

APPENDIX B PLOTS OF THE SAR MEASUREMENTS

Plots of the measured SAR distributions inside the phantom are given in this Appendix for all tested configurations. The spatial peak SAR values were assessed with the procedure described in this report.

Table: 5200 MHz Band SAR Measurement Plot Numbers

Test Position	Plot No.	Ant	Bit rate Mode (Mbps)	Channel Bandwidth (MHz)	Test Channel
Edge On Right	1	A	MCS0	40	38
	2	A			54
	3	A			62
Edge On Left	4	B	MCS0	40	54
Z-Axis graphs for Plots 1 to 4					

Table: 5600 MHz Band SAR Measurement Plot Numbers

Test Position	Plot No.	Ant	Bit rate Mode (Mbps)	Channel Bandwidth (MHz)	Test Channel
Edge On Right	5	A	MCS0	40	102
	6	A			118
	7	A			134
Z-Axis graphs for Plots 5 to 7					

Table: 5800 MHz Band SAR Measurement Plot Numbers

Test Position	Plot No.	Ant	Bit rate Mode (Mbps)	Channel Bandwidth (MHz)	Test Channel
Edge On Right	8	A	MCS0	40	151
	9	A			159
Z-Axis graphs for Plots 8 to 9					

Table: Validation Plots

Plot 10	Validation 5500 MHz 2 nd August 2008
Plot 11	Validation 5500 MHz 4 th August 2008
Plot 12	Validation 5200 MHz 12 th August 2008
Plot 13	Validation 5800 MHz 13 th August 2008
Z-Axis graphs for Plots 10 to 13	



Test Date: 12 August 2008

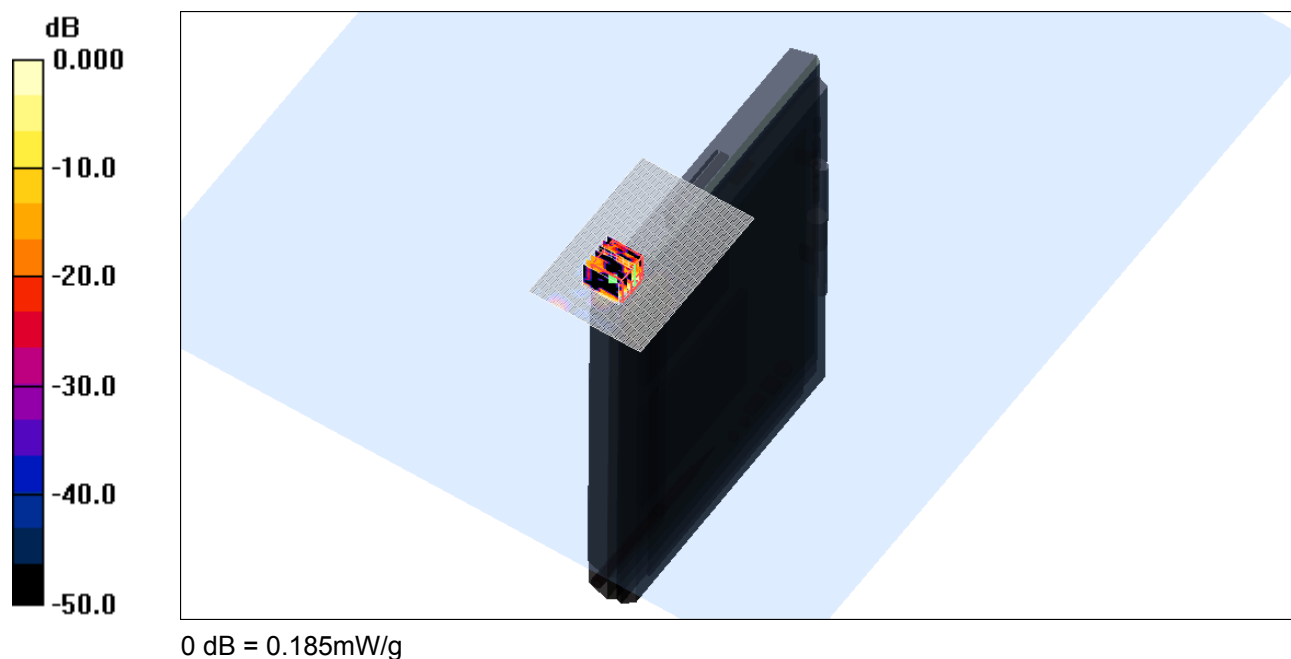
File Name: [Edge On Right OFDM HT0\(40MHz\) 5.2 GHz WiFi Antenna A 12-08-08.da4](#)

DUT: Fujitsu Tablet Cutlas with Atheros HB92 11abgn (2x2); Type: HB92; Serial: 001B9E-C85143

- * Communication System: OFDM 5250 MHz; Frequency: 5190 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5190$ MHz; $\sigma = 5.16$ mho/m; $\epsilon_r = 44.4$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.72, 3.72, 3.72)
- Phantom: Flat Phantom 10.1; Serial: P 10.1; Phantom section: Flat 2.2 Section

Channel 38 Test/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.122 mW/g

Channel 38 Test/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.34 V/m; Power Drift = 0.361 dB
Peak SAR (extrapolated) = 0.319 W/kg
SAR(1 g) = 0.078 mW/g; SAR(10 g) = 0.019 mW/g
Maximum value of SAR (measured) = 0.185 mW/g



SAR MEASUREMENT PLOT 1

Ambient Temperature
Liquid Temperature
Humidity

20.2 Degrees Celsius
20.0 Degrees Celsius
31.0 %



Test Date: 12 August 2008

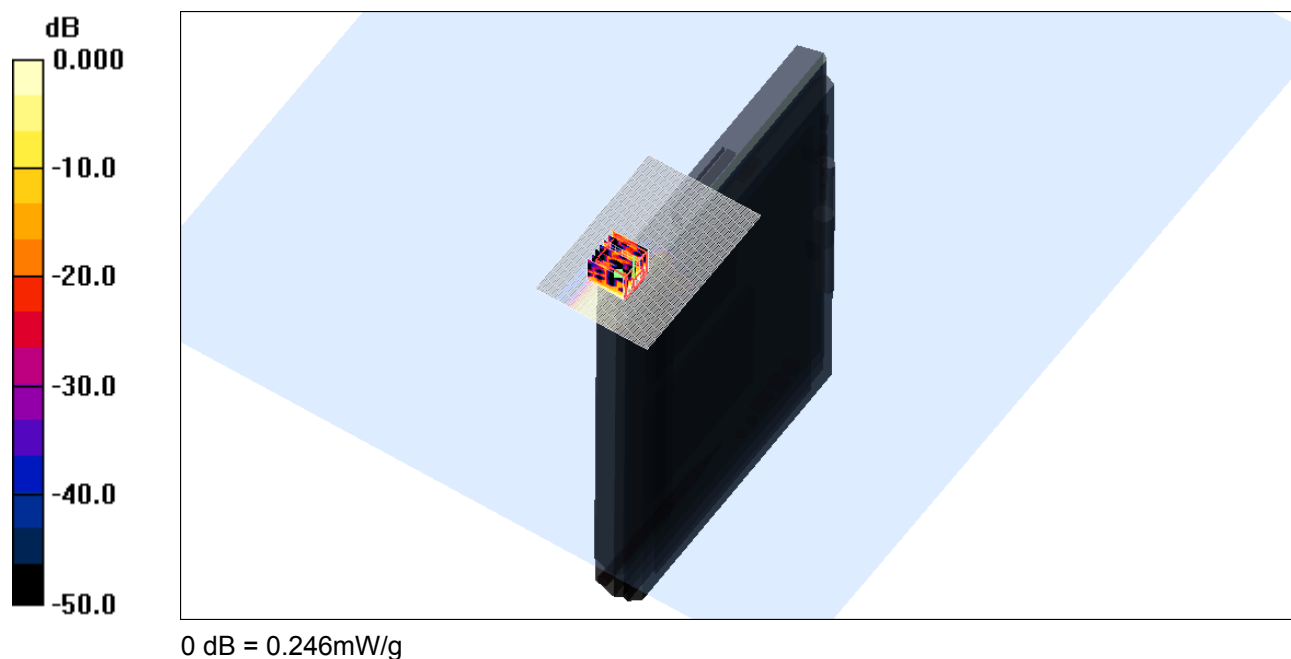
File Name: [Edge On Right OFDM HT0\(40MHz\) 5.2 GHz WiFi Antenna A 12-08-08.da4](#)

DUT: Fujitsu Tablet Cutlas with Atheros HB92 11abgn (2x2); Type: HB92; Serial: 001B9E-C85143

- * Communication System: OFDM 5250 MHz; Frequency: 5270 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5270$ MHz; $\sigma = 5.31$ mho/m; $\epsilon_r = 44.2$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.72, 3.72, 3.72)
- Phantom: Flat Phantom 10.1; Serial: P 10.1; Phantom section: Flat 2.2 Section

Channel 54 Test/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.147 mW/g

Channel 54 Test/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 4.18 V/m; Power Drift = -0.071 dB
Peak SAR (extrapolated) = 0.654 W/kg
SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.028 mW/g
Maximum value of SAR (measured) = 0.246 mW/g



SAR MEASUREMENT PLOT 2

Ambient Temperature
Liquid Temperature
Humidity

20.2 Degrees Celsius
20.0 Degrees Celsius
31.0 %



Test Date: 12 August 2008

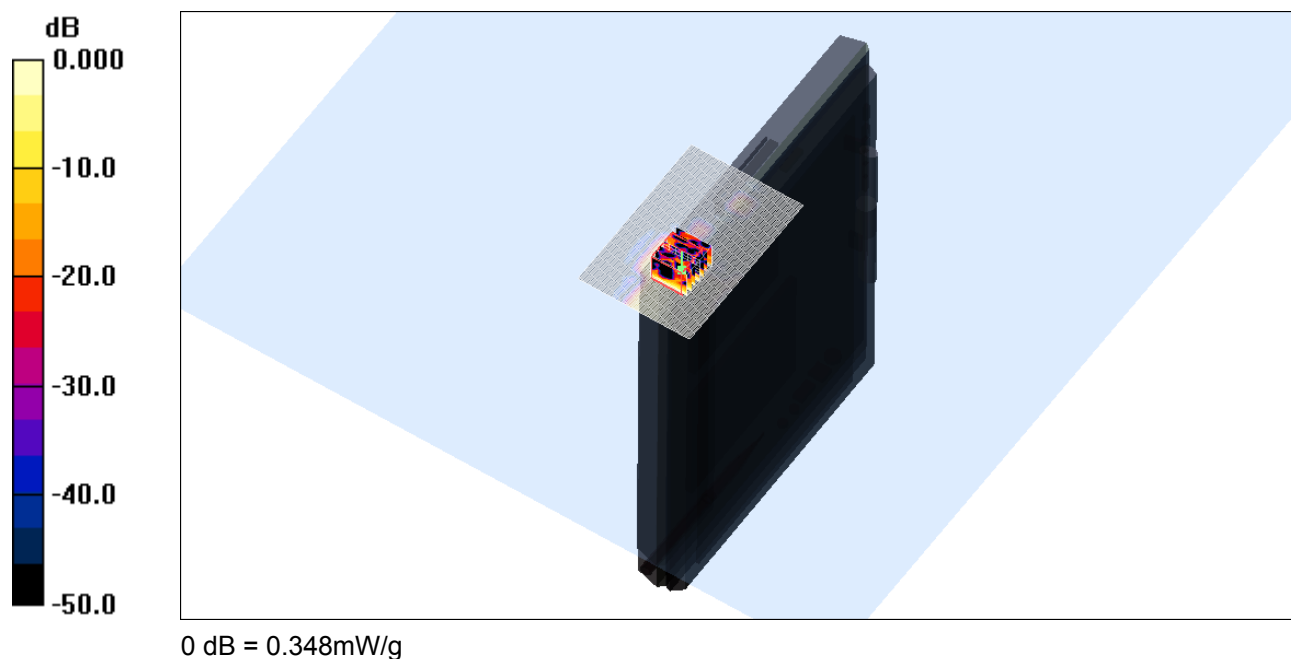
File Name: [Edge On Right OFDM HT0\(40MHz\) 5.2 GHz WiFi Antenna A 12-08-08.da4](#)

DUT: Fujitsu Tablet Cutlas with Atheros HB92 11abgn (2x2); Type: HB92; Serial: 001B9E-C85143

- * Communication System: OFDM 5250 MHz; Frequency: 5310 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5310$ MHz; $\sigma = 5.38$ mho/m; $\epsilon_r = 44.1$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.72, 3.72, 3.72)
- Phantom: Flat Phantom 10.1; Serial: P 10.1; Phantom section: Flat 2.2 Section

Channel 62 Test/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.181 mW/g

Channel 62 Test/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 6.16 V/m; Power Drift = -0.453 dB
Peak SAR (extrapolated) = 0.555 W/kg
SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.045 mW/g
Maximum value of SAR (measured) = 0.348 mW/g



SAR MEASUREMENT PLOT 3

Ambient Temperature
Liquid Temperature
Humidity

20.2 Degrees Celsius
20.0 Degrees Celsius
31.0 %



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Test Date: 12 August 2008

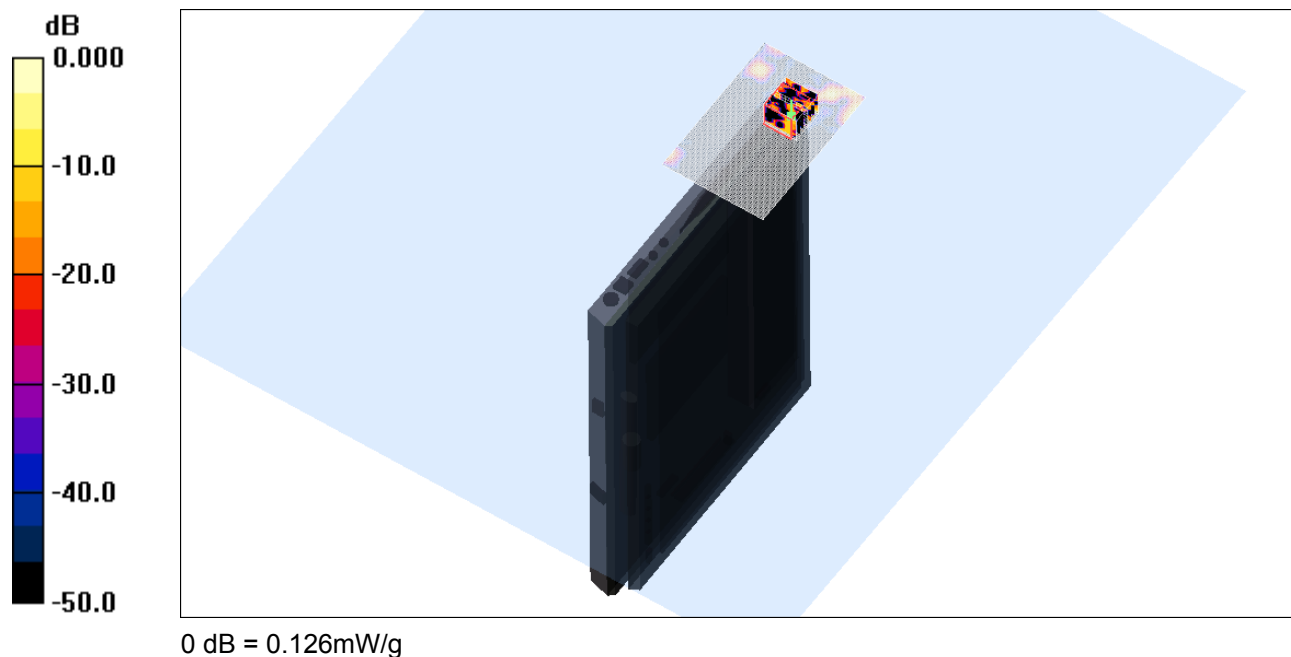
File Name: [Edge On Left OFDM HT0\(40MHz\) 5.2 GHz WiFi Antenna B 12-08-08.da4](#)

DUT: Fujitsu Tablet Cutlas with Atheros HB92 11abgn (2x2); Type: HB92; Serial: 001B9E-C85143

- * Communication System: OFDM 5250 MHz; Frequency: 5270 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5270$ MHz; $\sigma = 5.31$ mho/m; $\epsilon_r = 44.2$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.72, 3.72, 3.72)
- Phantom: Flat Phantom 10.1; Serial: P 10.1; Phantom section: Flat 2.2 Section

Channel 54 Test/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.066 mW/g

Channel 54 Test/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 2.42 V/m; Power Drift = -0.144 dB
Peak SAR (extrapolated) = 0.278 W/kg
SAR(1 g) = 0.048 mW/g; SAR(10 g) = 0.011 mW/g
Maximum value of SAR (measured) = 0.126 mW/g

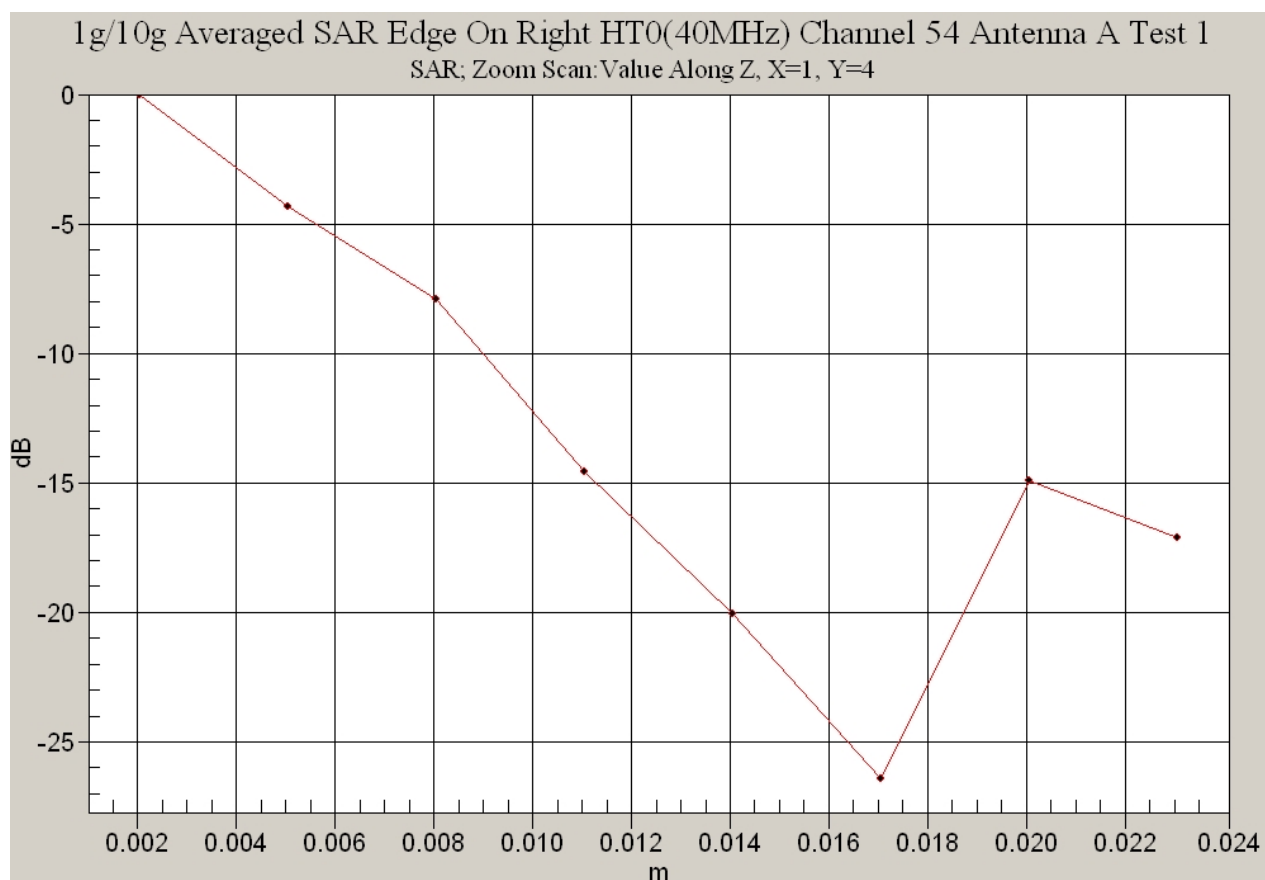
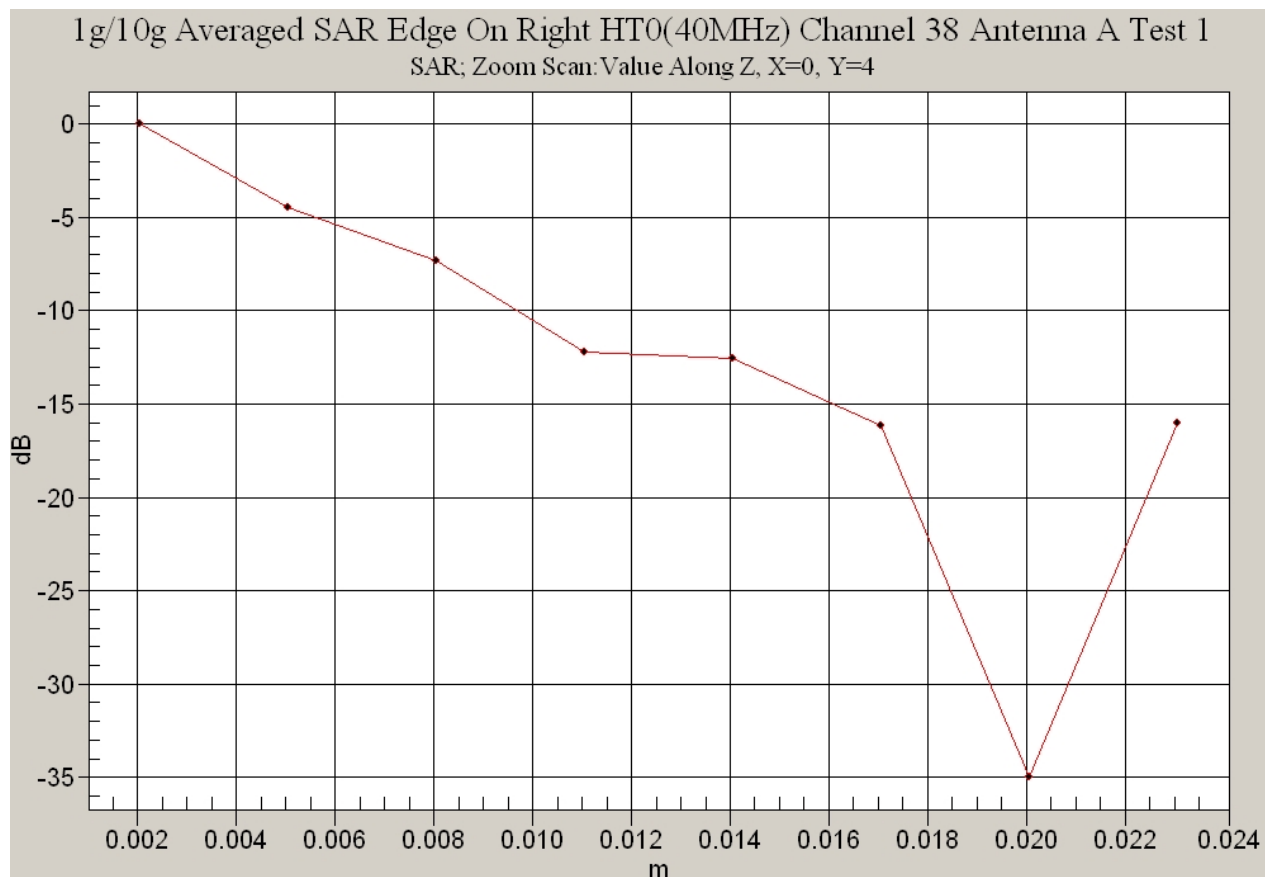


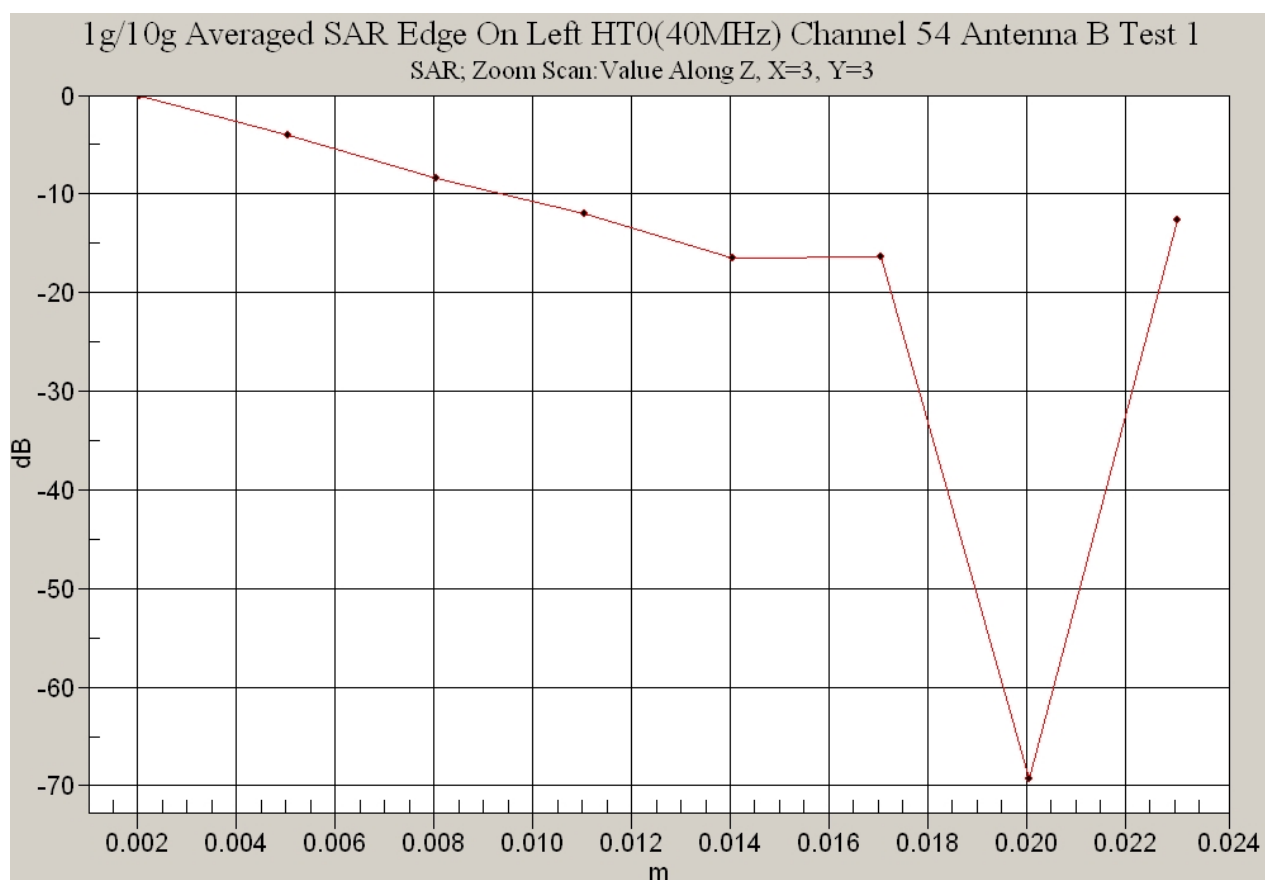
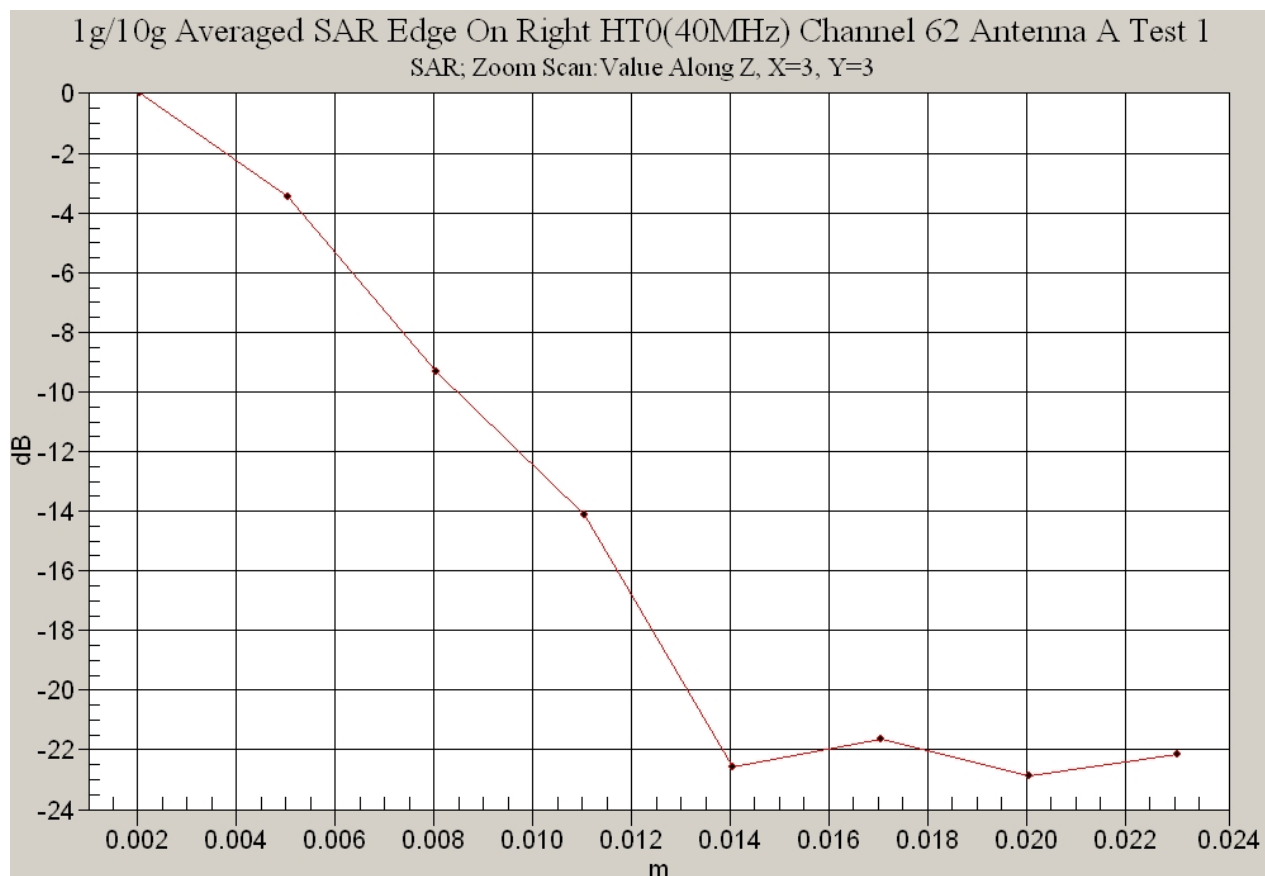
SAR MEASUREMENT PLOT 4

Ambient Temperature
Liquid Temperature
Humidity

20.2 Degrees Celsius
20.0 Degrees Celsius
31.0 %







Test Date: 04 August 2008

File Name: [Edge On Right OFDM HT0\(40MHz\) 5.6 GHz WiFi Antenna A 04-08-08.da4](#)

DUT: Fujitsu Tablet Cutlas with Atheros HB92 11abgn (2x2); Type: HB92; Serial: 001B9E-C85143

* Communication System: OFDM 5590 MHz; Frequency: 5510 MHz; Duty Cycle: 1:1

* Medium parameters used: $f = 5508.8$ MHz; $\sigma = 5.71$ mho/m; $\epsilon_r = 44.8$; $\rho = 1000$ kg/m³

- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.75, 3.75, 3.75)

- Phantom: Flat Phantom 10.1; Serial: P 10.1; Phantom section: Flat 2.2 Section

Channel 102 Test/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.215 mW/g

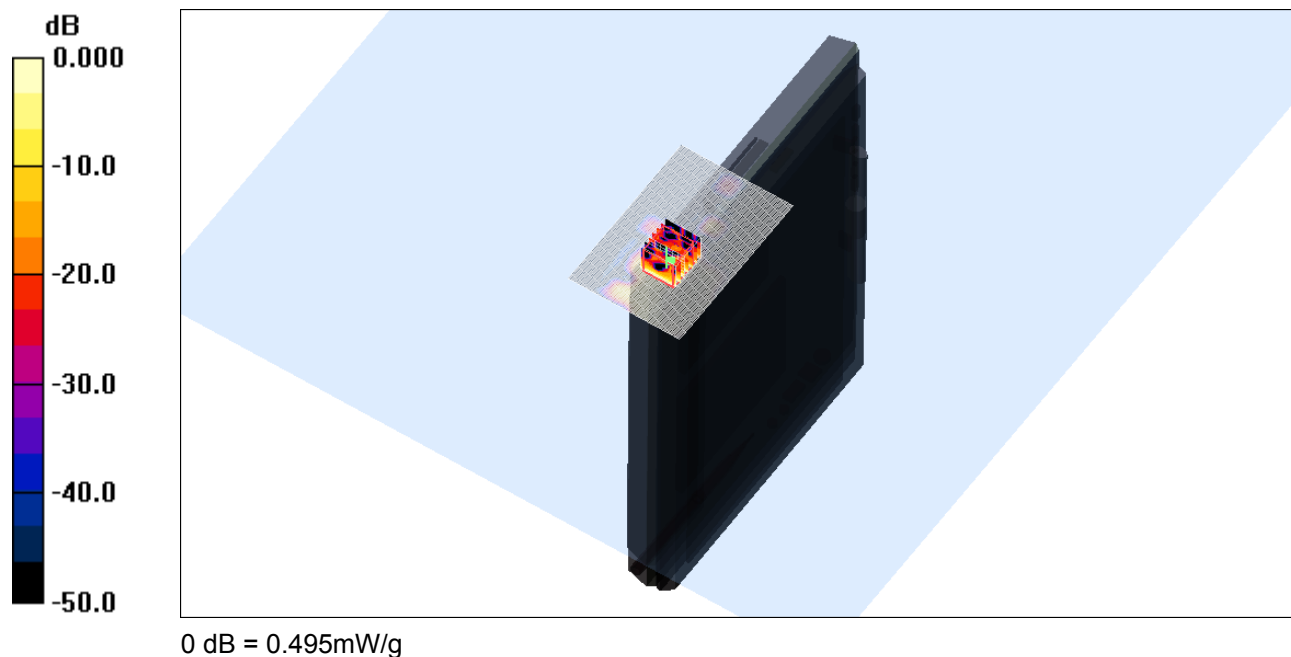
Channel 102 Test/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.92 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 0.852 W/kg

SAR(1 g) = 0.213 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.495 mW/g



SAR MEASUREMENT PLOT 5

Ambient Temperature
Liquid Temperature
Humidity

20.7 Degrees Celsius
20.3 Degrees Celsius
41.0 %



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Test Date: 04 August 2008

File Name: [Edge On Right OFDM HT0\(40MHz\) 5.6 GHz WiFi Antenna A 04-08-08.da4](#)

DUT: Fujitsu Tablet Cutlas with Atheros HB92 11abgn (2x2); Type: HB92; Serial: 001B9E-C85143

* Communication System: OFDM 5590 MHz; Frequency: 5590 MHz; Duty Cycle: 1:1

* Medium parameters used: $f = 5596.4$ MHz; $\sigma = 5.86$ mho/m; $\epsilon_r = 44.5$; $\rho = 1000$ kg/m³

- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.75, 3.75, 3.75)

- Phantom: Flat Phantom 10.1; Serial: P 10.1; Phantom section: Flat 2.2 Section

Channel 118 Test/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.298 mW/g

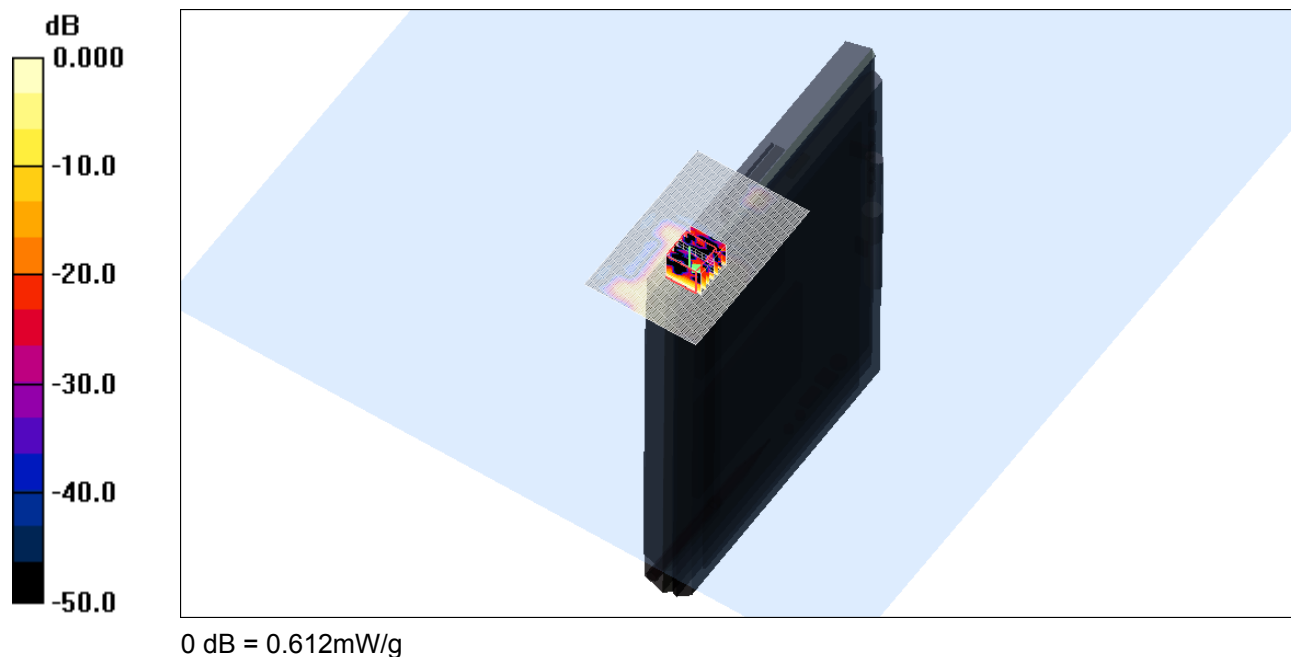
Channel 118 Test/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.41 V/m; Power Drift = -0.064 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.266 mW/g; SAR(10 g) = 0.078 mW/g

Maximum value of SAR (measured) = 0.612 mW/g



SAR MEASUREMENT PLOT 6

Ambient Temperature
Liquid Temperature
Humidity

20.7 Degrees Celsius
20.3 Degrees Celsius
41.0 %



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Test Date: 04 August 2008

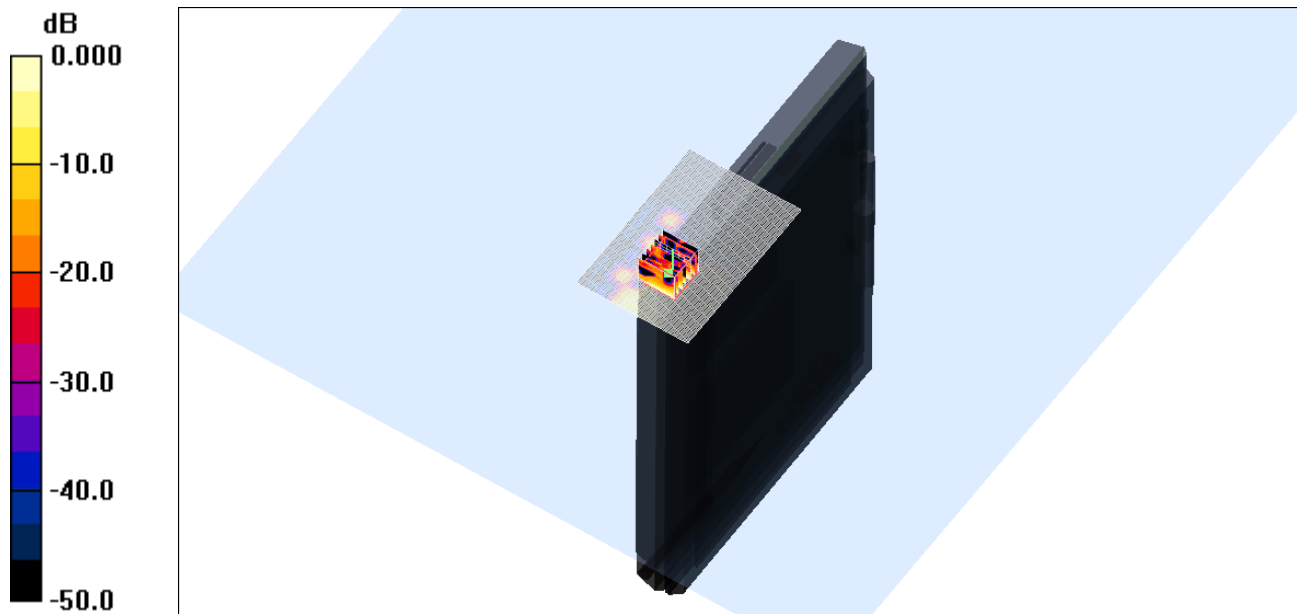
File Name: [Edge On Right OFDM HT0\(40MHz\) 5.6 GHz WiFi Antenna A 04-08-08.da4](#)

DUT: Fujitsu Tablet Cutlas with Atheros HB92 11abgn (2x2); Type: HB92; Serial: 001B9E-C85143

- * Communication System: OFDM 5590 MHz; Frequency: 5670 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5669.4$ MHz; $\sigma = 5.98$ mho/m; $\epsilon_r = 44.3$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.75, 3.75, 3.75)
- Phantom: Flat Phantom 10.1; Serial: P 10.1; Phantom section: Flat 2.2 Section

Channel 134 Test/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.219 mW/g

Channel 134 Test/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 5.73 V/m; Power Drift = -0.481 dB
Peak SAR (extrapolated) = 0.574 W/kg
SAR(1 g) = 0.137 mW/g; SAR(10 g) = 0.043 mW/g
Maximum value of SAR (measured) = 0.335 mW/g



0 dB = 0.335mW/g

SAR MEASUREMENT PLOT 7

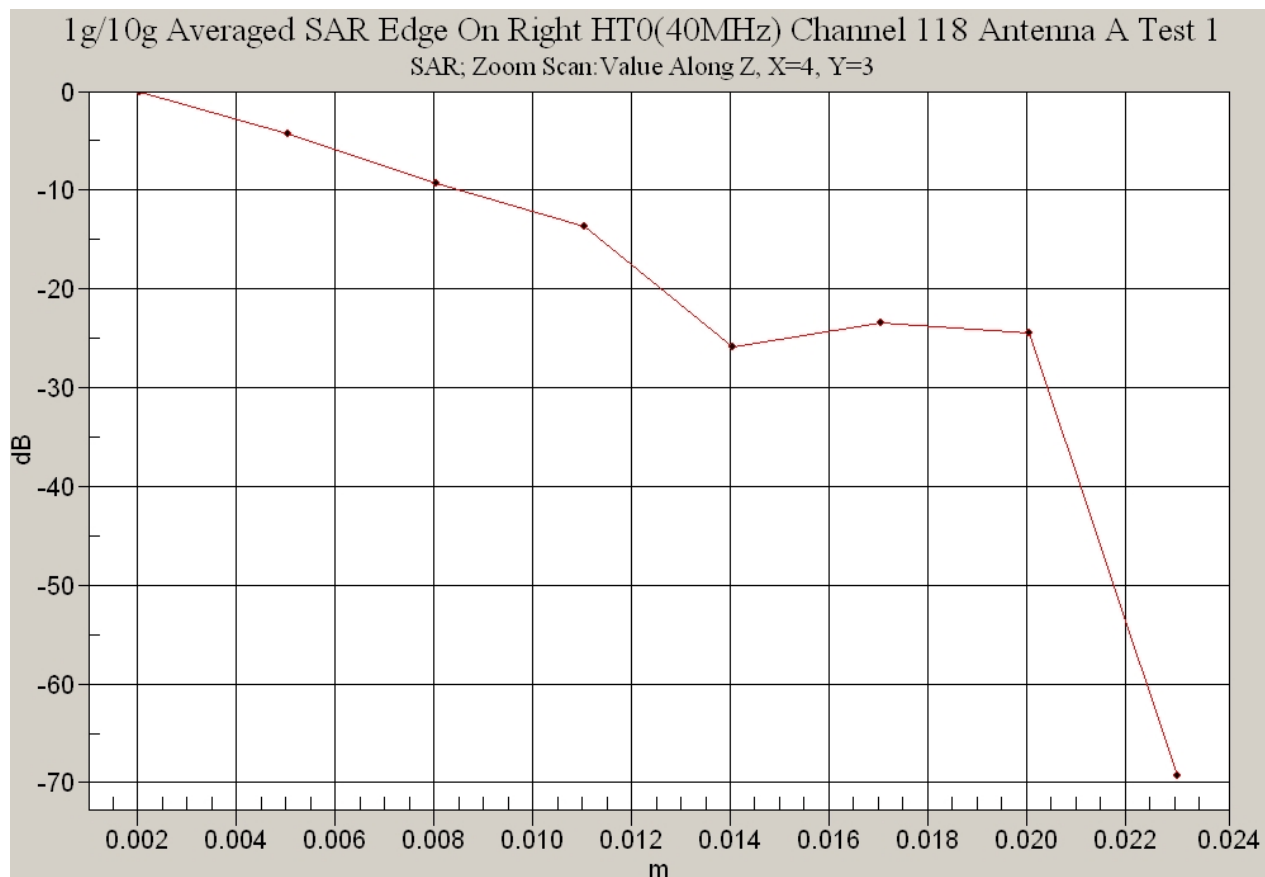
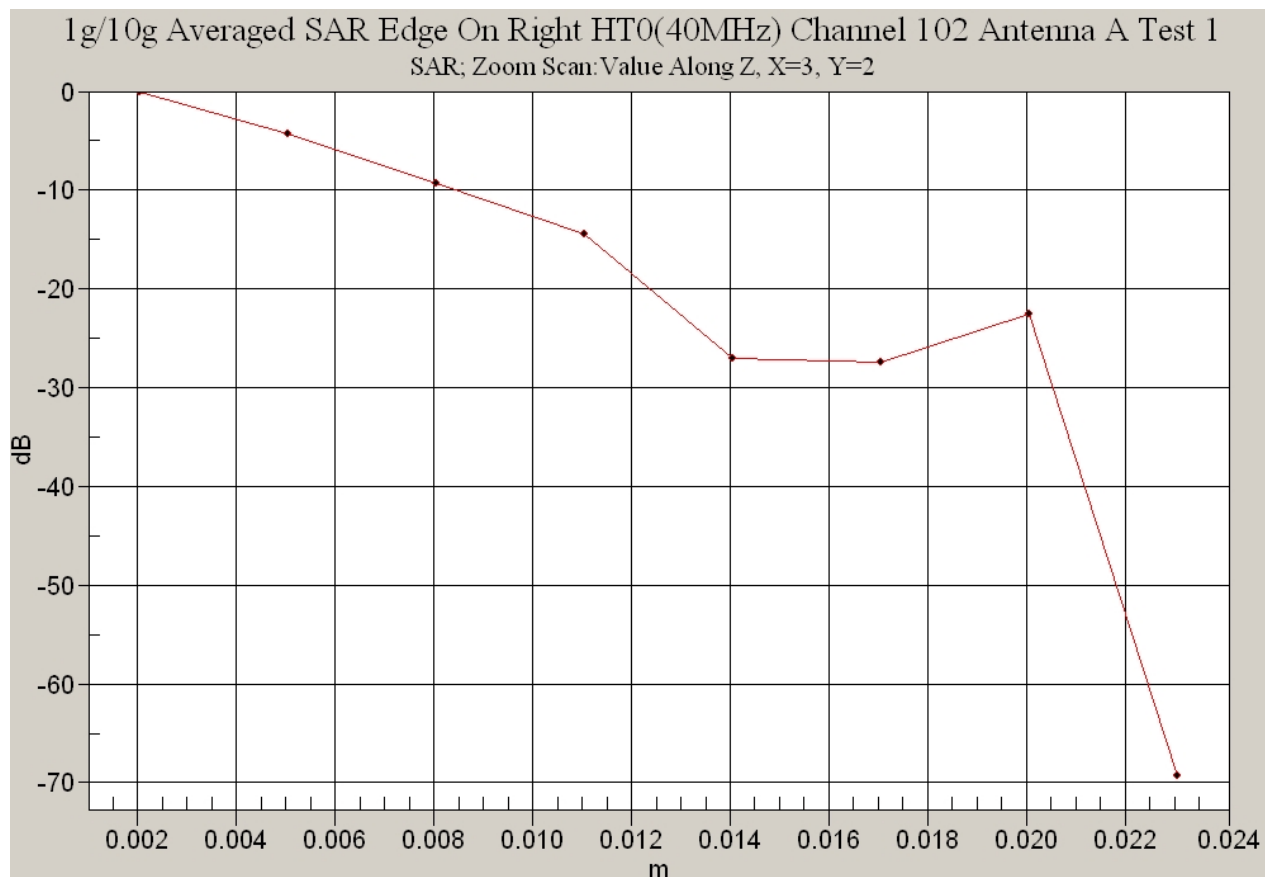
Ambient Temperature
Liquid Temperature
Humidity

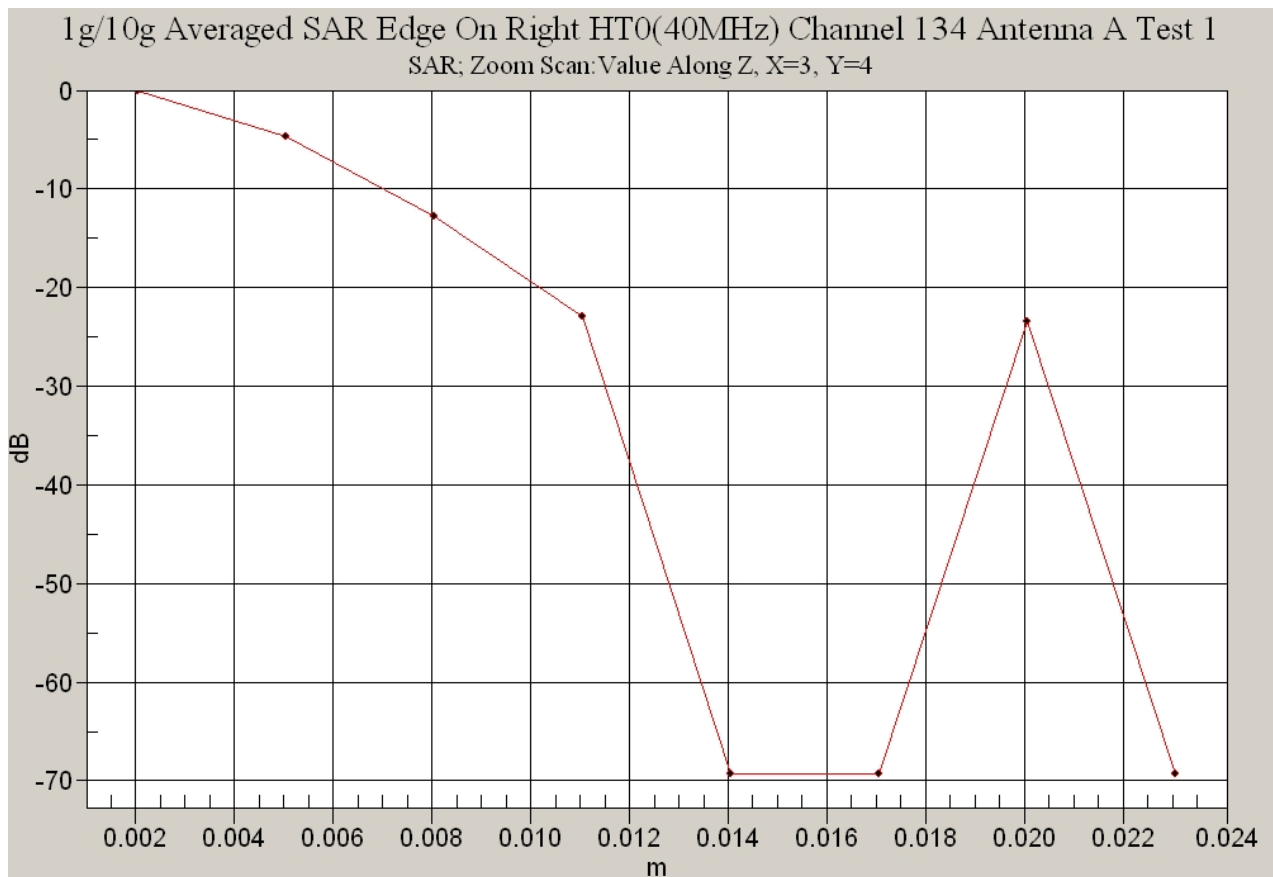
20.7 Degrees Celsius
20.3 Degrees Celsius
41.0 %



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Test Date: 13 August 2008

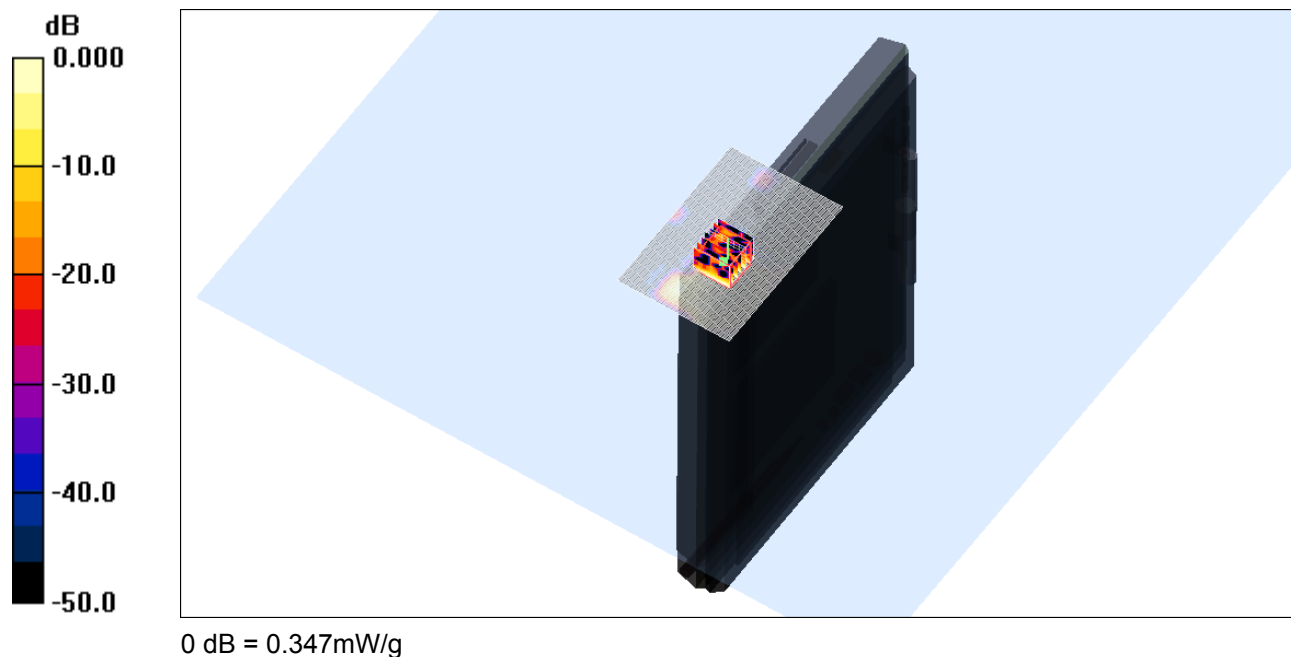
File Name: [Edge On Right OFDM HT0\(40MHz\) 5.8 GHz WiFi Antenna A 13-08-08.da4](#)

DUT: Fujitsu Tablet Cutlas with Atheros HB92 11abgn (2x2); Type: HB92; Serial: 001B9E-C85143

- * Communication System: OFDM 5775 MHz; Frequency: 5755 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5757$ MHz; $\sigma = 5.68$ mho/m; $\epsilon_r = 43.9$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.71, 3.71, 3.71)
- Phantom: Flat Phantom 10.1; Serial: P 10.1; Phantom section: Flat 2.2 Section

Channel 151 Test/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 0.272 mW/g

Channel 151 Test/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 6.32 V/m; Power Drift = 0.014 dB
Peak SAR (extrapolated) = 0.562 W/kg
SAR(1 g) = 0.140 mW/g; SAR(10 g) = 0.043 mW/g
Maximum value of SAR (measured) = 0.347 mW/g



SAR MEASUREMENT PLOT 8

Ambient Temperature
Liquid Temperature
Humidity

21.8 Degrees Celsius
21.4 Degrees Celsius
41.0 %



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Test Date: 13 August 2008

File Name: [Edge On Right OFDM HT0\(40MHz\) 5.8 GHz WiFi Antenna A 13-08-08.da4](#)

DUT: Fujitsu Tablet Cutlas with Atheros HB92 11abgn (2x2); Type: HB92; Serial: 001B9E-C85143

* Communication System: OFDM 5775 MHz; Frequency: 5795 MHz; Duty Cycle: 1:1

* Medium parameters used: $f = 5800.8$ MHz; $\sigma = 5.76$ mho/m; $\epsilon_r = 43.8$; $\rho = 1000$ kg/m³

- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.71, 3.71, 3.71)

- Phantom: Flat Phantom 10.1; Serial: P 10.1; Phantom section: Flat 2.2 Section

Channel 159 Test/Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.290 mW/g

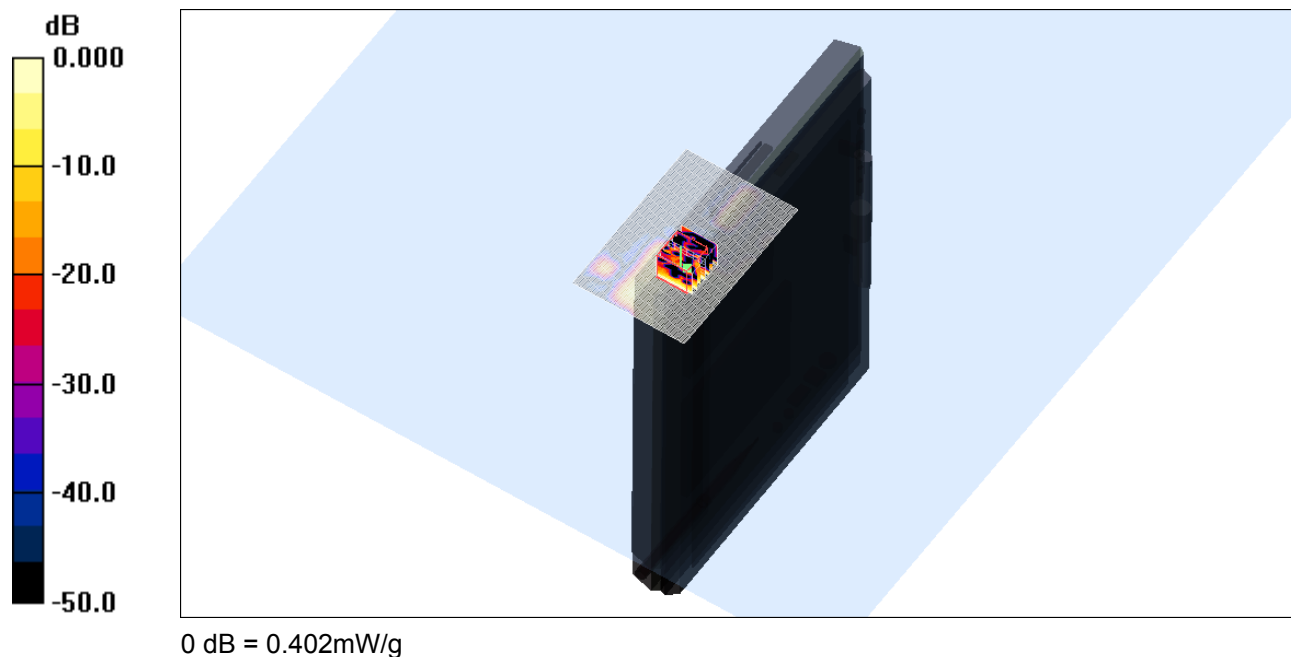
Channel 159 Test/Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.24 V/m; Power Drift = 0.169 dB

Peak SAR (extrapolated) = 0.679 W/kg

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.051 mW/g

Maximum value of SAR (measured) = 0.402 mW/g



SAR MEASUREMENT PLOT 9

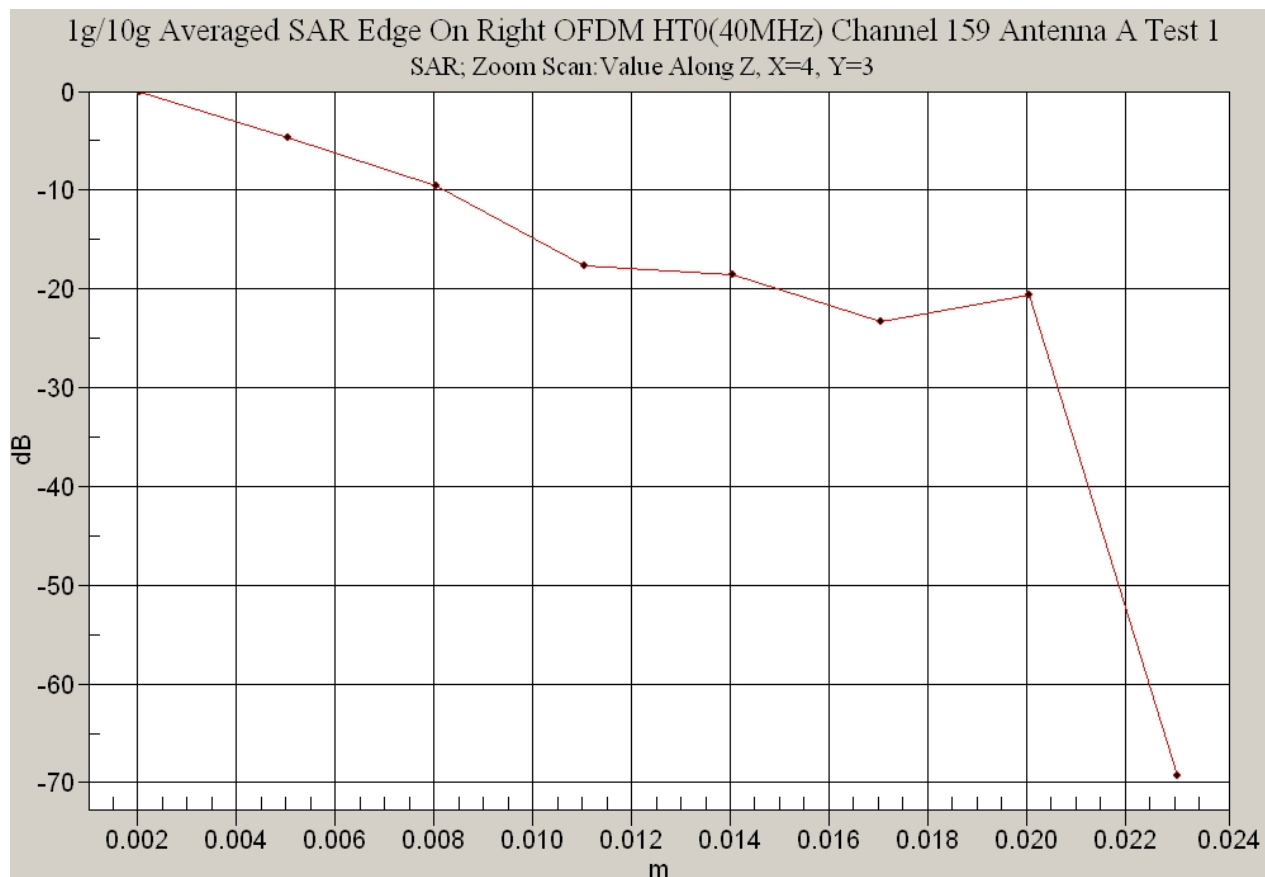
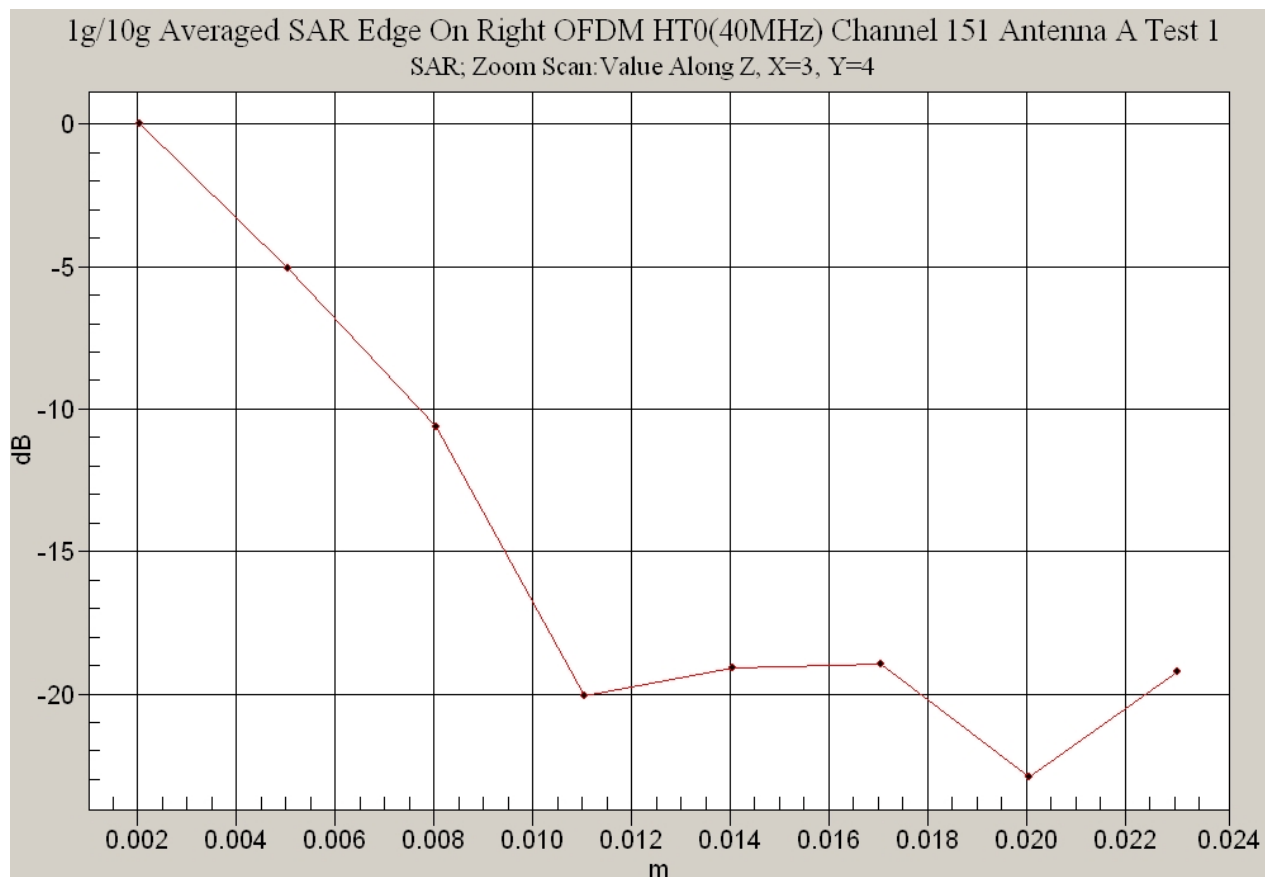
Ambient Temperature
Liquid Temperature
Humidity

21.8 Degrees Celsius
21.4 Degrees Celsius
41.0 %



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Test Date: 02 August 2008

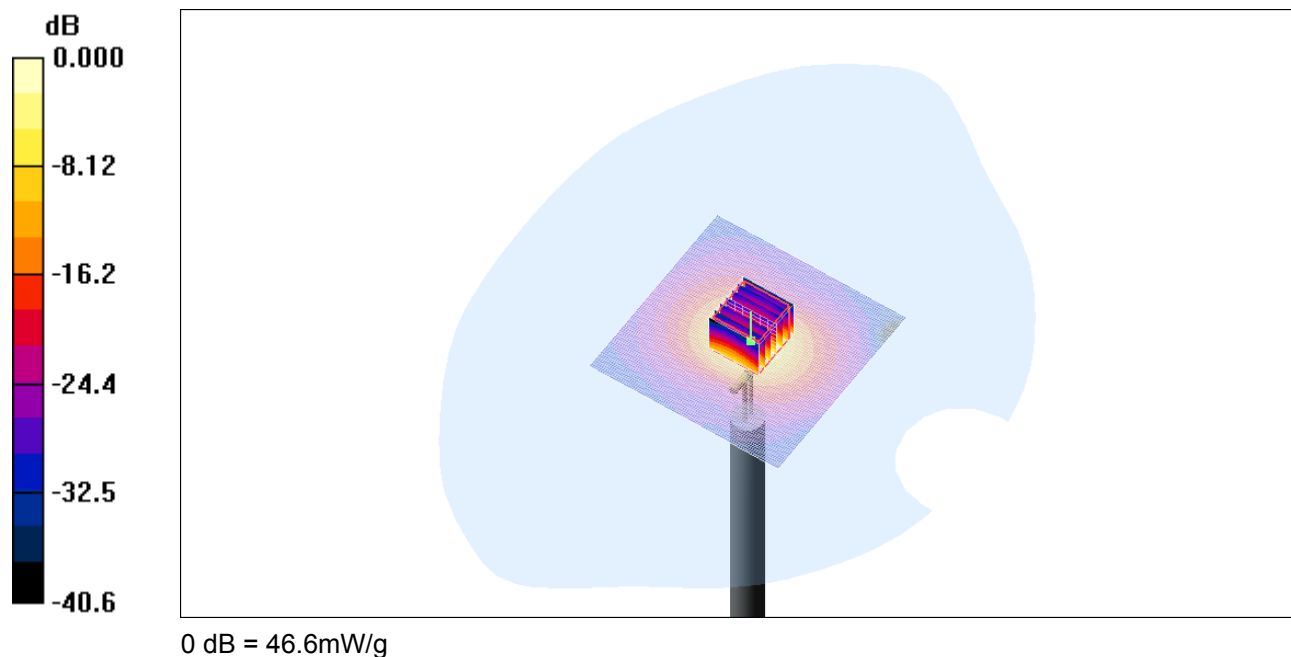
File Name: Validation 5500MHz (DAE 442 Probe EX3DV4) 02-08-08.da4

DUT: Dipole 5200_5800 MHz; Type: D5GHzV2; Serial: 1008

- * Communication System: CW 5500 MHz; Frequency: 5500 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5494.2$ MHz; $\sigma = 4.92$ mho/m; $\epsilon_r = 35.2$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(4, 4, 4)
- Phantom: SAM 22; Serial: 1260; Phantom section: Flat Section

Channel 1 Test/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 45.7 mW/g

Channel 1 Test/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 102.7 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 91.7 W/kg
SAR(1 g) = 21.8 mW/g; SAR(10 g) = 6.15 mW/g
Maximum value of SAR (measured) = 46.6 mW/g



SAR MEASUREMENT PLOT 10

Ambient Temperature
Liquid Temperature
Humidity

20.8 Degrees Celsius
20.5 Degrees Celsius
39.0 %



Test Date: 04 August 2008

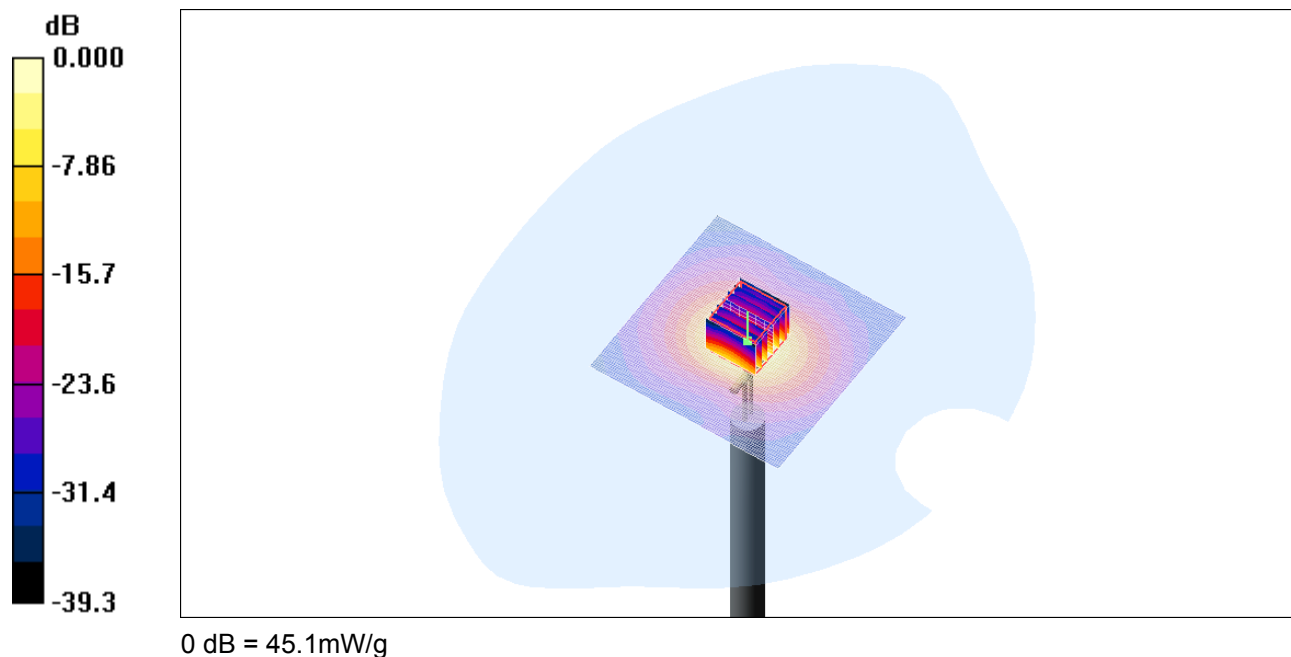
File Name: Validation 5500MHz (DAE 442 Probe EX3DV4) 04-08-08.da4

DUT: Dipole 5200_5800 MHz; Type: D5GHzV2; Serial: 1008

- * Communication System: CW 5500 MHz; Frequency: 5500 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5494.2$ MHz; $\sigma = 5.06$ mho/m; $\epsilon_r = 35.1$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(4, 4, 4)
- Phantom: SAM 22; Serial: 1260; Phantom section: Flat Section

Channel 1 Test/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 45.4 mW/g

Channel 1 Test/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 101.3 V/m; Power Drift = 0.017 dB
Peak SAR (extrapolated) = 87.5 W/kg
SAR(1 g) = 21.3 mW/g; SAR(10 g) = 6.08 mW/g
Maximum value of SAR (measured) = 45.1 mW/g



SAR MEASUREMENT PLOT 11

Ambient Temperature
Liquid Temperature
Humidity

20.7 Degrees Celsius
20.3 Degrees Celsius
41.0 %



Test Date: 12 August 2008

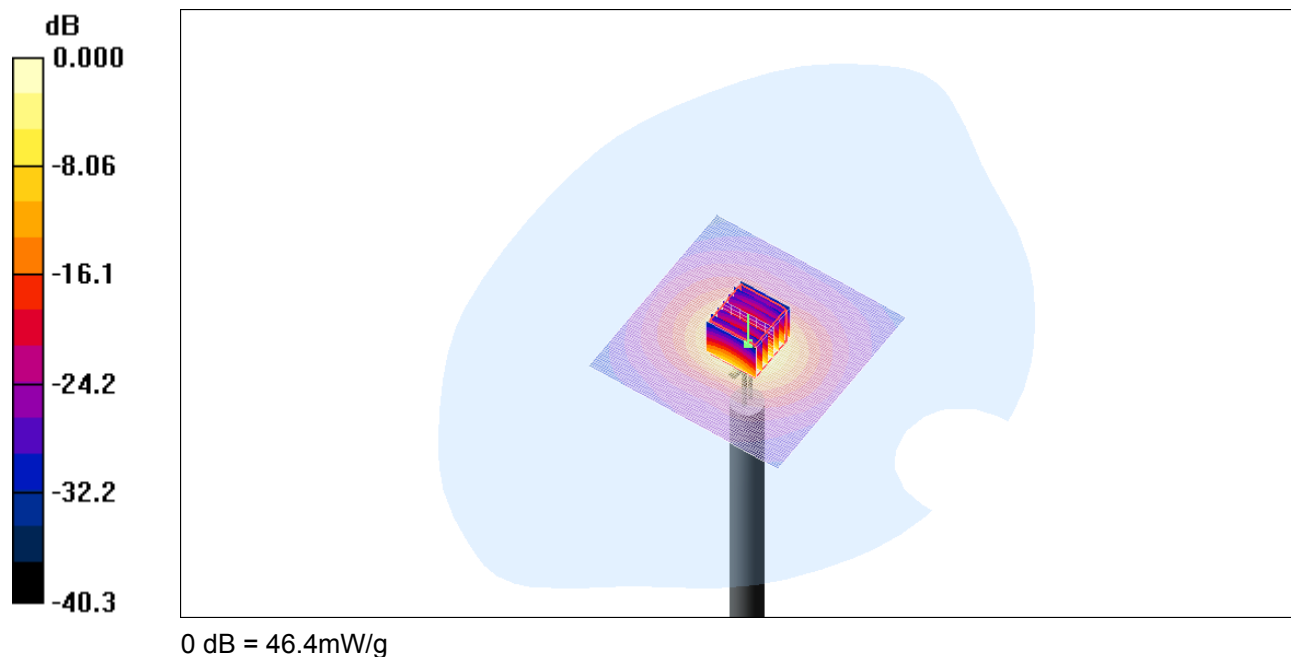
File Name: [Validation 5200MHz \(DAE 442 Probe EX3DV4\) 12-08-08.da4](#)

DUT: Dipole 5200_5800 MHz; Type: D5GHzV2; Serial: 1008

- * Communication System: CW 5200 MHz; Frequency: 5200 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5198$ MHz; $\sigma = 4.65$ mho/m; $\epsilon_r = 35.2$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(4.3, 4.3, 4.3)
- Phantom: SAM 22; Serial: 1260; Phantom section: Flat Section

Channel 1 Test/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 47.4 mW/g

Channel 1 Test/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 104.4 V/m; Power Drift = 0.127 dB
Peak SAR (extrapolated) = 87.0 W/kg
SAR(1 g) = 22.1 mW/g; SAR(10 g) = 6.26 mW/g
Maximum value of SAR (measured) = 46.4 mW/g



SAR MEASUREMENT PLOT 12

Ambient Temperature
Liquid Temperature
Humidity

20.2 Degrees Celsius
20.0 Degrees Celsius
31.0 %



Test Date: 13 August 2008

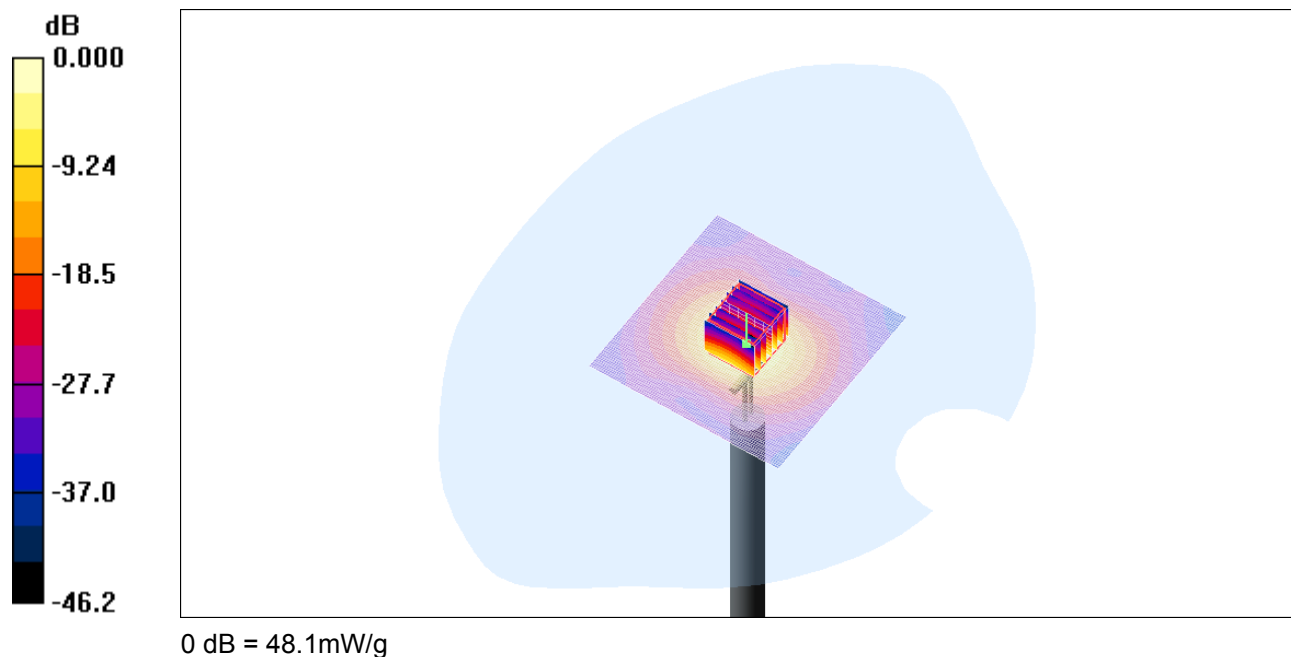
File Name: [Validation 5800MHz \(DAE 442 Probe EX3DV4\) 13-08-08.da4](#)

DUT: Dipole 5200_5800 MHz; Type: D5GHzV2; Serial: 1008

- * Communication System: CW 5800 MHz; Frequency: 5800 MHz; Duty Cycle: 1:1
- * Medium parameters used: $f = 5800.8$ MHz; $\sigma = 5.35$ mho/m; $\epsilon_r = 34.2$; $\rho = 1000$ kg/m³
- Electronics: DAE3 Sn442; Probe: EX3DV4 - SN3563; ConvF(3.87, 3.87, 3.87)
- Phantom: SAM 22; Serial: 1260; Phantom section: Flat Section

Channel 1 Test/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 47.8 mW/g

Channel 1 Test/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 99.9 V/m; Power Drift = 0.114 dB
Peak SAR (extrapolated) = 98.7 W/kg
SAR(1 g) = 22.5 mW/g; SAR(10 g) = 6.34 mW/g
Maximum value of SAR (measured) = 48.1 mW/g

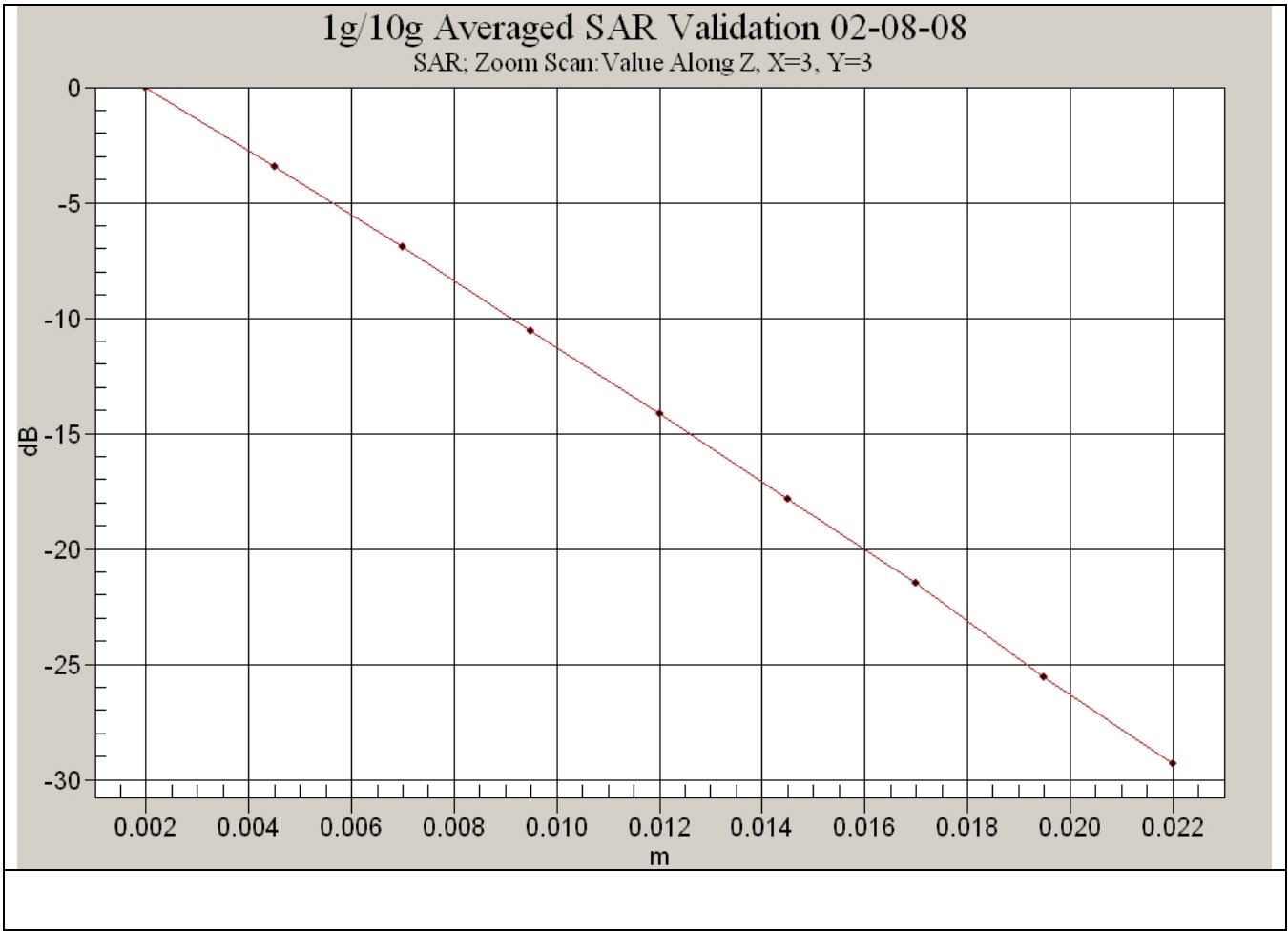


SAR MEASUREMENT PLOT 13

Ambient Temperature
Liquid Temperature
Humidity

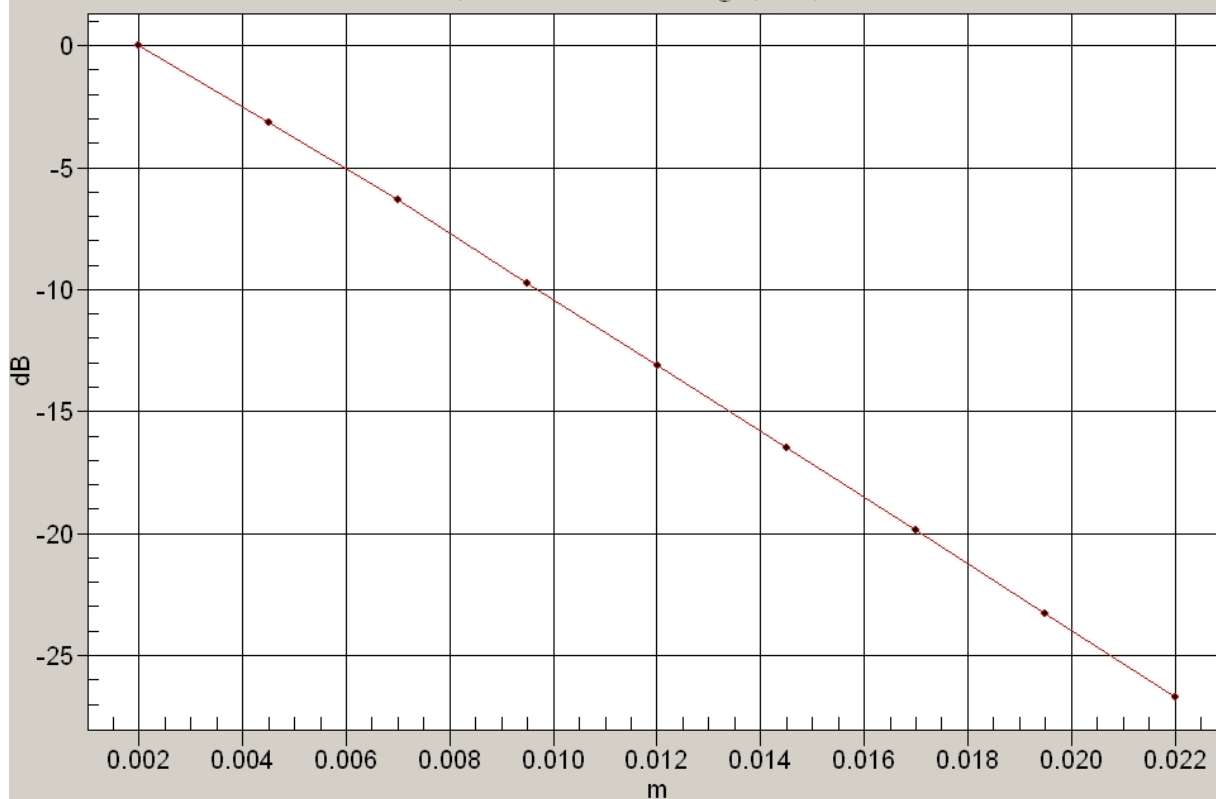
21.8 Degrees Celsius
21.4 Degrees Celsius
41.0 %





1g/10g Averaged SAR Validation 12-08-08

SAR; Zoom Scan: Value Along Z, X=3, Y=3



1g/10g Averaged SAR Validation 5800 MHz 13-08-08

SAR; Zoom Scan: Value Along Z, X=3, Y=3

