RF EXPOSURE LAB, LLC

2867 Progress Place, Suite 4D • Escondido, CA 92029 • U.S.A.
TEL (760) 737-3131 • FAX (760) 737-9131
http://www.rfexposurelab.com

CERTIFICATE OF COMPLIANCE
SAR EVALUATION

Novatel Wireless	Dates of Test: August 12-14, 23, 27, 2008
9645 Scranton Road, Suite 205	Test Report Number: SAR.20080804
San Diego, CA 92121	Revision C

FCC ID:	PKRNVWMC1000
IC Certificate:	3229B-MC1000
Model(s):	MC1000
Test Sample:	Engineering Unit Same as Production
Serial No.:	8708D
Equipment Type:	Wireless Modem
Classification:	Portable Transmitter Next to Body
TX Frequency Range:	824.2 – 848.8 MHz, 824.07 – 848.31 MHz, 826.4 – 846.6 MHz, 1850.2 – 1909.8 MHz, 1851.25 – 1908.75 MHz, 1852.4 – 1907.6 MHz
Frequency Tolerance:	± 25 ppm
Maximum RF Output:	835 MHz (1xRTT) – 24.18 dBm, 835 MHz (EvDo) – 24.47 dBm, 835 MHz (WCDMA) – 24.42 dBm, 850 MHz (GSM) – 32.85 dBm, 1900 MHz (1xRTT) – 23.78 dBm, 1900 MHz (EvDo) – 24.08 dBm, 1900 MHz (WCDMA) – 23.78 dBm, 1900 MHz (GSM) – 29.94 dBm Conducted
Signal Modulation:	GSM, CDMA, WCDMA
Antenna Type (Length):	Internal
Application Type:	Certification
FCC Rule Parts:	Part 22, 24
Industry Canada:	RSS-102

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

Table of Contents

1. Introduction

This measurement report shows compliance of the Novatel Wireless Model MC1000 FCC ID: PKRNVWMC1000 with FCC Part 2, 1093, ET Docket 93-62 Rules for mobile and portable devices and IC Certificate: 3229B-MC1000 with RSS102 & Safety Code 6. 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.

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)

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.

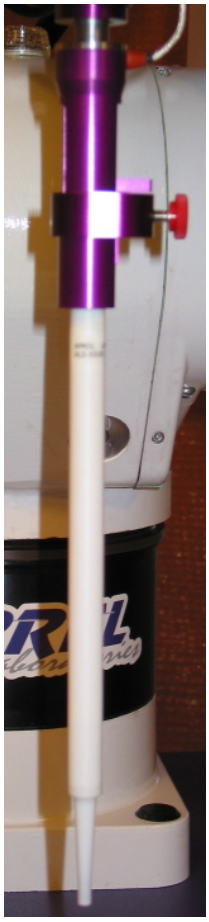
System Description

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.

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



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).

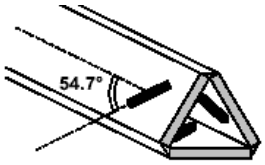
The overall uncertainty for the methodology and algorithms the ALSAS-10-U used during the SAR calculation was evaluated using the data from IEEE 1528 f3 algorithm:

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

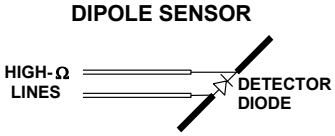
The probe used during the measurement process has been assessed to provide values for diode compression. These values are calculated during the probe calibration exercise and are used in the mathematical calculations for the assessment of SAR.

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.



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 which is the sum of the position (2.44 mm) and the sensor offset (1.56 mm). 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. For frequencies above 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 which is the sum of the probe position (1.44 mm) and the probe offset (0.56 mm). 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 1.56 mm (default setting) and the probe position set at 2.44 mm (default setting), the sensor to phantom gap will be 4.0 mm which is greater than half the probe tip diameter of 5.0 mm. For frequencies greater than 3 GHz, the probe diameter is 3 mm. With the sensor offset set at 0.56 mm (default setting) and the probe position set at 1.44 mm (default setting), the sensor to phantom gap will be 3.0 mm which is greater than half the probe tip diameter of 3.0 mm.

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.

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

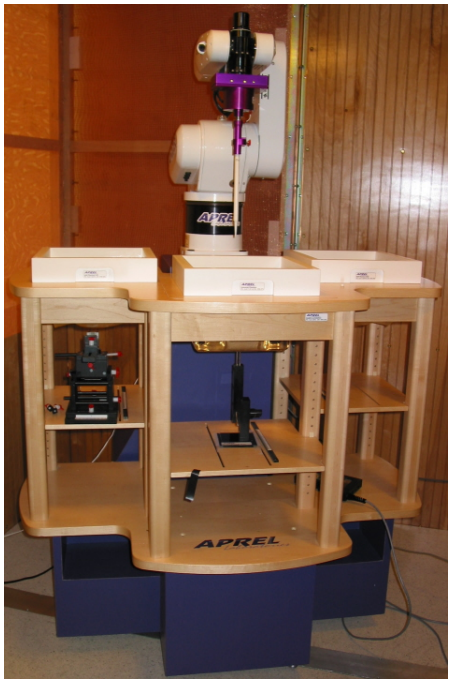
Features:	Signal Amplifier, End Effector, DAC
Software:	ALSAS 10-U Software

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



4. Probe and Dipole Calibration

See Appendix D and E.

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
Mixing Percentage			
Water		52.40	69.91
Sugar		45.00	0.00
Salt		1.40	0.13
HEC		1.00	0.00
Bactericide		0.10	0.00
DGBE		0.00	29.96
Dielectric Constant	Target	55.20	53.30
Conductivity (S/m)	Target	0.97	1.52

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).

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].

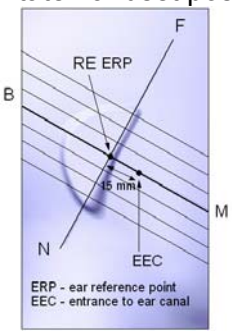


Figure 6.1 Close-up side view of ERP's

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].

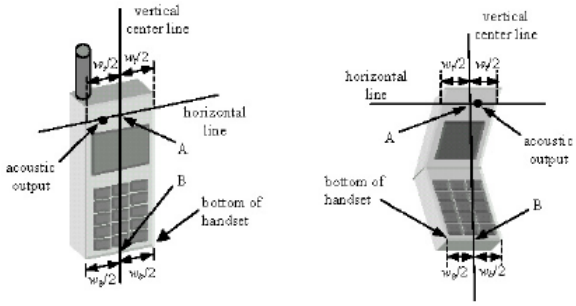


Figure 6.3 Handset Vertical Center & Horizontal Line Reference Points

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.

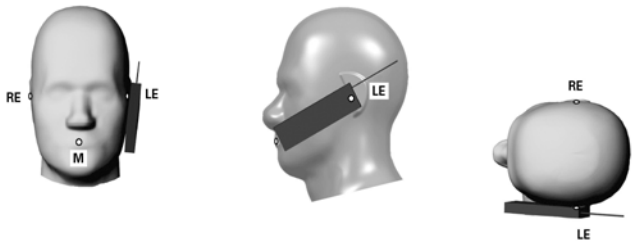


Figure 7.1 Front, Side and Top View of Cheek/Touch Position

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.

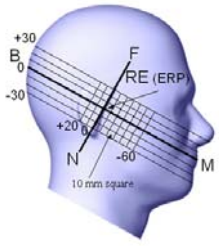


Figure 7.2 Side view w/ relevant markings

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).

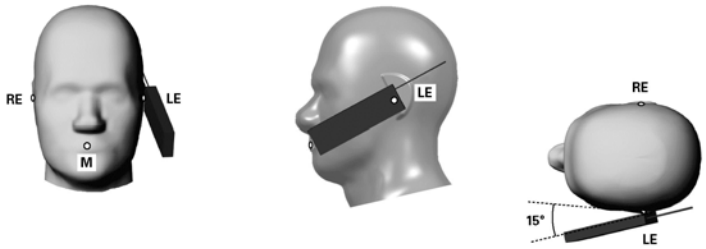


Figure 7.3 Front, Side and Top View of Ear/15˚ Tilt Position

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.

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.

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	$(1\text{-cp})^{1/2}$	$(1\text{-cp})^{1/2}$	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	4.2	rectangular	•3	1	1	2.4	2.4
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.)	0.5	normal	1	0.7	0.5	0.4	0.3
Liquid Permittivity(target)	5.0	rectangular	•3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	1.0	normal	1	0.6	0.5	0.6	0.5
Combined Uncertainty		RSS				9.6	9.4
Combined Uncertainty (coverage factor=2)		Normal(k=2)				19.1	18.8

10. System Validation

Tissue Verification

Table 10.1 Measured Tissue Parameters

		1900 MHz Body		1900 MHz Body		1900 MHz Body	
Date(s)		Aug. 12, 2008		Aug. 13, 2008		Aug. 14, 2008	
Liquid Temperature (˚C)	20.0	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: ε		53.30	53.57	53.30	54.35	53.30	52.93
Conductivity: σ		1.52	1.53	1.52	1.51	1.52	1.50
		835 MHz Body		1900 MHz Body		835 MHz Body	
Date(s)		Aug. 14, 2008		Aug. 23, 2008		Aug. 23, 2008	
Liquid Temperature (˚C)	20.0	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: ε		55.20	55.26	53.30	52.44	55.20	54.70
Conductivity: σ		0.97	0.96	1.52	1.51	0.97	0.98
		1900 MHz Body		835 MHz Body			
Date(s)		Aug. 27, 2008		Aug. 27, 2008			
Liquid Temperature (˚C)	20.0	Target	Measured	Target	Measured		
Dielectric Constant: ε		53.30	52.11	55.20	55.61		
Conductivity: σ		1.52	1.50	0.97	0.96		

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 (%)
12-Aug-2008	1900 MHz	40.99	39.37	- 3.95
13-Aug-2008	1900 MHz	40.99	40.12	- 2.12
14-Aug-2008	1900 MHz	40.99	40.01	- 2.39
14-Aug-2008	835 MHz	9.75	10.04	+ 2.97
23-Aug-2008	1900 MHz	40.99	39.11	- 4.59
23-Aug-2008	835 MHz	9.75	9.45	- 3.08
27-Aug-2008	1900 MHz	40.99	38.91	- 5.07
27-Aug-2008	835 MHz	9.75	9.25	- 5.13

See Appendix A for data plots.

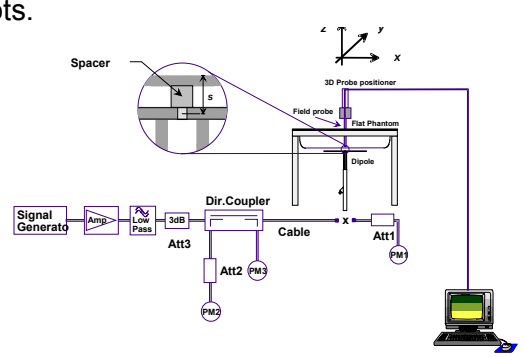


Figure 10.1 Dipole Validation Test Setup

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 four sides of the modem. The bottom side testing was conducted with the modem installed in a rear USB port on a Toshiba Portege Model R200. The left side testing was conducted with the modem installed in a side USB port on a HP Compaq Model nx9600. The top and right side testing was 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 Model R200. The gap was measured to be 12 mm from the phantom for all sides.

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.

The GSM/GPRS testing was conducted in the GPRS mode. The GPRS mode is a 2-slot configuration. The power measured is peak power. The average power in GSM is 1 ½ dB lower than the average power in GPRS. The device does have the EDGE capability and the power measurements for EDGE are list in the table below.

The WCDMA testing was conducted using 12.2 kbps RMC configured in Test Loop Mode 1. The HSPA testing was conducted with HS-DPCCH, E-DPCCH and E-DPDCH all enabled and a 12.2 kbps RMC. FRC was configured according to HS-DPCCH Sub-Test 1 using H-set 1 and QPSK.

The Desk Mount was test on the channel with the highest SAR value for each of the modes. It was tested in both the 850 MHz band and the 1900 MHz band. It was tested for each mode with the same settings as described above.

The testing was conducted on the high conducted power channel first. If the SAR value was 3 dB or more below the limit, the remaining two channels were not tested. In some cases, the highest conducted power channel was not the Mid channel. This was conducted to insure that the most conservative SAR values was reported.

An embedded antenna is seen on the underside of the top cover in the photos section of this report. This Inverted-F (PIFA) antenna is heat-staked to the underside of this cover. This is the Diversity Rx-only Antenna and is Non-Transmitting. This Diversity Antenna is made of 0.2 mm thickness Phosphorous Bronze – Nickel plated with selective Gold plating on the feed legs.

12. FCC 3G 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.

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	24.01	24.22	24.18	24.13	24.14	24.16	24.05	24.09	24.16	23.43
	384	23.53	23.65	23.57	23.54	23.62	23.74	23.77	23.61	23.68	22.92
	777	23.40	23.50	23.54	23.42	23.50	23.50	23.44	23.54	23.56	22.91
PCS	25	23.23	23.29	23.25	23.33	23.44	23.18	23.45	23.35	23.36	22.58
	600	23.54	23.54	23.60	23.68	23.78	23.69	23.60	23.59	23.68	22.76
	1175	23.72	23.78	23.80	23.59	23.69	23.59	23.76	23.74	23.74	22.96

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	24.10	24.02	24.08	24.02	24.06
	384	23.71	23.64	23.65	23.71	23.78
	777	23.82	23.71	23.72	23.64	23.79
PCS	25	23.09	23.05	23.02	23.06	23.14
	600	23.36	23.35	23.36	23.38	23.44
	1175	23.54	23.60	23.61	23.64	23.72

EvDo Rev A Power Measurements

1x EvDo Rev. A Type 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	24.21	24.27	24.31	24.34	24.36
	384	23.80	23.82	23.97	24.02	23.98
	777	23.78	23.79	23.91	23.85	23.81
PCS	25	23.30	23.22	23.38	23.34	23.34
	600	23.44	23.34	23.47	23.51	23.41
	1175	23.73	23.75	23.78	23.81	23.82

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	24.47	24.42	24.46	24.40	24.43	24.44	24.43	24.32	24.43	24.40	24.46	24.42
	384	24.24	24.16	24.18	24.17	24.20	24.21	24.21	24.18	24.19	24.17	24.23	24.22
	777	24.07	24.13	24.09	24.12	24.09	24.11	24.10	24.13	24.12	24.08	24.12	24.18
PCS	25	23.51	23.62	23.65	23.61	23.64	23.52	23.50	23.51	23.48	23.51	23.57	23.62
	600	23.72	23.84	23.90	23.87	23.91	23.79	23.67	23.75	23.79	23.65	23.69	23.72
	1175	24.06	24.06	23.94	24.02	24.08	24.10	24.06	23.96	24.02	23.96	23.98	24.06

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

GSM		
Band	Channel	Power
Cellular	128	32.81
	190	32.85
	251	32.82
PCS	512	29.92
	661	29.94
	810	29.91

GPRS/2-Slot		
Band	Channel	Power
Cellular	128	31.72
	190	31.78
	251	31.78
PCS	512	28.56
	661	28.69
	810	27.98

EDGE		
Band	Channel	Power
Cellular	128	26.6
	190	26.2
	251	26.2
PCS	512	25.4
	661	25.4
	810	25.3

3GPP Release Version	Mode	Cellular Band [dBm]			Sub-Test (See Table Below)	HSPA FRC
		4132	5183	4233		
99	WCDMA	24.42	24.19	24.03	-	-
6	HSDPA	24.39	24.20	24.05	1	H-Set 1
6		2426	24.11	24.02	2	H-Set 1
6		24.34	24.08	23.95	3	H-Set 1
6		24.22	24.17	23.97	4	H-Set 1
6	HSUPA	24.27	24.15	23.89	1	H-Set 1
6		24.19	24.02	23.92	2	H-Set 1
6		24.28	24.19	23.97	3	H-Set 1
6		24.32	24.10	24.01	4	H-Set 1
6		24.26	24.04	23.96	5	H-Set 1

3GPP Release Version	Mode	PCS Band [dBm]			Sub-Test (See Table Below)	HSPA FRC
		9262	9400	9538		
99	WCDMA	23.57	23.76	24.09	-	-
5	HSDPA	23.49	23.67	24.04	1	H-Set 1
5		23.56	23.72	23.99	2	H-Set 1
5		23.39	23.66	24.01	3	H-Set 1
5		23.42	23.68	23.92	4	H-Set 1
6	HSUPA	23.58	23.78	23.91	1	H-Set 1
6		23.41	23.59	24.10	2	H-Set 1
6		23.52	23.62	24.02	3	H-Set 1
6		23.54	23.69	23.97	4	H-Set 1
6		23.47	23.71	23.94	5	H-Set 1

Sub-Test Setup for Release 5 HSDPA

Sub-Test	β_c	β_d	B_c/β_d	β_{hs}
1	2/15	15/15	2/15	4/15
2	12/15	15/15	15/15	24/15
3	15/15	8/15	15/8	30/15
4	15/15	4/15	15/4	30/15
Δ_{ack}, Δ_{nack} and Δ_{cqi} = 8				

Sub-Test Setup for Release 6 HSUPA

Sub-Test	β_c	β_d	B_c/β_d	β_{hs}	B_{ec}	B_{ed}	MPR	AG Index	E-TFCI
1	11/15	15/15	11/15	22/15	209/225	1039/225	0.0	20	75
2	6/15	15/15	6/15	12/15	12/15	94/75	2.0	12	67
3	15/15	9/15	15/9	30/15	30/15	47/15	1.0	15	92
4	2/15	15/15	2/15	4/15	2/15	56/15	2.0	17	71
5	15/15	15/15	15/15	30/15	24/15	134/15	0.0	21	81
Δ_{ack}, Δ_{nack} and Δ_{cqi} = 8									

SAR Data Summary – 835 MHz Body – IS2000

MEASUREMENT RESULTS									
Gap	Side	Frequency		Modulation	Begin/End Power		RC	Configuration	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)			
12 mm	Top	824.07	1013	CDMA	24.16	24.15	RC3	TDSO/SO32 FCH Only	0.490
	Bottom	824.07	1013	CDMA	24.12	24.10	RC3	TDSO/SO32 FCH Only	0.697
	Right Side	824.07	1013	CDMA	24.15	24.12	RC3	TDSO/SO32 FCH Only	0.372
	Left Side	824.07	1013	CDMA	24.13	24.10	RC3	TDSO/SO32 FCH Only	0.459
14 mm	Desk Mount	824.07	1013	CDMA	24.14	24.12	RC3	TDSO/SO32 FCH Only	0.520

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

SAR Data Summary – 835 MHz Body – EvDo

MEASUREMENT RESULTS									
Gap	Side	Frequency		Rev Level	Begin/End Power		Reverse Channel	Forward Channel	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)			
12 mm	Top	824.07	1013	Rev 0	24.06	24.02	153.6 kbps	2 Slot 307.2 kbps	0.504
		824.07	1013	Rev A	24.43	24.41	4096 bits	2 Slot 307.2 kbps	0.509
	Bottom	824.07	1013	Rev 0	24.03	24.00	153.6 kbps	2 Slot 307.2 kbps	0.739
		824.07	1013	Rev A	24.40	24.38	4096 bits	2 Slot 307.2 kbps	0.750
	Right Side	824.07	1013	Rev 0	24.01	23.98	153.6 kbps	2 Slot 307.2 kbps	0.379
		824.07	1013	Rev A	24.42	24.39	4096 bits	2 Slot 307.2 kbps	0.400
	Left Side	824.07	1013	Rev 0	24.04	24.01	153.6 kbps	2 Slot 307.2 kbps	0.461
		824.07	1013	Rev A	24.39	24.37	4096 bits	2 Slot 307.2 kbps	0.485
14 mm	Desk Mount	824.07	1013	Rev A	24.41	24.37	4096 bits	2 Slot 307.2 kbps	0.585

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

SAR Data Summary – 835 MHz Body – WCDMA

MEASUREMENT RESULTS									
Gap	Side	Frequency		Configuration	Begin/End Power		RMC	Test Set Up	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)			
12 mm	Top	826.4	4132	WCDMA	24.42	24.40	12.2 kbps	Test Loop 1	0.553
		826.4	4132	HSPA	24.27	24.23	12.2 kbps	All Enabled	0.546
	Bottom	826.4	4132	WCDMA	24.39	24.38	12.2 kbps	Test Loop 1	0.782
		826.4	4132	HSPA	24.25	24.23	12.2 kbps	All Enabled	0.701
	Right Side	826.4	4132	WCDMA	24.41	24.39	12.2 kbps	Test Loop 1	0.404
		826.4	4132	HSPA	24.26	24.23	12.2 kbps	All Enabled	0.370
	Left Side	826.4	4132	WCDMA	24.38	24.35	12.2 kbps	Test Loop 1	0.425
		826.4	4132	HSPA	24.24	24.21	12.2 kbps	All Enabled	0.377
14 mm	Desk Mount	826.4	4132	WCDMA	24.39	24.36	12.2 kbps	Test Loop 1	0.579

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

SAR Data Summary – 835 MHz Body – GPRS/2-Slot

MEASUREMENT RESULTS									
Gap	**Side**	**Frequency**		**Modulation**	**Begin/End Power**		**TX Level**	**Multislot Configuration**	**SAR (W/kg)**
		MHz	**Ch.**		**(dBm)**	**(dBm)**			
12 mm	Top	836.6	190	GMSK	31.78	31.76	0	4 down, 1 up	0.503
	Bottom	836.6	190	GMSK	31.72	31.69	0	4 down, 1 up	0.512
	Right Side	836.6	190	GMSK	31.76	31.74	0	4 down, 1 up	0.385
	Left Side	836.6	190	GMSK	31.74	31.73	0	4 down, 1 up	0.263
14 mm	Desk Mount	836.6	190	GMSK	31.76	31.71	0	4 down, 1 up	0.379

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

SAR Data Summary – 1900 MHz Body – IS2000

MEASUREMENT RESULTS

Gap	Side	Frequency		Modulation	Begin/End Power		RC	Configuration	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)			
12 mm	Top	1851.25	25	CDMA	23.36	23.34	RC3	TDSO/SO32 FCH Only	1.124
		1880.00	600	CDMA	23.68	23.65	RC3	TDSO/SO32 FCH Only	1.398
		1908.75	1175	CDMA	23.74	23.71	RC3	TDSO/SO32 FCH Only	1.477
	Bottom	1851.25	25	CDMA	23.34	23.32	RC3	TDSO/SO32 FCH Only	1.296
		1880.00	600	CDMA	23.65	23.61	RC3	TDSO/SO32 FCH Only	1.455
		1908.75	1175	CDMA	23.73	23.70	RC3	TDSO/SO32 FCH Only	1.502
	Right Side	1851.25	25	CDMA	23.32	23.29	RC3	TDSO/SO32 FCH Only	1.101
		1880.00	600	CDMA	23.66	23.62	RC3	TDSO/SO32 FCH Only	1.050
		1908.75	1175	CDMA	23.71	23.69	RC3	TDSO/SO32 FCH Only	1.190
	Left Side	1851.25	25	CDMA	23.35	23.32	RC3	TDSO/SO32 FCH Only	1.170
		1880.00	600	CDMA	23.67	23.65	RC3	TDSO/SO32 FCH Only	1.169
		1908.75	1175	CDMA	23.70	23.68	RC3	TDSO/SO32 FCH Only	1.167
14 mm	Desk Mount	1908.75	1175	CDMA	23.71	23.67	RC3	TDSO/SO32 FCH Only	0.868

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

SAR Data Summary – 1900 MHz Body – EvDo

MEASUREMENT RESULTS									
Gap	Side	Frequency		Rev Level	Begin/End Power		Reverse Channel	Forward Channel	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)			
12 mm	Top	1851.25	25	Rev 0	23.14	23.12	153.6 kbps	2 Slot 307.2 kbps	1.028
		1880.00	600		23.44	23.41	153.6 kbps	2 Slot 307.2 kbps	1.181
		1908.75	1175		23.72	23.70	153.6 kbps	2 Slot 307.2 kbps	1.396
		1851.25	25	Rev A	23.48	23.45	4096 bits	2 Slot 307.2 kbps	1.094
		1880.00	600		23.79	23.76	4096 bits	2 Slot 307.2 kbps	1.383
		1908.75	1175		24.02	24.00	4096 bits	2 Slot 307.2 kbps	1.387
	Bottom	1851.25	25	Rev 0	23.12	23.10	153.6 kbps	2 Slot 307.2 kbps	1.173
		1880.00	600		23.41	23.38	153.6 kbps	2 Slot 307.2 kbps	1.344
		1908.75	1175		23.70	23.67	153.6 kbps	2 Slot 307.2 kbps	1.463
		1851.25	25	Rev A	23.45	23.42	4096 bits	2 Slot 307.2 kbps	1.346
		1880.00	600		23.76	23.71	4096 bits	2 Slot 307.2 kbps	1.506
		1908.75	1175		24.00	23.96	4096 bits	2 Slot 307.2 kbps	1.505
	Right Side	1851.25	25	Rev 0	23.10	23.05	153.6 kbps	2 Slot 307.2 kbps	1.106
		1880.00	600		23.42	23.39	153.6 kbps	2 Slot 307.2 kbps	0.934
		1908.75	1175		23.69	23.66	153.6 kbps	2 Slot 307.2 kbps	1.162
		1851.25	25	Rev A	23.46	23.42	4096 bits	2 Slot 307.2 kbps	0.853
		1880.00	600		23.78	23.74	4096 bits	2 Slot 307.2 kbps	0.851
		1908.75	1175		23.99	23.95	4096 bits	2 Slot 307.2 kbps	0.910
	Left Side	1851.25	25	Rev 0	23.14	23.12	153.6 kbps	2 Slot 307.2 kbps	1.065
		1880.00	600		23.42	23.41	153.6 kbps	2 Slot 307.2 kbps	1.058
		1908.75	1175		23.71	23.68	153.6 kbps	2 Slot 307.2 kbps	1.070
		1851.25	25	Rev A	23.44	23.42	4096 bits	2 Slot 307.2 kbps	1.118
		1880.00	600		23.77	23.73	4096 bits	2 Slot 307.2 kbps	1.164
		1908.75	1175		24.01	23.98	4096 bits	2 Slot 307.2 kbps	1.125
14 mm	Desk Mount	1880.00	600	Rev A	23.74	23.69	4096 bits	2 Slot 307.2 kbps	1.056

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

SAR Data Summary – 1900 MHz Body – WCDMA

MEASUREMENT RESULTS

Gap	Side	Frequency		Configuration	Begin/End Power		RMC	Test Setup	SAR (W/kg)
		MHz	Ch.		(dBm)	(dBm)			
12 mm	Top	1852.4	9262	WCDMA	23.57	23.52	12.2 kbps	Test Loop 1	0.927
		1880.0	9400		23.76	23.71	12.2 kbps	Test Loop 1	1.077
		1907.6	9538		24.09	24.06	12.2 kbps	Test Loop 1	1.500
		1852.4	9262	HSPA	23.58	23.56	12.2 kbps	All Enabled	0.770
		1880.0	9400		23.78	23.75	12.2 kbps	All Enabled	0.941
		1907.6	9538		23.91	23.89	12.2 kbps	All Enabled	1.059
	Bottom	1852.4	9262	WCDMA	23.52	23.50	12.2 kbps	Test Loop 1	1.268
		1880.0	9400		23.71	23.68	12.2 kbps	Test Loop 1	1.275
		1907.6	9538		24.04	24.01	12.2 kbps	Test Loop 1	1.502
		1852.4	9262	HSPA	23.56	23.52	12.2 kbps	All Enabled	1.102
		1880.0	9400		23.74	23.71	12.2 kbps	All Enabled	1.209
		1907.6	9538		23.87	23.83	12.2 kbps	All Enabled	1.347
	Right Side	1852.4	9262	WCDMA	23.54	23.52	12.2 kbps	Test Loop 1	0.857
		1880.0	9400		23.73	23.71	12.2 kbps	Test Loop 1	0.872
		1907.6	9538		24.06	24.01	12.2 kbps	Test Loop 1	0.916
		1880.0	9400	HSPA	23.75	23.72	12.2 kbps	All Enabled	0.606
	Left Side	1852.4	9262	WCDMA	23.56	23.51	12.2 kbps	Test Loop 1	1.039
		1880.0	9400		23.74	23.72	12.2 kbps	Test Loop 1	1.492
		1907.6	9538		24.08	24.06	12.2 kbps	Test Loop 1	1.469
		1880.0	9400	HSPA	23.77	23.72	12.2 kbps	All Enabled	0.702
14 mm	Desk Mount	1907.6	9538	WCDMA	24.07	24.03	12.2 kbps	Test Loop 1	1.063

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

SAR Data Summary – 1900 MHz Body – GPRS/2-Slot

MEASUREMENT RESULTS									
Gap	**Side**	**Frequency**		**Modulation**	**Begin/End Power**		**TX Level**	**Multislot Configuration**	**SAR (W/kg)**
		MHz	**Ch.**		**(dBm)**	**(dBm)**			
12 mm	Top	1880.0	661	GMSK	28.19	28.16	0	4 down, 1 up	0.437
	Bottom	1880.0	661	GMSK	28.16	28.12	0	4 down, 1 up	0.396
	Right Side	1880.0	661	GMSK	28.14	28.10	0	4 down, 1 up	0.281
	Left Side	1880.0	661	GMSK	28.18	28.15	0	4 down, 1 up	0.457
14 mm	Desk Mount	1880.0	661	GMSK	28.14	28.10	0	4 down, 1 up	0.283
					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

13. Test Equipment List

Table 12.1 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	12/03/2008	RFE-217
Aprel E-Field Probe ALS-E030	04/30/2008	AL-E3P1
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	04/30/2009	RFE-362
Aprel Validation Dipole ALS-D-835-S-2	02/22/2010	RFE-274
Aprel Validation Dipole ALS-D-1900-S-2	02/21/2010	RFE-277
Aprel Validation Dipole ALS-D-2450-S-2	02/20/2010	RFE-278
Aprel Validation Dipole ALS-D-BB-S-2	05/23/2009	5258-235-00801
Agilent (HP) 437B Power Meter	12/03/2008	3125U08837
Agilent (HP) 8481B Power Sensor	12/03/2008	3318A05384
Advantest R3261A Spectrum Analyzer	12/03/2008	31720068
Agilent (HP) 8350B Signal Generator	01/28/2009	2749A10226
Agilent (HP) 83525A RF Plug-In	01/28/2009	2647A01172
Agilent (HP) 8753C Vector Network Analyzer	01/28/2009	3135A01724
Agilent (HP) 85047A S-Parameter Test Set	01/28/2009	2904A00595
Agilent (HP) E55125C Base Station Sim.	07/12/2010	MY47511006
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 (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

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]

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.

Appendix A – System Validation Plots and Data

```
**********************************************************
Test Result for UIM Dielectric Parameter
Tue 12/Aug/2008 11:55:15
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        53.76       1.47
1.8800      53.30       1.52        53.69       1.49
1.8900      53.30       1.52        53.62       1.51
1.9000      53.30       1.52        53.57       1.53
1.9100      53.30       1.52        53.50       1.54
1.9200      53.30       1.52        53.43       1.56
1.9300      53.30       1.52        53.38       1.58


**********************************************************
Test Result for UIM Dielectric Parameter
Wed 13/Aug/2008 07:00:23
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
1.8700      53.30       1.52        54.54       1.48
1.8800      53.30       1.52        54.48       1.49
1.8900      53.30       1.52        54.42       1.50
1.9000      53.30       1.52        54.35       1.51
1.9100      53.30       1.52        54.30       1.53
1.9200      53.30       1.52        54.26       1.55
1.9300      53.30       1.52        54.21       1.58
```

```
**********************************************************
Test Result for UIM Dielectric Parameter
Thu 14/Aug/2008 06:42:26
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	53.05	1.55
1.8800	53.30	1.52	53.00	1.53
1.8900	53.30	1.52	52.97	1.52
1.9000	53.30	1.52	52.93	1.50
1.9100	53.30	1.52	52.88	1.49
1.9200	53.30	1.52	52.84	1.47
1.9300	53.30	1.52	52.81	1.46

```
**********************************************************
Test Result for UIM Dielectric Parameter
Thu 14/Aug/2008 12:17:29
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	55.50	0.91
0.8150	55.28	0.97	55.41	0.93
0.8250	55.24	0.97	55.34	0.95
0.8350	55.20	0.97	55.26	0.96
0.8450	55.17	0.98	55.21	0.98
0.8550	55.14	0.99	55.18	0.99
0.8650	55.11	1.01	55.13	1.01

```
************************************************************
Test Result for UIM Dielectric Parameter
Sat 23/Aug/2008 07:08:22
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	52.52	1.49
1.8800	53.30	1.52	52.49	1.50
1.8900	53.30	1.52	52.47	1.50
1.9000	53.30	1.52	52.44	1.51
1.9100	53.30	1.52	52.41	1.51
1.9200	53.30	1.52	52.39	1.52
1.9300	53.30	1.52	52.38	1.52

```
************************************************************
Test Result for UIM Dielectric Parameter
Sat 23/Aug/2008 03:45:32
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	54.87	0.92
0.8150	55.28	0.97	54.80	0.93
0.8250	55.24	0.97	54.78	0.95
0.8350	55.20	0.97	54.70	0.98
0.8450	55.17	0.98	54.69	1.00
0.8550	55.14	0.99	54.65	1.02
0.8650	55.11	1.01	54.62	1.03

```
**********************************************************
Test Result for UIM Dielectric Parameter
Wed 27/Aug/2008 06:59:36
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	52.17	1.48
1.8800	53.30	1.52	52.15	1.48
1.8900	53.30	1.52	52.14	1.49
1.9000	53.30	1.52	52.11	1.50
1.9100	53.30	1.52	52.10	1.51
1.9200	53.30	1.52	52.10	1.52
1.9300	53.30	1.52	52.08	1.53

```
**********************************************************
Test Result for UIM Dielectric Parameter
Wed 27/Aug/2008 09:53:48
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	55.88	0.93
0.8150	55.28	0.97	55.77	0.93
0.8250	55.24	0.97	55.75	0.94
0.8350	55.20	0.97	55.61	0.96
0.8450	55.17	0.98	55.63	0.97
0.8550	55.14	0.99	55.53	0.98
0.8650	55.11	1.01	55.49	0.99

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 11:59:41 AM
End Time : 12-Aug-2008 12:13:00 PM
Scanning Time : 799 secs

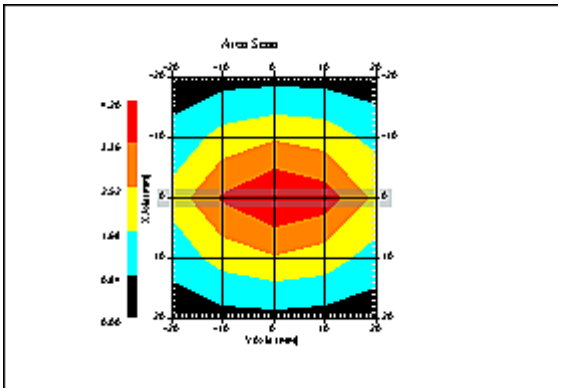
Product Data
Device Name : Validation
Serial No. : 1900
Type : Dipole
Model : ALS-D-1900-S-2
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 68 mm
Width : 3.6 mm
Depth : 39.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.265 W/kg
Power Drift-Finish: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

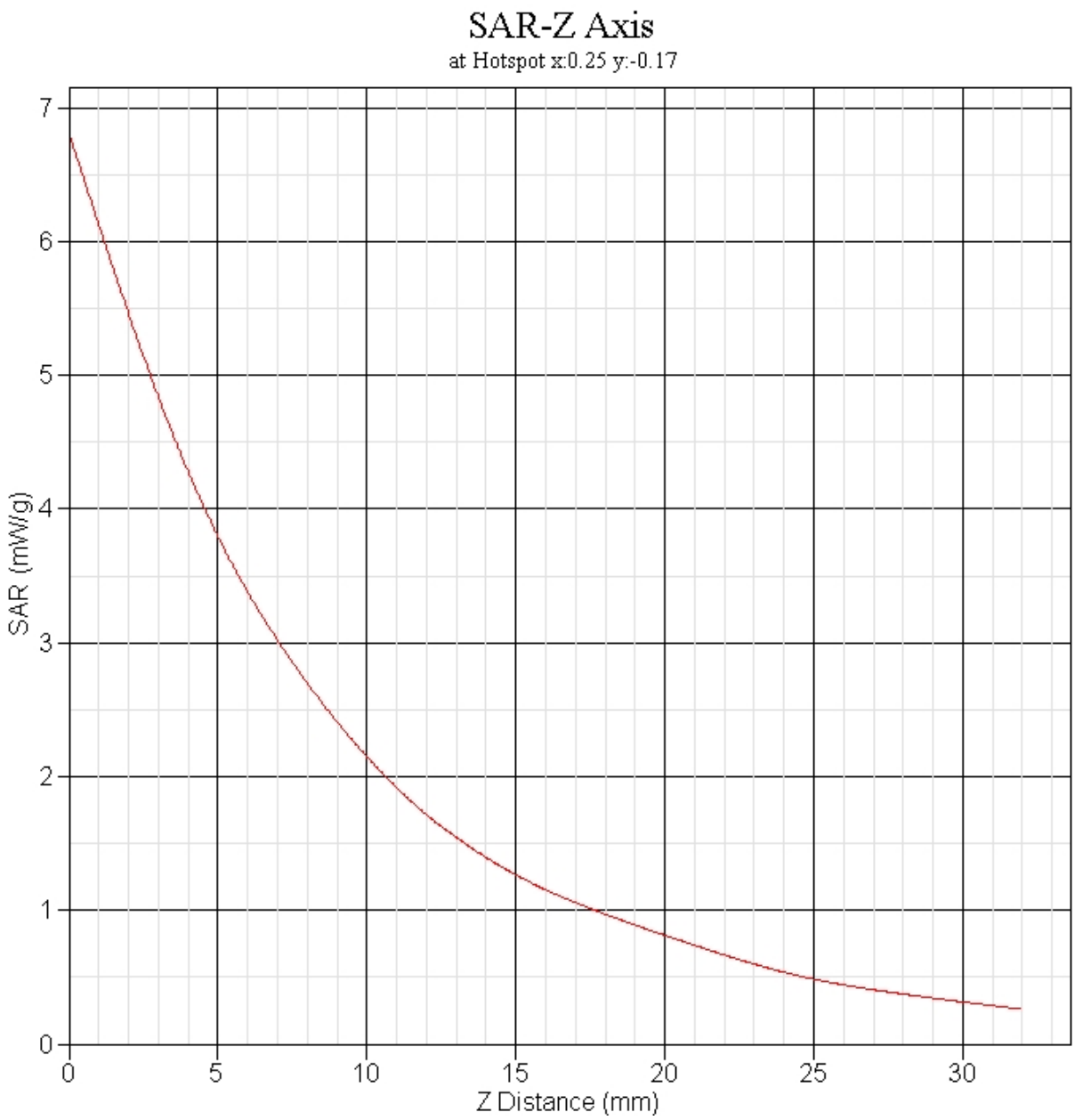
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 53.57 F/m
Sigma : 1.53 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
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
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
```



SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 07:03:15 AM
End Time : 13-Aug-2008 07:16:18 AM
Scanning Time : 783 secs

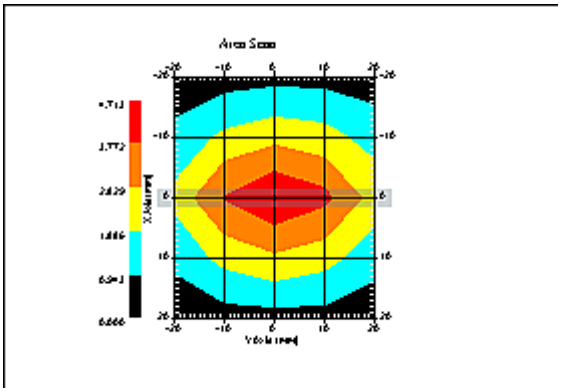
Product Data
Device Name : Validation
Serial No. : 1900
Type : Dipole
Model : ALS-D-1900-S-2
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 68 mm
Width : 3.6 mm
Depth : 39.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.658 W/kg
Power Drift-Finish: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

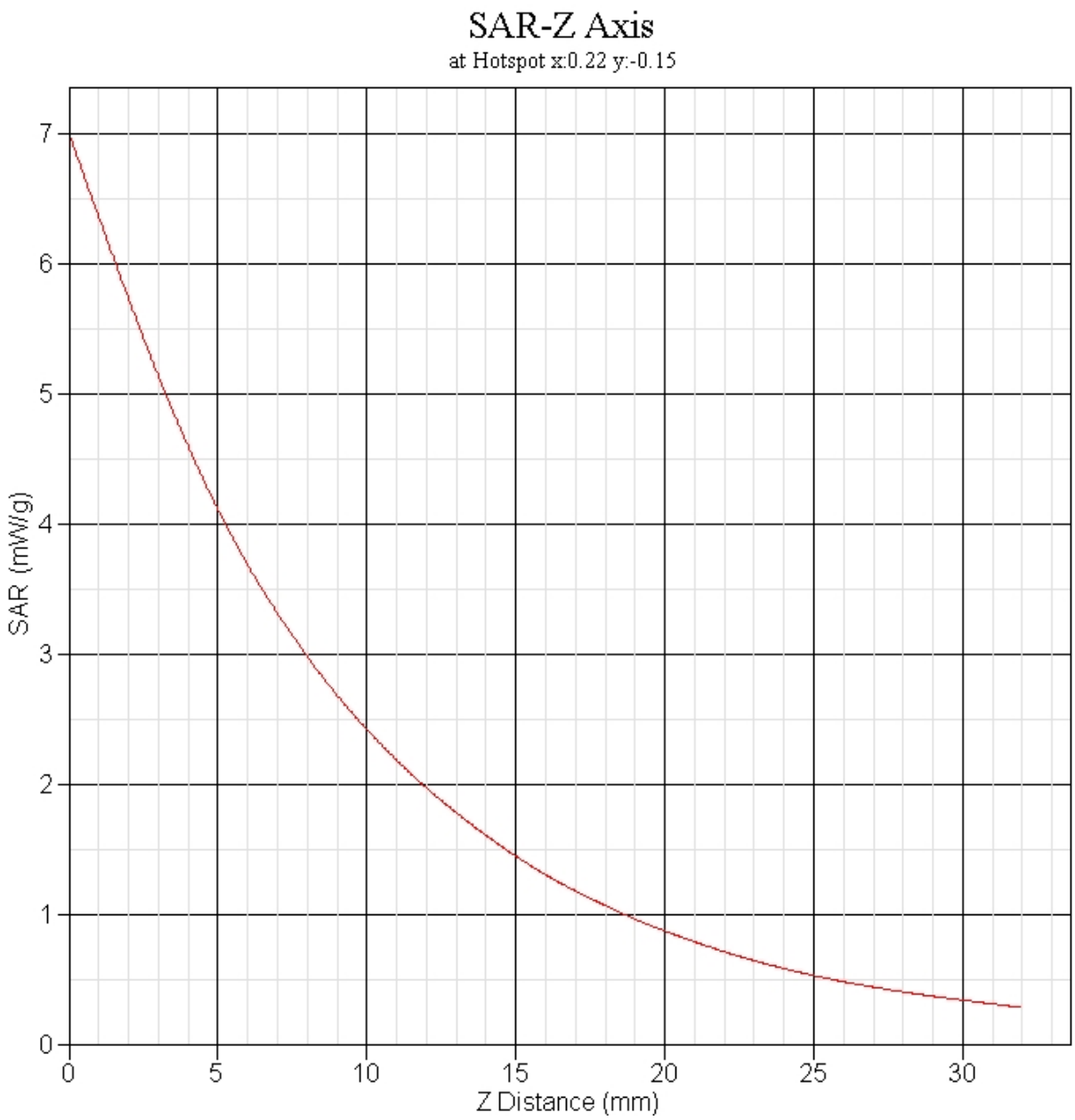
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 54.35 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
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
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
```



SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 06:49:33 AM
End Time : 14-Aug-2008 07:02:43 AM
Scanning Time : 790 secs

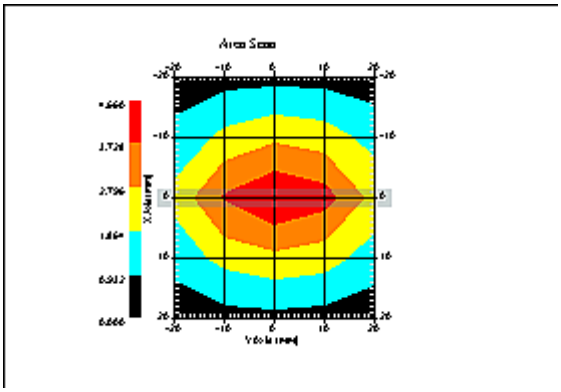
Product Data
Device Name : Validation
Serial No. : 1900
Type : Dipole
Model : ALS-D-1900-S-2
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 68 mm
Width : 3.6 mm
Depth : 39.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.597 W/kg
Power Drift-Finish: 4.622 W/kg
Power Drift (%) : 0.544

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

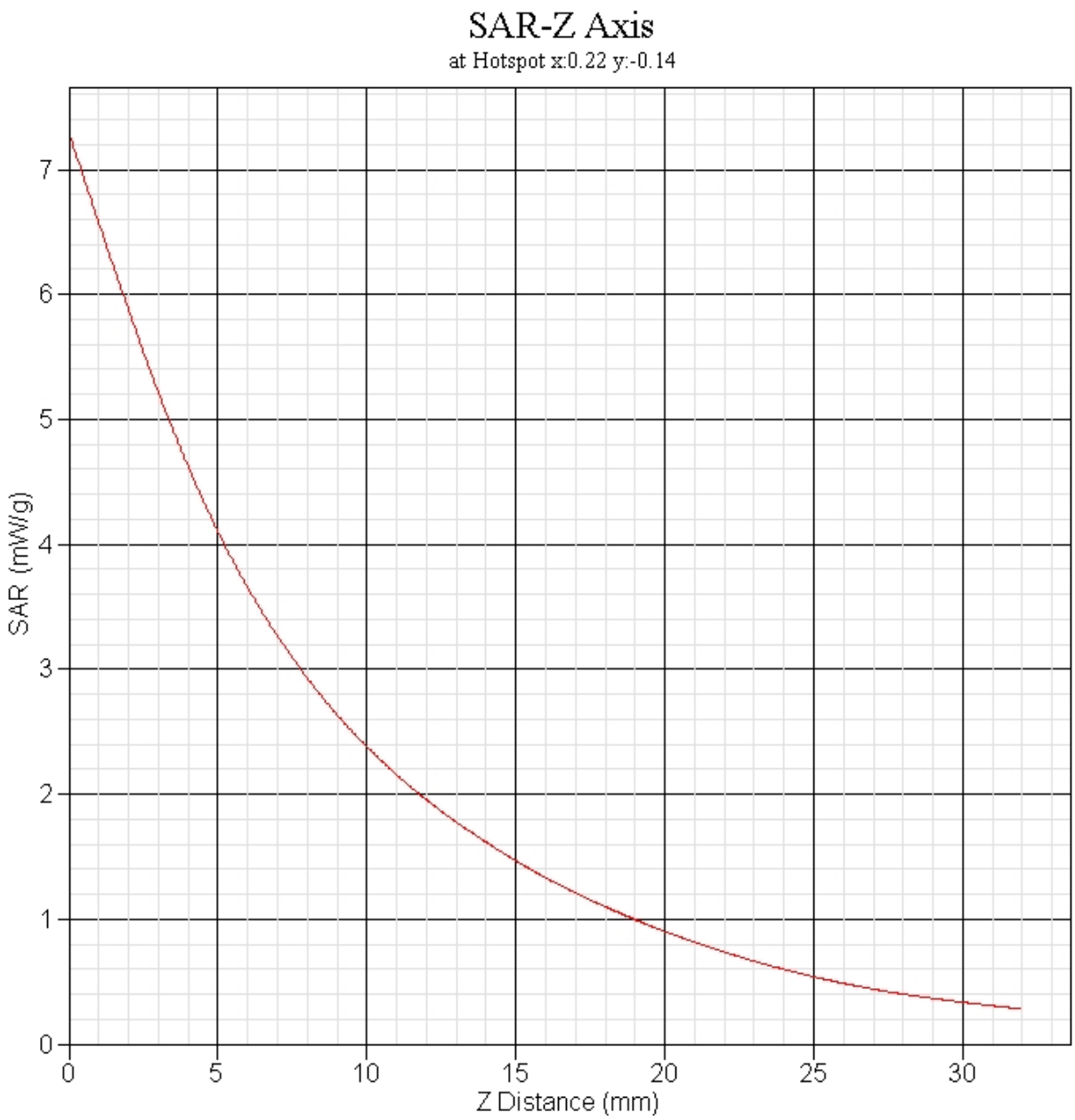
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 52.93 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 14-Aug-2008
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
Channel           : Mid
```



```
1 gram SAR value    : 4.001 W/kg
10 gram SAR value   : 2.082 W/kg
Area Scan Peak SAR  : 4.660 W/kg
Zoom Scan Peak SAR  : 7.296 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 12:40:41 PM
End Time : 14-Aug-2008 12:55:52 PM
Scanning Time : 911 secs

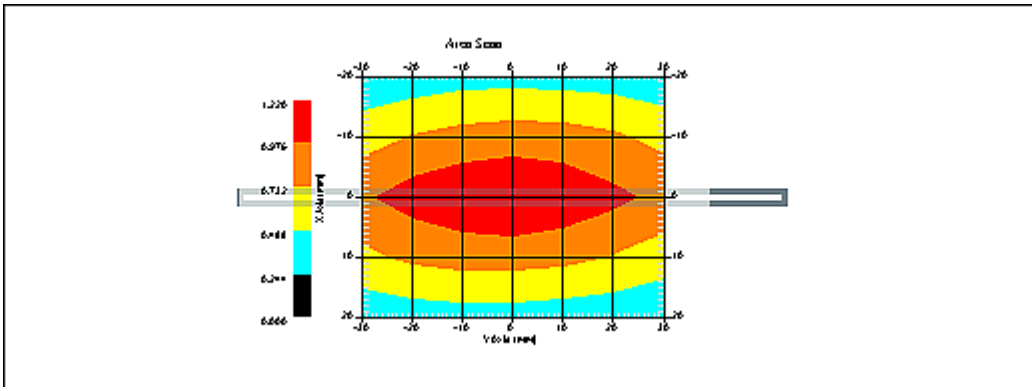
Product Data
Device Name : Validation
Serial No. : 835
Type : Dipole
Model : ALS-D-835-S-2
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 161 mm
Width : 3.6 mm
Depth : 89.8 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 1.116 W/kg
Power Drift-Finish: 1.078 W/kg
Power Drift (%) : -3.408

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

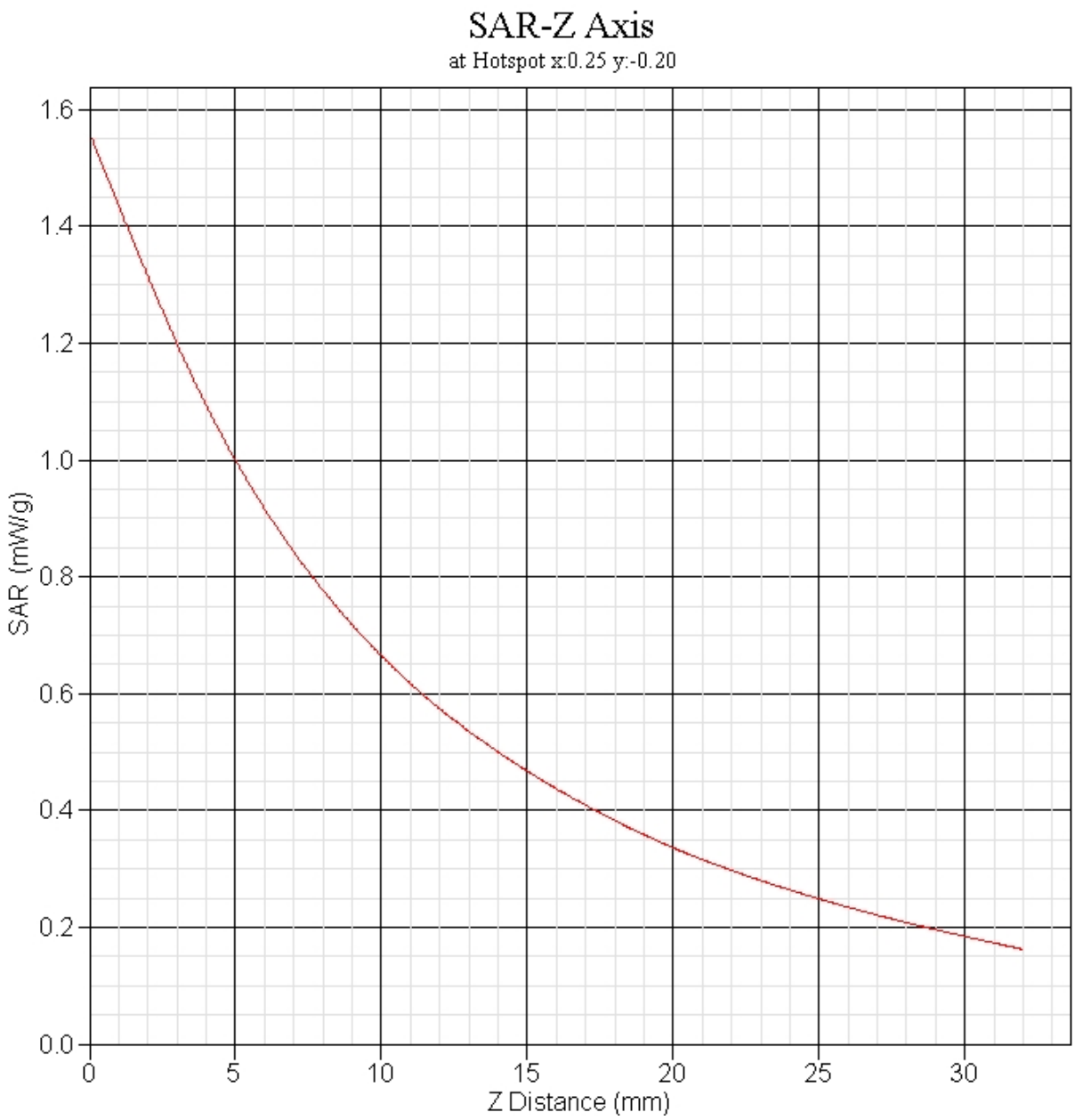
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 55.26 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 25.00 °C
Set-up Date       : 14-Aug-2008
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
Channel           : Mid
```



```
1 gram SAR value    : 1.004 W/kg
10 gram SAR value   : 0.633 W/kg
Area Scan Peak SAR  : 1.218 W/kg
Zoom Scan Peak SAR  : 1.561 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 07:10:10 AM
End Time : 23-Aug-2008 07:23:14 AM
Scanning Time : 784 secs

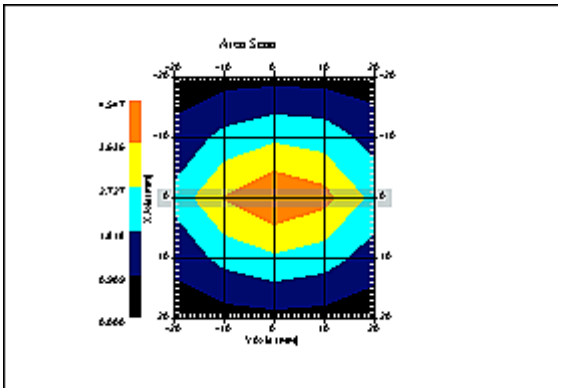
Product Data
Device Name : Validation
Serial No. : 1900
Type : Dipole
Model : ALS-D-1900-S-2
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 68 mm
Width : 3.6 mm
Depth : 39.5 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 4.422 W/kg
Power Drift-Finish: 4.547 W/kg
Power Drift (%) : 2.820

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

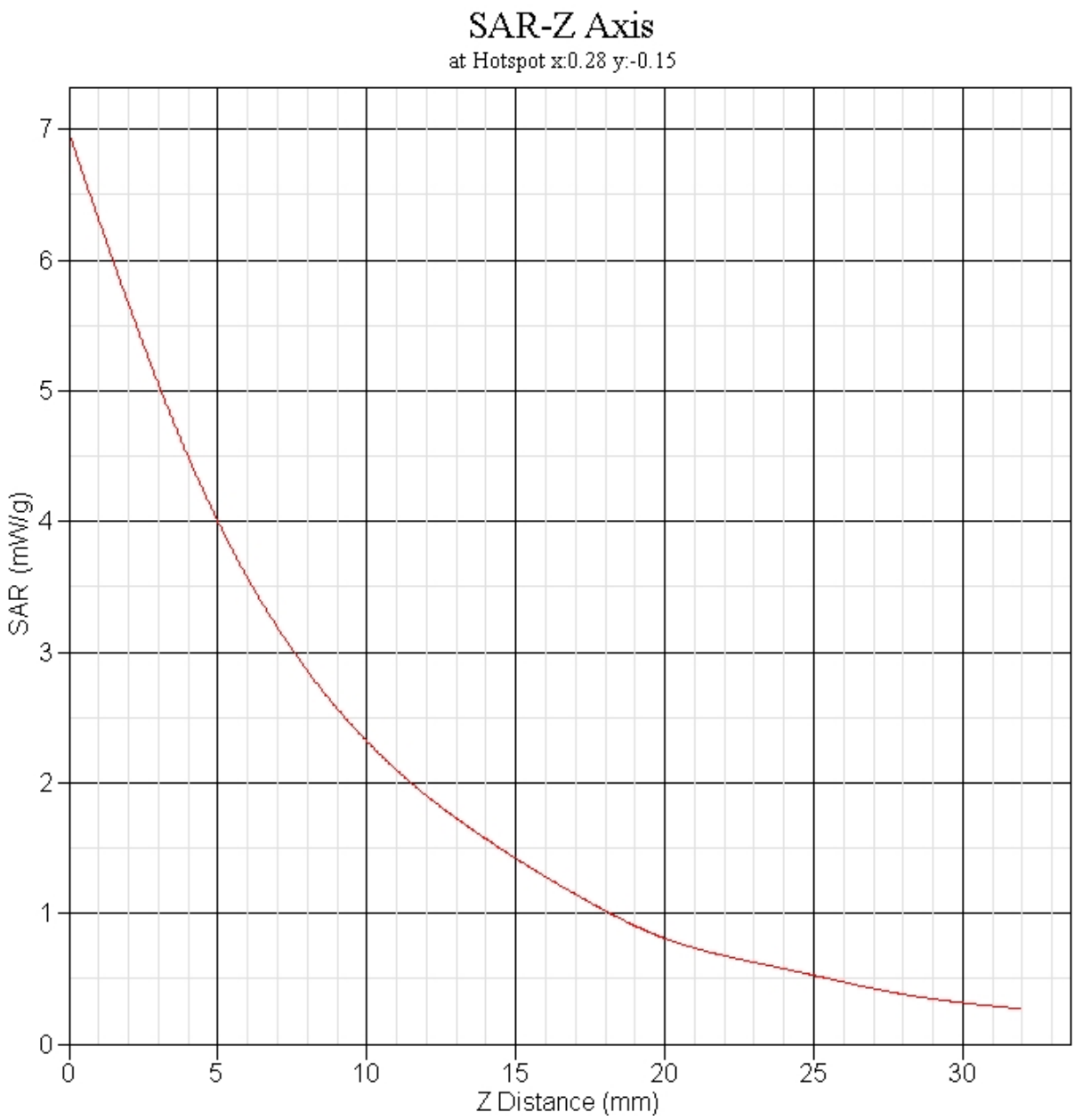
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 52.44 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 23-Aug-2008
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
Channel           : Mid
```



```
1 gram SAR value    : 3.911 W/kg
10 gram SAR value   : 2.049 W/kg
Area Scan Peak SAR  : 4.547 W/kg
Zoom Scan Peak SAR  : 6.976 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 03:49:30 PM
End Time : 23-Aug-2008 04:04:35 PM
Scanning Time : 905 secs

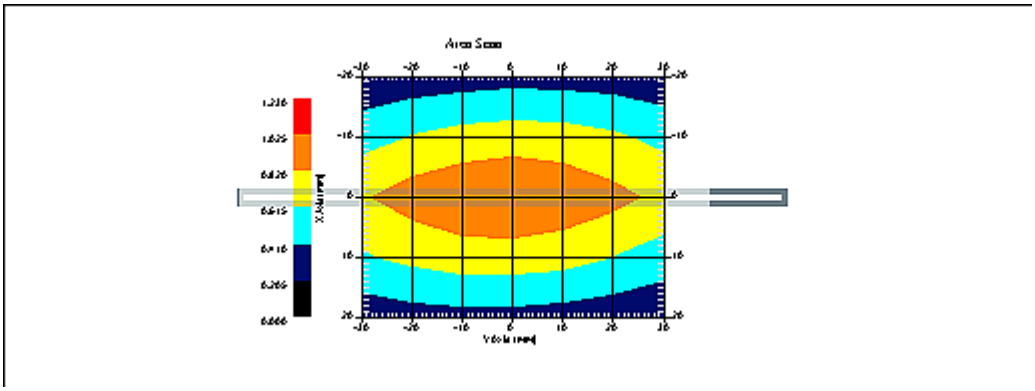
Product Data
Device Name : Validation
Serial No. : 835
Type : Dipole
Model : ALS-D-835-S-2
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 161 mm
Width : 3.6 mm
Depth : 89.8 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 1.026 W/kg
Power Drift-Finish: 1.035 W/kg
Power Drift (%) : 0.881

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

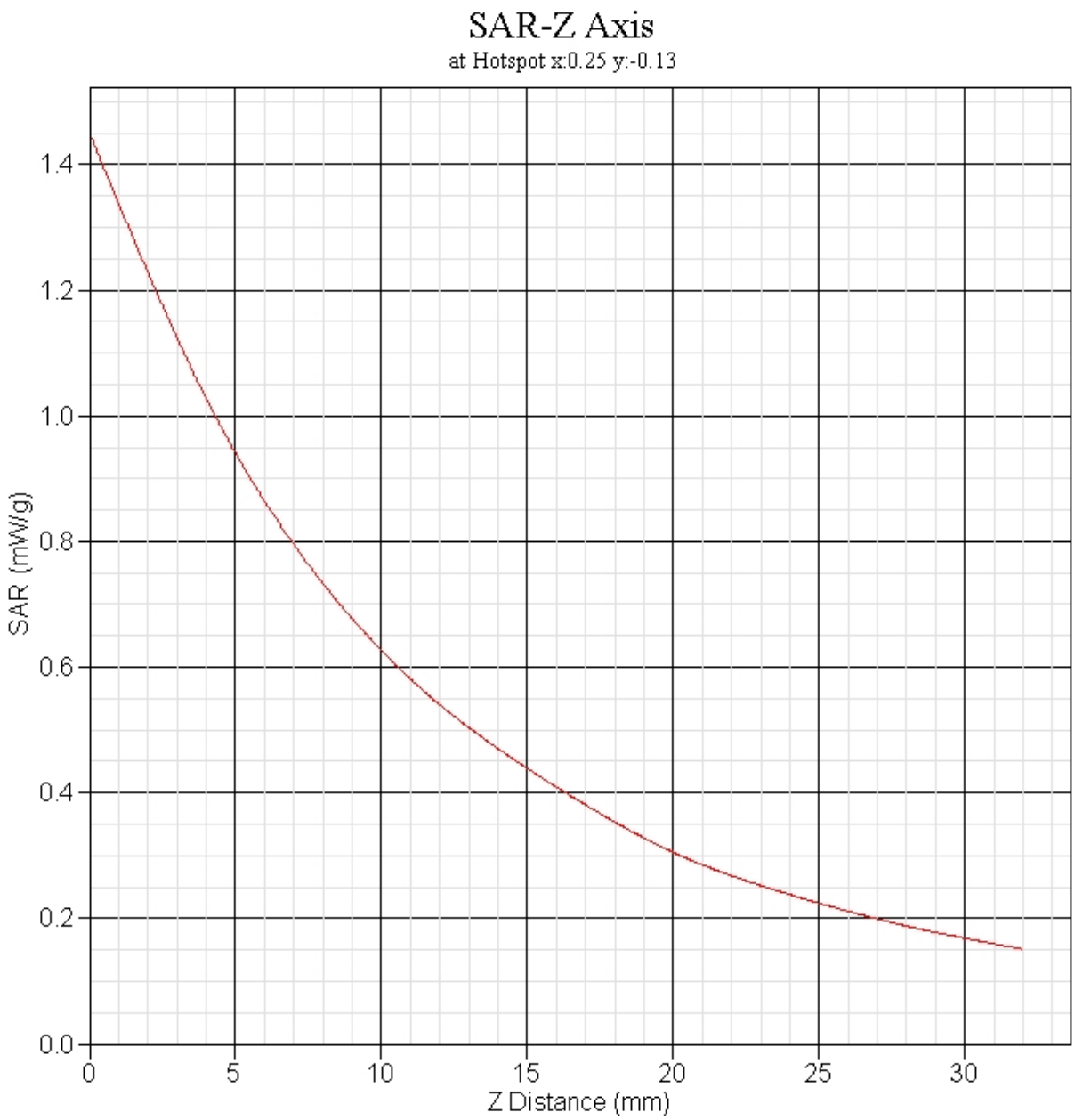
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 54.70 F/m
Sigma : 0.98 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 25.00 °C
Set-up Date       : 23-Aug-2008
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
Channel           : Mid
```



```
1 gram SAR value    : 0.945 W/kg
10 gram SAR value   : 0.598 W/kg
Area Scan Peak SAR  : 1.026 W/kg
Zoom Scan Peak SAR  : 1.451 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 07:06:43 AM
End Time : 27-Aug-2008 07:19:47 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

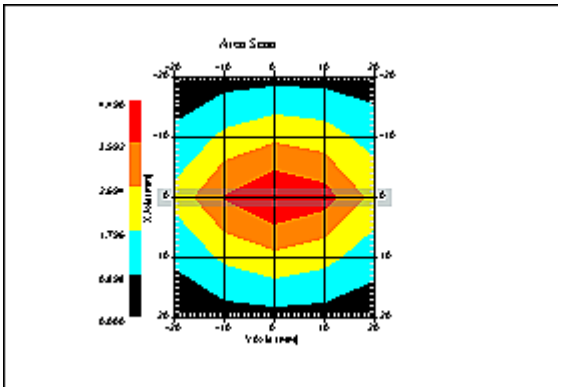
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 52.11 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

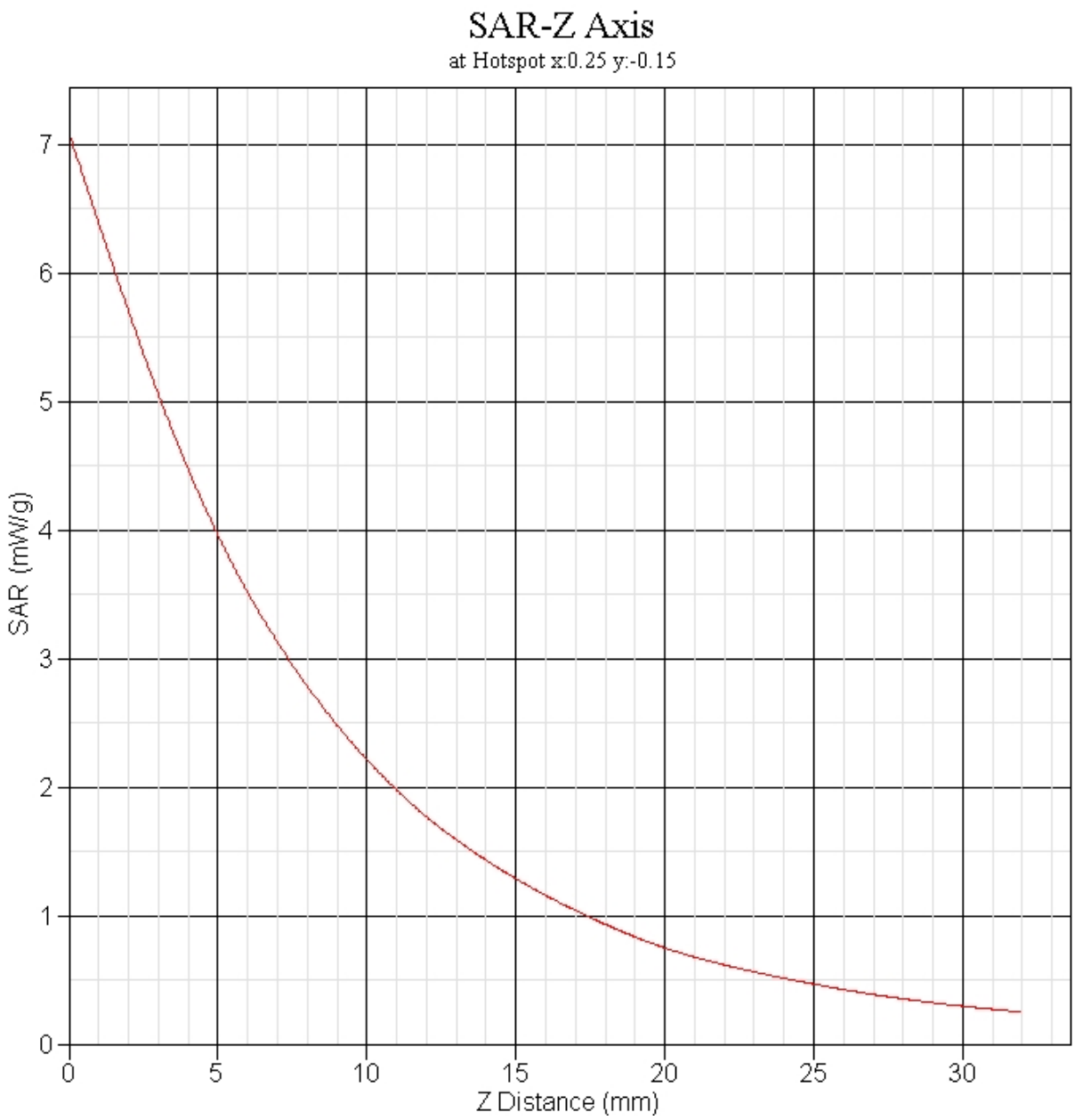
Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
Frequency : 1900.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4.85
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 27-Aug-2008
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
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



SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 10:37:55 AM
End Time : 27-Aug-2008 10:52:56 AM
Scanning Time : 901 secs

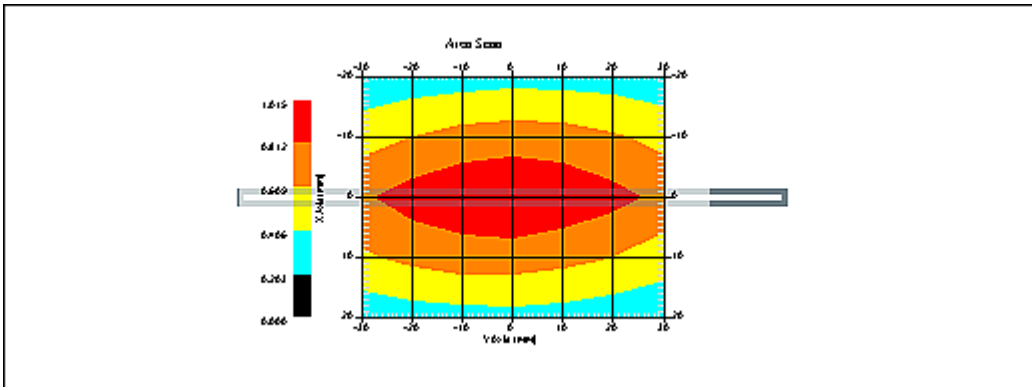
Product Data
Device Name : Validation
Serial No. : 835
Type : Dipole
Model : ALS-D-835-S-2
Frequency : 835.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 161 mm
Width : 3.6 mm
Depth : 89.8 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 1.004 W/kg
Power Drift-Finish: 0.985 W/kg
Power Drift (%) : -1.907

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

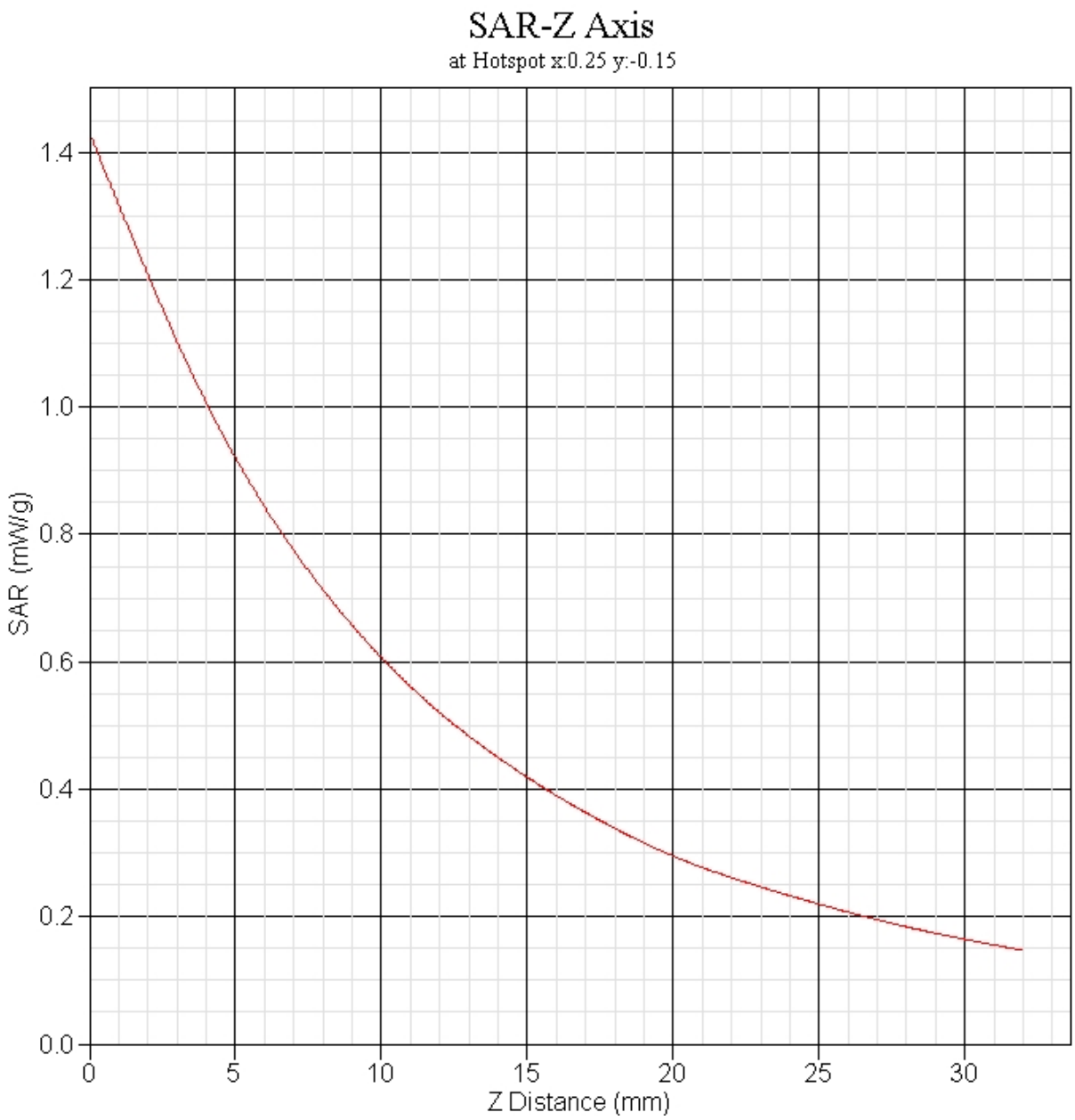
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 49.00 RH%
Epsilon : 55.61 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe 215 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 215
Last Calib. Date : 14-Feb-2007
Frequency : 835.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.3
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 25.00 °C
Set-up Date       : 27-Aug-2008
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
Channel           : Mid
```



```
1 gram SAR value    : 0.925 W/kg
10 gram SAR value   : 0.583 W/kg
Area Scan Peak SAR  : 1.014 W/kg
Zoom Scan Peak SAR  : 1.431 W/kg
```



Appendix B – SAR Test Data Plots

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 08:13:29 PM
End Time : 14-Aug-2008 08:31:25 PM
Scanning Time : 1076 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.552 W/kg
Power Drift-Finish: 0.530 W/kg
Power Drift (%) : -3.980

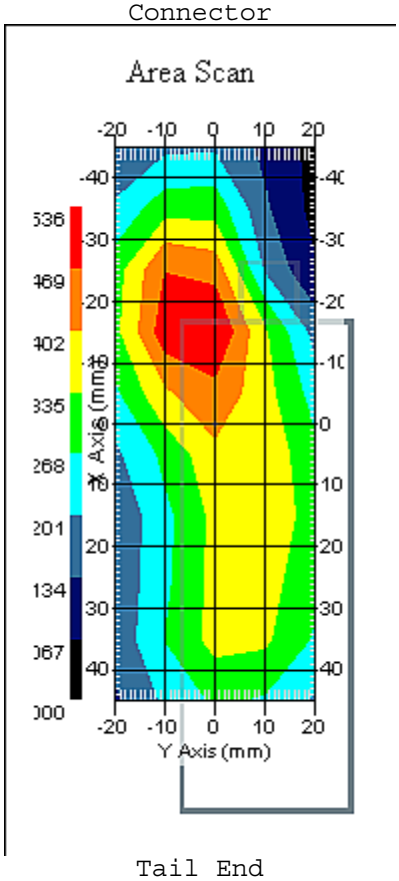
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.490 W/kg
10 gram SAR value   : 0.308 W/kg
Area Scan Peak SAR  : 0.536 W/kg
Zoom Scan Peak SAR  : 0.770 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 08:34:10 PM
End Time : 14-Aug-2008 08:52:10 PM
Scanning Time : 1080 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.516 W/kg
Power Drift-Finish: 0.536 W/kg
Power Drift (%) : 3.875

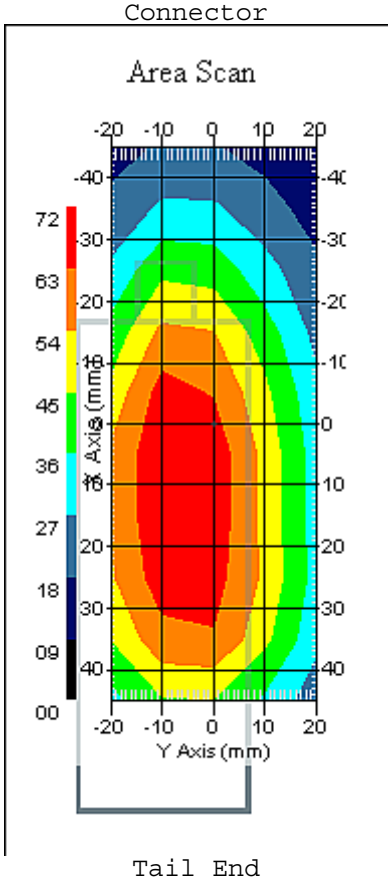
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

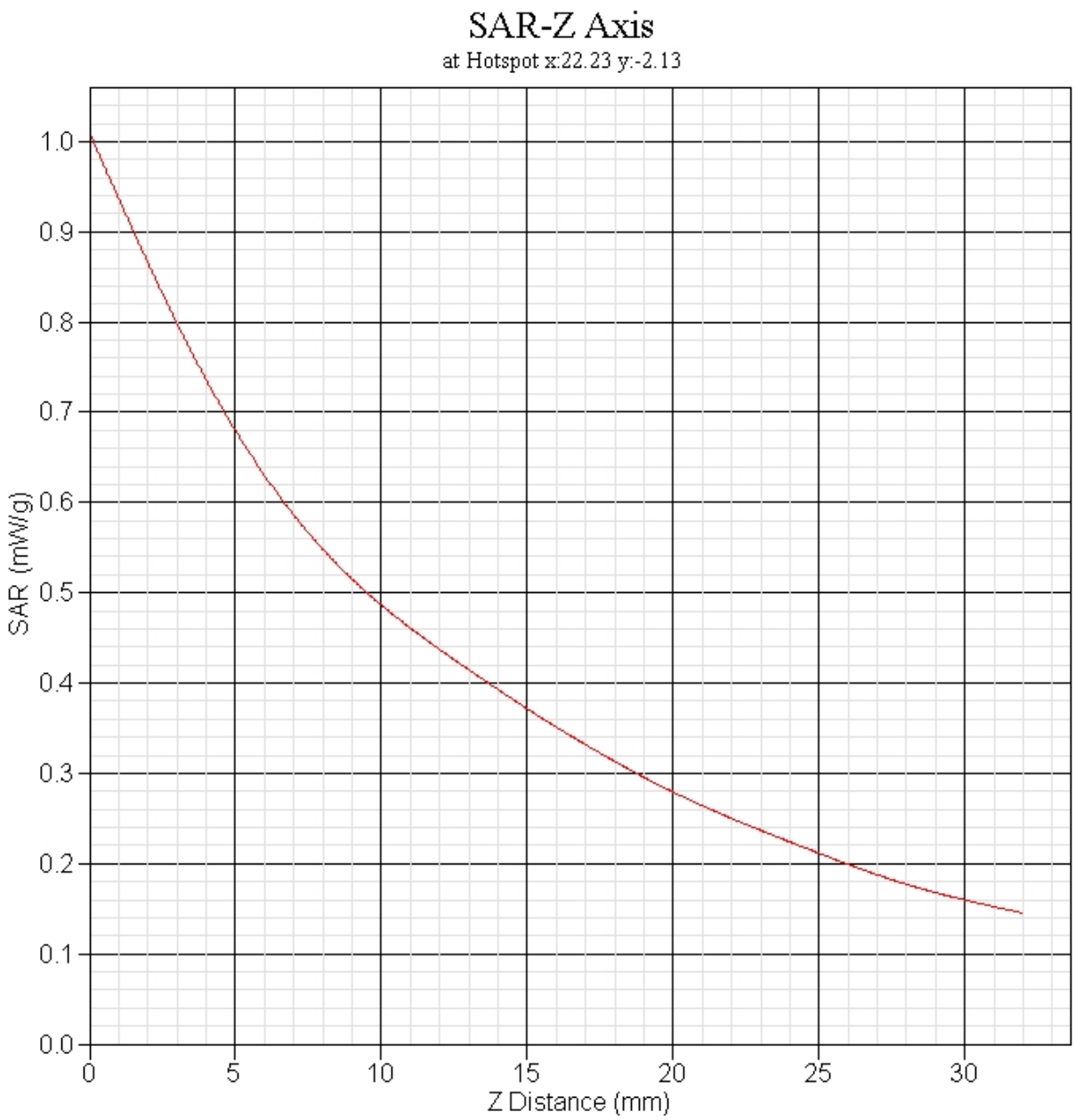
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.697 W/kg
10 gram SAR value   : 0.472 W/kg
Area Scan Peak SAR  : 0.716 W/kg
Zoom Scan Peak SAR  : 1.010 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 04:18:28 PM
End Time : 14-Aug-2008 04:36:31 PM
Scanning Time : 1083 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.358 W/kg
Power Drift-Finish: 0.341 W/kg
Power Drift (%) : -4.778

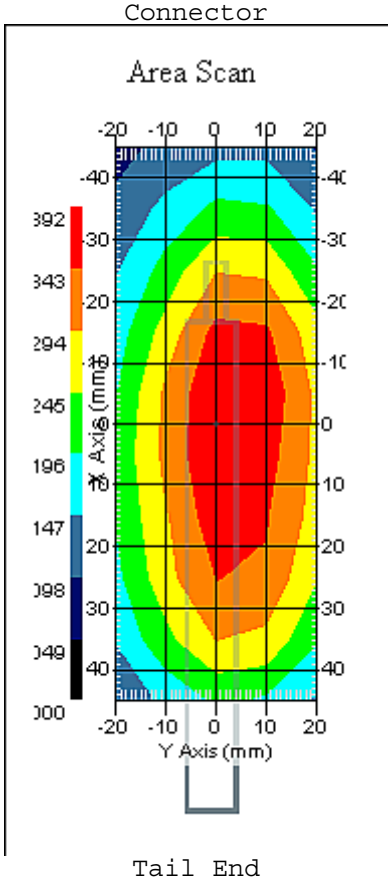
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.372 W/kg
10 gram SAR value   : 0.256 W/kg
Area Scan Peak SAR  : 0.388 W/kg
Zoom Scan Peak SAR  : 0.520 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 03:47:49 PM
End Time : 14-Aug-2008 04:05:52 PM
Scanning Time : 1083 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed in HP Laptop
Power Drift-Start : 0.228 W/kg
Power Drift-Finish: 0.221 W/kg
Power Drift (%) : -2.828

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

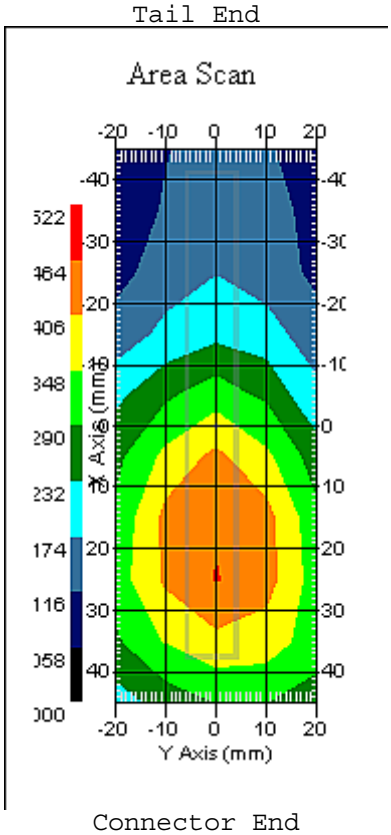
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 24.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 12:52:17 PM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed in HP Laptop
Separation : 12 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 0.459 W/kg
10 gram SAR value : 0.320 W/kg
Area Scan Peak SAR : 0.467 W/kg
Zoom Scan Peak SAR : 0.650 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 01:36:35 PM
End Time : 27-Aug-2008 01:50:20 PM
Scanning Time : 825 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom With Desk Mount
Power Drift-Start : 0.539 W/kg
Power Drift-Finish: 0.546 W/kg
Power Drift (%) : 1.320

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

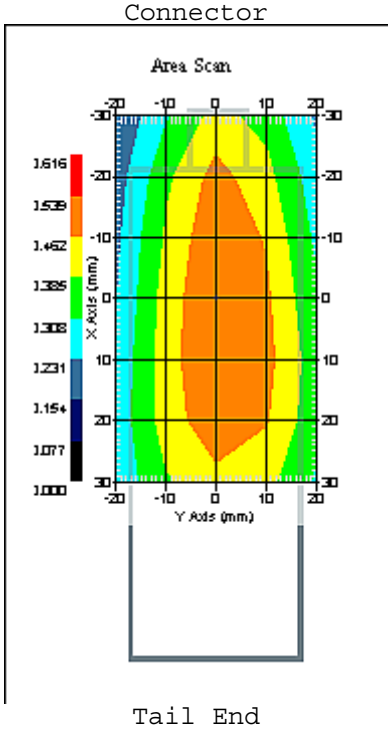
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.61 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 24.00 °C
Set-up Date : 27-Aug-2008
Set-up Time : 12:52:17 PM
Area Scan : 7x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Bottom With Desk Mount
Separation : 14 mm
Channel : Low

Connector



Tail End

1 gram SAR value : 0.520 W/kg
10 gram SAR value : 0.356 W/kg
Area Scan Peak SAR : 0.540 W/kg
Zoom Scan Peak SAR : 0.750 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 07:49:54 PM
End Time : 14-Aug-2008 08:08:04 PM
Scanning Time : 1090 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.565 W/kg
Power Drift-Finish: 0.563 W/kg
Power Drift (%) : -0.395

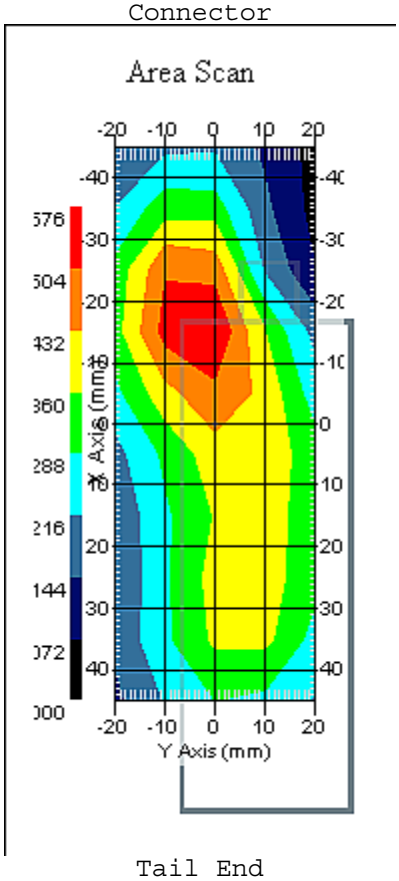
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.504 W/kg
10 gram SAR value   : 0.308 W/kg
Area Scan Peak SAR  : 0.572 W/kg
Zoom Scan Peak SAR  : 0.800 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 07:29:53 PM
End Time : 14-Aug-2008 07:47:56 PM
Scanning Time : 1083 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.592 W/kg
Power Drift-Finish: 0.569 W/kg
Power Drift (%) : -4.035

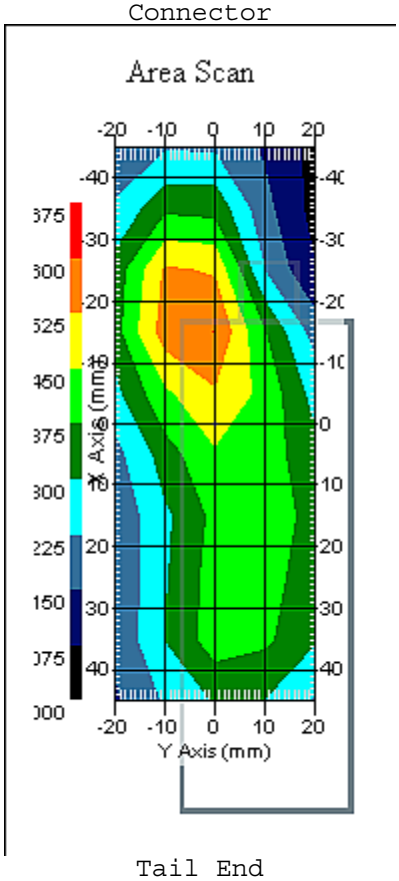
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.509 W/kg
10 gram SAR value   : 0.310 W/kg
Area Scan Peak SAR  : 0.601 W/kg
Zoom Scan Peak SAR  : 0.820 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 08:58:07 PM
End Time : 14-Aug-2008 09:16:09 PM
Scanning Time : 1082 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.567 W/kg
Power Drift-Finish: 0.560 W/kg
Power Drift (%) : -1.196

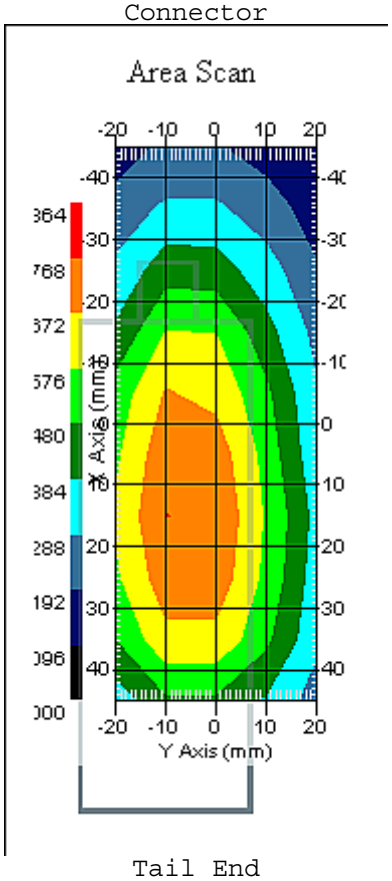
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.739 W/kg
10 gram SAR value   : 0.502 W/kg
Area Scan Peak SAR  : 0.769 W/kg
Zoom Scan Peak SAR  : 1.080 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 09:18:09 PM
End Time : 14-Aug-2008 09:36:18 PM
Scanning Time : 1089 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.586 W/kg
Power Drift-Finish: 0.587 W/kg
Power Drift (%) : 0.260

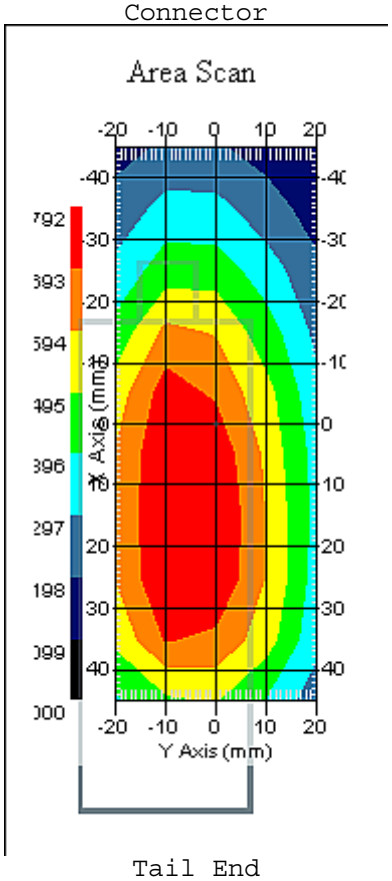
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

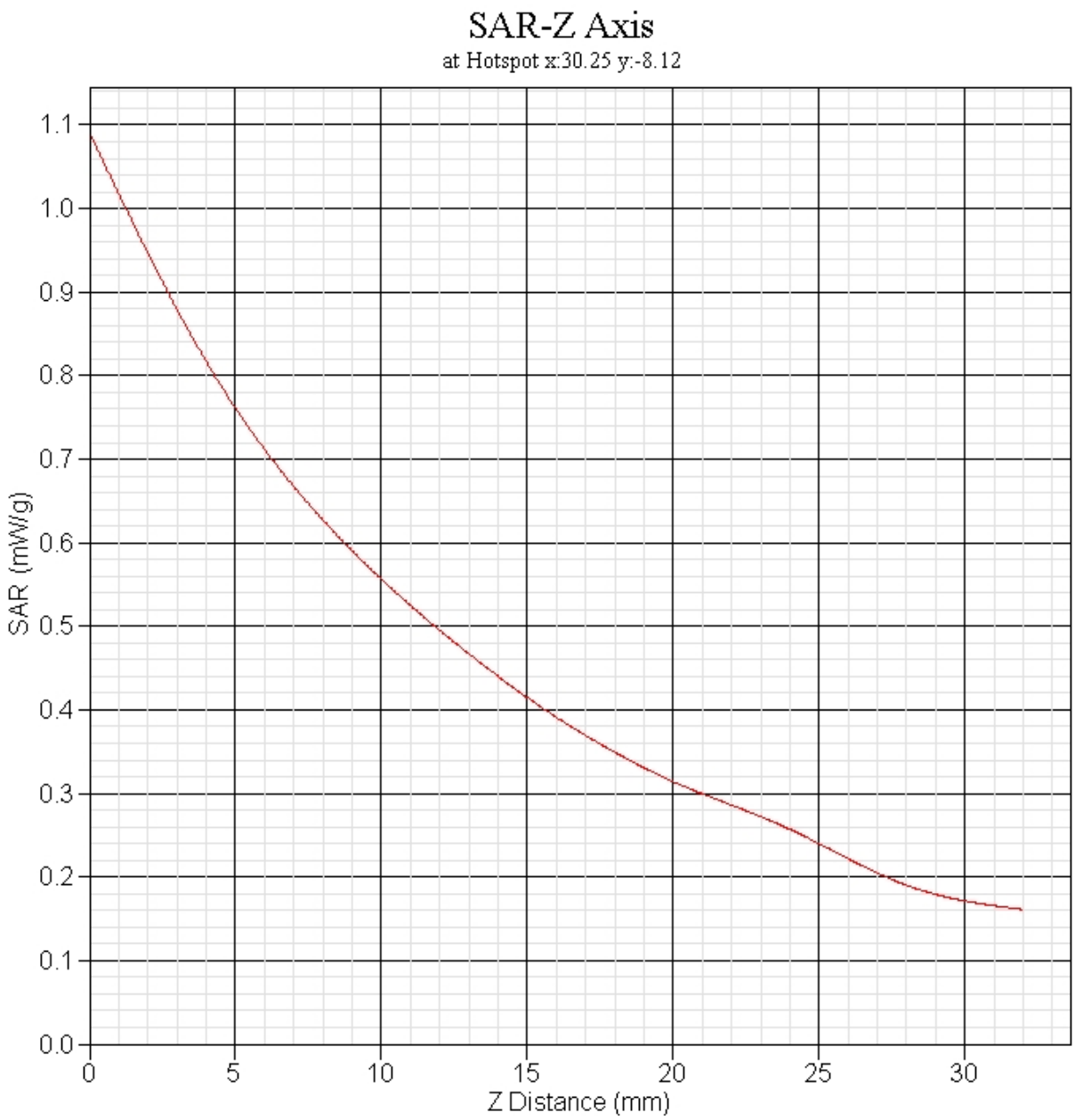
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.750 W/kg
10 gram SAR value   : 0.521 W/kg
Area Scan Peak SAR  : 0.789 W/kg
Zoom Scan Peak SAR  : 1.091 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 04:42:16 PM
End Time : 14-Aug-2008 05:00:16 PM
Scanning Time : 1080 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.366 W/kg
Power Drift-Finish: 0.351 W/kg
Power Drift (%) : -4.034

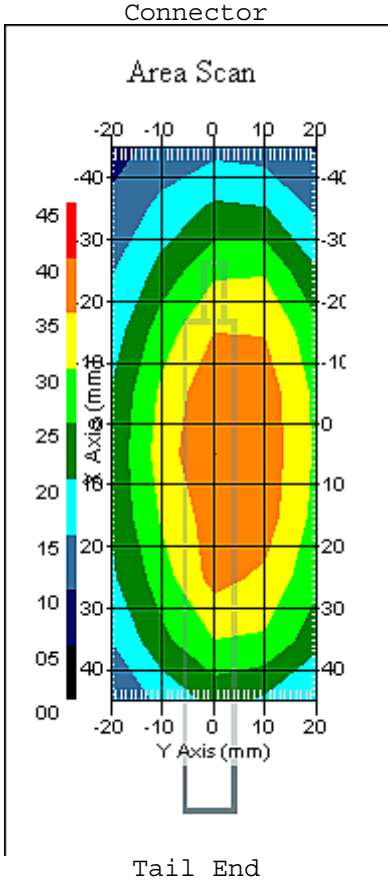
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.379 W/kg
10 gram SAR value   : 0.257 W/kg
Area Scan Peak SAR  : 0.401 W/kg
Zoom Scan Peak SAR  : 0.530 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 05:02:08 PM
End Time : 14-Aug-2008 05:20:10 PM
Scanning Time : 1082 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.379 W/kg
Power Drift-Finish: 0.371 W/kg
Power Drift (%) : -2.100

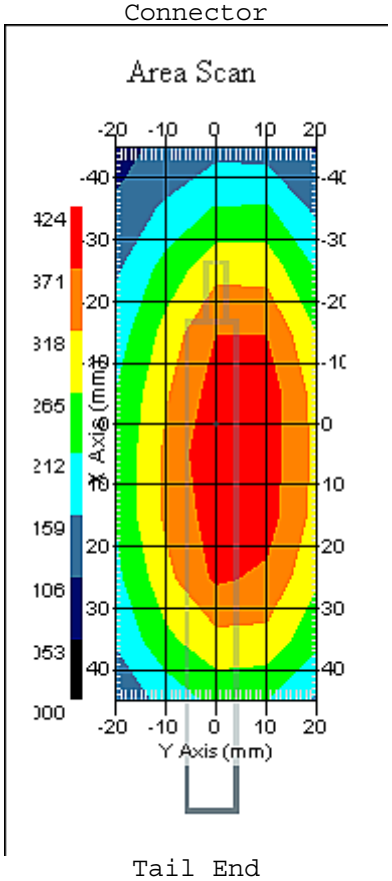
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.400 W/kg
10 gram SAR value   : 0.281 W/kg
Area Scan Peak SAR  : 0.421 W/kg
Zoom Scan Peak SAR  : 0.540 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 02:59:49 PM
End Time : 14-Aug-2008 03:17:45 PM
Scanning Time : 1076 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 0.218 W/kg
Power Drift-Finish: 0.221 W/kg
Power Drift (%) : 1.334

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

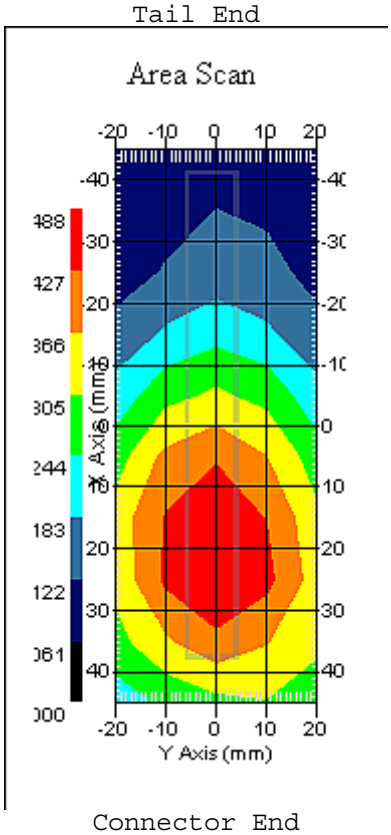
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 24.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 12:52:17 PM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 0.461 W/kg
10 gram SAR value : 0.322 W/kg
Area Scan Peak SAR : 0.486 W/kg
Zoom Scan Peak SAR : 0.650 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 03:20:14 PM
End Time : 14-Aug-2008 03:38:21 PM
Scanning Time : 1087 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 0.243 W/kg
Power Drift-Finish: 0.242 W/kg
Power Drift (%) : -0.562

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

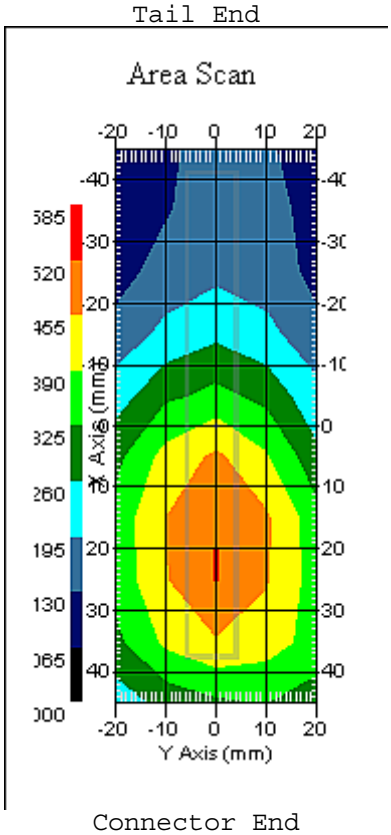
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 24.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 12:52:17 PM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 0.485 W/kg
10 gram SAR value : 0.335 W/kg
Area Scan Peak SAR : 0.523 W/kg
Zoom Scan Peak SAR : 0.700 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 11:18:10 AM
End Time : 27-Aug-2008 11:32:29 AM
Scanning Time : 859 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom With Desk Mount
Power Drift-Start : 0.422 W/kg
Power Drift-Finish: 0.440 W/kg
Power Drift (%) : 4.264

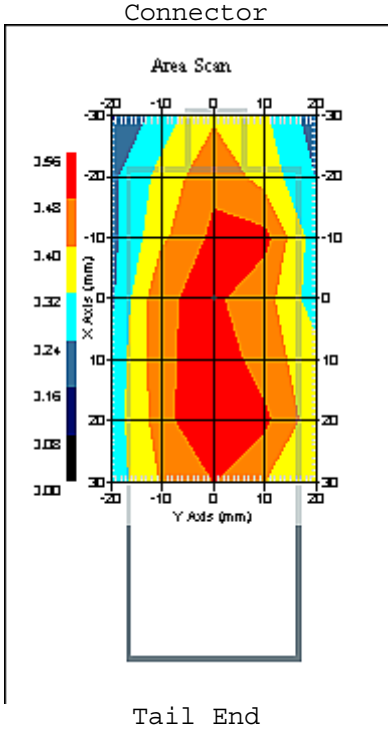
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.61 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 27-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 7x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom With Desk Mount
Separation        : 14 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.585 W/kg
10 gram SAR value   : 0.387 W/kg
Area Scan Peak SAR  : 0.560 W/kg
Zoom Scan Peak SAR  : 0.830 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 07:11:01 PM
End Time : 14-Aug-2008 07:28:59 PM
Scanning Time : 1078 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.606 W/kg
Power Drift-Finish: 0.586 W/kg
Power Drift (%) : -3.304

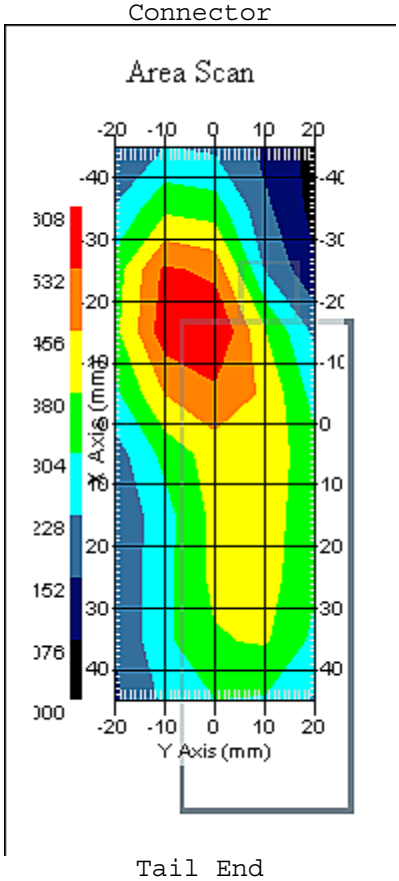
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.553 W/kg
10 gram SAR value   : 0.341 W/kg
Area Scan Peak SAR  : 0.608 W/kg
Zoom Scan Peak SAR  : 0.880 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 05:03:22 PM
End Time : 23-Aug-2008 05:20:09 PM
Scanning Time : 1007 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.564 W/kg
Power Drift-Finish: 0.566 W/kg
Power Drift (%) : 0.387

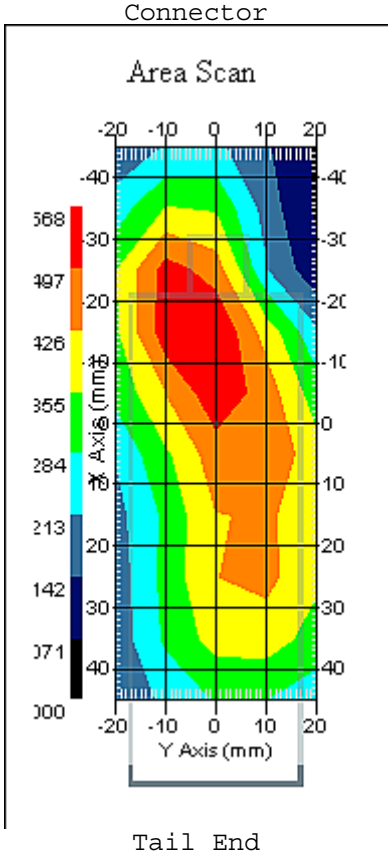
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 54.70 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.546 W/kg
10 gram SAR value   : 0.343 W/kg
Area Scan Peak SAR  : 0.565 W/kg
Zoom Scan Peak SAR  : 0.910 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 09:37:07 PM
End Time : 14-Aug-2008 09:55:17 PM
Scanning Time : 1090 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.586 W/kg
Power Drift-Finish: 0.581 W/kg
Power Drift (%) : -0.863

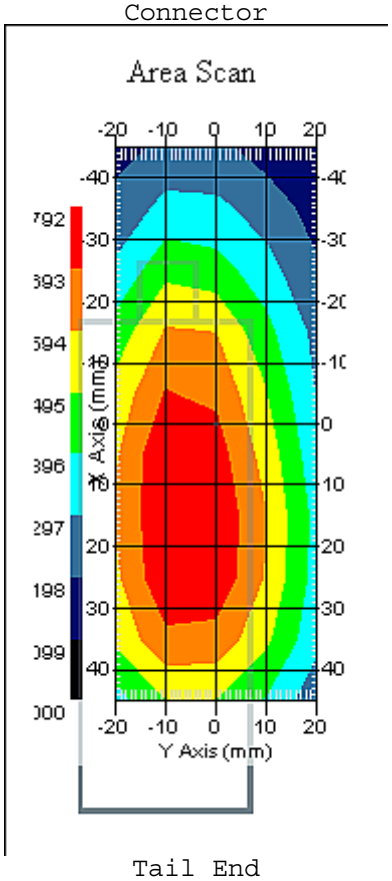
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

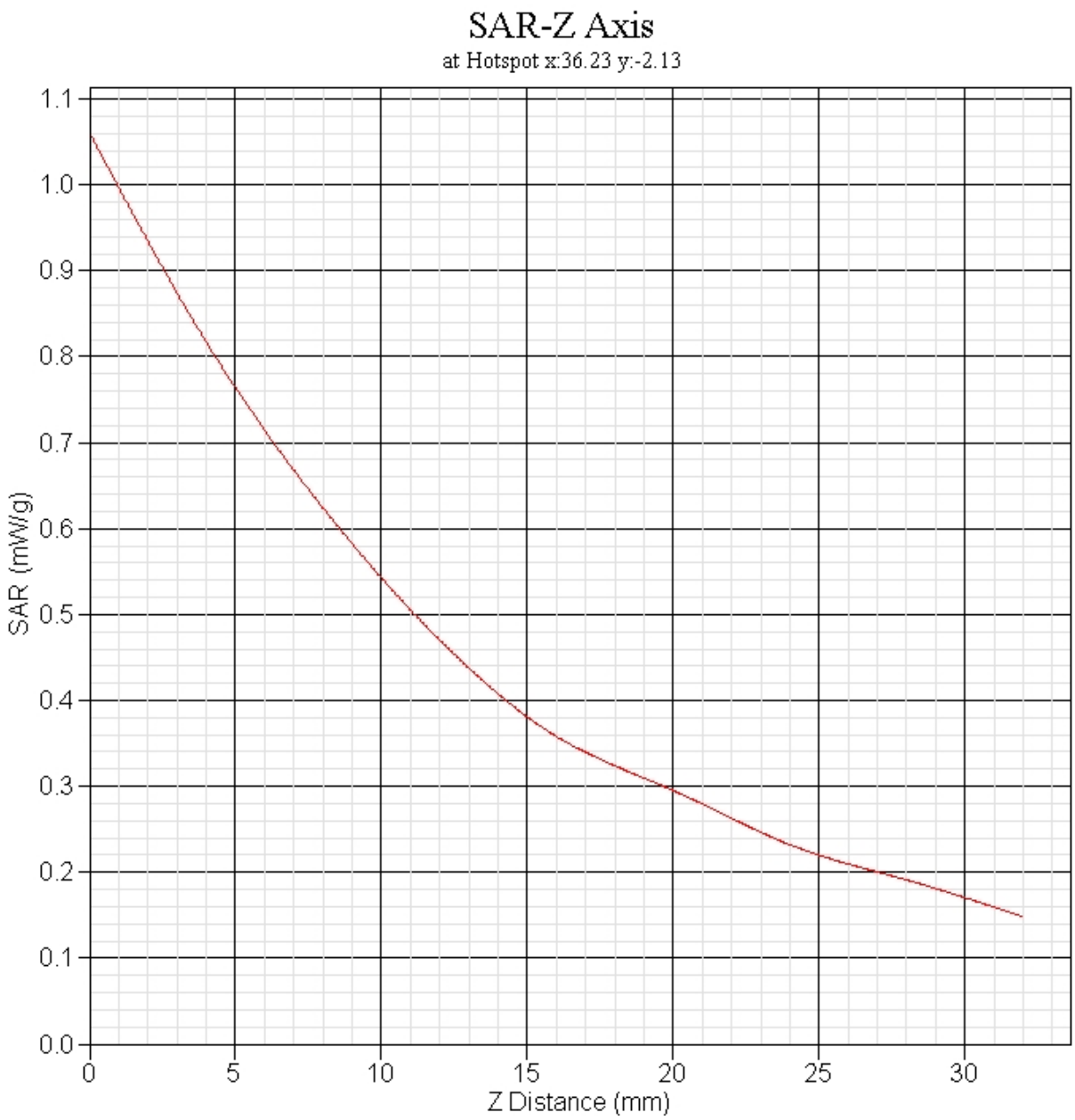
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.782 W/kg
10 gram SAR value   : 0.526 W/kg
Area Scan Peak SAR  : 0.790 W/kg
Zoom Scan Peak SAR  : 1.061 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 05:24:11 PM
End Time : 23-Aug-2008 05:40:50 PM
Scanning Time : 999 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.586 W/kg
Power Drift-Finish: 0.566 W/kg
Power Drift (%) : -3.502

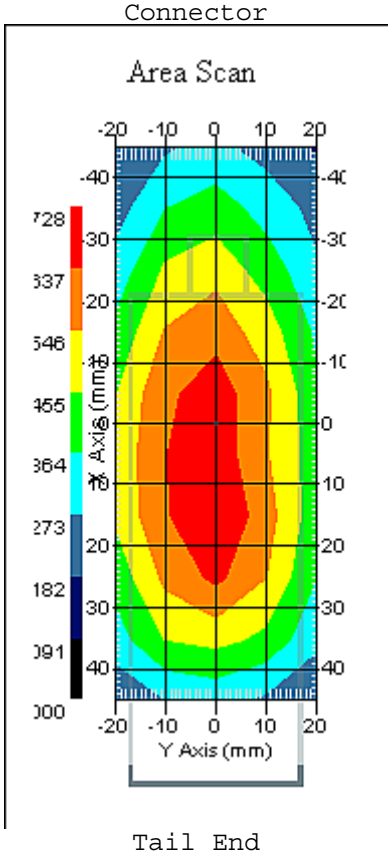
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 54.70 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.701 W/kg
10 gram SAR value   : 0.483 W/kg
Area Scan Peak SAR  : 0.727 W/kg
Zoom Scan Peak SAR  : 0.980 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 05:21:18 PM
End Time : 14-Aug-2008 05:39:14 PM
Scanning Time : 1076 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.368 W/kg
Power Drift-Finish: 0.376 W/kg
Power Drift (%) : 2.056

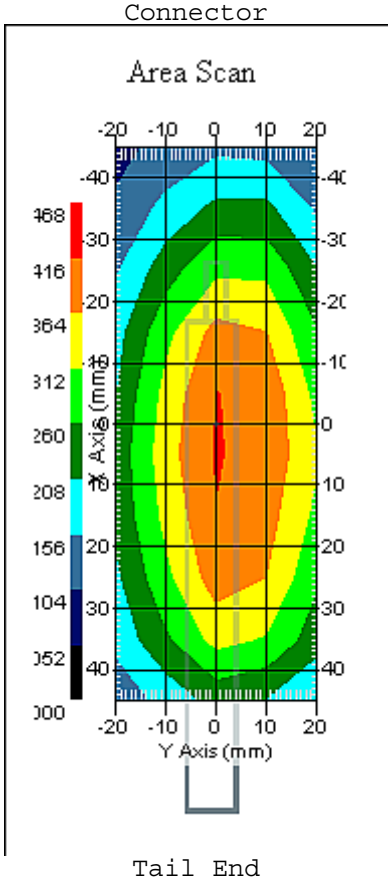
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.404 W/kg
10 gram SAR value   : 0.282 W/kg
Area Scan Peak SAR  : 0.418 W/kg
Zoom Scan Peak SAR  : 0.550 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 05:44:02 PM
End Time : 23-Aug-2008 06:00:49 PM
Scanning Time : 1007 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.334 W/kg
Power Drift-Finish: 0.328 W/kg
Power Drift (%) : -1.799

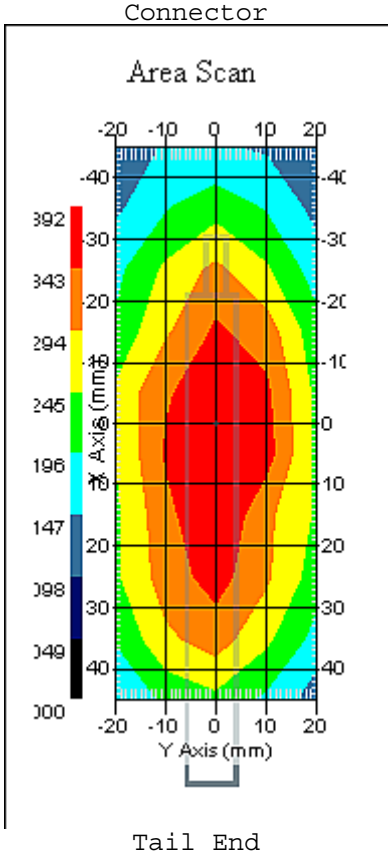
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 54.70 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.370 W/kg
10 gram SAR value   : 0.258 W/kg
Area Scan Peak SAR  : 0.392 W/kg
Zoom Scan Peak SAR  : 0.540 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 02:40:06 PM
End Time : 14-Aug-2008 02:58:34 PM
Scanning Time : 1108 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 0.215 W/kg
Power Drift-Finish: 0.216 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

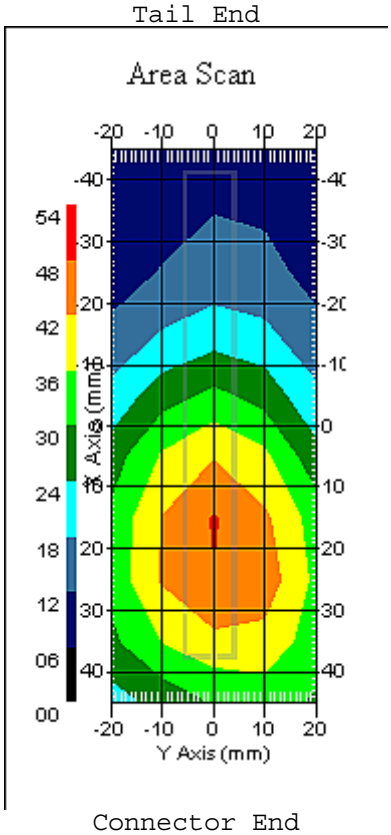
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 24.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 12:52:17 PM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 0.425 W/kg
10 gram SAR value : 0.296 W/kg
Area Scan Peak SAR : 0.484 W/kg
Zoom Scan Peak SAR : 0.610 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 06:01:15 PM
End Time : 23-Aug-2008 06:17:57 PM
Scanning Time : 1002 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 0.326 W/kg
Power Drift-Finish: 0.336 W/kg
Power Drift (%) : 3.060

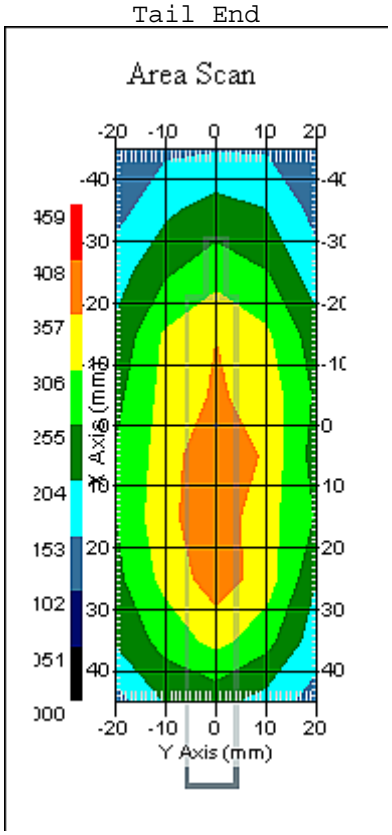
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 54.70 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Left Side Installed In HP Laptop
Separation        : 12 mm
Channel           : Low
```

Tail End



Connector End

```
1 gram SAR value    : 0.377 W/kg
10 gram SAR value   : 0.262 W/kg
Area Scan Peak SAR  : 0.409 W/kg
Zoom Scan Peak SAR  : 0.490 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 12:13:19 PM
End Time : 27-Aug-2008 12:27:08 PM
Scanning Time : 829 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom With Desk Mount
Power Drift-Start : 0.645 W/kg
Power Drift-Finish: 0.626 W/kg
Power Drift (%) : -2.881

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

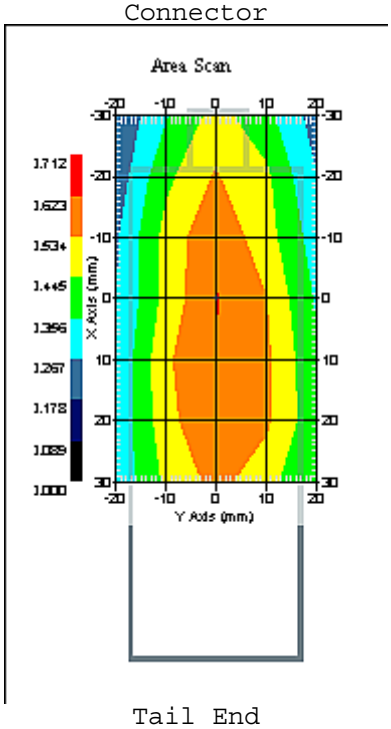
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.61 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 24.00 °C
Set-up Date : 27-Aug-2008
Set-up Time : 12:52:17 PM
Area Scan : 7x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Bottom With Desk Mount
Separation : 14 mm
Channel : Low

Connector



Tail End

1 gram SAR value : 0.579 W/kg
10 gram SAR value : 0.392 W/kg
Area Scan Peak SAR : 0.626 W/kg
Zoom Scan Peak SAR : 0.820 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 06:47:21 PM
End Time : 14-Aug-2008 07:05:26 PM
Scanning Time : 1085 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.568 W/kg
Power Drift-Finish: 0.588 W/kg
Power Drift (%) : 3.582

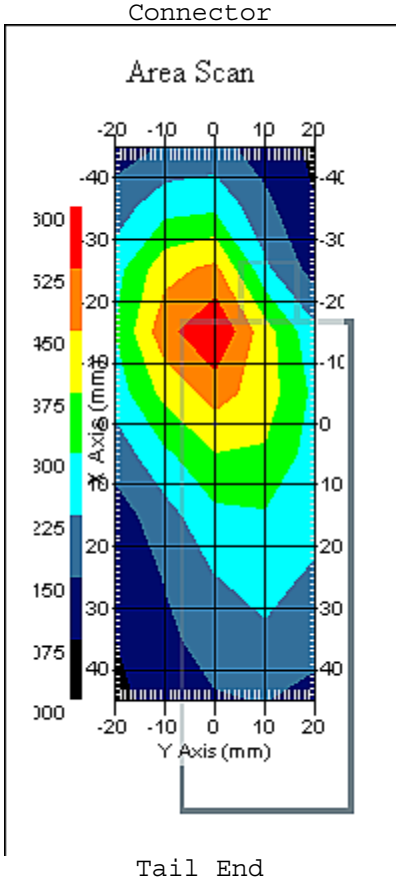
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.503 W/kg
10 gram SAR value   : 0.301 W/kg
Area Scan Peak SAR  : 0.598 W/kg
Zoom Scan Peak SAR  : 0.890 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 09:59:57 PM
End Time : 14-Aug-2008 10:17:54 PM
Scanning Time : 1077 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Install In Toshiba Laptop
Power Drift-Start : 0.532 W/kg
Power Drift-Finish: 0.518 W/kg
Power Drift (%) : -2.626

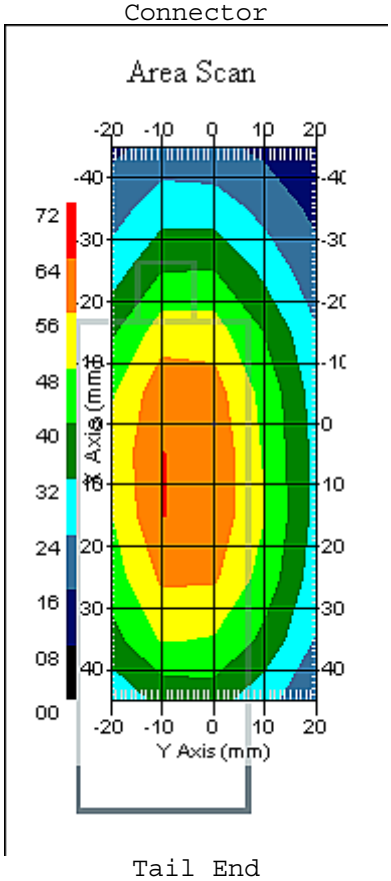
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

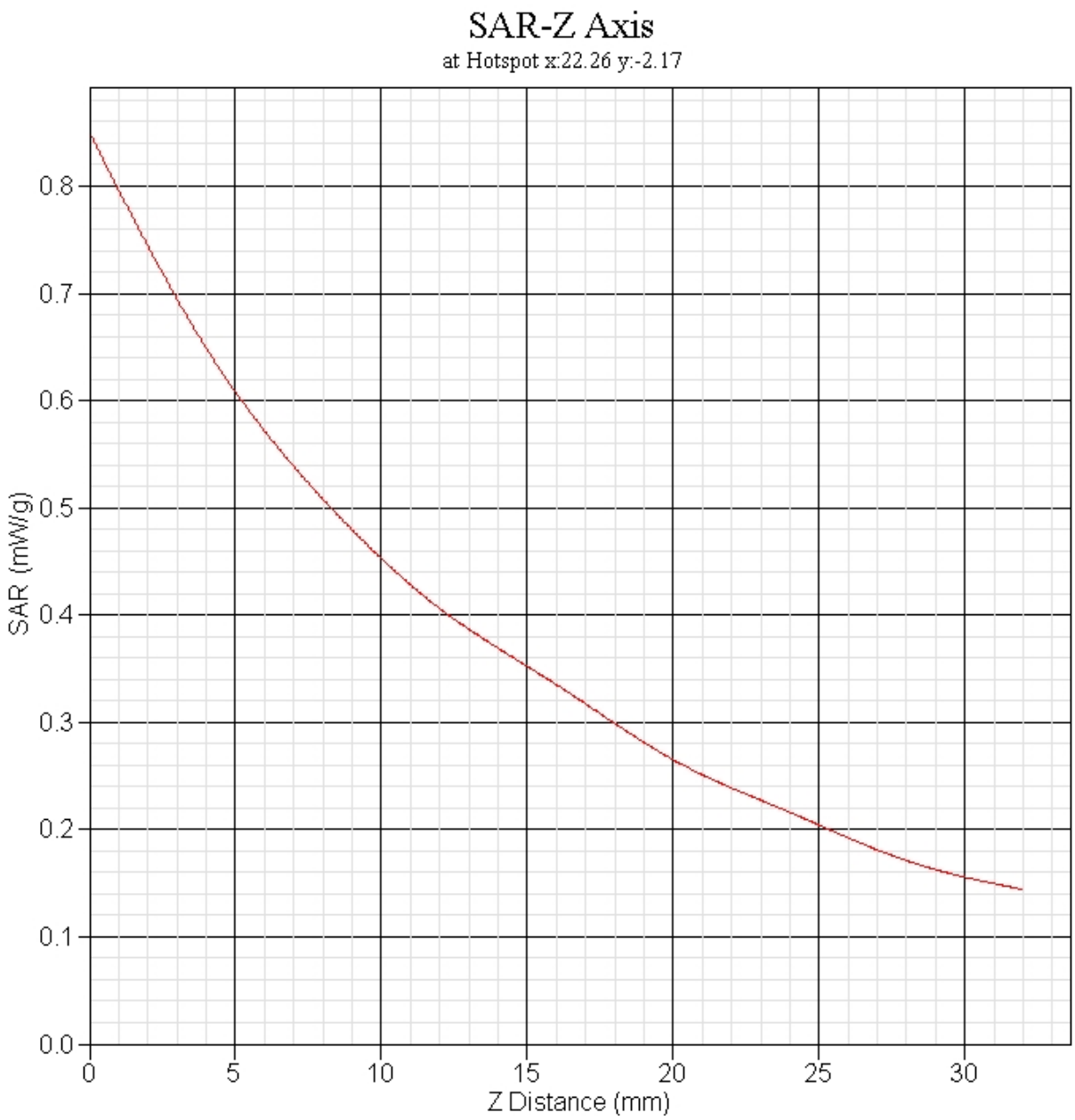
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Install In Toshiba Laptop
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.512 W/kg
10 gram SAR value   : 0.330 W/kg
Area Scan Peak SAR  : 0.642 W/kg
Zoom Scan Peak SAR  : 0.850 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 05:46:14 PM
End Time : 14-Aug-2008 06:04:13 PM
Scanning Time : 1079 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.366 W/kg
Power Drift-Finish: 0.354 W/kg
Power Drift (%) : -3.132

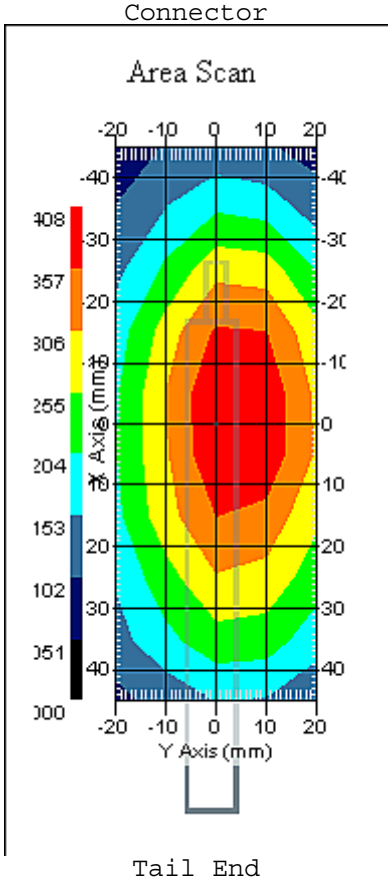
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 24.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 12:52:17 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.385 W/kg
10 gram SAR value   : 0.265 W/kg
Area Scan Peak SAR  : 0.405 W/kg
Zoom Scan Peak SAR  : 0.540 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 01:03:21 PM
End Time : 14-Aug-2008 01:21:31 PM
Scanning Time : 1090 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 0.107 W/kg
Power Drift-Finish: 0.108 W/kg
Power Drift (%) : 1.169

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

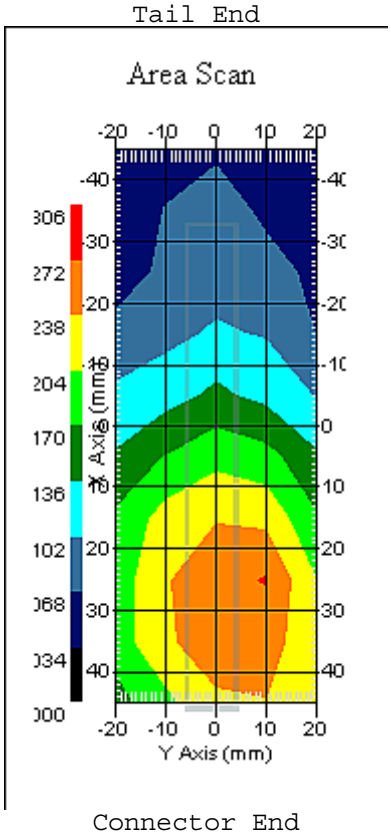
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.26 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 24.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 12:52:17 PM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.263 W/kg
10 gram SAR value : 0.189 W/kg
Area Scan Peak SAR : 0.274 W/kg
Zoom Scan Peak SAR : 0.350 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 01:18:15 PM
End Time : 27-Aug-2008 01:32:32 PM
Scanning Time : 857 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 850.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom With Desk Mount
Power Drift-Start : 0.387 W/kg
Power Drift-Finish: 0.381 W/kg
Power Drift (%) : -1.729

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

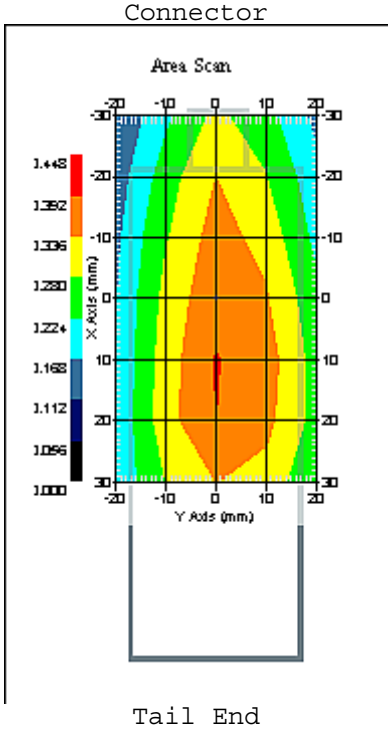
Tissue Data
Type : BODY
Serial No. : 835
Frequency : 835.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 24.00 °C
Humidity : 40.00 RH%
Epsilon : 55.61 F/m
Sigma : 0.96 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 24.00 °C
Set-up Date : 27-Aug-2008
Set-up Time : 12:52:17 PM
Area Scan : 7x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Bottom With Desk Mount
Separation : 14 mm
Channel : Mid

Connector



Tail End

1 gram SAR value : 0.379 W/kg
10 gram SAR value : 0.262 W/kg
Area Scan Peak SAR : 0.395 W/kg
Zoom Scan Peak SAR : 0.530 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 09:25:55 AM
End Time : 13-Aug-2008 09:44:54 AM
Scanning Time : 1139 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.369 W/kg
Power Drift-Finish: 0.376 W/kg
Power Drift (%) : 1.899

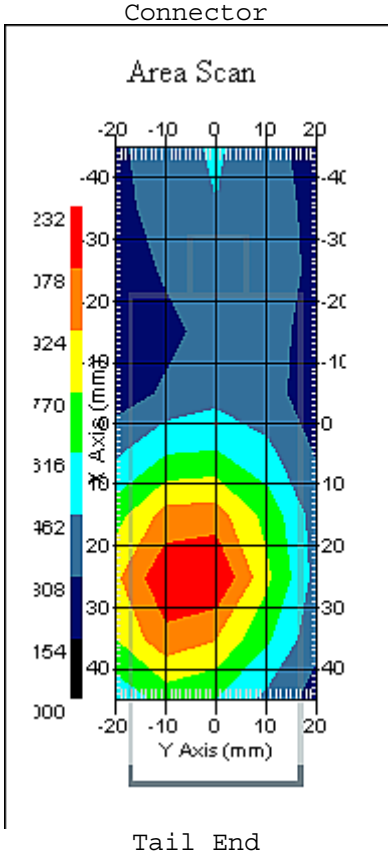
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.124 W/kg
10 gram SAR value   : 0.642 W/kg
Area Scan Peak SAR  : 1.231 W/kg
Zoom Scan Peak SAR  : 1.951 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 09:08:33 AM
End Time : 13-Aug-2008 09:25:02 AM
Scanning Time : 989 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.382 W/kg
Power Drift-Finish: 0.383 W/kg
Power Drift (%) : 0.216

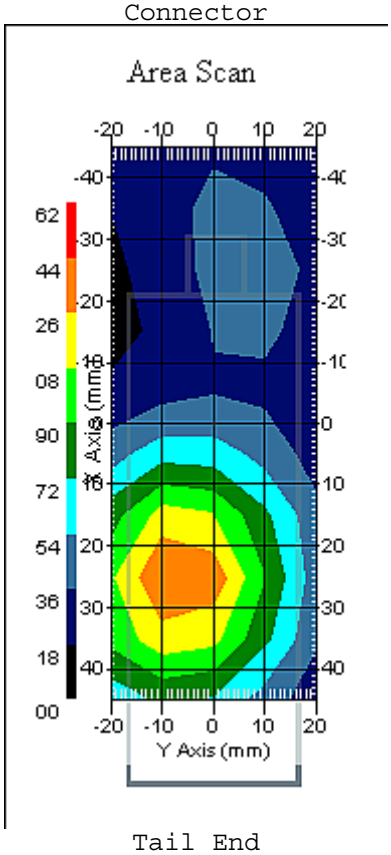
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.398 W/kg
10 gram SAR value   : 0.788 W/kg
Area Scan Peak SAR  : 1.441 W/kg
Zoom Scan Peak SAR  : 2.432 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 10:03:26 AM
End Time : 13-Aug-2008 10:20:01 AM
Scanning Time : 995 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.379 W/kg
Power Drift-Finish: 0.363 W/kg
Power Drift (%) : -4.163

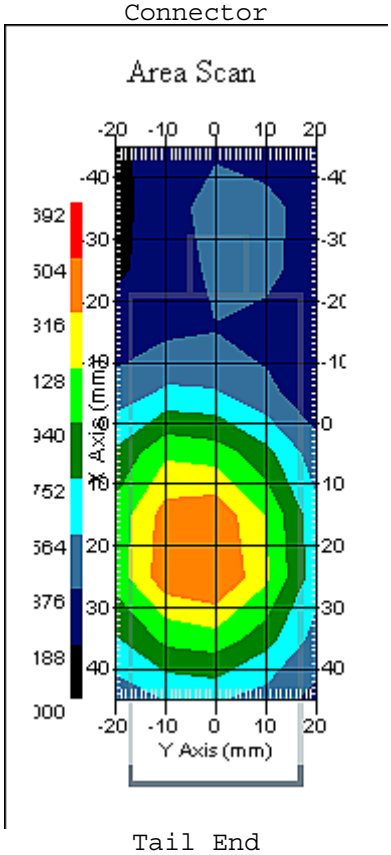
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.477 W/kg
10 gram SAR value   : 0.862 W/kg
Area Scan Peak SAR  : 1.505 W/kg
Zoom Scan Peak SAR  : 2.532 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 04:17:39 PM
End Time : 12-Aug-2008 04:35:35 PM
Scanning Time : 1076 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.540 W/kg
Power Drift-Finish: 0.561 W/kg
Power Drift (%) : 3.934

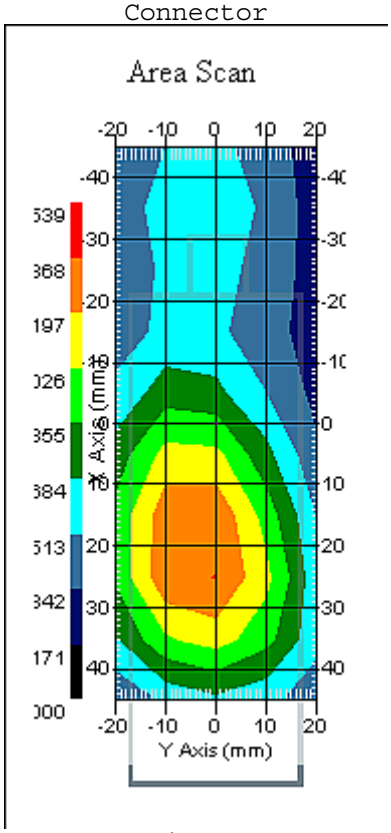
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.296 W/kg
10 gram SAR value   : 0.790 W/kg
Area Scan Peak SAR  : 1.371 W/kg
Zoom Scan Peak SAR  : 1.951 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 03:58:46 PM
End Time : 12-Aug-2008 04:16:45 PM
Scanning Time : 1079 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.578 W/kg
Power Drift-Finish: 0.588 W/kg
Power Drift (%) : 1.620

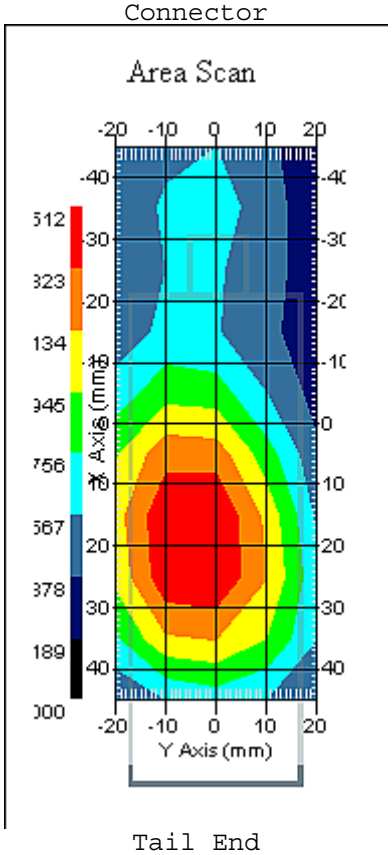
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.455 W/kg
10 gram SAR value   : 0.870 W/kg
Area Scan Peak SAR  : 1.509 W/kg
Zoom Scan Peak SAR  : 2.352 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 04:36:22 PM
End Time : 12-Aug-2008 04:54:30 PM
Scanning Time : 1088 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.581 W/kg
Power Drift-Finish: 0.594 W/kg
Power Drift (%) : 2.113

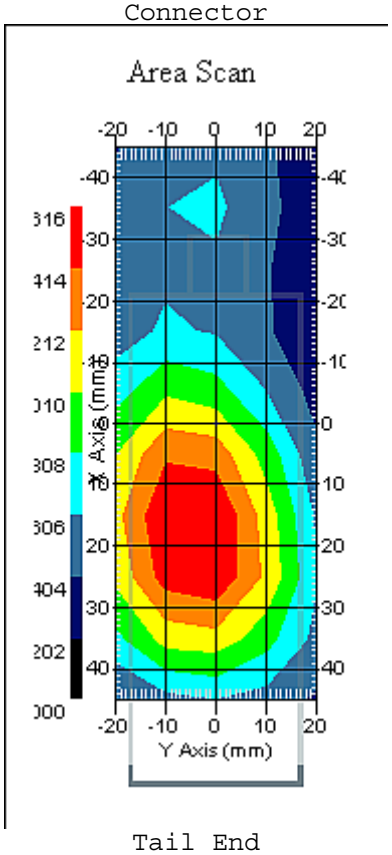
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

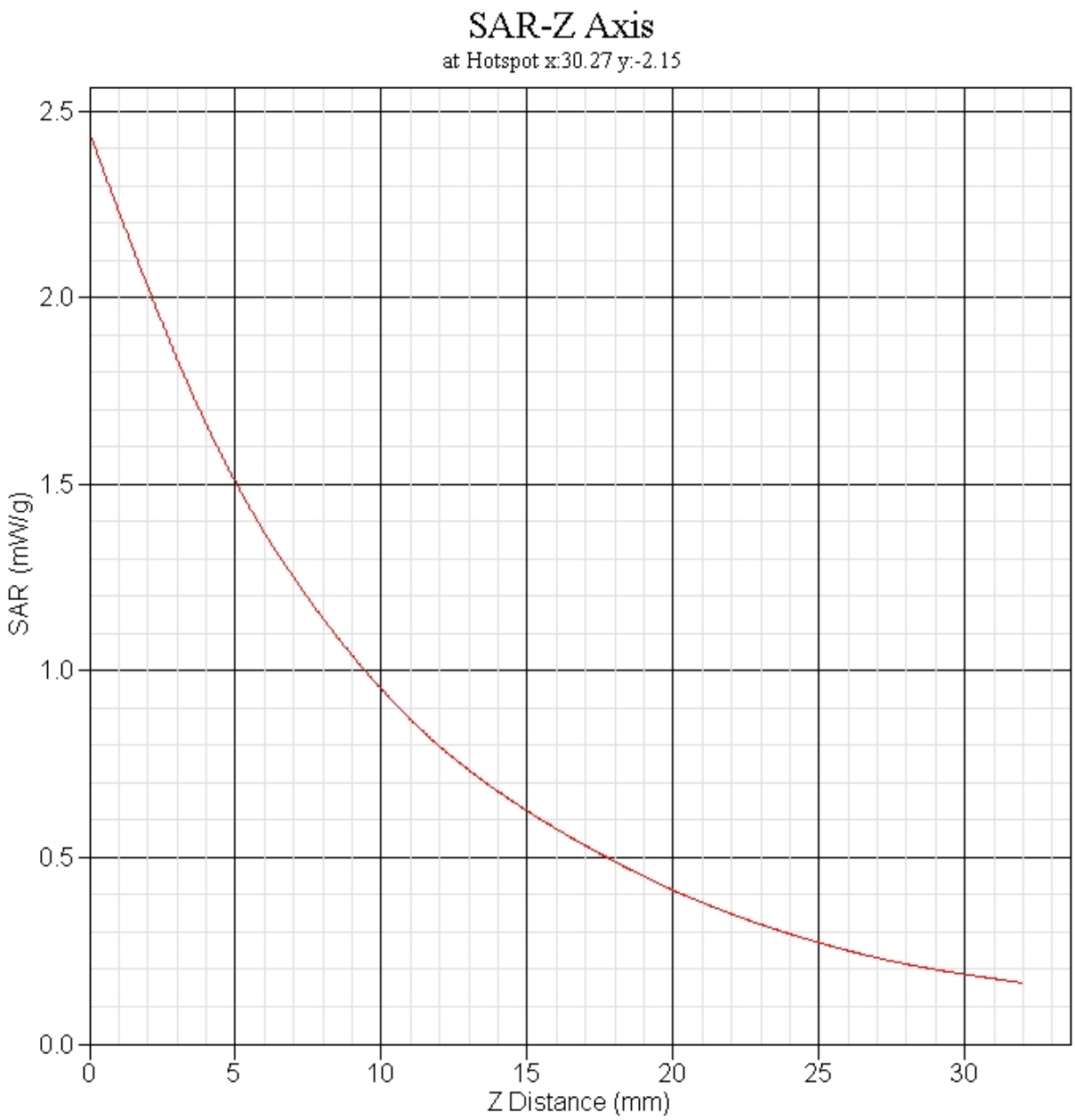
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.502 W/kg
10 gram SAR value   : 0.873 W/kg
Area Scan Peak SAR  : 1.616 W/kg
Zoom Scan Peak SAR  : 2.442 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 02:10:37 PM
End Time : 13-Aug-2008 02:27:14 PM
Scanning Time : 997 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.137 W/kg
Power Drift-Finish: 0.141 W/kg
Power Drift (%) : 2.907

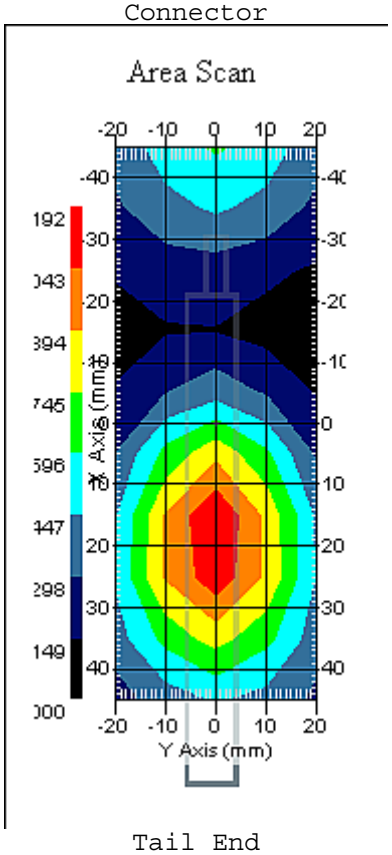
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.101 W/kg
10 gram SAR value   : 0.614 W/kg
Area Scan Peak SAR  : 1.192 W/kg
Zoom Scan Peak SAR  : 1.831 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 01:52:38 PM
End Time : 13-Aug-2008 02:09:06 PM
Scanning Time : 988 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.142 W/kg
Power Drift-Finish: 0.145 W/kg
Power Drift (%) : 2.593

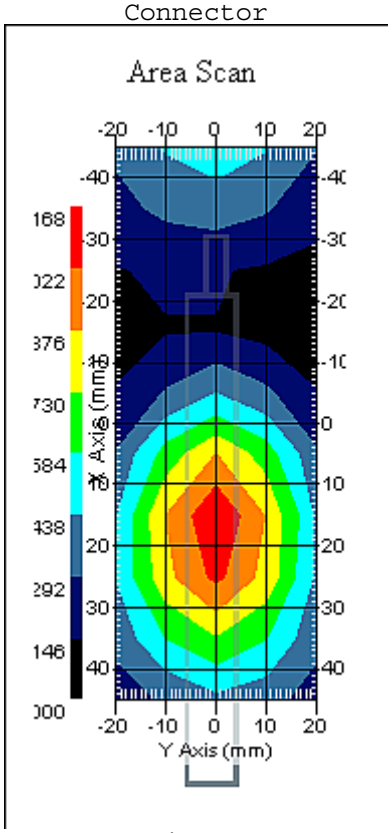
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.050 W/kg
10 gram SAR value   : 0.598 W/kg
Area Scan Peak SAR  : 1.168 W/kg
Zoom Scan Peak SAR  : 1.771 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 02:28:21 PM
End Time : 13-Aug-2008 02:44:50 PM
Scanning Time : 989 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.208 W/kg
Power Drift-Finish: 0.210 W/kg
Power Drift (%) : 1.132

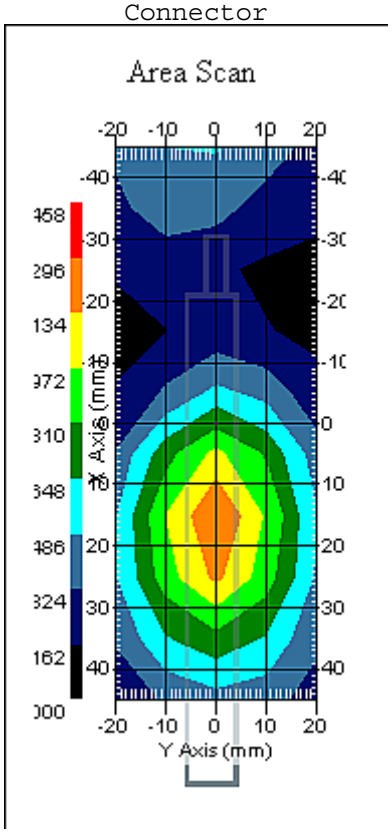
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : High
```

Connector



End

```
1 gram SAR value    : 1.190 W/kg
10 gram SAR value   : 0.668 W/kg
Area Scan Peak SAR  : 1.298 W/kg
Zoom Scan Peak SAR  : 2.071 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 10:01:04 AM
End Time : 14-Aug-2008 10:19:00 AM
Scanning Time : 1076 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.288 W/kg
Power Drift-Finish: 1.265 W/kg
Power Drift (%) : -1.771

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

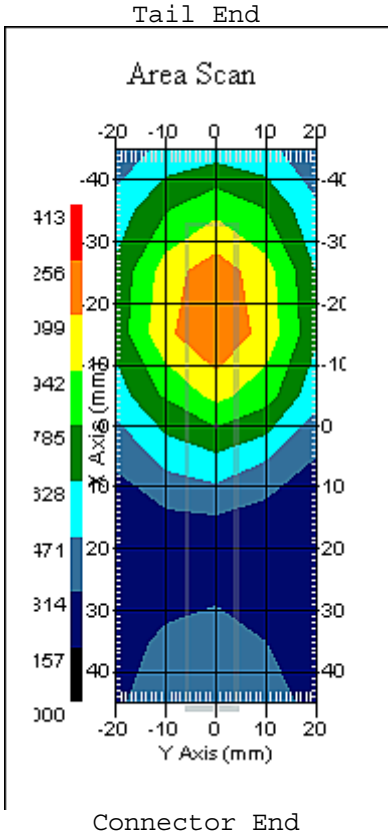
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 7:07:38 AM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 1.170 W/kg
10 gram SAR value : 0.706 W/kg
Area Scan Peak SAR : 1.257 W/kg
Zoom Scan Peak SAR : 1.801 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 09:42:14 AM
End Time : 14-Aug-2008 10:00:17 AM
Scanning Time : 1083 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.199 W/kg
Power Drift-Finish: 1.193 W/kg
Power Drift (%) : -0.509

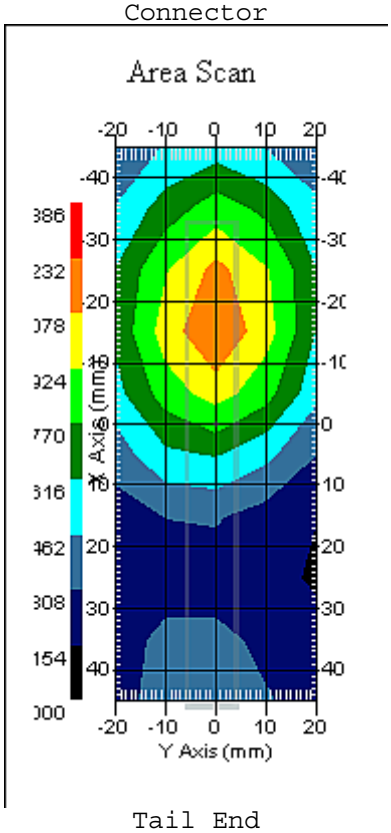
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Left Side Installed In HP Laptop
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.169 W/kg
10 gram SAR value   : 0.695 W/kg
Area Scan Peak SAR  : 1.233 W/kg
Zoom Scan Peak SAR  : 1.811 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 10:20:02 AM
End Time : 14-Aug-2008 10:38:03 AM
Scanning Time : 1081 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.206 W/kg
Power Drift-Finish: 1.224 W/kg
Power Drift (%) : 1.470

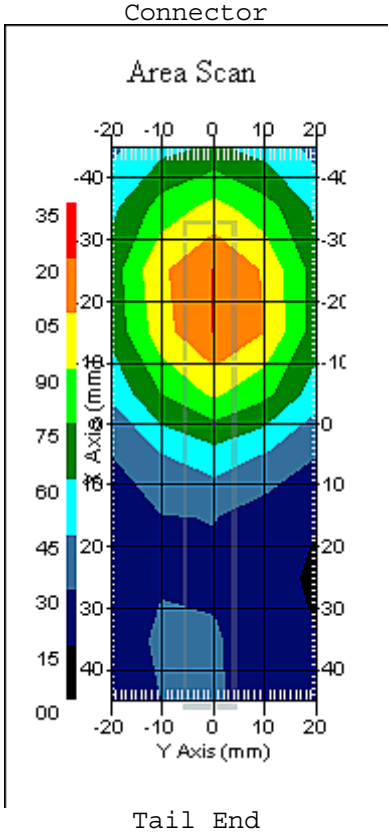
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Left Side Installed In HP Laptop
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.167 W/kg
10 gram SAR value   : 0.705 W/kg
Area Scan Peak SAR  : 1.203 W/kg
Zoom Scan Peak SAR  : 1.811 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 07:50:10 AM
End Time : 27-Aug-2008 08:13:57 AM
Scanning Time : 1427 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : 1xRTT
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom With Desk Mount
Power Drift-Start : 0.815 W/kg
Power Drift-Finish: 0.834 W/kg
Power Drift (%) : 2.336

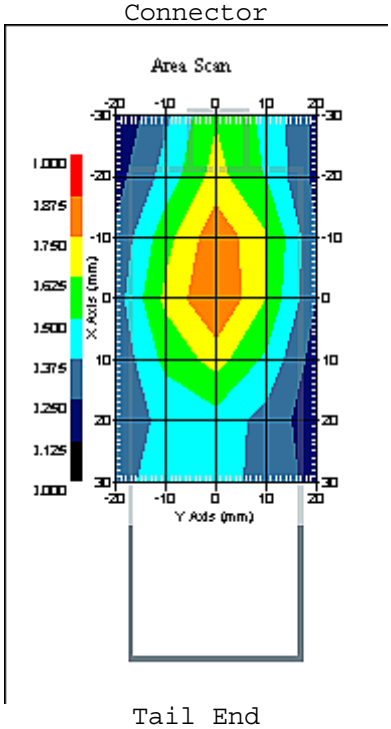
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.11 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 27-Aug-2008
Set-up Time       : 7:48:21 AM
Area Scan         : 7x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Bottom With Desk Mount
Separation        : 14 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 0.868 W/kg
10 gram SAR value   : 0.477 W/kg
Area Scan Peak SAR  : 0.877 W/kg
Zoom Scan Peak SAR  : 1.411 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 08:25:17 AM
End Time : 13-Aug-2008 08:41:59 AM
Scanning Time : 1002 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.384 W/kg
Power Drift-Finish: 0.392 W/kg
Power Drift (%) : 2.021

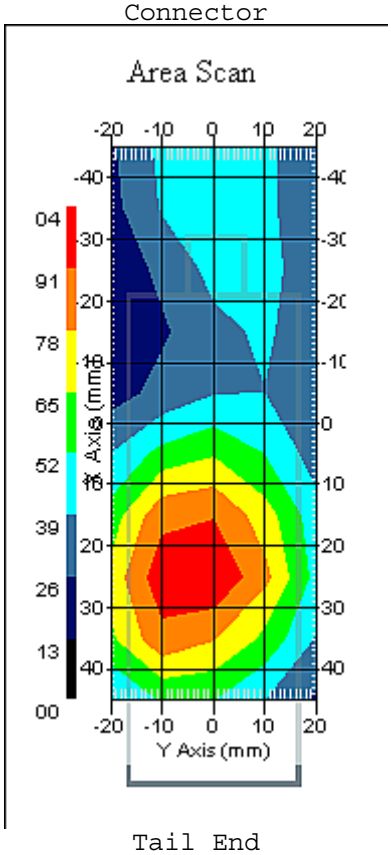
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.028 W/kg
10 gram SAR value   : 0.593 W/kg
Area Scan Peak SAR  : 1.037 W/kg
Zoom Scan Peak SAR  : 1.831 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 08:07:09 AM
End Time : 13-Aug-2008 08:23:40 AM
Scanning Time : 991 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.362 W/kg
Power Drift-Finish: 0.350 W/kg
Power Drift (%) : -3.454

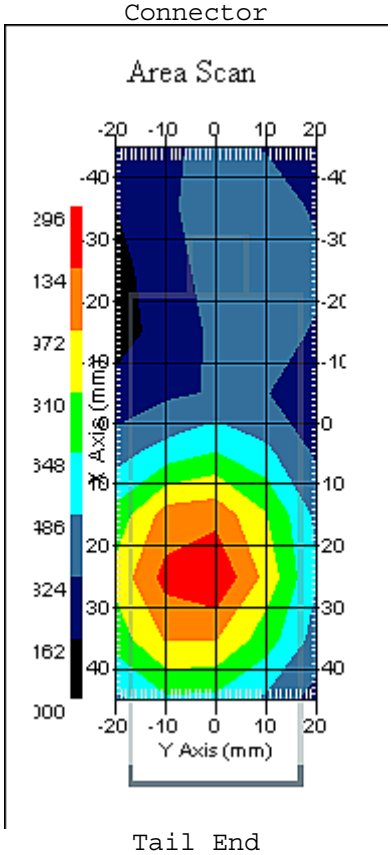
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.181 W/kg
10 gram SAR value   : 0.688 W/kg
Area Scan Peak SAR  : 1.293 W/kg
Zoom Scan Peak SAR  : 1.861 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 08:43:35 AM
End Time : 13-Aug-2008 09:00:08 AM
Scanning Time : 993 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.355 W/kg
Power Drift-Finish: 0.360 W/kg
Power Drift (%) : 1.236

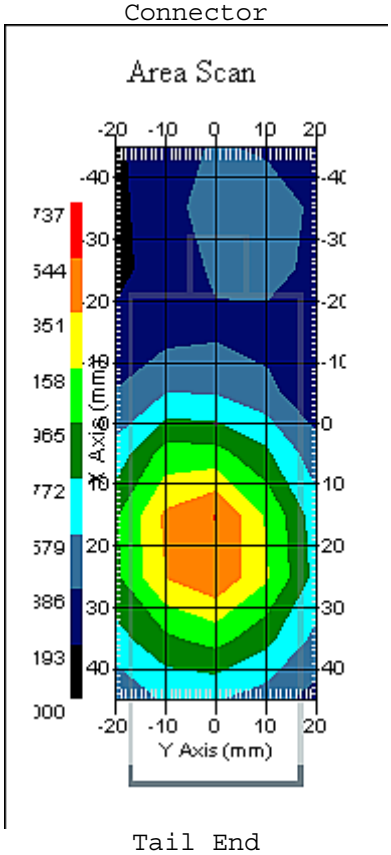
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.396 W/kg
10 gram SAR value   : 0.818 W/kg
Area Scan Peak SAR  : 1.548 W/kg
Zoom Scan Peak SAR  : 2.131 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 08:39:46 PM
End Time : 12-Aug-2008 08:57:30 PM
Scanning Time : 1064 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.420 W/kg
Power Drift-Finish: 0.432 W/kg
Power Drift (%) : 2.776

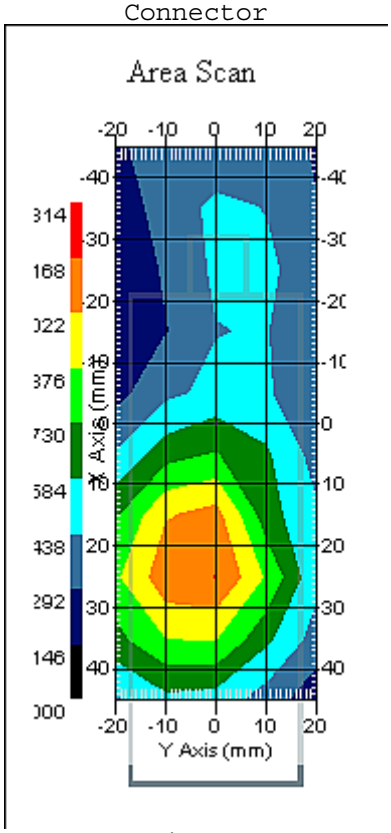
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.094 W/kg
10 gram SAR value   : 0.649 W/kg
Area Scan Peak SAR  : 1.171 W/kg
Zoom Scan Peak SAR  : 1.751 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 08:02:45 PM
End Time : 12-Aug-2008 08:20:38 PM
Scanning Time : 1073 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.344 W/kg
Power Drift-Finish: 0.354 W/kg
Power Drift (%) : 2.906

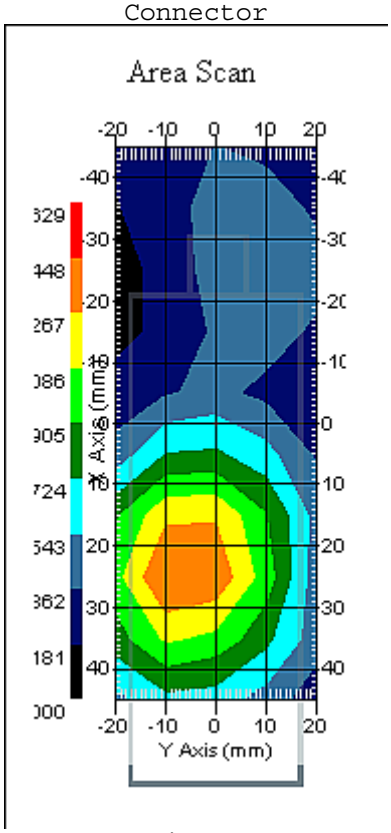
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.382 W/kg
10 gram SAR value   : 0.801 W/kg
Area Scan Peak SAR  : 1.449 W/kg
Zoom Scan Peak SAR  : 2.222 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 07:20:20 AM
End Time : 13-Aug-2008 07:37:43 AM
Scanning Time : 1043 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.377 W/kg
Power Drift-Finish: 0.388 W/kg
Power Drift (%) : 2.919

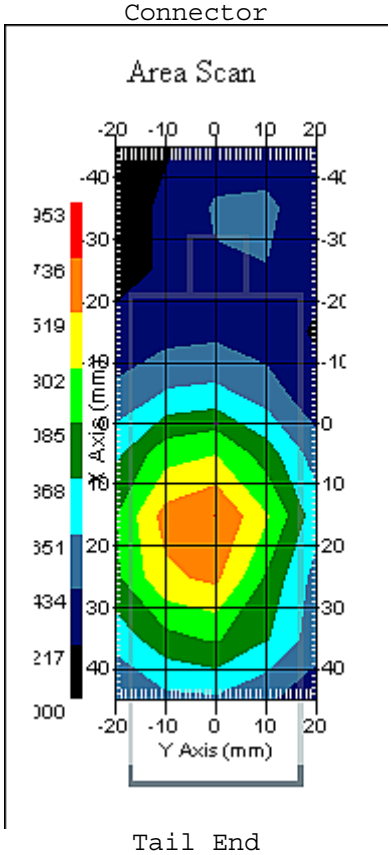
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.387 W/kg
10 gram SAR value   : 0.758 W/kg
Area Scan Peak SAR  : 1.739 W/kg
Zoom Scan Peak SAR  : 2.492 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 01:40:00 PM
End Time : 12-Aug-2008 01:57:58 PM
Scanning Time : 1078 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.514 W/kg
Power Drift-Finish: 0.508 W/kg
Power Drift (%) : -1.116

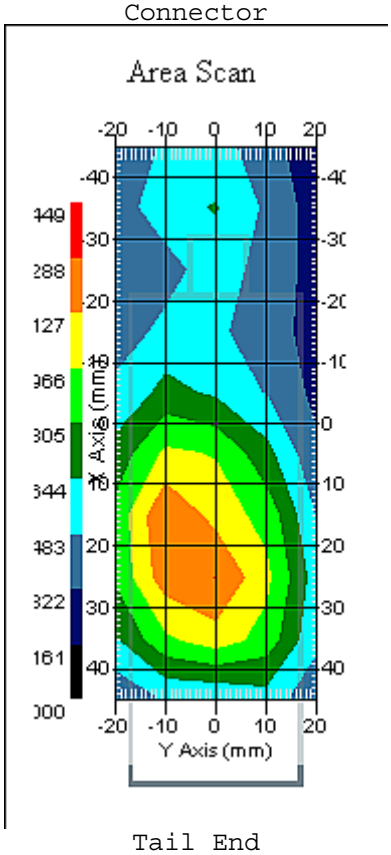
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.173 W/kg
10 gram SAR value   : 0.705 W/kg
Area Scan Peak SAR  : 1.291 W/kg
Zoom Scan Peak SAR  : 1.861 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 01:20:17 PM
End Time : 12-Aug-2008 01:38:44 PM
Scanning Time : 1107 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.543 W/kg
Power Drift-Finish: 0.538 W/kg
Power Drift (%) : -0.903

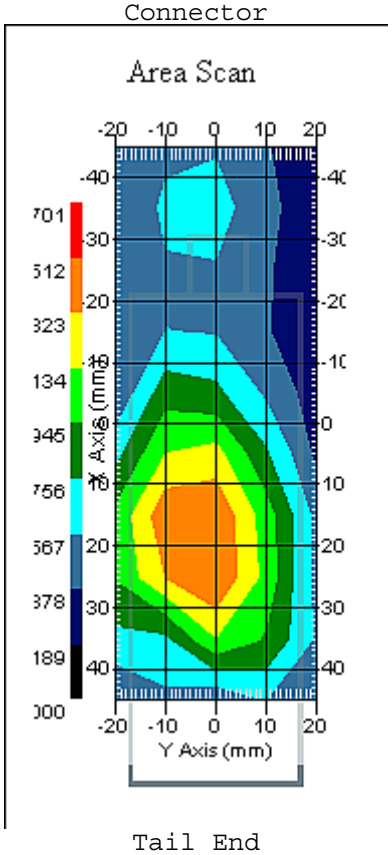
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.344 W/kg
10 gram SAR value   : 0.790 W/kg
Area Scan Peak SAR  : 1.513 W/kg
Zoom Scan Peak SAR  : 2.222 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 02:32:53 PM
End Time : 12-Aug-2008 02:50:49 PM
Scanning Time : 1076 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.581 W/kg
Power Drift-Finish: 0.586 W/kg
Power Drift (%) : 0.879

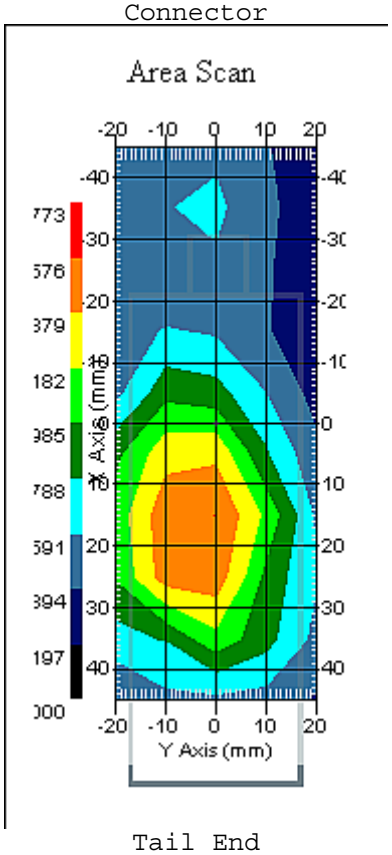
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.463 W/kg
10 gram SAR value   : 0.881 W/kg
Area Scan Peak SAR  : 1.579 W/kg
Zoom Scan Peak SAR  : 2.242 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 03:12:34 PM
End Time : 12-Aug-2008 03:30:27 PM
Scanning Time : 1073 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.569 W/kg
Power Drift-Finish: 0.576 W/kg
Power Drift (%) : 1.322

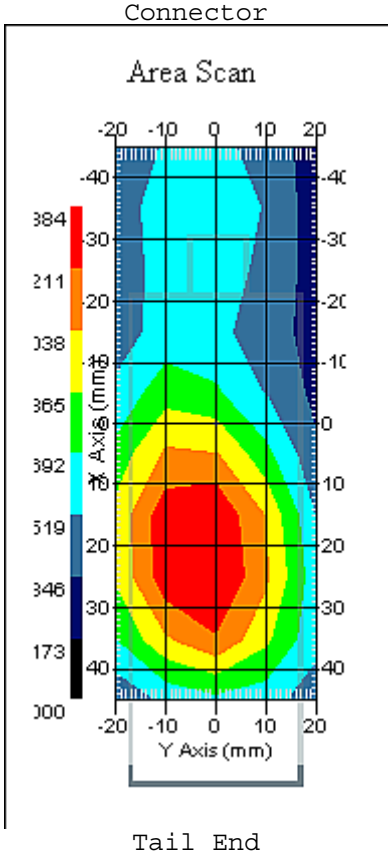
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.346 W/kg
10 gram SAR value   : 0.807 W/kg
Area Scan Peak SAR  : 1.381 W/kg
Zoom Scan Peak SAR  : 2.312 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 02:53:40 PM
End Time : 12-Aug-2008 03:11:44 PM
Scanning Time : 1084 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Type : Other
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Stub
Orientation : Touch
Power Drift-Start : 0.595 W/kg
Power Drift-Finish: 0.618 W/kg
Power Drift (%) : 3.862

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

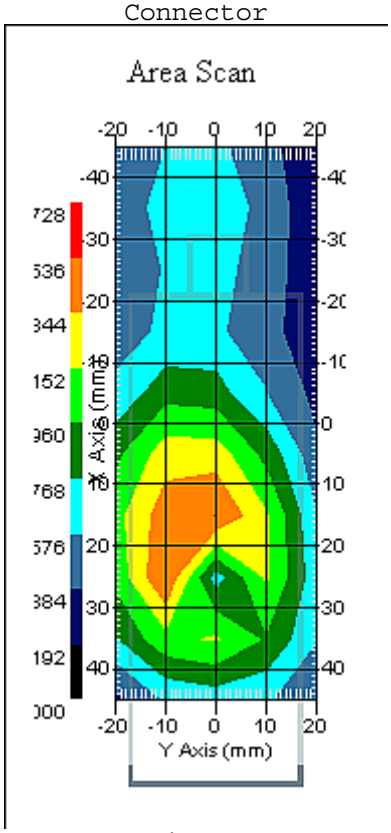
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 F/m
Sigma : 1.53 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 12-Aug-2008
Set-up Time : 12:50:00 PM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

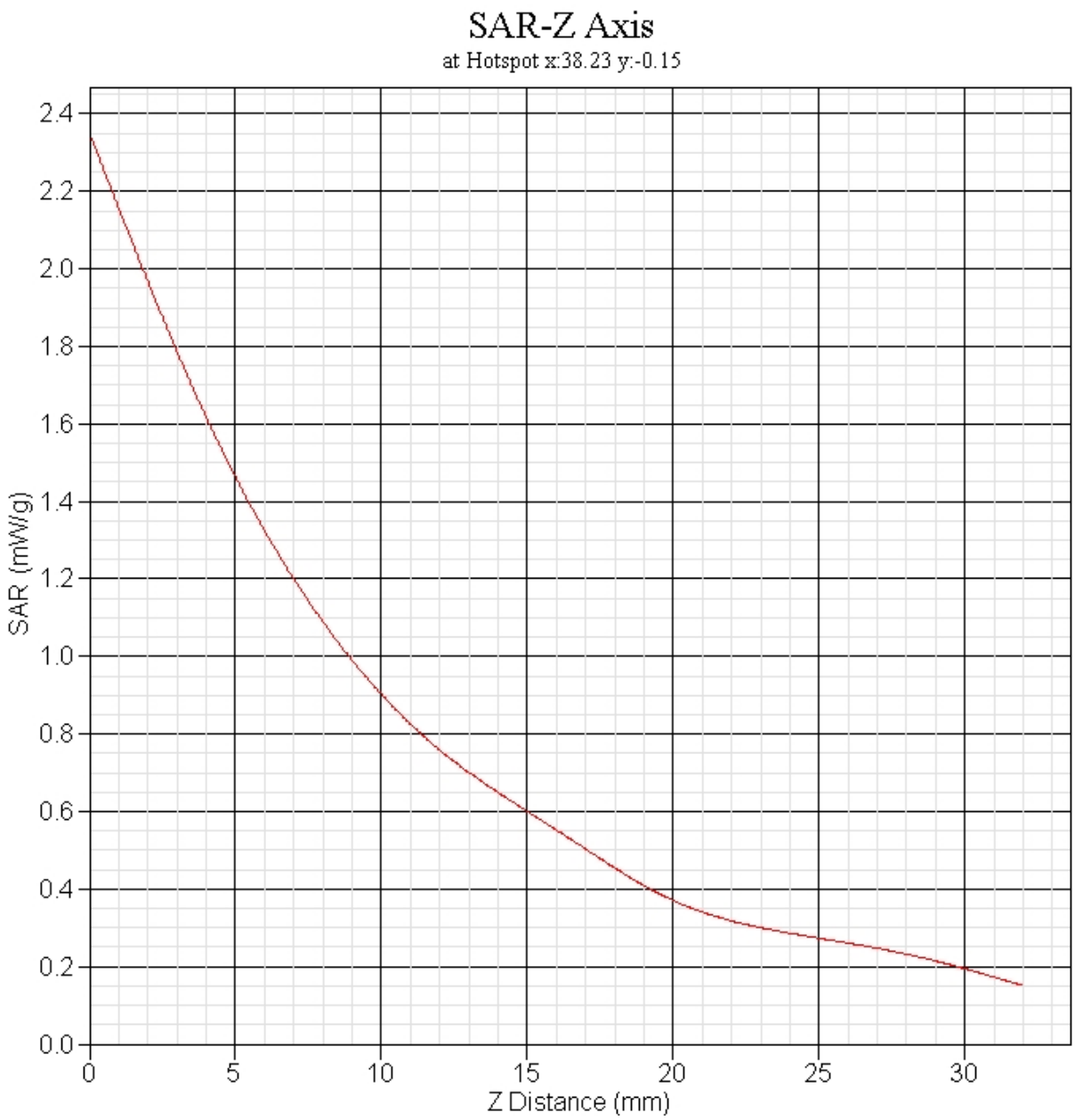
Other Data
DUT Position : Touch
Separation : 0
Channel : Mid

Connector



Tail End

1 gram SAR value : 1.506 W/kg
10 gram SAR value : 0.874 W/kg
Area Scan Peak SAR : 1.539 W/kg
Zoom Scan Peak SAR : 2.352 W/kg



SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 03:31:14 PM
End Time : 12-Aug-2008 03:49:16 PM
Scanning Time : 1082 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.612 W/kg
Power Drift-Finish: 0.598 W/kg
Power Drift (%) : -2.285

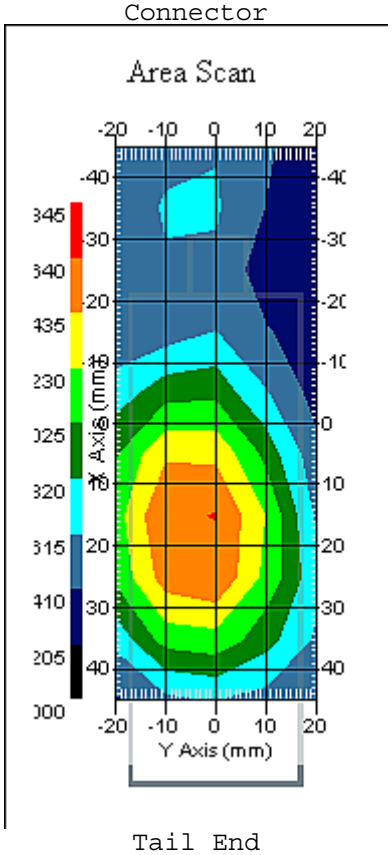
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.505 W/kg
10 gram SAR value   : 0.872 W/kg
Area Scan Peak SAR  : 1.643 W/kg
Zoom Scan Peak SAR  : 2.402 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 03:20:08 PM
End Time : 13-Aug-2008 03:36:39 PM
Scanning Time : 991 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.136 W/kg
Power Drift-Finish: 0.133 W/kg
Power Drift (%) : -2.405

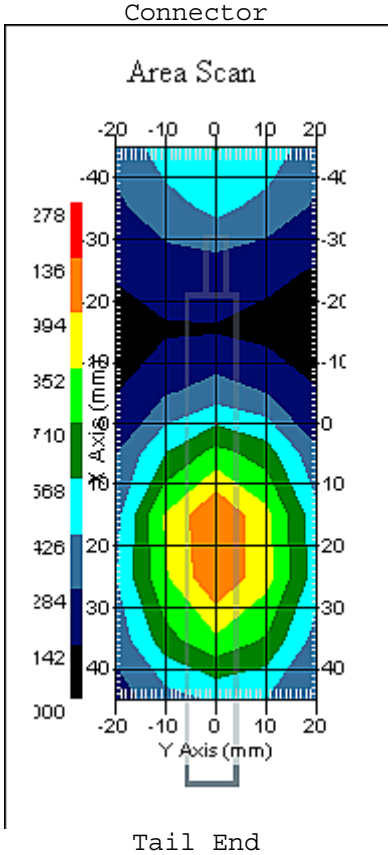
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.106 W/kg
10 gram SAR value   : 0.618 W/kg
Area Scan Peak SAR  : 1.137 W/kg
Zoom Scan Peak SAR  : 1.851 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 03:01:48 PM
End Time : 13-Aug-2008 03:18:18 PM
Scanning Time : 990 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.121 W/kg
Power Drift-Finish: 0.126 W/kg
Power Drift (%) : 3.966

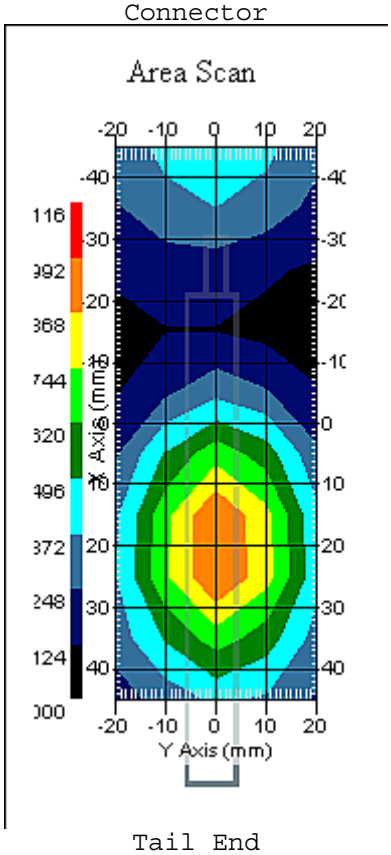
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.934 W/kg
10 gram SAR value   : 0.523 W/kg
Area Scan Peak SAR  : 0.993 W/kg
Zoom Scan Peak SAR  : 1.621 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 03:37:41 PM
End Time : 13-Aug-2008 03:54:02 PM
Scanning Time : 981 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.204 W/kg
Power Drift-Finish: 0.206 W/kg
Power Drift (%) : 1.204

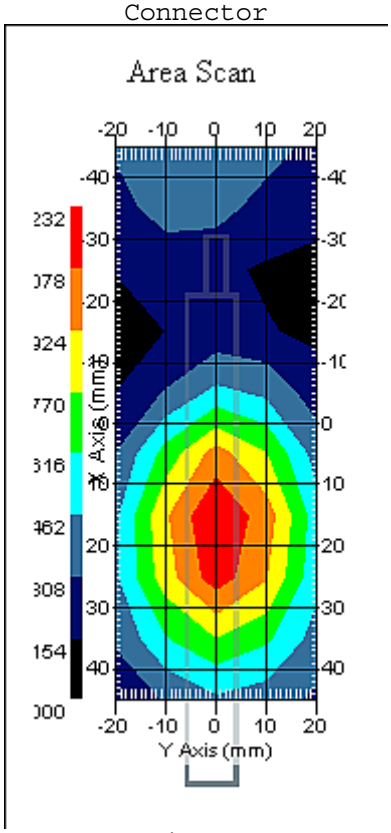
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.162 W/kg
10 gram SAR value   : 0.655 W/kg
Area Scan Peak SAR  : 1.228 W/kg
Zoom Scan Peak SAR  : 1.941 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 04:36:48 PM
End Time : 13-Aug-2008 04:53:22 PM
Scanning Time : 994 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.103 W/kg
Power Drift-Finish: 0.100 W/kg
Power Drift (%) : -2.979

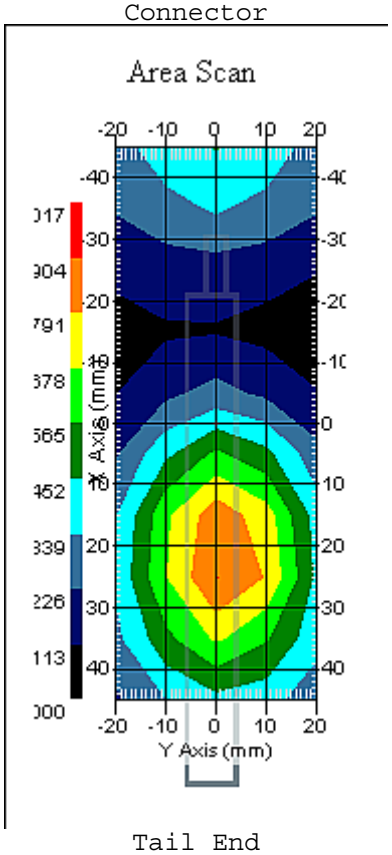
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.853 W/kg
10 gram SAR value   : 0.497 W/kg
Area Scan Peak SAR  : 0.907 W/kg
Zoom Scan Peak SAR  : 1.431 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 04:18:52 PM
End Time : 13-Aug-2008 04:35:18 PM
Scanning Time : 986 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.094 W/kg
Power Drift-Finish: 0.095 W/kg
Power Drift (%) : 0.756

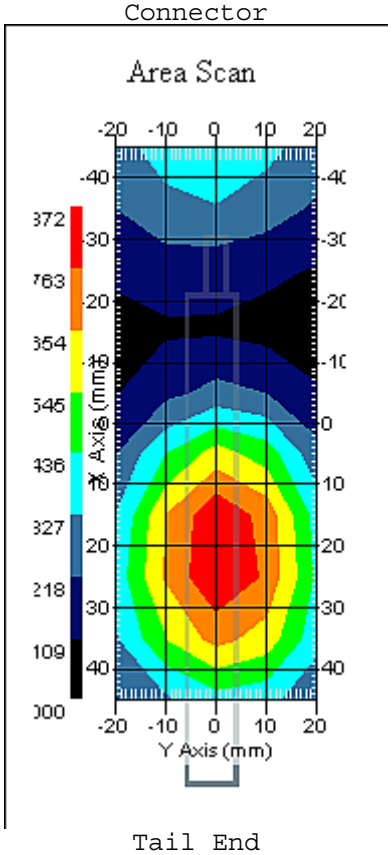
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.851 W/kg
10 gram SAR value   : 0.496 W/kg
Area Scan Peak SAR  : 0.869 W/kg
Zoom Scan Peak SAR  : 1.391 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 04:54:20 PM
End Time : 13-Aug-2008 05:10:55 PM
Scanning Time : 995 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.140 W/kg
Power Drift-Finish: 0.147 W/kg
Power Drift (%) : 4.898

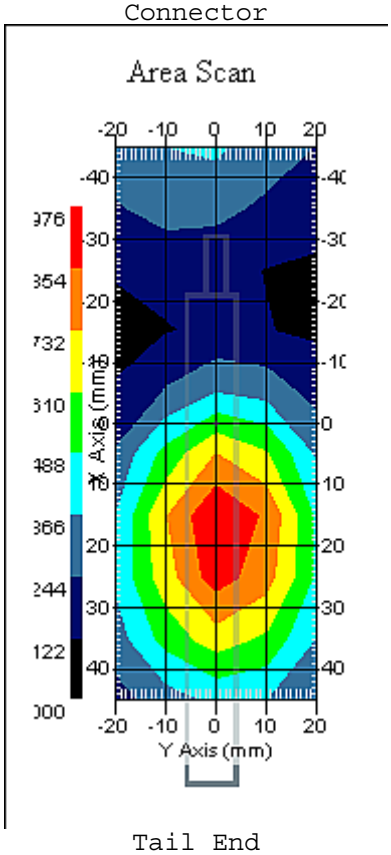
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 0.910 W/kg
10 gram SAR value   : 0.518 W/kg
Area Scan Peak SAR  : 0.974 W/kg
Zoom Scan Peak SAR  : 1.491 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 08:59:57 AM
End Time : 14-Aug-2008 09:18:00 AM
Scanning Time : 1083 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.136 W/kg
Power Drift-Finish: 1.187 W/kg
Power Drift (%) : 4.443

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

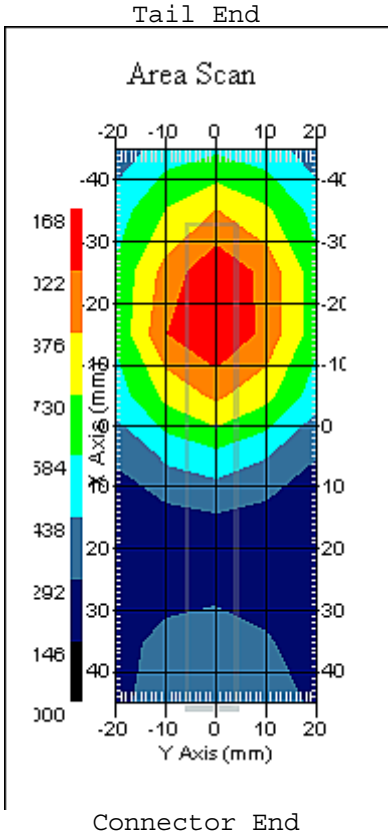
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 7:07:38 AM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 1.065 W/kg
10 gram SAR value : 0.651 W/kg
Area Scan Peak SAR : 1.168 W/kg
Zoom Scan Peak SAR : 1.621 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 08:41:13 AM
End Time : 14-Aug-2008 08:59:14 AM
Scanning Time : 1081 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.152 W/kg
Power Drift-Finish: 1.165 W/kg
Power Drift (%) : 1.166

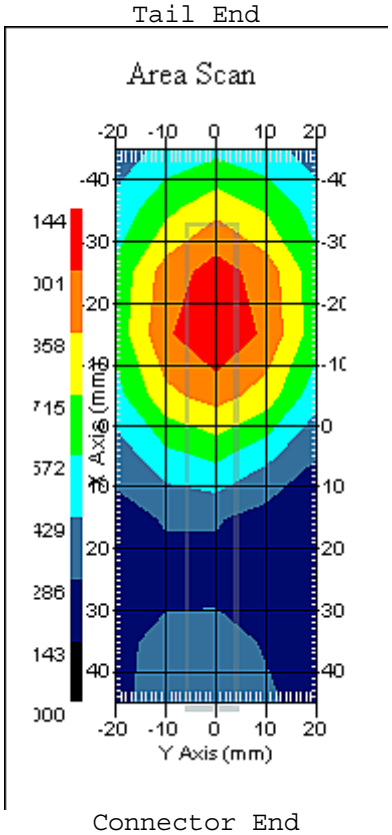
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Left Side Installed In HP Laptop
Separation        : 12 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 1.058 W/kg
10 gram SAR value   : 0.644 W/kg
Area Scan Peak SAR  : 1.142 W/kg
Zoom Scan Peak SAR  : 1.671 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 09:18:47 AM
End Time : 14-Aug-2008 09:36:45 AM
Scanning Time : 1078 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev 0
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.126 W/kg
Power Drift-Finish: 1.080 W/kg
Power Drift (%) : -4.097

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

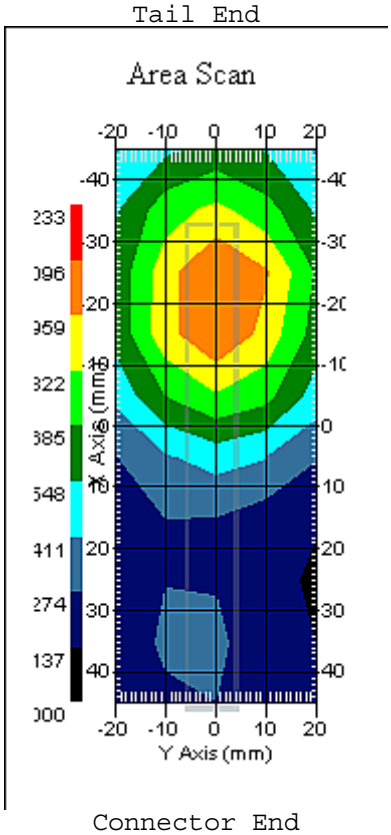
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 7:07:38 AM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 1.070 W/kg
10 gram SAR value : 0.639 W/kg
Area Scan Peak SAR : 1.098 W/kg
Zoom Scan Peak SAR : 1.761 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 08:02:49 AM
End Time : 14-Aug-2008 08:20:46 AM
Scanning Time : 1077 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.188 W/kg
Power Drift-Finish: 1.206 W/kg
Power Drift (%) : 1.524

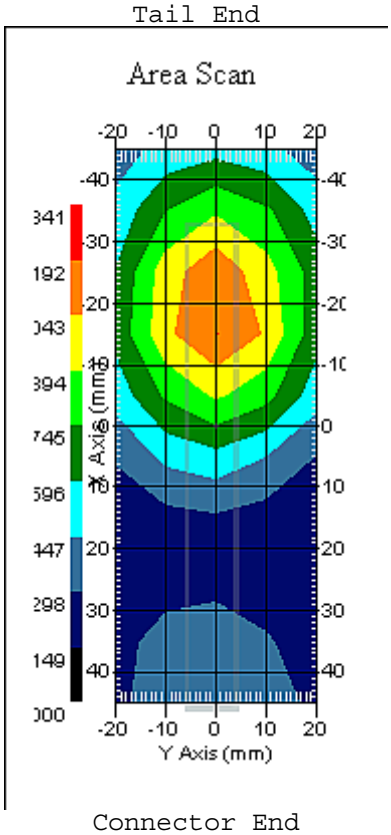
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 14-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Left Side Installed In HP Laptop
Separation        : 12 mm
Channel           : Low
```

Tail End



Connector End

```
1 gram SAR value    : 1.118 W/kg
10 gram SAR value   : 0.679 W/kg
Area Scan Peak SAR  : 1.196 W/kg
Zoom Scan Peak SAR  : 1.761 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 07:43:20 AM
End Time : 14-Aug-2008 08:01:41 AM
Scanning Time : 1101 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.188 W/kg
Power Drift-Finish: 1.176 W/kg
Power Drift (%) : -1.015

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

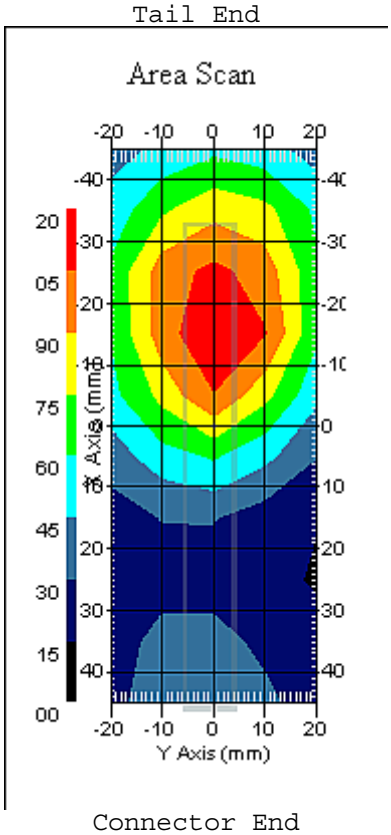
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 7:07:38 AM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 1.164 W/kg
10 gram SAR value : 0.697 W/kg
Area Scan Peak SAR : 1.200 W/kg
Zoom Scan Peak SAR : 1.851 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 08:21:35 AM
End Time : 14-Aug-2008 08:39:34 AM
Scanning Time : 1079 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.152 W/kg
Power Drift-Finish: 1.141 W/kg
Power Drift (%) : -0.883

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

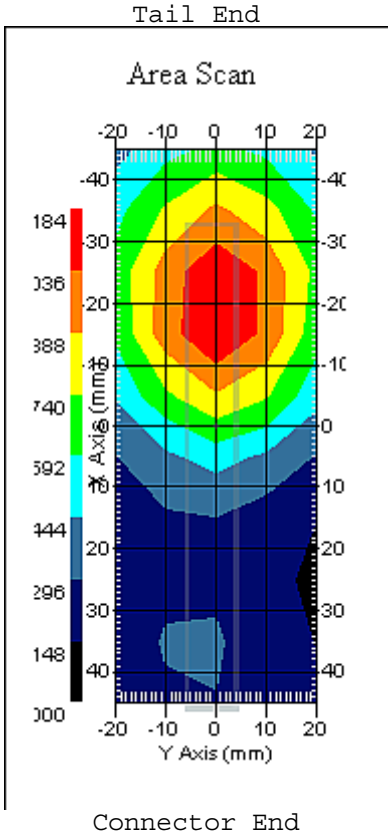
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 7:07:38 AM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 1.125 W/kg
10 gram SAR value : 0.679 W/kg
Area Scan Peak SAR : 1.182 W/kg
Zoom Scan Peak SAR : 1.781 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 09:14:35 AM
End Time : 27-Aug-2008 09:28:24 AM
Scanning Time : 829 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : EvDo Rev A
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom With Desk Mount
Power Drift-Start : 1.136 W/kg
Power Drift-Finish: 1.143 W/kg
Power Drift (%) : 0.661

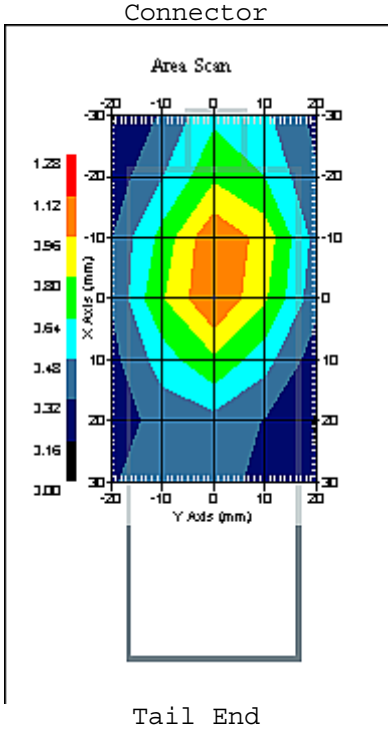
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.11 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 27-Aug-2008
Set-up Time       : 7:48:21 AM
Area Scan         : 7x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom With Desk Mount
Separation        : 14 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.056 W/kg
10 gram SAR value   : 0.588 W/kg
Area Scan Peak SAR  : 1.121 W/kg
Zoom Scan Peak SAR  : 1.781 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 10:43:02 AM
End Time : 13-Aug-2008 10:59:29 AM
Scanning Time : 987 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.402 W/kg
Power Drift-Finish: 0.408 W/kg
Power Drift (%) : 1.408

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

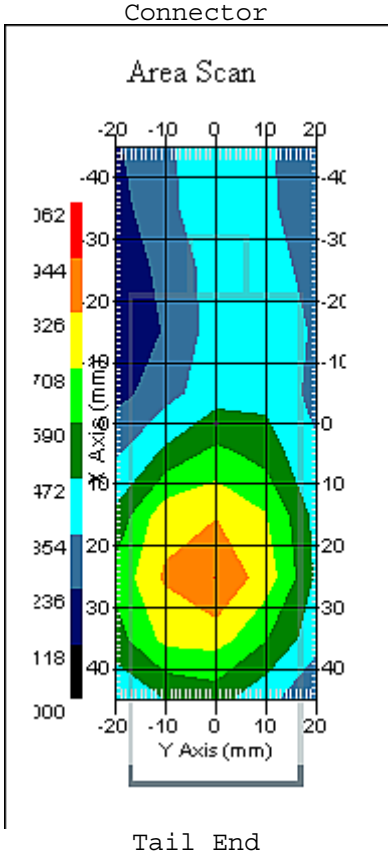
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 13-Aug-2008
Set-up Time : 7:19:52 AM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Top With USB Cable
Separation : 12 mm
Channel : Low

Connector



Tail End

1 gram SAR value : 0.927 W/kg
10 gram SAR value : 0.545 W/kg
Area Scan Peak SAR : 0.947 W/kg
Zoom Scan Peak SAR : 1.581 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 10:25:26 AM
End Time : 13-Aug-2008 10:41:58 AM
Scanning Time : 992 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.410 W/kg
Power Drift-Finish: 0.399 W/kg
Power Drift (%) : -2.734

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

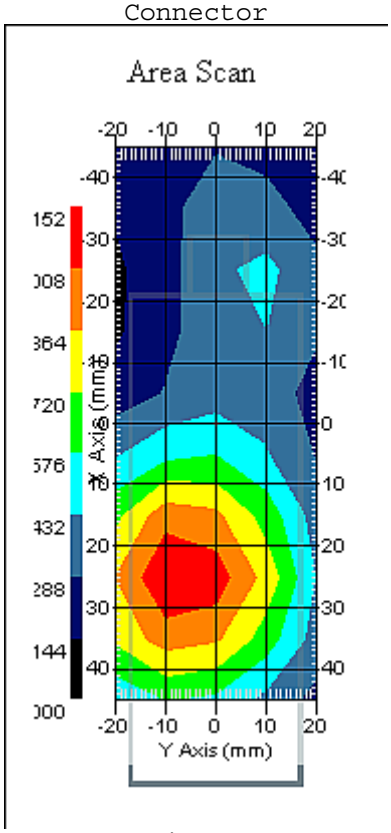
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 13-Aug-2008
Set-up Time : 7:19:52 AM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Top With USB Cable
Separation : 12 mm
Channel : Mid

Connector



Tail End

1 gram SAR value : 1.077 W/kg
10 gram SAR value : 0.627 W/kg
Area Scan Peak SAR : 1.152 W/kg
Zoom Scan Peak SAR : 1.771 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 11:00:22 AM
End Time : 13-Aug-2008 11:17:00 AM
Scanning Time : 998 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.356 W/kg
Power Drift-Finish: 0.354 W/kg
Power Drift (%) : -0.521

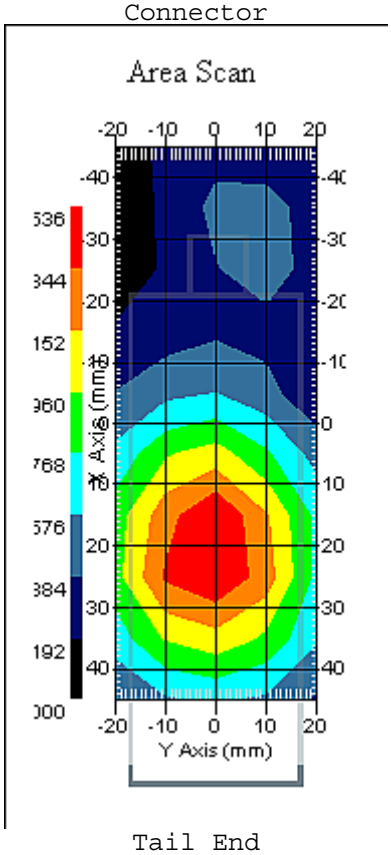
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.500 W/kg
10 gram SAR value   : 0.846 W/kg
Area Scan Peak SAR  : 1.534 W/kg
Zoom Scan Peak SAR  : 2.572 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 09:02:30 AM
End Time : 23-Aug-2008 09:19:41 AM
Scanning Time : 1031 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.570 W/kg
Power Drift-Finish: 0.557 W/kg
Power Drift (%) : -2.269

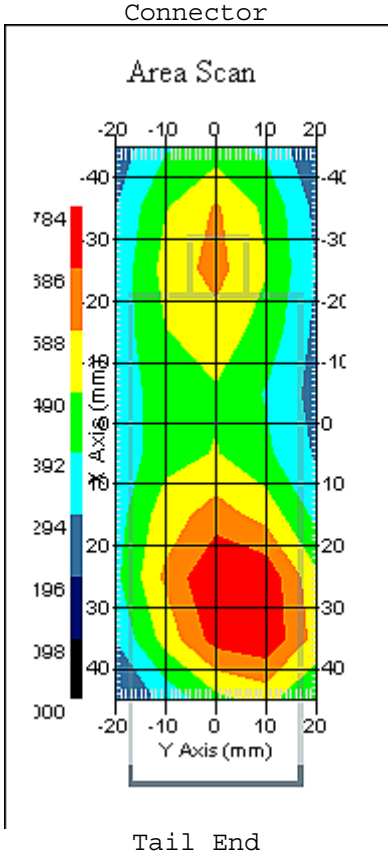
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.44 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.770 W/kg
10 gram SAR value   : 0.428 W/kg
Area Scan Peak SAR  : 0.783 W/kg
Zoom Scan Peak SAR  : 1.341 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 08:19:58 AM
End Time : 23-Aug-2008 08:38:24 AM
Scanning Time : 1106 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.591 W/kg
Power Drift-Finish: 0.601 W/kg
Power Drift (%) : 1.622

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

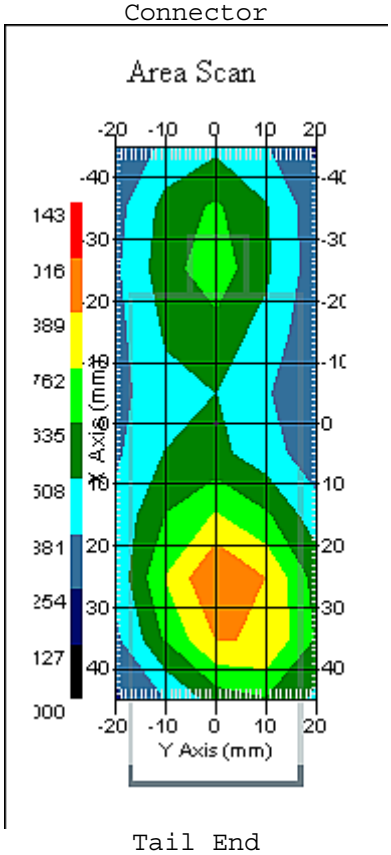
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.44 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 23-Aug-2008
Set-up Time : 7:07:38 AM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Top With USB Cable
Separation : 12 mm
Channel : Mid

Connector



Tail End

1 gram SAR value : 0.941 W/kg
10 gram SAR value : 0.531 W/kg
Area Scan Peak SAR : 1.018 W/kg
Zoom Scan Peak SAR : 1.661 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 10:12:22 AM
End Time : 23-Aug-2008 10:28:56 AM
Scanning Time : 994 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.584 W/kg
Power Drift-Finish: 0.596 W/kg
Power Drift (%) : 1.911

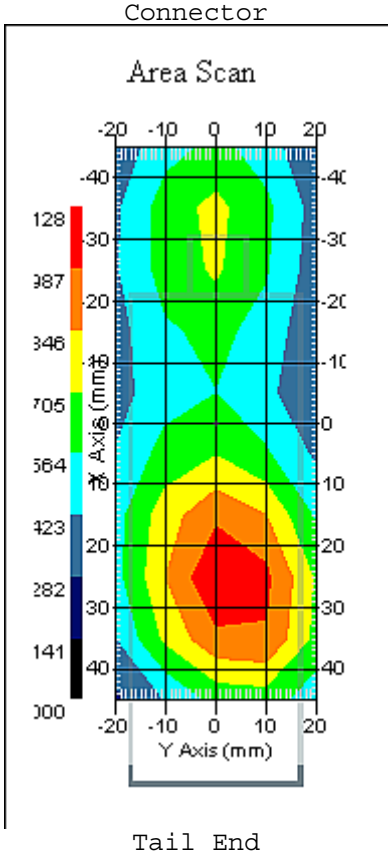
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.44 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.059 W/kg
10 gram SAR value   : 0.634 W/kg
Area Scan Peak SAR  : 1.128 W/kg
Zoom Scan Peak SAR  : 1.661 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 07:05:10 PM
End Time : 12-Aug-2008 07:23:03 PM
Scanning Time : 1073 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.611 W/kg
Power Drift-Finish: 0.600 W/kg
Power Drift (%) : -1.789

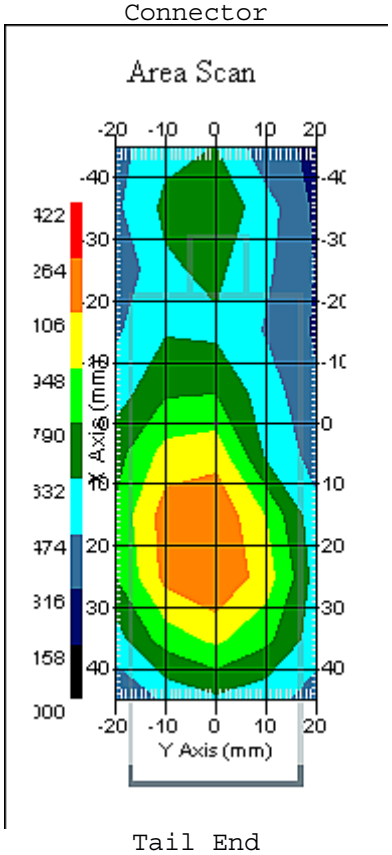
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.268 W/kg
10 gram SAR value   : 0.765 W/kg
Area Scan Peak SAR  : 1.265 W/kg
Zoom Scan Peak SAR  : 2.031 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 06:45:59 PM
End Time : 12-Aug-2008 07:04:02 PM
Scanning Time : 1083 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.613 W/kg
Power Drift-Finish: 0.623 W/kg
Power Drift (%) : 1.578

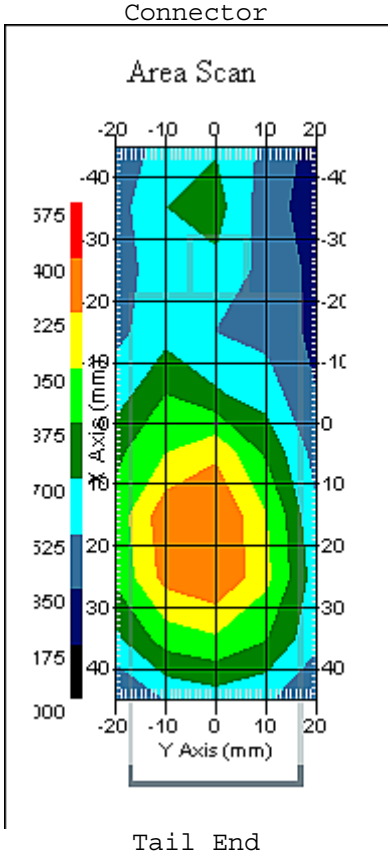
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.257 W/kg
10 gram SAR value   : 0.749 W/kg
Area Scan Peak SAR  : 1.401 W/kg
Zoom Scan Peak SAR  : 2.111 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 07:33:41 PM
End Time : 12-Aug-2008 07:51:27 PM
Scanning Time : 1066 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.619 W/kg
Power Drift-Finish: 0.629 W/kg
Power Drift (%) : 1.624

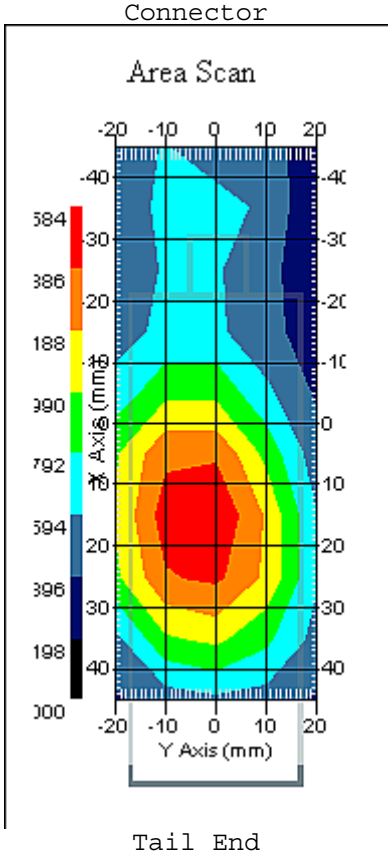
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

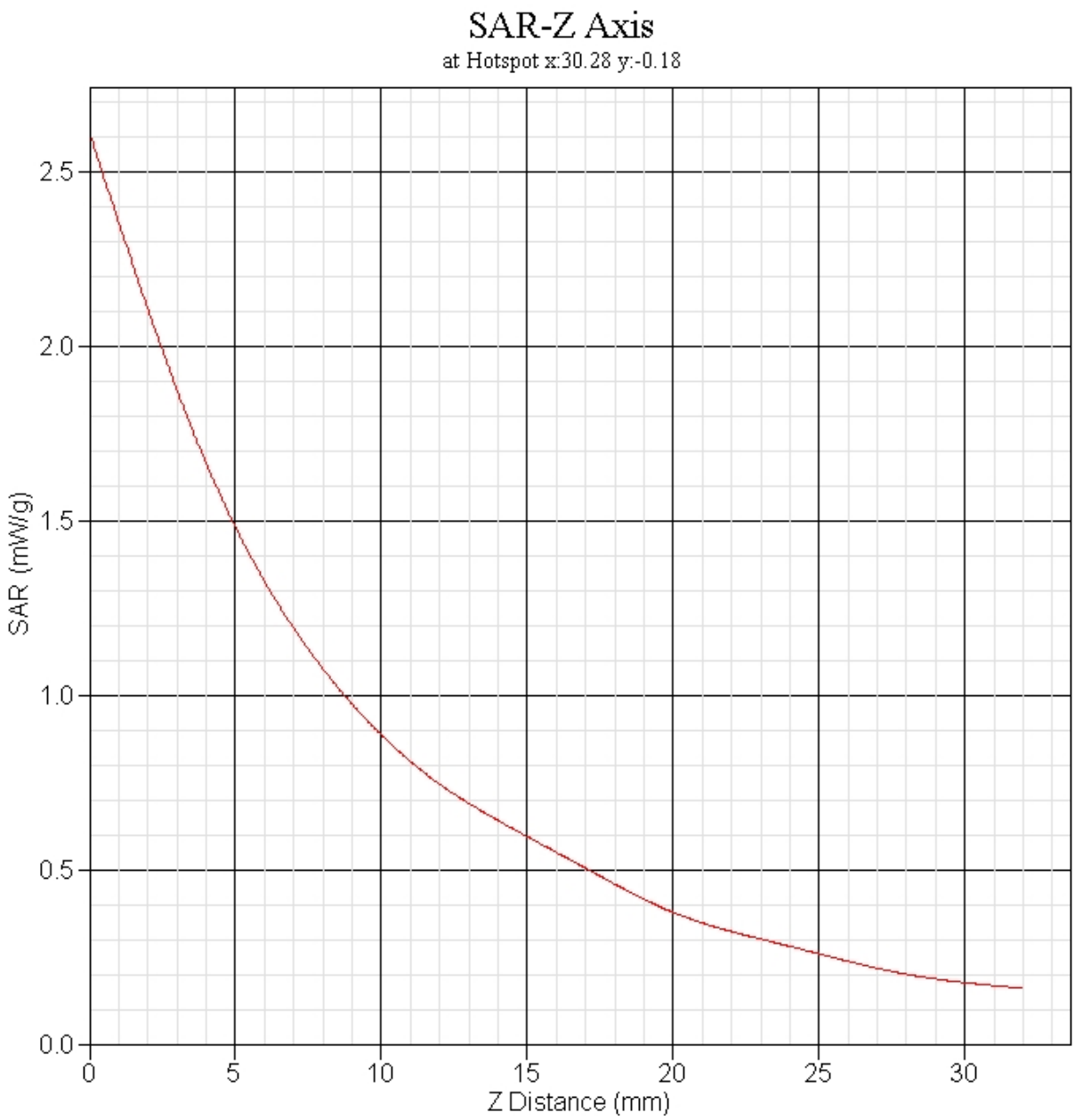
```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.502 W/kg
10 gram SAR value   : 0.866 W/kg
Area Scan Peak SAR  : 1.584 W/kg
Zoom Scan Peak SAR  : 2.612 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 10:54:30 AM
End Time : 23-Aug-2008 11:11:14 AM
Scanning Time : 1004 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.447 W/kg
Power Drift-Finish: 0.437 W/kg
Power Drift (%) : -2.173

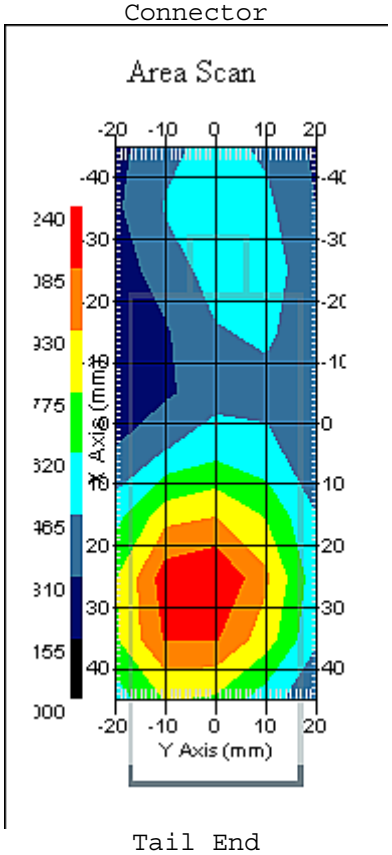
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.44 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 1.102 W/kg
10 gram SAR value   : 0.623 W/kg
Area Scan Peak SAR  : 1.239 W/kg
Zoom Scan Peak SAR  : 1.841 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 11:29:57 AM
End Time : 23-Aug-2008 11:46:43 AM
Scanning Time : 1006 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.304 W/kg
Power Drift-Finish: 0.297 W/kg
Power Drift (%) : -2.304

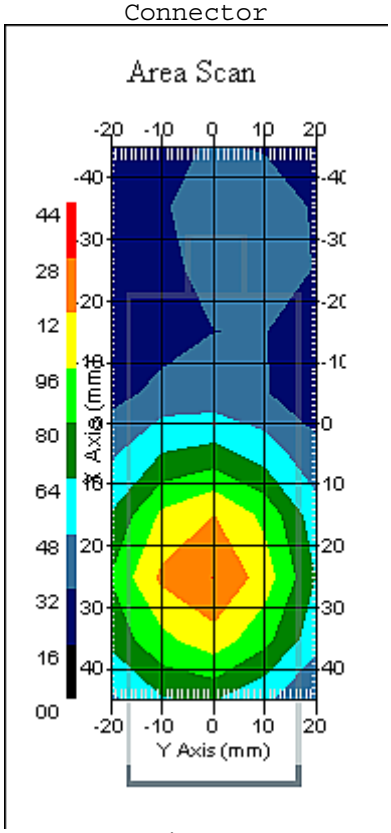
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.44 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 1.209 W/kg
10 gram SAR value   : 0.705 W/kg
Area Scan Peak SAR  : 1.283 W/kg
Zoom Scan Peak SAR  : 1.971 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 10:32:03 AM
End Time : 23-Aug-2008 10:48:45 AM
Scanning Time : 1002 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.435 W/kg
Power Drift-Finish: 0.445 W/kg
Power Drift (%) : 2.259

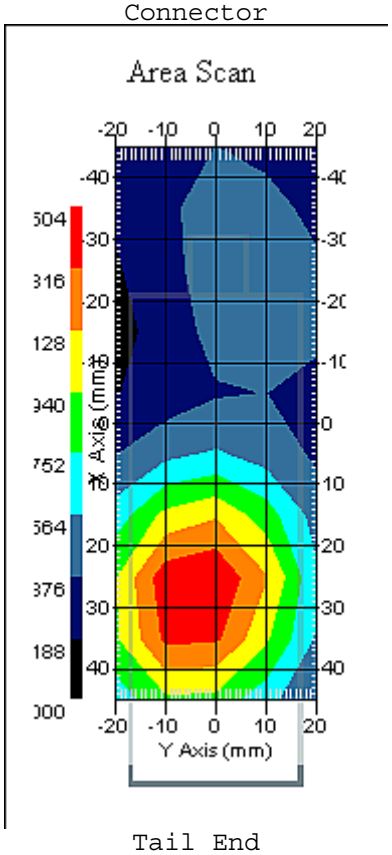
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.44 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.347 W/kg
10 gram SAR value   : 0.765 W/kg
Area Scan Peak SAR  : 1.503 W/kg
Zoom Scan Peak SAR  : 2.191 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 05:30:44 PM
End Time : 13-Aug-2008 05:47:13 PM
Scanning Time : 989 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.105 W/kg
Power Drift-Finish: 0.106 W/kg
Power Drift (%) : 1.555

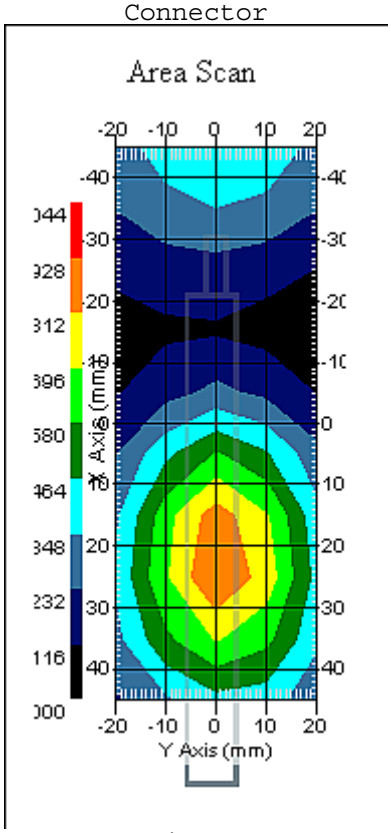
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Low
```

Connector



Tail End

```
1 gram SAR value    : 0.857 W/kg
10 gram SAR value   : 0.506 W/kg
Area Scan Peak SAR  : 0.930 W/kg
Zoom Scan Peak SAR  : 1.391 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 05:12:55 PM
End Time : 13-Aug-2008 05:29:31 PM
Scanning Time : 996 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.100 W/kg
Power Drift-Finish: 0.101 W/kg
Power Drift (%) : 0.205

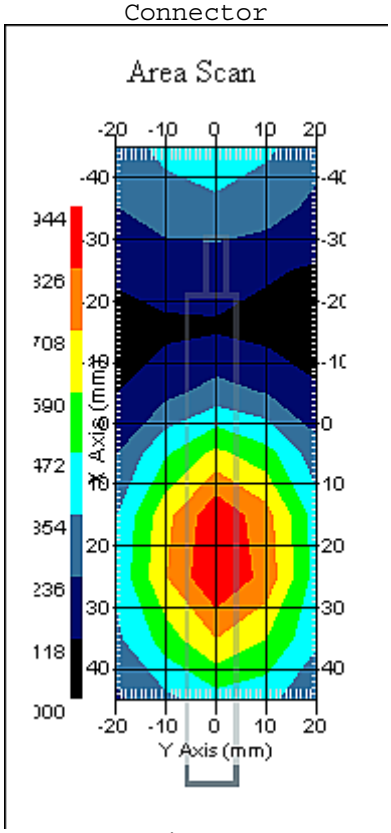
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.872 W/kg
10 gram SAR value   : 0.509 W/kg
Area Scan Peak SAR  : 0.942 W/kg
Zoom Scan Peak SAR  : 1.411 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 05:47:58 PM
End Time : 13-Aug-2008 06:04:30 PM
Scanning Time : 992 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.141 W/kg
Power Drift-Finish: 0.147 W/kg
Power Drift (%) : 4.200

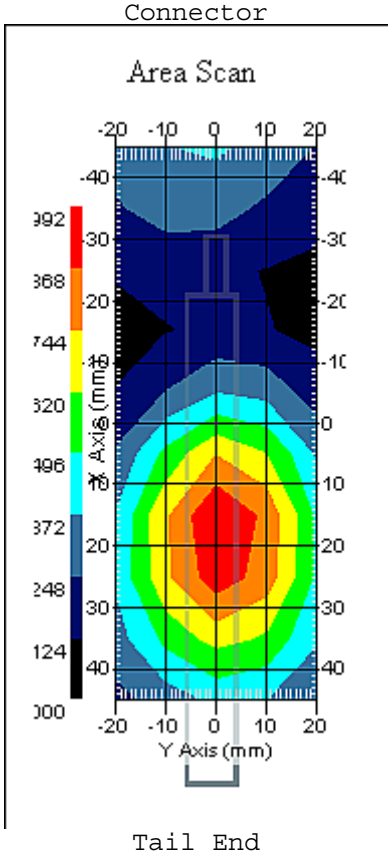
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 0.916 W/kg
10 gram SAR value   : 0.523 W/kg
Area Scan Peak SAR  : 0.989 W/kg
Zoom Scan Peak SAR  : 1.521 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 11:52:27 AM
End Time : 23-Aug-2008 12:09:01 PM
Scanning Time : 994 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.166 W/kg
Power Drift-Finish: 0.170 W/kg
Power Drift (%) : 2.521

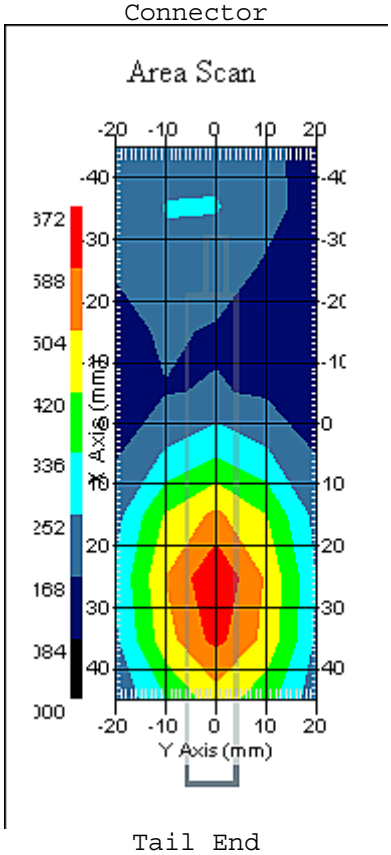
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.44 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.606 W/kg
10 gram SAR value   : 0.352 W/kg
Area Scan Peak SAR  : 0.669 W/kg
Zoom Scan Peak SAR  : 0.940 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 08:53:58 PM
End Time : 13-Aug-2008 09:10:58 PM
Scanning Time : 1020 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.106 W/kg
Power Drift-Finish: 1.080 W/kg
Power Drift (%) : -2.356

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

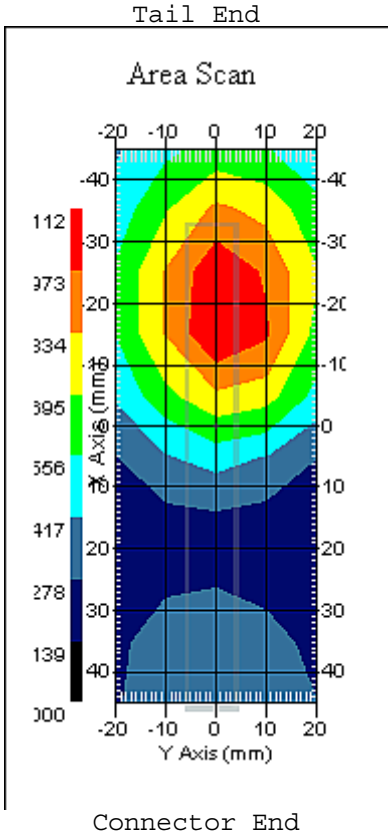
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 13-Aug-2008
Set-up Time : 8:52:55 PM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Low

Tail End



Connector End

1 gram SAR value : 1.039 W/kg
10 gram SAR value : 0.634 W/kg
Area Scan Peak SAR : 1.109 W/kg
Zoom Scan Peak SAR : 1.671 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 07:37:43 PM
End Time : 13-Aug-2008 07:54:20 PM
Scanning Time : 997 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.582 W/kg
Power Drift-Finish: 1.566 W/kg
Power Drift (%) : -1.022

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

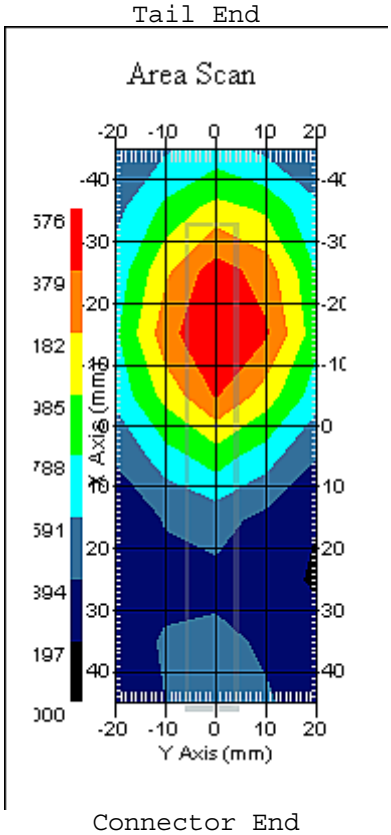
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 13-Aug-2008
Set-up Time : 6:24:55 PM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 1.492 W/kg
10 gram SAR value : 0.879 W/kg
Area Scan Peak SAR : 1.574 W/kg
Zoom Scan Peak SAR : 2.442 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 07:19:49 PM
End Time : 13-Aug-2008 07:36:33 PM
Scanning Time : 1004 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 1.626 W/kg
Power Drift-Finish: 1.567 W/kg
Power Drift (%) : -3.586

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

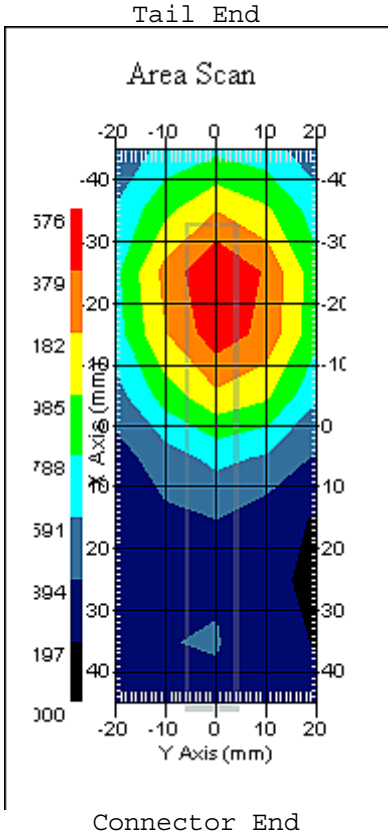
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 F/m
Sigma : 1.51 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 13-Aug-2008
Set-up Time : 6:24:55 PM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : High

Tail End



Connector End

1 gram SAR value : 1.469 W/kg
10 gram SAR value : 0.864 W/kg
Area Scan Peak SAR : 1.575 W/kg
Zoom Scan Peak SAR : 2.372 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 23-Aug-2008
Starting Time : 23-Aug-2008 12:31:58 PM
End Time : 23-Aug-2008 12:48:39 PM
Scanning Time : 1001 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : HSPA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 0.740 W/kg
Power Drift-Finish: 0.757 W/kg
Power Drift (%) : 2.290

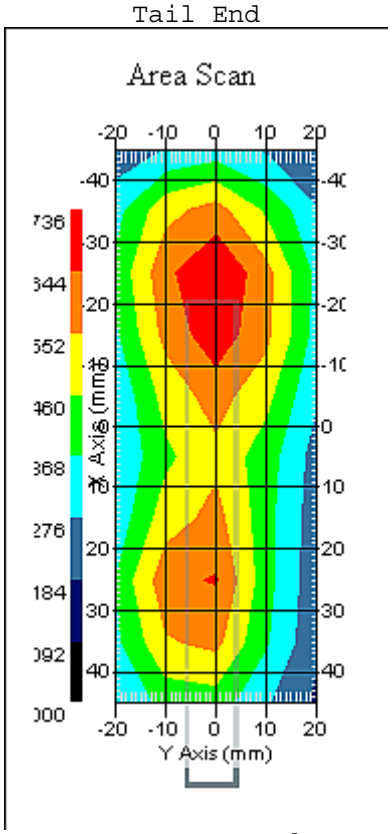
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 23-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.44 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 23-Aug-2008
Set-up Time       : 7:07:38 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Left Side Installed In HP Laptop
Separation        : 12 mm
Channel           : Mid
```

Tail End



Connector End

```
1 gram SAR value    : 0.702 W/kg
10 gram SAR value   : 0.412 W/kg
Area Scan Peak SAR  : 0.736 W/kg
Zoom Scan Peak SAR  : 1.121 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 09:31:23 AM
End Time : 27-Aug-2008 09:45:03 AM
Scanning Time : 820 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : WCDMA
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom With Desk Mount
Power Drift-Start : 1.139 W/kg
Power Drift-Finish: 1.129 W/kg
Power Drift (%) : -0.886

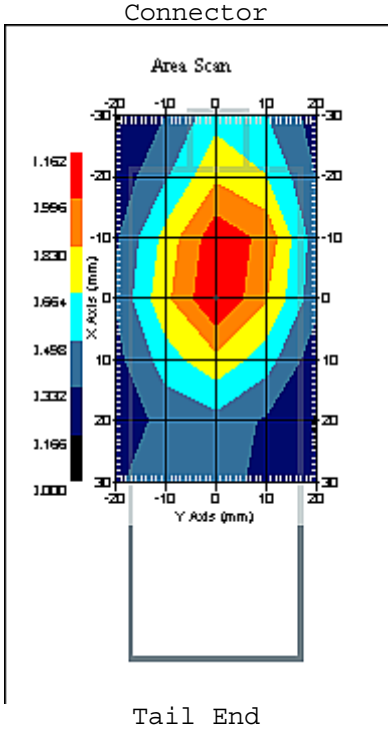
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.11 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 27-Aug-2008
Set-up Time       : 7:48:21 AM
Area Scan         : 7x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom With Desk Mount
Separation        : 14 mm
Channel           : High
```

Connector



Tail End

```
1 gram SAR value    : 1.063 W/kg
10 gram SAR value   : 0.591 W/kg
Area Scan Peak SAR  : 1.159 W/kg
Zoom Scan Peak SAR  : 1.821 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 12:15:05 PM
End Time : 13-Aug-2008 12:31:42 PM
Scanning Time : 997 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Top With USB Cable
Power Drift-Start : 0.139 W/kg
Power Drift-Finish: 0.137 W/kg
Power Drift (%) : -1.253

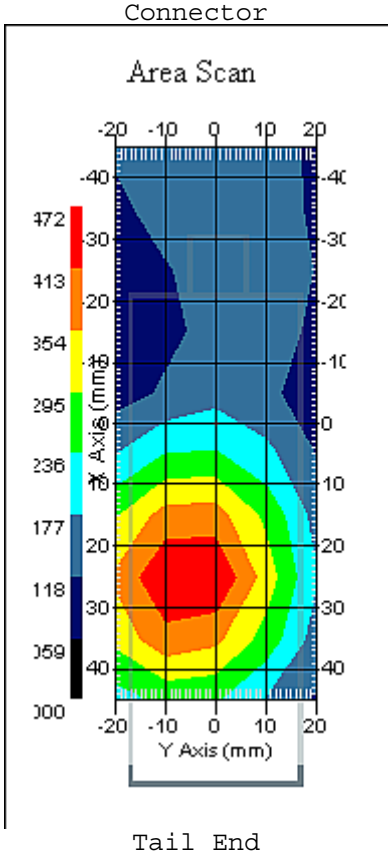
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Top With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.437 W/kg
10 gram SAR value   : 0.265 W/kg
Area Scan Peak SAR  : 0.469 W/kg
Zoom Scan Peak SAR  : 0.690 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 12-Aug-2008
Starting Time : 12-Aug-2008 05:05:40 PM
End Time : 12-Aug-2008 05:23:41 PM
Scanning Time : 1081 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom Installed In Toshiba Laptop
Power Drift-Start : 0.178 W/kg
Power Drift-Finish: 0.177 W/kg
Power Drift (%) : -0.464

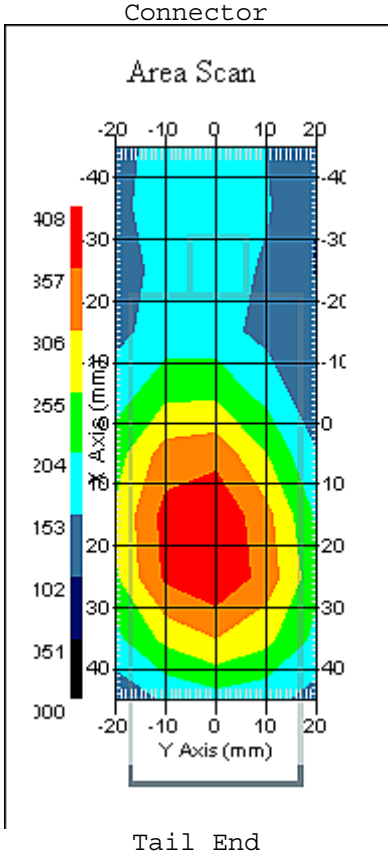
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 12-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 53.57 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 12-Aug-2008
Set-up Time       : 12:50:00 PM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom Installed In Toshiba Laptop
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.396 W/kg
10 gram SAR value   : 0.253 W/kg
Area Scan Peak SAR  : 0.405 W/kg
Zoom Scan Peak SAR  : 0.600 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 13-Aug-2008
Starting Time : 13-Aug-2008 01:13:28 PM
End Time : 13-Aug-2008 01:30:00 PM
Scanning Time : 992 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Right Side With USB Cable
Power Drift-Start : 0.090 W/kg
Power Drift-Finish: 0.092 W/kg
Power Drift (%) : 1.348

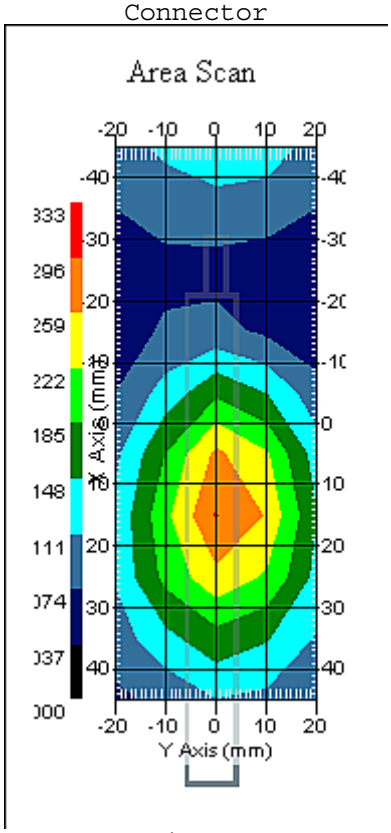
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 13-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 54.35 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 13-Aug-2008
Set-up Time       : 7:19:52 AM
Area Scan         : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Vertical - Right Side With USB Cable
Separation        : 12 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.281 W/kg
10 gram SAR value   : 0.173 W/kg
Area Scan Peak SAR  : 0.298 W/kg
Zoom Scan Peak SAR  : 0.460 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 14-Aug-2008
Starting Time : 14-Aug-2008 10:48:54 AM
End Time : 14-Aug-2008 11:06:45 AM
Scanning Time : 1071 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 12 mm
Depth : 35 mm
Antenna Type : Internal
Orientation : Vertical - Left Side Installed In HP Laptop
Power Drift-Start : 0.517 W/kg
Power Drift-Finish: 0.495 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

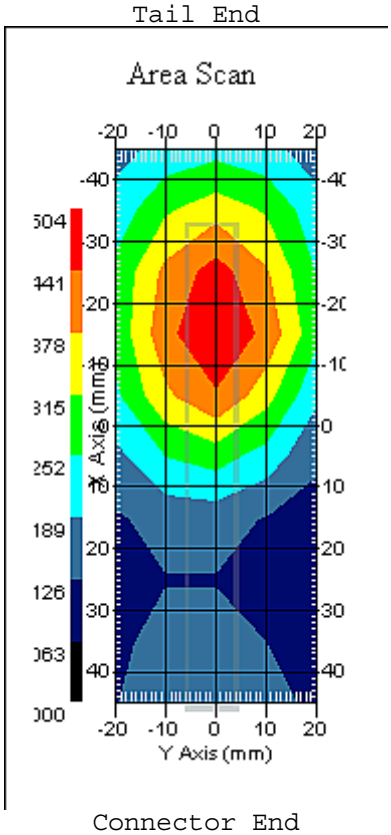
Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 14-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.93 F/m
Sigma : 1.50 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 03-Dec-2007
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

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 14-Aug-2008
Set-up Time : 7:07:38 AM
Area Scan : 10x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

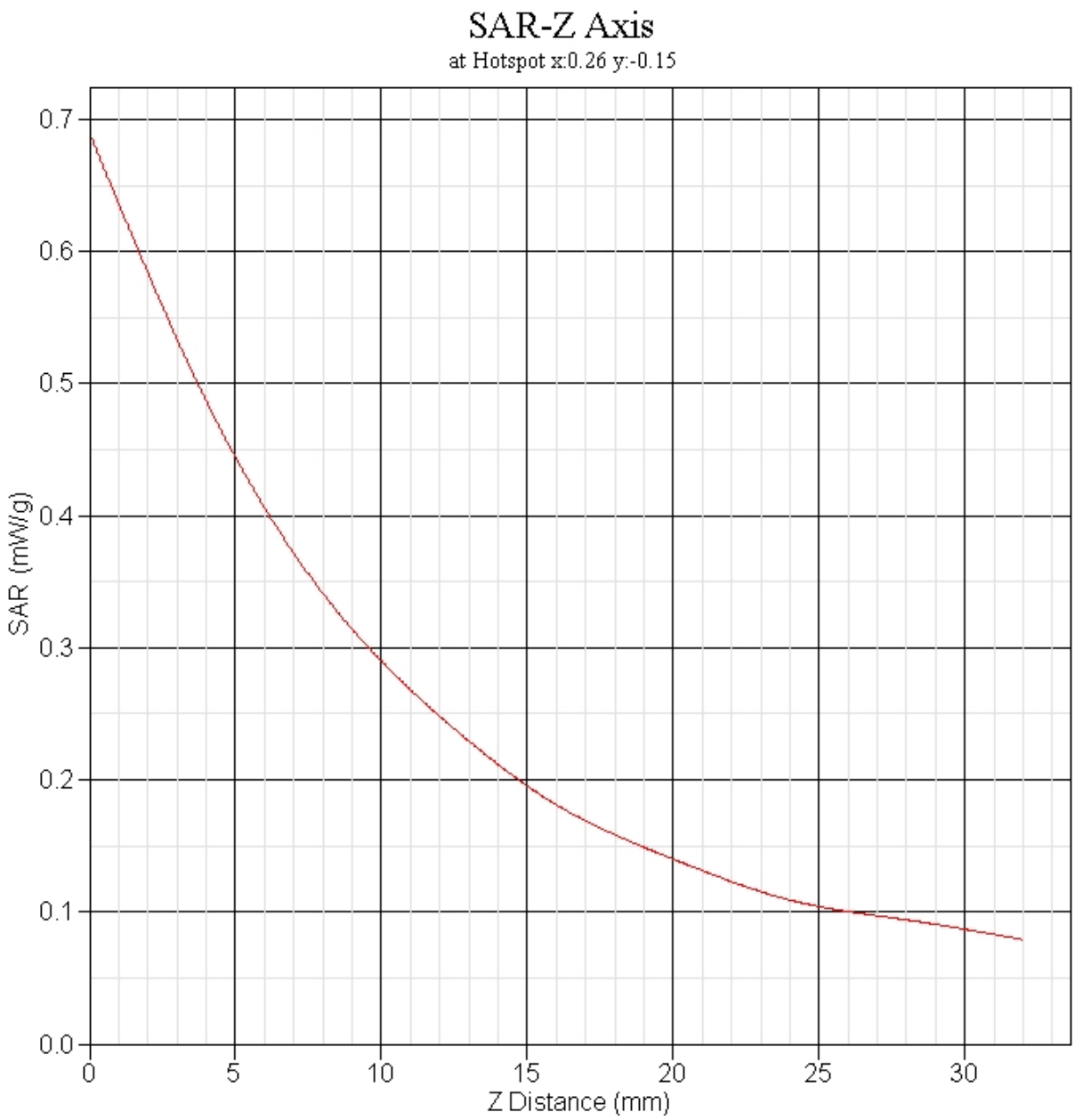
Other Data
DUT Position : Vertical - Left Side Installed In HP Laptop
Separation : 12 mm
Channel : Mid

Tail End



Connector End

1 gram SAR value : 0.457 W/kg
10 gram SAR value : 0.287 W/kg
Area Scan Peak SAR : 0.504 W/kg
Zoom Scan Peak SAR : 0.690 W/kg



SAR Test Report

By Operator : Jay
Measurement Date : 27-Aug-2008
Starting Time : 27-Aug-2008 08:25:39 AM
End Time : 27-Aug-2008 08:39:34 AM
Scanning Time : 835 secs

Product Data
Device Name : Novatel Wireless
Serial No. : 8708D
Mode : GPRS
Model : MC1000
Frequency : 1900.00 MHz
Max. Transmit Pwr : 0.25 W
Drift Time : 0 min(s)
Length : 95 mm
Width : 35 mm
Depth : 12 mm
Antenna Type : Internal
Orientation : Bottom With Desk Mount
Power Drift-Start : 0.324 W/kg
Power Drift-Finish: 0.317 W/kg
Power Drift (%) : -2.236

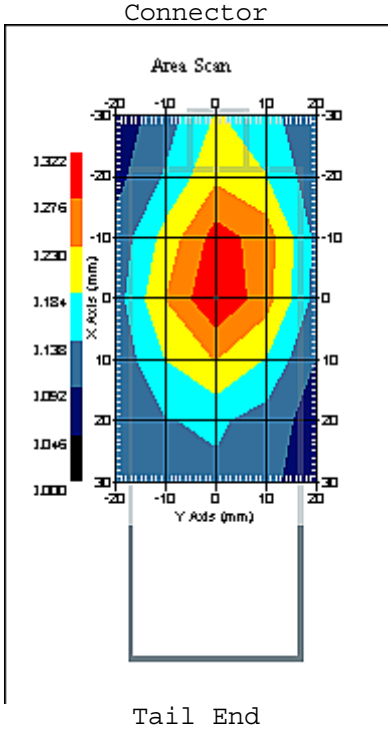
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 1900
Frequency : 1900.00 MHz
Last Calib. Date : 27-Aug-2008
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 52.00 RH%
Epsilon : 52.11 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 : 03-Dec-2007
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

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 27-Aug-2008
Set-up Time       : 7:48:21 AM
Area Scan         : 7x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Bottom With Desk Mount
Separation        : 14 mm
Channel           : Mid
```

Connector



Tail End

```
1 gram SAR value    : 0.283 W/kg
10 gram SAR value   : 0.172 W/kg
Area Scan Peak SAR  : 0.319 W/kg
Zoom Scan Peak SAR  : 0.430 W/kg
```