



# **ShenZhen Electronic Product Quality Testing Center**

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

### SAR06\_011A

Cellon(China)Co.,Ltd.

900/1800/1900 Tri-band Mobile Phone

Type Name: CT7568

FCC ID: T38CT7568

Hardware Version:

PR3

Software Version:

08460003

Date of Issue:

2006-4-3









## **GENERAL SUMMARY**

Product Name	e 900/1800/1900 Tri-band Mobile Phone Development	Stage	MP			
	47CFR § 2.1093: Radiofrequency Radiation Exposure Eva	luation	: Portable Devices			
	FCC OET Bulletin 65 (Edition 97-01), Supplement Compliance with FCC Guidelines for Human Exposure to Refields	5.8	60.			
Standard(s)	A Special control of the Special Control of t		PORTOCHIA PROTECTION STATEMENT STATE			
	Exposure to Radio Frequency Electromagnetic Fields, 3 kHz		ATTOMOS AT			
	IEEE 1528–2003: Recommended Practice for Determini Specific Absorption Rate (SAR) in the Human Body Due		LANGUAGO MARIA MAR			
	Devices: Experimental Techniques.	ne isoseni soneoli				
	Localized Specific Absorption Rate (SAR) of this portable	wireles	ss equipment has been			
	measured in all cases requested by the relevant standards	cited in	n Clause 5.2 of this test			
Conclusion	report. Maximum localized SAR is below exposure limits spe	cified i	n the relevant standards			
Consideren	cited in Clause 5.1 of this test report.	cited in Clause 5.1 of this test report.				
	General Judgment: Pass					
	Date	e of is	sue: Apr 3th, 2006			
	TX Freq. Band: 1710.20 MHz —1784.80 MHz(DCS) 890.20	MHz-	-914.80 MHz (900MHz)			
	RX Freq. Band: 1805.20 MHz —1879.80 MHz(DCS) 935.20	MHz-	-959.80 MHz (900MHz)			
Comment	1850.20 MHz —1909.80 MHz(PCS)					
Comment	1930.20 MHz —1989.80 MHz(PCS)					
	Antenna Character : build inside					
	The test result only responds to the measured sample.					
Tested	by: LiJum Liang Date A	·γ 3	th. 2006			
Checked	by: Smart Li Date: Ap	n	3 200b			
Approved by: (Legin Wang), Date: Apr. 3, 2006						
1						



#### **Contents**

#### 1. GENERAL CONDITIONS

#### 2. ADMINISTRATIVE DATA

- 2.1. Identification of the Responsible Testing Laboratory
- 2.2. Identification of the Responsible Testing Location(s)
- 2.3. Organization Item
- 2.4. Identification of Applicant
- 2.5. Identification of Manufacture

#### 3. EQUIPMENT UNDER TEST (EUT)

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

#### 4. OPERATIONAL CONDITIONS DURING TEST

- 4.1. Schematic Test Configuration
- 4.2. SAR Measurement System

#### 5. CHARACTERISTICS OF THE TEST

- 5.1. Applicable Limit Regulations
- 5.2. Applicable Measurement Standards

#### 6. LABORATORY ENVIRONMENT

#### 7. TEST RESULTS

- 7.1. Dielectric Performance
- 7.2. Summary of Measurement Results
- 7.3. Conclusion

#### 8. MEASUREMENT UNCERTAINTY

#### 9. MAIN TEST INSTRUMENTS

#### 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: Additional Tests** 



#### 1. GENERAL CONDITIONS

- 1.1 This report only refers to the item that has undergone the test.
- 1.2 This report standalone dose 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 Electronic Product Quality Testing Center.
- 1.4 This report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of Shenzhen Electronic Product Quality Testing Center and the Accreditation Bodies, if it applies.



#### 2. Administrative Date

#### 2.1. Identification of the Responsible Testing Laboratory

Company Name: ShenZhen Electronic Product Quality Testing Center

**Department:** Testing Department

Address: Electronic Testing Building, ShaHe Road, NanShan District,

ShenZhen, P. R. China

**Telephone**: +86-755-26628676 **Fax**: +86-755-26627238

Responsible Test Lab

Mr. Wang Keqin

#### 2.2. Identification of the Responsible Testing Location(s)

Company Name: ShenZhen Electronic Product Quality Testing Center

Address: Electronic Testing Building, ShaHe Road, NanShan District,

ShenZhen, P. R. China

2.3. Organization Item

S.E.T Report No.: SAR06\_011A
S.E.T Project Leader: Mr. Li Sixiong

S.E.T Responsible for

accreditation scope:

Mr. Wang Keqin

 Start of Testing:
 2006-3-23

 End of Testing:
 2006-3-30

#### 2.4. Identification of Applicant

Company Name: Cellon(China)Co.,Ltd.

Address: 13/F, Skyworth C Building, Gaoxin S.Ave1, Hi-Tech Industrial Park,

Nanshan, Shenzhen

Contact person: Yu xinglan

**Telephone:** (+86) 10-58270277 **Fax:** (+86) 10-84568718

#### 2.5.Identification of Manufacture

Company Name: Cellon(China)Co.,Ltd.

**Address:** 13/F, Skyworth C Building, Gaoxin S.Ave1, Hi-Tech Industrial Park,

Nanshan, Shenzhen

Contact person: Yu xinglan

**Telephone:** (+86) 10-58270277 **Fax:** (+86) 10-84568718

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



#### 3. Equipment Under Test (EUT)

#### 3.1.Identification of the Equipment under Test

Brand Name: Philips
Type Name: CT7568
Marking Name: CT7568

Test frequency GSM 900MHz、 DCS 1800MHz、 PCS1900MHz

Battery Type A23ZCM/E0P

Battery specification 1100mAh 3.7V Li-ion

Antenna type Build inside
Operation mode Call established

General description: Modulation mode GSM, NO BLUETOOTH

GSM 900: 0.385Watt(25.86dBm)

Max. Power(EIRP) DCS 1800: 0.282Watt(24.50dBm)

PCS 1900: 0.224Watt(23.51dBm)

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

EUT Code	Serial Number	Hardware Version	Software Version	IMEI
59000Н01	N.A.	PR3	08460003	358524000001047



#### 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 Absolute Radio Frequency Channel Number (ARFCN) is allocated to 1, 62 and 124 respectively in the case of GSM 900 MHz, or to 512, 700 and 885 respectively in the case of DCS 1800 MHz, and 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 IndexSAR SARA2 system, which consists of a

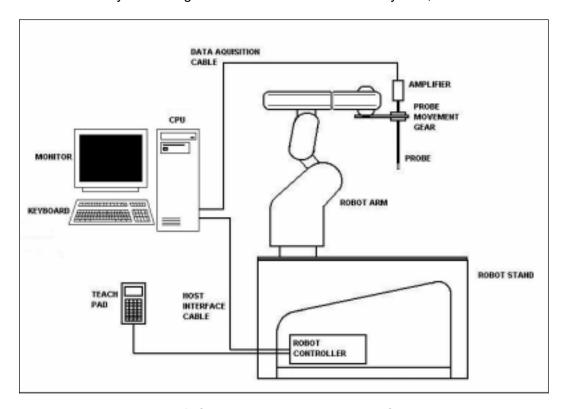


Figure 1. SAR Lab Test Measurement Set-up

Mitsubishi RV-E2 6-axis robot arm and controller, IndexSAR probe and amplifier and SAM phantom



Head Shape. The system is controlled remotely from a PC, which contains the software to control the robot and data acquisition equipment. The software also displays the data obtained from test scans.

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 centred 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.



#### Robot and Stand

Type Mitsubishi Movemaster RV-2A / 6 axis vertical

articulated robot

Dimensions (robot) Height: 790mm (in home position)

Dimensions (robot stand) 1010L x 450W x 820H mm

Weight Approx. 36 kg
Position repeatability +/- 0.04mm

Drive Method AC servomotor

Expandability Extra axis expansion capability for probe

calibration applications E-Field probe



#### Robot Controller Unit

**Type** CR1 - 571

Dimensions 212W x 290D x 151H mm

Weight 8 kg

Power source single-phase 100 - 240 VAC

#### 4.2.2 Probe and amplifier specification

#### IXP-050 Indexsar isotropic immersible SAR probe

The probes are constructed using three orthogonal dipole sensors arranged on an interlocking, triangular prism core. The probes have built-in shielding against static charges and are contained within a PEEK



cylindrical enclosure material at the tip (showed in figure 2). The system uses diode compression potential (DCP) to determine SAR values for different types of modulation. Crest factor is not used for determining SAR values. The DCP for different types of modulation is determined during the probe calibration procedure.

	E-filed Probe	
	Туре	Three orthogonal dipole sensors arranged on triangular, interlocking substrates
		Overall length: 350mm
		Tip length: 10mm
-	Dimensions	Body diameter: 12mm
7		Tip diameter: 5mm
		Distance from probe tip to dipole centers: 2.5mm
	Interfacing	Lemo 6 pole latching connector for interfacing to high
		impedance amplifier
		+/- 0.5dB in brain liquids (rotation about probe axis)
	Isotropy	typically +/- 0.15dB
		+/- 0.5dB in brain liquids (rotation normal to probe axis)
	0 - 111 41	Indexsar calibration in brain tissue simulating liquids at
	Calibration	frequency of 900MHz, 1800MHz and 1900MHz
	Dynamic Range	0.001W/kg to 100W/kg in liquid. Linearity +/- 0.2W/kg

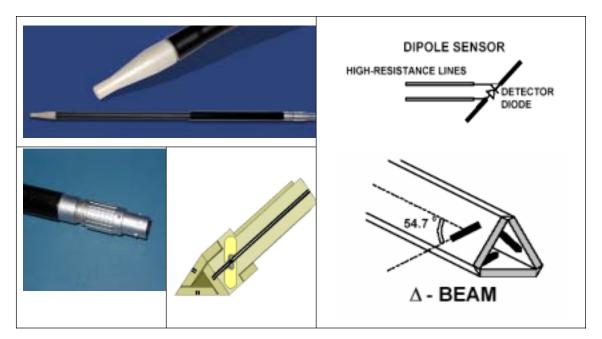
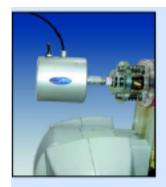


Figure 2. Specification and characterisation parameters of indexsar probe



#### **IFA-010 Amplifier**

The amplifier unit has a multi-pole connector to connect to the probe and a multiplexer selects between the 3-channel single-ended inputs. A 16-bit AtoD converter with programmable gain is used along with an on-board micro-controller with non-volatile firmware. Battery life is around 150 hours and data are transferred to the PC via 3m of duplex optical fibre and a self-powered RS232 to optical converter.



#### Probe Amplifier and PC Interface

Type High impedance inputs with 3 independent x,y,z sensor

channels giving simultaneous measurement data every 2ms. Reads true average of modulated signals without the need

for duty cycle corrections

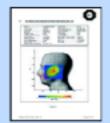
Ranges Software selectable of x1 to 63

Cable Optical cable with self-powered 9 way RS232 converter.

3m cable length supplied as standard.

Other lengths to order.

Power Requirements 2 x AAA batteries giving approximately 100 hours usage.



#### 'Word' report format

The results of each frequency scan are presented in a Microsoft 'Word' document with all the necessary measurement parameters automatically tabulated. Users can customise the layout and in some cases language changes are possible.

#### 4.2.3 Phantoms and simulant liquid

#### 4.2.3.1 SAR head phantom (SAM)

The Indexsar SAM Upright Phantom is fabricated to the shape defined in these CAD files by Antennessa.



#### **Head Phantom**

Type 2 Upright SAM phantom

Dimensions Height: 320mm

Baseplate diameter: 275mm

Weight empty: 1.2 kg

filled: 7.2 kg

Wall thickness 2.0 mm ±0.2

Construction Low loss resin / Strengthened

saggital seam

It is mounted on the base table, which holds the robotic positioner. Both mechanical and laser-based



registration systems are utilised to register the phantom position in relationship to the robot co-ordinate system. In the SARA2 implementation, the SAM phantom is mounted on a supporting table made of low dielectric loss material, which includes mounting brackets for DUT positioners, dipole holders and (optionally) a shelf for supporting larger devices like laptop computers.

#### 4.2.3.2 Box phantom

The box phantom used for body testing and for validation is manufactured from Perspex.

#### IXB - 070 Specification and characterisation parameters



**Constructional details** 

**Internal dimensions:** 200mm x 200mm x 200mm

**Thickness of base:** 2mm +/- 0.2mm

Wall thickness: 4mm
Material: PMMA

Frequency range 300MHz – 6GHz

**Dielectric properties** 

Relative permittivity 2.7

Loss tangent < 0.02

**Tissue-simulant volume required for 150mm depth (**6 litres)

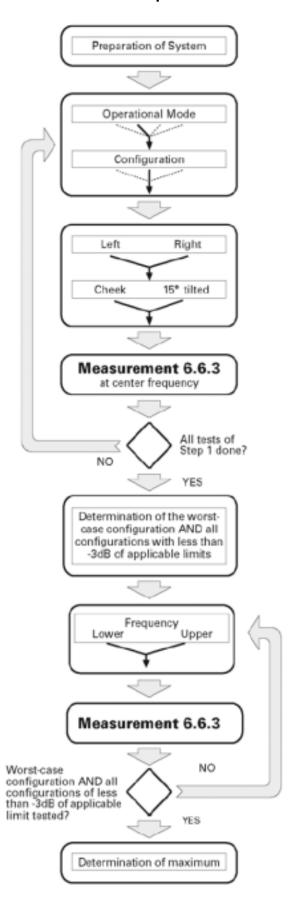
#### 4.2.3.3 Simulant liquids

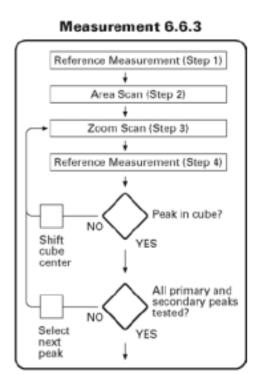
Simulant liquids that are used for testing at frequencies of GSM 90MHz \ DCS1800 MHz and PCS 1900MHz, which are made mainly of sugar, salt and water solutions may be left in the phantoms. Approximately 7litres are needed for an upright head compared to about 27litres for a horizontal bath phantom.

Ingredients	Frequency(MHz)					
(% by weight)	900		1800		1900	
Tissue Type	Head	Body	Head	Body	Head	Body
De-ionised Water	40.92	56.0	N.A.	N.A.	54.9	40.4
Salt(NaCl)	1.48	0.76	N.A.	N.A.	0.18	0.5
Sugar	56.5	41.76	N.A.	N.A.	0.0	58.0
HEC	1	1.21	N.A.	N.A.	0.0	1.0
DGBE	0.0	0.0	N.A.	N.A.	44.92	0.0
Acticide SPX	0.1	0.27	N.A.	N.A.	0.0	0.0
Dielectric Constant	41.44	52.99	N.A.	N.A.	39.9	54.0
Conductivity (S/m)	0.99	1.12	N.A.	N.A.	1.42	1.45



#### 4.2.4 SAR measurement procedure







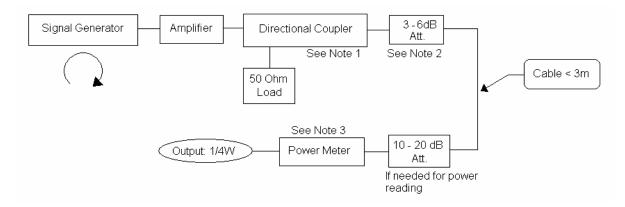
Channel	Left				Right			
	Ch	eek	Т	ilt	Ch	eek	Т	ilt
	Retracted	Extended	Retracted	Extended	Retracted	Extended	Retracted	Extended
Mode 1:								
High			S2(-1.4dB)	S2(-0.4dB)			S2(-2.2dB)	S2(-1.4dB)
Middle	S1(-4dB)	S1(-4dB)	S1(-1.5dB)	S1(-0.5dB)	S1(-5dB)	S1(-5dB)	S1(-2.5dB)	S1(-1.5dB)
Low			S2(-1.3dB)	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 behaviour are tested.

#### 4.2.5 Validation testing using box phantoms

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



With the SG and Amp and with directional coupler in place, set up the source signal at the relevant

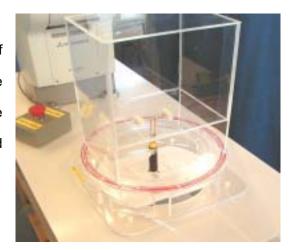


frequency and use a power meter to measure the power at the end of the SMA cable that you intend to connect to the balanced dipole. Adjust the SG to make this, say, 0.25W (24 dBm). If this level is too high to read directly with the power meter sensor, insert a calibrated attenuator (e.g. 10 or 20 dB) and make a suitable correction to the power meter reading.

- Note 1: In this method, the directional coupler is used for monitoring rather than setting the exact feed power level. If, however, the directional coupler is used for power measurement, you should check the frequency range and power rating of the coupler and measure the coupling factor (referred to output) at the test frequency using a VNA.
- Note 2: Remember that the use of a 3dB attenuator (as shown in Figure 8.1 of P1528) means that you need an RF amplifier of 2 times greater power for the same feed power. The other issue is the cable length. You might get up to 1dB of loss per meter of cable, so the cable length after the coupler needs to be quite short.
- Note 3: For the validation testing done using CW signals, most power meters are suitable. However, if you are measuring the output of a modulated signal from either a signal generator or a handset, you must ensure that the power meter correctly reads the modulated signals.

#### 4.2.5.1 Setting up the box phantom for validation testing

The main purpose of the box phantom is for validation of the system. By placing the box phantom in place of the upright head, using the box phantom dipole holder the system can now be used to check that the probe and software are giving accurate readings.



#### 4.2.5.2 Equipments and results of validation testing

Equipments:

Type and specification
SML02
450MHz-3GHz
3W 502(10-2500MHz)
IXD-190 antenna
IXD-090 antenna

#### Results:

Frequency	Target value (1g)	Test value (1g)
900 MHz	10.8	10.51
1800MHz	38.1	38.84
1900 MHz	39.7	40.01



#### 4.2.6 SARA2 Interpolation and Extrapolation schemes

SARA2 software contains support for both 2D cubic B-spline interpolation as well as 3D cubic B-spline interpolation. In addition, for extrapolation purposes, a general n-th order polynomial fitting routine is implemented following a singular value decomposition algorithm. A 4th order polynomial fit is used by default for data extrapolation, but a linear-logarithmic fitting function can be selected as an option. The polynomial fitting procedures have been tested by comparing the fitting coefficients generated by the SARA2 procedures with those obtained using the polynomial fit functions of Microsoft Excel when applied to the same test input data.

#### 4.2.7 Interpolation of 2D area scan

The 2D cubic B-spline interpolation is used after the initial area scan at fixed distance from the phantom shell wall. The initial scan data are collected with approx. 10mm spatial resolution and spline interpolation is used to find the location of the local maximum to within a 1mm resolution for positioning the subsequent 3D scanning.

#### 4.2.8Extrapolation of 3D scan

For the 3D scan, data are collected on a spatially regular 3D grid having (by default) 6.4 mm steps in the lateral dimensions and 3.5 mm steps in the depth direction (away from the source). SARA2 enables full control over the selection of alternative step sizes in all directions.

The digitised shape of the head is available to the SARA2 software, which decides which points in the 3D array are sufficiently well within the shell wall to be 'visited' by the SAR probe. After the data collection, the data are extrapolated in the depth direction to assign values to points in the 3D array closer to the shell wall. A notional extrapolation value is also assigned to the first point outside the shell wall so that subsequent interpolation schemes will be applicable right up to the shell wall boundary.

#### 4.2.9 Interpolation of 3D scan and volume averaging

The procedure used for defining the shape of the volumes used for SAR averaging in the SARA2 software follow the method of adapting the surface of the 'cube' to conform with the curved inner surface of the phantom. This is called, here, the conformal scheme.

For each row of data in the depth direction, the data are extrapolated and interpolated to less than 1mm spacing and average values are calculated from the phantom surface for the row of data over distances corresponding to the requisite depth for 10g and 1g cubes. This results in two 2D arrays of data, which



are then cubic B-spline interpolated to sub mm lateral resolution. A search routine then moves an averaging square around through the 2D array and records the maximum value of the corresponding 1g and 10g volume averages. For the definition of the surface in this procedure, the digitized position of the head shell surface is used for measurement in head-shaped phantoms. For measurements in rectangular, box phantoms, the distance between the phantom wall and the closest set of gridded data points is entered into the software. For measurements in box-shaped phantoms, this distance is under the control of the user. The effective distance must be greater than 2.5mm as this is the tip-sensor distance and to avoid interface proximity effects, it should be at least 5mm. A value of 6 or 8mm is recommended. This distance is called **dbe**.

For automated measurements inside the head, the distance cannot be less than 2.5mm, which is the radius of the probe tip and to avoid interface proximity effects, a minimum clearance distance of x mm is retained. The actual value of dbe will vary from point to point depending upon how the spatially regular 3D grid points fit within the shell. The greatest separation is when a grid point is just not visited due to the probe tip dimensions. In this case the distance could be as large as the step-size plus the minimum clearance distance (i.e with x=5 and a step size of 3.5, dbe will be between 3.5 and 8.5mm).

The default step size (dstep) used is 3.5mm, but this is under user-control. The compromise is with time of scan, so it is not practical to make it much smaller or scan times become long and power-drop influences become larger.

The robot positioning system specification for the repeatability of the positioning (dss) is +/- 0.04mm. The phantom shell is made by an industrial moulding process from the CAD files of the SAM shape, with both internal and external moulds. For the upright phantoms, the external shape is subsequently digitized on a Mitutoyo CMM machine (Euro an ultrasonic sensor indicate that the shell thickness (dph) away from the ear is 2.0 +/- 0.1mm. The ultrasonic measurements were calibrated using additional mechanical measurements on available cut surfaces of the phantom shells. See support document IXS-020x. For the upright phantom, the alignment is based upon registration of the rotation axis of the phantom on its 253mm diameter baseplate bearing and the position of the probe axis when commanded to go to the axial position. A laser alignment tool is provided (procedure detailed elsewhere). This enables the registration of the phantom tip (dmis) to be assured to within approx. 0.2mm. This alignment is done with reference to the actual probe tip after installation and probe alignment. The rotational positioning of the phantom is variable – offering advantages for special studies, but locating pins ensure accurate



repositioning at the principal positions (LH and RH ears).

# 4.2.10 Probe anisotropy and boundary proximity influence correction software (Virtual Probe Miniaturization VPM software)

Indexsar Report IXS0223 provides a background to the factors affecting measurements at high frequencies when using SAR probes of size 8 – 5mm tip diameter. Although the Indexsar probes are at the smaller end of this range, SAR probes are not isotropic in 5GHz phantom field gradients and ad 1) At >5GHz, the SAR field decays to 1/e of its value within 3-4mm of the surface of a phantom with a source adjacent. So, measurements are significantly affected by small errors in the separation distances employed between the probe and the phantom surface. The distance between the probe tip and the plane of the sensors should be allowed for using the same value as that declared in the probe calibration document. Distances between the probe tip and phantom surface should be measured accurately to 0.1mm. The best way to assure this is to use the robot to position the probe in light contact with the phantom wall and then to withdraw the probe by the selected amount under robot control.

- 2) The preferred test geometry at 5GHz is for testing at the bottom of an open phantom. If tests at the side of a phantom are performed, it will be necessary to apply VPM corrections as described below. In either case, careful monitoring of probe spacing from the phantom is required. Probe isotropy is improved for measuring fields polarized either normal to or parallel to the probe axis. If the source polarization is known, this arrangement should be established, if possible.
- 3) The probe calibration factors including boundary correction terms should be carefully entered from the calibration document. The probe calibration factors require that the probe be oriented in a known rotational position. The red spot on the Indexsar probe should be aligned facing away from the robot arm.
- 4) The latest SARA2 software (VPM editions) contain support for correcting for probe anisotropy in strong field gradients and include a procedure for correcting for boundary proximity influences. As noted above, the probe has to be oriented in a given rotational position and some familiarity with the new measurement procedures is necessary. The calculations can be performed either with or without the extended correction schemes applied.
- 5) If boundary corrections are used, it may be preferable to go rather closer to the phantom surface than is usually recommended and to perform scans using small steps between the measurement planes so that good data on the SAR profiles are collected within the first 10mm of the phantom depth.



#### **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	< 0.5 Ω			
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 Dielectric Performance

The measured 1-gram averaged SAR values of the device against the head and the body are provided in Tables 1 and 2 respectively. The humidity and ambient temperature of test facility were 52% ~60% and 22.0 °C ~22.9°C respectively. The SAM head phantom (SN 0380 SH and SN 0381 SH) were full of the head tissue simulating liquid. The depth of the body tissue was 15.1cm. The distance between the back of the device and the bottom of the flat phantom is 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

leasurement is made at temperature 22.0 °C ~22.9 °C and relative humidity 52% ~60%.					
,	F=====================================	Downsittivity o	Conductivity of		
/ Frequency Permittivity ε	Permittivity &	(S/m)			
Target value	900 MHZ	41.5	0.97		
Validation value	000 MUZ	44.00	0.070		
(Apr 23)	900 MHZ	41.23	0.978		
Target value	1800 MHZ	40.0	1.40		
Validation value	4000 MUZ	44.04	4 207		
(Apr 29 )	1800 MHZ	41.01	1.397		
Target value	1900 MHZ	40.0	1.40		
Validation value	1900 MHZ	40.11	1.397		

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 2: Dielectric Performance of Body Tissue Simulating Liquid

Temperature: 22.0~22.9° C, humidity: 52~60%.					
1	Frequency	Permittivity ε	Conductivity σ (S/m)		
Target value	900 MHz	550	1.05		
Validation value	900 MHz	54.92	1.059		
(Apr 30 )	900 1011 12	34.32	1.059		
Target value	1800 MHz	53.3	1.52		
Validation value	1800 MHz	53.41	1.516		
(Apr 30 )	1000 1011 12	33.41	1.510		
Target value	1900 MHz	53.3	1.52		
Validation value	1900 MHz	F2 72	1.522		
(Apr 30 )	1900 MIDZ	53.72	1.523		



### 7.2 Summary of Measurement Results

Table 3: SAR Values (GSM 900 MHz Band), Measured against the head.

Temperature: 22.0~22.9° C, humidity: 52~60%.					
Limit of SAR (W/kg)	1 g A	1 g Average 1.6			
Limit of SAR (W/kg)	1				
	Measurem	nent Result			
Test Case	1 g Average	Power level			
	(W/kg)	(dBm)			
Left head, Touch cheek, Top frequency	0.380	29.92			
Left head, Touch cheek, Mid frequency	0.463	29.85			
Left head, Touch cheek, Bottom frequency	0.410	29.89			
Left head, Tilt 15 Degree, Top frequency	0.360	29.92			
Left head, Tilt 15 Degree, Mid frequency	0.390 29.85				
Left head, Tilt 15 Degree, Bottom frequency	0.368	29.89			
Right head, Touch cheek, Top frequency	0.400	29.92			
Right head, Touch cheek, Mid frequency	0.432	29.85			
Right head, Touch cheek, Bottom frequency	0.445	29.89			
Right head, Tilt 15 Degree, Top frequency	0.334 29.92				
Right head, Tilt 15 Degree, Mid frequency	0.376 29.85				
Right head, Tilt 15 Degree, Bottom frequency	0.390	29.89			

Table 4: SAR Values (DCS 1800MHz Band), Measured against the head.

Temperature: 22.0~22.9° C, humidity: 52~60%.				
Limit of CAD (M/kg)	1 g Average			
Limit of SAR (W/kg)	1	.6		
	Measurem	ent Result		
Test Case	1 g Average	Power level		
	(W/kg)	(dBm)		
Left head, Touch cheek, Top frequency	0.256	28.56		
Left head, Touch cheek, Mid frequency	0.239	28.44		
Left head, Touch cheek, Bottom frequency	0.263	27.81		
Left head, Tilt 15 Degree, Top frequency	0.213	28.56		
Left head, Tilt 15 Degree, Mid frequency	0.163	28.44		
Left head, Tilt 15 Degree, Bottom frequency	0.213	27.81		
Right head, Touch cheek, Top frequency	0.129	28.56		
Right head, Touch cheek, Mid frequency	0.110	28.44		
Right head, Touch cheek, Bottom frequency	0.133	27.81		
Right head, Tilt 15 Degree, Top frequency	0.097 28.56			
Right head, Tilt 15 Degree, Mid frequency	0.075 28.44			
Right head, Tilt 15 Degree, Bottom frequency	0.083	27.81		



Table 5: SAR Values (PCS 1900MHz Band), Measured against the head.

Temperature: 22.0~22.9° C, humidity: 52~60%.				
Limit of SAR (W/kg)	1 g Average			
Limit of SAR (W/kg)	1.6			
	Measurement Result			
Test Case	1 g Average	Power level		
	(W/kg)	(dBm)		
Left head, Touch cheek, Top frequency	0.160	27.58		
Left head, Touch cheek, Mid frequency	0.192	27.17		
Left head, Touch cheek, Bottom frequency	0.242	27.10		
Left head, Tilt 15 Degree, Top frequency	0.130 27.58			
Left head, Tilt 15 Degree, Mid frequency	0.162	27.17		
Left head, Tilt 15 Degree, Bottom frequency	0.181	27.10		
Right head, Touch cheek, Top frequency	0.079	27.58		
Right head, Touch cheek, Mid frequency	0.100	27.17		
Right head, Touch cheek, Bottom frequency	0.115	27.10		
Right head, Tilt 15 Degree, Top frequency	0.082	27.58		
Right head, Tilt 15 Degree, Mid frequency	0.091 27.17			
Right head, Tilt 15 Degree, Bottom frequency	0.095 27.10			

Table 6: SAR Values (GSM 900 MHz Band), Measured against the body

Temperature: 22.0~22.9° C, humidity: 52~60%.					
Limit of CAD (M/kg)	1 g A	1 g Average			
Limit of SAR (W/kg)	1	.6			
	Measuren	nent Result			
Test Case	1 g Average	Power level			
	(W/kg)	(dBm)			
Side , Top frequency	0.444	29.92			
Side, Mid frequency	0.410	29.85			
Side, Bottom frequency	0.439	0.439 29.89			



Table 7: SAR Values (DCS 1800 MHz Band), Measured against the body

Temperature: 22.0~22.9° C, humidity: 52~60%.					
Limit of SAR (W/kg)	1 g A	1 g Average			
Limit of SAR (W/kg)	1.6				
	Measurem	ent Result			
Test Case	1 g Average	Power level			
	(W/kg)	(dBm)			
Side , Top frequency	0.130	28.56			
Side, Mid frequency	0.106	28.44			
Side, Bottom frequency	0.124	27.81			

Table 8: SAR Values (PCS 1900 MHz Band), Measured against the body

Temperature: 22.0~22.9° C, humidity: 52~60%.					
Limit of SAD (M/kg)	1 g A	1 g Average			
Limit of SAR (W/kg)	1	.6			
	Measuren	nent Result			
Test Case	1 g Average	Power level			
	(W/kg)	(dBm)			
Side , Top frequency	0.073	27.58			
Side, Mid frequency	0.074	27.17			
Side, Bottom frequency	0.115	27.10			

#### 7.3 Conclusion

Localized Specific Absorption Rate (SAR) of this portable wireless device has been measured in all cases requested by the relevant standards cited in Clause 5.2 of this report. Maximum localized SAR is **below** exposure limits specified in the relevant standards cited in Clause 5.1 of this test report.



# 8 Measurement Uncertainty

No	Uncertainty Component	Туре	Uncertainty Value (%)	Probability Distribution	k	Ci	Standard Uncertainty (%) <i>ui</i> (%)	Degree of freedom
	Measurement System	•			•			
1	−Probe Calibration	В	3.6	N	1	1	3.60	∞
2	—Axial isotropy	В	4.23	R	$\sqrt{3}$	$\sqrt{1-cp}$	0.00	∞
3	—Hemispherical Isotropy	В	10.7	R	$\sqrt{3}$	√cp	6.18	∞
4	-Boundary Effect	В	1.7	R	$\sqrt{3}$	1	0.98	∞
5	—Linearity	В	2.98	R	$\sqrt{3}$	1	1.69	∞
6	—System Detection Limits	В	0.00	R	$\sqrt{3}$	1	0.00	∞
7	Readout Electronics	В	0.00	N	1	1	0.00	∞
8	Response Time	В	0.00	R	$\sqrt{3}$	1	0.00	∞
9	-Integration Time	В	0.00	R	$\sqrt{3}$	1	0.00	∞
10	RF Ambient Conditions	В	0.00	R	$\sqrt{3}$	1	0.00	∞
11	-Probe Position Mechanical tolerance	В	1.14	R	$\sqrt{3}$	1	0.33	∞
12	-Probe Position with respect to Phantom Shell	В	2.86	R	$\sqrt{3}$	1	0.83	∞
13	-Extrapolation, Interpolation and Integration Algorithms for Max. SAR evaluation	В	3.6	R	$\sqrt{3}$	1	2.08	∞
	Uncertainties of the DUT							
14	-Position of the DUT	А	0.00	N	1	1	0.00	0
15	—Holder of the DUT	А	0.00	N	1	1	0.00	0
16	-Output Power Variation - SAR drift measurement	В	5.0	R	$\sqrt{3}$	1	2.89	∞



#### No. SAR06-011A

	Phantom and Tissue Parameters							
17	-Phantom Uncertainty(shape and thickness tolerances)	В	1.43	R	$\sqrt{3}$	1	0.83	∞
18	-Liquid Conductivity Target - tolerance	В	5.0	R	$\sqrt{3}$	0.7	2.02	∞
19	Liquid Conductivity –  measurement Uncertainty)	В	2.0	R	$\sqrt{3}$	0.7	0.81	∞
20	-Liquid Permittivity Target tolerance	В	5.0	R	$\sqrt{3}$	0.6	1.73	8
21	Liquid Permittivity –  measurement uncertainty	В	1.0	R	$\sqrt{3}$	0.6	0.35	∞
Con	nbined Standard Uncertainty			RSS			±8.95%	
1	anded uncertainty  fidence interval of 95 %)			K= 2.003935			±17.9%	

### 9 MAIN TEST INSTRUMENTS

No.	EQUIPMENT	TYPE	Due Date	
1	E-Field SAR Probe	IXP-050 (SN 0177)	2007-03-23	
2	Six-axis AC Servo industrial robot	RV-2A (SN AN406018)	2007-03-23	
3	Mobile Phone Tester	4405 (SN 0811211)	2007-03-23	
4	System Validation Dipole 900MHZ	IXD-090 (SN 0093)	2007-03-23	
5	System Validation Dipole 1800MHZ	IXD-180 (SN 0097)	2007-03-23	
6	System Validation Dipole 1900MHZ	IXD-080 (SN 0112)	2007-03-23	
7	Probe Amplifier and PC Interface	IFA-010 (SN 0027)	2007-03-23	
8	SAM Head Phantom	SN 0380 SH	2007-03-23	
9	SAM Head Phantom	SN 0381 SH	2007-03-23	
10	Box Phantom	IXB-070	2007-03-23	



#### **ANNEX A**

of

## **ShenZhen Electronic Product Quality Testing Center**

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SAR06\_011A

Cellon(China)Co.,Ltd.

900/1800/1900 Tri-band Mobile Phone

**Accreditation Certificate** 

This Annex consists of 2 pages Date of Report: 2006-4-3











# OF CHINA NATIONAL ACCREDITATION BOARD FOR LABORATORIES

(No.L1659)

This is to certify that

Shenzhen Electronic Product Quality Testing Center

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

Shenzhen, Guangdong, China

has been assessed and proved to be in compliance with CNAL/AC01: 2003 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 1999 General Requirements for the Competence of Testing and Calibration Laboratories).

Accreditation scope of the laboratory is listed in the attachment.

Date of Issue: 2004.10.09

Date of Expiry: 2009.10.08

处大

Wei Hao

Secretary General of CNAL



#### **ANNEX B**

of

# ShenZhen Electronic Product Quality Testing Center

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SAR06 011A

Cellon(China)Co.,Ltd.

900/1800/1900 Tri-band Mobile Phone

Type Name: CT7568

Hardware Version: PR3

Software Version: 08460003

**TEST LAYOUT** 

This Annex consists of 4 pages
Date of Report: 2006-4-3











Fig.1 SARA2 System Test Layout



Fig.2 The depth of head tissue in SAM





Fig.3 EUT Left Head Touch Cheek Position



Fig.4 EUT Left Head Tilt15 Position





Fig.5 EUT Right Head Touch Cheek Position



Fig.6 EUT Right Head Tilt15 Position





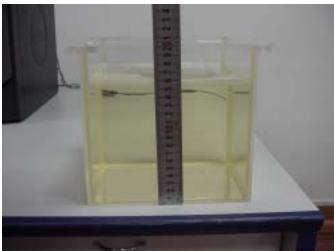


Fig.7 spacer 1.5cm

Fig.8 the depth of body tissue

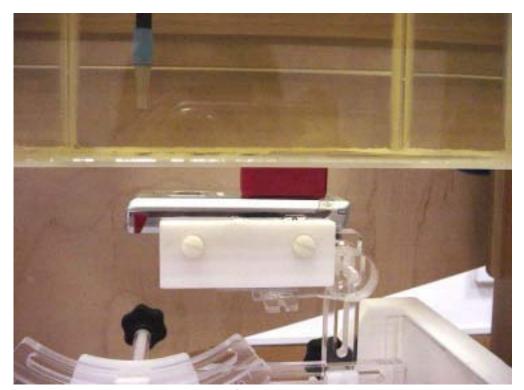


Fig.9 Side Position



#### **ANNEX C**

of

# ShenZhen Electronic Product Quality Testing Center

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SAR06 011A

Cellon(China)Co.,Ltd.

900/1800/1900 Tri-band Mobile Phone

Type Name: CT7568

Hardware Version: PR3

Software Version: 08460003

**Sample Photographs** 

This Annex consists of 3 pages
Date of Report: 2006-4-3









### 1. Photograph of the Equipment under Test

#### 1.1. Appearance







#### 1.2 Inside









#### **ANNEX D**

of

# **ShenZhen Electronic Product Quality Testing Center**

# CONFORMANCE TEST REPORT FOR **HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS**

SAR06 011A

Cellon(China)Co.,Ltd.

900/1800/1900 Tri-band Mobile Phone

**Type Name: CT7568** 

**Hardware Version:** 

PR<sub>3</sub>

**Software Version:** 

08460003

**Graph Test Results** 

This Annex consists of 46 pages Date of Report: 2006-4-3



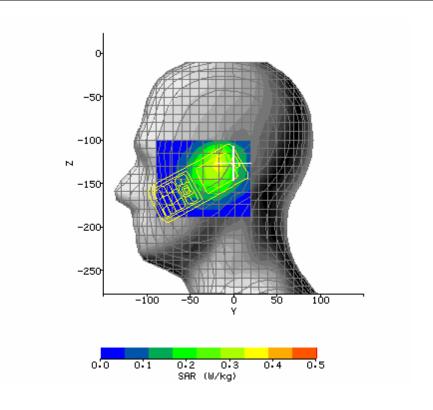






# SAR Test GSM 900 LH\_TouchCheek (Bottom Channel)

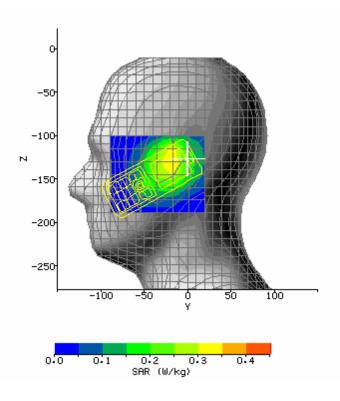
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.07dB
		•	0.0700
Date / Time:	2006-3-23 15:17:58	DUT Battery Model/No:	
Filename:	CT7568_900LH_Touch	Probe Serial Number:	0177
	Cheek_B.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	60%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	0°	Max SAR Y-axis	-18.50 mm
		Location:	
DUT Position:	CT7568_900LH_Touch	Max SAR Z-axis	-130.00 mm
	Cheek_B	Location:	
Antenna	Build inside	Max E Field:	22.41 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.410 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.280 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.194 W/kg
Type of Modulation:	GMSK	SAR End:	0.198 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	2.46 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 LH\_TouchCheek (Middle Channel)

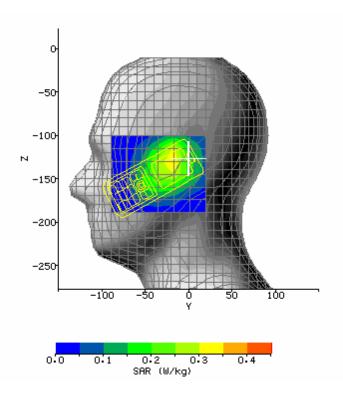
			T
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2006-3-23 15:30:52	DUT Battery Model/No:	
Filename:	CT7568_900LH_Touch	Probe Serial Number:	0177
	Cheek_M.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	60%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	0°	Max SAR Y-axis	-20.33 mm
		Location:	
DUT Position:	CT7568_900LH_Touch	Max SAR Z-axis	-130.00 mm
	Cheek_M	Location:	
Antenna	Build inside	Max E Field:	21.35 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.436 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.284 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.203 W/kg
Type of Modulation:	GMSK	SAR End:	0.204 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	0.68 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 LH\_TouchCheek (Top Channel)

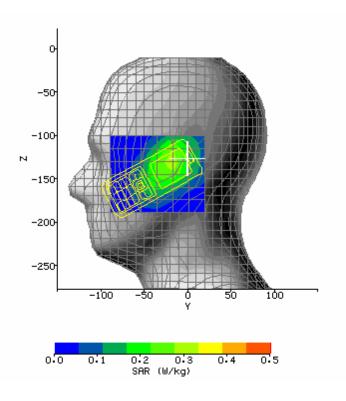
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.02dB
Date / Time:	2006-3-23 15:43:28	DUT Battery Model/No:	
Filename:	CT7568_900LH_Touch	Probe Serial Number:	0177
	Cheek_T.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	60%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	0°	Max SAR Y-axis	-20.33 mm
		Location:	
DUT Position:	CT7568_900LH_Touch	Max SAR Z-axis	-131.50 mm
	Cheek_T	Location:	
Antenna	Build inside	Max E Field:	20.37 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.380 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.262 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.190 W/kg
Type of Modulation:	GMSK	SAR End:	0.189 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-0.62 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 LH\_Tilt15 (Bottom Channel)

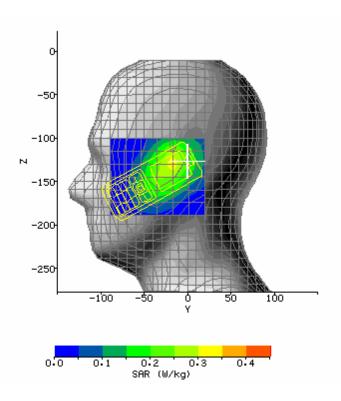
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.06dB
Date / Time:	2006-3-23 16:19:36	DUT Battery Model/No:	
Filename:	CT7568_900LH_Tilt15_	Probe Serial Number:	0177
	B.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	60%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	0°	Max SAR Y-axis	-18.50 mm
		Location:	
DUT Position:	CT7568_900LH_Tilt15_	Max SAR Z-axis	-131.50 mm
	В	Location:	
Antenna	Build inside	Max E Field:	21.64 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.368 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.254 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.187 W/kg
Type of Modulation:	GMSK	SAR End:	0.190 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.92 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 LH\_Tilt15 (Middle Channel)

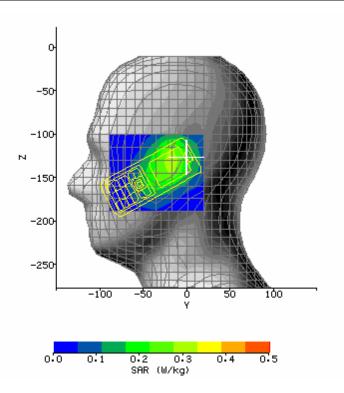
	T		T
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.07dB
Date / Time:	2006-3-23 16:08:09	DUT Battery Model/No:	
Filename:	CT7568_900LH_Tilt15_	Probe Serial Number:	0177
	M.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	60%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	0°	Max SAR Y-axis	-18.50 mm
		Location:	
DUT Position:	CT7568_900LH_Tilt15_	Max SAR Z-axis	-130.00 mm
	M	Location:	
Antenna	Build inside	Max E Field:	21.38 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.390 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.263 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.195 W/kg
Type of Modulation:	GMSK	SAR End:	0.200 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	2.27 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 LH\_Tilt15 (Top Channel)

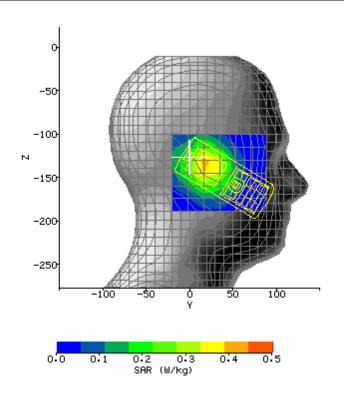
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
		•	0.0200
Date / Time:	2006-3-23 15:55:49	DUT Battery Model/No:	
Filename:	CT7568_900LH_Tilt15_	Probe Serial Number:	0177
	T.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	60%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	0°	Max SAR Y-axis	-18.50 mm
		Location:	
DUT Position:	CT7568_900LH_Tilt15_	Max SAR Z-axis	-133.00 mm
	Т	Location:	
Antenna	Build inside	Max E Field:	21.79 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.360 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.253 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.188 W/kg
Type of Modulation:	GMSK	SAR End:	0.190 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	0.86 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 RH\_TouchCheek (Bottom Channel)

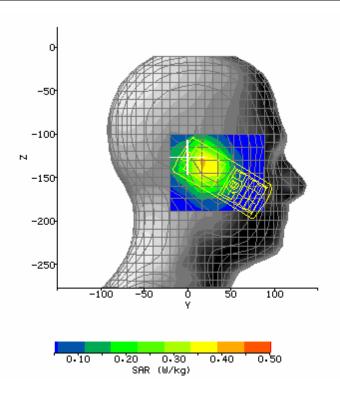
System / software:	SARA2 / 2.40 VPM	Innut Dawar Drift	0.06dB
System / software:		Input Power Drift:	U.000B
Date / Time:	2006-3-23 16:36:11	DUT Battery Model/No:	
Filename:	CT7568_900RH_Touch	Probe Serial Number:	0177
	Cheek_B.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
<b>Device Under Test:</b>	CT7568	Relative Permittivity:	41.23
Relative Humidity:	60%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	180°	Max SAR Y-axis	20.33 mm
		Location:	
DUT Position:	CT7568_900RH_Touch	Max SAR Z-axis	-136.00 mm
	Cheek_B	Location:	
Antenna	Build inside	Max E Field:	21.92 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.445 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.320 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.256 W/kg
Type of Modulation:	GMSK	SAR End:	0.261 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.97 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 RH\_TouchCheek (Middle Channel)

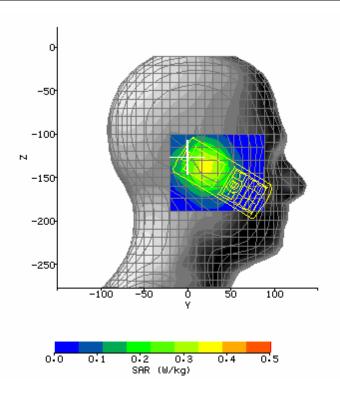
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.06dB
		•	0.00dB
Date / Time:	2006-3-23 16:48:16	DUT Battery Model/No:	
Filename:	CT7568_900RH_Touch	Probe Serial Number:	0177
	Cheek_M.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	60%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	180°	Max SAR Y-axis	22.17 mm
		Location:	
DUT Position:	CT7568_900RH_Touch	Max SAR Z-axis	-137.50 mm
	Cheek_M	Location:	
Antenna	Build inside	Max E Field:	22.19 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.432 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.324 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.261 W/kg
Type of Modulation:	GMSK	SAR End:	0.266 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.81 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 RH\_TouchCheek (Top Channel)

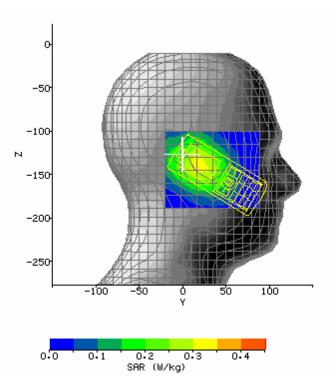
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.06dB
		•	0.00db
Date / Time:	2006-3-23 16:59:59	DUT Battery Model/No:	
Filename:	CT7568_900RH_Touch	Probe Serial Number:	0177
	Cheek_T.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	60%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	180°	Max SAR Y-axis	22.17 mm
		Location:	
DUT Position:	CT7568_900RH_Touch	Max SAR Z-axis	-137.50 mm
	Cheek_T	Location:	
Antenna	Build inside	Max E Field:	21.55 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.400 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.298 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.237 W/kg
Type of Modulation:	GMSK	SAR End:	0.241 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.94 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 RH\_Tilt15 (Bottom Channel)

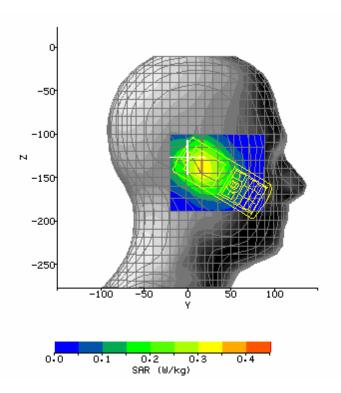
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2006-3-23 17:36:23	DUT Battery Model/No:	
Filename:	CT7568_900RH_Tilt15	Probe Serial Number:	0177
	_B.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	59%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	180°	Max SAR Y-axis	20.33 mm
		Location:	
DUT Position:	CT7568_900RH_Tilt15	Max SAR Z-axis	-139.00 mm
	_B	Location:	
Antenna	Build inside	Max E Field:	20.61 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.390 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.290 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.229 W/kg
Type of Modulation:	GMSK	SAR End:	0.232 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.16 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 RH\_Tilt15 (Middle Channel)

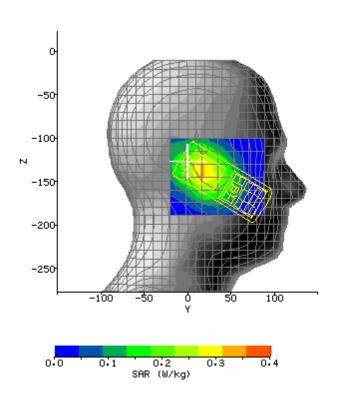
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2006-3-23 17:24:47	DUT Battery Model/No:	
Filename:	CT7568_900RH_Tilt15	Probe Serial Number:	0177
	M.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	59%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	180°	Max SAR Y-axis	18.50 mm
		Location:	
DUT Position:	CT7568_900RH_Tilt15	Max SAR Z-axis	-137.50 mm
	_M	Location:	
Antenna	Build inside	Max E Field:	20.80 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.376 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.276 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.227 W/kg
Type of Modulation:	GMSK	SAR End:	0.229 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	0.97 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 900 RH\_Tilt15 (Top Channel)

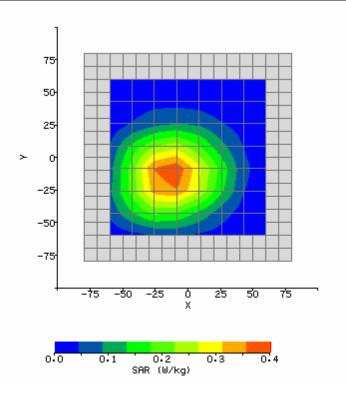
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.04dB
Date / Time:	2006-3-23 17:12:56	DUT Battery Model/No:	
Filename:	CT7568_900RH_Tilt15	Probe Serial Number:	0177
	_T.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.23
Relative Humidity:	59%	Conductivity:	.978
Phantom S/No:	Head_380SH.csv	Liquid Temperature:	22.2°C
Phantom Rotation:	180°	Max SAR Y-axis	18.50 mm
		Location:	
DUT Position:	CT7568_900RH_Tilt15	Max SAR Z-axis	-139.00 mm
	_T	Location:	
Antenna	Build inside	Max E Field:	19.10 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.334 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.252 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.206 W/kg
Type of Modulation:	GMSK	SAR End:	0.209 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.35 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





### SAR Test GSM 900 Side (Bottom Channel)

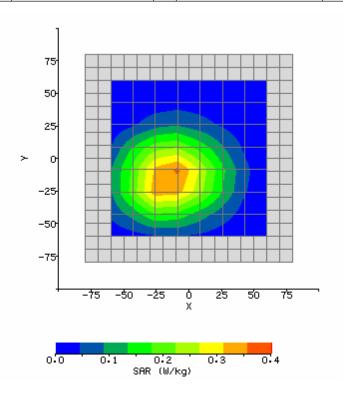
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.09dB
		•	0.000
Date / Time:	2006-3-30 9:36:41	DUT Battery Model/No:	
Filename:	CT7568_900Body_Side	Probe Serial Number:	0177
	_B.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	54.92
Relative Humidity:	58%	Conductivity:	1.059
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	0°	Max SAR X-axis	-13.71 mm
		Location:	
DUT Position:	CT7568_900Body_Side	Max SAR Y-axis	-13.71 mm
	_B	Location:	
Antenna	Build inside	Max E Field:	19.21 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.439 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.314 W/kg
Conversion Factors:	.271 / .271 / .271	SAR Start:	0.126 W/kg
Type of Modulation:	GMSK	SAR End:	0.129 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	3.03 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





### SAR Test GSM 900 Side (Middle Channel)

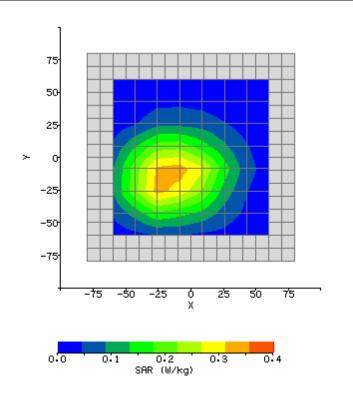
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.05dB
Date / Time:	2006-3-30 9:46:51	DUT Battery Model/No:	
Filename:		Probe Serial Number:	0177
riiename.	CT7568_900Body_Side	Probe Serial Number.	0177
	_M.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	54.92
Relative Humidity:	58%	Conductivity:	1.059
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	0°	Max SAR X-axis	-13.71 mm
		Location:	
DUT Position:	CT7568_900Body_Side	Max SAR Y-axis	-15.43 mm
	_M	Location:	
Antenna	Build inside	Max E Field:	18.56 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.410 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.295 W/kg
Conversion Factors:	.271 / .271 / .271	SAR Start:	0.118 W/kg
Type of Modulation:	GMSK	SAR End:	0.120 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.61 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





### SAR Test GSM 900 Side (Top Channel)

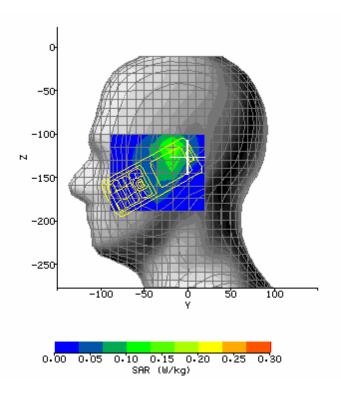
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.10dB
		•	0.1000
Date / Time:	2006-3-30 9:57:40	DUT Battery Model/No:	
Filename:	CT7568_900Body_Side	Probe Serial Number:	0177
	_T.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	54.92
Relative Humidity:	58%	Conductivity:	1.059
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	0°	Max SAR X-axis	-17.14 mm
		Location:	
DUT Position:	CT7568_900Body_Side	Max SAR Y-axis	-15.43 mm
	_T	Location:	
Antenna	Build inside	Max E Field:	18.64 V/m
Configuration:			
Test Frequency:	900MHz	SAR 1g:	0.444 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.304 W/kg
Conversion Factors:	.271 / .271 / .271	SAR Start:	0.115 W/kg
Type of Modulation:	GMSK	SAR End:	0.119 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	3.20 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level5(33dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 LH\_TouchCheek (Bottom Channel)

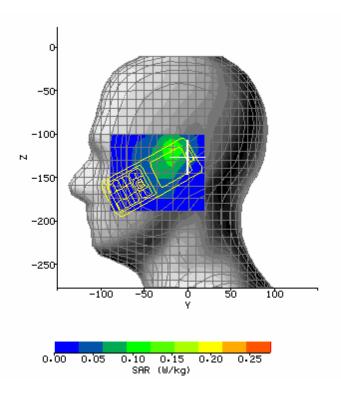
	T		I
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.09dB
Date / Time:	2006-3-29 10:17:11	DUT Battery Model/No:	
Filename:	CT7568_1800LH_Touc	Probe Serial Number:	0177
	hCheek_B.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
<b>Device Under Test:</b>	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR Y-axis	-16.67 mm
		Location:	
DUT Position:	CT7568_1800LH_Touc	Max SAR Z-axis	-119.50 mm
	hCheek_B	Location:	
Antenna	Build inside	Max E Field:	14.13 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.263 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.147 W/kg
<b>Conversion Factors:</b>	.319 / .319 / .319	SAR Start:	0.075 W/kg
Type of Modulation:	GMSK	SAR End:	0.078 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	3.15 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 LH\_TouchCheek (Middle Channel)

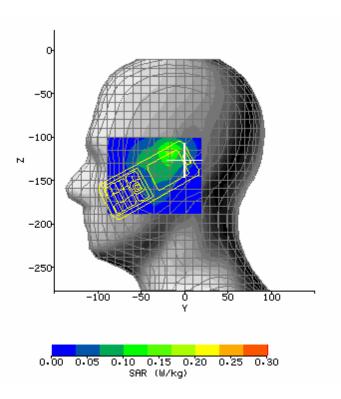
	T		T
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.11dB
Date / Time:	2006-3-29 10:28:36	DUT Battery Model/No:	
Filename:	CT7568_1800LH_Touc	Probe Serial Number:	0177
	hCheek_M.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
<b>Device Under Test:</b>	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR Y-axis	-16.67 mm
		Location:	
DUT Position:	CT7568_1800LH_Touc	Max SAR Z-axis	-121.00 mm
	hCheek_M	Location:	
Antenna	Build inside	Max E Field:	13.38 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.239 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.131 W/kg
<b>Conversion Factors:</b>	.319 / .319 / .319	SAR Start:	0.064 W/kg
Type of Modulation:	GMSK	SAR End:	0.066 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	3.74 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 LH\_TouchCheek (Top Channel)

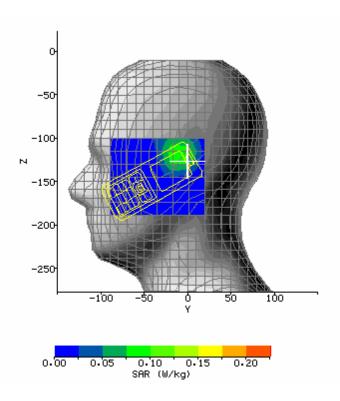
System / software:	SARA2 / 2.40 VPM	Innut Dawer Drift	0.02dB
System / software:		Input Power Drift:	U.U20B
Date / Time:	2006-3-29 10:53:52	DUT Battery Model/No:	
Filename:	CT7568_1800LH_Touc	Probe Serial Number:	0177
	hCheek_T.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
<b>Device Under Test:</b>	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR Y-axis	-16.67 mm
		Location:	
DUT Position:	CT7568_1800LH_Touc	Max SAR Z-axis	-119.50 mm
	hCheek_T	Location:	
Antenna	Build inside	Max E Field:	14.25 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.256 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.137 W/kg
Conversion Factors:	.319 / .319 / .319	SAR Start:	0.070 W/kg
Type of Modulation:	GMSK	SAR End:	0.070 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	0.71 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 LH\_Tilt15 (Bottom Channel)

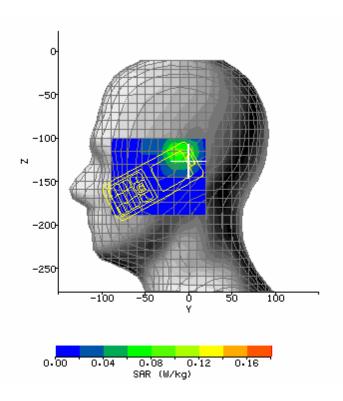
	T T	T	T
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.07dB
Date / Time:	2006-3-29 11:29:11	DUT Battery Model/No:	
Filename:	CT7568_1800LH_Tilt15	Probe Serial Number:	0177
	_B.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR Y-axis	-9.33 mm
		Location:	
DUT Position:	CT7568_1800LH_Tilt15	Max SAR Z-axis	-119.50 mm
	_B	Location:	
Antenna	Build inside	Max E Field:	12.69 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.213 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.116 W/kg
Conversion Factors:	.319 / .319 / .319	SAR Start:	0.072 W/kg
Type of Modulation:	GMSK	SAR End:	0.070 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-2.26 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 LH\_Tilt15 (Middle Channel)

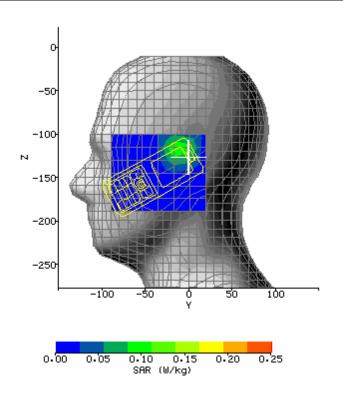
		T	
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.03dB
Date / Time:	2006-3-29 11:18:05	DUT Battery Model/No:	
Filename:	CT7568_1800LH_Tilt15	Probe Serial Number:	0177
	_M.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR Y-axis	-9.33 mm
		Location:	
DUT Position:	CT7568_1800LH_Tilt15	Max SAR Z-axis	-118.00 mm
	_M	Location:	
Antenna	Build inside	Max E Field:	11.09 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.163 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.094 W/kg
Conversion Factors:	.319 / .319 / .319	SAR Start:	0.060 W/kg
Type of Modulation:	GMSK	SAR End:	0.059 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-1.02 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 LH\_Tilt15 (Top Channel)

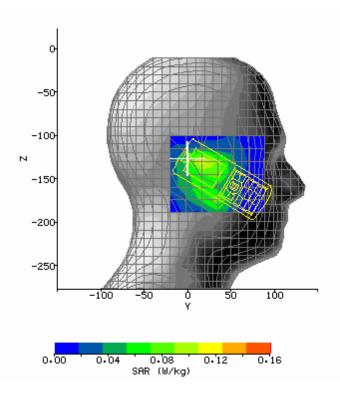
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.08dB
	0.000	•	-0.00db
Date / Time:	2006-3-29 11:06:43	DUT Battery Model/No:	
Filename:	CT7568_1800LH_Tilt15	Probe Serial Number:	0177
	_T.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR Y-axis	-11.17 mm
		Location:	
DUT Position:	CT7568_1800LH_Tilt15	Max SAR Z-axis	-118.00 mm
	_T	Location:	
Antenna	Build inside	Max E Field:	12.75 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.213 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.116 W/kg
Conversion Factors:	.319 / .319 / .319	SAR Start:	0.066 W/kg
Type of Modulation:	GMSK	SAR End:	0.068 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	2.68 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 RH\_TouchCheek (Bottom Channel)

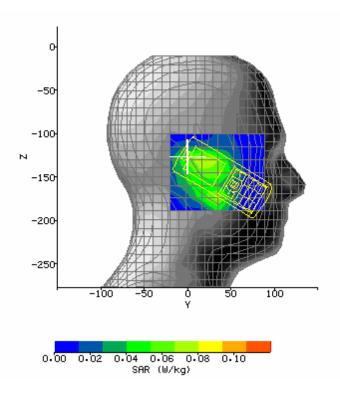
			T
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.05dBdB
Date / Time:	2006-3-29 8:58:32	DUT Battery Model/No:	
Filename:	CT7568_1800RH_Touc	Probe Serial Number:	0177
	hCheek_B.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	180°	Max SAR Y-axis	20.33 mm
		Location:	
DUT Position:	CT7568_1800RH_Touc	Max SAR Z-axis	-133.00 mm
	hCheek_B	Location:	
Antenna	Build inside	Max E Field:	10.19 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.133 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.083 W/kg
Conversion Factors:	.319 / .319 / .319	SAR Start:	0.059 W/kg
Type of Modulation:	GMSK	SAR End:	0.060 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.54 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 RH\_TouchCheek (Middle Channel)

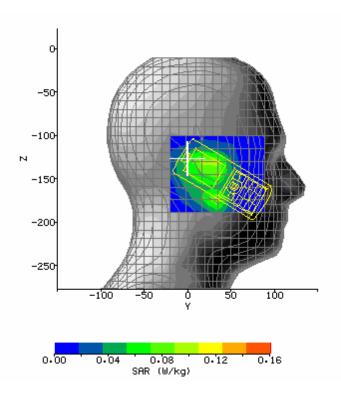
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.15dB
	0.0000000000000000000000000000000000000	•	0.1300
Date / Time:	2006-3-29 9:10:16	DUT Battery Model/No:	
Filename:	CT7568_1800RH_Touc	Probe Serial Number:	0177
	hCheek_M.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	180°	Max SAR Y-axis	22.17 mm
		Location:	
DUT Position:	CT7568_1800RH_Touc	Max SAR Z-axis	-136.00 mm
	hCheek_M	Location:	
Antenna	Build inside	Max E Field:	9.00 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.110 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.069 W/kg
Conversion Factors:	.319 / .319 / .319	SAR Start:	0.044 W/kg
Type of Modulation:	GMSK	SAR End:	0.047 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	4.89 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 RH\_TouchCheek (Top Channel)

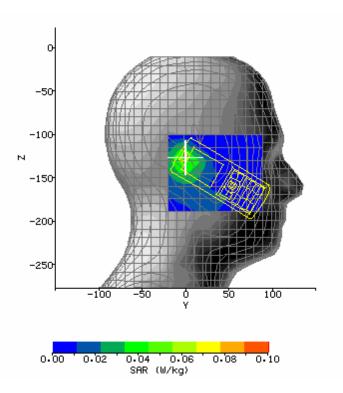
	T		I
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.01dB
Date / Time:	2006-3-29 9:21:28	DUT Battery Model/No:	
Filename:	CT7568_1800RH_Touc	Probe Serial Number:	0177
	hCheek_T.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	180°	Max SAR Y-axis	24.00 mm
		Location:	
DUT Position:	CT7568_1800RH_Touc	Max SAR Z-axis	-134.50 mm
	hCheek_T	Location:	
Antenna	Build inside	Max E Field:	10.32 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.129 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.082 W/kg
<b>Conversion Factors:</b>	.319 / .319 / .319	SAR Start:	0.054 W/kg
Type of Modulation:	GMSK	SAR End:	0.054 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-0.22 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test DCS 1800 RH\_Tilt15 (Bottom Channel)

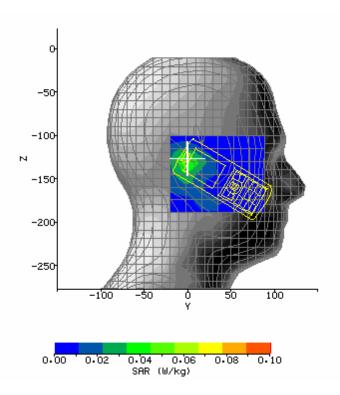
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2006-3-29 9:58:01	DUT Battery Model/No:	
Filename:	CT7568_1800RH_Tilt1	Probe Serial Number:	0177
	5_B.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	180°	Max SAR Y-axis	0.17 mm
		Location:	
DUT Position:	CT7568_1800RH_Tilt1	Max SAR Z-axis	-131.50 mm
	5_B	Location:	
Antenna	Build inside	Max E Field:	8.20 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.083 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.052 W/kg
<b>Conversion Factors:</b>	.319 / .319 / .319	SAR Start:	0.038 W/kg
Type of Modulation:	GMSK	SAR End:	0.038 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.19 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test DCS 1800 RH\_Tilt15 (Middle Channel)

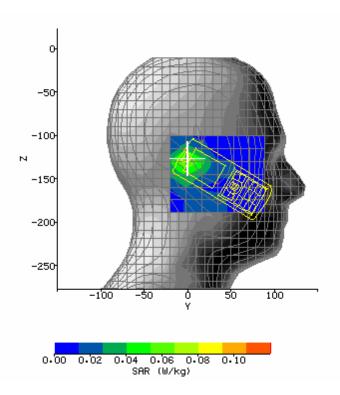
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.14dB
Date / Time:	2006-3-29 9:44:07	DUT Battery Model/No:	
Filename:	CT7568_1800RH_Tilt1	Probe Serial Number:	0177
	5_M.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	180°	Max SAR Y-axis	2.00 mm
		Location:	
DUT Position:	CT7568_1800RH_Tilt1	Max SAR Z-axis	-131.50 mm
	5_M	Location:	
Antenna	Build inside	Max E Field:	8.15 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.075 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.048 W/kg
Conversion Factors:	.319 / .319 / .319	SAR Start:	0.034 W/kg
Type of Modulation:	GMSK	SAR End:	0.036 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	4.59 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 RH\_Tilt15 (Top Channel)

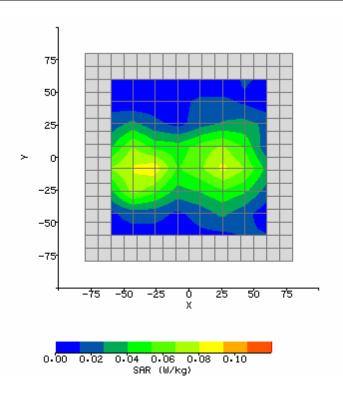
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.12dB
		<u> </u>	-0.12db
Date / Time:	2006-3-29 9:33:22	DUT Battery Model/No:	
Filename:	CT7568_1800RH_Tilt1	Probe Serial Number:	0177
	5_T.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	41.01
Relative Humidity:	58%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	180°	Max SAR Y-axis	2.00 mm
		Location:	
DUT Position:	CT7568_1800RH_Tilt1	Max SAR Z-axis	-131.50 mm
	5_T	Location:	
Antenna	Build inside	Max E Field:	8.88 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.097 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.061 W/kg
Conversion Factors:	.319 / .319 / .319	SAR Start:	0.048 W/kg
Type of Modulation:	GMSK	SAR End:	0.046 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-3.95 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test DCS 1800 Side (Bottom Channel)

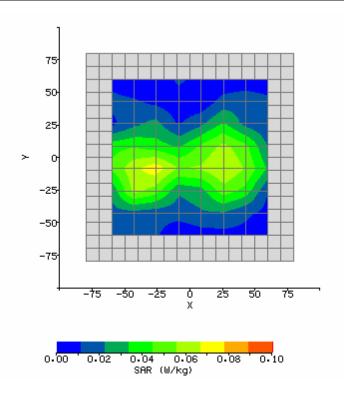
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.04dB
		•	-0.040D
Date / Time:	2006-3-30 10:42:00	DUT Battery Model/No:	
Filename:	CT7568_1800Body_Sid	Probe Serial Number:	0177
	e_B.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	53.41
Relative Humidity:	58%	Conductivity:	1.516
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR X-axis	-34.29 mm
		Location:	
DUT Position:	CT7568_1800Body_Sid	Max SAR Y-axis	-10.29 mm
	e_B	Location:	
Antenna	Build inside	Max E Field:	8.30 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.124 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.078 W/kg
Conversion Factors:	.341 / .341 / .341	SAR Start:	0.026 W/kg
Type of Modulation:	GMSK	SAR End:	0.025 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-1.41 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test DCS 1800 Side (Middle Channel)

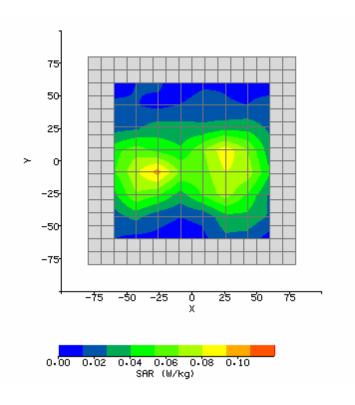
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.14dB
		•	0.1400
Date / Time:	2006-3-30 10:52:48	DUT Battery Model/No:	
Filename:	CT7568_1800Body_Sid	Probe Serial Number:	0177
	e_M.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	53.41
Relative Humidity:	58%	Conductivity:	1.516
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR X-axis	-30.86 mm
		Location:	
DUT Position:	CT7568_1800Body_Sid	Max SAR Y-axis	-10.29 mm
	e_M	Location:	
Antenna	Build inside	Max E Field:	7.75 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.106 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.067 W/kg
Conversion Factors:	.341 / .341 / .341	SAR Start:	0.021 W/kg
Type of Modulation:	GMSK	SAR End:	0.022 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	4.63 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test DCS 1800 Side (Top Channel)

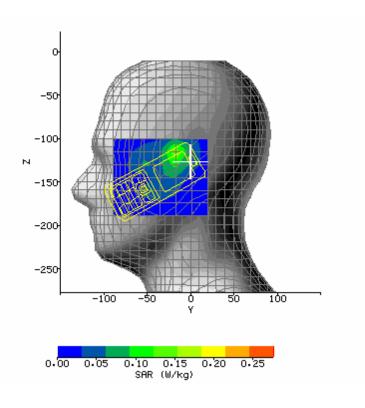
0	CADAS / S 40 VDM	In and Danier Daiffe	0.044D
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.04dB
Date / Time:	2006-3-30 11:02:54	DUT Battery Model/No:	
Filename:	CT7568_1800Body_Sid	Probe Serial Number:	0177
	e_T.txt		
Ambient Temperature:	22.6°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	53.41
Relative Humidity:	58%	Conductivity:	1.516
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR X-axis	27.43 mm
		Location:	
DUT Position:	CT7568_1800Body_Sid	Max SAR Y-axis	-1.71 mm
	e_T	Location:	
Antenna	Build inside	Max E Field:	8.45 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.130 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.084 W/kg
Conversion Factors:	.341 / .341 / .341	SAR Start:	0.030 W/kg
Type of Modulation:	GMSK	SAR End:	0.029 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-1.23 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test PCS 1900 LH\_TouchCheek (Bottom Channel)

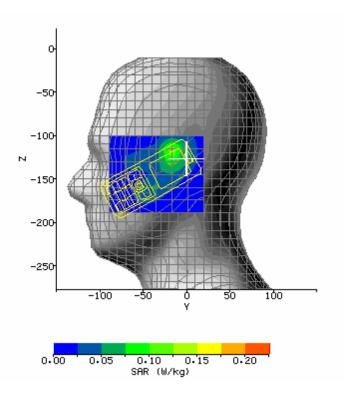
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.04dB
		•	0.0400
Date / Time:	2006-3-25 15:20:30	DUT Battery Model/No:	
Filename:	CT7568_1900LH_Touc	Probe Serial Number:	0177
	hCheek_B.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	56%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-16.67 mm
		Location:	
DUT Position:	CT7568_1900LH_Touc	Max SAR Z-axis	-119.50 mm
	hCheek_B	Location:	
Antenna	Build inside	Max E Field:	13.65 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.242 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.124 W/kg
Conversion Factors:	.326 / .326 / .326	SAR Start:	0.070 W/kg
Type of Modulation:	GMSK	SAR End:	0.071 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.39 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test PCS 1900 LH\_TouchCheek (Middle Channel)

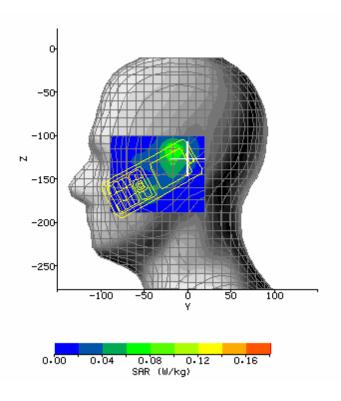
System / software:	SARA2 / 2.40 VPM	Innut Bourer Duift	0.09dB
System / software:	0	Input Power Drift:	0.0905
Date / Time:	2006-3-25 15:33:01	DUT Battery Model/No:	
Filename:	CT7568_1900LH_Touc	Probe Serial Number:	0177
	hCheek_M.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	56%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-14.83 mm
		Location:	
DUT Position:	CT7568_1900LH_Touc	Max SAR Z-axis	-122.50 mm
	hCheek_M	Location:	
Antenna	Build inside	Max E Field:	12.41 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.192 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.102 W/kg
Conversion Factors:	.326 / .326 / .326	SAR Start:	0.058 W/kg
Type of Modulation:	GMSK	SAR End:	0.060 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	2.92 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test PCS 1900 LH\_TouchCheek (Top Channel)

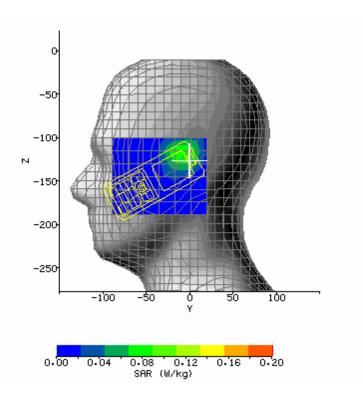
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.05dB
Date / Time:	2006-3-25 15:45:14	•	0.00dB
Date / Time:	2000 0 20 10110111	DUT Battery Model/No:	
Filename:	CT7568_1900LH_Touc	Probe Serial Number:	0177
	hCheek_T.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	56%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-14.83 mm
		Location:	
DUT Position:	CT7568_1900LH_Touc	Max SAR Z-axis	-121.00 mm
	hCheek_T	Location:	
Antenna	Build inside	Max E Field:	10.97 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.160 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.084 W/kg
Conversion Factors:	.326 / .326 / .326	SAR Start:	0.052 W/kg
Type of Modulation:	GMSK	SAR End:	0.051 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-1.55 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test PCS 1900 LH\_Tilt15 (Bottom Channel)

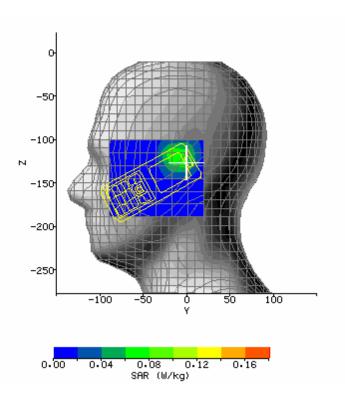
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.15dB
		•	0.1000
Date / Time:	2006-3-25 16:23:42	DUT Battery Model/No:	
Filename:	CT7568_1900LH_Tilt15	Probe Serial Number:	0177
	_B.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	56%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-7.50 mm
		Location:	
DUT Position:	CT7568_1900LH_Tilt15	Max SAR Z-axis	-121.00 mm
	_B	Location:	
Antenna	Build inside	Max E Field:	11.94 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.181 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.097 W/kg
Conversion Factors:	.326 / .326 / .326	SAR Start:	0.068 W/kg
Type of Modulation:	GMSK	SAR End:	0.070 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	4.49 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test PCS 1900 LH\_Tilt15 (Middle Channel)

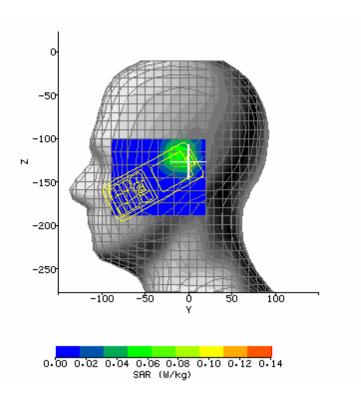
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.10dB
	0.000	•	0.1000
Date / Time:	2006-3-25 16:11:16	DUT Battery Model/No:	
Filename:	CT7568_1900LH_Tilt15	Probe Serial Number:	0177
	_M.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	56%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-9.33 mm
		Location:	
DUT Position:	CT7568_1900LH_Tilt15	Max SAR Z-axis	-121.00 mm
	_M	Location:	
Antenna	Build inside	Max E Field:	11.14 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.162 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.087 W/kg
Conversion Factors:	.326 / .326 / .326	SAR Start:	0.063 W/kg
Type of Modulation:	GMSK	SAR End:	0.065 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	3.14 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test PCS 1900 LH\_Tilt15 (Top Channel)

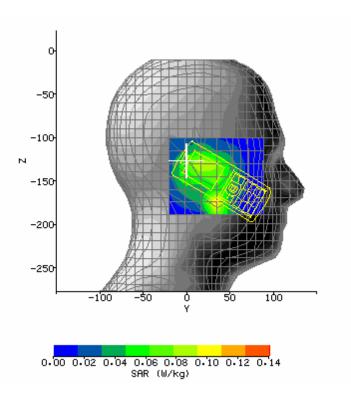
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.14dB
		•	0.1405
Date / Time:	2006-3-25 15:58:51	DUT Battery Model/No:	
Filename:	CT7568_1900LH_Tilt15	Probe Serial Number:	0177
	_T.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	56%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-9.33 mm
		Location:	
DUT Position:	CT7568_1900LH_Tilt15	Max SAR Z-axis	-121.00 mm
	_T	Location:	
Antenna	Build inside	Max E Field:	9.81 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.130 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.072 W/kg
<b>Conversion Factors:</b>	.326 / .326 / .326	SAR Start:	0.052 W/kg
Type of Modulation:	GMSK	SAR End:	0.054 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	4.73 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test PCS 1900 RH\_TouchCheek (Bottom Channel)

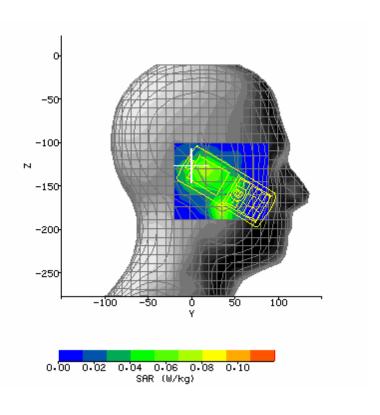
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.12dB
		•	-0.1200
Date / Time:	2006-3-25 14:00:27	DUT Battery Model/No:	
Filename:	CT7568_1900RH_Touc	Probe Serial Number:	0177
	hCheek_B.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	57%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	180°	Max SAR Y-axis	20.33 mm
		Location:	
DUT Position:	CT7568_1900RH_Touc	Max SAR Z-axis	-133.00 mm
	hCheek_B	Location:	
Antenna	Build inside	Max E Field:	9.51 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.115 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.075 W/kg
Conversion Factors:	.326 / .326 / .326	SAR Start:	0.060 W/kg
Type of Modulation:	GMSK	SAR End:	0.058 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-4.08 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test PCS 1900 RH\_TouchCheek (Middle Channel)

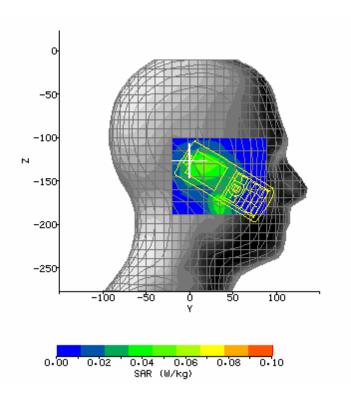
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.06dB
Date / Time:	2006-3-25 14:14:00	DUT Battery Model/No:	
Filename:	CT7568 1900RH Touc	Probe Serial Number:	0177
riiename.		Probe Serial Number.	0177
	hCheek_M.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	57%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	180°	Max SAR Y-axis	16.67 mm
		Location:	
DUT Position:	CT7568_1900RH_Touc	Max SAR Z-axis	-133.00 mm
	hCheek_M	Location:	
Antenna	Build inside	Max E Field:	8.87 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.100 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.065 W/kg
Conversion Factors:	.326 / .326 / .326	SAR Start:	0.050 W/kg
Type of Modulation:	GMSK	SAR End:	0.051 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	2.17 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test PCS 1900 RH\_TouchCheek (Top Channel)

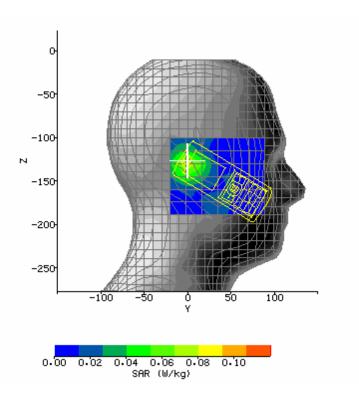
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.11dB
Date / Time:	2006-3-25 14:26:12	DUT Battery Model/No:	
Filename:	CT7568_1900RH_Touc	Probe Serial Number:	0177
	hCheek_T.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	57%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	180°	Max SAR Y-axis	18.50 mm
		Location:	
DUT Position:	CT7568_1900RH_Touc	Max SAR Z-axis	-133.00 mm
	hCheek_T	Location:	
Antenna	Build inside	Max E Field:	8.22 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.079 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.053 W/kg
Conversion Factors:	.326 / .326 / .326	SAR Start:	0.037 W/kg
Type of Modulation:	GMSK	SAR End:	0.038 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	3.50 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test PCS 1900 RH\_Tilt15 (Bottom Channel)

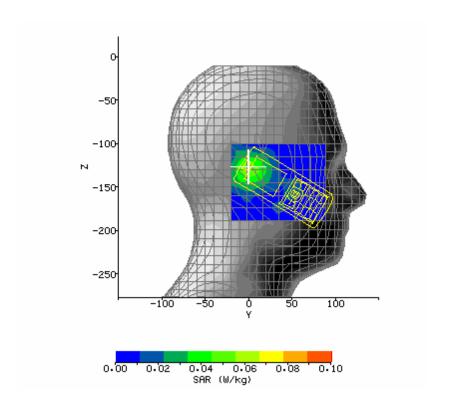
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2006-3-25 15:07:08	DUT Battery Model/No:	
Filename:	CT7568_1900RH_Tilt1	Probe Serial Number:	0177
	5_B.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	57%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	180°	Max SAR Y-axis	2.00 mm
		Location:	
DUT Position:	CT7568_1900RH_Tilt1	Max SAR Z-axis	-131.50 mm
	5_B	Location:	
Antenna	Build inside	Max E Field:	8.77 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.095 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.060 W/kg
<b>Conversion Factors:</b>	.326 / .326 / .326	SAR Start:	0.051 W/kg
Type of Modulation:	GMSK	SAR End:	0.051 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	0.21 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test PCS 1900 RH\_Tilt15 (Middle Channel)

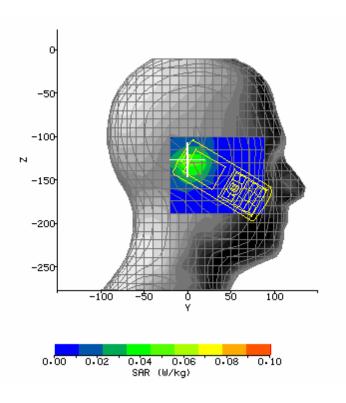
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
	0.000	•	0.0100
Date / Time:	2006-3-25 14:52:17	DUT Battery Model/No:	
Filename:	CT7568_1900RH_Tilt1	Probe Serial Number:	0177
	5_M.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	57%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	180°	Max SAR Y-axis	3.83 mm
		Location:	
DUT Position:	CT7568_1900RH_Tilt1	Max SAR Z-axis	-130.00 mm
	5_M	Location:	
Antenna	Build inside	Max E Field:	8.31 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.091 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.056 W/kg
Conversion Factors:	.326 / .326 / .326	SAR Start:	0.046 W/kg
Type of Modulation:	GMSK	SAR End:	0.046 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	0.18 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





## SAR Test PCS 1900 RH\_Tilt15 (Top Channel)

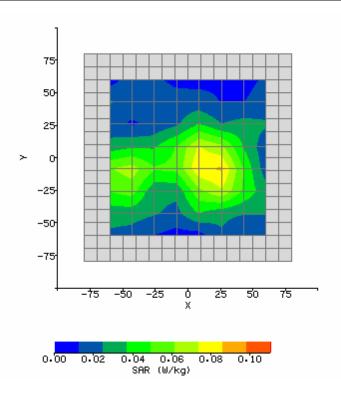
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.04dB
Date / Time:	2006-3-25 14:39:24	DUT Battery Model/No:	
Filename:	CT7568_1900RH_Tilt1	Probe Serial Number:	0177
	5_T.txt		
Ambient Temperature:	22.5°C	Liquid Simulant:	Head tissue
Device Under Test:	CT7568	Relative Permittivity:	40.11
Relative Humidity:	57%	Conductivity:	1.397
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.0°C
Phantom Rotation:	180°	Max SAR Y-axis	5.67 mm
		Location:	
DUT Position:	CT7568_1900RH_Tilt1	Max SAR Z-axis	-131.50 mm
	5_T	Location:	
Antenna	Build inside	Max E Field:	8.12 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.082 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.050 W/kg
<b>Conversion Factors:</b>	.326 / .326 / .326	SAR Start:	0.037 W/kg
Type of Modulation:	GMSK	SAR End:	0.037 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	1.26 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test PCS 1900 Side (Bottom Channel)

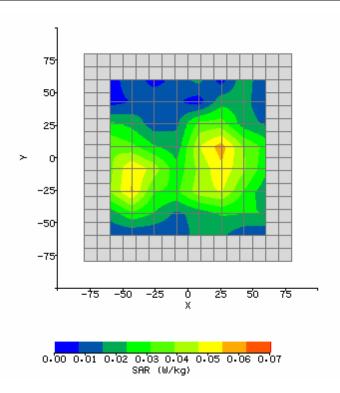
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.09dB
		•	0.0900
Date / Time:	2006-3-30 14:50:06	DUT Battery Model/No:	
Filename:	CT7568_1900Body_Sid	Probe Serial Number:	0177
	e_B.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	53.72
Relative Humidity:	57%	Conductivity:	1.516
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR X-axis	17.14 mm
		Location:	
DUT Position:	CT7568_1900Body_Sid	Max SAR Y-axis	-6.86 mm
	e_B	Location:	
Antenna	Build inside	Max E Field:	8.31 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.115 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.075 W/kg
Conversion Factors:	.356 / .356 / .356	SAR Start:	0.027 W/kg
Type of Modulation:	GMSK	SAR End:	0.028 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	2.99 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





#### SAR Test PCS 1900 Side (Middle Channel)

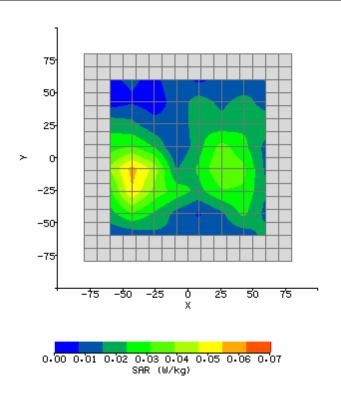
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.07dB
		•	0.0700
Date / Time:	2006-3-30 14:39:23	DUT Battery Model/No:	
Filename:	CT7568_1900Body_Sid	Probe Serial Number:	0177
	e_M.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	53.72
Relative Humidity:	57%	Conductivity:	1.516
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR X-axis	24.00 mm
		Location:	
DUT Position:	CT7568_1900Body_Sid	Max SAR Y-axis	1.71 mm
	e_M	Location:	
Antenna	Build inside	Max E Field:	6.78 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.074 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.052 W/kg
Conversion Factors:	.356 / .356 / .356	SAR Start:	0.021 W/kg
Type of Modulation:	GMSK	SAR End:	0.021 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	2.45 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





### SAR Test PCS 1900 Side (Top Channel)

System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.08dB
Date / Time:	2006-3-30 15:04:26	DUT Battery Model/No:	
Filename:	CT7568_1900Body_Sid	Probe Serial Number:	0177
	e_T.txt		
Ambient Temperature:	22.7°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	53.72
Relative Humidity:	57%	Conductivity:	1.516
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.1°C
Phantom Rotation:	0°	Max SAR X-axis	-39.43 mm
		Location:	
DUT Position:	CT7568_1900Body_Sid	Max SAR Y-axis	-13.71 mm
	e_T	Location:	
Antenna	Build inside	Max E Field:	6.40 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.073 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.046 W/kg
Conversion Factors:	.356 / .356 / .356	SAR Start:	0.021 W/kg
Type of Modulation:	GMSK	SAR End:	0.021 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	2.78 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





#### **ANNEX E**

of

## ShenZhen Electronic Product Quality Testing Center

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SAR06 011A

Cellon(China)Co.,Ltd.

900/1800/1900 Tri-band Mobile Phone

Type Name: CT7568

Hardware Version: PR3

Software Version: 08460003

### ADDITIONAL TESTS

This Annex consists of 3 pages
Date of Report: 2006-4-26



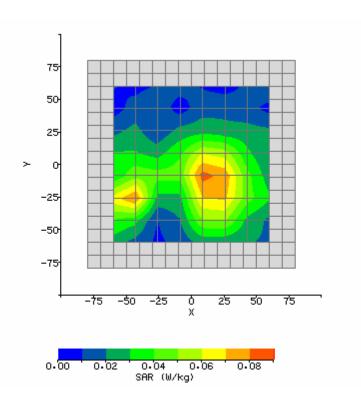






#### SAR Test PCS 1900 Side with headset (Bottom Channel)

System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.14dB
Date / Time:	2006-4-26 18:29:57	DUT Battery Model/No:	
Filename:	CT7568_1900Body_Sid e_B1.txt	Probe Serial Number:	0177
Ambient Temperature:	22.8°C	Liquid Simulant:	Body tissue
Device Under Test:	CT7568	Relative Permittivity:	53.81
Relative Humidity:	58%	Conductivity:	1.514
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR X-axis Location:	15.43 mm
DUT Position:	CT7568_1900Body_Sid e B1	Max SAR Y-axis Location:	-12.00 mm
Antenna Configuration:	Build inside	Max E Field:	7.50 V/m
Test Frequency:	1900MHz	SAR 1g:	0.101 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.071 W/kg
Conversion Factors:	.356 / .356 / .356	SAR Start:	0.034 W/kg
Type of Modulation:	GMSK	SAR End:	0.032 W/kg
Modn. Duty Cycle:	GSM:8	SAR Drift during Scan:	-4.68 %
Diode Compression Factors (V*200):	20 / 20 / 20	Probe battery last changed:	20/05/05
Input Power Level:	Level0(30dBm)	Extrapolation:	poly4





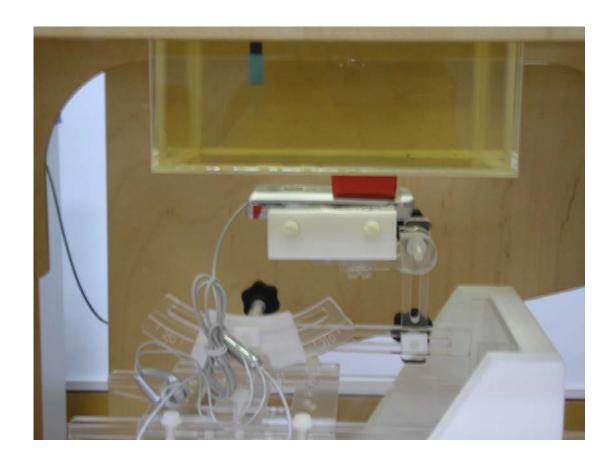


Fig.10 Side Position (with headset)