



SAR & HAC Instruments for Wireless • Consulting • Research • Standards • Compliance • Training

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 12:10:26 PM
 End Time : 11-Mar-2005 12:20:30 PM
 Scanning Time : 604 secs

Product Data
 Device Name : Dell Blade Hitachi
 Serial No. : KR-03Y639-36521-34S-Z224
 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 : 0.987
 Power Drift (%) : -2.3

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

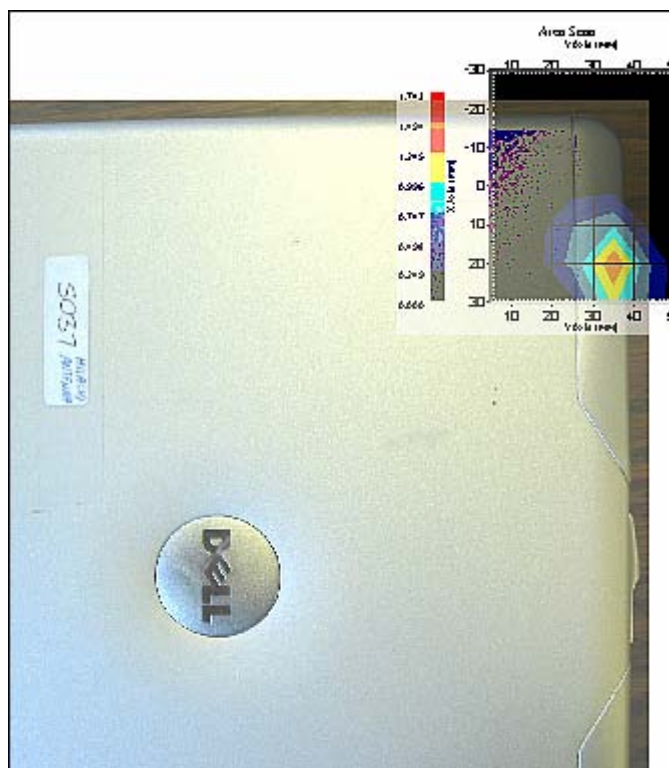


Measurement Data

Crest Factor : 1
 Scan Type : Complete
 Set-up Date : 11-Mar-2005
 Set-up Time : 10:21:36 AM

Other Data

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



1 gram SAR value : 1.066 W/kg
 Zoom Scan Peak SAR : 2.662



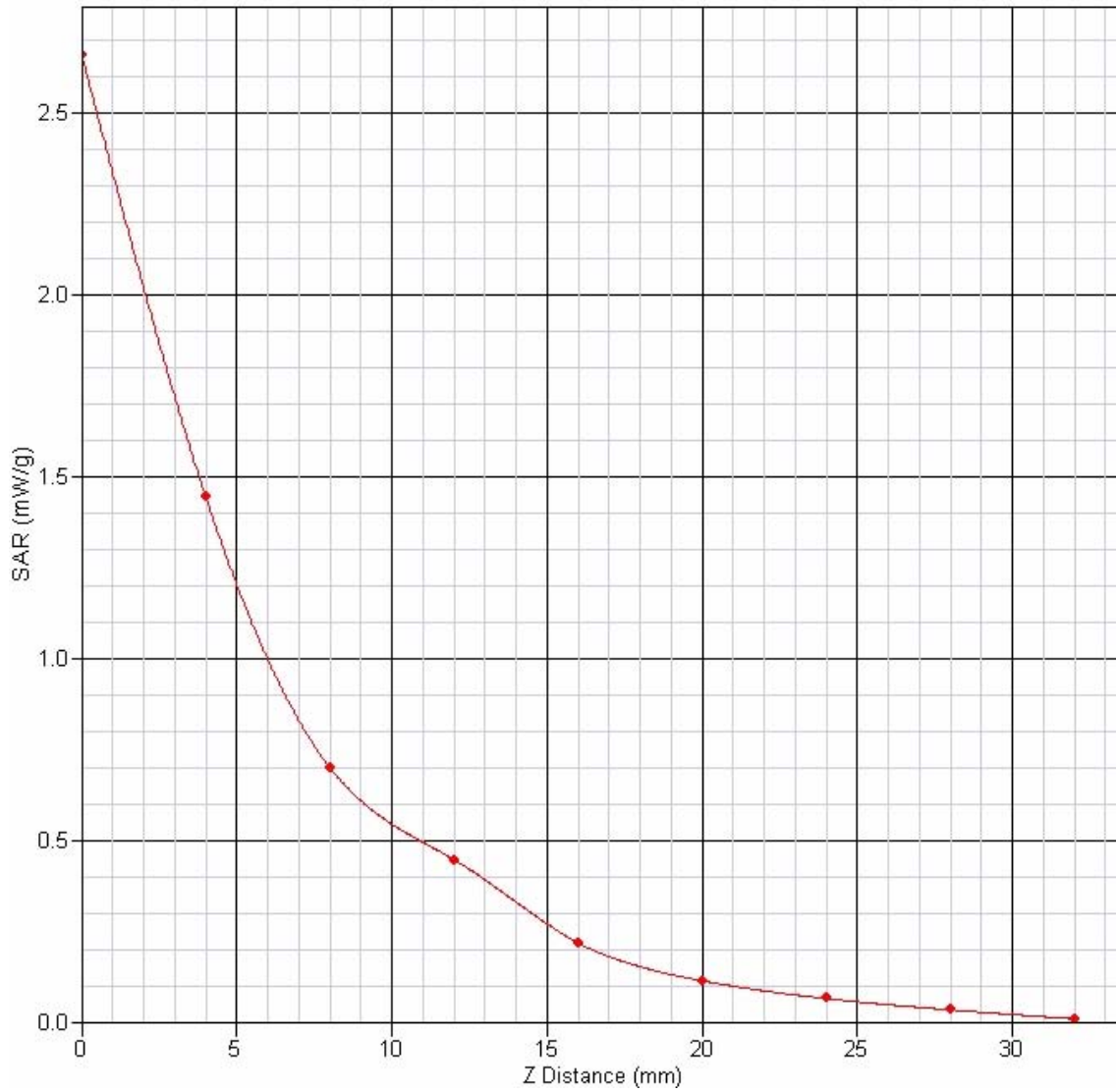
Exposure Assessment Measurement Uncertainty

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	$\sqrt{3}$	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	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	98.7	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:20.2 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 12:43:53 PM
 End Time : 11-Mar-2005 12:53:59 PM
 Scanning Time : 606 secs

Product Data
 Device Name : Dell Blade Hitachi
 Serial No. : KR-03Y639-36521-34S-Z224
 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 : 0.940
 Power Drift (%) : -5.0

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

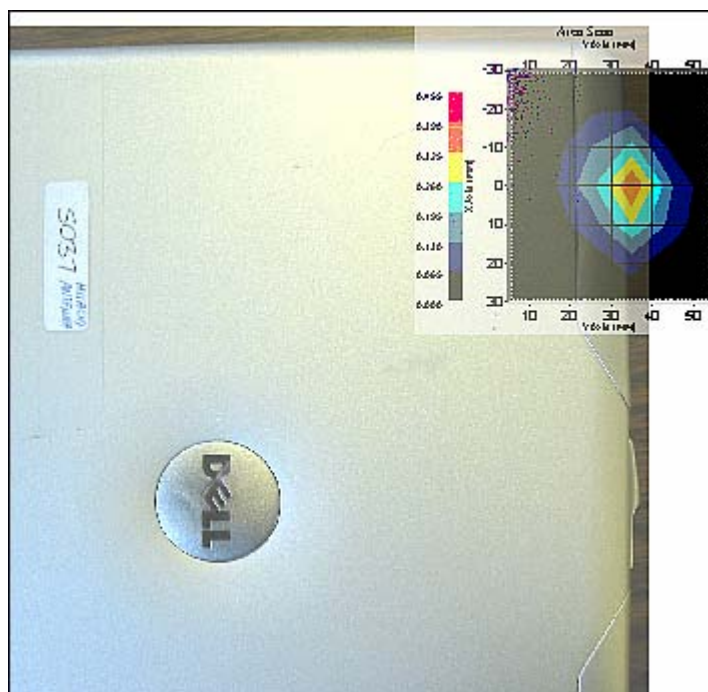


Measurement Data

Crest Factor : 1
 Scan Type : Complete
 Set-up Date : 11-Mar-2005
 Set-up Time : 10:21:36 AM

Other Data

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



1 gram SAR value : 0.308 W/kg
 Zoom Scan Peak SAR : 0.760

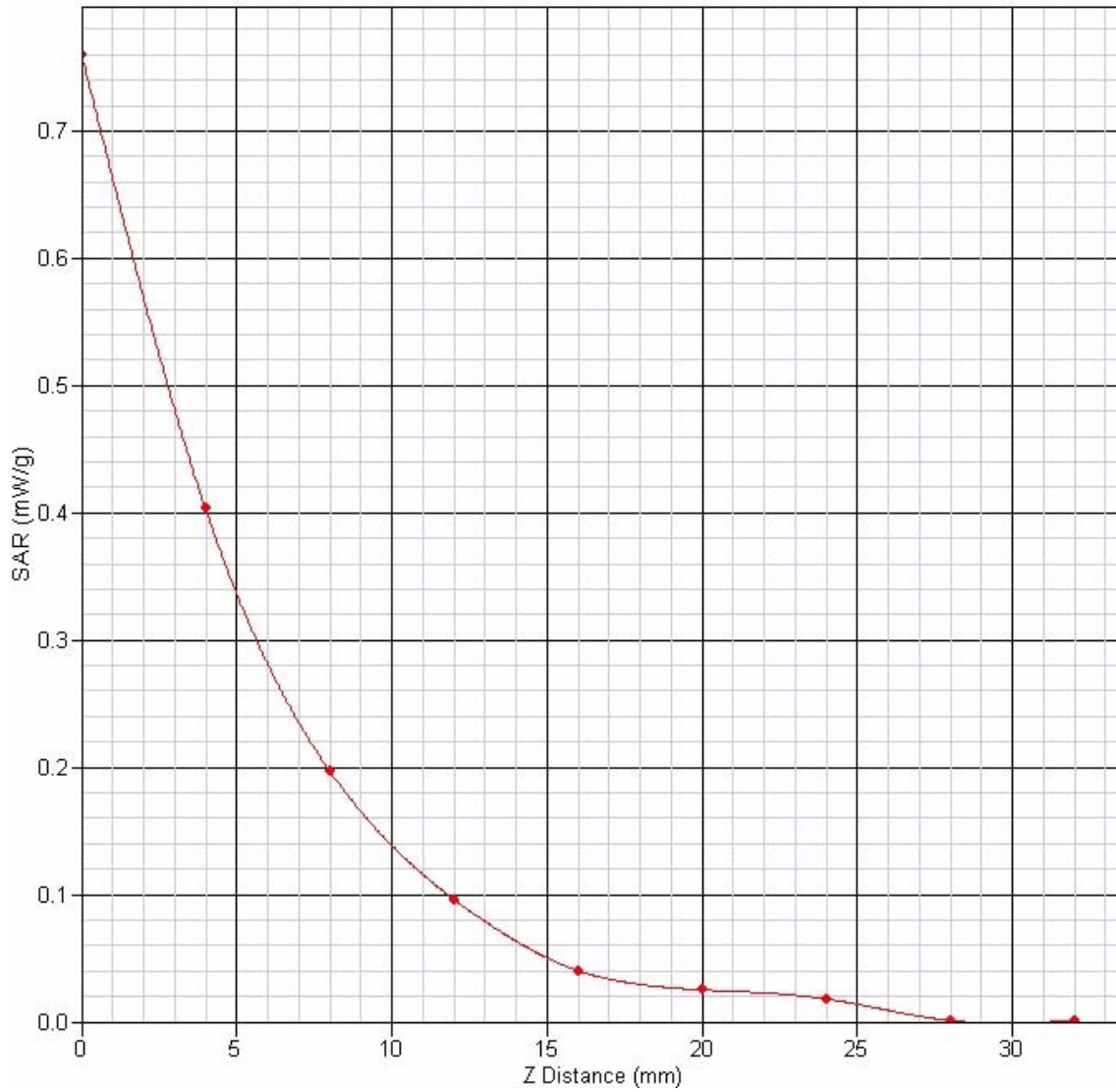


Exposure Assessment Measurement Uncertainty

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	$\sqrt{3}$	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	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	94.1	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 : 10-Mar-2005
 Measurement Date : 10-Mar-2005
 Starting Time : 10-Mar-2005 03:43:12 PM
 End Time : 10-Mar-2005 03:53:16 PM
 Scanning Time : 604 secs

Product Data
 Device Name : Dell Blade Hitachi
 Serial No. : KR-03Y639-36521-34S-Z224
 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 : 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

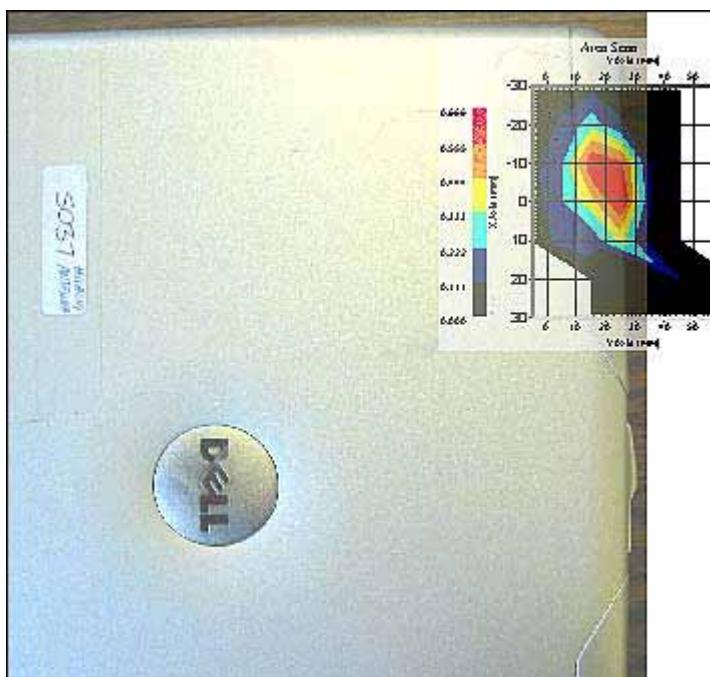


Measurement Data

Crest Factor : 1
 Scan Type : Complete
 Set-up Date : 10-Mar-2005
 Set-up Time : 2:46:02 PM

Other Data

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



1 gram SAR value : 0.614 W/kg
 Zoom Scan Peak SAR : 1.401

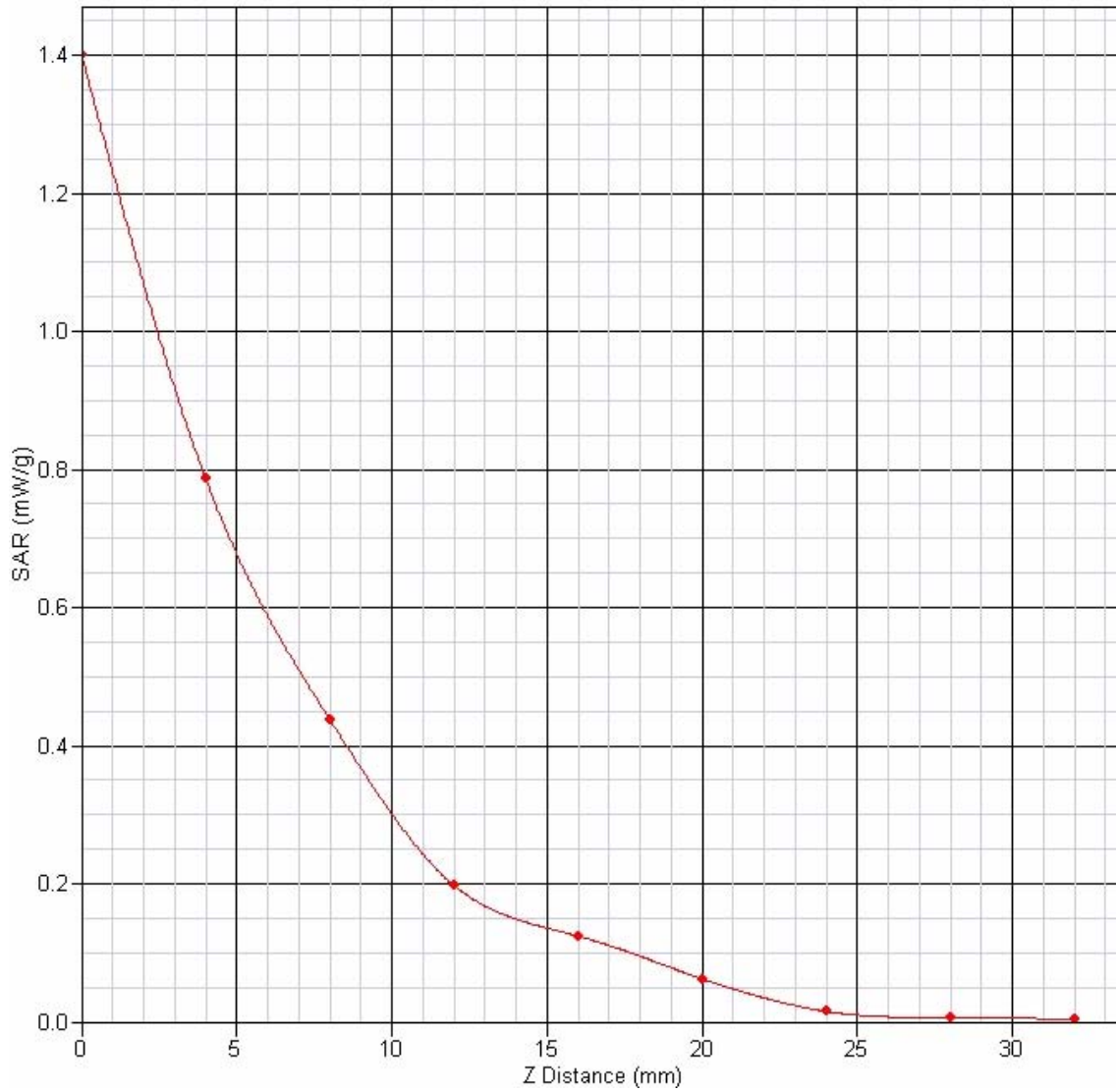


Exposure Assessment Measurement Uncertainty

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	$\sqrt{3}$	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	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	83.9	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:0.2 y:44.8





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SAR Test Report

Operator : 123
 Validation Date : 10-Mar-2005
 Measurement Date : 10-Mar-2005
 Starting Time : 10-Mar-2005 04:39:22 PM
 End Time : 10-Mar-2005 04:49:21 PM
 Scanning Time : 599 secs

Product Data
 Device Name : Dell Blade Hitachi
 Serial No. : KR-03Y639-36521-34S-Z224
 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 : 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

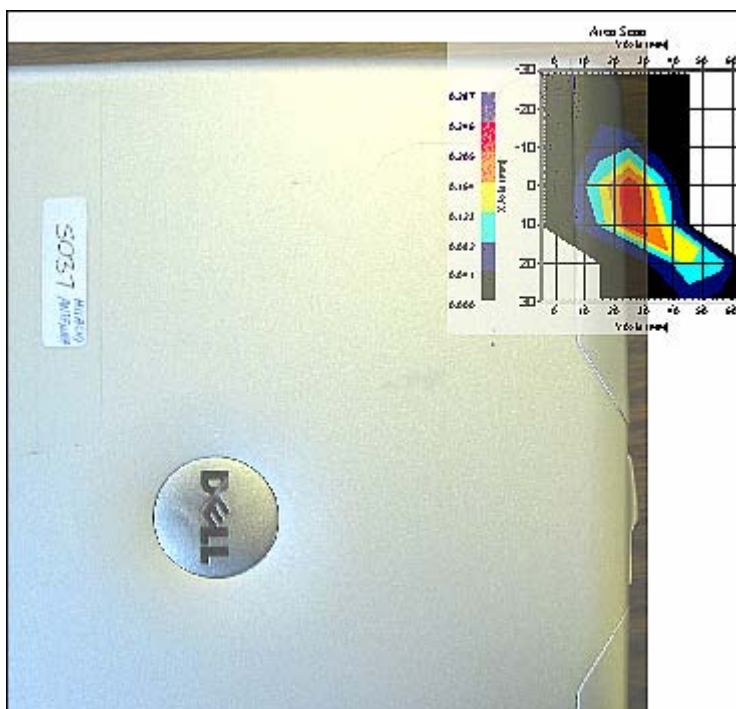


Measurement Data

Crest Factor : 1
 Scan Type : Complete
 Set-up Date : 10-Mar-2005
 Set-up Time : 2:46:02 PM

Other Data

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



1 gram SAR value : 0.198 W/kg
 Zoom Scan Peak SAR : 0.370



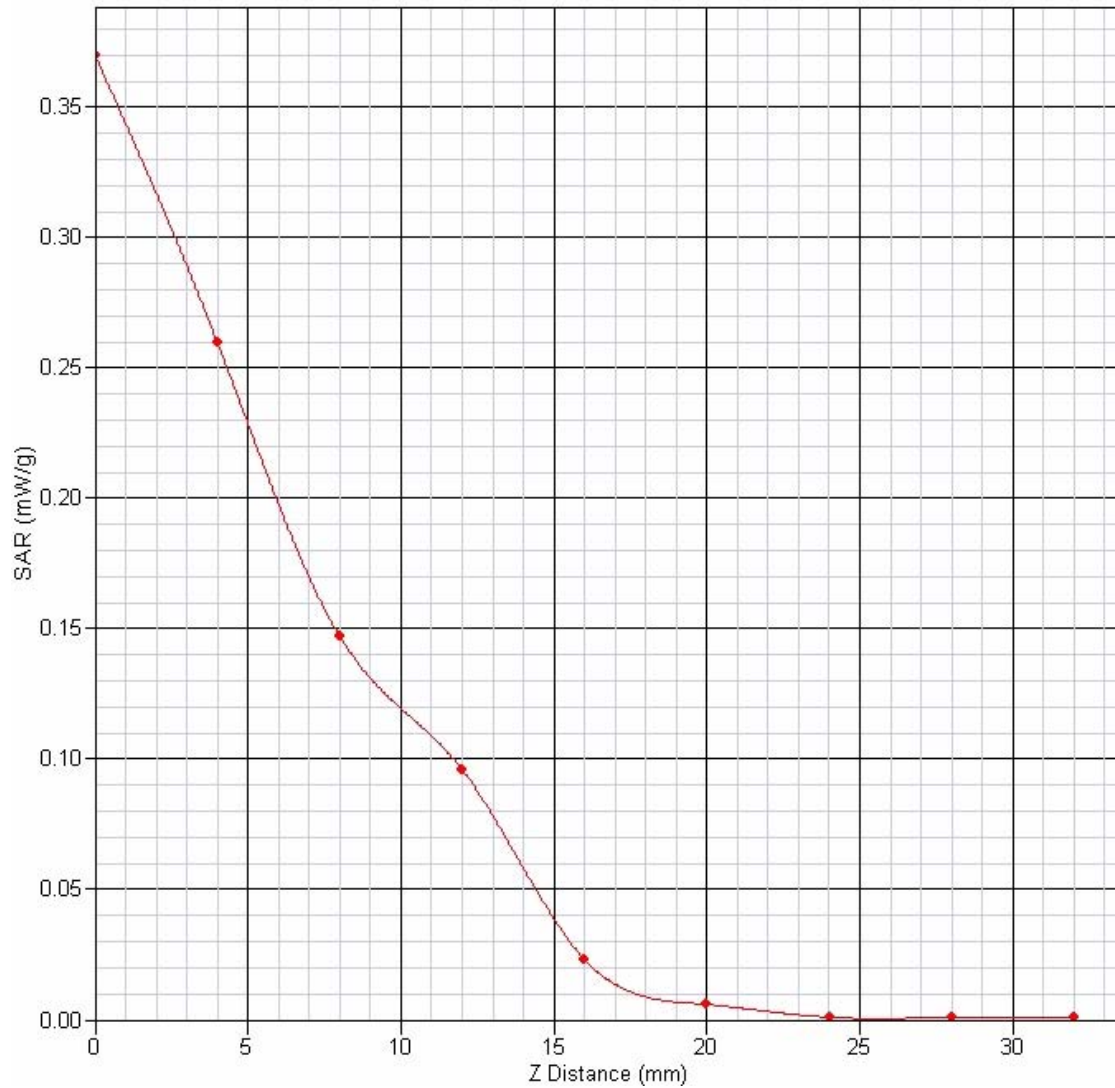
Exposure Assessment Measurement Uncertainty

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	$\sqrt{3}$	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	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	99.3	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:8.2 y:44.9





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SAR Test Report

Operator : 123
 Validation Date : 10-Mar-2005
 Measurement Date : 10-Mar-2005
 Starting Time : 10-Mar-2005 04:21:48 PM
 End Time : 10-Mar-2005 04:32:05 PM
 Scanning Time : 617 secs

Product Data
 Device Name : Dell Blade Hitachi
 Serial No. : KR-03Y639-36521-34S-Z224
 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 : 0.98.545
 Power Drift (%) : -1.0

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 : 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

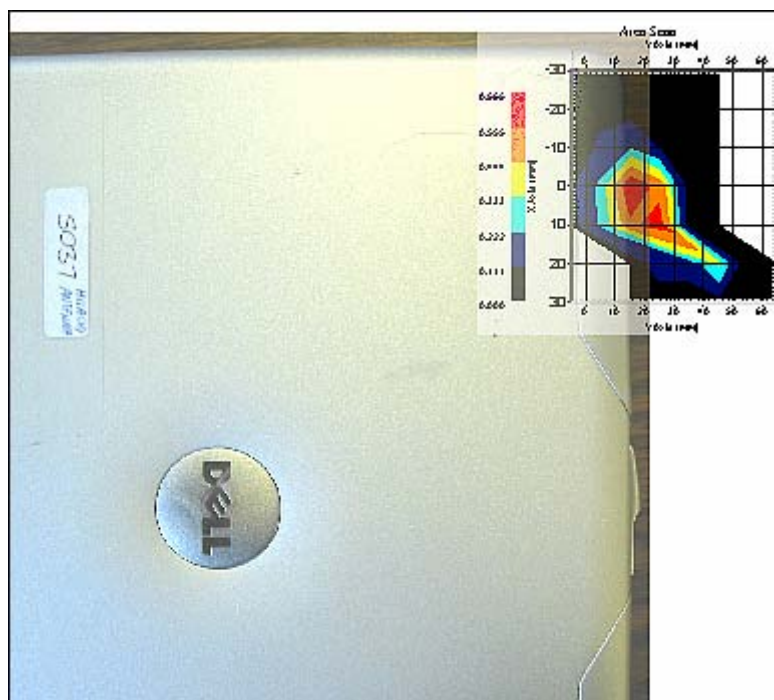


Measurement Data

Crest Factor : 1
 Scan Type : Complete
 Set-up Date : 10-Mar-2005
 Set-up Time : 2:46:02 PM

Other Data

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



1 gram SAR value : 0.621 W/kg
 Zoom Scan Peak SAR : 1.301



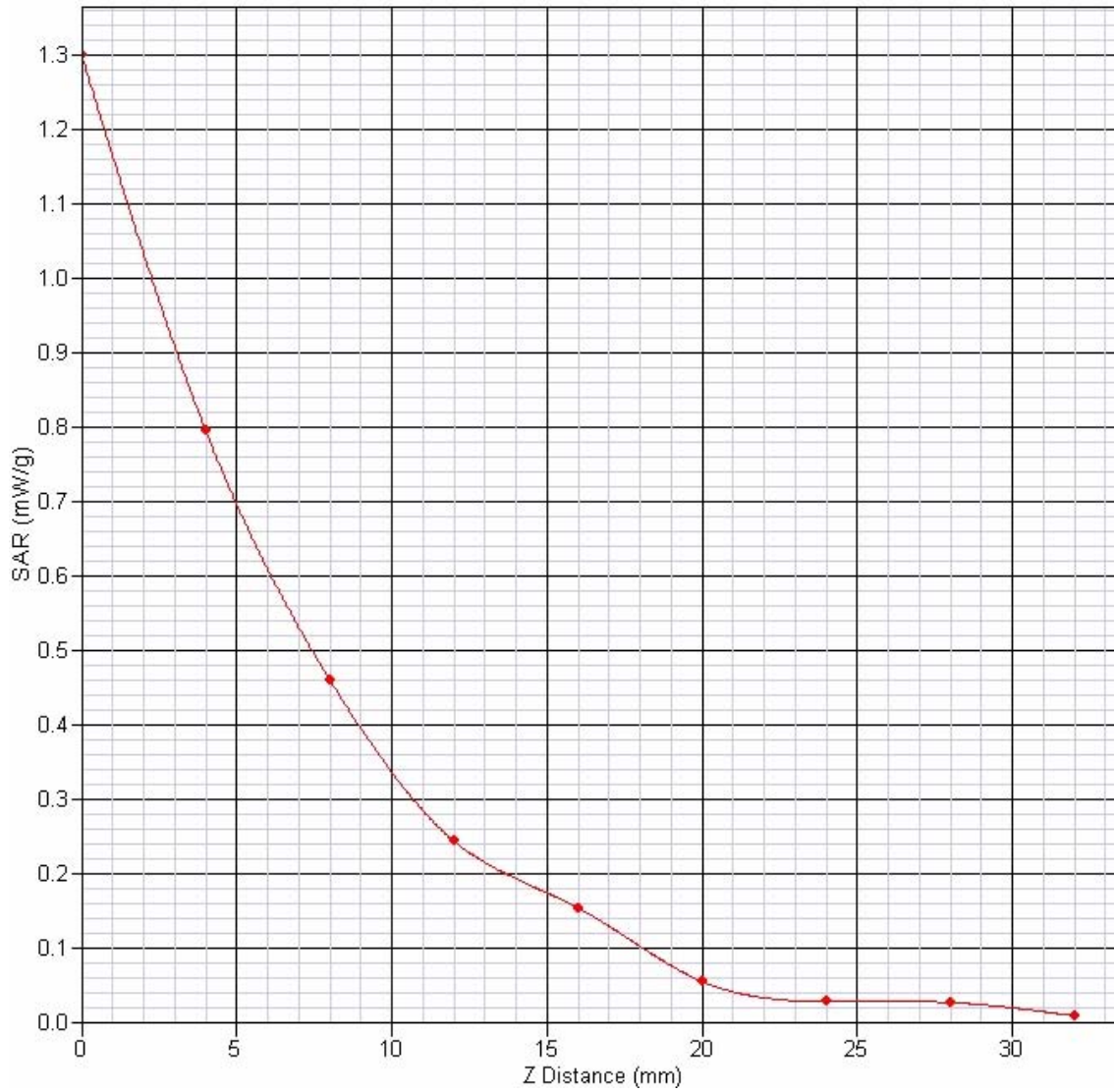
Exposure Assessment Measurement Uncertainty

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	$\sqrt{3}$	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	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	98.5	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 : 10-Mar-2005
 Measurement Date : 10-Mar-2005
 Starting Time : 10-Mar-2005 04:52:11 PM
 End Time : 10-Mar-2005 05:02:42 PM
 Scanning Time : 631 secs

Product Data
 Device Name : Dell Blade Hitachi
 Serial No. : KR-03Y639-36521-34S-Z224
 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 : 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

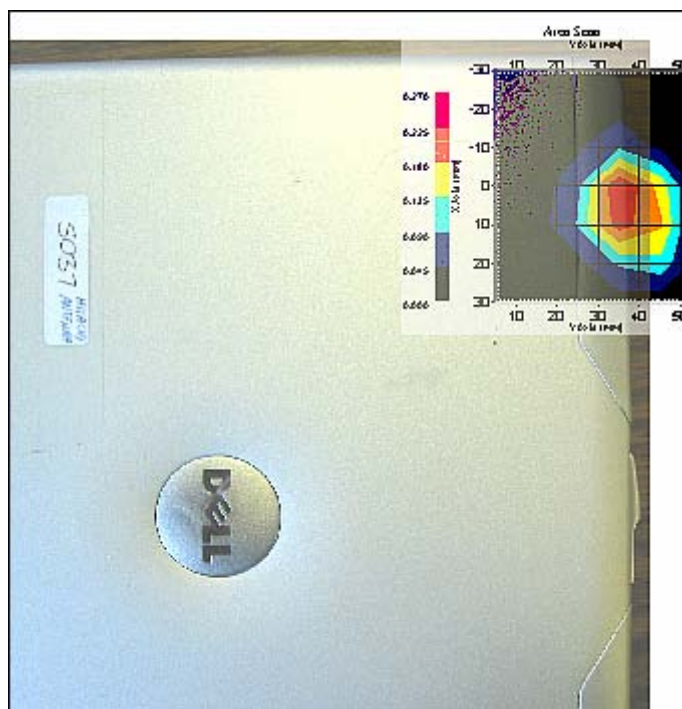


Measurement Data

Crest Factor : 1
 Scan Type : Complete
 Set-up Date : 10-Mar-2005
 Set-up Time : 4:52:05 PM

Other Data

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



1 gram SAR value : 0.215 W/kg
 Zoom Scan Peak SAR : 0.420



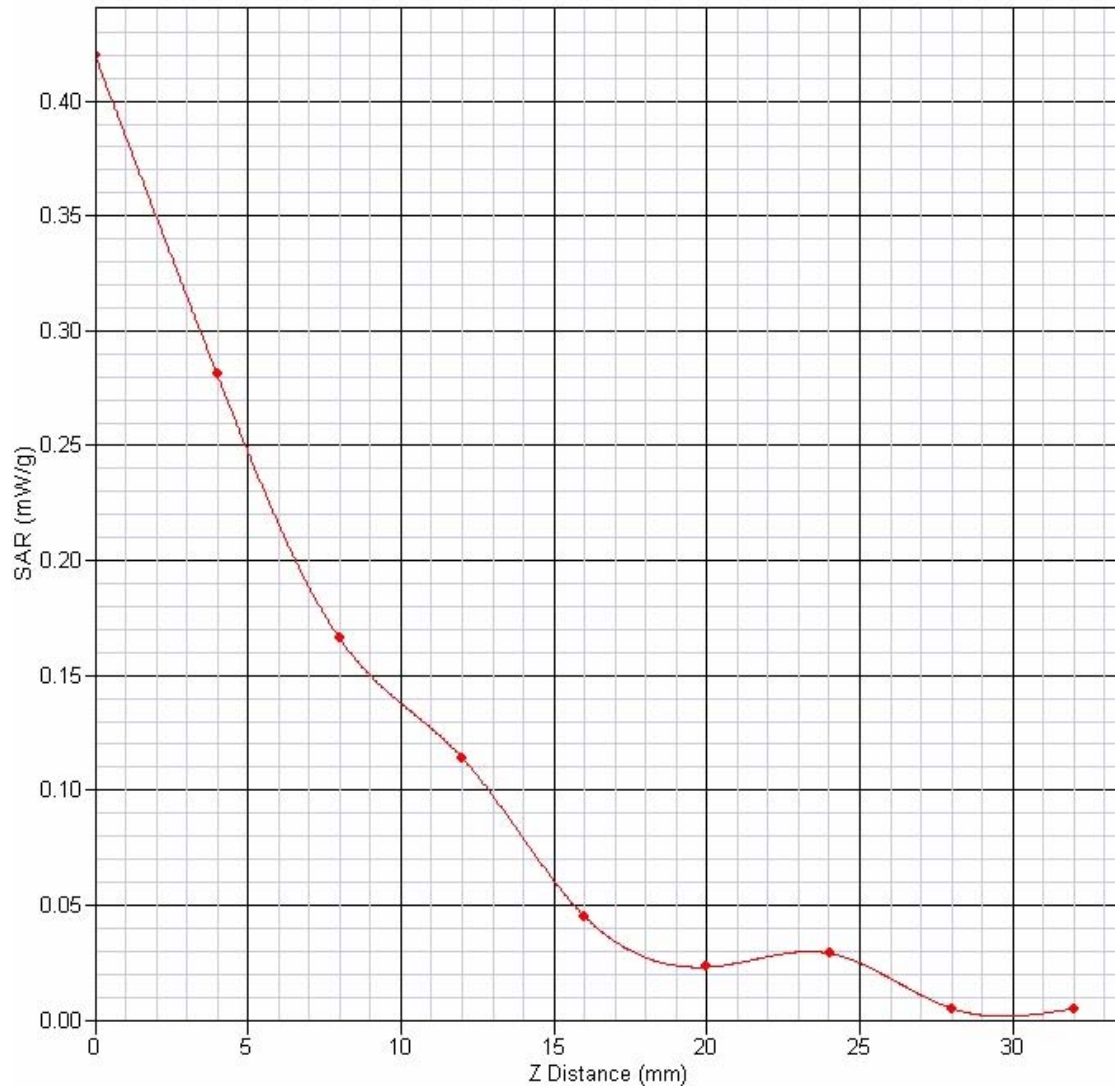
Exposure Assessment Measurement Uncertainty

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	$\sqrt{3}$	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	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	90.6	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:8.2 y:42.8





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SAR Test Report

Operator : 123
 Validation Date : 11-Mar-2005
 Measurement Date : 11-Mar-2005
 Starting Time : 11-Mar-2005 04:50:35 PM
 End Time : 11-Mar-2005 05:00:43 PM
 Scanning Time : 608 secs

Product Data
 Device Name : Dell Blade Hitachi
 Serial No. : KR-03Y639-36521-34S-Z224
 Type : Other
 Model : Standard
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.045 W
 Drift Time : 0 min(s)
 Length : 130
 Width : 180
 Depth : 30.4
 Antenna Type : Internal
 Power Start : 0.302
 Power Finish : 0.302
 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

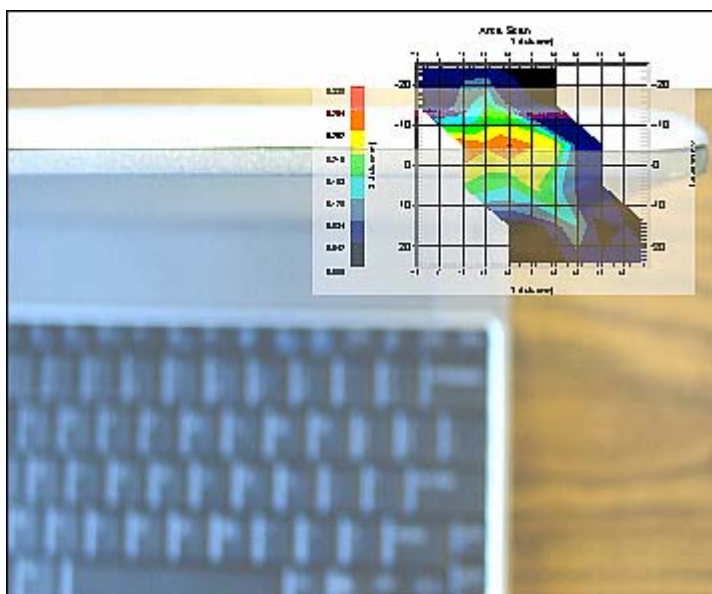


Measurement Data

Crest Factor : 1
 Scan Type : Complete
 Set-up Date : 11-Mar-2005
 Set-up Time : 3:20:08 PM

Other Data

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



1 gram SAR value : 0.214 W/kg
 Zoom Scan Peak SAR : 0.350



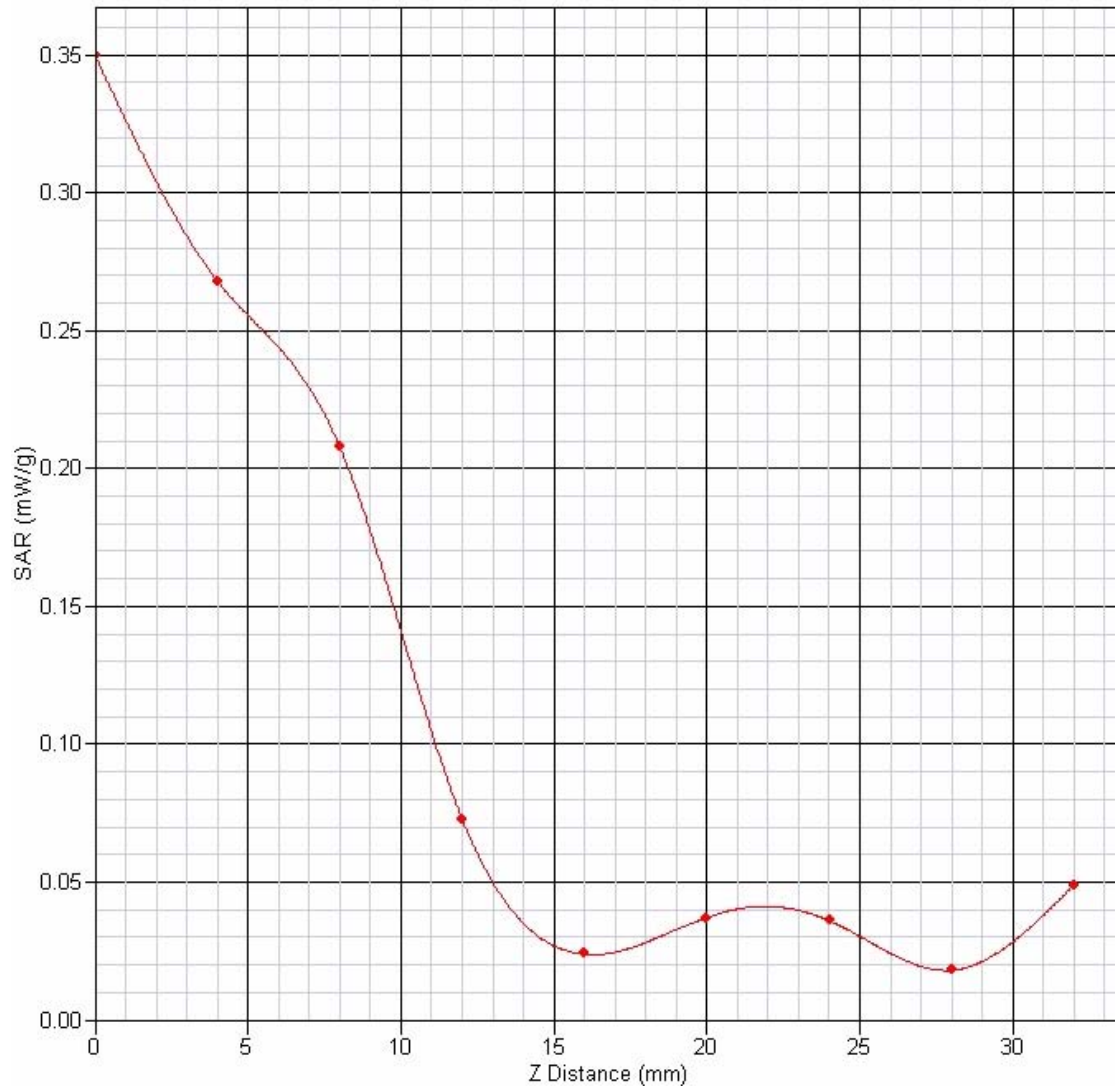
Exposure Assessment Measurement Uncertainty

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	$\sqrt{3}$	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	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	29.4	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:-4.8 y:33.9





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SAR Test Report

Operator : 123
 Validation Date : 11-Mar-2005
 Measurement Date : 11-Mar-2005
 Starting Time : 11-Mar-2005 05:09:28 PM
 End Time : 11-Mar-2005 05:19:48 PM
 Scanning Time : 620 secs

Product Data
 Device Name : Dell Blade Hitachi
 Serial No. : KR-03Y639-36521-34S-Z224
 Type : Other
 Model : Standard
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.045 W
 Drift Time : 0 min(s)
 Length : 130
 Width : 180
 Depth : 30.4
 Antenna Type : Internal
 Power Start : 0.057
 Power Finish : 0.057
 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

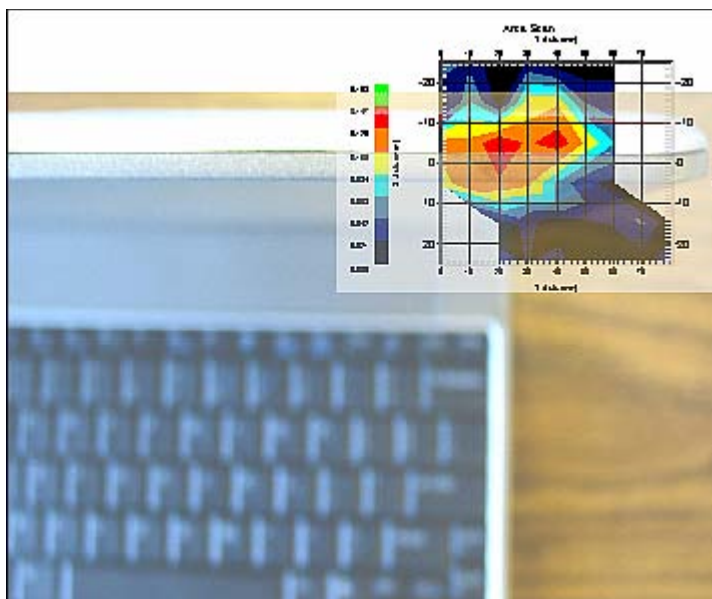


Measurement Data

Crest Factor : 1
 Scan Type : Complete
 Set-up Date : 11-Mar-2005
 Set-up Time : 3:20:08 PM

Other Data

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



1 gram SAR value : 0.180 W/kg
 Zoom Scan Peak SAR : 0.440



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	$\sqrt{3}$	$(1-cp)^{1/2}$	$(1-cp)^{1/2}$	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	50.7	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:3.2 y:23.9

