



# RF EXPOSURE LAB, LLC

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## CERTIFICATE OF COMPLIANCE SAR EVALUATION

Navini Networks  
2240 Campbell Creek Rd., Suite 110  
Richardson, TX 75082

Dates of Test: May 5-9, 2006  
Test Report Number: SAR.20060602  
Revision B

FCC ID:	PL6-2500-PCM19-R3
Model(s):	2500-2686 PMX
Test Sample:	Pre-Production Unit same as Production
Serial No.:	FFFE421E
Equipment Type:	PCMCIA Wireless Modem
Classification:	Portable Transmitter Next to Body
TX Frequency Range:	2500 – 2686 MHz
Frequency Tolerance:	± 2.5 ppm
Maximum RF Output:	25.0 dBm Conducted
Signal Modulation:	OFDM/CDMA
Antenna Type (Length):	(2) Internal, (1) External Fixed (85mm x 18 mm)
Battery:	Power Supplied by Laptop Battery
Application Type:	Certification
FCC Rule Parts:	Part 15E

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

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

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

Jay M. Moulton  
Vice President



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## 1. Introduction

This measurement report shows compliance of the Navini Networks Model 2500-2686 PMX FCC ID: PL6-2500-PCM19-R3 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]

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

### SAR Definition [4]

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 ( $\rho$ ).

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

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

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

where:

$\sigma$  = conductivity of the tissue (S/m)

$\rho$  = mass density of the tissue (kg/m<sup>3</sup>)

$E$  = 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 April 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 pendant 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 April 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).

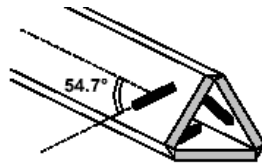
The overall uncertainty for the methodology and algorithms the ALSAS-10-U used during the SAR calculation was evaluated using the data from IEEE 1528 f3 algorithm:

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

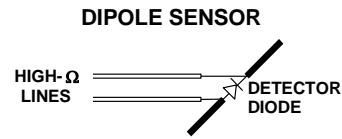
The probe used during the measurement process has been assessed to provide values for diode compression. These values are calculated during the probe calibration exercise and are used in the mathematical calculations for the assessment of SAR.

## E-Field Probe ALS-E-020

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



**Δ-BEAM**



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

### 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: ALS-E-020  
Serial Number: 215  
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 90<sup>th</sup> percentile adult male head dimensions as tabulated by the US Army. The SAM phantom shell is bisected along the mid sagittal 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].

### Brain & Muscle Simulating Mixture Characterization

The brain and muscle mixtures consist of a glycol based saline solution. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue. The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 have been incorporated in the following tables. Other head and 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 Muscle	2590 MHz Muscle
Mixing Percentage			
Water		73.20	73.20
DGBE		26.70	26.70
Triton X-100		0.00	0.00
Sugar		0.00	0.00
Salt		0.04	0.04
Bacteriacide		0.00	0.00
HEC		0.00	0.00
Dielectric Constant	Target	52.70	52.52
Conductivity (S/m)	Target	1.95	2.15

### 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. Body Worn Configurations

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

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then, when multiple accessories that contain metallic components are supplied with the device, the device is tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

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

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

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

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

## 7. 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 ENVIRONMENT Professional Population (W/kg) or (mW/g)
SPATIAL PEAK SAR <sup>1</sup> Brain	1.60	8.00
SPATIAL AVERAGE SAR <sup>2</sup> Whole Body	0.08	0.40
SPATIAL PEAK SAR <sup>3</sup> Hands, Feet, Ankles, Wrists	4.00	20.00

<sup>1</sup> 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.

<sup>2</sup> The Spatial Average value of the SAR averaged over the whole body.

<sup>3</sup> 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.

## 8. Measurement Uncertainty

### Exposure Assessment Measurement Uncertainty

Source of Uncertainty	Tolerance Value	Probability Distribution	Divisor	$c_i^{-1}$ (1-g)	$c_i^{-1}$ (10-g)	Standard Uncertainty (1-g) %	Standard Uncertainty (10-g) %
Measurement System							
Probe Calibration	3.5	normal	1	1	1	3.5	3.5
Axial Isotropy	3.7	rectangular	•3	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	1.5	1.5
Hemispherical Isotropy	10.9	rectangular	•3	•cp	•cp	4.4	4.4
Boundary Effect	1.0	rectangular	•3	1	1	0.6	0.6
Linearity	4.7	rectangular	•3	1	1	2.7	2.7
Detection Limit	1.0	rectangular	•3	1	1	0.6	0.6
Readout Electronics	1.0	normal	1	1	1	1.0	1.0
Response Time	0.8	rectangular	•3	1	1	0.5	0.5
Integration Time	1.7	rectangular	•3	1	1	1.0	1.0
RF Ambient Condition	3.0	rectangular	•3	1	1	1.7	1.7
Probe Positioner Mech.	0.4	rectangular	•3	1	1	0.2	0.2
Restriction							
Probe Positioning with respect to Phantom Shell	2.9	rectangular	•3	1	1	1.7	1.7
Extrapolation and Integration	3.7	rectangular	•3	1	1	2.1	2.1
Test Sample Positioning	4.0	normal	1	1	1	4.0	4.0
Device Holder Uncertainty	2.0	normal	1	1	1	2.0	2.0
Drift of Output Power	1.6	rectangular	•3	1	1	0.9	0.9
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.)	1.4	normal	1	0.7	0.5	0.0	0.0
Liquid Permittivity(target)	5.0	rectangular	•3	0.6	0.5	1.7	1.4
Liquid Permittivity(meas.)	1.4	normal	1	0.6	0.5	0.0	0.0
Combined Uncertainty		RSS				9.3	9.1
Combined Uncertainty (coverage factor=2)		Normal (k=2)				18.6	18.2

## 9. System Validation

### Tissue Verification

**Table 10.1 Measured Tissue Parameters**

Date(s)	2450 MHz Muscle	05-May-2006		06-May-2006		08-May-2006		09-May-2006	
Liquid Temperature (°C)	22.0	Target	Measured	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: $\epsilon$		52.70	52.23	52.70	53.11	52.70	52.67	52.70	51.93
Conductivity: $\sigma$		1.950	1.93	1.950	1.97	1.950	1.94	1.950	1.96

Date(s)	2590 MHz Muscle	05-May-2006		06-May-2006		08-May-2006		09-May-2006	
Liquid Temperature (°C)	22.0	Target	Measured	Target	Measured	Target	Measured	Target	Measured
Dielectric Constant: $\epsilon$		52.52	51.84	52.52	52.92	52.52	52.26	52.52	51.96
Conductivity: $\sigma$		2.150	2.22	2.150	2.20	2.150	2.21	2.150	2.19

See Appendix A for data printout.

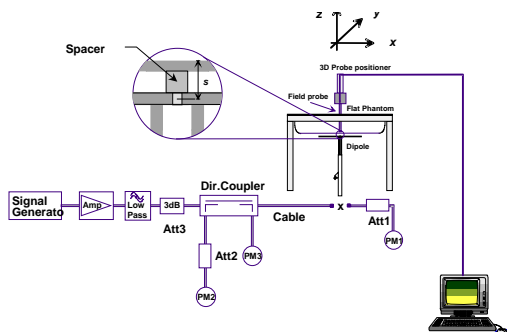
### Test System Verification

Prior to assessment, the system is verified to the  $\pm 10\%$  of the specifications at 2450 MHz by using the system kit(s). Muscle Tissue was used to verify the system (Graphic Plots Attached) Linear extrapolation to 1 Watt.

**Table 10.2 System Dipole Validation Target & Measured**

System Validation Kit ALS-D-2450-S-2 S/N: RFE-278	2450 MHz Muscle	Targeted SAR <sub>1g</sub> (W/kg)	Measure SAR <sub>1g</sub> (W/kg)	Deviation (%)
05-May-2006		52.4	49.97	- 4.64
06-May-2006		52.4	53.79	+ 2.65
08-May-2006		52.4	56.29	+7.42
09-May-2006		52.4	55.23	+ 5.40

See Appendix A for data plots.



**Figure 10.1 Dipole Validation Test Setup**

## 10. SAR Test Data Summary

### See Measurement Result Data Pages

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

### Procedures Used To Establish Test Signal

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

### Device Test Condition

The device is battery operated. Each SAR measurement was taken with a fully charged battery. 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. If a conducted power deviation of more than 5% occurred, the test was repeated.

### Device Information

The internal antenna is measured through an isolation switch. The loss due to the isolation switch has been measured and noted for each test. The device operates at a 46% duty cycle. The power measured and recorded is the average power measured with the loss due to the isolation switch.

The 15mm separation measurement was not conducted on the HP and Dell computer as the touch position yielded as a distance from of the phantom of 15mm and 12mm respectively. Therefore, no measurements are required. The Toshiba computer has a distance of 20mm from the phantom. Therefore, the measurements were conduct on the Toshiba computer. The mid channel was tested, and when the value was below the touch position the low and high channel were not tested.

## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – Dell C810 Model PP01X (200 kHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power			SAR (W/kg)
		MHz	Power Code*			(dBm)		Battery	
Touch	External	2592	22	OFDM	0	25.1	24.9	Standard	0.233
		2504	23	OFDM	17.6	7.3	7.0	Standard	0.351
	INV F1	2592	22	OFDM	17.1	8.1	7.9	Standard	0.361
		2684	22	OFDM	17.6	7.6	7.4	Standard	0.318
	INV F2	2504	23	OFDM	21.3	3.8	3.5	Standard	0.233
		2592	22	OFDM	18.1	6.9	6.8	Standard	0.400
	2684	22	OFDM	17	8.2	8.1	Standard	0.433	

\*Power code is used to set power

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

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



Jay M. Moulton  
Vice President

## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – Dell C810 Model PP01X (1 MHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power		SAR (W/kg)	
		MHz	Setting Code*			(dBm)	Battery		
Touch	External	2592	22	OFDM	0	25.2	24.9	Standard	0.208
		2504	23	OFDM	17.6	7.6	7.4	Standard	0.291
	INV F1	2592	22	OFDM	17.1	8.0	7.8	Standard	0.406
		2684	22	OFDM	17.6	7.5	7.4	Standard	0.273
		2504	23	OFDM	21.3	3.8	3.6	Standard	0.281
	INV F2	2592	22	OFDM	18.1	7.1	6.9	Standard	0.516
		2684	22	OFDM	17	8.1	8.0	Standard	0.363

\*Setting code is used to set antenna, frequency and power

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

5. Battery is fully charged for all tests.  
 Power Measured  Conducted  ERP  EIRP
6. SAR Measurement  
 Phantom Configuration  Left Head  Uni-phantom  Right Head  
 SAR Configuration  Head  Body
7. Test Signal Call Mode  Test Code  Base Station Simulator
8. Test Configuration  With Holster  Without Holster  N/A



Jay M. Moulton  
 Vice President



## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – Dell C810 Model PP01X (1.6 MHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power		SAR (W/kg)	
		MHz	Setting Code*			(dBm)	Battery		
Touch	External	2592	22	OFDM	0	25.1	24.7	Standard	0.225
		2504	23	OFDM	17.6	7.4	7.1	Standard	0.386
	INV F1	2592	22	OFDM	17.1	8.0	7.8	Standard	0.367
		2684	22	OFDM	17.6	7.5	7.3	Standard	0.228
		2504	23	OFDM	21.3	3.9	3.8	Standard	0.246
	INV F2	2592	22	OFDM	18.1	7.0	6.9	Standard	0.458
		2684	22	OFDM	17	8.3	8.1	Standard	0.550

\*Setting code is used to set antenna, frequency and power

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

9. Battery is fully charged for all tests.

Power Measured

Conducted

ERP

EIRP

10. SAR Measurement

Phantom Configuration

Left Head

Uni-phantom

Right Head

SAR Configuration

Head

Body

11. Test Signal Call Mode

Test Code

Base Station Simulator

12. Test Configuration

With Holster

Without Holster

N/A



Jay M. Moulton  
Vice President

## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – HP Pavilion zv5330 (200 kHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power		Battery	SAR (W/kg)
		MHz	Power Code*			(dBm)			
Touch	External	2592	22	OFDM	0	25.1	24.8	Standard	0.158
		2504	23	OFDM	17.6	7.6	7.2	Standard	0.304
	INV F1	2592	22	OFDM	17.1	8.2	8.0	Standard	0.380
		2684	22	OFDM	17.6	7.5	7.3	Standard	0.314
		2504	23	OFDM	21.3	3.9	3.7	Standard	0.182
	INV F2	2592	22	OFDM	18.1	7.2	7.0	Standard	0.289
		2684	22	OFDM	17	8.3	8.1	Standard	0.405

\*Power code is used to set power

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

13. Battery is fully charged for all tests.

Power Measured

Conducted

ERP

EIRP

14. SAR Measurement

Phantom Configuration

Left Head

Uni-phantom

Right Head

SAR Configuration

Head

Body

15. Test Signal Call Mode

Test Code

Base Station Simulator

16. Test Configuration

With Holster

Without Holster

N/A



Jay M. Moulton  
Vice President


**SAR Data Summary – 2590 MHz Muscle**

MEASUREMENT RESULTS – HP Pavilion zv5330 (1 MHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power		Battery	SAR (W/kg)
		MHz	Power Code*			(dBm)			
Touch	External	2592	22	OFDM	0	25.3	25.0	Standard	0.225
		2504	23	OFDM	17.6	7.6	7.3	Standard	0.340
	INV F1	2592	22	OFDM	17.1	8.1	7.8	Standard	0.466
		2684	22	OFDM	17.6	7.6	7.4	Standard	0.365
		2504	23	OFDM	21.3	3.9	3.7	Standard	0.340
	INV F2	2592	22	OFDM	18.1	7.2	7.0	Standard	0.551
		2684	22	OFDM	17	8.4	8.2	Standard	0.357

\*Power code is used to set power

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

17. Battery is fully charged for all tests.  
 Power Measured  Conducted  ERP  EIRP
18. SAR Measurement  
 Phantom Configuration  Left Head  Uni-phantom  Right Head  
 SAR Configuration  Head  Body
19. Test Signal Call Mode  Test Code  Base Station Simulator
20. Test Configuration  With Holster  Without Holster  N/A



\_\_\_\_\_  
 Jay M. Moulton  
 Vice President

## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – HP Pavilion zv5330 (1.6 MHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power		Battery	SAR (W/kg)
		MHz	Power Code*			(dBm)			
Touch	External	2592	22	OFDM	0	25.3	25.1	Standard	0.182
		2504	23	OFDM	17.6	7.6	7.3	Standard	0.320
	INV F1	2592	22	OFDM	17.1	8.2	8.0	Standard	0.476
		2684	22	OFDM	17.6	7.6	7.3	Standard	0.309
		2504	23	OFDM	21.3	3.9	3.7	Standard	0.314
	INV F2	2592	22	OFDM	18.1	7.3	7.0	Standard	0.560
		2684	22	OFDM	17	8.4	8.1	Standard	0.410

\*Power code is used to set power

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

21. Battery is fully charged for all tests.

Power Measured

Conducted

ERP

EIRP

22. SAR Measurement

Phantom Configuration

Left Head

Uni-phantom

Right Head

SAR Configuration

Head

Body

23. Test Signal Call Mode

Test Code

Base Station Simulator

24. Test Configuration

With Holster

Without Holster

N/A



Jay M. Moulton  
Vice President

### SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – Toshiba Satellite A75-S209 (200 kHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power		SAR (W/kg)	
		MHz	Setting Code*			(dBm)	Battery		
Touch	External	2592	22	OFDM	0	25.4	24.1	Standard	0.196
		2504	23	OFDM	17.6	7.6	7.5	Standard	0.235
	INV F1	2592	22	OFDM	17.1	8.1	8.0	Standard	0.312
		2684	22	OFDM	17.6	7.6	7.4	Standard	0.246
		2504	23	OFDM	21.3	3.9	3.7	Standard	0.194
	INV F2	2592	22	OFDM	18.1	7.2	7.0	Standard	0.314
		2684	22	OFDM	17	8.3	8.0	Standard	<b>0.453</b>

\*Setting code is used to set antenna, frequency and power

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

25. Battery is fully charged for all tests.  
 Power Measured  Conducted  ERP  EIRP
26. SAR Measurement  
 Phantom Configuration  Left Head  Uni-phantom  Right Head  
 SAR Configuration  Head  Body
27. Test Signal Call Mode  Test Code  Base Station Simulator
28. Test Configuration  With Holster  Without Holster  N/A



Jay M. Moulton  
 Vice President

## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – Toshiba Satellite A75-S209 (1 MHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power			SAR (W/kg)
		MHz	Setting Code*			(dBm)		Battery	
Touch	External	2592	22	OFDM	0	25.1	24.9	Standard	0.138
		2504	23	OFDM	17.6	7.5	7.3	Standard	0.250
	INV F1	2592	22	OFDM	17.1	8.0	7.8	Standard	0.376
		2684	22	OFDM	17.6	7.6	7.5	Standard	0.250
		2504	23	OFDM	21.3	3.9	3.8	Standard	0.192
	INV F2	2592	22	OFDM	18.1	6.9	6.7	Standard	0.363
		2684	22	OFDM	17	8.2	8.0	Standard	0.276

\*Setting code is used to set antenna, frequency and power

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

29. Battery is fully charged for all tests.

Power Measured

Conducted

ERP

EIRP

30. SAR Measurement

Phantom Configuration

Left Head

Uni-phantom

Right Head

SAR Configuration

Head

Body

31. Test Signal Call Mode

Test Code

Base Station Simulator

32. Test Configuration

With Holster

Without Holster

N/A



Jay M. Moulton  
Vice President

## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – Toshiba Satellite A75-S209 (1.6 MHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power		SAR (W/kg)	
		MHz	Setting Code*			(dBm)	Battery		
Touch	External	2592	22	OFDM	0	25.1	24.8	Standard	0.143
		2504	23	OFDM	17.6	7.5	7.3	Standard	0.255
	INV F1	2592	22	OFDM	17.1	8.0	7.9	Standard	0.315
		2684	22	OFDM	17.6	7.4	7.3	Standard	0.221
		2504	23	OFDM	21.3	3.8	3.6	Standard	0.220
	INV F2	2592	22	OFDM	18.1	7.0	6.8	Standard	0.302
		2684	22	OFDM	17	8.2	7.9	Standard	0.247

\*Setting code is used to set antenna, frequency and power

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

33. Battery is fully charged for all tests.

Power Measured

Conducted

ERP

EIRP

34. SAR Measurement

Phantom Configuration

Left Head

Uni-phantom

Right Head

SAR Configuration

Head

Body

35. Test Signal Call Mode

Test Code

Base Station Simulator

36. Test Configuration

With Holster

Without Holster

N/A



Jay M. Moulton  
Vice President

## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – Toshiba Satellite A75-S209 (200 kHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power			SAR (W/kg)
		MHz	Setting Code*			(dBm)		Battery	
15 mm	External	2592	22	OFDM	0	25.3	24.9	Standard	0.137
		2504	23	OFDM	17.6	7.7	7.5	Standard	0.280
	INV F1	2592	22	OFDM	17.1	8.2	8.0	Standard	0.361
		2684	22	OFDM	17.6	7.6	7.4	Standard	0.357
	INV F2	2504	23	OFDM	21.3	3.9	3.8	Standard	0.154
		2592	22	OFDM	18.1	7.2	7.0	Standard	0.271
	2684	22	OFDM	17	8.4	8.2	Standard	0.199	

\*Setting code is used to set antenna, frequency and power

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

37. Battery is fully charged for all tests.

Power Measured

Conducted

ERP

EIRP

38. SAR Measurement

Phantom Configuration

Left Head

Uni-phantom

Right Head

SAR Configuration

Head

Body

39. Test Signal Call Mode

Test Code

Base Station Simulator

40. Test Configuration

With Holster

Without Holster

N/A



Jay M. Moulton  
Vice President



## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – Toshiba Satellite A75-S209 (1 MHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power			SAR (W/kg)
		MHz	Setting Code*			(dBm)		Battery	
15 mm	External	2592	22	OFDM	0	25.3	25.1	Standard	0.117
		2504	23	OFDM	17.6	7.6	7.4	Standard	0.289
	INV F1	2592	22	OFDM	17.1	8.2	8.0	Standard	0.425
		2684	22	OFDM	17.6	7.6	7.4	Standard	0.359
	INV F2	2504	23	OFDM	21.3	4.0	3.8	Standard	0.171
		2592	22	OFDM	18.1	7.2	7.0	Standard	0.455
	2684	22	OFDM	17	8.1	7.9	Standard	0.327	

\*Setting code is used to set antenna, frequency and power

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

41. Battery is fully charged for all tests.

Power Measured

Conducted

ERP

EIRP

42. SAR Measurement

Phantom Configuration

Left Head

Uni-phantom

Right Head

SAR Configuration

Head

Body

43. Test Signal Call Mode

Test Code

Base Station Simulator

44. Test Configuration

With Holster

Without Holster

N/A



Jay M. Moulton  
Vice President

## SAR Data Summary – 2590 MHz Muscle

MEASUREMENT RESULTS – Toshiba Satellite A75-S209 (1.6 MHz)									
EUT Position	Antenna	Frequency		Modulation	Isolation (dB)	Begin / End Power			SAR (W/kg)
		MHz	Setting Code*			(dBm)		Battery	
15 mm	External	2592	22	OFDM	0	25.3	24.9	Standard	0.136
		2504	23	OFDM	17.6	7.7	7.5	Standard	0.294
	INV F1	2592	22	OFDM	17.1	8.1	7.9	Standard	0.267
		2684	22	OFDM	17.6	7.6	7.4	Standard	0.233
	INV F2	2504	23	OFDM	21.3	3.8	3.6	Standard	0.263
		2592	22	OFDM	18.1	7.2	7.0	Standard	0.233
		2684	22	OFDM	17	8.3	8.1	Standard	0.291
						8.3	8.1	Standard	0.291

\*Setting code is used to set antenna, frequency and power

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

45. Battery is fully charged for all tests.

Power Measured

Conducted

ERP

EIRP

46. SAR Measurement

Phantom Configuration

Left Head

Uni-phantom

Right Head

SAR Configuration

Head

Body

47. Test Signal Call Mode

Test Code

Base Station Simulator

48. Test Configuration

With Holster

Without Holster

N/A



Jay M. Moulton  
Vice President

## 11. Test Equipment List

**Table 12.1 Equipment Specifications**

Type	Calibration Due Date	Serial Number
ThermoCRS Robot	N/A	RAF0338198
ThermoCRS Controller	N/A	RCF0338224
ThermoCRS Teach Pendant (Joystick)	N/A	STP0334405
IBM Computer, 2.66 MHz P4	N/A	8189D8U KCPR08N
Apriel E-Field Probe ALS-E020	06/10/2006	215
Apriel Dummy Probe	N/A	023
Apriel Left Phantom	N/A	RFE-267
Apriel Right Phantom	N/A	RFE-268
Apriel UniPhantom	N/A	RFE-273
Apriel Validation Dipole ALS-D-450-S-2	01/12/2007	RFE-362
Apriel Validation Dipole ALS-D-835-S-2	02/16/2008	RFE-274
Apriel Validation Dipole ALS-D-1900-S-2	02/15/2008	RFE-277
Apriel Validation Dipole ALS-D-2450-S-2	02/17/2008	RFE-278
Apriel Validation Dipole ALS-D-BB-S-2	05/24/2007	5258-235-00801
Agilent (HP) 437B Power Meter	12/12/2006	3125U08837
Agilent (HP) 8481B Power Sensor	12/19/2006	3318A05384
Advantest R3261A Spectrum Analyzer	12/13/2006	31720068
Agilent (HP) 8350B Signal Generator	02/23/2007	2749A10226
Agilent (HP) 83525A RF Plug-In	02/23/2007	2647A01172
Agilent (HP) 8753C Vector Network Analyzer	02/02/2007	3135A01724
Agilent (HP) 85047A S-Parameter Test Set	02/02/2007	2904A00595
Apriel Dielectric Probe Assembly	N/A	0011
Microwave Power Devices 510-10E Amplifier	02/23/2007	6063-001
Microwave Power Devices 1020-9E Amplifier	02/23/2007	5618-1
Brain Equivalent Matter (450 MHz)	N/A	N/A
Brain Equivalent Matter (835 MHz)	N/A	N/A
Brain Equivalent Matter (1900 MHz)	N/A	N/A
Brain Equivalent Matter (2450 MHz)	N/A	N/A
Muscle Equivalent Matter (450 MHz)	N/A	N/A
Muscle Equivalent Matter (835 MHz)	N/A	N/A
Muscle Equivalent Matter (1900 MHz)	N/A	N/A
Muscle Equivalent Matter (2450 MHz)	N/A	N/A
Muscle Equivalent Matter (5200 MHz)	N/A	N/A
Muscle Equivalent Matter (5800 MHz)	N/A	N/A

## 12. Conclusion

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

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

## 13. References

- [1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation, August 1996
- [2] ANSI/IEEE C95.1 – 1999, American National Standard Safety Levels with respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300kHz to 100GHz, New York: IEEE, 1992.
- [3] ANSI/IEEE C95.3 – 2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave, New York: IEEE, 1992.
- [4] Federal Communications Commission, OET Bulletin 65 (Edition 97-01), Supplement C (Edition 01-01), Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields, July 2001.
- [5] IEEE Standard 1528 – 2003, IEEE Recommended Practice for Determining the Peak-Spatial Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communication Devices: Measurement Techniques, October 2003.

## Appendix A – System Validation Plots and Data

\*\*\*\*\*

Test Result for UIM Dielectric Parameter

Fri 05/May/2006 08:04:53

Freq Frequency(GHz)

FCC\_eH FCC Bulletin 65 Supplement C ( June 2001) Limits for Head Epsilon

FCC\_sH FCC Bulletin 65 Supplement C (June 2001) Limits for Head Sigma

FCC\_eB FCC Limits for Body Epsilon

FCC\_sB FCC Limits for Body Sigma

Test\_e Epsilon of UIM

Test\_s Sigma of UIM

\*\*\*\*\*

Freq	FCC_eB	FCC_sB	Test_e	Test_s
2.4200	52.74	1.92	52.28	1.91
2.4300	52.73	1.93	52.26	1.92
2.4400	52.71	1.94	52.24	1.92
2.4500	52.70	1.95	52.23	1.93
2.4600	52.69	1.96	52.22	1.94
2.4700	52.67	1.98	52.21	1.95
2.4800	52.66	1.99	52.20	1.97

\*\*\*\*\*

Test Result for UIM Dielectric Parameter

Fri 05/May/2006 08:12:17

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
2.5600	52.56	2.11	51.89	2.18
2.5700	52.55	2.12	51.87	2.20
2.5800	52.53	2.13	51.86	2.21
2.5900	52.52	2.15	51.84	2.22
2.6000	52.51	2.16	51.81	2.24
2.6100	52.50	2.18	51.80	2.25
2.6200	52.48	2.19	51.78	2.28

\*\*\*\*\*

Test Result for UIM Dielectric Parameter

Sat 06/May/2006 07:04:18

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
2.4200	52.74	1.92	52.95	1.95
2.4300	52.73	1.93	52.99	1.96
2.4400	52.71	1.94	53.09	1.97
2.4500	52.70	1.95	53.11	1.97
2.4600	52.69	1.96	53.14	2.00
2.4700	52.67	1.98	53.16	2.01
2.4800	52.66	1.99	53.17	2.03

\*\*\*\*\*

Test Result for UIM Dielectric Parameter

Sat 06/May/2006 07:12:52

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
2.5600	52.56	2.11	53.00	2.16
2.5700	52.55	2.12	52.97	2.17
2.5800	52.53	2.13	52.95	2.19
2.5900	52.52	2.15	52.92	2.20
2.6000	52.51	2.16	52.91	2.22
2.6100	52.50	2.18	52.89	2.23
2.6200	52.48	2.19	52.77	2.24

\*\*\*\*\*

Test Result for UIM Dielectric Parameter

Mon 08/May/2006 07:12:36

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
2.4200	52.74	1.92	52.61	1.90
2.4300	52.73	1.93	52.63	1.91
2.4400	52.71	1.94	52.65	1.92
2.4500	52.70	1.95	52.67	1.94
2.4600	52.69	1.96	52.69	1.96
2.4700	52.67	1.98	52.70	1.98
2.4800	52.66	1.99	52.73	1.99

\*\*\*\*\*

Test Result for UIM Dielectric Parameter

Mon 08/May/2006 07:18:24

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
2.5600	52.56	2.11	52.21	2.15
2.5700	52.55	2.12	52.23	2.18
2.5800	52.53	2.13	52.24	2.19
2.5900	52.52	2.15	52.26	2.21
2.6000	52.51	2.16	52.27	2.23
2.6100	52.50	2.18	52.29	2.25
2.6200	52.48	2.19	52.31	2.27



\*\*\*\*\*

Test Result for UIM Dielectric Parameter

Tue 09/May/2006 07:17:51

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
2.4200	52.74	1.92	52.18	1.91
2.4300	52.73	1.93	52.07	1.93
2.4400	52.71	1.94	52.05	1.96
2.4500	52.70	1.95	51.93	1.96
2.4600	52.69	1.96	51.91	1.98
2.4700	52.67	1.98	51.89	2.00
2.4800	52.66	1.99	51.87	1.99

\*\*\*\*\*

Test Result for UIM Dielectric Parameter

Tue 09/May/2006 07:35:36

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
2.5600	52.56	2.11	51.90	2.13
2.5700	52.55	2.12	51.92	2.15
2.5800	52.53	2.13	51.93	2.17
2.5900	52.52	2.15	51.96	2.19
2.6000	52.51	2.16	51.97	2.22
2.6100	52.50	2.18	52.00	2.25
2.6200	52.48	2.19	52.02	2.27

## SAR Test Report

By Operator : Jay  
Measurement Date : 05-May-2006  
Starting Time : 05-May-2006 08:20:44 AM  
End Time : 05-May-2006 08:34:06 AM  
Scanning Time : 802 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 : 2.745 W/kg  
Power Drift-Finish: 2.830 W/kg  
Power Drift (%) : 3.097

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2450  
Frequency : 2450.00 MHz  
Last Calib. Date : 05-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 50.00 RH%  
Epsilon : 52.23 F/m  
Sigma : 1.93 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

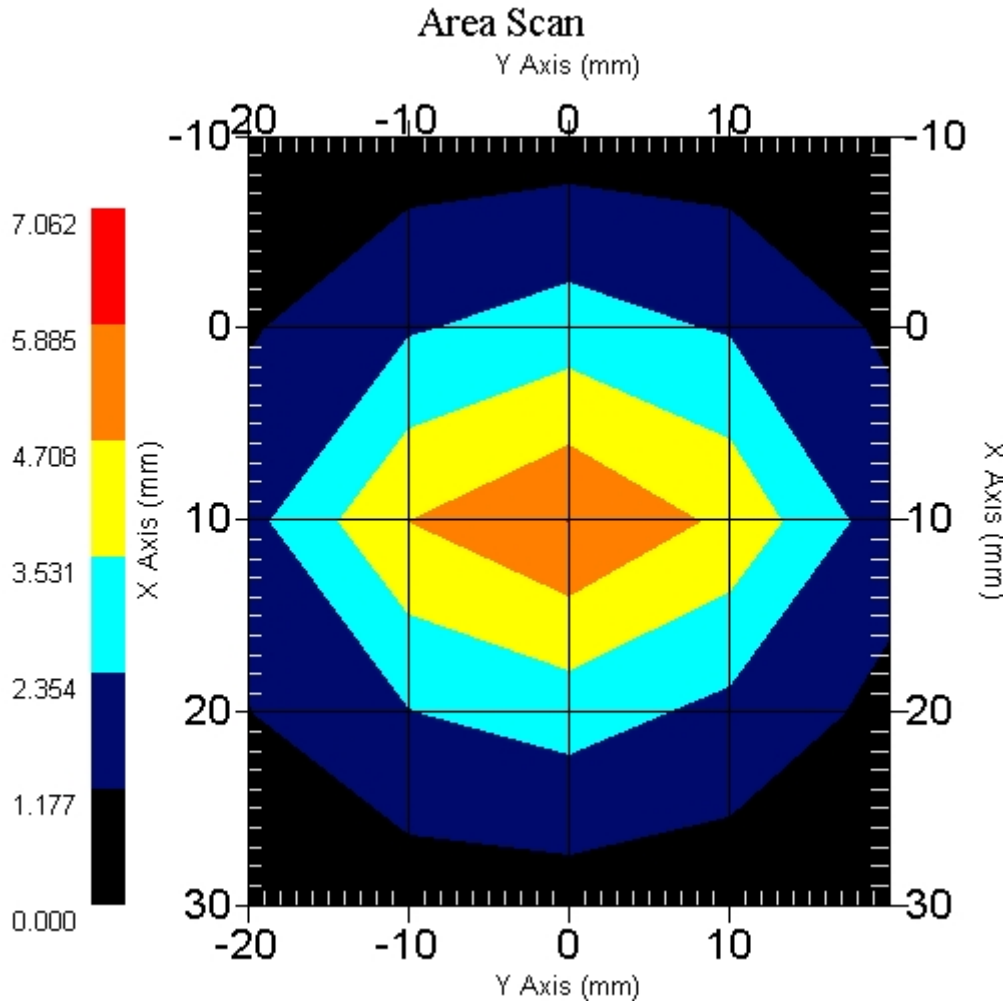
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 1  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 1  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 05-May-2006  
 Set-up Time : 8:33:20 AM  
 Area Scan : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm  
 Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

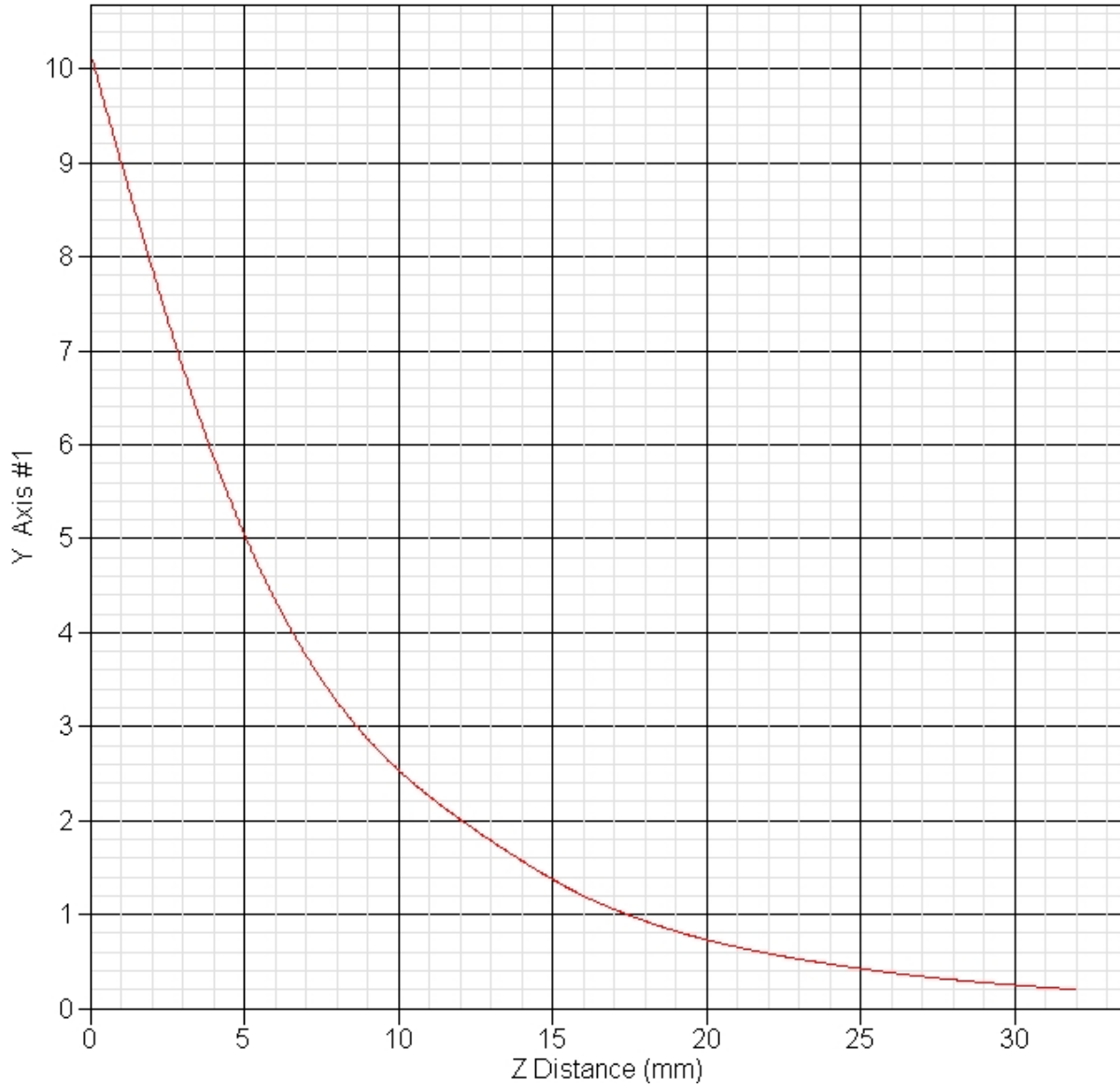
Other Data

DUT Position : Touch  
 Separation : 10 mm  
 Channel : Mid - 2450



1 gram SAR value : 4.997 W/kg  
 10 gram SAR value : 2.314 W/kg  
 Area Scan Peak SAR : 5.887 W/kg  
 Zoom Scan Peak SAR : 10.180 W/kg

### SAR-Z Axis at Hotspot x:10.40 y:-2.30



## SAR Test Report

By Operator : Jay  
Measurement Date : 06-May-2006  
Starting Time : 06-May-2006 07:19:11 AM  
End Time : 06-May-2006 07:32:45 AM  
Scanning Time : 814 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 : 2.588 W/kg  
Power Drift-Finish: 2.715 W/kg  
Power Drift (%) : 4.892

### Phantom Data

Name : APREL-Uni  
Type : 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 : 06-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 22.00 °C  
Humidity : 45.00 RH%  
Epsilon : 53.11 F/m  
Sigma : 1.97 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

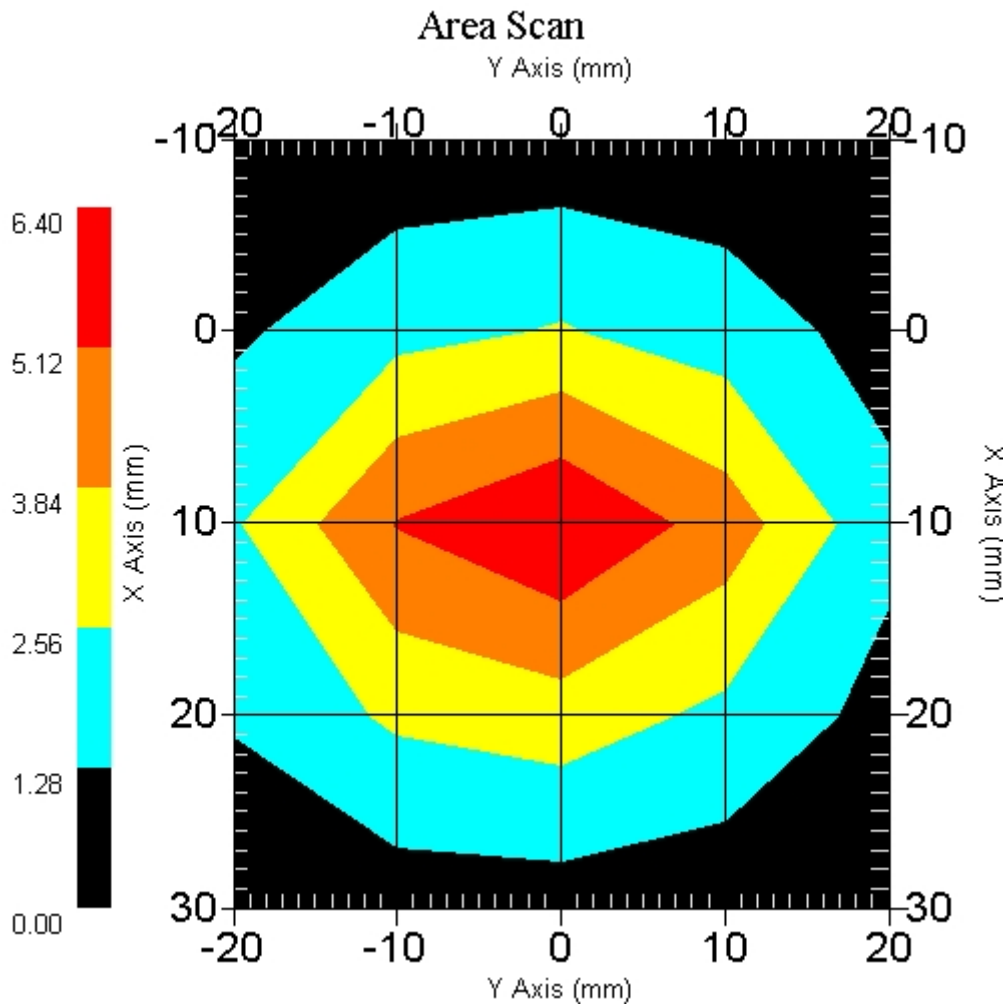
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 1  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 1  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 22.00 °C  
 Set-up Date : 06-May-2006  
 Set-up Time : 7:15:06 AM  
 Area Scan : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm  
 Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

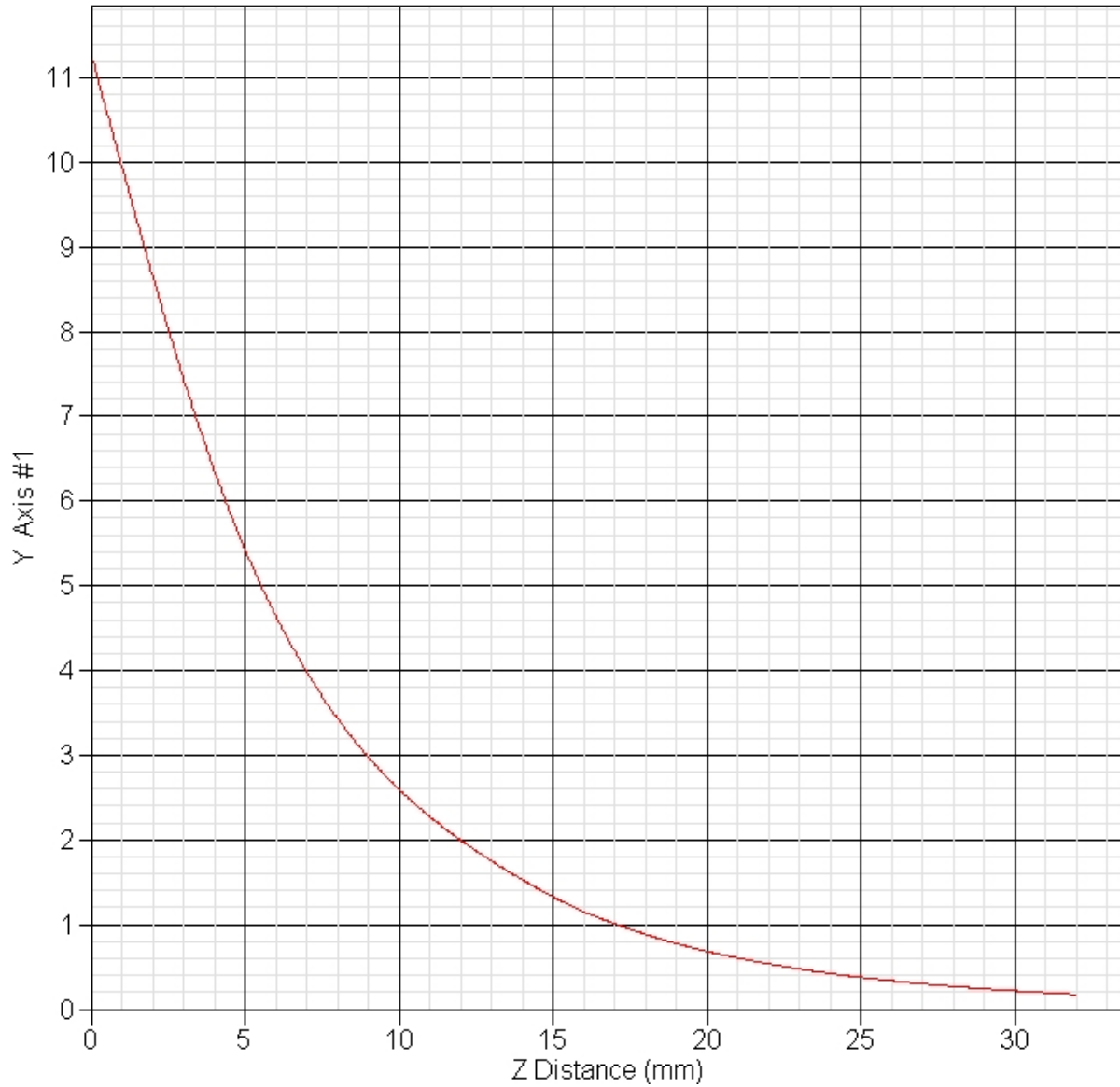
Other Data

DUT Position : Touch  
 Separation : 10 mm  
 Channel : Mid - 2450



1 gram SAR value : 5.379 W/kg  
 10 gram SAR value : 2.422 W/kg  
 Area Scan Peak SAR : 6.398 W/kg  
 Zoom Scan Peak SAR : 11.290 W/kg

**SAR-Z Axis**  
at Hotspot x:10.40 y:-2.30



## SAR Test Report

By Operator : Jay  
Measurement Date : 08-May-2006  
Starting Time : 08-May-2006 07:24:56 AM  
End Time : 08-May-2006 07:38:06 AM  
Scanning Time : 790 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 : 2.738 W/kg  
Power Drift-Finish: 2.784 W/kg  
Power Drift (%) : 1.680

### Phantom Data

Name : APREL-Uni  
Type : 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 : 08-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.67 F/m  
Sigma : 1.94 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 1  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

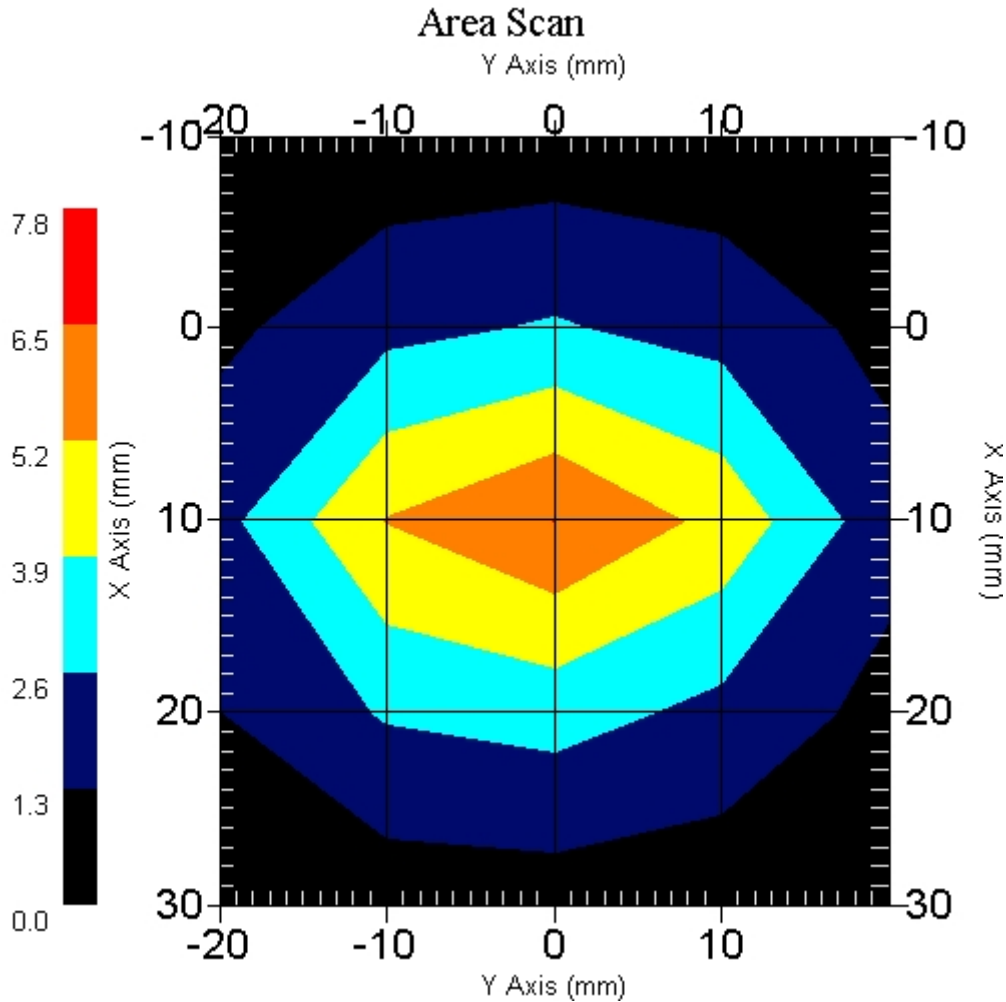


Measurement Data

Crest Factor : 1  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 08-May-2006  
 Set-up Time : 7:24:50 AM  
 Area Scan : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm  
 Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

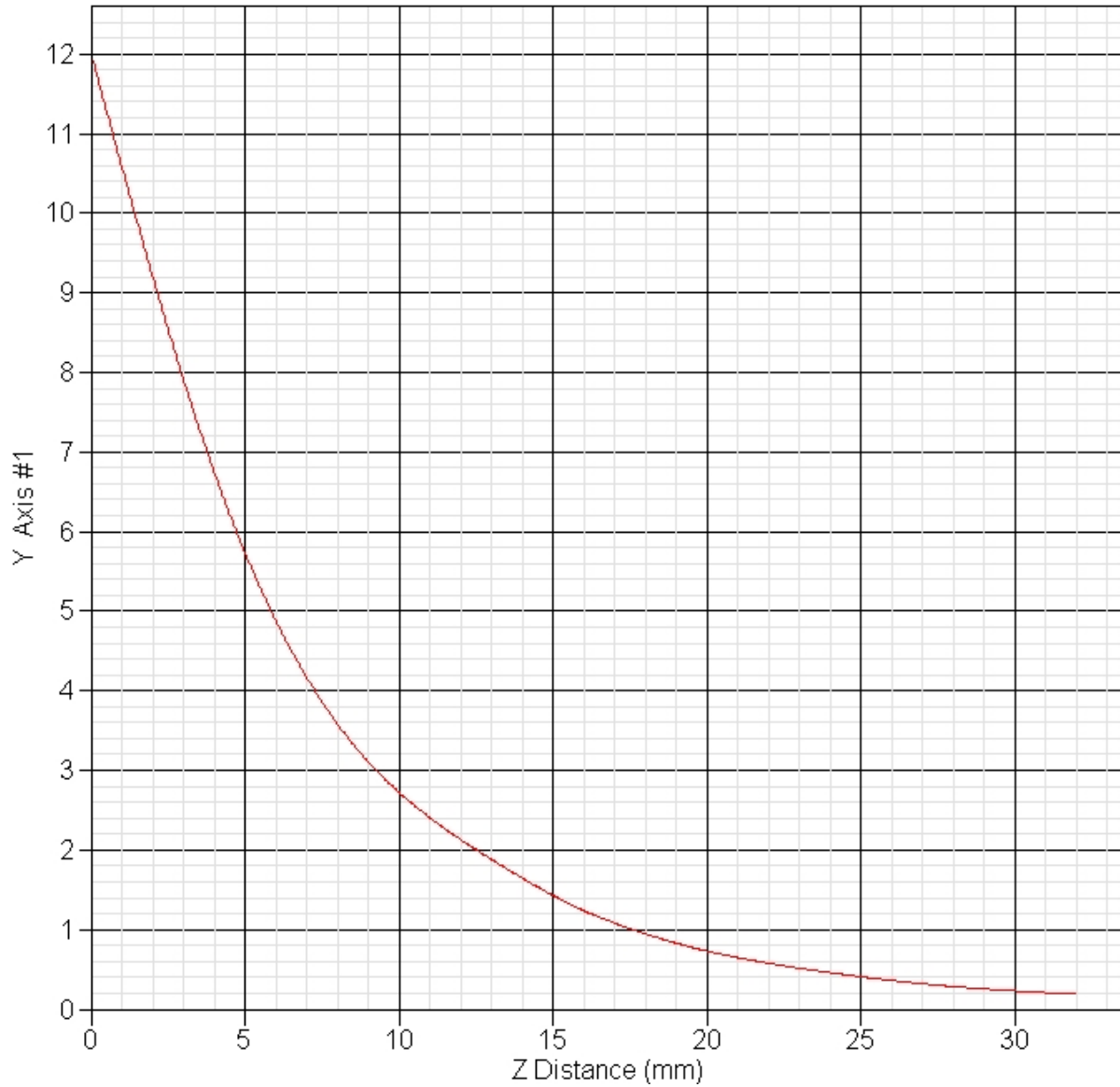
Other Data

DUT Position : Touch  
 Separation : 10 mm  
 Channel : Mid - 2450



1 gram SAR value : 5.629 W/kg  
 10 gram SAR value : 2.516 W/kg  
 Area Scan Peak SAR : 6.502 W/kg  
 Zoom Scan Peak SAR : 12.010 W/kg

**SAR-Z Axis**  
at Hotspot x:10.40 y:-2.30



## SAR Test Report

By Operator : Jay  
Measurement Date : 09-May-2006  
Starting Time : 09-May-2006 07:47:43 AM  
End Time : 09-May-2006 08:00:52 AM  
Scanning Time : 789 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 : 2.833 W/kg  
Power Drift-Finish: 2.872 W/kg  
Power Drift (%) : 1.370

### Phantom Data

Name : APREL-Uni  
Type : 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-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 44.00 RH%  
Epsilon : 51.93 F/m  
Sigma : 1.96 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

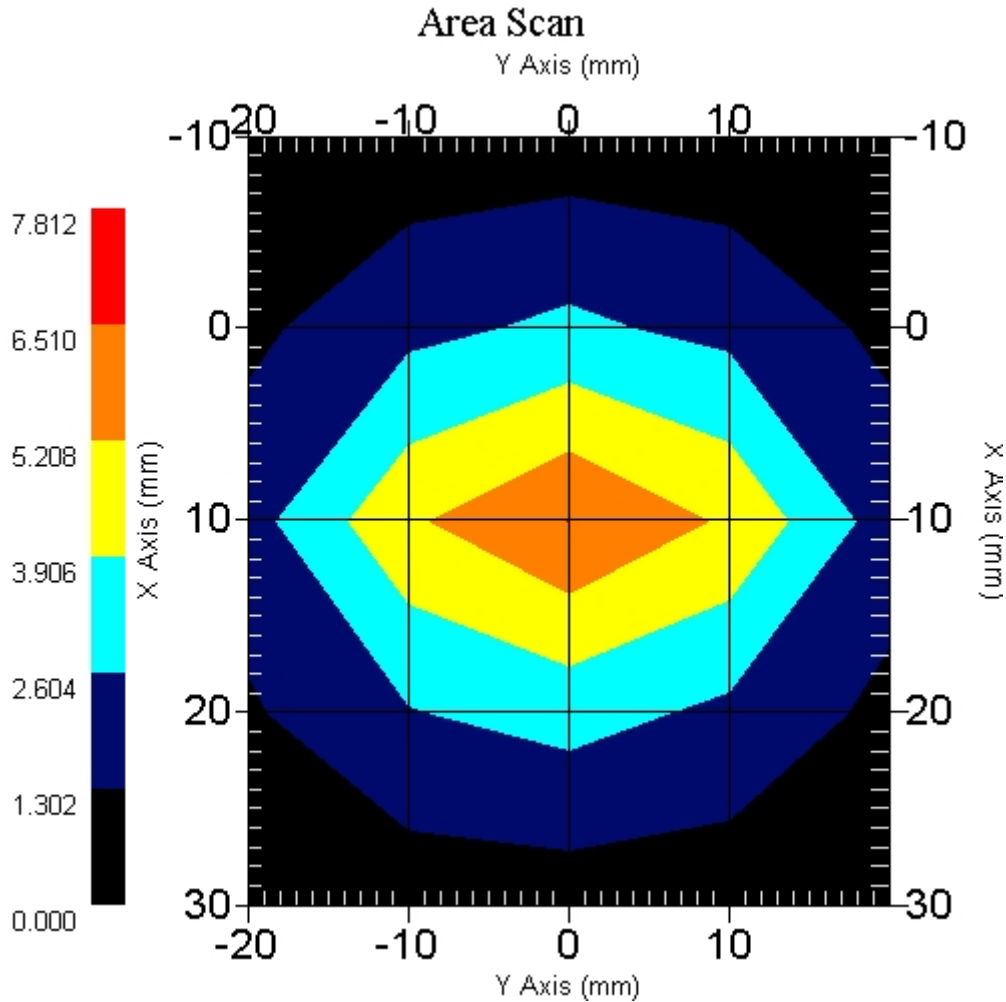
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 1  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 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-May-2006  
 Set-up Time : 7:45:11 AM  
 Area Scan : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm  
 Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

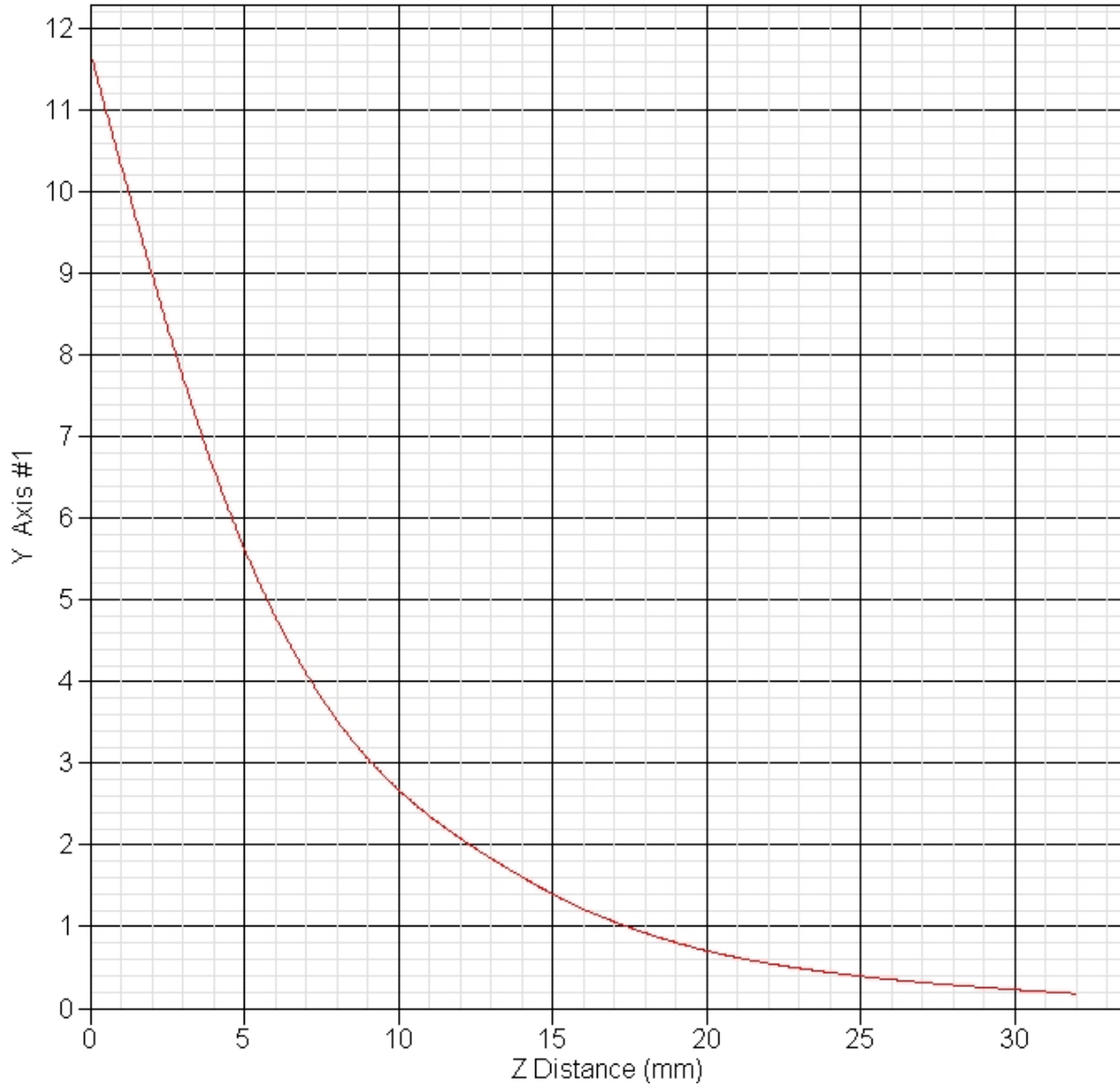
Other Data

DUT Position : Touch  
 Separation : 10 mm  
 Channel : Mid - 2450



1 gram SAR value : 5.523 W/kg  
 10 gram SAR value : 2.472 W/kg  
 Area Scan Peak SAR : 6.512 W/kg  
 Zoom Scan Peak SAR : 11.710 W/kg

**SAR-Z Axis**  
at Hotspot x:10.30 y:-2.30



## Appendix B – SAR Test Data Plots

## SAR Test Report

By Operator : Jay  
Measurement Date : 06-May-2006  
Starting Time : 06-May-2006 02:50:17 PM  
End Time : 06-May-2006 03:08:15 PM  
Scanning Time : 1078 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : External  
Orientation : Touch  
Power Drift-Start : 0.133 W/kg  
Power Drift-Finish: 0.138 W/kg  
Power Drift (%) : 4.070

### Phantom Data

Name : APREL-Uni  
Type : 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 : 06-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.92 F/m  
Sigma : 2.20 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

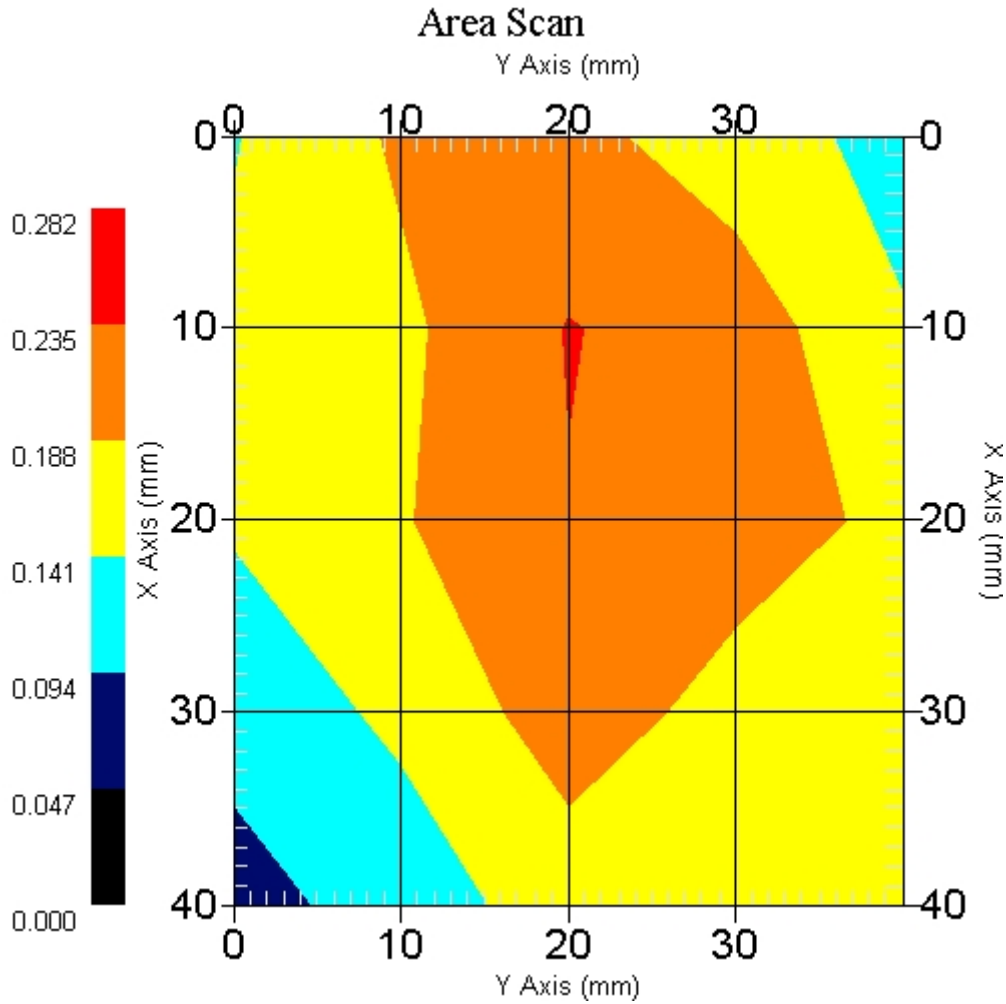
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 06-May-2006  
 Set-up Time : 7:35:03 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 : 15 mm  
 Channel : Mid - 23



1 gram SAR value : 0.233 W/kg  
 10 gram SAR value : 0.157 W/kg  
 Area Scan Peak SAR : 0.237 W/kg  
 Zoom Scan Peak SAR : 0.390 W/kg



## SAR Test Report

By Operator : Jay  
Measurement Date : 08-May-2006  
Starting Time : 08-May-2006 04:26:24 PM  
End Time : 08-May-2006 04:55:55 PM  
Scanning Time : 1771 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.099 W/kg  
Power Drift-Finish: 0.105 W/kg  
Power Drift (%) : 6.061

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 08-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.26 F/m  
Sigma : 2.21 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

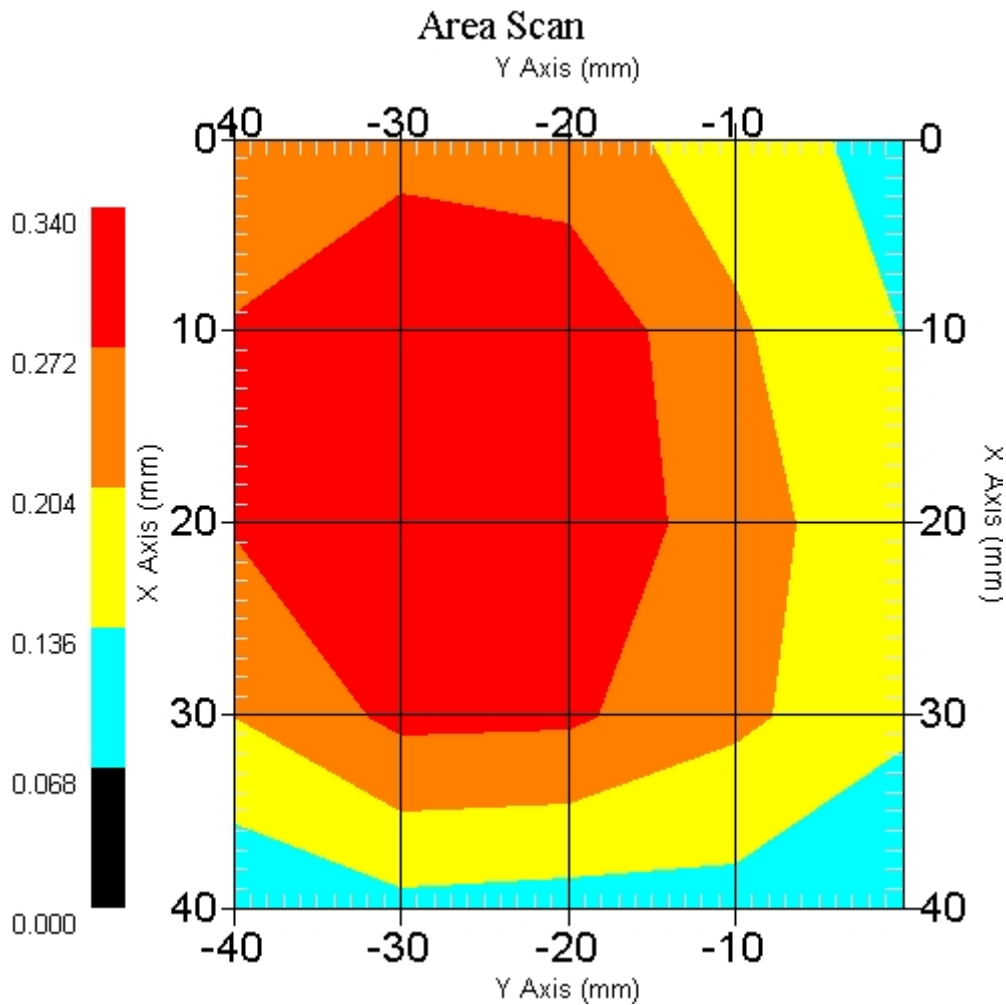
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 08-May-2006  
 Set-up Time : 8:01:28 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 : 0  
 Channel : Low - 1



1 gram SAR value : 0.351 W/kg  
 10 gram SAR value : 0.214 W/kg  
 Area Scan Peak SAR : 0.339 W/kg  
 Zoom Scan Peak SAR : 0.550 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 08-May-2006  
Starting Time : 08-May-2006 05:44:12 PM  
End Time : 08-May-2006 06:13:23 PM  
Scanning Time : 1751 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.209 W/kg  
Power Drift-Finish: 0.203 W/kg  
Power Drift (%) : -2.992

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 08-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.26 F/m  
Sigma : 2.21 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

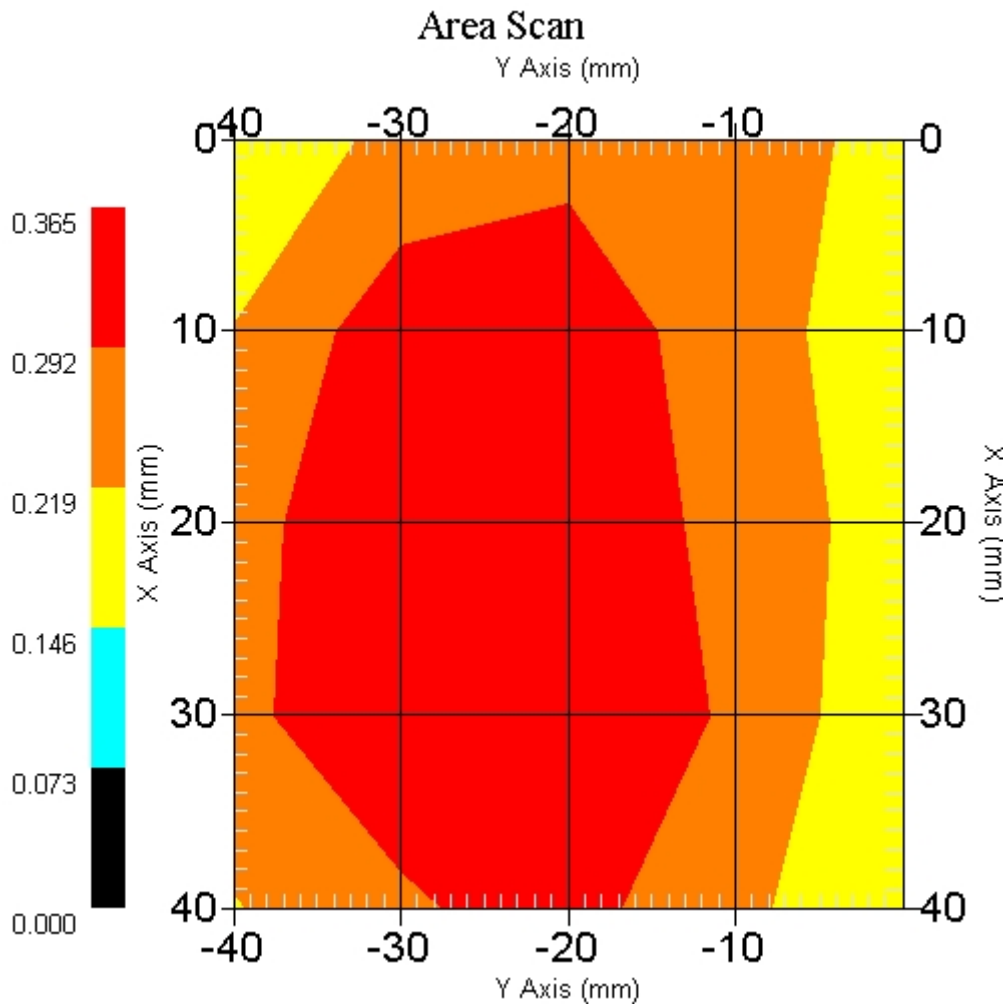
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 08-May-2006  
 Set-up Time : 8:01:28 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 : 0  
 Channel : Mid - 23



1 gram SAR value : 0.361 W/kg  
 10 gram SAR value : 0.223 W/kg  
 Area Scan Peak SAR : 0.364 W/kg  
 Zoom Scan Peak SAR : 0.620 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 09-May-2006  
Starting Time : 09-May-2006 10:09:58 AM  
End Time : 09-May-2006 10:40:31 AM  
Scanning Time : 1833 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.247 W/kg  
Power Drift-Finish: 0.238 W/kg  
Power Drift (%) : -3.644

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 09-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.96 F/m  
Sigma : 2.19 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

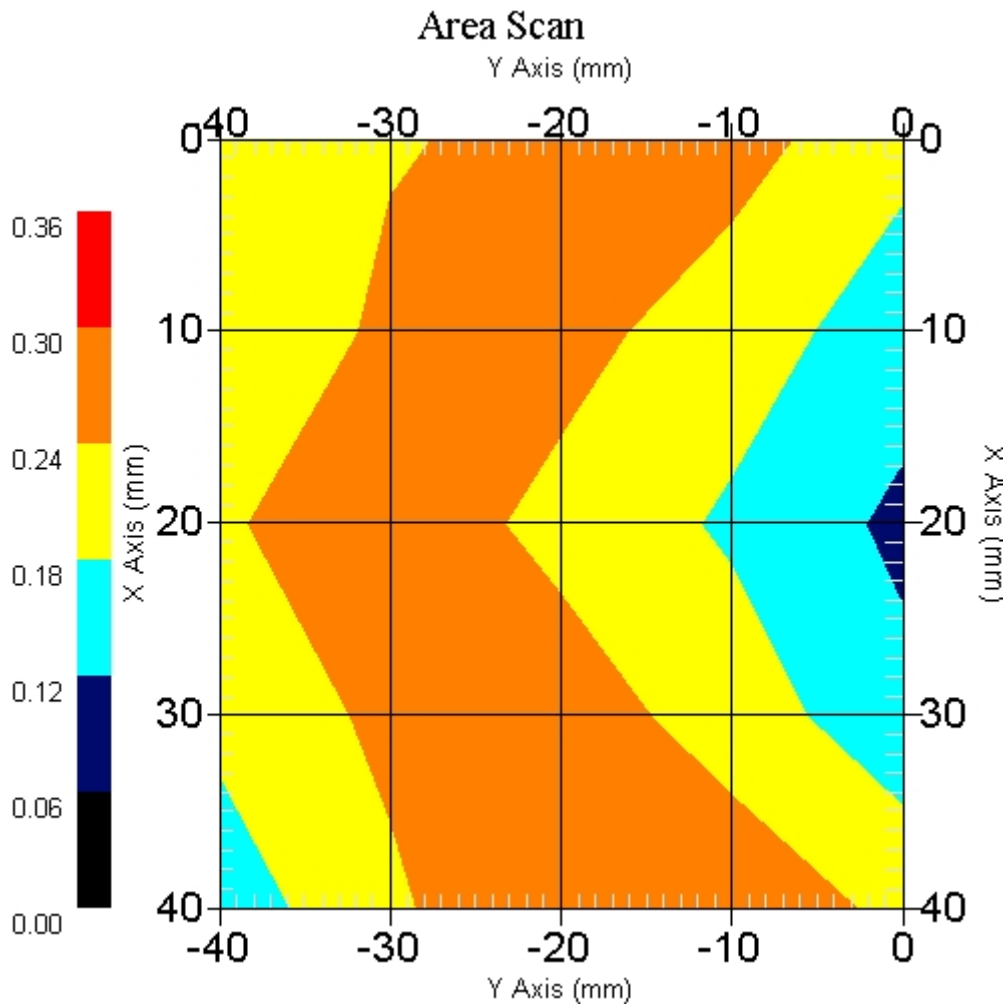
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 09-May-2006  
 Set-up Time : 8:17:03 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 : 0  
 Channel : High - 46



1 gram SAR value : 0.318 W/kg  
 10 gram SAR value : 0.237 W/kg  
 Area Scan Peak SAR : 0.300 W/kg  
 Zoom Scan Peak SAR : 0.510 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 05-May-2006  
Starting Time : 05-May-2006 10:24:39 AM  
End Time : 05-May-2006 10:43:03 AM  
Scanning Time : 1104 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.141 W/kg  
Power Drift-Finish: 0.132 W/kg  
Power Drift (%) : -6.383

### Phantom Data

Name : APREL-Uni  
Type : 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 : 05-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.84 F/m  
Sigma : 2.22 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

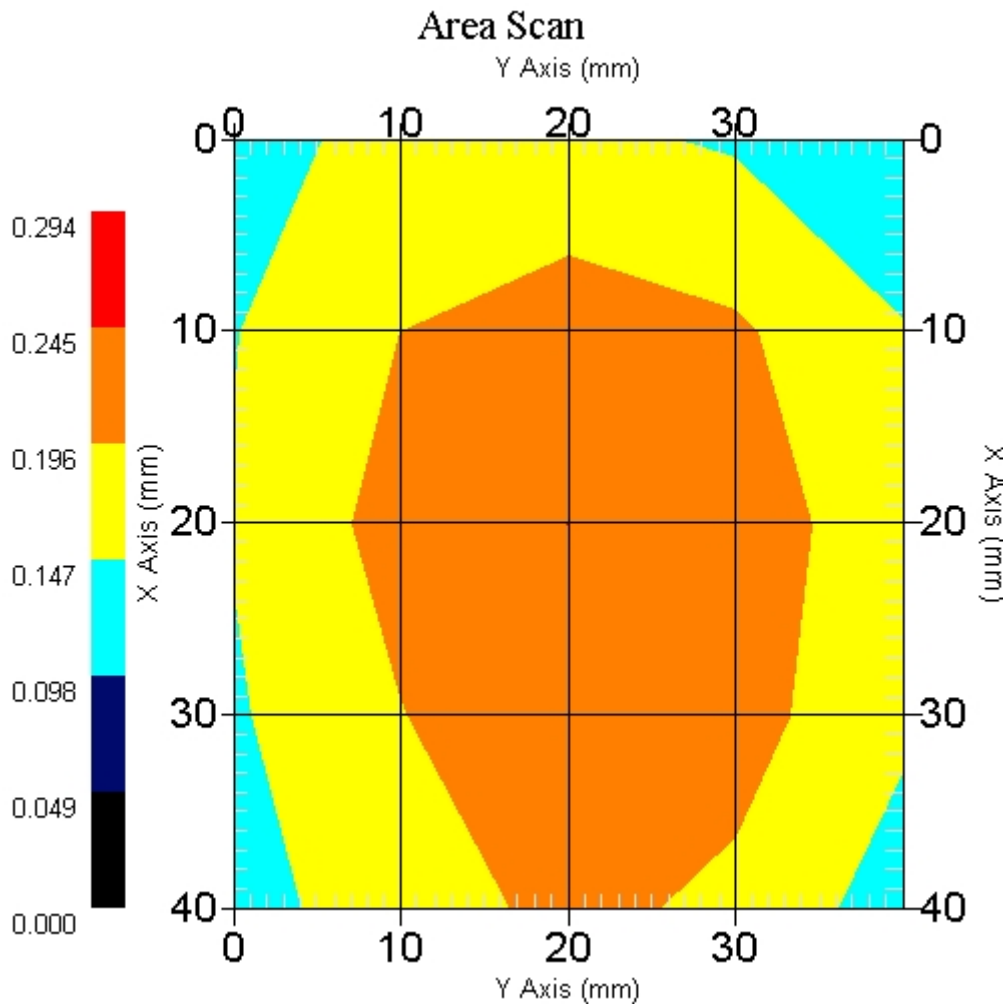
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 05-May-2006  
 Set-up Time : 8:42:11 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 : 0  
 Channel : Low - 1



1 gram SAR value : 0.223 W/kg  
 10 gram SAR value : 0.148 W/kg  
 Area Scan Peak SAR : 0.245 W/kg  
 Zoom Scan Peak SAR : 0.360 W/kg



## SAR Test Report

By Operator : Jay  
Measurement Date : 05-May-2006  
Starting Time : 05-May-2006 10:46:06 AM  
End Time : 05-May-2006 11:03:57 AM  
Scanning Time : 1071 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.183 W/kg  
Power Drift-Finish: 0.175 W/kg  
Power Drift (%) : -4.084

### Phantom Data

Name : APREL-Uni  
Type : 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 : 05-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.84 F/m  
Sigma : 2.22 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

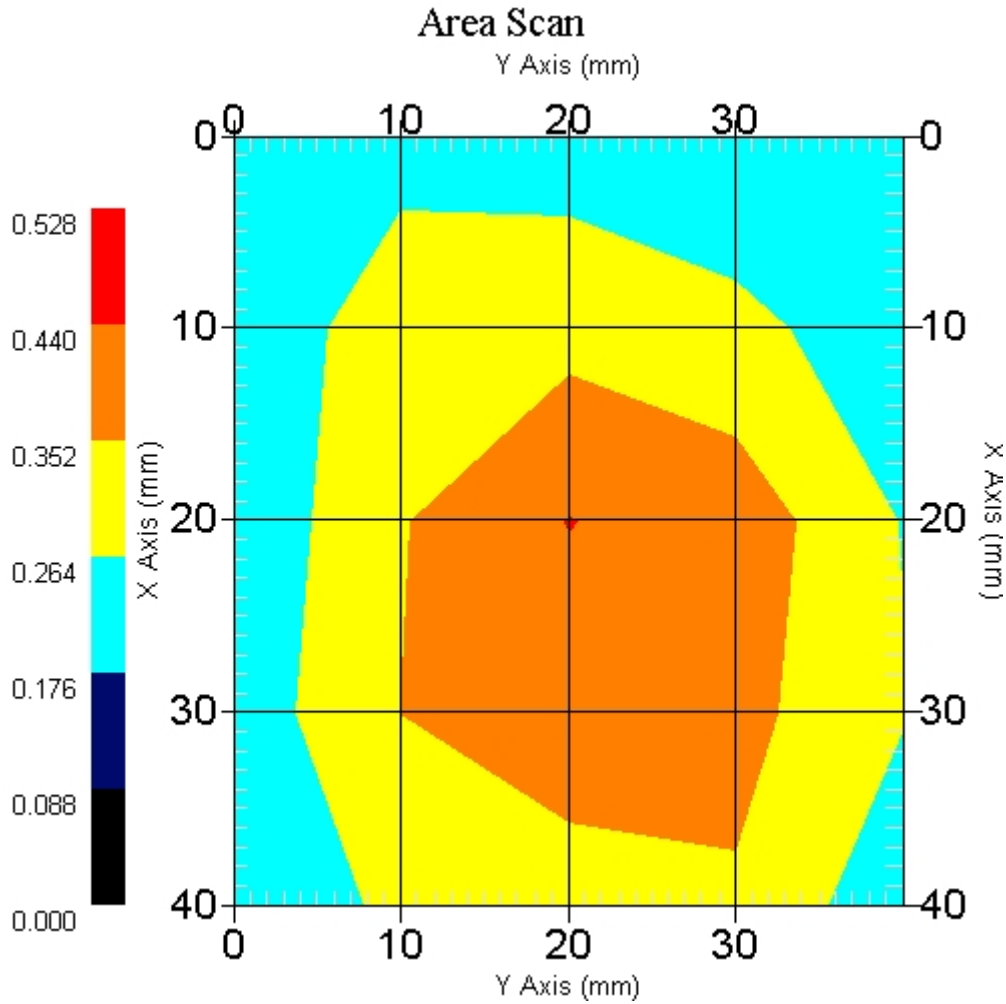
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 05-May-2006  
 Set-up Time : 8:42:11 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 : 0  
 Channel : Mid - 23



1 gram SAR value : 0.400 W/kg  
 10 gram SAR value : 0.244 W/kg  
 Area Scan Peak SAR : 0.442 W/kg  
 Zoom Scan Peak SAR : 0.650 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 05-May-2006  
Starting Time : 05-May-2006 11:04:58 AM  
End Time : 05-May-2006 11:22:16 AM  
Scanning Time : 1038 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.203 W/kg  
Power Drift-Finish: 0.185 W/kg  
Power Drift (%) : -8.948

### Phantom Data

Name : APREL-Uni  
Type : 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 : 05-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.84 F/m  
Sigma : 2.22 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

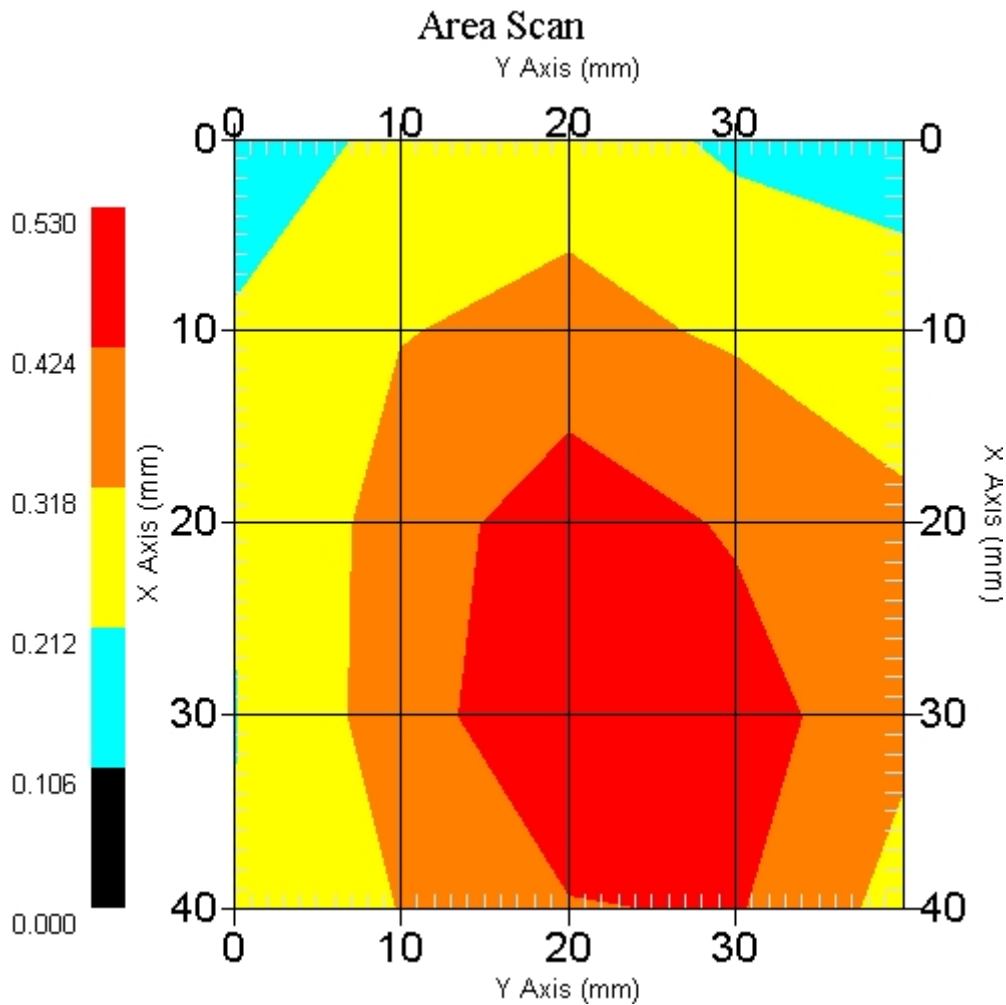
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 05-May-2006  
 Set-up Time : 8:42:11 AM  
 Area Scan : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm  
 Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

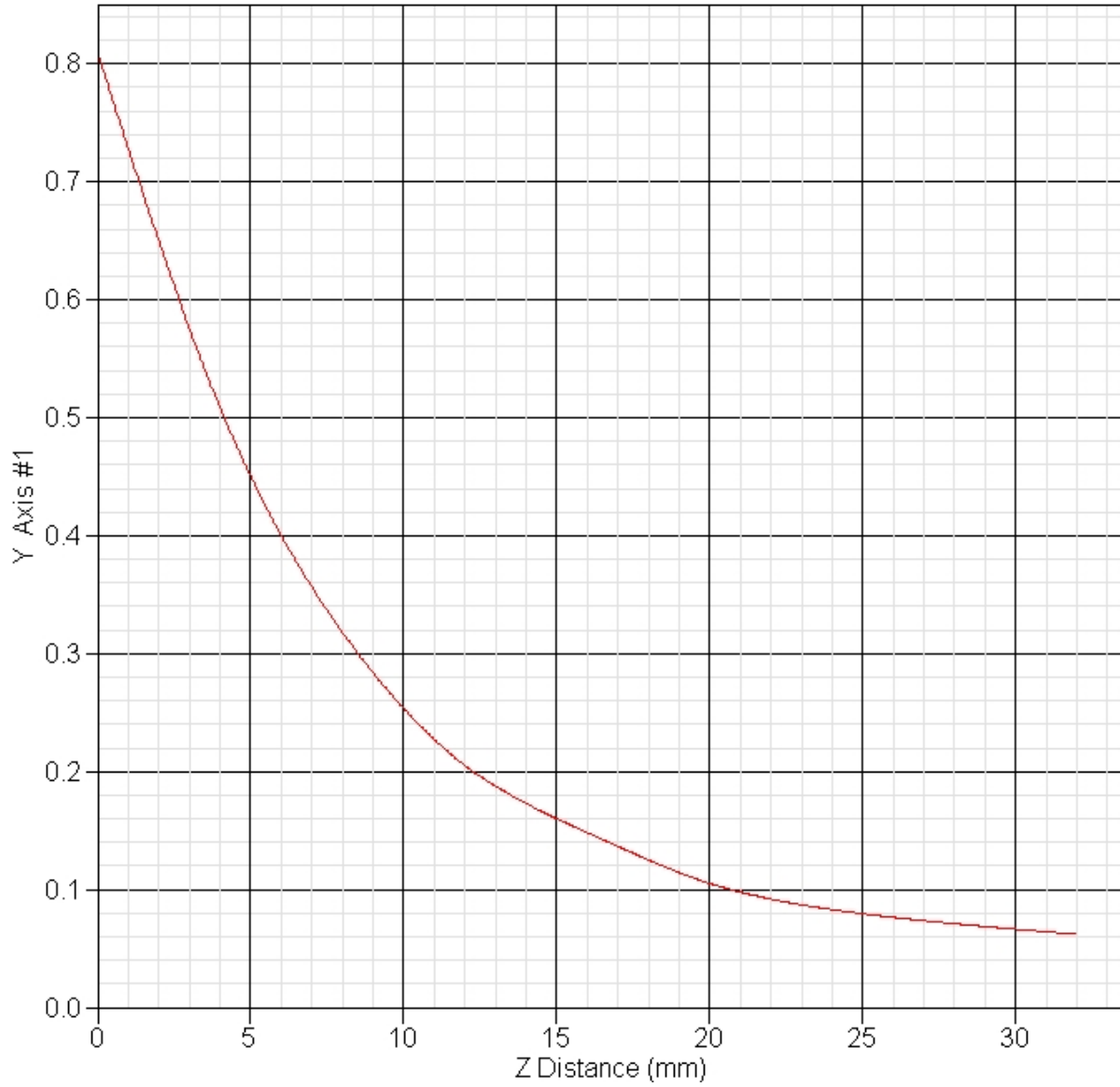
DUT Position : Touch  
 Separation : 0  
 Channel : High - 46



1 gram SAR value : 0.433 W/kg  
 10 gram SAR value : 0.258 W/kg  
 Area Scan Peak SAR : 0.529 W/kg  
 Zoom Scan Peak SAR : 0.810 W/kg

### SAR-Z Axis

at Hotspot x:30.30 y:19.70



## SAR Test Report

By Operator : Jay  
Measurement Date : 06-May-2006  
Starting Time : 06-May-2006 03:09:48 PM  
End Time : 06-May-2006 03:27:38 PM  
Scanning Time : 1070 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : External  
Orientation : Touch  
Power Drift-Start : 0.150 W/kg  
Power Drift-Finish: 0.148 W/kg  
Power Drift (%) : -0.745

### Phantom Data

Name : APREL-Uni  
Type : 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 : 06-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.92 F/m  
Sigma : 2.20 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

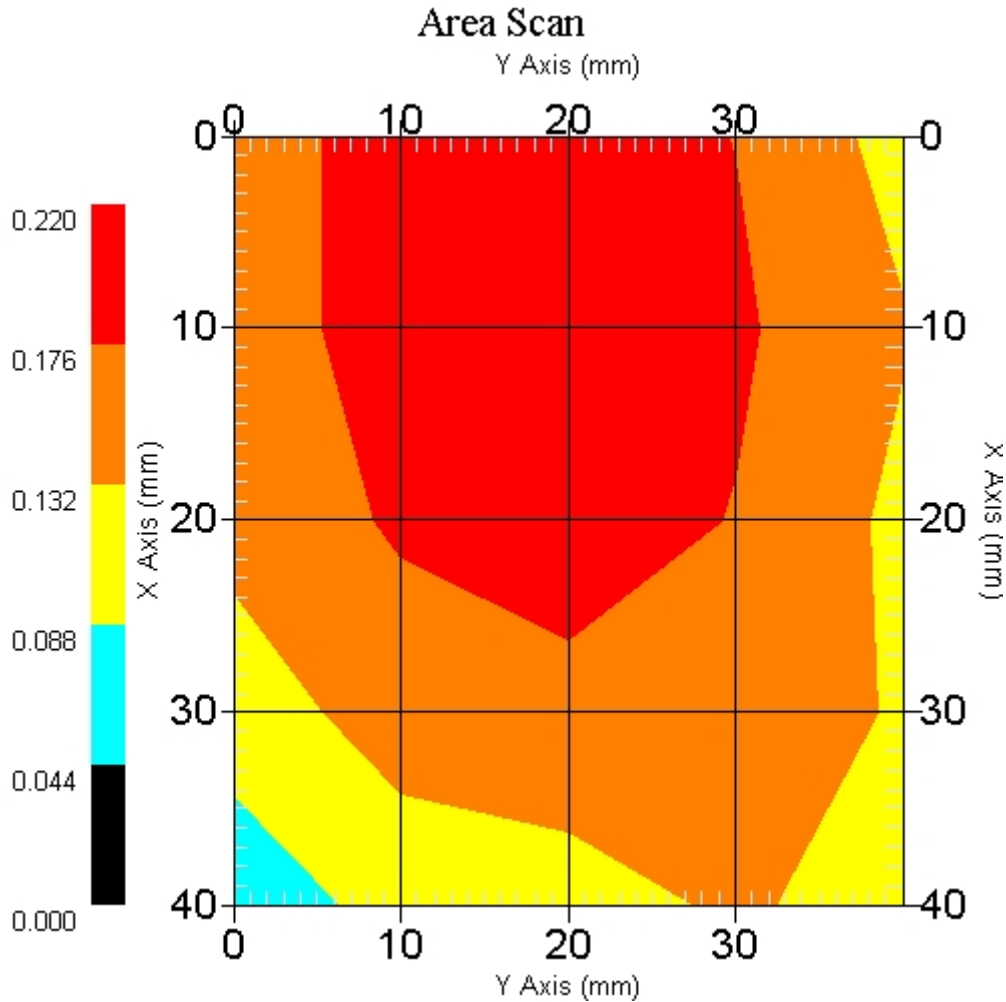
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 06-May-2006  
 Set-up Time : 7:35:03 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 : 15 mm  
 Channel : Mid - 23



1 gram SAR value : 0.208 W/kg  
 10 gram SAR value : 0.134 W/kg  
 Area Scan Peak SAR : 0.218 W/kg  
 Zoom Scan Peak SAR : 0.360 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 09-May-2006  
Starting Time : 09-May-2006 10:46:03 AM  
End Time : 09-May-2006 11:03:47 AM  
Scanning Time : 1064 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.125 W/kg  
Power Drift-Finish: 0.117 W/kg  
Power Drift (%) : -6.208

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 09-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.96 F/m  
Sigma : 2.19 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

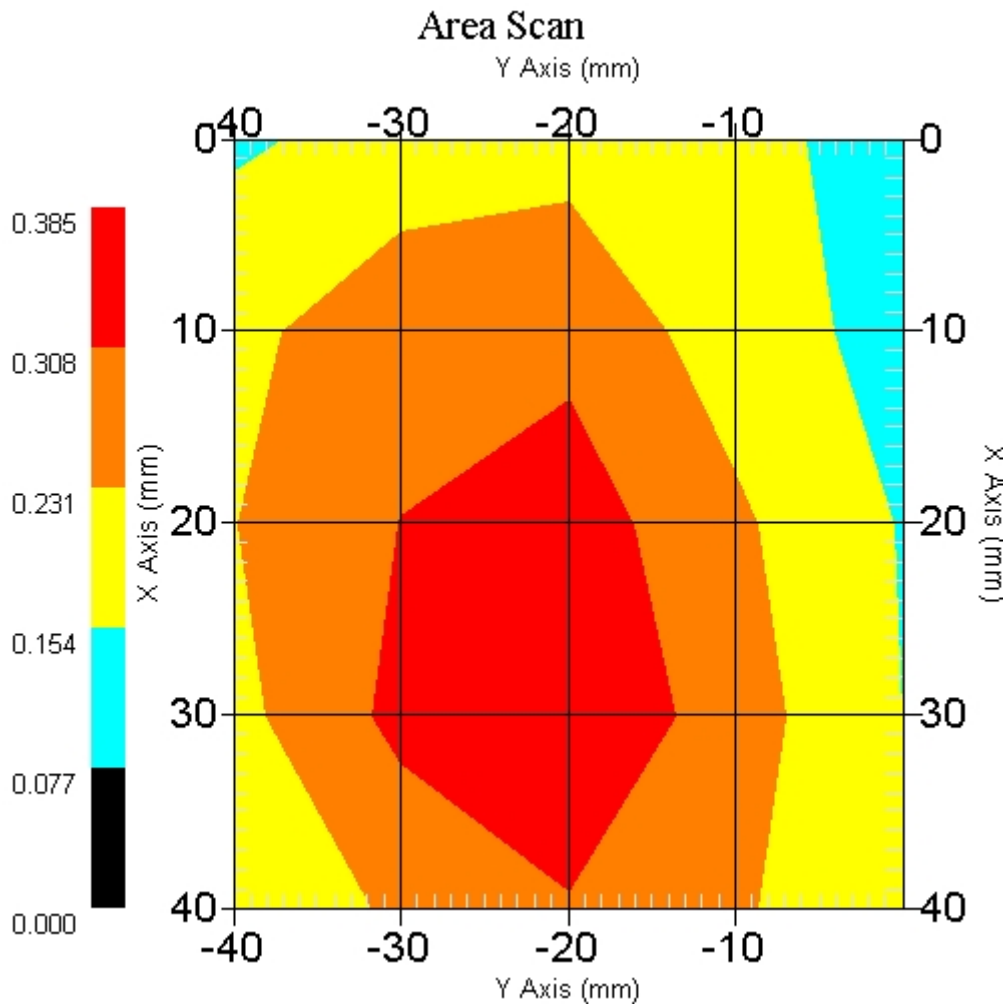


Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 09-May-2006  
 Set-up Time : 8:17:03 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 : 0  
 Channel : Low - 1



1 gram SAR value : 0.291 W/kg  
 10 gram SAR value : 0.177 W/kg  
 Area Scan Peak SAR : 0.384 W/kg  
 Zoom Scan Peak SAR : 0.590 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 09-May-2006  
Starting Time : 09-May-2006 11:05:04 AM  
End Time : 09-May-2006 11:22:39 AM  
Scanning Time : 1055 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.236 W/kg  
Power Drift-Finish: 0.221 W/kg  
Power Drift (%) : -6.356

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 09-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.96 F/m  
Sigma : 2.19 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

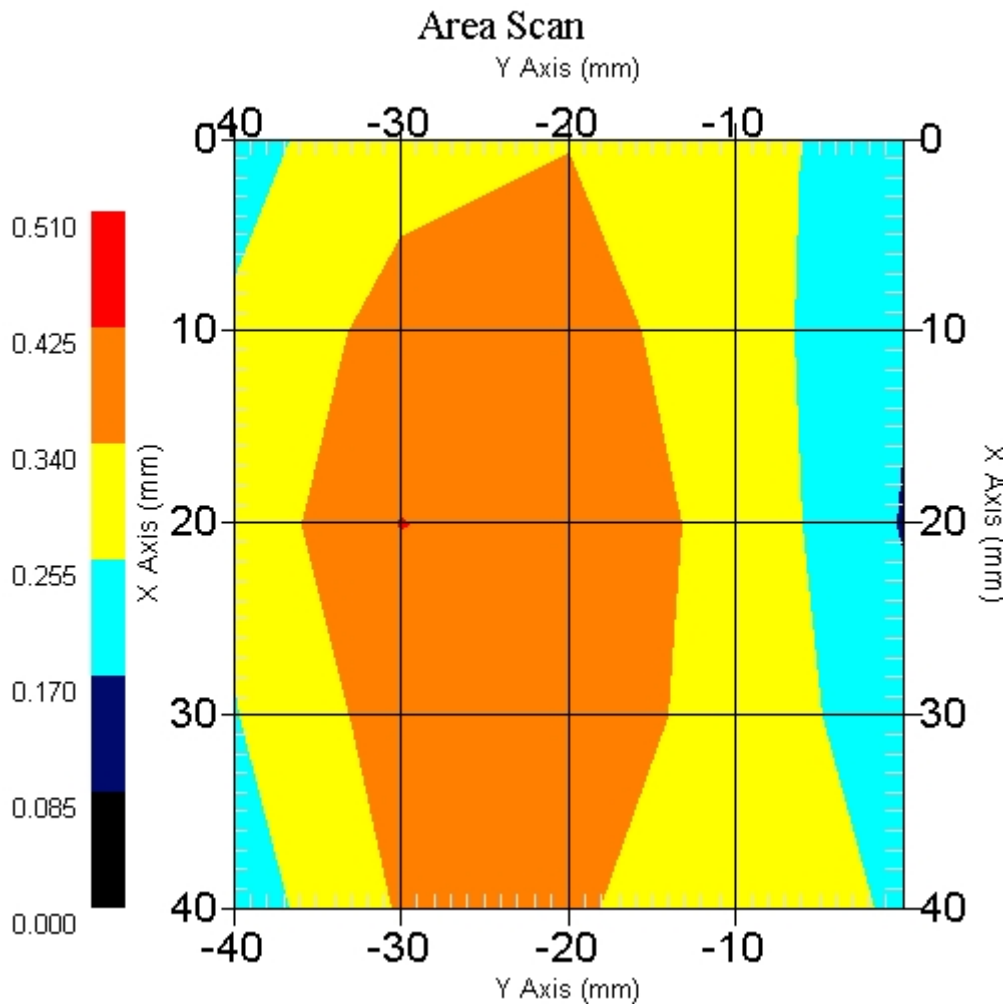
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 09-May-2006  
 Set-up Time : 8:17:03 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 : 0  
 Channel : Mid - 23



1 gram SAR value : 0.406 W/kg  
 10 gram SAR value : 0.221 W/kg  
 Area Scan Peak SAR : 0.427 W/kg  
 Zoom Scan Peak SAR : 0.620 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 09-May-2006  
Starting Time : 09-May-2006 11:23:53 AM  
End Time : 09-May-2006 11:54:35 AM  
Scanning Time : 1842 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.170 W/kg  
Power Drift-Finish: 0.164 W/kg  
Power Drift (%) : -3.331

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 09-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.96 F/m  
Sigma : 2.19 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

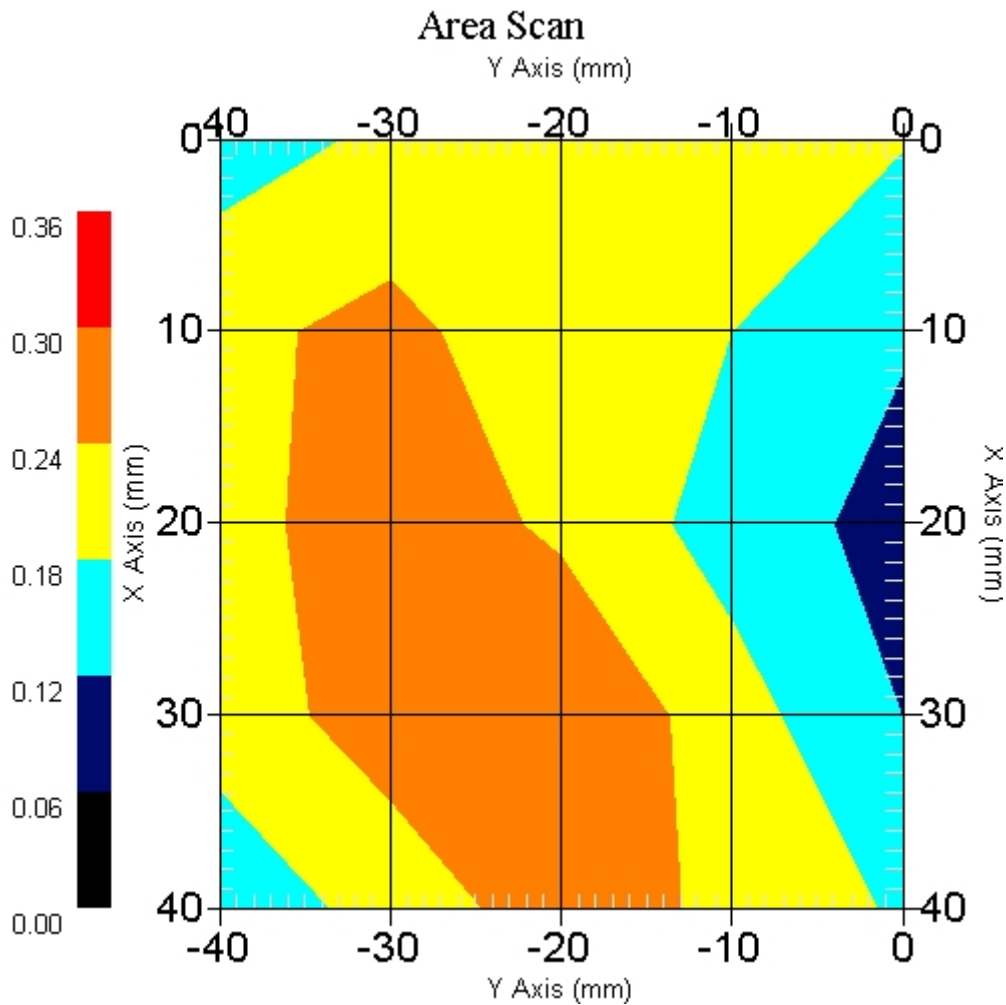
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 09-May-2006  
 Set-up Time : 8:17:03 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 : 0  
 Channel : High - 46



1 gram SAR value : 0.273 W/kg  
 10 gram SAR value : 0.166 W/kg  
 Area Scan Peak SAR : 0.300 W/kg  
 Zoom Scan Peak SAR : 0.520 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 05-May-2006  
Starting Time : 05-May-2006 11:23:39 AM  
End Time : 05-May-2006 11:41:34 AM  
Scanning Time : 1075 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.140 W/kg  
Power Drift-Finish: 0.137 W/kg  
Power Drift (%) : -2.206

### Phantom Data

Name : APREL-Uni  
Type : 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 : 05-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.84 F/m  
Sigma : 2.22 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

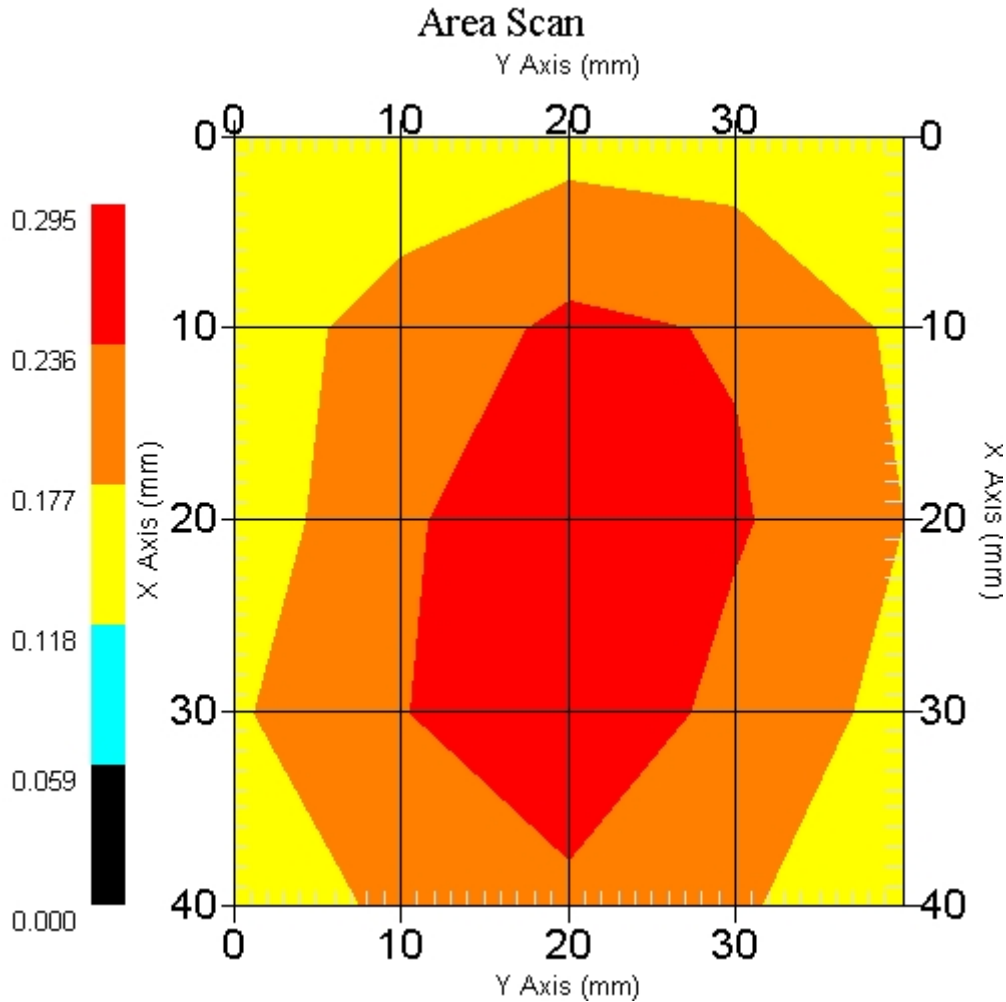
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 05-May-2006  
 Set-up Time : 8:42:11 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 : 0  
 Channel : Low - 1



1 gram SAR value : 0.281 W/kg  
 10 gram SAR value : 0.177 W/kg  
 Area Scan Peak SAR : 0.293 W/kg  
 Zoom Scan Peak SAR : 0.300 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 06-May-2006  
Starting Time : 06-May-2006 09:07:20 AM  
End Time : 06-May-2006 09:36:48 AM  
Scanning Time : 1768 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.239 W/kg  
Power Drift-Finish: 0.222 W/kg  
Power Drift (%) : -7.113

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 06-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.92 F/m  
Sigma : 2.20 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

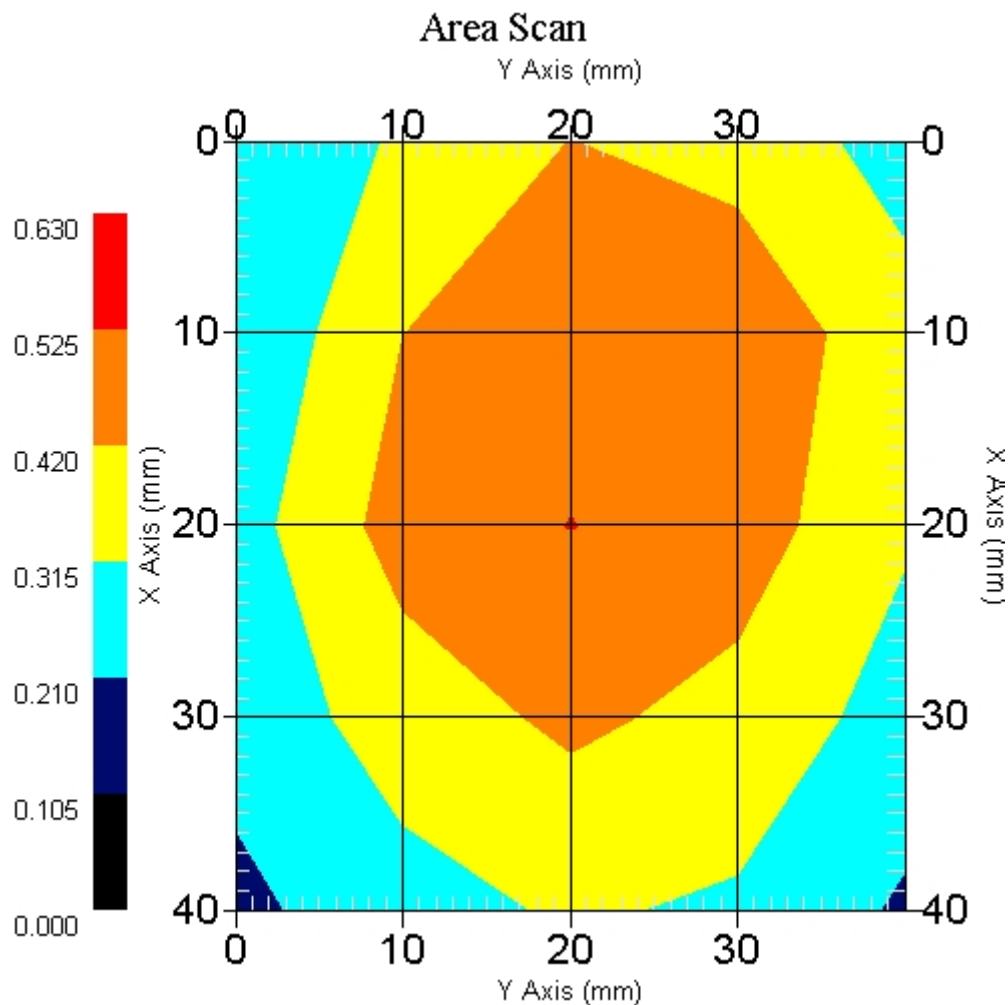


Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 06-May-2006  
 Set-up Time : 7:35:03 AM  
 Area Scan : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm  
 Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

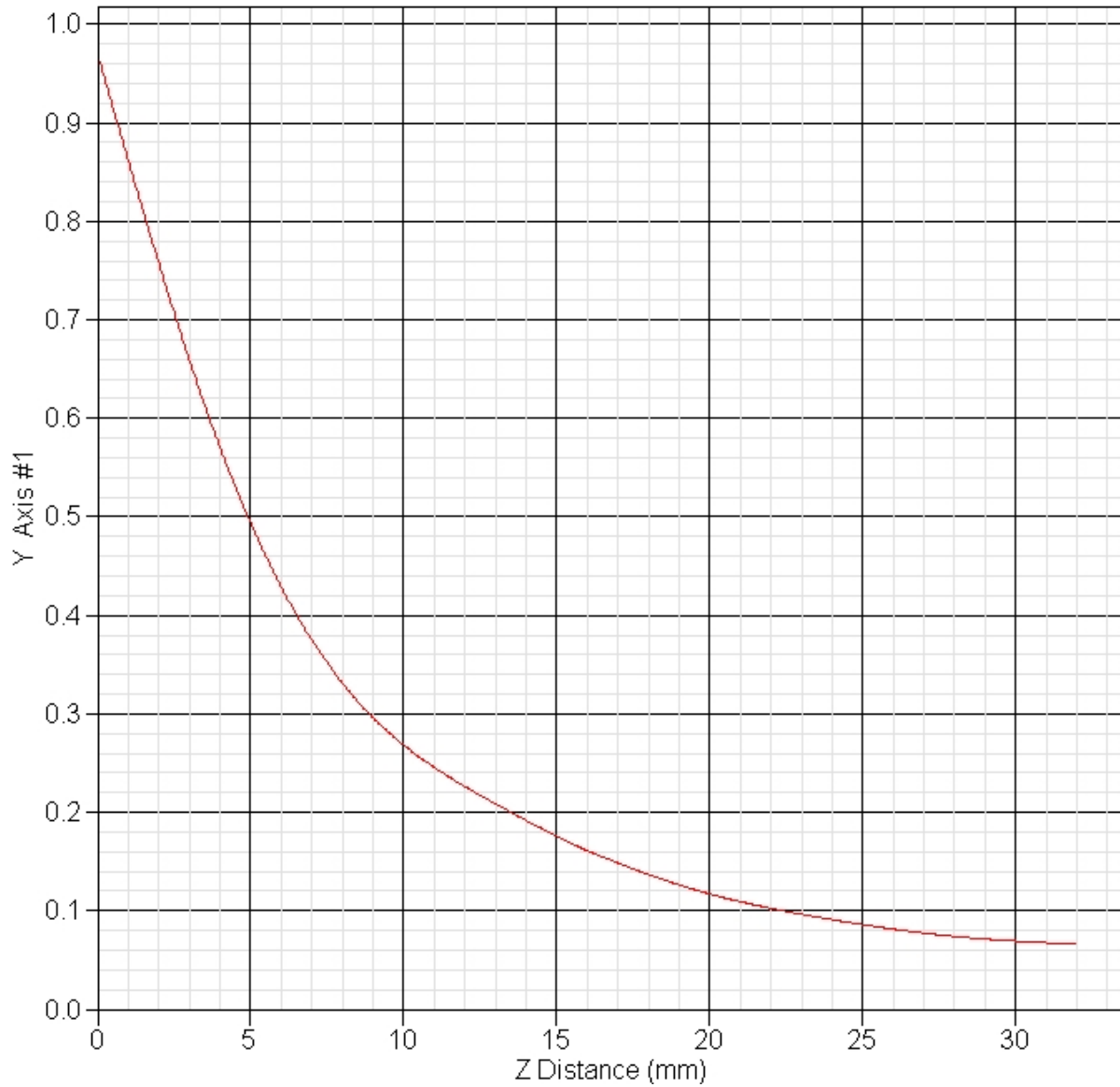
Other Data

DUT Position : Touch  
 Separation : 0  
 Channel : Mid - 23



1 gram SAR value : 0.516 W/kg  
 10 gram SAR value : 0.304 W/kg  
 Area Scan Peak SAR : 0.527 W/kg  
 Zoom Scan Peak SAR : 0.970 W/kg

### SAR-Z Axis at Hotspot x:12.40 y:27.70



## SAR Test Report

By Operator : Jay  
Measurement Date : 06-May-2006  
Starting Time : 06-May-2006 09:38:55 AM  
End Time : 06-May-2006 09:56:41 AM  
Scanning Time : 1066 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.134 W/kg  
Power Drift-Finish: 0.139 W/kg  
Power Drift (%) : 3.731

### Phantom Data

Name : APREL-Uni  
Type : 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 : 06-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.92 F/m  
Sigma : 2.20 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

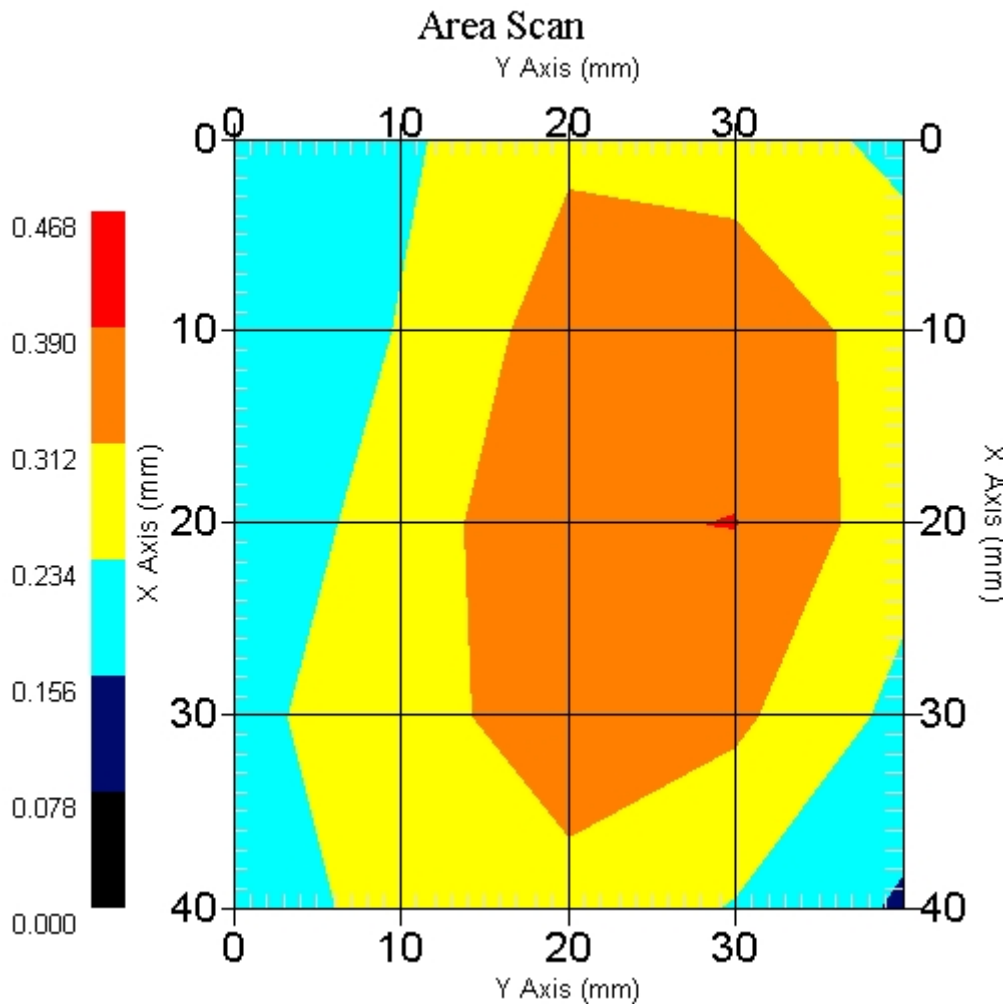
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 06-May-2006  
 Set-up Time : 7:35:03 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 : 0  
 Channel : High - 46



1 gram SAR value : 0.363 W/kg  
 10 gram SAR value : 0.218 W/kg  
 Area Scan Peak SAR : 0.392 W/kg  
 Zoom Scan Peak SAR : 0.650 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 06-May-2006  
Starting Time : 06-May-2006 03:29:23 PM  
End Time : 06-May-2006 03:47:08 PM  
Scanning Time : 1065 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1.6 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : External  
Orientation : Touch  
Power Drift-Start : 0.142 W/kg  
Power Drift-Finish: 0.139 W/kg  
Power Drift (%) : -1.812

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 06-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.92 F/m  
Sigma : 2.20 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

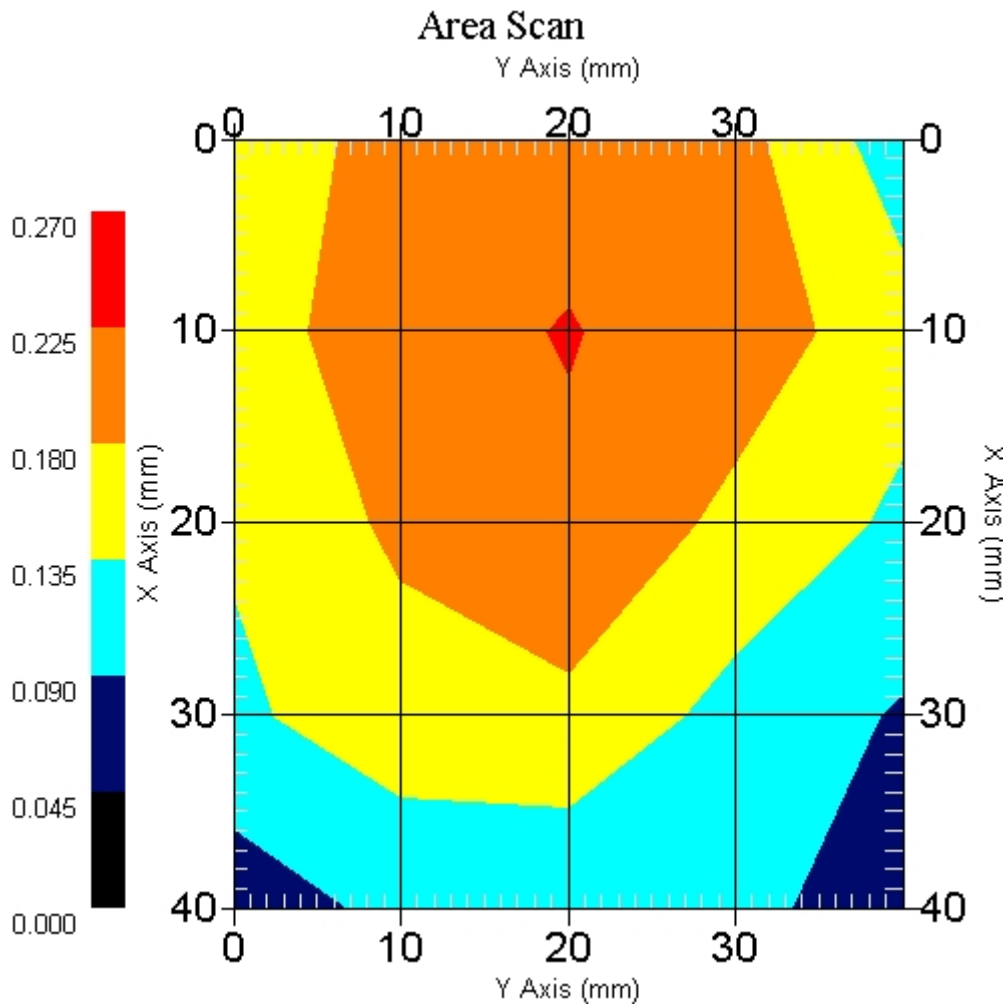
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 06-May-2006  
 Set-up Time : 7:35:03 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 : 15 mm  
 Channel : Mid - 23



1 gram SAR value : 0.225 W/kg  
 10 gram SAR value : 0.142 W/kg  
 Area Scan Peak SAR : 0.227 W/kg  
 Zoom Scan Peak SAR : 0.360 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 09-May-2006  
Starting Time : 09-May-2006 01:29:17 PM  
End Time : 09-May-2006 01:46:39 PM  
Scanning Time : 1042 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1.6 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.170 W/kg  
Power Drift-Finish: 0.156 W/kg  
Power Drift (%) : -8.235

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 09-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.96 F/m  
Sigma : 2.19 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

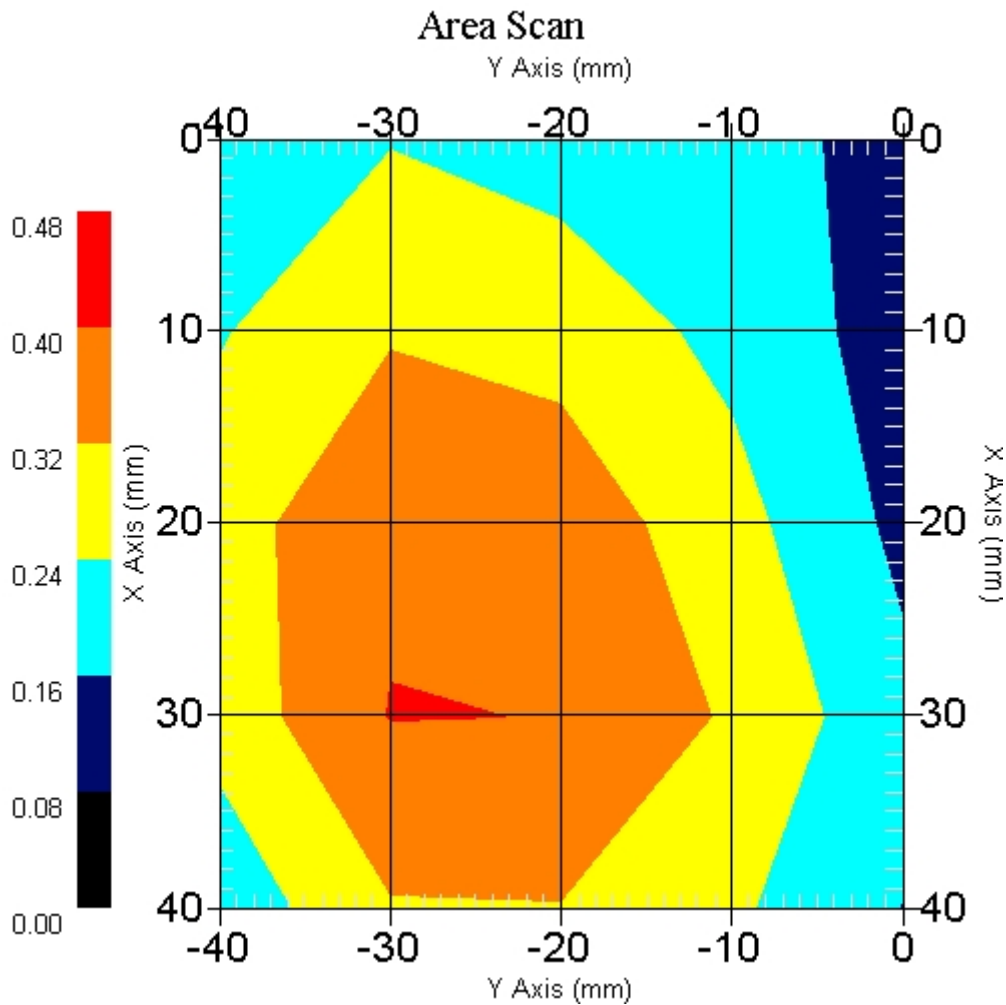
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 09-May-2006  
 Set-up Time : 8:17:03 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 : 0  
 Channel : Low - 1



1 gram SAR value : 0.386 W/kg  
 10 gram SAR value : 0.225 W/kg  
 Area Scan Peak SAR : 0.402 W/kg  
 Zoom Scan Peak SAR : 0.690 W/kg



## SAR Test Report

By Operator : Jay  
Measurement Date : 09-May-2006  
Starting Time : 09-May-2006 01:47:46 PM  
End Time : 09-May-2006 02:04:44 PM  
Scanning Time : 1018 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1.6 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.222 W/kg  
Power Drift-Finish: 0.214 W/kg  
Power Drift (%) : -3.535

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 09-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.96 F/m  
Sigma : 2.19 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

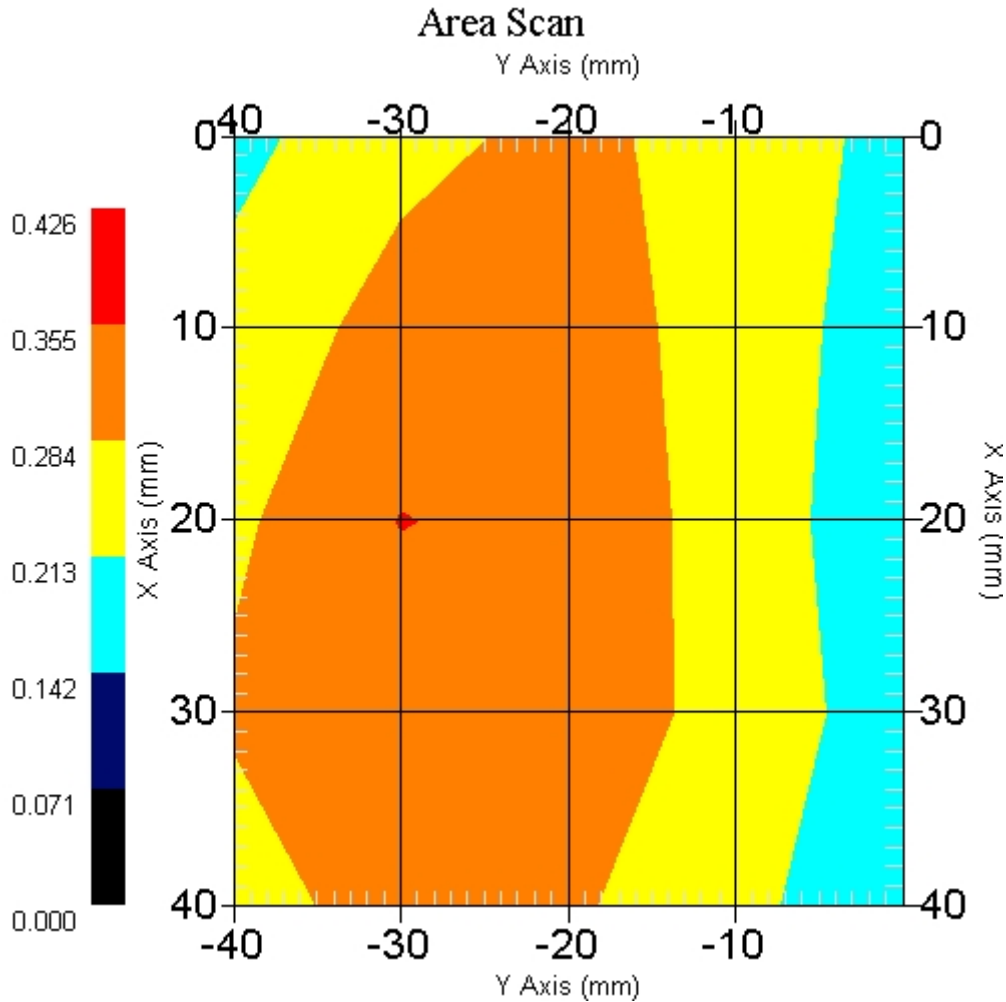
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 09-May-2006  
 Set-up Time : 8:17:03 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 : 0  
 Channel : Mid - 23



1 gram SAR value : 0.367 W/kg  
 10 gram SAR value : 0.221 W/kg  
 Area Scan Peak SAR : 0.357 W/kg  
 Zoom Scan Peak SAR : 0.660 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 09-May-2006  
Starting Time : 09-May-2006 02:05:50 PM  
End Time : 09-May-2006 02:23:33 PM  
Scanning Time : 1063 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1.6 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.175 W/kg  
Power Drift-Finish: 0.161 W/kg  
Power Drift (%) : -8.050

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 09-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.96 F/m  
Sigma : 2.19 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

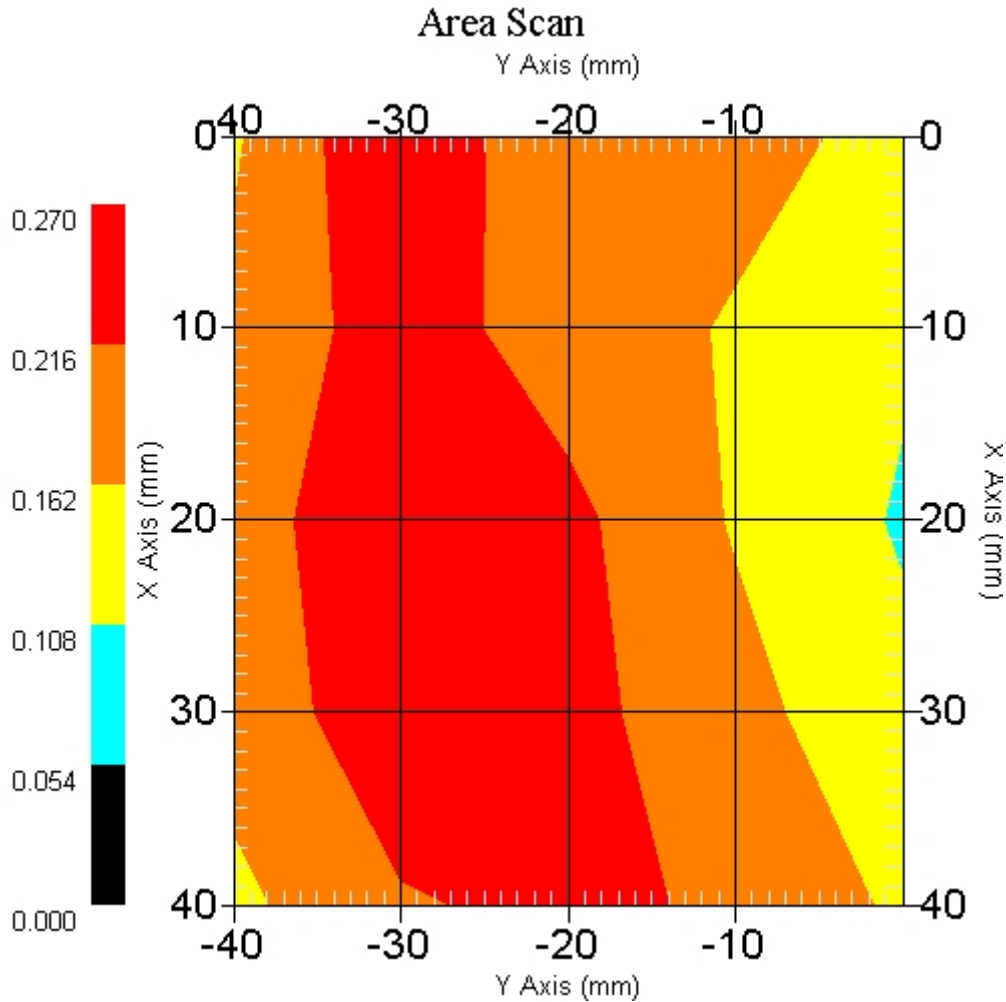
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 09-May-2006  
 Set-up Time : 8:17:03 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 : 0  
 Channel : High - 46



1 gram SAR value : 0.228 W/kg  
 10 gram SAR value : 0.129 W/kg  
 Area Scan Peak SAR : 0.268 W/kg  
 Zoom Scan Peak SAR : 0.450 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 06-May-2006  
Starting Time : 06-May-2006 09:57:51 AM  
End Time : 06-May-2006 10:15:48 AM  
Scanning Time : 1077 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1.6 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.170 W/kg  
Power Drift-Finish: 0.155 W/kg  
Power Drift (%) : -8.824

### Phantom Data

Name : APREL-Uni  
Type : 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 : 06-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.92 F/m  
Sigma : 2.20 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

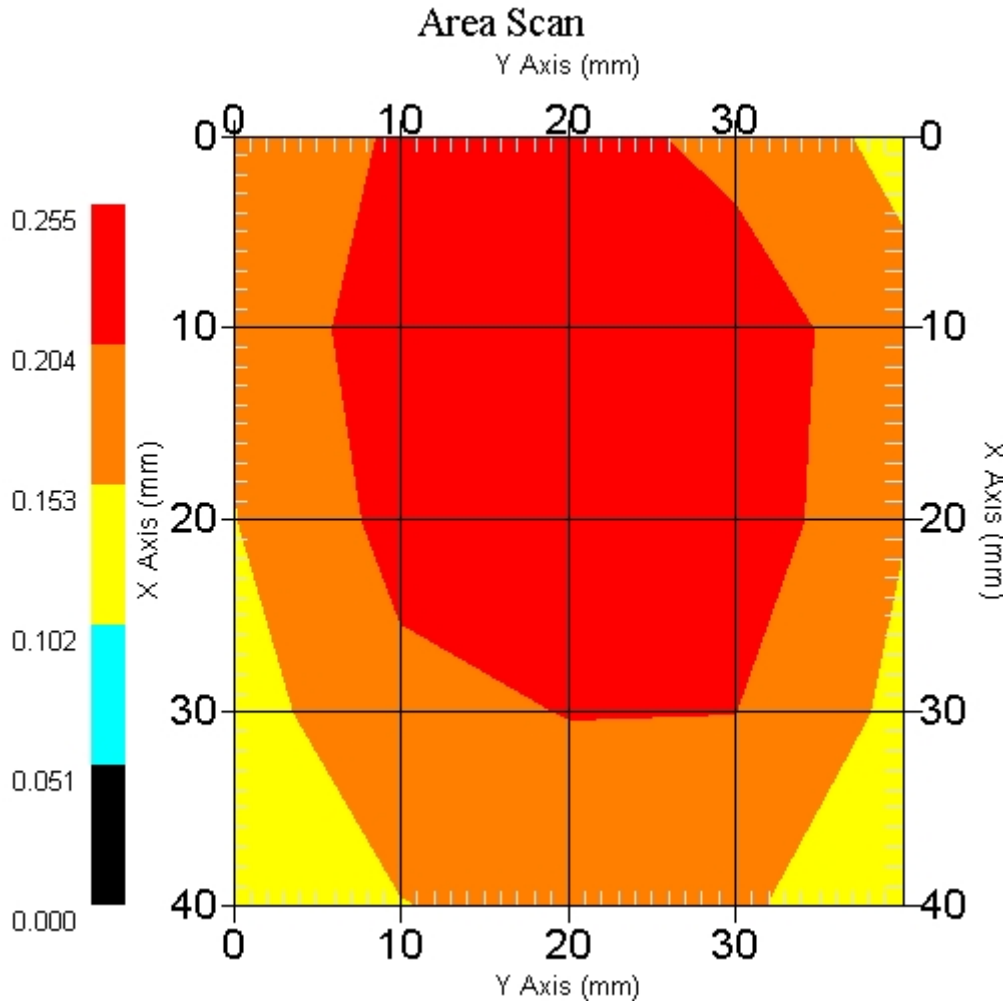
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 06-May-2006  
 Set-up Time : 7:35:03 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 : 0  
 Channel : Low - 1



1 gram SAR value : 0.246 W/kg  
 10 gram SAR value : 0.156 W/kg  
 Area Scan Peak SAR : 0.254 W/kg  
 Zoom Scan Peak SAR : 0.410 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 06-May-2006  
Starting Time : 06-May-2006 10:17:38 AM  
End Time : 06-May-2006 10:35:07 AM  
Scanning Time : 1049 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1.6 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.184 W/kg  
Power Drift-Finish: 0.186 W/kg  
Power Drift (%) : 0.975

### Phantom Data

Name : APREL-Uni  
Type : 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 : 06-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.92 F/m  
Sigma : 2.20 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

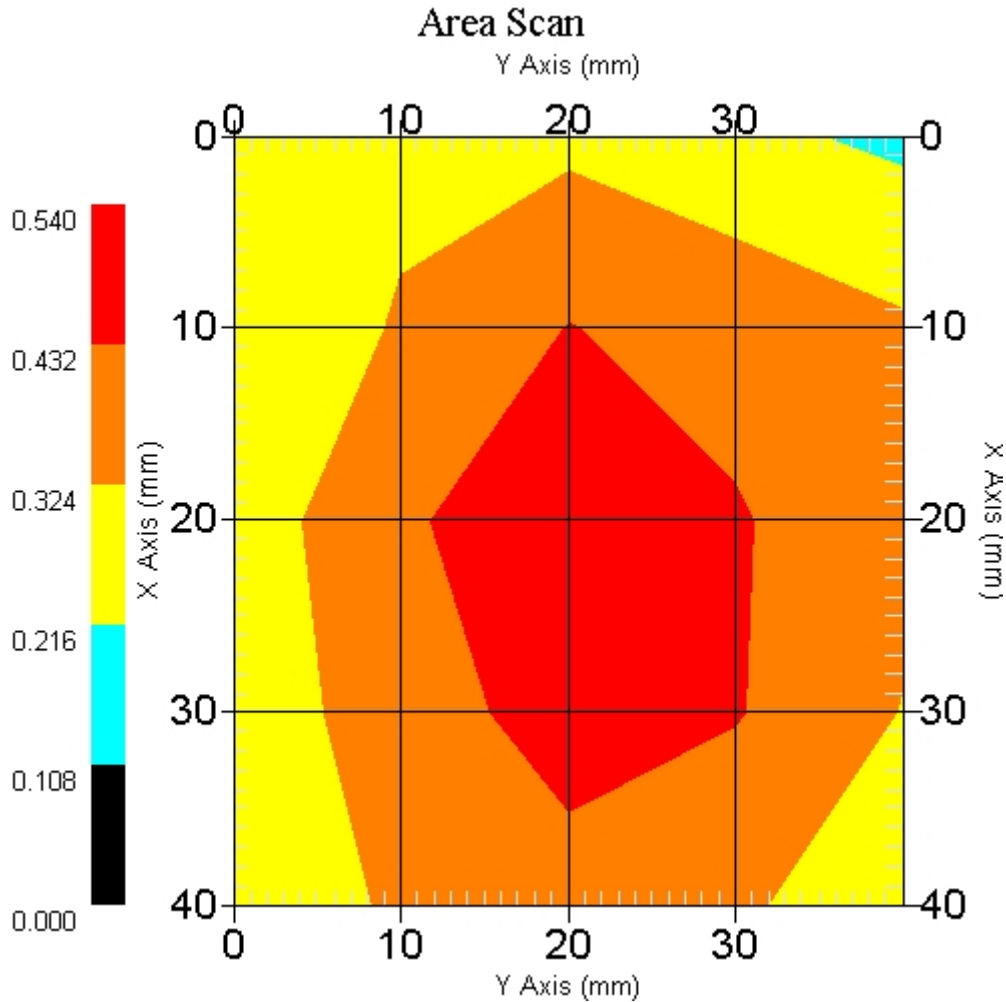
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 06-May-2006  
 Set-up Time : 7:35:03 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 : 0  
 Channel : Mid - 23



1 gram SAR value : 0.458 W/kg  
 10 gram SAR value : 0.279 W/kg  
 Area Scan Peak SAR : 0.539 W/kg  
 Zoom Scan Peak SAR : 0.970 W/kg



## SAR Test Report

By Operator : Jay  
Measurement Date : 06-May-2006  
Starting Time : 06-May-2006 02:20:15 PM  
End Time : 06-May-2006 02:37:44 PM  
Scanning Time : 1049 secs

### Product Data

Device Name : Navini Networks - Dell  
Serial No. : FFFE421E - 1.6 MHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.209 W/kg  
Power Drift-Finish: 0.197 W/kg  
Power Drift (%) : -5.742

### Phantom Data

Name : APREL-Uni  
Type : 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 : 06-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.92 F/m  
Sigma : 2.20 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

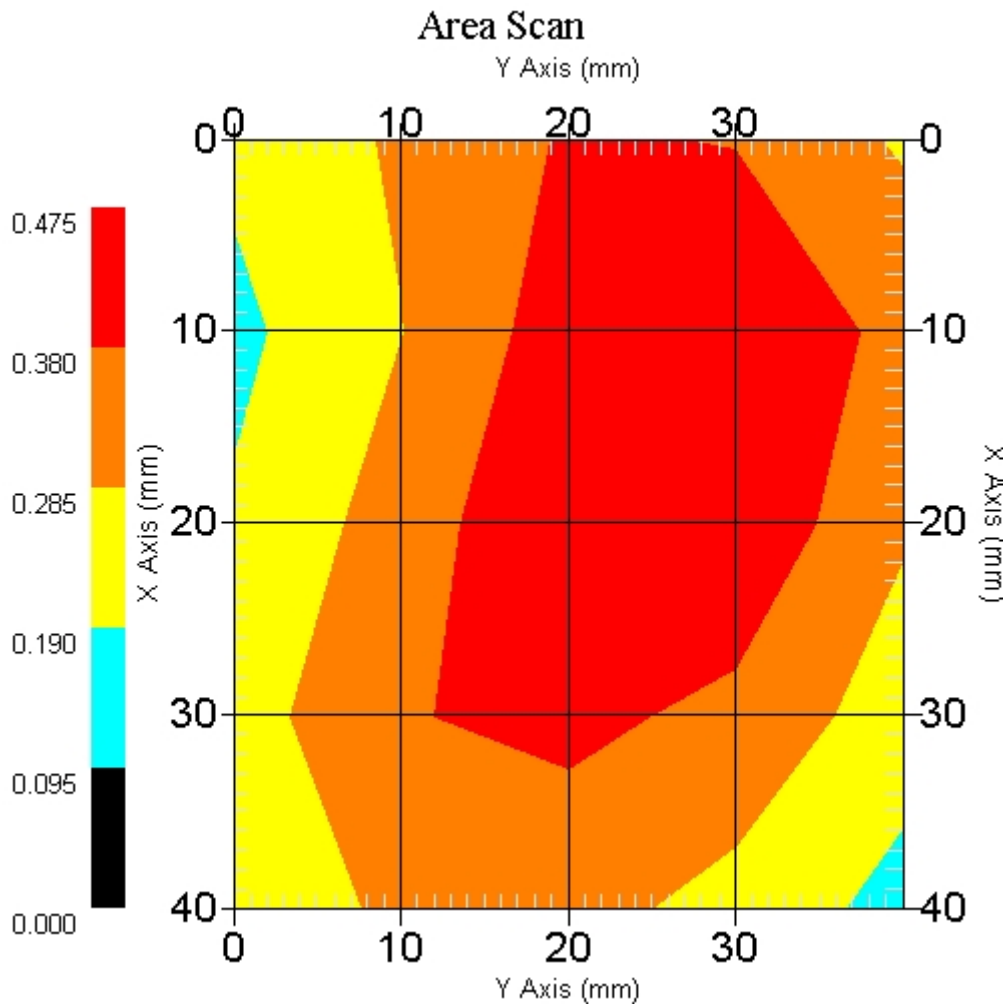
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 06-May-2006  
 Set-up Time : 7:35:03 AM  
 Area Scan : 5x5x1 : Measurement x=10mm, y=10mm, z=4mm  
 Zoom Scan : 5x5x8 : Measurement x=8mm, y=8mm, z=4mm

Other Data

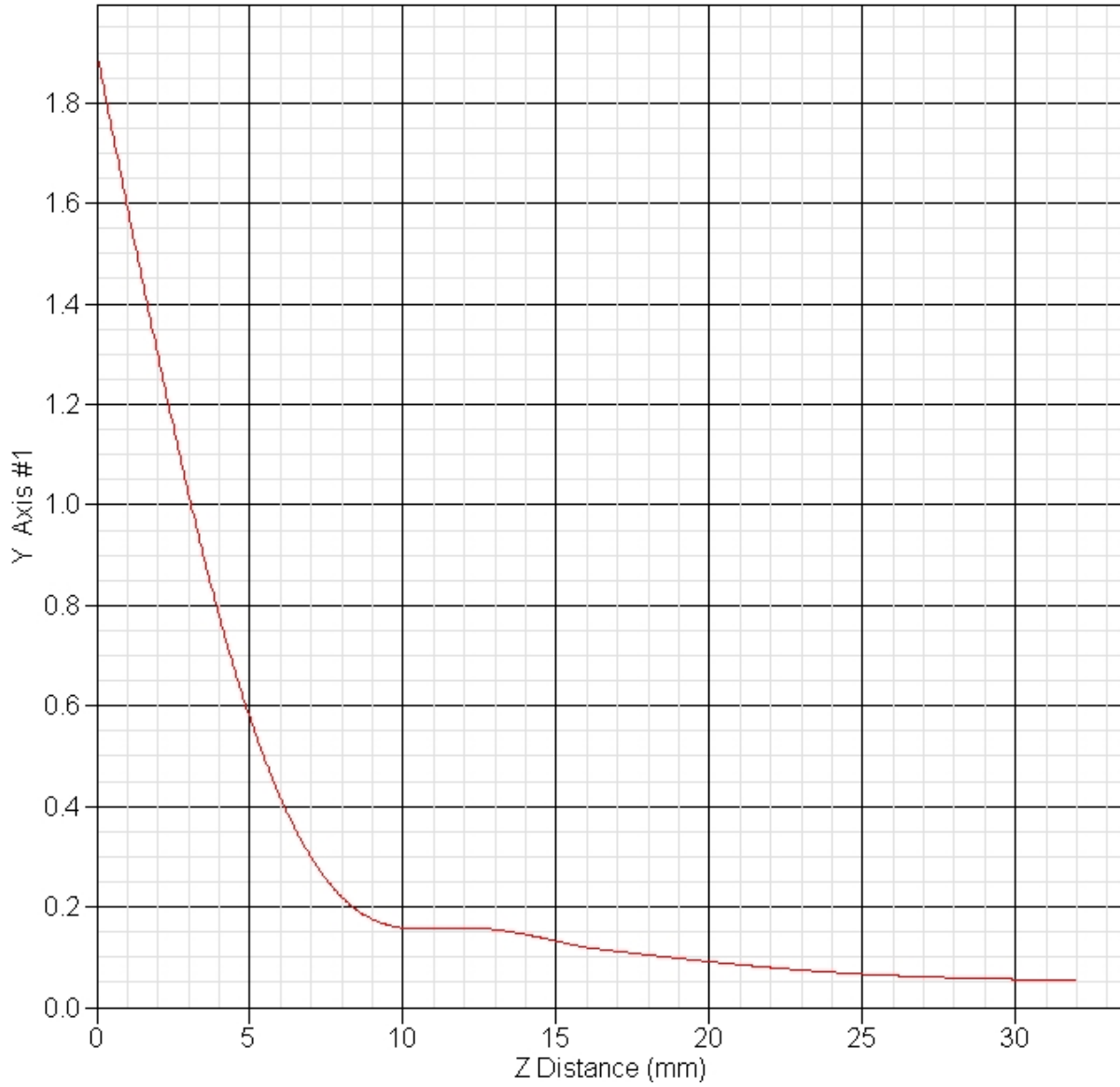
DUT Position : Touch  
 Separation : 0  
 Channel : High - 46



1 gram SAR value : 0.550 W/kg  
 10 gram SAR value : 0.255 W/kg  
 Area Scan Peak SAR : 0.474 W/kg  
 Zoom Scan Peak SAR : 1.901 W/kg

### SAR-Z Axis

at Hotspot x:28.40 y:11.70



## SAR Test Report

By Operator : Jay  
Measurement Date : 08-May-2006  
Starting Time : 08-May-2006 09:51:41 AM  
End Time : 08-May-2006 10:10:04 AM  
Scanning Time : 1103 secs

### Product Data

Device Name : Navini Networks - HP  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : External  
Orientation : Touch  
Power Drift-Start : 0.137 W/kg  
Power Drift-Finish: 0.129 W/kg  
Power Drift (%) : -5.839

### Phantom Data

Name : APREL-Uni  
Type : 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 : 08-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.26 F/m  
Sigma : 2.21 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

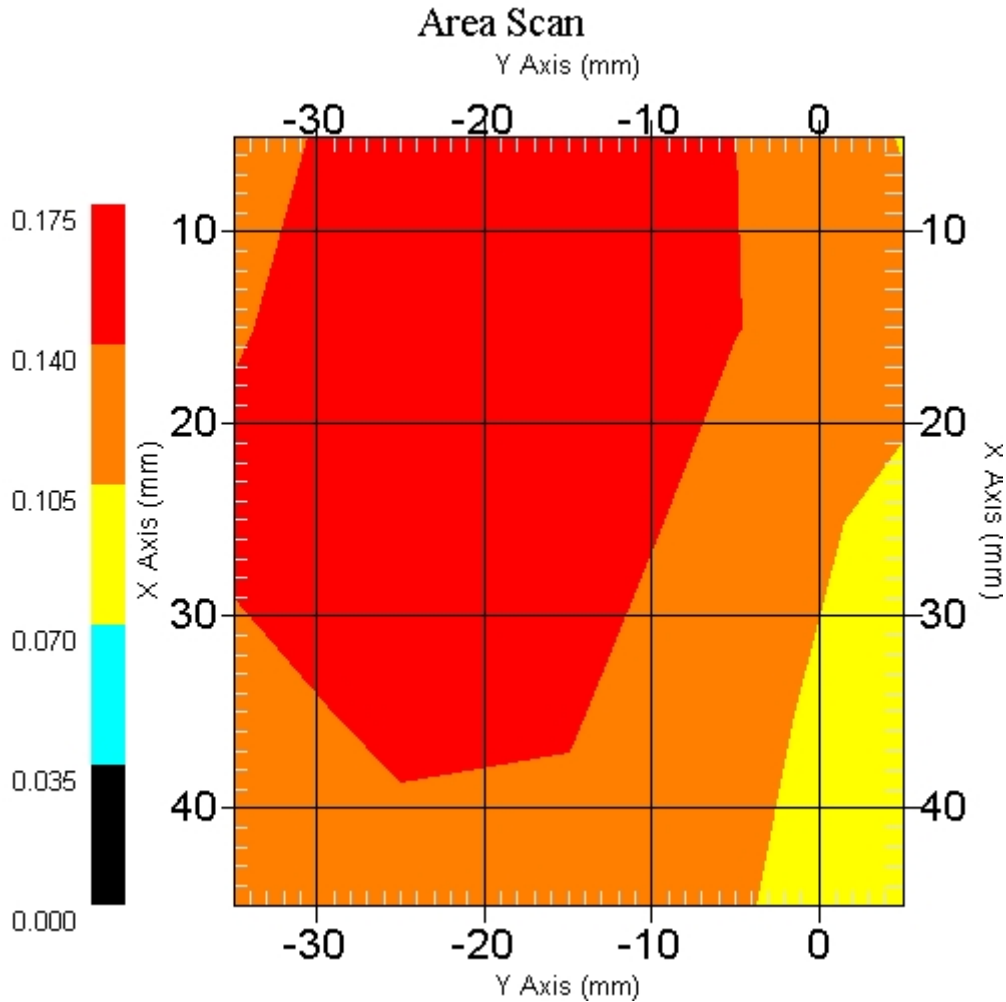
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 08-May-2006  
 Set-up Time : 8:01:28 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 : 0  
 Channel : Mid - 23



1 gram SAR value : 0.158 W/kg  
 10 gram SAR value : 0.108 W/kg  
 Area Scan Peak SAR : 0.174 W/kg  
 Zoom Scan Peak SAR : 0.270 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 05-May-2006  
Starting Time : 05-May-2006 12:15:04 PM  
End Time : 05-May-2006 12:33:07 PM  
Scanning Time : 1083 secs

### Product Data

Device Name : Navini Networks - HP  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.131 W/kg  
Power Drift-Finish: 0.140 W/kg  
Power Drift (%) : 6.870

### Phantom Data

Name : APREL-Uni  
Type : 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 : 05-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.84 F/m  
Sigma : 2.22 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

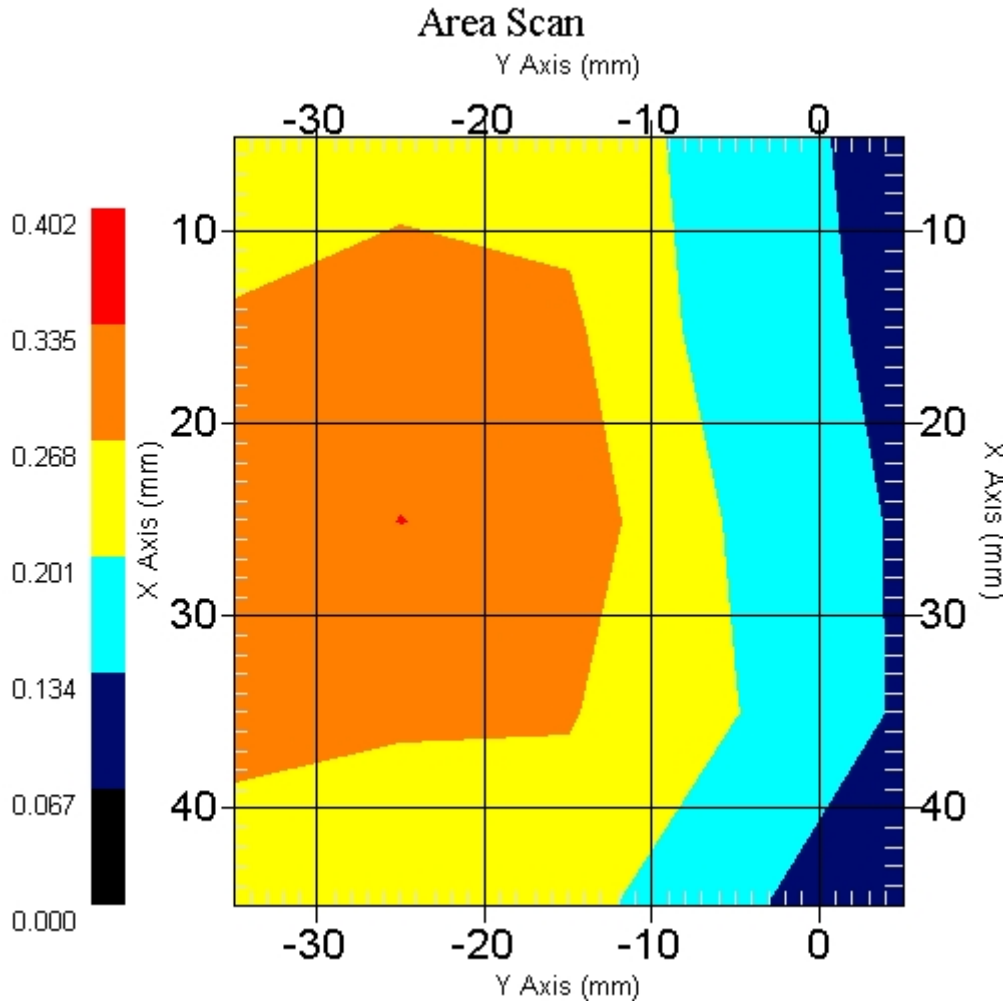
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 05-May-2006  
 Set-up Time : 8:42:11 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 : 0  
 Channel : Low - 1



1 gram SAR value : 0.304 W/kg  
 10 gram SAR value : 0.196 W/kg  
 Area Scan Peak SAR : 0.336 W/kg  
 Zoom Scan Peak SAR : 0.530 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 05-May-2006  
Starting Time : 05-May-2006 12:34:41 PM  
End Time : 05-May-2006 01:04:24 PM  
Scanning Time : 1783 secs

### Product Data

Device Name : Navini Networks - HP  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.209 W/kg  
Power Drift-Finish: 0.227 W/kg  
Power Drift (%) : 8.725

### 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. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 05-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.84 F/m  
Sigma : 2.22 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

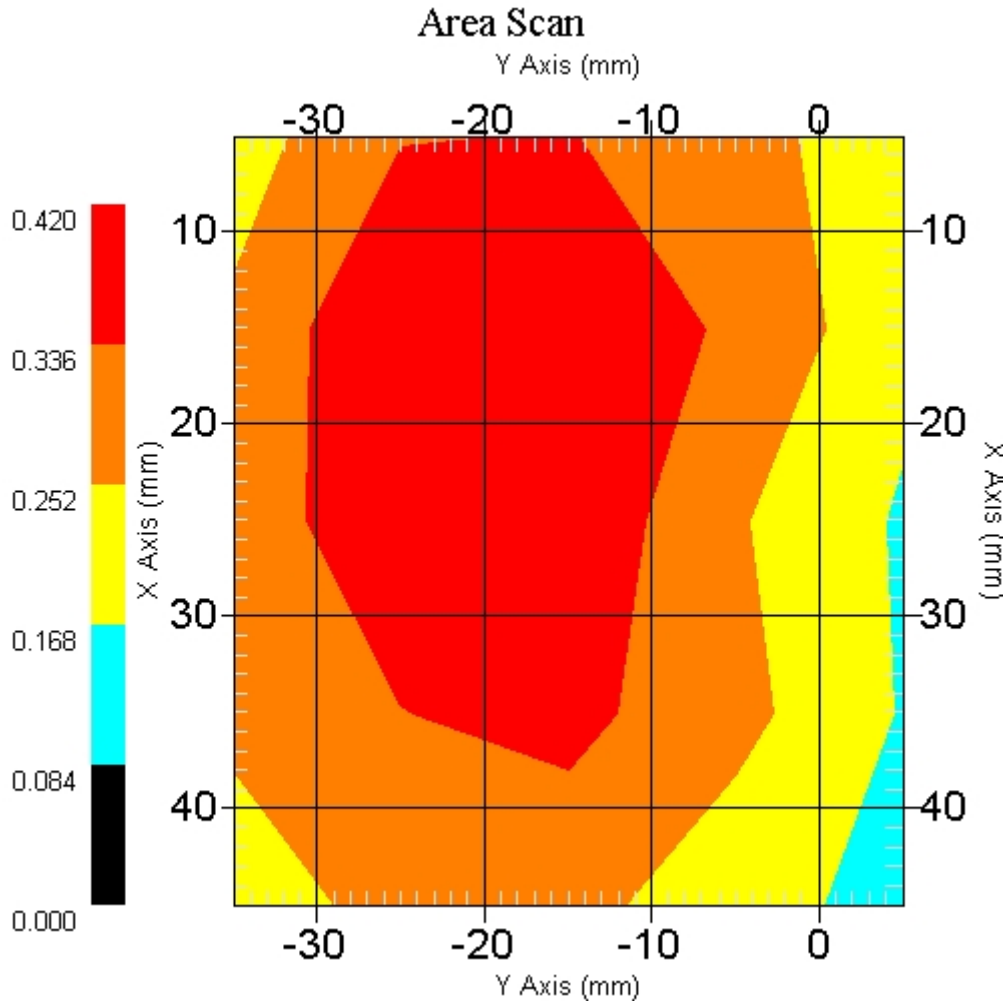


Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 05-May-2006  
 Set-up Time : 8:42:11 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 : 0  
 Channel : Mid - 23



1 gram SAR value : 0.380 W/kg  
 10 gram SAR value : 0.234 W/kg  
 Area Scan Peak SAR : 0.418 W/kg  
 Zoom Scan Peak SAR : 0.690 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 05-May-2006  
Starting Time : 05-May-2006 01:05:45 PM  
End Time : 05-May-2006 01:47:48 PM  
Scanning Time : 2523 secs

### Product Data

Device Name : Navini Networks - HP  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F1  
Orientation : Touch  
Power Drift-Start : 0.206 W/kg  
Power Drift-Finish: 0.223 W/kg  
Power Drift (%) : 8.407

### 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. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 05-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 51.84 F/m  
Sigma : 2.22 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

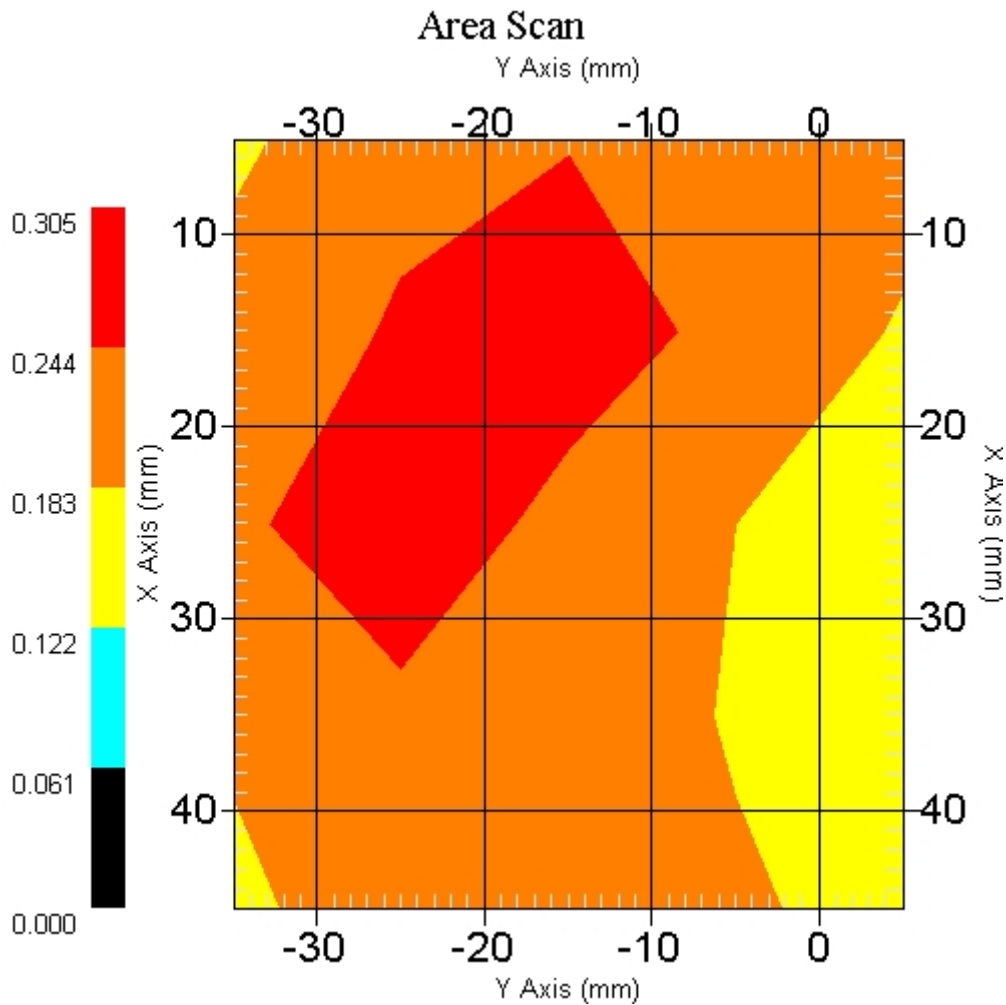
Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm

Measurement Data

Crest Factor : 0.46  
 Scan Type : Complete  
 Tissue Temp. : 20.00 °C  
 Ambient Temp. : 23.00 °C  
 Set-up Date : 05-May-2006  
 Set-up Time : 8:42:11 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 : 0  
 Channel : High - 46



1 gram SAR value : 0.314 W/kg  
 10 gram SAR value : 0.189 W/kg  
 Area Scan Peak SAR : 0.303 W/kg  
 Zoom Scan Peak SAR : 0.570 W/kg

## SAR Test Report

By Operator : Jay  
Measurement Date : 08-May-2006  
Starting Time : 08-May-2006 11:42:14 AM  
End Time : 08-May-2006 12:01:04 PM  
Scanning Time : 1130 secs

### Product Data

Device Name : Navini Networks - Toshiba  
Serial No. : FFFE421E - 200 kHz  
Type : Other  
Model : 2500-2686 PMX  
Frequency : 2590.00 MHz  
Max. Transmit Pwr : 0.316 W  
Drift Time : 0 min(s)  
Length : 55 mm  
Width : 54 mm  
Depth : 14 mm  
Antenna Type : Internal - F2  
Orientation : Touch  
Power Drift-Start : 0.183 W/kg  
Power Drift-Finish: 0.173 W/kg  
Power Drift (%) : -5.567

### Phantom Data

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

### Tissue Data

Type : BODY  
Serial No. : 2590  
Frequency : 2590.00 MHz  
Last Calib. Date : 08-May-2006  
Temperature : 20.00 °C  
Ambient Temp. : 23.00 °C  
Humidity : 45.00 RH%  
Epsilon : 52.26 F/m  
Sigma : 2.21 S/m  
Density : 1000.00 kg/cu. m

### Probe Data

Name : Probe 215 - RFEL  
Model : E020  
Type : E-Field Triangle  
Serial No. : 215  
Last Calib. Date : 10-Jun-2005  
Frequency : 2450.00 MHz  
Duty Cycle Factor: 0.46  
Conversion Factor: 4.6  
Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{m})^2$   
Compression Point: 95.00 mV  
Offset : 1.56 mm