

# SAR EVALUATION REPORT

For

# **ShenZhen Hipad Telecommunication Technology Co., LTD.**

Rm 502, Unit 3, Bldg. C, Kexing Science Park, Keyuan Rd., NanShan Dist., Shenzhen, China

**FCC ID: 2ABOU7705** 

Report Type: Product Type: Original Report mobile phone Wilson then **Test Engineer:** Wilson Chen **Report Number:** R1DG131230001-20 **Report Date:** 2014-02-14 Gez Wong Sandy Wang **Reviewed By:** SAR Engineer Prepared By: Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

**Note**: This test report is prepared for the customer shown above and for the equipment described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.

Attestation of Test Results								
	Company Name	ShenZhen Hipad Telecommunication Technology	Co., LTD.					
	EUT Description	mobile phone						
EUT Information	FCC ID	2ABOU7705						
	Model Number	AHS7705CA						
	<b>Test Date</b>	ate 2014-02-08 to 2014-02-10						
Frequency	I	Max. SAR Level(s) Reported	Limit(W/Kg)					
GSM 850		0.508 W/kg 1g Head SAR 1.054 W/kg 1g Body SAR						
PCS 1900		0.283 W/kg 1g Head SAR 0.575 W/kg 1g Body SAR						
WCDMA850		0.852 W/kg 1g Head SAR 0.762 W/kg 1g Body SAR						
WCDMA1900		0.778 W/kg 1g Head SAR 0.494 W/kg 1g Body SAR						
WiFi(802.11b)	0.148 W/kg 1g Head SAR 0.064 W/kg 1g Body SAR							
Simultaneous	0.927 W/kg 1g Head SAR 1.321 W/kg 1g Body SAR							
	Electromagnetic File	afety Levels with Respect to Human Exposure to Rads,3 kHz to 300 GHz.	dio Frequency					
	ANSI/IEEE C95.3: 2002  IEEE Recommended Practice for Measurements and Computations of Radio Frequence Electromagnetic Fields With Respect to Human Exposure to SuchFields,100 kHz—30 GHz.							
Applicable Standards	Practice for Determining the Peak Spatial-Average R) in the Human Head from Wireless Communication							
KDB procedures  KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equ Authorization Policies.  KDB 648474 D04 SAR Evaluation Considerations for Wireless Handsets  KDB 865664 D01 SAR Measurement Requirements for 100 MHz to 6 GHz  KDB 941225 D01 SAR Measurement Procedures for 3G Devices-CDMA 2000/E  WCDMA/HSDPA/HSUPA  KDB 941225 D06 SAR Evaluation Procedures for Portable Devices with Wireless Capabilities.								

**Note:** This wireless device has been shown to be capable of compliance for localized specific absorption rate (SAR) for General Population/Uncontrolled Exposure limits specified in ANSI/IEEE Standards and has been tested in accordance with the measurement procedures specified in IEEE 1528-2003 and RF exposure KDB procedures.

The results and statements contained in this report pertain only to the device(s) evaluated.

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# **DOCUMENT REVISION HISTORY**

Revision Number	Report Number	Description of Revision	Date of Revision	
0	R1DG131230001-20	Original Report	2014-02-14	

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# **EUT DESCRIPTION**

This report has been prepared on behalf of ShenZhen Hipad Telecommunication Technology Co., LTD. and their product, FCC ID: 2ABOU7705, Model: AHS7705CA or the EUT (Equipment under Test) as referred to in the rest of this report. The EUT is a mobile phone.

# **Technical Specification**

Product Type	Portable	
Exposure Category:	Population / Uncontrolled	
Antenna Type(s):	Internal Antenna	
Body-Worn Accessories:	Headset	
Face-Head Accessories:	None	
Multi-slot Class:	Class 12	
Operation Mode:	GSM Voice, GPRS Data, EGPRS Data, WCDMA, Wi-Fi and Bluetooth	
	GSM850 : 824-849 MHz (TX); 869-894 MHz (RX)	
	PCS1900: 1850-1910 MHz (TX); 1930-1990 MHz (RX)	
	WCDMA850: 824-849 MHz (TX); 869-894 MHz (RX)	
Frequency Band:	WCDMA1900: 1850-1910 MHz (TX); 1930-1990 MHz (RX)	
	Wi-Fi: 2412-2462 MHz	
	Bluetooth: 2402-2480 MHz	
	GSM850: 31.89 dBm	
	PCS1900: 28.90 dBm	
Conducted DE Decree	WCDMA850: 23.78 dBm	
Conducted RF Power:	WCDMA1900: 24.05 dBm	
	Wi-Fi: 14.90 dBm	
	Bluetooth: 0.49 dBm	
Dimensions (L*W*H):	114 mm (L) × 62 mm (W) × 12 mm (H)	
Power Source:	3.7 V <sub>DC</sub> Rechargeable Battery	
Normal Operation:	Head and Body-worn	

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#### REFERENCE, STANDARDS, AND GUILDELINES

#### FCC:

The Report and Order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 1.6 mW/g as recommended by the ANSI/IEEE standard C95.1-1992 [6] for an uncontrolled environment (Paragraph 65). According to the Supplement C of OET Bulletin 65 "Evaluating Compliance with FCC Guide-lines for Human Exposure to Radio frequency Electromagnetic Fields", released on Jun 29, 2001 by the FCC, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in North America is 1.6 mW/g average over 1 gram of tissue mass.

#### CE:

The order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 2 mW/g as recommended by EN62209-1 for an uncontrolled environment. According to the Standard, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in Europe is 2 mW/g average over 10 gram of tissue mass.

The test configurations were laid out on a specially designed test fixture to ensure the reproducibility of measurements. Each configuration was scanned for SAR. Analysis of each scan was carried out to characterize the above effects in the device.

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#### **SAR Limits**

## FCC Limit (1g Tissue)

	SAR (W/kg)			
EXPOSURE LIMITS	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)		
Spatial Average (averaged over the whole body)	0.08	0.4		
Spatial Peak (averaged over any 1 g of tissue)	1.60	8.0		
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0		

## CE Limit (10g Tissue)

	SAR (W/kg)				
EXPOSURE LIMITS	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)			
Spatial Average (averaged over the whole body)	0.08	0.4			
Spatial Peak (averaged over any 10 g of tissue)	2.0	10			
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0			

Population/Uncontrolled Environments are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.

Occupational/Controlled Environments are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure (i.e. as a result of employment or occupation).

General Population/Uncontrolled environments Spatial Peak limit 1.6W/kg (FCC) & 2 W/kg (CE) applied to the EUT.

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# **FACILITIES**

The test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect data is located at 6/F, the 3rd Phase of WanLi Industrial Building, Shi Hua Road, Fu Tian Free Trade Zone, Shenzhen, Guangdong, P.R. of China

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#### **DESCRIPTION OF TEST SYSTEM**

These measurements were performed with ALSAS 10 Universal Integrated SAR Measurement system from APREL Laboratories.

#### **ALSAS-10U System Description**

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

#### **Applications**

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

#### **Area Scans**

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 10mm2 step integral, with 1mm interpolation used to locate the peak SAR area used for zoom scan assessments.



Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

#### **Zoom Scan (Cube Scan Averaging)**

The averaging zoom scan volume utilized in the ALSAS-10U software is in the shape of a cube and the side dimension of a 1 g or 10 g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000 kg/m3 is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1 g cube is 10mm, with the side length of the 10 g cube 21,5mm.

When the cube intersects with the surface of the phantom, it is oriented so that 3 vertices touch the surface of the shell or the center of a face is tangent to the surface. The face of the cube closest to the surface is modified in order to conform to the tangent surface.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 5x5x8 (8mmx8mmx5mm) providing a volume of 32mm in the X & Y axis, and 35mm in the Z axis.

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#### **ALSAS-10U Interpolation and Extrapolation Uncertainty**

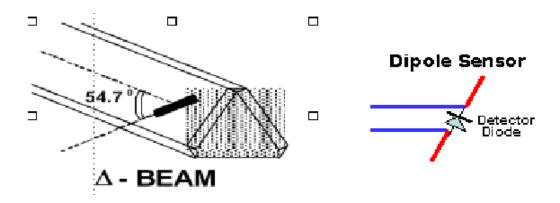
The overall uncertainty for the methodology and algorithms the used during the SAR calculation was evaluated using the data from IEEE 1528 based on the example f3 algorithm:

$$f_3(x, y, z) = A \frac{a^2}{\frac{a^2}{4} + x'^2 + y'^2} \cdot \left( e^{-\frac{2z}{a}} + \frac{a^2}{2(a+2z)^2} \right)$$

## **Isotropic E-Field Probe**

The isotropic E-Field probe has been fully calibrated and assessed for isotropicity, and boundary effect within a controlled environment. Depending on the frequency for which the probe is calibrated the method utilized for calibration will change.

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



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

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

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

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#### **Isotropic E-Field Probe Specification**

Calibration Method	Frequency Dependent Below 1 GHz Calibration in air performed in a TEM Cell Above 1 GHz Calibration in air performed in waveguide		
Sensitivity	$0.70~\mu\text{V/(V/m)}^2$ to $0.85~\mu\text{V/(V/m)}^2$		
Dynamic Range	0.0005 W/kg to 100 W/kg		
Isotropic Response	Better than 0.1 dB		
Diode Compression Point (DCP)	Calibration for Specific Frequency		
Probe Tip Diameter	< 2.9 mm		
Sensor Offset	1.56 (+/- 0.02 mm)		
Probe Length	289 mm		
Video Bandwidth	@ 500 Hz: 1 dB @ 1.02 kHz: 3 dB		
<b>Boundary Effect</b> Less than 2.1% for distance greater than 0.58 mm			
Spatial Resolution	The spatial resolution uncertainty is less than 1.5% for 4.9mm diameter probe.  The spatial resolution uncertainty is less than 1.0% for 2.5mm diameter probe		

#### **Boundary Detection Unit and Probe Mounting Device**

ALSAS-10U incorporates a boundary detection unit with a sensitivity of 0.05mm for detecting all types of surfaces. The robust design allows for detection during probe tilt (probe normalize) exercises, and utilizes a second stage emergency stop. The signal electronics are fed directly into the robot controller for high accuracy surface detection in lateral and axial detection modes (X, Y, & Z).

The probe is mounted directly onto the Boundary Detection unit for accurate tooling and displacement calculations controlled by the robot kinematics. The probe is connect to an isolated probe interconnect where the output stage of the probe is fed directly into the amplifier stage of the Daq-Paq.

## **Daq-Paq (Analog to Digital Electronics)**

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

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

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#### **Axis Articulated Robot**

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



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

#### **ALSAS Universal Workstation**

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

#### **Universal Device Positioner**

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

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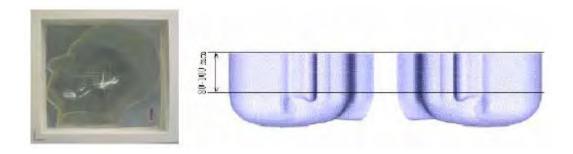


## **Phantom Types**

The ALSAS-10U allows the integration of multiple phantom types. SAM Phantoms fully compliant with IEEE 1528, Universal Phantom, and Universal Flat.

#### **APREL SAM Phantoms**

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



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#### **APREL Laboratories Universal Phantom**

The Universal Phantom is used on the ALSAS-10U as a system validation phantom. The Universal Phantom has been fully validated both experimentally from 800MHz to 6GHz and numerically using XFDTD numerical software.

The shell thickness is 2mm overall, with a 4mm spacer located at the NF/MB intersection providing an overall thickness of 6mm in line with the requirements of IEEE-1528.

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



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## **Tissue Dielectric Parameters for Head and Body Phantoms**

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

Ingredients	Frequency (MHz)										
(% by weight)	45	0	83	835		915		1900		2450	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body	
Water	38.56	51.16	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2	
Salt (Nacl)	3.95	1.49	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04	
Sugar	56.32	46.78	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0	
HEC	0.98	0.52	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0	
Bactericide	0.19	0.05	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0	
Triton x-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0	
DGBE	0.0	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7	
Dielectric Constant	43.42	58.0	42.54	56.1	42.0	56.8	39.9	54.0	39.8	52.5	
Conductivity (s/m)	0.85	0.83	0.91	0.95	1.0	1.07	1.42	1.45	1.88	1.78	

#### Recommended Tissue Dielectric Parameters for Head and Body

Frequency	Head	Tissue	Body Tissue		
(MHz)	<b>E</b> r	O'(S/m)	<b>E</b> r	O'(S/m)	
150	52.3	0.76	61.9	0.80	
300	45.3	0.87	58.2	0.92	
450	43.5	0.87	56.7	0.94	
835	41.5	0.90	55.2	0.97	
900	41.5	0.97	55.0	1.05	
915	41.5	0.98	55.0	1.06	
1450	40.5	1.20	54.0	1.30	
1610	40.3	1.29	53.8	1.40	
1800-2000	40.0	1.40	53.3	1.52	
2450	39.2	1.80	52.7	1.95	
3000	38.5	2.40	52.0	2.73	
5800	35.3	5.27	48.2	6.00	

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# **EQUIPMENT LIST AND CALIBRATION**

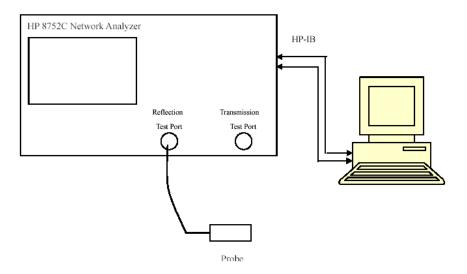
# **Equipments List & Calibration Information**

Equipment	Model	Calibration Date	S/N
CRS F3 robot	ALS-F3	N/A	RAF0805352
CRS F3 Software	ALS-F3-SW	N/A	N/A
CRS C500C controller	ALS-C500	N/A	RCF0805379
Probe mounting device & Boundary Detection Sensor System	ALS-PMDPS-3	N/A	120-00270
Universal Work Station	ALS-UWS	N/A	100-00157
Data Acquisition Package	ALS-DAQ-PAQ-3	2013-10-08	110-00212
Miniature E-Field Probe	ALS-E-020	2013-10-08	500-00283
Dipole, 835MHz	ALS-D-835-S-2	2011-08-25	180-00558
Dipole, 1900MHz	ALS-D-1900-S-2	2011-08-25	210-00710
Dipole,2450MHz	ALS-D-2450-S-2	2011-08-25	220-00758
Dipole Spacer	ALS-DS-U	N/A	250-00907
Device holder/Positioner	ALS-H-E-SET-2	N/A	170-00510
Left ear SAM phantom	ALS-P-SAM-L	N/A	130-00311
Right ear SAM phantom	ALS-P-SAM-R	N/A	140-00359
UniPhantom	ALS-P-UP-1	N/A	150-00413
Simulated Tissue 835 MHz Head	ALS-TS-835-H	Each Time	270-01002
Simulated Tissue 835 MHz Body	ALS-TS-835-B	Each Time	270-02101
Simulated Tissue 1900 MHz Head	ALS-TS-1900-H	Each Time	295-01103
Simulated Tissue 1900 MHz Body	ALS-TS-1900-B	Each Time	295-02102
Simulated Tissue 2450 MHz Head	ALS-TS-2450-H	Each Time	296-01001
Simulated Tissue 2450 MHz Body	ALS-TS-2450-B	Each Time	290-01109
Power Amplifier	5S1G4	N/A	71377
Synthesized Sweeper	HP 8341B	2013-05-09	2624A00116
UNIVERSAL RADIO COMMUNICATION TESTER	CMU200	2013-11-23	106891
EMI Test Receiver	ESCI	2013-11-12	101120

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# SAR MEASUREMENT SYSTEM VERIFICATION

# **Liquid Verification**



Liquid Verification Setup Block Diagram

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# **Liquid Verification Results**

Frequency	Liquid	Liquid	Parameter	Targ	et Value	Delta (%)		Tolerance
1 0	Type	$\epsilon_{\rm r}$	O'(S/m)	$\epsilon_{\rm r}$	O'(S/m)	$\Delta \epsilon_{ m r}$	ΔO (S/m)	(%)
824.2	Head	41.18	0.91	41.50	0.90	-2.460	0.667	±5
824.2	Body	55.23	0.94	55.20	0.97	0.327	-2.634	±5
926.4	Head	41.07	0.91	41.50	0.90	-2.151	0.987	±5
826.4	Body	55.25	0.95	55.20	0.97	0.679	-2.101	±5
836.6	Head	41.14	0.91	41.50	0.90	-0.904	0.720	±5
830.0	Body	55.30	0.96	55.20	0.97	2.089	-1.207	±5
946.6	Head	40.99	0.92	41.50	0.90	0.423	2.066	±5
846.6	Body	55.37	0.98	55.20	0.97	3.503	1.033	±5
0.40.0	Head	40.91	0.92	41.50	0.90	0.741	2.390	±5
848.8	Body	55.39	0.98	55.20	0.97	3.857	1.514	±5
1050.2	Head	39.99	1.41	40.00	1.40	-0.013	0.825	±5
1850.2	Body	53.93	1.50	53.30	1.52	1.185	-1.332	±5
1952.4	Head	40.04	1.41	40.00	1.40	0.093	0.495	±5
1852.4	Body	53.88	1.50	53.30	1.52	1.092	-1.485	±5
1880.0	Head	40.04	1.39	40.00	1.40	0.107	-0.650	±5
1880.0	Body	53.68	1.54	53.30	1.52	0.721	1.289	±5
1007.6	Head	40.05	1.41	40.00	1.40	0.121	0.451	±5
1907.6	Body	53.65	1.56	53.30	1.52	0.657	2.759	±5
1909.8	Head	40.05	1.41	40.00	1.40	0.123	0.503	±5
1909.8	Body	53.76	1.55	53.30	1.52	0.865	2.183	±5
2412	Head	39.58	1.81	39.20	1.80	0.963	0.524	±5
2412	Body	52.15	1.94	52.70	1.95	-1.039	-0.271	±5
2427	Head	39.64	1.83	39.20	1.80	1.114	1.604	±5
2437	Body	51.96	1.96	52.70	1.95	-1.406	0.603	±5
2462	Head	39.74	1.85	39.20	1.80	1.390	2.683	±5
2402	Body	51.79	2.00	52.70	1.95	-1.725	2.393	±5

<sup>\*</sup>Liquid Verification was performed on 2014-02-08.

Please refer to the following tables.

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835 MHz Head				835 MHz Body			
Frequency (MHz)	e'	e''	Frequency (MHz)	e'	e''		
824.0	41.1848	19.7756	824.0	55.2318	20.6146		
824.5	41.1538	19.7761	824.5	55.2350	20.5141		
825.0	41.1371	19.7767	825.0	55.2381	20.5266		
825.5	41.0320	19.7772	825.5	55.2412	20.5391		
826.0	41.0503	19.7778	826.0	55.2444	20.6741		
826.5	41.0722	19.7783	826.5	55.2475	20.7379		
827.0	41.0487	19.7789	827.0	55.2507	20.6524		
827.5	41.0960	19.7794	827.5	55.2538	20.5305		
828.0	41.1156	19.7800	828.0	55.2569	20.5651		
828.5	41.1221	19.7805	828.5	55.2601	20.5225		
829.0	41.1730	19.7811	829.0	55.2632	20.6266		
829.5	41.1215	19.7817	829.5	55.2664	20.5695		
830.0	41.1578	19.7822	830.0	55.2695	20.4474		
830.5	41.1179	19.7828	830.5	55.2726	20.5118		
831.0	41.0909	19.7833	831.0	55.2758	20.4969		
831.5	41.1104	19.7839	831.5	55.2789	20.7043		
832.0	41.0722	19.7844	832.0	55.2820	20.6820		
832.5	41.0471	19.7850	832.5	55.2852	20.4587		
833.0	41.0876	19.7855	833.0	55.2883	20.3921		
833.5	41.1190	19.7861	833.5	55.2915	20.5035		
834.0	41.1164	19.7866	834.0	55.2946	20.6554		
834.5	41.1150	19.7872	834.5	55.2977	20.5484		
835.0	41.1399	19.7377	835.0	55.3009	20.4918		
835.5	41.1409	19.5886	835.5	55.3040	20.7395		
836.0	41.1445	19.4895	836.0	55.3071	20.7465		
836.5	41.1395	19.4903	836.5	55.3103	20.6043		
837.0	41.1163	19.4912	837.0	55.3134	20.4313		
837.5	41.1105	19.4920	837.5	55.3166	20.4676		
838.0	41.1337	19.4929	838.0	55.3197	20.7519		
838.5	41.0922	19.4937	838.5	55.3228	20.7671		
839.0	41.0821	19.4946	839.0	55.3260	20.6891		
839.5	41.0846	19.4954	839.5	55.3291	20.6241		
840.0	41.0957	19.4963	840.0	55.3322	20.6912		
840.5	41.0850	19.4972	840.5	55.3354	20.7366		
841.0	41.0683	19.4980	841.0	55.3385	20.6917		
841.5	41.0977	19.4989	841.5	55.3417	20.6284		
842.0	41.0994	19.4997	842.0	55.3448	20.8043		
842.5	41.1031	19.5006	842.5	55.3479	20.7728		
843.0	41.0972	19.4914	843.0	55.3511	20.7332		
843.5	41.0209	19.4922	843.5	55.3542	20.6887		
844.0	41.0972	19.4931	844.0	55.3574	20.7064		
844.5	41.0515	19.4940	844.5	55.3605	20.7323		
845.0	40.9775	19.4948	845.0	55.3636	20.6417		
845.5	40.9928	19.4957	845.5	55.3668	20.5881		
846.0	40.9474	19.5166	846.0	55.3699	20.7611		
846.5	40.9883	19.5175	846.5	55.3730	20.8225		
847.0	40.9686	19.5183	847.0	55.3762	20.7713		
847.5	40.9718	19.5192	847.5	55.3793	20.6916		
848.0	40.9454	19.5200	848.0	55.3825	20.7818		
848.5	40.9500	19.5209	848.5	55.3856	20.8599		
849.0	40.9102	19.5217	849.0	55.3887	20.8601		

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	1900 MHz Head	I	1900 MHz Body		
Frequency (MHz)	e'	e''	Frequency (MHz)	e'	e''
1850.0	39.9946	13.7231	1850.0	53.9315	14.5805
1851.2	40.0369	13.6931	1851.2	53.8634	14.5379
1852.4	40.0371	13.6604	1852.4	53.8823	14.5390
1853.6	40.0374	13.6837	1853.6	53.8588	14.5153
1854.8	40.0376	13.6777	1854.8	53.7617	14.5347
1856.0	40.0379	13.6018	1856.0	53.8647	14.5712
1857.2	40.0381	13.7417	1857.2	53.8579	14.5972
1858.4	40.0384	13.6379	1858.4	53.8399	14.5184
1859.6	40.0386	13.6918	1859.6	53.8216	14.5127
1860.8	40.0389	13.6931	1860.8	53.7173	14.5655
1862.0	40.0391	13.3097	1862.0	53.7450	14.3927
1863.2	40.0394	13.3321	1863.2	53.6910	14.4055
1864.4	40.0396	13.3671	1864.4	53.7258	14.4226
1865.6	40.0399	13.3617	1865.6	53.7322	14.3936
1866.8	40.0401	13.3505	1866.8	53.8072	14.3842
1868.0	40.0404	13.3690	1868.0	53.8757	14.4003
1869.2	40.0406	13.4297	1869.2	53.8847	14.4227
1870.4	40.0409	13.4225	1870.4	53.7982	14.4742
1871.6	40.0411	13.3964	1871.6	53.7406	14.4749
1872.8	40.0414	13.4265	1872.8	53.7791	14.5039
1874.0	40.0416	13.3691	1874.0	53.7055	14.5122
1875.2	40.0419	13.4032	1875.2	53.7687	14.5754
1876.4	40.0421	13.4011	1876.4	53.6718	14.4982
1877.6	40.0423	13.4656	1877.6	53.7741	14.5782
1878.8	40.0426	13.3613	1878.8	53.8019	14.7101
1880.0	40.0428	13.3065	1880.0	53.6842	14.7290
1881.2	40.0431	13.3552	1881.2	53.6424	14.7261
1882.4	40.0433	13.3778	1882.4	53.7380	14.6974
1883.6	40.0436	13.3466	1883.6	53.7035	14.6535
1884.8	40.0438	13.3472	1884.8	53.7284	14.6762
1886.0	40.0441	13.3465	1886.0	53.7636	14.6084
1887.2	40.0443	13.3416	1887.2	53.7444	14.5846
1888.4	40.0446	13.3367	1888.4	53.8341	14.6189
1889.6	40.0448	13.3319	1889.6	53.7646	14.6235
1890.8	40.0451	13.3271	1890.8	53.8103	14.6803
1892.0	40.0453	13.3222	1892.0	53.7983	14.4765
1893.2	40.0456	13.3174	1893.2	53.7707	14.4374
1894.4	40.0458	13.3126	1894.4	53.7434	14.4865
1895.6	40.0461	13.3077	1895.6	53.7362	14.8203
1896.8	40.0463	13.3029	1896.8	53.7261	14.8184
1898.0	40.0466	13.2980	1898.0	53.7264	14.7990
1899.2	40.0468	13.2932	1899.2	53.8034	14.7994
1900.4	40.0471	13.2883	1900.4	53.7683	14.6981
1901.6	40.0473	13.2835	1901.6	53.7718	14.7874
1902.8	40.0476	13.2786	1902.8	53.7409	14.7474
1904.0	40.0478	13.2738	1904.0	53.8226	14.7163
1905.2	40.0481	13.2689	1905.2	53.7344	14.6848
1906.4	40.0483	13.2641	1906.4	53.7243	14.6097
1907.6	40.0486	13.2592	1907.6	53.6500	14.7265
1908.8	40.0488	13.2544	1908.8	53.7343	14.6619
1910.0	40.0491	13.2495	1910.0	53.7608	14.6256

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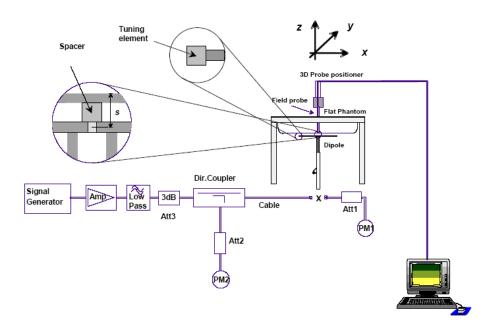
2450 MHz Head			2	2450 MHz Body			
Frequency (MHz)	e'	e''	Frequency (MHz)	e'	e''		
2410	39.5807	13.4921	2410	52.1705	14.4892		
2411	39.5797	13.4923	2411	52.1614	14.4962		
2412	39.5777	13.4925	2412	52.1524	14.5012		
2413	39.5757	13.4927	2413	52.1434	14.5062		
2414	39.5767	13.4929	2414	52.1344	14.5112		
2415	39.5777	13.4931	2415	52.1254	14.5162		
2416	39.5787	13.4933	2416	52.1164	14.5212		
2417	39.5797	13.4935	2417	52.1074	14.5262		
2418	39.5807	13.4937	2418	52.0984	14.5312		
2419	39.5847	13.4939	2419	52.0894	14.5362		
2420	39.5886	13.4941	2420	52.0804	14.5412		
2421	39.5926	13.4943	2421	52.0713	14.5662		
2422	39.5966	13.4945	2422	52.0643	14.5732		
2423	39.6006	13.4947	2423	52.0573	14.5802		
2424	39.6046	13.4949	2424	52.0503	14.5872		
2425	39.6086	13.4951	2425	52.0433	14.5942		
2426	39.6126	13.4953	2426	52.0363	14.6012		
2427	39.6166	13.4954	2427	52.0293	14.6082		
2428	39.6206	13.4956	2428	52.0223	14.6152		
2429	39.6246	13.4958	2429	52.0153	14.6222		
2430	39.6256	13.4960	2430	52.0083	14.6292		
2431	39.6266	13.4962	2431	52.0012	14.6362		
2432	39.6276	13.4964	2432	51.9942	14.6432		
2433	39.6286	13.4966	2433	51.9872	14.6502		
2434	39.6296	13.4968	2434	51.9802	14.6572		
2435	39.6306	13.4970	2435	51.9732	14.6642		
2436	39.6336	13.4972	2436	51.9662	14.6712		
2437	39.6366	13.4974	2437	51.9592	14.4782		
2438	39.6396	13.4976	2438	51.9522	14.4852		
2440	39.6426	13.4978	2440	51.9452	14.4922		
2441	39.6456	13.4980	2441	51.9382	14.4992		
2442	39.6486	13.4982	2442	51.9312	14.5062		
2443	39.6536	13.4984	2443	51.9242	14.5102		
2444	39.6586	13.4986	2444	51.9172	14.5142		
2445	39.6636	13.4988	2445	51.9101	14.5182		
2446 2447	39.6686	13.4990	2446 2447	51.9031	14.5222		
2447	39.6736	13.4992 13.4994	2447	51.8961	14.5262		
2448	39.6786 39.6836	13.4994	2448	51.8891 51.8821	14.5302 14.5342		
2449	39.6885	13.4998	2449	51.8751	14.5382		
2450	39.6935	13.5000	2450	51.8681	14.5422		
2451	39.6985	13.5002	2451	51.8611	14.5462		
2453	39.7035	13.5002	2453	51.8541	14.5502		
2454	39.7085	13.5004	2454	51.8471	14.5542		
2455	39.7125	13.5008	2455	51.8401	14.5582		
2456	39.7165	13.5010	2456	51.8331	14.5622		
2457	39.7205	13.5012	2457	51.8261	14.5662		
2458	39.7245	13.5014	2458	51.8190	14.5702		
2459	39.7285	13.5016	2459	51.8120	14.5742		
2460	39.7325	13.5018	2460	51.8050	14.5782		
2461	39.7365	13.5020	2461	51.7980	14.5822		
2462	39.7407	13.5022	2462	51.7910	14.5862		

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## **System Accuracy Verification**

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of  $\pm 10\%$ . The validation results are tabulated below. And also the corresponding SAR plot is attached as well in the SAR plots files.

### **System Verification Setup Block Diagram**



## Probe and dipole antenna List and Detail

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
APREL	Probe	ALS-E-020	500-00283	2013-10-08	2014-10-07
APREL	Dipole antenna(850MHz)	ALS-D-835-S-2	180-00558	2011-08-25	2014-08-24
APREL	Dipole antenna(1900MHz)	ALS-D-1900-S-2	210-00710	2011-08-25	2014-08-24
APREL	Dipole antenna(2450MHz)	ALS-D-2450-S-2	220-00758	2011-08-25	2014-08-24

#### **System Accuracy Check Results**

Date	Frequency Band	Liquid Type		ed SAR (Kg)	Target Value (W/Kg)	Delta (%)	Tolerance (%)
	925	Head	1g	9.648	9.590	0.605	±10
835	Body	1g	9.779	9.684	0.981	±10	
2014 02 08	2014 02 09 1000	Head	1g	39.758	39.648	0.277	±10
2014-02-08 1900 2450	Body	1g	39.815	39.769	0.116	±10	
	2450	Head	1g	53.208	52.667	1.027	±10
		Body	1g	52.989	52.561	0.814	±10

<sup>\*</sup>All SAR values are normalized to 1 Watt forward power.

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#### SAR SYSTEM VALIDATION DATA

Test Laboratory: Bay Area Compliance Lab Corp. (Shenzhen)

System Performance Check 835 MHz Head Liquid

Dipole 835 MHz; Type: ALS-D-835-S-2; S/N: 180-00558

Product Data

Device Name : Dipole 835 MHz Serial No. : 180-00558 Type : Dipole

Model : ALS-D-835-S-2

Frequency Band : 835

Max. Transmit Pwr
Drift Time : 3 min(s)
Power Drift-Start : 9.859 W/kg
Power Drift-Finish
Power Drift (%) : 1.108

Phantom Data

Name : APREL-Uni Type : Uni-Phantom Size (mm) : 280 x 280 x 200 Serial No. : System Default

Location : Center Description : Default

Phantom Data

Tissue Data

Type : Head Serial No. : 270-01002 Frequency : 835.0 MHz Last Calib. Date : 8-Feb-2014 Temperature : 20.00 °C Ambient Temp. : 21.00 °C Humidity : 56.00 RH% Epsilon : 41.14 F/m Sigma : 0.92 S/m

Density : 1000.00 kg/cu. m

Probe Data

Name : E-Field Model : E-020

Type : E-Field Triangle Serial No. : 500-00283 Last Calib. Date : 08-Oct-2013

Frequency Band : 835 Duty Cycle Factor : 1 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

Measurement Data

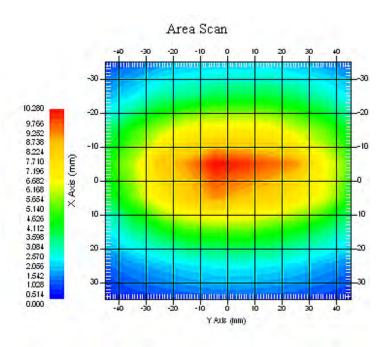
Crest Factor : 1

Scan Type : Complete Tissue Temp. : 21.00 °C Ambient Temp. : 21.00 °C

Area Scan : 7x9x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

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1 gram SAR value : 9.648 W/kg 10 gram SAR value : 6.502 W/kg Area Scan Peak SAR : 10.277 W/kg Zoom Scan Peak SAR : 14.985 W/kg



835 MHz System Validation with Head Tissue

SAR Evaluation Report 25 of 174

#### Test Laboratory: Bay Area Compliance Lab Corp. (Shenzhen)

### System Performance Check 835 MHz Body Liquid

#### Dipole 835 MHz; Type: ALS-D-835-S-2; S/N: 180-00558

Product Data

Device Name : Dipole 835 MHz Serial No. : 180-00558 Type : Dipole

Model : ALS-D-835-S-2

Frequency Band : 835

Max. Transmit Pwr
Drift Time : 3 min(s)
Power Drift-Start : 10.582 W/kg
Power Drift-Finish
Power Drift (%) : -1.785

Phantom Data

Name : APREL-Uni Type : Uni-Phantom Size (mm) : 280 x 280 x 200 Serial No. : System Default

Location : Center Description : Default

Phantom Data

Tissue Data

Type : Body : 270-02101 Serial No. Frequency : 835.0 MHz Last Calib. Date : 8-Feb-2014 : 20.00 °C Temperature : 21.00 °C Ambient Temp. : 56.00 RH% Humidity : 55.30 F/m Epsilon : 0.95 S/m Sigma Density : 1000.00 kg/cu. m

Probe Data

Name : E-Field Model : E-020

Type : E-Field Triangle Serial No. : 500-00283 Last Calib. Date : 08-Oct-2013

Frequency Band : 835 Duty Cycle Factor : 1 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

Measurement Data

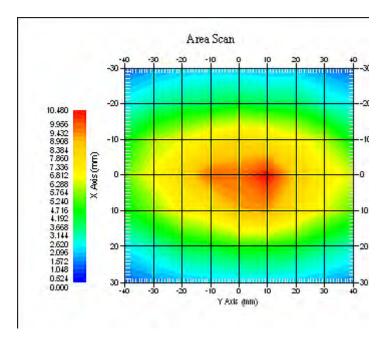
Crest Factor : 1

Scan Type : Complete Tissue Temp. : 21.00 °C Ambient Temp. : 21.00 °C

Area Scan : 7x9x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

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1 gram SAR value : 9.779 W/kg 10 gram SAR value : 6.537 W/kg Area Scan Peak SAR : 10.479 W/kg Zoom Scan Peak SAR : 15.107 W/kg



835 MHz System Validation with Body Tissue

SAR Evaluation Report 27 of 174

#### Test Laboratory: Bay Area Compliance Lab Corp. (Shenzhen)

#### System Performance Check 1900 MHz Head Liquid

Dipole 1900 MHz; Type: ALS-D-1900-S-2; S/N: 210-00710

Product Data

Device Name : Dipole 1900MHz Serial No. : 210-00710

Type : Dipole

Model : ALS-D-1900-S-2

Frequency Band : 1900
Max. Transmit Pwr : 1 W
Drift Time : 3 min(s)
Power Drift-Start : 40.102 W/kg
Power Drift-Finish : 40.523 W/kg

Power Drift (%) : 1.073

Phantom Data

Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default

Location : Center Description : Default

Tissue Data

Type : Head Serial No. : 295-01103 : 1900.00 MHz Frequency Last Calib. Date : 8-Feb-2014 : 20.00 °C Temperature : 21.00 °C Ambient Temp. : 56.00 RH% Humidity : 40.05 F/m Epsilon : 1.40 S/m Sigma Density : 1000.00 kg/cu. M

Probe Data

Name : E-Field Model : E-020

Type : E-Field Triangle Serial No. : 500-00283 Last Calib. Date : 08-Oct-2013

Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.2

Probe Sensitivity : 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

Measurement Data

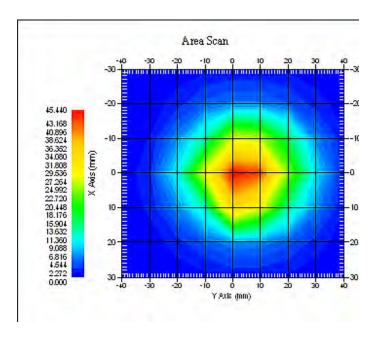
Crest Factor : 1

Scan Type : Complete Tissue Temp. : 20.00 °C Ambient Temp. : 20.00 °C

Area Scan : 7x9x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

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1 gram SAR value : 39.758 W/kg 10 gram SAR value : 20.596 W/kg Area Scan Peak SAR : 45.439 W/kg Zoom Scan Peak SAR : 85.968 W/kg



1900 MHz System Validation with Head Tissue

SAR Evaluation Report 29 of 174

#### Test Laboratory: Bay Area Compliance Lab Corp. (Shenzhen)

#### System Performance Check 1900 MHz Body Liquid

Dipole 1900 MHz; Type: ALS-D-1900-S-2; S/N: 210-00710

Product Data

Device Name : Dipole 1900MHz Serial No. : 210-00710 Type : Dipole

Model : ALS-D-1900-S-2

Frequency Band : 1900

Max. Transmit Pwr : 1 W

Drift Time : 3 min(s)

Power Drift-Start : 40.022 W/kg

Power Drift-Finish : 39.601 W/kg

Power Drift (%) : -1.035

Phantom Data

Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default

Location : Center Description : Default

Tissue Data

: Body Type Serial No. : 295-02102 : 1900.00 MHz Frequency Last Calib. Date : 8-Feb-2014 Temperature : 20.00 °C : 21.00 °C Ambient Temp. : 56.00 RH% Humidity : 53.77 F/m Epsilon : 1.55 S/m Sigma Density : 1000.00 kg/cu. m

Probe Data

Name : E-Field Model : E-020

Type : E-Field Triangle Serial No. : 500-00283 Last Calib. Date : 08-Oct-2013 Frequency Band : 1900

Frequency Band : 190 Duty Cycle Factor : 1 Conversion Factor : 5.0

Probe Sensitivity : 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

Measurement Data

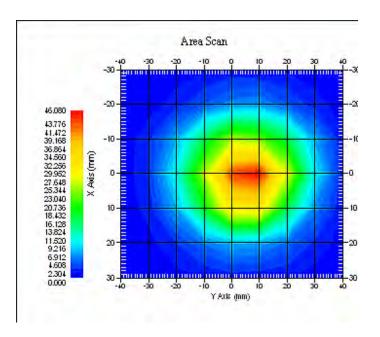
Crest Factor : 1

Scan Type : Complete Tissue Temp. : 20.00 °C Ambient Temp. : 21.00 °C

Area Scan : 7x9x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

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1 gram SAR value : 39.815 W/kg 10 gram SAR value : 20.963 W/kg Area Scan Peak SAR : 46.079 W/kg Zoom Scan Peak SAR : 90.114 W/kg



1900 MHz System Validation with Body Tissue

SAR Evaluation Report 31 of 174

#### Test Laboratory: Bay Area Compliance Lab Corp. (Shenzhen)

#### System Performance Check 2450 MHz Head Liquid

Dipole 2450 MHz; Type: ALS-D-2450-S-2; S/N: 220-00758

Product Data

Device Name : Dipole 2450MHz Serial No. : 220-00758

Type : Dipole

Model : ALS-D-2450-S-2 Frequency : 2450 MHz

Max. Transmit Pwr
Drift Time
Power Drift-Start
Power Drift-Finish
Power Drift (%)

1 2 130 MHz
1 3 min(s)
1 51.201 W/kg
1 51.752 W/kg
1 1.217

Phantom Data

Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default

Location : Center Description : Default

Tissue Data

Type : Head Serial No. : 290-01109 : 2450 MHz Frequency Last Calib. Date : 8-Feb-2014 : 20.00 °C Temperature : 21.00 °C Ambient Temp. : 50.00 RH% Humidity : 39.69 F/m Epsilon : 1.84 S/m Sigma Density : 1000.00 kg/cu. M

Probe Data

Name : E-Field Model : E-020

Type : E-Field Triangle
Serial No. : 500-00283
Last Calib. Date : 08-Oct-2013
Frequency : 2450 MHz

Duty Cycle Factor : 1 Conversion Factor : 4.9

Probe Sensitivity : 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

Measurement Data

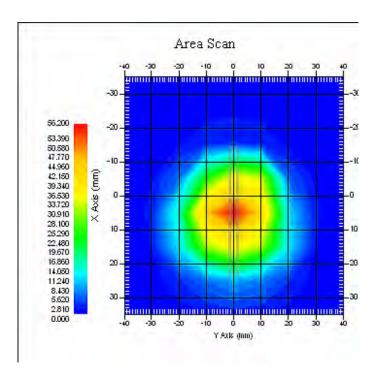
Crest Factor : 1

Scan Type : Complete Tissue Temp. : 20.00 °C Ambient Temp. : 20.00 °C

Area Scan : 7x7x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

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1 gram SAR value : 53.208 W/kg 10 gram SAR value : 23.331 W/kg Area Scan Peak SAR : 56.198 W/kg Zoom Scan Peak SAR : 108.630 W/kg



2450 MHz System Validation

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Test Laboratory: Bay Area Compliance Lab Corp. (Shenzhen)

System Performance Check 2450 MHz Body Liquid

Dipole 2450 MHz; Type: ALS-D-2450-S-2; S/N: 220-00758

Product Data

Device Name : Dipole 2450MHz Serial No. : 220-00758

Type : Dipole

Model : ALS-D-2450-S-2 Frequency : 2450 MHz

Max. Transmit Pwr
Drift Time
Power Drift-Start
Power Drift-Finish
Power Drift (%)

1 W
2 1 W
2 3 min(s)
2 49.050 W/kg
2 48.307 W/kg
3 -1.629

Phantom Data

Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default

Location : Center Description : Default

Tissue Data

Type : BODY Serial No. : 290-01109 : 2450 MHz Frequency Last Calib. Date : 8-Feb-2014 Temperature : 20.00 °C : 21.00 °C Ambient Temp. : 50.00 RH% Humidity : 51.87 F/m Epsilon : 1.98 S/m Sigma Density : 1000.00 kg/cu. M

Probe Data

Name : E-Field Model : E-020

Type : E-Field Triangle
Serial No. : 500-00283
Last Calib. Date : 08-Oct-2013
Frequency : 2450 MHz

Duty Cycle Factor : 1 Conversion Factor : 4.3

Probe Sensitivity : 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

Measurement Data

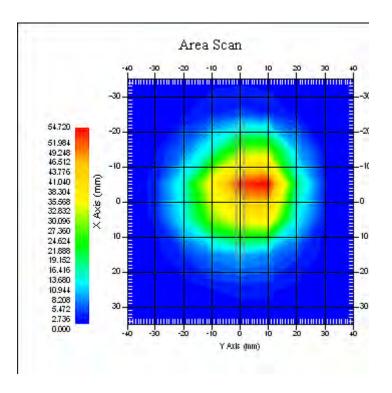
Crest Factor : 1

Scan Type : Complete Tissue Temp. : 20.00 °C Ambient Temp. : 20.00 °C

Area Scan : 7x7x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

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1 gram SAR value : 52.989 W/kg 10 gram SAR value : 24.185 W/kg Area Scan Peak SAR : 54.718 W/kg Zoom Scan Peak SAR : 97.522 W/kg



2450 MHz System Validation

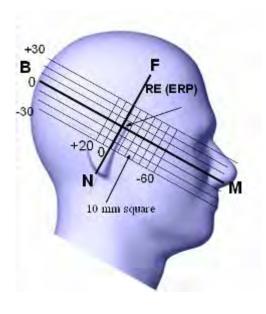
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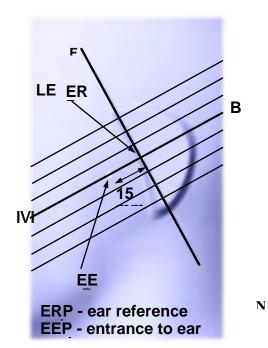
#### EUT TEST STRATEGY AND METHODOLOGY

#### **Test Positions for Device Operating Next to a Person's Ear**

This category includes most wireless handsets with fixed, retractable or internal antennas located toward the top half of the device, with or without a foldout, sliding or similar keypad cover. The handset should have its earpiece located within the upper ¼ of the device, either along the centerline or off-centered, as perceived by its users. This type of handset should be positioned in a normal operating position with the "test device reference point" located along the "vertical centerline" on the front of the device aligned to the "ear reference point". The "test device reference point" should be located at the same level as the center of the earpiece region. The "vertical centerline" should bisect the front surface of the handset at its top and bottom edges. A "ear reference point" is located on the outer surface of the head phantom on each ear spacer. It is located 1.5 cm above the center of the ear canal entrance in the "phantom reference plane" defined by the three lines joining the center of each "ear reference point" (left and right) and the tip of the mouth.

A handset should be initially positioned with the earpiece region pressed against the ear spacer of a head phantom. For the SCC-34/SC-2 head phantom, the device should be positioned parallel to the "N-F" line defined along the base of the ear spacer that contains the "ear reference point". For interim head phantoms, the device should be positioned parallel to the cheek for maximum RF energy coupling. The "test device reference point" is aligned to the "ear reference point" on the head phantom and the "vertical centerline" is aligned to the "phantom reference plane". This is called the "initial ear position". While maintaining these three alignments, the body of the handset is gradually adjusted to each of the following positions for evaluating SAR:





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#### **Cheek/Touch Position**

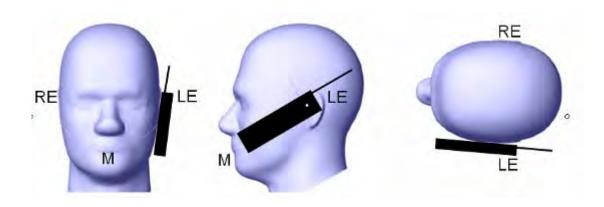
The device is brought toward the mouth of the head phantom by pivoting against the "ear reference point" or along the "N-F" line for the SCC-34/SC-2 head phantom.

This test position is established:

- When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.
- o (or) When any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.

For existing head phantoms – when the handset loses contact with the phantom at the pivoting point, rotation should continue until the device touches the cheek of the phantom or breaks its last contact from the ear spacer.

#### **Cheek / Touch Position**



#### **Ear/Tilt Position**

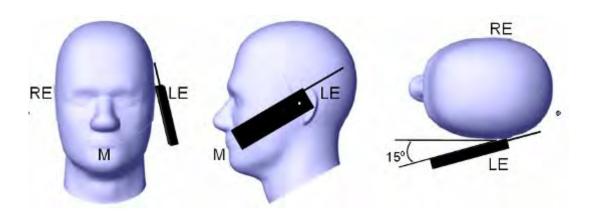
With the handset aligned in the "Cheek/Touch Position":

- 1) If the earpiece of the handset is not in full contact with the phantom's ear spacer (in the "Cheek/Touch position") and the peak SAR location for the "Cheek/Touch" position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device should be returned to the "initial ear position" by rotating it away from the mouth until the earpiece is in full contact with the ear spacer.
- 2) (otherwise) The handset should be moved (translated) away from the cheek perpendicular to the line passes through both "ear reference points" (note: one of these ear reference points may not physically exist on a split head model) for approximate 2-3 cm. While it is in this position, the device handset is tilted away from the mouth with respect to the "test device reference point" until the inside angle between the vertical centerline on the front surface of the phone and the horizontal line passing through the ear reference point isby 15 80°. After the tilt, it is then moved (translated) back toward the head perpendicular to the line passes through both "ear reference points" until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process should be repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously. This test position may require a device holder or positioner to achieve the translation and tilting with acceptable positioning repeatability.

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If a device is also designed to transmit with its keypad cover closed for operating in the head position, such positions should also be considered in the SAR evaluation. The device should be tested on the left and right side of the head phantom in the "Cheek/Touch" and "Ear/Tilt" positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tile/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s). If the transmission band of the test device is less than 10 MHz, testing at the high and low frequency channels is optional.

#### Ear /Tilt 15° Position



## Test positions for body-worn and other configurations

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.

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#### **SAR Evaluation Procedure**

The evaluation was performed with the following procedure:

- Step 1: Measurement of the SAR value at a fixed location above the ear point or central position was used as a reference value for assessing the power drop. The SAR at this point is measured at the start of the test and then again at the end of the testing.
- Step 2: The SAR distribution at the exposed side of the head was measured at a distance of 4 mm from the inner surface of the shell. The area covered the entire dimension of the head or EUT and the horizontal grid spacing was 10 mm x 10 mm. Based on these data, the area of the maximum absorption was determined by spline interpolation. The first Area Scan covers the entire dimension of the EUT to ensure that the hotspot was correctly identified.
- Step 3: Around this point, a volume of 35 mm x 35 mm x 35 mm was assessed by measuring 7x 7 x 7 points. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:
  - 1) The data at the surface were extrapolated, since the center of the dipoles is 1.2 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
  - 2) The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one dimensional splines with the "Not a knot"-condition (in x, y and z-directions). The volume was integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the averages.

All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation was repeated.

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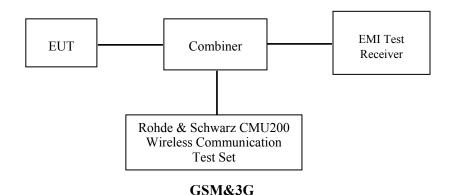
# CONDUCTED OUTPUT POWER MEASUREMENT

## **Provision Applicable**

The measured peak output power should be greater and within 5% than EMI measurement.

## **Test Procedure**

The RF output of the transmitter was connected to the input of the EMI Test Receiver through sufficient attenuation.



# **Maximum Output Power among production units**

	Max Target Power for Production Unit (dBm)							
Mode/Band	Channel							
Mode/Band	Low	Middle	High					
GSM 850	32.00	32.00	32.00					
GPRS 1 slot	32.00	32.00	32.00					
GPRS 2 slot	30.50	30.50	30.50					
GPRS 3 slot	29.00	29.00	29.00					
GPRS 4 slot	26.50	26.50	26.50					
PCS 1900	29.00	29.00	29.00					
GPRS 1 slot	29.50	29.50	29.50					
GPRS 2 slot	27.00	27.00	27.00					
GPRS 3 slot	26.00	26.00	26.00					
GPRS 4 slot	23.50	23.50	23.50					
WCDMA850	24.00	24.00	24.00					
WCDMA1900	24.00	24.00	24.00					
WiFi 802.11b	15.00	15.00	15.00					
WiFi 802.11g	13.00	13.00	13.00					
WiFi 802.11n-HT20	11.00	11.00	11.00					
Bluetooth	0.50	0.50	0.50					

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## **Test Results:**

## **GSM**

Dand	Frequency	Conducted Output Power				
Band GSM 850	(MHz)	Meas. Power (dBm)	Meas. Power (W)			
	824.2	31.45	1.396			
GSM 850	836.6	31.49	1.409			
	848.8	31.89	1.545			
	1850.2	28.90	0.776			
PCS 1900	1880.0	28.77	0.753			
	1909.8	28.60	0.724			

## **GPRS**

D I	Channel Frequency		RF Output Power (dBm)				
Band	No.	(MHz)	1 slot	2 slot	3 slots	4 slots	
	128	824.2	31.45	30.10	28.53	26.28	
GSM 850	190	836.6	31.46	30.12	28.55	26.30	
	251	848.8	31.85	30.06	28.55	26.29	
	512	1850.2	29.06	26.92	25.53	23.36	
PCS 1900	661	1880.0	28.88	26.72	25.33	23.16	
	810	1909.8	28.66	26.56	25.12	23.01	

## **EGPRS**

D J	Channel Frequency		RF Output Power (dBm)				
Band	No.	(MHz)	1 slot	2 slot	3 slots	4 slots	
	128	824.2	25.24	25.06	23.97	21.93	
GSM 850	190	836.6	25.46	25.27	24.13	22.11	
	251	848.8	25.35	25.25	24.00	22.07	
	512	1850.2	24.60	24.39	22.79	20.56	
PCS 1900	661	1880.0	24.50	24.36	22.66	20.30	
	810	1909.8	24.18	24.06	22.26	19.90	

For SAR, the time based average power is relevant, the difference in between depends on the duty cycle of the TDMA signal.

Number of Time slot	1	2	3	4
Duty Cycle	1:8	1:4	1:2.66	1:2
Time based Ave. power compared to slotted Ave. power	-9 dB	-6 dB	-4.25 dB	-3 dB
Crest Factor	8	4	2.66	2

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## The time based average power for GPRS

Dond	Channel Frequency		Time based average Power (dBm)				
Band	No.	(MHz)	1 slot	2 slot	3 slots	4 slots	
	128	824.2	22.45	24.10	24.28	23.28	
GSM 850	190	836.6	22.46	24.12	24.30	23.30	
	251	848.8	22.85	24.06	24.30	23.29	
	512	1850.2	20.06	20.92	21.28	20.36	
PCS 1900	661	1880.0	19.88	20.72	21.08	20.16	
	810	1909.8	19.66	20.56	20.87	20.01	

#### The time based average power for EGPRS

D d	Channel Frequency		Time based average Power (dBm)				
Band	No.	(MHz)	1 slot	2 slot	3 slots	4 slots	
	128	824.2	16.24	19.06	19.72	18.93	
GSM 850	190	836.6	16.46	19.27	19.88	19.11	
	251	848.8	16.35	19.25	19.75	19.07	
	512	1850.2	15.60	18.39	18.54	17.56	
PCS 1900	661	1880.0	15.50	18.36	18.41	17.30	
	810	1909.8	15.18	18.06	18.01	16.90	

#### Note:

- 1. Rohde & Schwarz Radio Communication Tester (CMU200) was used for the measurement of GSM peak and average output power for active timeslots.
- 2. For GSM voice, 1 timeslot has been activated with power level 5 (850 MHz band) and 0 (1900 MHz band).
- 3. For GPRS, 1, 3 timeslots has been activated separately with power level 5(850 MHz band) and 0(1900 MHz band).
- 4. For E-GRPS, 1, 2, 3 and 4 timeslots has been activated separately with power control level 8(850 MHz band) and 2(1900 MHz band).
- 5. The max average output power of the GPRS mode is more than 2 dB higher than the EGPRS measured in the same frequency band, according to IEEE1528, the SAR of EGPRS mode is not required.

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## **WCDMA-Release 99:**

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification. The EUT has a nominal maximum output power of 24dBm (+1.7/-3.7).

	Loopback Mode	Test Mode 1
WCDMA	Rel99 RMC	12.2 kbps RMC
General Settings	Power Control Algorithm	Algorithm2
	βс /βd	8/15

## Results (12.2kbps RMC)

D d	Frequency	Charact NO	Conducted Output Power		
Band	(MHz)	Channel NO.	(dBm)	(Watt)	
	826.4	4132	23.63	0.231	
WCDMA 850	836.6	4183	23.65	0.232	
	846.6	4233	23.62	0.230	
	1852.4	9262	23.81	0.240	
WCDMA 1900	1880.0	9400	23.91	0.246	
	1907.6	9538	23.77	0.238	

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## WCDMA HSDPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subset	1	2	3	4
	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2 kbps R	MC		
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm2			
WCDMA	$eta {f c}$	2/15	12/15	15/15	15/15
General Settings	β <b>d</b>	15/15	15/15	8/15	4/15
Settings	βd (SF)	64			
	$\beta c/\beta d$	2/15	12/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
	MPR(dB)	0	0	0.5	0.5
	$D_{ACK}$	8			
	$\mathrm{D}_{\mathrm{NAK}}$	8			
HSDPA	$\mathrm{D}_{\mathrm{CQI}}$	8			
Specific	Ack-Nack repetition factor	3			
Settings	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	Ahs= $\beta$ hs/ $\beta$ c	30/15			

## **Results (HSDPA)**

Band	Frequency	Channel NO.	Conducted Output Power (dBm)				
Danu	(MHz)	Channel NO.	Subset 1	Subset 2	Subset 3	Subset 4	
	826.4	4132	23.76	23.73	23.77	23.68	
WCDMA 850	836.6	4183	23.71	23.71	23.70	23.75	
	846.6	4233	23.62	23.73	23.75	23.69	
	1852.4	9262	23.94	23.87	23.91	23.90	
WCDMA 1900	1880.0	9400	24.01	24.03	24.00	24.05	
	1907.6	9538	23.83	23.89	23.91	23.90	

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## WCDMA HSUPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA	
	Subset	1	2	3	4	5	
	Loopback Mode	Test Mode	e 1		•	•	
	Rel99 RMC	12.2 kbps RMC					
	HSDPA FRC	H-Set1					
	HSUPA Test	HSUPA Loopback					
	Power Control Algorithm	Algorithm	12				
WCDMA General Settings	$eta {f c}$	11/15	6/15	15/15	2/15	15/15	
	βd	15/15	15/15	9/15	15/15	0	
Settings	βœ	209/225	12/15	30/15	2/15	5/15	
	β <b>c</b> / β <b>d</b>	11/15	6/15	15/9	2/15	-	
	βhs	22/15	12/15	30/15	4/15	5/15	
	CM(dB)	1.0	3.0	2.0	3.0	1.0	
	MPR(dB)	0	2	1	2	0	
	DACK 8						
	DNAK	8					
HSDPA	DCQI	8					
Specific	Ack-Nack repetition factor	3					
Settings	CQI Feedback	4ms					
	CQI Repetition Factor	2					
	Ahs= $\beta$ hs/ $\beta$ c	30/15					
	DE-DPCCH	6	8	8	5	7	
	DHARQ	0	0	0	0	0	
	AG Index	20	12	15	17	21	
	ETFCI	75	67	92	71	81	
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9	
HSUPA Specific Settings	Reference E_FCls	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27		E-TFCI 11 E-TFCI PO4 E-TFCI 92 E-TFCI PO 18	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27		

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## **Results (HSUPA)**

Dand	Frequency	Channel	Conducted Output Power (dBm)								
Band	(MHz)	(MHz) NO.		Subset 2	Subset 3	Subset 4	Subset 5				
	826.4	4132	23.71	23.69	23.75	23.73	23.74				
WCDMA 850	836.6	4183	23.71	23.78	23.71	23.72	23.76				
	846.6	4233	23.73	23.72	23.76	23.73	23.75				
	1852.4	9262	23.89	23.89	23.88	23.86	23.93				
WCDMA 1900	1880.0	9400	23.98	24.00	24.01	24.01	24.00				
	1907.6	9538	23.83	23.89	23.91	23.90	23.88				

#### Note:

- 1. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model 1.
- 2. KDB 941225 D01-Body SAR is not required for HSDPA when the maximum average output of each RF channel with HSDPA active is less than ¼ dB higher than measured without HSDPA using 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.
- 3. KDB 941225 D01-Body SAR is not required for HSUPA when the maximum average output of each RF channel with HSUPA active is less than ¼ dB higher than measured without HSUPA using 12.2kbps RMC and the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

#### Bluetooth

Mode	Channel frequency (MHz)	Reading power (dBm)	Power output (mw)
	(Low)2402	0.14	1.033
BDR(GFSK)	(Middle)2441	-0.02	0.995
	(High)2480	0.49	1.119
	(Low)2402	-0.07	0.984
EDR(4-DQPSK)	(Middle)2441	-0.25	0.944
	(High)2480	0.39	1.094

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## WiFi

Dand	Frequency	Conducted Ou	tput Power
Band	(MHz)	(dBm)	(mw)
	2412	14.90	30.903
802.11b	2437	14.57	28.642
	2462	14.56	28.576
	2412	12.90	19.498
802.11g	2437	12.77	18.923
	2462	12.83	19.187
	2412	10.66	11.641
802.11n-HT20	2437	10.16	10.375
	2462	10.53	11.298

## Note:

1. The output power was tested under data rate 1 Mbps for 802.11b, 6 Mbps for 802.11g, 6.5 Mbps for 802.11n-HT20.

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# SAR MEASUREMENT RESULTS

This page summarizes the results of the performed dosimetric evaluation.

## **SAR Test Data**

# **Environmental Conditions**

Temperature:	21-24 °C
Relative Humidity:	50-53 %
ATM Pressure:	1001-1002 mbar

Testing was performed by Wilson Chen from 2014-2-8 to 2014-02-10.

## **GSM 850:**

DUC	Frequency (	MHz)	Tant	Power	Max. Meas.	Max. Rated	FCC	1g SAR (V	V/Kg)
EUT Position	Channel	MHz	Test Mode	Drift (%)	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR
	128(Low)	824.2	GSM	/	/	/	/	/	/
Left Head Cheek	190(Middle)	836.6	GSM	-0.841	31.49	32.00	1.124	0.440	0.495
	251(High)	848.8	GSM	/	/	/	/	/	/
	128(Low)	824.2	GSM	/	/	/	/	/	/
Left Head Tilt	190(Middle)	836.6	GSM	1.205	31.49	32.00	1.124	0.213	0.239
	251(High)	848.8	GSM	/	/	/	/	/	/
	128(Low)	824.2	GSM	-1.125	31.45	32.00	1.136	0.377	0.428
Right Head Cheek	190(Middle)	836.6	GSM	0.946	31.49	32.00	1.124	0.451	0.507
	251(High)	848.8	GSM	-1.748	31.89	32.00	1.052	0.483	0.508
	128(Low)	824.2	GSM	/	/	/	/	/	/
Right Head Tilt	190(Middle)	836.6	GSM	0.633	31.49	32.00	1.124	0.302	0.339
	251(High)	848.8	GSM	/	/	/	/	/	/
	128(Low)	824.2	GSM	/	/	/	/	/	/
Body-Front-Headset (10mm)	190(Middle)	836.6	GSM	1.598	31.49	32.00	1.124	0.375	0.422
(1011111)	251(High)	848.8	GSM	/	/	/	/	/	/
	128(Low)	824.2	GSM	/	/	/	/	/	/
Body-Back-Headset (10mm)	190(Middle)	836.6	GSM	1.009	31.49	32.00	1.124	0.437	0.491
(19)	251(High)	848.8	GSM	/	/	/	/	/	/

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#### **PCS Band:**

DIE	Frequency (	(MHz)	Т 2 24	Power	Max.	Max. Rated	FCC	1g SAR (V	V/Kg)
EUT Position	Channel	MHz	Test Mode	Drift (%)	Meas. Power (dBm)	Power (dBm)	Scaled Factor	1g SAR (V Meas. SAR / 0.235 / 0.042 / 0.182 0.245 0.258 / 0.041 /	Scaled SAR
	512(Low)	1850.2	GSM	/	/	/	/	/	/
Left Head Cheek	661(Middle)	1880.0	GSM	-0.946	28.77	29.00	1.030	0.235	0.242
	810(High)	1909.8	GSM	/	/	/	/	/	/
	512(Low)	1850.2	GSM	/	/	/	/	/	/
Left Head Tilt	661(Middle)	1880.0	GSM	1.417	28.77	29.00	1.030	0.042	0.043
	810(High)	1909.8	GSM	/	/	/	/	/	/
	512(Low)	1850.2	GSM	-1.633	28.90	29.00	1.023	0.182	0.186
Right Head Cheek	661(Middle)	1880.0	GSM	-0.753	28.77	29.00	1.030	0.245	0.252
	810(High)	1909.8	GSM	1.092	28.60	29.00	1.096	0.258	0.283
	512(Low)	1850.2	GSM	/	/	/	/	/	/
Right Head Tilt	661(Middle)	1880.0	GSM	-2.108	28.77	29.00	1.030	0.041	0.042
	810(High)	1909.8	GSM	/	/	/	/	/	/
	512(Low)	1850.2	GSM	/	/	/	/	/	/
Body-Front-Headset (10mm)	661(Middle)	1880.0	GSM	2.601	28.77	29.00	1.030	0.223	0.230
(1011111)	810(High)	1909.8	GSM	/	/	/	/	/	/
	512(Low)	1850.2	GSM	/	/	/	/	/	/
Body-Back-Headset (10mm)	661(Middle)	1880.0	GSM	-1.869	28.77	29.00	1.030	0.256	0.264
	810(High)	1909.8	GSM	/	/	/	/	/	/

- When the 1-g SAR is ≤ 0.8W/Kg, testing for other channels are optional.
   The EUT transmit and receive through the same GSM antenna while testing SAR.
   When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

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#### **WCDMA 850**

EUT	Frequenc	y (MHz)		Power	Max. Meas.	Max. Rated	FCC	lg SAR (V	V/Kg)
Position	Channel	MHz	Test Mode	Drift (%)	Power Power Scaled Mes		Meas. SAR	Scaled SAR	
	4132	826.4	WCDMA 850	/	/	/	/	/	/
Left Head Cheek	4183	836.6	WCDMA 850	2.041	23.65	24.00	1.084	0.749	0.812
	4233	846.6	WCDMA 850	/	/	/	/	/	/
	4132	826.4	WCDMA 850	/	/	/	/	/	/
Left Head Tilt	4183	836.6	WCDMA 850	-0.844	23.65	24.00	1.084	0.352	0.382
	4233	846.6	WCDMA 850	/	/	/	/	/	/
	4132	826.4	WCDMA 850	-2.647	23.63	24.00	1.089	0.735	0.800
Right Head Cheek	4183	836.6	WCDMA 850	1.184	23.65	24.00	1.084	0.786	0.852
	4233	846.6	WCDMA 850	-0.528	23.62	24.00	1.091	0.706	0.770
	4132	826.4	WCDMA 850	/	/	/	/	/	/
Right Head Tilt	4183	836.6	WCDMA 850	0.368	23.65	24.00	1.084	0.341	0.370
	4233	846.6	WCDMA 850	/	/		/	/	/

## **WCDMA1900**

EUT	Frequenc	y (MHz)		Power	Max. Meas.	Max. Rated	FCC	1g SAR (V	V/Kg)
Position	Channel	MHz	Test Mode	Drift (%)	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR
	9262	1852.4	WCDMA1900	-1.027	23.81	24.00	1.045	0.520	0.543
Left Head Cheek	9400	1880.0	WCDMA1900	0.515	23.91	24.00	1.021	0.762	0.778
	9538	1907.6	WCDMA1900	-0.901	23.77	24.00	1.054	0.571	0.602
	9262	1852.4	WCDMA1900	/	/	/	/	/	/
Left Head Tilt	9400	1880.0	WCDMA1900	-1.859	23.91	24.00	1.021	0.139	0.142
	9538	1907.6	WCDMA1900	/	/	/	/	/	/
	9262	1852.4	WCDMA1900	/	/	/	/	/	/
Right Head Cheek	9400	1880.0	WCDMA1900	2.227	23.91	24.00	1.021	0.755	0.771
	9538	1907.6	WCDMA1900	/	/	/	/	/	/
	9262	1852.4	WCDMA1900	/	/	/	/	/	/
Right Head Tilt	9400	1880.0	WCDMA1900	-2.185	23.91	24.00	1.021	0.153	0.156
	9538	1907.6	WCDMA1900	/	/	/	/	/	/

#### Note:

- 1. When the 1-g SAR is  $\leq$  0.8W/Kg, testing for other channels are optional.
- 2. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model.
- 3. KDB 941225 D01-Body SAR is not required for HSDPA when the maximum average output of each RF channel with HSDPA active is less than ¼ dB higher than measured without HSDPA using 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

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- 4. KDB 941225 D01-Body SAR is not required for HSUPA when the maximum average output of each RF channel with HSUPA active is less than ¼ dB higher than measured without HSUPA using 12.2kbps RMC and the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.
- 5. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

#### WiFi

EUT	Frequenc	Frequency (MHz)		Power	Max. Meas.	Max. Rated	FCC	1g SAR (V	V/Kg)
Position	Channel	MHz	Test Mode	Drift (%)	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR
	1	2412	802.11b						
Left Head Cheek	6	2437	802.11b	1.195	14.57	15.00	1.105	0.104	0.115
	11	2462	802.11b						
	1	2412	802.11b						
Left Head Tilt	6	2437	802.11b	2.825	14.57	15.00	1.105	0.037	0.041
	11	2462	802.11b						
	1	2412	802.11b	-1.221	14.90	15.00	1.003	0.129	0.129
Right Head Cheek	6	2437	802.11b	-1.102	14.57	15.00	1.105	0.125	0.138
	11	2462	802.11b	1.859	14.56	15.00	1.107	0.134	0.148
	1	2412	802.11b						
Right Head Tilt	6	2437	802.11b	0.958	14.57	15.00	1.105	0.107	0.118
	11	2462	802.11b	/	/	/	/	/	/

#### Note

- 1. When the 1-g SAR is  $\leq$  0.8W/Kg, testing for other channels are optional.
- 2. KDB447498D01-When the maximum output power variation across the required test channels is  $> \frac{1}{2}$  dB, instead of the middle channel, the highest output power channel must be used.
- 3. KDB 248227- SAR is not required for 802.11g channels when the maximum average output power is less than ¼ dB higher than that measured on the corresponding 802.11b channels.
- 4. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

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#### **Mobile Hot-Spot Test Result**

The DUT is capable of functioning as a WiFi to Cellular Mobile hotspot. Additional SAR testing was performed according to KDB 941225 D06. Testing was performed with a separation of 1cm between the DUT and the flat phantom. The DUT was positioned for SAR tests with the front and back surfaces facing the phantom, and also with the edges facing the phantom in which the transmitting antenna is <2.5 cm from the edge. Each transmit band was utilized for SAR testing. The tested mode has been selected within each band that exhibits the highest time average output power.

## Hot spot-GPRS (Frequency Band: 835)

EUT	Frequency (	(MHz)	Test	Power	Max. Meas.	Max. Rated	FCC	1g SAR (V	V/Kg)
Position	Channel	MHz	Mode	Drift (%)	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR
Body-Front (10mm)	128(Low)	824.2	GPRS	/	/	/	/	/	/
	190(Middle)	836.6	GPRS	-2.102	28.55	29.00	1.109	0.729	0.808
(	251(High)	848.8	GPRS	/	/	/	/	/	/
	128(Low)	824.2	GPRS	-1.563	28.53	29.00	1.114	0.780	0.869
Body-Back (10mm)	190(Middle)	836.6	GPRS	1.311	28.55	29.00	1.109	0.950	1.054
(= =====)	251(High)	848.8	GPRS	-1.929	28.55	29.00	1.109	0.742	0.823
	128(Low)	824.2	GPRS	/	/	/	/	/	/
Body-Left (10mm)	190(Middle)	836.6	GPRS	-0.942	28.55	29.00	1.109	0.422	0.468
	251(High)	848.8	GPRS	/	/	/	/	/	/
D. J. Diela	128(Low)	824.2	GPRS	/	/	/	/	/	/
Body-Right (10mm)	190(Middle)	836.6	GPRS	1.586	28.55	29.00	1.109	0.383	0.425
(= =====)	251(High)	848.8	GPRS	/	/	/	/	/	/
	128(Low)	824.2	GPRS	/	/	/	/	/	/
Body-Bottom (10mm)	190(Middle)	836.6	GPRS	-1.968	28.55	29.00	1.109	0.071	0.079
	251(High)	848.8	GPRS	/	/	/	/	/	/

#### Note:

- 1. When the 1-g SAR is  $\leq$  0.8W/Kg, testing for other channels are optional.
- 2. The EUT is a Capability Class B mobile phone which can be attached to both GPRS and GSM services.
- 3. The Multi-slot Classes of EUT is Class 12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 2DL+3UL is the worst case.
- 4. The EUT transmit and receive through the same GSM antenna while testing SAR.
- 5. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

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## Hot spot-GPRS (Frequency Band: 1900)

EUT	Frequency (	(MHz)	Test	Power	Max. Meas.	Max. Rated	FCC	1g SAR (V	V/Kg)
Position Channel MHz Mode Of (%)	Drift (%)	Power (dBm)	Power (dBm)	Scaled Factor	Meas. SAR	Scaled SAR			
	512(Low)	1850.2	GPRS	/	/	/	/	/	/
Body-Front (10mm)	661(Middle)	1880.0	GPRS	1.305	25.33	26.00	1.167	0.440	0.513
(======)	810(High)	1909.8	GPRS	/	/	/	/	/	/
	512(Low)	1850.2	GPRS	/	/	/	/	/	/
Body-Back (10mm)	661(Middle)	1880.0	GPRS	-1.789	25.33	26.00	1.167	0.493	0.575
	810(High)	1909.8	GPRS	/	/	/	/	/	/
	512(Low)	1850.2	GPRS	/	/	/	/	/	/
Body-Left (10mm)	661(Middle)	1880.0	GPRS	-1.629	25.33	26.00	1.167	0.176	0.205
	810(High)	1909.8	GPRS	/	/	/	/	/	/
D. J. Diela	512(Low)	1850.2	GPRS	/	/	/	/	/	/
Body-Right (10mm)	661(Middle)	1880.0	GPRS	1.235	25.33	26.00	1.167	0.095	0.111
	810(High)	1909.8	GPRS	/	/	/	/	/	/
	512(Low)	1850.2	GPRS	-1.129	25.53	26.00	1.114	1.017	1.133
Body-Bottom (10mm)	661(Middle)	1880.0	GPRS	1.339	25.33	26.00	1.167	1.132	1.321
,	810(High)	1909.8	GPRS	1.301	25.12	26.00	1.225	1.057	1.295

- 1 .When the 1-g SAR is  $\leq$  0.8W/Kg, testing for other channels are optional.

- When the 1-g SAR is ≤ 0.8 w/kg, testing for other channels are optional.
   The EUT is a Capability Class B mobile phone which can be attached to both GPRS and GSM services.
   The Multi-slot Classes of EUT is Class12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 2DL+3UL is the worst case.
   The EUT transmit and receive through the same GSM antenna while testing SAR.
   When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

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# **Hot Spot-WCDMA850**

EUT	Frequenc	cy (MHz)		Power	Max. Meas.	Max. Rated	FCC	lg SAR (V	V/Kg)
Position	Channel MHz Test Mode		Drift (%)	Power (dBm)	Power	Scaled Factor	Meas. SAR	Scaled SAR	
	4132	826.4	WCDMA850	/	/	/	/	/	/
Body-Front (10mm)	4183	836.6	WCDMA850	-0.804	23.65	24.00	1.084	0.600	0.650
(	4233	846.6	WCDMA850	/	/	/	/	/	/
	4132	826.4	WCDMA850	/	/	/	/	/	/
Body-Back (10mm)	4183	836.6	WCDMA850	1.629	23.65	24.00	1.084	0.703	0.762
(= =====)	4233	846.6	WCDMA850	/	/	/	/	/	/
	4132	826.4	WCDMA850	/	/	/	/	/	/
Body-Left (10mm)	4183	836.6	WCDMA850	-1.785	23.65	24.00	1.084	0.372	0.403
	4233	846.6	WCDMA850	/	/	/	/	/	/
Dode Diele	4132	826.4	WCDMA850	/	/	/	/	/	/
Body-Right (10mm)	4183	836.6	WCDMA850	-1.055	23.65	24.00	1.084	0.437	0.474
	4233	846.6	WCDMA850	/	/	/	/	/	/
	4132	826.4	WCDMA850	/	/	/	/	/	/
Body-Bottom (10mm)	4183	836.6	WCDMA850	-0.158	23.65	24.00	1.084	0.036	0.039
, ,	4233	846.6	WCDMA850	/	/	/	/	/	/

# Hot Spot-WCDMA1900

EUT	Frequenc	ey (MHz)		Power	Max. Meas.	Max. Rated	FCC :	lg SAR (V	W/Kg)
Position	Channel	MHz	Test Mode	Drift (%)	Power (dBm)	Power	Scaled Factor	SAR	Scaled SAR
	9262	1852.4	WCDMA1900	/	/	/	/	/	/
Body-Front (10mm)	9400	1880.0	WCDMA1900	-1.305	23.91	24.00	1.021	0.330	0.337
(1011111)	9538	1907.6	WCDMA1900	/	/	/	/	/	/
	9262	1852.4	WCDMA1900	/	/	/	/	/	/
Body-Back (10mm)	9400	1880.0	WCDMA1900	1.485	23.91	24.00	1.021	0.484	0.494
(*******)	9538	1907.6	WCDMA1900	/	/	/	/	/	/
	9262	1852.4	WCDMA1900	/	/	/	/	/	/
Body-Left (10mm)	9400	1880.0	WCDMA1900	-1.705	23.91	24.00	1.021	0.019	0.019
	9538	1907.6	WCDMA1900	/	/	/	/	/	/
Dode Dielet	9262	1852.4	WCDMA1900	/	/	/	/	/	/
Body-Right (10mm)	9400	1880.0	WCDMA1900	0.807	23.91	24.00	1.021	0.001	0.001
(1,1111)	9538	1907.6	WCDMA1900	/	/	/	/	/	/
	9262	1852.4	WCDMA1900	/	/	/	/	/	/
Body-Bottom (10mm)	9400	1880.0	WCDMA1900	-1.878	23.91	24.00	1.021	0.469	0.479
,	9538	1907.6	WCDMA1900	/	/	/	/	/	/

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#### Note:

- 1. When the 1-g SAR is  $\leq 0.8$ W/Kg, testing for other channels are optional.
- 2. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model.
- 3. KDB 941225 D01-Body SAR is not required for HSDPA when the maximum average output of each RF channel with HSDPA active is less than ¼ dB higher than measured without HSDPA using 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.
- 4. KDB 941225 D01-Body SAR is not required for HSUPA when the maximum average output of each RF channel with HSUPA active is less than ½ dB higher than measured without HSUPA using 12.2kbps RMC and the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

#### Hot Spot-WiFi(802.11b)

EUT	Frequenc	cy (MHz)		Power	Max. Meas.	Max. Rated	FCC :	lg SAR (V	W/Kg)
Position	Channel	MHz	Test Mode	Drift (%)	Power (dBm)	Power	Scaled Factor	Meas. SAR	Scaled SAR
	1	2412	802.11b	/	/	/	/	/	/
Body-Front (10mm)	6	2437	802.11b	-0.429	14.90	15.00	1.023	0.002	0.002
(1011111)	11	2462	802.11b	/	/	/	/	/	/
	1	2412	802.11b	/	/	/	/	/	/
Body-Back (10mm)	6	2437	802.11b	-1.334	14.90	15.00	1.023	0.063	0.064
(1011111)	11	2462	802.11b	/	/	/	/	SAR  / 3 0.002  / 3 0.063  / 3 0.001  / /	/
	1	2412	802.11b	/	/	/	/	/	/
Body-Left (10mm)	6	2437	802.11b	2.354	14.90	15.00	1.023	0.001	0.001
(======)	11	2462	802.11b	/	/	/	/	/	/
	1	2412	802.11b	/	/	/	/	/	/
Body-Top (10mm)	6	2437	802.11b	-1.007	14.90	15.00	1.023	0.036	0.037
( - )	11	2462	802.11b	/	/	/	/	/	/

#### Note:

- 1. When the 1-g SAR is  $\leq$  0.8W/Kg, testing for other channels are optional.
- 2. KDB447498D01-When the maximum output power variation across the required test channels is  $> \frac{1}{2}$  dB, instead of the middle channel, the highest output power channel must be used.
- 3. KDB 248227- SAR is not required for 802.11g channels when the maximum average output power is less than ¼ dB higher than that measured on the corresponding 802.11b channels.
- 4. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

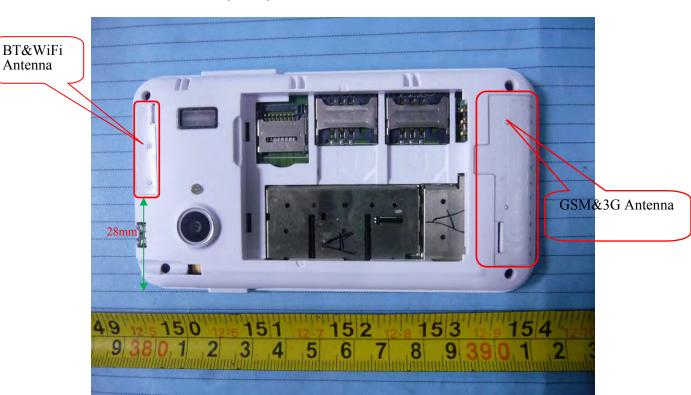
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# SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

## KDB 447498D01 General RF Exposure Guidance v05r02

Stand-alone and simultaneous SAR evaluation for a cell phone with multiple transmitters is base on the antennas distance of each radio.

## BT, WiFi, GSM and 3G Antenna Location:



## **Antenna Information:**

Description of Simultaneo	Antonnos Distanco (mm)		
Transmitter Combination	Simultaneous? Hotspot?		Antennas Distance (mm)
GSM + GPRS	×	×	0
GSM + WCDMA	×	×	0
GSM + Bluetooth	$\sqrt{}$	×	95
GSM + WiFi	√	$\sqrt{}$	95
GPRS + WCDMA	×	×	0
GPRS + Bluetooth	√	×	95
GPRS + WiFi	√	$\sqrt{}$	95
WCDMA + Bluetooth	√	×	95
WCDMA + WiFI	√	V	95

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#### **Standalone SAR test exclusion considerations**

#### Head Position:

Mode	Frequency (MHz)	P <sub>avg</sub> (dBm)	P <sub>avg</sub> (mW)	Distance (mm)	Calculated value	Threshold (1-g)	SAR Test Exclusion
GSM850	850	22.89	194.536	0	35.9	3.0	No
PCS1900	1900	19.90	97.724	0	26.9	3.0	No
WCDMSA850	850	23.65	231.739	0	42.7	3.0	No
WCDMSA1900	1900	23.91	246.037	0	67.8	3.0	No
Bluetooth	2450	0.49	1.119	0	0.4	3.0	Yes
WiFi	2450	14.90	30.903	0	9.7	3.0	No

## **Body Position:**

Mode	Frequency (MHz)	P <sub>avg</sub> (dBm)	P <sub>avg</sub> (mW)	Distance (mm)	Calculated value	Threshold (1-g)	SAR Test Exclusion
GSM850	850	24.30	269.153	10	24.8	3.0	No
PCS1900	1900	21.28	134.276	10	18.5	3.0	No
WCDMSA850	850	23.65	231.739	10	21.4	3.0	No
WCDMSA1900	1900	23.91	246.037	10	33.9	3.0	No
Bluetooth	2450	0.49	1.119	10	0.2	3.0	Yes
WiFi	2450	14.90	30.903	10	4.8	3.0	No

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances*  $\leq$  50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]  $\cdot [\sqrt{f(GHz)}] \le 3.0$  for 1-g SAR and  $\le 7.5$  for 10-g extremity SAR, where

- 1. f(GHz) is the RF channel transmit frequency in GHz.
- 2. Power and distance are rounded to the nearest mW and mm before calculation.
- 3. The result is rounded to one decimal place for comparison.
- 4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

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## Simultaneous SAR test exclusion considerations:

Mode	Frequency (GHz)	Distance (mm)	P <sub>avg</sub> (dBm)	P <sub>avg</sub> (mW)	Estimated 1-g (W/kg)
Bluetooth Head	2.45	0	0.50	1.122	0.047
Bluetooth Body	2.45	10	0.50	1.122	0.024

## **GSM** with BT:

Mada	Danitian	Reported	SAR (W/kg)	ΣSAR
Mode	Position	GSM	BT	(W/kg)
	Left Head Cheek	0.495	0.047	0.542
	Left Head Tile	0.239	0.047	0.286
CCMOSO	Right Head Cheek	0.508	0.047	0.555
GSM850	Right Head Tilt	0.339	0.047	0.386
	Body-Headset-Front	0.422	0.047	0.469
	Body-Headset-Back	0.491	0.047	0.538
	Left Head Cheek	0.242	0.047	0.289
	Left Head Tile	0.043	0.047	0.09
PCS1900	Right Head Cheek	0.283	0.047	0.33
PCS1900	Right Head Tilt	0.042	0.047	0.089
	Body-Headset-Front	0.230	0.024	0.254
	Body-Headset-Back	0.264	0.024	0.288

## WCDMA with BT:

Mode	Position	Reported SAR (W/kg)		ΣSAR
1,1000	1 00.00.00.0	WCDMA	BT	(W/kg)
	Left Head Cheek	0.812	0.047	0.859
	Left Head Tile	0.382	0.047	0.429
WCDMA 050	Right Head Cheek	0.852	0.047	0.899
WCDMA 850	Right Head Tilt	0.370	0.047	0.417
	Body-Headset-Front	0.650	0.024	0.674
	Body-Headset-Back	0.762	0.024	0.786
	Left Head Cheek	0.778	0.047	0.825
	Left Head Tile	0.142	0.047	0.189
WCDMA	Right Head Cheek	0.771	0.047	0.818
1900	Right Head Tilt	0.156	0.047	0.203
	Body-Headset-Front	0.337	0.024	0.361
	Body-Headset-Back	0.494	0.024	0.518

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#### **GSM** with WiFi:

Mode	Position		ed SAR /kg)	ΣSAR
		GSM	WiFi	(W/kg)
	Left Head Cheek	0.495	0.115	0.610
	Left Head Tile	0.239	0.041	0.280
CCMOSO	Right Head Cheek	0.508	0.148	0.656
GSM850	Right Head Tilt	0.339	0.118	0.457
	Body-Headset-Front	0.422	0.002	0.424
	Body-Headset-Back	0.491	0.064	0.555
	Left Head Cheek	0.242	0.115	0.357
	Left Head Tile	0.043	0.041	0.084
PCS1900	Right Head Cheek	0.283	0.148	0.431
PCS1900	Right Head Tilt	0.042	0.118	0.160
	Body-Headset-Front	0.230	0.002	0.232
	Body-Headset-Back	0.264	0.064	0.328

## WCDMA with WiFi:

Mode	Position	Reported SAR (W/kg)		ΣSAR
	- 03333	WCDMA	WiFi	(W/kg)
	Left Head Cheek	0.812	0.115	0.927
	Left Head Tile	0.382	0.041	0.423
WCDMA 050	Right Head Cheek	0.852	0.148	1.000
WCDMA 850	Right Head Tilt	0.370	0.118	0.488
	Body-Headset-Front	0.650	0.002	0.652
	Body-Headset-Back	0.762	0.064	0.826
	Left Head Cheek	0.778	0.115	0.893
	Left Head Tile	0.142	0.041	0.183
WCDMA	Right Head Cheek	0.771	0.148	0.919
1900	Right Head Tilt	0.156	0.118	0.274
	Body-Headset-Front	0.337	0.002	0.339
	Body-Headset-Back	0.494	0.064	0.558

## Note:

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]·[ $\sqrt{f(GHz)/x}$ ] W/kg for test separation distances  $\leq 50$  mm;

where x = 7.5 for 1-g SAR.

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion

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## **Conclusion:**

 $\Sigma$ SAR < 1.6 W/kg therefore simultaneous transmission SAR with Volume Scans is **not** required.

## **Hotspot:**

F	Evaluations for Simultaneous SAR, Mobile Hot Spot Positions									
Test Position	Body-Front (1.0cm)	Body-Back (1.0cm)	Body-Left (1.0cm)	Body-Right (1.0cm)	Body-Bottom (1.0cm)	Body-Top (1.0cm)				
Mode		Stand Alone 1-g SAR (W/Kg)								
GSM 850	0.808	1.054	0.468	0.425	0.079	/				
PCS 1900	0.513	0.575	0.205	0.111	1.321	/				
WCDMA850	0.650	0.762	0.403	0.474	0.039	/				
WCDMA 1900	0.337	0.494	0.019	0.090	0.479	/				
WiFi	0.002	0.064	0.001	/	/	0.037				
			∑ 1-g S.	AR (W/Kg)						
GSM850 + WiFi	0.810	1.118	0.469	/	/	/				
PCS 1900 + WiFi	0.515	0.639	0.206	/	/	/				
WCDMA850 + WiFi	0.652	0.826	0.404	/	/	/				
WCDMA 1900 + WiFi	0.339	0.558	0.020	/	/	/				

## Note:

If the sum of the 1g SAR measured for the simultaneously transmitting antennas is less than the SAR limit, SAR measurement for simultaneous transmission is not required.

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#### **EUT SCAN RESULTS**

## Test Laboratory: Bay Area Compliance Lab Corp. (Shenzhen)

## **Left Head Cheek (836.6 MHz Middle Channel)**

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : -0.841

Tissue Data

 Type
 : Head

 Frequency
 : 836.6 MHz

 Epsilon
 : 41.14 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

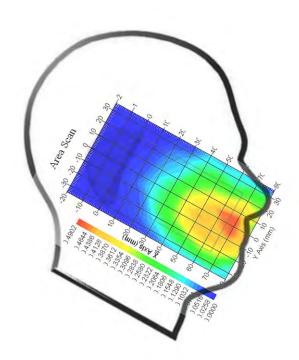
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.440 W/kg 10 gram SAR value : 0.325 W/kg Area Scan Peak SAR : 0.478 W/kg Zoom Scan Peak SAR : 0.650 W/kg

Plot 1#



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## Left Head Tilt (836.6 MHz Middle Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : 1.205

Tissue Data

 Type
 : Head

 Frequency
 : 836.6 MHz

 Epsilon
 : 41.14 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

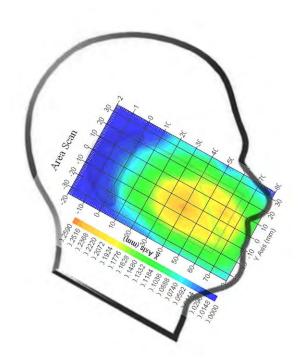
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.213 W/kg 10 gram SAR value : 0.160 W/kg Area Scan Peak SAR : 0.254 W/kg Zoom Scan Peak SAR : 0.410 W/kg

Plot 2#



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## Right Head Cheek (824.2 MHz Low Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.002 W/kg Power Drift-Finish : 0.002 W/kg Power Drift (%) : -1.125

Tissue Data

 Type
 : Head

 Frequency
 : 824.2 MHz

 Epsilon
 : 41.18 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

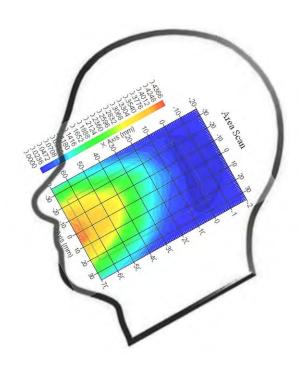
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.377 W/kg 10 gram SAR value : 0.266 W/kg Area Scan Peak SAR : 0.430 W/kg Zoom Scan Peak SAR : 0.750 W/kg

Plot 3#



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## Right Head Cheek (836.6 MHz Middle Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : 0.946

Tissue Data

 Type
 : Head

 Frequency
 : 836.6 MHz

 Epsilon
 : 41.14 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

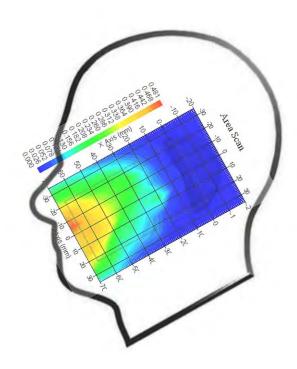
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.451 W/kg 10 gram SAR value : 0.311 W/kg Area Scan Peak SAR : 0.480 W/kg Zoom Scan Peak SAR : 0.680 W/kg

Plot 4#



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## Right Head Cheek (848.8 MHz High Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : -1.748

Tissue Data

 Type
 : Head

 Frequency
 : 848.8 MHz

 Epsilon
 : 40.91 F/m

 Sigma
 : 0.92 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

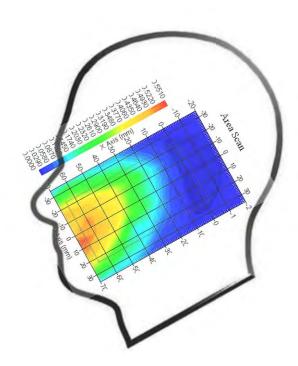
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.483 W/kg 10 gram SAR value : 0.345 W/kg Area Scan Peak SAR : 0.541 W/kg Zoom Scan Peak SAR : 0.680 W/kg

Plot 5#



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## Right Head Tilt (836.6 MHz Middle Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : 0.633

Tissue Data

 Type
 : Head

 Frequency
 : 836.6 MHz

 Epsilon
 : 41.14 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

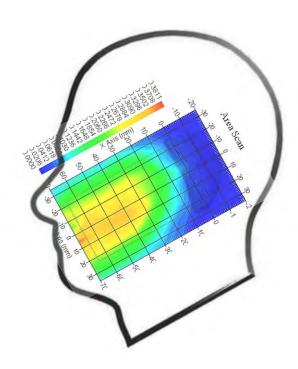
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.302 W/kg 10 gram SAR value : 0.188 W/kg Area Scan Peak SAR : 0.371 W/kg Zoom Scan Peak SAR : 0.620 W/kg

Plot 6#



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## **Body-worn Front-Headset (836.6 MHz Middle Channel)**

Measurement Data

Test mode : GSM Crest Factor : 8

Scan Type: : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.329 W/kg Power Drift-Finish : 0.334 W/kg Power Drift (%) : 1.598

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

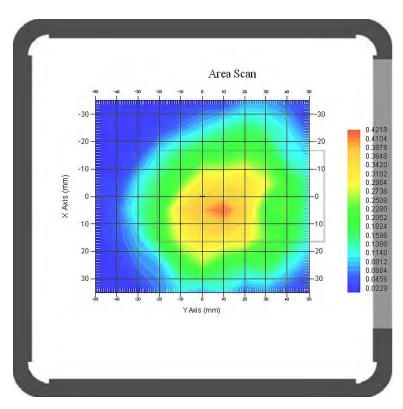
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.375 W/kg 10 gram SAR value : 0.261 W/kg Area Scan Peak SAR : 0.414 W/kg Zoom Scan Peak SAR : 0.460 W/kg

Plot 7#



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## **Body-worn Back-Headset (836.6 MHz Middle Channel)**

Measurement Data

Test mode : GSM Crest Factor : 8 Scan Type : : Comp

Scan Type: : Complete
Area Scan : 8x11x1 : Measurement x=1

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.396 W/kg Power Drift-Finish : 0.400 W/kg Power Drift (%) : 1.009

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

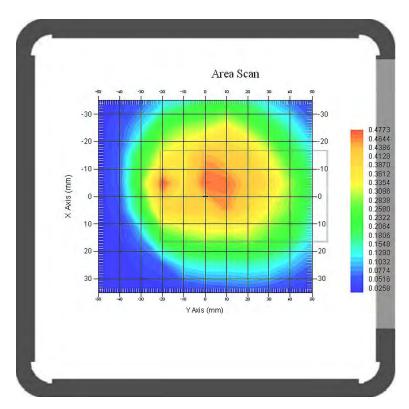
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 8 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.437 W/kg 10 gram SAR value : 0.318 W/kg Area Scan Peak SAR : 0.474 W/kg Zoom Scan Peak SAR : 0.650 W/kg

#### Plot 8#



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## Left Head Cheek (1880.0 MHz Middle Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : -0.946

Tissue Data

 Type
 : Head

 Frequency
 : 1880.0 MHz

 Epsilon
 : 40.04 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

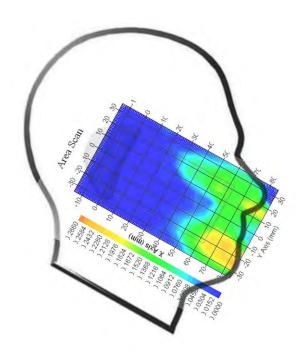
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 8 Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.235 W/kg 10 gram SAR value : 0.135 W/kg Area Scan Peak SAR : 0.263 W/kg Zoom Scan Peak SAR : 0.480 W/kg

Plot 9#



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## Left Head Tilt (1880 MHz Middle Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.002 W/kg Power Drift-Finish : 0.002 W/kg Power Drift (%) : 1.417

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 40.04 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

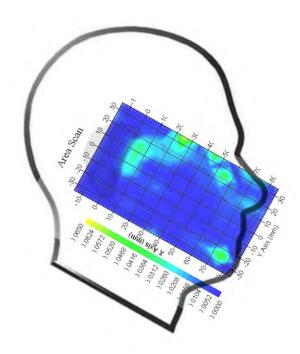
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.042 W/kg 10 gram SAR value : 0.019 W/kg Area Scan Peak SAR : 0.065 W/kg Zoom Scan Peak SAR : 0.200 W/kg

#### **Plot 10#**



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## Right Head Cheek (1850.2 MHz Low Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : -1.633

Tissue Data

 Type
 : Head

 Frequency
 : 1850.2 MHz

 Epsilon
 : 39.99 F/m

 Sigma
 : 1.41 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

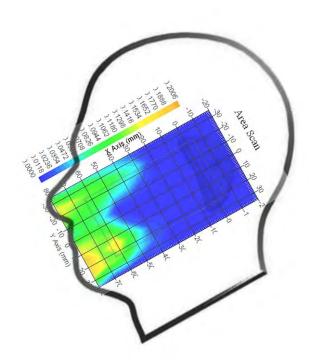
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.182 W/kg 10 gram SAR value : 0.105 W/kg Area Scan Peak SAR : 0.195 W/kg Zoom Scan Peak SAR : 0.450 W/kg

#### **Plot 11#**



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## Right Head Cheek (1880 MHz Middle Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : -0.753

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 40.04 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. M

Probe Data

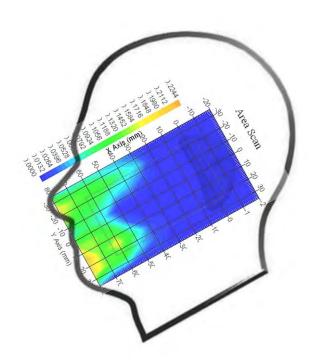
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.245 W/kg 10 gram SAR value : 0.122 W/kg Area Scan Peak SAR : 0.223 W/kg Zoom Scan Peak SAR : 0.480 W/kg

**Plot 12#** 



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## Right Head Cheek (1909.8 MHz High Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : 1.092

Tissue Data

 Type
 : Head

 Frequency
 : 1909.8 MHz

 Epsilon
 : 40.05 F/m

 Sigma
 : 1.41 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

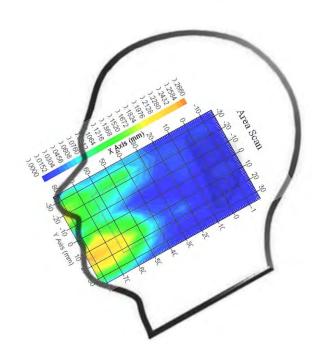
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 8 Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.258 W/kg 10 gram SAR value : 0.134 W/kg Area Scan Peak SAR : 0.265 W/kg Zoom Scan Peak SAR : 0.260 W/kg

**Plot 13#** 



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## Right Head Tilt (1880 MHz Middle Channel)

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 11x8x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.021 W/kg Power Drift-Finish : 0.021 W/kg Power Drift (%) : -2.108

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 40.04 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

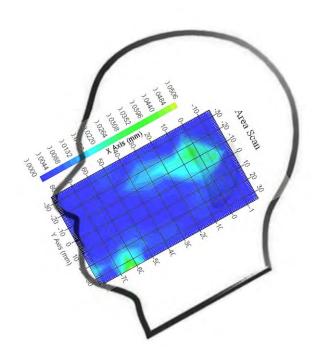
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.041 W/kg 10 gram SAR value : 0.020 W/kg Area Scan Peak SAR : 0.050 W/kg Zoom Scan Peak SAR : 0.090 W/kg

**Plot 14#** 



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## **Body-worn Front-Headset (1880 MHz Middle Channel)**

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.195 W/kg Power Drift-Finish : 0.200 W/kg Power Drift (%) : 2.601

Tissue Data

 Type
 : Body

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68 F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

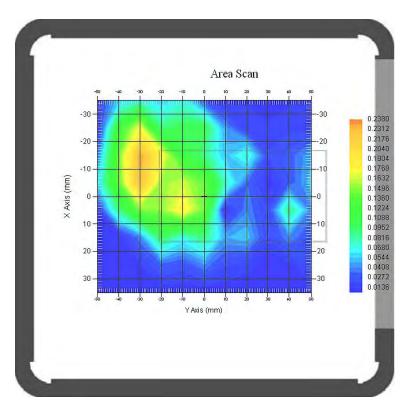
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 4.5

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.223 W/kg 10 gram SAR value : 0.133 W/kg Area Scan Peak SAR : 0.232 W/kg Zoom Scan Peak SAR : 0.500 W/kg

#### **Plot 15#**



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## **Body-worn Back- Headset (1880 MHz Middle Channel)**

Measurement Data

Test mode : GSM
Crest Factor : 8
Scan Type : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.215 W/kg Power Drift-Finish : 0.211W/kg Power Drift (%) :-1.869

Tissue Data

 Type
 : Body

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68 F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

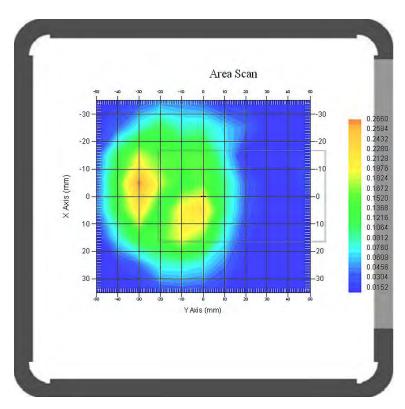
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 4.5

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.256 W/kg 10 gram SAR value : 0.138 W/kg Area Scan Peak SAR : 0.266 W/kg Zoom Scan Peak SAR : 0.440 W/kg

#### **Plot 16#**



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## WCDMA850; Left Head Cheek (836.6 MHz Middle Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : 2.041

Tissue Data

 Type
 : Head

 Frequency
 : 836.6 MHz

 Epsilon
 : 41.14 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

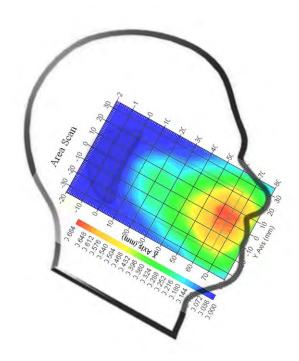
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 1 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.749 W/kg 10 gram SAR value : 0.528 W/kg Area Scan Peak SAR : 0.712 W/kg Zoom Scan Peak SAR : 0.970 W/kg

**Plot 17#** 



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## WCDMA850; Left Head Tilt (836.6 MHz Middle Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.005 W/kg Power Drift-Finish : 0.005 W/kg Power Drift (%) : -0.844

Tissue Data

 Type
 : Head

 Frequency
 : 836.6 MHz

 Epsilon
 : 41.14 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

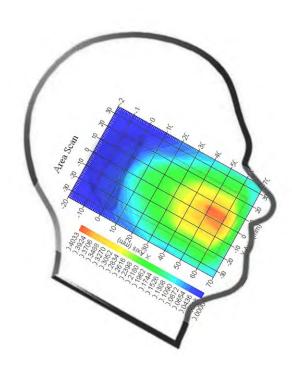
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 1 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.352 W/kg 10 gram SAR value : 0.158 W/kg Area Scan Peak SAR : 0.371 W/kg Zoom Scan Peak SAR : 0.600 W/kg

#### **Plot 18#**



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## WCDMA850; Right Head Cheek (826.4 MHz Low Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.006 W/kg Power Drift-Finish : 0.006 W/kg Power Drift (%) : -2.647

Tissue Data

 Type
 : Head

 Frequency
 : 826.4 MHz

 Epsilon
 : 41.07 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

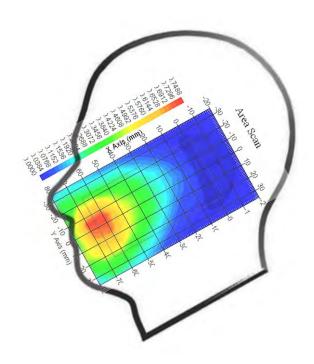
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 1 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.735 W/kg 10 gram SAR value : 0.495 W/kg Area Scan Peak SAR : 0.748 W/kg Zoom Scan Peak SAR : 1.025 W/kg

#### **Plot 19#**



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# WCDMA850; Right Head Cheek (836.6 MHz Middle Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.002 W/kg Power Drift-Finish : 0.002 W/kg Power Drift (%) : 1.184

Tissue Data

 Type
 : Head

 Frequency
 : 836.6 MHz

 Epsilon
 : 41.14 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

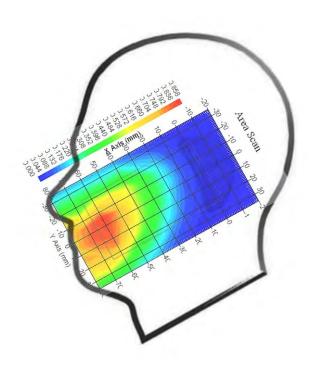
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 1 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.786 W/kg 10 gram SAR value : 0.555 W/kg Area Scan Peak SAR : 0.851 W/kg Zoom Scan Peak SAR : 1.221 W/kg

#### **Plot 20#**



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# WCDMA850; Right Head Cheek (846.6 MHz High Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.004 W/kg Power Drift-Finish : 0.004 W/kg Power Drift (%) : -0.528

Tissue Data

 Type
 : Head

 Frequency
 : 846.6 MHz

 Epsilon
 : 40.99 F/m

 Sigma
 : 0.92 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

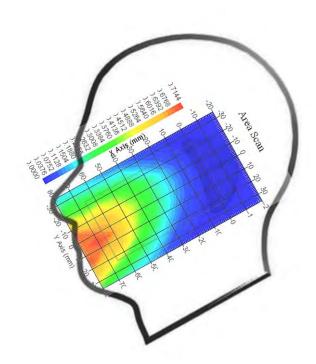
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 1 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.706 W/kg 10 gram SAR value : 0.488 W/kg Area Scan Peak SAR : 0.714 W/kg Zoom Scan Peak SAR : 1.205 W/kg

**Plot 21#** 



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# WCDMA850; Right Head Tilt (836.6 MHz Middle Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : 0.368

Tissue Data

 Type
 : Head

 Frequency
 : 836.6 MHz

 Epsilon
 : 41.14 F/m

 Sigma
 : 0.91 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

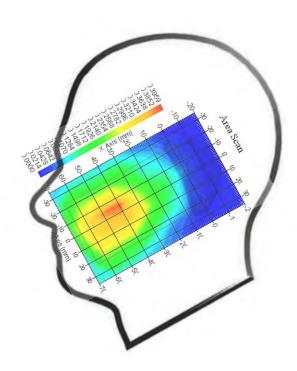
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 1 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.341 W/kg 10 gram SAR value : 0.176 W/kg Area Scan Peak SAR : 0.396 W/kg Zoom Scan Peak SAR : 0.502 W/kg

**Plot 22#** 



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## WCDMA1900; Left Head Cheek (1852.4 MHz Low Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.002 W/kg Power Drift-Finish : 0.002 W/kg Power Drift (%) : -1.027

Tissue Data

 Type
 : Head

 Frequency
 : 1852.4 MHz

 Epsilon
 : 40.04 F/m

 Sigma
 : 1.41 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

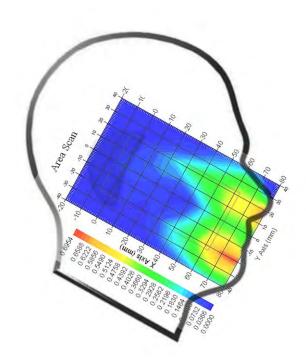
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.520 W/kg 10 gram SAR value : 0.251 W/kg Area Scan Peak SAR : 0.691 W/kg Zoom Scan Peak SAR : 0.970 W/kg

**Plot 23#** 



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## WCDMA1900; Left Head Cheek (1880 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.005 W/kg Power Drift-Finish : 0.005 W/kg Power Drift (%) : 0.515

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 40.04 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

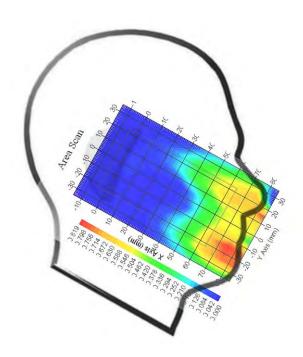
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 1
Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.762 W/kg 10 gram SAR value : 0.420 W/kg Area Scan Peak SAR : 0.809 W/kg Zoom Scan Peak SAR : 1.291 W/kg

**Plot 24#** 



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## WCDMA1900; Left Head Cheek (1907.6 MHz High Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.007 W/kg Power Drift-Finish : 0.007 W/kg Power Drift (%) : -0.901

Tissue Data

 Type
 : Head

 Frequency
 : 1907.6 MHz

 Epsilon
 : 40.05 F/m

 Sigma
 : 1.41 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

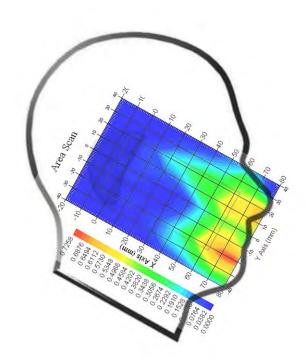
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 1
Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.571 W/kg 10 gram SAR value : 0.283 W/kg Area Scan Peak SAR : 0.724 W/kg Zoom Scan Peak SAR : 1.010 W/kg

**Plot 25#** 



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## WCDMA1900; Left Head Tilt (1880 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.122W/kg Power Drift-Finish : 0.119 W/kg Power Drift (%) : -1.859

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 40.04 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

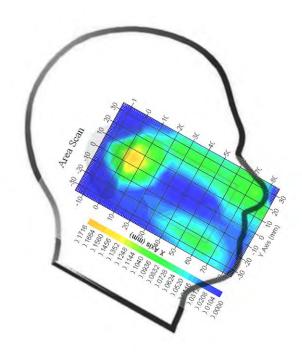
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.139 W/kg 10 gram SAR value : 0.056 W/kg Area Scan Peak SAR : 0.168 W/kg Zoom Scan Peak SAR : 0.330 W/kg

**Plot 26#** 



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## WCDMA1900; Right Head Cheek (1880 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : 2.227

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 40.04 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

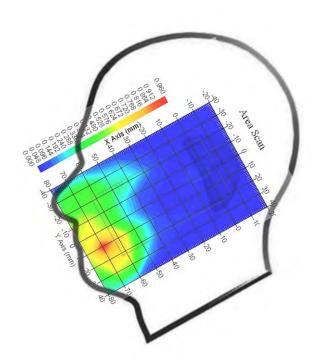
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 1
Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.755 W/kg 10 gram SAR value : 0.457 W/kg Area Scan Peak SAR : 0.959 W/kg Zoom Scan Peak SAR : 1.422 W/kg

**Plot 27#** 



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## WCDMA1900; Right Head Tilt (1880 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.101 W/kg Power Drift-Finish : 0.099 W/kg Power Drift (%) : -2.185

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 40.04 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

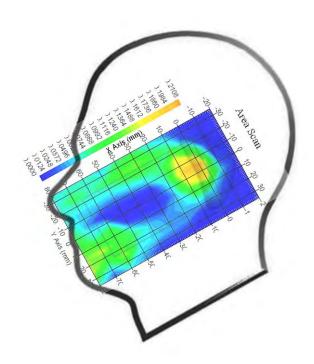
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 1
Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.153 W/kg 10 gram SAR value : 0.122 W/kg Area Scan Peak SAR : 0.207 W/kg Zoom Scan Peak SAR : 0.570 W/kg

**Plot 28#** 



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## 802.11b; Left Head Cheek (2437 MHz Channel 6)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.085 W/kg : 0.086 W/kg : 1.195 Power Drift-Finish Power Drift (%)

Tissue Data

Type : Head Frequency : 2437 MHz : 39.64 F/m Epsilon Sigma : 1.83 S/m Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

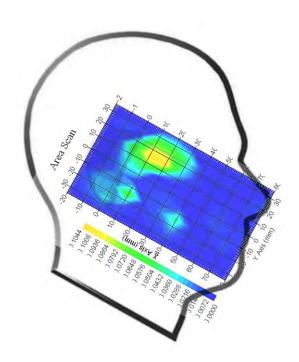
Duty Cycle Factor : 1 Conversion Factor : 4.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.104 W/kg 10 gram SAR value : 0.039 W/kg Area Scan Peak SAR : 0.103 W/kg Zoom Scan Peak SAR : 0.260 W/kg

**Plot 29#** 



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## 802.11b; Left Head Tilt (2437 MHz Channel 6)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.036 W/kg Power Drift-Finish : 0.037 W/kg Power Drift (%) : 2.825

Tissue Data

Type : Head Frequency : 2437 MHz : 39.64 F/m Epsilon Sigma : 1.83 S/m Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

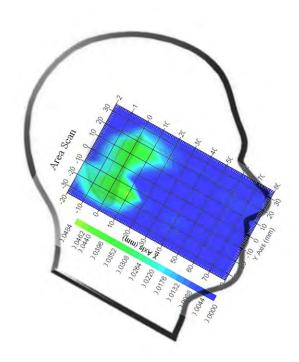
Duty Cycle Factor : 1 Conversion Factor : 4.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.037 W/kg 10 gram SAR value : 0.016 W/kg Area Scan Peak SAR : 0.047 W/kg Zoom Scan Peak SAR : 0.070 W/kg

**Plot 30#** 



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## 802.11b; Right Head Cheek (2412 MHz Channel 1)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.095 W/kg Power Drift-Finish : 0.094 W/kg Power Drift (%) : -1.221

Tissue Data

Type : Head Frequency : 2412 MHz Epsilon : 39.58 F/m Sigma : 1.81 S/m Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

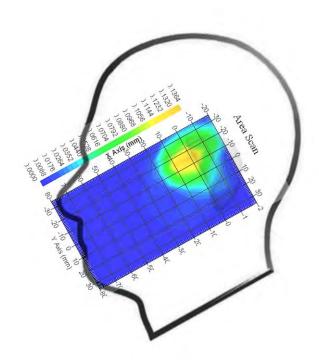
Duty Cycle Factor : 1 Conversion Factor : 4.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.129 W/kg 10 gram SAR value : 0.052 W/kg Area Scan Peak SAR : 0.136 W/kg Zoom Scan Peak SAR : 0.175 W/kg

### **Plot 31#**



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## 802.11b; Right Head Cheek (2437 MHz Channel 6)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.100 W/kg Power Drift-Finish : 0.099 W/kg Power Drift (%) : -1.102

Tissue Data

Type : Head Frequency : 2437 MHz Epsilon : 39.64 F/m Sigma : 1.83 S/m Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

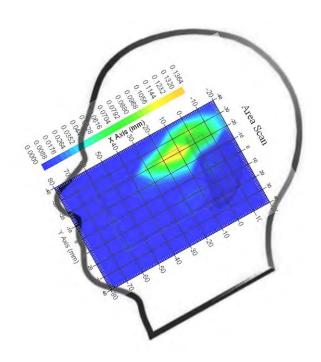
Duty Cycle Factor : 1 Conversion Factor : 4.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.125 W/kg 10 gram SAR value : 0.045 W/kg Area Scan Peak SAR : 0.132 W/kg Zoom Scan Peak SAR : 0.201 W/kg

**Plot 32#** 



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#### 802.11b; Right Head Cheek (2462 MHz Channel 11)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.102 W/kg Power Drift-Finish : 0.104 W/kg Power Drift (%) : 1.859

Tissue Data

Type : Head Frequency : 2462 MHz Epsilon : 39.74 F/m Sigma : 1.83 S/m Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

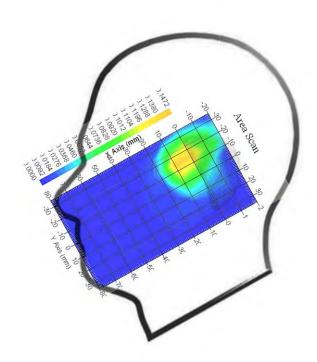
Duty Cycle Factor : 1 Conversion Factor : 4.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.134 W/kg 10 gram SAR value : 0.051 W/kg Area Scan Peak SAR : 0.147 W/kg : 0.201 W/kg Zoom Scan Peak SAR

**Plot 33#** 



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## 802.11b; Right Head Tilt (2437 MHz Channel 6)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.100 W/kg Power Drift-Finish : 0.101 W/kg Power Drift (%) : 0.958

Tissue Data

Type : Head Frequency : 2437 MHz Epsilon : 39.64 F/m Sigma : 1.83 S/m Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

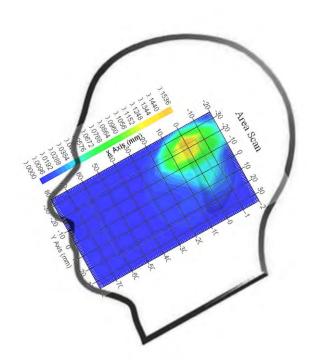
Duty Cycle Factor : 1 Conversion Factor : 4.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.107 W/kg 10 gram SAR value : 0.042 W/kg Area Scan Peak SAR : 0.153 W/kg Zoom Scan Peak SAR : 0.250 W/kg

**Plot 34#** 



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## **Body-worn-Front (836.6 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.630 W/kg Power Drift-Finish : 0.617 W/kg Power Drift (%) : -2.102

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

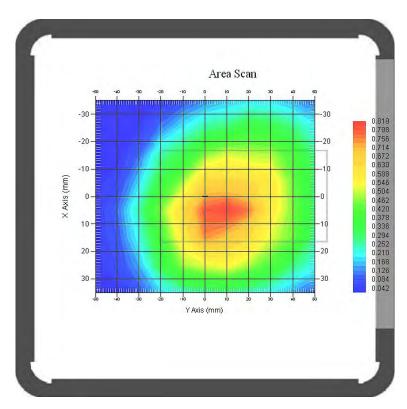
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 2.66 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.729 W/kg 10 gram SAR value : 0.513 W/kg Area Scan Peak SAR : 0.810 W/kg Zoom Scan Peak SAR : 1.081 W/kg

**Plot 35#** 



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## **Body-worn-Back (824.2 MHz Low Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.675 W/kg Power Drift-Finish : 0.665 W/kg Power Drift (%) : -1.563

Tissue Data

 Type
 : Body

 Frequency
 : 824.2 MHz

 Epsilon
 : 55.23 F/m

 Sigma
 : 0.94 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

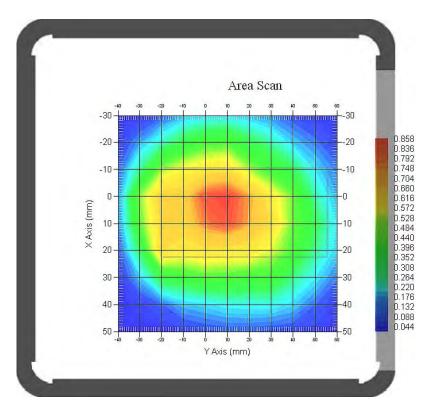
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 2.66 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.780 W/kg 10 gram SAR value : 0.523 W/kg Area Scan Peak SAR : 0.850 W/kg Zoom Scan Peak SAR : 1.191 W/kg

#### **Plot 36#**



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## **Body-worn-Back (836.6 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.910 W/kg Power Drift-Finish : 0.922 W/kg Power Drift (%) : 1.311

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

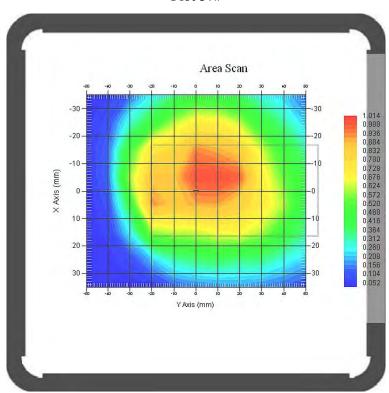
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 2.66 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.950 W/kg 10 gram SAR value : 0.628 W/kg Area Scan Peak SAR : 0.990 W/kg Zoom Scan Peak SAR : 1.401 W/kg

**Plot 37#** 



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## **Body-worn-Back (848.8 MHz High Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.653 W/kg Power Drift-Finish : 0.640 W/kg Power Drift (%) : -1.929

Tissue Data

 Type
 : Body

 Frequency
 : 848.8 MHz

 Epsilon
 : 55.39 F/m

 Sigma
 : 0.98 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

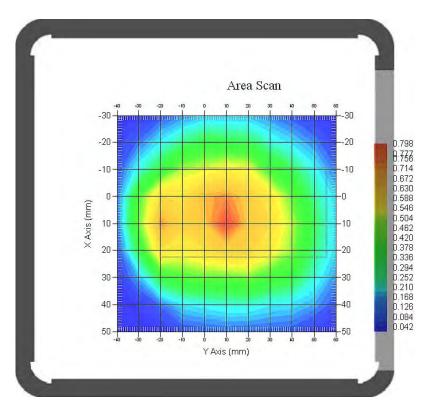
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 2.66 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.742 W/kg 10 gram SAR value : 0.482 W/kg Area Scan Peak SAR : 0.794 W/kg Zoom Scan Peak SAR : 1.121 W/kg

#### **Plot 38#**



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## **Body-worn-Left (836.6 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.365 W/kg Power Drift-Finish : 0.362 W/kg Power Drift (%) : -0.942

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

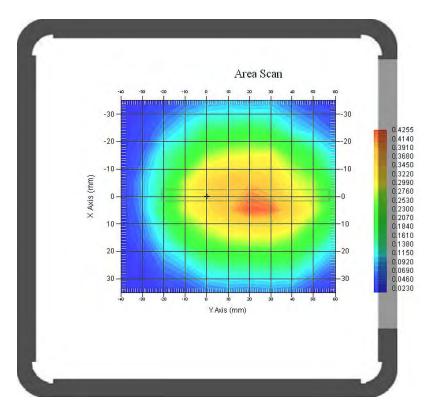
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 2.66 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.422 W/kg 10 gram SAR value : 0.265 W/kg Area Scan Peak SAR : 0.421 W/kg Zoom Scan Peak SAR : 0.690 W/kg

#### **Plot 39#**



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# **Body-worn-Right (836.6 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.349 W/kg Power Drift-Finish : 0.354 W/kg Power Drift (%) : 1.586

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

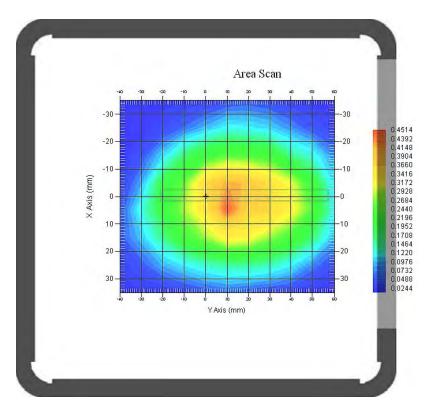
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 2.66
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.383 W/kg 10 gram SAR value : 0.236 W/kg Area Scan Peak SAR : 0.447 W/kg Zoom Scan Peak SAR : 0.570 W/kg

#### **Plot 40#**



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## **Body-worn-Bottom (836.6 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.052 W/kg Power Drift-Finish : 0.051 W/kg Power Drift (%) : -1.968

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

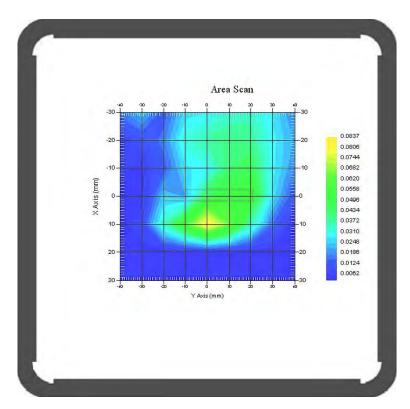
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 2.66 Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.071 W/kg 10 gram SAR value : 0.032 W/kg Area Scan Peak SAR : 0.082 W/kg Zoom Scan Peak SAR : 0.130 W/kg

#### **Plot 41#**



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## **Body-worn-Front (1880 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.356 W/kg Power Drift-Finish : 0.360 W/kg Power Drift (%) : 1.305

Tissue Data

 Type
 : Body

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68 F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

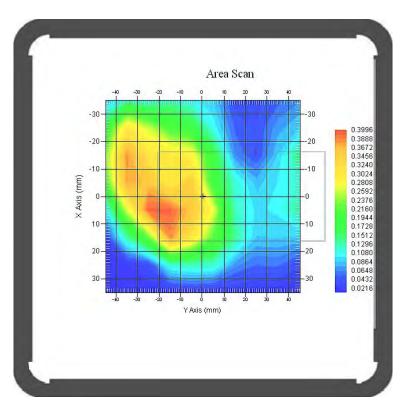
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 2.66 Conversion Factor : 4.5

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.440 W/kg 10 gram SAR value : 0.207 W/kg Area Scan Peak SAR : 0.393 W/kg Zoom Scan Peak SAR : 1.000 W/kg

**Plot 42#** 



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## **Body-worn-Back (1880 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.425 W/kg Power Drift-Finish : 0.417 W/kg Power Drift (%) : -1.789

Tissue Data

 Type
 : Body

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68 F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

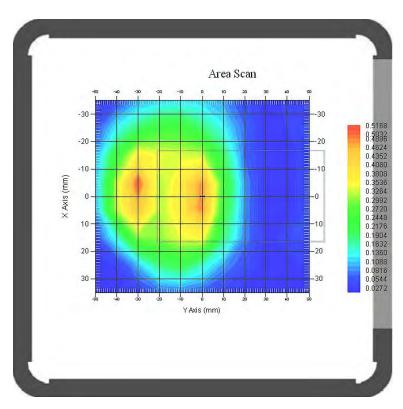
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 2.66 Conversion Factor : 4.5

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.493 W/kg 10 gram SAR value : 0.295 W/kg Area Scan Peak SAR : 0.505 W/kg Zoom Scan Peak SAR : 0.700 W/kg

**Plot 43**#



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# **Body-worn-Left (1880 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.130 W/kg Power Drift-Finish : 0.128 W/kg Power Drift (%) : -1.629

Tissue Data

 Type
 : Body

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68 F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

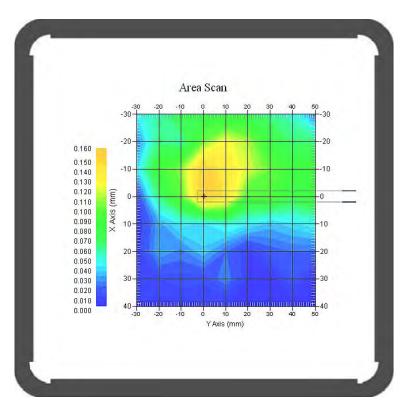
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 2.66 Conversion Factor : 4.5

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.176 W/kg 10 gram SAR value : 0.079 W/kg Area Scan Peak SAR : 0.158 W/kg Zoom Scan Peak SAR : 0.420 W/kg

#### **Plot 44#**



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## **Body-worn-Right (1880 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.085 W/kg Power Drift-Finish : 0.086 W/kg Power Drift (%) : 1.235

Tissue Data

 Type
 : Body

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68 F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

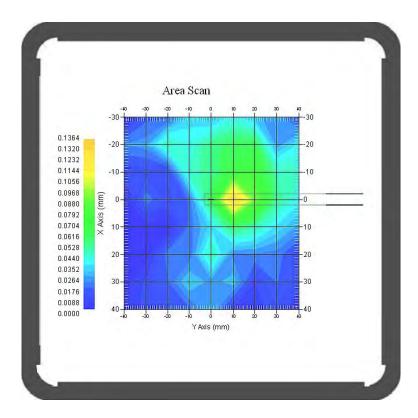
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 2.66 Conversion Factor : 4.5

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.095 W/kg 10 gram SAR value : 0.042 W/kg Area Scan Peak SAR : 0.138 W/kg Zoom Scan Peak SAR : 0.220 W/kg

**Plot 45#** 



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## **Body-worn-Bottom (1850.2 MHz Low Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 1.205 W/kg Power Drift-Finish : 1.190 W/kg Power Drift (%) : -1.129

Tissue Data

 Type
 : Body

 Frequency
 : 1850.2 MHz

 Epsilon
 : 53.93 F/m

 Sigma
 : 1.50 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

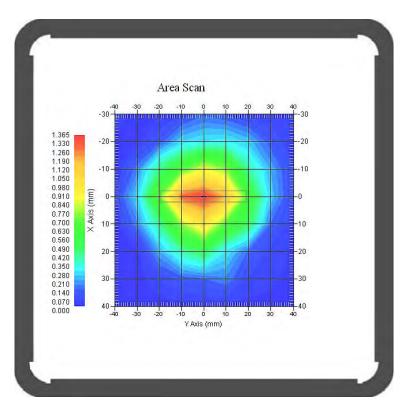
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 2.66 Conversion Factor : 4.5

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 1.017 W/kg 10 gram SAR value : 0.682 W/kg Area Scan Peak SAR : 1.351 W/kg Zoom Scan Peak SAR : 1.993 W/kg

#### **Plot 46#**



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## **Body-worn-Bottom (1880 MHz Middle Channel)**

Measurement Data

Test mode : GPRS Crest Factor : 2.66 Scan Type : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.985 W/kg Power Drift-Finish : 0.996 W/kg Power Drift (%) : 1.339

Tissue Data

 Type
 : Body

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68 F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

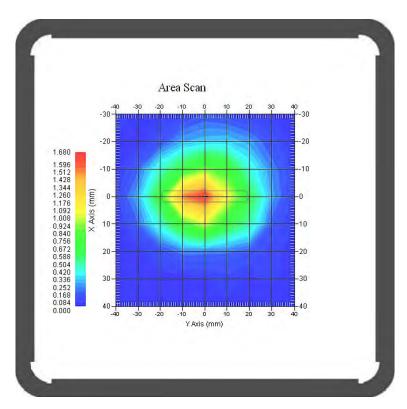
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 2.66 Conversion Factor : 4.5

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)^2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 1.132 W/kg 10 gram SAR value : 0.659 W/kg Area Scan Peak SAR : 1.553 W/kg Zoom Scan Peak SAR : 2.552 W/kg

**Plot 47#** 



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# **Body-worn-Bottom (1909.8 MHz High Channel)**

Measurement Data

Test mode : GPRS
Crest Factor : 2.66
Scan Type : Complete

Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 1.125 W/kg Power Drift-Finish : 1.139 W/kg Power Drift (%) : 1.301

Tissue Data

 Type
 : Body

 Frequency
 : 1909.8 MHz

 Epsilon
 : 53.76 F/m

 Sigma
 : 1.55 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

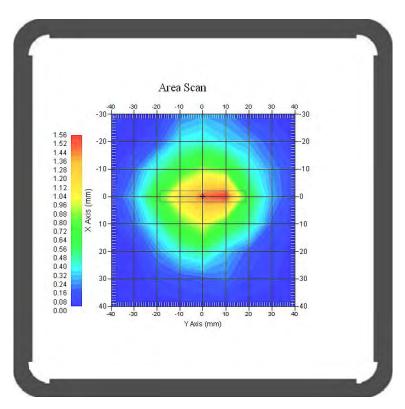
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 2.66 Conversion Factor : 4.5

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 1.057 W/kg 10 gram SAR value : 0.702 W/kg Area Scan Peak SAR : 1.528 W/kg Zoom Scan Peak SAR : 2.198 W/kg

#### **Plot 48#**



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#### WCDMA850; Body-Worn-Front (836.6 MHz Middle Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.592 W/kg Power Drift-Finish : 0.588 W/kg Power Drift (%) : -0.804

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

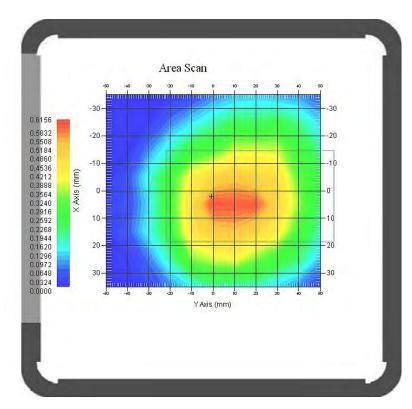
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 1
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.600 W/kg 10 gram SAR value : 0.382 W/kg Area Scan Peak SAR : 0.609 W/kg Zoom Scan Peak SAR : 0.980 W/kg

**Plot 49#** 



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#### WCDMA850; Body-Worn-Back (836.6 MHz Middle Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.701 W/kg Power Drift-Finish : 0.713 W/kg Power Drift (%) : 1.629

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

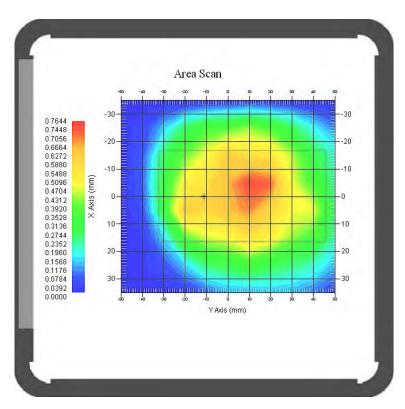
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 1
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.703 W/kg 10 gram SAR value : 0.454 W/kg Area Scan Peak SAR : 0.746 W/kg Zoom Scan Peak SAR : 1.121 W/kg

#### **Plot 50#**



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## WCDMA850; Body-Worn-Left (836.6 MHz Middle Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.402 W/kg Power Drift-Finish : 0.395 W/kg Power Drift (%) : -1.785

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

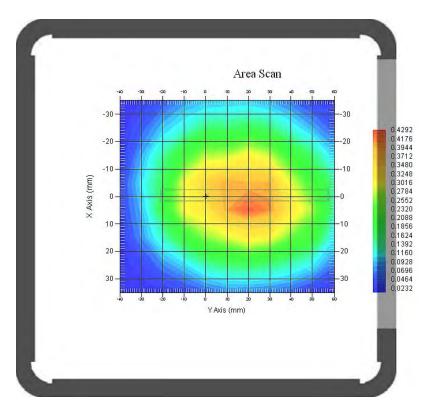
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 1
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.372 W/kg 10 gram SAR value : 0.233 W/kg Area Scan Peak SAR : 0.424 W/kg Zoom Scan Peak SAR : 0.530 W/kg

**Plot 51#** 



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## WCDMA850; Body-Worn-Right (836.6 MHz Middle Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.392 W/kg Power Drift-Finish : 0.388 W/kg Power Drift (%) : -1.055

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

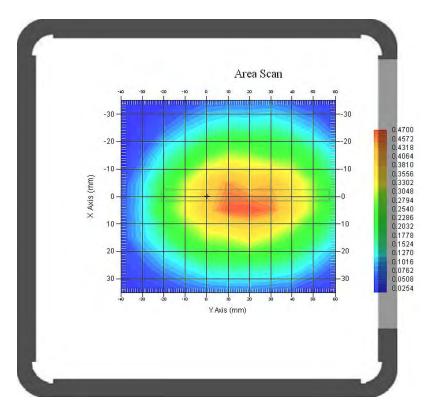
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 1
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.437 W/kg 10 gram SAR value : 0.265 W/kg Area Scan Peak SAR : 0.470 W/kg Zoom Scan Peak SAR : 0.650 W/kg

**Plot 52#** 



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#### WCDMA850; Body-Worn- Bottom(836.6 MHz Middle Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x8x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.022 W/kg Power Drift-Finish : 0.022 W/kg Power Drift (%) : -0.158

Tissue Data

 Type
 : Body

 Frequency
 : 836.6 MHz

 Epsilon
 : 55.30 F/m

 Sigma
 : 0.96 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 1
Conversion Factor : 5.9

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

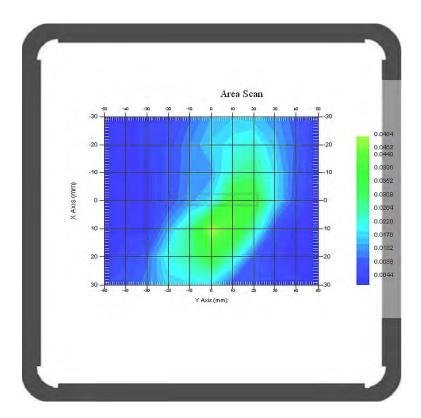
 1 gram SAR value
 : 0.036 W/kg

 10 gram SAR value
 : 0.016 W/kg

 Area Scan Peak SAR
 : 0.048 W/kg

 Zoom Scan Peak SAR
 : 0.070 W/kg

**Plot 53#** 



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## WCDMA1900; Body-Worn-Front (1880 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.305 W/kg Power Drift-Finish : 0.301 W/kg Power Drift (%) : -1.305

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

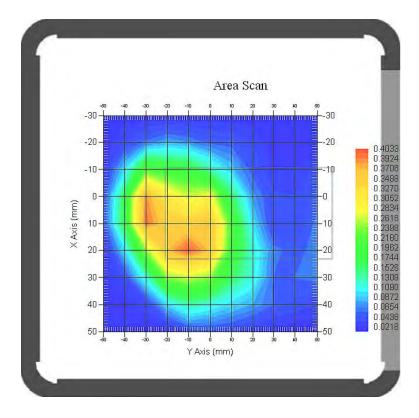
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.330 W/kg 10 gram SAR value : 0.167 W/kg Area Scan Peak SAR : 0.398 W/kg Zoom Scan Peak SAR : 0.620 W/kg

**Plot 54#** 



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## WCDMA1900; Body-Worn-Back (1880 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.362 W/kg Power Drift-Finish : 0.367 W/kg Power Drift (%) : 1.485

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

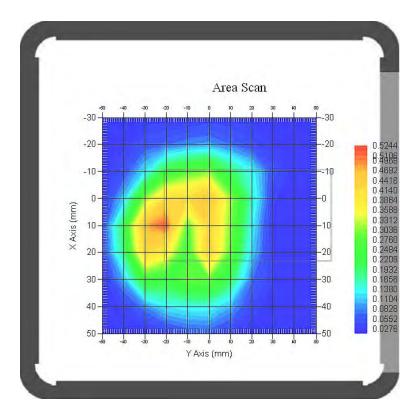
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.484 W/kg 10 gram SAR value : 0.246 W/kg Area Scan Peak SAR : 0.511 W/kg Zoom Scan Peak SAR : 0.950 W/kg

**Plot 55#** 



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## WCDMA1900; Body-Worn-Left (1880 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.012 W/kg Power Drift-Finish : 0.012 W/kg Power Drift (%) : -1.705

Tissue Data

Type : Head Frequency : 1880 MHz Epsilon : 53.68F/m Sigma : 1.54 S/m Density : 1000.00 kg/cu. m

Probe Data

: 500-00283 Serial No. : 1900 Frequency Band Duty Cycle Factor : 1 Conversion Factor : 4.8

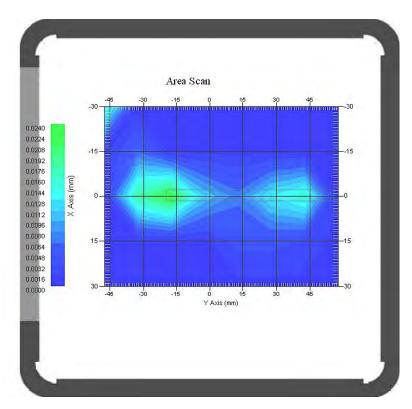
Probe Sensitivity

: 1.20 1.20 1.20  $\mu V/(V/m)2$ 

**Compression Point** : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.019 W/kg 10 gram SAR value : 0.008 W/kg Area Scan Peak SAR : 0.023 W/kg Zoom Scan Peak SAR : 0.050 W/kg

#### **Plot 56#**



## WCDMA1900; Body-Worn-Right (1880 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : 0.807

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

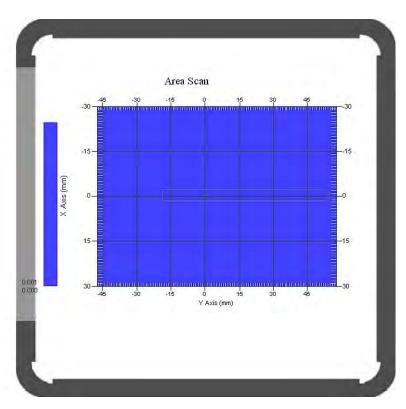
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.001 W/kg 10 gram SAR value : 0.001 W/kg Area Scan Peak SAR : 0.001 W/kg Zoom Scan Peak SAR : 0.009 W/kg

**Plot 57#** 



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## WCDMA1900; Body-Worn-Bottom (1880 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 11x9x1: Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7: Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.498 W/kg Power Drift-Finish : 0.489 W/kg Power Drift (%) : -1.878

Tissue Data

 Type
 : Head

 Frequency
 : 1880 MHz

 Epsilon
 : 53.68F/m

 Sigma
 : 1.54 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

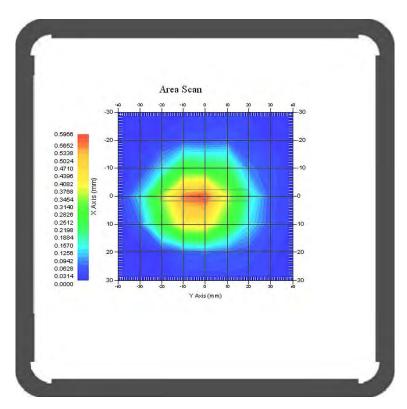
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 4.8

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)$ 2

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.469 W/kg 10 gram SAR value : 0.209 W/kg Area Scan Peak SAR : 0.589 W/kg Zoom Scan Peak SAR : 0.930 W/kg

#### **Plot 58#**



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#### 802.11b; Body-Worn-Front (2437 MHz Channel 6)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg : -0.429 Power Drift (%)

Tissue Data

Type : Body

Frequency : 2437.0 MHz Epsilon : 51.96 F/m : 1.96 S/m Sigma Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

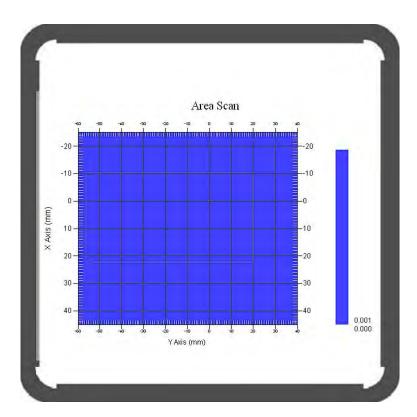
Duty Cycle Factor : 1 Conversion Factor : 4.3

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.002 W/kg 10 gram SAR value : 0.001 W/kg Area Scan Peak SAR : 0.001 W/kg Zoom Scan Peak SAR : 0.006 W/kg

### **Plot 59#**



#### 802.11b; Body-Worn-Back (2437 MHz Channel 6)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.026 W/kg Power Drift-Finish : 0.026 W/kg Power Drift (%) : -1.334

Tissue Data

Type : Body

Frequency : 2437.0 MHz Epsilon : 51.96 F/m : 1.96 S/m Sigma Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

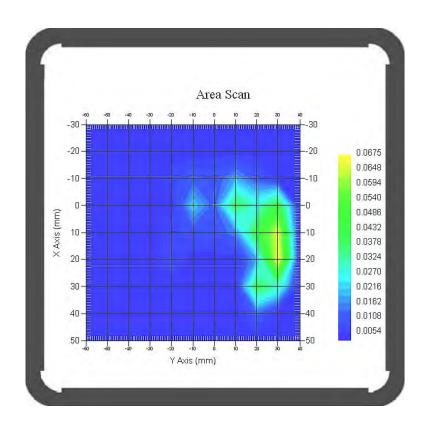
Duty Cycle Factor : 1 Conversion Factor : 4.3

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

: 95.00 mV **Compression Point** Offset : 1.56 mm

1 gram SAR value : 0.063 W/kg 10 gram SAR value : 0.020 W/kg Area Scan Peak SAR : 0.067 W/kg Zoom Scan Peak SAR : 0.220 W/kg

### **Plot 60#**



#### 802.11b; Body-Worn- Left (2437 MHz Channel 6)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.001 W/kg Power Drift-Finish : 0.001 W/kg Power Drift (%) : 2.354

Tissue Data

Type : Body Frequency : 2437.0 MHz Epsilon : 51.96 F/m

: 1.96 S/m Sigma Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

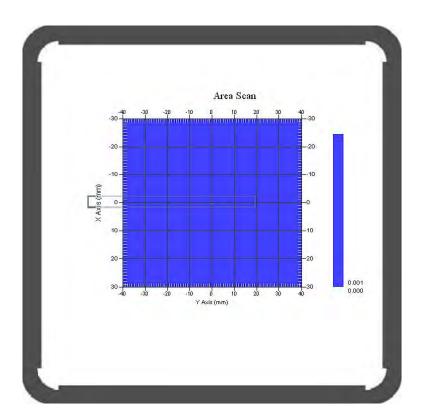
Duty Cycle Factor : 1 Conversion Factor : 4.3

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.001 W/kg 10 gram SAR value : 0.001 W/kg Area Scan Peak SAR : 0.001 W/kg Zoom Scan Peak SAR : 0.003 W/kg

### **Plot 61#**



## 802.11b; Body-Worn- Top (2437 MHz Channel 6)

Measurement Data

Crest Factor

: Complete

Scan Type Area Scan : 8x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.031 W/kg Power Drift-Finish : 0.031 W/kg : -1.007 Power Drift (%)

Tissue Data

Type : Body

Frequency : 2437.0 MHz Epsilon : 51.96 F/m : 1.96 S/m Sigma Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 MHz

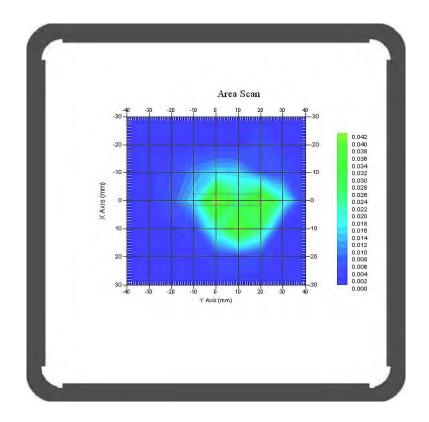
Duty Cycle Factor : 1 Conversion Factor : 4.3

Probe Sensitivity : 1.20 1.20 1.20  $\mu V/(V/m)2$ 

: 95.00 mV **Compression Point** Offset : 1.56 mm

1 gram SAR value : 0.036 W/kg 10 gram SAR value : 0.015 W/kg Area Scan Peak SAR : 0.042 W/kg Zoom Scan Peak SAR : 0.066 W/kg

**Plot 62#** 



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