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

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SAR07-004

E28 Ltd

GSM 850/900/1800/1900 Mobile Terminal

Type Name: E2831

**FCC ID: T6LE2831** 

Hardware Version:

P3.0

**Software Version:** 

V2.0.

Date of Issue:

2007-01-24









## **GENERAL SUMMARY**

Product Name	GSM 850/900/1800/1900 Mobile Terminal	Development Stage	Identical prototype
Standard(s)	47CFR § 2.1093: Radiofrequency Radiation FCC OET Bulletin 65 (Edition 97-01), Compliance with FCC Guidelines for Human Fields  ANSI C95.1–1999: IEEE Standard for Exposure to Radio Frequency Electromagnetic IEEE 1528–2003: Recommended Practice Specific Absorption Rate (SAR) in the Human Devices: Experimental Techniques.	Supplement C (Edition Exposure to Radiofred Safety Levels with its Fields, 3 kHz to 300 Ce for Determining the	ion 01-01): Evaluating quency Electromagnetic Respect to Humar GHz.  Peak Spatial-Average
Conclusion	Localized Specific Absorption Rate (SAR) of measured in all cases requested by the relevance report. Maximum localized SAR is below expecited in Clause 5.1 of this test report.  General Judgment: Pass	evant standards cited in	Clause 5.2 of this tes
Comment	TX Freq. Band: 824.20 MHz—848.80 MHz (CRX Freq. Band: 869.20 MHz—893.80 MHz (CRX Freq. Band: 869.20 MHz) (CRX Freq. Band: 86	GSM) 1850.20 MHz — GSM) 1930.20 MHz —	-1909.80 MHz (PCS)
Tested	by: How Tao	Date Jan 24,	2007
Checked	by: Smart Li	Jan-	24.2007
Approved	by: Li'an Wu	Date: Jan. W	200)



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#### This Test Report consists of the following Annexes:

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#### 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** 

Managers:

Mr. Li'an Wu

#### 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.: SAR07-004
S.E.T Project Leader: Mr. Li Sixiong

S.E.T Responsible for

Mr. Li'an Wu

accreditation scope:

 Start of Testing:
 2007-01-05

 End of Testing:
 2007-01-24

#### 2.4.Identification of Applicant

Company Name: E28 Ltd

Address: 2nd Floor, Dong Yin Tower, No. 689 East Beijing Road, Shanghai,

200001, P.R.China

Contact person: Tony Cheung

**Telephone:** 86-21-2306 0088 -302

**Fax:** 86-21-2306 0011

#### 2.5.Identification of Manufacture

Company Name: E28 Ltd

Address: 2nd Floor, Dong Yin Tower, No. 689 East Beijing Road, Shanghai,

200001, P.R.China

Contact person: Tony Cheung

**Telephone:** 86-21-2306 0088 -302

**Fax:** 86-21-2306 0011

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: Mango
Type Name: E2831
Marking Name: eEureka!

Test frequency GSM 850MHz PCS 1900MHz WIFI 2450MHz

Development Stage Identical prototype Accessories Charger, Battery

Battery Model E2831

Battery specification 1280mAh 3.7V

**General description:** Antenna type Build inside

Operation mode Call established

Modulation mode GSM; GPRS; Bluetooth; WIFI

33dBm(GSM 850) 30dBm(PCS 1900)

Max. Power

≤21dBm(WIFI 2450)

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

EUT Code	Serial Number	Hardware Version	Software Version	IMEI
1#	N.A.	P3.0	V2.0	N.A

#### NOTE:

1. The EUT consists of Hand Telephone Set and normal options: Charger, Lithium Battery as listed above.

- 2. Please refer to Appendix C for the photographs of the EUT. For a more detailed features description about the EUT, please refer to User's Manual.
- 3. The EUT can work in four different bands, but this SAR test was performed only in the GSM 850MHz and PCS 1900MHz bands.
- 4. The EUT can work in WIFI mode (operating frequency from 2400 to 2483.5MHz). This SAR test was performed in the 2450MHz, which is according to the 802.11g and 802.11b.



#### 4 OPERATIONAL CONDITIONS DURING TEST

#### 4.1 Schematic Test Configuration

During SAR test, EUT is in Traffic Mode (Channel Allocated) at Normal Voltage Condition. A communication link is set up with a System Simulator (SS) by air link, and a call is established. The TCH is allocated to 128, 190 and 251 respectively in the case of GSM 850 MHz, or to 512, 661 and 810 respectively in the case of PCS 1900 MHz. The EUT is commanded to operate at maximum transmitting power.

The EUT shall use its internal transmitter. The antenna(s), battery and accessories shall be those specified by the manufacturer. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output. If a wireless link is used, the antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the handset.

The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the handset by at least 35 dB.

#### 4.2 SAR Measurement System

The SAR measurement system being used is the IndexSAR SARA2 system, which consists of a

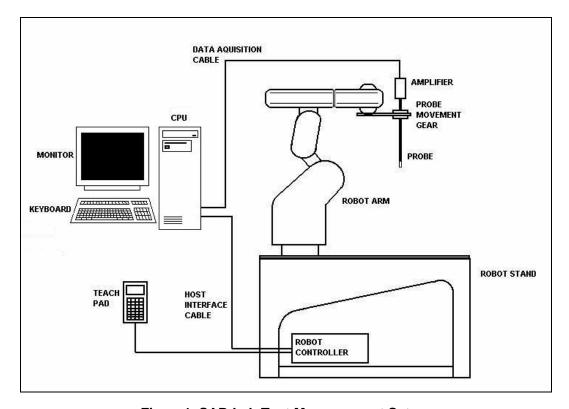


Figure 1. SAR Lab Test Measurement Set-up



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

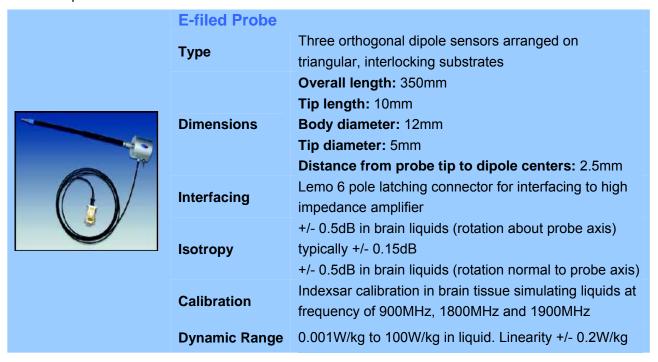
#### 4.2.2 Probe and amplifier specification

#### 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.



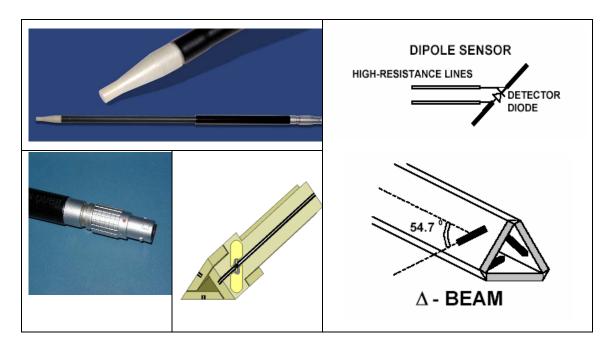
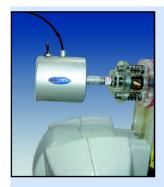


Figure 2. Specification and characterisation parameters of indexsar probe



#### **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

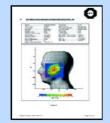
Ranges Software selectable of x1 to 63

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

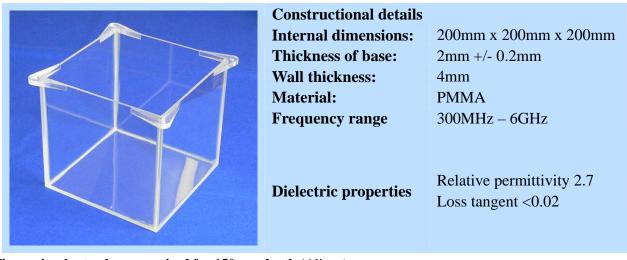


registration systems are utilised to register the phantom position in relationship to the robot co-ordinate system. In the SARA2 implementation, the SAM phantom is mounted on a supporting table made of low dielectric loss material, which includes mounting brackets for DUT positioners, dipole holders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



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

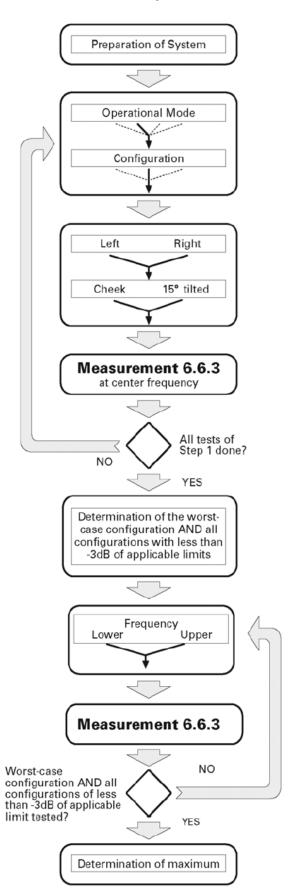
#### 4.2.3.3 Simulant liquids

**S**imulant liquids that are used for testing at frequencies of GSM 850MHz 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.

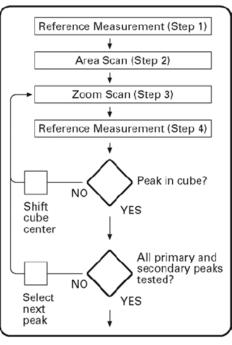
Ingredients			Frequency(MHz)			
(% by weight)	850		1900		2450	
Tissue Type	Head	Body	Head	Body	Head	Body
Water	40.92	56.0	54.9	40.4	N.A.	N.A.
Salt(NaCl)	1.48	0.76	0.18	0.5	N.A.	N.A.
Sugar	56.5	41.76	0.0	58.0	N.A.	N.A.
HEC	1	1.21	0.0	1.0	N.A.	N.A.
Bacterial de	0.0	0.0	0.0	0.1	N.A.	N.A.
DGBE	0.0	0.0	44.92	0.0	N.A.	N.A.
Acticide SPX	0.1	0.27	0.0	0.0	N.A.	N.A.
Dielectric Constant	41.44	52.99	39.9	54.0	39.2	52.7
Conductivity (S/m)	0.99	1.12	1.42	1.45	1.80	1.95



#### 4.2.4 SAR measurement procedure



#### Measurement 6.6.3





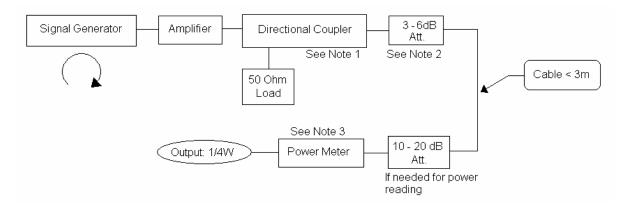
Channel	Left				Right			
	Ch	eek	Т	ilt	Ch	eek	Tilt	
	Retracted	Extended	Retracted	Extended	Retracted	Extended	Retracted	Extended
Mode 1:								
High			S2(-1.4dB)	S2(-0.4dB)			S2(-2.2dB)	S2(-1.4dB)
Middle	S1(-4dB)	S1(-4dB)	S1(-1.5dB)	S1(-0.5dB)	S1(-5dB)	S1(-5dB)	S1(-2.5dB)	S1(-1.5dB)
Low			S2(-1.3dB)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

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

Above is the scanning procedure flow chart and table from the IEEE P3.0528 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 P3.0528. 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

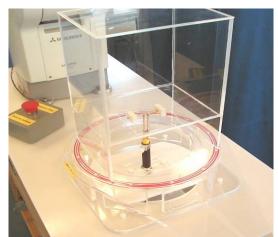


frequency and use a power meter to measure the power at the end of the SMA cable that you intend to connect to the balanced dipole. Adjust the SG to make this, say, 0.25W (24 dBm). If this level is too high to read directly with the power meter sensor, insert a calibrated attenuator (e.g. 10 or 20 dB) 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 P3.0528) 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:

name	Type and specification
Signal generator	SML02
Directional coupler	450MHz-3GHz
Amplifier	3W 502(10-2500MHz)
Reference dipole	IXD-080 validation dipole
	IXD-090 validation dipole
	IXD-245 validation dipole

#### Results:

Frequency	Target value (1g)	Test value (1g)	
850MHz	10.8 W/kg	10.528 W/kg (Head)	10.272 W/kg (Body)
1900MHz	39.7 W/kg	41.140 W/kg (Head)	40.340 W/kg (Body)
2450MHz	52.4 W/kg	52.824 W/kg (Head)	52.344 W/kg (Body)



#### 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

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.

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.

- 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 $^{\circ}$ C, Max. = 30 $^{\circ}$ 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 54% ~60% and 23.0 °C ~23.9°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

Temperature: 23.0~23.9° C, humidity: 54~60%.					
1	Frequency	Permittivity ε	Conductivity o (S/m)		
Target value	850 MHZ	41.5	0.97		
Validation value (Jan 6,2007)	850 MHZ	41.35	0.941		
Target value	1900 MHz	40.0	1.40		
Validation value (Jan 5,2007)	1900 MHz	40.02	1.396		
Target value	2450MHz	39.2	1.80		
Validation value (Jan 6,2007)	2450MHz	39.12	1.798		

Table 2: Dielectric Performance of Body Tissue Simulating Liquid

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.

Temperature: 23.0~23.9° C, humidity: 54~60%.					
1	Frequency	Permittivity ε	Conductivity o (S/m)		
Target value	850 MHz	55.0	1.05		
Validation value (Jan 11,2007)	850 MHz	55.13	0.99		
Target value	1900 MHz	53.3	1.52		
Validation value (Jan 11,2007)	1900 MHz	53.25	1.511		
Target value	2450 MHz	52.7	1.95		
Validation value (Jan 11,2007)	2450 MHz	52.66	1.942		

7.2 Summary of Measurement Results (GSM 850MHz PCS 1900 MHz Band and WIFI 2450 MHz 802.11b and 802.11g)



Table 3: SAR Values (GSM 850 MHz Band), Measured against the head.

Temperature: 23.0 °C ~23.8°C, humidity: 54~59%.				
Limit of SAD (M/kg)	1 g A	1 g Average		
Limit of SAR (W/kg)	1	.6		
	Measurement	Result (W/kg)		
Test Case	1 g Average	Power level		
	(W/kg)	(dBm)		
Left head, Touch cheek, Bottom Channel	0.798	30.10		
Left head, Touch cheek, Mid Channel	0.641	29.40		
Left head, Touch cheek, Top Channel	0.568	30.01		
Left head, Tilt 15 Degree, Bottom Channel	0.371	30.10		
Left head, Tilt 15 Degree, Mid Channel	0.350	29.40		
Left head, Tilt 15 Degree, Top Channel	0.349	30.01		
Right head, Touch cheek, Bottom Channel	0.826	30.10		
Right head, Touch cheek, Mid Channel	0.685	29.40		
Right head, Touch cheek, Top Channel	0.666	30.01		
Right head, Tilt 15 Degree, Bottom Channel	0.533	30.10		
Right head, Tilt 15 Degree, Mid Channel	0.479	29.40		
Right head, Tilt 15 Degree, Top Channel	0.470	30.01		

Table 4: SAR Values (PCS 1900MHz Band), Measured against the head.

Temperature: 23.0 °C ~23.8°C, humidity: 54~59%.				
Limit of SAR (W/kg)	1 g Average			
Ellilli of SAR (W/kg)	1.	.6		
	Measurement	Result (W/kg)		
Test Case	1 g Average	Power level		
	(W/kg)	(dBm)		
Left head, Touch cheek, Bottom Channel	0.529	28.01		
Left head, Touch cheek, Mid Channel	0.787	28.06		
Left head, Touch cheek, Top Channel	0.921	29.39		
Left head, Tilt 15 Degree, Bottom Channel	0.182	28.01		
Left head, Tilt 15 Degree, Mid Channel	0.211	28.06		
Left head, Tilt 15 Degree, Top Channel	0.208	29.39		
Right head, Touch cheek, Bottom Channel	0.533	28.01		
Right head, Touch cheek, Mid Channel	0.665	28.06		
Right head, Touch cheek, Top Channel	0.666	29.39		
Right head, Tilt 15 Degree, Bottom Channel	0.113 28.01			
Right head, Tilt 15 Degree, Mid Channel	0.165	28.06		
Right head, Tilt 15 Degree, Top Channel	0.168	29.39		



Table 5: SAR Values (WIFI 2450MHz Band,802.11b), Measured against the head.

Temperature: 23.0 °C ~23.8°C, humidity: 54~59%.				
Limit of SAD (M/kg)	1 g Average			
Limit of SAR (W/kg)	1.	6		
	Measurement	Result (W/kg)		
Test Case	1 g Average	Power level		
	(W/kg)	(dBm)		
Left head, Touch cheek, Bottom frequency	0.271	16.34		
Left head, Touch cheek, Mid frequency	0.278	16.30		
Left head, Touch cheek, Top frequency	0.281	16.41		
Left head, Tilt 15 Degree, Bottom frequency	0.306	16.34		
Left head, Tilt 15 Degree, Mid frequency	0.321	16.30		
Left head, Tilt 15 Degree, Top frequency	0.332	16.41		
Right head, Touch cheek, Bottom frequency	0.460	16.34		
Right head, Touch cheek, Mid frequency	0.513	16.30		
Right head, Touch cheek, Top frequency	0.589	16.41		
Right head, Tilt 15 Degree, Bottom frequency	0.534	16.34		
Right head, Tilt 15 Degree, Mid frequency	0.577	16.30		
Right head, Tilt 15 Degree, Top frequency	0.582	16.41		

Table 6: SAR Values (WIFI 2450MHz Band,802.11g), Measured against the head.

Temperature: 23.0 °C ~23.8°C, humidity: 54~59%.					
Limit of SAR (W/kg)	1 g Av	1 g Average			
Limit of SAR (W/kg)	1.	1.6			
	Measurement Result (W/kg)				
Test Case	1 g Average	Power level			
	(W/kg)	(dBm)			
Left head, Touch cheek, Bottom frequency	0.175	20.32			
Left head, Touch cheek, Mid frequency	0.190	20.61			
Left head, Touch cheek, Top frequency	0.174	20.50			
Left head, Tilt 15 Degree, Bottom frequency	0.252	20.32			
Left head, Tilt 15 Degree, Mid frequency	0.280	20.61			
Left head, Tilt 15 Degree, Top frequency	0.272	20.50			
Right head, Touch cheek, Bottom frequency	0.276	20.32			
Right head, Touch cheek, Mid frequency	0.309	20.61			
Right head, Touch cheek, Top frequency	0.327	20.50			
Right head, Tilt 15 Degree, Bottom frequency	0.264	20.32			
Right head, Tilt 15 Degree, Mid frequency	0.304	20.61			
Right head, Tilt 15 Degree, Top frequency	0.338	20.50			



Table 7: SAR Values (GSM 850 MHz Band), Measured against the body

Temperature: 23.0 °C ~23.8°C, humidity: 48~58%.					
Limit of SAD (W/kg)	1 g A	1 g Average			
Limit of SAR (W/kg)	1	.6			
	Measurement	Result (W/kg)			
Test Case	1 g Average	Power level			
	(W/kg)	(dBm)			
Side, Bottom Channel	0.453	30.10			
Side, Mid Channel	0.396	29.40			
Side , Top Channel	0.336	30.01			
Side , Bottom Channel(with GPRS)	0.475	30.10			
Side , Bottom Channel(with Bluetooth)	0.323	30.10			
Side, Bottom Channel(face to bottom)	0.408	30.10			
Side, Bottom Channel(with Headphone)	0.439	30.10			

Table 8: SAR Values (PCS1900 MHz Band), Measured against the body

Temperature: 21.0~21.9° C, humidity: 48~58%.					
Limit of SAD (M/kg)	1 g Average				
Limit of SAR (W/kg)	1.6				
	Measurement Result (W/kg)				
Test Case	1 g Average	Power level			
	(W/kg)	(dBm)			
Side, Bottom Channel	0.221	28.01			
Side, Mid Channel	0.196	28.06			
Side , Top Channel	0.196	29.39			
Side , Mid Channel(with GPRS)	0.248	28.01			
Side , Bottom Channel(with Bluetooth)	0.153	28.01			
Side , Mid Channel(face to bottom)	0.151	28.01			
Side, Bottom Channel(with Headphone)	0.261	28.01			



Table 9: SAR Values (WIFI 2450MHz Band,802.11b), Measured against the body

Temperature: 21.0~21.9° C, humidity: 48~58%.					
Limit of SAD (M/kg)	1 g A	1 g Average			
Limit of SAR (W/kg)	1.6				
	Measurement	Measurement Result (W/kg)			
Test Case	1 g Average	Power level			
	(W/kg)	(dBm)			
Side, Bottom frequency	0.078	16.34			
Side, Mid frequency	0.092	16.30			
Side , Top frequency	0.060	16.41			
Side , Mid frequency (face to bottom)	0.065	0.065 16.30			

Table 10: SAR Values (WIFI 2450MHz Band,802.11g), Measured against the body

Temperature: 21.0~21.9° C, humidity: 48~58%.						
Limit of SAD (M/kg)		1 g Average				
Limit of SAR (W/kg)		1.6				
	Measure	Measurement Result (W/kg)				
Test Case	1 g Ave	erage Power leve	el			
	(W/kg	g) (dBm)				
Side, Bottom frequency	0.046	20.32				
Side, Mid frequency	0.046	20.61				
Side , Top frequency	0.052	52 20.50				
Side , Top frequency (face to bottom)	0.050	0.050 20.50				

#### 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	1.00	R	$\sqrt{3}$	1	0.60	∞
7	-Readout Electronics	В	1.00	N	1	1	1.00	∞
8	Response Time	В	0.80	R	$\sqrt{3}$	1	0.50	∞
9	-Integration Time	В	2.60	R	$\sqrt{3}$	1	1.50	∞
10	RF Ambient Conditions	В	3.00	R	$\sqrt{3}$	1	1.70	∞
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	2.90	N	1	1	2.90	0
15	-Holder of the DUT	А	3.60	N	1	1	3.60	0
16	-Output Power Variation - SAR drift measurement	В	5.0	R	$\sqrt{3}$	1	2.89	8



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	Phantom and Tissue Parameters							
17	-Phantom Uncertainty(shape and thickness tolerances)	В	1.43	R	$\sqrt{3}$	1	0.83	8
18	-Liquid Conductivity Target - tolerance	В	5.0	R	$\sqrt{3}$	0.7	2.02	8
19	-Liquid Conductivity - measurement Uncertainty)	В	2.0	R	$\sqrt{3}$	0.7	0.81	8
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	8
Com	Combined Standard Uncertainty RSS ±8.95%							
_	anded uncertainty ifidence interval of 95 %)			K= 2.003935			±17.9%	

#### **9 MAIN TEST INSTRUMENTS**

No.	EQUIPMENT	ТҮРЕ	<b>Due Date</b>
1	E-Field SAR Probe	IXP-050 (SN 0177)	2007-03-28
2	Six-axis AC Servo industrial robot	RV-2A (SN AN406018)	2007-03-28
3	Mobile Phone Tester	4405 (SN 0811211)	2007-03-28
4	System Validation Dipole 1900MHz	IXD-080 (SN 0112)	2007-03-28
5	Probe Amplifier and PC Interface	IFA-010 (SN 0027)	2007-03-28
6	SAM Head Phantom	SN 0380 SH	2007-03-28
7	SAM Head Phantom	SN 0381 SH	2007-03-28
8	Box Phantom	IXB-070	2007-03-28



#### **ANNEX A**

of

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

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SAR07-004

E28 Ltd

# GSM 850/900/1800/1900 Mobile Terminal

**Accreditation Certificate** 

This Annex consists of 2 pages Date of Report: 2007-01-24











# ACCREDITATION CERTIFICATE 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

Wei Hao

wei Hao

Secretary General of CNAL



#### **ANNEX B**

of

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

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SAR07-004

#### E28 Ltd

#### GSM 850/900/1800/1900 Mobile Terminal

Type Name: E2831

Hardware Version: P3.0 Software Version: V2.0.

#### **TEST LAYOUT**

This Annex consists of 7 pages
Date of Report: 2007-01-24











Fig.1 SARA2 System Test Layout

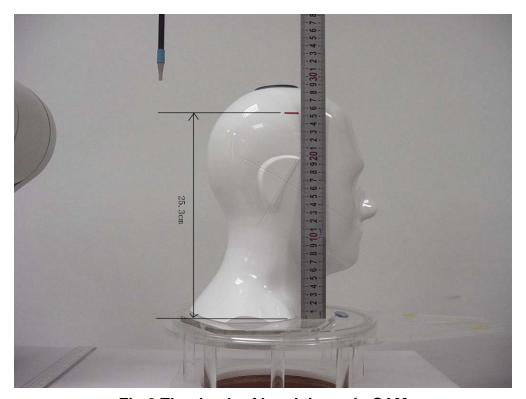


Fig.2 The depth of head tissue in SAM



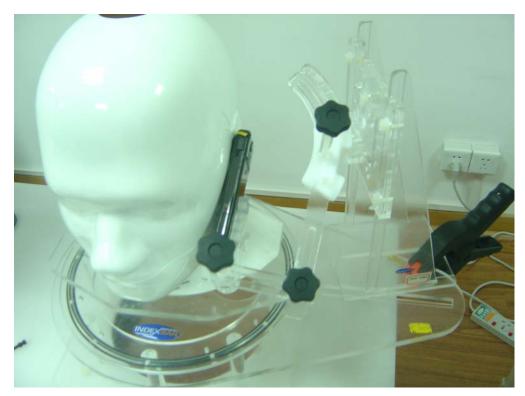


Fig.3 EUT Left Head Touch Cheek Position

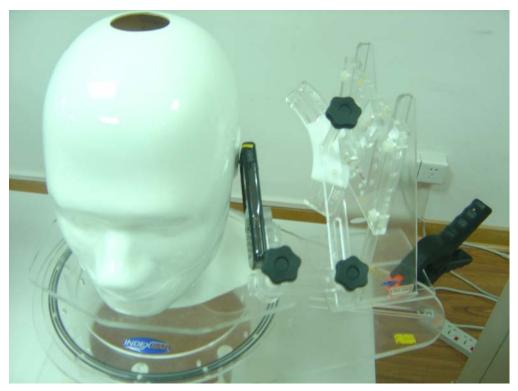


Fig.4 EUT Left Head Tilt15 Position





Fig.5 EUT Right Head Touch Cheek Position

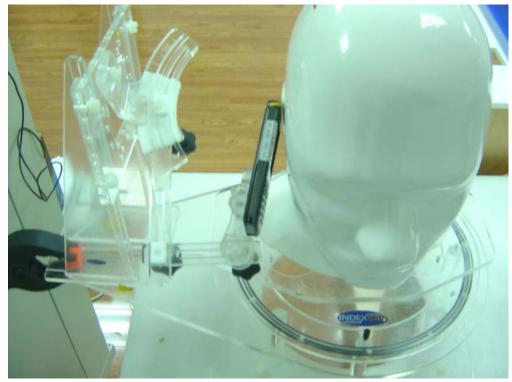


Fig.6 EUT Right Head Tilt15 Position





Fig.7 spacer 1.5cm

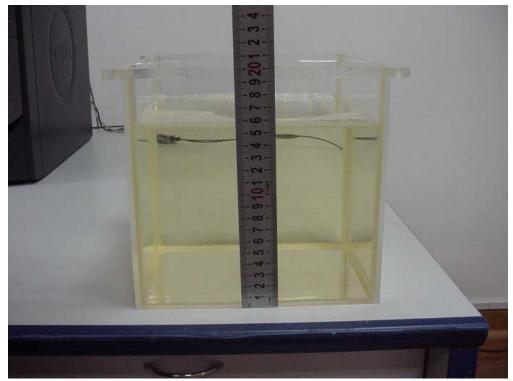


Fig.8 the depth of body tissue





Fig.9 Side Position(With Headphone)



Fig.10 Side Position



#### **ANNEX C**

of

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

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

#### **SAR07-004**

#### E28 Ltd

#### GSM 850/900/1800/1900 Mobile Terminal

Type Name: E2831

Hardware Version: P3.0 Software Version: V2.0..

#### **Sample Photographs**

This Annex consists of 6 pages Date of Report: 2007-01-24



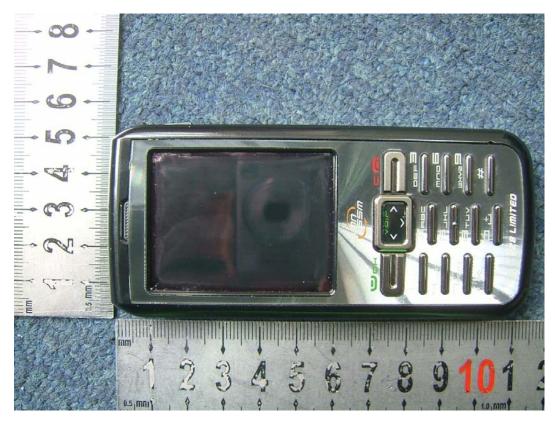






#### **Photograph of the Equipment under Test1.**

#### 1. Appearance of the EUT







#### 2. Inside of the EUT



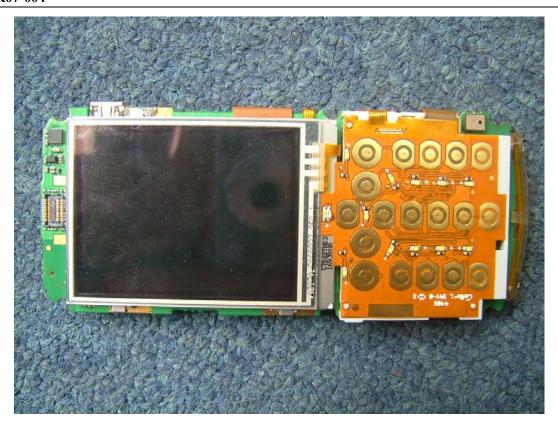


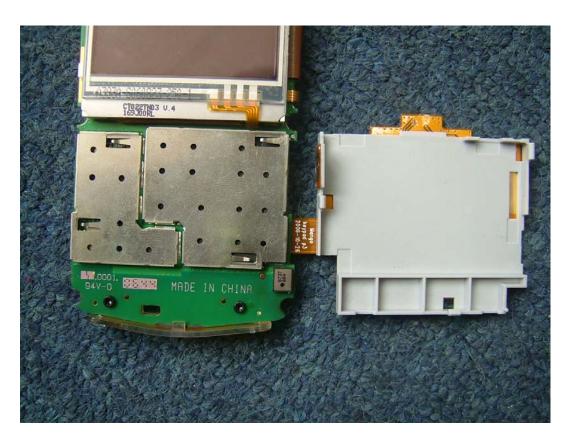


















#### **ANNEX D**

of

# **ShenZhen Electronic Product Quality Testing Center**

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SAR07-004

#### E28 Ltd

#### GSM 850/900/1800/1900 Mobile Terminal

Type Name: E2831

Hardware Version: P3.0 Software Version: V2.0.

**Graph Test Results** 

This Annex consists of 51 pages Date of Report: 2007-01-24



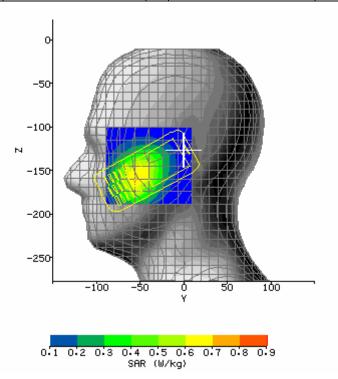






## SAR Test GSM 850 LH\_TouchCheek (Bottom Channel)

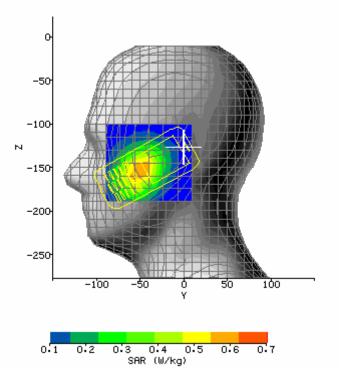
	T T		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-6 13:52:22	<b>DUT Battery Model/No:</b>	
Filename:	E28_850LH_TOUCHC	Probe Serial Number:	0177
	HEEK_B.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
<b>Device Under Test:</b>	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-51.67 mm
		Location:	
<b>DUT Position:</b>	E28_850LH_TOUCHC	Max SAR Z-axis	-155.50 mm
	HEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	30.78 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.798 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.602 W/kg
<b>Conversion Factors:</b>	.287 / .287 / .287	SAR Start:	0.473 W/kg
Type of Modulation:	GMSK	SAR End:	0.490 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	3.62 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





# SAR Test GSM 850 LH\_TouchCheek (Middle Channel)

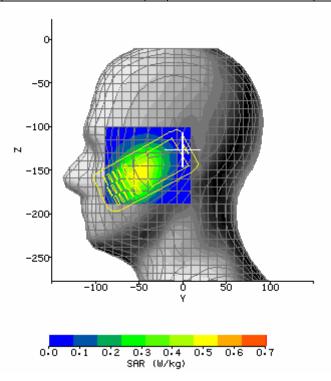
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2007-1-6 14:03:22	DUT Battery Model/No:	
Filename:	E28_850LH_TOUCHC	Probe Serial Number:	0177
	HEEK_M.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-50.00 mm
		Location:	
DUT Position:	E28_850LH_TOUCHC	Max SAR Z-axis	-154.00 mm
	HEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	27.17 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.641 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.498 W/kg
Conversion Factors:	.287 / .287 / .287	SAR Start:	0.407 W/kg
Type of Modulation:	GMSK	SAR End:	0.398 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-2.40 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 LH\_TouchCheek (Top Channel)

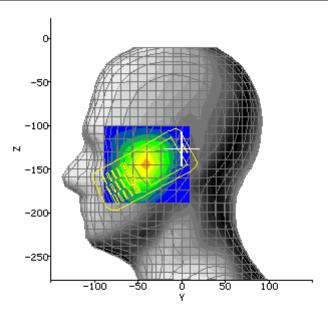
	T	1	
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2007-1-6 14:13:45	<b>DUT Battery Model/No:</b>	
Filename:	E28_850LH_TOUCHC	Probe Serial Number:	0177
	HEEK_T.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-48.33 mm
		Location:	
<b>DUT Position:</b>	E28_850LH_TOUCHC	Max SAR Z-axis	-152.50 mm
	HEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	25.69 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.568 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.436 W/kg
<b>Conversion Factors:</b>	.287 / .287 / .287	SAR Start:	0.359 W/kg
Type of Modulation:	GMSK	SAR End:	0.349 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-2.85 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 LH\_Tilt15 (Bottom Channel)

System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-6 14:28:12	DUT Battery Model/No:	
Filename:	e28_850LH_TILT15_B.t	Probe Serial Number:	0177
	xt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-41.67 mm
		Location:	
DUT Position:	e28_850LH_TILT15	Max SAR Z-axis	-145.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	20.59 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.371 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.279 W/kg
Conversion Factors:	.287 / .287 / .287	SAR Start:	0.222 W/kg
Type of Modulation:	GMSK	SAR End:	0.223 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	0.72 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4

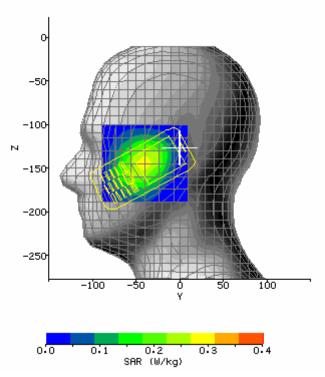






## SAR Test GSM 850 LH\_Tilt15 (Middle Channel)

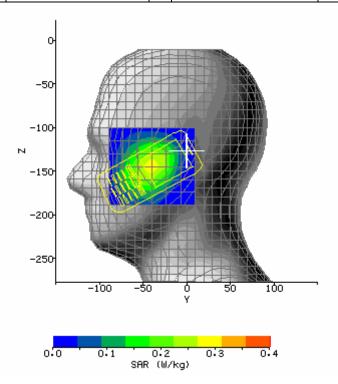
System / seftware:	SARA2 / 2.40 VPM	Innut Dower Drift	0.01dB
System / software:		Input Power Drift:	U.U I U B
Date / Time:	2007-1-6 14:39:21	DUT Battery Model/No:	
Filename:	e28_850LH_TILT15_M.	Probe Serial Number:	0177
	txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-40.00 mm
		Location:	
DUT Position:	e28_850LH_TILT15	Max SAR Z-axis	-143.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	20.44 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.350 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.256 W/kg
Conversion Factors:	.287 / .287 / .287	SAR Start:	0.193 W/kg
Type of Modulation:	GMSK	SAR End:	0.197 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	2.04 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 LH\_Tilt15 (Top Channel)

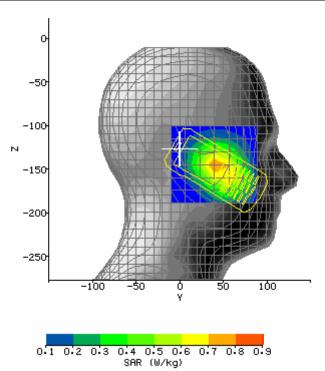
	ı		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-6 14:59:10	DUT Battery Model/No:	
Filename:	e28_850LH_TILT15_T.t	Probe Serial Number:	0177
	xt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-40.00 mm
		Location:	
DUT Position:	e28_850RH_TOUCHC	Max SAR Z-axis	-147.33 mm
	HEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	20.10 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.349 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.257 W/kg
<b>Conversion Factors:</b>	.287 / .287 / .287	SAR Start:	0.210 W/kg
Type of Modulation:	GMSK	SAR End:	0.209 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-0.63 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 RH\_TouchCheek (Bottom Channel)

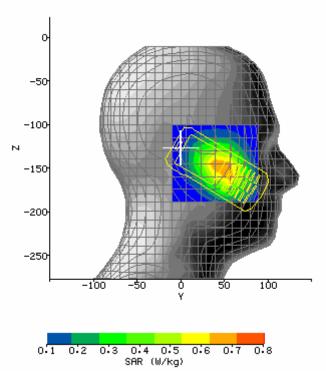
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-6 15:43:40	DUT Battery Model/No:	
Filename:	e28_850RH_TOUCHC	Probe Serial Number:	0177
	HCEEK_B.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	180°	Max SAR Y-axis	46.67 mm
		Location:	
DUT Position:	e28_850RH_TOUCHC	Max SAR Z-axis	-148.00 mm
	HEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	30.77 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.826 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.644 W/kg
Conversion Factors:	.287 / .287 / .287	SAR Start:	0.578 W/kg
Type of Modulation:	GMSK	SAR End:	0.583 W/kg
Modn. Duty Cycle:	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:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 RH\_TouchCheek (Middle Channel)

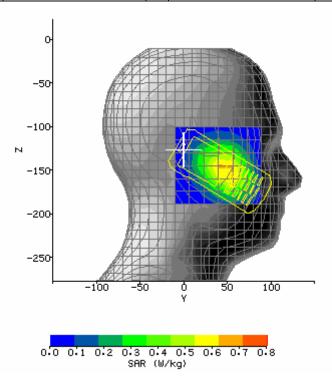
System / software	SARA2 / 2.40 VPM	Innut Bower Drift:	0.01dB
System / software:	0	Input Power Drift:	U.U1UB
Date / Time:	2007-1-6 15:26:56	DUT Battery Model/No:	
Filename:	e28_850RH_TOUCHC	Probe Serial Number:	0177
	HCEEK_M.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	180°	Max SAR Y-axis	48.33 mm
		Location:	
DUT Position:	e28_850RH_TOUCHC	Max SAR Z-axis	-149.50 mm
	HEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	28.33 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.685 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.547 W/kg
Conversion Factors:	.287 / .287 / .287	SAR Start:	0.506 W/kg
Type of Modulation:	GMSK	SAR End:	0.500 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-1.20 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 RH\_TouchCheek (Top Channel)

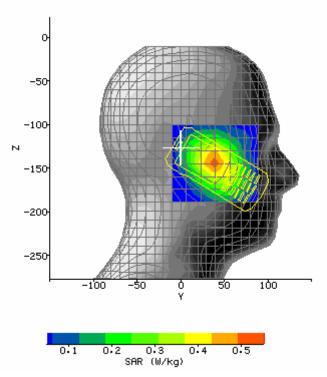
	l I		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-6 15:16:34	<b>DUT Battery Model/No:</b>	
Filename:	e28_850RH_TOUCHC	Probe Serial Number:	0177
	HCEEK_T.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	180°	Max SAR Y-axis	48.33 mm
		Location:	
<b>DUT Position:</b>	e28_850RH_TOUCHC	Max SAR Z-axis	-149.50 mm
	HEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	27.73 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.666 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.516 W/kg
Conversion Factors:	.287 / .287 / .287	SAR Start:	0.472 W/kg
Type of Modulation:	GMSK	SAR End:	0.468 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-0.81 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 RH\_Tilt15 (Bottom Channel)

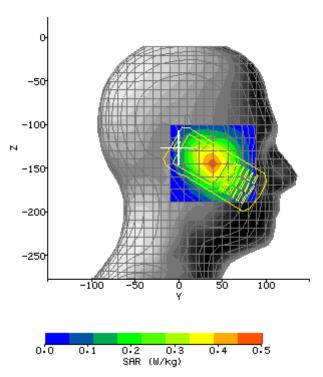
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2007-1-6 15:59:25	DUT Battery Model/No:	0.024.2
			0477
Filename:	e28_850RH_TILT15_B.	Probe Serial Number:	0177
	txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	180°	Max SAR Y-axis	40.00 mm
		Location:	
DUT Position:	e28_850RH_TILT15	Max SAR Z-axis	-143.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	23.89 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.533 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.401 W/kg
<b>Conversion Factors:</b>	.287 / .287 / .287	SAR Start:	0.356 W/kg
Type of Modulation:	GMSK	SAR End:	0.358 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	0.46 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 RH\_Tilt15 (Middle Channel)

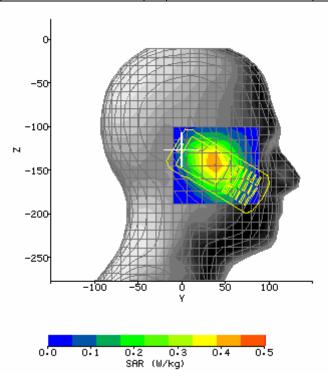
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-6 16:11:40	-	0.0100
		DUT Battery Model/No:	
Filename:	e28_850RH_TILT15_M.	Probe Serial Number:	0177
	txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	180°	Max SAR Y-axis	38.33 mm
		Location:	
DUT Position:	e28_850RH_TILT15	Max SAR Z-axis	-143.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	22.94 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.479 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.360 W/kg
<b>Conversion Factors:</b>	.287 / .287 / .287	SAR Start:	0.308 W/kg
Type of Modulation:	GMSK	SAR End:	0.322 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	4.60 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 RH\_Tilt15 (Top Channel)

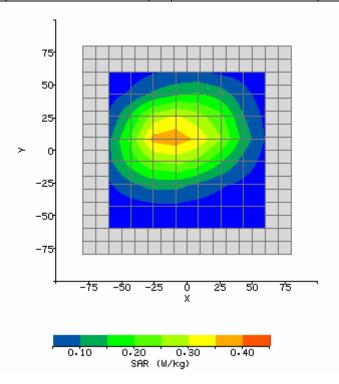
	[	T	T
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-6 16:51:34	<b>DUT Battery Model/No:</b>	
Filename:	e28_850RH_TILT15_M.	Probe Serial Number:	0177
	txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	41.35
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	180°	Max SAR Y-axis	38.33 mm
		Location:	
<b>DUT Position:</b>	e28_850RH_TILT15	Max SAR Z-axis	-142.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	22.40 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.470 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.348 W/kg
<b>Conversion Factors:</b>	.287 / .287 / .287	SAR Start:	0.292 W/kg
Type of Modulation:	GMSK	SAR End:	0.296 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	1.33 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## **SAR Test GSM 850 Side (Bottom Channel)**

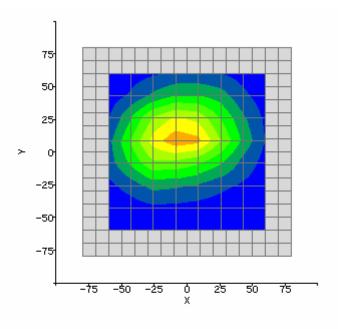
- · · · · ·	0.4.0.4.0.4.0.4.0.4.0.4.0.4.0.4.0.4.0.4		0.00 ID
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2007-1-11 10:34:15	DUT Battery Model/No:	
Filename:	e28_850BODY_SIDE_	Probe Serial Number:	0177
	B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
<b>Device Under Test:</b>	e28	Relative Permittivity:	55.13
Relative Humidity:	55%	Conductivity:	.99
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-12.00 mm
		Location:	
<b>DUT Position:</b>	E28_850BODY_SIDE	Max SAR Y-axis	10.29 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	20.94 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.453 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.345 W/kg
<b>Conversion Factors:</b>	.271 / .271 / .271	SAR Start:	0.198 W/kg
Type of Modulation:	GMSK	SAR End:	0.198 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	0.03 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 Side (Middle Channel)

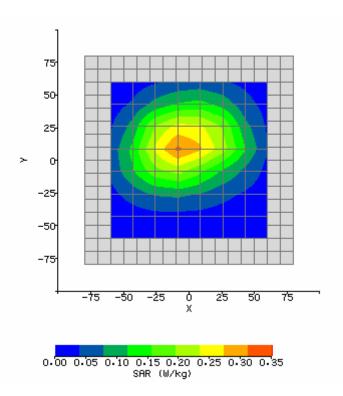
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2007-1-11 10:52:00	DUT Battery Model/No:	
Filename:	e28_850BODY_SIDE_	Probe Serial Number:	0177
	M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	55.13
Relative Humidity:	55%	Conductivity:	.99
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-5.14 mm
		Location:	
DUT Position:	E28_850BODY_SIDE	Max SAR Y-axis	12.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	19.23 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.396 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.301 W/kg
<b>Conversion Factors:</b>	.271 / .271 / .271	SAR Start:	0.173 W/kg
Type of Modulation:	GMSK	SAR End:	0.173 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-0.14 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## **SAR Test GSM 850 Side (Top Channel)**

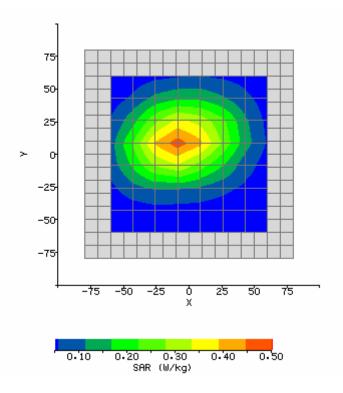
	T		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 11:01:06	<b>DUT Battery Model/No:</b>	
Filename:	e28_850BODY_SIDE_T	Probe Serial Number:	0177
	.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	55.13
Relative Humidity:	55%	Conductivity:	.99
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-5.14 mm
		Location:	
DUT Position:	E28_850BODY_SIDE	Max SAR Y-axis	12.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	17.70 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.336 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.257 W/kg
<b>Conversion Factors:</b>	.271 / .271 / .271	SAR Start:	0.150 W/kg
Type of Modulation:	GMSK	SAR End:	0.152 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	1.37 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 Side (Bottom Channel, With GPRS)

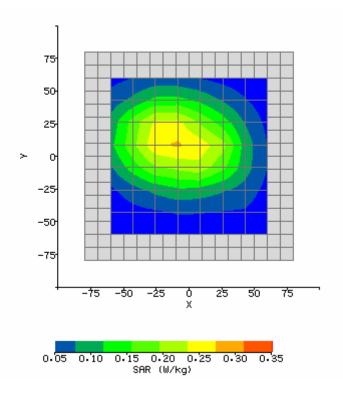
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 11:10:35	DUT Battery Model/No:	
Filename:	e28_850BODY_SIDE_	Probe Serial Number:	0177
	B2.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	55.13
Relative Humidity:	55%	Conductivity:	.99
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-8.57 mm
		Location:	
DUT Position:	E28_850BODY_SIDE	Max SAR Y-axis	8.57 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	21.55 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.475 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.376 W/kg
Conversion Factors:	.271 / .271 / .271	SAR Start:	0.211 W/kg
Type of Modulation:	GMSK	SAR End:	0.214 W/kg
Modn. Duty Cycle:	4	SAR Drift during Scan:	1.15 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 Side (Bottom Channel, With Bluetooth)

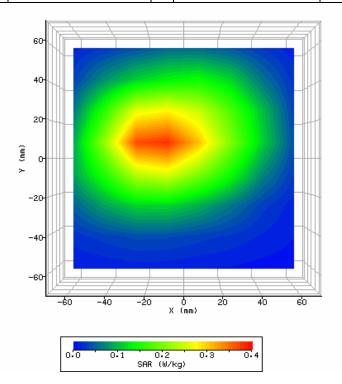
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 11:28:56	DUT Battery Model/No:	
Filename:	e28_850BODY_SIDE_	Probe Serial Number:	0177
	B4.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	55.13
Relative Humidity:	55%	Conductivity:	.99
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-12.00 mm
		Location:	
DUT Position:	E28_850BODY_SIDE	Max SAR Y-axis	12.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	17.56 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.323 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.257 W/kg
Conversion Factors:	.271 / .271 / .271	SAR Start:	0.154 W/kg
Type of Modulation:	GMSK	SAR End:	0.151 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-1.98 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 Side (Bottom Channel, face to bottom)

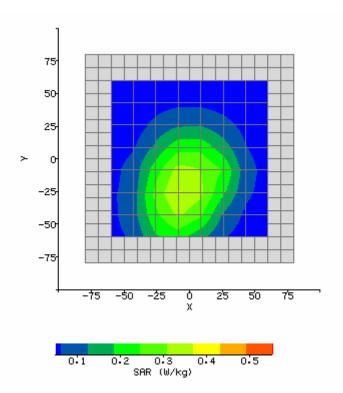
	Γ	1	
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 11:19:39	DUT Battery Model/No:	
Filename:	e28_850BODY_SIDE_	Probe Serial Number:	0177
	B3.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	55.13
Relative Humidity:	55%	Conductivity:	.99
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-13.71 mm
		Location:	
DUT Position:	E28_850BODY_SIDE	Max SAR Y-axis	4.95 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	19.72 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.408 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.316 W/kg
<b>Conversion Factors:</b>	.271 / .271 / .271	SAR Start:	0.181 W/kg
Type of Modulation:	GMSK	SAR End:	0.183 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	1.09 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





## SAR Test GSM 850 Side (Bottom Channel, with Headphone)

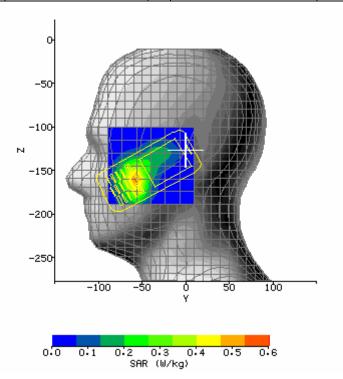
	T		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-2-12 15:34:15	DUT Battery Model/No:	
Filename:	e28_850BODY_SIDE_	Probe Serial Number:	0177
	headphone.txt		
Ambient Temperature:	20.0°C	Liquid Simulant:	BODY tissue
Device Under Test:	C677	Relative Permittivity:	55.13
Relative Humidity:	51%	Conductivity:	.99
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR X-axis	-5.14 mm
		Location:	
<b>DUT Position:</b>	e28_850BODY_SIDE_	Max SAR Y-axis	-24.00 mm
	headphone	Location:	
Antenna	BUILD INSIDE	Max E Field:	23.46 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	0.439 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.333 W/kg
Conversion Factors:	.271 / .271 / .271	SAR Start:	0.188 W/kg
Type of Modulation:	GMSK	SAR End:	0.185 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-1.47 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





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

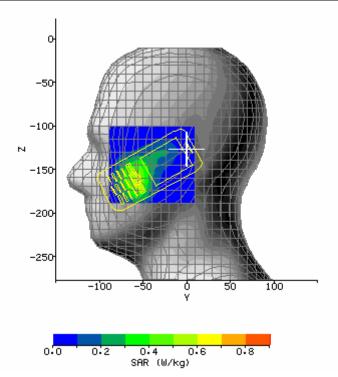
	Ī		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-5 10:29:38	DUT Battery Model/No:	
Filename:	E28_1900LH_TOUCHC	Probe Serial Number:	0177
	HEEK_B.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	40.02
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-63.67 mm
		Location:	
<b>DUT Position:</b>	E28_1900LH_TOUCHC	Max SAR Z-axis	-160.00 mm
	HEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	20.55 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.529 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.353 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.404 W/kg
Type of Modulation:	GMSK	SAR End:	0.407 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	0.73 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

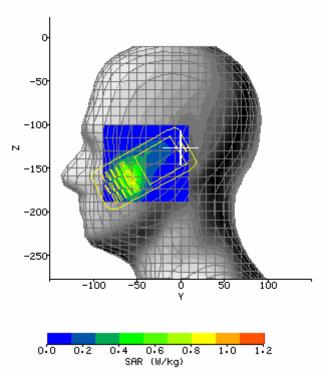
Γ <u>-</u>	I I	T	
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2007-1-5 10:19:35	<b>DUT Battery Model/No:</b>	
Filename:	E28_1900LH_TOUCHC	Probe Serial Number:	0177
	HEEK_M.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	40.02
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-58.33 mm
		Location:	
DUT Position:	E28_1900LH_TOUCHC	Max SAR Z-axis	-160.00 mm
	HEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	24.30 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.787 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.506 W/kg
Conversion Factors:	.325 / .325 / .325	SAR Start:	0.468 W/kg
Type of Modulation:	GMSK	SAR End:	0.478 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	2.06 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

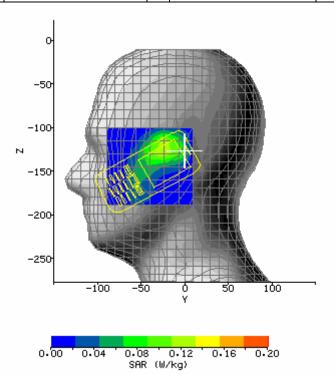
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2007-1-5 10:07:28	-	0.0245
Date / Time:	2007-1-0 10.07.20	DUT Battery Model/No:	
Filename:	E28_1900LH_TOUCHC	Probe Serial Number:	0177
	HEEK_T.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	40.02
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-58.33 mm
		Location:	
DUT Position:	E28_1900LH_TOUCHC	Max SAR Z-axis	-160.00 mm
	HEEK_T	Location:	
Antenna	BUILD INSIDE	Max E Field:	27.79 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.921 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.585 W/kg
<b>Conversion Factors:</b>	.325 / .325 / .325	SAR Start:	0.531 W/kg
Type of Modulation:	GMSK	SAR End:	0.551 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	3.82 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

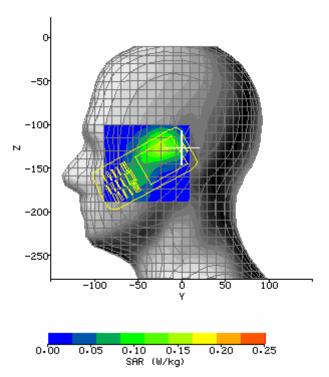
	ı		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-5 10:43:27	<b>DUT Battery Model/No:</b>	
Filename:	e28_1900LH_TILT15_B	Probe Serial Number:	0177
	.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	40.02
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-23.33 mm
		Location:	
<b>DUT Position:</b>	e28_1900RH_TILT15	Max SAR Z-axis	-125.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	11.96 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.182 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.121 W/kg
<b>Conversion Factors:</b>	.325 / .325 / .325	SAR Start:	0.095 W/kg
Type of Modulation:	GMSK	SAR End:	0.099 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	4.68 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

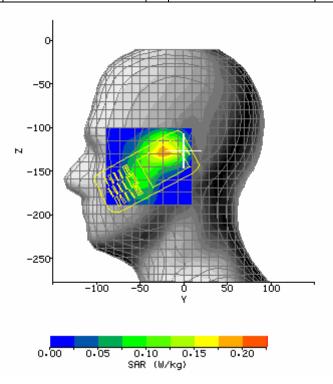
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-5 10:56:37	DUT Battery Model/No:	
			0477
Filename:	e28_1900LH_TILT15_	Probe Serial Number:	0177
	M.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	40.02
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-23.33 mm
		Location:	
DUT Position:	e28_1900RH_TILT15	Max SAR Z-axis	-127.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	12.81 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.211 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.143 W/kg
<b>Conversion Factors:</b>	.325 / .325 / .325	SAR Start:	0.115 W/kg
Type of Modulation:	GMSK	SAR End:	0.119 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	3.83 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

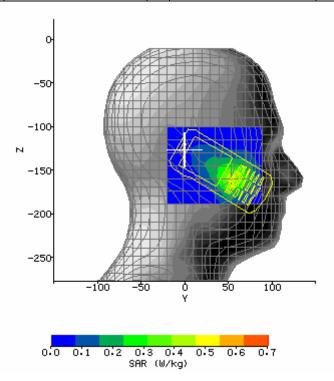
	I		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-5 11:10:50	DUT Battery Model/No:	
Filename:	e28_1900LH_TILT15_T	Probe Serial Number:	0177
	.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	40.02
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	-21.67 mm
		Location:	
DUT Position:	e28_1900LH_TILT15	Max SAR Z-axis	-121.67 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	12.66 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.208 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.145 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.137 W/kg
Type of Modulation:	GMSK	SAR End:	0.142 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	4.26 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

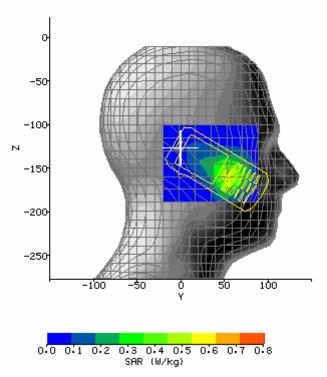
	T	T	T
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-5 8:50:44	DUT Battery Model/No:	
Filename:	e28_1900RH_TOUCH	Probe Serial Number:	0177
	CHEEK_B.txt		
Ambient Temperature:	21.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	E28	Relative Permittivity:	39.87
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	21.1°C
Phantom Rotation:	180°	Max SAR Y-axis	55.17 mm
		Location:	
DUT Position:	E28_1900RH_TOUCH	Max SAR Z-axis	-158.50 mm
	CHEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	21.30 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.533 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.361 W/kg
Conversion Factors:	.325 / .325 / .325	SAR Start:	0.362 W/kg
Type of Modulation:	GMSK	SAR End:	0.370 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	2.24 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

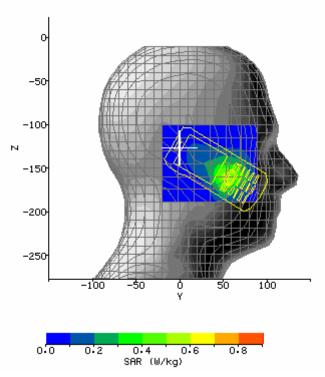
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-5 9:03:57	DUT Battery Model/No:	
			0477
Filename:	e28_1900RH_TOUCH	Probe Serial Number:	0177
	CHEEK_M.txt		
Ambient Temperature:	21.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	E28	Relative Permittivity:	39.87
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	21.1°C
Phantom Rotation:	180°	Max SAR Y-axis	55.17 mm
		Location:	
DUT Position:	E28_1900RH_TOUCH	Max SAR Z-axis	-158.50 mm
	CHEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	22.75 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.665 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.434 W/kg
<b>Conversion Factors:</b>	.325 / .325 / .325	SAR Start:	0.442 W/kg
Type of Modulation:	GMSK	SAR End:	0.462 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	4.54 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

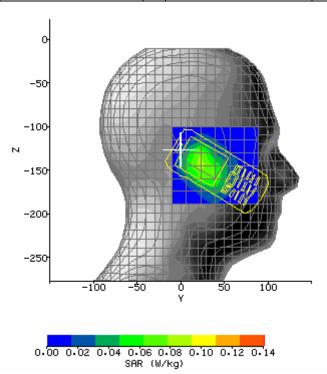
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-5 9:17:07	DUT Battery Model/No:	
			0477
Filename:	e28_1900RH_TOUCH	Probe Serial Number:	0177
	CHEEK_T.txt		
Ambient Temperature:	21.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	E28	Relative Permittivity:	39.87
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	21.1°C
Phantom Rotation:	180°	Max SAR Y-axis	55.17 mm
		Location:	
DUT Position:	E28_1900RH_TOUCH	Max SAR Z-axis	-160.00 mm
	CHEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	24.16 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.666 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.441 W/kg
<b>Conversion Factors:</b>	.325 / .325 / .325	SAR Start:	0.453 W/kg
Type of Modulation:	GMSK	SAR End:	0.448 W/kg
Modn. Duty Cycle:	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:	30dBm	Extrapolation:	poly4





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

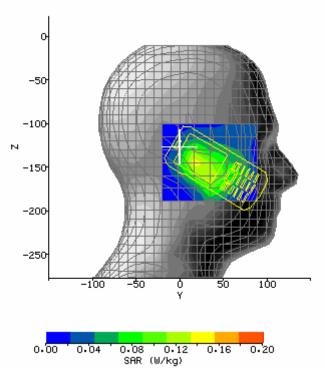
		1	
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2007-1-5 9:56:03	DUT Battery Model/No:	
Filename:	e28_1900RH_TILT15_	Probe Serial Number:	0177
	B.txt		
Ambient Temperature:	22.4°C	Liquid Simulant:	Head tissue
Device Under Test:	e28	Relative Permittivity:	40.02
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	180°	Max SAR Y-axis	18.83 mm
		Location:	
DUT Position:	e28_1900RH_TILT15	Max SAR Z-axis	-147.17 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	9.36 V/m
Configuration:			
Test Frequency:	1800MHz	SAR 1g:	0.113 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.085 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.080 W/kg
Type of Modulation:	GMSK	SAR End:	0.081 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	0.47 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

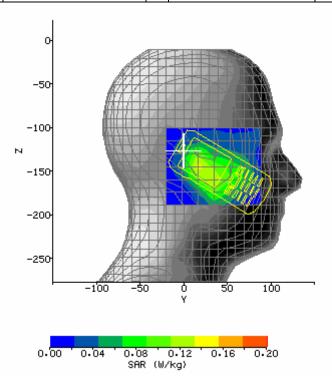
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
	2007-1-5 9:45:39	<u>'</u>	0.0100
Date / Time:	2007-1-5 9:45:39	DUT Battery Model/No:	
Filename:	e28_1900RH_TILT15_	Probe Serial Number:	0177
	M.txt		
Ambient Temperature:	21.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	E28	Relative Permittivity:	39.87
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	21.1°C
Phantom Rotation:	180°	Max SAR Y-axis	25.83 mm
		Location:	
DUT Position:	E28_1900RH_TILT15	Max SAR Z-axis	-148.00 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	11.39 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.165 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.124 W/kg
<b>Conversion Factors:</b>	.325 / .325 / .325	SAR Start:	0.092 W/kg
Type of Modulation:	GMSK	SAR End:	0.091 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-0.79 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





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

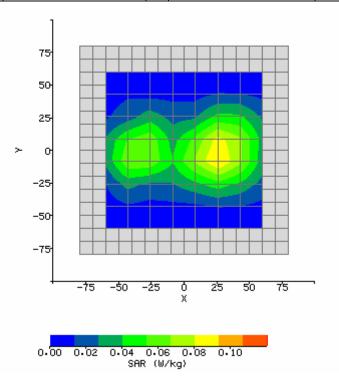
	Т		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-5 9:32:28	DUT Battery Model/No:	
Filename:	e28_1900RH_TILT15_T	Probe Serial Number:	0177
	.txt		
Ambient Temperature:	21.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	E28	Relative Permittivity:	39.87
Relative Humidity:	50%	Conductivity:	1.396
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	21.1°C
Phantom Rotation:	180°	Max SAR Y-axis	25.83 mm
		Location:	
DUT Position:	E28_1900RH_TILT15	Max SAR Z-axis	-149.50 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	11.56 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.168 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.123 W/kg
Conversion Factors:	.325 / .325 / .325	SAR Start:	0.092 W/kg
Type of Modulation:	GMSK	SAR End:	0.092 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	-0.24 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





## SAR Test GSM 1900 Side (Bottom Channel)

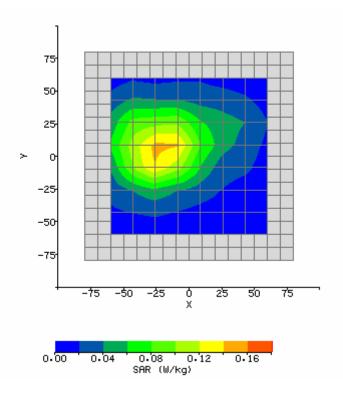
- · · · · ·	0.4.0.4.0.4.0.4.0.4.0.4.0.4.0.4.0.4.0.4	1	0.00 ID
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2007-1-11 8:52:26	DUT Battery Model/No:	
Filename:	e28_1900BODY_SIDE	Probe Serial Number:	0177
	_B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
<b>Device Under Test:</b>	e28	Relative Permittivity:	53.25
Relative Humidity:	55%	Conductivity:	1.511
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-20.57 mm
		Location:	
<b>DUT Position:</b>	E28_1900BODY_SIDE	Max SAR Y-axis	6.86 mm
	_B	Location:	
Antenna	BUILD INSIDE	Max E Field:	10.90 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.221 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.138 W/kg
<b>Conversion Factors:</b>	.356 / .356 / .356	SAR Start:	0.041 W/kg
Type of Modulation:	GMSK	SAR End:	0.042 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	1.72 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





# SAR Test GSM 1900 Side (Middle Channel)

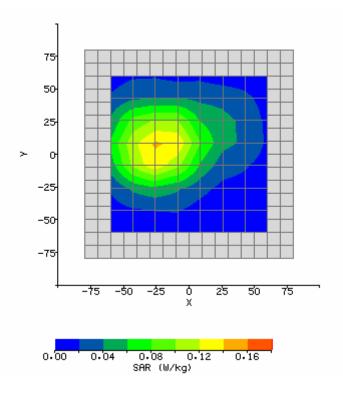
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2007-1-11 9:06:07	DUT Battery Model/No:	
Filename:	e28 1900BODY SIDE	Probe Serial Number:	0177
	_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	53.25
Relative Humidity:	55%	Conductivity:	1.511
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis Location:	-22.29 mm
DUT Position:	E28_1900BODY_SIDE	Max SAR Y-axis Location:	3.43 mm
Antenna	BUILD INSIDE	Max E Field:	10.45 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.196 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.126 W/kg
Conversion Factors:	.356 / .356 / .356	SAR Start:	0.035 W/kg
Type of Modulation:	GMSK	SAR End:	0.036 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	4.20 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





# SAR Test GSM 1900 Side (Top Channel)

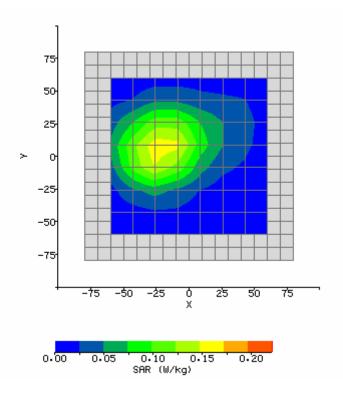
	T		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 9:15:43	DUT Battery Model/No:	
Filename:	e28_1900BODY_SIDE	Probe Serial Number:	0177
	_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	53.25
Relative Humidity:	55%	Conductivity:	1.511
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-22.29 mm
		Location:	
DUT Position:	E28_1900BODY_SIDE	Max SAR Y-axis	5.14 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	10.52 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.196 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.125 W/kg
Conversion Factors:	.356 / .356 / .356	SAR Start:	0.034 W/kg
Type of Modulation:	GMSK	SAR End:	0.035 W/kg
Modn. Duty Cycle:	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:	30dBm	Extrapolation:	poly4





# SAR Test GSM 1900 Side (Bottom Channel, With GPRS)

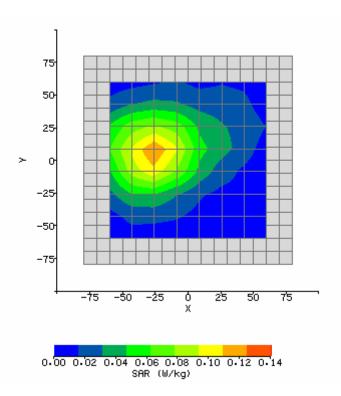
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 9:32:22	DUT Battery Model/No:	
Filename:	e28_1900BODY_SIDE	Probe Serial Number:	0177
	_B2.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	53.25
Relative Humidity:	55%	Conductivity:	1.511
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-20.57 mm
		Location:	
DUT Position:	E28_1900BODY_SIDE	Max SAR Y-axis	5.14 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	11.54 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.248 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.151 W/kg
Conversion Factors:	.356 / .356 / .356	SAR Start:	0.042 W/kg
Type of Modulation:	GMSK	SAR End:	0.042 W/kg
Modn. Duty Cycle:	4	SAR Drift during Scan:	-1.62 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation:	poly4





#### SAR Test GSM 1900 Side (Bottom Channel, With Bluetooth)

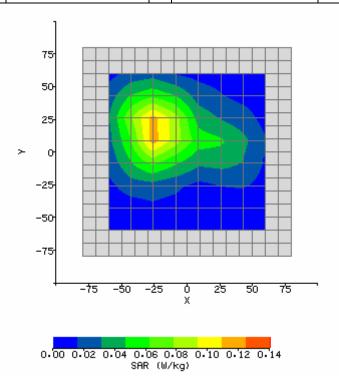
System / seftware:	SARA2 / 2.40 VPM	Innut Bower Drift	0.01dB
System / software:		Input Power Drift:	0.010B
Date / Time:	2007-1-11 9:44:29	DUT Battery Model/No:	
Filename:	e28_1900BODY_SIDE	Probe Serial Number:	0177
	_B3.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	53.25
Relative Humidity:	55%	Conductivity:	1.511
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-25.71 mm
		Location:	
<b>DUT Position:</b>	E28_1900BODY_SIDE	Max SAR Y-axis	5.14 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	9.11 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.153 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.100 W/kg
<b>Conversion Factors:</b>	.356 / .356 / .356	SAR Start:	0.029 W/kg
Type of Modulation:	GMSK	SAR End:	0.030 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	2.32 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





#### SAR Test GSM 1900 Side (Bottom Channel, face to bottom)

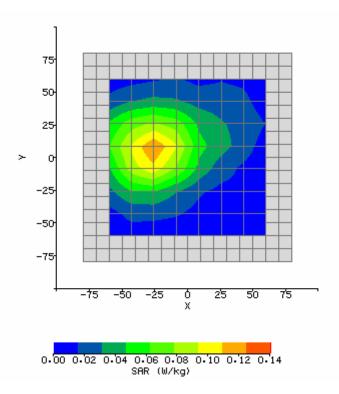
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 9:58:56	DUT Battery Model/No:	
Filename:	e28_1900BODY_SIDE	Probe Serial Number:	0177
	_B4.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	53.25
Relative Humidity:	55%	Conductivity:	1.511
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	-24.00 mm
		Location:	
DUT Position:	E28_1900BODY_SIDE	Max SAR Y-axis	17.14 mm
		Location:	
Antenna	BUILD INSIDE	Max E Field:	9.02 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	0.151 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	0.096 W/kg
Conversion Factors:	.356 / .356 / .356	SAR Start:	0.031 W/kg
Type of Modulation:	GMSK	SAR End:	0.031 W/kg
Modn. Duty Cycle:	8	SAR Drift during Scan:	2.70 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	LEVEL 5(33dBm)	Extrapolation:	poly4





#### **SAR Test GSM 1900 Side (Bottom Channel, With headphone)**

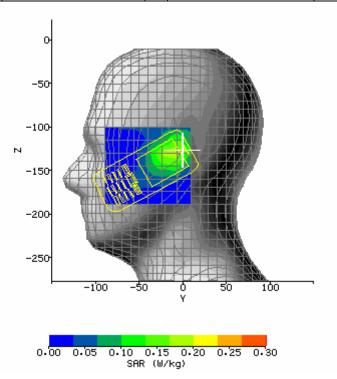
System / software:	SARA2 / 2.40 VPM	Input Power Drift: 0.02dB	
Date / Time:	2007-2-12 16:24:10	DUT Battery Model/No:	
Filename:	e28_1900BODY_SIDE	Probe Serial Number: 0177	
	_headphone.txt		
Ambient Temperature:	20.0°C	Liquid Simulant: BODY tiss	sue
Device Under Test:	C677	Relative Permittivity: 53.25	
Relative Humidity:	51%	Conductivity: 1.511	
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature: 23.0°C	
Phantom Rotation:	0°	Max SAR X-axis 15.43 mm	1
		Location:	
DUT Position:	e28_1900BODY_SIDE	Max SAR Y-axis -18.86 mr	n
	_headphone	Location:	
Antenna	BUILD INSIDE	Max E Field: 27.22 V/n	n
Configuration:			
Test Frequency:	1900MHz	<b>SAR 1g:</b> 0.261 W/k	кg
Air Factors:	417 / 368 / 414	<b>SAR 10g:</b> 0.180 W/k	кg
Conversion Factors:	.271 / .271 / .271	<b>SAR Start:</b> 0.078 W/R	кg
Type of Modulation:	GMSK	<b>SAR End:</b> 0.077 W/k	<b>G</b>
Modn. Duty Cycle:	8	SAR Drift during Scan: -1.09 %	
Diode Compression	20 / 20 / 20	Probe battery last 20/05/05	
Factors (V*200):		changed:	
Input Power Level:	30dBm	Extrapolation: poly4	





#### SAR Test GSM 2450 LH\_TouchCheek (Bottom Channel, 802.11b)

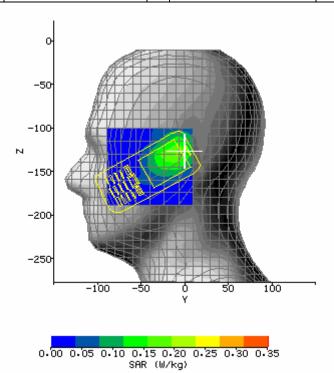
	1		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 21:48:30	DUT Battery Model/No:	
Filename:	E28_2450LH_TOUCHC	Probe Serial Number:	0177
	HEEK_802.11B_B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-13.33 mm
		Location:	
<b>DUT Position:</b>	E28_2450LH_TOUCHC	Max SAR Z-axis	-130.00 mm
	HEEK_802.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	12.59 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.271 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.159 W/kg
Conversion Factors:	.353 / .353 / .353	SAR Start:	0.101 W/kg
Type of Modulation:	CCK	SAR End:	0.101 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-0.45 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 LH\_TouchCheek (Middle Channel, 802.11b)

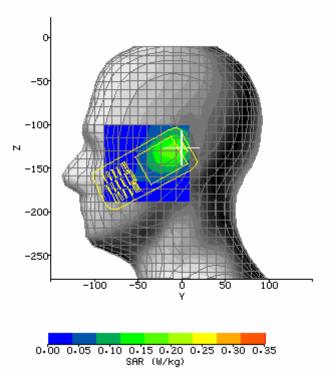
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
		•	0.0200
Date / Time:	2007-1-11 21:33:25	DUT Battery Model/No:	
Filename:	E28_2450LH_TOUCHC	Probe Serial Number:	0177
	HEEK_802.11B_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
<b>Device Under Test:</b>	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-13.33 mm
		Location:	
DUT Position:	E28_2450LH_TOUCHC	Max SAR Z-axis	-130.00 mm
	HEEK_802.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	13.01 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.278 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.164 W/kg
Conversion Factors:	.353 / .353 / .353	SAR Start:	0.103 W/kg
Type of Modulation:	CCK	SAR End:	0.106 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	2.72 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 LH\_TouchCheek (Top Channel, 802.11b)

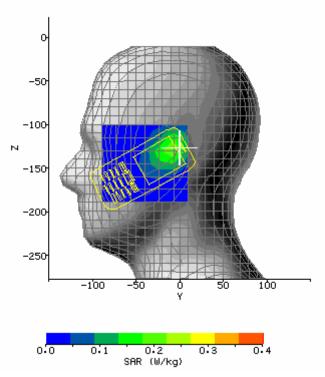
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
	07 11 12 7 21 10 11 11	-	0.0200
Date / Time:	2007-1-11 21:21:15	DUT Battery Model/No:	
Filename:	E28_2450LH_TOUCHC	Probe Serial Number:	0177
	HEEK_802.11B_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-13.33 mm
		Location:	
DUT Position:	E28_2450LH_TOUCHC	Max SAR Z-axis	-131.50 mm
	HEEK_802.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	13.07 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.281 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.168 W/kg
Conversion Factors:	.353 / .353 / .353	SAR Start:	0.100 W/kg
Type of Modulation:	CCK	SAR End:	0.098 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-2.26 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 LH\_Tilt15 (Bottom Channel, 802.11b)

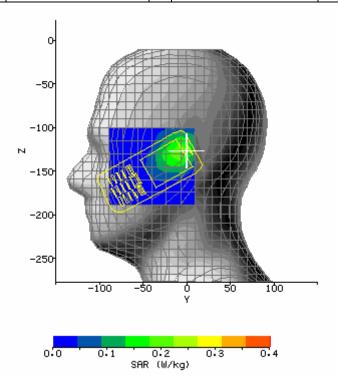
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
	07 11 12 7 21 10 11 111	-	0.0100
Date / Time:	2007-1-11 22:00:45	DUT Battery Model/No:	
Filename:	E28_2450LH_TILT15_8	Probe Serial Number:	0177
	02.11B_B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-10.00 mm
		Location:	
DUT Position:	E28_2450LH_TILT15_8	Max SAR Z-axis	-128.50 mm
	02.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	14.00 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.306 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.176 W/kg
Conversion Factors:	.353 / .353 / .353	SAR Start:	0.111 W/kg
Type of Modulation:	CCK	SAR End:	0.110 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-0.94 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 LH\_Tilt15 (Middle Channel, 802.11b)

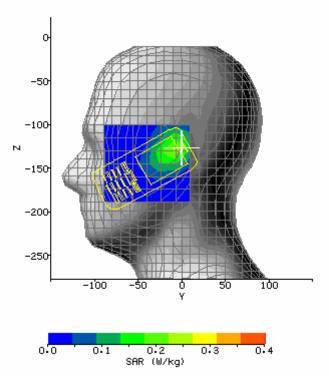
	, , , , , , , , , , , , , , , , , , , ,		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 22:14:09	<b>DUT Battery Model/No:</b>	
Filename:	E28_2450LH_TILT15_8	Probe Serial Number:	0177
	02.11B_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-11.67 mm
		Location:	
<b>DUT Position:</b>	E28_2450LH_TILT15_8	Max SAR Z-axis	-128.50 mm
	02.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	13.95 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.321 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.180 W/kg
<b>Conversion Factors:</b>	.353 / .353 / .353	SAR Start:	0.107 W/kg
Type of Modulation:	CCK	SAR End:	0.112 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	4.70 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 LH\_Tilt15 (Top Channel, 802.11b)

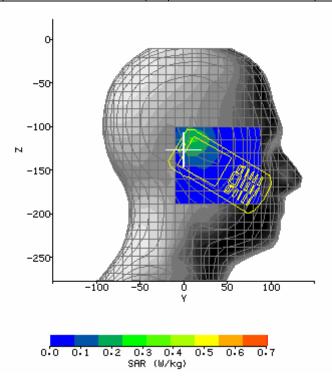
0	CADAC / CAC VDM	Innut Barres Britis	0.04 4D
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 22:33:14	DUT Battery Model/No:	
Filename:	E28_2450LH_TILT15_8	Probe Serial Number:	0177
	02.11B_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-11.67 mm
		Location:	
DUT Position:	E28_2450LH_TILT15_8	Max SAR Z-axis	-130.00 mm
	02.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	14.54 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.332 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.188 W/kg
<b>Conversion Factors:</b>	.353 / .353 / .353	SAR Start:	0.111 W/kg
Type of Modulation:	CCK	SAR End:	0.110 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-0.67 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_TouchCheek (Bottom Channel, 802.11b)

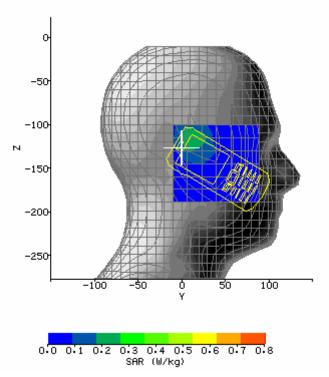
	T		
System / software:	SARA2 / 2.40 VPM	Input Power Drift: 0.01dB	
Date / Time:	2007-1-11 17:37:01	DUT Battery Model/No:	
Filename:	E28_2450RH_TOUCH	Probe Serial Number: 0177	
	CHEEK_802.11B_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant: HEAD tissue	
Device Under Test:	e28	Relative Permittivity: 39.12	
Relative Humidity:	55%	Conductivity: 1.798	
Phantom S/No:	Head_381SH.csv	Liquid Temperature: 23.0°C	
Phantom Rotation:	180°	Max SAR Y-axis 15.00 mm	
		Location:	
<b>DUT Position:</b>	E28_2450RH_TOUCH	Max SAR Z-axis -118.00 mm	
	CHEEK_802.11B	Location:	
Antenna	BUILD INSIDE	Max E Field: 18.99 V/m	
Configuration:			
Test Frequency:	2450MHz	<b>SAR 1g:</b> 0.460 W/kg	
Air Factors:	421 / 397 / 383	<b>SAR 10g:</b> 0.241 W/kg	
Conversion Factors:	.386 / .386 / .386	SAR Start: 0.110 W/kg	
Type of Modulation:	CCK	<b>SAR End:</b> 0.113 W/kg	
Modn. Duty Cycle:	1	SAR Drift during Scan: 3.04 %	
Diode Compression	20 / 20 / 20	Probe battery last 20/05/05	
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation: poly4	





#### SAR Test GSM 2450 RH\_TouchCheek (Middle Channel, 802.11b)

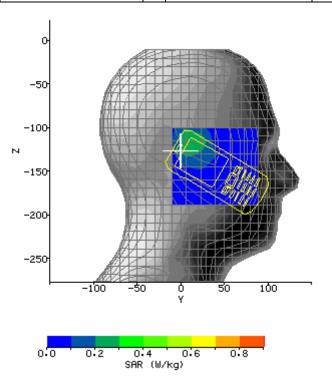
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
	07 11 12 7 21 10 11 11	-	0.0100
Date / Time:	2007-1-11 17:55:53	DUT Battery Model/No:	
Filename:	E28_2450RH_TOUCH	Probe Serial Number:	0177
	CHEEK_802.11B_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	15.00 mm
		Location:	
DUT Position:	E28_2450RH_TOUCH	Max SAR Z-axis	-118.00 mm
	CHEEK_802.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	20.15 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.513 W/kg
Air Factors:	421 / 397 / 383	SAR 10g:	0.266 W/kg
Conversion Factors:	.386 / .386 / .386	SAR Start:	0.115 W/kg
Type of Modulation:	CCK	SAR End:	0.119 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	4.10 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_TouchCheek (Top Channel, 802.11b)

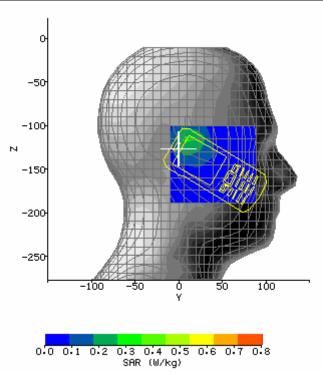
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 18:59:36	DUT Battery Model/No:	
Filename:	E28_2450RH_TOUCH	Probe Serial Number:	0177
	CHEEK_802.11B_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	15.00 mm
		Location:	
<b>DUT Position:</b>	E28_2450RH_TOUCH	Max SAR Z-axis	-107.33 mm
	CHEEK_802.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	21.75 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.589 W/kg
Air Factors:	421 / 397 / 383	SAR 10g:	0.300 W/kg
<b>Conversion Factors:</b>	.386 / .386 / .386	SAR Start:	0.138 W/kg
Type of Modulation:	CCK	SAR End:	0.138 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	0.15 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_Tilt15 (Bottom Channel, 802.11b)

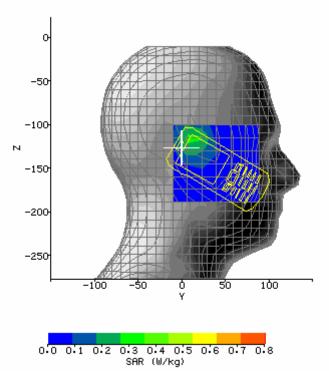
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2007-1-11 19:44:12	DUT Battery Model/No:	
Filename:	E28 2450RH TILT15	Probe Serial Number:	0177
	802.11B B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	15.00 mm
		Location:	
DUT Position:	E28_2450RH_TILT15_	Max SAR Z-axis	-118.00 mm
	802.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	20.09 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.534 W/kg
Air Factors:	421 / 397 / 383	SAR 10g:	0.274 W/kg
Conversion Factors:	.386 / .386 / .386	SAR Start:	0.127 W/kg
Type of Modulation:	CCK	SAR End:	0.131 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	4.86 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_Tilt15 (Middle Channel, 802.11b)

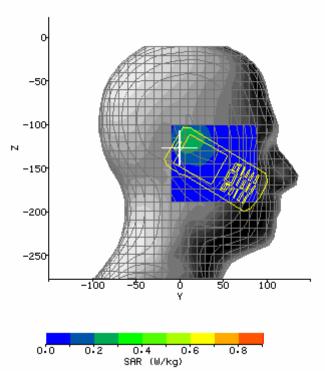
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
	07 11 12 7 21 10 11 11	-	0.0100
Date / Time:	2007-1-11 19:29:38	DUT Battery Model/No:	
Filename:	E28_2450RH_TILT15_	Probe Serial Number:	0177
	802.11B_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	15.00 mm
		Location:	
DUT Position:	E28_2450RH_TILT15_	Max SAR Z-axis	-118.00 mm
	802.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	21.00 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.577 W/kg
Air Factors:	421 / 397 / 383	SAR 10g:	0.291 W/kg
Conversion Factors:	.386 / .386 / .386	SAR Start:	0.133 W/kg
Type of Modulation:	CCK	SAR End:	0.132 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-0.66 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_Tilt15 (Top Channel, 802.11b)

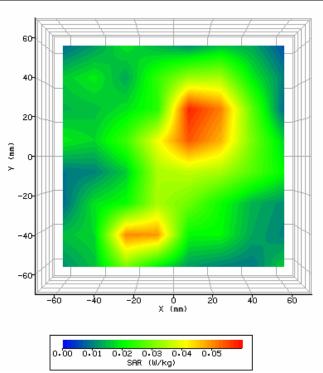
Custom I software	SARA2 / 2.40 VPM	Innut Dawer Drift.	0.01dB
System / software:		Input Power Drift:	0.010B
Date / Time:	2007-1-11 19:11:02	DUT Battery Model/No:	
Filename:	E28_2450RH_TILT15_	Probe Serial Number:	0177
	802.11B_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	15.00 mm
		Location:	
DUT Position:	E28_2450RH_TILT15_	Max SAR Z-axis	-118.00 mm
	802.11B	Location:	
Antenna	BUILD INSIDE	Max E Field:	21.44 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.582 W/kg
Air Factors:	421 / 397 / 383	SAR 10g:	0.295 W/kg
<b>Conversion Factors:</b>	.386 / .386 / .386	SAR Start:	0.129 W/kg
Type of Modulation:	CCK	SAR End:	0.130 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	1.30 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 Side (Bottom Channel, 802.11b)

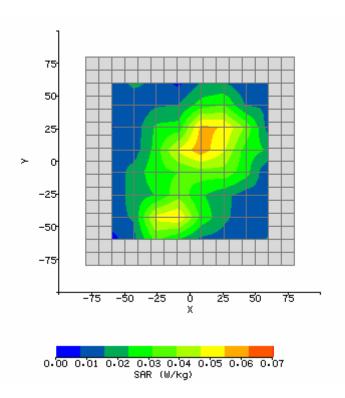
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2007-1-11 15:21:41	DUT Battery Model/No:	
Filename:	E28_2450_802.11B_SI	Probe Serial Number:	0177
	DE_B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
<b>Device Under Test:</b>	e28	Relative Permittivity:	52.66
Relative Humidity:	55%	Conductivity:	1.942
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	19.05 mm
		Location:	
DUT Position:	E28_2450_802.11B_SI	Max SAR Y-axis	18.86 mm
	DE	Location:	
Antenna	BUILD INSIDE	Max E Field:	5.76 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.078 W/kg
Air Factors:	421 / 397 / 383	SAR 10g:	0.052 W/kg
Conversion Factors:	.434 / .434 / .434	SAR Start:	0.020 W/kg
Type of Modulation:	CCK	SAR End:	0.020 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	2.97 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 Side (Middle Channel, 802.11b)

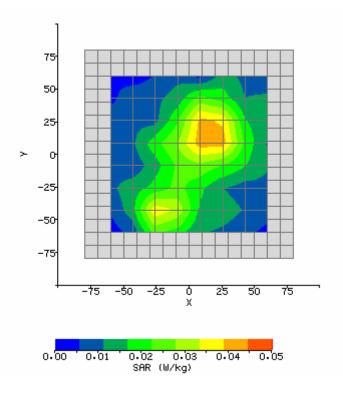
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2007-1-11 15:32:00	DUT Battery Model/No:	
Filename:	E28_2450_802.11B_SI	Probe Serial Number:	0177
	DE_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	52.66
Relative Humidity:	55%	Conductivity:	1.942
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	13.71 mm
		Location:	
DUT Position:	E28_2450_802.11B_SI	Max SAR Y-axis	15.43 mm
	DE	Location:	
Antenna	BUILD INSIDE	Max E Field:	5.99 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.092 W/kg
Air Factors:	421 / 397 / 383	SAR 10g:	0.056 W/kg
Conversion Factors:	.434 / .434 / .434	SAR Start:	0.021 W/kg
Type of Modulation:	CCK	SAR End:	0.021 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-2.58 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





# SAR Test GSM 2450 Side (Top Channel, 802.11b)

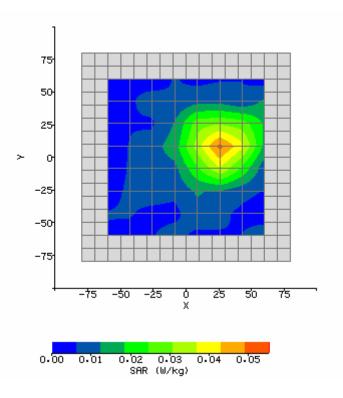
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 15:50:20	DUT Battery Model/No:	
Filename:	E28_2450_802.11B_SI	Probe Serial Number:	0177
	DE_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	52.66
Relative Humidity:	55%	Conductivity:	1.942
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	15.43 mm
		Location:	
DUT Position:	E28_2450_802.11B_SI	Max SAR Y-axis	15.43 mm
	DE	Location:	
Antenna	BUILD INSIDE	Max E Field:	4.91 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.060 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.037 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.013 W/kg
Type of Modulation:	CCK	SAR End:	0.013 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	4.59 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 Side (Mid Channel, face to bottom, 802.11b)

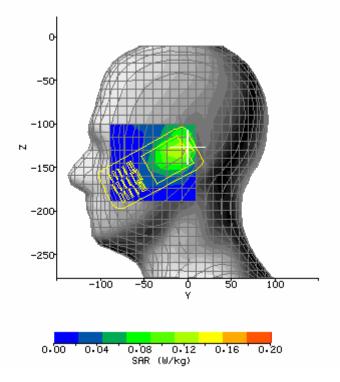
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 17:06:10	DUT Battery Model/No:	
Filename:	E28_2450_802.11B_SI	Probe Serial Number:	0177
	DE_M2.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	52.66
Relative Humidity:	55%	Conductivity:	1.942
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	27.43 mm
		Location:	
DUT Position:	E28_2450_802.11G_SI	Max SAR Y-axis	6.86 mm
	DE	Location:	
Antenna	BUILD INSIDE	Max E Field:	5.09 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.065 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.040 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.013 W/kg
Type of Modulation:	CCK	SAR End:	0.013 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	2.37 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





# SAR Test GSM 2450 LH\_TouchCheek (Bottom Channel, 802.11g)

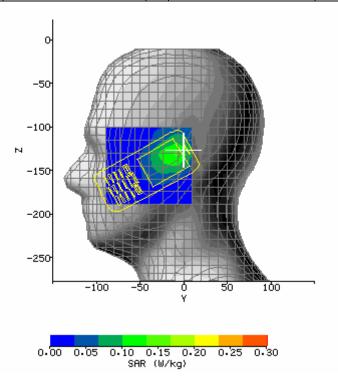
System / software:	SARA2 / 2.40 VPM	Input Power Drift: 0.01dB
Date / Time:	2007-1-12 0:39:45	DUT Battery Model/No:
Filename:	E28_2450LH_TOUCHC	Probe Serial Number: 0177
	HEEK_802.11G_B.txt	
Ambient Temperature:	23.2°C	Liquid Simulant: HEAD tissue
Device Under Test:	e28	Relative Permittivity: 39.12
Relative Humidity:	55%	Conductivity: 1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature: 23.0°C
Phantom Rotation:	0°	Max SAR Y-axis -13.33 mm
		Location:
DUT Position:	E28_2450LH_TOUCHC	Max SAR Z-axis -131.50 mm
	HEEK_802.11G	Location:
Antenna	BUILD INSIDE	Max E Field: 10.40 V/m
Configuration:		
Test Frequency:	2450MHz	<b>SAR 1g:</b> 0.175 W/kg
Air Factors:	417.2 / 368.0 / 414.8	<b>SAR 10g:</b> 0.108 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start: 0.072 W/kg
Type of Modulation:	OFDM	<b>SAR End:</b> 0.073 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan: 1.20 %
Diode Compression	20 / 20 / 20	Probe battery last 20/05/05
Factors (V*200):		changed:
Input Power Level:	Max Power	Extrapolation: poly4





# SAR Test GSM 2450 LH\_TouchCheek (Middle Channel, 802.11g)

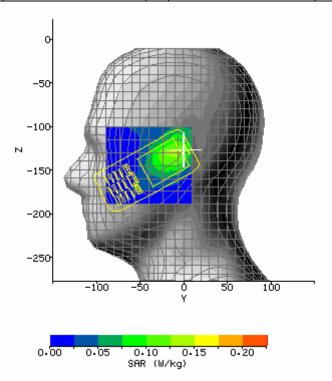
	T. T.		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2007-1-12 0:53:55	DUT Battery Model/No:	
Filename:	E28_2450LH_TOUCHC	Probe Serial Number:	0177
	HEEK_802.11G_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-13.33 mm
		Location:	
DUT Position:	E28_2450LH_TOUCHC	Max SAR Z-axis	-131.50 mm
	HEEK_802.11G	Location:	
Antenna	BUILD INSIDE	Max E Field:	12.43 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.190 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.113 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.073 W/kg
Type of Modulation:	OFDM	SAR End:	0.073 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	0.72 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 LH\_TouchCheek (Top Channel, 802.11g)

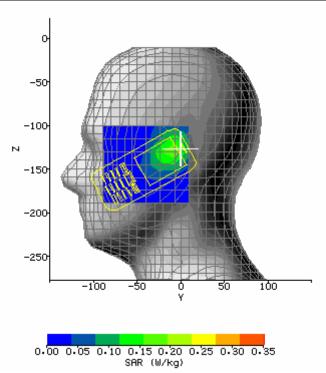
	T		
System / software:	SARA2 / 2.40 VPM	Input Power Drift: 0.02	dB
Date / Time:	2007-1-12 1:07:43	DUT Battery Model/No:	
Filename:	E28_2450LH_TOUCHC	Probe Serial Number: 0177	7
	HEEK_802.11G_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant: HEA	D tissue
Device Under Test:	e28	Relative Permittivity: 39.1	2
Relative Humidity:	55%	Conductivity: 1.79	8
Phantom S/No:	Head_381SH.csv	Liquid Temperature: 23.0	°C
Phantom Rotation:	0°	Max SAR Y-axis -13.3	33 mm
		Location:	
<b>DUT Position:</b>	E28_2450LH_TOUCHC	Max SAR Z-axis -131	.50 mm
	HEEK_802.11G	Location:	
Antenna	BUILD INSIDE	Max E Field: 11.0	1 V/m
Configuration:			
Test Frequency:	2450MHz	<b>SAR 1g:</b> 0.17	4 W/kg
Air Factors:	417.2 / 368.0 / 414.8	<b>SAR 10g:</b> 0.10	9 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start: 0.07	3 W/kg
Type of Modulation:	OFDM	<b>SAR End:</b> 0.07	5 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan: 3.46	%
Diode Compression	20 / 20 / 20	Probe battery last 20/0	5/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation: poly-	4





#### SAR Test GSM 2450 LH\_Tilt15 (Bottom Channel, 802.11g)

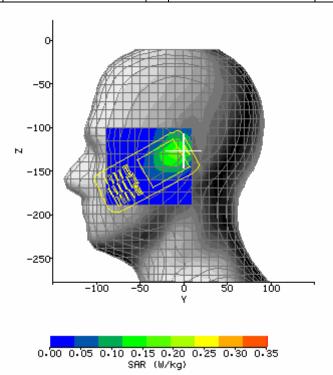
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 23:11:48	DUT Battery Model/No:	
Filename:	E28 2450LH TILT15 8	Probe Serial Number:	0177
	02.11G B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-11.67 mm
		Location:	
DUT Position:	E28_2450LH_TILT15_8	Max SAR Z-axis	-130.00 mm
	02.11G	Location:	
Antenna	BUILD INSIDE	Max E Field:	12.90 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.252 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.147 W/kg
Conversion Factors:	.353 / .353 / .353	SAR Start:	0.093 W/kg
Type of Modulation:	OFDM	SAR End:	0.090 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-3.39 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 LH\_Tilt15 (Middle Channel, 802.11g)

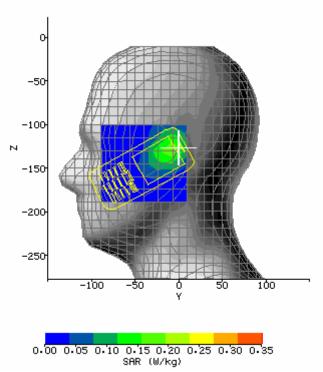
	T		
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 23:00:41	<b>DUT Battery Model/No:</b>	
Filename:	E28_2450LH_TILT15_8	Probe Serial Number:	0177
	02.11G_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-11.67 mm
		Location:	
<b>DUT Position:</b>	E28_2450LH_TILT15_8	Max SAR Z-axis	-130.00 mm
	02.11G	Location:	
Antenna	BUILD INSIDE	Max E Field:	13.25 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.280 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.157 W/kg
<b>Conversion Factors:</b>	.353 / .353 / .353	SAR Start:	0.089 W/kg
Type of Modulation:	OFDM	SAR End:	0.091 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	2.22 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 LH\_Tilt15 (Top Channel, 802.11g)

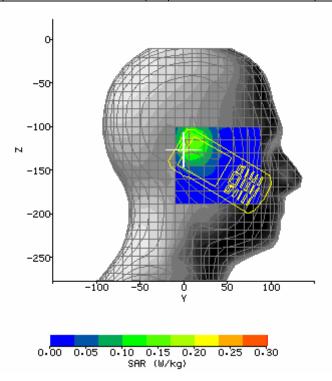
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
		-	0.0100
Date / Time:	2007-1-11 22:49:23	DUT Battery Model/No:	
Filename:	E28_2450LH_TILT15_8	Probe Serial Number:	0177
	02.11G_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR Y-axis	-11.67 mm
		Location:	
DUT Position:	E28_2450LH_TILT15_8	Max SAR Z-axis	-130.00 mm
	02.11G	Location:	
Antenna	BUILD INSIDE	Max E Field:	13.24 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.272 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.157 W/kg
<b>Conversion Factors:</b>	.353 / .353 / .353	SAR Start:	0.090 W/kg
Type of Modulation:	OFDM	SAR End:	0.093 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	3.50 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_TouchCheek (Bottom Channel, 802.11g)

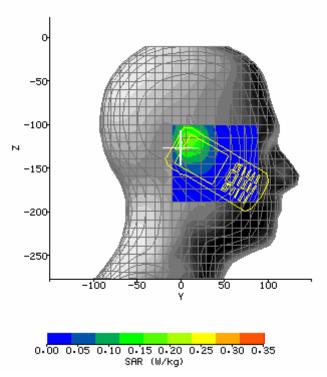
	T	T	
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 19:58:23	DUT Battery Model/No:	
Filename:	E28_2450_802.11G_T	Probe Serial Number:	0177
	OUCHCHEEK_B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	13.33 mm
		Location:	
DUT Position:	E28_2450_802.11G_T	Max SAR Z-axis	-119.50 mm
	OUCHCHEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	12.62 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.276 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.155 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.083 W/kg
Type of Modulation:	OFDM	SAR End:	0.088 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	4.78 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_TouchCheek (Middle Channel, 802.11g)

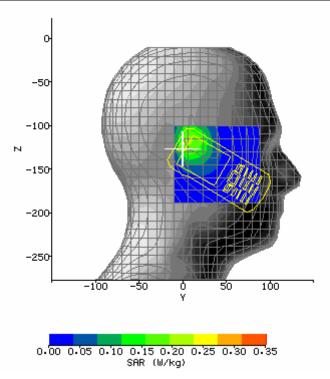
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
	0	-	0.0100
Date / Time:	2007-1-11 20:13:57	DUT Battery Model/No:	
Filename:	E28_2450_802.11G_T	Probe Serial Number:	0177
	OUCHCHEEK_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	13.33 mm
		Location:	
DUT Position:	E28_2450_802.11G_T	Max SAR Z-axis	-119.50 mm
	OUCHCHEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	13.42 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.309 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.172 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.095 W/kg
Type of Modulation:	OFDM	SAR End:	0.095 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-0.65 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_TouchCheek (Top Channel, 802.11g)

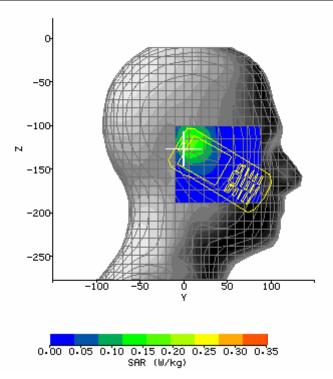
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 20:24:17	DUT Battery Model/No:	
Filename:	E28_2450_802.11G_T	Probe Serial Number:	0177
	OUCHCHEEK_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	-113.63 mm
		Location:	
DUT Position:	E28_2450_802.11G_T	Max SAR Z-axis	12.27 mm
	OUCHCHEEK	Location:	
Antenna	BUILD INSIDE	Max E Field:	13.68 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.327 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.183 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.095 W/kg
Type of Modulation:	OFDM	SAR End:	0.097 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	2.58 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_Tilt15 (Bottom Channel, 802.11g)

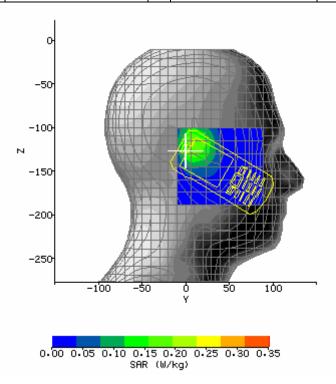
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.02dB
Date / Time:	2007-1-11 21:01:19	DUT Battery Model/No:	
Filename:	E28_2450RH_TILT15_	Probe Serial Number:	0177
	802.11G_B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	13.33 mm
		Location:	
DUT Position:	E28_2450RH_TILT15_	Max SAR Z-axis	-121.00 mm
	802.11G	Location:	
Antenna	BUILD INSIDE	Max E Field:	13.01 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.264 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.158 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.085 W/kg
Type of Modulation:	OFDM	SAR End:	0.089 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	4.51 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_Tilt15 (Middle Channel, 802.11g)

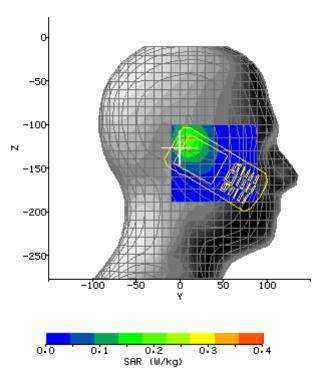
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 20:50:57	DUT Battery Model/No:	
Filename:	E28_2450RH_TILT15_	Probe Serial Number:	0177
	802.11G_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	13.33 mm
		Location:	
DUT Position:	E28_2450RH_TILT15_	Max SAR Z-axis	-121.00 mm
	802.11G	Location:	
Antenna	BUILD INSIDE	Max E Field:	13.58 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.304 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.177 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.096 W/kg
Type of Modulation:	OFDM	SAR End:	0.099 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	3.49 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 RH\_Tilt15 (Top Channel, 802.11g)

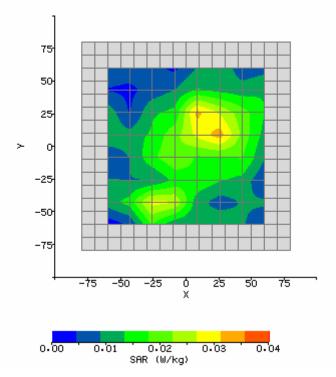
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
-	0.1.1.1.2.2.1.0.1.1.1.1	-	U.U1UB
Date / Time:	2007-1-11 20:40:04	DUT Battery Model/No:	
Filename:	E28_2450RH_TILT15_	Probe Serial Number:	0177
	802.11G_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	HEAD tissue
Device Under Test:	e28	Relative Permittivity:	39.12
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	Head_381SH.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR Y-axis	13.33 mm
		Location:	
DUT Position:	E28_2450RH_TILT15_	Max SAR Z-axis	-121.00 mm
	802.11G	Location:	
Antenna	BUILD INSIDE	Max E Field:	14.17 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.338 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.192 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.095 W/kg
Type of Modulation:	OFDM	SAR End:	0.097 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	1.77 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 Side (Bottom Channel, 802.11g)

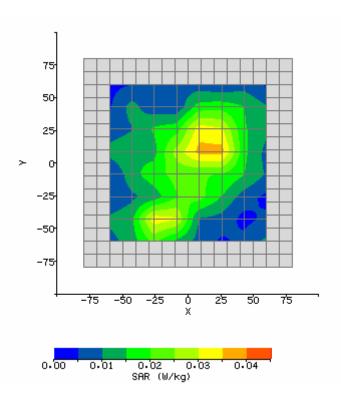
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2007-1-11 16:25:16	DUT Battery Model/No:	
Filename:	E28_2450_802.11G_SI	Probe Serial Number:	0177
	DE_B.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	52.66
Relative Humidity:	55%	Conductivity:	1.942
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	17.14 mm
		Location:	
DUT Position:	E28_2450_802.11G_SI	Max SAR Y-axis	15.43 mm
	DE	Location:	
Antenna	BUILD INSIDE	Max E Field:	4.42 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.046 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.029 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.013 W/kg
Type of Modulation:	OFDM	SAR End:	0.013 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	1.82 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### SAR Test GSM 2450 Side (Middle Channel, 802.11g)

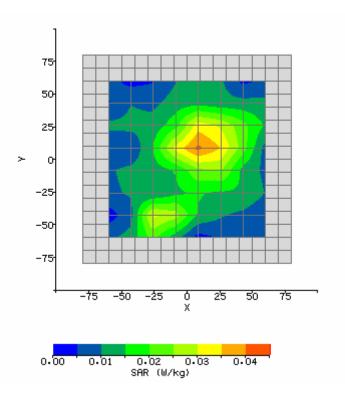
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.03dB
Date / Time:	2007-1-11 16:16:04	DUT Battery Model/No:	
		Probe Serial Number:	0177
Filename:	E28_2450_802.11G_SI	Probe Serial Number:	0177
	DE_M.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	52.66
Relative Humidity:	55%	Conductivity:	1.942
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	15.43 mm
		Location:	
DUT Position:	E28_2450_802.11G_SI	Max SAR Y-axis	13.71 mm
	DE	Location:	
Antenna	BUILD INSIDE	Max E Field:	4.63 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.046 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.031 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.011 W/kg
Type of Modulation:	OFDM	SAR End:	0.011 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	0.78 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





# SAR Test GSM 2450 Side (Top Channel, 802.11g)

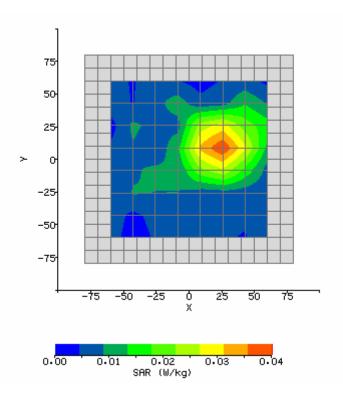
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 16:06:27	DUT Battery Model/No:	
Filename:	E28_2450_802.11G_SI	Probe Serial Number:	0177
	DE_T.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	52.66
Relative Humidity:	55%	Conductivity:	1.942
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	12.00 mm
		Location:	
DUT Position:	E28_2450_802.11G_SI	Max SAR Y-axis	12.00 mm
	DE	Location:	
Antenna	BUILD INSIDE	Max E Field:	4.72 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.052 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.033 W/kg
<b>Conversion Factors:</b>	.286 / .286 / .286	SAR Start:	0.014 W/kg
Type of Modulation:	OFDM	SAR End:	0.013 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-3.49 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





# SAR Test GSM 2450 Side (Top Channel, face to bottom, 802.11g)

System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 16:41:19	DUT Battery Model/No:	
Filename:	E28_2450_802.11G_SI	Probe Serial Number:	0177
	DE_T2.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	e28	Relative Permittivity:	52.66
Relative Humidity:	55%	Conductivity:	1.942
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	180°	Max SAR X-axis	24.00 mm
		Location:	
DUT Position:	E28_2450_802.11G_SI	Max SAR Y-axis	10.29 mm
	DE	Location:	
Antenna	BUILD INSIDE	Max E Field:	4.51 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	0.050 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	0.032 W/kg
Conversion Factors:	.286 / .286 / .286	SAR Start:	0.012 W/kg
Type of Modulation:	OFDM	SAR End:	0.012 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-0.09 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	Max Power	Extrapolation:	poly4





#### **ANNEX E**

of

# **ShenZhen Electronic Product Quality Testing Center**

# CONFORMANCE TEST REPORT FOR HUMAN EXPOSURE TO ELECTROMAGNETIC FIELDS

SAR07-004

#### E28 Ltd

#### GSM 850/900/1800/1900 Mobile Terminal

Type Name: E2831

Hardware Version: P3.0 Software Version: V2.0.

#### **System Performance Check Data**

This Annex consists of 7 pages Date of Report: 2007-01-24



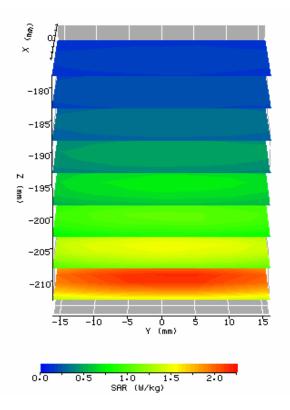






#### System Cheek Head 850MHz

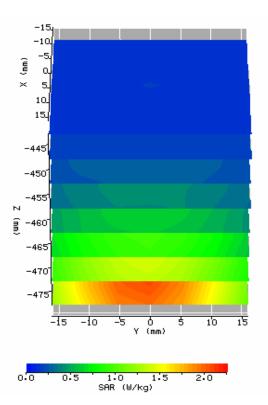
0 11 11 11 11	CADAO / O 40 V/DM	1	0.00-10
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.02dB
Date / Time:	2007-1-6 13:25:14	DUT Battery Model/No:	
Filename:	System Cheek_Head	Probe Serial Number:	0177
	_850MHz.txt		
Ambient Temperature:	23.4°C	Liquid Simulant:	Head tissue
Device Under Test:	IXD-090antenna	Relative Permittivity:	41.35
	(250mw)		
Relative Humidity:	50%	Conductivity:	.941
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	22.3°C
Phantom Rotation:	0°	Max SAR Y-axis	5.35 mm
		Location:	
DUT Position:	850_Head	Max SAR Z-axis	-213.02 mm
		Location:	
Antenna	IXD-090antenna	Max E Field:	47.03 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	2.651 W/kg
Air Factors:	417.2 / 368.0 / 414.8	SAR 10g:	1.812 W/kg
Conversion Factors:	.287 / .287 / .287	SAR Start:	0.625 W/kg
Type of Modulation:	1	SAR End:	0.619 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-0.98 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	24dBm	Extrapolation:	poly4





# System Cheek Body 850MHz

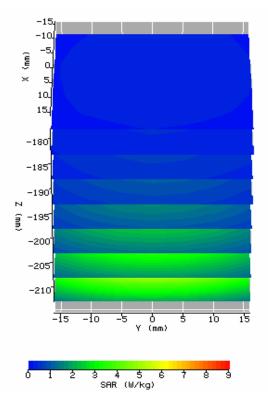
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 08:01:34	DUT Battery Model/No:	
Filename:	System Cheek_Body	Probe Serial Number:	0177
	_850MHz.txt		
Ambient Temperature:	23.2°C	Liquid Simulant:	Body tissue
Device Under Test:	IXD-090antenna	Relative Permittivity:	55.12
	(250mw)		
Relative Humidity:	55%	Conductivity:	.99
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR X-axis	0.00 mm
		Location:	
DUT Position:	850_Body	Max SAR Y-axis	0.00 mm
		Location:	
Antenna	IXD-090antenna	Max E Field:	44.80 V/m
Configuration:			
Test Frequency:	850MHz	SAR 1g:	2.594 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	1.702W/kg
Conversion Factors:	.271 / .271 / .271	SAR Start:	0.571 W/kg
Type of Modulation:	1	SAR End:	0.565 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	-1.06 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	24dBm	Extrapolation:	poly4





#### System Cheek Head 1900MHz

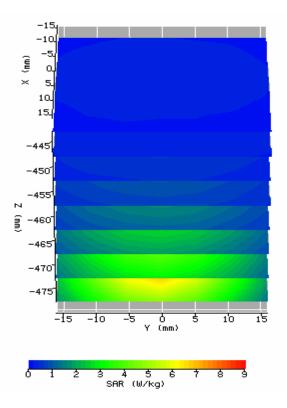
System / seftware:	SARA2 / 2.40 VPM	Innut Power Drift.	-0.01dB
System / software:		Input Power Drift:	-U.U IUB
Date / Time:	2007-1-5 08:15:10	DUT Battery Model/No:	
Filename:	System Cheek_Head	Probe Serial Number:	0177
	_1900MHz.txt		
Ambient Temperature:	23.6°C	Liquid Simulant:	Head tissue
Device Under Test:	IXD-080antenna	Relative Permittivity:	40.02
	(250mw)		
Relative Humidity:	56%	Conductivity:	1.396
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.1°C
Phantom Rotation:	0°	Max SAR Y-axis	0.00 mm
		Location:	
DUT Position:	1900_Head	Max SAR Z-axis	-213.09 mm
		Location:	
Antenna	IXD-080antenna	Max E Field:	76.86 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	10.285W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	5.716W/kg
Conversion Factors:	.325 / .325 / .325	SAR Start:	1.612/kg
Type of Modulation:	1	SAR End:	1.610
Modn. Duty Cycle:	1	SAR Drift during Scan:	-0.59 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	24dBm	Extrapolation:	Poly4





# System Cheek Body 1900MHz

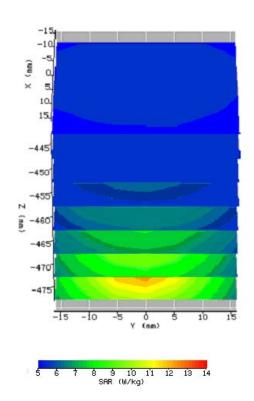
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 07:45:55	DUT Battery Model/No:	
Filename:	System Cheek_Body	Probe Serial Number:	0177
	_1900MHz.txt		
Ambient Temperature:	23.6°C	Liquid Simulant:	Body tissue
Device Under Test:	IXD-080antenna	Relative Permittivity:	53.25
	(250mw)		
Relative Humidity:	57%	Conductivity:	1.511
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.0°C
Phantom Rotation:	0°	Max SAR X-axis	0.00 mm
		Location:	
DUT Position:	1900_Body	Max SAR Y-axis	0.00 mm
		Location:	
Antenna	IXD-080antenna	Max E Field:	73.06 V/m
Configuration:			
Test Frequency:	1900MHz	SAR 1g:	10.085 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	5.482 W/kg
Conversion Factors:	.356 / .356 / .356	SAR Start:	1.563 W/kg
Type of Modulation:	1	SAR End:	1.572 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	1.08 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	24dBm	Extrapolation:	poly4





#### System Cheek Head 2450MHz

System / software:	SARA2 / 2.40 VPM	Input Power Drift:	-0.01dB
Date / Time:	2007-1-6 8:02:15	DUT Battery Model/No:	
Filename:	System Cheek_Head	Probe Serial Number:	0177
	_2450MHz.txt		
Ambient Temperature:	23.3°C	Liquid Simulant:	Head tissue
Device Under Test:	IXD-245antenna	Relative Permittivity:	39.12
	(250mw)		
Relative Humidity:	55%	Conductivity:	1.798
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.3°C
Phantom Rotation:	0°	Max SAR Y-axis	0.00 mm
		Location:	
DUT Position:	2450_Head	Max SAR Z-axis	-213.09 mm
		Location:	
Antenna	IXD-245antenna	Max E Field:	85.69 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	13.206 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	7.122 W/kg
Conversion Factors:	.325 / .325 / .325	SAR Start:	1.804 W/kg
Type of Modulation:	1	SAR End:	1.802 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	1.17 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	24dBm	Extrapolation:	poly4





System Cheek Body 2450MHz

System Cheek Body 2450MHZ			
System / software:	SARA2 / 2.40 VPM	Input Power Drift:	0.01dB
Date / Time:	2007-1-11 7:28:34	DUT Battery Model/No:	
Filename:	System Cheek_Body	Probe Serial Number:	0177
	_2450MHz.txt		
Ambient Temperature:	23.4°C	Liquid Simulant:	Body tissue
Device Under Test:	IXD-245antenna	Relative Permittivity:	52.66
	(250mw)		
Relative Humidity:	57%	Conductivity:	1.942
Phantom S/No:	HeadBox75mm.csv	Liquid Temperature:	23.2°C
Phantom Rotation:	0°	Max SAR X-axis	0.00 mm
		Location:	
<b>DUT Position:</b>	2450_Body	Max SAR Y-axis	0.00 mm
		Location:	
Antenna	IXD-080antenna	Max E Field:	79.08 V/m
Configuration:			
Test Frequency:	2450MHz	SAR 1g:	13.086 W/kg
Air Factors:	417 / 368 / 414	SAR 10g:	6.037 W/kg
<b>Conversion Factors:</b>	.395 / .395 / .395	SAR Start:	1.647 W/kg
Type of Modulation:	1	SAR End:	1.648 W/kg
Modn. Duty Cycle:	1	SAR Drift during Scan:	0.93 %
Diode Compression	20 / 20 / 20	Probe battery last	20/05/05
Factors (V*200):		changed:	
Input Power Level:	24dBm	Extrapolation:	poly4

