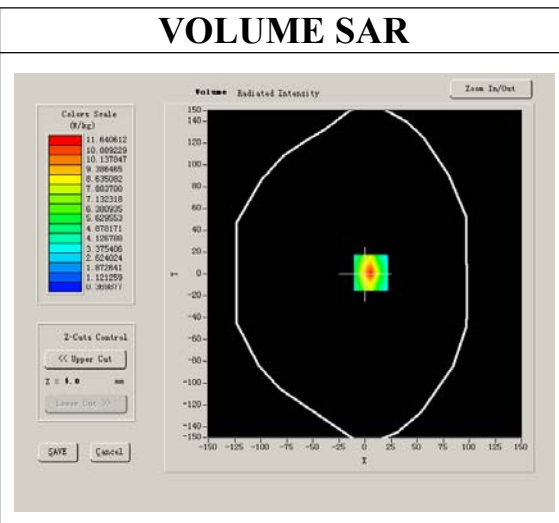
Band SAR

Frequency (MHz)	2450.000000
Relative permittivity (real part)	53.149069
Relative permittivity	12.991650
Conductivity (S/m)	1.882476
Power Drift (%)	1.080000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.8°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



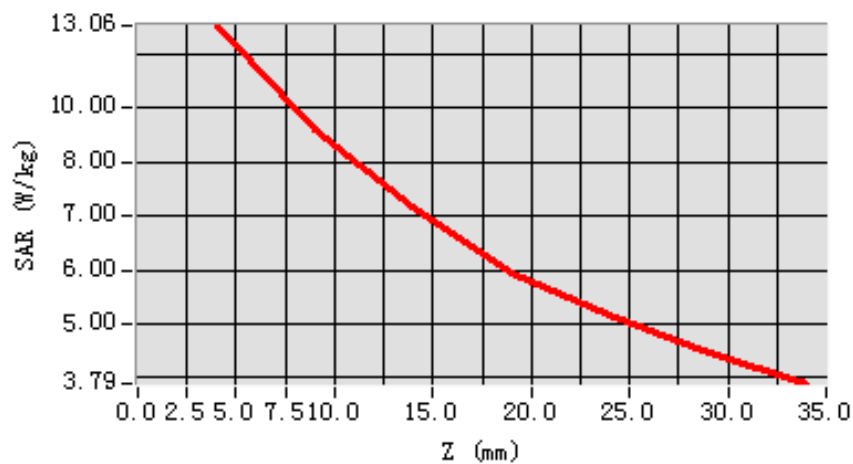
Maximum location: X=-1.00, Y=-50.00

SAR 10g (W/Kg)	7.156773
SAR 1g (W/Kg)	12.789110

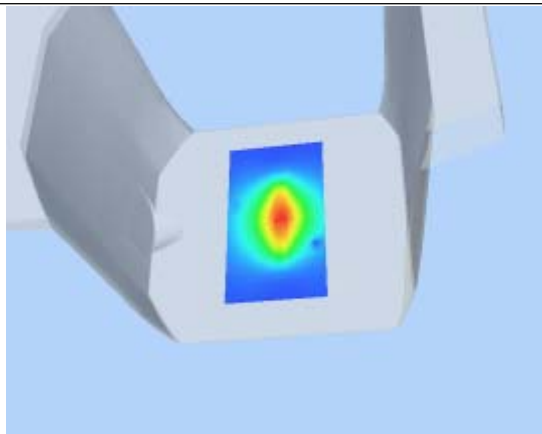
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	13.1279	6.8312	3.5991	1.3473

SAR, Z Axis Scan (X = -1, Y = -50)



3D scene shot



Hot spot position

