RF Exposure Lab

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CERTIFICATE OF COMPLIANCE
SAR EVALUATION

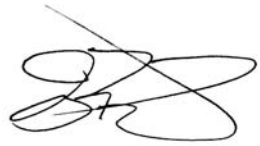
Intel Corporation	Dates of Test: November 4 – 10, 2011
100 Center Point Circle, Suite 200	Test Report Number: SAR.20111104
Columbia, SC 29210	Revision A

FCC ID:	PD9622ANXH & PD9622ANXHU
Model(s):	Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Test Sample:	Engineering Unit Same as Production
WiFi MAC Address:	0023150C5F78
WiMax MAC Address:	001DE13103B8
Equipment Type:	Wireless Module
Classification:	Portable Transmitter Next to Body
TX Frequency Range:	2412 – 2462 MHz; 5180 – 5320 MHz; 5500 – 5700 MHz; 5745 – 5825 MHz; 2498.5 – 2687.5 MHz
Frequency Tolerance:	± 2.5 ppm
Maximum RF Output:	2450 MHz (b) – 16.83 dB, 2450 MHz (g) – 16.84 dB, 2450 MHz (n) – 16.76 dB, 5250 MHz (a) – 16.79 dB, 5250 MHz (n) – 16.73 dB, 5600 MHz (a) – 16.84 dB, 5600 MHz (n) – 16.71 dB, 5800 MHz (a) – 16.85 dB, 5800 MHz (n) – 16.76 dB, 2600 MHz (10 MHz) – 23.96 dB Conducted
Signal Modulation:	DSSS, OFDM, QPSK, 16QAM, 64QAM
Antenna Type:	Shanghai Universe Communications Electron Co., Ltd., PIFA Antenna
Application Type:	Certification
FCC Rule Parts:	Part 2, 15C, 27
KDB Test Methodology:	KDB 447498, KDB 248227, KDB 616217, KDB 615223
Maximum SAR Value:	0.399 W/kg
Separation Distance:	17 mm

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. C95.1-1992 and had been tested in accordance with the measurement procedures specified in IEEE 1528-2003, and OET Bulletin 65 Supp. C (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 are subject to denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 863(a).



Jay M. Moulton
Vice President

ACCREDITED
Certificate # 2387.01

Table of Contents

1. Introduction

This measurement report shows compliance of the Intel Corporation Model Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW) FCC ID: PD9622ANXH & PD9622ANXHU with FCC Part 2, 1093, ET Docket 93-62 Rules for mobile and portable devices. The FCC have adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on August 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC regulated portable devices. [1], [6]

The test results recorded herein are based on a single type test of Intel Corporation model Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW) and therefore apply only to the tested sample.

The module is sold under two different FCC/IC ID numbers. The ID's ending in "U" are intended to allow user install conditions and host systems must be provided with a BIOS locking feature that prevents installation of unauthorized device.

The test procedures, as described in ANSI C95.1 – 1992 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 Health 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.

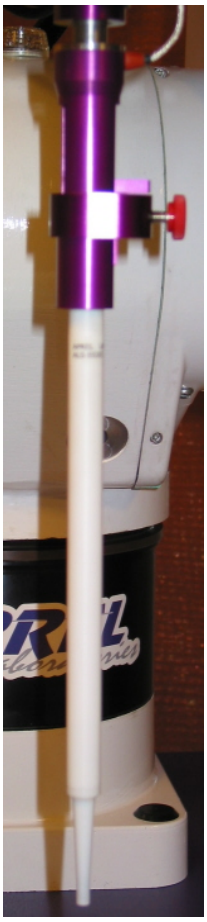
System Description

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).

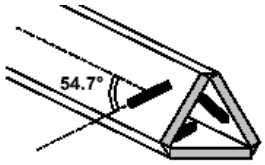
The overall uncertainty for the methodology and algorithms the ALSAS-10-U used during the SAR calculation was evaluated using the data from IEEE 1528 f3 algorithm:

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

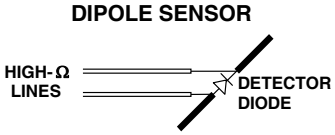
The probe used during the measurement process has been assessed to provide values for diode compression. These values are calculated during the probe calibration exercise and are used in the mathematical calculations for the assessment of SAR.

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 4 mm 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 4 mm default in the Z axis is the optimum height for assessing SAR where the boundary effect is at its least, with the probe located closest to the phantom surface (boundary).

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

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

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

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

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

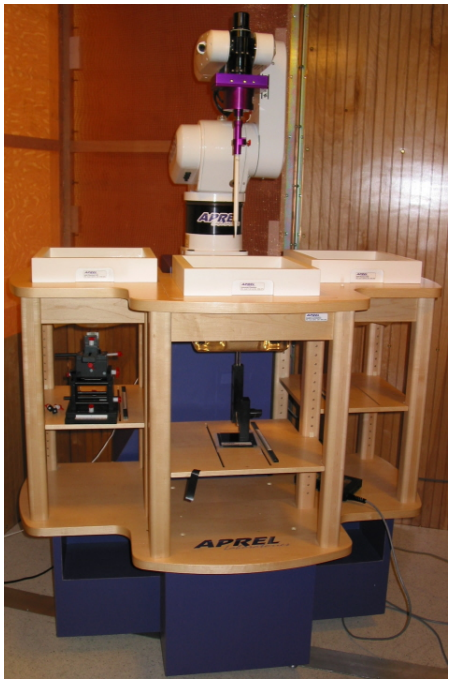
Features:	Signal Amplifier, End Effector, DAC
Software:	ALSAS 10-U Software

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.

Head & Body Simulating Mixture Characterization

The head and body 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				
		2450 MHz Body	2600 MHz Body	5250 MHz Body	5600 MHz Body	5785 MHz Body
Mixing Percentage						
Water		73.20	69.83	58.85	59.00	59.00
Sugar		0.00	0.00	41.00	40.60	40.60
Salt		0.04	0.00	0.00	0.00	0.00
HEC		0.00	0.00	0.10	0.30	0.30
Bactericide		0.00	0.00	0.05	0.10	0.10
DGBE		26.70	30.17	0.00	0.00	0.00
Dielectric Constant	Target	52.70	52.15	48.96	48.47	48.25
Conductivity (S/m)	Target	1.95	2.16	5.35	5.77	5.96

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. ANSI/IEEE C95.1 – 1992 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] Head	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.

7. 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) %	v_i
Measurement System								
Probe Calibration	3.5	normal	1	1	1	3.5	3.5	∞
Axial Isotropy	3.7	rectangular	√3	0.7	0.7	1.5	1.5	∞
Hemispherical Isotropy	10.9	rectangular	√3	0.7	0.7	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. Restriction	0.4	rectangular	√3	1	1	0.2	0.2	∞
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	7
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0	2
Drift of Output Power	5.0	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	5
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	5
Combined Uncertainty		RSS				9.6	9.4	>500
Combined Uncertainty (coverage factor=2)		Normal(k=2)				19.1	18.8	>500

8. System Validation

Tissue Verification

Table 8.1 Measured Tissue Parameters

		2450 MHz Body		2600 MHz Body		5250 MHz Body	
Date(s)		Nov. 9, 2011		Nov. 10, 2011		Nov. 4, 2011	
Liquid Temperature (˚C)	20.0	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: ε		52.70	52.22	52.52	52.38	48.95	47.40
Conductivity: σ		1.95	1.97	2.15	2.21	5.36	5.53
		5250 MHz Body		5600 MHz Body		5785 MHz Body	
Date(s)		Nov. 4, 2011		Nov. 7, 2011		Nov. 8, 2011	
Liquid Temperature (˚C)	20.0	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: ε		48.95	48.04	48.47	48.09	48.22	48.09
Conductivity: σ		5.36	5.40	5.77	5.82	5.98	6.02

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 normalized to 1 watt. (Graphic Plots Attached)

Table 8.2 System Dipole Validation Target & Measured

	Test Frequency	Targeted SAR_{1g} (W/kg)	Measure SAR_{1g} (W/kg)	Tissue Used for Verification	Deviation (%)
09-Nov-2011	2450 MHz	51.50	52.06	Body	+ 1.09
10-Nov-2011	2600 MHz	56.42	56.24	Body	- 0.32
04-Nov-2011	5250 MHz	59.81	60.51	Body	+ 1.17
05-Nov-2011	5250 MHz	59.81	61.63	Body	+ 3.04
07-Nov-2011	5600 MHz	63.10	63.23	Body	+ 0.21
09-Nov-2011	5800 MHz	61.36	61.73	Body	+ 0.60

See Appendix A for data plots.

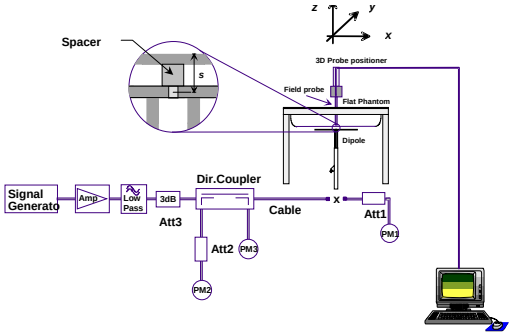


Figure 8.1 Dipole Validation Test Setup

Note: KDB 450824 was applied for probe calibration frequencies greater than or equal to 50 MHz of the DUT frequencies.

9. 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 actual transmission is activated through a base station simulator or similar equipment. The DUT did not contain any test software to facilitate any of the required signaling for the tests. 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 power drift of each test is measured at the start of the test and again at the end of the test. The drift percentage is calculated by the formula ((end/start)-1)*100 and rounded to three decimal places. The drift percentage is calculated into the resultant SAR value on the data sheet for each test.

The EUT was installed into a laptop computer. The laptop computer was used to configure the EUT to continuously transmit at a maximum output power on the channel specified in the test data.

The data rates used when evaluating the WiFi transmitter were the lowest data rates for each mode. The device was operating at its maximum output power at the lowest data rate for all measurements.

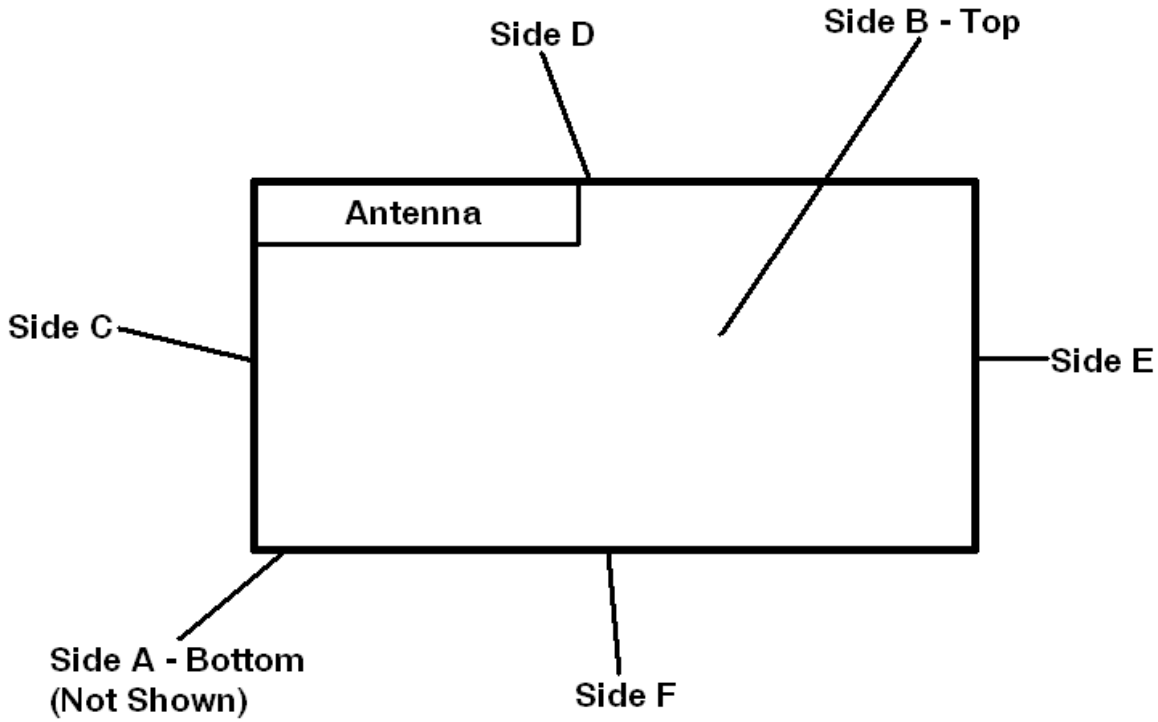
The PC was using the Intel test utility DRTU Version 1.2.12-0197 and the device driver was version 14.0.0.39 for WiFi testing.

The PC was using the Intel test utility VaTU version 5.30.110202 and waveform test vectors DQ64_56_UQ4_12_5M,DQ4_34_UQ4_34_5M,DQ16_12_UQ16_12_5M,DQ4_12_UQ16_34_5M,DQ_12_UQ64_56_5M,DQ64_56_UQ4_12_10M,DQ64_UQ4_34_15s_10M,DQ4_12_UQ16_12_10M, DQ4_12_UQ16_34_10M and DQ4_12_UQ64_56_10M.

The EUT antenna is a two-antenna PIFA antenna system – Shanghai Universe Communication Electron Co., Ltd. The antenna connects to the EUT via a non-standard antenna connector.

The antenna was tested on all six sides of the antenna device. During each test, the antenna was on a minimum of 10 cm of Styrofoam during the test. The coaxial cable from the module to the antenna was 500 mm in length. The laptop was set to be >10 cm from the antenna during the test. The following is a pictorial drawing of the locations.

SAR Location Diagram



			Data Rate - B			
Frequency	Channel	Antenna	1	2	5.5	11
2412	1	Chain A	16.74	15.90	14.75	14.31
2437	6	Chain A	16.83	15.84	14.62	14.06
2462	11	Chain A	16.61	15.51	14.90	13.94
2412	1	Chain B	16.71	16.29	15.31	14.72
2437	6	Chain B	16.78	16.21	15.77	14.41
2462	11	Chain B	16.69	15.56	14.98	14.39

			Data Rate - G							
Frequency	Channel	Antenna	6	9	12	18	24	36	48	54
2412	1	Chain A	16.81	15.95	14.59	14.02	13.46	12.60	12.12	11.56
2437	6	Chain A	16.84	16.07	15.50	14.29	13.03	12.30	11.58	10.92
2462	11	Chain A	15.76	14.55	13.82	12.70	11.54	10.88	10.15	9.50
2412	1	Chain B	15.86	14.25	13.65	12.79	12.21	10.91	9.60	8.58
2437	6	Chain B	16.59	15.81	15.22	14.76	14.20	13.10	12.62	11.95
2462	11	Chain B	16.32	14.93	14.01	12.63	11.95	11.41	10.03	8.69

			Data Rate – N							
Frequency	Channel	Antenna	6.5	13	20	26	39	52	58	65
2422	3	Chain A	14.85	14.35	13.63	12.98	12.53	11.20	10.60	9.55
2437	6	Chain A	16.76	15.82	14.57	14.04	13.09	12.52	11.29	10.54
2452	9	Chain A	13.62	12.67	11.61	10.81	9.48	8.64	7.64	6.48
2422	3	Chain B	10.83	9.89	8.49	7.32	6.22	5.67	4.28	3.86
2437	6	Chain B	16.59	15.36	14.56	13.41	12.79	11.50	10.37	9.56
2452	9	Chain B	14.63	14.01	13.03	12.06	11.01	10.07	8.96	8.17

			Data Rate – A							
Frequency	Channel	Antenna	6	9	12	18	24	36	48	54
5745	149	Chain A	16.72	16.29	15.16	14.34	13.51	12.19	11.37	10.20
5765	153	Chain A	16.78	15.99	14.86	14.13	12.95	11.70	10.47	9.47
5785	157	Chain A	16.85	16.12	15.26	13.93	13.31	12.10	11.67	10.78
5805	161	Chain A	16.80	16.07	14.97	14.19	13.43	12.40	11.15	9.79
5825	165	Chain A	16.73	15.99	15.44	14.27	12.88	12.18	11.61	10.43
5745	149	Chain B	16.70	15.76	14.62	13.50	12.42	11.06	10.00	8.61
5765	153	Chain B	16.75	16.19	15.23	14.38	13.92	13.01	12.32	11.53
5785	157	Chain B	16.81	15.87	14.74	13.61	12.60	11.58	10.50	9.40
5805	161	Chain B	16.79	15.54	14.90	14.20	13.03	11.68	10.67	9.56
5825	165	Chain B	16.76	15.59	15.02	14.10	12.96	11.78	10.74	10.13

			Data Rate - A							
Frequency	Channel	Antenna	6	9	12	18	24	36	48	54
5180	36	Chain A	16.79	16.07	15.16	13.89	13.03	11.85	11.30	10.39
5200	40	Chain A	16.73	15.53	15.00	13.82	13.38	12.00	11.60	10.63
5220	44	Chain A	16.75	16.05	15.12	13.80	13.24	12.12	11.24	10.51
5240	48	Chain A	16.78	15.94	14.84	14.20	13.54	12.55	11.46	10.93
5260	52	Chain A	16.63	16.15	15.37	14.14	13.61	12.97	11.95	10.83
5280	56	Chain A	16.66	15.27	14.13	13.20	12.29	11.29	10.74	9.35
5300	60	Chain A	16.69	16.12	14.77	13.57	12.75	11.95	10.60	9.71
5320	64	Chain A	16.64	16.21	15.63	14.63	13.91	12.76	11.79	11.12
5180	36	Chain B	16.75	16.20	14.91	14.42	13.09	12.05	11.05	10.59
5200	40	Chain B	16.64	16.19	15.78	14.78	13.59	12.76	11.85	11.33
5220	44	Chain B	16.62	15.65	14.31	13.78	12.39	11.76	11.19	10.31
5240	48	Chain B	16.66	15.84	15.25	13.91	12.89	12.19	11.64	10.57
5260	52	Chain B	16.61	15.99	15.52	14.27	13.06	12.01	11.52	10.54
5280	56	Chain B	16.65	16.01	14.97	13.68	12.62	12.03	10.75	9.68
5300	60	Chain B	16.69	16.29	15.28	14.17	13.10	11.98	11.45	11.00
5320	64	Chain B	16.62	15.43	14.19	13.24	11.87	10.85	10.08	9.18
5500	100	Chain A	16.73	15.58	14.28	13.44	12.26	11.42	10.89	9.56
5520	104	Chain A	16.75	15.77	15.25	14.63	13.57	12.84	11.61	10.98
5540	108	Chain A	16.70	15.34	13.99	12.84	11.61	10.84	10.04	8.70
5560	112	Chain A	16.79	16.07	15.08	14.31	13.72	12.74	12.07	11.27
5580	116	Chain A	16.80	16.35	15.81	14.95	13.79	12.64	11.55	10.95
5600	120	Chain A	16.82	16.29	15.45	14.97	14.41	13.43	12.07	11.46
5620	124	Chain A	16.81	16.04	14.86	14.33	13.20	12.33	11.45	10.92
5640	128	Chain A	16.78	15.55	15.07	14.08	12.79	12.13	11.19	10.56
5660	132	Chain A	16.74	15.77	14.58	13.76	13.00	12.35	11.77	10.73
5680	136	Chain A	16.71	15.33	14.51	13.17	12.17	11.55	10.33	9.18
5700	140	Chain A	16.76	15.96	15.55	14.42	13.89	13.40	12.79	12.30
5500	100	Chain B	16.73	15.34	14.46	13.61	12.30	11.31	10.57	10.12
5520	104	Chain B	16.75	16.04	15.43	14.81	14.01	12.82	11.64	10.89
5540	108	Chain B	16.79	16.02	15.24	14.38	13.87	13.03	12.19	11.13
5560	112	Chain B	16.80	16.16	14.76	14.05	13.48	12.51	12.02	11.29
5580	116	Chain B	16.82	15.65	14.93	13.84	13.23	12.53	11.67	11.13
5600	120	Chain B	16.84	15.48	14.87	13.56	12.76	12.14	11.50	10.56
5620	124	Chain B	16.83	15.46	14.94	14.26	13.16	12.62	11.79	10.86
5640	128	Chain B	16.80	15.94	15.23	14.36	13.27	12.75	11.58	10.32
5660	132	Chain B	16.76	15.81	14.61	13.24	12.69	11.74	11.27	10.53
5680	136	Chain B	16.72	16.10	14.74	13.42	12.69	12.09	10.81	9.88
5700	140	Chain B	16.71	15.88	14.62	13.66	13.25	12.29	11.04	9.78

			Data Rate - N							
Frequency	Channel	Antenna	6.5	13	20	26	39	52	58	65
5190	38	Chain A	16.09	15.39	14.14	13.38	12.53	11.84	10.97	9.99
5230	46	Chain A	16.72	15.70	15.27	13.91	12.69	11.40	10.72	9.38
5270	54	Chain A	16.49	15.51	15.09	13.87	13.14	11.93	11.16	9.99
5310	62	Chain A	16.35	15.04	14.48	14.07	12.96	12.19	10.90	9.86
5190	38	Chain B	16.04	14.69	14.07	13.50	12.88	12.14	11.13	10.53
5230	46	Chain B	16.73	15.49	14.84	14.33	13.17	12.76	11.70	10.82
5270	54	Chain B	16.52	15.51	14.98	14.27	13.25	11.96	11.16	10.55
5310	62	Chain B	15.64	14.58	13.54	12.48	11.28	10.34	9.15	7.76
5510	102	Chain A	16.52	15.53	14.96	13.93	13.04	12.05	11.42	10.99
5530	106	Chain A	16.54	15.65	14.88	13.61	12.92	11.76	10.83	9.44
5550	110	Chain A	16.50	15.27	14.09	13.28	12.22	11.31	10.74	10.12
5570	114	Chain A	16.49	15.21	14.51	13.27	11.91	10.69	9.99	8.78
5590	122	Chain A	16.56	15.80	15.36	14.36	13.81	12.42	11.83	11.33
5610	126	Chain A	16.52	15.88	14.95	13.61	12.78	11.65	10.87	10.15
5630	130	Chain A	16.48	15.75	14.79	13.61	12.29	11.76	11.26	10.52
5670	134	Chain A	16.53	15.59	15.08	14.13	13.39	12.70	11.81	10.90
5690	138	Chain A	16.52	15.14	13.77	12.99	11.77	11.11	9.90	9.01
5510	102	Chain B	16.62	15.63	14.32	12.99	12.14	11.62	10.79	9.63
5530	106	Chain B	16.59	16.15	15.50	14.69	13.66	12.75	11.38	10.80
5550	110	Chain B	16.64	15.41	14.48	13.77	12.40	11.70	11.06	10.42
5570	114	Chain B	16.68	15.54	14.37	13.79	12.55	11.37	10.46	9.32
5590	122	Chain B	16.66	15.52	14.27	13.22	12.12	11.16	10.30	9.85
5610	126	Chain B	16.58	15.59	14.43	13.63	12.43	11.82	10.88	9.59
5630	130	Chain B	16.69	15.77	14.55	13.39	12.09	10.93	10.15	9.41
5670	134	Chain B	16.71	16.16	15.11	13.88	13.16	11.79	11.17	10.72
5690	138	Chain B	16.64	15.63	14.79	13.43	12.59	11.83	11.09	9.99
5755	151	Chain A	16.76	15.65	15.06	14.09	12.93	12.43	11.47	10.55
5795	159	Chain A	16.63	15.69	14.76	14.30	13.27	11.95	11.55	10.90
5755	151	Chain B	16.72	15.94	15.27	14.06	13.05	12.63	12.15	11.41
5795	159	Chain B	16.64	15.72	14.74	13.68	12.99	12.52	11.70	10.38

10. WiMax System Description

The device is a 2.5 GHz WiMax transceiver in a module configuration using Intel chipset which supports 1xTx and 2xRx for this device. Antenna 1 is used for both transmitting and receiving. Its uplink is capable of both 10 MHz and 5 MHz bandwidths. The uplink sub-frame is triggered by an Allocation Start Time contained in the information of UL-MAP. This information specifies the starting times of the Uplink and Downlink frames. In any UL sub-frame, the duty factor ranging and bandwidth information is used to ensure optimal system operation. In normal device transmission, the device will transmit control signaling at the first 3 uplink symbols and then use the rest of the uplink symbols for data traffic bursts in the uplink sub-frame. Since the first 3 symbols are also used for ranging detection purposes and are shared among other device users, its transmitting power is much smaller than the data burst symbol power. The Signal Generator contained the Intel test software to generate the correct signal with the first 3 bits low. During the testing modes, the first 3 symbols have no power output and the data traffic bursts are always running at the maximum output power level. In the real usage, the data burst power will be adjusted according to the signal strength of the communication. In this way, by using the test software mode arrangement, we are transmitting at a worst case RF level during the data portion Symbols 4 to 18.

The data burst zone can operate in one mode:

PUSC
For the 10 MHz bandwidth, it has 35 sub-channels structured from 1024 subcarriers; 184 are used as spare/safeguard subcarriers, leaving 840 available for transmission. From this, 560 subcarriers for data transmission with 280 subcarriers intended for pilot use. For the 5 MHz bandwidth, it contains 17 sub-channels using 512 subcarriers; 104 subcarriers are spare/safeguard subcarriers, 272 for data transmission, and 136 for pilot.

The signal generator (Agilent E4438C-504 Digital RF Signal Generator) contains Intel control firmware within the signal generator to establish the required signaling. The E4438C-504 produces a downlink DL burst every 5 milliseconds which simulates the transmission of a base-station operating under normal mode. This DL burst instructs the mobile station MS to transmit for 15 symbols in the UL data zone. This UL transmission is repeated every 5 milliseconds. The TX power of the mobile station is set to maximum power. The Digital RF Signal Generator and MS use the same frequency. The Digital RF Signal Generator power is much lower than the MS Tx power (~80 dB lower) and does not affect the SAR readings.

The MS synchronizes to the signal from the Digital RF Signal Generator in frequency and time. It then demodulates two maps contained in the Digital RF Signal Generator DL frame. The first map (DL map) specifies the number of DL symbols (29). The second map (UL map) specifies the number of UL symbols (18). The UL map also tells the MS to transmit a burst which occupies all data symbols and all sub-channels. No control channel transmissions are requested by the Digital RF Signal Generator. Measurements are taken in this configuration with the MS transmitting using the 29:18 ratio, but since there is no energy in the control symbols, the effective power is only across 15 symbols.

As mentioned above the DL:UL frame is specified in the DL and UL maps respectively. There is no ranging present when there is data traffic. The other types of control traffic are HARQ ACK/NACK, CQICH (CINR reporting) and bandwidth BW requests. BW requests are piggy-backed onto the data symbols when traffic is present. Since the BW requests are shared

across the Control Symbols (traffic versus non-traffic modes), the control traffic that is relevant to the SAR calculation is CQICH and HARQ ACK/NACK. The maximum power for this control traffic is 32.73 mW (5/35 of 229.09 mW) for 10 MHz and 77.36 mw (5/17 of 263.03 mW) for 5 MHz.

In the test mode, the UL operates in PUSC with all data sub-channels (All 35 sub-channels for 10 MHz) occupied with data. During normal operation, the MS will transmit on all sub-channels when the maximum UL throughput is required. It is possible for the MS to transmit with fewer sub-channels. The sub-channels consist of tones that are distributed over the entire signal BW and a jump every three symbols so that the spectral density and hence SAR for the fractional sub-channel case will be similar to the full sub-channel case that is tested. (Note: In the WiMax standard, a sub-channel consists of tones that are spread across the occupied bandwidth. After every three symbols, the tones that make up the sub-channel switch to a new set of frequencies spread across the band. This "jumping" is called sub-channel rotation and helps to give the sub-channel frequency diversity.)

Equipment Used for network side:

Agilent E4438C-504 Digital RF Signal Generator

The testing was done using a common 29:18 ratio as this is the maximum achievable ratio for the product. The 29 indicates the number of downlink (from the base station) symbols, and the 18 indicates the number of uplink (transmitted from the MS) symbols. Inside the uplink, 15 symbols are used for data, and three of the symbols are used for sending control information to the network. During the testing, the control symbols contained no information, so did not contribute to the total energy transmitted. To compensate for the maximum energy which may be present in the 3 control symbols, the following scheme is used for the scaling factor:

Maximum output power of 5 MHz is 23.96 dBm = 248.89 mW

The maximum power in 5 MHz control traffic is 73.20 mW (5/17 of 248.89 mW)

Scaled factor for 5 MHz Bandwidth = see table below

Maximum output power of 10 MHz is 23.42 dBm = 219.79 mW

The maximum power in 10 MHz control traffic is 31.40 mW (5/35 of 219.79 mW)

Scaled factor for 10 MHz Bandwidth = see table below

Conversion Factor for 5 MHz Bandwidth = 1/(15/48) = 3.2
Conversion Factor for 10 MHz Bandwidth = 1/(14/48) = 3.4

10.1.1 WiMax Conducted Power Measurements

Zone Type	Modulation	Coding Rate	Frequency	Chain A - Main		
				Peak Power	Average Power	PAPR
PUSC	QPSK (BW 5 MHz)	1/2	2498.5	33.15	23.94	9.21
			2593.0	32.91	23.96	8.95
			2687.5	32.79	23.92	8.87
		3/4	2498.5	32.70	23.91	8.79
			2593.0	32.83	23.89	8.94
			2687.5	32.77	23.84	8.93
	16QAM (BW 5 MHz)	1/2	2498.5	32.67	23.82	8.85
			2593.0	32.70	23.86	8.84
			2687.5	32.73	23.87	8.86
		3/4	2498.5	32.78	23.81	8.97
			2593.0	32.76	23.83	8.93
			2687.5	32.95	23.85	9.10
	64QAM (BW 5 MHz)	5/6	2498.5	32.55	23.92	8.63
			2593.0	32.76	23.97	8.79
			2687.5	32.69	23.93	8.76
	QPSK (BW 10 MHz)	1/2	2501.0	32.43	23.39	9.04
			2593.0	32.19	23.42	8.77
			2685.0	32.25	23.40	8.85
		3/4	2501.0	32.21	23.26	8.95
			2593.0	32.31	23.28	9.03
			2685.0	32.09	23.21	8.88
	16QAM (BW 10 MHz)	1/2	2501.0	32.11	23.35	8.76
			2593.0	32.32	23.39	8.93
			2685.0	32.28	23.34	8.94
		3/4	2501.0	32.32	23.33	8.99
			2593.0	32.42	23.31	9.11
			2685.0	32.23	23.36	8.87
	64QAM (BW 10 MHz)	5/6	2501.0	32.50	23.69	8.81
			2593.0	32.58	23.72	8.86
			2685.0	32.59	23.68	8.91

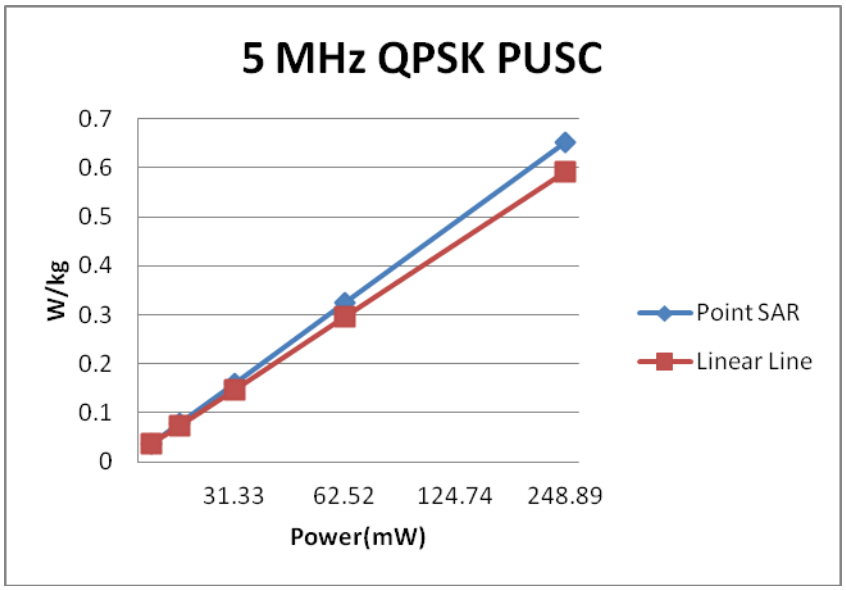
Note: An Agilent wideband power meter was used for measuring the conducted power.

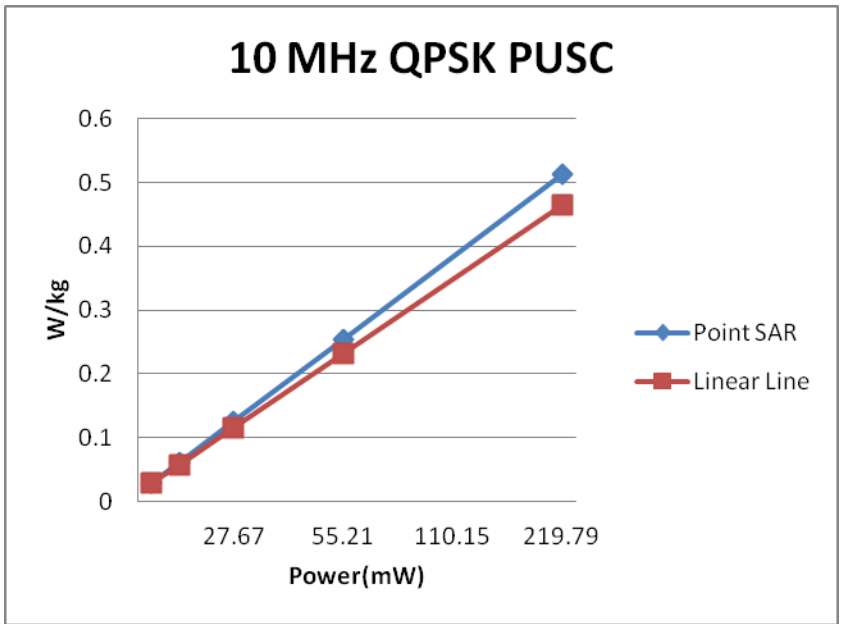
The SAR probe used in the measurements is calibrated with a sinusoidal CW signal. Since the DL:UL symbol ratio configuration used in the SAR tests provides a periodic uplink burst, the duty factor can be compensated by selecting the correct conversion factor (cf) for the SAR measurements. The high PAPR of OFDM/OFDMA is expected to introduce additional SAR measurement errors because the SAR probe is not calibrated for this type of random noise-like signals with large amplitude and phase variations within the bursts. The SAR error is also expected to vary with the average power and average PAPR at each measurement point, both temporally and spatially. In order to estimate the measurement error due to PAPR issues, the configuration with the highest SAR in each channel bandwidth and frequency band is measured at various power levels, from 16.60 mW for 5 MHz BW and 14.45 mW for 10 MHz BW, in 3 dB steps, until the maximum power level is reached with the antenna positioned 18 mm from the phantom surface. As shown by the results and plot below, SAR is linear to power only when the probe sensors are operating within the square-law region. As power continues to increase, the measured SAR error becomes increasingly larger. Since these are single point peak SAR values measured with the probe positioned at the peak SAR location, at 2 mm from the phantom surface, the values are substantially higher than the 1-g SAR required to determine compliance. Based on the linearity plots, SAR is not being underestimated.

Linearity Response Check PUSC QPSK

Output Power	dBm	11.96	14.96	17.96	20.96	23.96
	mW	15.70	31.33	62.52	124.74	248.89
5 MHz Single Point SAR (W/kg)		0.037	0.079	0.159	0.325	0.652
5 MHz Linear Line		0.037	0.074	0.148	0.296	0.592

Percent Deviation		0.00	6.76	7.43	9.80	10.14
Output Power	**dBm**	**11.42**	**14.42**	**17.42**	**20.42**	**23.42**
	mW	**13.87**	**27.67**	**55.21**	**110.15**	**219.79**
10 MHz Single Point SAR (W/kg)		0.029	0.061	0.126	0.254	0.513
10 MHz Linear Line		0.029	0.058	0.116	0.232	0.464
Percent Deviation		0.00	5.17	8.62	9.48	10.56





PUSC (Chain A – Main)				
	High	**Middle**	**Low**	**Max. Rated Power**

	QPSK	QPSK	QPSK	QPSK
5 MHz	247	249	248	251
Scaling Factor	1.078	1.068	1.073	
10 MHz	219	220	218	224
Scaling Factor	1.053	1.048	1.056	

5 MHz calculation of Scaling Factor formula used is as follows:

[(Rated Power*5/17)*3+(Rated Power*15)]/[Measured Power*15]

10 MHz calculation of Scaling Factor formula used is as follows:

[(Rated Power*5/35)*3+(Rated Power*15)]/[Measured Power*15]

Sample of Scaling Factor Calculation:

Using High Channel 5 MHz QPSK on Chain A the measured average power was 247 mW. The maximum rated power of the device is 251 mW.

[(251 mW*5/17)*3+(251 mW*15)]/[247 mW*15] = 1.078

Using High Channel 10 MHz QPSK on Chain A the measured average power was 219 mW. The maximum rated power of the device is 224 mW.

[(224 mW*5/35)*3+(224 mW*15)]/[219 mW*15] = 1.053

10.2.1 Spectrum Analyzer Plots (See Appendix G for additional Plots)

SAR Test Configurations for WiMax									
				QPSK 1/2			QPSK 3/4		
			Side	Low	Mid	High	Low	Mid	High
Antenna 1	PUSC	5 MHz	A	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			B	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			C	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			D	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			E	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			F	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
		10 MHz	A	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			B	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			C	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			D	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			E	Note 1	Tested	Note 1	Note 2	Note 2	Note 2
			F	Note 1	Tested	Note 1	Note 2	Note 2	Note 2

Note 1 - Reduced Per TCB Workshop Notes April 2010 page 9.
Note 2 - Reduced per TCB Workshop Notes April 2010 page 9.

SAR Test Configurations for WiMax									
				16QAM 1/2			16QAM 3/4		
			Side	Low	Mid	High	Low	Mid	High
Antenna 1	PUSC	5 MHz	A	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			B	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			C	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			D	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			E	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			F	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
		10 MHz	A	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			B	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			C	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			D	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			E	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			F	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3

Note 3 - Reduced per TCB Workshop Notes October 2010 page 33

SAR Test Configurations for WiMax									
				64QAM 1/2			64QAM 3/4		
			Side	Low	Mid	High	Low	Mid	High
Antenna 1	PUSC	5 MHz	A	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			B	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			C	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			D	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			E	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			F	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
		10 MHz	A	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			B	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			C	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			D	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			E	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3
			F	Note 3	Note 3	Note 3	Note 3	Note 3	Note 3

Note 3 - Reduced per TCB Workshop Notes October 2010 page 33

SAR Data Summary – 2450 MHz Body 802.11b

MEASUREMENT RESULTS							
Gap	Position	Frequency		Modulation	Antenna	End Power	SAR (W/kg)
		MHz	Ch.			(dBm)	
17 mm	Side A	2437	6	DSSS	Chain A	16.83	0.284
	Side B	2437	6	DSSS	Chain A	16.83	0.321
	Side C	2437	6	DSSS	Chain A	16.83	0.224
	Side D	2437	6	DSSS	Chain A	16.83	0.234
	Side E	2437	6	DSSS	Chain A	16.83	0.156
	Side F	2437	6	DSSS	Chain A	16.83	0.196
	Side A	2437	6	DSSS	Chain B	16.78	0.216
	Side B	2437	6	DSSS	Chain B	16.78	0.367
	Side C	2437	6	DSSS	Chain B	16.78	0.293
	Side D	2437	6	DSSS	Chain B	16.78	0.245
	Side E	2437	6	DSSS	Chain B	16.78	0.245
	Side F	2437	6	DSSS	Chain B	16.78	0.198
						Body **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
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

Note: SAR Tested on the Highest output power channel. When the measured channel is 3 dB or more below the limit the remaining channels are not required to be tested per KDB 447498 section 1) e). SAR is not required for 802.11g/HT20/HT40 channels when the maximum average output power is less than ¼ dB higher than that measured in the 802.11b. The testing was conducted on all sides of the antenna. All testing was conducted per KDB 447498, 248227, 616217 and OET Bulletin 65. See the photo in Appendix C and diagram on page 14 for a pictorial of the setup and labeling of the test locations.

SAR Data Summary – 5150 MHz Body 802.11a

MEASUREMENT RESULTS							
Gap	**Position**	**Frequency**		**Modulation**	**Antenna**	**End Power**	**SAR (W/kg)**
		MHz	**Ch.**			**(dBm)**	
17 mm	Side A	5180	36	OFDM	Chain A	16.79	0.249
	Side B	5180	36	OFDM	Chain A	16.79	0.228
	Side C	5180	36	OFDM	Chain A	16.79	0.298
	Side D	5180	36	OFDM	Chain A	16.79	0.238
	Side E	5180	36	OFDM	Chain A	16.79	0.228
	Side F	5180	36	OFDM	Chain A	16.79	0.214
	Side A	5180	36	OFDM	Chain B	16.75	0.234
	Side B	5180	36	OFDM	Chain B	16.75	0.260
	Side C	5180	36	OFDM	Chain B	16.75	0.219
	Side D	5180	36	OFDM	Chain B	16.75	0.224
	Side E	5180	36	OFDM	Chain B	16.75	0.260
	Side F	5180	36	OFDM	Chain B	16.75	0.207
				Body **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
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

Note: SAR Tested on the Highest output power channel. When the measured channel is 3 dB or more below the limit the remaining channels are not required to be tested per KDB 447498 section 1) e). SAR is not required for 802.11 HT20/HT40 channels when the maximum average output power is less than ¼ dB higher than that measured in the 802.11b. The testing was conducted on all sides of the antenna. All testing was conducted per KDB 447498, 248227, 616217 and OET Bulletin 65. See the photo in Appendix C and diagram on page 14 for a pictorial of the setup and labeling of the test locations.

SAR Data Summary – 5250 MHz Body 802.11a

MEASUREMENT RESULTS							
Gap	Position	Frequency		Modulation	Antenna	End Power	SAR (W/kg)
		MHz	Ch.			(dBm)	
17 mm	Side A	5300	60	OFDM	Chain A	16.69	0.279
	Side B	5300	60	OFDM	Chain A	16.69	0.242
	Side C	5300	60	OFDM	Chain A	16.69	0.299
	Side D	5300	60	OFDM	Chain A	16.69	0.231
	Side E	5300	60	OFDM	Chain A	16.69	0.225
	Side F	5300	60	OFDM	Chain A	16.69	0.201
	Side A	5300	60	OFDM	Chain B	16.69	0.291
	Side B	5300	60	OFDM	Chain B	16.69	0.265
	Side C	5300	60	OFDM	Chain B	16.69	0.240
	Side D	5300	60	OFDM	Chain B	16.69	0.249
	Side E	5300	60	OFDM	Chain B	16.69	0.257
	Side F	5300	60	OFDM	Chain B	16.69	0.213
				Body **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
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

Note: SAR Tested on the Highest output power channel. When the measured channel is 3 dB or more below the limit the remaining channels are not required to be tested per KDB 447498 section 1) e). SAR is not required for 802.11 HT20/HT40 channels when the maximum average output power is less than ¼ dB higher than that measured in the 802.11b. The testing was conducted on all sides of the antenna. All testing was conducted per KDB 447498, 248227, 616217 and OET Bulletin 65. See the photo in Appendix C and diagram on page 14 for a pictorial of the setup and labeling of the test locations.

SAR Data Summary – 5600 MHz Body 802.11a

MEASUREMENT RESULTS							
Gap	Position	Frequency		Modulation	Antenna	End Power	SAR (W/kg)
		MHz	Ch.			(dBm)	
17 mm	Side A	5620	124	OFDM	Chain A	16.81	0.297
	Side B	5620	124	OFDM	Chain A	16.81	0.279
	Side C	5620	124	OFDM	Chain A	16.81	0.300
	Side D	5620	124	OFDM	Chain A	16.81	0.261
	Side E	5620	124	OFDM	Chain A	16.81	0.233
	Side F	5620	124	OFDM	Chain A	16.81	0.221
	Side A	5620	124	OFDM	Chain B	16.83	0.225
	Side B	5620	124	OFDM	Chain B	16.83	0.291
	Side C	5620	124	OFDM	Chain B	16.83	0.294
	Side D	5620	124	OFDM	Chain B	16.83	0.249
	Side E	5620	124	OFDM	Chain B	16.83	0.260
	Side F	5620	124	OFDM	Chain B	16.83	0.228

Body
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
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

Note: SAR Tested on the Highest output power channel. When the measured channel is 3 dB or more below the limit the remaining channels are not required to be tested per KDB 447498 section 1) e). SAR is not required for 802.11 HT20/HT40 channels when the maximum average output power is less than ¼ dB higher than that measured in the 802.11b. The testing was conducted on all sides of the antenna. All testing was conducted per KDB 447498, 248227, 616217 and OET Bulletin 65. See the photo in Appendix C and diagram on page 14 for a pictorial of the setup and labeling of the test locations.

SAR Data Summary – 5800 MHz Body 802.11a

MEASUREMENT RESULTS							
Gap	Position	Frequency		Modulation	Antenna	End Power	SAR (W/kg)
		MHz	Ch.			(dBm)	
17 mm	Side A	5785	157	OFDM	Chain A	16.85	0.292
	Side B	5785	157	OFDM	Chain A	16.85	0.265
	Side C	5785	157	OFDM	Chain A	16.85	0.294
	Side D	5785	157	OFDM	Chain A	16.85	0.249
	Side E	5785	157	OFDM	Chain A	16.85	0.221
	Side F	5785	157	OFDM	Chain A	16.85	0.194
	Side A	5785	157	OFDM	Chain B	16.81	0.245
	Side B	5785	157	OFDM	Chain B	16.81	0.269
	Side C	5785	157	OFDM	Chain B	16.81	0.300
	Side D	5785	157	OFDM	Chain B	16.81	0.205
	Side E	5785	157	OFDM	Chain B	16.81	0.263
	Side F	5785	157	OFDM	Chain B	16.81	0.203

Body
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
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

Note: SAR Tested on the Highest output power channel. When the measured channel is 3 dB or more below the limit the remaining channels are not required to be tested per KDB 447498 section 1) e). SAR is not required for 802.11 HT20/HT40 channels when the maximum average output power is less than ¼ dB higher than that measured in the 802.11b. The testing was conducted on all sides of the antenna. All testing was conducted per KDB 447498, 248227, 616217 and OET Bulletin 65. See the photo in Appendix C and diagram on page 14 for a pictorial of the setup and labeling of the test locations.

SAR Data Summary – 2600 MHz Body – WiMax 5 MHz PUSC

MEASUREMENT RESULTS									
Gap	Antenna	Side	Frequency		Modulation	End Power	SAR (W/kg)	Scaling Factor	Calculated SAR
			MHz	Ch.		(dBm)			
17 mm	Chain A	A	2593.0	Mid	QPSK ½	23.96	0.372	1.068	0.397
		B	2593.0	Mid	QPSK ½	23.96	0.370	1.068	0.395
		C	2593.0	Mid	QPSK ½	23.96	0.373	1.068	0.398
		D	2593.0	Mid	QPSK ½	23.96	0.374	1.068	0.399
		E	2593.0	Mid	QPSK ½	23.96	0.237	1.068	0.253
		F	2593.0	Mid	QPSK ½	23.96	0.300	1.068	0.320

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

6. Power Measured ☒Conducted ☐ERP ☐EIRP
7. SAR Measurement
   Phantom Configuration ☐Left Head ☒Uniphantom ☐Right Head
   SAR Configuration ☐Head ☒Body
8. Test Signal Call Mode ☐Test Code ☒Base Station Simulator
9. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
10. All Testing conducted using KDB 447498 Section 2 and KDB 615223.

Jay M. Moulton
Vice President

Note: When the highest SAR channel is 3 dB or more below the limit the remaining channels are not required to be tested per KDB 447498 section 1) e). Test reduction was based on TCB workshop slides from April and October of 2010.

SAR Data Summary – 2600 MHz Body – WiMax 10 MHz PUSC

MEASUREMENT RESULTS									
Gap	Antenna	Side	Frequency		Modulation	End Power	SAR (W/kg)	Scaling Factor	Calculated SAR
			MHz	Ch.		(dBm)			
17 mm	Chain A	A	2593.0	Mid	QPSK ½	23.42	0.378	1.048	0.396
		B	2593.0	Mid	QPSK ½	23.42	0.379	1.048	0.397
		C	2593.0	Mid	QPSK ½	23.42	0.323	1.048	0.338
		D	2593.0	Mid	QPSK ½	23.42	0.328	1.048	0.344
		E	2593.0	Mid	QPSK ½	23.42	0.252	1.048	0.264
		F	2593.0	Mid	QPSK ½	23.42	0.333	1.048	0.348

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

1. 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
5. All Testing conducted using KDB 447498 Section 2 and KDB 615223.

Jay M. Moulton
Vice President

Note: When the highest SAR channel is 3 dB or more below the limit the remaining channels are not required to be tested per KDB 447498 section 1) e). Test reduction was based on TCB workshop slides from April and October of 2010.

11. Enhanced Energy Coupling

Worst-case test configuration	Band	Antenna-to-person distance (mm)		Peak SAR (W/kg)	Percent Change
Side A	2450 MHz	Initial	17	0.413	-----
		1	22	0.275	33.4
		2	27	0.201	51.3
Side B	2450 MHz	Initial	17	0.643	-----
		1	22	0.426	33.7
		2	27	0.318	50.5
Side C	2450 MHz	Initial	17	0.423	-----
		1	22	0.271	35.9
		2	27	0.199	53.0
Side D	2450 MHz	Initial	17	0.305	-----
		1	22	0.206	32.5
		2	27	0.143	53.1
Side E	2450 MHz	Initial	17	0.413	-----
		1	22	0.279	32.4
		2	27	0.178	56.9
Side F	2450 MHz	Initial	17	0.289	-----
		1	22	0.186	35.6
		2	27	0.127	56.1
Side A	5250 MHz	Initial	17	0.376	-----
		1	22	0.251	33.2
		2	27	0.162	56.9
Side B	5250 MHz	Initial	17	0.346	-----
		1	22	0.235	32.1
		2	27	0.161	53.5
Side C	5250 MHz	Initial	17	0.424	-----
		1	22	0.265	37.5
		2	27	0.211	50.2
Side D	5250 MHz	Initial	17	0.392	-----
		1	22	0.254	35.2
		2	27	0.179	54.3
Side E	5250 MHz	Initial	17	0.295	-----
		1	22	0.198	32.9
		2	27	0.132	55.3
Side F	5250 MHz	Initial	17	0.243	-----
		1	22	0.163	32.9
		2	27	0.119	51.0

Worst-case test configuration	Band	Antenna-to-person distance (mm)		Peak SAR (W/kg)	Percent Change
Side A	5600 MHz	Initial	17	0.402	-----
		1	22	0.265	34.1
		2	27	0.189	53.0
Side B	5600 MHz	Initial	17	0.418	-----
		1	22	0.279	33.3
		2	27	0.195	53.3
Side C	5600 MHz	Initial	17	0.469	-----
		1	22	0.303	35.4
		2	27	0.213	54.6
Side D	5600 MHz	Initial	17	0.385	-----
		1	22	0.265	31.2
		2	27	0.187	51.4
Side E	5600 MHz	Initial	17	0.309	-----
		1	22	0.202	34.6
		2	27	0.146	52.8
Side F	5600 MHz	Initial	17	0.288	-----
		1	22	0.183	36.5
		2	27	0.138	52.1
Side A	5800 MHz	Initial	17	0.512	-----
		1	22	0.332	35.2
		2	27	0.241	52.9
Side B	5800 MHz	Initial	17	0.407	-----
		1	22	0.259	36.4
		2	27	0.196	51.8
Side C	5800 MHz	Initial	17	0.413	-----
		1	22	0.271	34.4
		2	27	0.201	51.3
Side D	5800 MHz	Initial	17	0.342	-----
		1	22	0.224	34.5
		2	27	0.146	57.3
Side E	5800 MHz	Initial	17	0.416	-----
		1	22	0.276	33.7
		2	27	0.197	52.6
Side F	5800 MHz	Initial	17	0.275	-----
		1	22	0.178	35.3
		2	27	0.122	55.6

Worst-case test configuration	Band	Antenna-to-person distance (mm)		Peak SAR (W/kg)	Percent Change
Side A	2600 MHz	Initial	17	0.572	-----
		1	22	0.372	35.0
		2	27	0.271	52.6
Side B	2600 MHz	Initial	17	0.541	-----
		1	22	0.364	32.7
		2	27	0.243	55.1
Side C	2600 MHz	Initial	17	0.559	-----
		1	22	0.379	32.2
		2	27	0.265	52.6
Side D	2600 MHz	Initial	17	0.546	-----
		1	22	0.366	33.0
		2	27	0.253	53.7
Side E	2600 MHz	Initial	17	0.383	-----
		1	22	0.246	35.8
		2	27	0.186	51.4
Side F	2600 MHz	Initial	17	0.592	-----
		1	22	0.385	35.0
		2	27	0.280	52.7

12. Test Equipment

Table 12.1 Equipment Specifications

Type	Calibration Due Date	Calibration Done Date	Serial Number
ThermoCRS Robot	N/A	N/A	RAF0338198
ThermoCRS Controller	N/A	N/A	RCF0338224
ThermoCRS Teach Pendant (Joystick)	N/A	N/A	STP0334405
IBM Computer, 2.66 MHz P4	N/A	N/A	8189D8U KCPR08N
Aprel E-Field Probe ALS-E020	07/07/2012	09/07/2011	RFE-217
Aprel E-Field Probe ALS-E030	07/14/2012	07/14/2011	E030-001
Aprel Dummy Probe	N/A	N/A	023
Aprel Left Phantom	N/A	N/A	RFE-267
Aprel Right Phantom	N/A	N/A	RFE-268
Aprel UniPhantom	N/A	N/A	RFE-273
Aprel Validation Dipole ALS-D-450-S-2 Head	01/12/2012	01/12/2010	RFE-362
Aprel Validation Dipole ALS-D-450-S-2 Body	01/19/2012	01/19/2011	RFE-362
Aprel Validation Dipole ALS-D-750-S-2 Head	01/14/2012	01/14/2010	177-00501
Aprel Validation Dipole ALS-D-750-S-2 Body	11/15/2011	11/15/2010	177-00501
Aprel Validation Dipole ALS-D-835-S-2 Head	01/14/2012	01/14/2010	180-00561
Aprel Validation Dipole ALS-D-835-S-2 Body	11/16/2011	11/16/2010	180-00561
Aprel Validation Dipole ALS-D-900-S-2 Head	01/12/2012	01/12/2010	RFE-275
Aprel Validation Dipole ALS-D-900-S-2 Body	11/19/2011	11/19/2010	RFE-275
Aprel Validation Dipole ALS-D-1900-S-2 Head	01/15/2012	01/15/2010	210-00713
Aprel Validation Dipole ALS-D-1900-S-2 Body	11/16/2011	11/16/2010	210-00713
Aprel Validation Dipole ALS-D-2450-S-2 Head	01/12/2012	01/12/2010	RFE-278
Aprel Validation Dipole ALS-D-2450-S-2 Body	11/18/2011	11/18/2010	RFE-278
Aprel Validation Dipole RFE-D-2600-S-2 Body	01/18/2012	01/18/2010	RFE-121
Aprel Validation Dipole RFE-D-BB-S-2 Head	01/12/2012	01/12/2010	235-00801
Aprel Validation Dipole RFE-D-BB-S-2 Body	02/09/2012	02/09/2011	235-00801
Agilent (HP) 437B Power Meter	03/30/2012	03/30/2011	3125U08837
Agilent (HP) 8481B Power Sensor	03/30/2012	03/30/2011	3318A05384
Agilent N1911A Power Meter	03/30/2012	03/30/2011	GB45100254
Agilent N1922A Power Sensor	03/30/2012	03/30/2011	MY45240464
Advantest R3261A Spectrum Analyzer	03/30/2012	03/30/2011	31720068
Agilent (HP) 8350B Signal Generator	03/31/2012	03/31/2011	2749A10226
Agilent (HP) 83525A RF Plug-In	03/31/2012	03/31/2011	2647A01172
Agilent (HP) 8753C Vector Network Analyzer	03/30/2012	03/30/2011	3135A01724
Agilent (HP) 85047A S-Parameter Test Set	03/31/2012	03/31/2011	2904A00595
Agilent (HP) 8960 Base Station Sim.	03/25/2012	03/25/2011	MY48360364
Agilent N9020A-503 MXA Signal Analyzer	12/15/2012	10/21/2010	MY50410047
Agilent E4438C-504 ESG Vector Sig. Gen.	05/19/2013	05/06/2011	MY45092359
Anritsu MT8820C	03/23/2012	03/23/2011	6201010002
Aprel Dielectric Probe Assembly	N/A	N/A	0011
Head Equivalent Matter (450 MHz)	N/A	N/A	N/A
Head Equivalent Matter (835/900 MHz)	N/A	N/A	N/A
Head Equivalent Matter (1900 MHz)	N/A	N/A	N/A
Head Equivalent Matter (2450 MHz)	N/A	N/A	N/A
Body Equivalent Matter (450 MHz)	N/A	N/A	N/A
Body Equivalent Matter (750 MHz)	N/A	N/A	N/A
Body Equivalent Matter (835/900 MHz)	N/A	N/A	N/A
Body Equivalent Matter (1900 MHz)	N/A	N/A	N/A
Body Equivalent Matter (2450 MHz)	N/A	N/A	N/A
Body Equivalent Matter (2600 MHz)	N/A	N/A	N/A
Body Equivalent Matter (5200 MHz)	N/A	N/A	N/A
Body Equivalent Matter (5800 MHz)	N/A	N/A	N/A

13. 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.

14. 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 – 1992, 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 – 1992, 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, June 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), March 2010.

[7] Health Canada, Safety Code 6, Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3kHz to 300 GHz, 2009.

Appendix A – System Validation Plots and Data

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**********************************************************
Test Result for UIM Dielectric Parameter
WEd 09/Nov/2011 07:36:45
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
2.4100	52.75	1.91	52.28	1.91
2.4200	52.74	1.92	52.27	1.92
2.4300	52.73	1.93	52.25	1.94
2.4400	52.71	1.94	52.23	1.95
2.4500	52.70	1.95	52.22	1.97
2.4600	52.69	1.96	52.20	1.98
2.4700	52.67	1.98	52.18	2.00

```
**********************************************************
Test Result for UIM Dielectric Parameter
Thu 10/Nov/2011 08:01:51
Freq  Frequency(GHz)
FCC_eH      FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon
FCC_sH      FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma
FCC_eB      FCC Limits for Body Epsilon
FCC_sB      FCC Limits for Body Sigma
Test_e      Epsilon  of  UIM
Test_s      Sigma of UIM
**********************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
2.5000	52.64	2.02	52.58	2.03
2.5100	52.62	2.04	52.55	2.05
2.5200	52.61	2.05	52.52	2.07
2.5300	52.60	2.06	52.50	2.09
2.5400	52.59	2.08	52.49	2.11
2.5500	52.57	2.09	52.47	2.12
2.5600	52.56	2.11	52.45	2.14
2.5700	52.55	2.12	52.43	2.16
2.5800	52.53	2.13	52.42	2.17
2.5900	52.52	2.15	52.39	2.19
2.6000	52.51	2.16	52.38	2.21
2.6100	52.50	2.18	52.35	2.22
2.6200	52.48	2.19	52.33	2.25
2.6300	52.47	2.21	52.32	2.27
2.6400	52.46	2.22	52.30	2.29
2.6500	52.45	2.23	52.29	2.30
2.6600	52.43	2.25	52.27	2.32
2.6700	52.42	2.26	52.25	2.34
2.6800	52.41	2.28	52.23	2.35
2.6900	52.39	2.29	52.20	2.37
2.7000	52.38	2.30	52.19	2.39

```
**********************************************************
Test Result for UIM Dielectric Parameter
Fri 04/Nov/2011 06:28:42
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
5.1800	49.04	5.28	47.53	5.34
5.1900	49.03	5.29	47.51	5.35
5.2000	49.01	5.30	47.48	5.36
5.2100	49.00	5.31	47.46	5.38
5.2200	48.99	5.32	47.45	5.39
5.2300	48.97	5.33	47.43	5.40
5.2400	48.96	5.35	47.42	5.42
5.2500	48.95	5.36	47.40	5.43
5.2600	48.93	5.37	47.39	5.44
5.2700	48.92	5.38	47.37	5.46
5.2800	48.91	5.39	47.36	5.47
5.2900	48.89	5.40	47.35	5.49
5.3000	48.88	5.42	47.34	5.52
5.3100	48.87	5.43	47.32	5.53
5.3200	48.85	5.44	47.29	5.55

```
**********************************************************
Test Result for UIM Dielectric Parameter
Sat 05/Nov/2011 06:21:36
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
5.1800	49.04	5.28	48.14	5.31
5.1900	49.03	5.29	48.12	5.32
5.2000	49.01	5.30	48.10	5.34
5.2100	49.00	5.31	48.09	5.35
5.2200	48.99	5.32	48.08	5.36
5.2300	48.97	5.33	48.07	5.38
5.2400	48.96	5.35	48.05	5.39
5.2500	48.95	5.36	48.04	5.40
5.2600	48.93	5.37	48.02	5.41
5.2700	48.92	5.38	48.01	5.42
5.2800	48.91	5.39	47.99	5.44
5.2900	48.89	5.40	47.98	5.45
5.3000	48.88	5.42	47.96	5.47
5.3100	48.87	5.43	47.95	5.48
5.3200	48.85	5.44	47.92	5.49

```
**********************************************************
Test Result for UIM Dielectric Parameter
Mon 07/Nov/2011 06:46:32
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
5.5000	48.61	5.65	48.25	5.68
5.5200	48.58	5.67	48.22	5.71
5.5400	48.55	5.70	48.18	5.74
5.5600	48.53	5.72	48.16	5.77
5.5800	48.50	5.74	48.13	5.79
5.6000	48.47	5.77	48.09	5.82
5.6200	48.44	5.79	48.06	5.85
5.6400	48.42	5.81	48.03	5.87
5.6600	48.39	5.84	48.00	5.90
5.6800	48.36	5.86	47.96	5.93
5.7000	48.34	5.88	47.94	5.95

```
**********************************************************
Test Result for UIM Dielectric Parameter
Tue 08/Nov/2011 06:31:55
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
5.7450	48.27	5.94	48.16	5.97
5.7550	48.26	5.95	48.14	5.98
5.7650	48.25	5.96	48.13	6.00
5.7750	48.23	5.97	48.10	6.01
5.7850	48.22	5.98	48.09	6.02
5.7950	48.21	5.99	48.08	6.03
5.8050	48.19	6.01	48.05	6.06
5.8150	48.18	6.02	48.04	6.07
5.8250	48.17	6.03	48.02	6.09

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 07:40:41 AM
End Time : 09-Nov-2011 07:53:33 AM
Scanning Time : 772 secs

Product Data
Device Name : Validation
Serial No. : 2450
Type : Dipole
Model : ALS-D-2450-S-2
Frequency : 2450.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 51.5 mm
Width : 3.6 mm
Depth : 30.4 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 6.206 W/kg
Power Drift-Finish: 6.250 W/kg
Power Drift (%) : 0.717

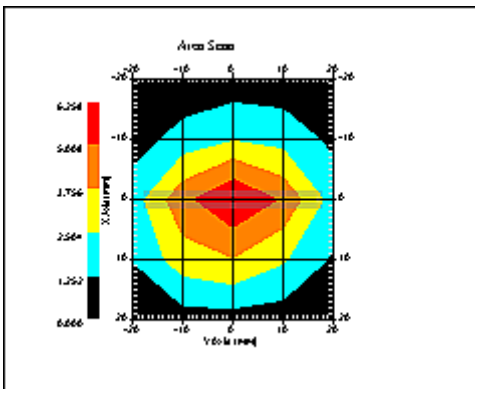
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2450
Frequency : 2450.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.22 F/m
Sigma : 1.97 S/m
Density : 1000.00 kg/cu. m

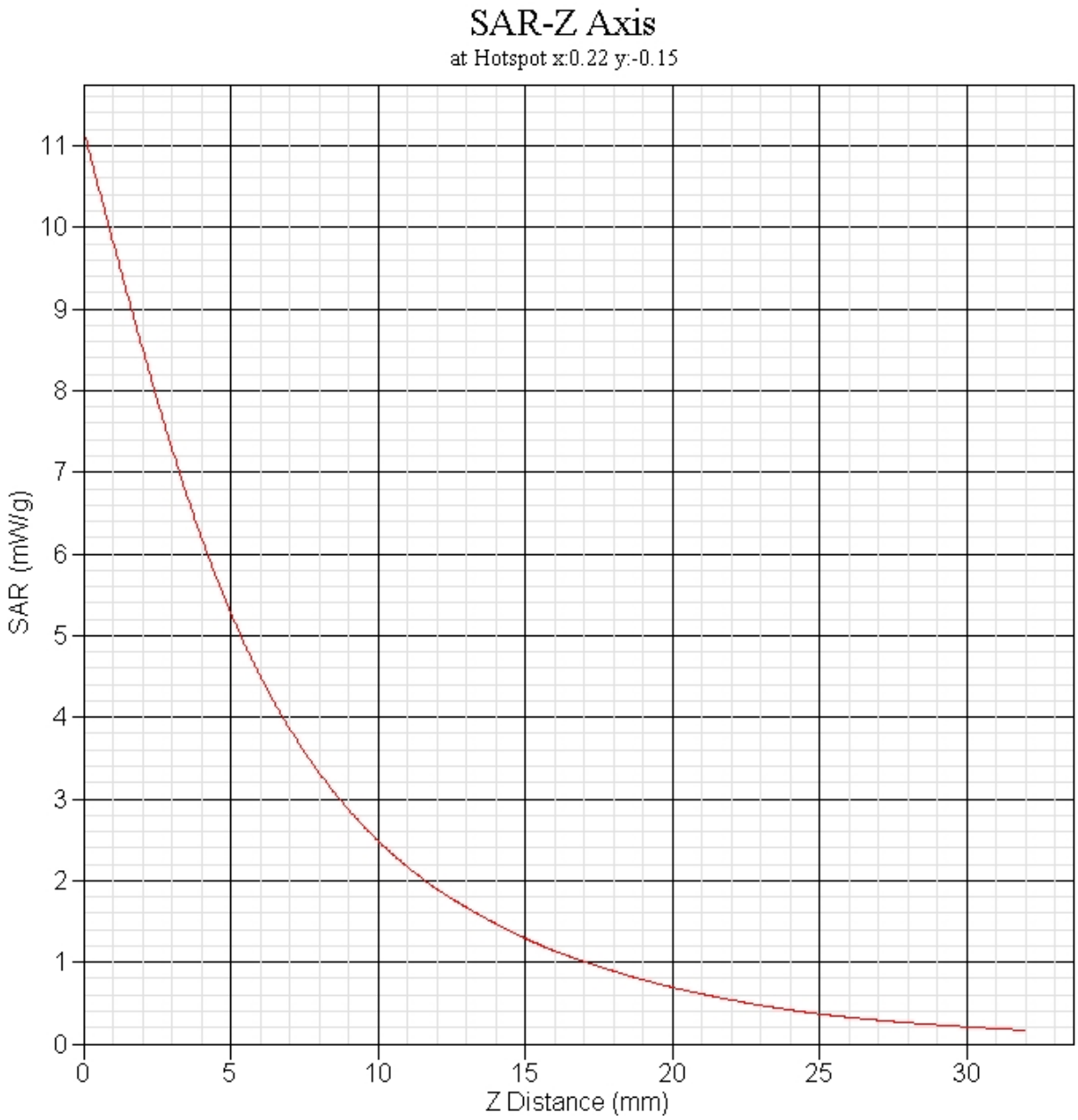
Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 09-Nov-2011
Set-up Time       : 7:40:13 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

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



```
1 gram SAR value    : 5.206 W/kg
10 gram SAR value   : 2.404 W/kg
Area Scan Peak SAR  : 6.258 W/kg
Zoom Scan Peak SAR  : 11.190 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 08:09:21 AM
End Time : 10-Nov-2011 08:22:20 AM
Scanning Time : 779 secs

Product Data
Device Name : Validation
Serial No. : 2600
Type : Dipole
Model : ALS-D-2600-S-2
Frequency : 2600.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 48.8 mm
Width : 3.6 mm
Depth : 32.8 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 6.280 W/kg
Power Drift-Finish: 6.193 W/kg
Power Drift (%) : -1.375

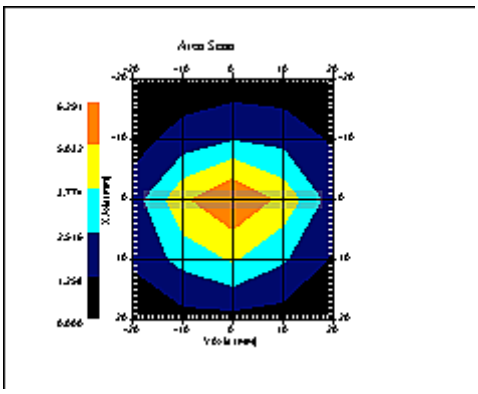
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2600
Frequency : 2600.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.38 F/m
Sigma : 2.21 S/m
Density : 1000.00 kg/cu. m

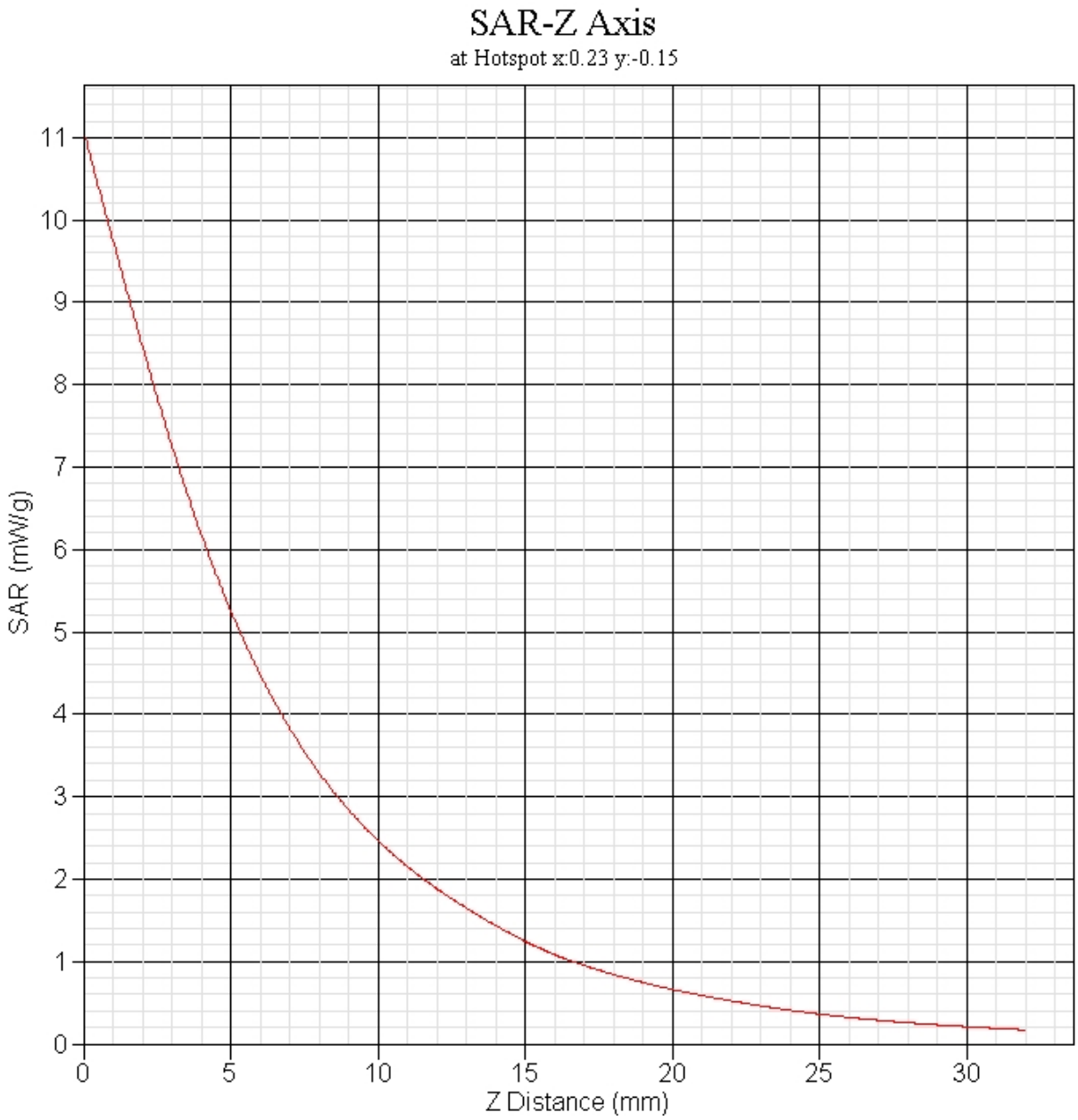
Probe Data
Name : Probe 217 - RFEL
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 07-Sep-2011
Frequency : 2600.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 4
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 7:40:13 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

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



```
1 gram SAR value    : 5.624 W/kg
10 gram SAR value   : 2.414 W/kg
Area Scan Peak SAR  : 6.291 W/kg
Zoom Scan Peak SAR  : 11.090 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 06:34:38 AM
End Time : 04-Nov-2011 06:57:51 AM
Scanning Time : 1393 secs

Product Data
Device Name : Validation
Serial No. : 5200
Type : Dipole
Model : ALS-D-BB-S-2
Frequency : 5250.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 23.1 mm
Width : 3.6 mm
Depth : 20.7 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 8.608 W/kg
Power Drift-Finish: 8.639 W/kg
Power Drift (%) : 0.358

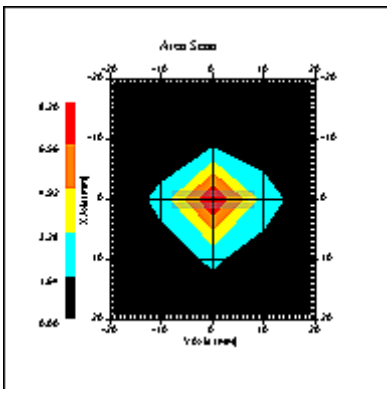
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5250
Frequency : 5250.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 50.00 RH%
Epsilon : 47.40 F/m
Sigma : 5.43 S/m
Density : 1000.00 kg/cu. m

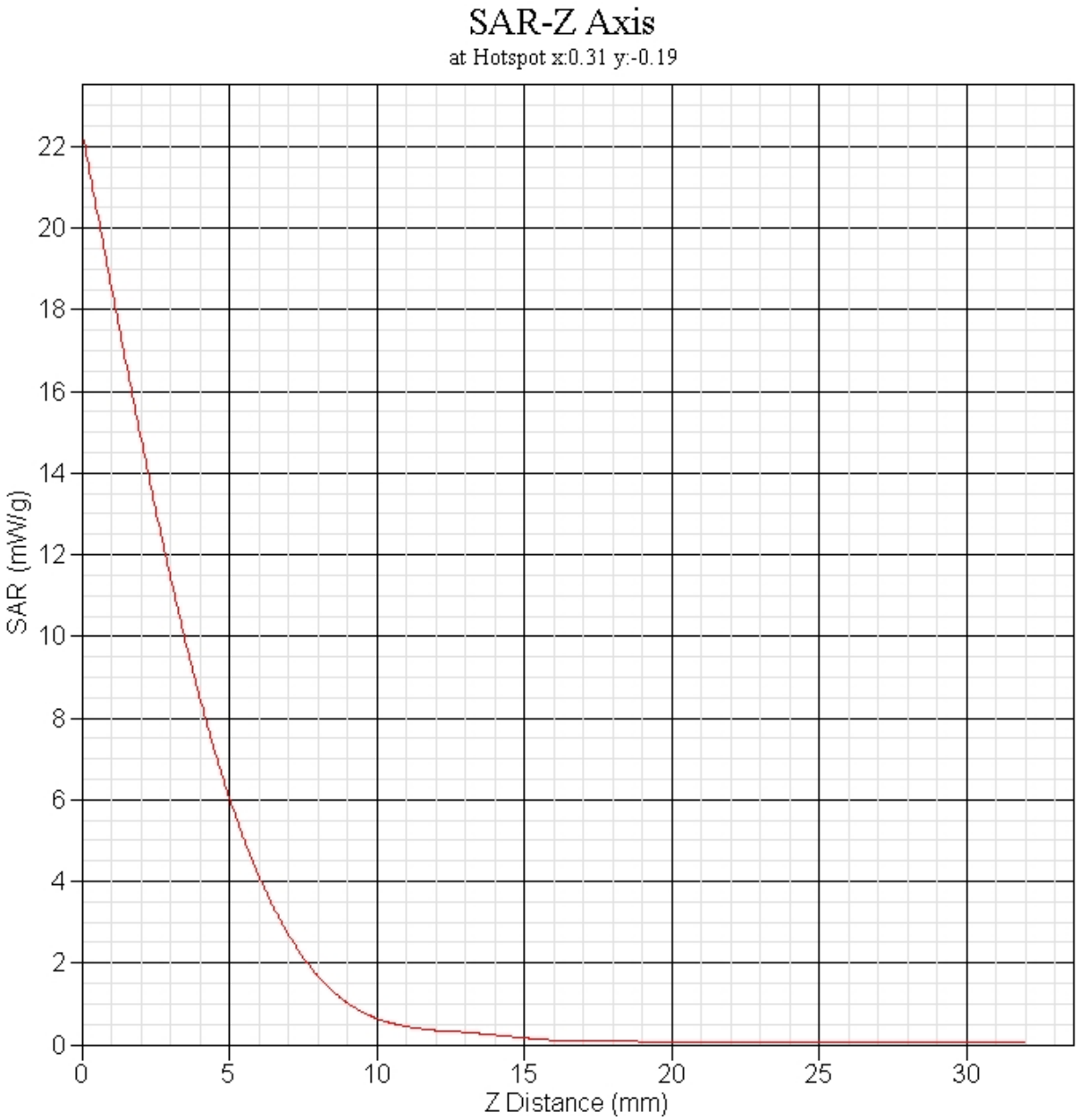
Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:00:47 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

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



```
1 gram SAR value    : 6.051 W/kg
10 gram SAR value   : 1.549 W/kg
Area Scan Peak SAR  : 8.199 W/kg
Zoom Scan Peak SAR  : 22.418 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 05-Nov-2011
Starting Time : 05-Nov-2011 06:22:02 AM
End Time : 05-Nov-2011 06:45:06 AM
Scanning Time : 1384 secs

Product Data
Device Name : Validation
Serial No. : 5200
Type : Dipole
Model : ALS-D-BB-S-2
Frequency : 5250.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 23.1 mm
Width : 3.6 mm
Depth : 20.7 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 8.831 W/kg
Power Drift-Finish: 8.803 W/kg
Power Drift (%) : -0.317

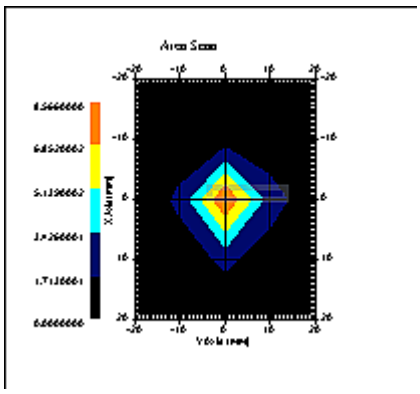
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5250
Frequency : 5250.00 MHz
Last Calib. Date : 05-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 50.00 RH%
Epsilon : 48.04 F/m
Sigma : 5.40 S/m
Density : 1000.00 kg/cu. m

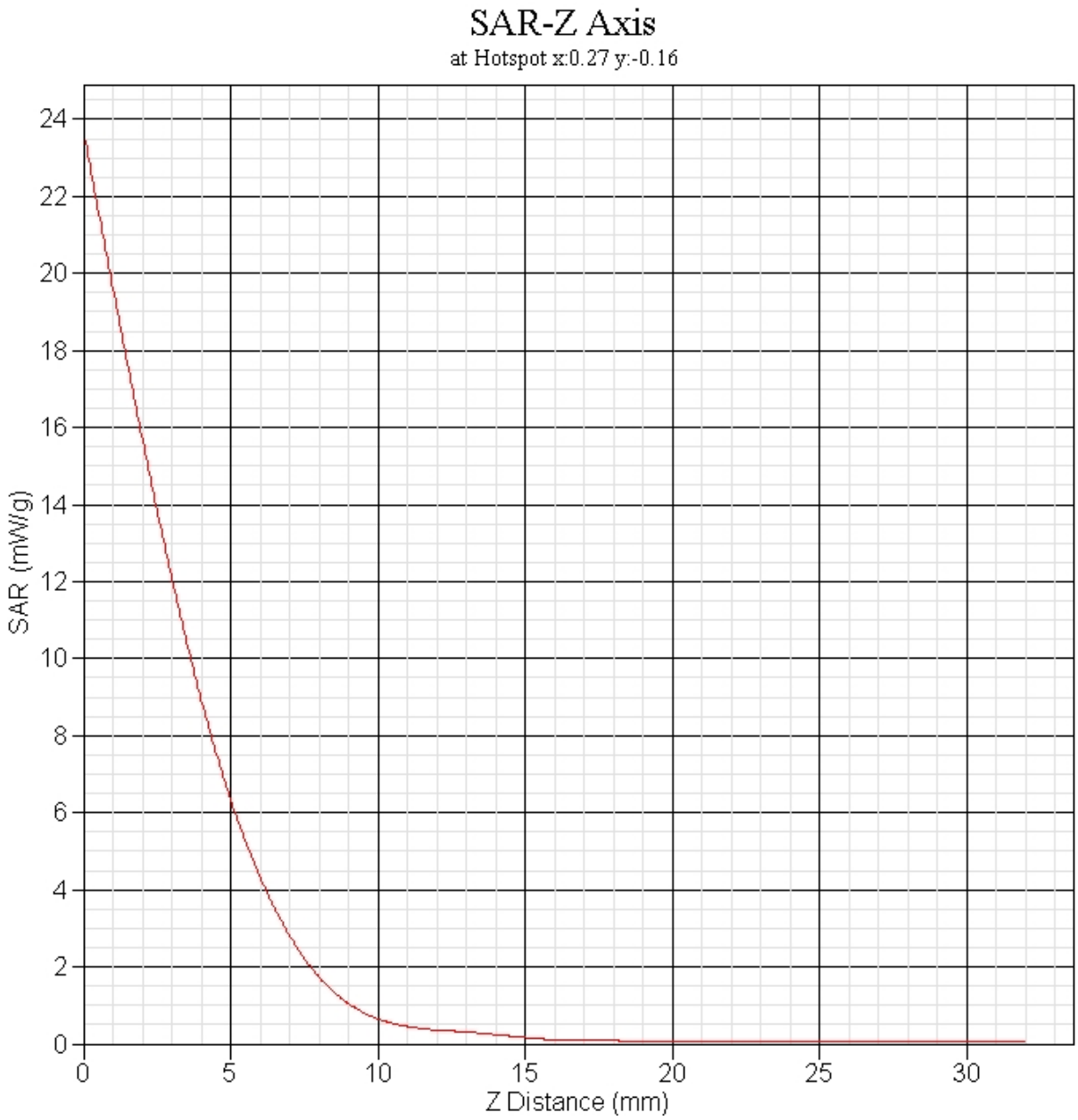
Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 05-Nov-2011
Set-up Time       : 9:00:47 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

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



```
1 gram SAR value    : 6.163 W/kg
10 gram SAR value   : 1.620 W/kg
Area Scan Peak SAR  : 8.566 W/kg
Zoom Scan Peak SAR  : 23.719 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 06:48:08 AM
End Time : 07-Nov-2011 07:10:58 AM
Scanning Time : 1370 secs

Product Data
Device Name : Validation
Serial No. : 5600
Type : Dipole
Model : ALS-D-BB-S-2
Frequency : 5600.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 23.1 mm
Width : 3.6 mm
Depth : 20.7 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 8.335 W/kg
Power Drift-Finish: 8.312 W/kg
Power Drift (%) : -0.271

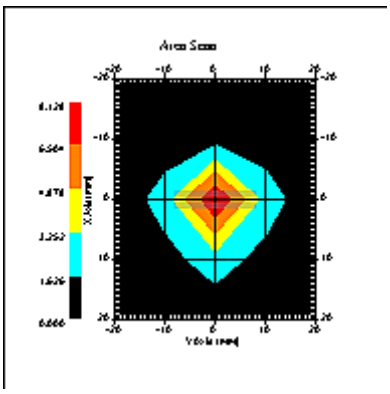
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5600
Frequency : 5600.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 50.00 RH%
Epsilon : 48.09 F/m
Sigma : 5.82 S/m
Density : 1000.00 kg/cu. m

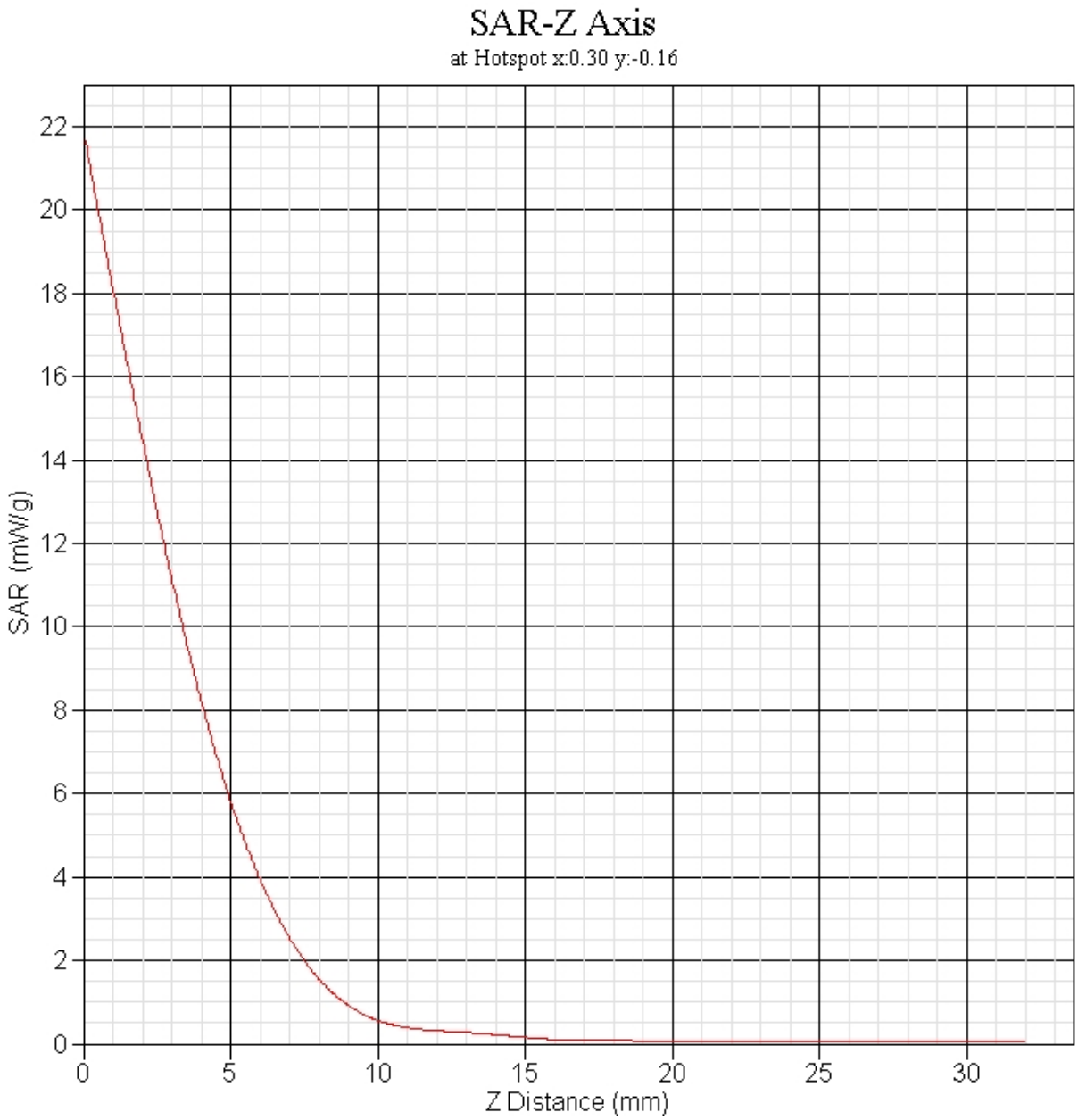
Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.3
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 8:54:57 AM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

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



```
1 gram SAR value    : 6.323 W/kg
10 gram SAR value   : 1.681 W/kg
Area Scan Peak SAR  : 8.128 W/kg
Zoom Scan Peak SAR  : 21.917 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 06:35:36 PM
End Time : 08-Nov-2011 06:58:36 PM
Scanning Time : 1380 secs

Product Data
Device Name : Validation
Serial No. : 5800
Type : Dipole
Model : ALS-D-BB-S-2
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.1 W
Drift Time : 0 min(s)
Length : 23.1 mm
Width : 3.6 mm
Depth : 20.7 mm
Antenna Type : Internal
Orientation : Touch
Power Drift-Start : 7.539 W/kg
Power Drift-Finish: 7.656 W/kg
Power Drift (%) : 1.553

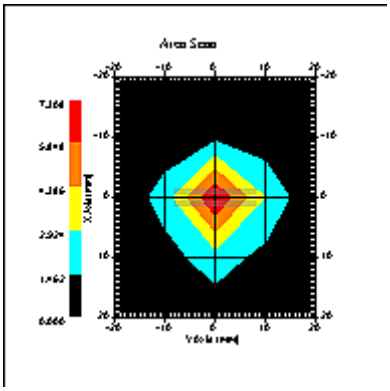
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 50.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

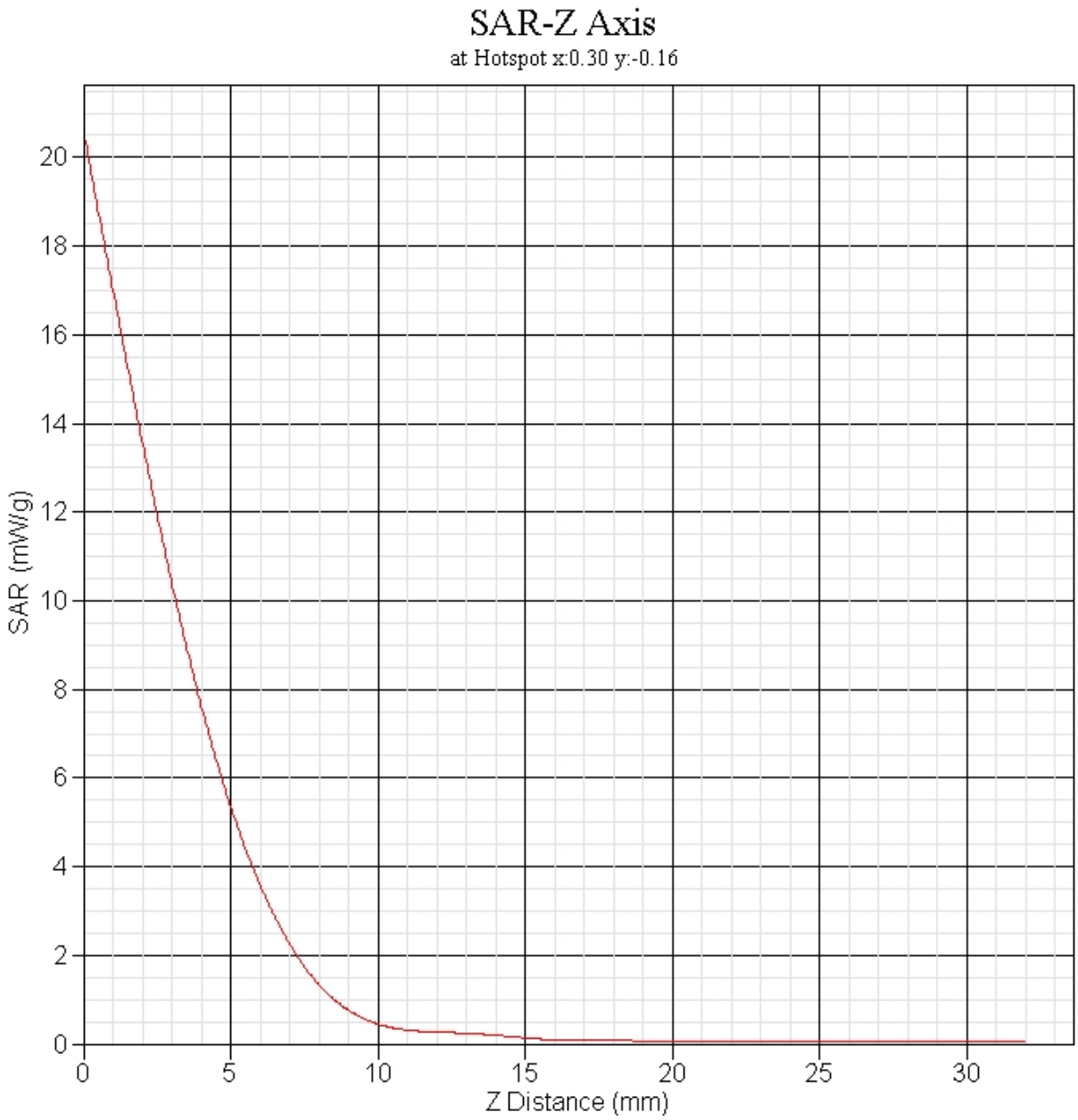
Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 4:10:18 PM
Area Scan         : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

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



```
1 gram SAR value    : 6.173 W/kg
10 gram SAR value   : 1.900 W/kg
Area Scan Peak SAR  : 7.308 W/kg
Zoom Scan Peak SAR  : 20.616 W/kg
```



Appendix B – SAR Test Data Plots

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 07:55:47 AM
End Time : 09-Nov-2011 08:12:56 AM
Scanning Time : 1029 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain A
Orientation : Side A
Power Drift-Start : 0.179 W/kg
Power Drift-Finish: 0.182 W/kg
Power Drift (%) : 1.546

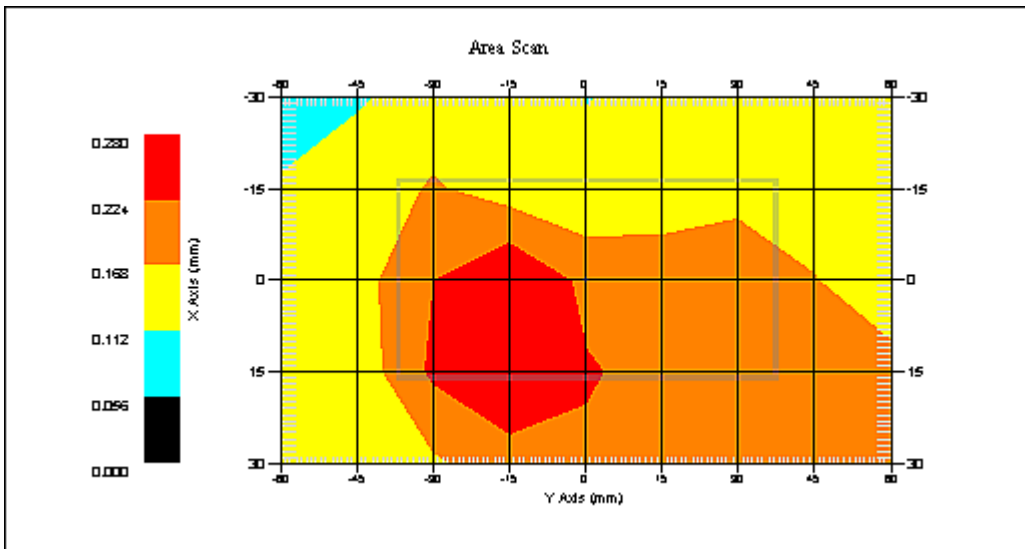
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.284 W/kg
10 gram SAR value   : 0.229 W/kg
Area Scan Peak SAR  : 0.279 W/kg
Zoom Scan Peak SAR  : 0.380 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 09:02:42 AM
End Time : 09-Nov-2011 09:19:39 AM
Scanning Time : 1017 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal - Chain A
Orientation : Side B
Power Drift-Start : 0.223 W/kg
Power Drift-Finish: 0.234 W/kg
Power Drift (%) : 4.748

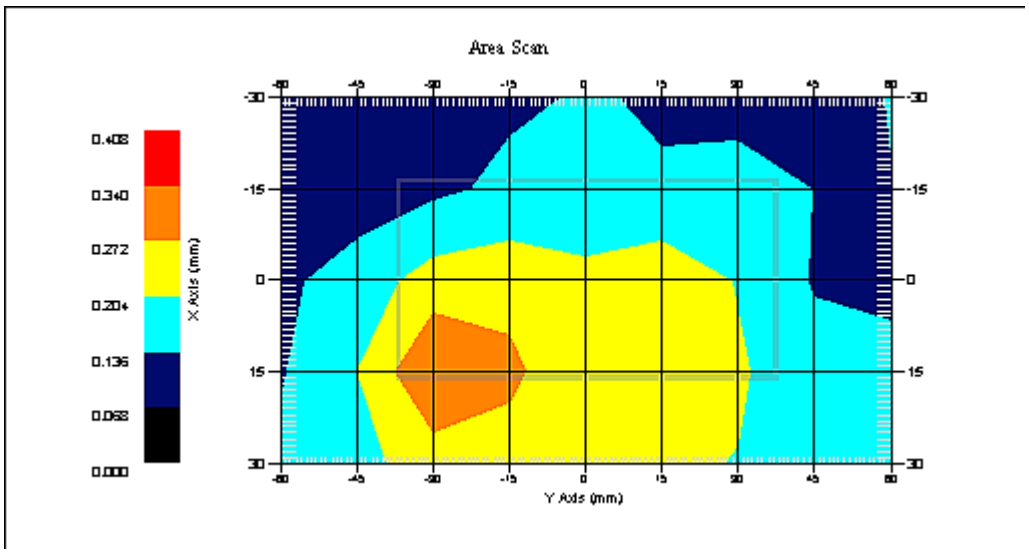
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.321 W/kg
10 gram SAR value   : 0.218 W/kg
Area Scan Peak SAR  : 0.342 W/kg
Zoom Scan Peak SAR  : 0.530 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 09:21:29 AM
End Time : 09-Nov-2011 09:36:26 AM
Scanning Time : 897 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal - Chain A
Orientation : Side C
Power Drift-Start : 0.220 W/kg
Power Drift-Finish: 0.220 W/kg
Power Drift (%) : 0.041

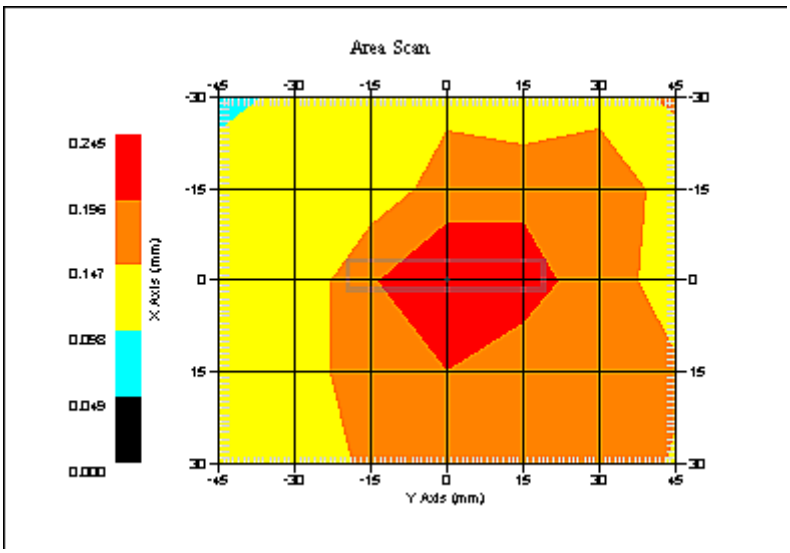
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.224 W/kg
10 gram SAR value   : 0.178 W/kg
Area Scan Peak SAR  : 0.245 W/kg
Zoom Scan Peak SAR  : 0.230 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 10:39:06 AM
End Time : 09-Nov-2011 11:06:05 AM
Scanning Time : 1619 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side D
Power Drift-Start : 0.160 W/kg
Power Drift-Finish: 0.162 W/kg
Power Drift (%) : 1.220

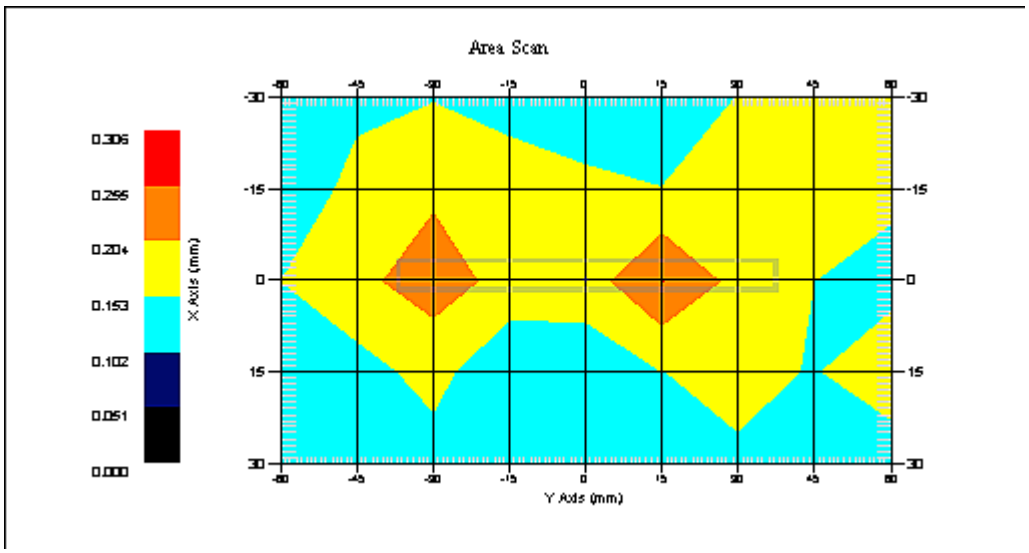
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.234 W/kg
10 gram SAR value   : 0.176 W/kg
Area Scan Peak SAR  : 0.256 W/kg
Zoom Scan Peak SAR  : 0.280 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 10:22:10 AM
End Time : 09-Nov-2011 10:37:15 AM
Scanning Time : 905 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal - Chain A
Orientation : Side E
Power Drift-Start : 0.182 W/kg
Power Drift-Finish: 0.185 W/kg
Power Drift (%) : 1.246

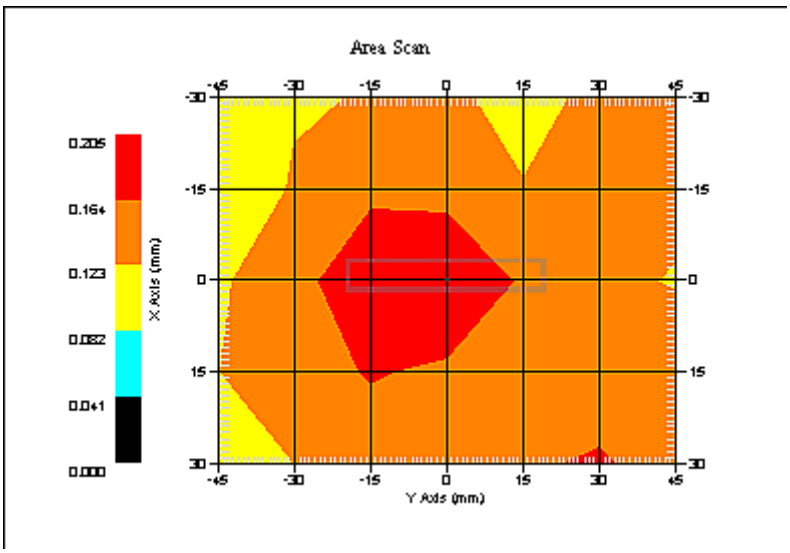
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.156 W/kg
10 gram SAR value   : 0.143 W/kg
Area Scan Peak SAR  : 0.204 W/kg
Zoom Scan Peak SAR  : 0.250 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 11:56:03 AM
End Time : 09-Nov-2011 12:12:48 PM
Scanning Time : 1005 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side F
Power Drift-Start : 0.192 W/kg
Power Drift-Finish: 0.185 W/kg
Power Drift (%) : -3.308

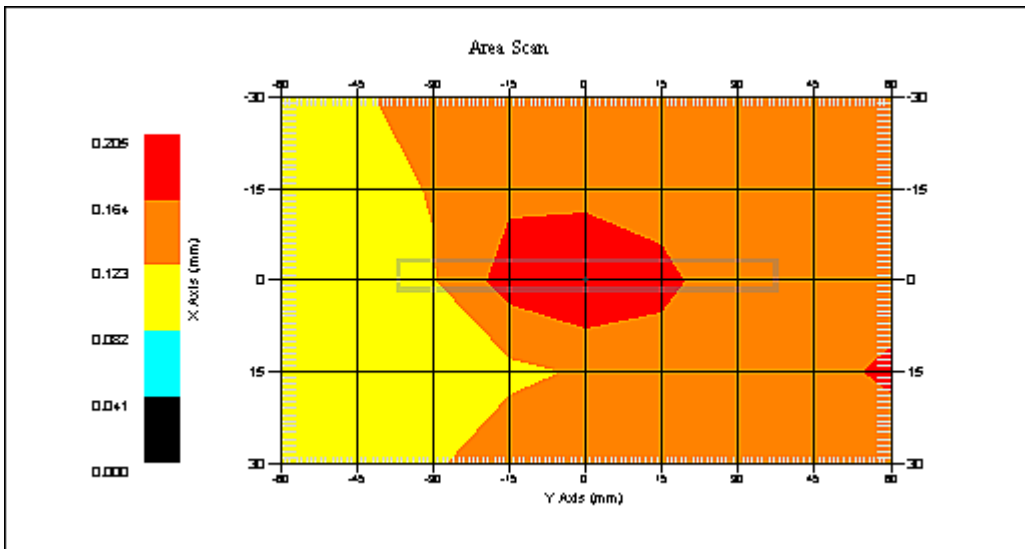
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.196 W/kg
10 gram SAR value   : 0.153 W/kg
Area Scan Peak SAR  : 0.205 W/kg
Zoom Scan Peak SAR  : 0.270 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 08:14:37 AM
End Time : 09-Nov-2011 08:41:40 AM
Scanning Time : 1623 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain B
Orientation : Side A
Power Drift-Start : 0.183 W/kg
Power Drift-Finish: 0.191 W/kg
Power Drift (%) : 4.445

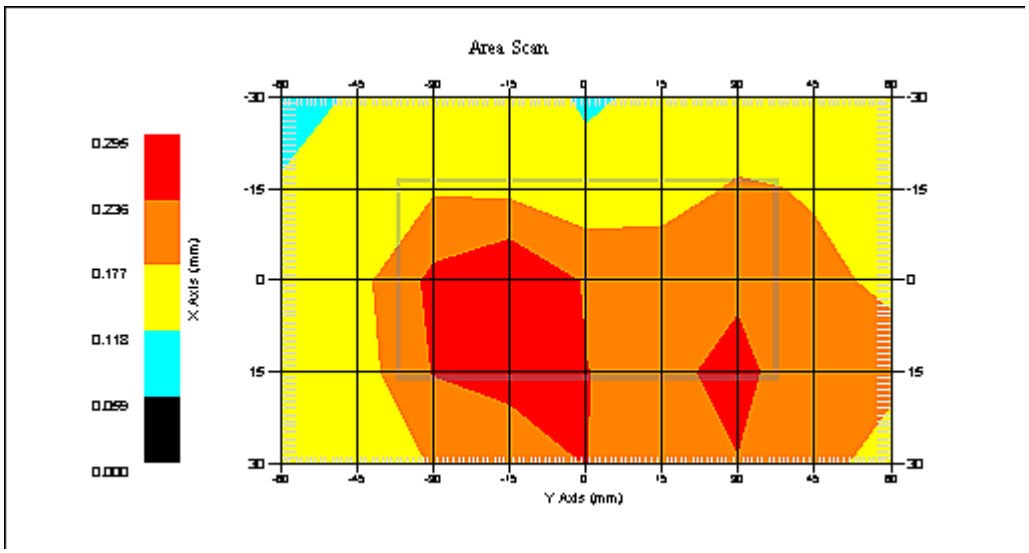
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.216 W/kg
10 gram SAR value   : 0.158 W/kg
Area Scan Peak SAR  : 0.295 W/kg
Zoom Scan Peak SAR  : 0.410 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 09-Nov-2011
Starting Time     : 09-Nov-2011  08:43:07 AM
End Time          : 09-Nov-2011  09:00:24 AM
Scanning Time     : 1037 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11b
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time        : 0 min(s)
Length            : 40 mm
Width             : 75 mm
Depth             : 8 mm
Antenna Type      : Internal - Chain B
Orientation       : Side B
Power Drift-Start : 0.234 W/kg
Power Drift-Finish: 0.238 W/kg
Power Drift (%)   : 1.702

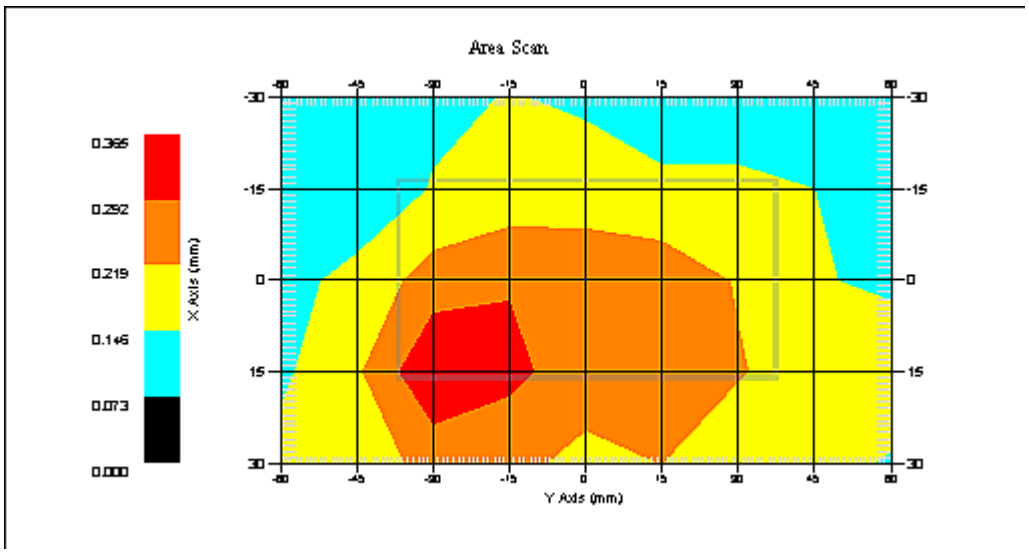
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 2440
Frequency       : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 52.23 F/m
Sigma           : 1.95 S/m
Density         : 1000.00 kg/cu. m

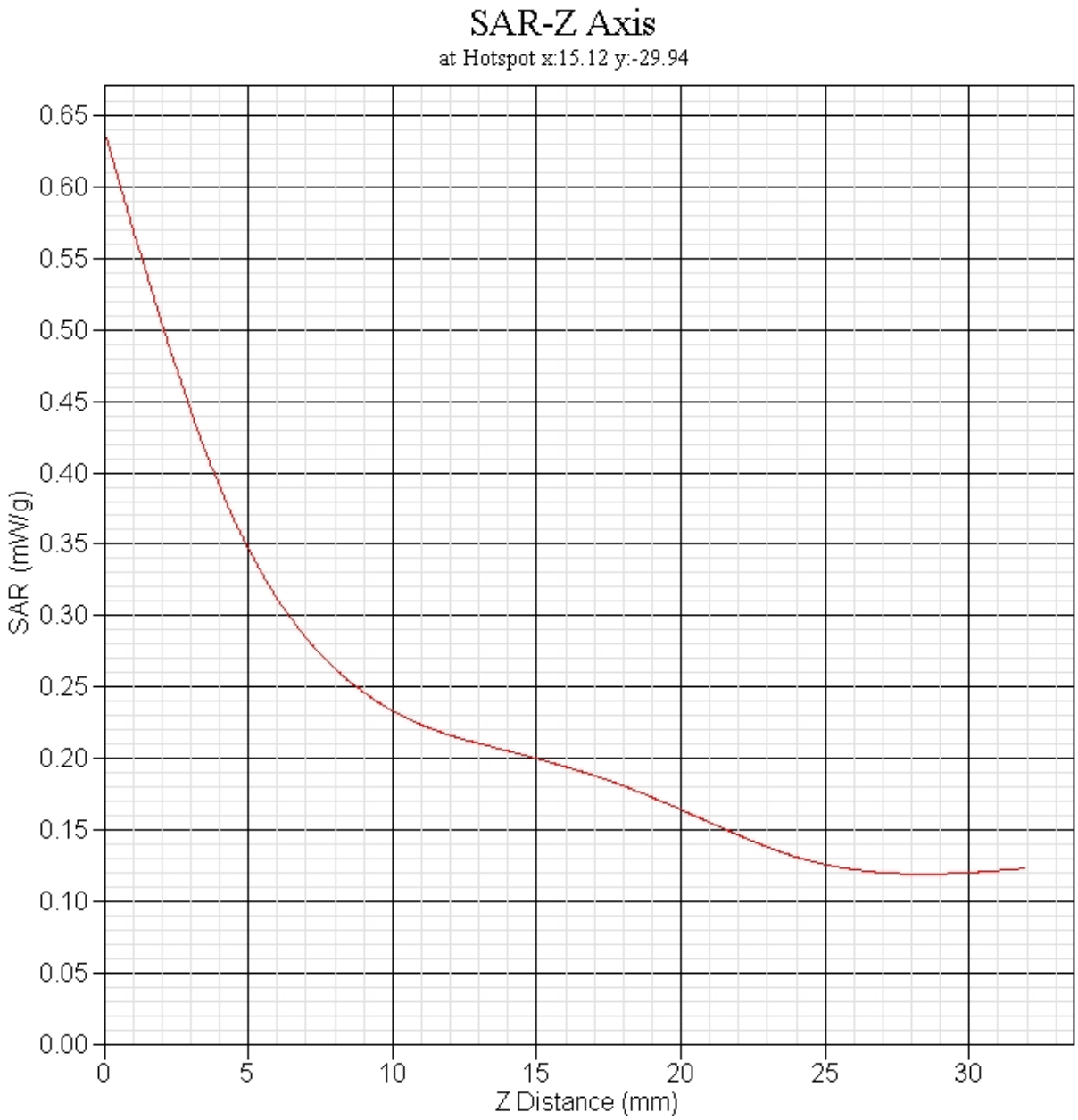
Probe Data
Name            : RFEL 217
Model           : E020
Type            : E-Field Triangle
Serial No.      : 217
Last Calib. Date : 07-Sep-2011
Frequency       : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.367 W/kg
10 gram SAR value   : 0.241 W/kg
Area Scan Peak SAR  : 0.363 W/kg
Zoom Scan Peak SAR  : 0.640 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 09:38:42 AM
End Time : 09-Nov-2011 09:53:38 AM
Scanning Time : 896 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain B
Orientation : Side C
Power Drift-Start : 0.303 W/kg
Power Drift-Finish: 0.309 W/kg
Power Drift (%) : 2.148

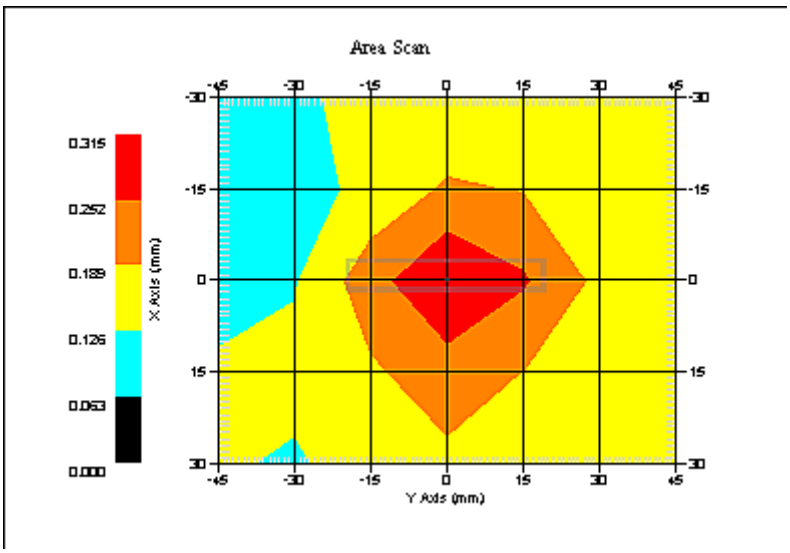
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.293 W/kg
10 gram SAR value   : 0.215 W/kg
Area Scan Peak SAR  : 0.314 W/kg
Zoom Scan Peak SAR  : 0.420 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 11:08:26 AM
End Time : 09-Nov-2011 11:35:22 AM
Scanning Time : 1616 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain B
Orientation : Side D
Power Drift-Start : 0.166 W/kg
Power Drift-Finish: 0.167 W/kg
Power Drift (%) : 0.293

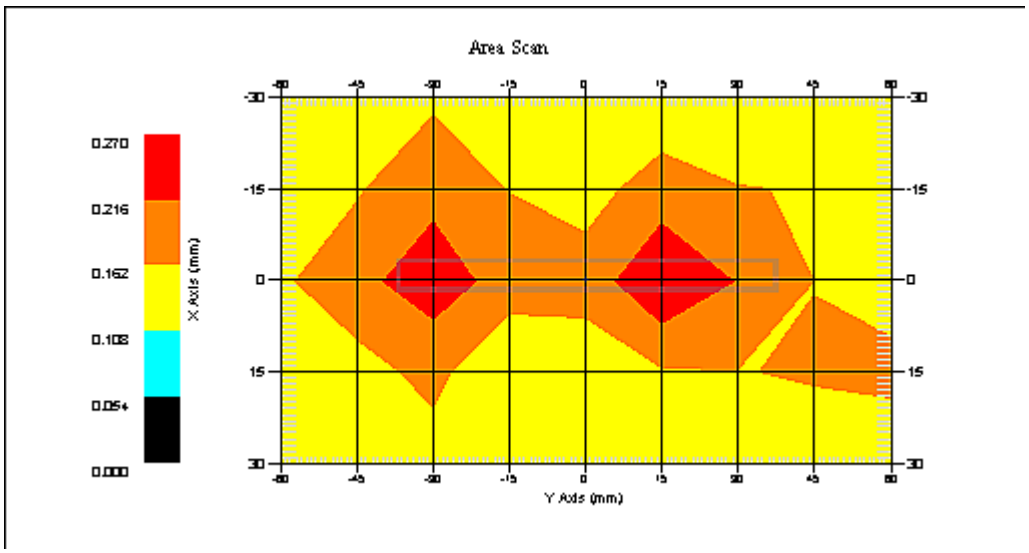
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.245 W/kg
10 gram SAR value   : 0.174 W/kg
Area Scan Peak SAR  : 0.269 W/kg
Zoom Scan Peak SAR  : 0.300 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 09:55:13 AM
End Time : 09-Nov-2011 10:20:13 AM
Scanning Time : 900 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain B
Orientation : Side E
Power Drift-Start : 0.213 W/kg
Power Drift-Finish: 0.221 W/kg
Power Drift (%) : 3.832

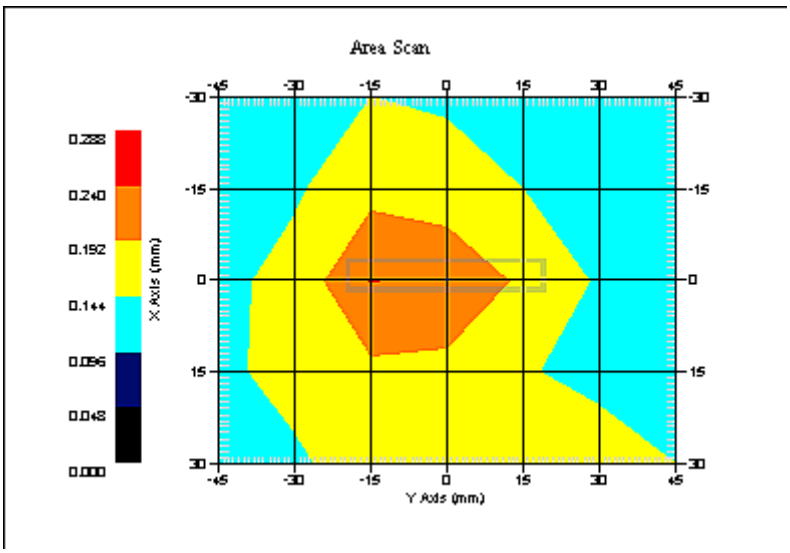
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.245 W/kg
10 gram SAR value   : 0.190 W/kg
Area Scan Peak SAR  : 0.241 W/kg
Zoom Scan Peak SAR  : 0.400 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 09-Nov-2011
Starting Time : 09-Nov-2011 11:37:13 AM
End Time : 09-Nov-2011 11:54:18 AM
Scanning Time : 1025 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11b
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2437.00 MHz
Max. Transmit Pwr : 0.046 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain B
Orientation : Side F
Power Drift-Start : 0.216 W/kg
Power Drift-Finish: 0.227 W/kg
Power Drift (%) : 4.963

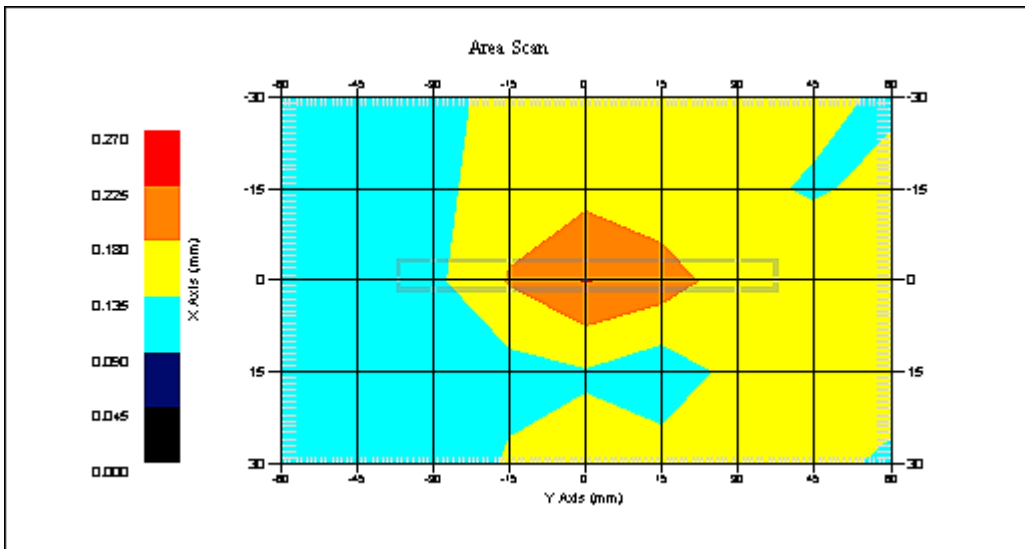
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2440
Frequency : 2440.00 MHz
Last Calib. Date : 09-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.23 F/m
Sigma : 1.95 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 3.94
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       : 09-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.198 W/kg
10 gram SAR value   : 0.160 W/kg
Area Scan Peak SAR  : 0.227 W/kg
Zoom Scan Peak SAR  : 0.280 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  07:02:37 AM
End Time          : 04-Nov-2011  07:39:30 AM
Scanning Time     : 2213 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time        : 0 min(s)
Length            : 40 mm
Width             : 75 mm
Depth             : 8 mm
Antenna Type      : Internal - Chain A
Orientation       : Side A
Power Drift-Start : 0.173 W/kg
Power Drift-Finish: 0.169 W/kg
Power Drift (%)   : -2.628

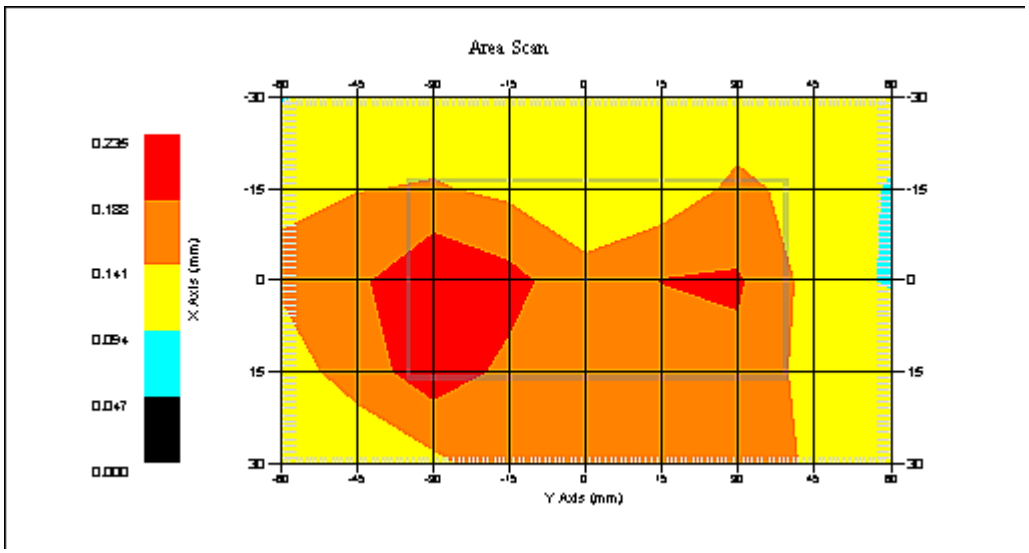
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5180
Frequency       : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.53 F/m
Sigma           : 5.34 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 7:33:10 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.249 W/kg
10 gram SAR value   : 0.184 W/kg
Area Scan Peak SAR  : 0.235 W/kg
Zoom Scan Peak SAR  : 0.270 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  10:54:40 AM
End Time          : 04-Nov-2011  11:21:39 AM
Scanning Time     : 1619 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time        : 0 min(s)
Length            : 40 mm
Width             : 75 mm
Depth             : 8 mm
Antenna Type      : Internal - Chain A
Orientation       : Side B
Power Drift-Start : 0.173 W/kg
Power Drift-Finish: 0.173 W/kg
Power Drift (%)   : 0.094

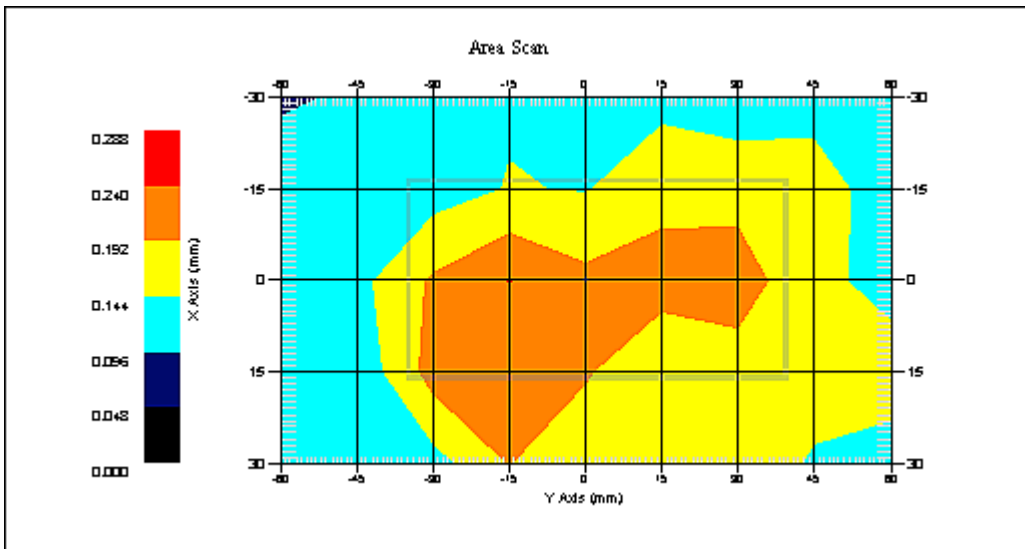
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5180
Frequency       : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.53 F/m
Sigma           : 5.34 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 7:33:10 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.228 W/kg
10 gram SAR value   : 0.178 W/kg
Area Scan Peak SAR  : 0.241 W/kg
Zoom Scan Peak SAR  : 0.280 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  11:24:22 AM
End Time          : 04-Nov-2011  11:49:23 AM
Scanning Time     : 1501 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time        : 0 min(s)
Length            : 8 mm
Width             : 40 mm
Depth             : 75 mm
Antenna Type      : Internal - Chain A
Orientation       : Side C
Power Drift-Start : 0.249 W/kg
Power Drift-Finish: 0.250 W/kg
Power Drift (%)   : 0.400

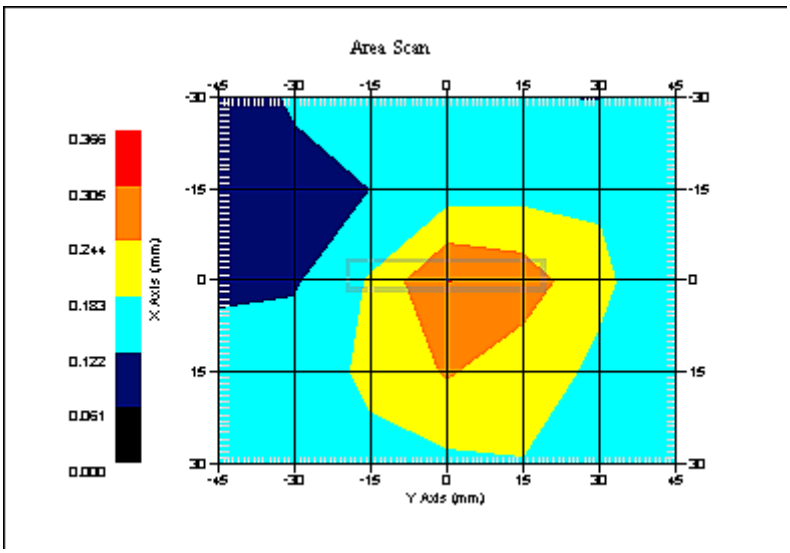
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5180
Frequency       : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.53 F/m
Sigma           : 5.34 S/m
Density         : 1000.00 kg/cu. m

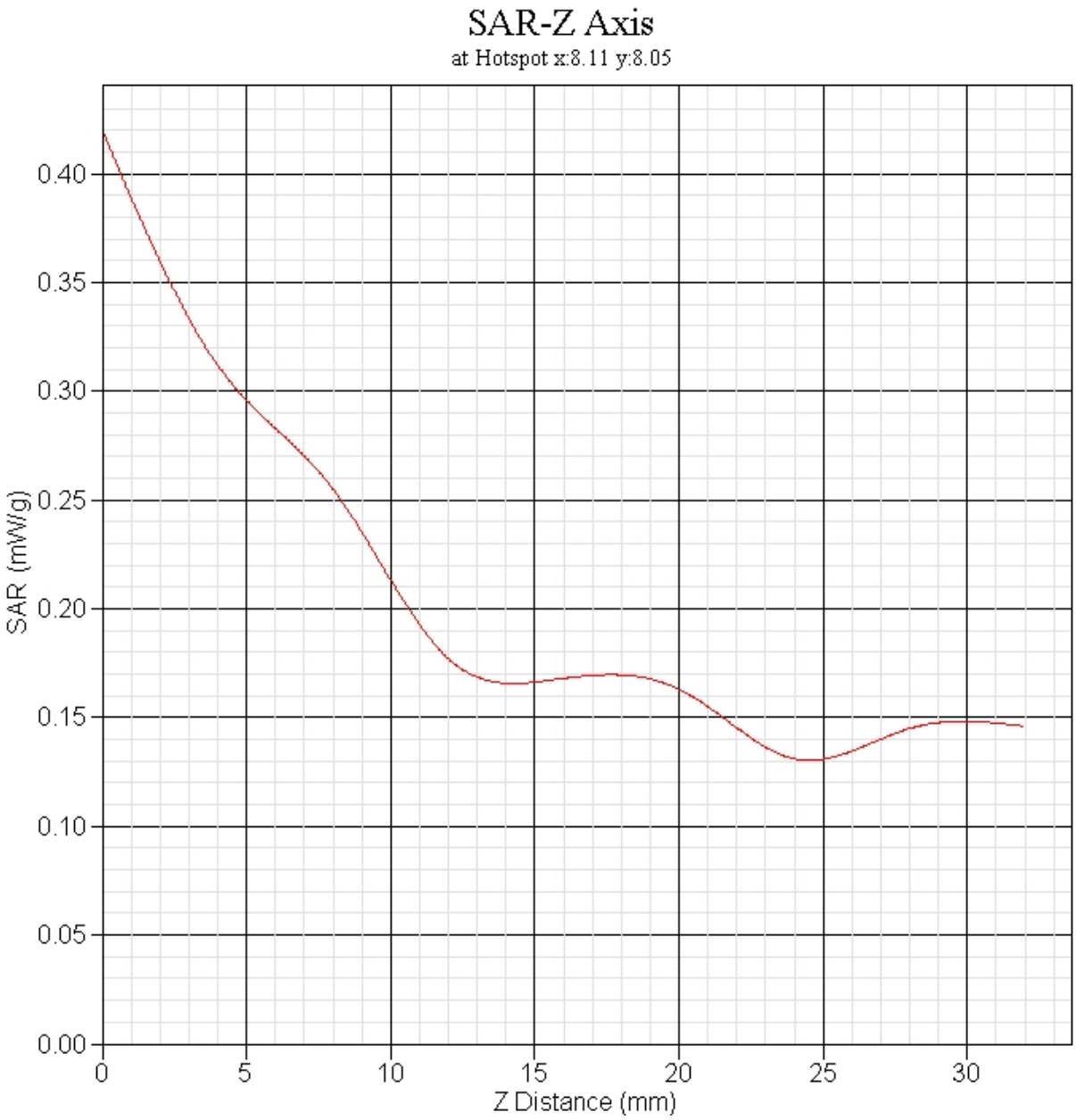
Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 7:33:10 AM
Area Scan         : 5x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.298 W/kg
10 gram SAR value   : 0.218 W/kg
Area Scan Peak SAR  : 0.306 W/kg
Zoom Scan Peak SAR  : 0.420 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 03:04:53 PM
End Time : 04-Nov-2011 03:41:56 PM
Scanning Time : 2223 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side D
Power Drift-Start : 0.161 W/kg
Power Drift-Finish: 0.168 W/kg
Power Drift (%) : 4.656

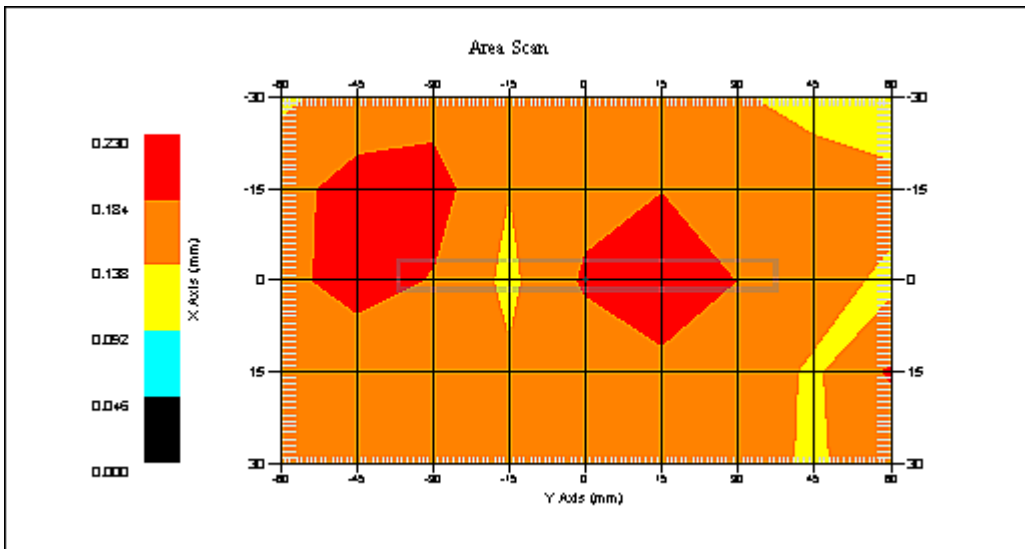
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5180
Frequency : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.53 F/m
Sigma : 5.34 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:46:53 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.238 W/kg
10 gram SAR value   : 0.175 W/kg
Area Scan Peak SAR  : 0.229 W/kg
Zoom Scan Peak SAR  : 0.390 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 02:36:40 PM
End Time : 04-Nov-2011 03:02:02 PM
Scanning Time : 1522 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain A
Orientation : Side E
Power Drift-Start : 0.212 W/kg
Power Drift-Finish: 0.215 W/kg
Power Drift (%) : 1.411

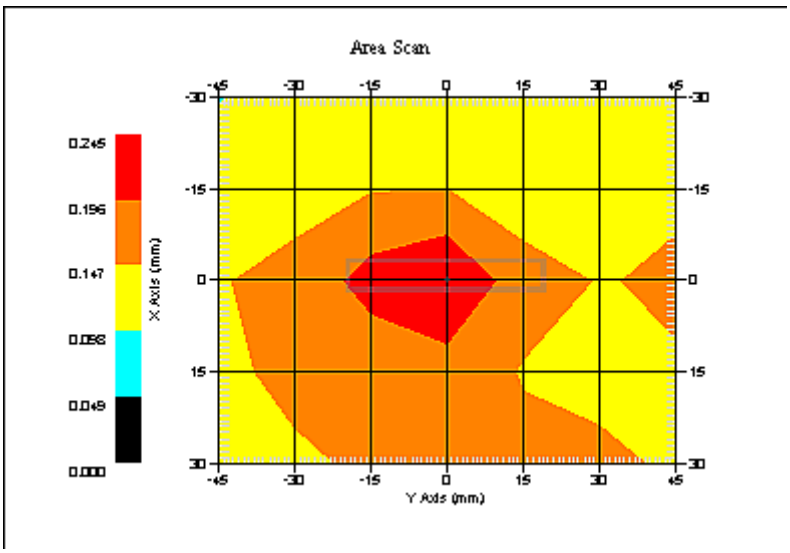
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5180
Frequency : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.53 F/m
Sigma : 5.34 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 2:52:05 PM
Area Scan         : 5x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.228 W/kg
10 gram SAR value   : 0.178 W/kg
Area Scan Peak SAR  : 0.245 W/kg
Zoom Scan Peak SAR  : 0.300 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 07:06:23 PM
End Time : 04-Nov-2011 07:33:18 PM
Scanning Time : 1615 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side F
Power Drift-Start : 0.199 W/kg
Power Drift-Finish: 0.203 W/kg
Power Drift (%) : 2.014

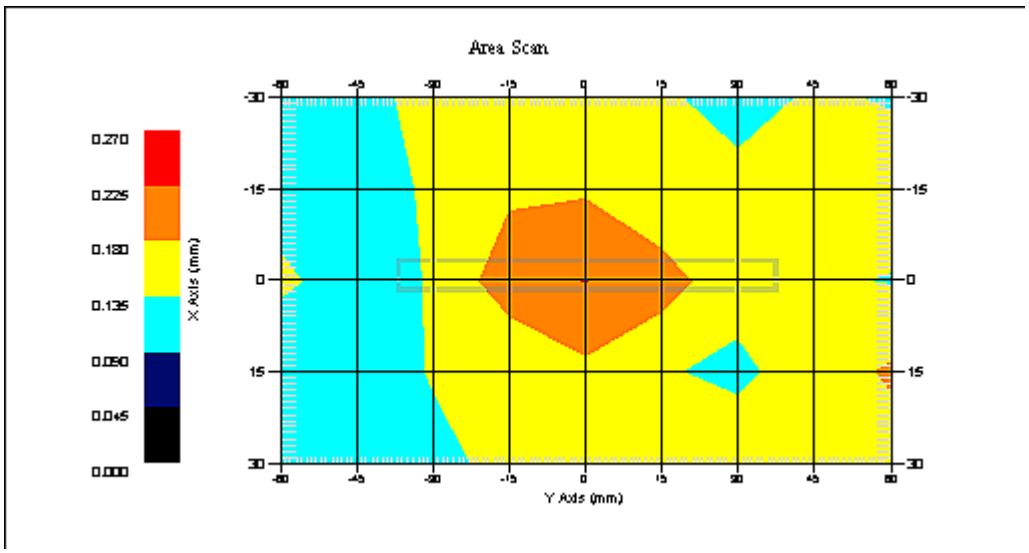
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5180
Frequency : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.53 F/m
Sigma : 5.34 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:46:53 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.214 W/kg
10 gram SAR value   : 0.171 W/kg
Area Scan Peak SAR  : 0.226 W/kg
Zoom Scan Peak SAR  : 0.270 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  08:49:32 AM
End Time          : 04-Nov-2011  09:26:27 AM
Scanning Time     : 2215 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time        : 0 min(s)
Length            : 40 mm
Width             : 75 mm
Depth             : 8 mm
Antenna Type      : Internal - Chain B
Orientation       : Side A
Power Drift-Start : 0.183 W/kg
Power Drift-Finish: 0.182 W/kg
Power Drift (%)   : -0.549

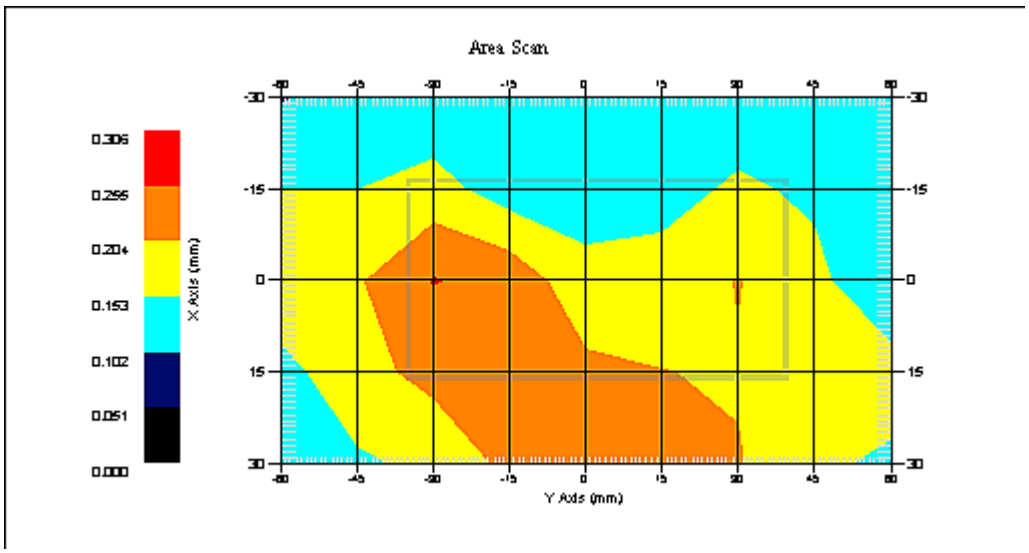
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5180
Frequency       : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.53 F/m
Sigma           : 5.34 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 7:33:10 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.279 W/kg
10 gram SAR value   : 0.190 W/kg
Area Scan Peak SAR  : 0.257 W/kg
Zoom Scan Peak SAR  : 0.450 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 09:28:22 AM
End Time : 04-Nov-2011 09:55:20 AM
Scanning Time : 1618 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain B
Orientation : Side B
Power Drift-Start : 0.196 W/kg
Power Drift-Finish: 0.205 W/kg
Power Drift (%) : 4.404

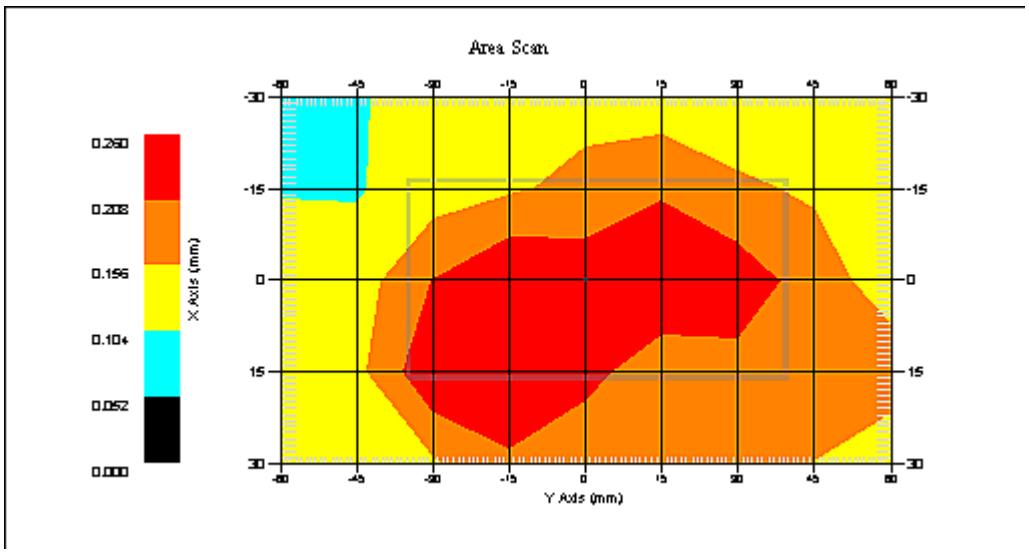
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5180
Frequency : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.53 F/m
Sigma : 5.34 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 7:33:10 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.260 W/kg
10 gram SAR value   : 0.190 W/kg
Area Scan Peak SAR  : 0.259 W/kg
Zoom Scan Peak SAR  : 0.370 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 12:46:59 PM
End Time : 04-Nov-2011 01:12:29 PM
Scanning Time : 1530 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain B
Orientation : Side C
Power Drift-Start : 0.224 W/kg
Power Drift-Finish: 0.220 W/kg
Power Drift (%) : -1.789

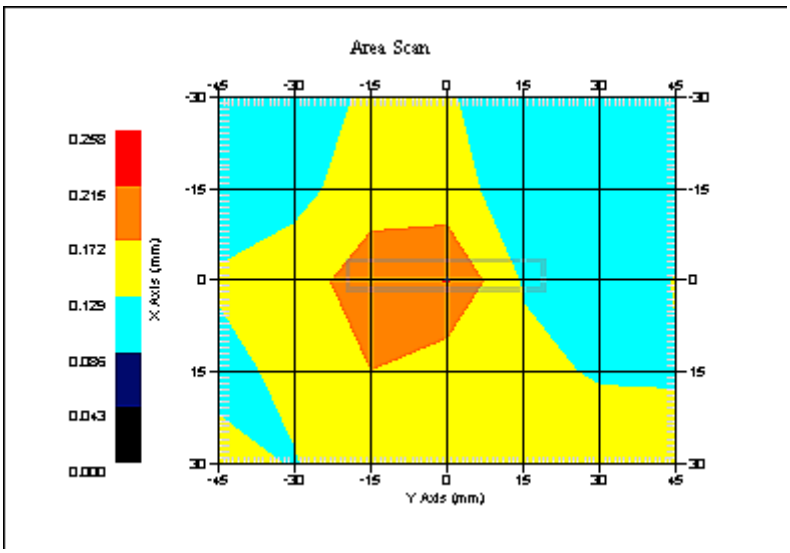
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5180
Frequency : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.53 F/m
Sigma : 5.34 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:46:53 AM
Area Scan         : 5x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.219 W/kg
10 gram SAR value   : 0.173 W/kg
Area Scan Peak SAR  : 0.216 W/kg
Zoom Scan Peak SAR  : 0.290 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  05:01:29 PM
End Time          : 04-Nov-2011  05:38:27 PM
Scanning Time     : 2218 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time        : 0 min(s)
Length            : 8 mm
Width             : 75 mm
Depth             : 40 mm
Antenna Type      : Internal - Chain B
Orientation       : Side D
Power Drift-Start : 0.163 W/kg
Power Drift-Finish: 0.168 W/kg
Power Drift (%)   : 2.792

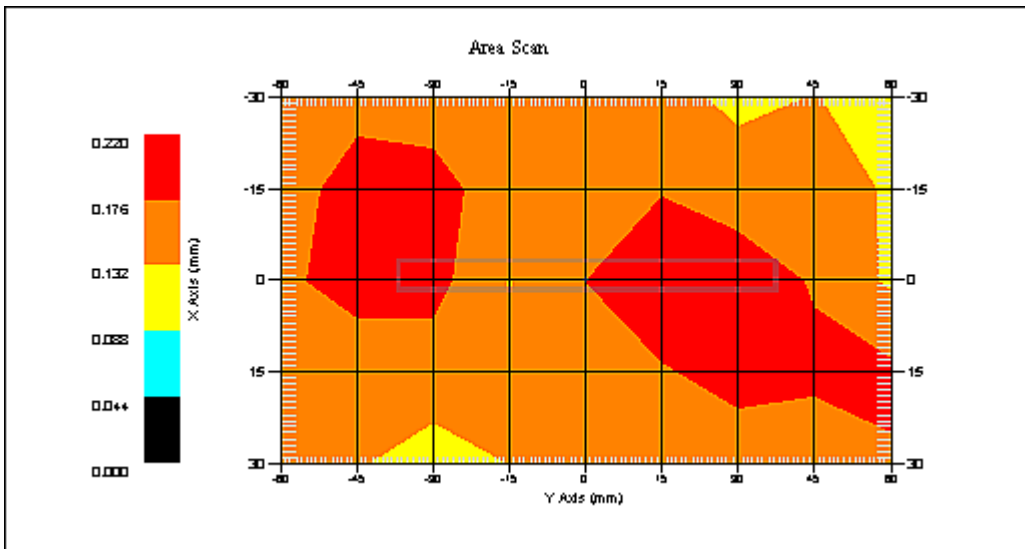
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5180
Frequency       : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.53 F/m
Sigma           : 5.34 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:46:53 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.224 W/kg
10 gram SAR value   : 0.172 W/kg
Area Scan Peak SAR  : 0.219 W/kg
Zoom Scan Peak SAR  : 0.330 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 01:15:28 PM
End Time : 04-Nov-2011 01:40:24 PM
Scanning Time : 1496 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain B
Orientation : Side E
Power Drift-Start : 0.234 W/kg
Power Drift-Finish: 0.236 W/kg
Power Drift (%) : 0.858

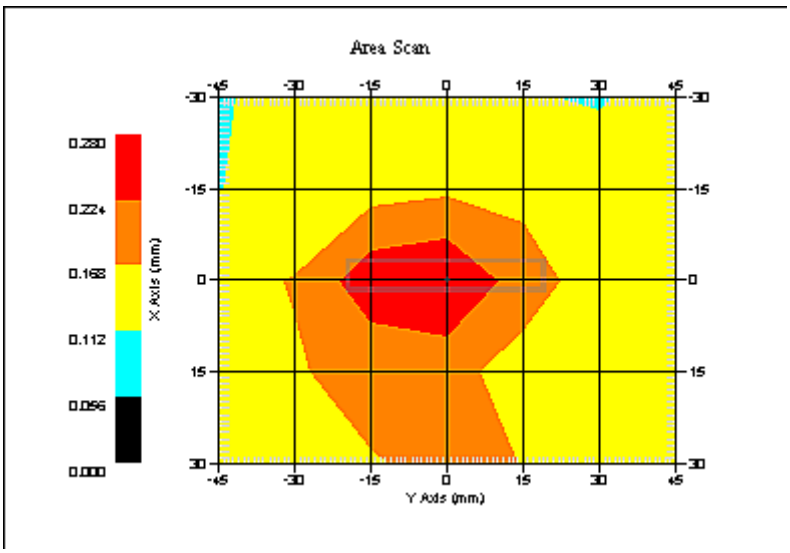
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5180
Frequency : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.53 F/m
Sigma : 5.34 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 2:52:05 PM
Area Scan         : 5x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.260 W/kg
10 gram SAR value   : 0.192 W/kg
Area Scan Peak SAR  : 0.280 W/kg
Zoom Scan Peak SAR  : 0.400 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  05:40:32 PM
End Time          : 04-Nov-2011  06:07:34 PM
Scanning Time     : 1622 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5180.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time        : 0 min(s)
Length            : 8 mm
Width             : 75 mm
Depth             : 40 mm
Antenna Type      : Internal - Chain B
Orientation       : Side F
Power Drift-Start : 0.210 W/kg
Power Drift-Finish: 0.213 W/kg
Power Drift (%)   : 1.420

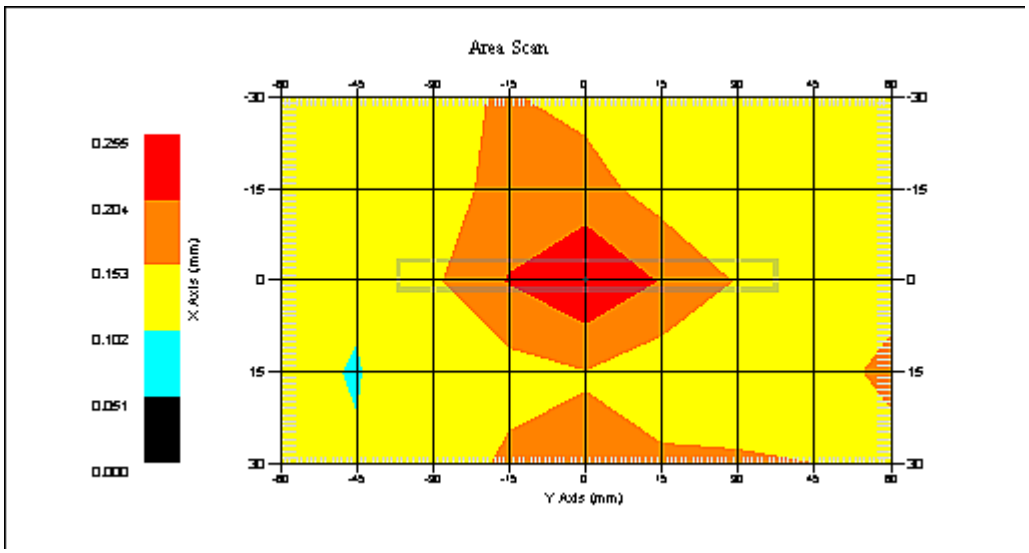
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5180
Frequency       : 5180.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.53 F/m
Sigma           : 5.34 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:46:53 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Low
```




```
1 gram SAR value    : 0.207 W/kg
10 gram SAR value   : 0.172 W/kg
Area Scan Peak SAR  : 0.253 W/kg
Zoom Scan Peak SAR  : 0.300 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 07:41:13 AM
End Time : 04-Nov-2011 08:08:08 AM
Scanning Time : 1615 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain A
Orientation : Side A
Power Drift-Start : 0.163 W/kg
Power Drift-Finish: 0.167 W/kg
Power Drift (%) : 2.793

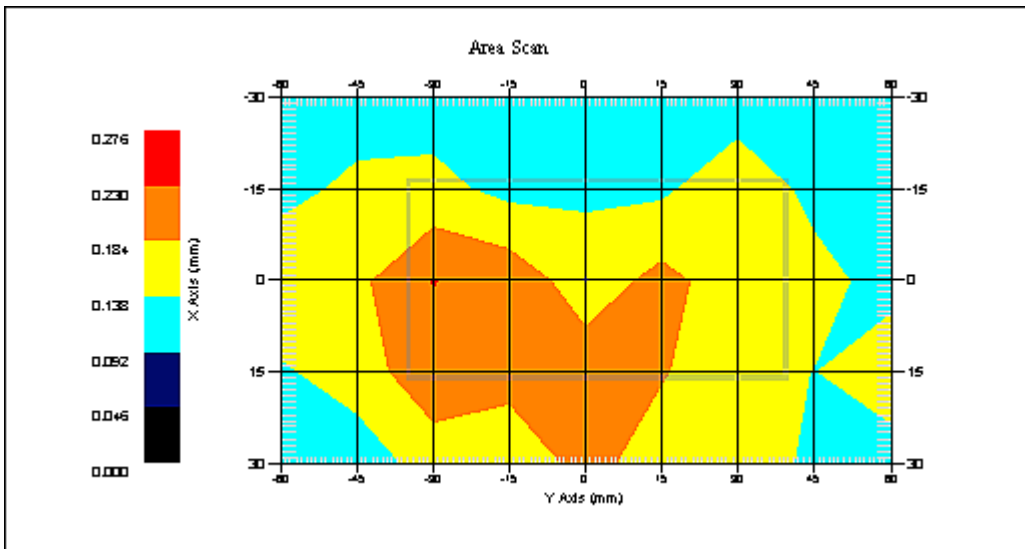
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5300
Frequency : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.34 F/m
Sigma : 5.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 7:33:10 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.234 W/kg
10 gram SAR value   : 0.170 W/kg
Area Scan Peak SAR  : 0.231 W/kg
Zoom Scan Peak SAR  : 0.370 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 10:26:37 AM
End Time : 04-Nov-2011 10:53:35 AM
Scanning Time : 1618 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain A
Orientation : Side B
Power Drift-Start : 0.165 W/kg
Power Drift-Finish: 0.166 W/kg
Power Drift (%) : 0.602

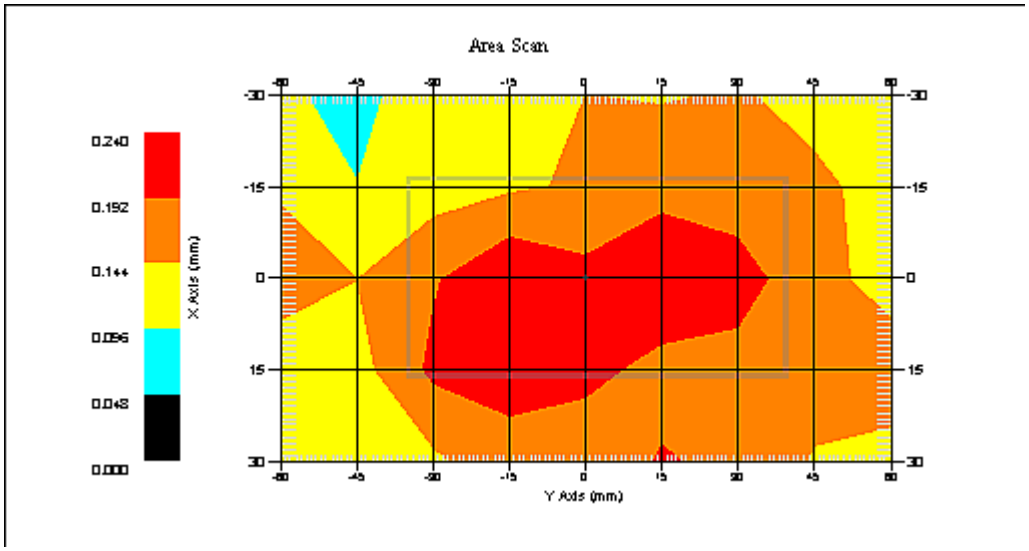
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5300
Frequency : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.34 F/m
Sigma : 5.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 04-Nov-2011
Set-up Time : 7:33:10 AM
Area Scan : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position : Side B
Separation : 17 mm
Channel : Mid



1 gram SAR value : 0.242 W/kg
10 gram SAR value : 0.182 W/kg
Area Scan Peak SAR : 0.240 W/kg
Zoom Scan Peak SAR : 0.340 W/kg

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 11:51:49 AM
End Time : 04-Nov-2011 12:17:00 PM
Scanning Time : 1511 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain A
Orientation : Side C
Power Drift-Start : 0.258 W/kg
Power Drift-Finish: 0.262 W/kg
Power Drift (%) : 1.638

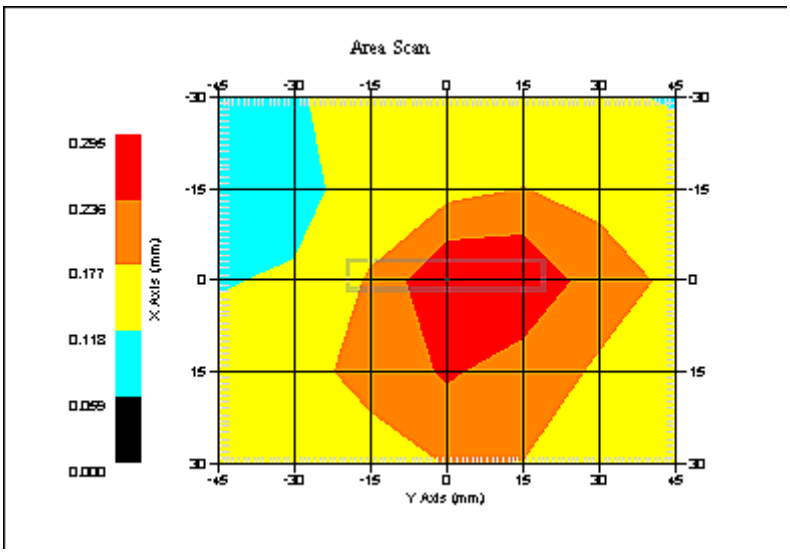
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5300
Frequency : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.34 F/m
Sigma : 5.52 S/m
Density : 1000.00 kg/cu. m

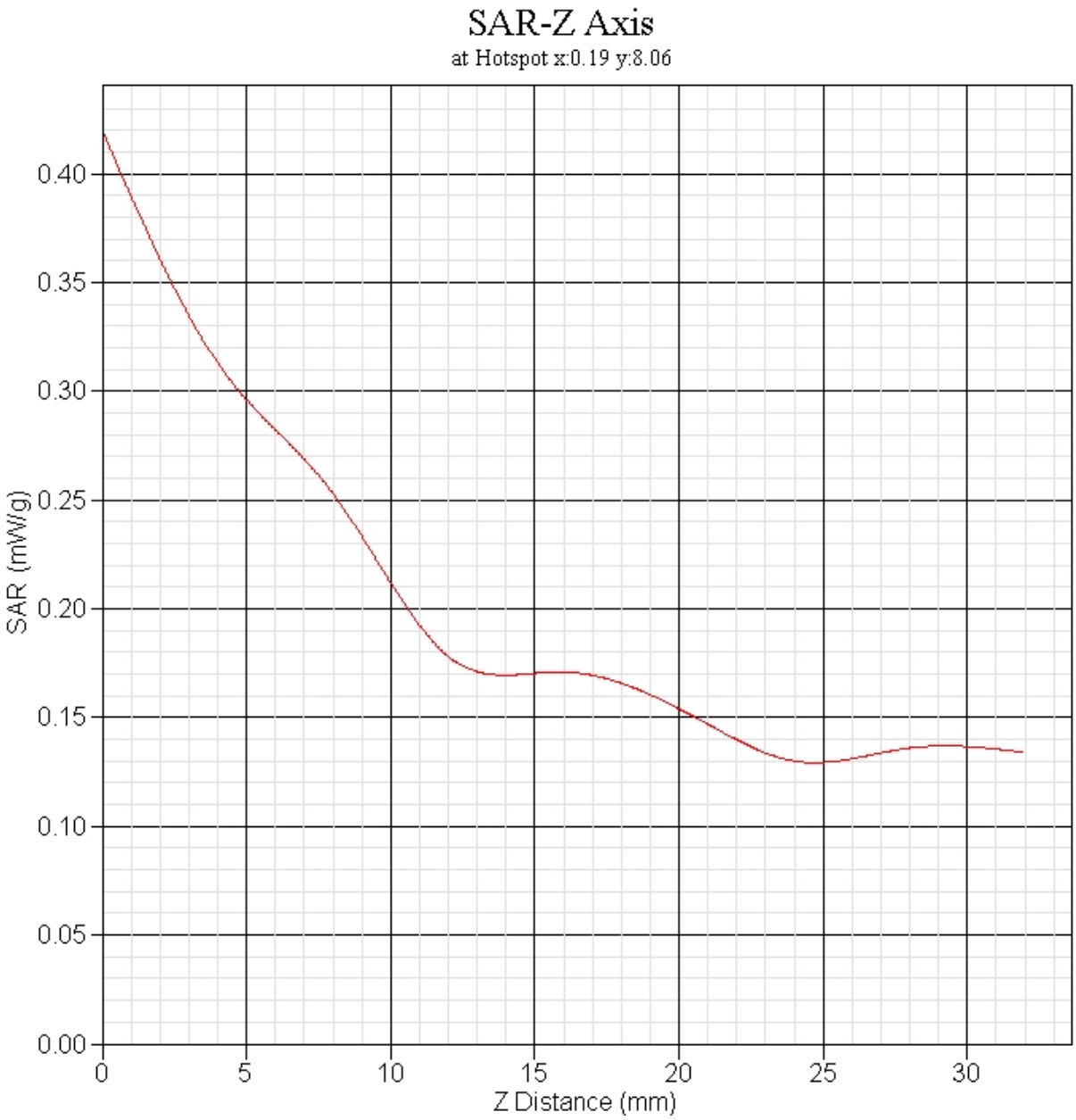
Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 7:33:10 AM
Area Scan         : 5x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.299 W/kg
10 gram SAR value   : 0.213 W/kg
Area Scan Peak SAR  : 0.294 W/kg
Zoom Scan Peak SAR  : 0.420 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 03:43:02 PM
End Time : 04-Nov-2011 04:20:01 PM
Scanning Time : 2219 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side D
Power Drift-Start : 0.172 W/kg
Power Drift-Finish: 0.171 W/kg
Power Drift (%) : -0.588

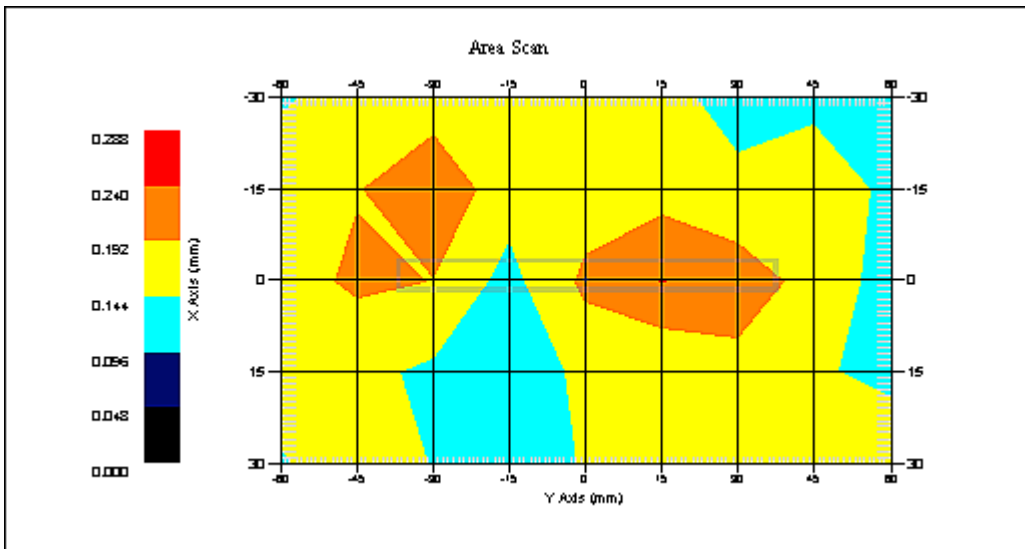
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5300
Frequency : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.34 F/m
Sigma : 5.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

Measurement Data
Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 20.00 °C
Ambient Temp. : 23.00 °C
Set-up Date : 04-Nov-2011
Set-up Time : 7:33:10 AM
Area Scan : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position : Side D
Separation : 17 mm
Channel : Mid



1 gram SAR value : 0.231 W/kg
10 gram SAR value : 0.170 W/kg
Area Scan Peak SAR : 0.241 W/kg
Zoom Scan Peak SAR : 0.390 W/kg

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  02:09:20 PM
End Time          : 04-Nov-2011  02:34:24 PM
Scanning Time     : 1504 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time        : 0 min(s)
Length            : 8 mm
Width             : 40 mm
Depth             : 75 mm
Antenna Type      : Internal - Chain A
Orientation       : Side E
Power Drift-Start : 0.221 W/kg
Power Drift-Finish: 0.222 W/kg
Power Drift (%)   : 0.456

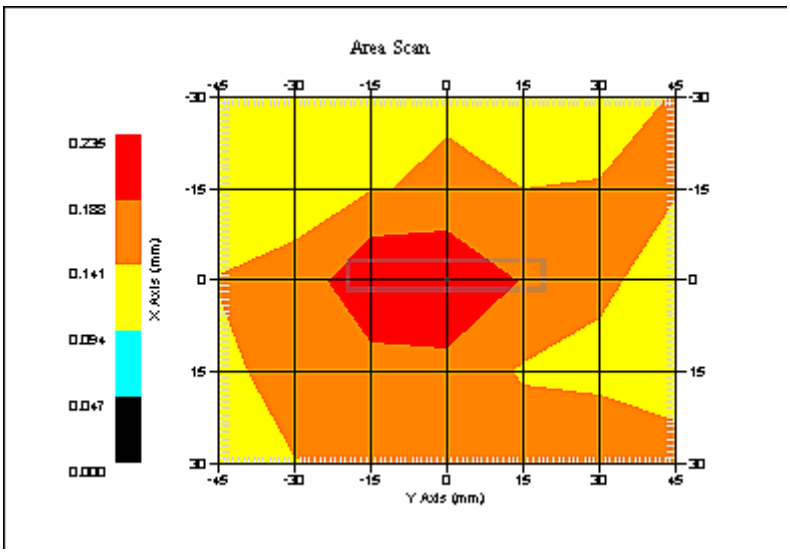
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5300
Frequency       : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.34 F/m
Sigma           : 5.52 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 2:52:05 PM
Area Scan         : 5x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.225 W/kg
10 gram SAR value   : 0.174 W/kg
Area Scan Peak SAR  : 0.235 W/kg
Zoom Scan Peak SAR  : 0.290 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 06:37:57 PM
End Time : 04-Nov-2011 07:04:54 PM
Scanning Time : 1617 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side F
Power Drift-Start : 0.214 W/kg
Power Drift-Finish: 0.215 W/kg
Power Drift (%) : 0.228

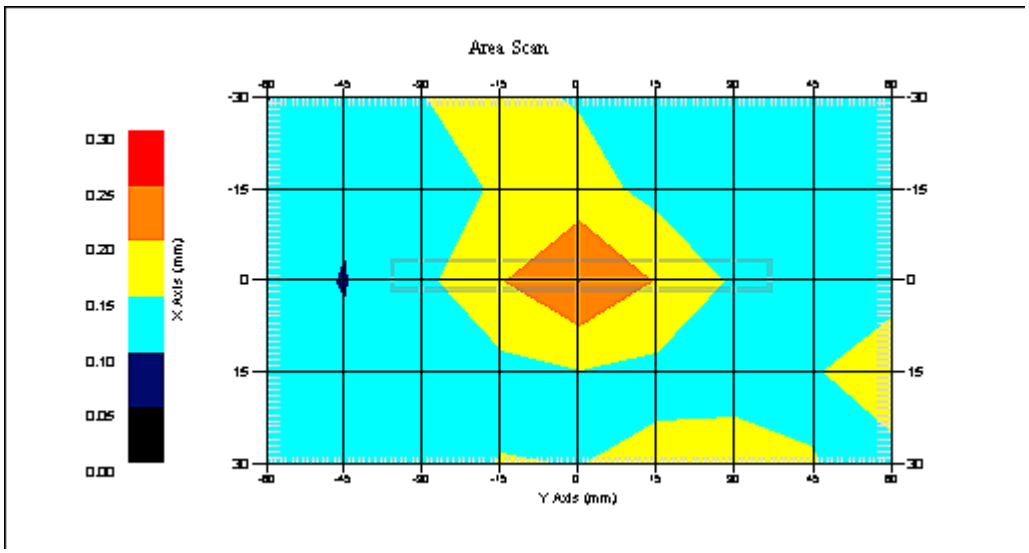
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5300
Frequency : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.34 F/m
Sigma : 5.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:46:53 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.201 W/kg
10 gram SAR value   : 0.161 W/kg
Area Scan Peak SAR  : 0.251 W/kg
Zoom Scan Peak SAR  : 0.240 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  08:10:44 AM
End Time          : 04-Nov-2011  08:47:42 AM
Scanning Time     : 2218 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time        : 0 min(s)
Length            : 40 mm
Width             : 75 mm
Depth             : 8 mm
Antenna Type      : Internal - Chain B
Orientation       : Side A
Power Drift-Start : 0.183 W/kg
Power Drift-Finish: 0.183 W/kg
Power Drift (%)   : 0.423

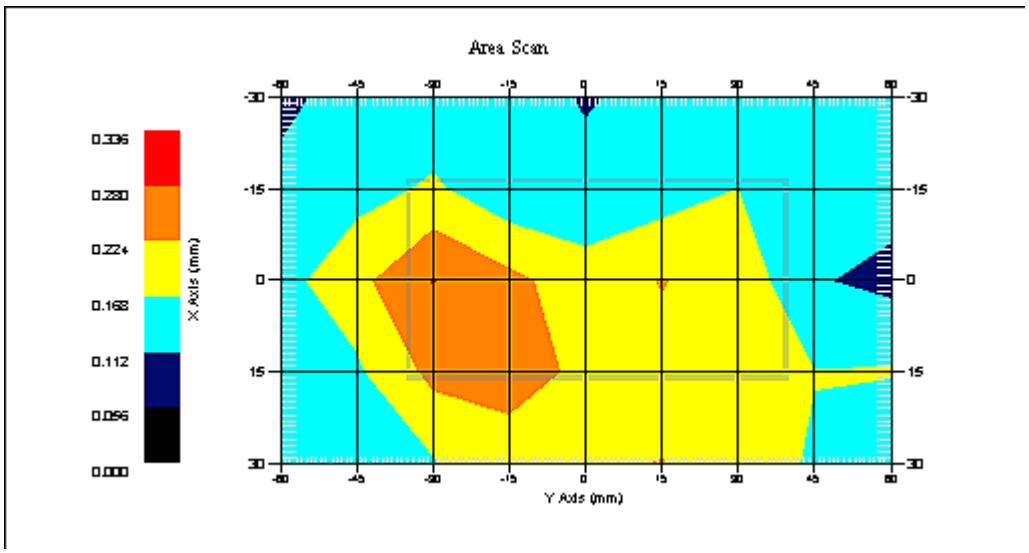
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5300
Frequency       : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.34 F/m
Sigma           : 5.52 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 7:33:10 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.291 W/kg
10 gram SAR value   : 0.201 W/kg
Area Scan Peak SAR  : 0.282 W/kg
Zoom Scan Peak SAR  : 0.440 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 09:57:52 AM
End Time : 04-Nov-2011 10:24:56 AM
Scanning Time : 1624 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain B
Orientation : Side B
Power Drift-Start : 0.211 W/kg
Power Drift-Finish: 0.220 W/kg
Power Drift (%) : 4.559

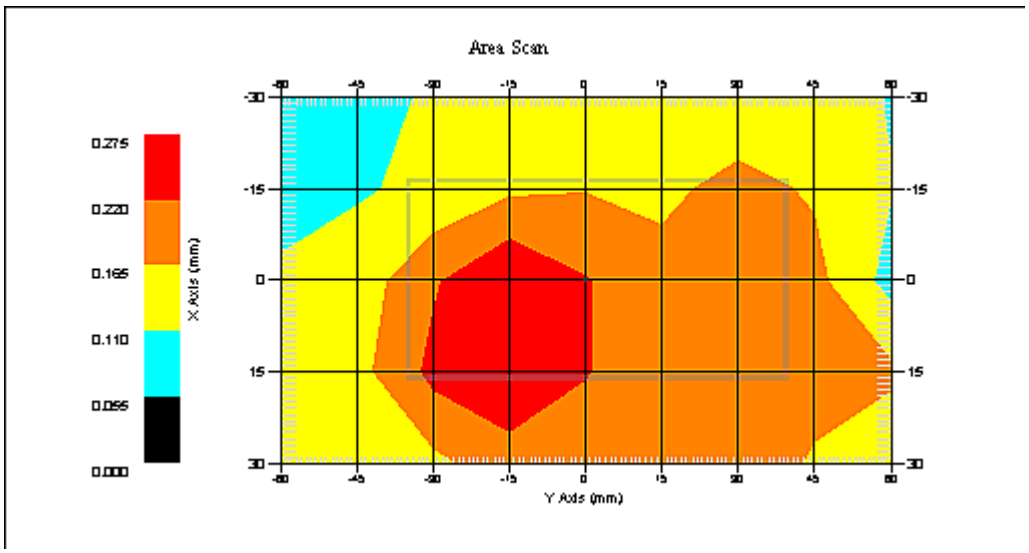
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5300
Frequency : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.34 F/m
Sigma : 5.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 7:33:10 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.265 W/kg
10 gram SAR value   : 0.189 W/kg
Area Scan Peak SAR  : 0.273 W/kg
Zoom Scan Peak SAR  : 0.400 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  12:19:38 PM
End Time          : 04-Nov-2011  12:44:33 PM
Scanning Time     : 1495 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time        : 0 min(s)
Length            : 8 mm
Width             : 40 mm
Depth             : 75 mm
Antenna Type      : Internal - Chain B
Orientation       : Side C
Power Drift-Start : 0.223 W/kg
Power Drift-Finish: 0.225 W/kg
Power Drift (%)   : 0.803

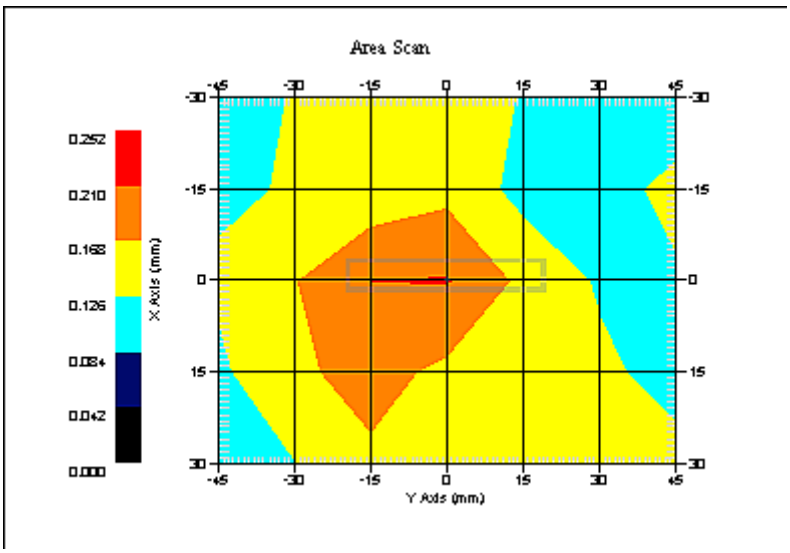
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5300
Frequency       : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.34 F/m
Sigma           : 5.52 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:46:53 AM
Area Scan         : 5x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.240 W/kg
10 gram SAR value   : 0.181 W/kg
Area Scan Peak SAR  : 0.212 W/kg
Zoom Scan Peak SAR  : 0.390 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  04:22:21 PM
End Time          : 04-Nov-2011  04:59:24 PM
Scanning Time     : 2223 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time        : 0 min(s)
Length            : 8 mm
Width             : 75 mm
Depth             : 40 mm
Antenna Type      : Internal - Chain B
Orientation       : Side D
Power Drift-Start : 0.171 W/kg
Power Drift-Finish: 0.171 W/kg
Power Drift (%)   : 7.087

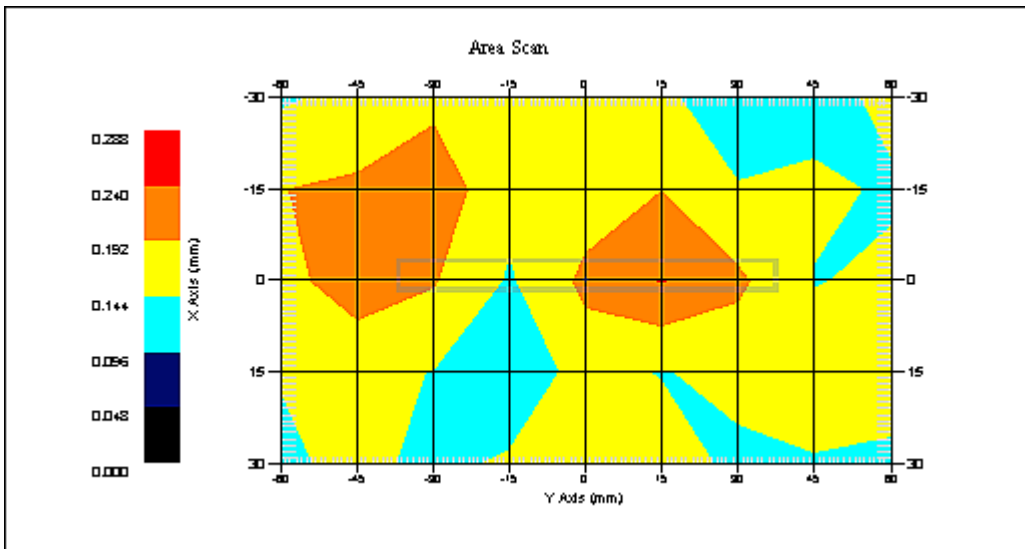
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5300
Frequency       : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 47.34 F/m
Sigma           : 5.52 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:46:53 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.249 W/kg
10 gram SAR value   : 0.175 W/kg
Area Scan Peak SAR  : 0.242 W/kg
Zoom Scan Peak SAR  : 0.390 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 04-Nov-2011
Starting Time     : 04-Nov-2011  01:42:55 PM
End Time          : 04-Nov-2011  02:07:53 PM
Scanning Time     : 1498 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time        : 0 min(s)
Length            : 8 mm
Width             : 40 mm
Depth             : 75 mm
Antenna Type      : Internal - Chain B
Orientation       : Side E
Power Drift-Start : 0.236 W/kg
Power Drift-Finish: 0.234 W/kg
Power Drift (%)   : -0.841

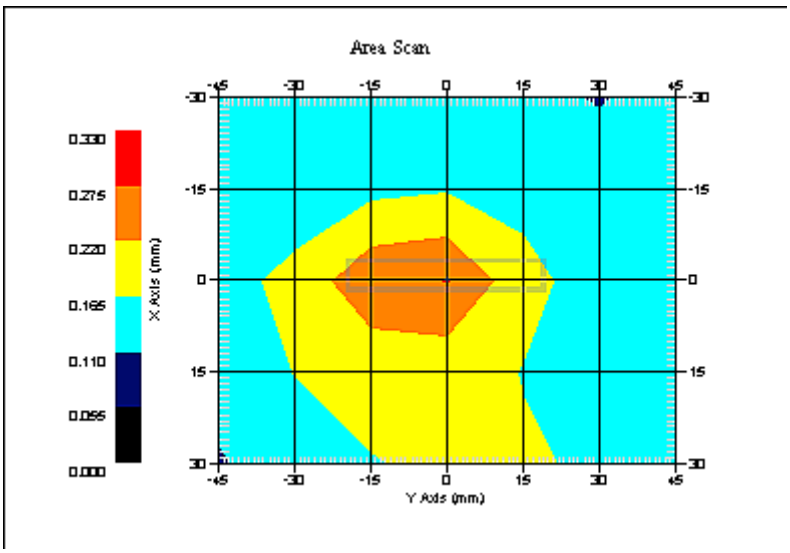
Phantom Data
Name              : APREL-Uni
Type              : Uni-Phantom
Size (mm)         : 280 x 280 x 200
Serial No.        : System Default
Location          : Center
Description       : Uni-Phantom

Tissue Data
Type              : BODY
Serial No.        : 5300
Frequency         : 5300.00 MHz
Last Calib. Date  : 04-Nov-2011
Temperature       : 20.00 °C
Ambient Temp.     : 23.00 °C
Humidity          : 45.00 RH%
Epsilon           : 47.34 F/m
Sigma             : 5.52 S/m
Density           : 1000.00 kg/cu. m

Probe Data
Name              : Probe E030-001 - RFEL
Model             : E030
Type              : E-Field Triangle
Serial No.        : E030-001
Last Calib. Date  : 15-Jul-2011
Frequency         : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset            : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 2:52:05 PM
Area Scan         : 5x7x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.257 W/kg
10 gram SAR value   : 0.191 W/kg
Area Scan Peak SAR  : 0.276 W/kg
Zoom Scan Peak SAR  : 0.380 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 04-Nov-2011
Starting Time : 04-Nov-2011 06:09:13 PM
End Time : 04-Nov-2011 06:35:58 PM
Scanning Time : 1605 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5300.00 MHz
Max. Transmit Pwr : 0.033 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal – Chain B
Orientation : Side F
Power Drift-Start : 0.211 W/kg
Power Drift-Finish: 0.211 W/kg
Power Drift (%) : 0.394

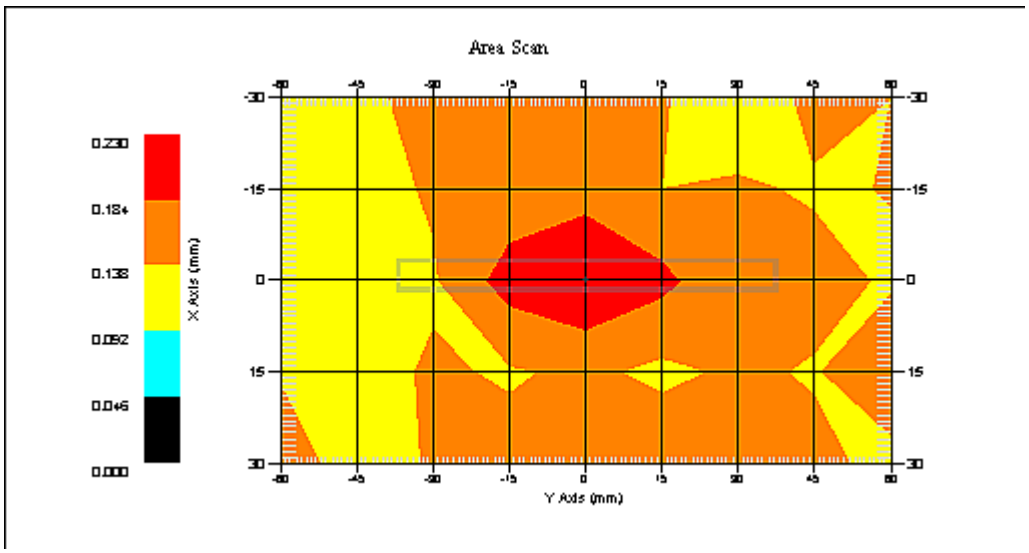
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5300
Frequency : 5300.00 MHz
Last Calib. Date : 04-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 47.34 F/m
Sigma : 5.52 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5200.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.7
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 04-Nov-2011
Set-up Time       : 9:46:53 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.213 W/kg
10 gram SAR value   : 0.171 W/kg
Area Scan Peak SAR  : 0.229 W/kg
Zoom Scan Peak SAR  : 0.300 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 07-Nov-2011
Starting Time     : 07-Nov-2011  07:14:08 AM
End Time          : 07-Nov-2011  07:41:21 AM
Scanning Time     : 1633 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time        : 0 min(s)
Length            : 40 mm
Width             : 75 mm
Depth             : 8 mm
Antenna Type      : Internal - Chain A
Orientation       : Side A
Power Drift-Start : 0.171 W/kg
Power Drift-Finish: 0.178 W/kg
Power Drift (%)   : 4.001

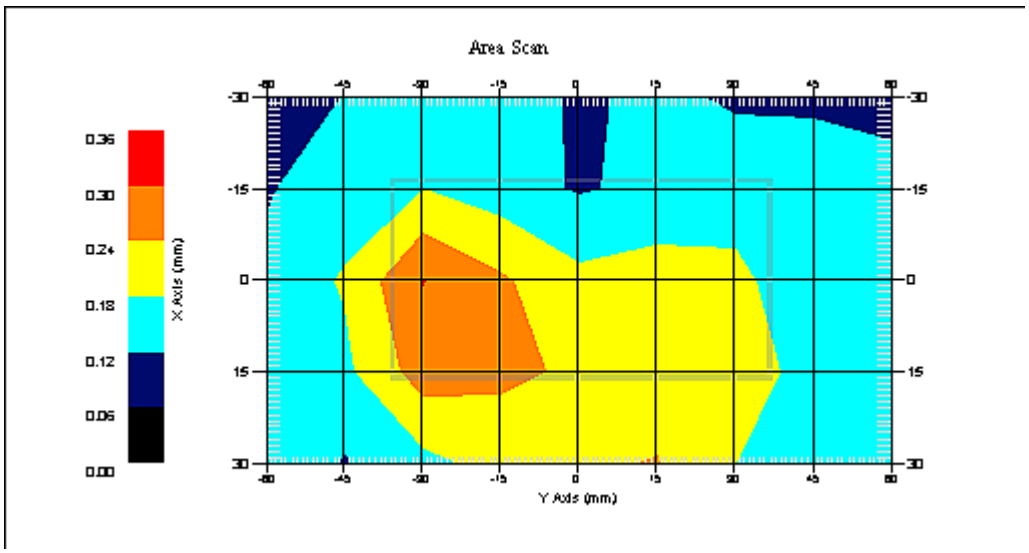
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5620
Frequency       : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 48.06 F/m
Sigma           : 5.85 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5600.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.3
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.297 W/kg
10 gram SAR value   : 0.242 W/kg
Area Scan Peak SAR  : 0.302 W/kg
Zoom Scan Peak SAR  : 0.400 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 08:41:23 AM
End Time : 07-Nov-2011 09:09:17 AM
Scanning Time : 1674 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain A
Orientation : Side B
Power Drift-Start : 0.187 W/kg
Power Drift-Finish: 0.194 W/kg
Power Drift (%) : 3.750

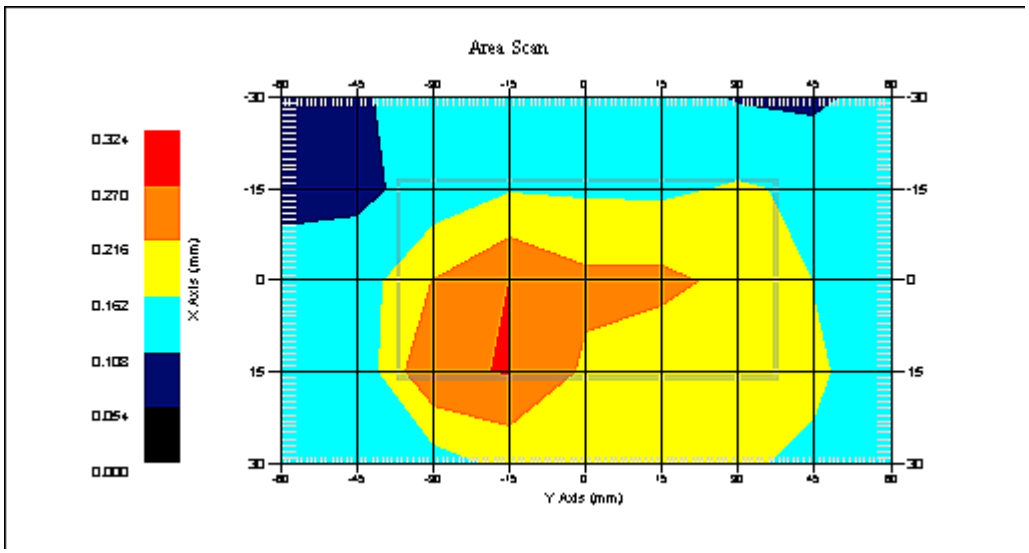
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 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 : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.279 W/kg
10 gram SAR value   : 0.197 W/kg
Area Scan Peak SAR  : 0.271 W/kg
Zoom Scan Peak SAR  : 0.410 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 09:11:15 AM
End Time : 07-Nov-2011 09:36:18 AM
Scanning Time : 1503 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal - Chain A
Orientation : Side C
Power Drift-Start : 0.271 W/kg
Power Drift-Finish: 0.282 W/kg
Power Drift (%) : 4.156

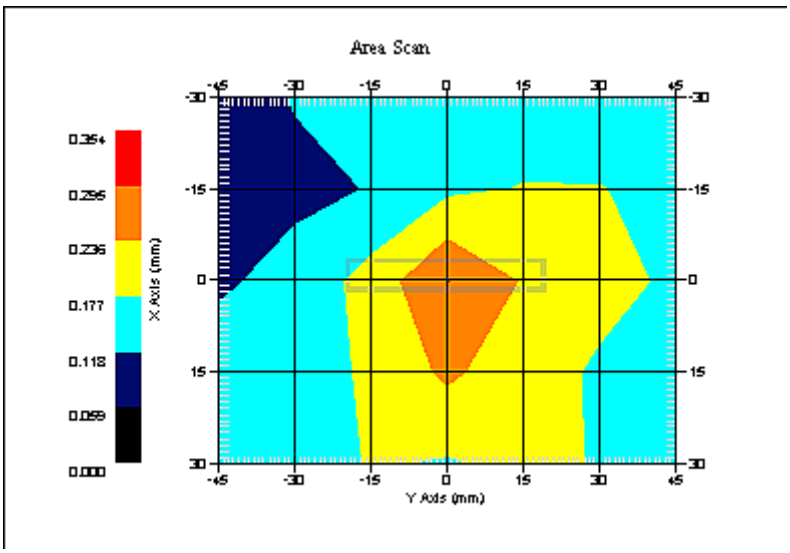
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

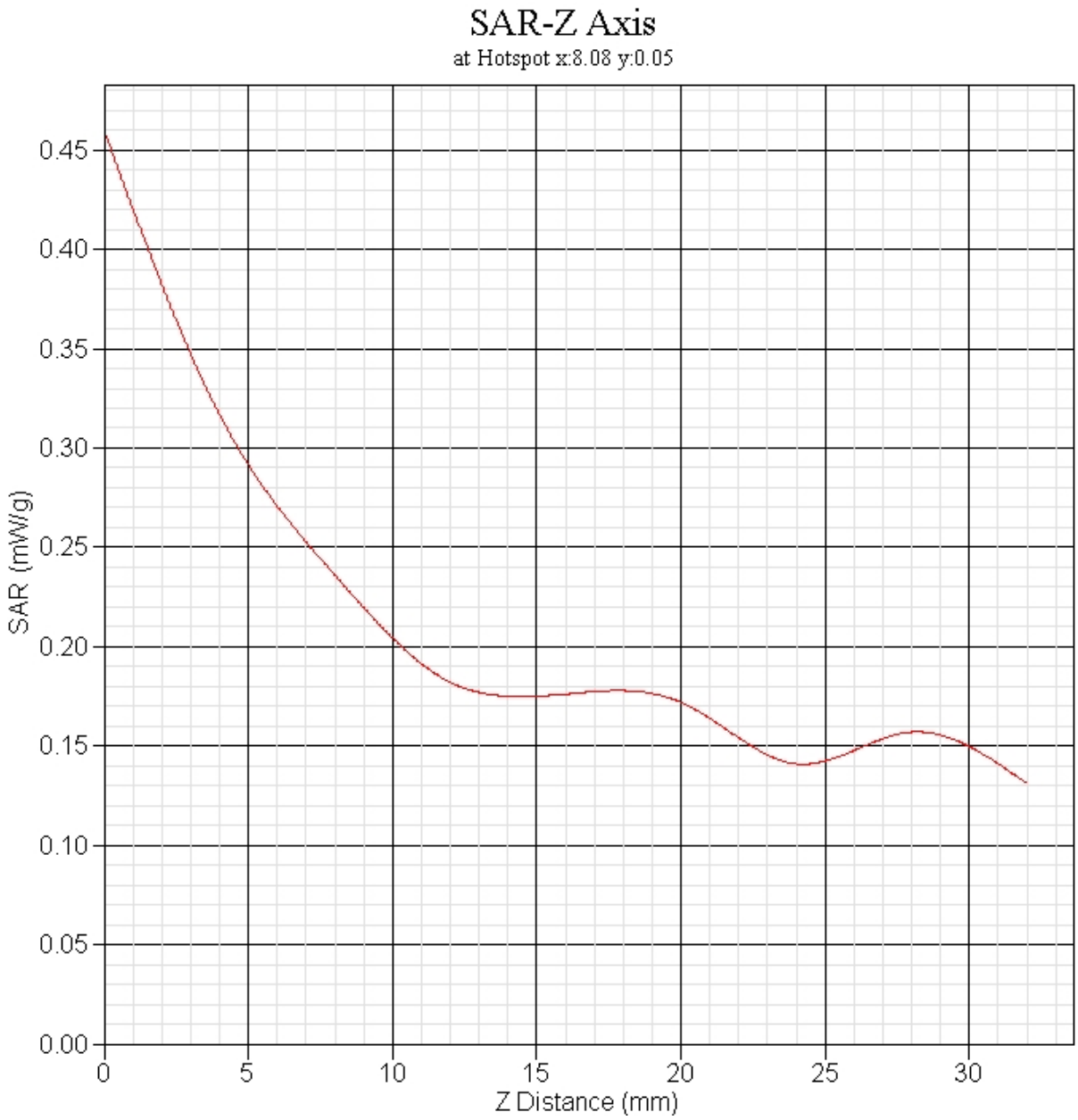
Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.3
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.300 W/kg
10 gram SAR value   : 0.215 W/kg
Area Scan Peak SAR  : 0.296 W/kg
Zoom Scan Peak SAR  : 0.460 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 11:00:48 AM
End Time : 07-Nov-2011 11:27:54 AM
Scanning Time : 1626 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal – Chain A
Orientation : Side D
Power Drift-Start : 0.170 W/kg
Power Drift-Finish: 0.169 W/kg
Power Drift (%) : -0.588

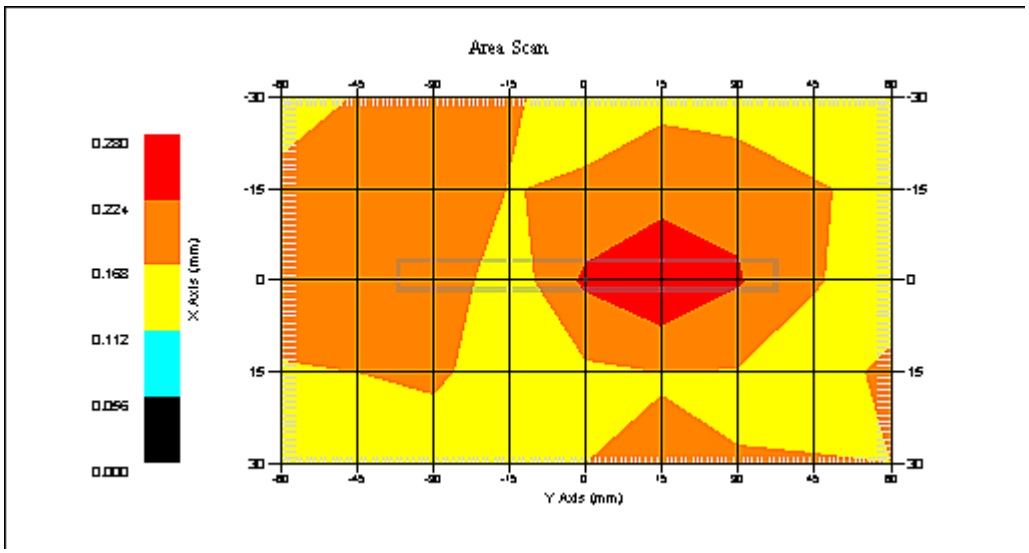
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 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 : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.261 W/kg
10 gram SAR value   : 0.192 W/kg
Area Scan Peak SAR  : 0.280 W/kg
Zoom Scan Peak SAR  : 0.380 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 10:33:33 AM
End Time : 07-Nov-2011 10:58:46 AM
Scanning Time : 1513 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain A
Orientation : Side E
Power Drift-Start : 0.246 W/kg
Power Drift-Finish: 0.248 W/kg
Power Drift (%) : 0.814

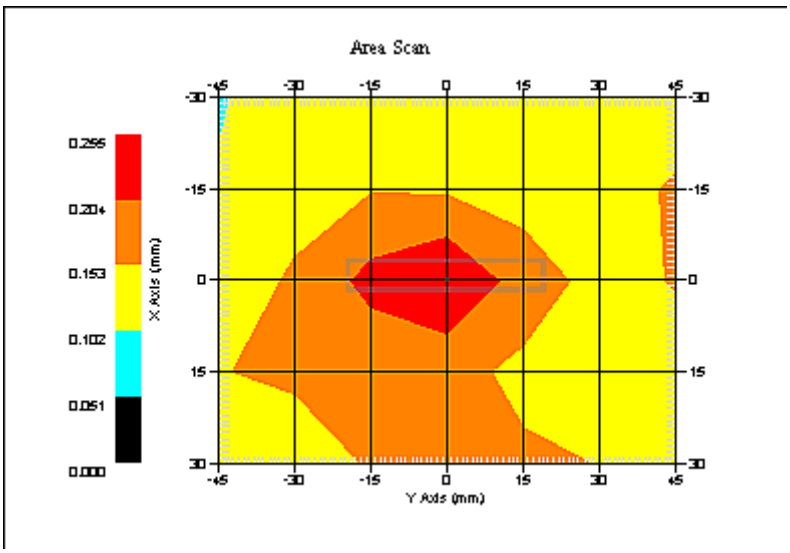
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 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 : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.233 W/kg
10 gram SAR value   : 0.180 W/kg
Area Scan Peak SAR  : 0.254 W/kg
Zoom Scan Peak SAR  : 0.300 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 12:37:51 PM
End Time : 07-Nov-2011 01:04:41 PM
Scanning Time : 1610 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side F
Power Drift-Start : 0.205 W/kg
Power Drift-Finish: 0.202 W/kg
Power Drift (%) : -1.466

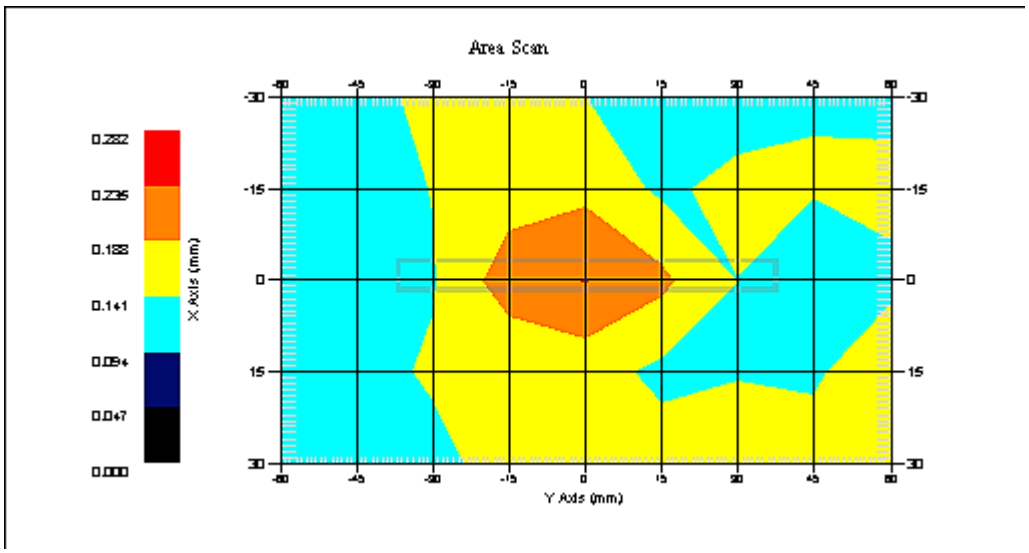
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 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 : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.221 W/kg
10 gram SAR value   : 0.174 W/kg
Area Scan Peak SAR  : 0.236 W/kg
Zoom Scan Peak SAR  : 0.280 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 07:43:15 AM
End Time : 07-Nov-2011 08:10:29 AM
Scanning Time : 1634 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain B
Orientation : Side A
Power Drift-Start : 0.187 W/kg
Power Drift-Finish: 0.195 W/kg
Power Drift (%) : 4.262

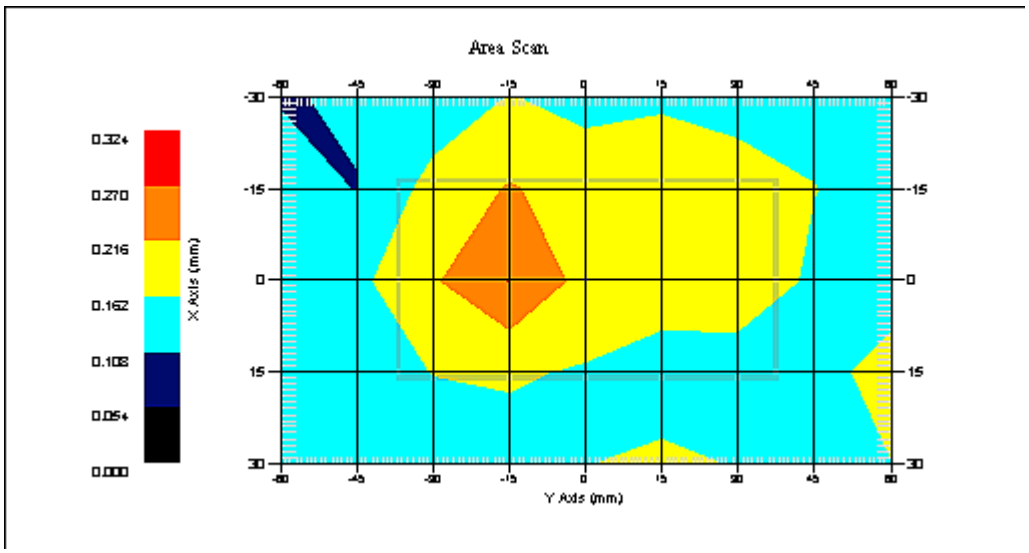
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 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 : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.225 W/kg
10 gram SAR value   : 0.181 W/kg
Area Scan Peak SAR  : 0.271 W/kg
Zoom Scan Peak SAR  : 0.310 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 08:12:31 AM
End Time : 07-Nov-2011 08:39:39 AM
Scanning Time : 1628 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain B
Orientation : Side B
Power Drift-Start : 0.225 W/kg
Power Drift-Finish: 0.218 W/kg
Power Drift (%) : -3.115

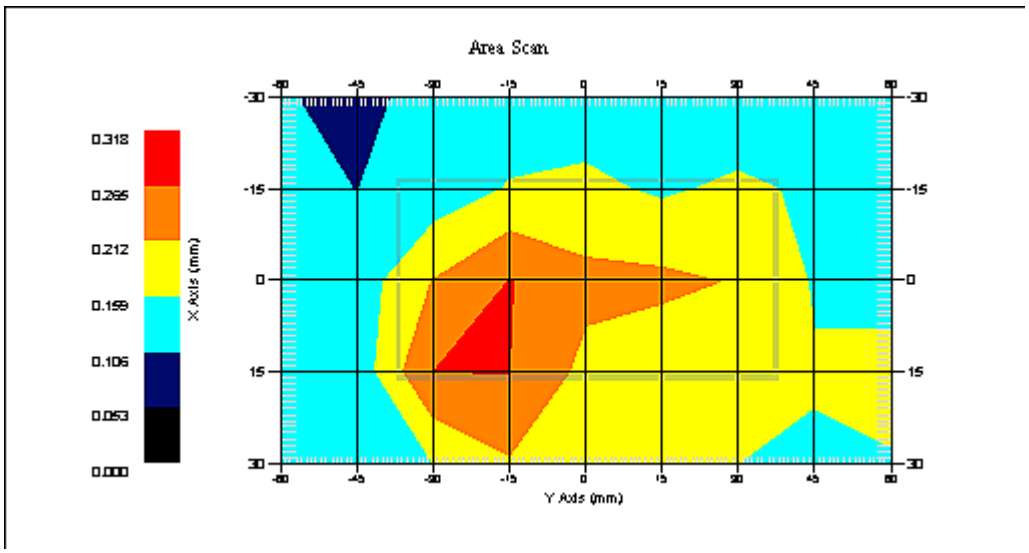
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 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 : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.291 W/kg
10 gram SAR value   : 0.200 W/kg
Area Scan Peak SAR  : 0.267 W/kg
Zoom Scan Peak SAR  : 0.360 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 09:38:31 AM
End Time : 07-Nov-2011 10:03:24 AM
Scanning Time : 1493 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain B
Orientation : Side C
Power Drift-Start : 0.257 W/kg
Power Drift-Finish: 0.259 W/kg
Power Drift (%) : 0.773

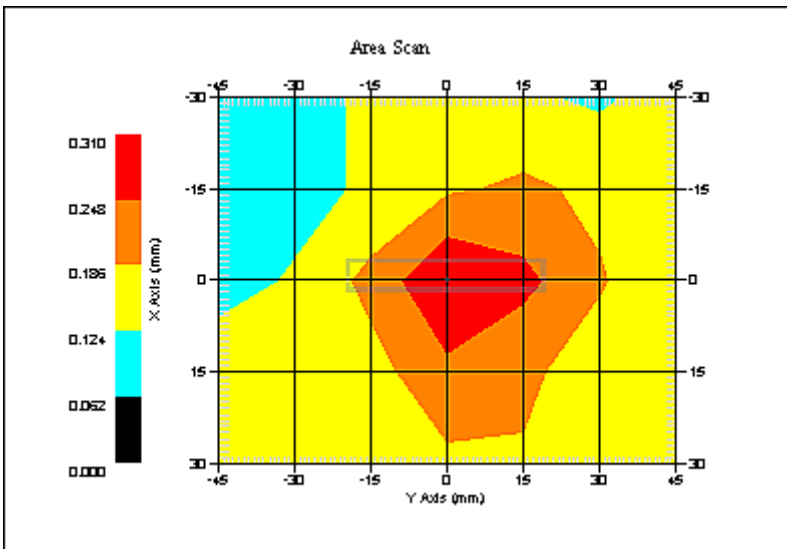
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 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 : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.294 W/kg
10 gram SAR value   : 0.215 W/kg
Area Scan Peak SAR  : 0.308 W/kg
Zoom Scan Peak SAR  : 0.440 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 07-Nov-2011
Starting Time     : 07-Nov-2011  11:29:13 AM
End Time          : 07-Nov-2011  12:06:13 PM
Scanning Time     : 2220 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time        : 0 min(s)
Length            : 8 mm
Width             : 75 mm
Depth             : 40 mm
Antenna Type      : Internal - Chain B
Orientation       : Side D
Power Drift-Start : 0.171 W/kg
Power Drift-Finish: 0.179 W/kg
Power Drift (%)   : 4.657

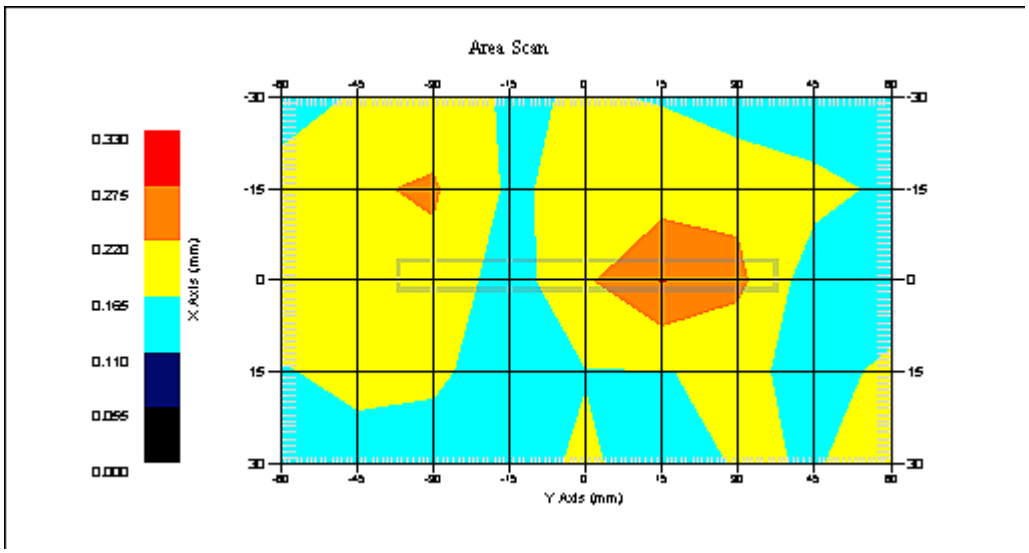
Phantom Data
Name              : APREL-Uni
Type              : Uni-Phantom
Size (mm)         : 280 x 280 x 200
Serial No.        : System Default
Location          : Center
Description       : Uni-Phantom

Tissue Data
Type              : BODY
Serial No.        : 5620
Frequency         : 5620.00 MHz
Last Calib. Date  : 07-Nov-2011
Temperature       : 20.00 °C
Ambient Temp.     : 23.00 °C
Humidity          : 45.00 RH%
Epsilon           : 48.06 F/m
Sigma             : 5.85 S/m
Density           : 1000.00 kg/cu. m

Probe Data
Name              : Probe E030-001 - RFEL
Model             : E030
Type              : E-Field Triangle
Serial No.        : E030-001
Last Calib. Date  : 15-Jul-2011
Frequency         : 5600.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 6.3
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset            : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.249 W/kg
10 gram SAR value   : 0.189 W/kg
Area Scan Peak SAR  : 0.277 W/kg
Zoom Scan Peak SAR  : 0.360 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 10:06:11 AM
End Time : 07-Nov-2011 10:31:12 AM
Scanning Time : 1501 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain B
Orientation : Side E
Power Drift-Start : 0.215 W/kg
Power Drift-Finish: 0.208 W/kg
Power Drift (%) : -3.252

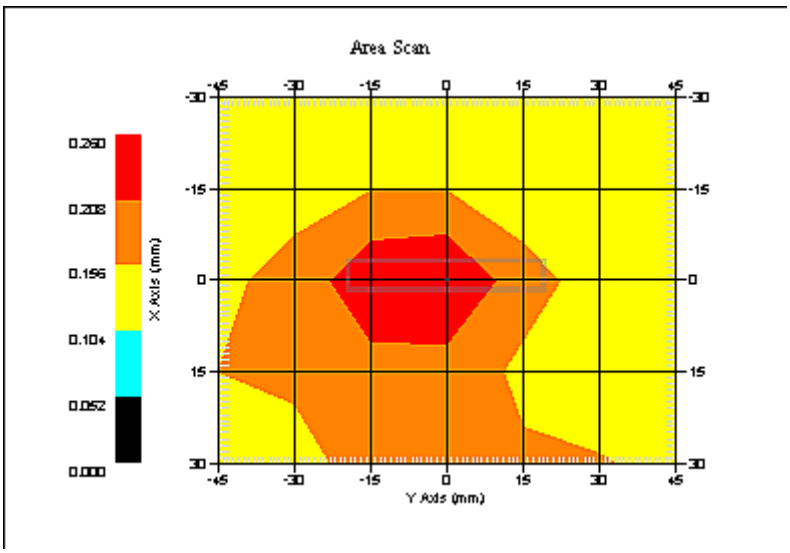
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 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 : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.266 W/kg
10 gram SAR value   : 0.197 W/kg
Area Scan Peak SAR  : 0.259 W/kg
Zoom Scan Peak SAR  : 0.410 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 07-Nov-2011
Starting Time : 07-Nov-2011 12:08:06 PM
End Time : 07-Nov-2011 12:35:03 PM
Scanning Time : 1617 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5620.00 MHz
Max. Transmit Pwr : 0.035 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain B
Orientation : Side F
Power Drift-Start : 0.200 W/kg
Power Drift-Finish: 0.206 W/kg
Power Drift (%) : 3.423

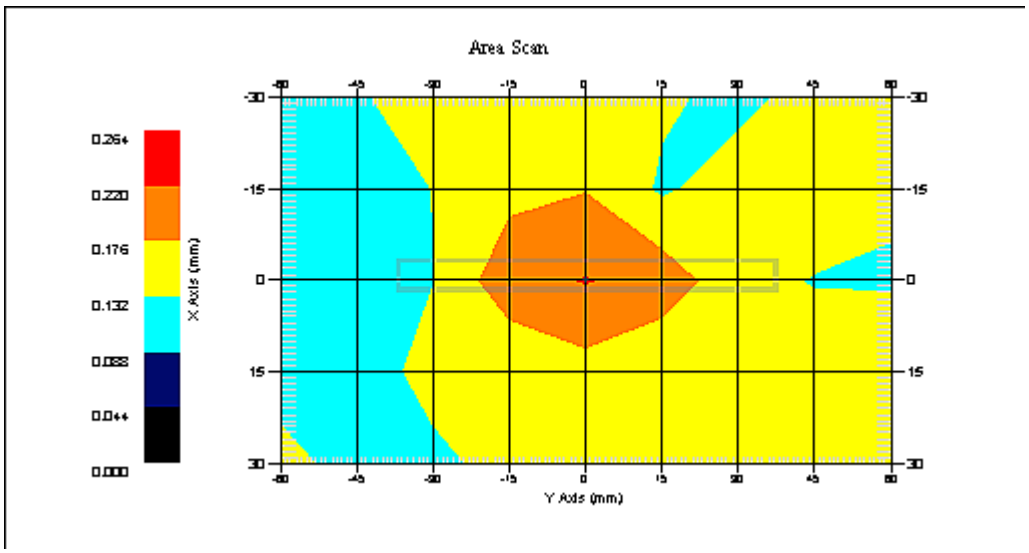
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5620
Frequency : 5620.00 MHz
Last Calib. Date : 07-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.06 F/m
Sigma : 5.85 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5600.00 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 : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 07-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.228 W/kg
10 gram SAR value   : 0.179 W/kg
Area Scan Peak SAR  : 0.222 W/kg
Zoom Scan Peak SAR  : 0.350 W/kg
```

SAR Test Report

```
By Operator       : Jay
Measurement Date  : 08-Nov-2011
Starting Time     : 08-Nov-2011  07:01:17 AM
End Time          : 08-Nov-2011  07:38:59 AM
Scanning Time     : 2262 secs

Product Data
Device Name       : Intel Corporation
Serial No.        : 0023150C5F78
Mode              : 802.11a
Model             : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency         : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time        : 0 min(s)
Length            : 40 mm
Width             : 75 mm
Depth             : 8 mm
Antenna Type      : Internal - Chain A
Orientation       : Side A
Power Drift-Start : 0.171 W/kg
Power Drift-Finish: 0.173 W/kg
Power Drift (%)   : 1.235

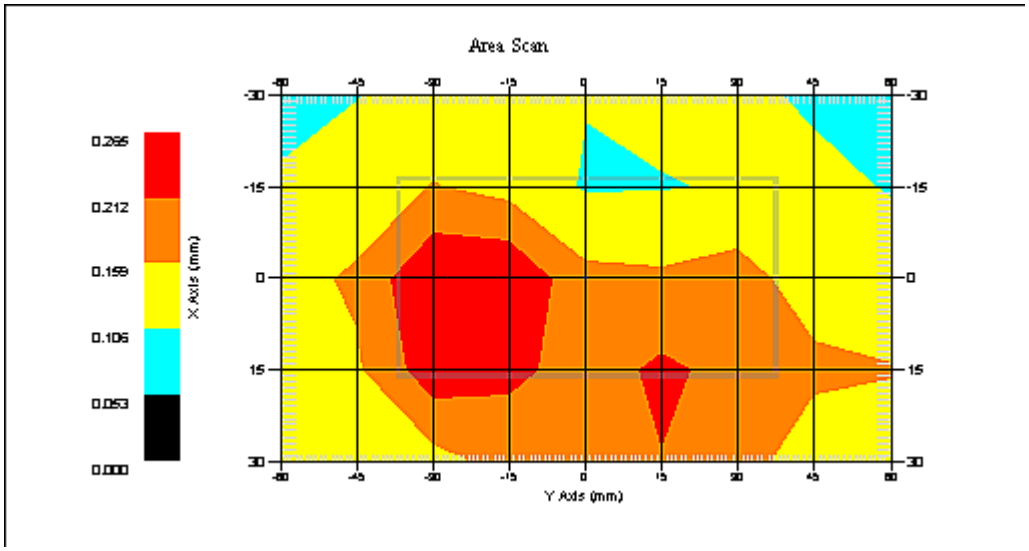
Phantom Data
Name            : APREL-Uni
Type            : Uni-Phantom
Size (mm)       : 280 x 280 x 200
Serial No.      : System Default
Location        : Center
Description     : Uni-Phantom

Tissue Data
Type            : BODY
Serial No.      : 5785
Frequency       : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature     : 20.00 °C
Ambient Temp.   : 23.00 °C
Humidity        : 45.00 RH%
Epsilon         : 48.09 F/m
Sigma           : 6.02 S/m
Density         : 1000.00 kg/cu. m

Probe Data
Name            : Probe E030-001 - RFEL
Model           : E030
Type            : E-Field Triangle
Serial No.      : E030-001
Last Calib. Date : 15-Jul-2011
Frequency       : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20  1.20  1.20   µV/(V/m)^2
Compression Point: 95.00 mV
Offset          : 0.56 mm
```

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.292 W/kg
10 gram SAR value   : 0.205 W/kg
Area Scan Peak SAR  : 0.263 W/kg
Zoom Scan Peak SAR  : 0.450 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 08:38:47 AM
End Time : 08-Nov-2011 09:05:52 AM
Scanning Time : 1625 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain A
Orientation : Side B
Power Drift-Start : 0.188 W/kg
Power Drift-Finish: 0.191 W/kg
Power Drift (%) : 1.209

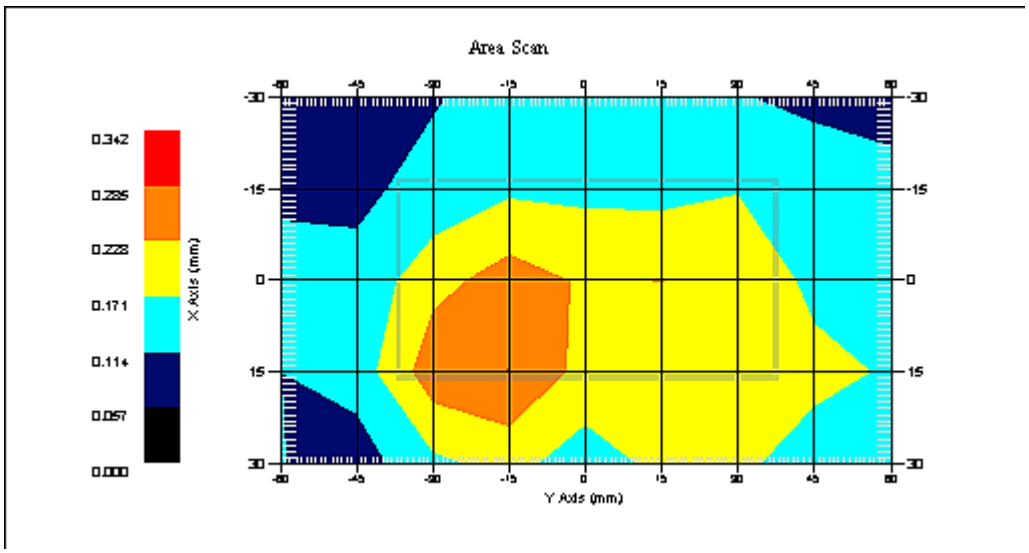
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.265 W/kg
10 gram SAR value   : 0.189 W/kg
Area Scan Peak SAR  : 0.286 W/kg
Zoom Scan Peak SAR  : 0.380 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 09:07:47 AM
End Time : 08-Nov-2011 09:32:48 AM
Scanning Time : 1501 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain A
Orientation : Side C
Power Drift-Start : 0.251 W/kg
Power Drift-Finish: 0.252 W/kg
Power Drift (%) : 0.391

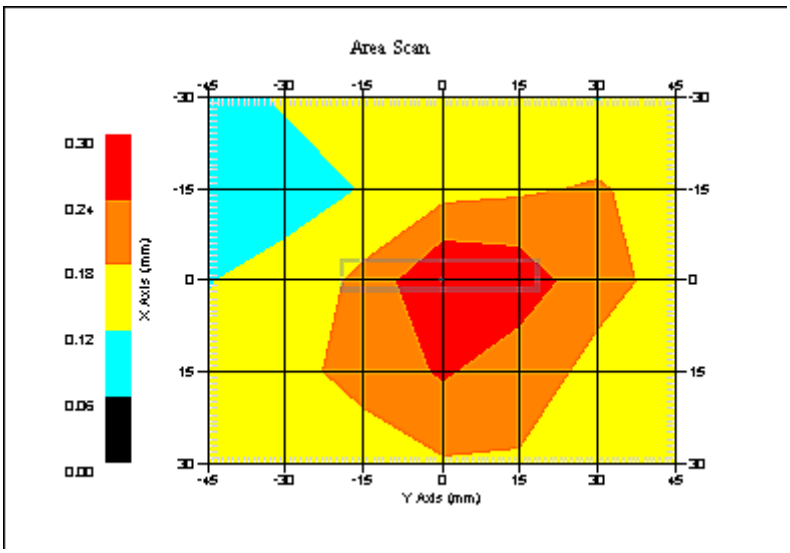
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.294 W/kg
10 gram SAR value   : 0.213 W/kg
Area Scan Peak SAR  : 0.299 W/kg
Zoom Scan Peak SAR  : 0.430 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 10:55:51 AM
End Time : 08-Nov-2011 11:32:58 AM
Scanning Time : 2227 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side D
Power Drift-Start : 0.198 W/kg
Power Drift-Finish: 0.193 W/kg
Power Drift (%) : -2.526

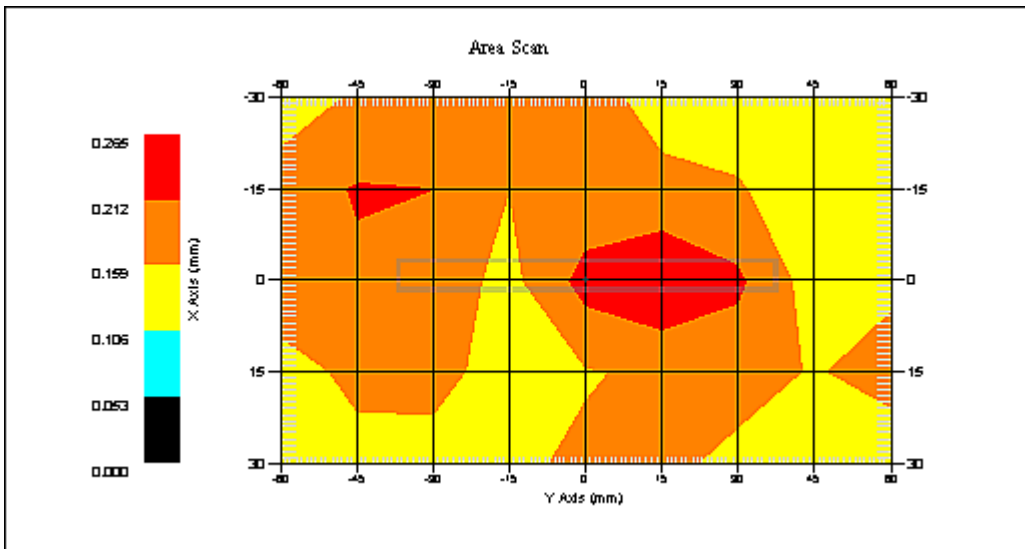
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.249 W/kg
10 gram SAR value   : 0.183 W/kg
Area Scan Peak SAR  : 0.265 W/kg
Zoom Scan Peak SAR  : 0.320 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 10:28:16 AM
End Time : 08-Nov-2011 10:53:26 AM
Scanning Time : 1510 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal - Chain A
Orientation : Side E
Power Drift-Start : 0.212 W/kg
Power Drift-Finish: 0.214 W/kg
Power Drift (%) : 0.947

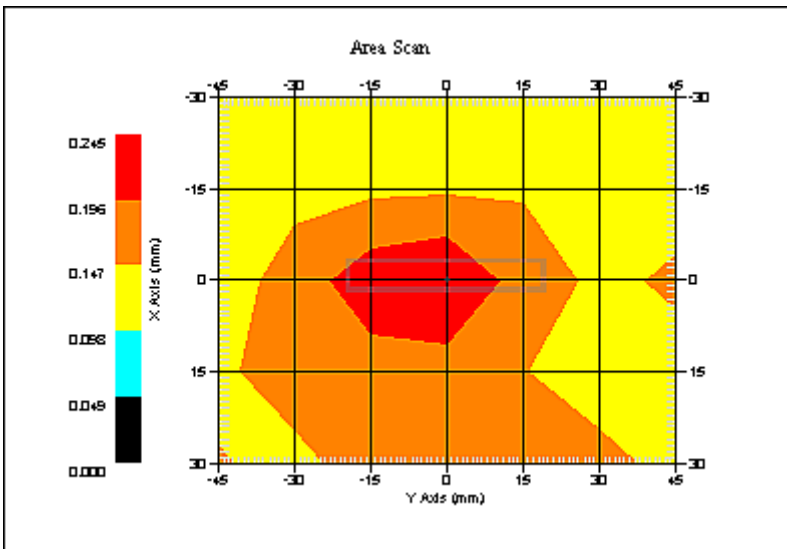
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.221 W/kg
10 gram SAR value   : 0.171 W/kg
Area Scan Peak SAR  : 0.244 W/kg
Zoom Scan Peak SAR  : 0.300 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 12:42:58 PM
End Time : 08-Nov-2011 01:10:03 PM
Scanning Time : 1625 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side F
Power Drift-Start : 0.235 W/kg
Power Drift-Finish: 0.231 W/kg
Power Drift (%) : -1.706

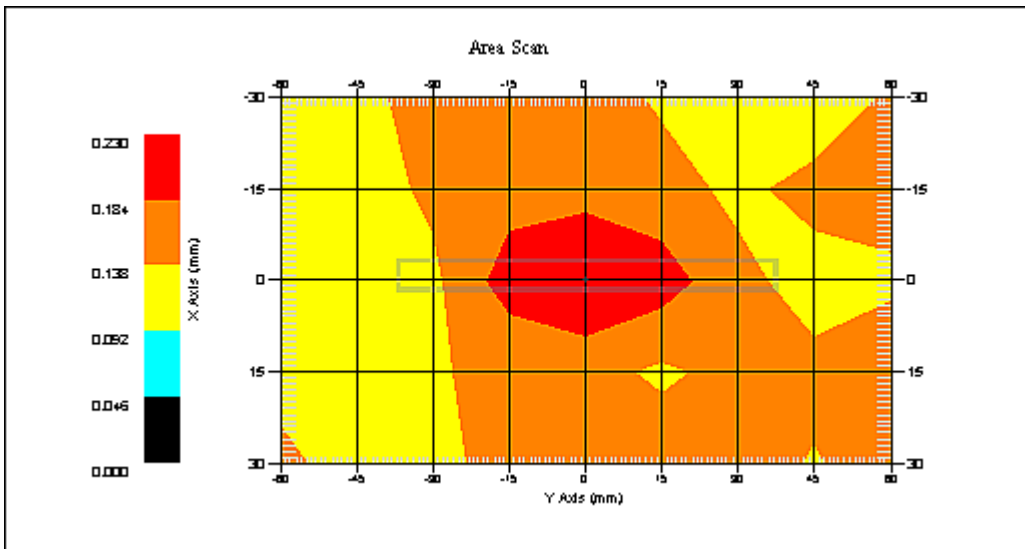
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.194 W/kg
10 gram SAR value   : 0.158 W/kg
Area Scan Peak SAR  : 0.230 W/kg
Zoom Scan Peak SAR  : 0.270 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 07:40:43 AM
End Time : 08-Nov-2011 08:07:52 AM
Scanning Time : 1629 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain B
Orientation : Side A
Power Drift-Start : 0.166 W/kg
Power Drift-Finish: 0.172 W/kg
Power Drift (%) : 3.823

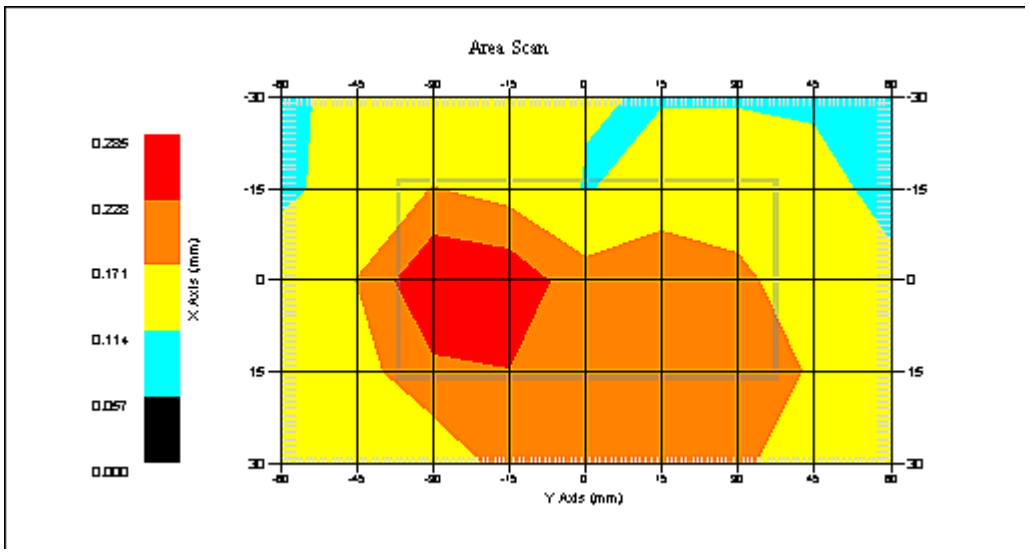
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.245 W/kg
10 gram SAR value   : 0.172 W/kg
Area Scan Peak SAR  : 0.283 W/kg
Zoom Scan Peak SAR  : 0.500 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 08:09:12 AM
End Time : 08-Nov-2011 08:36:28 AM
Scanning Time : 1636 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain B
Orientation : Side B
Power Drift-Start : 0.199 W/kg
Power Drift-Finish: 0.202 W/kg
Power Drift (%) : 1.508

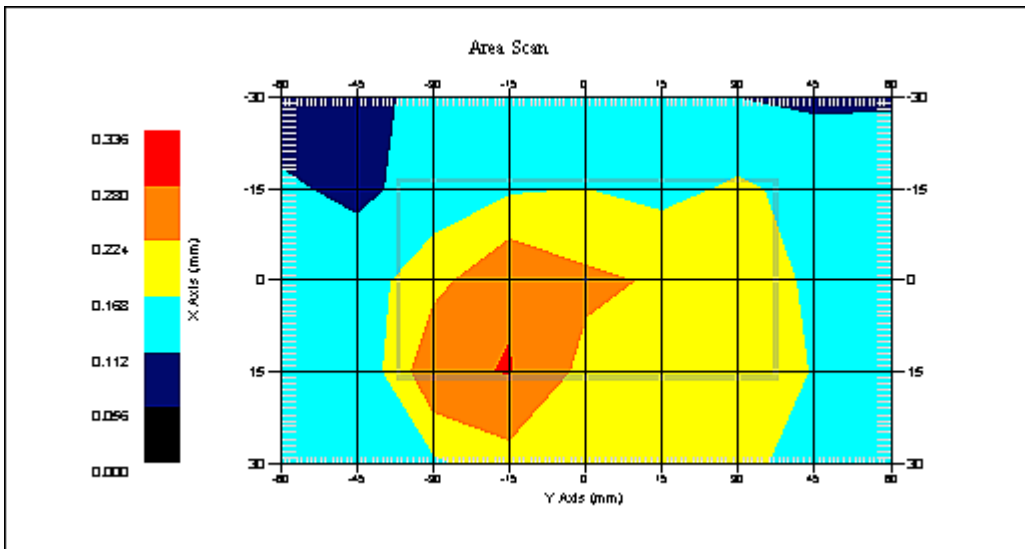
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.269 W/kg
10 gram SAR value   : 0.190 W/kg
Area Scan Peak SAR  : 0.282 W/kg
Zoom Scan Peak SAR  : 0.400 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 09:34:15 AM
End Time : 08-Nov-2011 09:59:34 AM
Scanning Time : 1519 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain B
Orientation : Side C
Power Drift-Start : 0.250 W/kg
Power Drift-Finish: 0.249 W/kg
Power Drift (%) : -0.407

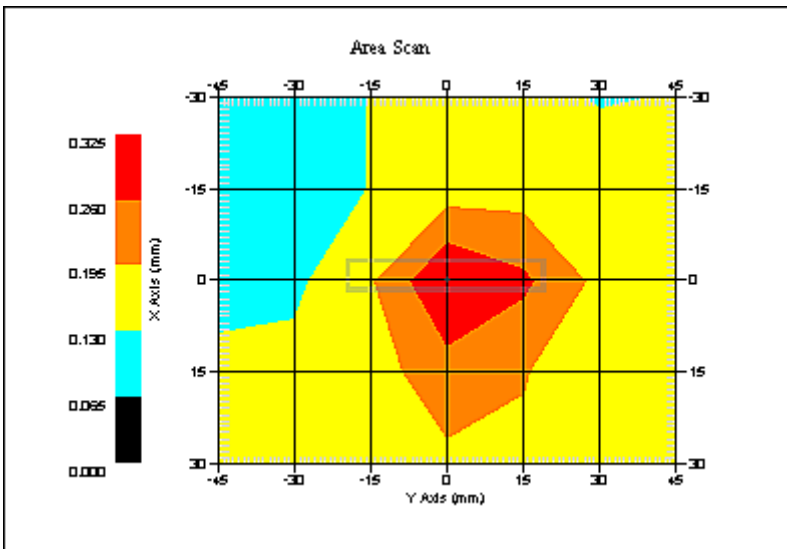
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

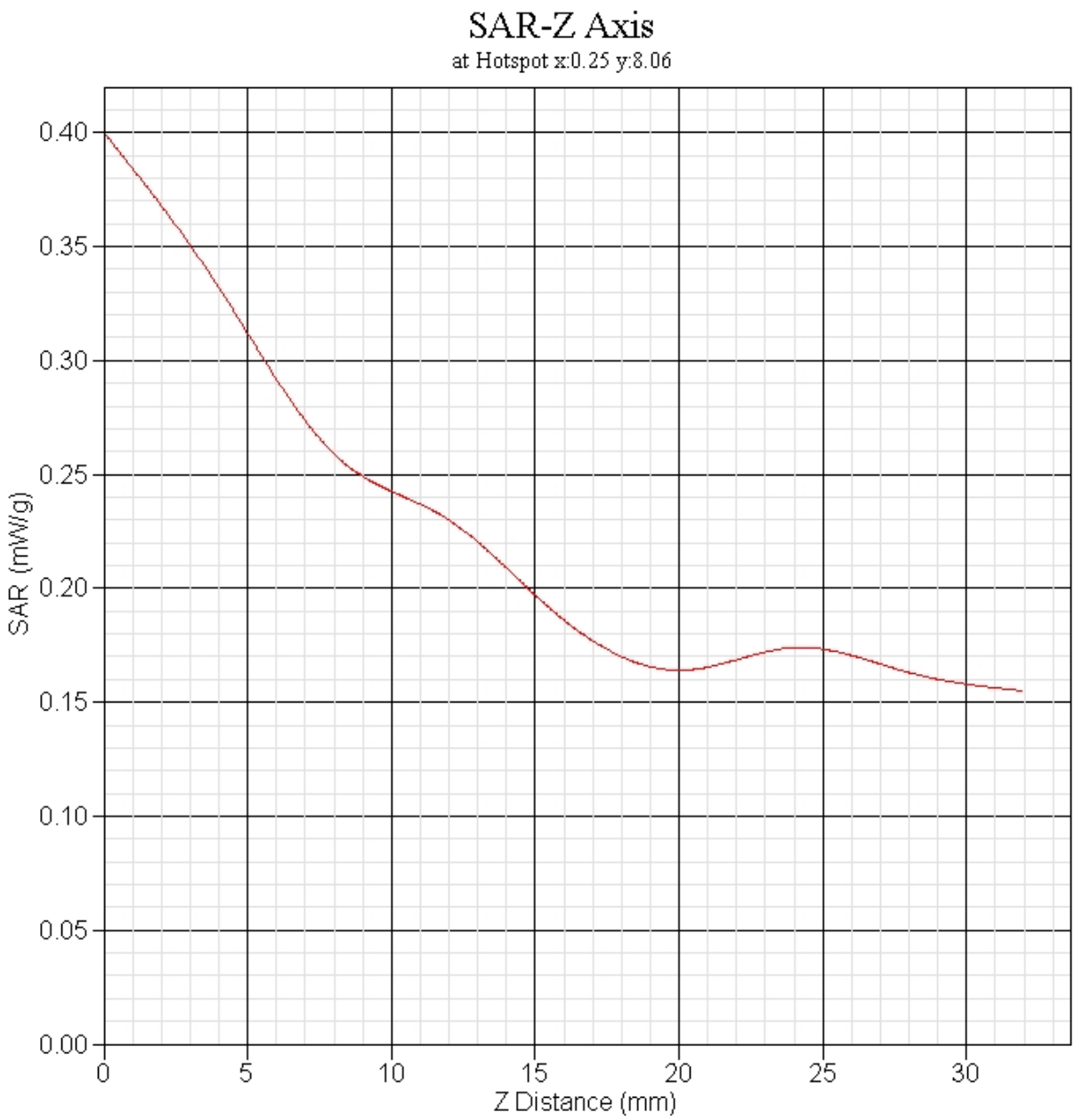
Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.300 W/kg
10 gram SAR value   : 0.210 W/kg
Area Scan Peak SAR  : 0.323 W/kg
Zoom Scan Peak SAR  : 0.400 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 11:34:25 AM
End Time : 08-Nov-2011 12:11:28 PM
Scanning Time : 2223 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal – Chain B
Orientation : Side D
Power Drift-Start : 0.174 W/kg
Power Drift-Finish: 0.171 W/kg
Power Drift (%) : -1.725

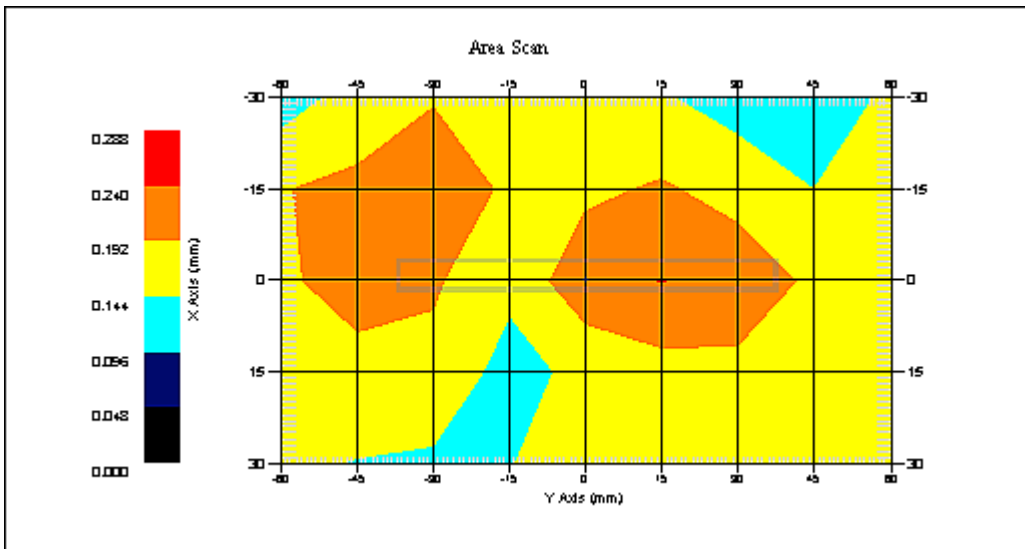
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.205 W/kg
10 gram SAR value   : 0.165 W/kg
Area Scan Peak SAR  : 0.241 W/kg
Zoom Scan Peak SAR  : 0.340 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 10:01:34 AM
End Time : 08-Nov-2011 10:26:36 AM
Scanning Time : 1502 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain B
Orientation : Side E
Power Drift-Start : 0.232 W/kg
Power Drift-Finish: 0.237 W/kg
Power Drift (%) : 2.151

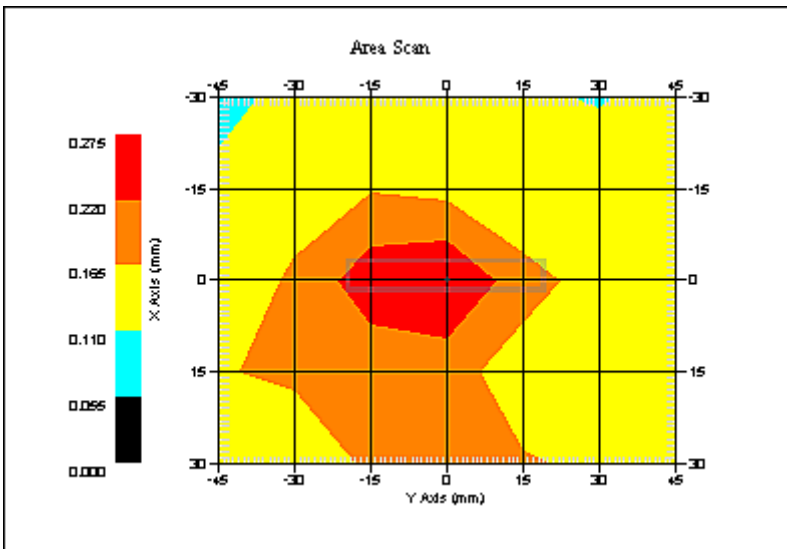
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.263 W/kg
10 gram SAR value   : 0.195 W/kg
Area Scan Peak SAR  : 0.275 W/kg
Zoom Scan Peak SAR  : 0.400 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 08-Nov-2011
Starting Time : 08-Nov-2011 12:13:31 PM
End Time : 08-Nov-2011 12:40:27 PM
Scanning Time : 1616 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : 802.11a
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 5785.00 MHz
Max. Transmit Pwr : 0.034 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain B
Orientation : Side F
Power Drift-Start : 0.199 W/kg
Power Drift-Finish: 0.195 W/kg
Power Drift (%) : -1.723

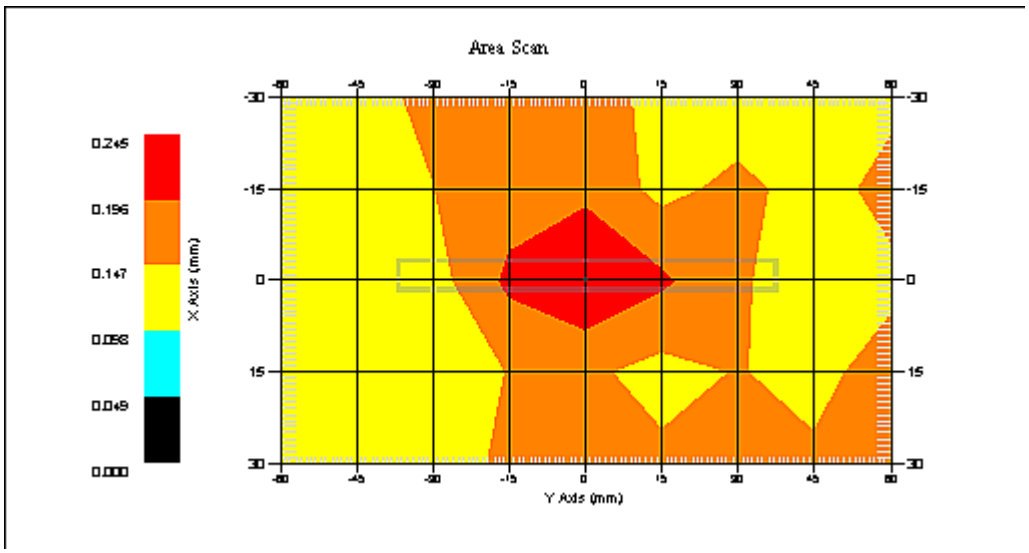
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 5785
Frequency : 5785.00 MHz
Last Calib. Date : 08-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 48.09 F/m
Sigma : 6.02 S/m
Density : 1000.00 kg/cu. m

Probe Data
Name : Probe E030-001 - RFEL
Model : E030
Type : E-Field Triangle
Serial No. : E030-001
Last Calib. Date : 15-Jul-2011
Frequency : 5800.00 MHz
Duty Cycle Factor: 1
Conversion Factor: 5.8
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 0.56 mm

```
Measurement Data
Crest Factor      : 1
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 08-Nov-2011
Set-up Time       : 6:26:51 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 7x7x10 : Measurement x=4mm, y=4mm, z=2.5mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.203 W/kg
10 gram SAR value   : 0.164 W/kg
Area Scan Peak SAR  : 0.244 W/kg
Zoom Scan Peak SAR  : 0.270 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 08:27:41 AM
End Time : 10-Nov-2011 08:43:13 AM
Scanning Time : 932 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 5 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain A
Orientation : Side A
Power Drift-Start : 0.288 W/kg
Power Drift-Finish: 0.298 W/kg
Power Drift (%) : 3.459

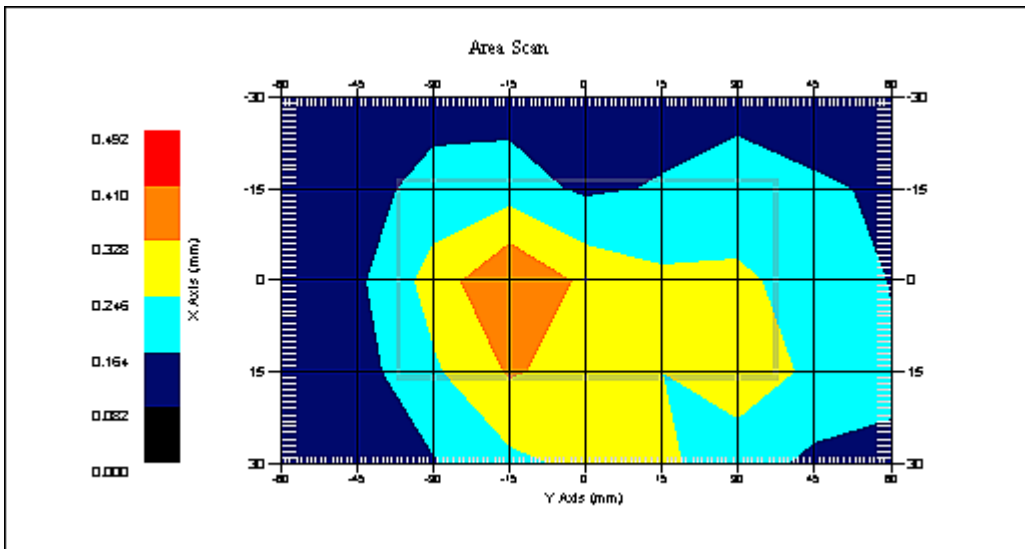
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.2
Conversion Factor: 4
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      : 3.2
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.372 W/kg
10 gram SAR value   : 0.256 W/kg
Area Scan Peak SAR  : 0.411 W/kg
Zoom Scan Peak SAR  : 0.560 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 09:28:47 AM
End Time : 10-Nov-2011 09:54:23 AM
Scanning Time : 1536 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 5 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain A
Orientation : Side B
Power Drift-Start : 0.302 W/kg
Power Drift-Finish: 0.293 W/kg
Power Drift (%) : -2.766

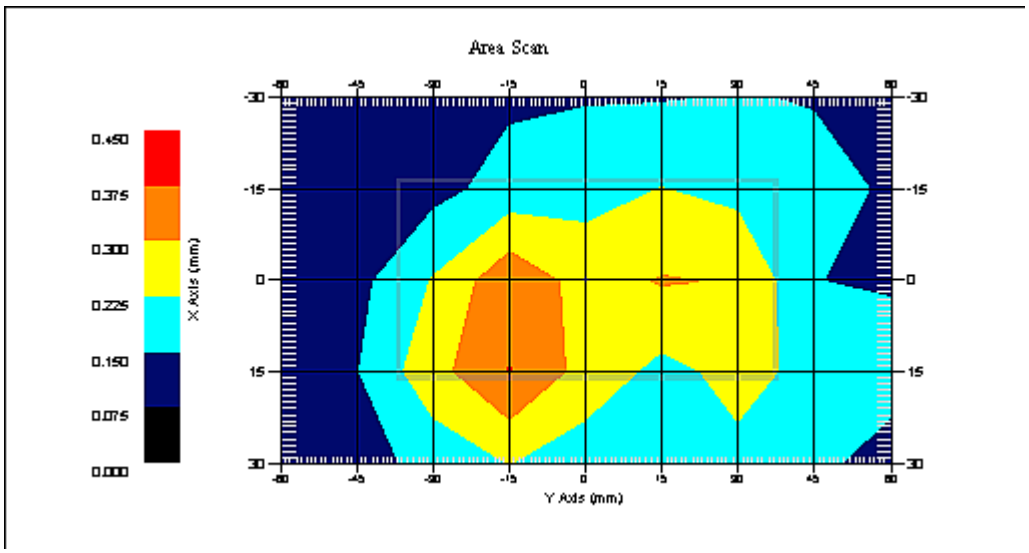
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.2
Conversion Factor: 4
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      : 3.2
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.370 W/kg
10 gram SAR value   : 0.237 W/kg
Area Scan Peak SAR  : 0.377 W/kg
Zoom Scan Peak SAR  : 0.570 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 09:56:38 AM
End Time : 10-Nov-2011 10:10:36 AM
Scanning Time : 838 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 5 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain A
Orientation : Side C
Power Drift-Start : 0.359 W/kg
Power Drift-Finish: 0.369 W/kg
Power Drift (%) : 2.732

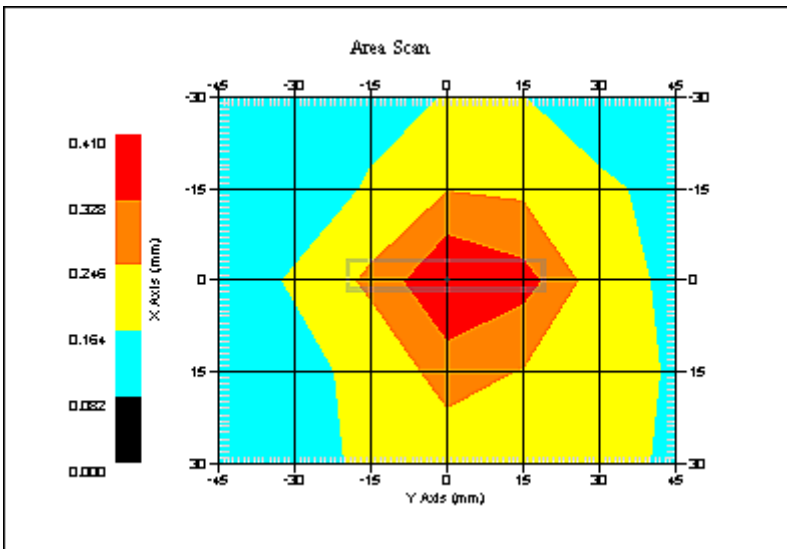
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.2
Conversion Factor: 4
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      : 3.2
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.373 W/kg
10 gram SAR value   : 0.252 W/kg
Area Scan Peak SAR  : 0.410 W/kg
Zoom Scan Peak SAR  : 0.610 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 11:13:33 AM
End Time : 10-Nov-2011 11:39:21 AM
Scanning Time : 1548 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 5 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal – Chain A
Orientation : Side D
Power Drift-Start : 0.223 W/kg
Power Drift-Finish: 0.225 W/kg
Power Drift (%) : 0.898

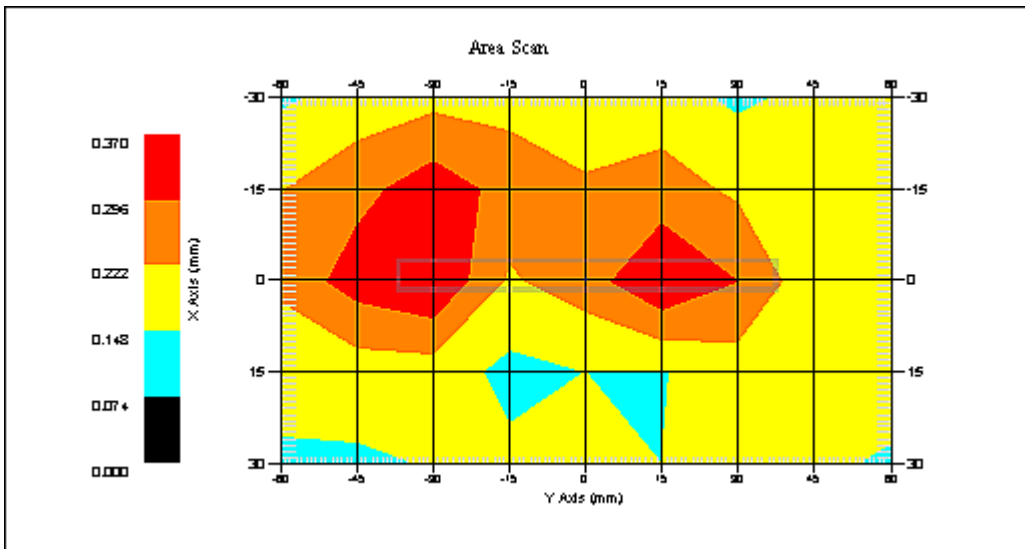
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 S/m
Density : 1000.00 kg/cu. m

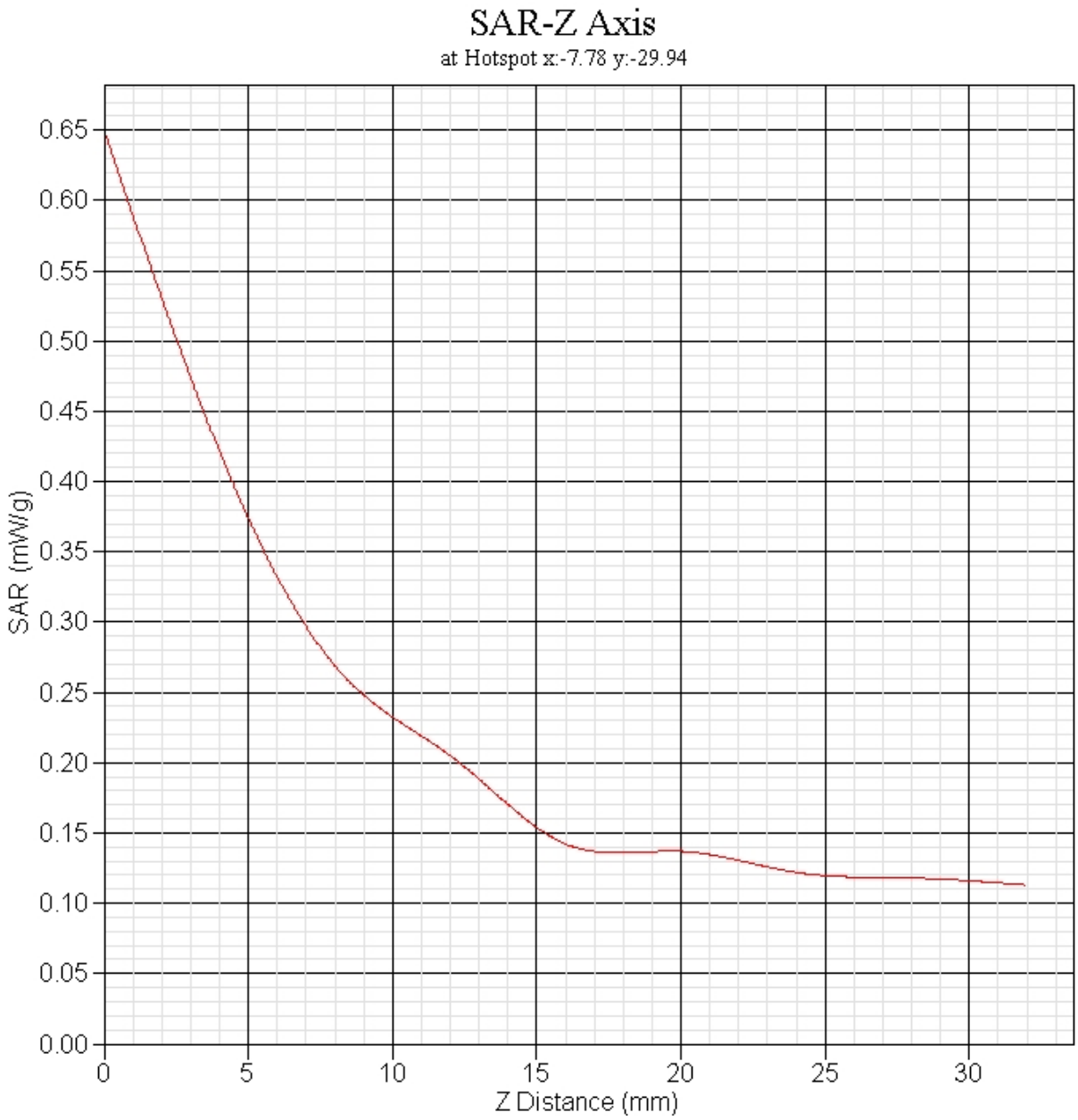
Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.2
Conversion Factor: 4
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

```
Measurement Data
Crest Factor      : 3.2
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.374 W/kg
10 gram SAR value   : 0.249 W/kg
Area Scan Peak SAR  : 0.368 W/kg
Zoom Scan Peak SAR  : 0.650 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 10:55:54 AM
End Time : 10-Nov-2011 11:09:44 AM
Scanning Time : 830 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 5 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain A
Orientation : Side E
Power Drift-Start : 0.213 W/kg
Power Drift-Finish: 0.217 W/kg
Power Drift (%) : 1.604

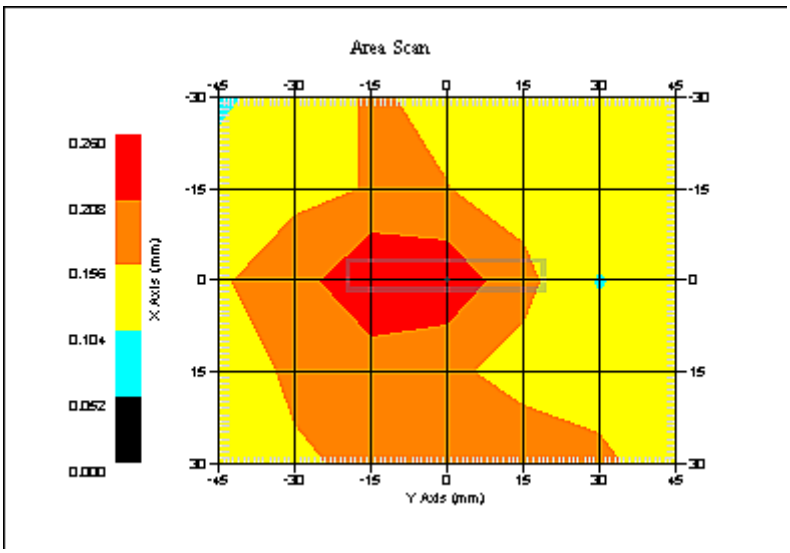
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.2
Conversion Factor: 4
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      : 3.2
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.237 W/kg
10 gram SAR value   : 0.185 W/kg
Area Scan Peak SAR  : 0.260 W/kg
Zoom Scan Peak SAR  : 0.280 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 12:43:39 PM
End Time : 10-Nov-2011 01:00:24 PM
Scanning Time : 1005 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 5 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal – Chain A
Orientation : Side F
Power Drift-Start : 0.283 W/kg
Power Drift-Finish: 0.287 W/kg
Power Drift (%) : 1.411

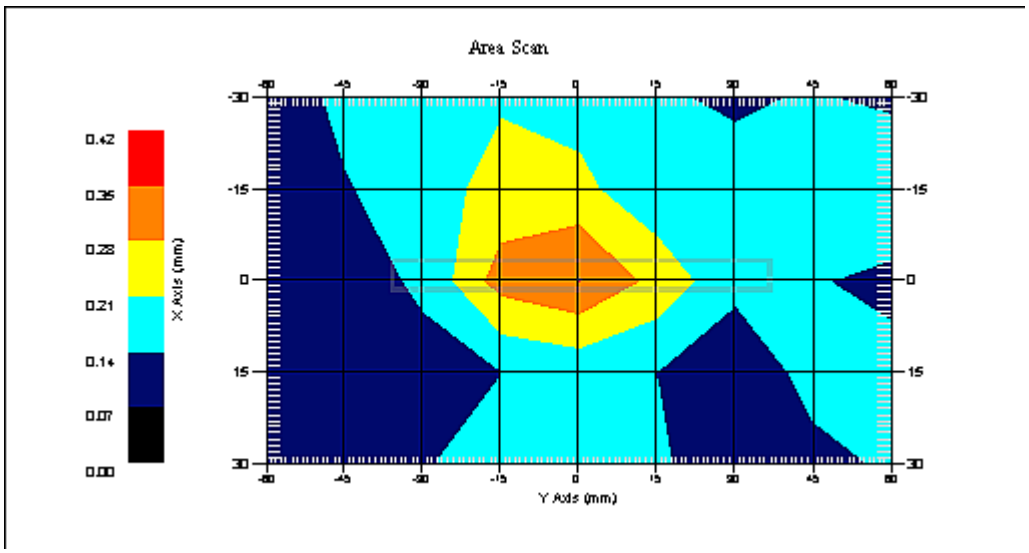
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.2
Conversion Factor: 4
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      : 3.2
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.300 W/kg
10 gram SAR value   : 0.208 W/kg
Area Scan Peak SAR  : 0.351 W/kg
Zoom Scan Peak SAR  : 0.560 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 08:48:38 AM
End Time : 10-Nov-2011 09:04:11 AM
Scanning Time : 933 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 10 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain A
Orientation : Side A
Power Drift-Start : 0.295 W/kg
Power Drift-Finish: 0.291 W/kg
Power Drift (%) : -1.327

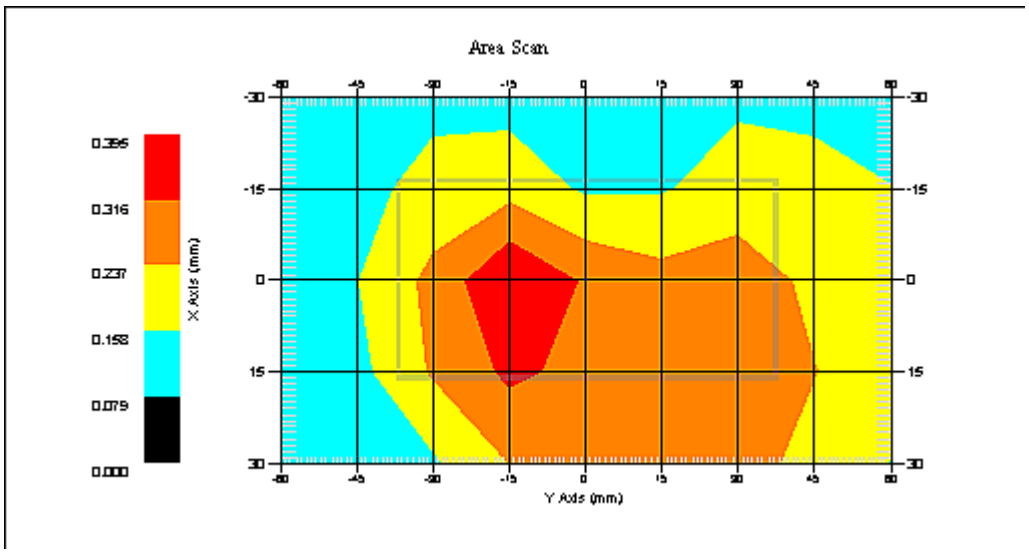
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.4
Conversion Factor: 4
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      : 3.4
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side A
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.378 W/kg
10 gram SAR value   : 0.255 W/kg
Area Scan Peak SAR  : 0.394 W/kg
Zoom Scan Peak SAR  : 0.570 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 09:06:45 AM
End Time : 10-Nov-2011 09:22:21 AM
Scanning Time : 936 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 10 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 40 mm
Width : 75 mm
Depth : 8 mm
Antenna Type : Internal – Chain A
Orientation : Side B
Power Drift-Start : 0.297 W/kg
Power Drift-Finish: 0.307 W/kg
Power Drift (%) : 3.295

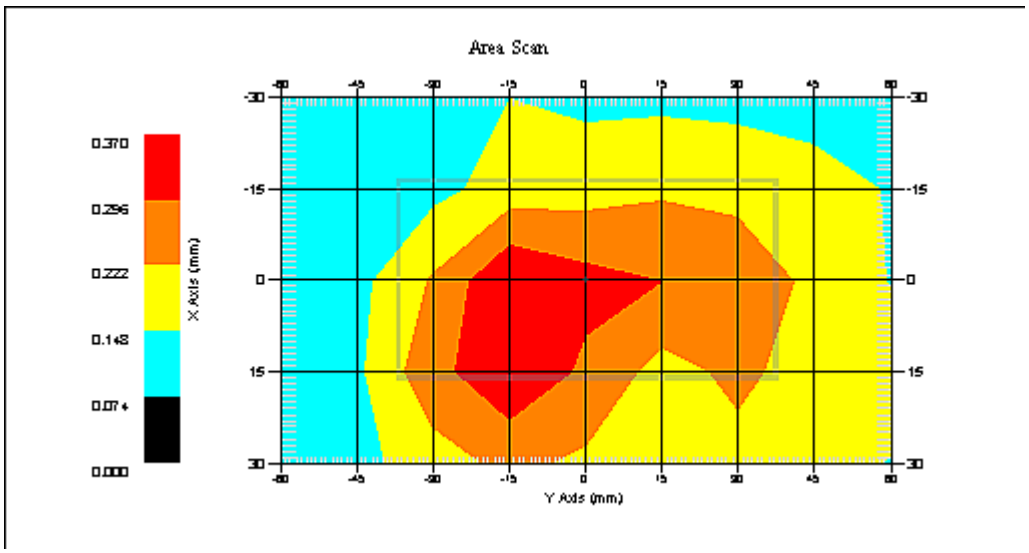
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 S/m
Density : 1000.00 kg/cu. m

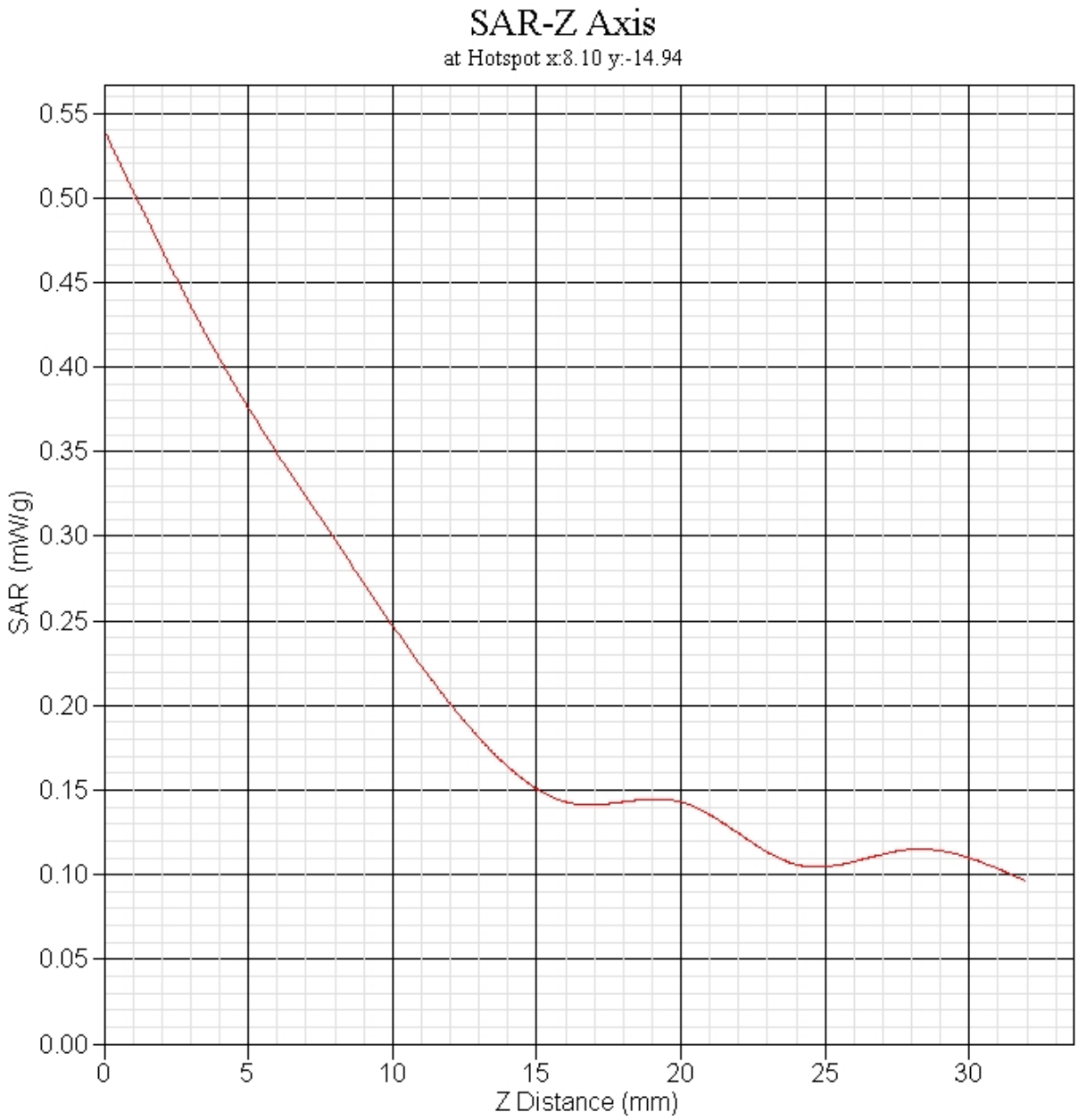
Probe Data
Name : RFEL 217
Model : E020
Type : E-Field Triangle
Serial No. : 217
Last Calib. Date : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.4
Conversion Factor: 4
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

```
Measurement Data
Crest Factor      : 3.4
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side B
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.379 W/kg
10 gram SAR value   : 0.280 W/kg
Area Scan Peak SAR  : 0.369 W/kg
Zoom Scan Peak SAR  : 0.540 W/kg
```



SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 10:17:53 AM
End Time : 10-Nov-2011 10:31:50 AM
Scanning Time : 837 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 10 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal – Chain A
Orientation : Side C
Power Drift-Start : 0.384 W/kg
Power Drift-Finish: 0.398 W/kg
Power Drift (%) : 3.743

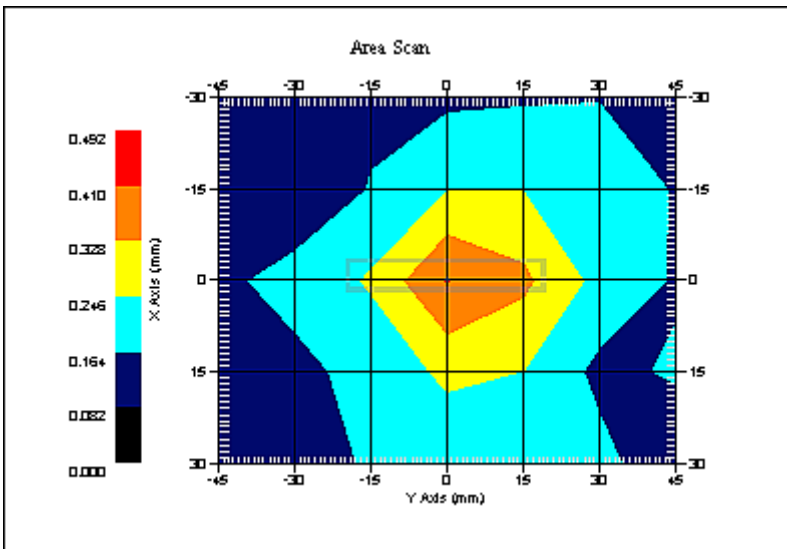
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.4
Conversion Factor: 4
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      : 3.4
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side C
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.323 W/kg
10 gram SAR value   : 0.219 W/kg
Area Scan Peak SAR  : 0.412 W/kg
Zoom Scan Peak SAR  : 0.550 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 11:46:50 AM
End Time : 10-Nov-2011 12:12:27 PM
Scanning Time : 1537 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 10 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal – Chain A
Orientation : Side D
Power Drift-Start : 0.252 W/kg
Power Drift-Finish: 0.241 W/kg
Power Drift (%) : -4.384

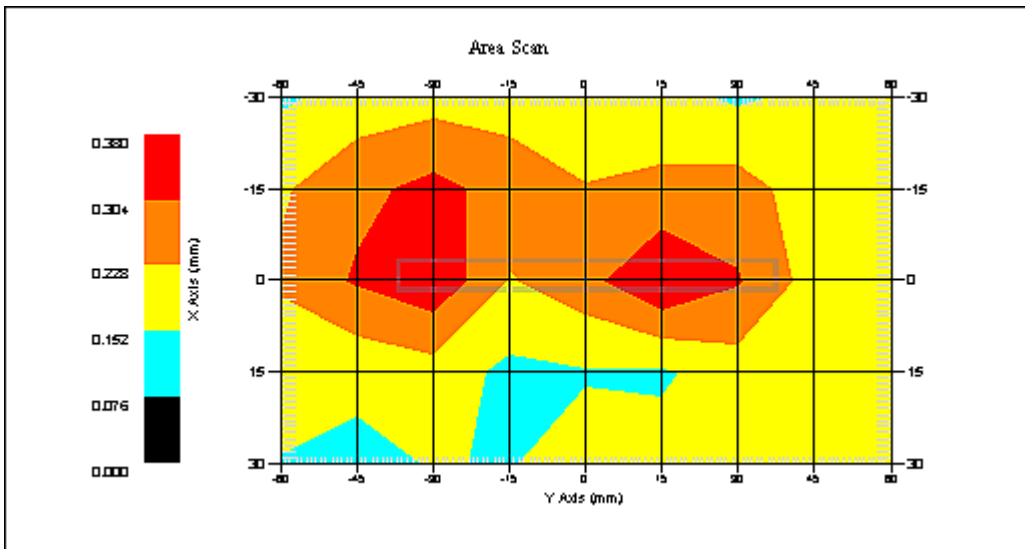
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.4
Conversion Factor: 4
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      : 3.4
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side D
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.328 W/kg
10 gram SAR value   : 0.229 W/kg
Area Scan Peak SAR  : 0.378 W/kg
Zoom Scan Peak SAR  : 0.540 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 10:34:08 AM
End Time : 10-Nov-2011 10:47:56 AM
Scanning Time : 828 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 10 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 40 mm
Depth : 75 mm
Antenna Type : Internal - Chain A
Orientation : Side E
Power Drift-Start : 0.214 W/kg
Power Drift-Finish: 0.216 W/kg
Power Drift (%) : 1.061

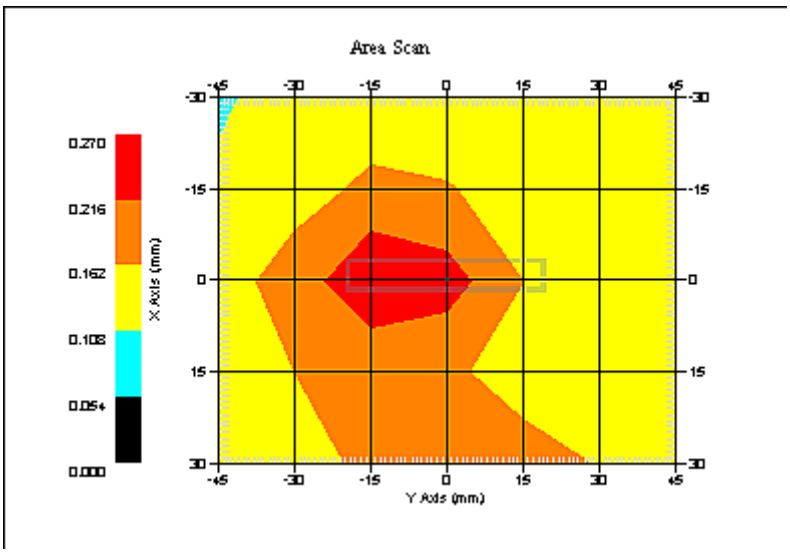
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.4
Conversion Factor: 4
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      : 3.4
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side E
Separation        : 17 mm
Channel           : Mid
```




```
1 gram SAR value    : 0.252 W/kg
10 gram SAR value   : 0.185 W/kg
Area Scan Peak SAR  : 0.269 W/kg
Zoom Scan Peak SAR  : 0.380 W/kg
```

SAR Test Report

By Operator : Jay
Measurement Date : 10-Nov-2011
Starting Time : 10-Nov-2011 12:18:12 PM
End Time : 10-Nov-2011 12:35:00 PM
Scanning Time : 1008 secs

Product Data
Device Name : Intel Corporation
Serial No. : 0023150C5F78
Mode : PUSC QPSK½ - 10 MHz Bandwidth
Model : Intel® Centrino® Advanced-N+WiMax 6250 (Model 622ANXHMW)
Frequency : 2593.00 MHz
Max. Transmit Pwr : 0.269 W
Drift Time : 0 min(s)
Length : 8 mm
Width : 75 mm
Depth : 40 mm
Antenna Type : Internal - Chain A
Orientation : Side F
Power Drift-Start : 0.310 W/kg
Power Drift-Finish: 0.307 W/kg
Power Drift (%) : -0.837

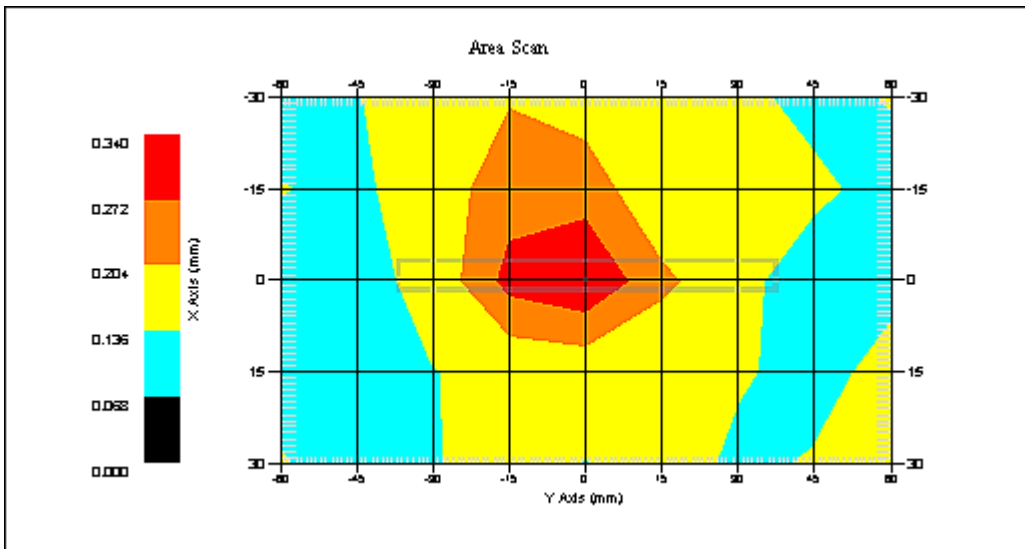
Phantom Data
Name : APREL-Uni
Type : Uni-Phantom
Size (mm) : 280 x 280 x 200
Serial No. : System Default
Location : Center
Description : Uni-Phantom

Tissue Data
Type : BODY
Serial No. : 2590
Frequency : 2590.00 MHz
Last Calib. Date : 10-Nov-2011
Temperature : 20.00 °C
Ambient Temp. : 23.00 °C
Humidity : 45.00 RH%
Epsilon : 52.39 F/m
Sigma : 2.19 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 : 07-Sep-2011
Frequency : 2450.00 MHz
Duty Cycle Factor: 3.4
Conversion Factor: 4
Probe Sensitivity: 1.20 1.20 1.20 $\mu V/(V/m)^2$
Compression Point: 95.00 mV
Offset : 1.56 mm

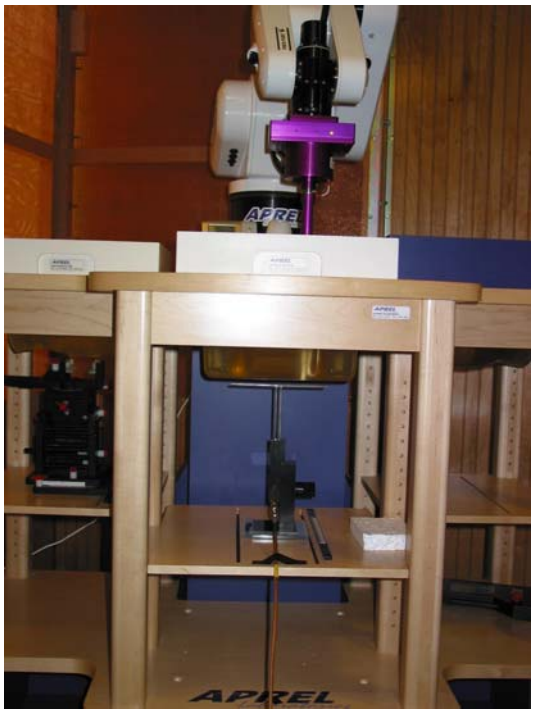
```
Measurement Data
Crest Factor      : 3.4
Scan Type         : Complete
Tissue Temp.      : 20.00 °C
Ambient Temp.     : 23.00 °C
Set-up Date       : 10-Nov-2011
Set-up Time       : 11:43:27 AM
Area Scan         : 5x9x1 : Measurement x=15mm, y=15mm, z=4mm
Zoom Scan         : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data
DUT Position      : Side F
Separation        : 17 mm
Channel           : Mid
```

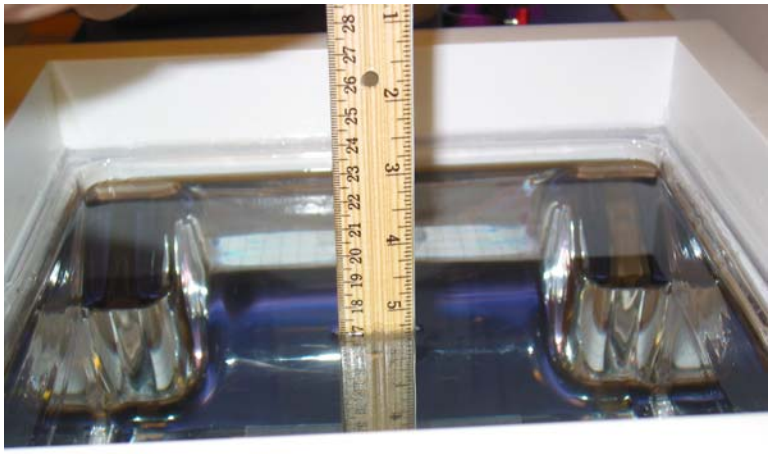



```
1 gram SAR value    : 0.333 W/kg
10 gram SAR value   : 0.215 W/kg
Area Scan Peak SAR  : 0.339 W/kg
Zoom Scan Peak SAR  : 0.590 W/kg
```

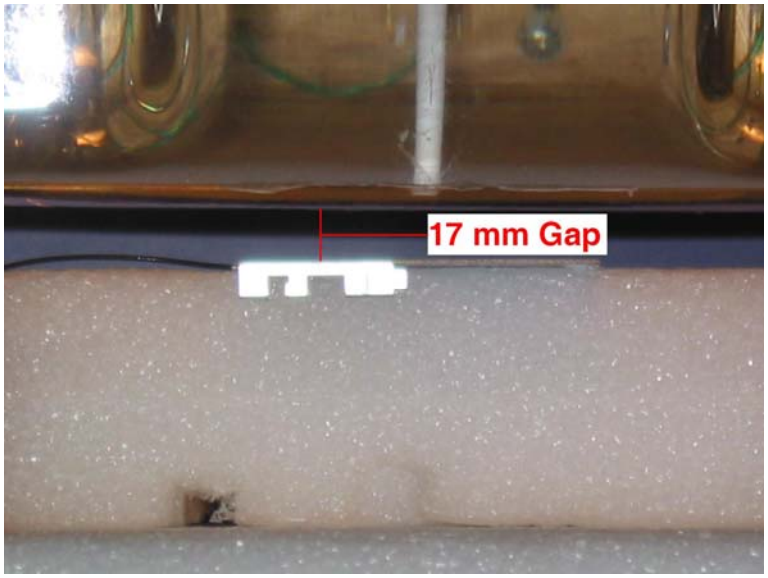
Appendix C – SAR Test Setup Photos



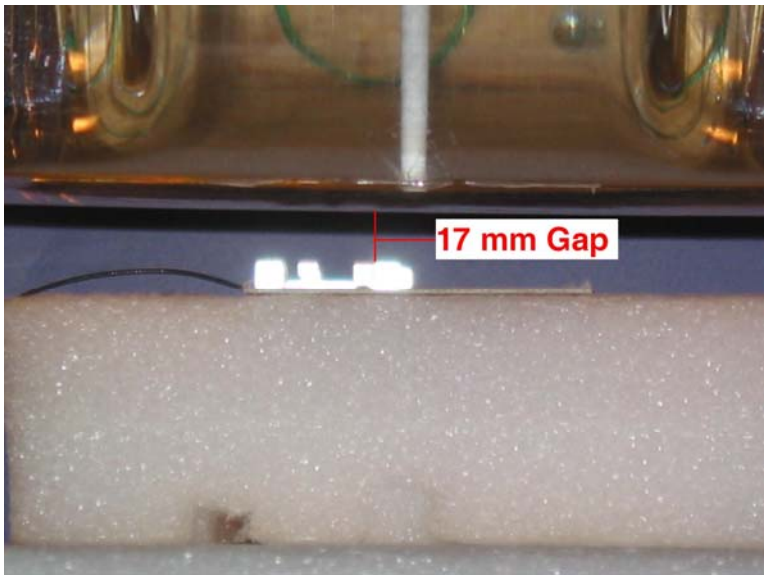
System Body Configuration



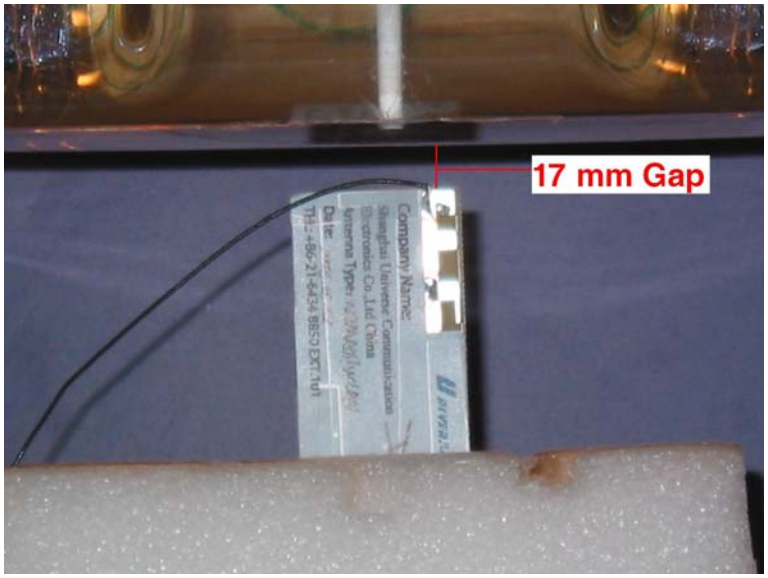
Body Tissue Depth



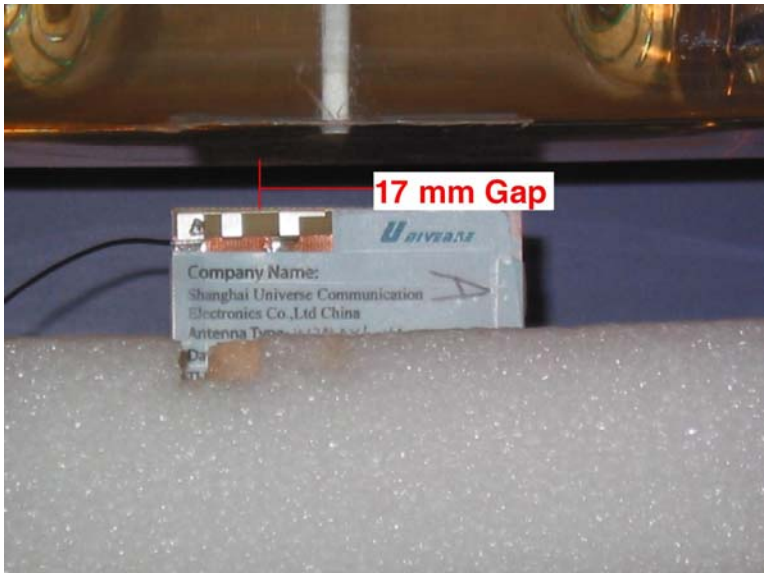
Test Position Side A 17 mm Gap



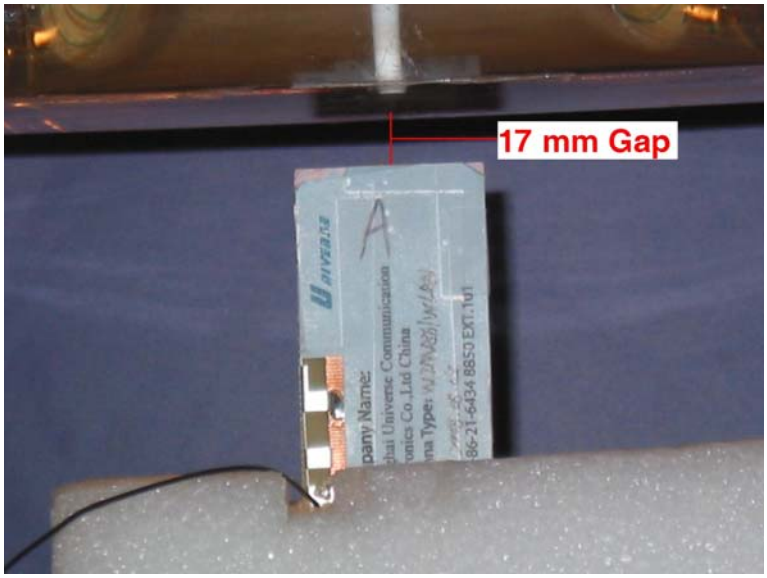
Test Position Side B 17 mm Gap



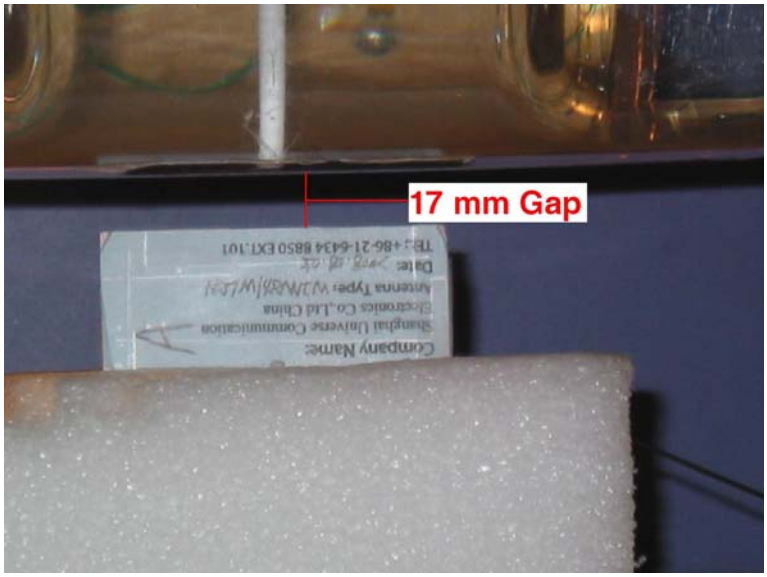
Test Position Side C 17 mm Gap



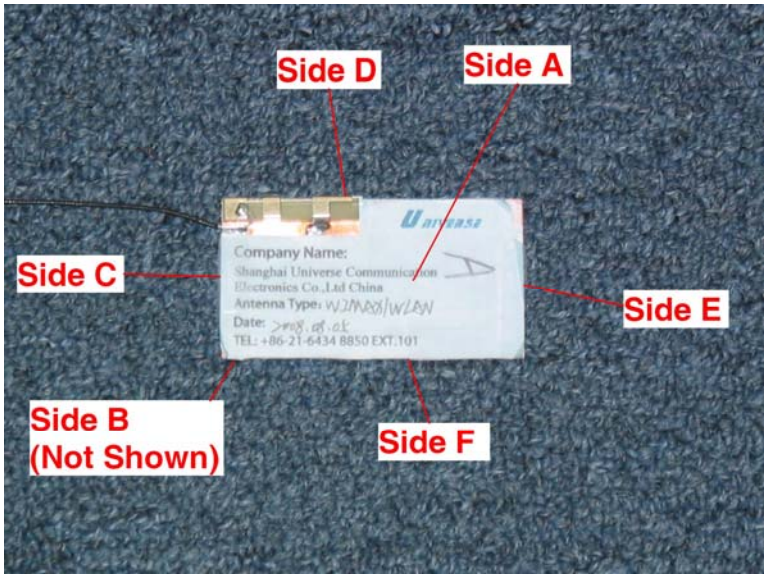
Test Position Side D 17 mm Gap



Test Position Side E 17 mm Gap

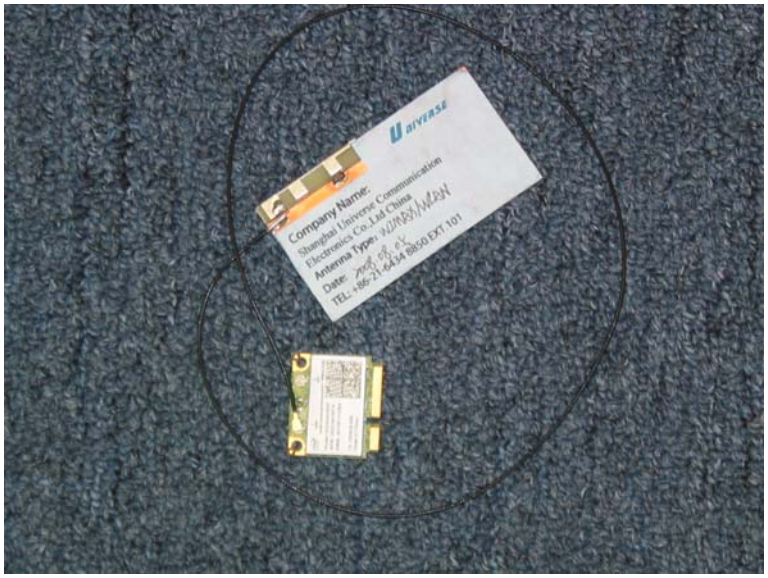


Test Position Side F 17 mm Gap



Test Locations

Module



Test System

Appendix D – Probe Calibration Data Sheets

NCL CALIBRATION LABORATORIES

Calibration File No.: PC1333-1350

Client.: RFEL

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

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

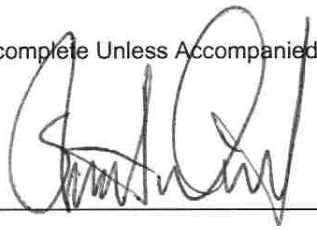
Equipment: Miniature Isotropic RF Probe
Record of Calibration
Head and Body
Manufacturer: APREL Laboratories
Model No.: E-020
Serial No.: 217

Calibration Procedure: D01-032-E020-V2, D22-012-Tissue, D28-002-Dipole
Project No: RFEL-PC-5620

Calibrated: 7th September 2011
Released on: 7th September 2011

Approved By: Stuart Nicol

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary

Released By: 

NCL CALIBRATION LABORATORIES
303 Terry Fox Drive, Suite 102
Kanata, Ontario
CANADA K2K 3J1
Division of APREL
TEL: (613) 435-8300
FAX: (613) 435-8306

Introduction

This Calibration Report reproduces the results of the calibration performed in line with the references listed below. Calibration is performed using accepted methodologies as per the references listed below. Probes are calibrated for air, and tissue and the values reported are the results from the physical quantification of the probe through meteorgical practices.

Calibration Method

Probes are calibrated using the following methods.

<1000MHz
TEM Cell for sensitivity in air
Standard phantom using temperature transfer method for sensitivity in tissue

>1000MHz
Waveguide* method to determine sensitivity in air and tissue
*Waveguide is numerically (simulation) assessed to determine the field distribution and power

The boundary effect for the probe is assessed using a standard flat phantom where the probe output is compared against a numerically simulated series of data points

References

- IEEE Standard 1528 (2003) including Amendment 1
  IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
- EN 62209-1 (2006)
  Human Exposure to RF Fields from hand-held and body-mounted wireless communication devices - Human models. instrumentation, and procedures-Part 1: Procedure to measure the Specific Absorption Rate (SAR) for hand-held mobile wireless devices
- IEC 62209-2 Ed. 1.0 (2010-03)
  Human exposure to RF fields from hand-held and body-mounted wireless devices - Human models, instrumentation, and procedures - Part 2: specific absorption rate (SAR) for wireless communication devices (30 MHz - 6 GHz)
- TP-D01-032-E020-V2 E-Field probe calibration procedure
- D22-012-Tissue dielectric tissue calibration procedure
- D28-002-Dipole procedure for validation of SAR system using a dipole
- IEEE 1309 Draft Standard for Calibration of Electromagnetic Field Sensors and Probes, Excluding Antennas, from 9kHz to 40GHz

Conditions

Probe 217 was a re-calibration.

Ambient Temperature of the Laboratory:	22 °C +/- 1.5°C
Temperature of the Tissue:	21 °C +/- 1.5°C
Relative Humidity:	< 60%

Primary Measurement Standards

Instrument	**Serial Number**	**Cal date**
Power meter Anritsu MA2408A	90025437	Nov.4, 2010
Power Sensor Anritsu MA2481D	103555	Nov 4, 2010
Attenuator HP 8495A (70dB)	1944A10711	Sept. 14, 2010
Network Analyzer Anritsu MT8801C	MB11855	Feb. 8, 2011

Secondary Measurement Standards

Signal Generator Agilent E4438C -506	MY55182336	June 7, 2011

Attestation

The below named signatories have conducted the calibration and review of the data which is presented in this calibration report.

We the undersigned attest that to the best of our knowledge the calibration of this probe has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol

Jesse Hones

Probe Summary

Probe Type:	E-Field Probe E020
Serial Number:	217
Frequency:	750MHz
Sensor Offset:	1.56
Sensor Length:	2.5
Tip Enclosure:	Composite*
Tip Diameter:	< 2.9 mm
Tip Length:	55 mm
Total Length:	289 mm

*Resistive to recommended tissue recipes per IEEE-1528

Sensitivity in Air

Channel X:	1.2 μV/(V/m)^2
Channel Y:	1.2 μV/(V/m)^2
Channel Z:	1.2 μV/(V/m)^2
Diode Compression Point:	95 mV

Calibration for Tissue (Head H, Body B)

Frequency	Tissue Type	Measured Epsilon	Measured Sigma	Calibration Uncertainty	Tolerance Uncertainty for 5%*	Conversion Factor
450 H	**Head**	**45.31**	**0.91**	**4.1**	**3.6**	**5.8**
450 B	**Body**	**56.77**	**0.99**	**4.1**	**3.6**	**6.0**
650 B	**Body**	**57.42**	**0.91**	**3.96**	**3.5**	**6.2**
750 H	**Head**	**42.16**	**0.87**	**3.94**	**3.5**	**6.2**
750 B	**Body**	**55.54**	**0.94**	**3.94**	**3.4**	**6.3**
835 H	**Head**	**42.5**	**0.93**	**3.5**	**3.4**	**6.4**
835 B	**Body**	**56.37**	**0.954**	**3.5**	**3.4**	**6.4**
900 H	**Head**	**41.89**	**1.0**	**3.5**	**3.4**	**6.1**
900 B	**Body**	**53.68**	**1.05**	**3.5**	**3.4**	**6.1**
1450 H	Head	X	X	X	X	X
1450 B	Body	X	X	X	X	X
1500 H	Head	X	X	X	X	X
1500 B	Body	X	X	X	X	X
1640 H	**Head**	**39.0**	**1.25**	**3.5**	**2.7**	**5.2**
1640 B	**Body**	**52.03**	**1.39**	**3.5**	**2.7**	**5.0**
1735 H	Head	X	X	X	X	X
1735 B	**Body**	**51.68**	**1.5**	**3.5**	**2.7**	**5.2**
1800 H	**Head**	**38.38**	**1.39**	**3.5**	**2.7**	**4.9**
1800 B	**Body**	**51.54**	**1.56**	**3.5**	**2.7**	**5.1**
1900 H	**Head**	**38.4**	**1.43**	**3.5**	**2.7**	**4.9**
1900 B	**Body**	**52.08**	**1.59**	**3.5**	**2.7**	**4.8**
2000 H	Head	X	X	X	X	X
2000 B	Body	X	X	X	X	X
2100 H	Head	X	X	X	X	X
2100 B	Body	X	X	X	X	X
2300 H	Head	X	X	X	X	X
2300 B	Body	X	X	X	X	X
2450 H	**Head**	**38.2**	**1.82**	**3.5**	**3.5**	**3.91**
2450B	**Body**	**51.74**	**1.96**	**3.5**	**3.5**	**3.94**
2600 H	Head	X	X	X	X	X
2600 B	**Body**	**51.18**	**2.16**	**3.5**	**3.5**	**4.0**
3000 H	Head	X	X	X	X	X
3000 B	Body	X	X	X	X	X
3600 H	Head	X	X	X	X	X
3600 B	Body	X	X	X	X	X
5200 H	Head	X	X	X	X	X
5200 B	Body	X	X	X	X	X
5600 H	Head	X	X	X	X	X
5600 B	Body	X	X	X	X	X
5800 H	Head	X	X	X	X	X
5800 B	Body	X	X	X	X	X

Boundary Effect:

Uncertainty resulting from the boundary effect is less than 2.1% for the distance between the tip of the probe and the tissue boundary, when less than 0.58mm.

Spatial Resolution:

The spatial resolution uncertainty is less than 1.5% for 4.9mm diameter probe.
The spatial resolution uncertainty is less than 1.0% for 2.5mm diameter probe.

DAQ-PAQ Contribution

To minimize the uncertainty calculation all tissue sensitivity values were calculated using a load impedance of 5 MΩ.

Boundary Effect:

For a distance of 0.58mm the worst case evaluated uncertainty (increase in the probe sensitivity) is less than 2.1%.

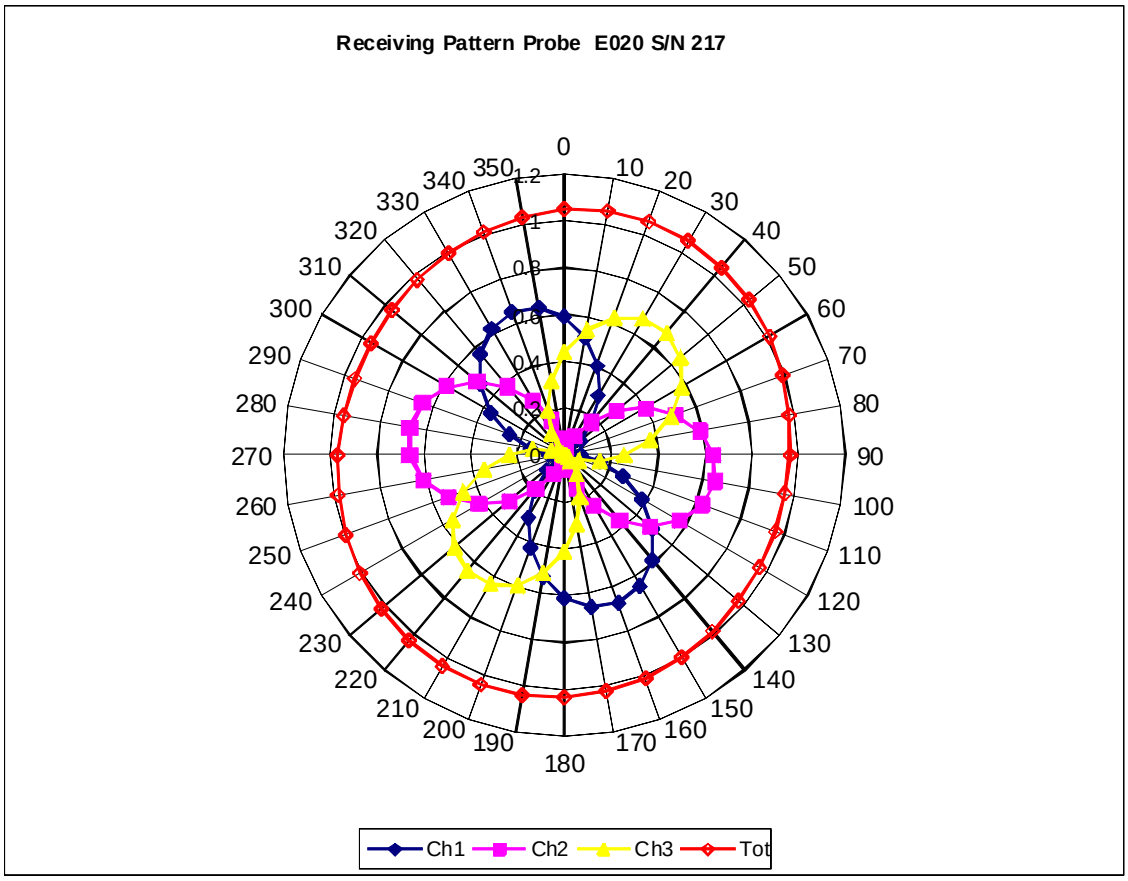
NOTES:

*The maximum deviation from the centre frequency when comparing the lower to upper range is listed.

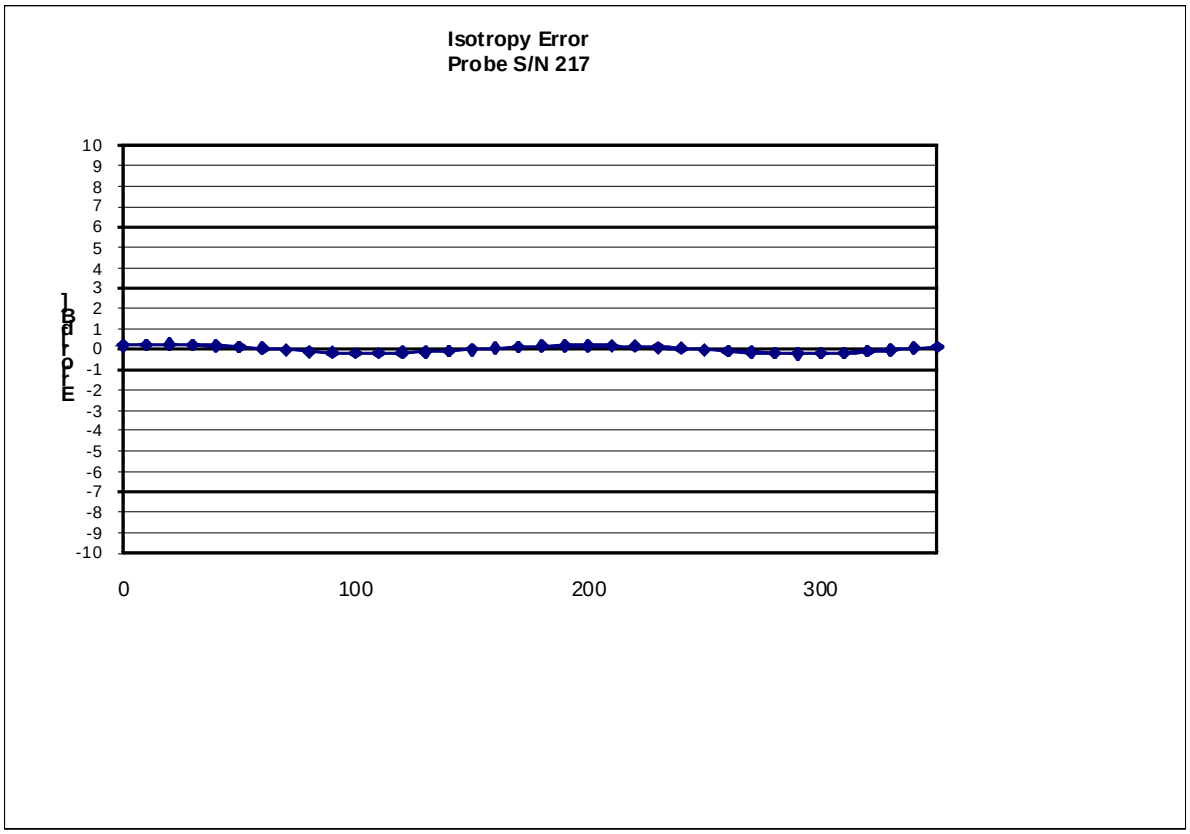
The probe was received in good condition.

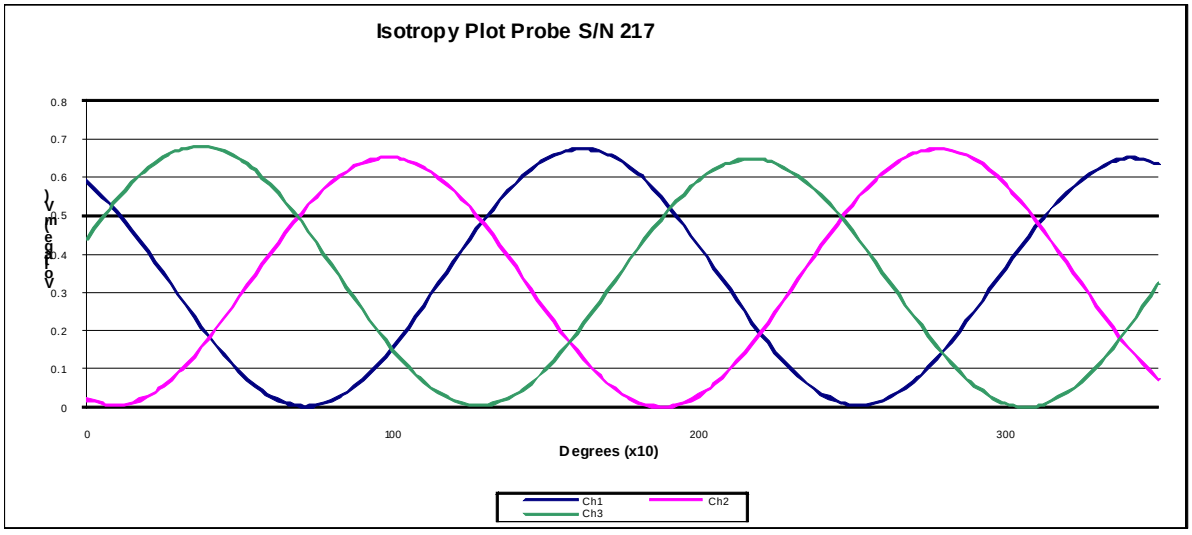
Probe was calibrated on new DAC-PAQ.

Receiving Pattern Air



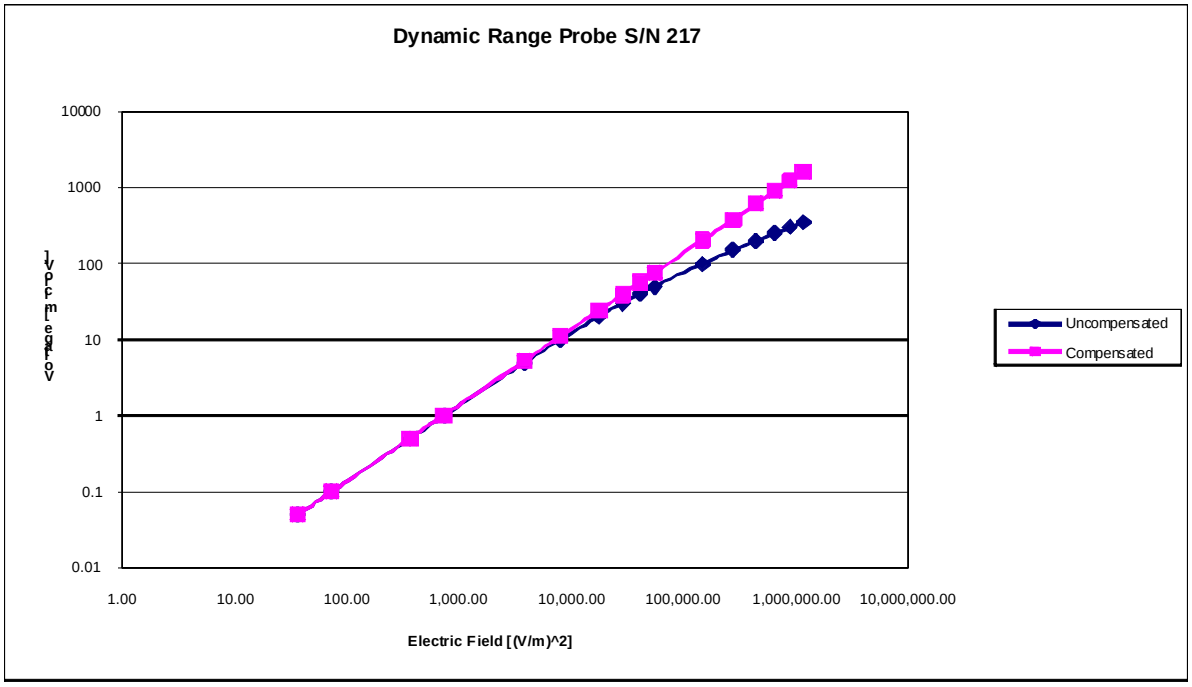
Isotropy Error



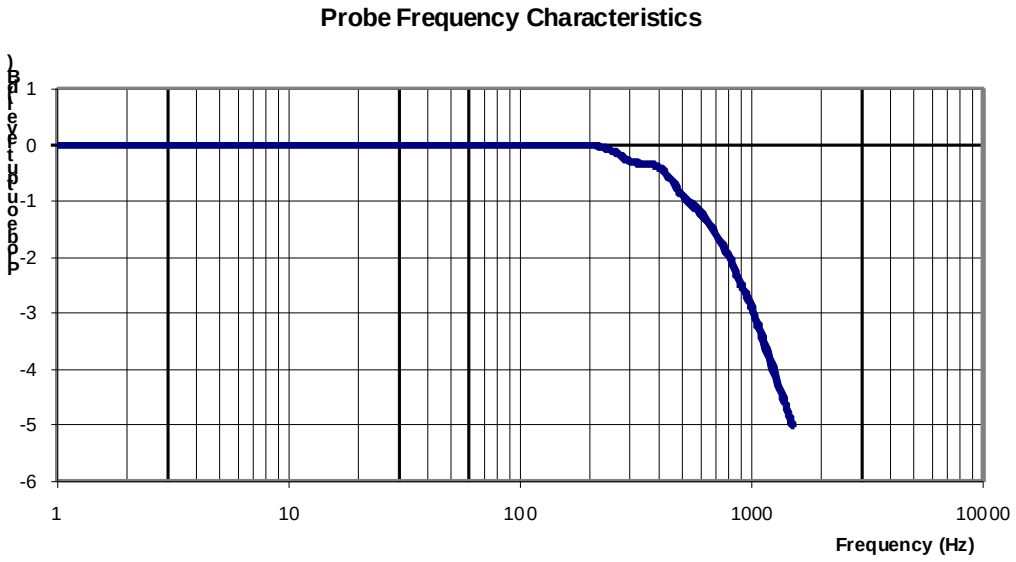


Isotropicity Tissue: 0.12 dB

Dynamic Range



Video Bandwidth



Video Bandwidth at 500 Hz 1 dB
Video Bandwidth at 1.02 KHz: 3 dB

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2011.

NCL CALIBRATION LABORATORIES

Calibration File No.: 1271-1276

Client.: RFEL

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

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

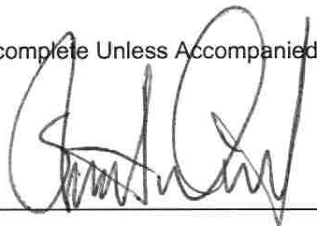
Equipment: Miniature Isotropic RF Probe
Record of Calibration
Head and Body
Manufacturer: APREL Laboratories
Model No.: E-020
Serial No.: E030-001

Calibration Procedure: D01-032-E020-V2, D22-012-Tissue, D28-002-Dipole
Project No: RFEL-5611

Calibrated: 15th July 2011
Released on: 20th July 2011

Approved By: Stuart Nicol

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary

Released By: 

NCL CALIBRATION LABORATORIES
303 Terry Fox Drive, Suite 102
Kanata, Ontario
CANADA K2K 3J1
Division of APREL
TEL: (613) 435-8300
FAX: (613) 435-8306

Introduction

This Calibration Report reproduces the results of the calibration performed in line with the references listed below. Calibration is performed using accepted methodologies as per the references listed below. Probes are calibrated for air, and tissue and the values reported are the results from the physical quantification of the probe through meteorgical practices.

Calibration Method

Probes are calibrated using the following methods.

<1000MHz
TEM Cell for sensitivity in air
Standard phantom using temperature transfer method for sensitivity in tissue

>1000MHz
Waveguide* method to determine sensitivity in air and tissue
*Waveguide is numerically (simulation) assessed to determine the field distribution and power

The boundary effect for the probe is assessed using a standard flat phantom where the probe output is compared against a numerically simulated series of data points

References

- IEEE Standard 1528 (2003) including Amendment 1
  IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
- EN 62209-1 (2006)
  Human Exposure to RF Fields from hand-held and body-mounted wireless communication devices - Human models. instrumentation, and procedures-Part 1: Procedure to measure the Specific Absorption Rate (SAR) for hand-held mobile wireless devices
- IEC 62209-2 Ed. 1.0 (2010-03)
  Human exposure to RF fields from hand-held and body-mounted wireless devices - Human models, instrumentation, and procedures - Part 2: specific absorption rate (SAR) for wireless communication devices (30 MHz - 6 GHz)
- TP-D01-032-E020-V2 E-Field probe calibration procedure
- D22-012-Tissue dielectric tissue calibration procedure
- D28-002-Dipole procedure for validation of SAR system using a dipole
- IEEE 1309 Draft Standard for Calibration of Electromagnetic Field Sensors and Probes, Excluding Antennas, from 9kHz to 40GHz

Conditions

Probe E030-001 was a re-calibration.
The probe tip condition was in need of repair and this caused the probe to be out of tolerance.
**After the repair the probe was found to be in tolerance.

Ambient Temperature of the Laboratory:	22 °C +/- 1.5°C
Temperature of the Tissue:	21 °C +/- 1.5°C
Relative Humidity:	< 60%

Primary Measurement Standards

Instrument	**Serial Number**	**Cal due date**
Power meter Anritsu MA2408A	90025437	Nov.4, 2011
Power Sensor Anritsu MA2481D	103555	Nov 4, 2011
Attenuator HP 8495A (70dB)	1944A10711	Sept. 14, 2011
Network Analyzer Anritsu MT8801C	MB11855	Feb. 8, 2012

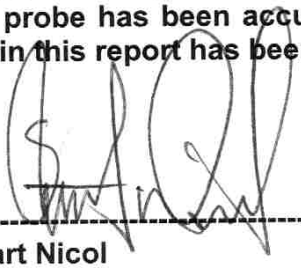
Secondary Measurement Standards

Signal Generator Agilent E4438C -506	MY55182336	June 7, 2012

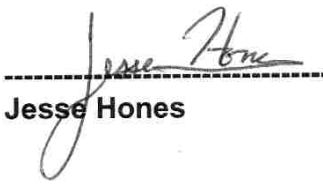
Attestation

The below named signatories have conducted the calibration and review of the data which is presented in this calibration report.

We the undersigned attest that to the best of our knowledge the calibration of this probe has been accurately conducted and that all information contained within this report has been reviewed for accuracy.



Stuart Nicol



Jesse Hones

Probe Summary

Probe Type:	E-Field Probe E030
Serial Number:	E030-001
Frequency:	As presented on page 5
Sensor Offset:	0.56
Sensor Length:	2.5
Tip Enclosure:	Composite*
Tip Diameter:	< 2.9 mm
Tip Length:	55 mm
Total Length:	289 mm

*Resistive to recommended tissue recipes per IEEE-1528

Sensitivity in Air

Channel X:	1.2 $\mu V/(V/m)^2$
Channel Y:	1.2 $\mu V/(V/m)^2$
Channel Z:	1.2 $\mu V/(V/m)^2$
Diode Compression Point:	95 mV

Calibration for Tissue (Head H, Body B)

Frequency	Tissue Type	Measured Epsilon	Measured Sigma	Calibration Uncertainty	Tolerance Uncertainty for 5%*	Conversion Factor
450 H	Head	X	X	X	X	X
450 B	Body	X	X	X	X	X
750 H	Head	X	X	X	X	X
750 B	Body	X	X	X	X	X
835 H	Head	X	X	X	X	X
835 B	Body	X	X	X	X	X
900 H	Head	X	X	X	X	X
900 B	Body	X	X	X	X	X
1450 H	Head	X	X	X	X	X
1450 B	Body	X	X	X	X	X
1500 H	Head	X	X	X	X	X
1500 B	Body	X	X	X	X	X
1640 H	Head	X	X	X	X	X
1640 B	Body	X	X	X	X	X
1750 H	Head	X	X	X	X	X
1750 B	Body	X	X	X	X	X
1800 H	Head	X	X	X	X	X
1800 B	Body	X	X	X	X	X
1900 H	Head	X	X	X	X	X
1900 B	Body	X	X	X	X	X
2000 H	Head	X	X	X	X	X
2000 B	Body	X	X	X	X	X
2100 H	Head	X	X	X	X	X
2100 B	Body	X	X	X	X	X
2300 H	Head	X	X	X	X	X
2300 B	Body	X	X	X	X	X
2450 H	Head	X	X	X	X	X
2450B	Body	X	X	X	X	X
2600 H	Head	X	X	X	X	X
2600 B	Body	X	X	X	X	X
3000 H	Head	X	X	X	X	X
3000 B	Body	X	X	X	X	X
3600 H	Head	X	X	X	X	X
3600 B	Body	X	X	X	X	X
5200 H	**Head**	**35.37**	**4.58**	**3.5**	**2.6**	**7.2**
5200 B	**Body**	**47.63**	**5.14**	**3.5**	**2.6**	**6.7**
5600 H	**Head**	**34.04**	**5.05**	**3.5**	**2.6**	**6.8**
5600 B	**Body**	**46.38**	**5.79**	**3.5**	**2.6**	**6.3**
5800 H	**Head**	**33.62**	**5.27**	**3.5**	**2.6**	**6.6**
5800 B	**Body**	**45.87**	**6.07**	**3.5**	**2.6**	**5.8**

Boundary Effect:

Uncertainty resulting from the boundary effect is less than 2.1% for the distance between the tip of the probe and the tissue boundary, when less than 0.58mm.

Spatial Resolution:

The spatial resolution uncertainty is less than 1.5% for 4.9mm diameter probe.
The spatial resolution uncertainty is less than 1.0% for 2.5mm diameter probe.

DAQ-PAQ Contribution

To minimize the uncertainty calculation all tissue sensitivity values were calculated using a load impedance of 5 MΩ.

Boundary Effect:

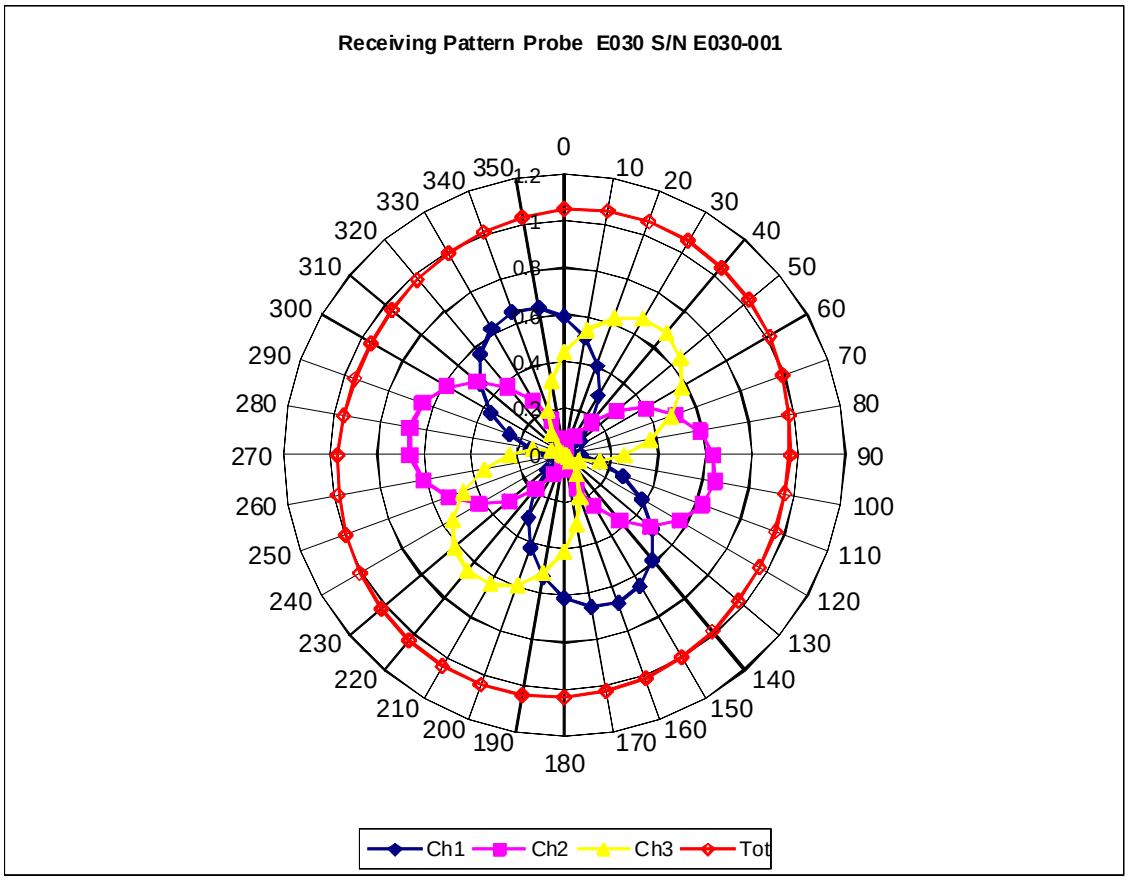
For a distance of 0.58mm the worst case evaluated uncertainty (increase in the probe sensitivity) is less than 2.1%.

NOTES:

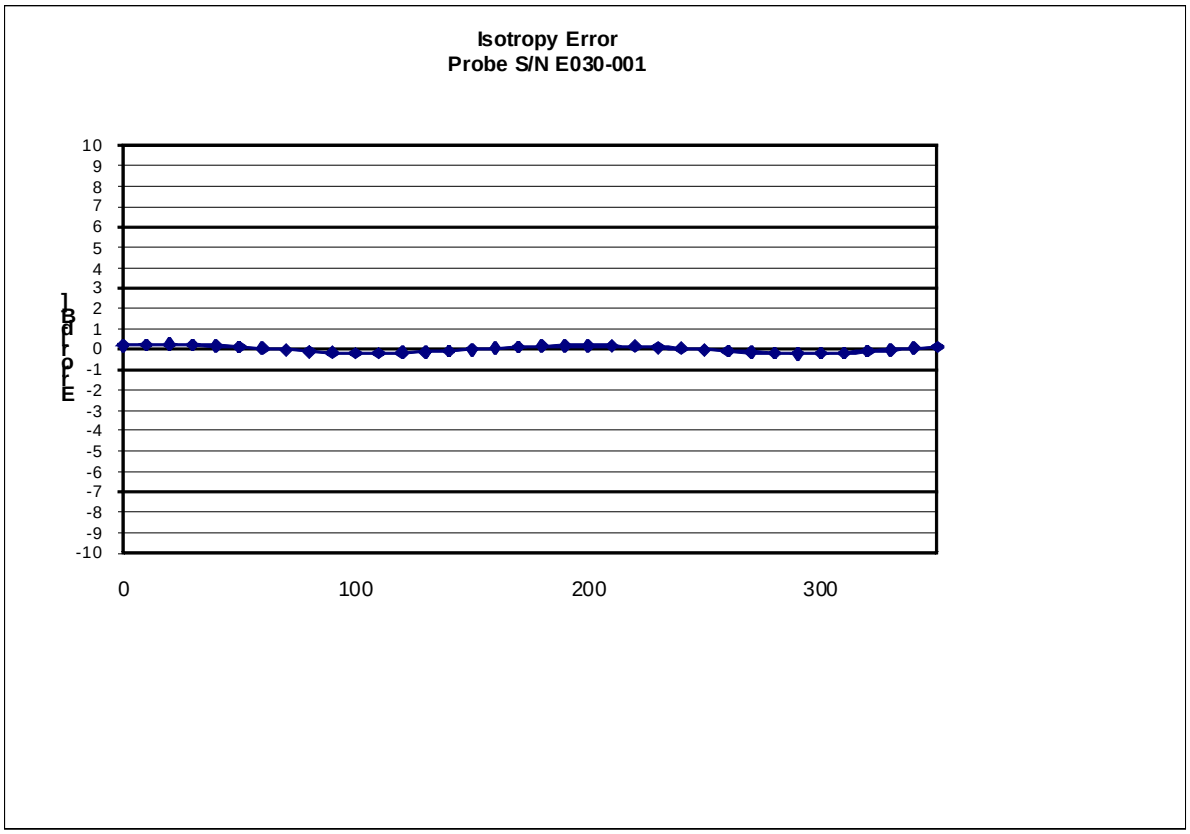
*The maximum deviation from the centre frequency when comparing the lower to upper range is listed.

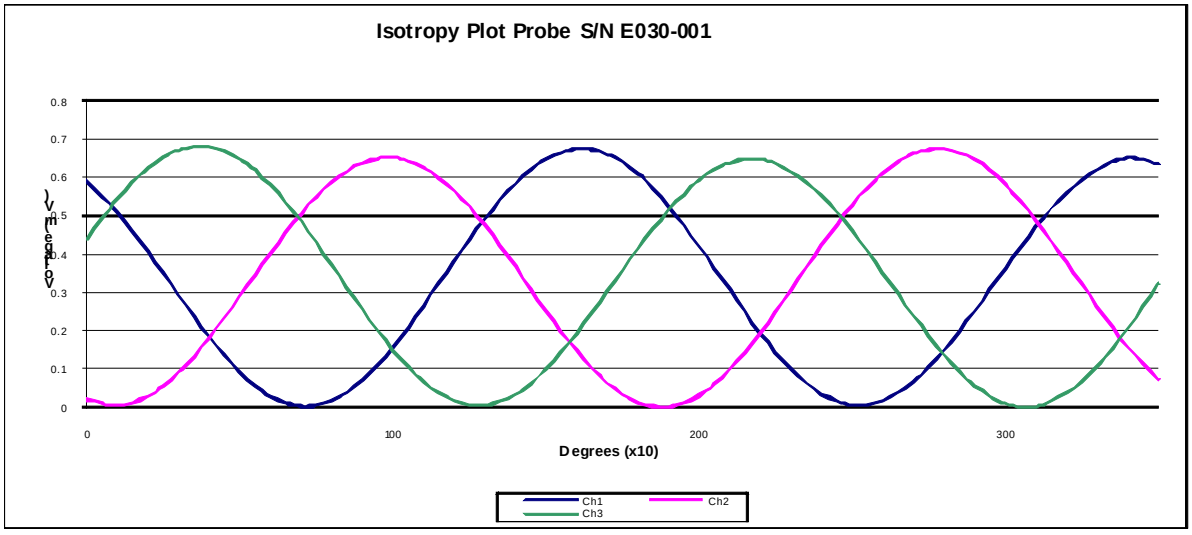
**The deviation of the calibration factor from the calculated values was found to be as much as +18% worst case for this probe. It was found that the probe tip had been damaged and that once repaired the deviation from calculated values was less than 2%. As the deviation measured would have contributed to a higher SAR value APREL can conclude that SAR measurements made with this probe will have been within typical uncertainty of 10% and that this would not contribute to SAR value which if corrected would yield a higher than reported value.

Receiving Pattern Air



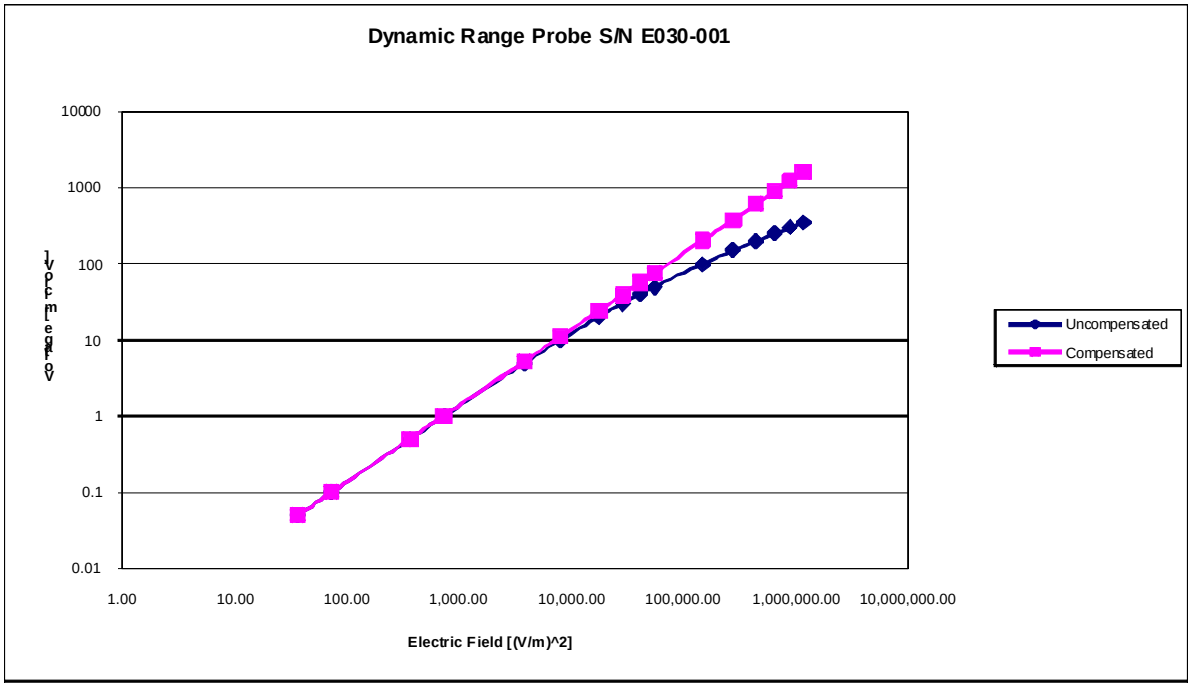
Isotropy Error Air



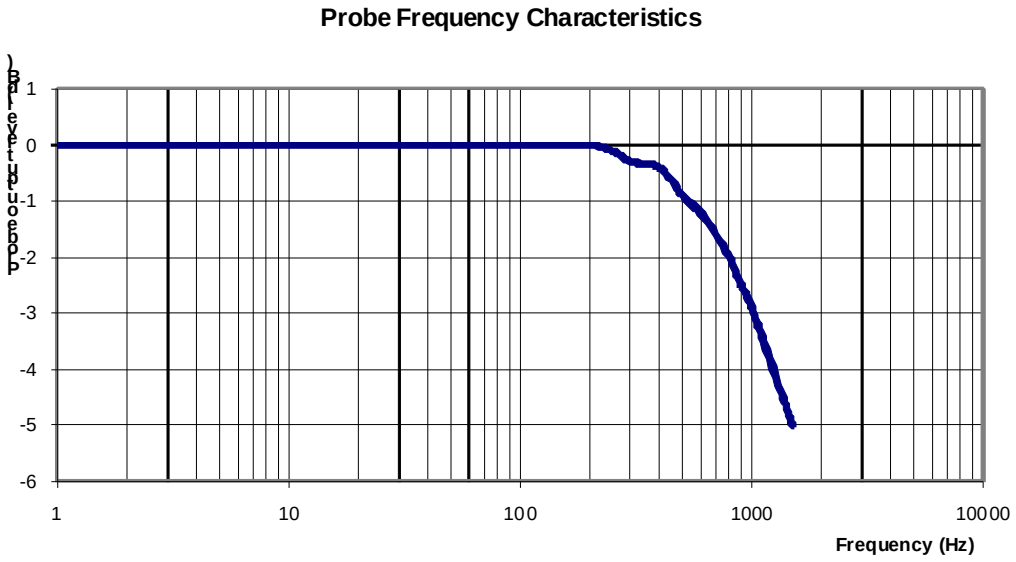


Isotropicity Tissue: 0.10 dB

Dynamic Range



Video Bandwidth



Video Bandwidth at 500 Hz 1 dB
Video Bandwidth at 1.02 KHz: 3 dB

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2011.

Appendix E – Dipole Calibration Data Sheets

NCL CALIBRATION LABORATORIES

Calibration File No: DC-1182
Project Number: RFEB-5552

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

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

Validation Dipole

Manufacturer: APREL Laboratories
Part number: ALS-D-2450-S-2
Frequency: 2450 MHz
Serial No: RFE-278

Customer: RFEL
Body Calibration

Calibrated: 18th November 2010
Released on: 19th November 2010

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary

Released By: _____

NCL CALIBRATION LABORATORIES
51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6
Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4162

Conditions

Dipole RFE-278 was a new calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 21 °C +/- 0.5°C

We the undersigned attest that to the best of our knowledge the calibration of this device has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

We the undersigned attest that to the best of our knowledge the calibration of this device has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol

C. Teodorian

Calibration Results Summary

The following results relate the Calibrated Dipole and should be used as a quick reference for the user.

Mechanical Dimensions

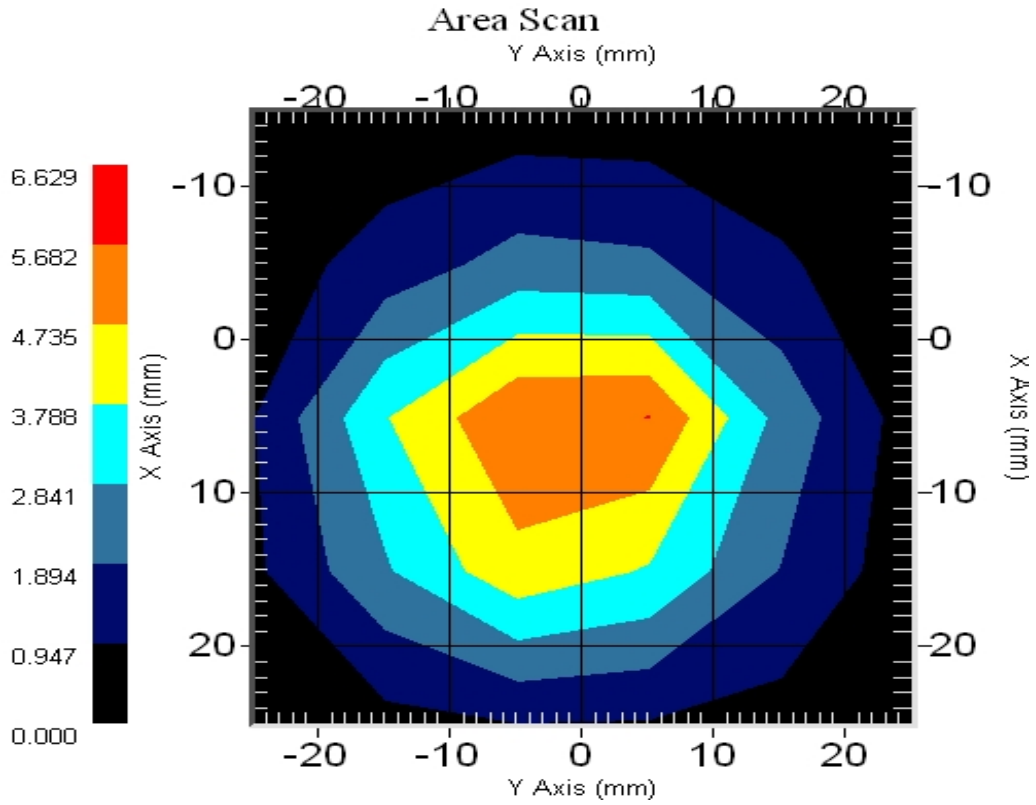
Length: 51.5 mm
Height: 30.4 mm

Electrical Specification

SWR: 1.249 U
Return Loss: -19.170 dB
Impedance: 42.223 Ω

System Validation Results @ 100mW

Frequency	1 Gram	10 Gram	Peak
2450 MHz	5.15	2.31	10.01



Introduction

This Calibration Report has been produced in line with the SSI Dipole Calibration Procedure SSI-TP-018-ALSAS. The results contained within this report are for Validation Dipole RFE-278. The calibration routine consisted of a three-step process. Step 1 was a mechanical verification of the dipole to ensure that it meets the mechanical specifications. Step 2 was an Electrical Calibration for the Validation Dipole, where the SWR, Impedance, and the Return loss were assessed. Step 3 involved a System Validation using the ALSAS-10U, along with APREL E-020 130 MHz to 26 GHz E-Field Probe Serial Number 226.

References

SSI-TP-018-ALSAS Dipole Calibration Procedure
SSI-TP-016 Tissue Calibration Procedure
IEEE 1528 “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”

Conditions

Dipole RFE-278 was a re-calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 20 °C +/- 0.5°C

Dipole Calibration Results

Mechanical Verification

APREL Length	APREL Height	Measured Length	Measured Height
51.5 mm	30.4 mm	52.1 mm	31.0 mm

Tissue Validation

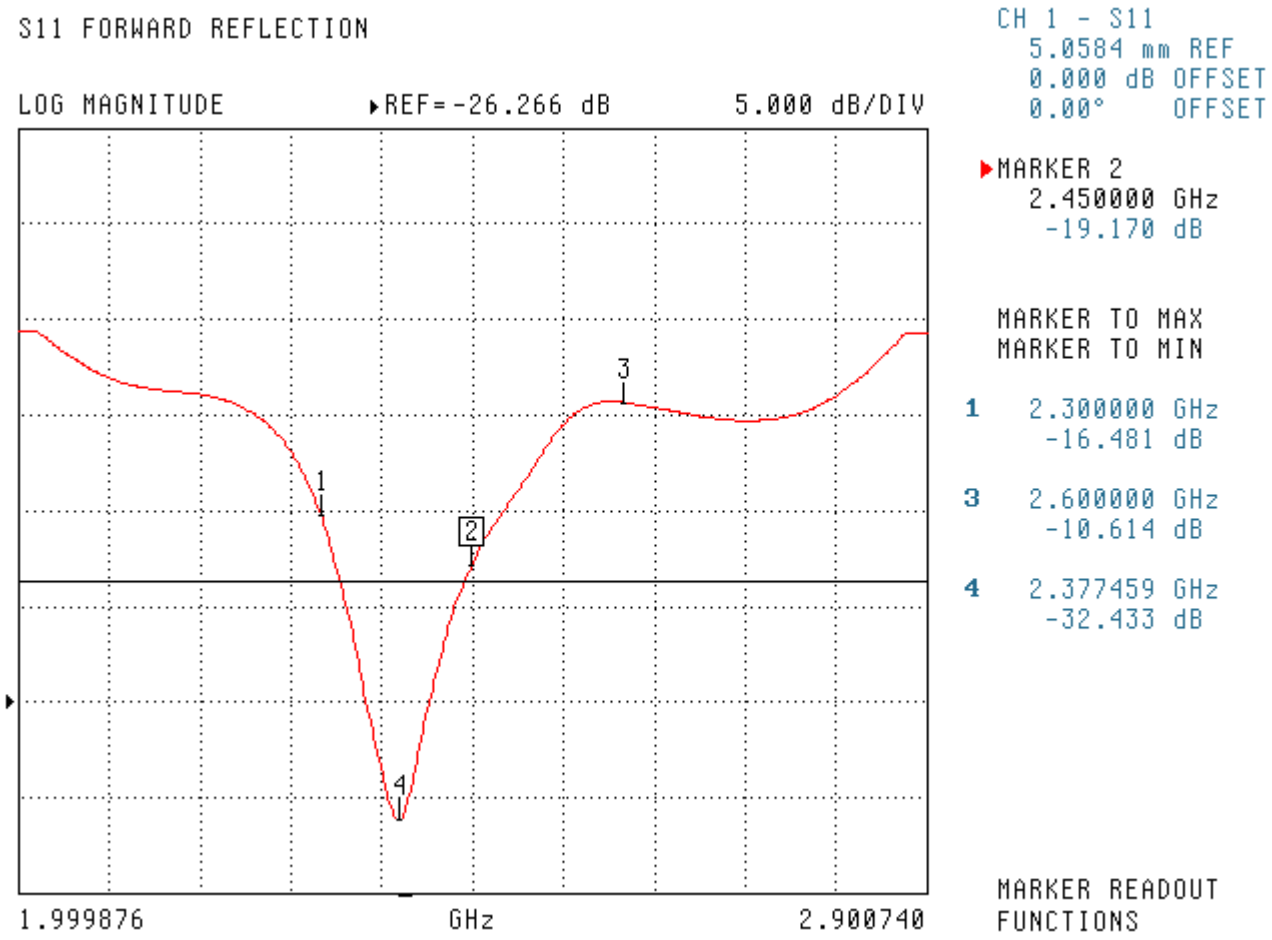
Body Tissue 2450 MHz	Measured
Dielectric constant, ε_r	52.0
Conductivity, σ [S/m]	1.92

Electrical Calibration

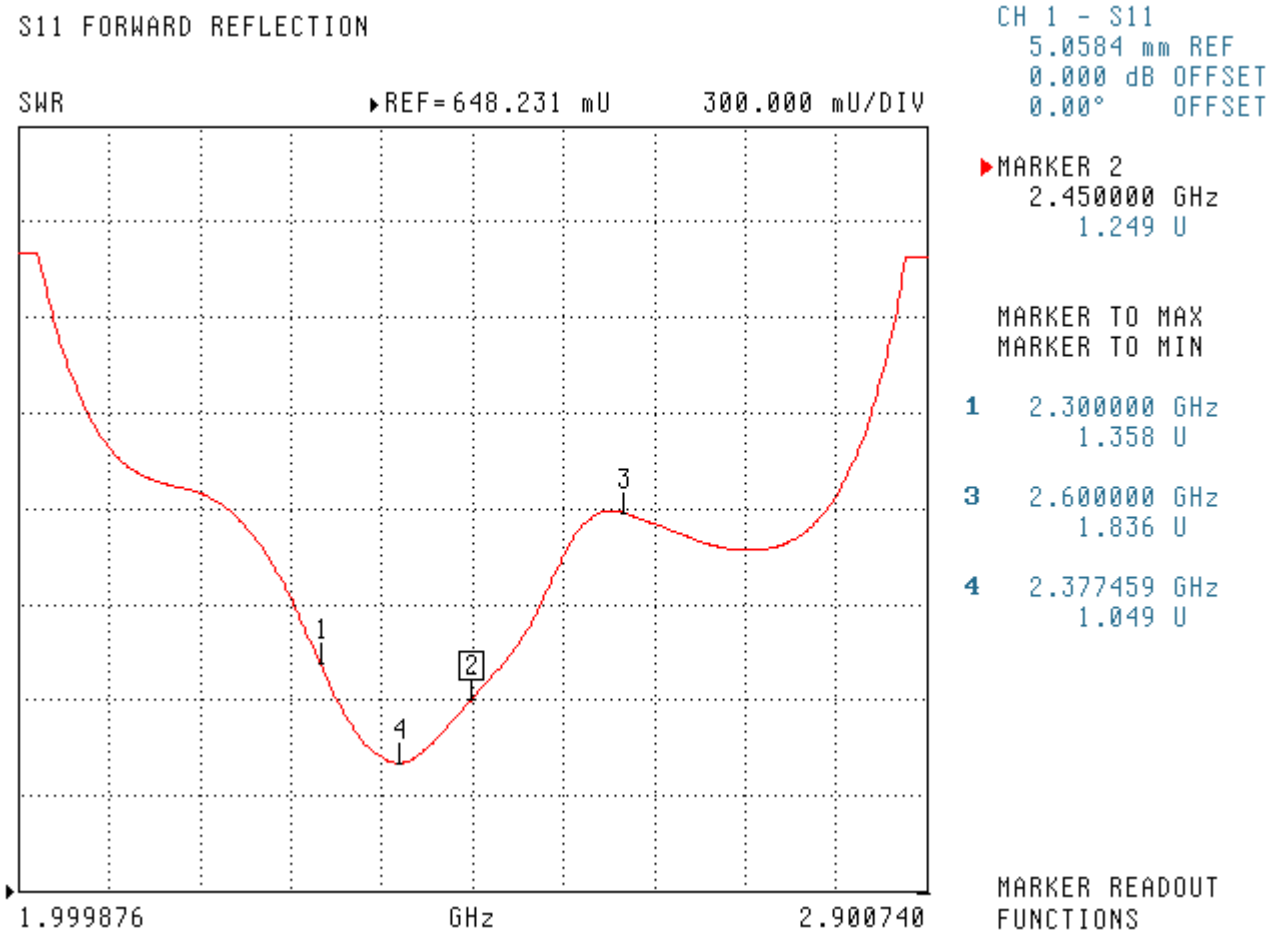
Test	Result
S11 R/L	-19.170 dB
SWR	1.249 U
Impedance	42.223 Ω

The Following Graphs are the results as displayed on the Vector Network Analyzer.

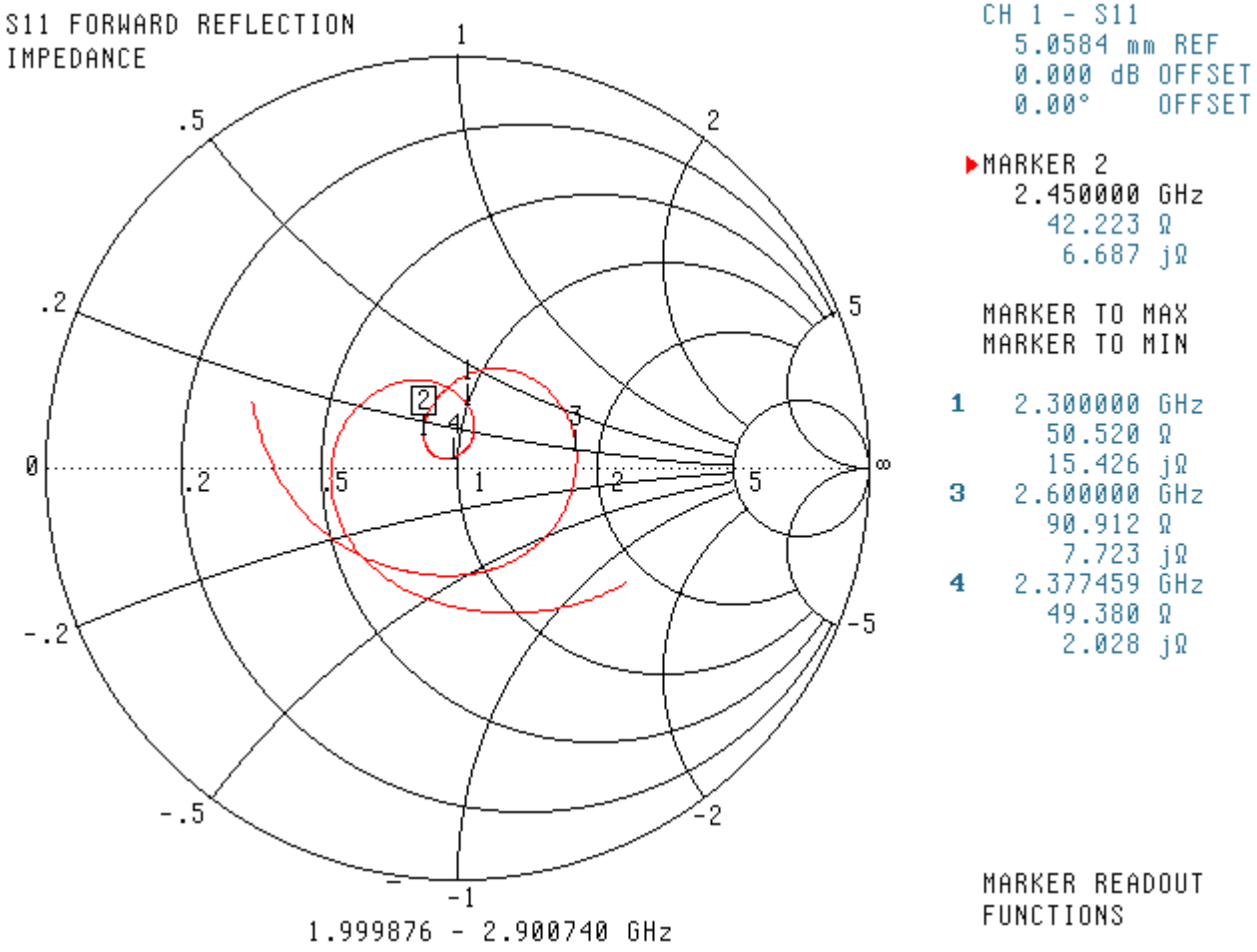
S11 Parameter Return Loss



SWR



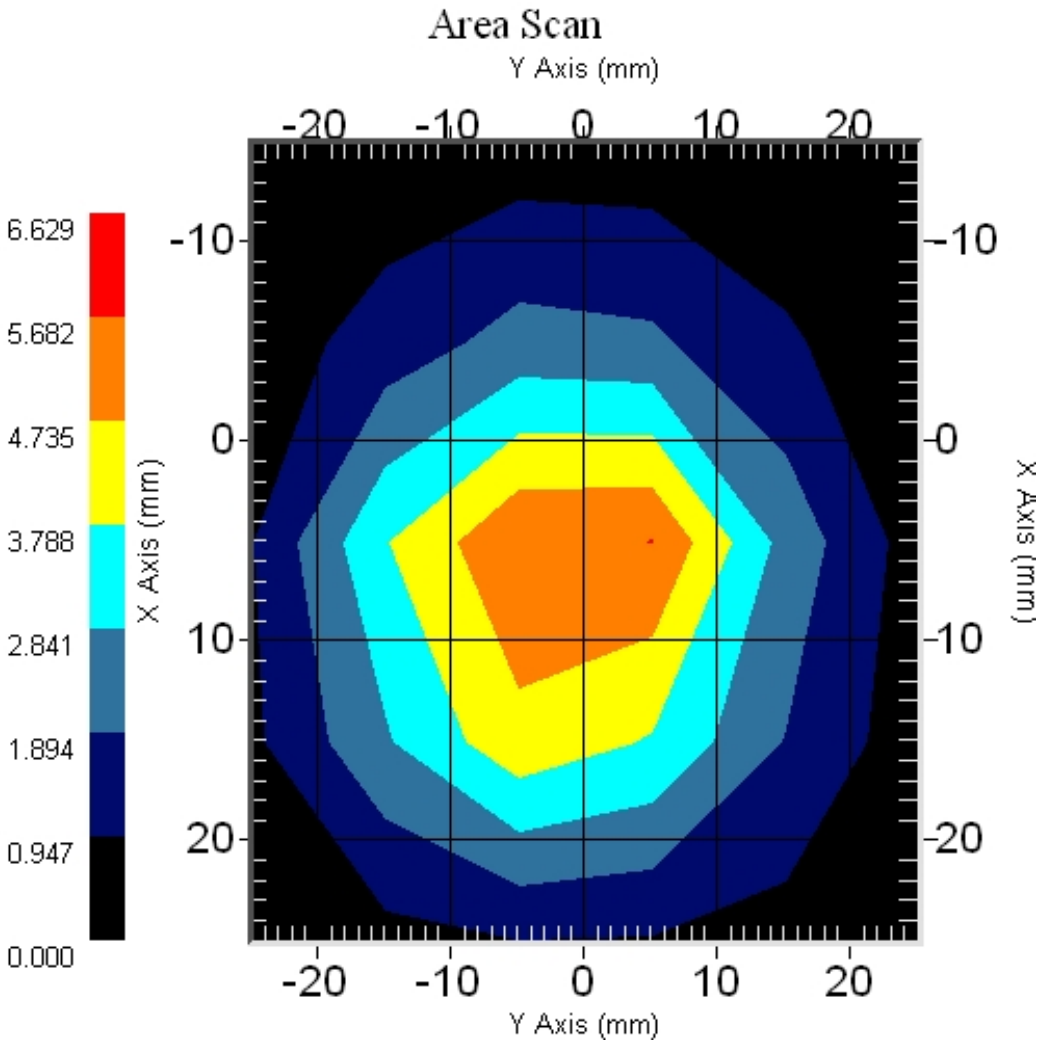
Smith Chart Dipole Impedance



System Validation Results Using the Electrically Calibrated Dipole

Results @ 100mW

Body Tissue Frequency	1 Gram	10 Gram	Peak Above Feed Point
2450 MHz	5.15	2.31	10.01



Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2010.

NCL CALIBRATION LABORATORIES

Calibration File No: DC-1116
Project Number: RFEL-2600-Dipole-5482

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

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

APREL Validation Dipole

Manufacturer: APREL Laboratories
Part number: ALS-D-2600-S-2
Frequency: 2600 MHz
Serial No: 225-00903

Customer: RFEL
BODY Calibration

Calibrated: 18th January 2010
Released on: 19th January 2010

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary

Released By: _____

NCL CALIBRATION LABORATORIES

17 Bentley Avenue
NEPEAN, ONTARIO
CANADA K2E 6T7

Division of APREL Lab.
TEL: (613) 820-2730
FAX: (613) 820-4161

Conditions

Dipole 225-00903 was new and taken from stock prior to calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 21 °C +/- 0.5°C

We the undersigned attest that to the best of our knowledge the calibration of this device has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol

C. Teodorian

Calibration Results Summary

The following results relate the Calibrated Dipole and should be used as a quick reference for the user.

Mechanical Dimensions

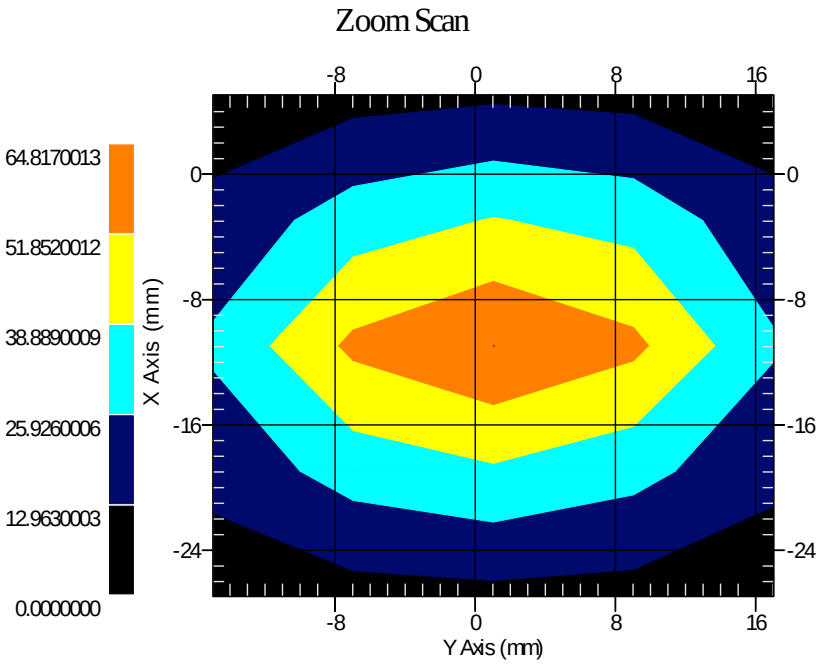
Length: 48.8 mm
Height: 32.8 mm

Electrical Specification

SWR: 1.013U
Return Loss: -43.521dB
Impedance: 49.355 ohm

System Validation Results

Frequency	1 Gram	10 Gram	Peak
2600 MHz	56.42	24.68	119



Introduction

This Calibration Report has been produced in line with the SSI Dipole Calibration Procedure SSI-TP-018-ALSAS. The results contained within this report are for Validation Dipole 225-00903. The calibration routine consisted of a three-step process. Step 1 was a mechanical verification of the dipole to ensure that it meets the mechanical specifications. Step 2 was an Electrical Calibration for the Validation Dipole, where the SWR, Impedance, and the Return loss were assessed. Step 3 involved a System Validation using the ALSAS-10U, along with APREL E-020 130 MHz to 26 GHz E-Field Probe Serial Number 225.

References

SSI-TP-018-ALSAS Dipole Calibration Procedure
SSI-TP-016 Tissue Calibration Procedure
IEEE 1528 “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”

Conditions

Dipole 225-00903 was new taken from stock.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 20 °C +/- 0.5°C

Dipole Calibration Results

Mechanical Verification

Measured Length	Measured Height
48.8 mm	32.8 mm

Tissue Validation

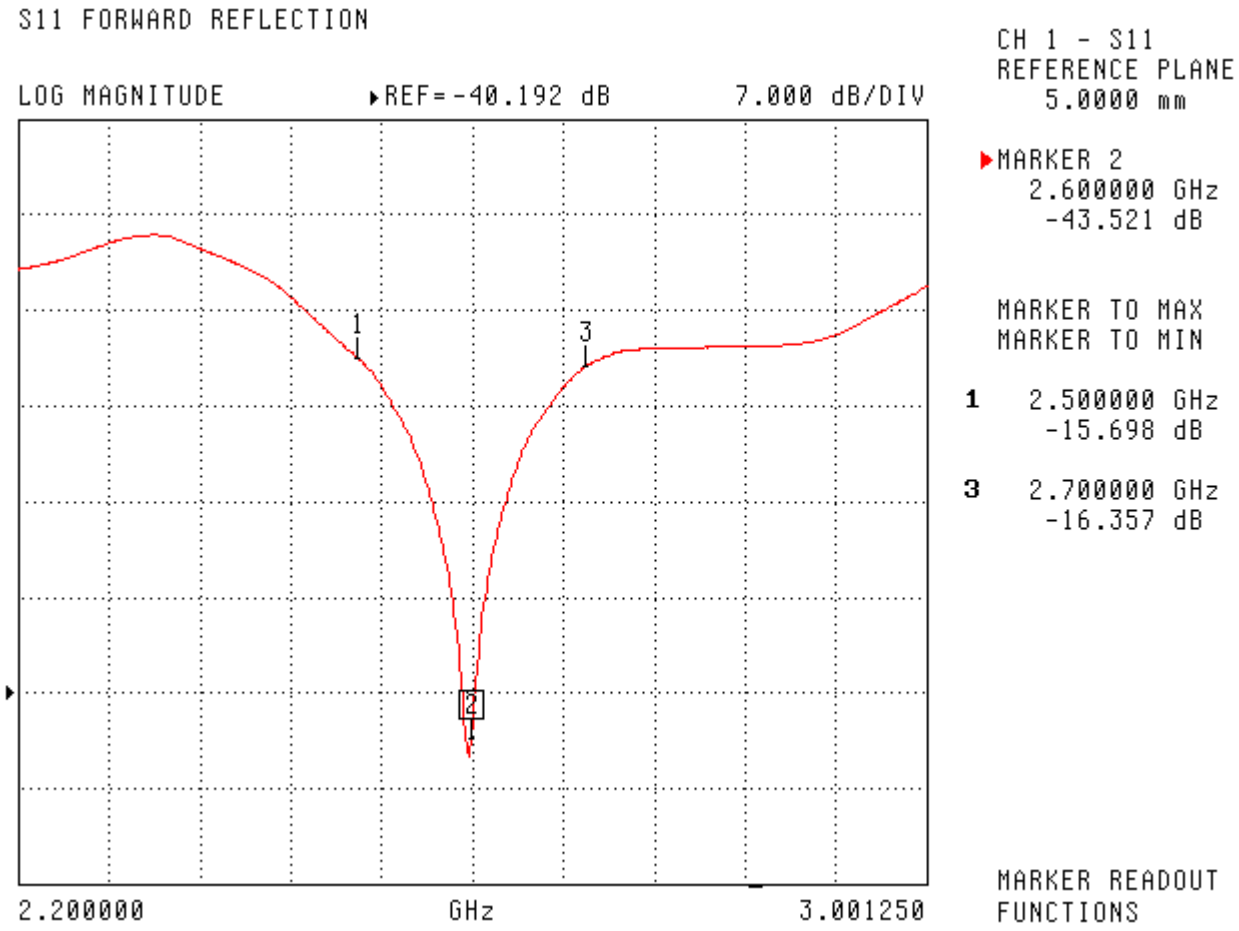
Body Tissue 2600 MHz	Measured
Dielectric constant, ε_r	51.15
Conductivity, σ [S/m]	2.13

Electrical Calibration

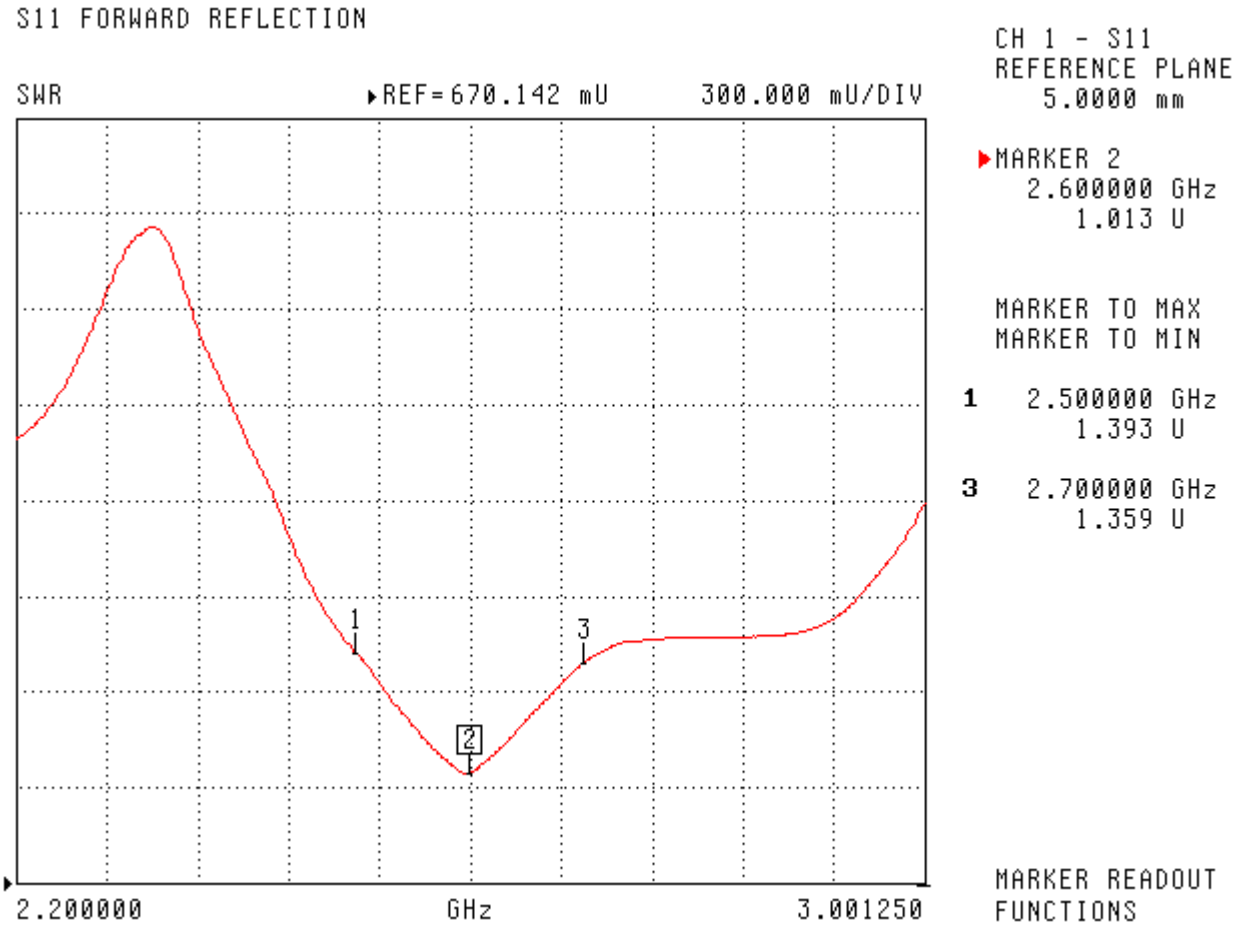
Test	Result
S11 R/L	-43.521
SWR	1.013U
Impedance	49.355Ω

The Following Graphs are the results as displayed on the Vector Network Analyzer.

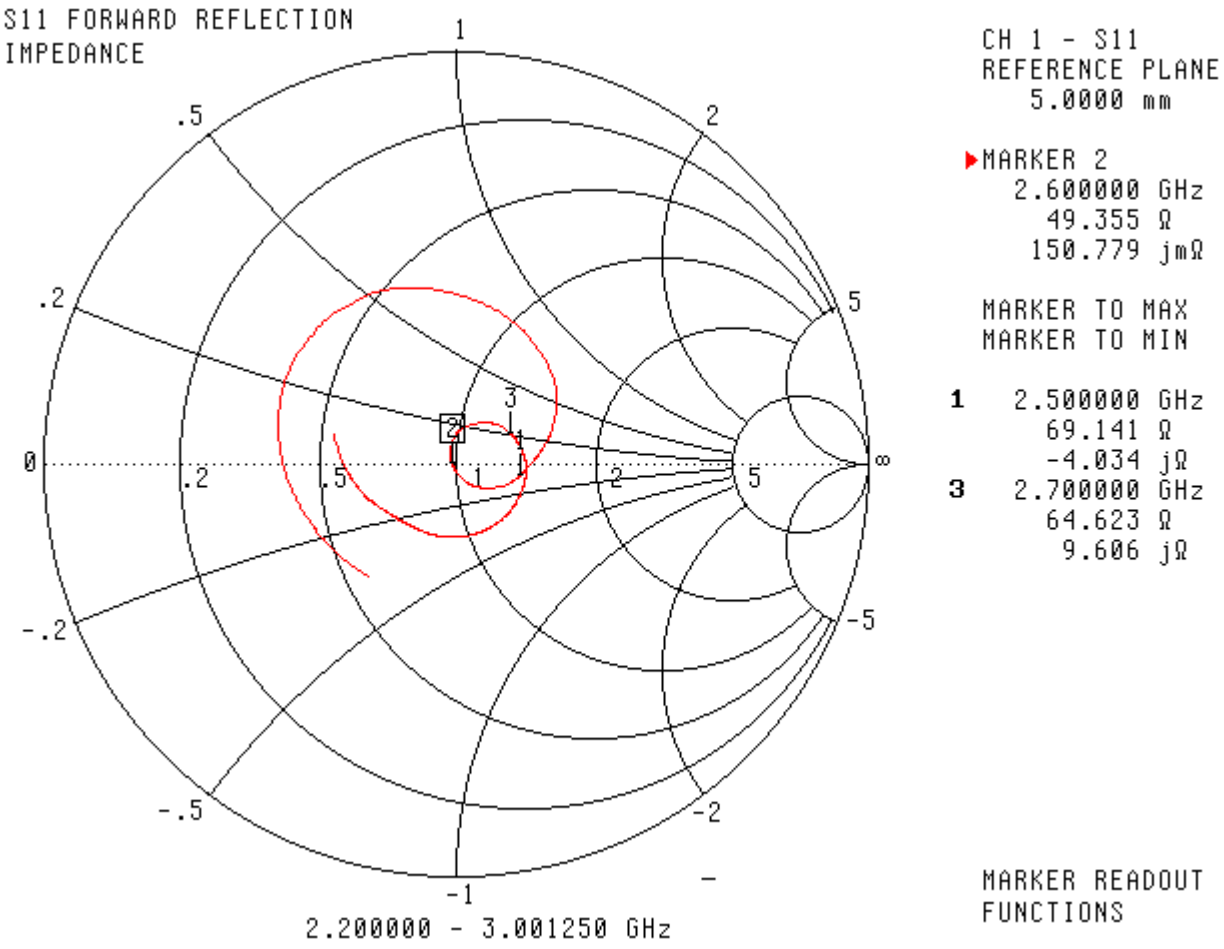
S11 Parameter Return Loss



SWR



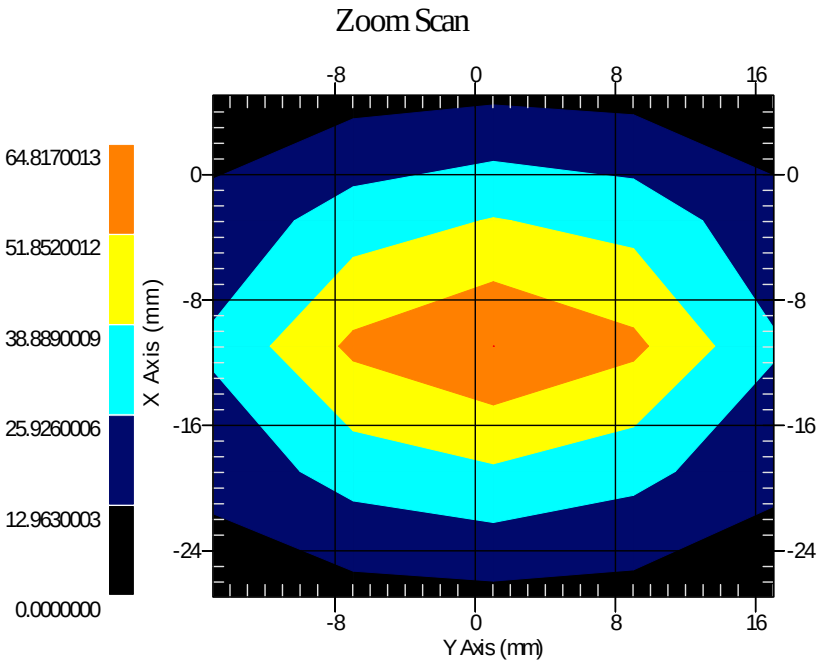
Smith Chart Dipole Impedance



This page has been reviewed for content and attested to by signature within this document.

System Validation Results Using the Electrically Calibrated Dipole

Body Tissue Frequency	1 Gram	10 Gram	Peak Above Feed Point
2600 MHz	56.42	24.68	119



Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2009.

NCL CALIBRATION LABORATORIES

Calibration File No: DC-1191
Project Number: RFEB-5556

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

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

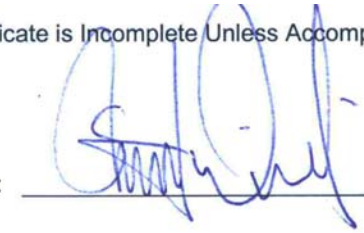
Validation Dipole

Manufacturer: APREL Laboratories
Part number: ALS-D-BB-S-2
Frequency: 5200-5800 MHz
Serial No: 235-00801

Customer: RFEL

Calibrated: 16th December 2010
Released on: 9th February 2011

This Calibration Certificate is Incomplete Unless Accompanied with the Calibration Results Summary

Released By: 

NCL CALIBRATION LABORATORIES

51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6

Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4162

Conditions

Dipole 235-00801 was new and taken from stock prior to calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 21 °C +/- 0.5°C

We the undersigned attest that to the best of our knowledge the calibration of this device has been accurately conducted and that all information contained within this report has been reviewed for accuracy.

Stuart Nicol

C. Teodorian

Calibration Results Summary

The following results relate the Calibrated Dipole and should be used as a quick reference for the user.

Mechanical Dimensions

Length: 23 mm
Height: 21 mm

Electrical Specification 5200MHz

SWR: 1.013 U
Return Loss: -44.267 dB
Impedance: 49.892 Ω

Electrical Specification 5600MHz

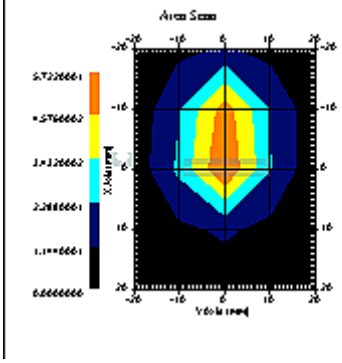
SWR: 1.006 U
Return Loss: -50.321 dB
Impedance: 50.247 Ω

Electrical Specification 5800MHz

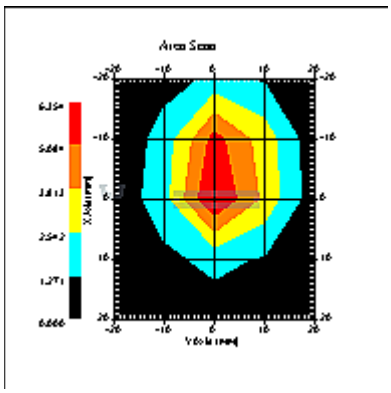
SWR: 1.021 U
Return Loss: -39.852 dB
Impedance: 49.261 Ω

System Validation Results

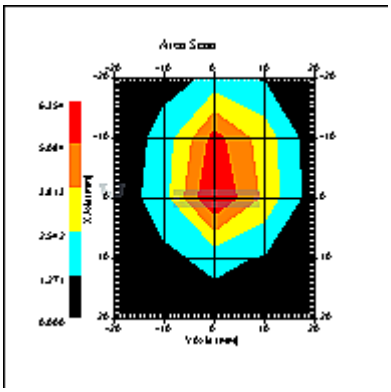
Frequency	1 Gram	10 Gram	Peak
5200 MHz	59.81	19.01	-
5600 MHz	63.10	20.60	-
5800 MHz	61.36	19.73	-



5200MHz



5600MHz



5800MHz

Introduction

This Calibration Report has been produced in line with the SSI Dipole Calibration Procedure SSI-TP-018-ALSAS. The results contained within this report are for Validation Dipole 235-00801. The calibration routine consisted of a three-step process. Step 1 was a mechanical verification of the dipole to ensure that it meets the mechanical specifications. Step 2 was an Electrical Calibration for the Validation Dipole, where the SWR, Impedance, and the Return loss were assessed. Step 3 involved a System Validation using the ALSAS-10U, along with APREL E-030 130 MHz to 26 GHz E-Field Probe Serial Number 215.

References

SSI-TP-018-ALSAS Dipole Calibration Procedure
SSI-TP-016 Tissue Calibration Procedure
IEEE 1528 “Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”
IEC-62209 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures”
Part 1: “Procedure to determine the Specific Absorption Rate (SAR) for hand-held devices used in close proximity of the ear (frequency range of 300 MHz to 3 GHz)”
IEC-62209 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures”
Part 2 *Draft*: “Procedure to determine the Specific Absorption Rate (SAR) for hand-held devices used in close proximity of the ear (frequency range of 30 MHz to 6 GHz)”

Conditions

Dipole 235-00801 was a re-calibration.

Ambient Temperature of the Laboratory: 22 °C +/- 0.5°C
Temperature of the Tissue: 20 °C +/- 0.5°C

Dipole Calibration Results

Mechanical Verification

APREL Length	APREL Height	Measured Length	Measured Height
23 mm	21 mm	23 mm	21 mm

Tissue Validation

Body Tissue 5200 MHz	Measured
Dielectric constant, ε_r	48.40
Conductivity, σ [S/m]	5.12

Body Tissue 5600 MHz	Measured
Dielectric constant, ε_r	47.31
Conductivity, σ [S/m]	5.80

Body Tissue 5800 MHz	Measured
Dielectric constant, ε_r	46.72
Conductivity, σ [S/m]	6.18

Electrical Calibration

Electrical Specification 5200MHz

SWR: 1.013 U
Return Loss: -44.267 dB
Impedance: 49.892 Ω

Electrical Specification 5600MHz

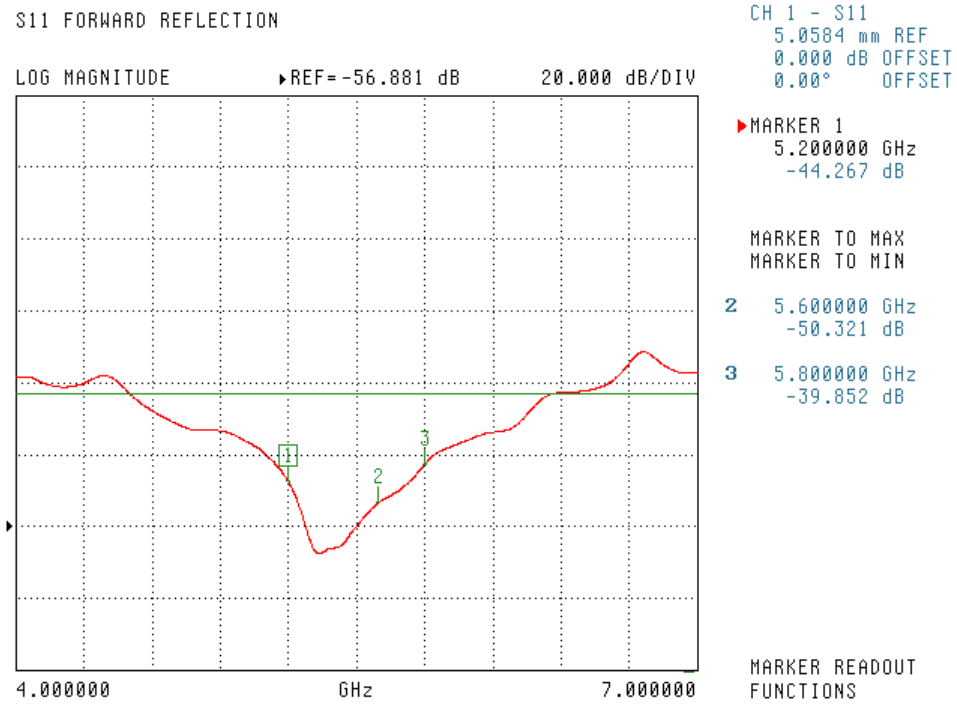
SWR: 1.006 U
Return Loss: -50.321 dB
Impedance: 50.247 Ω

Electrical Specification 5800MHz

SWR: 1.021 U
Return Loss: -39.852 dB
Impedance: 49.261 Ω

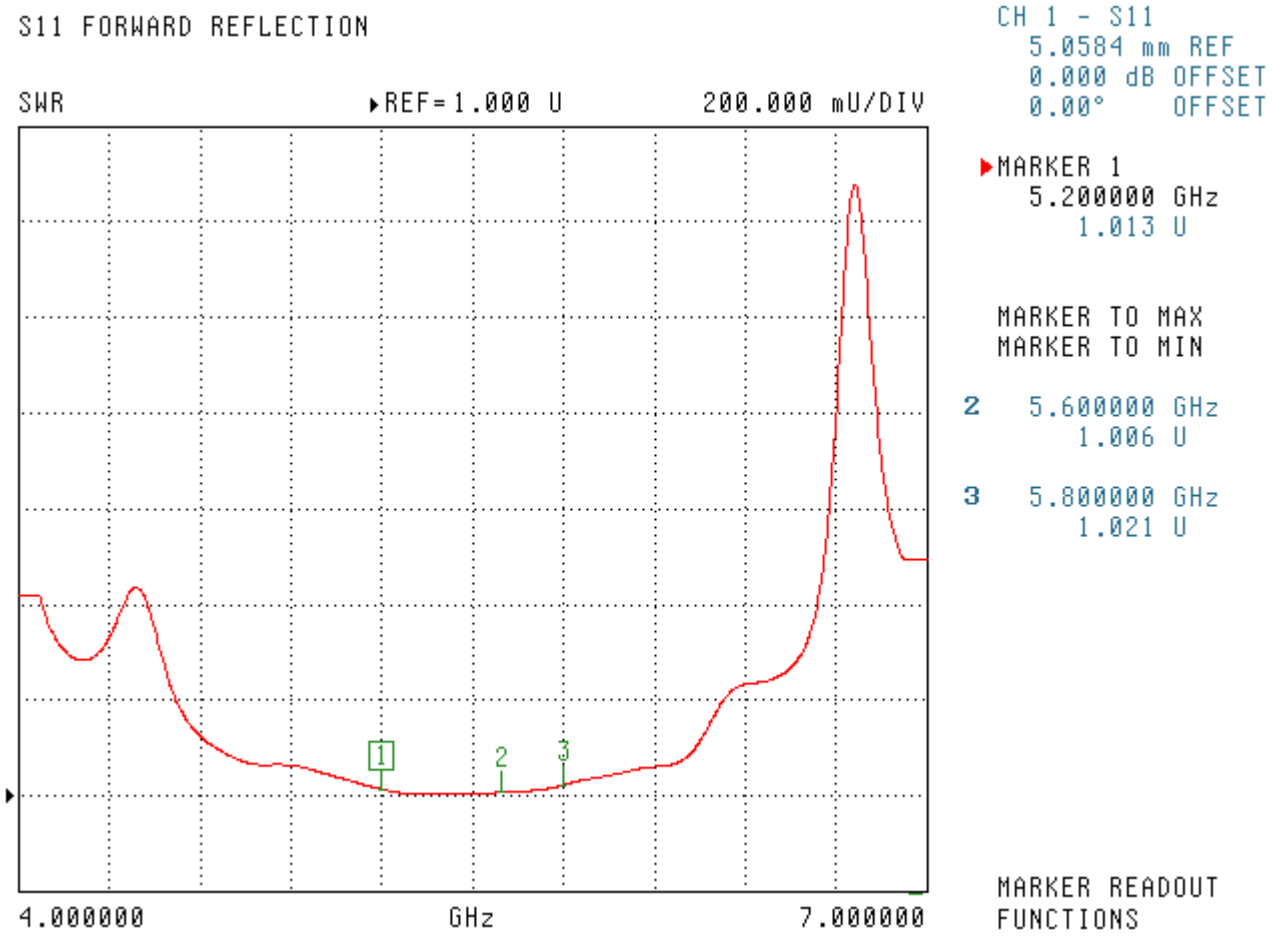
The Following Graphs are the results as displayed on the Vector Network Analyzer.

S11 Parameter Return Loss

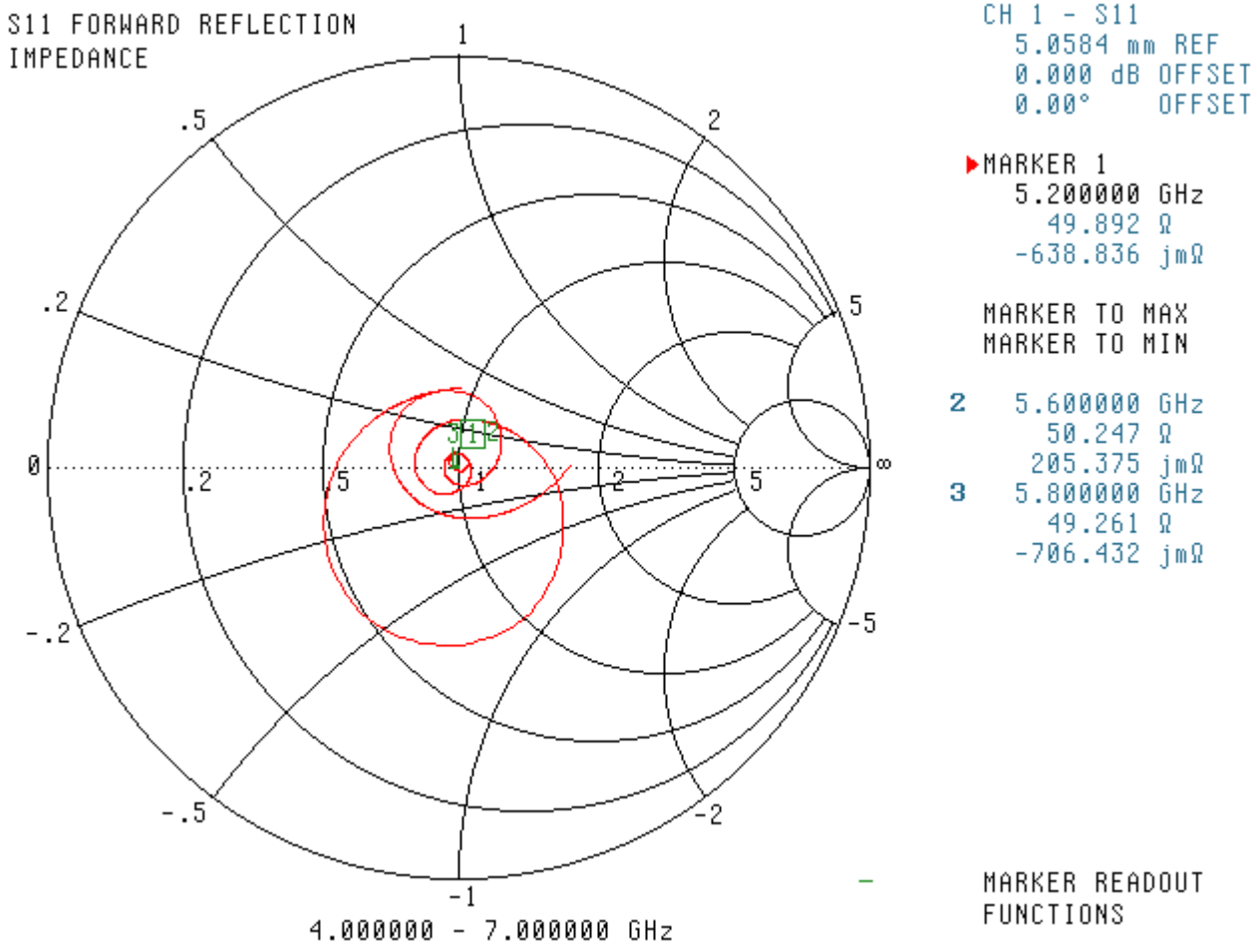


This page has been reviewed for content and attested to by signature within this document.

SWR

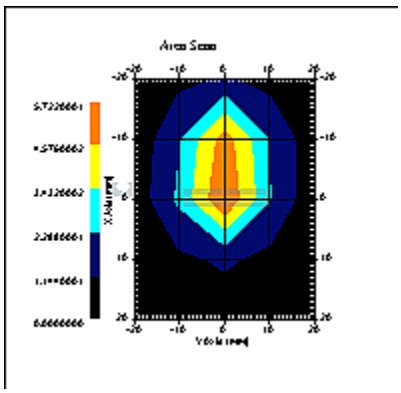


Smith Chart Dipole Impedance

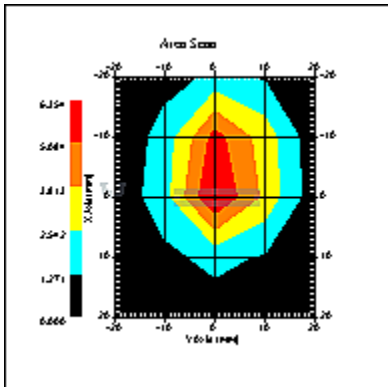


System Validation Results Using the Electrically Calibrated Dipole

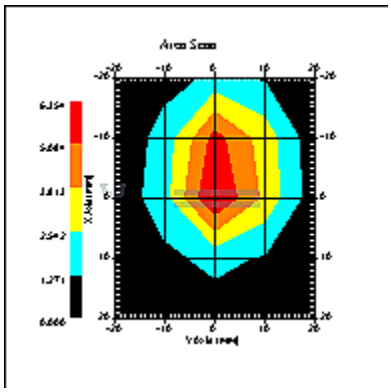
Frequency	1 Gram	10 Gram	Peak
5200 MHz	59.81	19.01	-
5600 MHz	63.10	20.60	-
5800 MHz	61.36	19.73	-



5200MHz



5600MHz



5800MHz

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2010.

Appendix F – Phantom Calibration Data Sheets

NCL CALIBRATION LABORATORIES

Calibration File No.: RFE-273

CERTIFICATE OF CALIBRATION

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

Thickness of the UniPhantom is 2 mm ± 10%
Pinna thickness is 6 mm ± 10%

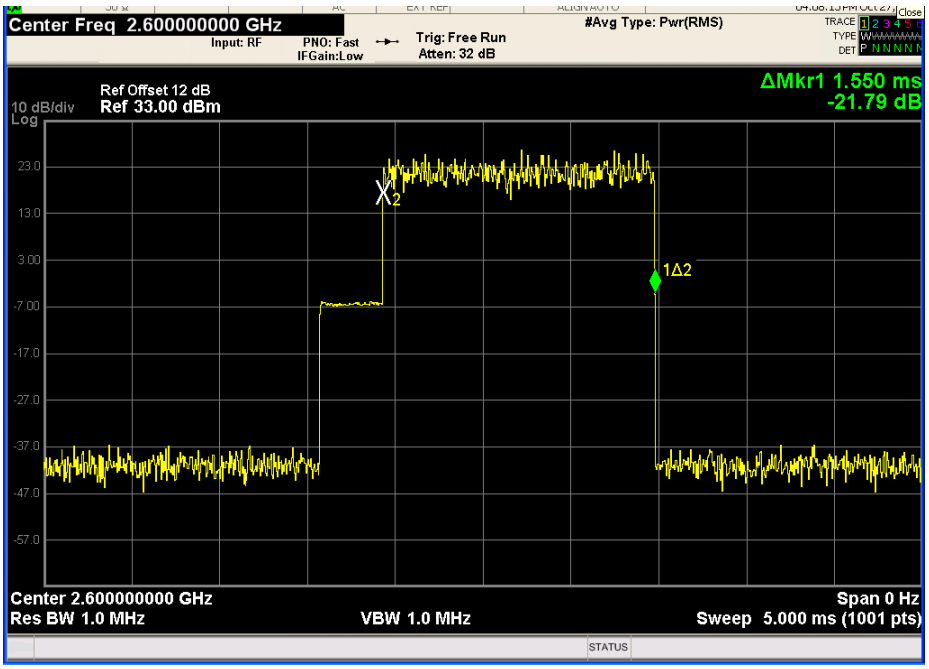
Resolution:	0.01 mm	Calibrated to:	0.0 mm
Stability:	OK	Accuracy:	< 0.1 mm

Calibrated By: Karen K. Feb 17/04.

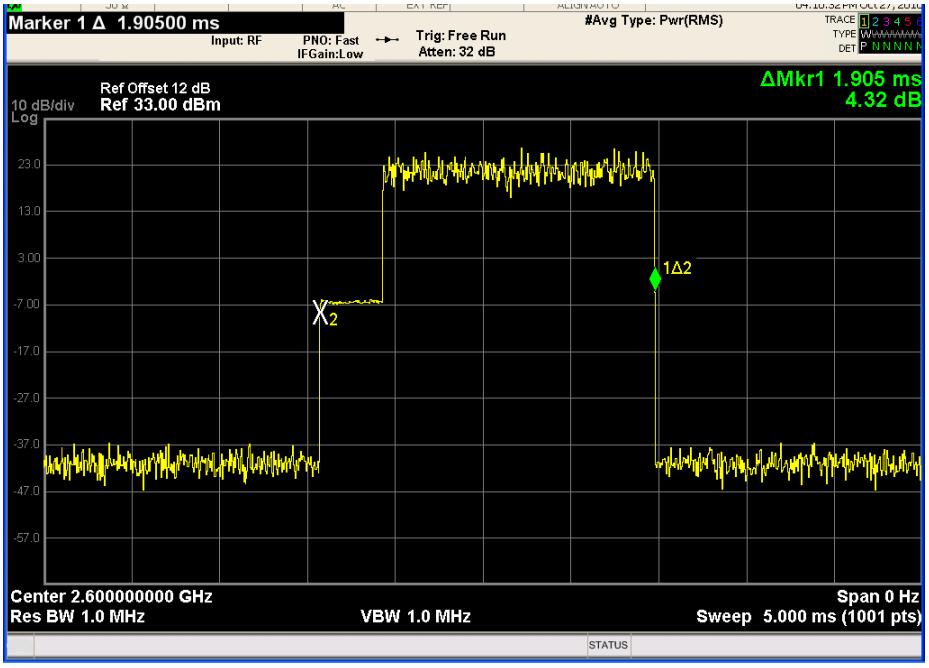
NCL CALIBRATION LABORATORIES
51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6

Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4161

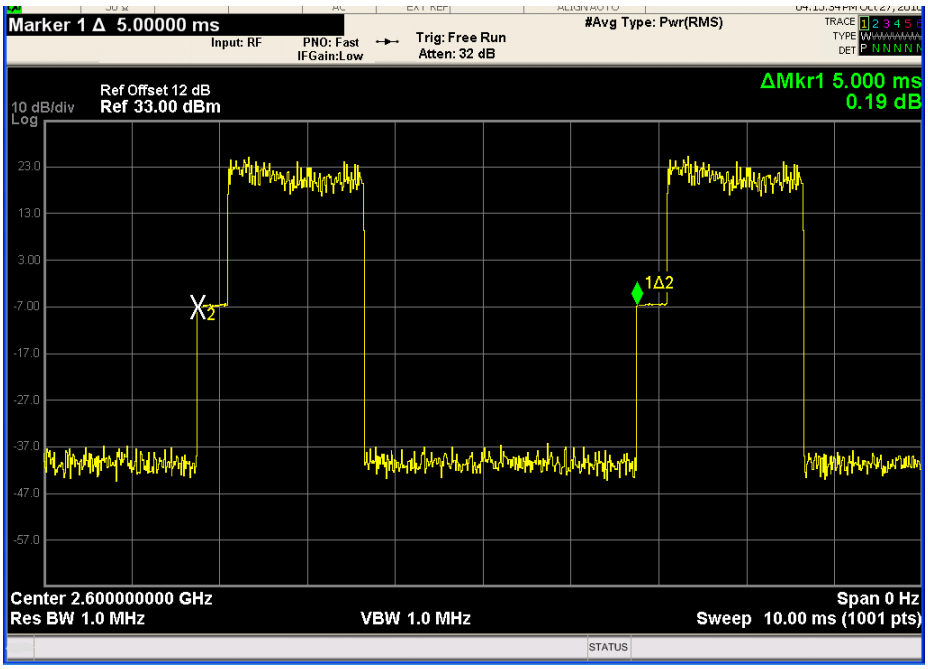
Appendix G – Additional Plots



WiMax Signal 15 Control Bits



WiMax Signal 18 Control Bits



WiMax Signal to Signal