TEST REPORT

上海市计量测试技术研究院
Shanghai Institute of Measurement and Testing Technology

华东国家计量测试中心
National Center of Measurement and Test for East China

中国上海测试中心
National Center of Testing Technology, Shanghai

委托者 Customer	Sando Industrial Co., Ltd.
委托者地址 Address of customer	Flat 3,16/F Perfect Industrial Building,No.31 Tai Yau Street,San Po Kong,KOWLOON.HONG.KONG
样品名称 Name of sample	Big Key GSM Mobile phone
制造厂 Manufacturer	Sando Industrial Co., Ltd.
型号/规格 Model/Specification	X660,S69,S179
样品编号 No. of sample	/

投诉电话：021-50798262
Tel. for complaint

地址：上海市张衡路 1500 号(总部) 电话：021-38839800 传真：021-50798390 邮编：201203
Address No.1500 Zhangheng Road，Shanghai(headquarters) Tel. Fax. Post Code

上海市宜山路 716 号(分部) 电话：021-64701390 传真：021-64701810 邮编：200233
No. 716 Yishan Road，Shanghai(branch) Tel. Fax. Post Code

国家法定计量检定机构计量授权证书号（中心/院）：（国）法计（2002）01039 号/（2002）01019 号
The number of the Certificate of Metrological Authorization to The Legal Metrological Verification Institution is No.（2002）01039 / No.（2002）01019

中国合格评定国家认可委员会实验室认可证书号：No. CNAS L0134
The number of the certificate accredited by CNAS is No.L0134

中国国家认证认可监督管理委员会资质认定计量认证证书（CMA）号：2006000597E
The number of the metrology accreditation certificate by CNCA is No. 2006000597E

本次检测所依据的技术规范（代号、名称）：
Reference documents for the test (code 、name)

IEEE 1528-2003	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
FCC OET65 C	Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions

本次检测所使用的主要测量仪器：
Main measuring instruments used in this test

Refer to attachment 1

检测地点及环境条件：
Location and environmental condition for the test

地点：No. 716 Yishan Road, Shanghai
Location

温度：21 ℃；湿度：55 %RH；其它：
Ambient temperature / Relative humidity / Others

检测结果/说明：
Results of test and additional explanation

Pass
(Date of test: 2008.09.09)

Standard Applicable:

According to FCC Part 1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline. This product is a portable device.

Measurement Result:

This is a portable device and the max peak output power is 31.91dBm (1.55 W). Higher than the low threshold 60/f GHz = (71.73 mW), d<2.5 cm general population category. The SAR measurement is necessary.

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1. Specific Absorption Rate Test

1.1 Basic information

EUT Description

Product Name	Big Key GSM Mobile phone
Model No.	X660,S69,S179
FCC ID	WPMSANDOX-660
Antenna Type	Integral
GPRS class	/
GPRS Timeslots of test	/
Modulation Mode	GMSK
Tx Frequency range	850MHz: 824~849MHz MHz 1900MHz: 1850~1910MHz
Rx Frequency range	850MHz: 869~894MHz 1900MHz: 1930~1990MHz
Maximum RF Conducted Power	GSM 850: 31.95dBm DCS1900: 28.73 dBm

1.2 Test Environment during SAR test

Temperature	Min. =19°C, Max. =23°C
Relative humidity	Min. =30%, Max. =70%
Ground system resistance	<0.5Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

1.3 Tissue Simulating Liquid

1.3.1 The composition of the tissue simulating liquid

The parameters of the simulating solution strongly influence the SAR values. The different normalization organizations have defined adapted solutions for the each mobile system.

GSM liquid: is made of 1-2 Propylene Glycol, de-ionized water and NaCl, reconstituting the electric properties of human tissues at 850MHz/900 MHz;

DCS/PCS Liquid: is made of de-ionized water, DGBE, Triton X 100 and NaCl, reconstituting the electric properties of human tissues at 1800MHz/1900MHz;

UMTS Liquid: is made of de-ionized water, DGBE, Triton X 100 and NaCl, reconstituting the electric properties of human tissues at 2000MHz;

Bluetooth Liquid: is made of de-ionized water, DGBE, Triton X 100 and NaCl, reconstituting the electric properties of human tissues at 2450MHz;

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.3.2 Tissue Calibration Result

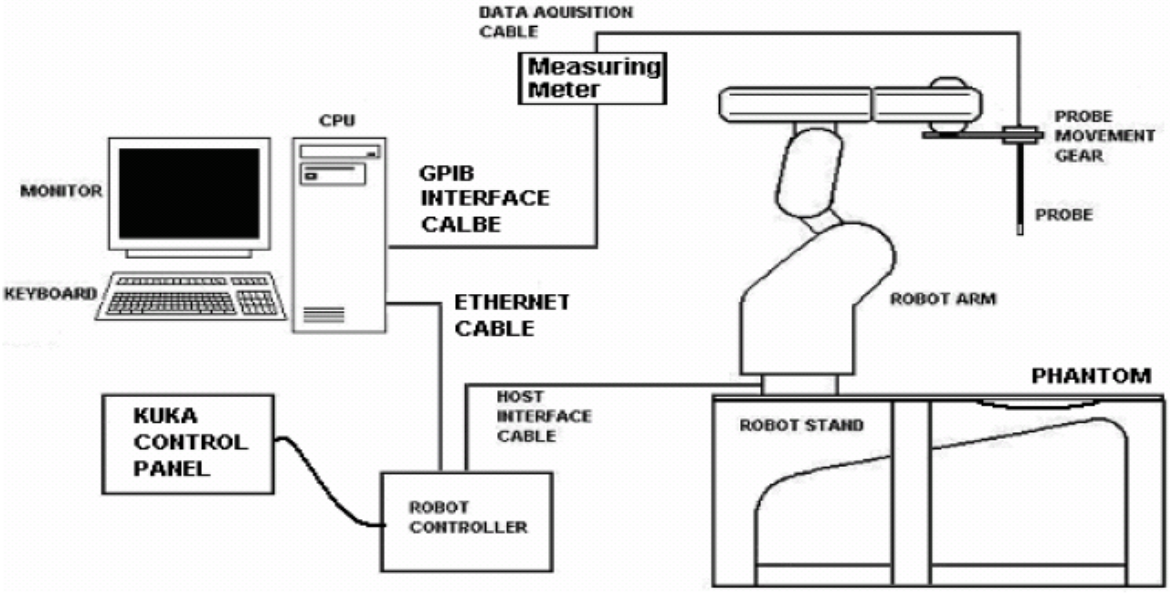
The dielectric parameters of the liquids were verified prior to the SAR evaluation using the Calibration Kits and R&S® ZVB4 Vector Network Analyzers.

Head Tissue simulating Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp.(°C)
		ε_r	σ(S/m)	
850MHz	Reference result +/-5%	41.50	0.90	N/A
	2008-09-09	41.42	0.92	21
1900MHz	Reference result +/-5%	40.00	1.40	N/A
	2008-09-09	38.96	1.41	21

Body Tissue simulating Measurement				
Frequency [MHz]	Description	Dielectric Parameters		Tissue Temp.(°C)
		ε_r	σ(S/m)	
850MHz	Reference result +/-5%	55.20	0.97	N/A
	2008-09-09	54.21	0.98	21
1900MHz	Reference result +/-5%	53.30	1.52	N/A
	2008-09-09	54.86	1.51	21

1.4 SAR Measurement System

This SAR Measurement System uses a Computer-controlled 3-D stepper motor system(SAR Handset Assessment Systems from Antennessa). A E-field probe is used to determine the internal electric fields. The SAR can be obtained from the equation SAR=σ (|Ei|2)/ ρ where σ and ρ are the conductivity and mass density of the tissue simulating liquid.



检测结果/说明（续页）：
Results of test and additional explanation（continued page）

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 TCH is allocated to 0, 62 and 124 respectively in the case of GSM 900 MHz, or to 512,698 and 885 respectively in the case of PCS 1800 MHz. 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.

1.4.1 SAM phantom

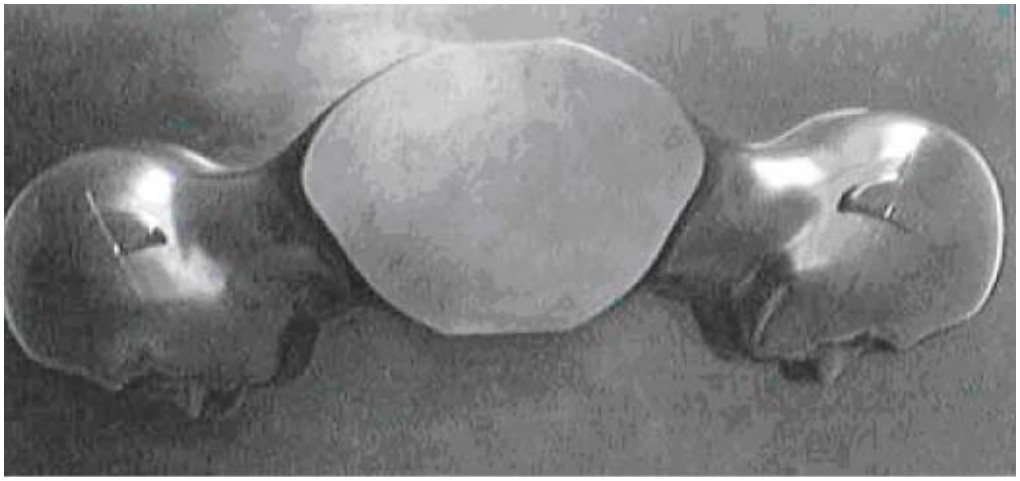


Figure 1:SAM phantom

The SAM phantom(Antennessa SN:SN_36_05_SAM25) is used to measure the SAR relative to persons exposure to electro-magnetic field radiated by mobile phones. For thickness control purpose, the phantom has several integrated thickness control points(see crosses on the picture below)

Shell thickness	2 mm +/-0.2 mm
Filling volume	27 liters
Dimensions	1000mm(length);500mm (width);200 mm (height)
5 molded plastic points for high precision reference Delivered with 4 nylon screws	
CENELEC 50361 or IEEE 1528-200X versions	

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.4.2 Probe Specification

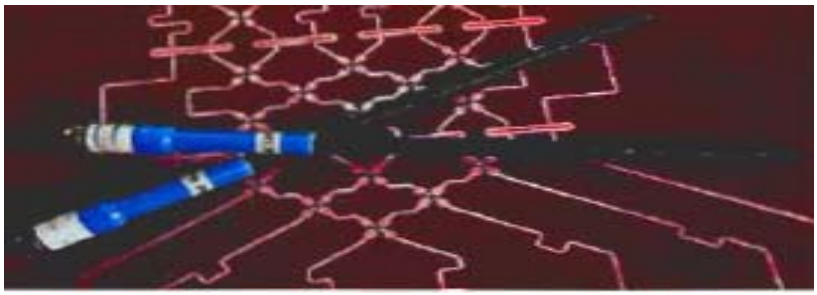


Figure 2: Antennessa probe

E-field probes are constructed with a triangular section bar in alumina. On each face, a dipole and a resistive line are printed. A Schottky diode is placed in the center of each dipole. This probe is designed to fulfill CENELEC and IEEE recommendations for the measurement of electromagnetic fields radiated by mobile phones and base stations. The E-field detection probe is composed of three orthogonal dipoles linked to special Schottky diodes with low detection thresholds. The probe allows the measurement of electric fields in liquids such as the one defined in the IEEE and CENELEC standard. These uncoupled dipoles perform the isotropic and wide-band measurements necessary to assess mobile phones SAR. Figure 3 shows E-field probe relevant features.

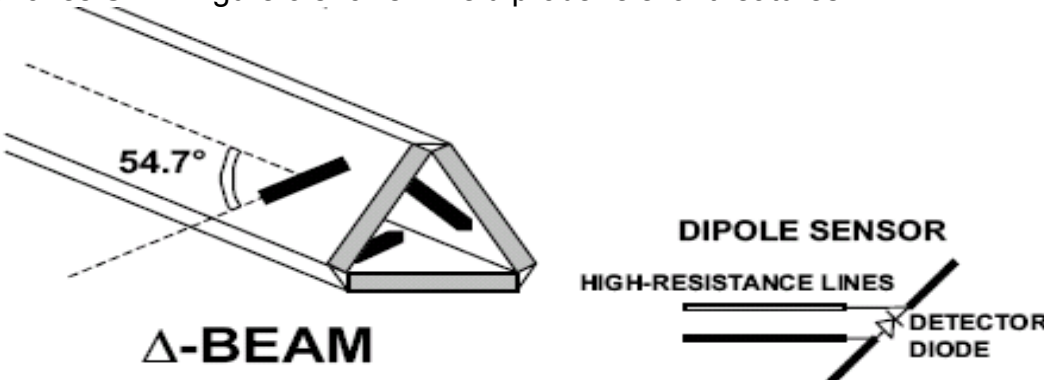


Figure 3:Typical E-field probe construction

The characteristics of the probes	
Frequency range	100 MHz-30 GHz
Maximum external diameter	8 mm
Probe tip external diameter	5 mm
Distance between dipoles and the probe tip	<2.7 mm
Dipole resistance(in the connector plane)	1M to 2M
Axial isotropy in human-equivalent liquids	+/-0.25 dB
Hemispherical Isotropy in human-equivalent liquids	+/-0.5 dB
Linearity	+/-0.5 dB
Maximum operating SAR	100 Watts/Kg
Low SAR detection threshold	0.0015 Watts/Kg
Connectors	6 male wires (Hirose SR30)

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.4.3 6 Axis Articulated Robot

This KR3 robot is used in the SAR testing which provides a powerful combination of high-speed flexible automation, high reliability and ease of use. This is due to its brushless DC servomotors, absolute ncoders and high-stiffness harmonic drives, which make it one of the fastest and most durable robots in its class.

Figure 4:KR3 robot

Robot/Controller Manufacture	KUKA
Number of axis	6
Position Repeatability	+/- 0.05 mm
Controller	KR C3
Work envelope volume	0.679 m3
Communication	LAN

1.4.4 Device and Dipole Holder

The SAR value is approximatively inversely proportional to the square of the distance between the source and the internal phantom surface. For a source at 5 mm distance, a positioning uncertainty of +/-0.5 mm would produce a SAR uncertainty of +/-20%. An accurate device positioning is therefore essential for accurate and repeatable measurements

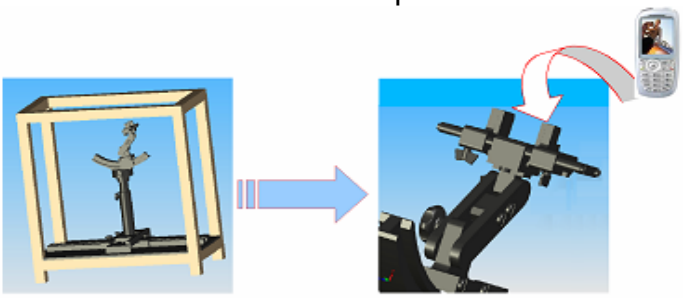
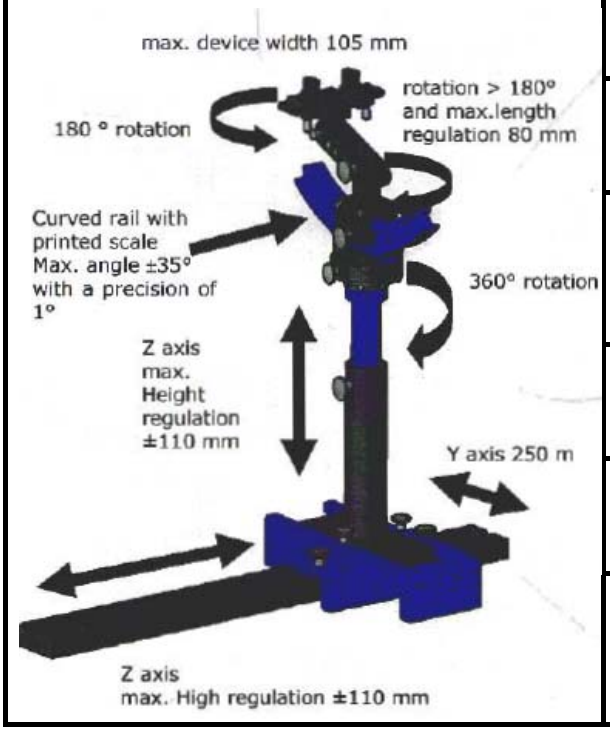


Figure 5:evice holder

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

	Totally metal-free design
	Rotation point on ear opening
	Translation to lock the device under test under the flat part or under the left or right ear
	High repeatability with rotation point external adjustment
	Easy and accurate position according to all standards
	Compliance with mobile phone, PMR or PDA dimensions

This positioning system allows the translation of the mobile phone along the X,Y and Z axis, as well as the required rotation around the phantom ear, for the 2 positions defined by standards(0° “cheek” position and 15° “tilt” position).

1.4.5 Dipoles

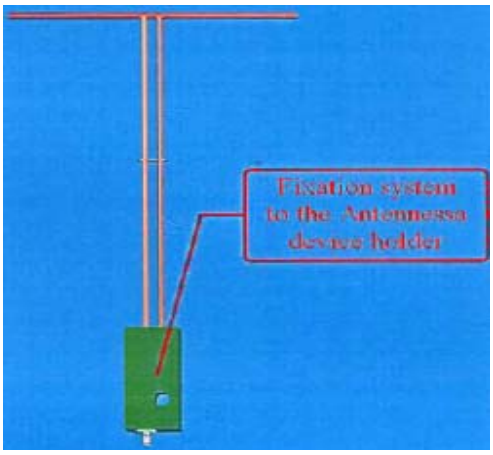


Figure 6:valibration dipole

The antennas are developed with a λ/4 balun, so that all calibration dipoles are totally symmetrical.

Each validation dipole is used to check the whole SAR measurement chain in its frequency band. They are especially developed to make SAR measurements near a flat SAM phantom filled with human-equivalent liquid, according to CENELEC and IEEE standards.

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Frequencies	Antennessa has a full range of dipoles corresponding to the frequencies defines by standards: 835,900,1800,1900,2450,3000MHz,etc.	
Adaptation	S11<-20dB in specified validation position	
Maximum input Power	100W	
Connectors	SMA	
Dimensions	Height: between 200 mm and 300 mm Length: between 25 mm and 83 mm	}depends on the dipole frequency

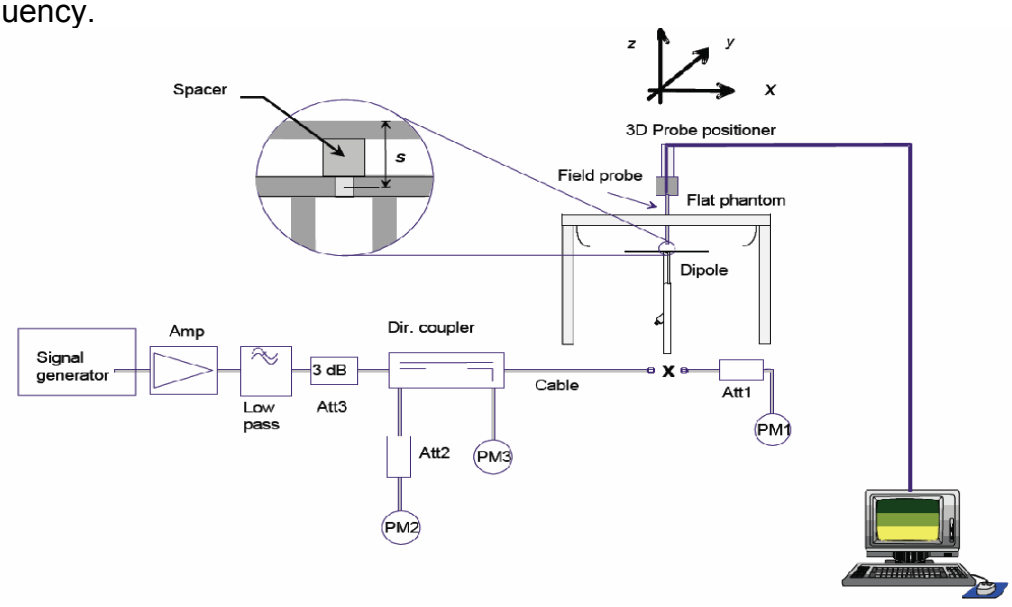
1.5 SAR Measurement Procedure

1.5.1 General Requirements

The test shall be performed in a laboratory with an environment which avoids influence on SAR measurements by ambient EM sources and reflection from the environment itself. The ambient temperature shall be in the range of 18°C to 25°C during the test

1.5.2 SAR System Validation

Prior to assessment, the system is verified to the ±10% of the specifications. The SAR value is measured with the dipole which is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis, The standard measuring distance was 15mm (below 1GHz) and 10mm (above 1GHz) from dipole center to the simulating liquid surface. During measurement, 1W antenna input power is required and the flat phantom is filled the liquid whose parameters are calibrated relative to different frequency.



SAR System Validation setup

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

System Validation result:

Frequency	Liquid	Date	Target value (W/kg)		Test value (W/kg)	
			1g	10g	1g	10g
850 MHz	Head	2008.09.09	9.5	6.2	9.259	6.198
	body	2008.09.09			9.649	6.559
900 MHz	/	/	/	/	/	/
	/	/			/	/
1800 MHz	/	/	/	/	/	/
	/	/			/	/
1900 MHz	Head	2008.09.09	39.7	20.5	38.649	20.395
	body	2008.09.09			40.186	21.508
2000 MHz	/	/	/	/	/	/
	/	/			/	/
2450 MHz	/	/	/	/	/	/
	/	/			/	/

1.5.3 Test Positions

As it cannot be expected that the user will hold the mobile phone exactly in one well defined position, different operational conditions shall be tested. The IEEE standard requires two test positions. For an exact description helpful geometrical definitions are introduced and shown in Fig. 7-8.

There are two imaginary lines on the mobile, the vertical centerline and the horizontal line. The vertical centerline passes through two points on the fronts side of the handset: the midpoint of the width w_t of the handset at the level of the acoustic output(point A on Fig.7),and the midpoint of the width w_b of the bottom of the handset (point B).The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output (see Fig.7).The two lines intersect at point A

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

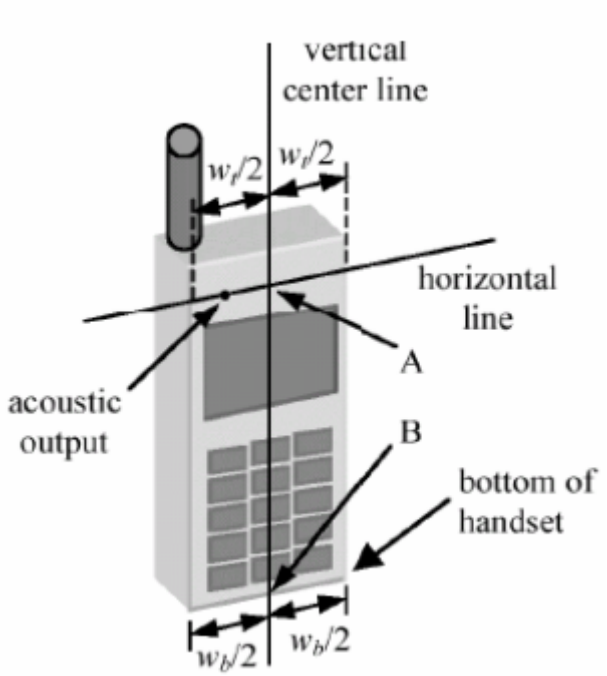


Figure 7:Handset vertical and horizontal reference lines

According to Fig.8 the human head position is given by means of the following three reference points: auditory canal opening of both ears (RE and LE) and the center of the closed mouth(M). The ear reference points are 15-17mm above the entrance to the ear cannal along the BM line (back-mouth), as shown in Fig.8. The plane passing through the two ear canals and M is defined as the reference plane. The line NF (Neck-Front) perpendicular to the reference plane and passing through the RE (or LE) is called the reference pivoting line. Line BM is perpendicular to the NF line. With this definitions the test positions are given by

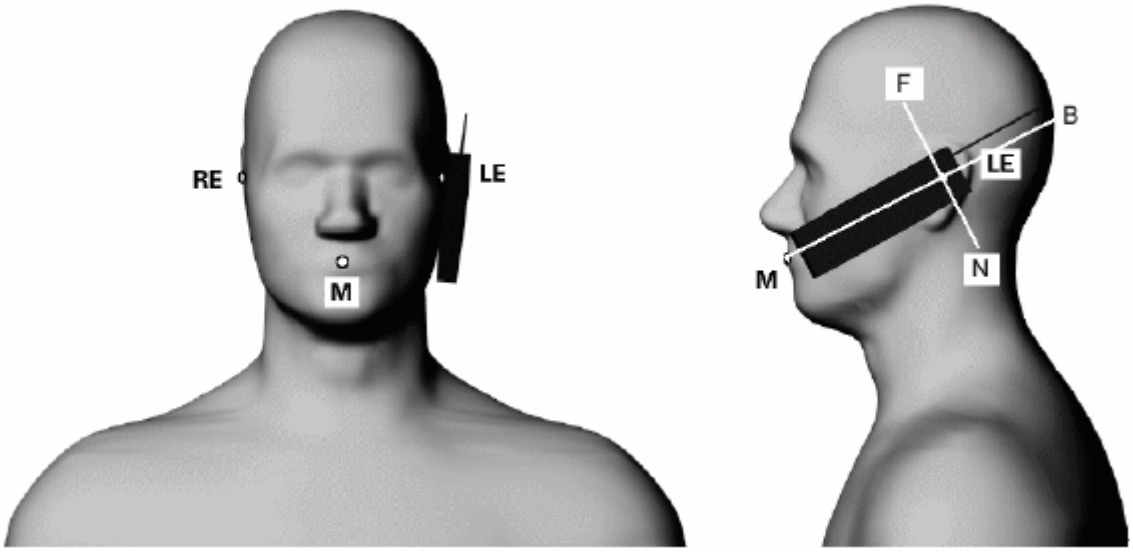


Figure 8:Phantom reference points

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.5.3.1 Cheek position (see Fig.9)

Position the handset close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Fig.8). such that the plane defined by the vertical center line and the horizontal line of the phone is approximately parallel to the sagittal plane of the phantom. Translate the handset towards the phantom along the line passing through RE and LE until the handset touches the ear. While maintaining the handset in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to MB-NF including the line MB (called the reference plane). Rotate the phone around the vertical centerline until the phone (horizontal line) is symmetrical with respect to the line NF. While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE, and maintaining the phone contact with the ear ,rotate the handset about the line NF until any point on the handset is in contact with a phantom point below the ear.

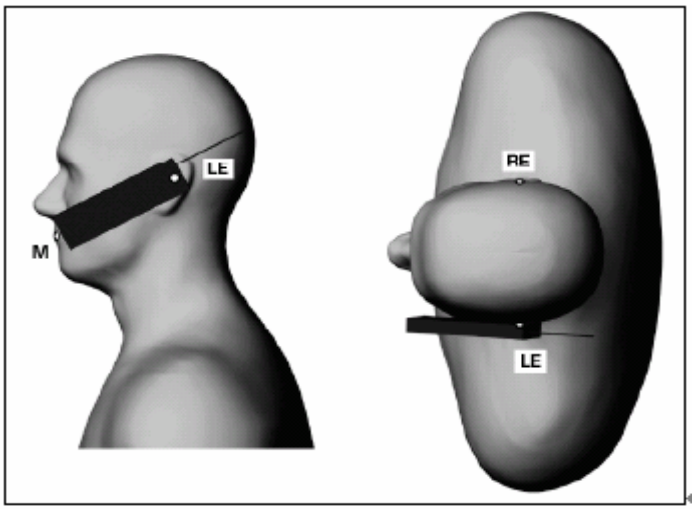


Figure 9:The cheek position

1.5.3.2 Tilted position (see Fig.10)

While maintaining the orientation of the phone retract the phone parallel to the reference plane far enough to enable a rotation of the phone by 15º. Rotate the phone around the horizontal line by 15º. While maintaining the orientation of the phone, move the phone parallel to the reference plane until any part of the phone touches the head. In the position, point A will be located on the line RE-LE.

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

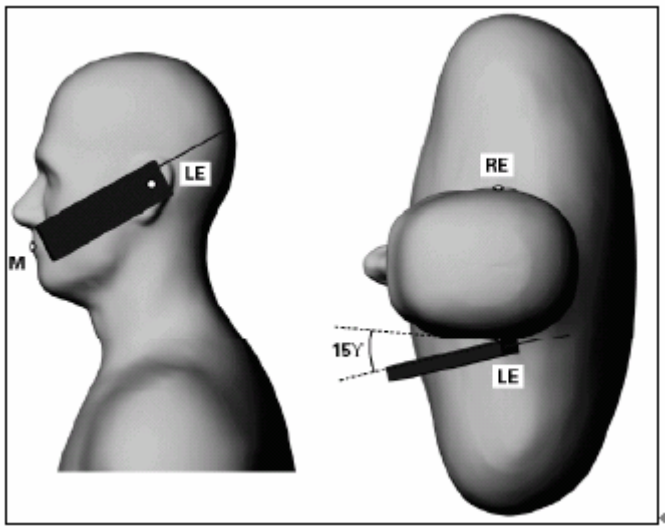


Figure10: The tilted position

1.5.3.3 Body-worn and Other Configurations

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distance may be use, but not exceed 2.5 cm. A separation distance of 1.5 cm between the back of the device and a flat phantom is set for this test.

1.5.4 Test to be performed

1.5.4.1 The SAR test shall be performed with both phone positions described above, on the left and right side of the phantom. The device shall be measured for all modes operating when the device is next to the ear, even if the different modes operate in the same frequency band. First the SAR test shall be performed using the center frequency of each available operating band and mode with the maximum peak power level. At the device position with highest SAR (cheek or tilted, left or right), the test is repeated at the lowest and highest frequency. In addition, for all other device positions respectively configurations where the spatial peak SAR value is within 3dB of the 1.6 W/kg limit, the lowest and highest frequencies should be tested.

1.5.4.2 For devices with retractable antenna all of the tests described above shall be performed with the antenna fully extended and fully retracted. Other factors that may affect the exposure should also be tested. For example, optional antennas or optional battery packs which may significantly change the volume, lengths, flip open/closed, etc. of the device, or any other accessories which might have the potential to considerably increase the peak spatial-average SAR value.

1.5.4.3 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 phone and the base station simulator is established via air interface.

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Measurement of the local E-field distribution is done with a grid of 8 mm*8mm and a constant distance 4mm to the inner surface of the phantom. Since the sensors cannot 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 interpolating scheme.
Around this point, a cube of 30*30*30mm or 32*32*30mm is assessed by measuring 5*5*5mm or 8*8*5 mm. With these data, the peak spatial-average SAR value can be calculated.

1.5.5 Description of Interpolation/Extrapolation Scheme

The local SAR inside the phantom is measured using small dipole sensing elements inside a probe body. The probe tip must not be in contact with the phantom surface in order to minimise measurements errors, but the highest local SAR will occur at the surface of the phantom.
An extrapolation is using to determinate this highest local SAR values. The extrapolation is base 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 (due to the duration of the battery) so the step of measurement is high. It could vary between 5 and 8mm. to obtain an accurate assessment of the maximum SAR averaged over 10 grams and 1gram requires a very fine resolution in the three-dimensional scanned data array.

1.5.6 SAR Exposure Limits

SAR assessments have been made in line with the requirements of IEEE-1528, FCC Supplement C, and comply with ANSI/IEEE C95.1-1992 “Uncontrolled Environments” limits. These limits apply to a location which is deemed as “Uncontrolled Environments” which can be described as a situation where the general public may be exposed to an RF source with no prior knowledge or control over their exposure.

Type Exposure	Uncontrolled Environment Limit
Spatial Peak SAR (1g cube tissue for brain or body)	1.60W/Kg(U.S.A)
Spatial Peak SAR (10g cube tissue for brain or body)	2.0 W/Kg(EURO)
Spatial Average SAR (whole body)	0.08W/Kg
Spatial Peak SAR (10g for hands, feet, ankles and wrist)	4.00W/Kg

1.5.7 Summary of Measurement Results

Peak Spatial-Average Specific Absorption Rate (SAR) of this portable wireless device has been measured in all configurations.

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Table 1: SAR Values(GSM 850),Measured against the head/body(Duty Cycle:1:8).

Temperature: 21.0~21.8°C, Relative Humidity: 60~65%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Configuration	SAR (W/kg)	before/after Power (dBm)
Left head, Touch cheek, Low Channel	0.190	32.08/32.05
Left head, Touch cheek, Middle Channel	0.250	31.99/31.97
Left head, Touch cheek, High Channel	0.353	31.86/31.83
Left head, Tilt 15, Low Channel	0.116	32.11/32.09
Left head, Tilt 15, Middle Channel	0.159	32.03/31.88
Left head, Tilt 15, High Channel	0.236	32..00/31.83
Right head, Touch cheek, Low Channel	0.157	32.22/32.11
Right head, Touch cheek, Middle Channel	0.215	32.09/31.98
Right head, Touch cheek, High Channel	0.312	31.89/31.83
Right head, Tilt 15, Low Channel	0.100	32.22/32.20
Right head, Tilt 15, Middle Channel	0.141	32.23/32.12
Right head, Tilt 15, High Channel	0.212	31.99 /31.87
Body, Low Channel	0.204	32.23/32.14
Body, Mid Channel	0.279	32.16/32.09
Body, Mid Channel(face to bottom)	0.089	32.20/32.11
Body, High Channel	0.392	32.11/31.99

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Table 2: SAR Values(PCS 1900),Measured against the head/body(Duty Cycle: 1:8).

Temperature: 21.0~21.8°C, Relative Humidity: 60~65%.		
Limit of SAR (W/kg)	1 g Average	
	1.6	
Test Configuration	SAR (W/kg)	before/after Power (dBm)
Left head, Touch cheek, Low Channel	0.408	28.12/28.10
Left head, Touch cheek, Middle Channel	0.326	28.99/28.87
Left head, Touch cheek, High Channel	0.292	28.95/28.87
Left head, Tilt 15, Low Channel	0.450	28.13/28.10
Left head, Tilt 15, Middle Channel	0.333	29.0128.96
Left head, Tilt 15, High Channel	0.309	29.14/28.99
Right head, Touch cheek, Low Channel	0.258	28.32/28.22
Right head, Touch cheek, Middle Channel	0.209	29.04/28.88
Right head, Touch cheek, High Channel	0.192	29.03/28.89
Right head, Tilt 15, Low Channel	0.321	28.11/28.09
Right head, Tilt 15, Middle Channel	0.249	29.20/29.12
Right head, Tilt 15, High Channel	0.233	29.11/28.97
Body, Low Channel	0.121	28.14/28.02
Body, Mid Channel	0.117	29.06/28.94
Body, Mid Channel(face to bottom)	0.049	29.08/28.93
Body, High Channel	0.107	29.14/29.01

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.6 Test Results

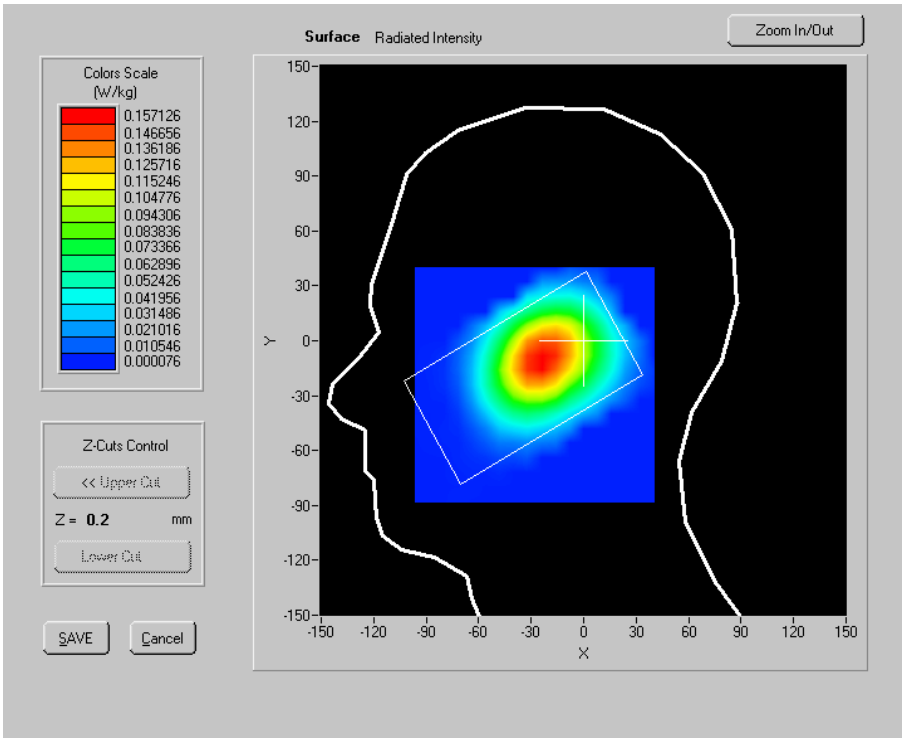
1.6.1GSM 850MHz

1.6.1.1Right head, Cheek

Lower Band SAR (Channel 128):

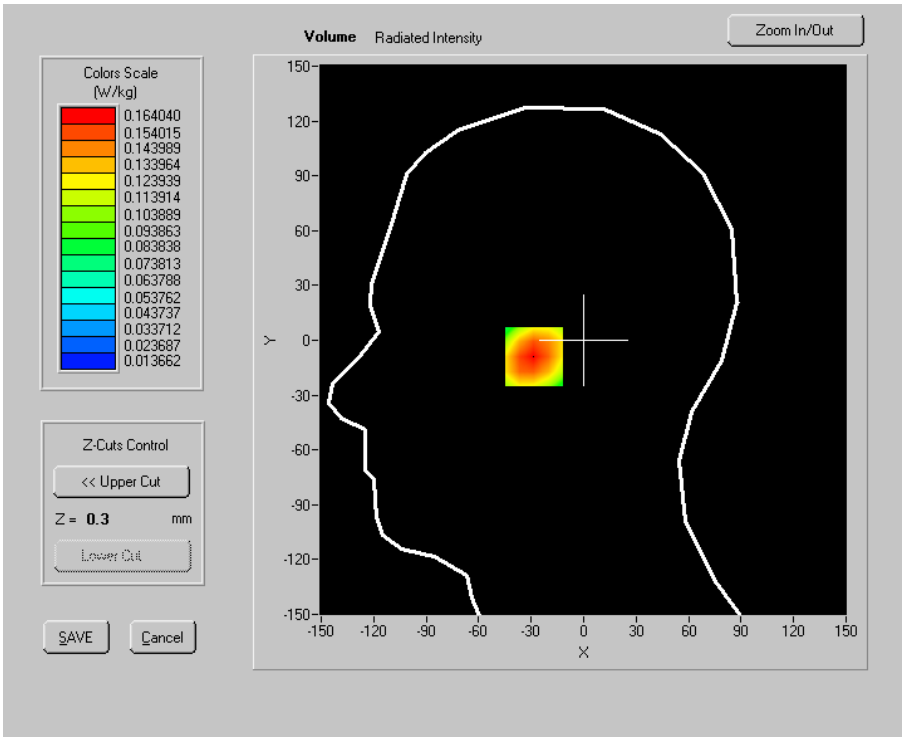
Experimental conditions	
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	TDMA
before/after Power Level:	32.22dBm/32.11 dBm/
Liquid Temperature:	21.2°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	824.200012
Relative permitivity (real part)	41.513000
Relative permitivity (imaginary part)	19.642349
Conductivity (S/m)	0.899401
Variation (%)	-1.710000



SURFACE SAR

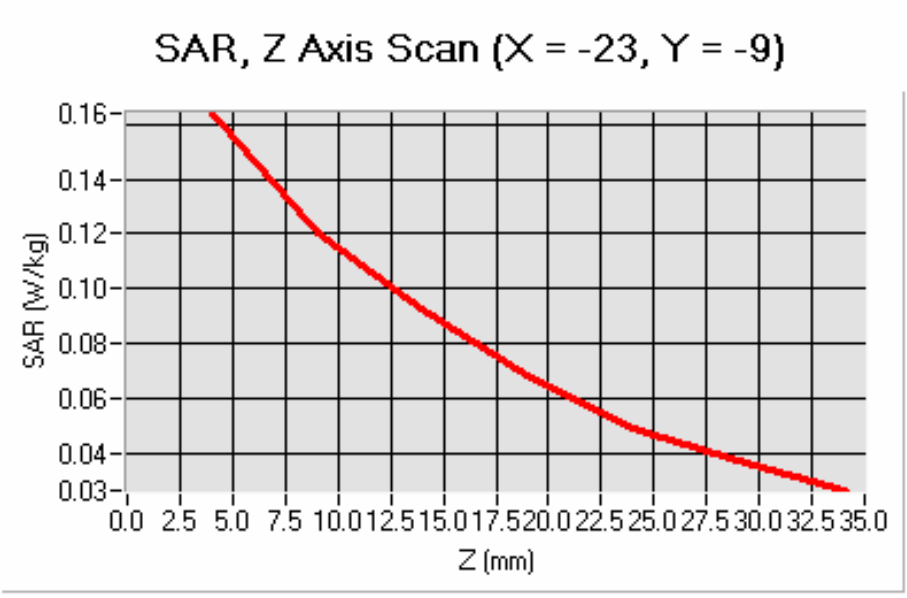
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-23.00, Y=-9.00

SAR 10g (W/Kg)	0.109387
SAR 1g (W/Kg)	0.157191

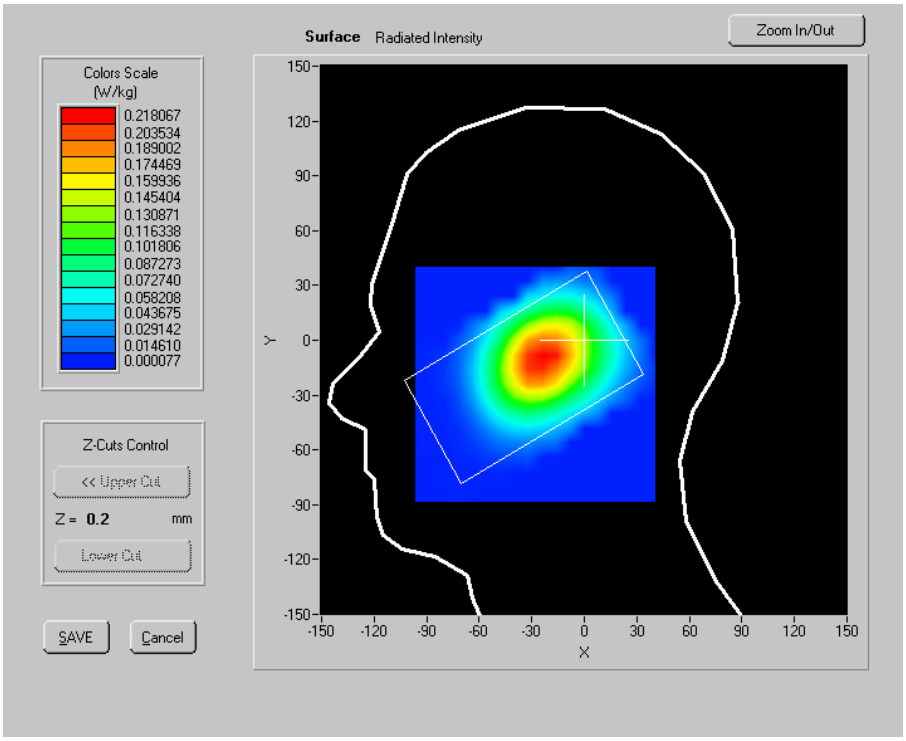


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 189):

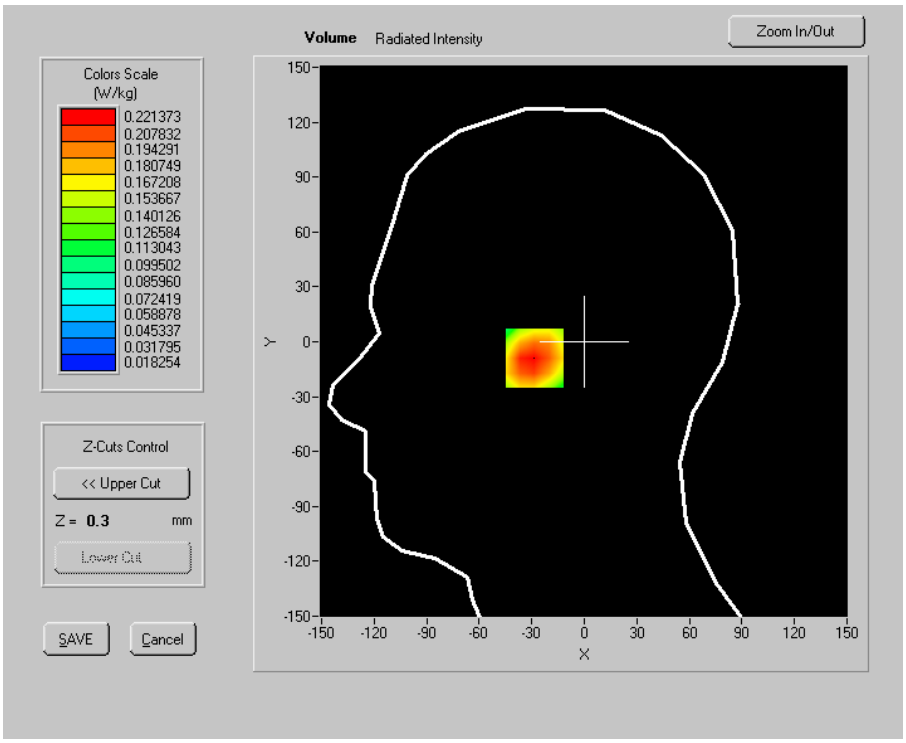
Experimental conditions	
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA
before/after Power Level:	32.09dBm/31.98 dBm
Liquid Temperature:	21.3°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	836.400024
Relative permitivity (real part)	41.415001
Relative permitivity (imaginary part)	19.700100
Conductivity (S/m)	0.915398
Variation (%)	-1.710000



SURFACE SAR

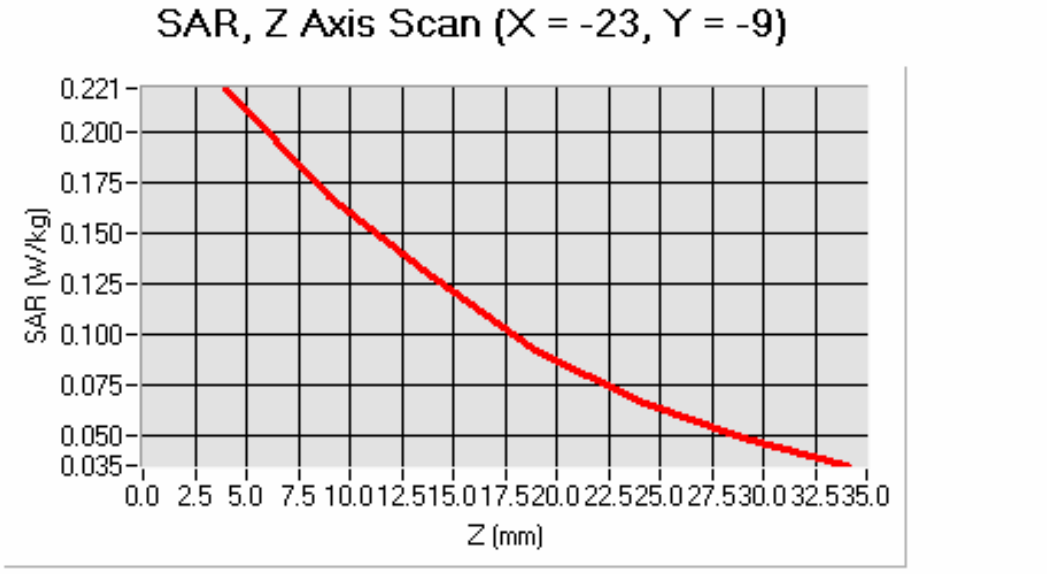
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-23.00, Y=-9.00

SAR 10g (W/Kg)	0.148389
SAR 1g (W/Kg)	0.214553

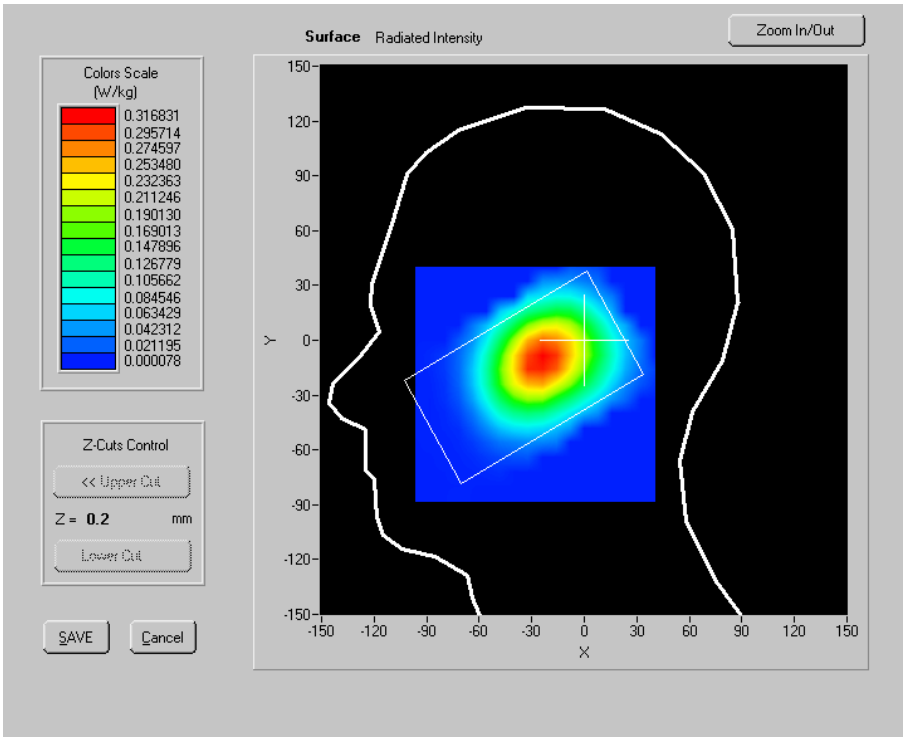


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 251):

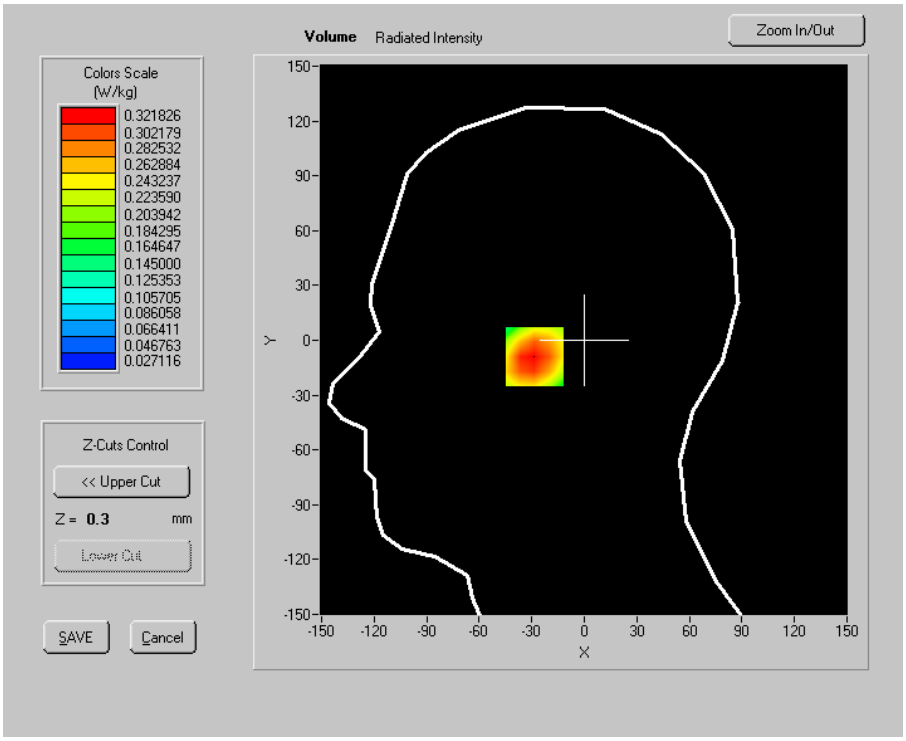
Experimental conditions	
Phantom	Right head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	TDMA
before/after Power Level:	31.89dBm/31.83 dBm
Liquid Temperature:	21.4°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	848.799988
Relative permitivity (real part)	41.286999
Relative permitivity (imaginary part)	19.738951
Conductivity (S/m)	0.930801
Variation (%)	-1.710000



SURFACE SAR

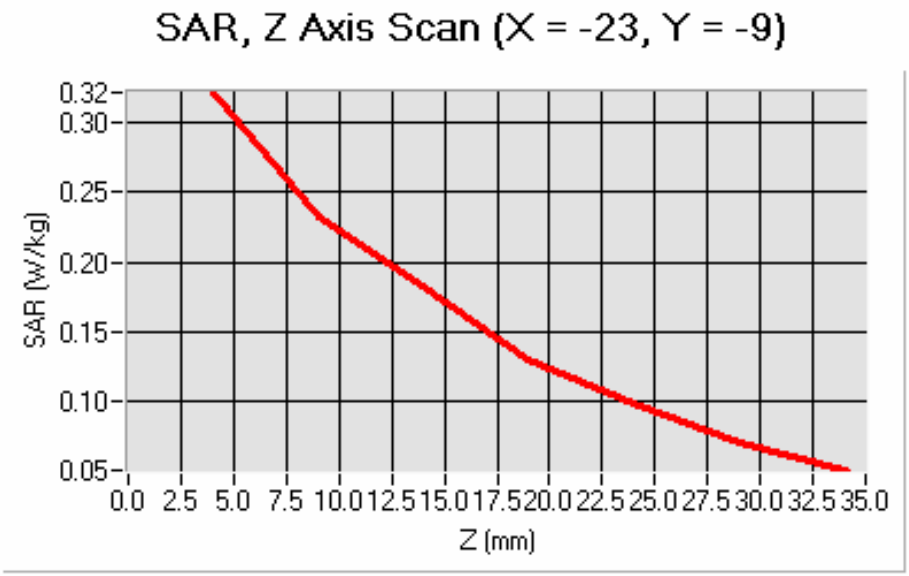
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-23.00, Y=-9.00

SAR 10g (W/Kg)	0.214932
SAR 1g (W/Kg)	0.312398



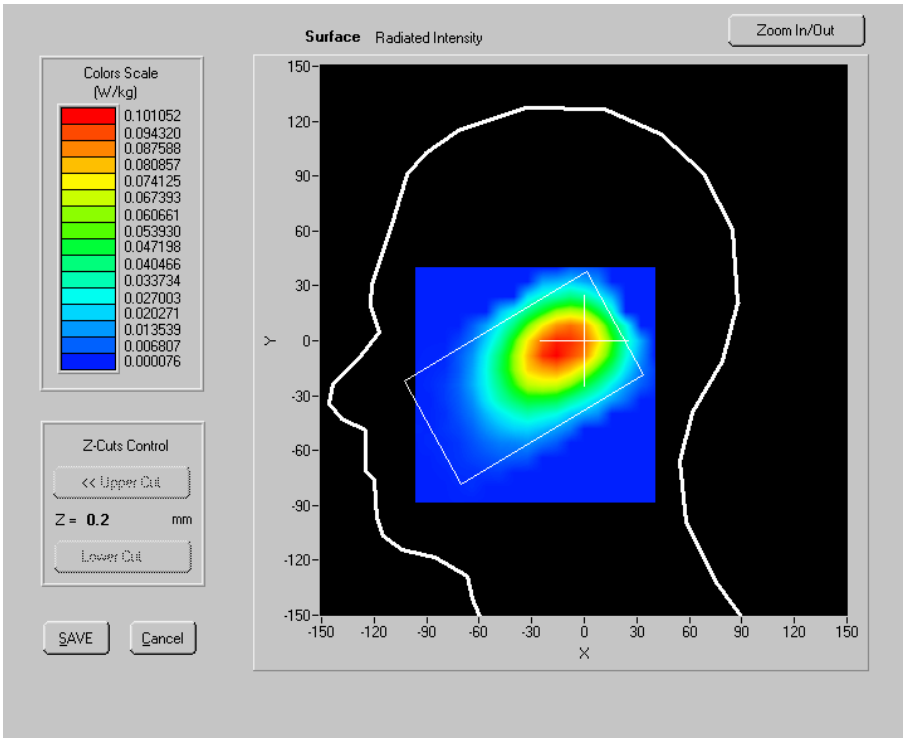
检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.6.1.2Right head, Tilt

Lower Band SAR (Channel 128):

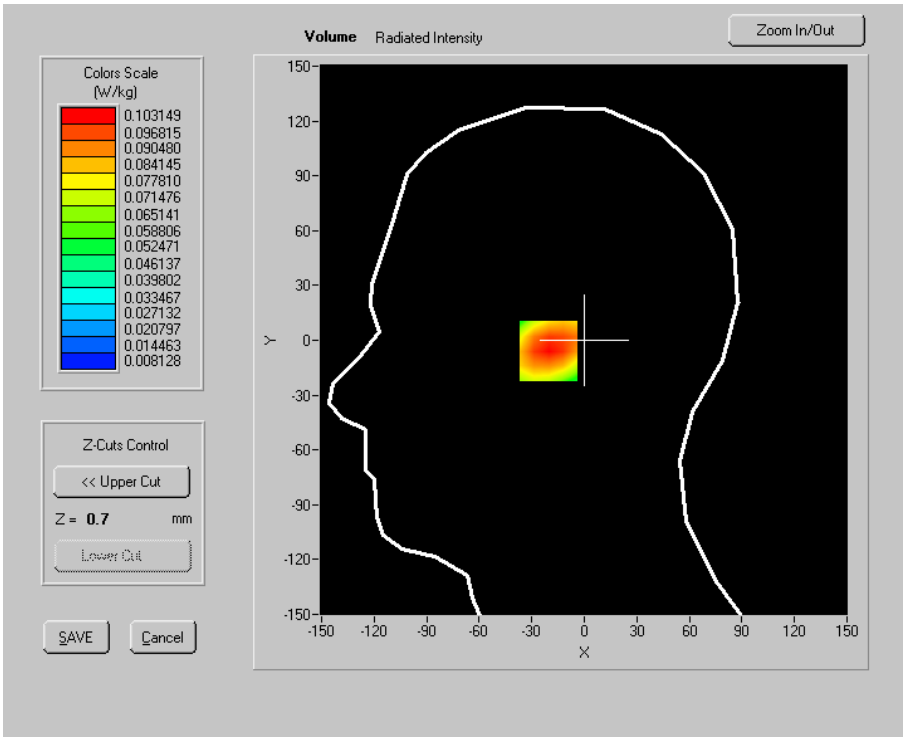
Experimental conditions	
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Low
Signal	TDMA
before/after Power Level:	32.22 dBm /32.20dBm
Liquid Temperature:	21.1°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	824.200012
Relative permitivity (real part)	41.513000
Relative permitivity (imaginary part)	19.642349
Conductivity (S/m)	0.899401
Variation (%)	-1.810000



SURFACE SAR

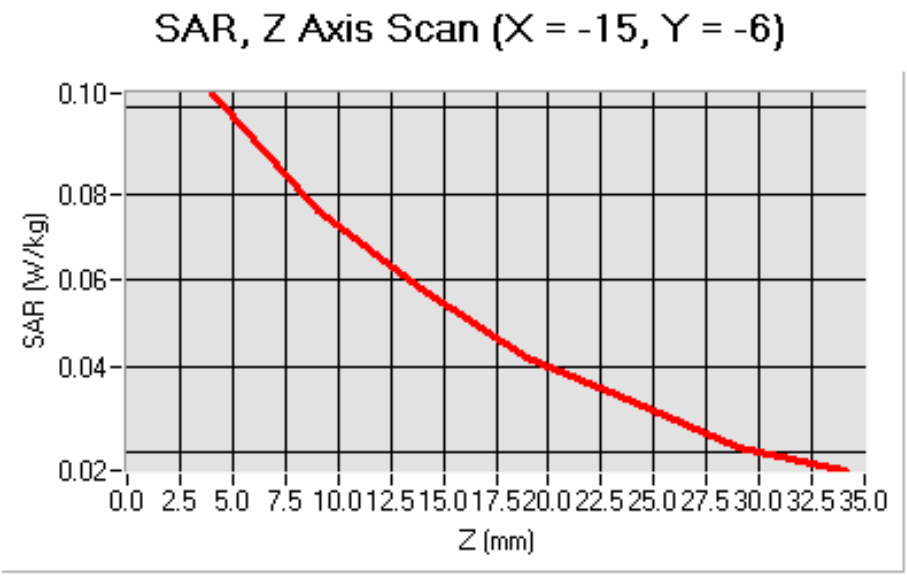
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-15.00, Y=-6.00

SAR 10g (W/Kg)	0.069382
SAR 1g (W/Kg)	0.099551

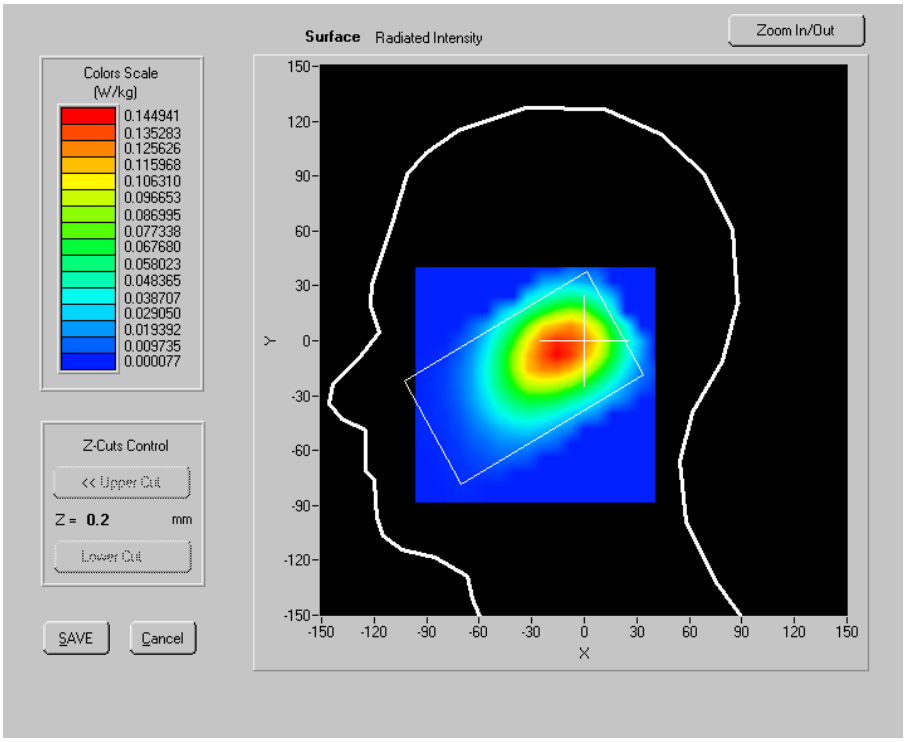


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 189):

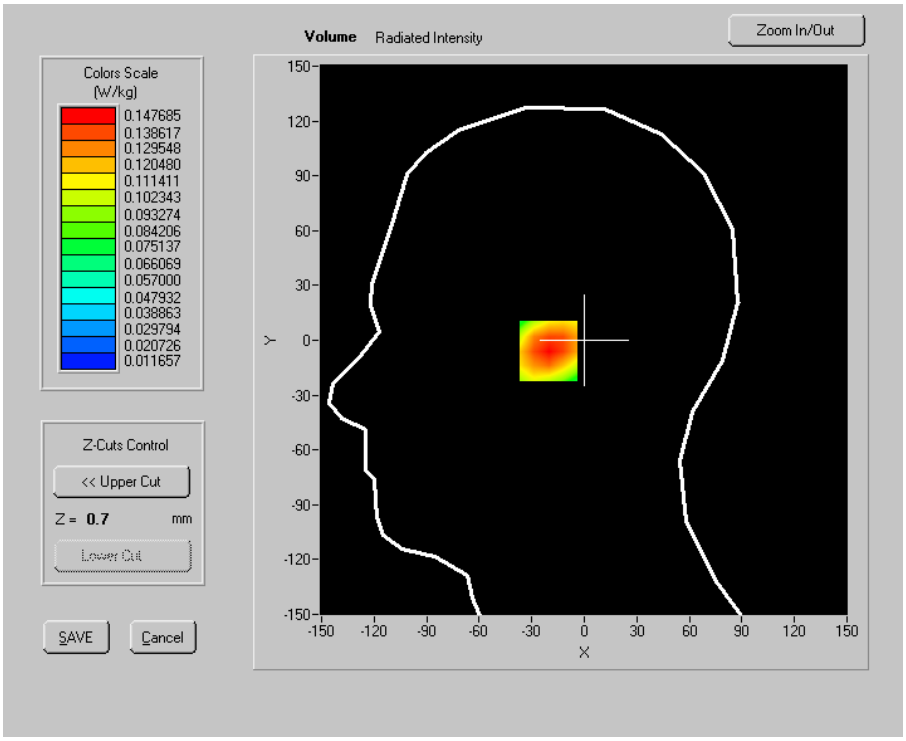
Experimental conditions	
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA
before/after Power Level:	32.23dBm/32.12 dBm
Liquid Temperature:	21.5°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	836.400024
Relative permitivity (real part)	41.415001
Relative permitivity (imaginary part)	19.700100
Conductivity (S/m)	0.915398
Variation (%)	-1.810000



SURFACE SAR

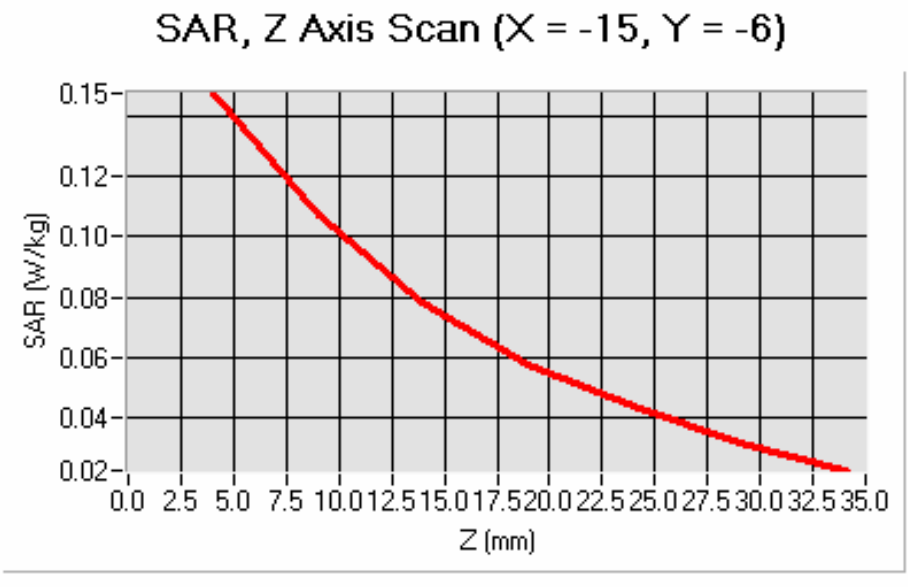
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-15.00, Y=-6.00

SAR 10g (W/Kg)	0.097572
SAR 1g (W/Kg)	0.141188

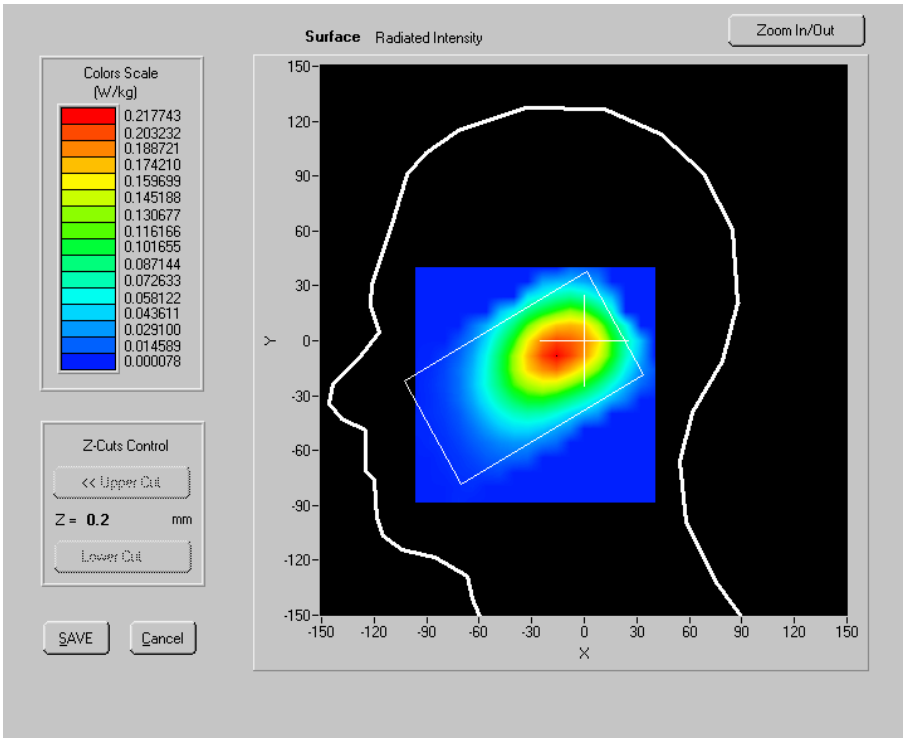


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 251):

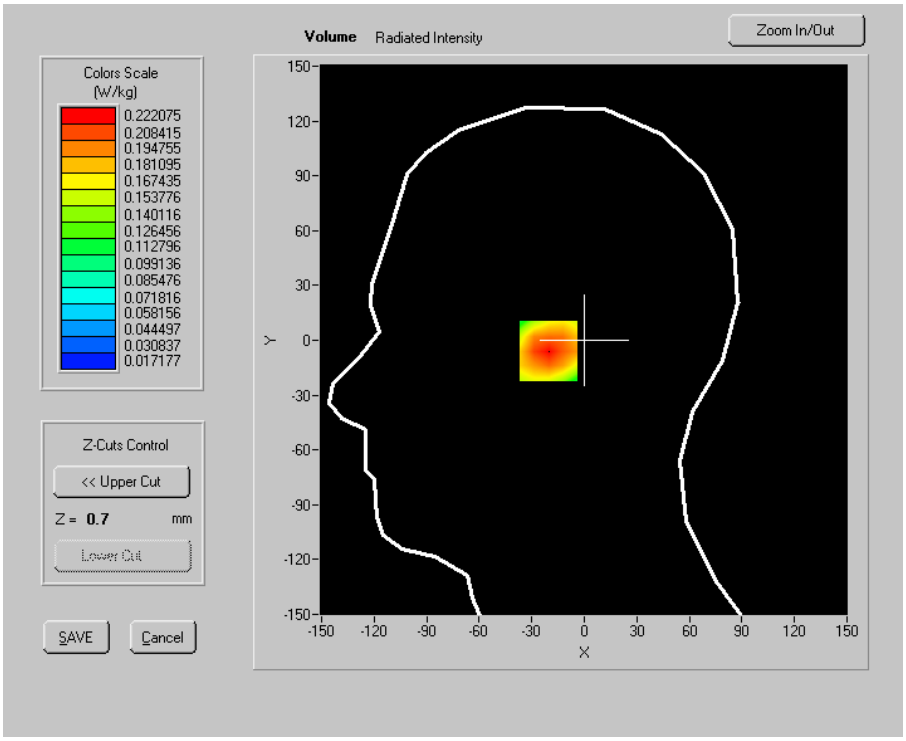
Experimental conditions	
Phantom	Right head
Device Position	Tilt
Band	GSM850
Channels	High
Signal	TDMA
before/after Power Level:	31.99dBm /31.87 dBm
Liquid Temperature:	21.4°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	848.799988
Relative permitivity (real part)	41.286999
Relative permitivity (imaginary part)	19.738951
Conductivity (S/m)	0.930801
Variation (%)	-1.810000



SURFACE SAR

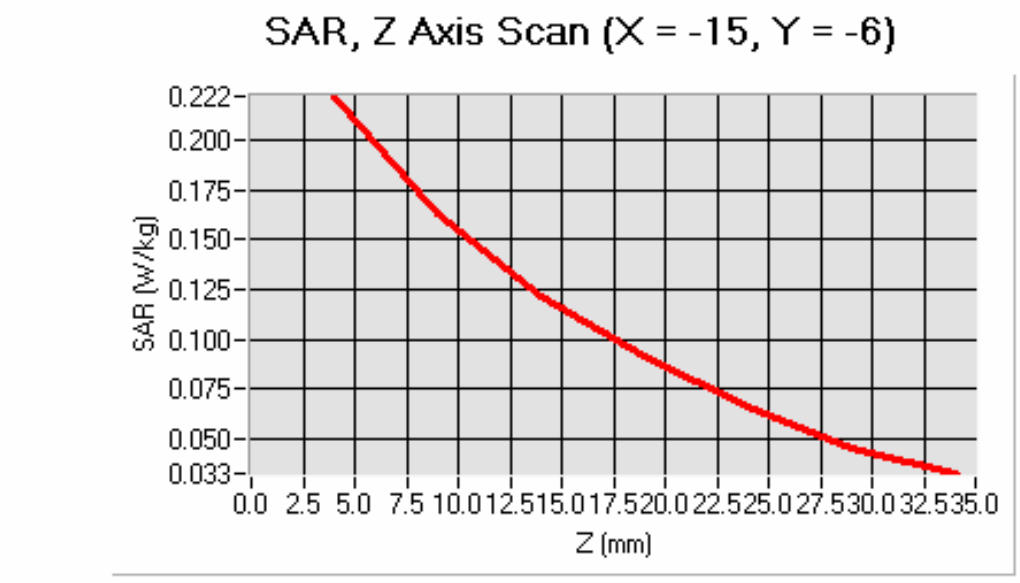
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-15.00, Y=-6.00

SAR 10g (W/Kg)	0.146638
SAR 1g (W/Kg)	0.211705



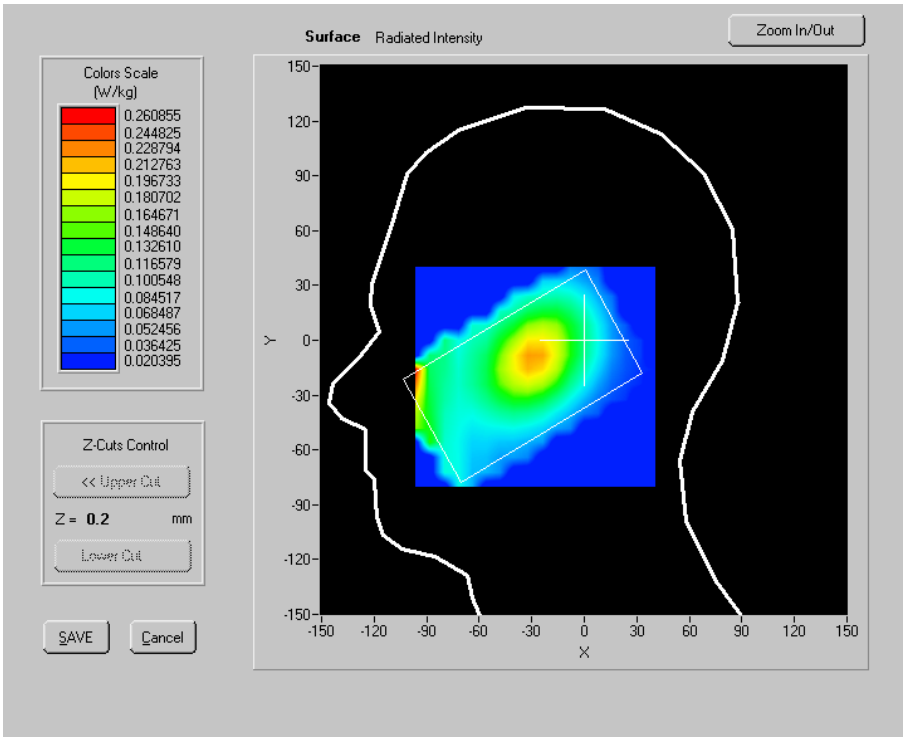
检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.6.1.3 Left head, Cheek

Lower Band SAR (Channel 128):

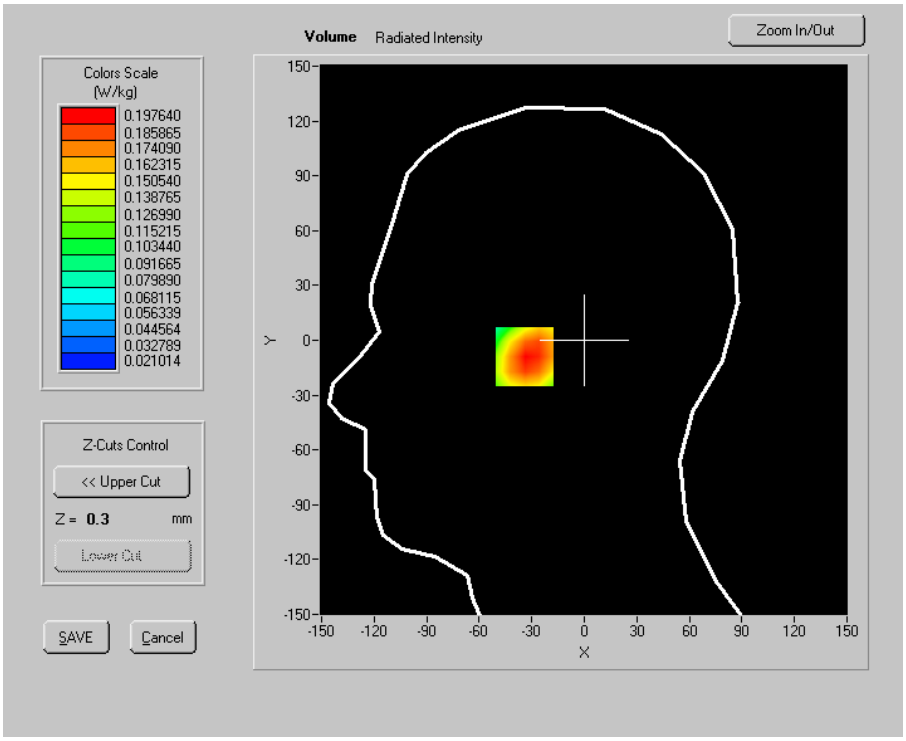
Experimental conditions	
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Low
Signal	TDMA
before/after Power Level:	32.08dBm/32.05 dBm
Liquid Temperature:	21.1°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	824.200012
Relative permitivity (real part)	41.513000
Relative permitivity (imaginary part)	19.642349
Conductivity (S/m)	0.899401
Variation (%)	1.500000



SURFACE SAR

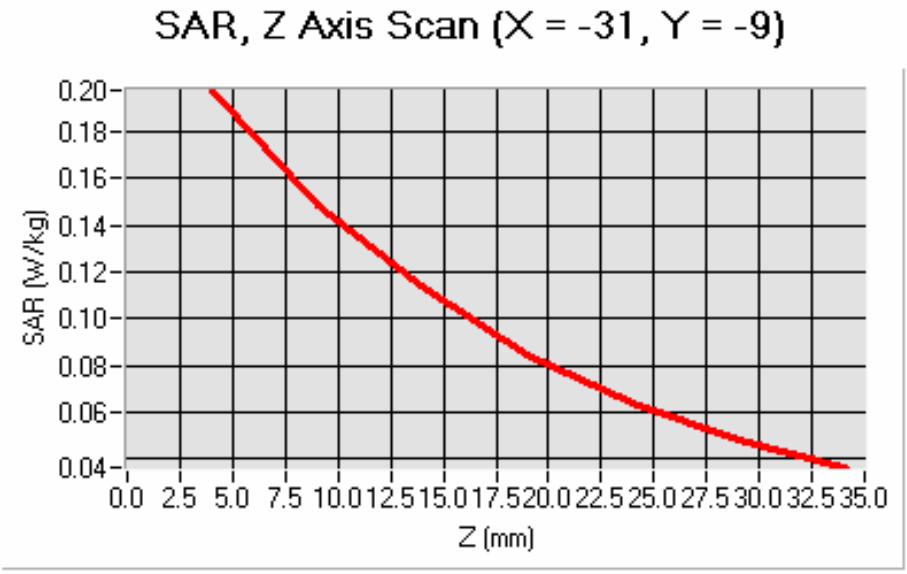
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-31.00, Y=-9.00

SAR 10g (W/Kg)	0.134203
SAR 1g (W/Kg)	0.190120

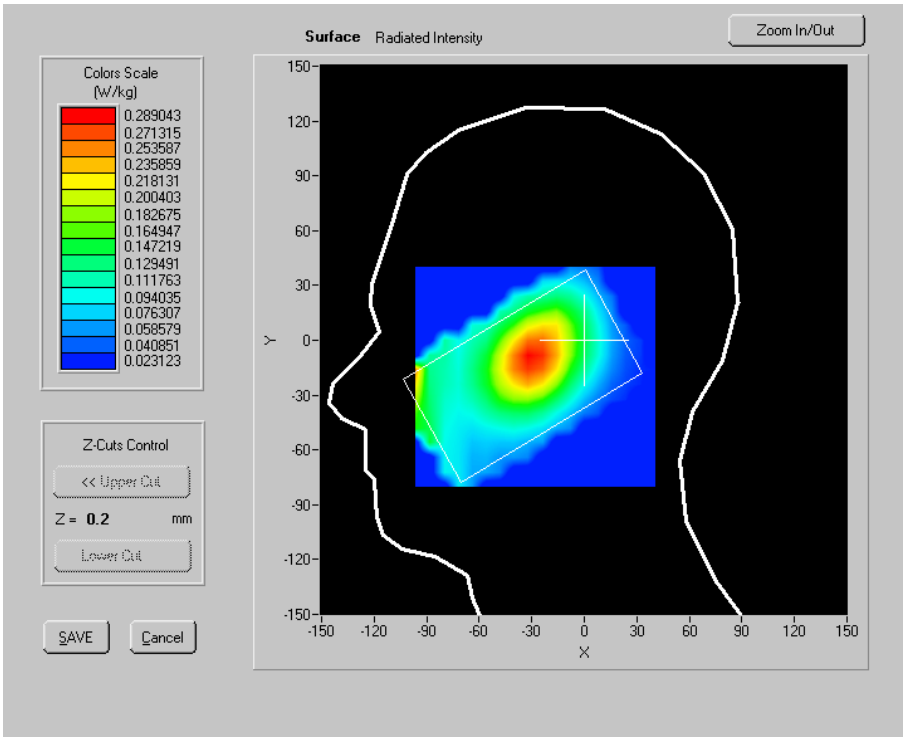


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 189):

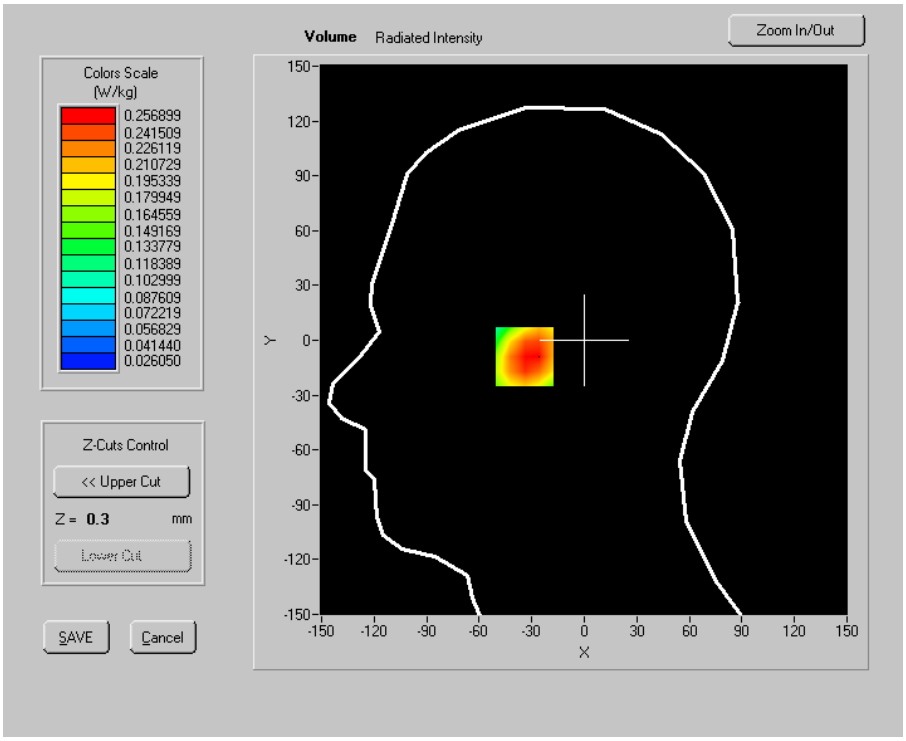
Experimental conditions	
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	Middle
Signal	TDMA
before/after Power Level:	31.99dBm/31.97 dBm
Liquid Temperature:	21.5°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	836.400024
Relative permitivity (real part)	41.415001
Relative permitivity (imaginary part)	19.700100
Conductivity (S/m)	0.915398
Variation (%)	-1.580000



SURFACE SAR

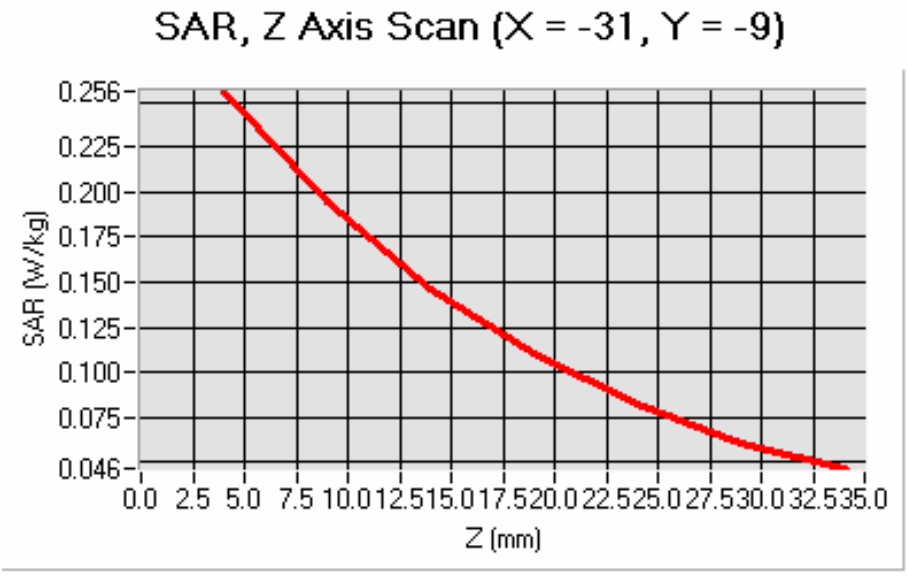
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-31.00, Y=-9.00

SAR 10g (W/Kg)	0.175675
SAR 1g (W/Kg)	0.249574

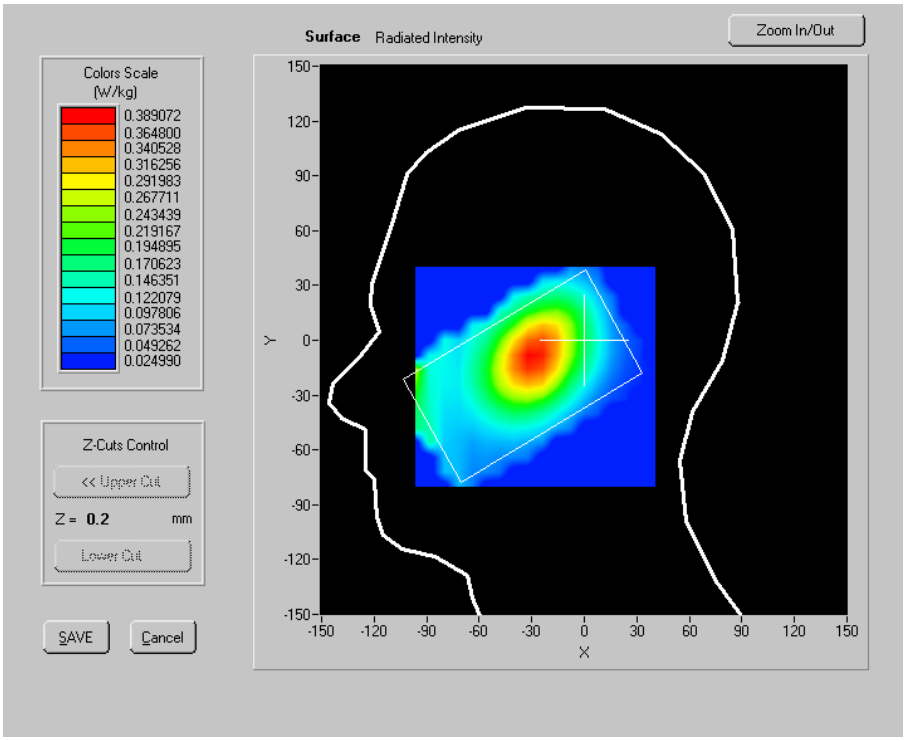


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 251):

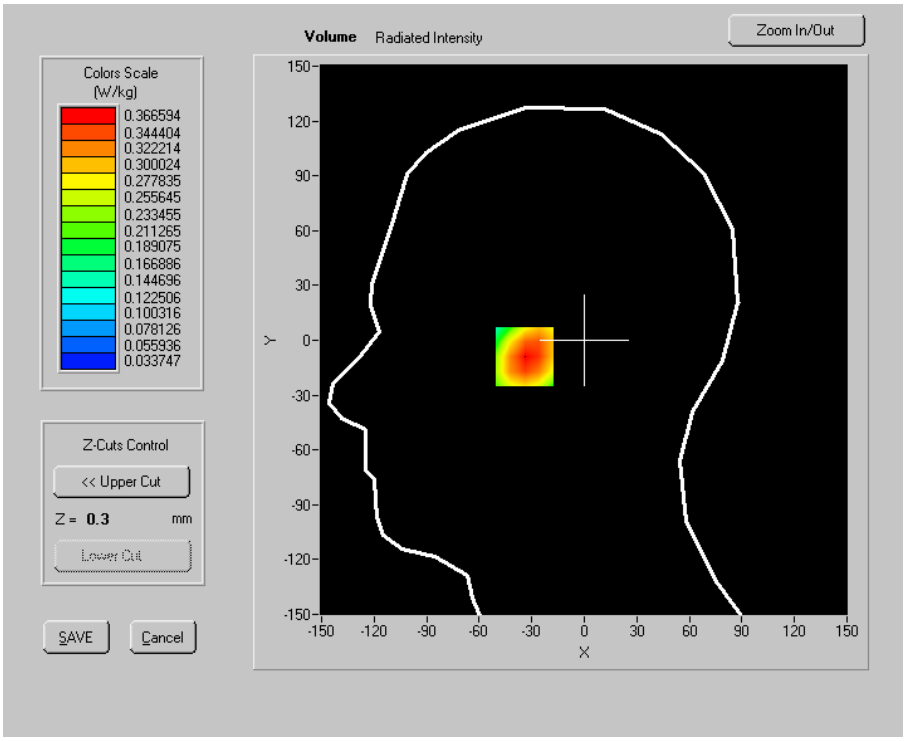
Experimental conditions	
Phantom	Left head
Device Position	Cheek
Band	GSM850
Channels	High
Signal	TDMA
before/after Power Level:	31.86dBm/31.83 dBm
Liquid Temperature:	21.3°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	848.799988
Relative permitivity (real part)	41.286999
Relative permitivity (imaginary part)	19.738951
Conductivity (S/m)	0.930801
Variation (%)	-2.100000



SURFACE SAR

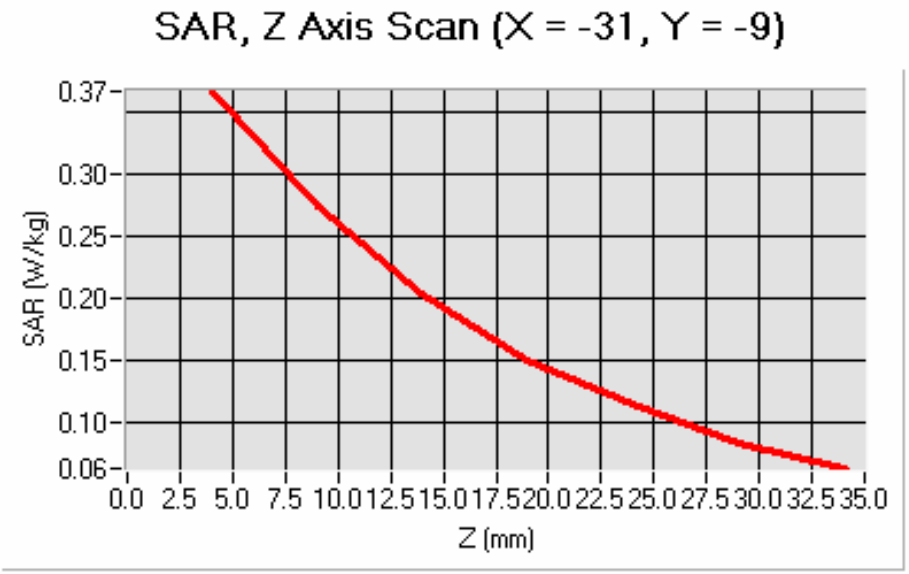
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-31.00, Y=-9.00

SAR 10g (W/Kg)	0.245264
SAR 1g (W/Kg)	0.353157



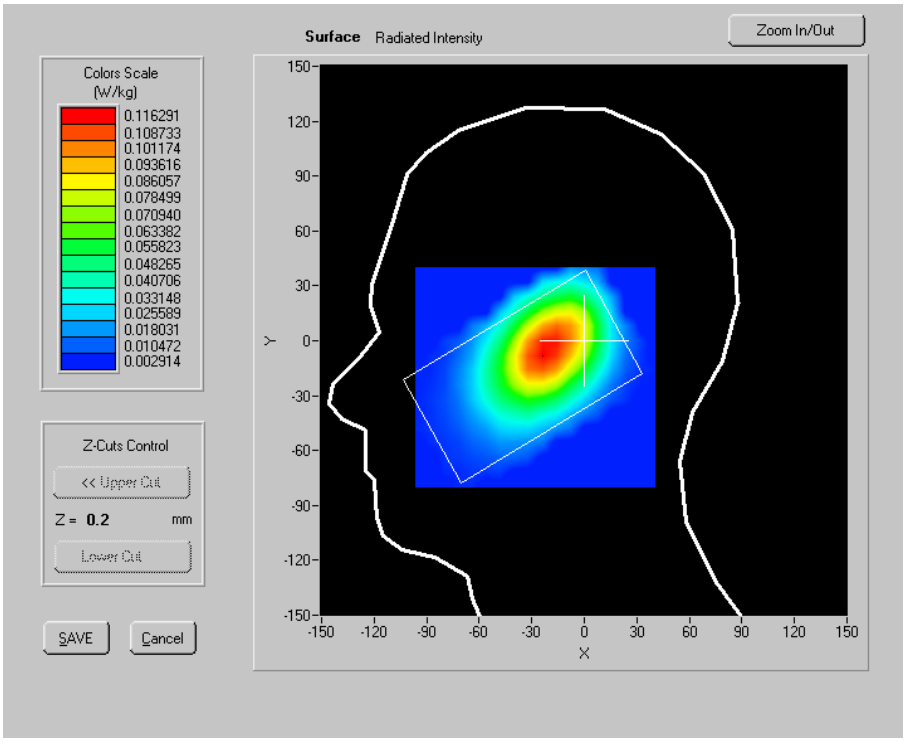
检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.6.1.4 Left head, Tilt

Lower Band SAR (Channel 128):

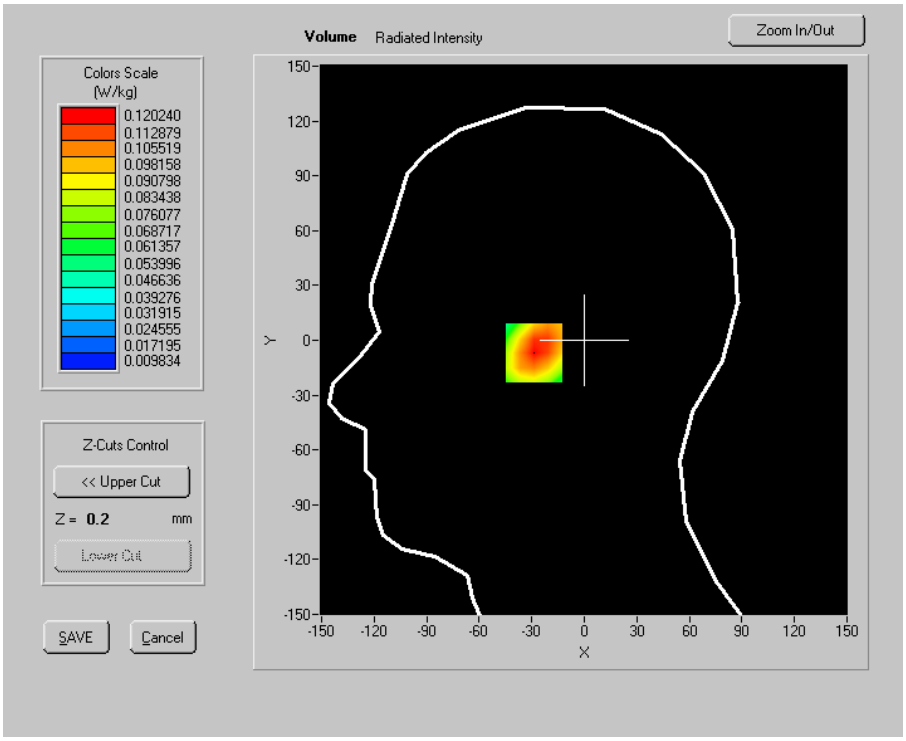
Experimental conditions	
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Low
Signal	TDMA
before/after Power Level:	32.11dBm/32.09 dBm
Liquid Temperature:	21.4°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	824.200012
Relative permitivity (real part)	41.513000
Relative permitivity (imaginary part)	19.642349
Conductivity (S/m)	0.899401
Variation (%)	-3.030000



SURFACE SAR

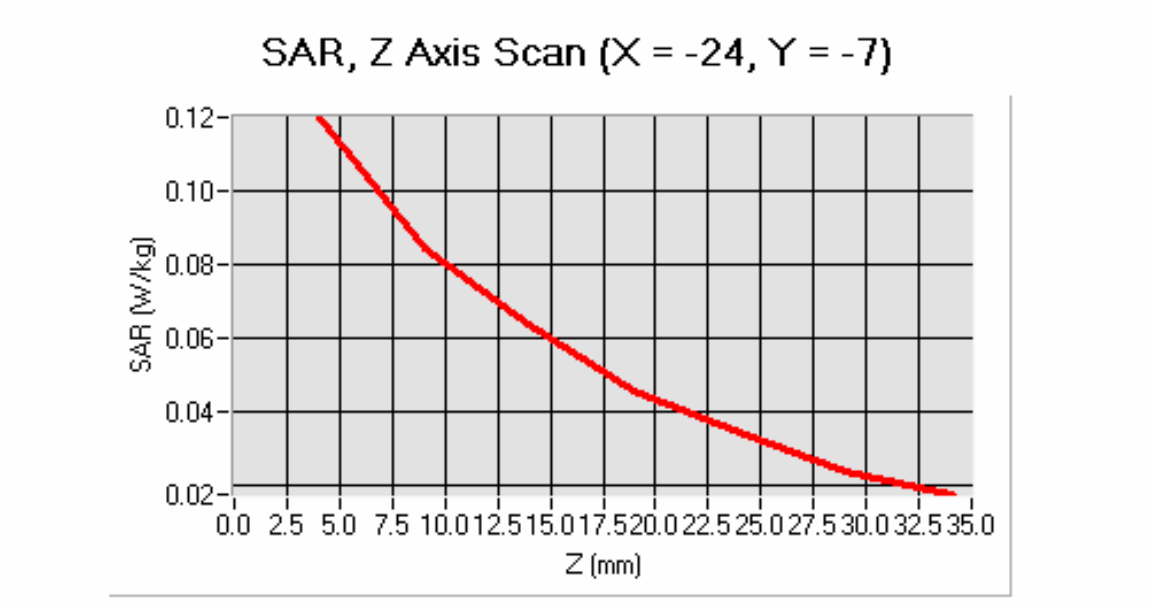
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-24.00, Y=-7.00

SAR 10g (W/Kg)	0.078386
SAR 1g (W/Kg)	0.116000

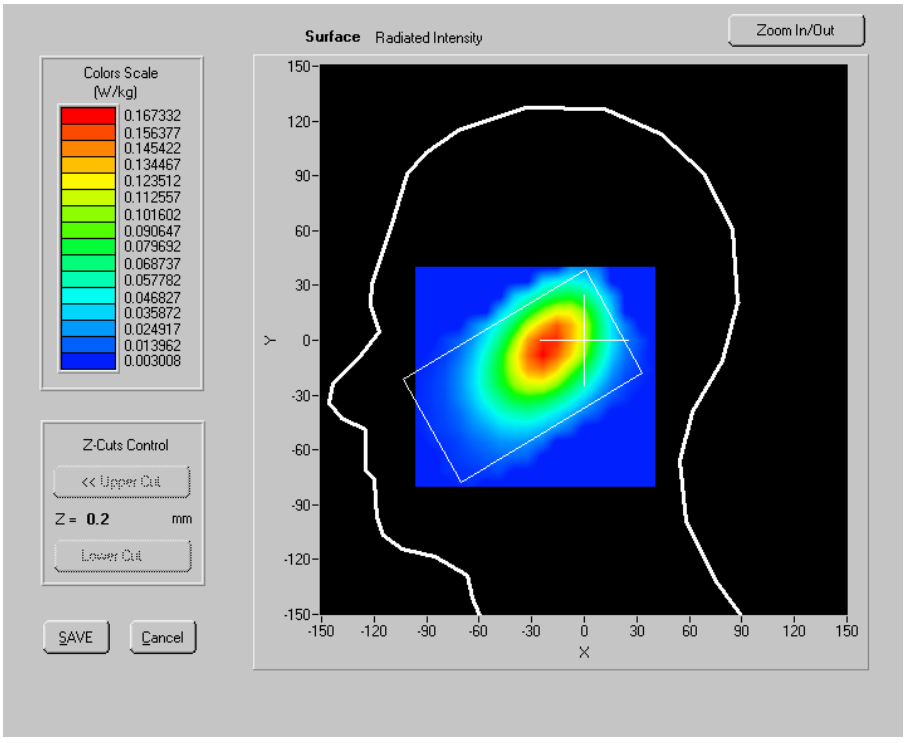


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 189):

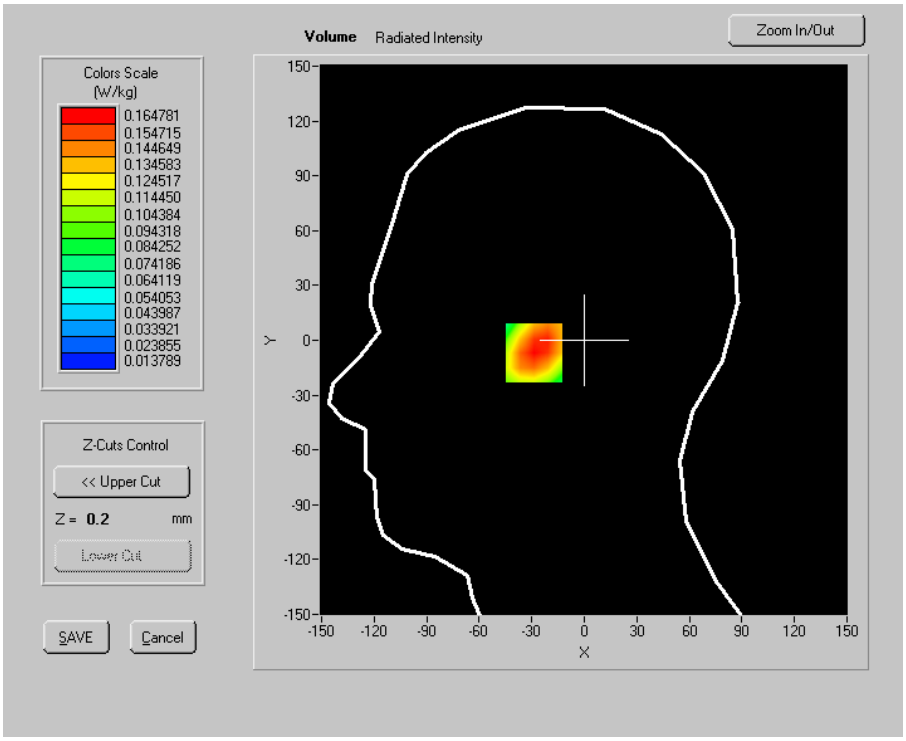
Experimental conditions	
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	Middle
Signal	TDMA
before/after Power Level:	32.03dBm/31.88 dBm
Liquid Temperature:	21.2°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	836.400024
Relative permitivity (real part)	41.415001
Relative permitivity (imaginary part)	19.700100
Conductivity (S/m)	0.915398
Variation (%)	-3.030000



SURFACE SAR

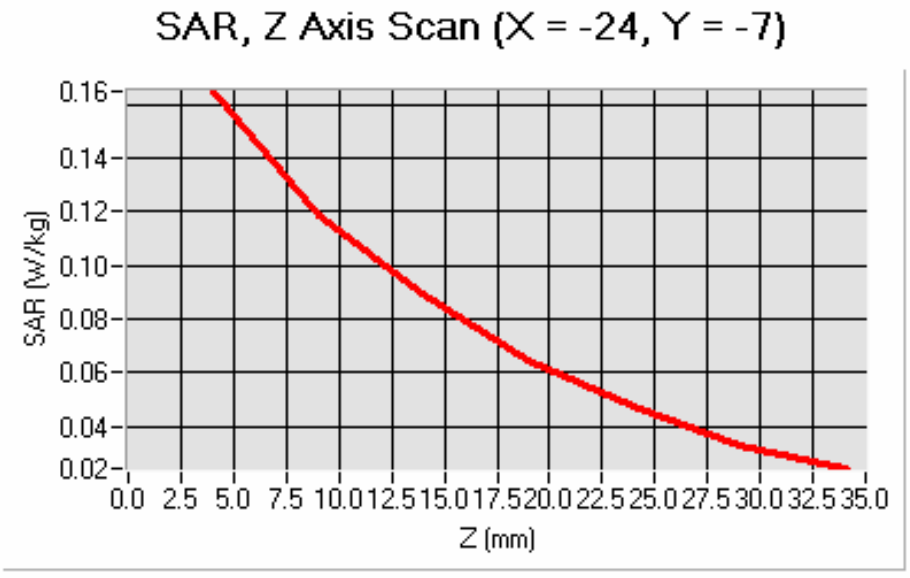
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-24.00, Y=-7.00

SAR 10g (W/Kg)	0.109249
SAR 1g (W/Kg)	0.159456

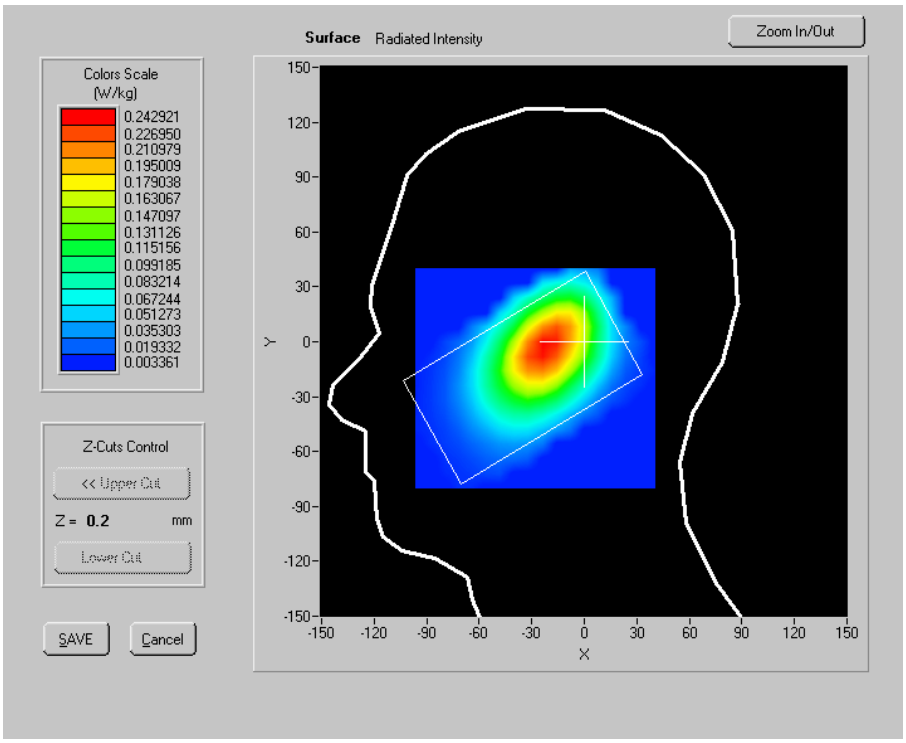


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 251):

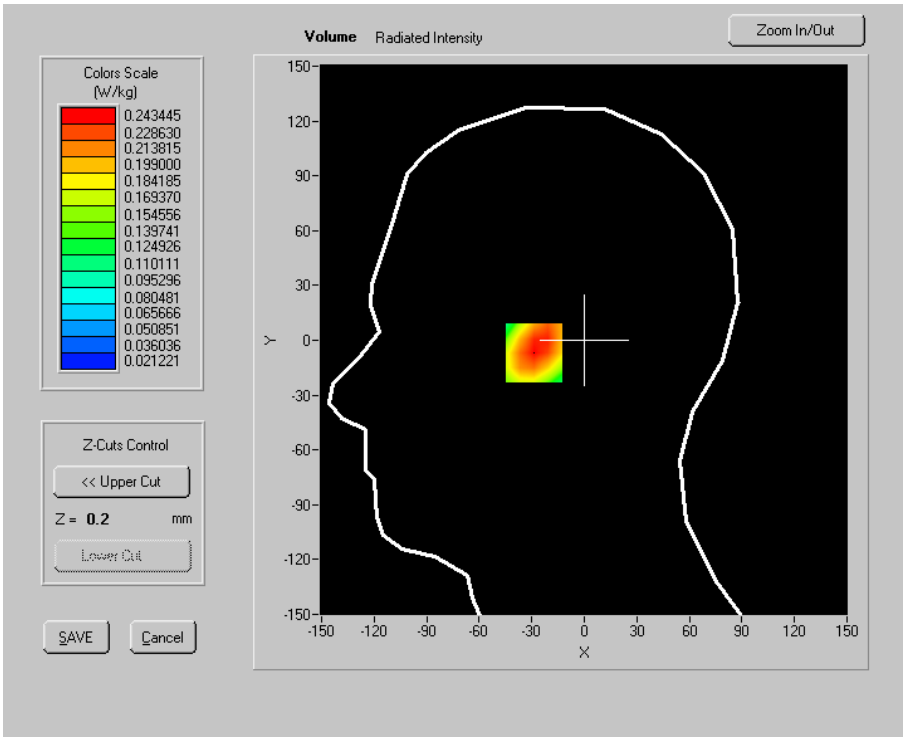
Experimental conditions	
Phantom	Left head
Device Position	Tilt
Band	GSM850
Channels	High
Signal	TDMA
before/after Power Level:	32..00dBm/31.83 dBm
Liquid Temperature:	21.4°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date:	2008.09.09

Frequency (MHz)	848.799988
Relative permitivity (real part)	41.286999
Relative permitivity (imaginary part)	19.738951
Conductivity (S/m)	0.930801
Variation (%)	-3.030000



SURFACE SAR

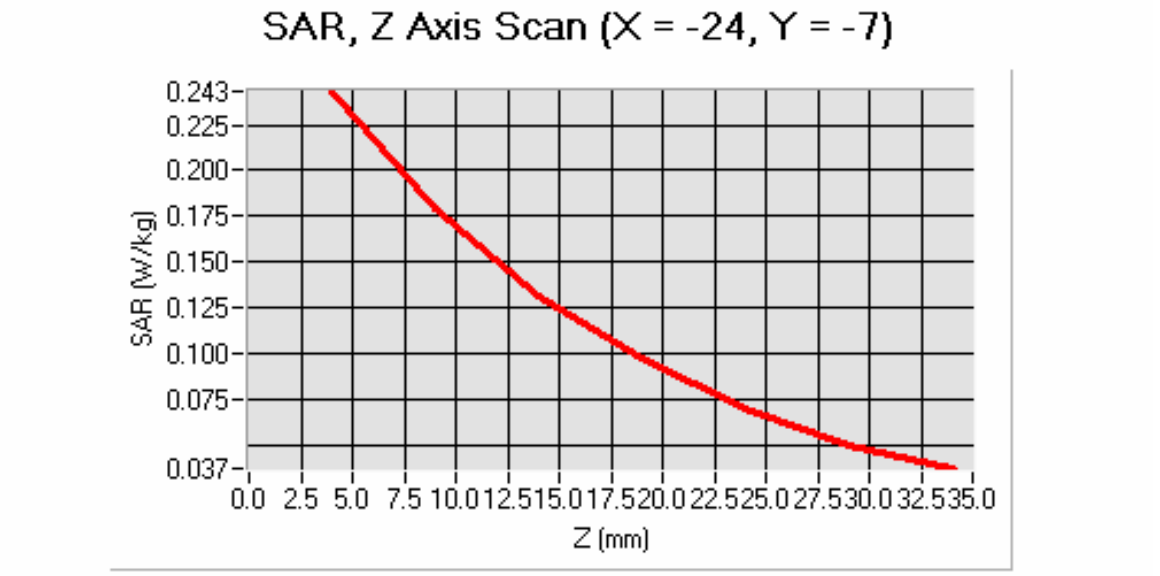
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-24.00, Y=-7.00

SAR 10g (W/Kg)	0.162438
SAR 1g (W/Kg)	0.236038



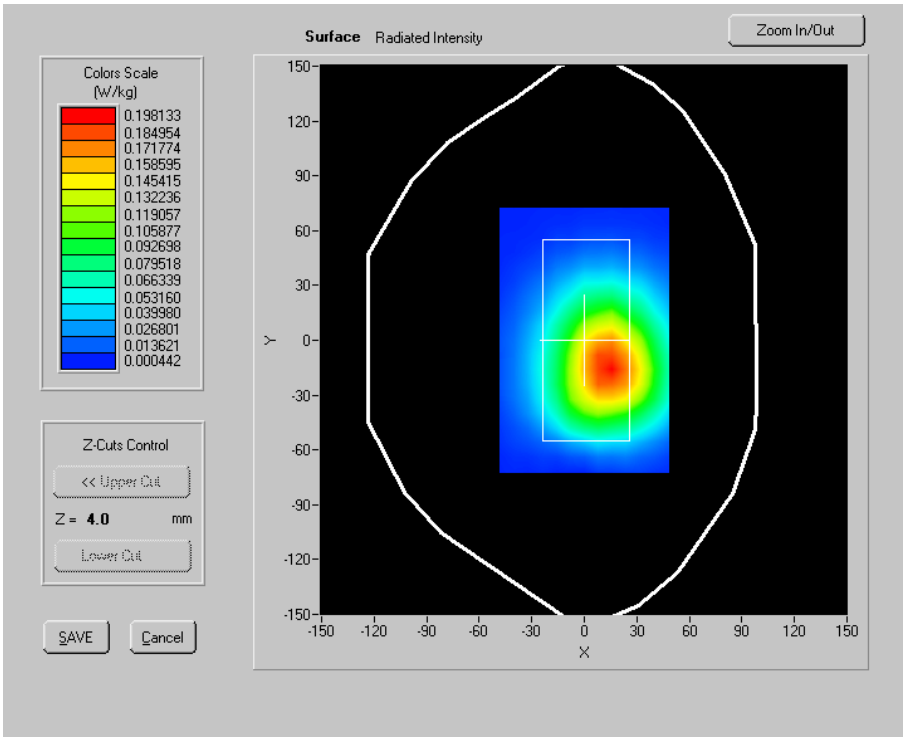
检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.6.1.5 body-worn

Lower Band SAR (Channel 128):

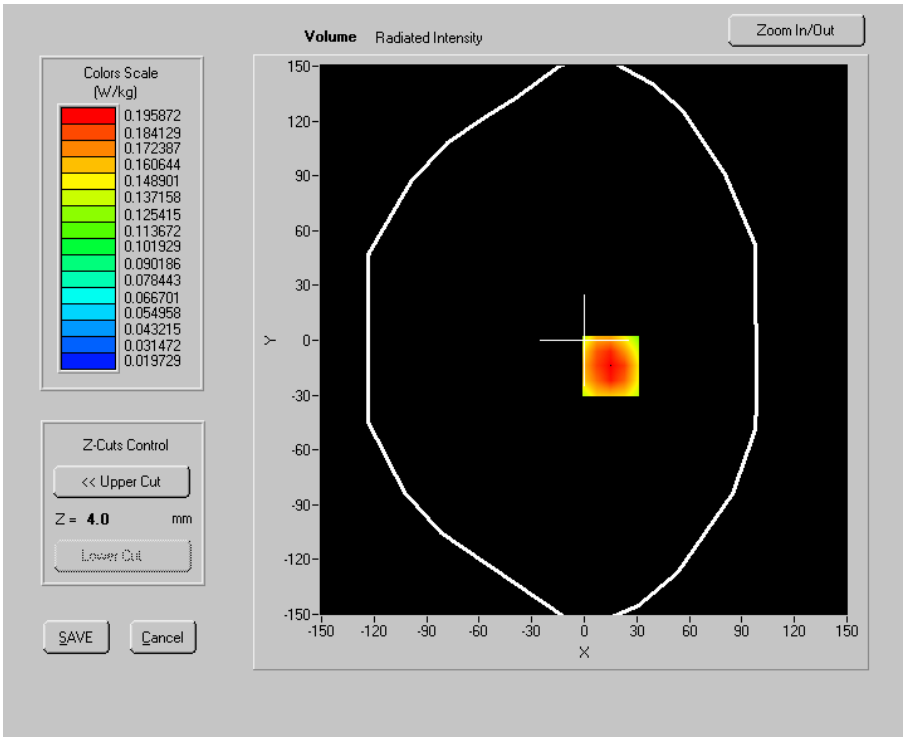
Experimental conditions	
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Low
Signal	TDMA
before/after Power Level:	32.23dBm/32.14 dBm
Liquid Temperature:	21.6°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test data	2008.09.09

Frequency (MHz)	824.200012
Relative permitivity (real part)	54.306000
Relative permitivity (imaginary part)	21.108150
Conductivity (S/m)	0.966519
Variation (%)	-1.970000



SURFACE SAR

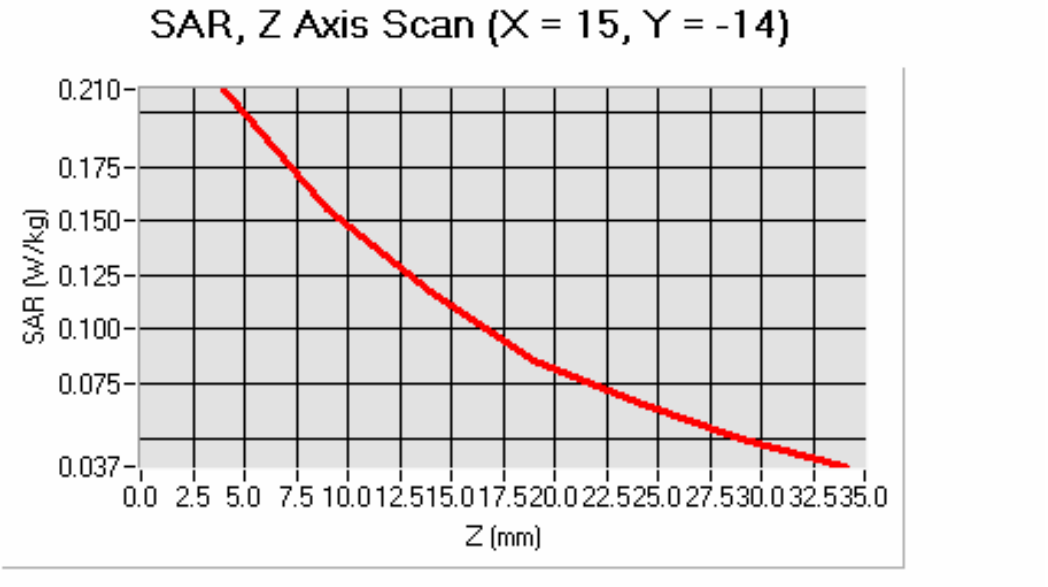
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=15.00, Y=-14.00

SAR 10g (W/Kg)	0.143414
SAR 1g (W/Kg)	0.204275

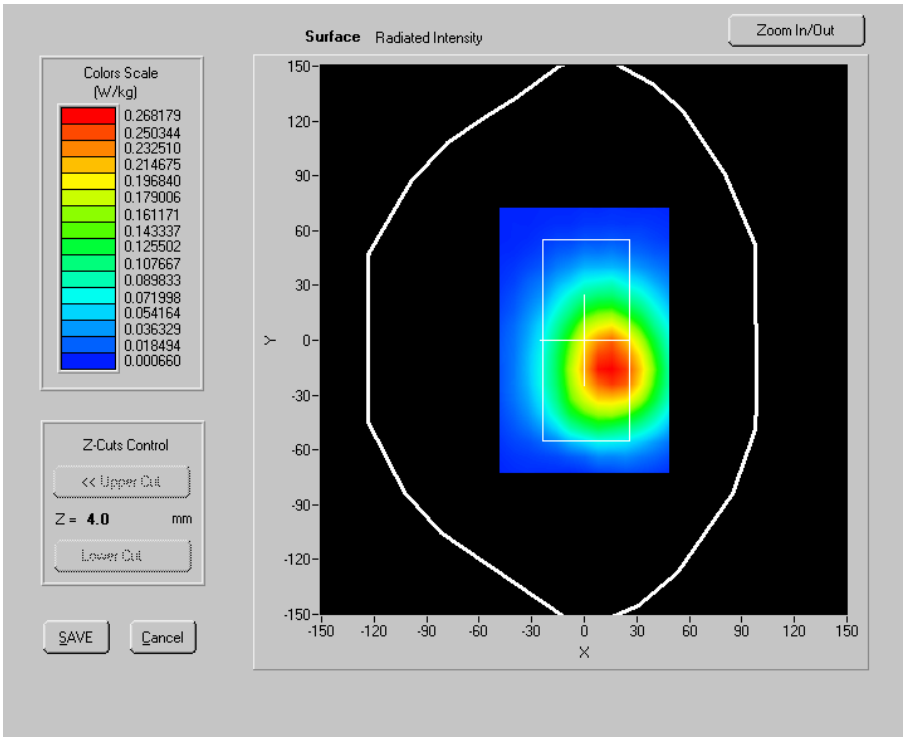


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 189):

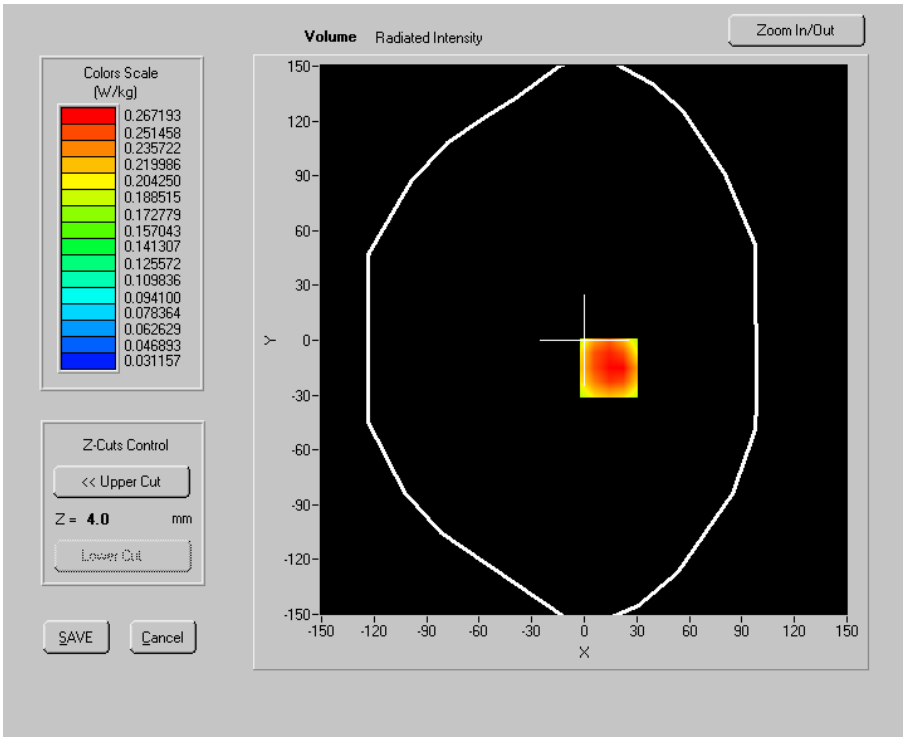
Experimental conditions	
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	Middle
Signal	TDMA
before/after Power Level:	32.16dBm/32.09 dBm
Liquid Temperature:	21.5°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date	2008.09.09

Frequency (MHz)	836.400024
Relative permitivity (real part)	54.209000
Relative permitivity (imaginary part)	21.116550
Conductivity (S/m)	0.981216
Variation (%)	-0.490000



SURFACE SAR

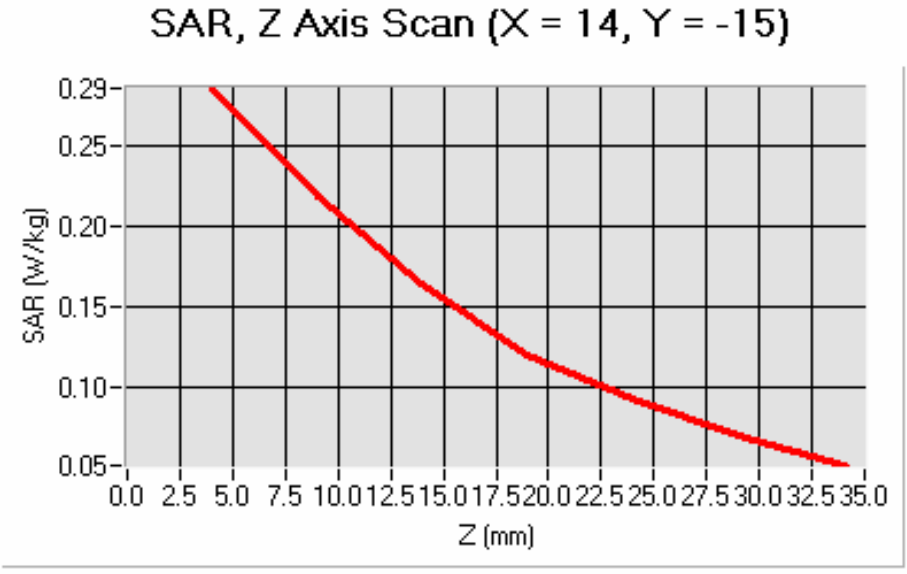
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=14.00, Y=-15.00

SAR 10g (W/Kg)	0.198237
SAR 1g (W/Kg)	0.279420

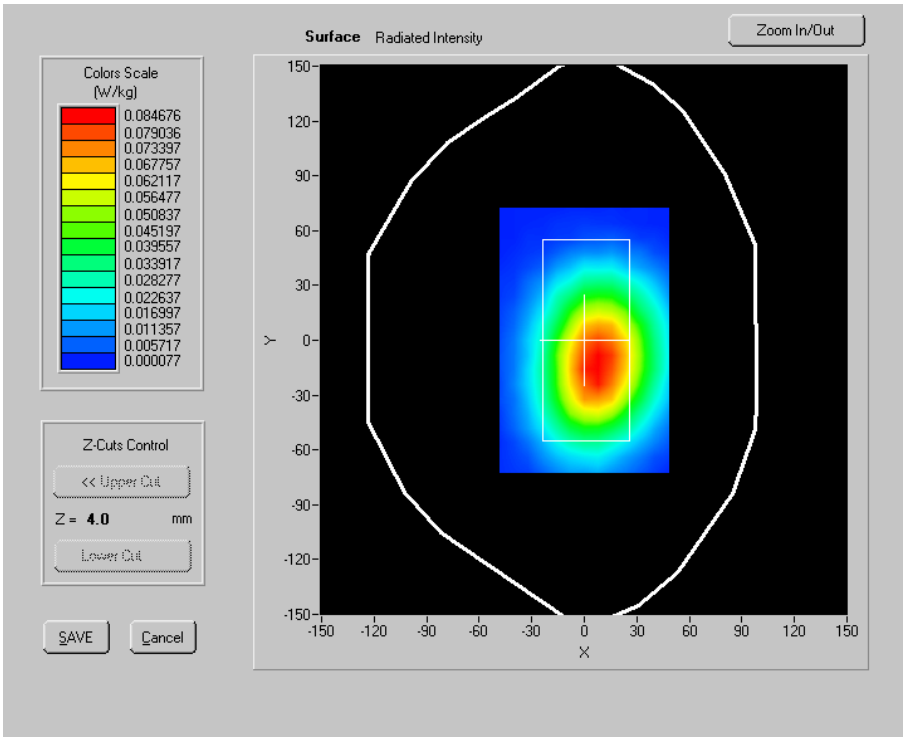


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 189):

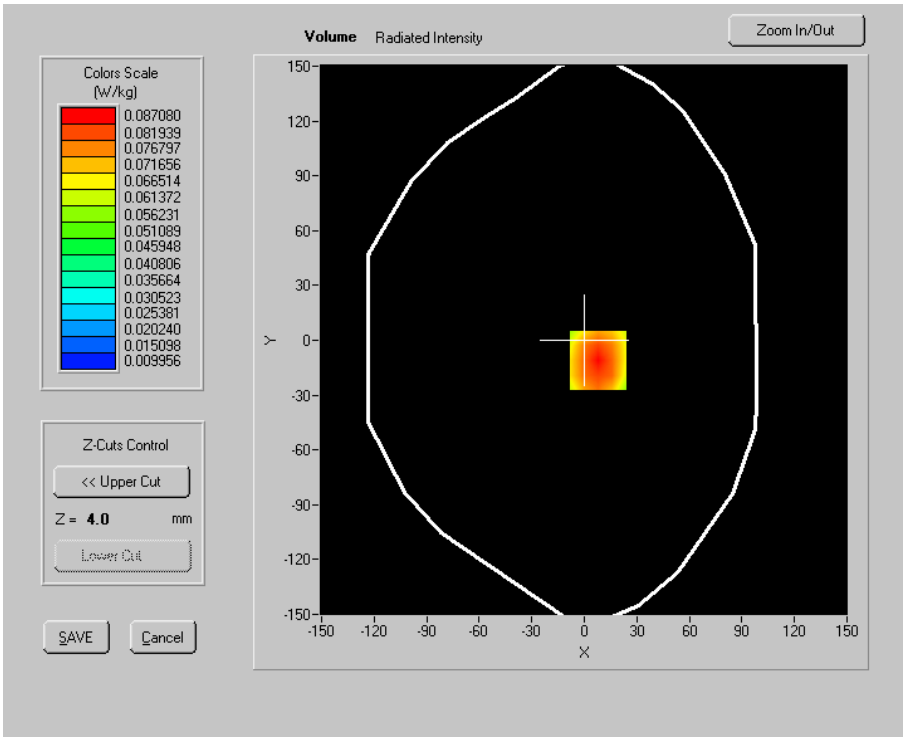
Experimental conditions	
Phantom	Validation plane
Device Position	Body（face to buttom）
Band	GSM850
Channels	Middle
Signal	TDMA
before/after Power Level:	32.20dBm/32.11 dBm
Liquid Temperature:	21.3°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test data	2008.09.09

Frequency (MHz)	836.400024
Relative permitivity (real part)	54.209000
Relative permitivity (imaginary part)	21.116550
Conductivity (S/m)	0.981216
Variation (%)	-1.720000



SURFACE SAR

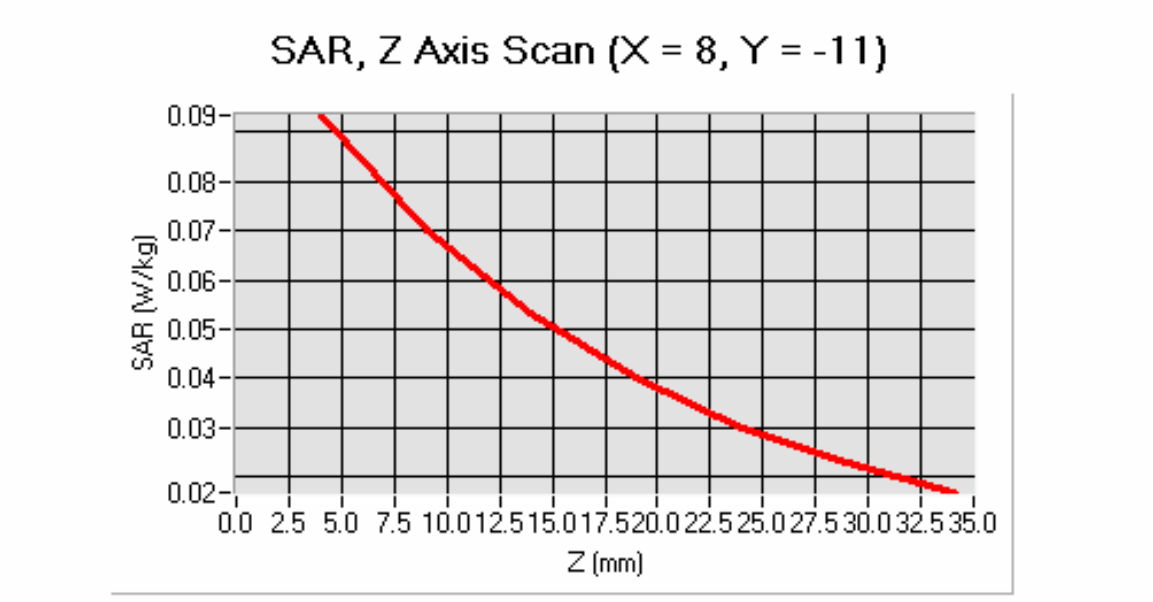
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=8.00, Y=-11.00

SAR 10g (W/Kg)	0.063920
SAR 1g (W/Kg)	0.089214

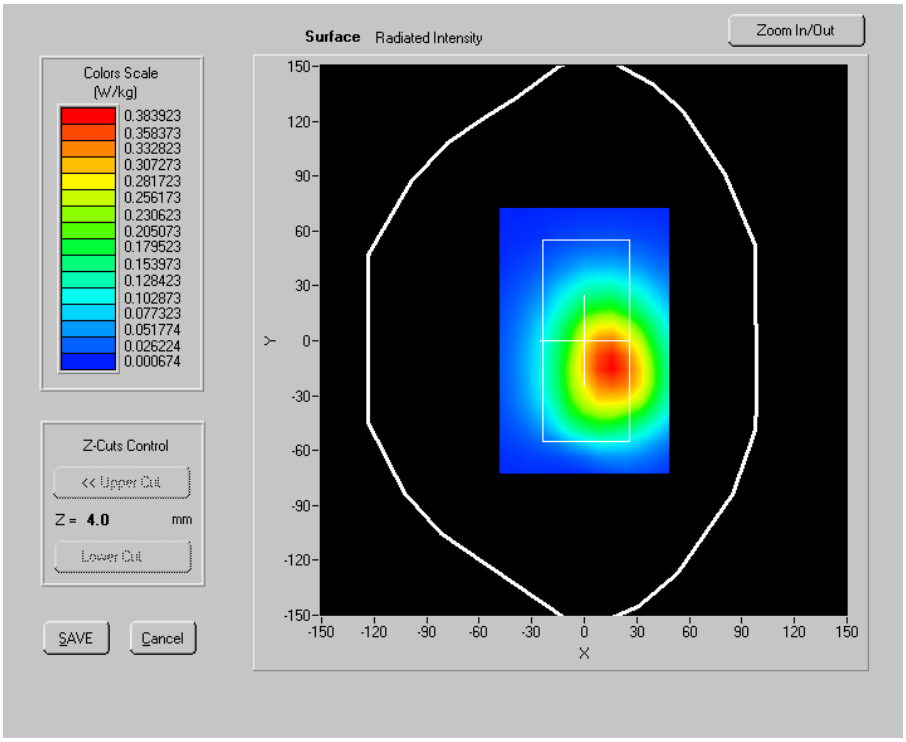


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 251):

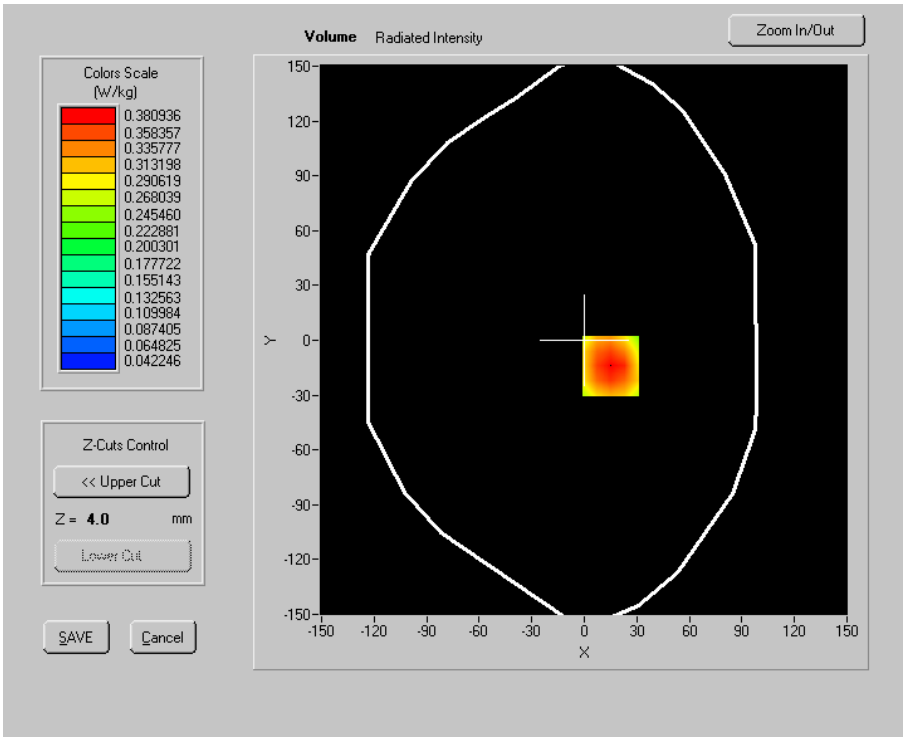
Experimental conditions	
Phantom	Validation plane
Device Position	Body
Band	GSM850
Channels	High
Signal	TDMA
before/after Power Level:	32.11dBm/31.99 dBm
Liquid Temperature:	21.5°C
Duty Cycle:	1:8
Conversion Factor	33.39/31.28/28.39
Test date	2008.09.09

Frequency (MHz)	848.799988
Relative permitivity (real part)	54.166000
Relative permitivity (imaginary part)	21.128099
Conductivity (S/m)	0.996307
Variation (%)	-1.970000



SURFACE SAR

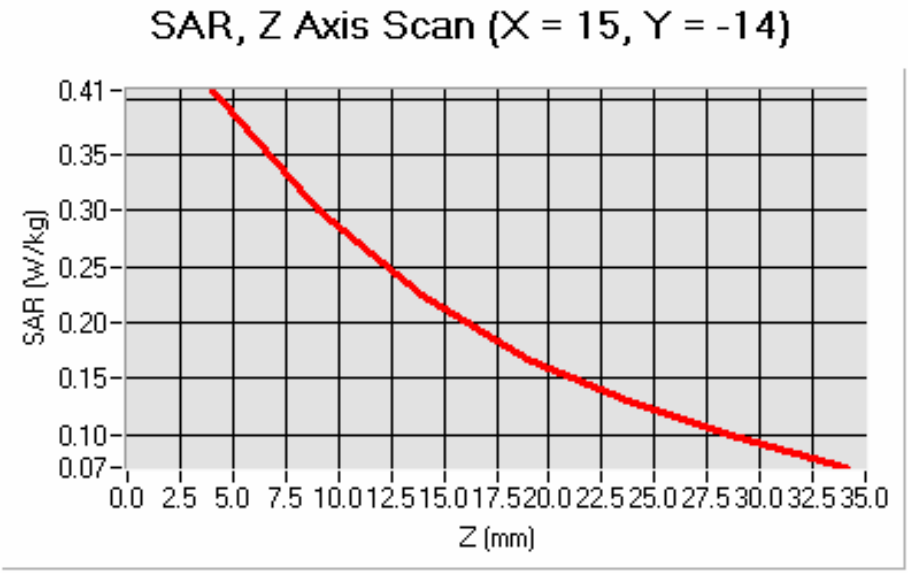
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=15.00, Y=-14.00

SAR 10g (W/Kg)	0.277004
SAR 1g (W/Kg)	0.392059



检测结果/说明（续页）：
Results of test and additional explanation（continued page）

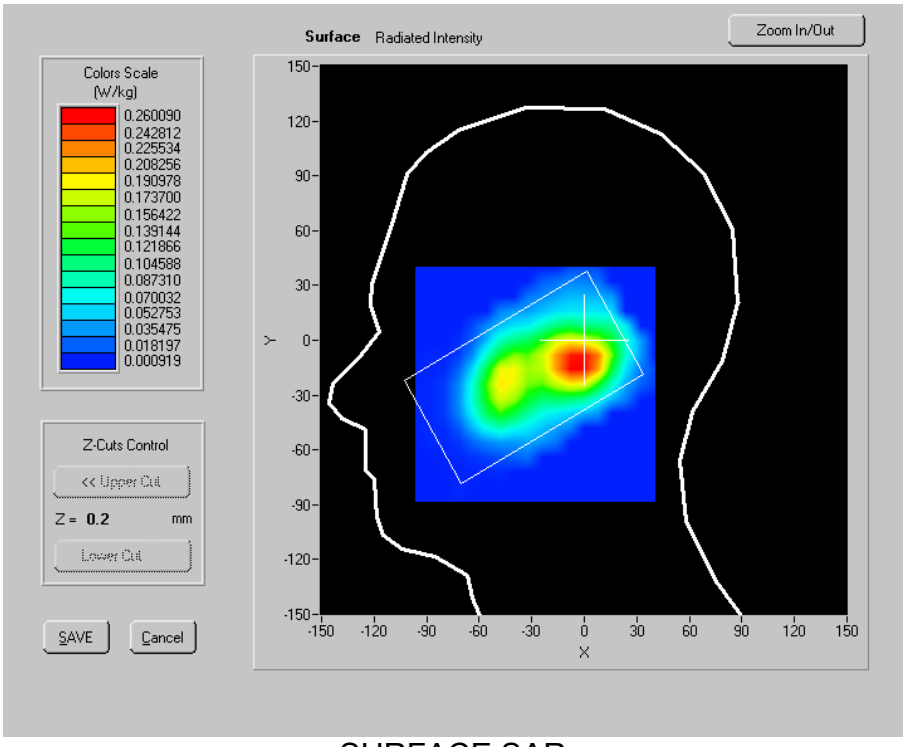
1.6.2 PCS 1900MHz

1.6.2.1 Right head, Cheek

Lower Band SAR (Channel 512):

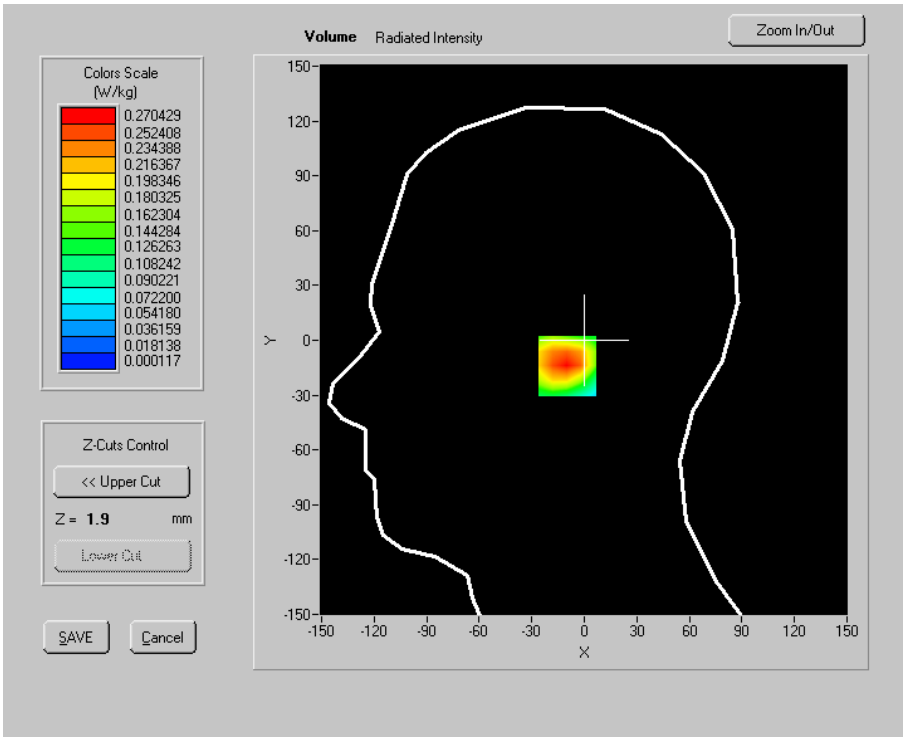
Experimental conditions	
Phantom	Right head
Device Position	Cheek
Band	PCS1900
Channels	Low
Signal	TDMA
before/after Power Level:	28.32dBm/28.22 dBm
Liquid Temperature:	21.6°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test data	2008.09.09

Frequency (MHz)	1850.199951
Relative permitivity (real part)	38.952999
Relative permitivity (imaginary part)	13.398000
Conductivity (S/m)	1.377166
Variation (%)	-3.070000



SURFACE SAR

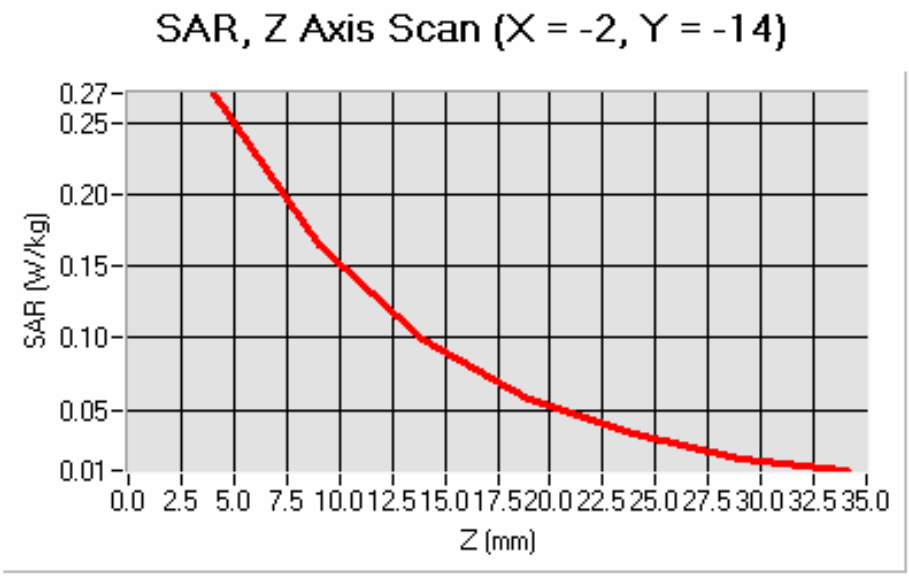
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-2.00, Y=-14.00

SAR 10g (W/Kg)	0.146312
SAR 1g (W/Kg)	0.258276

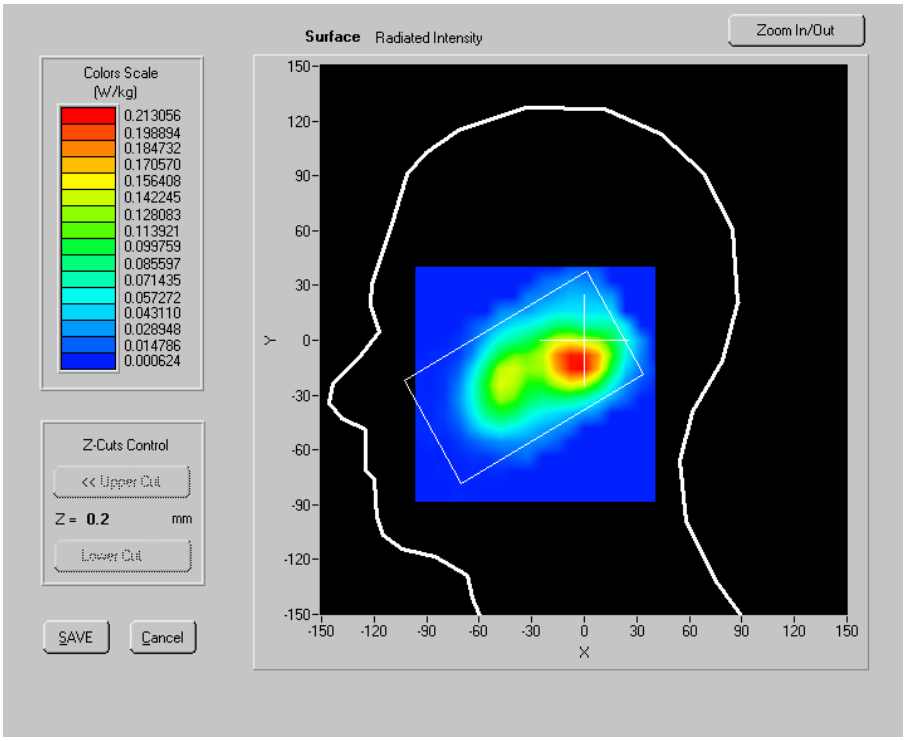


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 661):

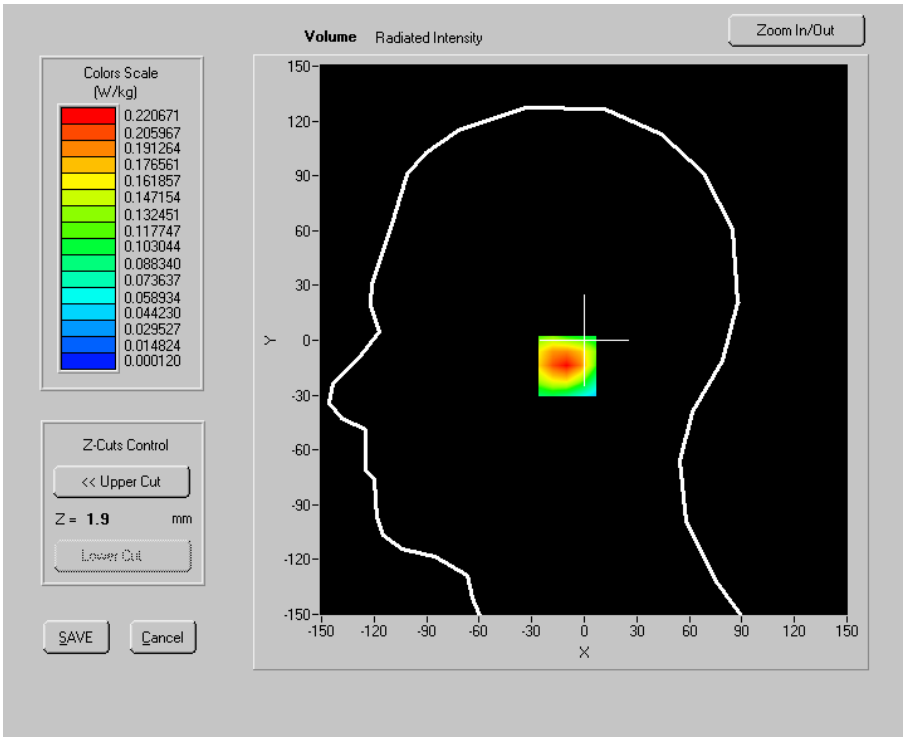
Experimental conditions	
Phantom	Right head
Device Position	Cheek
Band	PCS1900
Channels	Middle
Signal	TDMA
before/after Power Level:	29.04dBm/28.88 dBm
Liquid Temperature:	21.4°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test date	2008.09.09

Frequency (MHz)	1880.000000
Relative permitivity (real part)	38.959000
Relative permitivity (imaginary part)	13.520850
Conductivity (S/m)	1.412178
Variation (%)	-3.070000



SURFACE SAR

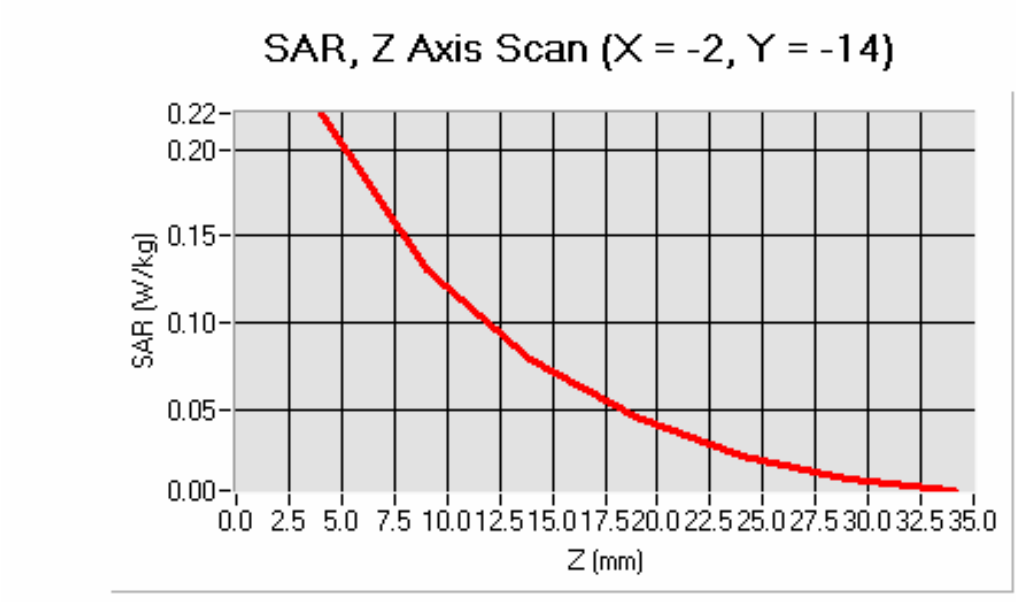
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=- X=-2.00, Y=-14.00

SAR 10g (W/Kg)	0.116884
SAR 1g (W/Kg)	0.208572

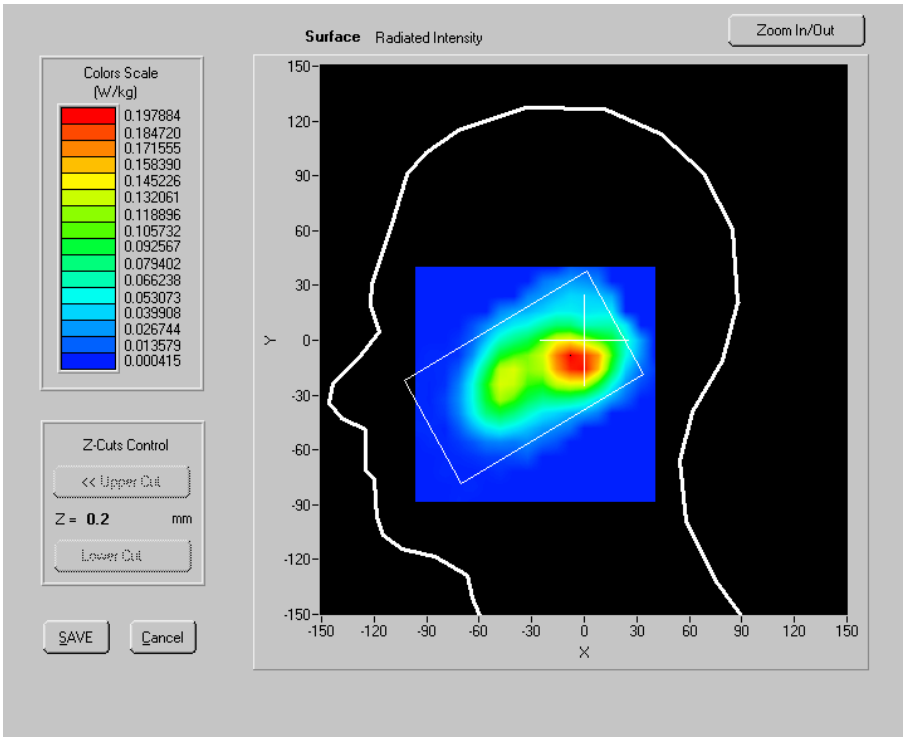


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 810):

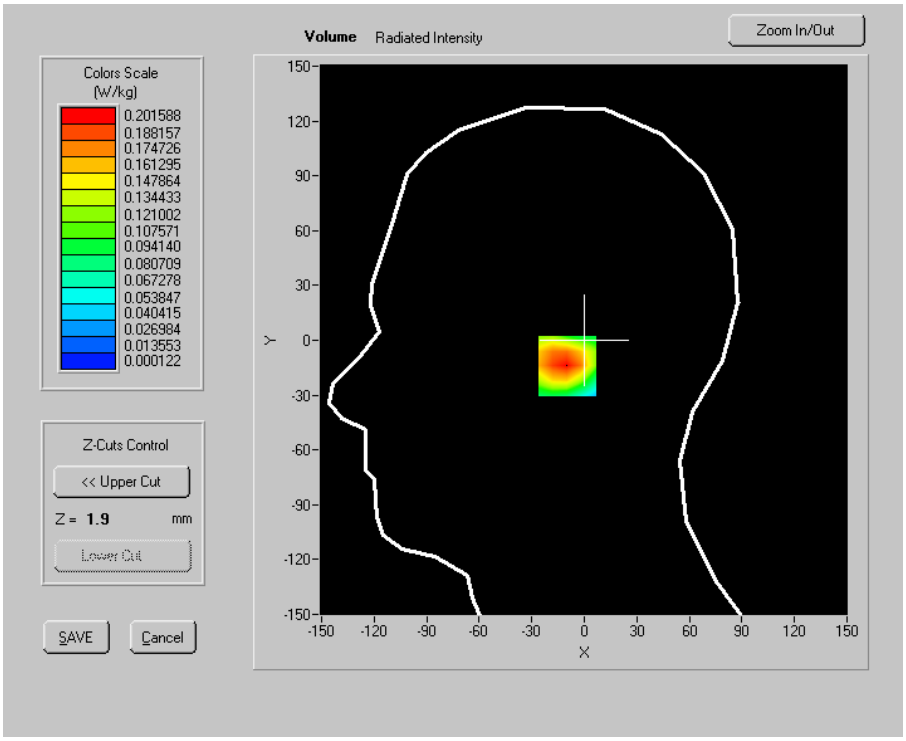
Experimental conditions	
Phantom	Right head
Device Position	Cheek
Band	PCS1900
Channels	High
Signal	TDMA
before/after Power Level:	29.03dBm/28.89dBm
Liquid Temperature:	21.4°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test data	2008.09.09

Frequency (MHz)	1909.800049
Relative permitivity (real part)	38.911999
Relative permitivity (imaginary part)	13.542900
Conductivity (S/m)	1.436902
Variation (%)	-3.070000



SURFACE SAR

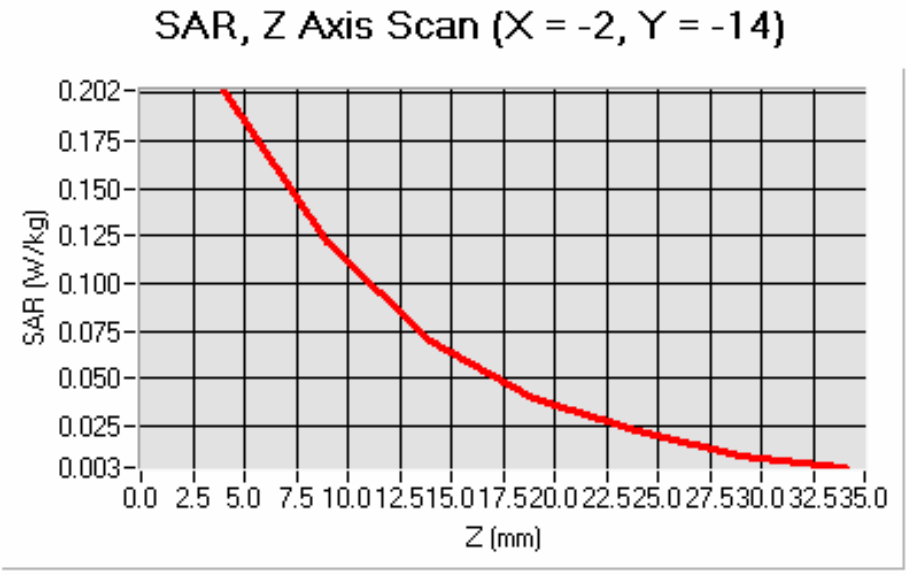
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-2.00, Y=-14.00

SAR 10g (W/Kg)	0.107988
SAR 1g (W/Kg)	0.191807



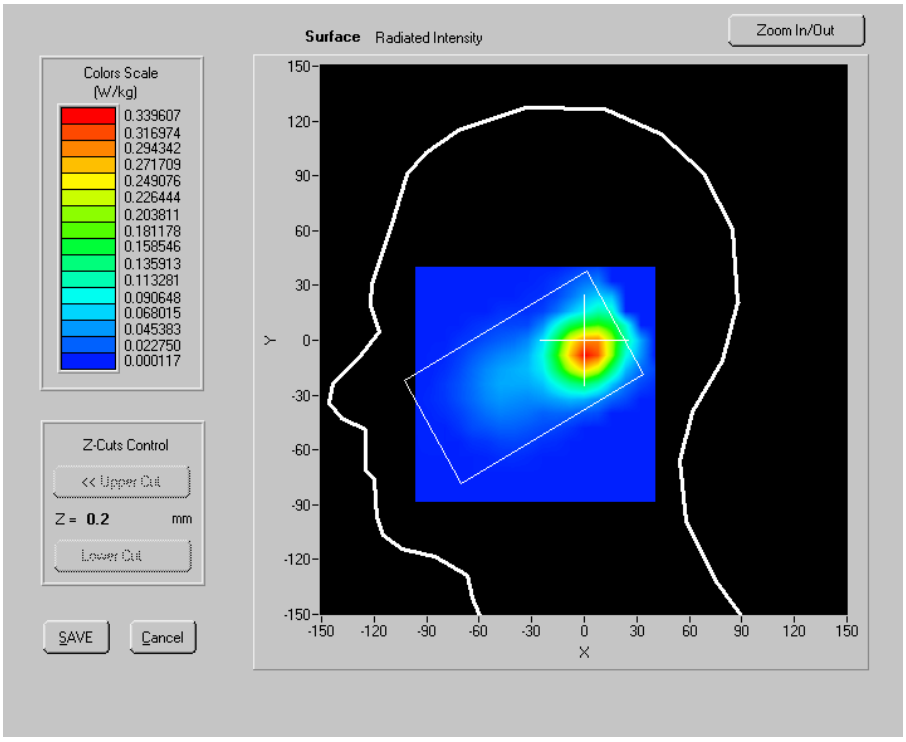
检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.6.2.2 Right head, Tilt

Lower Band SAR (Channel 512):

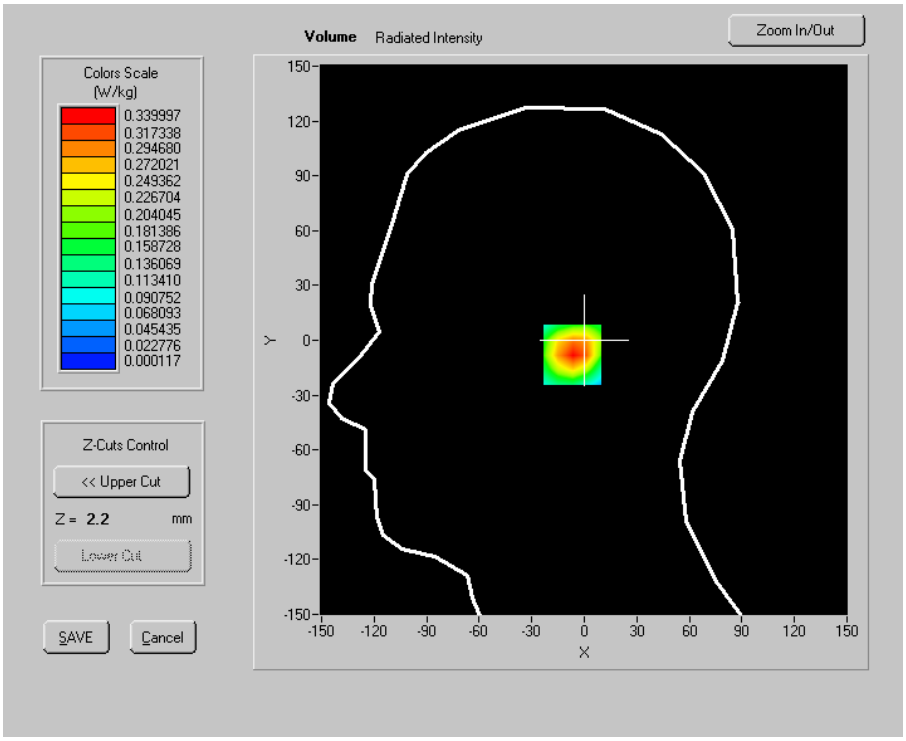
Experimental conditions	
Phantom	Right head
Device Position	Tilt
Band	PCS1900
Channels	Low
Signal	TDMA
before/after Power Level:	28.11dBm/28.09 dBm
Liquid Temperature:	21.1°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test data	2008.09.09

Frequency (MHz)	1850.199951
Relative permitivity (real part)	38.952999
Relative permitivity (imaginary part)	13.398000
Conductivity (S/m)	1.377166
Variation (%)	-2.810000



SURFACE SAR

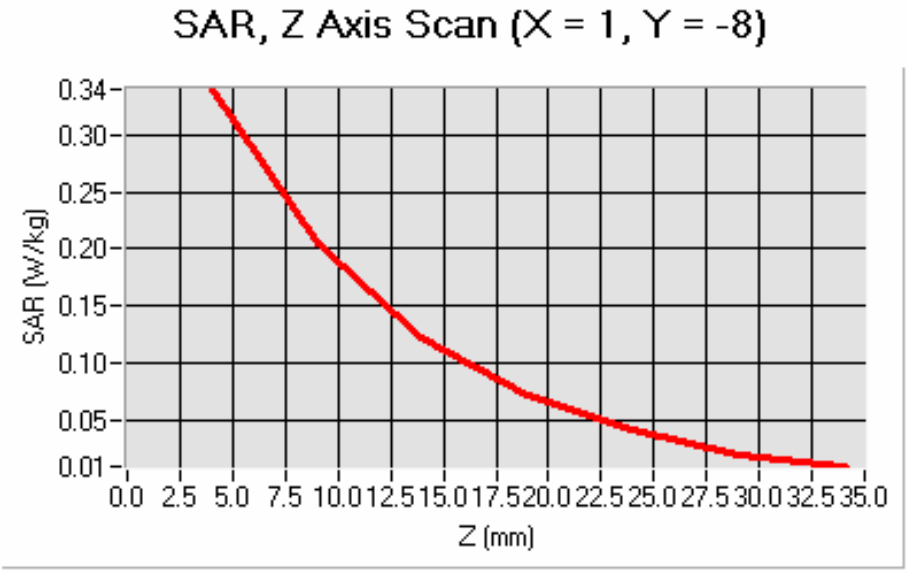
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=1.00, Y=-8.00

SAR 10g (W/Kg)	0.176654
SAR 1g (W/Kg)	0.321329

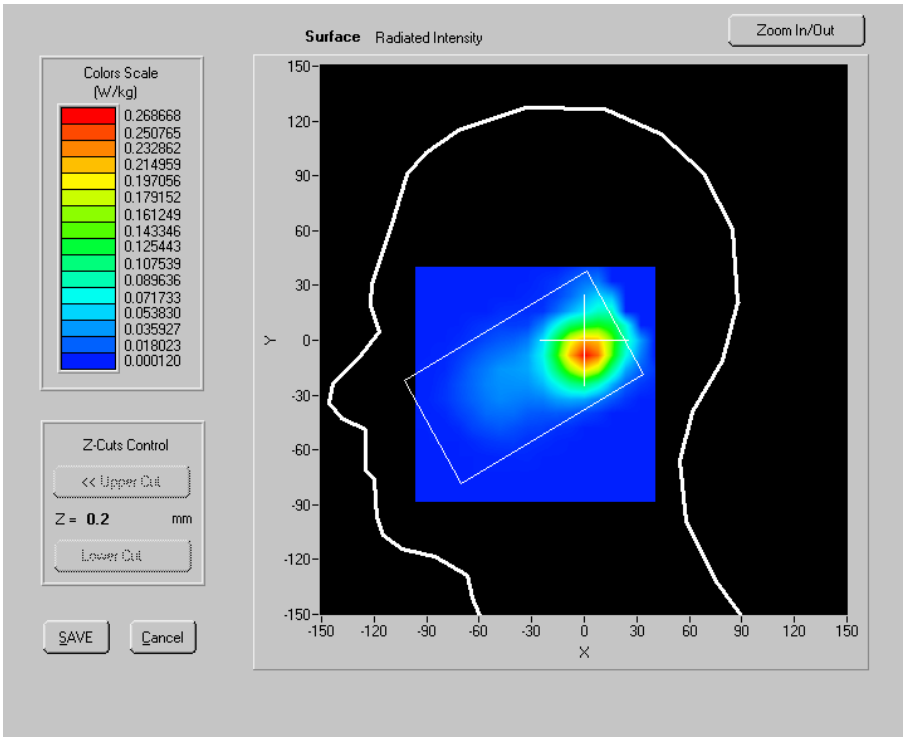


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 661):

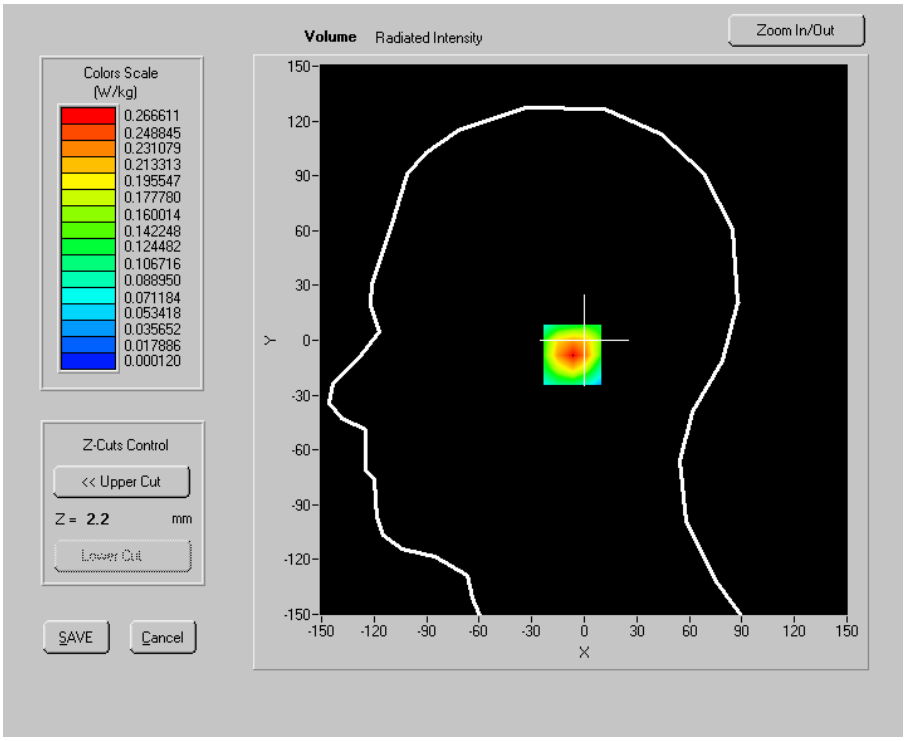
Experimental conditions	
Phantom	Right head
Device Position	Tilt
Band	PCS1900
Channels	Middle
Signal	TDMA
before/after Power Level:	29.20dBm/29.12 dBm
Liquid Temperature:	21.4°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test date	2008.09.09

Frequency (MHz)	1880.000000
Relative permitivity (real part)	38.959000
Relative permitivity (imaginary part)	13.520850
Conductivity (S/m)	1.412178
Variation (%)	-2.810000



SURFACE SAR

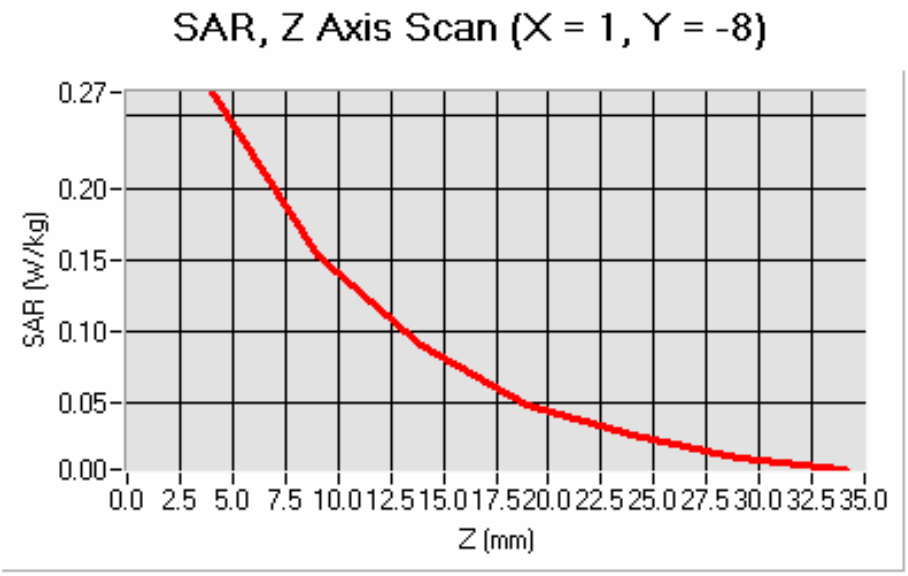
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=1.00, Y=-8.00

SAR 10g (W/Kg)	0.134274
SAR 1g (W/Kg)	0.248836

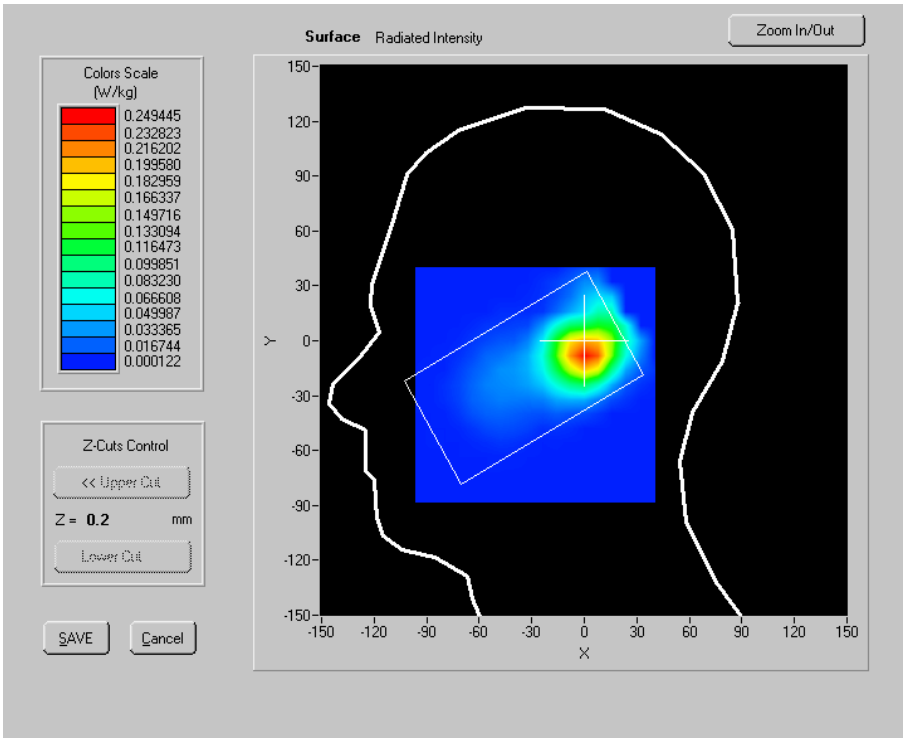


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 810):

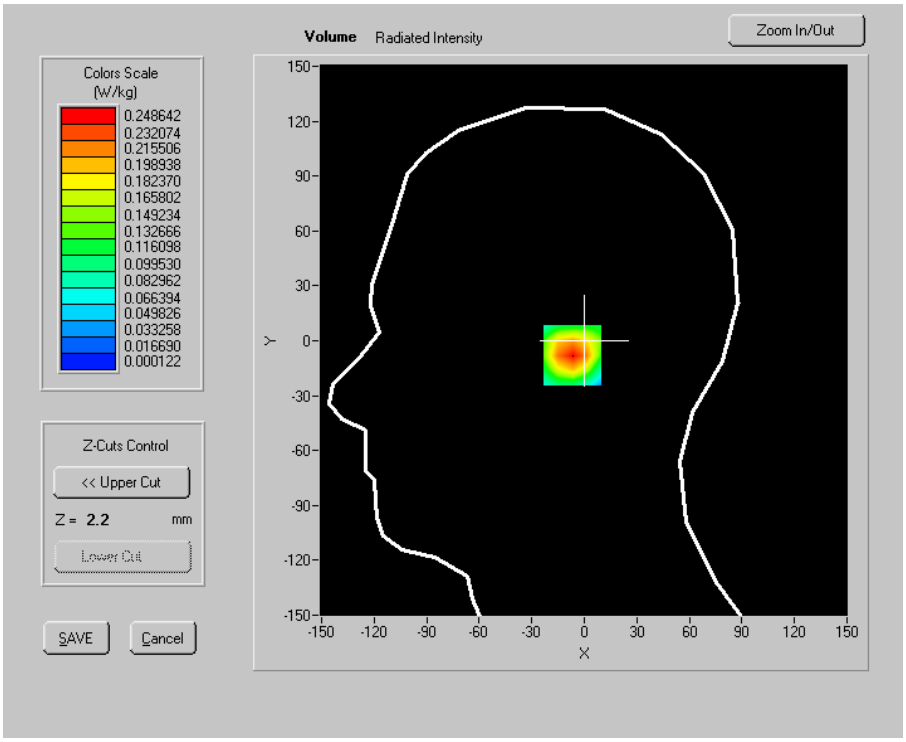
Experimental conditions	
Phantom	Right head
Device Position	Tilt
Band	PCS1900
Channels	High
Signal	TDMA
before/after Power Level:	29.11dBm/28.97 dBm
Liquid Temperature:	21.2°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test data	2008.09.09

Frequency (MHz)	1909.800049
Relative permitivity (real part)	38.911999
Relative permitivity (imaginary part)	13.542900
Conductivity (S/m)	1.436902
Variation (%)	-2.810000



SURFACE SAR

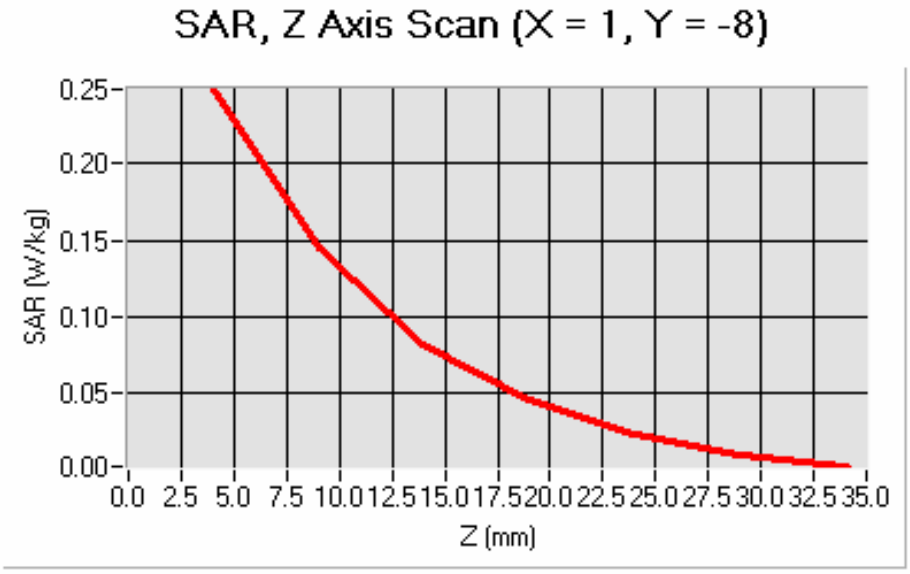
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=1.00, Y=-8.00

SAR 10g (W/Kg)	0.126116
SAR 1g (W/Kg)	0.233125



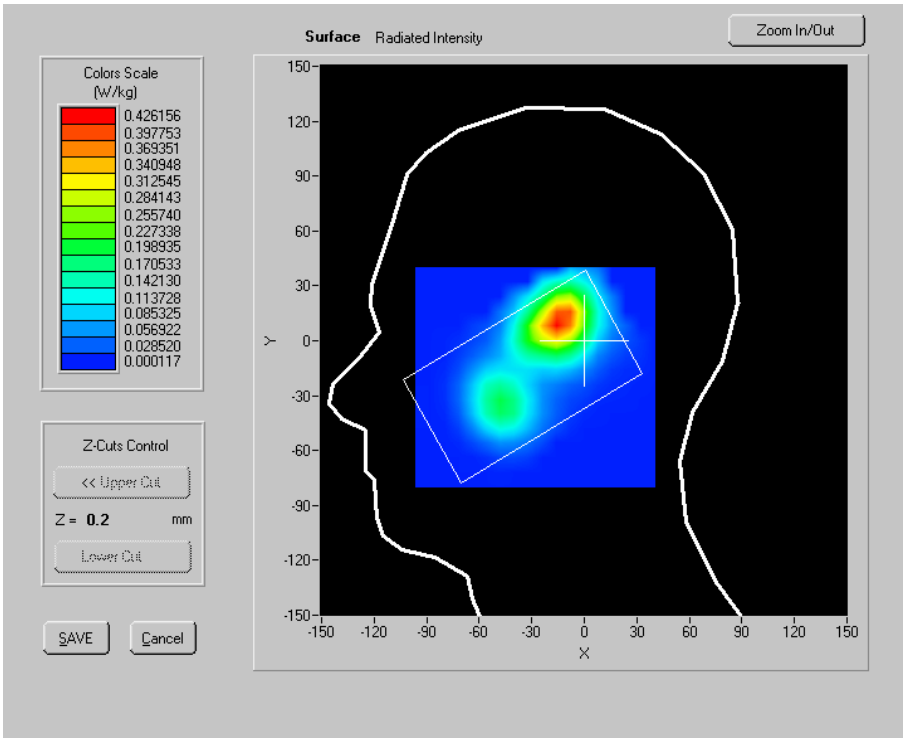
检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.6.2.3 Left head, Cheek

Lower Band SAR (Channel 512):

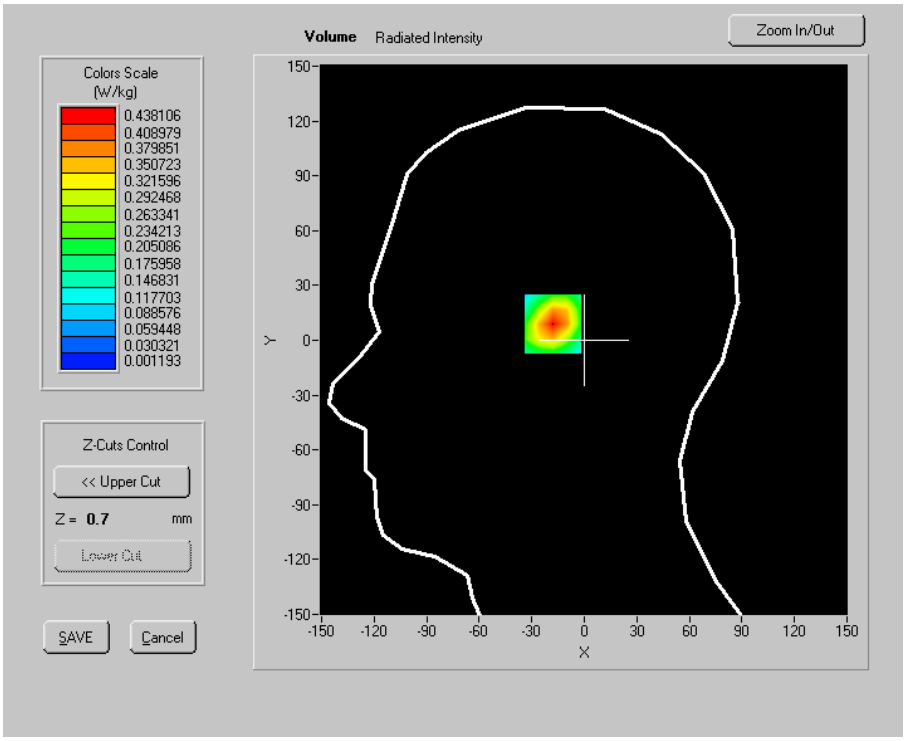
Experimental conditions	
Phantom	Left head
Device Position	Cheek
Band	PCS1900
Channels	Low
Signal	TDMA
before/after Power Level:	28.12dBm/28.10 dBm
Liquid Temperature:	21.5°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test date	2008.09.09

Frequency (MHz)	1850.199951
Relative permitivity (real part)	38.952999
Relative permitivity (imaginary part)	13.398000
Conductivity (S/m)	1.377166
Variation (%)	-0.830000



SURFACE SAR

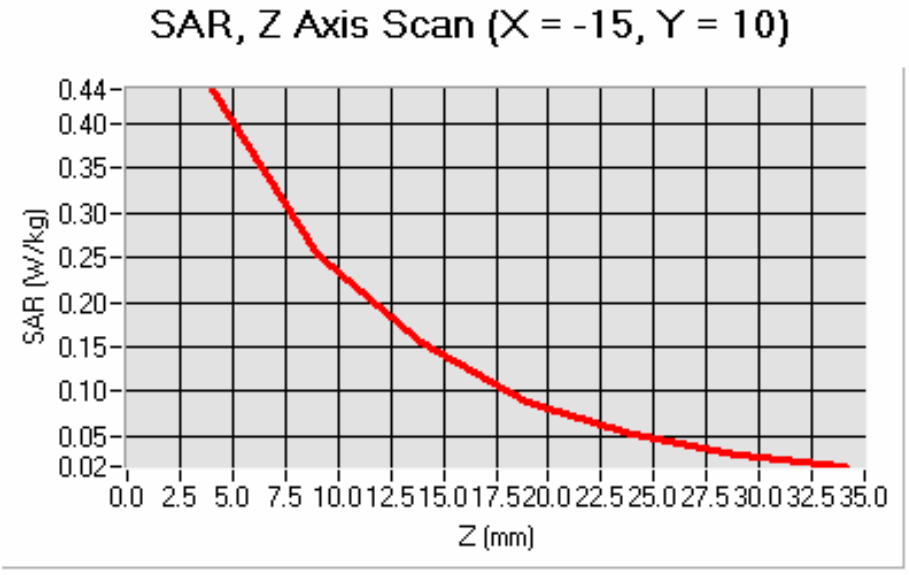
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-15.00, Y=10.00

SAR 10g (W/Kg)	0.221457
SAR 1g (W/Kg)	0.408199

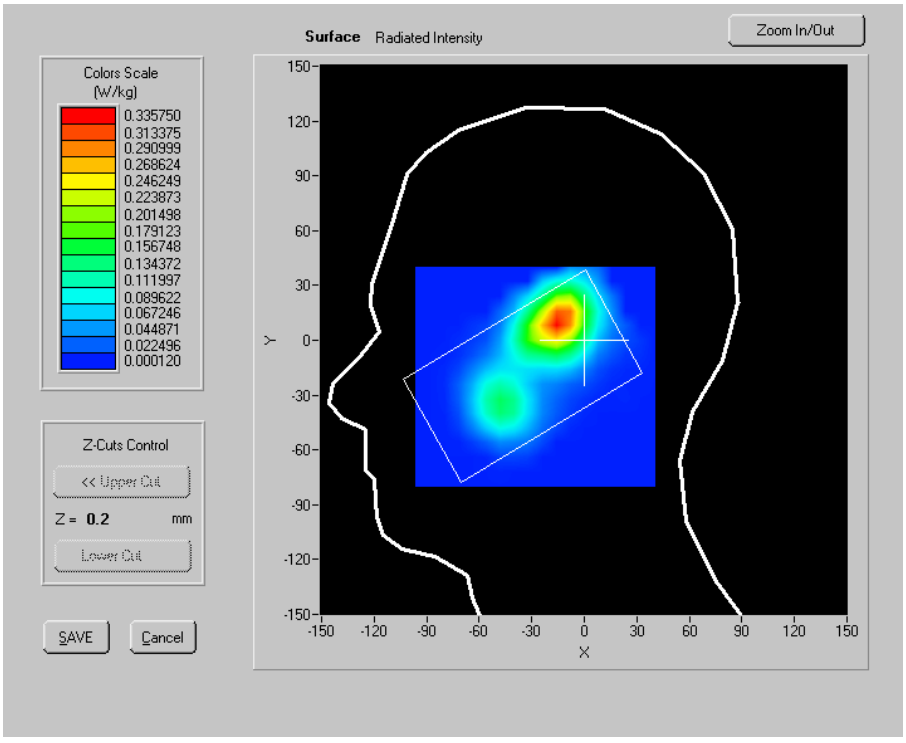


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 661):

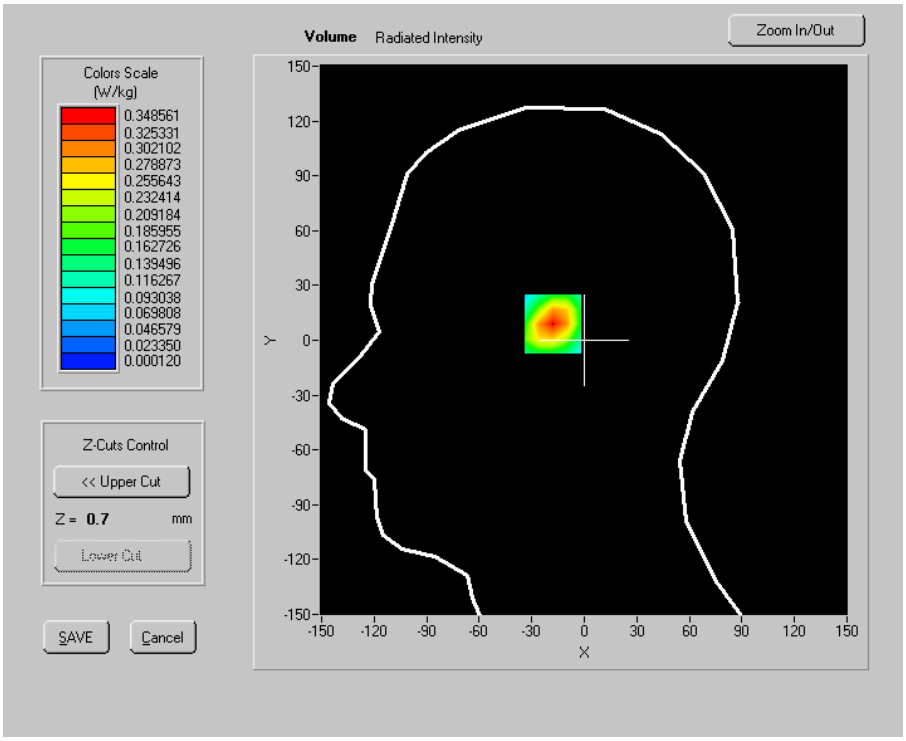
Experimental conditions	
Phantom	Left head
Device Position	Cheek
Band	PCS1900
Channels	Middle
Signal	TDMA
before/after Power Level:	28.99dBm/28.87 dBm
Liquid Temperature:	21.6°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test data	2008.09.09

Frequency (MHz)	1880.000000
Relative permitivity (real part)	38.959000
Relative permitivity (imaginary part)	13.520850
Conductivity (S/m)	1.412178
Variation (%)	-0.830000



SURFACE SAR

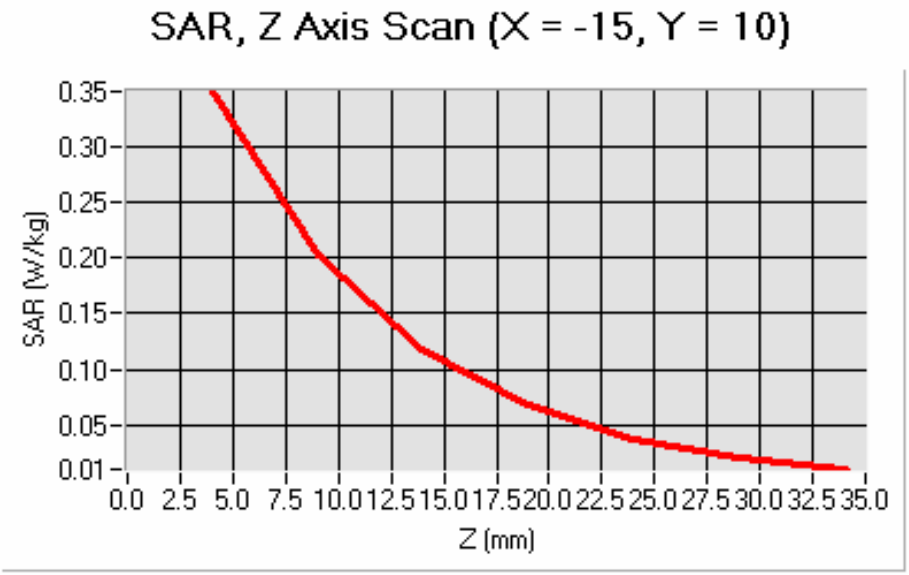
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-15.00, Y=10.00

SAR 10g (W/Kg)	0.174342
SAR 1g (W/Kg)	0.325518

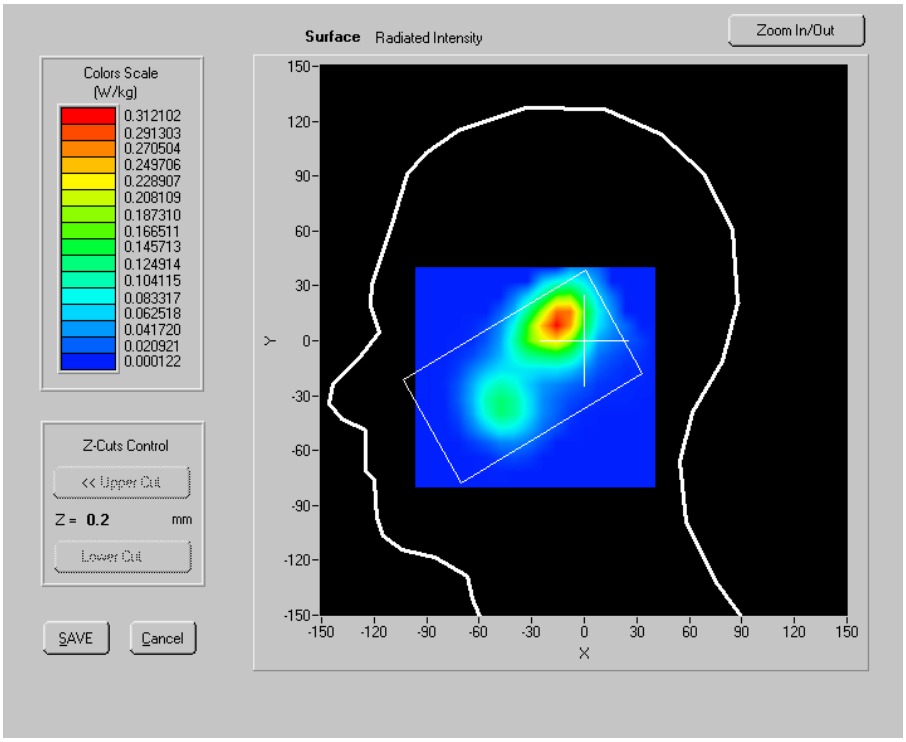


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 810):

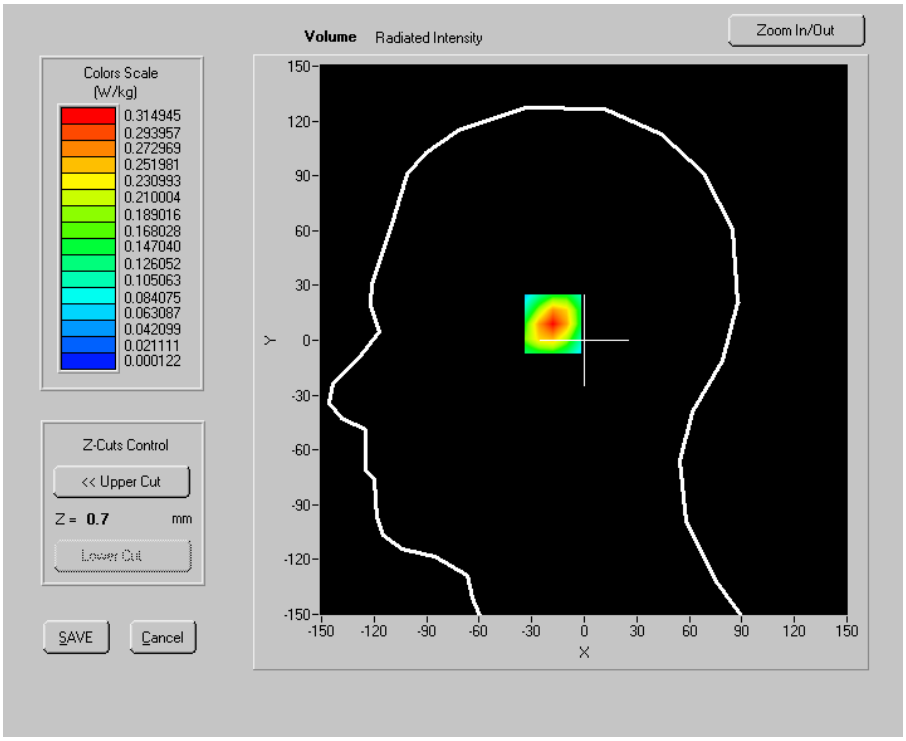
Experimental conditions	
Phantom	Left head
Device Position	Cheek
Band	PCS1900
Channels	High
Signal	TDMA
before/after Power Level:	28.95dBm/28.87 dBm
Liquid Temperature:	21.5°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test date	2008.09.09

Frequency (MHz)	1909.800049
Relative permitivity (real part)	38.911999
Relative permitivity (imaginary part)	13.542900
Conductivity (S/m)	1.436902
Variation (%)	-0.830000



SURFACE SAR

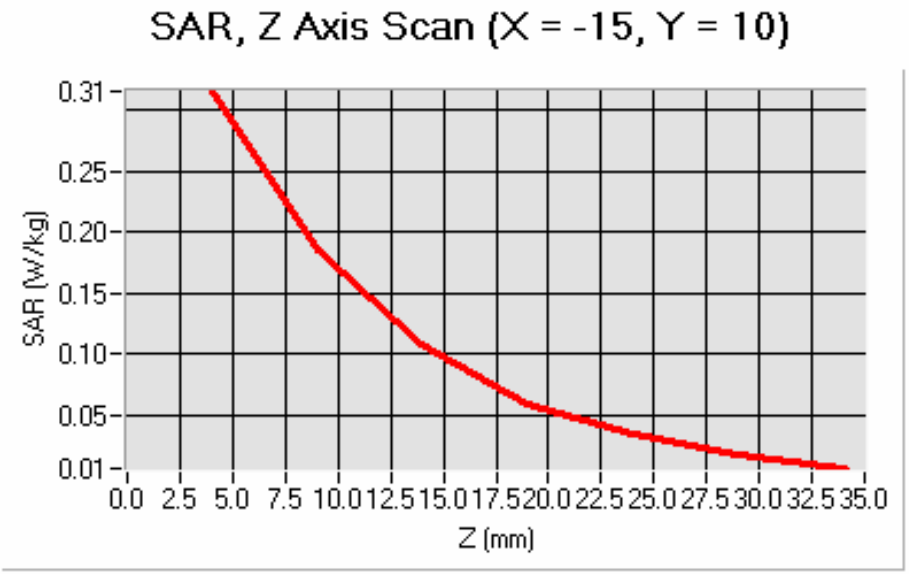
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-15.00, Y=10.00

SAR 10g (W/Kg)	0.157137
SAR 1g (W/Kg)	0.292234



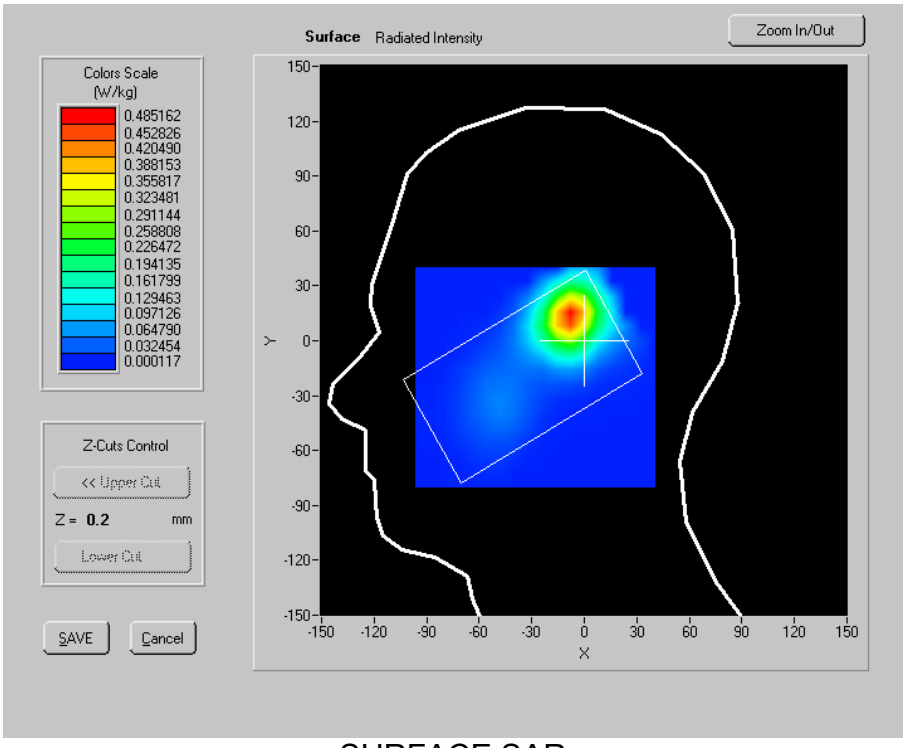
检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.6.2.4 Left head, Tilt

Lower Band SAR (Channel 512):

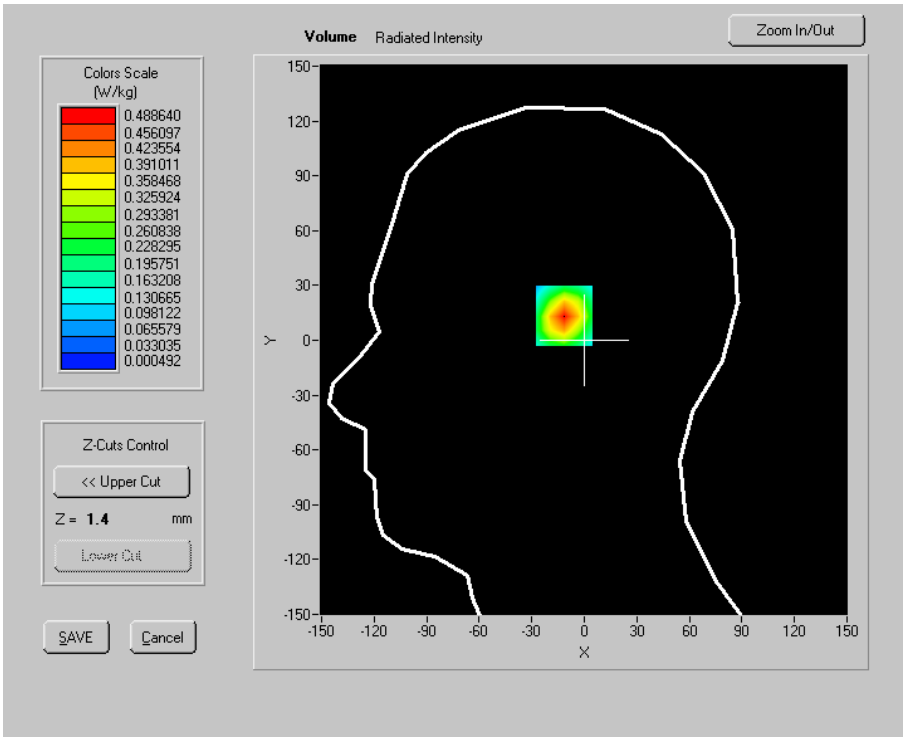
Experimental conditions	
Phantom	Left head
Device Position	Tilt
Band	PCS1900
Channels	Low
Signal	TDMA
before/after Power Level:	28.13dBm/28.10 dBm
Liquid Temperature:	21.43°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test data	2008.09.09

Frequency (MHz)	1850.199951
Relative permitivity (real part)	38.952999
Relative permitivity (imaginary part)	13.398000
Conductivity (S/m)	1.377166
Variation (%)	0.790000



SURFACE SAR

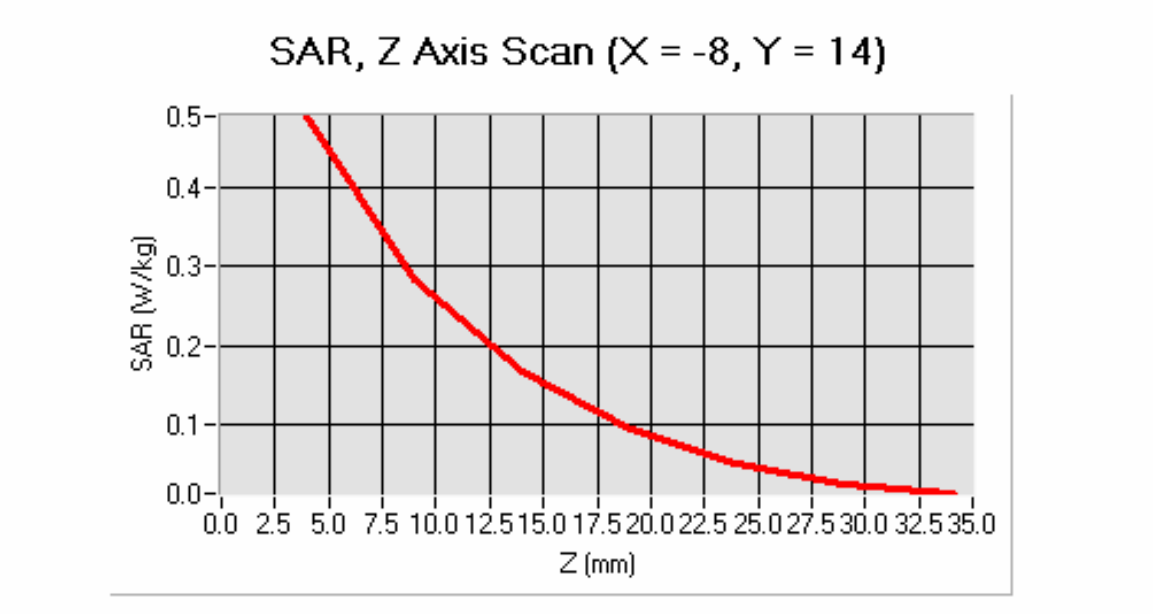
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-8.00, Y=14.00

SAR 10g (W/Kg)	0.237262
SAR 1g (W/Kg)	0.449854

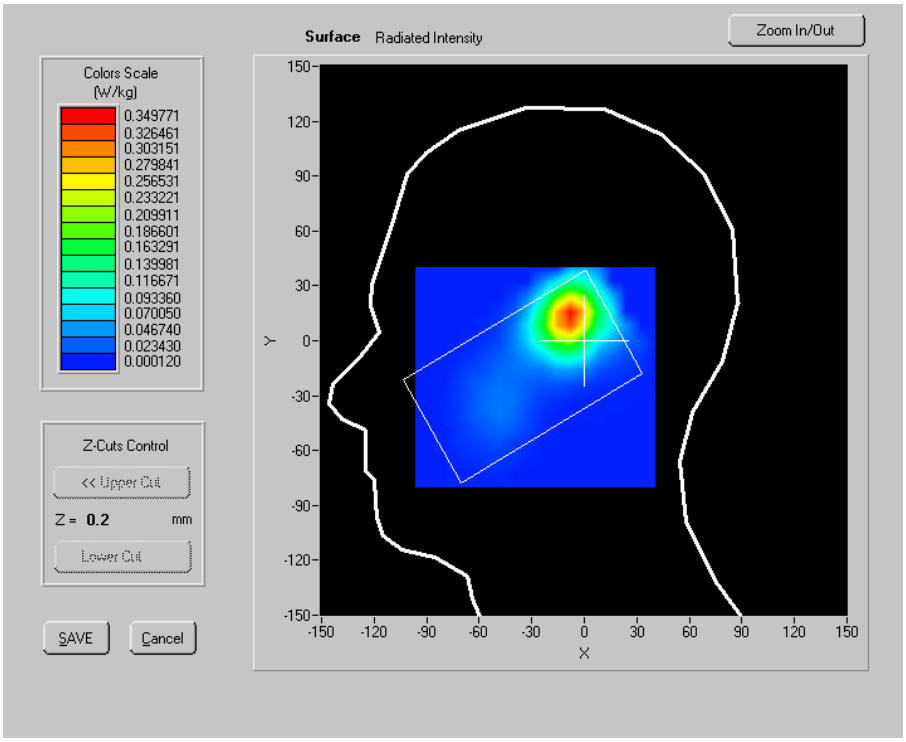


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 661):

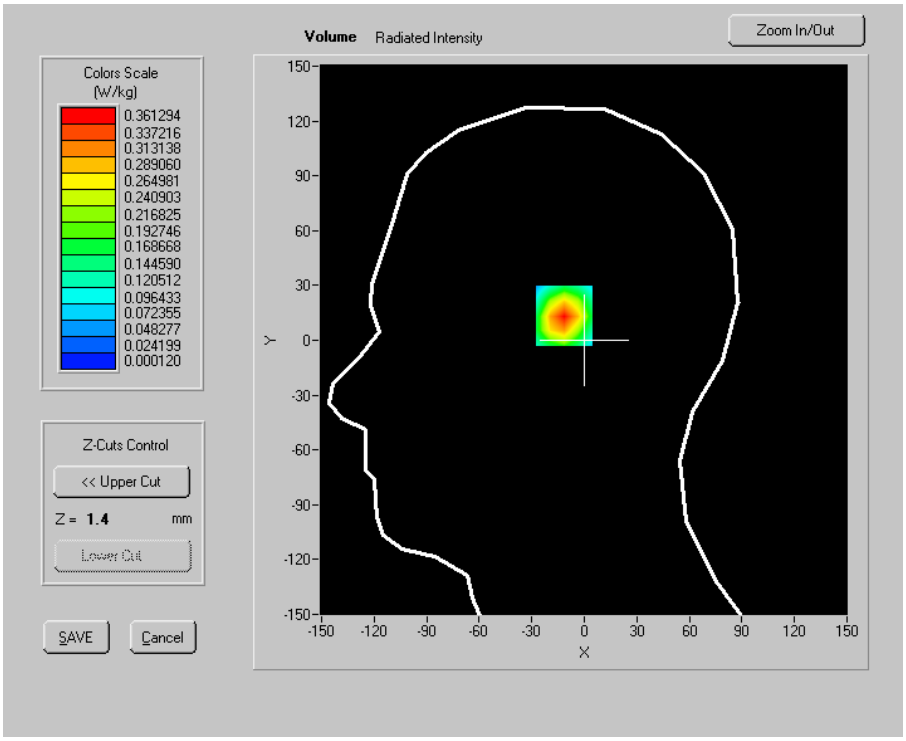
Experimental conditions	
Phantom	Left head
Device Position	Tilt
Band	PCS1900
Channels	Middle
Signal	TDMA
before/after Power Level:	29.01dBm/28.96 dBm
Liquid Temperature:	21.6°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test date	2008.09.09

Frequency (MHz)	1880.000000
Relative permitivity (real part)	38.959000
Relative permitivity (imaginary part)	13.520850
Conductivity (S/m)	1.412178
Variation (%)	0.790000



SURFACE SAR

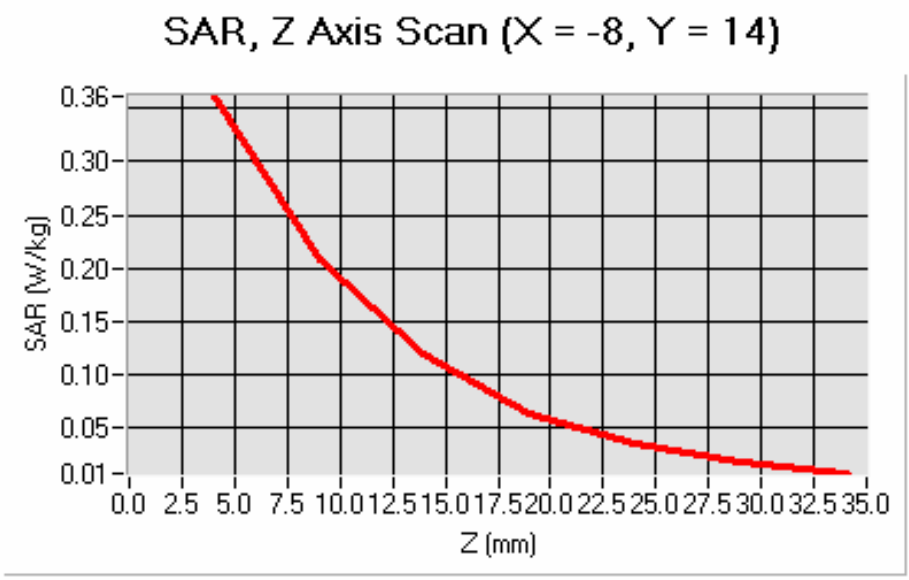
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X= X=-8.00, Y=14.00

SAR 10g (W/Kg)	0.174751
SAR 1g (W/Kg)	0.333342

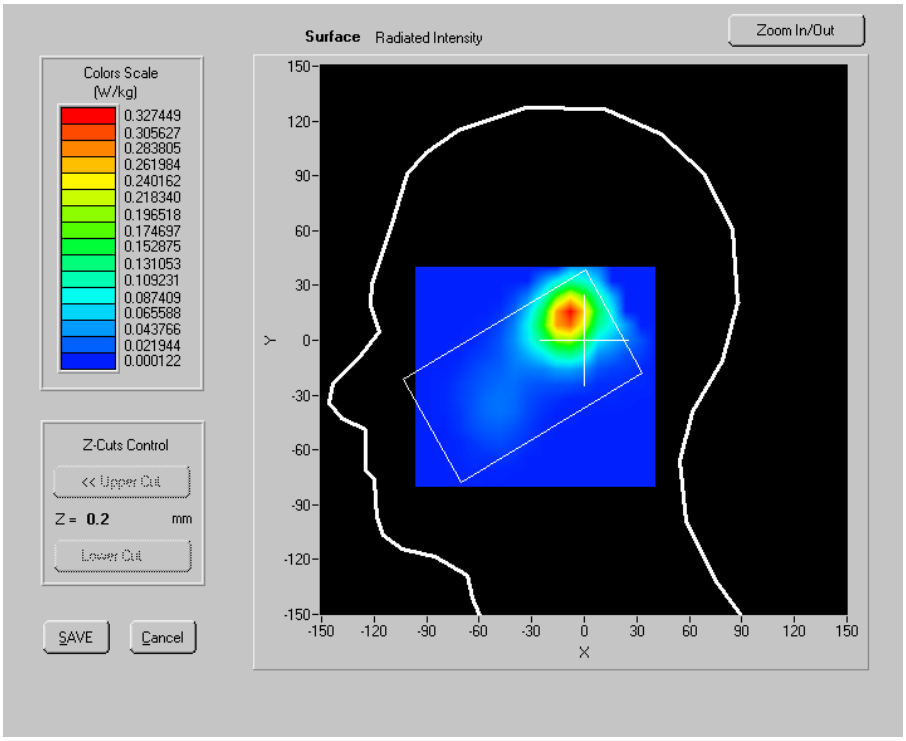


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 810):

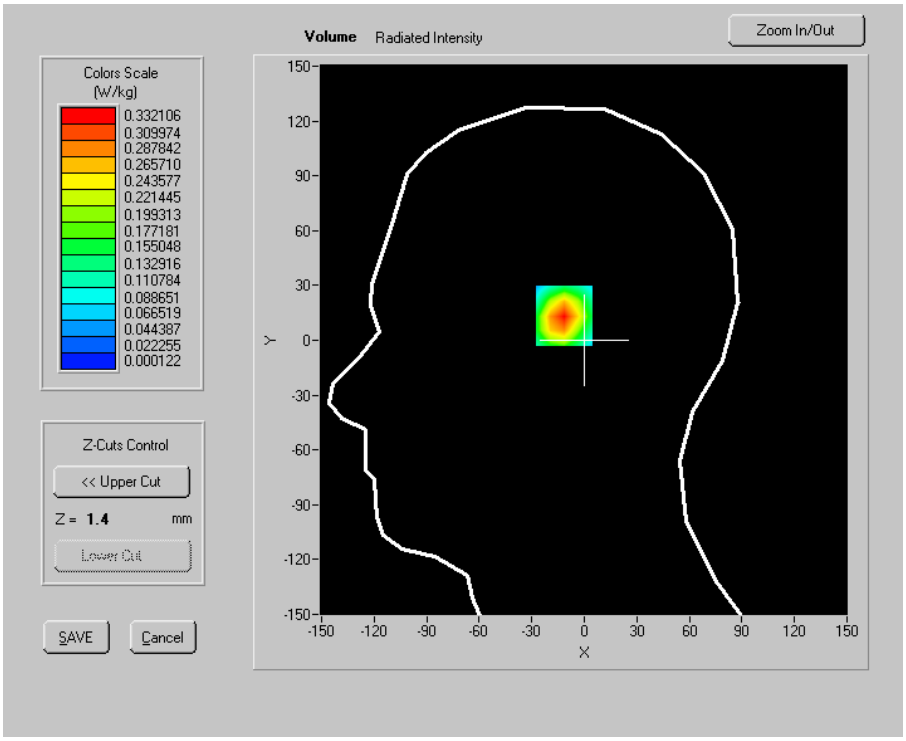
Experimental conditions	
Phantom	Left head
Device Position	Tilt
Band	PCS1900
Channels	High
Signal	TDMA
before/after Power Level:	29.14dBm/28.99 dBm/
Liquid Temperature:	21.4°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test data	2008.09.09

Frequency (MHz)	1909.800049
Relative permitivity (real part)	38.911999
Relative permitivity (imaginary part)	13.542900
Conductivity (S/m)	1.436902
Variation (%)	0.790000



SURFACE SAR

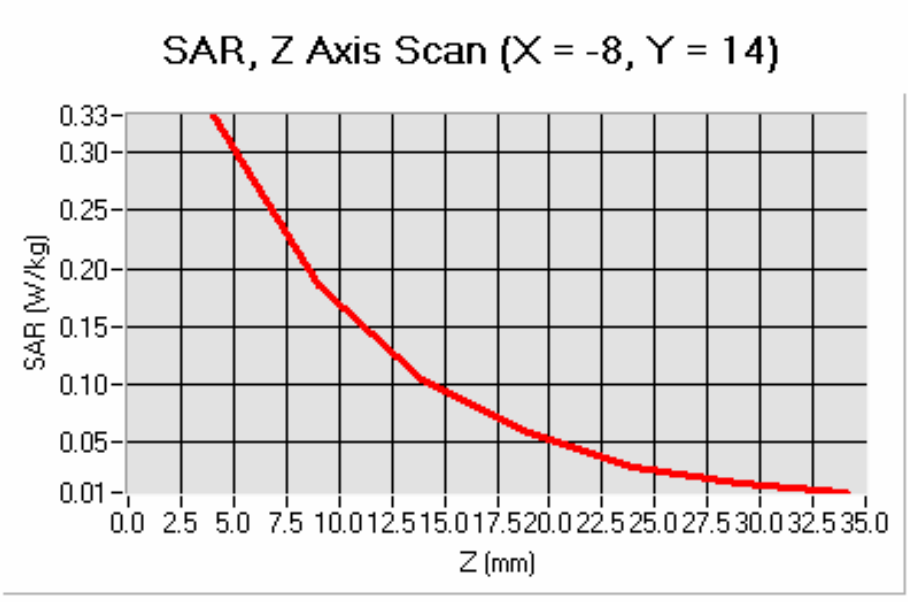
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-8.00, Y=14.00

SAR 10g (W/Kg)	0.160650
SAR 1g (W/Kg)	0.308713



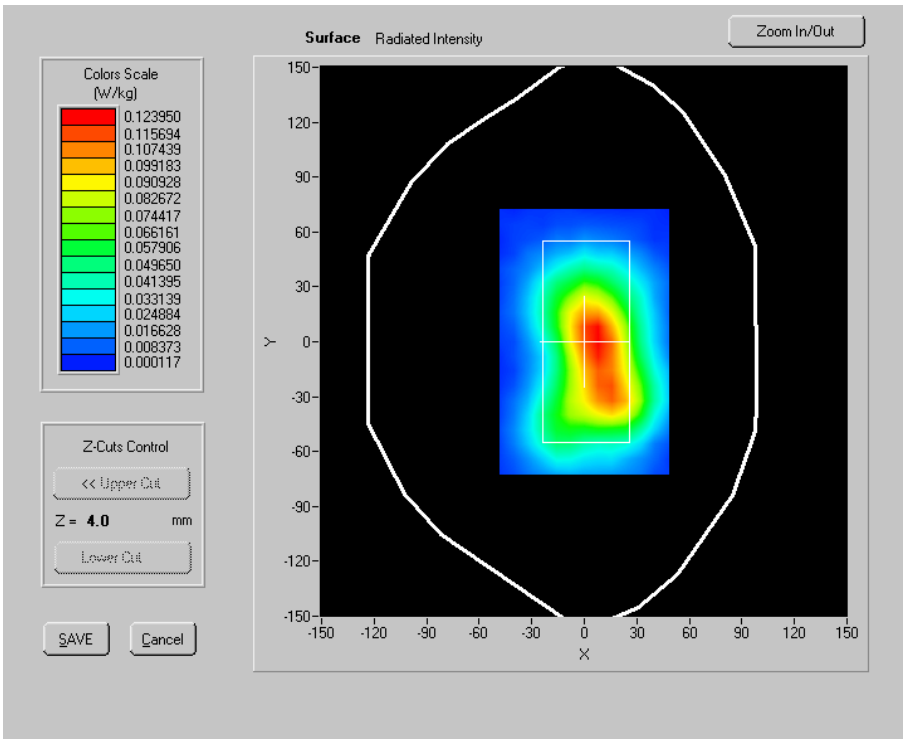
检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.6.2.5 Body-worn

Lower Band SAR (Channel 512):

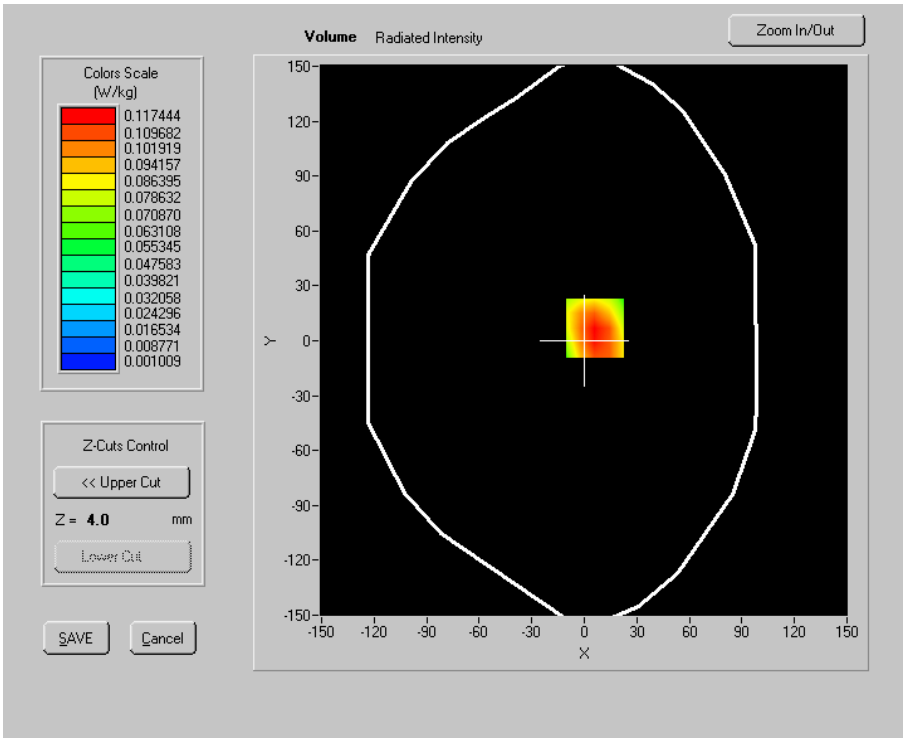
Experimental conditions	
Phantom	Validation plane
Device Position	Body
Band	PCS1900
Channels	Low
Signal	TDMA
before/after Power Level:	28.14dBm/28.02 dBm
Liquid Temperature:	21.4°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test data	2008.09.09

Frequency (MHz)	1850.199951
Relative permitivity (real part)	54.834999
Relative permitivity (imaginary part)	14.400750
Conductivity (S/m)	1.480237
Variation (%)	-3.330000



SURFACE SAR

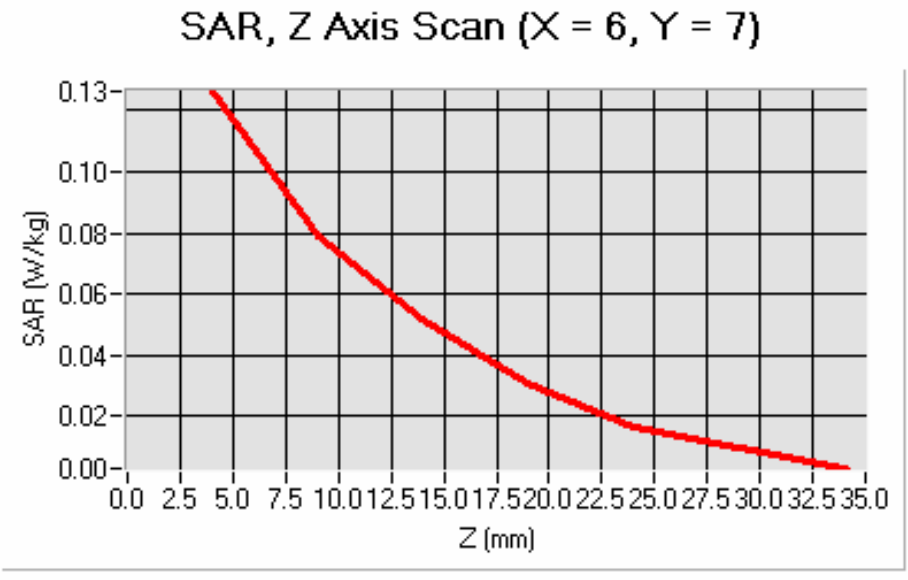
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=6.00, Y=7.00

SAR 10g (W/Kg)	0.074170
SAR 1g (W/Kg)	0.120820

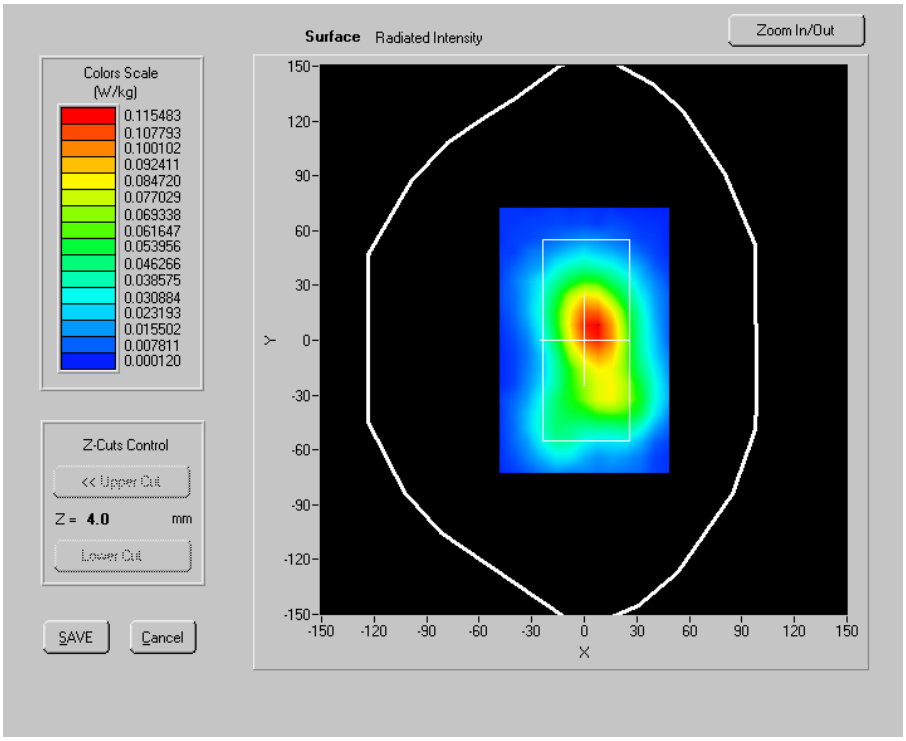


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 661):

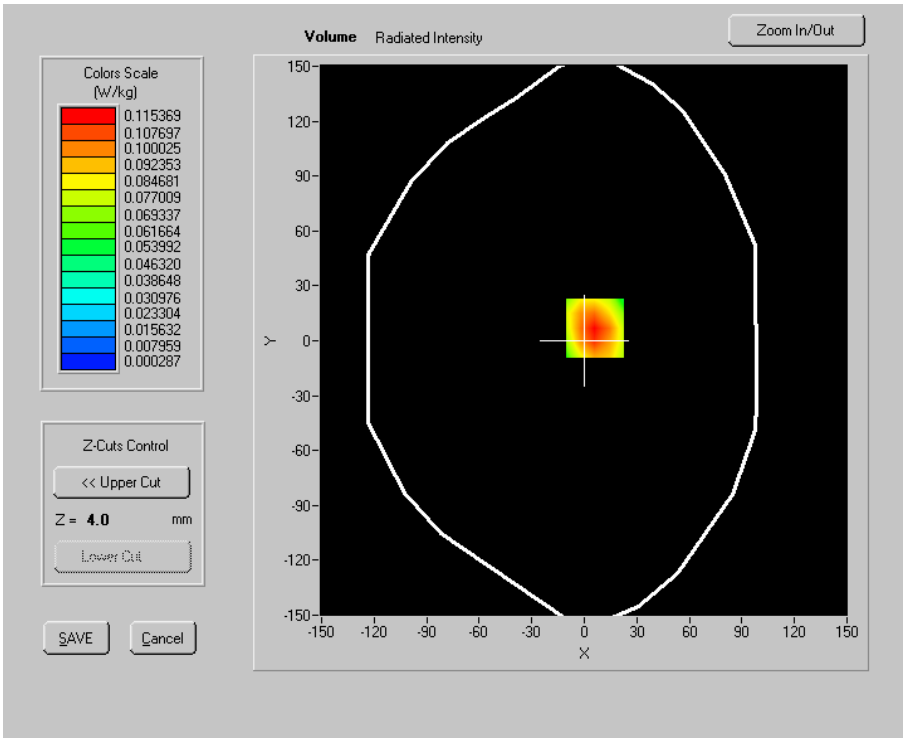
Experimental conditions	
Phantom	Validation plane
Device Position	Body
Band	PCS1900
Channels	Middle
Signal	TDMA
before/after Power Level:	29.06dBm/28.94 dBm
Liquid Temperature:	21.3°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test date	2008.09.09

Frequency (MHz)	1880.000000
Relative permitivity (real part)	54.855999
Relative permitivity (imaginary part)	14.439600
Conductivity (S/m)	1.508136
Variation (%)	-3.330000



SURFACE SAR

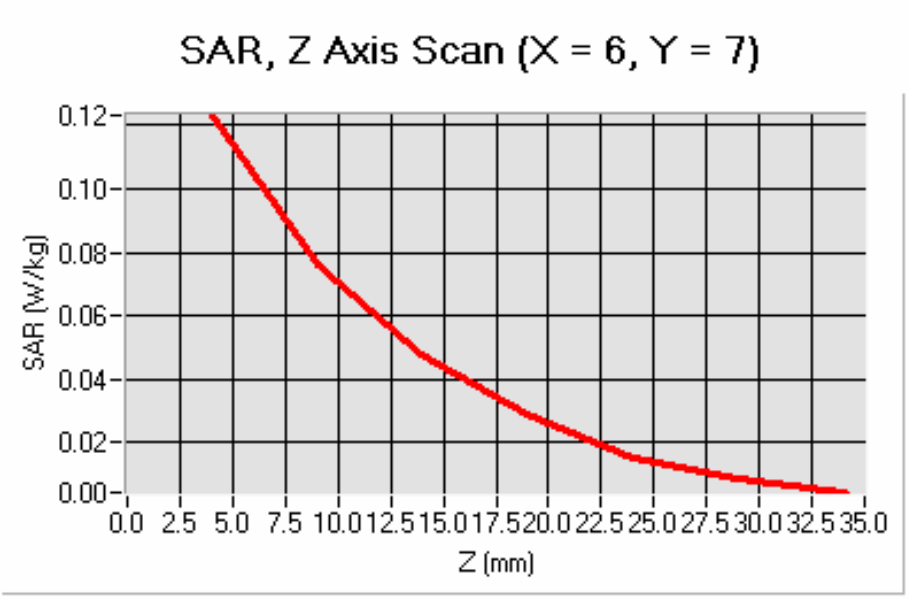
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=6.00, Y=7.00

SAR 10g (W/Kg)	0.069441
SAR 1g (W/Kg)	0.117166

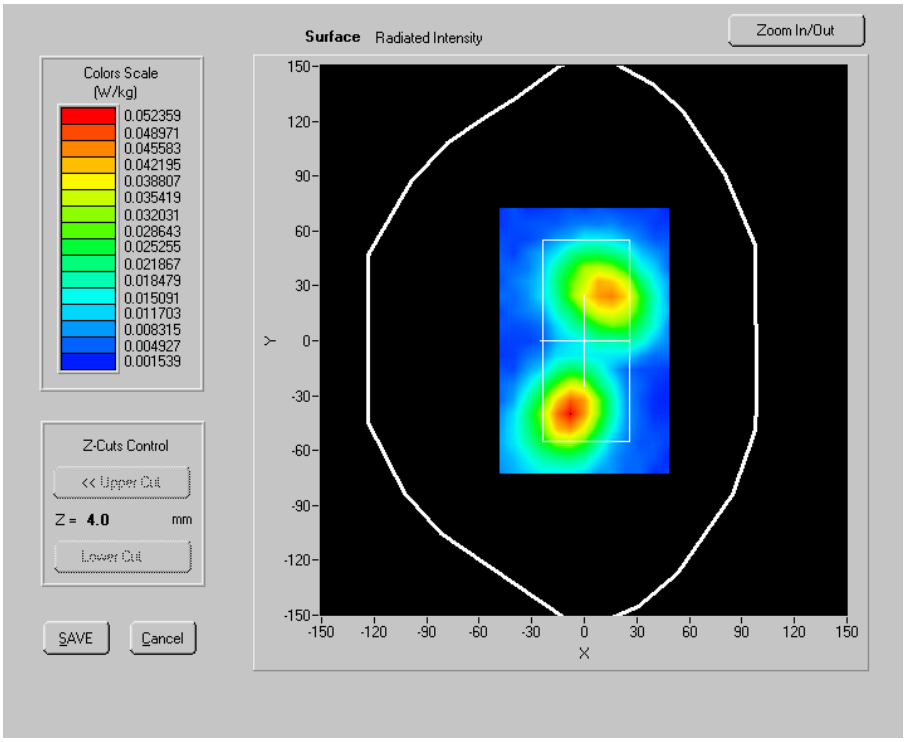


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Middle Band SAR (Channel 661):

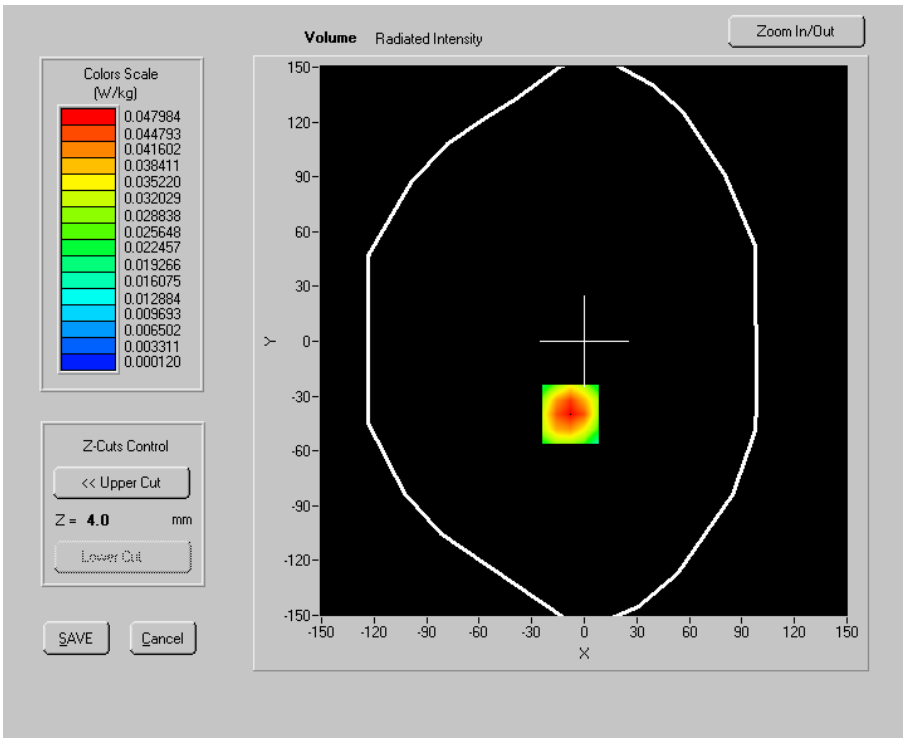
Experimental conditions	
Phantom	Validation plane
Device Position	Body（face to buttom）
Band	PCS1900
Channels	Middle
Signal	TDMA
before/after Power Level:	29.08dBm/28.93 dBm
Liquid Temperature:	21.5°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test data	2008.09.09

Frequency (MHz)	1880.000000
Relative permitivity (real part)	54.855999
Relative permitivity (imaginary part)	14.439600
Conductivity (S/m)	1.508136
Variation (%)	-4.990000



SURFACE SAR

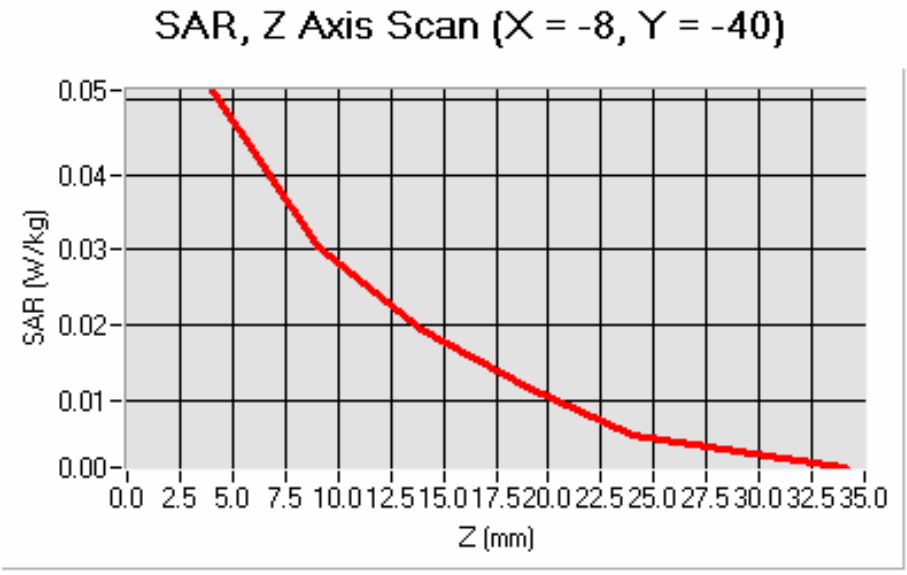
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=-8.00, Y=-40.00

SAR 10g (W/Kg)	0.028062
SAR 1g (W/Kg)	0.049229

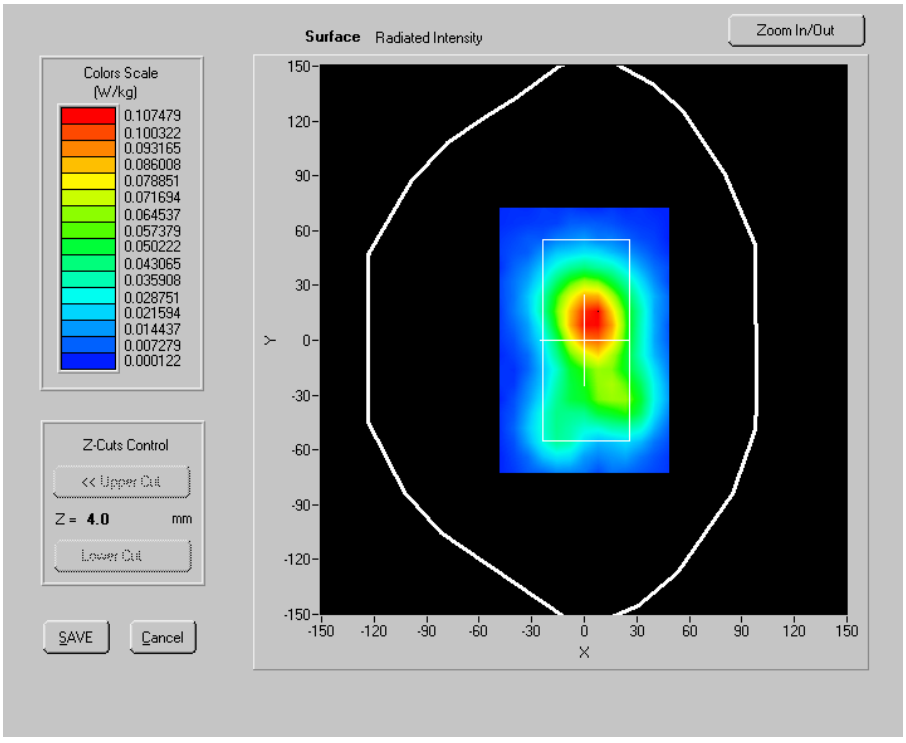


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Higher Band SAR (Channel 810):

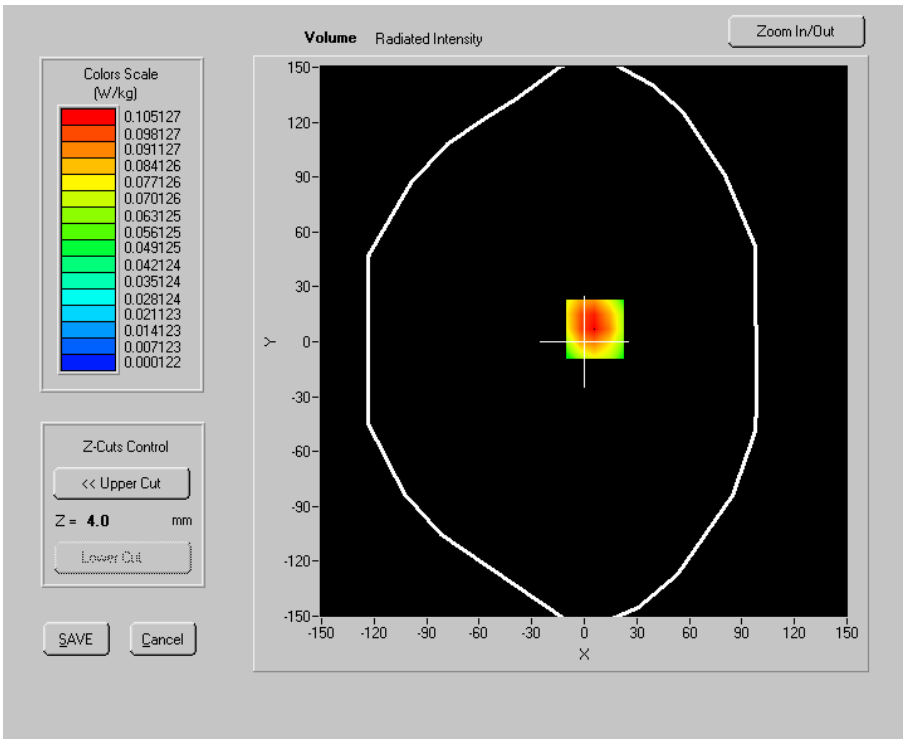
Experimental conditions	
Phantom	Validation plane
Device Position	Body
Band	PCS1900
Channels	High
Signal	TDMA
before/after Power Level:	29.14dBm/29.01 dBm
Liquid Temperature:	21.3°C
Duty Cycle:	1:8
Conversion Factor	39.76/36.98/33.37
Test date	2008.09.09

Frequency (MHz)	1909.800049
Relative permitivity (real part)	54.842999
Relative permitivity (imaginary part)	14.492100
Conductivity (S/m)	1.537612
Variation (%)	-3.330000



SURFACE SAR

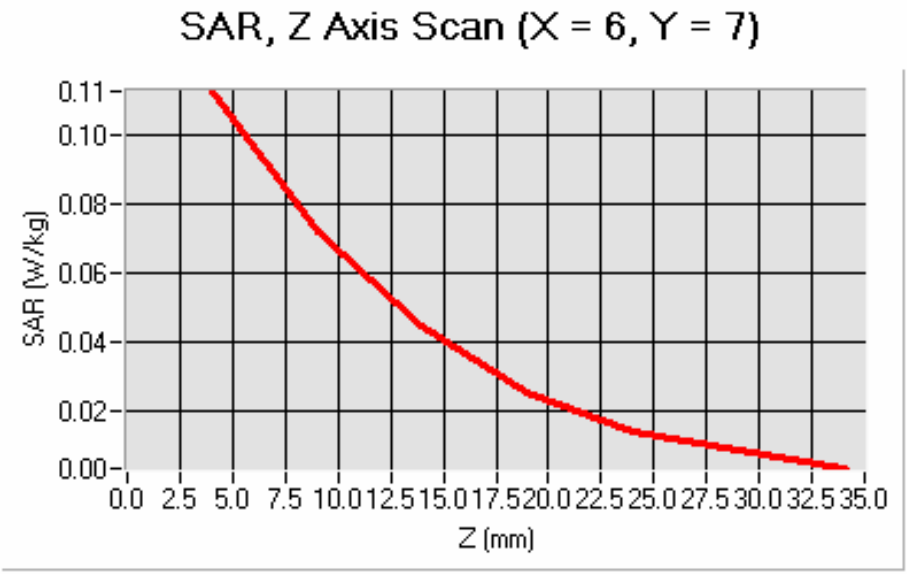
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=6.00, Y=7.00

SAR 10g (W/Kg)	0.065013
SAR 1g (W/Kg)	0.107104



检测结果/说明（续页）：
Results of test and additional explanation（continued page）

1.7 SAR System Validation Data

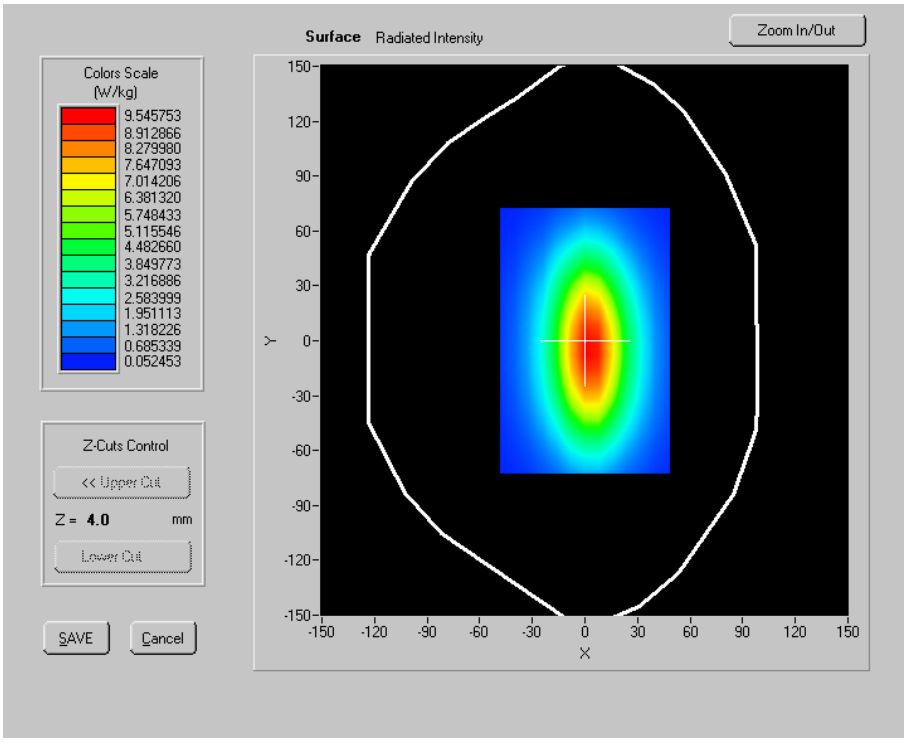
1.7.1 GSM 850MHz

Experimental conditions

Middle Band SAR (Channel 189):

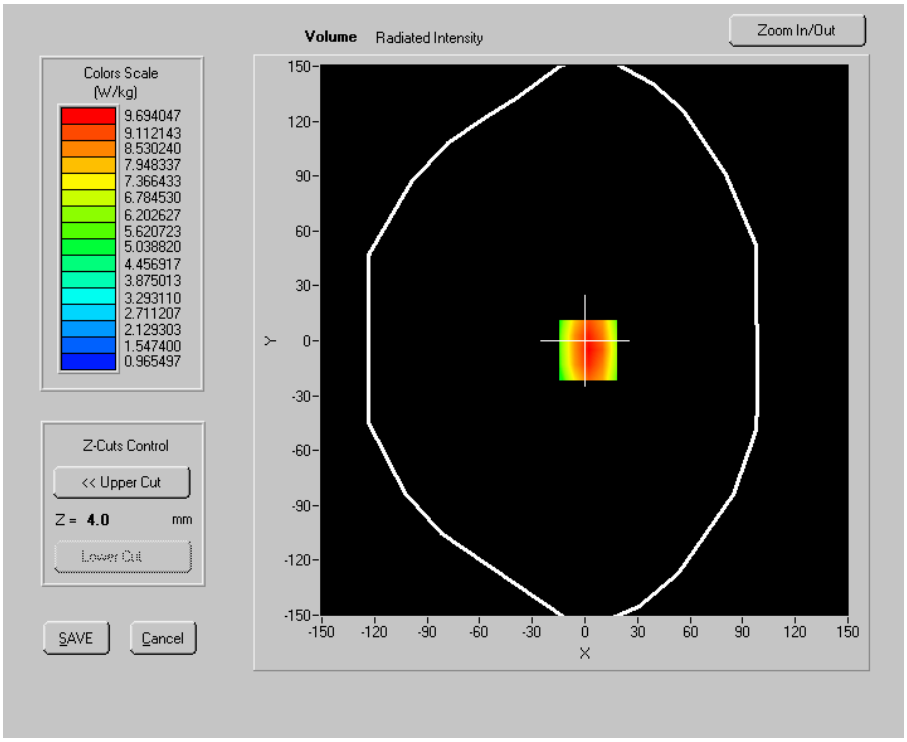
Phantom	Validation plane
Device Position	Dipole
Band	GSM850
Channels	Middle
Signal	CW
Input Power Level:	30dBm
Liquid Temperature:	21.1°C
Test data	2008.09.09

Frequency (MHz)	836.400024
Relative permitivity (real part)	41.415001
Relative permitivity (imaginary part)	19.700100
Conductivity (S/m)	0.915398
Variation (%)	-1.110000



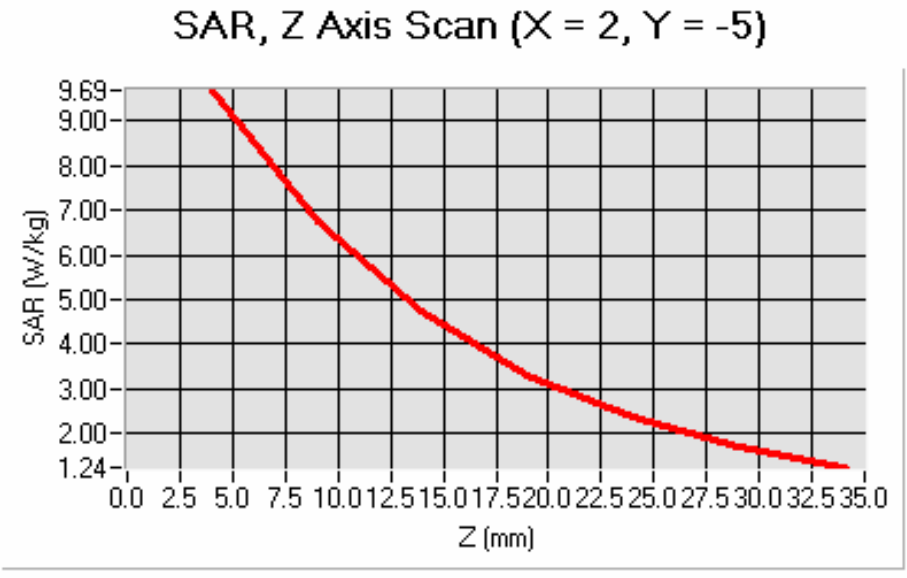
SURFACE SAR

检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR
Maximum location: X=2.00, Y=-5.00

SAR 10g (W/Kg)	6.197848
SAR 1g (W/Kg)	9.259419



检测结果/说明（续页）：
Results of test and additional explanation（continued page）

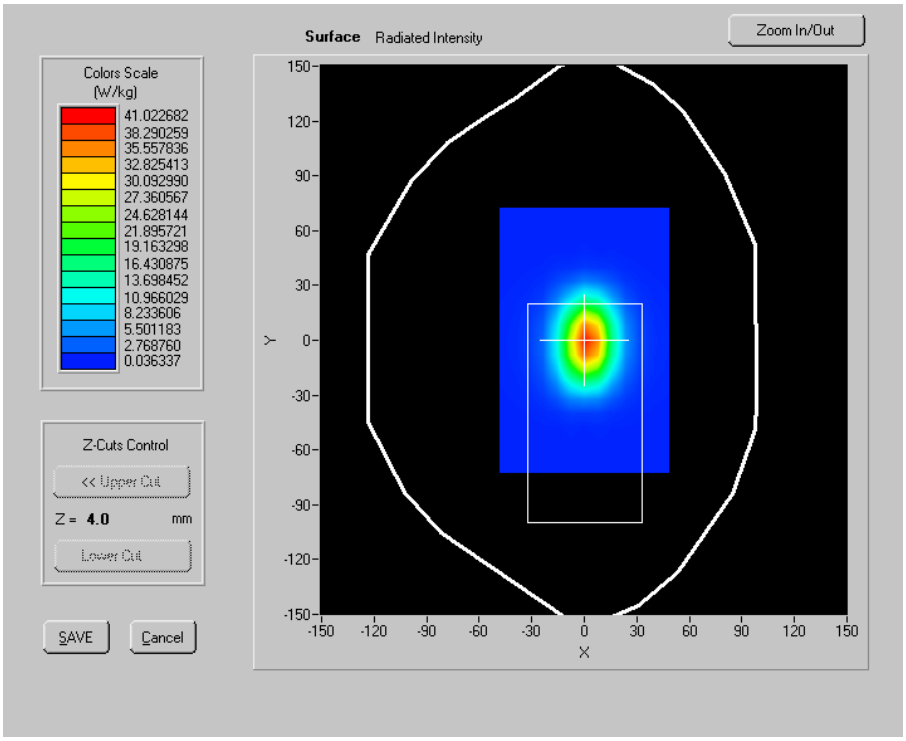
1..7.2 PCS 1900MHz

Experimental conditions

Middle Band SAR (Channel 661):

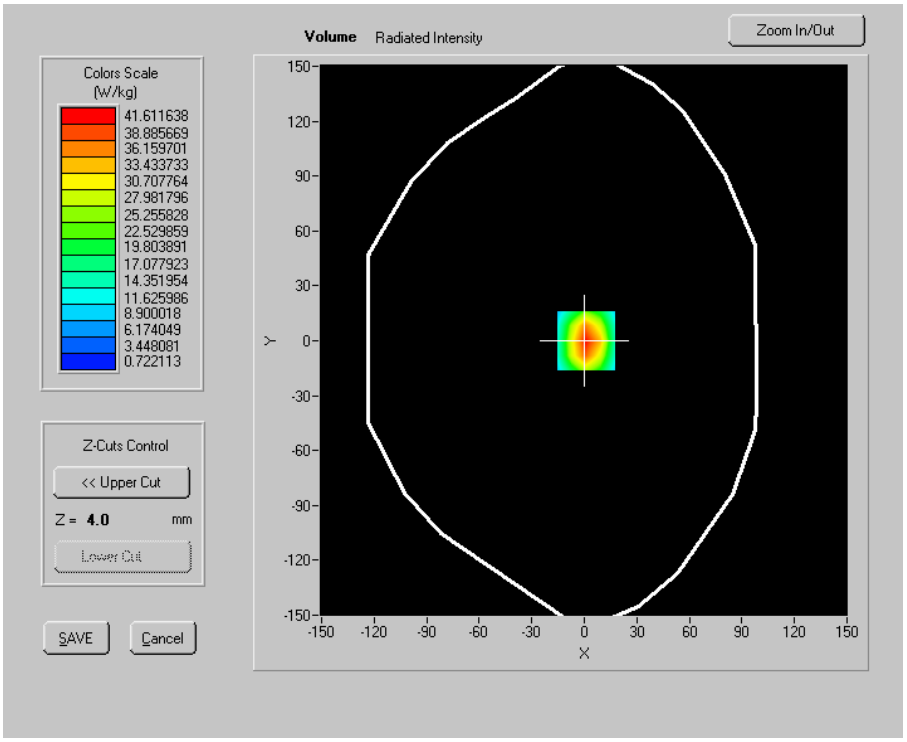
Phantom	Validation plane
Device Position	Dipole
Band	PCS 1900
Channels	Middle
Signal	CW
Input Power Level:	30dBm
Liquid Temperature:	21.0°C
Test date	2008.09.09

Frequency (MHz)	1880.000000
Relative permitivity (real part)	38.959000
Relative permitivity (imaginary part)	13.520850
Conductivity (S/m)	1.412178
Variation (%)	-1.130000



SURFACE SAR

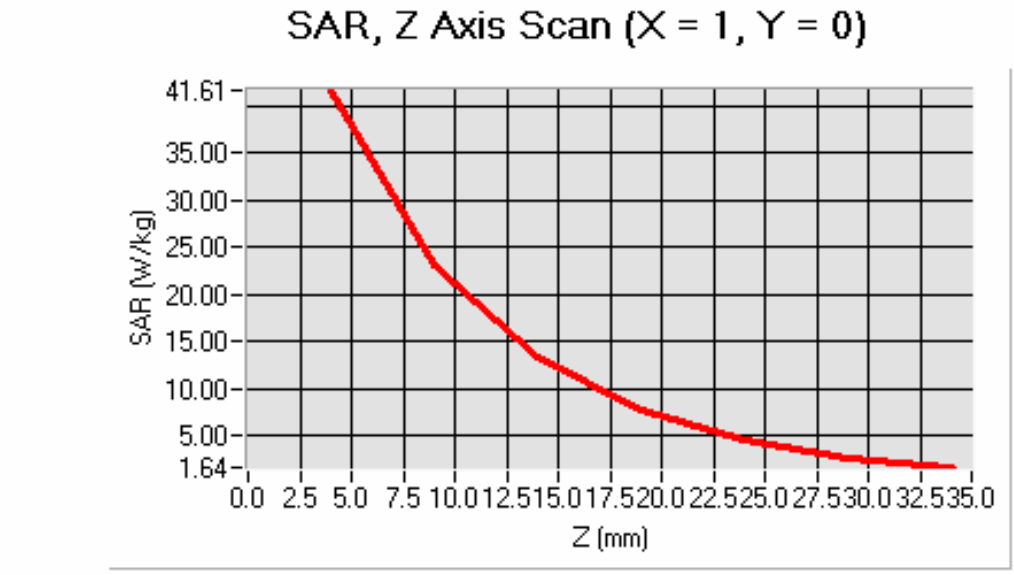
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=1.00, Y=0.00

SAR 10g (W/Kg)	20.395151
SAR 1g (W/Kg)	38.649521



检测结果/说明（续页）：
Results of test and additional explanation（continued page）

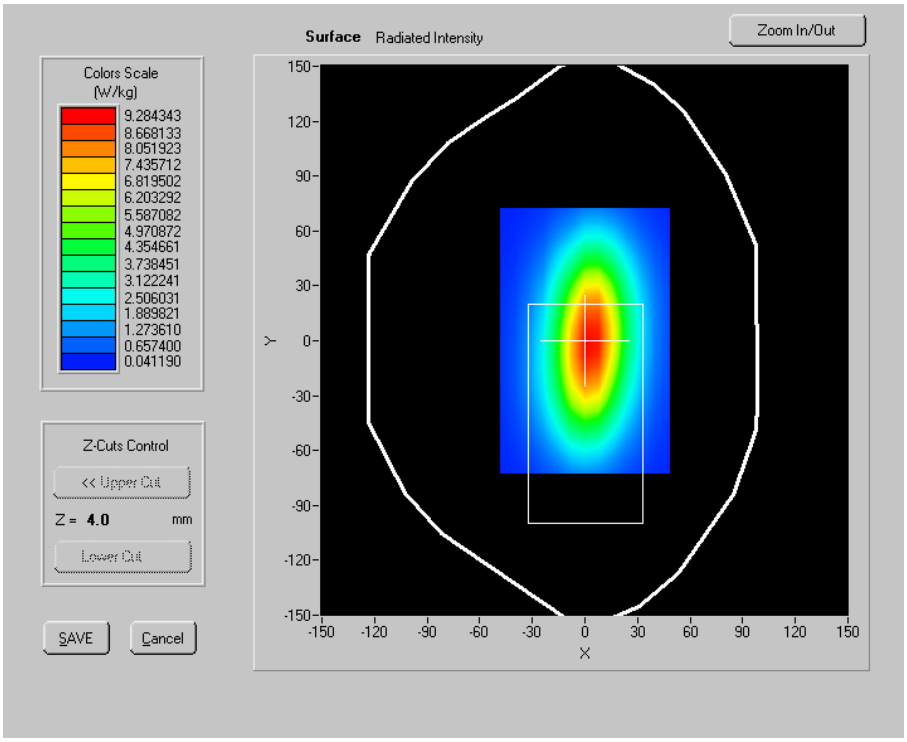
1.7.3 GSM 850MHz(Body)

Experimental conditions

Middle Band SAR (Channel 189):

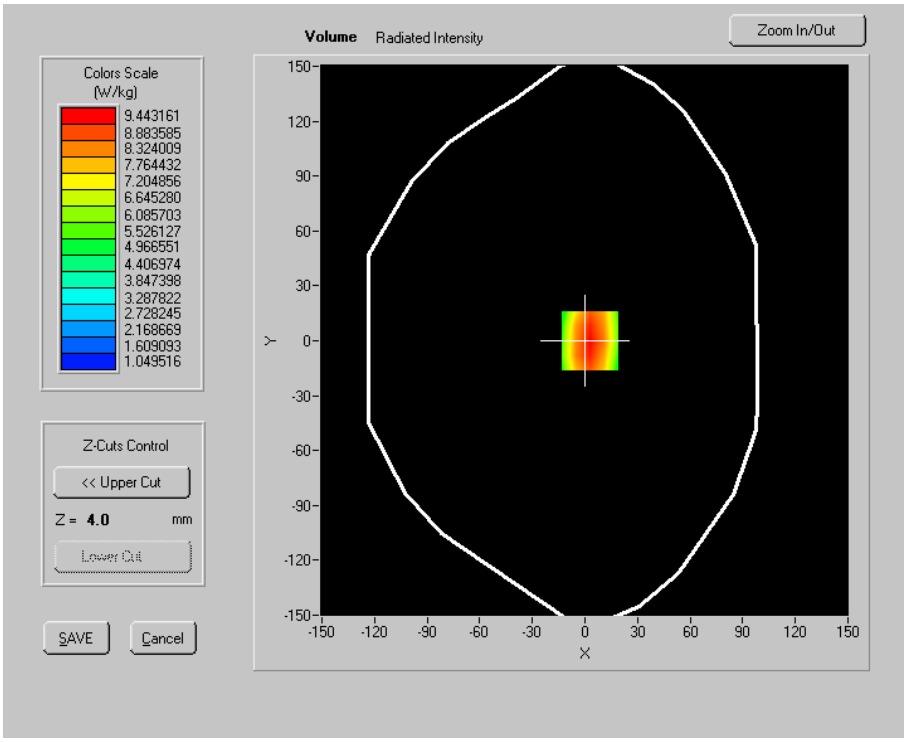
Phantom	Validation plane
Device Position	Dipole
Band	GSM850(Body)
Channels	Middle
Signal	CW
Input Power Level:	30dBm
Liquid Temperature:	21.3°C
Test data	2008.09.09

Frequency (MHz)	836.400024
Relative permitivity (real part)	54.209000
Relative permitivity (imaginary part)	21.116550
Conductivity (S/m)	0.981216
Variation (%)	-0.640000



SURFACE SAR

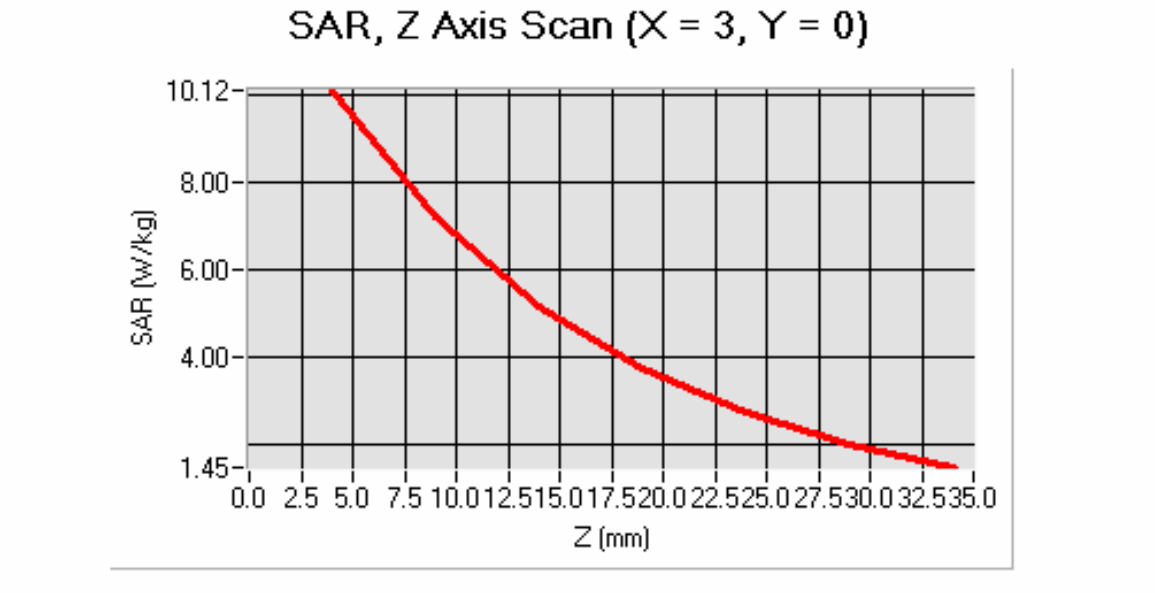
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=3.00, Y=0.00

SAR 10g (W/Kg)	6.551492
SAR 1g (W/Kg)	9.649266



检测结果/说明（续页）：
Results of test and additional explanation（continued page）

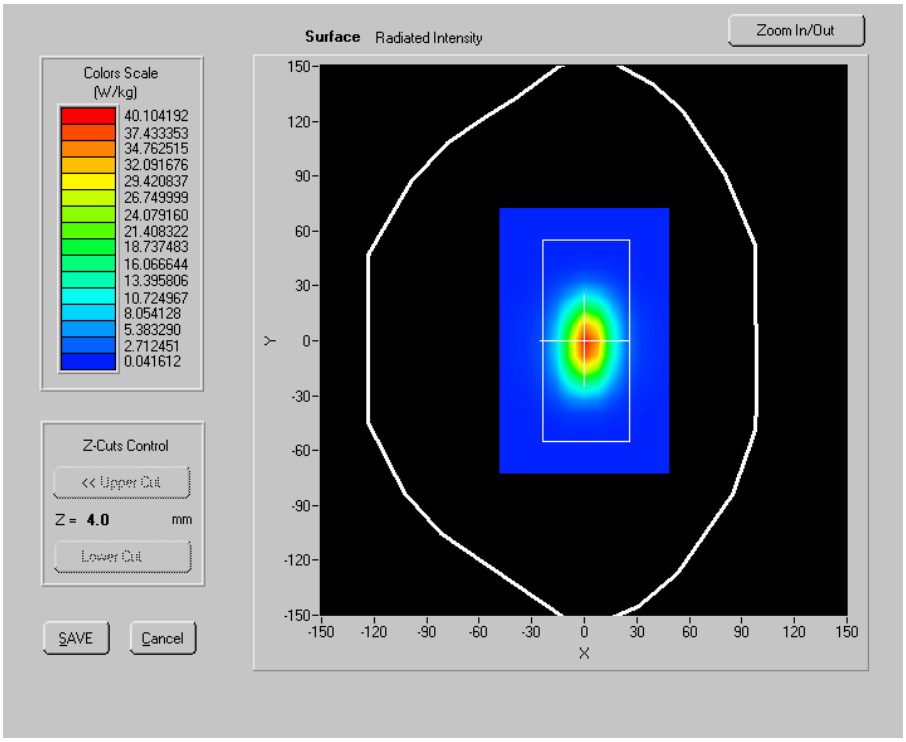
1.7.4PCS 1900MHz(Body)

Experimental conditions

Middle Band SAR (Channel 661):

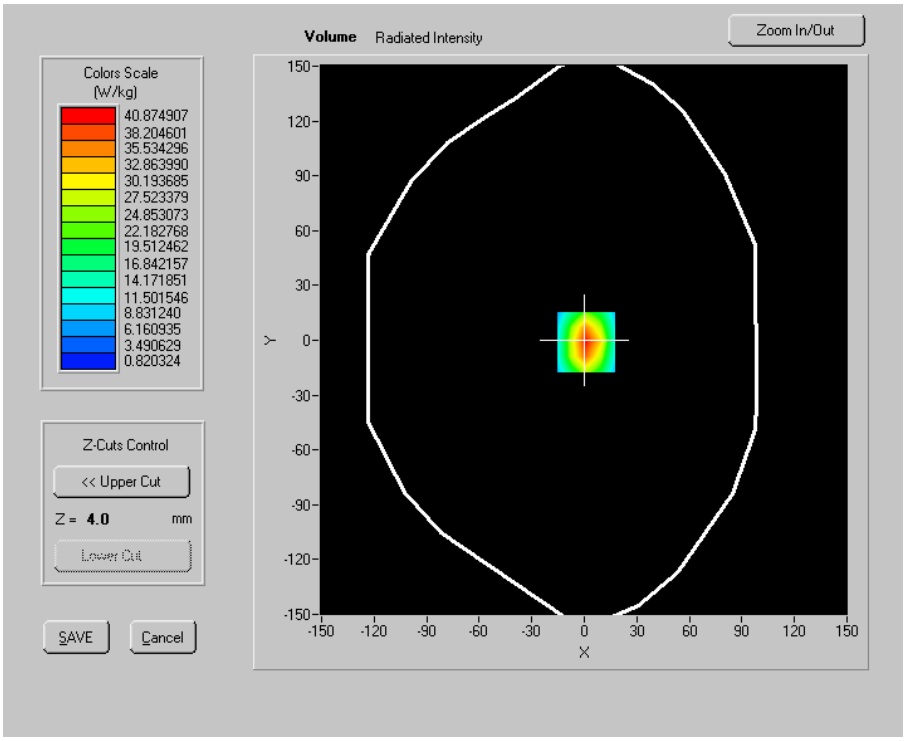
Phantom	Validation plane
Device Position	Dipole
Band	PCS 1900(Body)
Channels	Middle
Signal	CW
Input Power Level:	30dBm
Liquid Temperature:	21.0°C
Test date	2008.09.09

Frequency (MHz)	1880.000000
Relative permitivity (real part)	54.855999
Relative permitivity (imaginary part)	14.439600
Conductivity (S/m)	1.508136
Variation (%)	-0.840000



SURFACE SAR

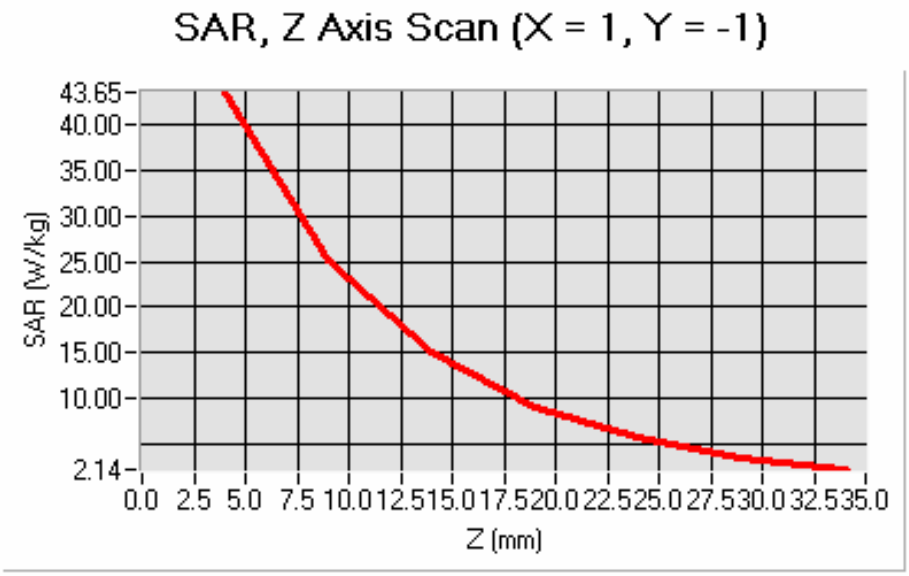
检测结果/说明（续页）：
Results of test and additional explanation（continued page）



VOLUME SAR

Maximum location: X=1.00, Y=-1.00

SAR 10g (W/Kg)	21.508011
SAR 1g (W/Kg)	40.186253

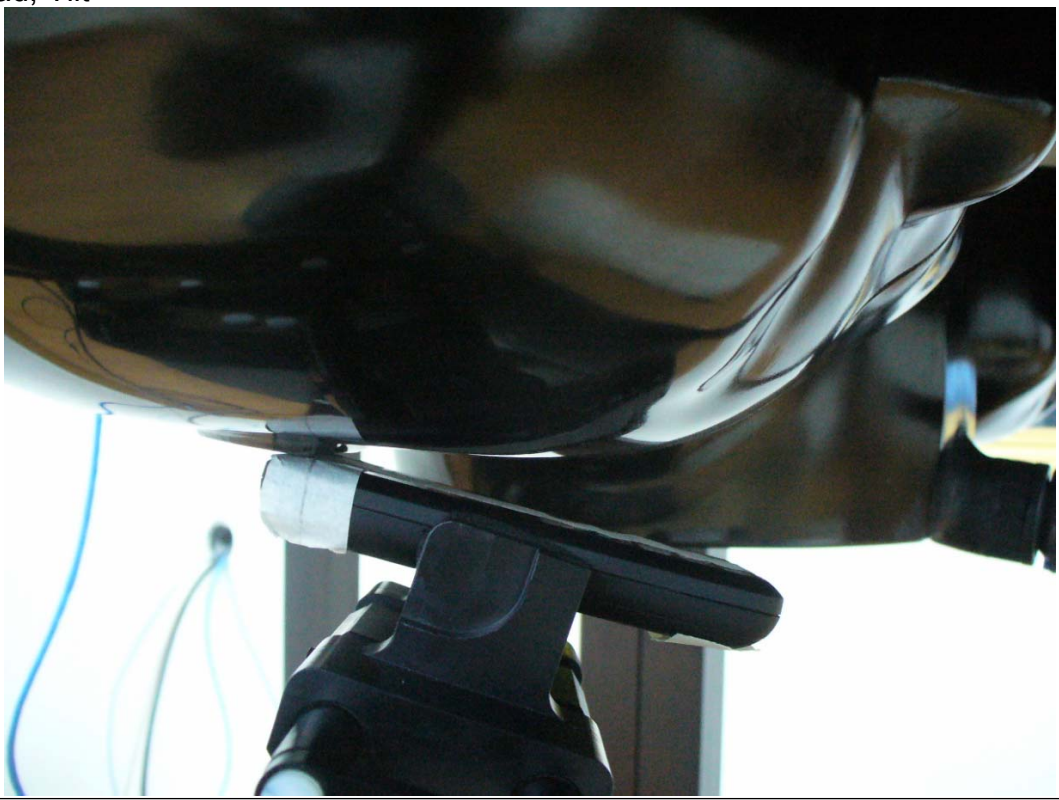


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Test photographs

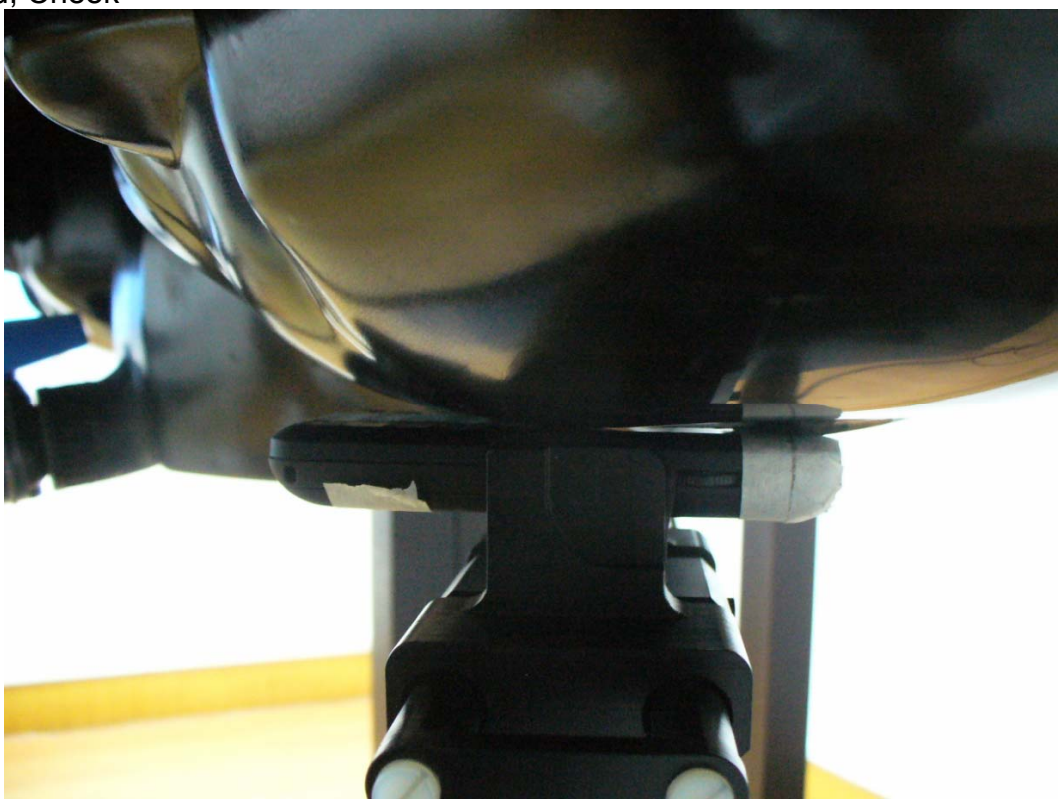
Right head, Cheek

Right head, Tilt

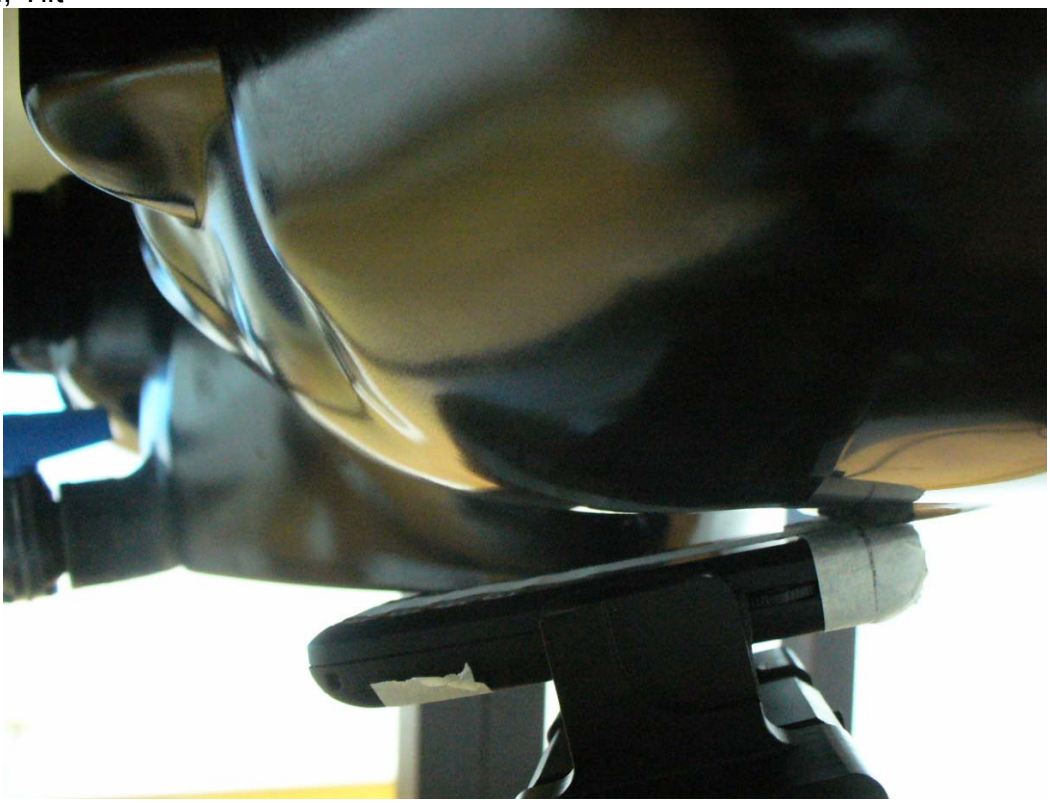


检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Left head, Cheek

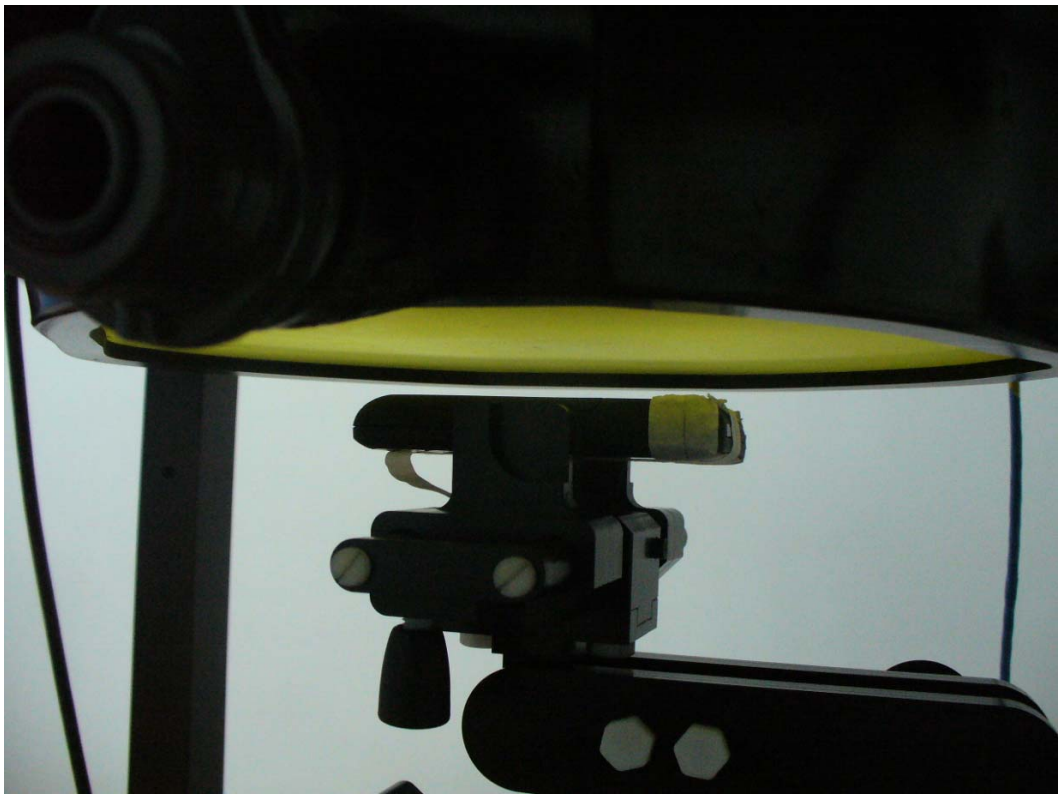


Left head, Tilt



检测结果/说明（续页）：
Results of test and additional explanation（continued page）

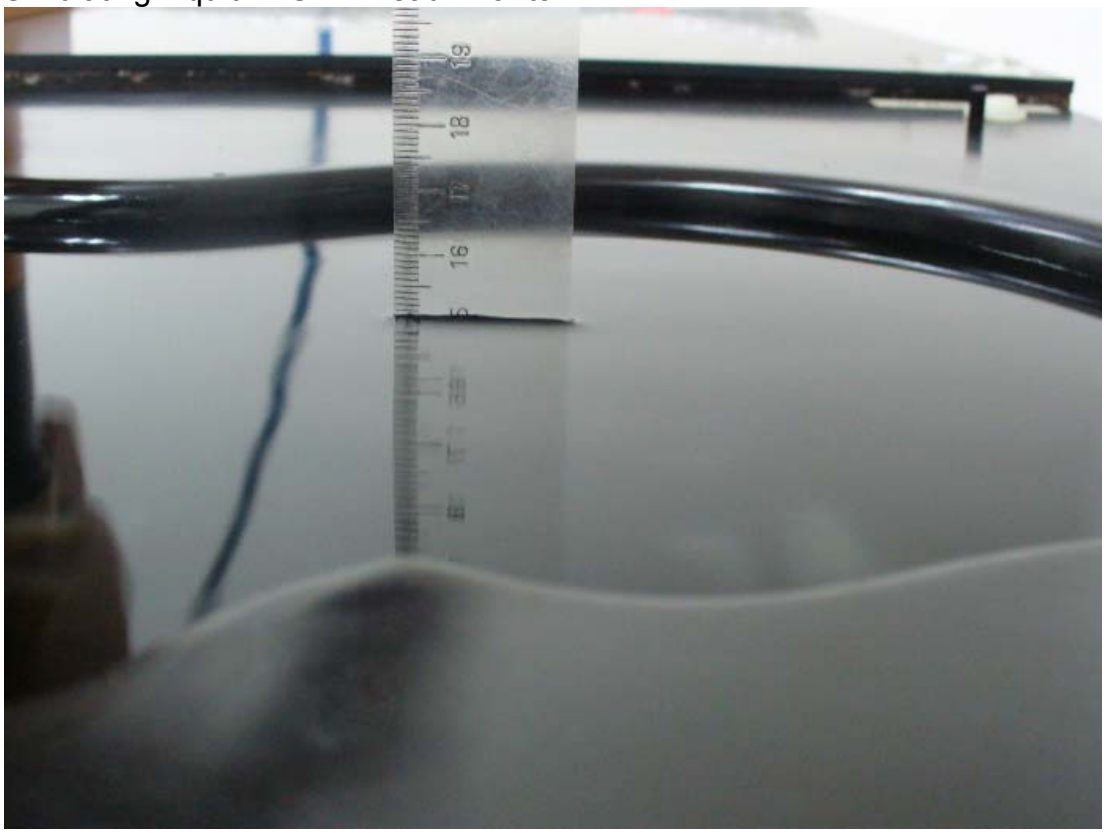
Body-worn



Body-worn（face to buttom）

检测结果/说明（续页）：
Results of test and additional explanation（continued page）

Depth of Simulating Liquid in SAM Head Phantom



Depth of Simulating Liquid in SAM Flat (Body) Phantom

Attachment 1：Test equipment

本次检测所使用的主要测量仪器：
Main measuring instruments used in this test

名称/型号 Name/Model	编号 Number	证书编号/有效期限 Certificate No./Due date	测量范围/准确度 Measuring range/accuracy
6 axis Robot KR3	容-027-01	/	6 axes, Repeatability： ± 0.05 mm，Nominal payload： 3 kg
Vector Network Analyzer ZVB 8	容-027-27	2008F31-10-001907 2009.06.26	300 kHz to 8 GHz，Frequency resolution：100 μHz，Measurement time：< 8 ms，Measurement bandwidths：1 Hz to 500 kHz
Signal Generator SMT 06	容-027-15	2008F33-10-001469 2009.06.26	5 kHz - 6 GHz,Resolution:0.1Hz,-144 to + 13 dBm,Max.RF power:1W,Max.DC voltage:0V / Level > -127 dBm:f<1.5 GHz:< 1dB; F>1.5 GHz:< 1.5dB; f> 3GHz:< 2dB
Power Meter NRVD	容-027-16	2008F31-10-001906 2009.06.24	100 kHz to 6 GHz,10nW to 500mW
Millivoltmeter 2000	容-027-26	2008F11-10-001004 2009.06.19	Measurement range:100.0000 ｍ V ～ 1000.000V Sensibility: 0.1μV～1ｍＶ.
Power Amplifier BLMA 0820-6	容-027-18	2008F33-10-001467 2009.06.29	0.8 - 2 GHz; Output:6W; Gain:min 37.8 / typ 40,± 2 dB; Harmonics:2nd:20dBc, 3rd:20dBc; Line power:125 W.
Isotropic E-Field Probe E-FIELD PROBE	容-027-54	2008J10-10-801001 2008.12.25	Dipole resistance (in the connector plane)：1M ﹒to 2M Axial isotropy in human-equivalent liquids：<0.25dBHemispherical Isotropy in humanequivalent liquids<0.5dB,Linearity<0.5dB,Lower SAR detection threshold: 0.0015 Watts/kg
SAM Phantom	容-027-22	/	/
Mobile Phone Positioning Device POSITIONING DEVICE	容-027-20	/	/
1900 MHz Reference Dipole Dipole 1900	容-027-06	2008.10.22	/
835 MHz Reference Dipole Dipole 835	容-027-03	2008.10.22	/

Attachment 2：Measurement Uncertainties

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	6.0	N	1	1	1	6.0	6.0	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	$(1\text{-}Cp)^{1/2}$	$(1\text{-}Cp)^{1/2}$	1.0	1.0	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	$\sqrt{Cp}$	$\sqrt{Cp}$	1.6	1.6	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	0.5	N	1	1	1	0.5	0.5	∞
Reponse Time	E.2.7	0.2	R	$\sqrt{3}$	1	1	0.1	0.1	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
Probe positioning with respect to Phantom	E.6.3	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	1.5	R	$\sqrt{3}$	1	1	0.9	0.9	∞
Test sample Related									
Test sample positioning	E.4.2.1	1.5	N	1	1	1	1.5	1.5	N-1
Device Holder Uncertainty	E.4.1.1	5.0	N	1	1	1	5.0	5.0	
Output power Variation - SAR drift measurement	6.6.2	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞

Attachment 2：Measurement Uncertainties

Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
Liquid conductivity - deviation from target value	E.3.2	0.5	R	$\sqrt{3}$	0.64	0.43	0.2	0.1	∞
Liquid conductivity - measurement uncertainty	E.3.3	2.5	N	1	0.64	0.43	1.6	1.1	M
Liquid permitivity - deviation from target value	E.3.2	1.7	R	$\sqrt{3}$	0.6	0.49	0.6	0.5	∞
Liquid permitivity - measurement uncertainty	E.3.3	2.5	N	1	0.6	0.49	1.5	1.2	M
Combined Standard Uncertainty			RSS				9.6	9.5	
Expanded Uncertainty (95% Confidence interval)			k				18.7	18.5	

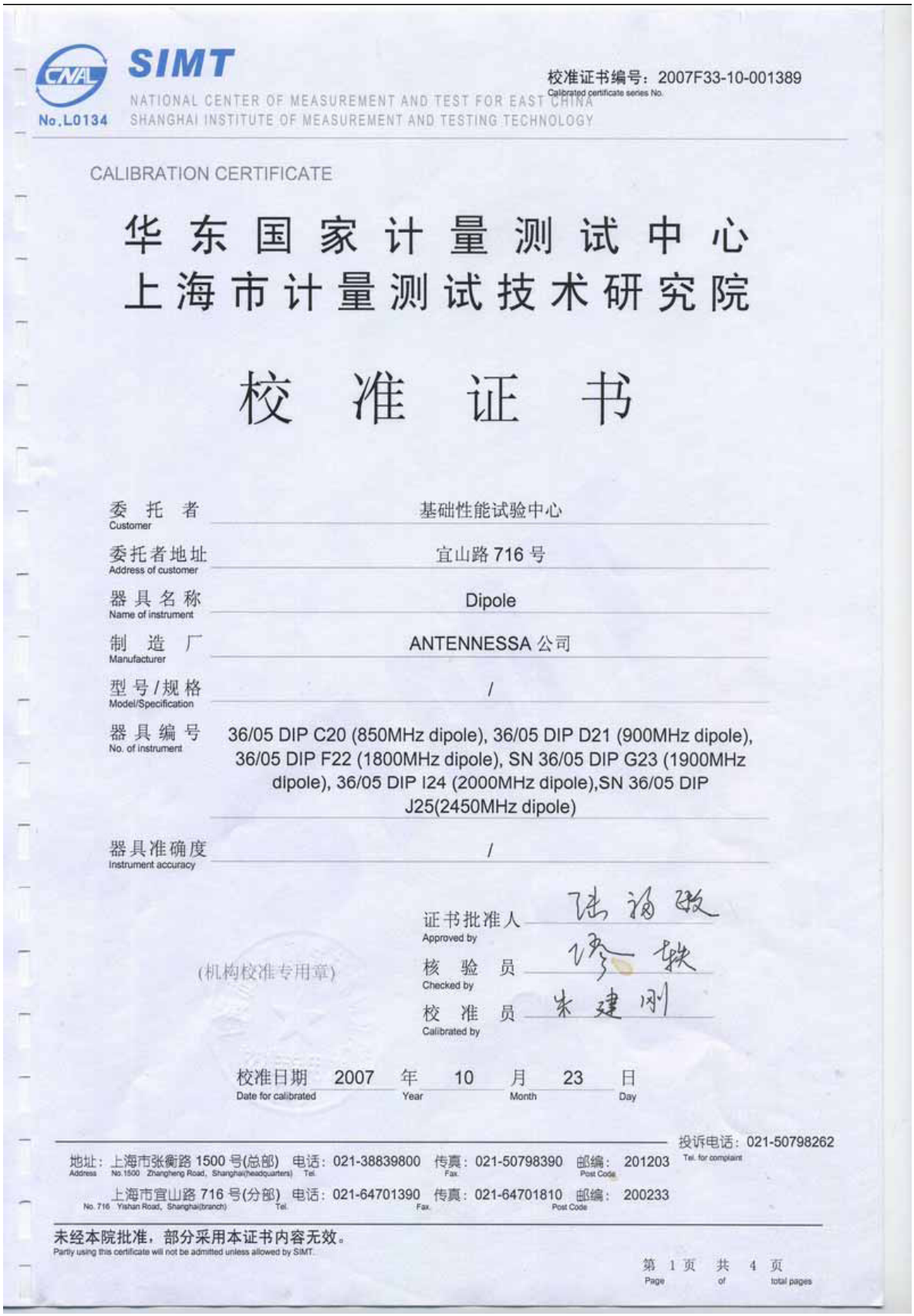
UNCERTAINTY FOR SYSTEM PERFORMANCE CHECK

a	b	c	d	e= f(d,k)	f	g	h= c*f/e	i= c*g/e	k
Uncertainty Component	Sec.	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	Vi
Measurement System									
Probe calibration	E.2.1	6.0	N	1	1	1	6.0	6.0	∞
Axial Isotropy	E.2.2	2.5	R	$\sqrt{3}$	$(1\text{-}Cp)^{1/2}$	$(1\text{-}Cp)^{1/2}$	1.0	1.0	∞
Hemispherical Isotropy	E.2.2	4.0	R	$\sqrt{3}$	$\sqrt{Cp}$	$\sqrt{Cp}$	1.6	1.6	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Linearity	E.2.4	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
System detection limits	E.2.5	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	0.5	N	1	1	1	0.5	0.5	∞
Reponse Time	E.2.7	0.2	R	$\sqrt{3}$	1	1	0.1	0.1	∞
Integration Time	E.2.8	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
RF ambient Conditions	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
Probe positioner Mechanical Tolerance	E.6.2	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
Probe positioning with respect to Phantom Shell	E.6.3	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Extrapolation, interpolation and integration Algoritms for Max. SAR Evaluation	E.5.2	1.5	R	$\sqrt{3}$	1	1	0.9	0.9	∞

Attachment 2：Measurement Uncertainties

Dipole									
Dipole axis to liquid Distance	8,E.4.2	1.0	N	$\sqrt{3}$	1	1	0.6	0.6	N-1
Input power and SAR drift measurement	8,6.6.2	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
Phantom and Tissue Parameters									
Phantom Uncertainty (Shape and thickness tolerances)	E.3.1	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
Liquid conductivity - deviation from target value	E.3.2	0.5	R	$\sqrt{3}$	0.64	0.43	0.2	0.1	∞
Liquid conductivity - measurement uncertainty	E.3.3	2.5	N	1	0.64	0.43	1.6	1.1	M
Liquid permitivity - deviation from target value	E.3.2	1.7	R	$\sqrt{3}$	0.6	0.49	0.6	0.5	∞
Liquid permitivity - measurement uncertainty	E.3.3	2.5	N	1	0.6	0.49	1.5	1.2	M
Combined Standard Uncertainty			RSS				8.0	8.0	
Expanded Uncertainty (95% Confidence interval)			k				15.7	15.5	

Attachment 3：Calibration Report of the dipole



CNAL No.L0134

SIMT
NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA
SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY

校准证书编号：2007F33-10-001389
Calibrated certificate series No.

CALIBRATION CERTIFICATE

华东国家计量测试中心
上海市计量测试技术研究院

校 准 证 书

委 托 者 Customer	基础性能试验中心
委托者地址 Address of customer	宜山路 716 号
器具名称 Name of instrument	Dipole
制 造 厂 Manufacturer	ANTENNESSA 公司
型号/规格 Model/Specification	/
器具编号 No. of instrument	36/05 DIP C20 (850MHz dipole), 36/05 DIP D21 (900MHz dipole), 36/05 DIP F22 (1800MHz dipole), SN 36/05 DIP G23 (1900MHz dipole), 36/05 DIP I24 (2000MHz dipole),SN 36/05 DIP J25(2450MHz dipole)
器具准确度 Instrument accuracy	/

证书批准人 Approved by 陈福敬
核 验 员 Checked by 陈 铁
校 准 员 Calibrated by 朱建刚

(机构校准专用章)

校准日期 Date for calibrated 2007 年 Year 10 月 Month 23 日 Day

地址：上海市张衡路 1500 号(总部) 电话：021-38839800 传真：021-50798390 邮编：201203 投诉电话：021-50798262
Address No.1500 Zhangheng Road, Shanghai(headquarters) Tel. Fax. Post Code Tel. for complaint
上海市宜山路 716 号(分部) 电话：021-64701390 传真：021-64701810 邮编：200233
No. 716 Yishan Road, Shanghai(branch) Tel. Fax. Post Code

未经本院批准，部分采用本证书内容无效。
Partly using this certificate will not be admitted unless allowed by SIMT.

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Page of total pages

Attachment 3：Calibration Report of the dipole

SIMT
NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA
No.L0134 SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY

校准证书编号：2007F33-10-001389
Calibrated certificate series No.

国家法定计量检定机构计量授权证书号（中心/院）：（国）法计（2002）01039 号/（2002）01019 号
The number of the Certificate of Metrological Authorization to The Legal Metrological Verification Institution is No.（2002）01039 / No.（2002）01019

中国实验室国家认可委员会（CNAL）实验室认可证书号：No.L0134
The number of the certificate accredited by CNAL is No.L0134

本次校准所依据的技术规范（代号、名称）：
Reference documents for the calibration (code 、name)

IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head form Wireless Communications Devices: Measure Techniques", December 2003

CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields form mobile phones (300 MHz – 3 GHz)", July 2001

Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

本次校准所使用的主要计量标准器具：
Main measurement standards used in this calibration

名称/型号 Name/Model	编号 Number	证书编号/有效期限 Certificate No./Due date	测量范围/准确度 Measuring range/accuracy
矢量网络分析仪 ZVB 8	容-027-27	2007F31-10-001767 2008.06.27	300 kHz to 8 GHz，频率分辨率：100 μHz，测量时间：< 8 ms，测量带宽：1 Hz to 500 kHz

以上计量标准器具的量值溯源至国家基准。
Quantity values of above measurement standards used in this calibration are traced to those of the national primary standards in the P.R. China.

校准地点及环境条件：
Location and environmental condition for the calibration

地点：Location 上海市计量测试技术研究院

温度：Ambient temperature 21.8-22.2 ℃；湿度：Relative humidity 43 %RH；其它：Others /

本次校准结果的扩展不确定度：
Expanded uncertainty

/

校准结果/说明：
Results of calibration and additional explanation

参见校准结果/说明
校准规范要求：
Return Loss must be less than -20dB

符合校准规范要求

本证书提供的结果仅对本次被校的器具有效。
The data are valid only for the instrument(s).

校准证书续页专用
Continued page of calibration certificate

第 2 页 共 4 页
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Attachment 3：Calibration Report of the dipole

SIMT
NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA
SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY
No.L0134

校准证书编号：2007F33-10-001389
Calibrated certificate series No.

校准结果/说明（续页）：
Results of calibration and additonal explanation（continued page）

1. Calibration procedure:
Return Loss is measured with the dipole mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis. During calibration, The flat phantom is filled with the liquid whose parameters are calibrated relative to different frequency.

2. Calibration Conditions:

A. The spacer from Dipole center to TSL:

Distance Dipole Center - TSL	Frequency
15mm±0.2mm with spacer	900MHz, 850MHz
10mm±0.2mm with spacer	1800MHz, 1900 MHz, 2000MHz, 2450 MHz

B. Head TSL parameters:
The following parameters and calculation were applied.
Head TSL temperature change is well controlled to be within 22±0.2°C during test.

Frequency	Nominal Head TSL Parameters (Permittivity/ Conductivity)	Measurement Head TSL parameters (Permittivity/ Conductivity)
850 MHz	42.53/0.94	41.97/0.96
900 MHz	42.00/0.99	41.20/0.97
1800 MHz	40.00/1.38	39.71/1.36
1900 MHz	40.00/1.40	39.65/1.37
2000 MHz	40.00/1.40	39.15/1.39
2450 MHz	39.00/1.84	38.56/1.82

C. Body TSL parameters:
The following parameters and calculation were applied.
Body TSL temperature change is well controlled to be within 22±0.2°C during test.

Frequency	Nominal Body TSL Parameters (Permittivity/ Conductivity)	Measurement Body TSL parameters (Permittivity/ Conductivity)
850 MHz	55.20/0.97	50.91/0.93
900 MHz	55.00/1.05	54.63/1.04
1800 MHz	53.30/1.52	51.39/1.53
1900 MHz	53.30/1.52	51.98/1.52
2000 MHz	53.30/1.52	51.58/1.51
2450 MHz	52.70/1.95	/

校准证书续页专用
Continued page of calibration certificate

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Attachment 3：Calibration Report of the dipole

SIMT

校准证书编号：2007F33-10-001389
Calibrated certificate series No.

NATIONAL CENTER OF MEASUREMENT AND TEST FOR EAST CHINA
No.L0134 SHANGHAI INSTITUTE OF MEASUREMENT AND TESTING TECHNOLOGY

校准结果/说明（续页）：
Results of calibration and additional explanation（continued page）

3. Measurement Results:

Frequency	Return Loss with Head TSL	Return Loss with Body TSL
850 MHz Dipole	-28.06 dB	-27.15 dB
900 MHz Dipole	-23.17 dB	-22.19 dB
1800 MHz Dipole	-21.14 dB	-21.08 dB
1900 MHz Dipole	-22.43 dB	-21.56 dB
2000 MHz Dipole	-22.71 dB	-21.25 dB
2450 MHz Dipole	-37.56 dB	/

备注：/

校准结果内容结束

校准证书续页专用
Continued page of calibration certificate

第 4 页 共 4 页
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Attachment 5：Statement of compliance with FCC RF exposure

Wireless phone is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for wireless mobile phones employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. * Tests for SAR are conducted with the phone transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the phone while operating can be well below the maximum value. This is because the phone is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a phone model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this model phone when tested for use at the ear is 0.450 W/Kg and when worn on the body as described in this user guide, is 0.392W/Kg (Body-worn measurements differ among phone models, depending upon available accessories and FCC requirements). While there may be differences between the SAR levels of various phones and at various positions, they all meet the government requirement for safe exposure.

The FCC has granted an Equipment Authorization for this model phone with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model phone is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/ oet after searching on FCC ID: WPMSANDOX-660.