SPECIFIC ABSORPTION RATE (SAR)

TEST REPORT

of

Fixed Wireless Phone on CDMA 1900MHz

Model Name:	PX330N
Brand Name:	Axesstel Inc
Report No.:	SH10060012S01
FCC ID:	PH7PX130N

prepared for

Axesstel Inc

6815 Flanders Drive, #210, San Diego, CA 92121, USA

prepared by

Shenzhen Electronic Product Quality Testing Center
Morlab Laboratory
3/F, Electronic Testing Building, Shahe Road, Xili,
Nanshan District, Shenzhen, 518055 P. R. China
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GENERAL SUMMARY

Product Name	Fixed Wireless Phone on CDMA 1900MHz	Model	PX330N
Brand Name	Axesstel Inc	Carrier	Oliver Liu
Quantity of EUT	One	Manufacturer	Asiatelco Technologies Co.
Standard(s)	**ANSI C95.1-1999:** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz. **OET 65(Edition 97-01), Supplement C (Edition 01-01):** Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields. **IEEE 1528-2003:** Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techuiques. **FCC Tracking Number:** 478906		
Conclusion	Localized Specific Absorption Rate (SAR) of this portable wireless equipment has been measured in all cases requested by the relevant standards cited in Clause 5.2 of this test report. Maximum localized SAR is below exposure limits specified in the relevant standards cited in Clause 5.1 of this test report. General Judgment: **Pass** **Date of issue: Dec . 21 . 2010**		
Comment	TX Freq. Band: 1851.25MHz–1908.75MHz (CDMA1900MHZ) RX Freq. Band: 1931.25MHz–1988.75MHz (CDMA1900MHZ) Antenna Character : build outside The test result only responds to the measured sample.		

Tested by: Huangyunlong, Date: 2010.12.30

Checked by: Zhang Jun, Date: 2010. 12. 30

Approved by: WeiBei, Date: 2010 . 12 . 30 .

TABLE OF CONTENT

1 GENERAL CONDITIONS

This report only refers to the item that has undergone the test.This report standalone does not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities.

This document is only valid if complete; no partial reproduction can be made without written approval of Shenzhen Morlab Communications Technology Co., Ltd.

This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of Shenzhen Morlab Communications Technology Co., Ltd. and the Accreditation Bodies, if it applies.

2 Administrative Date

2.1 Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co.,Ltd.
Department:	Testing Department
Address:	3Fl, Electronic Testing Building, ShaHe Road, NanShan District, Shenzhen, P. R. China
Telephone:	+86 755 86130268
Fax:	+86 755 86130218
Responsible Test Lab Managers:	Mr. Shu Luan

2.2 Identification of the Responsible Testing Location(s)

Company Name:	Shenzhen Electronic Product Quality Testing Center Morlab Laboratory
Address:	3Fl, Electronic Testing Building, ShaHe Road, NanShan District, Shenzhen, P. R. China

2.3 Organization Item

Morlab Report No.:	SH10060012S01
Morlab Project Leader:	Mr. Zhang Jun
Morlab Responsible for Accreditation scope:	Mrs.Wei Bei
Start of Testing:	2010-12-21
End of Testing:	2010-12-21

2.4 Identification of Applicant

Company Name:	Axesstel Inc
Address:	6815 Flanders Drive, #210， San Diego, CA 92121, USA
Contact person:	Oliver Liu
Telephone:	+86-21-51688806
Fax:	+86-21-33932400

2.5.Identification of Manufacture

Company Name:	Asiatelco Technologies Co.
Address:	#289 Bisheng Rd, Bld-8, 3F, Zhangjiang Hi-Tech Park, Pudong, Shanghai, China

Notes: This data is based on the information offered by the applicant.

3 Equipment Under Test (EUT)

3.1.Identification of the Equipment under Test

Product Name:	Fixed Wireless Phone on CDMA 1900MHz	
Brand name:	Axesstel Inc	
Model No:	PX330N	
General description:	Test frequency	CDMA 1900 MHz，
	Accessories	Charger, Battery
	Battery Model	ABL-1200A
	Battery specification	3.6V 1200mAh
	Battery Manufacture	Zetong Electron Science & Technique Co., Ltd
	Antenna type	CDMA1900
	Modulation mode	CDMA 1x

3.2.Identification of all used Test Sample of the Equipment under Test

EUT Code	Serial Number	Hardware Version	Software Version	IMEI
#1	N/A	P2	PX330SE_P2.1C.US_44_6_1T	N/A

NOTE:

1. The EUT consists of Hand Telephone Set and normal options: Charger, Lithium Battery as listed above.
2. Please refer to Appendix C for the photographs of the EUT. For a more detailed features description of the EUT, please refer to its User’s Manual.

4 OPERATIONAL CONDITIONS DURING TEST

4.1 Schematic Test Configuration

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 25, 600 and 1175 respectively in the case of CDMA 1900 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.

4.2 SAR Measurement System

ALSAS-10-U is fully compliant with the technical and scientific requirements of IEEE 1528, IEC 62209, CENELEC, ARIB, ACA, and the Federal Communications Commission. The system comprises of a six axes articulated robot which utilizes a dedicated controller.ALSAS-10U uses the latest methodologies and FDTD order to provide a platform which is repeatable with minimum uncertainty.

Applications Predefined measurement procedures compliant with the guidelines of CENELEC, IEEE, IEC, FCC, etc are utilized during the assessment for the device. Automatic detection for all SAR maxima are embedded within the core architecture for the system, ensuring that peak locations used for centering the zoom scan are within a 1mm resolution and a 0.05mm repeatable position. System operation range currently is available up to 6 GHz in simulated tissue.

4.2.1 Robot system specification

ALSAS-10U utilizes a six articulated robot, which is controlled using a Pentium based real-time movement controller. The movement kinematics engine utilizes proprietary (Thermo CRS) interpolation and extrapolation algorithms, which allow full freedom of movement for each of the six joints within the working envelop. Utilization of joint 6 allows for full probe rotation with a tolerance better than 0.05mm around the central axis.

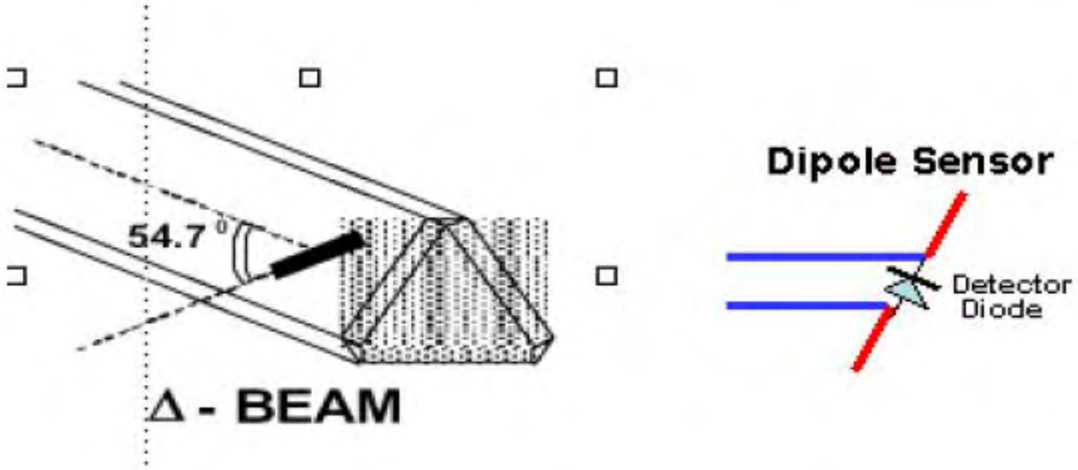
Robot/Controller Manufacturer	Thermo CRS
Number of Axis	Six independently controlled axis
Positioning Repeatability	0.05mm
Controller Type	Single phase Pentium based C500C
Robot Reach	710mm
Communication	RS232 and LAN compatible

4.2.2 Probe Specification

The isotropic E-Field probe has been fully calibrated and assessed for isotropic, and boundary effect within a controlled environment. Depending on the frequency for which the probe is calibrated the method utilized for calibration will change. A number of methods is used for calibrating probes, and these are outlined in the table below:

Calibration Frequency	Air Calibration	Tissue Calibration
850MHZ	TEM Cell	Temperature
1900MHZ	TEM Cell	Temperature

The E-Field probe utilizes a triangular sensor arrangement as detailed in the diagram below:



SAR is assessed with a calibrated probe which moves at a default height of 5mm from the center of the diode, which is mounted to the sensor, to the phantom surface (in the Z Axis). The 5mm offset height has been selected so as to minimize any resultant boundary effect due to the probe being in close proximity to the phantom surface.

The following algorithm is an example of the function used by the system for linearization of the output from the probe when measuring complex modulation schemes.

$$V_i = U_i + U_i^{\,2} \cdot \frac{cf}{dcp_i}$$

Isotropic E-Field Probe Specification

Calibration in Air	Frequency Dependent Below 2GHz Calibration in air performed in a TEM Cell Above 2GHz Calibration in air performed in waveguide
Sensitivity	0.70 μV/(V/m)^2 to 0.85 μV/(V/m)^2
Dynamic Range	0.0005 W/kg to 100W/kg
Isotropic Response	Better than 0.2dB
Diode Compression point (DCP)	Calibration for Specific Frequency
Probe Tip Radius	< 5mm
Sensor Offset	1.56 (+/- 0.02mm)
Probe Length	290mm
Video Bandwidth	@ 500 Hz: 1dB @1.02 KHz: 3dB
Boundary Effect	Less than 2% for distance greater than 2.4mm
Spatial Resolution	Diameter less than 5mm Compliant with Standards

Boundary detection Unit and Probe Mounting Device

ALSAS-10U incorporates a boundary detection unit with a sensitivity of 0.05mm for detecting all types of surfaces. The robust design allows for detecting during probe tilt (probe normalize) exercises, and utilizes a second stage emergency stop. The signal electronics are directly into the robot controller for high accuracy surface detection in lateral and axial detection modes (X, Y, &Z). The probe is mounted directly onto the Boundary Detection unit for accurate tooling and displacement calculations controlled by the robot kinematics. The probe is connected to an isolated probe interconnect where the output stage of the probe is fed directly into the amplifier stage of the Daq-Paq.

Daq-Paq (Analog to Digital Electronics)

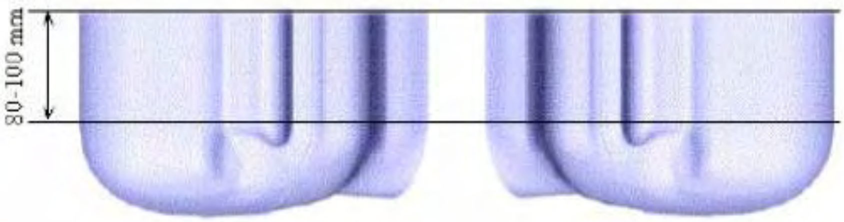
ALSAS-10U incorporates a fully calibrated Daq-Paq (analog to digital conversion system) which has a 4 channel input stage, sent via a 2 stage auto-set amplifier module. The input signal is amplified accordingly so as to offer a dynamic range from 5μ V to 800mV. Integration of the fields measured is carried out at board level utilizing a Co-Processor which then sends the measured fields down into the main computational module in digitized form via a RS232 communications port. Probe linearity and duty cycle compensation is carried out within the main Daq-Paq module.

ADC	12 Bit
Amplifier Range	20mV to 200mV and 150mV to 800mV
Field Integration	Local Co-Processor utilizing proprietary integration algorithms
Number of Input Channels	4 in total 3 dedicated and 1 spare
Communication	Packet data via RS232

4.2.3 Phantoms, Device Holder and Simulant Liquid

4.2.3.1 Sam Phantom

The SAM phantoms developed using the IEEE SAM CAD file. They are fully compliant with the requirements for both IEEE 1528 and FCC Supplement C. Both the left and right SAM phantoms are interchangeable, transparent and include the IEEE 1528 grid with visible NF and MB lines.



APREL Laboratories Universal Phantom

The Universal Phantom is used on the ALSAS-10U as a system validation phantom. The Universal Phantom has been fully validated both experimentally from 800MHz to 6GHz and numerically using XFDTD numerical software. The shell thickness is 2mm overall, with a 4mm spacer located at the NF/MB intersection providing an overall thickness of 6mm in line with the requirements of IEEE-1528.

The design allows for fast and accurate measurements, of handsets , by allowing the conservative SAR to be evaluated at on frequency for both left and right head experiments in one measurement.

Device and Dipole Holder

ALSAS Universal Workstation

ALSAS Universal workstation allows for repeatability and fast adaptability. It allows users to do calibration, testing and measurement using different types of phantoms with one set up, which significantly speeds up the measurement process.

Universal Device Positioner

The universal device positioner allows complete freedom of movement of the EUT. Developed to hold a EUT in a free-space scenario any additional loading attributable to the material used in the construction of the positioner has been eliminated. Repeatability has been enhanced through the linear scales which form the design used to indicate positioning for any given test scenario in all major axes. A 15° tilt movements for head SAR analysis. Overall uncertainty for measurements has been reduced due to the design of the Universal device positioner, which allows positioning of a device in as near to a free-space scenario as possible, and by providing the means for complete repeatability.

4.2.3.2 Tissue Simulating Liquids

There is no simulating liquids that can cover all frequency bands. Therefore, our system is using different liquids for the measured band as explained bellows.

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

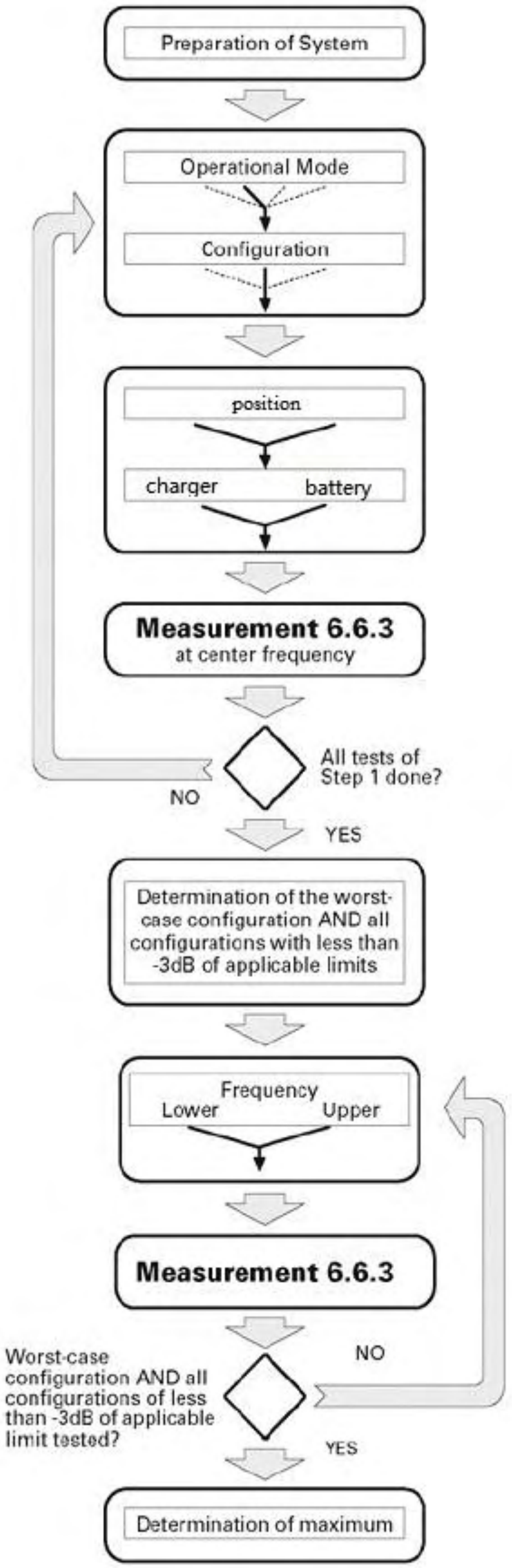
GSM liquid: is made of Sugar, de-ionized water and NaCl, reconstituting the electric properties of human tissues at 850MHz.

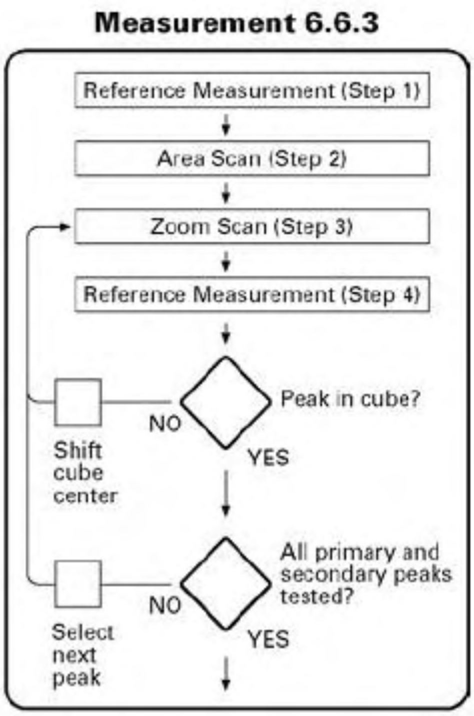
PCS Liquid: is made of de-ionized water, Glycol monobutyl and NaCl, reconstituting the electric properties of human tissues at 1900MHz.

Several measurement systems are available for measuring the dielectric parameters.

Antennessa has developed its own software, based on a coaxial probe. This method allows measurement of liquid permittivity between 300 MHz and 6GHz.

4.2.4 SAR measurement procedure



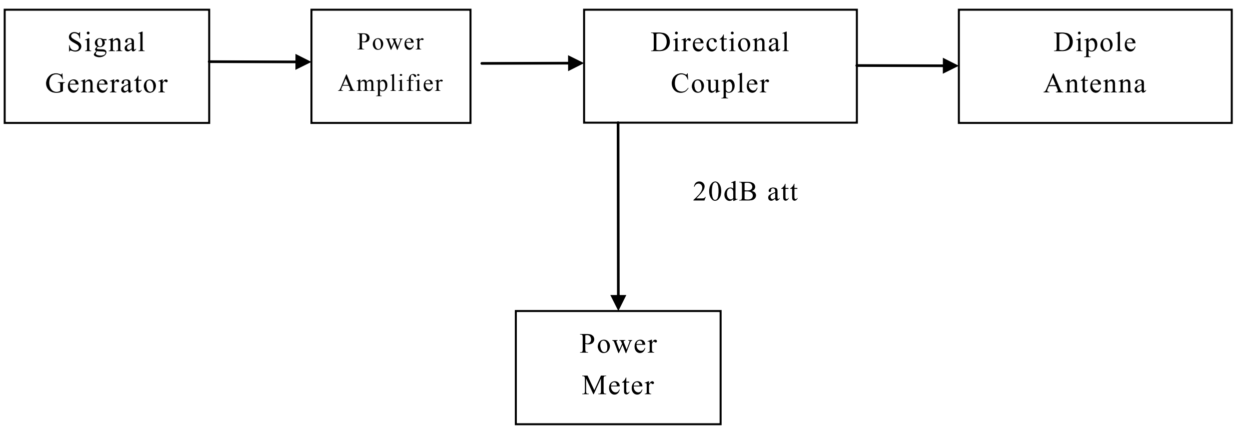


After an area scan has been done at a fixed distance of 8mm from the surface of the phantom on the source side, a 3D scan is set up around the location of the maximum spot SAR. First, a point within the scan area is visited by the probe and a SAR reading taken at the start of testing. At the end of testing, the probe is returned to the same point and a second reading is taken. Comparison between these start and end readings enables the power drift during measurement to be assessed.

Above is the scanning procedure flow chart and table from the IEEE P1528 standard. This is the procedure for which all compliant testing should be carried out to ensure that all variations of the device position and transmission behavior are tested.

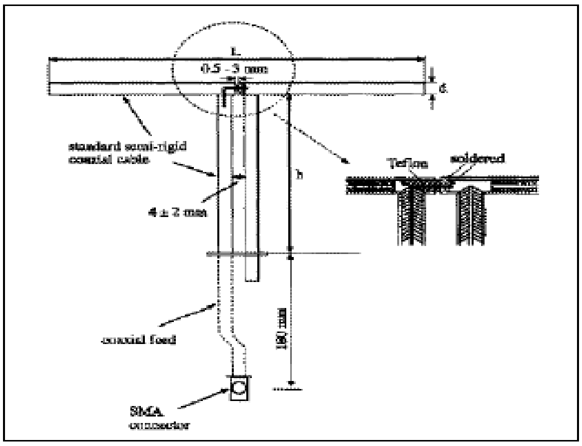
4.2.5 Validation Test Using Flat Phantom

The following procedure, recommended for performing validation tests using flat phantom is based on the procedures described in the IEEE standard P1528. Setup according to the setup diagram below:



4.2.5.1 Setting up the Box Phantom for Validation Testing

Validation Dipoles



The dipoles used are based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of both IEEE and FCC Supplement C. The table below provides details for the mechanical and electrical specifications for the dipoles.

Frequency	L(mm)	h(mm)	d(mm)
850MHZ	160	89.8	3.6
1900MHZ	73	39.5	3.6

Validation Result

System Performance Check at 1900MHz				
Validation Kit: ASL-D-1900-S-2				
Frequency(MHz)	Description	SAR(W/Kg) 1g	SAR(W/Kg) 10g	Tissue Temp.(℃)
1900MHz	Reference result	39.7	20.5	N/A
	+/-5%window	37.715 to 41.685	19.475 to 21.525	
	21-Dec 10	38.79	20.08	21.0
Note: All SAR values are normalized to 1W forward power.				

4.2.6 Measurement Procedure

The following steps are used for each test position

Establish a call with the maximum output power with a base station simulator. The connection between the mobile phone and the base station simulator is established via air interface.

Measurement of the local E-field distribution is done with a grid of 8 to 16mm*8 to 16mm and a constant distance 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*32mm is assessed by measuring 5 or 8*5 or 8*4 or 5mm. With these data, the peak spatial-average SAR value can be calculated.

4.2.7 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.

5 CHARACTERISTICS OF THE TEST

5.1.1 Applicable Limit Regulations

ANSI C95.1-1999: Product standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones.

It specifies the maximum exposure limit of 1.6 W/kg as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

5.1.2 Applicable Measurement Standards

IEEE 1528-2003: Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones.

OET 65(Edition 97-01), Supplement C (Edition 01-01): Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields.
It specifies the measurement method for demonstration of compliance with the SAR limits for such equipments.

6 LABORATORY ENVIRONMENT

Table: The Ambient Conditions during SAR Test

Temperature	Min. =15°C, Max. =30°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.	

7 TEST RESULTS

7.1 Explain

The EUT has been tested under the operating conditions.

7.2 Dielectric Performance

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

Table: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 23.0~23.8 ℃, humidity: 54~60%.			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	1900 MHz	53.3	1.52
Validation value **(Dec 21)**	1900 MHz	52.84	1.54

7.3 Summary of Measurement Results (CDMA1900)

Conducted Power(dBm)

Test Model	Test Status	Channel	Frequency(MHz)	Conducted Power(dBm)
CDMA 2000 1xRTT	RC1+SO55	25 (Low)	1851.25	23.75
		600 (Mid)	1880.00	23.59
		1175 (High)	1908.75	22.89
	RC3+SO32	25 (Low)	1851.25	23.60
		600 (Mid)	1880.00	23.45
		1175 (High)	1908.75	22.73
	FCH+SCH_RC3	25 (Low)	1851.25	23.62
		600 (Mid)	1880.00	23.48
		1175 (High)	1908.75	22.70

According to KDB 941225, the body SAR is measured in RC3 with SO32. Body SAR for RC1 is not required because the maximum power is less than 1/4 dB higher than RC3. SAR for FCH+SCH is not required when the maximum power is less than 1/4 dB higher than that measured with FCH only.

Table 1: SAR Values (CDMA 1900), Measured against the body.

Temperature: 20.0~21.0 ℃, Relative Humidity: 45~50%.		
Limit of SAR (W/kg)	**1 g Average**	
	1.6	
Test Configuration	**Measurement Result (W/kg)**	
	1 g Average(W/kg)	**Power Drift(%)**
Back Side with antenna position 1 Middle Channel (with battery)	0.049	3.446
Back Side with antenna position 2 Middle Channel (with battery)	0.111	-4.671
Back Side with antenna position 3 Middle Channel (with battery)	0.232	4.117
Back Side with antenna position 1 Middle Channel (with adapter)	0.080	-3.780
Back Side with antenna position 2 Middle Channel (with adapter)	0.198	1.841
Back Side with antenna position 3 Low Channel (with adapter)	0.325	2.415
Back Side with antenna position 3 Middle Channel (with adapter)	0.273	-0.748
Back Side with antenna position 3 High Channel (with adapter)	0.223	-4.374

7.4 Conclusion

Peak Spatial-Average Specific Absorption Rate (SAR) of this portable wireless device has been measured in all configurations requested by the relevant standards cited in Clause 5.2 of this report. SAR values are below exposure limits specified in the relevant standards cited in Clause 5.1 of this test report.

8 Measurement Uncertainties

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

UNCERTAINTY EVALUATION FOR HANDSET SAR TEST

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	ci1 (1-g)	ci1 (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	(1-cp)1/2	(1-cp)1/2	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation	3.7	rectangular	√3	1	1	2.1	2.1

and Integration							
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	0.6	rectangular	√3	1	1	0.3	0.3
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	0.0	normal	1	0.7	0.5	0.0	0.0
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	2.4	normal	1	0.6	0.5	1.4	1.2
Combined Uncertainty		RSS				9.3	9.2
Combined Uncertainty (coverage factor=2)		Normal(k=2)				18.7	18.3

9 MAIN TEST INSTRUMENTS

Instrument	Manufacture	Model No.	Serial No.	Last Calibration
Universal Work Station	Aprel	ALS-UWS	100-00154	Jun.2010
Data Acquisition Package	Aprel	ALS-DAQ-PAQ-3	110-00215	Jun.2010
Probe Mounting Device and Boundary Detection Sensor System	Aprel	ALS-PMDPS-3	120-00265	Jun.2010
Miniature E-Field Probe	Aprel	ALS-E-020	273-B	Sep.2010
Left ear SAM Phontom	Aprel	ALS-P-SAM-L	130-00312	N/A
Right ear SAM Phontom	Aprel	ALS-P-SAM-R	140-00362	N/A
Universal SAM Phontom	Aprel	ALS-P-SU-1	150-00410	N/A
Reference Validation Dipole 900MHz	Aprel	ALS-D-900-S-2	190-00607	N/A
Reference Validation Dipole 1800MHz	Aprel	ALS-D-1800-S-2	200-00657	N/A
Dielectric Probe Kit	Aprel	ALS-PR-DIEL	260-00955	N/A
Device Holder 2.0	Aprel	ALS-H-E-SET-2	170-00506	N/A
SAR software	Aprel	ALS-SAR-AL-10	Ver.2.3.6	N/A
CRS C500C Controller	Thermo	ALS-C500	RCF0504291	N/A
CRS F3 Robot	Aprel	ALS-F3-SW	N/A	N/A
Power Amplifier	Mini-Circuit	SN0974	040306	N/A
Directional Coupler	Agilent	778D-012	N/A	N/A
Universal Radio Communication Tester	Rohde&Schwarz	CMU200	104845	Jan.10
Vector Network	Anritsu	MS4623B	N/A	Nov.10
Signal Generator	Agilent	E8257D	N/A	Jan.10
Power Meter	Rohde&Schwarz	NRP	N/A	Jan.10

ANNEX A- Accreditation Certificate

of

Shenzhen Morlab Communications Technology Co.,Ltd.

CONFORMANCE TEST REPORT FOR
HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

Fixed Wireless Phone on CDMA 1900MHz

REPORT NO: SH10060012S01
Type Name: PX330N

Hardware Version： P2
Software Version： PX330SE_P2.1C.US_44_6_1T

Accreditation Certificate

ilac-MRA CNAS

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(No. CNAS L1659)

China National Accreditation Service for Conformity Assessment has accredited

Shenzhen Electronic Product Quality Testing Center

Electronic Testing Building, Shahe Road, Xili, Nanshan District,

Shenzhen, Guangdong, China

to ***ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories)*** *for the competence in the field of testing and calibration.*

The scope of accreditation is detailed in the attached schedule bearing the same accreditation number as above. The schedule forms an integral part of this certificate.

Date of Issue: 2009-09-29

Date of Expiry: 2012-09-28

Date of Initial Accreditation: 1999-08-03

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment(CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation systems for conformity assessment. CNAS is the signatory to International Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (ILAC MRA), and the signatory to Asia Pacific Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (APLAC MRA).

ANNEX B- Test Layout

of

Shenzhen Morlab Communications Technology Co.,Ltd.

CONFORMANCE TEST REPORT FOR
HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

Fixed Wireless Phone on CDMA 1900MHz

REPORT NO: SH10060012S01
Type Name: PX330N
Hardware Version： P2
Software Version： PX330SE_P2.1C.US_44_6_1T

Test Layout

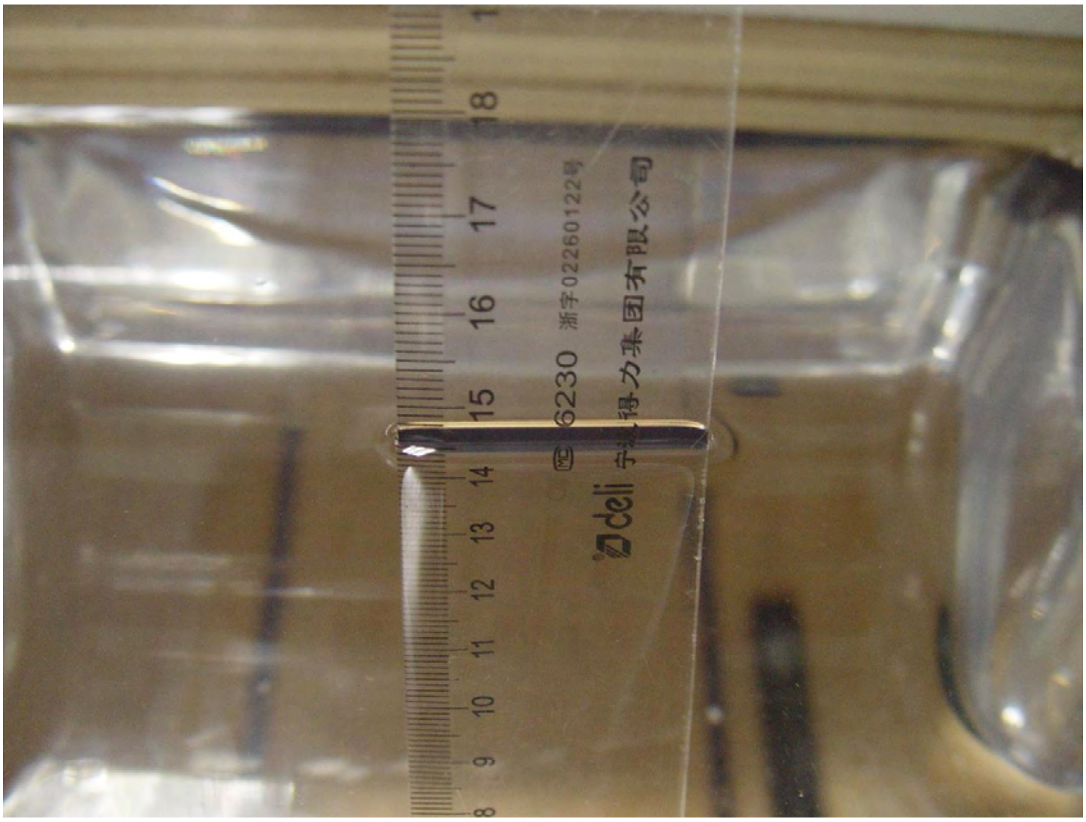


Figure B.1 Depth of Simulating Liquid in SAM Body Phantom

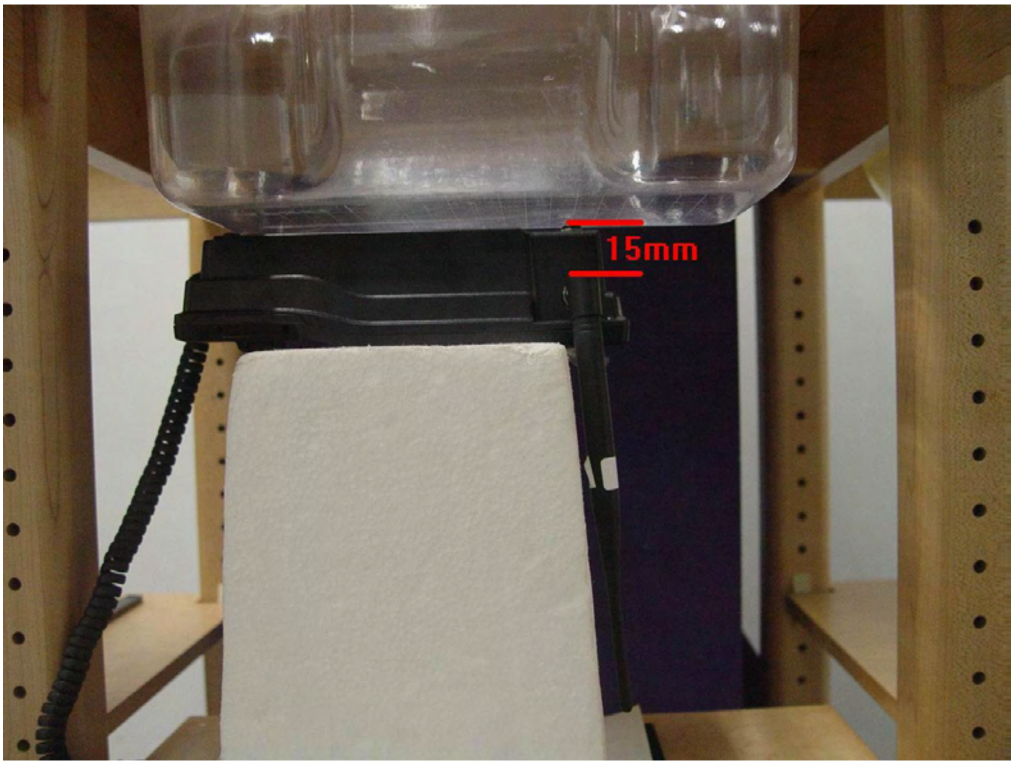
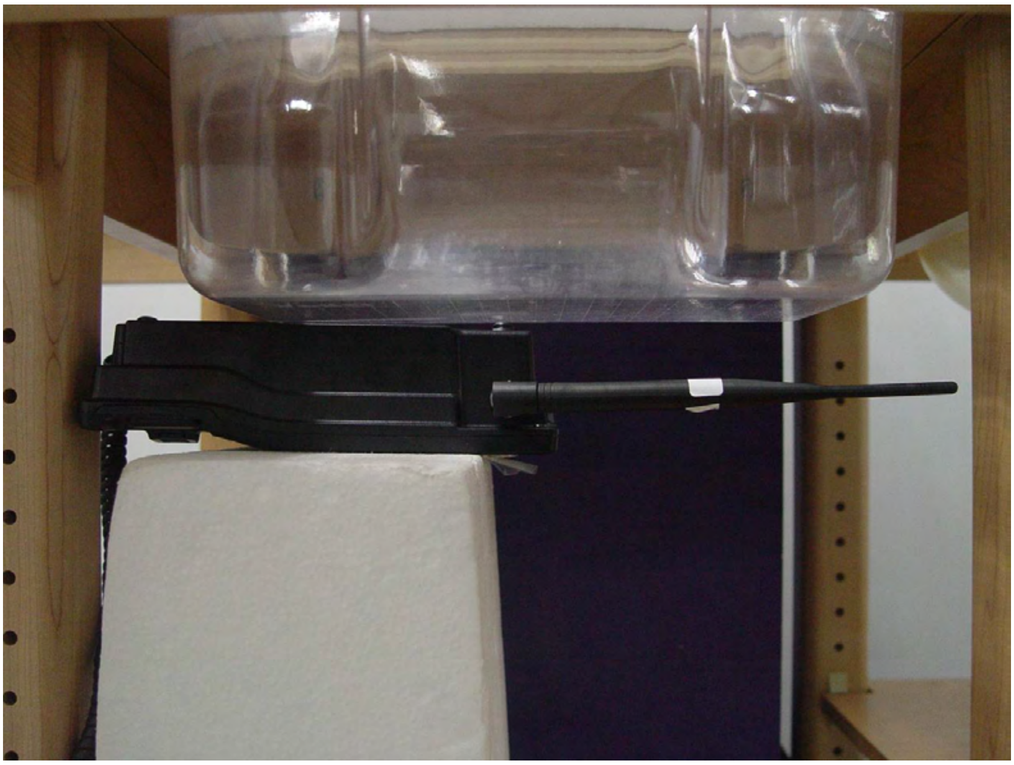


Figure B.2 EUT Back Side with antenna position 1 (with battery)



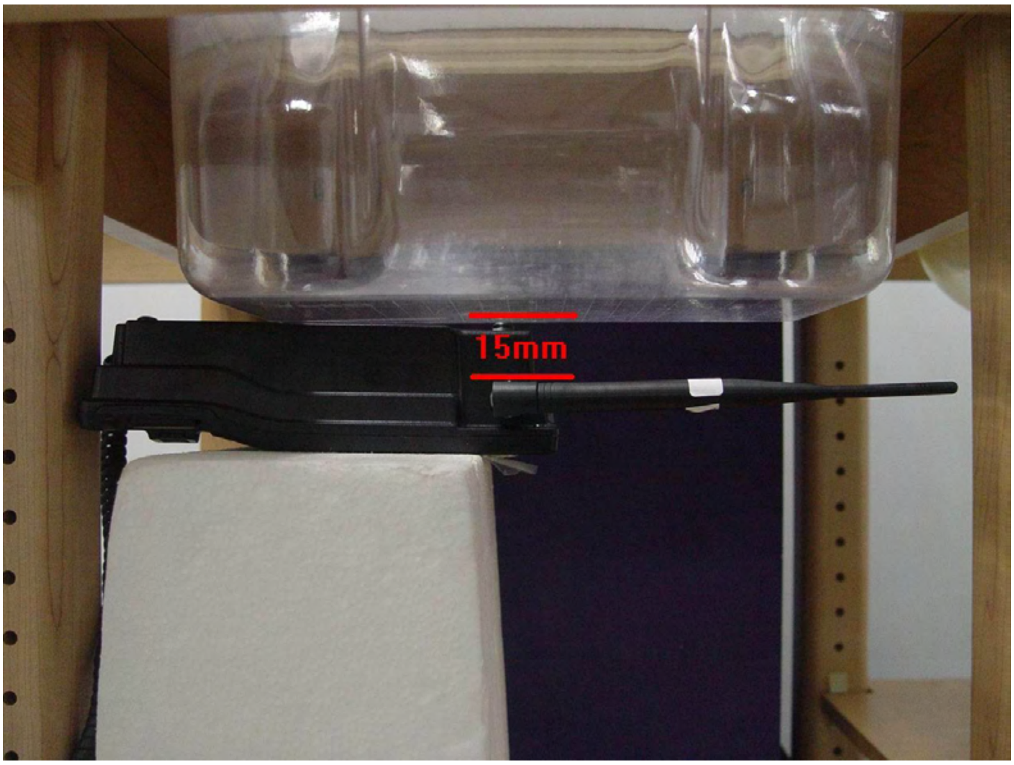


Figure B.3 EUT Back Side with antenna position 2 (with battery)

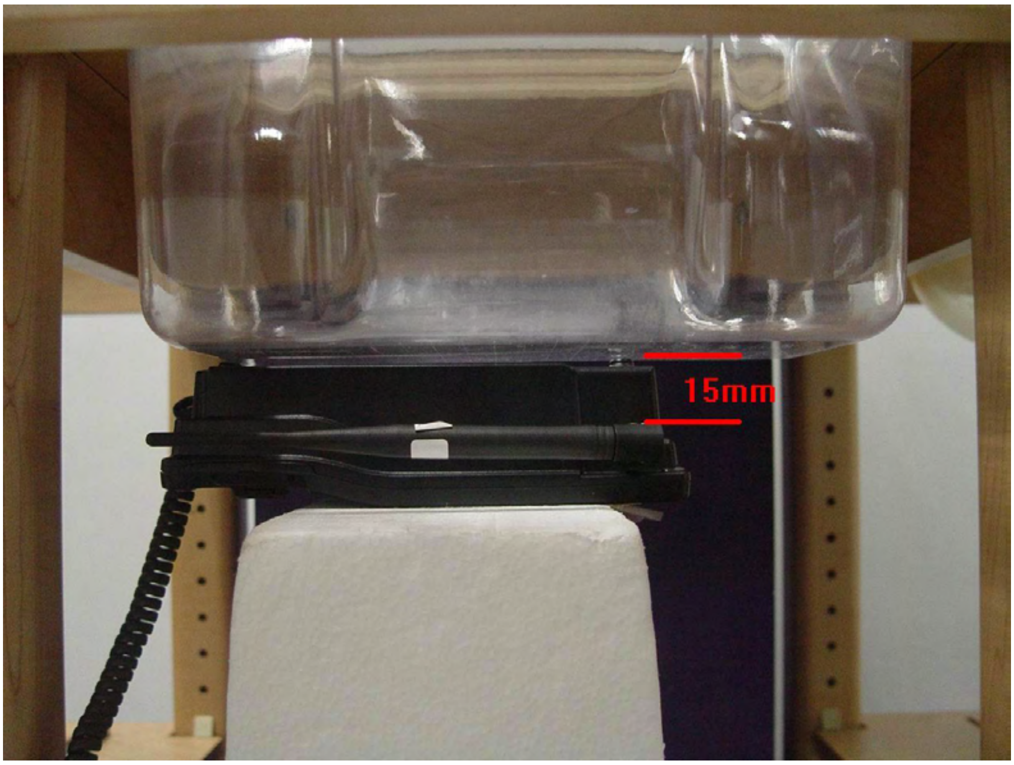


Figure B.4 EUT Back Side with antenna position 3 (with battery)

Figure B.5 EUT Back Side with antenna position 1 (with adapter)

Figure B.6 EUT Back Side with antenna position 2 (with adapter)

Figure B.7 EUT Back Side with antenna position 3 (with adapter)

ANNEX C- Sample Photographs

of

Shenzhen Morlab Communications Technology Co.,Ltd.

CONFORMANCE TEST REPORT FOR
HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

Fixed Wireless Phone on CDMA 1900MHz

REPORT NO: SH10060012S01
Type Name: PX330N
Hardware Version: P2
Software Version: PX330SE_P2.1C.US_44_6_1T

Sample Photographs

Photograph of the Equipment under Test

ANNEX D- Graph Test Results

of

Shenzhen Morlab Communications Technology Co.,Ltd.

CONFORMANCE TEST REPORT FOR
HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

Fixed Wireless Phone on CDMA 1900MHz

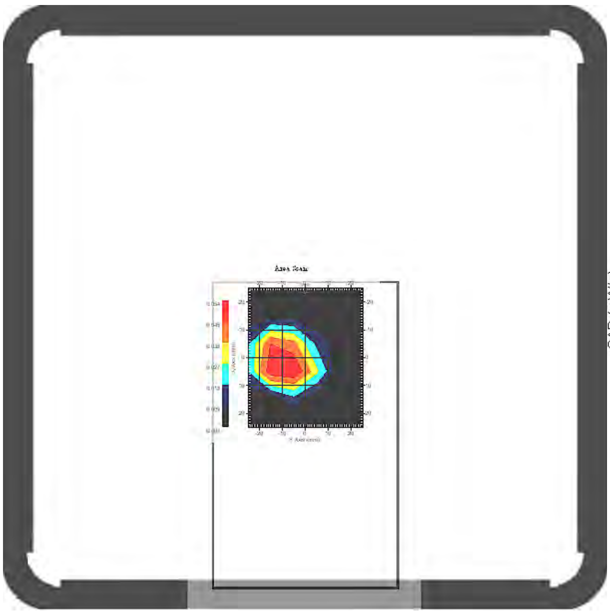
REPORT NO: SH10060012S01
Type Name: PX330N

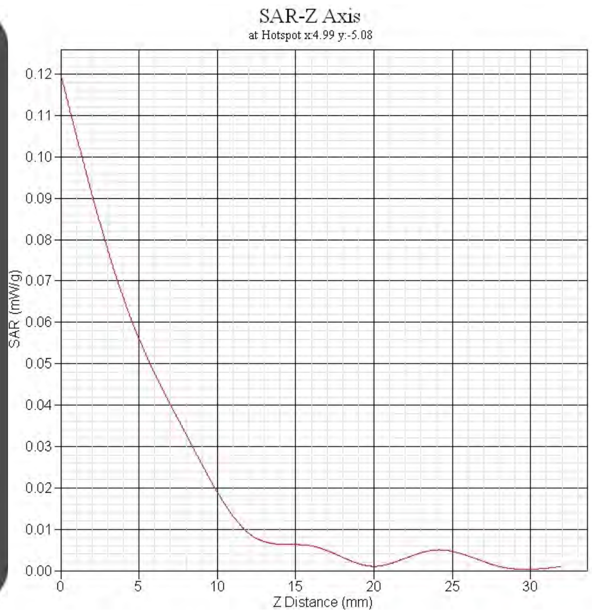
Hardware Version：	P2
Software Version：	PX330SE_P2.1C.US_44_6_1T

Graph Test Results

CDMA1900 Flat Body, Middle frequency with antenna position 1(with battery)

Frequency (MHz)	1880.01
Relative permitivity (real part)	52.840001
Relative permitivity (imaginary part)	15.070000
Conductivity (S/m)	1.5473975
Variation (%)	3.446000
Crest factor	1
Conversion Factor	4.7
Temperatures	21.00 °C
Date	2010-12-21

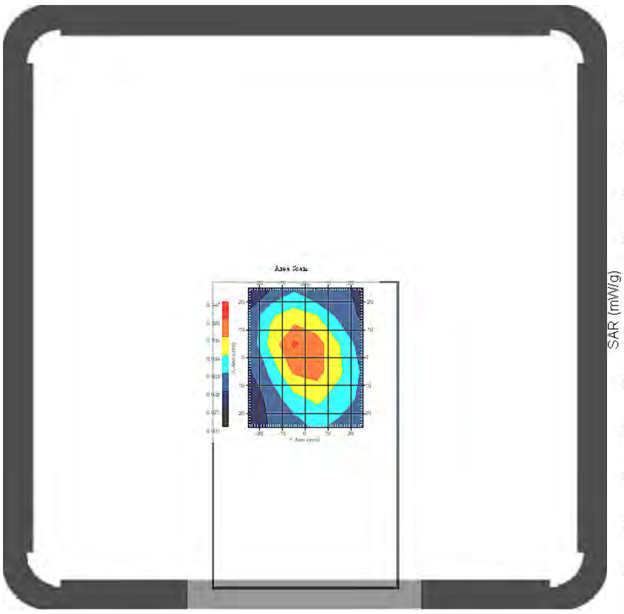
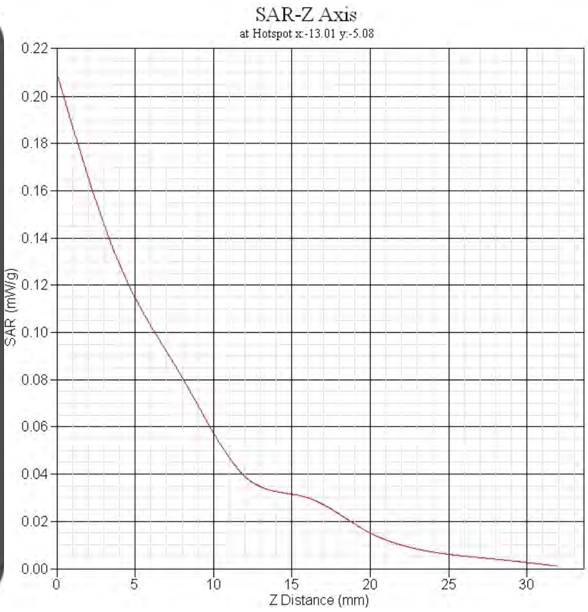




SAR 10g (W/Kg)	**0.017**
SAR 1g (W/Kg)	**0.049**

CDMA1900 Flat Body, Middle frequency with antenna position 2(with battery)

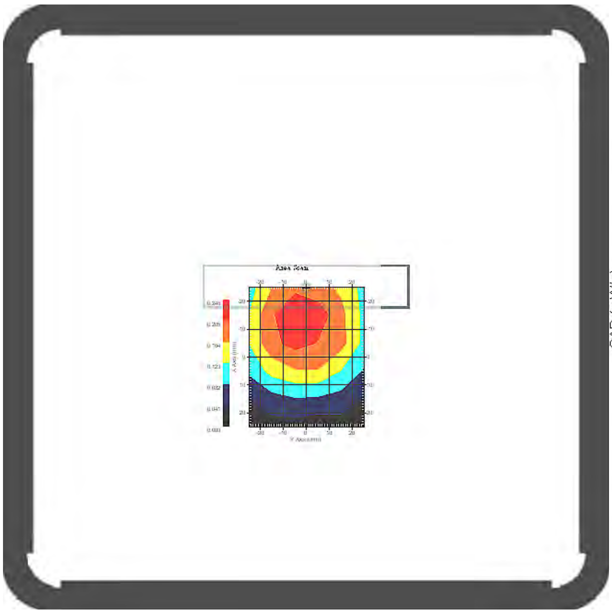
Frequency (MHz)	1880.01
Relative permitivity (real part)	52.840001
Relative permitivity (imaginary part)	12.420000
Conductivity (S/m)	1.5473975
Variation (%)	-4.671000
Crest factor	1
Conversion Factor	4.7
Temperatures	21.00 °C
Date	2010-12-21

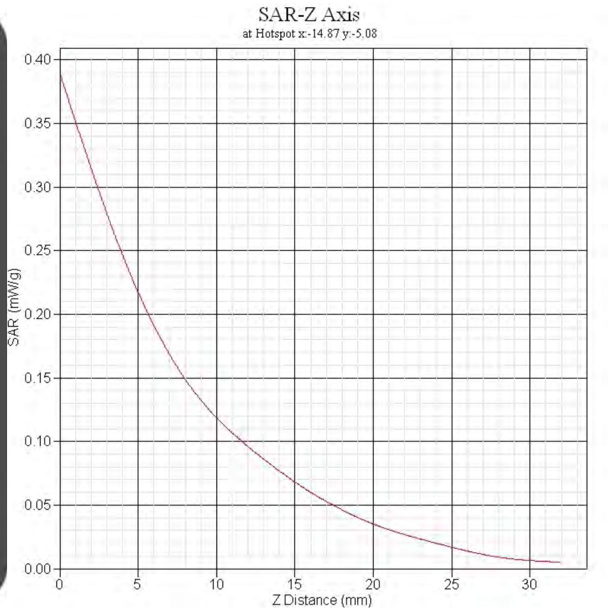



SAR 10g (W/Kg)	**0.056**
SAR 1g (W/Kg)	**0.111**

CDMA1900 Flat Body, Middle frequency with antenna position 3(with battery)

Frequency (MHz)	1880.01
Relative permitivity (real part)	52.840001
Relative permitivity (imaginary part)	21.470000
Conductivity (S/m)	1.5473975
Variation (%)	4.117000
Crest factor	1
Conversion Factor	4.7
Temperatures	21.00 °C
Date	2010-12-21

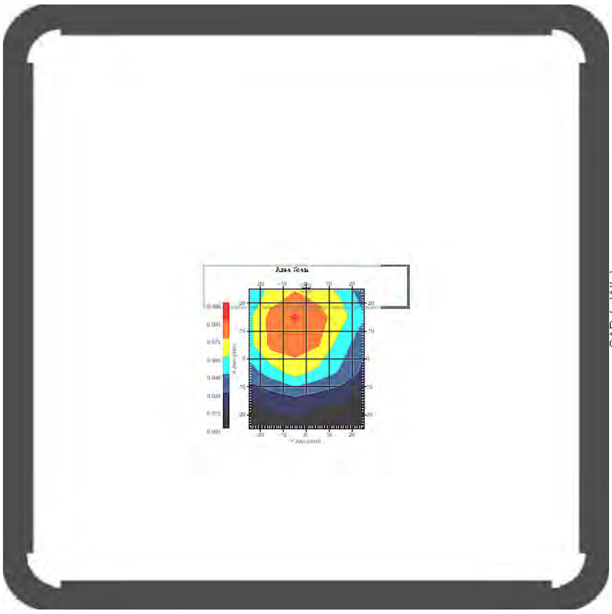


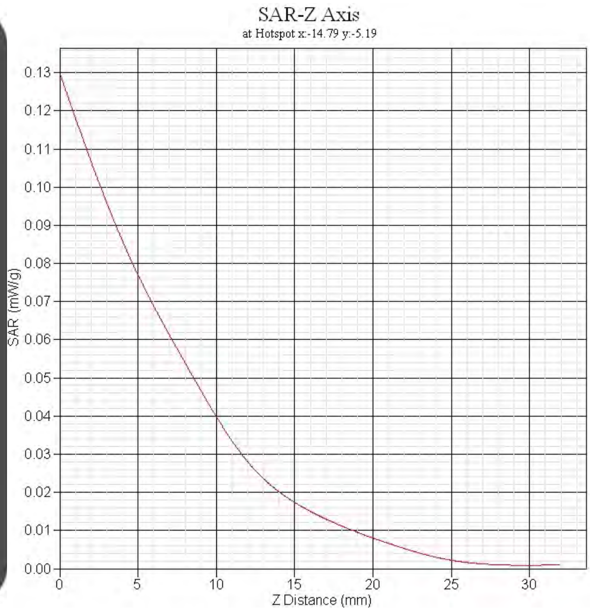


SAR 10g (W/Kg)	**0.129**
SAR 1g (W/Kg)	**0.232**

CDMA1900 Flat Body, Middle frequency with antenna position 1(with adapter)

Frequency (MHz)	1880.01
Relative permitivity (real part)	52.840001
Relative permitivity (imaginary part)	9.410000
Conductivity (S/m)	1.5473975
Variation (%)	-3.780000
Crest factor	1
Conversion Factor	4.7
Temperatures	21.00 °C
Date	2010-12-21

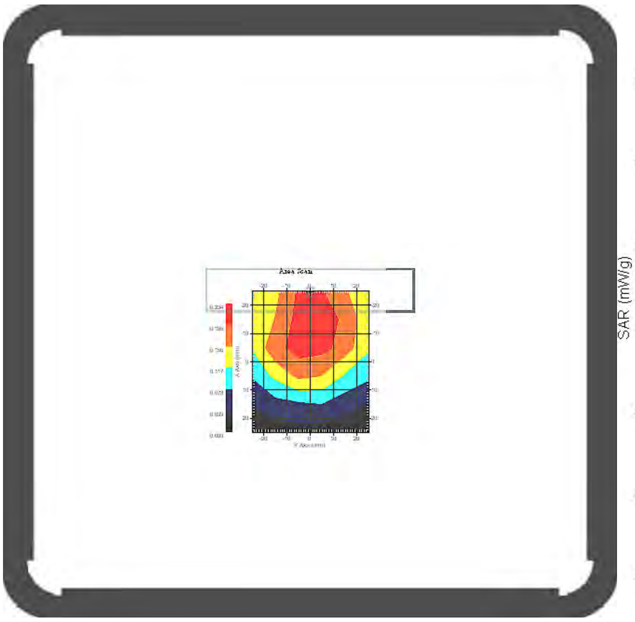


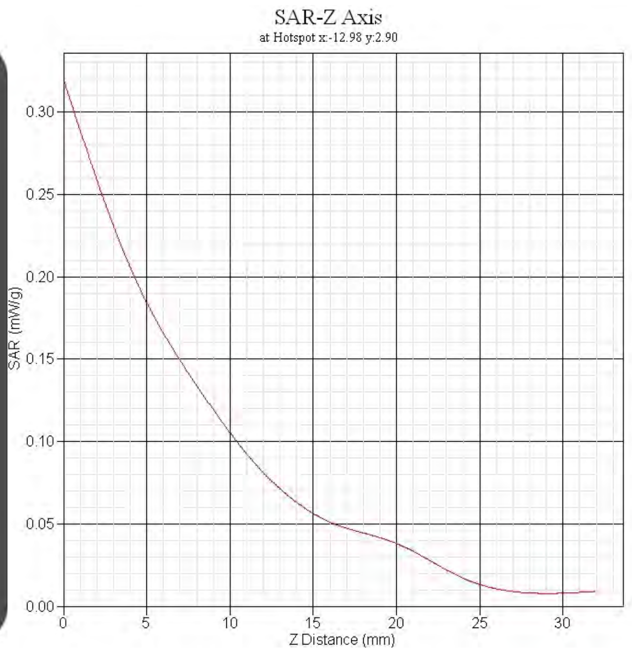


SAR 10g (W/Kg)	**0.041**
SAR 1g (W/Kg)	**0.080**

CDMA1900 Flat Body, Middle frequency with antenna position 2(with adapter)

Frequency (MHz)	1880.01
Relative permitivity (real part)	52.840001
Relative permitivity (imaginary part)	12.820000
Conductivity (S/m)	1.5473975
Variation (%)	1.841000
Crest factor	1
Conversion Factor	4.7
Temperatures	21.00 °C
Date	2010-12-21

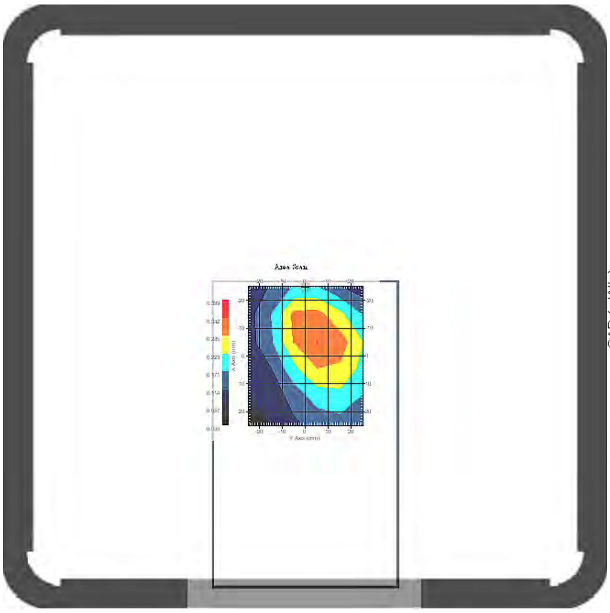


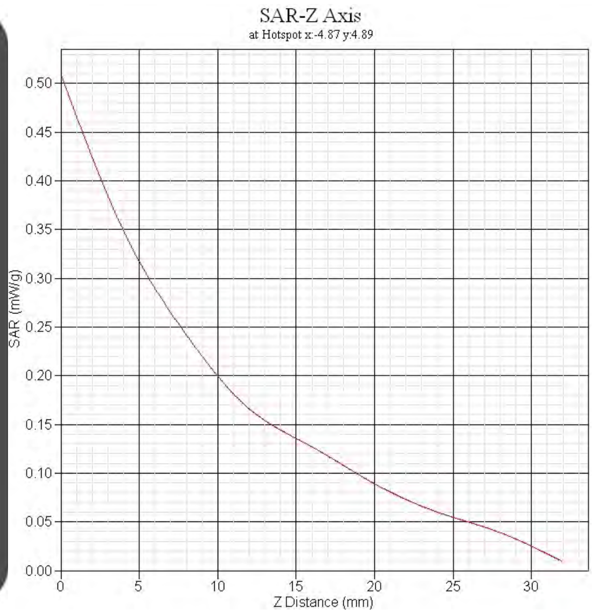


SAR 10g (W/Kg)	**0.109**
SAR 1g (W/Kg)	**0.198**

CDMA1900 Flat Body, Low frequency with antenna position 3(with adapter)

Frequency (MHz)	1851.25
Relative permitivity (real part)	52.910002
Relative permitivity (imaginary part)	17.170000
Conductivity (S/m)	1.5214002
Variation (%)	2.415000
Crest factor	1
Conversion Factor	4.7
Temperatures	21.00 °C
Date	2010-12-21

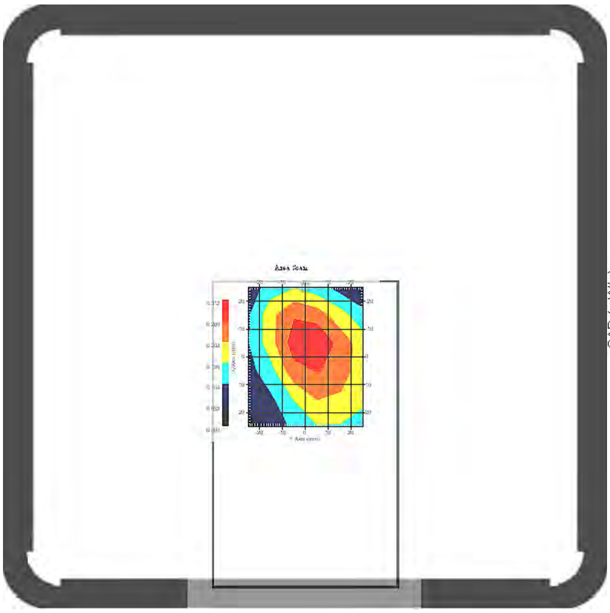


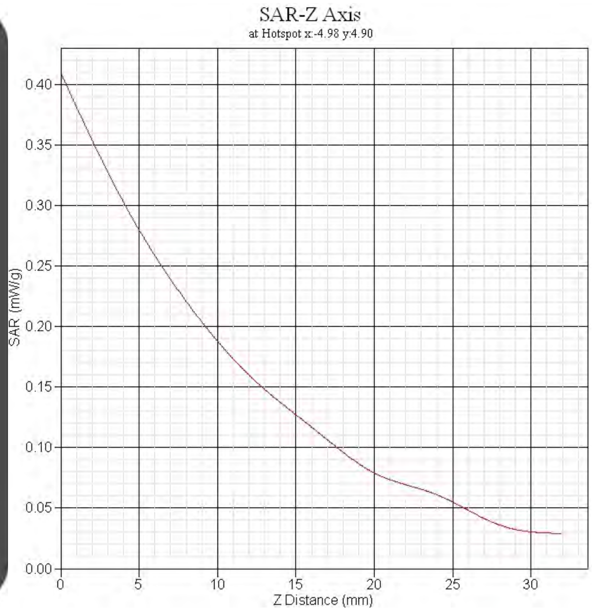


SAR 10g (W/Kg)	**0.197**
SAR 1g (W/Kg)	**0.325**

CDMA1900 Flat Body, Middle frequency with antenna position 3(with adapter)

Frequency (MHz)	1880.01
Relative permitivity (real part)	52.840001
Relative permitivity (imaginary part)	-13.070000
Conductivity (S/m)	1.5473975
Variation (%)	-0.748000
Crest factor	1
Conversion Factor	4.7
Temperatures	21.00 °C
Date	2010-12-21

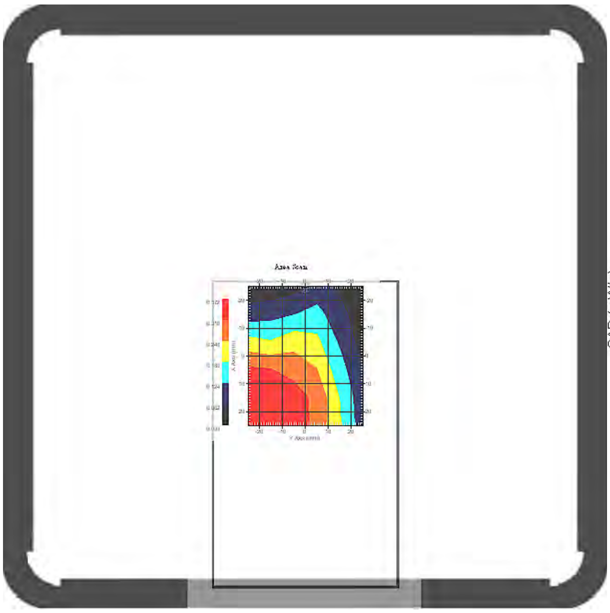


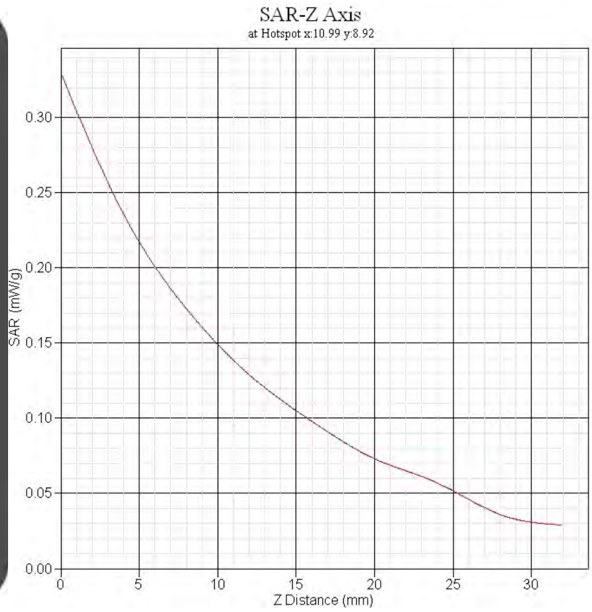


SAR 10g (W/Kg)	**0.162**
SAR 1g (W/Kg)	**0.273**

CDMA1900 Flat Body, High frequency with antenna position 3(with adapter)

Frequency (MHz)	1908.75
Relative permitivity (real part)	52.730001
Relative permitivity (imaginary part)	11.34000
Conductivity (S/m)	1.5522314
Variation (%)	-4.374000
Crest factor	1
Conversion Factor	4.7
Temperatures	21.00 °C
Date	2010-12-21

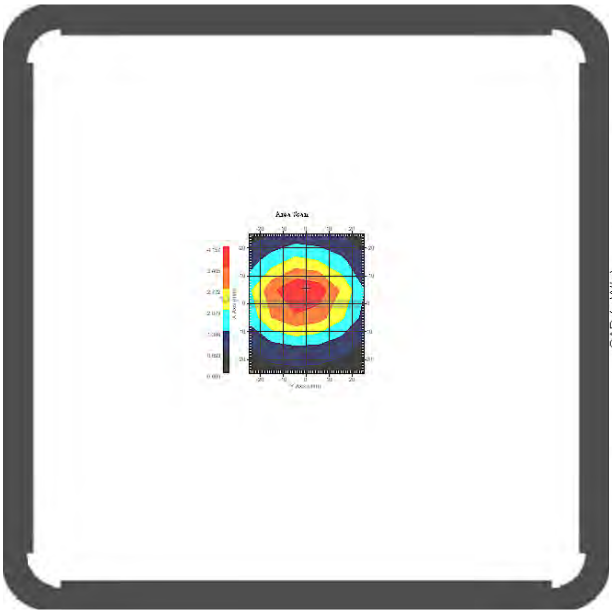


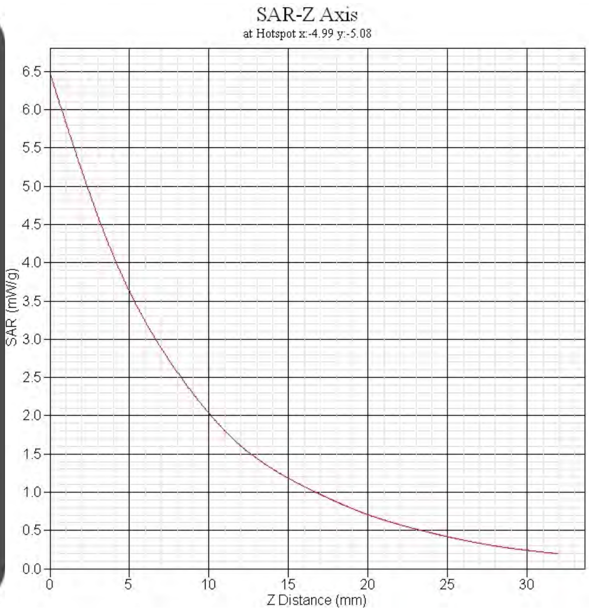


SAR 10g (W/Kg)	**0.154**
SAR 1g (W/Kg)	**0.223**

System Performance Check Data

Frequency (MHz)	1900
Relative permitivity (real part)	52.841002
Relative permitivity (imaginary part)	14.310000
Conductivity (S/m)	1.541241
Variation (%)	-1.550000
Crest factor	1
Conversion Factor	4.7
Temperatures	21.00 °C
Date	2010-12-21





SAR 10g (W/Kg)	**2.008**
SAR 1g (W/Kg)	**3.879**

** END OF REPORT **