



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

Appendix A SAR Plots



SAR Test Report

Operator : Chen
 Validation Date : 19-Apr-2009
 Measurement Date : 19-Apr-2009
 Starting Time : 19-Apr-2009 01:58:50 PM
 End Time : 19-Apr-2009 02:12:49 PM
 Scanning Time : 839 secs

Product Data
 Device Name : Dell_Tahiti_Phycomp
 Serial No. : N/A
 Type : Other
 Model : Latitude D510
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.05 W
 Drift Time : 0 min(s)
 Length : 100 mm
 Width : 150 mm
 Depth : 30.4 mm
 Antenna Type : Internal
 Power Drift-Start : 0.105
 Power Drift-Finish: 0.101
 Power Drift (%) : -4.000

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

Tissue Data
 Type : BODY
 Serial No. : 2450
 Frequency : 2450 MHz
 Calibration Date : 19-Apr-2005
 Temperature : 21 °C
 Ambient Temp. : 22 °C
 Humidity : 50 RH%
 Epsilon : 54.12 F/m
 Sigma : 2.01 S/m
 Density : 1000 kg/cu. m

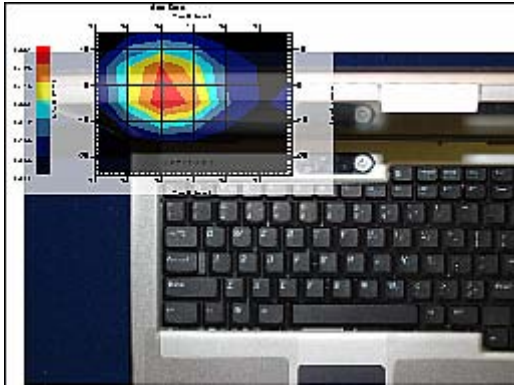
Probe Data
 Name : APREL Probe 212
 Model : E020
 Type : E-Field Triangle
 Serial No. : 212
 Calibration Date : 27-Dec-2004
 Frequency : 2450 MHz
 Duty Cycle Factor: 1
 Conversion Factor: 5
 Probe Sensitivity: 1.20 1.20 1.20 $\mu\text{V}/(\text{V}/\text{m})^2$
 Compression Point: 95 mV
 Offset : 1.56

Measurement Data

Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 21 °C
Ambient Temp. : 22°C
Set-up Date : 19-Apr-2009
Set-up Time : 1:57:13 PM

Other Data

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



1 gram SAR value : 0.471 W/kg
Zoom Scan Peak SAR : 0.980





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

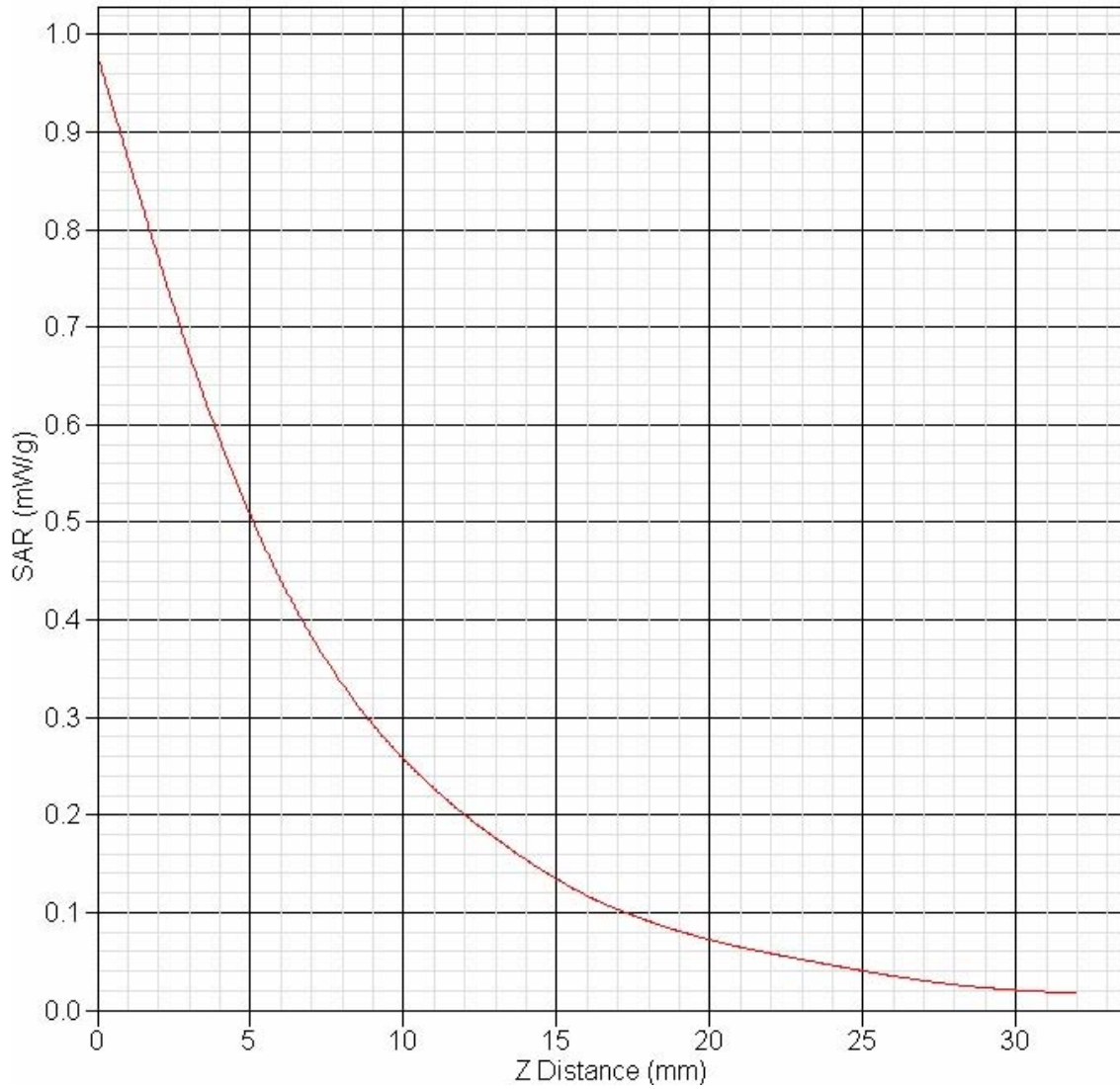
Exposure Assessment Measurement Uncertainty

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	-20.8	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.)	5.4	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:-2.9 y:-49.9



SAR Test Report

Operator : Chen
 Validation Date : 19-Apr-2009
 Measurement Date : 19-Apr-2009
 Starting Time : 19-Apr-2009 01:58:50 PM
 End Time : 19-Apr-2009 02:12:49 PM
 Scanning Time : 839 secs

Product Data
 Device Name : Dell_Tahiti_Phycomp
 Serial No. : N/A
 Type : Other
 Model : Latitude D510
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.05 W
 Drift Time : 0 min(s)
 Length : 100 mm
 Width : 150 mm
 Depth : 30.4 mm
 Antenna Type : Internal
 Power Drift-Start : 0.105
 Power Drift-Finish: 0.103
 Power Drift (%) : -2.000

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

Tissue Data
 Type : BODY
 Serial No. : 2450
 Frequency : 2450 MHz
 Calibration Date : 19-Apr-2005
 Temperature : 21 °C
 Ambient Temp. : 22 °C
 Humidity : 50 RH%
 Epsilon : 54.12 F/m
 Sigma : 2.01 S/m
 Density : 1000 kg/cu. m

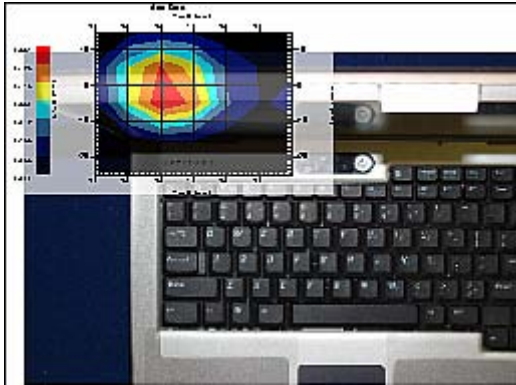
Probe Data
 Name : APREL Probe 212
 Model : E020
 Type : E-Field Triangle
 Serial No. : 212
 Calibration Date : 27-Dec-2004
 Frequency : 2450 MHz
 Duty Cycle Factor: 1
 Conversion Factor: 5
 Probe Sensitivity: 1.20 1.20 1.20 $\mu\text{V}/(\text{V}/\text{m})^2$
 Compression Point: 95 mV
 Offset : 1.56

Measurement Data

Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 21 °C
Ambient Temp. : 22°C
Set-up Date : 19-Apr-2009
Set-up Time : 1:57:13 PM

Other Data

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



1 gram SAR value : 0.471 W/kg
Zoom Scan Peak SAR : 0.980

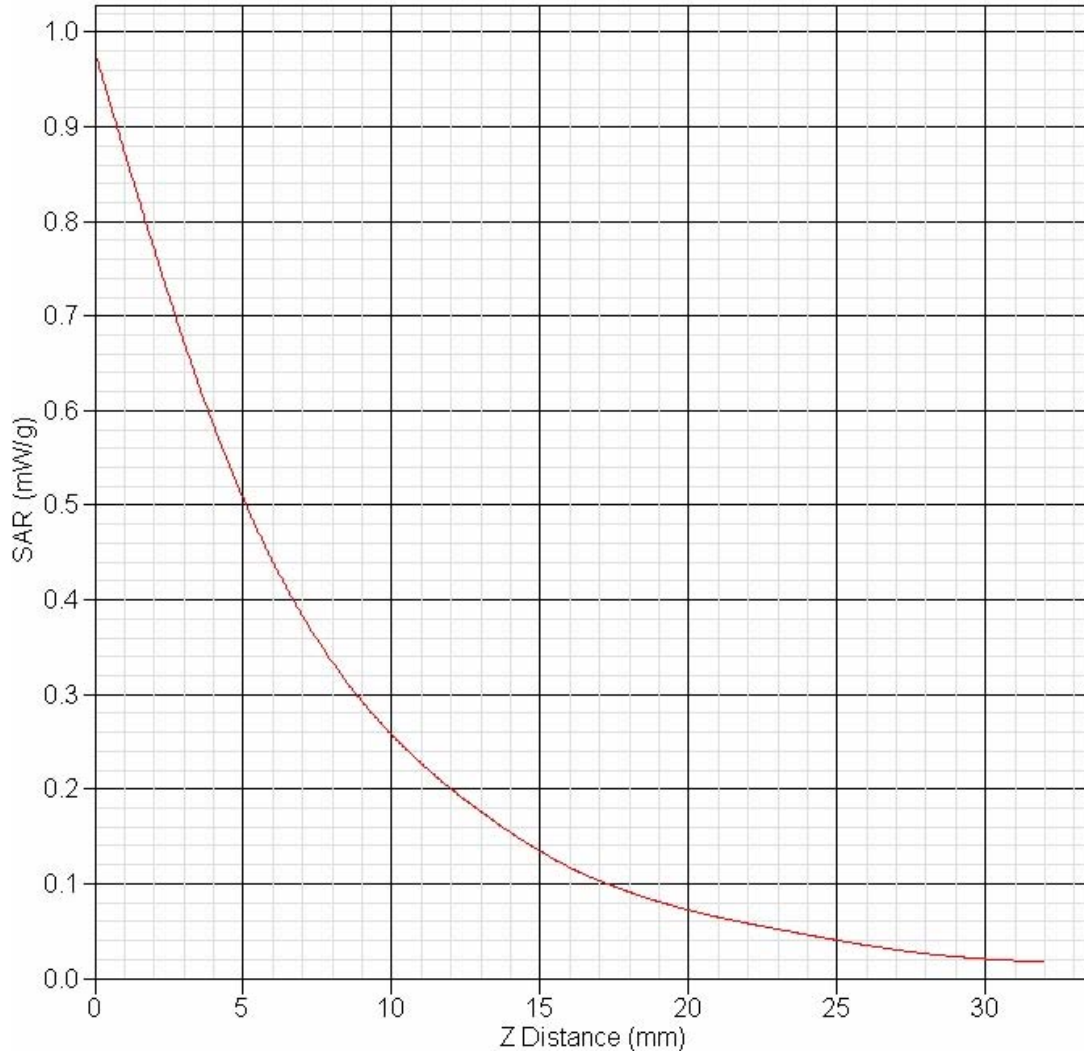


Exposure Assessment Measurement Uncertainty

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	-20.8	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.)	5.4	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:-2.9 y:-49.9



SAR Test Report

Operator : Chen
 Validation Date : 19-Apr-2009
 Measurement Date : 19-Apr-2009
 Starting Time : 19-Apr-2009 03:19:31 PM
 End Time : 19-Apr-2009 03:33:30 PM
 Scanning Time : 839 secs

Product Data
 Device Name : Dell_Tahiti_Phycomp
 Serial No. : N/A
 Type : Other
 Model : Latitude D510
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.05 W
 Drift Time : 0 min(s)
 Length : 100 mm
 Width : 150 mm
 Depth : 30.4 mm
 Antenna Type : Internal
 Power Drift-Start : 0.100
 Power Drift-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 : User Define Data

Tissue Data
 Type : BODY
 Serial No. : 2450
 Frequency : 2450 MHz
 Calibration Date : 19-Apr-2005
 Temperature : 21 °C
 Ambient Temp. : 22 °C
 Humidity : 50 RH%
 Epsilon : 54.12 F/m
 Sigma : 2.01 S/m
 Density : 1000 kg/cu. m

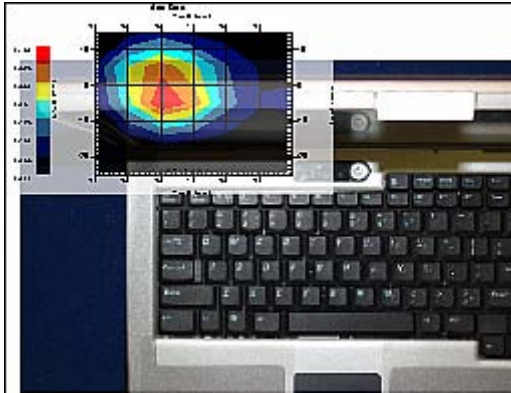
Probe Data
 Name : APREL Probe 212
 Model : E020
 Type : E-Field Triangle
 Serial No. : 212
 Calibration Date : 27-Dec-2004
 Frequency : 2450 MHz
 Duty Cycle Factor: 1
 Conversion Factor: 5
 Probe Sensitivity: 1.20 1.20 1.20 $\mu\text{V}/(\text{V}/\text{m})^2$
 Compression Point: 95 mV
 Offset : 1.56

Measurement Data

Crest Factor : 1
 Scan Type : Complete
 Tissue Temp. : 21 °C
 Ambient Temp. : 22°C
 Set-up Date : 19-Apr-2009
 Set-up Time : 1:57:13 PM

Other Data

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



1 gram SAR value : 0.412 W/kg
 Zoom Scan Peak SAR : 0.850





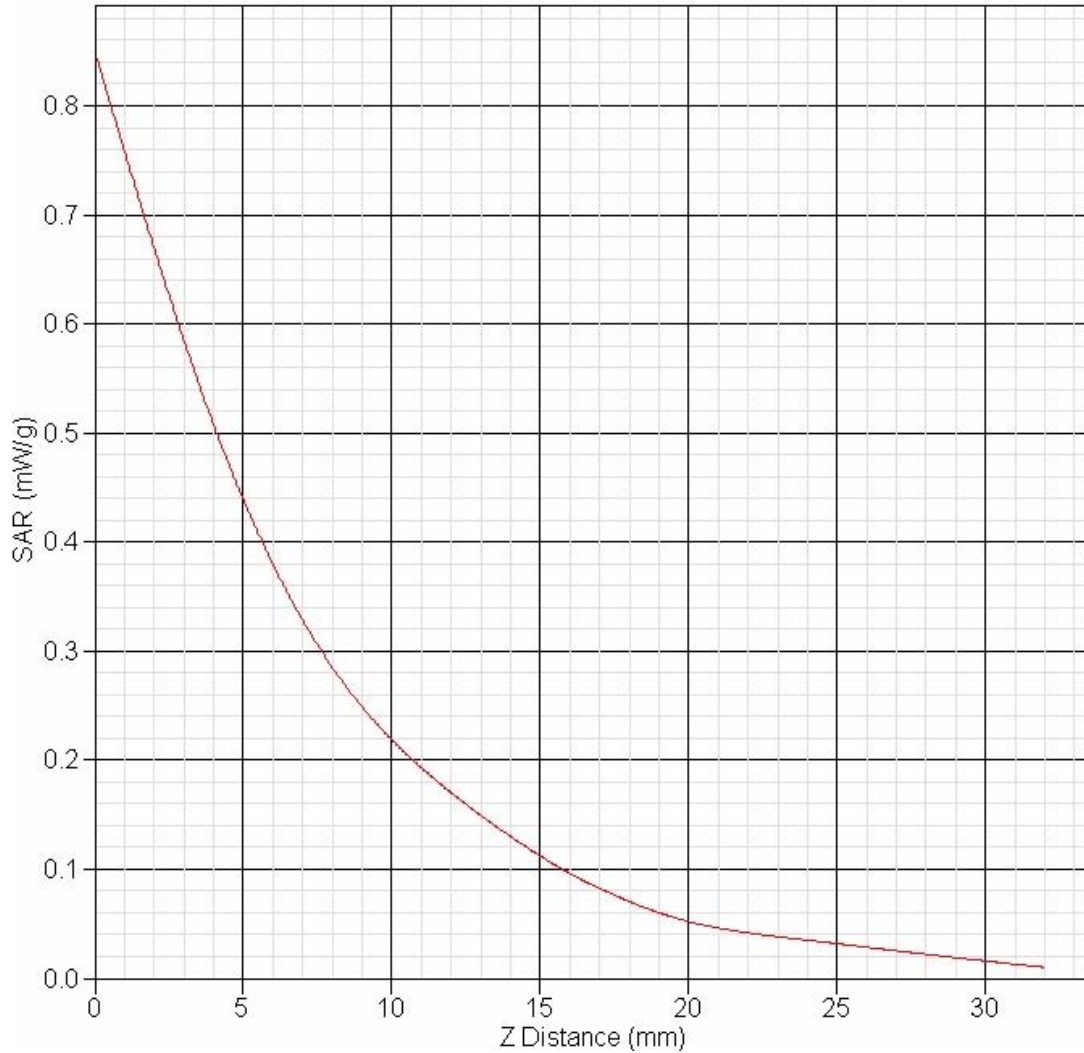
SAR & HAC Instruments for Wireless • Consulting • Research • Standards • Compliance • Training

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	-38.9	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.)	5.4	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:-2.9 y:-49.9



SAR Test Report

Operator : Chen
 Validation Date : 20-Apr-2009
 Measurement Date : 20-Apr-2009
 Starting Time : 20-Apr-2009 11:00:48 AM
 End Time : 20-Apr-2009 11:13:54 AM
 Scanning Time : 786 secs

Product Data
 Device Name : Dell_Tahiti_Phycomp
 Serial No. : N/A
 Type : Other
 Model : Latitude D510
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.05 W
 Drift Time : 0 min(s)
 Length : 100 mm
 Width : 150 mm
 Depth : 30.4 mm
 Antenna Type : Internal
 Power Drift-Start : 0.100
 Power Drift-Finish: 0.099
 Power Drift (%) : -1.000

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

Tissue Data
 Type : BODY
 Serial No. : 2450
 Frequency : 2450 MHz
 Calibration Date : 20-Apr-2005
 Temperature : 21 °C
 Ambient Temp. : 22 °C
 Humidity : 50 RH%
 Epsilon : 54.12 F/m
 Sigma : 2.01 S/m
 Density : 1000 kg/cu. m

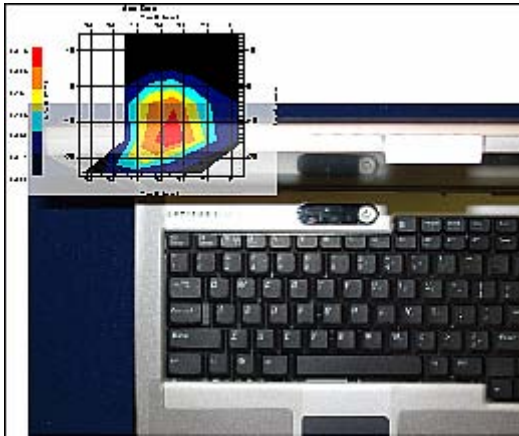
Probe Data
 Name : APREL Probe 212
 Model : E020
 Type : E-Field Triangle
 Serial No. : 212
 Calibration Date : 27-Dec-2004
 Frequency : 2450 MHz
 Duty Cycle Factor: 1
 Conversion Factor: 5
 Probe Sensitivity: 1.20 1.20 1.20 $\mu\text{V}/(\text{V}/\text{m})^2$
 Compression Point: 95 mV
 Offset : 1.56

Measurement Data
 Crest Factor : 1
 Scan Type : Complete
 Tissue Temp. : 21 °C
 Ambient Temp. : 22°C
 Set-up Date : 20-Apr-2009
 Set-up Time : 10:41:12 AM

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

APREL *Laboratories*

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



1 gram SAR value : 0.207 W/kg
 Zoom Scan Peak SAR : 0.430





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

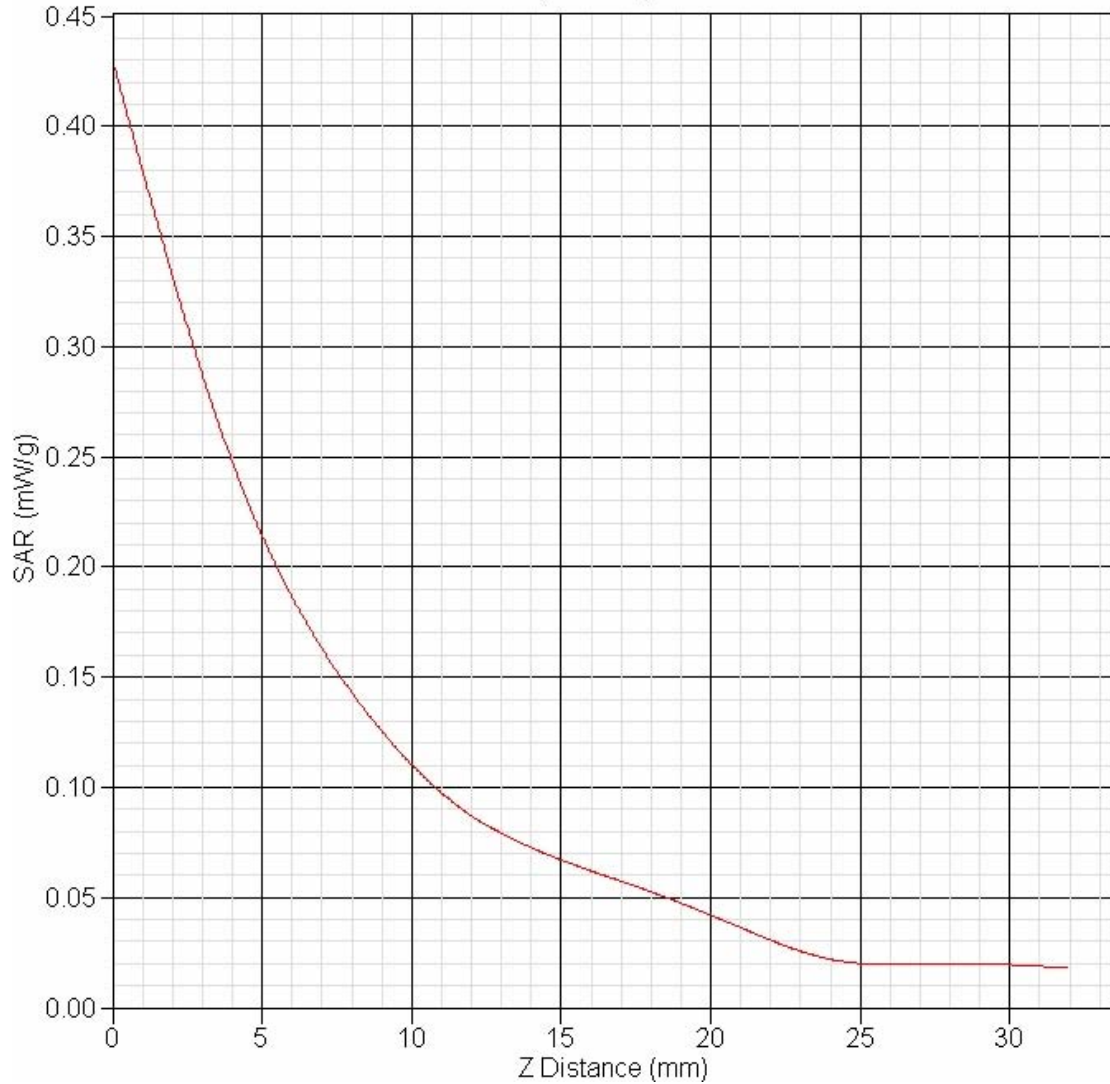
Exposure Assessment Measurement Uncertainty

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	-79.2	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.)	5.4	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:15.1 y:-44.9



SAR Test Report

Operator : Chen
 Validation Date : 19-Apr-2009
 Measurement Date : 19-Apr-2009
 Starting Time : 19-Apr-2009 03:44:09 PM
 End Time : 19-Apr-2009 03:58:09 PM
 Scanning Time : 840 secs

Product Data
 Device Name : Dell_Tahiti_Phycomp
 Serial No. : N/A
 Type : Other
 Model : Latitude D510
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.05 W
 Drift Time : 0 min(s)
 Length : 100 mm
 Width : 150 mm
 Depth : 30.4 mm
 Antenna Type : Internal
 Power Drift-Start : 0.100
 Power Drift-Finish: 0.101
 Power Drift (%) : 1.000

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

Tissue Data
 Type : BODY
 Serial No. : 2450
 Frequency : 2450 MHz
 Calibration Date : 19-Apr-2005
 Temperature : 21 °C
 Ambient Temp. : 22 °C
 Humidity : 50 RH%
 Epsilon : 54.12 F/m
 Sigma : 2.01 S/m
 Density : 1000 kg/cu. m

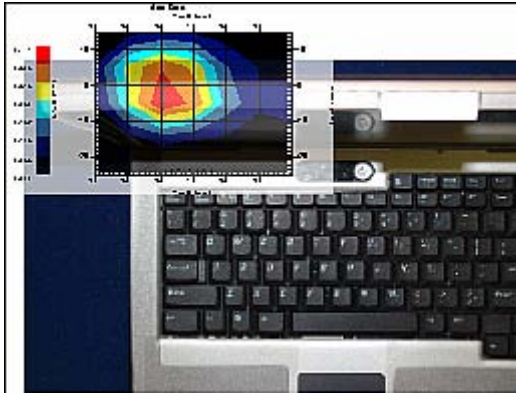
Probe Data
 Name : APREL Probe 212
 Model : E020
 Type : E-Field Triangle
 Serial No. : 212
 Calibration Date : 27-Dec-2004
 Frequency : 2450 MHz
 Duty Cycle Factor: 1
 Conversion Factor: 5
 Probe Sensitivity: 1.20 1.20 1.20 $\mu\text{V}/(\text{V}/\text{m})^2$
 Compression Point: 95 mV
 Offset : 1.56

Measurement Data

Crest Factor : 1
Scan Type : Complete
Tissue Temp. : 21 °C
Ambient Temp. : 22°C
Set-up Date : 19-Apr-2009
Set-up Time : 1:57:13 PM

Other Data

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



1 gram SAR value : 0.392 W/kg
Zoom Scan Peak SAR : 0.820





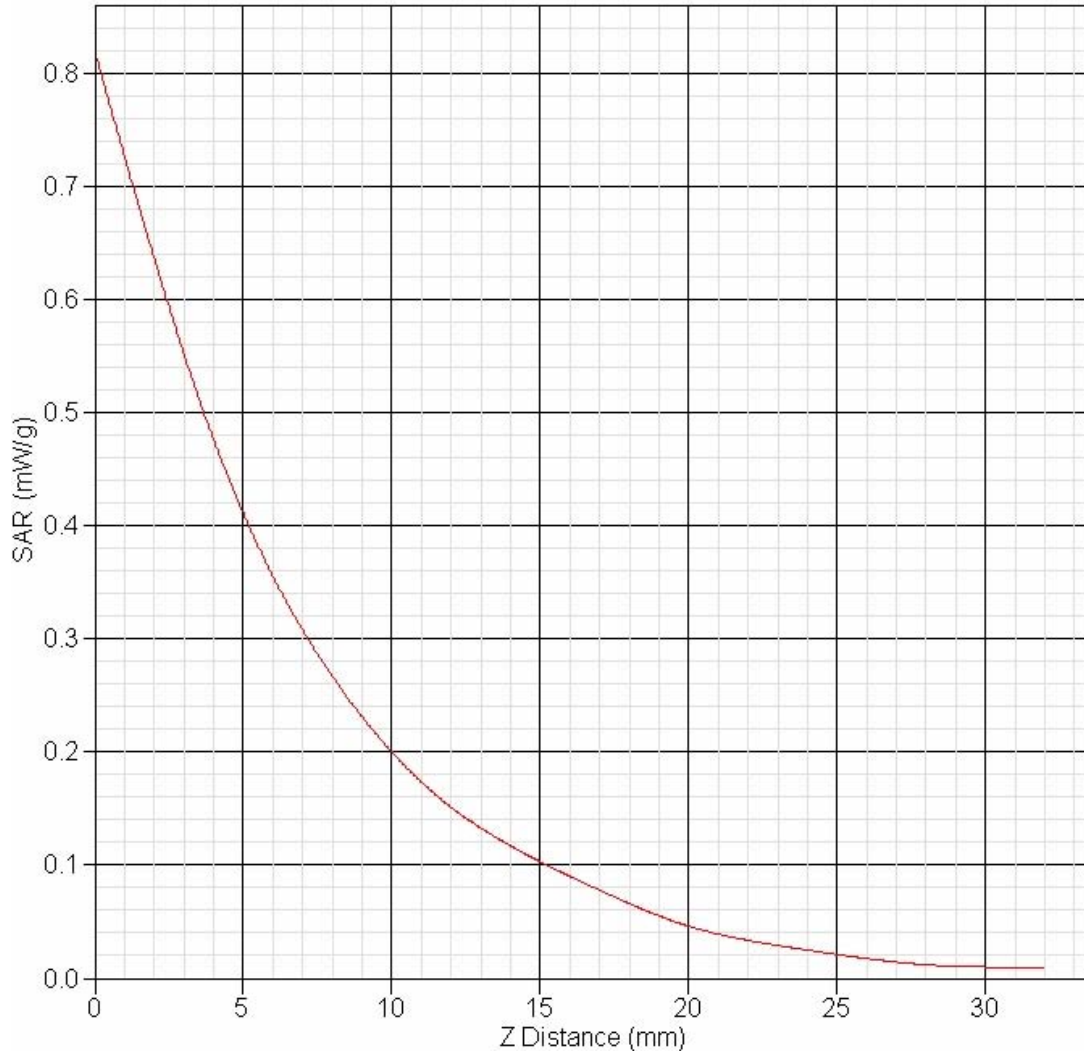
SAR & HAC Instruments for Wireless • Consulting • Research • Standards • Compliance • Training

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	-38.3	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.)	5.4	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:-3.0 y:-49.9



SAR Test Report

Operator : Chen
 Validation Date : 20-Apr-2009
 Measurement Date : 20-Apr-2009
 Starting Time : 20-Apr-2009 11:19:09 AM
 End Time : 20-Apr-2009 11:32:15 AM
 Scanning Time : 786 secs

Product Data
 Device Name : Dell_Tahiti_Phycomp
 Serial No. : N/A
 Type : Other
 Model : Latitude D510
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.05 W
 Drift Time : 0 min(s)
 Length : 100 mm
 Width : 150 mm
 Depth : 30.4 mm
 Antenna Type : Internal
 Power Drift-Start : 0.122
 Power Drift-Finish: 0.126
 Power Drift (%) : 2.544

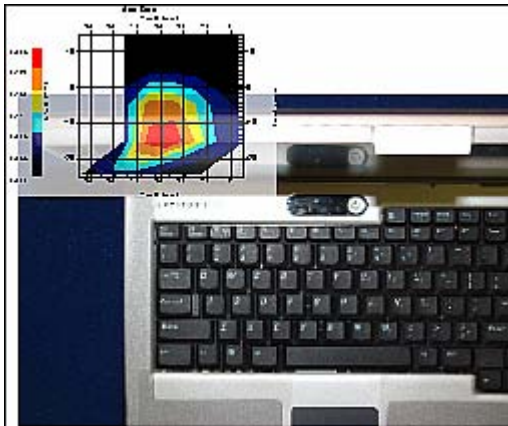
Phantom Data
 Name : APREL-Uni
 Type : Uni-Phantom
 Size : 280 x 280 x 200
 Serial No. : User Define
 Location : Center
 Description : User Define Data

Tissue Data
 Type : BODY
 Serial No. : 2450
 Frequency : 2450 MHz
 Calibration Date : 20-Apr-2005
 Temperature : 21 °C
 Ambient Temp. : 22 °C
 Humidity : 50 RH%
 Epsilon : 54.12 F/m
 Sigma : 2.01 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 $\mu\text{V}/(\text{V}/\text{m})^2$
 Compression Point: 95 mV
 Offset : 1.56

Measurement Data
 Crest Factor : 1
 Scan Type : Complete
 Tissue Temp. : 21 °C
 Ambient Temp. : 22°C
 Set-up Date : 20-Apr-2009
 Set-up Time : 10:41:12 AM

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



1 gram SAR value : 0.193 W/kg
 Zoom Scan Peak SAR : 0.410





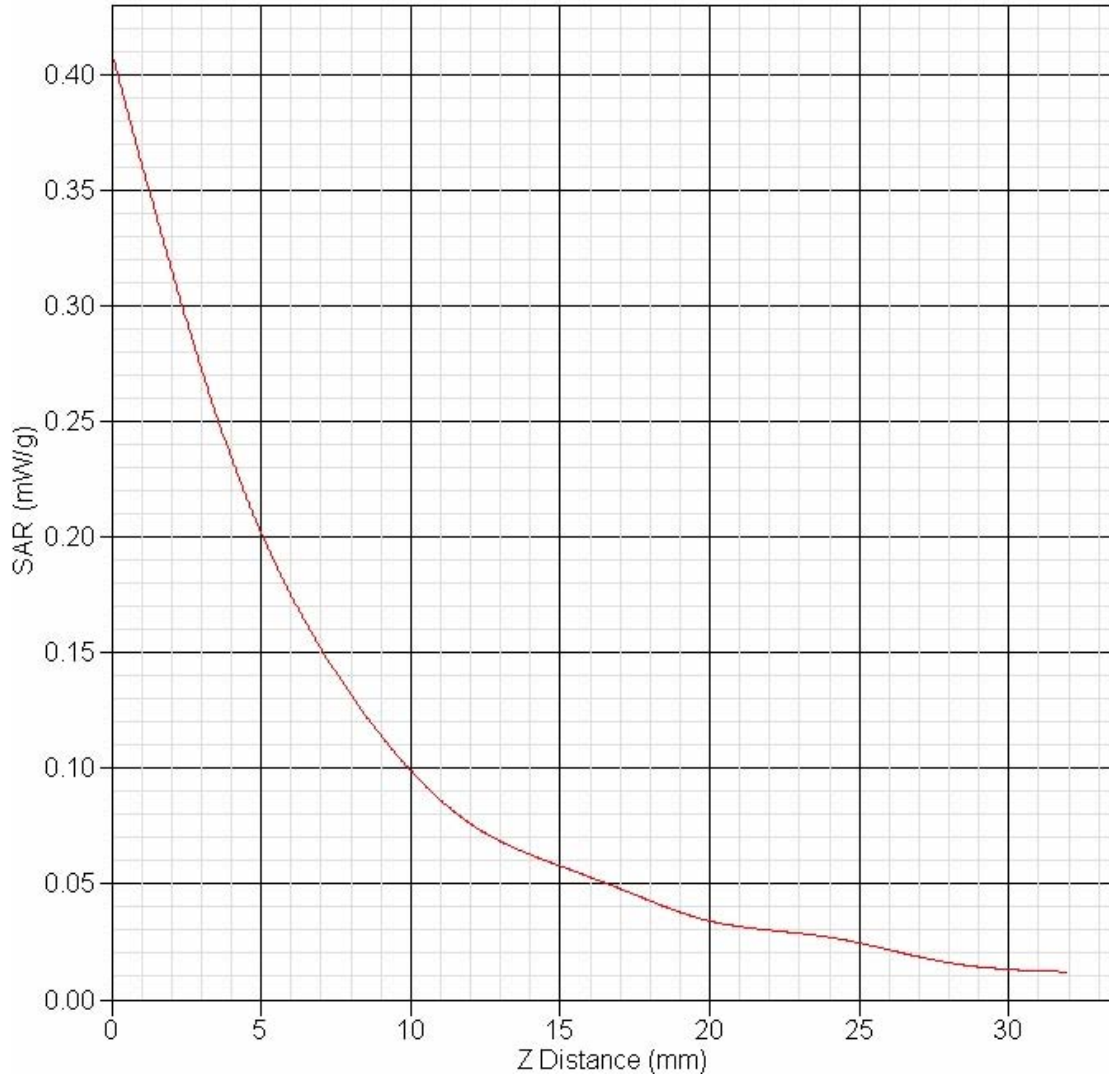
SAR & HAC Instruments for Wireless • Consulting • Research • Standards • Compliance • Training

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	-74.2	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.)	5.4	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:15.1 y:-44.9



SAR Test Report

Operator : Chen
 Validation Date : 20-Apr-2009
 Measurement Date : 20-Apr-2009
 Starting Time : 20-Apr-2009 12:50:33 PM
 End Time : 20-Apr-2009 01:03:39 PM
 Scanning Time : 786 secs

Product Data
 Device Name : Dell_Tahiti_Phycomp
 Serial No. : N/A
 Type : Other
 Model : Latitude D510
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.05 W
 Drift Time : 0 min(s)
 Length : 150 mm
 Width : 120 mm
 Depth : 30.4 mm
 Antenna Type : Internal
 Power Drift-Start : 0.100
 Power Drift-Finish: 0.095
 Power Drift (%) : -4.461

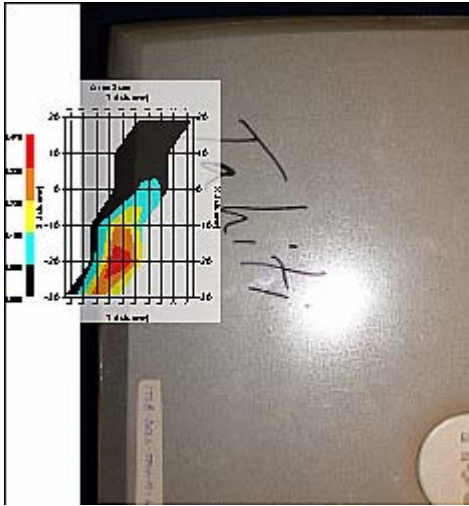
Phantom Data
 Name : APREL-Uni
 Type : Uni-Phantom
 Size : 280 x 280 x 200
 Serial No. : User Define
 Location : Center
 Description : User Define Data

Tissue Data
 Type : BODY
 Serial No. : 2450
 Frequency : 2450 MHz
 Calibration Date : 20-Apr-2005
 Temperature : 21 °C
 Ambient Temp. : 22 °C
 Humidity : 50 RH%
 Epsilon : 54.12 F/m
 Sigma : 2.01 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 $\mu\text{V}/(\text{V}/\text{m})^2$
 Compression Point: 95 mV
 Offset : 1.56

Measurement Data
 Crest Factor : 1
 Scan Type : Complete
 Tissue Temp. : 21 °C
 Ambient Temp. : 22°C
 Set-up Date : 20-Apr-2009
 Set-up Time : 10:41:12 AM

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



1 gram SAR value : 0.402 W/kg
 Zoom Scan Peak SAR : 0.850

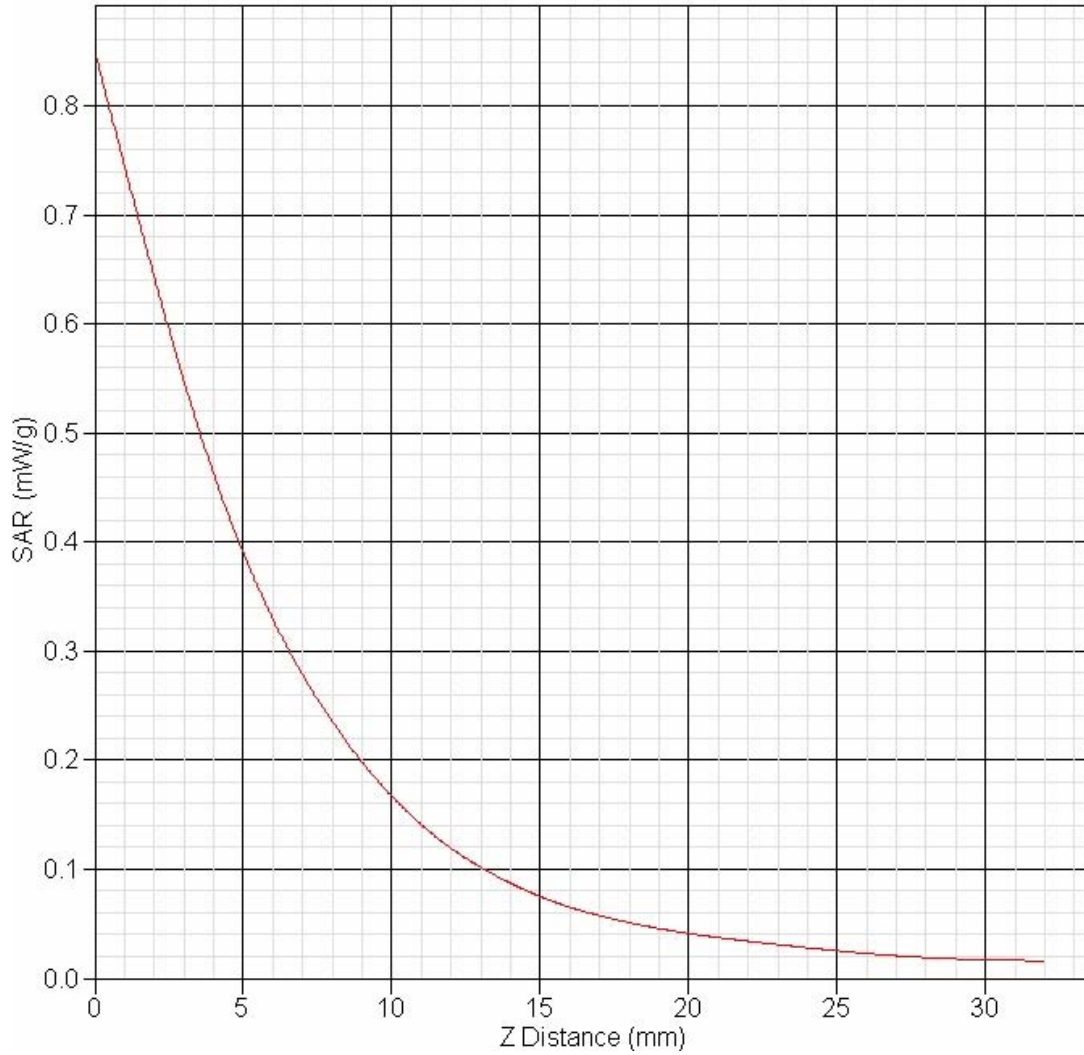


Exposure Assessment Measurement Uncertainty

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	-94.5	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.)	5.4	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:20.1 y:-74.9



SAR Test Report

Operator : Chen
 Validation Date : 20-Apr-2009
 Measurement Date : 20-Apr-2009
 Starting Time : 20-Apr-2009 01:20:37 PM
 End Time : 20-Apr-2009 01:33:45 PM
 Scanning Time : 788 secs

Product Data
 Device Name : Dell_Tahiti_Phycomp
 Serial No. : N/A
 Type : Other
 Model : Latitude D510
 Frequency : 2450.00 MHz
 Max. Transmit Pwr : 0.05 W
 Drift Time : 0 min(s)
 Length : 150 mm
 Width : 120 mm
 Depth : 30.4 mm
 Antenna Type : Internal
 Power Drift-Start : 0.100
 Power Drift-Finish: 0.095
 Power Drift (%) : -4.244

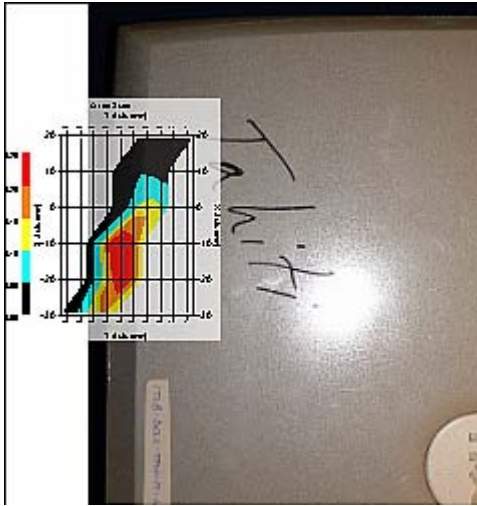
Phantom Data
 Name : APREL-Uni
 Type : Uni-Phantom
 Size : 280 x 280 x 200
 Serial No. : User Define
 Location : Center
 Description : User Define Data

Tissue Data
 Type : BODY
 Serial No. : 2450
 Frequency : 2450 MHz
 Calibration Date : 20-Apr-2005
 Temperature : 21 °C
 Ambient Temp. : 22 °C
 Humidity : 50 RH%
 Epsilon : 54.12 F/m
 Sigma : 2.01 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 $\mu\text{V}/(\text{V}/\text{m})^2$
 Compression Point: 95 mV
 Offset : 1.56

Measurement Data
 Crest Factor : 1
 Scan Type : Complete
 Tissue Temp. : 21 °C
 Ambient Temp. : 22°C
 Set-up Date : 20-Apr-2009
 Set-up Time : 10:41:12 AM

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



1 gram SAR value : 0.211 W/kg
 Zoom Scan Peak SAR : 0.420





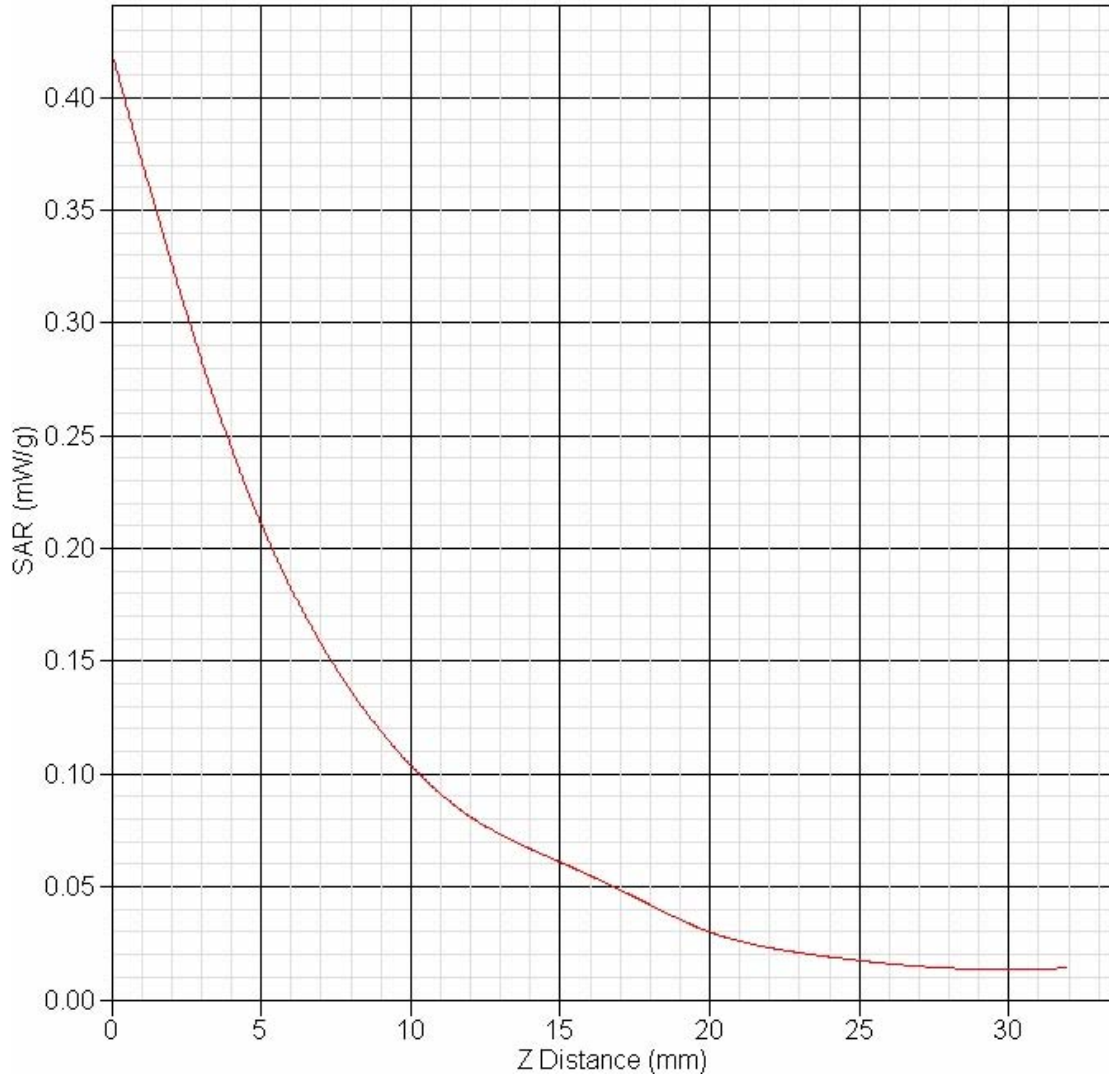
SAR & HAC Instruments for Wireless • Consulting • Research • Standards • Compliance • Training

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	-95.2	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.)	5.4	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:18.0 y:-66.9





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

Appendix B Probe Calibration Certificate





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

NCL CALIBRATION LABORATORIES

Calibration File No.: CP-469

Client.: APREL

CERTIFICATE OF CALIBRATION

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

Equipment: Miniature Isotropic RF Probe 5800 MHz

Manufacturer: APREL Laboratories

Model No.: E-020

Serial No.: 212

Body Calibration

Calibration Procedure: SSI/DRB-TP-D01-032-E020-V2

Project No: Internal

Calibrated: 27th December 2004

Released on: 27th December 2004

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

Released By: _____

NCL CALIBRATION LABORATORIES

51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6

Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4161



Introduction

This Calibration Report reproduces the results of the calibration performed in line with the SSI/DRB-TP-D01-032-E020-V2 E-Field Probe Calibration Procedure. The results contained within this report are for APREL E-Field Probe E-020 212.

References

SSI/DRB-TP-D01-032-E020-V2 E-Field Probe Calibration Procedure
 IEEE 1528 "Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques"
 SSI-TP-011 Tissue Calibration Procedure

Conditions

Probe 212 was a new probe taken from stock prior to calibration.

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

Calibration Results Summary



Probe Type:	E-Field Probe E-020
Serial Number:	212
Frequency:	2450 MHz
Sensor Offset:	1.56 mm
Sensor Length:	2.5 mm
Tip Enclosure:	Ertalyte*
Tip Diameter:	5 mm
Tip Length:	60 mm
Total Length:	290 mm

*Resistive to recommended tissue recipes per IEEE-1528

Sensitivity in Air

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

Sensitivity in Body Tissue



Frequency: 2450 MHz

Epsilon: 50.6 (+/-5%) **Sigma:** 2.01 S/m (+/-10%)

ConvF**Channel X:** 5.0**Channel Y:** 5.0**Channel Z:** 5.0

Tissue sensitivity values were calculated using the load impedance of the APREL Laboratories Daq-Paq.

Boundary Effect:

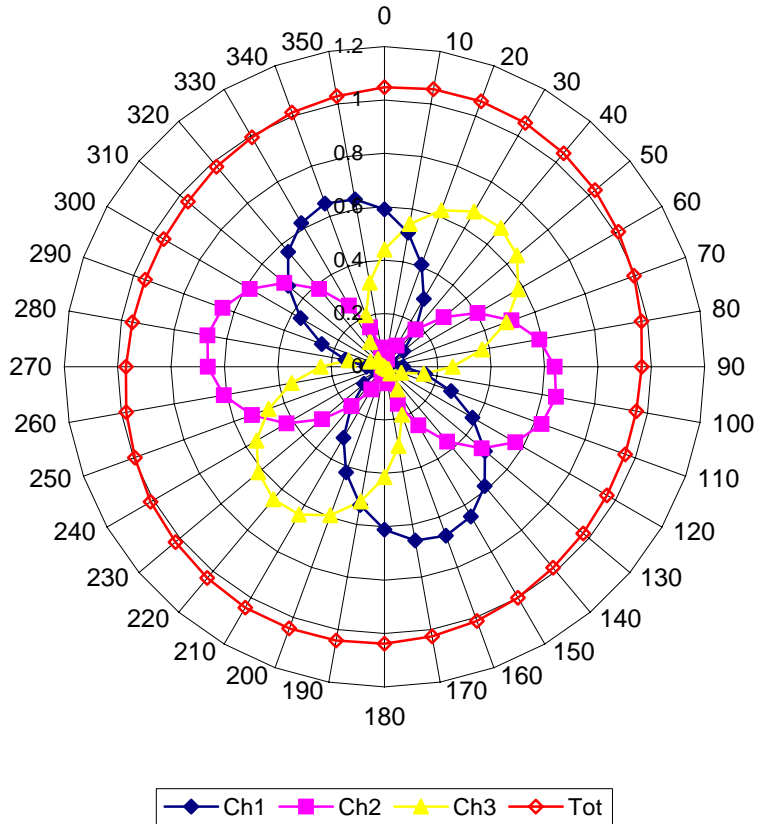
Uncertainty resulting from the boundary effect is less than 2% for the distance between the tip of the probe and the tissue boundary, when less than 2.4mm.

Spatial Resolution:

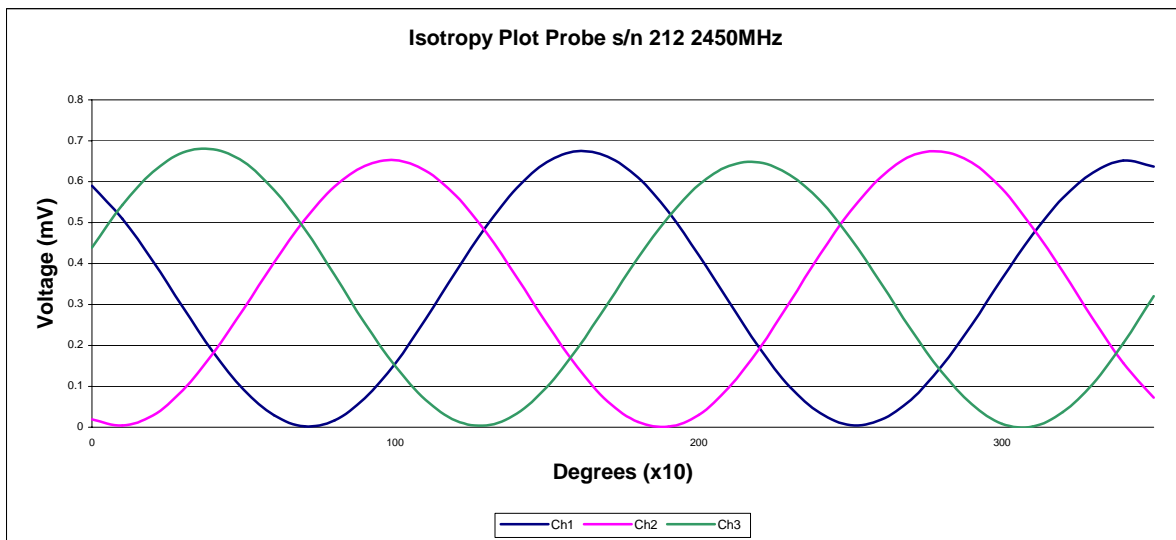
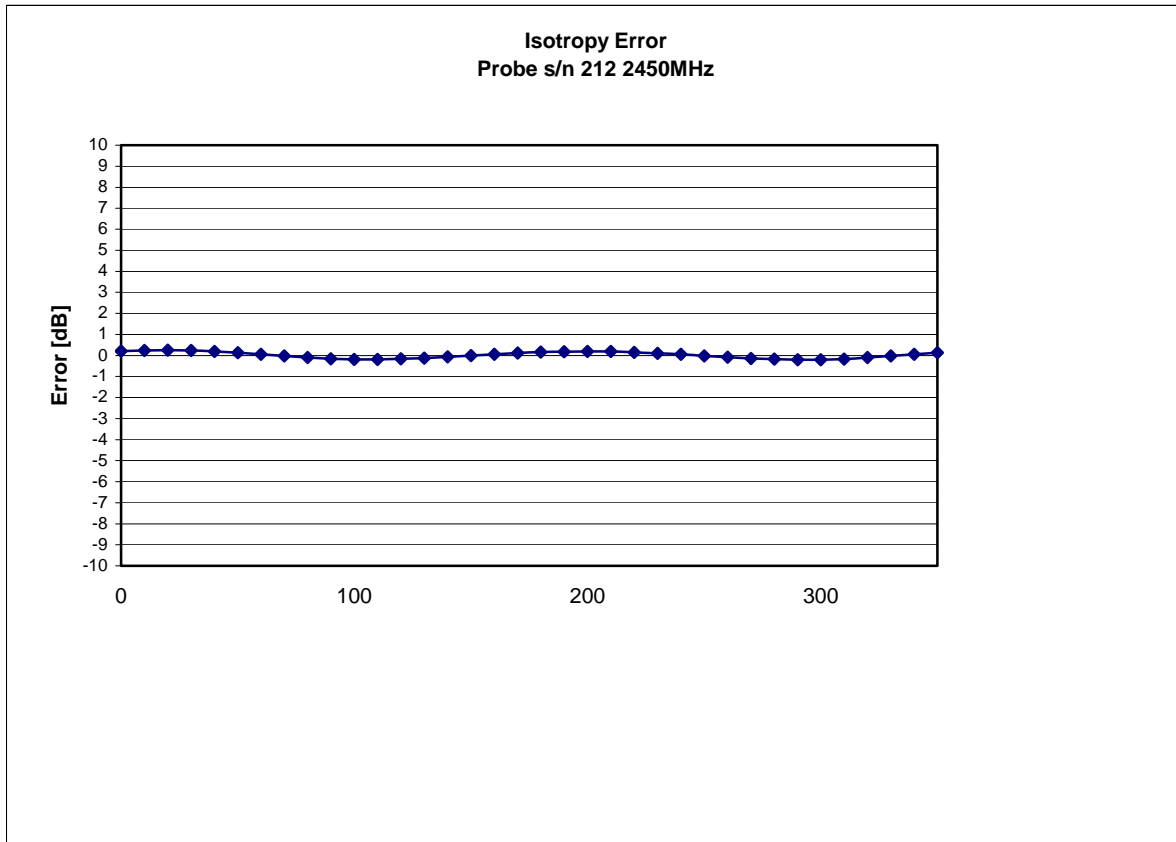
The measured probe tip diameter is 5 mm (+/- 0.01 mm) and therefore meets the requirements of SSI/DRB-TP-D01-032 for spatial resolution.

Receiving Pattern 2450 MHz (Air)

Receiving Pattern Probe s/n 212 24500MHz



Isotropy Error 2450 MHz (Air)

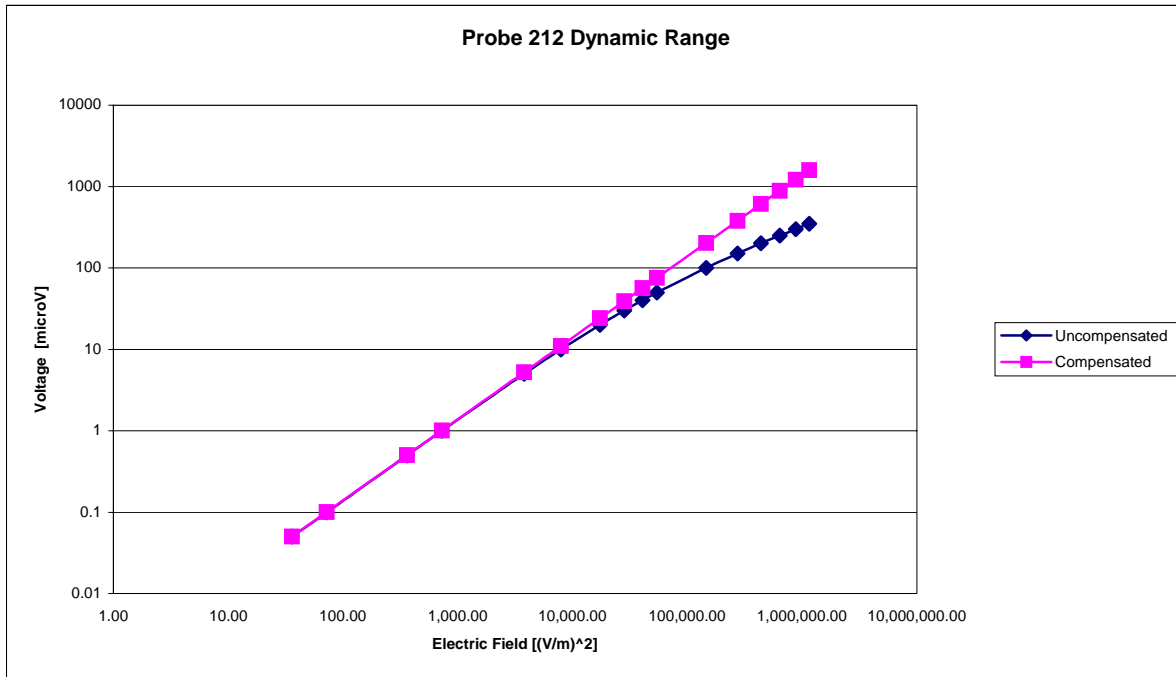


Isotropy:

0.10 dB

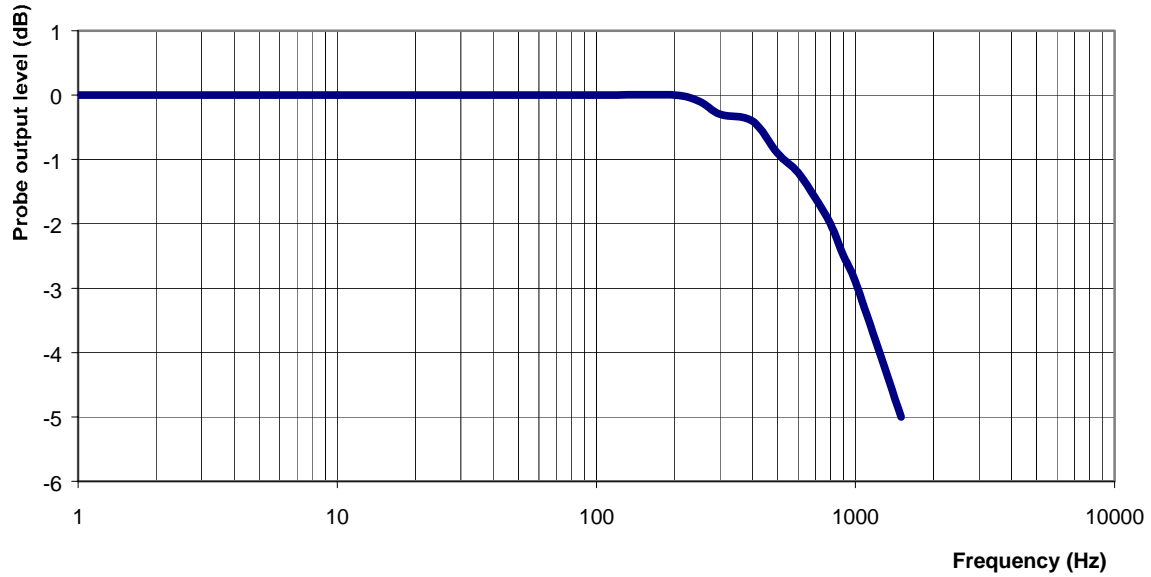


Dynamic Range



Video Bandwidth

Probe Frequency Characteristics



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



Conversion Factor Uncertainty Assessment

Frequency: 2450MHz

Epsilon: 50.6 (+/-5%) **Sigma:** 2.01 S/m (+/-10%)

ConvF

Channel X: 5.0 7%(K=2)

Channel Y: 5.0 7%(K=2)

Channel Z: 5.0 7%(K=2)

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

Boundary Effect:

For a distance of 2.4mm the evaluated uncertainty (increase in the probe sensitivity) is less than 2%.



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

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2004.





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

Appendix C Dipole Calibration Certificate





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

NCL CALIBRATION LABORATORIES

Calibration File No: DC-0265
Project Number: Internal

CERTIFICATE OF CALIBRATION

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

APREL Validation Dipole

Manufacturer: APREL Laboratories
Part number: D-2450-S-1
Frequency: 2.45 GHz
Serial No: ALCD-10

Customer: APREL

Calibrated: 14 November 2003
Released on: 15 November 2003

Released By: _____

NCL CALIBRATION LABORATORIES

51 SPECTRUM WAY
NEPEAN, ONTARIO
CANADA K2R 1E6

Division of APREL Lab.
TEL: (613) 820-4988
FAX: (613) 820-4161



Calibration Results Summary

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

Mechanical Dimensions

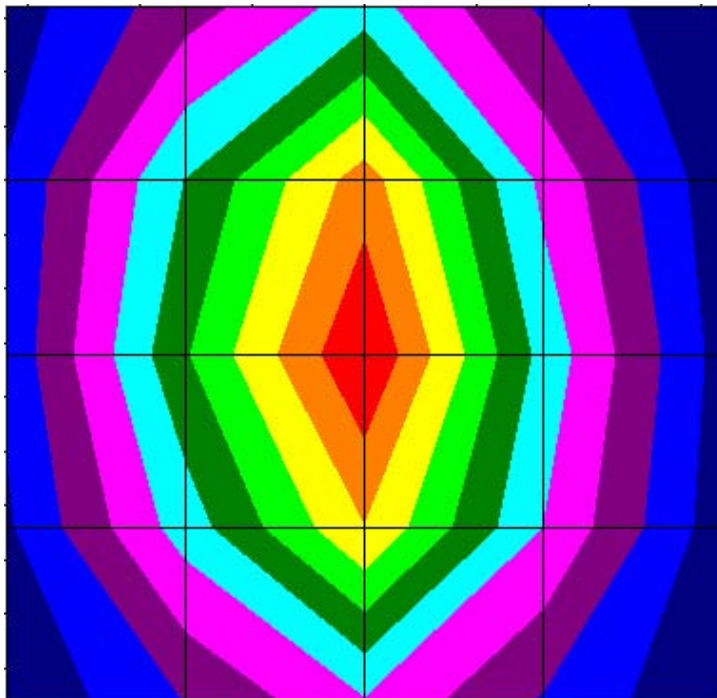
Length: 51.7 mm
Height: 30.8 mm

Electrical Specification

SWR: 1.181U
Return Loss: -21.4 dB
Impedance: 46.175

System Validation Results

Frequency	1 Gram	10 Gram	Peak
2.45 GHz	52.45	22.91	102.91



Introduction

This Calibration Report has been produced in line with the SSI Dipole Calibration Procedure SSI-TP-018. The results contained within this report are for Validation Dipole ALCD-10 at 2.45 GHz. The calibration routine consisted of a three-step process. Step 1 was a mechanical verification of the dipole to ensure that it meets the IEEE mechanical specification. Step 2 was an Electrical Calibration for the Validation Dipole, where the SWR, Impedance, and the Return loss were assessed. Step 3 involved a System Validation using the ALIDX-500, along with the APREL Reference E-010 130 MHz to 26 GHz E-Field Probe Serial Number 163.

References

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

Conditions

Dipole ALCD-10 was a new Dipole taken from stock prior to calibration.

Ambient Temperature of the Laboratory: 24 °C +/- 0.5°C
Temperature of the Tissue: 20 °C +/- 0.5°C

Dipole Calibration Results

Mechanical Verification

IEEE Length	IEEE Height	Measured Length	Measured Height
51.5 mm	30.4 mm	51.7 mm	30.8 mm

Tissue Validation

Head Tissue 2450 MHz	Measured
Dielectric constant, ϵ_r	39.2
Conductivity, σ [S/m]	1.82
Tissue Conversion Factor,	4.61



Electrical Calibration

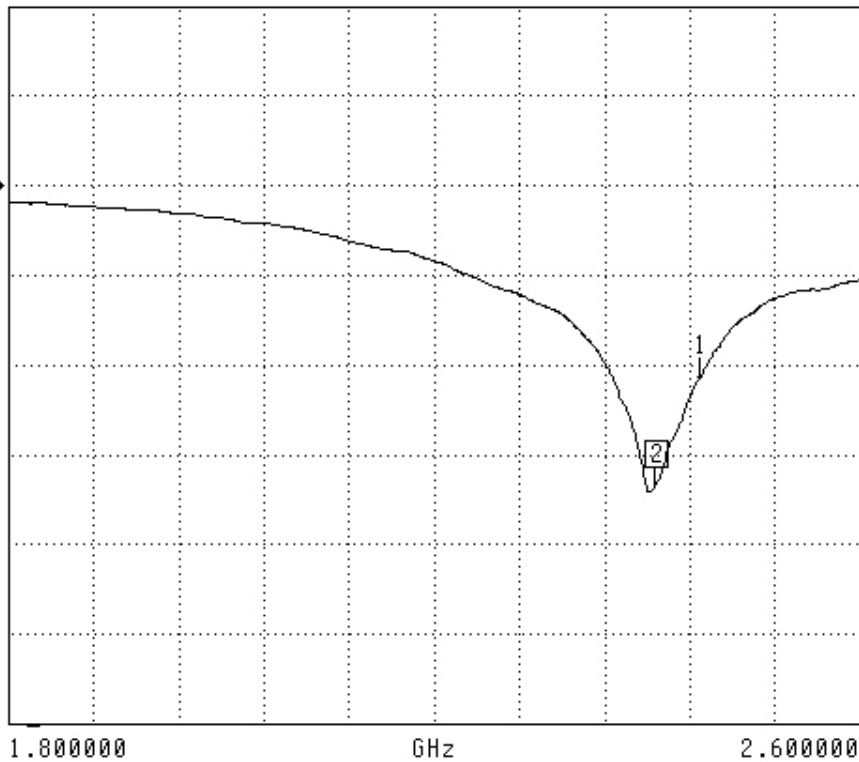
Test	Result	IEEE Value
S11 R/L	-21.4	-21 dB
SWR	1.181U	-
Impedance	46.175 Ω	

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

S11 Parameter Return Loss

S11 FORWARD REFLECTION

LOG MAGNITUDE REF=0.000 dB 10.000 dB/DIV



CH 1 - S11
REFERENCE PLANE
5.1160 mm

MARKER 2
2.408000 GHz
-33.566 dB

MARKER TO MAX
▶ MARKER TO MIN
1 2.450000 GHz
-21.377 dB

MARKER READOUT
FUNCTIONS



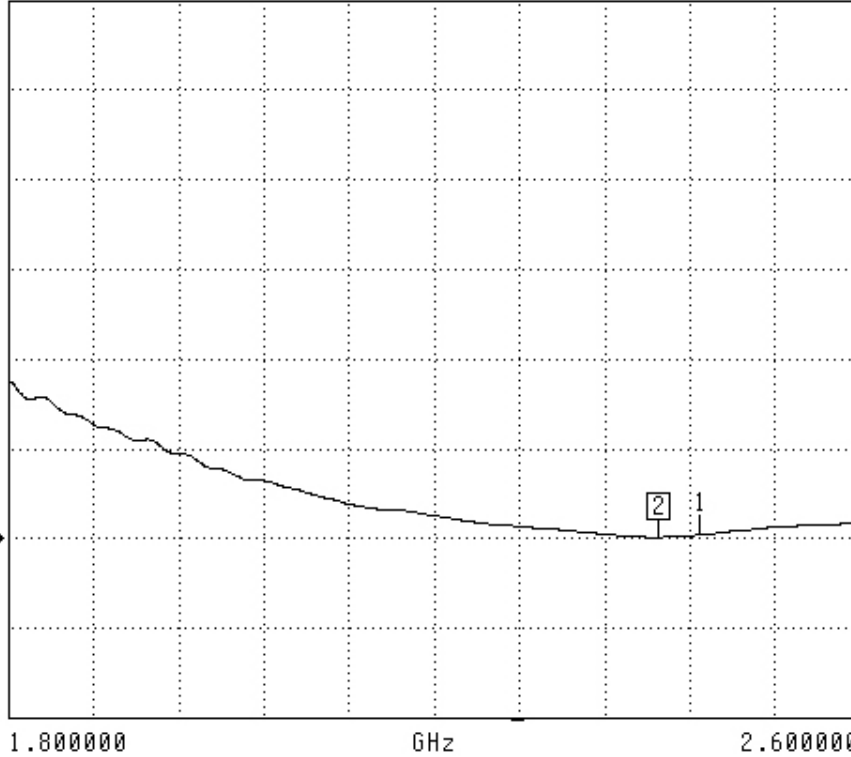
SWR

S11 FORWARD REFLECTION

SWR

REF=1.000 U

5.000 U/DIV



CH 1 - S11
REFERENCE PLANE
5.1160 mm

MARKER 2
2.411000 GHz
1.049 U

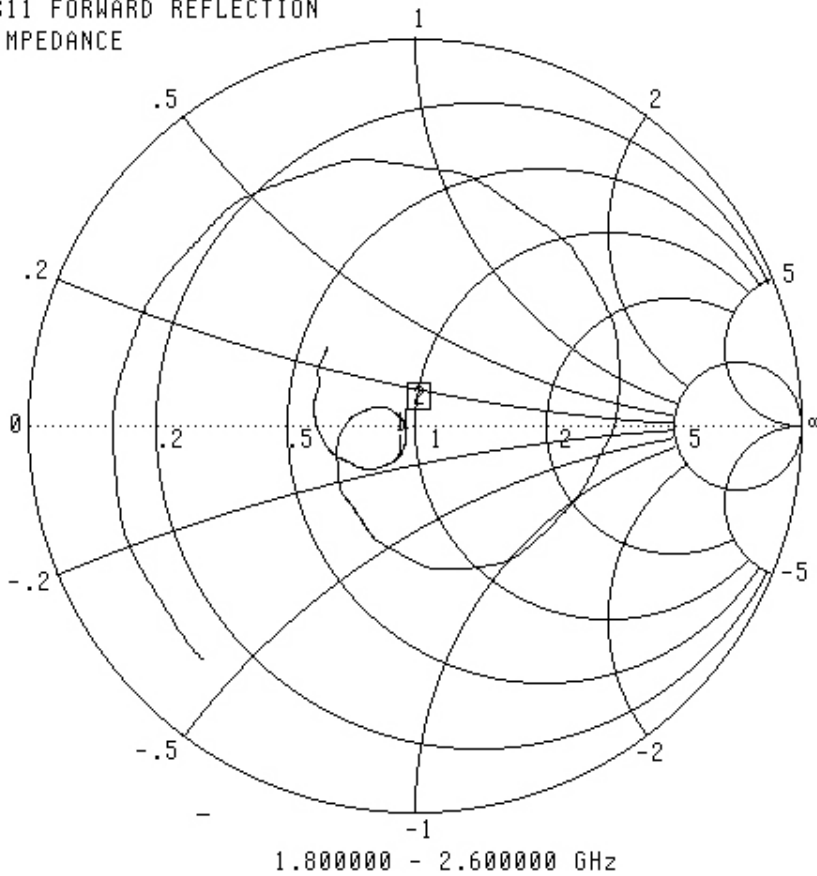
MARKER TO MAX
▶ MARKER TO MIN
1 2.450000 GHz
1.181 U

MARKER READOUT
FUNCTIONS



Smith Chart Dipole Impedance

S11 FORWARD REFLECTION
IMPEDANCE



CH 1 - S11
REFERENCE PLANE
5.1160 mm

MARKER 2
2.411000 GHz
48.080 Ω
-1.171 jΩ

MARKER TO MAX
 ▶ MARKER TO MIN

1 2.450000 GHz
46.175 Ω
-7.199 jΩ

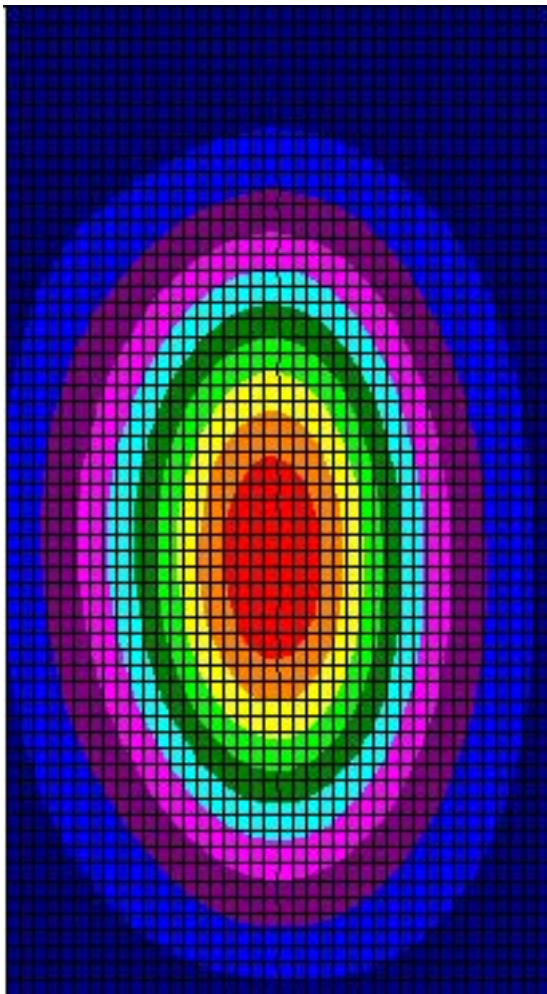
MARKER READOUT
FUNCTIONS



System Validation Results Using the Electrically Calibrated Dipole

Frequency	1 Gram	10 Gram	Peak Above Feed Point
2.45 GHz	52.45	22.91	102.91

The following Graphic Plot is the splined measurement result for the course scan.





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

Test Equipment

The test equipment used during Probe Calibration, manufacturer, model number and, current calibration status are listed and located on the main APREL server R:\NCL\Calibration Equipment\Instrument List May 2004.

