



Report No.: SZ13110056S01



SAR TEST REPORT

Issued to

WIREDTIME INC

For

SMART PHONE WITH INTEGRATED BARCODE SCANNER

Model Name : WT1000-3G
 Trade Name : N/A
 Brand Name : CHEKONE
 FCC ID : S90-WT1000-3G
 Standard : 47CFR 2.1093
 IEEE 1528-2013
 MAX SAR : Head: 0.770W/kg
 Body: 0.703W/kg
 Test date : 2013-5-8 to 2013-5-10
 Issue date : 2013-12-3



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 (SAR Specialist)

Date 2013.12.3

Date 2013.12.3

Date 2013.12.3

CTIA Authorized Test Lab
 LAB CODE 20081223-00
 IEEE 1725

OFTA
 電訊管理局



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Bluetooth
 BQTF

FCC
 Reg. No.
 695796

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Change History		
Issue	Date	Reason for change
1.0	Dec. 3, 2013	First edition

1. Testing Laboratory

1.1. Identification of the Responsible Testing Location

Name: Shenzhen Morlab Communications Technology Co., Ltd.
Morlab Laboratory

Address: FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China 518101

1.2. Accreditation Certificate

Accredited Testing Laboratory: No. CNAS L3572

1.3. 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	Aglient (8960, SN:10752)	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)	2013-5-07	1year
8	Power Sensor	Agilent (N8482A, SN:MY41091706)	2013-5-07	1year
9	Directional coupler	Giga-tronics(SN:1829112)	2012-9-24	1year
10	Probe	Satimo (SN:SN 37/08 EP80)	2012-10-04	1year
11	Dielectric Probe Kit	Agilent (85033E)	2012-9-24	1year
12	Phantom	Satimo (SN:SN_36_08_SAM62)	2012-9-24	1year
13	Liquid	Satimo(Last Calibration: 2013-5-8 to 2013-5-10)	N/A	N/A
14	Dipole 835MHz	Satimo (SN 36/08 DIPC 99)	2012-10-05	1year
15	Dipole 1750MHz	Satimo (SN 36/08 DIPC 101)	2012-10-05	1year
16	Dipole 1900MHz	Satimo (SN 36/08 DIPF 102)	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: WIREDTIME INC
Address: 5-350 SHIRLEY AVENUE, KITCHENER, ON, CANADA
N2B 2E1

2.2. Identification of Manufacturer

Company Name: WIREDTIME INC
Address: 5-350 SHIRLEY AVENUE, KITCHENER, ON, CANADA
N2B 2E1

2.3. Equipment Under Test (EUT)

Model Name: WT1000-3G
Trade Name: N/A
Brand Name: CHEKONE
Hardware Version: 6
Software Version: 13.03.03
Frequency Bands: GSM 850MHz / PCS 1900MHz;
WCDMA 850MHz/ 1700MHz/ 1900MHz; (Band II, IV, V)
Modulation Mode: GSM/GPRS: GMSK; EDGE:8PSK;
WCDMA/HSDPA/HSUPA: QPSK;
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: N/A
Battery specification: N/A
3GPP Version: Release 6
Hotspot function: 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#	6	13.03.03

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	IEEE 1528-2013	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
3	KDB 447498 D1 V05r01	General RF Exposure Guidance
4	KDB 248227 D1 Rev1.2	SAR Measurement Procedures for 802.11 a/b/g Transmitters
5	KDB 941225 D1 Rev2.0	SAR Measurement Procedures for 3G Devices
6	KDB 941225 D6v01r01	Hot Spot SAR v01
7	KDB 865664 D1 v01r01	SAR Measurement 100 MHz to 6 GHz
8	KDB 865664 D2 v01r01	RF Exposure Reporting

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/WCDMA1700MHz WCDMA 1900MHz;
Operation mode:	Call established
Power Level:	GSM 850 MHz Maximum output power(level 5) PCS 1900 MHz Maximum output power(level 0) WCDMA 850MHz Maximum output power(All up bits) WCDMA 1700MHz Maximum output power(All up bits) WCDMA 1900MHz Maximum output power(All up bits)

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 4175, 4175 and 4233 respectively in the case of WCDMA 850MHz, or to 1312, 1412 and 1513 respectively in the case of WCDMA 1700, or to 9262, 9400 and 9538 respectively in the case of WCDMA 1900. 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 Middle than the output power level of the handset by at least 35 dB.

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 Middle 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:

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

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

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

$$SAR = C \left(\frac{\delta T}{\delta t} \right)$$

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

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

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

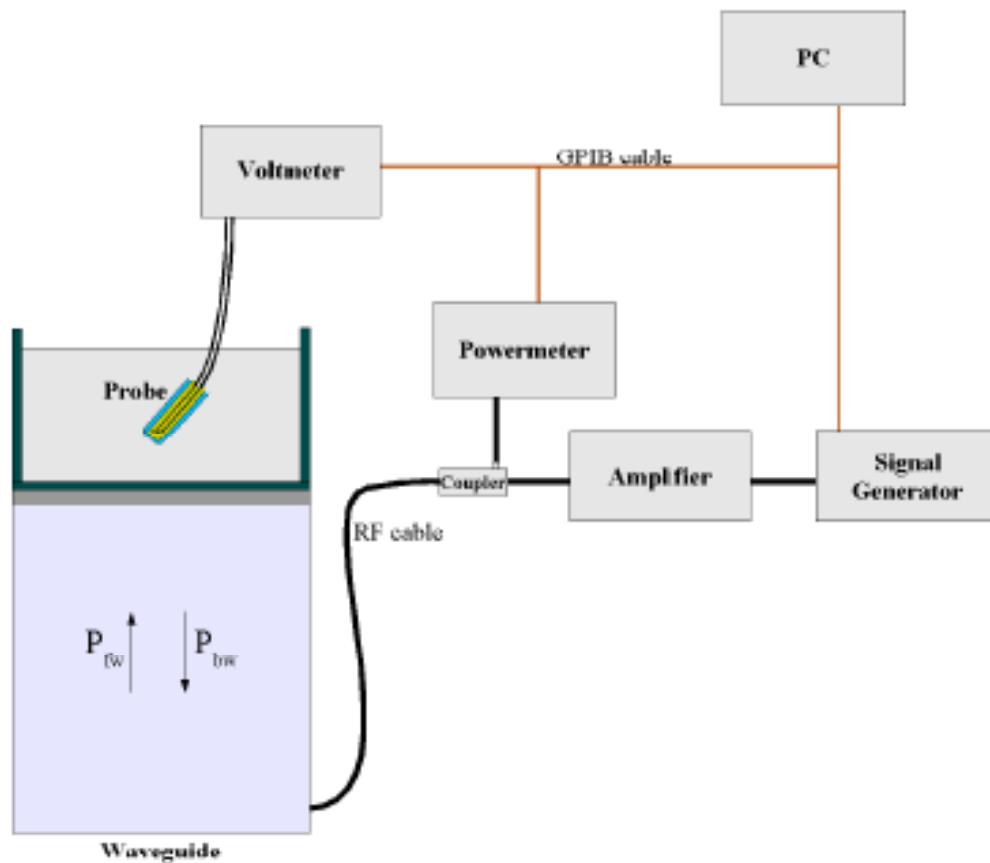
For the measurements the Specific Dosimetric E-Field Probe SN 37/08 EP80 with Following specifications is used

- 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 annex 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 simulating 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:

δt = exposure time (30 seconds),

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

δT = temperature increase due to RF exposure.

$$SAR = C \left(\frac{\delta T}{\delta t} \right)$$

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.

Where:

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

σ = simulated tissue conductivity,

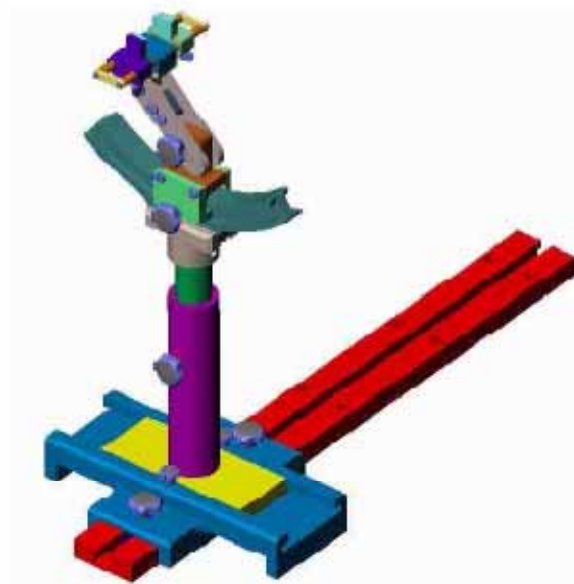
ρ = Tissue density (1.25 g/cm³ for brain tissue)

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 Middle than 1°.



Device holder

System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

5. Tissue Simulating Liquids

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5% are listed in below table.

The following table gives the recipes for tissue simulating liquids

Ingredients (% by weight)	Frequency Band		Frequency Band		Frequency Band	
	835MHz		1750MHz		1900MHz	
Tissue Type	Head	Body	Head	Body	Head	Body
Water	41.45	52.4	52.6	68.8	54.9	40.4
Salt(NaCl)	1.45	1.4	0.4	0.2	0.18	0.5
Sugar	56.0	45.0	0	0.0	0.0	58.0
HEC	1.0	1.0	0	1.0	0.0	1.0
Bactericide	0.1	0.1	0	0.1	0.0	0.1
Triton X-100	0.0	0.0	0	0.0	0.0	0.0
DGBE	0.0	0.0	47.0	31.0	44.92	0.0
Acticide SPX	0.0	0.0	0	0.0	0.0	0.0
Dielectric Constant	41.50	55.2	40.1	53.4	40.0	53.3
Conductivity (S/m)	0.90	0.97	1.37	1.49	1.40	1.52

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

Table 1: Dielectric Performance of Tissue Simulating Liquid

Temperature: 22.0~23.8°C, humidity: 54~60%.						
Date	Freq.(MHz)	Liquid Parameters	Meas.	Target	Delta(%)	Limit±(%)
2013/5/8	Head 835	Relative Permittivity(ϵ_r):	42.52	41.5	2.46	5
		Conductivity(σ):	0.92	0.90	2.22	5
	Body 835	Relative Permittivity(ϵ_r):	55.14	55.2	-0.11	5
		Conductivity(σ):	0.95	0.97	-2.06	5
2013/5/10	Head 1750	Relative Permittivity(ϵ_r):	40.05	40.1	-0.12	5
		Conductivity(σ):	1.38	1.37	0.73	5
	Body 1750	Relative Permittivity(ϵ_r):	52.9	53.4	-0.94	5
		Conductivity(σ):	1.47	1.49	-1.34	5

2013/5/9	Head 1900	Relative Permittivity(ϵ_r):	41.27	40	3.18	5
		Conductivity(σ):	1.41	1.40	0.71	5
	Body 1900	Relative Permittivity(ϵ_r):	53.21	53.3	-0.17	5
		Conductivity(σ):	1.51	1.52	-0.66	5

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

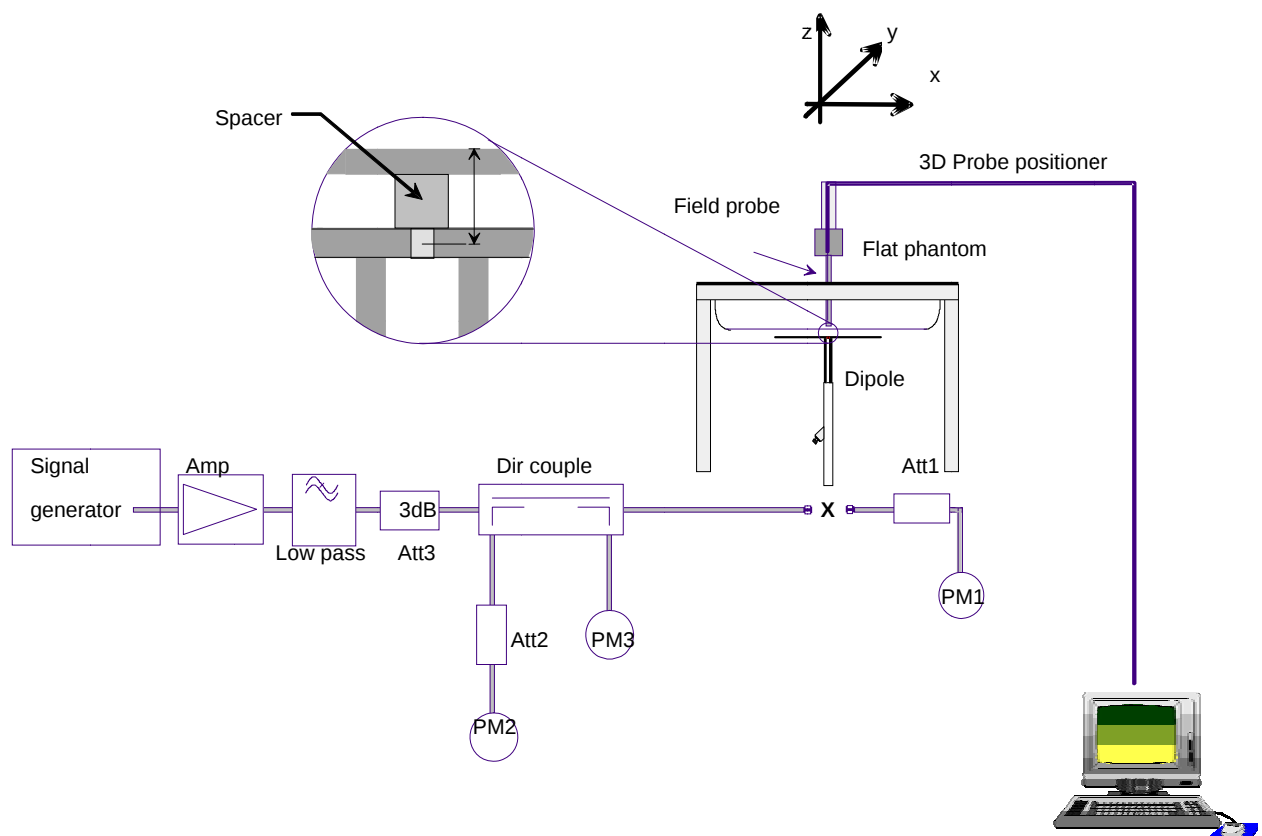
a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+ - %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	4.76	N	1	1	1	4.76	4.76	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	0.7	0.7	1.01	1.01	∞
Hemispherical Isotropy	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. 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. The system check verifies that the system operates within its specifications. It is performed daily or before every SAR measurement. The system check uses normal SAR measurements in the flat section of the phantom with a matched dipole at a specified distance. The system verification setup is shown as below.



The validation dipole is placed beneath the flat phantom with the specific spacer in place. The distance spacer is touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The power meter PM1 measures the forward power at the location of the system check dipole connector. The signal generator is adjusted for the desired forward power (250 mW is used for 700 MHz to 3 GHz, 100 mW is used for 3.5 GHz to 6 GHz) at the dipole connector and the power meter PM2 is read at that level. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter PM2.

7.2. Validation Results

After system check testing, the SAR result will be normalized to 1W forward input power and compared with the reference SAR value derived from validation dipole certificate report. The deviation of system check should be within 10 %.

Frequency	835MHz(H)	835MHz(B)	1750MHz(H)	1750MHz(B)
Target value (1g)	9.740 W/Kg	9.880 W/Kg	36.920 W/Kg	37.770 W/Kg
Test value (1g 250 mW input)	2.432 W/Kg (5.8)	2.446 W/Kg (5. 8)	9.684 W/Kg (5. 10)	9.340 W/Kg (5. 10)
Normalized value (1g)	9.728 W/Kg	9.784W/Kg	38.736 W/Kg	37.360 W/Kg

Frequency	1900MHz(H)	1900MHz(B)
Target value (1g)	40.320 W/Kg	38.530 W/Kg
Test value (1g 250 mW input)	9.749 W/Kg (5. 9)	9.681 W/Kg (5. 9)
Normalized value (1g)	38.996 W/Kg	38.724 W/Kg

Note: System checks the specific test data please see page 103~114

8. Operational Conditions During Test

8.1. Information 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.

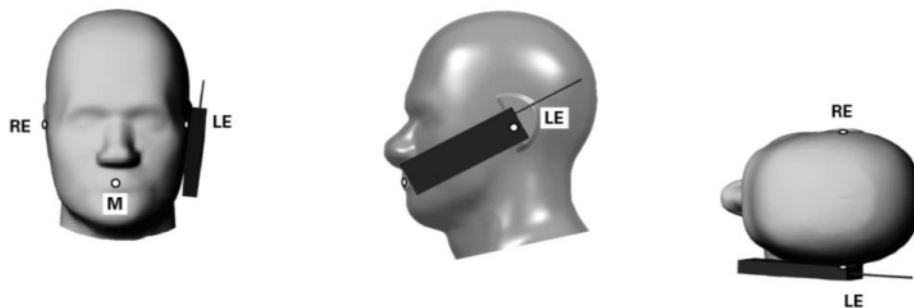


Illustration for Cheek Position

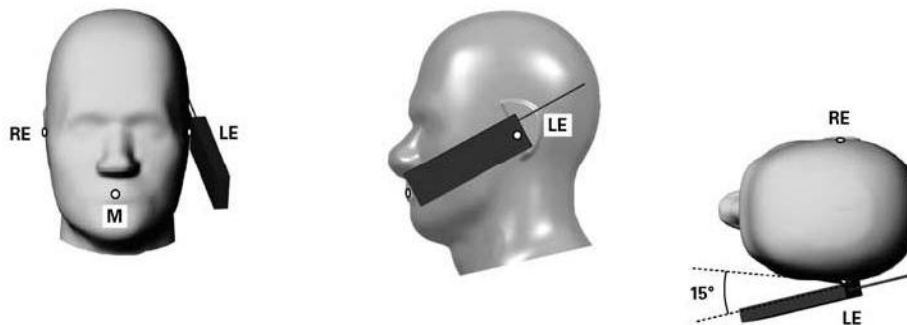


Illustration for Tilted Position

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.

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.

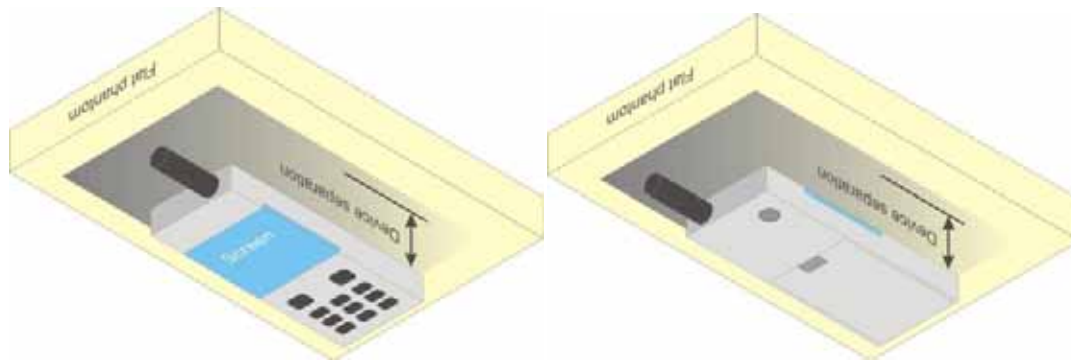


Illustration for Body Worn Position

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	22.55	22.87	22.89	23.63	23.67	23.76
HSDPA	1	22.51	22.79	22.85	23.61	23.64	23.72
	2	22.53	22.77	22.84	23.62	23.63	23.73
	3	22.02	22.25	22.33	23.17	23.19	23.25
	4	22.03	21.27	22.31	23.15	23.12	23.27
HSUPA	1	22.48	22.76	22.81	23.59	23.61	23.71
	2	20.53	20.77	20.86	21.57	21.67	21.85
	3	21.45	21.69	21.82	22.53	22.59	22.73
	4	20.51	20.73	20.83	21.55	21.65	21.77
	5	22.47	22.75	22.85	23.57	23.60	23.68
Note:	The Conducted RF Output Power test of WCDMA /HSDPA /HSUPA was tested by power meter.						

Item	band	WCDMA 1700		
	ARFCN	1312	1412	1513
	subtest	dBm		
5.2(WCDMA)	non	23.56	23.59	23.63
HSDPA	1	23.53	23.55	23.61
	2	23.51	23.54	23.58
	3	23.05	23.06	23.13
	4	23.03	23.05	23.12
HSUPA	1	23.52	23.53	23.57
	2	21.55	21.55	21.53
	3	22.55	22.54	22.61
	4	21.51	21.56	21.59
	5	23.51	23.52	23.55
Note:	The Conducted RF Output Power test of WCDMA /HSDPA /HSUPA was tested by power meter.			

2. GSM Conducted peak output power

Band	Channel	Frequency (MHz)	Output Power (dBm)
GSM 850	128	824.2	32.67
	190	836.6	32.88
	251	848.8	33.97
PCS 1900	512	1850.2	29.18
	661	1880.0	29.83
	810	1909.8	28.93

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	32.03	30.33	28.32	27.41
	190	836.6	32.24	30.22	28.39	27.53
	251	848.8	32.31	30.16	28.41	27.50
PCS 1900	512	1850.2	26.48	26.05	26.13	25.31
	661	1880.0	29.13	28.01	26.32	25.32
	810	1909.8	28.35	28.11	26.39	25.30

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	23.03	24.31	24.06	24.40
	190	836.6	23.24	24.20	24.13	24.52
	251	848.8	23.31	24.14	24.15	24.49
PCS 1900	512	1850.2	17.48	20.03	21.87	22.30
	661	1880.0	20.13	21.99	22.06	22.31
	810	1909.8	19.35	22.09	22.13	22.29

4. EGPRS 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	32.97	30.53	29.07	27.81
	190	836.6	33.25	30.57	29.01	27.92
	251	848.8	33.25	30.52	29.06	27.87
PCS 1900	512	1850.2	29.66	27.29	26.22	25.51
	661	1880.0	29.08	27.12	26.18	25.42
	810	1909.8	28.60	27.41	26.09	25.41

EGPRS Time-based Average Power

Band	Channel	Frequency (MHz)	Output Power(dBm)			
			Slot 1	Slot 2	Slot 3	Slot 4
GSM 850	128	824.2	23.97	24.51	24.81	24.80
	190	836.6	24.25	24.55	24.75	24.91
	251	848.8	24.25	24.50	24.80	24.86
PCS 1900	512	1850.2	20.66	21.27	21.96	22.50
	661	1880.0	20.08	21.10	21.92	22.41
	810	1909.8	19.60	21.39	21.83	22.40

Timeslot consignations:

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

10. Test Results List

Summary of Measurement Results (GSM 850MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.						
Phantom Configurations		Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head		Cheek/Touch	128	0.637	1.007	0.641
		Ear/Tilt		0.440		0.443
Left Side Of Head		Cheek/Touch		0.449		0.452
		Ear/Tilt		0.392		0.395
Body (15mm Separation)	GSM	Back upward		0.458		0.461
		Front upward		0.107		0.108
	EDGE	Back upward	0.690	1.019	0.703	
		Front upward	0.392		0.399	
	GPRS	Back upward	0.557	1.040	0.579	

Summary of Measurement Results (GSM 1900MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.						
Phantom Configurations		Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head		Cheek/Touch	661	0.547	1.040	0.569
		Ear/Tilt		0.177		0.184
Left Side Of Head		Cheek/Touch		0.567		0.590
		Ear/Tilt		0.221		0.230
Body (15mm Separation)	GSM	Back upward		0.443	1.042	0.461
		Front upward		0.327		0.340
	EDGE	Back upward		0.585	1.042	0.610
		Front upward		0.429		0.447
	GPRS	Back upward		0.436	1.042	0.454

Note:

1. GPRS/EDGE test Scenario(Based on the Max. Time-based Average Power)

Band	Channel	Slots	Power level	Duty Cycle
GPRS850	190	4	5	1:2
EDGE850	190	4	5	1:2
GPRS1900	661	4	0	1:2
EDGE1900	661	4	0	1:2

Summary of Measurement Results (WCDMA 850MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head	Cheek/Touch	4175	0.385	1.030	0.397
	Ear/Tilt		0.154		0.159
Left Side Of Head	Cheek/Touch		0.465		0.479
	Ear/Tilt		0.190		0.196
Body (15mm Separation)	Back upward		0.576		0.593
	Front upward		0.361		0.372

Summary of Measurement Results (WCDMA 1700MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head	Cheek/Touch	1412	0.652	1.099	0.717
	Ear/Tilt		0.490		0.539
Left Side Of Head	Cheek/Touch		0.701		0.770
	Ear/Tilt		0.496		0.545
Body (15mm Separation)	Back upward		0.458		0.503
	Front upward		0.174		0.191

Summary of Measurement Results (WCDMA 1900MHz Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Device Test channel	SAR(W/Kg), 1g Peak	Scaling Factor	Scaled SAR (W/Kg), 1g
Right Side Of Head	Cheek/Touch	9400	0.527	1.079	0.569
	Ear/Tilt		0.314		0.339
Left Side Of Head	Cheek/Touch		0.657		0.709
	Ear/Tilt		0.435		0.469
Body (15mm Separation)	Back upward		0.457		0.493
	Front upward		0.396		0.427

Note:

1. When the 1-g SAR for the mid-band channel or the channel with the Highest output power satisfy the Following conditions, testing of the other channels in the band is not required. (Per KDB 447498 D01 General RF Exposure Guidance v05)
 - $\leq 0.8 \text{ W/kg}$ and transmission band $\leq 100 \text{ MHz}$
 - $\leq 0.6 \text{ W/kg}$ and, $100 \text{ MHz} < \text{transmission bandwidth} \leq 200 \text{ MHz}$
 - $\leq 0.4 \text{ W/kg}$ and transmission band $> 200 \text{ MHz}$
2. Per KDB447498, Supplement C 01-01 and IEEE Std 1528-2003 require the middle channel to be tested first. This generally applies to wireless devices that are designed to operate in technologies with tight tolerances for maximum output power variations across channels in the band. When the maximum output power variation across the required test channels is $> \frac{1}{2} \text{ dB}$, instead of the middle channel, the highest output power channel must be used.
3. The WCDMA mode is test with 12.2kbps RMC and TPC set to all "1", if maximum SAR for 12.2kbps RMC is $\leq 75\%$ of the SAR limit (i.e. 1.2 W/Kg 1g) and maximum average output of each RF channel with HSDPA/HSUPA active is less than $\frac{1}{4} \text{ dB}$ Middle than that measured without HSDPA/HSUPA using 12.2kbps RMC, according to KDB 941225D01v02, SAR is not required for this handset with HSPA capabilities.

4. Scaling Factor calculation

Band	Tune-up power tolerance (dBm)	SAR test channel Power (dBm)	Scaling Factor
GSM 850	PCL = 5, PWR = 33.5+-0.5	33.97	1.007
EDGE 850	PCL = 5, PWR = 27.5+-0.5(4 slots)	27.92	1.019
GPRS 850	PCL = 5, PWR = 27.2+-0.5(4 slots)	27.53	1.040
PCS 1900	PCL = 0, PWR = 29.5+-0.5	29.83	1.040
EDGE 1900	PCL=0, PWR= 25.2+-0.5(4 slots)	25.42	1.042
GPRS 1900	PCL=0, PWR= 25+-0.5(4 slots)	25.32	1.042
WCDMA 850	Max output power = 22(+1/-2)	22.87	1.030
WCDMA 1700	Max output power = 23(+1/-2)	23.59	1.099
WCDMA 1900	Max output power = 23 (+1/-2)	23.67	1.079

Annex A Graph Test Results

BAND	<u>PARAMETERS</u>
<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 Tilt device position on Low Channel in GSM mode <u>Measurement 3:</u> Left Head with Cheek device position on Low Channel in GSM mode <u>Measurement 4:</u> Left Head with Tilt device position on Low Channel in GSM mode <u>Measurement 5:</u> Flat Plane with Body device position on Low Channel in GSM mode <u>Measurement 6:</u> Flat Plane with Body device position on Low Channel in GSM mode <u>Measurement 7:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 8:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 9:</u> Flat Plane with Body device position on Middle Channel in GPRS mode
<u>GSM1900</u>	<u>Measurement 10:</u> Right Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 11:</u> Right Head with Tilt device position on Middle Channel in GSM mode <u>Measurement 12:</u> Left Head with Cheek device position on Middle Channel in GSM mode <u>Measurement 13:</u> Left Head with Tilt device position on Middle Channel in GSM mode <u>Measurement 14:</u> Flat Plane with Body device position Middle Channel in GSM mode <u>Measurement 15:</u> Flat Plane with Body device position on Middle Channel in GSM mode <u>Measurement 16:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 17:</u> Flat Plane with Body device position on Middle Channel in EDGE mode <u>Measurement 18:</u> Flat Plane with Body device position on Middle Channel in GPRS mode
<u>WCDMA 850</u>	<u>Measurement 19:</u> Right Head with Cheek device position on Middle Channel in WCDMA mode <u>Measurement 20:</u> Right Head with Tilt device position on Middle Channel in WCDMA mode

	<u>Measurement 21:</u> Left Head with Cheek device position on Middle Channel in WCDMA mode <u>Measurement 22:</u> Left Head with Tilt device position on Middle Channel in WCDMA mode <u>Measurement 23:</u> Flat Plane with Body device position on Middle Channel in WCDMA mode <u>Measurement 24:</u> Flat Plane with Body device position on Middle Channel in WCDMA mode
<u>WCDMA</u> <u>1700</u>	<u>Measurement 25:</u> Right Head with Cheek device position on Middle Channel in WCDMA mode <u>Measurement 26:</u> Right Head with Tilt device position on Middle Channel in WCDMA mode <u>Measurement 27:</u> Left Head with Cheek device position on Middle Channel in WCDMA mode <u>Measurement 28:</u> Left Head with Tilt device position on Middle Channel in WCDMA mode <u>Measurement 29:</u> Flat Plane with Body device position on Middle Channel in WCDMA mode <u>Measurement 30:</u> Flat Plane with Body device position on Middle Channel in WCDMA mode
<u>WCDMA</u> <u>1900</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 WMA 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: 2013.5.8

Measurement duration: 7 minutes 49 seconds

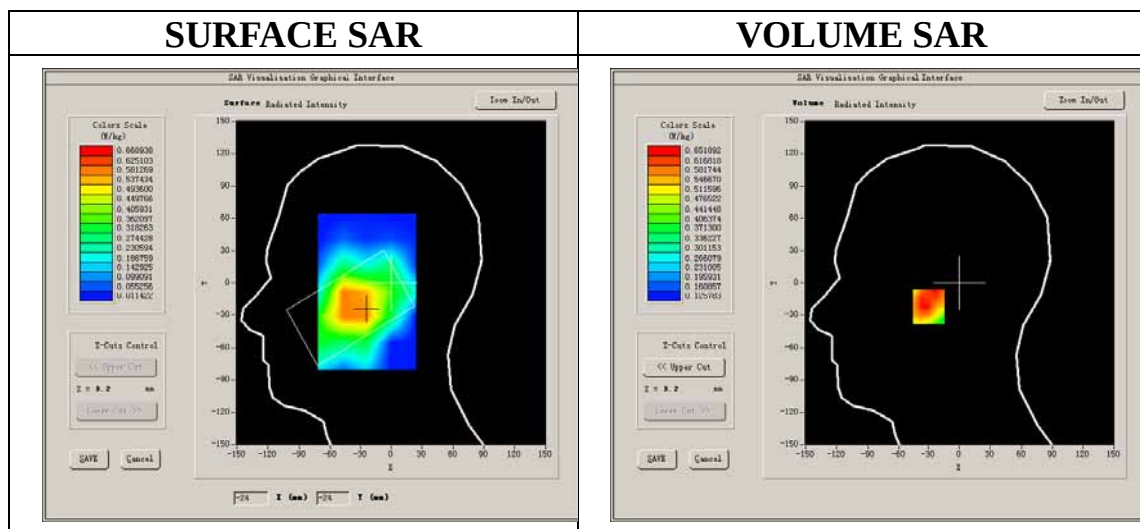
A. Experimental conditions.

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

B. SAR Measurement Results

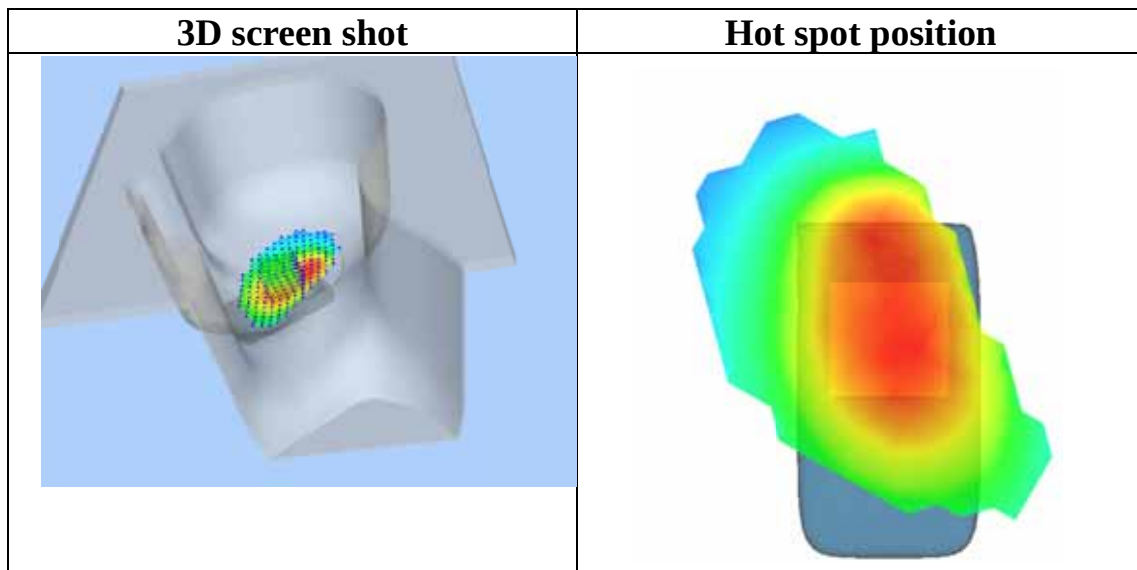
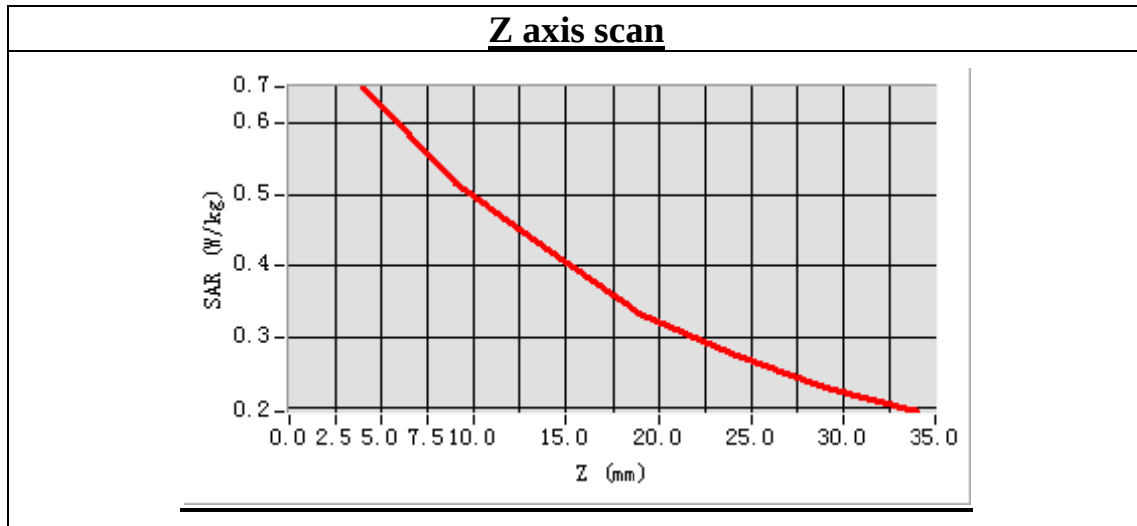
Lower Band SAR (Channel 128):

Frequency (MHz)	824.200000
Relative permittivity (real part)	42.522765
Conductivity (S/m)	0.918504
Power drift (%)	-0.620000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8



Maximum location: X=-24.00, Y=-22.00

SAR 10g (W/Kg)	0.480519
SAR 1g (W/Kg)	0.637372



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: 2013.5.8

Measurement duration: 7 minutes 33 seconds

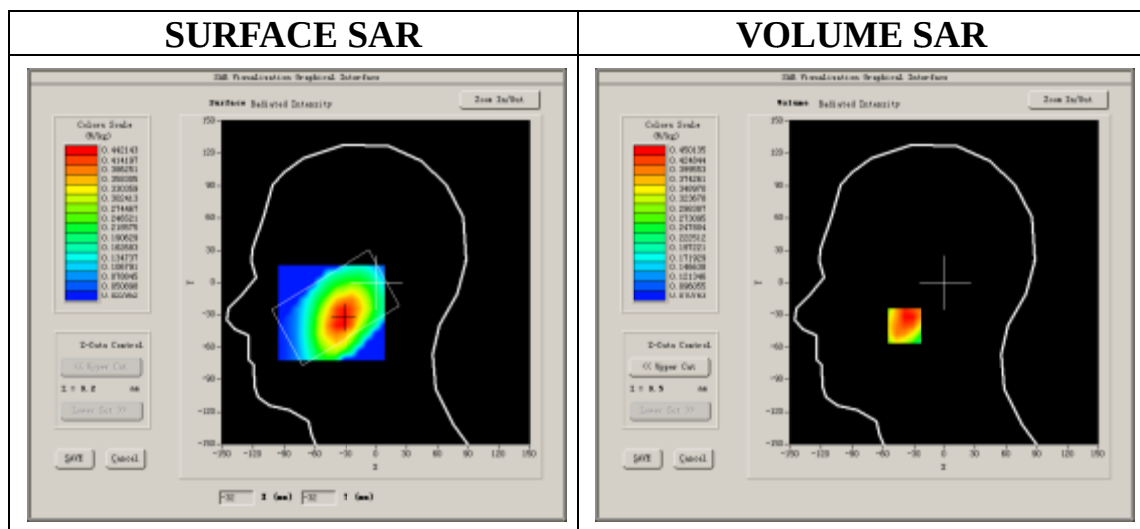
A. Experimental conditions.

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):

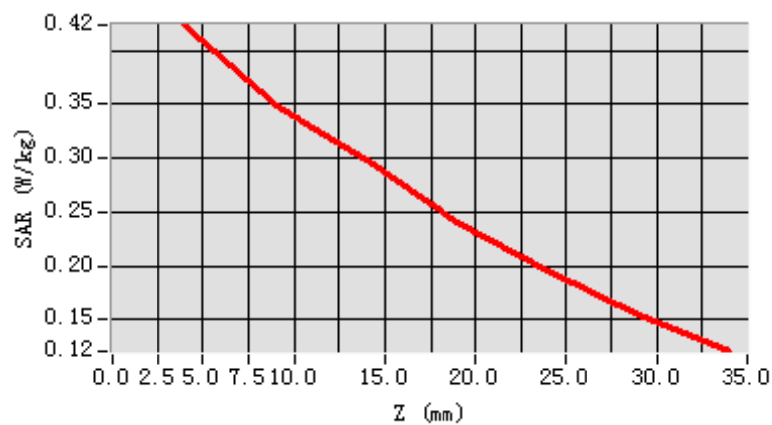
Frequency (MHz)	824.200000
Relative permittivity (real part)	42.522765
Conductivity (S/m)	0.918504
Power drift(%)	-0.570000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8

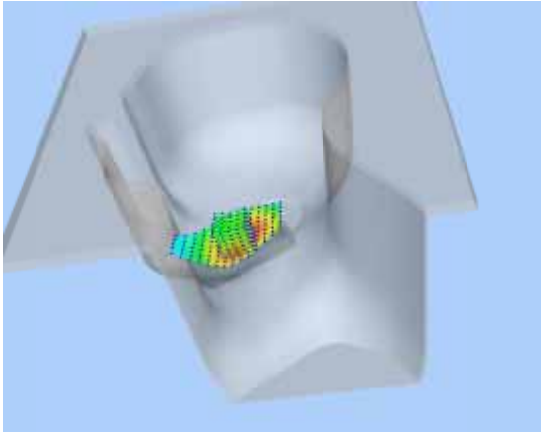
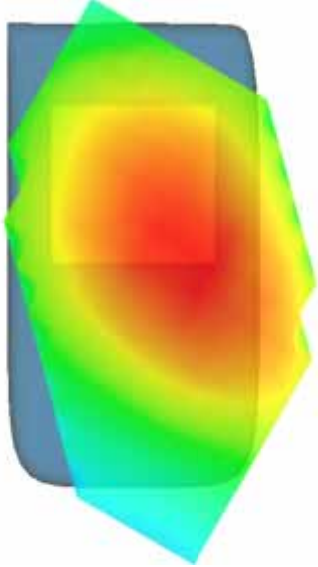


Maximum location: X=-35.00, Y=-40.00

SAR 10g (W/Kg)	0.328994
SAR 1g (W/Kg)	0.440165

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4234	0.3484	0.2973	0.2397	0.1955	0.1541



3D screen 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: 2013.5.8

Measurement duration: 7 minutes 28 seconds

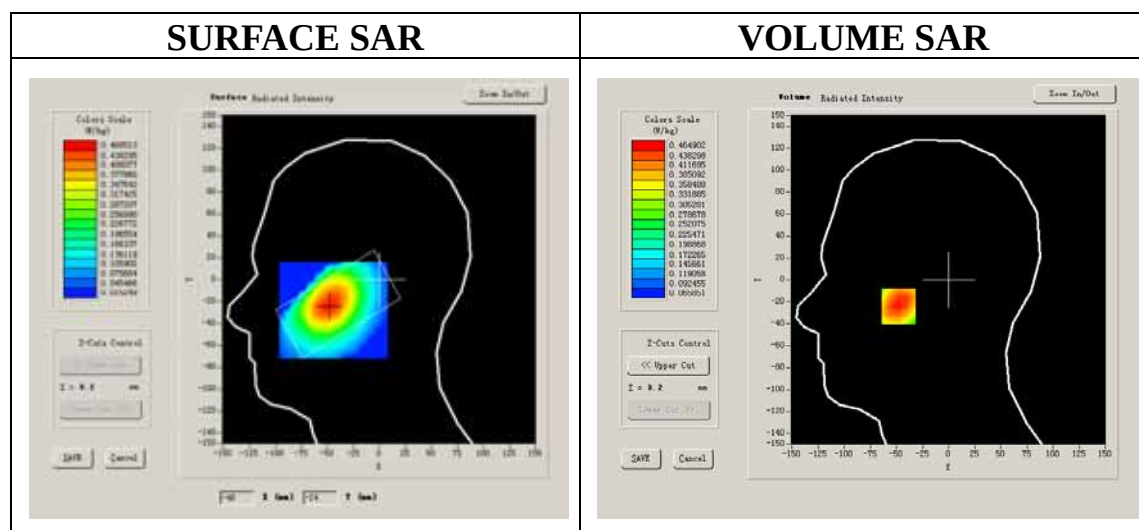
A. Experimental conditions.

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)	42.522765
Conductivity (S/m)	0.918504
Power drift (%)	-0.680000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8



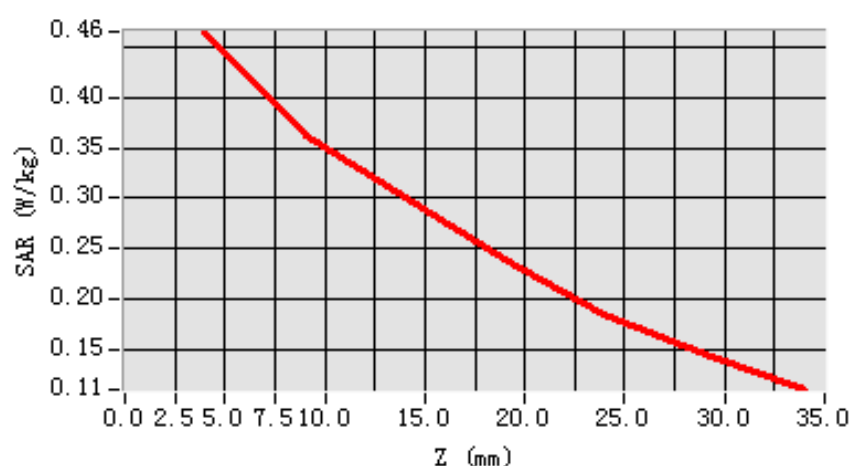
Maximum location: X=-48.00, Y=-24.00

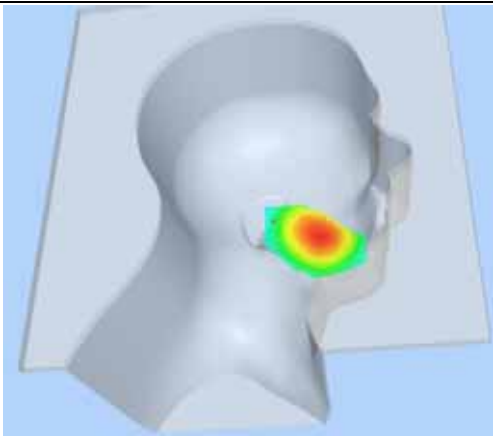
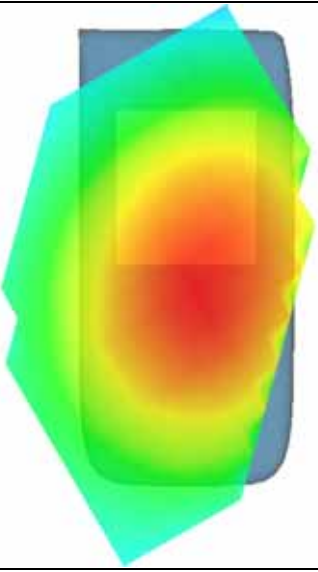
SAR 10g (W/Kg)	0.336121
SAR 1g (W/Kg)	0.448711

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4649	0.3628	0.3003	0.2387	0.1859	0.1457

SAR, Z Axis Scan (X = -48, Y = -24)



3D sceen 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: 2013.5.8

Measurement duration: 8 minutes 33 seconds

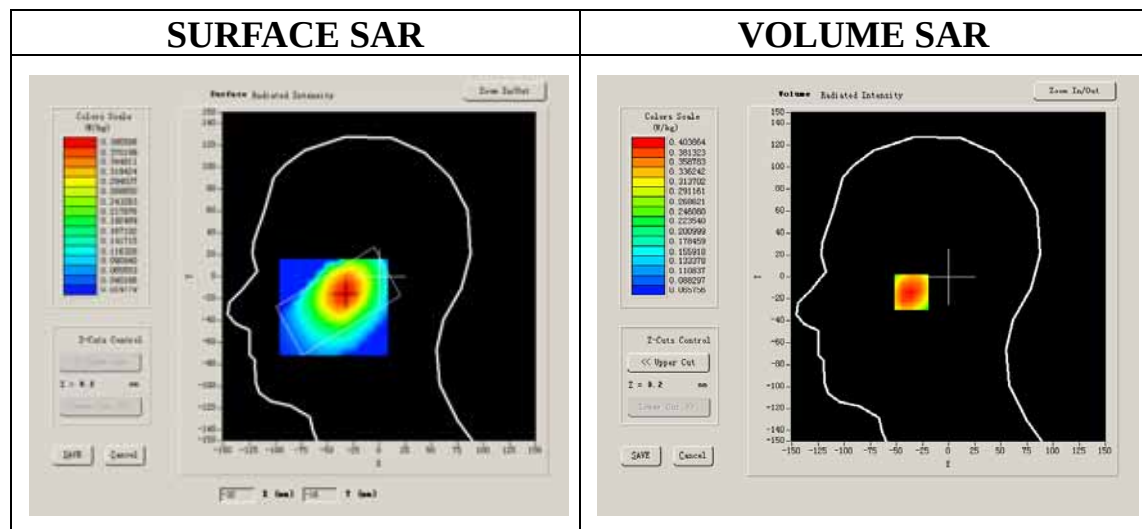
A. Experimental conditions.

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)	42.522765
Conductivity (S/m)	0.918504
Power drift(%)	-0.760000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.19
Crest factor:	1:8



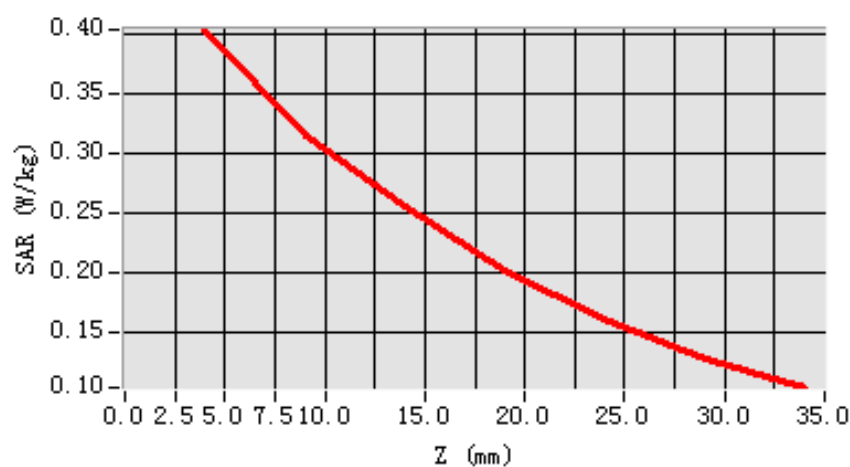
Maximum location: X=-32.00, Y=-14.00

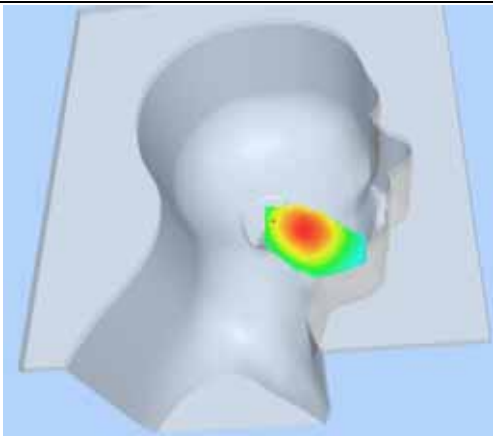
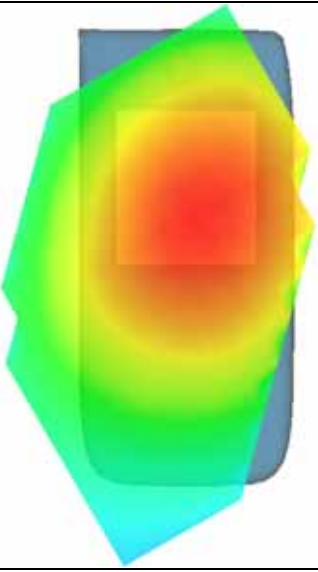
SAR 10g (W/Kg)	0.291843
SAR 1g (W/Kg)	0.392222

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4039	0.3157	0.2569	0.2019	0.1623	0.1284

SAR, Z Axis Scan (X = -32, Y = -14)



3D sceen 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: 2013.5.8

Measurement duration: 9 minutes 11 seconds

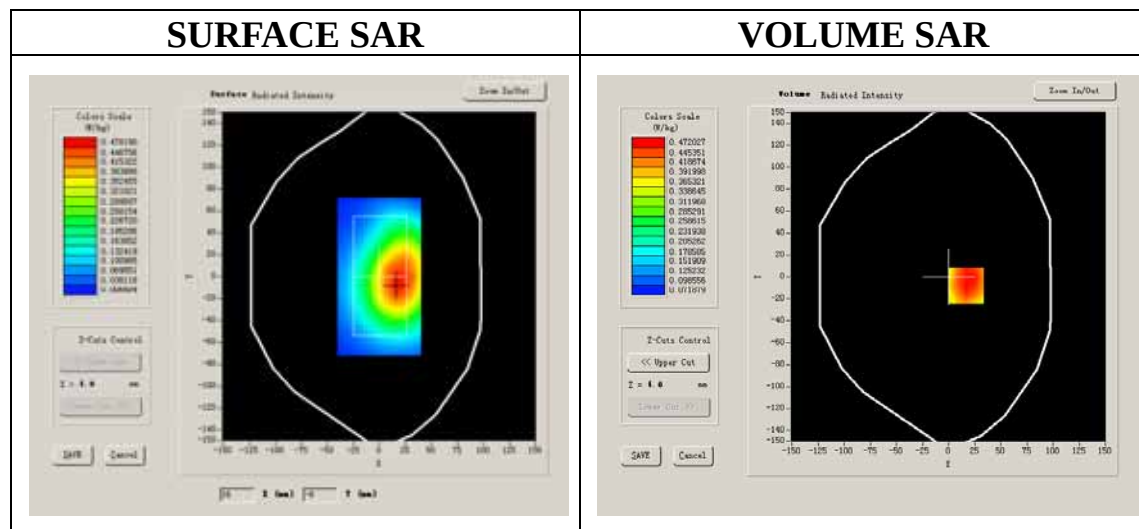
A. Experimental conditions.

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)	55.140974
Conductivity (S/m)	0.950681
Power drift (%)	-0.540000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:8



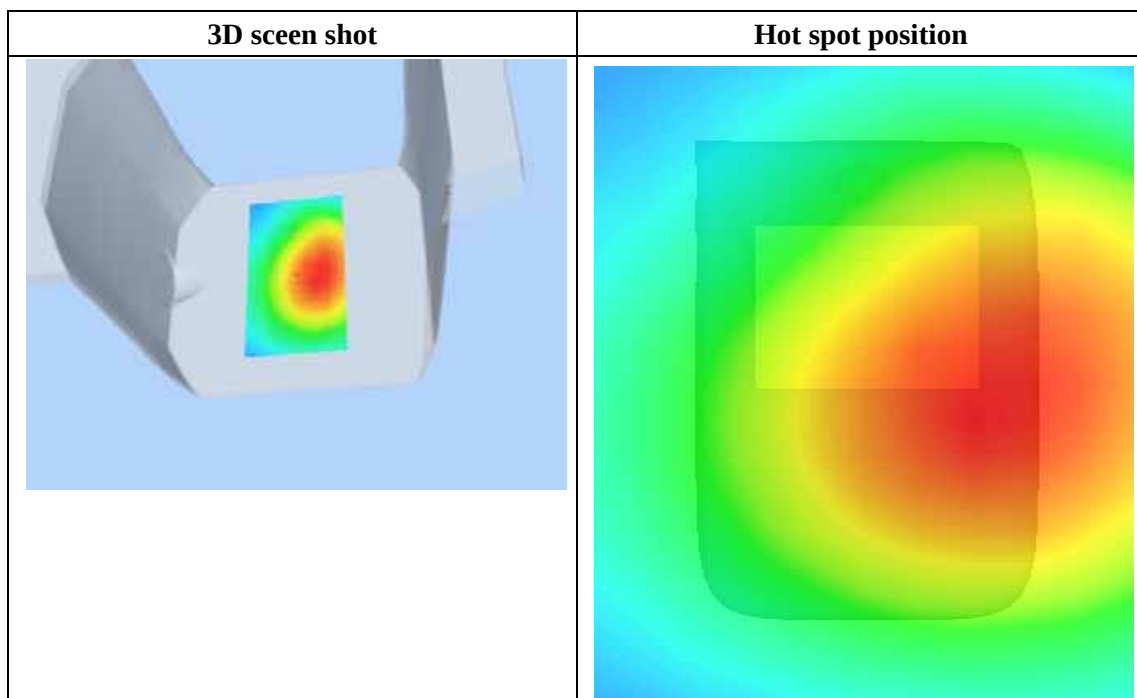
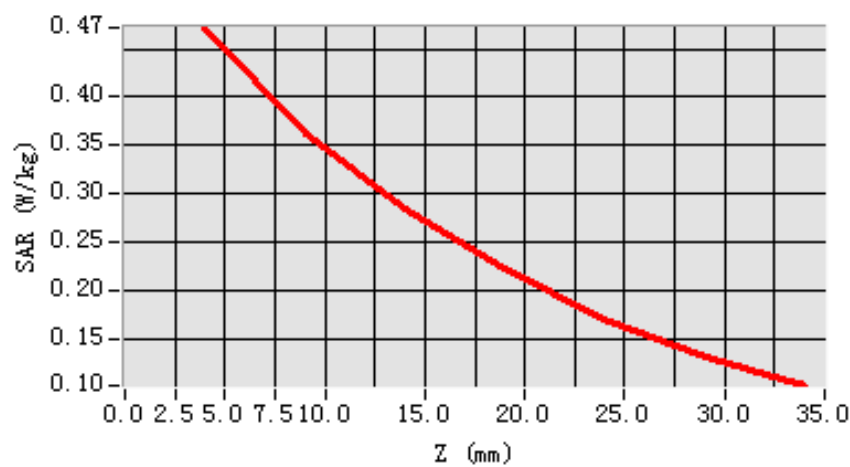
Maximum location: X=17.00, Y=-8.00

SAR 10g (W/Kg)	0.341906
SAR 1g (W/Kg)	0.458468

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4720	0.3626	0.2833	0.2234	0.1694	0.1302

SAR, Z Axis Scan (X = 17, Y = -8)



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: 2013.5.8

Measurement duration: 9 minutes 10 seconds

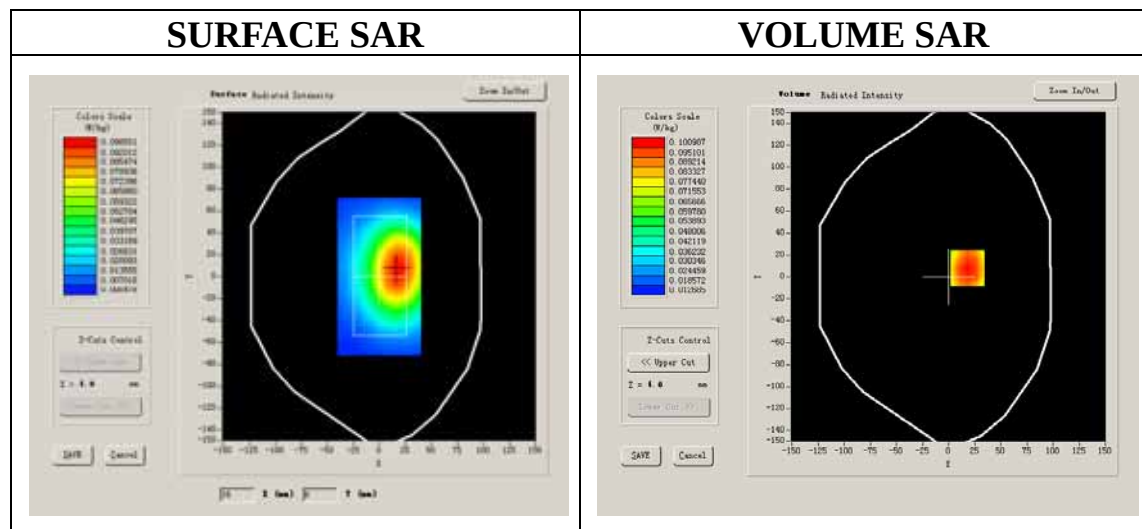
A. Experimental conditions.

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)	55.140974
Conductivity (S/m)	0.950681
Power drift(%)	-1.350000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:8



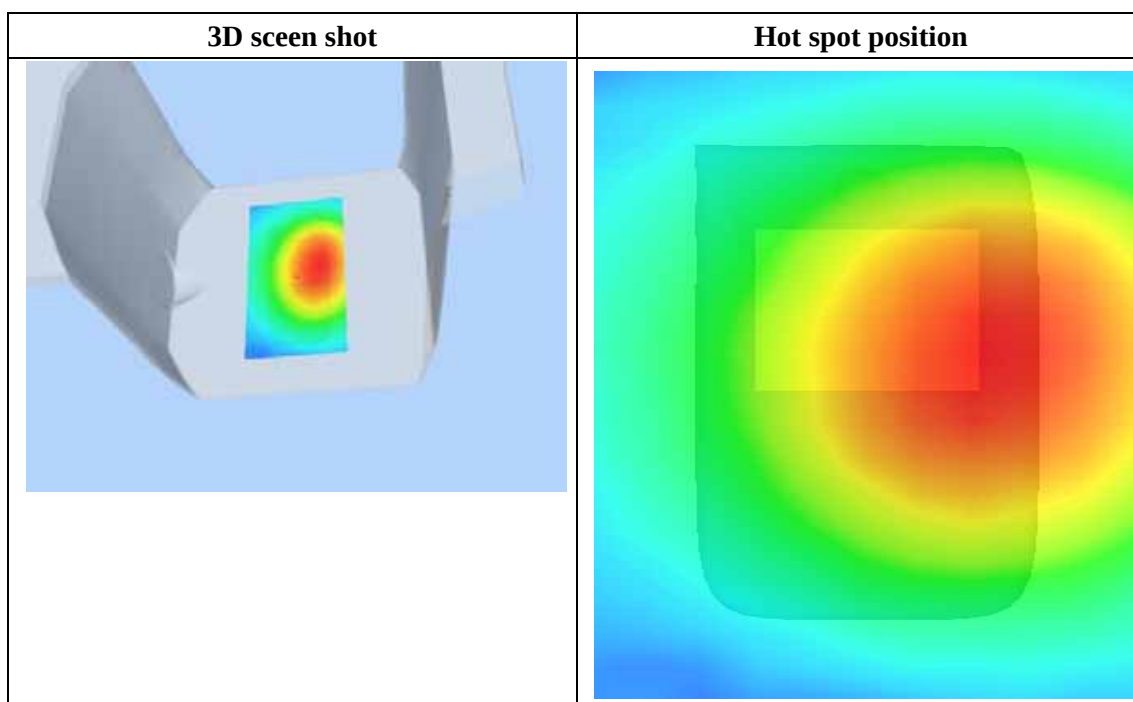
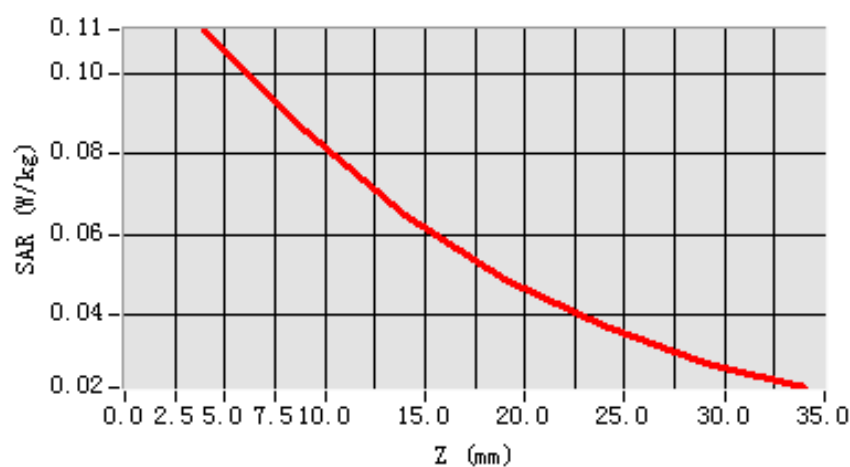
Maximum location: X=18.00, Y=8.00

SAR 10g (W/Kg)	0.077145
SAR 1g (W/Kg)	0.106960

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1109	0.0855	0.0650	0.0491	0.0375	0.0280

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



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: 2013.5.8

Measurement duration: 9 minutes 11 seconds

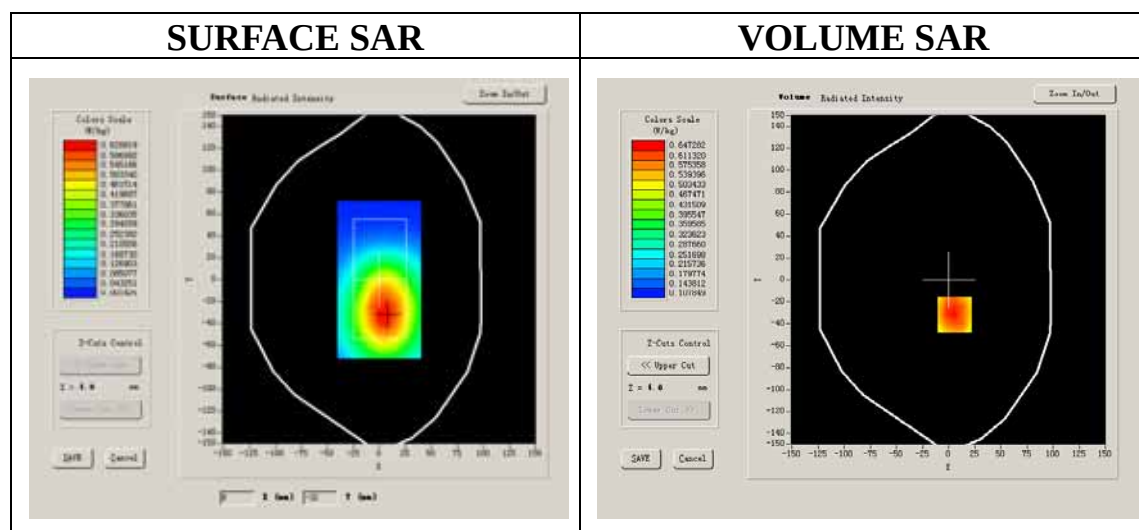
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.600000
Relative permittivity (real part)	55.140974
Conductivity (S/m)	0.950681
Power drift(%)	-0.610000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



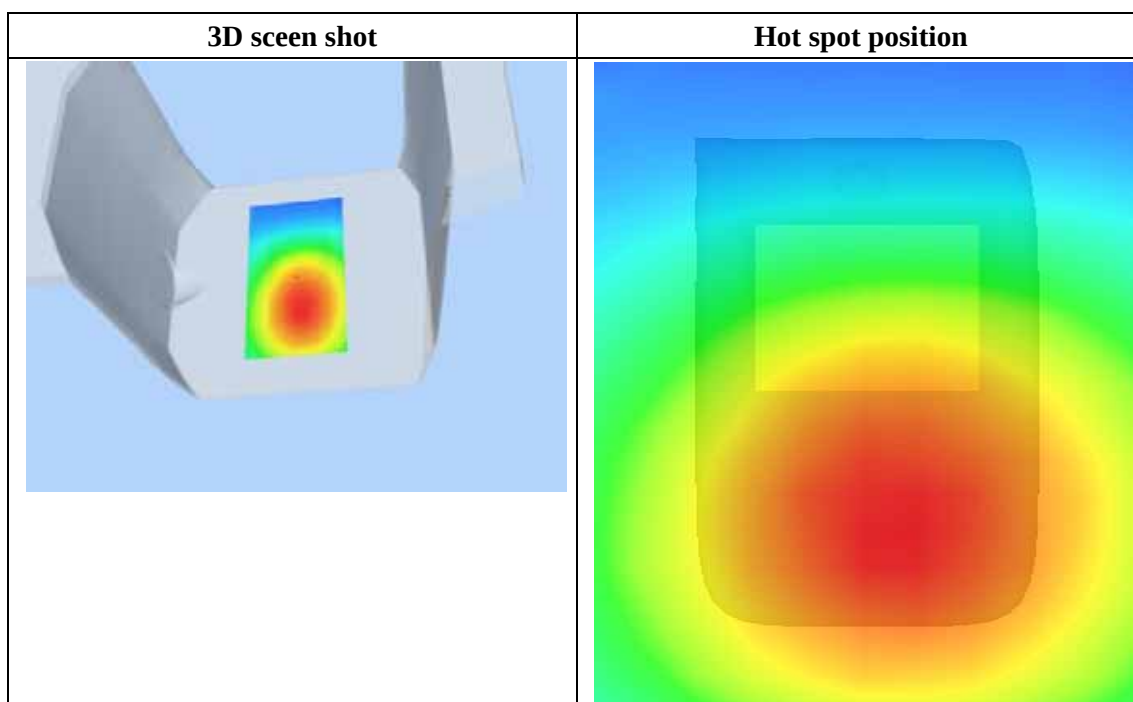
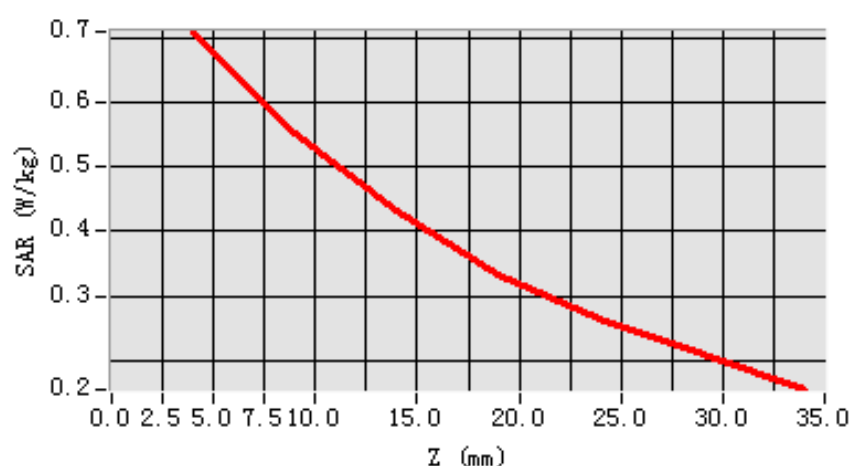
Maximum location: X=6.00, Y=-32.00

SAR 10g (W/Kg)	0.508522
SAR 1g (W/Kg)	0.690301

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7106	0.5528	0.4337	0.3327	0.2629	0.2104

SAR, Z Axis Scan (X = 6, Y = -32)



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: 2013.5.8

Measurement duration: 9 minutes 11 seconds

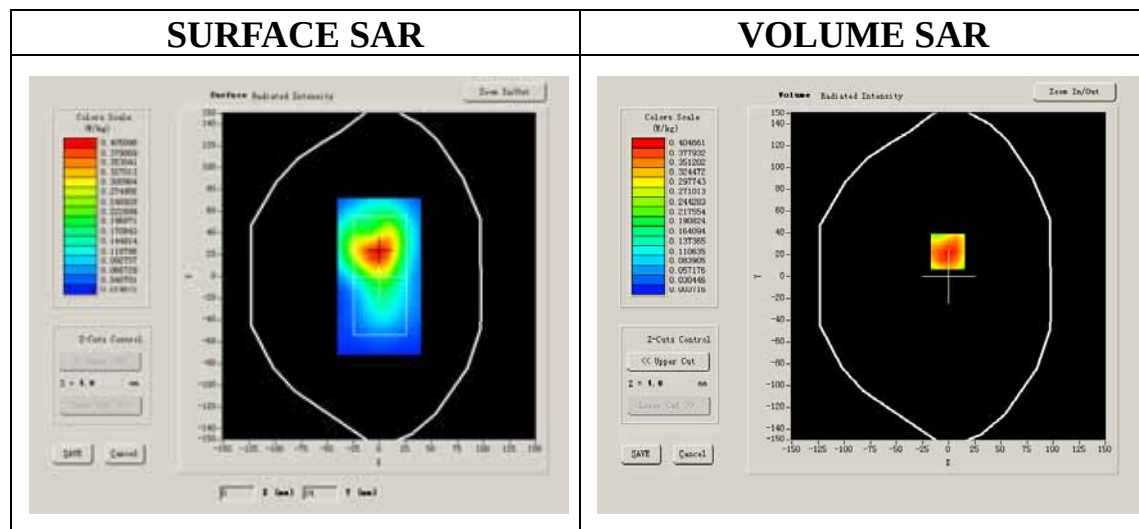
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 190):

Frequency (MHz)	836.600000
Relative permittivity (real part)	55.140974
Conductivity (S/m)	0.950681
Power drift(%)	-0.450000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



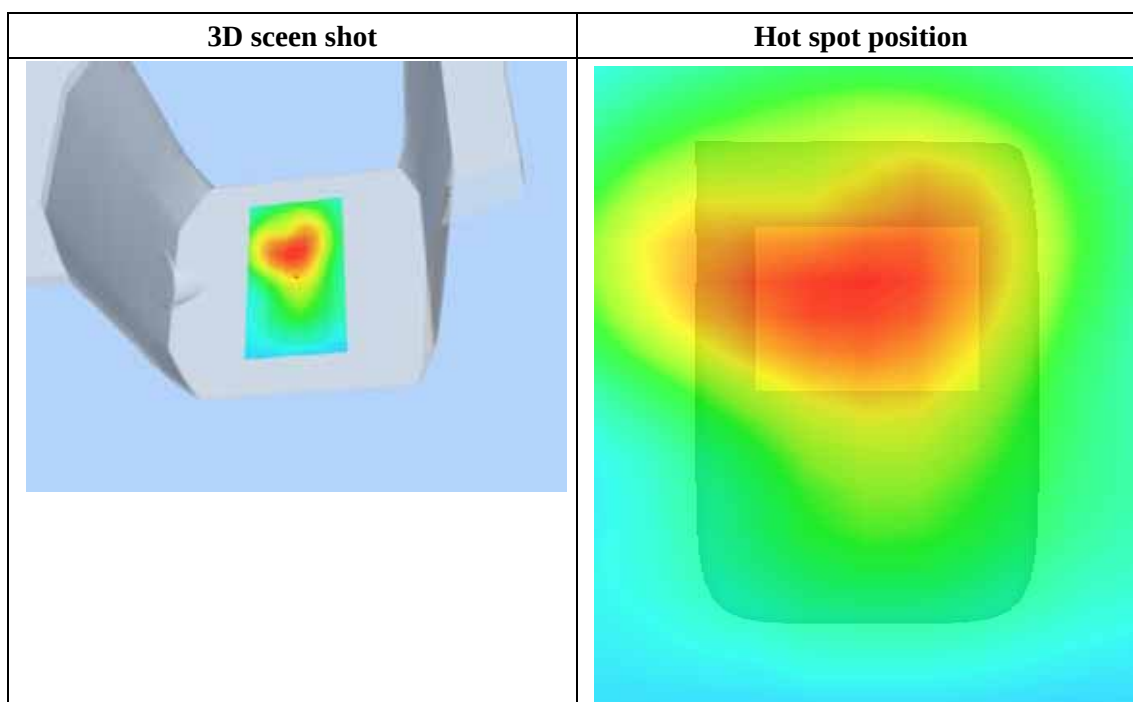
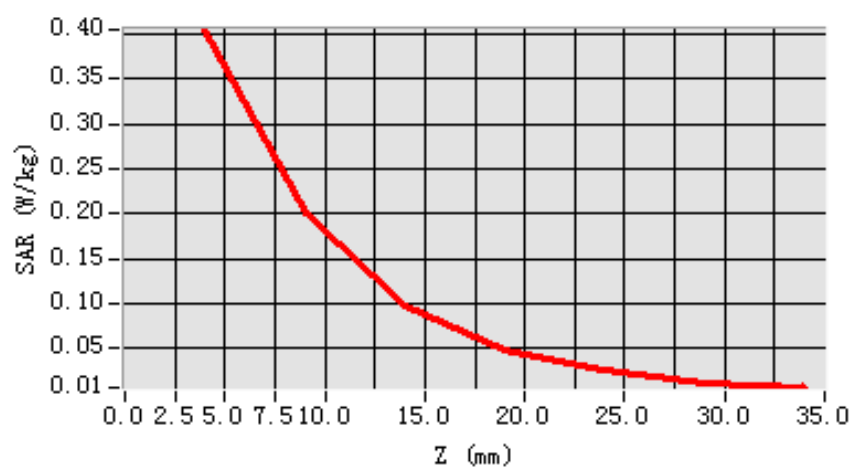
Maximum location: X=-1.00, Y=23.00

SAR 10g (W/Kg)	0.212124
SAR 1g (W/Kg)	0.391650

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4047	0.2018	0.0967	0.0484	0.0251	0.0120

SAR, Z Axis Scan (X = -1, Y = 23)



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: 2013.5.8

Measurement duration: 9 minutes 10 seconds

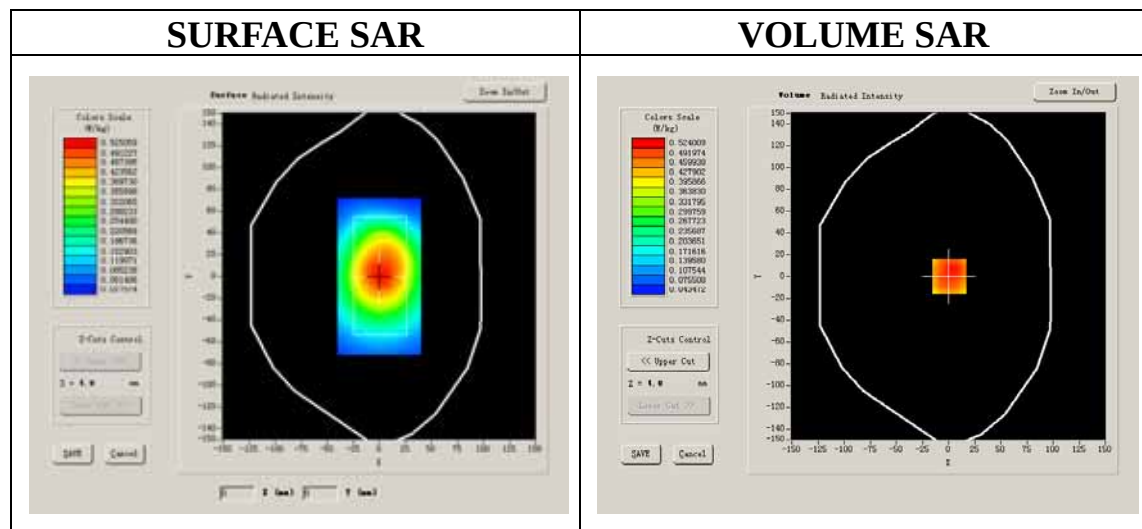
A. Experimental conditions.

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)	55.140974
Conductivity (S/m)	0.950681
Power drift(%)	-0.780000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:2



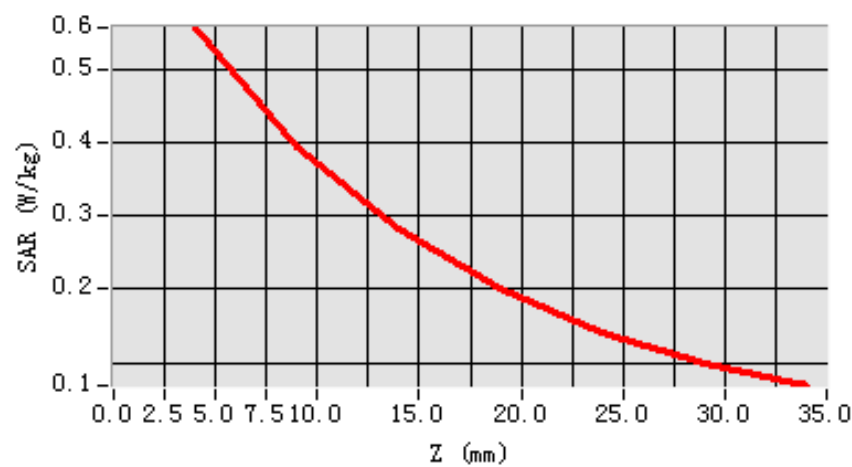
Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	0.379656
SAR 1g (W/Kg)	0.556869

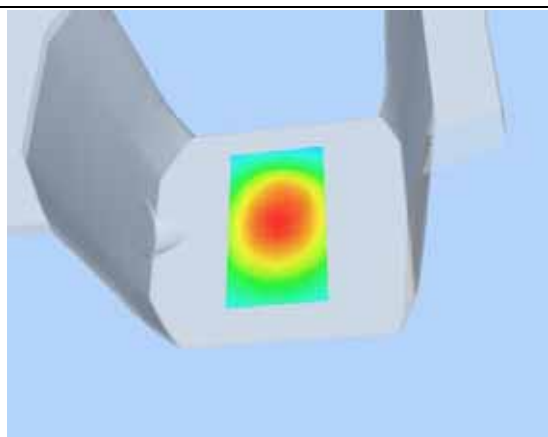
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5589	0.3966	0.2838	0.2026	0.1413	0.1000

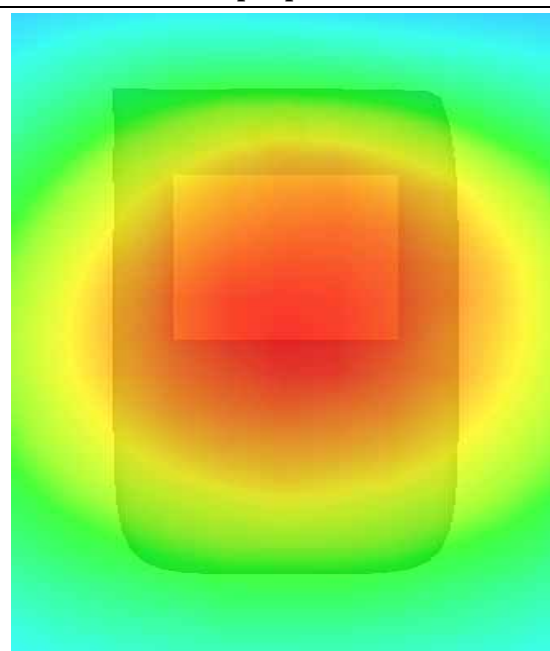
SAR, Z Axis Scan (X = 1, Y = 0)



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: 2013.5.9

Measurement duration: 7 minutes 52 seconds

A. Experimental conditions.

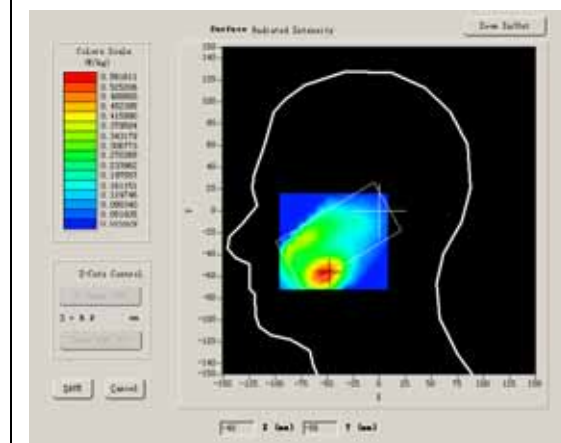
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

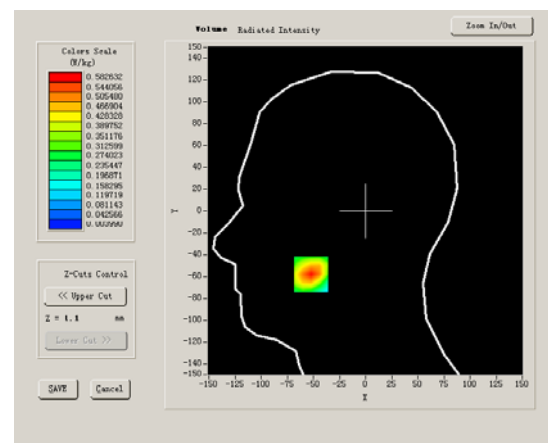
Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.267921
Conductivity (S/m)	1.406817
Power drift(%)	-0.730000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



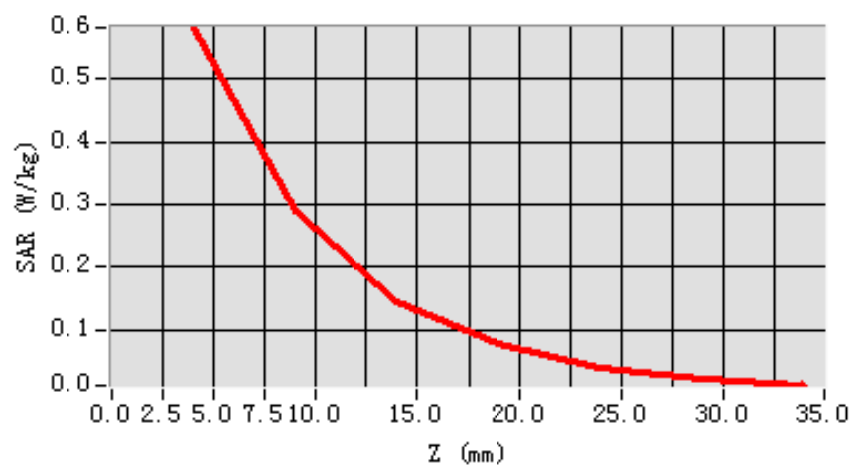
Maximum location: X=-52.00, Y=-58.00

SAR 10g (W/Kg)	0.278057
SAR 1g (W/Kg)	0.546939

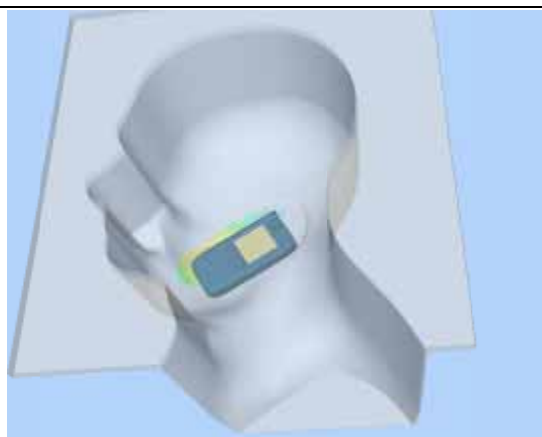
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5826	0.2897	0.1447	0.0771	0.0391	0.0198

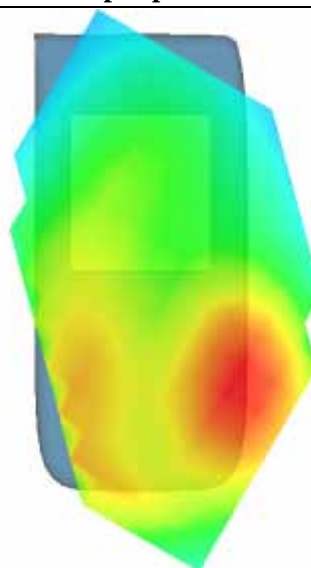
SAR, Z Axis Scan (X = -52, Y = -58)



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: 2013.5.9

Measurement duration: 8 minutes 33 seconds

A. Experimental conditions.

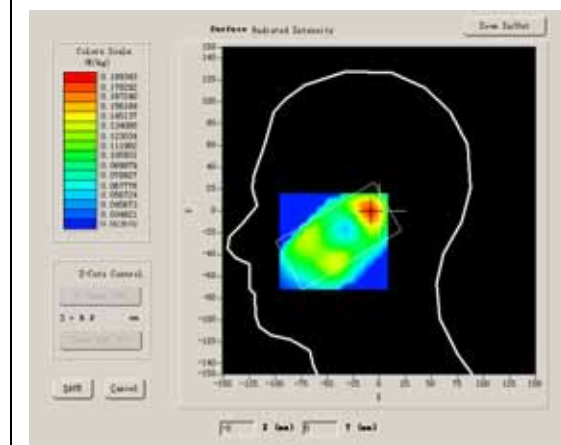
Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	GSM1900
Channels	Middle
Signal	GSM

B. SAR Measurement Results

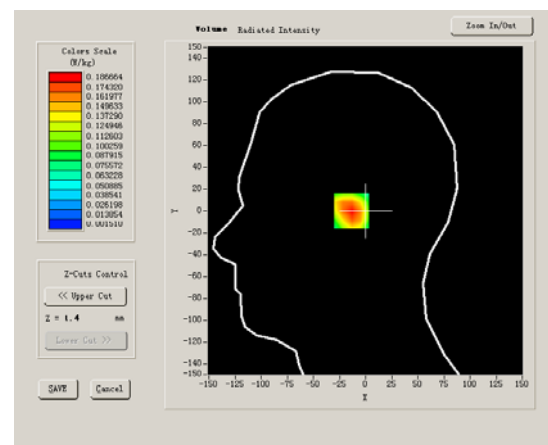
Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.267921
Conductivity (S/m)	1.406817
Power drift(%)	-1.430000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8

SURFACE SAR



VOLUME SAR



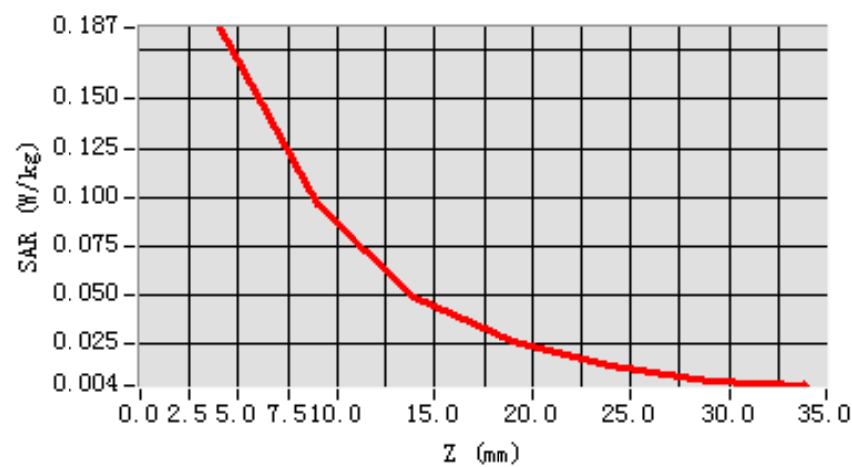
Maximum location: X=-8.00, Y=0.00

SAR 10g (W/Kg)	0.094669
SAR 1g (W/Kg)	0.177346

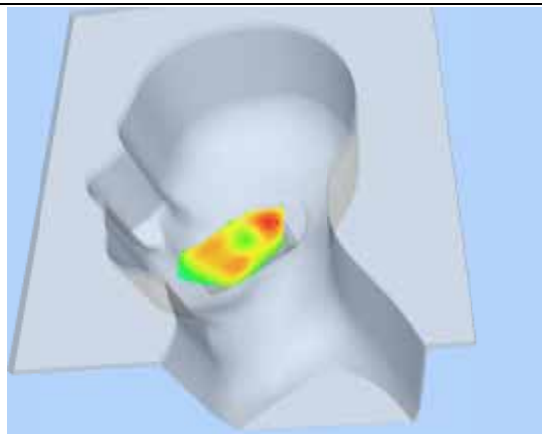
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1867	0.0959	0.0488	0.0261	0.0140	0.0064

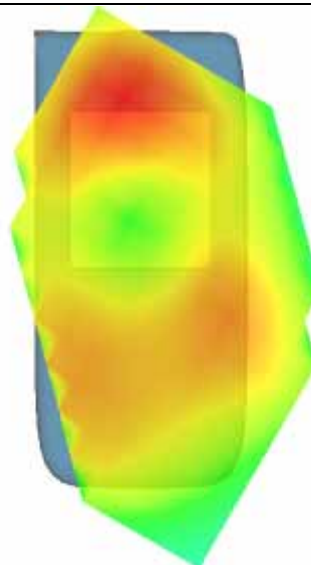
SAR, Z Axis Scan (X = -8, Y = 0)



3D sceen 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: 2013.5.9

Measurement duration: 8 minutes 24 seconds

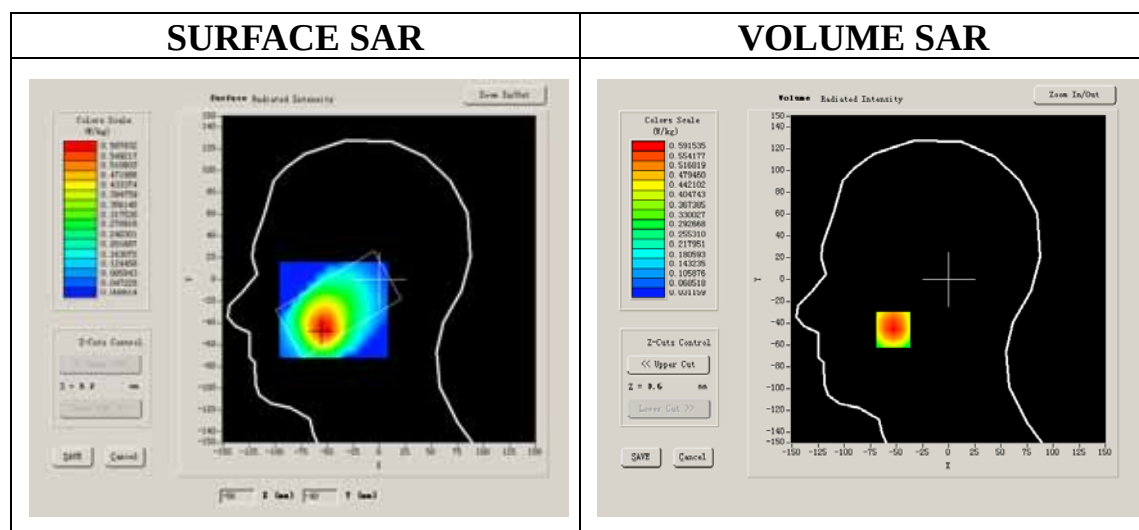
A. Experimental conditions.

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)	41.267921
Conductivity (S/m)	1.406817
Power drift(%)	-0.590000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



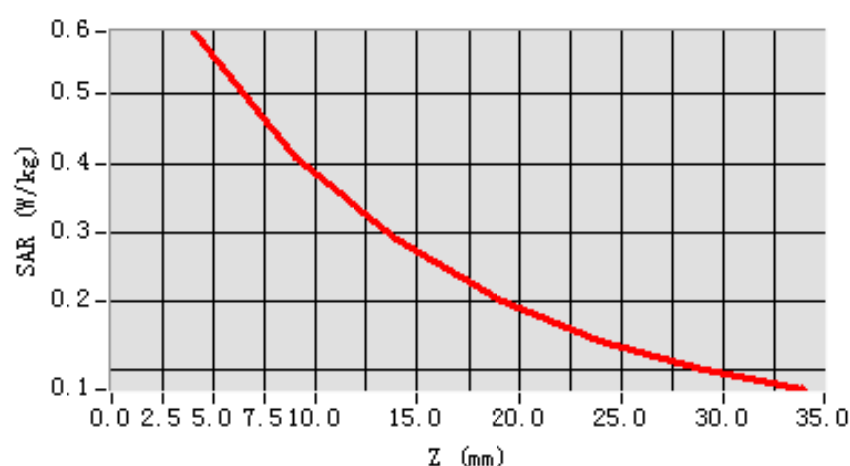
Maximum location: X=-53.00, Y=-46.00

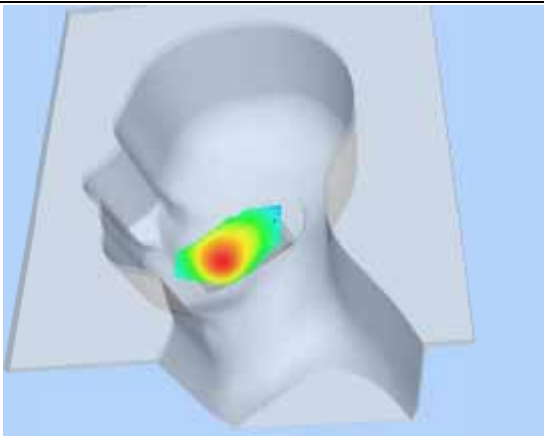
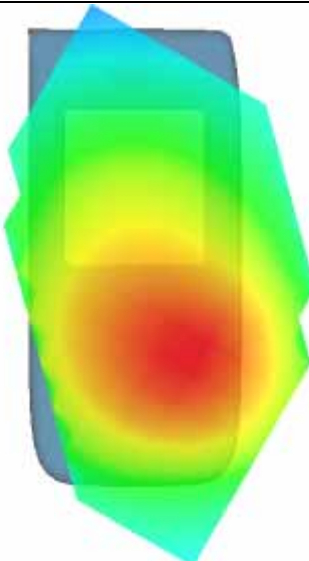
SAR 10g (W/Kg)	0.379388
SAR 1g (W/Kg)	0.567168

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5915	0.4090	0.2899	0.2006	0.1417	0.0984

SAR, Z Axis Scan (X = -53, Y = -46)



3D sceen 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: 2013.5.9

Measurement duration: 7 minutes 18 seconds

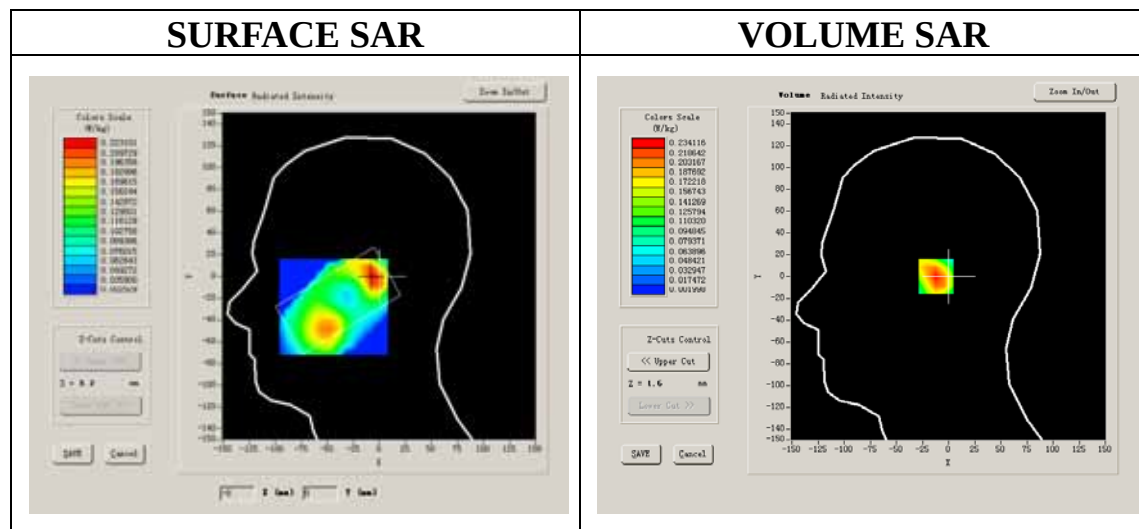
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	GSM1800
Channels	Middle
Signal	GSM

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.267921
Conductivity (S/m)	1.406817
Power drift(%)	-0.290000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:8



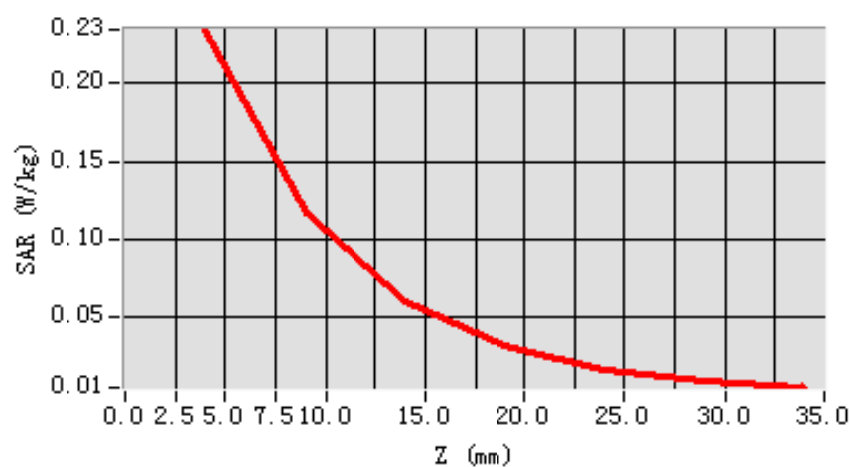
Maximum location: X=-6.00, Y=0.00

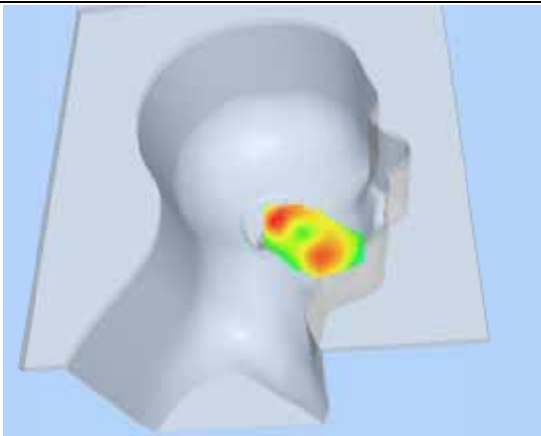
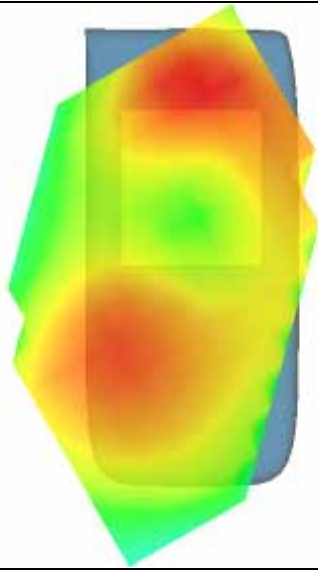
SAR 10g (W/Kg)	0.115934
SAR 1g (W/Kg)	0.220721

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2341	0.1163	0.0602	0.0318	0.0165	0.0097

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



3D sceen 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: 2013.5.9

Measurement duration: 9 minutes 8 seconds

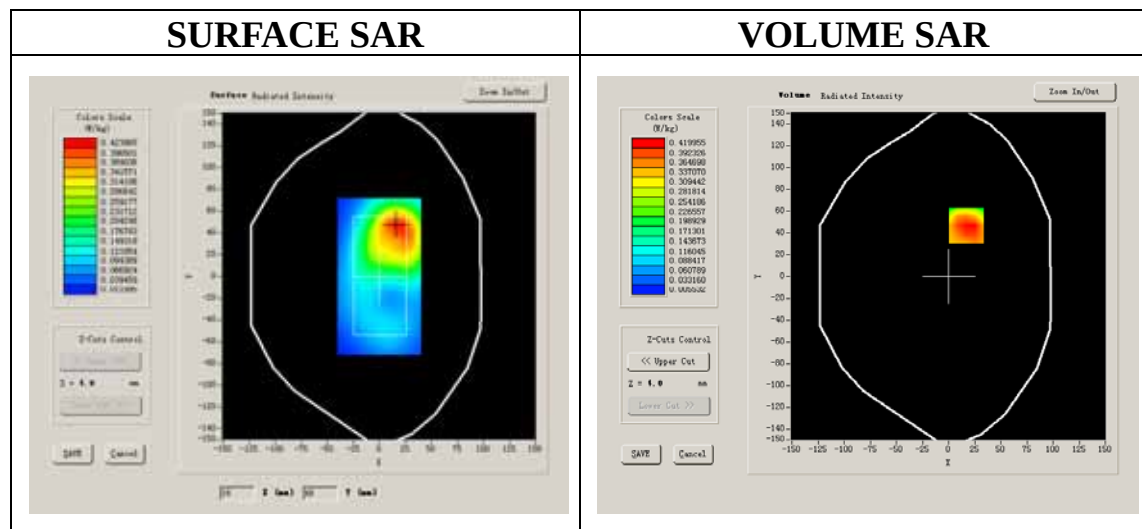
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.207082
Conductivity (S/m)	1.510328
Power drift(%)	-2.320000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:8



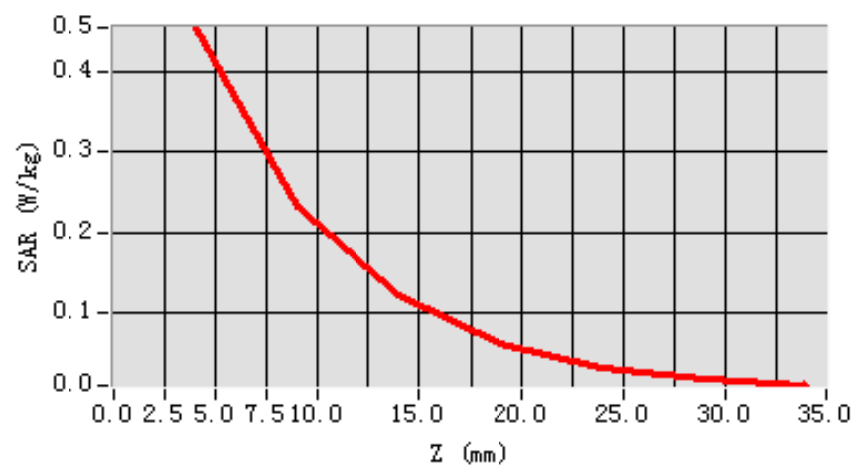
Maximum location: X=17.00, Y=47.00

SAR 10g (W/Kg)	0.242003
SAR 1g (W/Kg)	0.444271

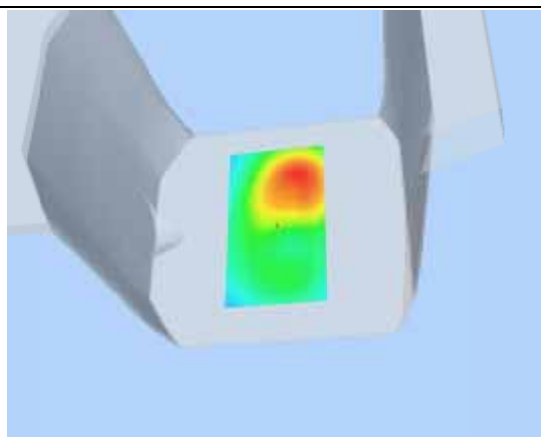
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4548	0.2319	0.1215	0.0629	0.0308	0.0176

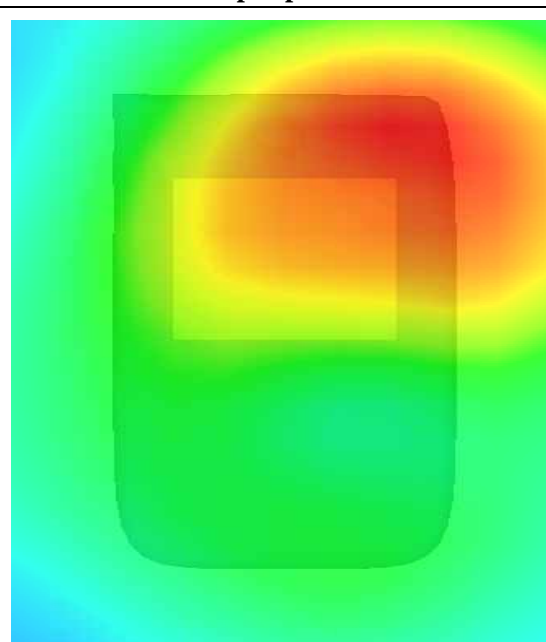
SAR, Z Axis Scan (X = 17, Y = 47)



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: 2013.5.9

Measurement duration: 9 minutes 9 seconds

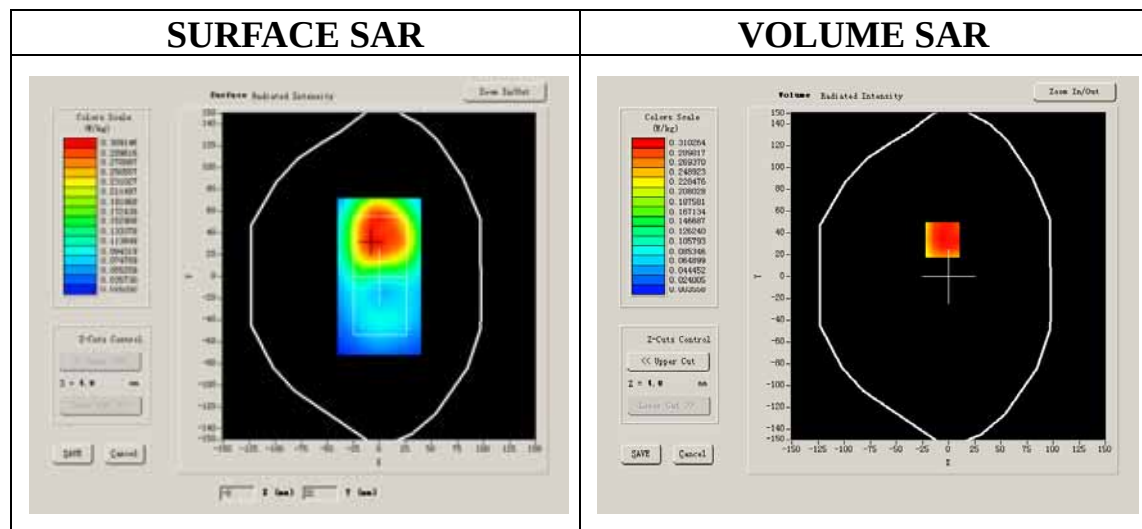
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.207082
Conductivity (S/m)	1.510328
Power drift(%)	0.110000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:8



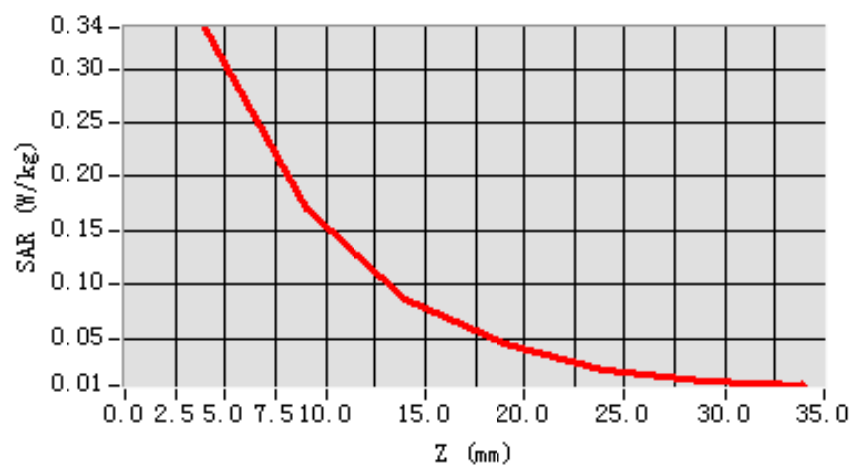
Maximum location: X=-6.00, Y=34.00

SAR 10g (W/Kg)	0.186506
SAR 1g (W/Kg)	0.327132

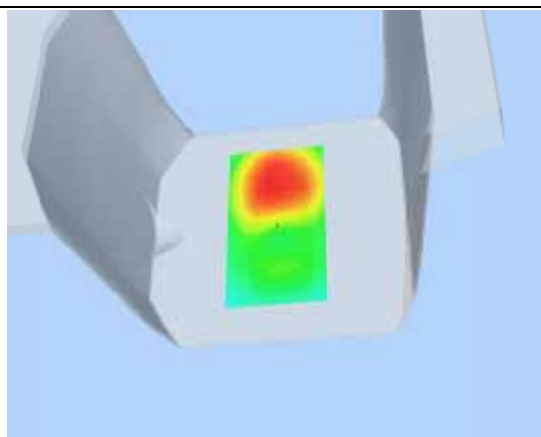
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3378	0.1701	0.0860	0.0456	0.0220	0.0110

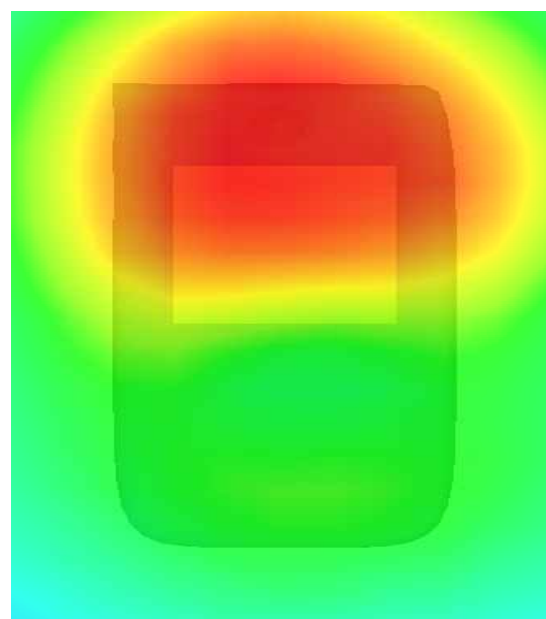
SAR, Z Axis Scan (X = -6, Y = 34)



3D sceen 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: 2013.5.9

Measurement duration: 9 minutes 8 seconds

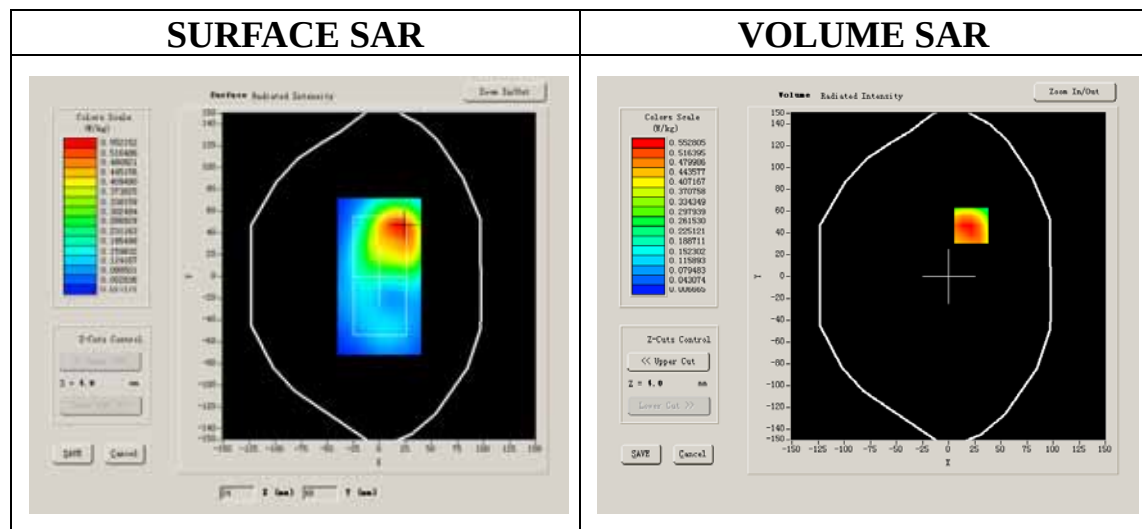
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.207082
Conductivity (S/m)	1.510328
Power drift(%)	-0.710000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



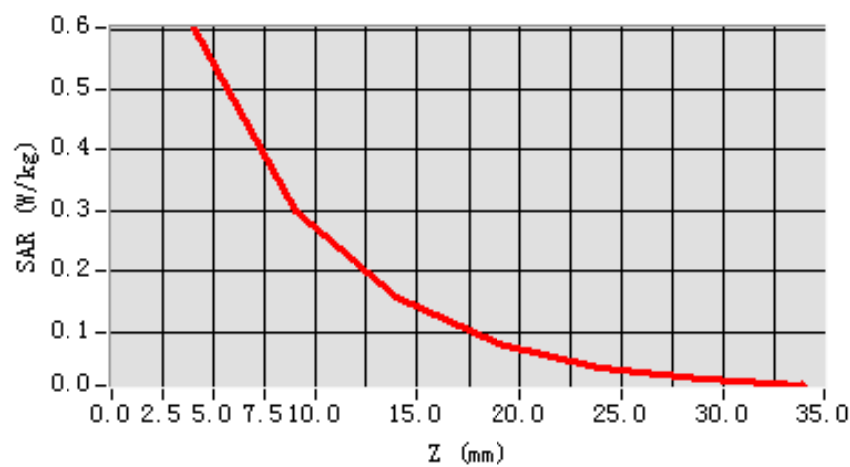
Maximum location: X=22.00, Y=47.00

SAR 10g (W/Kg)	0.319299
SAR 1g (W/Kg)	0.584715

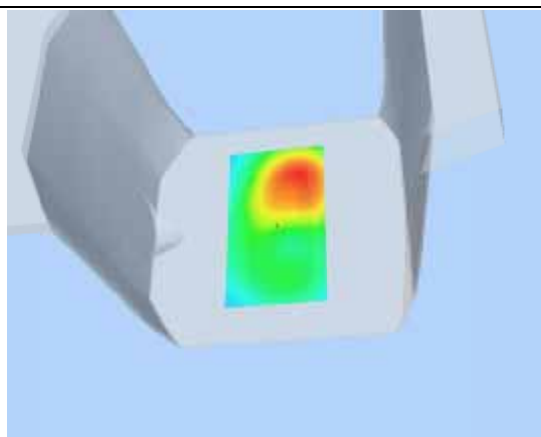
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6020	0.2992	0.1578	0.0808	0.0418	0.0231

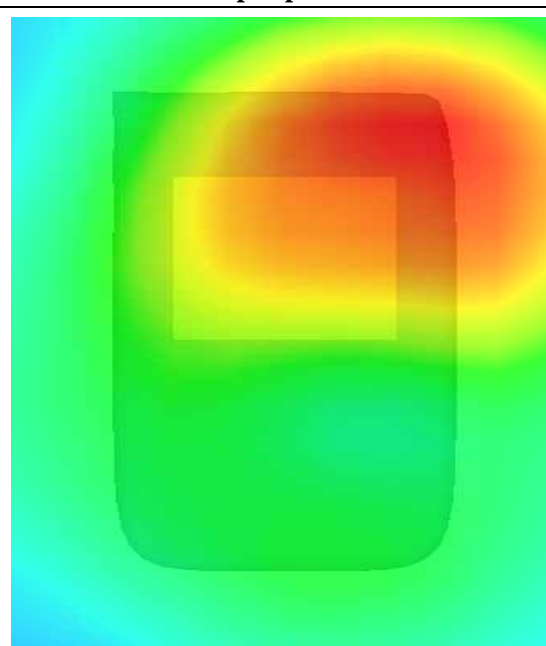
SAR, Z Axis Scan (X = 22, Y = 47)



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: 2013.5.9

Measurement duration: 9 minutes 8 seconds

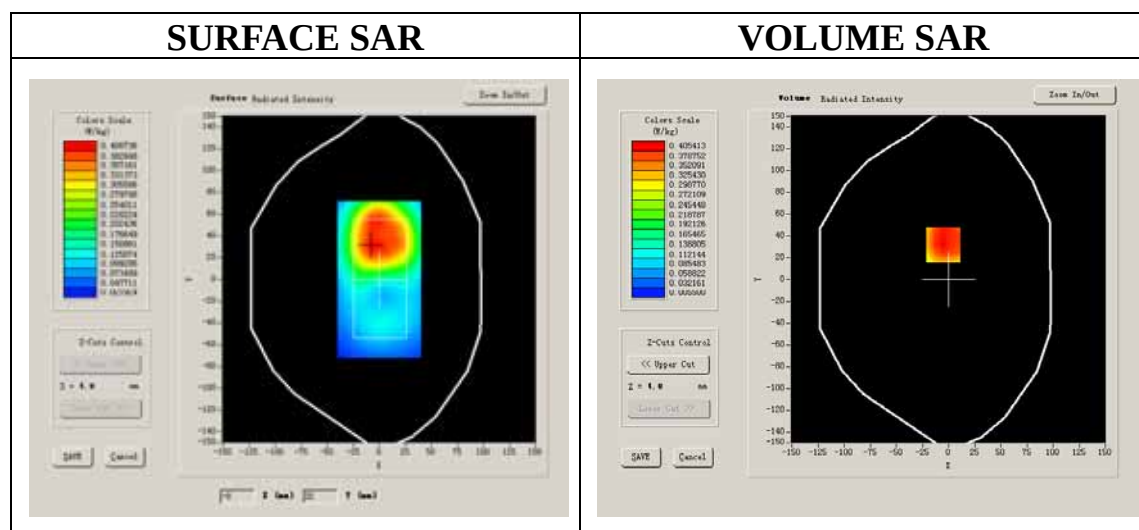
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 661):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.207082
Conductivity (S/m)	1.510328
Power drift(%)	-0.860000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



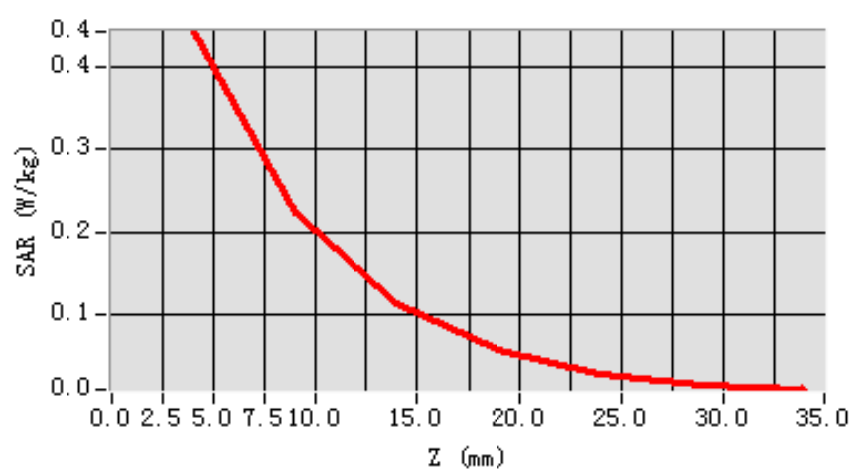
Maximum location: X=-5.00, Y=32.00

SAR 10g (W/Kg)	0.241760
SAR 1g (W/Kg)	0.428679

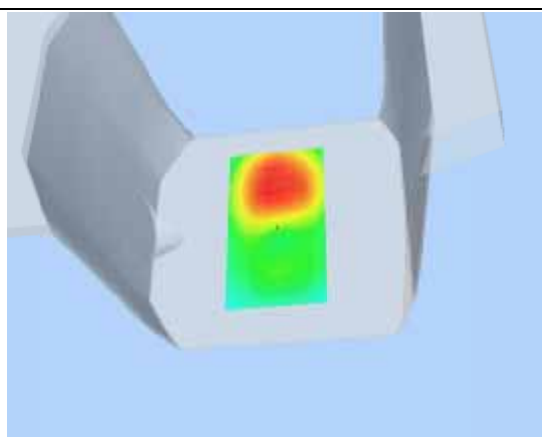
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4415	0.2223	0.1134	0.0584	0.0292	0.0154

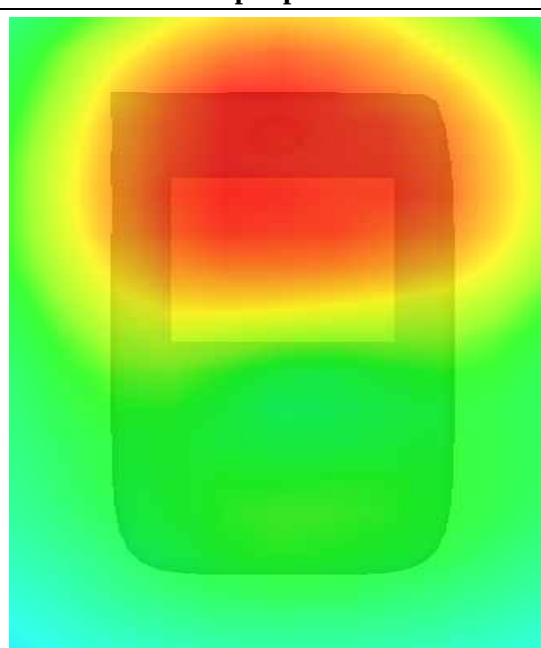
SAR, Z Axis Scan (X = -5, Y = 32)



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: 2013.5.9

Measurement duration: 9 minutes 8 seconds

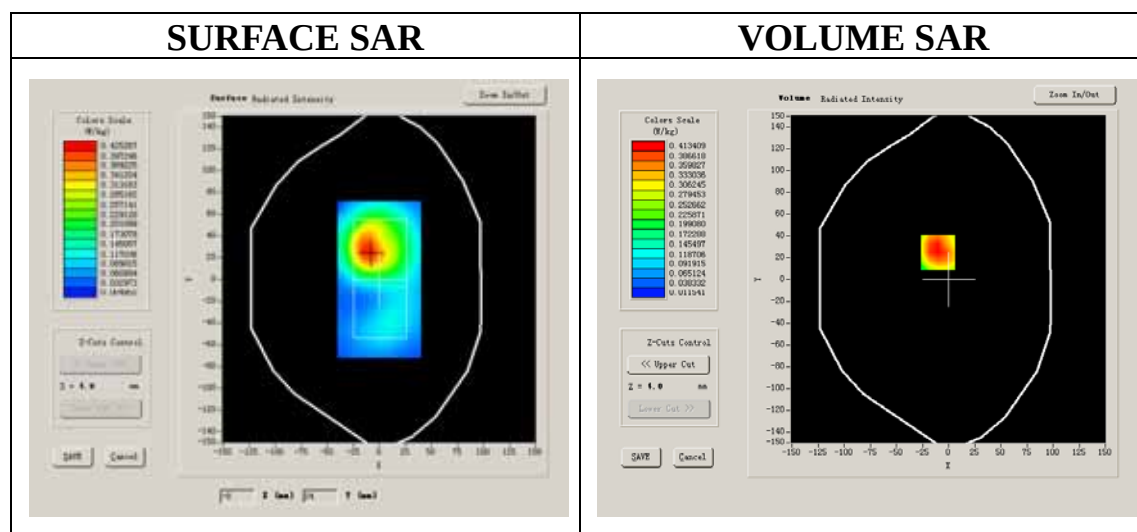
A. Experimental conditions.

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)	53.207082
Conductivity (S/m)	1.510328
Power drift(%)	0.130000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:2



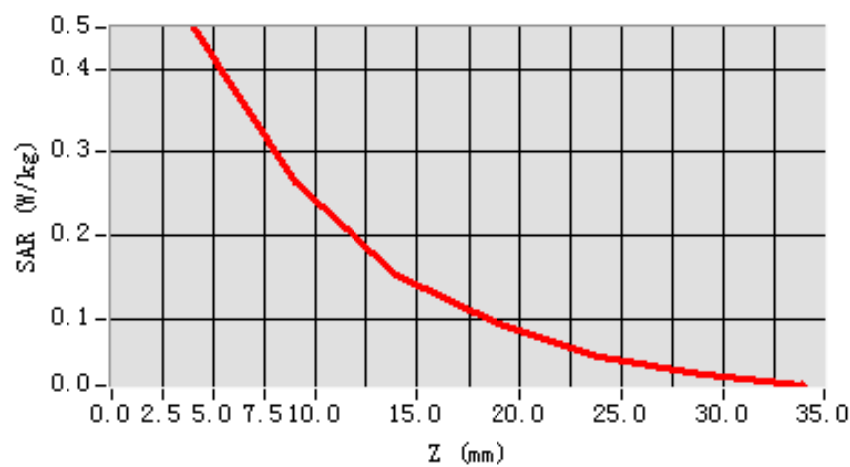
Maximum location: X=-10.00, Y=25.00

SAR 10g (W/Kg)	0.255300
SAR 1g (W/Kg)	0.436135

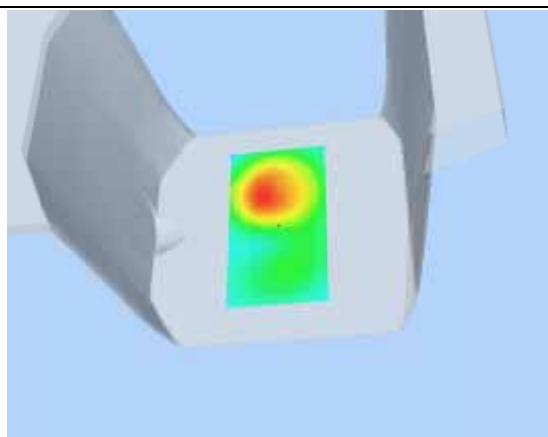
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4502	0.2648	0.1525	0.0925	0.0545	0.0317

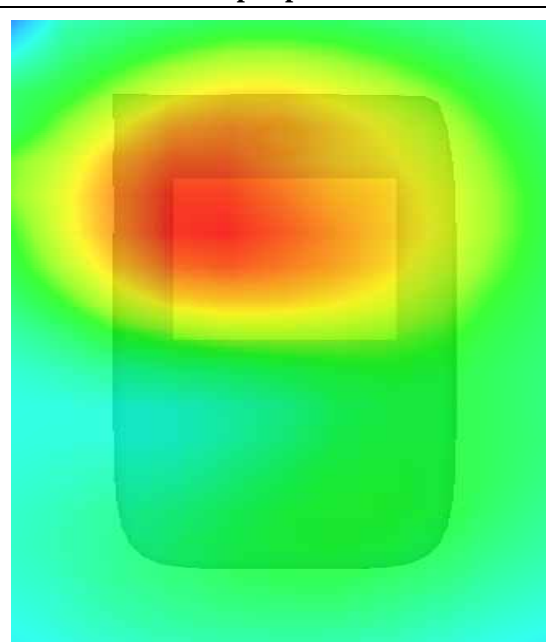
SAR, Z Axis Scan (X = -10, Y = 25)



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: 2013.5.8

Measurement duration: 7 minutes 59 seconds

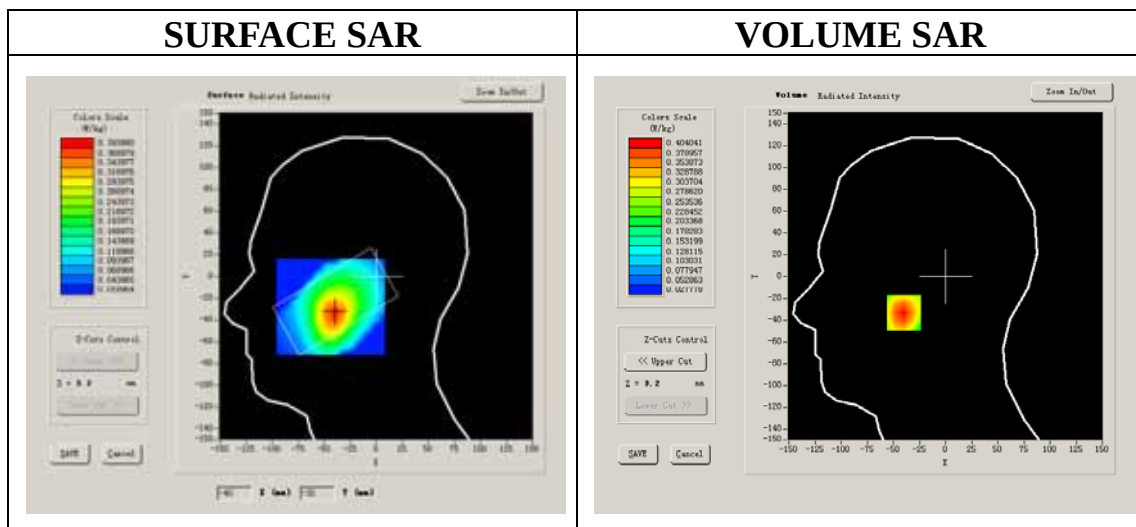
A. Experimental conditions.

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)	42.522765
Conductivity (S/m)	0.918504
Power drift (%)	-0.320000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



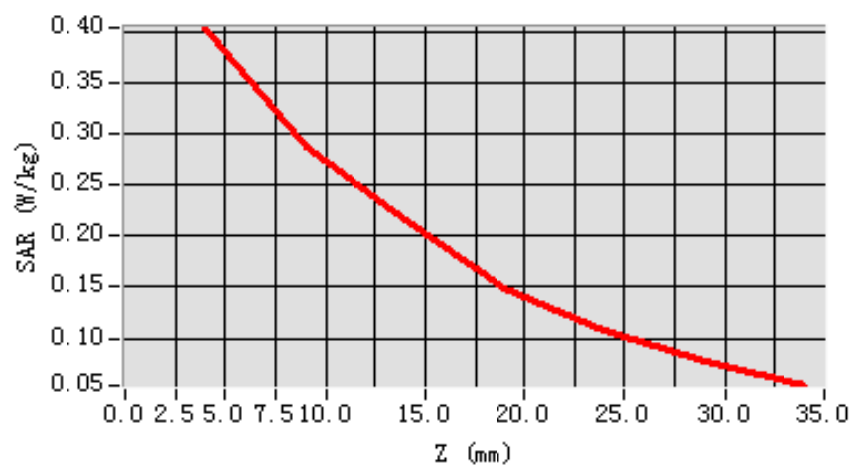
Maximum location: X=-40.00, Y=-33.00

SAR 10g (W/Kg)	0.259198
SAR 1g (W/Kg)	0.385046

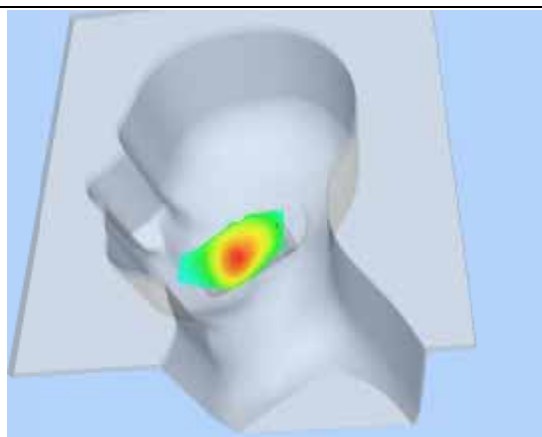
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4040	0.2875	0.2160	0.1496	0.1088	0.0777

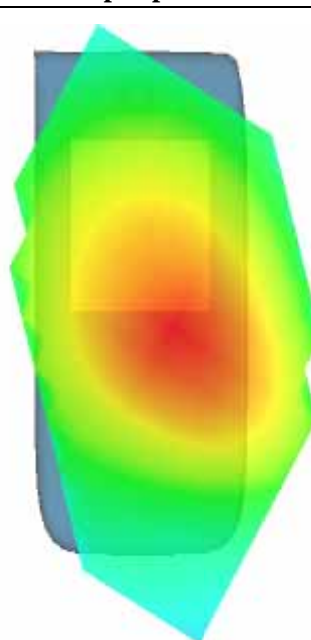
SAR, Z Axis Scan (X = -40, Y = -33)



3D sceen 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: 2013.5.8

Measurement duration: 7 minutes 41 seconds

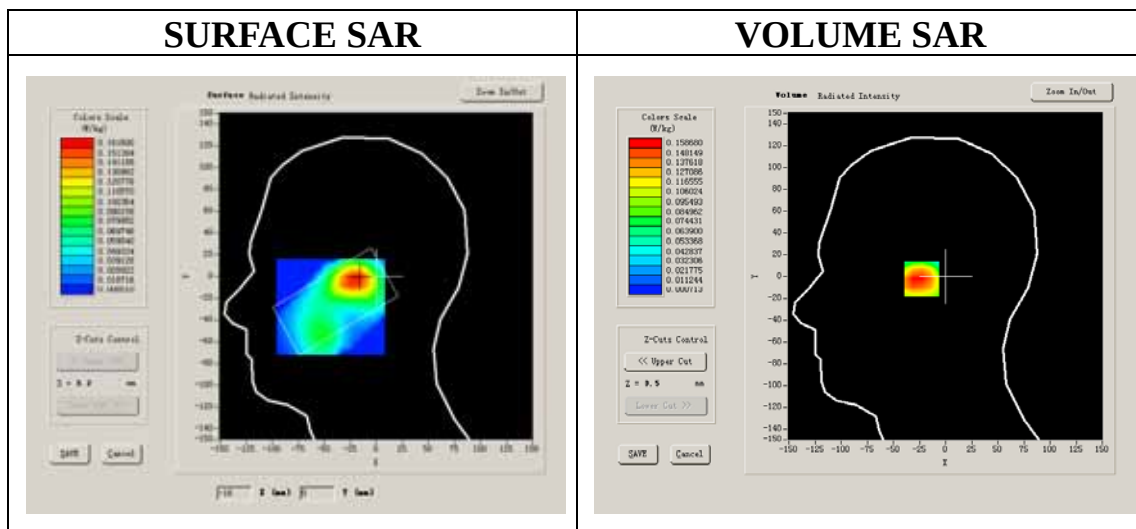
A. Experimental conditions.

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)	42.522765
Conductivity (S/m)	0.918504
Power drift (%)	-0.320000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



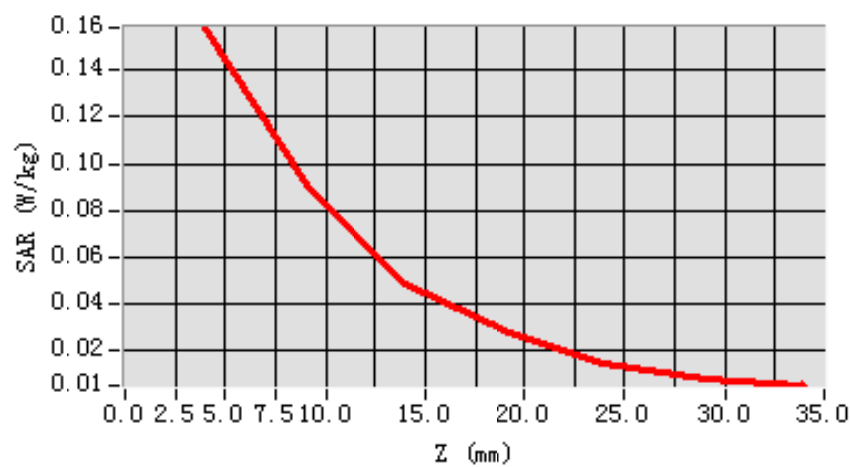
Maximum location: X=-18.00, Y=-2.00

SAR 10g (W/Kg)	0.085899
SAR 1g (W/Kg)	0.154367

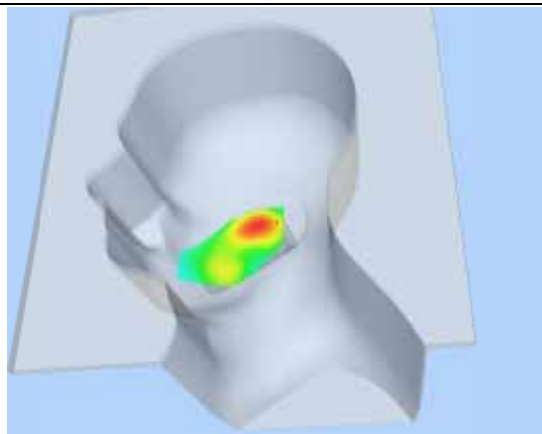
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1582	0.0911	0.0491	0.0291	0.0146	0.0077

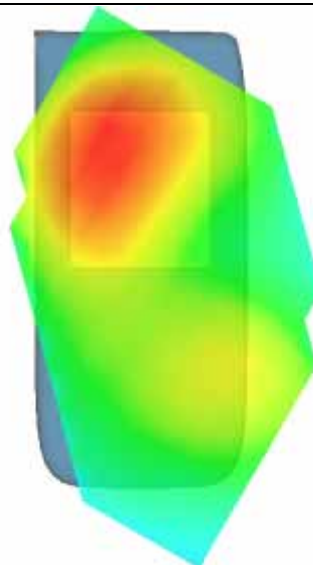
SAR, Z Axis Scan (X = -18, Y = -2)



3D sceen 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: 2013.5.8

Measurement duration: 7 minutes 53 seconds

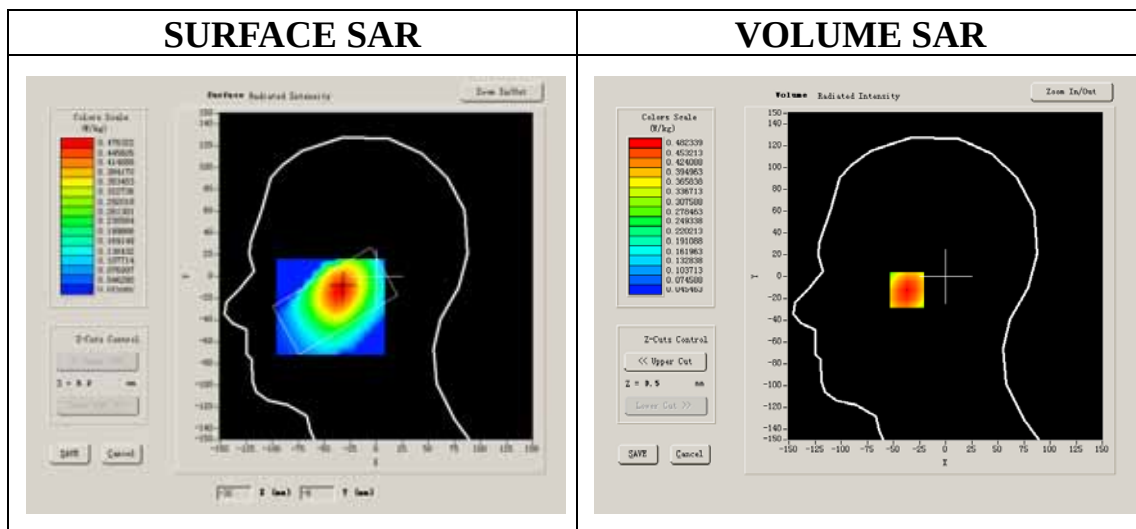
A. Experimental conditions.

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)	42.522765
Conductivity (S/m)	0.918504
Power drift (%)	-0.080000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



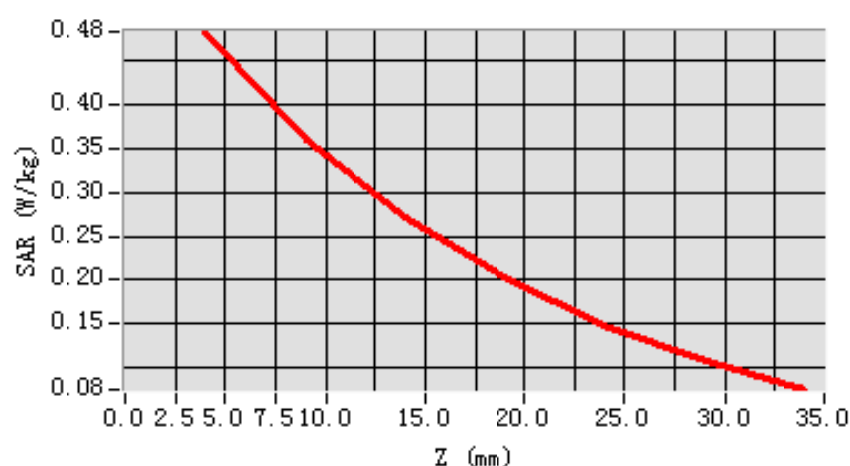
Maximum location: X=-35.00, Y=-12.00

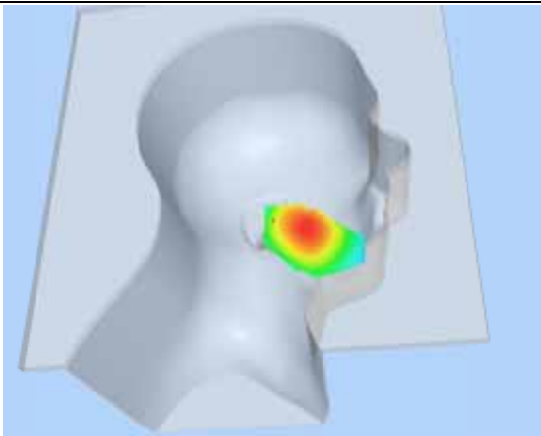
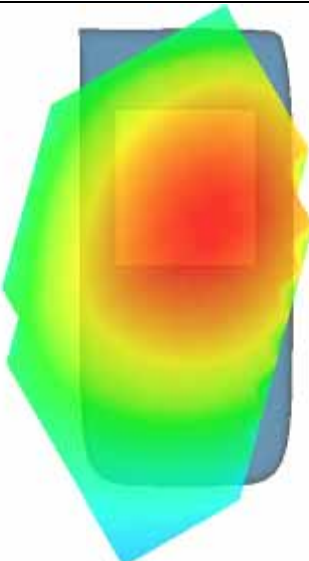
SAR 10g (W/Kg)	0.330053
SAR 1g (W/Kg)	0.464982

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4823	0.3589	0.2715	0.2034	0.1488	0.1071

SAR, Z Axis Scan (X = -35, Y = -12)



3D sceen 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: 2013.5.8

Measurement duration: 7 minutes 40 seconds

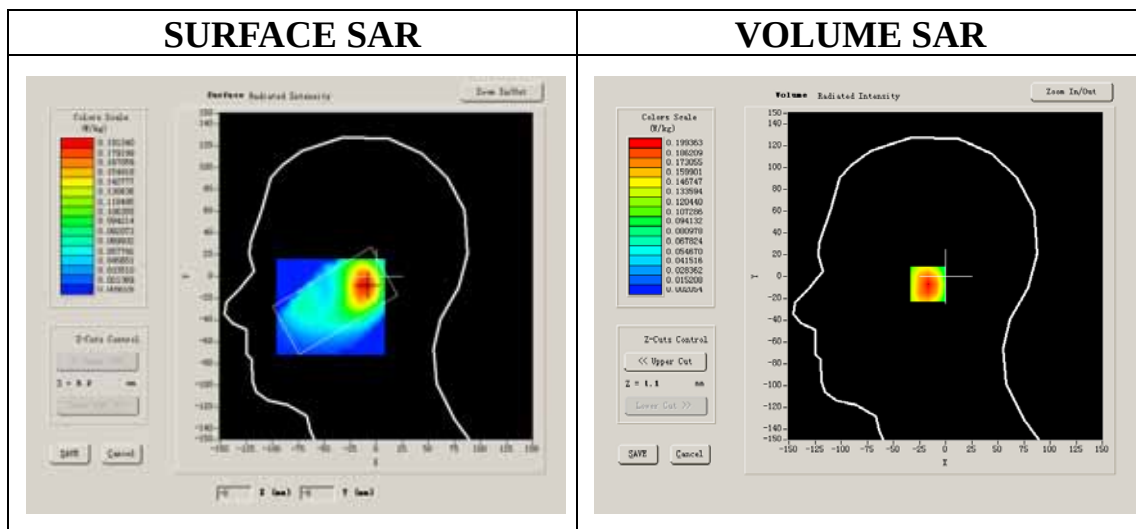
A. Experimental conditions.

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)	42.522765
Conductivity (S/m)	0.918504
Power drift (%)	-0.410000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479, 25.214, 27.196
Crest factor:	1:1



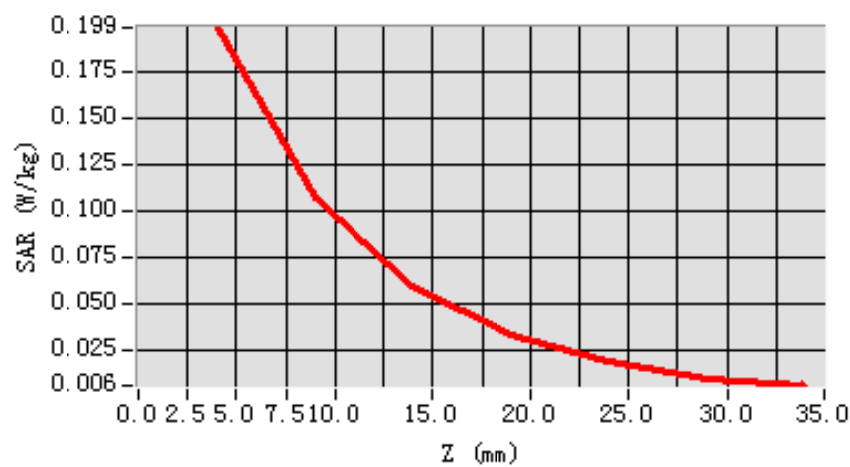
Maximum location: X=-11.00, Y=-7.00

SAR 10g (W/Kg)	0.104969
SAR 1g (W/Kg)	0.189659

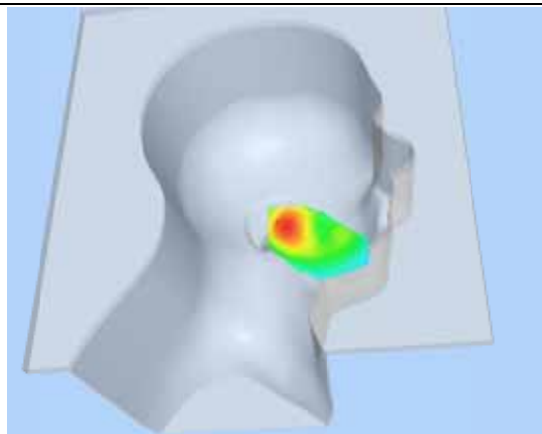
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1994	0.1072	0.0600	0.0328	0.0185	0.0097

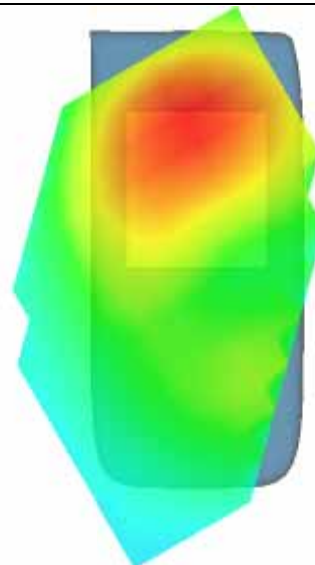
SAR, Z Axis Scan (X = -11, Y = -7)



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: 2013.5.8

Measurement duration: 9 minutes 15 seconds

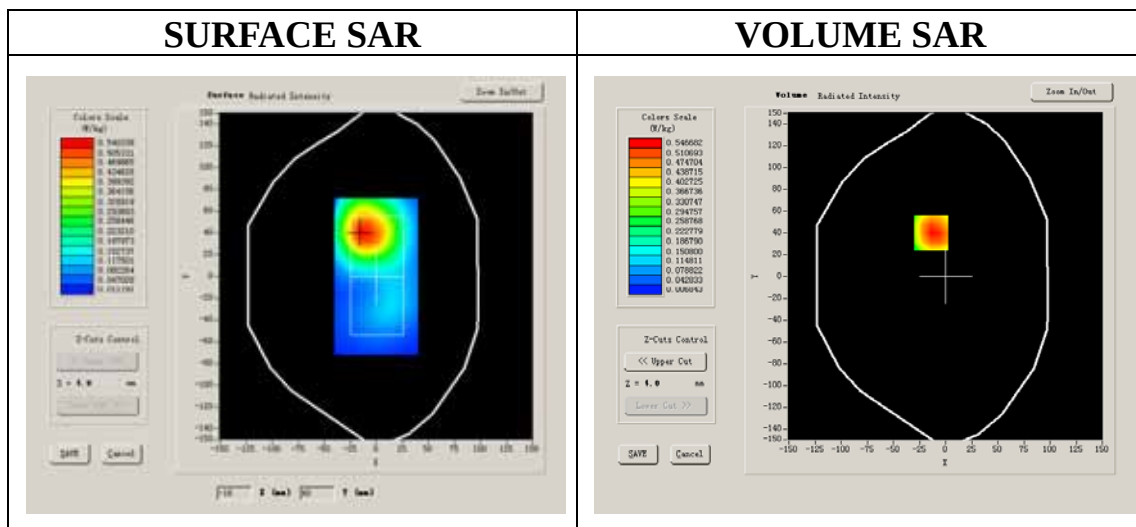
A. Experimental conditions.

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)	55.140974
Conductivity (S/m)	0.950681
Power drift (%)	-0.130000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:1



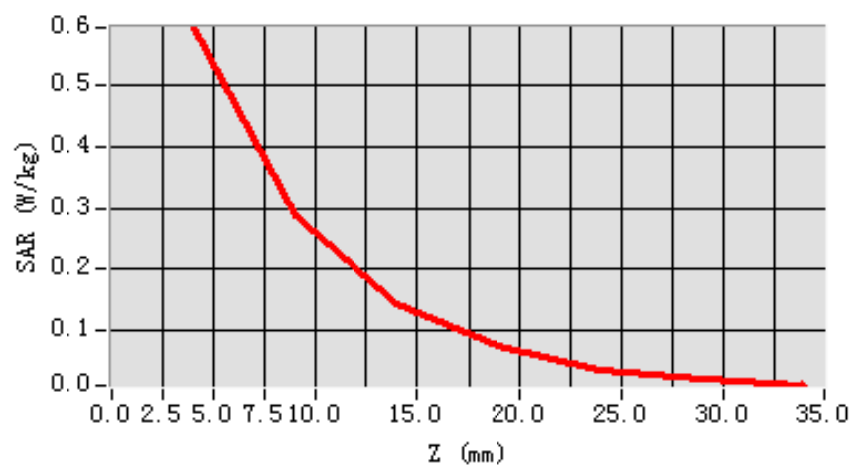
Maximum location: X=-14.00, Y=40.00

SAR 10g (W/Kg)	0.310013
SAR 1g (W/Kg)	0.576097

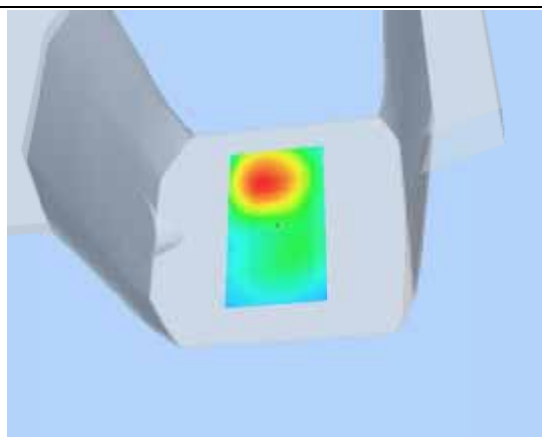
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5953	0.2883	0.1446	0.0742	0.0354	0.0194

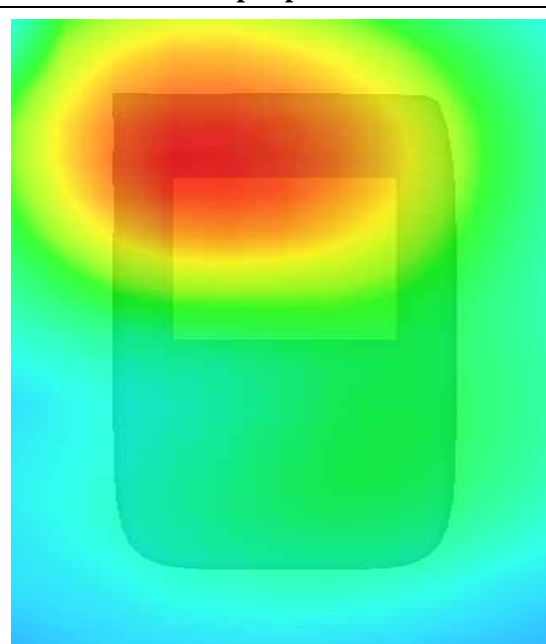
SAR, Z Axis Scan (X = -14, Y = 40)



3D sceen 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: 2013.5.8

Measurement duration: 9 minutes 16 seconds

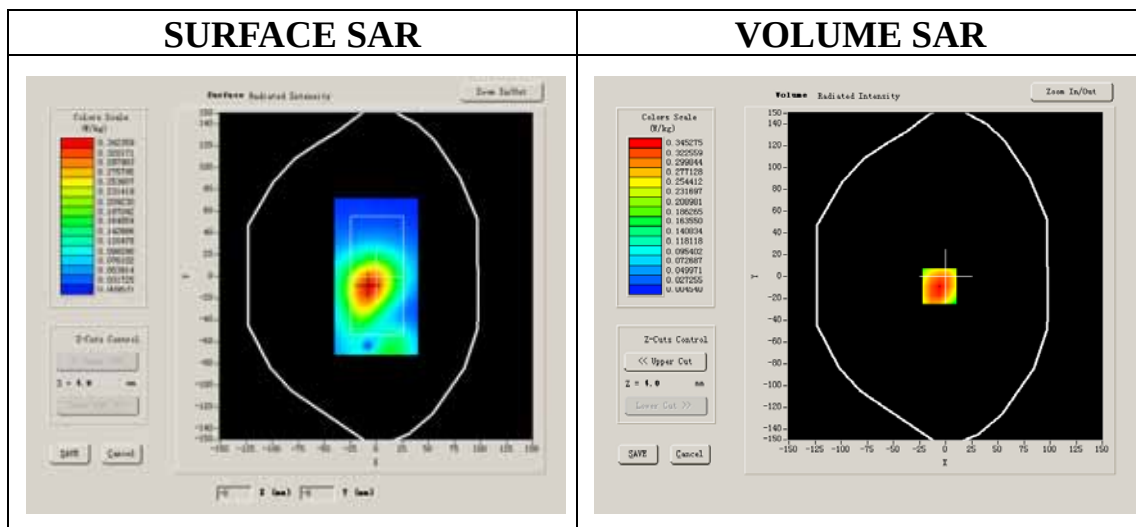
A. Experimental conditions.

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)	55.140974
Conductivity (S/m)	0.950681
Power drift (%)	0.060000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559, 25.681, 27.588
Crest factor:	1:1



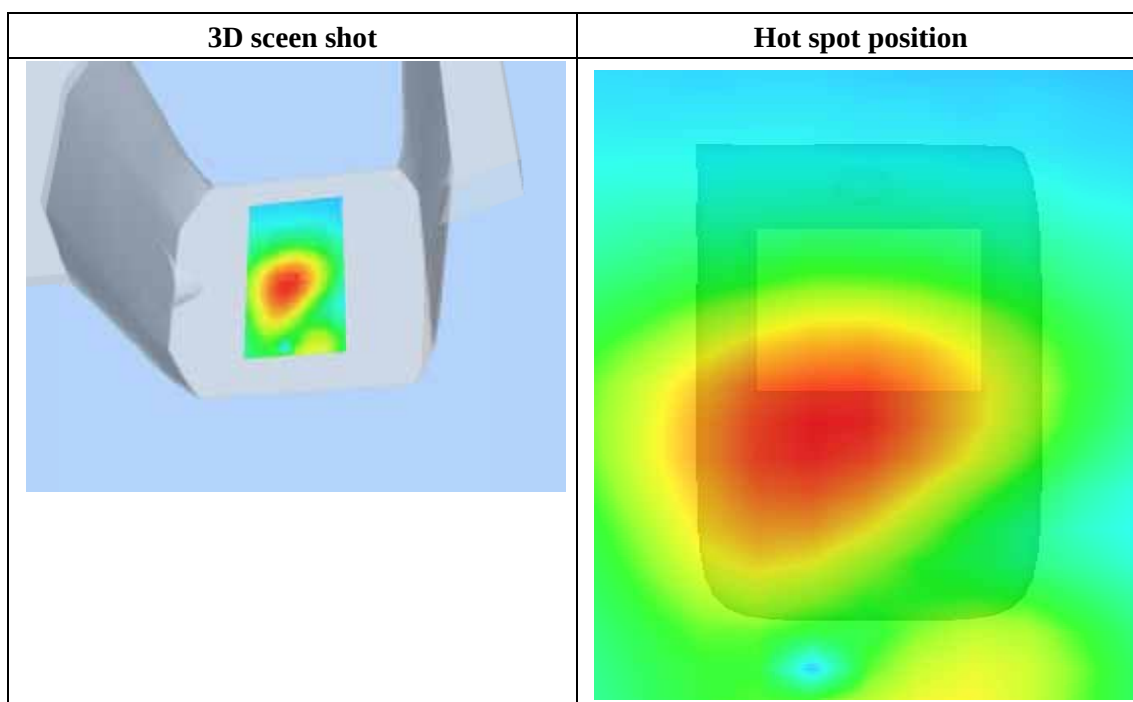
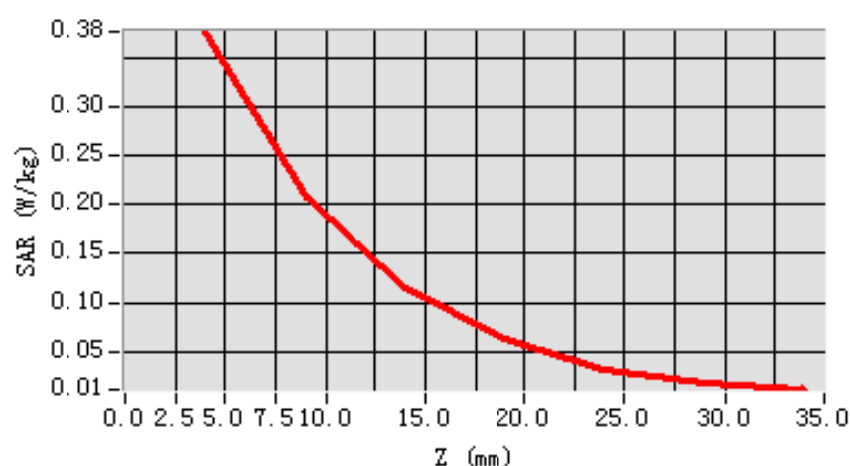
Maximum location: X=-6.00, Y=-9.00

SAR 10g (W/Kg)	0.203927
SAR 1g (W/Kg)	0.360718

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3760	0.2063	0.1141	0.0635	0.0324	0.0186

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



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: 2013.5.10

Measurement duration: 7 minutes 59 seconds

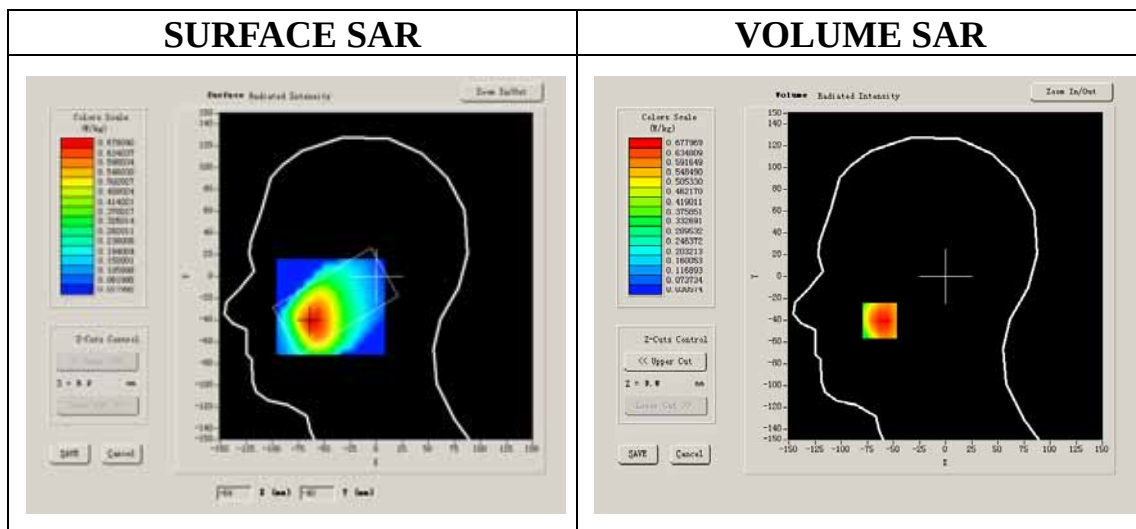
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	WCDMA1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 1412):

Frequency (MHz)	1732.400000
Relative permittivity (real part)	40.048953
Conductivity (S/m)	1.380357
Power drift (%)	-0.430000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.3°C
ConvF:	42.533, 36.791, 41.019
Crest factor:	1:1



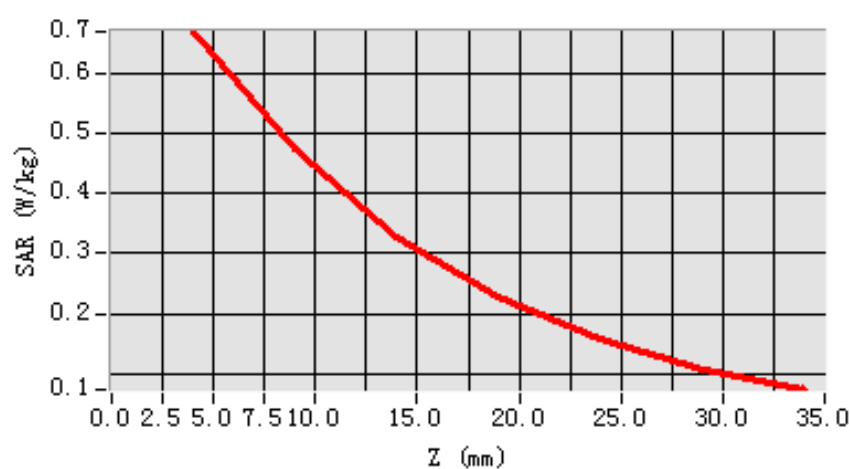
Maximum location: X=-63.00, Y=-41.00

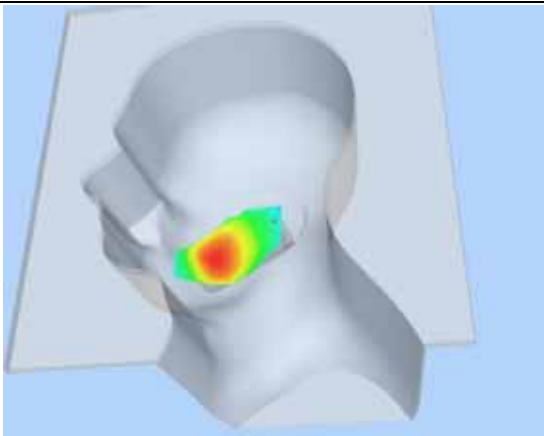
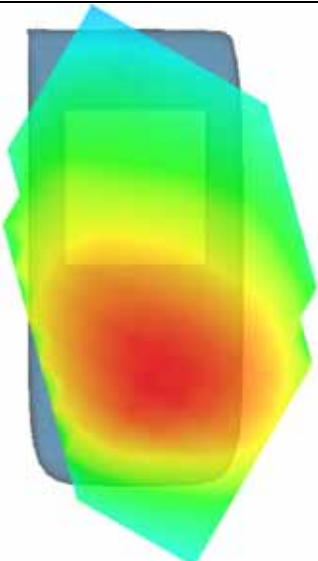
SAR 10g (W/Kg)	0.439039
SAR 1g (W/Kg)	0.651747

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6702	0.4745	0.3282	0.2268	0.1562	0.1070

SAR, Z Axis Scan (X = -63, Y = -41)



3D sceen 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: 2013.5.10

Measurement duration: 7 minutes 41 seconds

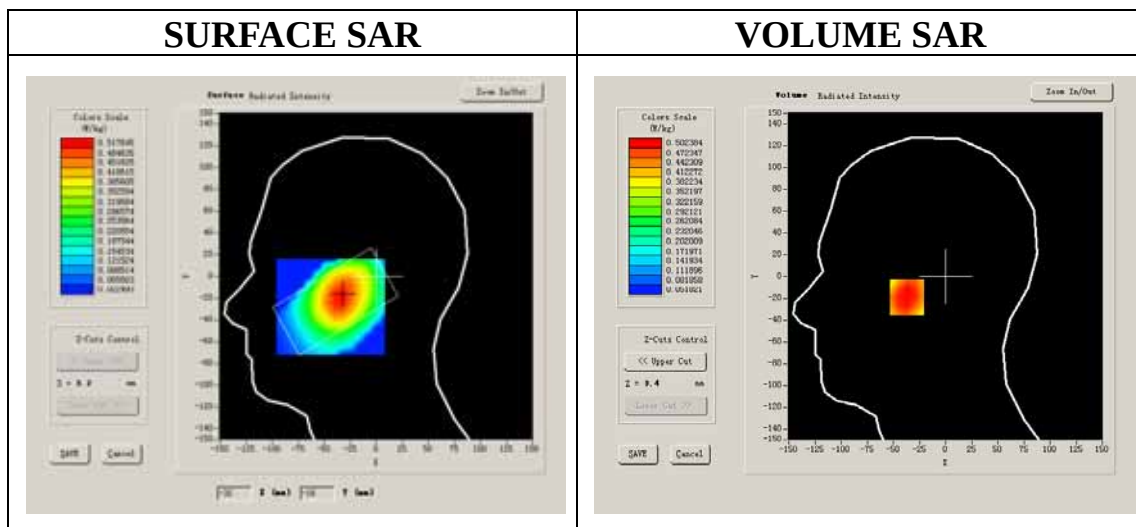
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	WCDMA1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 1412):

Frequency (MHz)	1732.400000
Relative permittivity (real part)	40.048953
Conductivity (S/m)	1.380357
Power drift (%)	-0.620000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.3°C
ConvF:	42.533, 36.791, 41.019
Crest factor:	1:1



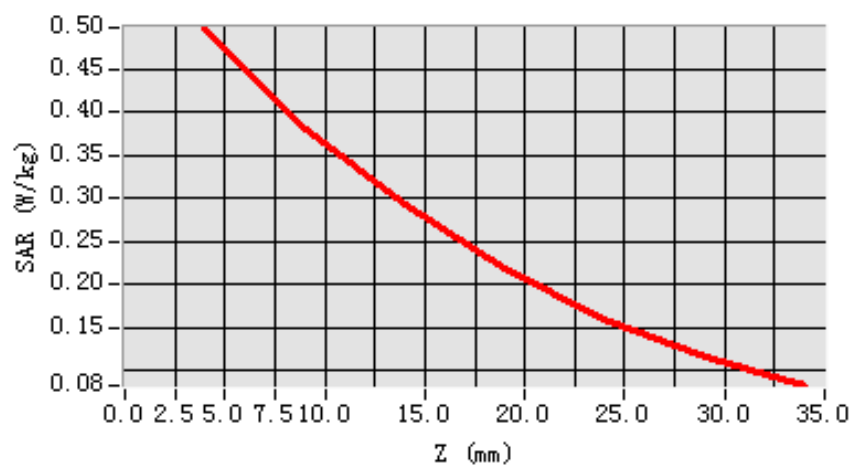
Maximum location: X=-34.00, Y=-19.00

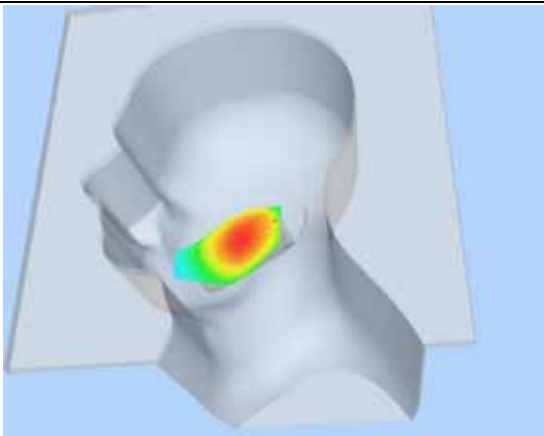
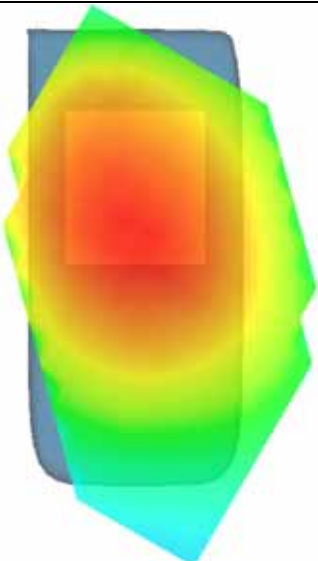
SAR 10g (W/Kg)	0.354150
SAR 1g (W/Kg)	0.489747

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4989	0.3815	0.2925	0.2181	0.1605	0.1162

SAR, Z Axis Scan (X = -34, Y = -19)



3D sceen 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: 2013.5.10

Measurement duration: 7 minutes 53 seconds

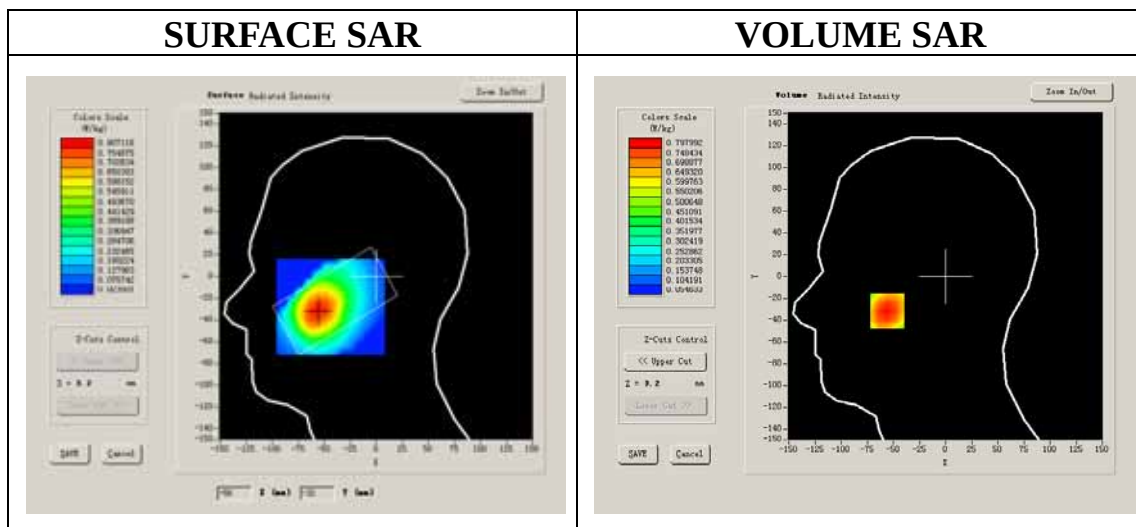
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	WCDMA1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 1412):

Frequency (MHz)	1732.400000
Relative permittivity (real part)	40.048953
Conductivity (S/m)	1.380357
Power drift (%)	-0.500000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.3°C
ConvF:	42.533, 36.791, 41.019
Crest factor:	1:1



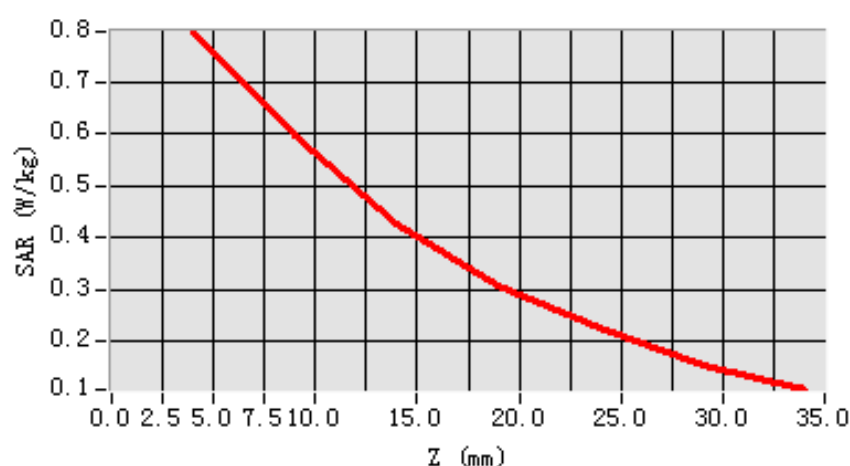
Maximum location: X=-56.00, Y=-32.00

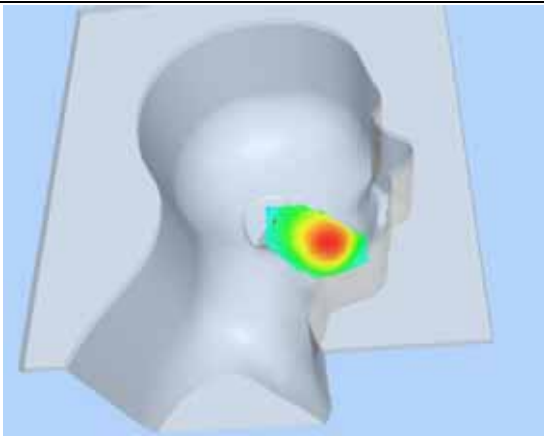
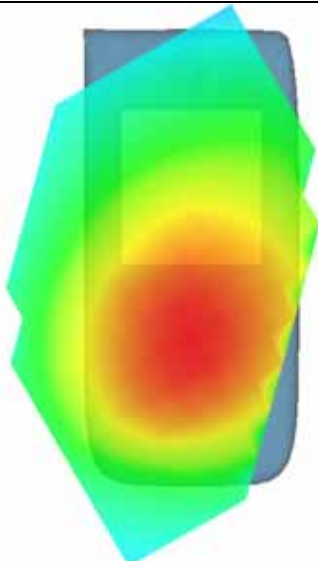
SAR 10g (W/Kg)	0.531739
SAR 1g (W/Kg)	0.700888

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7980	0.5964	0.4283	0.3056	0.2247	0.1542

SAR, Z Axis Scan (X = -56, Y = -32)



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: 2013.5.10

Measurement duration: 7 minutes 40 seconds

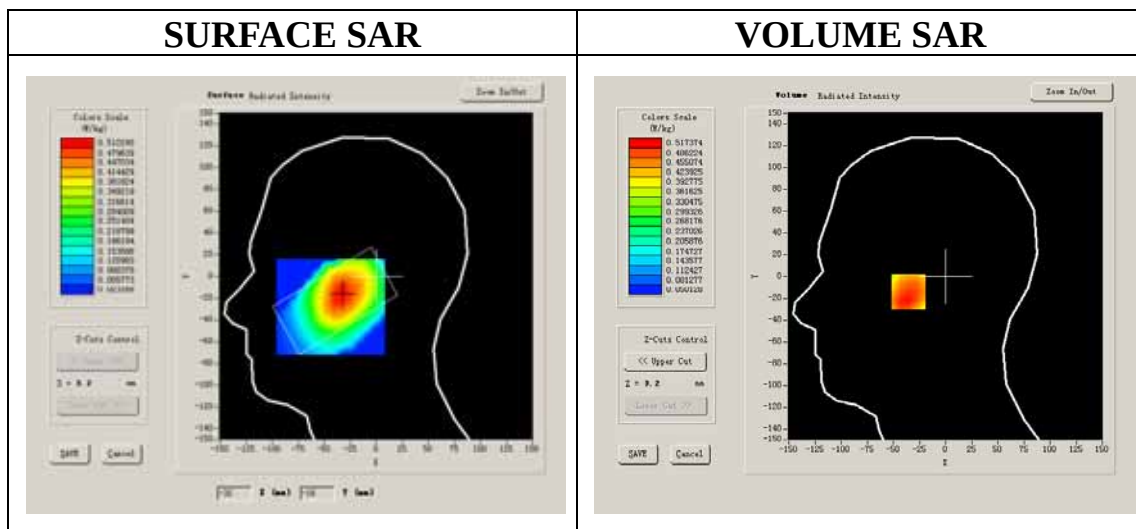
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	WCDMA1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 1412):

Frequency (MHz)	1732.400000
Relative permittivity (real part)	40.048953
Conductivity (S/m)	1.380357
Power drift (%)	-0.380000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.3°C
ConvF:	42.533, 36.791, 41.019
Crest factor:	1:1



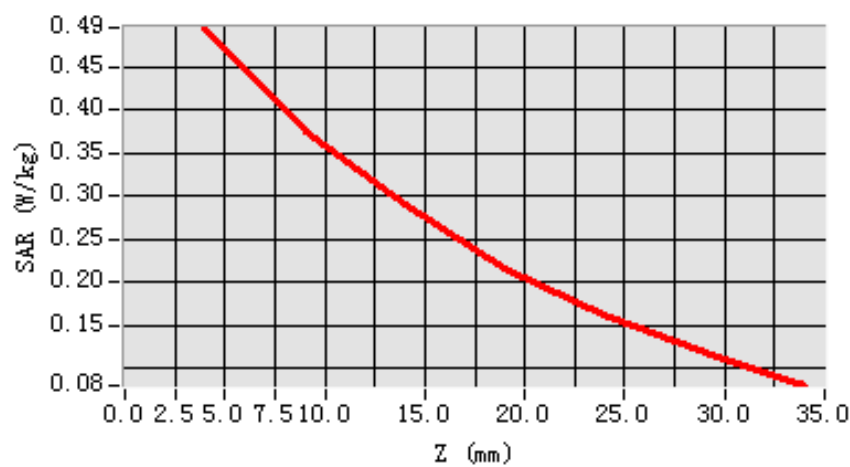
Maximum location: X=-32.00, Y=-14.00

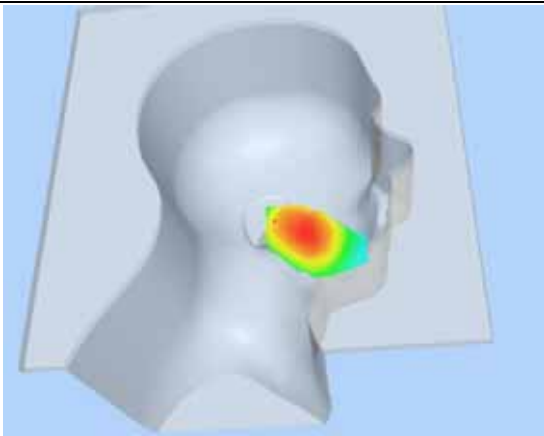
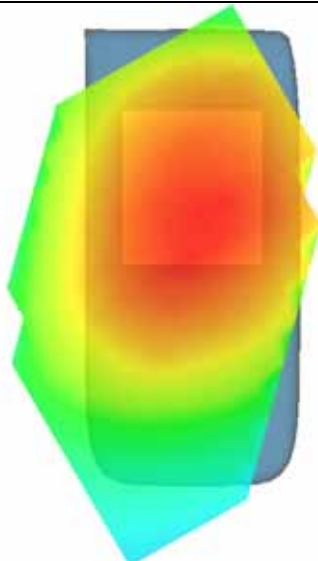
SAR 10g (W/Kg)	0.355938
SAR 1g (W/Kg)	0.496242

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4949	0.3759	0.2912	0.2171	0.1628	0.1188

SAR, Z Axis Scan (X = -32, Y = -14)



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: 2013.5.10

Measurement duration: 9 minutes 15 seconds

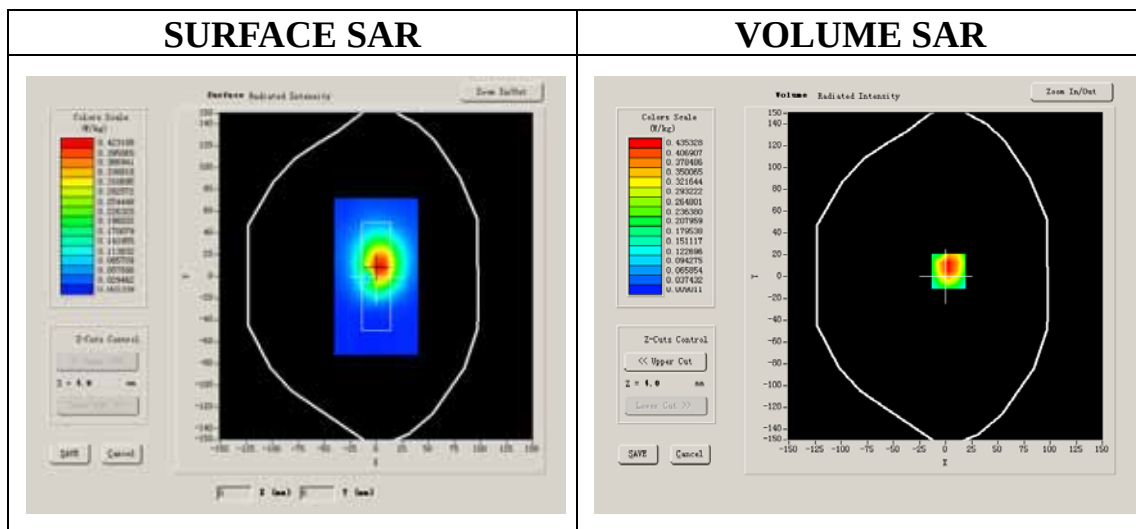
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 1412):

Frequency (MHz)	1732.400000
Relative permittivity (real part)	52.904154
Conductivity (S/m)	1.467291
Power drift (%)	-0.030000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.3°C
ConvF:	42.982,37.514,41.835
Crest factor:	1:1



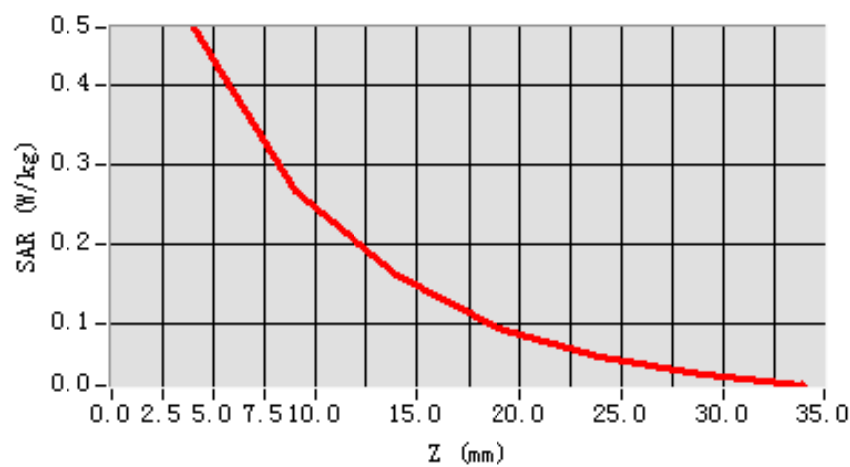
Maximum location: X=3.00, Y=5.00

SAR 10g (W/Kg)	0.253977
SAR 1g (W/Kg)	0.457578

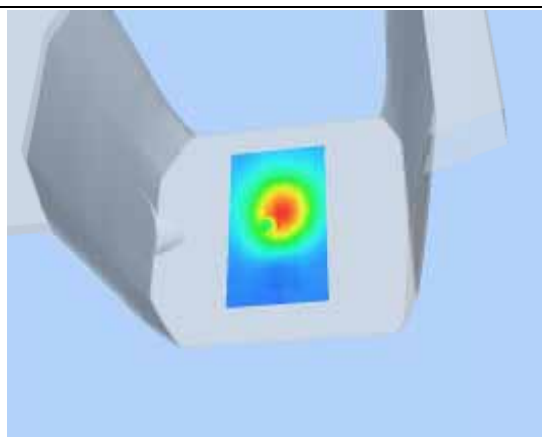
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4705	0.2649	0.1598	0.0945	0.0599	0.0361

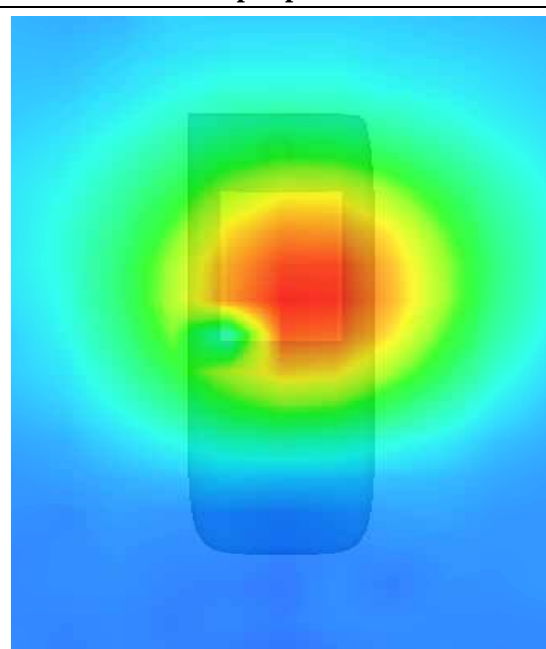
SAR, Z Axis Scan (X = 3, Y = 5)



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: 2013.5.10

Measurement duration: 9 minutes 16 seconds

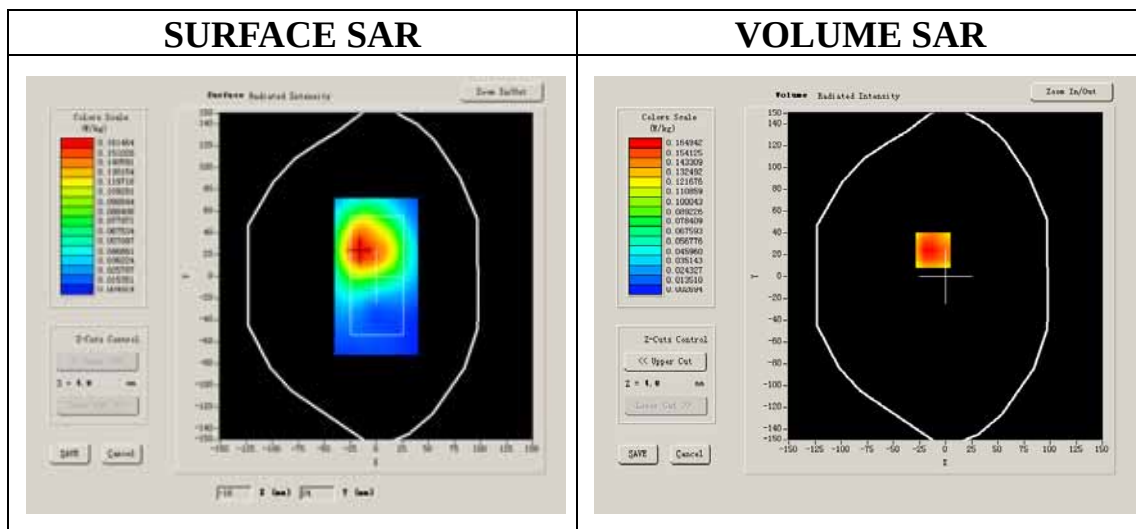
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	WCDMA1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 1412):

Frequency (MHz)	1732.400000
Relative permittivity (real part)	52.904154
Conductivity (S/m)	1.467291
Power drift (%)	-1.390000
Ambient Temperature:	22.7°C
Liquid Temperature:	22.3°C
ConvF:	42.982,37.514,41.835
Crest factor:	1:1



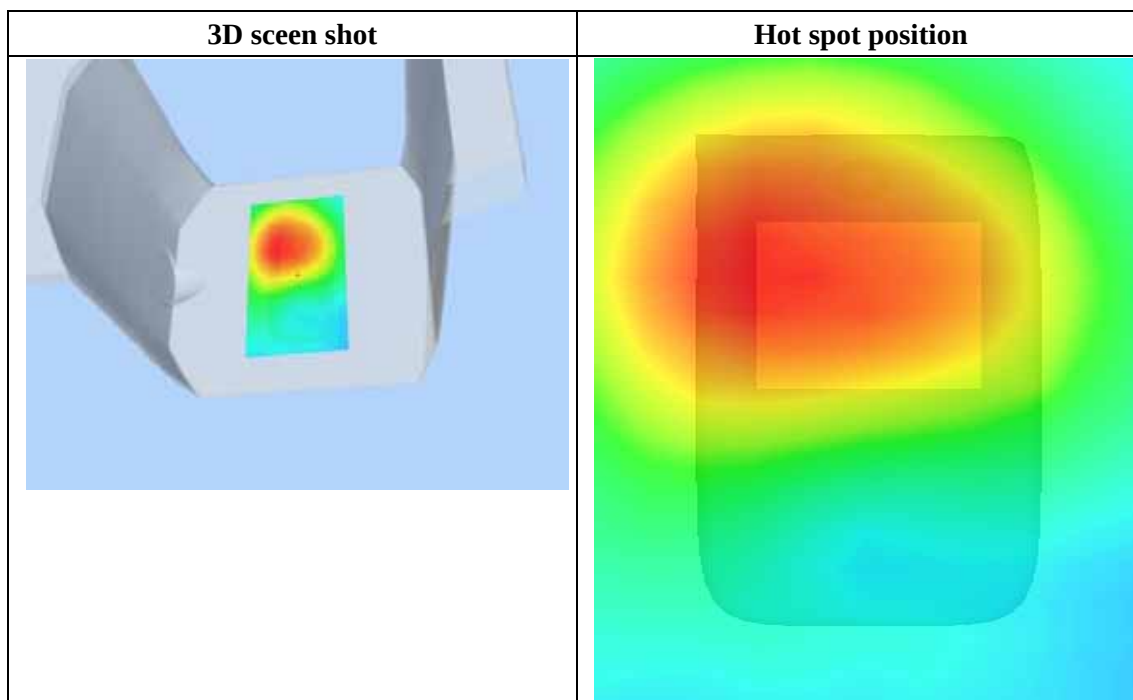
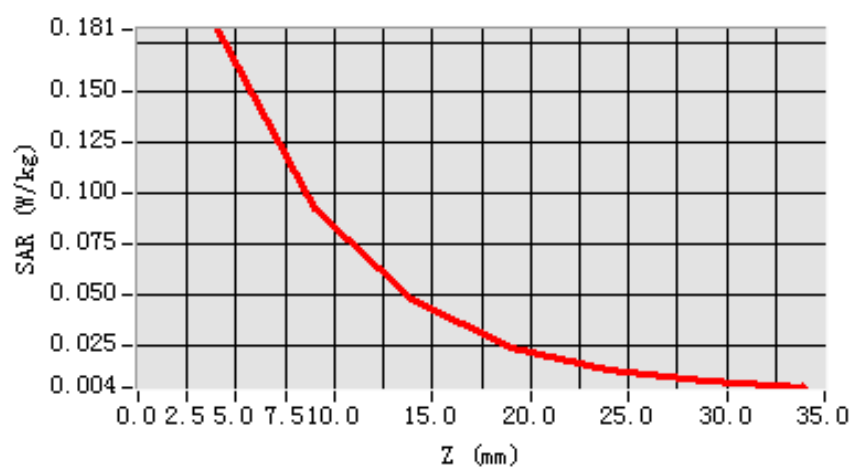
Maximum location: X=-12.00, Y=24.00

SAR 10g (W/Kg)	0.097333
SAR 1g (W/Kg)	0.173538

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1811	0.0921	0.0479	0.0235	0.0128	0.0073

SAR, Z Axis Scan (X = -12, Y = 24)



MEASUREMENT 31

Type: Phone measurement (Complete)

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

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

Date of measurement: 2013.5.9

Measurement duration: 8 minutes 9 seconds

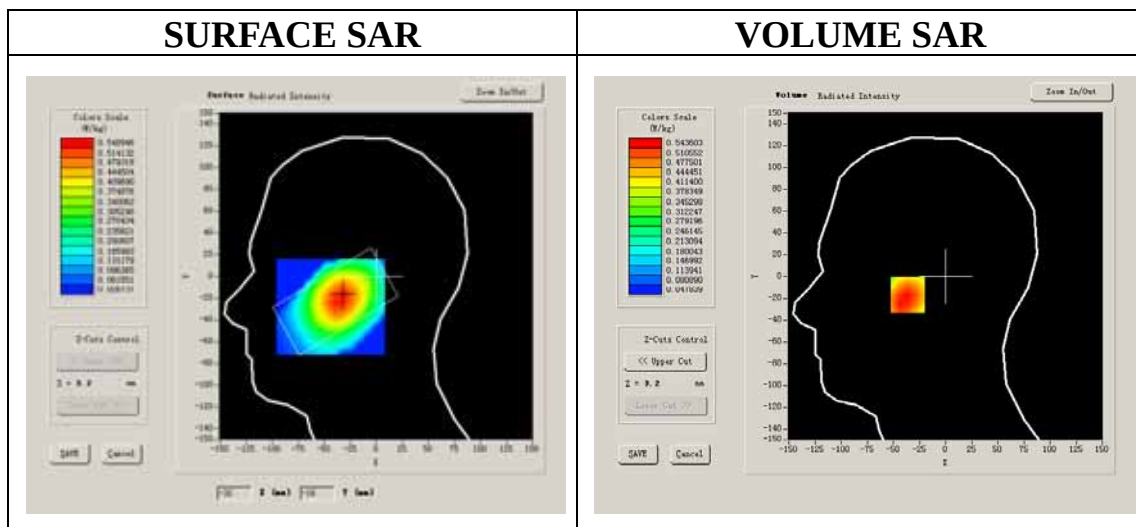
A. Experimental conditions.

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)	41.267921
Conductivity (S/m)	1.406817
Power drift (%)	0.350000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



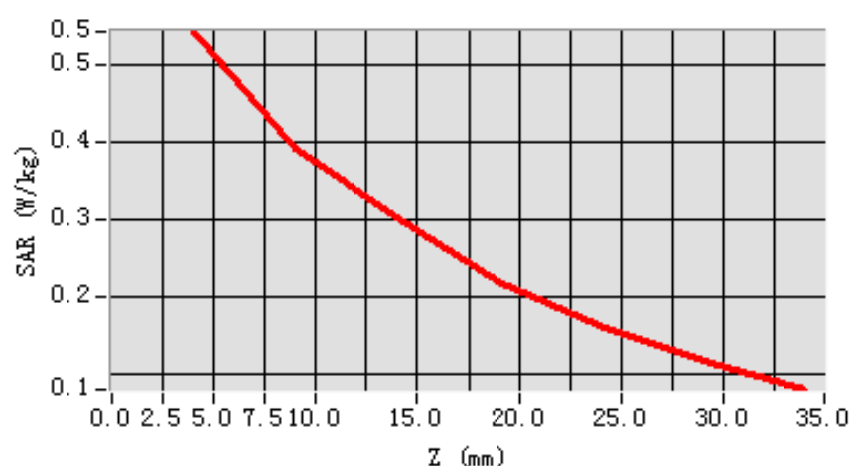
Maximum location: X=-32.00, Y=-17.00

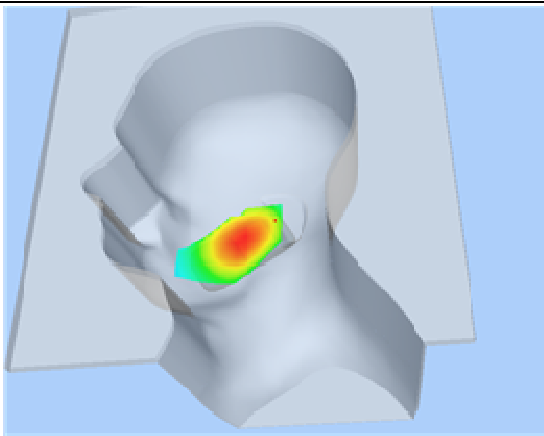
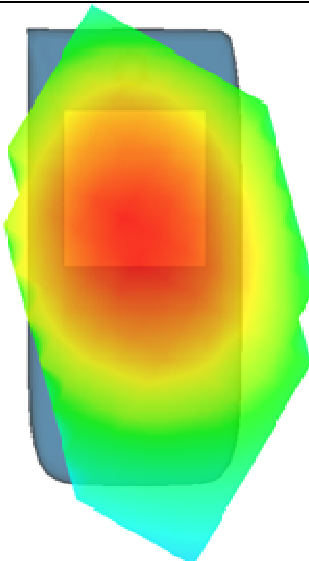
SAR 10g (W/Kg)	0.373048
SAR 1g (W/Kg)	0.527097

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5436	0.3929	0.3021	0.2201	0.1623	0.1162

SAR, Z Axis Scan (X = -32, Y = -17)



3D sceen 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: 2013.5.9

Measurement duration: 7 minutes 28 seconds

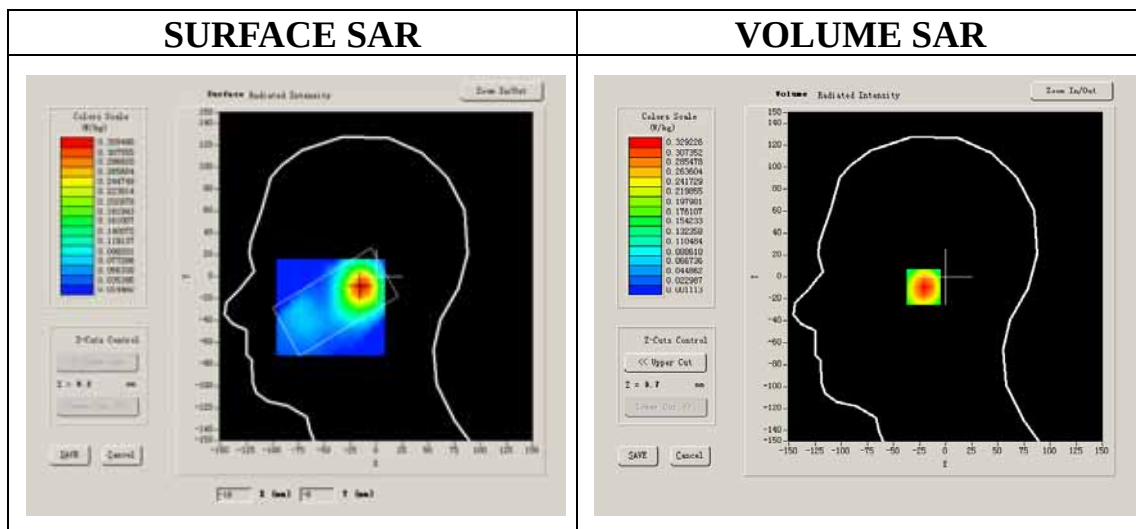
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.267921
Conductivity (S/m)	1.406817
Power drift (%)	0.850000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

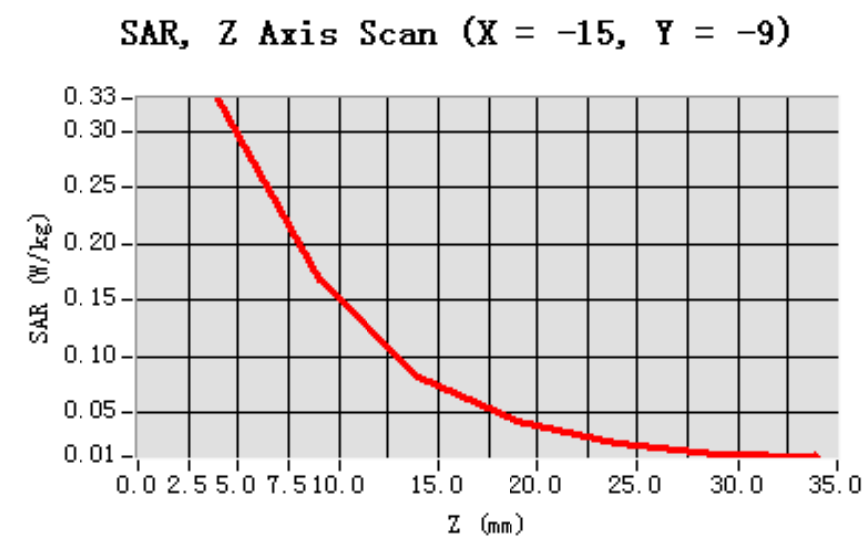


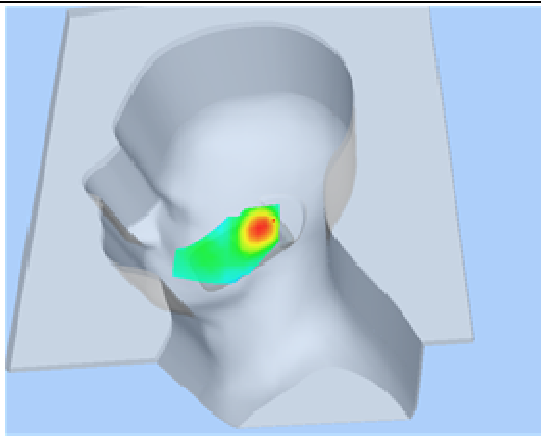
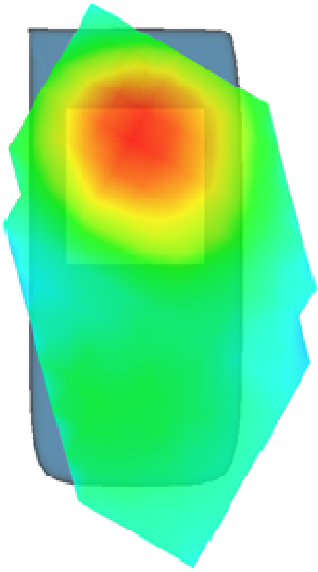
Maximum location: X=-15.00, Y=-9.00

SAR 10g (W/Kg)	0.164379
SAR 1g (W/Kg)	0.313925

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3292	0.1683	0.0809	0.0413	0.0222	0.0136



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: 2013.5.9

Measurement duration: 8 minutes 7 seconds

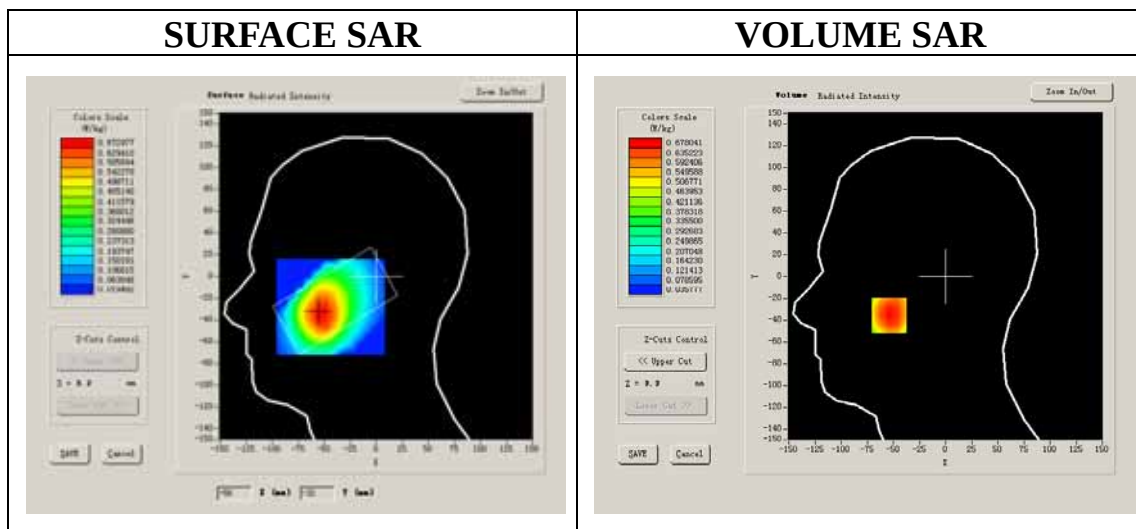
A. Experimental conditions.

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)	41.267921
Conductivity (S/m)	1.406817
Power drift (%)	-0.040000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



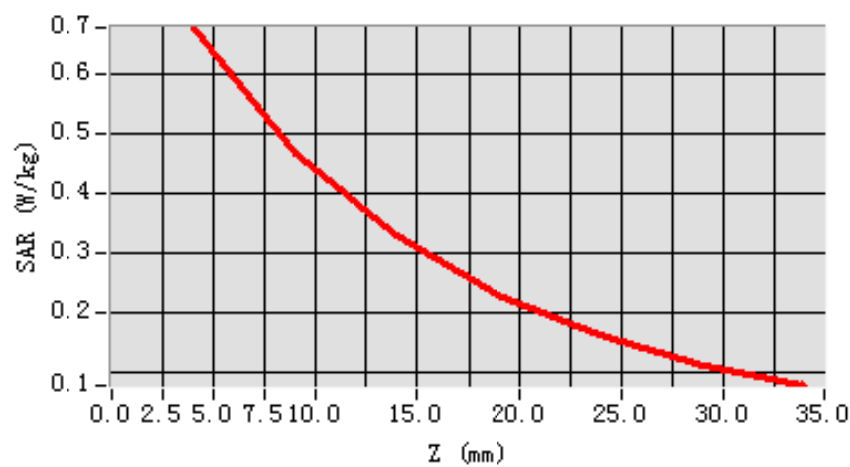
Maximum location: X=-54.00, Y=-36.00

SAR 10g (W/Kg)	0.448873
SAR 1g (W/Kg)	0.657191

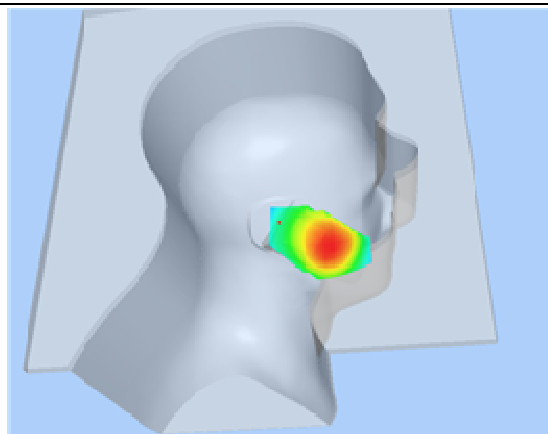
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6780	0.4687	0.3310	0.2289	0.1640	0.1127

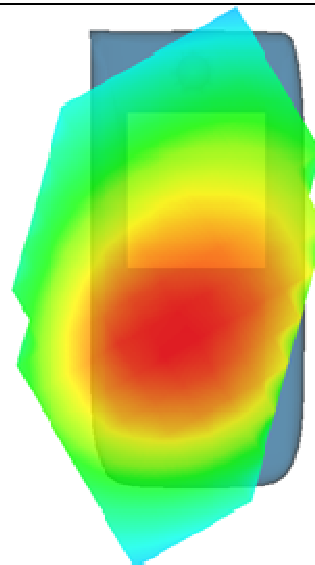
SAR, Z Axis Scan (X = -54, Y = -36)



3D sceen 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: 2013.5.9

Measurement duration: 7 minutes 30 seconds

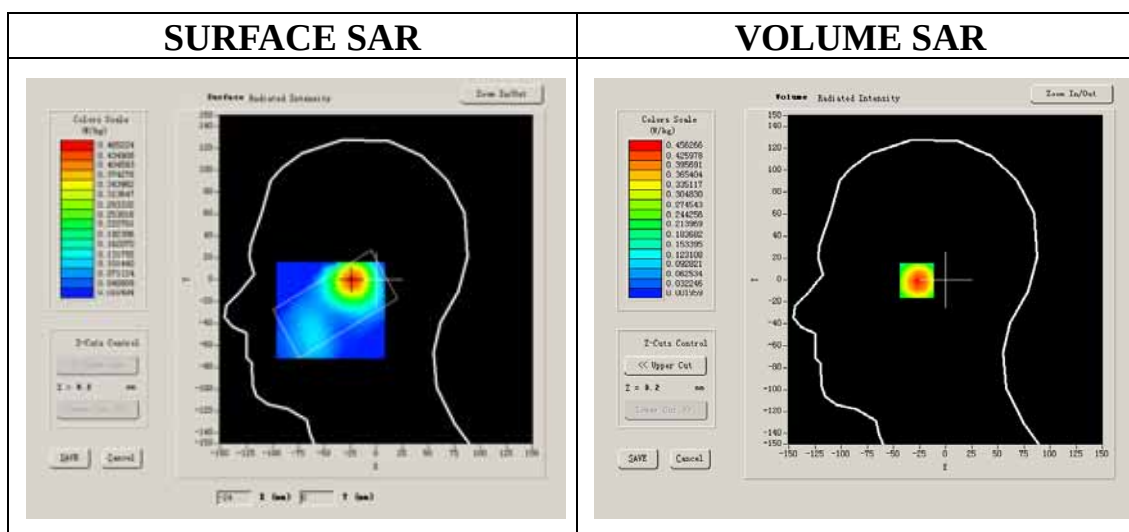
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	41.267921
Conductivity (S/m)	1.406817
Power drift (%)	-0.040000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1



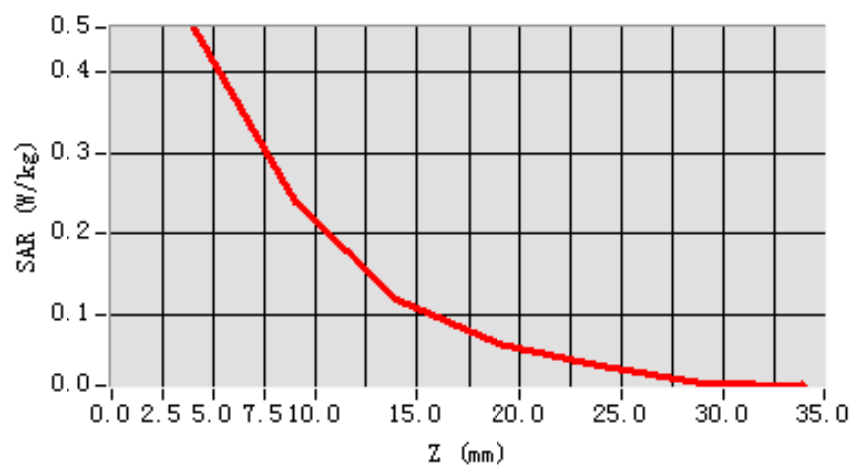
Maximum location: X=-24.00, Y=0.00

SAR 10g (W/Kg)	0.228835
SAR 1g (W/Kg)	0.435056

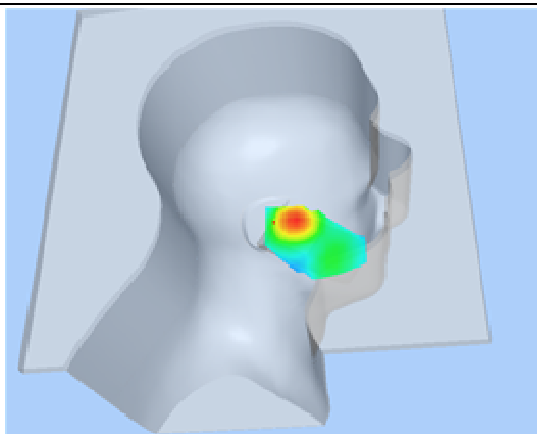
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4563	0.2386	0.1191	0.0640	0.0347	0.0136

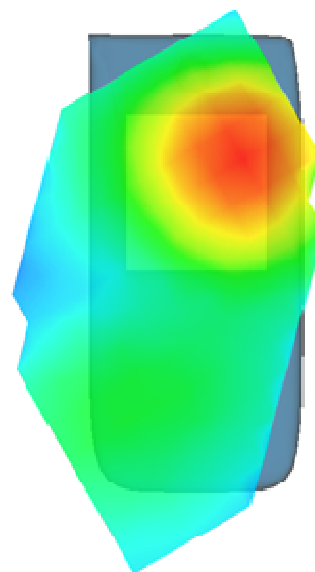
SAR, Z Axis Scan (X = -24, Y = 0)



3D scene shot



Hot spot position



MEASUREMENT 35

Type: Phone measurement (Complete)

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

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

Date of measurement: 2013.5.9

Measurement duration: 9 minutes 14 seconds

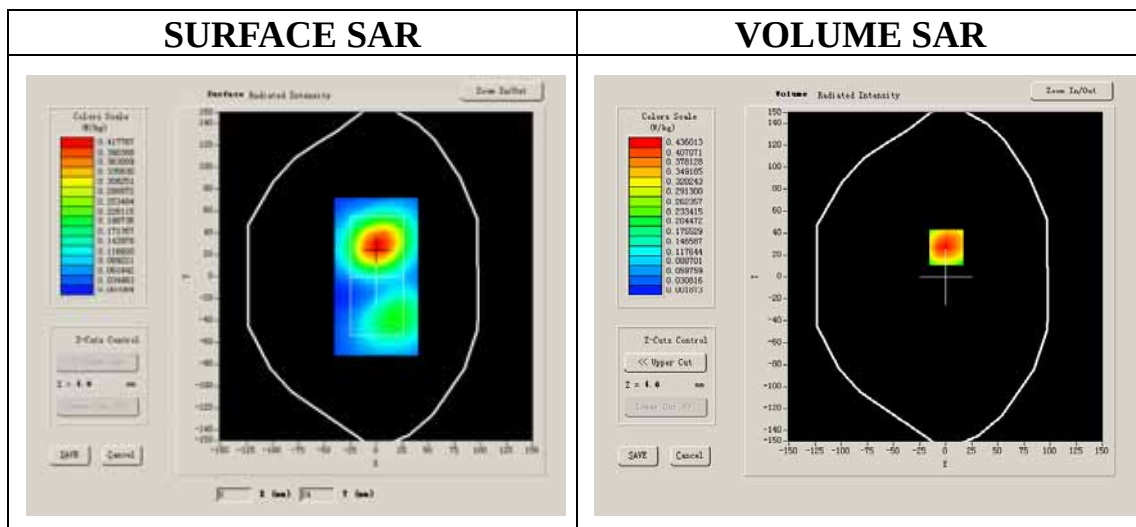
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.207082
Conductivity (S/m)	1.510328
Power drift (%)	-0.480000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1



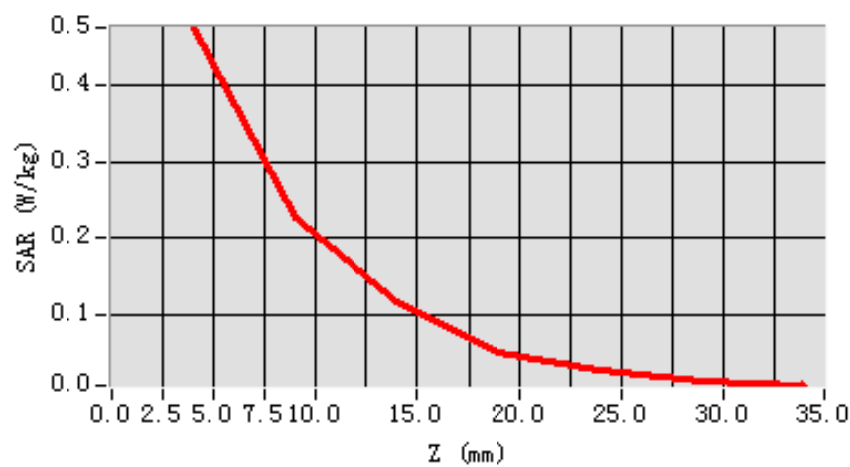
Maximum location: X=1.00, Y=27.00

SAR 10g (W/Kg)	0.240459
SAR 1g (W/Kg)	0.457361

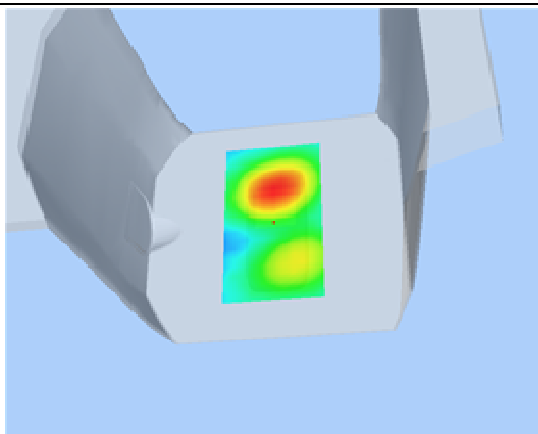
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4748	0.2265	0.1178	0.0499	0.0274	0.0118

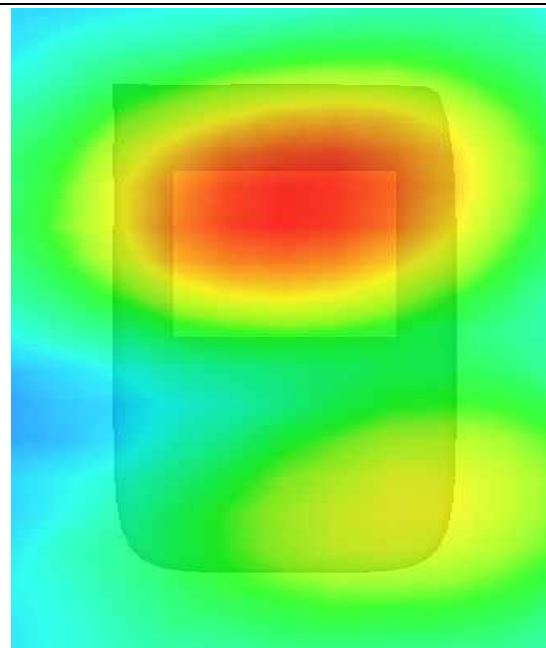
SAR, Z Axis Scan (X = 1, Y = 27)



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: 2013.5.9

Measurement duration: 9 minutes 14 seconds

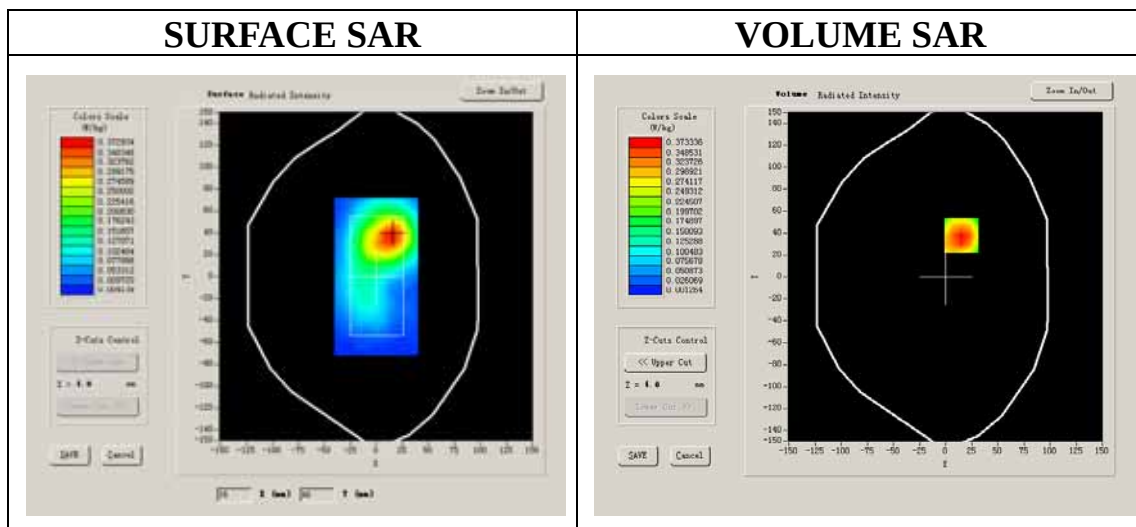
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 9400):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	53.207082
Conductivity (S/m)	1.510328
Power drift (%)	-1.120000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1



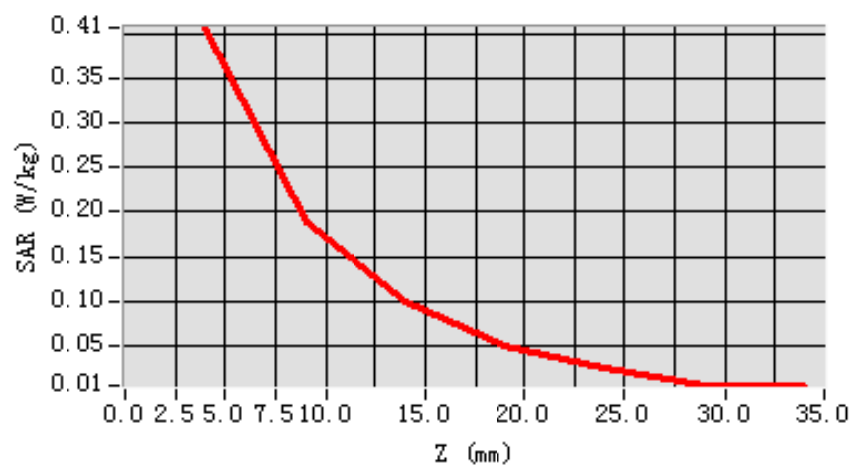
Maximum location: X=15.00, Y=38.00

SAR 10g (W/Kg)	0.205764
SAR 1g (W/Kg)	0.395791

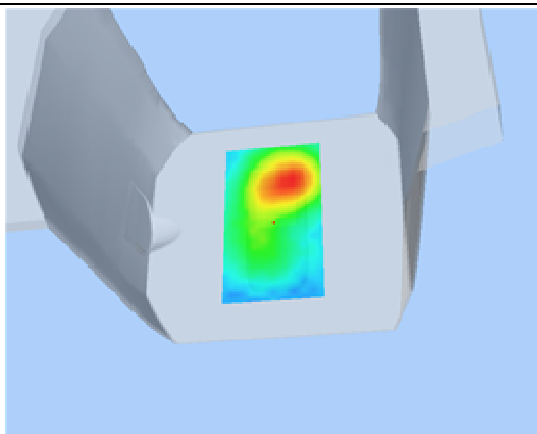
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4065	0.1899	0.0988	0.0496	0.0251	0.0059

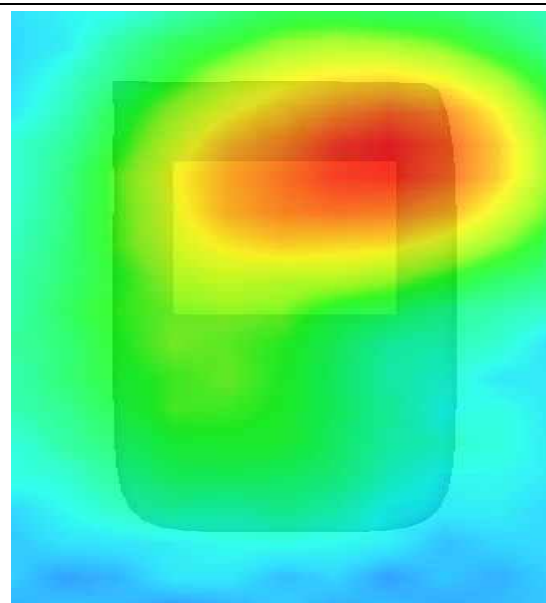
SAR, Z Axis Scan (X = 15, Y = 38)



3D sceen shot



Hot spot position



System Performance Check Data(Head)

Type: Phone measurement (Complete)

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

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

Date of measurement: 2013.5.8

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

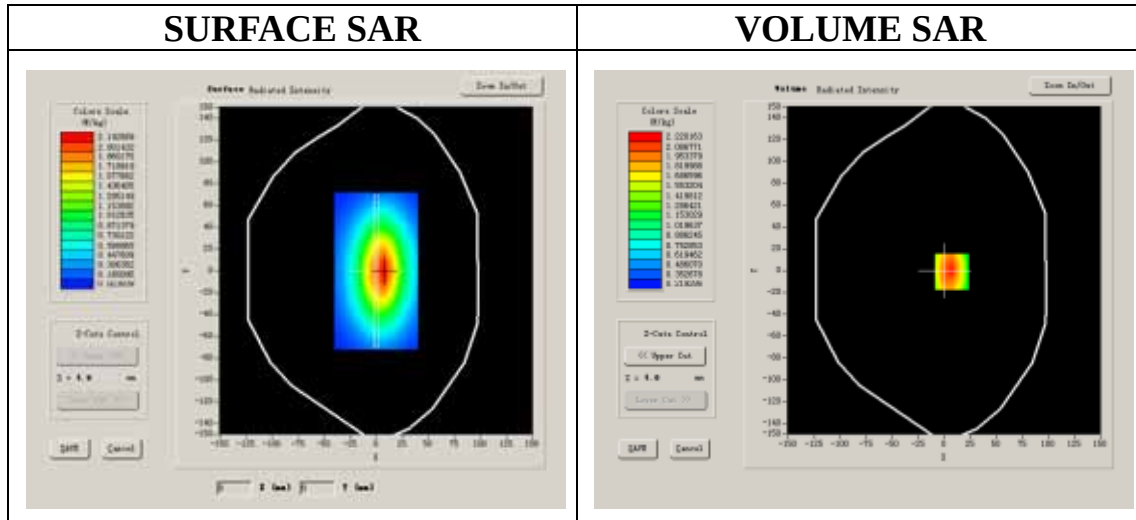
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	835MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	42.522765
Conductivity (S/m)	0.918504
Power drift (%)	-0.310000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

SURFACE SAR



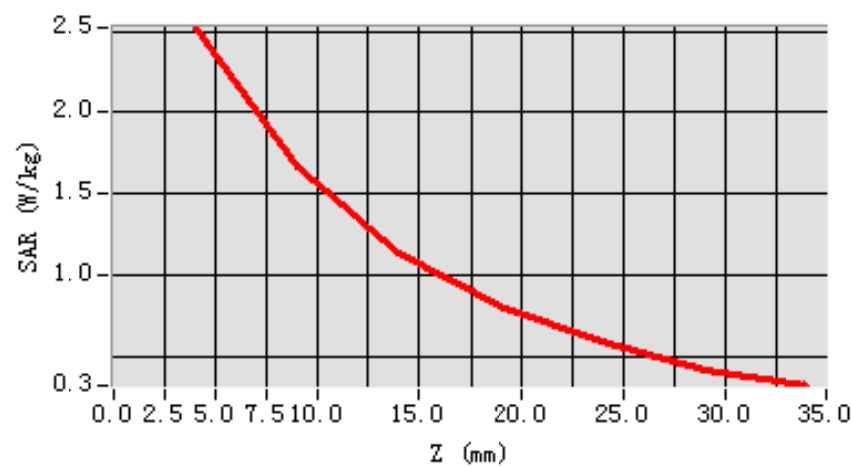
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.548473
SAR 1g (W/Kg)	2.432445

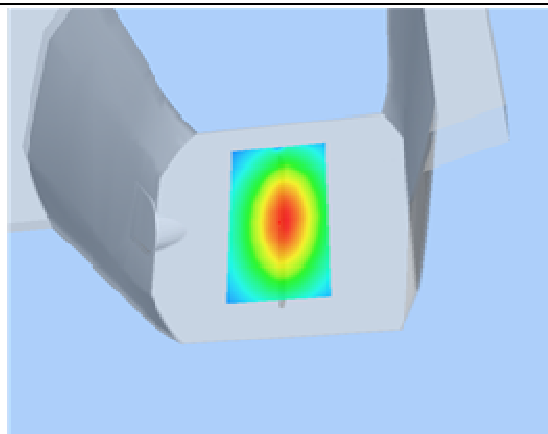
Z Axis Scan

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

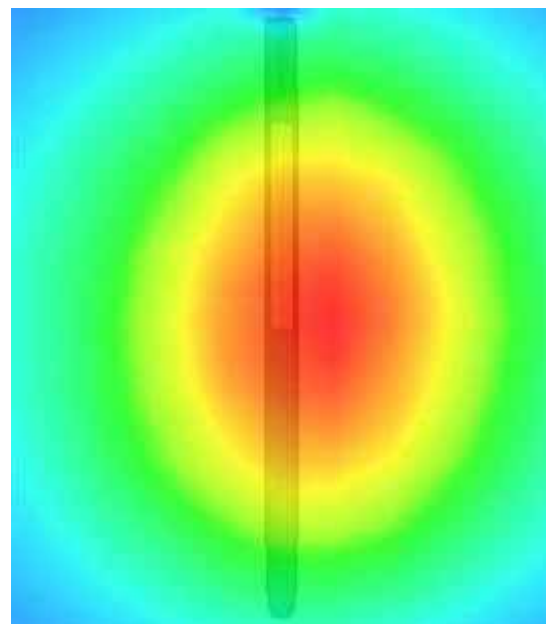
SAR, Z Axis Scan (X = 7, Y = -1)



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: 2013.5.8

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

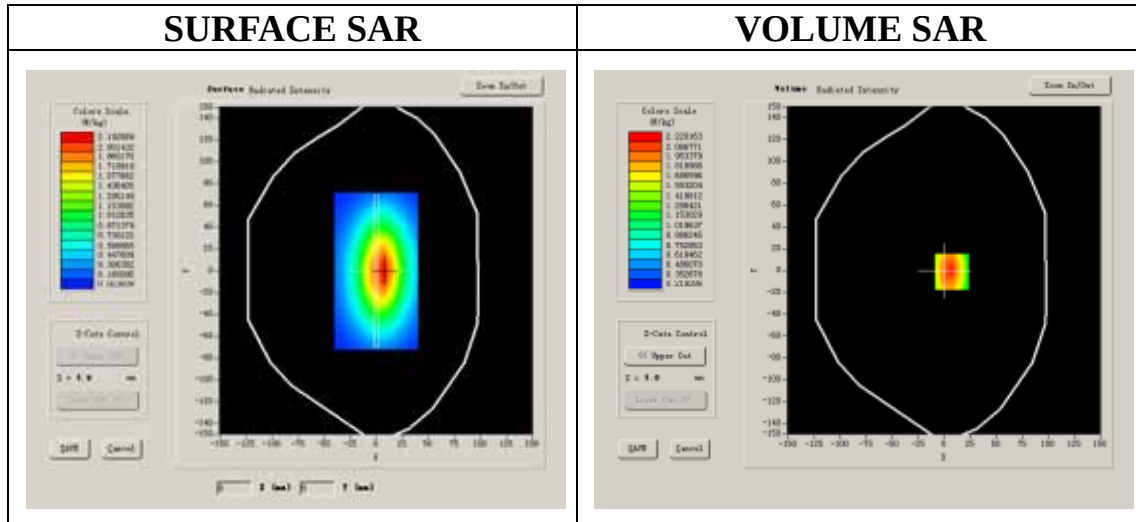
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	835MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	55.140974
Conductivity (S/m)	0.950681
Power drift (%)	-1.700000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	28.559,25.681,27.588
Crest factor:	1:1

SURFACE SAR



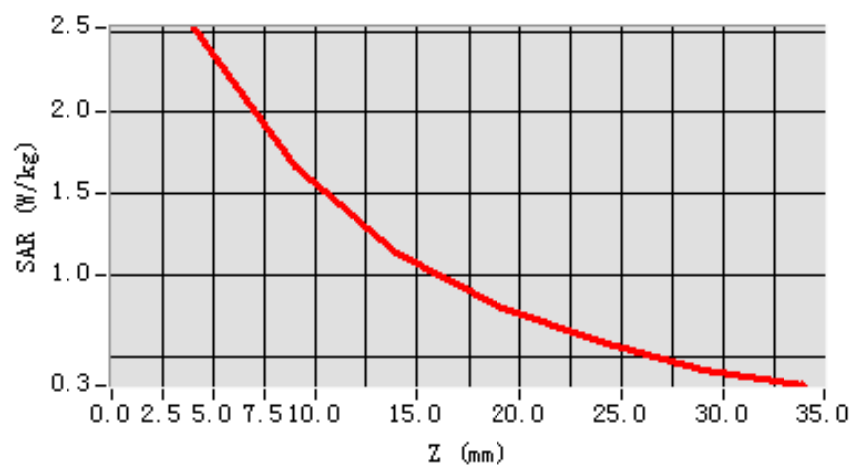
Maximum location: X=7.00, Y=-1.00

SAR 10g (W/Kg)	1.567132
SAR 1g (W/Kg)	2.446425

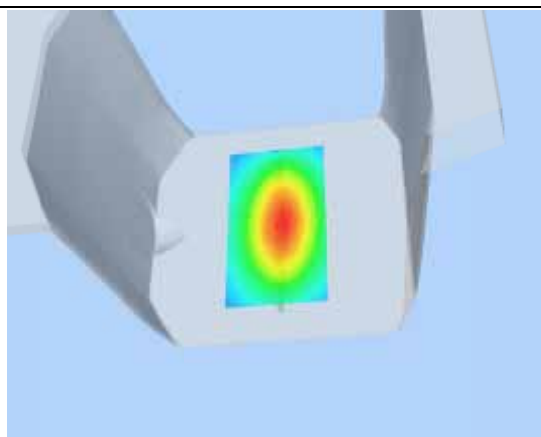
Z Axis Scan

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

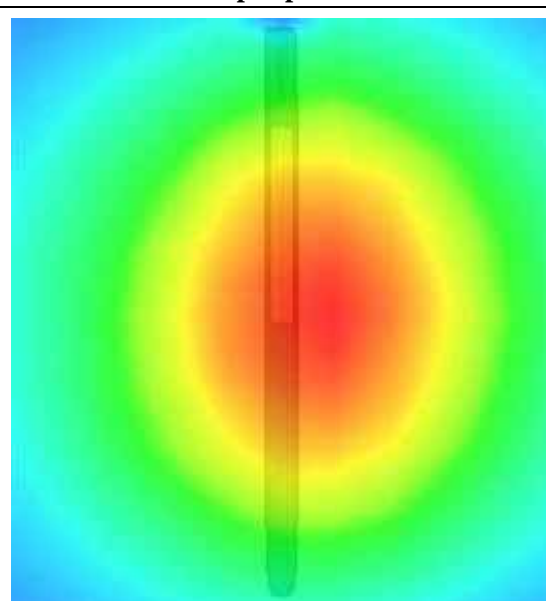
SAR, Z Axis Scan (X = 7, Y = -1)



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: 2013.5.10

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

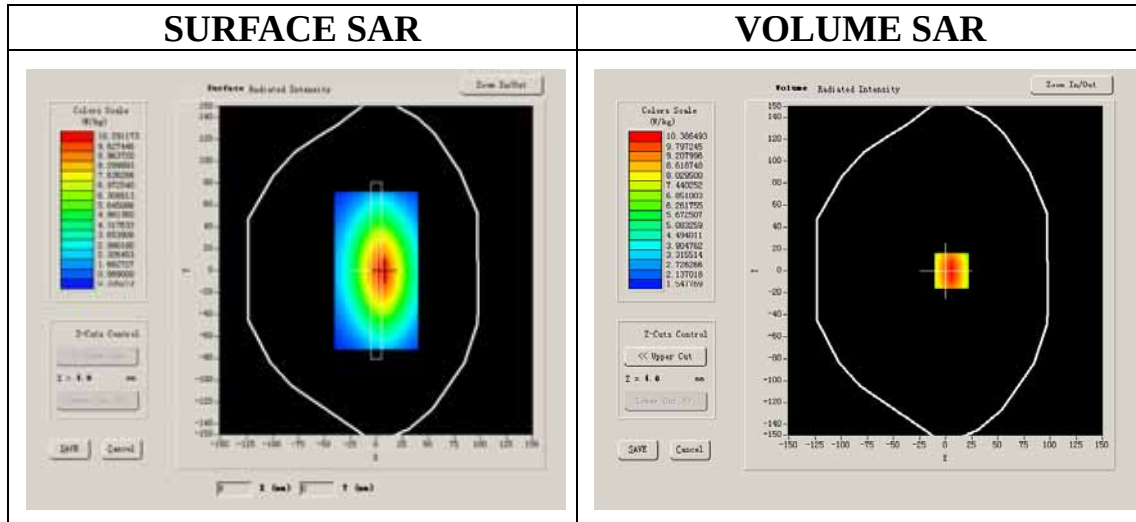
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	1750MHz
Channels	
Signal	CW

B. SAR Measurement Results

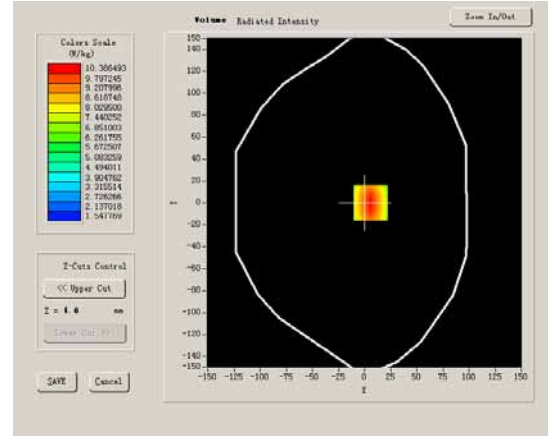
Band SAR

Frequency (MHz)	1750.000000
Relative permittivity (real part)	40.048953
Conductivity (S/m)	1.380357
Power drift (%)	-0.820000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	42.533,36.791,41.019
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



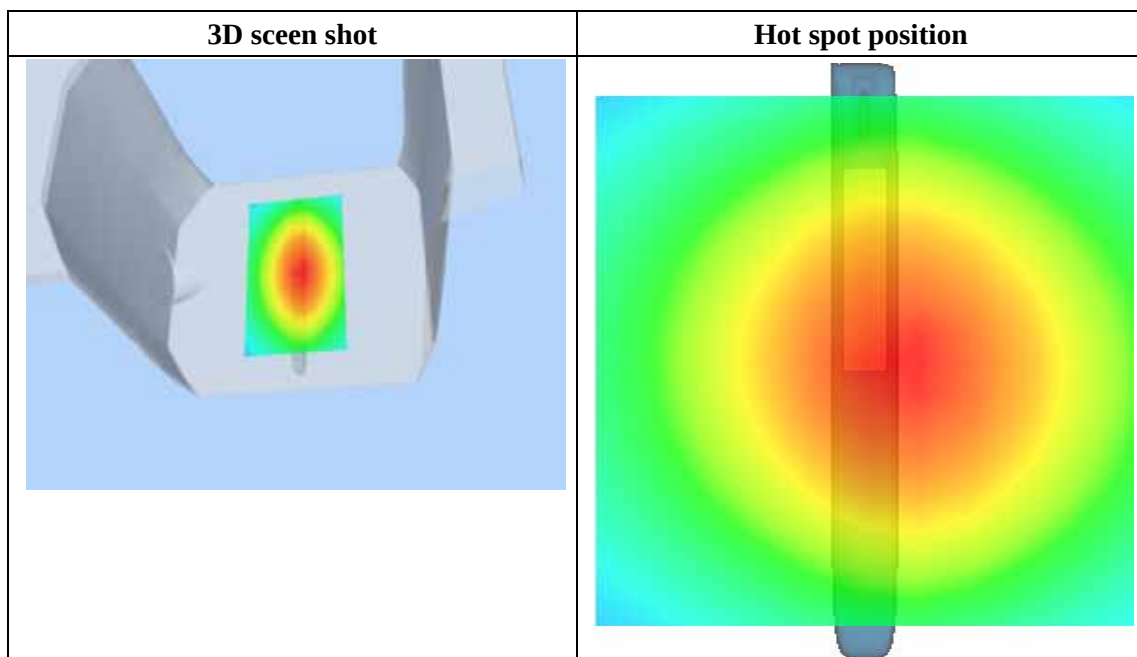
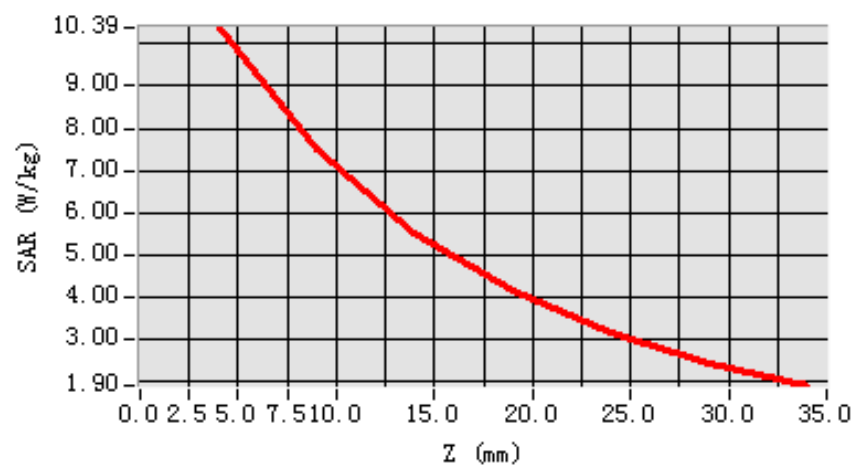
Maximum location: X=6.00, Y=-0.00

SAR 10g (W/Kg)	6.909945
SAR 1g (W/Kg)	9.683835

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.3865	7.5004	5.5370	4.1568	3.1632	2.4391

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



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: 2013.5.10

Measurement duration: 13 minutes 26 seconds

A. Experimental conditions.

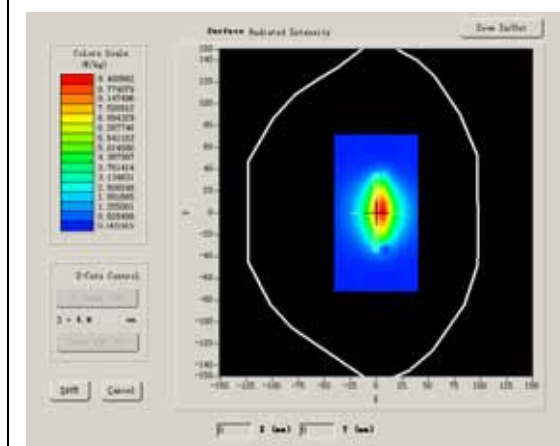
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	1750MHz
Channels	
Signal	CW

B. SAR Measurement Results

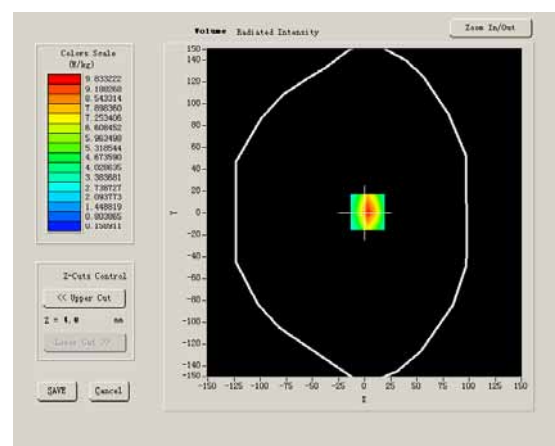
Band SAR

Frequency (MHz)	1750.000000
Relative permittivity (real part)	52.904154
Conductivity (S/m)	1.467291
Power drift (%)	-0.710000
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



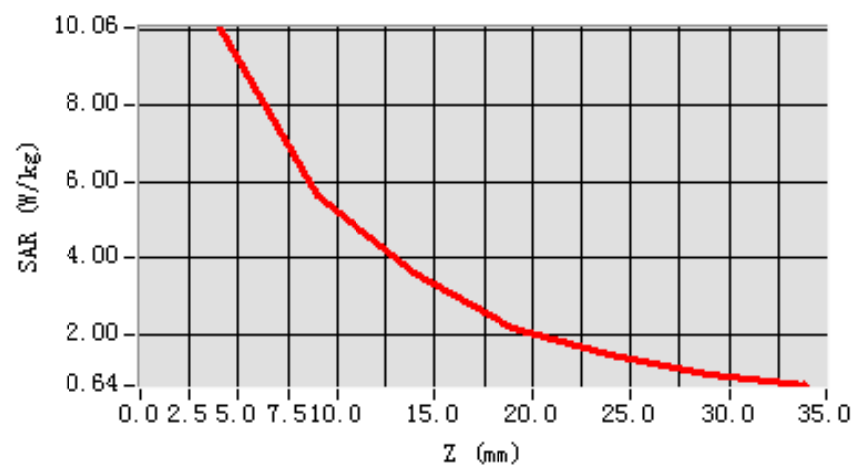
Maximum location: X=3.00, Y=1.00

SAR 10g (W/Kg)	4.981611
SAR 1g (W/Kg)	9.340177

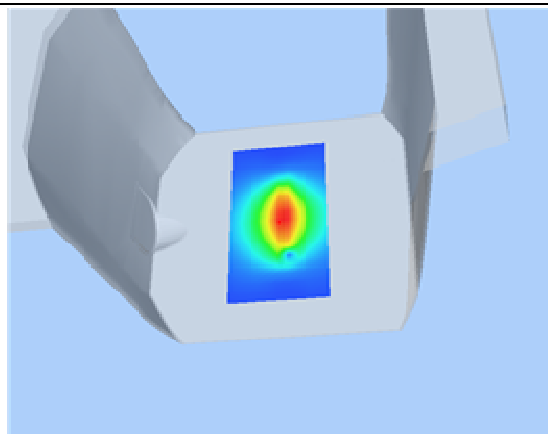
Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	10.0621	5.6445	3.6226	2.1642	1.4521	0.9078

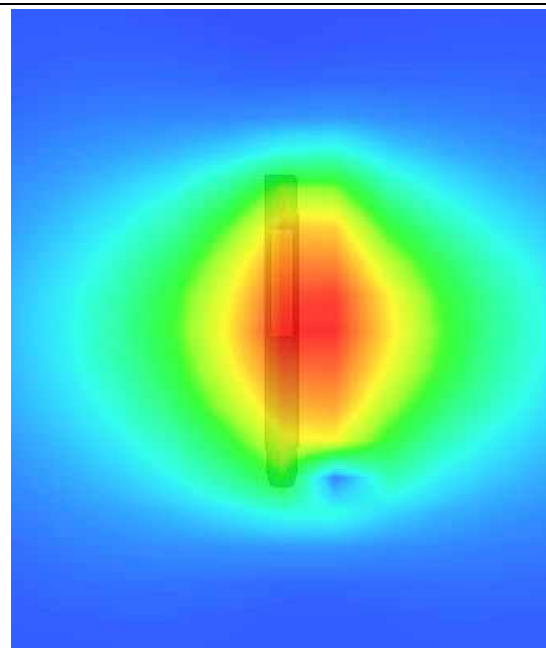
SAR, Z Axis Scan (X = 3, Y = 1)



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: 2013.5.9

Measurement duration: 13 minutes 27 seconds

A. Experimental conditions.

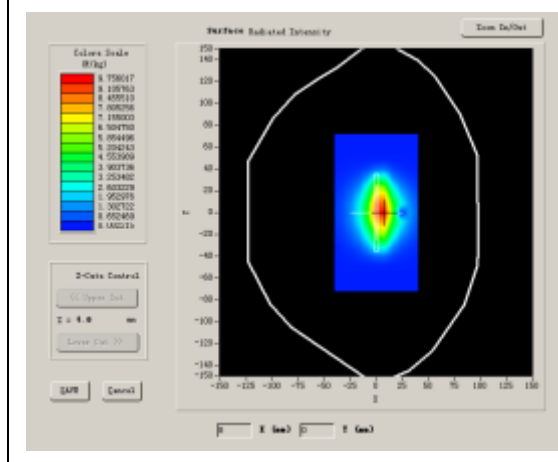
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	1900MHz
Channels	
Signal	CW

B. SAR Measurement Results

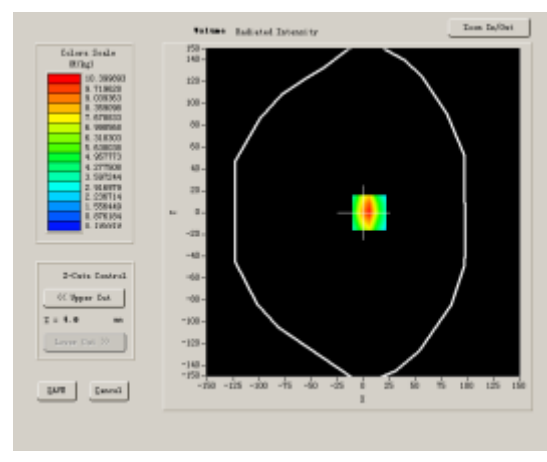
Band SAR

Frequency (MHz)	1900.000000
Relative permittivity (real part)	41.267921
Conductivity (S/m)	1.406817
Power drift (%)	-0.290000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



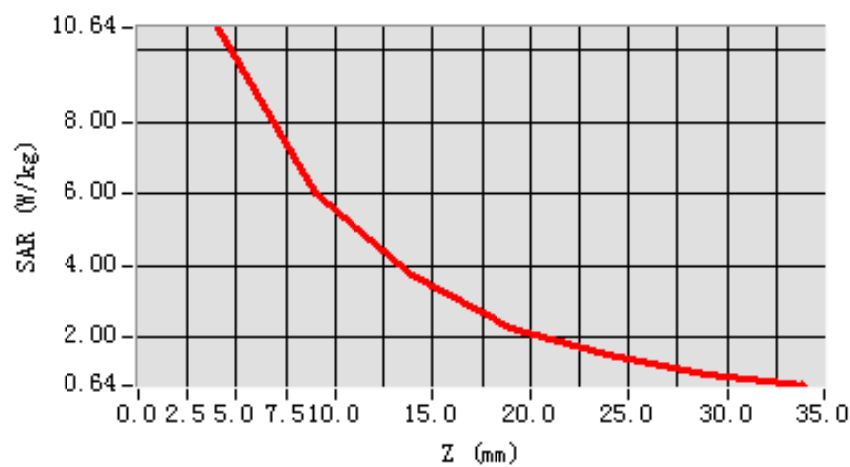
Maximum location: X=6.00, Y=0.00

SAR 10g (W/Kg)	6.325211
SAR 1g (W/Kg)	9.749043

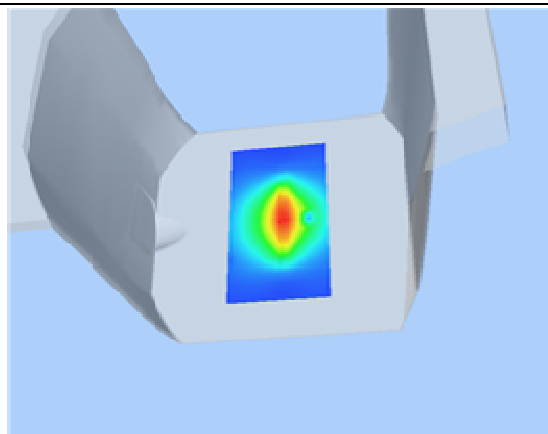
Z Axis Scan

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

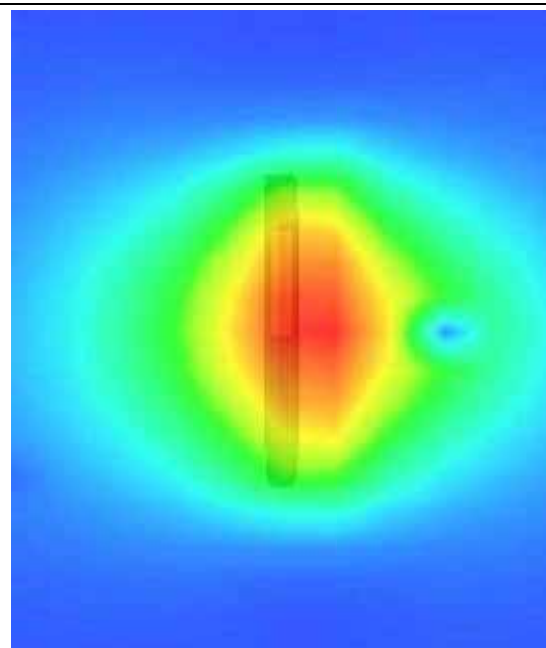
SAR, Z Axis Scan (X = 6, Y = 0)



3D sceen shot



Hot spot position



System Performance Check Data(Body)

Type: Phone measurement (Complete)

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

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

Date of measurement: 2013.5.9

Measurement duration: 13 minutes 26 seconds

A. Experimental conditions.

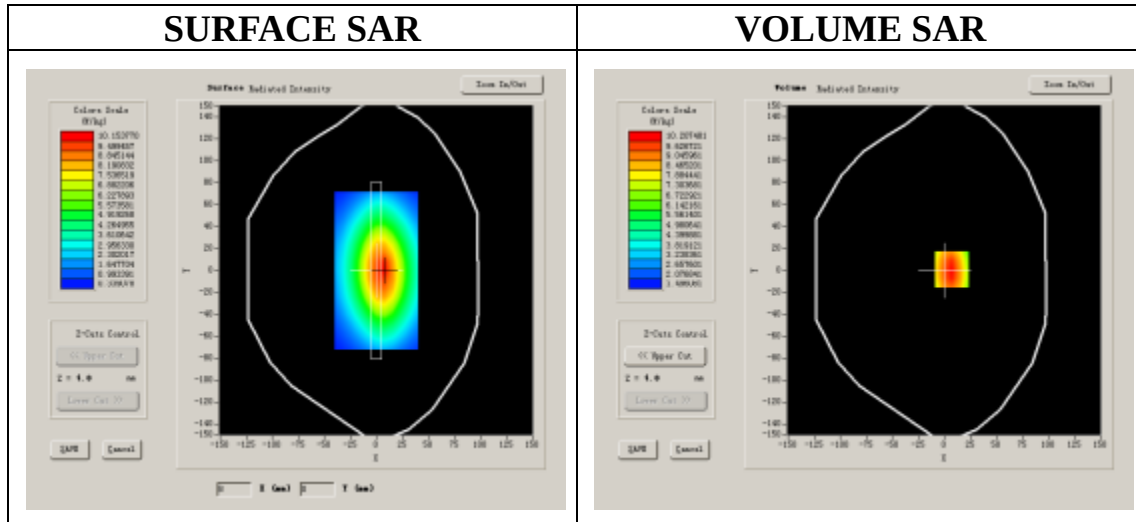
Phantom File	surf_sam_plan.txt
Phantom	Flat Plane
Device Position	
Band	1900MHz
Channels	
Signal	CW

B. SAR Measurement Results

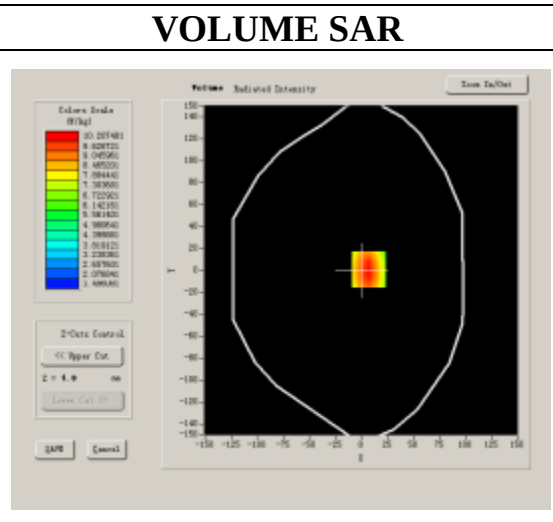
Band SAR

Frequency (MHz)	1900.000000
Relative permittivity (real part)	53.207082
Conductivity (S/m)	1.510328
Power drift (%)	-0.520000
Ambient Temperature:	22.9°C
Liquid Temperature:	22.1°C
ConvF:	40.625,34.773,38.535
Crest factor:	1:1

SURFACE SAR



VOLUME SAR



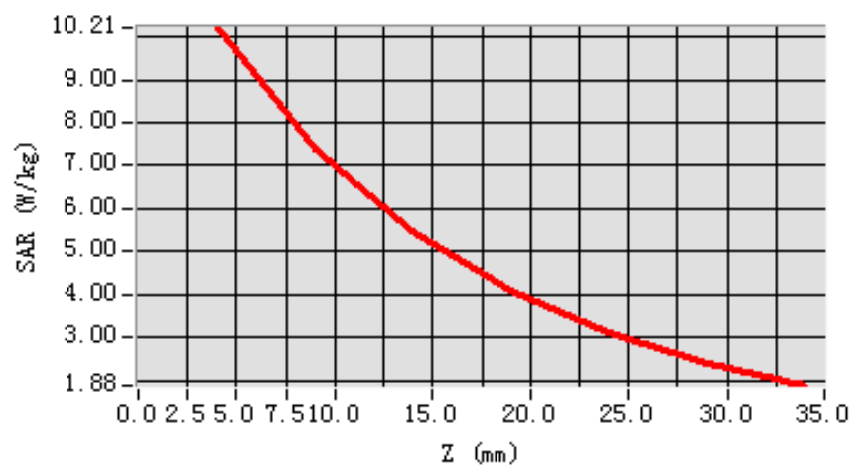
Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	6.478518
SAR 1g (W/Kg)	9.681012

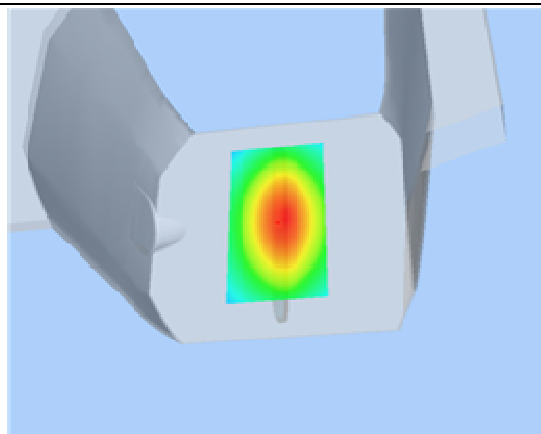
Z Axis Scan

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

