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## Appendix A SAR Plots





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## SAR Test Report

Operator : 123  
 Validation Date : 11-Mar-2005  
 Measurement Date : 11-Mar-2005  
 Starting Time : 11-Mar-2005 11:09:58 AM  
 End Time : 11-Mar-2005 11:20:05 AM  
 Scanning Time : 607 secs

Product Data  
 Device Name : Dell Blade II  
 Serial No. : CN-0X0024-36521-3AG-00BD  
 Type : Other  
 Model : Standard  
 Frequency : 2450.00 MHz  
 Max. Transmit Pwr : 0.045 W  
 Drift Time : 0 min(s)  
 Length : 170  
 Width : 160  
 Depth : 30.4  
 Antenna Type : Internal  
 Power Start : 0.100  
 Power Finish : 0.100  
 Power Drift (%) : 0.000

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

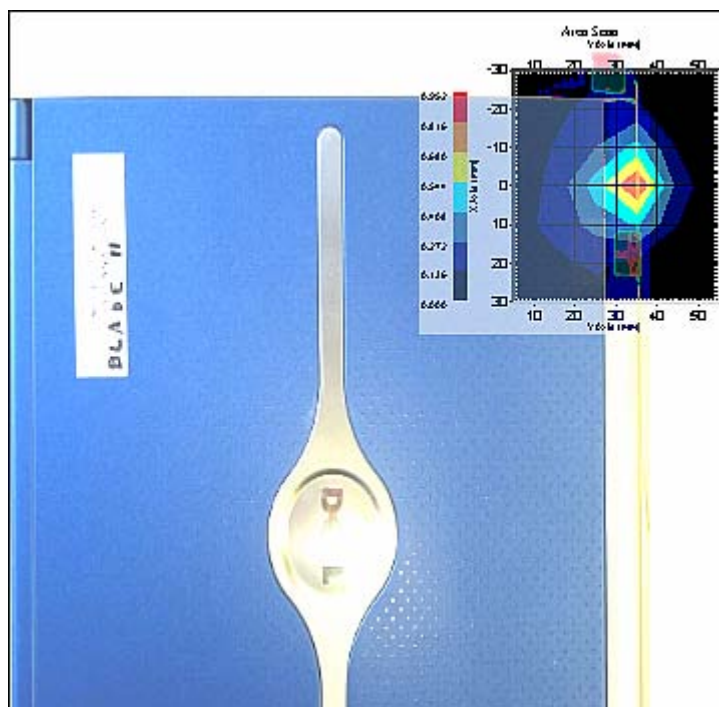
Tissue Data  
 Type : BODY  
 Serial No. : 2450  
 Frequency : 2450 MHz  
 Calibration Date : 11-Mar-2005  
 Temperature : 22 °C  
 Ambient Temp. : 23 °C  
 Humidity : 50 RH%  
 Epsilon : 54.96 F/m  
 Sigma : 1.9 S/m  
 Density : 1000 kg/cu. m

Probe Data  
 Name : APREL Probe 212  
 Model : E020  
 Type : E-Field Triangle  
 Serial No. : 212  
 Calibration Date : 27-Dec-2004  
 Frequency : 2450 MHz  
 Duty Cycle Factor: 1  
 Conversion Factor: 5  
 Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{sq. m})$   
 Compression Point: 95 mV  
 Offset : 1.56



Measurement Data  
 Crest Factor : 1  
 Scan Type : Complete  
 Set-up Date : 11-Mar-2005  
 Set-up Time : 10:22:47 AM

Other Data  
 DUT Position : Touch  
 Separation : 0  
 Channel : Mid - 2437



1 gram SAR value : 0.595 W/kg  
 Zoom Scan Peak SAR : 1.461



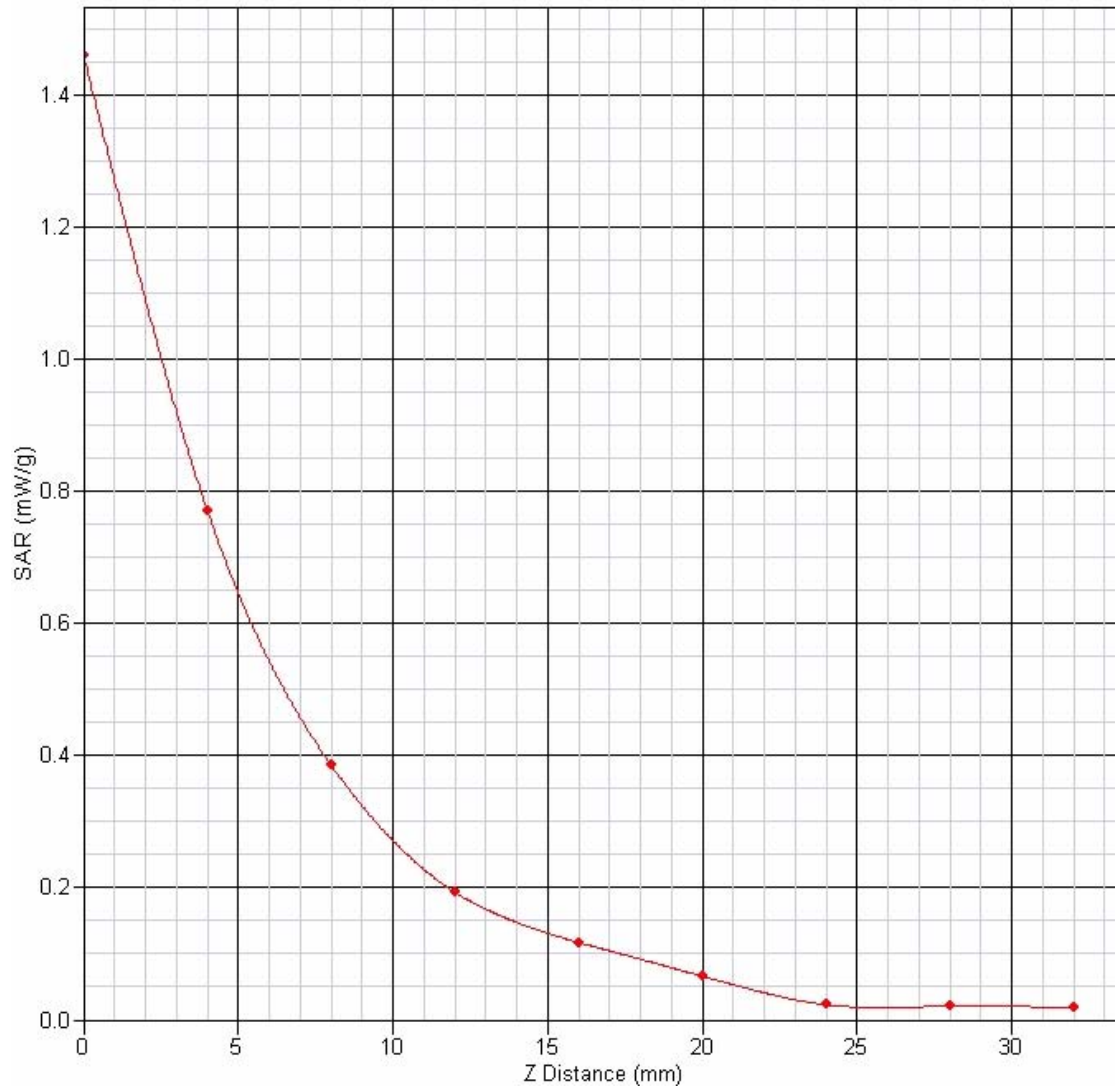
## Exposure Assessment Measurement Uncertainty

| Source of Uncertainty                            | Tolerance Value | Probability Distribution | Divisor    | $c_i^{-1}$<br>(1-g) | $c_i^{-1}$<br>(10-g) | Standard Uncertainty<br>(1-g) | Standard Uncertainty<br>(10-g) |
|--------------------------------------------------|-----------------|--------------------------|------------|---------------------|----------------------|-------------------------------|--------------------------------|
| Measurement System                               |                 |                          |            |                     |                      |                               |                                |
| Probe Calibration                                | 3.5             | normal                   | 1          | 1                   | 1                    | 3.5                           | 3.5                            |
| Axial Isotropy                                   | 3.7             | rectangular              | $\sqrt{3}$ | $(1-cp)^{1/2}$      | $(1-cp)^{1/2}$       | 1.5                           | 1.5                            |
| Hemispherical Isotropy                           | 10.9            | rectangular              | $\sqrt{3}$ | $\sqrt{cp}$         | $\sqrt{cp}$          | 4.4                           | 4.4                            |
| Boundary Effect                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Linearity                                        | 4.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.7                           | 2.7                            |
| Detection Limit                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Readout Electronics                              | 1.0             | normal                   | 1          | 1                   | 1                    | 1.0                           | 1.0                            |
| Response Time                                    | 0.8             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.5                           | 0.5                            |
| Integration Time                                 | 1.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.0                           | 1.0                            |
| RF Ambient Condition                             | 3.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Probe Positioner Mech.                           | 0.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.2                           | 0.2                            |
| Restriction                                      |                 |                          |            |                     |                      |                               |                                |
| Probe Positioning with respect to Phantom Shell  | 2.9             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Extrapolation and Integration                    | 3.7             | rectangular              | $\sqrt{3}$ | 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                            | 54.5            | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.0                           | 0.0                            |
| Phantom and Setup                                |                 |                          |            |                     |                      |                               |                                |
| Phantom Uncertainty(shape & thickness tolerance) | 3.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.0                           | 2.0                            |
| Liquid Conductivity(target)                      | 5.0             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 2.0                           | 1.4                            |
| Liquid Conductivity(meas.)                       | 0.2             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 0.1                           | 0.1                            |
| Liquid Permittivity(target)                      | 2.0             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 0.7                           | 0.6                            |
| Liquid Permittivity(meas.)                       | 5.5             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 1.9                           | 1.6                            |
| Combined Uncertainty                             |                 | RSS                      |            |                     |                      | 9.3                           | 9.1                            |
| Combined Uncertainty (coverage factor=2)         |                 | Normal (k=2)             |            |                     |                      | 18.6                          | 18.2                           |



## SAR-Z Axis

at Hotspot x:0.2 y:34.9





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## SAR Test Report

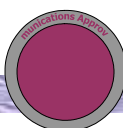
Operator : 123  
 Validation Date : 11-Mar-2005  
 Measurement Date : 11-Mar-2005  
 Starting Time : 11-Mar-2005 11:53:01 AM  
 End Time : 11-Mar-2005 12:03:21 PM  
 Scanning Time : 620 secs

Product Data  
 Device Name : Dell Blade II  
 Serial No. : CN-0X0024-36521-3AG-00BD  
 Type : Other  
 Model : Standard  
 Frequency : 2450.00 MHz  
 Max. Transmit Pwr : 0.045 W  
 Drift Time : 0 min(s)  
 Length : 170  
 Width : 160  
 Depth : 30.4  
 Antenna Type : Internal  
 Power Start : 0.100  
 Power Finish : 95.339  
 Power Drift (%) : 05

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

Tissue Data  
 Type : BODY  
 Serial No. : 2450  
 Frequency : 2450 MHz  
 Calibration Date : 11-Mar-2005  
 Temperature : 22 °C  
 Ambient Temp. : 23 °C  
 Humidity : 50 RH%  
 Epsilon : 54.96 F/m  
 Sigma : 1.9 S/m  
 Density : 1000 kg/cu. m

Probe Data  
 Name : APREL Probe 212  
 Model : E020  
 Type : E-Field Triangle  
 Serial No. : 212  
 Calibration Date : 27-Dec-2004  
 Frequency : 2450 MHz  
 Duty Cycle Factor: 1  
 Conversion Factor: 5  
 Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{sq. m})$   
 Compression Point: 95 mV  
 Offset : 1.56

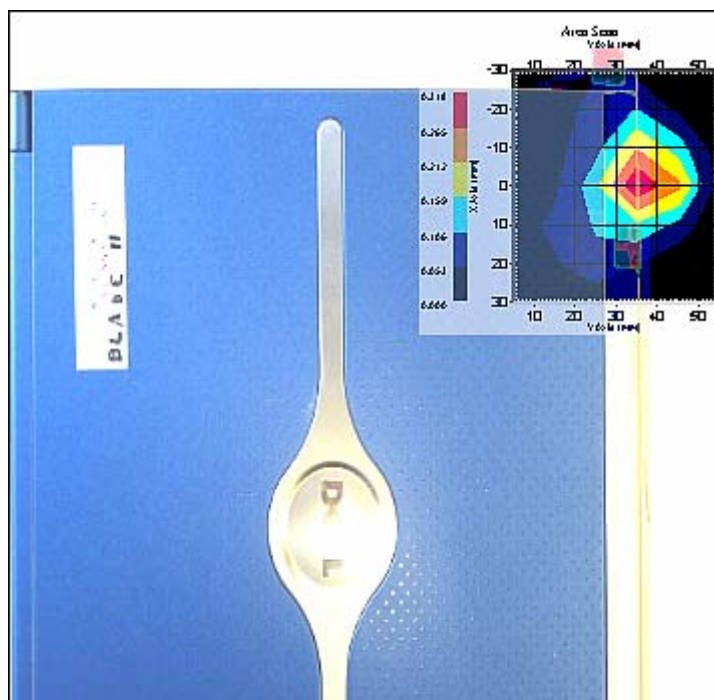


## Measurement Data

Crest Factor : 1  
 Scan Type : Complete  
 Set-up Date : 11-Mar-2005  
 Set-up Time : 10:22:47 AM

## Other Data

DUT Position : Touch  
 Separation : 0  
 Channel : Mid - 2437



1 gram SAR value : 0.255 W/kg  
 Zoom Scan Peak SAR : 0.560

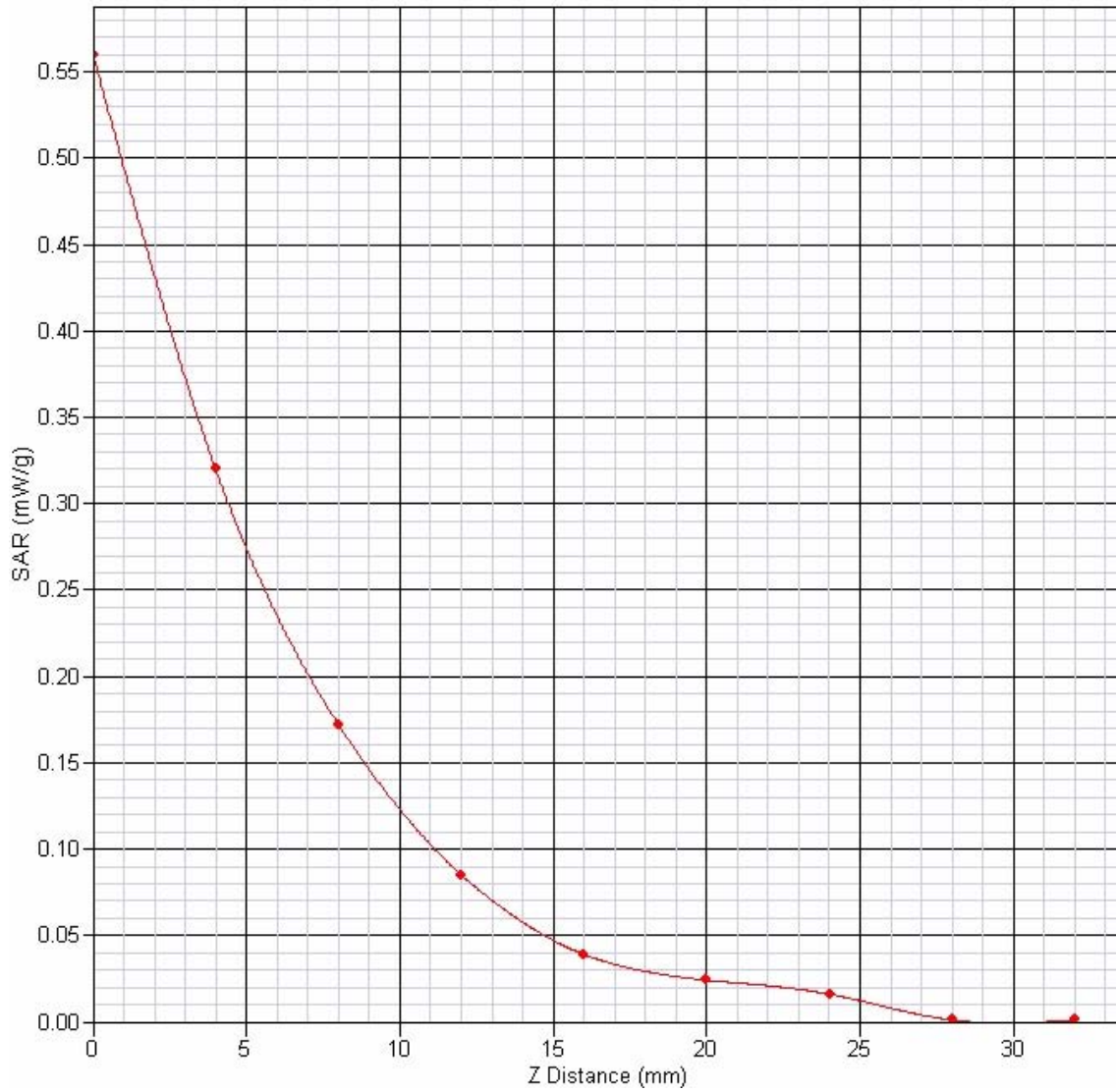


## Exposure Assessment Measurement Uncertainty

| Source of Uncertainty                            | Tolerance Value | Probability Distribution | Divisor    | $c_i^{-1}$<br>(1-g) | $c_i^{-1}$<br>(10-g) | Standard Uncertainty<br>(1-g) | Standard Uncertainty<br>(10-g) |
|--------------------------------------------------|-----------------|--------------------------|------------|---------------------|----------------------|-------------------------------|--------------------------------|
| Measurement System                               |                 |                          |            |                     |                      |                               |                                |
| Probe Calibration                                | 3.5             | normal                   | 1          | 1                   | 1                    | 3.5                           | 3.5                            |
| Axial Isotropy                                   | 3.7             | rectangular              | $\sqrt{3}$ | $(1-cp)^{1/2}$      | $(1-cp)^{1/2}$       | 1.5                           | 1.5                            |
| Hemispherical Isotropy                           | 10.9            | rectangular              | $\sqrt{3}$ | $\sqrt{cp}$         | $\sqrt{cp}$          | 4.4                           | 4.4                            |
| Boundary Effect                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Linearity                                        | 4.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.7                           | 2.7                            |
| Detection Limit                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Readout Electronics                              | 1.0             | normal                   | 1          | 1                   | 1                    | 1.0                           | 1.0                            |
| Response Time                                    | 0.8             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.5                           | 0.5                            |
| Integration Time                                 | 1.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.0                           | 1.0                            |
| RF Ambient Condition                             | 3.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Probe Positioner Mech.                           | 0.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.2                           | 0.2                            |
| Restriction                                      |                 |                          |            |                     |                      |                               |                                |
| Probe Positioning with respect to Phantom Shell  | 2.9             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Extrapolation and Integration                    | 3.7             | rectangular              | $\sqrt{3}$ | 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                            | 95.3            | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.0                           | 0.0                            |
| Phantom and Setup                                |                 |                          |            |                     |                      |                               |                                |
| Phantom Uncertainty(shape & thickness tolerance) | 3.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.0                           | 2.0                            |
| Liquid Conductivity(target)                      | 5.0             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 2.0                           | 1.4                            |
| Liquid Conductivity(meas.)                       | 0.2             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 0.1                           | 0.1                            |
| Liquid Permittivity(target)                      | 2.0             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 0.7                           | 0.6                            |
| Liquid Permittivity(meas.)                       | 5.5             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 1.9                           | 1.6                            |
| Combined Uncertainty                             |                 | RSS                      |            |                     |                      | 9.3                           | 9.1                            |
| Combined Uncertainty (coverage factor=2)         |                 | Normal (k=2)             |            |                     |                      | 18.6                          | 18.2                           |



**SAR-Z Axis**  
at Hotspot x:0.2 y:34.8





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## SAR Test Report

Operator : 123  
 Validation Date : 10-Mar-2005  
 Measurement Date : 10-Mar-2005  
 Starting Time : 10-Mar-2005 12:22:40 PM  
 End Time : 10-Mar-2005 12:32:57 PM  
 Scanning Time : 617 secs

Product Data  
 Device Name : Dell Blade II  
 Serial No. : CN-0X0024-36521-3AG-00BD  
 Type : Other  
 Model : Standard  
 Frequency : 2450.00 MHz  
 Max. Transmit Pwr : 0.045 W  
 Drift Time : 0 min(s)  
 Length : 150  
 Width : 160  
 Depth : 30.4  
 Antenna Type : Internal  
 Power Start : 0.100  
 Power Finish : 0.100  
 Power Drift (%) : 0.00

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

Tissue Data  
 Type : BODY  
 Serial No. : 2450  
 Frequency : 2450 MHz  
 Calibration Date : 10-Mar-2005  
 Temperature : 22 °C  
 Ambient Temp. : 23 °C  
 Humidity : 50 RH%  
 Epsilon : 54.96 F/m  
 Sigma : 1.9 S/m  
 Density : 1000 kg/cu. m

Probe Data  
 Name : APREL Probe 212  
 Model : E020  
 Type : E-Field Triangle  
 Serial No. : 212  
 Calibration Date : 27-Dec-2004  
 Frequency : 2450 MHz  
 Duty Cycle Factor: 1  
 Conversion Factor: 5  
 Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{sq. m})$   
 Compression Point: 95 mV  
 Offset : 1.56

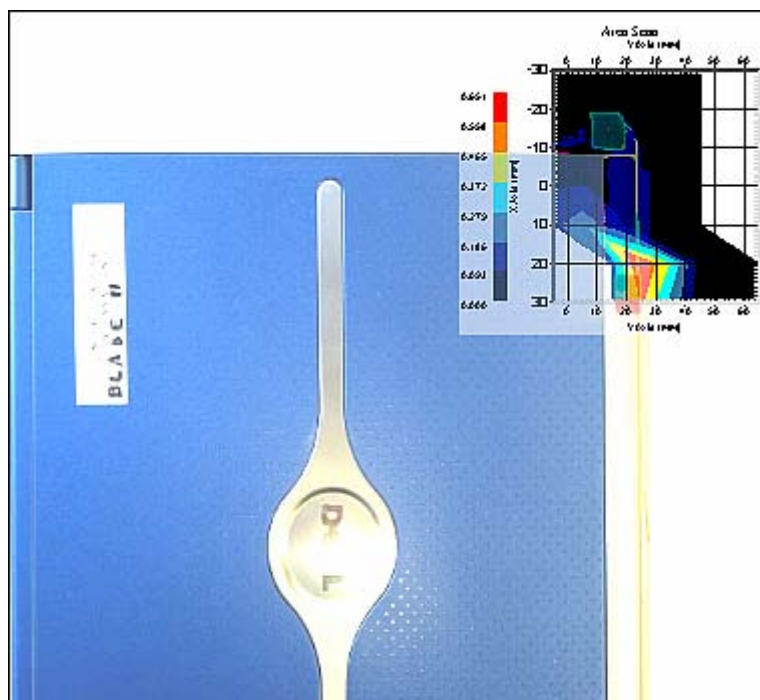


## Measurement Data

Crest Factor : 1  
 Scan Type : Complete  
 Set-up Date : 09-Mar-2005  
 Set-up Time : 4:00:52 PM

## Other Data

DUT Position : Touch  
 Separation : 0  
 Channel : Low - 2412



1 gram SAR value : 0.437 W/kg  
 Zoom Scan Peak SAR : 0.940

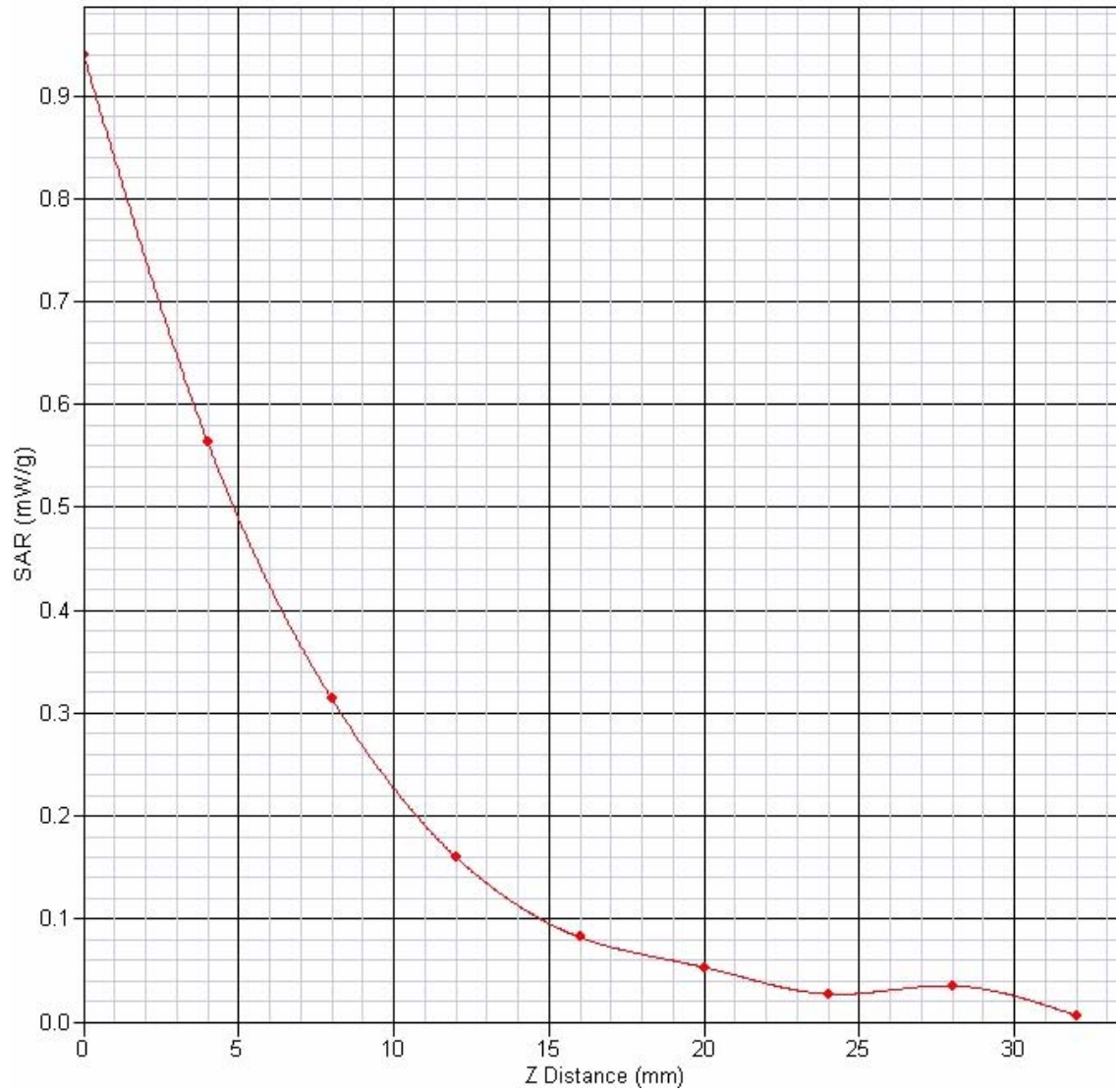


## Exposure Assessment Measurement Uncertainty

| Source of Uncertainty                            | Tolerance Value | Probability Distribution | Divisor    | $c_i^{-1}$<br>(1-g) | $c_i^{-1}$<br>(10-g) | Standard Uncertainty<br>(1-g) | Standard Uncertainty<br>(10-g) |
|--------------------------------------------------|-----------------|--------------------------|------------|---------------------|----------------------|-------------------------------|--------------------------------|
| Measurement System                               |                 |                          |            |                     |                      |                               |                                |
| Probe Calibration                                | 3.5             | normal                   | 1          | 1                   | 1                    | 3.5                           | 3.5                            |
| Axial Isotropy                                   | 3.7             | rectangular              | $\sqrt{3}$ | $(1-cp)^{1/2}$      | $(1-cp)^{1/2}$       | 1.5                           | 1.5                            |
| Hemispherical Isotropy                           | 10.9            | rectangular              | $\sqrt{3}$ | $\sqrt{cp}$         | $\sqrt{cp}$          | 4.4                           | 4.4                            |
| Boundary Effect                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Linearity                                        | 4.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.7                           | 2.7                            |
| Detection Limit                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Readout Electronics                              | 1.0             | normal                   | 1          | 1                   | 1                    | 1.0                           | 1.0                            |
| Response Time                                    | 0.8             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.5                           | 0.5                            |
| Integration Time                                 | 1.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.0                           | 1.0                            |
| RF Ambient Condition                             | 3.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Probe Positioner Mech.                           | 0.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.2                           | 0.2                            |
| Restriction                                      |                 |                          |            |                     |                      |                               |                                |
| Probe Positioning with respect to Phantom Shell  | 2.9             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Extrapolation and Integration                    | 3.7             | rectangular              | $\sqrt{3}$ | 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                            | 66.9            | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.0                           | 0.0                            |
| Phantom and Setup                                |                 |                          |            |                     |                      |                               |                                |
| Phantom Uncertainty(shape & thickness tolerance) | 3.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.0                           | 2.0                            |
| Liquid Conductivity(target)                      | 5.0             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 2.0                           | 1.4                            |
| Liquid Conductivity(meas.)                       | 0.2             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 0.1                           | 0.1                            |
| Liquid Permittivity(target)                      | 2.0             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 0.7                           | 0.6                            |
| Liquid Permittivity(meas.)                       | 5.5             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 1.9                           | 1.6                            |
| Combined Uncertainty                             |                 | RSS                      |            |                     |                      | 9.3                           | 9.1                            |
| Combined Uncertainty (coverage factor=2)         |                 | Normal (k=2)             |            |                     |                      | 18.6                          | 18.2                           |



**SAR-Z Axis**  
at Hotspot x:28.3 y:24.9





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## SAR Test Report

Operator : 123  
 Validation Date : 10-Mar-2005  
 Measurement Date : 10-Mar-2005  
 Starting Time : 10-Mar-2005 02:18:06 PM  
 End Time : 10-Mar-2005 02:28:09 PM  
 Scanning Time : 603 secs

Product Data  
 Device Name : Dell Blade II  
 Serial No. : CN-0X0024-36521-3AG-00BD  
 Type : Other  
 Model : Standard  
 Frequency : 2450.00 MHz  
 Max. Transmit Pwr : 0.045 W  
 Drift Time : 0 min(s)  
 Length : 150  
 Width : 160  
 Depth : 30.4  
 Antenna Type : Internal  
 Power Start : 0.100  
 Power Finish : 0.100  
 Power Drift (%) : 0.00

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

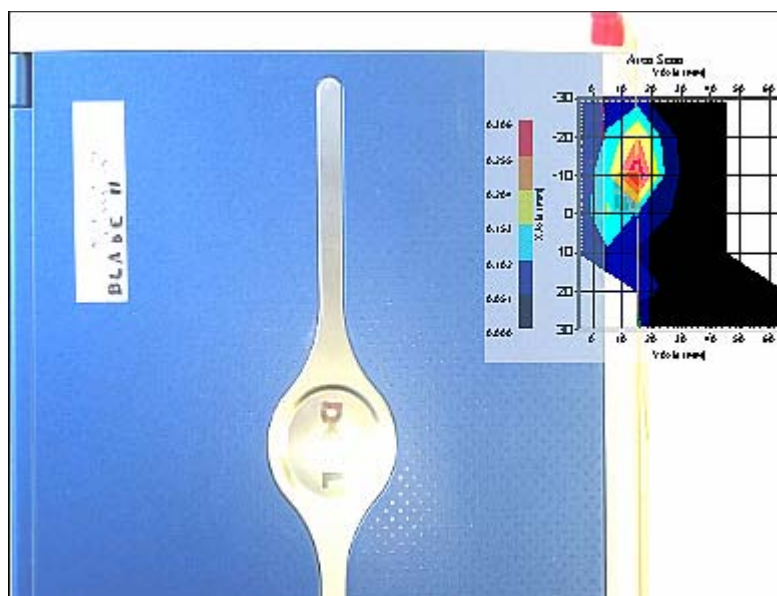
Tissue Data  
 Type : BODY  
 Serial No. : 2450  
 Frequency : 2450 MHz  
 Calibration Date : 10-Mar-2005  
 Temperature : 22 °C  
 Ambient Temp. : 23 °C  
 Humidity : 50 RH%  
 Epsilon : 54.96 F/m  
 Sigma : 1.9 S/m  
 Density : 1000 kg/cu. m

Probe Data  
 Name : APREL Probe 212  
 Model : E020  
 Type : E-Field Triangle  
 Serial No. : 212  
 Calibration Date : 27-Dec-2004  
 Frequency : 2450 MHz  
 Duty Cycle Factor: 1  
 Conversion Factor: 5  
 Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{sq. m})$   
 Compression Point: 95 mV  
 Offset : 1.56



Measurement Data  
 Crest Factor : 1  
 Scan Type : Complete  
 Set-up Date : 09-Mar-2005  
 Set-up Time : 4:00:52 PM

Other Data  
 DUT Position : Touch  
 Separation : 0  
 Channel : Low - 2412



1 gram SAR value : 0.220 W/kg  
 Zoom Scan Peak SAR : 0.460

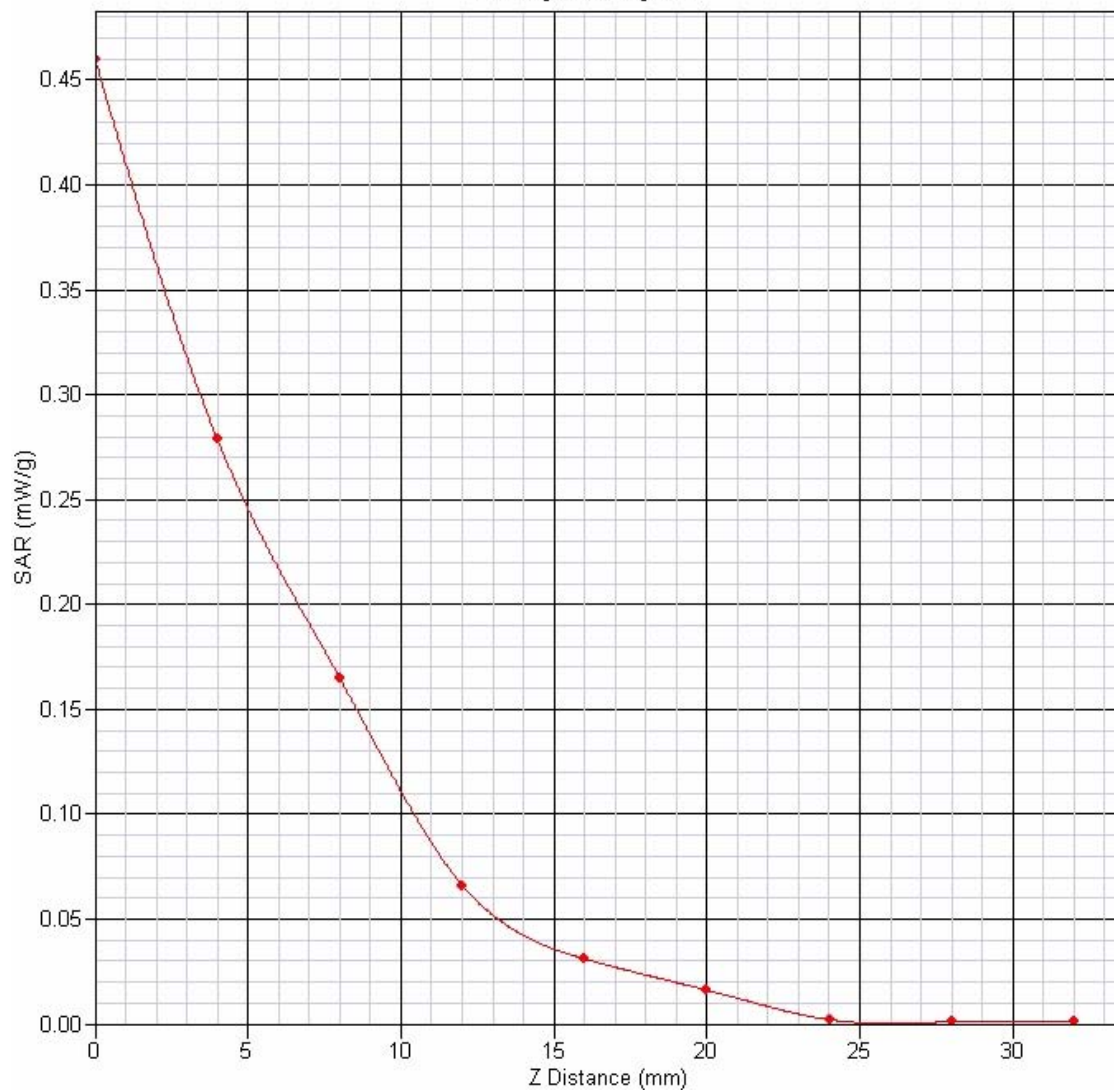


## Exposure Assessment Measurement Uncertainty

| Source of Uncertainty                            | Tolerance Value | Probability Distribution | Divisor    | $c_i^{-1}$<br>(1-g) | $c_i^{-1}$<br>(10-g) | Standard Uncertainty<br>(1-g) | Standard Uncertainty<br>(10-g) |
|--------------------------------------------------|-----------------|--------------------------|------------|---------------------|----------------------|-------------------------------|--------------------------------|
| Measurement System                               |                 |                          |            |                     |                      |                               |                                |
| Probe Calibration                                | 3.5             | normal                   | 1          | 1                   | 1                    | 3.5                           | 3.5                            |
| Axial Isotropy                                   | 3.7             | rectangular              | $\sqrt{3}$ | $(1-cp)^{1/2}$      | $(1-cp)^{1/2}$       | 1.5                           | 1.5                            |
| Hemispherical Isotropy                           | 10.9            | rectangular              | $\sqrt{3}$ | $\sqrt{cp}$         | $\sqrt{cp}$          | 4.4                           | 4.4                            |
| Boundary Effect                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Linearity                                        | 4.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.7                           | 2.7                            |
| Detection Limit                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Readout Electronics                              | 1.0             | normal                   | 1          | 1                   | 1                    | 1.0                           | 1.0                            |
| Response Time                                    | 0.8             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.5                           | 0.5                            |
| Integration Time                                 | 1.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.0                           | 1.0                            |
| RF Ambient Condition                             | 3.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Probe Positioner Mech.                           | 0.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.2                           | 0.2                            |
| Restriction                                      |                 |                          |            |                     |                      |                               |                                |
| Probe Positioning with respect to Phantom Shell  | 2.9             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Extrapolation and Integration                    | 3.7             | rectangular              | $\sqrt{3}$ | 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                            | 85.2            | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.0                           | 0.0                            |
| Phantom and Setup                                |                 |                          |            |                     |                      |                               |                                |
| Phantom Uncertainty(shape & thickness tolerance) | 3.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.0                           | 2.0                            |
| Liquid Conductivity(target)                      | 5.0             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 2.0                           | 1.4                            |
| Liquid Conductivity(meas.)                       | 0.2             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 0.1                           | 0.1                            |
| Liquid Permittivity(target)                      | 2.0             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 0.7                           | 0.6                            |
| Liquid Permittivity(meas.)                       | 5.5             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 1.9                           | 1.6                            |
| Combined Uncertainty                             |                 | RSS                      |            |                     |                      | 9.3                           | 9.1                            |
| Combined Uncertainty (coverage factor=2)         |                 | Normal (k=2)             |            |                     |                      | 18.6                          | 18.2                           |



**SAR-Z Axis**  
at Hotspot x:-9.7 y:34.9





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## SAR Test Report

Operator : 123  
 Validation Date : 11-Mar-2005  
 Measurement Date : 11-Mar-2005  
 Starting Time : 11-Mar-2005 10:24:45 AM  
 End Time : 11-Mar-2005 10:35:00 AM  
 Scanning Time : 615 secs

Product Data  
 Device Name : Dell Blade II  
 Serial No. : CN-0X0024-36521-3AG-00BD  
 Type : Other  
 Model : Standard  
 Frequency : 2450.00 MHz  
 Max. Transmit Pwr : 0.045 W  
 Drift Time : 0 min(s)  
 Length : 170  
 Width : 160  
 Depth : 30.4  
 Antenna Type : Internal  
 Power Start : 0.100  
 Power Finish : 0.100  
 Power Drift (%) : 0.00

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

Tissue Data  
 Type : BODY  
 Serial No. : 2450  
 Frequency : 2450 MHz  
 Calibration Date : 11-Mar-2005  
 Temperature : 22 °C  
 Ambient Temp. : 23 °C  
 Humidity : 50 RH%  
 Epsilon : 54.96 F/m  
 Sigma : 1.9 S/m  
 Density : 1000 kg/cu. m

Probe Data  
 Name : APREL Probe 212  
 Model : E020  
 Type : E-Field Triangle  
 Serial No. : 212  
 Calibration Date : 27-Dec-2004  
 Frequency : 2450 MHz  
 Duty Cycle Factor: 1  
 Conversion Factor: 5  
 Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{sq. m})$   
 Compression Point: 95 mV  
 Offset : 1.56

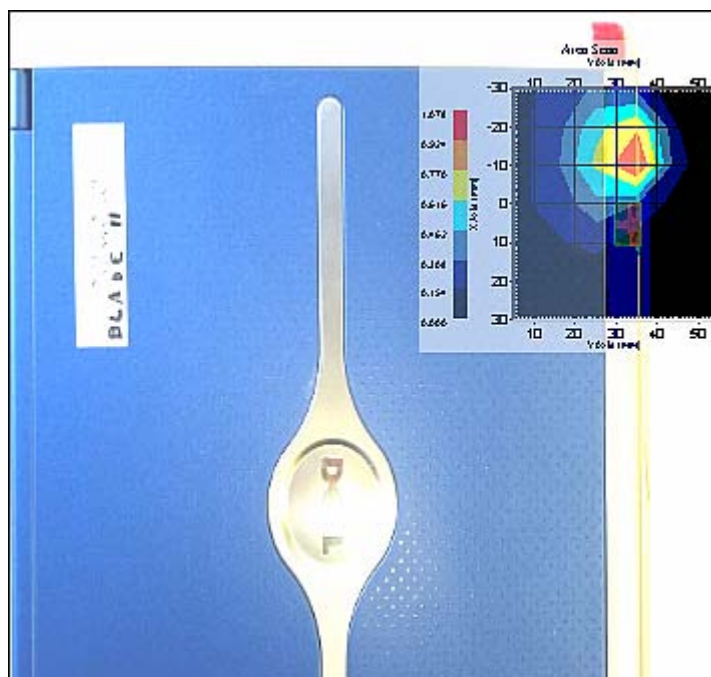


## Measurement Data

Crest Factor : 1  
 Scan Type : Complete  
 Set-up Date : 11-Mar-2005  
 Set-up Time : 10:22:47 AM

## Other Data

DUT Position : Touch  
 Separation : 0  
 Channel : High - 2462



1 gram SAR value : 0.577 W/kg  
 Zoom Scan Peak SAR : 1.211



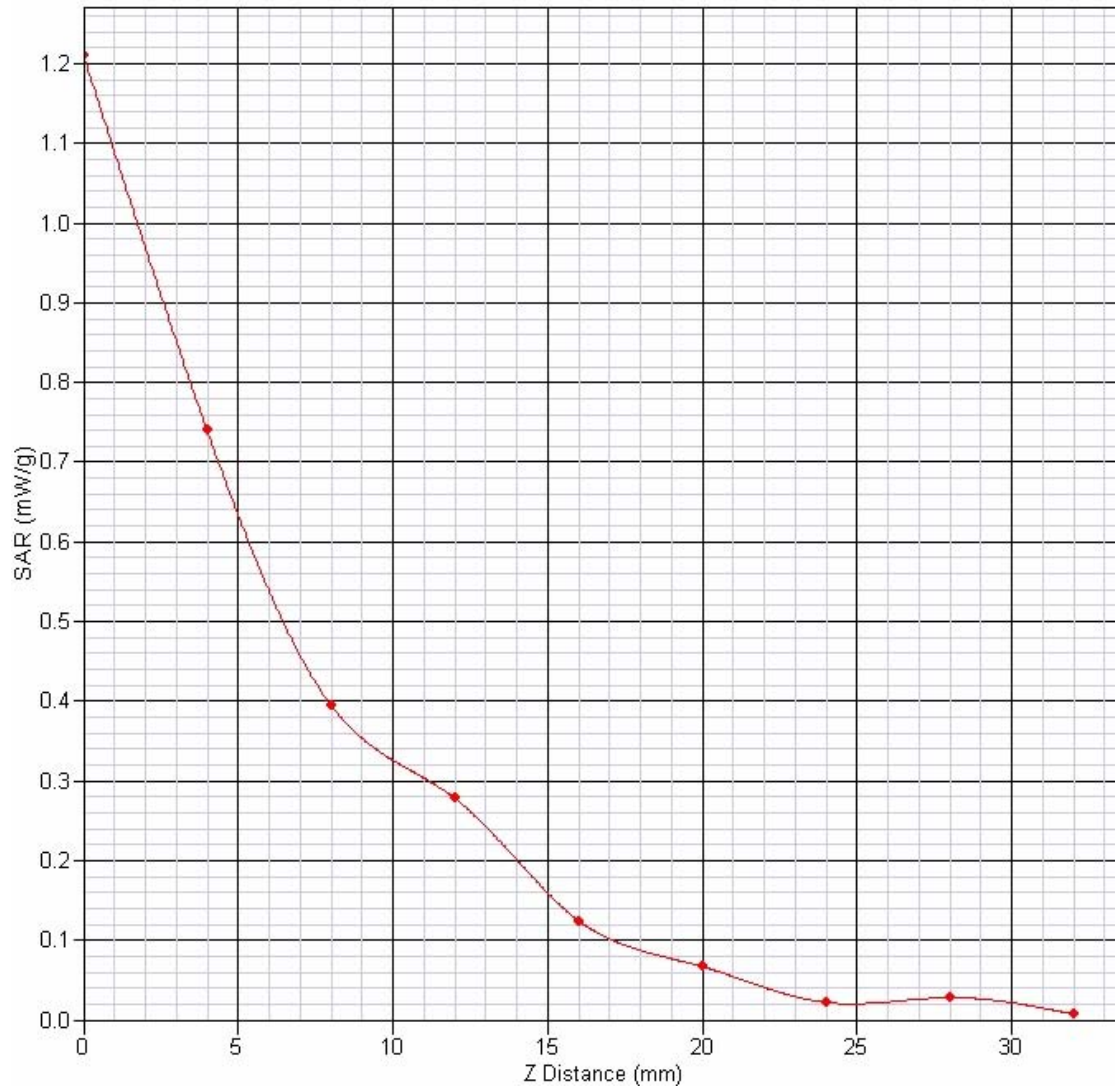
## Exposure Assessment Measurement Uncertainty

| Source of Uncertainty                            | Tolerance Value | Probability Distribution | Divisor    | $c_i^{-1}$<br>(1-g) | $c_i^{-1}$<br>(10-g) | Standard Uncertainty<br>(1-g) | Standard Uncertainty<br>(10-g) |
|--------------------------------------------------|-----------------|--------------------------|------------|---------------------|----------------------|-------------------------------|--------------------------------|
| Measurement System                               |                 |                          |            |                     |                      |                               |                                |
| Probe Calibration                                | 3.5             | normal                   | 1          | 1                   | 1                    | 3.5                           | 3.5                            |
| Axial Isotropy                                   | 3.7             | rectangular              | $\sqrt{3}$ | $(1-cp)^{1/2}$      | $(1-cp)^{1/2}$       | 1.5                           | 1.5                            |
| Hemispherical Isotropy                           | 10.9            | rectangular              | $\sqrt{3}$ | $\sqrt{cp}$         | $\sqrt{cp}$          | 4.4                           | 4.4                            |
| Boundary Effect                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Linearity                                        | 4.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.7                           | 2.7                            |
| Detection Limit                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Readout Electronics                              | 1.0             | normal                   | 1          | 1                   | 1                    | 1.0                           | 1.0                            |
| Response Time                                    | 0.8             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.5                           | 0.5                            |
| Integration Time                                 | 1.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.0                           | 1.0                            |
| RF Ambient Condition                             | 3.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Probe Positioner Mech.                           | 0.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.2                           | 0.2                            |
| Restriction                                      |                 |                          |            |                     |                      |                               |                                |
| Probe Positioning with respect to Phantom Shell  | 2.9             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Extrapolation and Integration                    | 3.7             | rectangular              | $\sqrt{3}$ | 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                            | 56.3            | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.0                           | 0.0                            |
| Phantom and Setup                                |                 |                          |            |                     |                      |                               |                                |
| Phantom Uncertainty(shape & thickness tolerance) | 3.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.0                           | 2.0                            |
| Liquid Conductivity(target)                      | 5.0             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 2.0                           | 1.4                            |
| Liquid Conductivity(meas.)                       | 0.2             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 0.1                           | 0.1                            |
| Liquid Permittivity(target)                      | 2.0             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 0.7                           | 0.6                            |
| Liquid Permittivity(meas.)                       | 5.5             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 1.9                           | 1.6                            |
| Combined Uncertainty                             |                 | RSS                      |            |                     |                      | 9.3                           | 9.1                            |
| Combined Uncertainty (coverage factor=2)         |                 | Normal (k=2)             |            |                     |                      | 18.6                          | 18.2                           |



## SAR-Z Axis

at Hotspot x:-9.8 y:34.9





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## SAR Test Report

Operator : 123  
 Validation Date : 11-Mar-2005  
 Measurement Date : 11-Mar-2005  
 Starting Time : 11-Mar-2005 11:36:53 AM  
 End Time : 11-Mar-2005 11:47:01 AM  
 Scanning Time : 608 secs

Product Data  
 Device Name : Dell Blade II  
 Serial No. : CN-0X0024-36521-3AG-00BD  
 Type : Other  
 Model : Standard  
 Frequency : 2450.00 MHz  
 Max. Transmit Pwr : 0.045 W  
 Drift Time : 0 min(s)  
 Length : 170  
 Width : 160  
 Depth : 30.4  
 Antenna Type : Internal  
 Power Start : 0.100  
 Power Finish : 97.994  
 Power Drift (%) : 2.0

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

Tissue Data  
 Type : BODY  
 Serial No. : 2450  
 Frequency : 2450 MHz  
 Calibration Date : 11-Mar-2005  
 Temperature : 22 °C  
 Ambient Temp. : 23 °C  
 Humidity : 50 RH%  
 Epsilon : 54.96 F/m  
 Sigma : 1.9 S/m  
 Density : 1000 kg/cu. m

Probe Data  
 Name : APREL Probe 212  
 Model : E020  
 Type : E-Field Triangle  
 Serial No. : 212  
 Calibration Date : 27-Dec-2004  
 Frequency : 2450 MHz  
 Duty Cycle Factor: 1  
 Conversion Factor: 5  
 Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{sq. m})$   
 Compression Point: 95 mV  
 Offset : 1.56

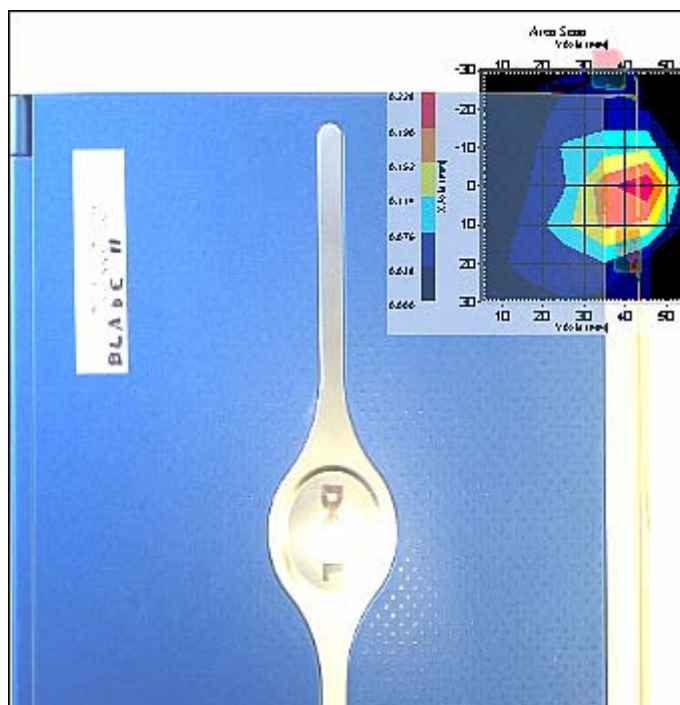


## Measurement Data

Crest Factor : 1  
 Scan Type : Complete  
 Set-up Date : 11-Mar-2005  
 Set-up Time : 10:22:47 AM

## Other Data

DUT Position : Touch  
 Separation : 0  
 Channel : High - 2462



1 gram SAR value : 0.172 W/kg  
 Zoom Scan Peak SAR : 0.340

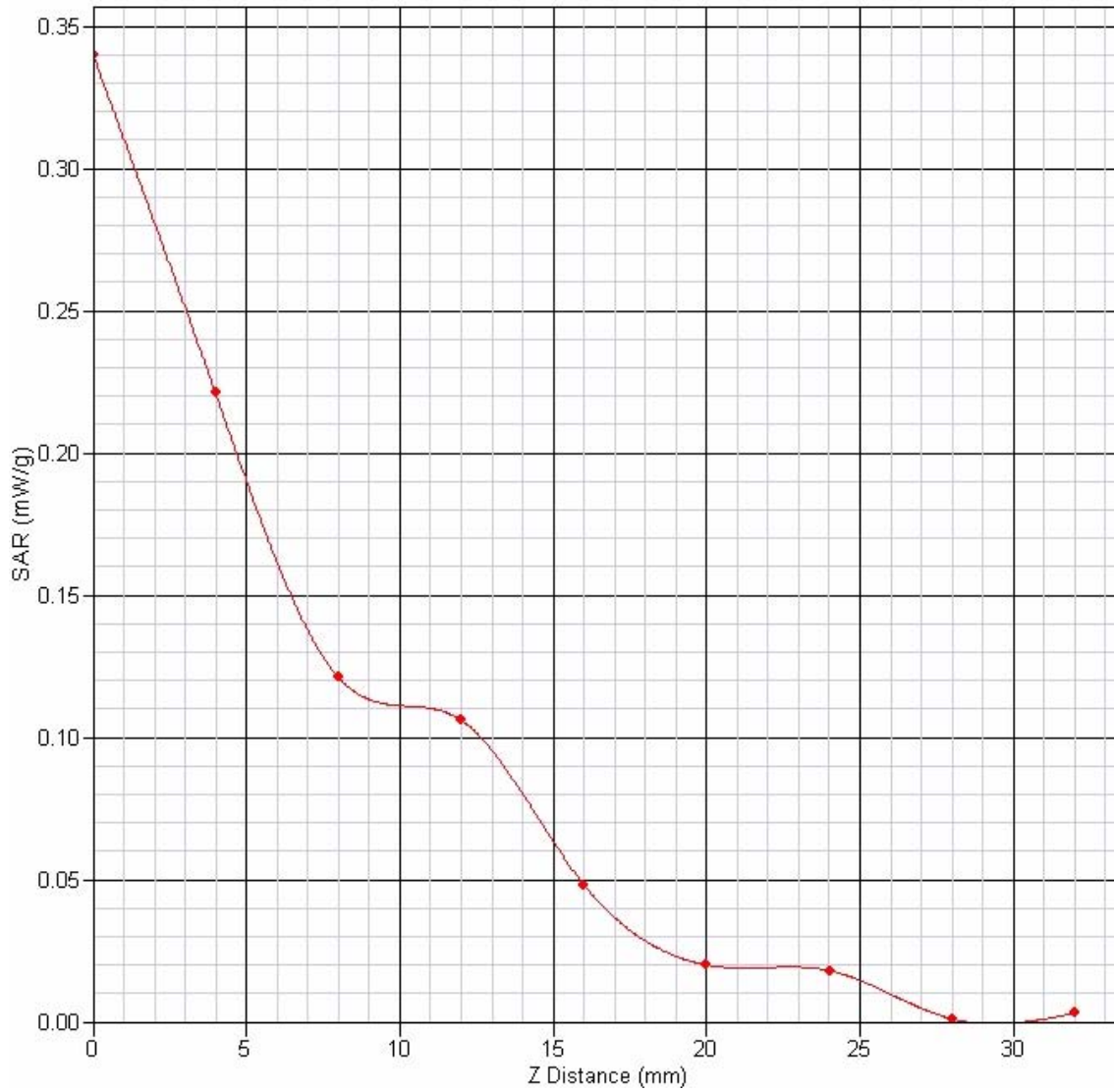


## Exposure Assessment Measurement Uncertainty

| Source of Uncertainty                            | Tolerance Value | Probability Distribution | Divisor    | $c_i^{-1}$<br>(1-g) | $c_i^{-1}$<br>(10-g) | Standard Uncertainty<br>(1-g) | Standard Uncertainty<br>(10-g) |
|--------------------------------------------------|-----------------|--------------------------|------------|---------------------|----------------------|-------------------------------|--------------------------------|
| Measurement System                               |                 |                          |            |                     |                      |                               |                                |
| Probe Calibration                                | 3.5             | normal                   | 1          | 1                   | 1                    | 3.5                           | 3.5                            |
| Axial Isotropy                                   | 3.7             | rectangular              | $\sqrt{3}$ | $(1-cp)^{1/2}$      | $(1-cp)^{1/2}$       | 1.5                           | 1.5                            |
| Hemispherical Isotropy                           | 10.9            | rectangular              | $\sqrt{3}$ | $\sqrt{cp}$         | $\sqrt{cp}$          | 4.4                           | 4.4                            |
| Boundary Effect                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Linearity                                        | 4.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.7                           | 2.7                            |
| Detection Limit                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Readout Electronics                              | 1.0             | normal                   | 1          | 1                   | 1                    | 1.0                           | 1.0                            |
| Response Time                                    | 0.8             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.5                           | 0.5                            |
| Integration Time                                 | 1.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.0                           | 1.0                            |
| RF Ambient Condition                             | 3.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Probe Positioner Mech.                           | 0.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.2                           | 0.2                            |
| Restriction                                      |                 |                          |            |                     |                      |                               |                                |
| Probe Positioning with respect to Phantom Shell  | 2.9             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Extrapolation and Integration                    | 3.7             | rectangular              | $\sqrt{3}$ | 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                            | 98.0            | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.0                           | 0.0                            |
| Phantom and Setup                                |                 |                          |            |                     |                      |                               |                                |
| Phantom Uncertainty(shape & thickness tolerance) | 3.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.0                           | 2.0                            |
| Liquid Conductivity(target)                      | 5.0             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 2.0                           | 1.4                            |
| Liquid Conductivity(meas.)                       | 0.2             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 0.1                           | 0.1                            |
| Liquid Permittivity(target)                      | 2.0             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 0.7                           | 0.6                            |
| Liquid Permittivity(meas.)                       | 5.5             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 1.9                           | 1.6                            |
| Combined Uncertainty                             |                 | RSS                      |            |                     |                      | 9.3                           | 9.1                            |
| Combined Uncertainty (coverage factor=2)         |                 | Normal (k=2)             |            |                     |                      | 18.6                          | 18.2                           |



**SAR-Z Axis**  
at Hotspot x:0.2 y:36.8





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## SAR Test Report

Operator : 123  
 Validation Date : 11-Mar-2005  
 Measurement Date : 11-Mar-2005  
 Starting Time : 11-Mar-2005 04:13:40 PM  
 End Time : 11-Mar-2005 04:23:58 PM  
 Scanning Time : 618 secs

Product Data  
 Device Name : Dell Blade II  
 Serial No. : CN-0X0024-36521-3AG-00BD  
 Type : Other  
 Model : Standard  
 Frequency : 2450.00 MHz  
 Max. Transmit Pwr : 0.045 W  
 Drift Time : 0 min(s)  
 Length : 150  
 Width : 160  
 Depth : 30.4  
 Antenna Type : Internal  
 Power Start : 0.043  
 Power Finish : 0.043  
 Power Drift (%) : 0.00

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

Tissue Data  
 Type : BODY  
 Serial No. : 2450  
 Frequency : 2450 MHz  
 Calibration Date : 11-Mar-2005  
 Temperature : 22 °C  
 Ambient Temp. : 23 °C  
 Humidity : 50 RH%  
 Epsilon : 54.96 F/m  
 Sigma : 1.9 S/m  
 Density : 1000 kg/cu. m

Probe Data  
 Name : APREL Probe 212  
 Model : E020  
 Type : E-Field Triangle  
 Serial No. : 212  
 Calibration Date : 27-Dec-2004  
 Frequency : 2450 MHz  
 Duty Cycle Factor: 1  
 Conversion Factor: 5  
 Probe Sensitivity: 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{sq. m})$   
 Compression Point: 95 mV  
 Offset : 1.56

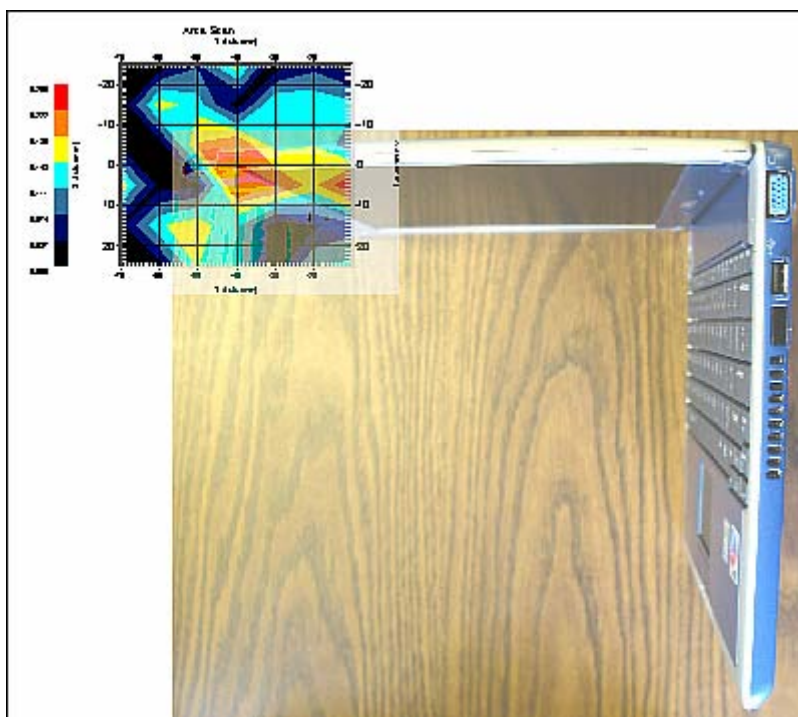


## Measurement Data

Crest Factor : 1  
 Scan Type : Complete  
 Set-up Date : 11-Mar-2005  
 Set-up Time : 4:43:07 PM

## Other Data

DUT Position : Touch  
 Separation : 0  
 Channel : Mid - 2437



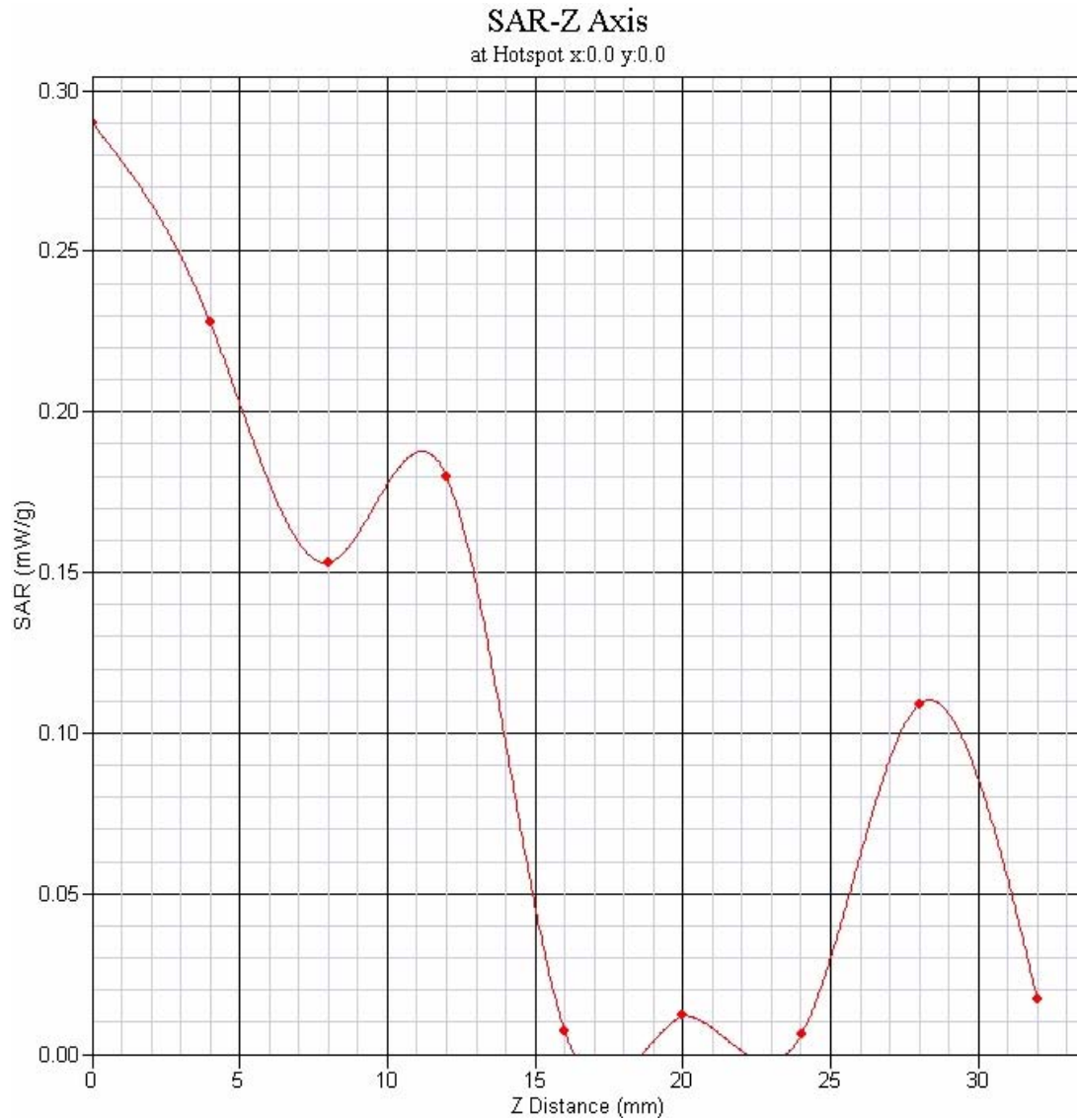
1 gram SAR value : 0.172 W/kg  
 Zoom Scan Peak SAR : 0.290



## Exposure Assessment Measurement Uncertainty

| Source of Uncertainty                            | Tolerance Value | Probability Distribution | Divisor    | $c_i^{-1}$<br>(1-g) | $c_i^{-1}$<br>(10-g) | Standard Uncertainty<br>(1-g) | Standard Uncertainty<br>(10-g) |
|--------------------------------------------------|-----------------|--------------------------|------------|---------------------|----------------------|-------------------------------|--------------------------------|
| Measurement System                               |                 |                          |            |                     |                      |                               |                                |
| Probe Calibration                                | 3.5             | normal                   | 1          | 1                   | 1                    | 3.5                           | 3.5                            |
| Axial Isotropy                                   | 3.7             | rectangular              | $\sqrt{3}$ | $(1-cp)^{1/2}$      | $(1-cp)^{1/2}$       | 1.5                           | 1.5                            |
| Hemispherical Isotropy                           | 10.9            | rectangular              | $\sqrt{3}$ | $\sqrt{cp}$         | $\sqrt{cp}$          | 4.4                           | 4.4                            |
| Boundary Effect                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Linearity                                        | 4.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.7                           | 2.7                            |
| Detection Limit                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Readout Electronics                              | 1.0             | normal                   | 1          | 1                   | 1                    | 1.0                           | 1.0                            |
| Response Time                                    | 0.8             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.5                           | 0.5                            |
| Integration Time                                 | 1.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.0                           | 1.0                            |
| RF Ambient Condition                             | 3.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Probe Positioner Mech.                           | 0.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.2                           | 0.2                            |
| Restriction                                      |                 |                          |            |                     |                      |                               |                                |
| Probe Positioning with respect to Phantom Shell  | 2.9             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Extrapolation and Integration                    | 3.7             | rectangular              | $\sqrt{3}$ | 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                            | 142.8           | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.0                           | 0.0                            |
| Phantom and Setup                                |                 |                          |            |                     |                      |                               |                                |
| Phantom Uncertainty(shape & thickness tolerance) | 3.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.0                           | 2.0                            |
| Liquid Conductivity(target)                      | 5.0             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 2.0                           | 1.4                            |
| Liquid Conductivity(meas.)                       | 0.2             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 0.1                           | 0.1                            |
| Liquid Permittivity(target)                      | 2.0             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 0.7                           | 0.6                            |
| Liquid Permittivity(meas.)                       | 5.5             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 1.9                           | 1.6                            |
| Combined Uncertainty                             |                 | RSS                      |            |                     |                      | 9.3                           | 9.1                            |
| Combined Uncertainty (coverage factor=2)         |                 | Normal (k=2)             |            |                     |                      | 18.6                          | 18.2                           |







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## SAR Test Report

Operator : 123  
 Validation Date : 11-Mar-2005  
 Measurement Date : 11-Mar-2005  
 Starting Time : 11-Mar-2005 03:30:55 PM  
 End Time : 11-Mar-2005 03:41:03 PM  
 Scanning Time : 608 secs

Product Data  
 Device Name : Dell Blade II  
 Serial No. : CN-0X0024-36521-3AG-00BD  
 Type : Other  
 Model : Standard  
 Frequency : 2450.00 MHz  
 Max. Transmit Pwr : 0.045 W  
 Drift Time : 0 min(s)  
 Length : 150  
 Width : 160  
 Depth : 30.4  
 Antenna Type : Internal  
 Power Start : 0.043  
 Power Finish : 0.043  
 Power Drift (%) : 0.00

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

Tissue Data  
 Type : BODY  
 Serial No. : 2450  
 Frequency : 2450 MHz  
 Calibration Date : 11-Mar-2005  
 Temperature : 22 °C  
 Ambient Temp. : 23 °C  
 Humidity : 50 RH%  
 Epsilon : 54.96 F/m  
 Sigma : 1.9 S/m  
 Density : 1000 kg/cu. m

Probe Data  
 Name : APREL Probe 212  
 Model : E020  
 Type : E-Field Triangle  
 Serial No. : 212  
 Calibration Date : 27-Dec-2004  
 Frequency : 2450 MHz  
 Duty Cycle Factor : 1  
 Conversion Factor : 5  
 Probe Sensitivity : 1.20 1.20 1.20  $\mu\text{V}/(\text{V}/\text{sq. m})$   
 Compression Point : 95 mV  
 Offset : 1.56

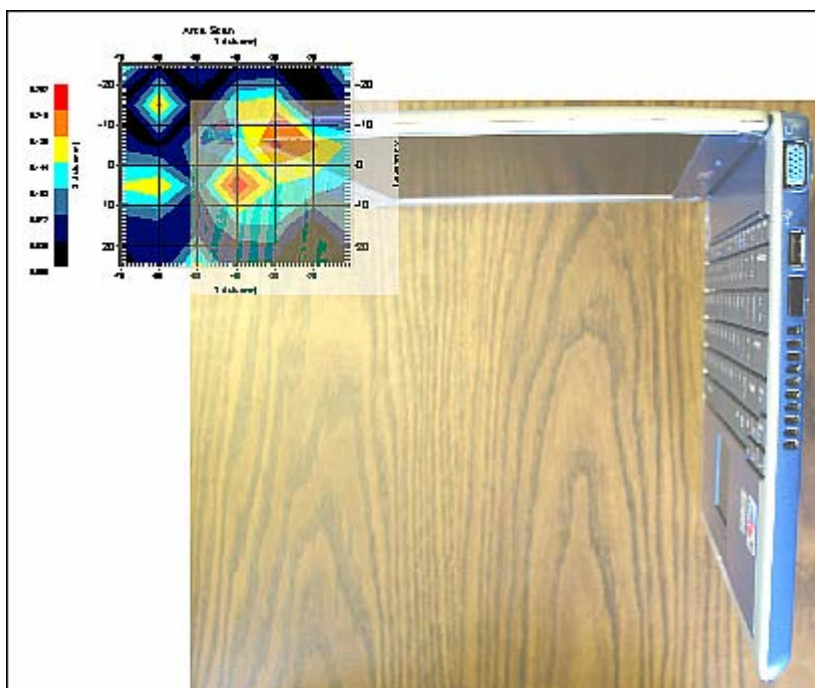


## Measurement Data

Crest Factor : 1  
 Scan Type : Complete  
 Set-up Date : 09-Mar-2005  
 Set-up Time : 4:00:52 PM

## Other Data

DUT Position : Touch  
 Separation : 0  
 Channel : Mid - 2437



1 gram SAR value : 0.141 W/kg  
 Zoom Scan Peak SAR : 0.520



## Exposure Assessment Measurement Uncertainty

| Source of Uncertainty                            | Tolerance Value | Probability Distribution | Divisor    | $c_i^{-1}$<br>(1-g) | $c_i^{-1}$<br>(10-g) | Standard Uncertainty<br>(1-g) | Standard Uncertainty<br>(10-g) |
|--------------------------------------------------|-----------------|--------------------------|------------|---------------------|----------------------|-------------------------------|--------------------------------|
| Measurement System                               |                 |                          |            |                     |                      |                               |                                |
| Probe Calibration                                | 3.5             | normal                   | 1          | 1                   | 1                    | 3.5                           | 3.5                            |
| Axial Isotropy                                   | 3.7             | rectangular              | $\sqrt{3}$ | $(1-cp)^{1/2}$      | $(1-cp)^{1/2}$       | 1.5                           | 1.5                            |
| Hemispherical Isotropy                           | 10.9            | rectangular              | $\sqrt{3}$ | $\sqrt{cp}$         | $\sqrt{cp}$          | 4.4                           | 4.4                            |
| Boundary Effect                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Linearity                                        | 4.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.7                           | 2.7                            |
| Detection Limit                                  | 1.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.6                           | 0.6                            |
| Readout Electronics                              | 1.0             | normal                   | 1          | 1                   | 1                    | 1.0                           | 1.0                            |
| Response Time                                    | 0.8             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.5                           | 0.5                            |
| Integration Time                                 | 1.7             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.0                           | 1.0                            |
| RF Ambient Condition                             | 3.0             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Probe Positioner Mech.                           | 0.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.2                           | 0.2                            |
| Restriction                                      |                 |                          |            |                     |                      |                               |                                |
| Probe Positioning with respect to Phantom Shell  | 2.9             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 1.7                           | 1.7                            |
| Extrapolation and Integration                    | 3.7             | rectangular              | $\sqrt{3}$ | 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                            | 31.5            | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 0.0                           | 0.0                            |
| Phantom and Setup                                |                 |                          |            |                     |                      |                               |                                |
| Phantom Uncertainty(shape & thickness tolerance) | 3.4             | rectangular              | $\sqrt{3}$ | 1                   | 1                    | 2.0                           | 2.0                            |
| Liquid Conductivity(target)                      | 5.0             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 2.0                           | 1.4                            |
| Liquid Conductivity(meas.)                       | 0.2             | rectangular              | $\sqrt{3}$ | 0.7                 | 0.5                  | 0.1                           | 0.1                            |
| Liquid Permittivity(target)                      | 2.0             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 0.7                           | 0.6                            |
| Liquid Permittivity(meas.)                       | 5.5             | rectangular              | $\sqrt{3}$ | 0.6                 | 0.5                  | 1.9                           | 1.6                            |
| Combined Uncertainty                             |                 | RSS                      |            |                     |                      | 9.3                           | 9.1                            |
| Combined Uncertainty (coverage factor=2)         |                 | Normal (k=2)             |            |                     |                      | 18.6                          | 18.2                           |



## SAR-Z Axis

at Hotspot x:5.2 y:-23.9

