RF EXPOSURE LAB, LLC

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CERTIFICATE OF COMPLIANCE
SAR EVALUATION

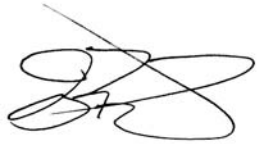
Cmotech Co., Ltd.	Dates of Test: Feb. 5,8, Apr. 5, May 18, Jun. 29, 2010
20/21F Gangnam Bldg. 1321-1	Test Report Number: SAR.20100201
Seocho-Dong, Seocho-Gu	Revision H
Seoul, South Korea 137-070	

FCC ID:	TARCDU-685A
Model(s):	CDU-685A
Test Sample:	Engineering Unit Same as Production
Serial No.:	2
Equipment Type:	Wireless Modem
Classification:	Portable Transmitter Next to Body
TX Frequency Range:	824.7 – 848.31 MHz, 1851.25 – 1908.75 MHz, 1710 – 1755 MHz
Frequency Tolerance:	± 25 ppm
Maximum RF Output:	835 MHz – 24.84 dBm, 1900 MHz – 24.42 dBm, 1700 MHz – 24.38 dBm Conducted
Signal Modulation:	QPSK,16QAM
Antenna Type (Length):	Internal Main; Four S Tech Co., Ltd. P/N FSM-CDUP-CM10-08-0 Int. Div/GPS; Four S Tech Co., Ltd. P/N FSM-CDUP-CM10-08-0 See Appendix C for Locations
Application Type:	Certification
FCC Rule Parts:	Part 22, 24, 27

This wireless mobile and/or portable device has been shown to be compliant for localized specific absorption rate (SAR) for uncontrolled environment/general exposure limits specified in ANSI/IEEE Std. C95.1-1999 and had been tested in accordance with the measurement procedures specified in IEEE 1528-2003, OET Bulletin 65 Supp. C, RSS-102 and Safety Code 6 (See test report).

I attest to the accuracy of the data. All measurements were performed by myself or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

RF Exposure Lab, LLC certifies that no party to this application has been denied FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 853(a).



Jay M. Moulton
Vice President

ACCREDITED
Certificate # 2387.01

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1. Introduction

This measurement report shows compliance of the Cmotech Co., Ltd. Model CDU-685A FCC ID: TARCDU-685A with FCC Part 2, 1093, ET Docket 93-62 Rules for mobile and portable devices. The FCC have adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on August 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC regulated portable devices. [1], [6]

The test procedures, as described in ANSI C95.1 – 1999 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz [2], ANSI C95.3 – 2002 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields [3], FCC OET Bulletin 65 Supp. C – 2001 [4], IEEE Std.1528 – 2003 Recommended Practice [5], and Industry Canada Safety Code 6 Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3kHz to 300 GHz were employed.

For USB dongle transmitters, the device is required to be tested on all four sides of the modem. Two of the orientations (1 horizontal side and 1 vertical side) must be conducted installed in a laptop. The remaining two sides may be conducted at the end of 12" high quality USB extender cable.

SAR Definition [5]

Specific Absorption Rate is defined as the time derivative (rate) of the incremental energy (*dW*) absorbed by (dissipated in) an incremental mass (*dm*) contained in a volume element (*dV*) of a given density (ρ).

$$SAR = \frac{d}{dt}\left(\frac{dW}{dm}\right) = \frac{d}{dt}\left(\frac{dW}{\rho dV}\right)$$

SAR is expressed in units of watts per kilogram (W/kg). *SAR* can be related to the electric field at a point by

$$SAR = \frac{\sigma \mid E \mid^2}{\rho}$$

where:

σ = conductivity of the tissue (S/m)
ρ = mass density of the tissue (kg/m^3)
E = rms electric field strength (V/m)

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2. SAR Measurement Setup

Robotic System

The measurements are conducted utilizing the ALSAS-10-U automated dosimetric assessment system. The ALSAS-10-U is designed and manufactured by Aprel Laboratories in Nepean, Ontario, Canada. The system utilizes a Robcomm 3 robot manufactured by ThermoCRS located in Michigan USA.

System Hardware

The system consists of a six axis articulated arm, controller for precise probe positioning (0.05 mm repeatability), a power supply, a teach pendent for teaching area scans, near field probe, an IBM Pentium 4™ 2.66 GHz PC with Windows XP Pro™, and custom software developed to enable communications between the robot controller software and the host operating system.

An amplifier is located on the articulated arm, which is isolated from the custom designed end effector and robot arm. The end effector provides the mechanical touch detection functionality and probe connection interface. The amplifier is functionally validated within the manufacturer's site and calibrated at NCL Calibration Laboratories. A Data Acquisition Card (DAC) is used to collect the signal as detected by the isotropic e-field probe. The DAC manufacturer calibrates the DAC to NIST standards. A formal validation is executed using all mechanical and electronic components to prove conformity of the measurement platform as a whole.

System Description

The ALSAS-10-U has been designed to measure devices within the compliance environment to meet all recognized standards. The system also conforms to standards, which are currently being developed by the scientific and manufacturing community.

The course scan resolution is defined by the operator and reflects the requirements of the standard to which the device is being tested. Precise measurements are made within the predefined course scan area and the values are logged.

The user predefines the sample rate for which the measurements are made so as to ensure that the full duty-cycle of a pulse modulation device is covered during the sample. The following algorithm is an example of the function used by the system for linearization of the output for the probe.

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

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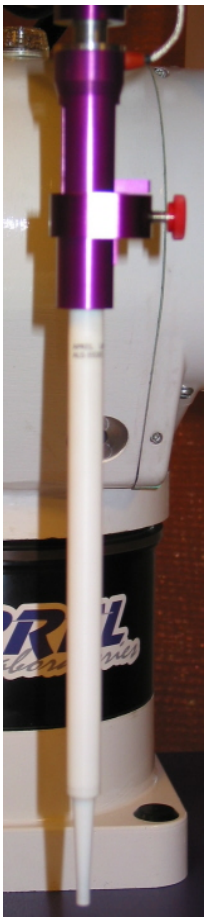

The Aprel E-Field probe is evaluated to establish the diode compression point.

A complex algorithm is then used to calculate the values within the measured points down to a resolution of 1mm. The data from this process is then used to provide the co-ordinates from which the cube scan is created for the determination of the 1 g and 10 g averages.

Cube scan averaging consists of a number of complex algorithms, which are used to calculate the one, and ten gram averages. The basis for the cube scan process is centered on the location where the maximum measured SAR value was found. When a secondary peak value is found which is within 60% of the initial peak value, the system will report this back to the operator who can then assess the need for further analysis of both the peak values prior to the one and ten-gram cube scan averaging process. The algorithm consists of 3D cubic Spline, and Lagrange extrapolation to the surface, which form the matrix for calculating the measurement output for the one and ten gram average values. The resolution for the physical scan integral is user defined with a final calculated resolution down to 1mm.

In-depth analysis for the differential of the physical scanning resolution for the cube scan analysis has been carried out, to identify the optimum setting for the probe positioning steps, and this has been determined at 8mm increments on the X, & Y planes. The reduction of the physical step increment increased the time taken for analysis but did not provide a better uncertainty or return on measured values.

The final output from the system provides data for the area scan measurements, physical and splined (1mm resolution) cube scan with physical and calculated values (1mm resolution).

The overall uncertainty for the methodology and algorithms the ALSAS-10-U used during the SAR calculation was evaluated using the data from IEEE 1528 f3 algorithm:

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

The probe used during the measurement process has been assessed to provide values for diode compression. These values are calculated during the probe calibration exercise and are used in the mathematical calculations for the assessment of SAR.

E-Field Probe

The E-field probe used by RF Exposure Lab, LLC, has been fully calibrated and assessed for isotropic, and boundary effect. The probe utilizes a triangular sensor arrangement as detailed in the diagram below right.

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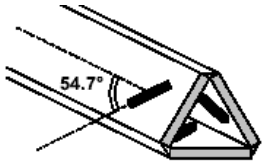
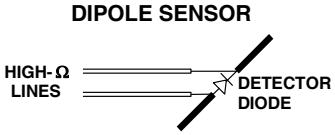


Δ-BEAM



The SAR is assessed with the 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 (Z height). The diagram above right shows how the center of the sensor is defined with the location of the diode placed at the center of the dipole. The 5mm default in the Z axis is the optimum height for assessing SAR where the boundary effect is at its least, with the probe located closest to the phantom surface (boundary).

The manufacturer specified precision of the robot is ± 0.05 mm and the precision of the APREL bottom detection device is ± 0.1 mm. These precisions are calibrated and tested in the manufacturing process of the bottom detection device. A constant distance is maintained because the surface of the phantom is dynamically detected for each point. The surface detection algorithm corrects the position of the robot so that the probe rests on the surface of the phantom. The probe is then moved to the measurement location 2.44 mm above the phantom surface resulting in the probe center location to be at 4.0 mm above the phantom surface. Therefore, the probe sensor will be at 4.0 mm above the phantom surface ± 0.1 mm for each SAR location for frequencies below 3 GHz. The probe is moved to the measurement location 1.44 mm above the phantom surface resulting in the probe center location to be at 2.0 mm above the phantom surface. Therefore, the probe sensor will be at 2.0 mm above the phantom surface ± 0.1 mm for each SAR location for frequencies above 3 GHz.

The probe boundary effect compensation cannot be disabled in the ALSAS-10U testing system. The probe tip will always be at least half a probe tip diameter from the phantom surface. For frequencies up to 3 GHz, the probe diameter is 5 mm. With the sensor offset set at 1.54 mm (default setting), the sensor to phantom gap will be 4.0 mm which is greater than half the probe tip diameter. For frequencies greater than 3 GHz, the probe diameter is 3 mm. With the sensor offset set at 0.56 mm (default setting), the sensor to phantom gap will be 3.0 mm which is greater than half the probe tip diameter.

The separation of the first 2 measurement points in the zoom scan is specified in the test setup software. For frequencies below 3 GHz, the user must specify a zoom scan resolution of less than 6 mm in the z-axis to have the first two measurements within 1 cm of the surface. The z-axis is set to 4 mm as shown on each of the data sheets in Appendix B. For frequencies above 3 GHz, the user must specify a zoom scan resolution of less than 3 mm in the z-axis to have the first two measurements within 5 mm of the surface. The z-axis is set to 2 mm as shown on each of the data sheets in Appendix B.

The zoom scan volume for devices ≤3 GHz with a cube scan of 5x5x8 yields a volume of 32x32x28 mm^3. For devices >3 GHz and <4.5 GHz, the cube scan of 9x9x9 yields a volume of 32x32x24 mm^3. For devices ≥4.5 GHz, the cube scan of 7x7x12 yields a volume of 24x24x22 mm^3.

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3. Robot Specifications

Specifications

Positioner:	ThermoCRS, Robot Model: Robocomm 3
Repeatability:	0.05 mm
No. of axis:	6

Data Acquisition Card (DAC) System

Cell Controller

Processor:	Pentium 4™
Clock Speed:	2.66 GHz
Operating System:	Windows XP Pro™

Data Converter

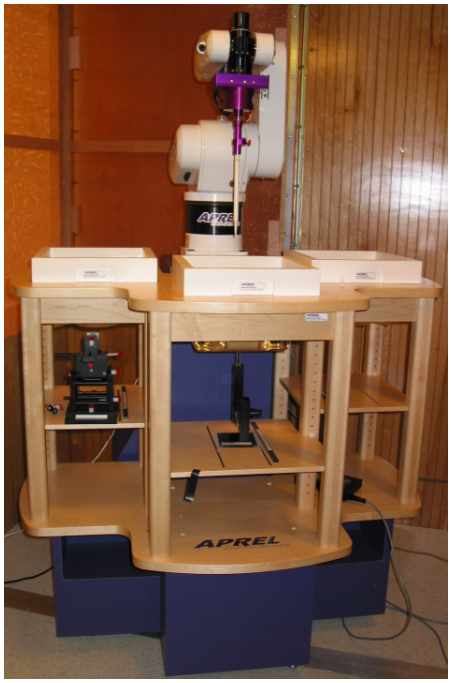
Features:	Signal Amplifier, End Effector, DAC
Software:	ALSAS 10-U Software

E-Field Probe

Model:	Various See Probe Calibration Sheet
Serial Number:	Various See Probe Calibration Sheet
Construction:	Triangular Core Touch Detection System
Frequency:	10MHz to 6GHz

Phantom

Phantom:	Uniphantom, Right Phantom, Left Phantom



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4. Probe and Dipole Calibration

See Appendix D and E.

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5. Phantom & Simulating Tissue Specifications

SAM Phantom

The Aprel system utilizes three separate phantoms. Each phantom for SAR assessment testing is a low loss dielectric shell, with shape and dimensions derived from the anthropomorphic data of the 90th percentile adult male head dimensions as tabulated by the US Army. The SAM phantom shell is bisected along the mid sagittai plane into right and left halves. The perimeter sidewalls of each phantom half is extended to allow filling with liquid to a depth of 15 cm that is sufficient to minimize reflections from the upper surface [5]. The Uni-Phantom is used to conduct body measurements and held to face measurements. The depth of the phantom allows for 15 cm of tissue material to be filled within the phantom. See photos in Appendix C.

Brain & Muscle Simulating Mixture Characterization

The brain and muscle mixtures consist of the material based on the table listed below. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue. Body tissue parameters that have not been specified in P1528 are derived from the issue dielectric parameters computed from the 4-Cole-Cole equations.

Table 5.1 Typical Composition of Ingredients for Tissue

Ingredients		Simulating Tissue		
		835 MHz Muscle	1900 MHz Muscle	1750 MHz Muscle
Mixing Percentage				
Water		52.40	69.91	70.17
Sugar		45.00	0.00	0.00
Salt		1.40	0.13	0.20
HEC		1.00	0.00	0.00
Bactericide		0.10	0.00	0.00
DGBE		0.00	29.96	29.44
Dielectric Constant	Target	55.20	53.30	53.43
Conductivity (S/m)	Target	0.97	1.52	1.49

Device Holder

In combination with the SAM phantom, the mounting device enables the rotation of the mounted transmitter in spherical coordinates whereby the rotation point is the ear opening. The devices can easily, accurately, and repeatably be positioned according to the FCC specifications. The device holder can be locked at different phantom locations (left head, right head, and uni-phantom).

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6. Definition of Reference Points

Ear Reference Point

Figure 6.2 shows the front, back and side views of the SAM Phantom. The point "M" is the reference point for the center of the mouth, "LE" is the left ear reference point (ERP), and "RE" is the right ERP. The ERPs are 15mm posterior to the entrance to the ear canal (EEC) along the B-M line (Back-Mouth), as shown in Figure 6.1. The plane passing through the two ear canals and M is defined as the Reference Plane. The line N-F (Neck-Front) is perpendicular to the reference plane and passing through the RE (or LE) is called the Reference Pivoting Line (see Figure 6.1). Line B-M is perpendicular to the N-F line. Both N-F and B-M lines are marked on the external phantom shell to facilitate handset positioning [5].

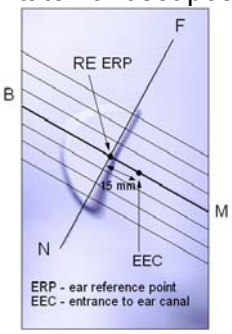

Figure 6.1 Close-up side view of ERP's

Figure 6.2 Front, back and side view of SAM

Device Reference Points

Two imaginary lines on the device need to be established: the vertical centerline and the horizontal line. The test device is placed 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" (See Fig. 6.3). The "test device reference point" is than located at the same level as the center of the ear reference point. The test device is positioned so that the "vertical centerline" is bisecting the front surface of the device at it's top and bottom edges, positioning the "ear reference point" on the outer surface of both the left and right head phantoms on the ear reference point [5].

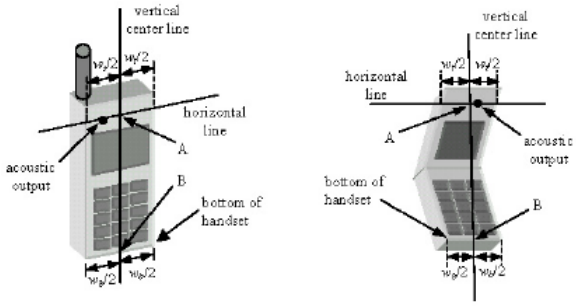

Figure 6.3 Handset Vertical Center & Horizontal Line Reference Points

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7. Test Configuration Positions

Positioning for Cheek/Touch [5]

1. Position the device close to the surface of the phantom such that point A is on the (virtual) extension of the line passing through points RE and LE on the phantom (see Figure 7.1), such that the plane defined by the vertical center line and the horizontal line of the device is approximately parallel to the sagittal plane of the phantom.

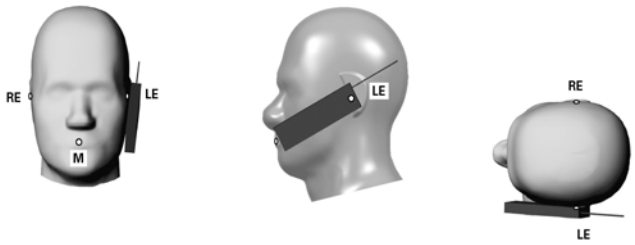

Figure 7.1 Front, Side and Top View of Cheek/Touch Position

2. Translate the device towards the phantom along the line passing through RE and LE until the device touches the ear.

3. While maintaining the device in this plane, rotate it around the LE-RE line until the vertical centerline is in the plane normal to MB-NF including the line MB (called the reference plane).

4. Rotate the device around the vertical centerline until the device (horizontal line) is symmetrical with respect to the line NF.

5. While maintaining the vertical centerline in the reference plane, keeping point A on the line passing through RE and LE and maintaining the device contact with the ear, rotate the device about the line NF until any point on the device is in contact with a phantom point below the ear (cheek). See Figure 7.2.

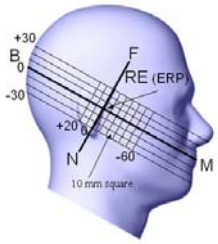

Figure 7.2 Side view w/ relevant markings

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Positioning for Ear / 15° Tilt [5]

With the test device aligned in the Cheek/Touch Position":

1. While maintaining the orientation of the device, retracted the device parallel to the reference plane far enough to enable a rotation of the device by 15 degrees.

2. Rotate the device around the horizontal line by 15 degrees.

3. While maintaining the orientation of the device, move the device parallel to the reference plane until any part of the device touches the head. (In this position, point A is located on the line RE-LE). The tilted position is obtained when the contact is on the pinna. If the contact is at any location other than the pinna, the angle of the device shall be reduced. The tilted position is obtained when any part of the device is in contact with the ear as well as a second part of the device is in contact with the head (see Figure 7.3).

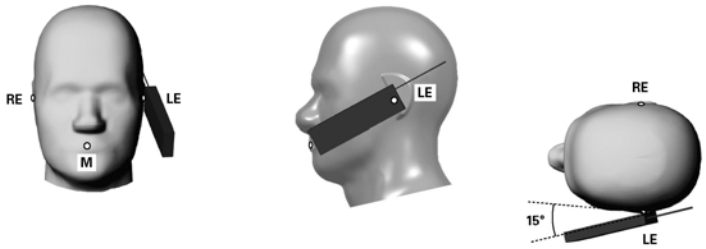

Figure 7.3 Front, Side and Top View of Ear/15° Tilt Position

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Body Worn Configurations

Body-worn operating configurations are tested with the accessories attached to the device and positioned against a flat phantom in a normal use configuration. A device with a headset output is tested with a headset connected to the device. Body dielectric parameters are used.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then, when multiple accessories that contain metallic components are supplied with the device, the device is tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (i.e. 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 is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration where a separation distance between the back of the device and the flat phantom is used. All test position spacings are documented.

Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessory(ies), including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

In all cases SAR measurements are performed to investigate the worst-case positioning. Worst-case positioning is then documented and used to perform Body SAR testing.

In order for users to be aware of the body-worn operating requirements for meeting RF exposure compliance, operating instructions and cautions statements are included in the user's manual.

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8. ANSI/IEEE C95.1 – 1999 RF Exposure Limits [2]

Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Table 8.1 Human Exposure Limits

	UNCONTROLLED ENVIRONMENT General Population (W/kg) or (mW/g)	CONTROLLED ENVIROMENT Professional Population (W/kg) or (mW/g)
SPATIAL PEAK SAR[1] Brain	1.60	8.00
SPATIAL AVERAGE SAR[2] Whole Body	0.08	0.40
SPATIAL PEAK SAR[3] Hands, Feet, Ankles, Wrists	4.00	20.00

[1] The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.
[2] The Spatial Average value of the SAR averaged over the whole body.
[3] The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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9. Measurement Uncertainty

Exposure Assessment Measurement Uncertainty

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	c_i^1 (1-g)	c_i^1 (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	√3	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	√3	√cp	√cp	4.4	4.4
Boundary Effect	1.0	rectangular	√3	1	1	0.6	0.6
Linearity	4.7	rectangular	√3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	√3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	√3	1	1	0.5	0.5
Integration Time	1.7	rectangular	√3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	√3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	√3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	√3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	√3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	7.1	rectangular	√3	1	1	4.1	4.1
Phantom and Setup							
Phantom Uncertainty(shape & thickness tolerance)	3.4	rectangular	√3	1	1	2.0	2.0
Liquid Conductivity(target)	5.0	rectangular	√3	0.7	0.5	2.0	1.4
Liquid Conductivity(meas.)	2.1	normal	1	0.7	0.5	1.4	1.0
Liquid Permittivity(target)	5.0	rectangular	√3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	0.1	normal	1	0.6	0.5	0.1	0.0
Combined Uncertainty		RSS				10.2	10.0
Combined Uncertainty (coverage factor=2)		Normal(k=2)				20.4	20.0

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10. System Validation

Tissue Verification

Table 10.1 Measured Tissue Parameters

		835 MHz Body		1900 MHz Body		1750 MHz Body	
Date(s)		Feb. 8, 2010		Feb. 8, 2010		Feb. 5, 2010	
Liquid Temperature (˚C)	20.0	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: ε		55.20	56.65	53.30	52.26	53.43	53.56
Conductivity: σ		0.97	0.96	1.52	1.56	1.49	1.51
		1900 MHz Body		1750 MHz Body		1750 MHz Body	
Date(s)		Apr. 5, 2010		Apr. 5, 2010		May 18, 2010	
Liquid Temperature (˚C)	20.0	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: ε		53.30	52.71	53.43	53.43	53.43	53.32
Conductivity: σ		1.52	1.54	1.49	1.49	1.49	1.52
		835 MHz Body		1900 MHz Body		1750 MHz Body	
Date(s)		Jun. 29, 2010		Jun. 29, 2010		Jun. 29, 2010	
Liquid Temperature (˚C)	20.0	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: ε		55.20	55.01	53.30	52.84	53.43	53.32
Conductivity: σ		0.97	0.98	1.52	1.53	1.49	1.52

See Appendix A for data printout.

Test System Verification

Prior to assessment, the system is verified to the ±10% of the specifications at the test frequency by using the system kit. Power is extrapolated to 1 watt. (Graphic Plots Attached)

Table 10.2 System Dipole Validation Target & Measured

	Test Frequency	Targeted SAR_{1g} (W/kg)	Measure SAR_{1g} (W/kg)	Deviation (%)
08-Feb-2010	835 MHz	9.49	10.14	+ 6.85
08-Feb-2010	1900 MHz	38.70	40.12	+ 3.67
05-Feb-2010	1750 MHz	38.20	36.95	- 3.27
05-Apr-2010	1900 MHz	38.70	39.37	+ 1.73
05-Apr-2010	1750 MHz	38.20	39.93	+ 4.53
18-May-2010	1750 MHz	38.20	39.12	+ 2.41
29-Jun-2010	835 MHz	9.49	9.58	+ 0.95
29-Jun-2010	1900 MHz	38.70	38.91	+ 0.54
29-Jun-2010	1750 MHz	38.20	37.99	- 0.55

See Appendix A for data plots.

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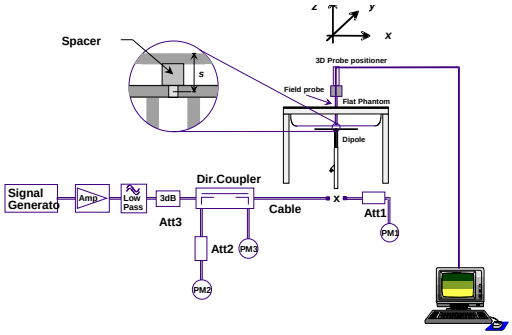

Figure 10.1 Dipole Validation Test Setup

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11. SAR Test Data Summary

See Measurement Result Data Pages

See Appendix B for SAR Test Data Plots.
See Appendix C for SAR Test Setup Photos.

Procedures Used To Establish Test Signal

The device was placed into simulated transmit mode using the manufacturer's test codes. Such test signals offer a consistent means for testing SAR and are recommended for evaluating SAR. When test modes are not available or inappropriate for testing a device, the actual transmission is activated through a base station simulator or similar equipment. See data pages for actual procedure used in measurement.

Device Test Condition

In order to verify that the device was tested at full power, conducted output power measurements were performed before and after each SAR measurement to confirm the output power unless otherwise noted. If a conducted power deviation of more than 5% occurred, the test was repeated.

The testing was conducted on all side sides of the modem. The bottom back side testing was conducted with the modem installed in a side USB port on a Toshiba Portege A600 Laptop. The right side testing was conducted with the modem installed in a rear USB port on a Toshiba Satellite 2400 Laptop. All other positions were conducted with the modem installed on a 12 inch USB extension cable. The extension cable was installed in a side USB port on a Toshiba Portege A600 Laptop. The gap was measured to be 5 mm from the phantom at the USB connector end of the body for the top and bottom, and 5 mm from the phantom for the left, right and tip sides of the device.

The 1xRTT testing was conducted in RC3 with the device configured using TDSO/SO32 with FCH transmitting at full rate. The power control was set to "All Bits Up." Multiple code channels were not tested due to the conducted power measured was less than ¼ dB higher than with FCH only.

The Rev. 0 and Rev. A Subtype 0/1 testing was conducted with the Reverse Data Channel rate of 153.6 kbps. The Forward Traffic Channel data rate is set to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots. The power control was set to "All Bits Up." Other rates were not tested due to the conducted power measured was less than ¼ dB higher than 153.6 kbps.

The Rev. A Subtype 2 testing was conducted with the Reverse Data Channel payload size of 4096 bits and Termination Target of 16 slots. The Forward Traffic Channel data rate is set to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots. The power control was set to "All Bits Up." Other rates were not tested due to the conducted power measured was less than ¼ dB higher than 4096 bits.

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12. FCC Measurement Procedures – March 2008

Power measurements were performed using a base station simulator under average power.

12.1 Procedures Used to Establish RF Signal for SAR

The device was placed into a simulated call using a base station simulator in a screen room. Such test signals offer a consistent means for testing SAR and recommended for evaluating SAR. The SAR measurement software calculates a reference point at the start and end of the test to check for power drifts. If conducted power deviations of more than 5% occurred, the tests were repeated.

12.2 SAR Measurement Conditions

12.2.1 Output Power Verification Ev-Do

Maximum output power is verified on the High, Middle, and Low channels according to the procedures in section 3.1.2.3.4 of 3GPP2 C.S0033-0/TIA-866 for Rev. 0 and section 4.3.4 of 3GPP2 C.S0033-1 for Rev. A. For Rev. A, maximum output power for both Subtype 0/1 and Subtype 2 Physical Layer configurations should be measured. The device operating configurations under TAP/ETAP shall be documented in the test report; including power control, code channel and RF channel output power levels. The measurement results should be tabulated in the SAR report with any measurement difficulties and equipment limitations clearly identified.

12.2.2 Body SAR Measurements

SAR is measured using FTAP/RTAP and FETAP/RETAP respectively for Rev. 0 and Rev. A devices. The AT is tested with a Reverse Data Channel rate of 153.6 kbps in Subtype 0/1 Physical Layer configurations; and a Reverse Data Channel payload size of 4096 bits and Termination Target of 16 slots in Subtype 2 Physical Layer configurations. Both FTAP and FETAP are configured with a Forward Traffic Channel data rate corresponding to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots. AT power control should be in All Bits Up conditions for TAP/ETAP modes.

Body SAR is measured using Subtype 0/1 Physical Layer configurations for Rev. 0. SAR for Subtype 2 Physical Layer configurations is not require for Rev. A when the maximum average output of each RF channel is less than that measured in Subtype 0/1 Physical Layer configurations. Otherwise, SAR is measured on the maximum output channel for Rev. A using the exposure configurations that results in the highest SAR for that RF channel in Rev. 0.

1x RTT Support
For Ev-Do devices that also support 1x RTT voice and/or data operations, SAR is not required for 1x RTT when the maximum average output of each channel is less than ¼ dB higher than that measured in Subtype 0/1 Physical Layer configurations for Rev. 0. Otherwise, the 'Body SAR Measurements' procedures in the 'CDMA-2000 1x Handsets" section should be applied.

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12.2.3 Output Power Verification 1x RTT

Maximum output power is verified on the High, Middle, and Low channels according to procedures in section 4.4.5.2 of 3 GPP2 C.S0011/TIA-98-E. Results for at least steps 3, 4 and 10 of the power measurement procedures should be tabulated in the SAR report. Steps 3 and 4 should be measured using SO55 with power control bits in "All Up" condition. TDSO / SO32 may be used instead of SO55 for step 4. Step 10 should be measured using TDSO / SO32 with power control bits in the "Bits Hold" condition (i.e. alternative Up/Down Bits). All power measurements defined in C.S0011/TIA-98-E that are inapplicable to the DUT or cannot be measured due to technical or equipment limitations should be clearly identified in the test report.

1xRTT Power Measurements

IS-2000	Channel	SO2 [dBm]	SO2 [dBm]	SO2 [dBm]	SO55 [dBm]	SO55 [dBm]	SO9 [dBm]	SO9 [dBm]	SO55 [dBm]	TDSO SO32 FCH Only [dBm]	TDSO SO32 FCH+SCH [dBm]
	F-RC	RC1	RC3	RC4	RC1	RC3	RC2	RC5	RC2	RC3	RC3
Band	Vocoder Rate	Full	Full	Full	Full	Full	Full	Full	Full	Full	Full
Cellular	1013	24.16	24.13	24.10	24.12	24.11	24.08	24.06	24.09	24.13	24.15
	384	23.89	23.82	23.86	23.81	23.80	23.79	23.84	23.86	23.80	23.79
	777	24.51	24.47	24.43	24.49	24.41	24.43	24.46	24.50	24.48	24.41
PCS	25	24.42	24.39	24.40	24.31	24.38	24.36	24.37	24.39	24.41	24.38
	600	23.99	23.92	23.97	23.93	23.90	23.98	23.87	23.91	23.95	23.91
	1175	24.18	24.12	24.08	24.13	24.16	24.17	24.09	24.15	24.17	24.11
AWS	225	24.38	24.32	24.37	24.29	24.27	24.31	24.36	24.31	24.36	24.29
	300	24.35	24.30	24.27	24.26	24.29	24.31	24.32	24.33	24.25	24.24
	375	24.09	24.01	23.99	24.05	24.03	23.97	23.99	24.03	24.06	24.08
	100	24.42	24.38	24.39	24.32	24.33	24.29	24.30	24.36	24.21	24.28
	450	24.01	23.98	23.99	23.92	23.97	23.89	23.88	23.82	23.86	23.94
	800	23.95	23.91	23.85	23.87	23.83	23.79	23.85	23.89	23.92	23.90

EvDo Rev 0 Power Measurements

1x EvDo Rev. 0 [dBm] - FTAP rate = 2 Slot Version 307.2 kbps						
	RTAP Rate	9.6 kbps	19.2 kbps	38.4 kbps	76.8 kbps	153.6 kbps
Band	Channel					
Cellular	1013	24.02	24.08	24.05	24.10	24.12
	384	23.79	23.81	23.80	23.79	23.82
	777	24.50	24.49	24.51	24.52	24.54
PCS	25	24.31	24.38	24.35	24.36	24.37
	600	23.89	23.91	23.90	23.92	23.94
	1175	24.05	24.06	24.09	24.11	24.13
AWS	225	24.25	24.28	24.29	24.31	24.32
	300	24.20	24.22	24.26	24.25	24.28
	375	23.99	24.01	24.00	24.02	24.04
	100	24.43	24.41	24.40	24.43	24.39
	450	24.06	24.05	24.00	24.03	24.01
	800	23.99	23.98	23.92	23.96	23.94

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EvDo Rev A Power Measurements

1x EvDo Rev. A Type 2 [dBm] - FETAP rate = 2 Slot Version 307.2 kbps													
	RETAP Payload	128 bits	256 bits	512 bits	768 bits	1024 bits	1536 bits	2048 bits	3072 bits	4096 bits	6144 bits	8192 bits	12288 bits
Band	Channel												
Cellular	1013	24.13	24.10	24.09	24.05	24.11	24.06	24.02	24.12	24.01	24.08	24.05	24.10
	384	23.84	23.75	23.76	23.79	23.71	23.77	23.82	23.80	23.83	23.76	23.79	23.84
	777	24.47	24.41	24.46	24.49	24.39	24.45	24.48	24.51	24.50	24.43	24.47	24.46
PCS	25	24.38	24.31	24.36	24.35	24.39	24.30	24.40	24.41	24.37	24.36	24.39	24.40
	600	23.95	23.90	23.89	23.96	23.99	23.91	23.87	23.88	23.84	23.90	23.91	23.96
	1175	24.13	24.03	24.06	24.09	24.11	24.16	24.05	24.09	24.07	24.10	24.11	24.06
AWS	225	24.32	24.29	24.25	24.26	24.27	24.31	24.30	24.33	24.28	24.26	24.25	24.32
	300	24.34	24.31	24.27	24.29	24.31	24.36	24.24	24.30	24.31	24.25	24.33	24.36
	375	24.04	23.99	23.94	24.00	24.01	23.93	23.94	23.98	24.03	24.06	24.01	24.05
	100	24.36	24.33	24.26	24.28	24.22	24.31	24.35	24.26	24.19	24.27	24.16	24.28
	450	24.31	24.29	24.32	24.21	24.20	24.26	24.17	24.13	24.28	24.23	24.28	24.22
	800	24.00	23.99	23.94	23.91	23.87	23.82	23.95	23.96	23.99	24.01	24.00	23.92

Power Control was set in "All Bits Up" for all measurements.

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12.3 SAR Measurement Description

This modem contains a technology which will sense the close proximity of the human body to the device. When the technology senses the human body, it will reduce the maximum power the modem can transmit to 18 dBm. The base station will still have full control of the modem's power below the 18 dBm threshold. When the base station requests an increase in power which will go above the 18 dBm power level, the modem will not allow the power delivered to the antenna to increase any further then the 18 dBm until the human body is no longer detected. Below are the power plots of the device with the sensor activated and when the sensor is inactive.

For the device which this report is written, the 835 MHz band is not included with the reduction of power when the body is sensed. If the modem is operating in the 835 MHz band, it will operate normally with the full transmit power of 24 dBm. This band does not utilize the body sensor technology due to the device being able to meet the SAR requirements without reducing the power level.

The following table shows the distance for each side of the modem when the body is detected to cause the modem to reduce the maximum power level.

Orientation / Sensing distance Distance	5mm	7mm	10mm	15mm
Top	Active	Active	Active	Inactive
Bottom	Active	Active	Active	Inactive
Left	Active	Inactive	Inactive	Inactive
Right	Active	Active	Inactive	Inactive
Tip	Active	Inactive	Inactive	Inactive

Table 12.1 Body Sensor Distance For 1700 MHz & 1900 MHz Bands

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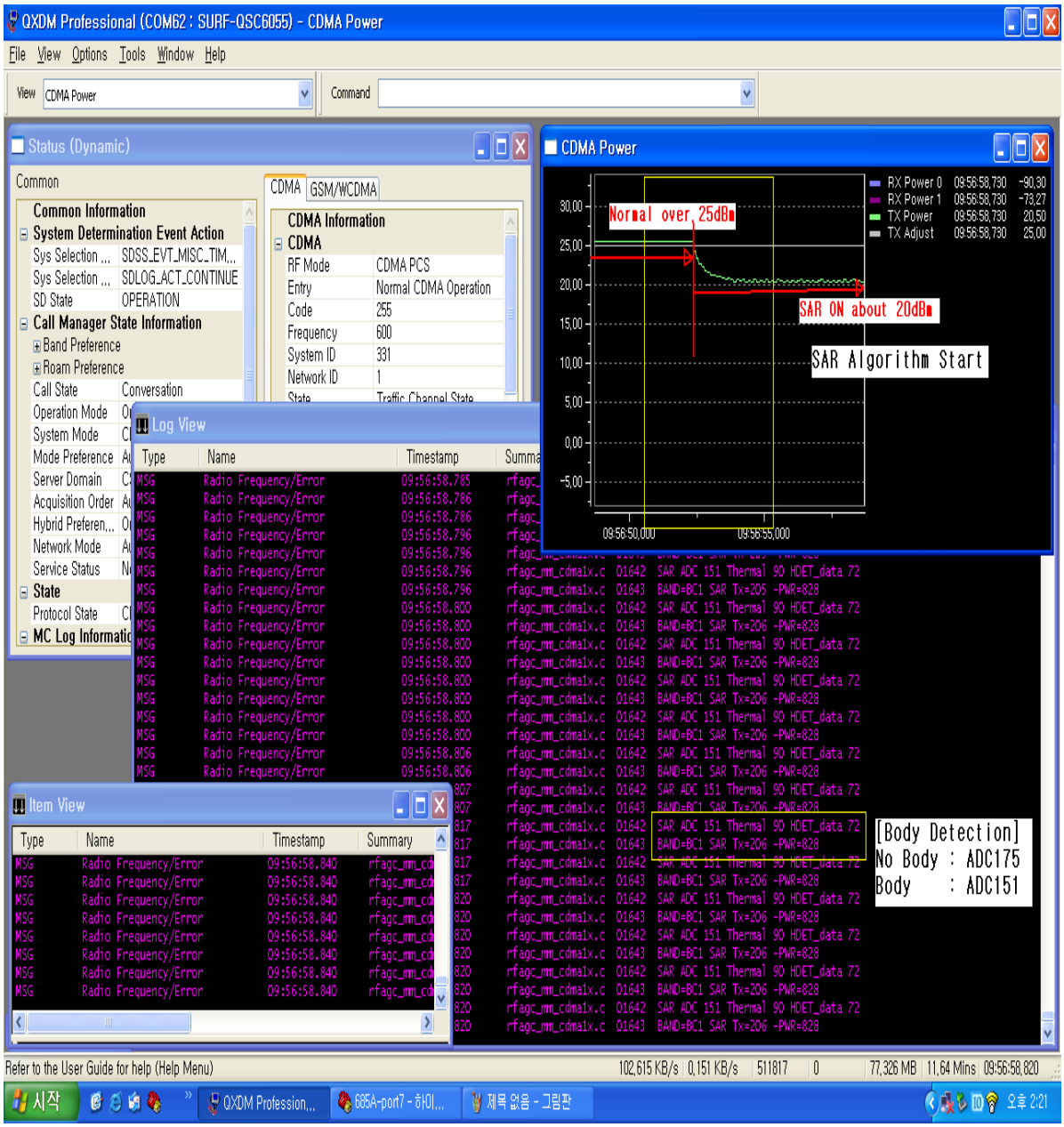

The above plot shows the modem power as measured using Qualcomm proprietary software package QXDM. The start of the plot has the total power of the transmitter at 26 dBm. This power is when the modem is at a distance greater than the distance in table 12.1 when the body sensing circuitry is not active. When the modem is moved closer to the body and reaches the active distance in table 12.1, the power drops which is shown in the plot to the right end of the spectrum. The power level of the transmitter when the body sensor is active is at 20 dBm. The modem power was measured without body sensor active, and the power level is actually 24 dBm. The QXDM software indicates that the power is 2 dB higher than the actual power measured. The software package is not a calibrated power measurement. Therefore, the actual power level of the modem when the body sensor is inactive is 24 dBm and when the body sensor is active is 18 dBm. The above plot was conducted on the top of the device with the body 20 mm from the device and moving the device to 5 mm from the body. For all sides of the device, the above plot would be similar using the distances in Table 12.1.

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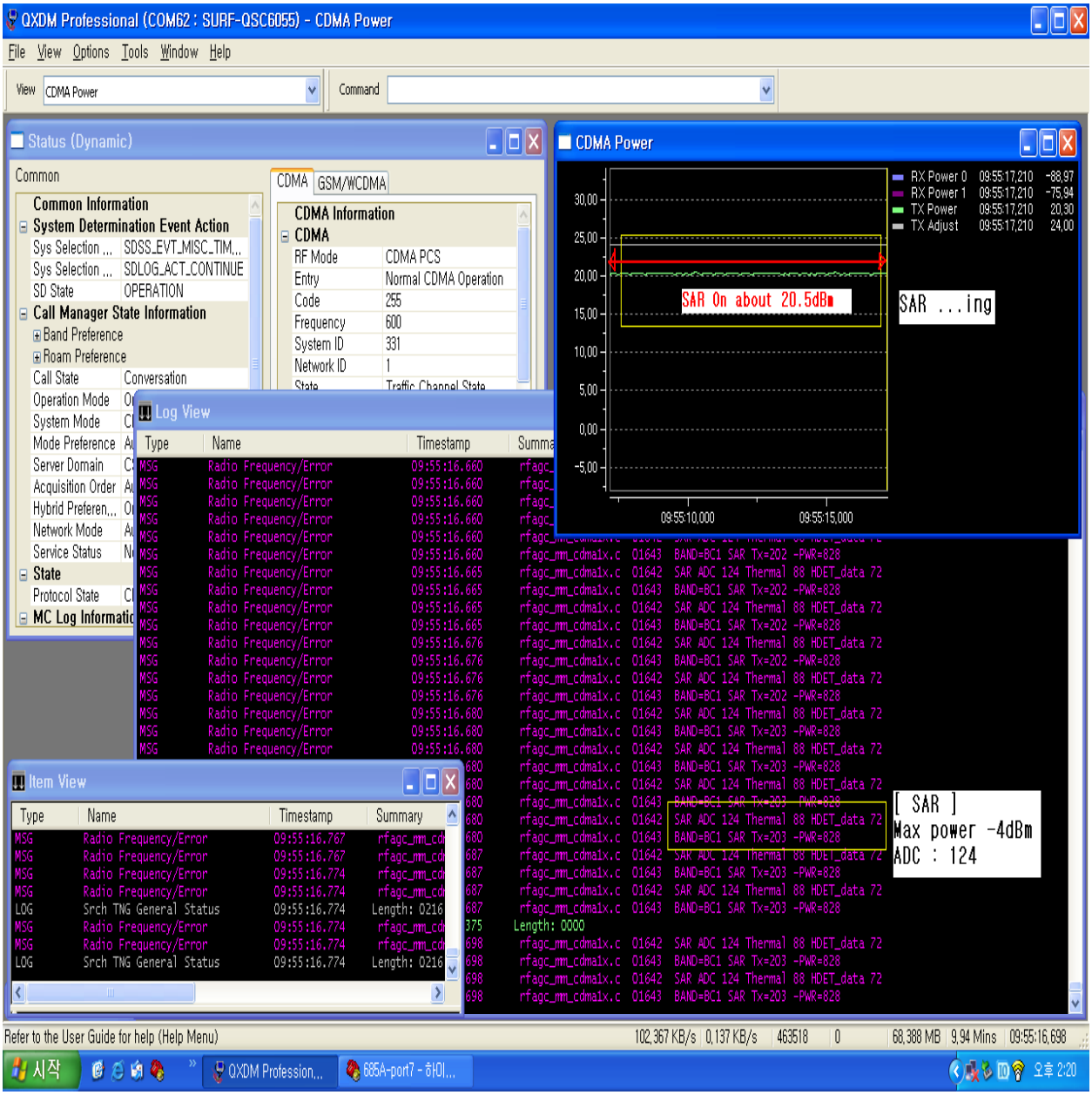

The above plot shows the modem power as measured using Qualcomm proprietary software package QXDM. When the modem is held close to the body and remains at or below the active distance in table 12.1, the power level of the transmitter remains at 20 dBm. The QXDM software indicates that the power is 2 dB higher than the actual power measured. The software package is not a calibrated power measurement. Therefore, the actual power level of the modem when the body sensor is active is 18 dBm. The above plot was conducted on the top of the device with the body 5 mm from the device. For all sides of the device, the above plot would be similar using the distances in Table 12.1.

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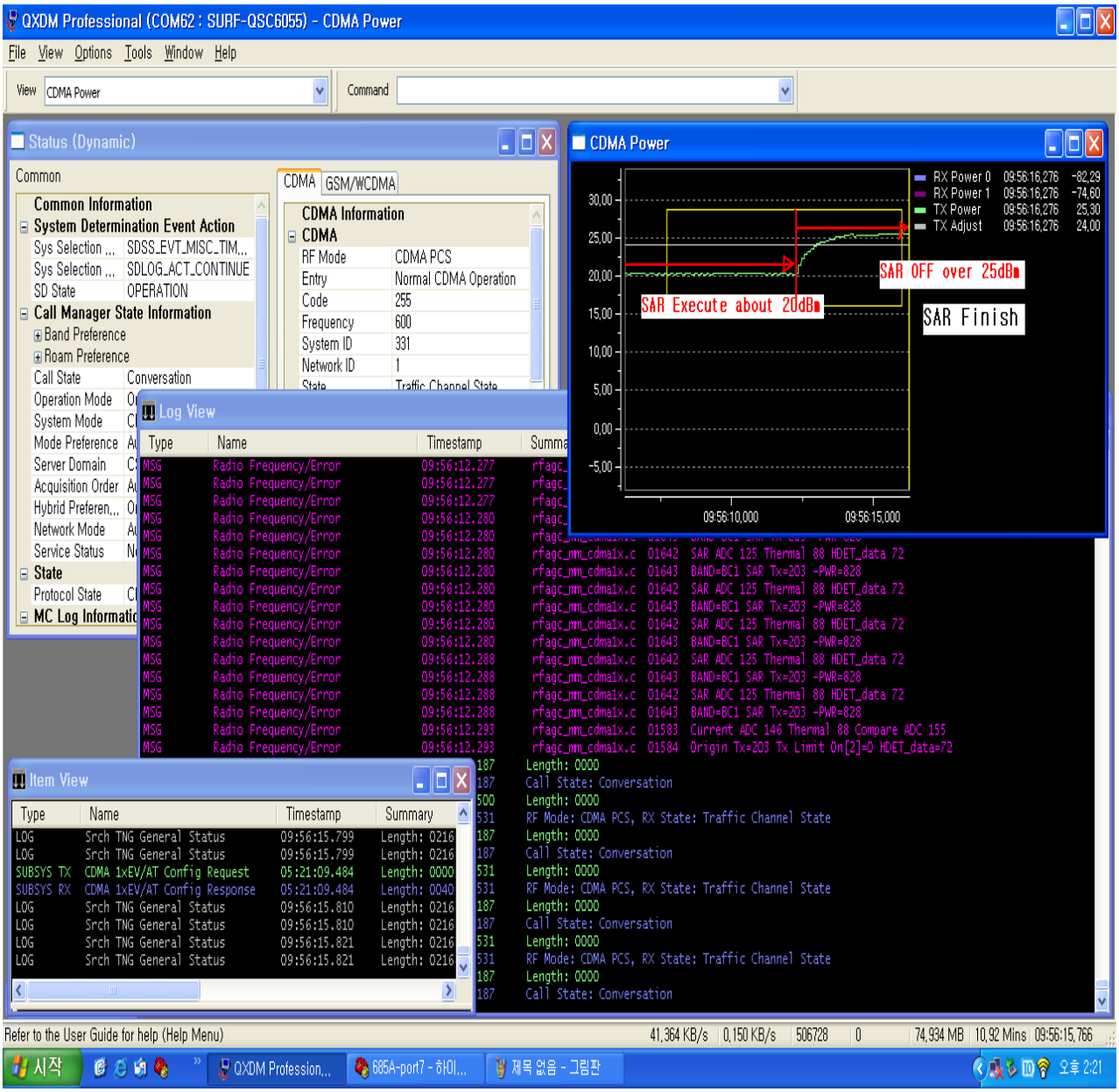

The above plot shows the modem power as measured using Qualcomm proprietary software package QXDM. The start of the plot has the total power of the transmitter at 20 dBm. This power is when the modem is at or closer than the distance in table 12.1 when the body sensing circuitry is active. When the modem is moved away from the body and reaches the inactive distance in table 12.1, the power increases which is shown in the plot to the right end of the spectrum. The power level of the transmitter when the body sensor is inactive is at 26 dBm. The QXDM software indicates that the power is 2 dB higher than the actual power measured. The software package is not a calibrated power measurement. Therefore, the actual power level of the modem when the body sensor is inactive is 24 dBm and when the body sensor is active is 18 dBm. The above plot was conducted on the top of the device with the body 5 mm from the device and moving the device to 20 mm from the body. For all sides of the device, the above plot would be similar using the distances in Table 12.1.

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SAR Data Summary – 835 MHz Body – EvDo

MEASUREMENT RESULTS									
Gap	Side	Frequency		Mode	Begin/End Conducted Power		Reverse Channel	Forward Channel	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)			
5 mm	Top	824.7	1013	Rev. 0	24.12	24.09	153.6 kbps	2 Slot 307.2 kbps	0.641
		836.6	384	Rev. 0	23.82	23.80	153.6 kbps	2 Slot 307.2 kbps	0.905
		848.5	777	Rev. 0	24.84	24.81	153.6 kbps	2 Slot 307.2 kbps	0.445
	Bottom	824.7	1013	Rev. 0	24.08	24.06	153.6 kbps	2 Slot 307.2 kbps	0.627
		836.6	384	Rev. 0	23.79	23.77	153.6 kbps	2 Slot 307.2 kbps	0.939
		848.5	777	Rev. 0	24.52	24.50	153.6 kbps	2 Slot 307.2 kbps	0.464
	Right Side	824.7	1013	Rev. 0	24.09	24.06	153.6 kbps	2 Slot 307.2 kbps	0.460
		836.6	384	Rev. 0	23.81	23.77	153.6 kbps	2 Slot 307.2 kbps	0.618
		848.5	777	Rev. 0	24.50	24.46	153.6 kbps	2 Slot 307.2 kbps	0.331
	Left Side	824.7	1013	Rev. 0	24.11	24.07	153.6 kbps	2 Slot 307.2 kbps	0.468
		836.6	384	Rev. 0	23.80	23.75	153.6 kbps	2 Slot 307.2 kbps	0.549
		848.5	777	Rev. 0	24.49	24.47	153.6 kbps	2 Slot 307.2 kbps	0.315
	Tip	836.60	384	Rev. 0	23.81	23.78	153.6 kbps	2 Slot 307.2 kbps	0.333
	Bottom	836.6	384	Rev. A	23.84	23.81	4096 bits	2 Slot 307.2 kbps	0.922
							Muscle 1.6 W/kg (mW/g) averaged over 1 gram		

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP

2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Uniphantom ☐Right Head
   SAR Configuration ☐Head ☒Body

3. Test Signal Call Mode ☐Test Code ☒Base Station Simulator

4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A

Jay M. Moulton
Vice President

Note: The body sensor technology is not implemented for the 835 MHz band. This band does not utilize the body sensor technology due to the device being able to meet the SAR requirements without reducing the power level. KDB 447498 1(e) has been applied for tip position.

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SAR Data Summary – 1900 MHz Body – EvDo Body Sensing Active

MEASUREMENT RESULTS

Gap	Side	Frequency		Mode	Begin/End Conducted Power		Power Level During Test (dBm)	Reverse Channel	Forward Channel	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)				
5 mm	Top	1851.25	25	Rev. 0	24.37	24.32	18	153.6 kbps	2 Slot 307.2 kbps	1.052
		1880.00	600	Rev. 0	23.94	23.92	18	153.6 kbps	2 Slot 307.2 kbps	1.059
		1908.75	1175	Rev. 0	24.13	24.10	18	153.6 kbps	2 Slot 307.2 kbps	1.019
	Bottom	1851.25	25	Rev. 0	24.35	24.31	18	153.6 kbps	2 Slot 307.2 kbps	0.595
		1880.00	600	Rev. 0	23.90	23.87	18	153.6 kbps	2 Slot 307.2 kbps	0.619
		1908.75	1175	Rev. 0	24.07	24.05	18	153.6 kbps	2 Slot 307.2 kbps	0.755
	Right Side	1851.25	25	Rev. 0	24.32	24.28	18	153.6 kbps	2 Slot 307.2 kbps	0.698
		1880.00	600	Rev. 0	23.92	23.90	18	153.6 kbps	2 Slot 307.2 kbps	0.754
		1908.75	1175	Rev. 0	24.09	24.05	18	153.6 kbps	2 Slot 307.2 kbps	0.661
	Left Side	1851.25	25	Rev. 0	24.36	24.32	18	153.6 kbps	2 Slot 307.2 kbps	0.630
		1880.00	600	Rev. 0	23.93	23.90	18	153.6 kbps	2 Slot 307.2 kbps	0.568
		1908.75	1175	Rev. 0	24.11	24.08	18	153.6 kbps	2 Slot 307.2 kbps	0.535
	Tip	1880.00	600	Rev. 0	23.91	23.89	18	153.6 kbps	2 Slot 307.2 kbps	0.292
	Top	1880.00	600	Rev. A	23.92	23.90	18	4092 bits	2 Slot 307.2 kbps	1.024

Muscle
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Uniphantom ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☐Test Code ☒Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A

Jay M. Moulton
Vice President

Note: The conducted power measurement is higher than the actual power level during the test due to the body sensor circuitry. When the sensor is active, the power level cannot exceed 18 dBm during the testing. However, as soon as the adapter is connected to the RF port, the sensor is de-activated and full power (24 dBm) is measured. KDB 447498 1(e) has been applied for tip position.

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SAR Data Summary – 1900 MHz Body – EvDo Body Sensing Inactive

MEASUREMENT RESULTS									
Gap	**Side**	**Frequency**		**Mode**	**Begin/End Conducted Power**		**Reverse Channel**	**Forward Channel**	**SAR (W/kg)**
		MHz	**Ch.**		**(dBm)**	**(dBm)**			
15 mm	Top	1880.00	600	Rev. 0	23.92	23.90	153.6 kbps	2 Slot 307.2 kbps	0.326
15 mm	Bottom	1908.75	1175	Rev. 0	24.12	24.09	153.6 kbps	2 Slot 307.2 kbps	0.295
10 mm	Right Side	1880.00	600	Rev. 0	23.91	23.89	153.6 kbps	2 Slot 307.2 kbps	0.394
7 mm	Left Side	1851.25	25	Rev. 0	23.35	23.32	153.6 kbps	2 Slot 307.2 kbps	0.449
7 mm	Tip	1880.00	600	Rev. 0	23.93	23.88	153.6 kbps	2 Slot 307.2 kbps	0.179
						Muscle 1.6 W/kg (mW/g) averaged over 1 gram			

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP

2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Uniphantom ☐Right Head
   SAR Configuration ☐Head ☒Body

3. Test Signal Call Mode ☐Test Code ☒Base Station Simulator

4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A

Jay M. Moulton
Vice President

Note: These measurements were conducted at the point in which the body sensing technology becomes inactive. This measurement was conducted to show that the device was still compliant with the SAR requirements when the device increases the power to 24 dBm. KDB 447498 1(e) has been applied.

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For Part 27.5 (h), the device operates in the following frequency bands.

1710 – 1720 MHz, Block A, 10 MHz; mid-band channel at 1715 MHz tested.
1720 – 1730 MHz, Block B, 10 MHz; low, middle and high channel tested at 1721.25, 1725 and 1728.75 MHz
1730 – 1735 MHz, Block C, 5 MHz, mid-band channel at 1732.5 MHz tested
1745 – 1755 MHz, Block F, 10 MHz, mid-band channel at 1750 MHz tested

SAR for Block B has been performed earlier and Blocks A, C and F are added subsequently. The procedures in Section (6)(c) and (1)(e) of KDB 447498 have been applied to test SAR for each of the other blocks, A, C and F. When only one channel requires testing in a Block, the mid-band channel for that Block is used.

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SAR Data Summary – 1700 MHz Block B Body – EvDo Body Sensing Active

MEASUREMENT RESULTS										
Gap	Side	Frequency		Mode	Begin/End Conducted Power		Power Level During Test (dBm)	Reverse Channel	Forward Channel	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)				
5 mm	Top	1721.25	225	Rev. 0	24.32	23.30	18	153.6 kbps	2 Slot 307.2 kbps	1.175
		1725.00	300	Rev. 0	24.28	24.25	18	153.6 kbps	2 Slot 307.2 kbps	1.190
		1728.75	375	Rev. 0	24.04	24.01	18	153.6 kbps	2 Slot 307.2 kbps	1.144
	Bottom	1721.25	225	Rev. 0	24.29	24.26	18	153.6 kbps	2 Slot 307.2 kbps	0.961
		1725.00	300	Rev. 0	24.25	24.23	18	153.6 kbps	2 Slot 307.2 kbps	0.931
		1728.75	375	Rev. 0	24.02	24.00	18	153.6 kbps	2 Slot 307.2 kbps	1.168
	Right Side	1721.25	225	Rev. 0	24.30	24.27	18	153.6 kbps	2 Slot 307.2 kbps	0.608
		1725.00	300	Rev. 0	24.23	24.20	18	153.6 kbps	2 Slot 307.2 kbps	0.652
		1728.75	375	Rev. 0	23.99	23.97	18	153.6 kbps	2 Slot 307.2 kbps	0.591
	Left Side	1721.25	225	Rev. 0	24.29	24.26	18	153.6 kbps	2 Slot 307.2 kbps	0.663
		1725.00	300	Rev. 0	24.27	24.22	18	153.6 kbps	2 Slot 307.2 kbps	0.671
		1728.75	375	Rev. 0	24.01	23.99	18	153.6 kbps	2 Slot 307.2 kbps	0.640
	Tip	1721.25	225	Rev. 0	24.24	24.20	18	153.6 kbps	2 Slot 307.2 kbps	0.297
						Muscle 1.6 W/kg (mW/g) averaged over 1 gram				

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP

2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Uniphantom ☐Right Head
   SAR Configuration ☐Head ☒Body

3. Test Signal Call Mode ☐Test Code ☒Base Station Simulator

4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A

Jay M. Moulton
Vice President

Note: The conducted power measurement is higher than the actual power level during the test due to the body sensor circuitry. When the sensor is active, the power level cannot exceed 18 dBm during the testing. However, as soon as the adapter is connected to the RF port, the sensor is de-activated and full power (24 dBm) is measured. KDB 447498 1(e) has been applied for tip position.

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SAR Data Summary – 1700 MHz Blocks A,C,F Body – EvDo Body Sensing Active

MEASUREMENT RESULTS										
Gap	Side	Frequency		Mode	Begin/End Conducted Power		Power Level During Test (dBm)	Reverse Channel	Forward Channel	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)				
5 mm	Top	1715.0	100	Rev. 0	24.39	24.37	18	153.6 kbps	2 Slot 307.2 kbps	1.089
		1732.5	450	Rev. 0	24.01	23.99	18	153.6 kbps	2 Slot 307.2 kbps	1.094
		1750.0	800	Rev. 0	23.94	23.90	18	153.6 kbps	2 Slot 307.2 kbps	1.121
	Bottom	1715.0	100	Rev. 0	24.36	24.29	18	153.6 kbps	2 Slot 307.2 kbps	1.055
		1732.5	450	Rev. 0	24.00	23.92	18	153.6 kbps	2 Slot 307.2 kbps	1.017
		1750.0	800	Rev. 0	23.92	23.87	18	153.6 kbps	2 Slot 307.2 kbps	1.058
	Right Side	1715.0	100	Rev. 0	24.38	23.30	18	153.6 kbps	2 Slot 307.2 kbps	0.865
		1732.5	450	Rev. 0	24.01	23.97	18	153.6 kbps	2 Slot 307.2 kbps	0.865
		1750.0	800	Rev. 0	24.11	24.02	18	153.6 kbps	2 Slot 307.2 kbps	0.948
	Left Side	1715.0	100	Rev. 0	24.36	23.32	18	153.6 kbps	2 Slot 307.2 kbps	0.984
		1732.5	450	Rev. 0	23.99	23.91	18	153.6 kbps	2 Slot 307.2 kbps	1.007
		1750.0	800	Rev. 0	23.90	23.82	18	153.6 kbps	2 Slot 307.2 kbps	1.033
	Tip	1715.0	100	Rev. 0	24.35	24.31	18	153.6 kbps	2 Slot 307.2 kbps	0.331
		1732.5	450	Rev. 0	24.00	23.89	18	153.6 kbps	2 Slot 307.2 kbps	0.293
		1750.0	800	Rev. 0	24.13	24.06	18	153.6 kbps	2 Slot 307.2 kbps	0.467
	Top	1750.0	800	Rev. A	24.12	24.09	18	4096 bits	2 Slot 307.2 kbps	1.119
					Muscle 1.6 W/kg (mW/g) averaged over 1 gram					

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Uniphantom ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☐Test Code ☒Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A

Jay M. Moulton
Vice President

Note: The conducted power measurement is higher than the actual power level during the test due to the body sensor circuitry. When the sensor is active, the power level cannot exceed 18 dBm during the testing. However, as soon as the adapter is connected to the RF port, the sensor is de-activated and full power (24 dBm) is measured. KDB 447498 (6)(c) and (1)(e) have been applied.

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SAR Data Summary – 1700 MHz Blocks A,C,F Body – EvDo Body Sensing Inactive

MEASUREMENT RESULTS									
Gap	Side	Frequency		Mode	Begin/End Conducted Power		Reverse Channel	Forward Channel	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)			
15 mm	Top	1725.00	300	Rev. 0	24.28	24.25	153.6 kbps	2 Slot 307.2 kbps	0.512
15 mm	Bottom	1728.75	375	Rev. 0	24.00	23.97	153.6 kbps	2 Slot 307.2 kbps	0.440
10 mm	Right Side	1725.00	300	Rev. 0	24.26	24.23	153.6 kbps	2 Slot 307.2 kbps	0.365
7 mm	Left Side	1725.00	300	Rev. 0	24.24	24.22	153.6 kbps	2 Slot 307.2 kbps	0.454
7 mm	Tip	1725.00	300	Rev. 0	24.25	24.21	153.6 kbps	2 Slot 307.2 kbps	0.183
15 mm	Top	1715.0	100	Rev. 0	24.38	24.30	153.6 kbps	2 Slot 307.2 kbps	0.376
15 mm	Top	1732.5	450	Rev. 0	24.02	23.98	153.6 kbps	2 Slot 307.2 kbps	0.344
15 mm	Top	1750.0	800	Rev. 0	23.96	23.92	153.6 kbps	2 Slot 307.2 kbps	0.346
					Muscle 1.6 W/kg (mW/g) averaged over 1 gram				

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP

2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Uniphantom ☐Right Head
   SAR Configuration ☐Head ☒Body

3. Test Signal Call Mode ☐Test Code ☒Base Station Simulator

4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A

Jay M. Moulton
Vice President

Note: These measurements were conducted at the point in which the body sensing technology becomes inactive. This measurement was conducted to show that the device was still compliant with the SAR requirements when the device increases the power to 24 dBm. KDB 447498 (6)(c) and (1)(e) have been applied.

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13. Test Equipment List

Table 13.1 Equipment Specifications

Type	Calibration Due Date	Serial Number
ThermoCRS Robot	N/A	RAF0338198
ThermoCRS Controller	N/A	RCF0338224
ThermoCRS Teach Pendant (Joystick)	N/A	STP0334405
IBM Computer, 2.66 MHz P4	N/A	8189D8U KCPR08N
Aprel E-Field Probe ALS-E020	10/21/2010	RFE-217
Aprel E-Field Probe ALS-E030	07/14/2010	E030-001
Aprel Dummy Probe	N/A	023
Aprel Left Phantom	N/A	RFE-267
Aprel Right Phantom	N/A	RFE-268
Aprel UniPhantom	N/A	RFE-273
Aprel Validation Dipole ALS-D-450-S-2	01/12/2011	RFE-362
Aprel Validation Dipole ALS-D-835-S-2	01/14/2011	180-00561
Aprel Validation Dipole ALS-D-900-S-2	01/12/2011	RFE-275
Aprel Validation Dipole ALS-D-1750-S-2	01/15/2011	210-00714
Aprel Validation Dipole ALS-D-1900-S-2	01/15/2011	210-00713
Aprel Validation Dipole ALS-D-2450-S-2	01/12/2011	RFE-278
Aprel Validation Dipole RFE-D-2600-S-2	01/18/2011	RFE-121
Agilent (HP) 437B Power Meter	10/23/2010	3125U08837
Agilent (HP) 8481B Power Sensor	10/24/2010	3318A05384
Advantest R3261A Spectrum Analyzer	10/24/2010	31720068
Agilent (HP) 8350B Signal Generator	10/23/2010	2749A10226
Agilent (HP) 83525A RF Plug-In	10/23/2010	2647A01172
Agilent (HP) 8753C Vector Network Analyzer	10/23/2010	3135A01724
Agilent (HP) 85047A S-Parameter Test Set	10/23/2010	2904A00595
Agilent (HP) E55125C Base Station Sim.	10/24/2011	MY48360364
Aprel Dielectric Probe Assembly	N/A	0011
Brain Equivalent Matter (450 MHz)	N/A	N/A
Brain Equivalent Matter (835 MHz)	N/A	N/A
Brain Equivalent Matter (1900 MHz)	N/A	N/A
Brain Equivalent Matter (2450 MHz)	N/A	N/A
Muscle Equivalent Matter (450 MHz)	N/A	N/A
Muscle Equivalent Matter (835 MHz)	N/A	N/A
Muscle Equivalent Matter (1750 MHz)	N/A	N/A
Muscle Equivalent Matter (1900 MHz)	N/A	N/A
Muscle Equivalent Matter (2450 MHz)	N/A	N/A
Muscle Equivalent Matter (5200 MHz)	N/A	N/A
Muscle Equivalent Matter (5800 MHz)	N/A	N/A

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14. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the FCC. These measurements are taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The tested device complies with the requirements in respect to all parameters subject to the test. The test results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body is a very complex phenomena that depends on the mass, shape, and size of the body; the orientation of the body with respect to the field vectors; and, the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because innumerable factors may interact to determine the specific biological outcome of an exposure to electromagnetic fields, any protection guide shall consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables. [3]

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15. References

[1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation, August 1996

[2] ANSI/IEEE C95.1 – 1999, American National Standard Safety Levels with respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300kHz to 100GHz, New York: IEEE, 1992.

[3] ANSI/IEEE C95.3 – 2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave, New York: IEEE, 1992.

[4] Federal Communications Commission, OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01), Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields, July 2001.

[5] IEEE Standard 1528 – 2003, IEEE Recommended Practice for Determining the Peak-Spatial Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communication Devices: Measurement Techniques, October 2003.

[6] Industry Canada, RSS – 102e, Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands), November 2005.

[7] Industry Canada, Safety Code 6, Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3kHz to 300 GHz, 1999.

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Appendix A – System Validation Plots and Data

```
************************************************************
Test Result for UIM Dielectric Parameter
Mon 08/Feb/2010 07:10:22
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
************************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
0.8050	55.32	0.97	56.87	0.93
0.8150	55.28	0.97	56.82	0.93
0.8250	55.24	0.97	56.75	0.95
0.8350	55.20	0.97	56.65	0.96
0.8450	55.17	0.98	56.63	0.99
0.8550	55.14	0.99	56.53	0.99
0.8650	55.11	1.01	56.49	1.00

```
************************************************************
Test Result for UIM Dielectric Parameter
Fri 05/Feb/2010 12:59:53
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
************************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
1.7200	53.51	1.47	53.65	1.49
1.7300	53.48	1.48	53.62	1.50
1.7400	53.46	1.48	53.59	1.50
1.7500	53.43	1.49	53.56	1.51
1.7600	53.41	1.49	53.53	1.51
1.7700	53.38	1.50	53.49	1.52
1.7800	53.35	1.51	51.45	1.52

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```
************************************************************
Test Result for UIM Dielectric Parameter
Mon 08/Feb/2010 08:03:22
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
************************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
1.8700	53.30	1.52	52.69	1.55
1.8800	53.30	1.52	52.67	1.55
1.8900	53.30	1.52	52.64	1.55
1.9000	53.30	1.52	52.62	1.56
1.9100	53.30	1.52	52.60	1.56
1.9200	53.30	1.52	52.37	1.57
1.9300	53.30	1.52	52.35	1.57

```
************************************************************
Test Result for UIM Dielectric Parameter
Mon 05/Apr/2010 06:48:23
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
************************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
1.7200	53.51	1.47	53.48	1.48
1.7300	53.48	1.48	53.46	1.48
1.7400	53.46	1.48	53.43	1.49
1.7500	53.43	1.49	53.40	1.50
1.7600	53.41	1.49	53.37	1.51
1.7700	53.38	1.50	53.35	1.52
1.7800	53.35	1.51	53.32	1.52

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```
**********************************************************
Test Result for UIM Dielectric Parameter
Mon 05/Apr/2010 06:57:41
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
**********************************************************
Freq        FCC_eB      FCC_sB      Test_e      Test_s
1.8700      53.30       1.52        52.78       1.52
1.8800      53.30       1.52        52.76       1.52
1.8900      53.30       1.52        52.73       1.53
1.9000      53.30       1.52        52.71       1.54
1.9100      53.30       1.52        52.69       1.55
1.9200      53.30       1.52        52.67       1.56
1.9300      53.30       1.52        52.65       1.57


**********************************************************
Test Result for UIM Dielectric Parameter
Tue 18/May/2010 07:08:23
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
**********************************************************
Freq        FCC_eB      FCC_sB      Test_e      Test_s
1.7200      53.51       1.47        53.53       1.49
1.7300      53.48       1.48        53.49       1.50
1.7400      53.46       1.48        53.36       1.51
1.7500      53.43       1.49        53.32       1.52
1.7600      53.41       1.49        53.30       1.53
1.7700      53.38       1.50        53.26       1.54
1.7800      53.35       1.51        53.22       1.55
```


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```
**********************************************************
Test Result for UIM Dielectric Parameter
Tue 29/Jun/2010 08:05:16
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
**********************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
0.8050	55.32	0.97	55.15	0.95
0.8150	55.28	0.97	55.10	0.96
0.8250	55.24	0.97	55.06	0.97
0.8350	55.20	0.97	55.01	0.98
0.8450	55.17	0.98	54.98	0.99
0.8550	55.14	0.99	54.94	1.01
0.8650	55.11	1.01	54.90	1.03

```
**********************************************************
Test Result for UIM Dielectric Parameter
Tue 29/Jun/2010 03:32:51
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
**********************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
1.8700	53.30	1.52	52.90	1.50
1.8800	53.30	1.52	52.89	1.51
1.8900	53.30	1.52	52.87	1.52
1.9000	53.30	1.52	52.85	1.53
1.9100	53.30	1.52	52.84	1.54
1.9200	53.30	1.52	52.82	1.55
1.9300	53.30	1.52	52.81	1.56

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```
**********************************************************
Test Result for UIM Dielectric Parameter
Tue 29/Jun/2010 04:28:23
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
**********************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
1.7200	53.51	1.47	53.52	1.49
1.7300	53.48	1.48	53.38	1.50
1.7400	53.46	1.48	53.36	1.51
1.7500	53.43	1.49	53.32	1.52
1.7600	53.41	1.49	53.30	1.53
1.7700	53.38	1.50	53.27	1.55
1.7800	53.35	1.51	53.23	1.55

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 07:16:11 AM
End Time : 08-Feb-2010 07:31:12 AM
Scanning Time : 901 secs

Product Data
Device Name : Validation
Serial No. : 835
Type : Dipole
Model : ALS-D-835-S-2
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 161 mm
Width : 3.6 mm
Depth : 89.8 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 1.114 W/kg
Power Drift-Finish: 1.098 W/kg
Power Drift (%) : -1.442

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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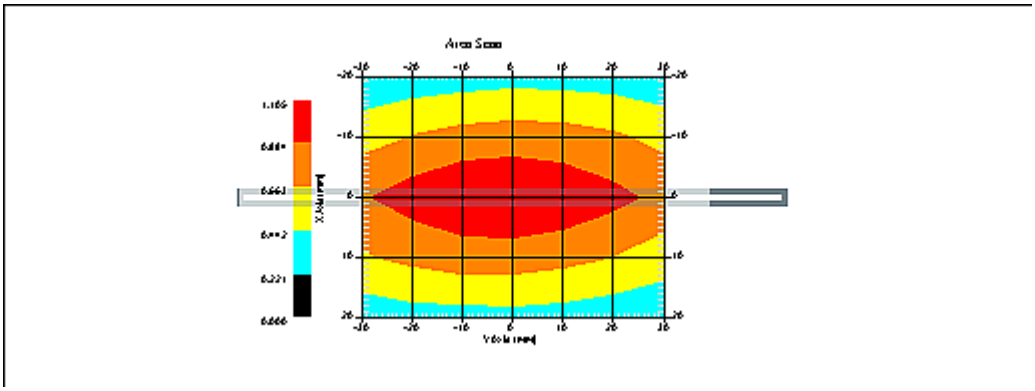
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 25.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 9:21:48 AM
Area Scan         : 5x7x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Touch
Separation        : 15 mm
Channel           : Mid
```



```
1 gram SAR value    : 1.014 W/kg
10 gram SAR value   : 0.641 W/kg
Area Scan Peak SAR  : 1.105 W/kg
Zoom Scan Peak SAR  : 1.571 W/kg
```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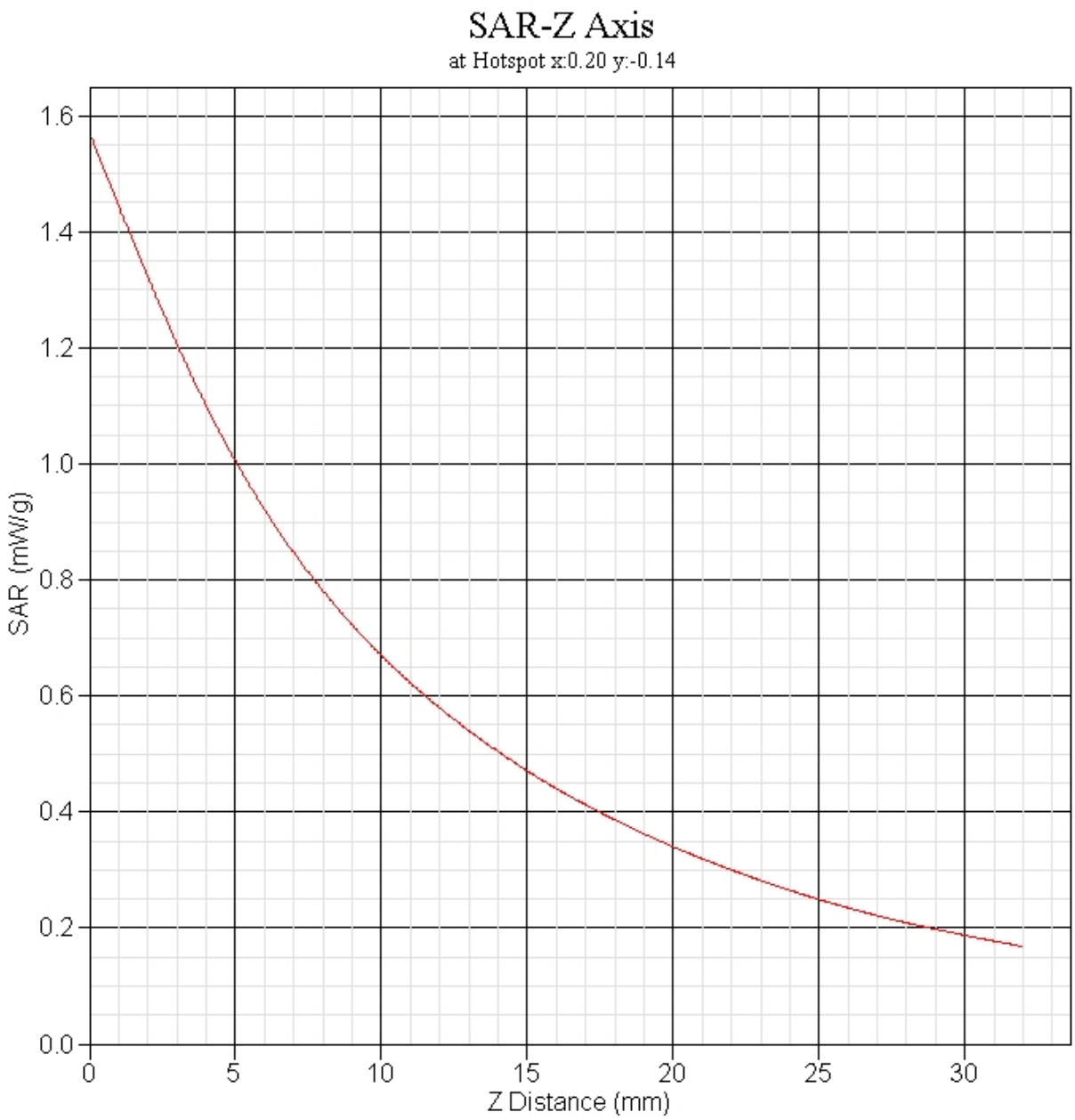

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 01:02:34 PM
End Time : 05-Feb-2010 01:15:31 PM
Scanning Time : 777 secs

Product Data
Device Name : Validation
Serial No. : 1750
Type : Dipole
Model : ALS-D-1750-S-2
Frequency : 1750.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 75.2 mm
Width : 3.6 mm
Depth : 42.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.442 W/kg
Power Drift-Finish: 4.477 W/kg
Power Drift (%) : 0.784

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

Tissue Data
Type : BODY
Serial No. : 1750
Frequency : 1750.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 53.24 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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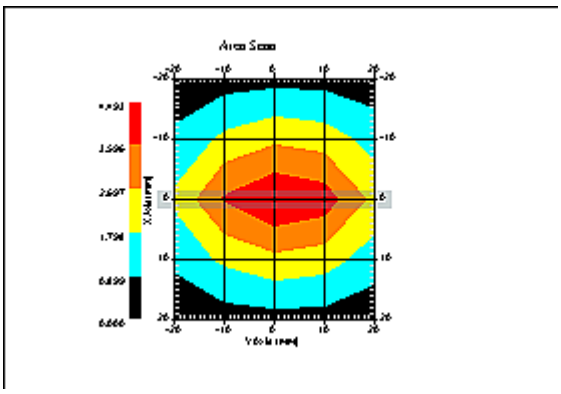
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Feb-2010
Set-up Time       : 7:03:12 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Touch
Separation        : 10 mm
Channel           : Mid
```



```
1 gram SAR value    : 3.695 W/kg
10 gram SAR value   : 1.902 W/kg
Area Scan Peak SAR  : 4.493 W/kg
Zoom Scan Peak SAR  : 6.986 W/kg
```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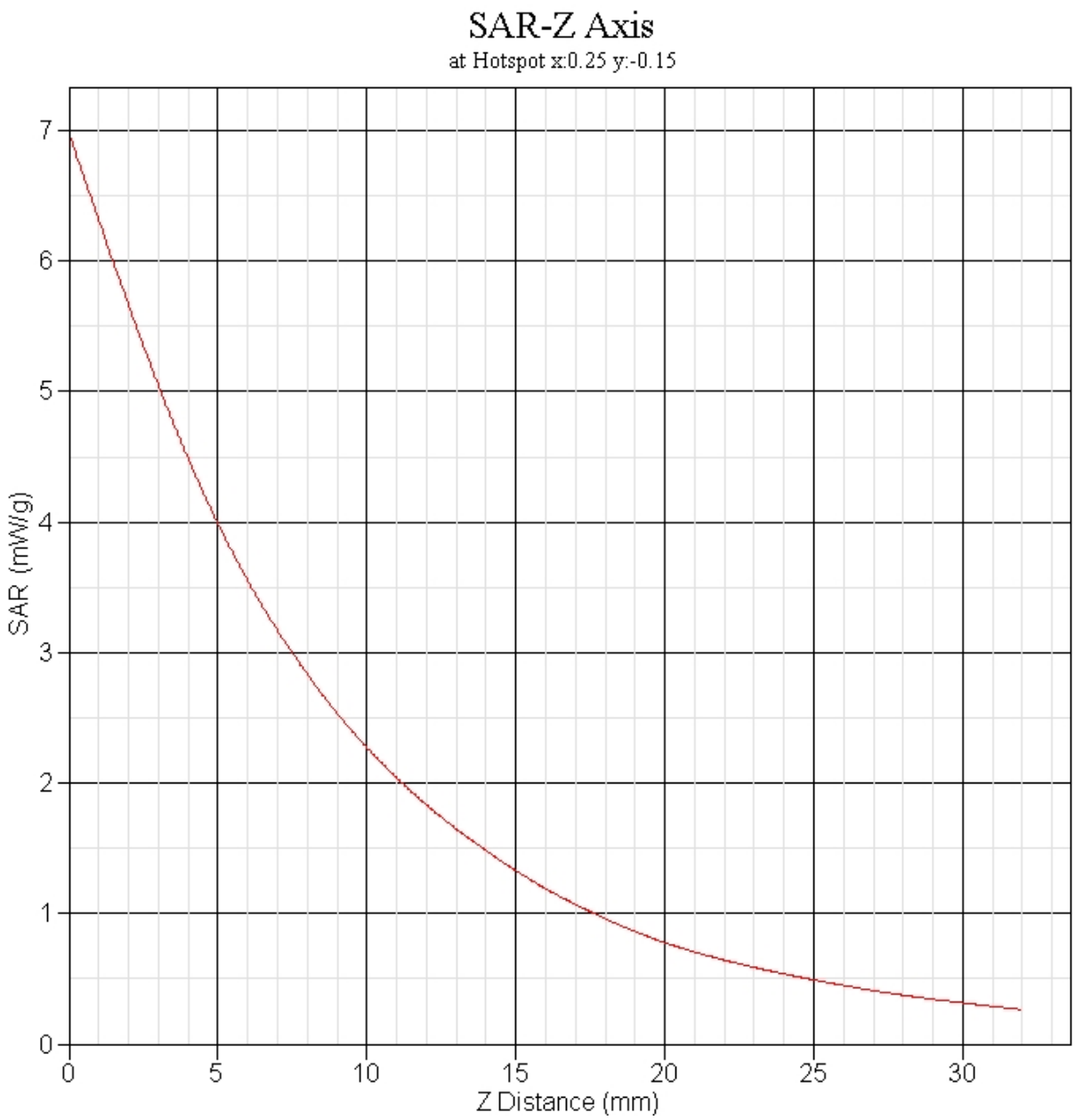

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 08:08:15 AM
End Time : 08-Feb-2010 08:21:18 AM
Scanning Time : 783 secs

Product Data
Device Name : Validation
Serial No. : 1900
Type : Dipole
Model : ALS-D-1900-S-2
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 68 mm
Width : 3.6 mm
Depth : 39.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.658 W/kg
Power Drift-Finish: 4.657 W/kg
Power Drift (%) : -0.024

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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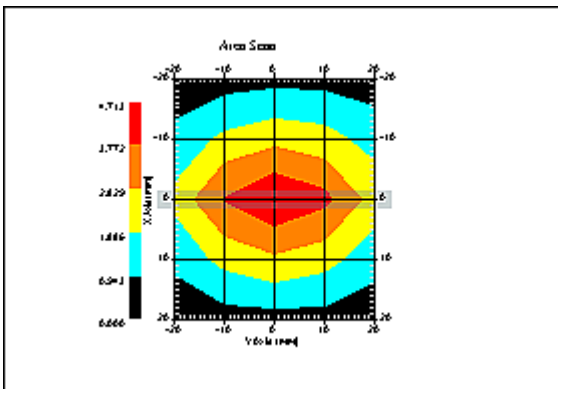
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 8:39:41 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Touch
Separation        : 10 mm
Channel           : Mid
```



```
1 gram SAR value    : 4.012 W/kg
10 gram SAR value   : 2.091 W/kg
Area Scan Peak SAR  : 4.713 W/kg
Zoom Scan Peak SAR  : 7.006 W/kg
```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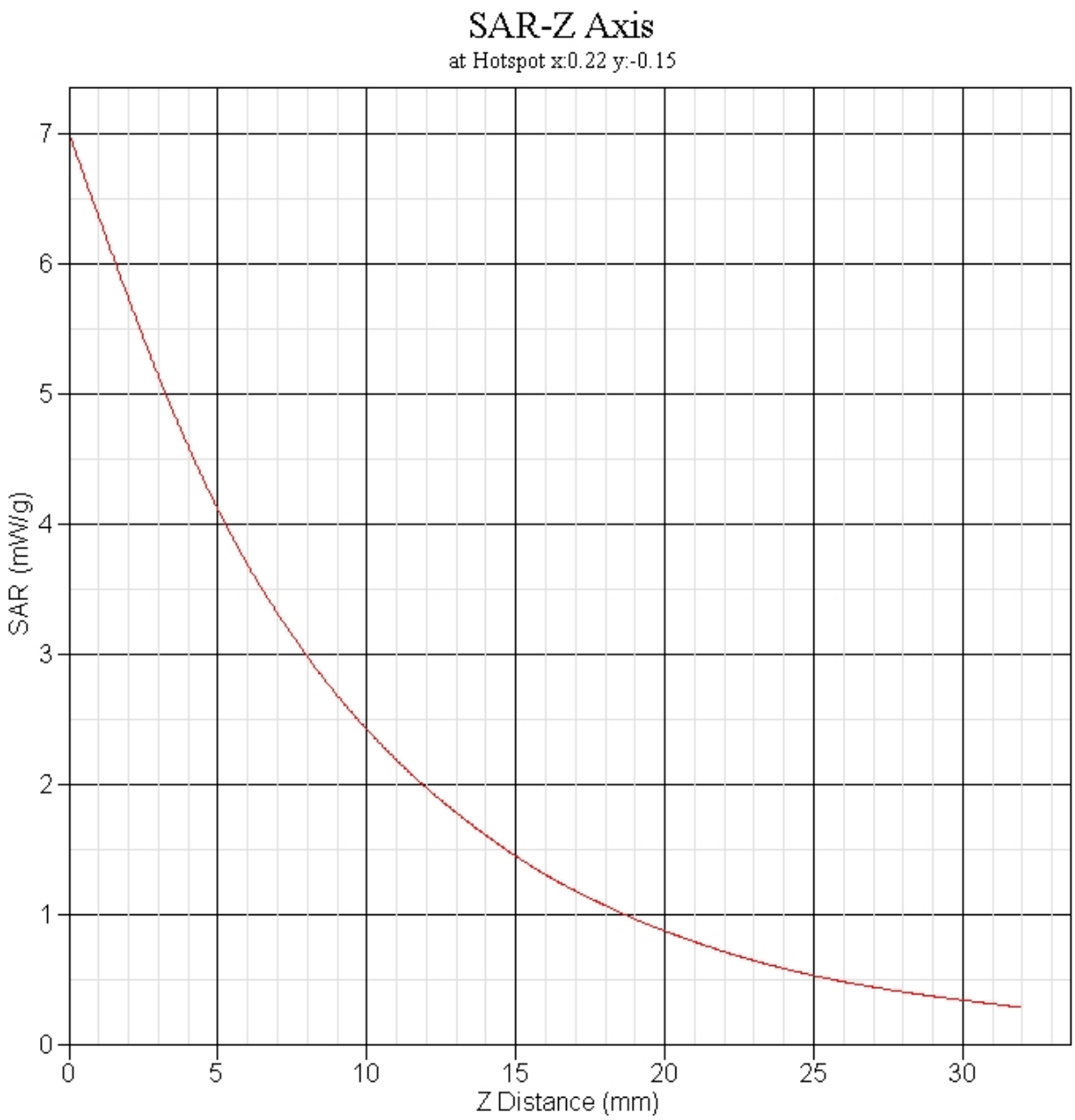

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 06:54:22 AM
End Time : 05-Apr-2010 07:07:21 AM
Scanning Time : 779 secs

Product Data
Device Name : Validation
Serial No. : 1750
Type : Dipole
Model : ALS-D-1750-S-2
Frequency : 1750.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 75.2 mm
Width : 3.6 mm
Depth : 42.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.552 W/kg
Power Drift-Finish: 4.532 W/kg
Power Drift (%) : -0.448

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

Tissue Data
Type : BODY
Serial No. : 1750
Frequency : 1750.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 52.71 F/m
Sigma : 1.54 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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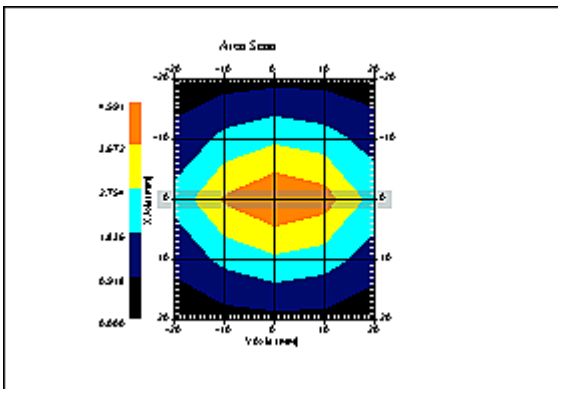
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Apr-2010
Set-up Time       : 8:39:41 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Touch
Separation        : 10 mm
Channel           : Mid
```



```
1 gram SAR value    : 3.993 W/kg
10 gram SAR value   : 2.076 W/kg
Area Scan Peak SAR  : 4.591 W/kg
Zoom Scan Peak SAR  : 7.066 W/kg
```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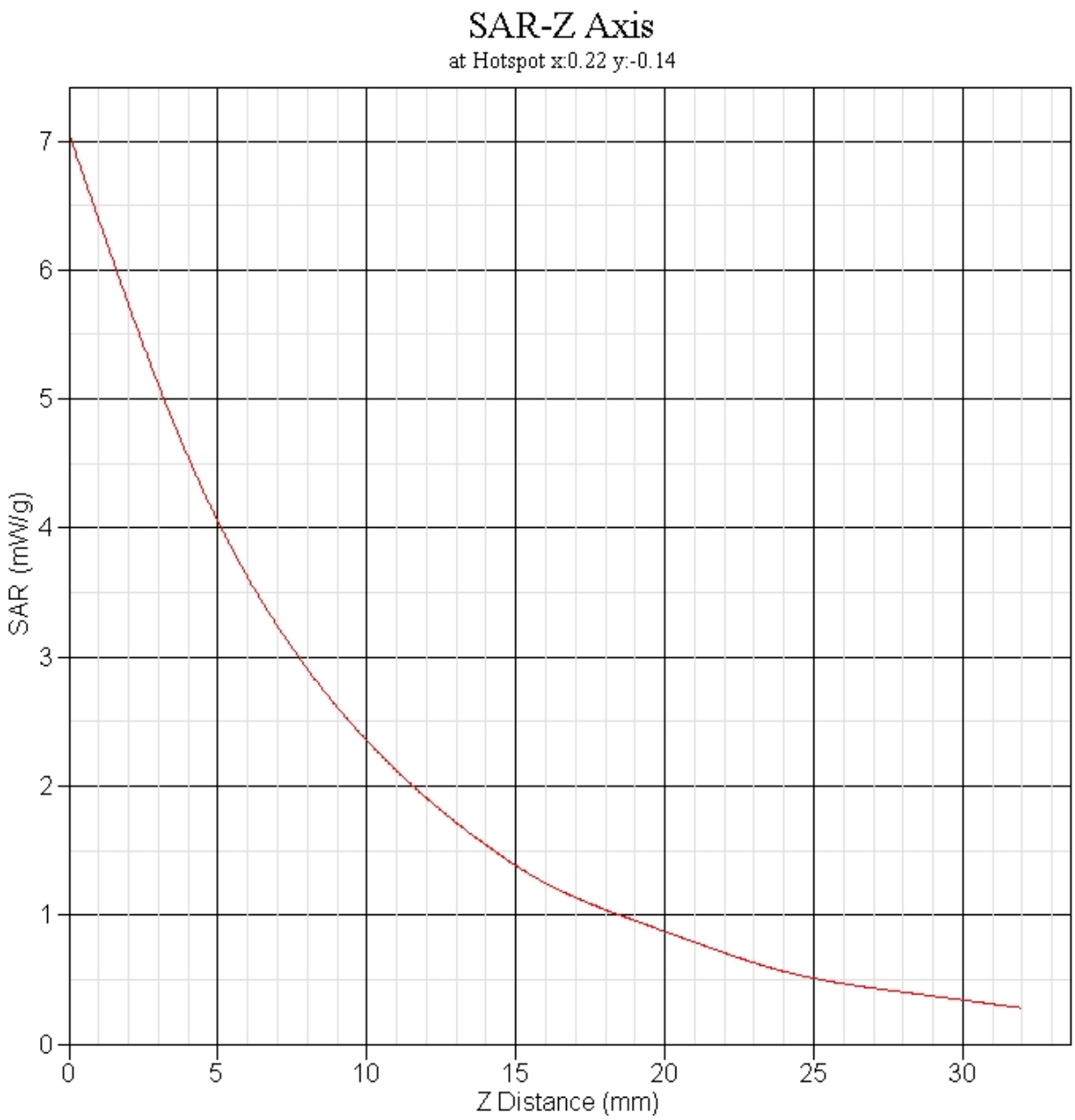

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 07:33:41 AM
End Time : 05-Apr-2010 07:47:00 AM
Scanning Time : 799 secs

Product Data
Device Name : Validation
Serial No. : 1900
Type : Dipole
Model : ALS-D-1900-S-2
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 68 mm
Width : 3.6 mm
Depth : 39.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.265 W/kg
Power Drift-Finish: 4.284 W/kg
Power Drift (%) : 0.453

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 52.71 F/m
Sigma : 1.54 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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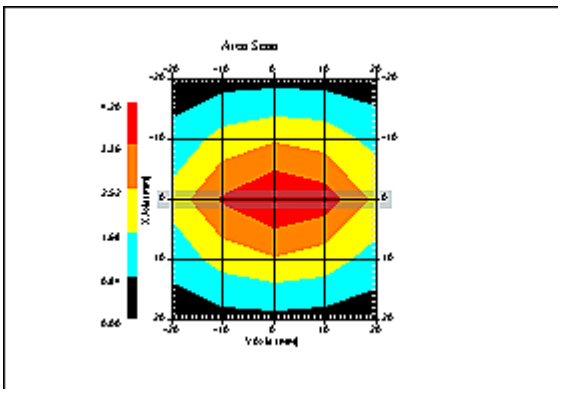
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Apr-2010
Set-up Time       : 8:39:41 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Touch
Separation        : 10 mm
Channel           : Mid
```



```
1 gram SAR value    : 3.937 W/kg
10 gram SAR value   : 1.933 W/kg
Area Scan Peak SAR  : 4.200 W/kg
Zoom Scan Peak SAR  : 6.816 W/kg
```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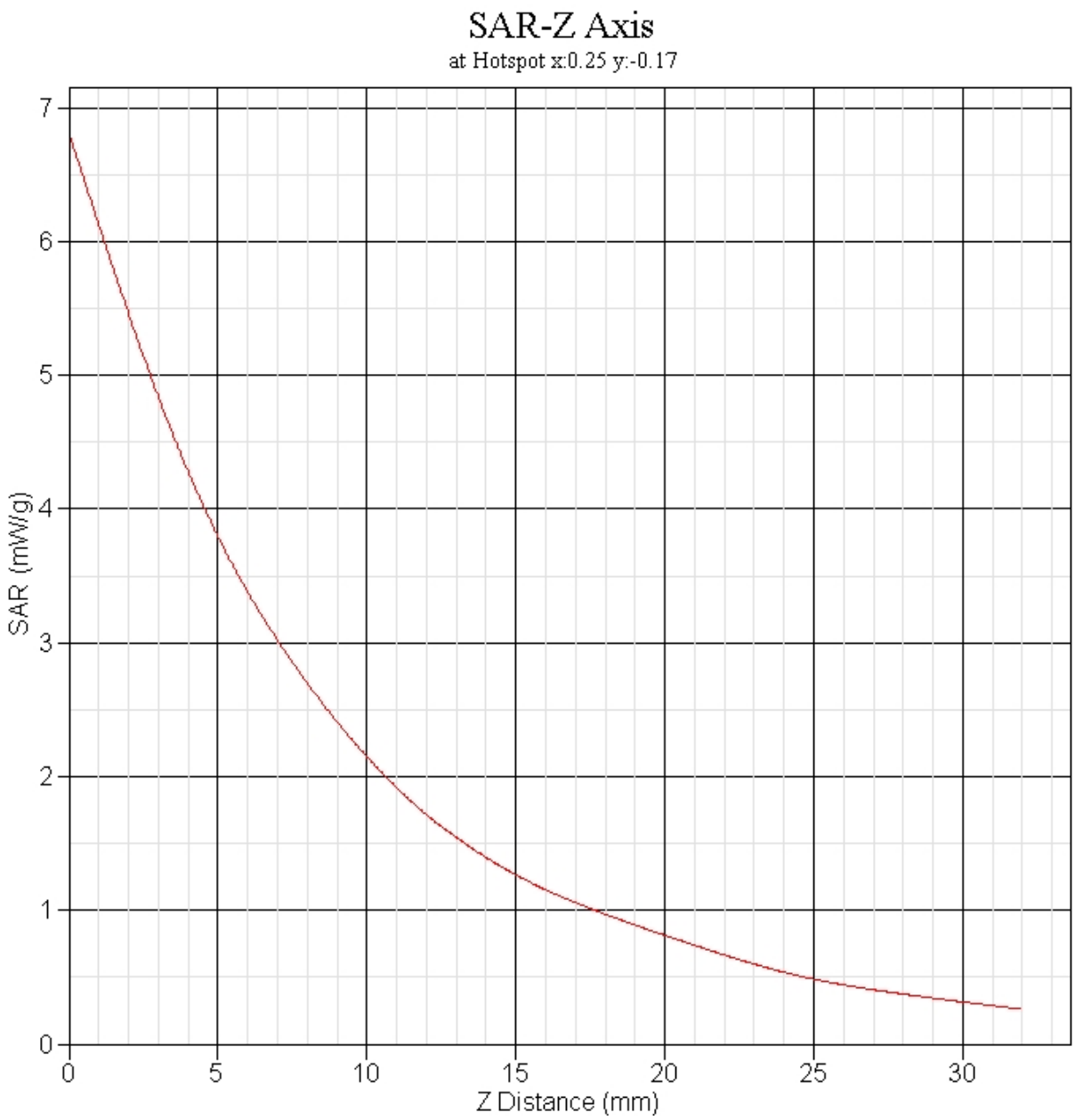

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SAR Test Report

By Operator : Jay
Measurement Date : 18-May-2010
Starting Time : 18-May-2010 09:27:44 AM
End Time : 18-May-2010 09:40:46 AM
Scanning Time : 782 secs

Product Data
Device Name : Validation
Serial No. : 1750
Type : Dipole
Model : ALS-D-1750-S-2
Frequency : 1750.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 75.2 mm
Width : 3.6 mm
Depth : 42.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.453 W/kg
Power Drift-Finish: 4.504 W/kg
Power Drift (%) : 1.134

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 18-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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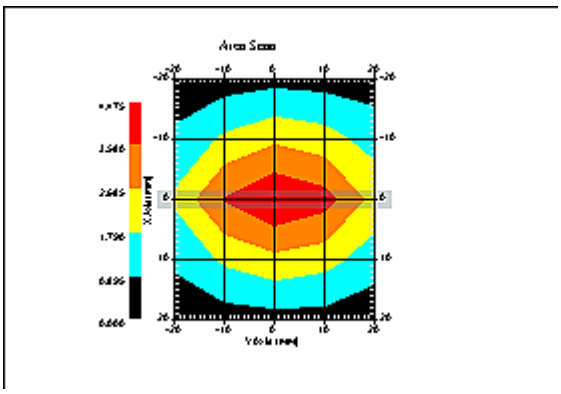
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 18-May-2010
Set-up Time       : 8:03:12 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Touch
Separation        : 10 mm
Channel           : Mid
```



```
1 gram SAR value    : 3.912 W/kg
10 gram SAR value   : 1.965 W/kg
Area Scan Peak SAR  : 4.391 W/kg
Zoom Scan Peak SAR  : 7.126 W/kg
```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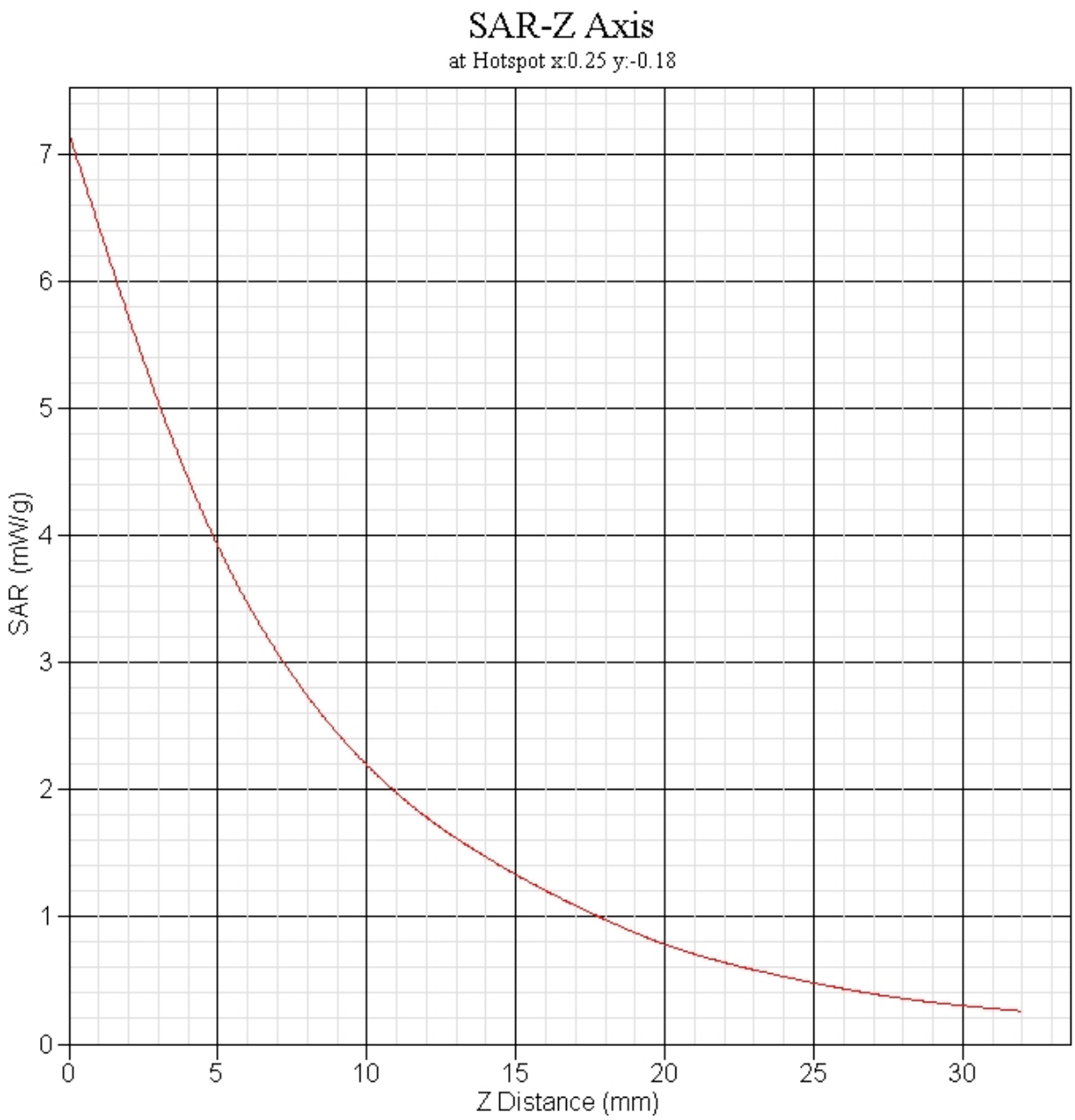

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SAR Test Report

By Operator : Jay
Measurement Date : 29-Jun-2010
Starting Time : 29-Jun-2010 08:07:43 PM
End Time : 29-Jun-2010 08:22:55 PM
Scanning Time : 912 secs

Product Data
Device Name : Validation
Serial No. : 835
Type : Dipole
Model : ALS-D-835-S-2
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 161 mm
Width : 3.6 mm
Depth : 89.8 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 1.040 W/kg
Power Drift-Finish: 1.039 W/kg
Power Drift (%) : -0.129

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 29-Jun-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 55.01 F/m
Sigma : 0.98 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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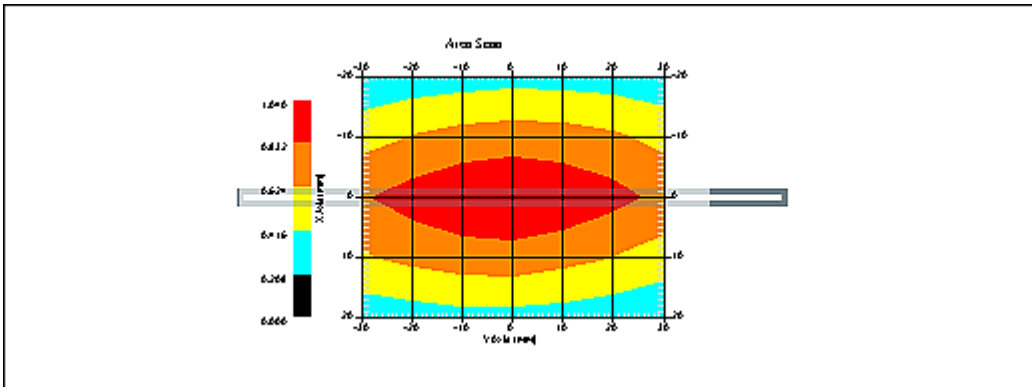
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 25.00 °C
Set-up Date       : 29-Jun-2010
Set-up Time       : 9:21:48 AM
Area Scan         : 5x7x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Touch
Separation        : 15 mm
Channel           : Mid
```



```
1 gram SAR value    : 0.958 W/kg
10 gram SAR value   : 0.604 W/kg
Area Scan Peak SAR  : 1.038 W/kg
Zoom Scan Peak SAR  : 1.491 W/kg
```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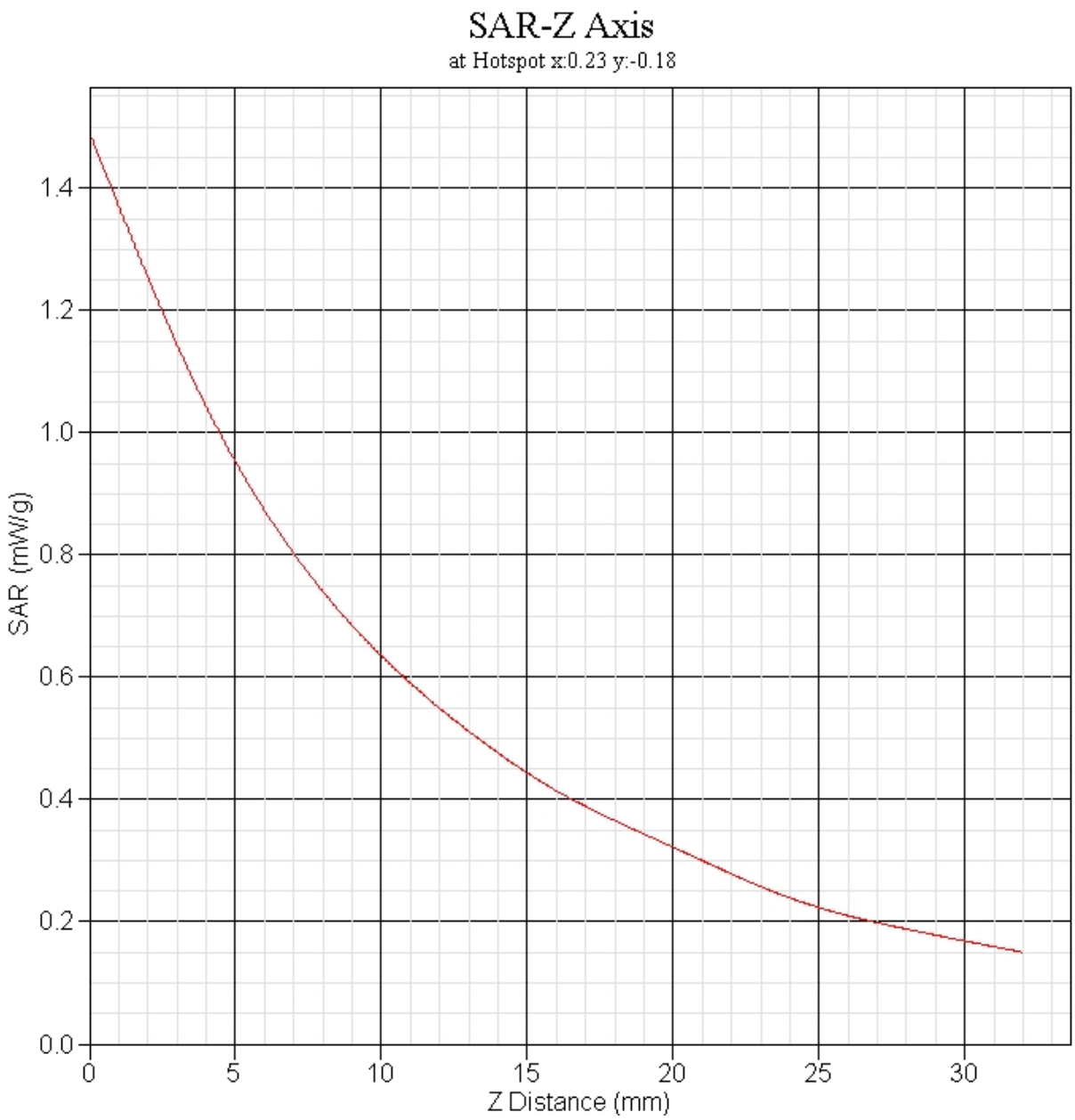

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SAR Test Report

By Operator : Jay
Measurement Date : 29-Jun-2010
Starting Time : 29-Jun-2010 03:36:43 AM
End Time : 29-Jun-2010 03:49:47 AM
Scanning Time : 784 secs

Product Data
Device Name : Validation
Serial No. : 1900
Type : Dipole
Model : ALS-D-1900-S-2
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 68 mm
Width : 3.6 mm
Depth : 39.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.458 W/kg
Power Drift-Finish: 4.423 W/kg
Power Drift (%) : -0.792

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 29-Jun-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 52.84 F/m
Sigma : 1.53 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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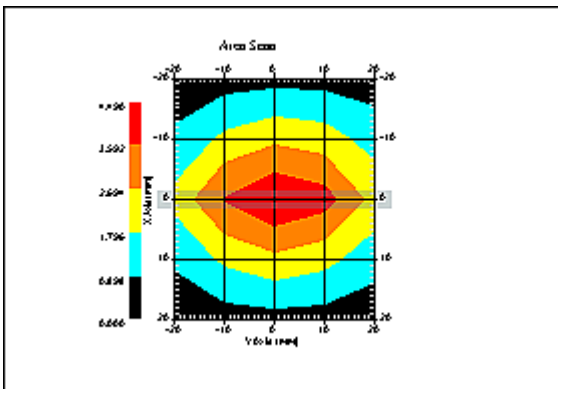
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 29-Jun-2010
Set-up Time       : 8:03:12 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Touch
Separation        : 10 mm
Channel           : Mid
```



```
1 gram SAR value    : 3.891 W/kg
10 gram SAR value   : 1.987 W/kg
Area Scan Peak SAR  : 4.490 W/kg
Zoom Scan Peak SAR  : 7.096 W/kg
```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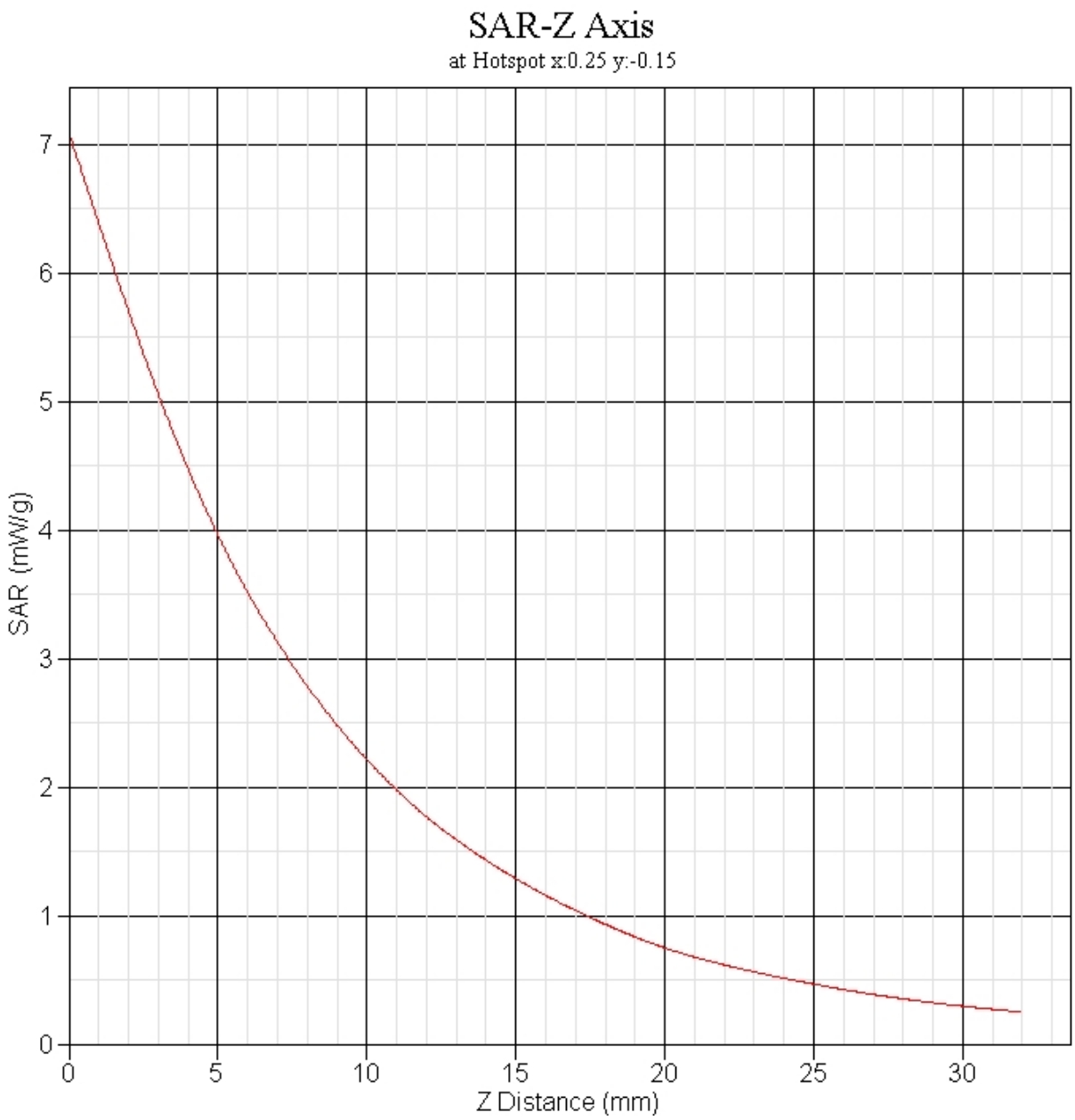

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SAR Test Report

By Operator : Jay
Measurement Date : 29-Jun-2010
Starting Time : 29-Jun-2010 08:47:44 AM
End Time : 29-Jun-2010 09:00:46 AM
Scanning Time : 782 secs

Product Data
Device Name : Validation
Serial No. : 1750
Type : Dipole
Model : ALS-D-1750-S-2
Frequency : 1750.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 75.2 mm
Width : 3.6 mm
Depth : 42.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.383 W/kg
Power Drift-Finish: 4.402 W/kg
Power Drift (%) : 0.434

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

Tissue Data
Type : BODY
Serial No. : 1750
Frequency : 1750.00 MHz
Last Calib. Date : 29-Jun-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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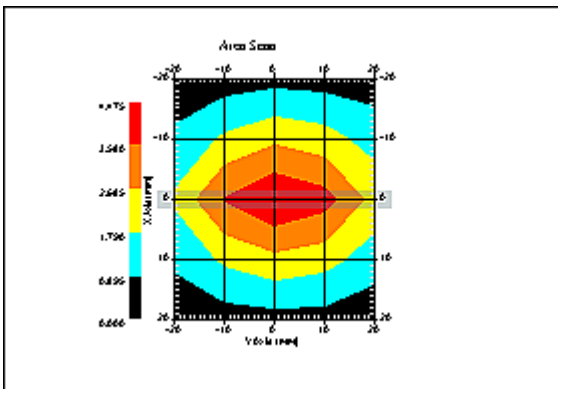
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 29-Jun-2010
Set-up Time       : 8:03:12 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Touch
Separation        : 10 mm
Channel           : Mid
```



```
1 gram SAR value    : 3.799 W/kg
10 gram SAR value   : 1.898 W/kg
Area Scan Peak SAR  : 4.396 W/kg
Zoom Scan Peak SAR  : 7.129 W/kg
```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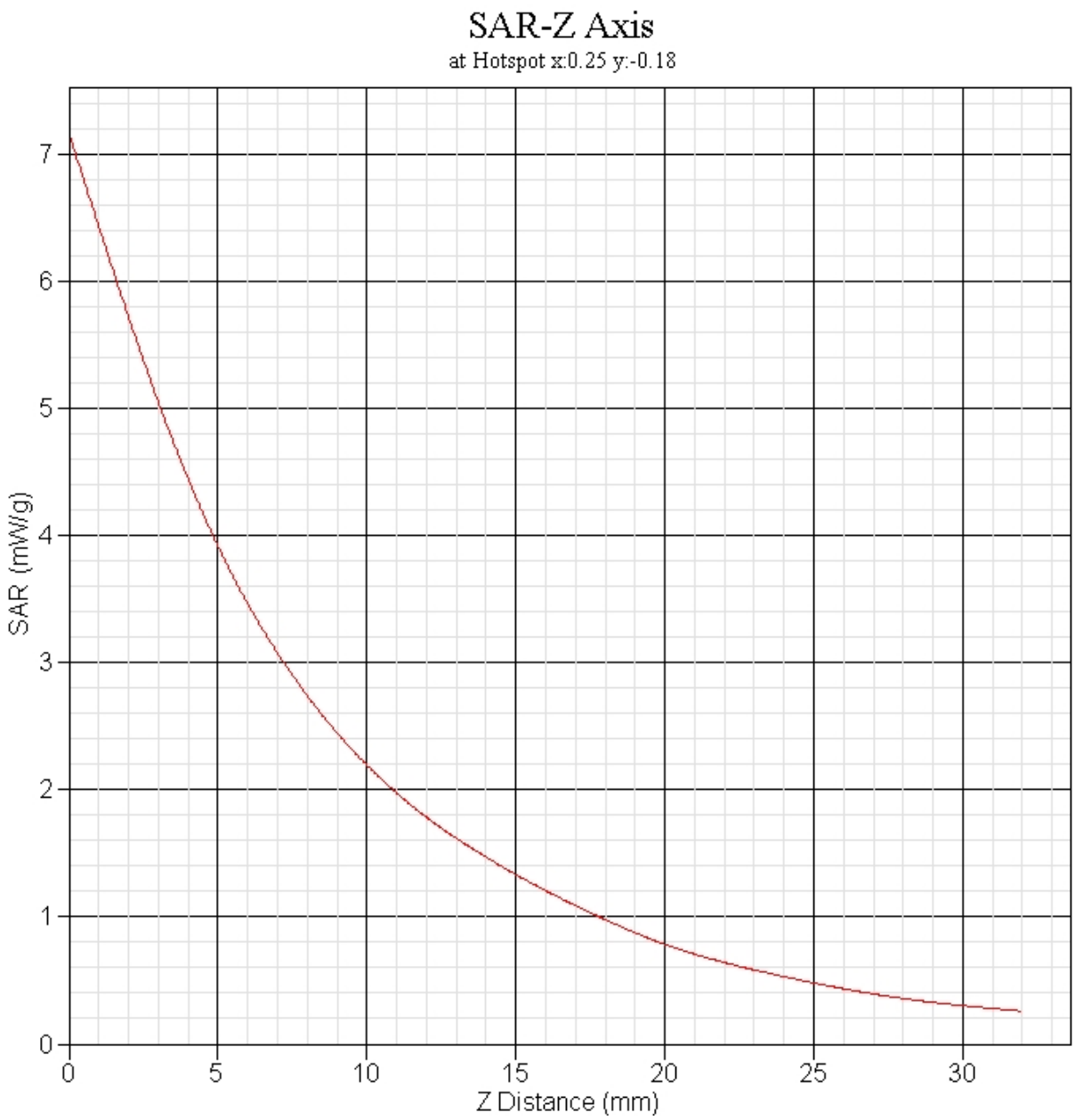

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Appendix B – SAR Test Data Plots

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 03:16:54 PM
End Time : 08-Feb-2010 03:31:42 PM
Scanning Time : 888 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.673 W/kg
Power Drift-Finish: 0.674 W/kg
Power Drift (%) : 0.176

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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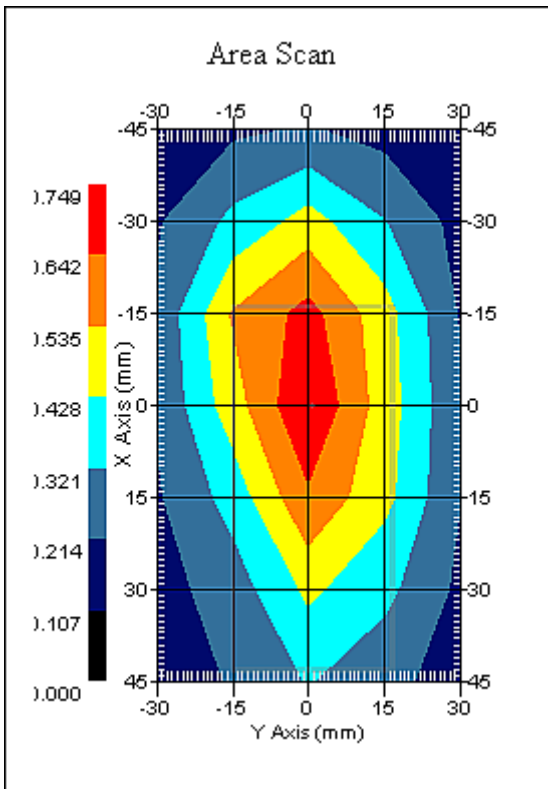
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 7:08:14 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Top on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 0.641 W/kg
10 gram SAR value : 0.444 W/kg
Area Scan Peak SAR : 0.749 W/kg
Zoom Scan Peak SAR : 0.940 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 03:01:33 PM
End Time : 08-Feb-2010 03:16:19 PM
Scanning Time : 886 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.902 W/kg
Power Drift-Finish: 0.896 W/kg
Power Drift (%) : -0.578

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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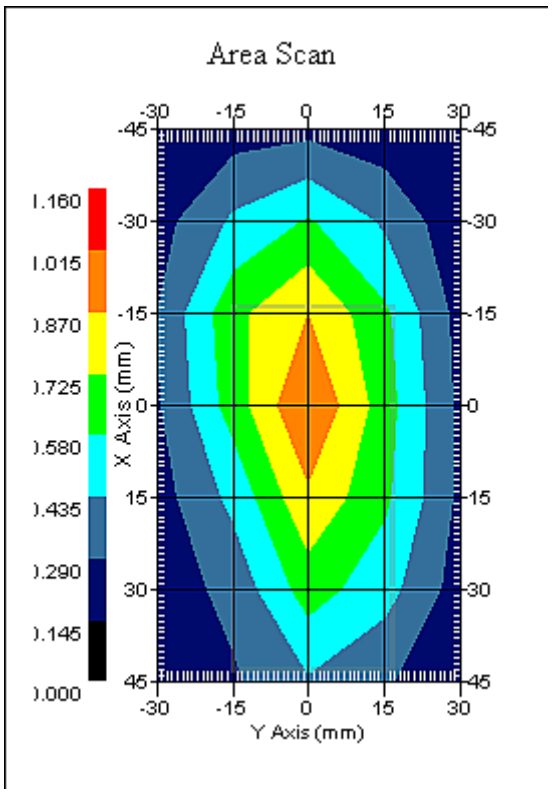
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 7:08:14 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.905 W/kg
10 gram SAR value   : 0.614 W/kg
Area Scan Peak SAR  : 1.017 W/kg
Zoom Scan Peak SAR  : 1.301 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 03:32:18 PM
End Time : 08-Feb-2010 03:46:56 PM
Scanning Time : 878 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.456 W/kg
Power Drift-Finish: 0.442 W/kg
Power Drift (%) : -3.074

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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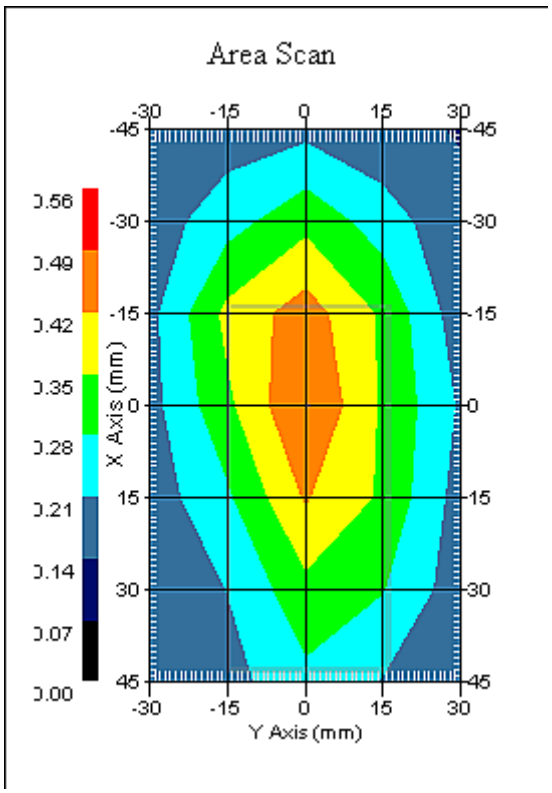
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 7:08:14 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Top on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 0.445 W/kg
10 gram SAR value : 0.334 W/kg
Area Scan Peak SAR : 0.491 W/kg
Zoom Scan Peak SAR : 0.600 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 02:29:03 PM
End Time : 08-Feb-2010 02:44:09 PM
Scanning Time : 906 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 0.623 W/kg
Power Drift-Finish: 0.614 W/kg
Power Drift (%) : -1.449

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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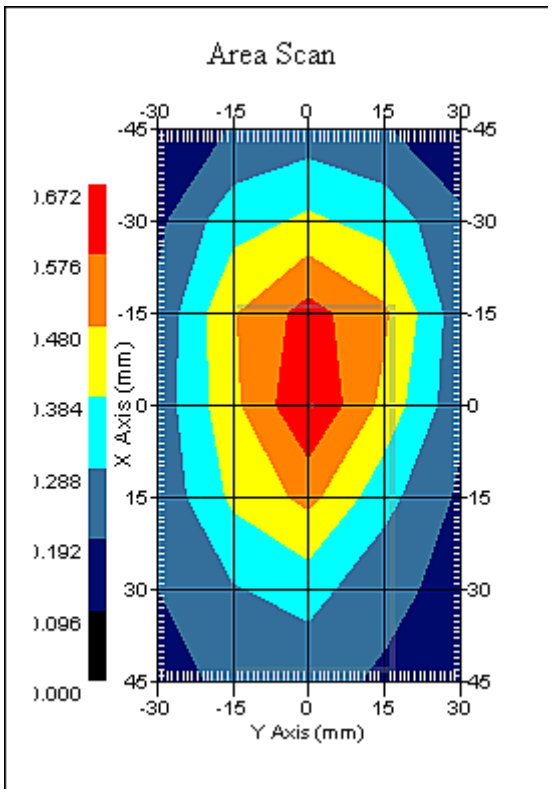
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 7:08:14 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Bottom Installed in Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 0.627 W/kg
10 gram SAR value : 0.418 W/kg
Area Scan Peak SAR : 0.671 W/kg
Zoom Scan Peak SAR : 0.930 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 02:11:03 PM
End Time : 08-Feb-2010 02:27:06 PM
Scanning Time : 963 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 0.794 W/kg
Power Drift-Finish: 0.756 W/kg
Power Drift (%) : -4.786

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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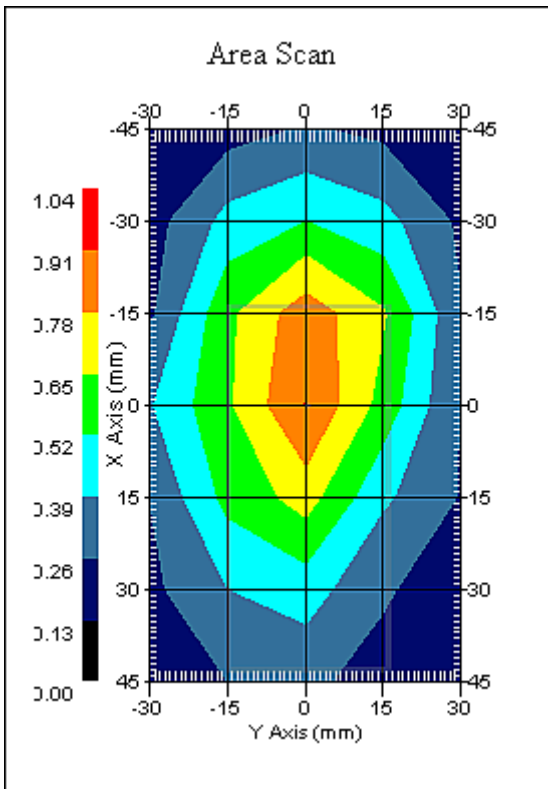
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 7:08:14 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Bottom Installed in Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.939 W/kg
10 gram SAR value : 0.629 W/kg
Area Scan Peak SAR : 0.913 W/kg
Zoom Scan Peak SAR : 1.441 W/kg

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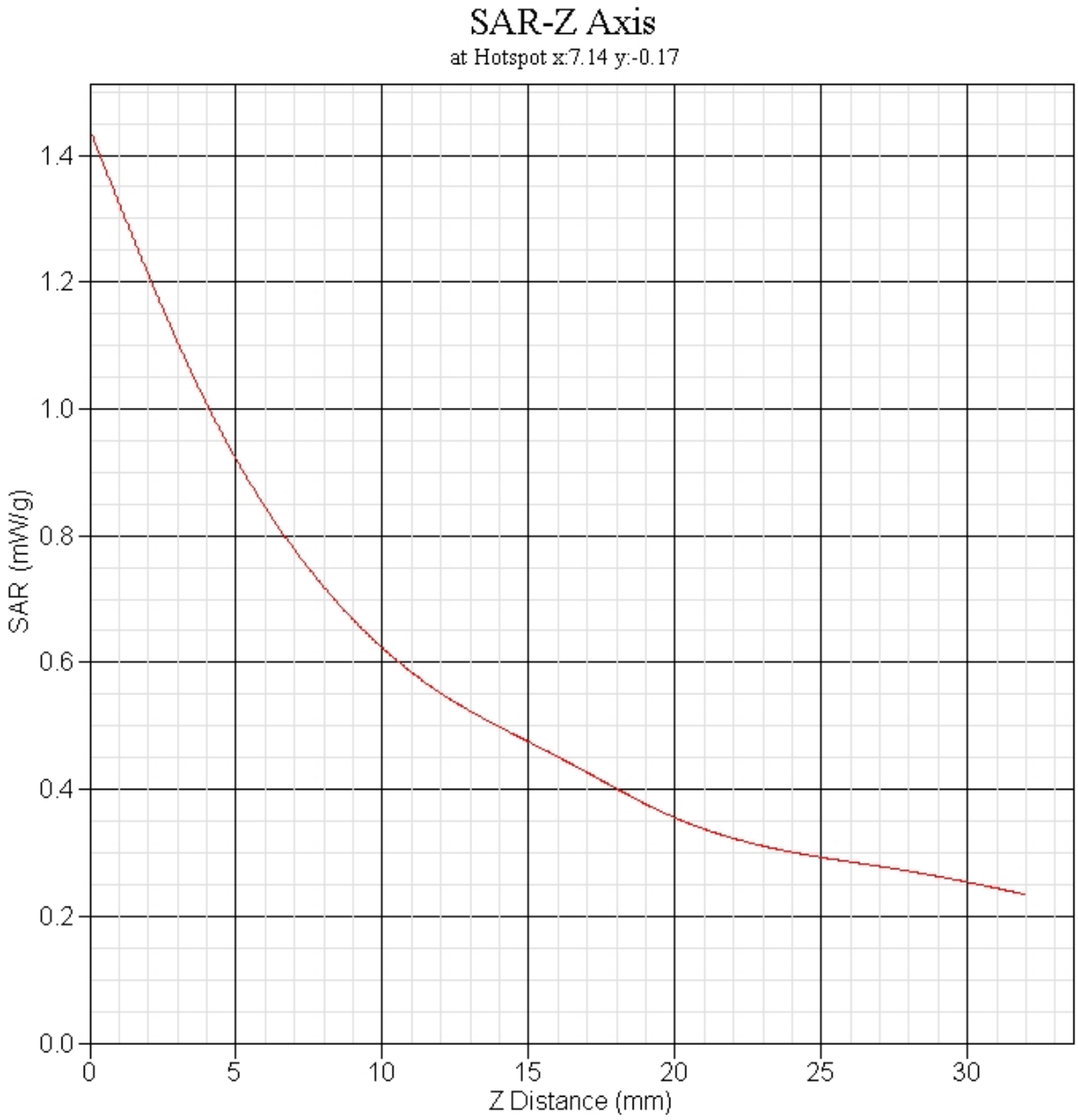

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 02:44:55 PM
End Time : 08-Feb-2010 02:59:39 PM
Scanning Time : 884 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 0.421 W/kg
Power Drift-Finish: 0.440 W/kg
Power Drift (%) : 4.336

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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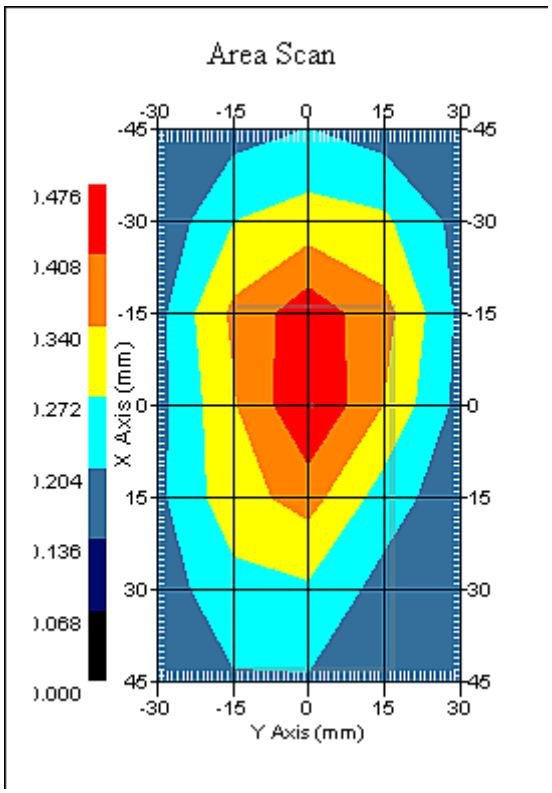
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 7:08:14 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Bottom Installed in Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 0.464 W/kg
10 gram SAR value : 0.335 W/kg
Area Scan Peak SAR : 0.476 W/kg
Zoom Scan Peak SAR : 0.680 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 04:05:17 PM
End Time : 08-Feb-2010 04:20:00 PM
Scanning Time : 883 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.439 W/kg
Power Drift-Finish: 0.438 W/kg
Power Drift (%) : -0.290

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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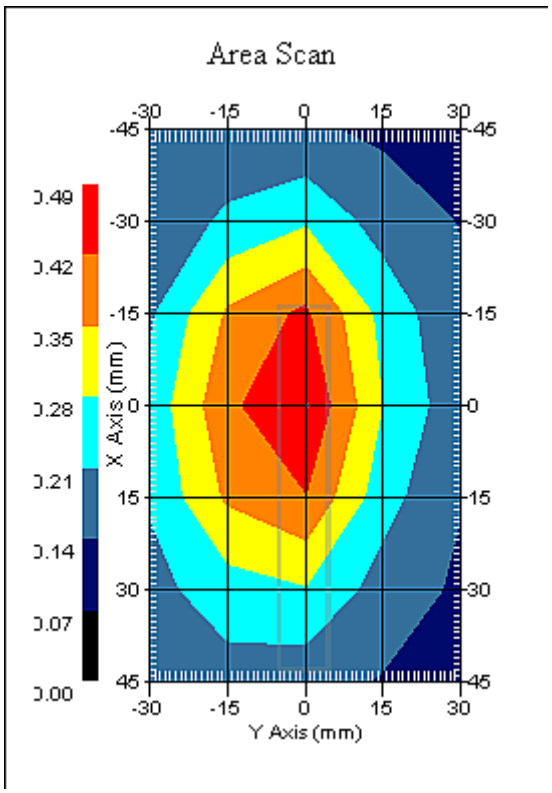
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 7:08:14 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation        : 5 mm
Channel           : Low
```

Tail End



Connector End

```
1 gram SAR value    : 0.460 W/kg
10 gram SAR value   : 0.338 W/kg
Area Scan Peak SAR : 0.487 W/kg
Zoom Scan Peak SAR : 0.630 W/kg
```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SAR Test Report

```
By Operator       : Jay
Measurement Date  : 08-Feb-2010
Starting Time     : 08-Feb-2010  03:50:00 PM
End Time          : 08-Feb-2010  04:04:42 PM
Scanning Time     : 882 secs

Product Data
Device Name       : Cmotech
Serial No.        : 2
Mode              : Rev. 0
Model             : CDU-685A
Frequency         : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time        : 0 min(s)
Length            : 72 mm
Width             : 12 mm
Depth             : 33 mm
Antenna Type      : Internal
Orientation       : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.581 W/kg
Power Drift-Finish: 0.592 W/kg
Power Drift (%)   : 2.003

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

Tissue Data
Type              : BODY
Serial No.        : 835
Frequency         : 835.00 MHz
Last Calib. Date  : 08-Feb-2010
Temperature       : 20.00 °C
Ambient Temp.     : 23.00 °C
Humidity          : 40.00 RH%
Epsilon           : 56.65 F/m
Sigma             : 0.96 S/m
Density           : 1000.00 kg/cu. m

Probe Data
Name              : RFEL 217
Model             : E020
Type              : E-Field Triangle
Serial No.        : 217
Last Calib. Date  : 21-Oct-2009
Frequency         : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)²
Compression Point: 95.00 mV
Offset            : 1.56 mm
```

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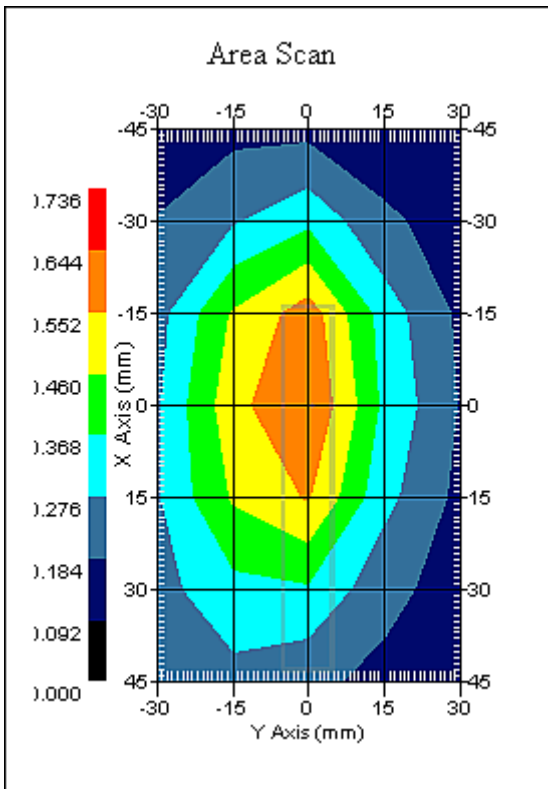
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 7:08:14 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.618 W/kg
10 gram SAR value : 0.441 W/kg
Area Scan Peak SAR : 0.645 W/kg
Zoom Scan Peak SAR : 0.840 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 04:36:27 PM
End Time : 08-Feb-2010 04:51:14 PM
Scanning Time : 887 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.319 W/kg
Power Drift-Finish: 0.312 W/kg
Power Drift (%) : -2.264

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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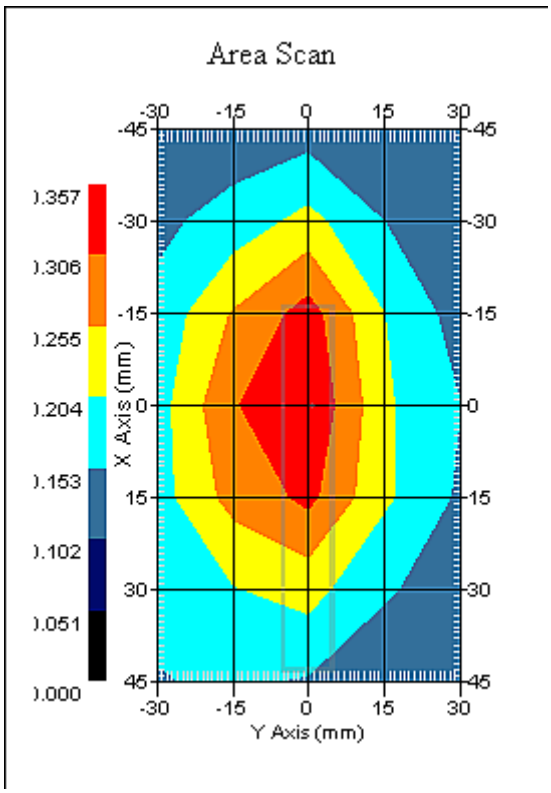
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 9:36:19 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation : 5 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 0.331 W/kg
10 gram SAR value : 0.255 W/kg
Area Scan Peak SAR : 0.356 W/kg
Zoom Scan Peak SAR : 0.440 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 05:08:49 PM
End Time : 08-Feb-2010 05:23:34 PM
Scanning Time : 885 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.502 W/kg
Power Drift-Finish: 0.493 W/kg
Power Drift (%) : -1.797

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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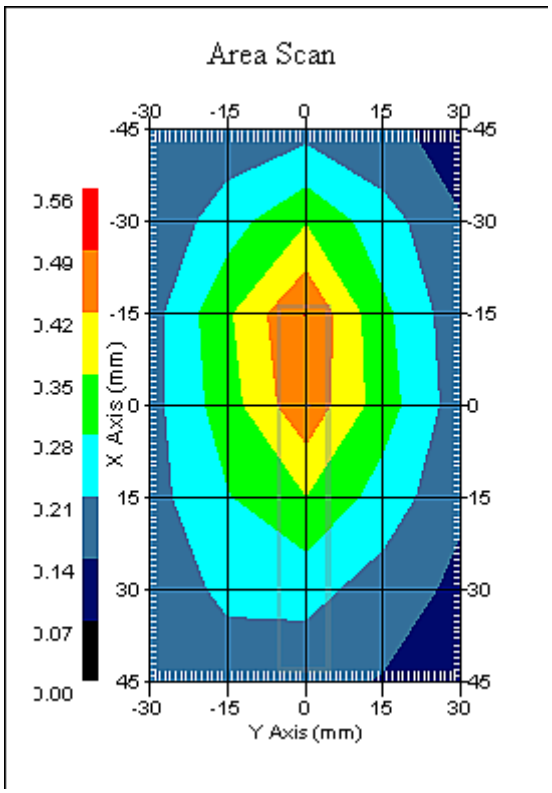
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 9:36:19 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Low
```

Tail End



Connector End

```
1 gram SAR value    : 0.468 W/kg
10 gram SAR value   : 0.327 W/kg
Area Scan Peak SAR  : 0.491 W/kg
Zoom Scan Peak SAR  : 0.680 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 04:53:17 PM
End Time : 08-Feb-2010 05:08:01 PM
Scanning Time : 884 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.588 W/kg
Power Drift-Finish: 0.584 W/kg
Power Drift (%) : -0.797

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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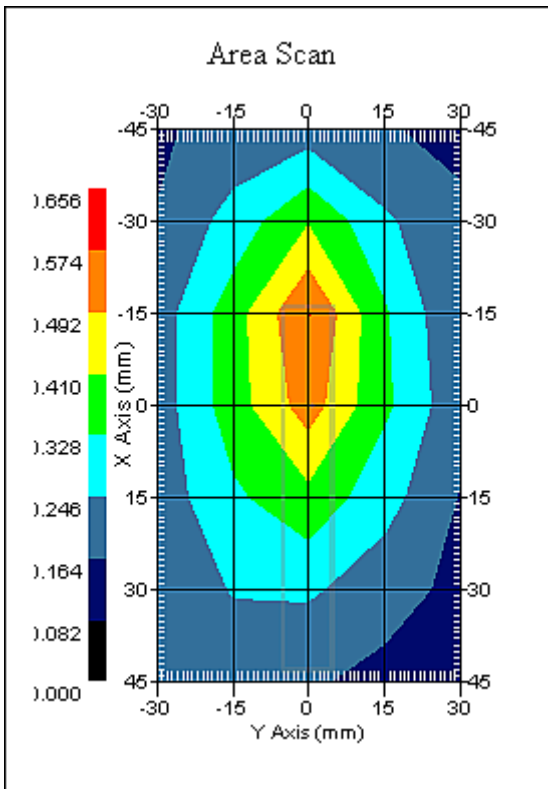
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 9:36:19 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.549 W/kg
10 gram SAR value : 0.369 W/kg
Area Scan Peak SAR : 0.577 W/kg
Zoom Scan Peak SAR : 0.840 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 05:24:08 PM
End Time : 08-Feb-2010 05:38:55 PM
Scanning Time : 887 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.332 W/kg
Power Drift-Finish: 0.337 W/kg
Power Drift (%) : 1.489

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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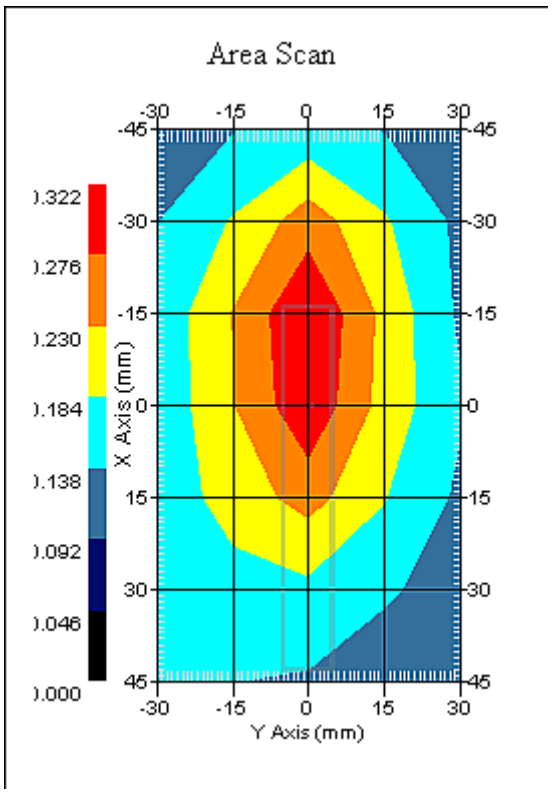
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 9:36:19 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : High
```

Tail End



Connector End

```
1 gram SAR value    : 0.315 W/kg
10 gram SAR value   : 0.232 W/kg
Area Scan Peak SAR : 0.321 W/kg
Zoom Scan Peak SAR : 0.440 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 05:42:30 PM
End Time : 08-Feb-2010 05:58:42 PM
Scanning Time : 972 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 12 mm
Width : 33 mm
Depth : 72 mm
Antenna Type : Internal
Orientation : Tip End on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.293 W/kg
Power Drift-Finish: 0.293 W/kg
Power Drift (%) : -0.869

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 56.65 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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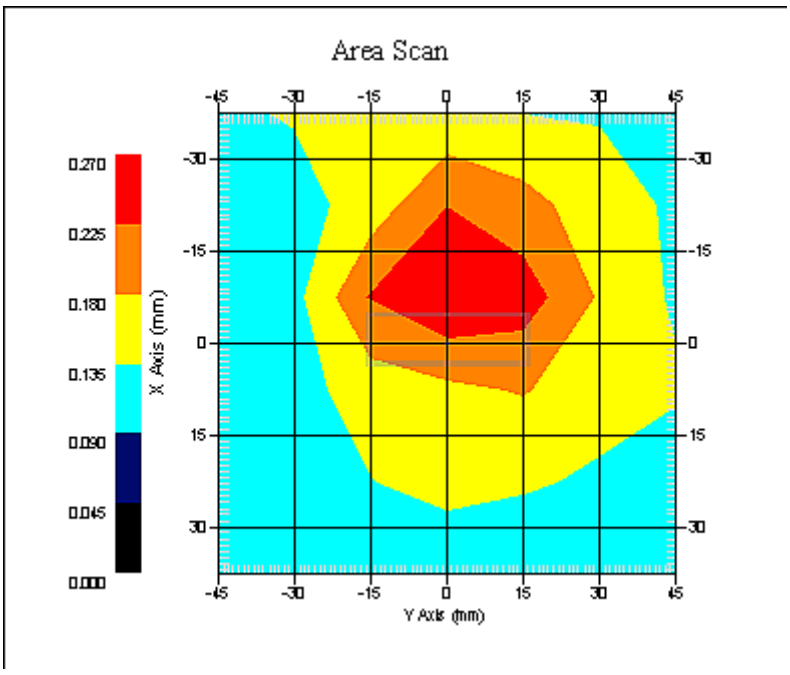
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 9:36:19 AM
Area Scan         : 6x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Tip End on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.333 W/kg
10 gram SAR value   : 0.202 W/kg
Area Scan Peak SAR  : 0.268 W/kg
Zoom Scan Peak SAR  : 0.630 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 29-Jun-2010
Starting Time : 29-Jun-2010 08:35:50 PM
End Time : 29-Jun-2010 08:50:55 PM
Scanning Time : 905 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.829 W/kg
Power Drift-Finish: 0.839 W/kg
Power Drift (%) : 1.234

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

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 29-Jun-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 55.01 F/m
Sigma : 0.98 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.1
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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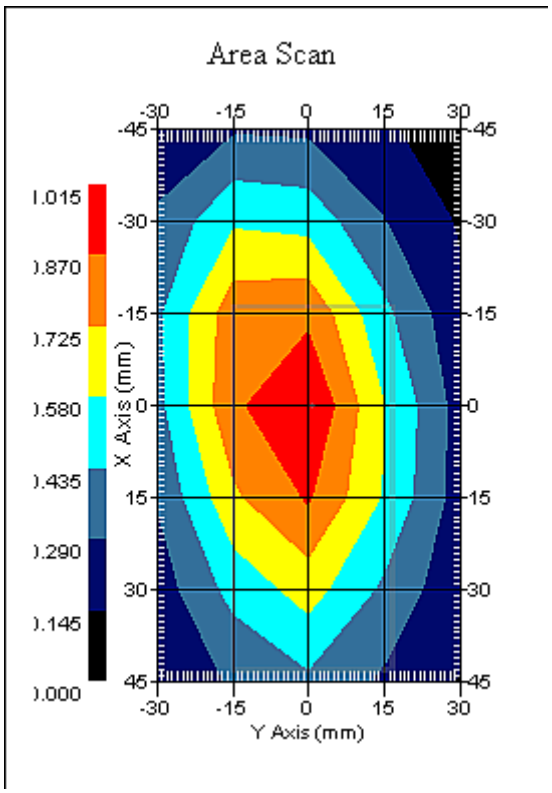
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 29-Jun-2010
Set-up Time : 1:19:51 PM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Bottom Installed in Toshiba Satellite 2400 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.922 W/kg
10 gram SAR value : 0.681 W/kg
Area Scan Peak SAR : 1.015 W/kg
Zoom Scan Peak SAR : 1.221 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 10:39:47 AM
End Time : 08-Feb-2010 10:56:07 AM
Scanning Time : 980 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.071 W/kg
Power Drift-Finish: 1.067 W/kg
Power Drift (%) : -0.316

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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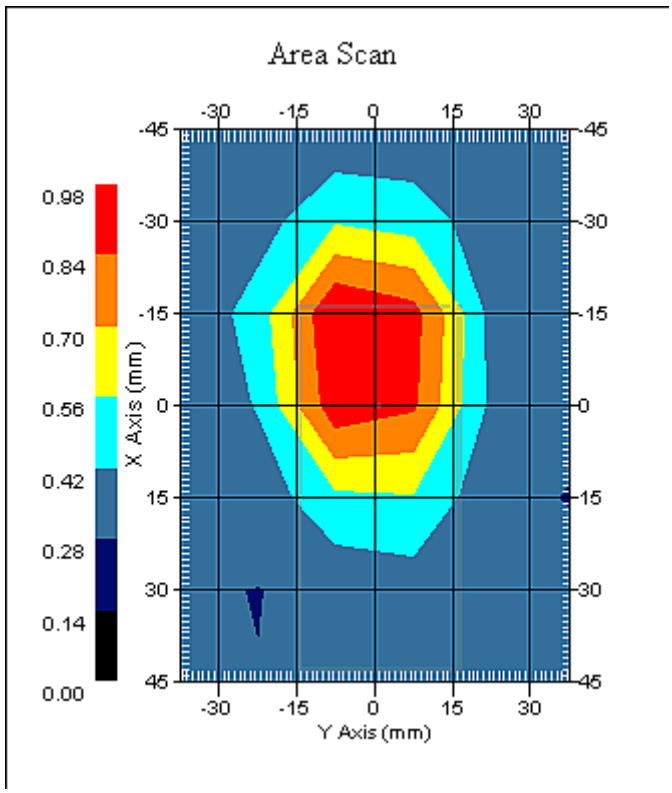
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 10:24:20 AM
Area Scan : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Top on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 1.052 W/kg
10 gram SAR value : 0.674 W/kg
Area Scan Peak SAR : 0.980 W/kg
Zoom Scan Peak SAR : 1.631 W/kg

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SAR Test Report

```
By Operator       : Jay
Measurement Date  : 08-Feb-2010
Starting Time     : 08-Feb-2010  10:22:32 AM
End Time          : 08-Feb-2010  10:38:58 AM
Scanning Time     : 986 secs

Product Data
Device Name       : Cmotech
Serial No.        : 2
Mode              : Rev. 0
Model             : CDU-685A
Frequency         : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time        : 0 min(s)
Length            : 72 mm
Width             : 33 mm
Depth             : 12 mm
Antenna Type      : Internal
Orientation       : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.999 W/kg
Power Drift-Finish: 1.037 W/kg
Power Drift (%)   : 3.829

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

Tissue Data
Type              : BODY
Serial No.        : 1900
Frequency         : 1900.00 MHz
Last Calib. Date  : 08-Feb-2010
Temperature       : 20.00 °C
Ambient Temp.     : 23.00 °C
Humidity          : 36.00 RH%
Epsilon           : 52.62 F/m
Sigma             : 1.56 S/m
Density           : 1000.00 kg/cu. m

Probe Data
Name              : RFEL 217
Model             : E020
Type              : E-Field Triangle
Serial No.        : 217
Last Calib. Date  : 21-Oct-2009
Frequency         : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)²
Compression Point: 95.00 mV
Offset            : 1.56 mm
```

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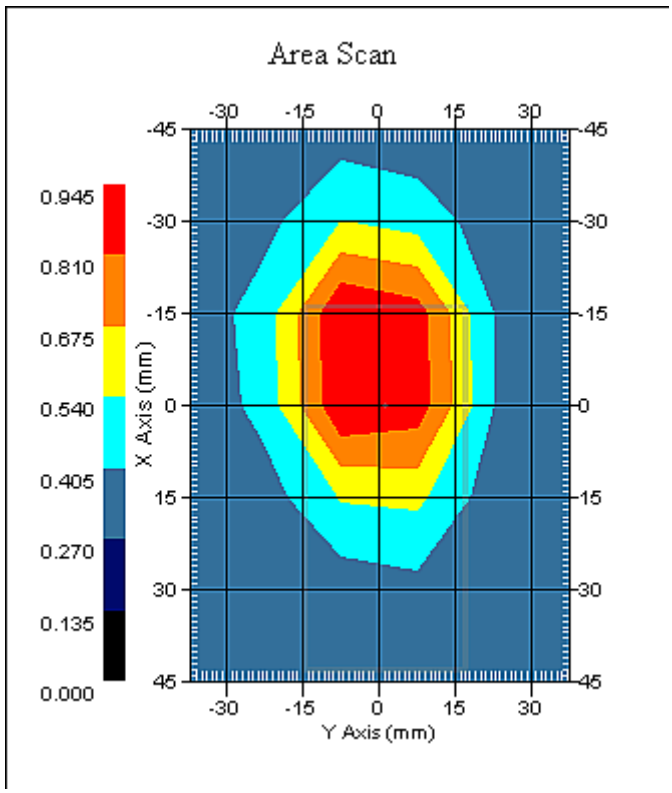
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 10:24:20 AM
Area Scan : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Top on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 1.059 W/kg
10 gram SAR value : 0.680 W/kg
Area Scan Peak SAR : 0.942 W/kg
Zoom Scan Peak SAR : 1.611 W/kg

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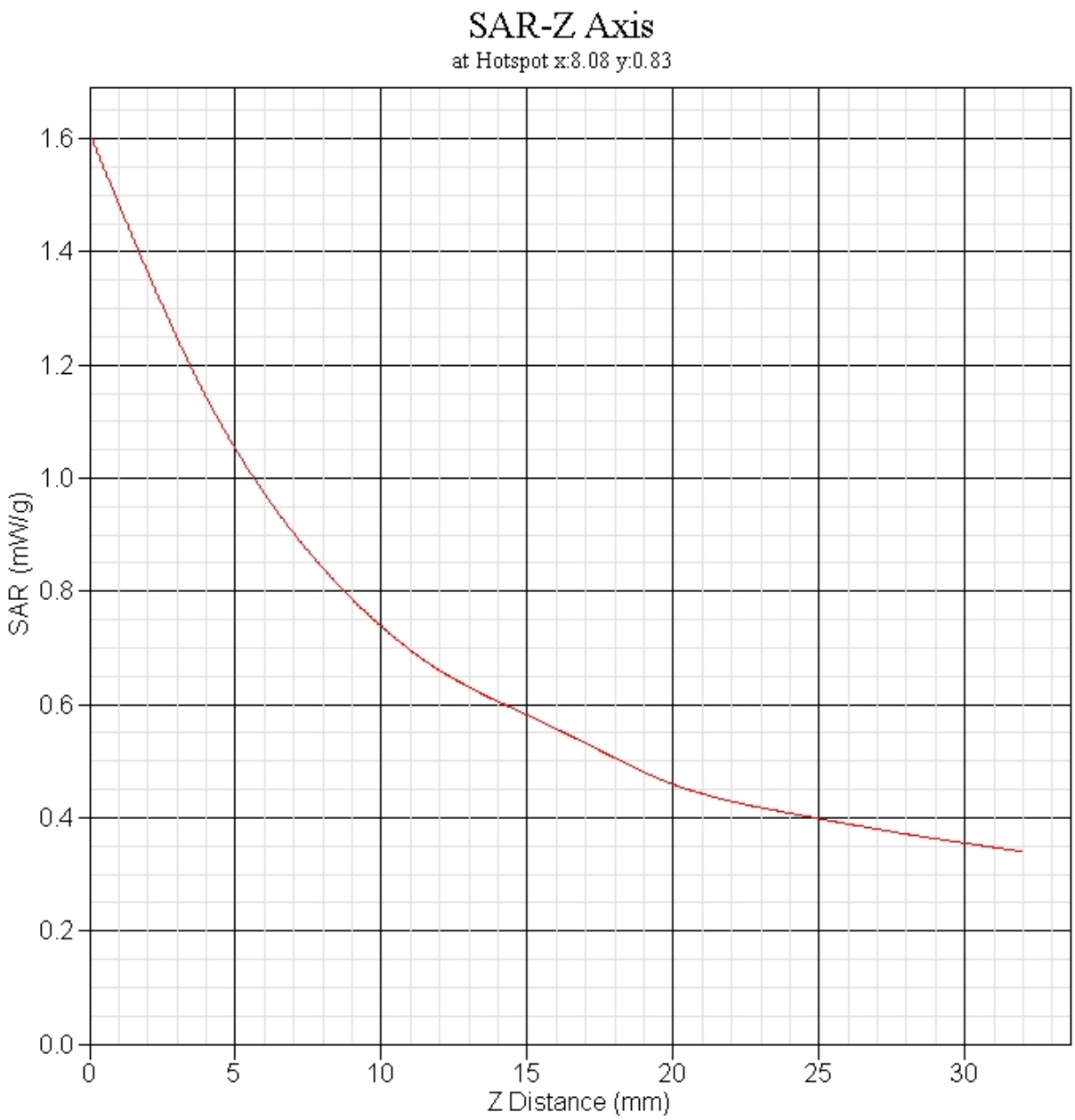

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 10:56:39 AM
End Time : 08-Feb-2010 11:12:59 AM
Scanning Time : 980 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.968 W/kg
Power Drift-Finish: 0.984 W/kg
Power Drift (%) : 1.631

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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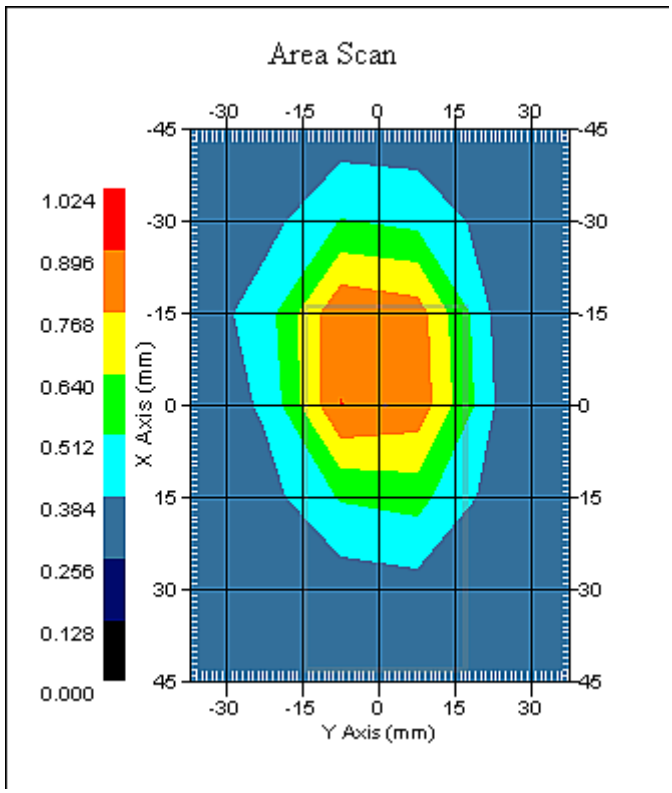
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 10:24:20 AM
Area Scan : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Top on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 1.019 W/kg
10 gram SAR value : 0.663 W/kg
Area Scan Peak SAR : 0.897 W/kg
Zoom Scan Peak SAR : 1.581 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 09:47:49 AM
End Time : 08-Feb-2010 10:04:01 AM
Scanning Time : 972 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 0.623 W/kg
Power Drift-Finish: 0.619 W/kg
Power Drift (%) : -0.646

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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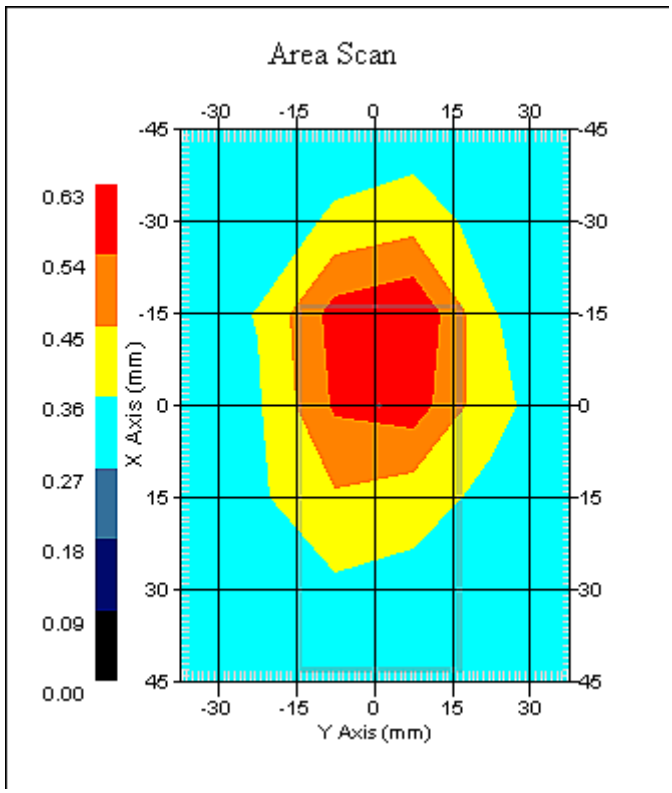
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 10:24:20 AM
Area Scan         : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Bottom Installed in Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Low
```

Tail End



Connector End

```
1 gram SAR value    : 0.595 W/kg
10 gram SAR value   : 0.448 W/kg
Area Scan Peak SAR : 0.628 W/kg
Zoom Scan Peak SAR : 0.840 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 08:57:16 AM
End Time : 08-Feb-2010 09:13:46 AM
Scanning Time : 990 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 0.671 W/kg
Power Drift-Finish: 0.671 W/kg
Power Drift (%) : -0.088

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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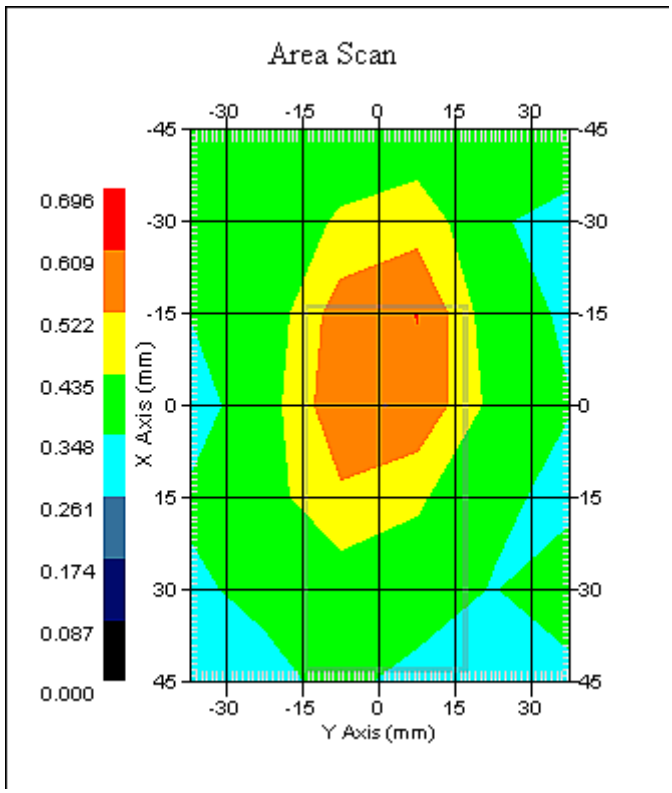
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 10:24:20 AM
Area Scan : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Bottom Installed in Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.619 W/kg
10 gram SAR value : 0.477 W/kg
Area Scan Peak SAR : 0.610 W/kg
Zoom Scan Peak SAR : 0.800 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 10:04:37 AM
End Time : 08-Feb-2010 10:20:46 AM
Scanning Time : 969 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 0.815 W/kg
Power Drift-Finish: 0.795 W/kg
Power Drift (%) : -2.424

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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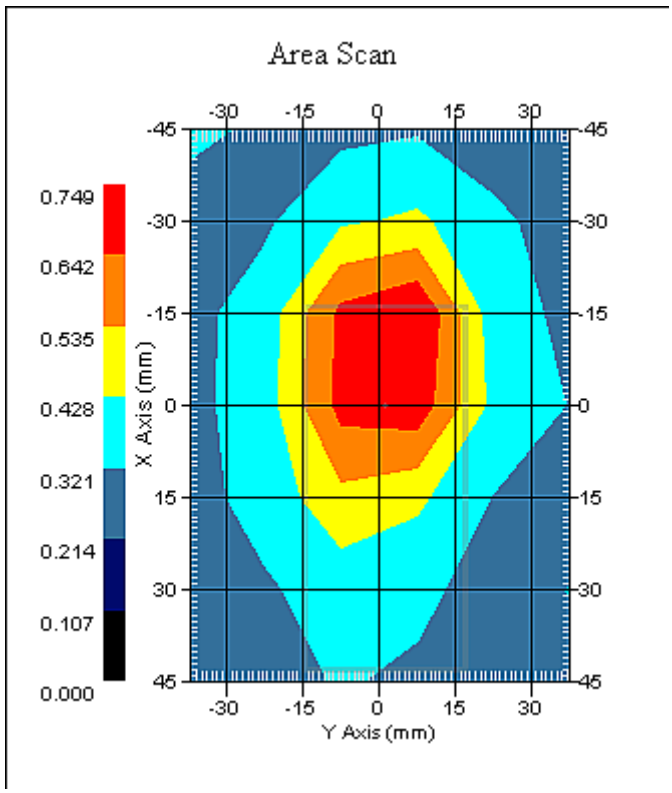
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 10:24:20 AM
Area Scan         : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Bottom Installed in Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : High
```

Tail End



Connector End

```
1 gram SAR value    : 0.755 W/kg
10 gram SAR value   : 0.527 W/kg
Area Scan Peak SAR : 0.747 W/kg
Zoom Scan Peak SAR : 1.081 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 01:00:56 PM
End Time : 08-Feb-2010 01:17:23 PM
Scanning Time : 987 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.588 W/kg
Power Drift-Finish: 0.582 W/kg
Power Drift (%) : -1.009

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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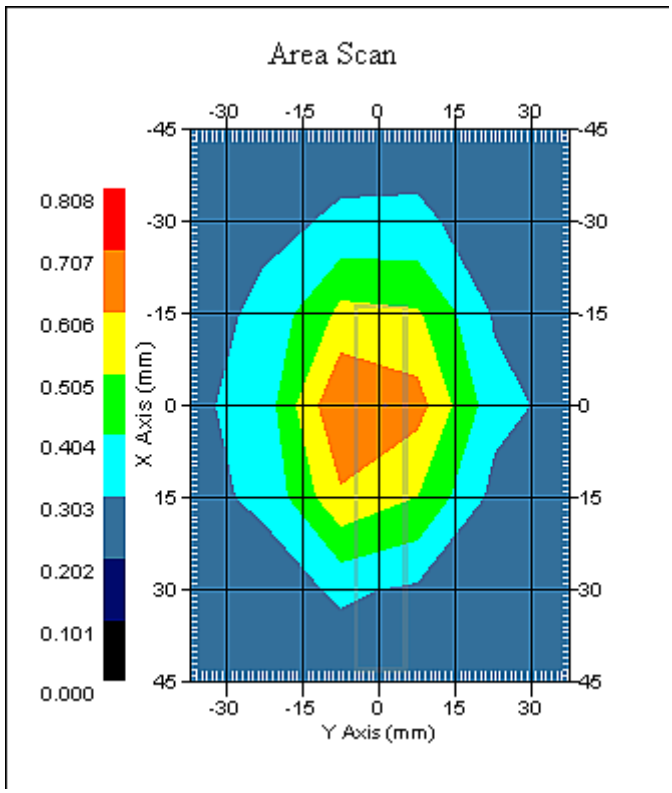
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 10:24:20 AM
Area Scan : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation : 5 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 0.698 W/kg
10 gram SAR value : 0.474 W/kg
Area Scan Peak SAR : 0.708 W/kg
Zoom Scan Peak SAR : 1.040 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 12:43:59 PM
End Time : 08-Feb-2010 01:00:21 PM
Scanning Time : 982 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.602 W/kg
Power Drift-Finish: 0.611 W/kg
Power Drift (%) : 1.340

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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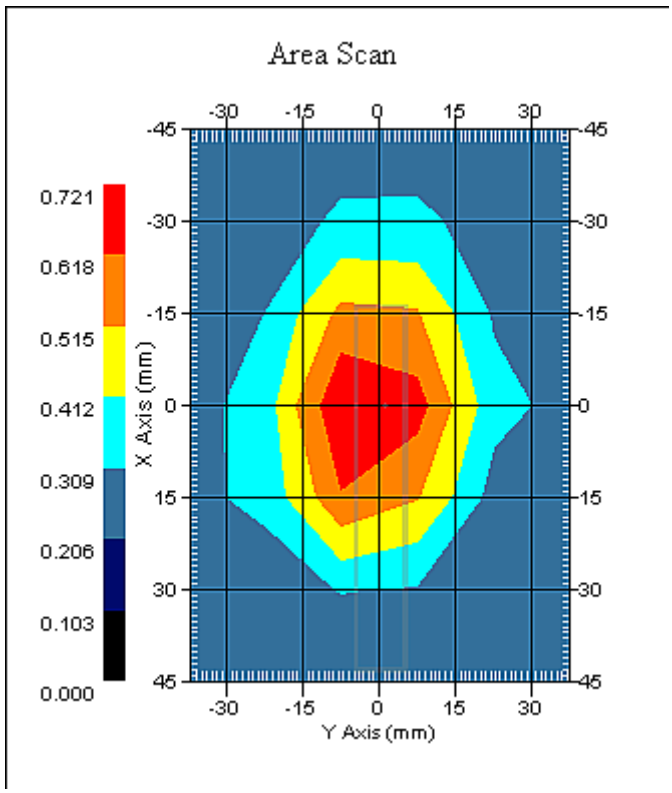
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 08-Feb-2010
Set-up Time : 10:24:20 AM
Area Scan : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.754 W/kg
10 gram SAR value : 0.502 W/kg
Area Scan Peak SAR : 0.721 W/kg
Zoom Scan Peak SAR : 1.101 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 01:19:06 PM
End Time : 08-Feb-2010 01:35:29 PM
Scanning Time : 983 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.562 W/kg
Power Drift-Finish: 0.586 W/kg
Power Drift (%) : 4.301

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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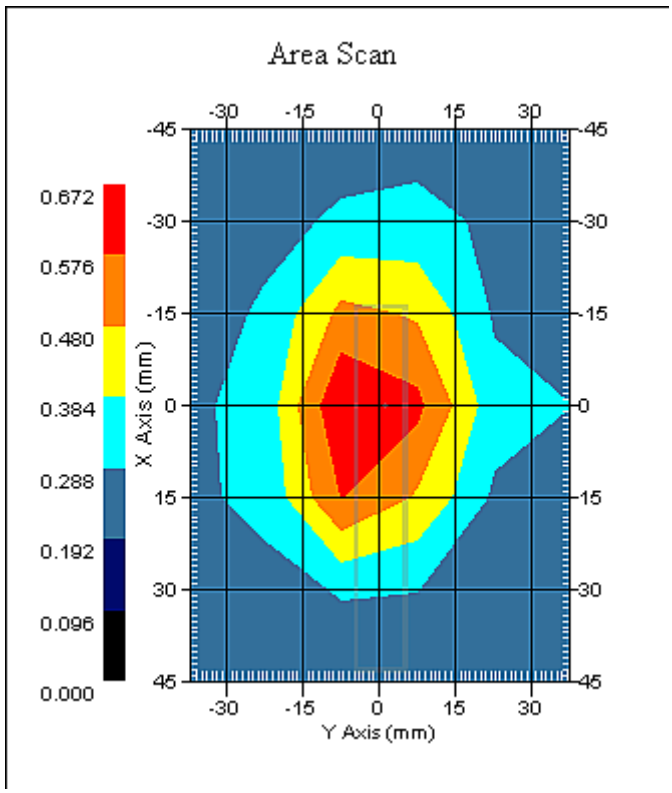
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 10:24:20 AM
Area Scan         : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation        : 5 mm
Channel           : High
```

Tail End



Connector End

```
1 gram SAR value    : 0.661 W/kg
10 gram SAR value   : 0.441 W/kg
Area Scan Peak SAR  : 0.671 W/kg
Zoom Scan Peak SAR  : 1.010 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 11:45:19 AM
End Time : 08-Feb-2010 12:01:39 PM
Scanning Time : 980 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.617 W/kg
Power Drift-Finish: 0.612 W/kg
Power Drift (%) : -0.812

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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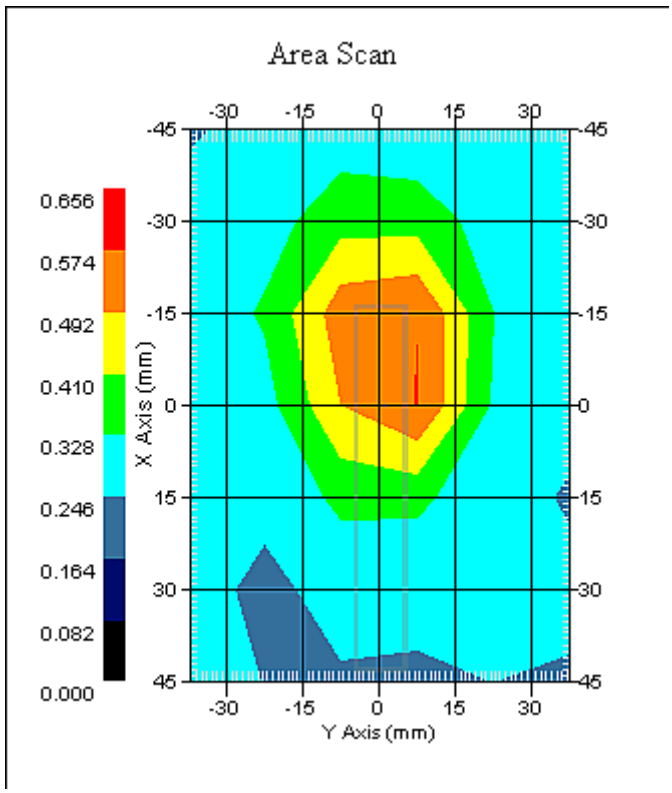
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 10:24:20 AM
Area Scan         : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Low
```

Tail End



Connector End

```
1 gram SAR value    : 0.630 W/kg
10 gram SAR value   : 0.453 W/kg
Area Scan Peak SAR  : 0.576 W/kg
Zoom Scan Peak SAR  : 0.920 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 11:28:10 AM
End Time : 08-Feb-2010 11:44:40 AM
Scanning Time : 990 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.544 W/kg
Power Drift-Finish: 0.552 W/kg
Power Drift (%) : 1.472

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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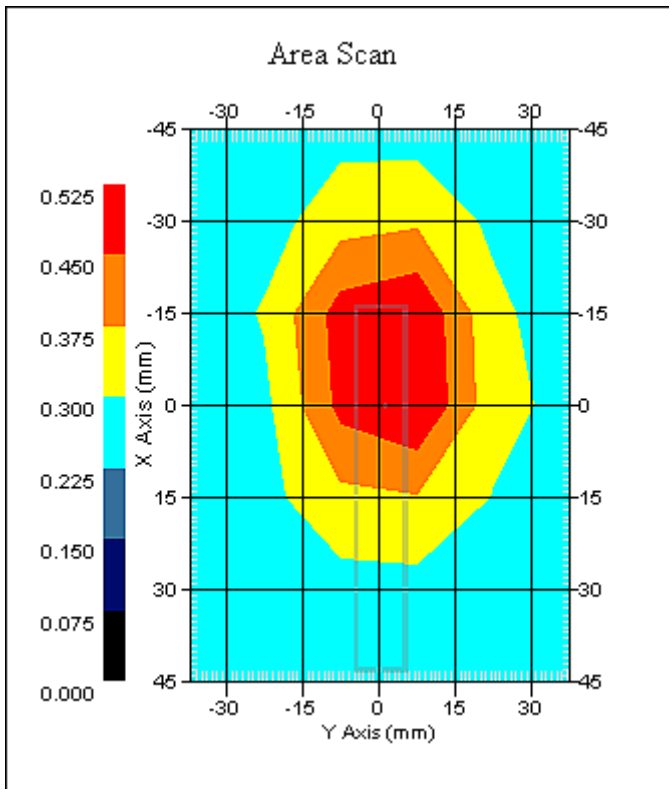
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 10:24:20 AM
Area Scan         : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.568 W/kg
10 gram SAR value   : 0.421 W/kg
Area Scan Peak SAR  : 0.524 W/kg
Zoom Scan Peak SAR  : 0.850 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 12:03:39 PM
End Time : 08-Feb-2010 12:19:48 PM
Scanning Time : 969 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.536 W/kg
Power Drift-Finish: 0.536 W/kg
Power Drift (%) : -0.016

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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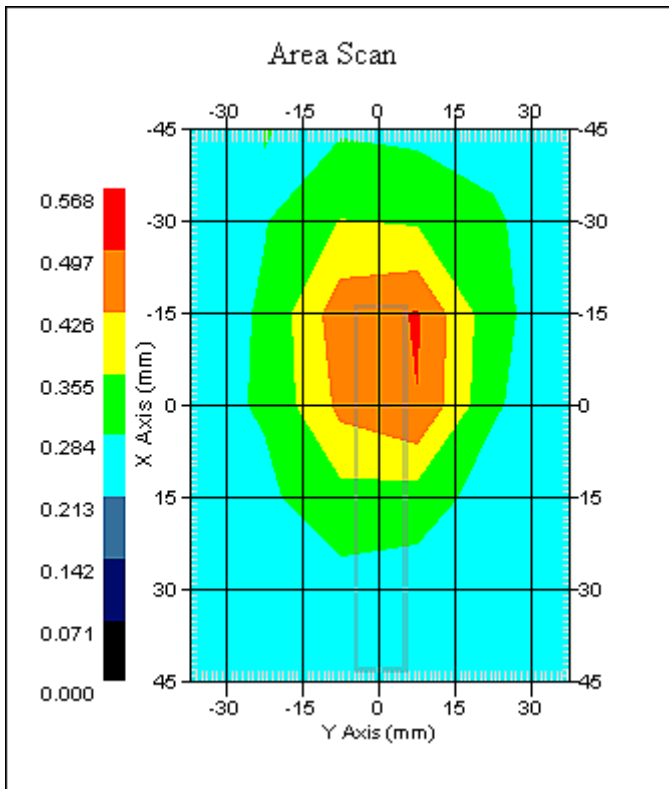
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 10:24:20 AM
Area Scan         : 7x6x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : High
```

Tail End



Connector End

```
1 gram SAR value    : 0.535 W/kg
10 gram SAR value   : 0.399 W/kg
Area Scan Peak SAR  : 0.500 W/kg
Zoom Scan Peak SAR  : 0.770 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 08-Feb-2010
Starting Time : 08-Feb-2010 01:39:01 PM
End Time : 08-Feb-2010 01:55:16 PM
Scanning Time : 975 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 12 mm
Width : 33 mm
Depth : 72 mm
Antenna Type : Internal
Orientation : Tip End on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.322 W/kg
Power Drift-Finish: 0.314 W/kg
Power Drift (%) : -2.483

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 08-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.62 F/m
Sigma : 1.56 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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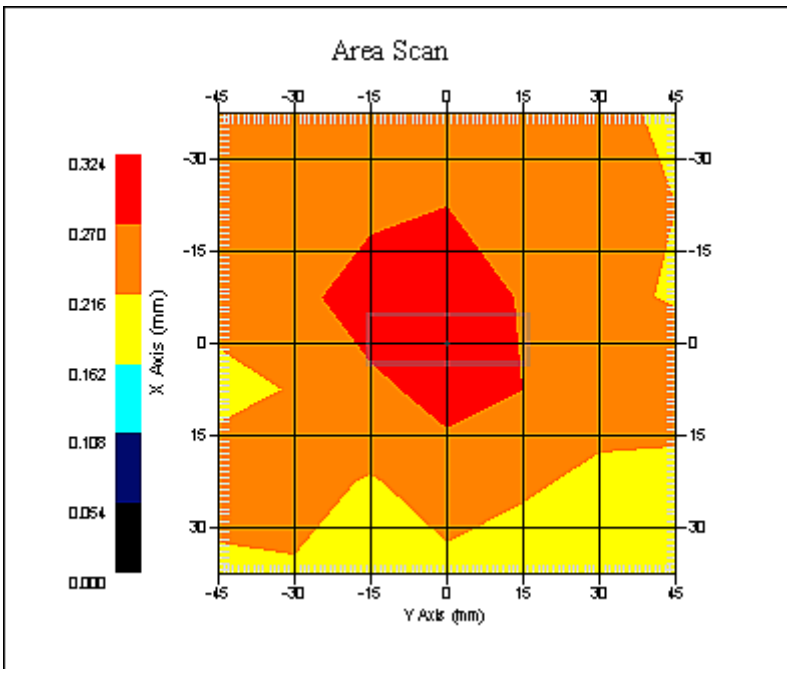
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 10:24:20 AM
Area Scan         : 6x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Tip End on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.292 W/kg
10 gram SAR value   : 0.243 W/kg
Area Scan Peak SAR : 0.322 W/kg
Zoom Scan Peak SAR : 0.320 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 29-Jun-2010
Starting Time : 29-Jun-2010 03:55:34 PM
End Time : 29-Jun-2010 04:10:32 PM
Scanning Time : 898 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. A
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.914 W/kg
Power Drift-Finish: 0.902 W/kg
Power Drift (%) : -1.286

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 29-Jun-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 40.00 RH%
Epsilon : 52.84 F/m
Sigma : 1.53 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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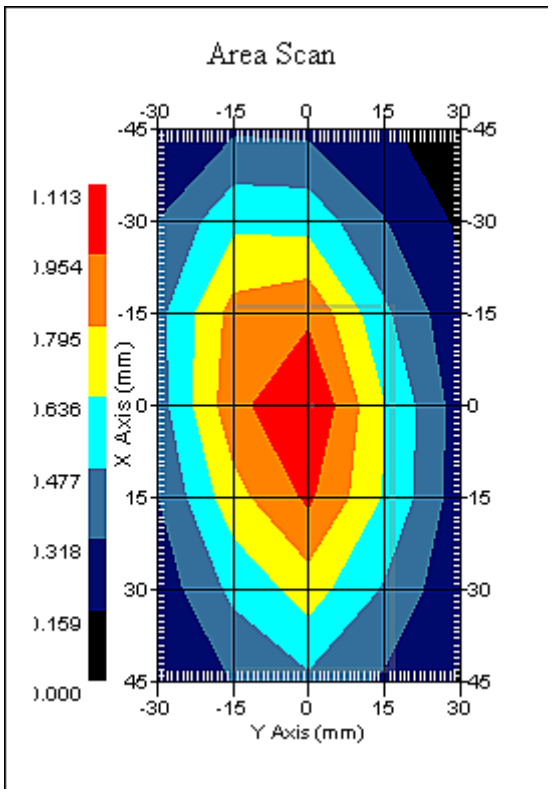
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 29-Jun-2010
Set-up Time       : 1:19:51 PM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 1.024 W/kg
10 gram SAR value   : 0.750 W/kg
Area Scan Peak SAR  : 1.111 W/kg
Zoom Scan Peak SAR  : 1.301 W/kg
```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SAR Test Report

```
By Operator       : Jay
Measurement Date  : 05-Apr-2010
Starting Time     : 05-Apr-2010  08:26:12 AM
End Time          : 05-Apr-2010  08:46:41 AM
Scanning Time     : 1229 secs

Product Data
Device Name       : Cmotech
Serial No.        : 2
Mode              : Rev. 0
Model             : CDU-685A
Frequency         : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time        : 0 min(s)
Length            : 72 mm
Width             : 33 mm
Depth             : 12 mm
Antenna Type      : Internal
Orientation       : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.335 W/kg
Power Drift-Finish: 0.328 W/kg
Power Drift (%)   : -1.994

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

Tissue Data
Type              : BODY
Serial No.        : 1900
Frequency         : 1900.00 MHz
Last Calib. Date  : 05-Apr-2010
Temperature       : 20.00 °C
Ambient Temp.     : 23.00 °C
Humidity          : 30.00 RH%
Epsilon           : 52.71 F/m
Sigma             : 1.54 S/m
Density           : 1000.00 kg/cu. m

Probe Data
Name              : RFEL 217
Model             : E020
Type              : E-Field Triangle
Serial No.        : 217
Last Calib. Date  : 21-Oct-2009
Frequency         : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset            : 1.56 mm
```

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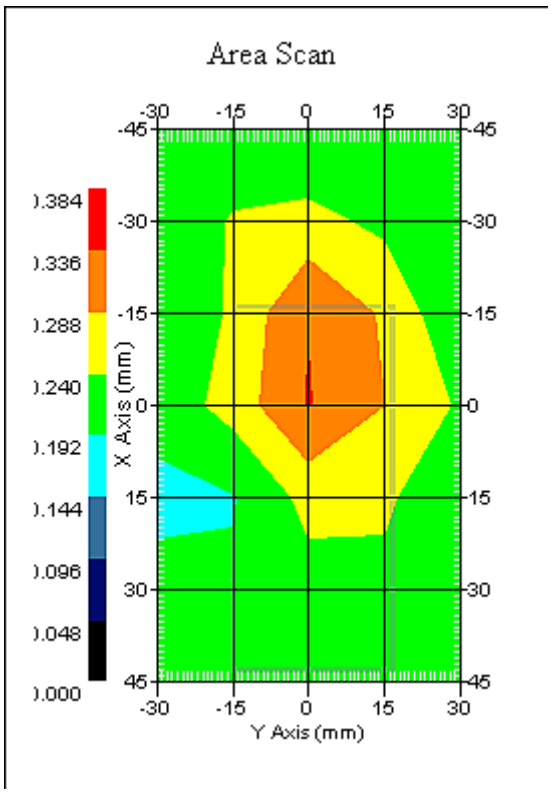
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Apr-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 15 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.326 W/kg
10 gram SAR value   : 0.267 W/kg
Area Scan Peak SAR  : 0.338 W/kg
Zoom Scan Peak SAR  : 0.390 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 08:54:17 AM
End Time : 05-Apr-2010 09:14:48 AM
Scanning Time : 1231 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 0.286 W/kg
Power Drift-Finish: 0.279 W/kg
Power Drift (%) : -2.443

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 52.71 F/m
Sigma : 1.54 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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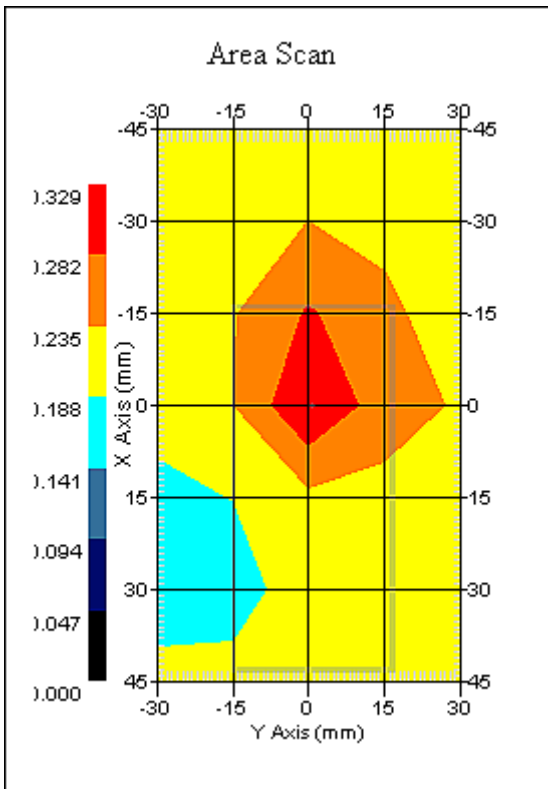
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Apr-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Bottom Installed in Toshiba Portege A600 Laptop
Separation        : 15 mm
Channel           : High
```

Tail End



Connector End

```
1 gram SAR value    : 0.295 W/kg
10 gram SAR value   : 0.245 W/kg
Area Scan Peak SAR : 0.328 W/kg
Zoom Scan Peak SAR : 0.350 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 09:22:46 AM
End Time : 05-Apr-2010 09:43:08 AM
Scanning Time : 1227 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.370 W/kg
Power Drift-Finish: 0.384 W/kg
Power Drift (%) : 3.631

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 52.71 F/m
Sigma : 1.54 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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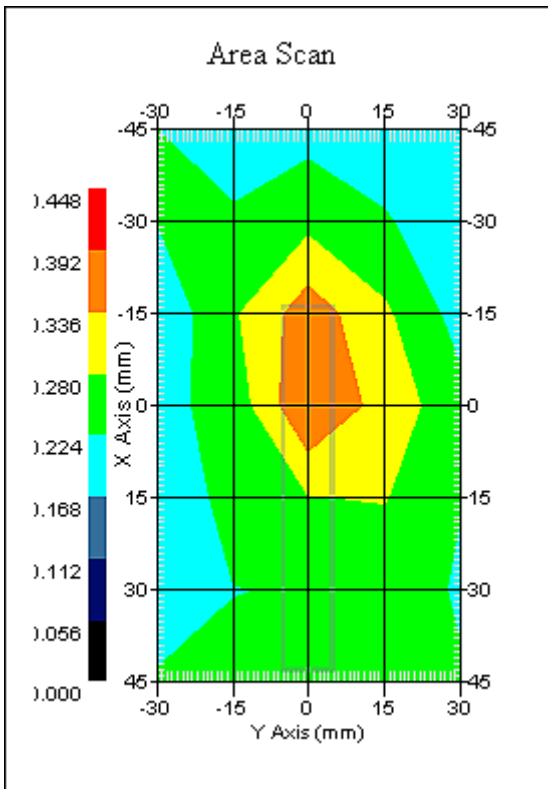
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Apr-2010
Set-up Time : 8:04:43 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation : 10 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.394 W/kg
10 gram SAR value : 0.306 W/kg
Area Scan Peak SAR : 0.393 W/kg
Zoom Scan Peak SAR : 0.530 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 09:46:11 AM
End Time : 05-Apr-2010 10:06:38 AM
Scanning Time : 1227 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.412 W/kg
Power Drift-Finish: 0.400 W/kg
Power Drift (%) : -2.906

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 52.71 F/m
Sigma : 1.54 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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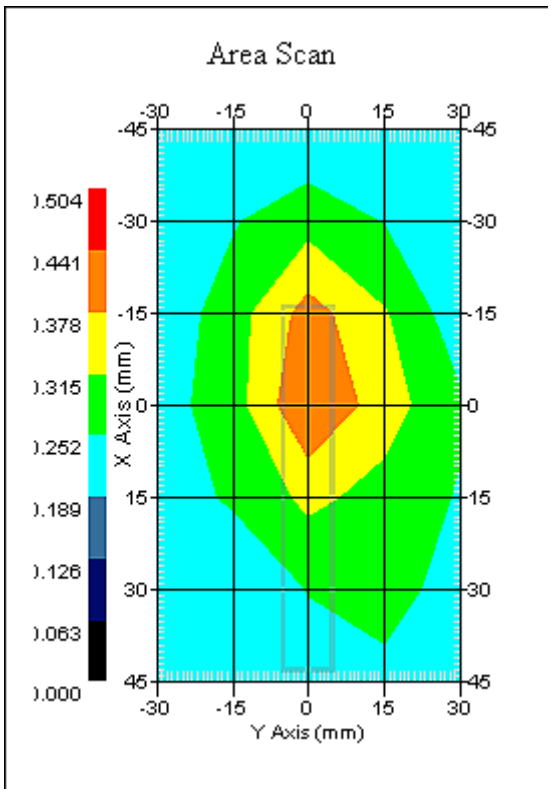
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Apr-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation        : 7 mm
Channel           : Low
```

Tail End



Connector End

```
1 gram SAR value    : 0.449 W/kg
10 gram SAR value   : 0.334 W/kg
Area Scan Peak SAR  : 0.443 W/kg
Zoom Scan Peak SAR  : 0.630 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 10:17:05 AM
End Time : 05-Apr-2010 10:40:28 AM
Scanning Time : 1403 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 12 mm
Width : 33 mm
Depth : 72 mm
Antenna Type : Internal
Orientation : Tip End on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.188 W/kg
Power Drift-Finish: 0.195 W/kg
Power Drift (%) : 3.936

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

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 36.00 RH%
Epsilon : 52.71 F/m
Sigma : 1.54 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

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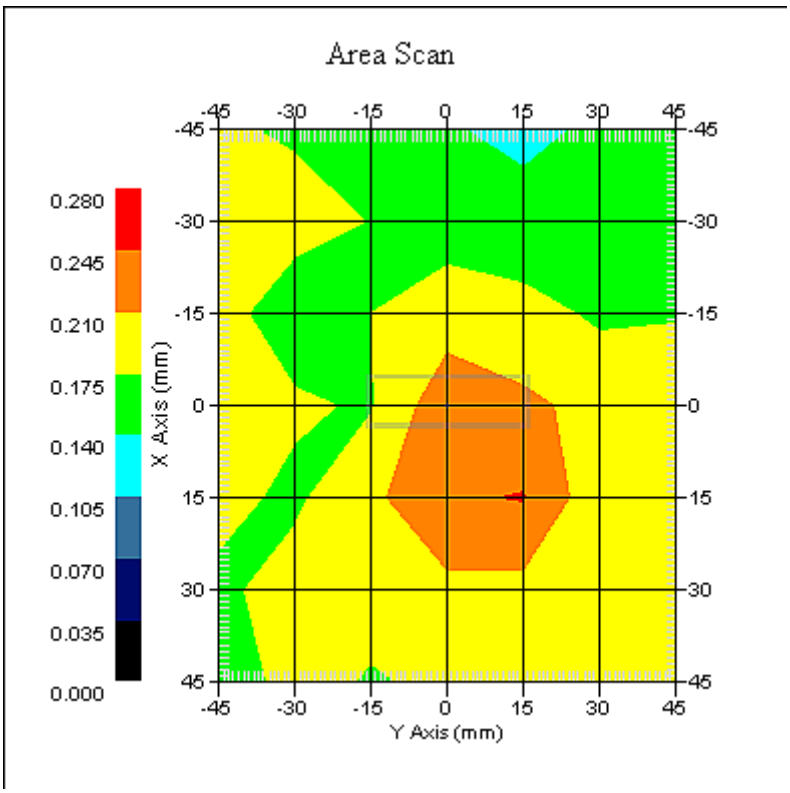
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Feb-2010
Set-up Time       : 10:24:20 AM
Area Scan         : 7x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Tip End on USB Cable With Toshiba Portege A600 Laptop
Separation        : 7 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.179 W/kg
10 gram SAR value   : 0.174 W/kg
Area Scan Peak SAR  : 0.247 W/kg
Zoom Scan Peak SAR  : 0.280 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 03:06:54 PM
End Time : 05-Feb-2010 03:21:31 PM
Scanning Time : 877 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.295 W/kg
Power Drift-Finish: 1.281 W/kg
Power Drift (%) : -1.033

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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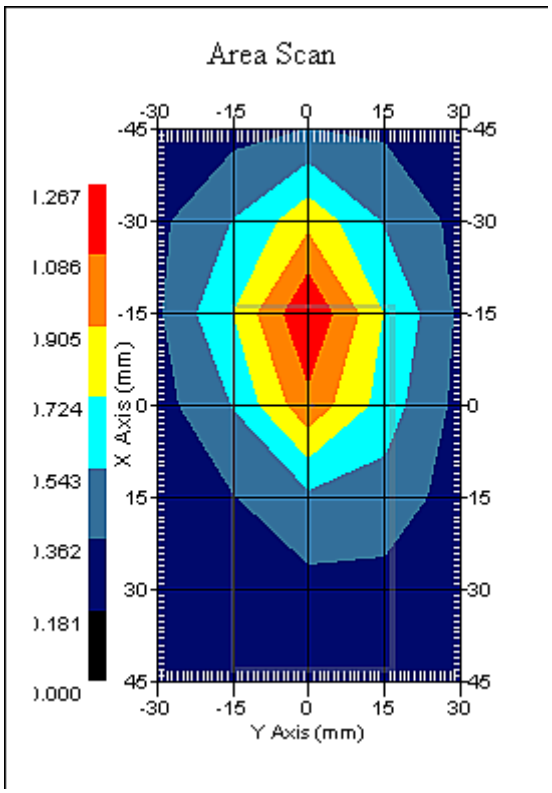
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Feb-2010
Set-up Time       : 7:06:41 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Low
```

Tail End



Connector End

```
1 gram SAR value    : 1.175 W/kg
10 gram SAR value   : 0.782 W/kg
Area Scan Peak SAR  : 1.264 W/kg
Zoom Scan Peak SAR  : 1.741 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 02:48:24 PM
End Time : 05-Feb-2010 03:02:54 PM
Scanning Time : 870 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.294 W/kg
Power Drift-Finish: 1.293 W/kg
Power Drift (%) : -0.118

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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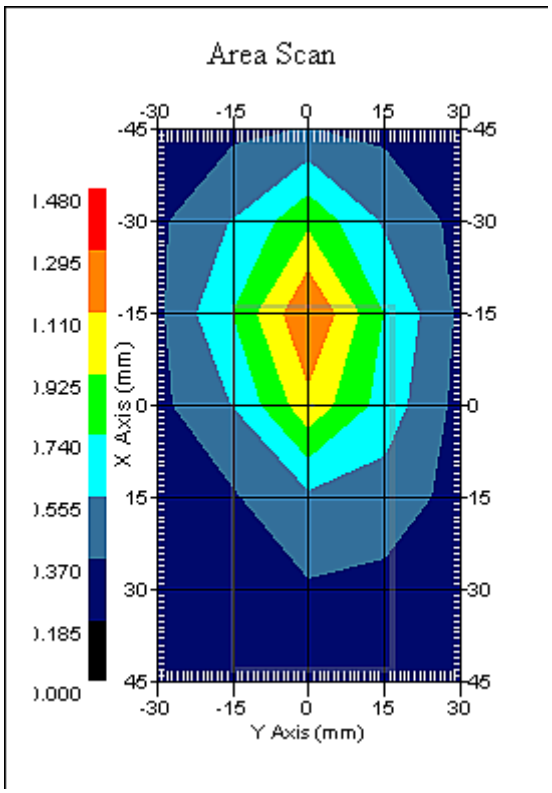
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Feb-2010
Set-up Time       : 7:06:41 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 1.190 W/kg
10 gram SAR value   : 0.795 W/kg
Area Scan Peak SAR : 1.297 W/kg
Zoom Scan Peak SAR : 1.801 W/kg
```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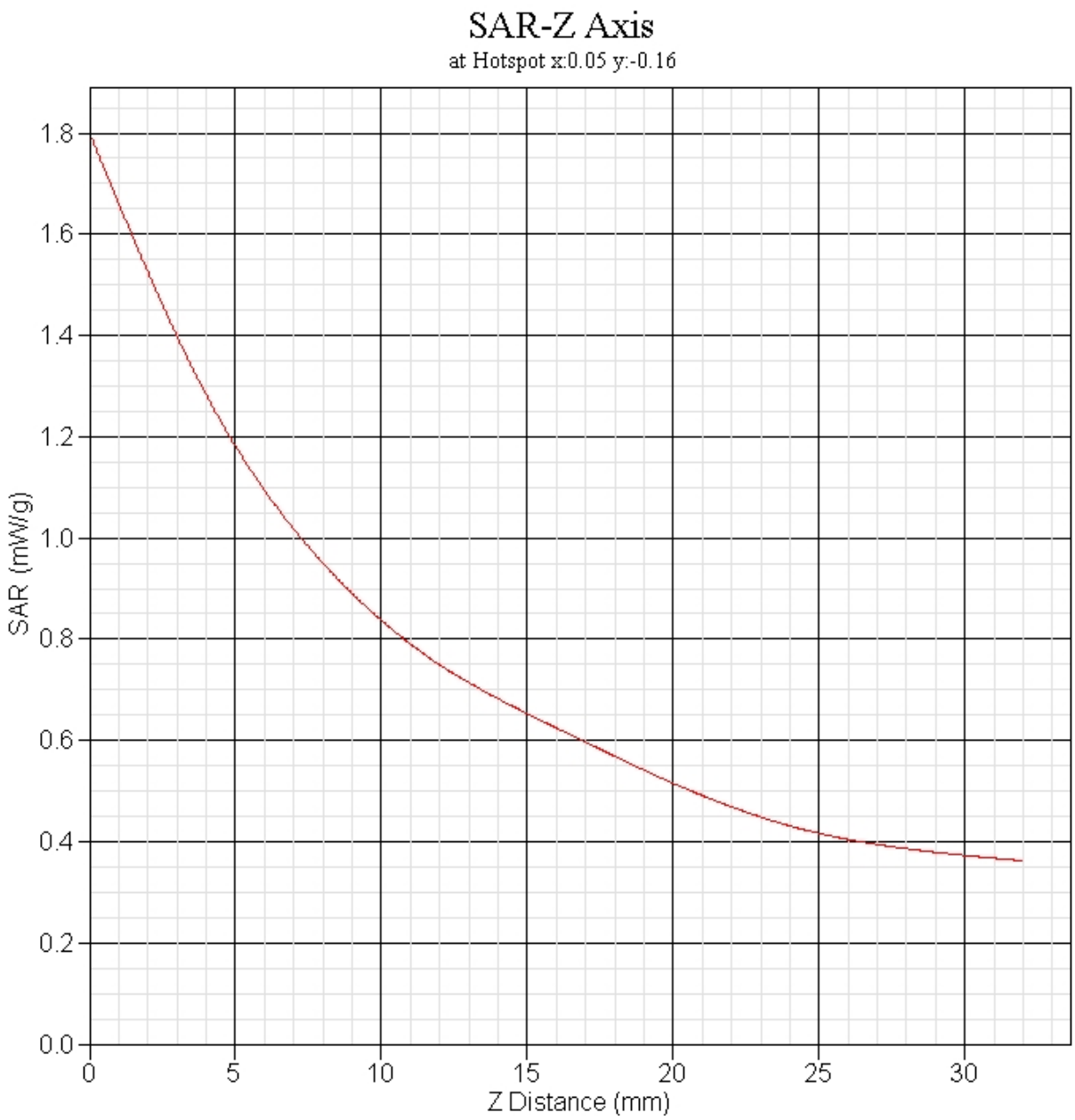

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 02:28:16 PM
End Time : 05-Feb-2010 02:43:01 PM
Scanning Time : 885 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.235 W/kg
Power Drift-Finish: 1.238 W/kg
Power Drift (%) : 0.202

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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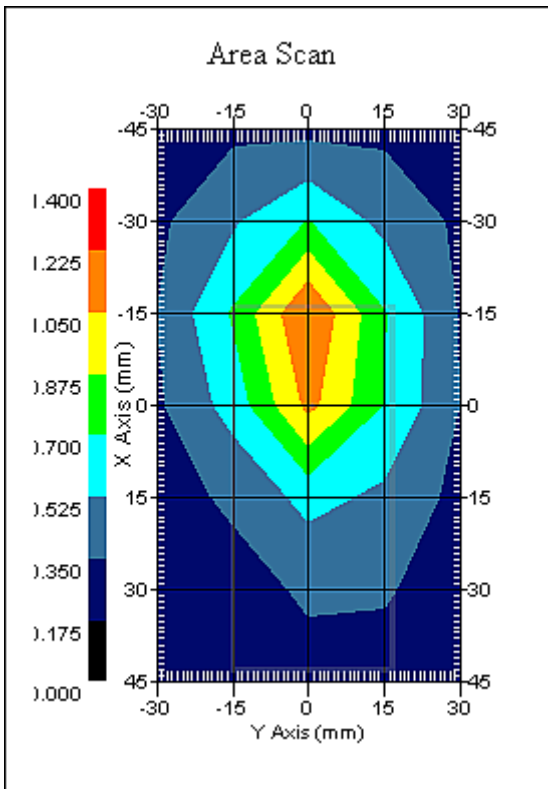
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Feb-2010
Set-up Time : 7:06:41 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Top on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 1.144 W/kg
10 gram SAR value : 0.762 W/kg
Area Scan Peak SAR : 1.227 W/kg
Zoom Scan Peak SAR : 1.671 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 02:09:32 PM
End Time : 05-Feb-2010 02:24:12 PM
Scanning Time : 880 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 1.055 W/kg
Power Drift-Finish: 1.030 W/kg
Power Drift (%) : -2.376

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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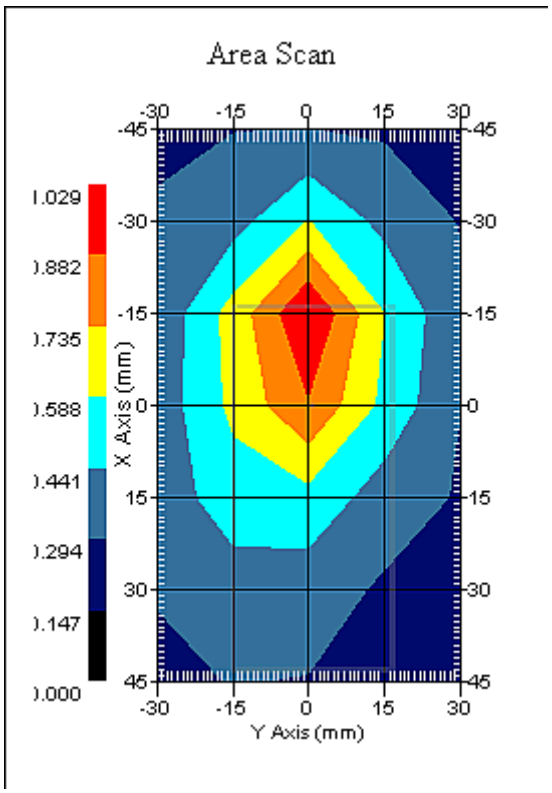
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Feb-2010
Set-up Time       : 7:06:41 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Bottom Installed in Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Low
```

Tail End



Connector End

```
1 gram SAR value    : 0.961 W/kg
10 gram SAR value   : 0.643 W/kg
Area Scan Peak SAR  : 1.029 W/kg
Zoom Scan Peak SAR  : 1.491 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 01:53:44 PM
End Time : 05-Feb-2010 02:08:26 PM
Scanning Time : 882 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 1.200 W/kg
Power Drift-Finish: 1.181 W/kg
Power Drift (%) : -1.583

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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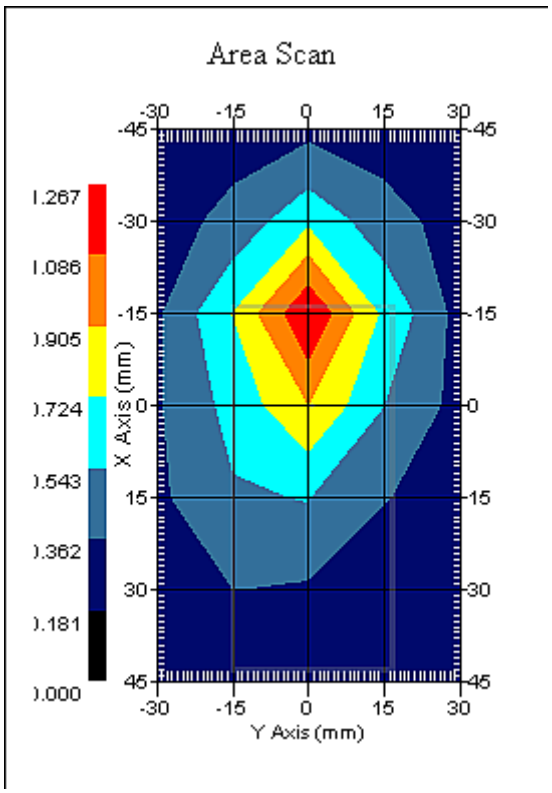
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Feb-2010
Set-up Time : 7:06:41 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Bottom Installed in Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.931 W/kg
10 gram SAR value : 0.632 W/kg
Area Scan Peak SAR : 1.267 W/kg
Zoom Scan Peak SAR : 1.381 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 01:34:20 PM
End Time : 05-Feb-2010 01:49:24 PM
Scanning Time : 904 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 1.211 W/kg
Power Drift-Finish: 1.233 W/kg
Power Drift (%) : 1.818

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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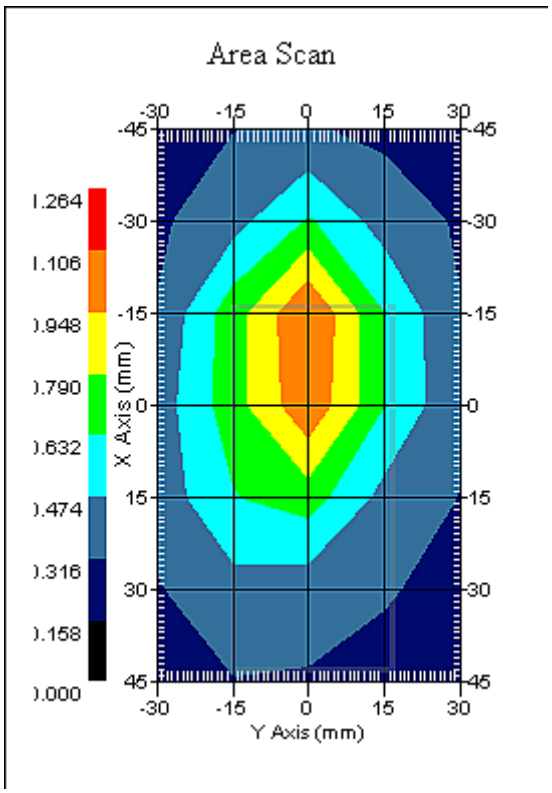
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Feb-2010
Set-up Time : 7:06:41 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Bottom Installed in Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 1.168 W/kg
10 gram SAR value : 0.775 W/kg
Area Scan Peak SAR : 1.108 W/kg
Zoom Scan Peak SAR : 1.741 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 04:59:21 PM
End Time : 05-Feb-2010 05:14:11 PM
Scanning Time : 890 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.657 W/kg
Power Drift-Finish: 0.660 W/kg
Power Drift (%) : 0.543

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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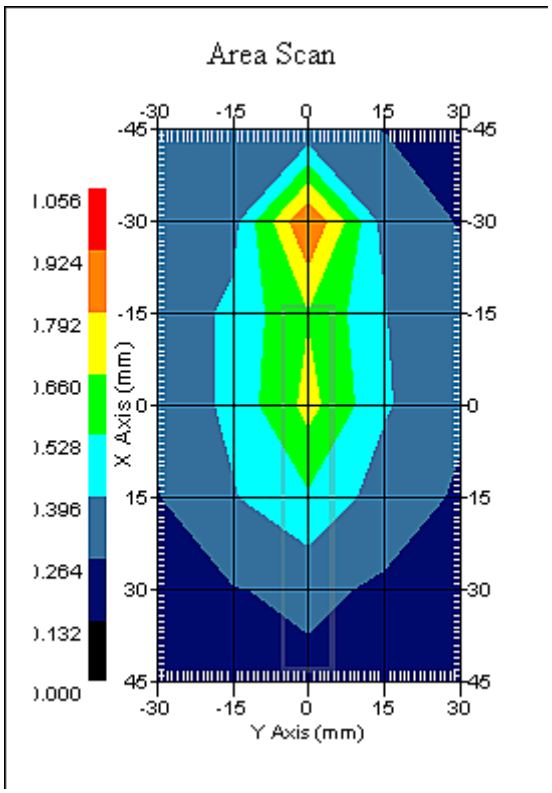
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Feb-2010
Set-up Time : 7:06:41 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation : 5 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 0.608 W/kg
10 gram SAR value : 0.480 W/kg
Area Scan Peak SAR : 0.926 W/kg
Zoom Scan Peak SAR : 0.900 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 04:44:04 PM
End Time : 05-Feb-2010 04:58:45 PM
Scanning Time : 881 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.641 W/kg
Power Drift-Finish: 0.640 W/kg
Power Drift (%) : -0.150

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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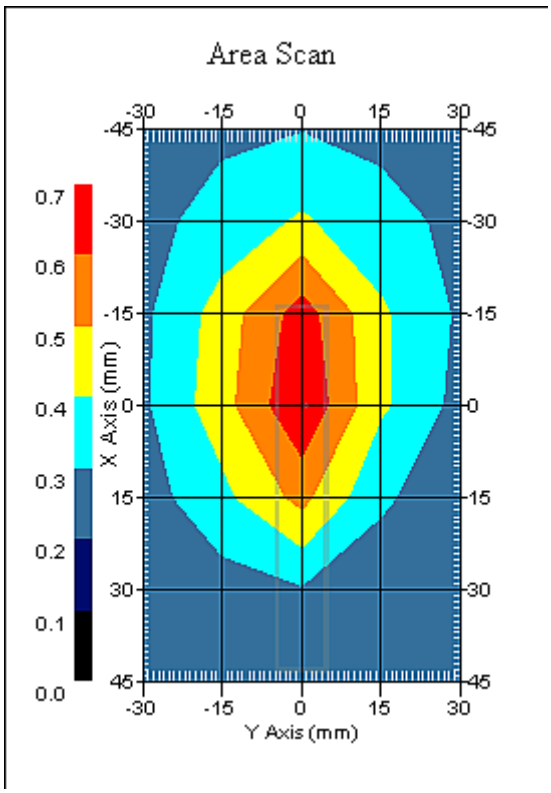
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Feb-2010
Set-up Time : 7:06:41 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.652 W/kg
10 gram SAR value : 0.473 W/kg
Area Scan Peak SAR : 0.697 W/kg
Zoom Scan Peak SAR : 0.890 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 04:28:33 PM
End Time : 05-Feb-2010 04:43:21 PM
Scanning Time : 888 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.626 W/kg
Power Drift-Finish: 0.595 W/kg
Power Drift (%) : -4.953

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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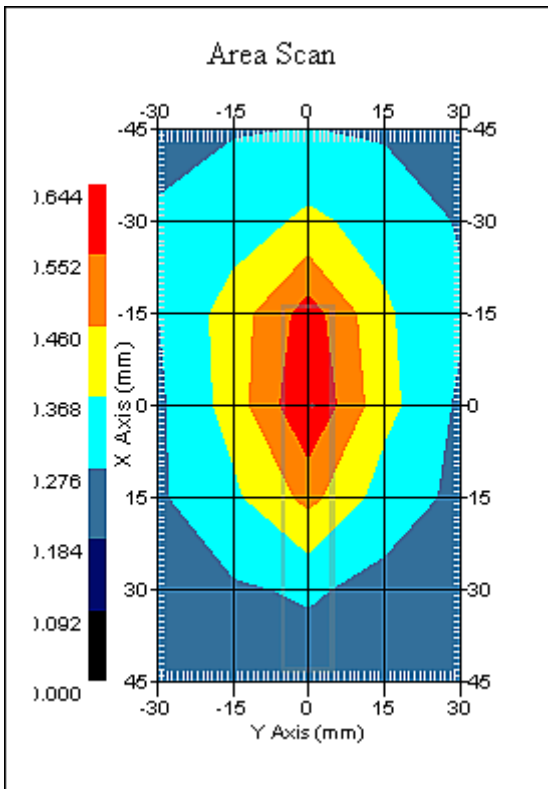
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Feb-2010
Set-up Time       : 7:06:41 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation        : 5 mm
Channel           : High
```

Tail End



Connector End

```
1 gram SAR value    : 0.591 W/kg
10 gram SAR value   : 0.439 W/kg
Area Scan Peak SAR  : 0.641 W/kg
Zoom Scan Peak SAR  : 0.840 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 03:35:31 PM
End Time : 05-Feb-2010 03:50:15 PM
Scanning Time : 884 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.703 W/kg
Power Drift-Finish: 0.687 W/kg
Power Drift (%) : -2.305

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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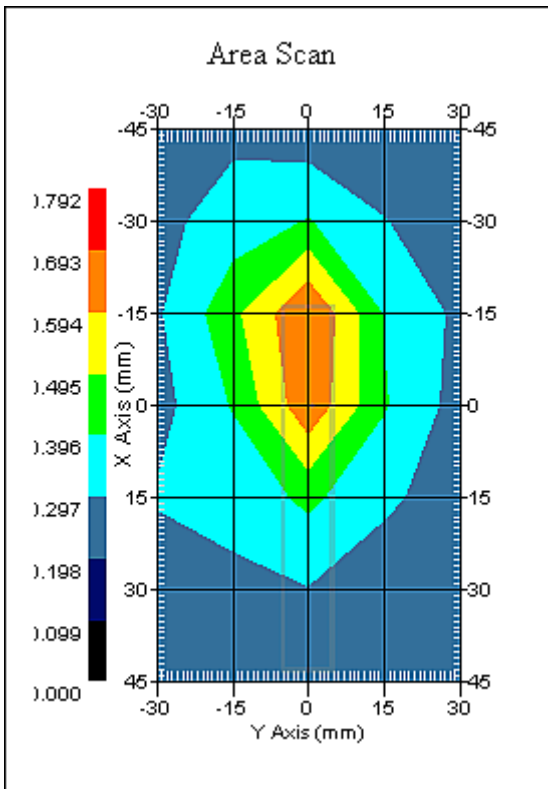
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Feb-2010
Set-up Time : 7:06:41 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 0.663 W/kg
10 gram SAR value : 0.465 W/kg
Area Scan Peak SAR : 0.695 W/kg
Zoom Scan Peak SAR : 1.000 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 03:51:28 PM
End Time : 05-Feb-2010 04:06:16 PM
Scanning Time : 888 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.688 W/kg
Power Drift-Finish: 0.690 W/kg
Power Drift (%) : 0.205

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

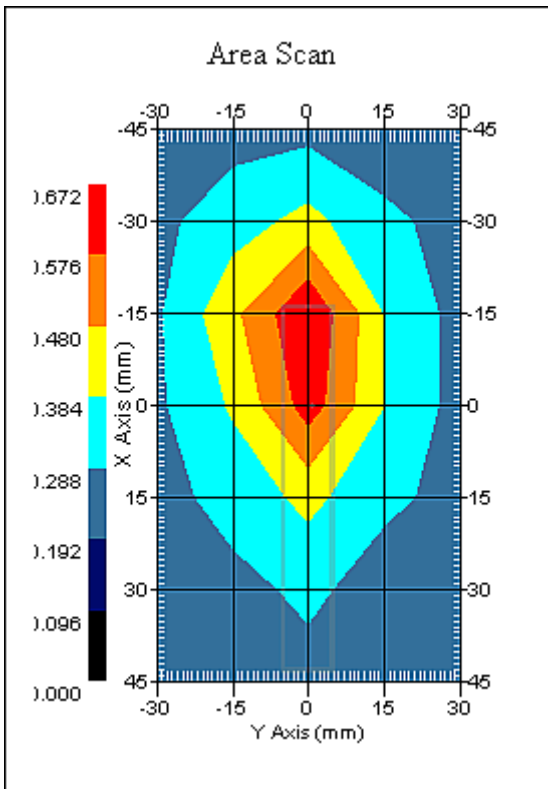
Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.2
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

This report shall not be reproduced except in full without the written approval of RF Exposure Lab, LLC.

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Feb-2010
Set-up Time : 7:06:41 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.671 W/kg
10 gram SAR value : 0.470 W/kg
Area Scan Peak SAR : 0.671 W/kg
Zoom Scan Peak SAR : 0.960 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Feb-2010
Starting Time : 05-Feb-2010 04:07:01 PM
End Time : 05-Feb-2010 04:21:35 PM
Scanning Time : 874 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.709 W/kg
Power Drift-Finish: 0.686 W/kg
Power Drift (%) : -3.251

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Feb-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.56 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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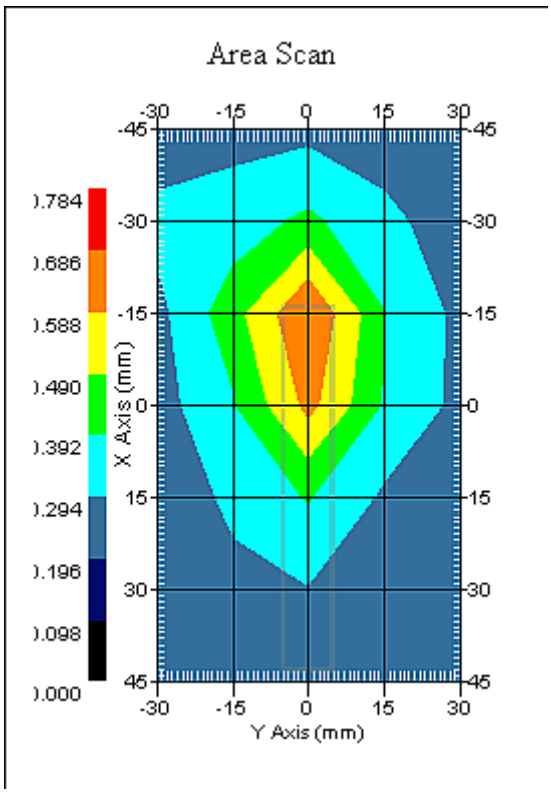
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Feb-2010
Set-up Time : 7:06:41 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 0.640 W/kg
10 gram SAR value : 0.455 W/kg
Area Scan Peak SAR : 0.687 W/kg
Zoom Scan Peak SAR : 0.960 W/kg

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SAR Test Report

```
By Operator       : Jay
Measurement Date  : 05-Feb-2010
Starting Time     : 05-Feb-2010  05:18:01 PM
End Time          : 05-Feb-2010  05:34:02 PM
Scanning Time     : 961 secs

Product Data
Device Name       : Cmotech
Serial No.        : 2
Mode              : Rev. 0
Model             : CDU-685A
Frequency         : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time        : 0 min(s)
Length            : 12 mm
Width             : 33 mm
Depth             : 72 mm
Antenna Type      : Internal
Orientation       : Tip End on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.266 W/kg
Power Drift-Finish: 0.266 W/kg
Power Drift (%)   : 0.121

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

Tissue Data
Type              : BODY
Serial No.        : 1730
Frequency         : 1730.00 MHz
Last Calib. Date  : 05-Feb-2010
Temperature       : 20.00 °C
Ambient Temp.     : 23.00 °C
Humidity          : 30.00 RH%
Epsilon           : 53.56 F/m
Sigma             : 1.51 S/m
Density           : 1000.00 kg/cu. m

Probe Data
Name              : RFEL 217
Model             : E020
Type              : E-Field Triangle
Serial No.        : 217
Last Calib. Date  : 21-Oct-2009
Frequency         : 1735.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.2
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)²
Compression Point: 95.00 mV
Offset            : 1.56 mm
```


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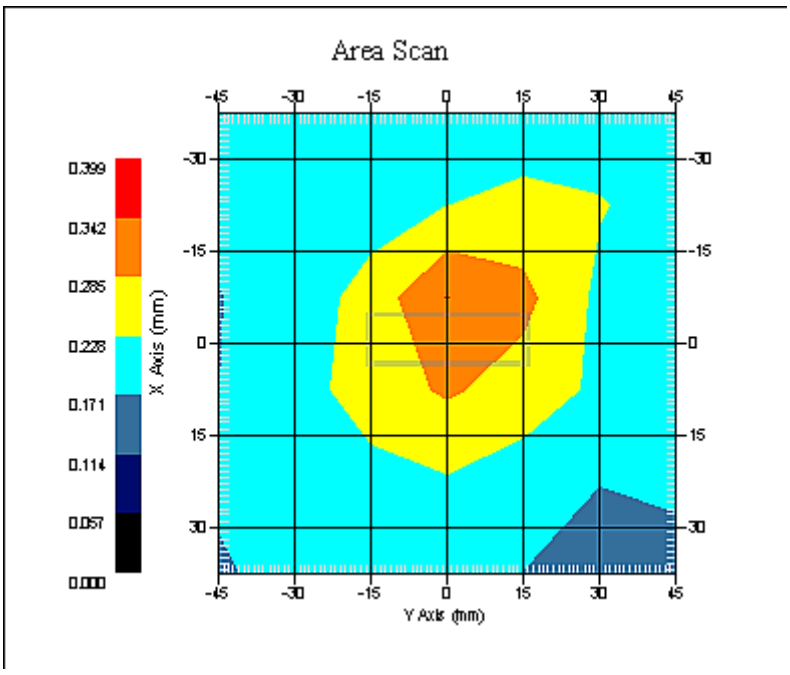
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Feb-2010
Set-up Time       : 7:06:41 AM
Area Scan         : 6x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Tip End on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.297 W/kg
10 gram SAR value   : 0.234 W/kg
Area Scan Peak SAR  : 0.343 W/kg
Zoom Scan Peak SAR  : 0.429 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 09:52:57 AM
End Time : 19-May-2010 10:13:14 AM
Scanning Time : 1217 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.093 W/kg
Power Drift-Finish: 1.140 W/kg
Power Drift (%) : 4.261

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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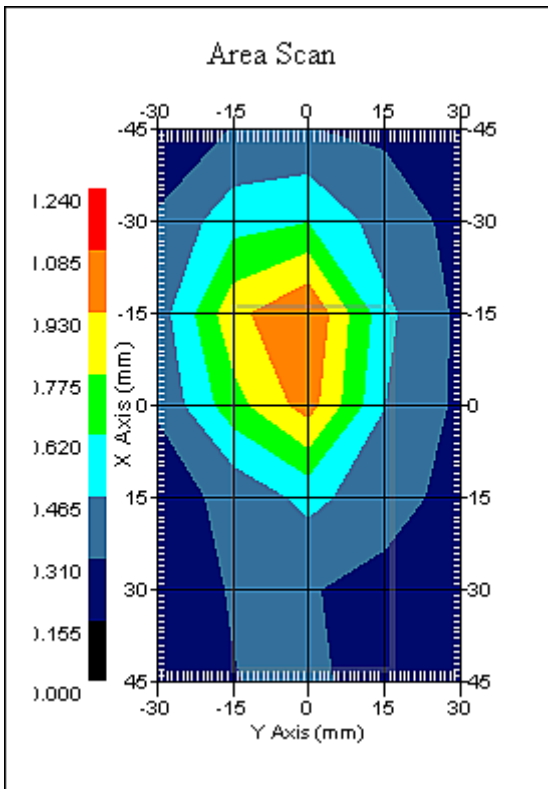
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 1.089 W/kg
10 gram SAR value   : 0.708 W/kg
Area Scan Peak SAR  : 1.086 W/kg
Zoom Scan Peak SAR  : 1.751 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 10:15:58 AM
End Time : 19-May-2010 10:35:52 AM
Scanning Time : 1194 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.154 W/kg
Power Drift-Finish: 1.141 W/kg
Power Drift (%) : -1.182

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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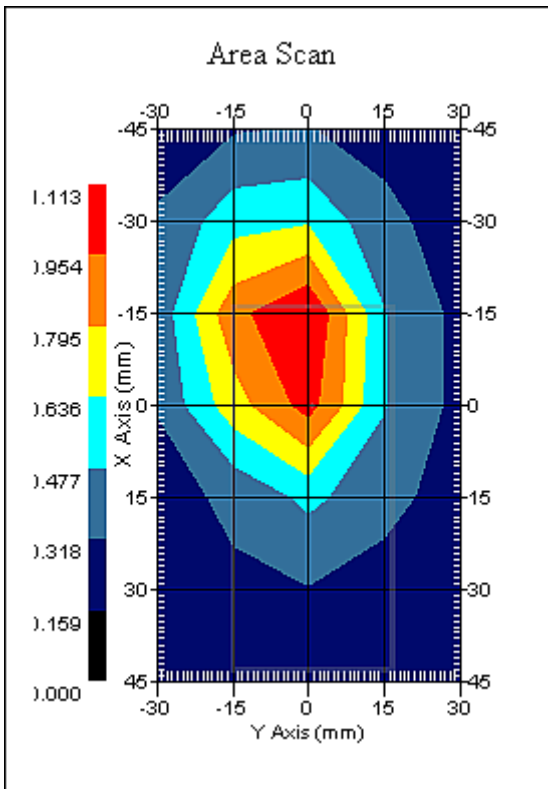
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 19-May-2010
Set-up Time : 8:04:43 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Top on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 1.094 W/kg
10 gram SAR value : 0.707 W/kg
Area Scan Peak SAR : 1.111 W/kg
Zoom Scan Peak SAR : 1.721 W/kg

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SAR Test Report

```
By Operator       : Jay
Measurement Date  : 19-May-2010
Starting Time     : 19-May-2010  10:18:08 AM
End Time          : 19-May-2010  10:57:56 AM
Scanning Time     : 1188 secs

Product Data
Device Name       : Cmotech
Serial No.        : 2
Mode              : Rev. 0
Model             : CDU-685A
Frequency         : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time        : 0 min(s)
Length            : 72 mm
Width             : 33 mm
Depth             : 12 mm
Antenna Type      : Internal
Orientation       : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.181 W/kg
Power Drift-Finish: 1.129 W/kg
Power Drift (%)   : -4.455

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

Tissue Data
Type              : BODY
Serial No.        : 1730
Frequency         : 1730.00 MHz
Last Calib. Date  : 19-May-2010
Temperature       : 20.00 °C
Ambient Temp.     : 23.00 °C
Humidity          : 30.00 RH%
Epsilon           : 53.32 F/m
Sigma             : 1.52 S/m
Density           : 1000.00 kg/cu. m

Probe Data
Name              : RFEL 217
Model             : E020
Type              : E-Field Triangle
Serial No.        : 217
Last Calib. Date  : 21-Oct-2009
Frequency         : 1735.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.2
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)²
Compression Point: 95.00 mV
Offset            : 1.56 mm
```


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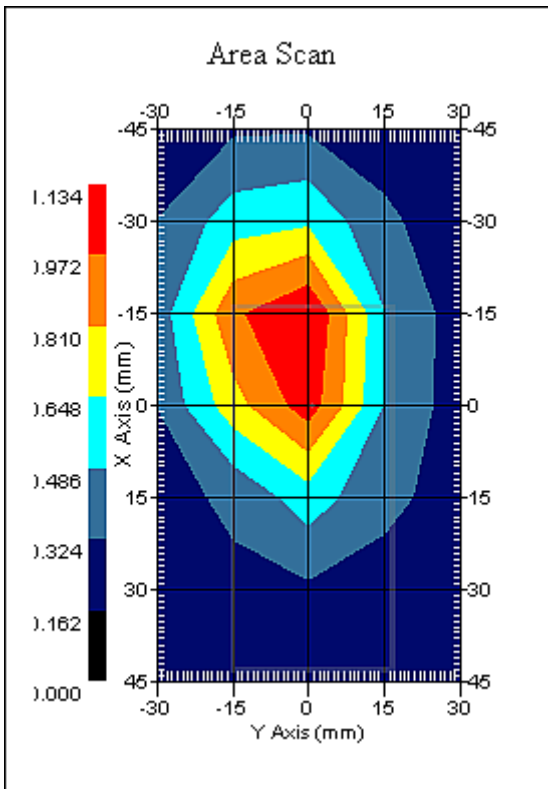
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 1.121 W/kg
10 gram SAR value   : 0.710 W/kg
Area Scan Peak SAR  : 1.134 W/kg
Zoom Scan Peak SAR  : 1.791 W/kg
```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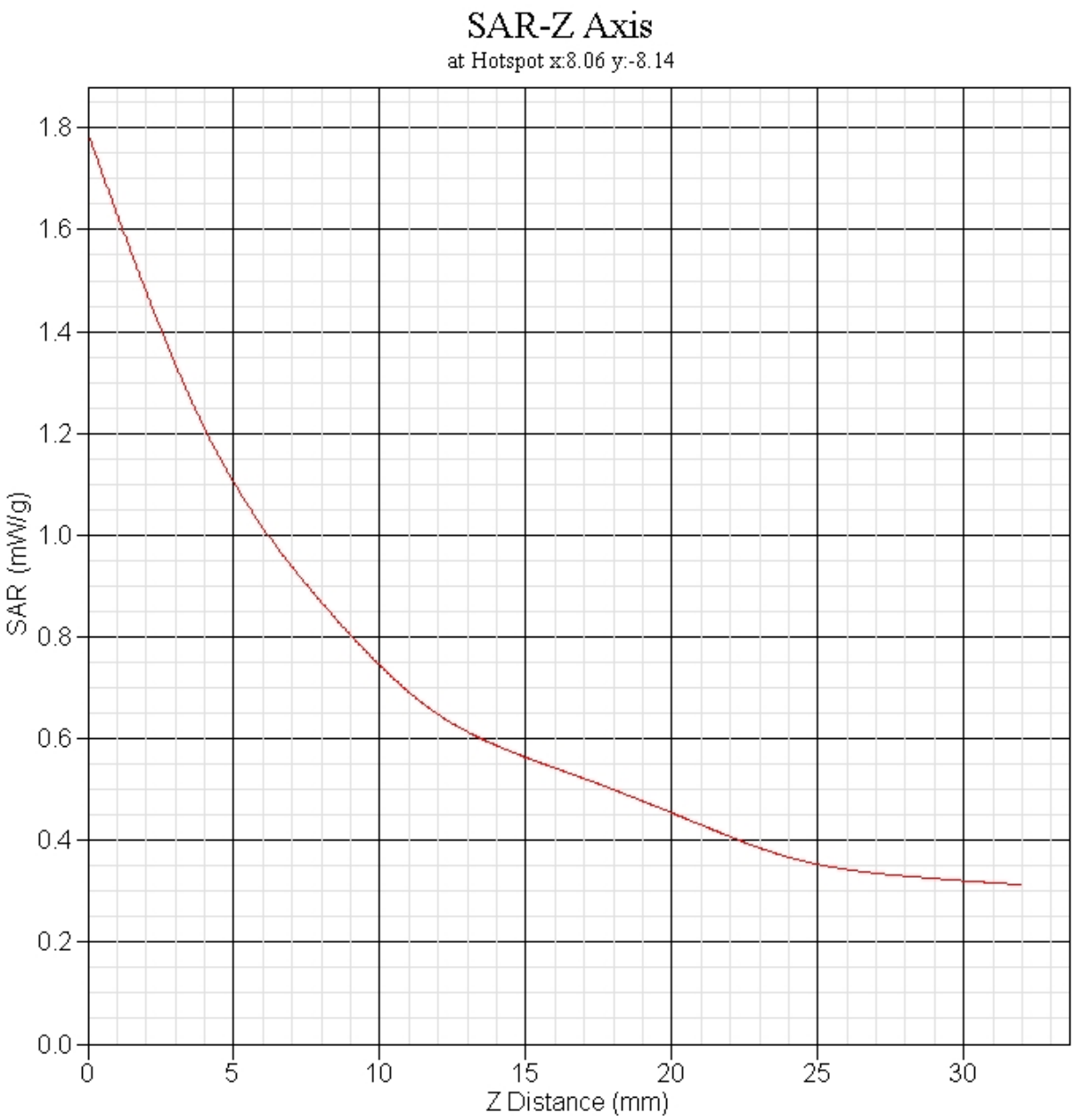

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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 11:46:08 AM
End Time : 19-May-2010 12:06:01 PM
Scanning Time : 1193 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 1.045 W/kg
Power Drift-Finish: 1.093 W/kg
Power Drift (%) : 4.396

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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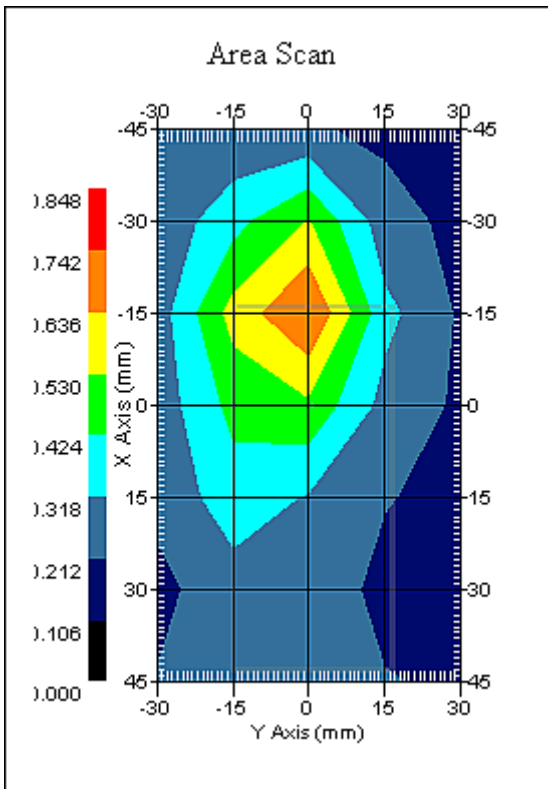
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Bottom Installed in Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 1.055 W/kg
10 gram SAR value   : 0.538 W/kg
Area Scan Peak SAR  : 0.743 W/kg
Zoom Scan Peak SAR  : 1.851 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 11:23:02 AM
End Time : 19-May-2010 11:42:47 AM
Scanning Time : 1185 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 1.124 W/kg
Power Drift-Finish: 1.105 W/kg
Power Drift (%) : -1.691

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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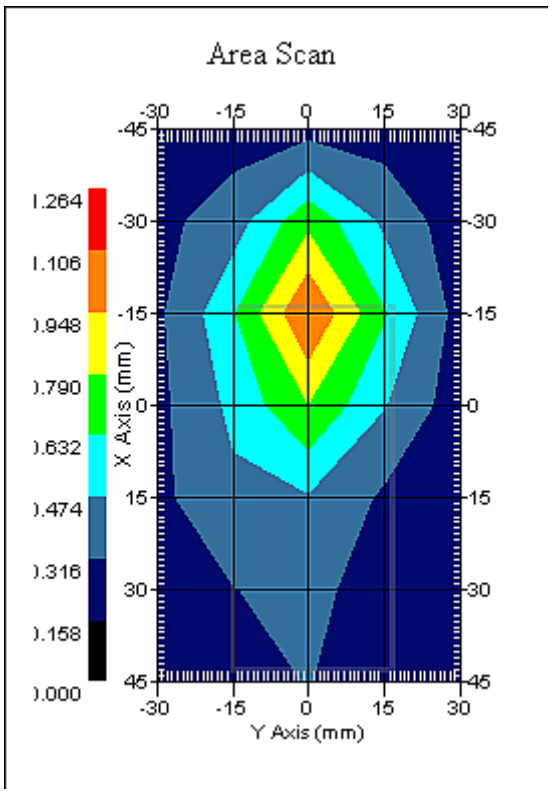
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Bottom Installed in Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 1.017 W/kg
10 gram SAR value   : 0.651 W/kg
Area Scan Peak SAR  : 1.108 W/kg
Zoom Scan Peak SAR  : 1.601 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 11:00:50 AM
End Time : 19-May-2010 11:20:34 AM
Scanning Time : 1184 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 1.166 W/kg
Power Drift-Finish: 1.160 W/kg
Power Drift (%) : -0.511

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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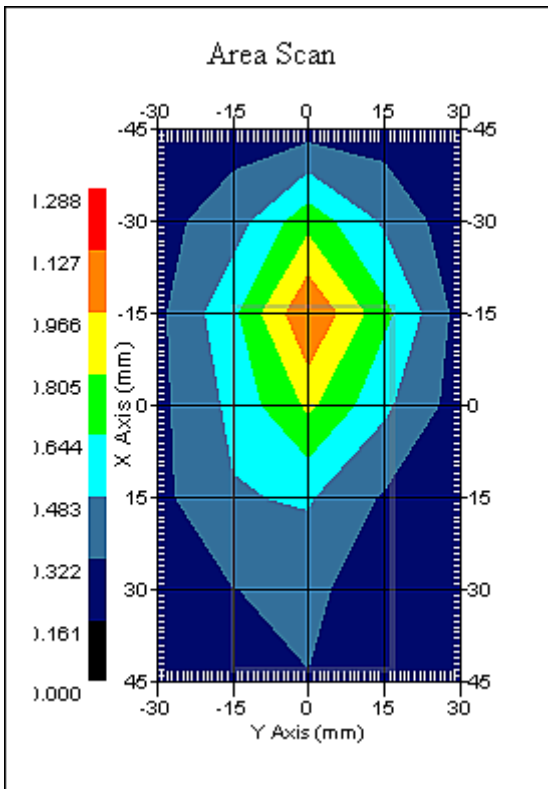
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 19-May-2010
Set-up Time : 8:04:43 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Bottom Installed in Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 1.058 W/kg
10 gram SAR value : 0.676 W/kg
Area Scan Peak SAR : 1.130 W/kg
Zoom Scan Peak SAR : 1.661 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 02:32:15 PM
End Time : 19-May-2010 02:51:56 PM
Scanning Time : 1181 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.871 W/kg
Power Drift-Finish: 0.840 W/kg
Power Drift (%) : -3.583

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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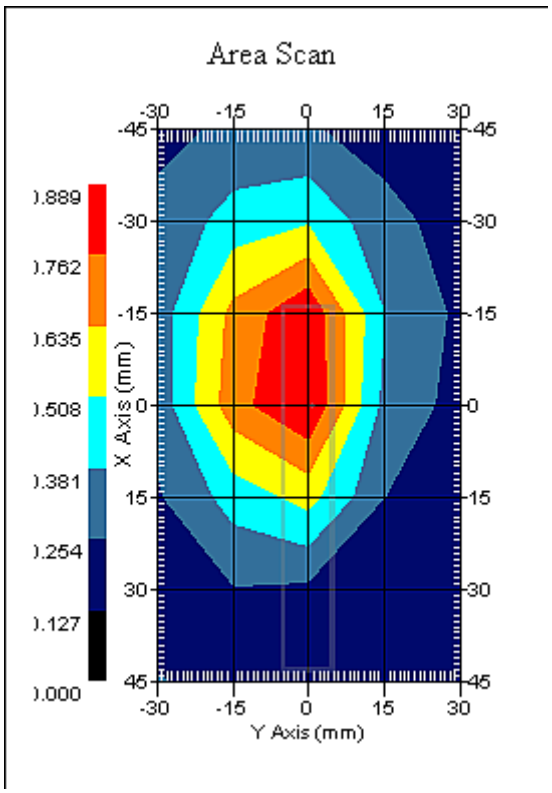
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 19-May-2010
Set-up Time : 8:04:43 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.865 W/kg
10 gram SAR value : 0.572 W/kg
Area Scan Peak SAR : 0.887 W/kg
Zoom Scan Peak SAR : 1.341 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 02:06:44 PM
End Time : 19-May-2010 02:26:27 PM
Scanning Time : 1183 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.834 W/kg
Power Drift-Finish: 0.828 W/kg
Power Drift (%) : -0.675

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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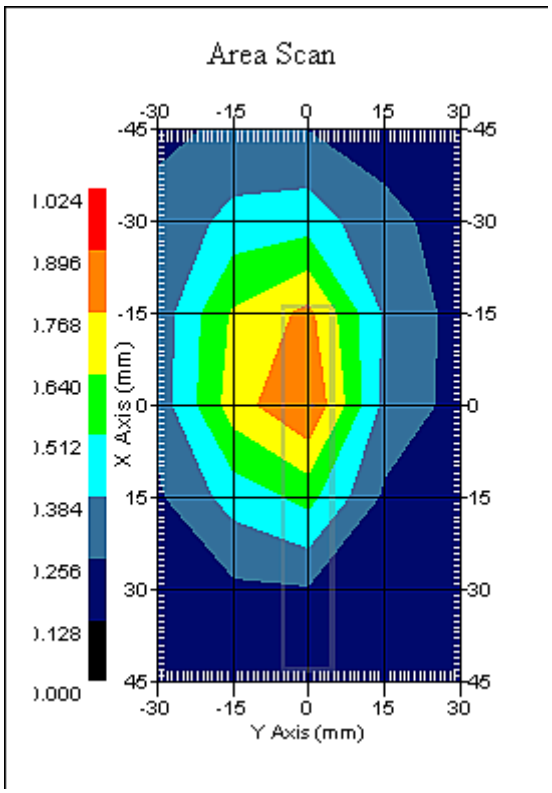
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.865 W/kg
10 gram SAR value   : 0.568 W/kg
Area Scan Peak SAR  : 0.898 W/kg
Zoom Scan Peak SAR  : 1.351 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 02:57:45 PM
End Time : 19-May-2010 03:17:28 PM
Scanning Time : 1183 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.895 W/kg
Power Drift-Finish: 0.876 W/kg
Power Drift (%) : -2.186

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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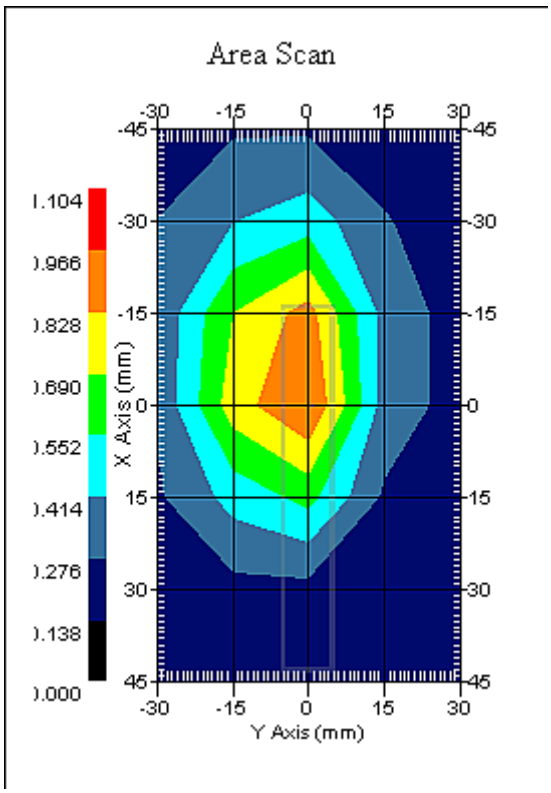
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.948 W/kg
10 gram SAR value   : 0.604 W/kg
Area Scan Peak SAR  : 0.967 W/kg
Zoom Scan Peak SAR  : 1.531 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 01:44:11 PM
End Time : 19-May-2010 02:03:51 PM
Scanning Time : 1180 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.987 W/kg
Power Drift-Finish: 0.985 W/kg
Power Drift (%) : -0.205

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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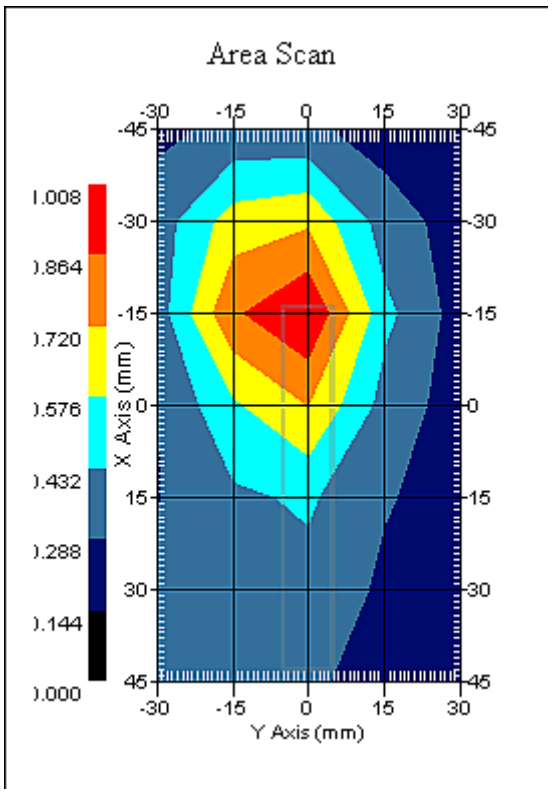
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.984 W/kg
10 gram SAR value   : 0.623 W/kg
Area Scan Peak SAR  : 1.007 W/kg
Zoom Scan Peak SAR  : 1.541 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 01:18:48 PM
End Time : 19-May-2010 01:38:34 PM
Scanning Time : 1186 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.029 W/kg
Power Drift-Finish: 1.036 W/kg
Power Drift (%) : 0.636

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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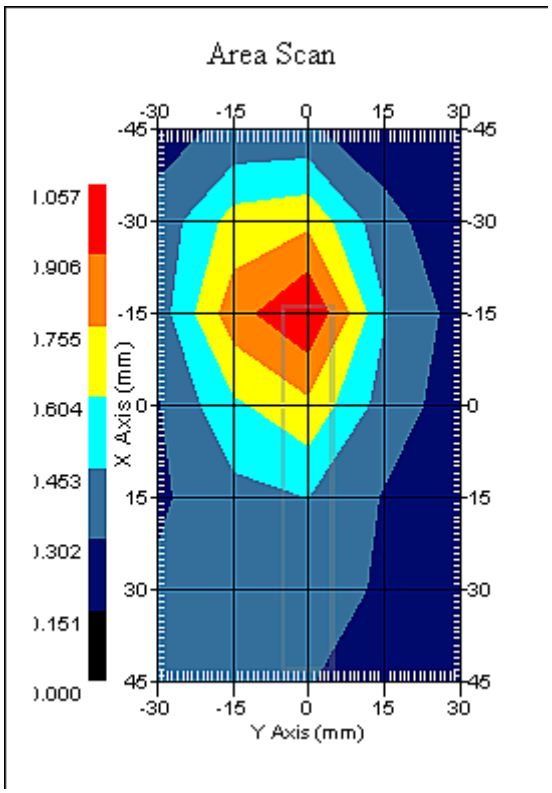
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 19-May-2010
Set-up Time : 8:04:43 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 1.007 W/kg
10 gram SAR value : 0.635 W/kg
Area Scan Peak SAR : 1.057 W/kg
Zoom Scan Peak SAR : 1.611 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 12:52:17 PM
End Time : 19-May-2010 01:12:00 PM
Scanning Time : 1183 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.085 W/kg
Power Drift-Finish: 1.073 W/kg
Power Drift (%) : -1.127

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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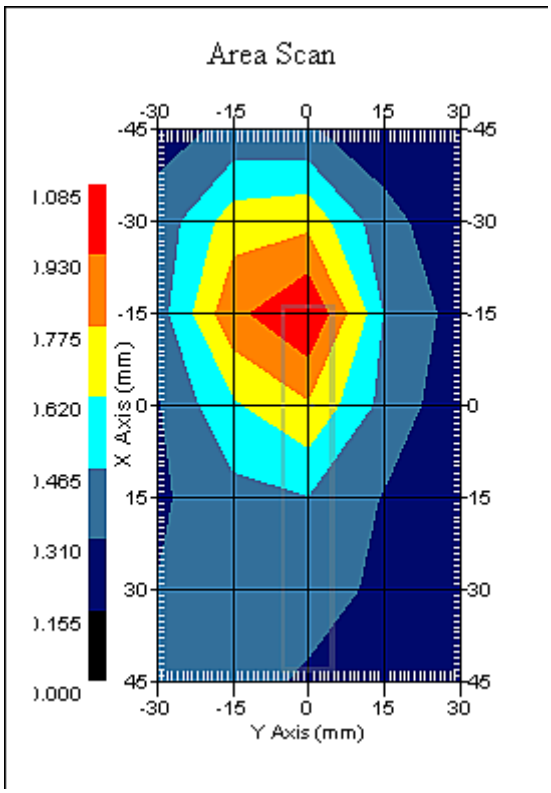
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 1.033 W/kg
10 gram SAR value   : 0.654 W/kg
Area Scan Peak SAR  : 1.084 W/kg
Zoom Scan Peak SAR  : 1.611 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 04:16:02 PM
End Time : 19-May-2010 04:35:40 PM
Scanning Time : 1178 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 12 mm
Width : 33 mm
Depth : 72 mm
Antenna Type : Internal
Orientation : Tip End on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.358 W/kg
Power Drift-Finish: 0.363 W/kg
Power Drift (%) : 1.586

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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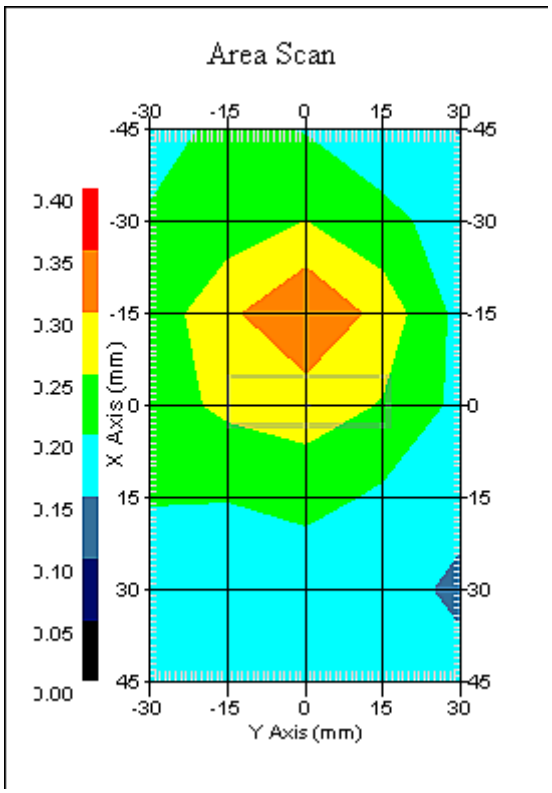
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Tip End on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.331 W/kg
10 gram SAR value   : 0.242 W/kg
Area Scan Peak SAR  : 0.351 W/kg
Zoom Scan Peak SAR  : 0.480 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 03:50:34 PM
End Time : 19-May-2010 04:10:07 PM
Scanning Time : 1173 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 12 mm
Width : 33 mm
Depth : 72 mm
Antenna Type : Internal
Orientation : Tip End on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.265 W/kg
Power Drift-Finish: 0.265 W/kg
Power Drift (%) : 0.744

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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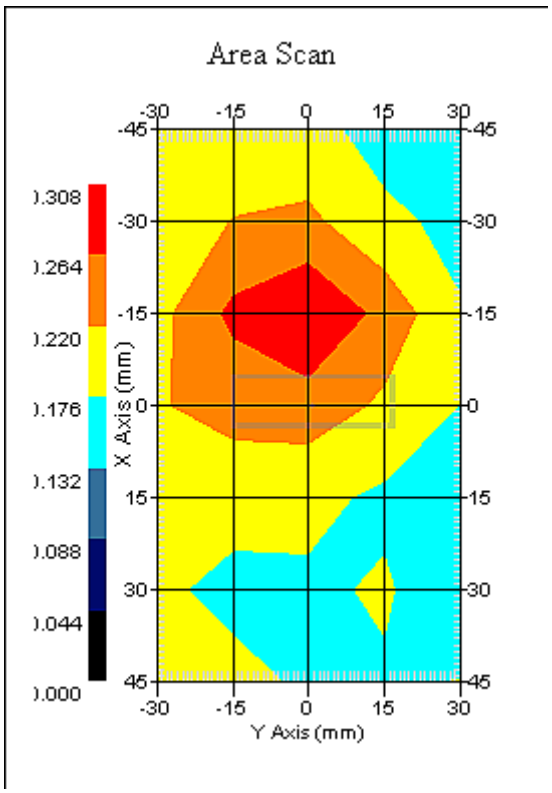
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Tip End on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.293 W/kg
10 gram SAR value   : 0.221 W/kg
Area Scan Peak SAR  : 0.308 W/kg
Zoom Scan Peak SAR  : 0.440 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 03:25:08 PM
End Time : 19-May-2010 03:44:57 PM
Scanning Time : 1189 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time : 0 min(s)
Length : 12 mm
Width : 33 mm
Depth : 72 mm
Antenna Type : Internal
Orientation : Tip End on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.388 W/kg
Power Drift-Finish: 0.383 W/kg
Power Drift (%) : -1.288

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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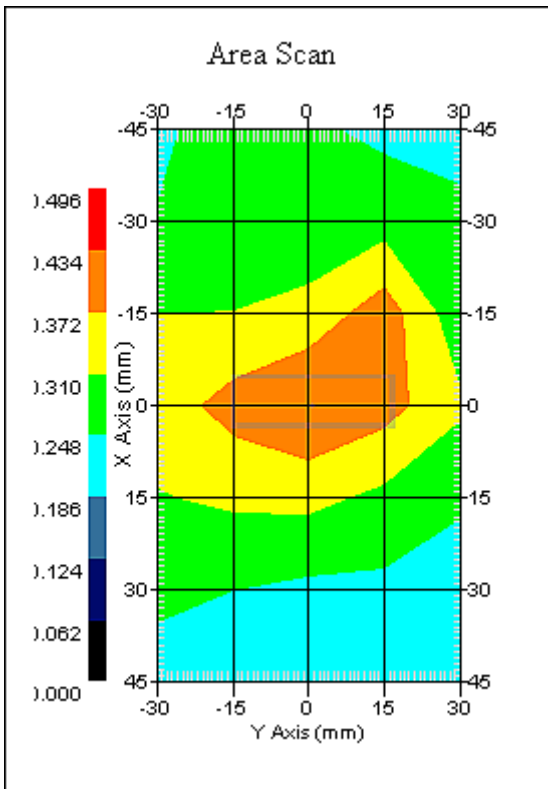
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Tip End on USB Cable With Toshiba Portege A600 Laptop
Separation        : 5 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.467 W/kg
10 gram SAR value   : 0.402 W/kg
Area Scan Peak SAR  : 0.435 W/kg
Zoom Scan Peak SAR  : 0.610 W/kg
```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SAR Test Report

```
By Operator       : Jay
Measurement Date  : 29-Jun-2010
Starting Time     : 29-Jun-2010  04:28:05 PM
End Time          : 29-Jun-2010  04:43:04 PM
Scanning Time     : 899 secs

Product Data
Device Name       : Cmotech
Serial No.        : 2
Mode              : Rev. A
Model             : CDU-685A
Frequency         : 1700.00 MHz
Max. Transmit Pwr : 0.063 W
Drift Time        : 0 min(s)
Length            : 72 mm
Width             : 33 mm
Depth             : 12 mm
Antenna Type      : Internal
Orientation       : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 1.041 W/kg
Power Drift-Finish: 1.039 W/kg
Power Drift (%)   : 0.190

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

Tissue Data
Type              : BODY
Serial No.        : 1730
Frequency         : 1730.00 MHz
Last Calib. Date  : 29-Jun-2010
Temperature       : 20.00 °C
Ambient Temp.     : 23.00 °C
Humidity          : 40.00 RH%
Epsilon           : 53.32 F/m
Sigma             : 1.52 S/m
Density           : 1000.00 kg/cu. m

Probe Data
Name              : RFEL 217
Model             : E020
Type              : E-Field Triangle
Serial No.        : 217
Last Calib. Date  : 21-Oct-2009
Frequency         : 1735.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.2
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset            : 1.56 mm
```


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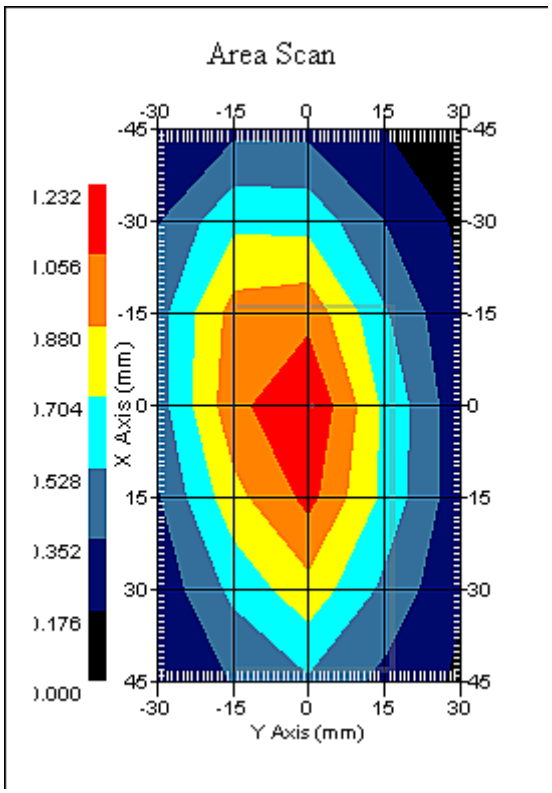
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 29-Jun-2010
Set-up Time : 1:19:51 PM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Top on USB Cable With Toshiba Portege A600 Laptop
Separation : 5 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 1.119 W/kg
10 gram SAR value : 0.832 W/kg
Area Scan Peak SAR : 1.231 W/kg
Zoom Scan Peak SAR : 1.601 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 11:16:56 AM
End Time : 05-Apr-2010 11:37:20 AM
Scanning Time : 1224 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.468 W/kg
Power Drift-Finish: 0.473 W/kg
Power Drift (%) : 1.188

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.40 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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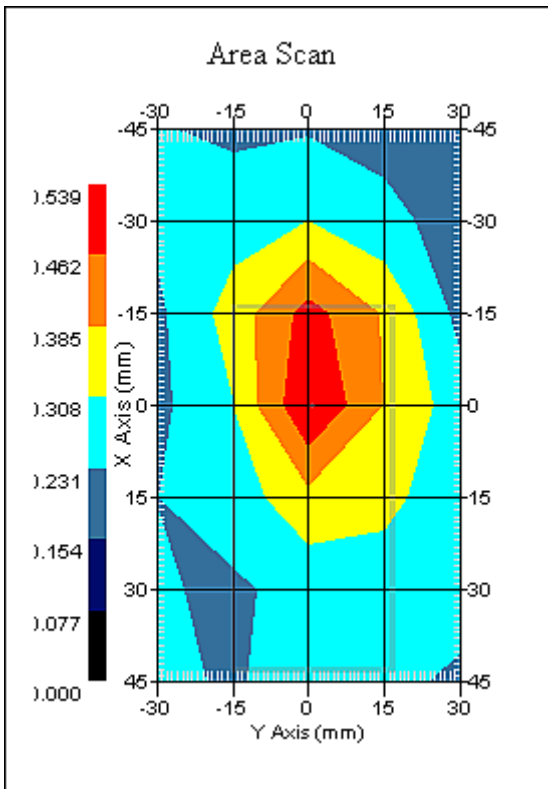
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Apr-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 15 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.512 W/kg
10 gram SAR value   : 0.371 W/kg
Area Scan Peak SAR  : 0.537 W/kg
Zoom Scan Peak SAR  : 0.740 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 11:35:23 AM
End Time : 05-Apr-2010 11:55:47 AM
Scanning Time : 1224 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed in Toshiba Portege A600 Laptop
Power Drift-Start : 0.411 W/kg
Power Drift-Finish: 0.417 W/kg
Power Drift (%) : 1.484

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.40 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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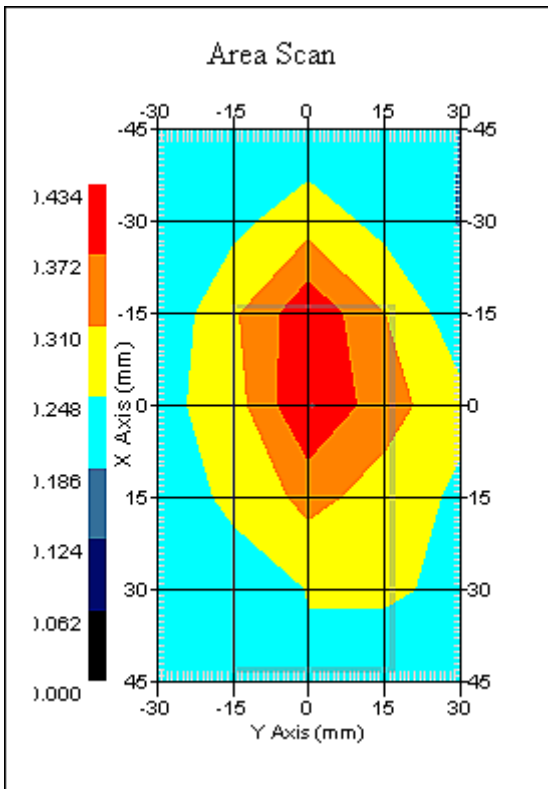
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Apr-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Bottom Installed in Toshiba Portege A600 Laptop
Separation        : 15 mm
Channel           : High
```

Tail End



Connector End

```
1 gram SAR value    : 0.440 W/kg
10 gram SAR value   : 0.328 W/kg
Area Scan Peak SAR : 0.434 W/kg
Zoom Scan Peak SAR : 0.630 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 12:12:46 PM
End Time : 05-Apr-2010 12:33:08 PM
Scanning Time : 1222 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Right Side Installed in Toshiba Satellite 2400 Laptop
Power Drift-Start : 0.379 W/kg
Power Drift-Finish: 0.364 W/kg
Power Drift (%) : -3.974

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.40 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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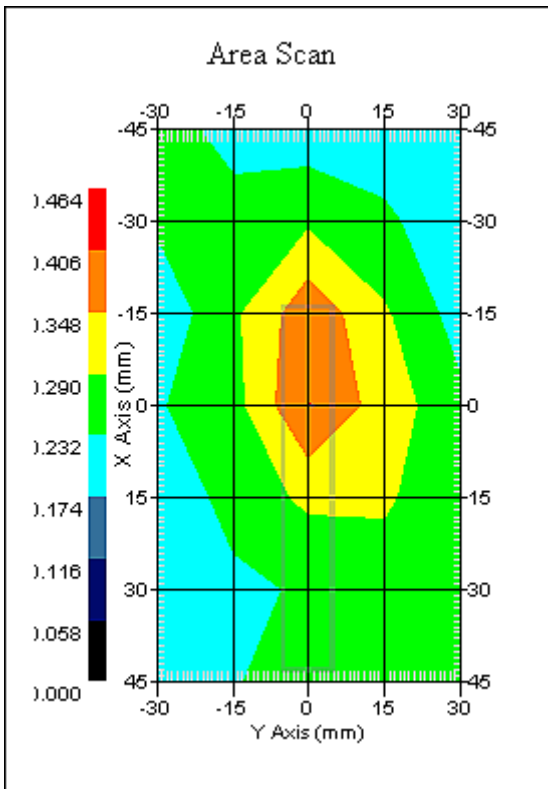
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Apr-2010
Set-up Time : 8:04:43 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Right Side Installed in Toshiba Satellite 2400 Laptop
Separation : 10 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.365 W/kg
10 gram SAR value : 0.290 W/kg
Area Scan Peak SAR : 0.408 W/kg
Zoom Scan Peak SAR : 0.480 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 05-Apr-2010
Starting Time : 05-Apr-2010 12:51:07 PM
End Time : 05-Apr-2010 01:11:34 PM
Scanning Time : 1227 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 12 mm
Depth : 33 mm
Antenna Type : Internal
Orientation : Left Side on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.416 W/kg
Power Drift-Finish: 0.420 W/kg
Power Drift (%) : 1.120

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 05-Apr-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.40 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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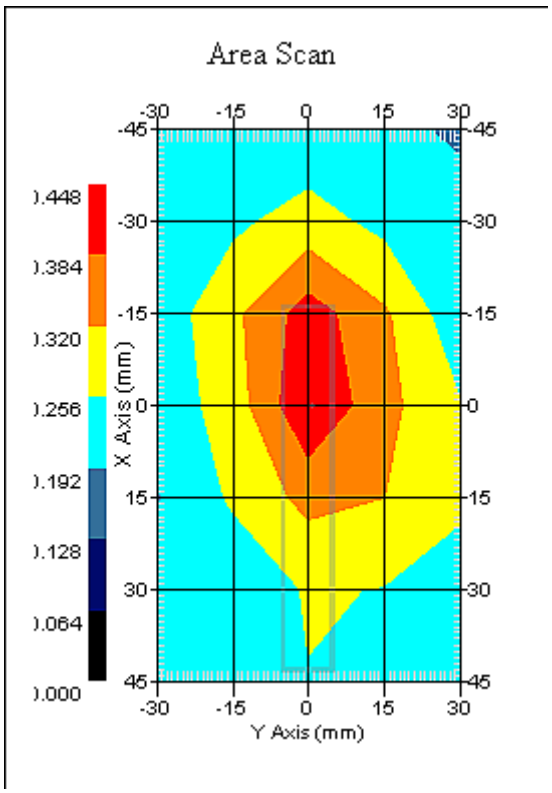
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 05-Apr-2010
Set-up Time : 8:04:43 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Left Side on USB Cable With Toshiba Portege A600 Laptop
Separation : 7 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.454 W/kg
10 gram SAR value : 0.337 W/kg
Area Scan Peak SAR : 0.445 W/kg
Zoom Scan Peak SAR : 0.670 W/kg

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SAR Test Report

```
By Operator       : Jay
Measurement Date  : 05-Apr-2010
Starting Time     : 05-Apr-2010  01:31:11 PM
End Time          : 05-Apr-2010  01:54:31 PM
Scanning Time     : 1400 secs

Product Data
Device Name       : Cmotech
Serial No.        : 2
Mode              : Rev. 0
Model             : CDU-685A
Frequency         : 1700.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time        : 0 min(s)
Length            : 12 mm
Width             : 33 mm
Depth             : 72 mm
Antenna Type      : Internal
Orientation       : Tip End on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.167 W/kg
Power Drift-Finish: 0.162 W/kg
Power Drift (%)   : -2.949

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

Tissue Data
Type              : BODY
Serial No.        : 1730
Frequency         : 1730.00 MHz
Last Calib. Date  : 05-Apr-2010
Temperature       : 20.00 °C
Ambient Temp.     : 23.00 °C
Humidity          : 30.00 RH%
Epsilon           : 53.40 F/m
Sigma             : 1.50 S/m
Density           : 1000.00 kg/cu. m

Probe Data
Name              : RFEL 217
Model             : E020
Type              : E-Field Triangle
Serial No.        : 217
Last Calib. Date  : 21-Oct-2009
Frequency         : 1735.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.2
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset            : 1.56 mm
```


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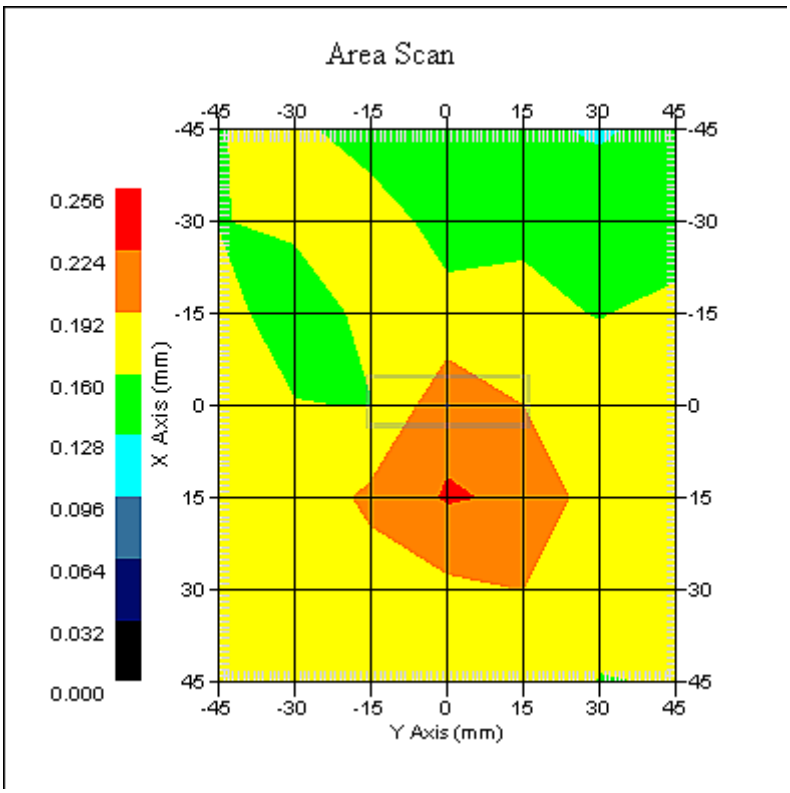
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Apr-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Tip End on USB Cable With Toshiba Portege A600 Laptop
Separation        : 7 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.183 W/kg
10 gram SAR value   : 0.170 W/kg
Area Scan Peak SAR  : 0.227 W/kg
Zoom Scan Peak SAR  : 0.220 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 04:43:40 PM
End Time : 19-May-2010 05:03:45 PM
Scanning Time : 1205 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.365 W/kg
Power Drift-Finish: 0.360 W/kg
Power Drift (%) : -1.360

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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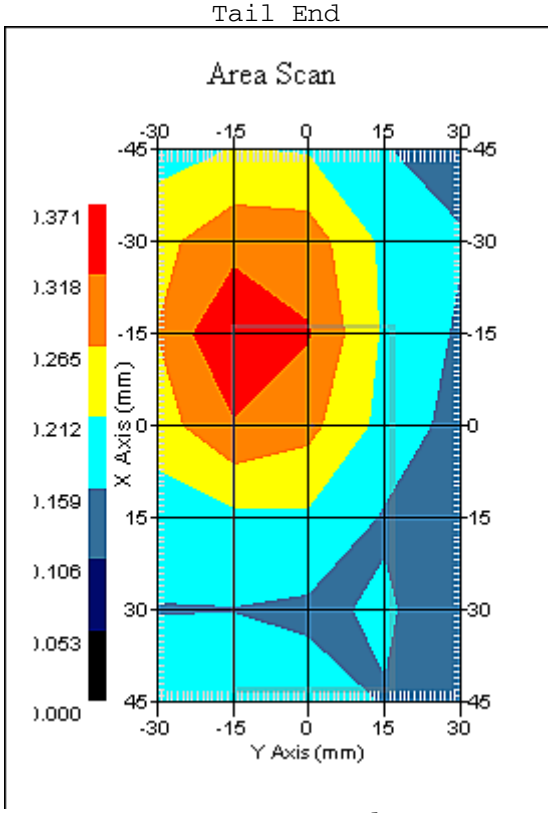
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 15 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.376 W/kg
10 gram SAR value   : 0.283 W/kg
Area Scan Peak SAR  : 0.371 W/kg
Zoom Scan Peak SAR  : 0.530 W/kg
```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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 05:09:41 PM
End Time : 19-May-2010 05:29:24 PM
Scanning Time : 1183 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.349 W/kg
Power Drift-Finish: 0.345 W/kg
Power Drift (%) : -1.223

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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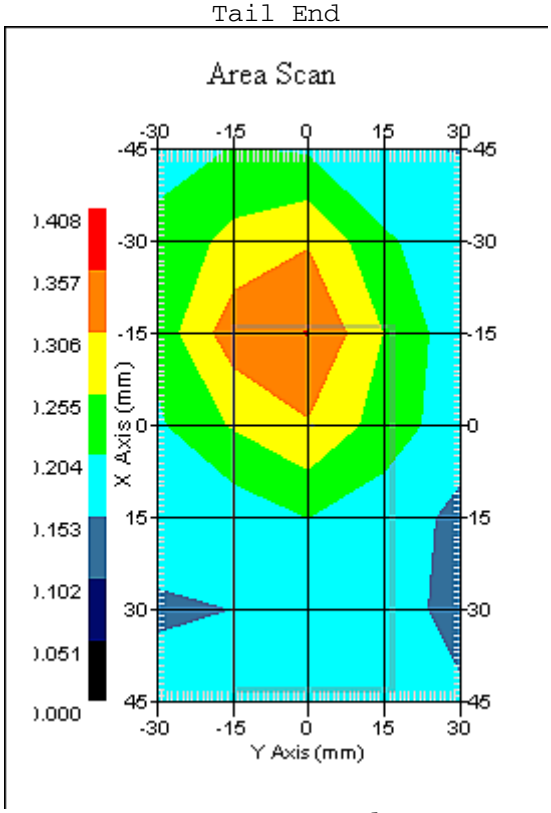
Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 19-May-2010
Set-up Time : 8:04:43 AM
Area Scan : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position : Top on USB Cable With Toshiba Portege A600 Laptop
Separation : 15 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.344 W/kg
10 gram SAR value : 0.259 W/kg
Area Scan Peak SAR : 0.359 W/kg
Zoom Scan Peak SAR : 0.510 W/kg

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SAR Test Report

By Operator : Jay
Measurement Date : 19-May-2010
Starting Time : 19-May-2010 05:34:59 PM
End Time : 19-May-2010 05:54:37 PM
Scanning Time : 1178 secs

Product Data
Device Name : Cmotech
Serial No. : 2
Mode : Rev. 0
Model : CDU-685A
Frequency : 1700.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 72 mm
Width : 33 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top on USB Cable With Toshiba Portege A600 Laptop
Power Drift-Start : 0.378 W/kg
Power Drift-Finish: 0.362 W/kg
Power Drift (%) : -3.987

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

Tissue Data
Type : BODY
Serial No. : 1730
Frequency : 1730.00 MHz
Last Calib. Date : 19-May-2010
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 30.00 RH%
Epsilon : 53.32 F/m
Sigma : 1.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 21-Oct-2009
Frequency : 1735.00 MHz
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

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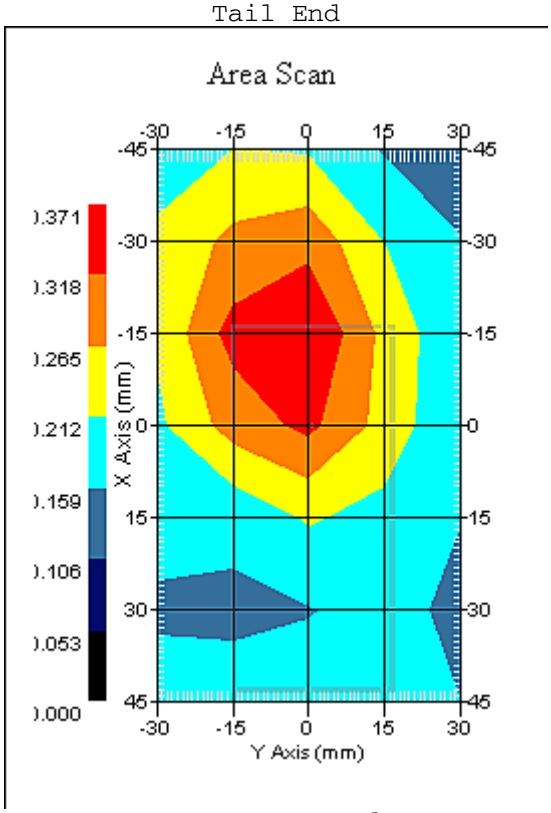
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 19-May-2010
Set-up Time       : 8:04:43 AM
Area Scan         : 7x5x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x7 : Measurement x=5mm, y=5mm, z=5mm

Other Data
DUT Position      : Top on USB Cable With Toshiba Portege A600 Laptop
Separation        : 15 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.346 W/kg
10 gram SAR value   : 0.260 W/kg
Area Scan Peak SAR  : 0.370 W/kg
Zoom Scan Peak SAR  : 0.510 W/kg
```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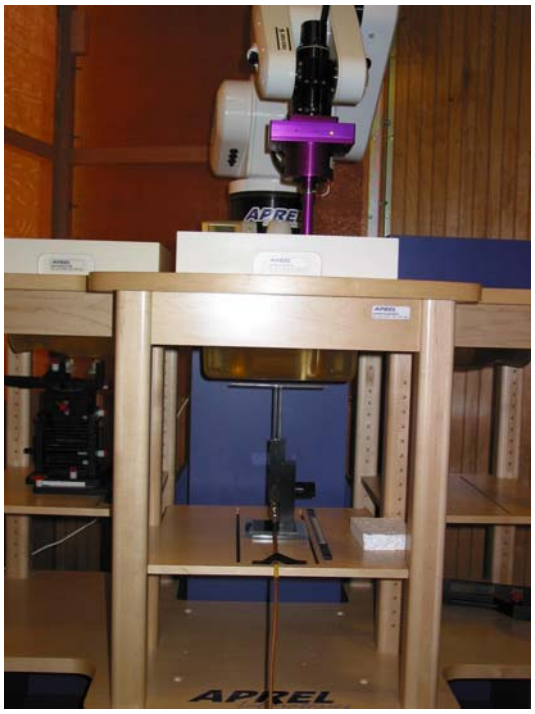
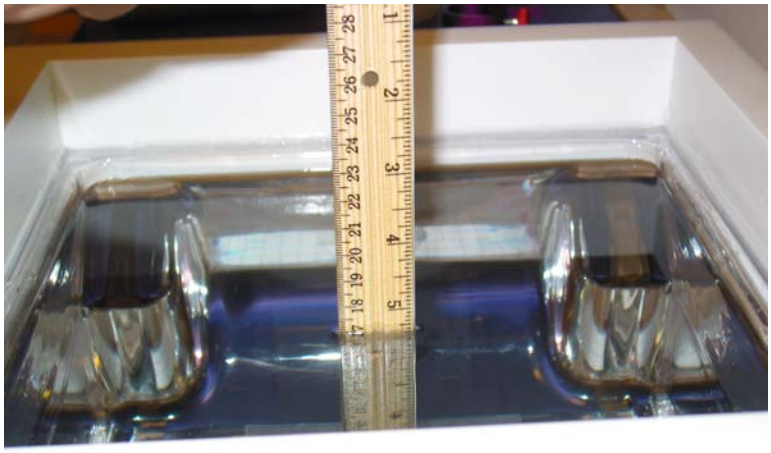
Appendix C – SAR Test Setup Photos



System Body Configuration



Body Tissue Depth

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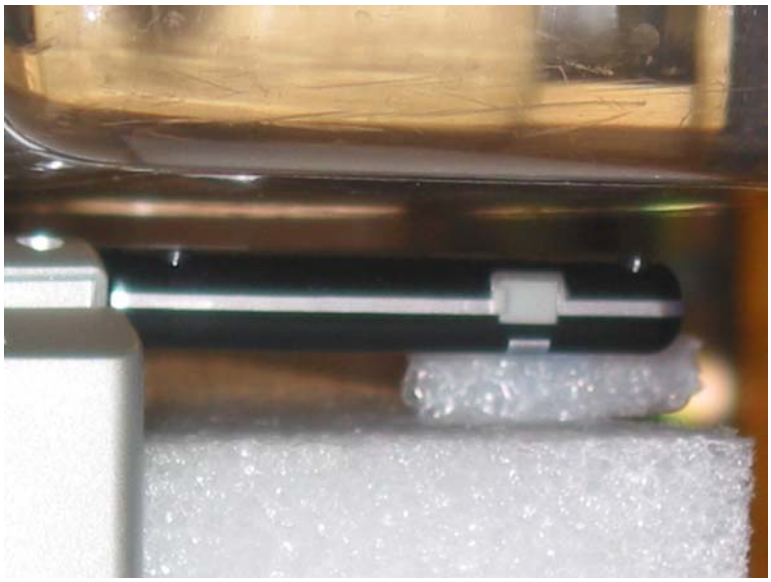

Bottom Position Installed in Toshiba Portege A600 5 mm Gap

Top Position on Cable 5 mm Gap

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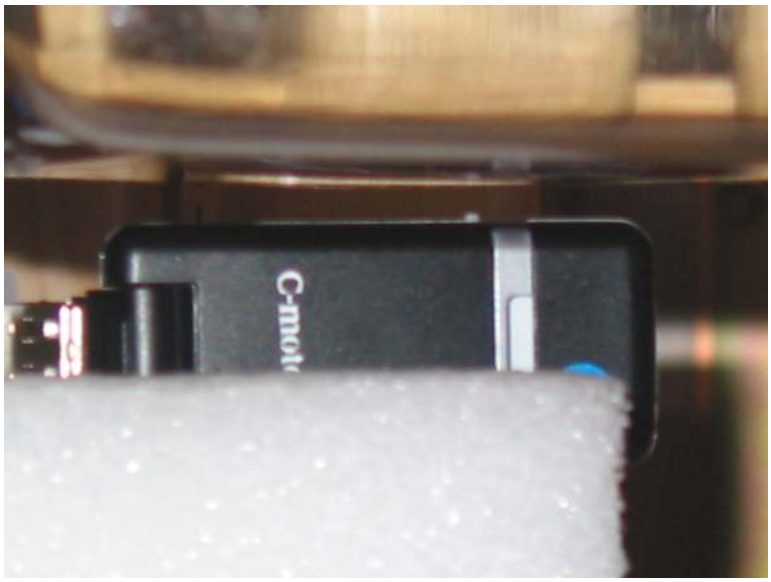
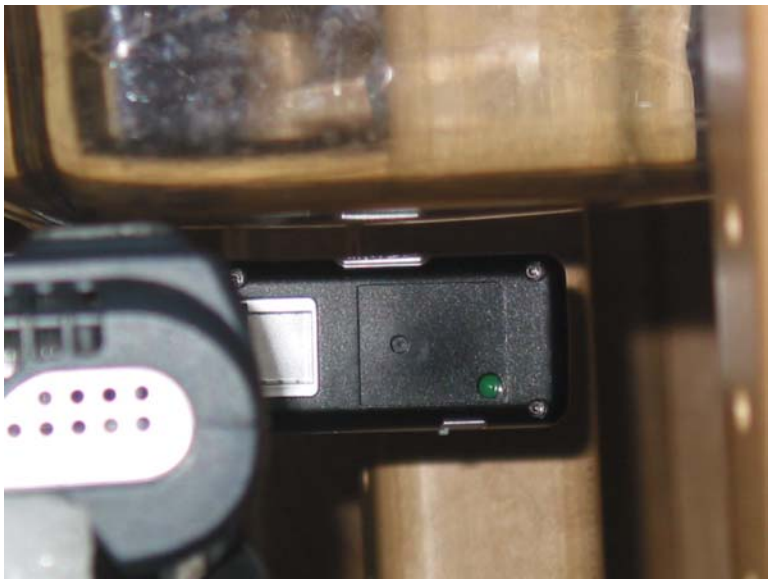


Left Side Position on Cable 5 mm Gap



Right Side Position Installed in Toshiba 2400 5 mm Gap

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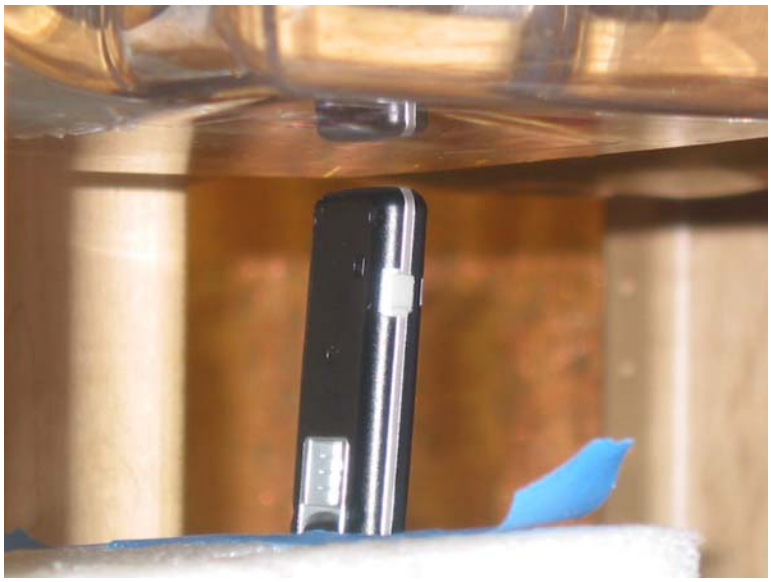

Tip Position on Cable 5 mm Gap

Front/Top of Device

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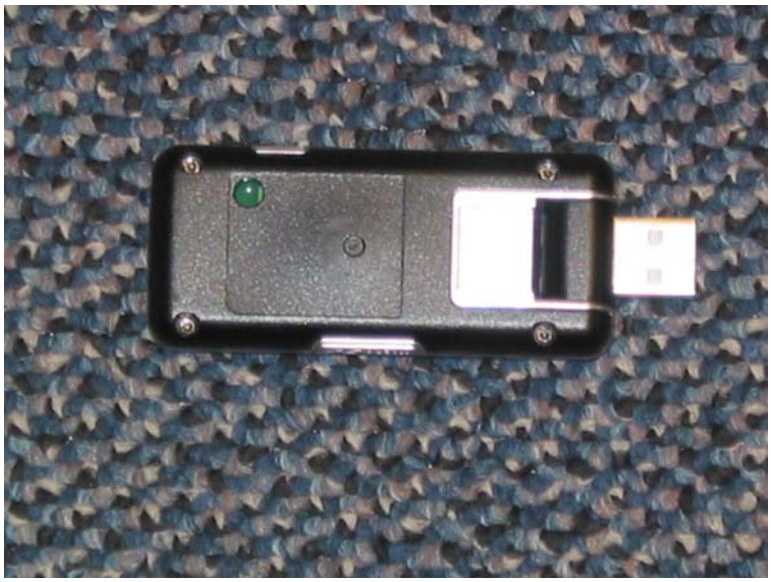
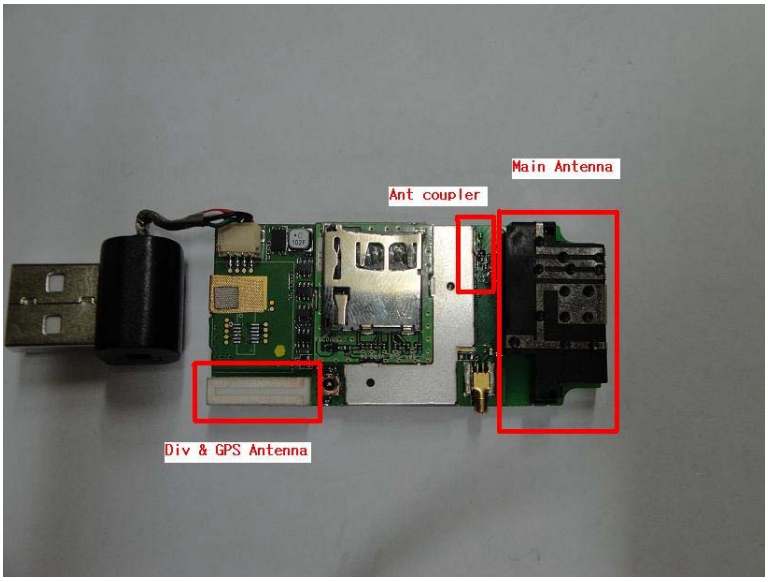


Back/Bottom of Device



Antenna Locations

This report shall not be reproduced except in full without the written approval of RF Exposure Lab, LLC.

Appendix D – Probe Calibration Data Sheets

This report shall not be reproduced except in full without the written approval of RF Exposure Lab, LLC.

NCL CALIBRATION LABORATORIES

Calibration File No.: CP-1079

Client.: RFEL

C E R T I F I C A T E OF C A L I B R A T I O N

It is certified that the equipment identified below has been calibrated in the **NCL CALIBRATION LABORATORIES** by qualified personnel following recognized procedures and using transfer standards traceable to NRC/NIST.

Equipment: Miniature Isotropic RF Probe 835 MHz

BODY Calibration

Manufacturer: APREL Laboratories

Model No.: E-020

Serial No.: 217

Calibration Procedure: SSI/DRB-TP-D01-032-E020-V2
Project No: RFEL-E020-CAL-5477

Calibrated: 21st October 2009
Released on: 28th October 2009

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary
This calibration has been conducted in line with the SCC ISO-IEC 17025 Scope of Accreditation
Accredited Laboratory Number 48

Released By: _____

NCL CALIBRATION LABORATORIES

51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6

Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4161

Introduction

This Calibration Report reproduces the results of the calibration performed in line with the SSI/DRB-TP-D01-032-E020-V2 E-Field Probe Calibration Procedure. The results contained within this report are for APREL E-Field Probe E-020 217.

References

SSI/DRB-TP-D01-032-E020-V2 E-Field Probe Calibration Procedure
IEEE 1528 “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”
SSI-TP-011 Tissue Calibration Procedure
IEC 62209 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 1 & 2: Procedure to determine the Specific Absorption Rate (SAR) for hand-held devices used in close proximity of the ear (frequency range of 300 MHz to 3 GHz)”
IEEE 1309 Draft Standard for Calibration of Electromagnetic Field Sensors and Probes, Excluding Antennas, from 9kHz to 40GHz

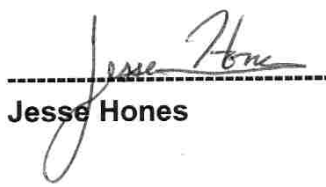
Conditions

Probe 217 was a re-calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 21 °C +/- 0.5°C

We the undersigned attest that to the best of our knowledge the calibration of this probe has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol



Jesse Hones

Calibration Results Summary

Probe Type:	E-Field Probe E-020
Serial Number:	217
Frequency:	835 MHz
Sensor Offset:	1.56 mm
Sensor Length:	2.5 mm
Tip Enclosure:	Ertalyte*
Tip Diameter:	**<**5 mm
Tip Length:	60 mm
Total Length:	290 mm

*Resistive to recommended tissue recipes per IEEE-1528

Sensitivity in Air

Channel X:	1.2 $\mu V/(V/m)^2$
Channel Y:	1.2 $\mu V/(V/m)^2$
Channel Z:	1.2 $\mu V/(V/m)^2$
Diode Compression Point:	95 mV

Sensitivity in Body Tissue Measured

Frequency: 835 MHz

Epsilon: 54.9 (+/-5%) **Sigma:** 1.04 S/m (+/-5%)

ConvF

Channel X: 6.1

Channel Y: 6.1

Channel Z: 6.1

Tissue sensitivity values were calculated using the load impedance of the APREL Laboratories Daq-Paq.

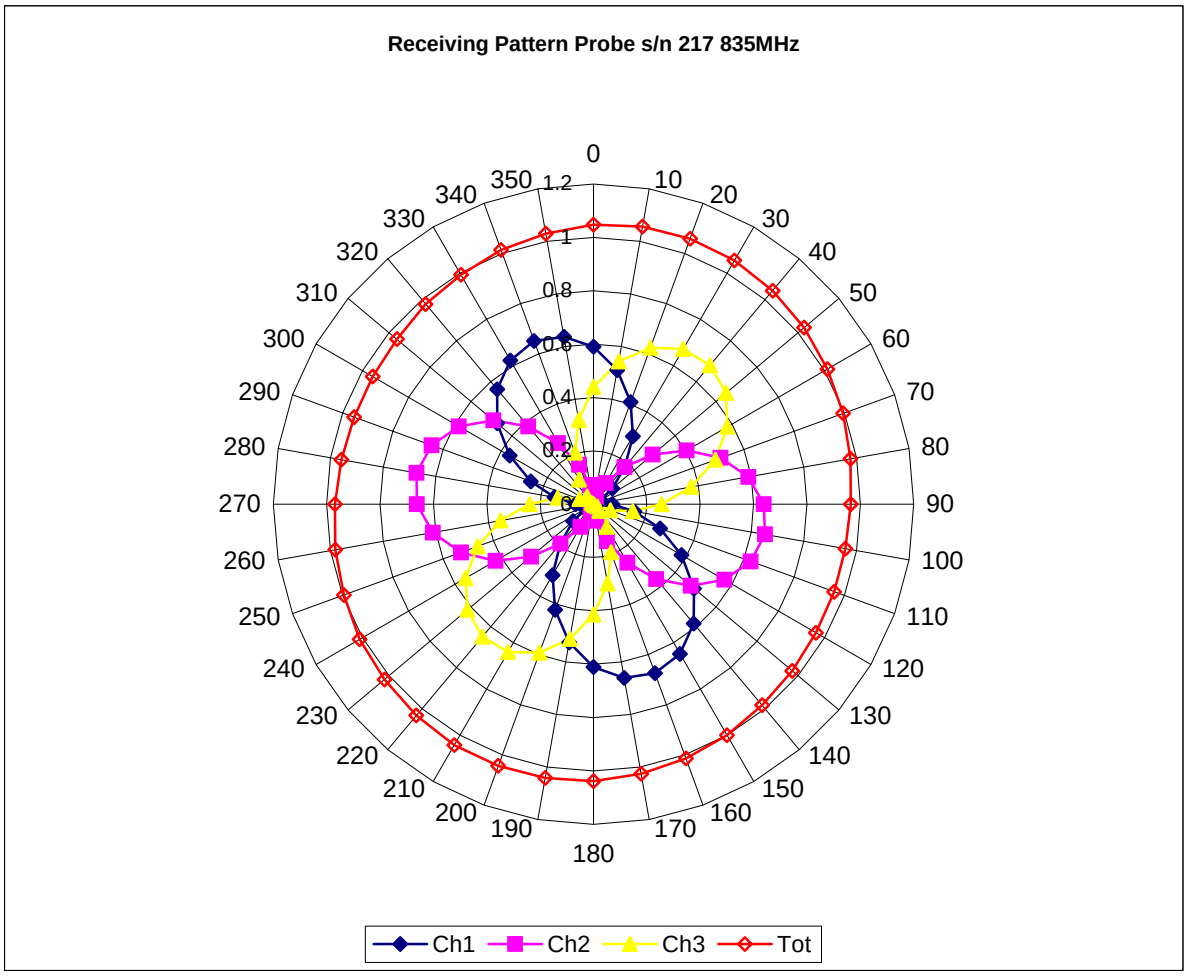
Boundary Effect:

Uncertainty resulting from the boundary effect is less than 2% for the distance between the tip of the probe and the tissue boundary, when less than 2.44mm.

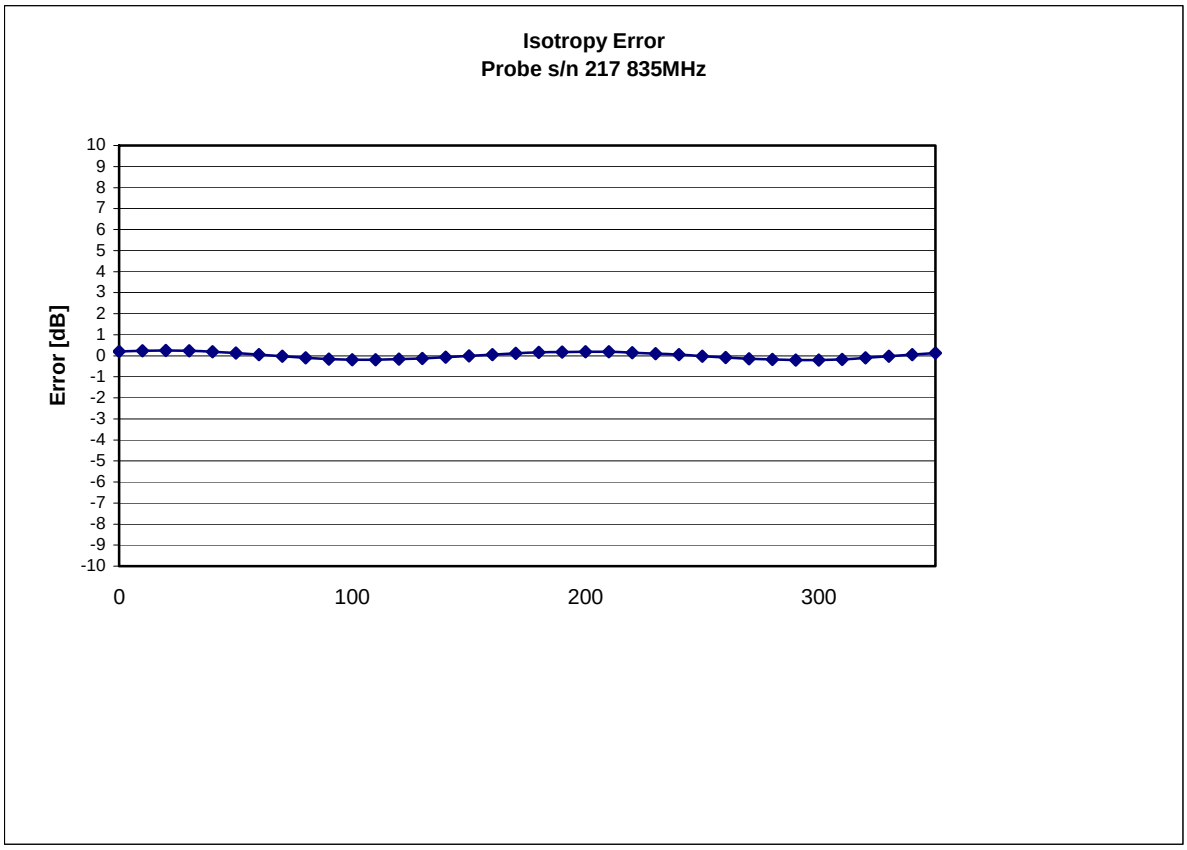
Spatial Resolution:

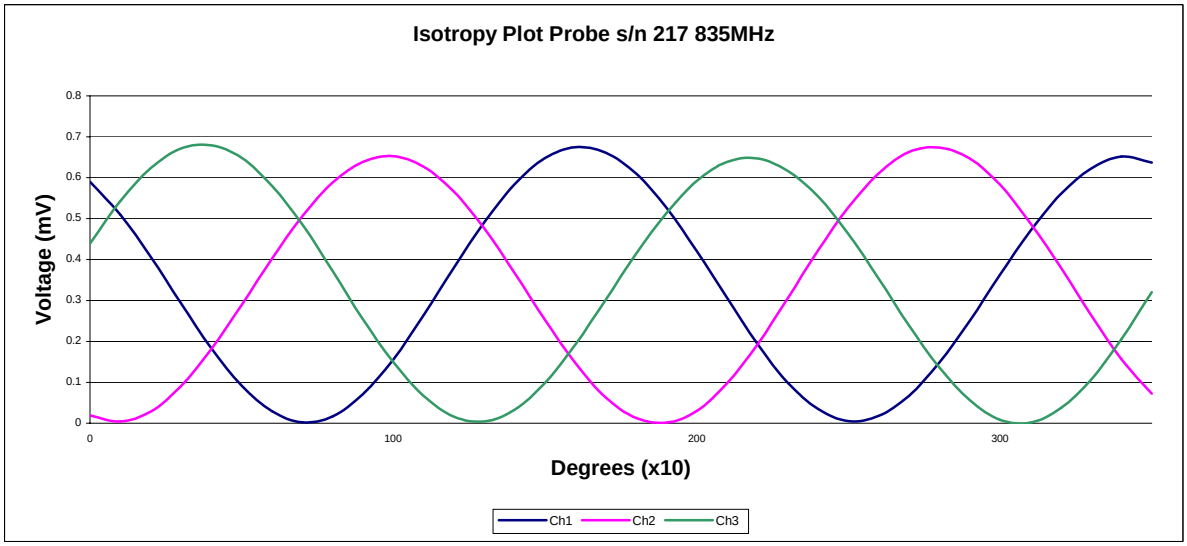
The measured probe tip diameter is 5 mm (+/- 0.01 mm) and therefore meets the requirements of SSI/DRB-TP-D01-032 for spatial resolution.

Receiving Pattern 835 MHz (Air)



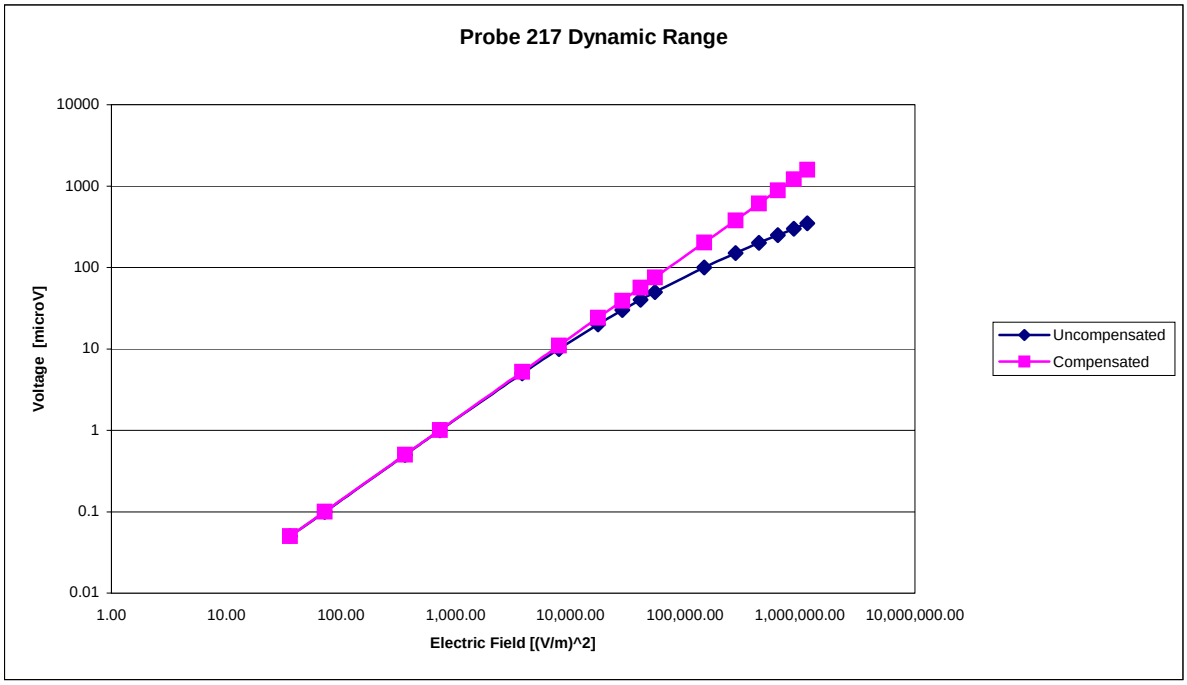
Isotropy Error 835 MHz (Air)



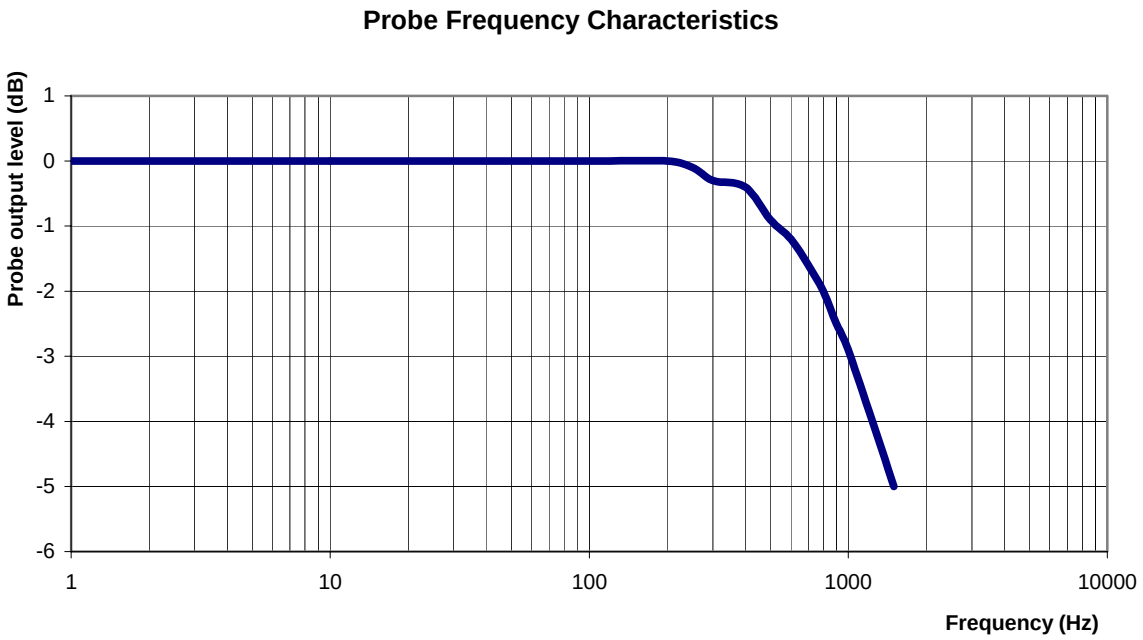


Isotropicity Tissue: 0.10 dB

Dynamic Range



Video Bandwidth



Video Bandwidth at 500 Hz 1 dB
Video Bandwidth at 1.02 KHz: 3 dB

Conversion Factor Uncertainty Assessment Measured

Sensitivity in Body Tissue

Frequency:		835 MHz	
Epsilon:	54.9 (+/-5%)	**Sigma:**	1.04 S/m (+/-5%)
ConvF			
Channel X:	6.1	7%(K=2)	
Channel Y:	6.1	7%(K=2)	
Channel Z:	6.1	7%(K=2)	

To minimize the uncertainty calculation all tissue sensitivity values were calculated using a load impedance of 5 MΩ.

Boundary Effect:

For a distance of 2.5mm the evaluated uncertainty (increase in the probe sensitivity) is less than 2%.

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2009.

NCL CALIBRATION LABORATORIES

Calibration File No.: CP-1090

Client.: RFEL

C E R T I F I C A T E OF C A L I B R A T I O N

It is certified that the equipment identified below has been calibrated in the **NCL CALIBRATION LABORATORIES** by qualified personnel following recognized procedures and using transfer standards traceable to NRC/NIST.

Equipment: Miniature Isotropic RF Probe 1735 MHz
BODY Calibration
Manufacturer: APREL Laboratories
Model No.: E-020
Serial No.: 217

Calibration Procedure: SSI/DRB-TP-D01-032-E020-V2
Project No: RFEL-E020-CAL-5477

Calibrated: 21st October 2009
Released on: 28th October 2009

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary
This calibration has been conducted in line with the SCC ISO-IEC 17025 Scope of Accreditation
Accredited Laboratory Number 48

Released By: _____

NCL CALIBRATION LABORATORIES

51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6

Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4161

Introduction

This Calibration Report reproduces the results of the calibration performed in line with the SSI/DRB-TP-D01-032-E020-V2 E-Field Probe Calibration Procedure. The results contained within this report are for APREL E-Field Probe E-020 217.

References

SSI/DRB-TP-D01-032-E020-V2 E-Field Probe Calibration Procedure
IEEE 1528 “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”
SSI-TP-011 Tissue Calibration Procedure
IEC 62209 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 1 & 2: Procedure to determine the Specific Absorption Rate (SAR) for hand-held devices used in close proximity of the ear (frequency range of 300 MHz to 3 GHz)”
IEEE 1309 Draft Standard for Calibration of Electromagnetic Field Sensors and Probes, Excluding Antennas, from 9kHz to 40GHz

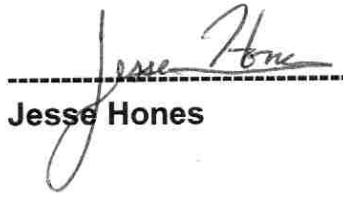
Conditions

Probe 217 was a new calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 21 °C +/- 0.5°C

We the undersigned attest that to the best of our knowledge the calibration of this probe has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol



Jesse Hones

Calibration Results Summary

Probe Type:	E-Field Probe E-020
Serial Number:	217
Frequency:	1735 MHz
Sensor Offset:	1.56 mm
Sensor Length:	2.5 mm
Tip Enclosure:	Ertalyte*
Tip Diameter:	**<**5 mm
Tip Length:	60 mm
Total Length:	290 mm

*Resistive to recommended tissue recipes per IEEE-1528

Sensitivity in Air

Channel X:	1.2 $\mu V/(V/m)^2$
Channel Y:	1.2 $\mu V/(V/m)^2$
Channel Z:	1.2 $\mu V/(V/m)^2$
Diode Compression Point:	95 mV

Sensitivity in Body Tissue

Frequency: 1735 MHz

Epsilon: 53.8 (+/-5%) **Sigma:** 1.48 S/m (+/-5%)

ConvF

Channel X: 5.2

Channel Y: 5.2

Channel Z: 5.2

Tissue sensitivity values are typically calculated using the load impedance of the APREL Laboratories Daq-Paq.

Target values for dipole are provided below using an 1800MHz dipole fed with a 1735MHz CW signal.

After calibration the conversion factors derived were shown to provide the measured values in the table below.

Frequency (MHz)	Tissue Type	Method	1g	10g	Peak
1735	Head	Interpolated	36.5	19.1	66.2
1735	Head	Measured	36.3	19.2	65.4

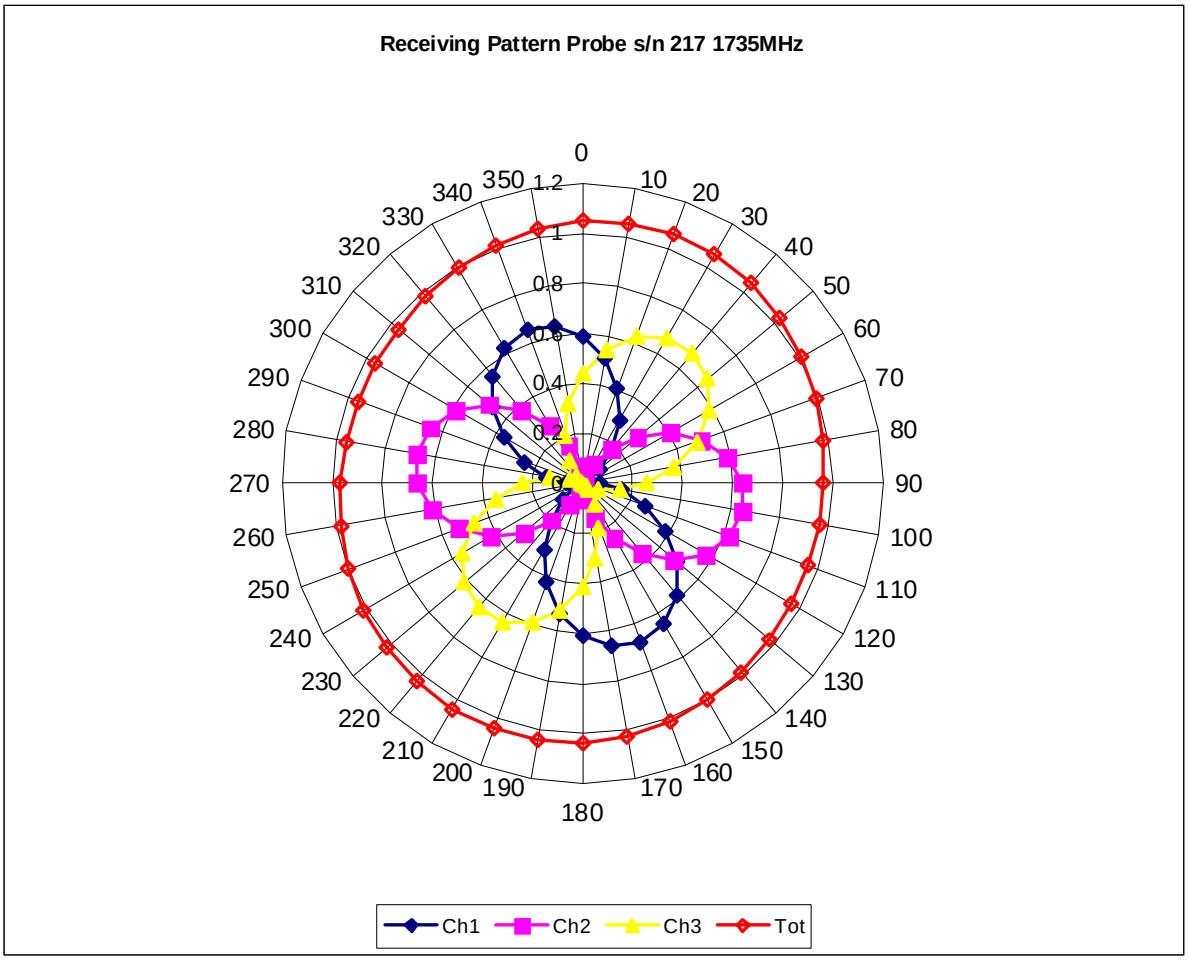
Boundary Effect:

Uncertainty resulting from the boundary effect is less than 2% for the distance between the tip of the probe and the tissue boundary, when less than 2.44mm.

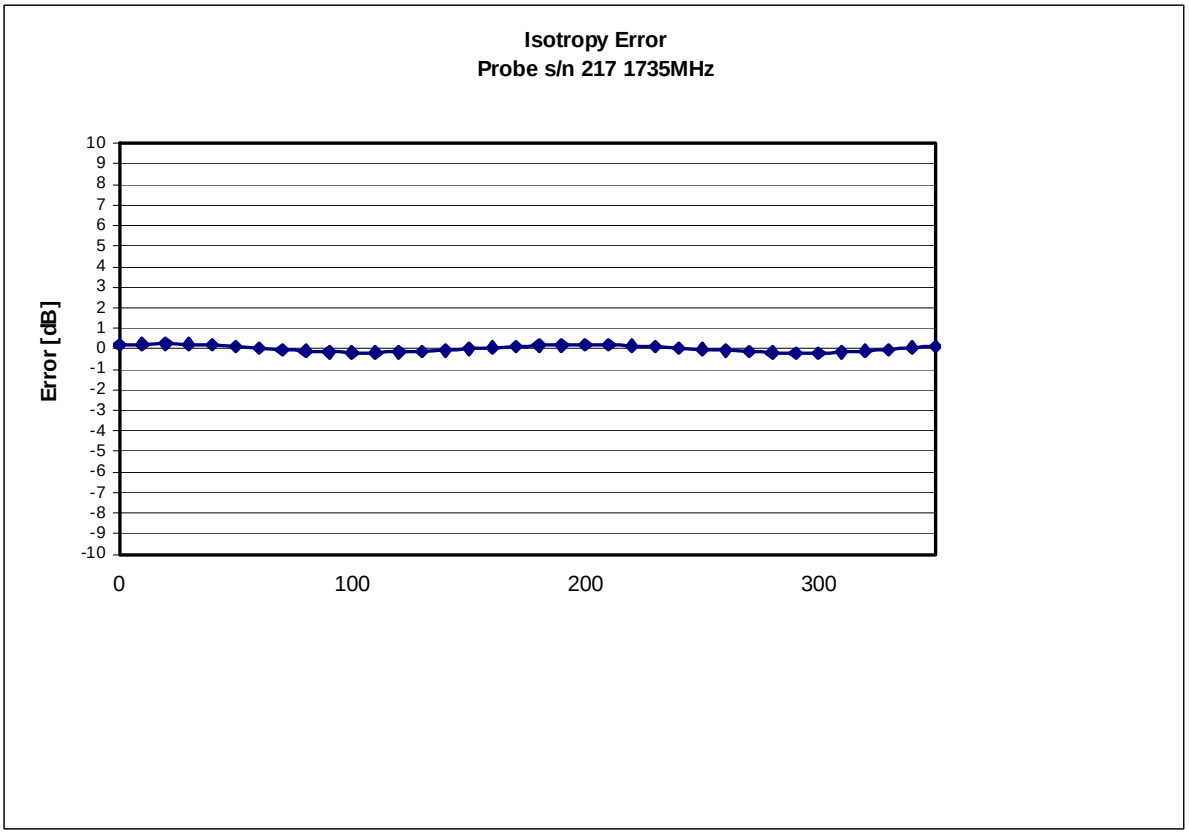
Spatial Resolution:

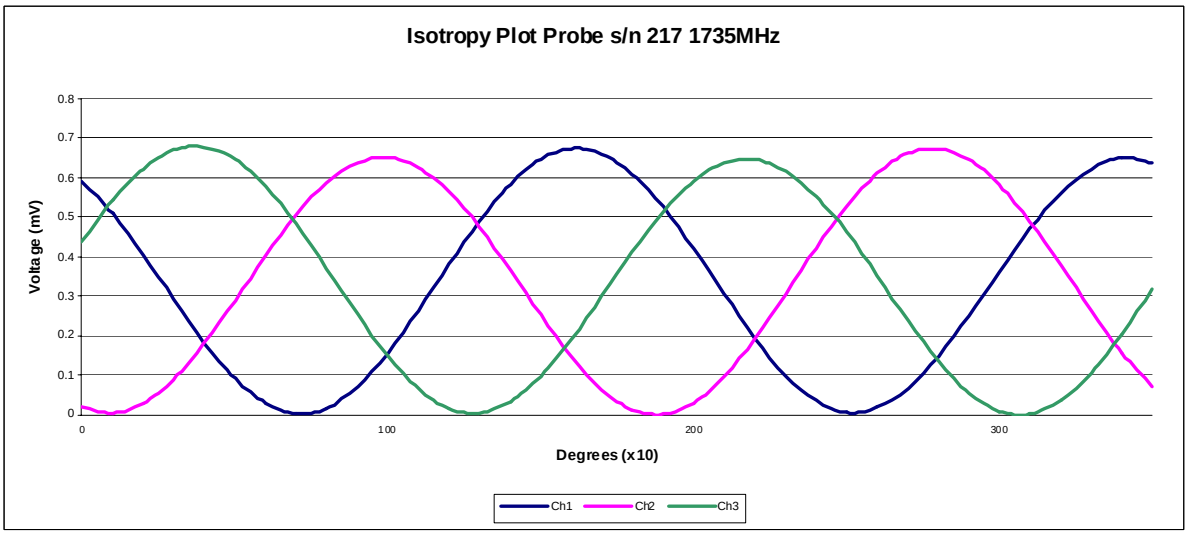
The measured probe tip diameter is 5 mm (+/- 0.01 mm) and therefore meets the requirements of SSI/DRB-TP-D01-032 for spatial resolution.

Receiving Pattern 1735 MHz (Air)



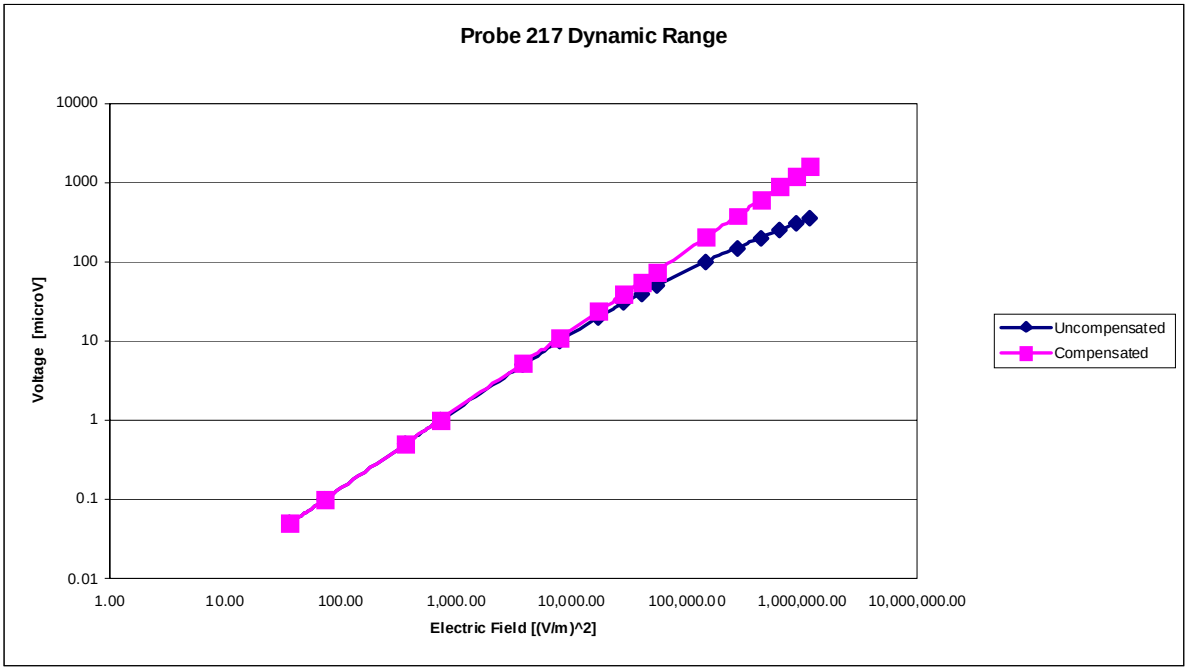
Isotropy Error 1735 MHz (Air)



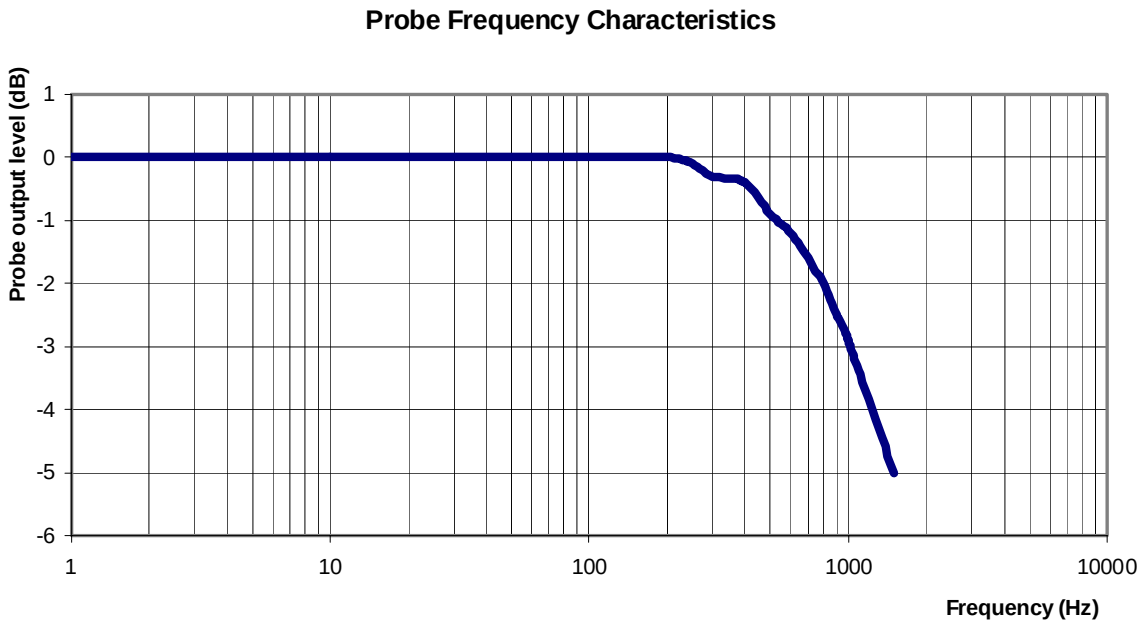


Isotropicity Tissue: 0.10 dB

Dynamic Range



Video Bandwidth



Video Bandwidth at 500 Hz 1 dB
Video Bandwidth at 1.02 KHz: 3 dB

Conversion Factor Uncertainty Assessment

Sensitivity in Body Tissue

Frequency:		1735 MHz	
Epsilon:	53.8 (+/-5%)	**Sigma:**	1.48 S/m (+/-5%)
ConvF			
Channel X:	5.2	7%(K=2)	
Channel Y:	5.2	7%(K=2)	
Channel Z:	5.2	7%(K=2)	

To minimize the uncertainty calculation all tissue sensitivity values were calculated using a load impedance of 5 MΩ.

Boundary Effect:

For a distance of 2.5mm the evaluated uncertainty (increase in the probe sensitivity) is less than 2%.

NOTE:

This calibration has been conducted using physical quantities for the tissue dielectrics and normalized against a calculated value for system validation.

Consult page 4 for further details on methods used.

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2009.

NCL CALIBRATION LABORATORIES

Calibration File No.: CP-1084

Client.: RFEL

C E R T I F I C A T E OF C A L I B R A T I O N

It is certified that the equipment identified below has been calibrated in the **NCL CALIBRATION LABORATORIES** by qualified personnel following recognized procedures and using transfer standards traceable to NRC/NIST.

Equipment: Miniature Isotropic RF Probe 1900 MHz
BODY Calibration
Manufacturer: APREL Laboratories
Model No.: E-020
Serial No.: 217

Calibration Procedure: SSI/DRB-TP-D01-032-E020-V2
Project No: RFEL-E020-CAL-5477

Calibrated: 21st October 2009
Released on: 28th October 2009

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary
This calibration has been conducted in line with the SCC ISO-IEC 17025 Scope of Accreditation
Accredited Laboratory Number 48

Released By: _____

NCL CALIBRATION LABORATORIES

51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6

Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4161

Introduction

This Calibration Report reproduces the results of the calibration performed in line with the SSI/DRB-TP-D01-032-E020-V2 E-Field Probe Calibration Procedure. The results contained within this report are for APREL E-Field Probe E-020 217.

References

SSI/DRB-TP-D01-032-E020-V2 E-Field Probe Calibration Procedure
IEEE 1528 “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”
SSI-TP-011 Tissue Calibration Procedure
IEC 62209 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures –Part 1 & 2: Procedure to determine the Specific Absorption Rate (SAR) for hand-held devices used in close proximity of the ear (frequency range of 300 MHz to 3 GHz)”
IEEE 1309 Draft Standard for Calibration of Electromagnetic Field Sensors and Probes, Excluding Antennas, from 9kHz to 40GHz

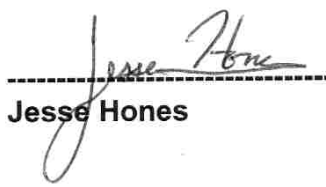
Conditions

Probe 217 was a re-calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 21 °C +/- 0.5°C

We the undersigned attest that to the best of our knowledge the calibration of this probe has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol



Jesse Hones

Calibration Results Summary

Probe Type:	E-Field Probe E-020
Serial Number:	217
Frequency:	1900 MHz
Sensor Offset:	1.56 mm
Sensor Length:	2.5 mm
Tip Enclosure:	Ertalyte*
Tip Diameter:	**<**5 mm
Tip Length:	60 mm
Total Length:	290 mm

*Resistive to recommended tissue recipes per IEEE-1528

Sensitivity in Air

Channel X:	1.2 $\mu V/(V/m)^2$
Channel Y:	1.2 $\mu V/(V/m)^2$
Channel Z:	1.2 $\mu V/(V/m)^2$
Diode Compression Point:	95 mV

Sensitivity in Body Tissue Measured

Frequency: 1900 MHz

Epsilon: 54.6 (+/-5%) **Sigma:** 1.55 S/m (+/-5%)

ConvF

Channel X: 4.85

Channel Y: 4.85

Channel Z: 4.85

Tissue sensitivity values were calculated using the load impedance of the APREL Laboratories Daq-Paq.

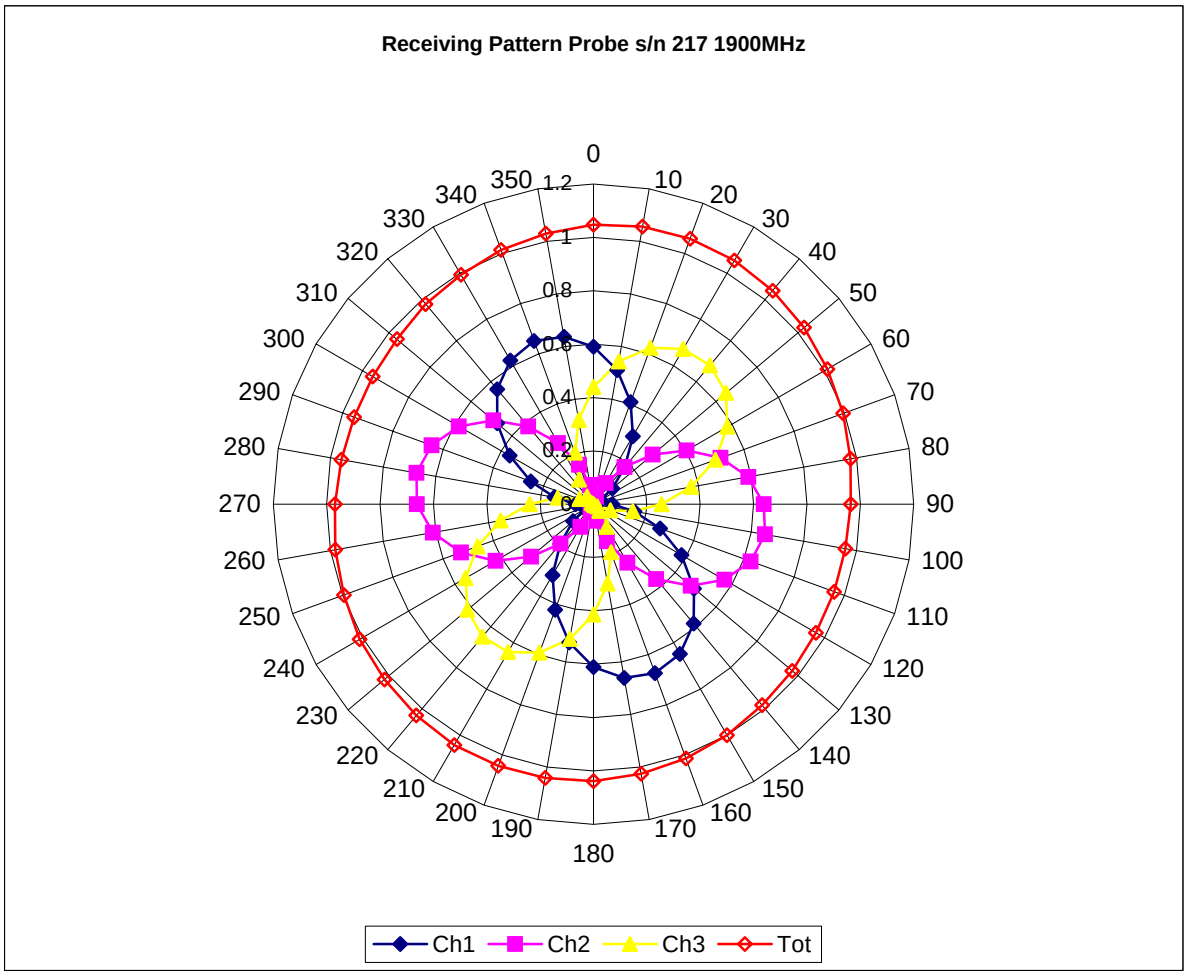
Boundary Effect:

Uncertainty resulting from the boundary effect is less than 2% for the distance between the tip of the probe and the tissue boundary, when less than 2.44mm.

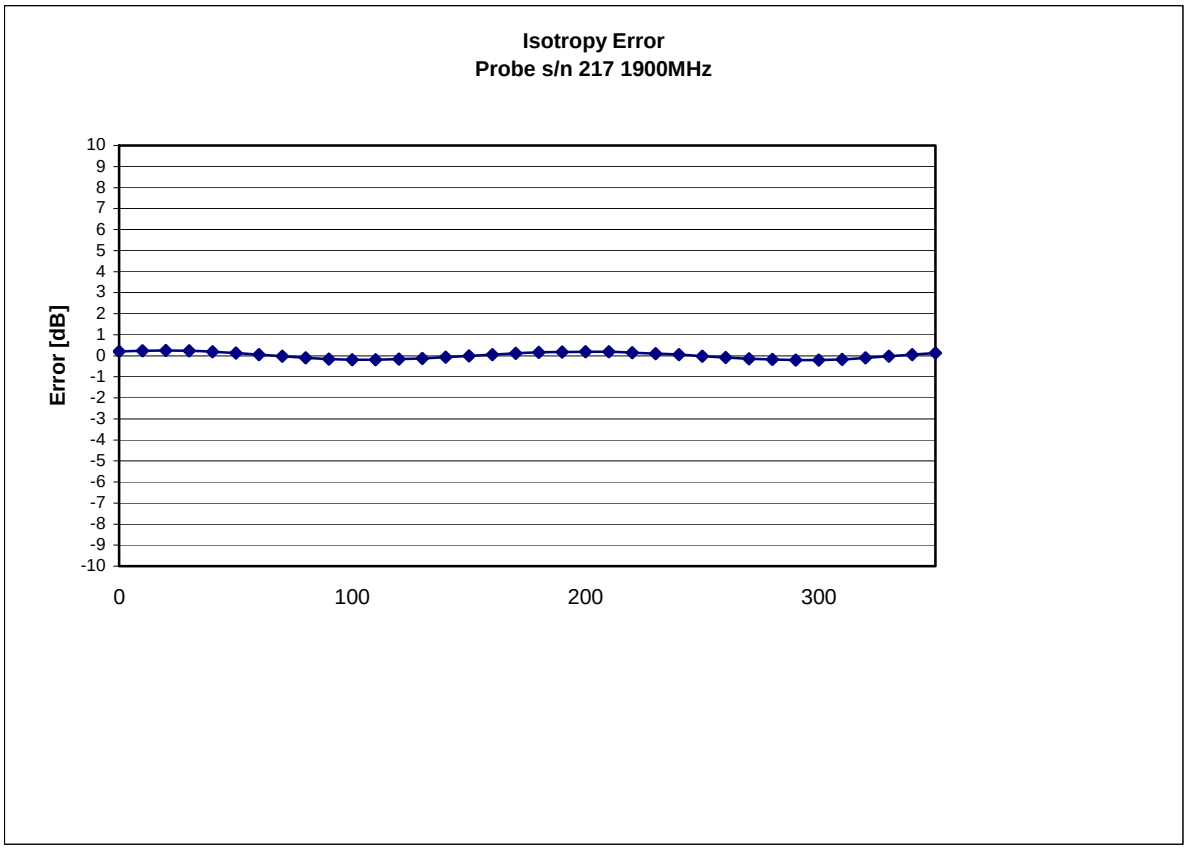
Spatial Resolution:

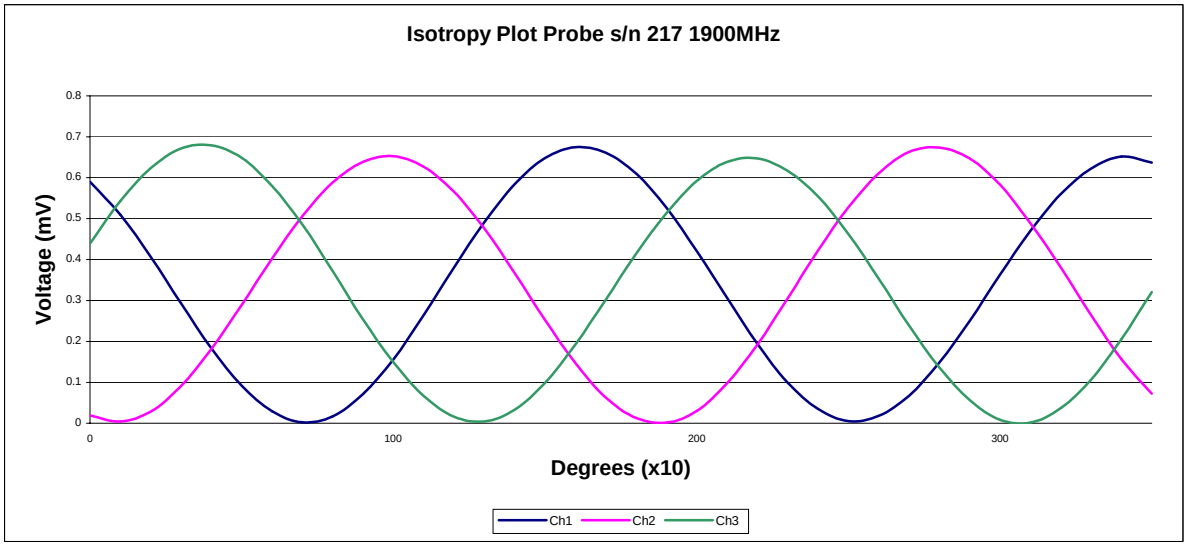
The measured probe tip diameter is 5 mm (+/- 0.01 mm) and therefore meets the requirements of SSI/DRB-TP-D01-032 for spatial resolution.

Receiving Pattern 1900 MHz (Air)



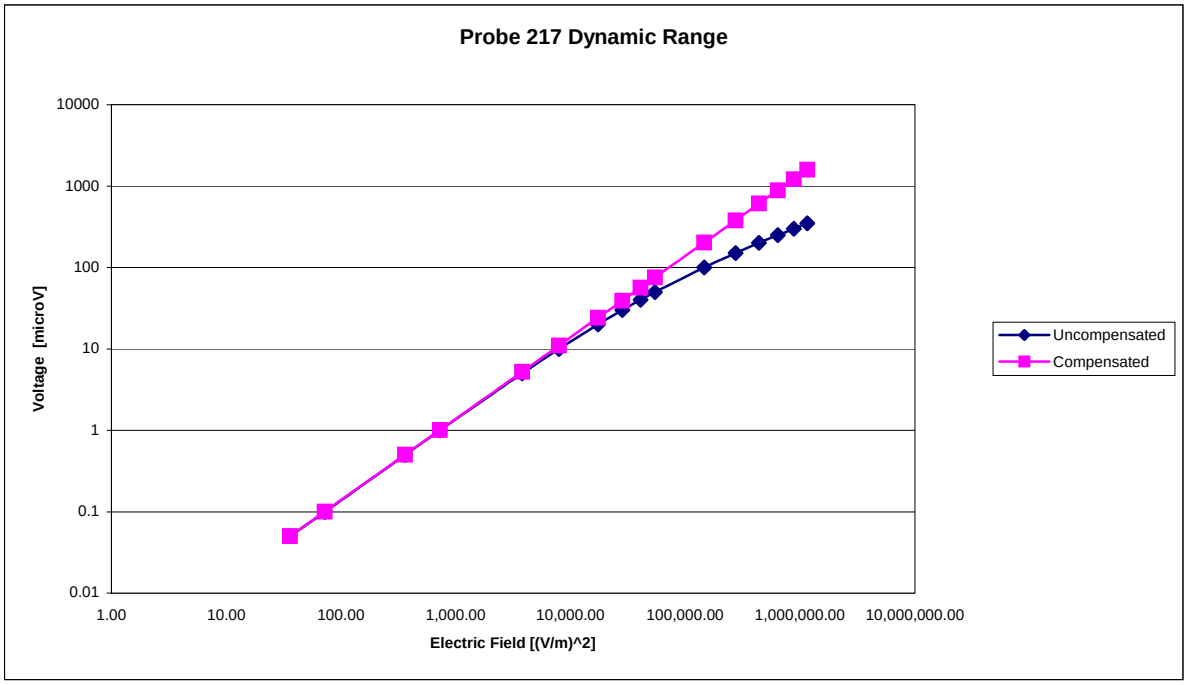
Isotropy Error 1900 MHz (Air)



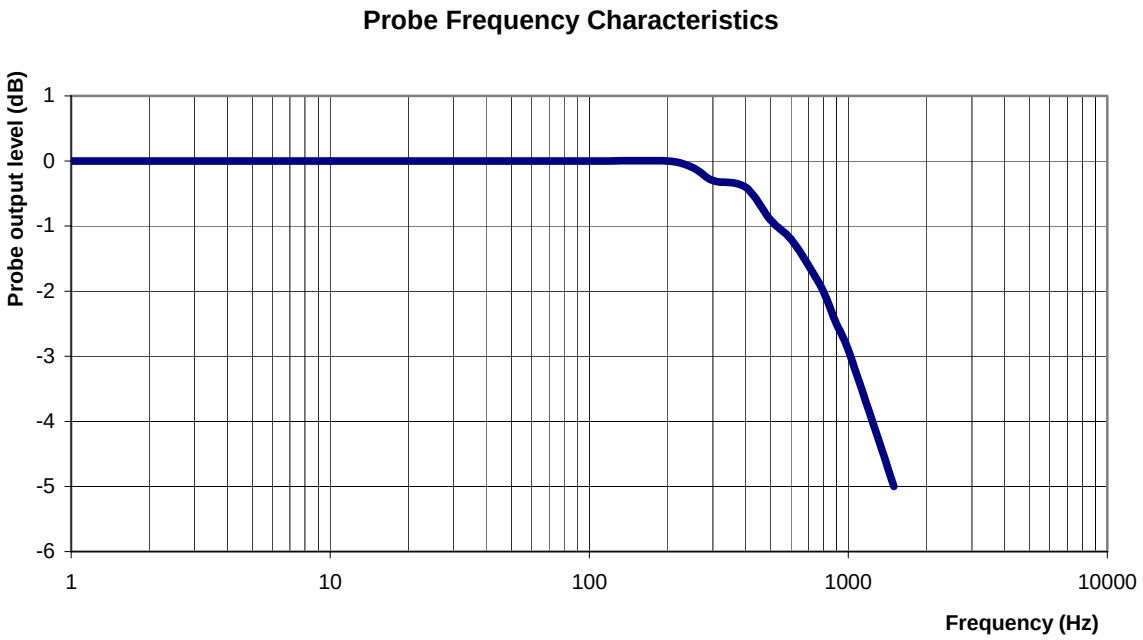


Isotropicity Tissue: 0.10 dB

Dynamic Range



Video Bandwidth



Video Bandwidth at 500 Hz 1 dB
Video Bandwidth at 1.02 KHz: 3 dB

Conversion Factor Uncertainty Assessment Measured

Sensitivity in Body Tissue

Frequency:		1900 MHz	
Epsilon:	54.6 (+/-5%)	**Sigma:**	1.55 S/m (+/-5%)
ConvF			
Channel X:	4.85	7%(K=2)	
Channel Y:	4.85	7%(K=2)	
Channel Z:	4.85	7%(K=2)	

To minimize the uncertainty calculation all tissue sensitivity values were calculated using a load impedance of 5 MΩ.

Boundary Effect:

For a distance of 2.5mm the evaluated uncertainty (increase in the probe sensitivity) is less than 2%.

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2009.

Appendix E – Dipole Calibration Data Sheets

This report shall not be reproduced except in full without the written approval of RF Exposure Lab, LLC.

NCL CALIBRATION LABORATORIES

Calibration File No: DC-1114
Project Number: RFEL-835-Dipole-5480

C E R T I F I C A T E OF C A L I B R A T I O N

It is certified that the equipment identified below has been calibrated in the **NCL CALIBRATION LABORATORIES** by qualified personnel following recognized procedures and using transfer standards traceable to NRC/NIST.

Validation Dipole

Manufacturer: APREL Laboratories
Part number: ALS-D-835-S-2
Frequency: 835 MHz
Serial No: 180-00561

Customer: RFEL

Calibrated: 14th January 2010
Released on: 19th January 2010

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary

Released By: _____

NCL CALIBRATION LABORATORIES
51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6
Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4162

Conditions

Dipole 180-00561 was a new calibration.

Ambient Temperature of the Laboratory:	22 °C +/- 0.5°C
Temperature of the Tissue:	21 °C +/- 0.5°C

We the undersigned attest that to the best of our knowledge the calibration of this device has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

We the undersigned attest that to the best of our knowledge the calibration of this device has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol

C. Teodorian

Calibration Results Summary

The following results relate the Calibrated Dipole and should be used as a quick reference for the user.

Mechanical Dimensions

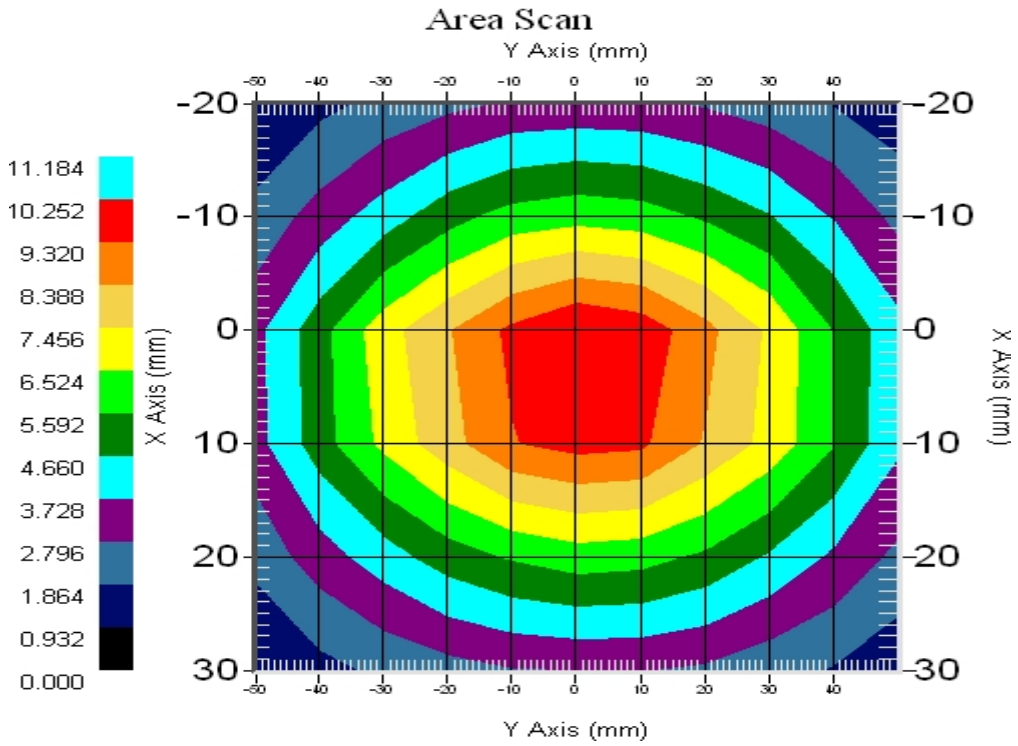
Length: 161.0 mm
Height: 89.8 mm

Electrical Specification

SWR: 1.009U
Return Loss: -47.751 dB
Impedance: 50.065 Ω

System Validation Results

Frequency	1 Gram	10 Gram	Peak
835 MHz	9.49	6.1	14.21



This page has been reviewed for content and attested to by signature within this document.

Introduction

This Calibration Report has been produced in line with the SSI Dipole Calibration Procedure SSI-TP-018-ALSAS. The results contained within this report are for Validation Dipole 180-00561. The calibration routine consisted of a three-step process. Step 1 was a mechanical verification of the dipole to ensure that it meets the mechanical specifications. Step 2 was an Electrical Calibration for the Validation Dipole, where the SWR, Impedance, and the Return loss were assessed. Step 3 involved a System Validation using the ALSAS-10U, along with APREL E-020 130 MHz to 26 GHz E-Field Probe Serial Number 2225.

References

SSI-TP-018-ALSAS Dipole Calibration Procedure
SSI-TP-016 Tissue Calibration Procedure
IEEE 1528 “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”

Conditions

Dipole 180-00561 was a new calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 20 °C +/- 0.5°C

This page has been reviewed for content and attested to by signature within this document.

Dipole Calibration Results

Mechanical Verification

APREL Length	APREL Height	Measured Length	Measured Height
161.0 mm	89.8 mm	162.1 mm	89.8 mm

Tissue Validation

Head Tissue 835MHz	Measured
Dielectric constant, ε_r	41.54
Conductivity, σ [S/m]	0.91

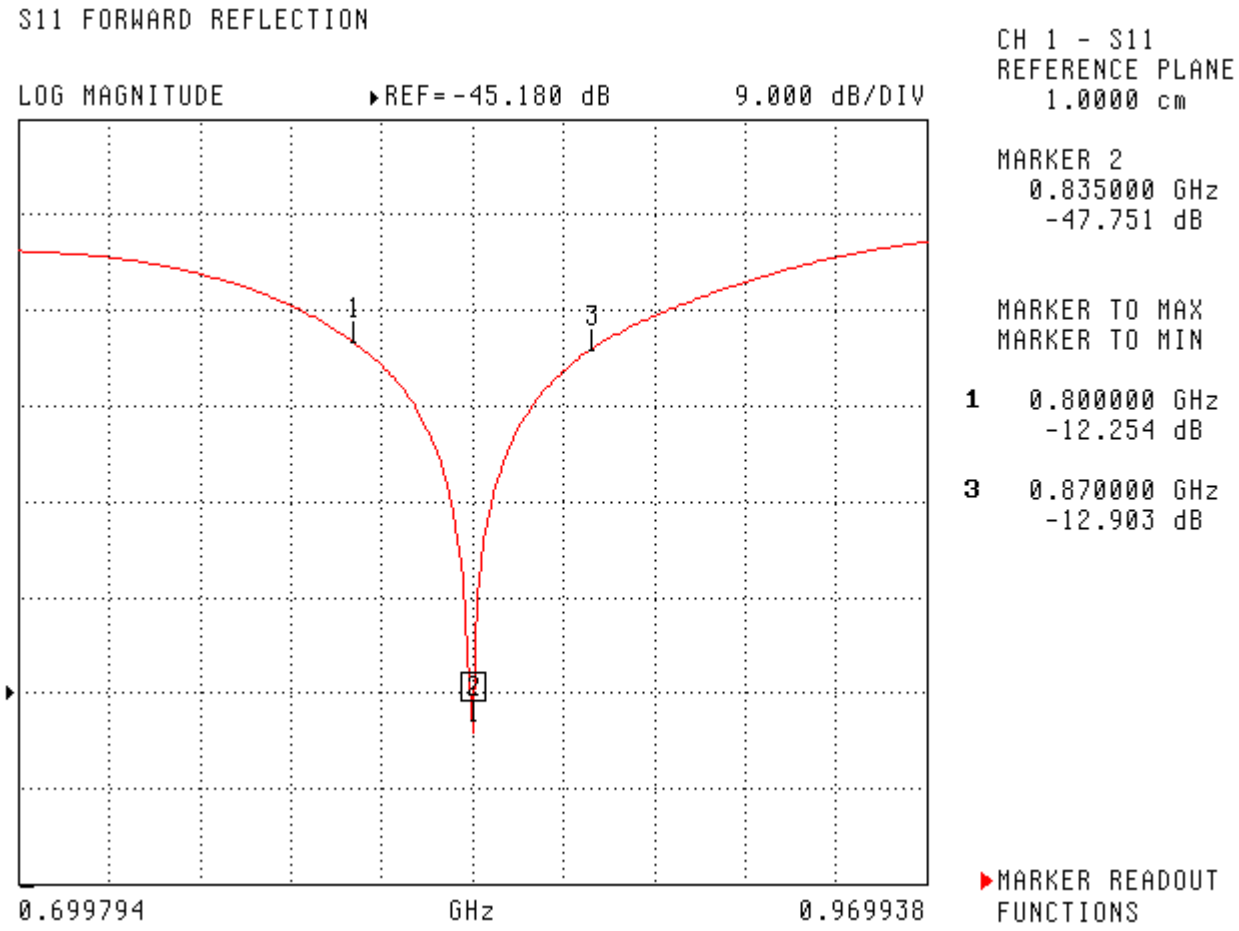
This page has been reviewed for content and attested to by signature within this document.

Electrical Calibration

Test	Result
S11 RL	-47.751dB
SWR	1.009U
Impedance	50.065 Ω

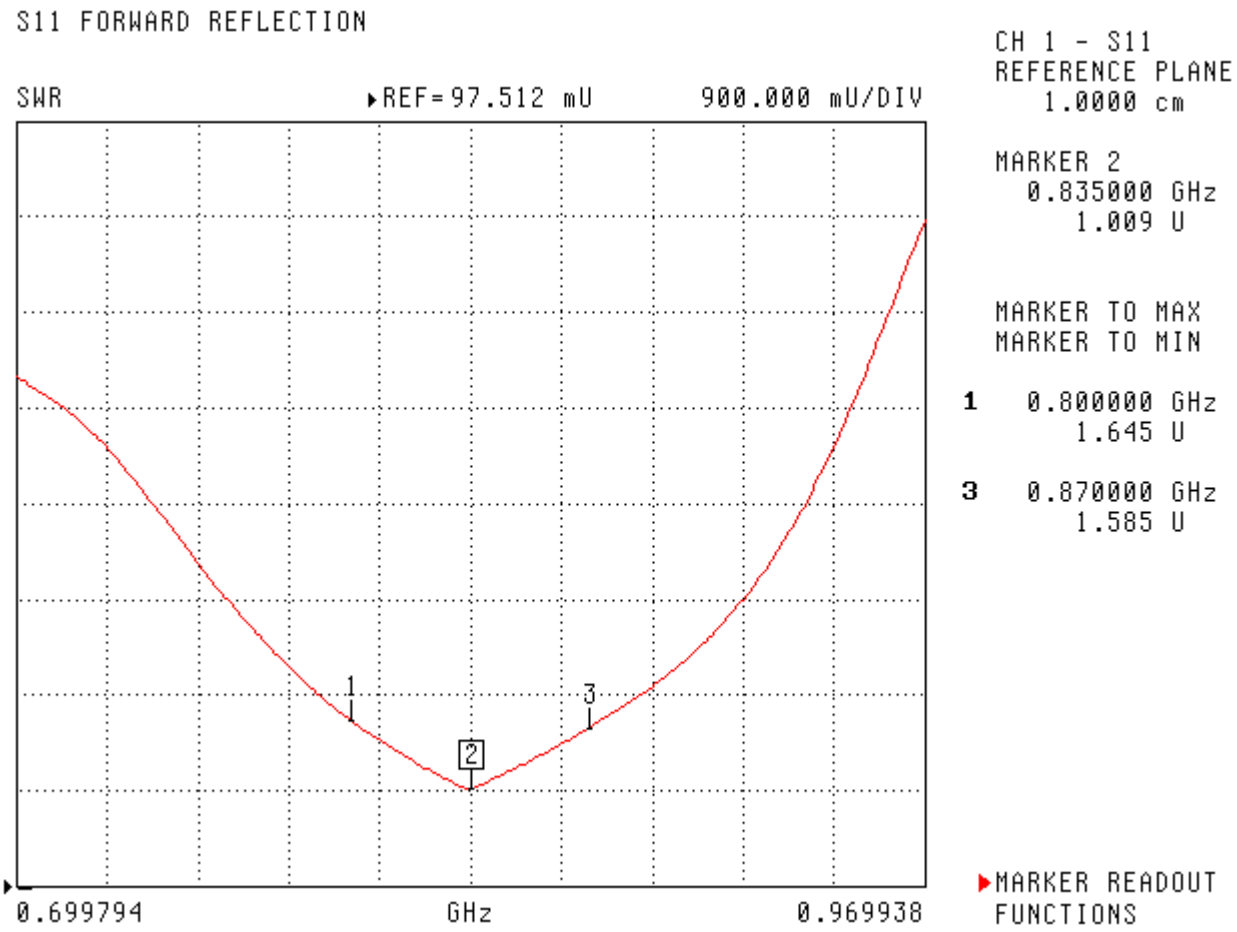
The Following Graphs are the results as displayed on the Vector Network Analyzer.

S11 Parameter Return Loss



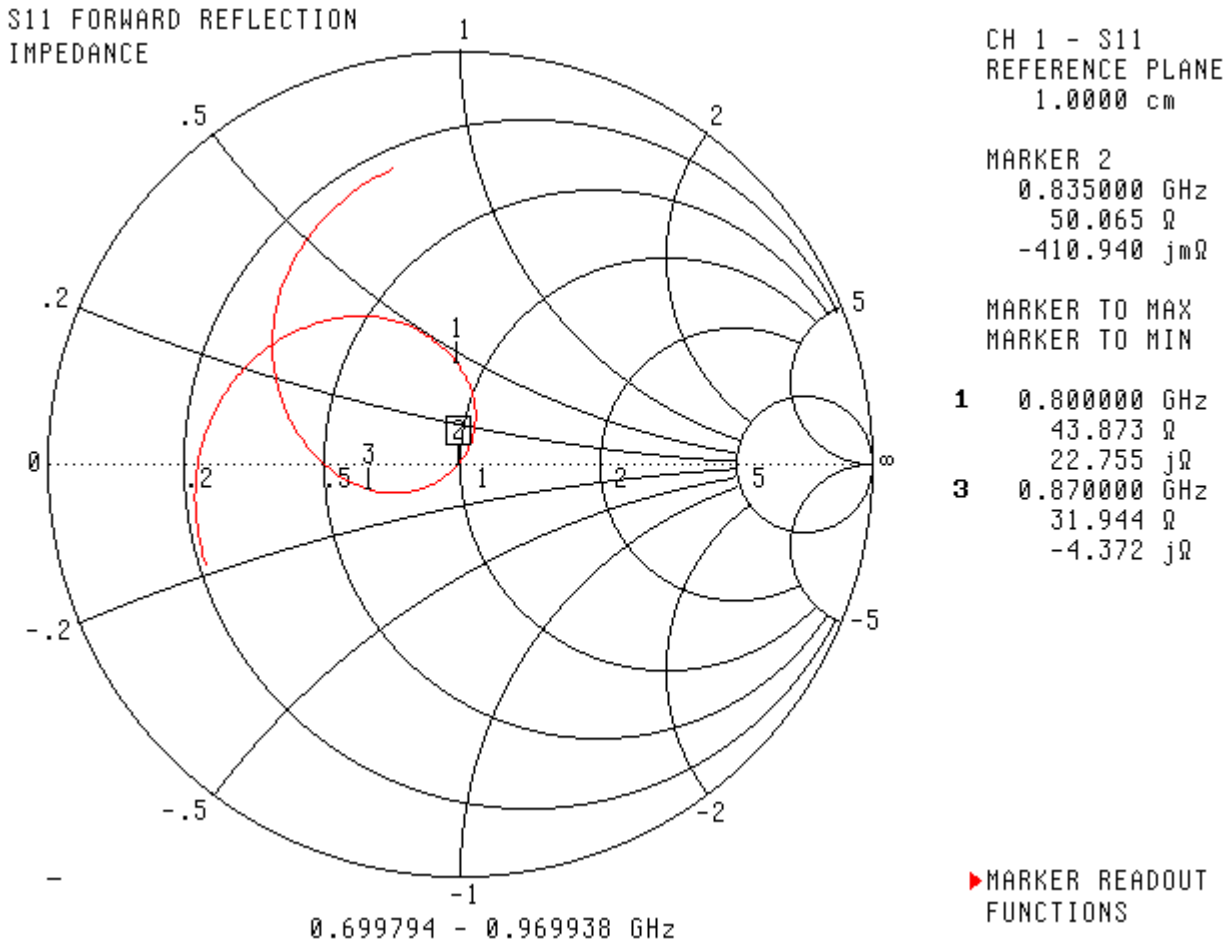
This page has been reviewed for content and attested to by signature within this document.

SWR



This page has been reviewed for content and attested to by signature within this document.

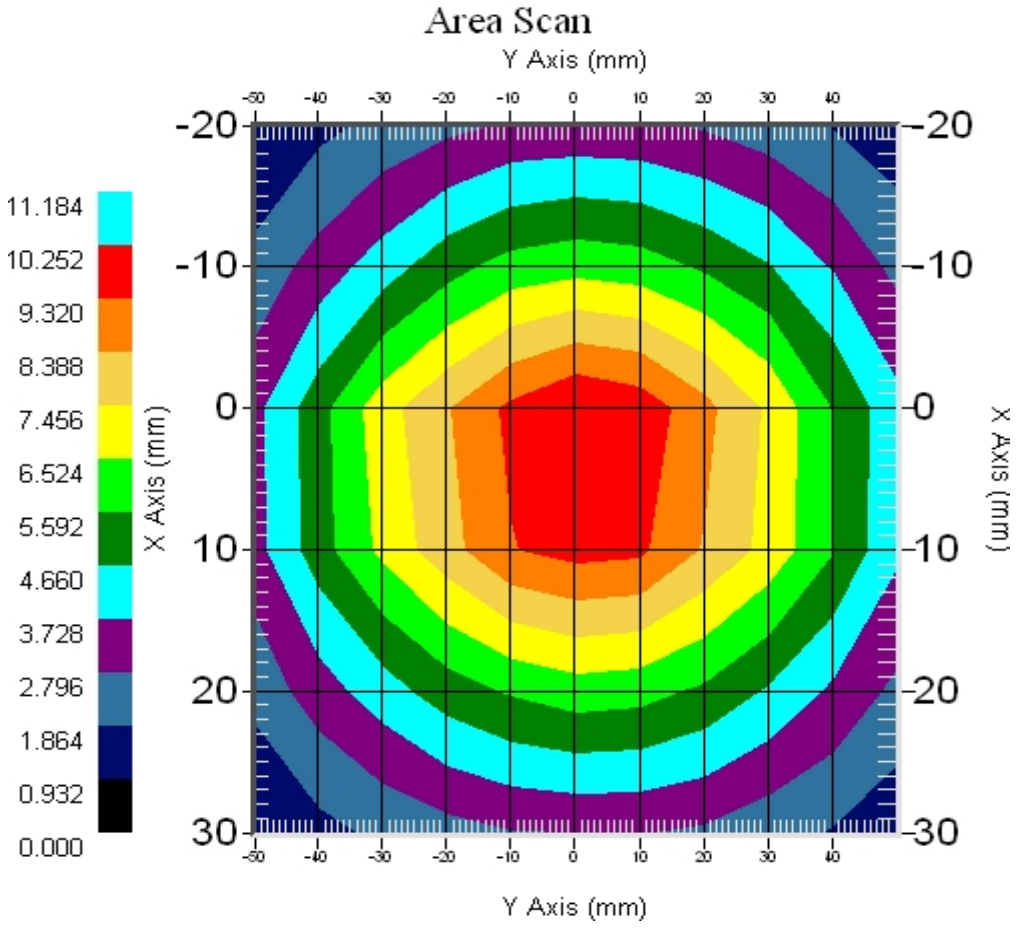
Smith Chart Dipole Impedance



This page has been reviewed for content and attested to by signature within this document.

System Validation Results Using the Electrically Calibrated Dipole

Head Tissue Frequency	1 Gram	10 Gram	Peak Above Feed Point
835 MHz	9.49	6.1	14.21



This page has been reviewed for content and attested to by signature within this document.

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2009.

This page has been reviewed for content and attested to by signature within this document.

NCL CALIBRATION LABORATORIES

Calibration File No: DC-1118
Project Number: RFEL-1750-Dipole-5493

C E R T I F I C A T E OF C A L I B R A T I O N

It is certified that the equipment identified below has been calibrated in the **NCL CALIBRATION LABORATORIES** by qualified personnel following recognized procedures and using transfer standards traceable to NRC/NIST.

Validation Dipole

Manufacturer: APREL Laboratories
Part number: ALS-D-1750-S-2
Frequency: 1750 MHz
Serial No: 210-00715

Customer: RFEL

Calibrated: 15th January 2010
Released on: 19th January 2010

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary

Released By: _____

NCL CALIBRATION LABORATORIES

51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6

Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4162

Conditions

Dipole 210-00715 was new and taken from stock prior to calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 21 °C +/- 0.5°C

We the undersigned attest that to the best of our knowledge the calibration of this device has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol

C. Teodorian

Calibration Results Summary

The following results relate the Calibrated Dipole and should be used as a quick reference for the user.

Mechanical Dimensions

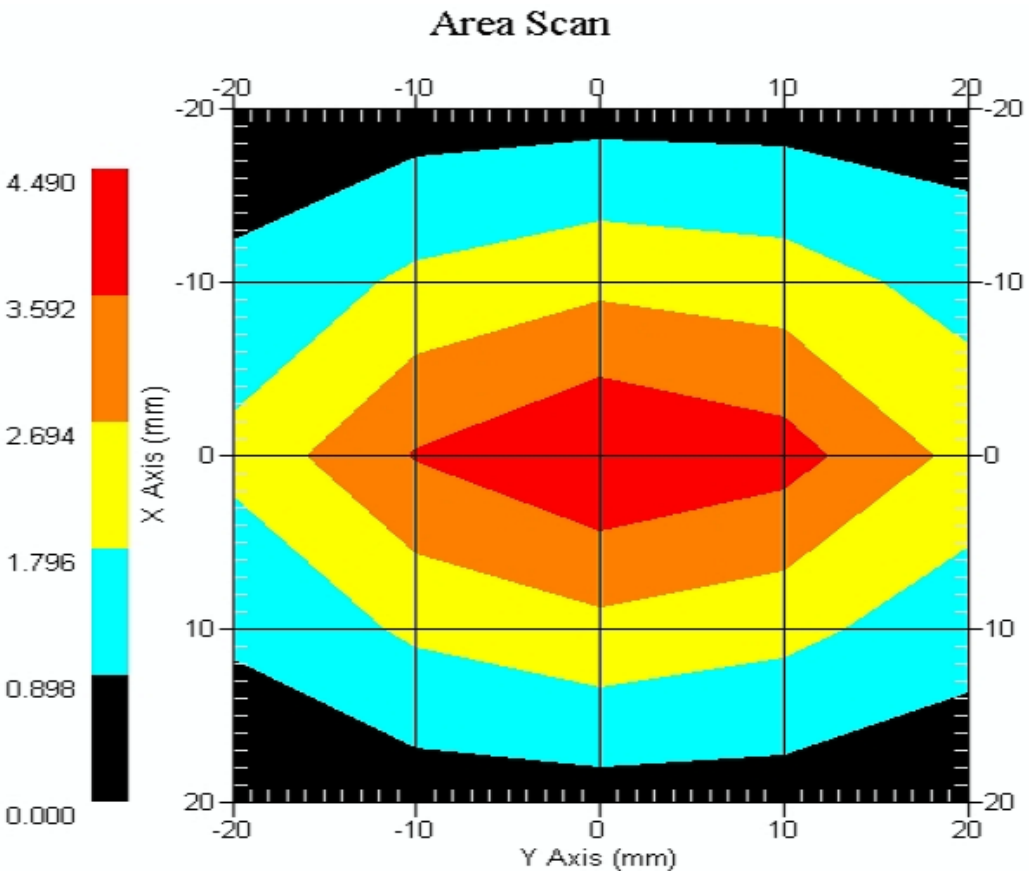
Length: 75.2 mm
Height: 42.5 mm

Electrical Specification

SWR: 1.021U
Return Loss: -45.729dB
Impedance: 50.079Ω

System Validation Results

Frequency	1 Gram	10 Gram	Peak
1750 MHz	38.2	20.8	69.2



This page has been reviewed for content and attested to by signature within this document.

Introduction

This Calibration Report has been produced in line with the SSI Dipole Calibration Procedure SSI-TP-018-ALSAS. The results contained within this report are for Validation Dipole 210-00715. The calibration routine consisted of a three-step process. Step 1 was a mechanical verification of the dipole to ensure that it meets the mechanical specifications. Step 2 was an Electrical Calibration for the Validation Dipole, where the SWR, Impedance, and the Return loss were assessed. Step 3 involved a System Validation using the ALSAS-10U, along with APREL E-020 130 MHz to 26 GHz E-Field Probe Serial Number 226.

References

SSI-TP-018-ALSAS Dipole Calibration Procedure
SSI-TP-016 Tissue Calibration Procedure
IEEE 1528 “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”

Conditions

Dipole 210-00715 was new taken from stock.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 20 °C +/- 0.5°C

This page has been reviewed for content and attested to by signature within this document.

Dipole Calibration Results

Mechanical Verification

APREL Length	APREL Height	Measured Length	Measured Height
75.5 mm	42.7 mm	75.2 mm	42.5 mm

Tissue Validation

Body Tissue 1750 MHz	Measured
Dielectric constant, ε_r	53.64
Conductivity, σ [S/m]	1.52

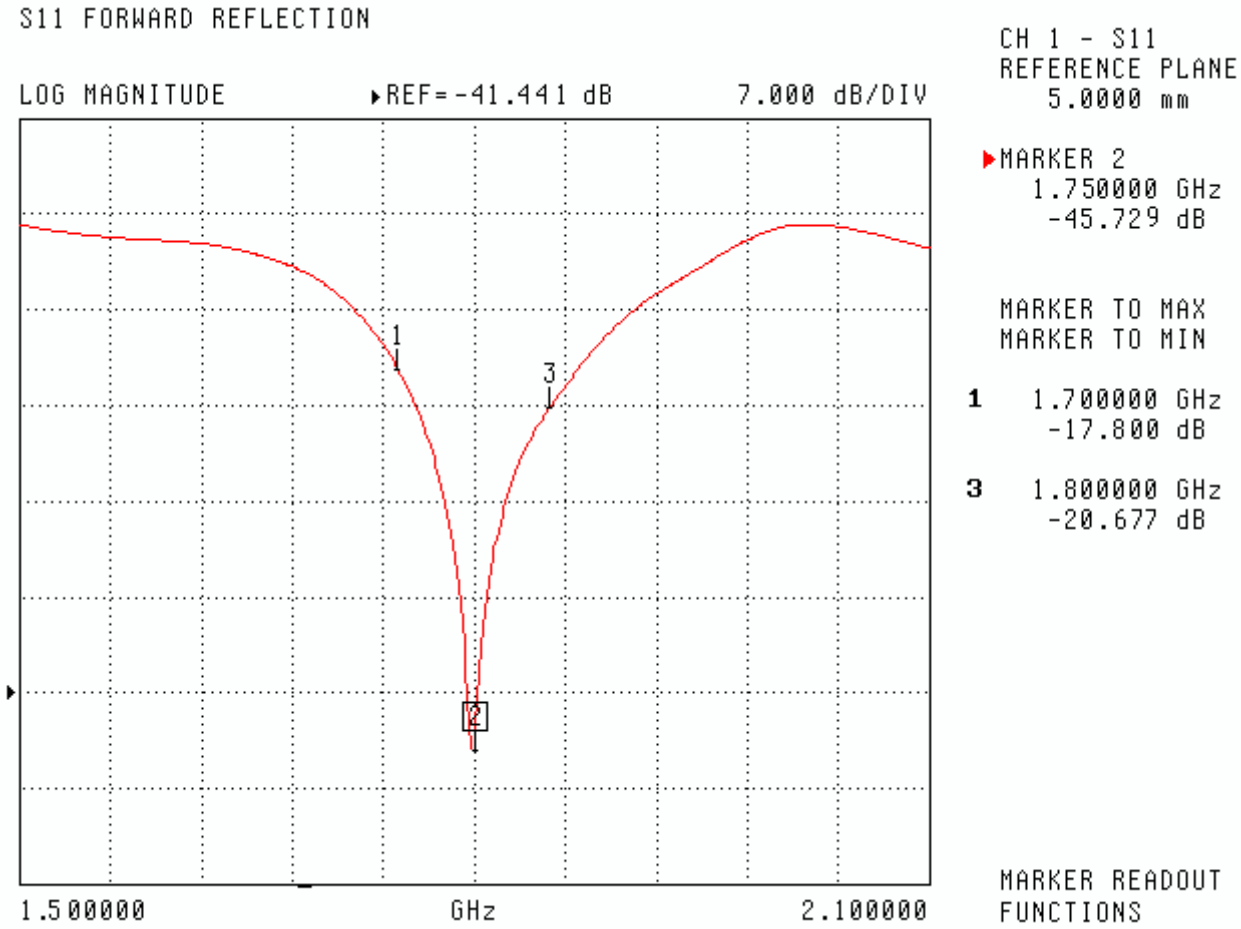
This page has been reviewed for content and attested to by signature within this document.

Electrical Calibration

Test	Result
S11 R/L	-45.729dB
SWR	1.021U
Impedance	50.079 Ω

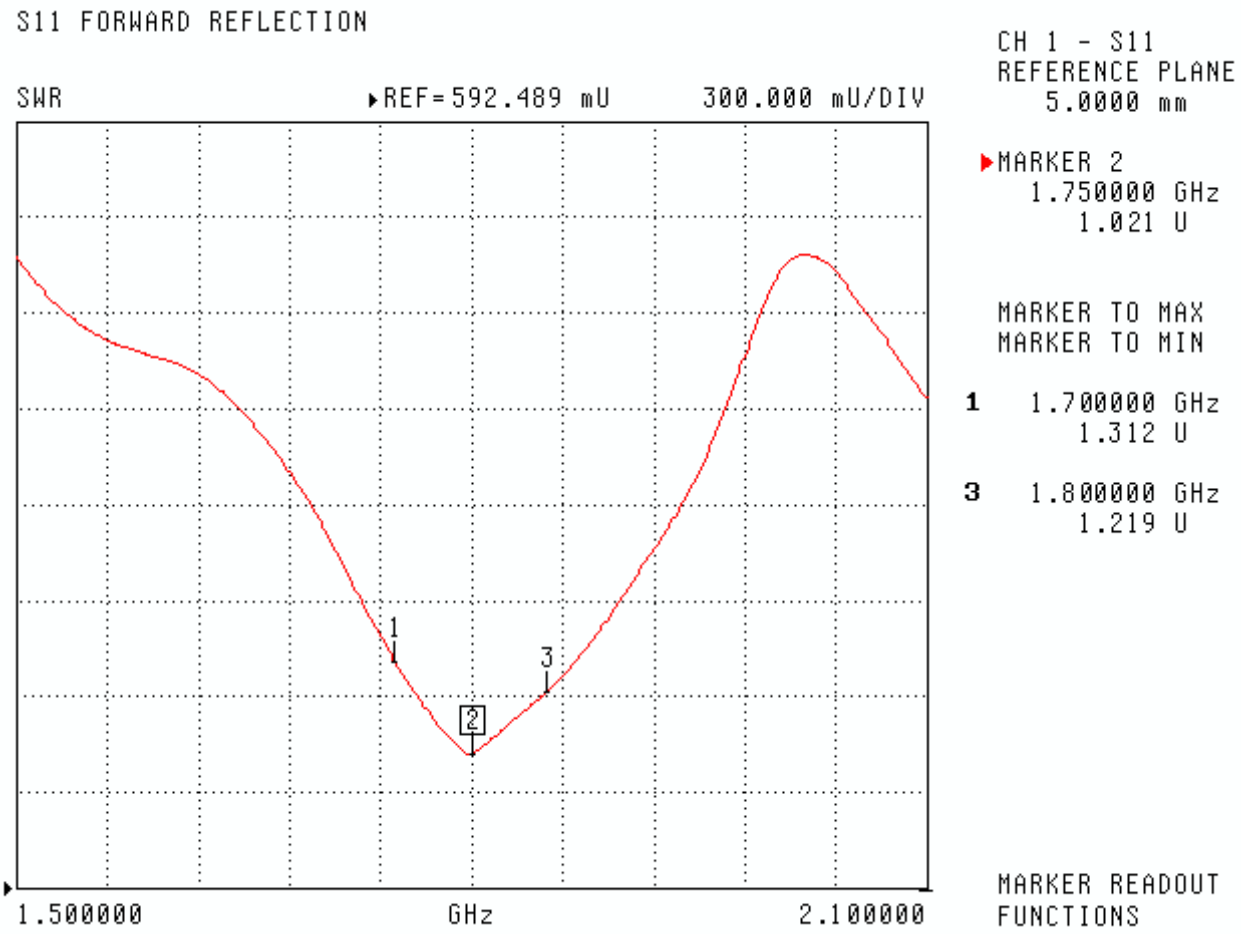
The Following Graphs are the results as displayed on the Vector Network Analyzer.

S11 Parameter Return Loss



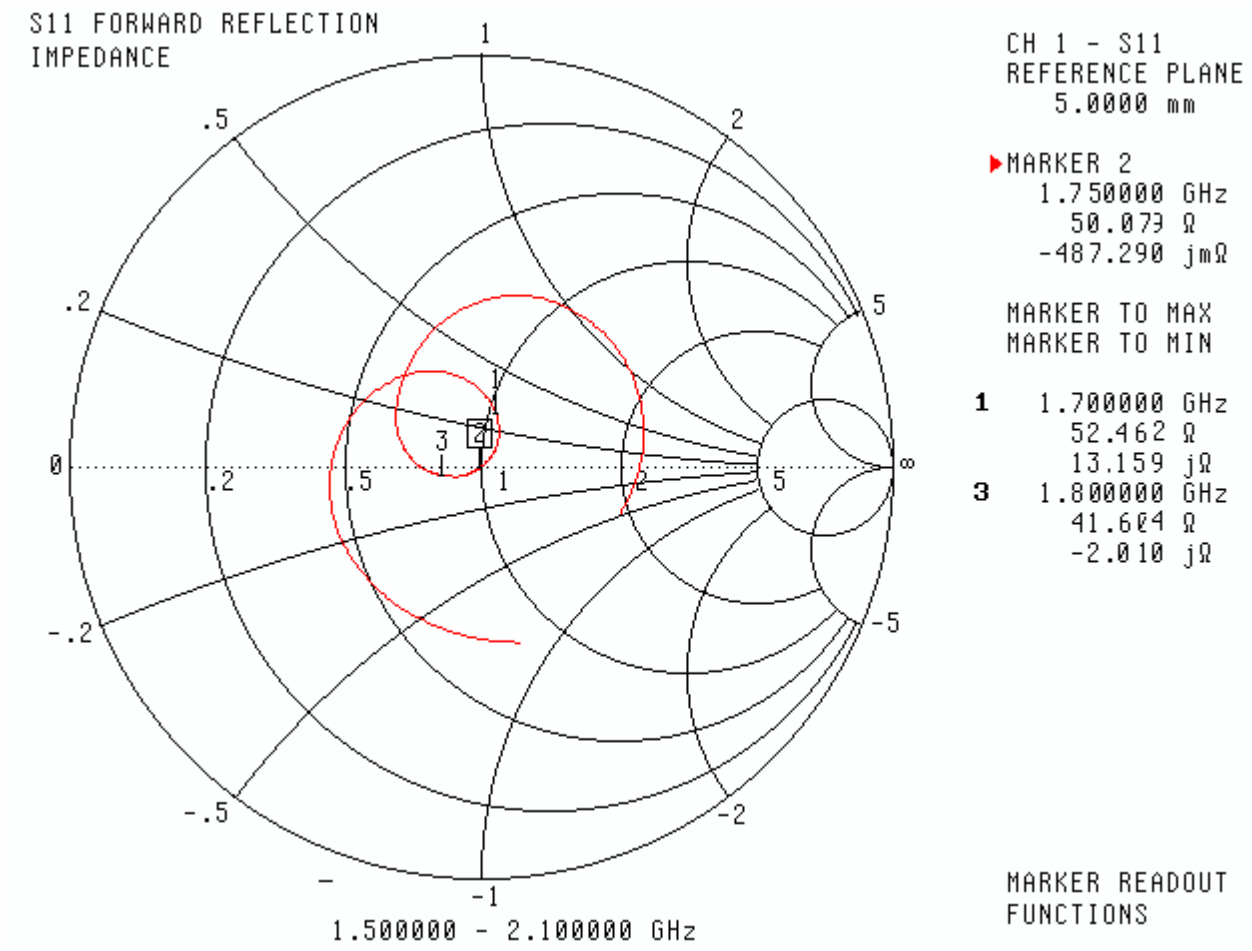
This page has been reviewed for content and attested to by signature within this document.

SWR



This page has been reviewed for content and attested to by signature within this document.

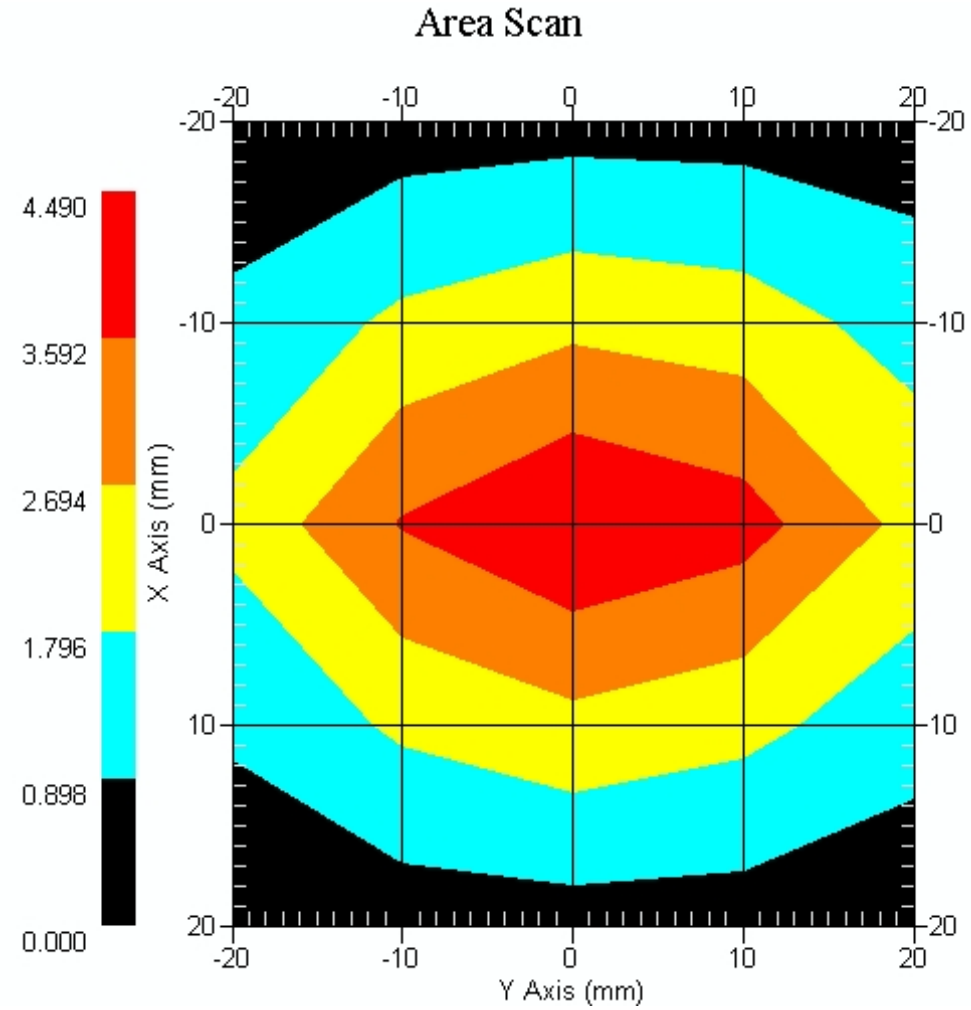
Smith Chart Dipole Impedance



This page has been reviewed for content and attested to by signature within this document.

System Validation Results Using the Electrically Calibrated Dipole

Body Tissue Frequency	1 Gram	10 Gram	Peak Above Feed Point
1750 MHz	38.2	20.8	69.2



This page has been reviewed for content and attested to by signature within this document.

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List 2009.

This page has been reviewed for content and attested to by signature within this document.

NCL CALIBRATION LABORATORIES

Calibration File No: DC-1115
Project Number: RFEL-1900-Dipole-5481

C E R T I F I C A T E OF C A L I B R A T I O N

It is certified that the equipment identified below has been calibrated in the **NCL CALIBRATION LABORATORIES** by qualified personnel following recognized procedures and using transfer standards traceable to NRC/NIST.

Validation Dipole

Manufacturer: APREL Laboratories
Part number: ALS-D-1900-S-2
Frequency: 1900 MHz
Serial No: 210-00713

Customer: RFEL

Calibrated: 15th January 2010
Released on: 19th January 2010

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary

Released By: _____

NCL CALIBRATION LABORATORIES

51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6

Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4162

Conditions

Dipole 210-00713 was new and taken from stock prior to calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 21 °C +/- 0.5°C

We the undersigned attest that to the best of our knowledge the calibration of this device has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol

C. Teodorian

Calibration Results Summary

The following results relate the Calibrated Dipole and should be used as a quick reference for the user.

Mechanical Dimensions

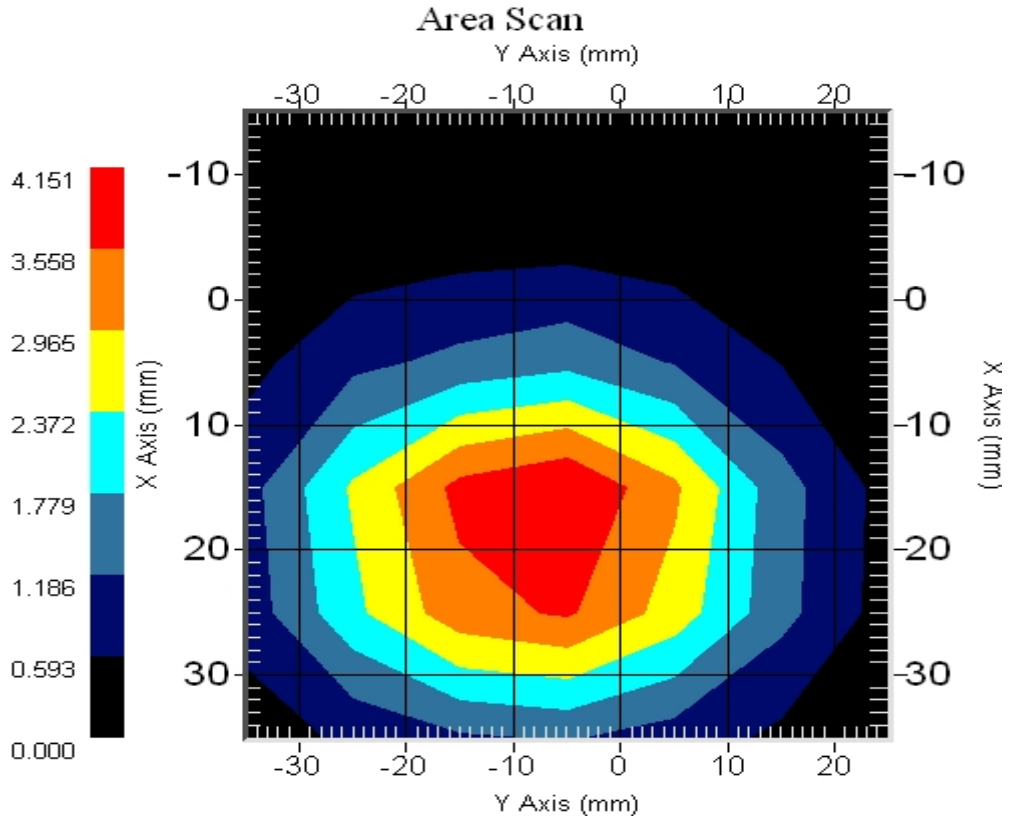
Length: 67.1 mm
Height: 38.9 mm

Electrical Specification

SWR: 1.011U
Return Loss: -45.642dB
Impedance: 50.194Ω

System Validation Results

Frequency	1 Gram	10 Gram	Peak
1900 MHz	38.7	20.5	69.7



This page has been reviewed for content and attested to by signature within this document.

Introduction

This Calibration Report has been produced in line with the SSI Dipole Calibration Procedure SSI-TP-018-ALSAS. The results contained within this report are for Validation Dipole 210-00713. The calibration routine consisted of a three-step process. Step 1 was a mechanical verification of the dipole to ensure that it meets the mechanical specifications. Step 2 was an Electrical Calibration for the Validation Dipole, where the SWR, Impedance, and the Return loss were assessed. Step 3 involved a System Validation using the ALSAS-10U, along with APREL E-020 130 MHz to 26 GHz E-Field Probe Serial Number 226.

References

SSI-TP-018-ALSAS Dipole Calibration Procedure
SSI-TP-016 Tissue Calibration Procedure
IEEE 1528 “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”

Conditions

Dipole 210-00713 was new taken from stock.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 20 °C +/- 0.5°C

This page has been reviewed for content and attested to by signature within this document.

Dipole Calibration Results

Mechanical Verification

APREL Length	APREL Height	Measured Length	Measured Height
68.0 mm	39.5 mm	67.1mm	38.9 mm

Tissue Validation

Head Tissue 1900 MHz	Measured
Dielectric constant, ε_r	40.03
Conductivity, σ [S/m]	1.38

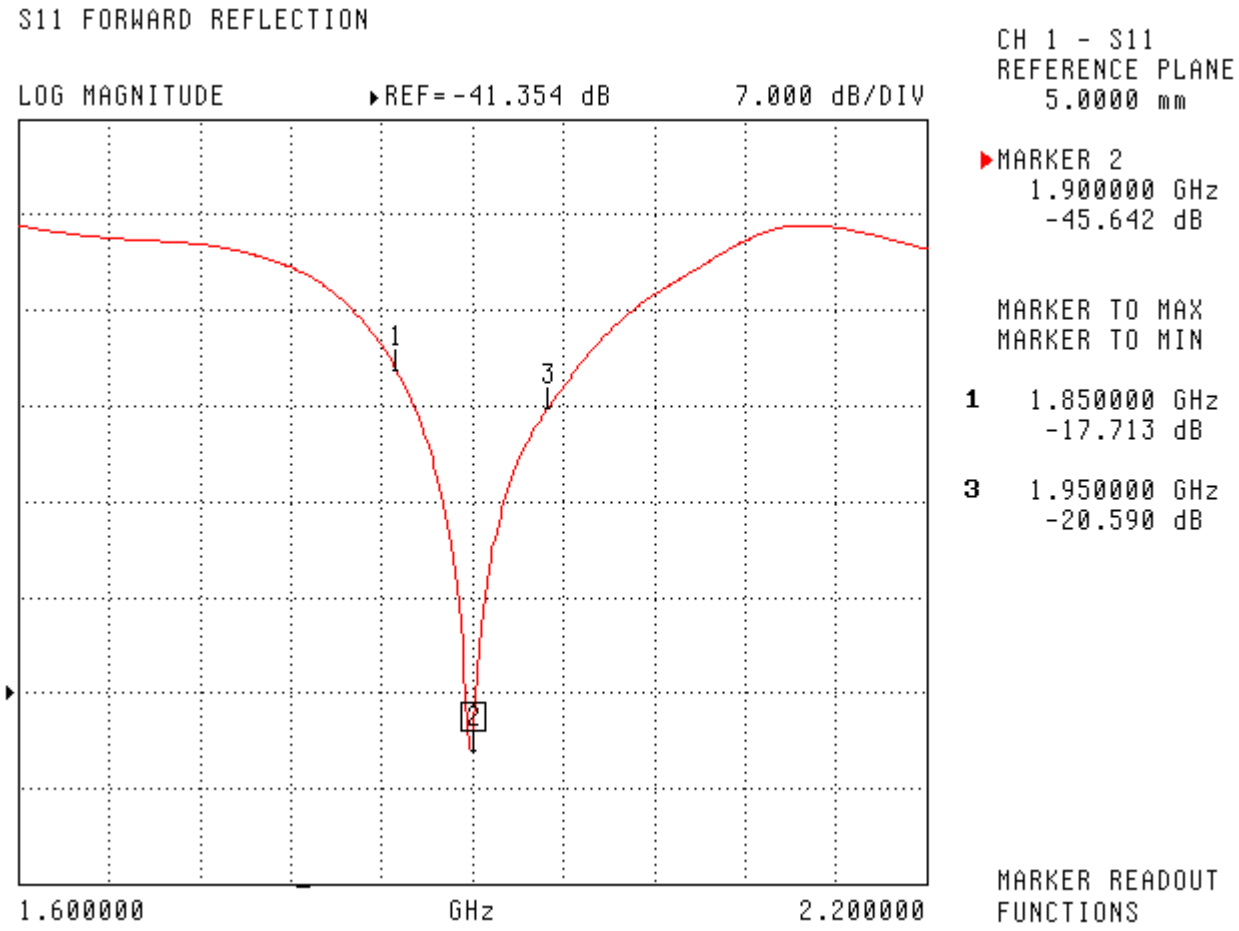
This page has been reviewed for content and attested to by signature within this document.

Electrical Calibration

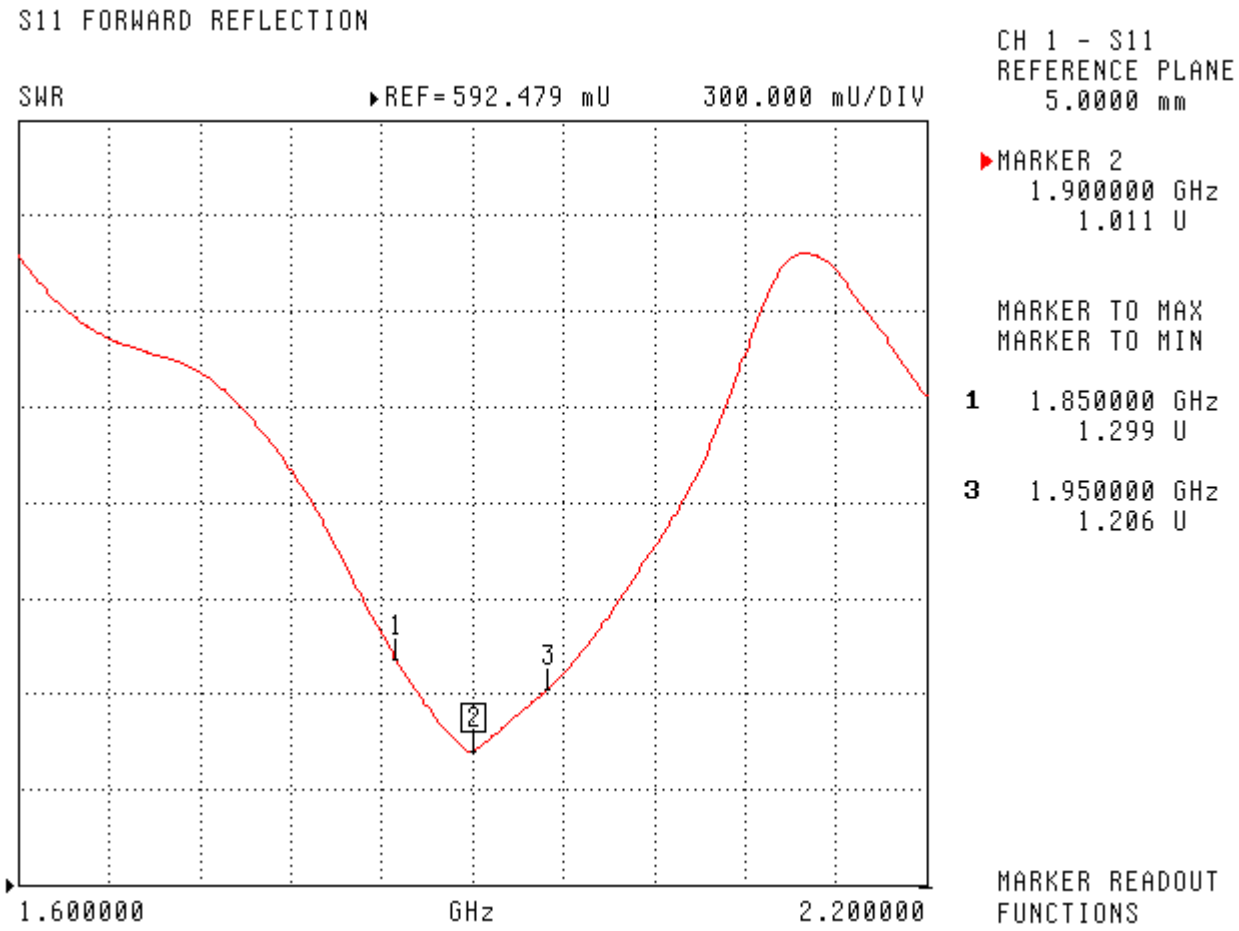
Test	Result
S11 R/L	-45.642dB
SWR	1.011U
Impedance	50.194 Ω

The Following Graphs are the results as displayed on the Vector Network Analyzer.

S11 Parameter Return Loss

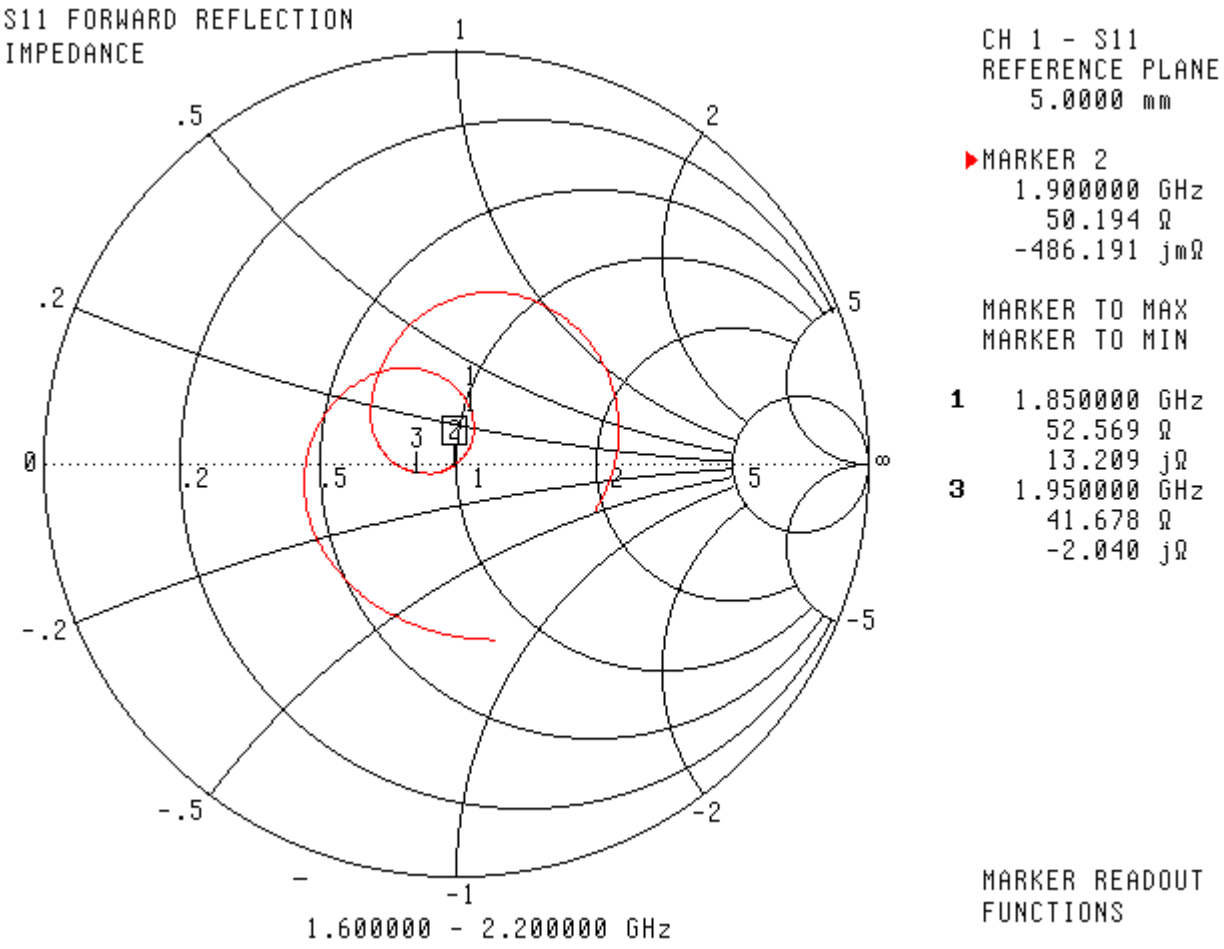


SWR



This page has been reviewed for content and attested to by signature within this document.

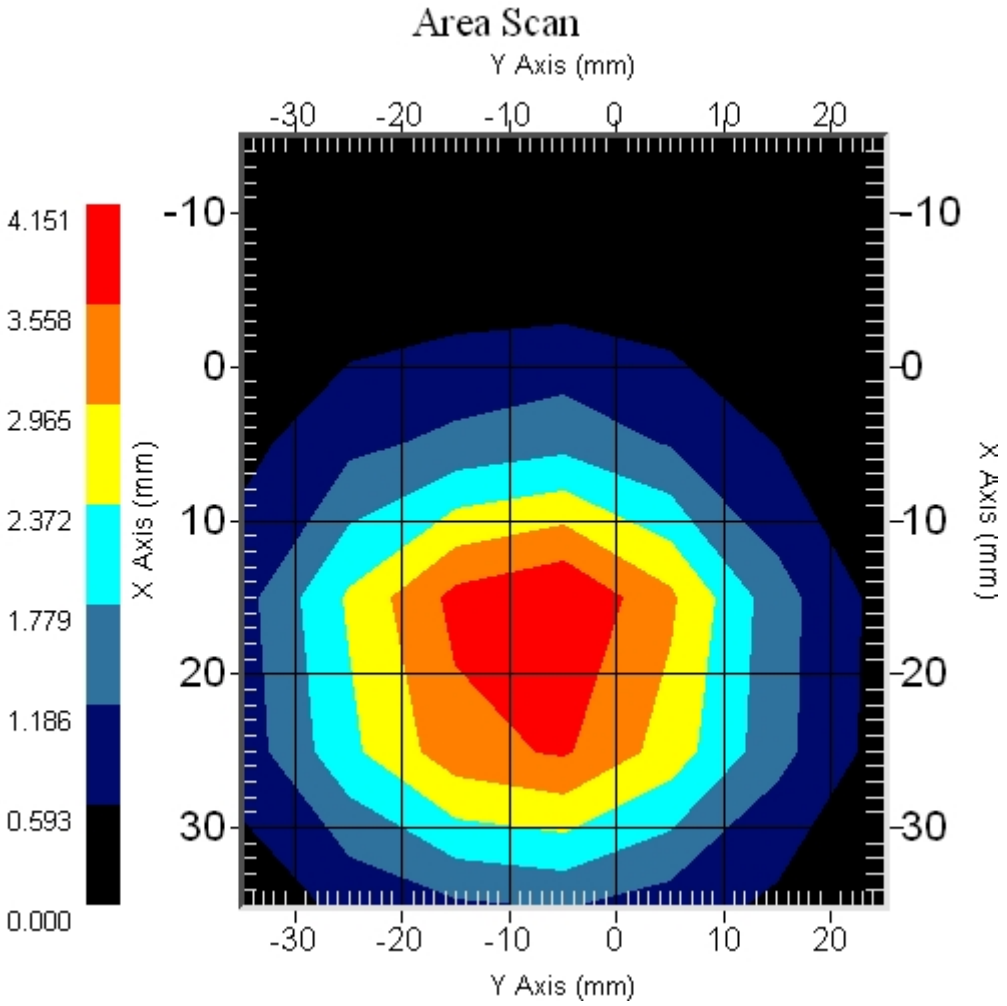
Smith Chart Dipole Impedance



This page has been reviewed for content and attested to by signature within this document.

System Validation Results Using the Electrically Calibrated Dipole

Head Tissue Frequency	1 Gram	10 Gram	Peak Above Feed Point
1900 MHz	38.7	20.5	69.7



This page has been reviewed for content and attested to by signature within this document.

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List 2009.

This page has been reviewed for content and attested to by signature within this document.

Appendix F – Phantom Calibration Data Sheets

This report shall not be reproduced except in full without the written approval of RF Exposure Lab, LLC.

NCL CALIBRATION LABORATORIES

Calibration File No.: RFE-273

CERTIFICATE OF CALIBRATION

It is certified that the equipment identified below has been calibrated in the **NCL CALIBRATION LABORATORIES** by qualified personnel following recognized procedures and using transfer standards traceable to National Standards.

Thickness of the UniPhantom is 2 mm ± 10%
Pinna thickness is 6 mm ± 10%

Resolution:	0.01 mm	Calibrated to:	0.0 mm
Stability:	OK	Accuracy:	< 0.1 mm

Calibrated By: Karen K. Feb 17/04.

NCL CALIBRATION LABORATORIES
51 SPECTRUM WAY
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