SAR TEST REPORT

Issued to

Teleepoch Limited

For

Mobile phone

Model Name	:	VM2090PDKIT180; Wi921;
Trade Name	:	PCD
Brand Name	:	Sienna
FCC ID	:	U46-WI921
Standard	:	FCC Oet65 Supplement C Jun.2001 47CFR 2.1093 ANSI C95.1-1999 IEEE 1528-2003
MAX SAR	:	Head: 0.935W/kg Body: 0.998W/kg
Test date	:	2011-08-03
Issue date	:	2011-08-10

By

Shenzhen MORLAB Communication Technology Co., Ltd.

Tested by	Samuel Peng	*Approved by*	Zeng Dexin	*Review by*	Li Lei
Date	2011.08.10	*Date*	2011.08.10	*Date*	2011.08.10

DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	Aug 10, 2010	First edition

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:21 08 08)	2010-8-21	1year
10	Dipole 835MHz	Satimo (SN 36/08 DIPC 99)	2010-9-23	1year
11	Dipole 1900MHz	Satimo (SN 36/08 DIPF 102)	2010-9-23	1year
12	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-Tech Park(south), Nanshan district， Shenzhen，Guangdong Province, China

2.2. Identification of Manufacturer

Company Name:	Teleepoch Limited
Address:	5A，B1 Building, Digital Tech Zone, High-Tech Park(south), Nanshan district， Shenzhen，Guangdong Province, China

2.3. Equipment Under Test (EUT)

Brand Name:	Sienna
Type Name:	PCD
Marking Name:	VM2090PDKIT180; Wi921;
Hardware Version:	WI921_V1.21
Software Version:	N/A
Frequency Bands:	CDMA 800MHz /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:	BTR209
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#	WI921_V1.21	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	**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 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, 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

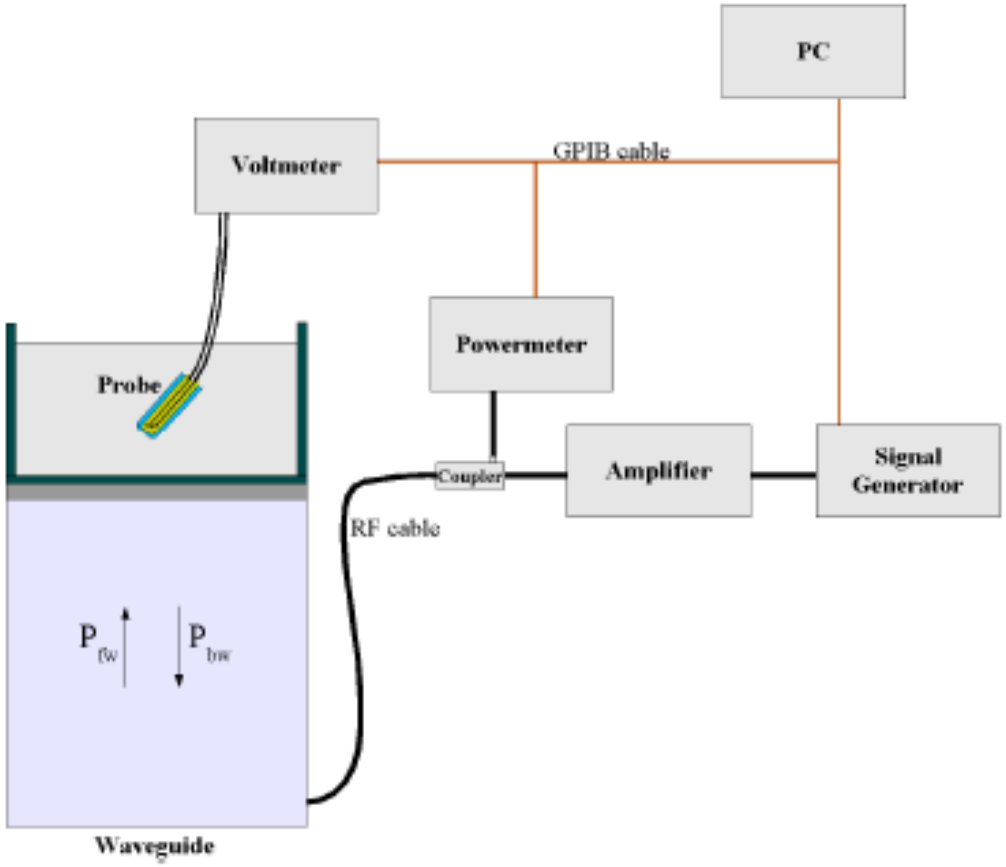
For the measurements the Specific Dosimetric E-Field Probe SN 37/08 EP80 with following specifications is used

- 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:

$$CF(N)=SAR(N)/Vlin(N) \qquad (N=1,2,3)$$

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

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

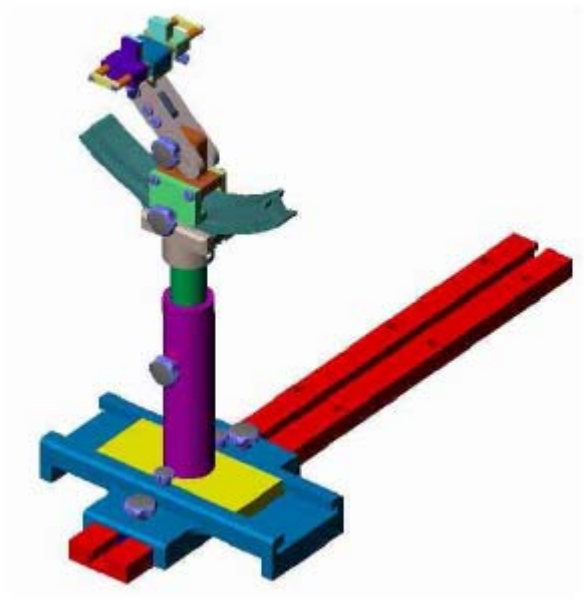
where DCP is the diode compression point in mV.

4.3. 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.

4.4. 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		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 (Aug 03)	835 MHZ	41.675999	0.894409
Target value	1900 MHZ	40	1.40
Validation value (Aug 03)	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 (Aug 03)	835 MHz	55.709999	1.009033
Target value	1900 MHz	53.3	1.52
Validation value (Aug 03)	1900 MHz	52.548876	1.573978
Target value	2450 MHz	53.3	1.52
Validation value (Aug 03)	2450 MHz	52.548876	1.573978

6. Uncertainty Assessment

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

6.1. UNCERTAINTY EVALUATION FOR 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	7.0	N	1	1	1	7.00	7.00	
Axial Isotropy	E.2.2	2.5	R	√3			1.02	1.02	
Hemispherical Isotropy	E.2.2	4.0	R	√3			1.63	1.63	
Boundary effect	E.2.3	1.0	R	√3	1	1	0.58	0.58	
Linearity	E.2.4	5.0	R	√3	1	1	2.89	2.89	
System detection limits	E.2.5	1.0	R	√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	√3	1	1	1.73	1.73	
Integration Time	E.2.8	2.0	R	√3	1	1	1.15	1.15	
RF ambient Conditions	E.6.1	3.0	R	√3	1	1	1.73	1.73	
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	√3	1	1	1.15	1.15	
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	√3	1	1	0.03	0.03	
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	5.0	R	√3	1	1	2.89	2.89	
Test sample Related									
Test sample positioning	E.4.2.1	0.03	N	1	1	1	0.03	0.03	N-1
Device Holder Uncertainty	E.4.1.1	5.00	N	1	1	1	5.00	5.00	
Output power Power Drift - SAR drift measurement	6.6.2	4.04	R	√3	1	1	2.33	2.33	
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	0.05	R	√3	1	1	0.03	0.03	
Liquid conductivity - deviation from target value	E.3.2	4.57	R	√3	0.64	0.43	1.69	1.13	
Liquid conductivity -	E.3.3	5.00	N	1	0.64	0.43	3.20	2.15	M

measurement uncertainty									
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	$\sqrt{3}$			11.23	10.70	
Expanded Uncertainty (95% Confidence interval)			k				21.91	20.86	

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 (10 g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	7.0	N	1	1	1	7.00	7.00	
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$			1.02	1.02	
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$			1.63	1.63	
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	
Readout Electronics	E.2.6	0.02	N	1	1	1	0.02	0.02	
Reponse Time	E.2.7	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	
Probe positioning with respect to Phantom Shell	E.6.3	0.05	R	$\sqrt{3}$	1	1	0.03	0.03	
Extrapolation, interpolation and integration 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	N-1
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	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				10.08	9.47	
Expanded Uncertainty (95% Confidence interval)			k				19.65	18.47	

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, 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 1900MHz:SN 36/08 DIPF 102 2450MHz:SN 36/08 DIPF 103

7.2. Validation Results

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

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

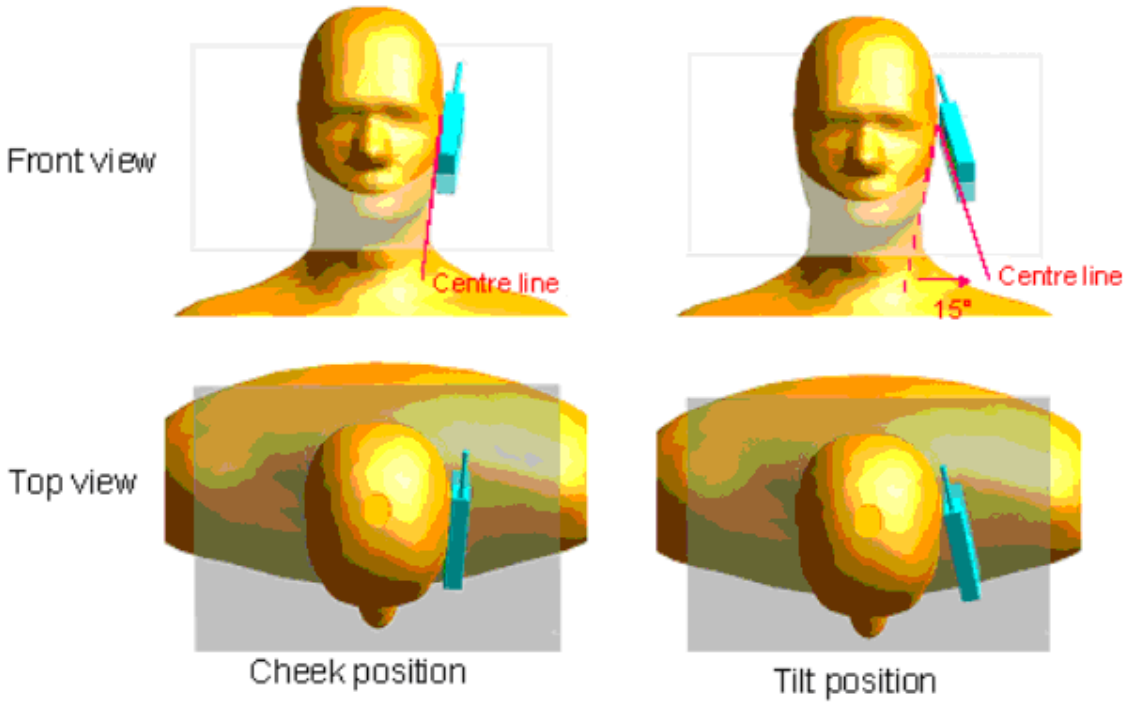
Note: System checks the specific test data please see page 107-112.

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.

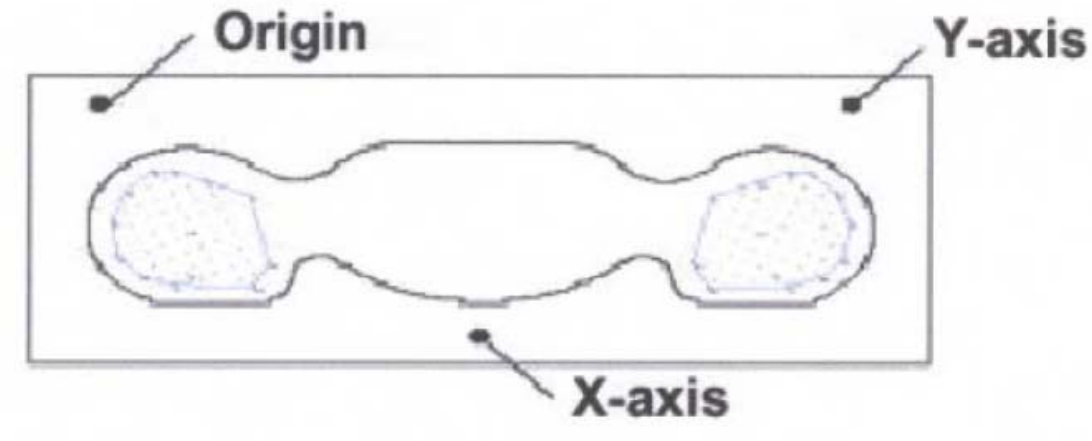
Remark: Please refer to Appendix B for the test setup photos.

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

Channel	Radio Configuration aud conducted Power (dBm)			
	RC1	RC1	RC3	RC3
1013	27.75	27.71	27.62	27.57
384	27.76	27.69	27.63	27.58
777	27.62	27.61	27.57	27.51
25	25.64	25.63	25.62	25.63
600	26.17	26.15	26.15	26.11
1175	26.16	26.12	26.10	26.12
SO	SO2	SO55	SO2	SO55

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	10.04	9.67
	6	2437	11.03	10.48
	11	2462	10.20	10.88

Bluetooth peak output power

Band	Channel	Frequency (MHz)	Output Power(dBm)		
			GFSK	Π/4-DQPSK	8-DPSK
BT	0	2402	8.229	7.501	6.709
	38	2441	8.075	7.378	6.569
	79	2480	8.131	7.328	6.468

10.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	0.836	0.614	0.910
	Ear/Tilt	Internal	0.828	0.935	0.825
Right Side Of Head	Cheek/Touch	Internal	0.350	0.474	0.391
	Ear/Tilt	Internal	0.349	0.448	0.390
Body	Back upward	Internal	0.752	0.998	0.856
	Face Upward	Internal	0.190	0.263	0.231

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		
			Channel 25	Channel 600	Channel 1775
Left Side Of Head	Cheek/Touch	Internal	0.478	0.370	0.684
	Ear/Tilt	Internal	0.497	0.358	0.651
Right Side Of Head	Cheek/Touch	Internal	0.348	0.223	0.386
	Ear/Tilt	Internal	0.420	0.305	0.545
Body	Back upward	Internal	0.311	0.341	0.551
	Face Upward	Internal	0.218	0.096	0.158

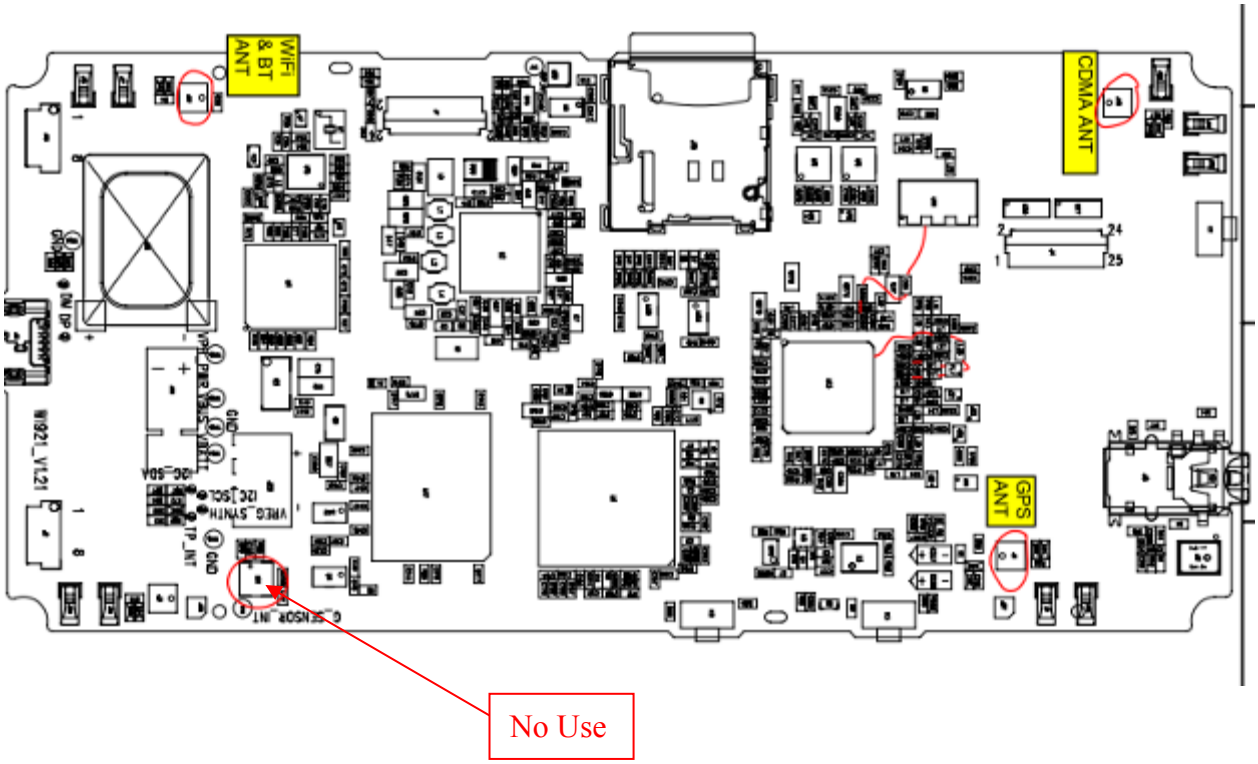
Summary of Measurement Results (WLAN 2450 Band)

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	Back upward	Internal	/	0.133	/
	Face Upward	Internal	/	0.044	/

Note: 1. er 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.

11.Multiple Transmitters Evaluation

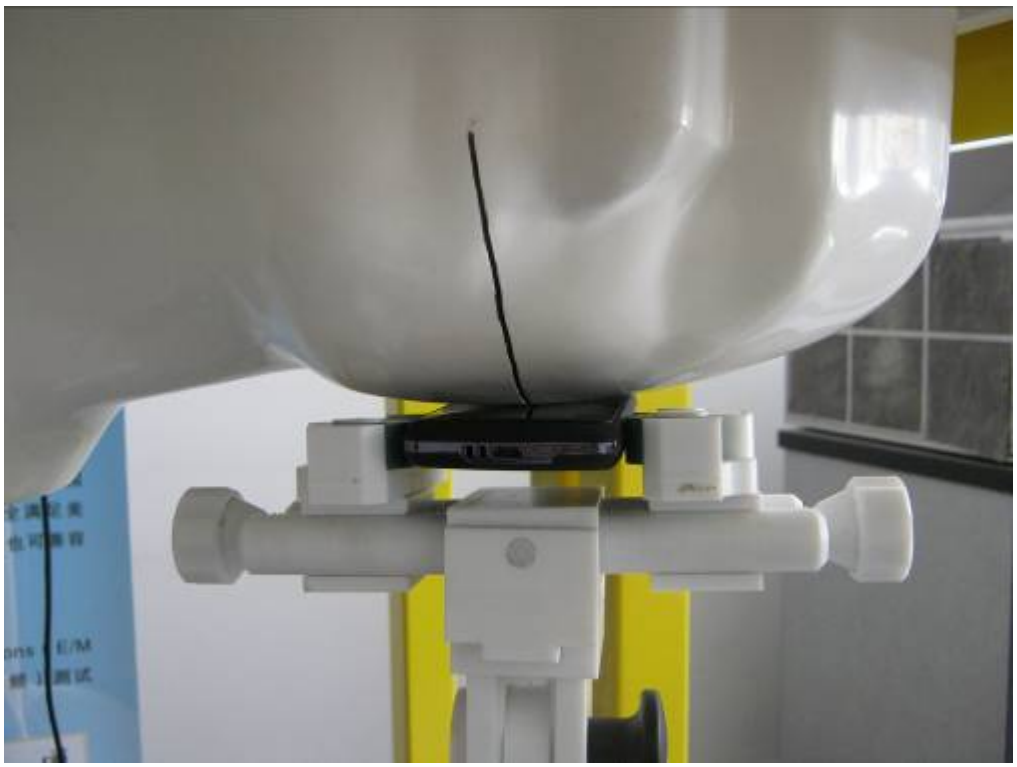
The are three transmitters build in EUT, CDMA, BT and WiFi, As follwing :



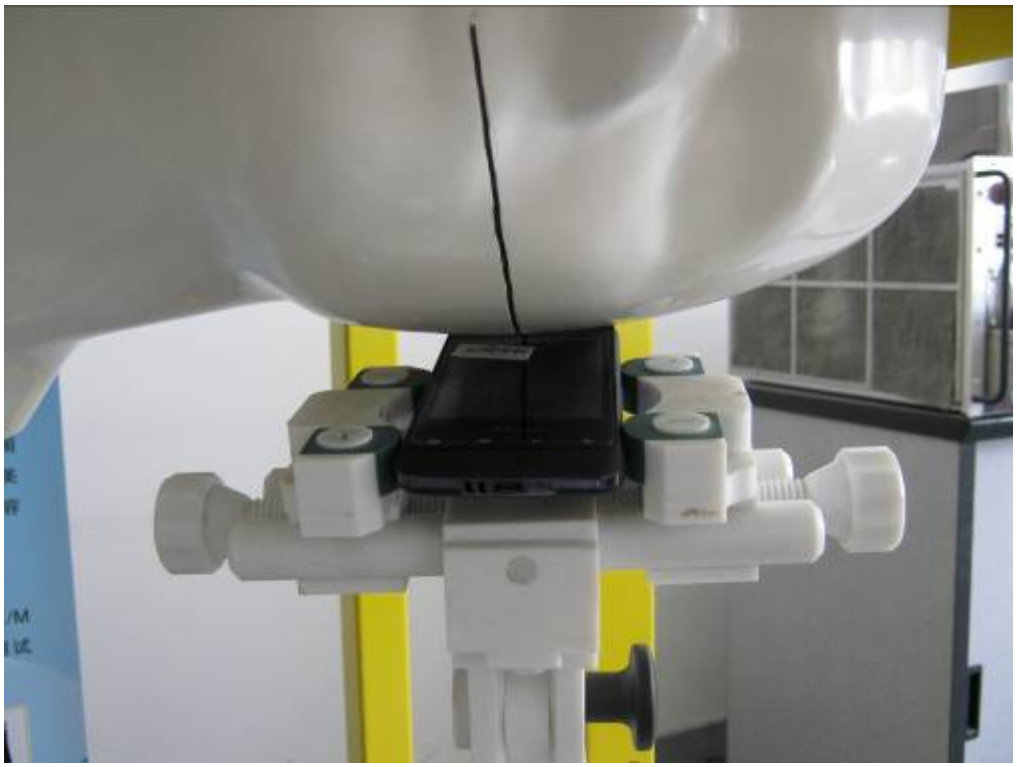
1. The Wifi mode Max. 1-g SAR vauel is 0.133W/Kg, and the CDMA Max. 1-g SAR vauel is 0.998W/Kg, the sum of 1-g SAR vauel is 1.131W/Kg less than 1.6W/Kg, according with KDB 648474 D01, when the sum of the 1-g SAR is <1.6 W/kg for all simultaneous transmitting antennas , and the Simultaneous Transmission SAR is not required.

Annex A Photographs of the EUT

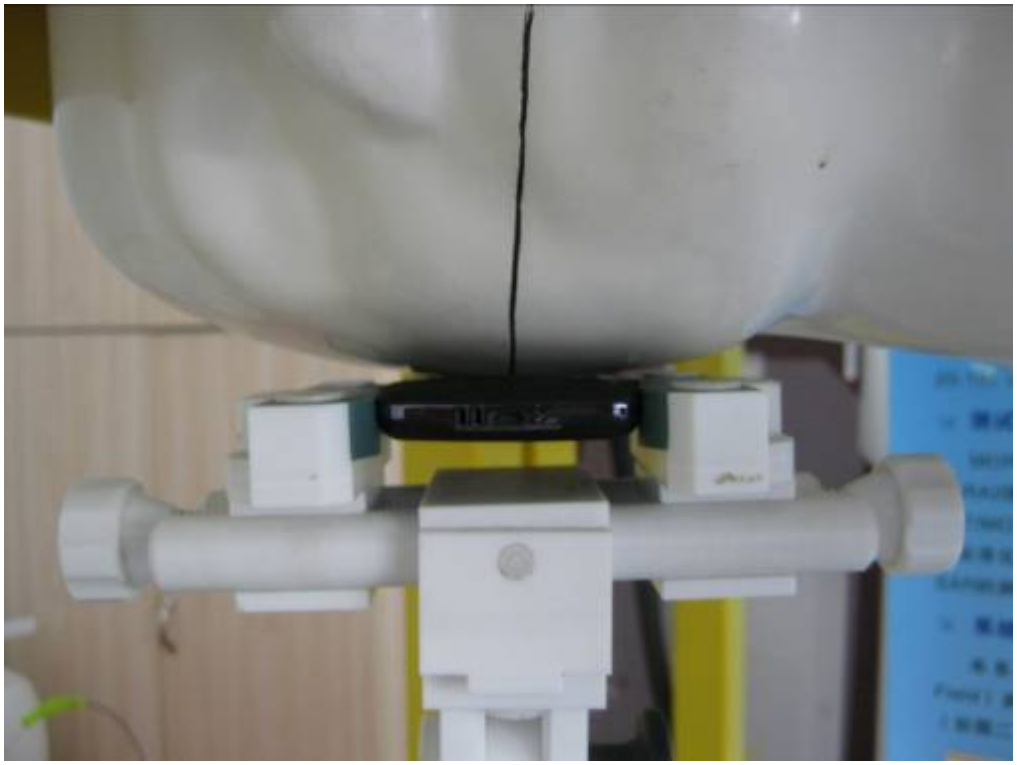
1 EUT Left Head Touch Cheek Position



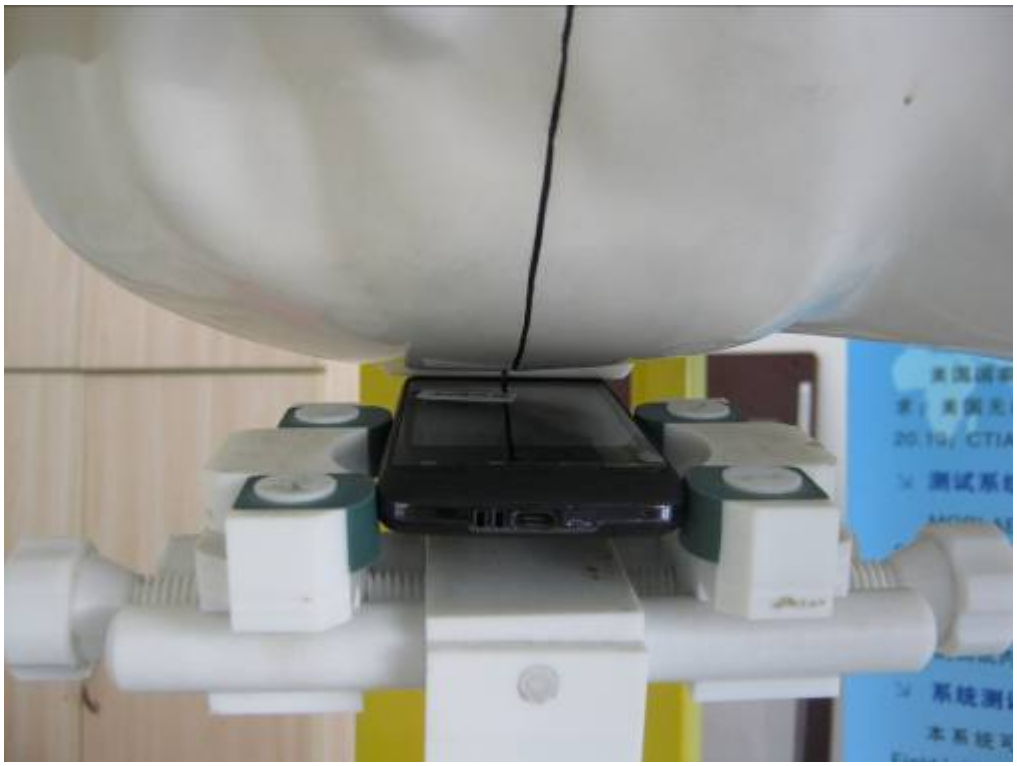
2 EUT Left Head Tilt15 Position



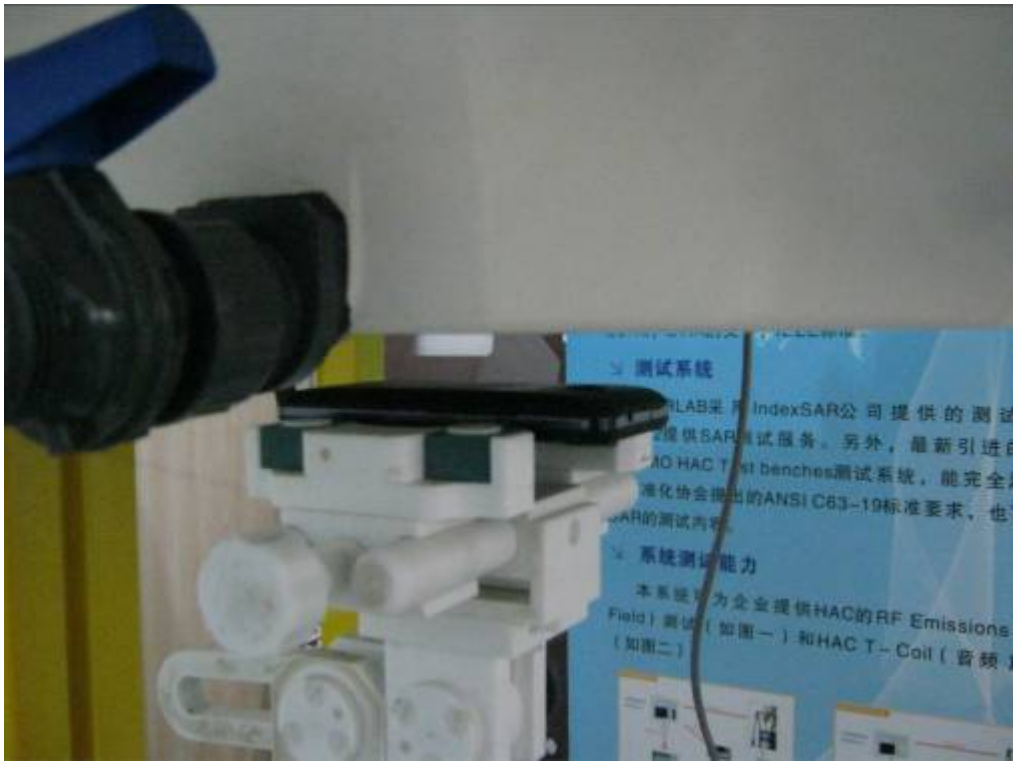
3 EUT Right Head Touch Cheek Position



4 EUT Right Head Tilt15 Position



5 Side Position



6 With Headphone

Liquid Level Photo

Annex C Graph Test Results

TYPE	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
	CDMA 1900	Measurement 19: Right Head with Cheek device position on Low Channel in CDMA mode Measurement 20: Right Head with Cheek device position on Middle Channel in CDMA mode

	CDMA 1900	Measurement 21: Right Head with Cheek device position on High Channel in CDMA mode Measurement 22: Right Head with Tilt device position on Low Channel in CDMA mode Measurement 23: Right Head with Tilt device position on Middle Channel in CDMA mode Measurement 24: Right Head with Tilt device position on High Channel in CDMA mode Measurement 25: Left Head with Cheek device position on Low Channel in CDMA mode Measurement 26: Left Head with Cheek device position on Middle Channel in CDMA mode Measurement 27: Left Head with Cheek device position on High Channel in CDMA mode Measurement 28: Left Head with Tilt device position on Low Channel in CDMA mode Measurement 29: Left Head with Tilt device position on Middle Channel in CDMA mode Measurement 30: Left Head with Tilt device position on High Channel in CDMA mode Measurement 31: Validation Plane with Body device position on Low Channel in CDMA mode Measurement 32: Validation Plane with Body device position on Low Channel in CDMA mode Measurement 33: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 34: Validation Plane with Body device position on Middle Channel in CDMA mode Measurement 35: Validation Plane with Body device position on High Channel in CDMA mode Measurement 36: Validation Plane with Body device position on High Channel in CDMA mode
	WIFI 2450	Measurement 37: Validation Plane with Body device position on High Channel in DSSS mode Measurement 38: Validation Plane with Body device position on High Channel in DSSS mode

MEASUREMENT 1

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 3/8/2011
Measurement duration: 7 minutes 32 seconds

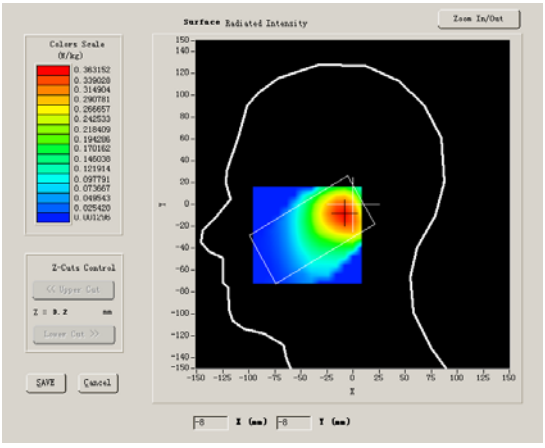
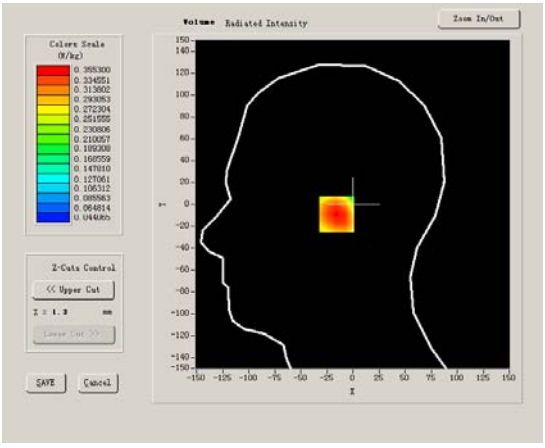
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	CDMA850
Channels	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 (%)	0.060000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

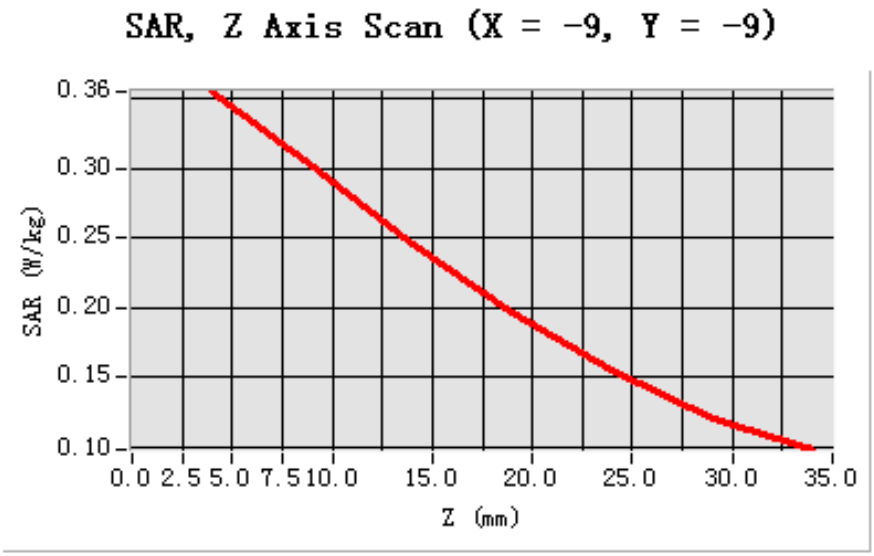
SURFACE SAR	VOLUME SAR
	

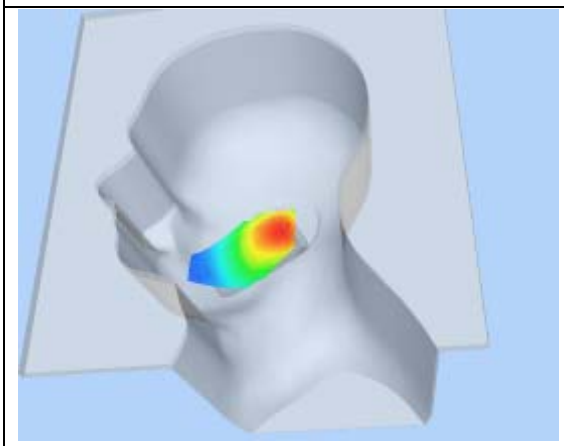
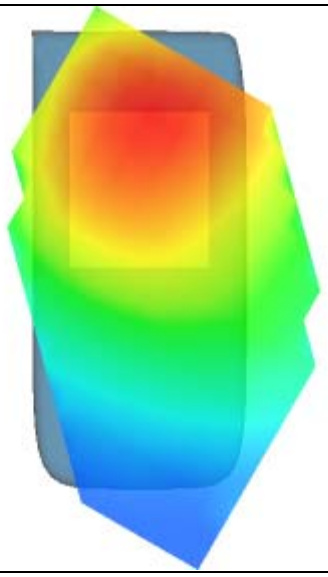
Maximum location: X=-9.00, Y=-9.00

SAR 10g (W/Kg)	0.268830
SAR 1g (W/Kg)	0.349590

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3553	0.3005	0.2460	0.1958	0.1543	0.1204



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: 3/8/2011
Measurement duration: 7 minutes 31 seconds

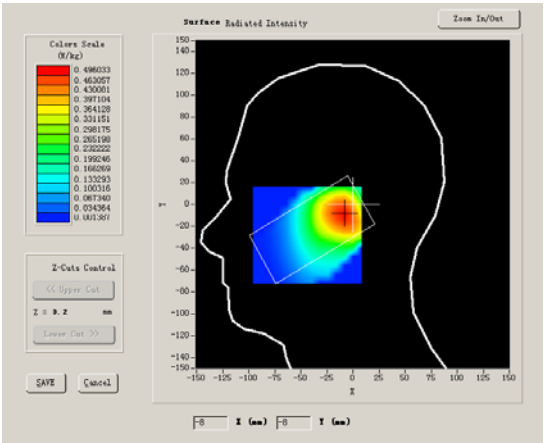
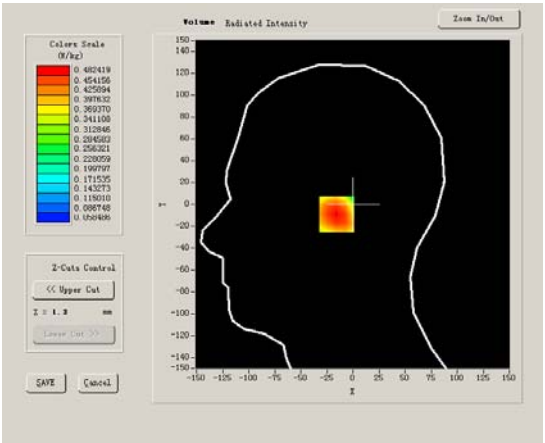
A. Experimental conditions.

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 (%)	-0.100000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

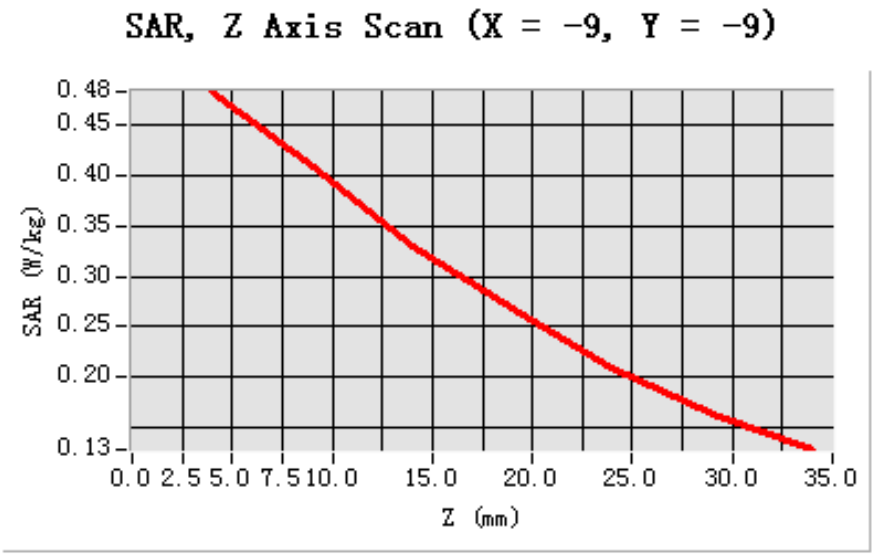
SURFACE SAR	VOLUME SAR
	

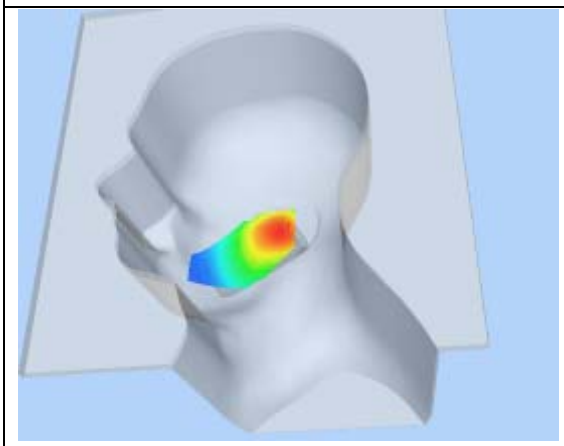
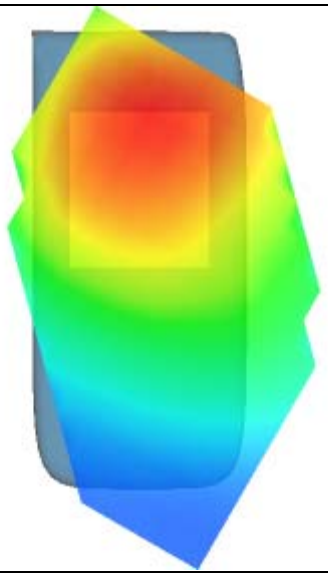
Maximum location: X=-9.00, Y=-9.00

SAR 10g (W/Kg)	0.366593
SAR 1g (W/Kg)	0.473990

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4824	0.4078	0.3301	0.2674	0.2095	0.1640



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: 3/8/2011
Measurement duration: 7 minutes 30 seconds

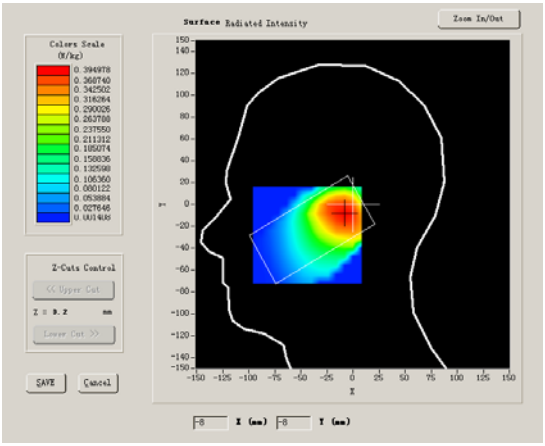
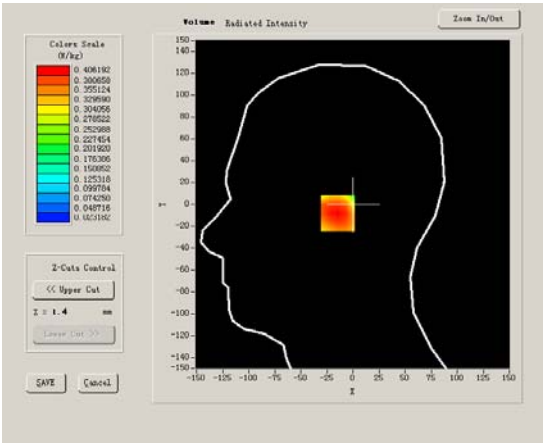
A. Experimental conditions.

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 (%)	2.010000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

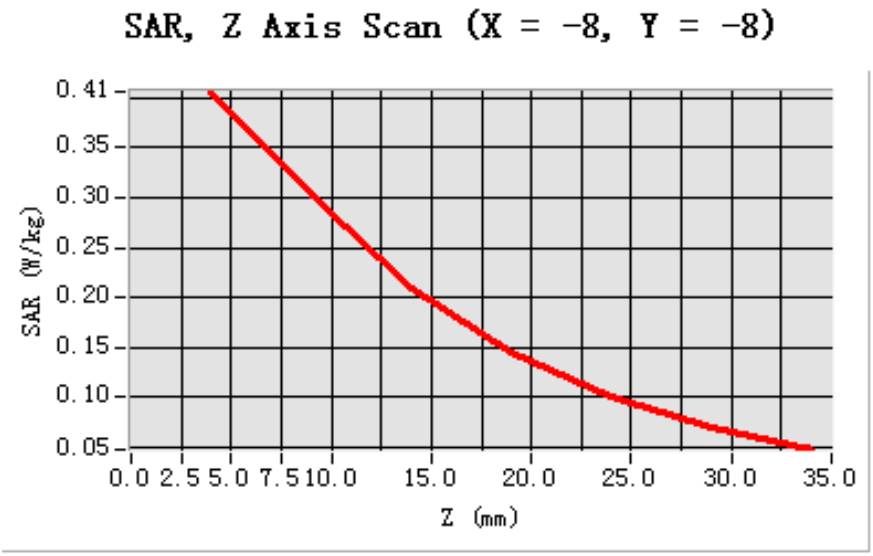
SURFACE SAR	VOLUME SAR
	

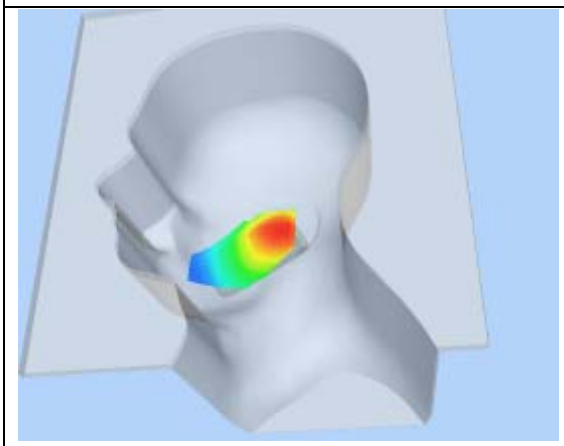
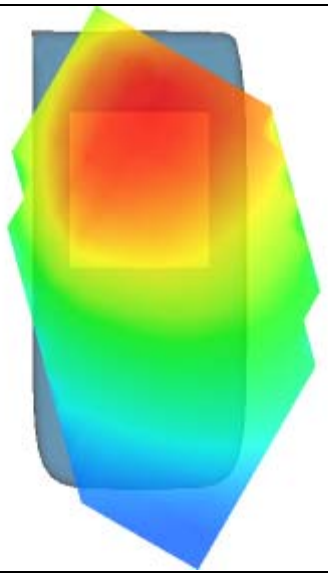
Maximum location: X=-8.00, Y=-8.00

SAR 10g (W/Kg)	0.270170
SAR 1g (W/Kg)	0.391246

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4062	0.3018	0.2084	0.1447	0.1011	0.0703



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: 3/8/2011
Measurement duration: 7 minutes 32 seconds

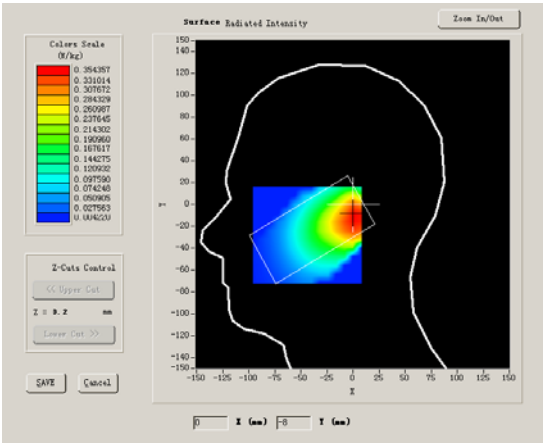
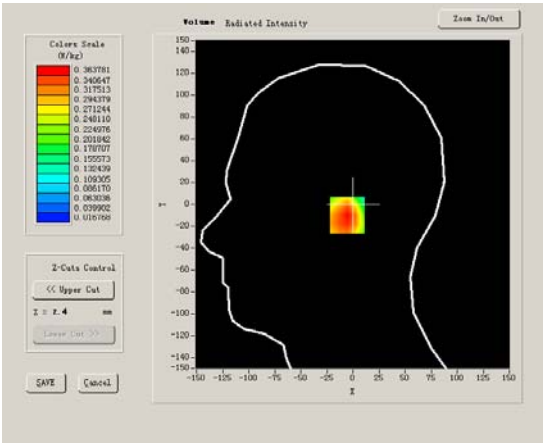
A. Experimental conditions.

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 (%)	-0.440000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

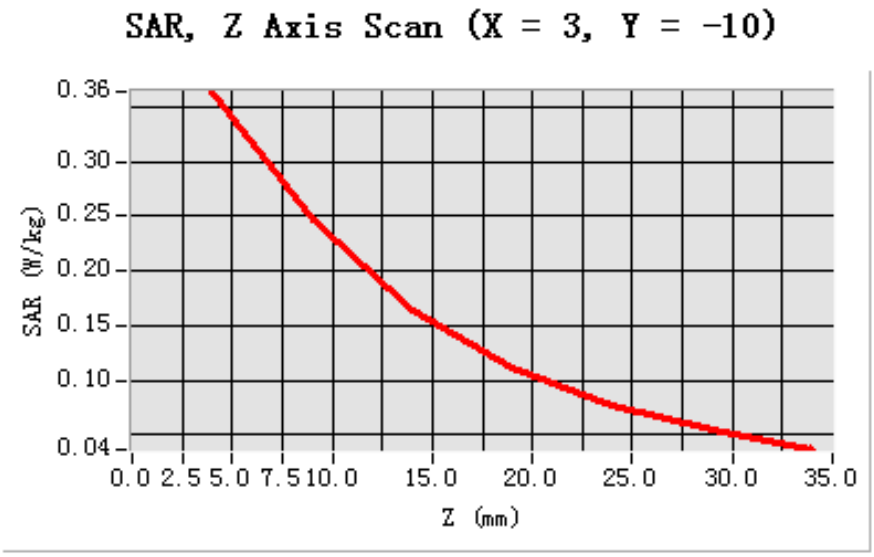
SURFACE SAR	VOLUME SAR
	

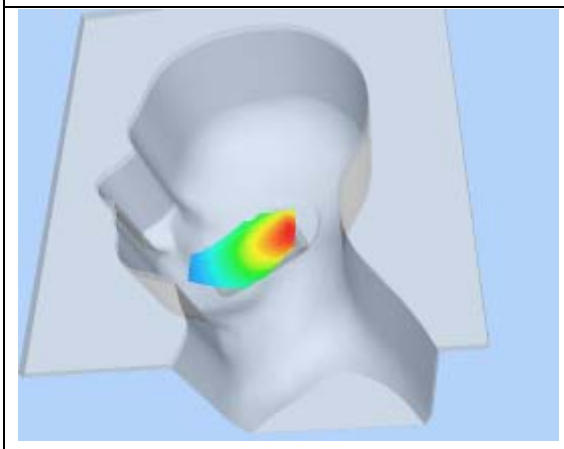
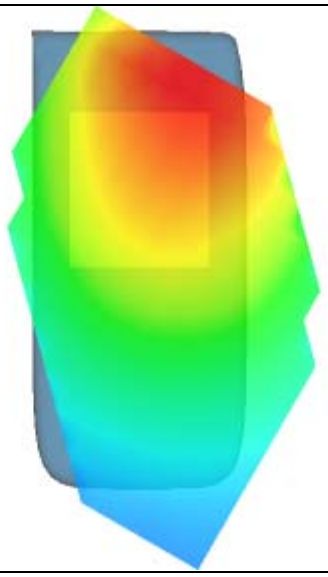
Maximum location: X=3.00, Y=-10.00

SAR 10g (W/Kg)	0.231366
SAR 1g (W/Kg)	0.349400

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3638	0.2459	0.1645	0.1120	0.0773	0.0541



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: 3/8/2011
Measurement duration: 7 minutes 33 seconds

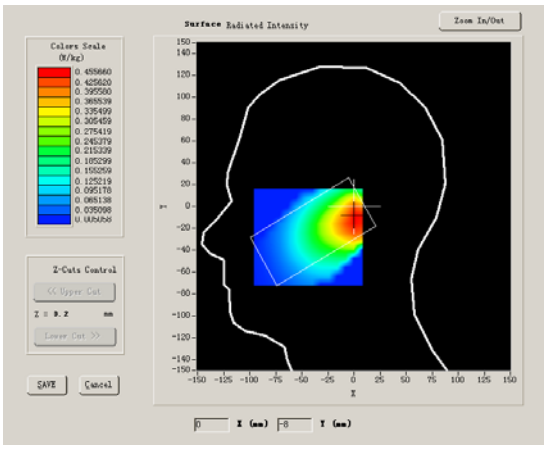
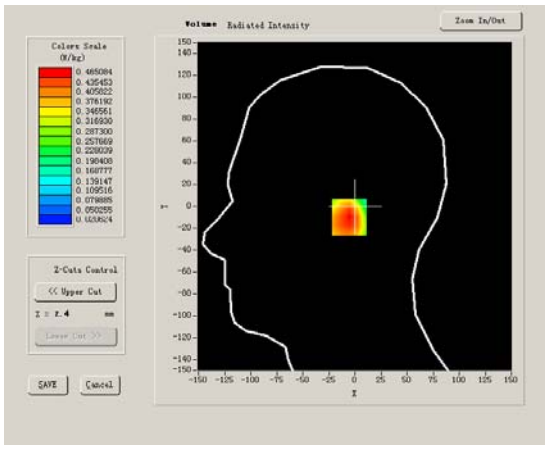
A. Experimental conditions.

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 (%)	0.690000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

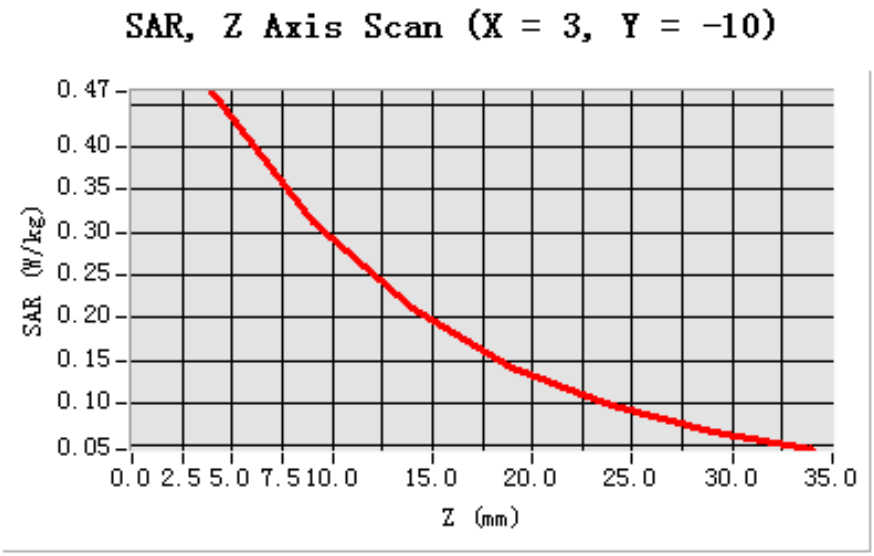
SURFACE SAR	VOLUME SAR
	

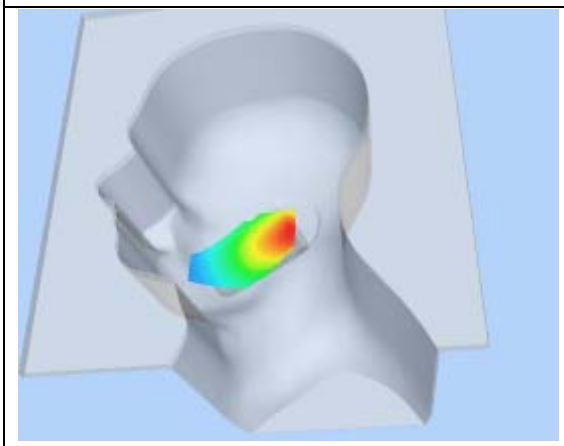
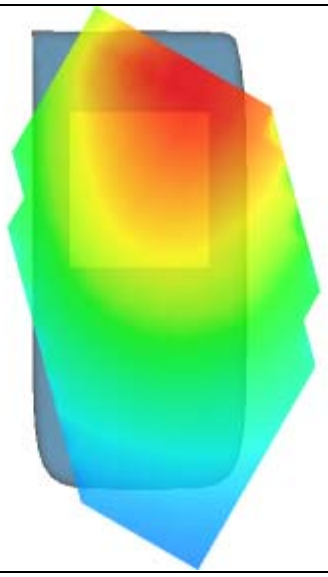
Maximum location: X=3.00, Y=-10.00

SAR 10g (W/Kg)	0.294964
SAR 1g (W/Kg)	0.448230

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4651	0.3114	0.2110	0.1421	0.0982	0.0674



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: 3/8/2011
Measurement duration: 7 minutes 37 seconds

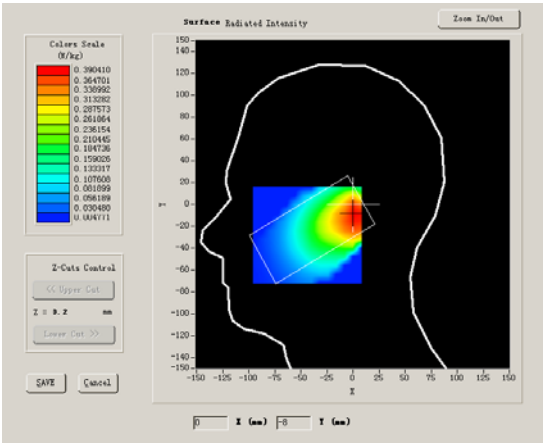
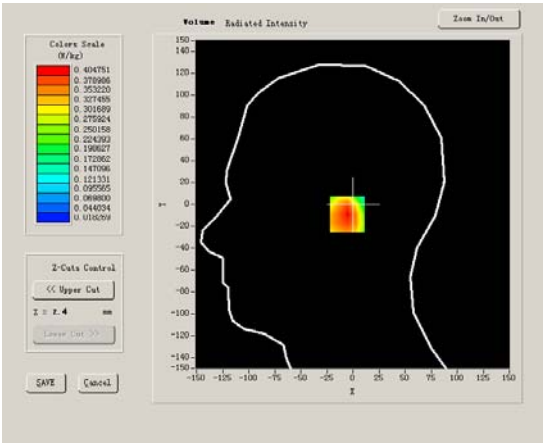
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.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 (%)	1.670000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

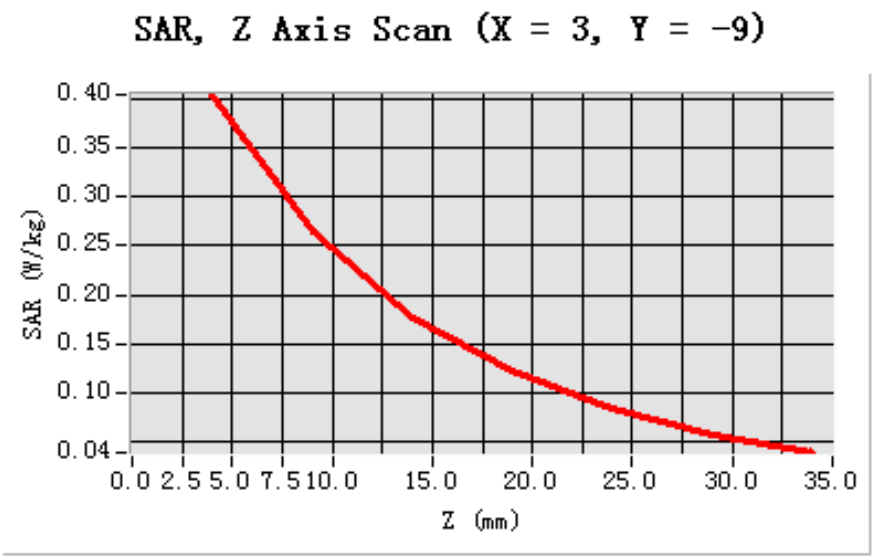
SURFACE SAR	VOLUME SAR
	

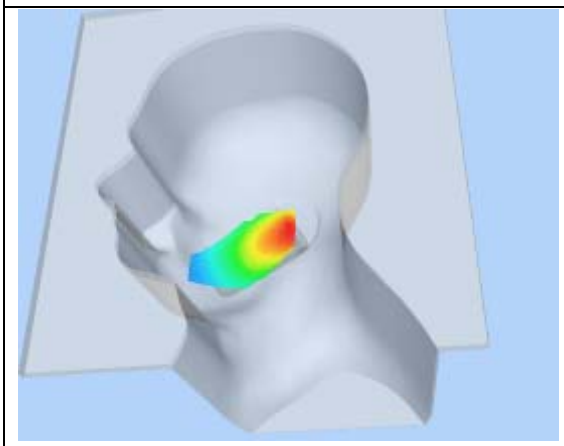
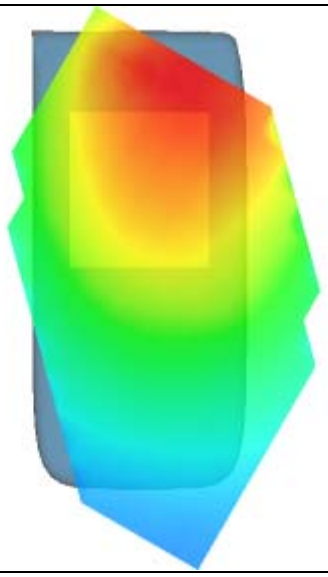
Maximum location: X=3.00, Y=-9.00

SAR 10g (W/Kg)	0.254324
SAR 1g (W/Kg)	0.390307

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4048	0.2644	0.1763	0.1230	0.0836	0.0570



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: 3/8/2011
Measurement duration: 7 minutes 20 seconds

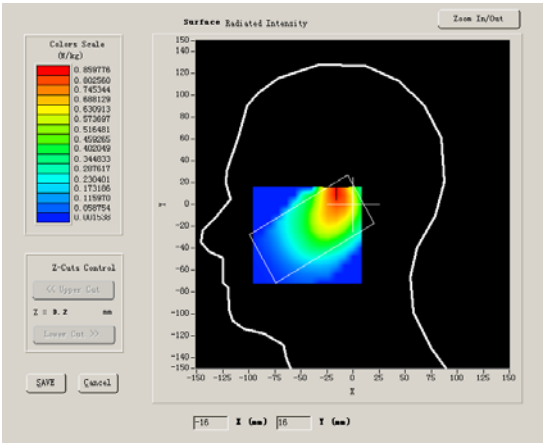
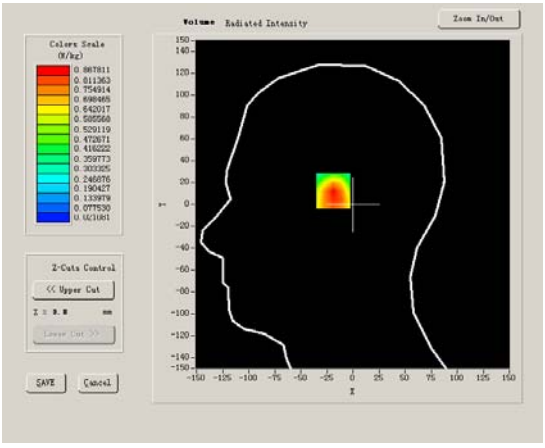
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.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 (%)	1.930000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

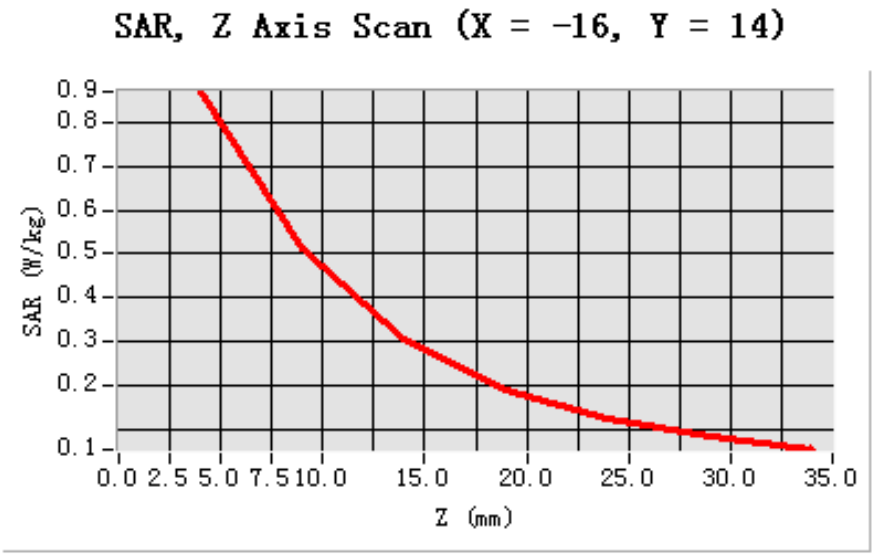
SURFACE SAR	VOLUME SAR
	

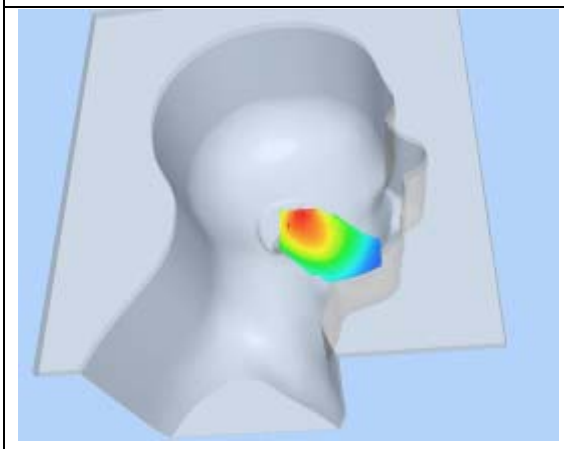
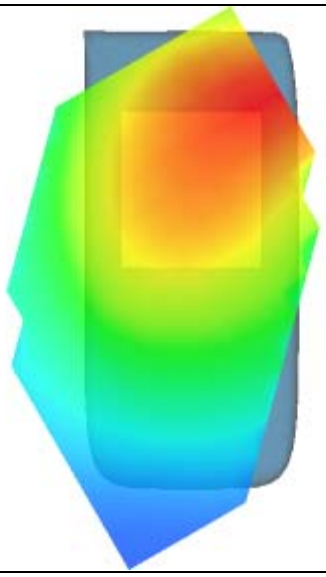
Maximum location: X=-16.00, Y=14.00

SAR 10g (W/Kg)	0.511601
SAR 1g (W/Kg)	0.836450

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8678	0.5118	0.3053	0.1916	0.1250	0.0853



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: 3/8/2011
Measurement duration: 7 minutes 46 seconds

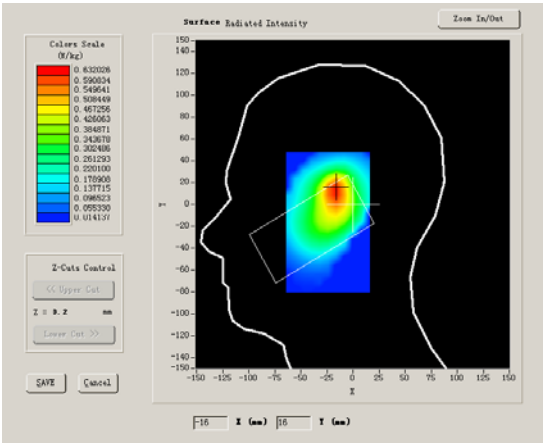
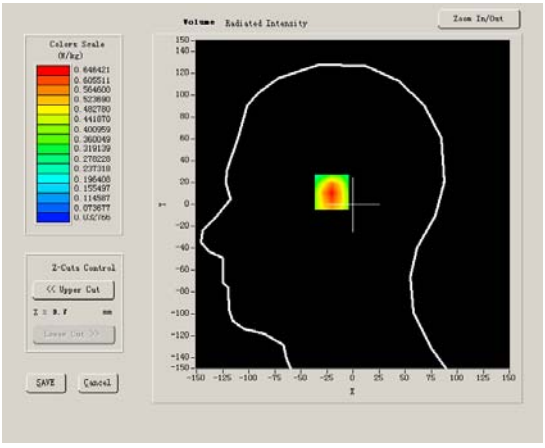
A. Experimental conditions.

Phantom File	zinf3.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 (%)	0.880000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

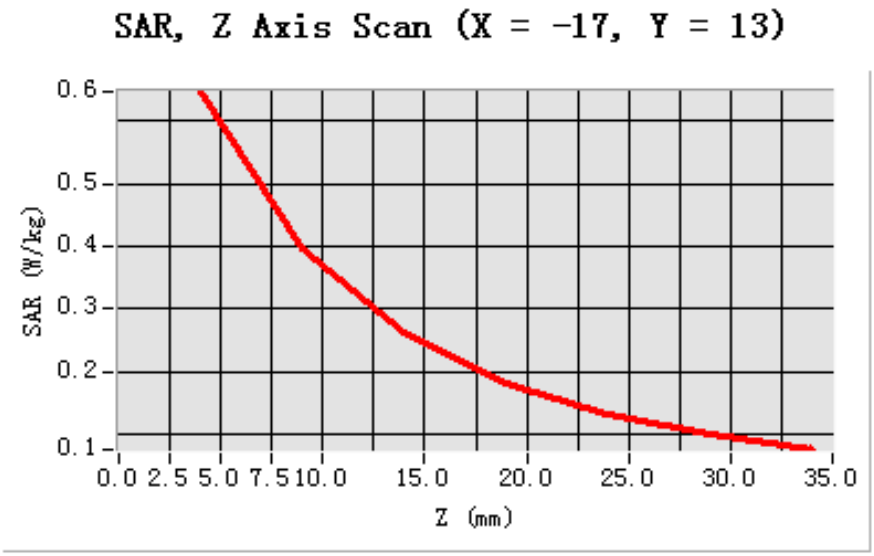
SURFACE SAR	VOLUME SAR
	

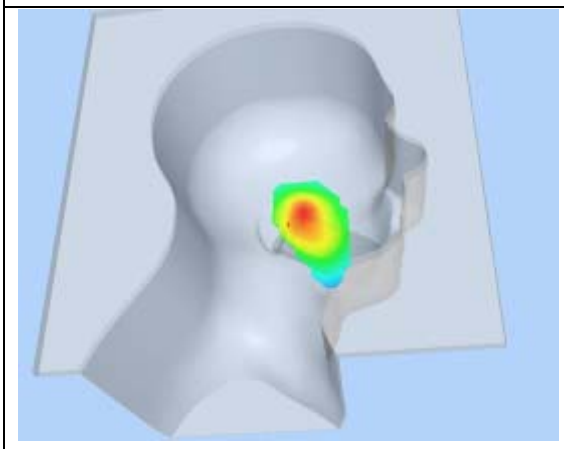
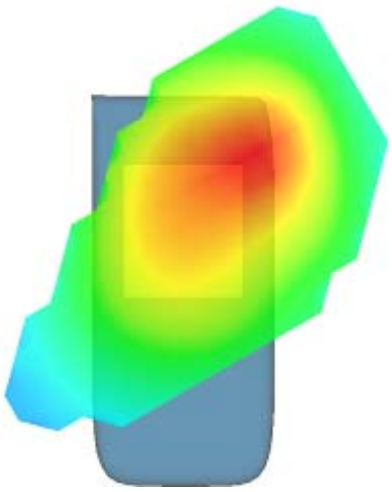
Maximum location: X=-17.00, Y=13.00

SAR 10g (W/Kg)	0.387091
SAR 1g (W/Kg)	0.613609

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.6464	0.3974	0.2620	0.1794	0.1315	0.0992



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: 3/8/2011
Measurement duration: 7 minutes 25 seconds

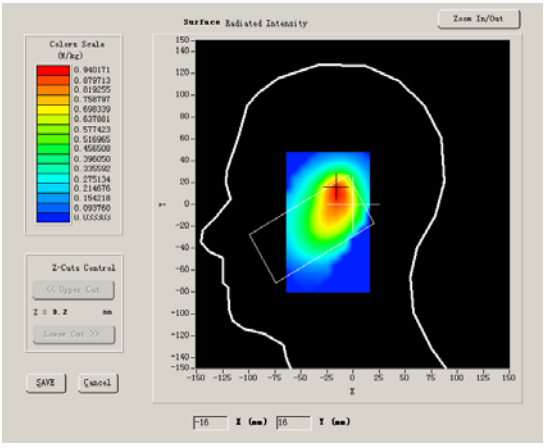
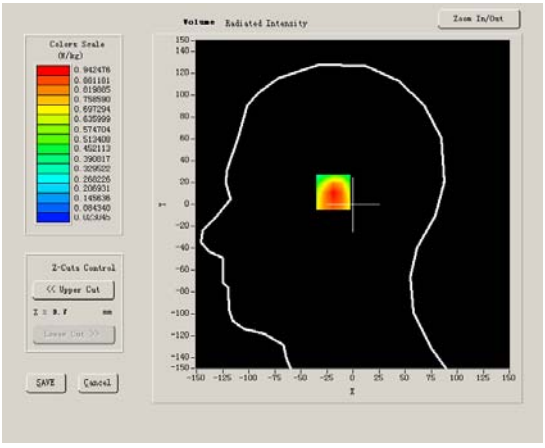
A. Experimental conditions.

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 (%)	-0.690000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

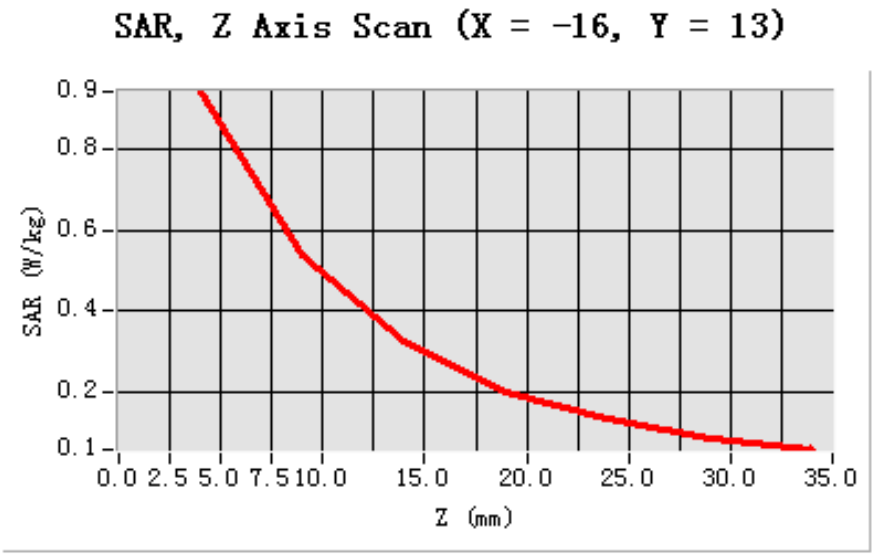
SURFACE SAR	VOLUME SAR
	

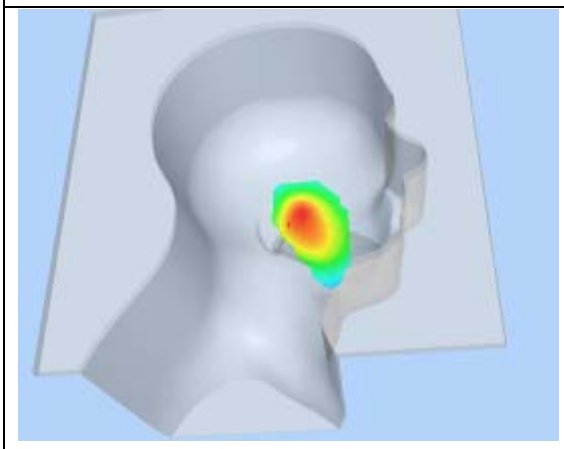
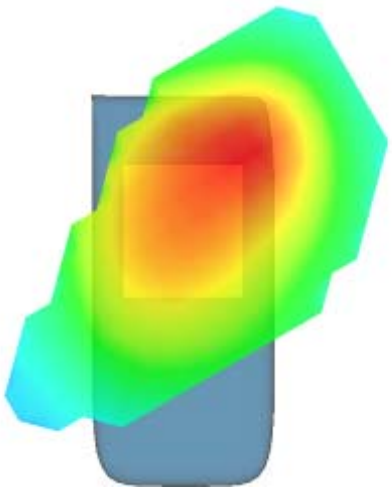
Maximum location: X=-16.00, Y=13.00

SAR 10g (W/Kg)	0.549792
SAR 1g (W/Kg)	0.909946

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9425	0.5403	0.3258	0.2000	0.1327	0.0866



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: 3/8/2011
Measurement duration: 7 minutes 25 seconds

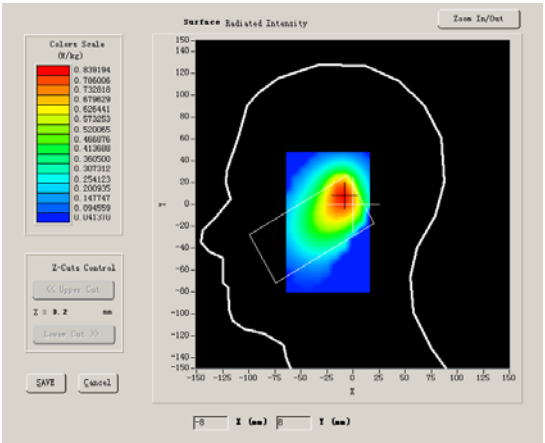
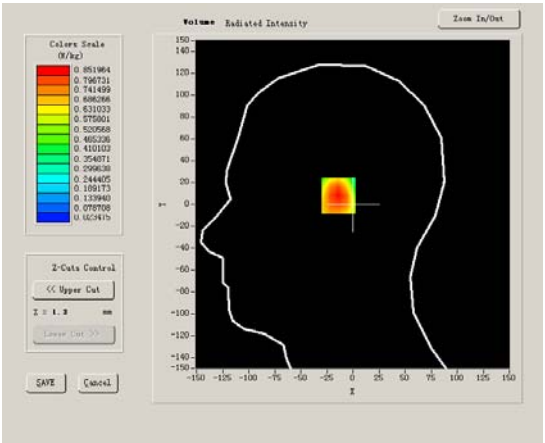
A. Experimental conditions.

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 (%)	0.540000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

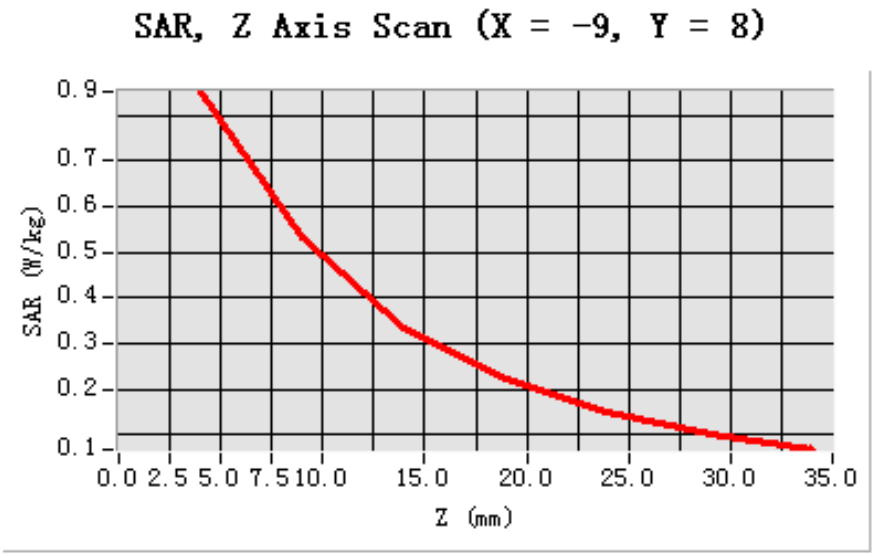
SURFACE SAR	VOLUME SAR
	

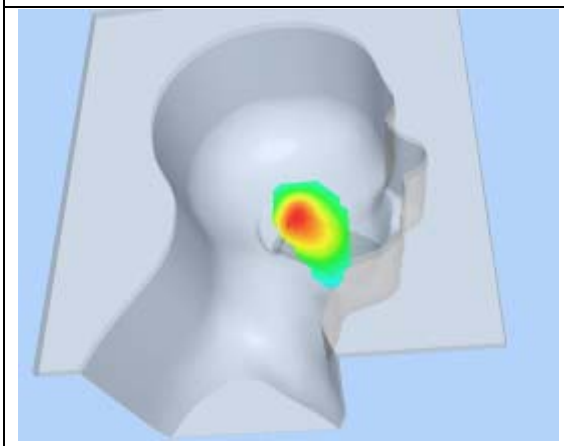
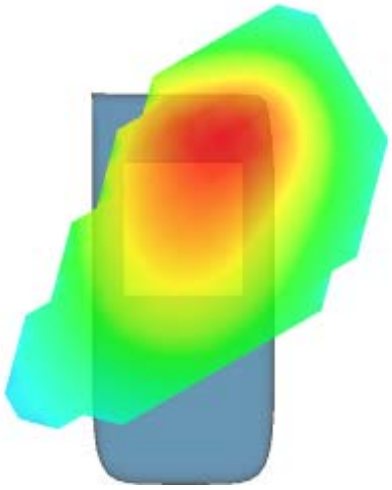
Maximum location: X=-9.00, Y=8.00

SAR 10g (W/Kg)	0.525129
SAR 1g (W/Kg)	0.827628

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8520	0.5307	0.3346	0.2216	0.1472	0.1003



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: 3/8/2011
Measurement duration: 7 minutes 25 seconds

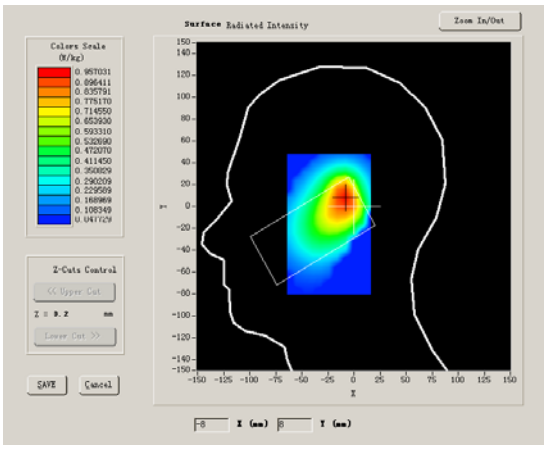
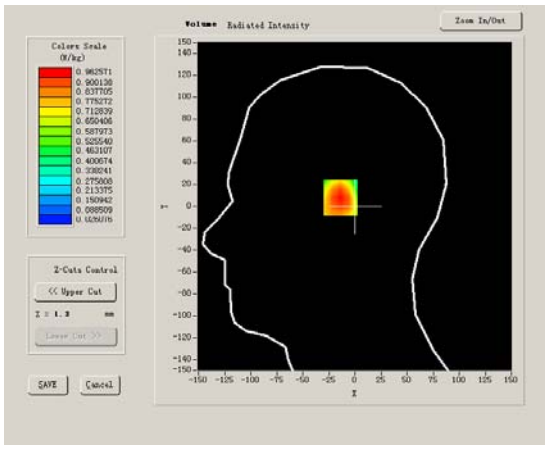
A. Experimental conditions.

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 (%)	-0.540000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

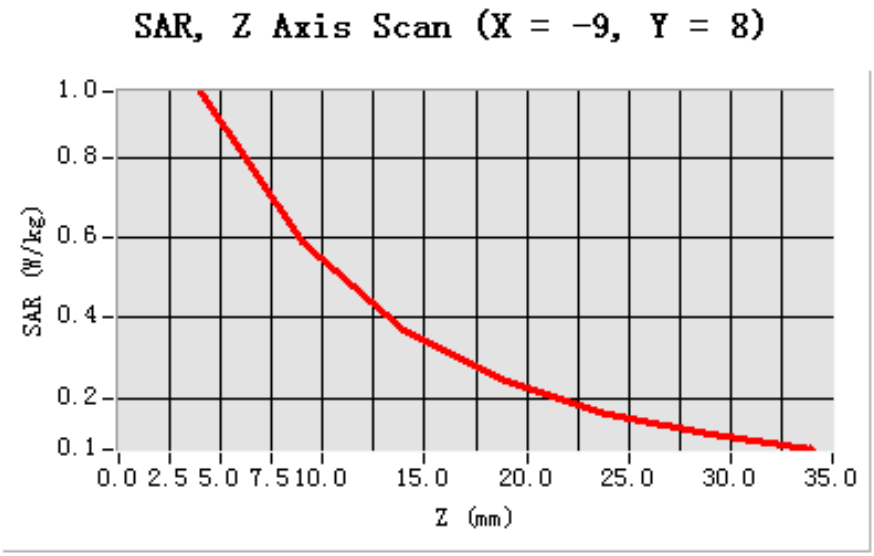
SURFACE SAR	VOLUME SAR
	

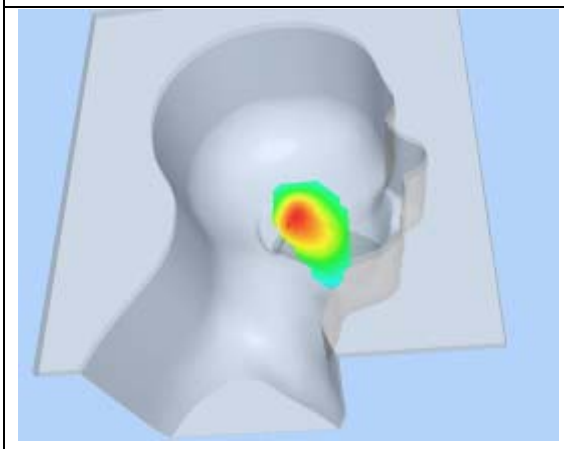
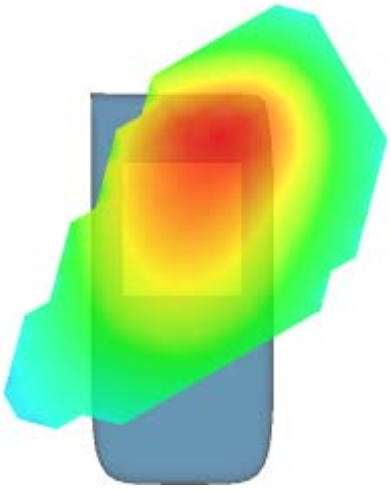
Maximum location: X=-9.00, Y=8.00

SAR 10g (W/Kg)	0.590442
SAR 1g (W/Kg)	0.935097

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.9626	0.5912	0.3711	0.2410	0.1595	0.1085



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: 3/8/2011
Measurement duration: 7 minutes 23 seconds

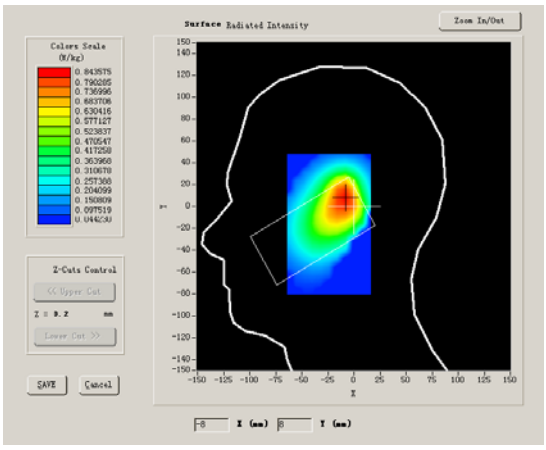
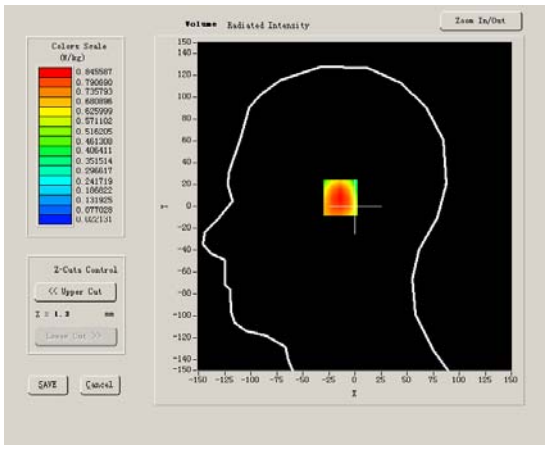
A. Experimental conditions.

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 (%)	-1.620000
Type:	Phone
Area	scan
	Zoom
Date	of

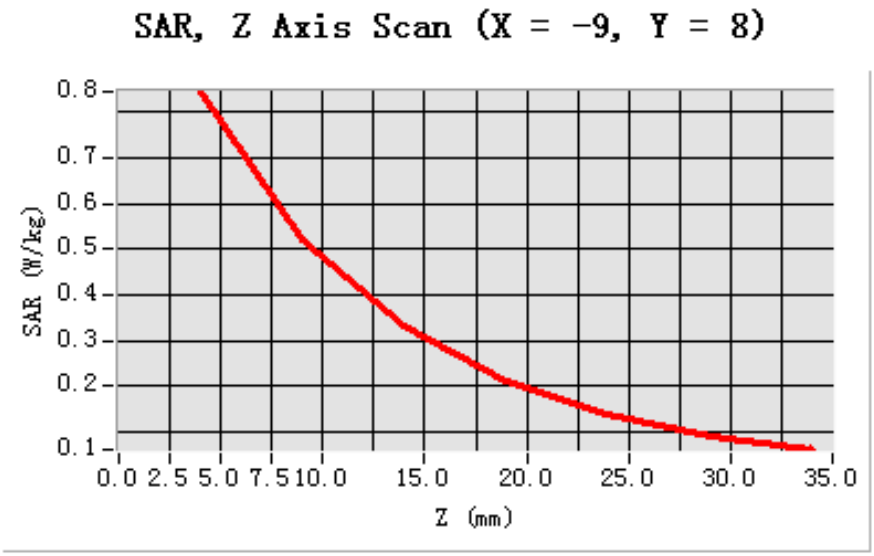
SURFACE SAR	VOLUME SAR
	

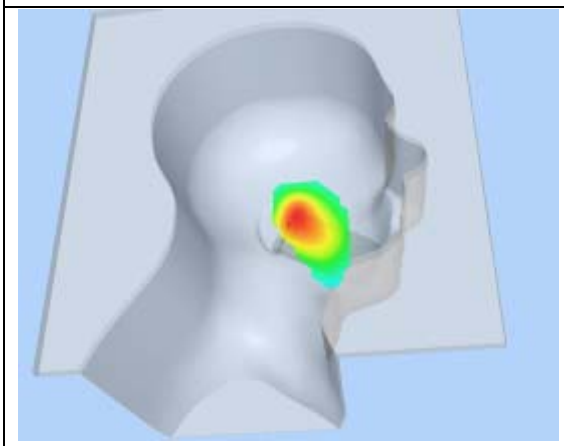
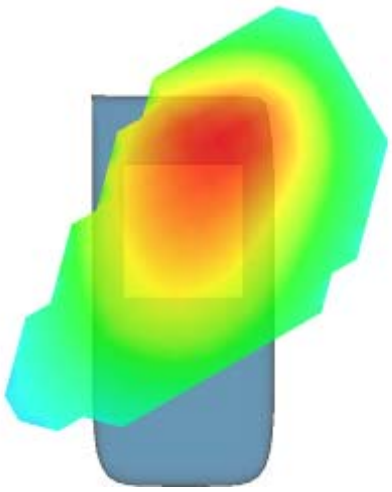
Maximum location: X=-9.00, Y=8.00

SAR 10g (W/Kg)	0.521004
SAR 1g (W/Kg)	0.824632

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8456	0.5212	0.3311	0.2116	0.1379	0.0920



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: 3/8/2011
Measurement duration: 9 minutes 14 seconds

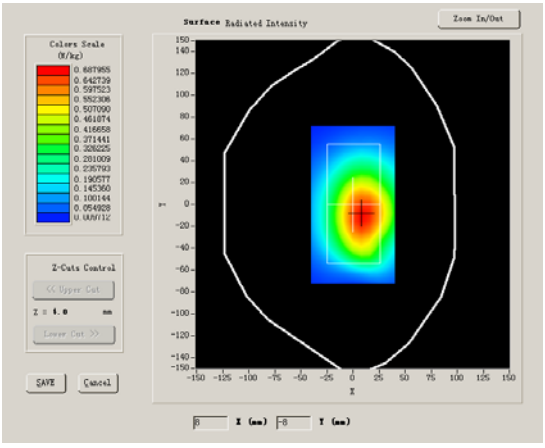
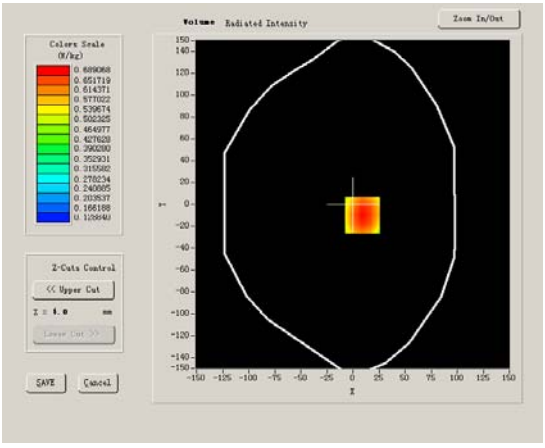
A. Experimental conditions.

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 (%)	2.340000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

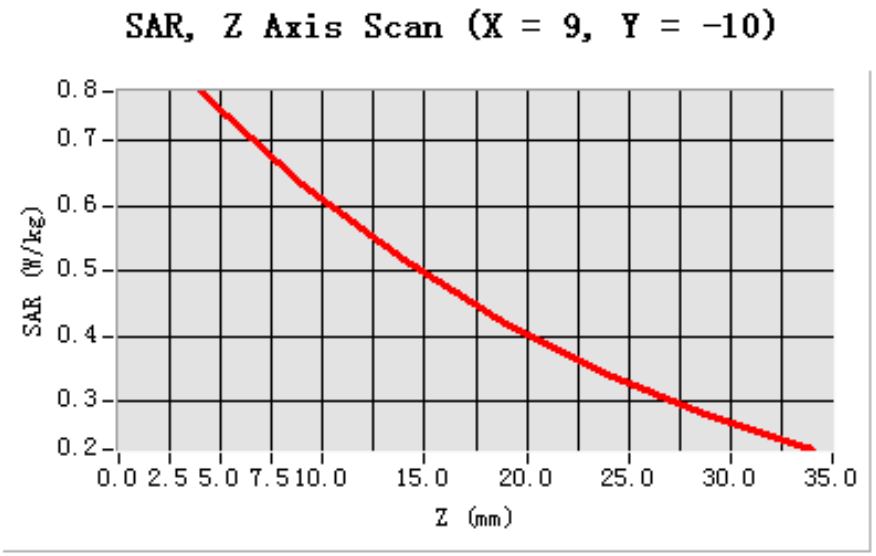
SURFACE SAR	VOLUME SAR
	

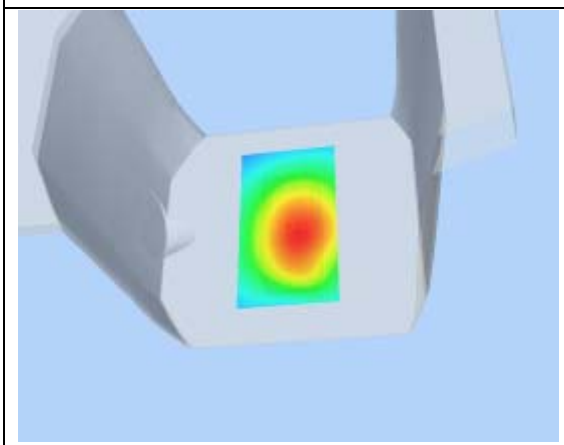
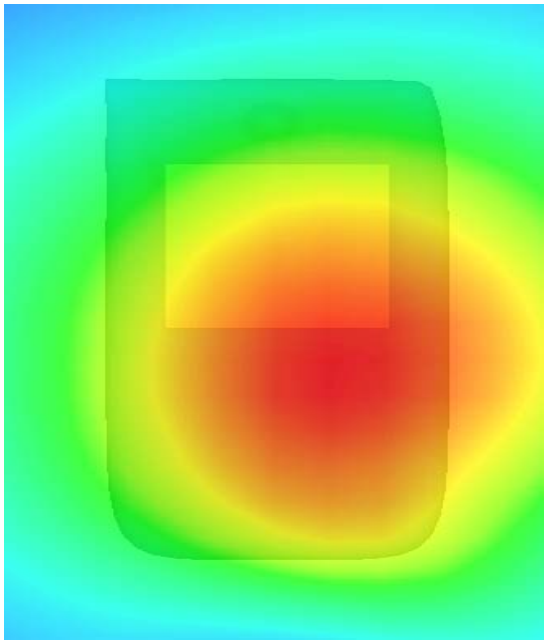
Maximum location: X=9.00, Y=-10.00

SAR 10g (W/Kg)	0.583776
SAR 1g (W/Kg)	0.751770

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7749	0.6334	0.5180	0.4200	0.3423	0.2763



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: 3/8/2011
Measurement duration: 9 minutes 7 seconds

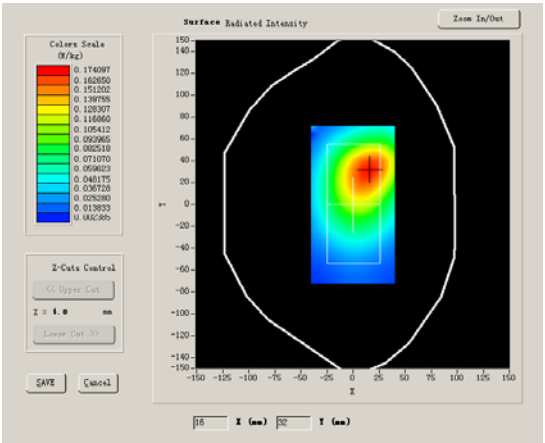
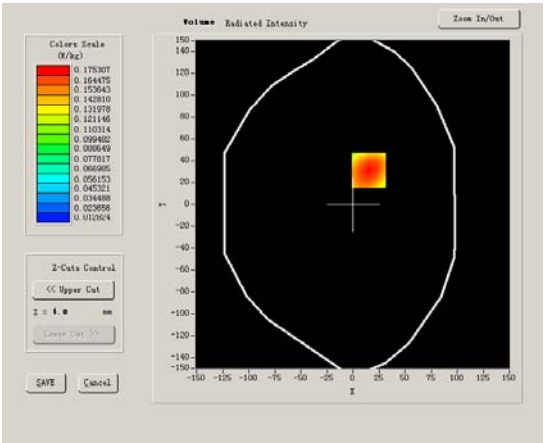
A. Experimental conditions.

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 (%)	0.160000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

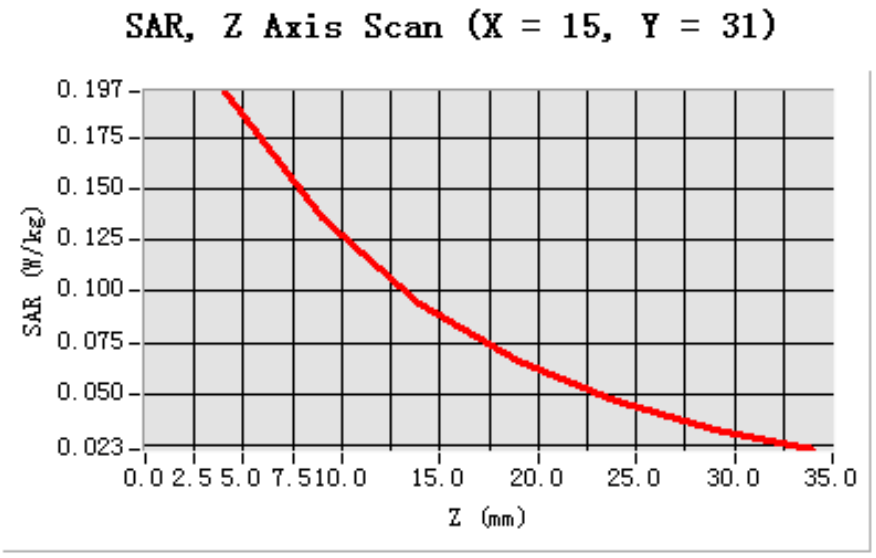
SURFACE SAR	VOLUME SAR
	

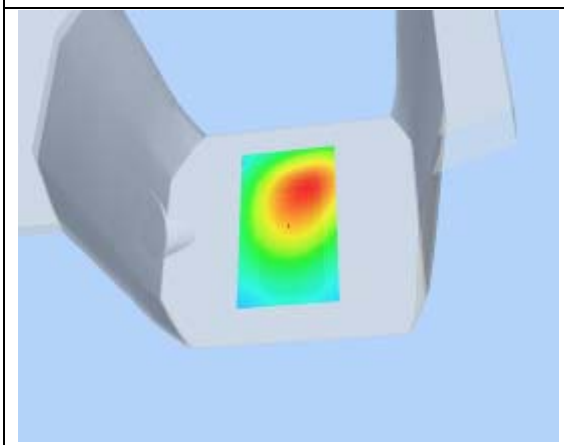
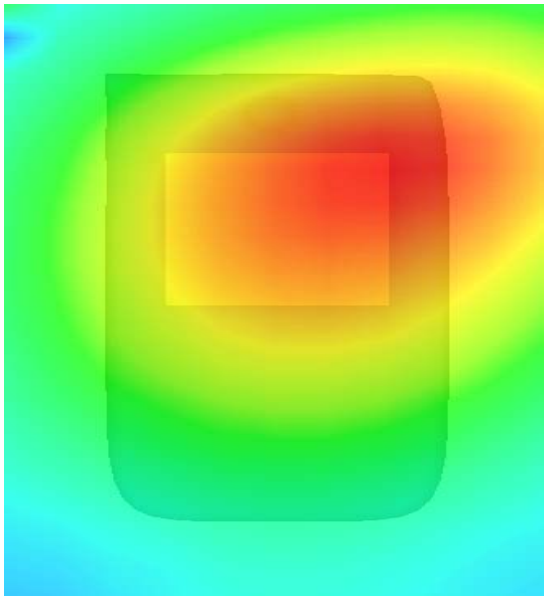
Maximum location: X=15.00, Y=31.00

SAR 10g (W/Kg)	0.127925
SAR 1g (W/Kg)	0.190049

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1972	0.1364	0.0940	0.0657	0.0470	0.0326



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: 3/8/2011
Measurement duration: 9 minutes 10 seconds

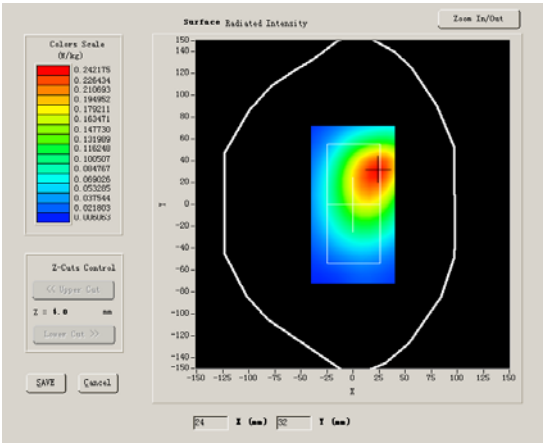
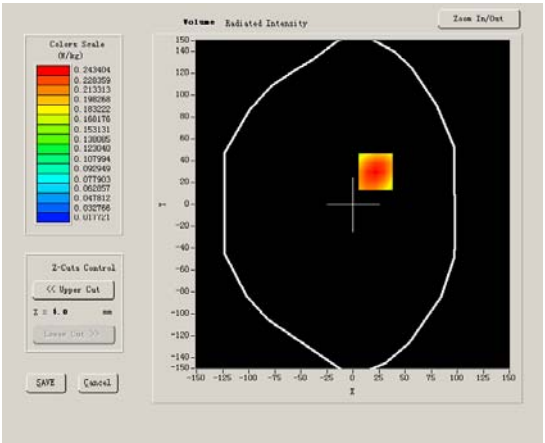
A. Experimental conditions.

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 (%)	-0.130000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

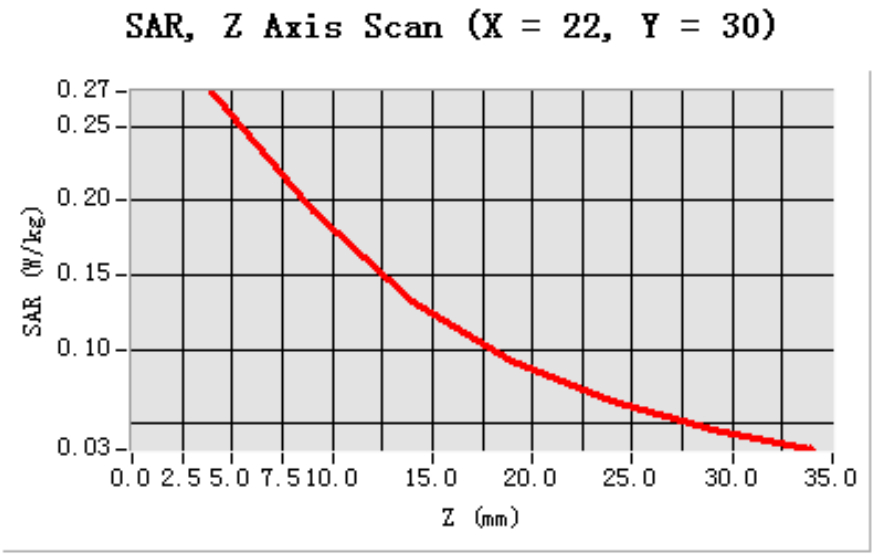
SURFACE SAR	VOLUME SAR
	

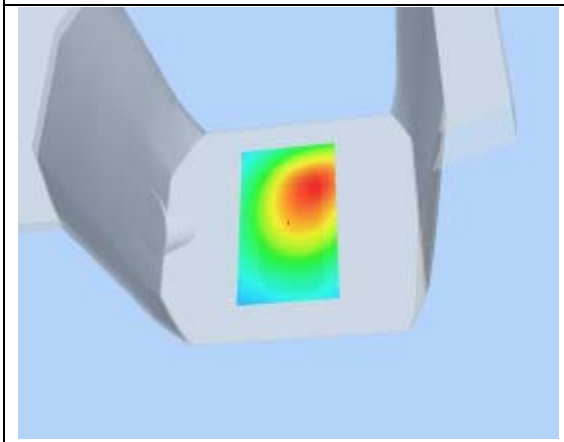
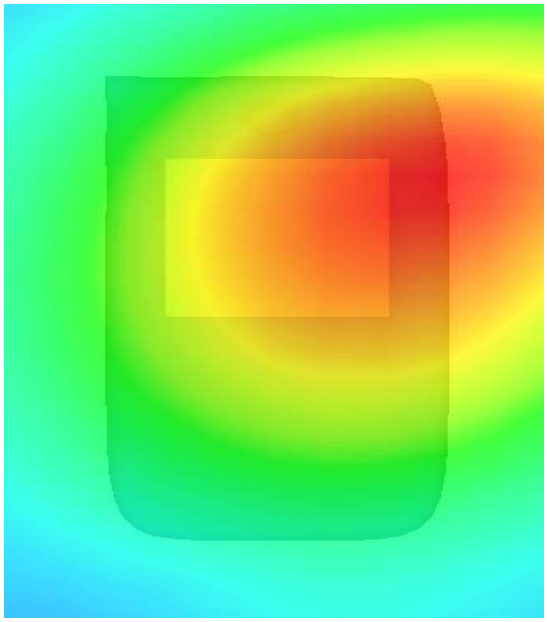
Maximum location: X=22.00, Y=30.00

SAR 10g (W/Kg)	0.178496
SAR 1g (W/Kg)	0.262843

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2737	0.1938	0.1325	0.0925	0.0655	0.0461



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: 3/8/2011
Measurement duration: 9 minutes 27 seconds

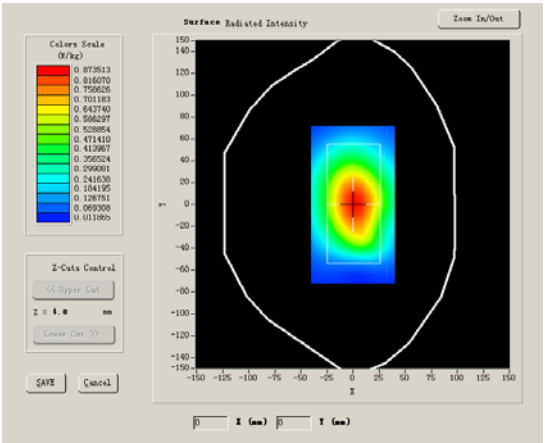
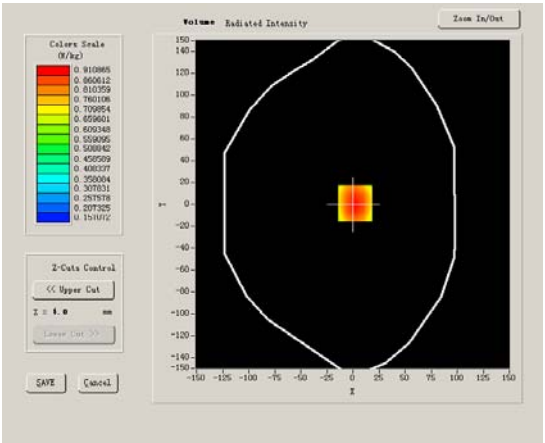
A. Experimental conditions.

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 (%)	1.750000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

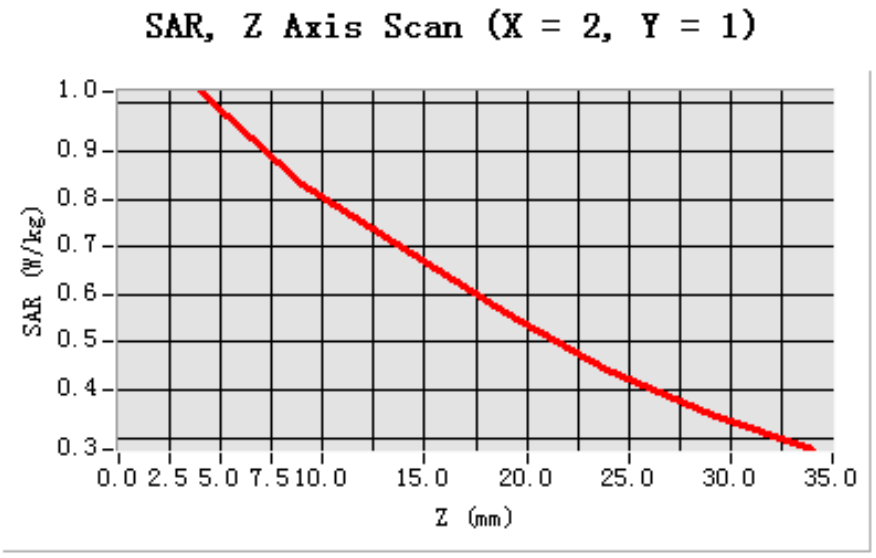
SURFACE SAR	VOLUME SAR
	

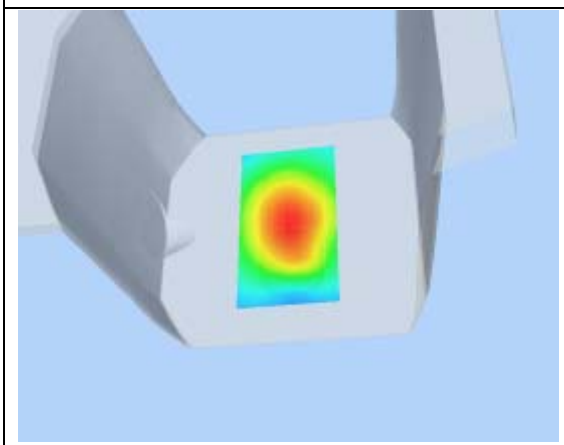
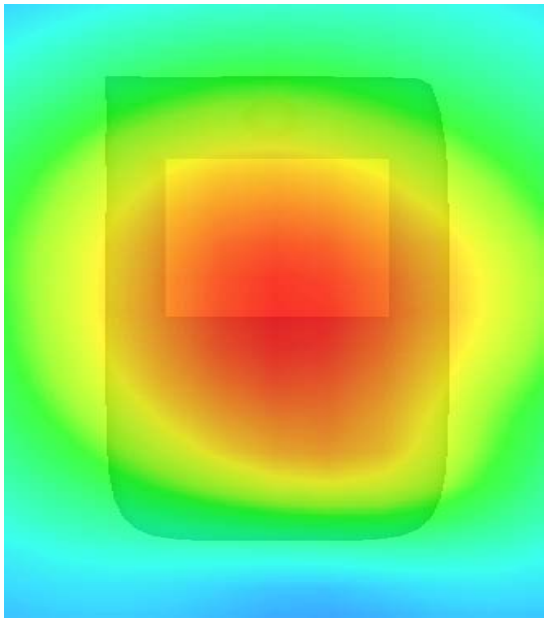
Maximum location: X=2.00, Y=1.00

SAR 10g (W/Kg)	0.773954
SAR 1g (W/Kg)	0.998228

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	1.0244	0.8302	0.6964	0.5644	0.4434	0.3494



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: 3/8/2011
Measurement duration: 9 minutes 10 seconds

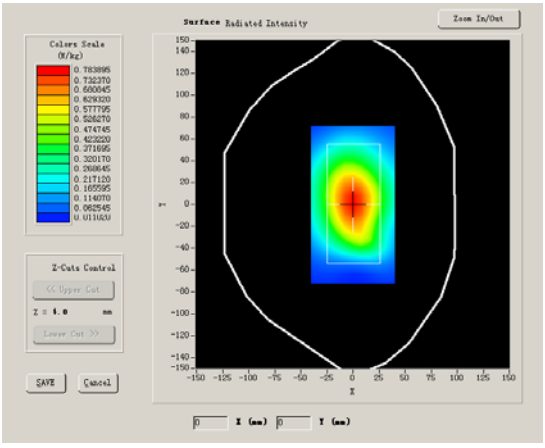
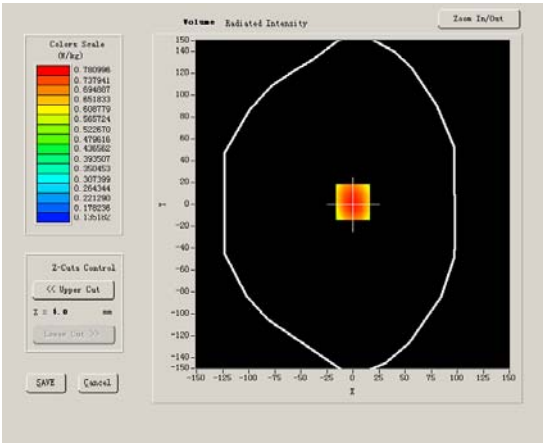
A. Experimental conditions.

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 (%)	1.340000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

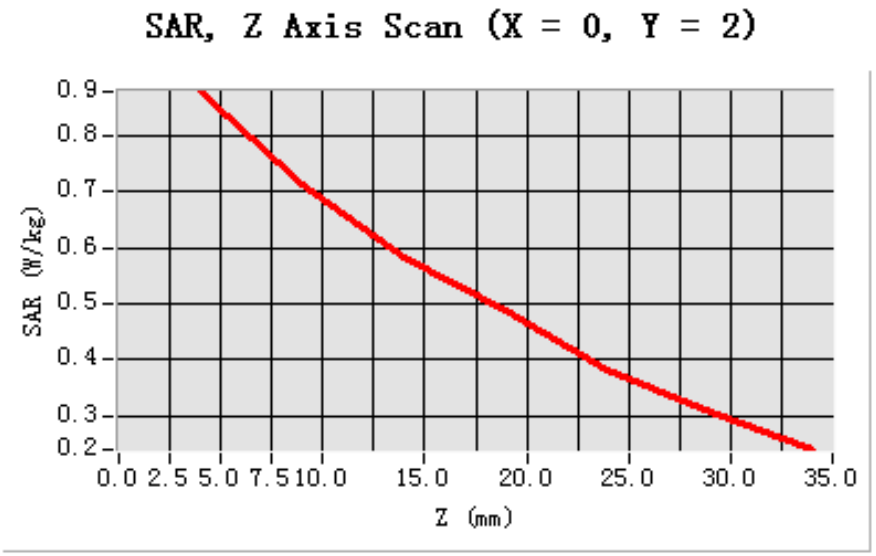
SURFACE SAR	VOLUME SAR
	

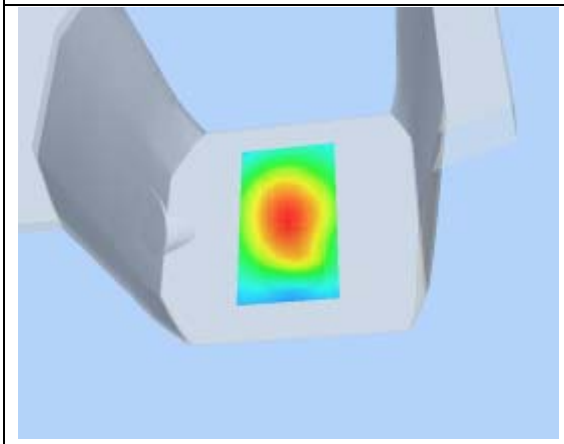
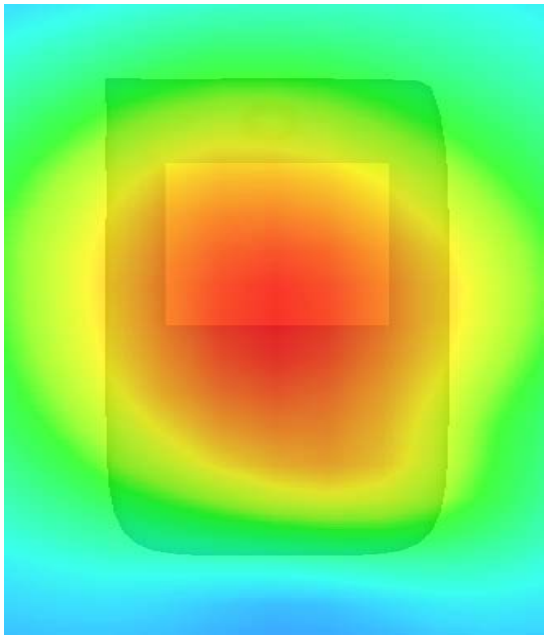
Maximum location: X=0.00, Y=2.00

SAR 10g (W/Kg)	0.663059
SAR 1g (W/Kg)	0.855652

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.8783	0.7115	0.5812	0.4857	0.3819	0.3058



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: 3/8/2011
Measurement duration: 9 minutes 6 seconds

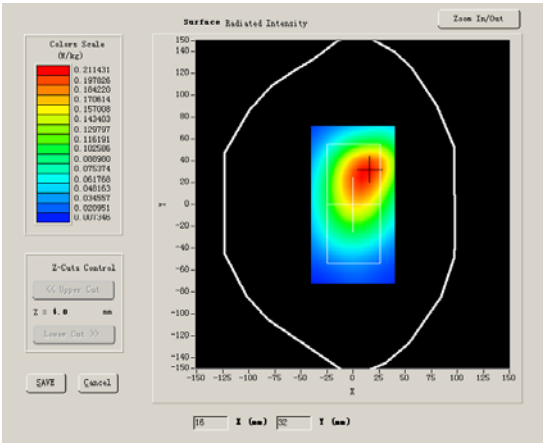
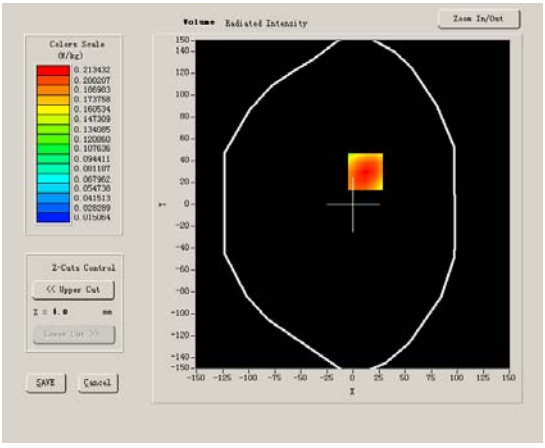
A. Experimental conditions.

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 (%)	0.320000
Ambient Temperature:	22.2°C
Liquid Temperature:	21.5C
ConvF:	28.479,25.214,27.196
Crest factor:	1:1

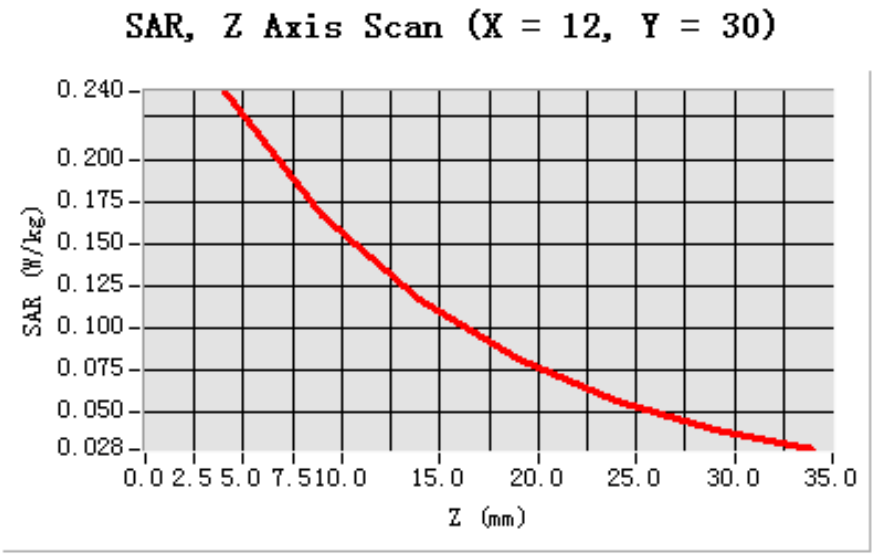
SURFACE SAR	VOLUME SAR
	

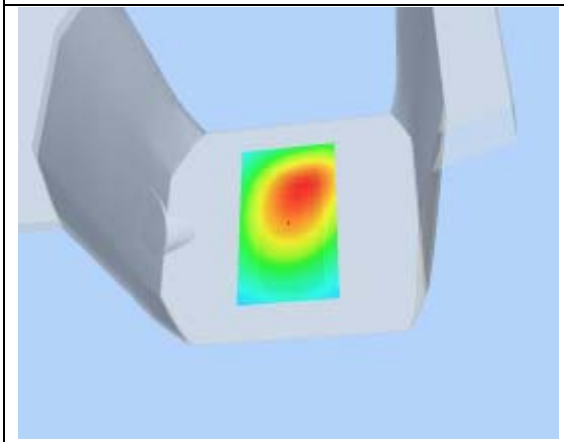
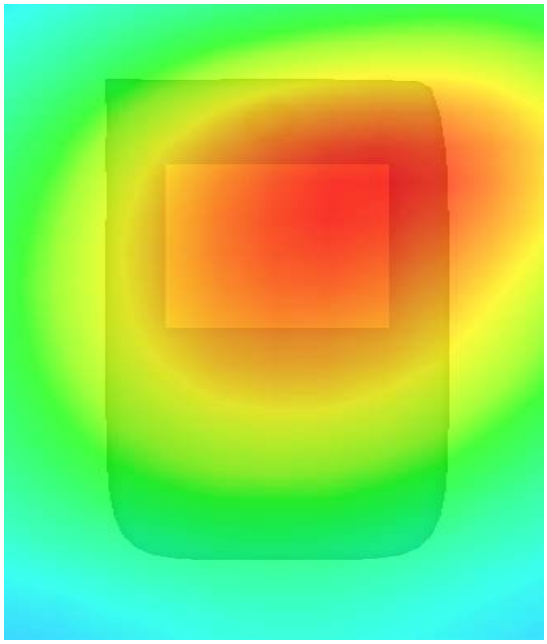
Maximum location: X=12.00, Y=30.00

SAR 10g (W/Kg)	0.158176
SAR 1g (W/Kg)	0.231481

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2400	0.1672	0.1164	0.0809	0.0569	0.0400



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: 3/8/2011
Measurement duration: 7 minutes 25 seconds

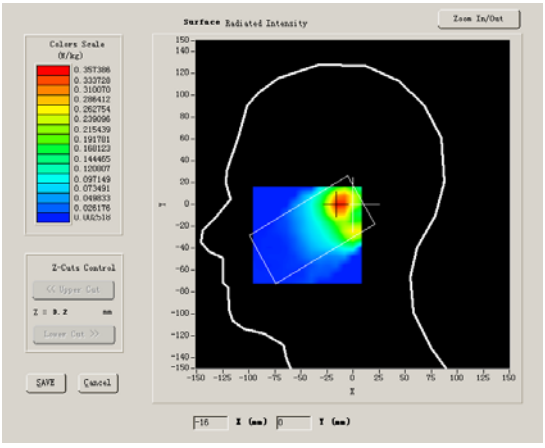
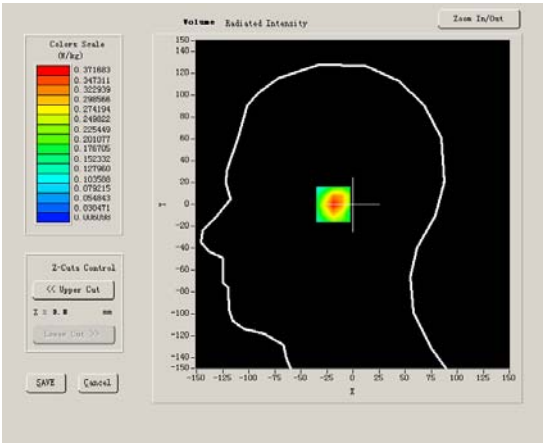
A. Experimental conditions.

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 (%)	1.020000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

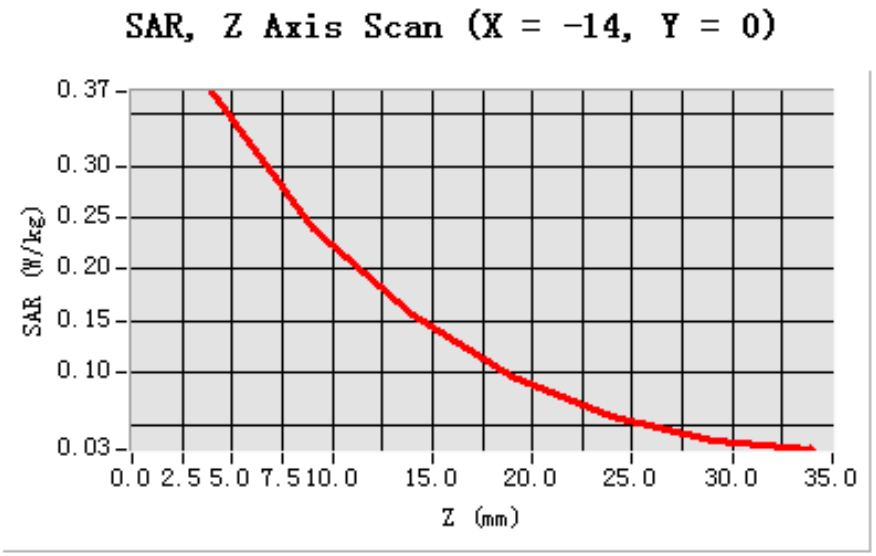
SURFACE SAR	VOLUME SAR
	

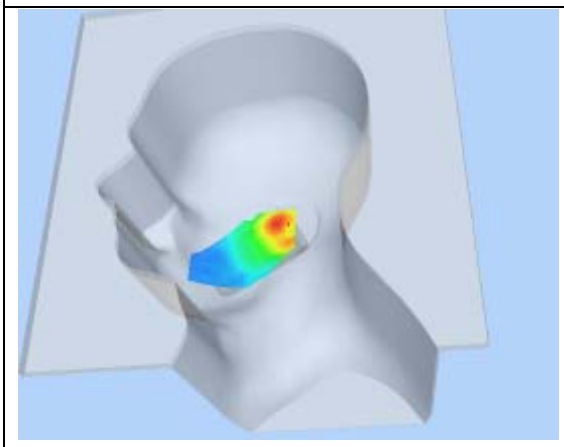
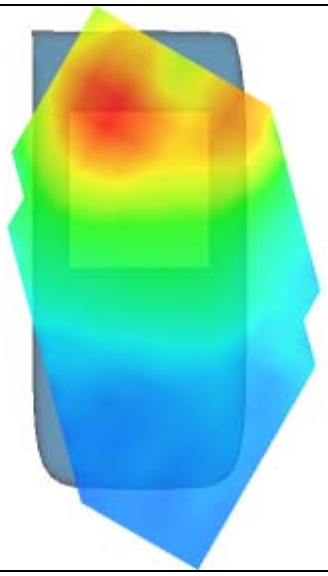
Maximum location: X=-14.00, Y=0.00

SAR 10g (W/Kg)	0.197501
SAR 1g (W/Kg)	0.348276

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3717	0.2395	0.1568	0.0955	0.0579	0.0340



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: 3/8/2011
Measurement duration: 7 minutes 20 seconds

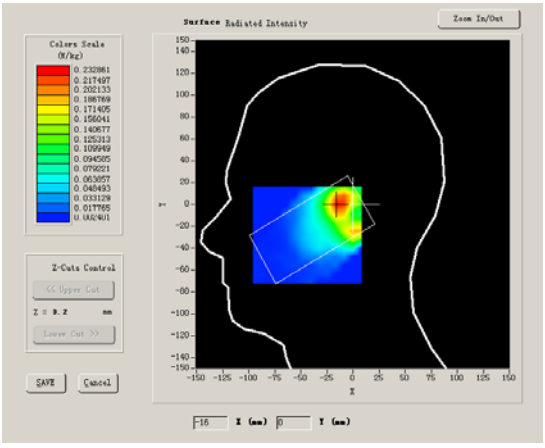
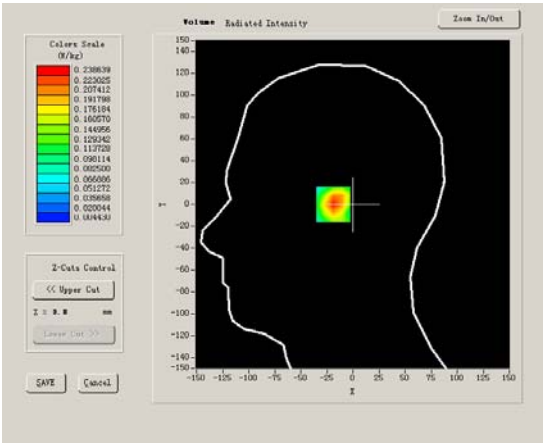
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.txt
Phantom	Right head
Device Position	Cheek
Band	US_PCS
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 (%)	0.010000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

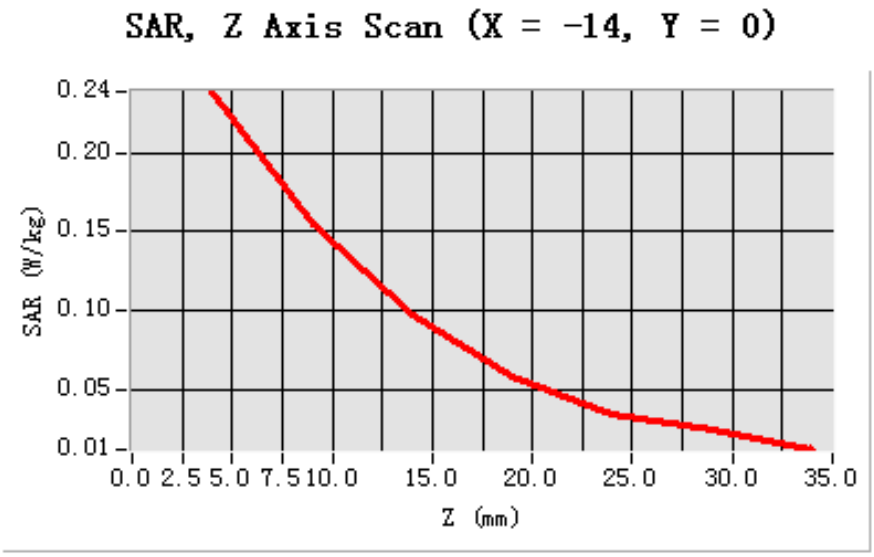
SURFACE SAR	VOLUME SAR
	

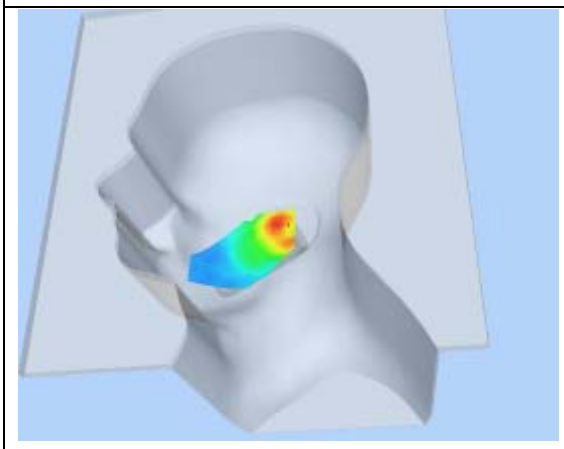
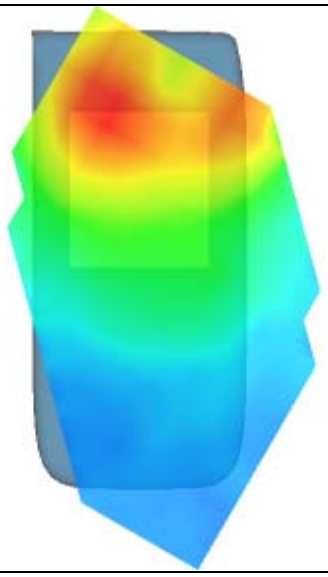
Maximum location: X=-14.00, Y=0.00

SAR 10g (W/Kg)	0.126327
SAR 1g (W/Kg)	0.222845

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.2386	0.1555	0.0980	0.0581	0.0352	0.0243



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: 3/8/2011
Measurement duration: 7 minutes 23 seconds

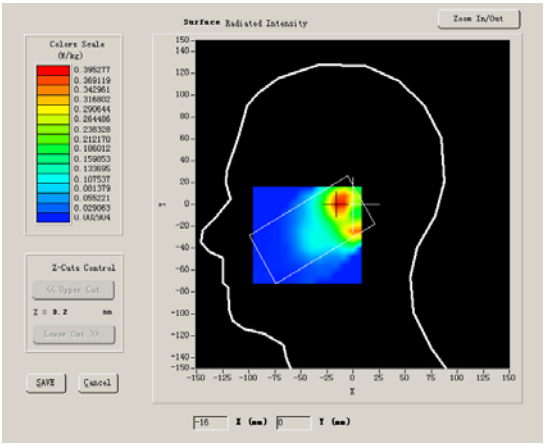
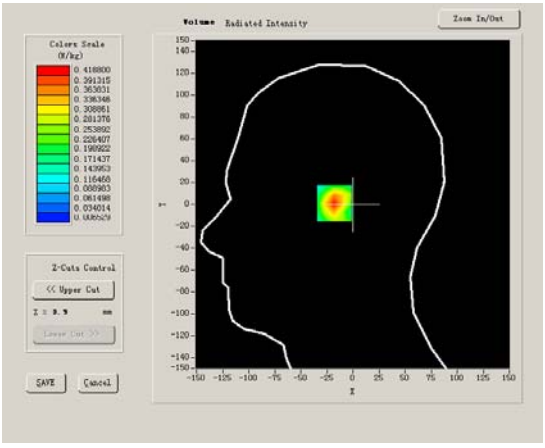
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.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 (%)	-0.120000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

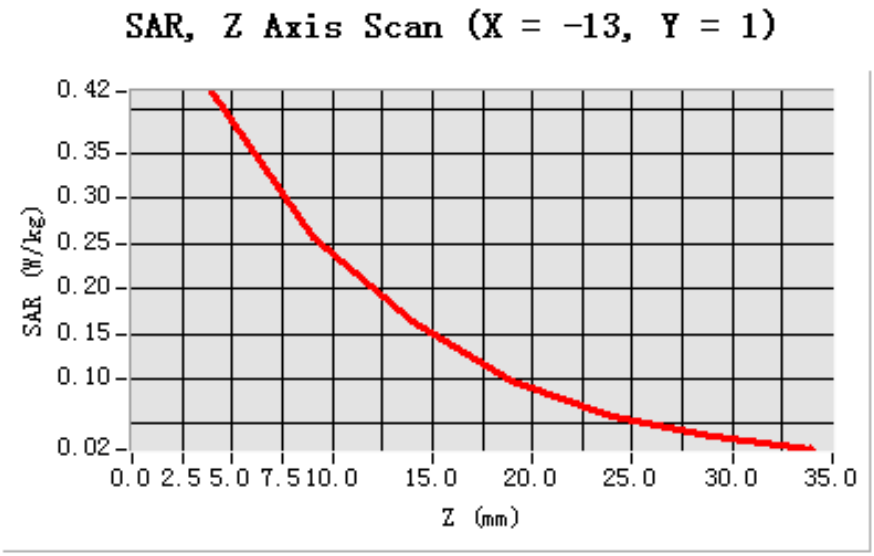
SURFACE SAR	VOLUME SAR
	

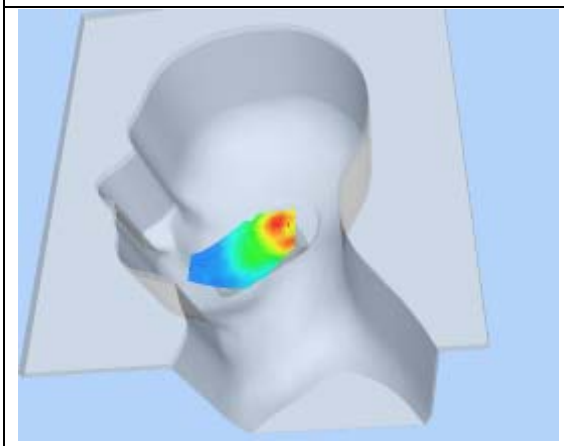
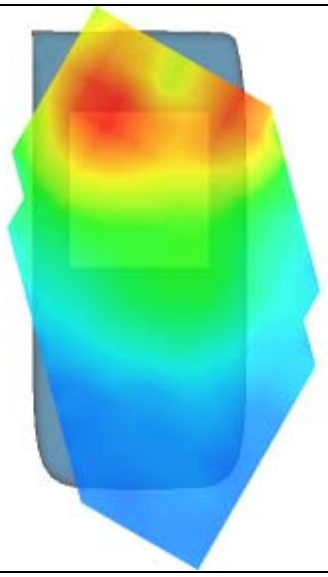
Maximum location: X=-13.00, Y=1.00

SAR 10g (W/Kg)	0.213943
SAR 1g (W/Kg)	0.386016

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4188	0.2577	0.1624	0.0977	0.0586	0.0362



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: 3/8/2011
Measurement duration: 7 minutes 31 seconds

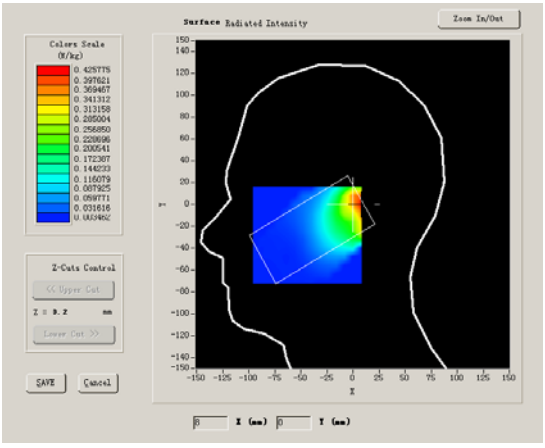
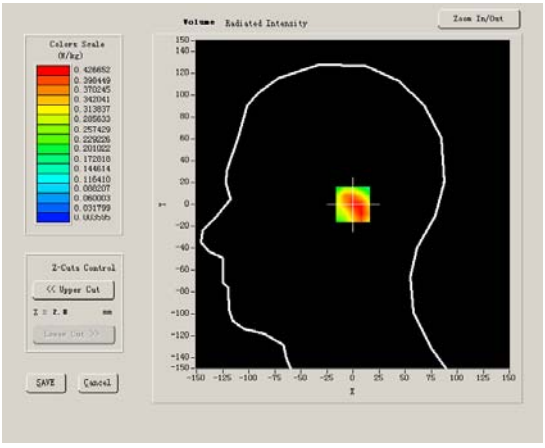
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.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 (%)	-0.780000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

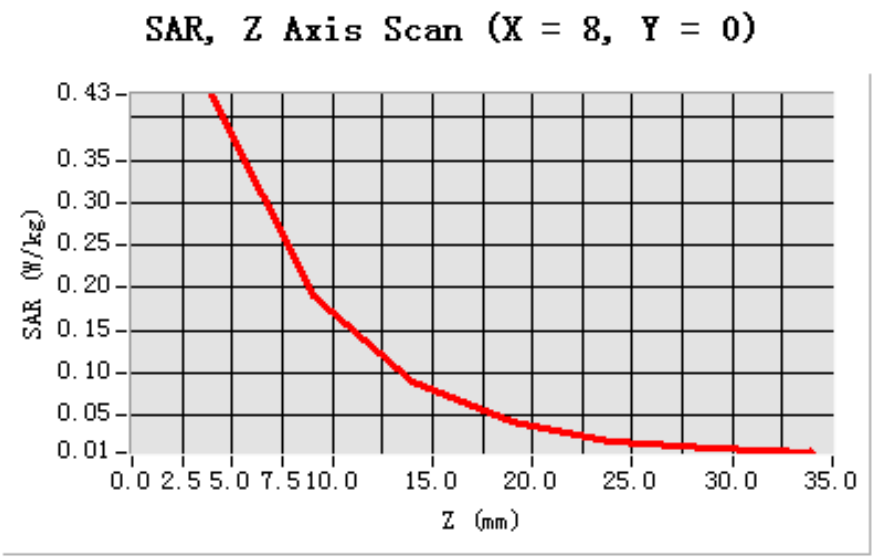
SURFACE SAR	VOLUME SAR
	

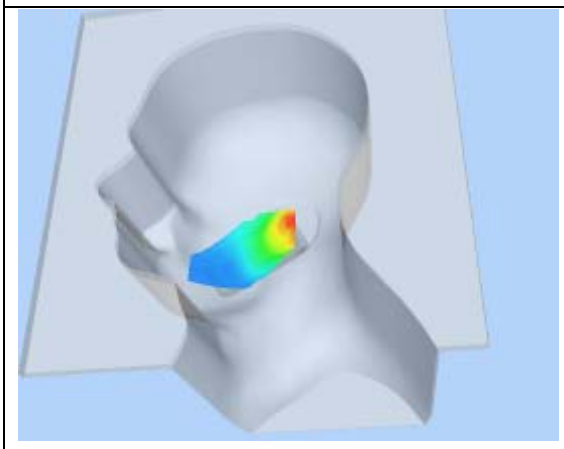
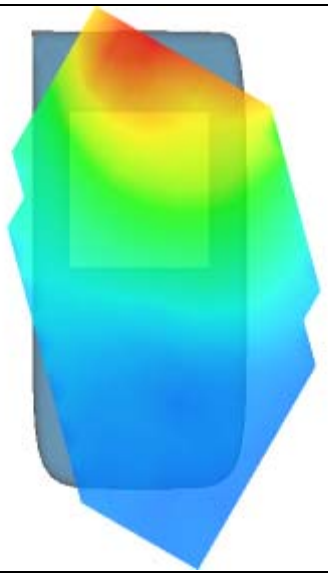
Maximum location: X=8.00, Y=0.00

SAR 10g (W/Kg)	0.212846
SAR 1g (W/Kg)	0.419989

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4267	0.1904	0.0896	0.0440	0.0208	0.0112



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: 3/8/2011
Measurement duration: 7 minutes 30 seconds

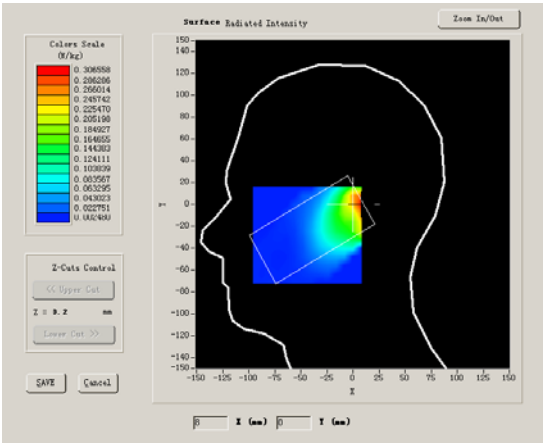
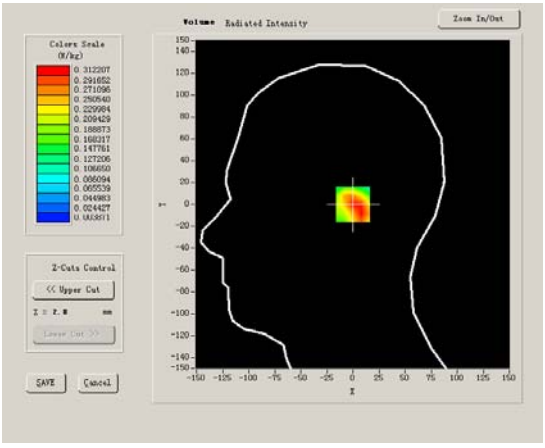
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.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 (%)	0.300000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

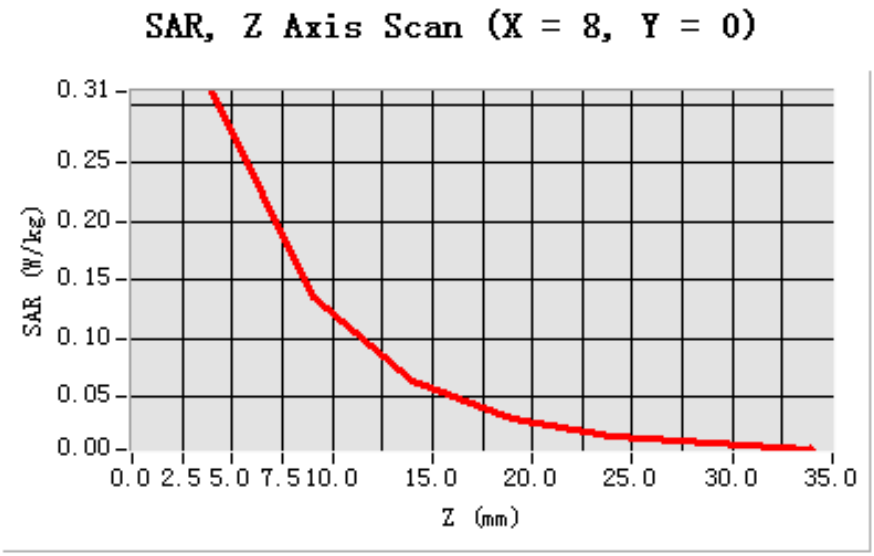
SURFACE SAR	VOLUME SAR
	

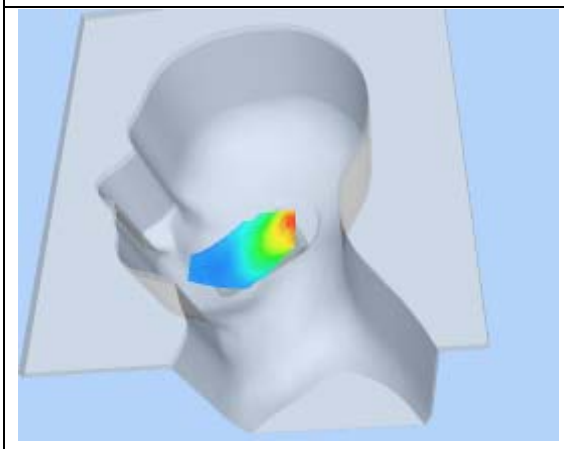
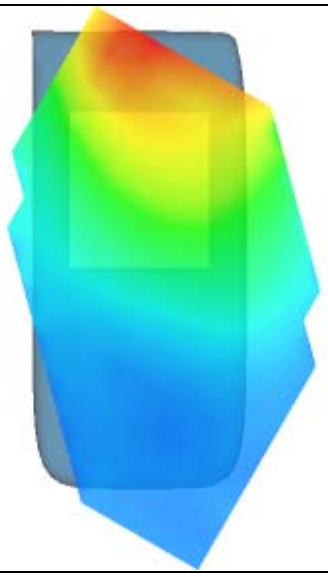
Maximum location: X=8.00, Y=0.00

SAR 10g (W/Kg)	0.153218
SAR 1g (W/Kg)	0.304954

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3114	0.1348	0.0640	0.0304	0.0157	0.0101



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: 3/8/2011
Measurement duration: 7 minutes 30 seconds

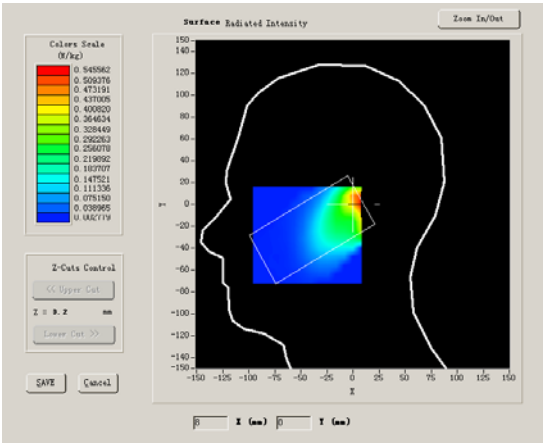
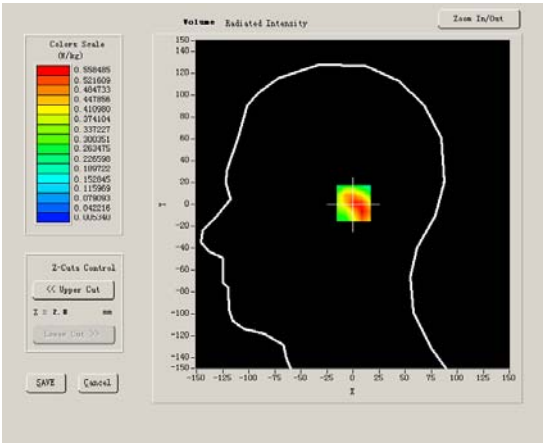
A. Experimental conditions.

Phantom File	sam_direct_droit2_surf8mm.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 (%)	-0.270000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

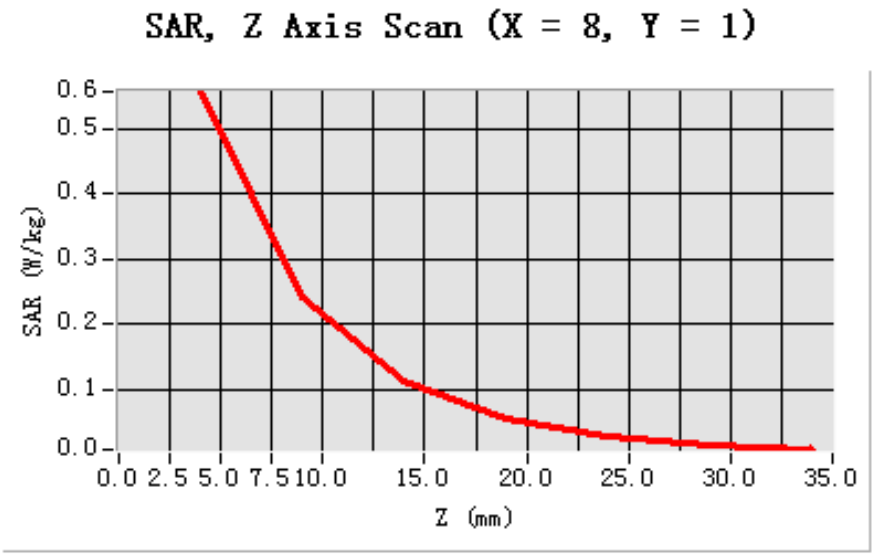
SURFACE SAR	VOLUME SAR
	

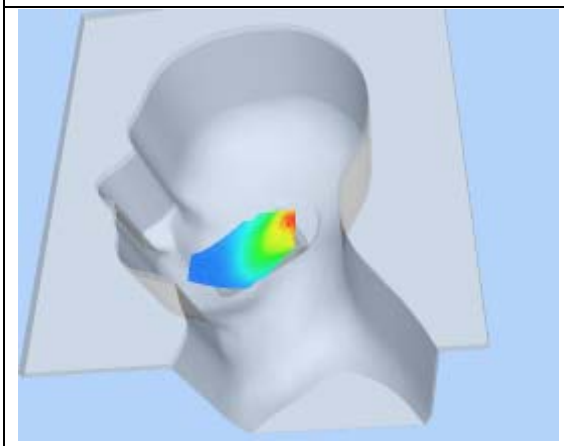
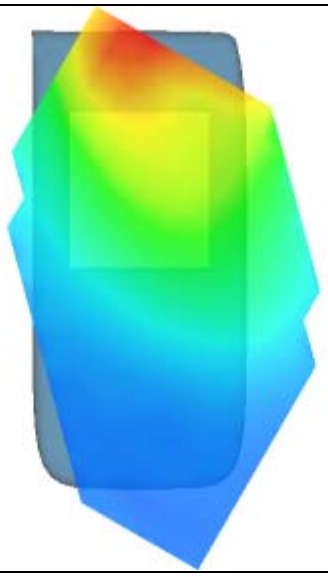
Maximum location: X=8.00, Y=1.00

SAR 10g (W/Kg)	0.271381
SAR 1g (W/Kg)	0.545125

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5580	0.2421	0.1112	0.0547	0.0275	0.0151



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: 3/8/2011
Measurement duration: 6 minutes 6 seconds

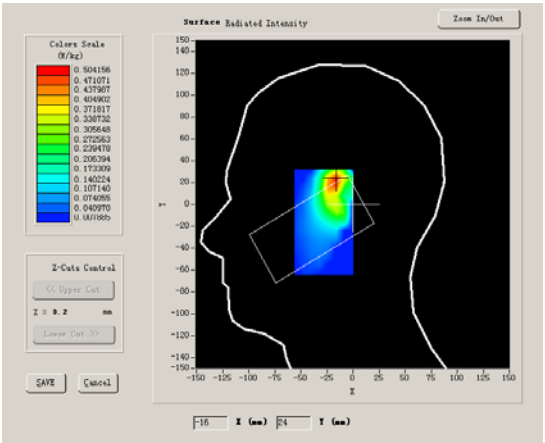
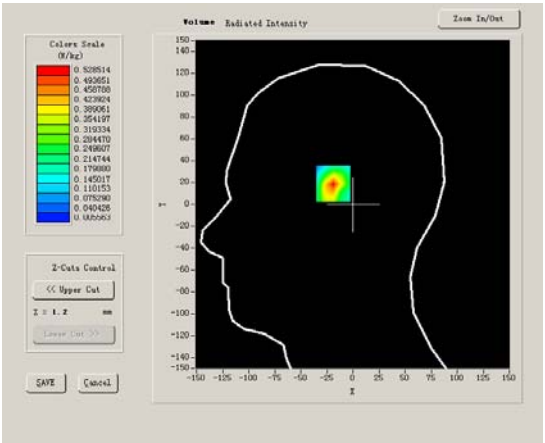
A. Experimental conditions.

Phantom File	zinf1.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 (%)	1.150000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

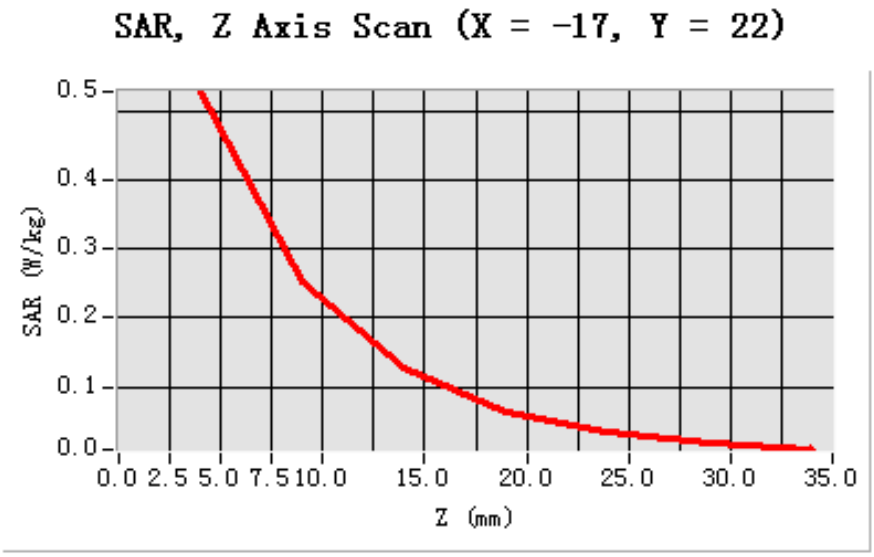
SURFACE SAR	VOLUME SAR
	

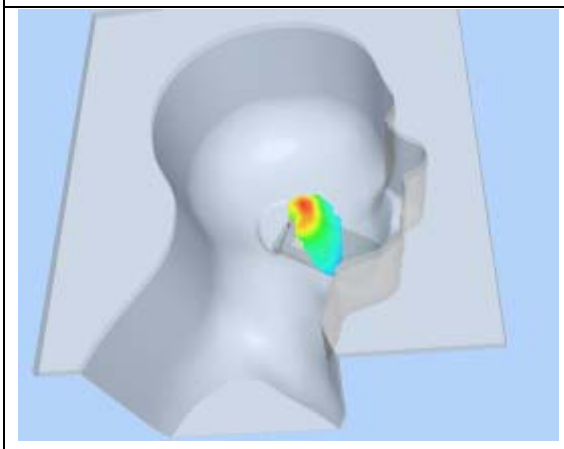
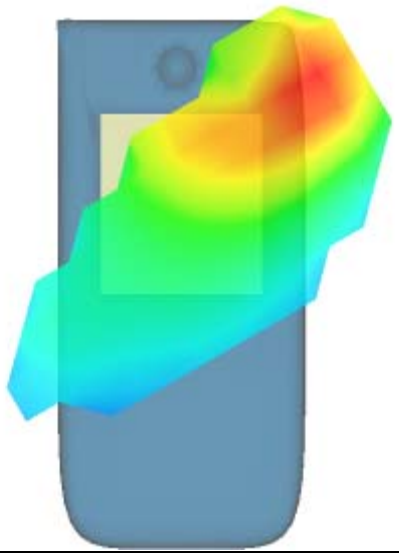
Maximum location: X=-17.00, Y=22.00

SAR 10g (W/Kg)	0.226578
SAR 1g (W/Kg)	0.478436

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5285	0.2521	0.1283	0.0643	0.0351	0.0197



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: 3/8/2011
Measurement duration: 6 minutes 11 seconds

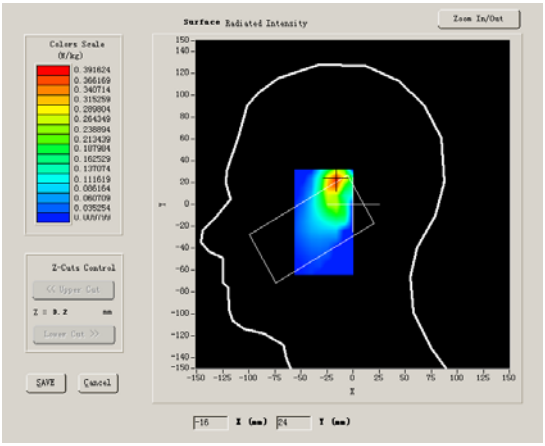
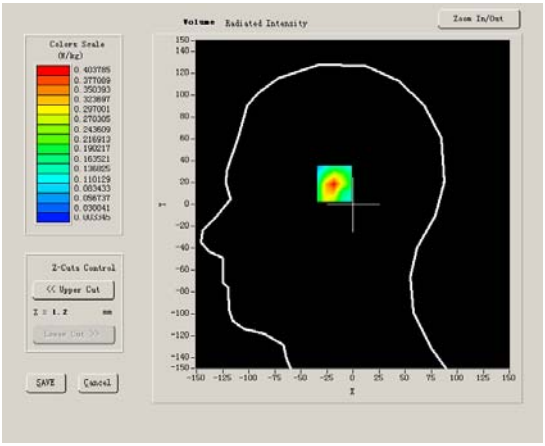
A. Experimental conditions.

Phantom File	zinf1.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 (%)	-1.120000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

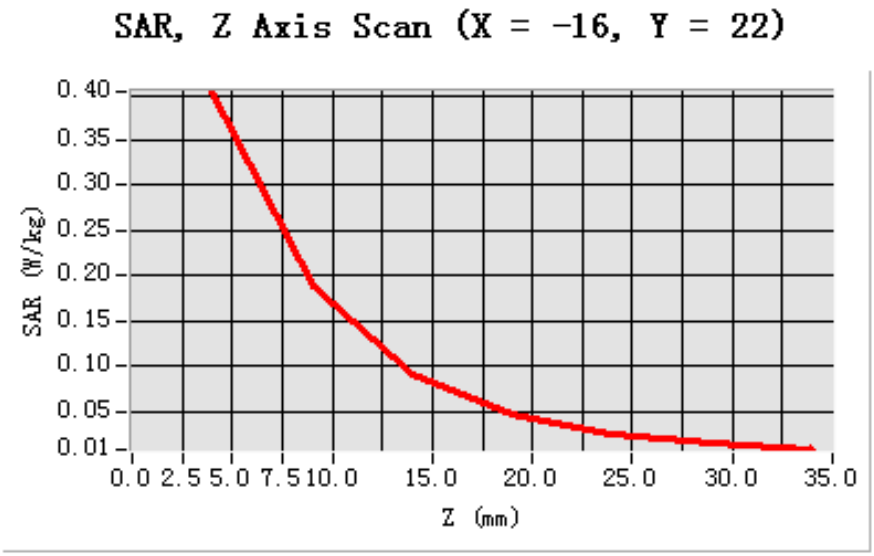
SURFACE SAR	VOLUME SAR
	

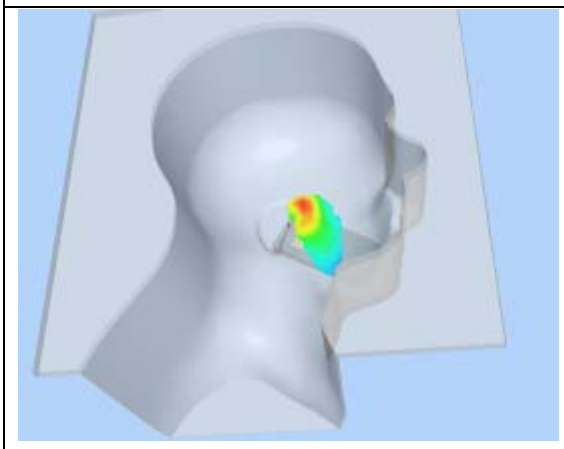
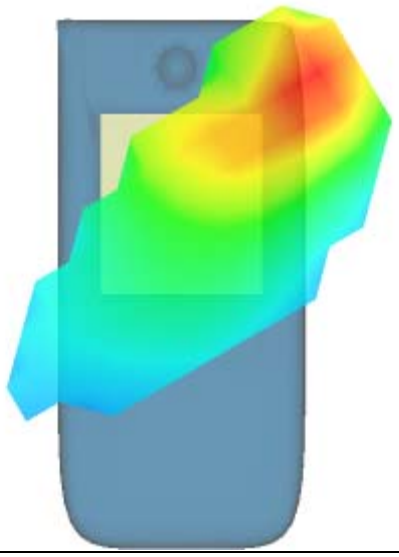
Maximum location: X=-16.00, Y=22.00

SAR 10g (W/Kg)	0.173868
SAR 1g (W/Kg)	0.369834

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.4038	0.1897	0.0921	0.0470	0.0261	0.0141



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: 3/8/2011
Measurement duration: 7 minutes 38 seconds

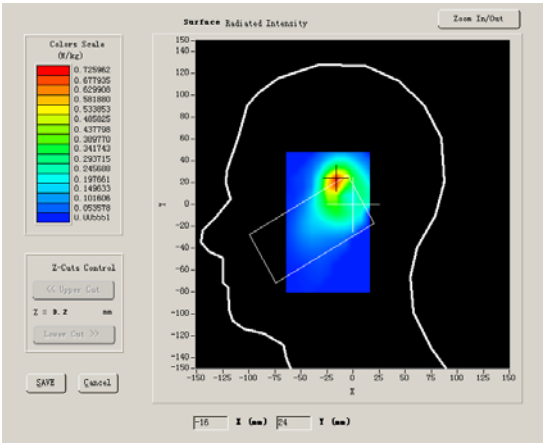
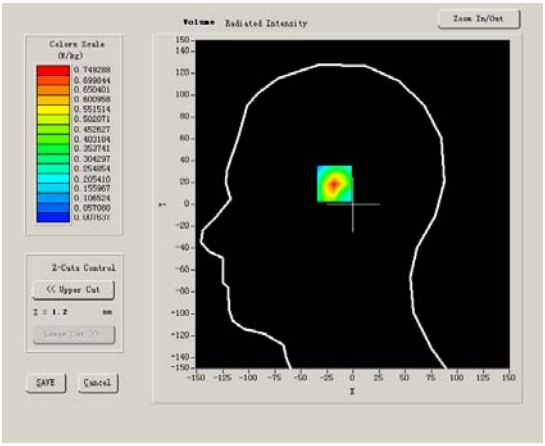
A. Experimental conditions.

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 (%)	-0.150000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

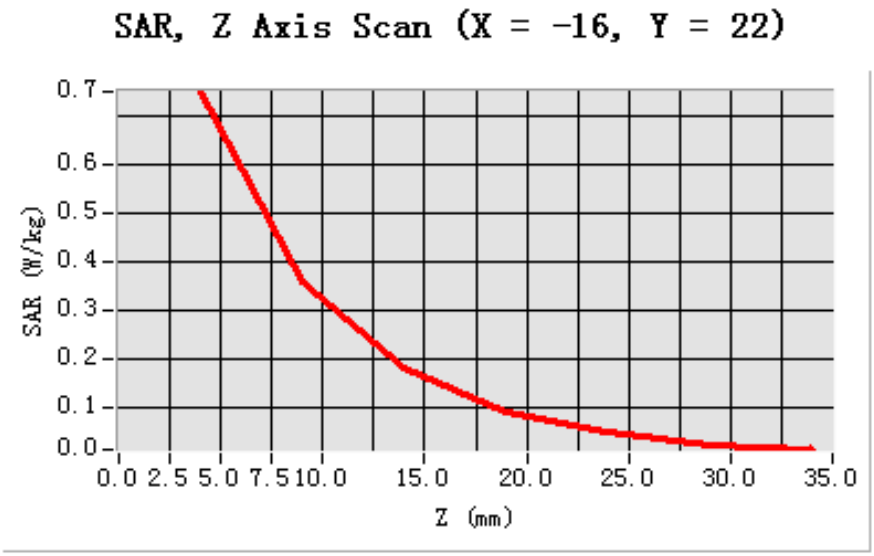
SURFACE SAR	VOLUME SAR
	

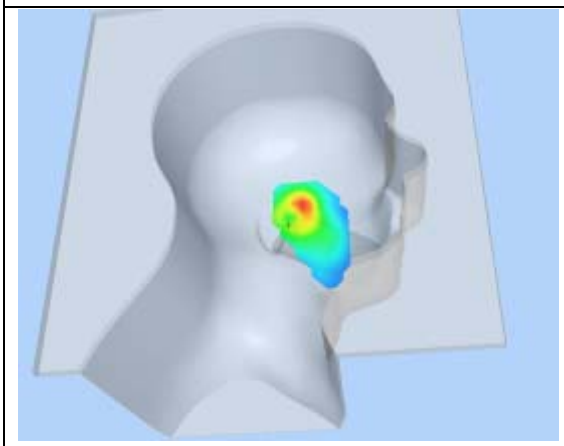
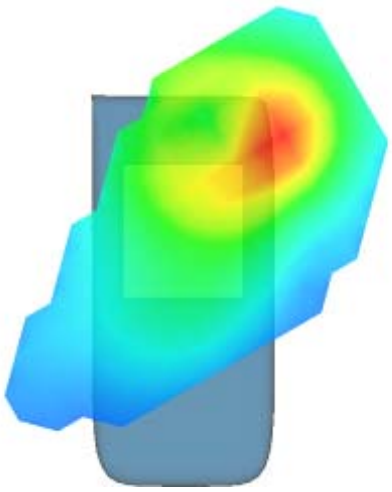
Maximum location: X=-16.00, Y=22.00

SAR 10g (W/Kg)	0.320665
SAR 1g (W/Kg)	0.684460

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7493	0.3605	0.1816	0.0923	0.0482	0.0234



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: 3/8/2011
Measurement duration: 7 minutes 43 seconds

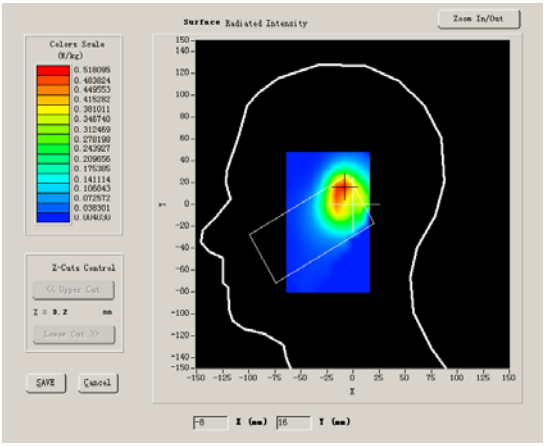
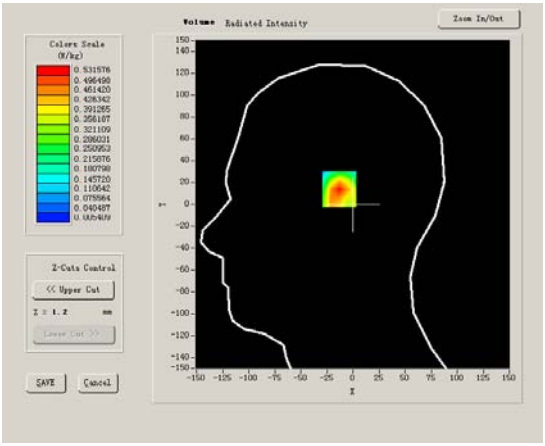
A. Experimental conditions.

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 (%)	0.640000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

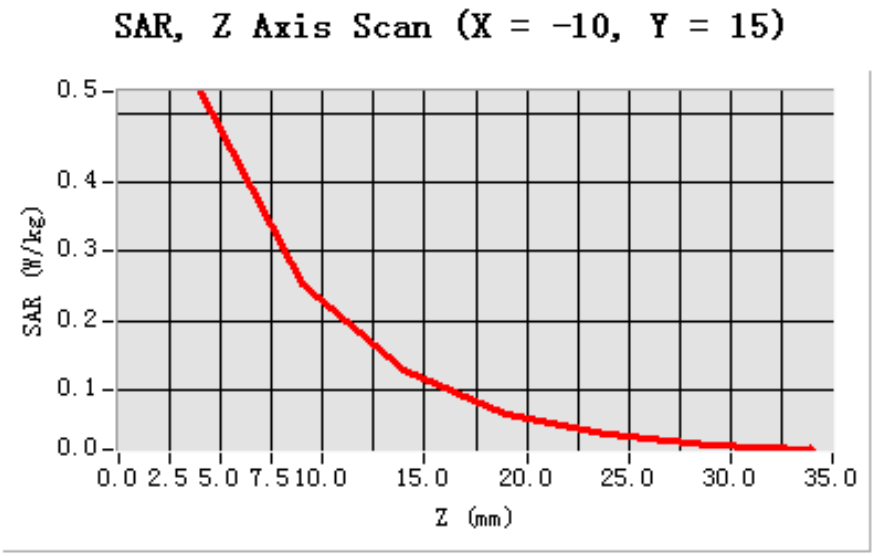
SURFACE SAR	VOLUME SAR
	

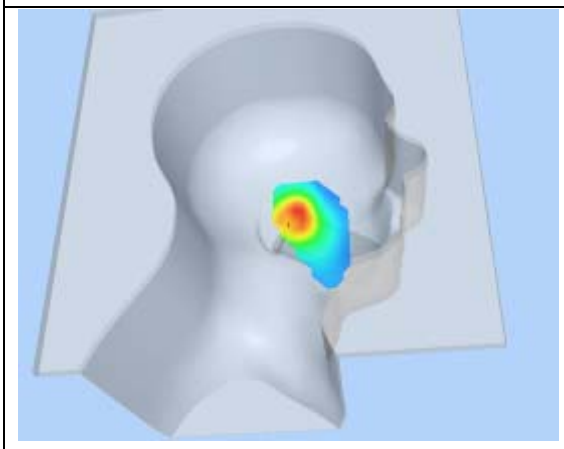
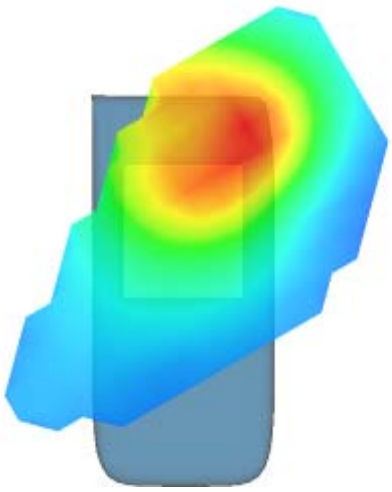
Maximum location: X=-10.00, Y=15.00

SAR 10g (W/Kg)	0.254289
SAR 1g (W/Kg)	0.497483

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5316	0.2540	0.1279	0.0646	0.0354	0.0187



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: 3/8/2011
Measurement duration: 7 minutes 41 seconds

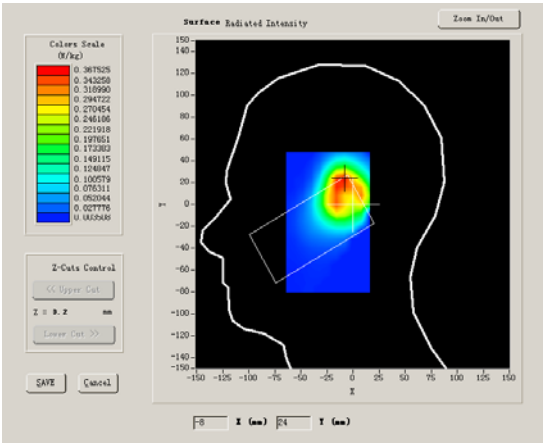
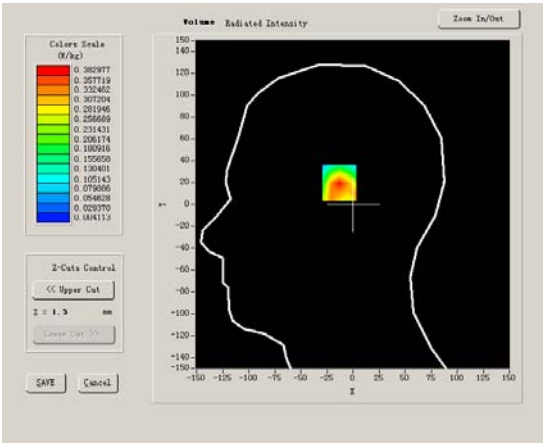
A. Experimental conditions.

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 (%)	-0.380000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

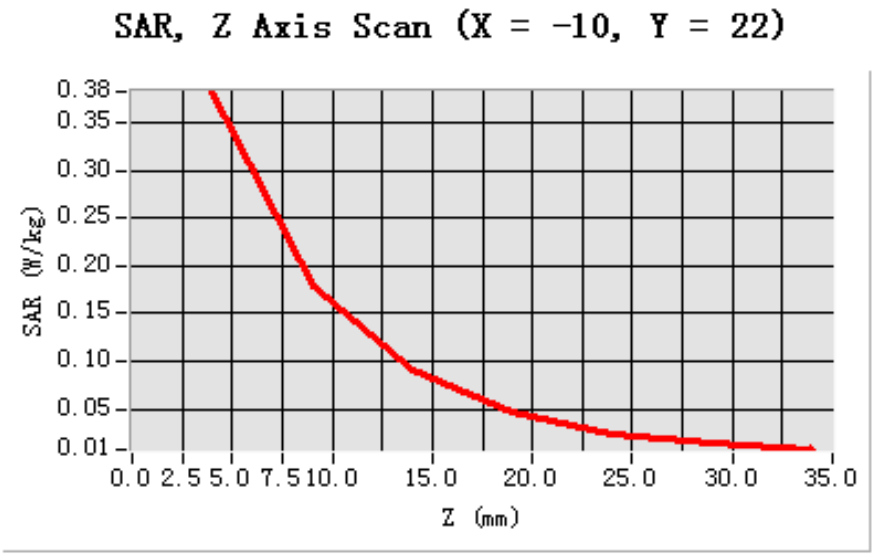
SURFACE SAR	VOLUME SAR
	

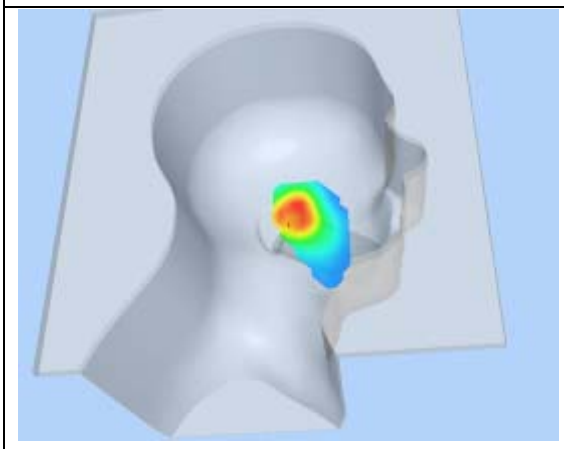
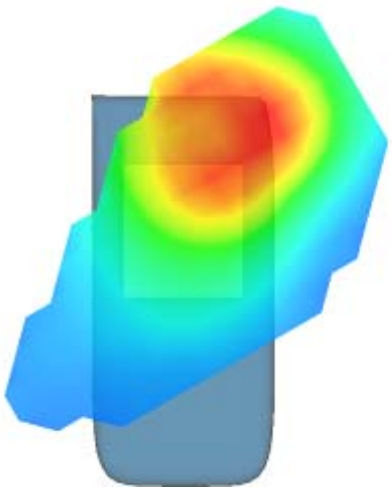
Maximum location: X=-10.00, Y=22.00

SAR 10g (W/Kg)	0.185170
SAR 1g (W/Kg)	0.357872

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3830	0.1788	0.0904	0.0458	0.0245	0.0144



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: 3/8/2011
Measurement duration: 7 minutes 43 seconds

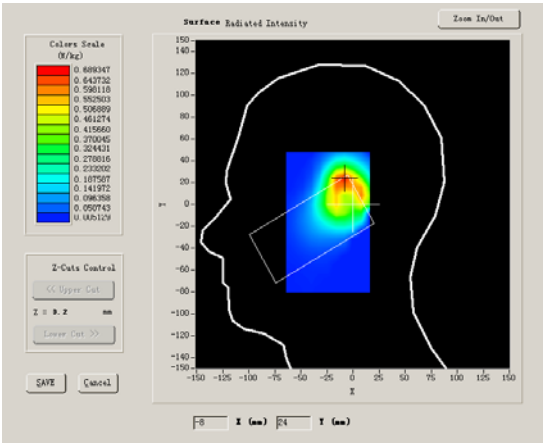
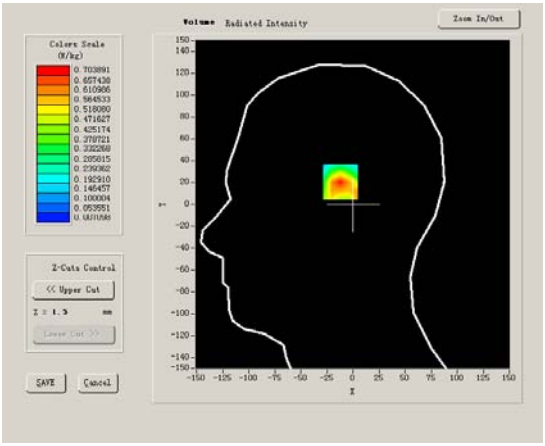
A. Experimental conditions.

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 (%)	-0.170000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

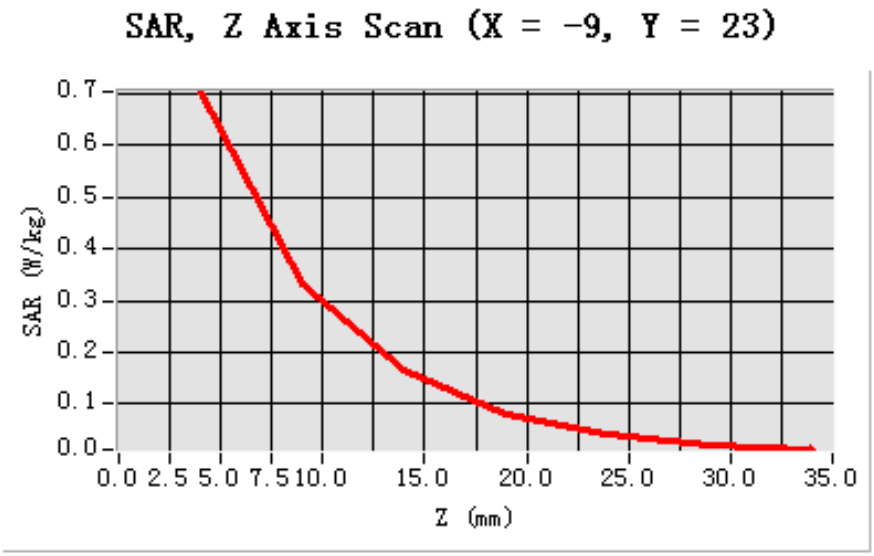
SURFACE SAR	VOLUME SAR
	

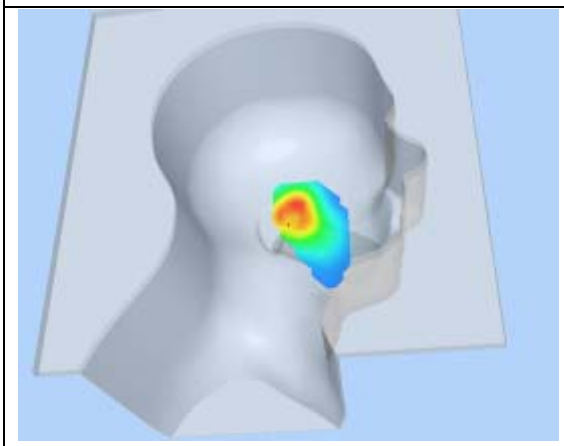
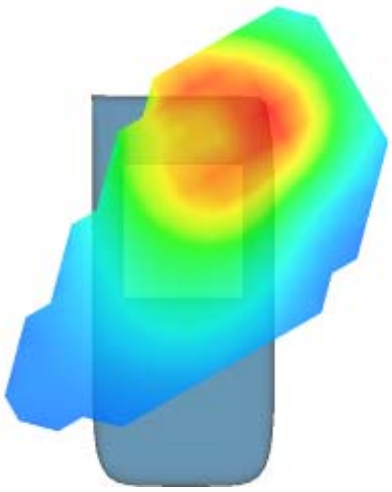
Maximum location: X=-9.00, Y=23.00

SAR 10g (W/Kg)	0.330992
SAR 1g (W/Kg)	0.650826

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.7039	0.3320	0.1660	0.0807	0.0436	0.0215



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: 3/8/2011
Measurement duration: 9 minutes 14 seconds

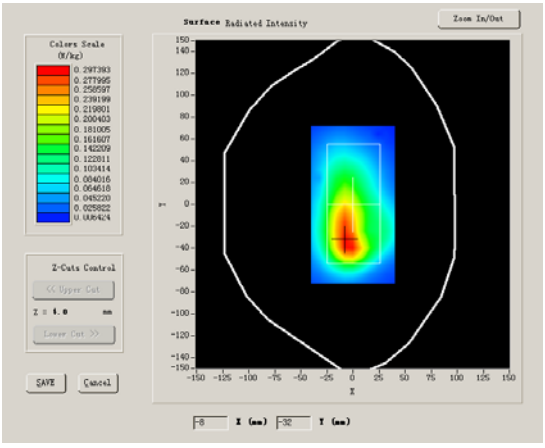
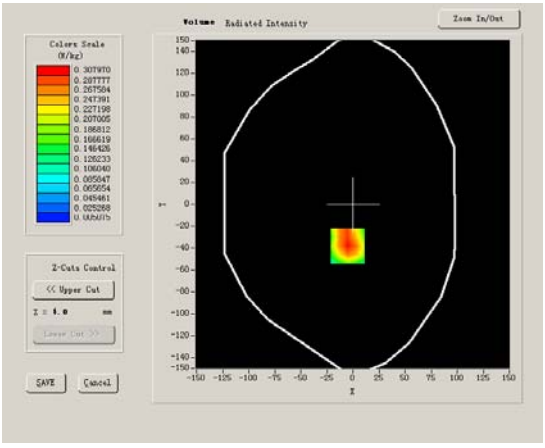
A. Experimental conditions.

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 (%)	0.060000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

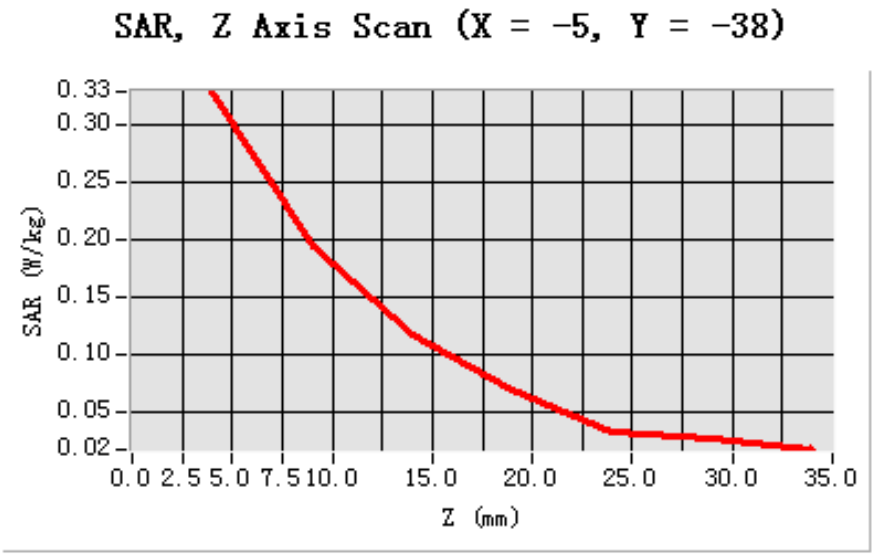
SURFACE SAR	VOLUME SAR
	

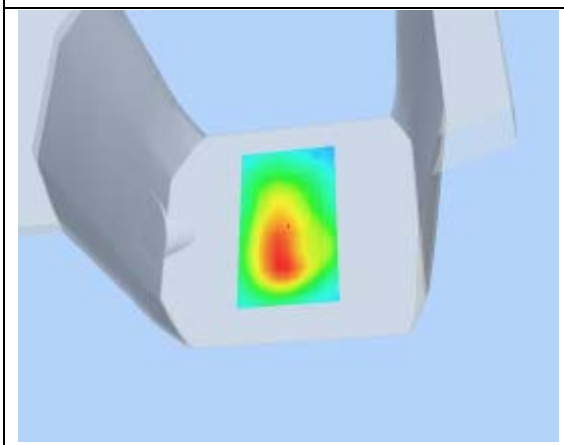
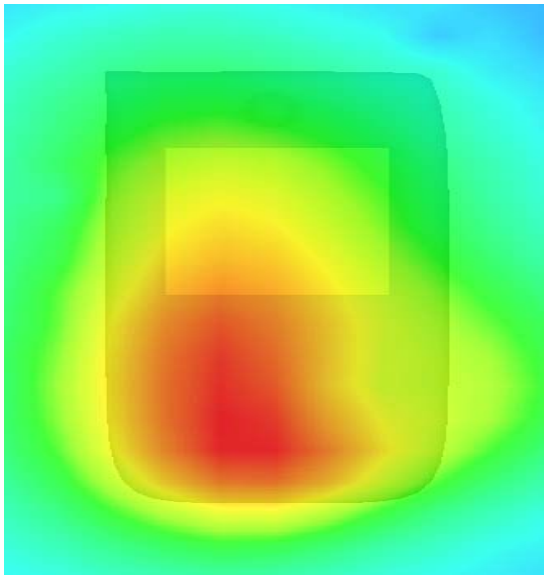
Maximum location: X=-5.00, Y=-38.00

SAR 10g (W/Kg)	0.176329
SAR 1g (W/Kg)	0.311410

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3279	0.1934	0.1160	0.0694	0.0323	0.0260



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: 3/8/2011
Measurement duration: 9 minutes 7 seconds

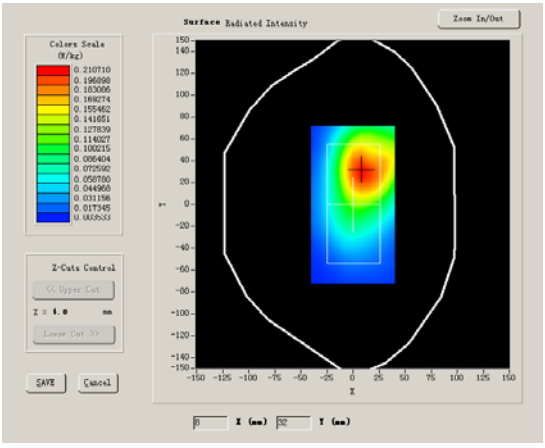
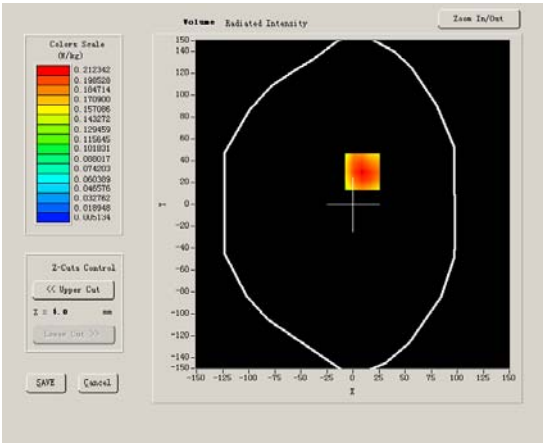
A. Experimental conditions.

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

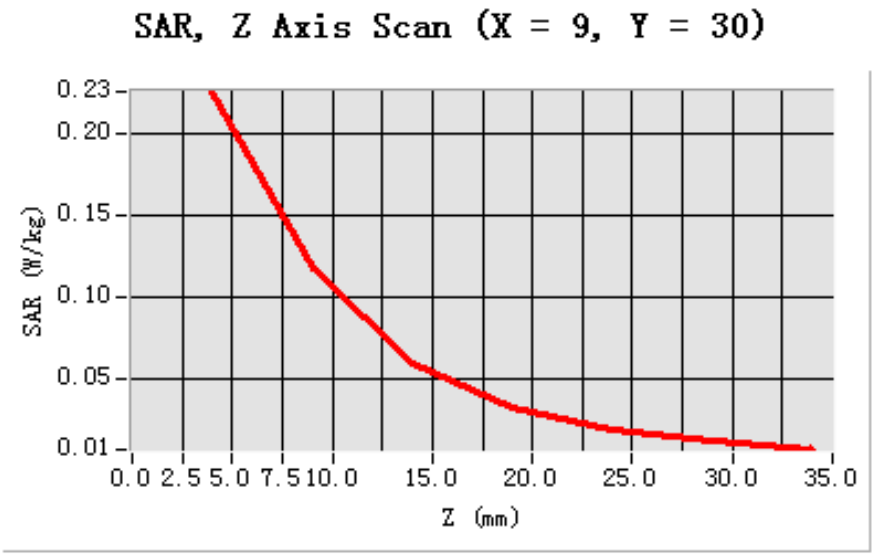
SURFACE SAR	VOLUME SAR
	

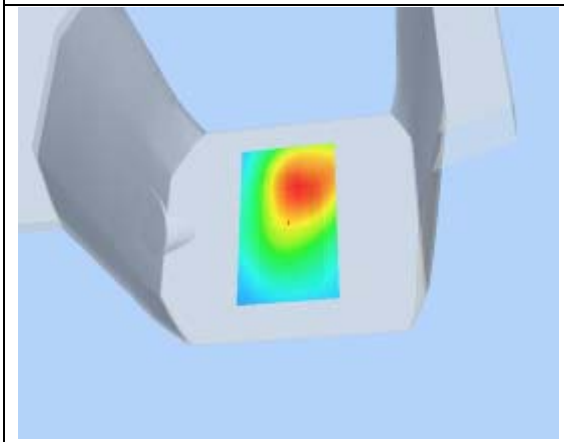
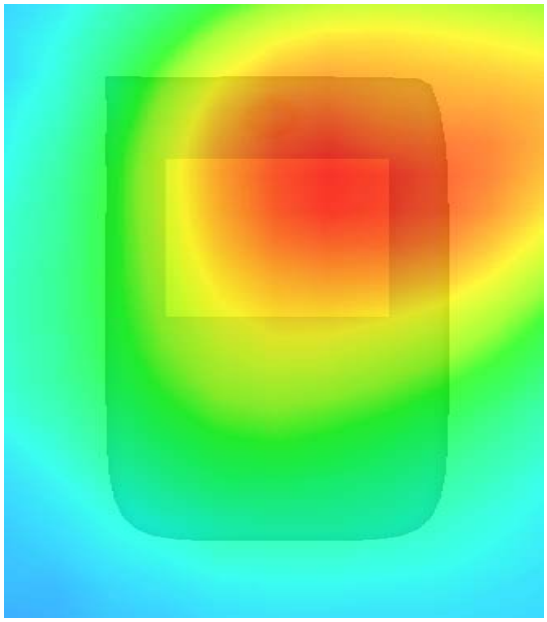
Maximum location: X=9.00, Y=30.00

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 33

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 3/8/2011
Measurement duration: 9 minutes 13 seconds

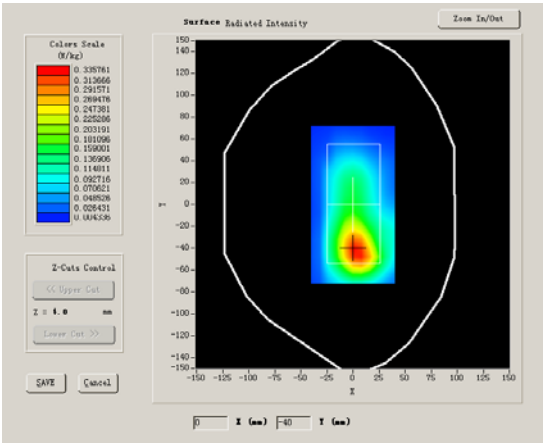
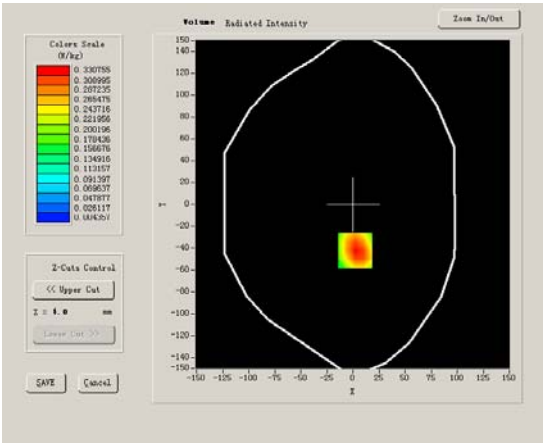
A. Experimental conditions.

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 (%)	-2.770000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

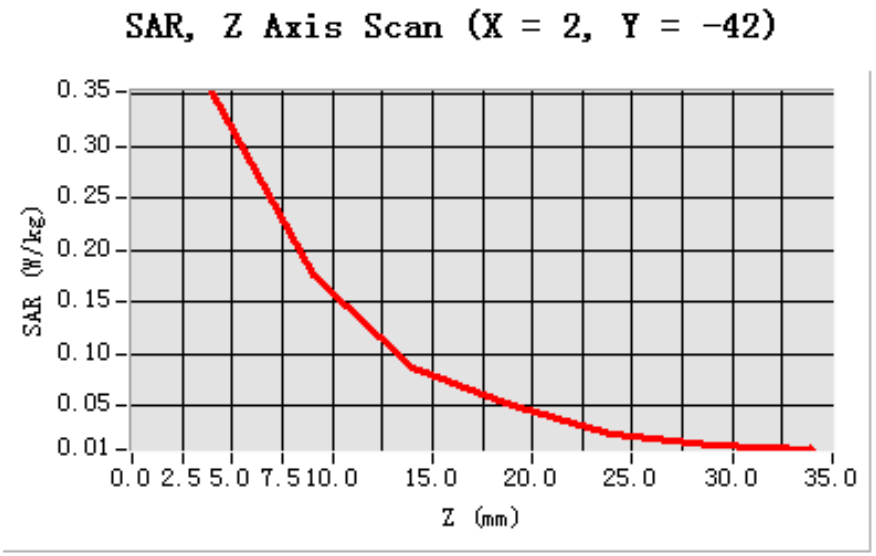
SURFACE SAR	VOLUME SAR
	

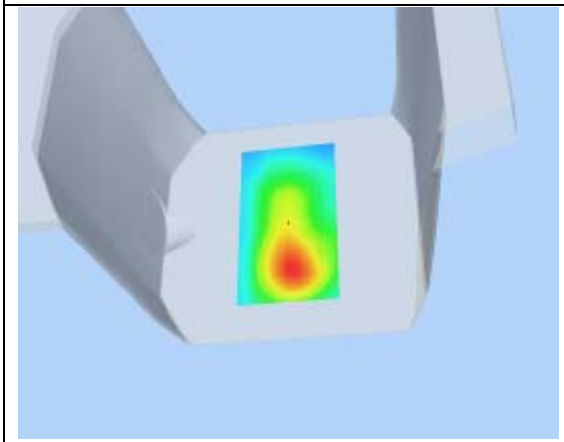
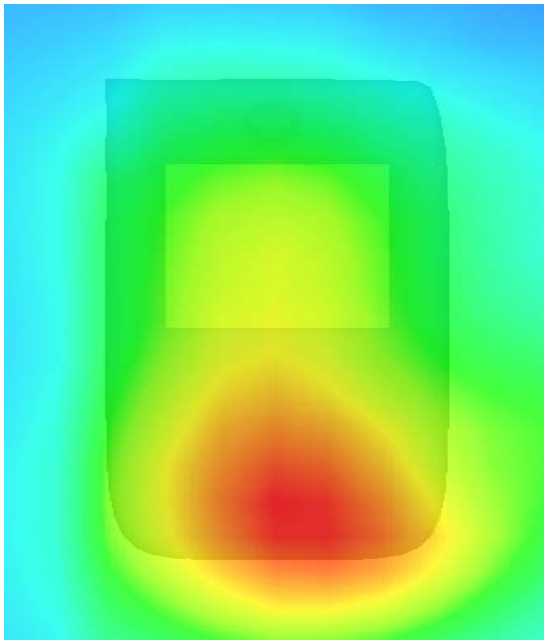
Maximum location: X=2.00, Y=-42.00

SAR 10g (W/Kg)	0.180697
SAR 1g (W/Kg)	0.341110

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.3522	0.1763	0.0868	0.0492	0.0225	0.0120



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: 3/8/2011
Measurement duration: 9 minutes 9 seconds

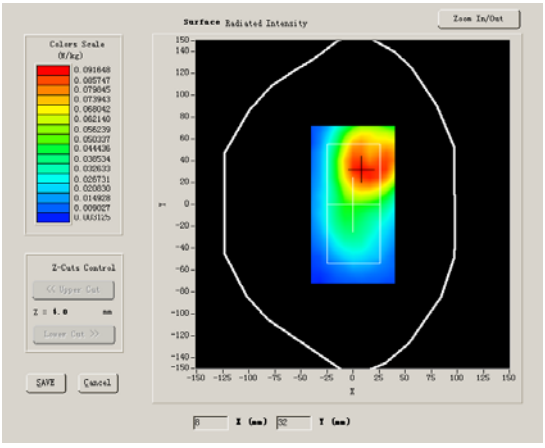
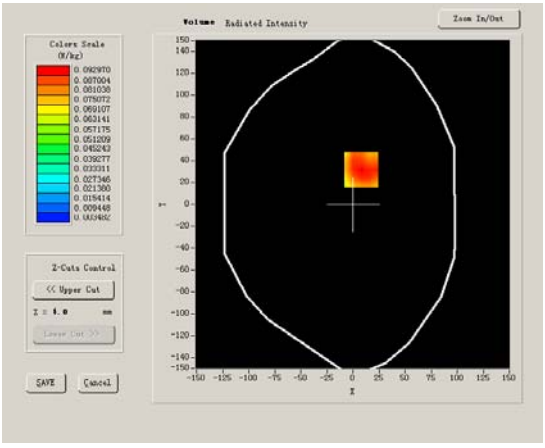
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS
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 (%)	0.530000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

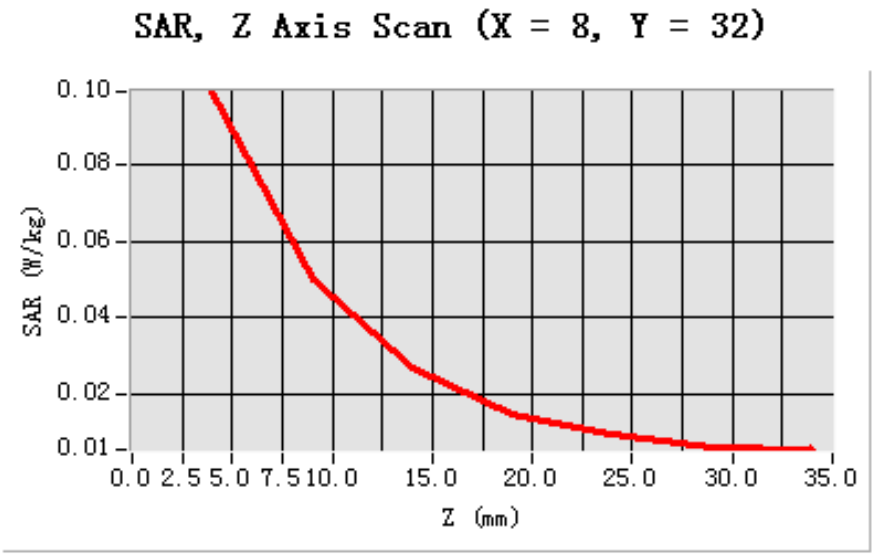
SURFACE SAR	VOLUME SAR
	

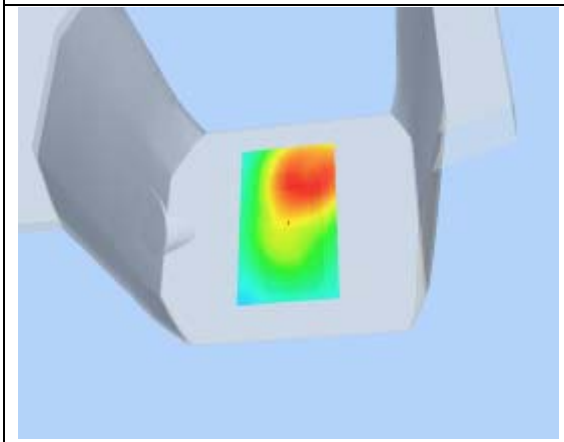
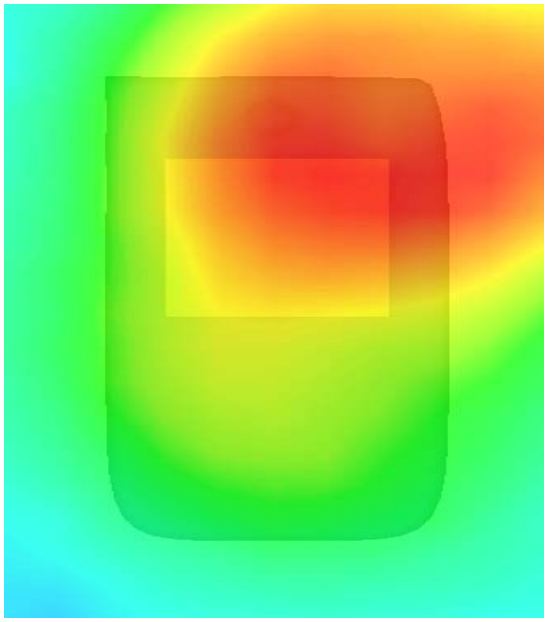
Maximum location: X=8.00, Y=32.00

SAR 10g (W/Kg)	0.054640
SAR 1g (W/Kg)	0.096486

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0990	0.0502	0.0267	0.0148	0.0096	0.0063



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: 3/8/2011
Measurement duration: 9 minutes 8 seconds

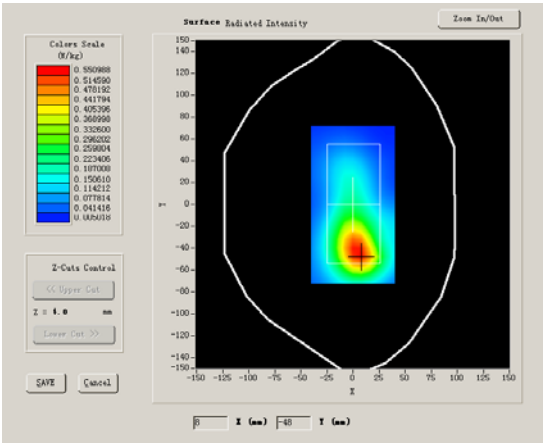
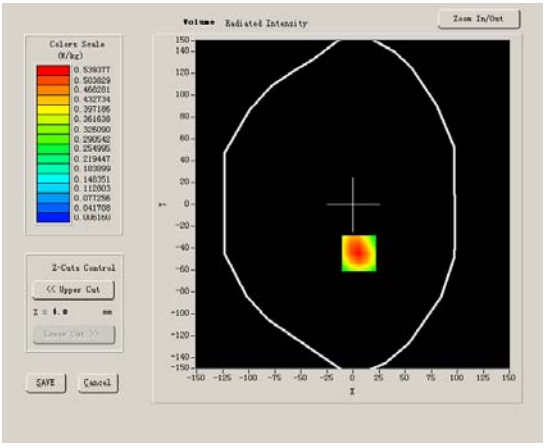
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS
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 (%)	-1.950000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

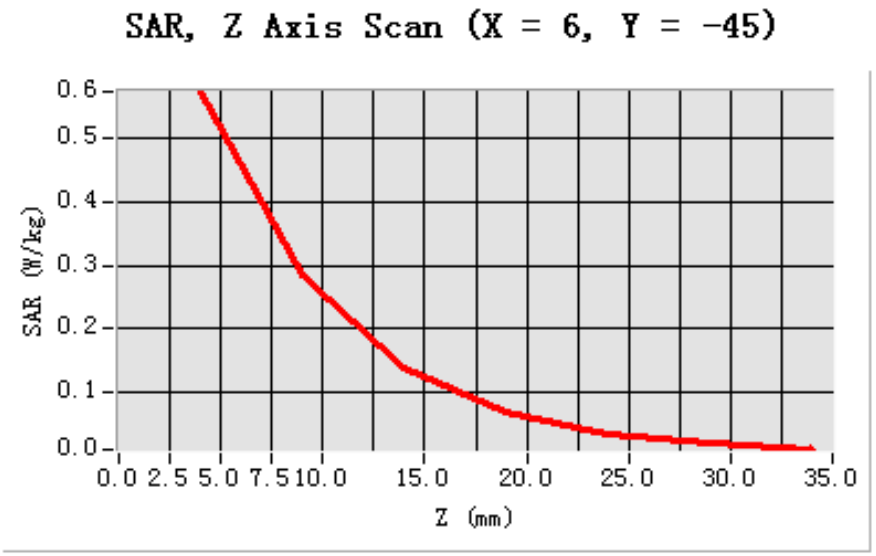
SURFACE SAR	VOLUME SAR
	

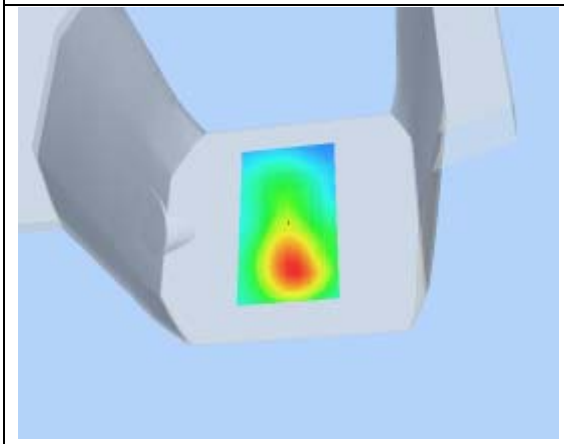
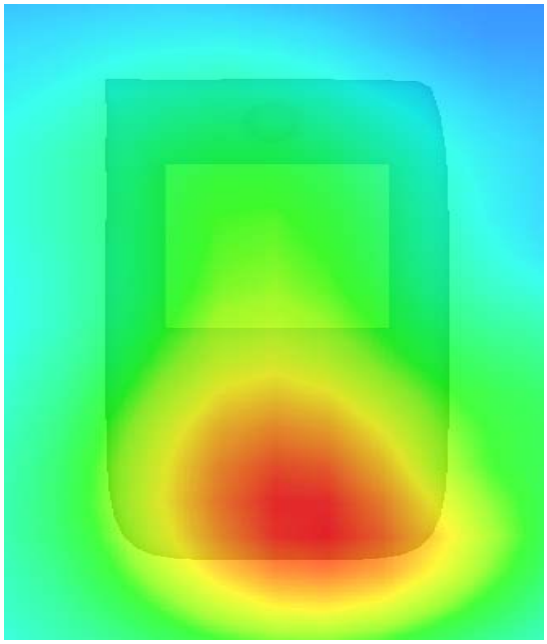
Maximum location: X=6.00, Y=-45.00

SAR 10g (W/Kg)	0.292470
SAR 1g (W/Kg)	0.550521

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.5743	0.2838	0.1388	0.0705	0.0356	0.0195



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: 3/8/2011
Measurement duration: 9 minutes 9 seconds

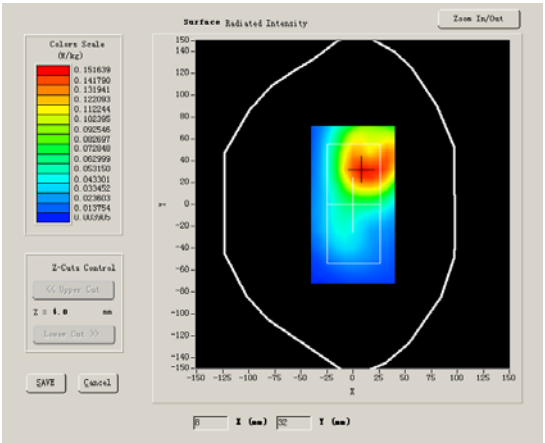
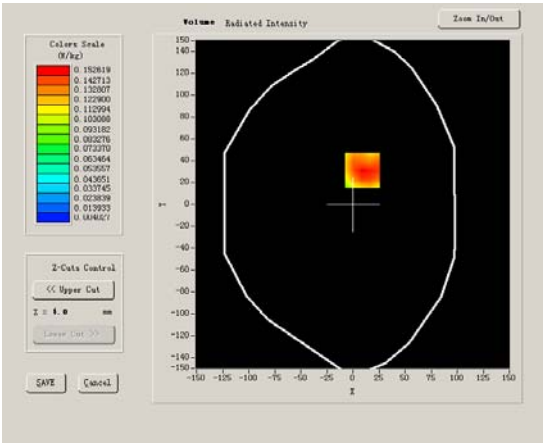
A. Experimental conditions.

Phantom File	surf_sam_plan.txt
Phantom	Validation plane
Device Position	Body
Band	US_PCS
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 (%)	0.190000
Ambient Temperature:	22.0°C
Liquid Temperature:	21.7C
ConvF:	40.136,34.843,38.721
Crest factor:	1:1

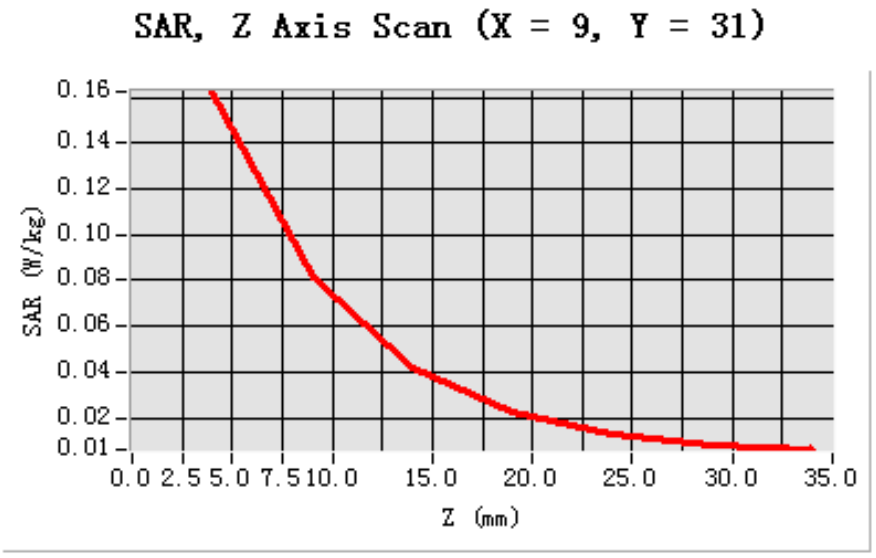
SURFACE SAR	VOLUME SAR
	

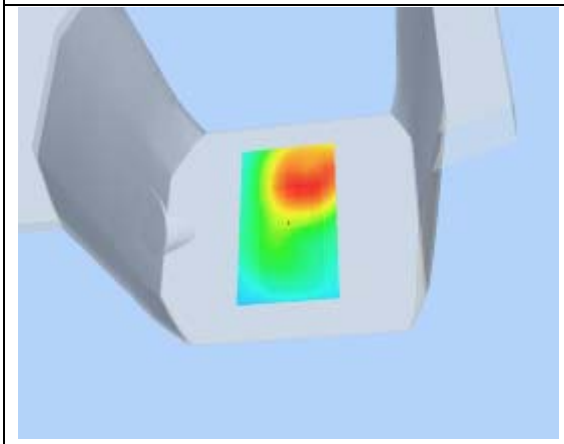
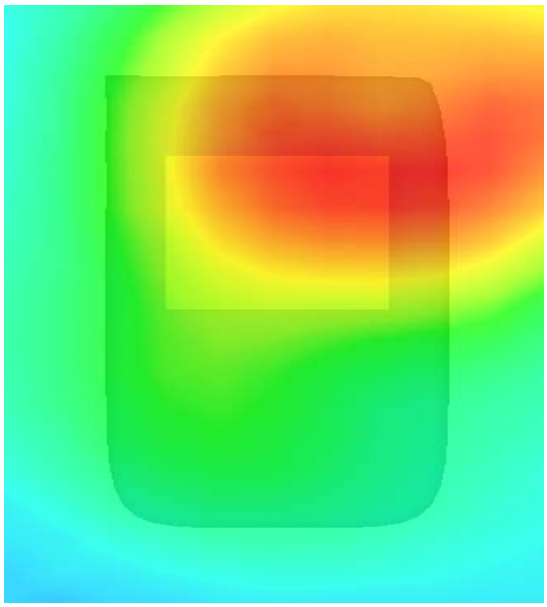
Maximum location: X=9.00, Y=31.00

SAR 10g (W/Kg)	0.087174
SAR 1g (W/Kg)	0.157942

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1625	0.0817	0.0418	0.0228	0.0129	0.0078



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: 3/8/2011
Measurement duration: 9 minutes 8 seconds

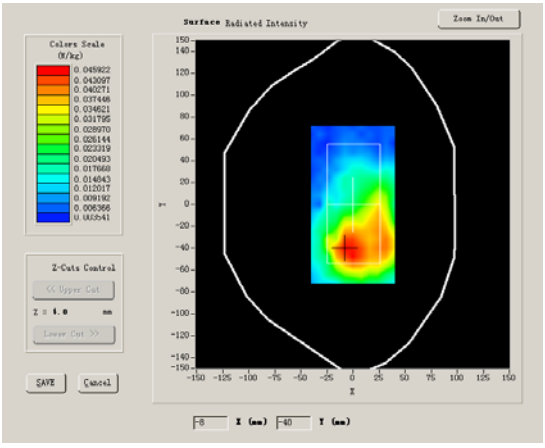
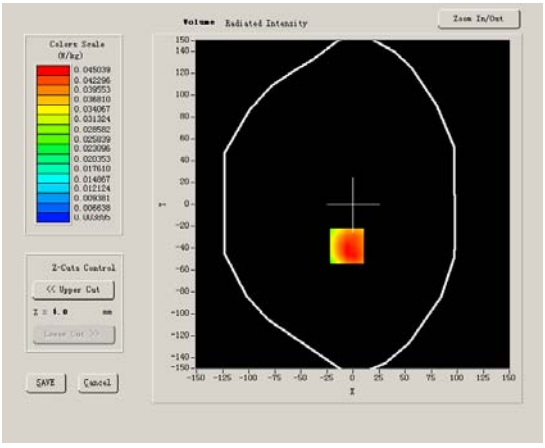
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.000000
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

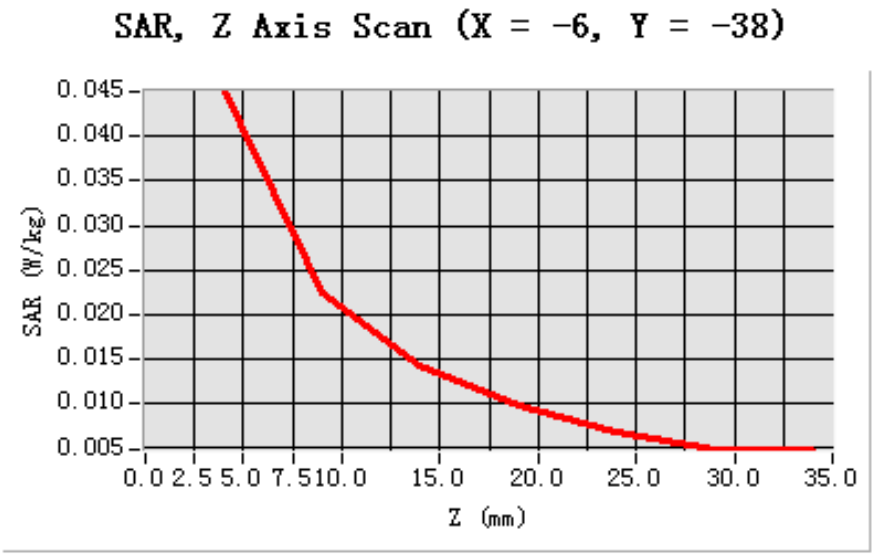
SURFACE SAR	VOLUME SAR
	

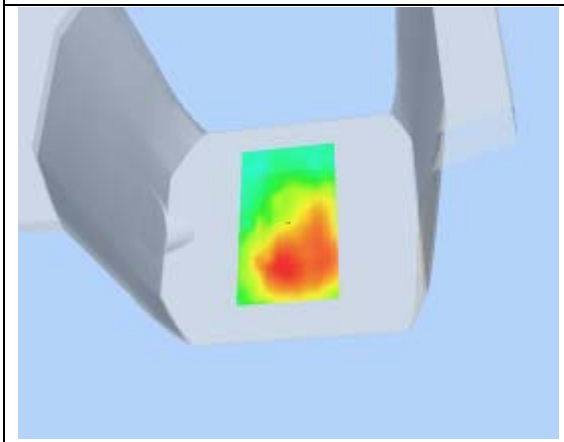
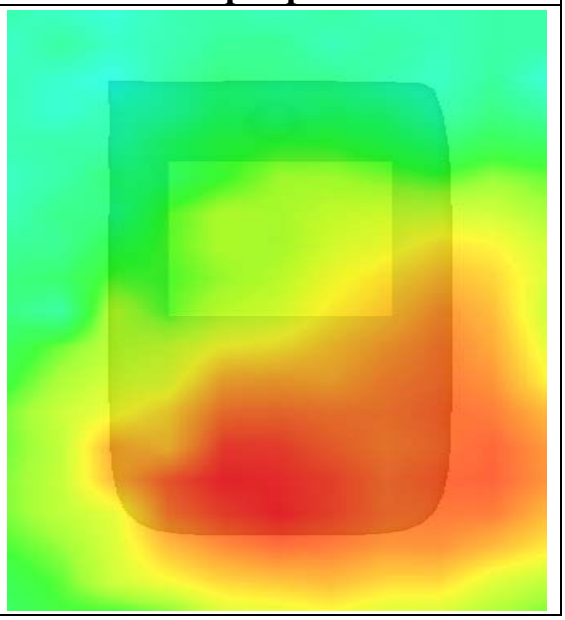
tion: X=-6.00, Y=-38.00

SAR 10g (W/Kg)	0.025368
SAR 1g (W/Kg)	0.044497

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.0450	0.0225	0.0142	0.0099	0.0068	0.0048



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
Date of measurement: 3/8/2011
Measurement duration: 9 minutes 8 seconds

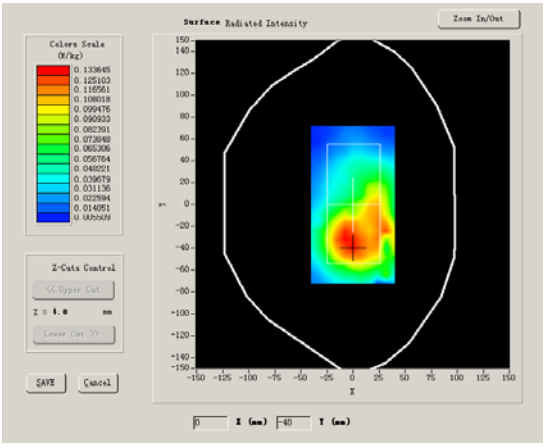
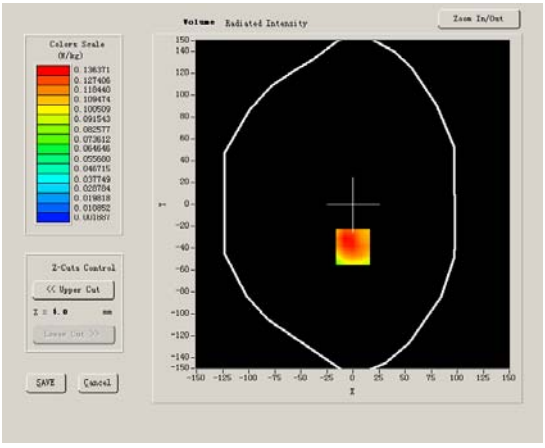
A. Experimental conditions.

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

B. SAR Measurement Results

Middle Band SAR (Channel 6):

Frequency (MHz)	2437.000000
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

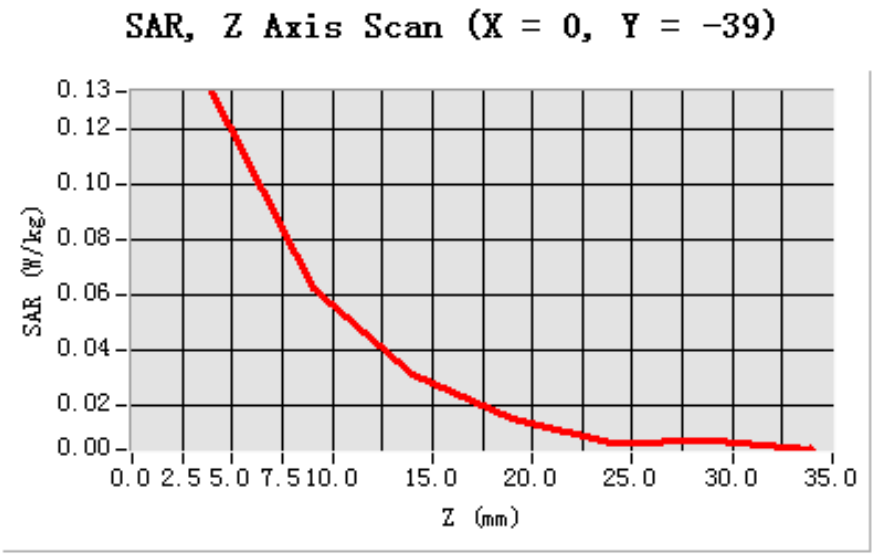
SURFACE SAR	VOLUME SAR
	

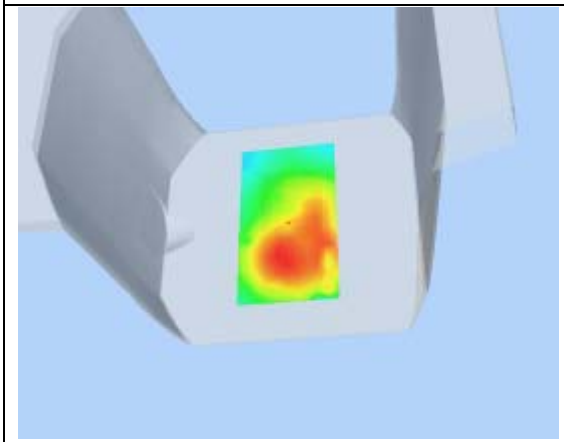
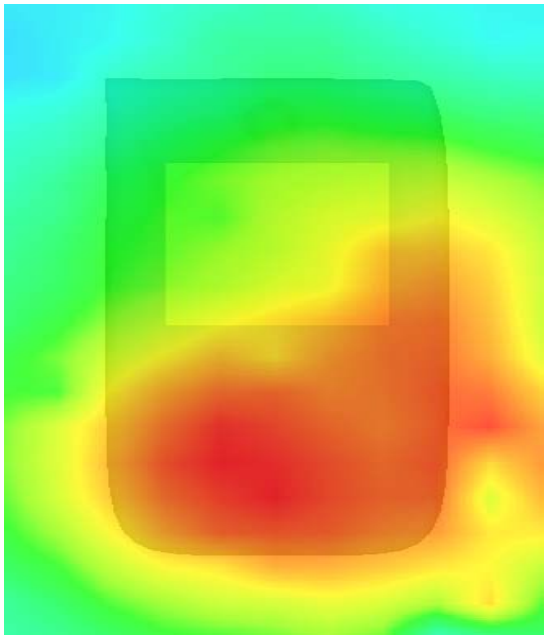
Maximum location: X=0.00, Y=-39.00

SAR 10g (W/Kg)	0.071720
SAR 1g (W/Kg)	0.133186

Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.0000	0.1336	0.0628	0.0312	0.0157	0.0067	0.0077



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: 3/8/2011
Measurement duration: 13 minutes 27 seconds

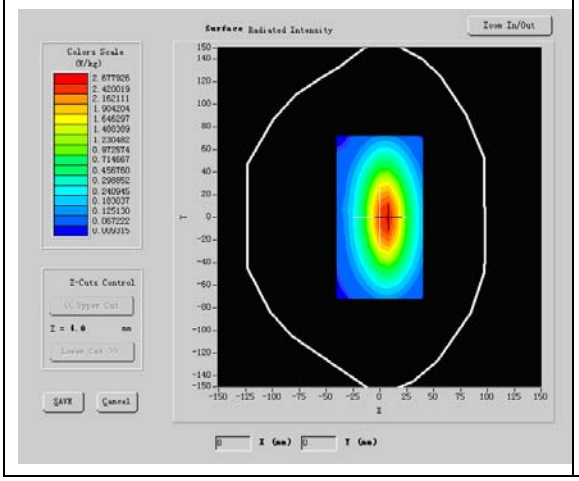
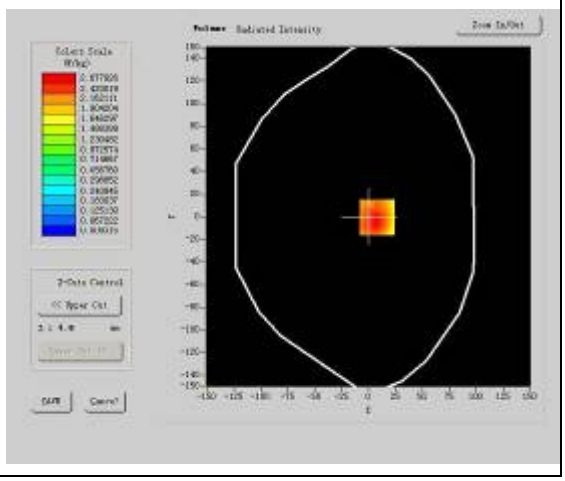
A. Experimental conditions.

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

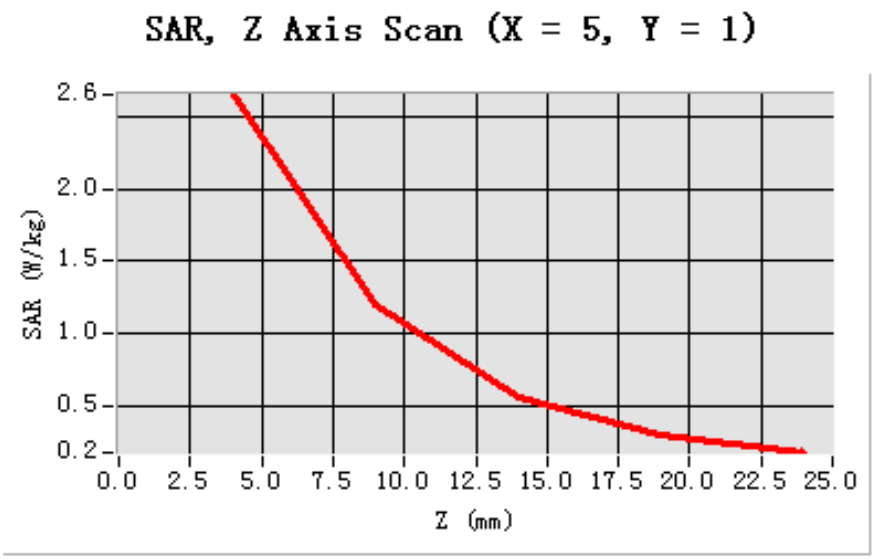
SURFACE SAR	VOLUME SAR
	

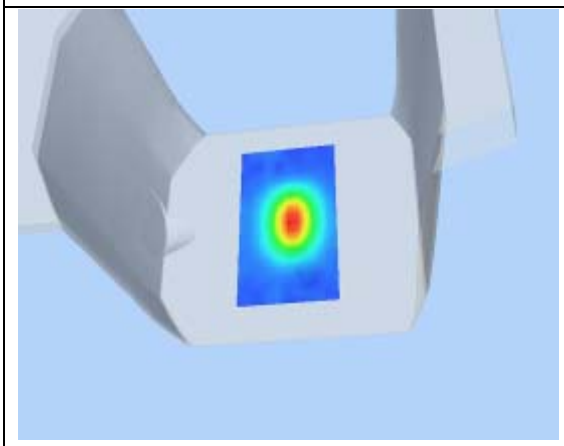
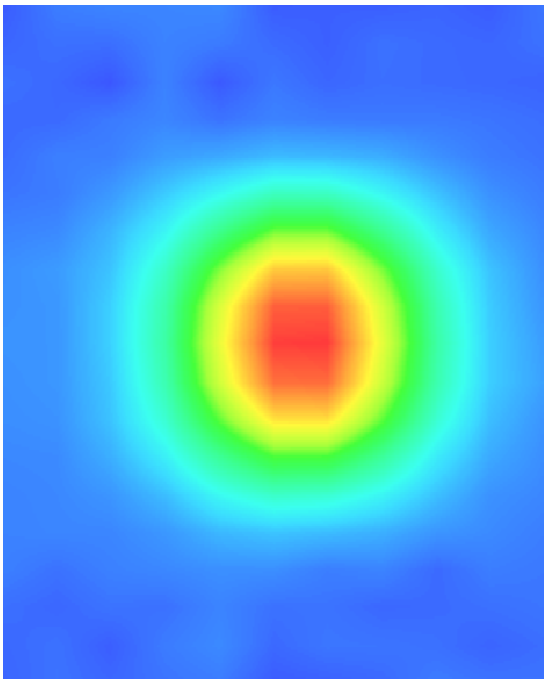
Maximum location: X=5.00, Y=1.00

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(1900MHz)

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm,dy=8mm
Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm
Date of measurement: 3/8/2011
Measurement duration: 13 minutes 27 seconds

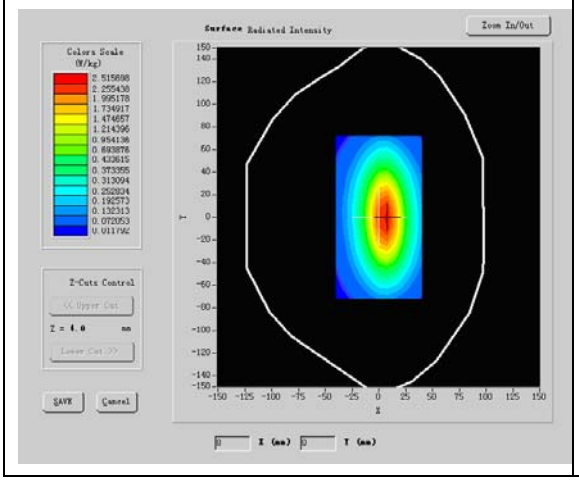
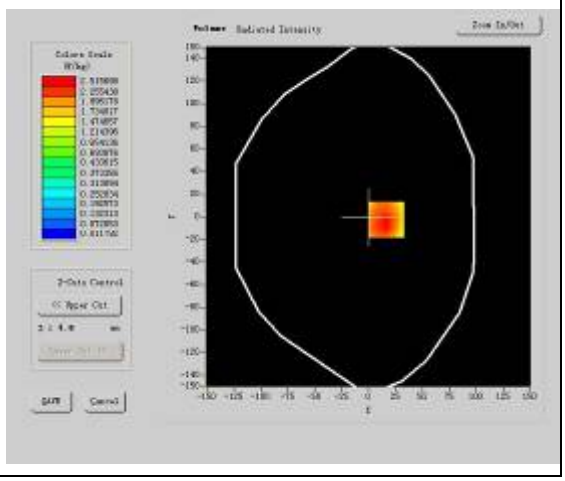
A. Experimental conditions.

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)	38.930000
Relative permittivity	15.070000
Conductivity (S/m)	1.321229
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

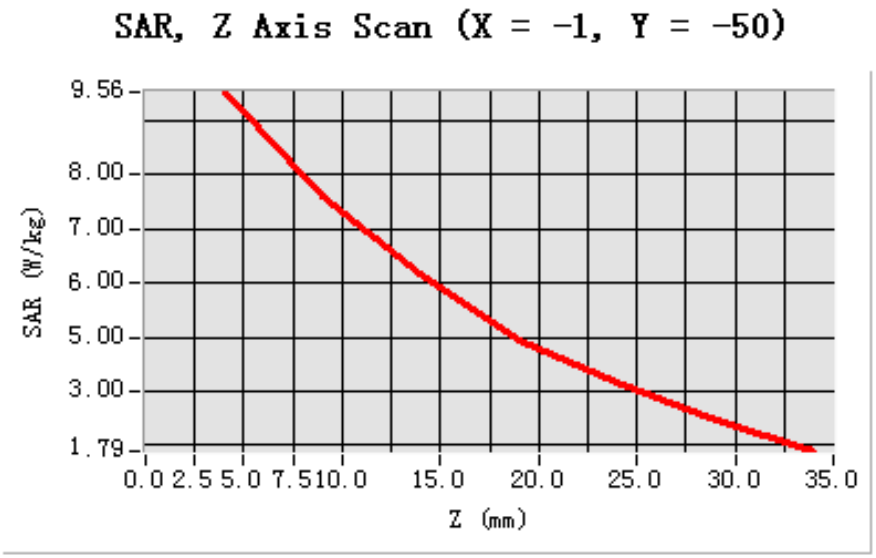
SURFACE SAR	VOLUME SAR
	

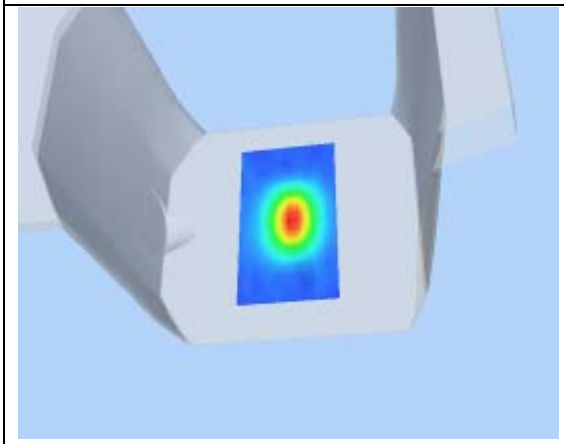
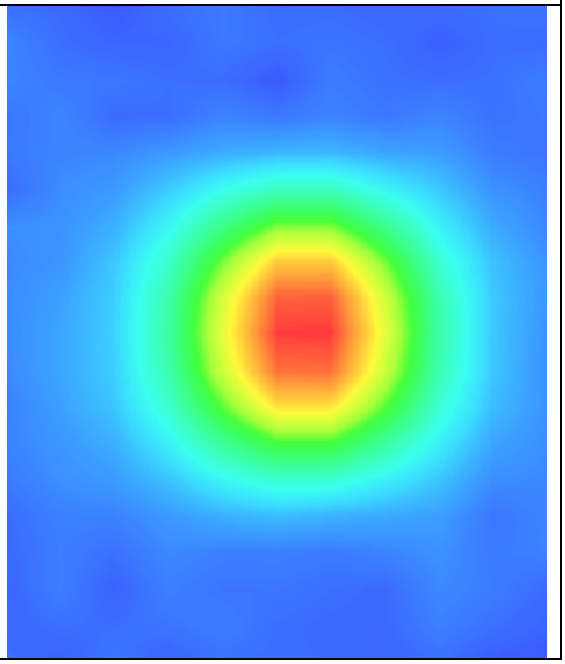
Maximum location: X=-1.00, Y=-50.00

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: 3/8/2011
Measurement duration: 13 minutes 27 seconds

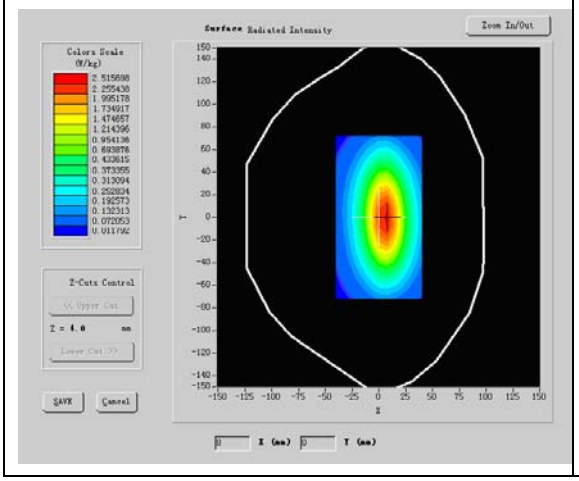
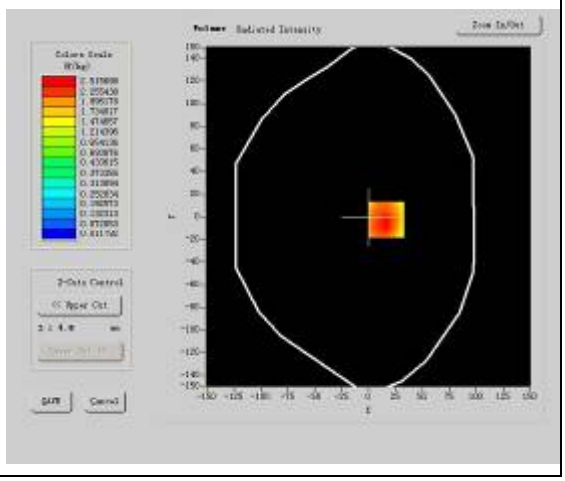
A. Experimental conditions.

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

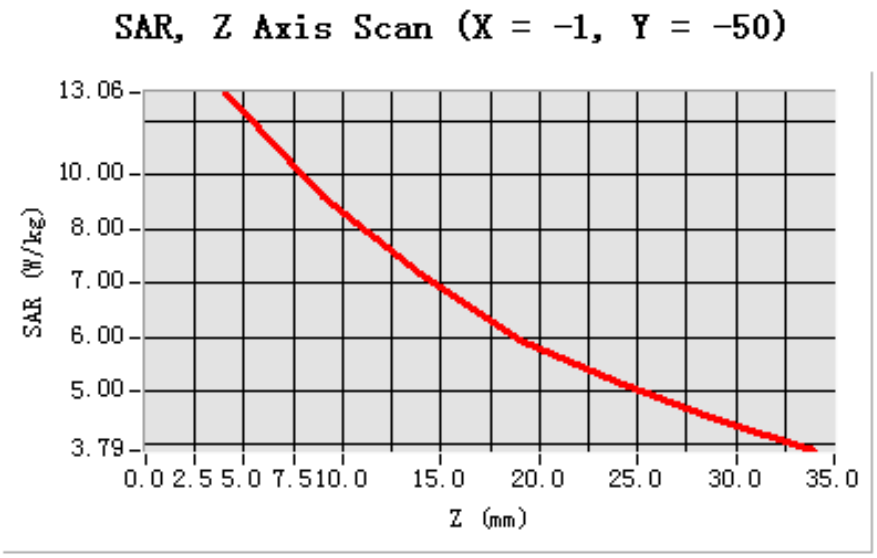
SURFACE SAR	VOLUME SAR
	

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