SPECIFIC ABSORPTION RATE (SAR)

TEST REPORT

of

Pocket PC Mobile Phone

Model Name: V83
Trade Name: Inventec / Velocity
Report No.: SH08090014S02
FCC ID: DGI V83

prepared for

Inventec Corporation
Inventec Building, 66 Hou-Kang St., Shih-Lin District,
Taipei 11170, Taiwan, R.O.C

prepared by

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GENERAL SUMMARY

Product Name	Pocket PC Mobile Phone	Development Stage	Identical prototype
Standard(s)	**47CFR §2.1093:** Radiofrequency Radiation Exposure Evaluation: Portable Devices **FCC OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01):** Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields **ANSI C95.1–1999:** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. **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 Techniques.		
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: Nov. 4, 2008**		
Comment	TX Freq. Band: 824.20 MHz-848.80 MHz 1850.20 MHz -1909.80 MHz RX Freq. Band: 869.20 MHz-893.80 MHz 1930.20 MHz -1989.80 MHz Antenna Character : build inside The test result only responds to the measured sample.		

Teste by: Gao Hongning Date: 2008.11.05
GaoHongning

Checked by: Zhang Jun Date: 2008.11.05
Zhang Jun

Approved by: Su Feng Date: 2008.11.05
Su Feng

MORLAB Certification GLOBAL SERVICE

Contents

This Test Report consists of the following Annexes:

Annex A: Accreditation Certificate
Annex B: Test Layout
Annex C: Sample Photographs
Annex D: Graph Test Results
Annex E: System Performance Check Data

1. GENERAL CONDITIONS

1.1 This report only refers to the item that has undergone the test.

1.2 This report standalone does not constitute or imply by its own an approval of the product by the certification Bodies or competent Authorities.

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

1.4 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.

1.5 This production is a GPS tracker no speech function.

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.:	SH08090014S02
Morlab Project Leader:	Ms. Gao hongning
Morlab Responsible for Accreditation scope:	Mr. Shu Luan
Start of Testing:	2008-10-8
End of Testing:	2008-10-23

2.4.Identification of Applicant

Company Name:	Inventec Corporation
Address:	Inventec Building, 66 Hou-Kang St., Shih-Lin District, Taipei 11170, Taiwan, R.O.C
Contact person:	Mr. Lee, Alex
Telephone:	+86 021－64298888 # 62017
Fax:	+86 021－24031135

2.5.Identification of Manufacture

Company Name:	Inventec Hi-tech Corporation
Address:	789 Puxing Road , Min Hang District Shanghai 201114 , China
Contact person:	Mr. Lee, Alex
Telephone:	+86 021－64298888 # 62017
Fax:	+86 021－24031135

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

Brand Name:	Inventec / Velocity	
Type Name:	V83	
Marking Name:	Inventec / Velocity	
General description:	Test frequency	GSM 850MHz , PCS 1900MHz,WLAN 2400MHz
	Development Stage	Identical prototype
	Accessories	Charger, Battery
	Battery Model	M30/S30/V83
	Battery specification	3.7V 1100mAh
	Antenna type	Integrated
	Operation mode	Call established
	Modulation mode	GSM/GPRS/EDGE/WIFI/Bluetooth
	Max.Power(ERP/EIRP）	33dBm(GSM 850) 30dBm(PCS 1900) ≤21dBm(Wifi 2400)

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.	DVT2.2	Ver8227	--

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 128, 189 and 251 respectively in the case of GSM 850 MHz, or to 512, 661 and 810 respectively in the case of PCS 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

The SAR measurement system being used is the COMOSAR Test Bench, which consists of a

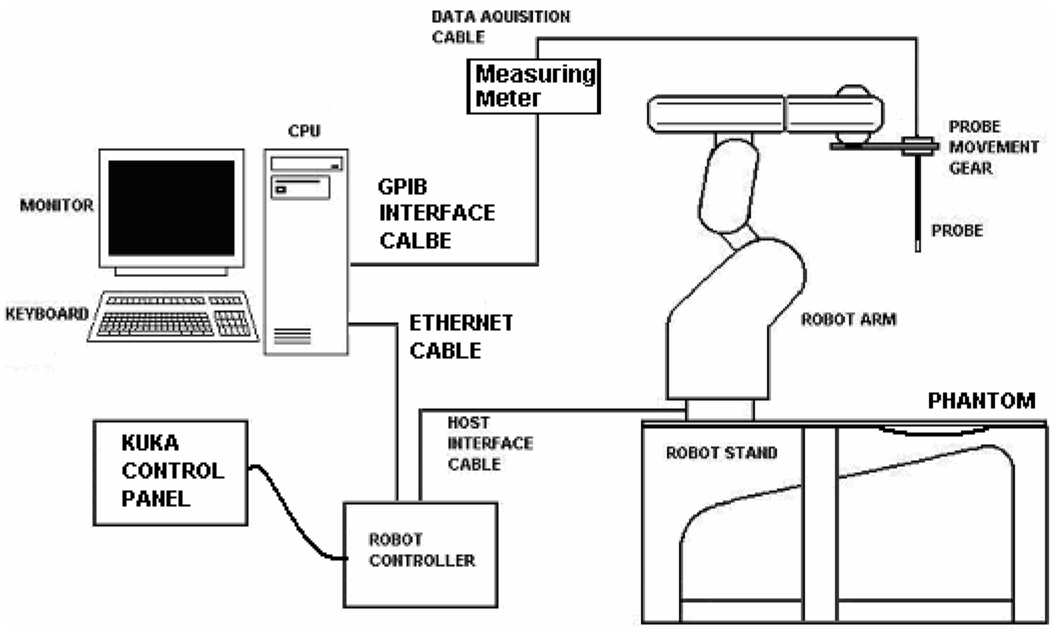
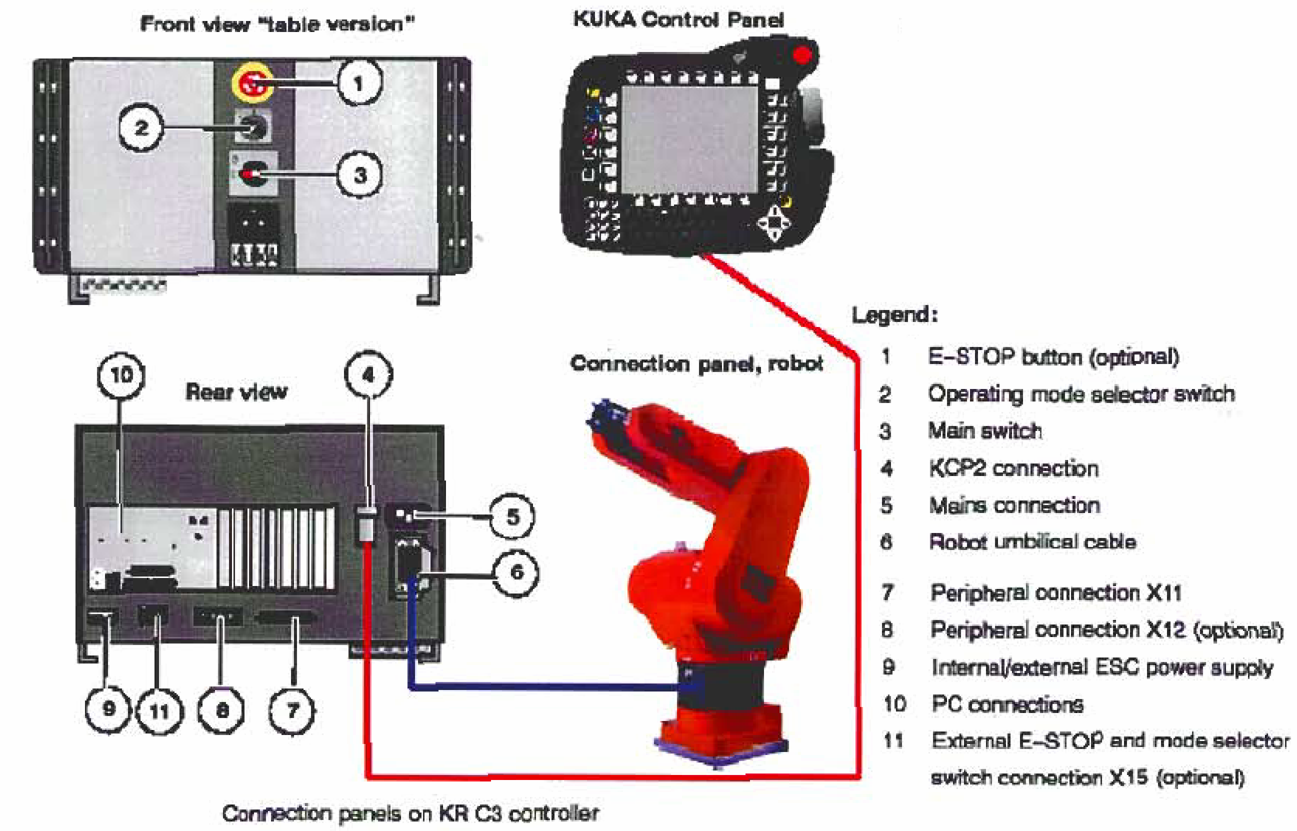


Figure1. SAR Lab Test Measurement Set-up

KUKA 6-axis robot arm and controller, Antennessa probe with *no amplifier* and SAM phantom. The system is controlled remotely from a PC, which contains the software to control most of the bench devices and stores measurement data. The software also displays the data obtained from test scans, and determines the averaged SAR values (averaging region 1 gram or 10 gram) for compliance testing. In operation, the system first does an area (2D) scan at a fixed depth within the liquid from the inside wall of the phantom. When the maximum SAR point has been found, the system will then carry out a 3D scan centered at that point to determine volume averaged SAR level.

4.2.1 Robot system specification

The robot is used to articulate the probe to programmed positions inside the phantom head to obtain the SAR readings from the DUT.



4.2.2 Probe Specification

Antennessa isotropic waterproof and low loss SAR probe

Antennessa 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, IEEE and FCC recommendations for the measurement of electromagnetic fields radiated by mobile phones and base stations.

All probes are protected by waterproof and low loss girdle. The dosimetric probe has special calibration factors for each frequency and mode.

Due to the specific structure and high sensitivity of Antennessa probes, the E field evaluation needs *no amplification* between the sensors and the PC.

Technical data

This 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 on defined in the IEEEE and CENELEC standard. These uncoupled dipoles perform the isotropic and wideband measurements necessary to assess mobile phones SAR.

Frequency range	100 MHz - 30 GHz
Length	330 mm
Dipoles Length	4.5 mm
Maximum external diameter	8 mm
Probe tip external diameter	5 mm
Distance between dipoles and the probe tip	<2.7mm
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
Lower SAR detection threshold	0.0015 Watts/kg
Connectors	6 male wires (Hirose SR30)

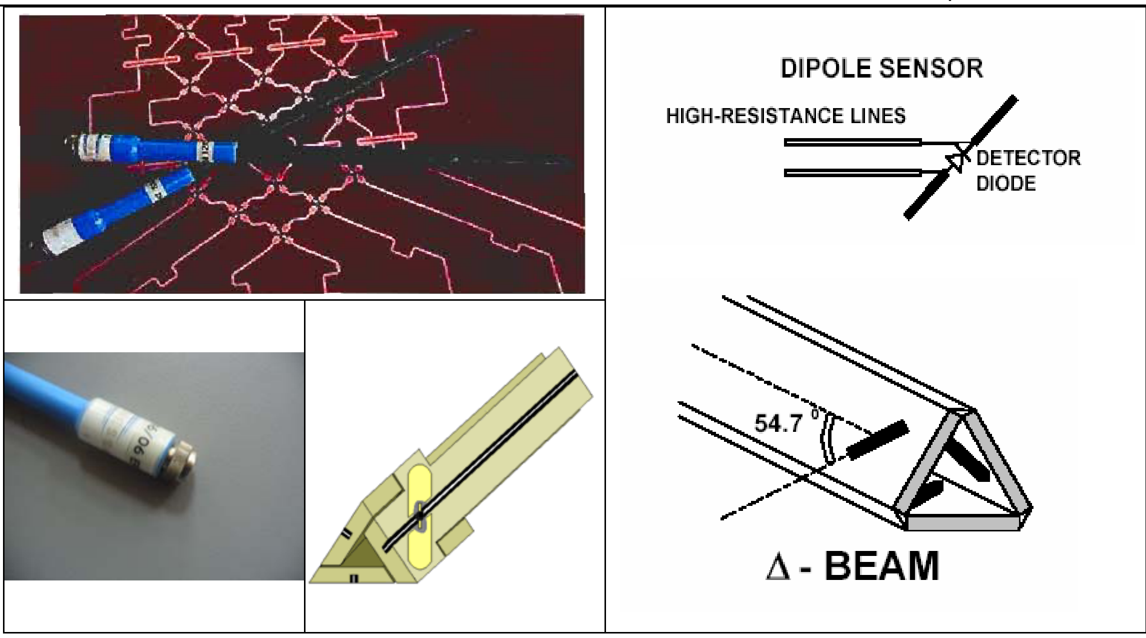
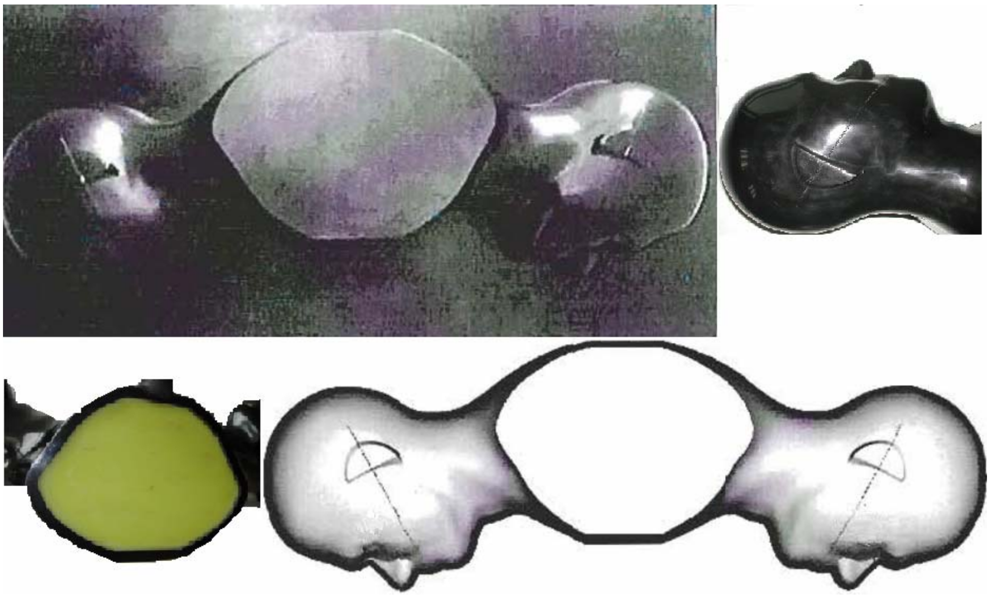


Figure2. Specification and characterization parameters of antennessa probe

4.2.3 Phantoms, Device Holder and Simulant Liquid

4.2.3.1 Sam Phantom

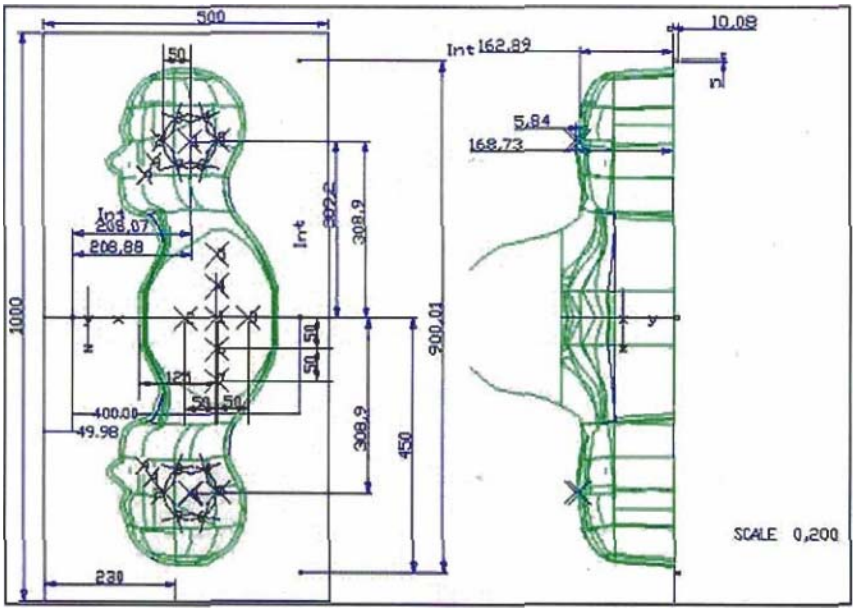


The SAM phantom is used to measure the SAR relative to person's exposure to electro-magnetic field radiated by mobile phones.

Technical Data

Shell thickness	2 mm +/-0.2 mm
Filling volume	27 liters
Dimensions	1000 mm (Length) ; 500 mm (Width) ; 200 mm (Height)
5 molded plastic points for high precision reference Delivered with 4 nylon screws	

For thickness control purposes, the phantom has several integrated thickness control points (see crosses on the picture below)



Position of the thickness control points

The SAM phantom is delivered with a CAD CD-ROM including the 3D data of the internal shape of the shell. These data are used by the 6 axis robot control software to define movements relative to its internal surface.

The SAM phantom also has 5 additional CAD-linked reference points to properly position the 6-axis robot (probe tip) in the phantom shell.

The SAM phantom has reference points at the center of the flat area (for measurements with dipoles) and near its mouth and ear for mobile phone positioning purposes.

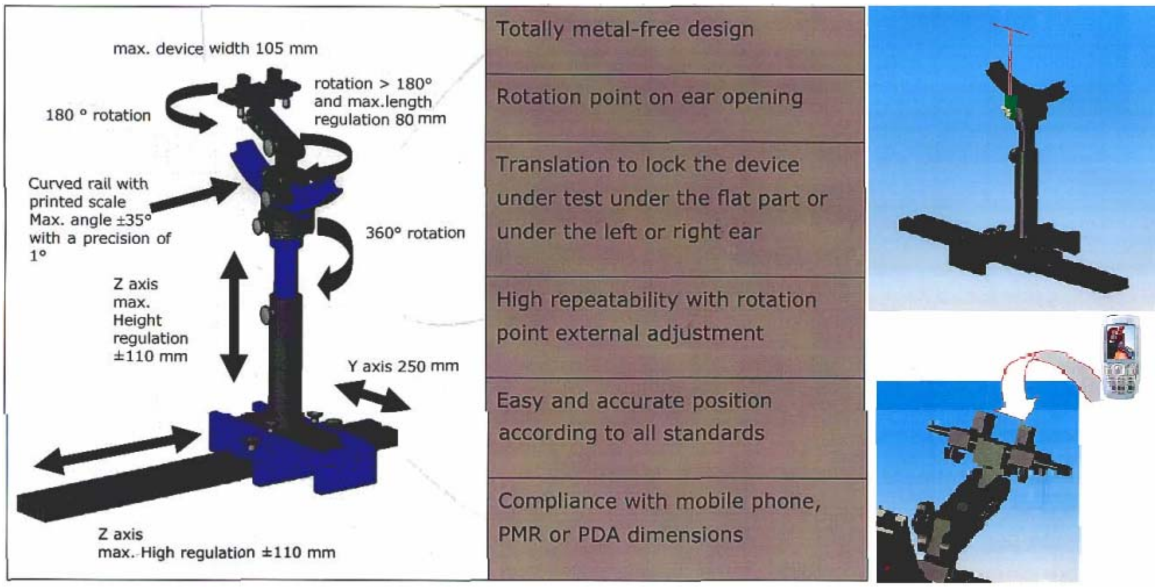
The phantom is equipped with a tap for draining the liquid.

The liquid quantity necessary t fill the phantom is approximately 20 liters.

All phantoms are tested after production. The test is made on 22 different points. It is based on an ultrasonic system measurement, which allows measuring the thickness with a precision of 10μm. The mould has been controlled by a certification company.

4.2.3.2 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 5mm distance, a positioning uncertainty of ±0.5mm would produce a SAR uncertainty of ±20%. An accurate device positioning is therefore essential for accurate and repeatable measurements.



This positioning system allows the translating 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).

The correct position can be easily determined thanks to an additional tool with a pointer. The top part of the system, above the curved rail, can be fixed definitively so that subsequent adjustments just concern the angle or the x, y or z axis.

This simplifies the positioning of the acoustic output of the telephone on the cross section of the phantom, before rolling the system underneath the phantom. It also improves the accuracy and repeatability of positioning with a tolerance ≤0.65mm.

4.2.3.3 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 1-2 Propylene Glycol, de-ionized water and NaCl, reconstituting the electric properties of human tissues at 900MHz.

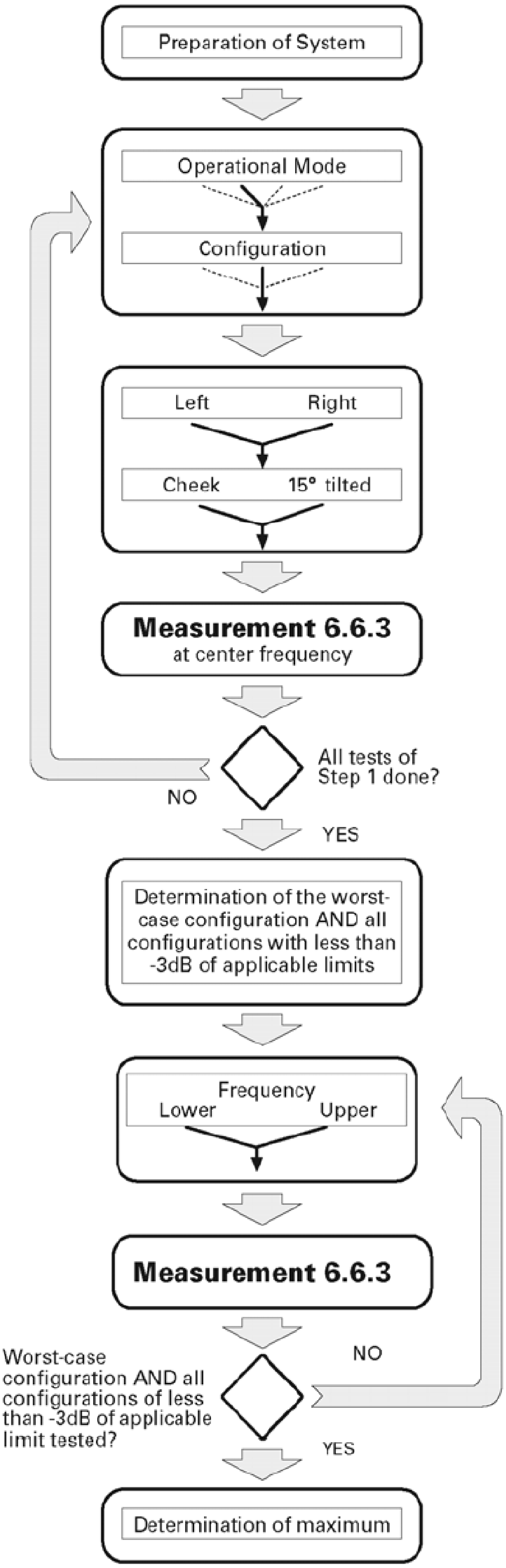
PCS Liquid: is made of de-ionized water, DGBE, Triton X 100 and NaCl, reconstituting the electric properties of human tissues at 1800MHz.

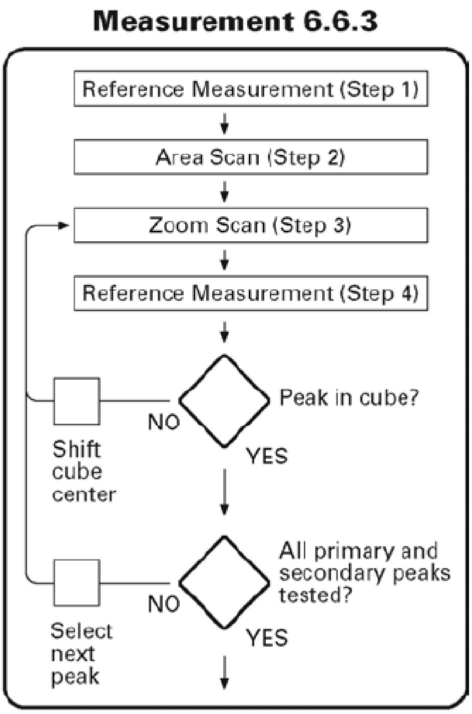
UMTS Liquid: is made of de-ionized water, DGBE, Triton X 100 and NaCl, reconstituting the electric properties of human tissues at 2000MHz.

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





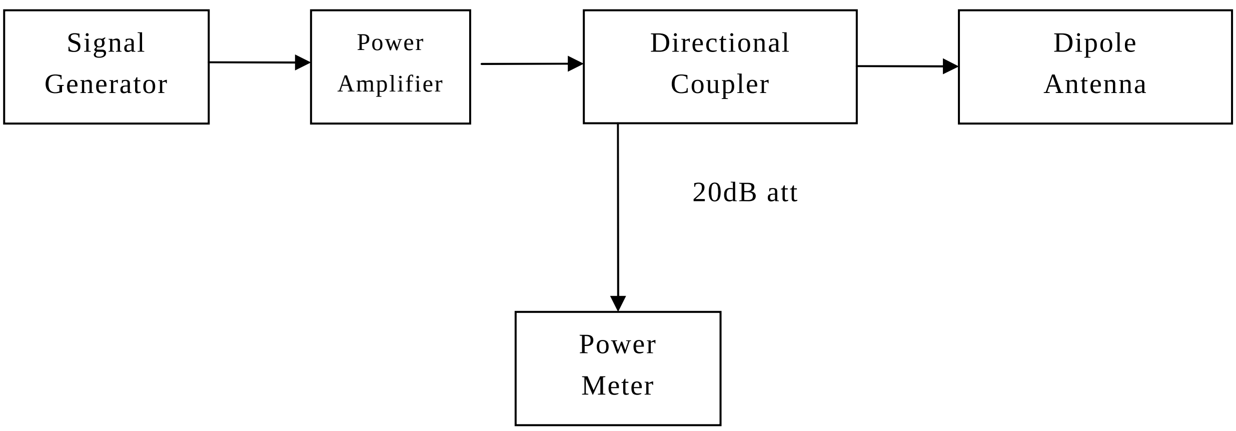
Channel	Left				Right			
	Cheek		Tilt		Cheek		Tilt	
	Retracted	Extended	Retracted	Extended	Retracted	Extended	Retracted	Extended
Mode 1:								
High			S2(-1.4dB)	S2(-0.4dB)			S2(-2.2dB)	S2(-1.4dB)
Middle	S1(-4dB)	S1(-4dB)	S1(-1.5dB)	S1(-0.5dB)	S1(-5dB)	S1(-5dB)	S1(-2.5dB)	S1(-1.5dB)
Low			S2(-1.3dB)	S2(-0.7dB)			S2(-2.7dB)	S2(-0.6dB)
Mode 2:								
High			S2(-2.7dB)	S2(-1.1dB)				
Middle	S1(-5dB)	S1(-5dB)	S1(-2.5dB)	S1(-1dB)	S1(-6dB)	S1(-6dB)	S1(-5dB)	S1(-5dB)
Low			S2(-2.2dB)	S2(-0.8dB)				

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

One of the main purposes of the flat part of the phantom is for validation of the system. By placing the highly-symmetric and matched reference dipole below the phantom and using the same device holder, the system can now be used to check that the probe and software are giving accurate readings.

The antennas are developed with a $\lambda_0 / 4$ 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 the standards.

Each dipole has been designed to be plugged in the Antennessa phone positioning system. Validation measurements are made according to the standard, as the Antennessa phone positioning system is totally metal free.

4.2.5.2 Equipments and Results of Validation Testing

Equipments:

name	Type and specification
Signal generator	SMT 06
Directional coupler	MFR 34078
Amplifier	BLMA 0820-6
Reference dipole	SN 36/05 DIP C20
	SN 36/05 DIP G23

Results：

Frequency	Date	Target value(1g) W/kg	Test value(1g) W/kg
850MHz	2008.10.22	9.5	9.272(Head) 9.551 (Body)
1900MHz	2008.10.21	39.7	39.421(Head) 39.421(Body)
2400MHz	2008.10.21	52.4	50.617(Body)

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 Applicable Limit Regulations

47CFR §2.1093: Radiofrequency Radiation Exposure Evaluation: Portable Devices

FCC OET Bulletin 65(Edition 97-01), Supplement C(Edition 01-01): Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

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.

5.2 Applicable Measurement Standards

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 Techniques.

They specify 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 3G MEASUREMEAMENT PROCEDURE

7.1 Procedures Used To Establish Test Signal

The handset was placed into a simulated call using a base station simulator in a shielded chamber. Such test signals offer a consistent means for testing SAR and are recommended for evaluating SAR. SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement software calculates a reference point at the start and end of the test to check for power drifts. If conducted power deviations of more then 5% occurred, the tests were repeated. 7.2 SAR Measurement Conditions for CDMA2000 1x.

7.2 SAR Measurement Conditions for CDMA2000 1x

These procedures were followed according to FCC "SAR Measurement Procedures for 3G Devices", June 2006.

7.2.1 Output Power Verification

See 3GPP2 C.S0011/TIA-98-E as recommended by "SAR Measurement Procedures for 3G Devices", June 2006. Maximum output power is verified on the High, Middle and Low channels according to procedures defined in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. SO55 tests were measured with power control bits in “All Up” condition. 1. If the mobile station supports Reverse TCH RC 1 and Forward TCH RC 1, set up a call using Fundamental Channel Test Mode 1 (RC=1/1) with 9600 bps data rate only. 2. Under RC1, C.S0011 Table 4.4.5.2-1 (Table.A) parameters were applied. 3. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH0 and demodulation of RC 3, 4, or 5, set up a call using Supplemental Channel Test Mode 3 (RC 3/3) with 9600 bps Fundamental Channel and 9600 bps SCH0 data rate Channel and 9600 bps SCH0 data rate. 4. Under RC3, C.S0011 Table 4.4.5.2-2(Table.B) was applied. 5. FCHs were configured at full rate for maximum SAR with “All Up” power control bits.

Table 1: Parameters for Max. Power for RC1

Parameter	Units	Value
$\hat{I}_{or}$	dBm/1.23 MHz	-104
$\frac{\text{Pilot } E_c}{I_{or}}$	dB	-7
$\frac{\text{Traffic } E_c}{I_{or}}$	dB	-7.4

Table 2: Parameters for Max. Power for RC3

Parameter	Units	Value
$\hat{I}_{or}$	dBm/3.69 MHz	-99
$\frac{\text{Pilot } E_c}{I_{or}}$	dB	-10
$\frac{\text{Traffic } E_c}{I_{or}}$	dB	-12.4

7.2.2 Head SAR Measurement

SAR for head exposure configurations is measured in RC3 with the DUT configured to transmit at full rate using Loop back Service Option SO55. SAR for RC1 is not required when the maximum average output of each channel is less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel in RC1 using the exposure configuration thatresults in the highest SAR for that channel in RC3.

7.2.3 Body SAR Measurement

SAR for body exposure configurations is measured in RC3 with the DUT configured to transmit at full rate on FCH with all other code channels disabled using TDSO / SO32. SAR for multiple code channels (FCH + SCHn) is not required when the maximum average output of each RF channel is less than ¼ dB higher than that measured with FCH only. Otherwise, SAR is measured on the maximum output channel (FCH + SCHn) with FCH at full rate and SCH0 enabled at 9600 bps using the exposure configuration that results in the highest SAR for that channel with FCH only. When multiple code channels are enabled, the DUT output may shift by more than 0.5 dB and lead to higher SAR drifts and SCH dropouts. Body SAR in RC1 is not required when the maximum average output of each channel is less than ¼dB higher than that measured in RC3. Otherwise, SAR is measured on the maximum output channel in RC1; with Loop back Service Option SO55, at full rate, using the body exposure configuration that results in the highest SAR for that channel in RC3 .

Max Output Power:

850MHZ Band EIRP

824.20MHz: 28.51dBm

836.00MHz: 28.58dBm

848.80MHz: 28.73dBm

1900MHZ Band EIRP

1850.20MHz: 25.21dBm

1880.00MHz: 24.88dBm

1909.80MHz: 24.29dBm

2400MHZ Band EIRP

2412MHz: 20.32dBm

2437MHz: 20.61dBm

2462MHz: 20.50dBm

8 TEST RESULTS

8.1 Dielectric Performance

The measured 1-gram averaged SAR values of the device against the head and the body are provided in Table 1. The relative humidity and ambient temperature of test facility were 60% ~65% and 21.0 °C ~23.5°C respectively. The SAM head phantom (SN 36/05 SAM 25) was full of the head tissue simulating liquid. The depth of the body tissue was 15.0cm. The distance between the back of the device and the bottom of the flat phantom is 1.5cm. A base station simulator was used to control the device during the SAR measurement. The phone was supplied with full-charged battery for each measurement.

For head measurement, the device was tested at the lowest, middle and highest frequencies in the transmit band.

Table 1: Dielectric Performance of Head Tissue Simulating Liquid

Temperature: 21.0~23.5°C, Relative Humidity: 60~65%.			
/	**Frequency**	**Permittivity** ε_r	**Conductivity** σ **(S/m)**
Target value	850 MHZ	41.50	0.90
Validation value (Oct 22)	850 MHZ	41.74	0.92
Target value	1900MHz	40.00	1.40
Validation value (Oct 21)	1900MHz	38.98	1.45

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 3: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 21.0~23.5°C, Relative Humidity: 60~65%.			
/	**Frequency**	**Permittivity ε**	**Conductivity σ (S/m)**
Target value	850 MHz	55.20	0.97
Validation value (Oct 22)	850 MHz	54.43	0.99
Target value	1900MHz	53.30	1.52
Validation value (Oct 21)	1900MHz	54.33	1.53
Target value	2450	52.70	1.95
Validation value (Oct 21)	2450	52.68	1.94

8.2 Summary of Measurement Results (GSM850MHz,PCS 1900MHz and Wlan2400MHz)

Table 4: SAR Values (GSM 850 MHz Band), Measured against the Head

Temperature: 21.0~23.5°C, Relative Humidity: 60~65%.	
Limit of SAR (W/kg)	**1 g Average**
	1.6
Test Case	**Measurement Result (W/kg)**
	1 g Average (W/kg)
Left head,cheek,Low channel	0.631
Left head,cheek,Middle channel	0.928
Left head,cheek,High channel	1.084
Left head,Tilt,Low channel	0.331
Left head,Tilt,Middle channel	0.477
Left head,Tilt,High channel	0.564
Left head,cheek,Middle channel(With BT On)	0.913
Right head,cheek,Low channel	0.665
Right head,cheek,Middle channel	0.981
Right head,cheek,High channel	**1.141**
Right head,Tilt,Low channel	0.295
Right head,Tilt,Middle channel	0.423
Right head,Tilt,High channel	0.525
Right head,cheek,Middle channel(With BT On)	0.991

Table 5: SAR Values (GSM 850 MHz Band), Measured against the body

Temperature: 21.0~23.5°C, Relative Humidity: 60~65%.	
Limit of SAR (W/kg)	**1 g Average**
	1.6
Test Case	**Measurement Result (W/kg)**
	1 g Average (W/kg)
Front, Middle Channel	0.813
Back, Low Channel	0.653
Back, Middle Channel	0.826
Back, High Channel	0.884
Back, Middle Channel(With BT on)	0.818
Front, Middle Channel(GPRS)	0.942
Back, Middle Channel(GPRS)	1.106
Front,Middle Channel(EDGE)	0.893
Back, Middle Channel(EDGE)	0.966

Table 6: SAR Values (GSM 1900 MHz Band), Measured against the Head

Temperature: 21.0~23.5°C, Relative Humidity: 60~65%.	
Limit of SAR (W/kg)	1 g Average
	1.6
Test Case	Measurement Result (W/kg)
	1 g Average (W/kg)
Left head,cheek,Low channel	0.461
Left head,cheek,Middle channel	0.554
Left head,cheek,High channel	0.612
Left head,Tilt,Low channel	0.279
Left head,Tilt,Middle channel	0.300
Left head,Tilt,High channel	0.307
Left head,cheek,Middle channel(With BT On)	0.588
Right head,cheek,Low channel	0.726
Right head,cheek,Middle channel	0.806
Right head,cheek,High channel	0.835
Right head,Tilt,Low channel	0.206
Right head,Tilt,Middle channel	0.230
Right head,Tilt,High channel	0.222
Right head,cheek,Middle channel(With BT On)	0.754

Table 7: SAR Values (GSM 1900 MHz Band), Measured against the body

Temperature: 21.0~23.5°C, Relative Humidity: 60~65%.	
Limit of SAR (W/kg)	1 g Average
	1.6
Test Case	Measurement Result (W/kg)
	1 g Average (W/kg)
Back, Middle Channel	0.445
Front, Low Channel	0.394
Front, Middle Channel	0.504
Front, High Channel	0.307
Front, Middle Channel(With BT On)	0.501
Front, Middle Channel(GPRS)	0.953
Back, Middle Channel(GPRS)	1.090
Front,Middle Channel(EDGE)	1.091
Back, Middle Channel(EDGE)	1.066

Table 8: SAR Values (WLAN 2400 Band), Measured against the body

Temperature: 21.0~23.5°C, Relative Humidity: 60~65%.	
Limit of SAR (W/kg)	1 g Average
	1.6
Test Case	Measurement Result (W/kg)
	1 g Average (W/kg)
802.11b Front, Middle Channel	0.102
802.11b Back, Low Channel	0.090
802.11b Back, Middle Channel	0.091
802.11b Back, High Channel	0.141
802.11g Front, Low Channel	0.042
802.11g Front, Middle Channel	0.045
802.11g Front, High Channel	0.040
802.11g Back, Middle Channel	0.026

Note: According *SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas*,tht Wlan max output power is 20.61dBm(115mw),and the bluetooth max output power is 0.6dBm(1.2mw);

o output ≤ 60/f: SAR not required

o output > 60/f: stand-alone SAR required

so the bluetooth sar is not required,and the stand-alone sar for the Wlan is required.

When stand-alone SAR is required

o test SAR on highest output channel for each wireless mode and exposure condition

o if SAR for highest output channel is > 50% of SAR limit, evaluate all channels according to normal procedures

But the wlan sar on body with the highest output power channel,middle channel 2437MHz,front(0.045W/kg) and back(0.026W/kg) sar is also <50%(0.8W/kg) of the limit.

So the other channel is not must required.

When the sum of the 1-g SAR is < 1.6 W/kg for all simultaneous transmitting antennas,the sar is not required.

The max 1g sar for GSM850 is 1.141w/kg, and the max 1g sar for wlan is 0.141w/kg,the sum of two sar is 1.282w/kg,also < 1.6 W/kg,so the co-location sar with simultaneous transmitting antennas is not required.

8.3 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.

9 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

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	$\sqrt{3}$	$(1-Cp)^{1/2}$	$(1-Cp)^{1/2}$	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	∞
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	2.5	R	$\sqrt{3}$	1	1	1.4	1.4	∞
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	1.6	R	$\sqrt{3}$	0.64	0.43	0.6	0.4	∞

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	2.9	R	$\sqrt{3}$	0.6	0.49	1.0	0.8	∞
Liquid permitivity - measurement uncertainty	E.3.3	2.5	N	1	0.6	0.49	1.5	1.2	M
Combined Standard Uncertainty			RSS				9.5	9.4	
Expanded Uncertainty (95% Confidence interval)			k				18.6	18.4	

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	$\sqrt{3}$	$(1-Cp)^{1/2}$	$(1-Cp)^{1/2}$	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	∞
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	2.5	R	$\sqrt{3}$	1	1	1.4	1.4	∞
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	1.6	R	$\sqrt{3}$	0.64	0.43	0.6	0.4	∞
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	2.9	R	$\sqrt{3}$	0.6	0.49	1.0	0.8	∞
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	7.9	
Expanded Uncertainty (95% Confidence interval)			k				15.6	15.4	

10 MAIN TEST INSTRUMENTS

Function	Name	Model No.	Series No.	Cal. Due Date
General	Desktop Computer	Pentium IV 2.4GHz	X1023533	2009-07-30
	SAR measurement software	OpenSAR V2.0.1e	/	2009-07-30
Liquid mixing and calibration	Vector Network Analyzer	ZVB 8	100154	2009-09-26
	PC 3.5 Calibration Kit	ZV-Z32	100356	2009-09-26
	Test Cable	ZV-Z13	100152	2009-07-15
	Constant temperature cultivating cabinet	DNP-9272	L-504468	2009-08-01
	Liquid thermometer	Testo 106-T1	/	2009-07-21
	Electric scale	YP20KN	/	2009-08-26
	Magnetic stirring machine	90-1B	/	2009-11-09
And calibration probe, beaker, test tube, injector, calibration bottles, mix barrel etc.				2009-07-30
SAR Measurement	Dipole antenna FREQ 850MHz	/	SN 36/05 DIP D21	2009-09-01
	Dipole antenna FREQ 1900MHz	/	SN 36/05 DIP F22	2009-09-01
	Dipole antenna FREQ 2450MHz	/	SN 36/05 DIP J25	2009-09-01
	Power amplifier (Freq.: 0.8-2.0GHz)	BLMA 0820-6	056060A	2009-11-27
	Directional coupler (Freq.: 0.5-2.0GHz)	MFR 34078	CPL-5220-20-SMA-79	2009-09-24
	Signal generator	SMT 06	101836	2009-09-26
	Power meter	NRVD	101311	2009-09-25
	Multi meter	2000	1062728	2009-09-19
	Robot	KCP2 Std.ed05	00171	2009-10-01
	Measurement probe	/	SN 12/05 EP 61	2009-10-01
	Flat Phantom	/	SN 36/05 SAM 25	2009-10-01
	Test table	/	SN 35/05 TABP13	2009-10-01
	Supporter (Holder)	/	SN 45/04 MSH09	2009-10-01

ANNEX A

of

Shenzhen Morlab Communications Technology Co., Ltd.

CONFORMANCE TEST REPORT FOR

HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

REPORT NO: SH08090014S02

Inventec Corporation

Pocket PC Mobile Phone

Accreditation Certificate

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
(CQCS Testing Co. Ltd.)

Electronic Testing Building Wenguang Road, Shahe West, Xili Town, Nanshan District, Shenzhen, Guangdong, China

to ISO/IEC 17025:1999 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：2007-01-17
Date of Expiry：2009-10-08
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

of

Shenzhen Morlab Communications Technology Co.,Ltd.

CONFORMANCE TEST REPORT FOR

HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

REPORT NO: SH08090014S02

Inventec Corporation

Pocket PC Mobile Phone

Type Name: V83

Hardware Version：	**DVT2.2**
Software Version：	**ver8227**

TEST LAYOUT

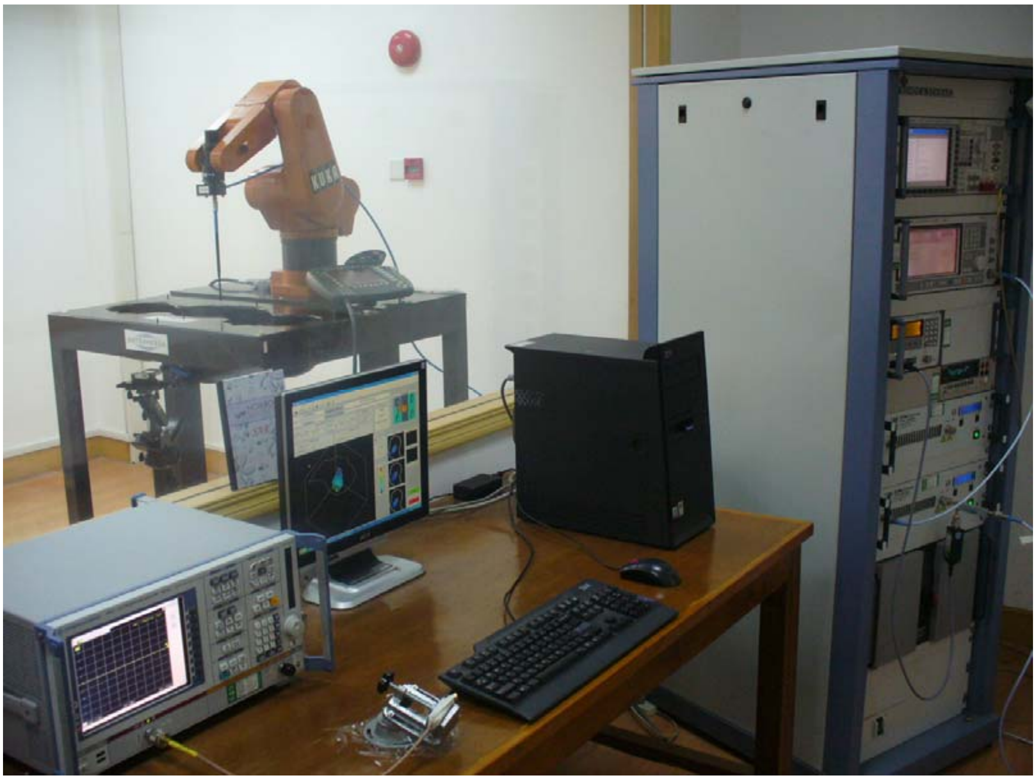


Figure B.1 COMOSAR Test Bench Test Layout

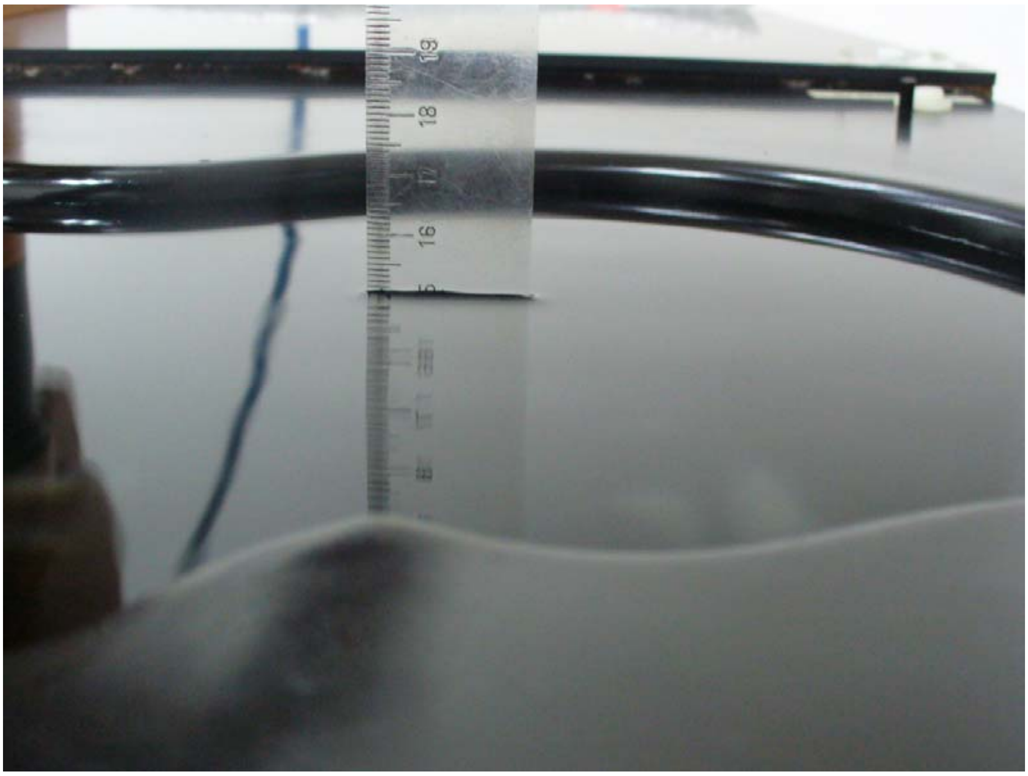


Figure B.2 Depth of Simulating Liquid in SAM Flat (Body) Phantom

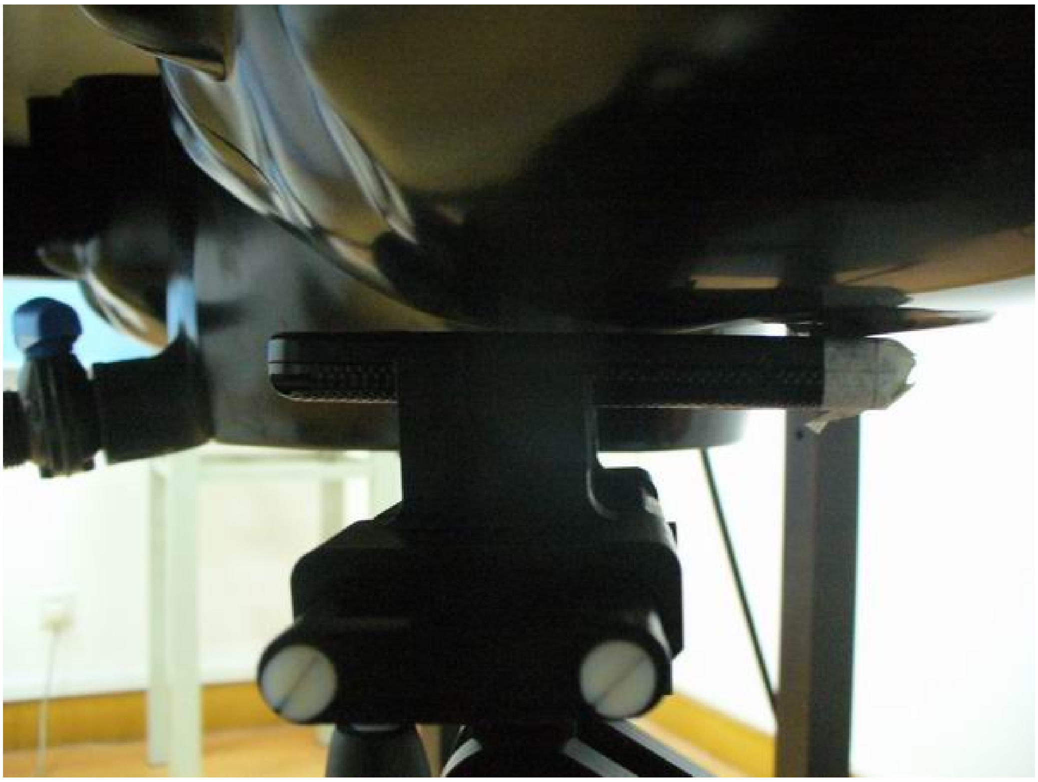


Figure B.3 EUT Head Touch Cheek Position

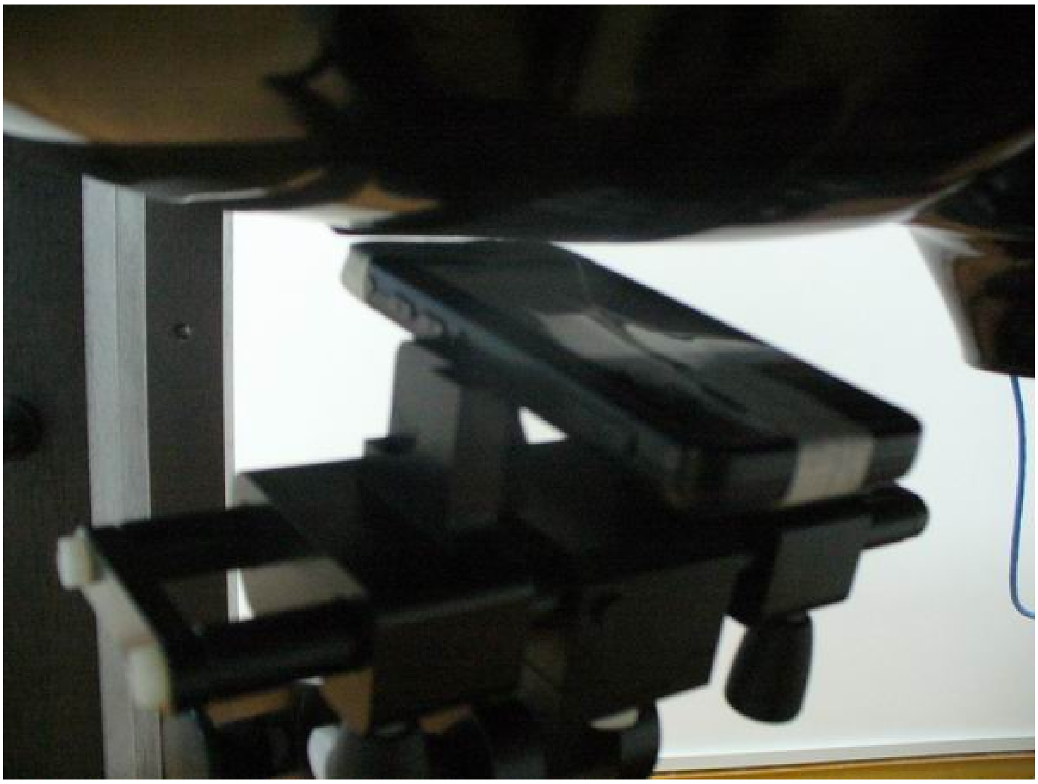


Figure B.4 EUT Head Tilt Position

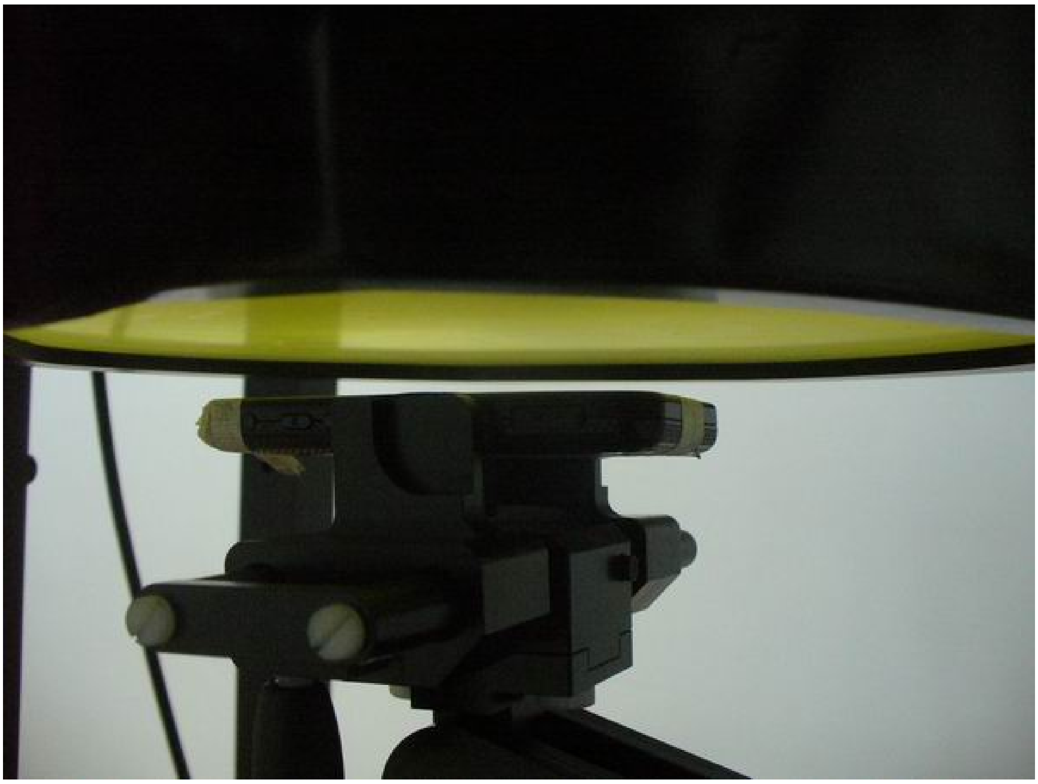


Figure B.5 EUT Body Position(FRONT)

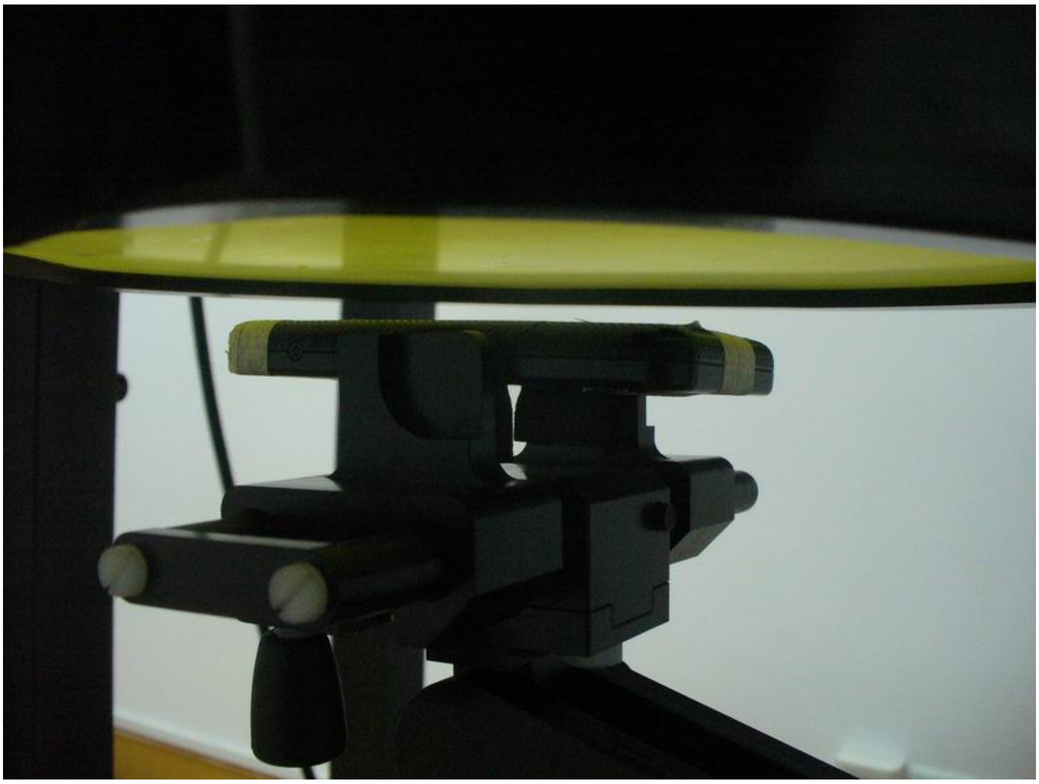


Figure B.6 EUT Body Position(BACK)

ANNEX C

of

Shenzhen Morlab Communications Technology Co.,Ltd.

CONFORMANCE TEST REPORT FOR

HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

REPORT NO: SH08090014S02

Inventec Corporation

Pocket PC Mobile Phone

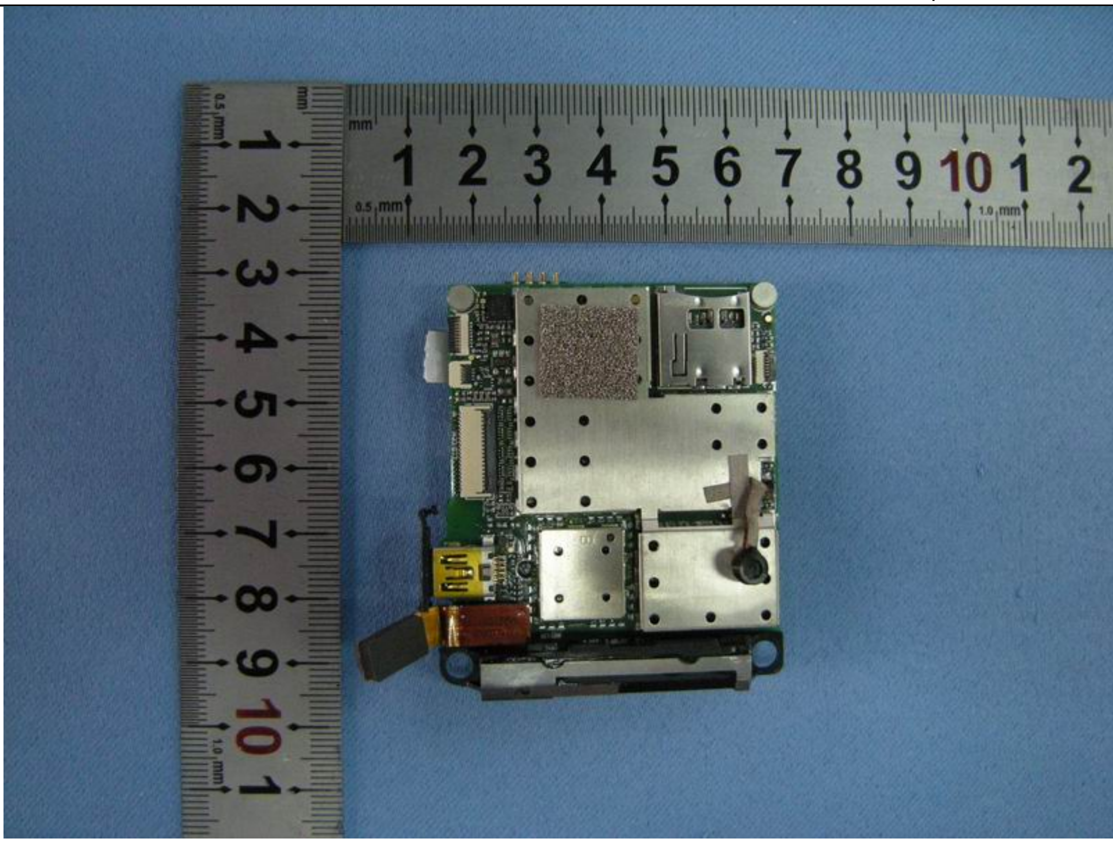
Type Name: V83

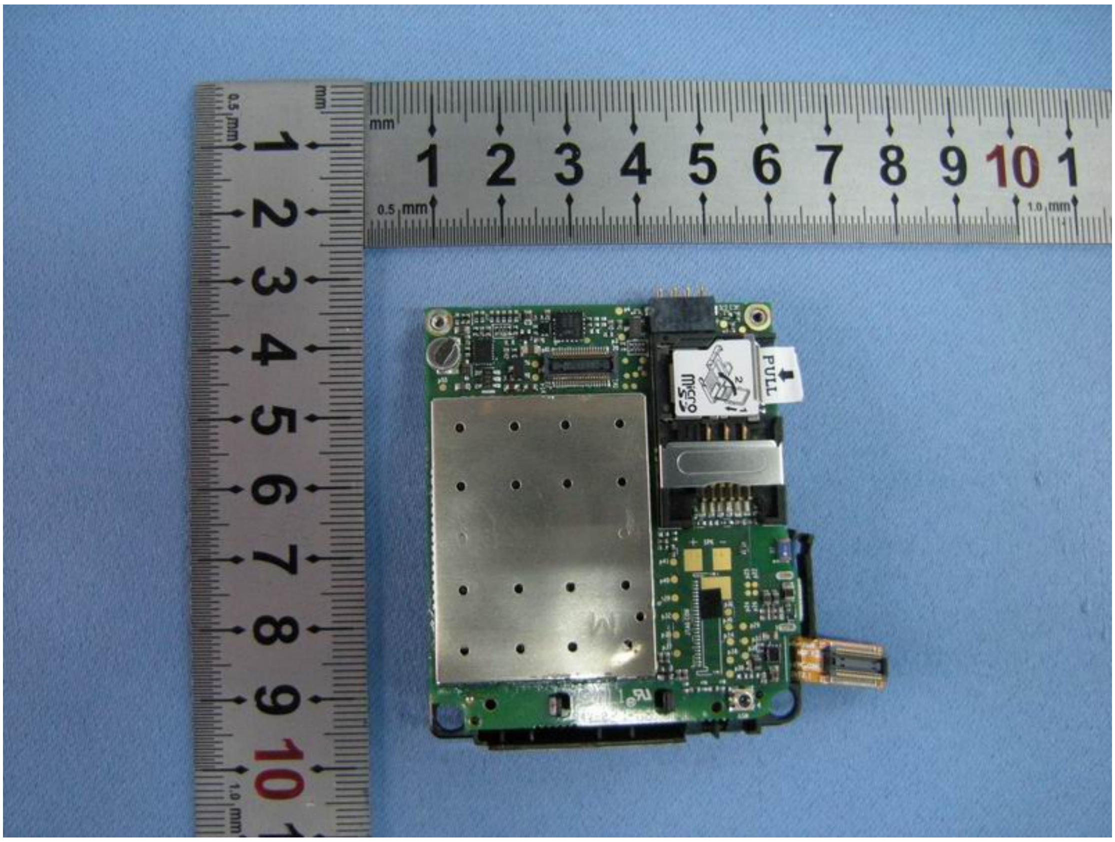
Hardware Version：	**DVT2.2**
Software Version：	**ver8227**

Sample Photographs

1.1 Photograph of the Equipment under Test

1.2 Inside




PULL

ANNEX D

of

Shenzhen Morlab Communications Technology Co.,Ltd.

CONFORMANCE TEST REPORT FOR

HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

REPORT NO: SH08090014S02

Inventec Corporation

Pocket PC Mobile Phone

Type Name: V83

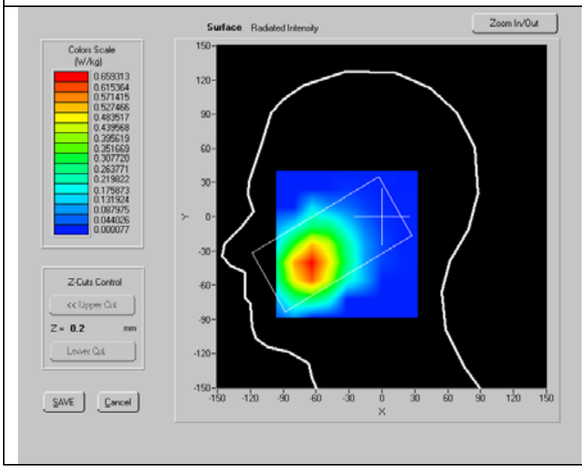
Hardware Version：	**DVT2.2**
Software Version：	**ver8227**

Graph Test Results

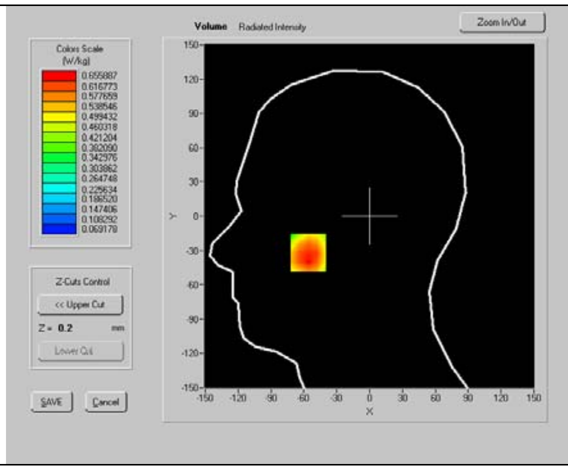
SAR Test GSM 850 Head (Left,Cheek,Low Channel)

System / software:	COMOSAR / OpenSAR v2.0.1e		**Modn. Duty Cycle:**	1
Date:	2008-10-22		**Input Power Level:**	24dBm
Project Name:	SH08090014S02		**DUT Battery Model/No:**	V83
Ambient Temperature:	21.5°C		**Probe Serial Number:**	SN_4606_EP_61
Device Under Test:	V83		**Simulating Liquid:**	850 MHz Head tissue
Relative Humidity:	60%		**Relative Permittivity:**	41.91
Phantom name:	Flat		**Conductivity:**	0.91
Phantom S/No:	SN 36/05 SAM 25		**Liquid Temperature:**	21.6°C
Phantom File:	sam_direct_droit2_surf 8mm.txt		**Max SAR X-axis Location:**	-56 mm
Device Position:	850_Head		**Max SAR Y-axis Location:**	-32 mm
Antenna Configuration:	Integrated		**SAR 1g:**	0.631 W/kg
Test Frequency:	850 MHz		**SAR 10g:**	0.463 W/kg
Comment:	/		**SAR Drift during Scan:**	3.09 %
Type of Modulation:	GMSK		**Extrapolation:**	poly4

SURFACE SAR

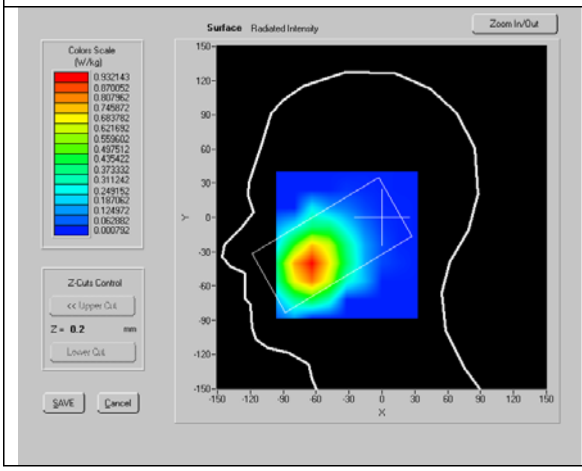
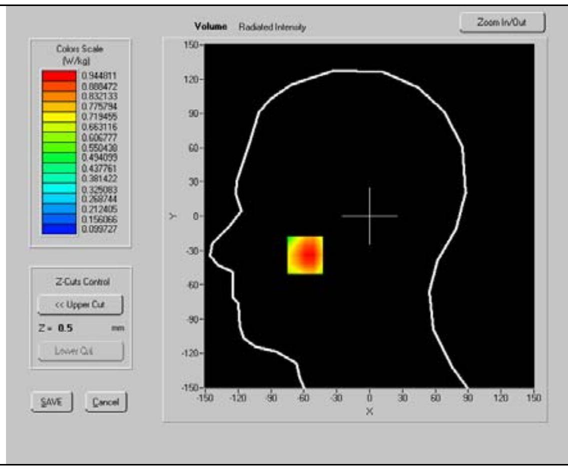


VOLUME SAR



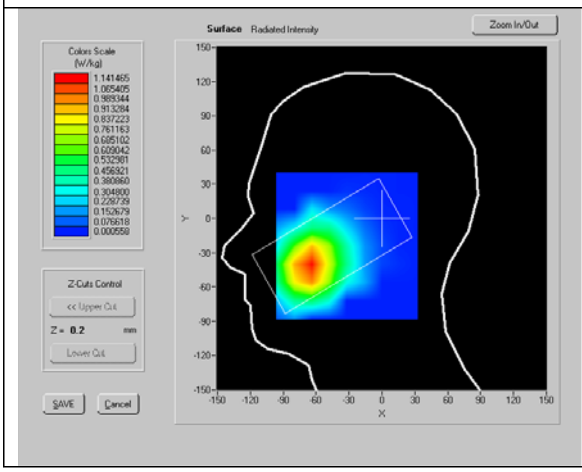
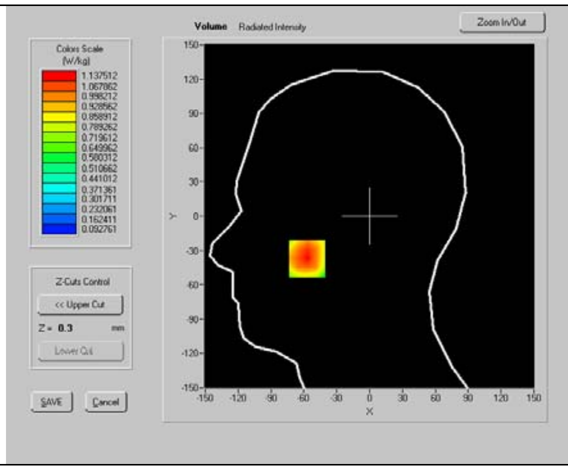
SAR Test GSM 850 Head (Left,Cheek,Middle Channel)

System / software:	COMOSAR / OpenSAR v2.0.1e		**Modn. Duty Cycle:**	1
Date:	2008-10-22		**Input Power Level:**	24dBm
Project Name:	SH08090014S02		**DUT Battery Model/No:**	V83
Ambient Temperature:	21.5°C		**Probe Serial Number:**	SN_4606_EP_61
Device Under Test:	V83		**Simulating Liquid:**	850 MHz Head tissue
Relative Humidity:	60%		**Relative Permittivity:**	41.74
Phantom name:	Flat		**Conductivity:**	0.92
Phantom S/No:	SN 36/05 SAM 25		**Liquid Temperature:**	21.6°C
Phantom File:	sam_direct_droit2_surf 8mm.txt		**Max SAR X-axis Location:**	-59 mm
Device Position:	850_Head		**Max SAR Y-axis Location:**	-34 mm
Antenna Configuration:	Integrated		**SAR 1g:**	0.928 W/kg
Test Frequency:	850 MHz		**SAR 10g:**	0.669 W/kg
Comment:	/		**SAR Drift during Scan:**	3.09 %
Type of Modulation:	GMSK		**Extrapolation:**	poly4

SURFACE SAR	VOLUME SAR
	

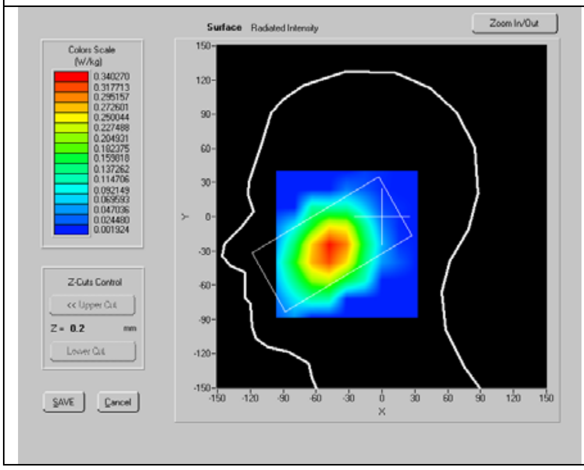
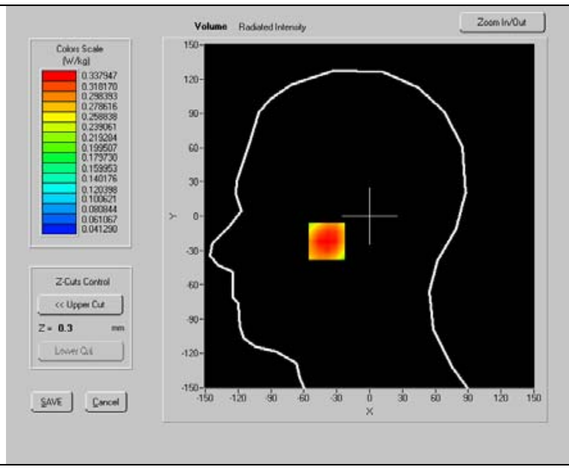
SAR Test GSM 850 Head (Left,Cheek,Middle,High Channel)

System / software:	COMOSAR / OpenSAR v2.0.1e	**Modn. Duty Cycle:**	1
Date:	2008-10-22	**Input Power Level:**	24dBm
Project Name:	SH08090014S02	**DUT Battery Model/No:**	V83
Ambient Temperature:	21.5°C	**Probe Serial Number:**	SN_4606_EP_61
Device Under Test:	V83	**Simulating Liquid:**	850 MHz Head tissue
Relative Humidity:	60%	**Relative Permittivity:**	41.59
Phantom name:	Flat	**Conductivity:**	0.94
Phantom S/No:	SN 36/05 SAM 25	**Liquid Temperature:**	21.6°C
Phantom File:	sam_direct_droit2_surf 8mm.txt	**Max SAR X-axis Location:**	-57mm
Device Position:	850_Head	**Max SAR Y-axis Location:**	-37mm
Antenna Configuration:	Integrated	**SAR 1g:**	1.084W/kg
Test Frequency:	850 MHz	**SAR 10g:**	0.782W/kg
Comment:	/	**SAR Drift during Scan:**	3.09 %
Type of Modulation:	GMSK	**Extrapolation:**	poly4

SURFACE SAR	VOLUME SAR
	

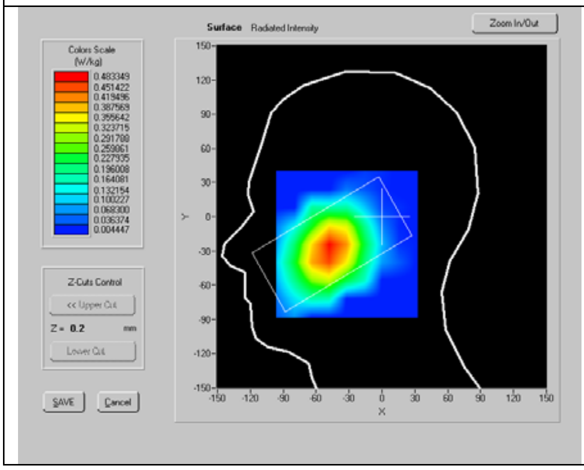
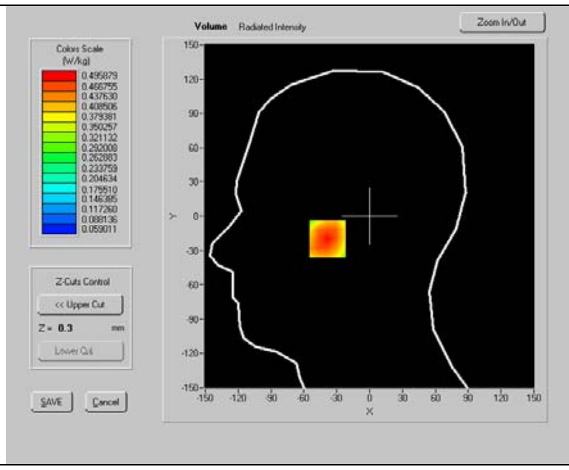
SAR Test GSM 850 Head (Left,Tilt,Low Channel)

System / software:	COMOSAR / OpenSAR v2.0.1e		Modn. Duty Cycle:	1
Date:	2008-10-22		Input Power Level:	24dBm
Project Name:	SH08090014S02		DUT Battery Model/No:	V83
Ambient Temperature:	21.5°C		Probe Serial Number:	SN_4606_EP_61
Device Under Test:	V83		Simulating Liquid:	850 MHz Head tissue
Relative Humidity:	60%		Relative Permittivity:	41.91
Phantom name:	Flat		Conductivity:	0.91
Phantom S/No:	SN 36/05 SAM 25		Liquid Temperature:	21.6°C
Phantom File:	sam_direct_droit2_surf 8mm.txt		Max SAR X-axis Location:	-39mm
Device Position:	850_Head		Max SAR Y-axis Location:	-22mm
Antenna Configuration:	Integrated		SAR 1g:	0.331W/kg
Test Frequency:	850 MHz		SAR 10g:	0.250W/kg
Comment:	/		SAR Drift during Scan:	3.09 %
Type of Modulation:	GMSK		Extrapolation:	poly4

SURFACE SAR	VOLUME SAR
	

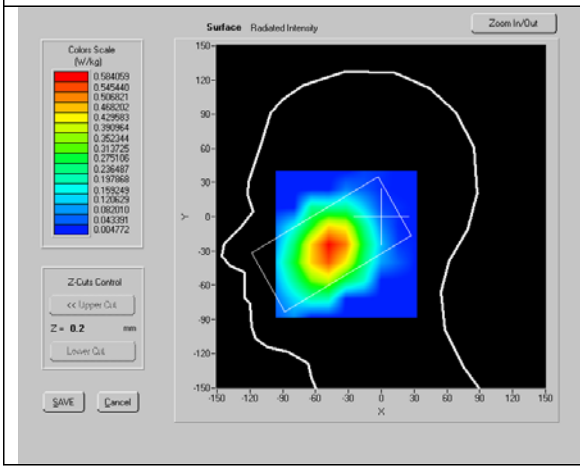
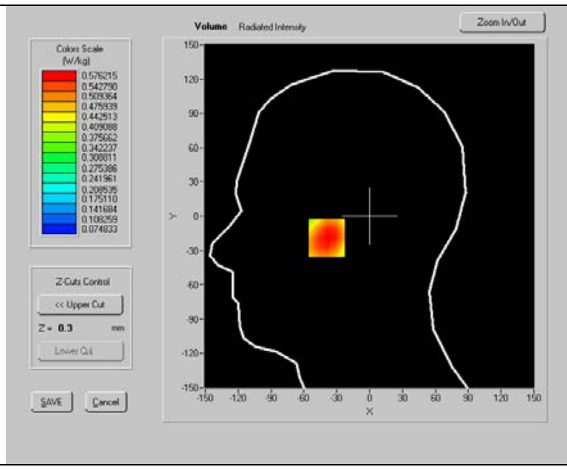
SAR Test GSM 850 Head (Left,Tilt,Middle Channel)

System / software:	COMOSAR / OpenSAR v2.0.1e	**Modn. Duty Cycle:**	1
Date:	2008-10-22	**Input Power Level:**	24dBm
Project Name:	SH08090014S02	**DUT Battery Model/No:**	V83
Ambient Temperature:	21.5°C	**Probe Serial Number:**	SN_4606_EP_61
Device Under Test:	V83	**Simulating Liquid:**	850 MHz Head tissue
Relative Humidity:	60%	**Relative Permittivity:**	41.74
Phantom name:	Flat	**Conductivity:**	0.92
Phantom S/No:	SN 36/05 SAM 25	**Liquid Temperature:**	21.6°C
Phantom File:	sam_direct_droit2_surf 8mm.txt	**Max SAR X-axis Location:**	-38mm
Device Position:	850_Head	**Max SAR Y-axis Location:**	-20mm
Antenna Configuration:	Integrated	**SAR 1g:**	0.477W/kg
Test Frequency:	850 MHz	**SAR 10g:**	0.355W/kg
Comment:	/	**SAR Drift during Scan:**	3.09 %
Type of Modulation:	GMSK	**Extrapolation:**	poly4

SURFACE SAR	VOLUME SAR
	

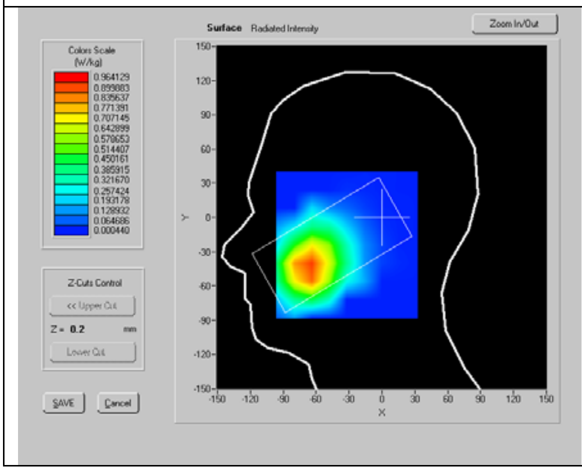
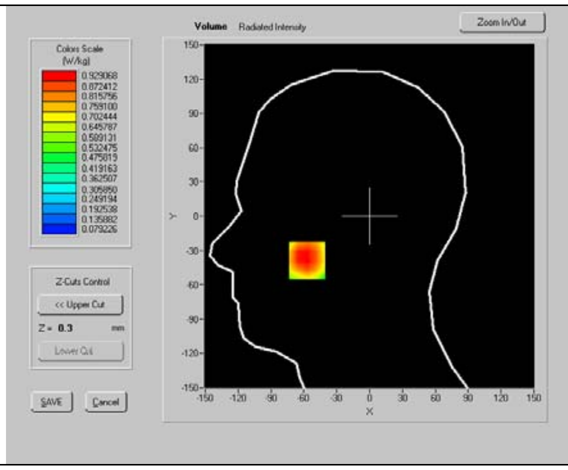
SAR Test GSM 850 Head (Left,Tilt,High Channel)

System / software:	COMOSAR / OpenSAR v2.0.1e		Modn. Duty Cycle:	1
Date:	2008-10-22		Input Power Level:	24dBm
Project Name:	SH08090014S02		DUT Battery Model/No:	V83
Ambient Temperature:	21.5°C		Probe Serial Number:	SN_4606_EP_61
Device Under Test:	V83		Simulating Liquid:	850 MHz Head tissue
Relative Humidity:	60%		Relative Permittivity:	41.59
Phantom name:	Flat		Conductivity:	0.94
Phantom S/No:	SN 36/05 SAM 25		Liquid Temperature:	21.6°C
Phantom File:	sam_direct_droit2_surf 8mm.txt		Max SAR X-axis Location:	-39mm
Device Position:	850_Head		Max SAR Y-axis Location:	-19mm
Antenna Configuration:	Integrated		SAR 1g:	0.564W/kg
Test Frequency:	850 MHz		SAR 10g:	0.423W/kg
Comment:	/		SAR Drift during Scan:	3.09 %
Type of Modulation:	GMSK		Extrapolation:	poly4

SURFACE SAR	VOLUME SAR
	

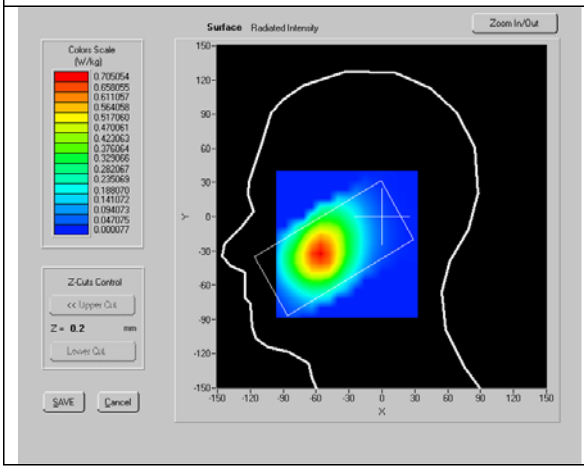
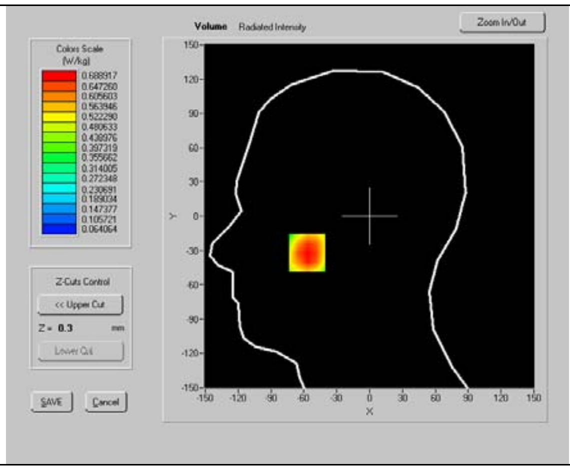
SAR Test GSM 850 Head (Left,Cheek,Middle Channel with BT On)

System / software:	COMOSAR / OpenSAR v2.0.1e	**Modn. Duty Cycle:**	1
Date:	2008-10-22	**Input Power Level:**	24dBm
Project Name:	SH08090014S02	**DUT Battery Model/No:**	V83
Ambient Temperature:	21.5°C	**Probe Serial Number:**	SN_4606_EP_61
Device Under Test:	V83	**Simulating Liquid:**	850 MHz Head tissue
Relative Humidity:	60%	**Relative Permittivity:**	41.74
Phantom name:	Flat	**Conductivity:**	0.92
Phantom S/No:	SN 36/05 SAM 25	**Liquid Temperature:**	21.6°C
Phantom File:	sam_direct_droit2_surf 8mm.txt	**Max SAR X-axis Location:**	-57mm
Device Position:	850_Head	**Max SAR Y-axis Location:**	-39mm
Antenna Configuration:	Integrated	**SAR 1g:**	0.913W/kg
Test Frequency:	850 MHz	**SAR 10g:**	0.664W/kg
Comment:	/	**SAR Drift during Scan:**	3.09 %
Type of Modulation:	GMSK	**Extrapolation:**	poly4

SURFACE SAR	VOLUME SAR
	

SAR Test GSM 850 Head (Right,Cheek,Low Channel)

System / software:	COMOSAR / OpenSAR v2.0.1e		**Modn. Duty Cycle:**	1
Date:	2008-10-22		**Input Power Level:**	24dBm
Project Name:	SH08090014S02		**DUT Battery Model/No:**	V83
Ambient Temperature:	21.5°C		**Probe Serial Number:**	SN_4606_EP_61
Device Under Test:	V83		**Simulating Liquid:**	850 MHz Head tissue
Relative Humidity:	60%		**Relative Permittivity:**	41.91
Phantom name:	Flat		**Conductivity:**	0.91
Phantom S/No:	SN 36/05 SAM 25		**Liquid Temperature:**	21.6°C
Phantom File:	sam_direct_droit2_surf 8mm.txt		**Max SAR X-axis Location:**	-57mm
Device Position:	850_Head		**Max SAR Y-axis Location:**	-32mm
Antenna Configuration:	Integrated		**SAR 1g:**	0.665W/kg
Test Frequency:	850 MHz		**SAR 10g:**	0.488W/kg
Comment:	/		**SAR Drift during Scan:**	3.09 %
Type of Modulation:	GMSK		**Extrapolation:**	poly4

SURFACE SAR	VOLUME SAR
	

SAR Test GSM 850 Head (Right,Cheek,Middle Channel)

System / software:	COMOSAR / OpenSAR v2.0.1e		**Modn. Duty Cycle:**	1
Date:	2008-10-22		**Input Power Level:**	24dBm
Project Name:	SH08090014S02		**DUT Battery Model/No:**	V83
Ambient Temperature:	21.5°C		**Probe Serial Number:**	SN_4606_EP_61
Device Under Test:	V83		**Simulating Liquid:**	850 MHz Head tissue
Relative Humidity:	60%		**Relative Permittivity:**	41.74
Phantom name:	Flat		**Conductivity:**	0.92
Phantom S/No:	SN 36/05 SAM 25		**Liquid Temperature:**	21.6°C
Phantom File:	sam_direct_droit2_surf 8mm.txt		**Max SAR X-axis Location:**	-56mm
Device Position:	850_Head		**Max SAR Y-axis Location:**	-32mm
Antenna Configuration:	Integrated		**SAR 1g:**	0.981W/kg
Test Frequency:	850 MHz		**SAR 10g:**	0.712W/kg
Comment:	/		**SAR Drift during Scan:**	3.09 %
Type of Modulation:	GMSK		**Extrapolation:**	poly4

SURFACE SAR	VOLUME SAR