



SAR EVALUATION REPORT

For

Nexpro International Limitada

San Jose-Goicoechea, Guadalupa, Barrio Tournor, Frente A1 Hotel Villas Tournon, Oficinas Del Bufete Facio Y Canas, Costa Rica

FCC ID: ZYPS7054

Report Type: **Product Type:**

Original Report Smart Mobile Phone

Test Engineer: Sandy Wang

Report Number: R1DG120721001-20

Report Date: 2012-09-05

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Reviewed By: RF Leader

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^{*} This report contain data that are not covered by the NVLAP accreditation and are marked with an asterisk "★" (Rev.2)

	At	testation of Test Results			
	Company Name	Nexpro International Limitada			
	EUT Description	Smart Mobile Phone			
EUT Information	FCC ID	ZYPS7054			
	Model Number	WISE			
	Test Date	e 2012.08.19—2012.08.21			
Frequency	N	Max. SAR Level(s) Measured	Limit (W/Kg)		
Cellular Band		0.675 W/kg 1g Head SAR 1.484 W/kg 1g Body SAR			
PCS Band		0.889 W/kg 1g Head SAR 0.605 W/kg 1g Body SAR			
WCDMA 850		0.226 W/kg 1g Head SAR 0.282 W/kg 1g Body SAR	1.6		
WCDMA 1900		1.175 W/kg 1g Head SAR 1.023 W/kg 1g Body SAR			
Wi-Fi (802.11b)		0.048 W/kg 1g Body SAR			
Applicable Standards	ANSI / IEEE C95.1 : 2005 IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fileds, 3 kHz to 300 GHz. ANSI / IEEE C95.3 : 2002 IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to SuchFields, 100 kHz—300 GHz. OET BULLETIN 65 SUPPLEMENT C Evaluating Compliance with FCC Guidelines for Human Exposure To Radiofrequency Electromagnetic Fields IEEE1528:2003 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques				

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 FCC OET 65 Supplement C and IEEE 1528-2003.

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	RSZ120721001-20	Original Report	2012-09-04	

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EUT DESCRIPTION

This report has been prepared on behalf of Nexpro International Limitada and their product, FCC ID: ZYPS7054, Model: WISE or the EUT (Equipment Under Test) as referred to in the rest of this report. The EUT is a Smart Mobile Phone.

Report No: R1DG120721001-20

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
Hot-spot	Support
Operation Mode :	GSM Voice , GPRS/EGPRS Data, WCDMA , Bluetooth and Wi-Fi
	Cellular Band: 824-849 MHz (TX); 869-894 MHz (RX)
	PCS Band: 1850-1910 MHz (TX); 1930-1990 MHz (RX)
F.,, ,,,,,,,,,,,, P.,,, J.	WCDMA Band V: 824-849 MHz (TX); 869-894 MHz (RX)
Frequency Band:	WCDMA Band II: 1850-1910 MHz (TX); 1930-1990 MHz (RX)
	Bluetooth: 2402-2480 MHz
	Wi-Fi: 2412-2462 MHz, 2422-2452 MHz
	GSM/GPRS Cellular Band: 32.26 dBm
	GSM/GPRS PCS Band: 29.55 dBm
Conducted RF Power:	WCDMA Band V: 20.58 dBm
Conducted Kr Fower:	WCDMA Band II: 21.61 dBm
	Bluetooth: 8.30 dBm
	Wi-Fi: 12.81 dBm
Dimensions (L*W*H):	112.5mm (L)× 62.4mm (W)× 14mm (H)
Weight:	105.2g
Power Source:	3.7VDC
Normal Operation:	Head Body-worn and Hot-spot

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Report No: R1DG120721001-20

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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Report No: R1DG120721001-20

FACILITIES AND ACCREDITATION

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

Additionally, Bay Area Compliance Laboratories Corp. (Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0).



The current scope of accreditations can be found at http://ts.nist.gov/Standards/scopes/2007070.htm

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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 10 mm, with the side length of the 10 g cube 21,5 mm.

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

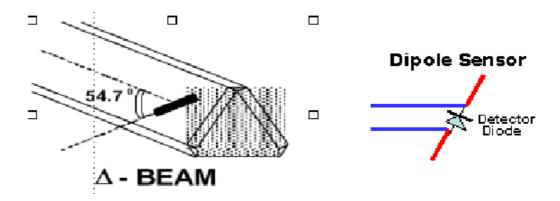
The overall uncertainty for the methodology and algorithms the used during the SAR calculation was evaluated using the data from IEEE 1528 based on the example f3 algorithm:

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

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	$0.70 \ \mu V/(V/m)^2$ to $0.85 \ \mu V/(V/m)^2$
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
Boundary Effect	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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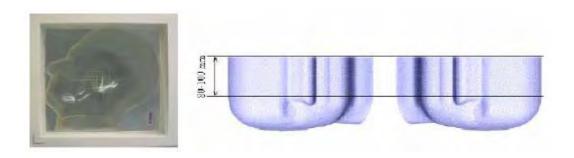


Phantom Types

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.



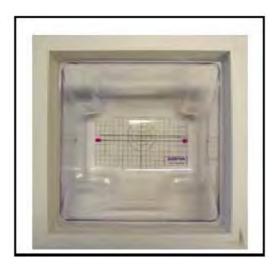
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APREL Laboratories Universal Phantom

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	35	91	15	19	00	24	50
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 7	Гissue	Body	Body Tissue			
(MHz)	Er	O (S/m)	£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

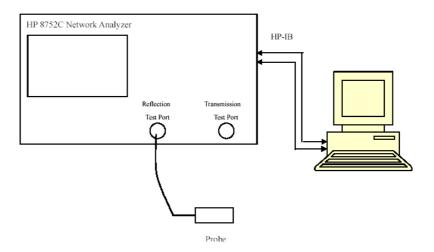
Equipments List & Calibration Information

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	2012-05-13	110-00212
Miniature E-Field Probe	ALS-E-020	2012-08-09	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 Body	ALS-TS-2450-B	Each Time	290-01109
Power Amplifier	5S1G4	N/A	71377
Synthesized Sweeper	HP 8341B	2012-05-17	2624A00116
Universal Radio Communication Tester	CMU 200	2011.12.16	1100.0008.02
EMI Test Receiver	ESCI	2011-11-17	101122

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SAR MEASUREMENT SYSTEM VERIFICATION

Liquid Verification



Liquid Verification Setup Block Diagram

Liquid Verification Results

Engagonary	Liquid	Liqı Paran		Target	Carget Value Delta T		Tolerance	
Frequency	Type	$\epsilon_{ m r}$	O' (S/m)	ε _r	O (S/m)	(%)		(%)
824.2	Head	42.25	0.88	41.50	0.90	-2.460	-2.460	±5
024.2	Body	56.19	0.97	55.20	0.97	0.327	0.328	±5
826.4	Head	42.14	0.88	41.50	0.90	-2.151	-2.150	±5
820.4	Body	56.20	0.98	55.20	0.97	0.679	0.750	±5
836.6	Head	42.21	0.89	41.50	0.90	-0.904	-0.904	±5
630.0	Body	56.26	0.99	55.20	0.97	2.089	2.089	±5
846.6	Head	42.06	0.90	41.50	0.90	0.423	0.265	±5
040.0	Body	56.33	1.00	55.20	0.97	3.503	3.503	±5
848.8	Head	41.98	0.90	41.50	0.90	0.741	0.264	±5
040.0	Body	56.34	1.01	55.20	0.97	3.857	3.857	±5
1850.2	Head	40.05	1.39	40.00	1.40	0.124	-0.401	±5
1830.2	Body	54.04	1.50	53.30	1.52	1.386	-1.640	±5
1852.6	Head	40.05	1.40	40.00	1.40	0.13	-0.244	±5
1832.0	Body	54.03	1.50	53.30	1.52	1.363	-1.498	±5
1880	Head	40.06	1.42	40.00	1.40	0.144	1.569	±5
1000	Body	53.89	1.52	53.30	1.52	1.105	0.144	±5
1907.6	Head	40.06	1.45	40.00	1.40	0.158	3.391	±5
1907.0	Body	53.75	1.55	53.30	1.52	0.846	1.791	±5
1909.8	Head	40.06	1.45	40.00	1.40	0.16	3.551	±5
1909.8	Body	53.74	1.55	53.30	1.52	0.823	1.934	±5
2412	Body	52.90	1.94	52.70	1.95	0.375	-0.69	±5
2437	Body	52.70	1.98	52.70	1.95	0.028	1.573	±5
2462	Body	52.54	2.02	52.70	1.95	-0.31	3.373	±5

^{*}Liquid Verification was performed on 2012-08-19

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Please refer to the following tables

850 MHz Head				850 MHz Body			
Frequency (MHz)	e'	e''	Frequency (MHz)	e'	e''		
824.0	42.254109	19.161296	824.0	56.186819	21.241738		
824.5	42.223049	19.161849	824.5	56.189957	21.243734		
825.0	42.206372	19.162402	825.0	56.193091	21.245732		
825.5	42.101126	19.162955	825.5	56.196233	21.247725		
826.0	42.119502	19.163508	826.0	56.199371	21.249721		
826.5	42.141417	19.164061	826.5	56.202509	21.251716		
827.0	42.117884	19.164615	827.0	56.205647	21.253712		
827.5	42.165249	19.165168	827.5	56.208785	21.255707		
828.0	42.184874	19.165721	828.0	56.211923	21.257703		
828.5	42.191308	19.166274	828.5	56.215061	21.259698		
829.0	42.242291	19.166827	829.0	56.218199	21.261694		
829.5	42.190731	19.167381	829.5	56.221337	21.263691		
830.0	42.227136	19.167933	830.0	56.224475	21.265685		
830.5	42.187124	19.168486	830.5	56.227613	21.267681		
831.0	42.160095	19.169039	831.0	56.230751	21.269676		
831.5	42.179671	19.169592	831.5	56.233889	21.271672		
832.0	42.141449	19.170145	832.0	56.237027	21.273667		
832.5	42.116245	19.170698	832.5	56.240165	21.275663		
833.0	42.156825	19.171251	833.0	56.243303	21.277659		
833.5	42.188276	19.171804	833.5	56.246441	21.279654		
834.0	42.185698	19.172357	834.0	56.249578	21.281651		
834.5	42.184277	19.172912	834.5	56.252716	21.283645		
835.0	42.209131	19.173463	835.0	56.255854	21.285641		
835.5	42.210132	19.174317	835.5	56.258992	21.287636		
836.0	42.213735	19.175171	836.0	56.262131	21.289632		
836.5	42.208752	19.176024	836.5	56.263268	21.291627		
837.0	42.185536	19.176878	837.0	56.268406	21.293623		
837.5	42.179737	19.177731	837.5	56.271544	21.295619		
838.0	42.202932	19.178585	838.0	56.274682	21.297614		
838.5	42.161422	19.179439	838.5	56.277821	21.299611		
839.0	42.151342	19.180292	839.0	56.280958	21.301605		
839.5	42.153815	19.181146	839.5	56.284096	21.303601		
840.0	42.164893	19.181999	840.0	56.287234	21.305596		
840.5	42.154243	19.182853	840.5	56.290372	21.307592		
841.0	42.137499	19.183707	841.0	56.293514	21.309587		
841.5	42.166971	19.184561	841.5	56.296648	21.311583		
842.0	42.168675	19.185414	842.0	56.299786	21.313579		
842.5	42.172375	19.186268	842.5	56.302924	21.315574		
843.0	42.166464	19.177102	843.0	56.306062	21.317571		
843.5 844.0	42.090089 42.166419	19.177956 19.178809	843.5	56.309214	21.319565		
844.5	42.100419	19.178609	844.0 844.5	56.312338 56.315476	21.321561 21.323556		
845.0 845.5	42.046606	19.180517	845.0 845.5	56.318614	21.325552 21.327548		
845.3 846.0	42.061924 42.016461	19.181371 19.172205	846.0	56.321752 56.324891	21.32/548		
846.5	42.010461	19.172205	846.5	56.328028	21.329543		
847.0	42.037441	19.173039	847.0	56.331166	21.333534		
847.5	42.037694	19.163893	847.5	56.334304	21.335531		
848.0	42.040878	19.145562	848.0	56.337442	21.337525		
848.5	42.019053	19.145362	848.5	56.340581	21.339521		
849.0	41.979281	19.136397	849.0				
849.0	41.9/9281	19.110411	849.0	56.343718	21.341516		

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1900 MHz Head				1900 MHz Body			
Frequency (MHz)	e'	e''	Frequency (MHz)	e'	e''		
1850.0	40.049442	13.556134	1850.0	54.039554	14.534953		
1851.2	40.051669	13.558028	1851.2	54.032562	14.536052		
1852.4	40.051922	13.559929	1852.4	54.026569	14.537155		
1853.6	40.052168	13.561831	1853.6	54.020576	14.538256		
1854.8	40.052417	13.563731	1854.8	54.014583	14.539357		
1856.0	40.052665	13.565632	1856.0	54.008591	14.540459		
1857.2	40.052915	13.567533	1857.2	54.002598	14.541561		
1858.4	40.053166	13.569434	1858.4	53.996606	14.542667		
1859.6	40.053414	13.571335	1859.6	53.990612	14.543762		
1860.8	40.053663	13.573246	1860.8	53.984622	14.544864		
1862.0	40.053912	13.575138	1862.0	53.978627	14.545965		
1863.2	40.054161	13.577041	1863.2	53.972634	14.547063		
1864.4	40.054411	13.578941	1864.4	53.966641	14.548167		
1865.6	40.054659	13.580842	1865.6	53.960649	14.549269		
1866.8	40.054909	13.582742	1866.8	53.954656	14.550374		
1868.0	40.055207	13.584643	1868.0	53.948663	14.551475		
1869.2	40.055406	13.586545	1869.2	53.942671	14.552572		
1870.4	40.055658	13.588445	1870.4	53.936678	14.553673		
1871.6	40.055905	13.590346	1871.6	53.930687	14.554775		
1872.8	40.056154	13.592248	1872.8	53.924692	14.555876		
1874.0	40.056403	13.594153	1874.0	53.918714	14.556975		
1875.2	40.056653	13.596051	1875.2	53.912707	14.558078		
1876.4	40.056912	13.597951	1876.4	53.906714	14.559184		
1877.6	40.057151	13.600073	1877.6	53.900721	14.560282		
1878.8	40.057421	13.601753	1878.8	53.894729	14.561382		
1880.0	40.057649	13.603654	1880.0	53.888736	14.562479		
1881.2	40.057898	13.605555	1881.2	53.882743	14.563584		
1882.4	40.058149	13.607456	1882.4	53.876751	14.564685		
1883.6	40.058397	13.609358	1883.6	53.870758	14.565787		
1884.8	40.058646	13.611259	1884.8	53.864766	14.566895		
1886.0	40.058895	13.613159	1886.0	53.858772	14.567989		
1887.2	40.059145	13.615066	1887.2	53.852779	14.569089		
1888.4	40.059395	13.616961	1888.4	53.846787	14.570192		
1889.6	40.059643	13.618864	1889.6	53.840794	14.571293		
1890.8	40.059892	13.620764	1890.8	53.834801	14.572394		
1892.0	40.060141	13.622665	1892.0	53.828808	14.573495		
1893.2	40.060391	13.624566	1893.2	53.822816	14.574597		
1894.4	40.060641	13.626468	1894.4	53.816823	14.575742		
1895.6	40.060888	13.628374	1895.6	53.810833	14.576799		
1896.8	40.061138	13.630271	1896.8	53.804838	14.577924		
1898.0	40.061387	13.632172	1898.0	53.798846	14.579002		
1899.2	40.061637	13.634072	1899.2	53.792852	14.580103		
1900.4	40.061887	13.635973	1900.4	53.786859	14.581204		
1901.6	40.062135	13.637872	1901.6	53.780867	14.582305		
1902.8	40.062405	13.639775	1902.8	53.774874	14.583406		
1904.0	40.062632	13.641676	1904.0	53.768881	14.584515		
1905.2	40.062882	13.643578	1905.2	53.762888	14.585609		
1906.4	40.063142	13.645479	1906.4	53.756896	14.586711		
1907.6	40.063383	13.647377	1907.6	53.750903	14.587812		
1908.8	40.063629	13.649281	1908.8	53.744912	14.588913		
1910.0	40.063881	13.651182	1910.0	53.738917	14.590017		

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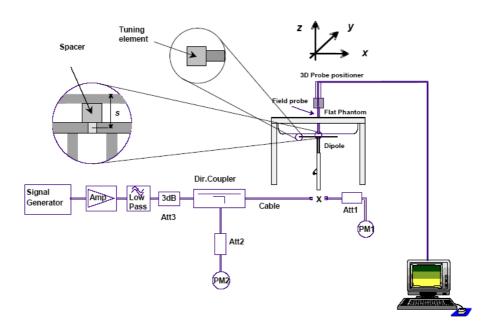
2450 MHz Body						
Frequency (MHz)	e'	e''				
2410	52.915625	14.428874				
2411	52.906595	14.435871				
2412	52.897583	14.440873				
2413	52.888574	14.445871				
2414	52.879563	14.450873				
2415	52.870562	14.455878				
2416	52.861551	14.460873				
2417	52.852536	14.465873				
2418	52.843528	14.470872				
2419	52.834519	14.475871				
2420	52.825524	14.480877				
2421	52.816493	14.505873				
2422	52.809484	14.512876				
2423	52.802476	14.519873				
2424	52.795468	14.526872				
2425	52.788461	14.533873				
2426	52.781453	14.540872				
2427	52.774445	14.547871				
2428	52.767437	14.554878				
2429	52.760431	14.561873				
2430	52.753426	14.568872				
2431	52.746414	14.575871				
2432	52.739406	14.582872				
2433	52.732398	14.589877				
2434	52.725391	14.596872				
2435	52.718383	14.603872				
2436	52.711375	14.610877				
2437 2438	52.704367 52.697359	14.617876				
2438	52.690357	14.624876				
2440	52.683344	14.631872 14.638871				
2441	52.676336	14.645871				
2442	52.669328	14.649869				
2444	52.662321	14.653872				
2445	52.655313	14.657875				
2446	52.648305	14.661874				
2447	52.641297	14.665873				
2448	52.634289	14.669871				
2449	52.627286	14.673871				
2450	52.620274	14.677872				
2451	52.613266	14.681871				
2452	52.606258	14.685871				
2453	52.599251	14.689871				
2454	52.592243	14.693875				
2455	52.585235	14.697871				
2456	52.578227	14.701871				
2457	52.571219	14.705878				
2458	52.564213	14.709871				
2459	52.557204	14.713876				
2460	52.550196	14.717871				
2461	52.543188	14.721874				
2462	52.536181	14.725869				
	52.543188 52.536181	14.721874 14.725869				

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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	2012-08-09	2013-08-08
APREL	Dipole antenna (835 MHz)	ALS-D-835-S-2	180-00558	2011-08-25	2014-08-24
APREL	Dipole antenna (1900 MHz)	ALS-D-1900-S-2	210-00710	2011-08-25	2014-08-24
APREL	Dipole antenna (2450 MHz)	ALS-D-2450-S-2	220-00758	2011-08-25	2014-08-24

System Accuracy Check Results

Date	Frequency (MHz)	Liquid Type	Measured SAR (W/Kg)		Target Value (W/Kg)	Delta (%)	Tolerance (%)
2012-8-19	835	Head	1g	8.762	9.59	-8.634	±10
2012-8-19 833	Body	1g	9.662	9.684	-0.227	±10	
2012-8-20	1900	Head	1g	42.104	39.648	6.195	±10
2012-8-20 1900	Body	1g	41.209	39.769	3.621	±10	
2012-8-21	2450	Body	1g	52.526	52.561	-0.003	±10

^{*}All SAR values are normalized to 1 Watt forward power.

SAR Evaluation Report 22 of 160

SAR SYSTEM VALIDATION DATA

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

System Performance Check 836.6 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 : 835.00

Max. Transmit Pwr : 1 W

Drift Time : 3 min(s)

Power Drift-Start : 8.516 W/kg

Power Drift-Finish : 8.719 W/kg

Power Drift (%) : 2.491

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 : 836.60 MHz Last Calib. Date : 19-Aug-2012 : 20.00 °C Temperature Ambient Temp. : 21.00 °C Humidity : 56.00 RH% **Epsilon** : 42.21 F/m Sigma : 0.89 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 : 09-Aug-2012
Frequency Band : 835.00
Duty Cycle Factor : 1

Duty Cycle Factor : 1 Conversion Factor : 6.6

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

Compression Point : 95.00 mV Offset : 1.56 mm

Measurement Data

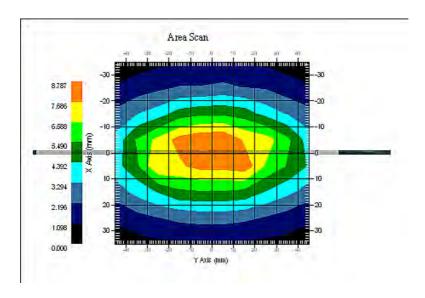
Crest Factor : 1

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

Area Scan : 8x10x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

SAR Evaluation Report 23 of 160

1 gram SAR value : 8.762 W/kg 10 gram SAR value : 4.921 W/kg Area Scan Peak SAR : 8.787 W/kg Zoom Scan Peak SAR : 14.022 W/kg



835 MHz System Validation with Head Tissue

SAR Evaluation Report 24 of 160

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

System Performance Check 836.6 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 : 835.00

Max. Transmit Pwr : 1 W

Drift Time : 3 min(s)

Power Drift-Start : 9.513 W/kg

Power Drift-Finish : 9.776 W/kg

Power Drift (%) : 2.482

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 Serial No. : 270-02101 Frequency : 836.60 MHz Last Calib. Date : 19-Aug-2012 : 20.00 °C Temperature : 21.00 °C Ambient Temp. : 56.00 RH% Humidity **Epsilon** : 56.26 F/m Sigma : 0.99 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 : 09-Aug-2012
Frequency Band : 835.00

Duty Cycle Factor : 1 Conversion Factor : 6.6

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

Compression Point : 95.00 mV Offset : 1.56 mm

Measurement Data

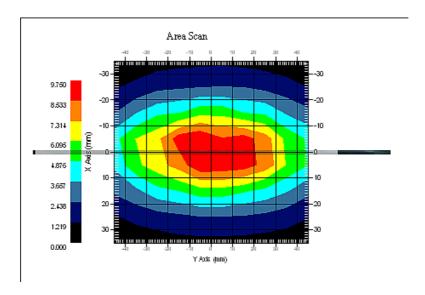
Crest Factor : 1 Scan Type : Complete

Tissue Temp. $: 21.00 \,^{\circ}\text{C}$ Ambient Temp. $: 21.00 \,^{\circ}\text{C}$

Area Scan : 8x10x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

SAR Evaluation Report 25 of 160

1 gram SAR value : 9.662 W/kg 10 gram SAR value : 5.819 W/kg Area Scan Peak SAR : 9.749 W/kg Zoom Scan Peak SAR : 16.011 W/kg



835 MHz System Validation with Body Tissue

SAR Evaluation Report 26 of 160

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

System Performance Check 1880.0 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 : 1900.00

Max. Transmit Pwr : 1 W

Drift Time : 3 min(s)

Power Drift-Start : 43.326 W/kg

Power Drift-Finish : 44.389 W/kg

Power Drift (%) : 2.455

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 Frequency : 1880.00 : 19-Aug-2012 Last Calib. Date Temperature : 20.00 °C : 21.00 °C Ambient Temp. : 56.00 RH% Humidity : 40.06 F/m **Epsilon** Sigma : 1.42 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 : 09-Aug-2012
Frequency Band : 1900.00 MHz

Duty Cycle Factor : 1 Conversion Factor : 5.20

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

Compression Point : 95.00 mV Offset : 1.56 mm

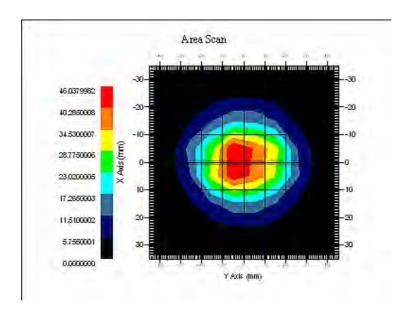
Measurement Data

Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 20.00 °C

Area Scan : 8x10x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

SAR Evaluation Report 27 of 160

1 gram SAR value : 42.104 W/kg 10 gram SAR value : 24.097W/kg Area Scan Peak SAR : 46.037 W/kg Zoom Scan Peak SAR : 78.219 W/kg



1900 MHz System Validation with Head Tissue

SAR Evaluation Report 28 of 160

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

System Performance Check 1880.0 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 : 1900.00

Max. Transmit Pwr : 1 W

Drift Time : 3 min(s)

Power Drift-Start : 41.696 W/kg

Power Drift-Finish : 41.987 W/kg

Power Drift (%) : 0.748

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. : 295-02102 Frequency : 1880.00 MHz Last Calib. Date : 19-Aug-2012 : 20.00 °C Temperature : 21.00 °C Ambient Temp. : 56.00 RH% Humidity : 53.89 F/m **Epsilon** Sigma : 1.52 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 : 09-Aug-2012
Frequency Band : 1900.00

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

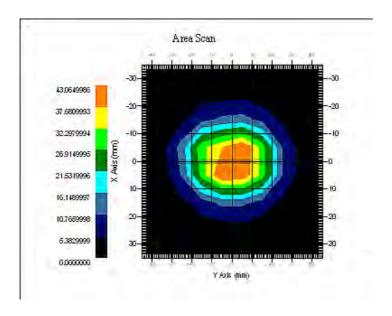
Measurement Data

Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 21.00 °C

Area Scan : 8x10x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

SAR Evaluation Report 29 of 160

1 gram SAR value : 41.209 W/kg 10 gram SAR value : 23.244 W/kg Area Scan Peak SAR : 43.061 W/kg Zoom Scan Peak SAR : 79.337 W/kg



1900 MHz System Validation with Body Tissue

SAR Evaluation Report 30 of 160

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

System Performance Check 2437 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 Band : 2450

Max. Transmit Pwr
Drift Time : 3 min(s)
Power Drift-Start : 50.125 W/kg
Power Drift-Finish
Power Drift(%) : 1.544

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 Frequency : 2437.00 MHz Last Calib. Date : 19-Aug-2012 : 20.00 °C Temperature : 21.00 °C Ambient Temp. : 50.00 RH% Humidity : 52.70 F/m Epsilon Sigma : 1.98 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 : 09-Aug-2012

Frequency Band : 2450 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

 $\begin{array}{lll} \mbox{Scan Type} & : \mbox{Complete} \\ \mbox{Tissue Temp.} & : 20.00 \ ^{\circ}\mbox{C} \\ \mbox{Ambient Temp.} & : 20.00 \ ^{\circ}\mbox{C} \\ \end{array}$

Area Scan : 8x7x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

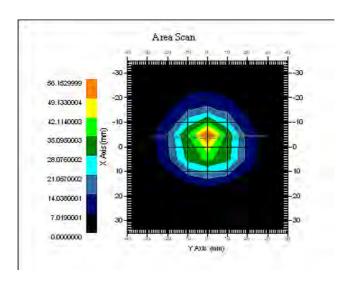
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 1 gram SAR value
 : 52.526 W/kg

 10 gram SAR value
 : 25.637 W/kg

 Area Scan Peak SAR
 : 56.153 W/kg

 Zoom Scan Peak SAR
 : 97.521 W/kg



2450 MHz System Validation with Body Tissue

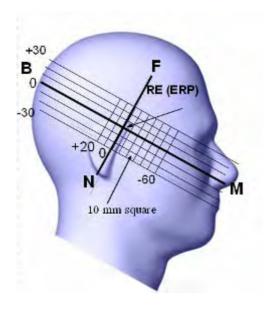
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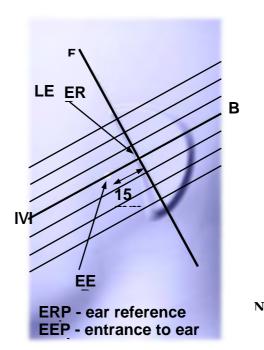
EUT TEST STRATEGY AND METHODOLOGY

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

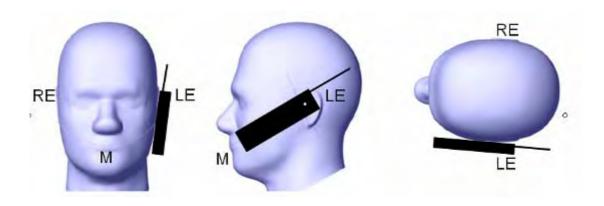
The device is brought toward the mouth of the head phantom by pivoting against the "ear reference point" or along the "N-F" line for the SCC-34/SC-2 head phantom.

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

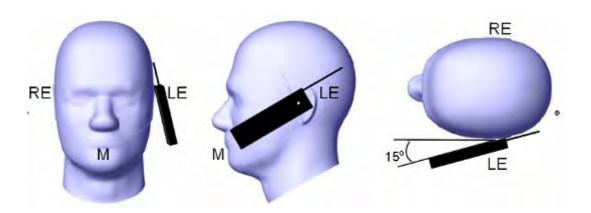
With the handset aligned in the "Cheek/Touch Position":

- 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.

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- 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.

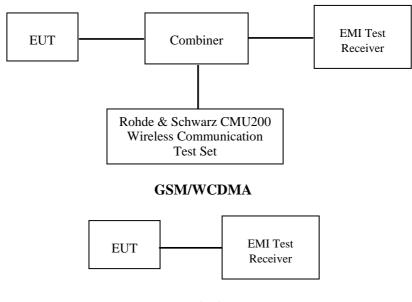
Step 4: Re-measurement of the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation was repeated.

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CONDUCTED OUTPUT POWER MEASUREMENT

Test Block Diagram and Procedure

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



Wi-Fi

Test Results

GSM

Band	Frequency	Conducted Outp	out Power
Danu	(MHz)	(dBm)	(Watt)
	824.2	32.21	1.663
Cellular	836.6	32.10	1.622
	848.8	32.26	1.683
	1850.2	29.03	0.800
PCS	1880.0	29.18	0.828
	1909.8	29.15	0.822

GPRS

Band	Channel No.	Frequency	RF Output Power (dBm)						
	Chaimei No.	(MHz)	1 slot	2 slots	3 slots	4 slots			
	128	824.2	32.17	31.32	29.60	28.82			
Cellular	190	836.6	32.18	31.32	29.58	28.78			
	251	848.8	32.15	31.27	29.54	28.76			
	512	1850.2	29.55	28.62	27.05	26.22			
PCS	661	1880.0	29.32	28.43	26.81	26.02			
	810	1909.8	29.04	28.14	26.56	25.75			

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E-GPRS

Band	Channel No.	Frequency	RF Output Power (dBm)					
	Channel No.	(MHz)	1 slot	2 slots	3 slots	4 slots		
	128	824.2	27.05	25.97	23.3	22.04		
Cellular	190	836.6	26.97	26.16	23.41	22.03		
	251	848.8	27.01	26.13	23.45	22.06		
	512	1850.2	25.59	24.48	22.29	20.98		
PCS	661	1880.0	25.49	24.33	22.40	20.73		
	810	1909.8	25.28	24.00	21.85	20.46		

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

The time based average power for GPRS

Band	Channel No.	Frequency	Time based average Power (dBm)						
	Chamiei No.	(MHz)	1 slot	2 slots	3 slots	4 slots			
	128	824.2	23.17	25.32	25.35	25.82			
Cellular	190	836.6	23.18	25.32	25.33	25.78			
	251	848.8	23.15	25.27	25.29	25.76			
	512	1850.2	20.55	22.62	22.80	23.22			
PCS	661	1880.0	20.32	22.43	22.56	23.02			
	810	1909.8	20.04	22.14	22.31	22.75			

The time based average power for EGPRS

Band	Channel No.	Frequency	Time based average Power (dBm)					
	Channel No.	(MHz)	1 slot	2 slots	3 slots	4 slots		
	128	824.2	18.05	19.97	19.05	19.04		
Cellular	190	836.6	17.97	20.16	19.16	19.03		
	251	848.8	18.01	20.13	19.20	19.06		
	512	1850.2	16.59	18.48	18.04	17.98		
PCS	661	1880.0	16.49	18.33	18.15	17.73		
	810	1909.8	16.28	18.00	17.60	17.46		

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, 2, 3 and 4 timeslots has been activated separately with power control level 5 (850 MHz band) and 0(1900 MHz band).
- 4. For EGPRS, 1, 2, 3 and 4 timeslots has been activated separately with power control level 5(850 MHz band) and 0 (1900 MHz band).
- 5. According to KDB 941225 D03, we can reduce the SAR testing for EGPRS.

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WCDMA

The summary of WCDMA settings are illustrated below:

WCDMA	Mode	HSDPA	HSDPA	HSDPA	HSDPA			
Setting	Subset	1	2	3	4			
	Loopback Mode	Test Mode 1						
	Rel99 RMC	12.2kbps RMC						
	HSDPA FRC		H	-Set1				
WCDMA	Power Control Algorithm		Algo	orithm2				
General	βс	2/15	12/15	15/15	15/15			
Settings	βd	15/15	15/15	8/15	4/15			
	Bd(SF)	64						
	βc/βd	2/15	12/15	15/8	15/4			
	βhs	4/15	24/15	30/15	30/15			
	CM(dB)	0	1	1.5	1.5			
	D _{ACK}	8						
	D_{NAK}	8						
HSDPA	DCQI	8						
Specific Settings	Ack-Nack repetition factor	3						
bettings	CQI Feedback	4ms						
	CQI Repetition Factor	2						
	Ahs= β hs/ β c	30/15	<u> </u>		<u> </u>			

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WCDM	Mode	HSPA	HSPA	HSPA	HSPA	HSPA		
A Setting	Subset	1	2	3	4	5		
	Loopback Mode			Test Mode 1	3 4 ode 1 RMC t1 oopback hm2 /15 2/15 15 15/15 /15 2/15 /15 4/15 47/15 56/75 .0 3.0 1 2 8 5 0 0 5 17 2 71 2.8 205.8 E-TFCI FE-TFCI F			
	Rel99 RMC	12.2kbps RMC						
	HSDPA FRC			H-Set1				
	HSUPA Test		I	HSUPA Loopback				
	Power Control Algorithm			Algorithm2				
WCDMA	βc	11/15	6/15	15/15	2/15	15/15		
General	βd	15/15	15/15	9/15	15/15	15/15		
Settings	βес	209/225	12/15	30/15	2/15	24/15		
	βc/βd	11/15	6/15	15/9	2/15	15/15		
	βhs	22/15	12/15	30/15	4/15	30/15		
	βed	1309/225	94/75	47/15 47/15	56/75	134/15		
	CM(dB)	1.0	3.0	2.0	3.0	1.0		
	MPR(dB)	0	2	1	2	0		
	DACK	8		1	•	•		
HSDPA Specific	DNAK	8						
	DCQI	8						
	Ack-Nack repetition factor	3						
Settings	CQI Feedback	4ms	łms					
	CQI Repetition Factor	2						
	Ahs= β hs/ β 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 1 E-TFCI 71 E-TFCI PO2 E-TFCI PO2 E-TFCI 81 E-TFCI PO 2	8 3 6	E-TFCI 11 E-TFCI PO4 E-TFCI 92 E-TFCI PO 18	E-TFCI 1 E-TFCI P	O 4 7 O 18 1 O 23 5 O 26 1		

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WCDMA Output Power:

Mode	Conducted Output Power (dBm)							
Band		WCDMA 850		,	WCDMA 1900			
Tx Channel NO.	4132	4182	4233	9262	9400	9538		
Frequency (MHz)	826.4	836.6	846.6	1852.4	1880	1907.6		
RMC 12.2 kbps	20.57	20.38	20.58	21.40	20.57	21.60		
HSDPA subtest-1	20.44	20.31	20.40	20.70	20.15	20.63		
HSDPA subtest-2	20.55	20.35	20.37	21.32	20.30	20.33		
HSDPA subtest-3	20.43	20.35	20.41	21.34	21.10	21.13		
HSDPA subtest-4	20.52	20.47	20.42	21.29	20.07	20.70		
HSUPA sbutest-1	20.38	20.33	20.37	21.30	20.04	20.78		
HSUPA sbutest-2	20.51	20.36	20.49	21.02	20.58	20.71		
HSUPA sbutest-3	19.77	19.42	19.67	20.81	20.07	20.4		
HSUPA sbutest-4	19.89	19.85	19.32	20.66	20.22	20.25		
HSUPA sbutest-5	19.60	19.84	19.80	20.54	20.10	20.13		

- **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.
 - 4. All sub-tests were completed according to the procedures in section 5.2 of 3GPP TS34.121. A.

Wi-Fi

Mode	Frequency	Conducted Outp	out Power
Wiode	(MHz)	(dBm)	(Watt)
	2412	12.58	0.018
802.11b	2437	12.81	0.019
	2462	12.64	0.018
	2412	10.93	0.012
802.11g	2437	10.49	0.011
	2462	10.79	0.012
	2412	10.79	0.012
802.11n-20	2437	10.92	0.012
	2462	10.84	0.012
	2422	10.86	0.012
802.11n-40	2437	10.58	0.011
	2452	10.50	0.011

Note: 1. The output power was tested under data rate 1Mbps for 802.11b, 6Mbps for 802.11g, 6.5Mbps for 802.11n-20, 13.5Mbps for 802.11n-40.

2. KDB248227-SAR is not required for 802.11g/802.11n channels when the maximum average output power is less than 1/4 dB higher than that measured on the corresponding 802.11b channels.

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SAR MEASUREMENT RESULTS

This page summarizes the results of the performed dosimetric evaluation.

SAR Test Data

Environmental Conditions

Temperature:	21° C
Relative Humidity:	50%
ATM Pressure:	1002 mbar

^{*} Testing was performed by Sandy Wang on 2012.08.19--2012.08.21

Cellular Band:

EUT	Freque	ncy	Test	Antenna	Phantom	Power	FCC 1g SA	AR (W/Kg)
Position	Channel	MHz	Mode	Type	Type	Drift (%)	Measured	Limit
	128(Low)	824.2	GSM	Integral	SAM	/	/	1.6
Left Head Cheek	190(Middle)	836.6	GSM	Integral	SAM	/	/	1.6
	251(High)	848.8	GSM	Integral	SAM	2.739	0.675	1.6
	128(Low)	824.2	GSM	Integral	SAM	/	/	1.6
Left Head Tilt	190(Middle)	836.6	GSM	Integral	SAM	/	/	1.6
	251(High)	848.8	GSM	Integral	SAM	1.369	0.366	1.6
D: 1. IV	128(Low)	824.2	GSM	Integral	SAM	/	/	1.6
Right Head Cheek	190(Middle)	836.6	GSM	Integral	SAM	/	/	1.6
	251(High)	848.8	GSM	Integral	SAM	0.537	0.665	1.6
D: 1. IV. 1	128(Low)	824.2	GSM	Integral	SAM	/	/	1.6
Right Head Tilt	190(Middle)	836.6	GSM	Integral	SAM	/	/	1.6
	251(High)	848.8	GSM	Integral	SAM	0.971	0.353	1.6
Body-Front	128(Low)	824.2	GSM	Integral	Universal	/	/	1.6
w/ Headset	190(Middle)	836.6	GSM	Integral	Universal	/	/	1.6
(10mm)	251(High)	848.8	GSM	Integral	Universal	4.401	0.411	1.6
Body-Back	128(Low)	824.2	GSM	Integral	Universal	/	/	1.6
w/ Headset	190(Middle)	836.6	GSM	Integral	Universal	/	/	1.6
(10mm)	251(High)	848.8	GSM	Integral	Universal	0.277	0.479	1.6

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Note:

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^{1.} When the 1-g SAR is \leq 0.8W/Kg, testing for other channels are optional. 2. The EUT transmit and receive through the same GSM antenna while testing SAR.

PCS Band:

EUT	Freque	ncy	Test	Antenna	Phantom	Power	FCC 1g SA	AR (W/Kg)
Position	Channel	MHz	Mode	Туре	Туре	Drift (%)	Measured	Limit
Left Head Cheek	512(Low)	1850.2	GSM	Integral	SAM	2.152	0.841	1.6
	661(Middle)	1880.0	GSM	Integral	SAM	1.221	0.853	1.6
	810(High)	1909.8	GSM	Integral	SAM	1.333	0.870	1.6
	512(Low)	1850.2	GSM	Integral	SAM	/	/	1.6
Left Head Tilt	661(Middle)	1880.0	GSM	Integral	SAM	1.012	0.079	1.6
	810(High)	1909.8	GSM	Integral	SAM	/	/	1.6
D: 1. II	512(Low)	1850.2	GSM	Integral	SAM	3.004	0.865	1.6
Right Head Cheek	661(Middle)	1880.0	GSM	Integral	SAM	2.054	0.876	1.6
Check	810(High)	1909.8	GSM	Integral	SAM	0.998	0.889	1.6
D: 1. II	512(Low)	1850.2	GSM	Integral	SAM	/	/	1.6
Right Head Tilt	661(Middle)	1880.0	GSM	Integral	SAM	/	/	1.6
	810(High)	1909.8	GSM	Integral	SAM	1.875	0.082	1.6
Body-Front	512(Low)	1850.2	GSM	Integral	Universal	/	/	1.6
w/ Headset	661(Middle)	1880.0	GSM	Integral	Universal	/	/	1.6
(10mm)	810(High)	1909.8	GSM	Integral	Universal	-3.906	0.262	1.6
Body-Back	512(Low)	1850.2	GSM	Integral	Universal	/	/	1.6
w/ Headset	661(Middle)	1880.0	GSM	Integral	Universal	/	/	1.6
(10mm)	810(High)	1909.8	GSM	Integral	Universal	-2.609	0.124	1.6

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Note: 1. When the 1-g SAR is \leq 0.8W/Kg, testing for other channels are optional. 2. The EUT transmit and receive through the same GSM antenna while testing SAR.

WCDMA 850

EUT	Frequ	ency	Test	Antenna	Phantom	Power	FCC 1g SAI	R (W/Kg)
Position	Channel	MHz	Mode	Type	Type	Drift (%)	Measured	Limit
- 4 4	4132	824.2	WCDMA 850	Integral	SAM	1.085	0.217	1.6
Left Head Cheek	4183	836.6	WCDMA 850	Integral	SAM	/	/	1.6
	4233	846.6	WCDMA 850	Integral	SAM	/	/	1.6
I 6 II 1	4132	824.2	WCDMA 850	Integral	SAM	2.654	0.148	1.6
Left Head Tilt	4183	836.6	WCDMA 850	Integral	SAM	/	/	1.6
	4233	846.6	WCDMA 850	Integral	SAM	/	/	1.6
D' L' II L	4132	824.2	WCDMA 850	Integral	SAM	3.118	0.226	1.6
Right Head Cheek	4183	836.6	WCDMA 850	Integral	SAM	/	/	1.6
Chech	4233	846.6	WCDMA 850	Integral	SAM	/	/	1.6
D' L' H	4132	824.2	WCDMA 850	Integral	SAM	-1.848	0.154	1.6
Right Head Tilt	4183	836.6	WCDMA 850	Integral	SAM	/	/	1.6
	4233	846.6	WCDMA 850	Integral	SAM	/	/	1.6

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

WCDMA1900

EUT	Frequ	ency	Test	Antenna	Phantom	Power	FCC 1g SAI	R (W/Kg)
Position	Channel	MHz	Mode	Type	Type	Drift (%)	Measured	Limit
	9262	1852.4	WCDMA 1900	Integral	SAM	-1.927	1.127	1.6
Left Head Cheek	9400	1880.0	WCDMA 1900	Integral	SAM	-1.942	0.982	1.6
	9538	1907.6	WCDMA1900	Integral	SAM	0.315	1.175	1.6
1 6 11 1	9262	1852.4	WCDMA 1900	Integral	SAM	/	/	1.6
Left Head Tilt	9400	1880.0	WCDMA 1900	Integral	SAM	/	/	1.6
	9538	1907.6	WCDMA1900	Integral	SAM	3.291	0.133	1.6
D: 1. II 1	9262	1852.4	WCDMA 1900	Integral	SAM	-1.117	1.134	1.6
Right Head Cheek	9400	1880.0	WCDMA 1900	Integral	SAM	1.005	0.977	1.6
	9538	1907.6	WCDMA1900	Integral	SAM	1.215	1.158	1.6
D: 1. W 1	9262	1852.4	WCDMA 1900	Integral	SAM	/	/	1.6
Right Head Tilt	9400	1880.0	WCDMA 1900	Integral	SAM	/	/	1.6
- 110	9538	1907.6	WCDMA1900	Integral	SAM	-1.724	0.159	1.6

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

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^{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.

^{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.

Mobile Hot-Spot Test Result

The DUT is capable of functioning as a Wi-Fi 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	Frequenc	ey (MHz)	Test	Antenna	Phantom	Power	FCC 1g SA	R (W/Kg)
Position	Channel	MHz	Mode	Type	Type	Drift (%)	Measured	Limit
	128	824.2	GPRS	Integral	Universal	-2.952	0.969	1.6
Body-Front	190	836.6	GPRS	Integral	Universal	2.136	1.127	1.6
(10mm)	251	846.6	GPRS	Integral	Universal	4.403	1.090	1.6
D 1 D 1	128	824.2	GPRS	Integral	Universal	-1.990	1.402	1.6
Body-Back (10mm)	190	836.6	GPRS	Integral	Universal	2.124	1.483	1.6
(1011111)	251	846.6	GPRS	Integral	Universal	-3.975	1.484	1.6
Dire	128	824.2	GPRS	Integral	Universal	2.671	0.490	1.6
Body-Left (10mm)	190	836.6	GPRS	Integral	Universal	/	/	1.6
(=======	251	846.6	GPRS	Integral	Universal	/	/	1.6
D - 1 - D' -1 -	128	824.2	GPRS	Integral	Universal	3.656	0.505	1.6
Body-Right (10mm	190	836.6	GPRS	Integral	Universal	/	/	1.6
(5 5	251	846.6	GPRS	Integral	Universal	/	/	1.6
	128	824.2	GPRS	Integral	Universal	3.361	0.116	1.6
Body-Bottom	190	836.6	GPRS	Integral	Universal	/	/	1.6
(10mm)	251	846.6	GPRS	Integral	Universal	/	/	1.6

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

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Hot spot-GPRS (Frequency Band: 1900)

EUT	Frequ	iency	Test	Antenna	Phantom	Power	FCC 1g SAI	R (W/Kg)
Position	Channel	MHz	Mode	Type	Type	Drift (%)	Measured	Limit
	512	1850.2	GPRS	Integral	Universal	0.339	0.605	1.6
Body-Front	661	1880.0	GPRS	Integral	Universal	/	/	1.6
(10mm)	810	1909.8	GPRS	Integral	Universal	/	/	1.6
D 1 D 1	512	1850.2	GPRS	Integral	Universal	1.445	0.599	1.6
Body-Back (10mm)	661	1880.0	GPRS	Integral	Universal	/	/	1.6
(1011111)	810	1909.8	GPRS	Integral	Universal	/	/	1.6
Dire	512	1850.2	GPRS	Integral	Universal	-2.397	0.298	1.6
Body-Left (10mm)	661	1880.0	GPRS	Integral	Universal	/	/	1.6
(1011111)	810	1909.8	GPRS	Integral	Universal	/	/	1.6
D 1 D' 1	512	1850.2	GPRS	Integral	Universal	-2.577	0.222	1.6
Body-Right (10mm	661	1880.0	GPRS	Integral	Universal	/	/	1.6
(10111111	810	1909.8	GPRS	Integral	Universal	/	/	1.6
	512	1850.2	GPRS	Integral	Universal	-1.812	0.581	1.6
Body-Bottom	661	1880.0	GPRS	Integral	Universal	/	/	1.6
(10mm)	810	1909.8	GPRS	Integral	Universal	/	/	1.6

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Note: 1 .When the 1-g SAR is \leq 0.8W/Kg, testing for other channels is 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, 1DL+4UL is the worse case.

^{4.} The EUT transmit and receive through the same GSM antenna while testing SAR.

Hot Spot-WCDMA850

EUT	Frequ	iency	Test	Antenna	Phantom	Power	FCC 1g SAI	R (W/Kg)
Position	Channel	MHz	Mode	Type	Type	Drift (%)	Measured	Limit
	4132	826.4	WCDMA850	Integral	Universal	4.222	0.188	1.6
Body-Front	4183	836.6	WCDMA850	Integral	Universal	/	/	1.6
(10mm)	4233	846.6	WCDMA850	Integral	Universal	/	/	1.6
D 1 D 1	4132	826.4	WCDMA850	Integral	Universal	2.349	0.282	1.6
Body-Back (10mm)	4183	836.6	WCDMA850	Integral	Universal	/	/	1.6
(1011111)	4233	846.6	WCDMA850	Integral	Universal	/	/	1.6
DITC	4132	826.4	WCDMA850	Integral	Universal	-1.806	0.036	1.6
Body-Left (10mm)	4183	836.6	WCDMA850	Integral	Universal	/	/	1.6
()	4233	846.6	WCDMA850	Integral	Universal	/	/	1.6
D . I . D' . I .	4132	826.4	WCDMA850	Integral	Universal	0.966	0.064	1.6
Body-Right (10mm	4183	836.6	WCDMA850	Integral	Universal	/	/	1.6
(1011111	4233	846.6	WCDMA850	Integral	Universal	/	/	1.6
	9262	826.4	WCDMA1900	Integral	Universal	1.901	0.049	1.6
Body-Bottom	9400	836.6	WCDMA1900	Integral	Universal	/	/	1.6
(10mm)	9538	846.6	WCDMA1900	Integral	Universal		/	1.6

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

Hot Spot-WCDMA1900

EUT	Frequ	iency	Test	Antenna	Phantom	Power	FCC 1g SAI	R (W/Kg)
Position	Channel	MHz	Mode	Type	Type	Drift (%)	Measured	Limit
	9262	1852.4	WCDMA1900	Integral	Universal	2.011	0.900	1.6
Body-Front	9400	1880.0	WCDMA1900	Integral	Universal	2.240	0.175	1.6
(10mm)	9538	1907.6	WCDMA1900	Integral	Universal	1.663	1.023	1.6
D 1 D 1	9262	1852.4	WCDMA1900	Integral	Universal	1.306	0.657	1.6
Body-Back (10mm)	9400	1880.0	WCDMA1900	Integral	Universal	1.088	0.122	1.6
(1011111)	9538	1907.6	WCDMA1900	Integral	Universal	1.662	0.810	1.6
D. L. L. G	9262	1852.4	WCDMA1900	Integral	Universal	/	/	1.6
Body-Left (10mm)	9400	1880.0	WCDMA1900	Integral	Universal	/	/	1.6
(101111)	9538	1907.6	WCDMA1900	Integral	Universal	1.377	0.294	1.6
D 1 D' 1	9262	1852.4	WCDMA1900	Integral	Universal	/	/	1.6
Body-Right (10mm	9400	1880.0	WCDMA1900	Integral	Universal	/	/	1.6
(10111111	9538	1907.6	WCDMA1900	Integral	Universal	1.221	0.154	1.6
	9262	1852.4	WCDMA1900	Integral	Universal	/	/	1.6
Body-Bottom	9400	1880.0	WCDMA1900	Integral	Universal	/	/	1.6
(10mm)	9538	1907.6	WCDMA1900	Integral	Universal	2.491	0.569	1.6

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

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^{2.} The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 1.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model 1.

^{2.} The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 1.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model 1.

Hot Spot-WiFi

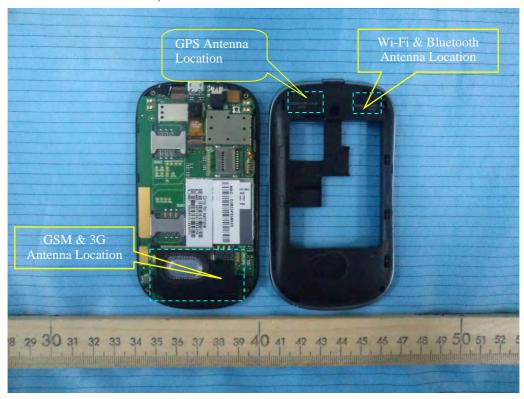
EUT	Frequency		Test	Antenna	Phantom	Power	FCC 1g SAI	R (W/Kg)
Position	Channel	MHz	Mode Type		Type	Drift (%)	Measured	Limit
	1	2412	802.11b	Integral	Universal	/	/	1.6
Body-Front	6	2437	802.11b	802.11b Integral		1.124	0.037	1.6
(10mm)	11	2462	802.11b	Integral	Universal	/	/	1.6
	1	2412	802.11b	Integral	Universal	/	/	1.6
Body-Back (10mm)	6	2437	802.11b	Integral	Universal	2.127	0.048	1.6
(101111)	11	2462	802.11b	Integral	Universal	/	/	1.6
D. L. L. G	1	2412	802.11b	Integral	Universal	/	/	1.6
Body-Left (10mm	6	2437	802.11b	Integral	Universal	1.329	0.022	1.6
(10111111	11	2462	802.11b	Integral	Universal	/	/	1.6
D 1 T	1	2412	802.11b	Integral	Universal	/	/	1.6
Body-Top (10mm	6	2437	802.11b	Integral	Universal	1.395	0.029	1.6
(10111111	11	2462	802.11b	Integral	Universal	/	/	1.6

Note: 1. When the 1-g SAR is \leq 0.8W/Kg, testing for other channels are optional. 2. The SAR testing is conducted with 100% duty cycle factor. 3. The output power was tested under data rate 1Mbps for 802.11b.

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SAR SIMULTANEOUS TRANSMISSION DESCRIPTION AND EVALUATION

Per FCC KDB 648474, Stand-alone and simultaneous SAR evaluation for a cell phone with multiple transmitters is base on the antennas distance of each radio.



Wi-Fi, BT and GSM & 3G Antenna Location

Antenna Information

Description of Simultaneous	Description of Simultaneous Transmit Capabilities									
Transmitter Combination	Scenario Supported?	Supported for Mobile Hot Spot	Antennas Distance (mm)							
GSM(CS Voice) + GSM(PS Data)	×	×	0.00							
GSM(CS Voice) + WCDMA(Voice)	×	×	0.00							
GSM(CS Voice) + WCDMA(Data)	×	×	0.00							
GSM(PS Data) + WCDMA(Voice)	×	×	0.00							
GSM(PS Data) + WCDMA(Data)	×	×	0.00							
WCDMA(Voice) + WCDMA(Data)	√	√	0.00							
GSM(CS Voice) + WiFi	√	×	71.20							
GSM(PS Data) + WiFi	√	√	71.20							
WCDMA(Voice) + WiFi	√	×	71.20							
WCDMA(Data) + WiFi	√	√	71.20							
Bluetooth + GSM/WCDMA	√	×	71.20							
Bluetooth + WiFi	×	×	0.00							

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CONCLUSION:

	Evaluations for Simultaneous SAR, Head Positions												
		Stand	Alone 1-g SAl	R (W/Kg)		Σ	1-g SAR (W/Kg)					
Test Position	GSM 850	PCS 1900	WCDMA 850	WCDMA 1900	WiFi	GSM 850+WiFi	PCS 1900+WiFi	WCDMA 850+WiFi					
Left Head (Touch)	0.675	0.870	0.217	1.175	N/A	N/A	N/A	N/A					
Left Head (Tilt)	0.366	0.079	0.148	0.133	N/A	N/A	N/A	N/A					
Right Head (Touch)	0.665	0.889	0226	1.158	N/A	N/A	N/A	N/A					
Right Head (Tilt)	0.353	0.082	0.154	0.159	N/A	N/A	N/A	N/A					

Report No: R1DG120721001-20

	Evaluations for Simultaneous SAR, Mobile Hot Spot Positions												
		Stand	Alone 1-g SA	R (W/Kg)			∑ 1-g SAR	(W/Kg)					
Test Position	GSM 850	PCS 1900	WCDMA 850	WCDMA 1900	WiFi	GSM 850+WiFi	PCS 1900+WiFi	WCDMA 850+WiFi	WCDMA 1900+WiFi				
Body-Front (1.0cm)	1.127	0.605	0.188	1.023	0.037	1.164	0.642	0.225	1.060				
Body-Back (1.0cm)	1.484	0.599	0.282	0.810	0.048	1.532	0.647	0.330	0.860				
Body-Left (1.0cm)	0.490	0.298	0.036	0.294	0.022	0.512	0.320	0.058	0.316				
Body-Right (1.0cm)	0.505	0.222	0.064	0.154	N/A	N/A	N/A	N/A	N/A				
Body-Bottom (1.0cm)	0.116	0.581	0.049	0.569	N/A	N/A	N/A	N/A	N/A				

For Wi-Fi:

- 1) The WiFi and Bluetooth can't transmit simultaneously.
- 2) The max output power of WiFi antenna is (12.81dBm) $19.985mW < 2P_{Ref}$ (24mW), and distance between WiFi and GSM main antenna is 71.2mm > 50mm.

According to KDB648474, stand-alone and simultaneous SAR is not required.

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 (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 : 0.071 W/kg Power Drift-Finish : 0.073 W/kg Power Drift (%) : 2.739

Tissue Data

 Type
 : Head

 Frequency
 : 848.80 MHz

 Epsilon
 : 41.98 F/m

 Sigma
 : 0.90 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

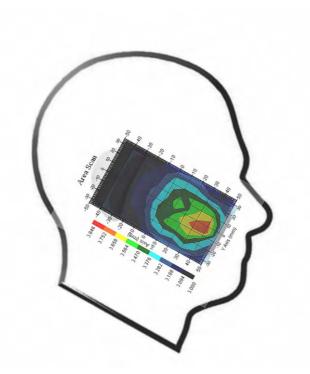
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 6.6

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

Compression Point : 95.00 mV Offset : 1.56 mm

 $\begin{array}{lll} 1 \text{ gram SAR value} & : 0.675 \text{ W/kg} \\ 10 \text{ gram SAR value} & : 0.386 \text{ W/kg} \\ \text{Area Scan Peak SAR} & : 0.755 \text{ W/kg} \\ \text{Zoom Scan Peak SAR} & : 1.171 \text{ W/kg} \end{array}$

Plot 1#



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Left Head Tilt (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 : 0.072 W/kg Power Drift-Finish : 0.073 W/kg Power Drift (%) : 1.369

Tissue Data

 Type
 : Head

 Frequency
 : 848.80 MHz

 Epsilon
 : 41.98 F/m

 Sigma
 : 0.90 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

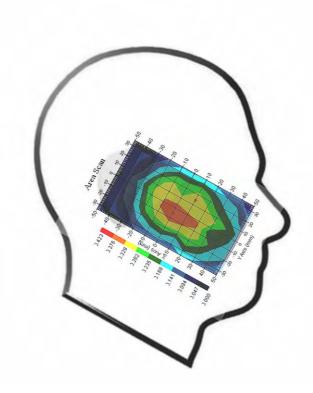
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 6.6

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 : 0.366 W/kg 10 gram SAR value : 0.253 W/kg Area Scan Peak SAR : 0.380 W/kg Zoom Scan Peak SAR : 0.480 W/kg

Plot 2#



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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 : 0.068 W/kg Power Drift-Finish : 0.068 W/kg Power Drift (%) : 0.537

Tissue Data

 Type
 : Head

 Frequency
 : 848.80 MHz

 Epsilon
 : 41.98 F/m

 Sigma
 : 0.90 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

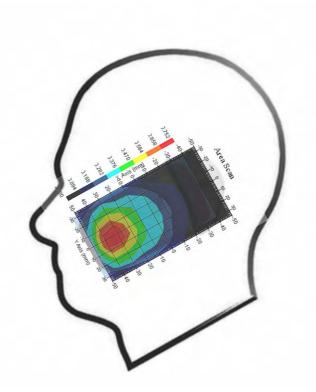
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 6.6

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 : 0.665 W/kg 10 gram SAR value : 0.376 W/kg Area Scan Peak SAR : 0.786 W/kg Zoom Scan Peak SAR : 1.192 W/kg

Plot 3#



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Left Head Tilt (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 : 0.102 W/kg Power Drift-Finish : 0.103 W/kg Power Drift (%) : 0.971

Tissue Data

 Type
 : Head

 Frequency
 : 848.80 MHz

 Epsilon
 : 41.98 F/m

 Sigma
 : 0.90 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

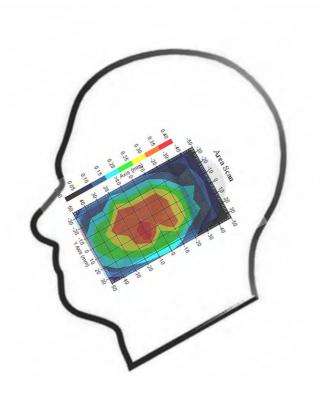
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 6.6

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 : 0.353 W/kg 10 gram SAR value : 0.217 W/kg Area Scan Peak SAR : 0.400 W/kg Zoom Scan Peak SAR : 0.510 W/kg

Plot 4#



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Body-worn-Front-Headset (848.8 MHz High Channel)

Measurement Data

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

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.338 W/kg Power Drift-Finish : 0.353 W/kg Power Drift (%) : 4.401

Tissue Data

 Type
 : Body

 Frequency
 : 848.80 MHz

 Epsilon
 : 56.34 F/m

 Sigma
 : 1.01 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

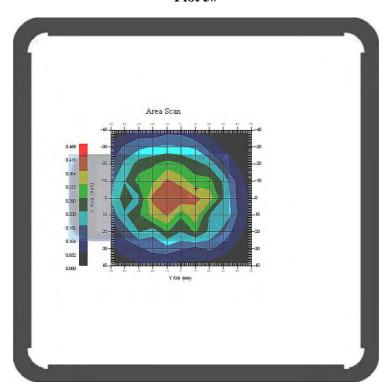
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 6.6

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 : 0.411 W/kg 10 gram SAR value : 0.273 W/kg Area Scan Peak SAR : 0.417 W/kg Zoom Scan Peak SAR : 0.570 W/kg

Plot 5#



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Body-worn-Back-Headset (848.8 MHz High Channel)

Measurement Data

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

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.471 W/kg Power Drift-Finish : 0.472 W/kg Power Drift (%) : 0.277

Tissue Data

 Type
 : Body

 Frequency
 : 848.80 MHz

 Epsilon
 : 56.34 F/m

 Sigma
 : 1.01 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

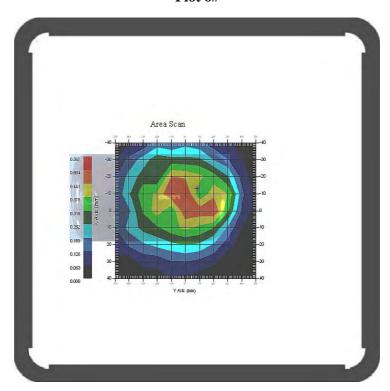
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 8
Conversion Factor : 6.6

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 : 0.479 W/kg 10 gram SAR value : 0.284 W/kg Area Scan Peak SAR : 0.505 W/kg Zoom Scan Peak SAR : 0.630 W/kg

Plot 6#



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Left 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 : 0.016 W/kg Power Drift-Finish : 0.016 W/kg Power Drift (%) : 2.152

Tissue Data

 Type
 : Head

 Frequency
 : 1850.20 MHz

 Epsilon
 : 40.05 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

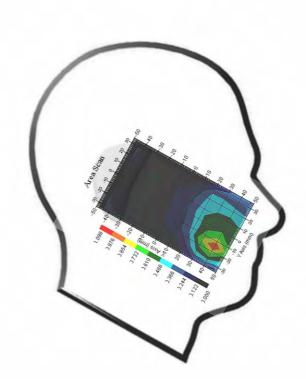
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 5.2

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 : 0.841 W/kg 10 gram SAR value : 0.394 W/kg Area Scan Peak SAR : 0.977 W/kg Zoom Scan Peak SAR : 1.851 W/kg

Plot 7#



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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 : 0.021 W/kg Power Drift-Finish : 0.021 W/kg Power Drift (%) : 1.221

Tissue Data

 Type
 : Head

 Frequency
 : 1880.00 MHz

 Epsilon
 : 40.06 F/m

 Sigma
 : 1.42 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

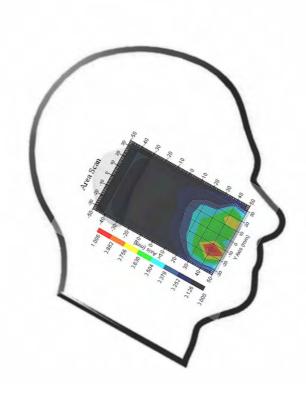
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 5.2

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 : 0.853 W/kg 10 gram SAR value : 0.424 W/kg Area Scan Peak SAR : 1.130 W/kg Zoom Scan Peak SAR : 1.921 W/kg

Plot 8#



SAR Evaluation Report 58 of 160

Left 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 : 0.019 W/kg Power Drift-Finish : 0.019 W/kg Power Drift (%) : 1.333

Tissue Data

 Type
 : Head

 Frequency
 : 1909.8 MHz

 Epsilon
 : 40.06 F/m

 Sigma
 : 1.45 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

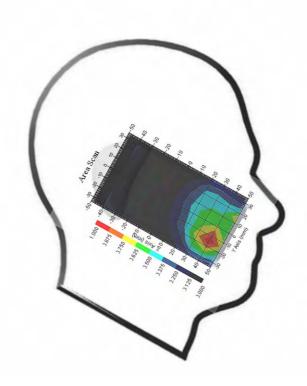
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 5.2

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 : 0.870 W/kg 10 gram SAR value : 0.431 W/kg Area Scan Peak SAR : 1.221 W/kg Zoom Scan Peak SAR : 1.955 W/kg

Plot 9#



SAR Evaluation Report 59 of 160

Left Head Tilt (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 : 0.017 W/kg Power Drift-Finish : 0.017 W/kg Power Drift (%) : 1.012

Tissue Data

 Type
 : Head

 Frequency
 : 1880.00 MHz

 Epsilon
 : 40.06 F/m

 Sigma
 : 1.42 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

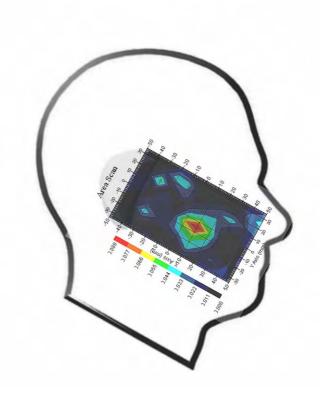
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 5.2

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 : 0.079 W/kg 10 gram SAR value : 0.041 W/kg Area Scan Peak SAR : 0.088 W/kg Zoom Scan Peak SAR : 0.170 W/kg

Plot 10#



SAR Evaluation Report 60 of 160

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=4mmZoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.014 W/kg Power Drift-Finish : 0.015 W/kg Power Drift (%) : 3.004

Tissue Data

 Type
 : Head

 Frequency
 : 1850.20 MHz

 Epsilon
 : 40.05 F/m

 Sigma
 : 1.39 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

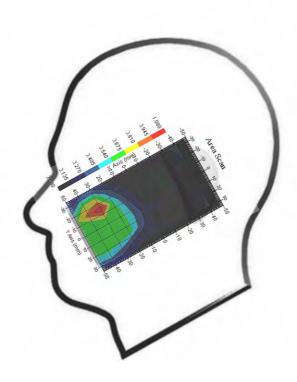
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 5.2

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 : 0.865 W/kg 10 gram SAR value : 0.503 W/kg Area Scan Peak SAR : 1.093 W/kg Zoom Scan Peak SAR : 1.761 W/kg

Plot 11#



SAR Evaluation Report 61 of 160

Right 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 : 0.020 W/kg Power Drift-Finish : 0.020 W/kg Power Drift (%) : 2.054

Tissue Data

 Type
 : Head

 Frequency
 : 1880.00 MHz

 Epsilon
 : 40.06 F/m

 Sigma
 : 1.42 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

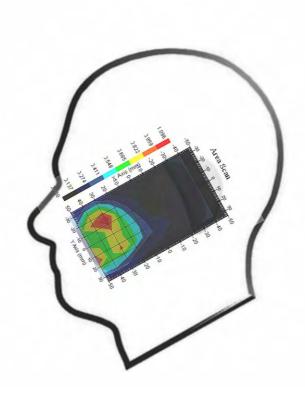
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 5.2

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

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.876 W/kg 10 gram SAR value : 0.522 W/kg Area Scan Peak SAR : 1.152 W/kg Zoom Scan Peak SAR : 1.841 W/kg

Plot 12#



SAR Evaluation Report 62 of 160

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 : 0.018 W/kg Power Drift-Finish : 0.018 W/kg Power Drift (%) : 0.998

Tissue Data

 Type
 : Head

 Frequency
 : 1909.8 MHz

 Epsilon
 : 40.06 F/m

 Sigma
 : 1.45 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

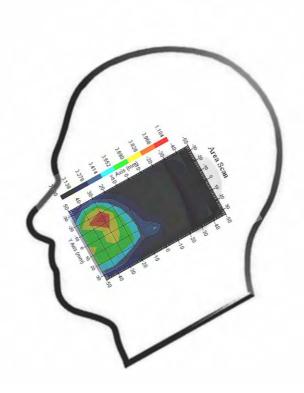
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 8 Conversion Factor : 5.2

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

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.889 W/kg 10 gram SAR value : 0.536 W/kg Area Scan Peak SAR : 1.199 W/kg Zoom Scan Peak SAR : 1.750 W/kg

Plot 13#



SAR Evaluation Report 63 of 160

Right Head Tilt (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 : 0.015 W/kg Power Drift-Finish : 0.015 W/kg Power Drift (%) : 1.875

Tissue Data

 Type
 : Head

 Frequency
 : 1880.00 MHz

 Epsilon
 : 40.06 F/m

 Sigma
 : 1.42 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

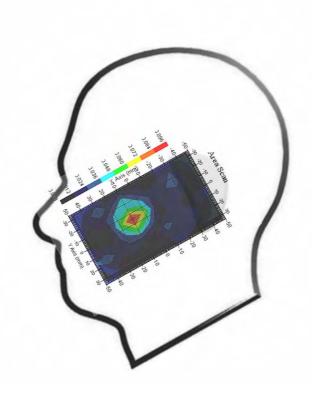
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 5.2

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 : 0.082 W/kg 10 gram SAR value : 0.040 W/kg Area Scan Peak SAR : 0.093 W/kg Zoom Scan Peak SAR : 0.179 W/kg

Plot 14#



SAR Evaluation Report 64 of 160

Body-worn Front-Headset (1880.0 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 : 0.266 W/kg Power Drift-Finish : 0.256 W/kg Power Drift (%) : -3.906

Tissue Data

Type : Body

Frequency : 1880.00 MHz
Epsilon : 53.89 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data

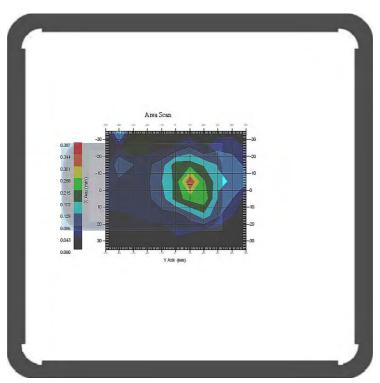
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 5.0

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 : 0.262 W/kg 10 gram SAR value : 0.132 W/kg Area Scan Peak SAR : 0.346 W/kg Zoom Scan Peak SAR : 0.560 W/kg

Plot 15#



SAR Evaluation Report 65 of 160

Body-worn Back-Headset (1880.0 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 : 0.118 W/kg Power Drift-Finish : 0.115 W/kg Power Drift (%) : -2.609

Tissue Data

Type : Body

Frequency : 1880.00 MHz
Epsilon : 53.89 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data

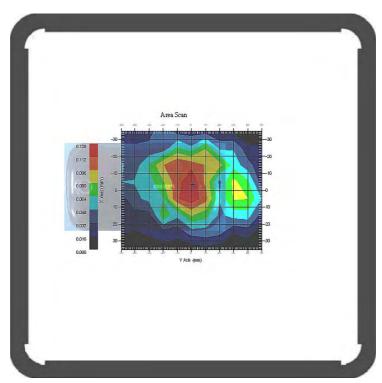
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 8
Conversion Factor : 5.0

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 : 0.124 W/kg 10 gram SAR value : 0.068 W/kg Area Scan Peak SAR : 0.127 W/kg Zoom Scan Peak SAR : 0.300 W/kg

Plot 16#



SAR Evaluation Report 66 of 160

WCDMA850; Left Head Cheek (824.2 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 : 0.018 W/kg Power Drift-Finish : 0.018 W/kg Power Drift (%) : 1.085

Tissue Data

 Type
 : Head

 Frequency
 : 824.20 MHz

 Epsilon
 : 42.25 F/m

 Sigma
 : 0.88 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

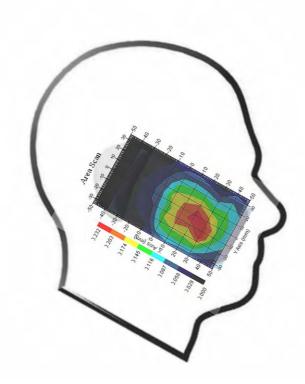
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 1
Conversion Factor : 6.6

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 : 0.217 W/kg 10 gram SAR value : 0.126 W/kg Area Scan Peak SAR : 0.230 W/kg Zoom Scan Peak SAR : 0.381 W/kg

Plot 17#



SAR Evaluation Report 67 of 160

WCDMA850; Left Head Tilt (824.2 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 : 0.094 W/kg Power Drift-Finish : 0.097 W/kg Power Drift (%) : 2.654

Tissue Data

 Type
 : Head

 Frequency
 : 824.2 MHz

 Epsilon
 : 42.25 F/m

 Sigma
 : 0.88 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

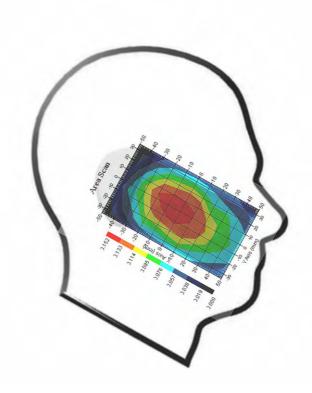
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 1
Conversion Factor : 6.6

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 : 0.148 W/kg 10 gram SAR value : 0.105 W/kg Area Scan Peak SAR : 0.151 W/kg Zoom Scan Peak SAR : 0.210 W/kg

Plot 18#



SAR Evaluation Report 68 of 160

WCDMA850; Right Head Cheek (824.2 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 : 0.021 W/kg Power Drift-Finish : 0.021 W/kg Power Drift (%) : 3.118

Tissue Data

 Type
 : Head

 Frequency
 : 824.2 MHz

 Epsilon
 : 42.25 F/m

 Sigma
 : 0.88 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

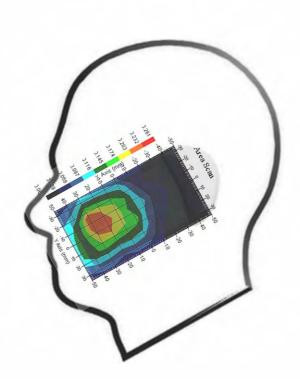
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 1
Conversion Factor : 6.6

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 : 0.226 W/kg 10 gram SAR value : 0.134 W/kg Area Scan Peak SAR : 0.235 W/kg Zoom Scan Peak SAR : 0.397 W/kg

Plot 19#



SAR Evaluation Report 69 of 160

WCDMA850; Right Head Tilt (824.2 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 : 0.094 W/kg Power Drift-Finish : 0.092 W/kg Power Drift (%) : -1.848

Tissue Data

 Type
 : Head

 Frequency
 : 824.2 MHz

 Epsilon
 : 42.25 F/m

 Sigma
 : 0.88 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

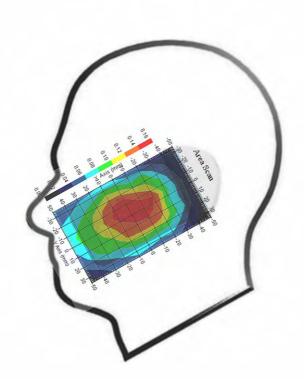
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 1
Conversion Factor : 6.6

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 : 0.154 W/kg 10 gram SAR value : 0.104 W/kg Area Scan Peak SAR : 0.157 W/kg Zoom Scan Peak SAR : 0.210 W/kg

Plot 20#



SAR Evaluation Report 70 of 160

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 : 0.067 W/kg Power Drift-Finish : 0.067 W/kg Power Drift (%) : -1.927

Tissue Data

 Type
 : Head

 Frequency
 : 1852.40 MHz

 Epsilon
 : 40.05 F/m

 Sigma
 : 1.40 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

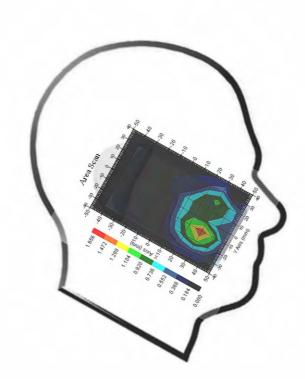
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.2

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 : 1.127 W/kg 10 gram SAR value : 0.530 W/kg Area Scan Peak SAR : 1.475 W/kg Zoom Scan Peak SAR : 2.482 W/kg

Plot 21#



SAR Evaluation Report 71 of 160

WCDMA1900; Left Head Cheek (1880.0 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 : 0.027 W/kg Power Drift-Finish : 0.027 W/kg Power Drift (%) : -1.517

Tissue Data

 Type
 : Head

 Frequency
 : 1880.00 MHz

 Epsilon
 : 40.06 F/m

 Sigma
 : 1.42 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

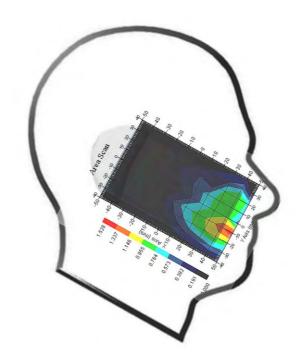
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.2

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 : 0.982 W/kg 10 gram SAR value : 0.569 W/kg Area Scan Peak SAR : 1.047 W/kg Zoom Scan Peak SAR : 1.890 W/kg

Plot 22#



SAR Evaluation Report 72 of 160

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 : 0.057 W/kg Power Drift-Finish : 0.057 W/kg Power Drift (%) : 0.315

Tissue Data

Type : Head : 1907.60 MHz Frequency Epsilon : 40.06 F/m Sigma : 1.45 S/m Density : 1000.00 kg/cu. m

Probe Data

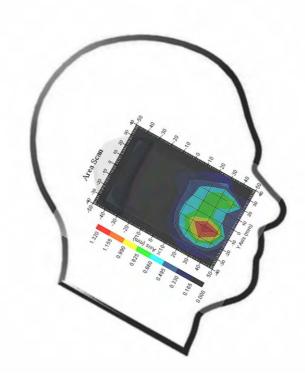
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.2

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

Compression Point : 95.00 mV : 1.56 mm Offset

1 gram SAR value : 1.175 W/kg 10 gram SAR value : 0.647 W/kg Area Scan Peak SAR : 1.317 W/kg Zoom Scan Peak SAR : 2.091 W/kg

Plot 23#



SAR Evaluation Report 73 of 160

WCDMA1900; Left Head Tilt (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 : 0.049 W/kg Power Drift-Finish : 0.051 W/kg : 3.921 Power Drift (%)

Tissue Data

Type : Head Frequency : 1907.60 MHz Epsilon : 40.06 F/m Sigma : 1.45 S/m Density : 1000.00 kg/cu. m

Probe Data

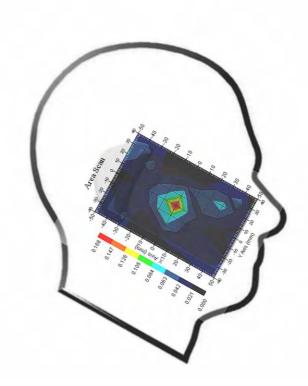
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.2

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

Compression Point : 95.00 mV : 1.56 mm Offset

1 gram SAR value : 0.133 W/kg 10 gram SAR value : 0.082 W/kg Area Scan Peak SAR : 0.165 W/kg Zoom Scan Peak SAR : 0.306 W/kg

Plot 24#



SAR Evaluation Report 74 of 160

WCDMA1900; Right Head Cheek (1852.40 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 : 0.047 W/kg Power Drift-Finish : 0.047 W/kg Power Drift (%) : -1.117

Tissue Data

 Type
 : Head

 Frequency
 : 1852.40 MHz

 Epsilon
 : 40.05 F/m

 Sigma
 : 1.40 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

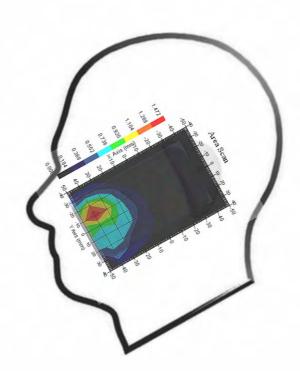
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.2

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 : 1.134 W/kg 10 gram SAR value : 0.610 W/kg Area Scan Peak SAR : 1.735 W/kg Zoom Scan Peak SAR : 2.532 W/kg

Plot 25#



SAR Evaluation Report 75 of 160

WCDMA1900; Right Head Cheek (1880.0 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 : 0.025 W/kg Power Drift-Finish : 0.025 W/kg Power Drift (%) : 1.005

Tissue Data

 Type
 : Head

 Frequency
 : 1880.00 MHz

 Epsilon
 : 40.06 F/m

 Sigma
 : 1.42 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 1
Conversion Factor : 5.2

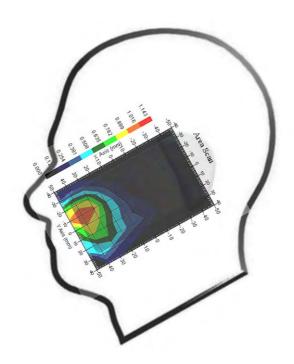
Conversion Factor : 5.2

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 : 0.977 W/kg 10 gram SAR value : 0.572 W/kg Area Scan Peak SAR : 1.239 W/kg Zoom Scan Peak SAR : 2.182 W/kg

Plot 26#



SAR Evaluation Report 76 of 160

WCDMA1900; Right Head Cheek (1907.60 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 : 0.046 W/kg Power Drift-Finish : 0.046 W/kg : 1.215 Power Drift (%)

Tissue Data

Type : Head : 1907.60 MHz Frequency Epsilon : 40.06 F/m Sigma : 1.45 S/m Density : 1000.00 kg/cu. m

Probe Data

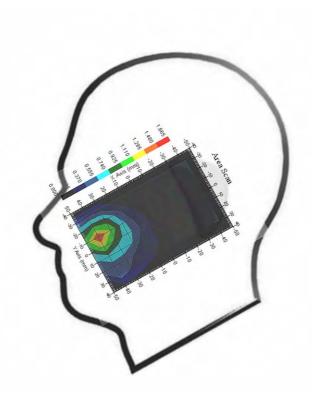
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.2

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

Compression Point : 95.00 mV : 1.56 mm Offset

1 gram SAR value : 1.158 W/kg 10 gram SAR value : 0.611 W/kg Area Scan Peak SAR : 1.559 W/kg Zoom Scan Peak SAR : 2.687 W/kg

Plot 27#



SAR Evaluation Report 77 of 160

WCDMA1900; Left Head Tilt (1907.60 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 : 0.059 W/kg Power Drift-Finish : 0.058 W/kg : -1.724 Power Drift (%)

Tissue Data

Type : Head Frequency : 1907.60 MHz Epsilon : 40.06 F/m Sigma : 1.45 S/m Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.2

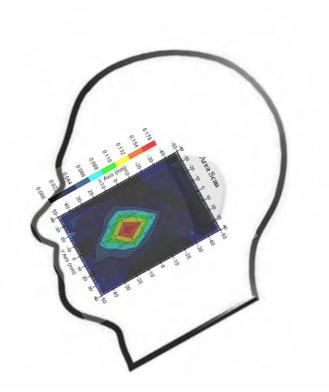
Probe Sensitivity : 1.20 1.20 1.20

 $\mu V/(V/m)2$ **Compression Point** : 95.00 mV

Offset : 1.56 mm

1 gram SAR value : 0.159 W/kg 10 gram SAR value : 0.087 W/kg Area Scan Peak SAR : 0.175 W/kg Zoom Scan Peak SAR : 0.316 W/kg

Plot 28#



SAR Evaluation Report 78 of 160

Hot Spot: Body-Front (824.2 MHz Low Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
Scan Type : : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 1.082 W/kg Power Drift-Finish : 1.051 W/kg Power Drift (%) : -2.952

Tissue Data

 Type
 : Body

 Frequency
 : 824.20 MHz

 Epsilon
 : 56.19 F/m

 Sigma
 : 0.97 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

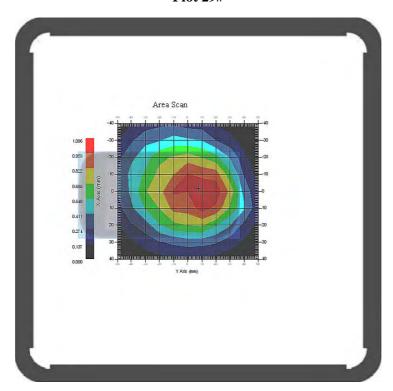
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 2
Conversion Factor : 6.6

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 : 0.969 W/kg 10 gram SAR value : 0.576 W/kg Area Scan Peak SAR : 1.096 W/kg Zoom Scan Peak SAR : 1.431 W/kg

Plot 29#



SAR Evaluation Report 79 of 160

Hot Spot: Body-Front (836.6 MHz Middle Channel)

Measurement Data

Test mode : GPRS Crest Factor : 2 Scan Type: : Complete

Area Scan

: 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 1.149 W/kg Power Drift-Finish : 1.174 W/kg Power Drift (%) : 2.136

Tissue Data

Type : Body Frequency : 836.60 MHz Epsilon : 56.26 F/m Sigma : 0.99 S/m Density : 1000.00 kg/cu. m

Probe Data

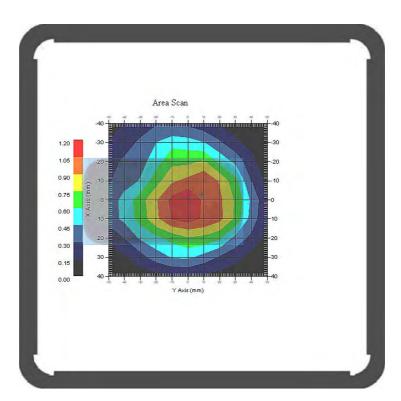
Serial No. : 500-00283 Frequency Band : 835 Duty Cycle Factor : 2 Conversion Factor : 6.6

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 : 1.127 W/kg 10 gram SAR value : 0.746 W/kg Area Scan Peak SAR : 1.198 W/kg Zoom Scan Peak SAR : 1.724 W/kg

Plot 30#



SAR Evaluation Report 80 of 160

Hot Spot: Body-Front (848.8 MHz High Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
Scan Type : : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 1.129 W/kg Power Drift-Finish : 1.181 W/kg Power Drift (%) : 4.403

Tissue Data

 Type
 : Body

 Frequency
 : 848.80 MHz

 Epsilon
 : 56.34 F/m

 Sigma
 : 1.01 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

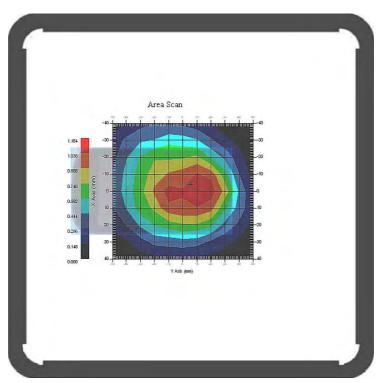
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 2
Conversion Factor : 6.6

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 : 1.090 W/kg 10 gram SAR value : 0.738 W/kg Area Scan Peak SAR : 1.182 W/kg Zoom Scan Peak SAR : 1.601 W/kg

Plot 31#



SAR Evaluation Report 81 of 160

Hot Spot: Body-Back (824.2 MHz Low Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
Scan Type : : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 1.334 W/kg Power Drift-Finish : 1.308 W/kg Power Drift (%) : -1.990

Tissue Data

 Type
 : Body

 Frequency
 : 824.20 MHz

 Epsilon
 : 56.19 F/m

 Sigma
 : 0.97 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

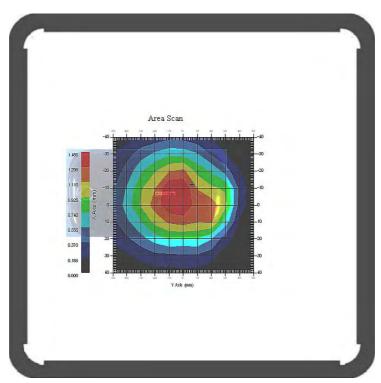
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 2
Conversion Factor : 6.6

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 : 1.402 W/kg 10 gram SAR value : 0.897 W/kg Area Scan Peak SAR : 1.479 W/kg Zoom Scan Peak SAR : 1.981 W/kg

Plot 32#



SAR Evaluation Report 82 of 160

Hot Spot: Body-Back (836.6 MHz Middle Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
Scan Type : : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 1.414 W/kg Power Drift-Finish : 1.444 W/kg Power Drift (%) : 2.124

Tissue Data

 Type
 : Body

 Frequency
 : 836.60 MHz

 Epsilon
 : 56.26 F/m

 Sigma
 : 0.99 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

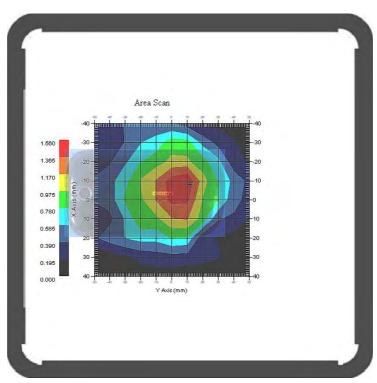
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 2
Conversion Factor : 6.6

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 : 1.483 W/kg 10 gram SAR value : 0.988 W/kg Area Scan Peak SAR : 1.558 W/kg Zoom Scan Peak SAR : 2.242 W/kg

Plot 33#



SAR Evaluation Report 83 of 160

Hot Spot: Body-Back (848.8 MHz High Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
Scan Type : : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 1.446 W/kg Power Drift-Finish : 1.441 W/kg Power Drift (%) : -3.975

Tissue Data

 Type
 : Body

 Frequency
 : 848.80 MHz

 Epsilon
 : 56.34 F/m

 Sigma
 : 1.01 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

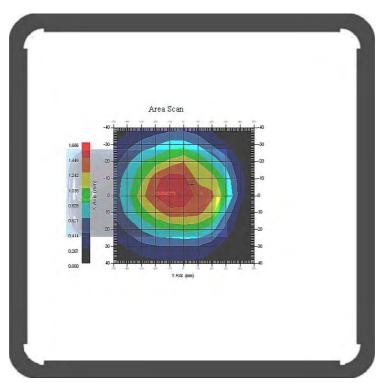
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 2
Conversion Factor : 6.6

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 : 1.484 W/kg 10 gram SAR value : 0.921 W/kg Area Scan Peak SAR : 1.656 W/kg Zoom Scan Peak SAR : 2.272 W/kg

Plot 34#



SAR Evaluation Report 84 of 160

Hot Spot: Body-Left (824.2 MHz Low Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
Scan Type : : Complete

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

Power Drift-Start : 0.547 W/kg Power Drift-Finish : 0.562 W/kg Power Drift (%) : 2.671

Tissue Data

 Type
 : Body

 Frequency
 : 824.20 MHz

 Epsilon
 : 56.19 F/m

 Sigma
 : 0.97 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

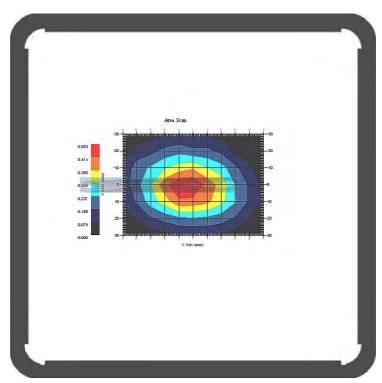
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 2
Conversion Factor : 6.6

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 : 0.490 W/kg 10 gram SAR value : 0.292 W/kg Area Scan Peak SAR : 0.553 W/kg Zoom Scan Peak SAR : 0.840 W/kg

Plot 35#



SAR Evaluation Report 85 of 160

Hot Spot: Body-Right (824.2 MHz Low Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
Scan Type : : Complete

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

Power Drift-Start : 0.465 W/kg Power Drift-Finish : 0.482 W/kg Power Drift (%) : 3.656

Tissue Data

 Type
 : Body

 Frequency
 : 824.20 MHz

 Epsilon
 : 56.19 F/m

 Sigma
 : 0.97 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

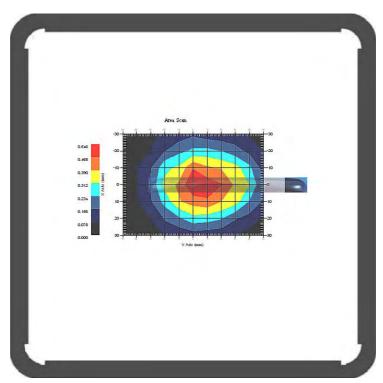
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 2
Conversion Factor : 6.6

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 : 0.505 W/kg 10 gram SAR value : 0.292 W/kg Area Scan Peak SAR : 0.546 W/kg Zoom Scan Peak SAR : 0.790 W/kg

Plot 36#



SAR Evaluation Report 86 of 160

Hot Spot: Body-Bottom (824.2 MHz Low Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
Scan Type : : Complete

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

Power Drift-Start : 0.115 W/kg Power Drift-Finish : 0.119 W/kg Power Drift (%) : 3.361

Tissue Data

 Type
 : Body

 Frequency
 : 824.20 MHz

 Epsilon
 : 56.19 F/m

 Sigma
 : 0.97 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

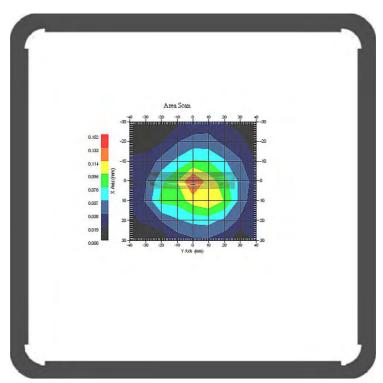
Serial No. : 500-00283
Frequency Band : 835
Duty Cycle Factor : 2
Conversion Factor : 6.6

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

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.116 W/kg 10 gram SAR value : 0.052 W/kg Area Scan Peak SAR : 0.135 W/kg Zoom Scan Peak SAR : 0.250 W/kg

Plot 37#



SAR Evaluation Report 87 of 160

Hot Spot: Body-Front (1850.2 MHz Low Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
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 : 0.590 W/kg Power Drift-Finish : 0.592 W/kg Power Drift (%) : 0.339

Tissue Data

Type : Body Frequency : 1850.20 MHz Epsilon : 54.04 F/m

Sigma : 1.50 S/m Density : 1000.00 kg/cu. m

Probe Data

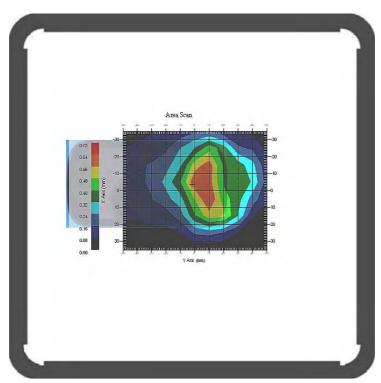
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 2
Conversion Factor : 5.0

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 : 0.605 W/kg 10 gram SAR value : 0.323 W/kg Area Scan Peak SAR : 0.642 W/kg Zoom Scan Peak SAR : 1.030 W/kg

Plot 38#



SAR Evaluation Report 88 of 160

Hot Spot: Body-Back (1850.2 MHz Low Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
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 : 0.614 W/kg Power Drift-Finish : 0.623 W/kg Power Drift (%) : 1.445

Tissue Data

Type : Body Frequency : 1850.20 MHz Epsilon : 54.04 F/m

Sigma : 1.50 S/m Density : 1000.00 kg/cu. m

Probe Data

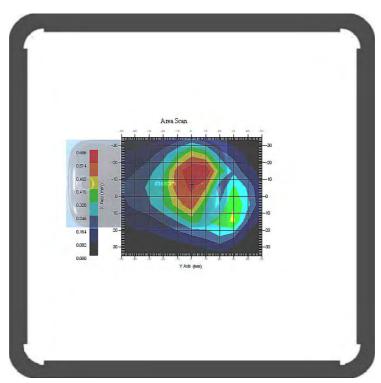
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 2
Conversion Factor : 5.0

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 : 0.599 W/kg 10 gram SAR value : 0.307 W/kg Area Scan Peak SAR : 0.655 W/kg Zoom Scan Peak SAR : 1.141 W/kg

Plot 39#



SAR Evaluation Report 89 of 160

Hot Spot: Body-Left (1850.2 MHz Low Channel)

Measurement Data

Test mode : GPRS Crest Factor : 2 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

: 0.299 W/kg Power Drift-Finish : 0.292 W/kg : -2.397 Power Drift (%)

Tissue Data

Type : Body

Frequency : 1850.20 MHz Epsilon : 54.04 F/m Sigma : 1.50 S/m Density : 1000.00 kg/cu. m

Probe Data

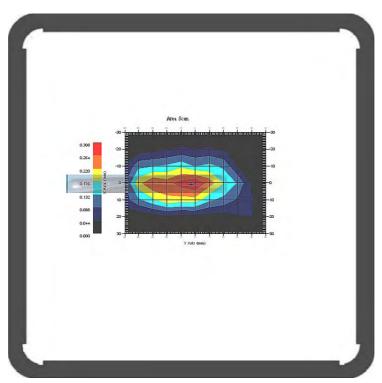
Serial No. : 500-00283 Frequency Band : 1900 Duty Cycle Factor : 2 Conversion Factor : 5.0

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 : 0.298 W/kg 10 gram SAR value : 0.144 W/kg Area Scan Peak SAR : 0.307 W/kg Zoom Scan Peak SAR : 0.540 W/kg

Plot 40#



SAR Evaluation Report 90 of 160

Hot Spot: Body-Right (1850.2 MHz Low Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
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 : 0.199 W/kg Power Drift-Finish : 0.194 W/kg Power Drift (%) : -2.577

Tissue Data

Type : Body

 Frequency
 : 1850.20 MHz

 Epsilon
 : 54.04 F/m

 Sigma
 : 1.50 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

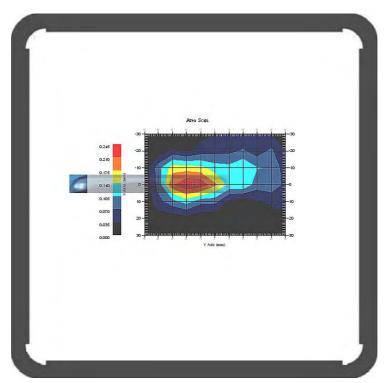
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 2
Conversion Factor : 5.0

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 : 0.222 W/kg 10 gram SAR value : 0.100 W/kg Area Scan Peak SAR : 0.244 W/kg Zoom Scan Peak SAR : 0.530 W/kg

Plot 41#



SAR Evaluation Report 91 of 160

Hot Spot: Body-Bottom (1850.2 MHz Low Channel)

Measurement Data

Test mode : GPRS
Crest Factor : 2
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 : 0.674 W/kg Power Drift-Finish : 0.662 W/kg Power Drift (%) : -1.812

Tissue Data

Type : Body
Frequency : 1850.20 MHz
Epsilon : 54.04 F/m
Sigma : 1.50 S/m

Density : 1000.00 kg/cu. m

Probe Data

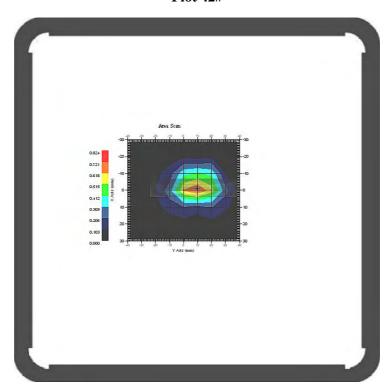
Serial No. : 500-00283
Frequency Band : 1900
Duty Cycle Factor : 2
Conversion Factor : 5.0

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 : 0.581 W/kg 10 gram SAR value : 0.264 W/kg Area Scan Peak SAR : 0.723 W/kg Zoom Scan Peak SAR : 0.970 W/kg

Plot 42#



SAR Evaluation Report 92 of 160

Hot Spot: WCDMA850 ; Body-Front (826.4 MHz Low Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.193 W/kg Power Drift-Finish : 0.202 W/kg : 4.222 Power Drift (%)

Tissue Data

Type : Body Frequency : 826.40 MHz : 56.20 F/m Epsilon Sigma : 0.98 S/m Density : 1000.00 kg/cu. m

Probe Data

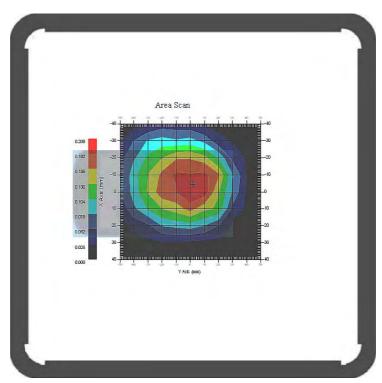
Serial No. : 500-00283 Frequency : 835 **Duty Cycle Factor** : 1 Conversion Factor : 6.6

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

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

1 gram SAR value : 0.188 W/kg 10 gram SAR value : 0.103 W/kg Area Scan Peak SAR : 0.207 W/kg Zoom Scan Peak SAR : 0.290 W/kg

Plot 43#



SAR Evaluation Report 93 of 160

Hot Spot: WCDMA850; Body-Back (826.4 MHz Low Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.291 W/kg Power Drift-Finish : 0.298 W/kg Power Drift (%) : 2.349

Tissue Data

 Type
 : Body

 Frequency
 : 826.40 MHz

 Epsilon
 : 56.20 F/m

 Sigma
 : 0.98 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283
Frequency : 835
Duty Cycle Factor : 1
Conversion Factor : 6.6

Probe Sensitivity : 1.20 1.20 1.20

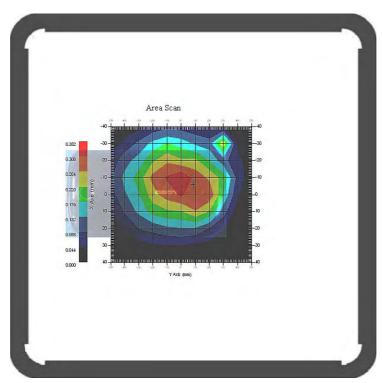
Compression Point : 95.00 mV

Offset : 1.56 mm

1 gram SAR value : 0.282 W/kg 10 gram SAR value : 0.171 W/kg Area Scan Peak SAR : 0.351 W/kg Zoom Scan Peak SAR : 0.430 W/kg

Plot 44#

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



SAR Evaluation Report 94 of 160

Hot Spot: WCDMA850; Body-Left (826.4 MHz Low Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.039 W/kg Power Drift-Finish : 0.039 W/kg : -1.806 Power Drift (%)

Tissue Data

Type : Body Frequency : 826.40 MHz : 56.20 F/m Epsilon Sigma : 0.98 S/m Density : 1000.00 kg/cu. m

Probe Data

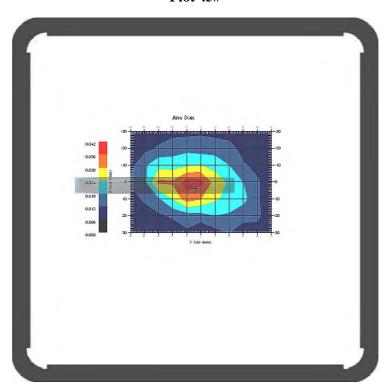
Serial No. : 500-00283 Frequency : 835 Duty Cycle Factor : 1 Conversion Factor : 6.6

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

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

1 gram SAR value : 0.036 W/kg 10 gram SAR value : 0.024 W/kg Area Scan Peak SAR : 0.039 W/kg Zoom Scan Peak SAR : 0.100 W/kg

Plot 45#



SAR Evaluation Report 95 of 160

Hot Spot: WCDMA850; Body-Right (824.6 MHz Low Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.055 W/kg Power Drift-Finish : 0.056 W/kg : 0.966 Power Drift (%)

Tissue Data

Type : Body Frequency : 826.40 MHz : 56.20 F/m Epsilon Sigma : 0.98 S/m Density : 1000.00 kg/cu. m

Probe Data

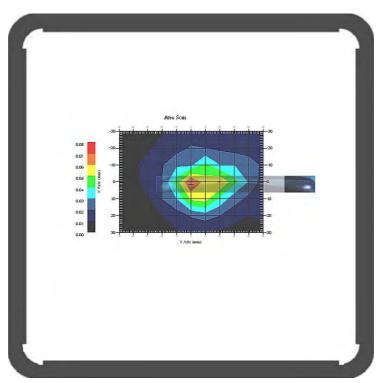
Serial No. : 500-00283 : 835 Frequency **Duty Cycle Factor** : 1 Conversion Factor : 6.6

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

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

1 gram SAR value : 0.064 W/kg 10 gram SAR value : 0.033 W/kg Area Scan Peak SAR : 0.071 W/kg Zoom Scan Peak SAR : 0.110 W/kg

Plot 46#



SAR Evaluation Report 96 of 160

Hot Spot: WCDMA850; Body-Bottom (8426.4 MHz Low Channel)

Measurement Data

Test mode : WCDMA850

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.020 W/kg Power Drift-Finish : 0.020 W/kg Power Drift (%) : 1.901

Tissue Data

 Type
 : Body

 Frequency
 : 826.40 MHz

 Epsilon
 : 56.20 F/m

 Sigma
 : 0.98 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

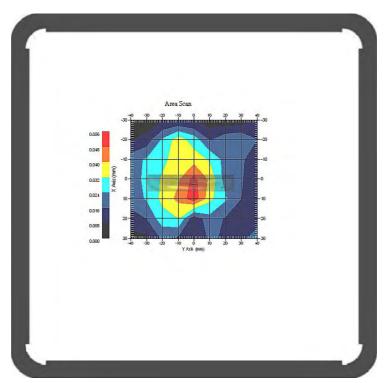
Serial No. : 500-00283
Frequency : 835
Duty Cycle Factor : 1
Conversion Factor : 6.6

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 : 0.049 W/kg 10 gram SAR value : 0.022 W/kg Area Scan Peak SAR : 0.053 W/kg Zoom Scan Peak SAR : 0.070 W/kg

Plot 47#



SAR Evaluation Report 97 of 160

Hot Spot: WCDMA1900; Body-Front (1852.4 MHz Low Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.714 W/kg Power Drift-Finish : 0.729 W/kg Power Drift (%) : 2.011

Tissue Data

Type : Body

 Frequency
 : 1852.40 MHz

 Epsilon
 : 54.03 F/m

 Sigma
 : 1.50 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

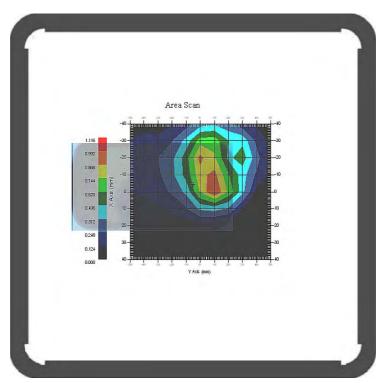
Serial No. : 500-00283 Frequency : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.0

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

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.900 W/kg 10 gram SAR value : 0.540 W/kg Area Scan Peak SAR : 0.993 W/kg Zoom Scan Peak SAR : 1.582 W/kg

Plot 48#



SAR Evaluation Report 98 of 160

Hot Spot: WCDMA1900; Body-Front (1880.0 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.134 W/kg Power Drift-Finish : 0.137 W/kg Power Drift (%) : 2.240

Tissue Data

Type : Body

 Frequency
 : 1880.00 MHz

 Epsilon
 : 53.89 F/m

 Sigma
 : 1.52 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

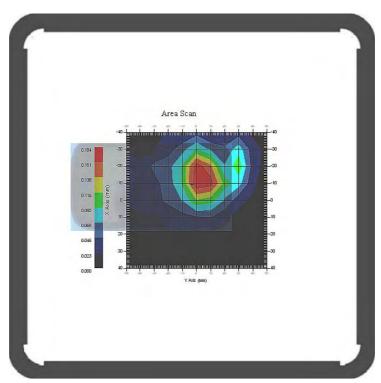
Serial No. : 500-00283 Frequency : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.0

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

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.175 W/kg 10 gram SAR value : 0.096 W/kg Area Scan Peak SAR : 0.183 W/kg Zoom Scan Peak SAR : 0.319 W/kg

Plot 49#



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Hot Spot: WCDMA1900; Body-Front (1907.6 MHz High Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.902 W/kg Power Drift-Finish : 0.917 W/kg Power Drift (%) : 1.663

Tissue Data

Type : Body

Frequency : 1907.60 MHz
Epsilon : 53.75 F/m
Sigma : 1.55 S/m
Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.0

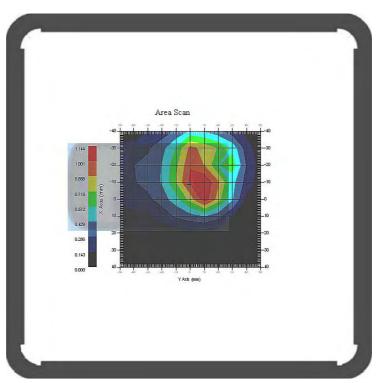
Probe Sensitivity : 1.20 1.20 1.20

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 1.023 W/kg 10 gram SAR value : 0.536 W/kg Area Scan Peak SAR : 1.142 W/kg Zoom Scan Peak SAR : 1.811 W/kg

Plot 50#

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



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Hot Spot: WCDMA1900; Body-Back (1852.4 MHz Low Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.537 W/kg Power Drift-Finish : 0.544 W/kg : 1.306 Power Drift (%)

Tissue Data

Type : Body

Frequency : 1852.40 MHz : 54.03 F/m Epsilon Sigma : 1.50 S/m Density : 1000.00 kg/cu. m

Probe Data

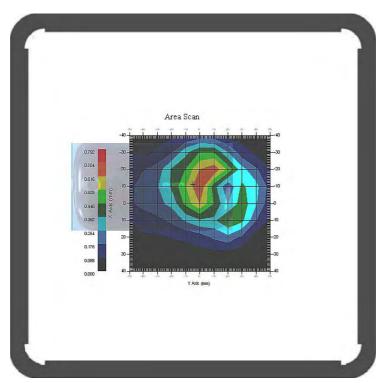
Serial No. : 500-00283 : 1900 Frequency : 1 **Duty Cycle Factor** Conversion Factor : 5.0

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 : 0.657 W/kg 10 gram SAR value : 0.346 W/kg Area Scan Peak SAR : 0.707 W/kg Zoom Scan Peak SAR : 1.131 W/kg

Plot 51#



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Hot Spot: WCDMA1900; Body-Back (1880.0 MHz Middle Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.092 W/kg Power Drift-Finish : 0.093 W/kg Power Drift (%) : 1.088

Tissue Data

Type : Body

 Frequency
 : 1880.00 MHz

 Epsilon
 : 53.89 F/m

 Sigma
 : 1.52 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283
Frequency : 1900
Duty Cycle Factor : 1
Conversion Factor : 5.0

Probe Sensitivity : 1.20 1.20 1.20

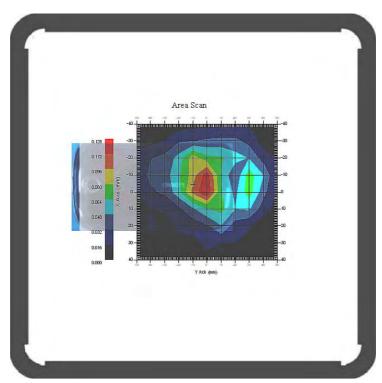
Compression Point : 95.00 mV

Offset : 1.56 mm

1 gram SAR value : 0.122 W/kg 10 gram SAR value : 0.066 W/kg Area Scan Peak SAR : 0.128 W/kg Zoom Scan Peak SAR : 0.239 W/kg

Plot 52#

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



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Hot Spot: WCDMA1900; Body-Back (1907.6 MHz High Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

Area Scan : 9x11x1 : Measurement x=10mm, y=10mm, z=4mm Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Power Drift-Start : 0.542 W/kg Power Drift-Finish : 0.551 W/kg Power Drift (%) : 1.662

Tissue Data

Type : Body

 Frequency
 : 1907.60 MHz

 Epsilon
 : 53.75 F/m

 Sigma
 : 1.55 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

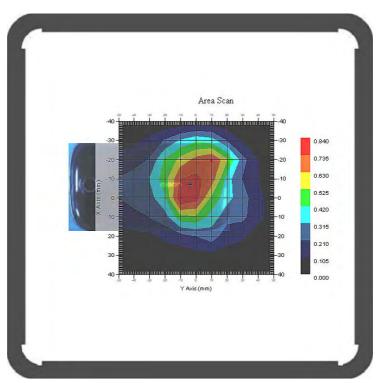
Serial No. : 500-00283
Frequency : 1900
Duty Cycle Factor : 1
Conversion Factor : 5.0

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

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.810 W/kg 10 gram SAR value : 0.446 W/kg Area Scan Peak SAR : 0.838 W/kg Zoom Scan Peak SAR : 1.402 W/kg

Plot 53#



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Hot Spot: WCDMA1900; Body-Left (1907.6 MHz High Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.288 W/kg Power Drift-Finish : 0.293 W/kg Power Drift (%) : 1.377

Tissue Data

Type : Body

 Frequency
 : 1907.60 MHz

 Epsilon
 : 53.75 F/m

 Sigma
 : 1.55 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

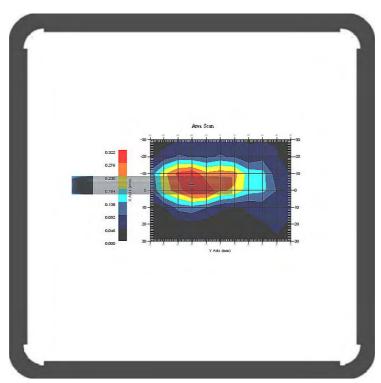
Serial No. : 500-00283 Frequency : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.0

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

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.294 W/kg 10 gram SAR value : 0.143 W/kg Area Scan Peak SAR : 0.322 W/kg Zoom Scan Peak SAR : 0.610 W/kg

Plot 54#



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Hot Spot: WCDMA1900; Body-Right (1907.6 MHz High Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.082 W/kg Power Drift-Finish : 0.083 W/kg Power Drift (%) : 1.221

Tissue Data

Type : Body

Frequency : 1907.60 MHz
Epsilon : 53.75 F/m
Sigma : 1.55 S/m
Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency : 1900 Duty Cycle Factor : 1 Conversion Factor : 5.0

Probe Sensitivity : 1.20 1.20 1.20

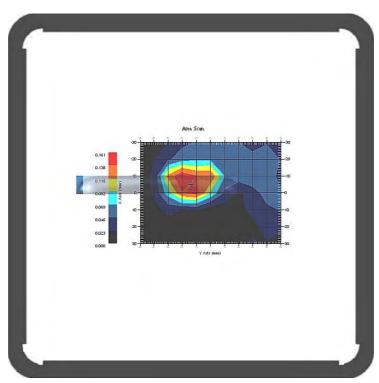
Compression Point : 95.00 mV

Offset : 1.56 mm

1 gram SAR value : 0.154 W/kg 10 gram SAR value : 0.074 W/kg Area Scan Peak SAR : 0.160W/kg Zoom Scan Peak SAR : 0.392 W/kg

Plot 55#

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



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Hot Spot: WCDMA1900; Body-Bottom (1907.6MHz High Channel)

Measurement Data

Test mode : WCDMA1900

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.442 W/kg Power Drift-Finish : 0.453 W/kg : 2.491 Power Drift (%)

Tissue Data

Type : Body

Frequency : 1907.60 MHz Epsilon : 53.75 F/m Sigma : 1.55 S/m Density : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 : 1900 Frequency : 1 **Duty Cycle Factor** Conversion Factor : 5.0

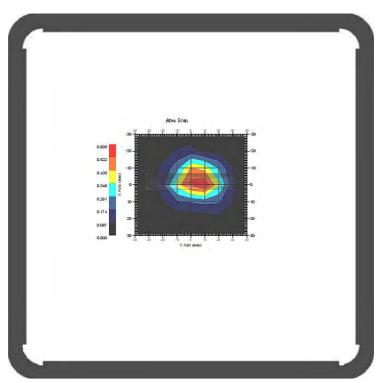
Probe Sensitivity

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

Compression Point : 95.00 mV Offset : 1.56 mm

1 gram SAR value : 0.569 W/kg 10 gram SAR value : 0.264 W/kg Area Scan Peak SAR : 0.606 W/kg Zoom Scan Peak SAR : 1.211 W/kg

Plot 56#



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Hot Spot: 802.11b; Body-Front (2437 MHz Channel 6)

Measurement Data

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.032 W/kg Power Drift-Finish : 0.032 W/kg Power Drift (%) : 1.124

Tissue Data

 Type
 : Body

 Frequency
 : 2437 MHz

 Epsilon
 : 52.70 F/m

 Sigma
 : 1.98 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283
Frequency Band : 2450
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

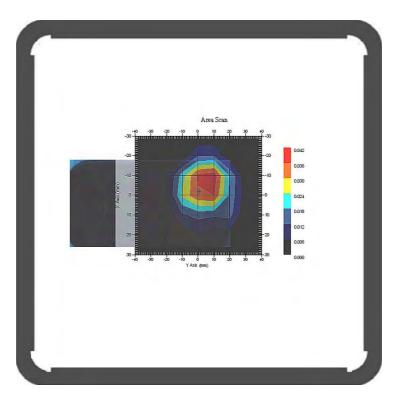
 1 gram SAR value
 : 0.037 W/kg

 10 gram SAR value
 : 0.020 W/kg

 Area Scan Peak SAR
 : 0.039 W/kg

 Zoom Scan Peak SAR
 : 0.090 W/kg

Plot 57#



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Hot Spot: 802.11b; Body-Back (2437 MHz Channel 6)

Measurement Data

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.046 W/kg Power Drift-Finish : 0.047 W/kg Power Drift (%) : 2.127

Tissue Data

 Type
 : Body

 Frequency
 : 2437 MHz

 Epsilon
 : 52.70 F/m

 Sigma
 : 1.98 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

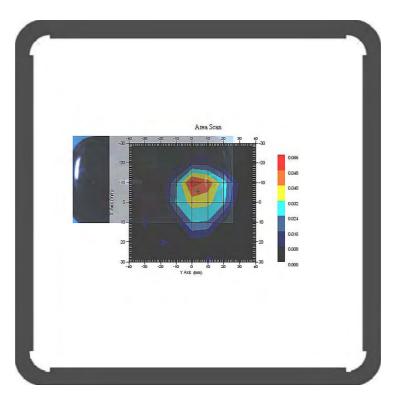
Serial No. : 500-00283 Frequency Band : 2450 Duty Cycle Factor : 1 Conversion Factor : 4.3

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

Compression Point : 95.00 mV Offset : 1.56 mm

 $\begin{array}{lll} 1 \text{ gram SAR value} & : 0.048 \text{ W/kg} \\ 10 \text{ gram SAR value} & : 0.027 \text{ W/kg} \\ \text{Area Scan Peak SAR} & : 0.056 \text{ W/kg} \\ \text{Zoom Scan Peak SAR} & : 0.093 \text{ W/kg} \end{array}$

Plot 58#



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Hot Spot: 802.11b; Body-Left (2437 MHz Channel 6)

Measurement Data

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.023 W/kg Power Drift-Finish : 0.023 W/kg Power Drift (%) : 1.329

Tissue Data

 Type
 : Body

 Frequency
 : 2437 MHz

 Epsilon
 : 52.70 F/m

 Sigma
 : 1.98 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

Serial No. : 500-00283 Frequency Band : 2450 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

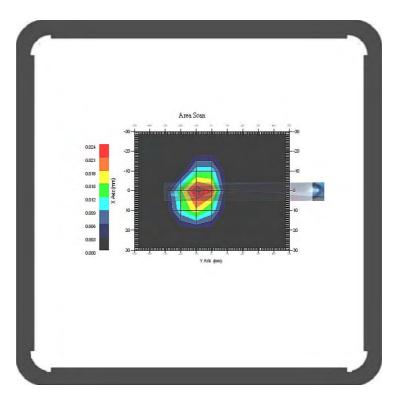
 1 gram SAR value
 : 0.022 W/kg

 10 gram SAR value
 : 0.013 W/kg

 Area Scan Peak SAR
 : 0.024 W/kg

 Zoom Scan Peak SAR
 : 0.049 W/kg

Plot 59#



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Hot Spot: 802.11b; Body-Top (2437 MHz Channel 6)

Measurement Data

Crest Factor : 1

Scan Type : Complete

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

Power Drift-Start : 0.029 W/kg Power Drift-Finish : 0.029 W/kg Power Drift (%) : 1.395

Tissue Data

 Type
 : Body

 Frequency
 : 2437 MHz

 Epsilon
 : 52.70 F/m

 Sigma
 : 1.98 S/m

 Density
 : 1000.00 kg/cu. m

Probe Data

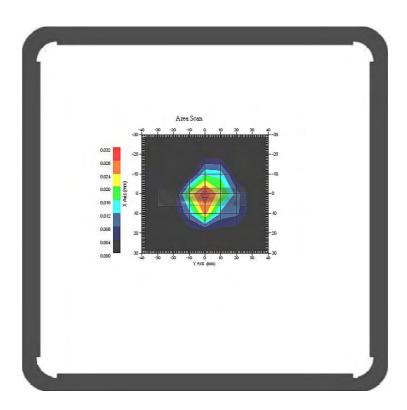
Serial No. : 500-00283 Frequency Band : 2450 Duty Cycle Factor : 1 Conversion Factor : 4.3

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

Compression Point : 95.00 mV Offset : 1.56 mm

 $\begin{array}{lll} 1 \text{ gram SAR value} & : 0.029 \text{ W/kg} \\ 10 \text{ gram SAR value} & : 0.016 \text{ W/kg} \\ \text{Area Scan Peak SAR} & : 0.032 \text{ W/kg} \\ \text{Zoom Scan Peak SAR} & : 0.079 \text{ W/kg} \end{array}$

Plot 60#



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