SAR TEST REPORT

Issued to

Teleepoch Limited

For

Mobile phone

Model Name	:	Wi920;WI920E/MAX
Trade Name	:	PUBLIC/UMX
Brand Name	:	PUBLIC/UMX
FCC ID	:	U46-MAX
IC ID	:	9412A-*MAX*
Standard	:	FCC Oet65 Supplement C Jun.2001 47CFR 2.1093 ANSI C95.1-1999 Health Canada's Safety Code 6 RSS-102 issue 4-2010 IEEE 1528-2003
MAX SAR	:	Head: 0.908W/kg Body:1.151W/kg
Test date	:	2011-09-07
Issue date	:	2011-12-06

Shenzhen MORLAB Communication Technology Co., Ltd.

Tested by	Samuel Peng	*Approved by*	Zeng Rixin	*Review by*	Li Lei
	Samuel Peng		Zeng Rixin		Li Lei
Date	2011.12.6	*Date*	2011.12.6	*Date*	2011.12.6

DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	Sep. 16, 2011	First edition
2.0	Dec. 06,2011	Correct test report.

1. Testing Laboratory

1.1. Identification of the Responsible Testing Laboratory

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

1.2. Identification of the Responsible Testing Location

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

1.3. Accreditation Certificate

Accredited Testing Laboratory:	No. CNAS L3572

1.4. List of Test Equipments

No.	Instrument	Type	Cal. Date	Cal. Due
1	PC	Dell (Pentium IV 2.4GHz, SN:X10-23533)	(n.a)	(n.a)
2	Network Emulator	Rohde&Schwarz (CMU200, SN:105894)	2010-9-26	1year
3	Voltmeter	Keithley (2000, SN:1000572)	2010-9-24	1year
4	Synthetizer	Rohde&Schwarz (SML_03, SN:101868)	2010-9-24	1year
5	Amplifier	Nucl udes (ALB216, SN:10800)	2010-9-24	1year
6	Power Meter	Rohde&Schwarz (NRVD, SN:101066)	2010-9-24	1year
7	Probe	Satimo (SN:SN_3708_EP80)	2010-9-24	1year
8	Phantom	Satimo (SN:SN_36_08_SAM62)	2010-9-24	1year
9	Liquid	Satimo (Last Calibration:2011-09-07)	2011-8-21	1year
10	Dipole 835MHz	Satimo (SN 36/08 DIPC 99)	2010-9-23	1year
11	Dipole 1800MHz	Satimo (SN 36/08 DIPF 101)	2010-9-23	1year
12	Dipole 1900MHz	Satimo (SN 36/08 DIPF 102)	2010-9-23	1year
13	Dipole 2450MHz	Satimo (SN 36/08 DIPF 103)	2010-9-23	1year

2. Technical Information

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

2.1. Identification of Applicant

Company Name:	Teleepoch Limited
Address:	5A, B1 Building, Digital Tech Zone, High, Shenzhen, China

2.2. Identification of Manufacturer

Company Name:	Teleepoch Limited
Address:	5A, B1 Building, Digital Tech Zone, High, Shenzhen, China

2.3. Equipment Under Test (EUT)

Brand Name:	PUBLIC/UMX
Type Name:	PUBLIC/UMX
Marking Name:	Wi920;WI920E/MAX
Hardware Version:	WI920_V1.2
Software Version:	N/A
Frequency Bands:	CDMA 800MHz /CDMA 1700MHz/ CDMA 1900MHz WIFI: 2412MHz-2462MHz BT: 2402MHz-2480MHz
Modulation Mode:	CDMA : CDMA WIFI 802.11B : DSSS WIFI 802.11G: OFDM BT: GFSK
Antenna type:	Fixed Internal Antenna
Development Stage:	Identical prototype
Battery Model:	N/A
Battery specification:	1450mAh 3.7V

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#	WI920_V1.2	N/A

2.4. Applied Reference Documents

Leading reference documents for testing:

No.	Identity	Document Title
1	**47 CFR § 2. 1093**	Radiofrequency Radiation Exposure Evaluation: Portable Devices
2	**FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01)**	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields
3	**ANSI C95.1-1999**	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz
4	**Health Canada's Safety Code 6**	Limits of Human Exposure to Radiofrequency Electromagnetic Energy in the Frequency Range from 3 kHz to 300 GHz - Safety Code 6 (2009)
5	**RSS-102, Issue 4-2010**	Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)
6	**IEEE 1528-2003**	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techuiques.

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:	CDMA 800MHz
	CDMA 1700MHz
	CDMA 1900MHz
	WIFI:2450MHz
Operation mode:	Call established
Power Level:	CDMA Maximum output power
	WIFI Maximum output power

During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established.
The Absolute Radio Frequency Channel Number (ARFCN) is 1013, 384 and 777 respectively in the case of CDMA 800MHz or is allocated to 25, 450 and 870 respectively in the case of CDMA 1700MHz, or is allocated to 25, 600 and 1175 respectively in the case of CDMA 1900MHz, The EUT is commanded to operate at maximum transmitting power.
The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset.
The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the handset by at least 35 dB.
For SAR testing, EUT is in CDMA link mode, its crest factor is 1.

3. Specific Absorption Rate (SAR)

3.1. Introduction

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

3.2. SAR Definition

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

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

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by

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

, where C is the specific head capacity, δ T is the temperature rise and δ t 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

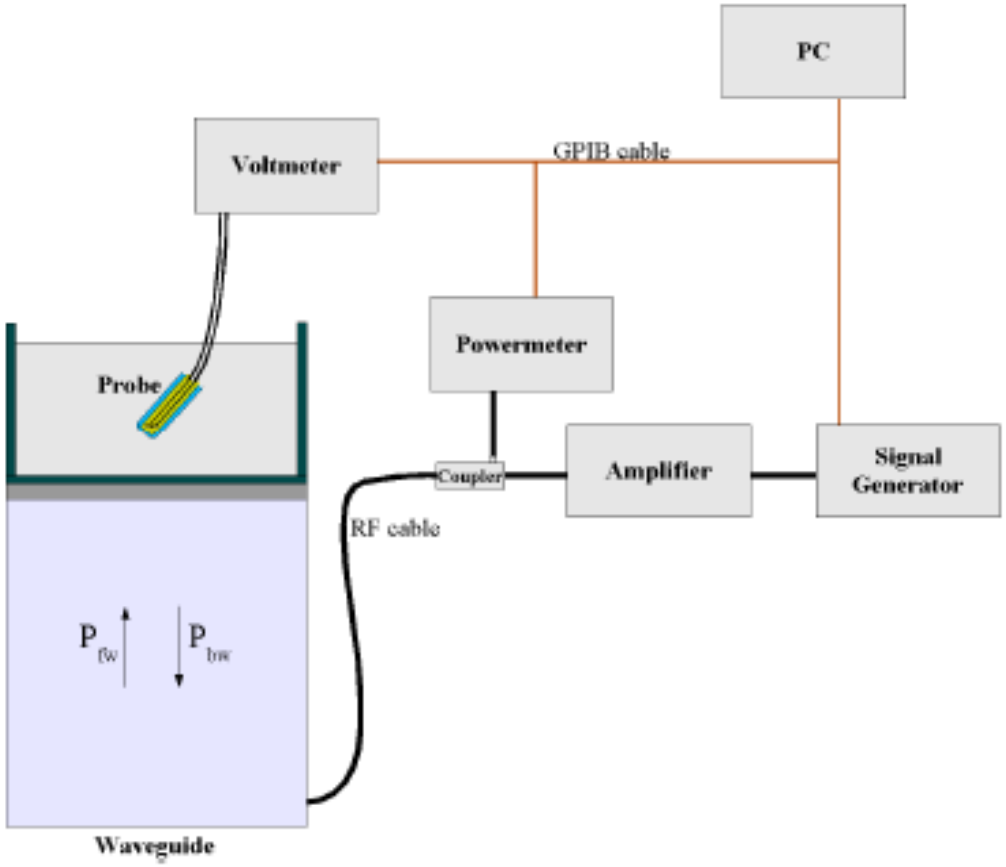
For the measurements the Specific Dosimetric E-Field Probe SN 37/08 EP80 with following specifications is used

- 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 suface normal line:1ess than 30°

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



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

Where :
Pfw = Forward Power
Pbw = Backward Power
a and b = Waveguide dimensions
ı = 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)/Vlin(N) (N=1,2,3)

The linearised output voltage Vlin(N) is obtained from the displayed output voltage V(N) using

Vlin(N)=V(N)*(1+V(N)/DCP(N)) (N=1,2,3)

where DCP is the diode compression point in mV.

4.3. Probe Calibration Process

4.3.1 Dosimetric Assessment Procedure

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

4.3.2 Free Space Assessment Procedure

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

4.3.2 Temperature Assessment Procedure

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

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

Where:

Δt = exposure time (30 seconds),

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

ΔT = temperature increase due to RF exposure.

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

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

Where:

σ = simulated tissue conductivity,

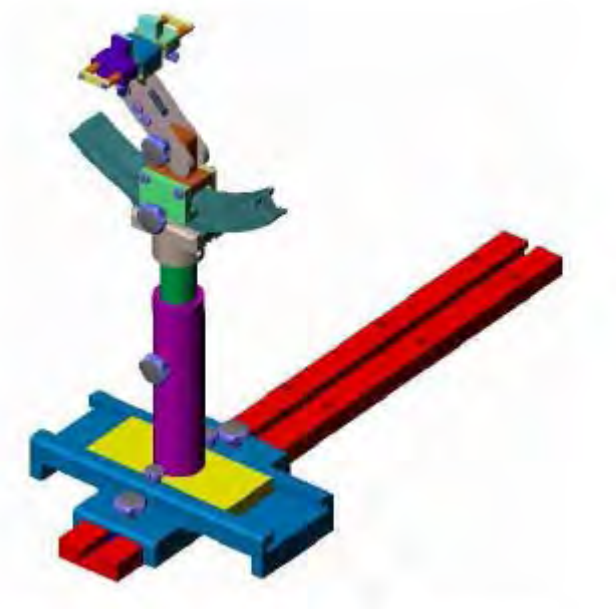
ρ = Tissue density (1.25 g/cm3 for brain tissue)

4.4. Phantom

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

4.5. Device Holder

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



Device holder

System Material	Permittivity	Loss Tangent
Delrin	3.7	0.005

5. Tissue Simulating Liquids

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

Following is the recipes for one liter of head and body tissue simulating liquid for frequency band 835 MHz ,1900 MHz and 2450MHz.

Ingredients (% by weight)	Frequency Band		Frequency Band		Frequency Band
	835MHz		1800-1900MHz		2450MHz
Tissue Type	Head	Body	Head	Body	Body
Water	41.45	52.4	54.9	40.4	40.4
Salt(NaCl)	1.49	1.4	0.18	0.5	0.5
Sugar	46.78	45.0	0.0	58.0	58.0
HEC	0.52	1.0	0.0	1.0	1.0
Bactericide	0.05	0.1	0.0	0.1	0.1
Triton	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	44.92	0.0	0.0
Acticide SPX	0.0	0.0	0.0	0.0	0.0
Dielectric Constant	42.54	56.1	39.9	54.0	54.0
Conductivity (S/m)	0.91	0.95	1.42	1.45	1.45

Recipes for Tissue Simulating Liquid

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

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

Table 1: Dielectric Performance of Head Tissue Simulating Liquid

Temperature: 23.0~23.8°C, humidity: 54~60%.			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHZ	41.5	0.90
Validation value (Sep. 7)	835 MHZ	41.675999	0.894409
Target value	1800 MHZ	40	1.40
Validation value (Sep. 7)	1800 MHZ	38.509998	1.416111
Target value	1900 MHZ	40	1.40
Validation value (Sep. 7)	1900 MHZ	38.509998	1.436111

Table 2: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 23.0~23.8°C, humidity: 54~60%.			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	835 MHz	55.2	0.97
Validation value (Sep. 7)	835 MHz	55.709999	1.009033
Target value	1800 MHZ	54.0	1.45
Validation value (Sep. 7)	1800 MHZ	52.949998	1.436111
Target value	1900 MHz	53.3	1.52
Validation value (Sep. 7)	1900 MHz	52.548876	1.573978
Target value	2450 MHz	53.3	1.52
Validation value (Sep. 7)	2450 MHz	52.548876	1.573978

6. Uncertainty Assessment

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

6.1. UNCERTAINTY EVALUATION FOR HANDSET SAR TEST

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/ e	k
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+- %)	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 Algoritms 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 Algoritms 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

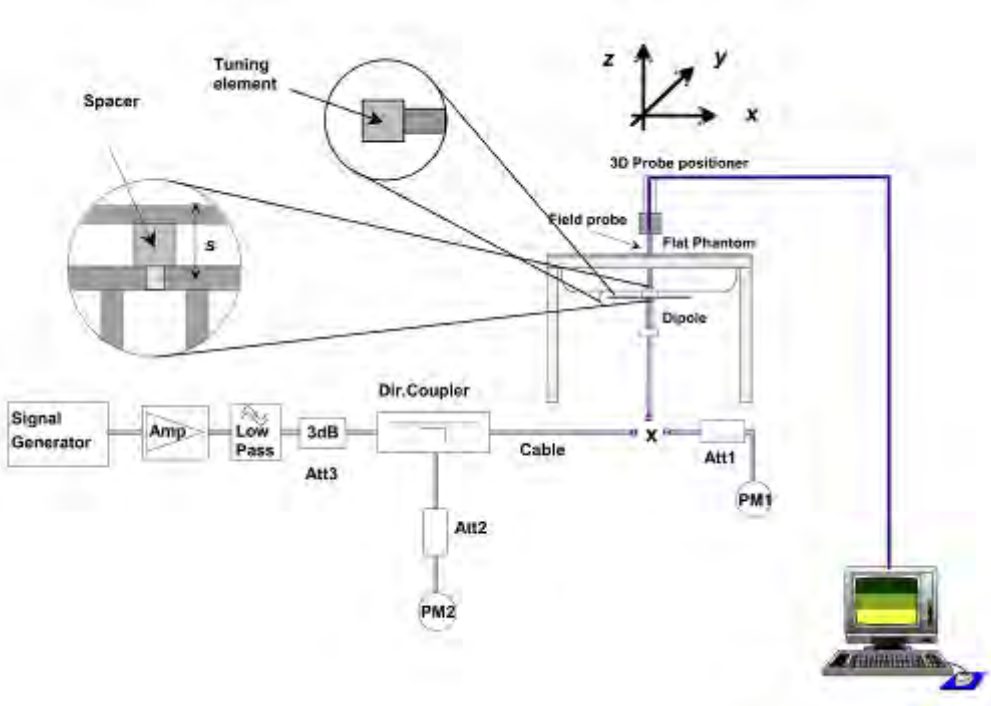
7.1. System Setup

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 frequency at 835 MHz, 1700MHz, 1900 MHz and 2450MHz. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long
side of the phantom.

Equipments:

name	Type and specification
Signal generator	E4433B
Directional coupler	450MHz-3GHz
Amplifier	3W 502(10-2500MHz)
Reference dipole	835MHz:SN 36/08 DIPC 99 1700MHz:SN 36/08 DIPF 101 1900MHz:SN 36/08 DIPF 102 2450MHz:SN 36/08 DIPF 103

System Verification Setup Block Diagram



7.2. Validation Results

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

Frequency	835MHz	1700MHz	1900MHz	2450MHz
Target value（1g）	9.5 W/Kg	38.1 W/Kg	39.7 W/Kg	52.4 W/Kg
250 mW power	2.478 W/Kg	8.857 W/Kg	9.556 W/Kg	12.899 W/Kg
Test value（1g）	9.912 W/Kg	35.428 W/Kg	38.224 W/Kg	51.596 W/Kg

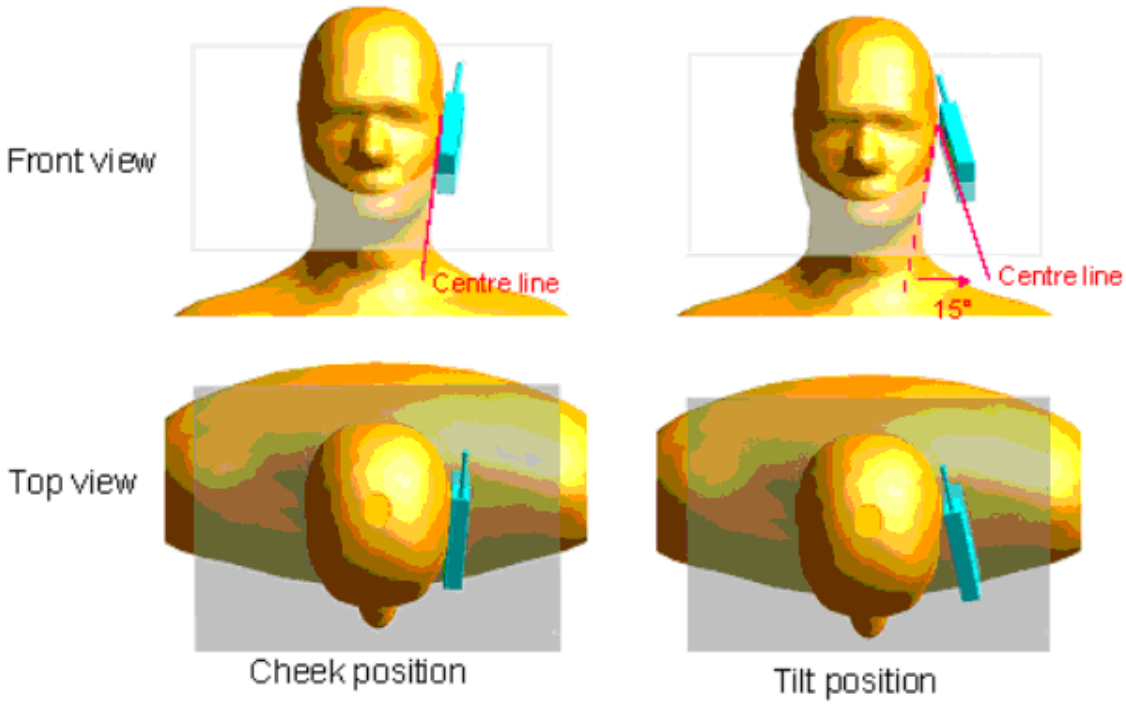
Note: System checks the specific test data please see page 192-199.

8. Operational Conditions During Test

8.1. Informations on the testing

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

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



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

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

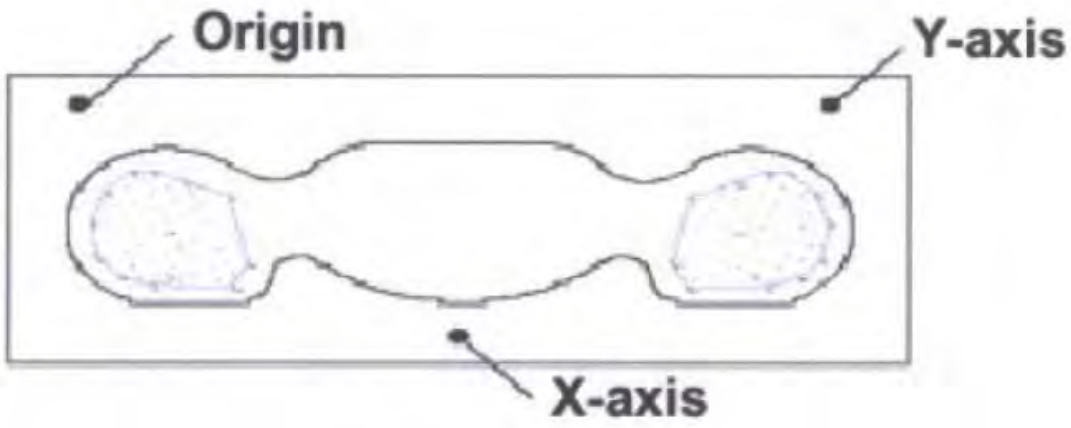
Remark: Please refer to Appendix B for the test setup photos.

8.2. Body-worn Configurations

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

The depth of the body tissue was 15.1cm. The distance between the back of the device and the bottom of the flat phantom is 5mm(taking into account of the IEEE 1528 and the place of the antenna)

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



SAR Measurement Points in Area Scan

8.3. Measurement procedure

The following steps are used for each test position

- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to16 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 PROCEDURES

9.1. Procedures Used To Establish Test Signal

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

9.2. SAR Measurement Conditions for CDMA

These procedures were followed according to FCC "SAR Measurement Procedures for 3G Devices", October 2007 (Revised).

9.3. Output Power Verification

See 3GPP2 C.S0011/TIA-98-E as recommended by "SAR Measurement Procedures for 3G Devices", October 2007 (Revised).
Maximum output power is verified on the High, Middle and Low channels according to procedures in section 3.1.2.3.4 of 3GPP2 C.S0033-0/TIA-866 for Rev. 0 and section 4.3.4 of 3GPP2 C.S0033-A for Rev. A. For Rev. A, maximum output power for both Subtype 0/1 and Subtype 2 Physical Layer configurations should be measured. The device operating configurations under TAP/ETAP should be documented in the test report; including power control, code channel and RF channel output power levels. The measurement results should be tabulated in the SAR report with any measurement difficulties and equipment limitations clearly identified.

9.4. SAR Measurement

SAR is measured using FTAP/RTAP and FETAP/RETAP respectively for Rev. 0 and Rev. A devices. The AT is tested with a Reverse Data Channel rate of 153.6 kbps in Subtype 0/1 Physical Layer configurations; and a Reverse Data Channel payload size of 4096 bits and Termination Target of 16 slots in Subtype 2 Physical Layer configurations. Both FTAP and FETAP are configured with a Forward Traffic Channel data rate corresponding to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots. AT power control should be in “All Bits Up” conditions for TAP/ETAP.

Body SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0. SAR for Subtype 2 Physical layer configurations is not required for Rev. A when the maximum average output of each RF channels is less than that measured in Subtype 0/1 Physical layer configurations. Otherwise, SAR is measured on the maximum output channel for Rev. A using the exposure configuration that results in the highest SAR for that RF channels in Rev. 0.17 Head SAR is required for Ev-Do devices that support operations next to the ear; for example, with VOIP, using Subtype 2 Physical Layer configurations according to the required handsetconfigurations.

4.4.2.3 1x RTT Support

For Ev-Do devices that also support 1x RTT voice and/or data operations, SAR is not required for 1x RTT when the maximum average output of each channel is less than ¼ dB higher than that measured in Subtype 0/1 Physical Layer configurations for Rev. 0. Otherwise, the 'Body SAR Measurements' procedures in the 'CDMA 2000 1x Handsets' section should be applied.

4.4.2.4 Output Power Verification 1x RTT

Maximum output power is verified on the High, Middle, and Low channels according to procedures in Section 4.4.5.2 of 3 GPP2 C.S0011/TIA-98-E. Results for at least steps 3,4 and 10 of the power measurement procedures should be tabulated in the SAR report. Steps 3 and 4 should be measured using SO55 with power control bits in "All Up" condition. TDSO/SO32 may be used instead of SO55 for step 4.Step 10 should be measured using TDSO/SO32 with power control bits in the "Bits Hold"

1xRTT Power Measurements

Band	Channel	Radio Configuration aud conducted Power (dBm)			
		RC1	RC1	RC3	RC3
CDMA 800	1013	28.49	28.34	28.35	28.22
	384	29.04	29.01	28.98	28.83
	777	28.29	28.12	28.17	28.09
CDMA 1700	25	26.17	26.12	26.08	26.10
	450	27.18	27.12	27.15	27.11
	875	26.76	26.58	26.49	26.57
CDMA 1900	25	27.89	27.75	27.69	27.63
	600	27.19	27.05	27.10	27.09
	1175	26.72	26.57	26.38	26.45
	1275	23.97	23.68	23.57	23.54
	SO	SO2	SO55	SO2	SO55

EvDo Rev A Power Measurements

1x EvDo Rev.A Type 0 [dBm] – FTAP rate = 2 Slot Version 307.2kbps						
	RTAP Rate	9.6kbps	19.2 kbps	38.2 kbps	76.8 kbps	153.6 kbps
Band	Channel					
CDMA 800	1013	24.75	24.56	24.62	24.48	24.37
	384	23.87	23.68	23.42	23.58	23.42
	777	25.30	25.21	25.18	25.20	25.11
CDMA 1900	25	25.72	25.56	25.61	25.54	25.42
	600	24.99	24.86	24.53	24.44	24.37
	1175	25.27	25.14	25.13	25.08	25.00
	1275	22.57	22.24	22.14	22.29	22.22

Note: 1. Because CDMA voice mode peak output power is large than EVDO, we select CDMA voice mode for SAR testing.

2. SAR test Power Control was set in 'All Bits Up" for all measurements.

9.5. WIFI and BT measurement power.

Wifi peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)	
			802.11B (DSSS)	802.11G (OFDM)
WiFi	1	2412	10.72	1.12
	6	2437	11.07	1.27
	11	2462	11.40	1.36

Bluetooth peak output power

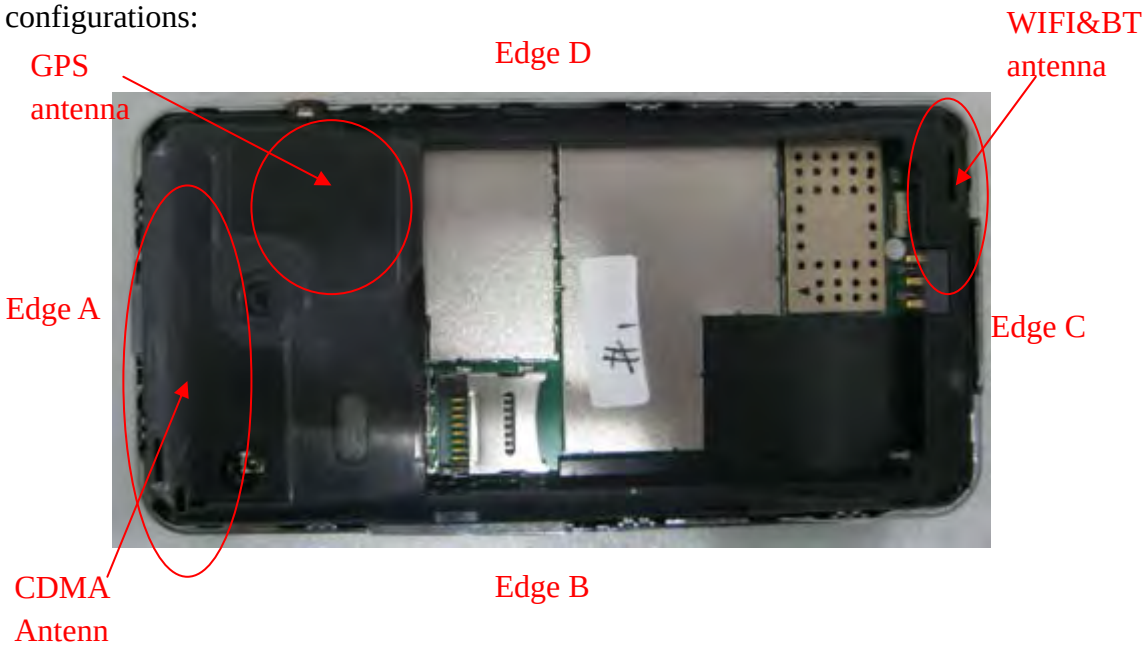
Band	Channel	Frequency (MHz)	Output Power(dBm)		
			GFSK	Π/4-DQPSK	8-DPSK
BT	0	2402	8.126	7.754	7.681
	38	2441	6.758	6.223	6.320
	79	2480	6.225	5.662	5.751

10.Wireless Hot Spot SAR Evaluation Procedures

This Portable Devices with Wireless Router function. And the SAR evaluation procedures accord with KDB 941225 D06 Hot Spot SAR v01.

1. SAR must be tested for all surfaces and edges (side) with a transmitting antenna with in 2.5 cm from that surface or edge, at a test separation distance of 10 mm, in the wireless modes that support wireless routing.

2. Edge configurations:



11.Test Results List

Summary of Measurement Results (CDMA 800 Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg), 1g Peak		
			Device Test channel		
			Channel 1013	Channel 384	Channel 777
Left Side Of Head	Cheek/Touch	Internal	0.287	0.152	0.158
	Ear/Tilt	Internal	0.288	0.149	0.154
Right Side Of Head	Cheek/Touch	Internal	0.302	0.157	0.169
	Ear/Tilt	Internal	0.361	0.174	0.192
Body (10mm separation)	Back Side	Internal	1.151	0.483	0.383
	Face Side	Internal	0.660	0.332	0.374
	Edge A	Internal	/	0.225	/
	Edge B	Internal	/	0.705	/
	Edge C	Internal	/	/	/
	Edge D	Internal	/	0.606	/

Summary of Measurement Results (CDMA 1700 Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg), 1g Peak		
			Device Test channel		
			Channel 25	Channel 450	Channel 875
Left Side Of Head	Cheek/Touch	Internal	0.535	0.549	0.825
	Ear/Tilt	Internal	0.397	0.281	0.522
Right Side Of Head	Cheek/Touch	Internal	0.716	0.792	0.656
	Ear/Tilt	Internal	0.894	0.903	0.764
Body (10mm separation)	Back Side	Internal	0.780	1.008	0.927
	Face Side	Internal	0.320	0.364	0.324
	Edge A	Internal	/	0.318	/
	Edge B	Internal	/	0.286	/
	Edge C	Internal	/	/	/
	Edge D	Internal	/	0.396	/

Summary of Measurement Results (CDMA 1900 Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.						
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg), 1g Peak			
			Device Test channel			
			Ch. 25	Ch. 600	Ch. 1175	Ch. 1275
Left Side Of Head	Cheek/Touch	Internal	0.634	0.589	0.811	0.577
	Ear/Tilt	Internal	0.750	0.703	0.908	0.672
Right Side Of Head	Cheek/Touch	Internal	0.396	0.363	0.471	0.407
	Ear/Tilt	Internal	0.643	0.598	0.764	0.561
Body (10mm separation)	Back Side	Internal	0.671	0.595	0.738	0.638
	Face Side	Internal	0.238	0.216	0.285	0.186
	Edge A	Internal	0.218	/	/	0.496
	Edge B	Internal	0.270	/	/	0.423
	Edge C	Internal	/	/	/	/
	Edge D	Internal	0.289	/	/	0.371

Summary of Measurement Results (WLAN 802.11B Band)

Temperature: 21.0~23.8°C, humidity: 54~60%.					
Phantom Configurations	Device Test Positions	Antenna Positions	SAR(W/Kg), 1g Peak		
			Device Test channel		
			Channel 1	Channel 6	Channel 11
Body (10mm separation)	Back upward	Internal	/	/	0.115
	Face Upward	Internal	/	/	0.071
	Edge A	Internal	/	/	/
	Edge B	Internal	/	/	0.032
	Edge C	Internal	/	/	0.082
	Edge D	Internal	/	/	0.023

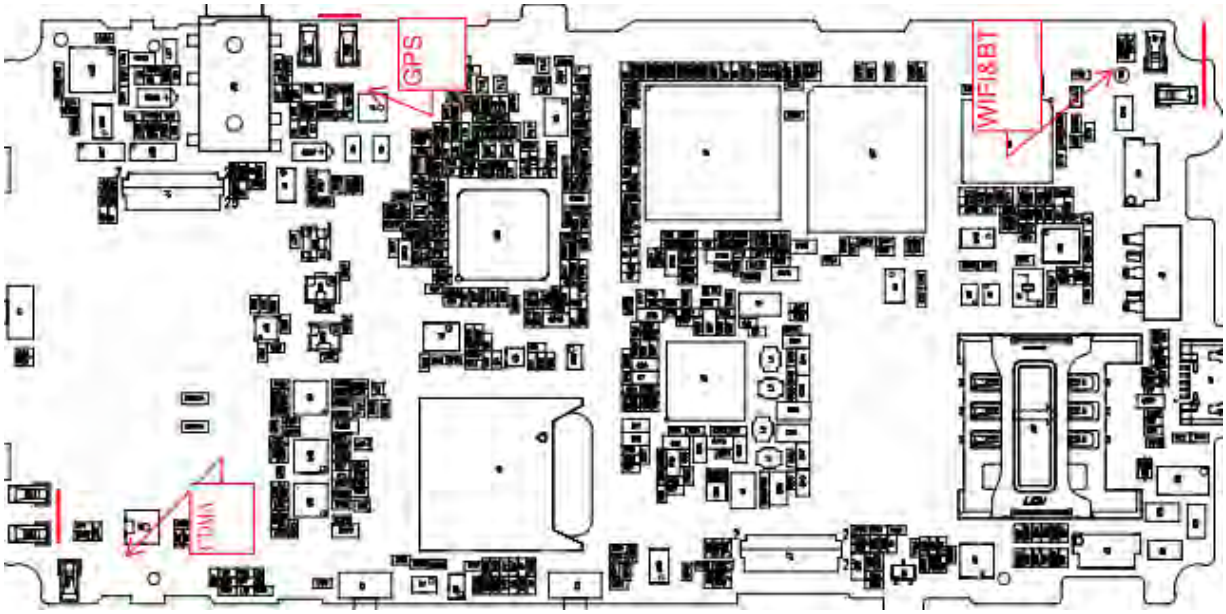
Note: 1. Refer KDB 447498, when the SAR procedures require multiple channels to be tested and the 1-g SAR for the highest output channel is less than 0.8 W/kg and peak SAR is less than 1.6W/kg, where the transmission band corresponding to all channels is ≤ 100 MHz, testing for the other channels is not required.

2. CDMA antenna located at edge A, the distance between CDMA antenna and edge C is large than 2.5cm. acording with KDB941225 D06, the SAR measurement of Edge D is not required

3. WIFI antenna located at edge C. the distance between wifi antenna and edge A is large than 2.5cm. acording with KDB941225 D06, the SAR measurement of Edge A is not required.

12.Multiple Transmitters Evaluation

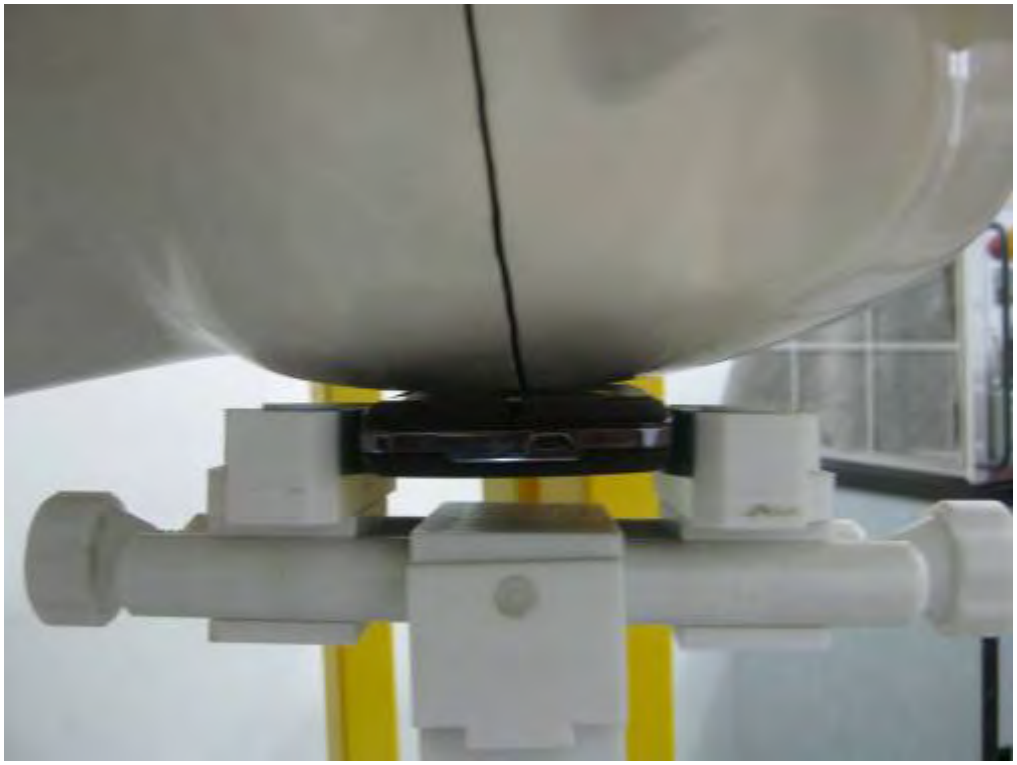
The are three transmitters build in EUT, CDMA, BT and WiFi, As follwing :



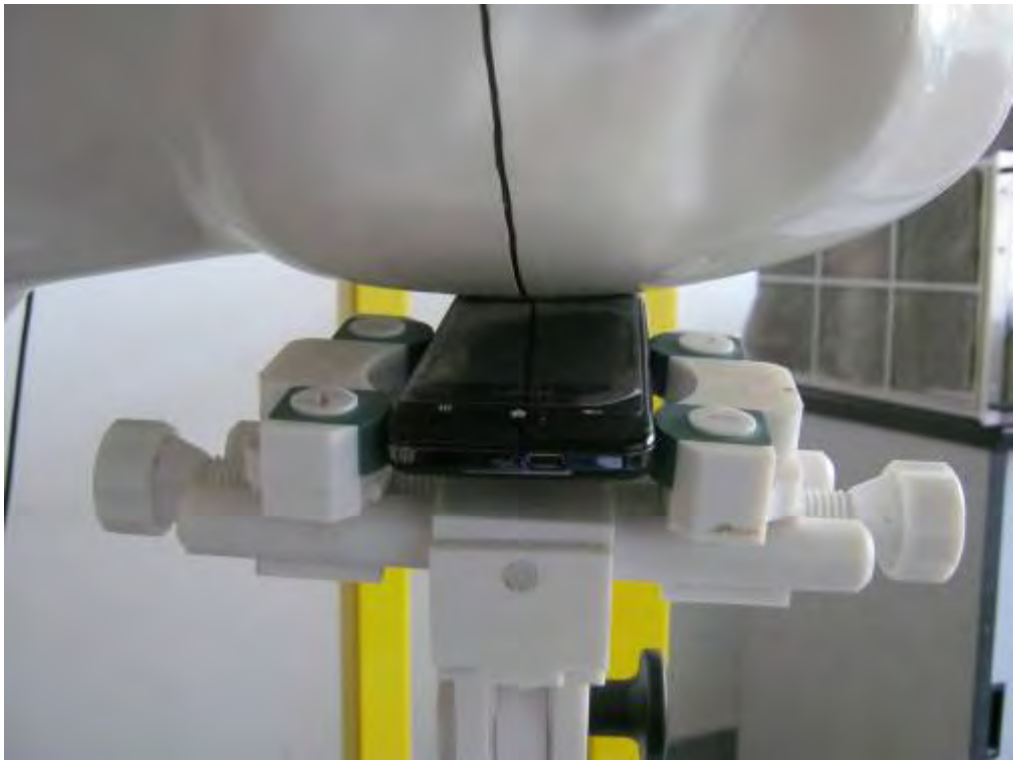
1. The distance between CDMA antenna and WIFI&BT antenna is 10.5cm.
2. The Wifi mode Max. 1-g SAR vauel is 0.115W/Kg, and the CDMA Max. 1-g SAR vauel is 1.151W/Kg, the sum of 1-g SAR vauel is 1.266W/Kg less than 1.6W/Kg, according with KDB 648474 D01, when the sum of the 1-g SAR is <1.6 W/kg for all simultaneous transmitting antennas , and the Simultaneous Transmission SAR is not required.

Annex A Photographs of the EUT

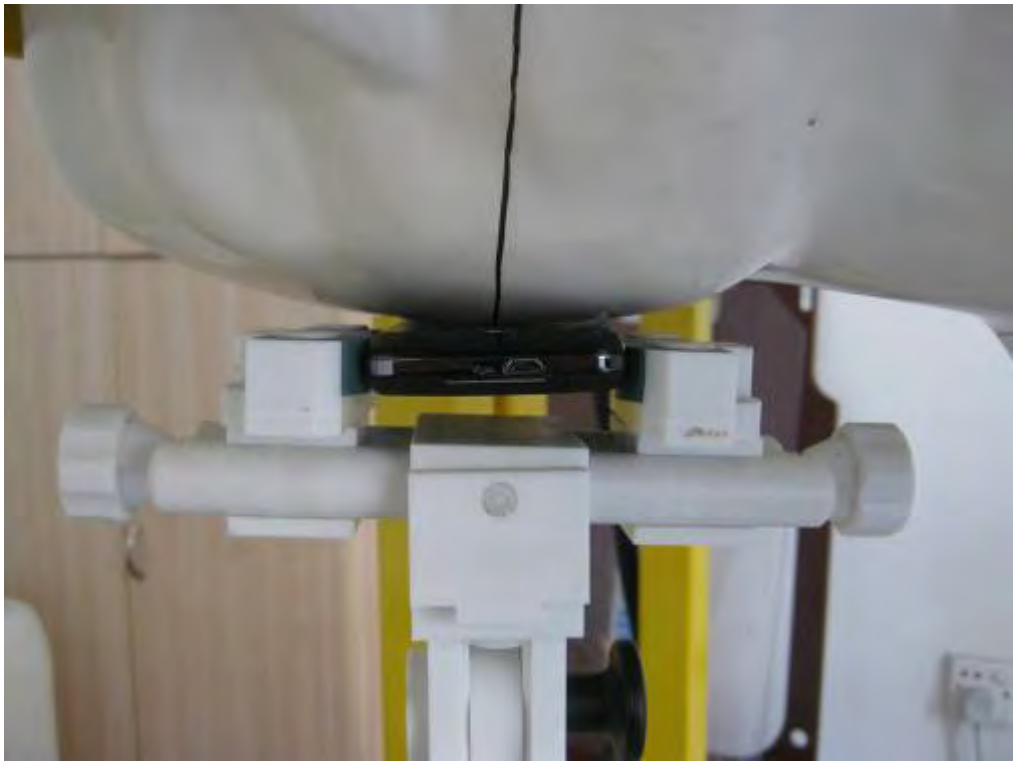
1 EUT Left Head Touch Cheek Position



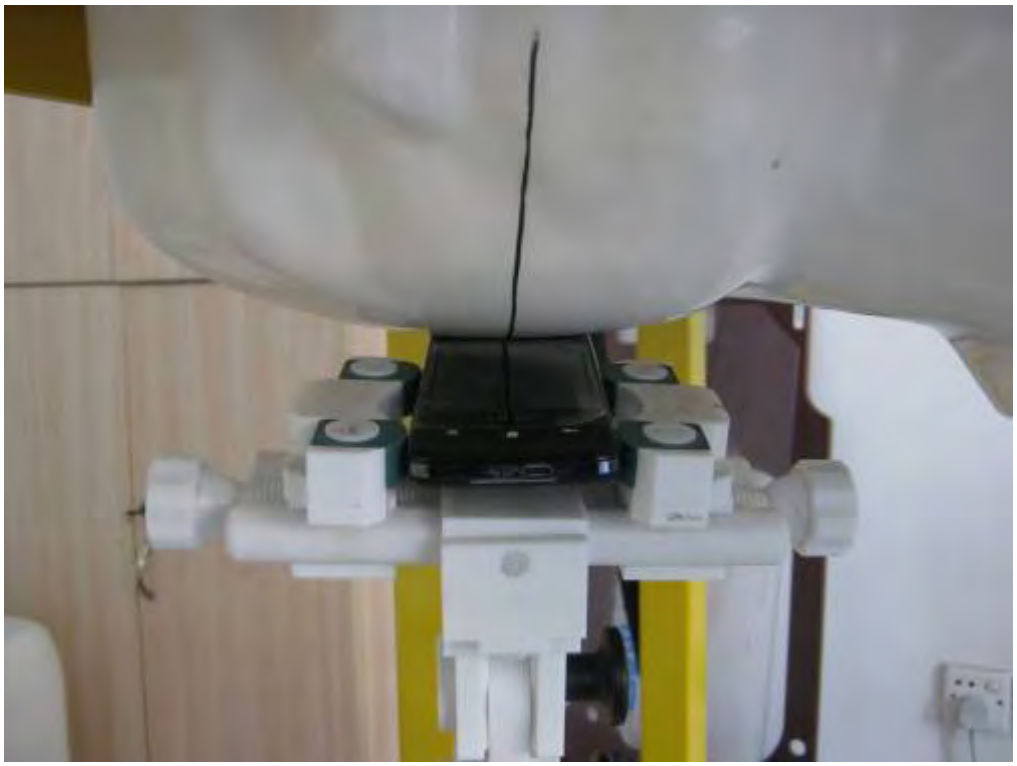
2 EUT Left Head Tilt15 Position



3 EUT Right Head Touch Cheek Position



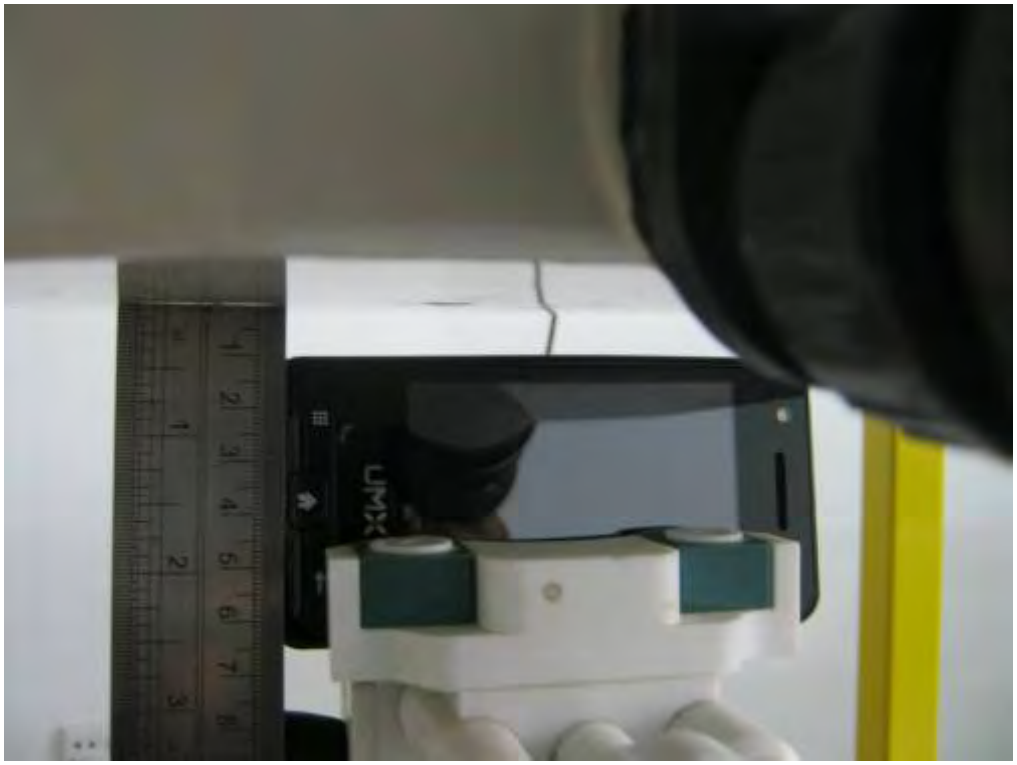
4 EUT Right Head Tilt15 Position



5 Side Position With Headphone 10mm distance.

6 Edge A, 10mm distance.

7. Edge B, 10mm distance



8. Edge C, 10mm distance

8. Edge D, 10mm distanc

Liquid Level Photo

Annex C Graph Test Results

BAND	PARAMETERS
CDMA 800	Measurement 1: Right Head with Cheek device position on Low Channel in CDMA mode Measurement 2: Right Head with Cheek device position on Middle Channel in CDMA mode Measurement 3: Right Head with Cheek device position on High Channel in CDMA mode Measurement 4: Right Head with Tilt device position on Low Channel in CDMA mode Measurement 5: Right Head with Tilt device position on Middle Channel in CDMA mode Measurement 6: Right Head with Tilt device position on High Channel in CDMA mode Measurement 7: Left Head with Cheek device position on Low Channel in CDMA mode Measurement 8: Left Head with Cheek device position on Middle Channel in CDMA mode Measurement 9: Left Head with Cheek device position on High Channel in CDMA mode Measurement 10: Left Head with Tilt device position on Low Channel in CDMA mode Measurement 11: Left Head with Tilt device position on Middle Channel in CDMA mode Measurement 12: Left Head with Tilt device position on High Channel in CDMA mode Measurement 13: Validation Plane with Body device position on Low Channel in CDMA mode Measurement 14: Validation Plane with Body device position on Low Channel in CDMA mode Measurement 15: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 16: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 17: Validation Plane with Body device position on High Channel in CDMA mode Measurement 18: Validation Plane with Body device position on High Channel in CDMA mode Measurement 19: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 20: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 21: Validation Plane with Body device position on

	Middle Channel in CDMA mode
CDMA 1700	Measurement 22: Right Head with Cheek device position on Low Channel in CDMA mode Measurement 23: Right Head with Cheek device position on Middle Channel in CDMA mode Measurement 24: Right Head with Cheek device position on High Channel in CDMA mode Measurement 25: Right Head with Tilt device position on Low Channel in CDMA mode Measurement 26: Right Head with Tilt device position on Middle Channel in CDMA mode Measurement 27: Right Head with Tilt device position on High Channel in CDMA mode Measurement 28: Left Head with Cheek device position on Low Channel in CDMA mode Measurement 29: Left Head with Cheek device position on Middle Channel in CDMA mode Measurement 30: Left Head with Cheek device position on High Channel in CDMA mode Measurement 31: Left Head with Tilt device position on Low Channel in CDMA mode Measurement 32: Left Head with Tilt device position on Middle Channel in CDMA mode Measurement 33: Left Head with Tilt device position on High Channel in CDMA mode Measurement 34: Validation Plane with Body device position on Low Channel in CDMA mode Measurement 35: Validation Plane with Body device position on Low Channel in CDMA mode Measurement 36: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 37: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 38: Validation Plane with Body device position on High Channel in CDMA mode Measurement 39: Validation Plane with Body device position on High Channel in CDMA mode Measurement 40: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 41: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 42: Validation Plane with Body device position on Middle Channel in CDMA mode

CDMA 1900	Measurement 43: Right Head with Cheek device position on Low Channel in CDMA mode Measurement 44: Right Head with Cheek device position on Middle Channel in CDMA mode Measurement 45: Right Head with Cheek device position on High Channel in CDMA mode Measurement 46: Right Head with Tilt device position on Low Channel in CDMA mode Measurement 47: Right Head with Tilt device position on Middle Channel in CDMA mode Measurement 48: Right Head with Tilt device position on High Channel in CDMA mode Measurement 49: Left Head with Cheek device position on Low Channel in CDMA mode Measurement 50: Left Head with Cheek device position on Middle Channel in CDMA mode Measurement 51: Left Head with Cheek device position on High Channel in CDMA mode Measurement 52: Left Head with Tilt device position on Low Channel in CDMA mode Measurement 53: Left Head with Tilt device position on Middle Channel in CDMA mode Measurement 54: Left Head with Tilt device position on High Channel in CDMA mode Measurement 55: Validation Plane with Body device position on Low Channel in CDMA mode Measurement 56: Validation Plane with Body device position on Low Channel in CDMA mode Measurement 57: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 58: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 59: Validation Plane with Body device position on High Channel in CDMA mode Measurement 60: Validation Plane with Body device position on High Channel in CDMA mode Measurement 61: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 62: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 63: Validation Plane with Body device position on Middle Channel in CDMA mode
	Measurement 64: Right Head with Cheek device position on Low Channel in CDMA mode

CDMA 1900 G-block	Measurement 65: Right Head with Tilt device position in CDMA mode Measurement 66: Left Head with Cheek device position in CDMA mode Measurement 67: Left Head with Tilt device position in CDMA mode Measurement 68: Validation Plane with Body device position in CDMA mode Measurement 69: Validation Plane with Body device position in CDMA mode Measurement 70: Validation Plane with Body device position in CDMA mode Measurement 71: Validation Plane with Body device position in CDMA mode Measurement 72: Validation Plane with Body device position in CDMA mode
WIFI 2450	Measurement 73: Validation Plane with Body device position on Low Channel in DSSS mode Measurement 74: Validation Plane with Body device position on Low Channel in DSSS mode Measurement 75: Validation Plane with Body device position on Low Channel in DSSS mode Measurement 76: Validation Plane with Body device position on Low Channel in DSSS mode Measurement 77: Validation Plane with Body device position on Low Channel in DSSS mode

MEASUREMENT 1

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 28 seconds

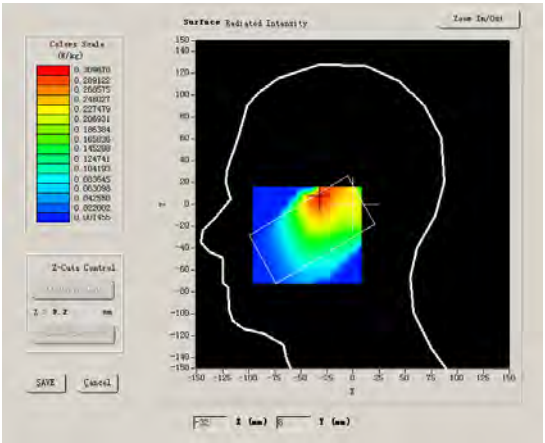
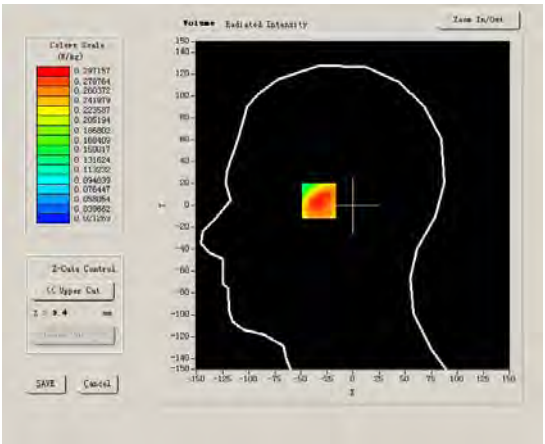
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	CDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 1013):

Frequency (MHz)	824.700012
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.867138
Power Drift (%)	-2.130000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

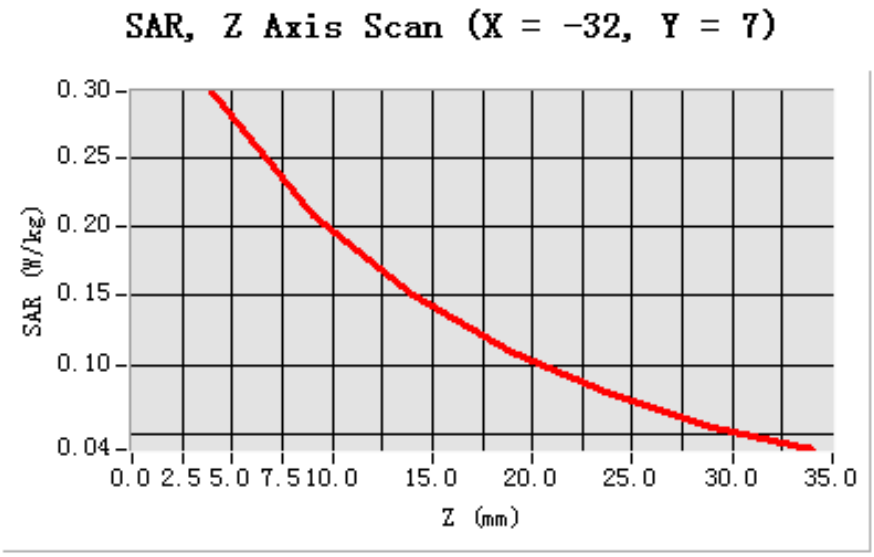
SURFACE SAR	VOLUME SAR
	

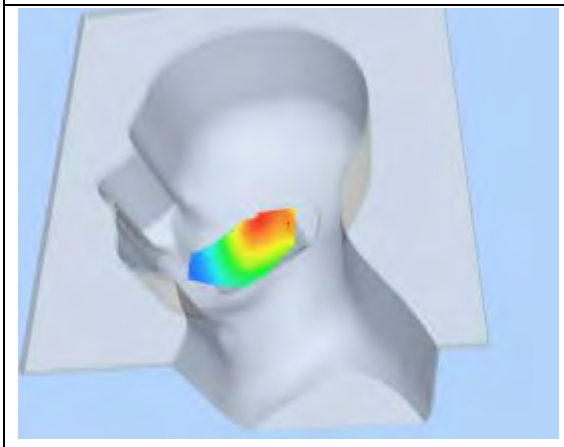
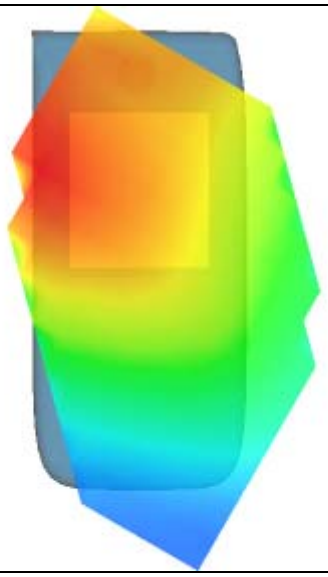
Maximum location: X=-32.00, Y=7.00

SAR 10g (W/Kg)	0.194188
SAR 1g (W/Kg)	0.286632

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2972	0.2072	0.1512	0.1085	0.0780	0.0555



3D sceen shot	Hot spot position
	

MEASUREMENT 2

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 32 seconds

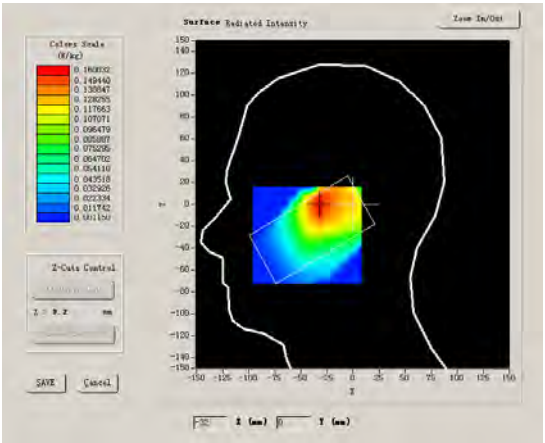
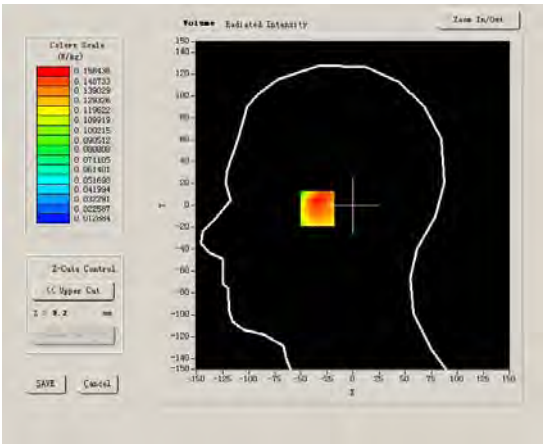
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	CDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 384):

Frequency (MHz)	836.520020
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.879566
Power Drift (%)	-3.660000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

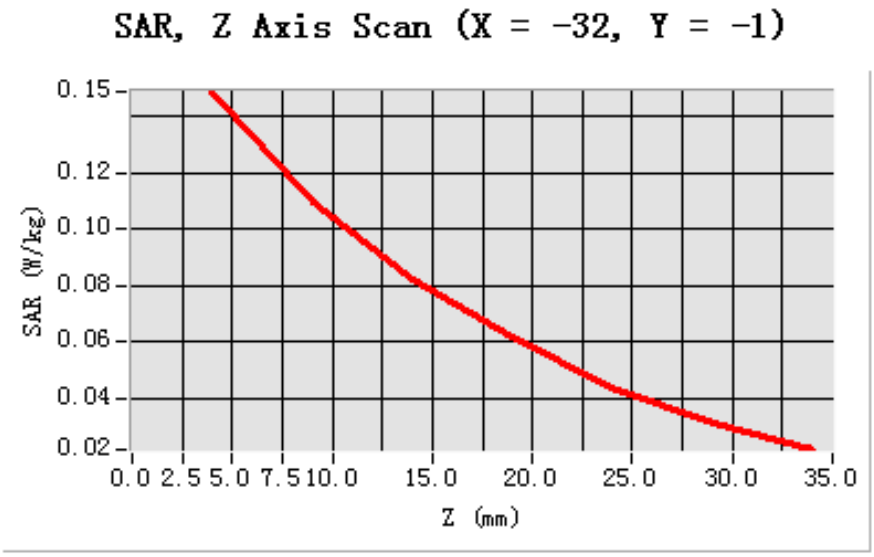
SURFACE SAR	VOLUME SAR
	

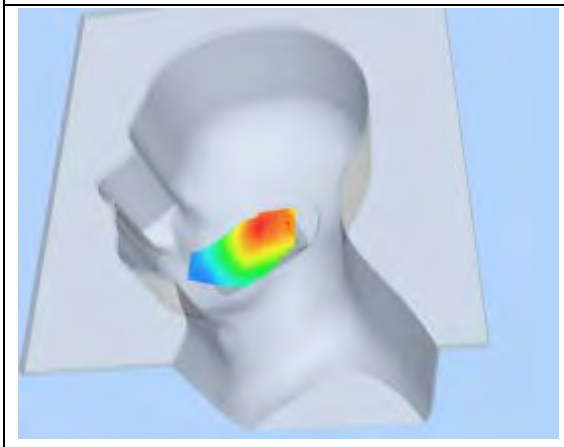
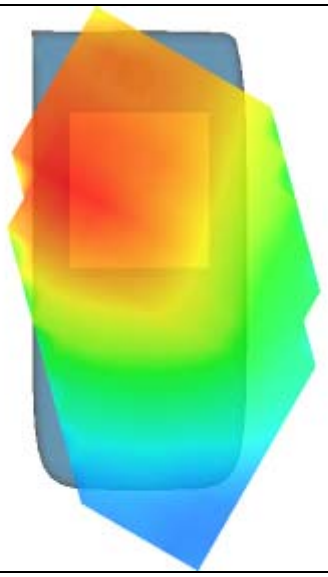
Maximum location: X=-32.00, Y=-1.00

SAR 10g (W/Kg)	0.103992
SAR 1g (W/Kg)	0.151812

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1487	0.1098	0.0820	0.0617	0.0434	0.0311



3D sceen 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: 7/9/2011
Measurement duration: 7 minutes 30 seconds

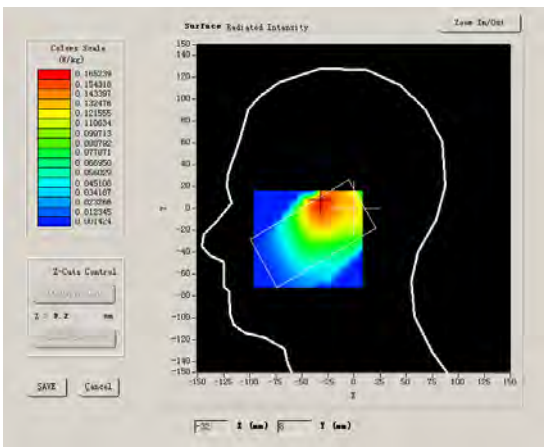
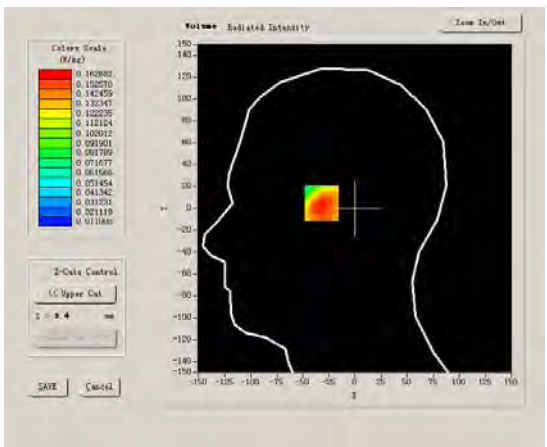
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	CDMA850
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 777):

Frequency (MHz)	848.309998
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.891963
Power Drift (%)	0.090000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

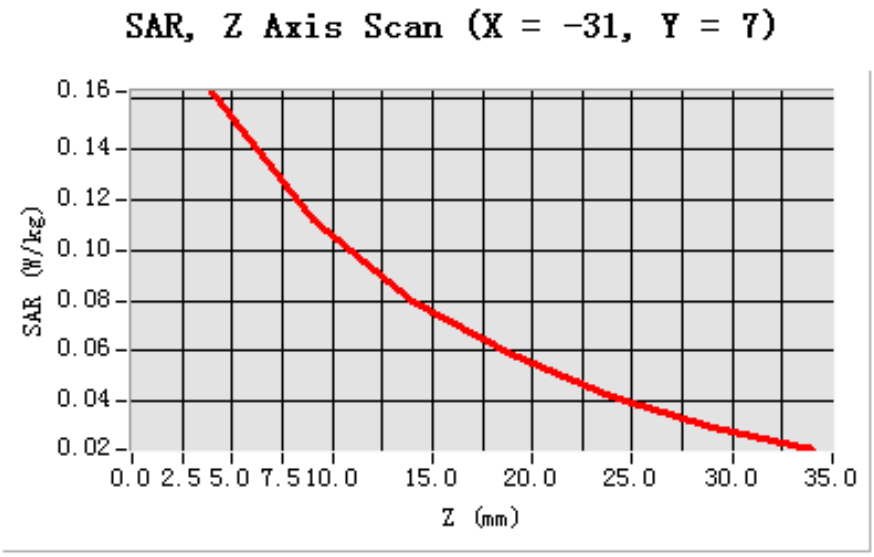
SURFACE SAR	VOLUME SAR
	

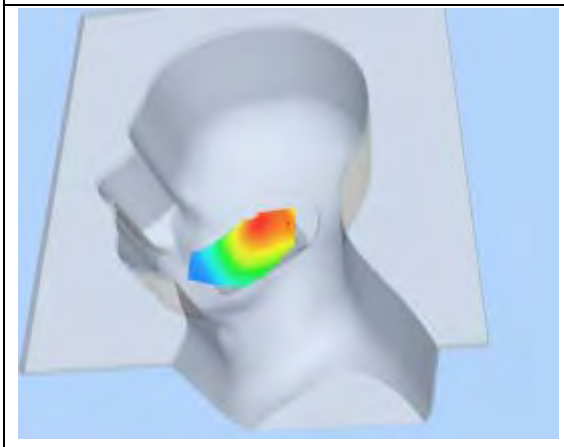
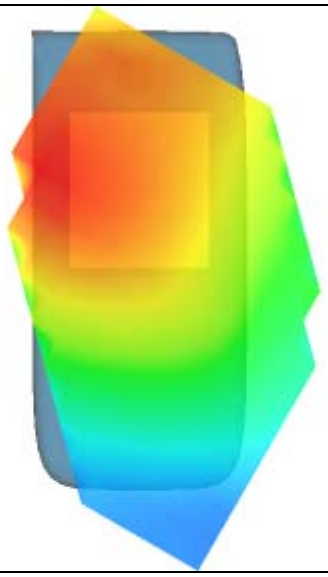
Maximum location: X=-31.00, Y=7.00

SAR 10g (W/Kg)	0.107421
SAR 1g (W/Kg)	0.157912

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1627	0.1120	0.0798	0.0583	0.0424	0.0294



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: 7/9/2011
Measurement duration: 7 minutes 22 seconds

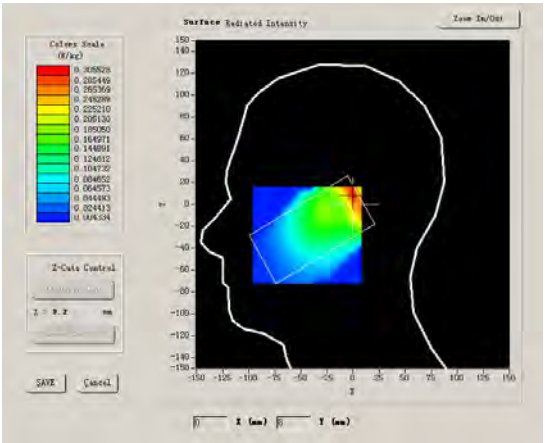
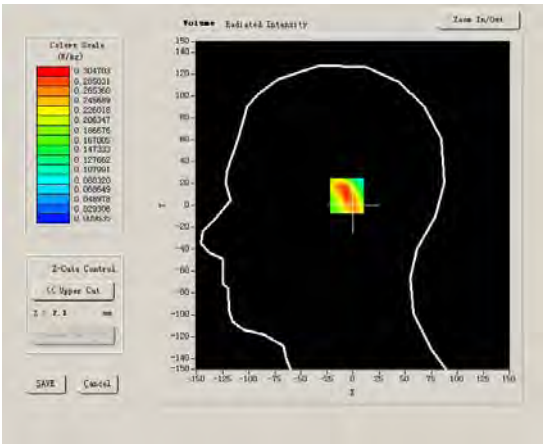
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	CDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 1013):

Frequency (MHz)	824.700012
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.867138
Power Drift (%)	-0.730000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

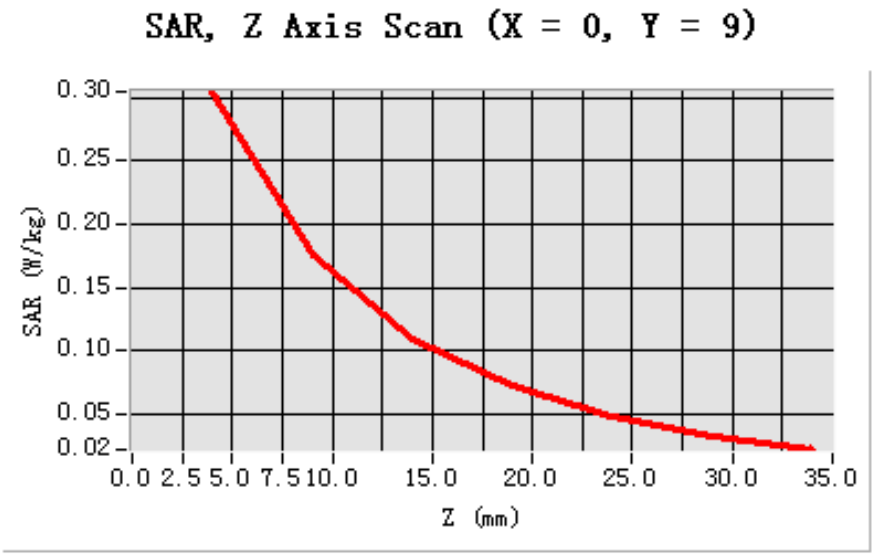
SURFACE SAR	VOLUME SAR
	

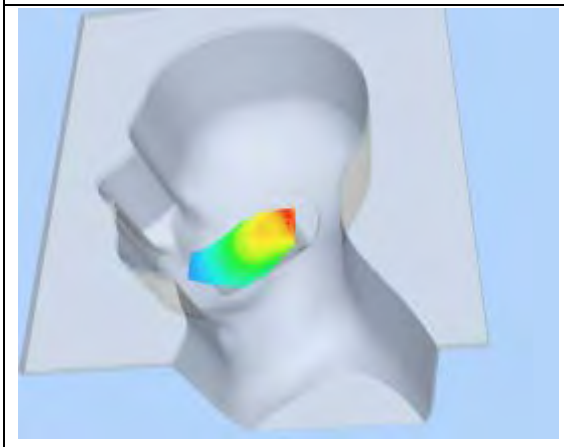
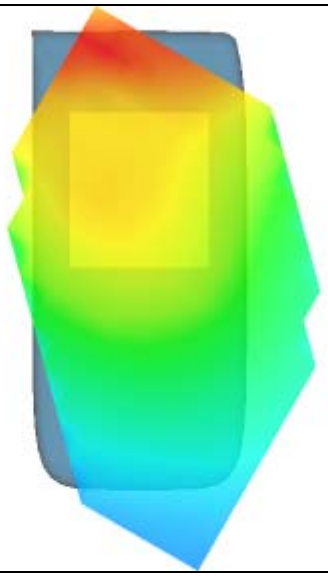
Maximum location: X=0.00, Y=9.00

SAR 10g (W/Kg)	0.166729
SAR 1g (W/Kg)	0.287598

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3047	0.1755	0.1096	0.0721	0.0487	0.0328



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: 7/9/2011
Measurement duration: 7 minutes 27 seconds

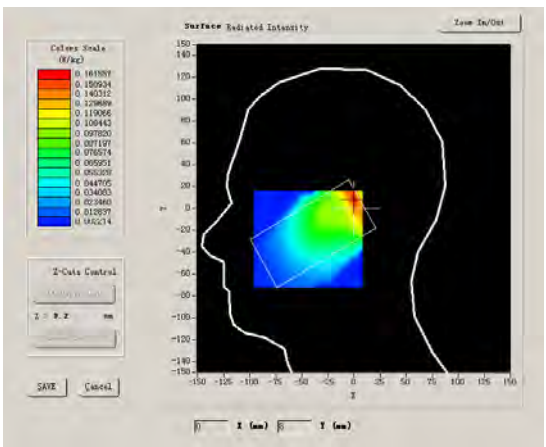
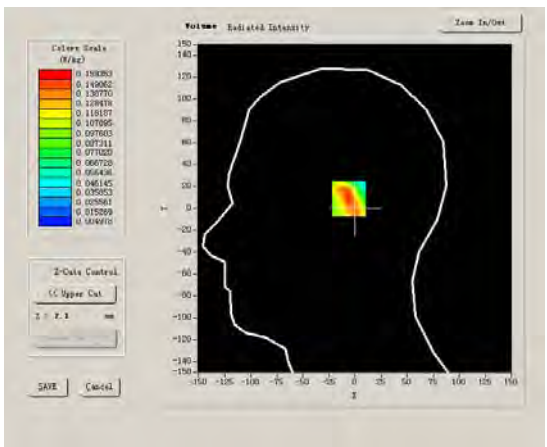
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	CDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 384):

Frequency (MHz)	836.520020
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.879566
Power Drift (%)	-1.840000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

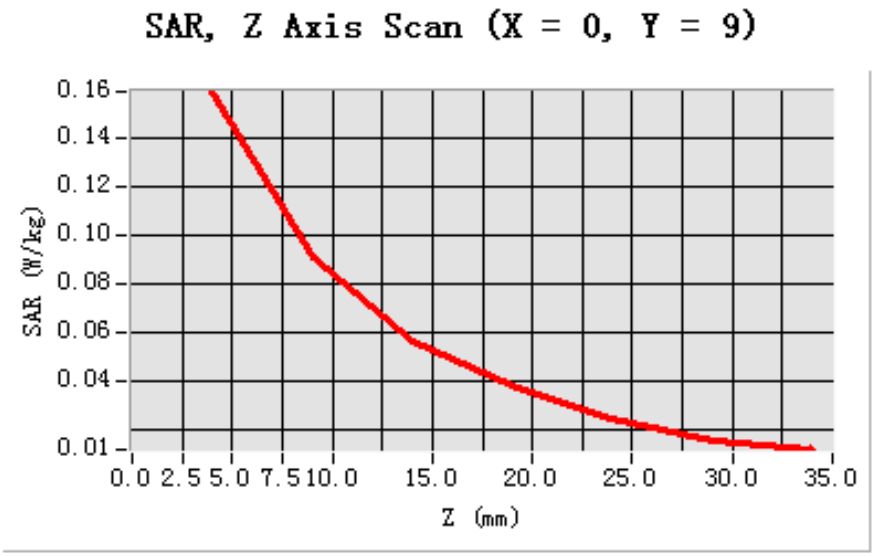
SURFACE SAR	VOLUME SAR
	

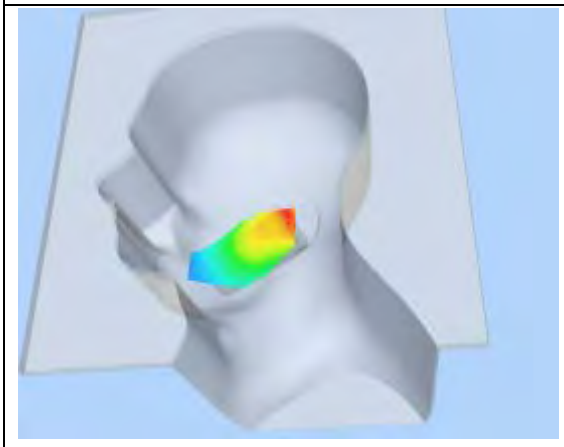
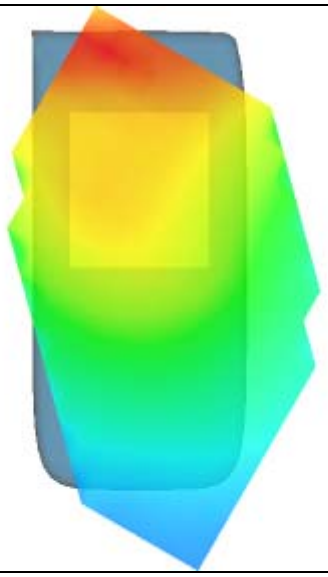
Maximum location: X=0.00, Y=9.00

SAR 10g (W/Kg)	0.087107
SAR 1g (W/Kg)	0.149038

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1594	0.0911	0.0564	0.0379	0.0248	0.0159



3D sceen shot	Hot spot position
	

MEASUREMENT 6

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 8 minutes 34 seconds

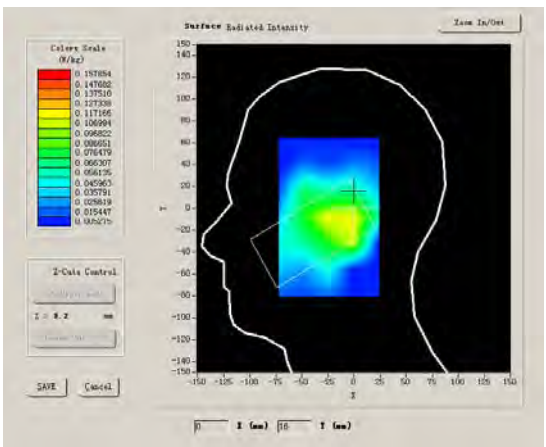
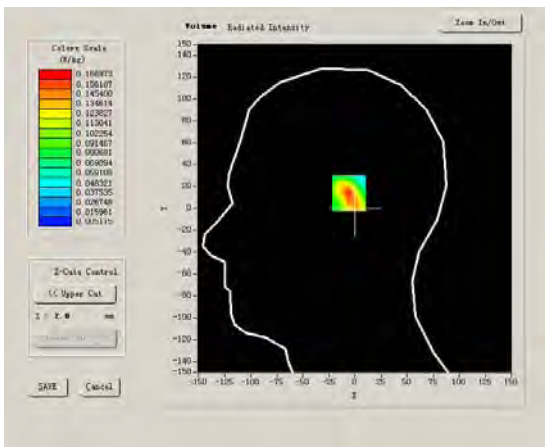
A. Experimental conditions.

Phantom File	zinf5.txt
Phantom	Right head
Device Position	Tilt
Band	CDMA850
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 777):

Frequency (MHz)	848.309998
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.891963
Power Drift (%)	1.350000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

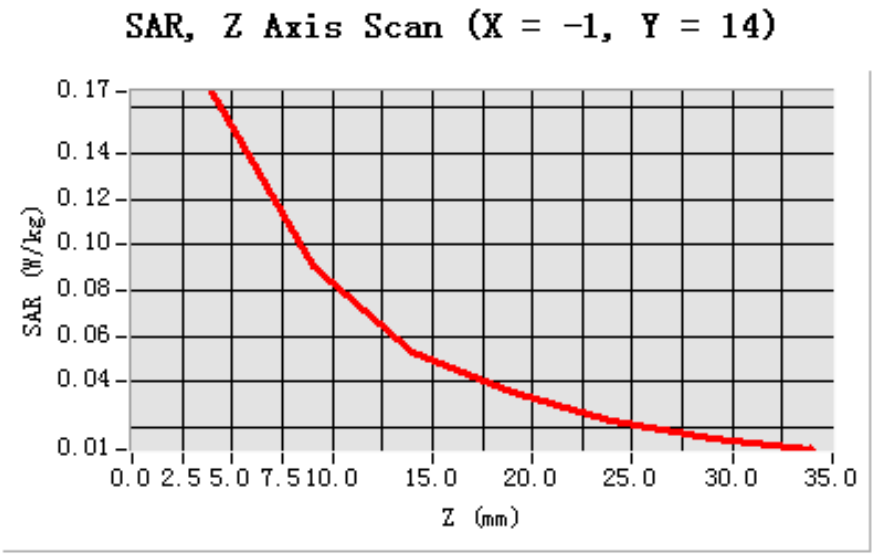
SURFACE SAR	VOLUME SAR
	

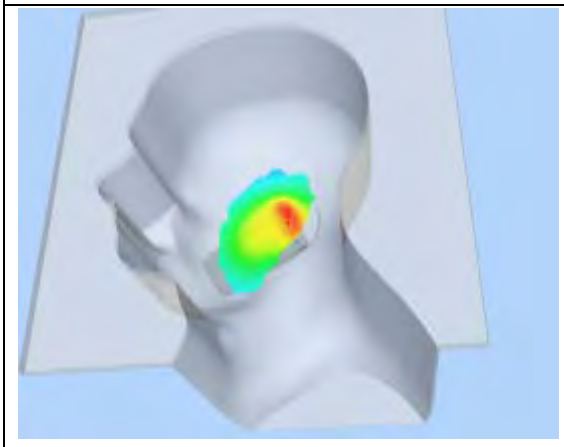
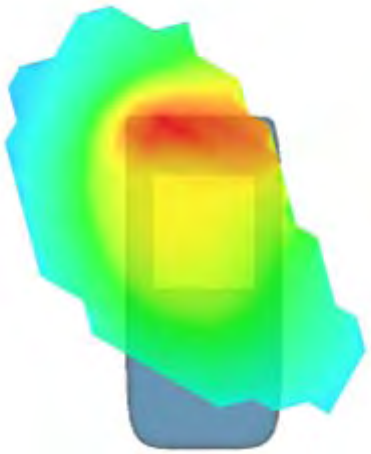
Maximum location: X=-1.00, Y=14.00

SAR 10g (W/Kg)	0.087012
SAR 1g (W/Kg)	0.153957

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1670	0.0906	0.0534	0.0353	0.0232	0.0154



3D sceen shot	Hot spot position
	

MEASUREMENT 7

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 24 seconds

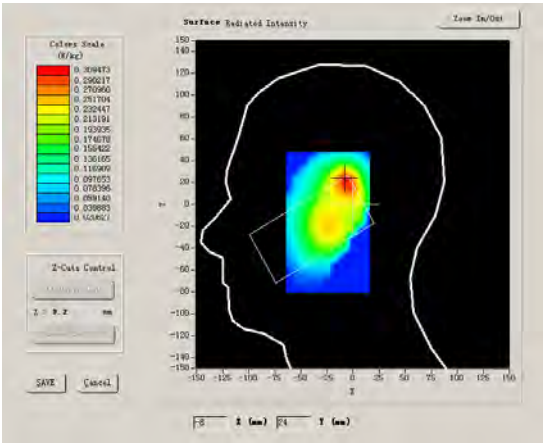
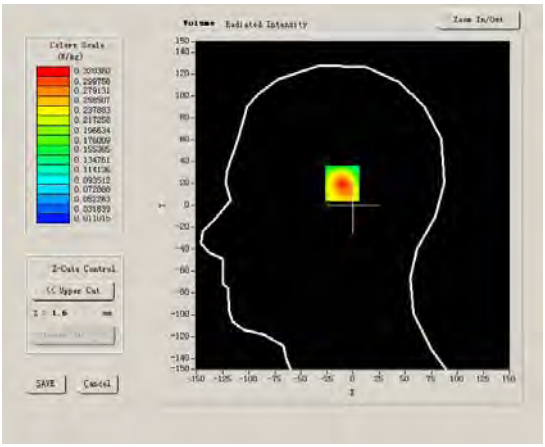
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Cheek
Band	CDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 1013):

Frequency (MHz)	824.700012
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.867138
Power Drift (%)	1.090000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

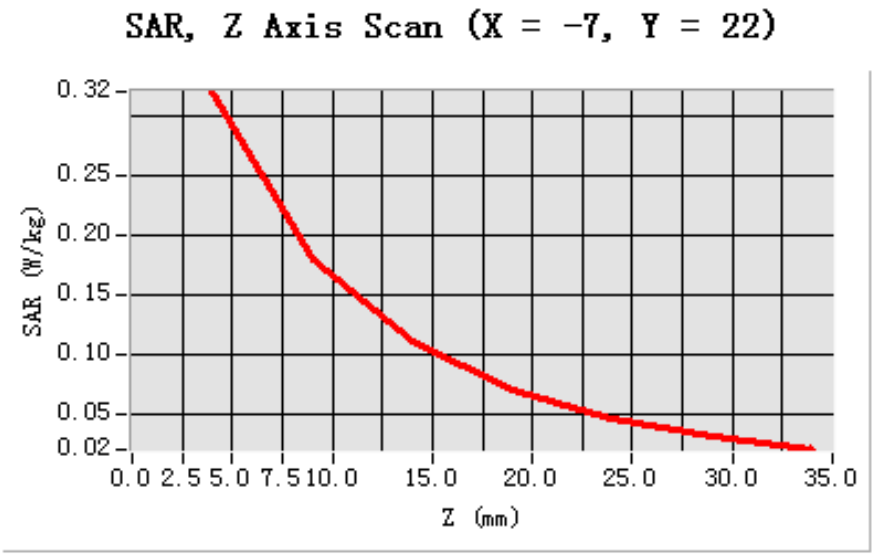
SURFACE SAR	VOLUME SAR
	

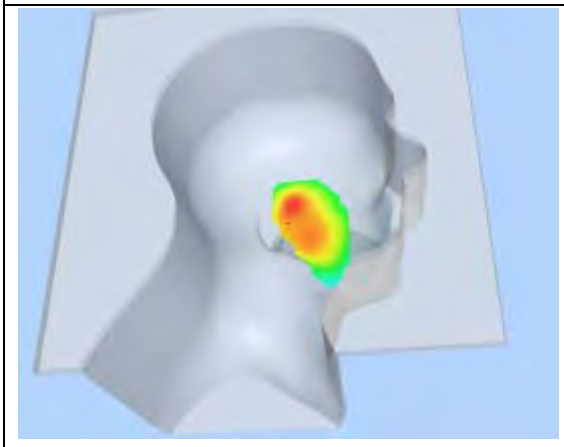
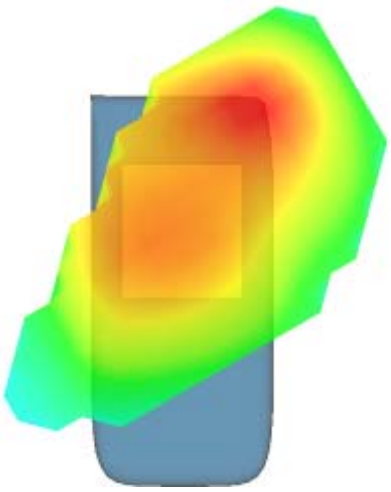
Maximum location: X=-7.00, Y=22.00

SAR 10g (W/Kg)	0.176618
SAR 1g (W/Kg)	0.301725

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3204	0.1804	0.1106	0.0709	0.0472	0.0315



3D sceen shot	Hot spot position
	

MEASUREMENT 8

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 15 seconds

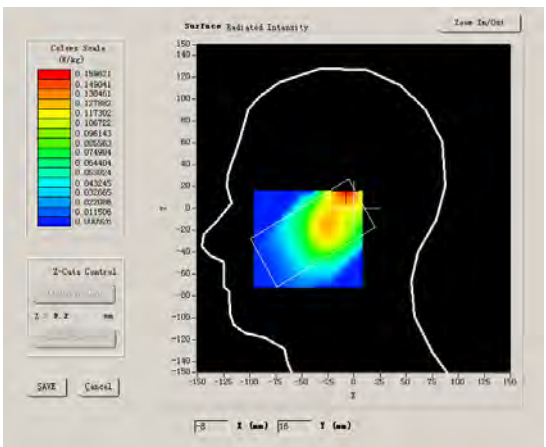
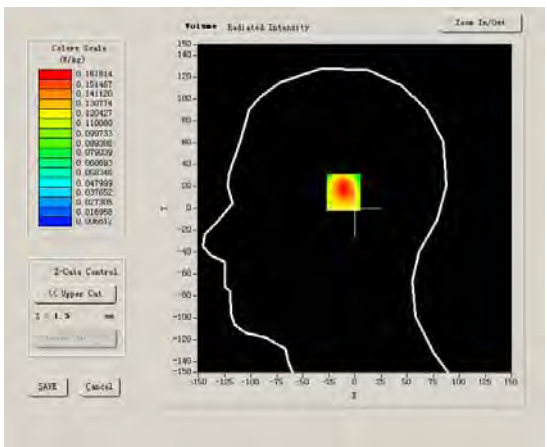
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	CDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 384):

Frequency (MHz)	836.520020
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.879566
Power Drift (%)	-1.600000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

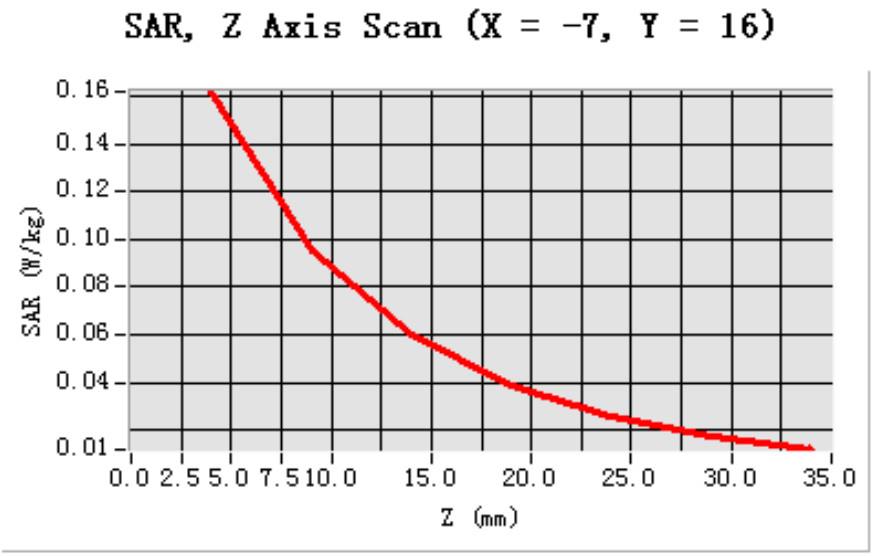
SURFACE SAR	VOLUME SAR
	

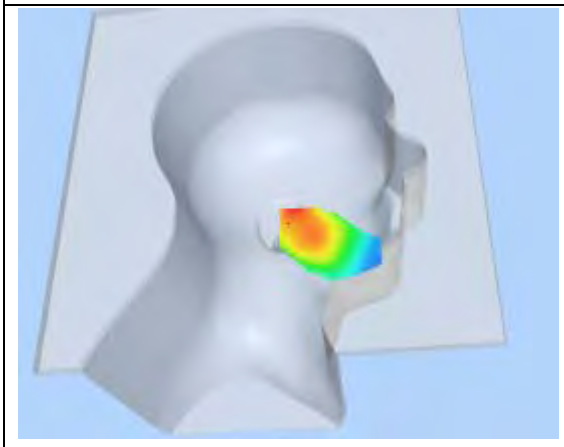
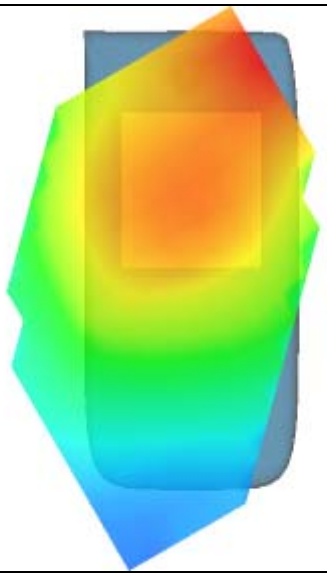
Maximum location: X=-7.00, Y=16.00

SAR 10g (W/Kg)	0.092581
SAR 1g (W/Kg)	0.157379

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1618	0.0953	0.0596	0.0385	0.0253	0.0169



3D sceen shot	Hot spot position
	

MEASUREMENT 9

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 24 seconds

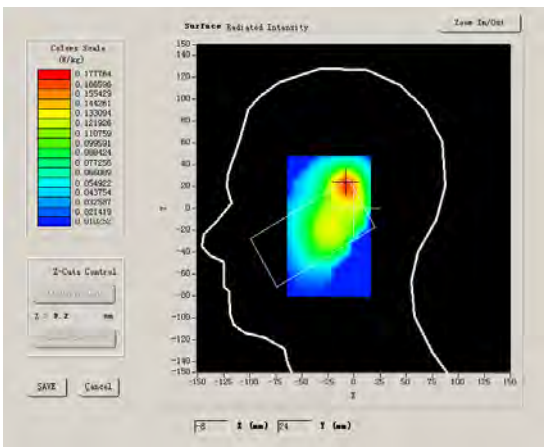
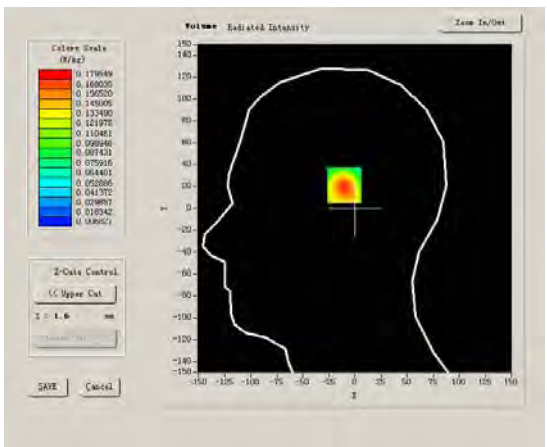
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Cheek
Band	CDMA850
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 777):

Frequency (MHz)	848.309998
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.891963
Power Drift (%)	-1.130000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

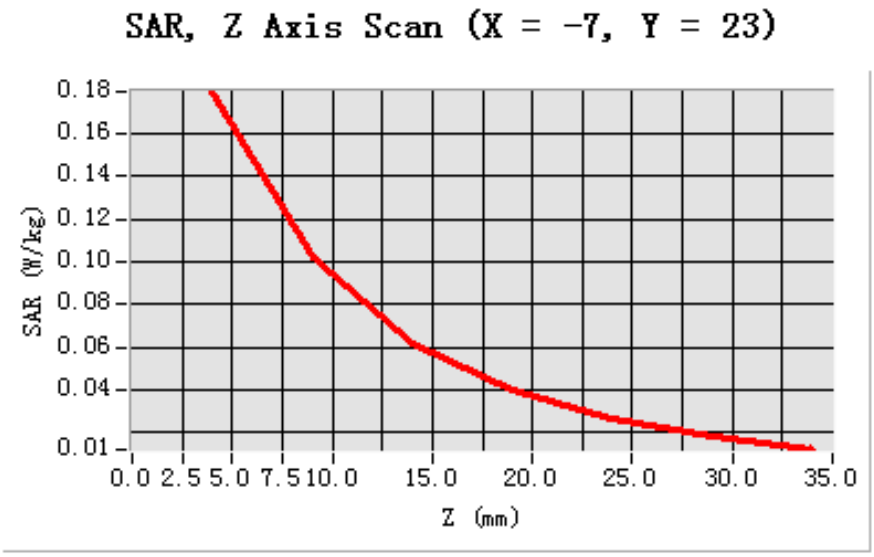
SURFACE SAR	VOLUME SAR
	

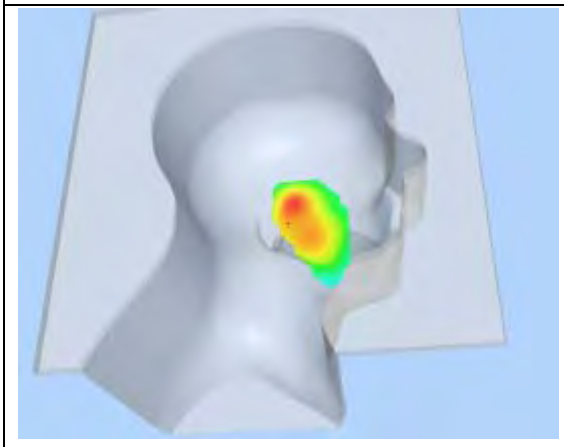
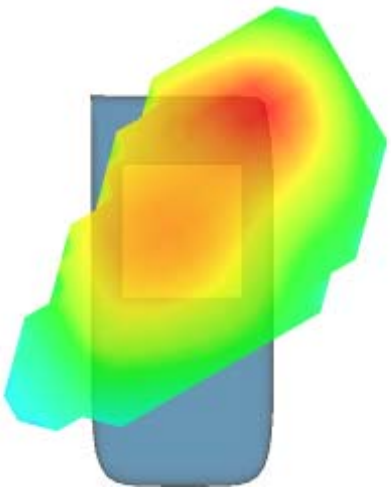
Maximum location: X=-7.00, Y=23.00

SAR 10g (W/Kg)	0.098969
SAR 1g (W/Kg)	0.169441

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1795	0.1021	0.0617	0.0398	0.0260	0.0178



3D sceen 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: 7/9/2011
Measurement duration: 7 minutes 25 seconds

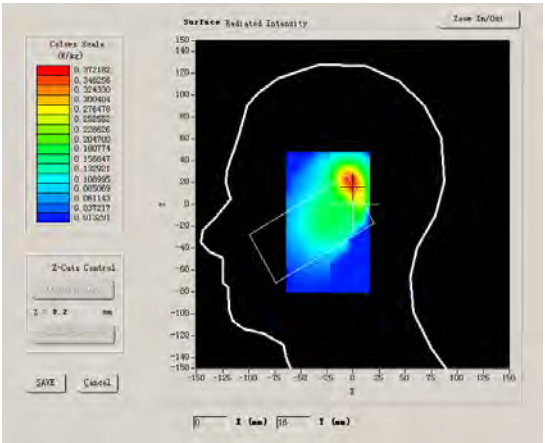
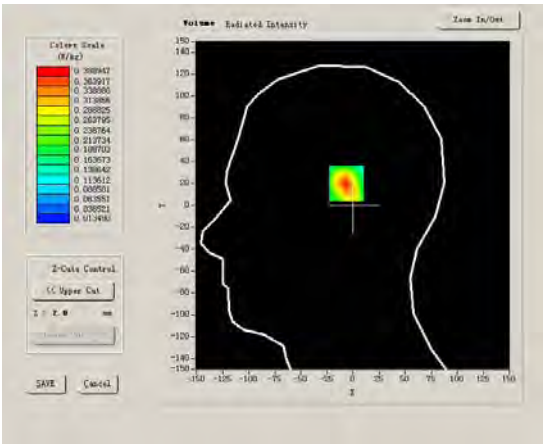
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	CDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 1013):

Frequency (MHz)	824.700012
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.867138
Power Drift (%)	-0.040000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

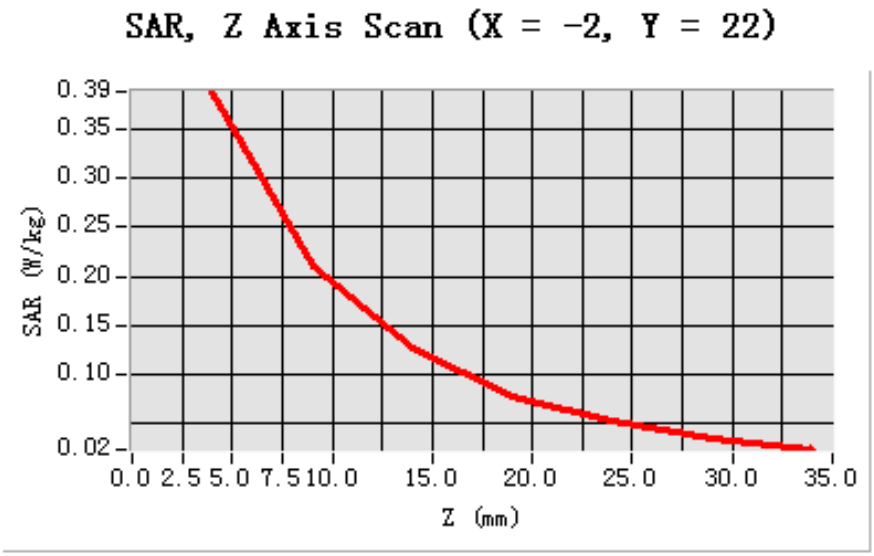
SURFACE SAR	VOLUME SAR
	

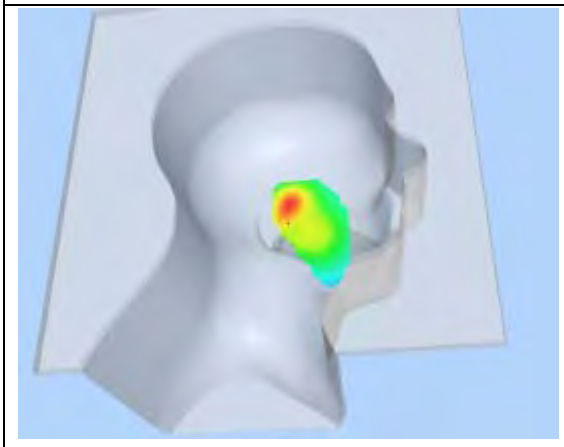
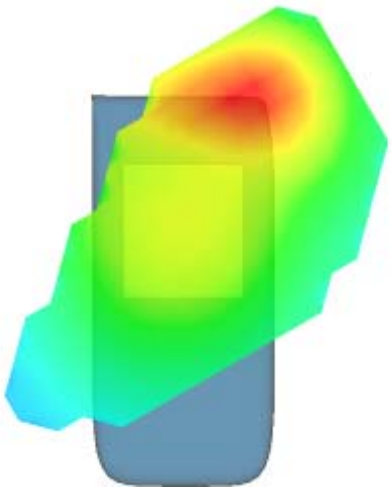
Maximum location: X=-2.00, Y=22.00

SAR 10g (W/Kg)	0.199684
SAR 1g (W/Kg)	0.360860

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3889	0.2107	0.1261	0.0779	0.0520	0.0344



3D sceen 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: 7/9/2011
Measurement duration: 7 minutes 24 seconds

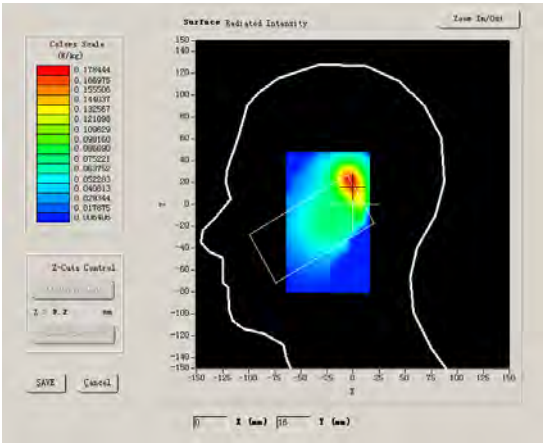
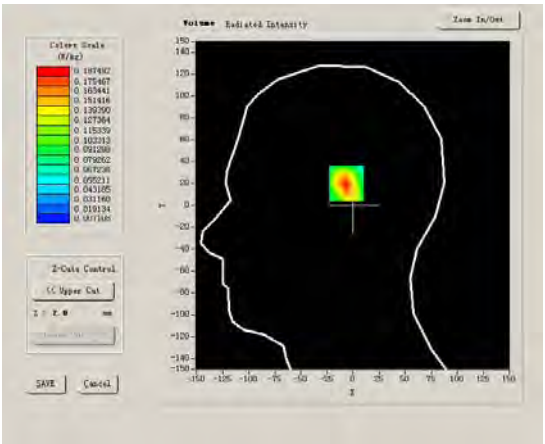
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	CDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 384):

Frequency (MHz)	836.520020
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.879566
Power Drift (%)	0.460000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

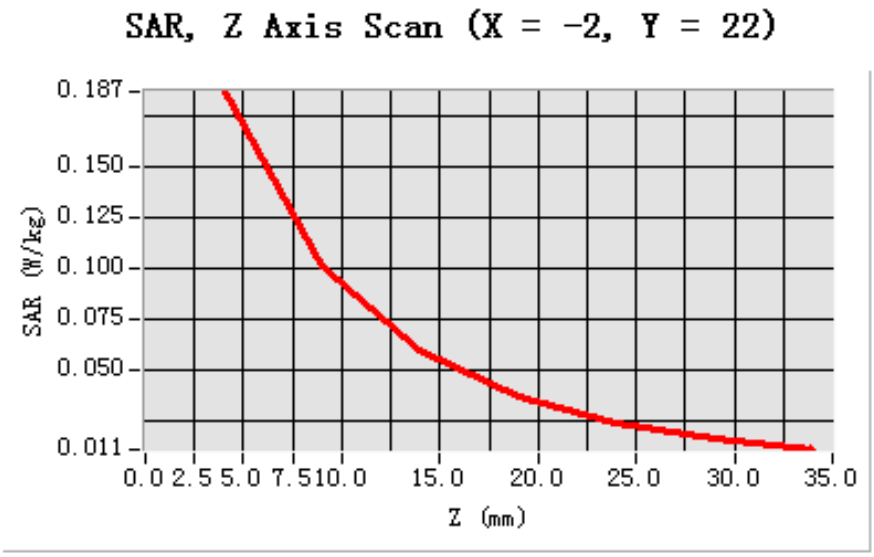
SURFACE SAR	VOLUME SAR
	

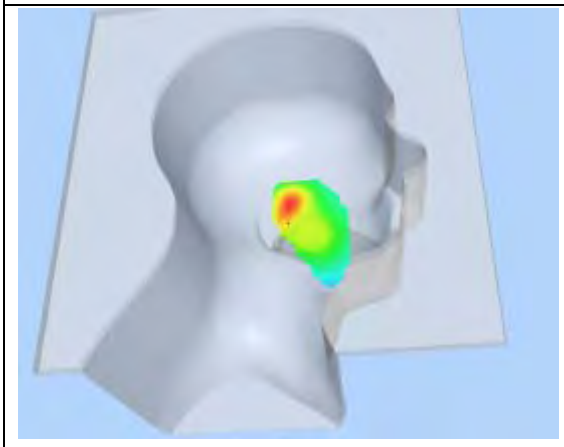
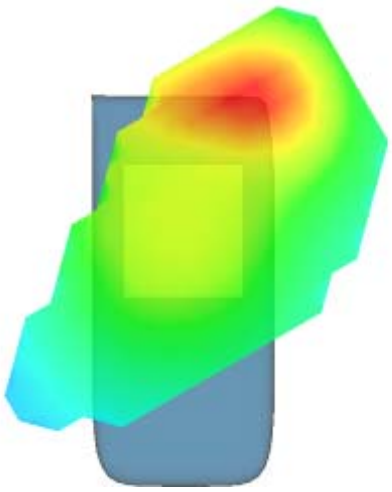
Maximum location: X=-2.00, Y=22.00

SAR 10g (W/Kg)	0.095722
SAR 1g (W/Kg)	0.174425

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1875	0.1011	0.0594	0.0371	0.0241	0.0159



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: 7/9/2011
Measurement duration: 7 minutes 24 seconds

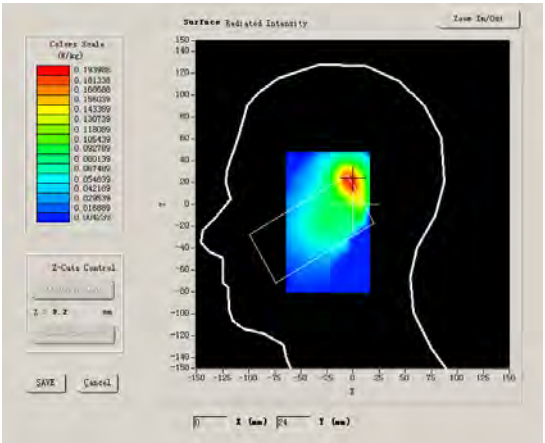
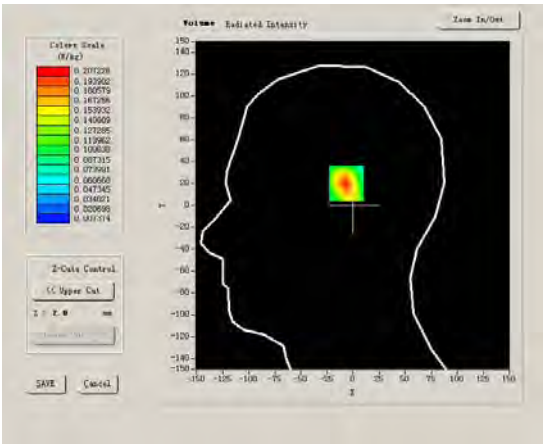
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	CDMA850
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 777):

Frequency (MHz)	848.309998
Relative permittivity (real part)	41.790001
Relative permittivity	18.926250
Conductivity (S/m)	0.891963
Power Drift (%)	0.540000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

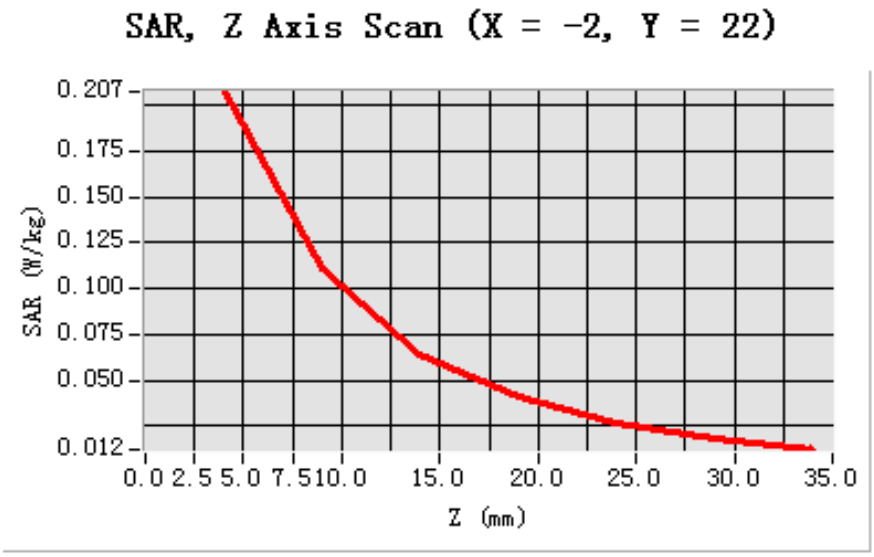
SURFACE SAR	VOLUME SAR
	

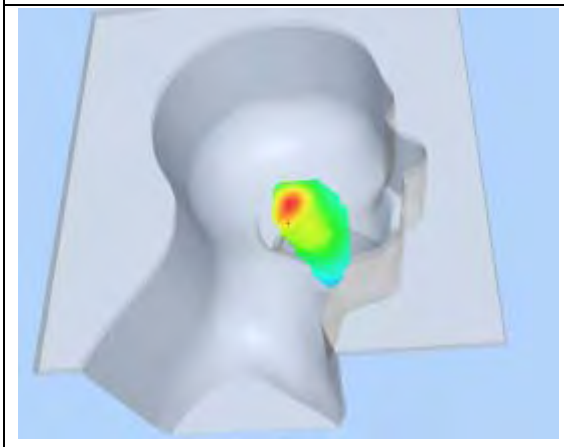
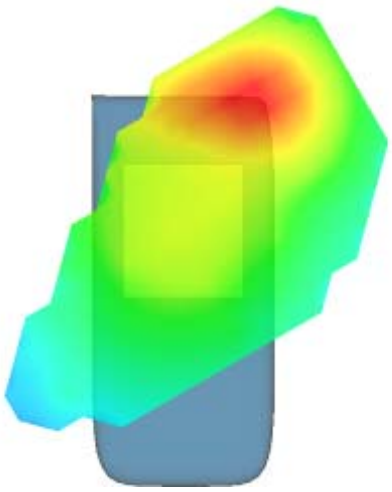
Maximum location: X=-2.00, Y=22.00

SAR 10g (W/Kg)	0.105513
SAR 1g (W/Kg)	0.192462

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2072	0.1112	0.0644	0.0413	0.0270	0.0178



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: 7/9/2011
Measurement duration: 9 minutes 8 seconds

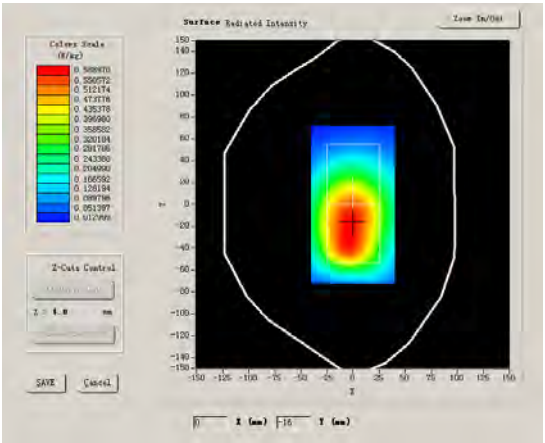
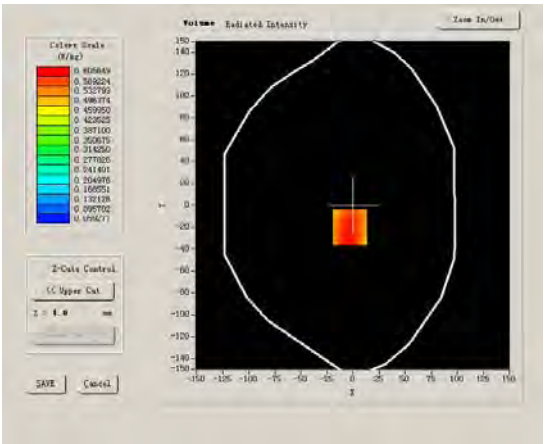
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 1013):

Frequency (MHz)	824.700012
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550
Conductivity (S/m)	0.975187
Power drift (%)	-0.870000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

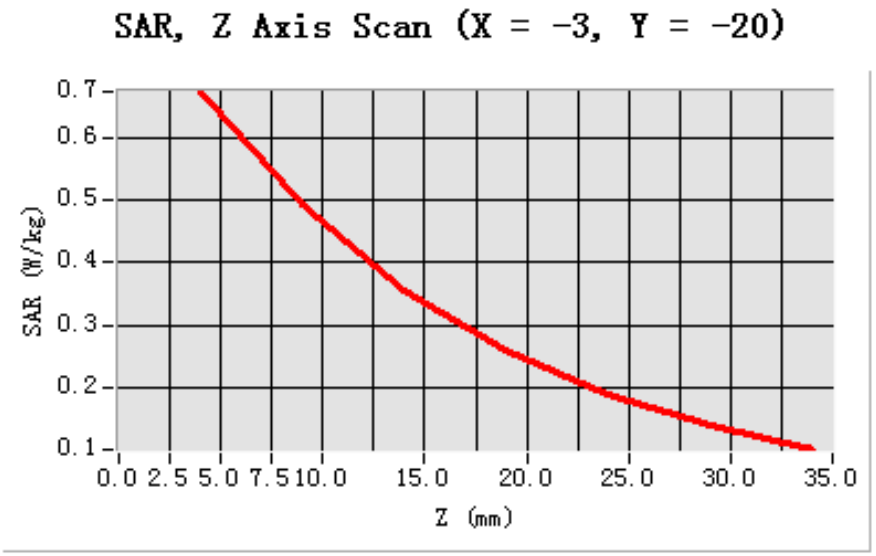
SURFACE SAR	VOLUME SAR
	

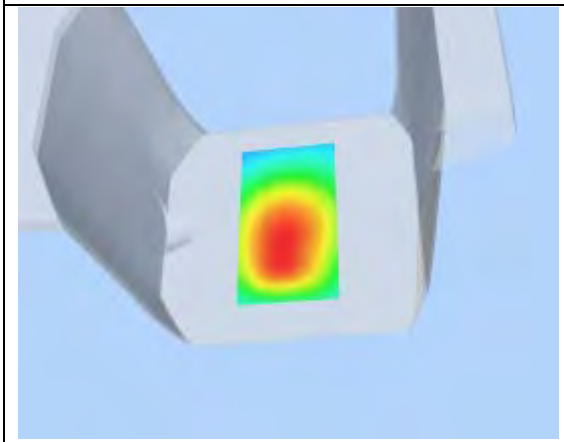
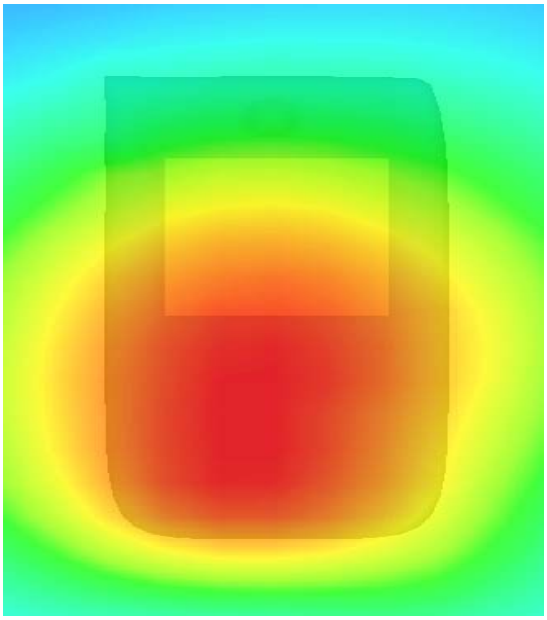
Maximum location: X=-3.00, Y=-20.00

SAR 10g (W/Kg)	0.467085
SAR 1g (W/Kg)	0.660292

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6739	0.4938	0.3534	0.2584	0.1897	0.1378



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: 7/9/2011
Measurement duration: 9 minutes 16 seconds

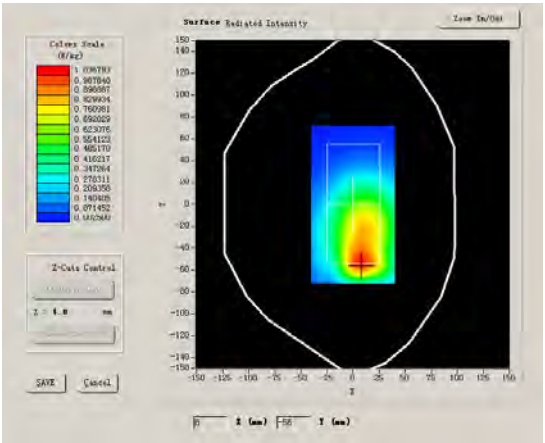
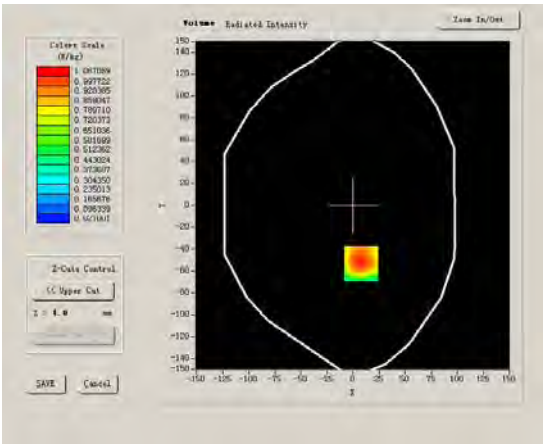
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA850
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 1013):

Frequency (MHz)	824.700012
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550
Conductivity (S/m)	0.975187
Power drift (%)	-0.030000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

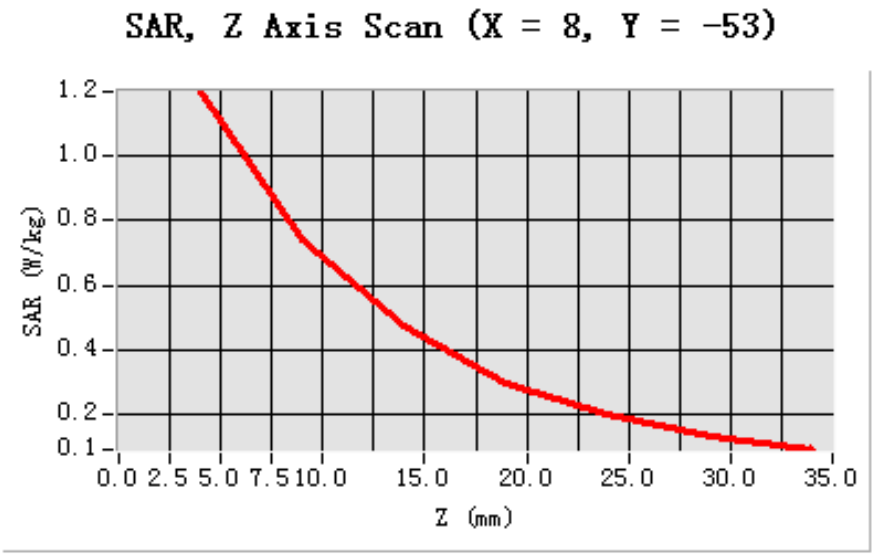
SURFACE SAR	VOLUME SAR
	

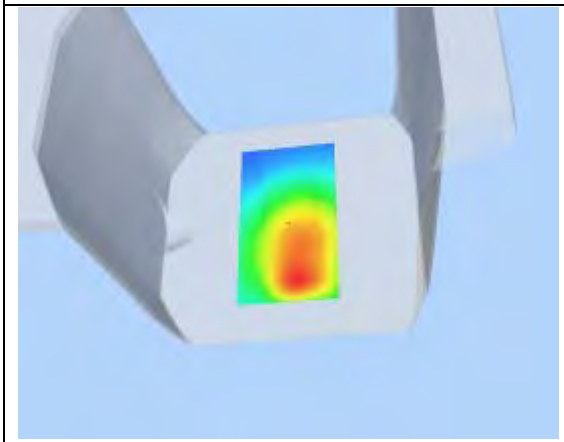
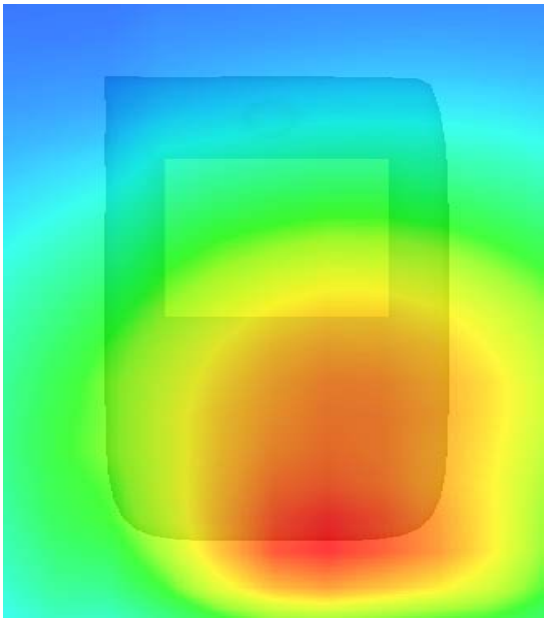
Maximum location: X=8.00, Y=-53.00

SAR 10g (W/Kg)	0.718364
SAR 1g (W/Kg)	1.151197

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.2000	0.7444	0.4738	0.2988	0.1983	0.1343



3D sceen 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: 7/9/2011
Measurement duration: 9 minutes 12 seconds

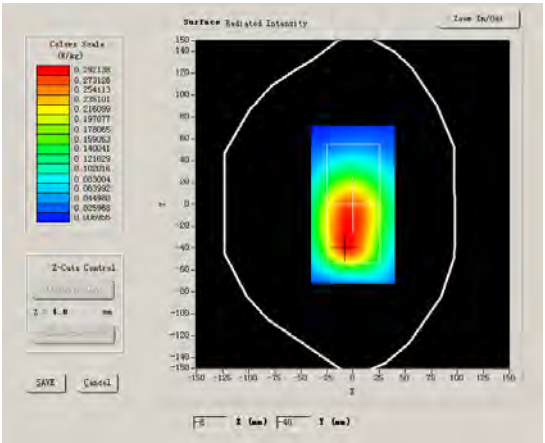
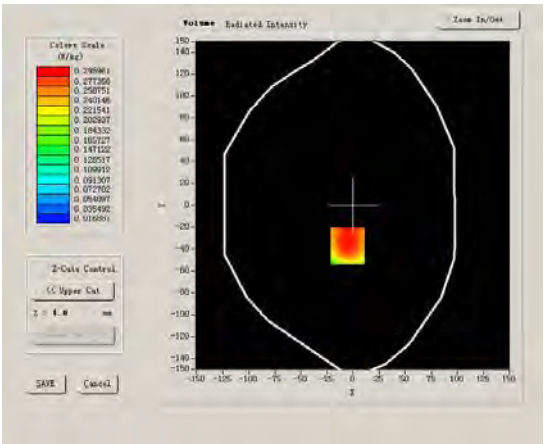
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 384):

Frequency (MHz)	836.520020
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550
Conductivity (S/m)	0.989164
Power drift (%)	-0.080000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

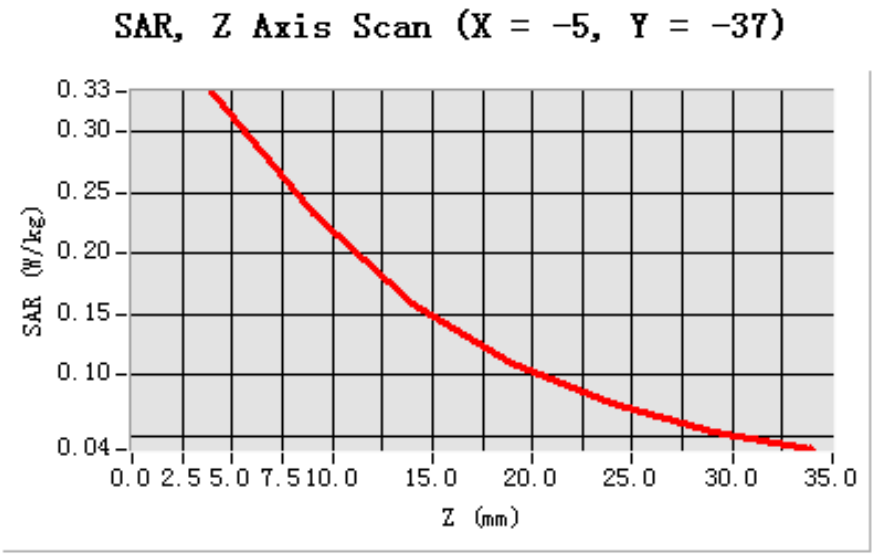
SURFACE SAR	VOLUME SAR
	

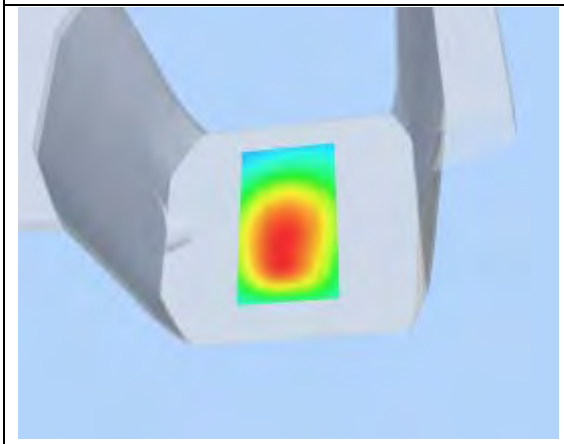
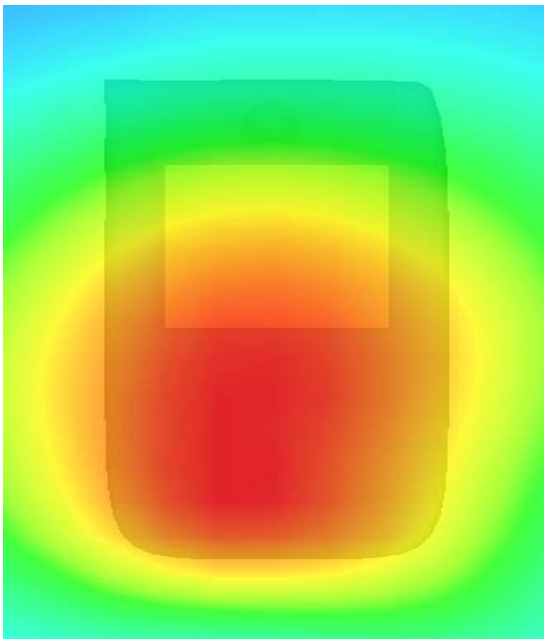
Maximum location: X=-5.00, Y=-37.00

SAR 10g (W/Kg)	0.219996
SAR 1g (W/Kg)	0.322145

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3328	0.2326	0.1592	0.1103	0.0781	0.0546



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: 7/9/2011
Measurement duration: 9 minutes 11 seconds

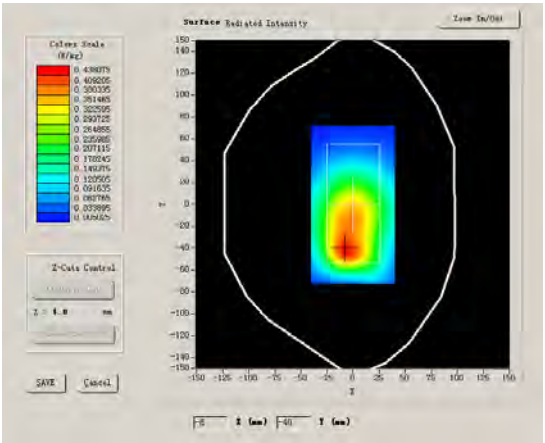
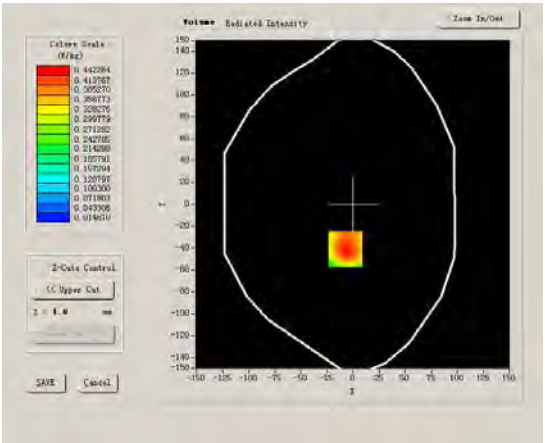
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 384):

Frequency (MHz)	836.520020
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550
Conductivity (S/m)	0.989164
Power drift (%)	-1.350000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

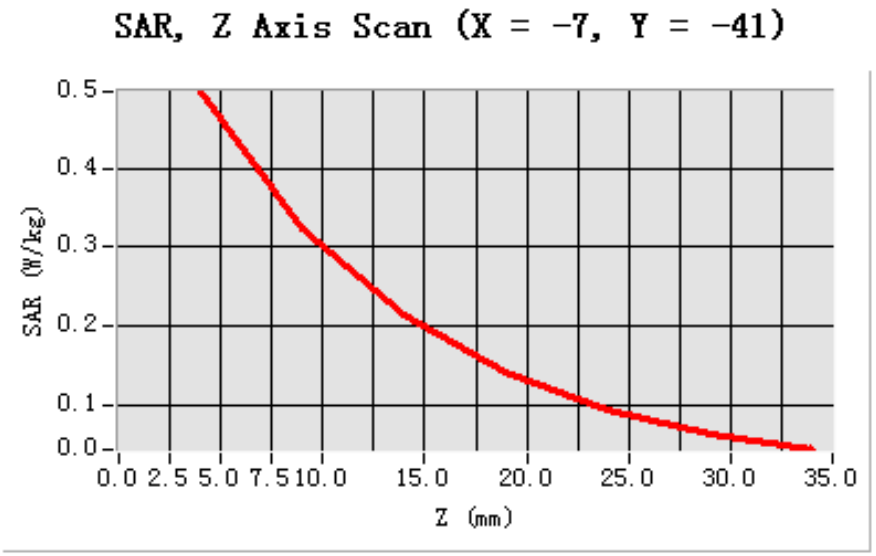
SURFACE SAR	VOLUME SAR
	

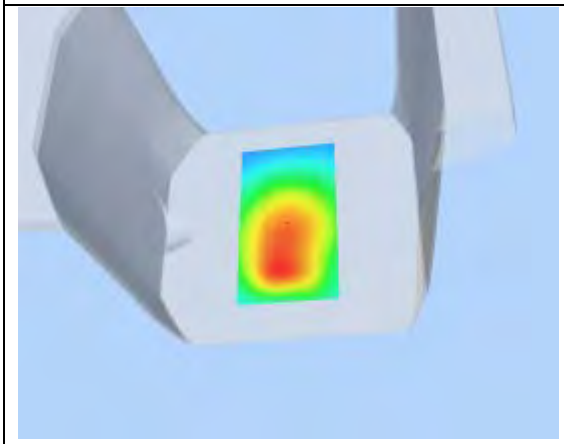
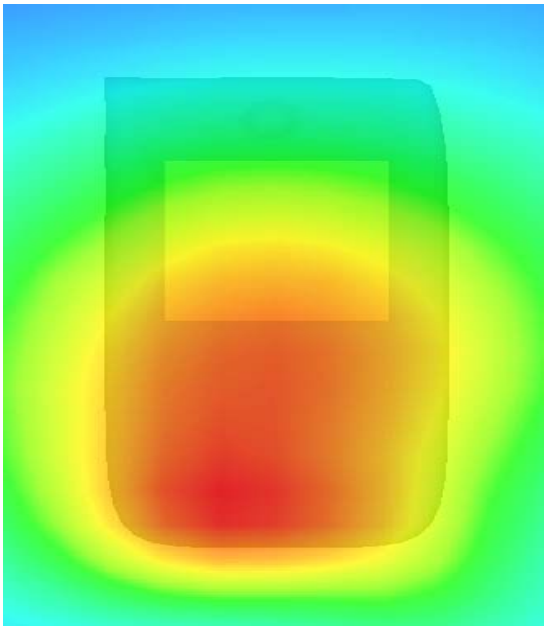
Maximum location: X=-7.00, Y=-41.00

SAR 10g (W/Kg)	0.308533
SAR 1g (W/Kg)	0.483495

Z Axis Scan

(mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4974	0.3227	0.2136	0.1422	0.0943	0.0636



3D sceen 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: 7/9/2011
Measurement duration: 9 minutes 12 seconds

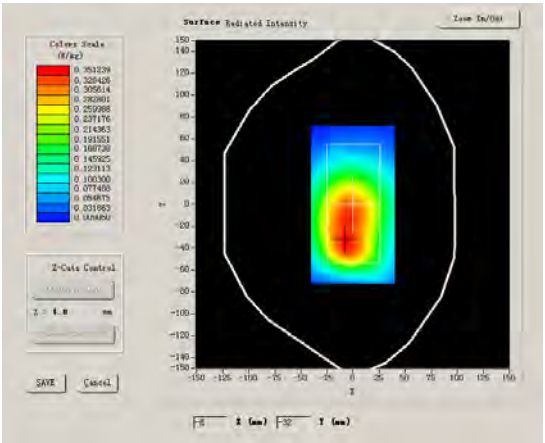
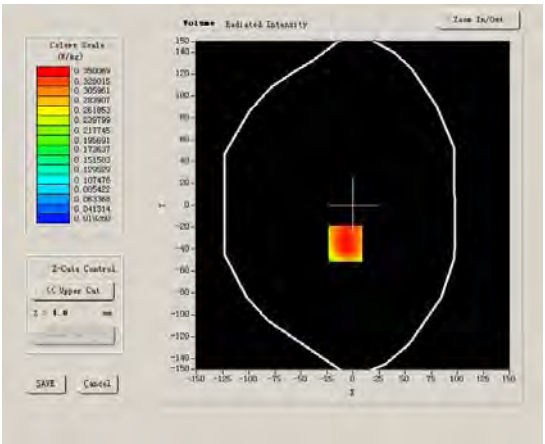
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA850
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 777):

Frequency (MHz)	848.309998
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550
Conductivity (S/m)	1.003105
Power drift (%)	-1.480000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

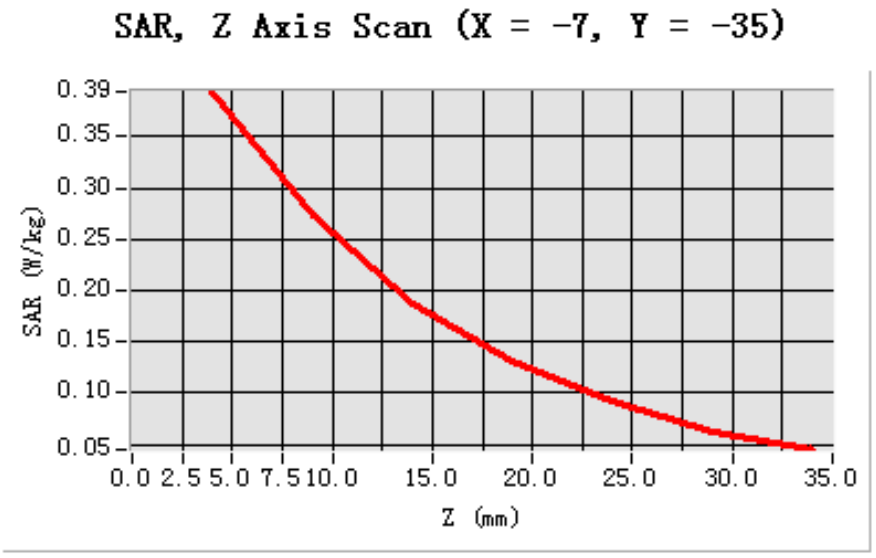
SURFACE SAR	VOLUME SAR
	

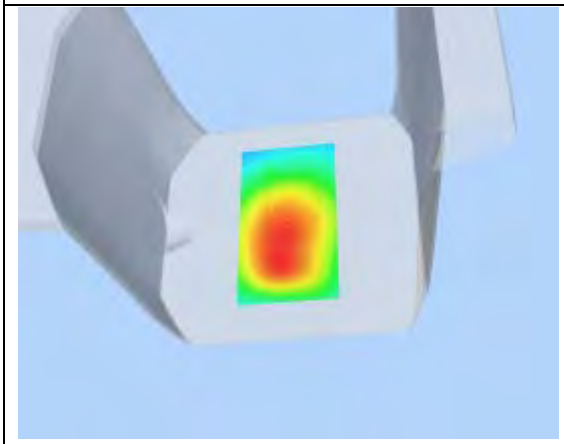
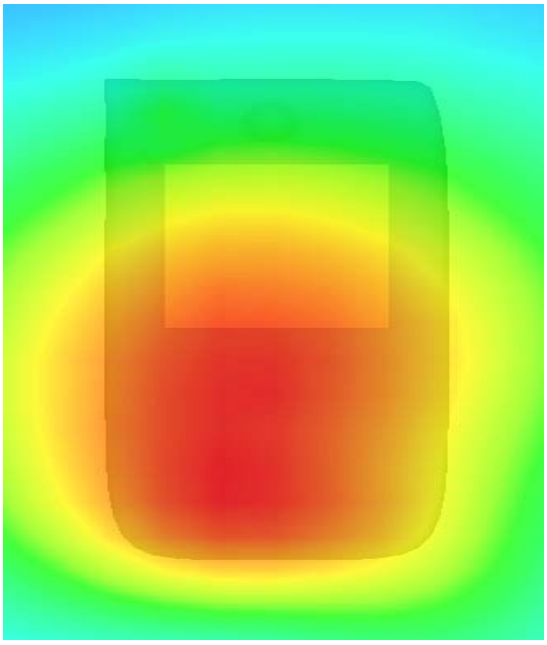
Maximum location: X=-7.00, Y=-35.00

SAR 10g (W/Kg)	0.260353
SAR 1g (W/Kg)	0.383301

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3937	0.2724	0.1862	0.1303	0.0917	0.0632



3D sceen 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: 7/9/2011
Measurement duration: 9 minutes 16 seconds

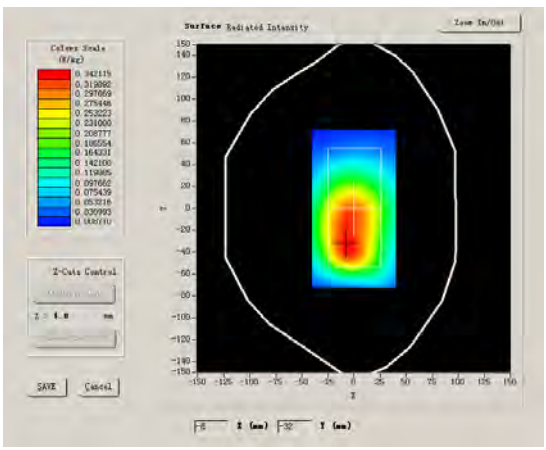
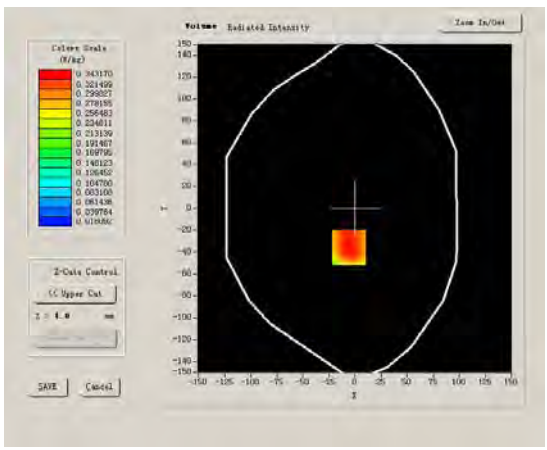
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA850
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 777):

Frequency (MHz)	848.309998
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550
Conductivity (S/m)	1.003105
Power drift (%)	-0.170000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

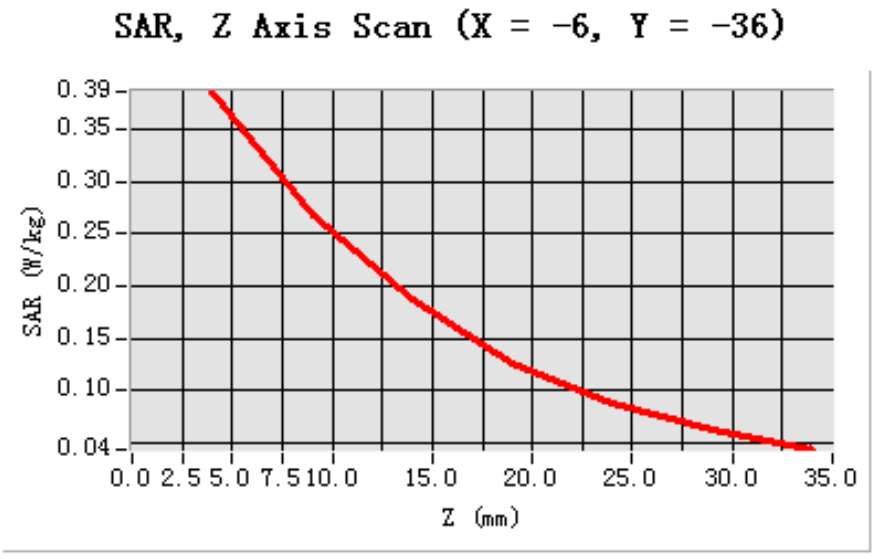
SURFACE SAR	VOLUME SAR
	

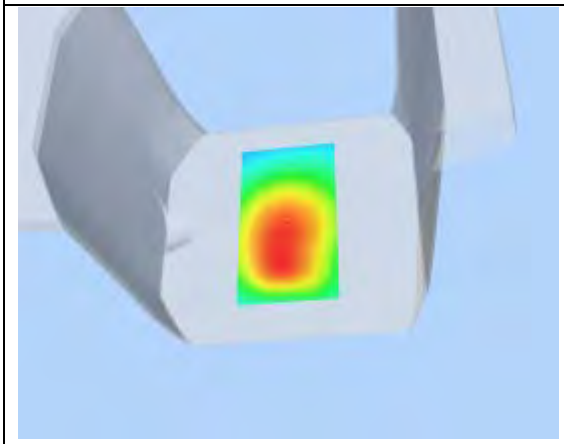
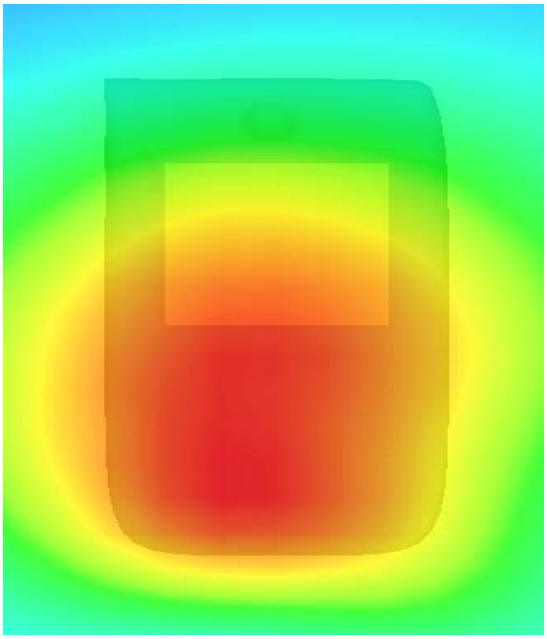
Maximum location: X=-6.00, Y=-36.00

SAR 10g (W/Kg)	0.253771
SAR 1g (W/Kg)	0.373509

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3859	0.2683	0.1863	0.1266	0.0883	0.0620



3D sceen 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: 7/9/2011
Measurement duration: 9 minutes 17 seconds

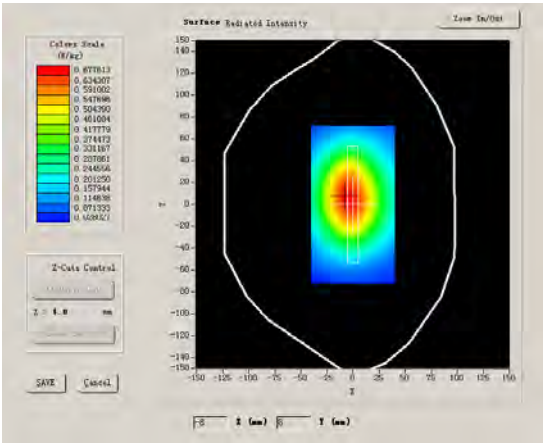
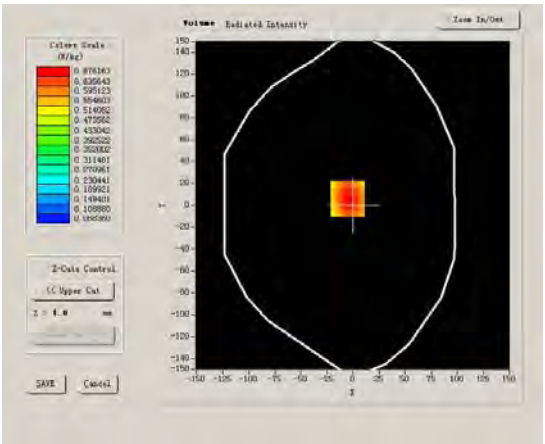
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body (Edge B)
Band	CDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 384):

Frequency (MHz)	836.520020
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550
Conductivity (S/m)	0.989164
Power Drift (%)	-1.410000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

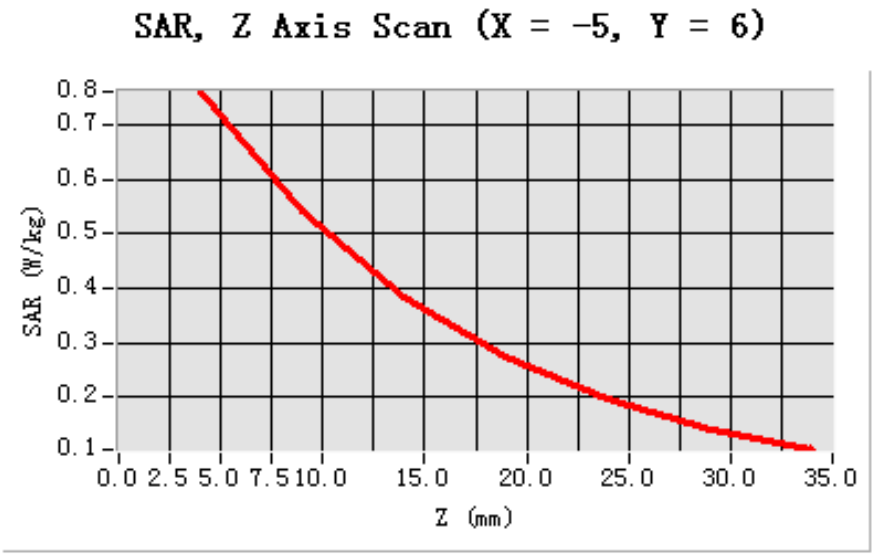
SURFACE SAR	VOLUME SAR
	

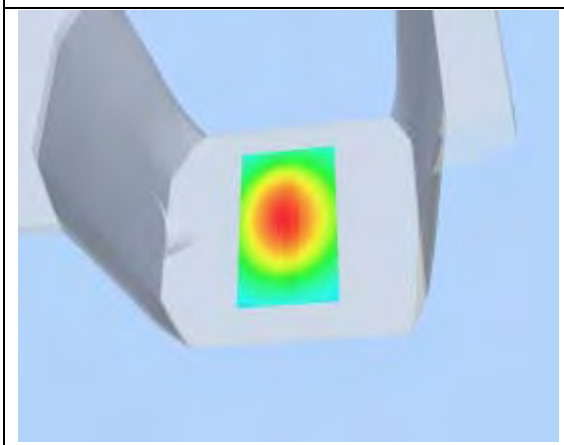
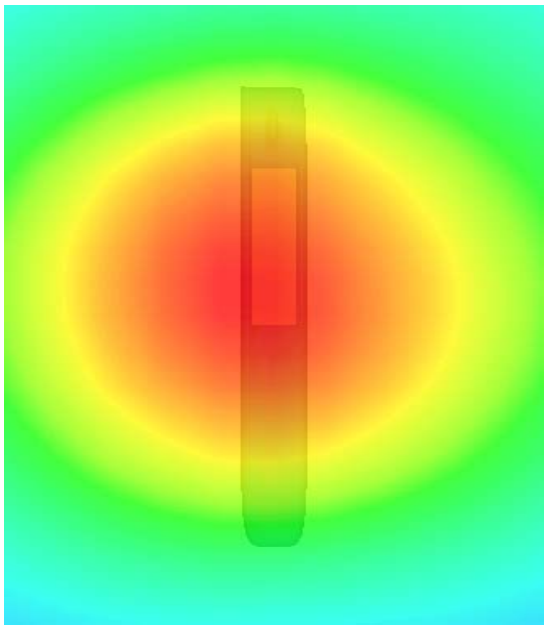
Maximum location: X=-5.00, Y=6.00

SAR 10g (W/Kg)	0.507229
SAR 1g (W/Kg)	0.705493

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7604	0.5399	0.3850	0.2741	0.1967	0.1423



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: 7/9/2011
Measurement duration: 9 minutes 11 seconds

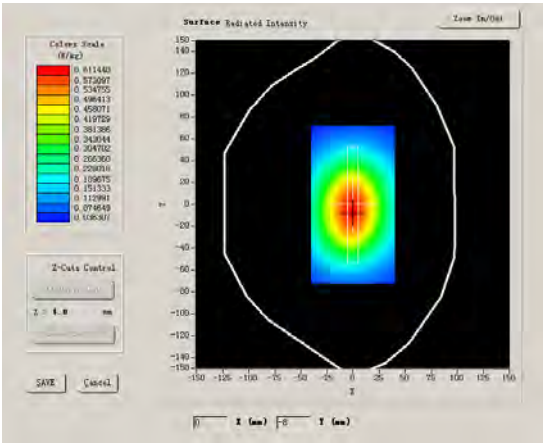
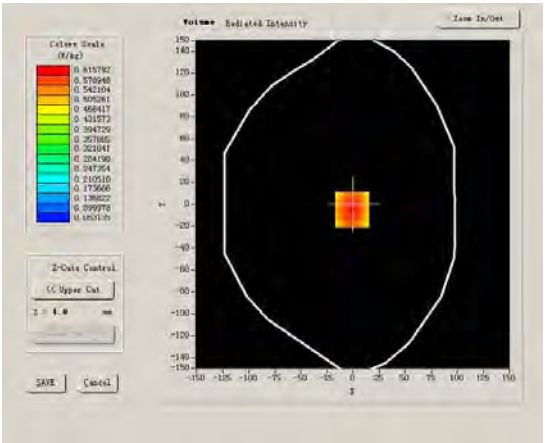
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body (Edge D)
Band	CDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 384):

Frequency (MHz)	836.520020
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550
Conductivity (S/m)	0.989164
Power Drift (%)	-0.970000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

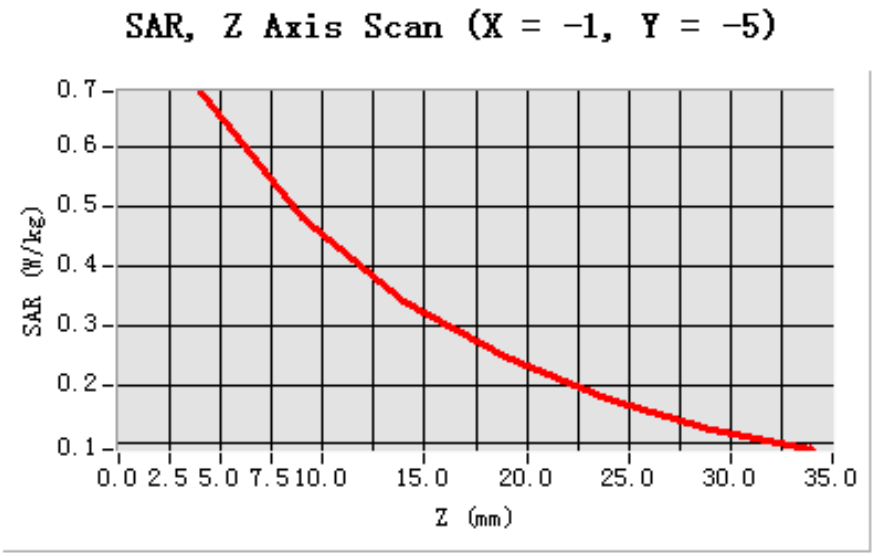
SURFACE SAR	VOLUME SAR
	

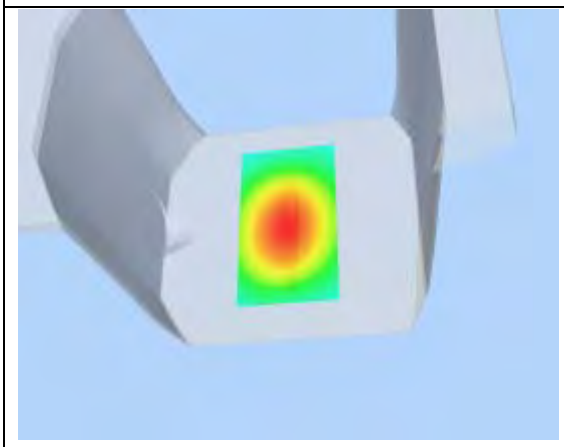
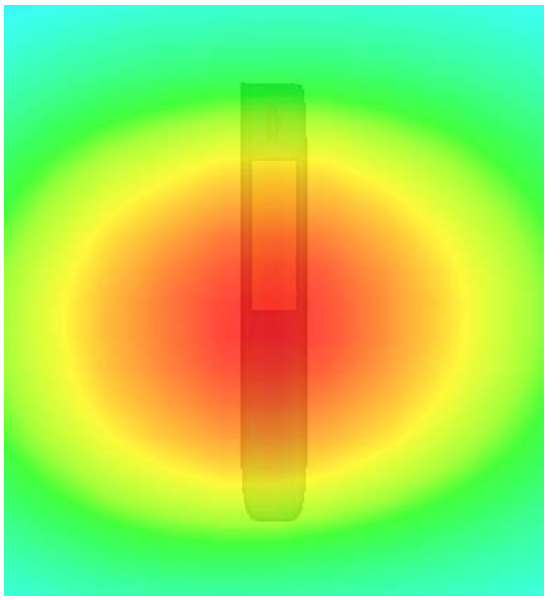
Maximum location: X=-1.00, Y=-5.00

SAR 10g (W/Kg)	0.456210
SAR 1g (W/Kg)	0.606412

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6925	0.4802	0.3391	0.2451	0.1749	0.1255



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: 7/9/2011
Measurement duration: 9 minutes 19 seconds

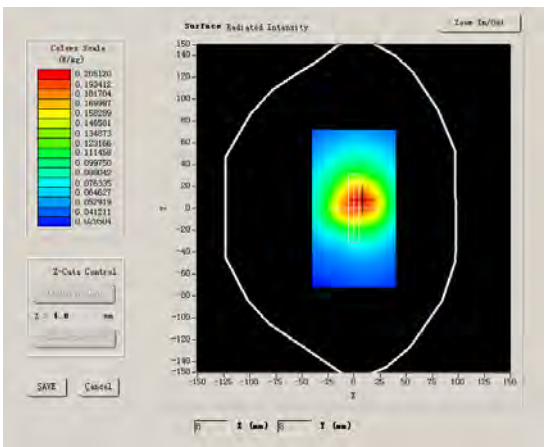
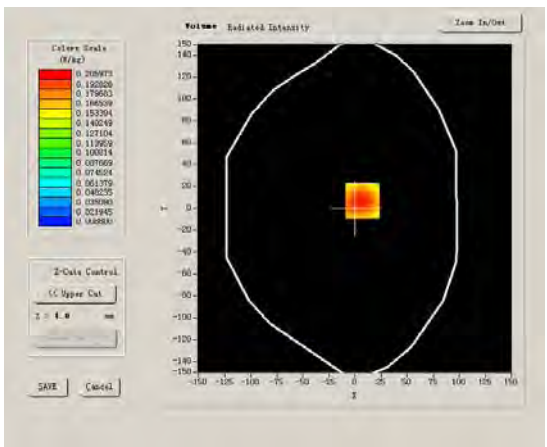
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body (Edge A)
Band	CDMA850
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 384):

Frequency (MHz)	836.520020
Relative permittivity (real part)	54.116001
Relative permittivity	21.284550
Conductivity (S/m)	0.989164
Power Drift (%)	-1.360000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

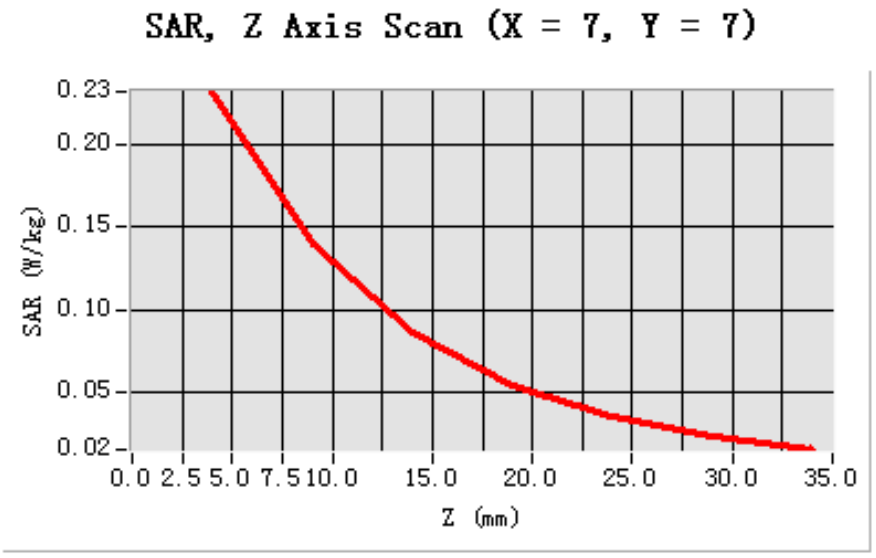
SURFACE SAR	VOLUME SAR
	

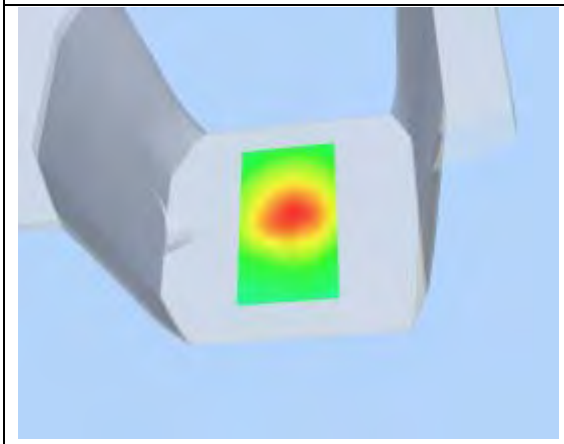
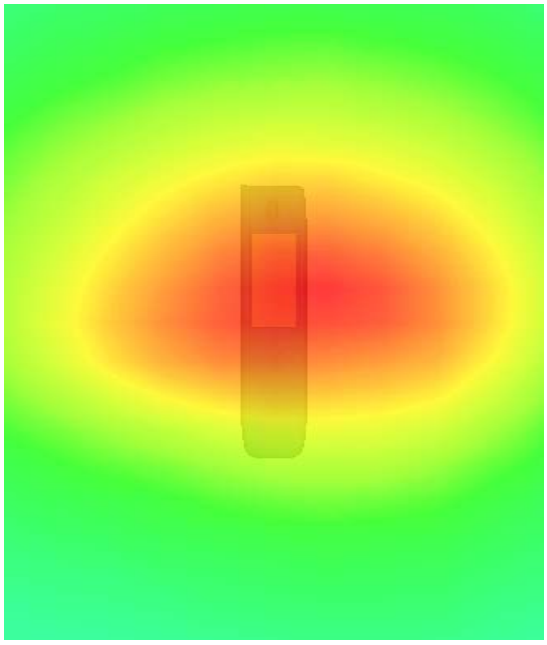
Maximum location: X=7.00, Y=7.00

SAR 10g (W/Kg)	0.139478
SAR 1g (W/Kg)	0.224720

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2316	0.1396	0.0857	0.0543	0.0346	0.0230



3D sceen shot	Hot spot position
	

MEASUREMENT 22

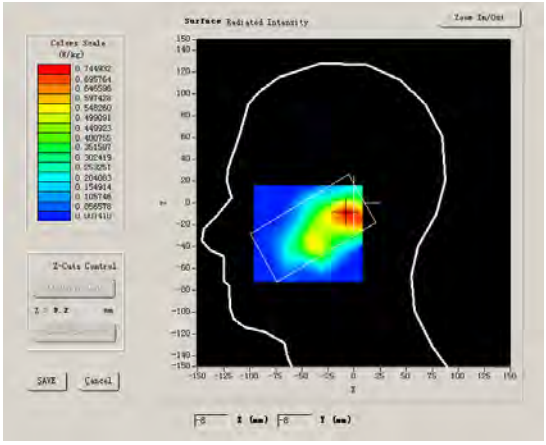
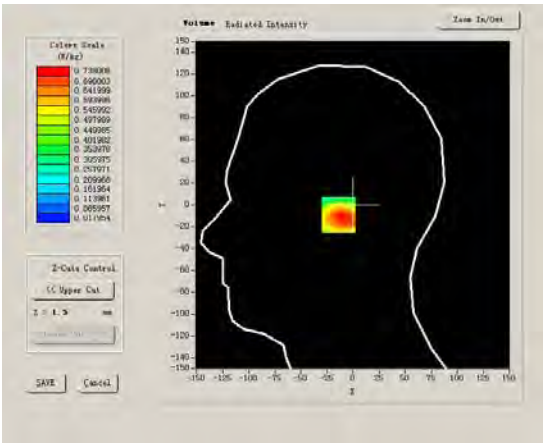
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 29 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	CDMA 1700
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1711.250000
Relative permittivity (real part)	38.650002
Relative permittivity	13.750000
Conductivity (S/m)	1.306250
Power drift (%)	-3.550000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

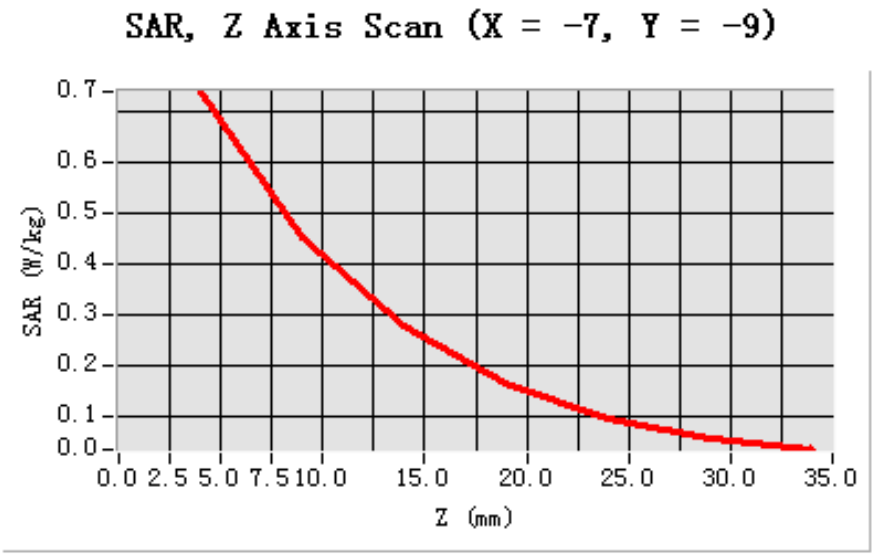
SURFACE SAR	VOLUME SAR
	

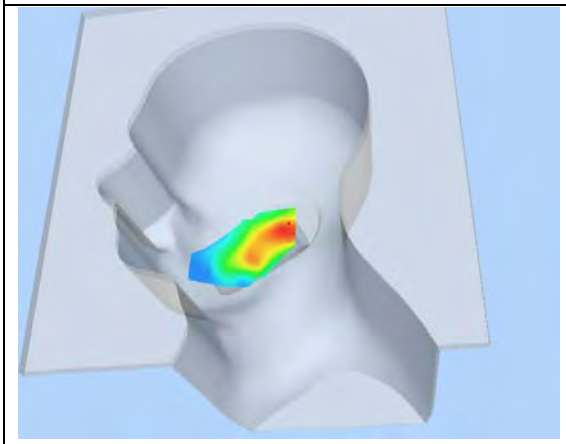
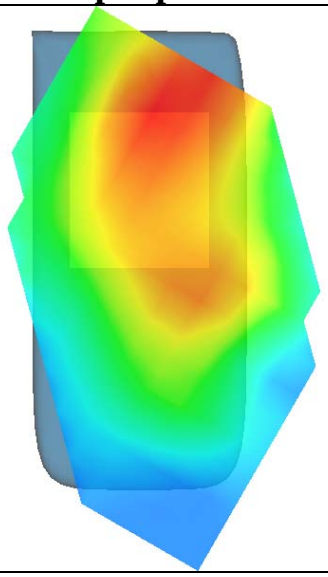
Maximum location: X=-7.00, Y=-9.00

SAR 10g (W/Kg)	0.419289
SAR 1g (W/Kg)	0.716451

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7380	0.4508	0.2770	0.1644	0.0962	0.0586



3D sceen shot	Hot spot position
	

MEASUREMENT 23

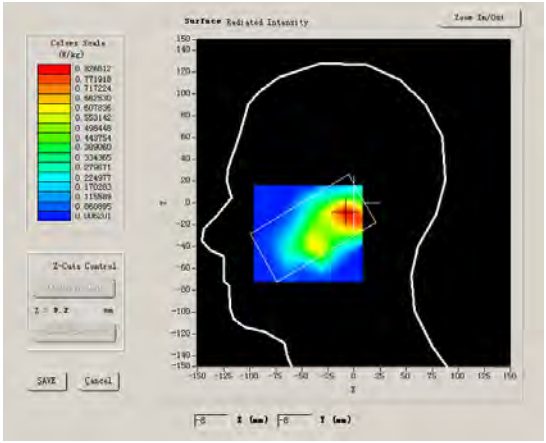
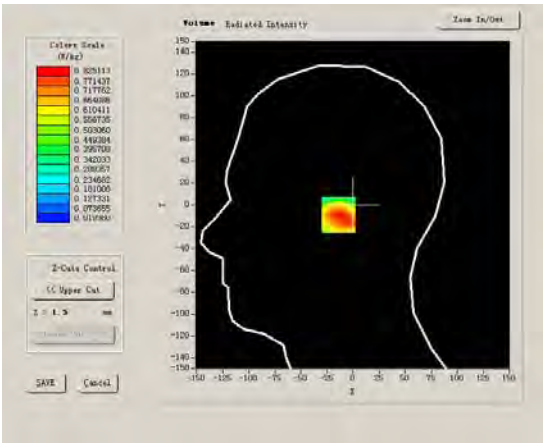
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 27 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	CDMA 1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1732.000000
Relative permittivity (real part)	38.930000
Relative permittivity	13.610000
Conductivity (S/m)	1.309584
Power drift (%)	0.080000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

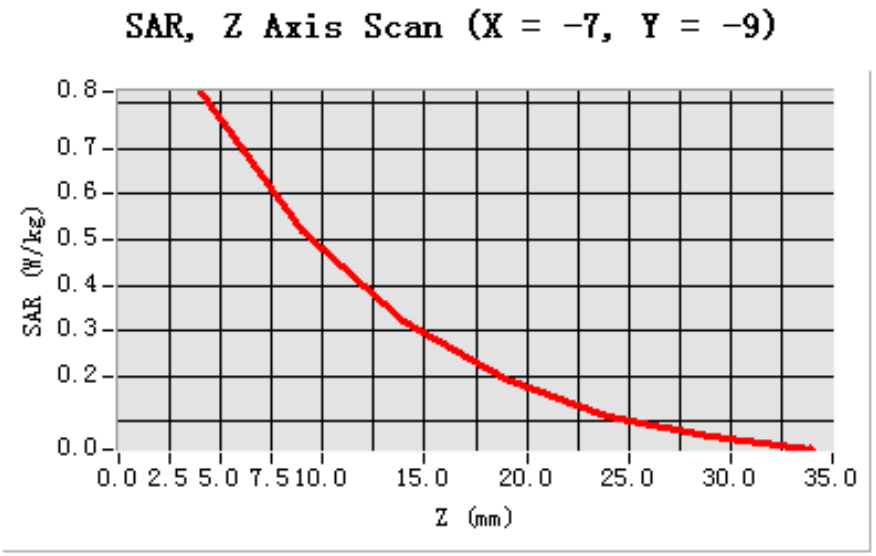
SURFACE SAR	VOLUME SAR
	

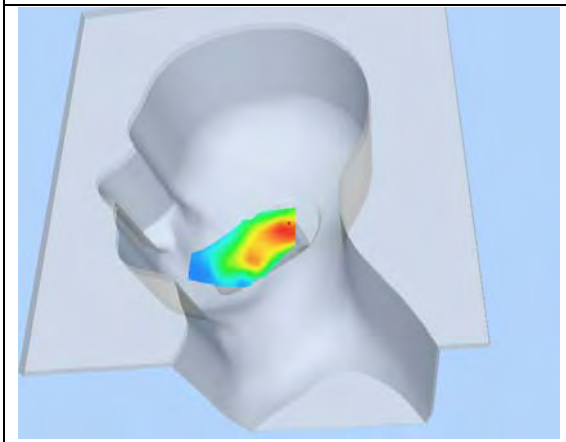
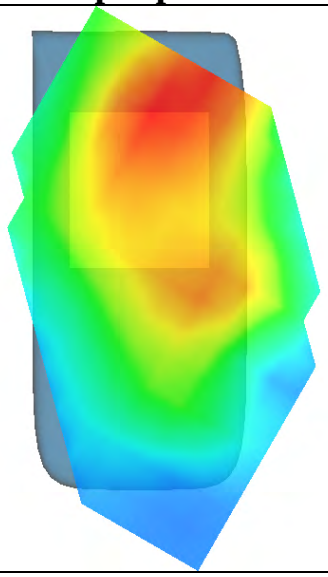
Maximum location: X=-7.00, Y=-9.00

SAR 10g (W/Kg)	0.468934
SAR 1g (W/Kg)	0.792119

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8251	0.5192	0.3206	0.1925	0.1139	0.0684



3D sceen shot	Hot spot position
	

MEASUREMENT 24

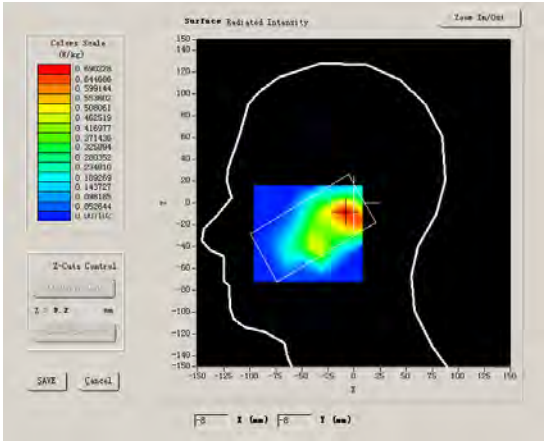
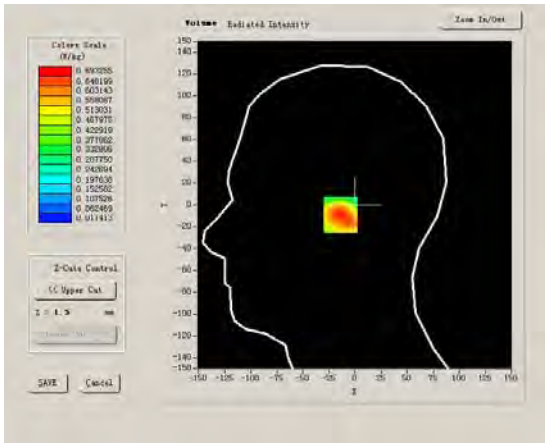
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 27 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	CDMA 1700
Channels	High
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1753.700000
Relative permittivity (real part)	38.270000
Relative permittivity	13.900000
Conductivity (S/m)	1.355250
Power drift (%)	0.210000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

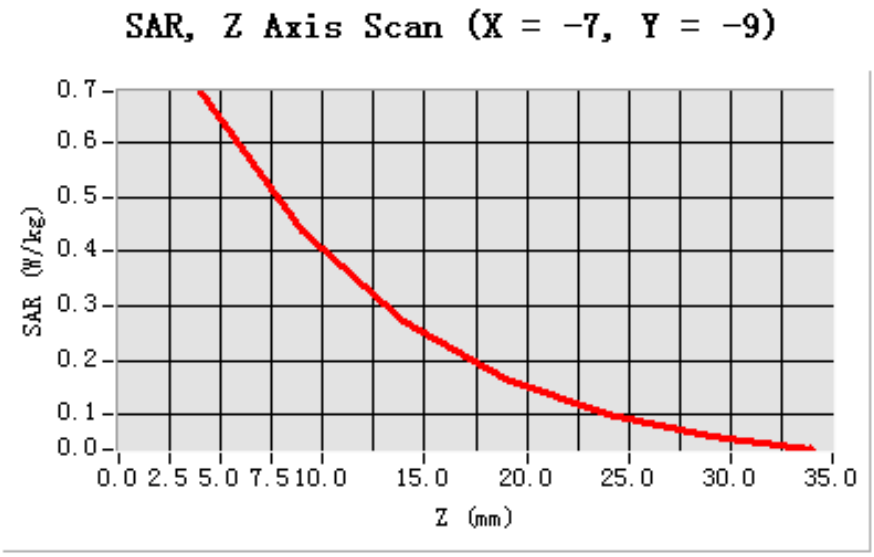
SURFACE SAR	VOLUME SAR
	

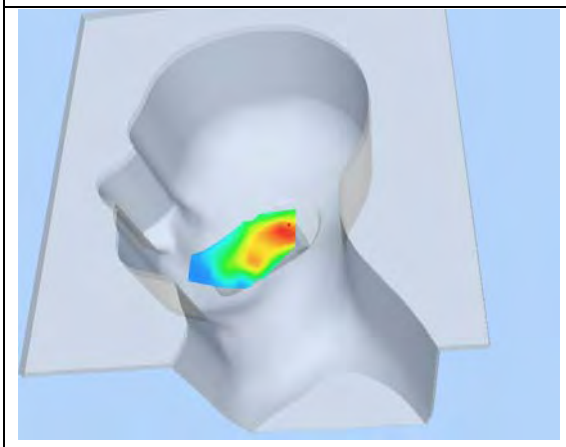
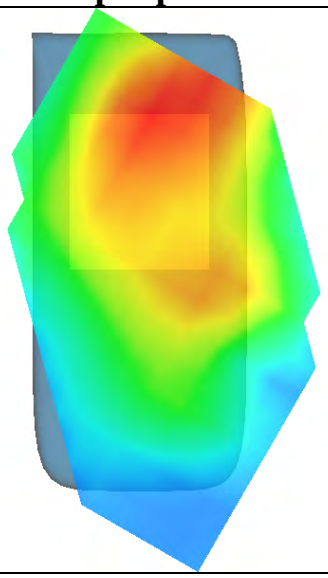
Maximum location: X=-7.00, Y=-9.00

SAR 10g (W/Kg)	0.387185
SAR 1g (W/Kg)	0.655701

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6933	0.4379	0.2717	0.1652	0.0997	0.0585



3D sceen shot	Hot spot position
	

MEASUREMENT 25

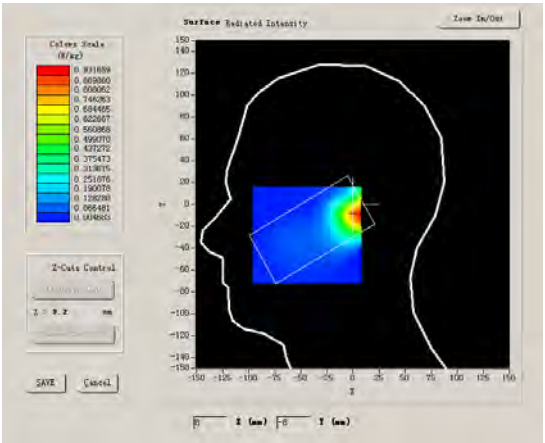
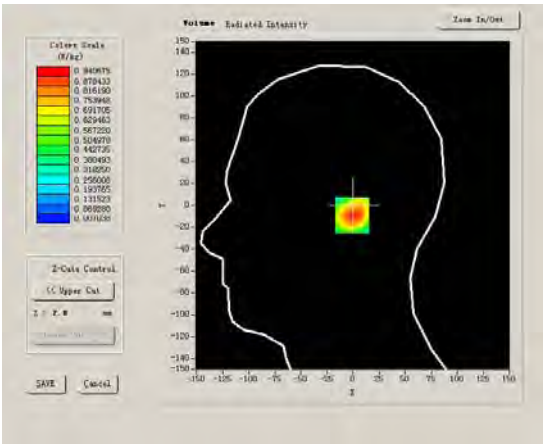
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 27 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	CDMA 1700
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1711.250000
Relative permittivity (real part)	38.650002
Relative permittivity	13.750000
Conductivity (S/m)	1.306250
Power drift (%)	-0.730000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

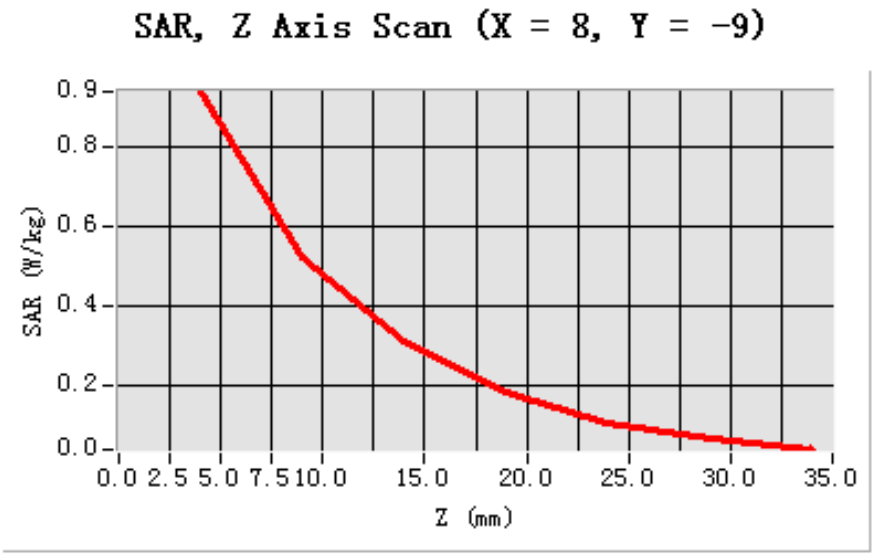
SURFACE SAR	VOLUME SAR
	

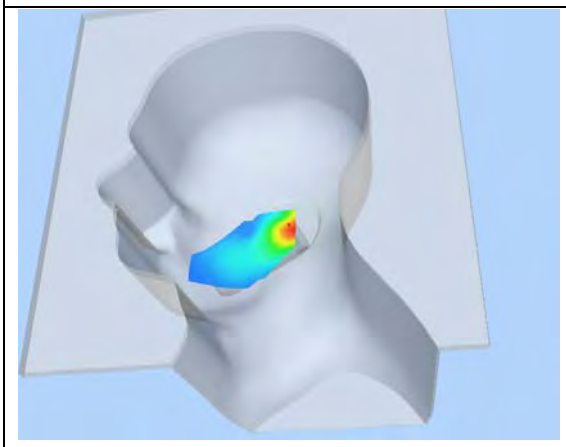
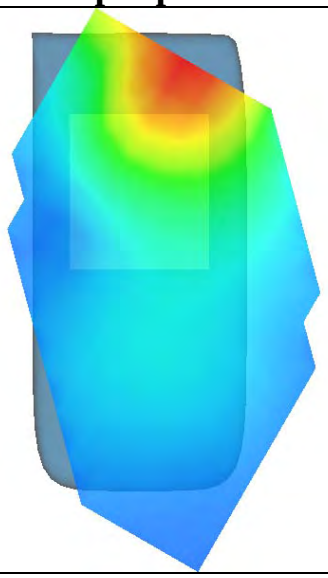
Maximum location: X=8.00, Y=-9.00

SAR 10g (W/Kg)	0.495032
SAR 1g (W/Kg)	0.894730

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9407	0.5255	0.3110	0.1842	0.1064	0.0639



3D sceen shot	Hot spot position
	

MEASUREMENT 26

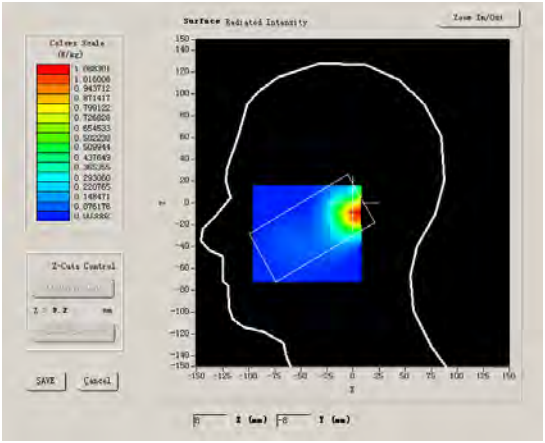
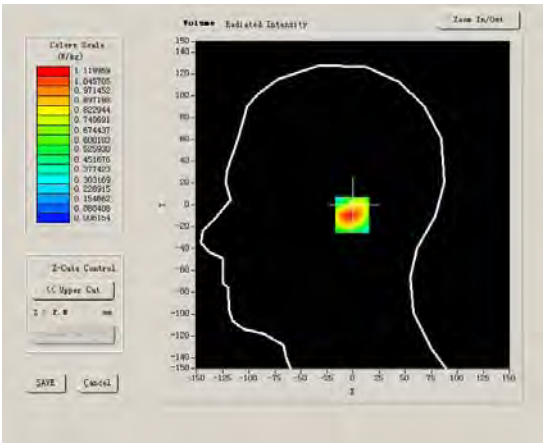
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 24 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	CDMA 1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1732.000000
Relative permittivity (real part)	38.930000
Relative permittivity	13.610000
Conductivity (S/m)	1.309584
Power drift (%)	-4.590000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

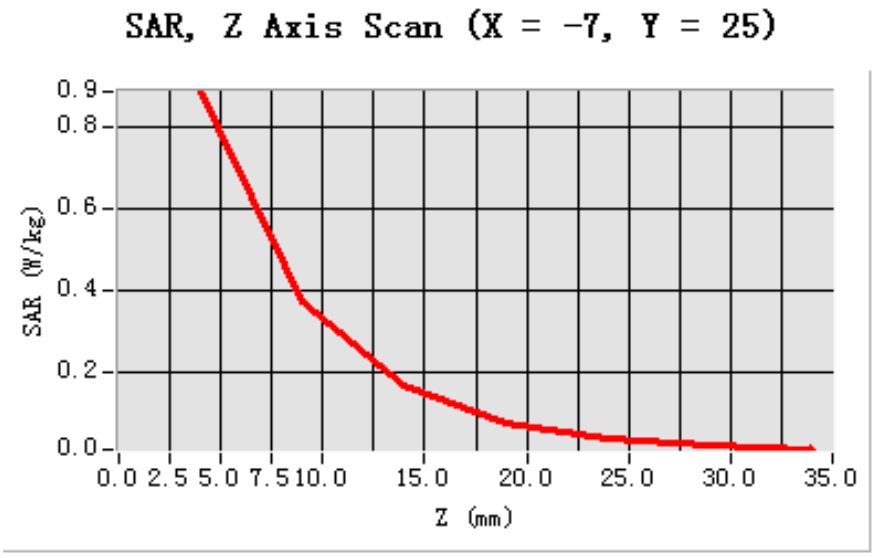
SURFACE SAR	VOLUME SAR
	

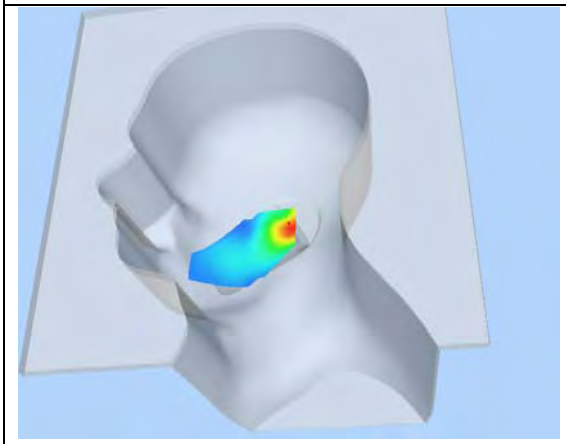
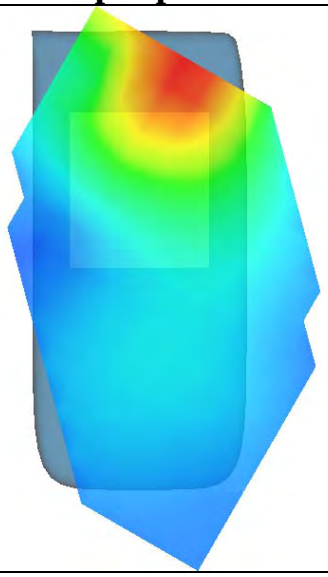
Maximum location: X=-7.00, Y=25.00

SAR 10g (W/Kg)	0.562463
SAR 1g (W/Kg)	0.9032375

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.90400	0.5648	0.3370	0.1960	0.1156	0.0669



3D sceen shot	Hot spot position
	

MEASUREMENT 27

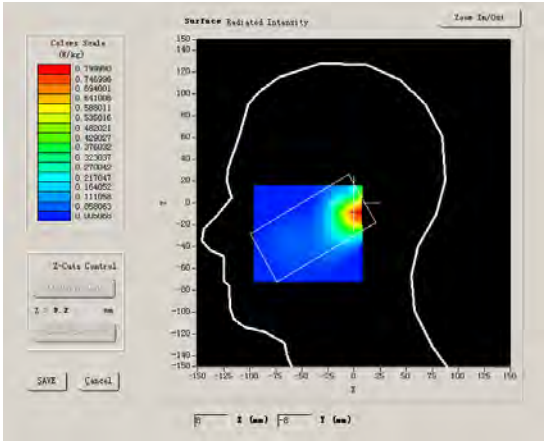
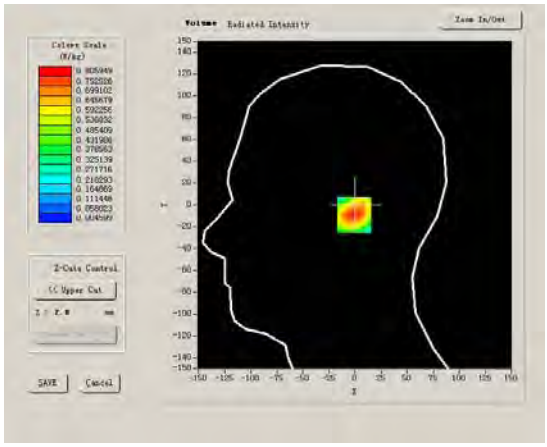
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 29 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Tilt
Band	CDMA 1700
Channels	High
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1753.700000
Relative permittivity (real part)	38.270000
Relative permittivity	13.900000
Conductivity (S/m)	1.355250
Power drift (%)	0.280000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

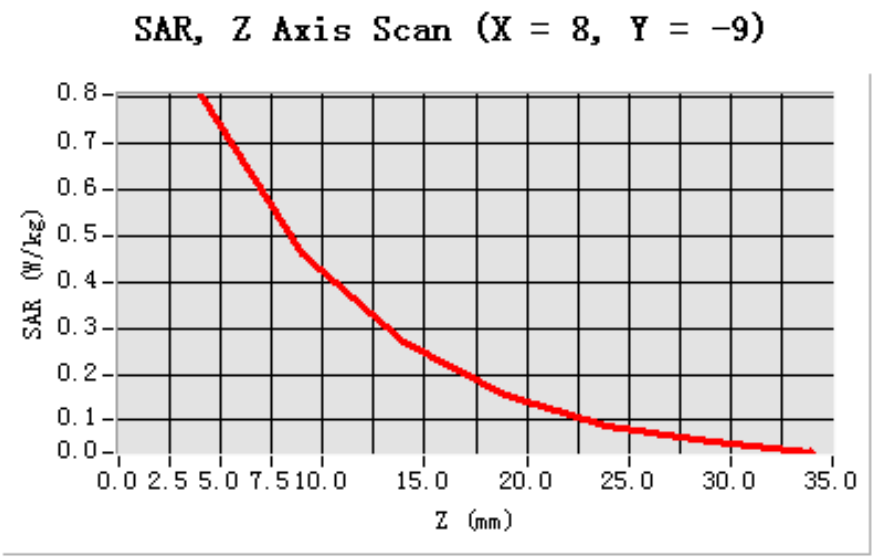
SURFACE SAR	VOLUME SAR
	

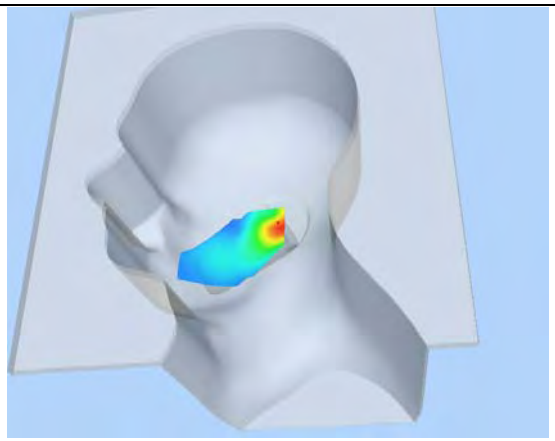
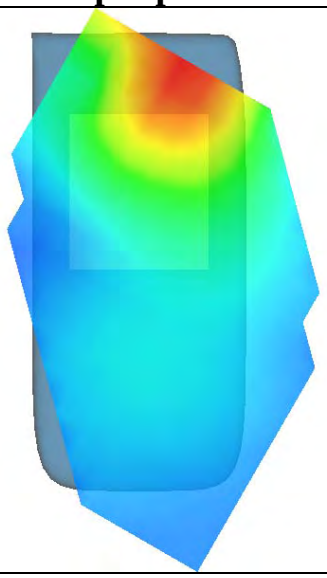
Maximum location: X=8.00, Y=-9.00

SAR 10g (W/Kg)	0.424375
SAR 1g (W/Kg)	0.764794

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8059	0.4594	0.2675	0.1573	0.0903	0.0534



3D sceen shot	Hot spot position
	

MEASUREMENT 28

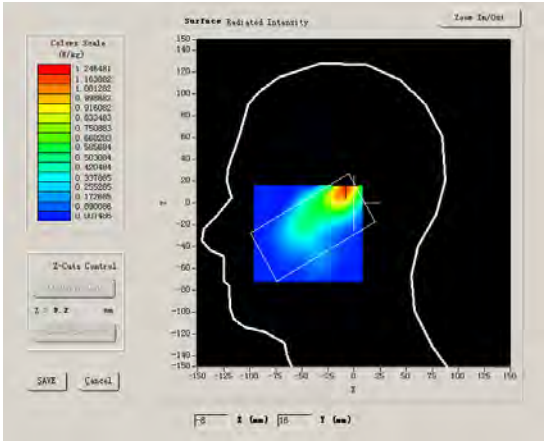
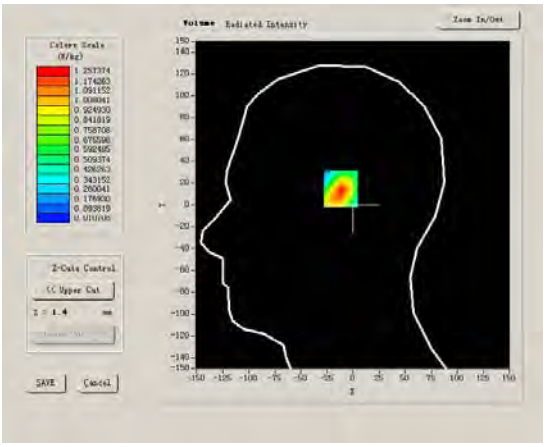
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 16/9/2011
Measurement duration: 7 minutes 27 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	CDMA 1700
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1711.250000
Relative permittivity (real part)	38.650002
Relative permittivity	13.750000
Conductivity (S/m)	1.306250
Power drift (%)	-1.120000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

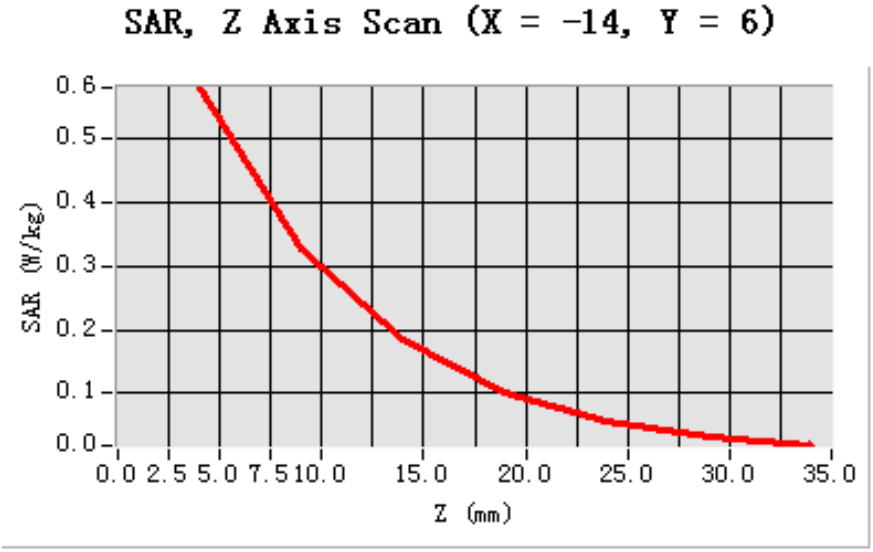
SURFACE SAR	VOLUME SAR
	

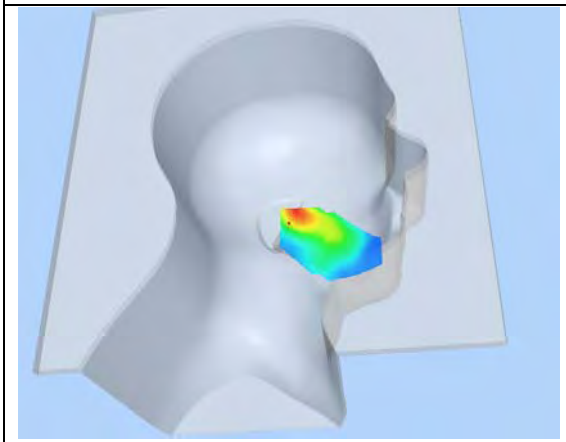
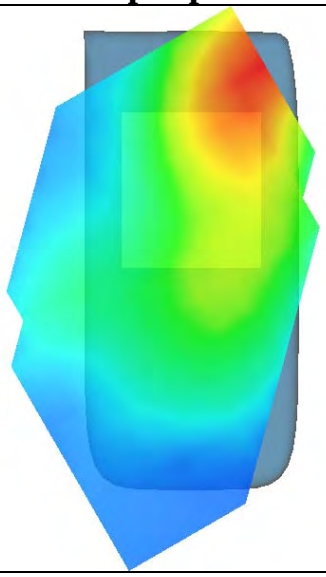
Maximum location: X=-14.00, Y=6.00

SAR 10g (W/Kg)	0.275783
SAR 1g (W/Kg)	0.535171

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.2574	0.6315	0.3361	0.1848	0.1005	0.0543



3D sceen shot	Hot spot position
	

MEASUREMENT 29

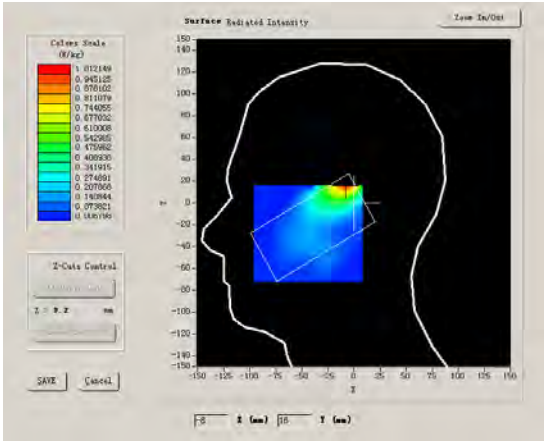
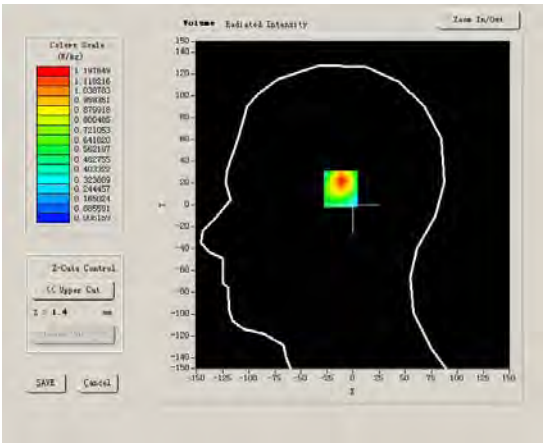
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 13/9/2011
Measurement duration: 7 minutes 26 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	CDMA 1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1732.000000
Relative permittivity (real part)	38.930000
Relative permittivity	13.610000
Conductivity (S/m)	1.309584
Power drift (%)	3.600000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

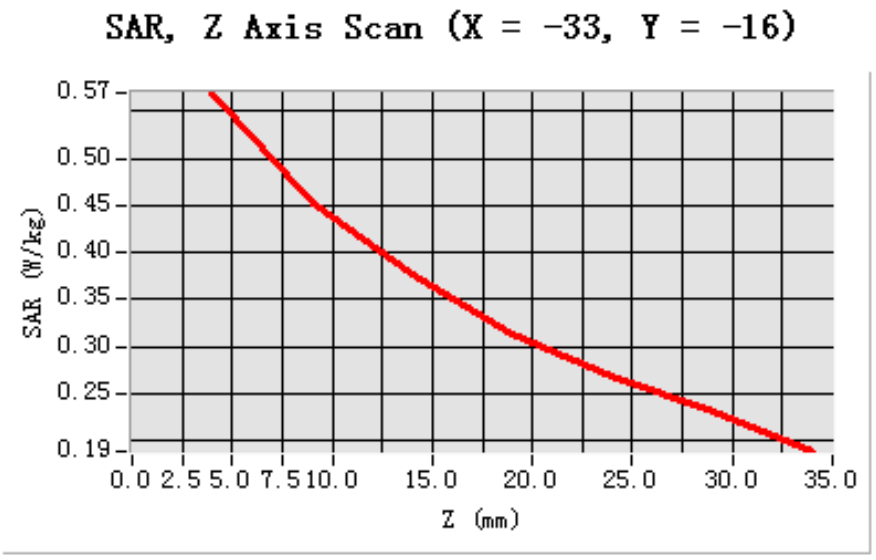
SURFACE SAR	VOLUME SAR
	

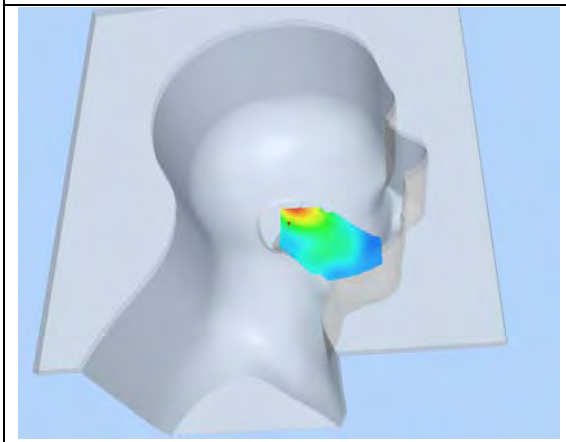
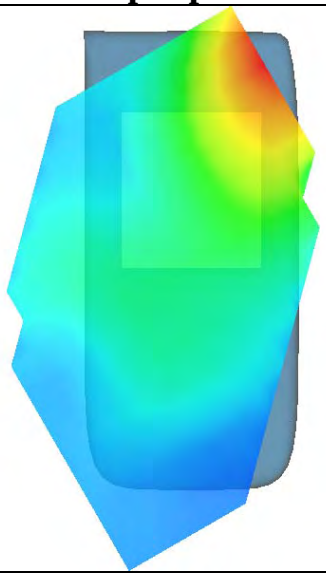
Maximum location: X=-33.00, Y=-16.00

SAR 10g (W/Kg)	0.417431
SAR 1g (W/Kg)	0.549414

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0158	0.4752	0.2307	0.1117	0.0561	0.0270



3D sceen shot	Hot spot position
	

MEASUREMENT 30

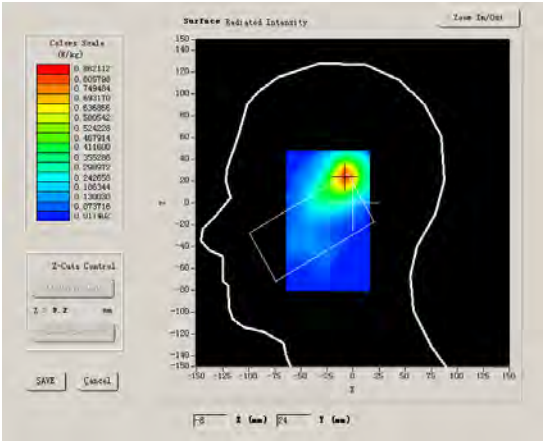
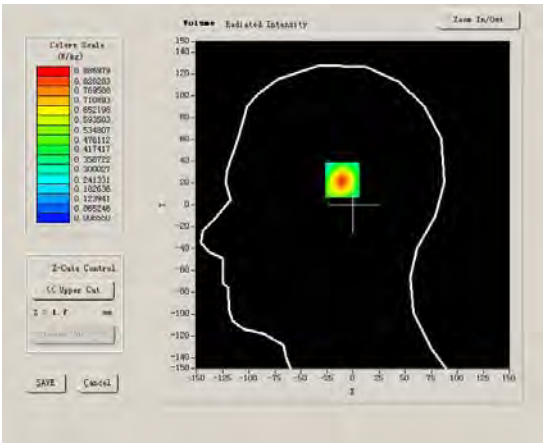
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 26 seconds

A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Cheek
Band	CDMA 1700
Channels	High
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1753.700000
Relative permittivity (real part)	38.270000
Relative permittivity	13.900000
Conductivity (S/m)	1.355250
Power drift (%)	2.130000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

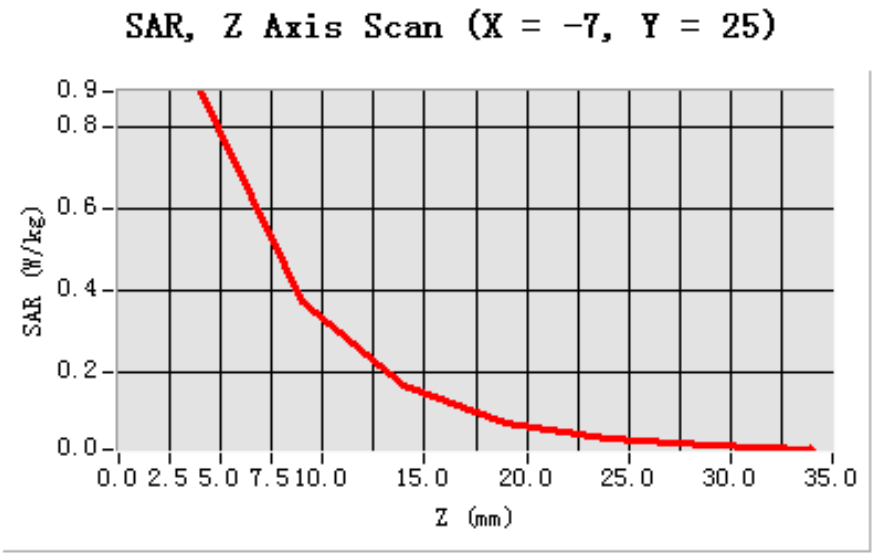
SURFACE SAR	VOLUME SAR
	

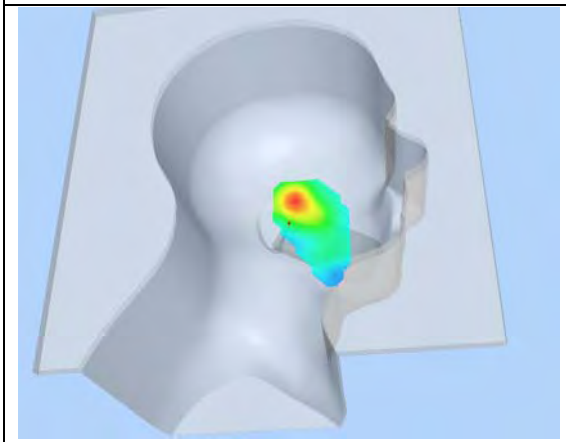
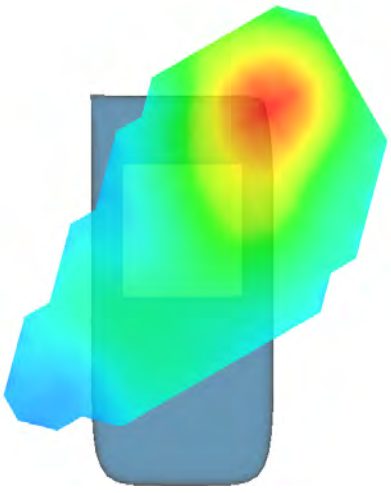
Maximum location: X=-7.00, Y=25.00

SAR 10g (W/Kg)	0.387393
SAR 1g (W/Kg)	0.825546

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8870	0.3712	0.1673	0.0778	0.0372	0.0222



3D sceen shot	Hot spot position
	

MEASUREMENT 31

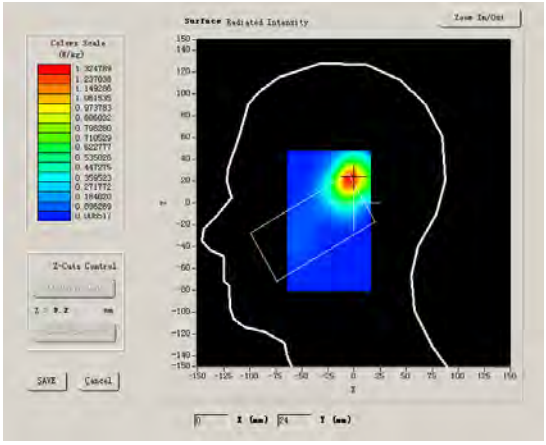
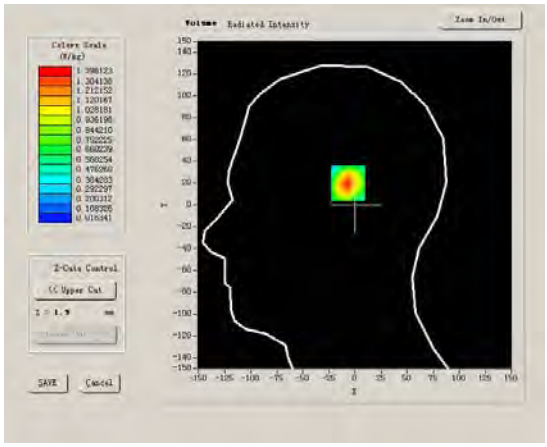
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 25 seconds

A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	CDMA 1700
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1711.250000
Relative permittivity (real part)	38.650002
Relative permittivity	13.750000
Conductivity (S/m)	1.306250
Power drift (%)	-2.580000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

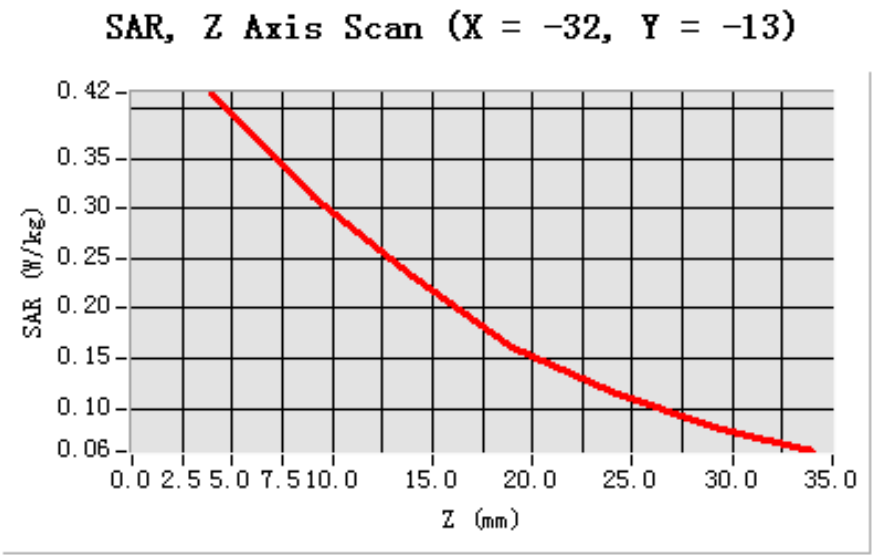
SURFACE SAR	VOLUME SAR
	

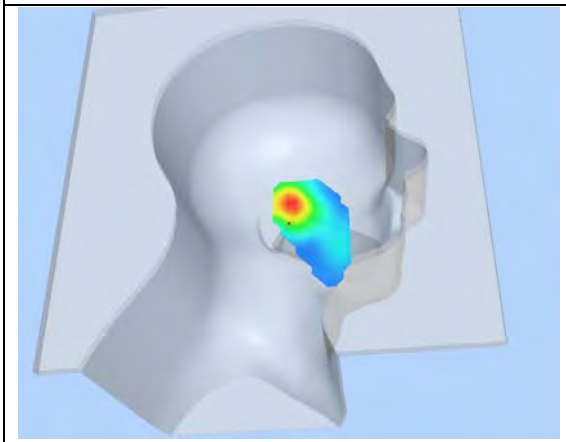
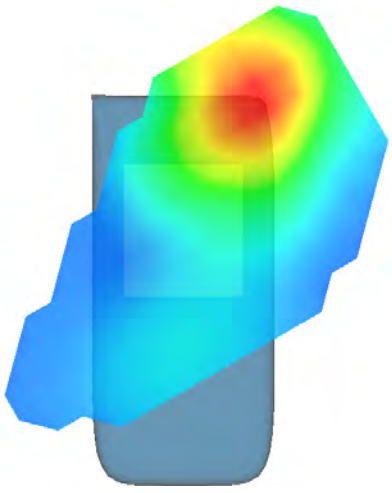
Maximum location: X=-32.00, Y=-13.00

SAR 10g (W/Kg)	0.275649
SAR 1g (W/Kg)	0.397115

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8870	0.3712	0.1673	0.0778	0.0372	0.0222



3D sceen shot	Hot spot position
	

MEASUREMENT 32

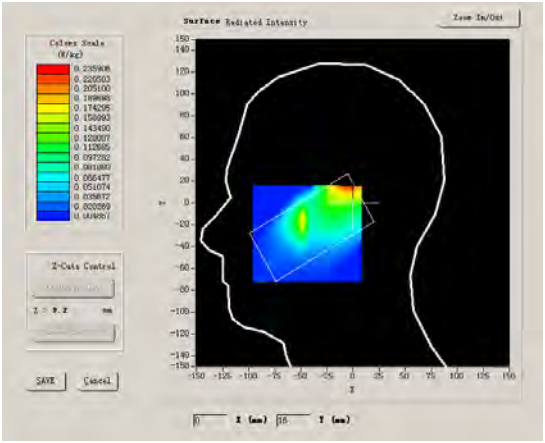
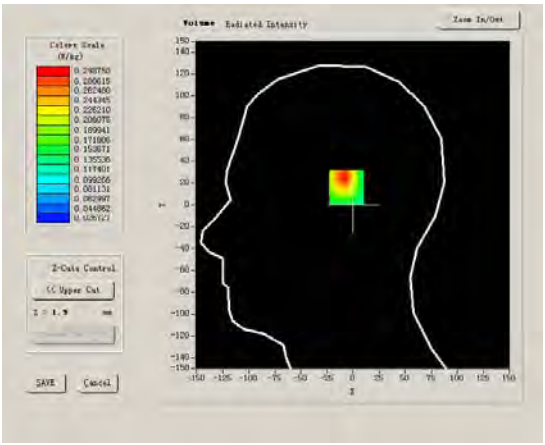
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 16/9/2011
Measurement duration: 7 minutes 34 seconds

A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Tilt
Band	CDMA 1700
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1711.250000
Relative permittivity (real part)	38.650002
Relative permittivity	13.750000
Conductivity (S/m)	1.306250
Power drift (%)	6.010000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

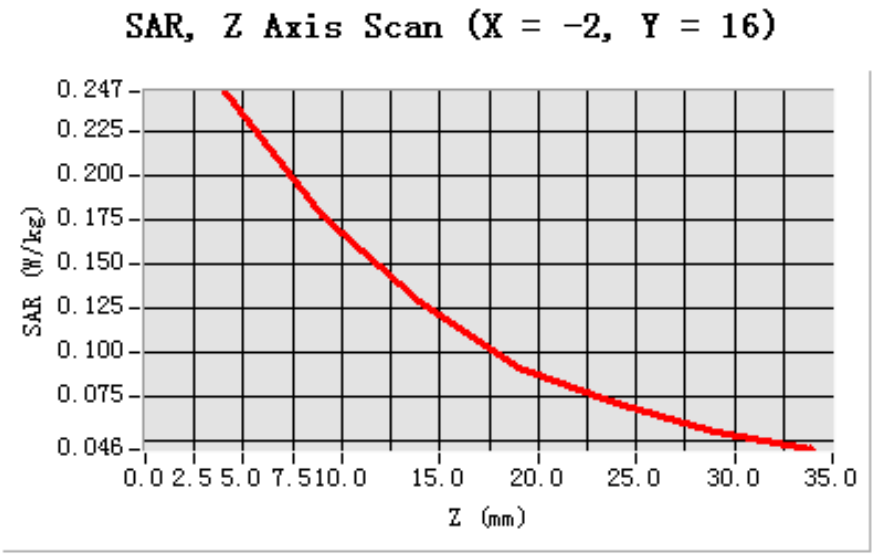
SURFACE SAR	VOLUME SAR
	

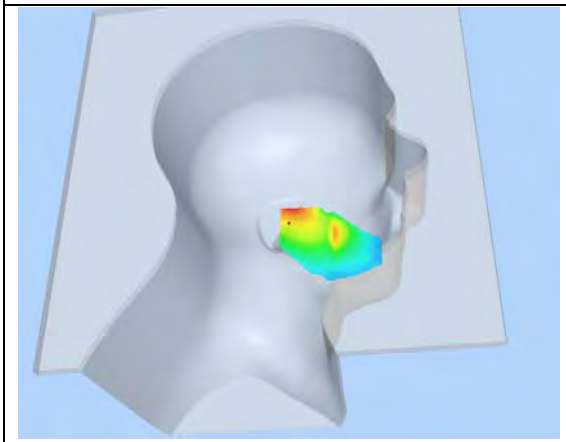
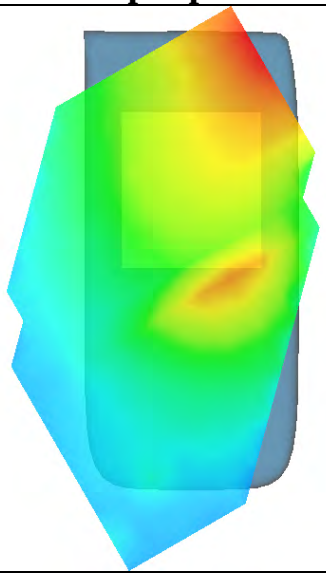
Maximum location: X=-2.00, Y=16.00

SAR 10g (W/Kg)	0.175084
SAR 1g (W/Kg)	0.281352

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2475	0.1776	0.1289	0.0911	0.0718	0.0559



3D sceen shot	Hot spot position
	

MEASUREMENT 33

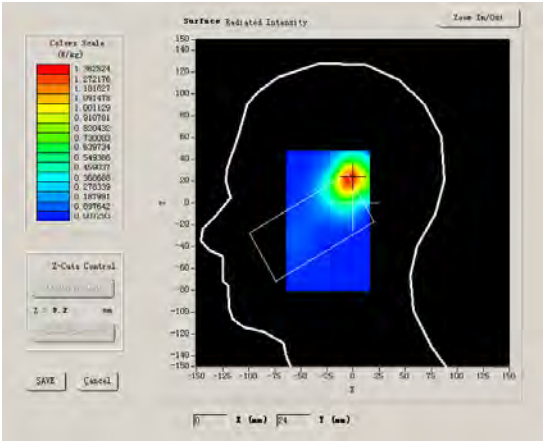
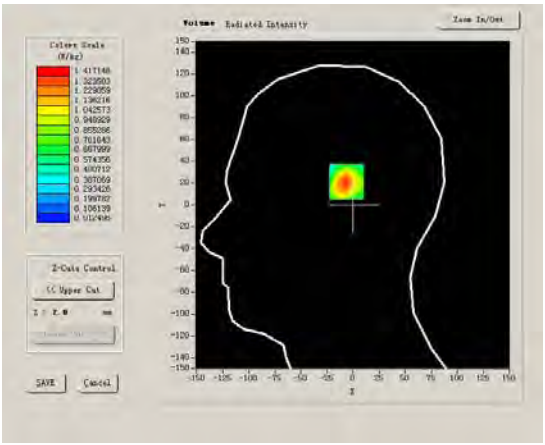
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 30 seconds

A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	CDMA 1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1732.000000
Relative permittivity (real part)	38.930000
Relative permittivity	13.610000
Conductivity (S/m)	1.309584
Power drift (%)	0.260000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

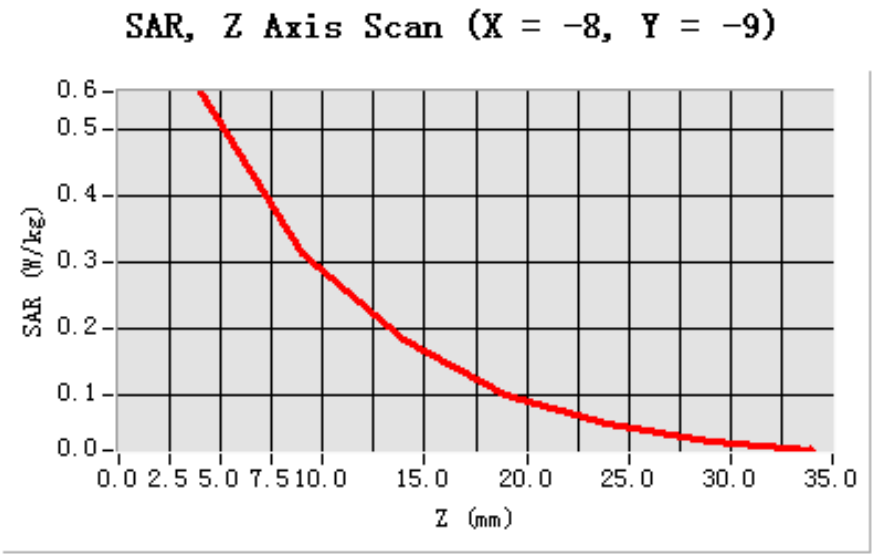
SURFACE SAR	VOLUME SAR
	

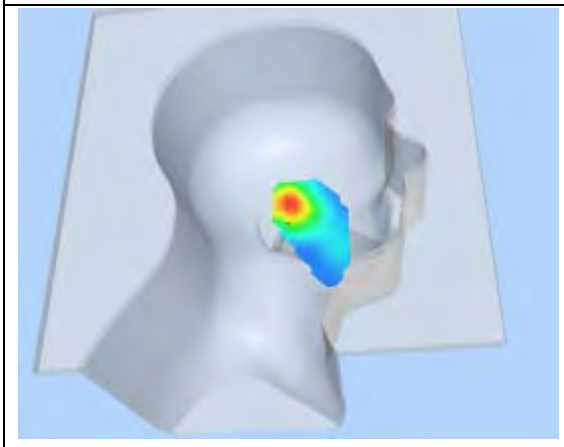
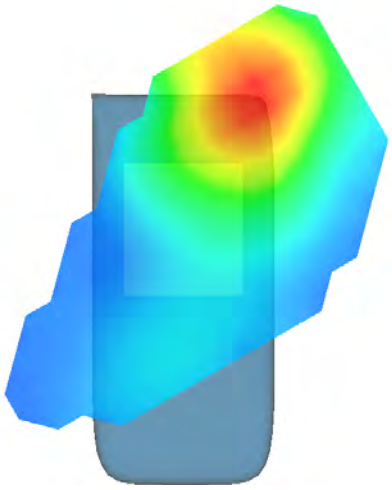
Maximum location: X=-8.00, Y=-9.00

SAR 10g (W/Kg)	0.281561
SAR 1g (W/Kg)	0.522506

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5551	0.3135	0.1818	0.0978	0.0545	0.0283



3D sceen shot	Hot spot position
	

MEASUREMENT 34

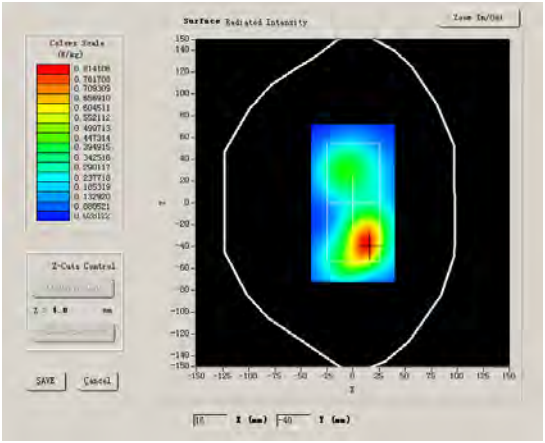
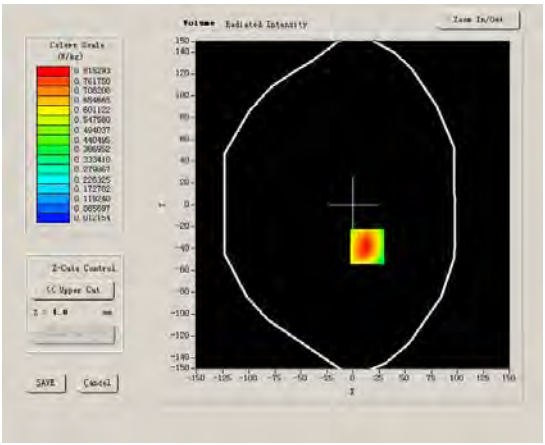
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 8 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA 1700
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1711.250000
Relative permittivity (real part)	38.650002
Relative permittivity	13.750000
Conductivity (S/m)	1.306250
Power drift (%)	-1.320000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

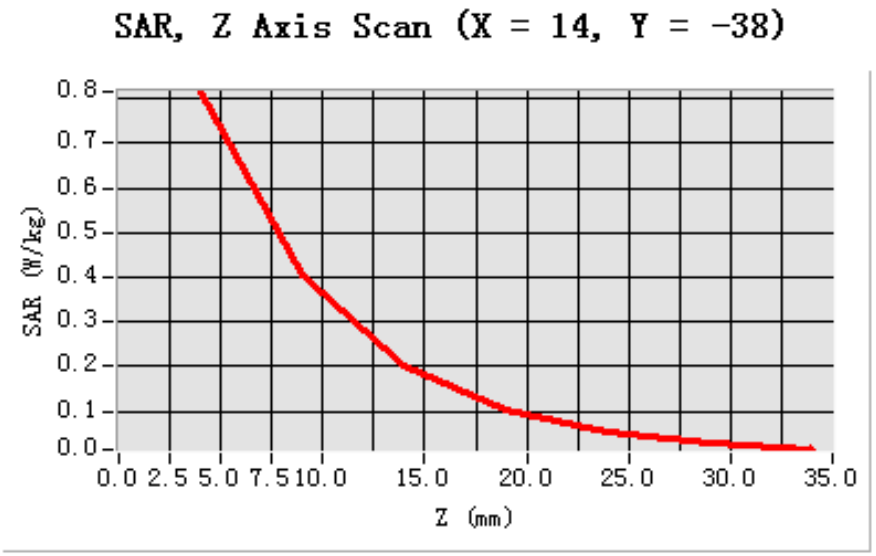
SURFACE SAR	VOLUME SAR
	

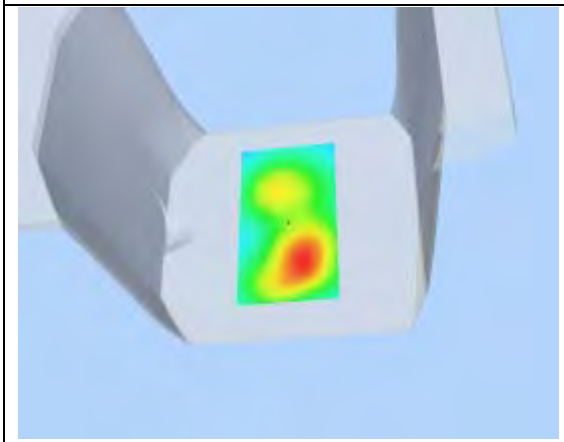
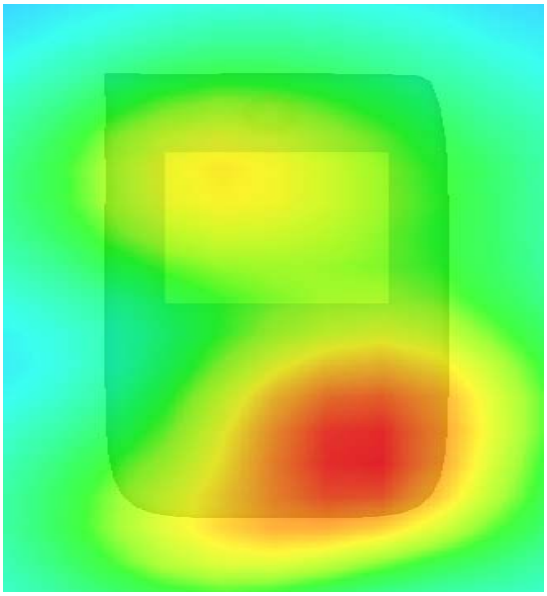
Maximum location: X=14.00, Y=-38.00

SAR 10g (W/Kg)	0.416571
SAR 1g (W/Kg)	0.780189

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8153	0.4042	0.2040	0.1022	0.0540	0.0287



3D sceen shot	Hot spot position
	

MEASUREMENT 35

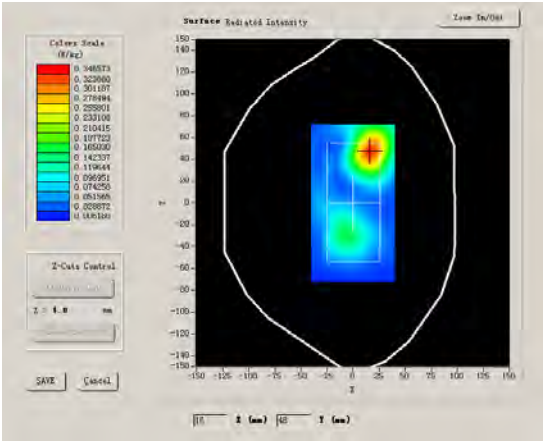
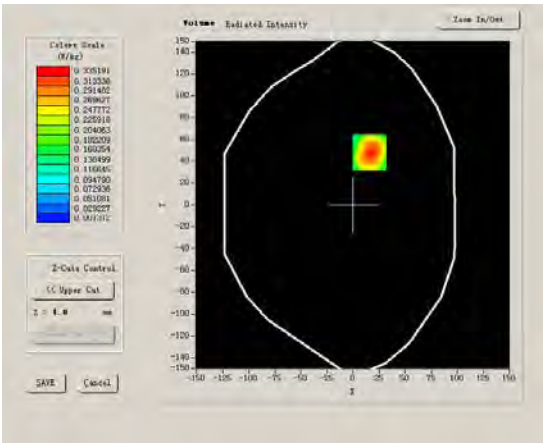
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 10 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA 1700
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1711.250000
Relative permittivity (real part)	38.650002
Relative permittivity	13.750000
Conductivity (S/m)	1.306250
Power drift (%)	-8.520000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

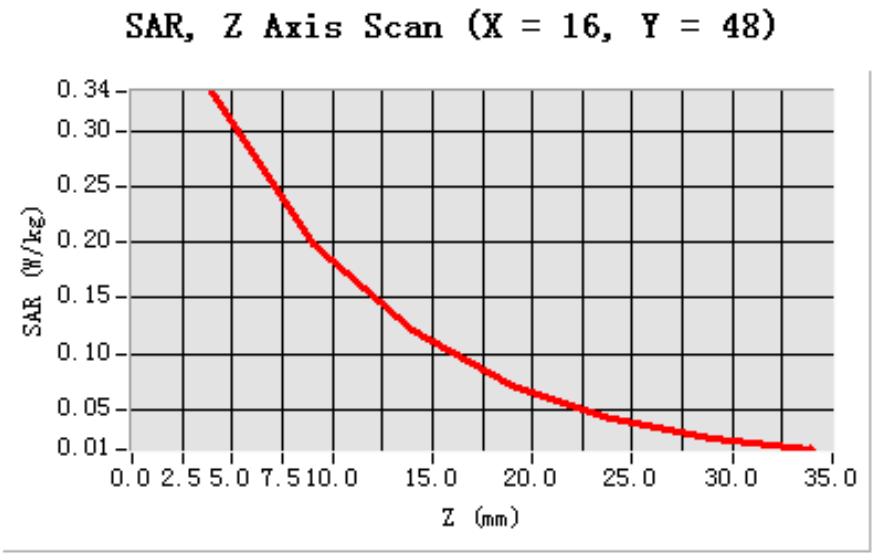
SURFACE SAR	VOLUME SAR
	

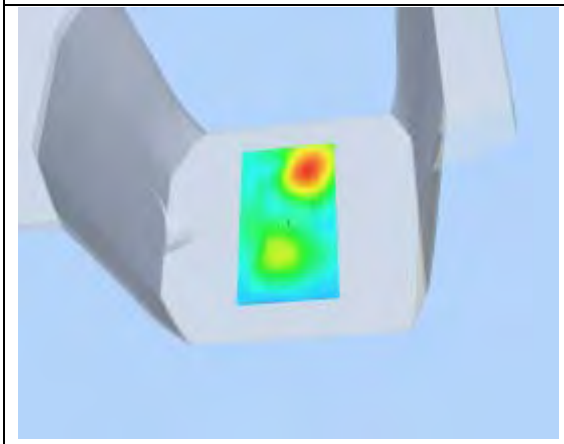
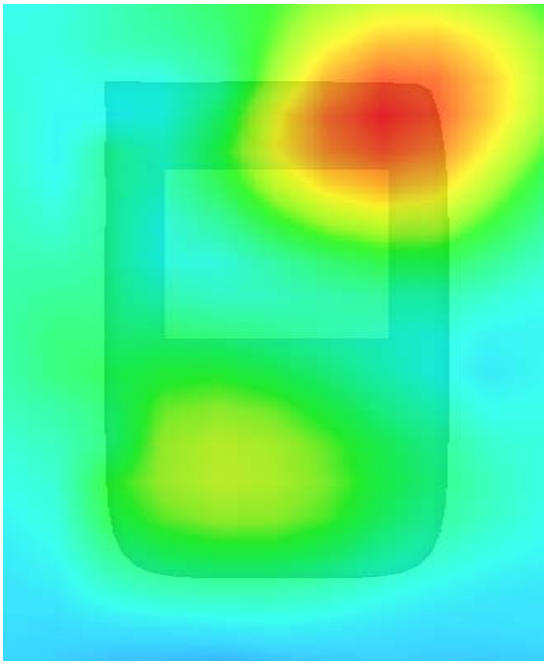
Maximum location: X=16.00, Y=48.00

SAR 10g (W/Kg)	0.183794
SAR 1g (W/Kg)	0.319825

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3352	0.1993	0.1207	0.0712	0.0425	0.0236



3D sceen shot	Hot spot position
	

MEASUREMENT 36

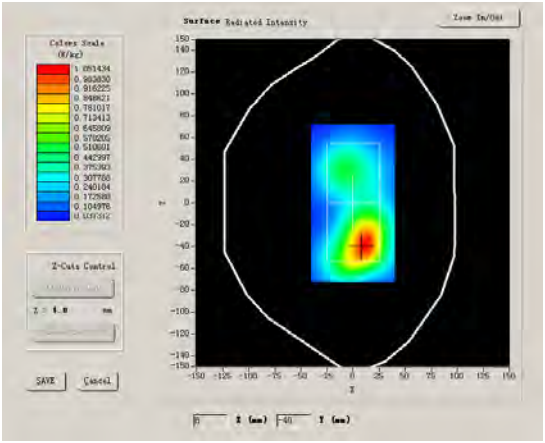
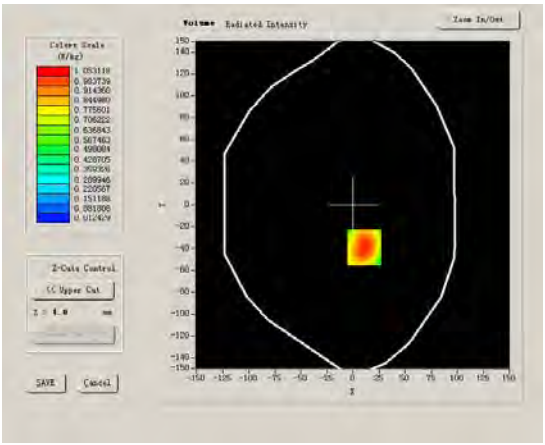
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA 1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1732.000000
Relative permittivity (real part)	38.930000
Relative permittivity	13.610000
Conductivity (S/m)	1.309584
Power drift (%)	-0.150000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

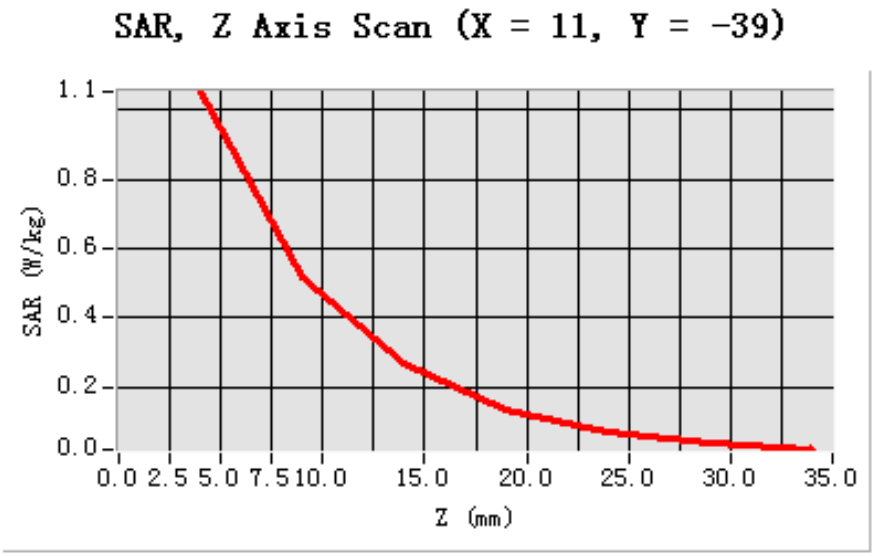
SURFACE SAR	VOLUME SAR
	

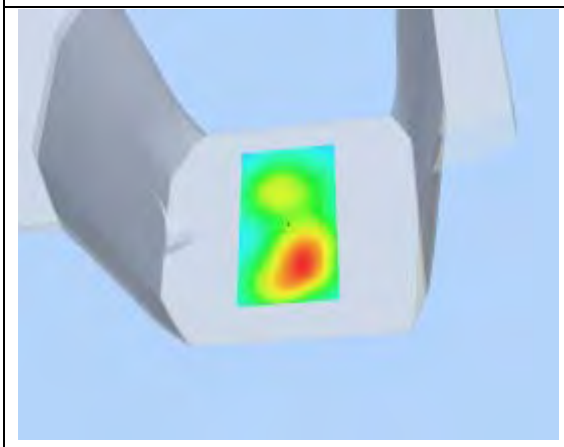
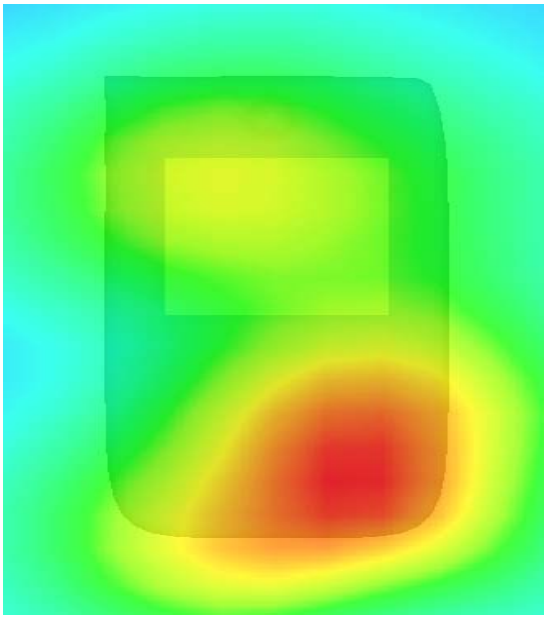
Maximum location: X=11.00, Y=-39.00

SAR 10g (W/Kg)	0.542552
SAR 1g (W/Kg)	1.008165

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0531	0.5183	0.2673	0.1362	0.0722	0.0385



3D sceen shot	Hot spot position
	

MEASUREMENT 37

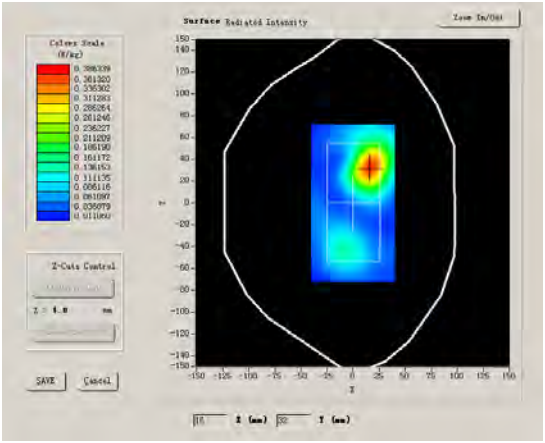
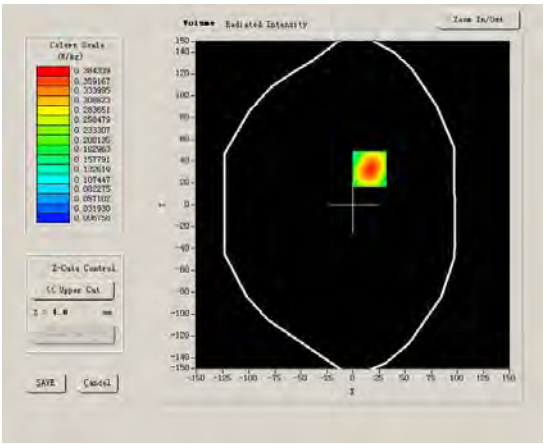
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA 1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1732.000000
Relative permittivity (real part)	38.930000
Relative permittivity	13.610000
Conductivity (S/m)	1.309584
Power drift (%)	-0.490000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

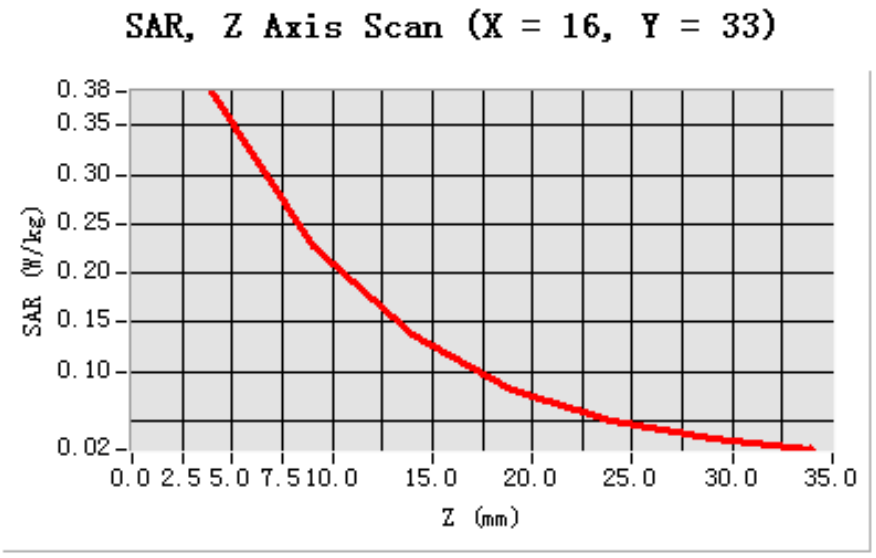
SURFACE SAR	VOLUME SAR
	

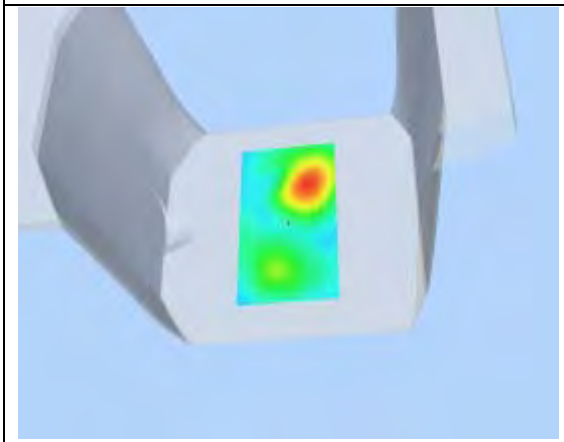
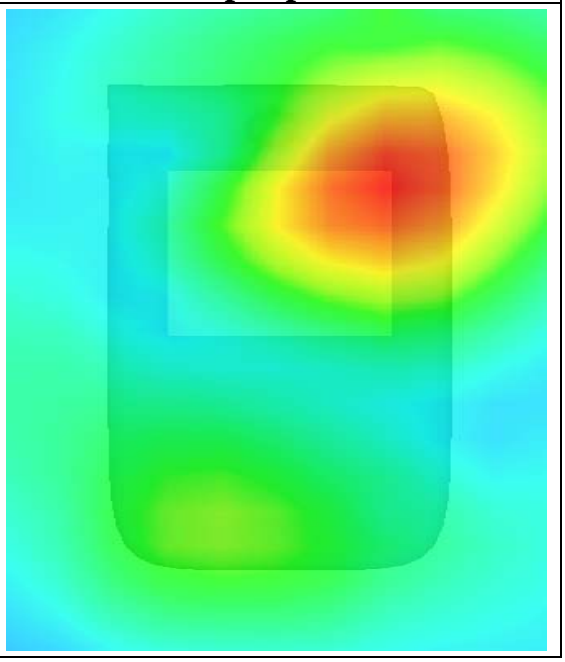
Maximum location: X=16.00, Y=33.00

SAR 10g (W/Kg)	0.208022
SAR 1g (W/Kg)	0.364370

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3843	0.2271	0.1360	0.0818	0.0501	0.0306



3D sceen shot	Hot spot position
	

MEASUREMENT 38

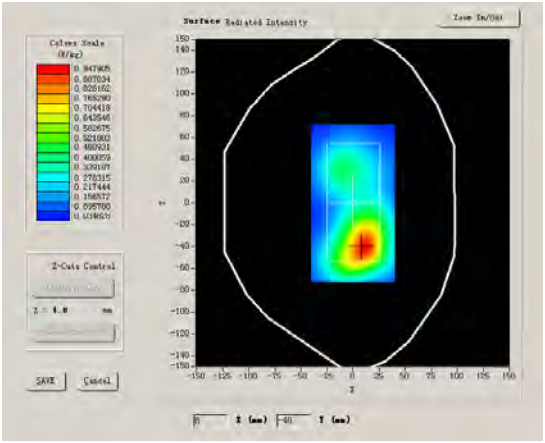
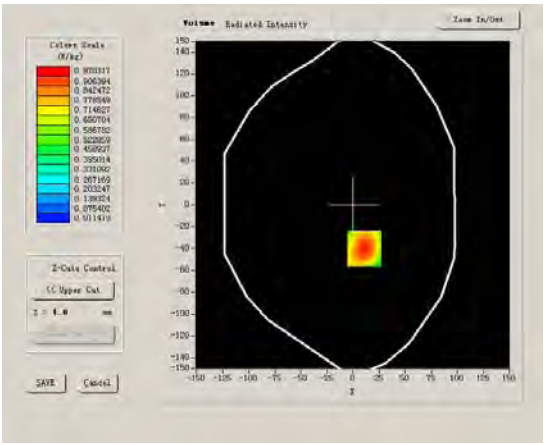
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
of measurement: 7/9/2011
Measurement duration: 9 minutes 7 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA 1700
Channels	High
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1753.700000
Relative permittivity (real part)	38.270000
Relative permittivity	13.900000
Conductivity (S/m)	1.355250
Power drift (%)	1.880000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

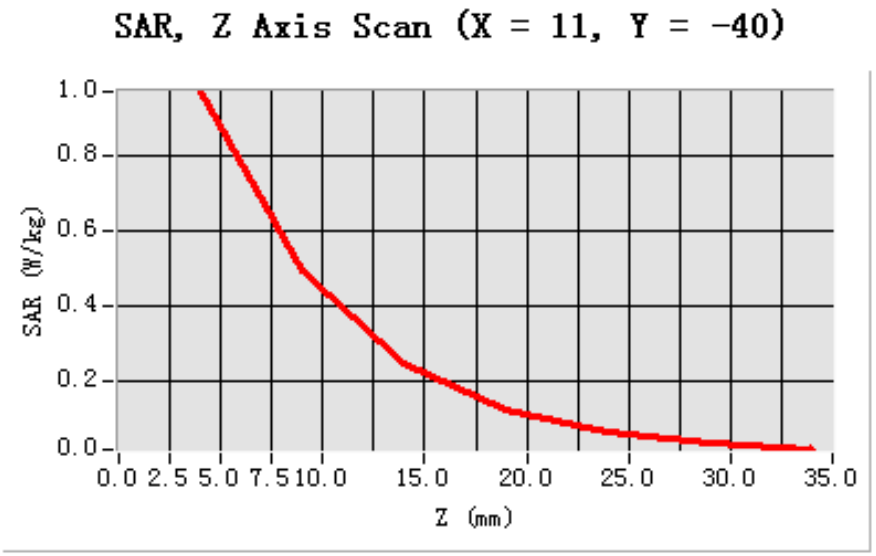
SURFACE SAR	VOLUME SAR
	

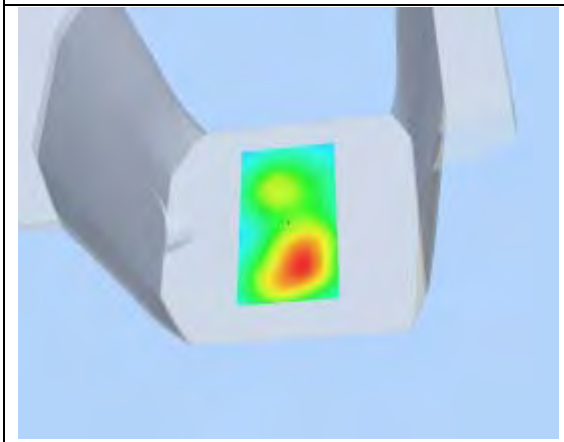
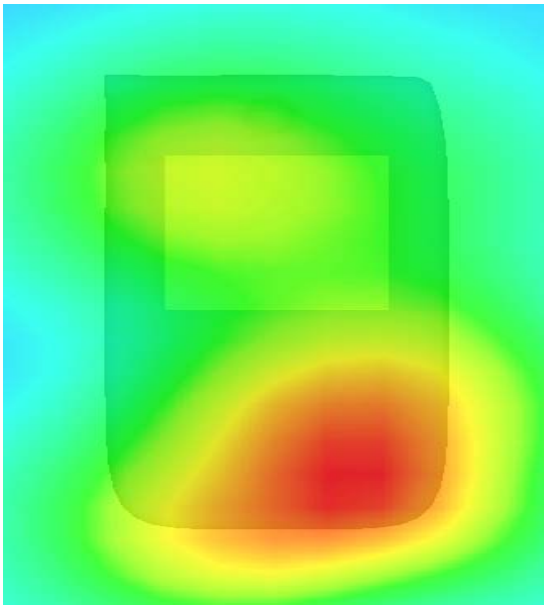
Maximum location: X=11.00, Y=-40.00

SAR 10g (W/Kg)	0.500224
SAR 1g (W/Kg)	0.927570

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9703	0.4934	0.2500	0.1270	0.0668	0.0366



3D sceen shot	Hot spot position
	

MEASUREMENT 39

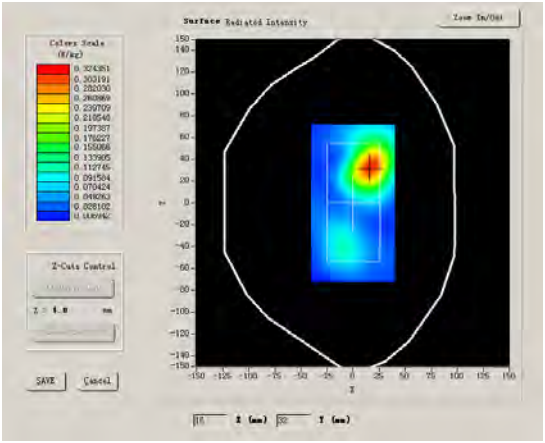
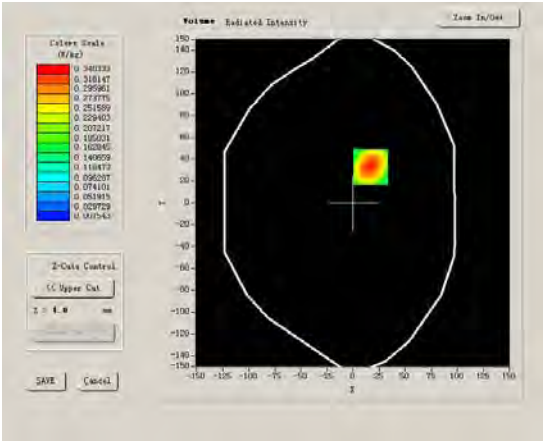
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 13 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA 1700
Channels	High
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1753.700000
Relative permittivity (real part)	38.270000
Relative permittivity	13.900000
Conductivity (S/m)	1.355250
Power drift (%)	-0.040000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

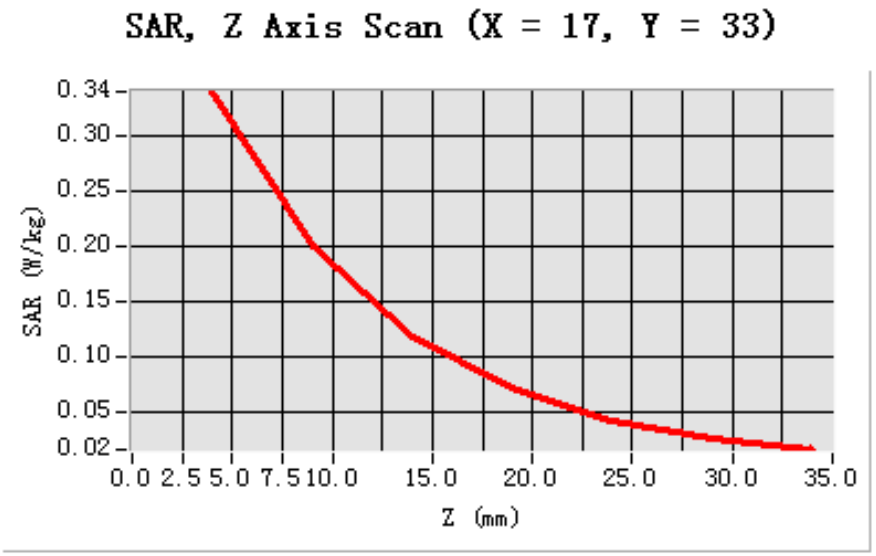
SURFACE SAR	VOLUME SAR
	

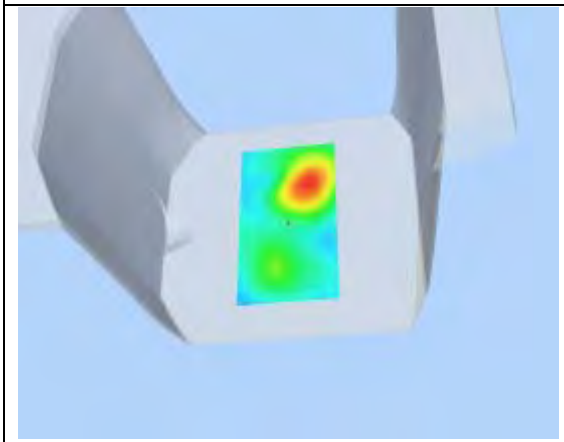
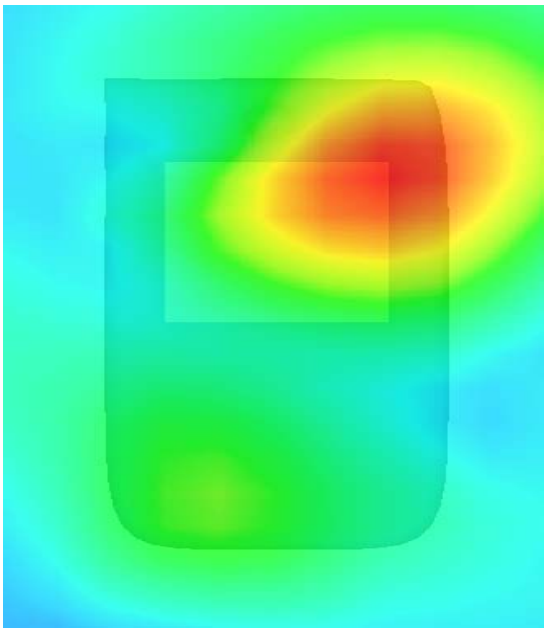
Maximum location: X=17.00, Y=33.00

SAR 10g (W/Kg)	0.185477
SAR 1g (W/Kg)	0.324485

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3403	0.2013	0.1185	0.0722	0.0431	0.0273



3D sceen shot	Hot spot position
	

MEASUREMENT 40

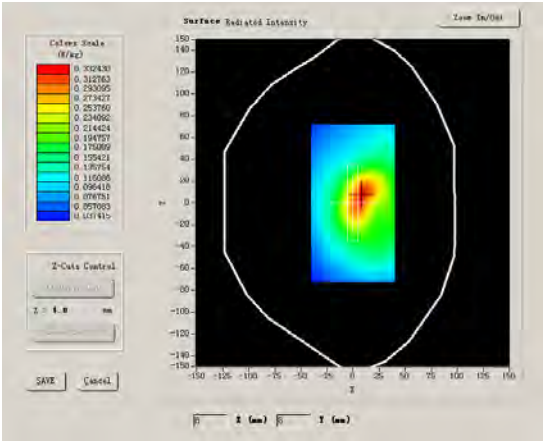
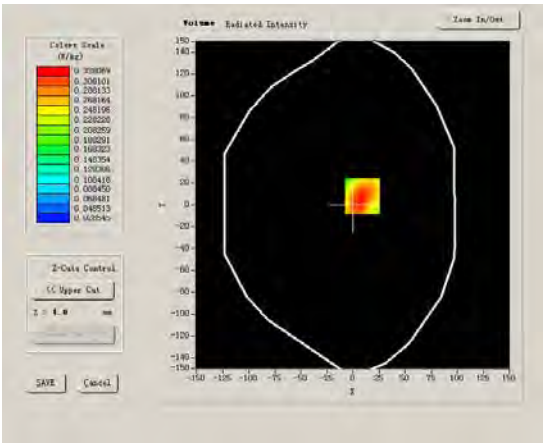
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 5 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA 1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1732.000000
Relative permittivity (real part)	38.930000
Relative permittivity	13.610000
Conductivity (S/m)	1.309584
Power drift (%)	-0.490000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

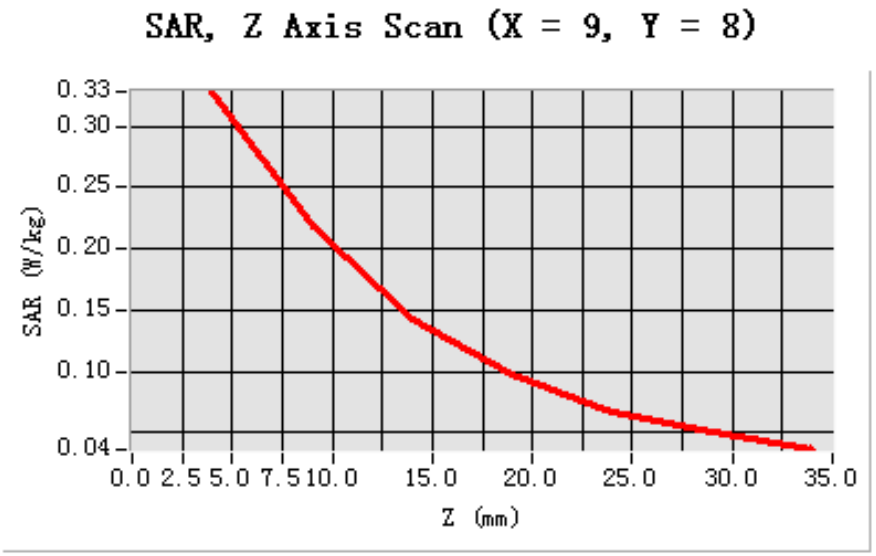
SURFACE SAR	VOLUME SAR
	

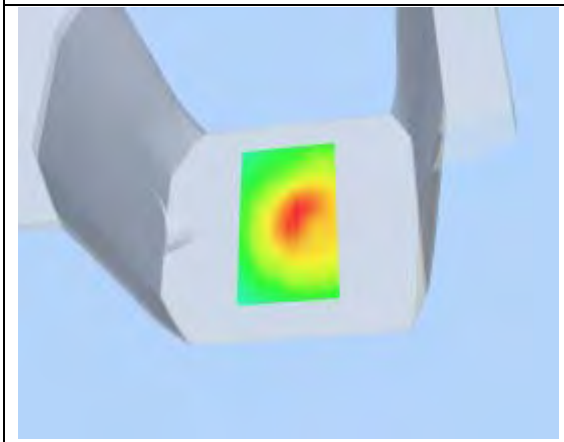
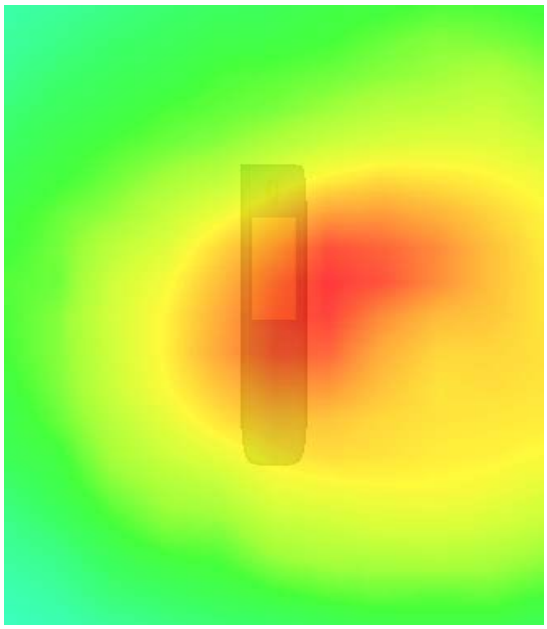
Maximum location: X=9.00, Y=8.00

SAR 10g (W/Kg)	0.209614
SAR 1g (W/Kg)	0.317980

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3281	0.2185	0.1429	0.0973	0.0676	0.0507



3D sceen shot	Hot spot position
	

MEASUREMENT 41

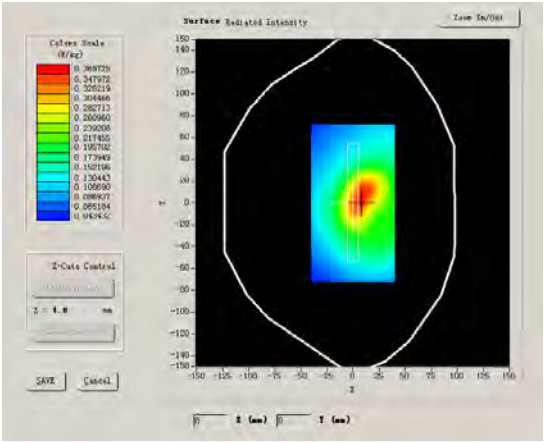
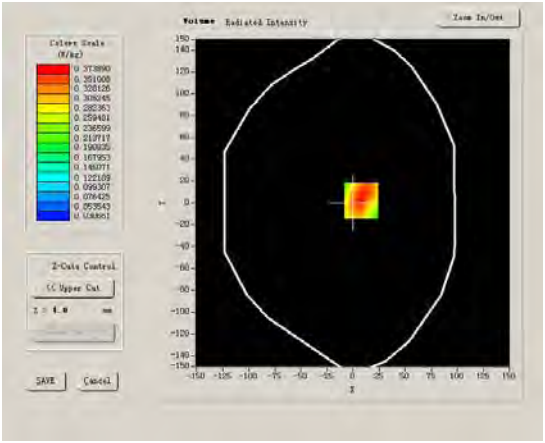
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 6 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA 1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1732.000000
Relative permittivity (real part)	38.930000
Relative permittivity	13.610000
Conductivity (S/m)	1.309584
Power drift (%)	-2.760000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

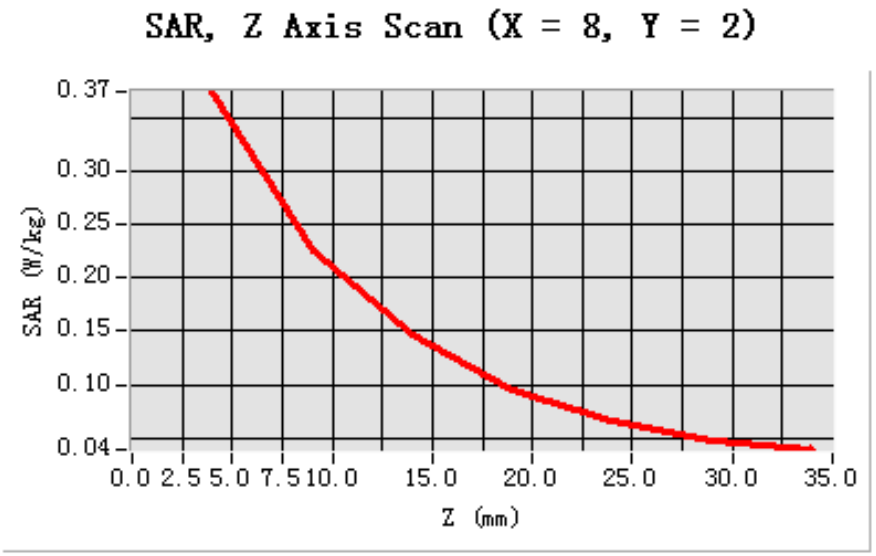
SURFACE SAR	VOLUME SAR
	

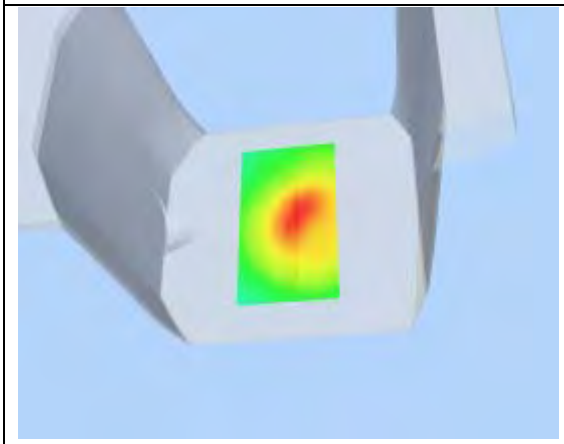
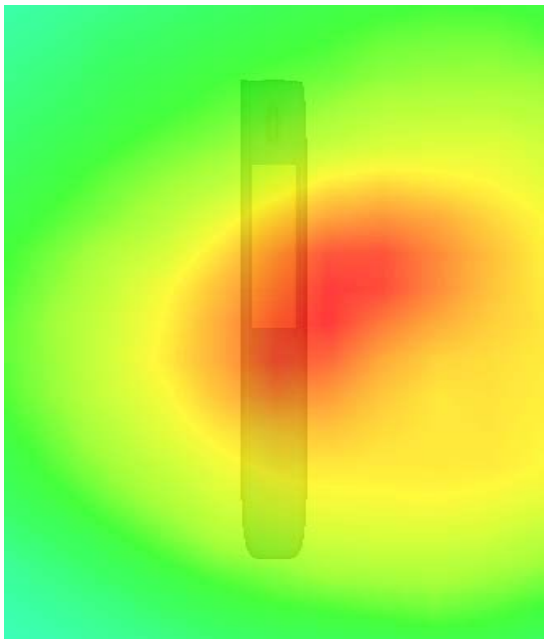
Maximum location: X=8.00, Y=2.00

SAR 10g (W/Kg)	0.229785
SAR 1g (W/Kg)	0.360778

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3739	0.2244	0.1467	0.0956	0.0671	0.0471



3D sceen shot	Hot spot position
	

MEASUREMENT 42

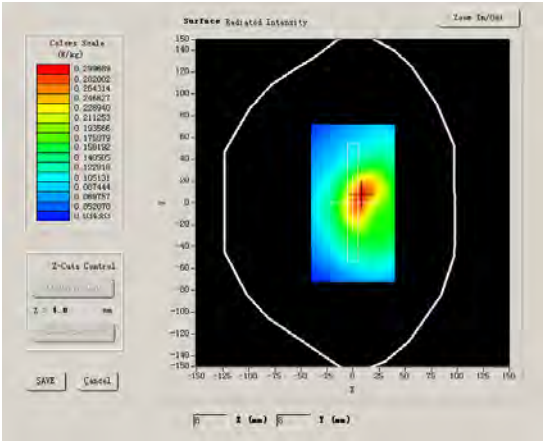
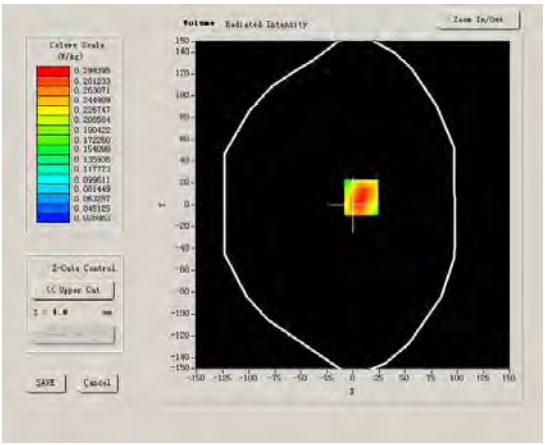
Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 9 seconds

A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	CDMA 1700
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Frequency (MHz)	1732.000000
Relative permittivity (real part)	38.930000
Relative permittivity	13.610000
Conductivity (S/m)	1.309584
Power drift (%)	3.770000
Ambient Temperature	22.4℃
Liquid Temperature	21.6℃
ConvF:	40.977,35.416,39.388
Crest factor:	1:1

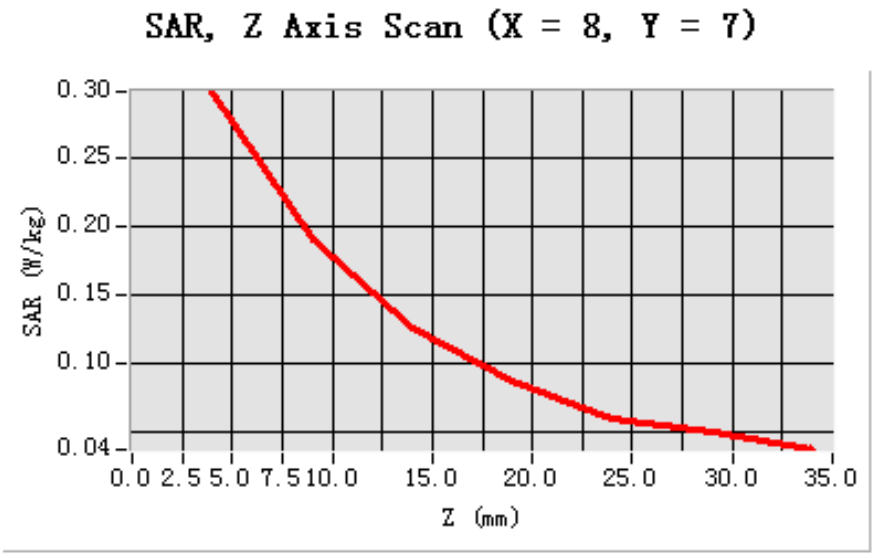
SURFACE SAR	VOLUME SAR
	

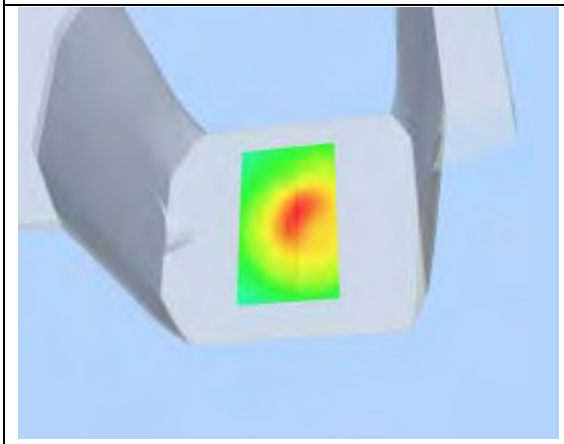
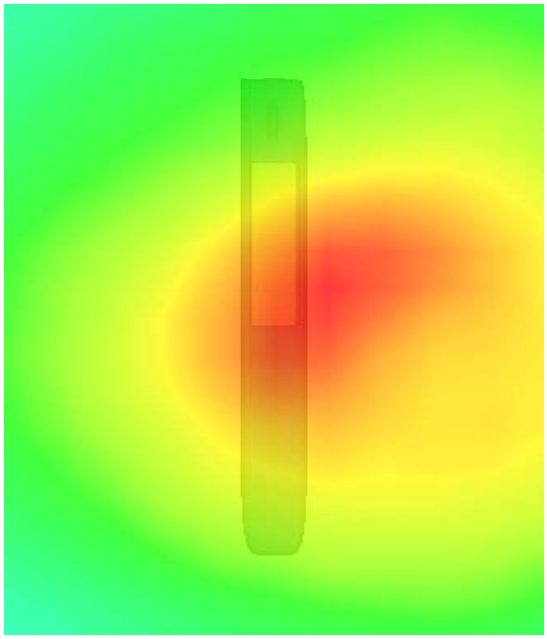
Maximum location: X=8.00, Y=7.00

SAR 10g (W/Kg)	0.185646
SAR 1g (W/Kg)	0.286416

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2994	0.1902	0.1258	0.0876	0.0590	0.0498



3D sceen shot	Hot spot position
	

MEASUREMENT 43

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 27 seconds

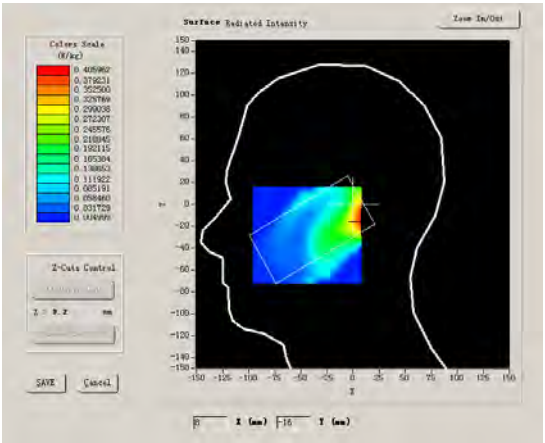
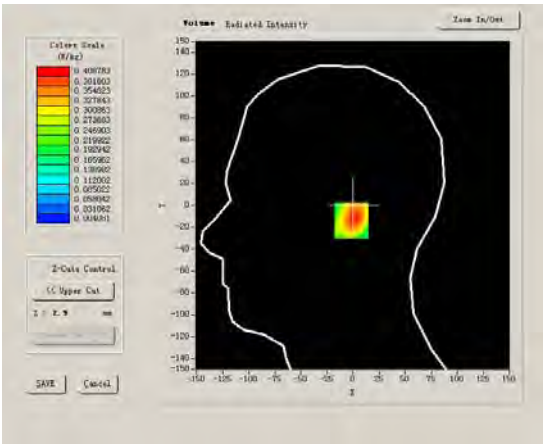
A. Experimental conditions.

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

B. SAR Measurement Results

Lower Band SAR (Channel 25):

Frequency (MHz)	1851.250000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.431186
Power drift (%)	0.060000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

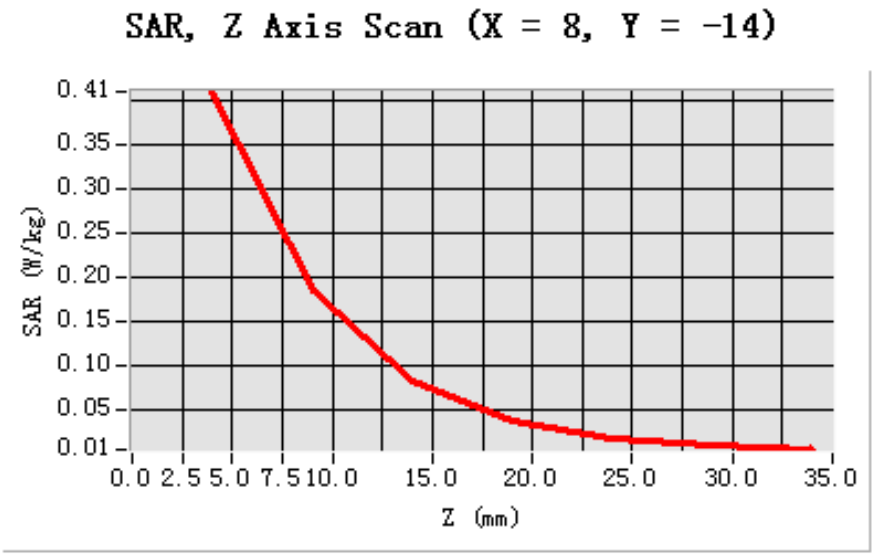
SURFACE SAR	VOLUME SAR
	

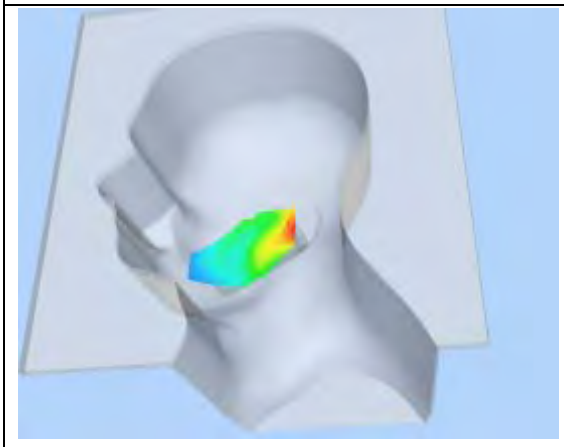
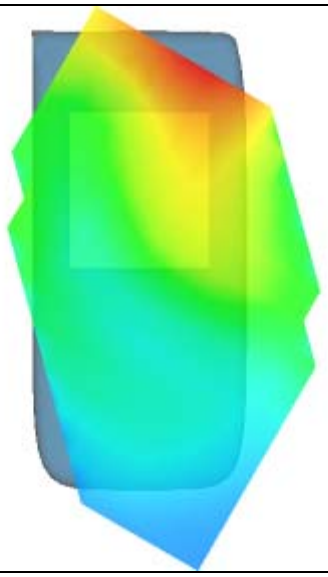
Maximum location: X=8.00, Y=-14.00

SAR 10g (W/Kg)	0.198530
SAR 1g (W/Kg)	0.396151

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4088	0.1841	0.0817	0.0391	0.0180	0.0105



3D sceen shot	Hot spot position
	

MEASUREMENT 44

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 28 seconds

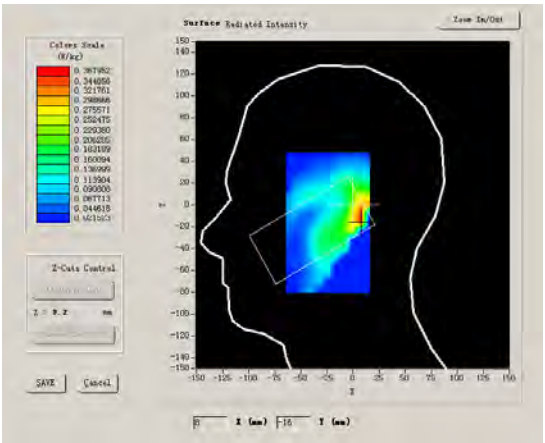
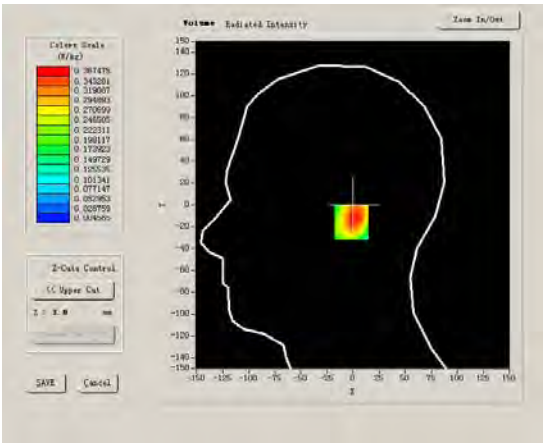
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Right head
Device Position	Cheek
Band	US_PCS
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 600):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.453412
Power drift (%)	-0.040000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

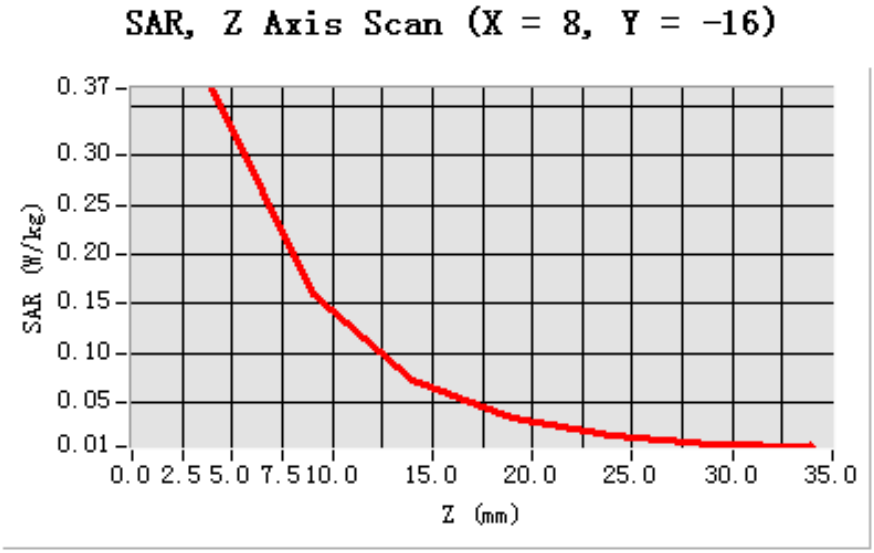
SURFACE SAR	VOLUME SAR
	

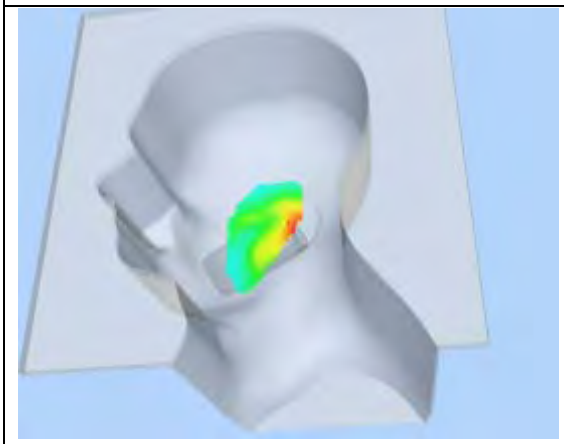
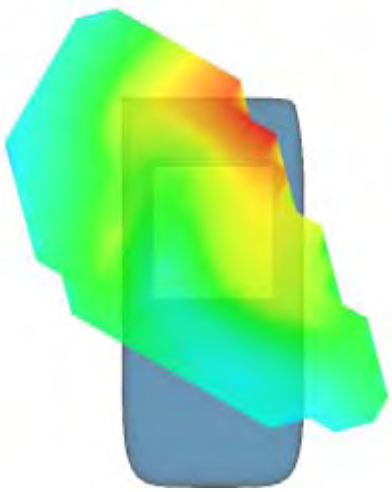
Maximum location: X=8.00, Y=-16.00

SAR 10g (W/Kg)	0.180976
SAR 1g (W/Kg)	0.363345

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3675	0.1589	0.0720	0.0342	0.0162	0.0078



3D sceen shot	Hot spot position
	

MEASUREMENT 45

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 8 minutes 34 seconds

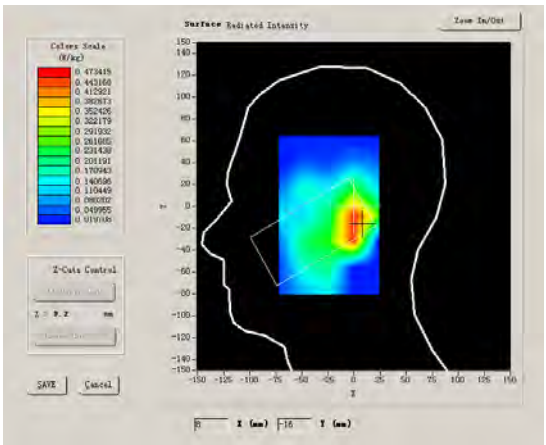
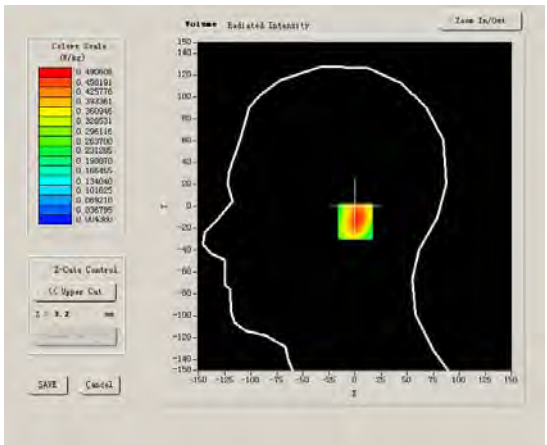
A. Experimental conditions.

Phantom File	zinf5.txt
Phantom	Right head
Device Position	Cheek
Band	US_PCS
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1175):

Frequency (MHz)	1908.750000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.475639
Power drift (%)	0.500000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

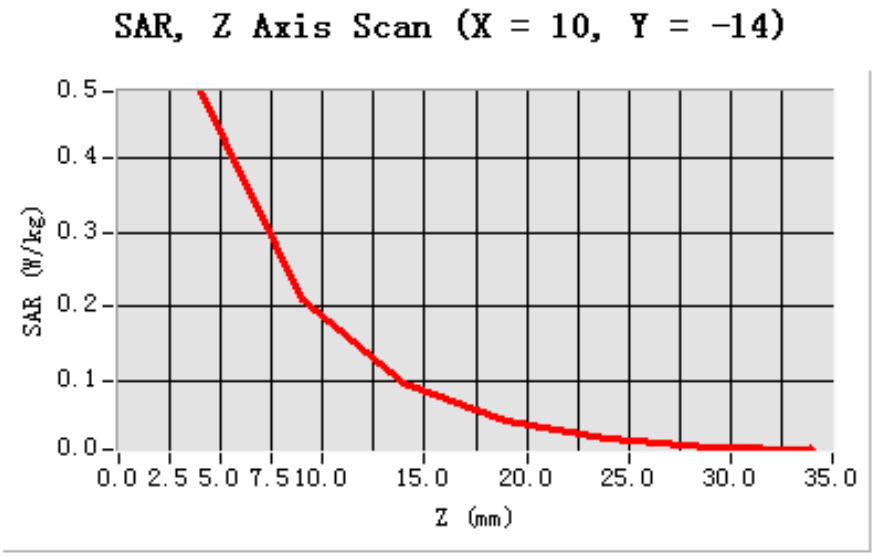
SURFACE SAR	VOLUME SAR
	

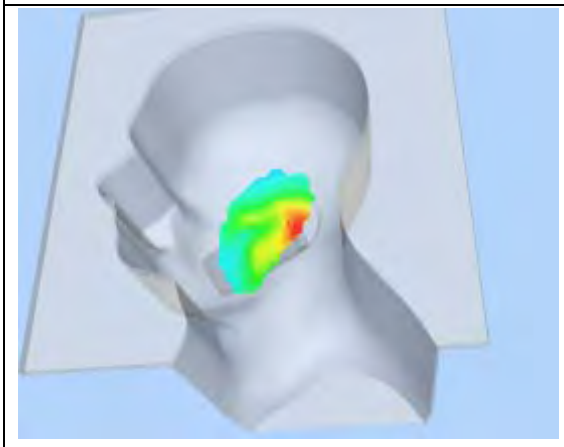
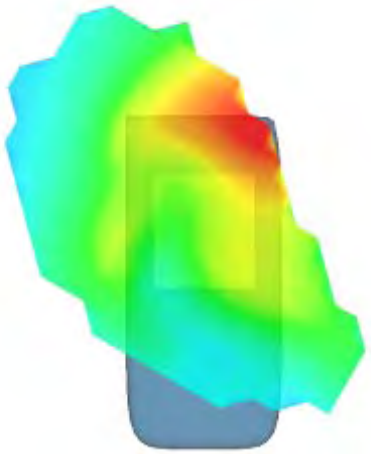
Maximum location: X=10.00, Y=-14.00

SAR 10g (W/Kg)	0.236984
SAR 1g (W/Kg)	0.471481

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4906	0.2091	0.0955	0.0459	0.0213	0.0100



3D sceen shot	Hot spot position
	

MEASUREMENT 46

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 30 seconds

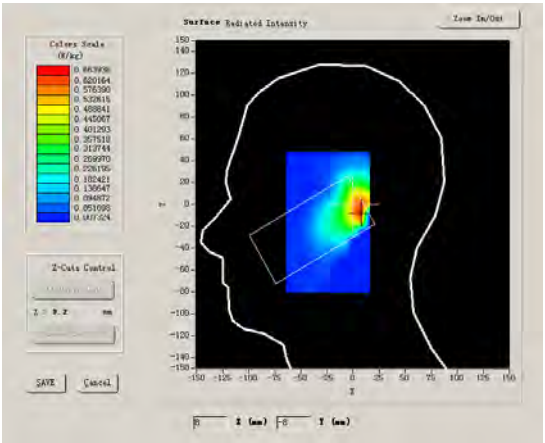
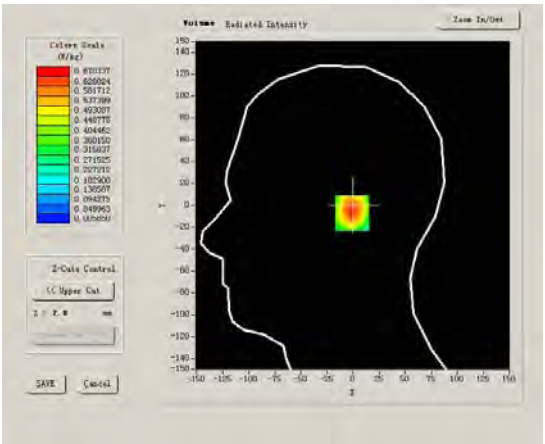
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	US_PCS
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 25):

Frequency (MHz)	1851.250000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.431186
Power drift (%)	0.350000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721

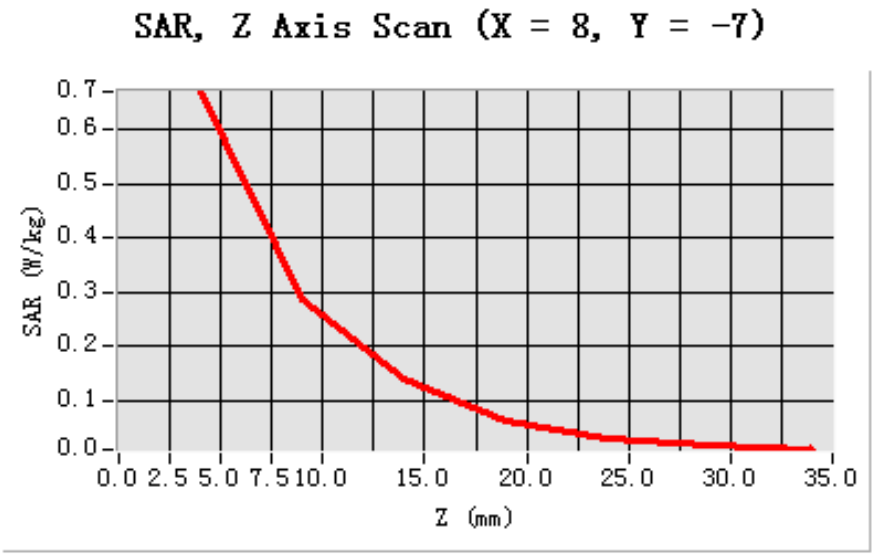
SURFACE SAR	VOLUME SAR
	

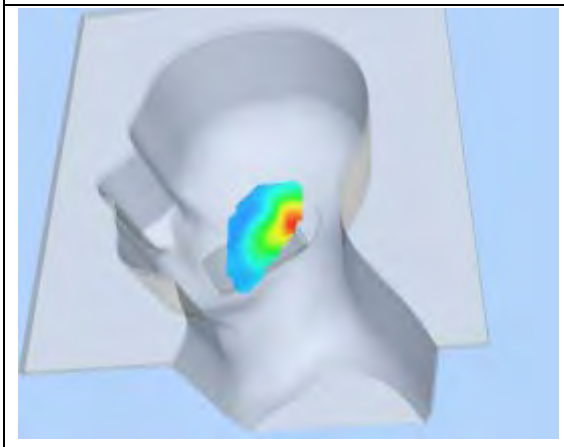
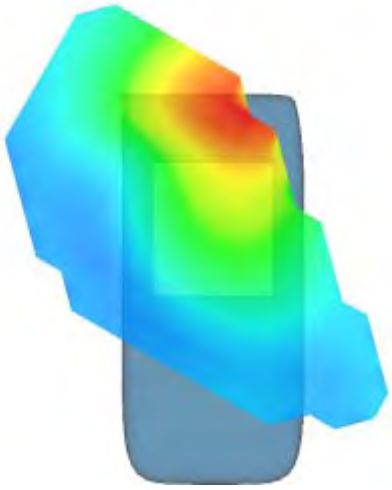
Maximum location: X=8.00, Y=-7.00

SAR 10g (W/Kg)	0.322870
SAR 1g (W/Kg)	0.643106

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6703	0.2884	0.1388	0.0640	0.0320	0.0167



3D sceen shot	Hot spot position
	

MEASUREMENT 47

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 27 seconds

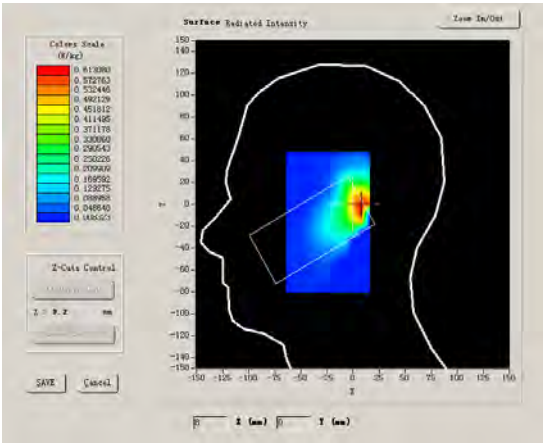
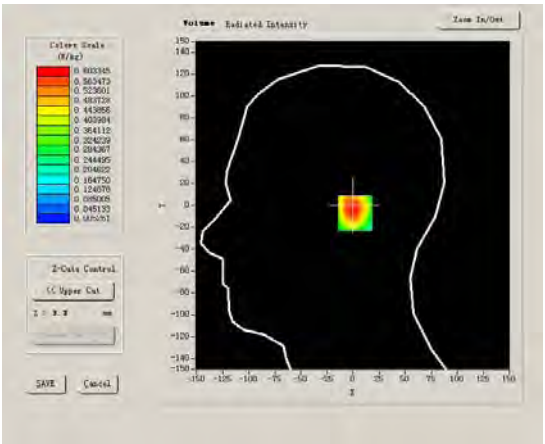
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	US_PCS
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 600):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.453412
Power drift (%)	0.430000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

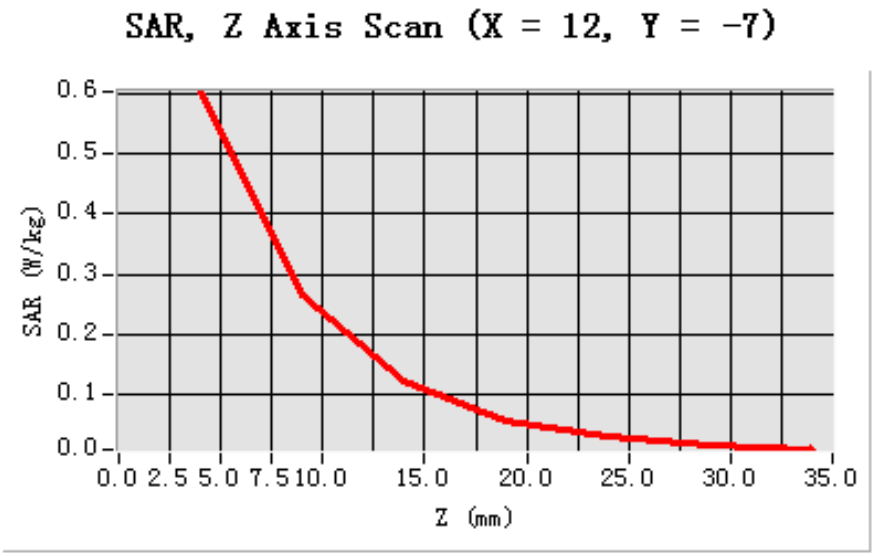
SURFACE SAR	VOLUME SAR
	

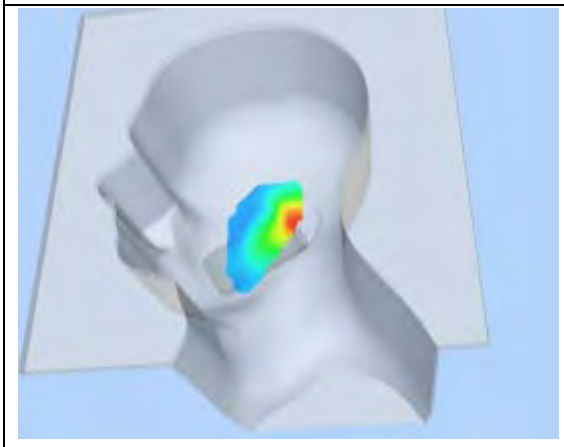
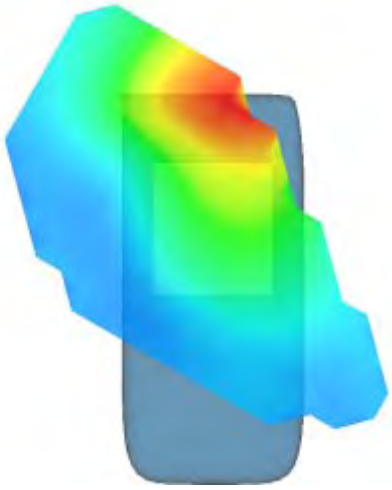
Maximum location: X=12.00, Y=-7.00

SAR 10g (W/Kg)	0.300881
SAR 1g (W/Kg)	0.598486

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6033	0.2652	0.1210	0.0578	0.0286	0.0148



3D sceen shot	Hot spot position
	

MEASUREMENT 48

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 29 seconds

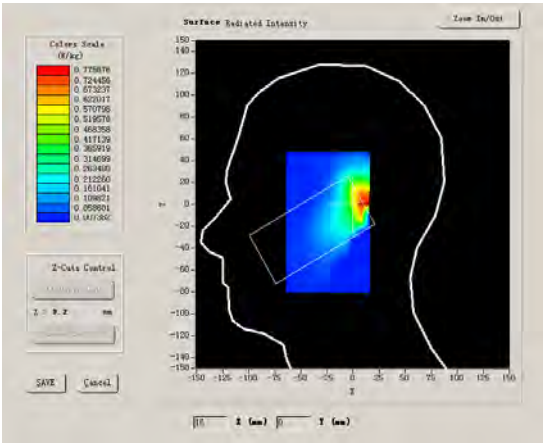
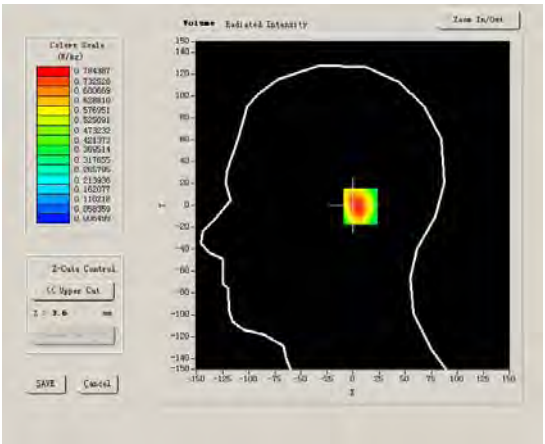
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	US_PCS
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1175):

Frequency (MHz)	1908.750000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.475639
Power drift (%)	0.870000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

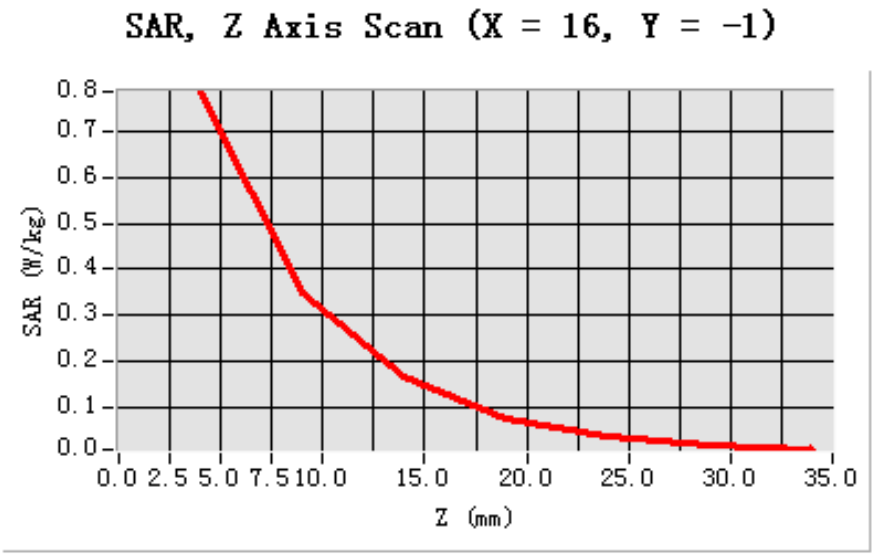
SURFACE SAR	VOLUME SAR
	

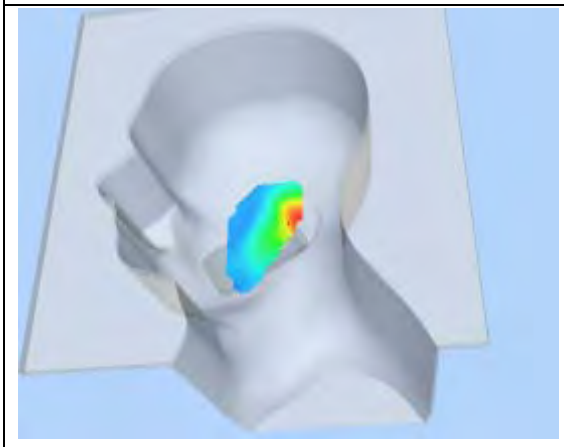
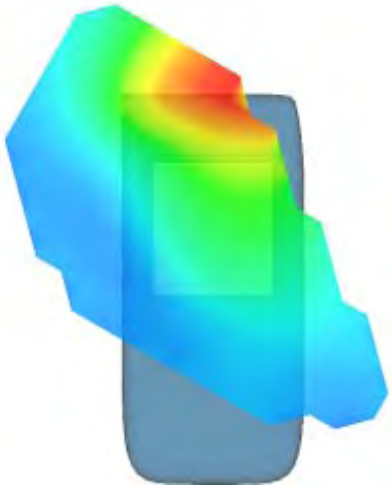
Maximum location: X=16.00, Y=-1.00

SAR 10g (W/Kg)	0.384169
SAR 1g (W/Kg)	0.764145

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7844	0.3515	0.1665	0.0778	0.0370	0.0195



3D sceen shot	Hot spot position
	

MEASUREMENT 49

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 28 seconds

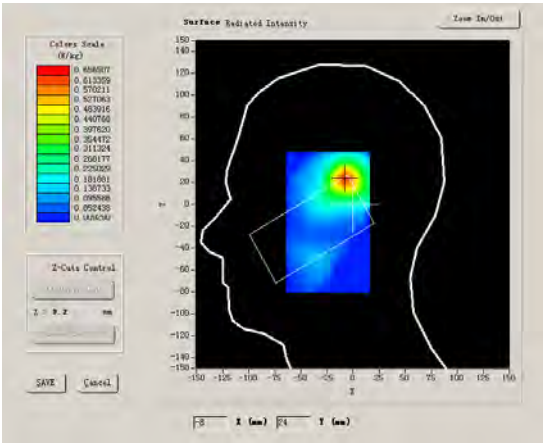
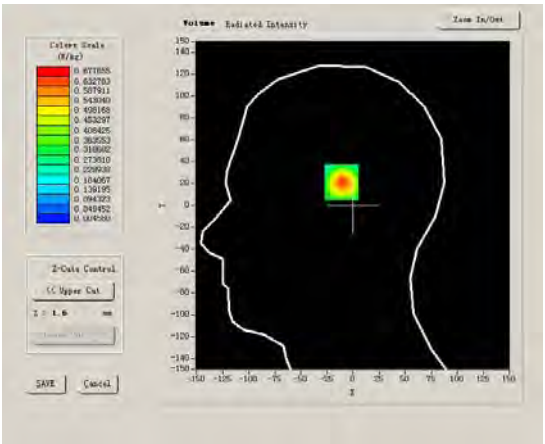
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Cheek
Band	US_PCS
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 25):

Frequency (MHz)	1851.250000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.431186
Power drift (%)	2.220000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

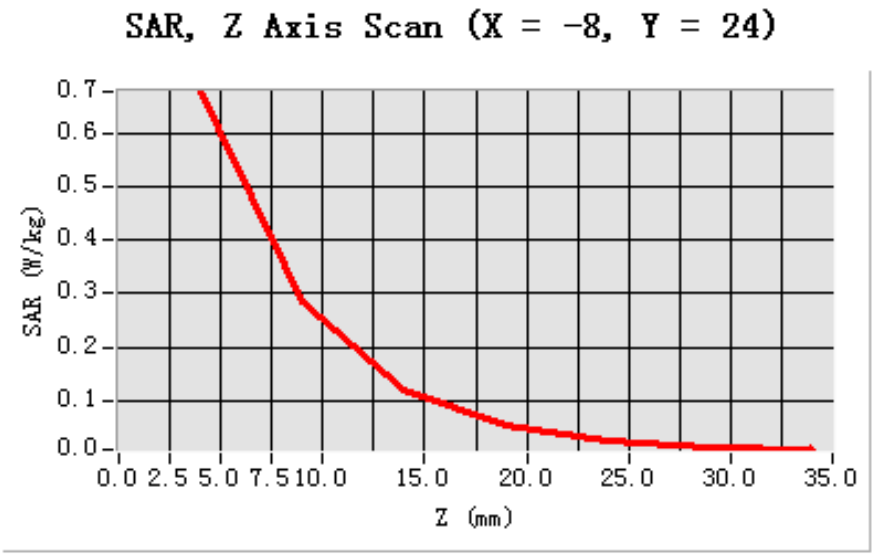
SURFACE SAR	VOLUME SAR
	

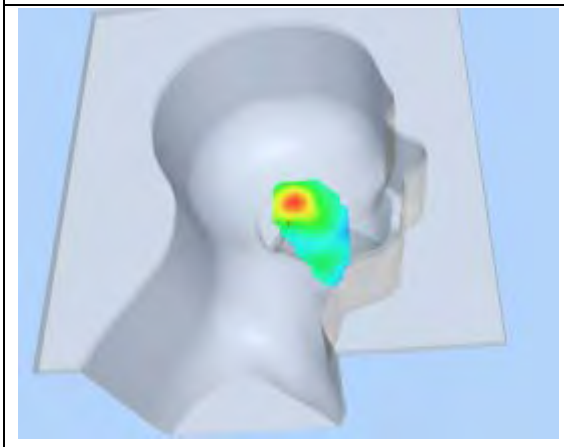
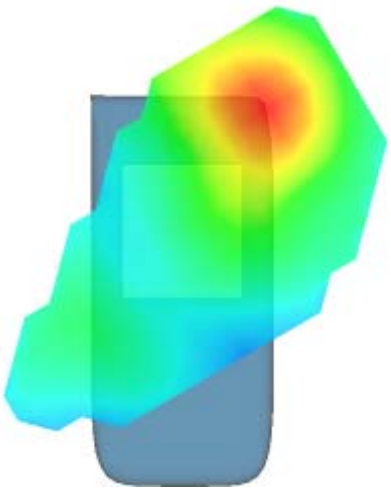
Maximum location: X=-8.00, Y=24.00

SAR 10g (W/Kg)	0.296744
SAR 1g (W/Kg)	0.633808

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6777	0.2845	0.1192	0.0531	0.0234	0.0129



3D sceen shot	Hot spot position
	

MEASUREMENT 50

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 21 seconds

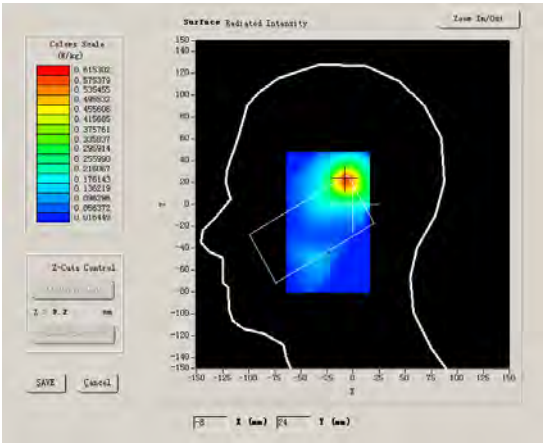
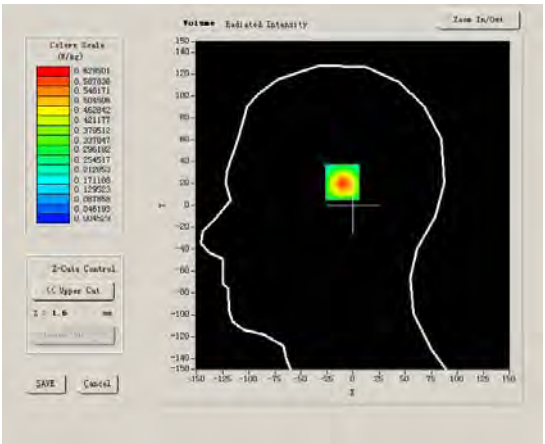
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Cheek
Band	US_PCS
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 600):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.453412
Power drift (%)	-1.600000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

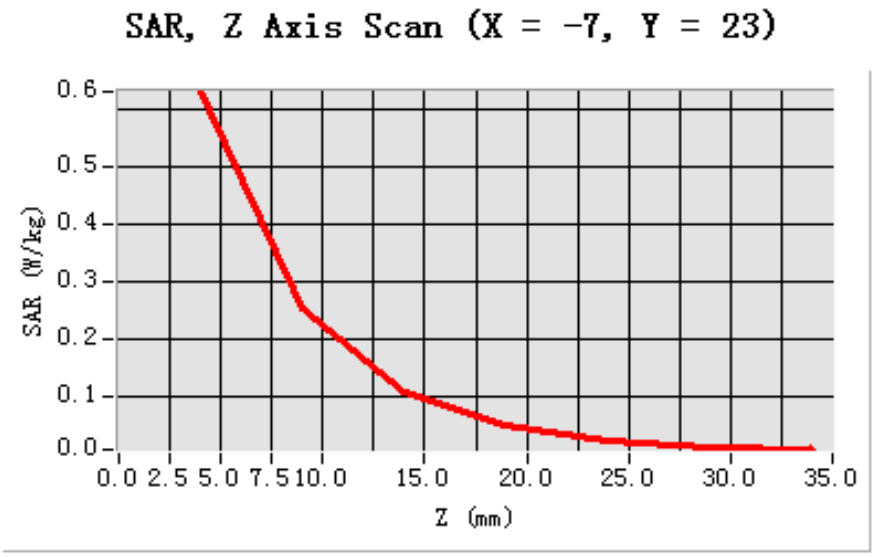
SURFACE SAR	VOLUME SAR
	

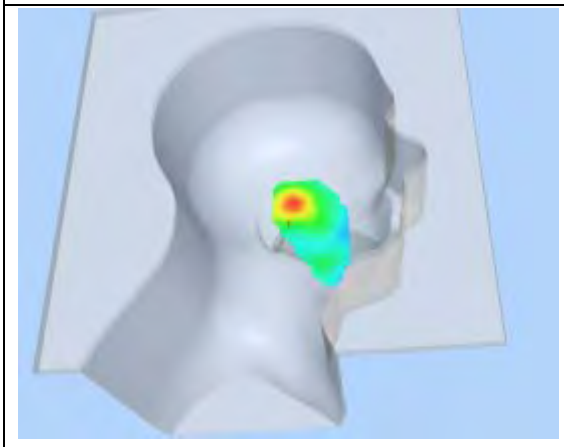
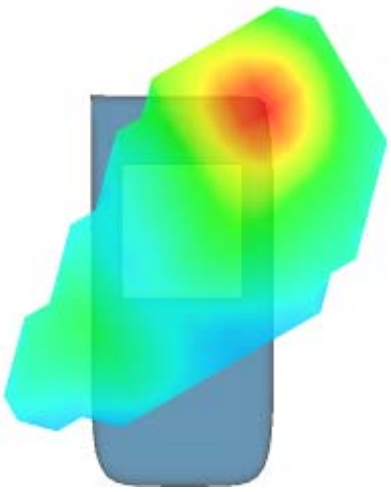
Maximum location: X=-7.00, Y=23.00

SAR 10g (W/Kg)	0.271574
SAR 1g (W/Kg)	0.588628

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6295	0.2535	0.1079	0.0485	0.0223	0.0117



3D sceen shot	Hot spot position
	

MEASUREMENT 51

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 22 seconds

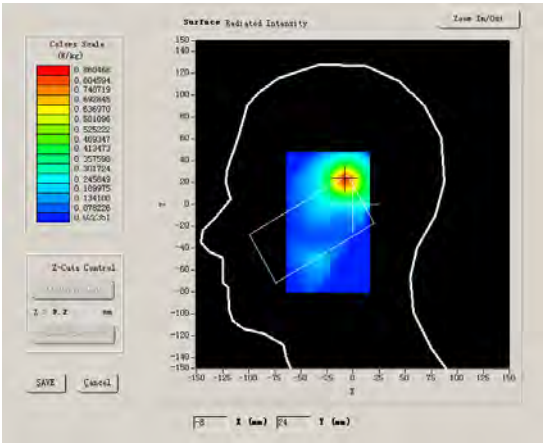
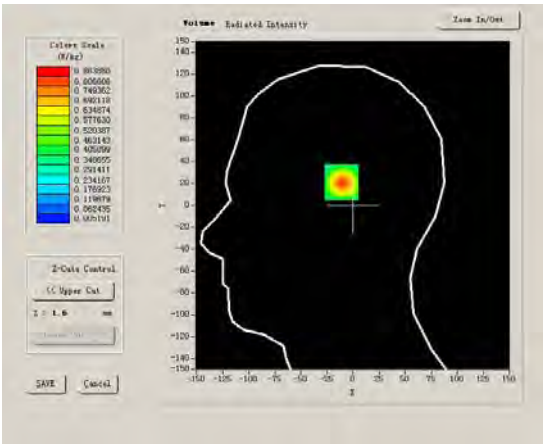
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Cheek
Band	US_PCS
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1175):

Frequency (MHz)	1908.750000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.475639
Power drift (%)	1.730000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

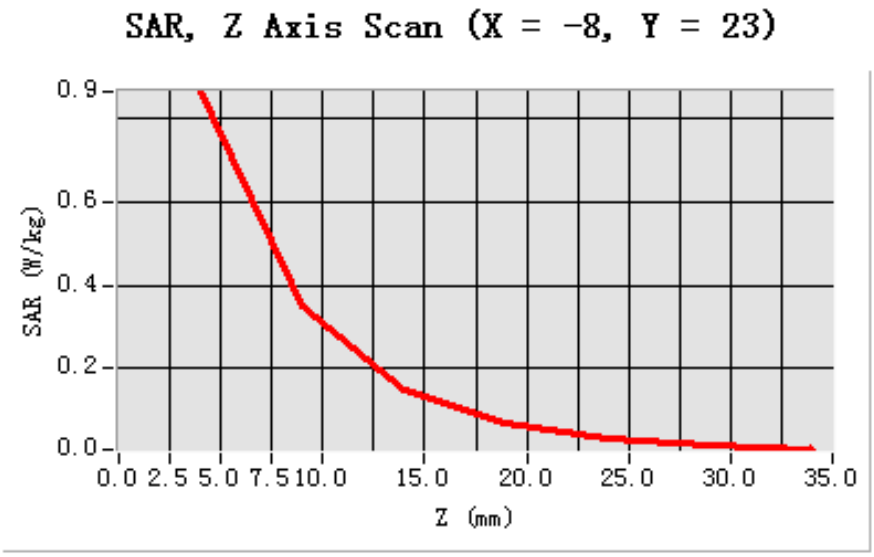
SURFACE SAR	VOLUME SAR
	

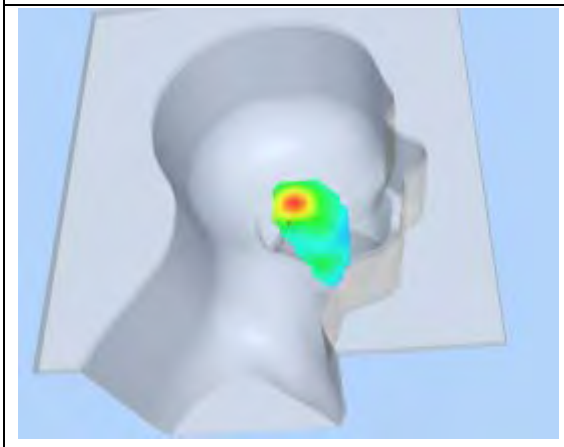
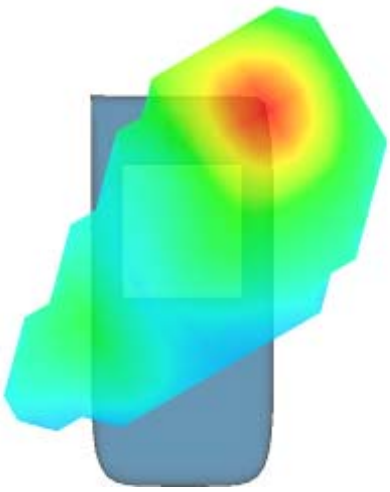
Maximum location: X=-8.00, Y=23.00

SAR 10g (W/Kg)	0.376721
SAR 1g (W/Kg)	0.810732

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8639	0.3487	0.1518	0.0687	0.0307	0.0154



3D sceen shot	Hot spot position
	

MEASUREMENT 52

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 27 seconds

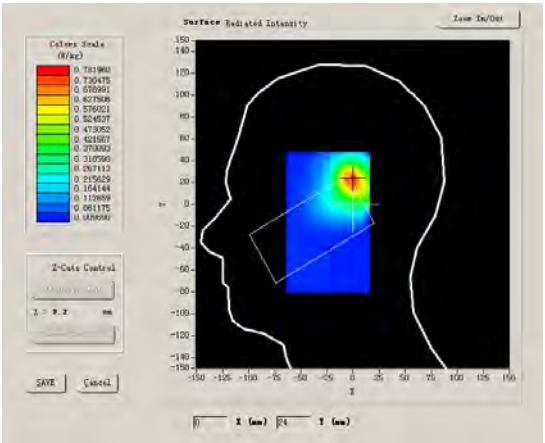
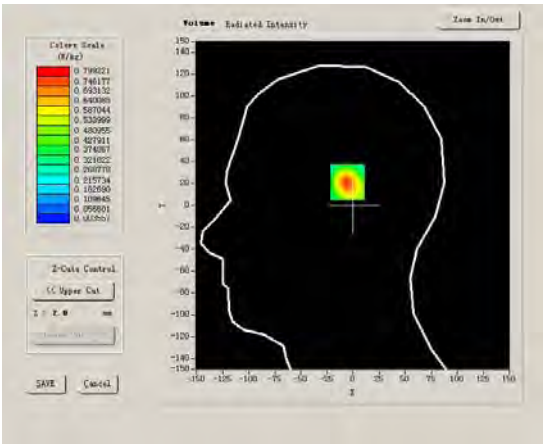
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	US_PCS
Channels	Low
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 25):

Frequency (MHz)	1851.250000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.431186
Power drift (%)	1.260000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

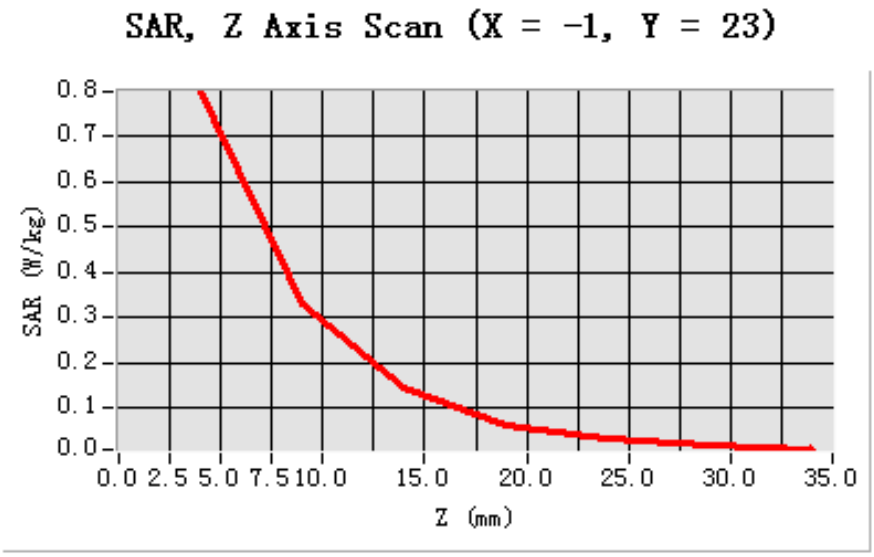
SURFACE SAR	VOLUME SAR
	

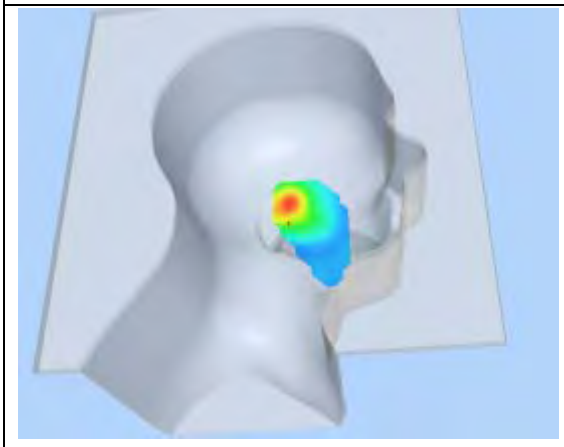
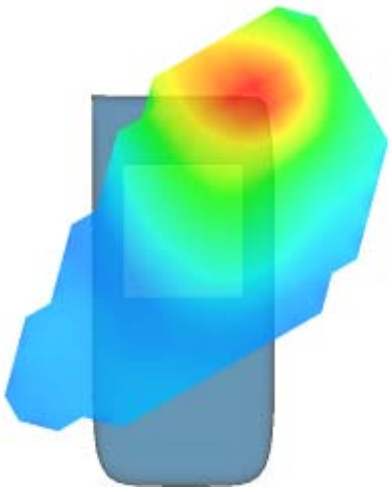
Maximum location: X=-1.00, Y=23.00

SAR 10g (W/Kg)	0.352574
SAR 1g (W/Kg)	0.749713

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7992	0.3299	0.1433	0.0632	0.0297	0.0159



3D sceen shot	Hot spot position
	

MEASUREMENT 53

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 36 seconds

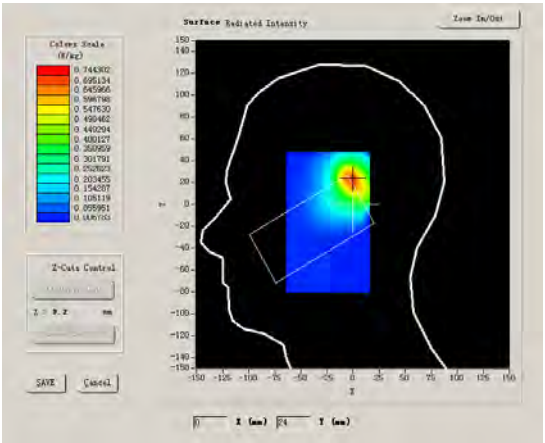
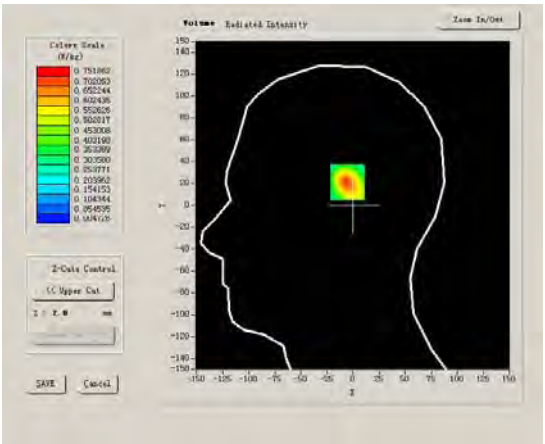
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	US_PCS
Channels	Middle
Signal	CDMA

B. SAR Measurement Results

Middle Band SAR (Channel 600):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.453412
Power drift (%)	-1.130000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

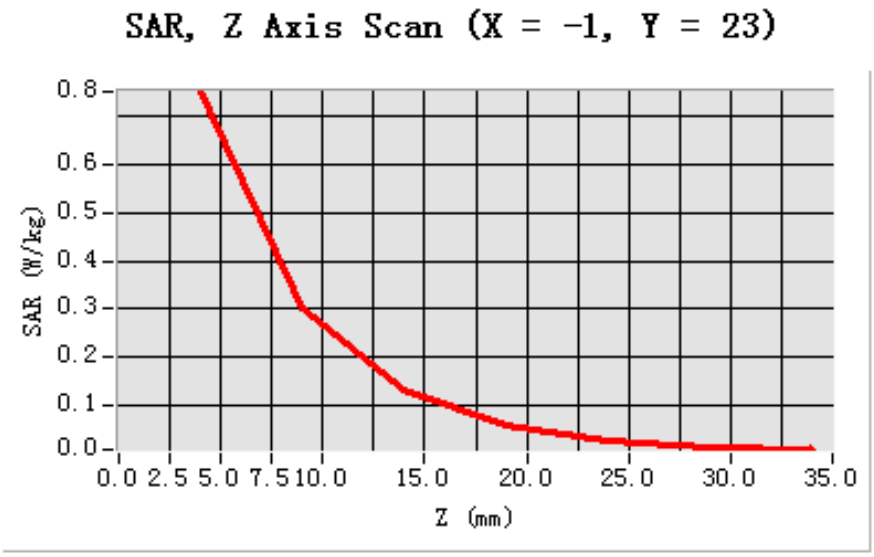
SURFACE SAR	VOLUME SAR
	

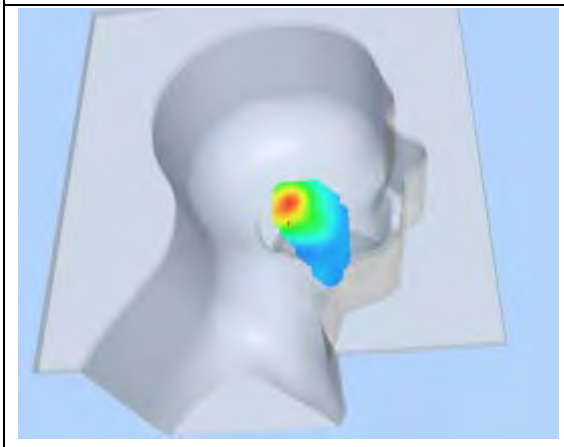
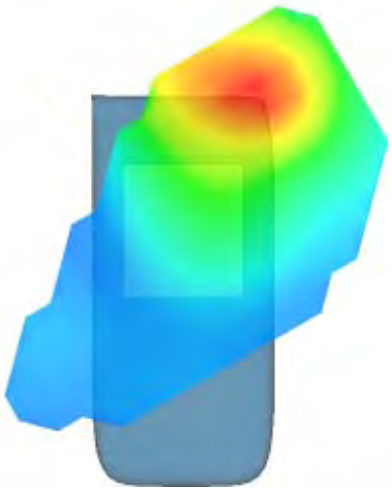
Maximum location: X=-1.00, Y=23.00

SAR 10g (W/Kg)	0.332006
SAR 1g (W/Kg)	0.703677

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7519	0.3033	0.1312	0.0579	0.0259	0.0126



3D sceen shot	Hot spot position
	

MEASUREMENT 54

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 29 seconds

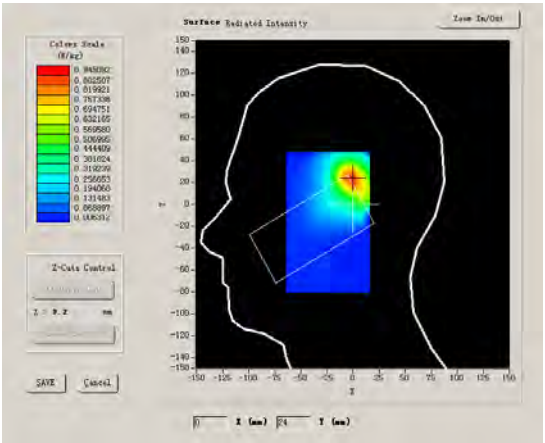
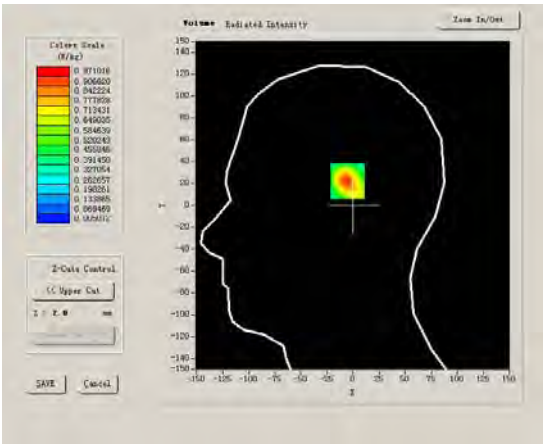
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	US_PCS
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1175):

Frequency (MHz)	1908.750000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.475639
Power drift (%)	1.150000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

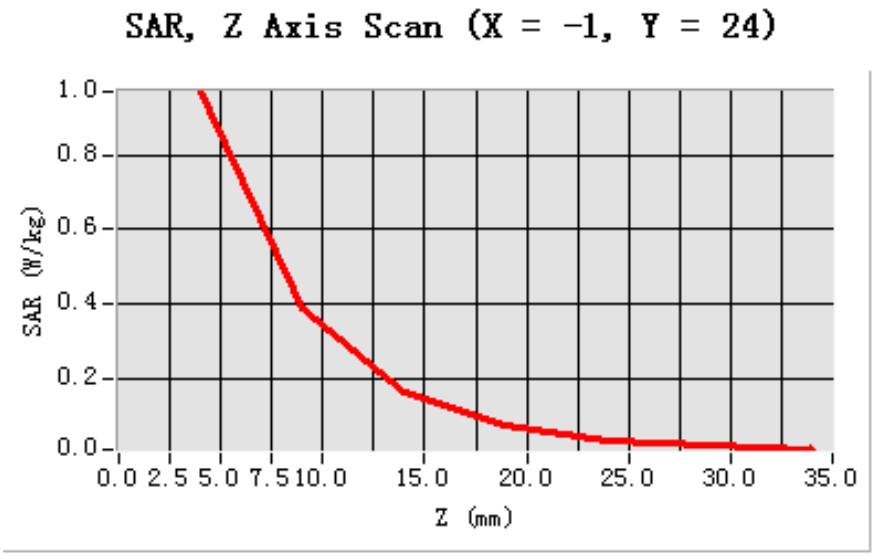
SURFACE SAR	VOLUME SAR
	

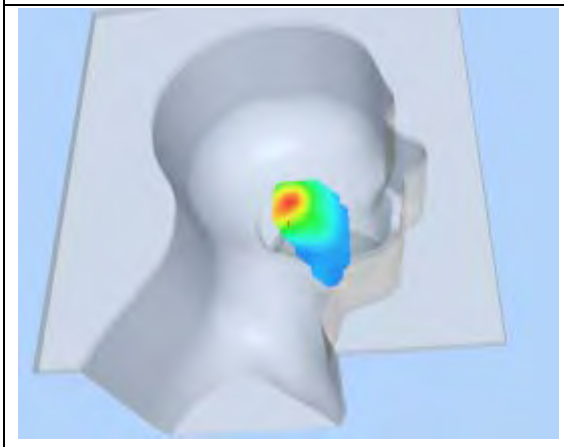
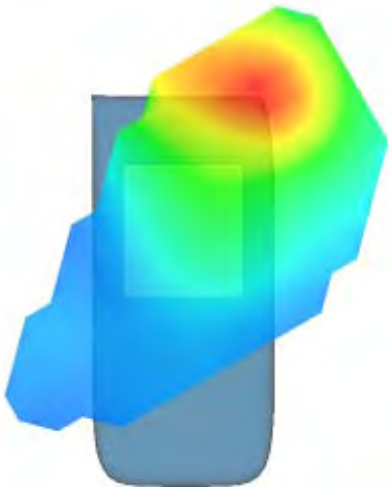
Maximum location: X=-1.00, Y=24.00

SAR 10g (W/Kg)	0.425652
SAR 1g (W/Kg)	0.908228

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9710	0.3896	0.1649	0.0725	0.0334	0.0173



3D sceen shot	Hot spot position
	

MEASUREMENT 55

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 12 seconds

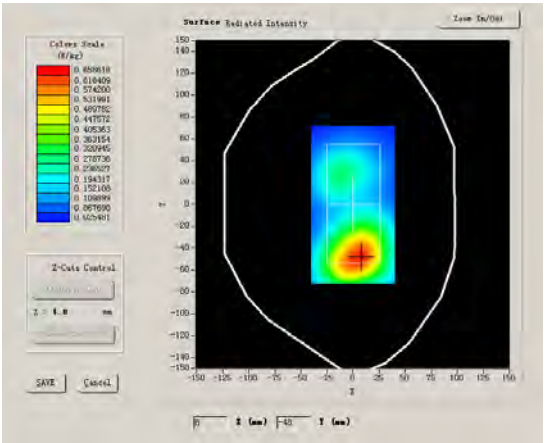
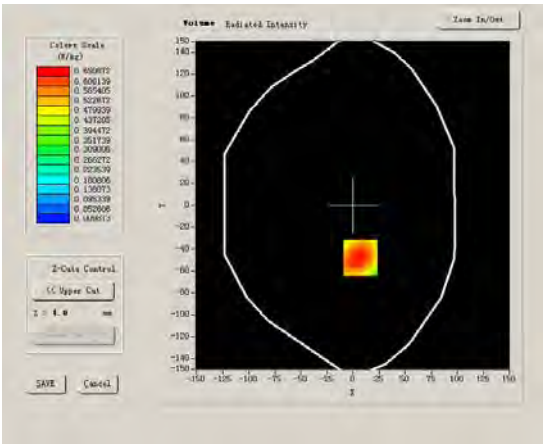
A. Experimental conditions.

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

B. SAR Measurement Results

Lower Band SAR (Channel 25):

Frequency (MHz)	1851.250000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.523949
Power drift (%)	0.330000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

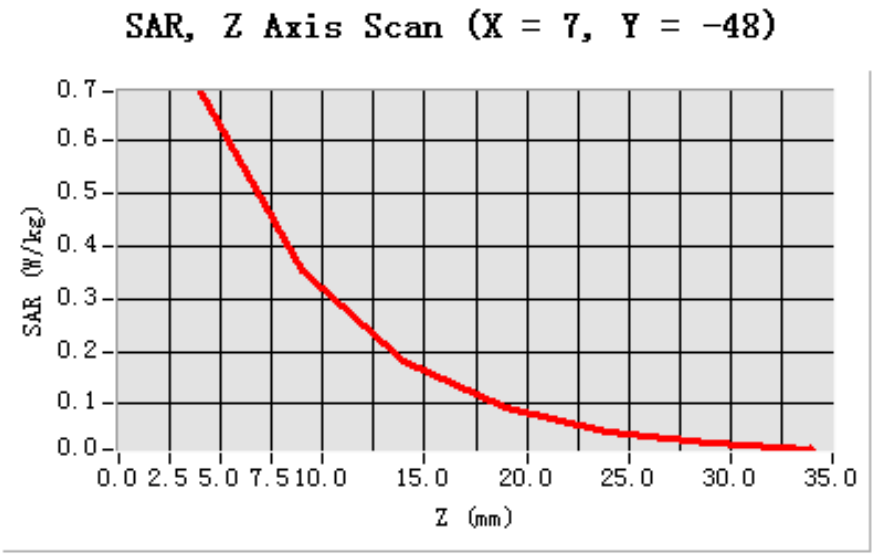
SURFACE SAR	VOLUME SAR
	

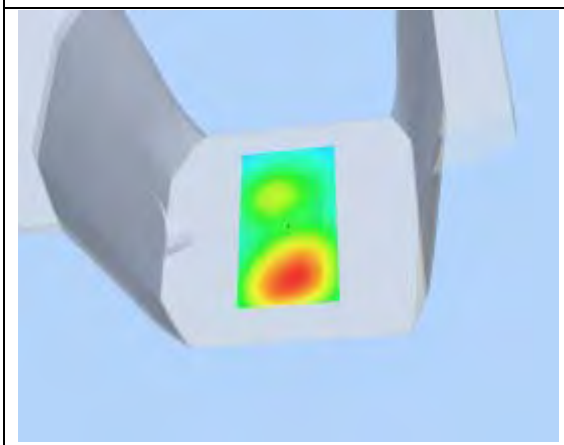
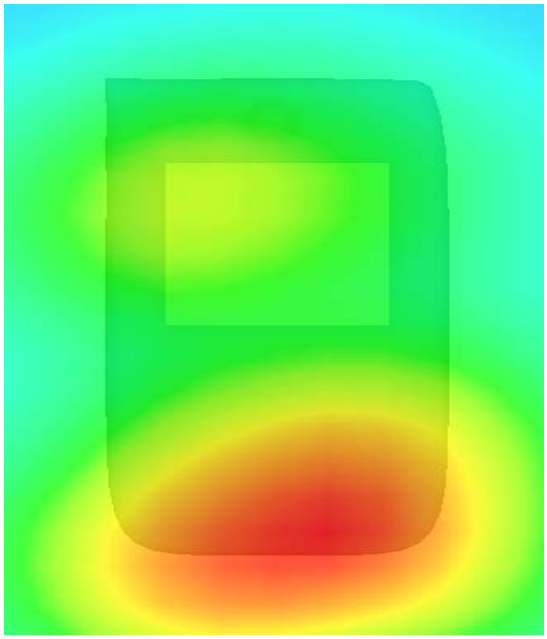
Maximum location: X=7.00, Y=-48.00

SAR 10g (W/Kg)	0.369739
SAR 1g (W/Kg)	0.671117

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6931	0.3539	0.1813	0.0922	0.0490	0.0265



3D sceen shot	Hot spot position
	

MEASUREMENT 56

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 10 seconds

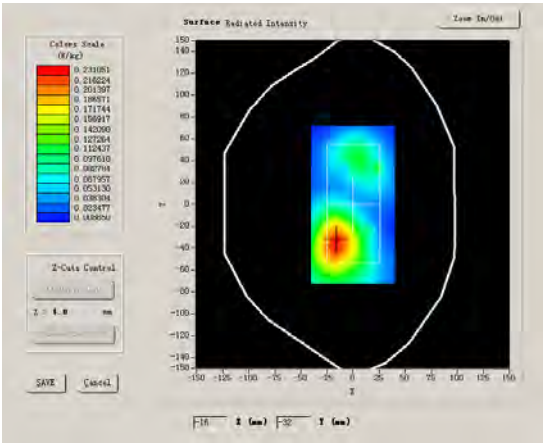
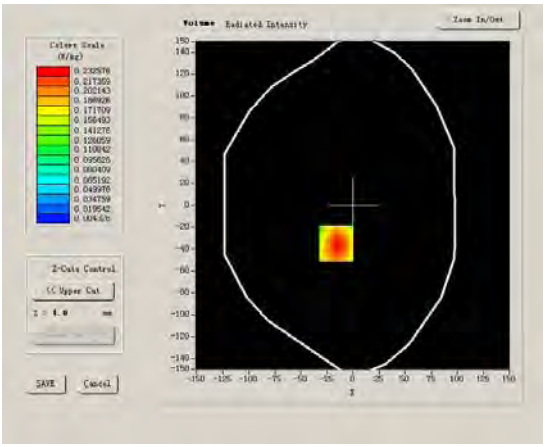
A. Experimental conditions.

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

B. SAR Measurement Results

Lower Band SAR (Channel 25):

Frequency (MHz)	1851.250000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.523949
Power drift (%)	-0.300000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

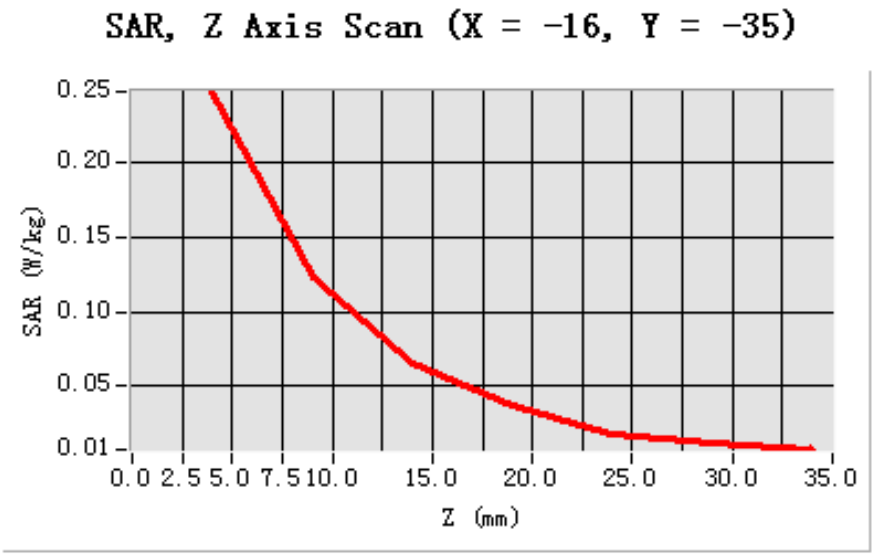
SURFACE SAR	VOLUME SAR
	

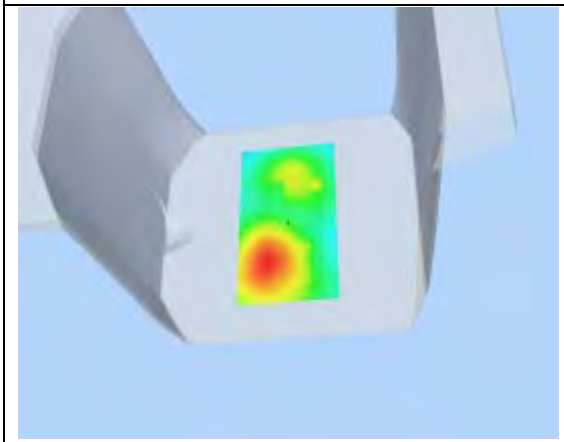
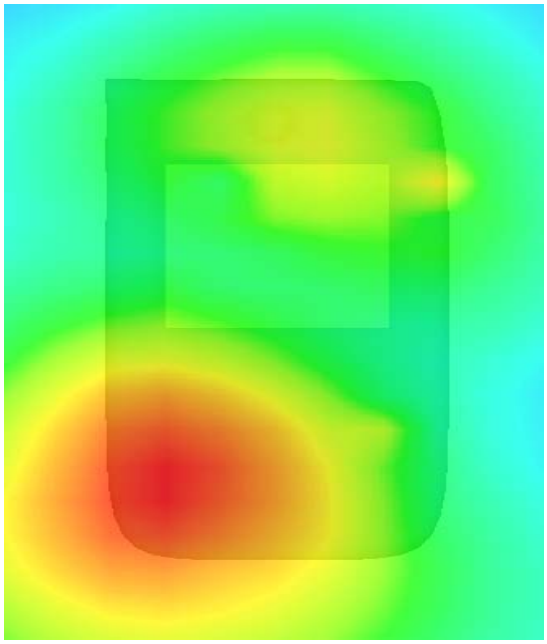
Maximum location: X=-16.00, Y=-35.00

SAR 10g (W/Kg)	0.130080
SAR 1g (W/Kg)	0.238362

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2477	0.1238	0.0647	0.0373	0.0181	0.0117



3D sceen shot	Hot spot position
	

MEASUREMENT 57

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 10 seconds

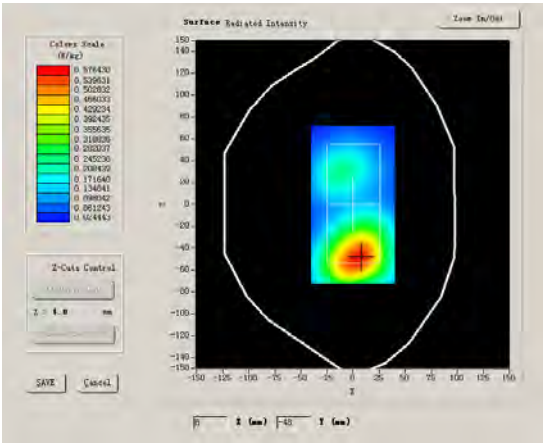
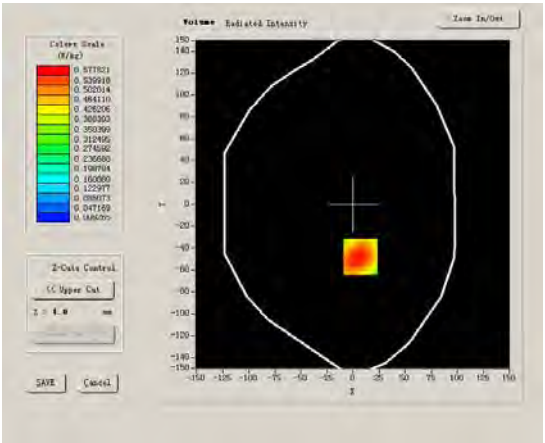
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 600):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.547616
Power drift (%)	-0.070000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

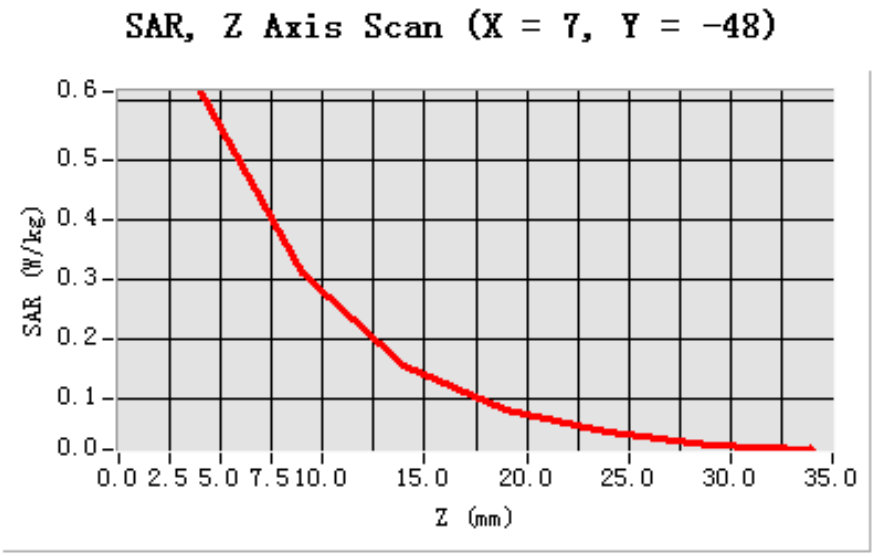
SURFACE SAR	VOLUME SAR
	

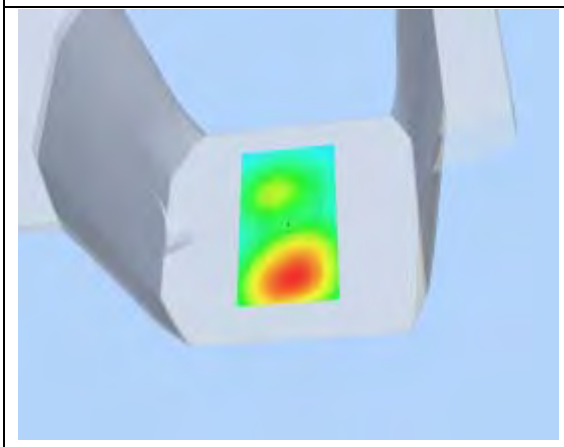
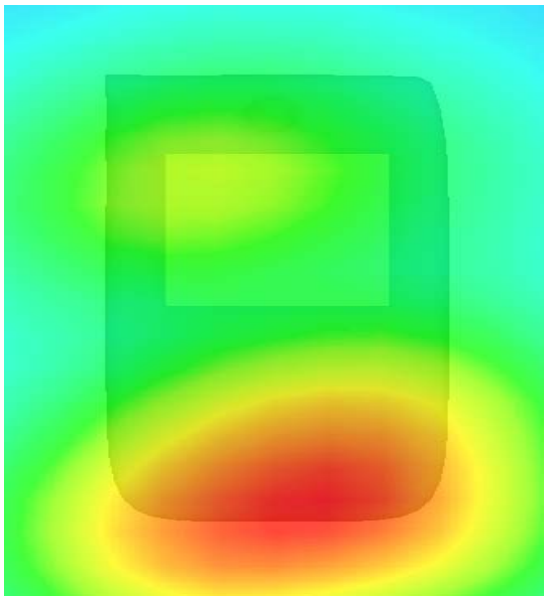
Maximum location: X=7.00, Y=-48.00

SAR 10g (W/Kg)	0.327101
SAR 1g (W/Kg)	0.595740

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6153	0.3114	0.1556	0.0795	0.0419	0.0231



3D sceen shot	Hot spot position
	

MEASUREMENT 58

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 11 seconds

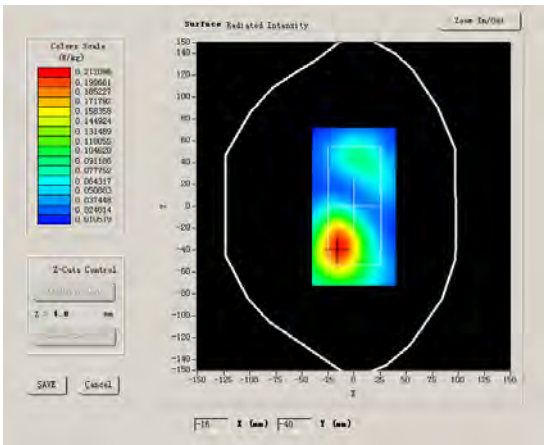
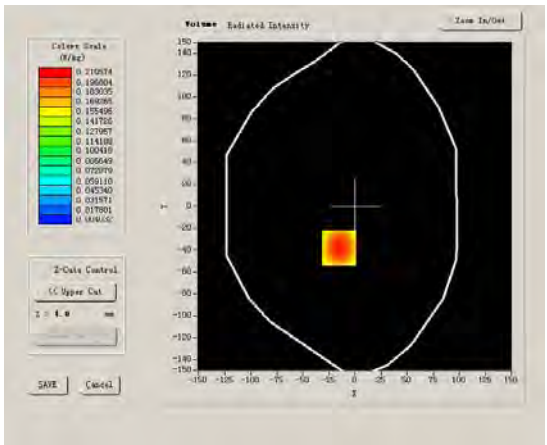
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 600):

Frequency (MHz)	1880.000000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.547616
Power drift (%)	-1.240000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

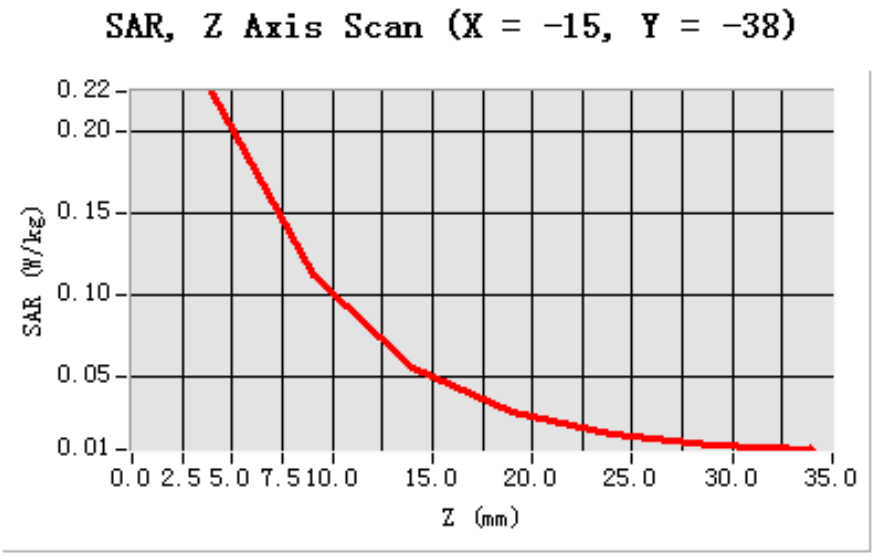
SURFACE SAR	VOLUME SAR
	

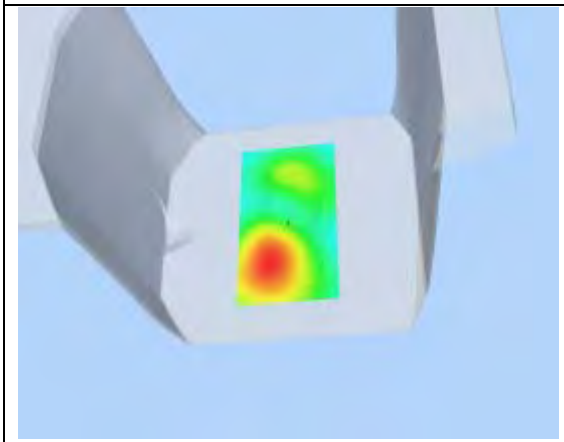
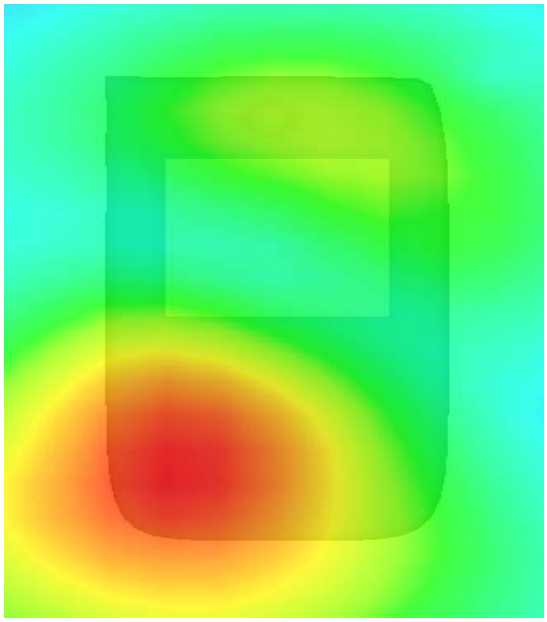
Maximum location: X=-15.00, Y=-38.00

SAR 10g (W/Kg)	0.119605
SAR 1g (W/Kg)	0.216038

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2242	0.1131	0.0562	0.0289	0.0161	0.0094



3D sceen shot	Hot spot position
	

MEASUREMENT 59

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 15 seconds

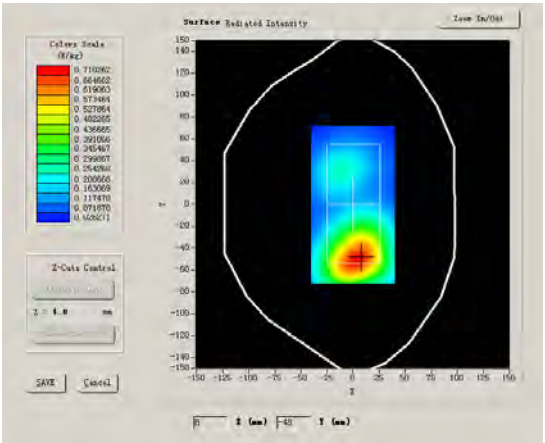
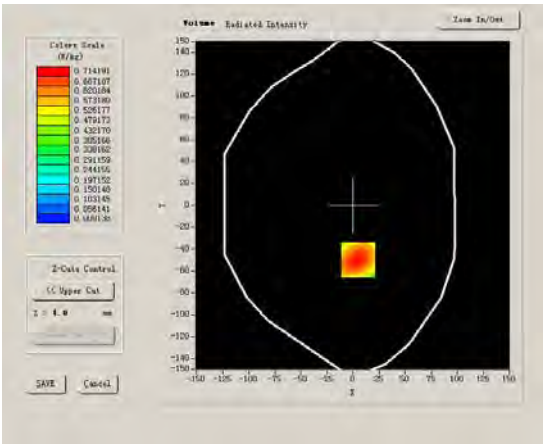
A. Experimental conditions.

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

B. SAR Measurement Results

Higher Band SAR (Channel 1175):

Frequency (MHz)	1908.750000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.571283
Power drift (%)	-0.110000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

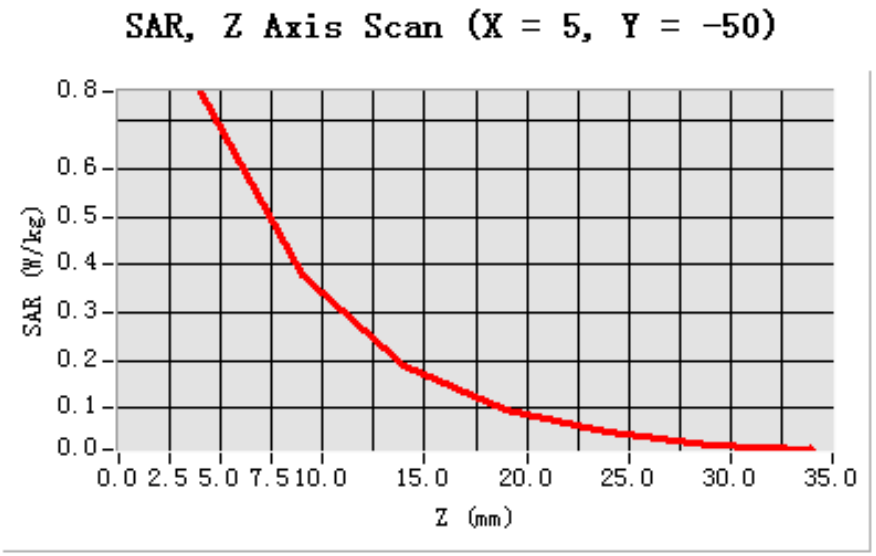
SURFACE SAR	VOLUME SAR
	

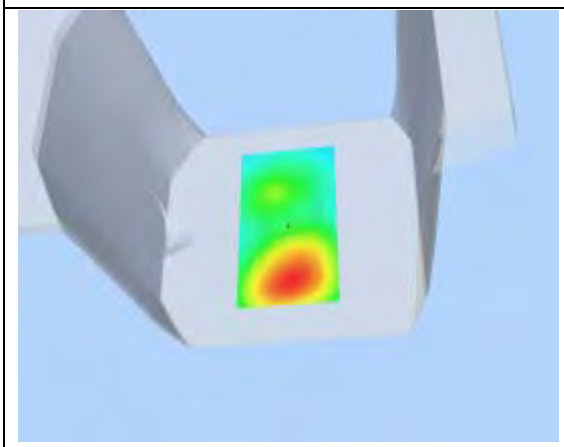
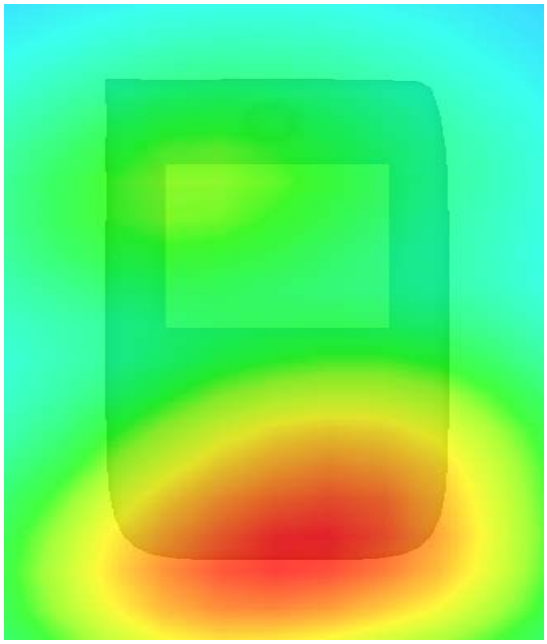
Maximum location: X=5.00, Y=-50.00

SAR 10g (W/Kg)	0.402655
SAR 1g (W/Kg)	0.738487

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7605	0.3799	0.1913	0.0971	0.0500	0.0231



3D sceen shot	Hot spot position
	

MEASUREMENT 60

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 11 seconds

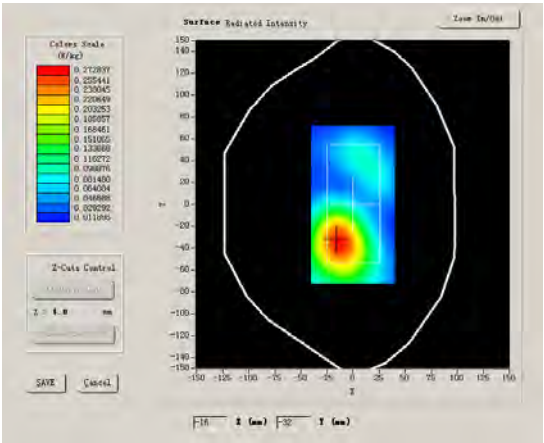
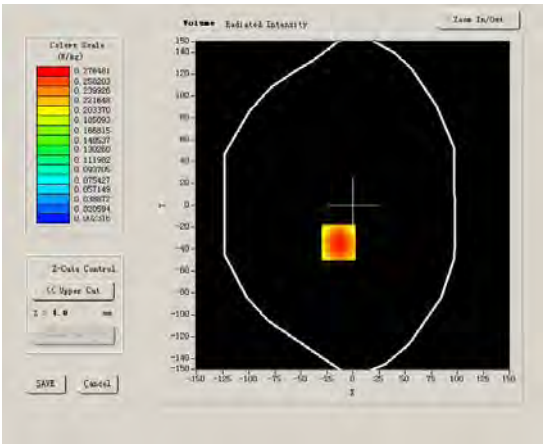
A. Experimental conditions.

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

B. SAR Measurement Results

Higher Band SAR (Channel 1175):

Frequency (MHz)	1908.750000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.571283
Power drift (%)	-1.299988
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

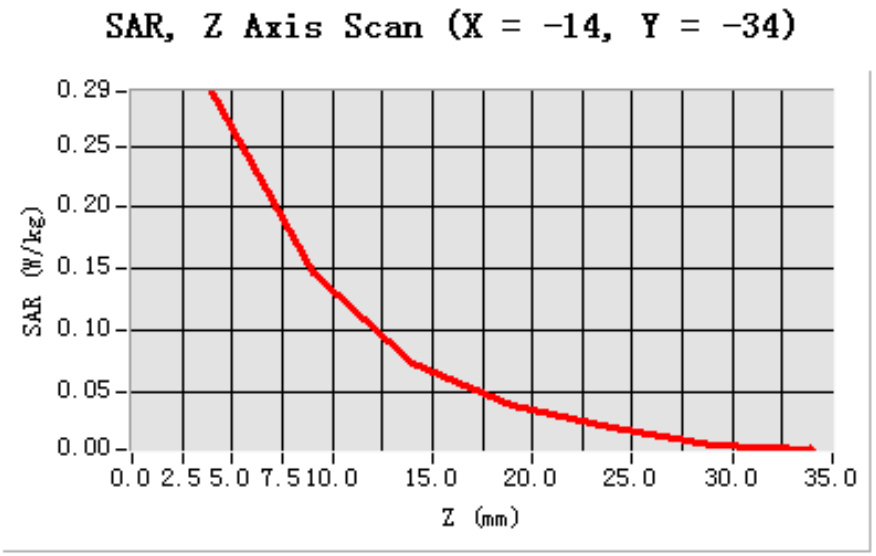
SURFACE SAR	VOLUME SAR
	

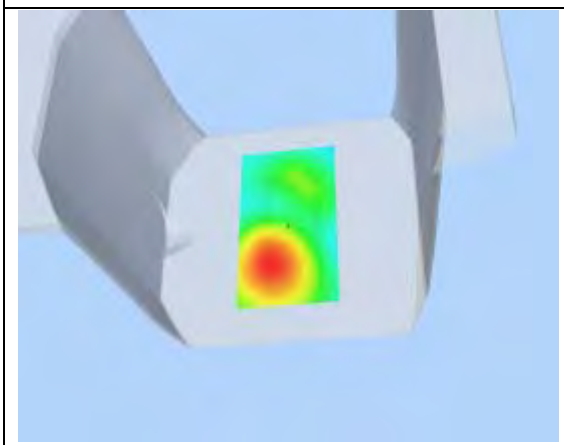
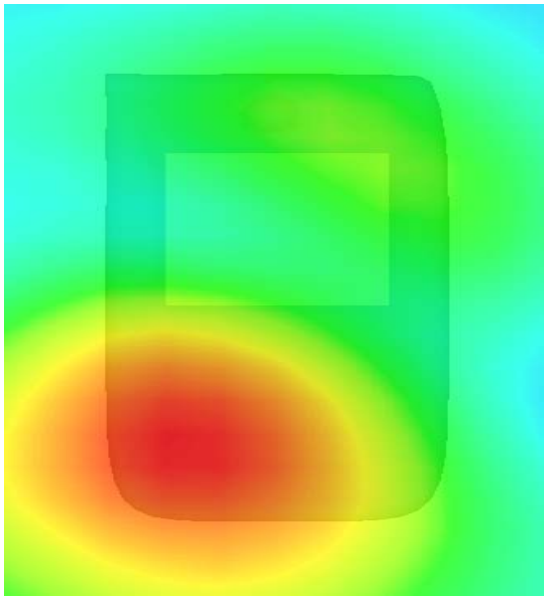
Maximum location: X=-14.00, Y=-34.00

SAR 10g (W/Kg)	0.157050
SAR 1g (W/Kg)	0.285781

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2944	0.1472	0.0729	0.0388	0.0201	0.0072



3D sceen shot	Hot spot position
	

MEASUREMENT 61

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 17 seconds

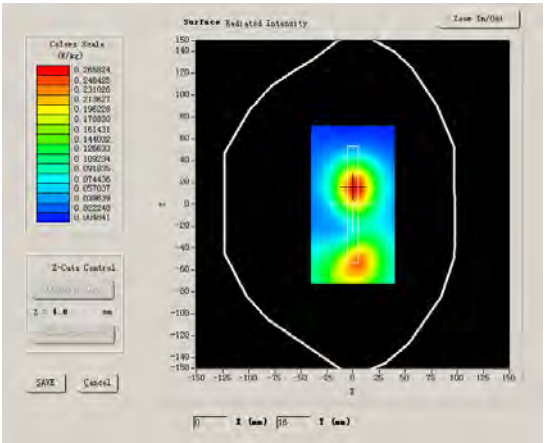
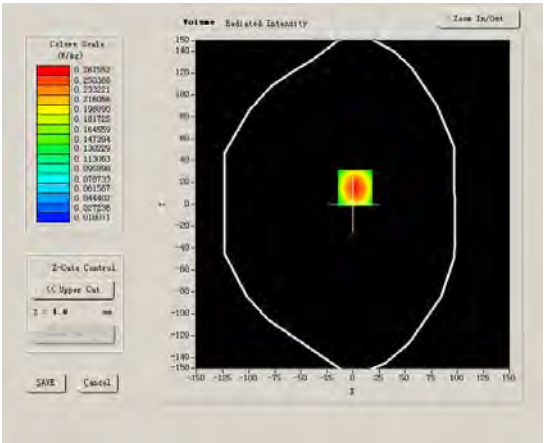
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS
Channels	Low (Edge B)
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 25):

Frequency (MHz)	1851.250000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.547616
Power Drift (%)	0.190000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

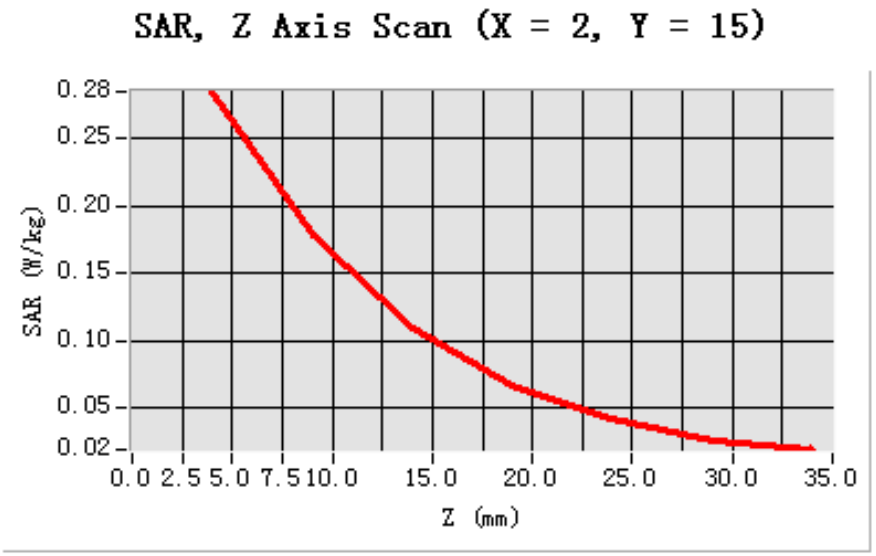
SURFACE SAR	VOLUME SAR
	

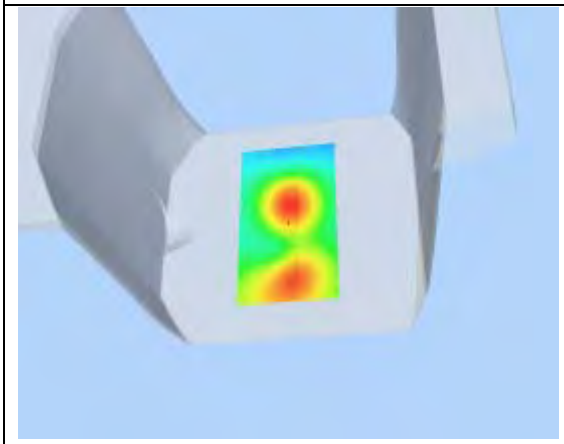
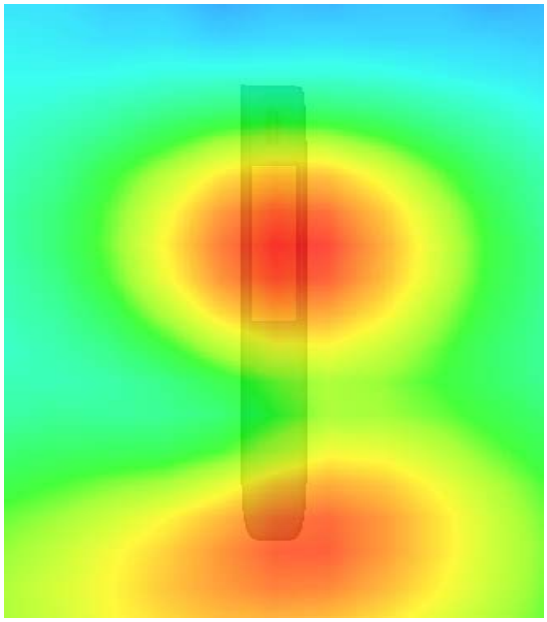
Maximum location: X=2.00, Y=15.00

SAR 10g (W/Kg)	0.161124
SAR 1g (W/Kg)	0.269521

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2849	0.1777	0.1103	0.0663	0.0432	0.0268



3D sceen shot	Hot spot position
	

MEASUREMENT 62

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 17 seconds

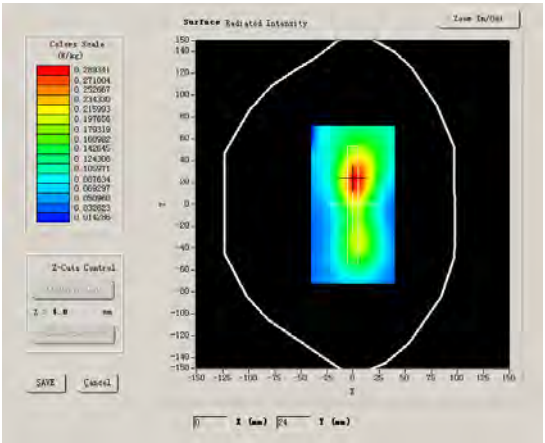
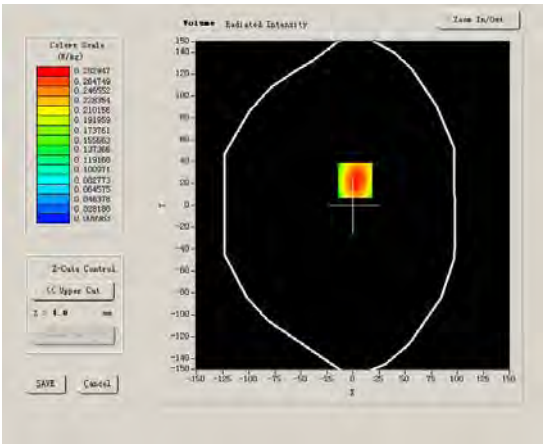
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS
Channels	Low (Edge D)
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 25):

Frequency (MHz)	1851.250000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.547616
Power Drift (%)	-2.430000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

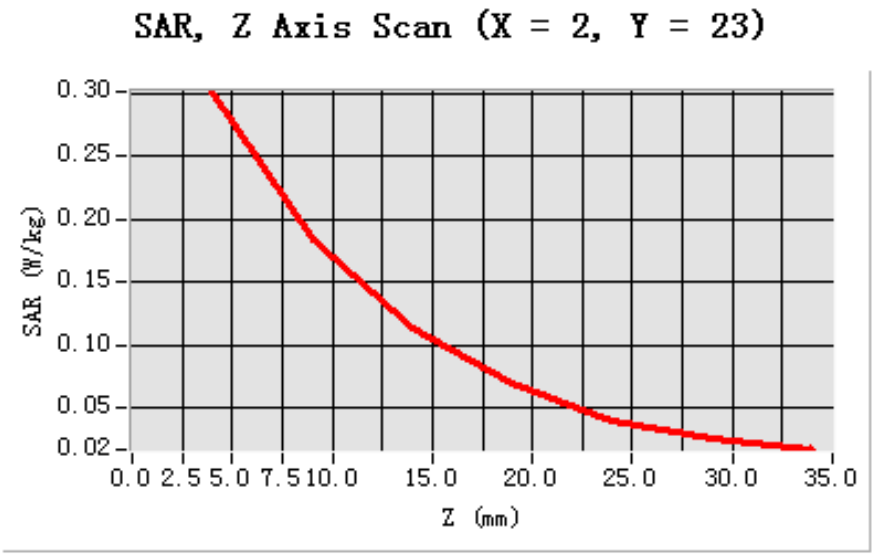
SURFACE SAR	VOLUME SAR
	

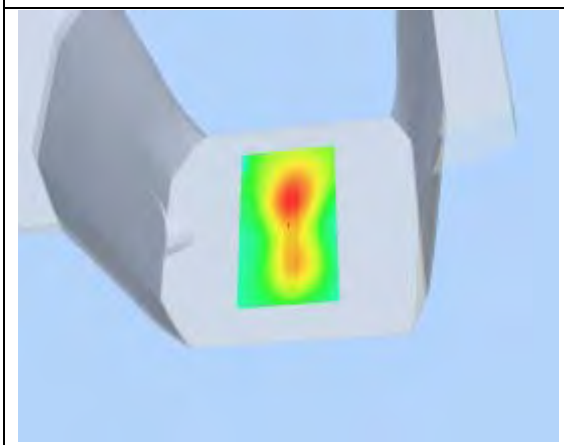
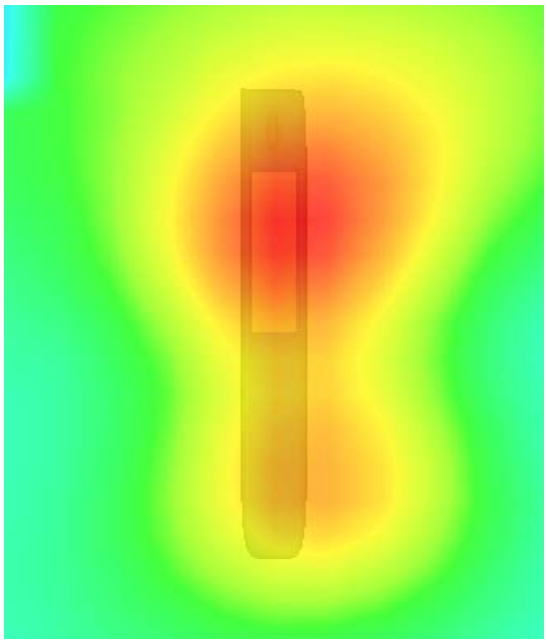
Maximum location: X=2.00, Y=23.00

SAR 10g (W/Kg)	0.172801
SAR 1g (W/Kg)	0.288534

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3013	0.1828	0.1137	0.0699	0.0393	0.0256



3D sceen shot	Hot spot position
	

MEASUREMENT 63

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 7 seconds

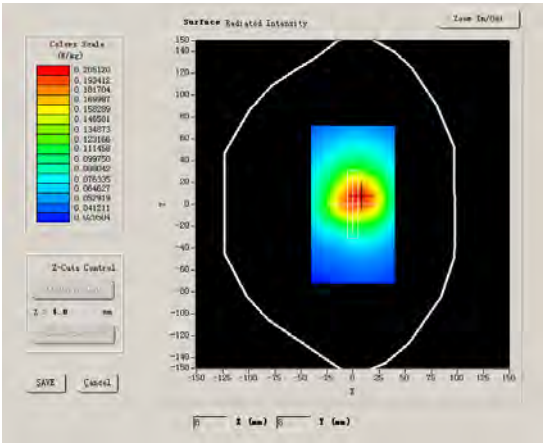
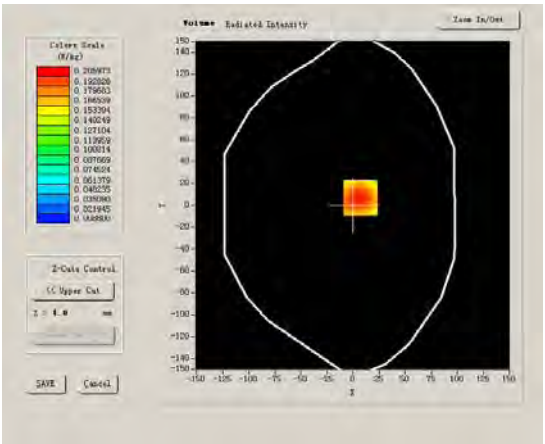
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS
Channels	Low (Edge A)
Signal	CDMA

B. SAR Measurement Results

Lower Band SAR (Channel 25):

Frequency (MHz)	1851.250000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.523949
Power Drift (%)	0.950000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

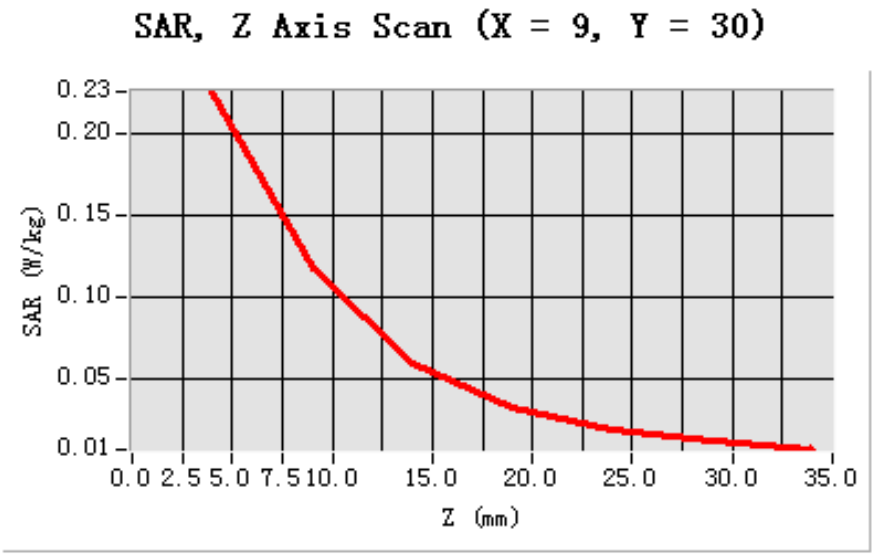
SURFACE SAR	VOLUME SAR
	

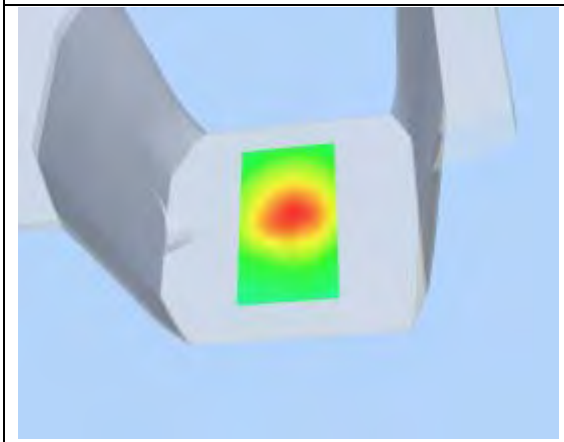
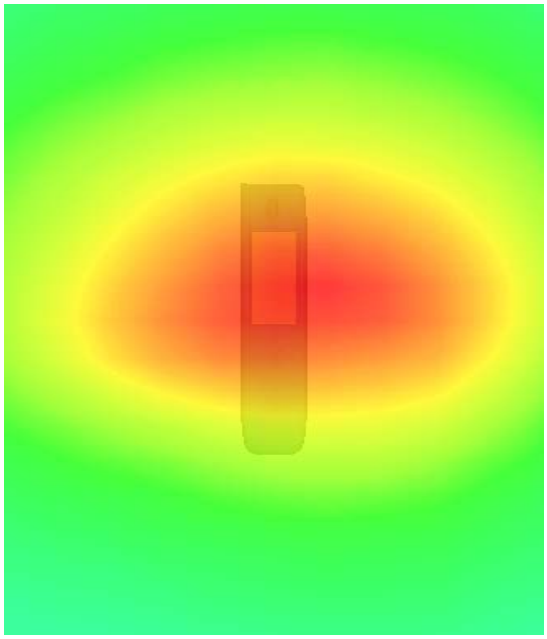
Maximum location: X=9.00, Y=30.00

SAR 10g (W/Kg)	0.122531
SAR 1g (W/Kg)	0.217918

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2261	0.1180	0.0604	0.0330	0.0193	0.0122



3D sceen shot	Hot spot position
	

MEASUREMENT 64

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 20 seconds

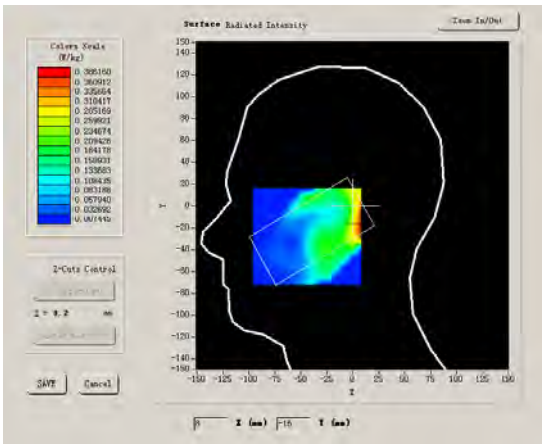
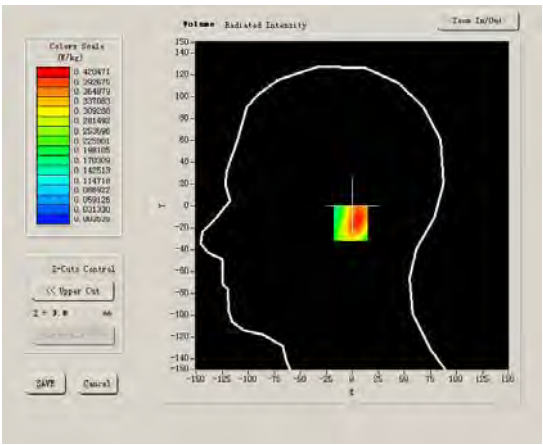
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	US_PCS_G-block
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1275):

Frequency (MHz)	1913.750000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.479504
Power drift (%)	-1.310000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

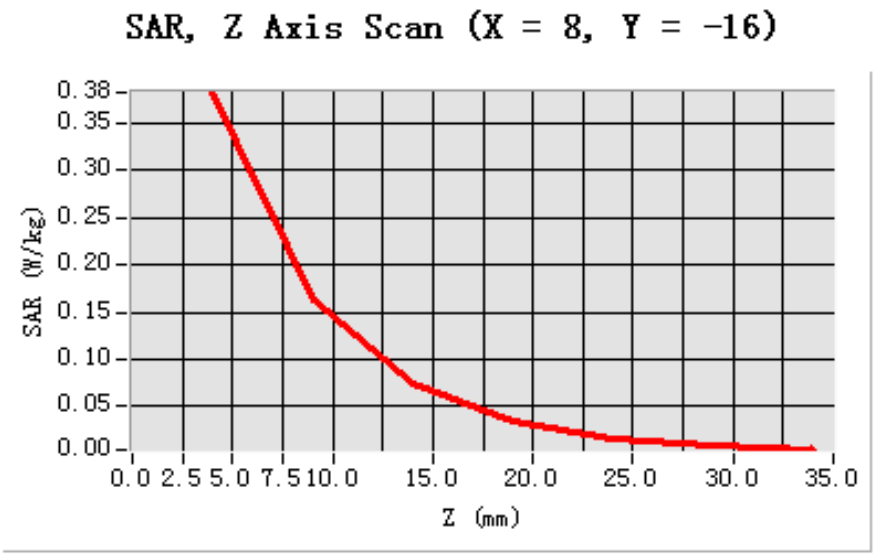
SURFACE SAR	VOLUME SAR
	

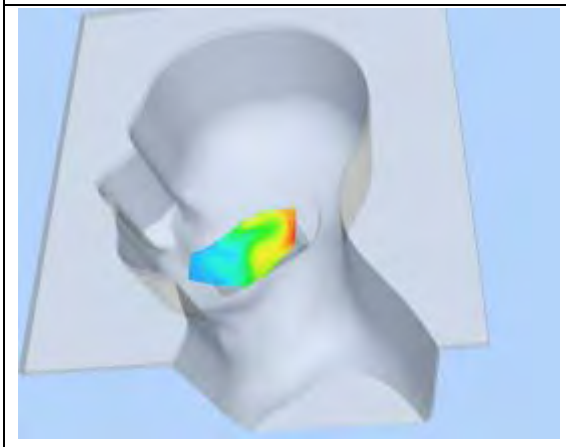
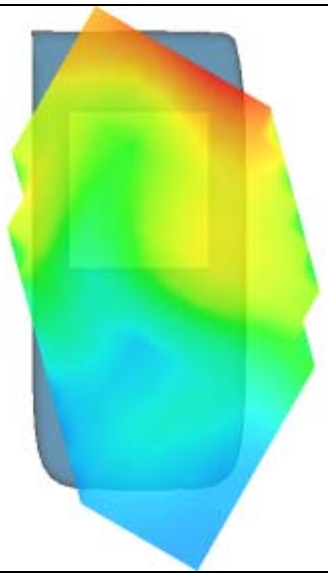
Maximum location: X=8.00, Y=-16.00

SAR 10g (W/Kg)	0.204328
SAR 1g (W/Kg)	0.407675

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3829	0.1630	0.0735	0.0343	0.0159	0.0086



3D sceen shot	Hot spot position
	

MEASUREMENT 65

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 25 seconds

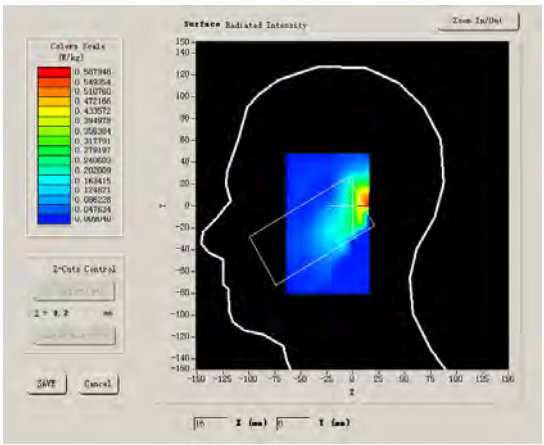
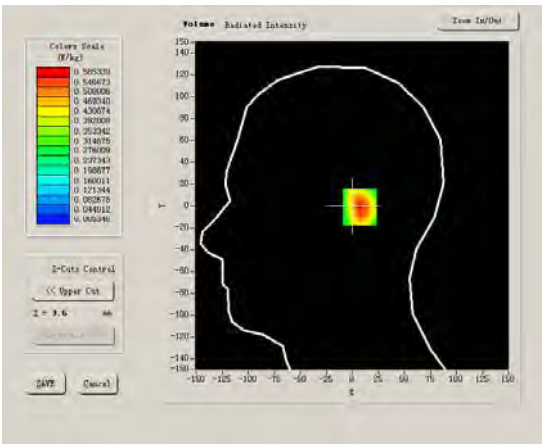
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Right head
Device Position	Tilt
Band	US_PCS_G-block
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1275):

Frequency (MHz)	1913.750000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.479504
Power drift (%)	-1.040000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

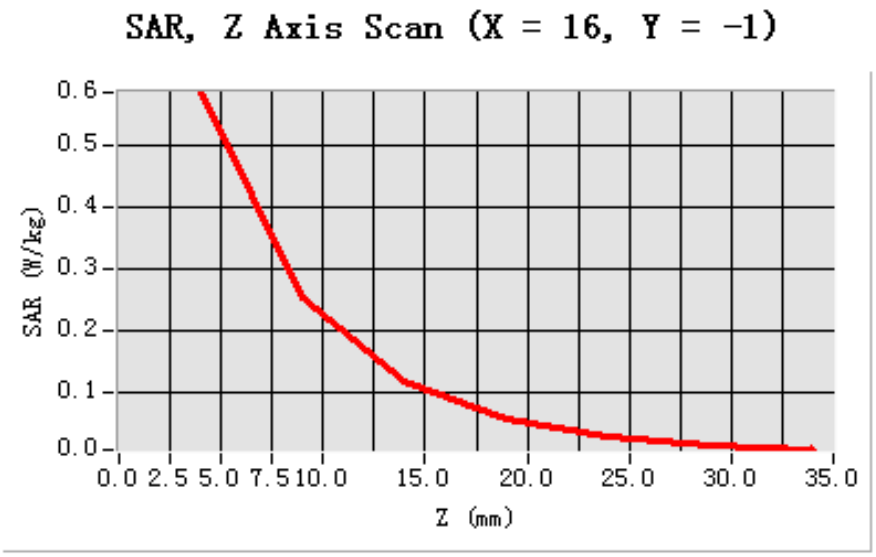
SURFACE SAR	VOLUME SAR
	

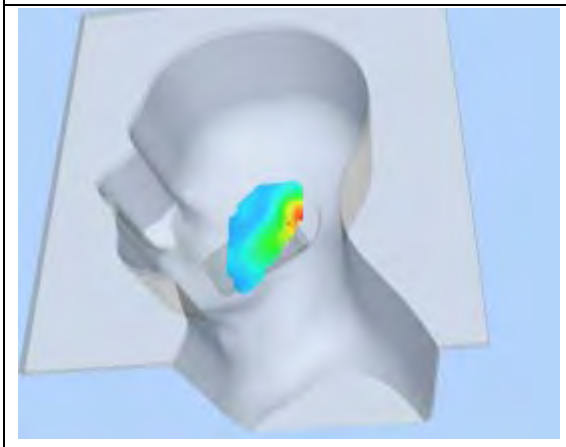
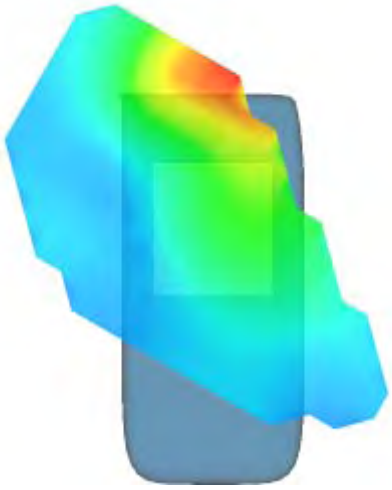
Maximum location: X=16.00, Y=-1.00

SAR 10g (W/Kg)	0.282267
SAR 1g (W/Kg)	0.561236

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5853	0.2535	0.1209	0.0572	0.0300	0.0144



3D sceen shot	Hot spot position
	

MEASUREMENT 66

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 23 seconds

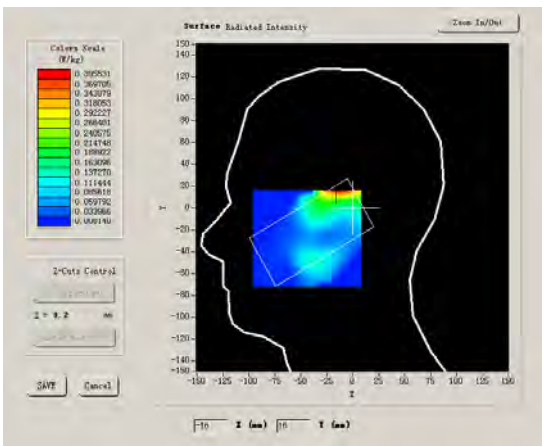
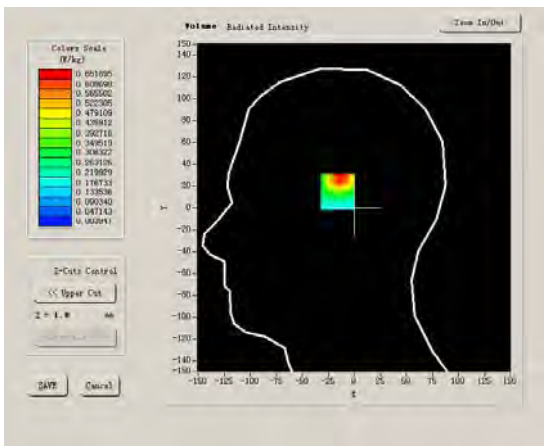
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Left head
Device Position	Cheek
Band	US_PCS_G-block
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1275):

Frequency (MHz)	1913.750000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.479504
Power drift (%)	-2.660000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

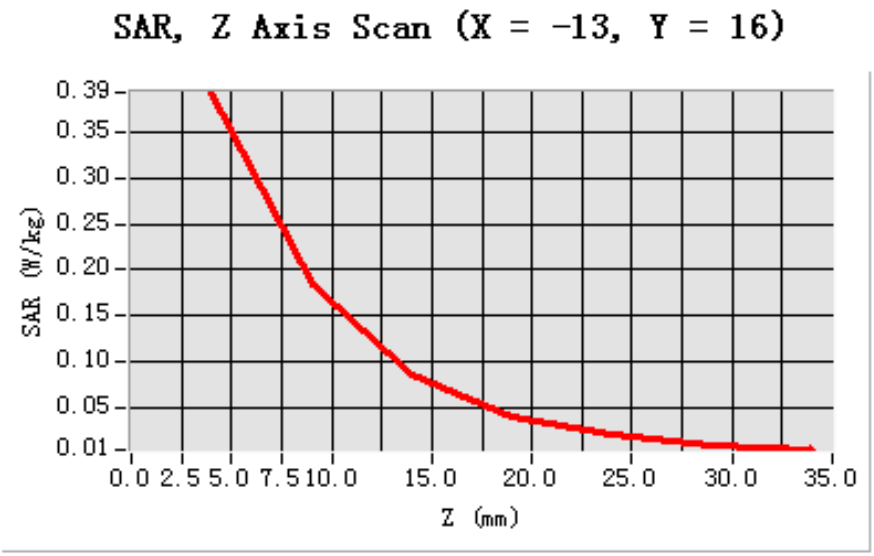
SURFACE SAR	VOLUME SAR
	

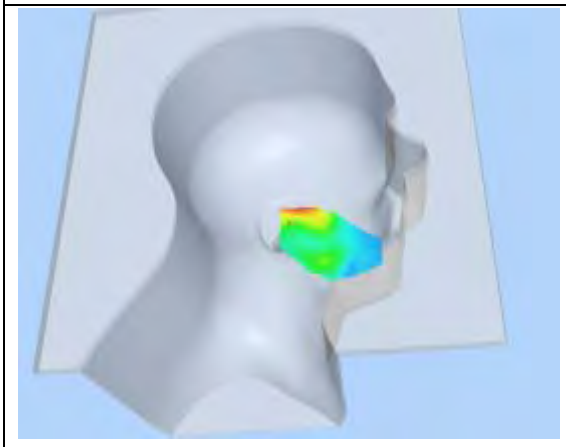
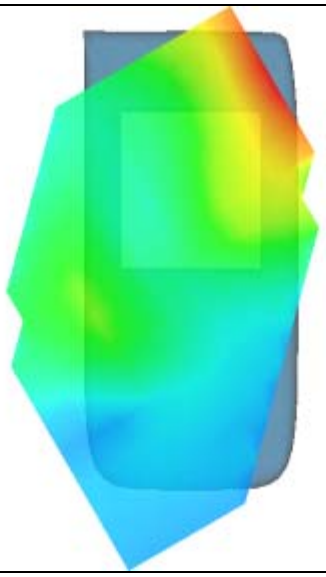
Maximum location: X=-13.00, Y=16.00

SAR 10g (W/Kg)	0.275572
SAR 1g (W/Kg)	0.577221

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3925	0.1846	0.0868	0.0412	0.0211	0.0105



3D sceen shot	Hot spot position
	

MEASUREMENT 67

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 7 minutes 19 seconds

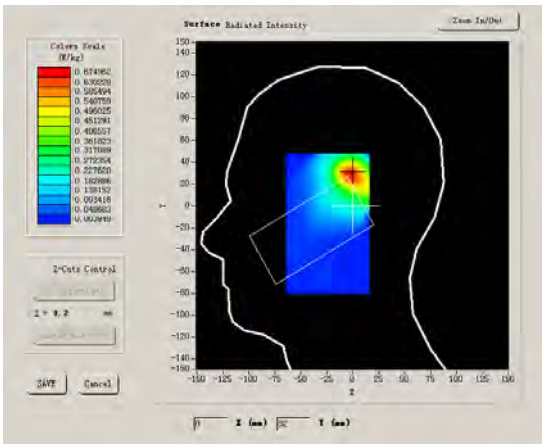
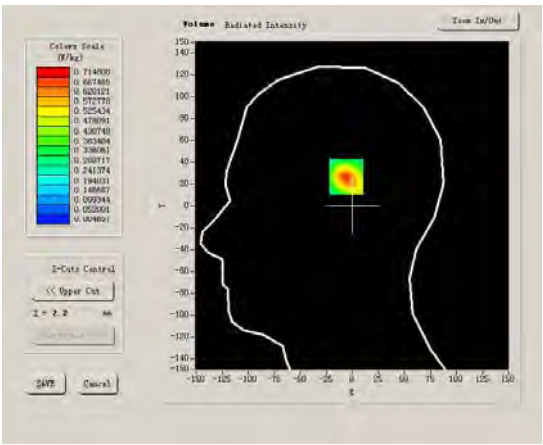
A. Experimental conditions.

Phantom File	zinf3.txt
Phantom	Left head
Device Position	Tilt
Band	US_PCS_G-block
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1275):

Frequency (MHz)	1913.750000
Relative permittivity (real part)	38.209000
Relative permittivity	13.915650
Conductivity (S/m)	1.479504
Power drift (%)	1.060000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721

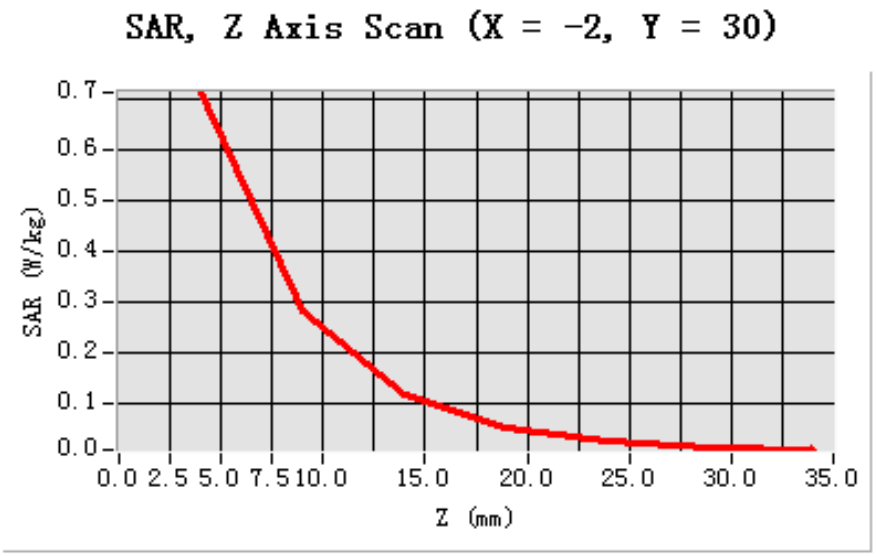
SURFACE SAR	VOLUME SAR
	

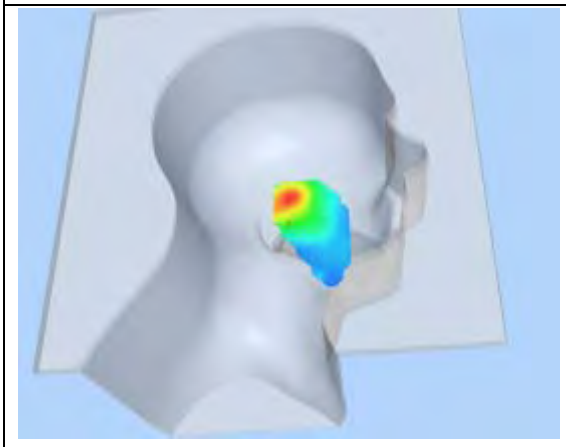
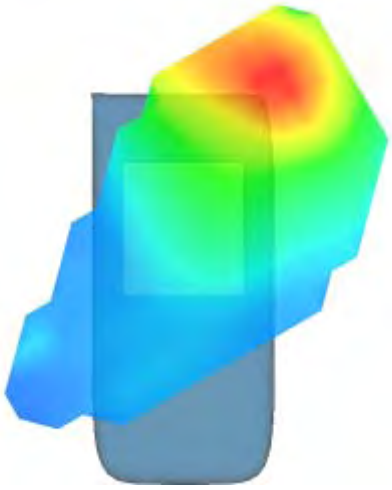
Maximum location: X=-2.00, Y=30.00

SAR 10g (W/Kg)	0.316596
SAR 1g (W/Kg)	0.672919

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7148	0.2842	0.1158	0.0515	0.0226	0.0107



3D sceen shot	Hot spot position
	

MEASUREMENT 68

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 8 seconds

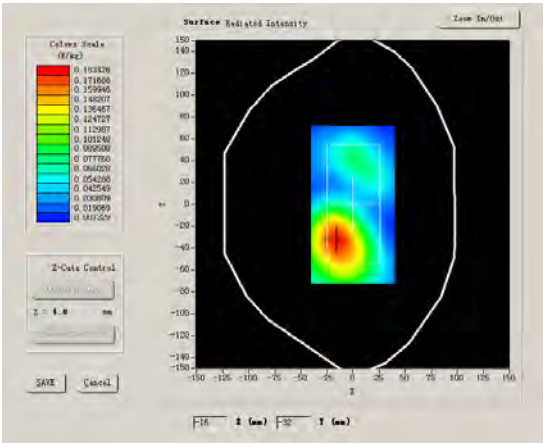
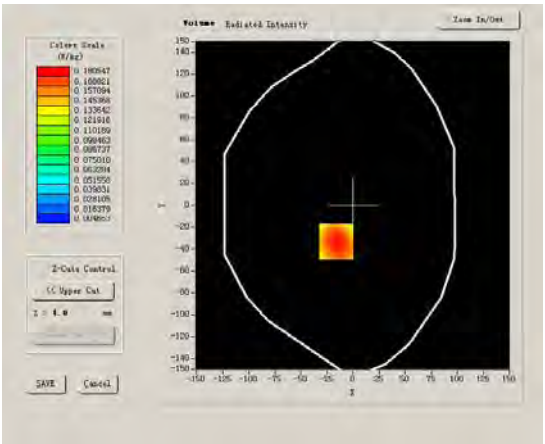
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS_G-block
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1275):

Frequency (MHz)	1913.750000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.575399
Power drift (%)	0.030000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

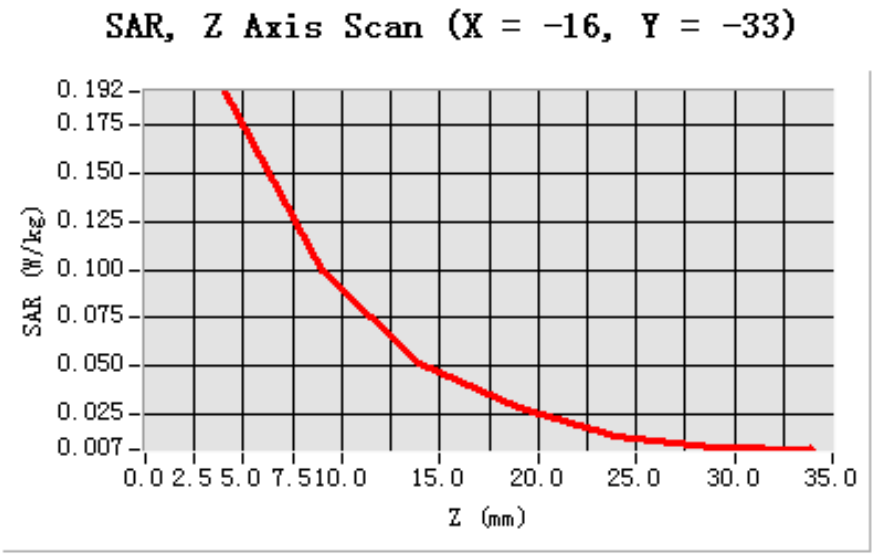
SURFACE SAR	VOLUME SAR
	

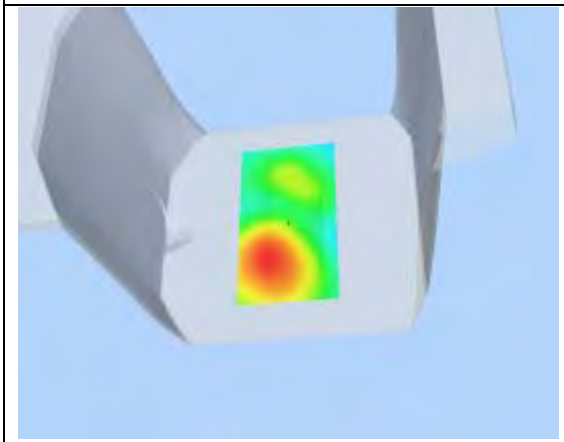
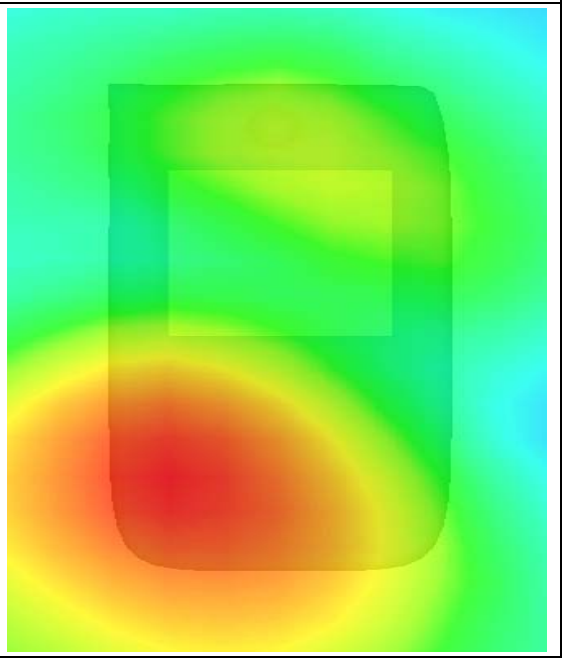
Maximum location: X=-16.00, Y=-33.00

SAR 10g (W/Kg)	0.104849
SAR 1g (W/Kg)	0.185677

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1922	0.0995	0.0515	0.0280	0.0142	0.0082



3D sceen shot	Hot spot position
	

MEASUREMENT 69

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 8 seconds

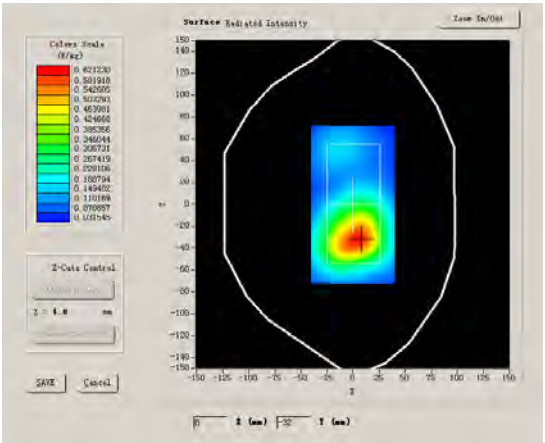
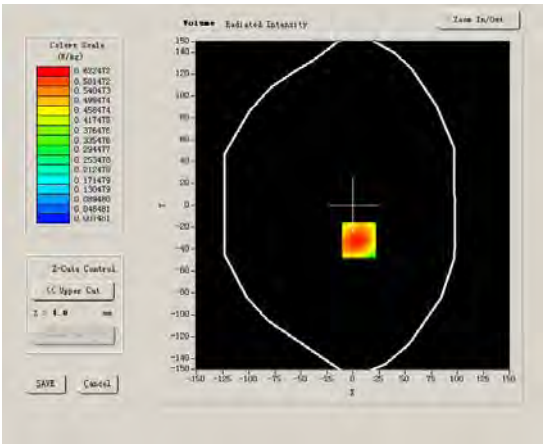
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS_G-block
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1275):

Frequency (MHz)	1913.750000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.575399
Power drift (%)	-0.580000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

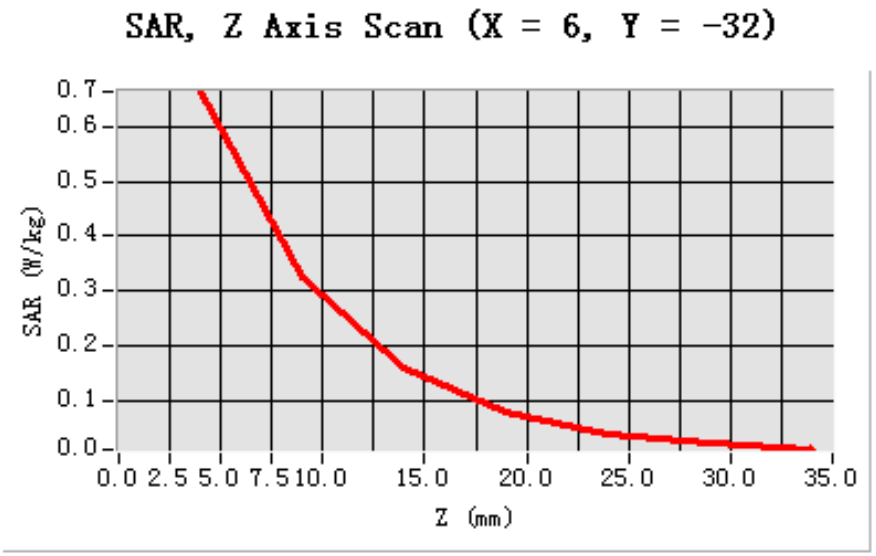
SURFACE SAR	VOLUME SAR
	

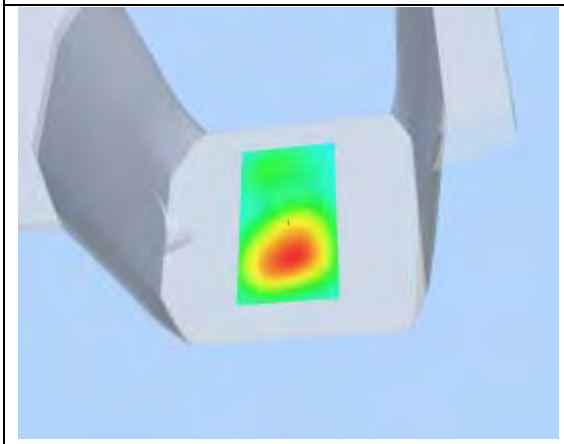
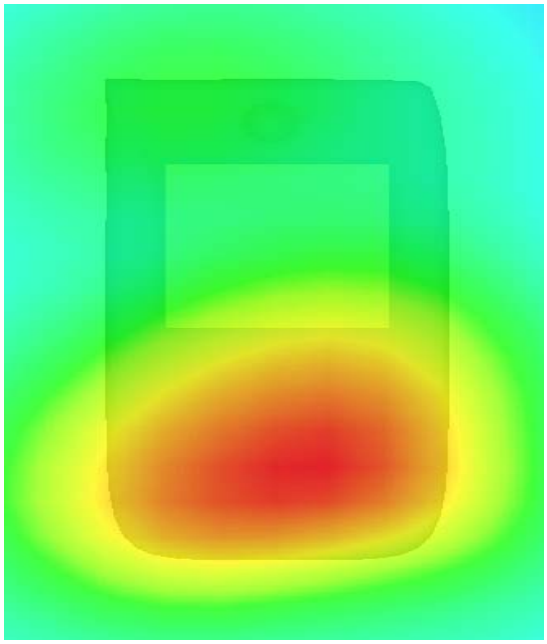
Maximum location: X=6.00, Y=-32.00

SAR 10g (W/Kg)	0.344370
SAR 1g (W/Kg)	0.638656

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6628	0.3241	0.1595	0.0817	0.0416	0.0228



3D sceen shot	Hot spot position
	

MEASUREMENT 70

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 9 seconds

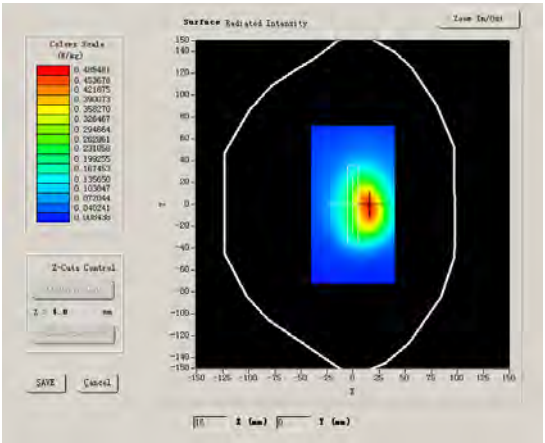
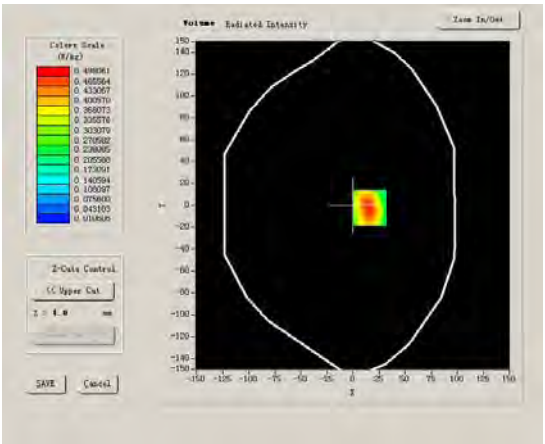
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS _G-block(Edge A)
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1275):

Frequency (MHz)	1913.750000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.575399
Power drift (%)	-3.170000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

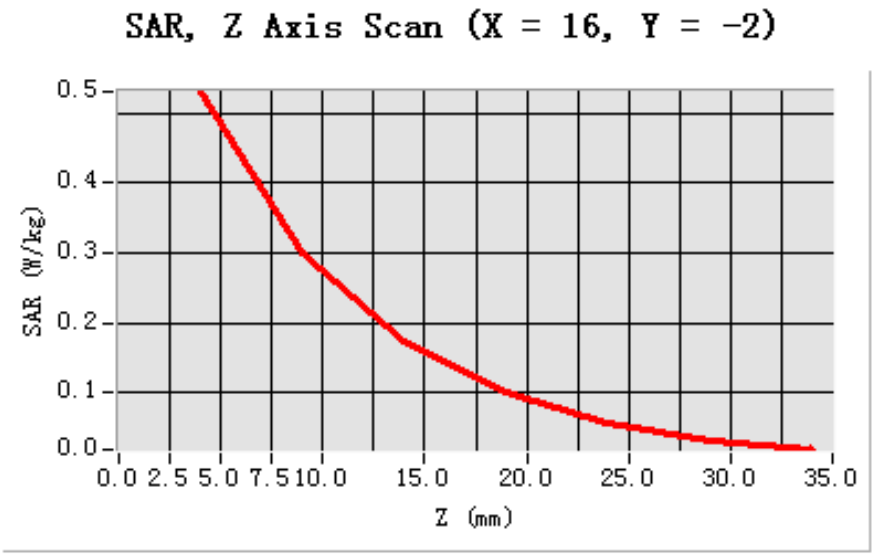
SURFACE SAR	VOLUME SAR
	

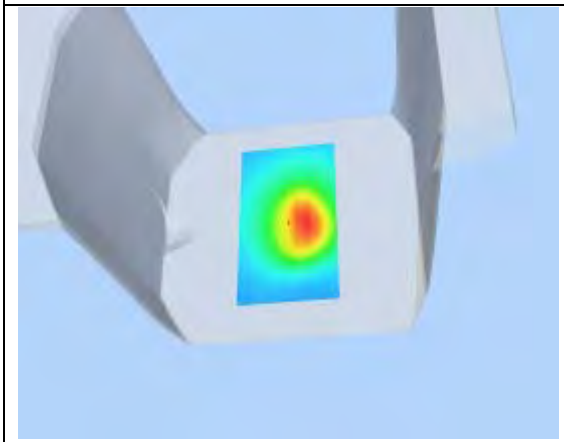
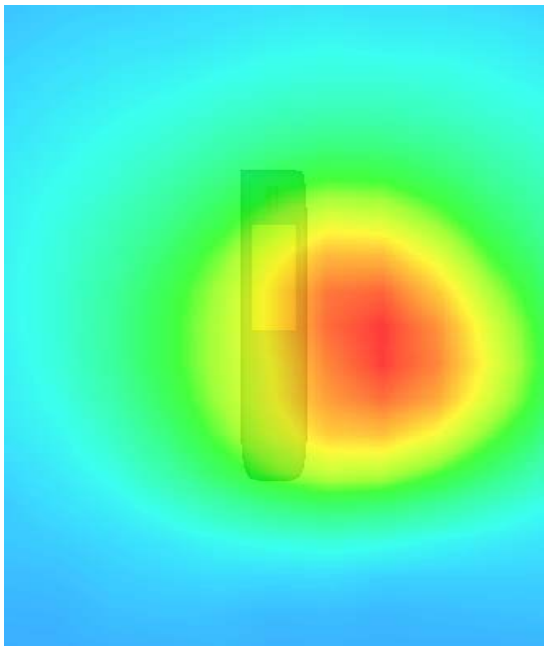
Maximum location: X=16.00, Y=-2.00

SAR 10g (W/Kg)	0.277437
SAR 1g (W/Kg)	0.496814

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5303	0.3006	0.1747	0.1002	0.0572	0.0319



3D sceen shot	Hot spot position
	

MEASUREMENT71

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 8 seconds

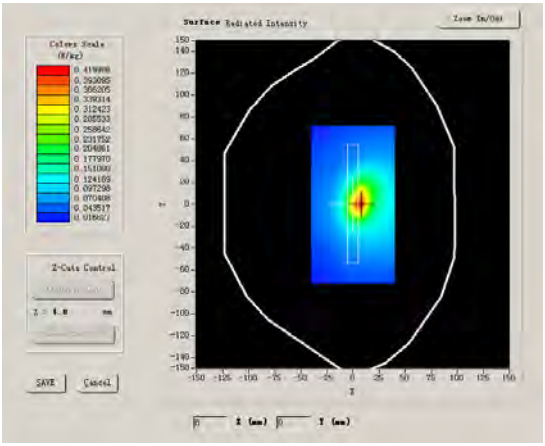
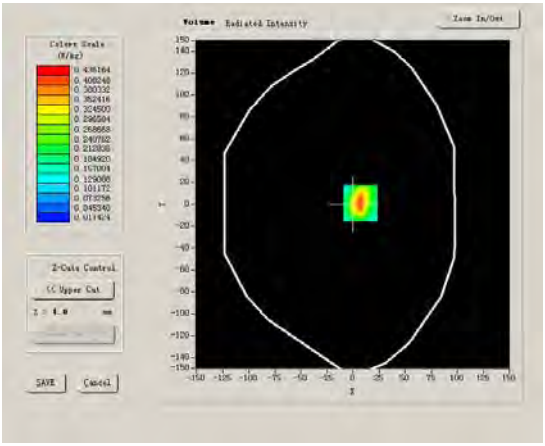
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS _G-block(Edge B)
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1275):

Frequency (MHz)	1913.750000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.575399
Power drift (%)	1.150000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

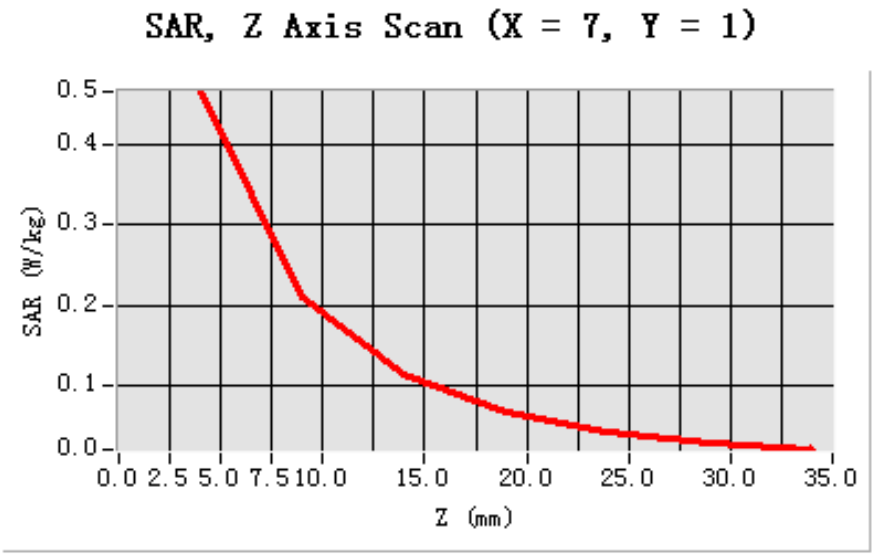
SURFACE SAR	VOLUME SAR
	

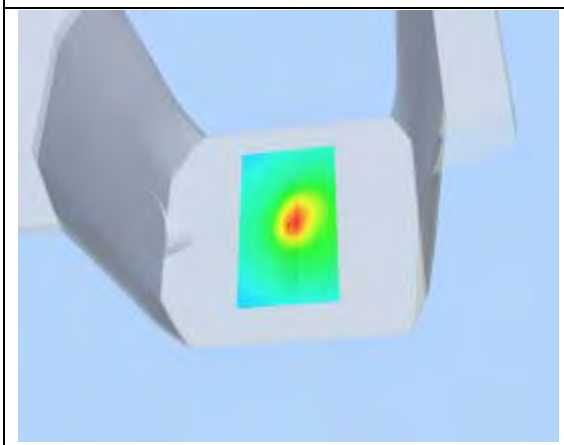
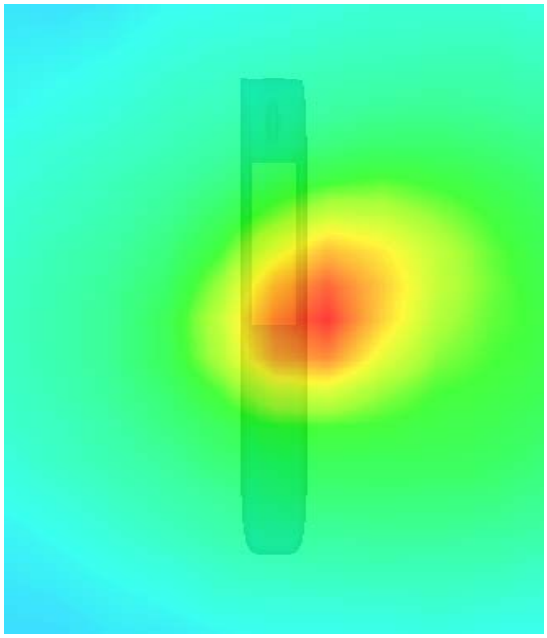
Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	0.212707
SAR 1g (W/Kg)	0.423613

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4644	0.2106	0.1136	0.0675	0.0421	0.0297



3D sceen shot	Hot spot position
	

MEASUREMENT 72

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 9 seconds

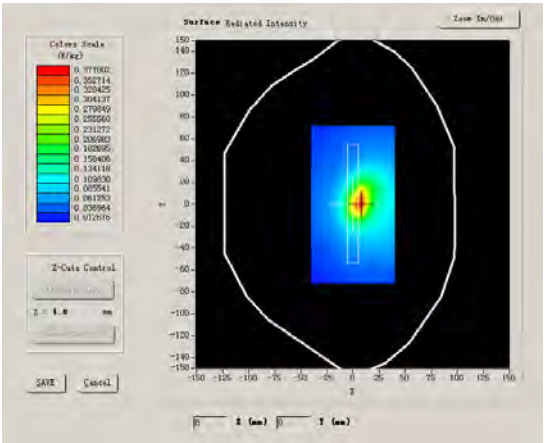
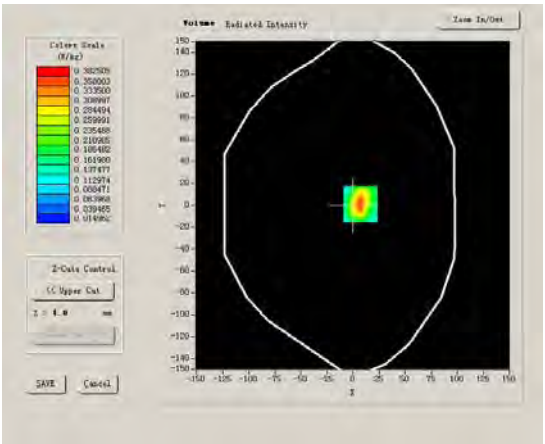
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS _G-block(Edge D)
Channels	High
Signal	CDMA

B. SAR Measurement Results

Higher Band SAR (Channel 1275):

Frequency (MHz)	1913.750000
Relative permittivity (real part)	51.903000
Relative permittivity	14.817600
Conductivity (S/m)	1.575399
Power drift (%)	-0.350000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

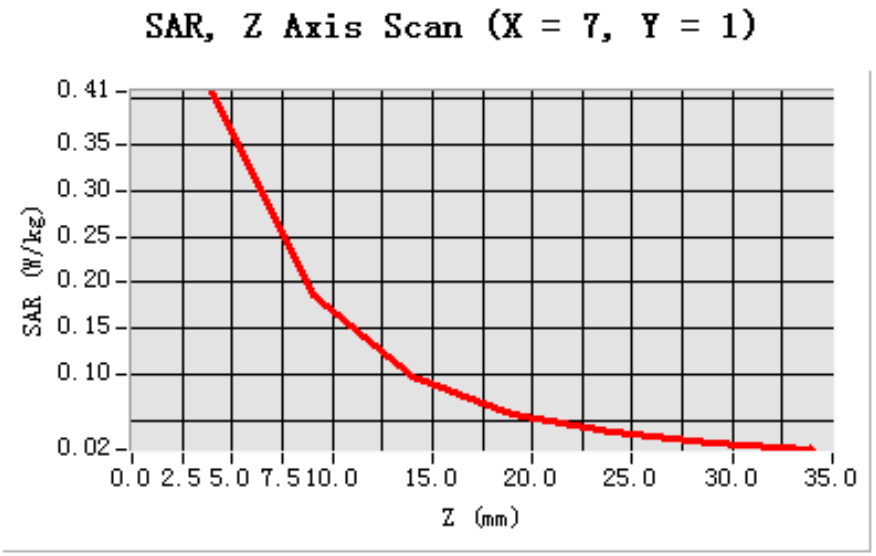
SURFACE SAR	VOLUME SAR
	

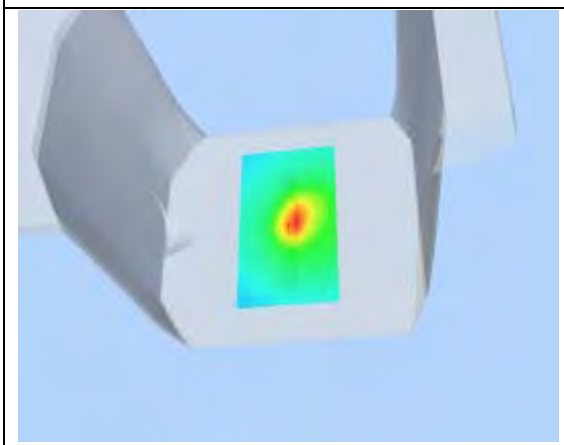
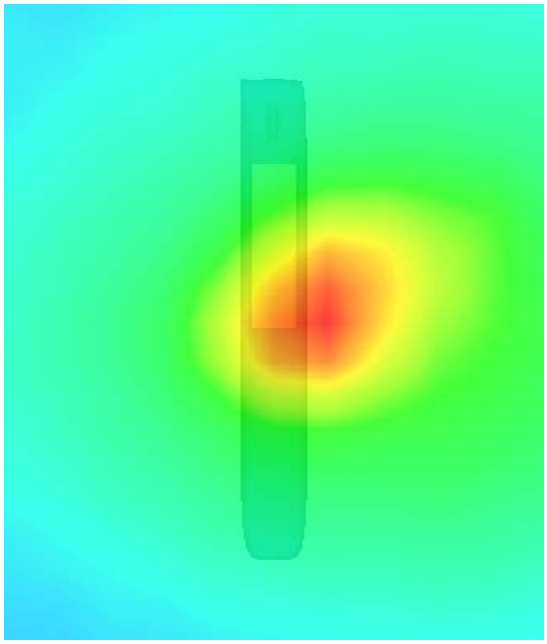
Maximum location: X=7.00, Y=1.00

SAR 10g (W/Kg)	0.187177
SAR 1g (W/Kg)	0.371627

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4073	0.1856	0.0971	0.0568	0.0368	0.0268



3D sceen shot	Hot spot position
	

MEASUREMENT 73

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 8 seconds

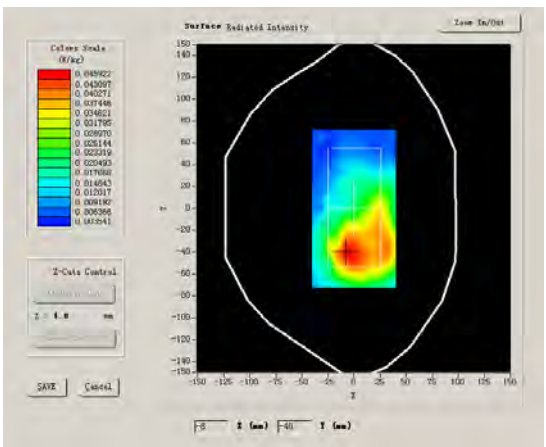
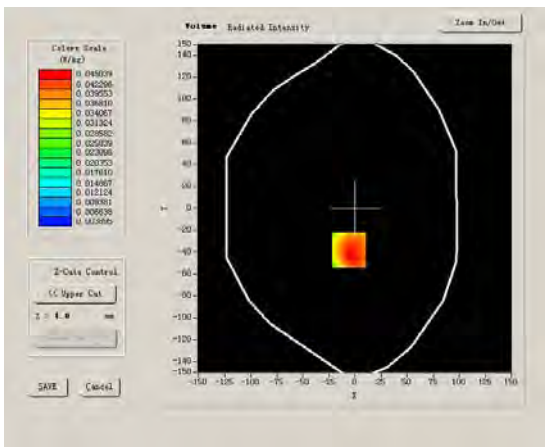
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.341000
Relative permittivity	19.120001
Conductivity (S/m)	1.952641
Power drift (%)	0.300000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.8°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

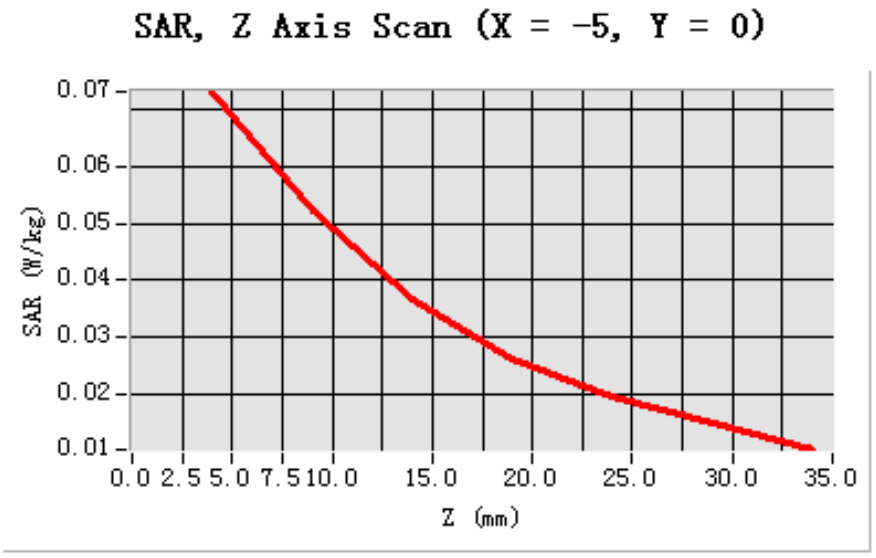
SURFACE SAR	VOLUME SAR
	

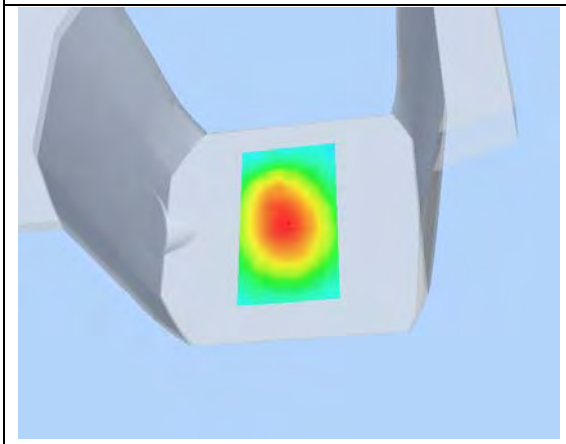
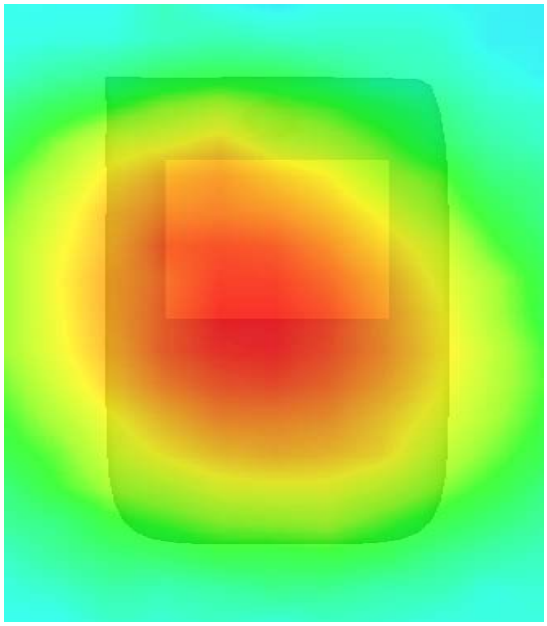
tion: X=-5.00, Y=0.00

SAR 10g (W/Kg)	0.048517
SAR 1g (W/Kg)	0.070753

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0732	0.0524	0.0366	0.0263	0.0194	0.0151



3D sceen shot	Hot spot position
	

MEASUREMENT 74

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 8 seconds

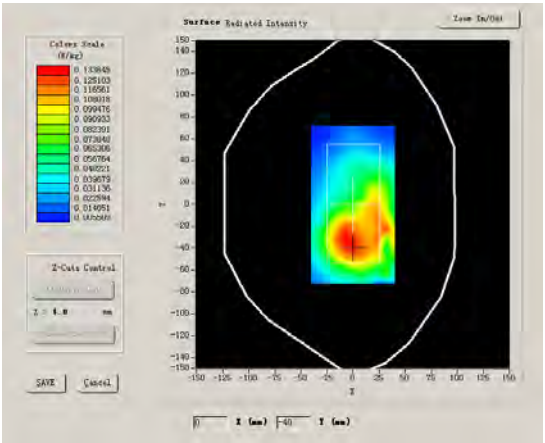
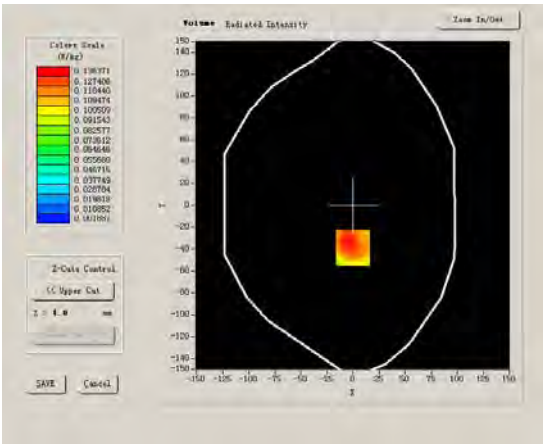
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 11):

Frequency (MHz)	246 2.000000
Relative permittivity (real part)	54.341000
Relative permittivity	19.120001
Conductivity (S/m)	1.952641
Power drift (%)	1.860000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.8°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

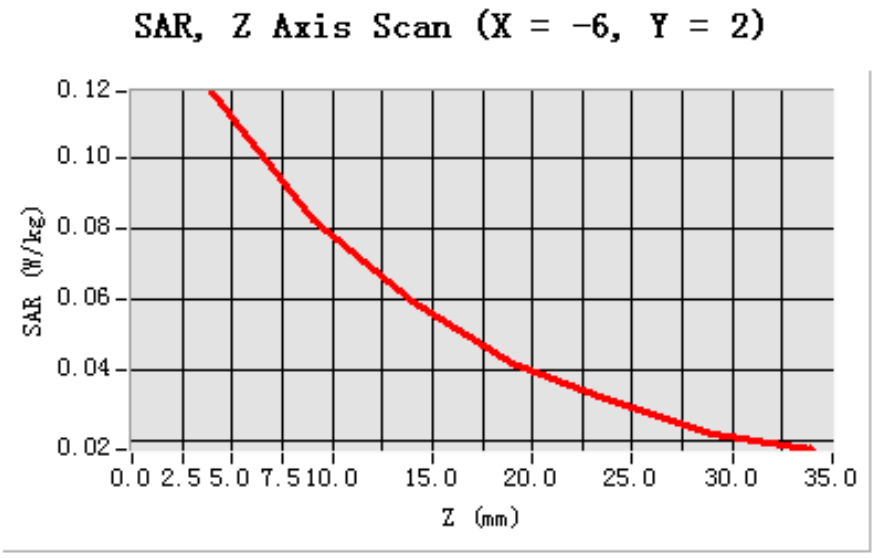
SURFACE SAR	VOLUME SAR
	

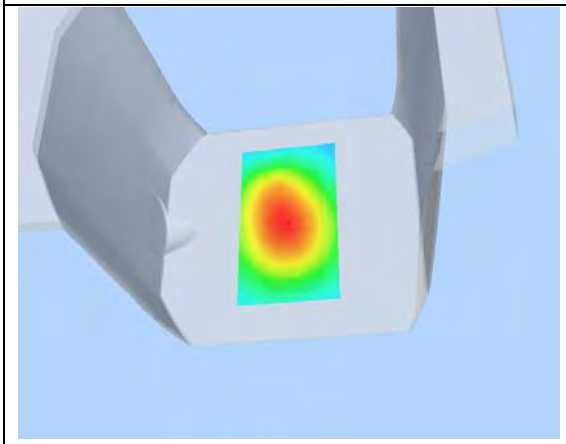
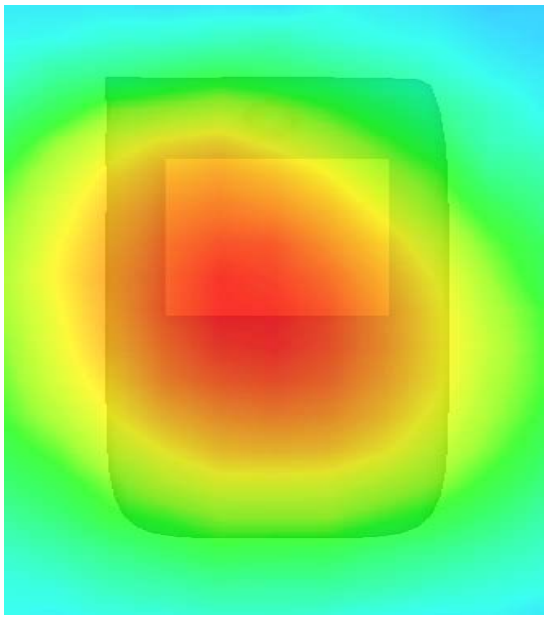
Maximum location: X=-6.00, Y=-2.00

SAR 10g (W/Kg)	0.078781
SAR 1g (W/Kg)	0.114768

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1186	0.0826	0.0598	0.0422	0.0312	0.0222



3D sceen shot	Hot spot position
	

MEASUREMENT 75

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 13 seconds

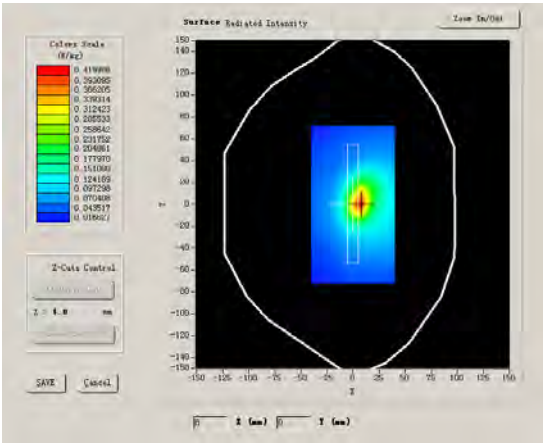
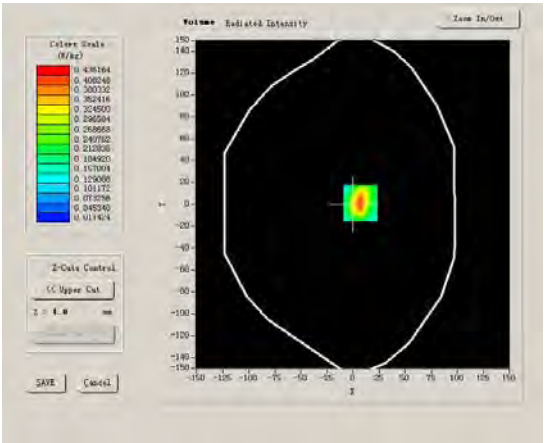
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.341000
Relative permittivity	19.120001
Conductivity (S/m)	1.952641
Power drift (%)	-2.139999
Ambient Temperature:	22.2°C
Liquid Temperature:	21.8°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

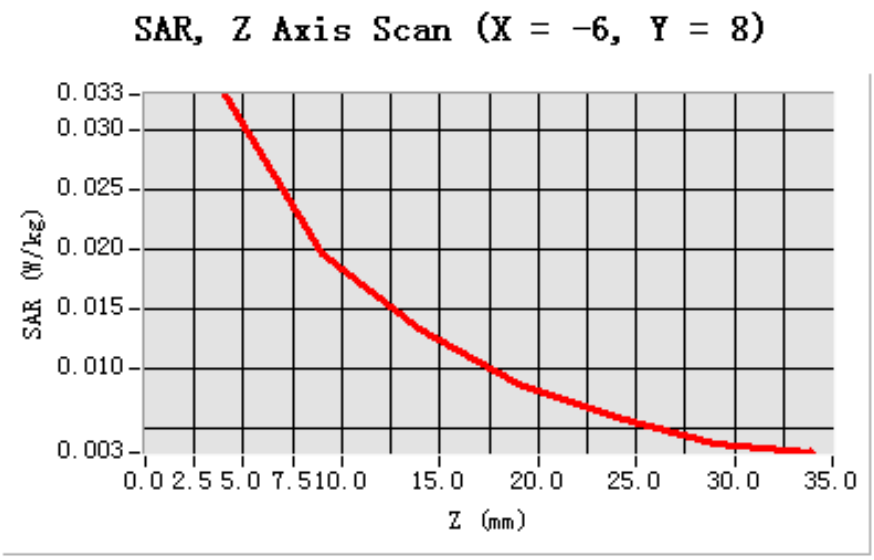
SURFACE SAR	VOLUME SAR
	

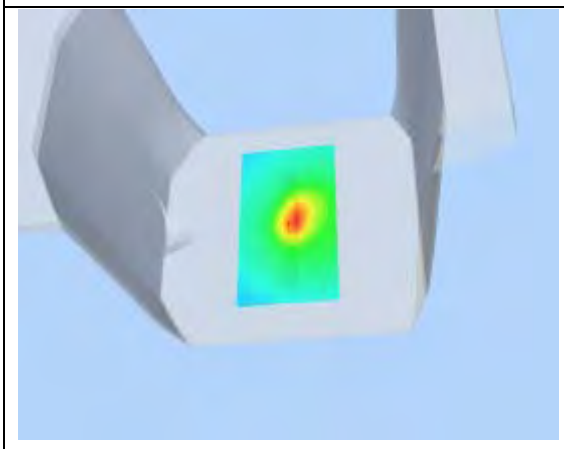
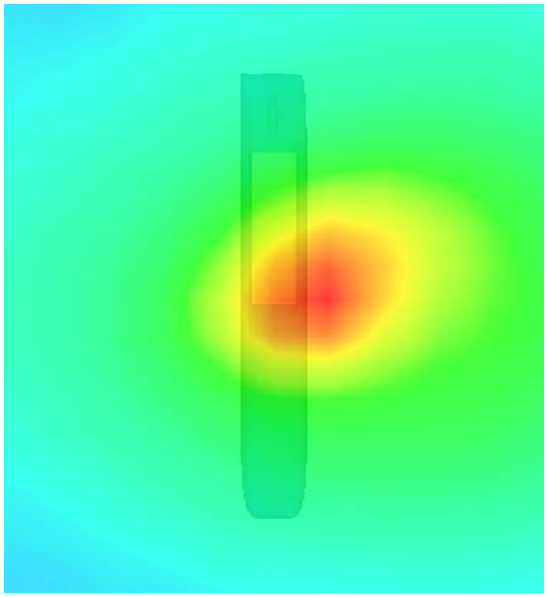
Maximum location: X=-6.00, Y=8.00

SAR 10g (W/Kg)	0.010847
SAR 1g (W/Kg)	0.032925

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0053	0.0030	0.0027	0.0024	0.0046	0.0036



3D sceen shot	Hot spot position
	

MEASUREMENT 76

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 7 seconds

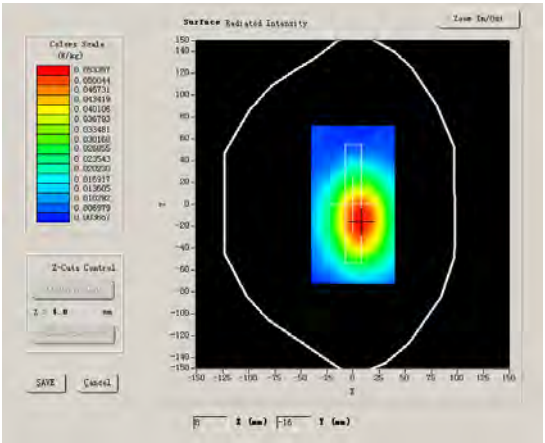
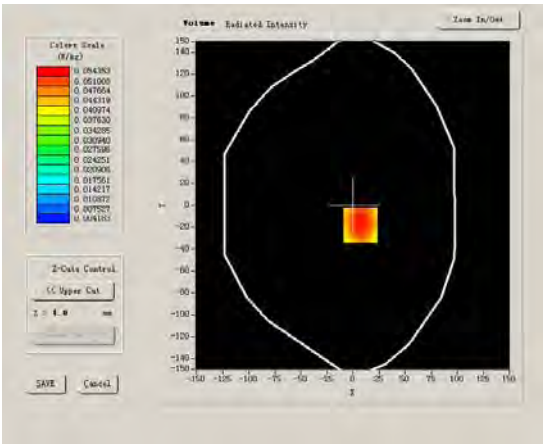
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.341000
Relative permittivity	19.120001
Power drift (S/m)	1.952641
Power drift (%)	-3.529999
Ambient Temperature:	22.2°C
Liquid Temperature:	21.8°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

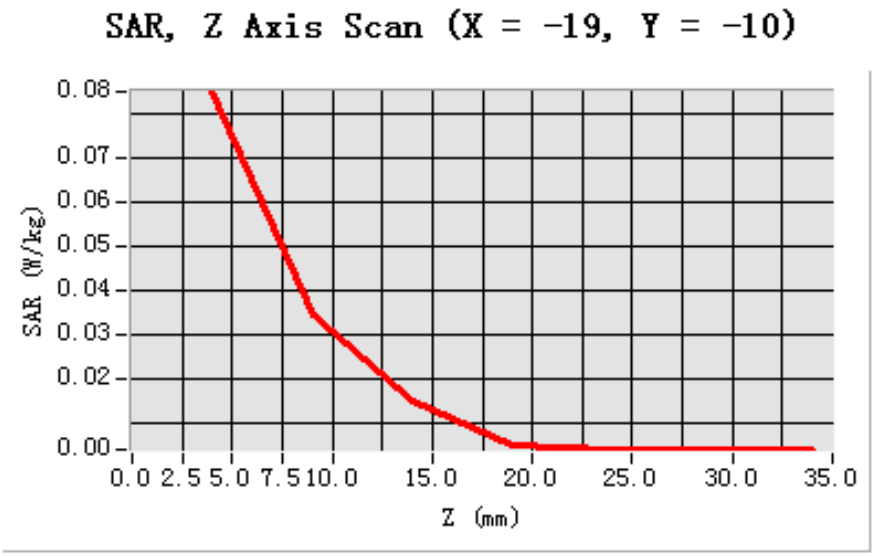
SURFACE SAR	VOLUME SAR
	

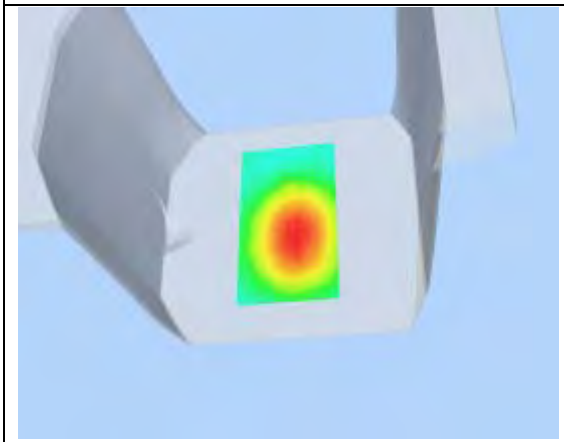
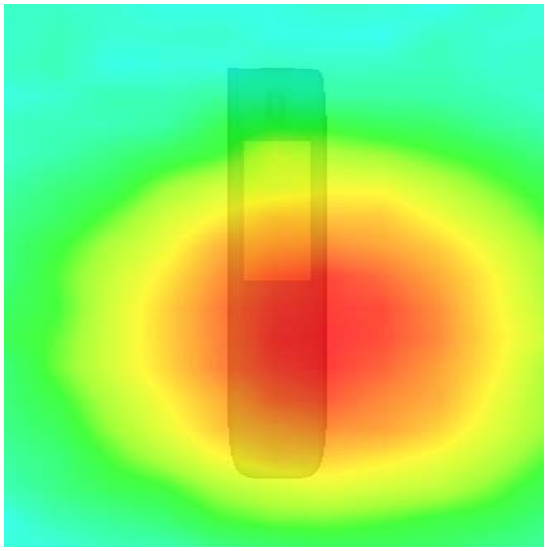
Maximum location: X=-19.00, Y=-10.00

SAR 10g (W/Kg)	0.040635
SAR 1g (W/Kg)	0.081988

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0848	0.0345	0.0146	0.0049	0.0039	0.0039



3D sceen shot	Hot spot position
	

MEASUREMENT 77

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 9 minutes 6 seconds

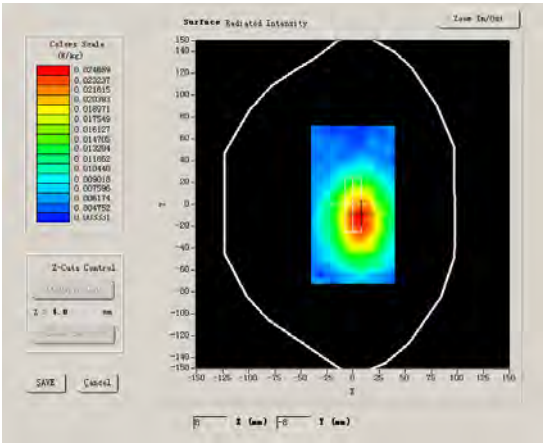
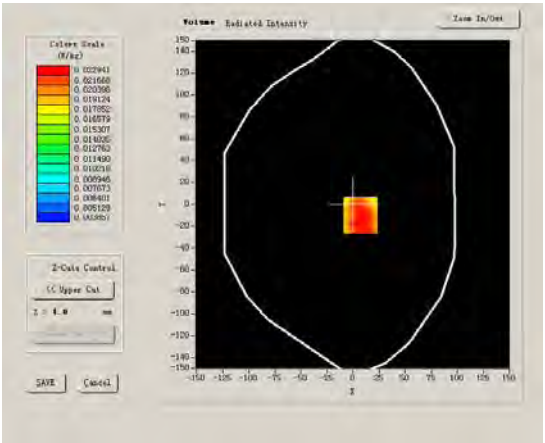
A. Experimental conditions.

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

B. SAR Measurement Results

High Band SAR (Channel 11):

Frequency (MHz)	2462.000000
Relative permittivity (real part)	54.341000
Relative permittivity	19.120001
Conductivity (S/m)	1.952641
Power drift (%)	-1.570000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.8°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

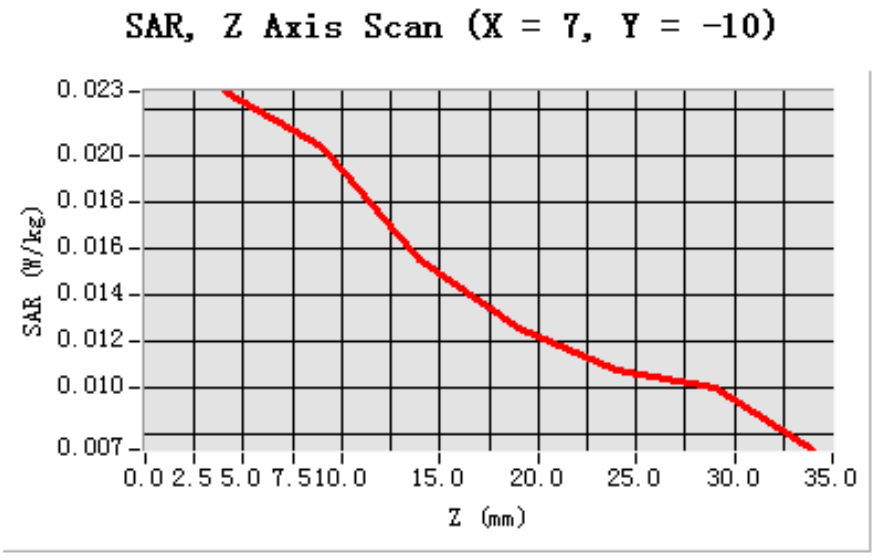
SURFACE SAR	VOLUME SAR
	

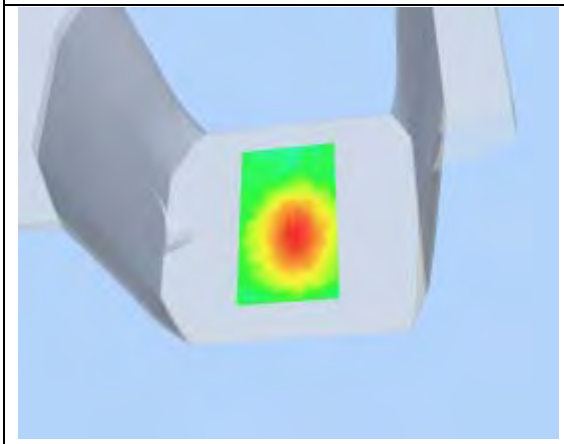
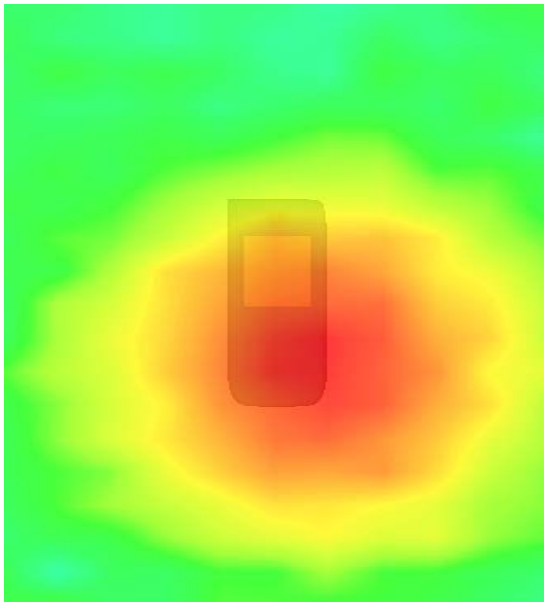
Maximum location: X=7.00, Y=-10.00

SAR 10g (W/Kg)	0.017409
SAR 1g (W/Kg)	0.023061

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0228	0.0204	0.0155	0.0126	0.0108	0.0100



3D sceen shot	Hot spot position
	

System Performance Check Data(835MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 13 minutes 27 seconds

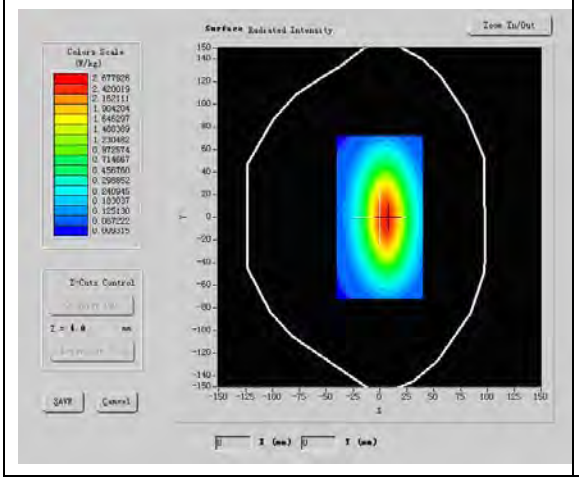
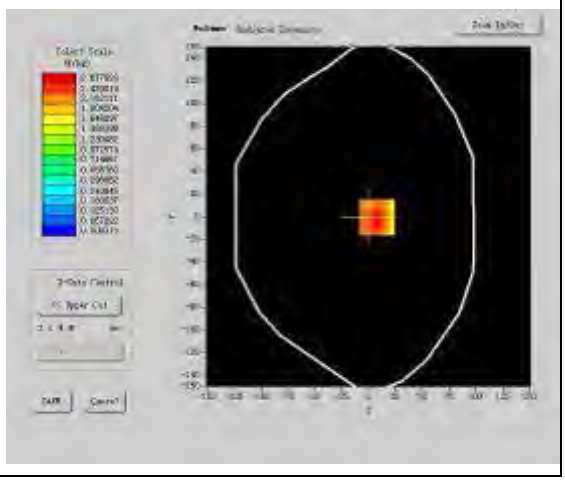
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

Frequency (MHz)	835.000000
Relative permittivity (real part)	40.490002
Relative permittivity	15.070000
Conductivity (S/m)	0.983918
Power Drift (%)	-0.050000
Ambient Temperature:	22.4°C
Liquid Temperature:	22.5°C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

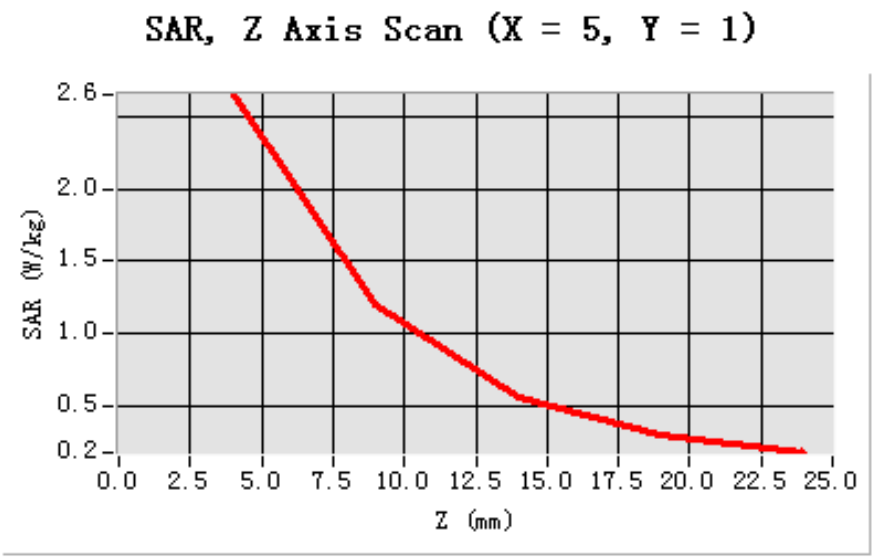
SURFACE SAR	VOLUME SAR
	

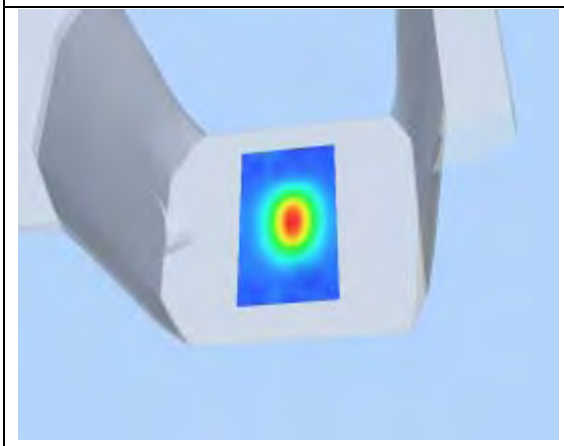
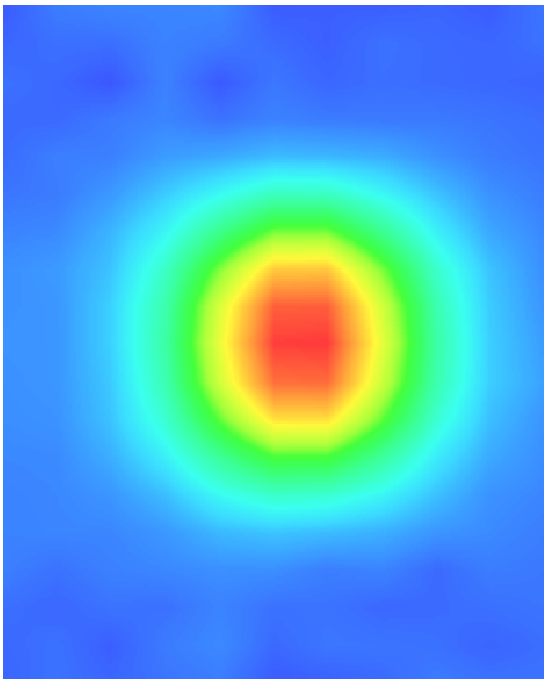
Maximum location: X=5.00, Y=1.00

SAR 10g (W/Kg)	1.715223
SAR 1g (W/Kg)	2.477926

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	2.5486	1.2069	0.5583	0.3002



3D sceen shot	Hot spot position
	

System Performance Check Data(1700MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 13 minutes 27 seconds

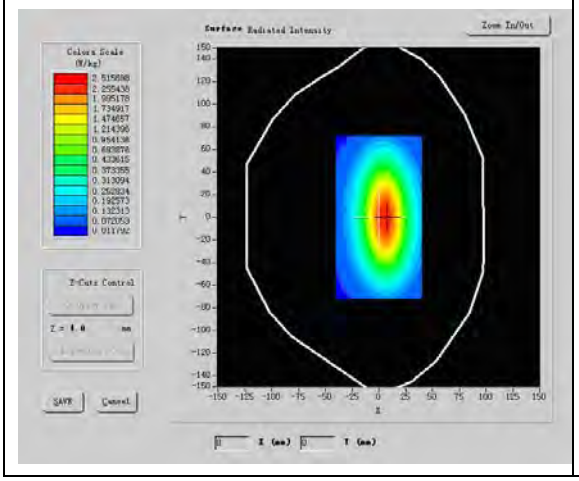
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	
Band	1700MHz
Channels	
Signal	CW

B. SAR Measurement Results

Band SAR

Frequency (MHz)	1700.000000
Relative permittivity (real part)	39.930000
Relative permittivity	15.070000
Conductivity (S/m)	1.341229
Power Drift (%)	-0.140000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.8°C
ConvF:	42.533,36.791,41.019
Crest factor:	1:1

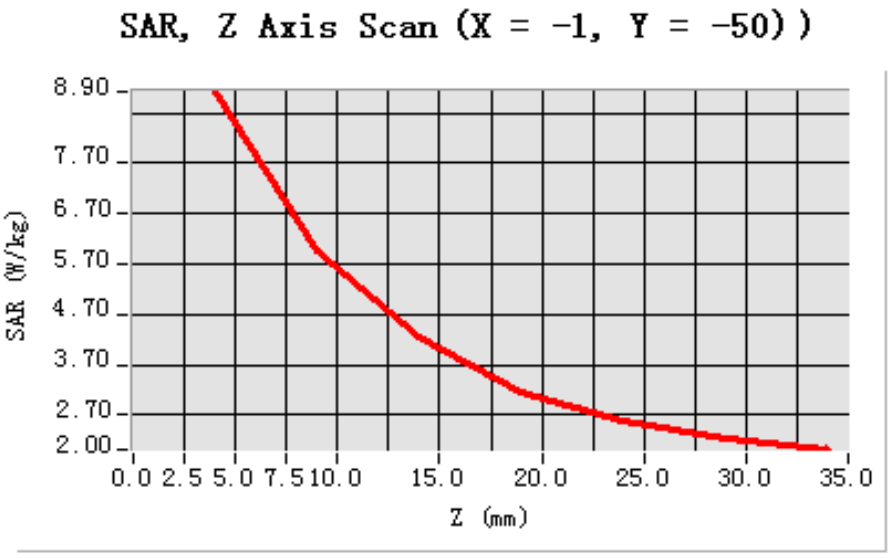
SURFACE SAR	VOLUME SAR
	

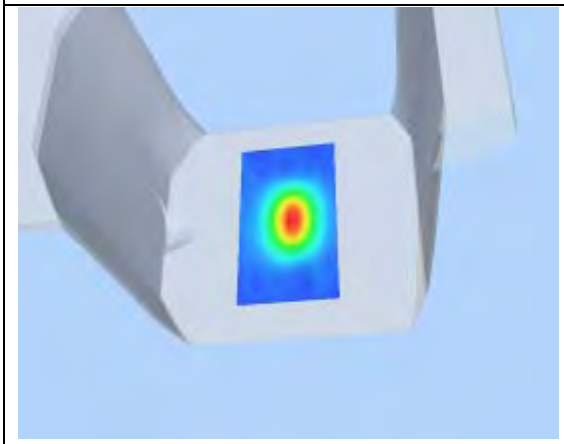
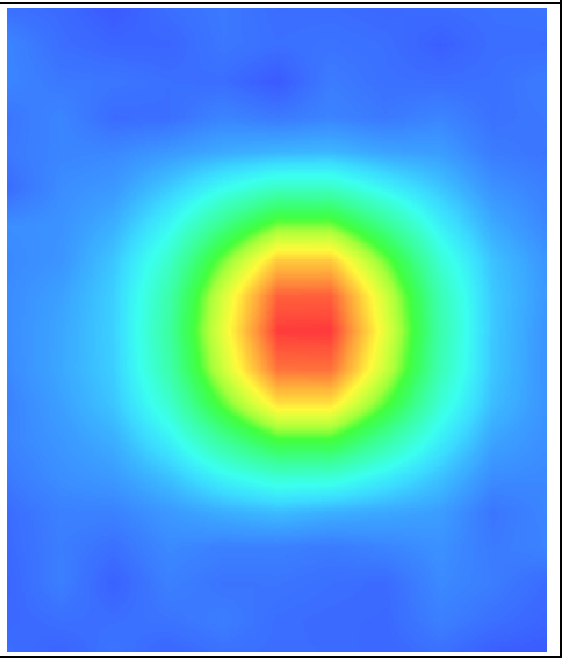
Maximum location: X=-1.00, Y=-50.00

SAR 10g (W/Kg)	4.845273
SAR 1g (W/Kg)	8.857267

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	8.8528	5.9541	4.1275	2.8571



3D sceen shot	Hot spot position
	

System Performance Check Data(1900MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 13 minutes 27 seconds

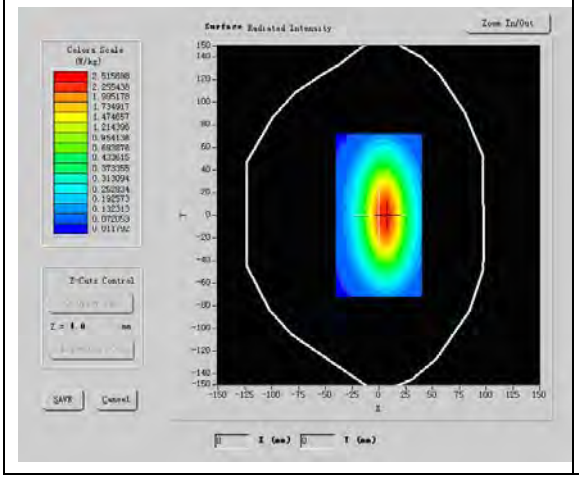
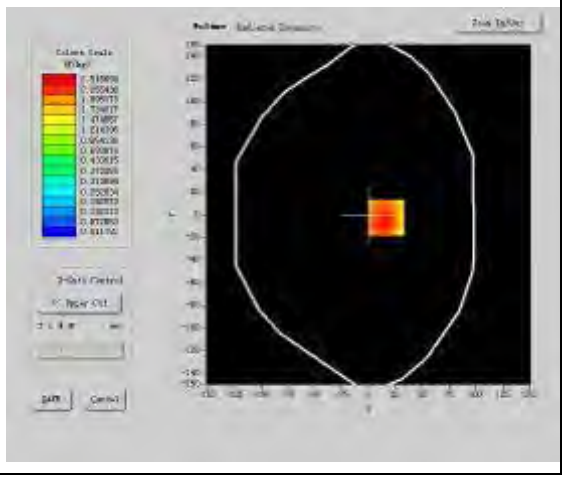
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

Frequency (MHz)	1900.000000
Relative permittivity (real part)	39.930000
Relative permittivity	15.070000
Conductivity (S/m)	1.341229
Power Drift (%)	-0.140000
Ambient Temperature:	22.3°C
Liquid Temperature:	22.6°C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

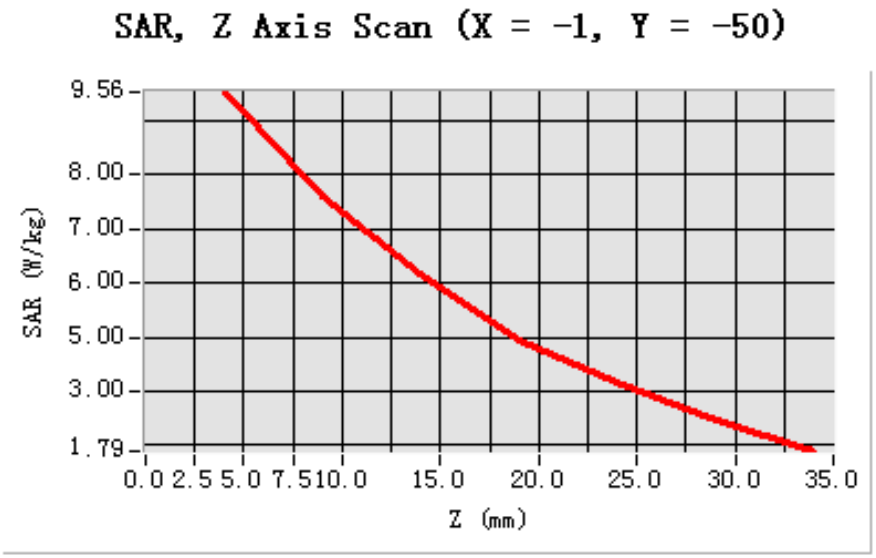
SURFACE SAR	VOLUME SAR
	

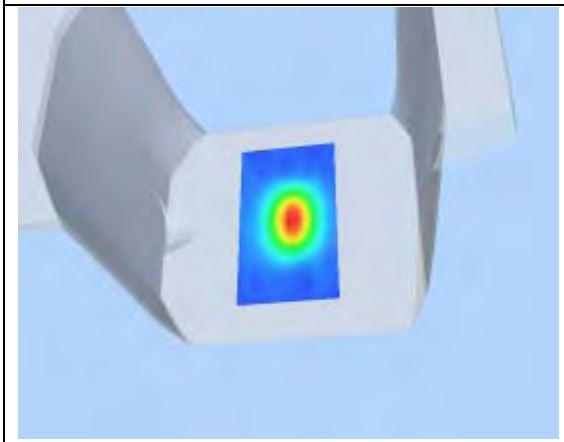
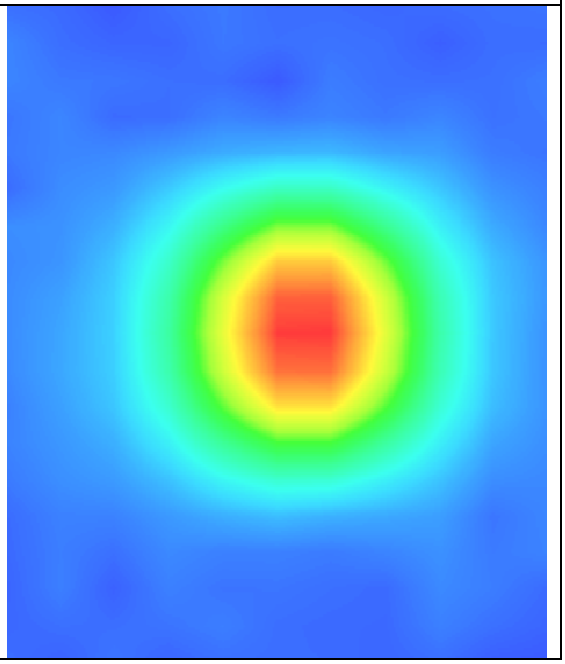
Maximum location: X=-1.00, Y=-50.00

SAR 10g (W/Kg)	4.910003
SAR 1g (W/Kg)	9.555521

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	0.0000	9.5536	5.3061	2.6041	0.3211



3D sceen shot	Hot spot position
	

System Performance Check Data(2450MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 7/9/2011
Measurement duration: 13 minutes 27 seconds

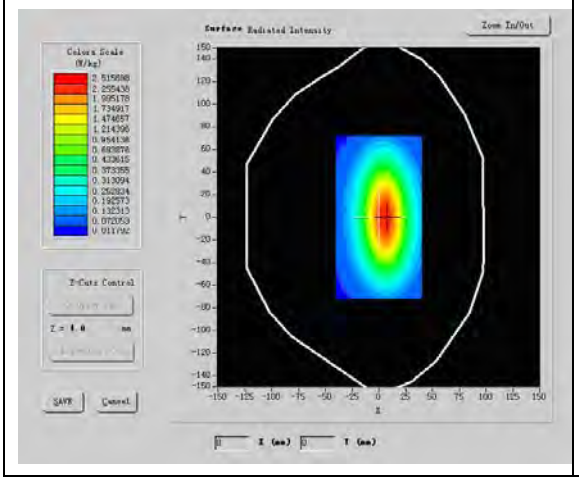
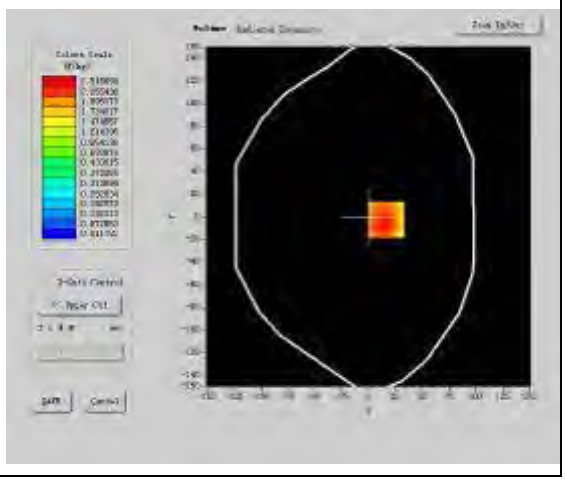
A. Experimental conditions.

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

B. SAR Measurement Results

Band SAR

Frequency (MHz)	2450.000000
Relative permittivity (real part)	52..548876
Relative permittivity	12.991650
Conductivity (S/m)	1.770014
Power Drift (%)	-2.180000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.8°C
ConvF:	39.772,33.946,37.835
Crest factor:	1:1

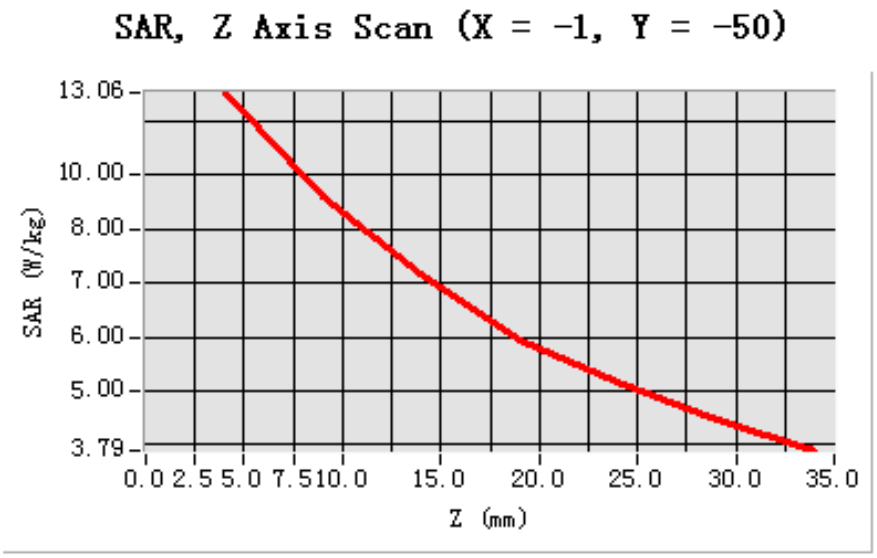
SURFACE SAR	VOLUME SAR
	

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

SAR 10g (W/Kg)	6.256773
SAR 1g (W/Kg)	12.899365

Z Axis Scan

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



3D sceen shot	Hot spot position