

APPENDIX B

PLOTS OF THE SAR MEASUREMENTS

Plots of the measured SAR distributions inside the phantom are given in this Appendix for the “Lap Arm Held” and “Tablet” tested configurations. The spatial peak SAR values were assessed with the procedure described in this report.

NOTE on SAR Plots: The measured SAR levels in the Tablet position were < 0.1mW/g and consequently the “hotspot” was not always clearly defined. The measurement results are only just above the noise floor and the measurement sensitivity of the SAR system. The plots and graphs for these positions were not included.

Table 22: 2450 MHz DSSS Band SAR Measurement Plot Numbers

Plot 1	Lap Arm Held Position – CH#06 – Ant B – Pre-scan	Page 26
Plot 2	Lap Arm Held Position – CH#06 – Ant A – Pre-scan	Page 27
Plot 3	Lap Arm Held Position – CH#01 – Ant A	Page 28
Plot 4	Lap Arm Held Position – CH#06 – Ant A	Page 29
Plot 5	Lap Arm Held Position – CH#11 – Ant A	Page 30
Z-Axis Graphs	Z-Axis graphs for Plots 3 to 5	Page 31
Plot 6	Tablet Position – CH#06 – Ant A	Page 32

Table 23: 2450 MHz OFDM Band SAR Measurement Plot Numbers

Plot 7	Lap Arm Held Position – CH#06 – Ant A	Page 33
Z-Axis Graphs	Z-Axis graphs for Plot 7	Page 34

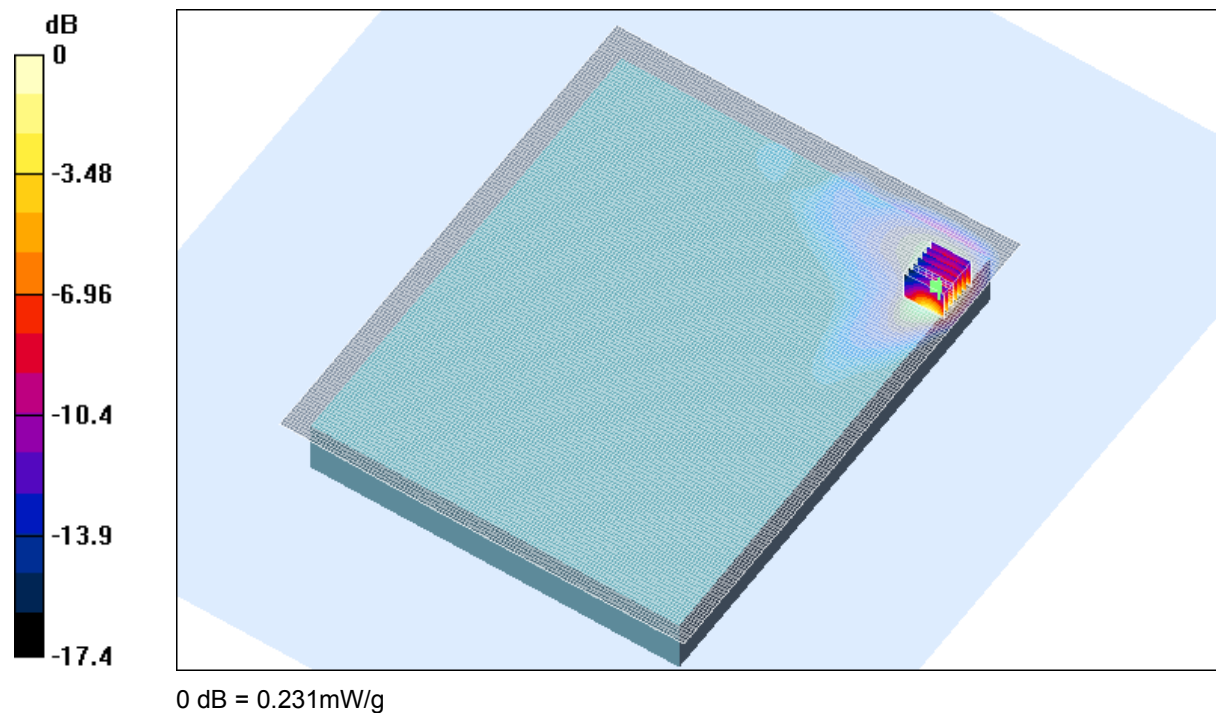
Table 24: 2450MHz Validation Plot

Plot 8	Validation 2450MHz 10 th February 2004	Page 35
Plot 9	Validation 2450MHz 11 th February 2004	Page 36
Plot 10	Validation 2450MHz 3 rd March 2004	Page 37
Z-Axis Graphs	Z-Axis graphs for Plot 10	Page 38

Test Date: 10 February 2004

File Name: [Arm Held DSSS 2.45 GHz Mace 2 Atheros 11abg Antenna B Prescan 10-02-04.da4](#)

DUT: Fujitsu Tablet MACE/MACE2 with Atheros 11abg Module; Type: WLL 4030 Module; Serial: MAC: 009096-6CAE3F



SAR MEASUREMENT PLOT 1

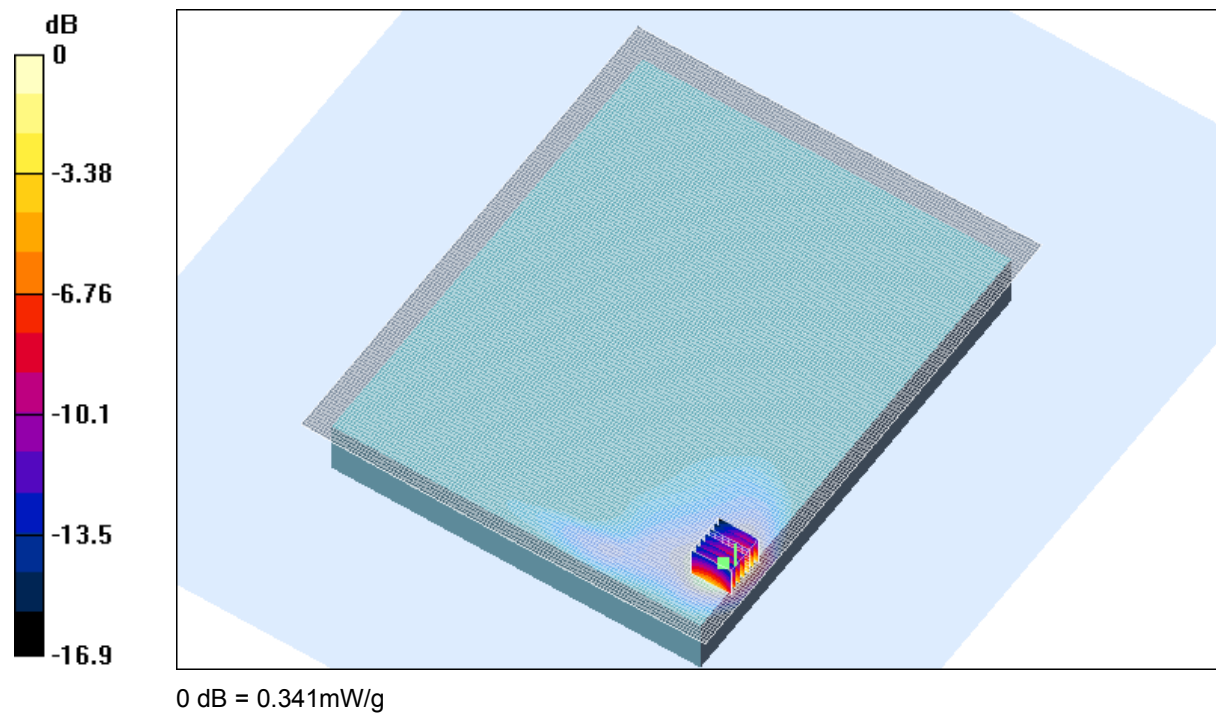
Ambient Temperature
Liquid Temperature
Humidity

21.4 Degrees Celsius
20.6 Degrees Celsius
49 %

Test Date: 10 February 2004

File Name: [Arm Held DSSS 2.45 GHz Mace 2 Atheros 11abg Antenna A Prescan 10-02-04.da4](#)

DUT: Fujitsu Tablet MACE/MACE2 with Atheros 11abg Module; Type: WLL 4030 Module; Serial: MAC: 009096-6CAE3F



SAR MEASUREMENT PLOT 2

Ambient Temperature
Liquid Temperature
Humidity

21.4 Degrees Celsius
20.6 Degrees Celsius
49 %

Test Date: 3rd March 2004

File Name: [Arm Held DSSS 2.45 GHz Mace 2 Atheros 11abg Antenna A 3-03-04 #2.da4](#)

DUT: Fujitsu Tablet MACE/MACE2 with Atheros 11abg Module; Type: WLL 4030 Module; Serial: MAC: 009096-6CAE3F

* Communication System: DSSS 2450 MHz; Frequency: 2412 MHz; Duty Cycle: 1:1

* Medium: Body 2450 MHz; Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 52.6$; $\rho = 1000$ kg/m³

- Electronics: DAE3 Sn359; Probe: ET3DV6 - SN1380; ConvF(4.5, 4.5, 4.5)

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

Channel 01 Test/Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 11.3 V/m

Power Drift = 0.4 dB

Maximum value of SAR = 0.250 mW/g

Channel 01 Test/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

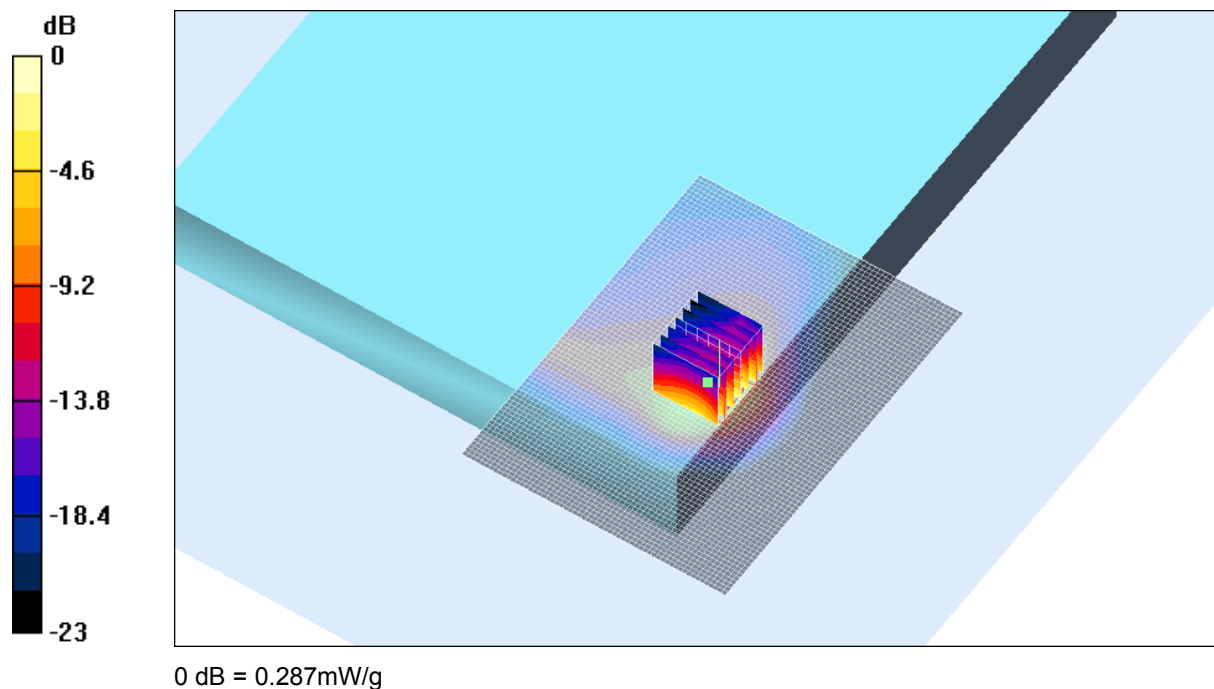
Peak SAR (extrapolated) = 0.645 W/kg

SAR(1 g) = 0.255 mW/g; SAR(10 g) = 0.108 mW/g

Reference Value = 11.3 V/m

Power Drift = 0.4 dB

Maximum value of SAR = 0.287 mW/g



SAR MEASUREMENT PLOT 3

Ambient Temperature
Liquid Temperature
Humidity

21.5 Degrees Celsius
19.8 Degrees Celsius
63 %

Test Date: 3rd March 2004

File Name: [Arm Held DSSS 2.45 GHz Mace 2 Atheros 11abg Antenna A 3-03-04 #2.da4](#)

DUT: Fujitsu Tablet MACE/MACE2 with Atheros 11abg Module; Type: WLL 4030 Module; Serial: MAC: 009096-6CAE3F

* Communication System: DSSS 2450 MHz; Frequency: 2437 MHz; Duty Cycle: 1:1

* Medium: Body 2450 MHz; Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 52.5$; $\rho = 1000$ kg/m³

- Electronics: DAE3 Sn359; Probe: ET3DV6 - SN1380; ConvF(4.5, 4.5, 4.5)

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

Channel 06 Test/Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 11.2 V/m

Power Drift = -0.1 dB

Maximum value of SAR = 0.232 mW/g

Channel 06 Test/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

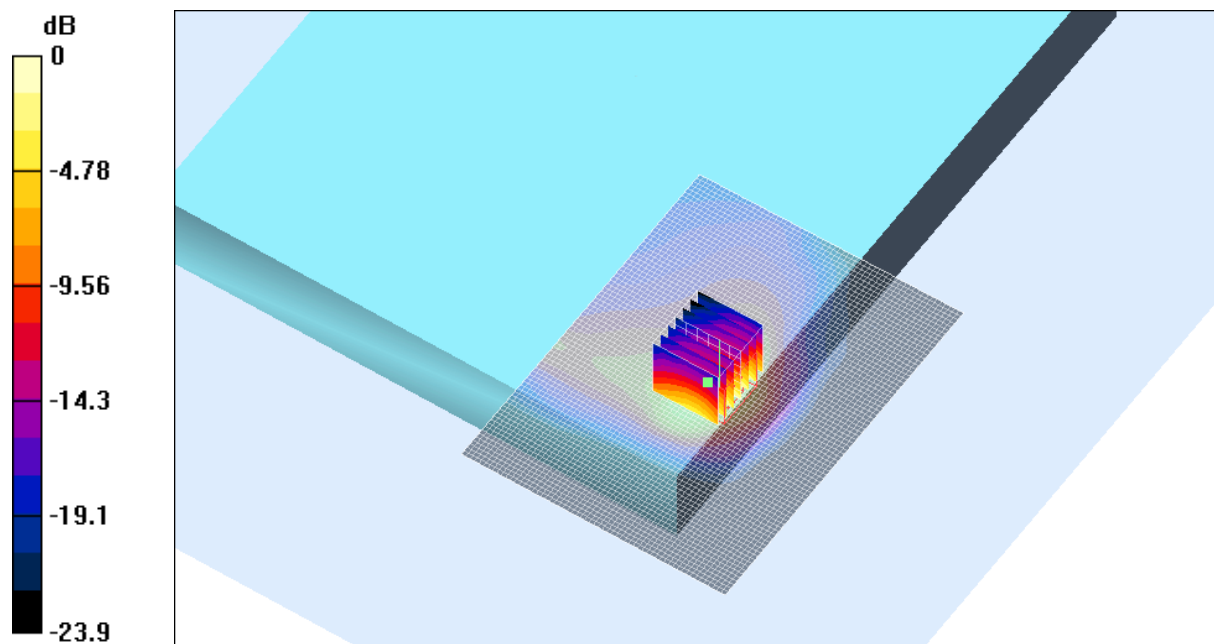
Peak SAR (extrapolated) = 0.638 W/kg

SAR(1 g) = 0.255 mW/g; SAR(10 g) = 0.109 mW/g

Reference Value = 11.2 V/m

Power Drift = -0.1 dB

Maximum value of SAR = 0.279 mW/g



0 dB = 0.279mW/g

SAR MEASUREMENT PLOT 4

Ambient Temperature
Liquid Temperature
Humidity

21.5 Degrees Celsius
19.8 Degrees Celsius
63 %

Test Date: 3rd March 2004

File Name: [Arm Held DSSS 2.45 GHz Mace 2 Atheros 11abg Antenna A 3-03-04 #2.da4](#)

DUT: Fujitsu Tablet MACE/MACE2 with Atheros 11abg Module; Type: WLL 4030 Module; Serial: MAC: 009096-6CAE3F

* Communication System: DSSS 2450 MHz; Frequency: 2462 MHz; Duty Cycle: 1:1

* Medium: Body 2450 MHz; Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$ kg/m³

- Electronics: DAE3 Sn359; Probe: ET3DV6 - SN1380; ConvF(4.5, 4.5, 4.5)

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

Channel 11 Test/Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 11.6 V/m

Power Drift = 0.3 dB

Maximum value of SAR = 0.274 mW/g

Channel 11 Test/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

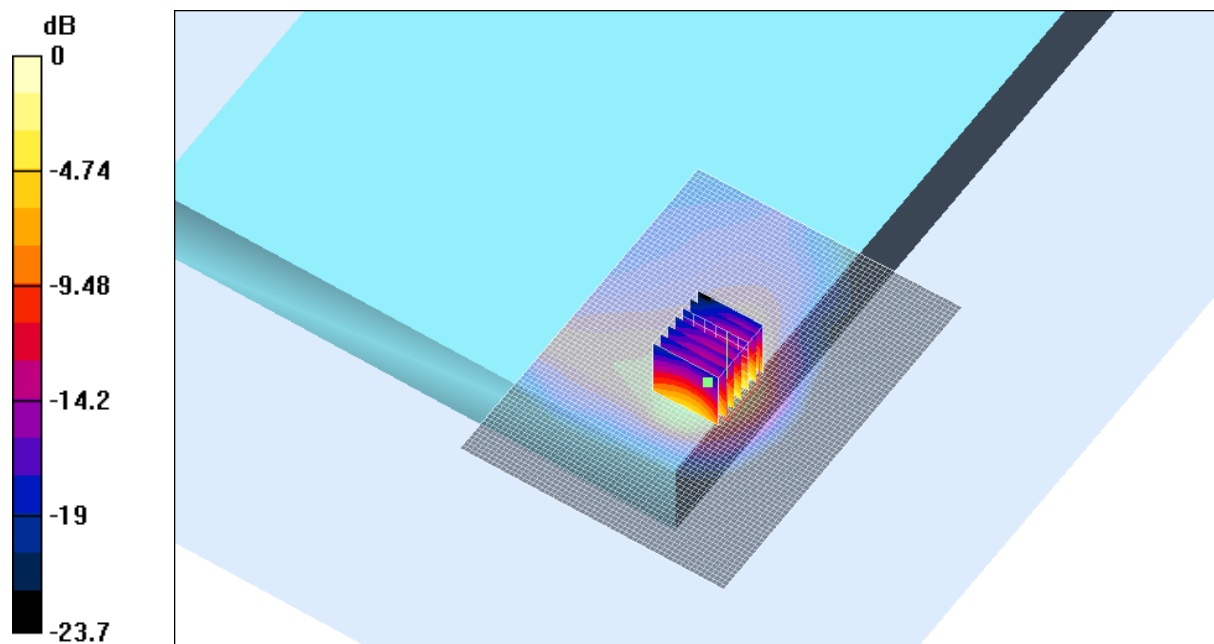
Peak SAR (extrapolated) = 0.810 W/kg

SAR(1 g) = 0.318 mW/g; SAR(10 g) = 0.137 mW/g

Reference Value = 11.6 V/m

Power Drift = 0.3 dB

Maximum value of SAR = 0.362 mW/g



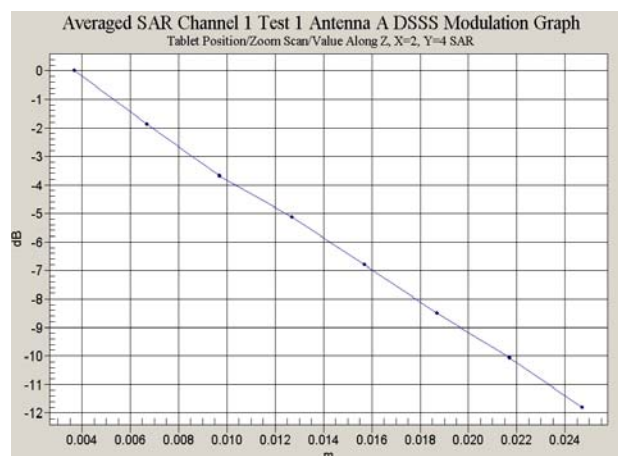
0 dB = 0.362mW/g

SAR MEASUREMENT PLOT 5

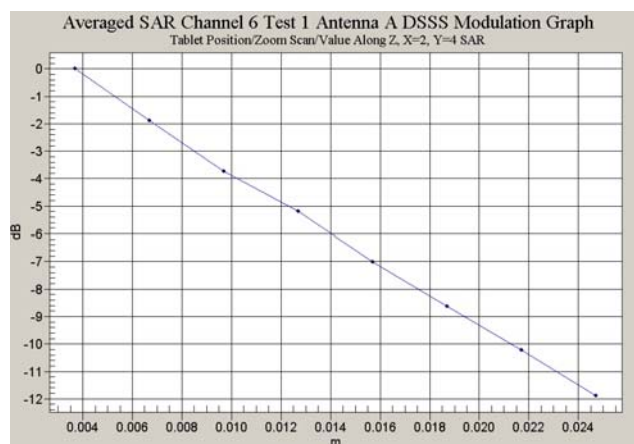
Ambient Temperature
Liquid Temperature
Humidity

21.5 Degrees Celsius
19.8 Degrees Celsius
63 %

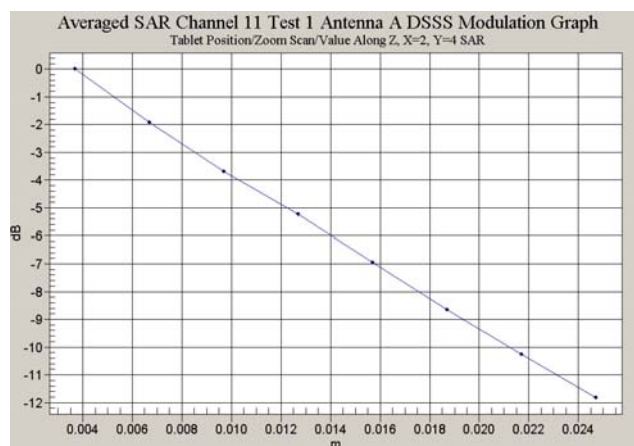
Z-axis scan for Plot 4



Z-Axis scan for Plot 5



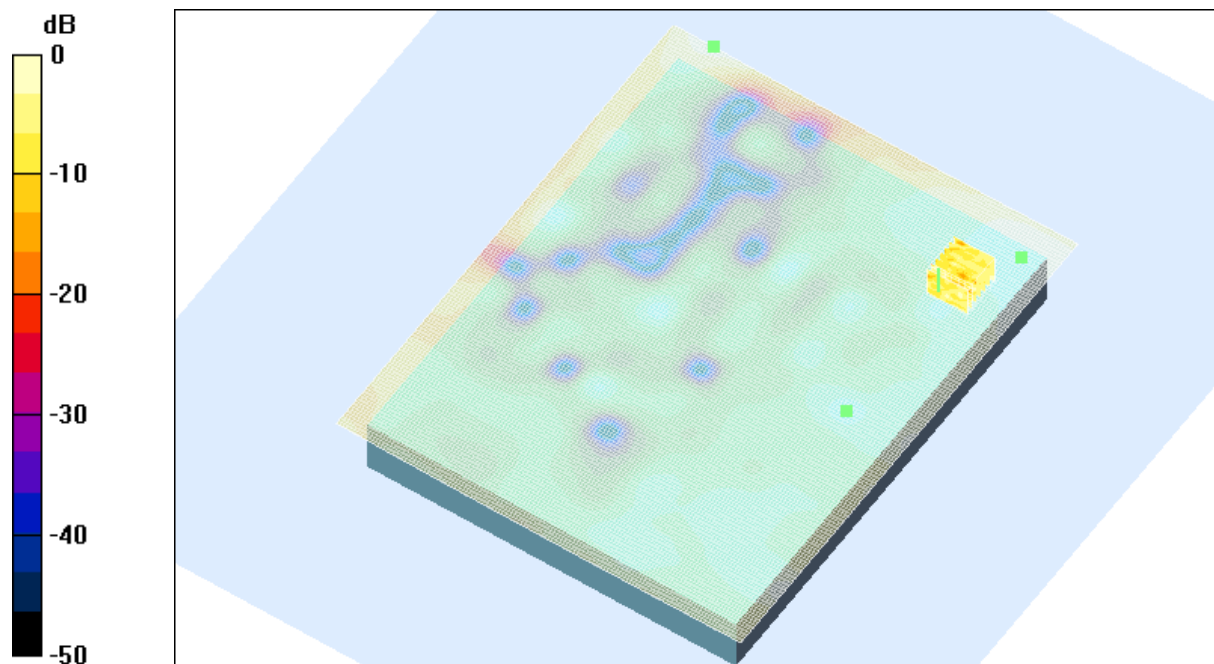
Z-axis scan for Plot 6



Test Date: 10 February 2004

File Name: [Tablet DSSS 2.45 GHz Mace 2 Atheros 11abg Antenna A Prescan 10-02-04.da4](#)

DUT: Fujitsu Tablet MACE/MACE2 with Atheros 11abg Module; Type: WLL 4030 Module; Serial: MAC: 009096-6CAE3F



0 dB = 0.00339mW/g

SAR MEASUREMENT PLOT 6

Ambient Temperature
Liquid Temperature
Humidity

21.4 Degrees Celsius
20.6 Degrees Celsius
49 %

Test Date: 3rd March 2004

File Name: [Arm Held OFDM 2.45 GHz Mace 2 Atheros 11abg Antenna A 3-03-04 #2.da4](#)

DUT: Fujitsu Tablet MACE/MACE2 with Atheros 11abg Module; Type: WLL 4030 Module; Serial: MAC: 009096-6CAE3F

* Communication System: OFDM 2450 MHz; Frequency: 2437 MHz; Duty Cycle: 1:1

* Medium: Body 2450 MHz; Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 52.5$; $\rho = 1000$ kg/m³

- Electronics: DAE3 Sn359; Probe: ET3DV6 - SN1380; ConvF(4.5, 4.5, 4.5)

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

Channel 06 Test/Area Scan (61x81x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 11.9 V/m

Power Drift = -0.3 dB

Maximum value of SAR = 0.253 mW/g

Channel 06 Test/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

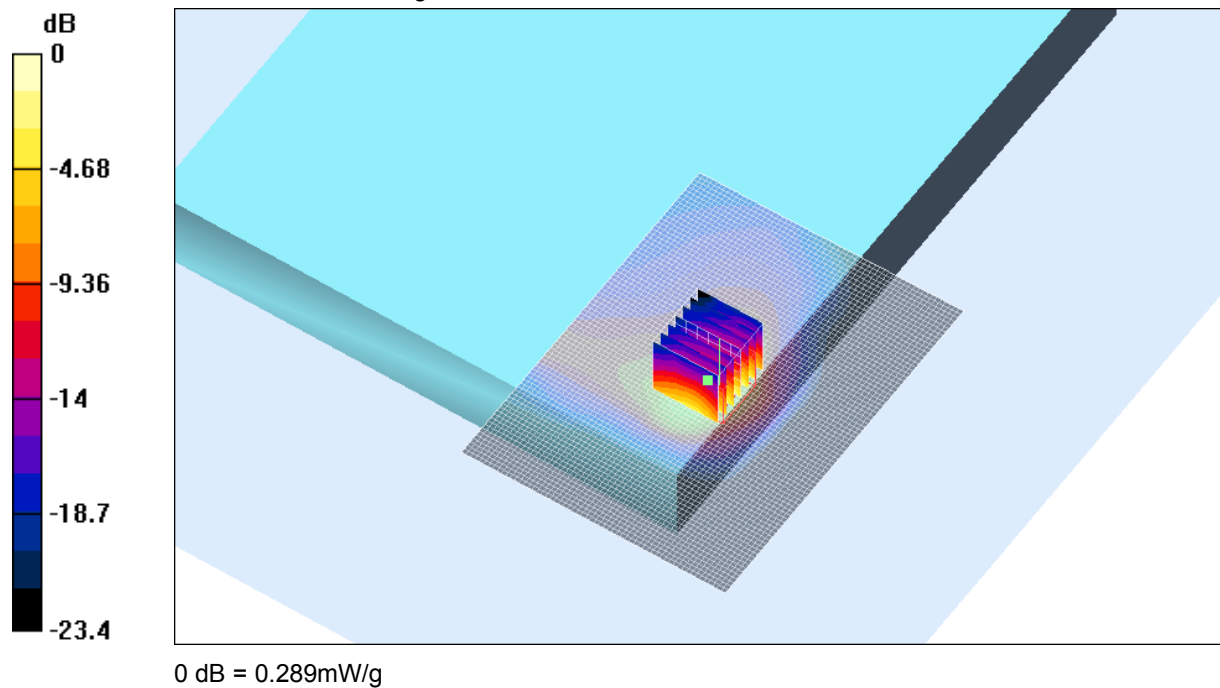
Peak SAR (extrapolated) = 0.638 W/kg

SAR(1 g) = 0.253 mW/g; SAR(10 g) = 0.109 mW/g

Reference Value = 11.9 V/m

Power Drift = -0.3 dB

Maximum value of SAR = 0.289 mW/g

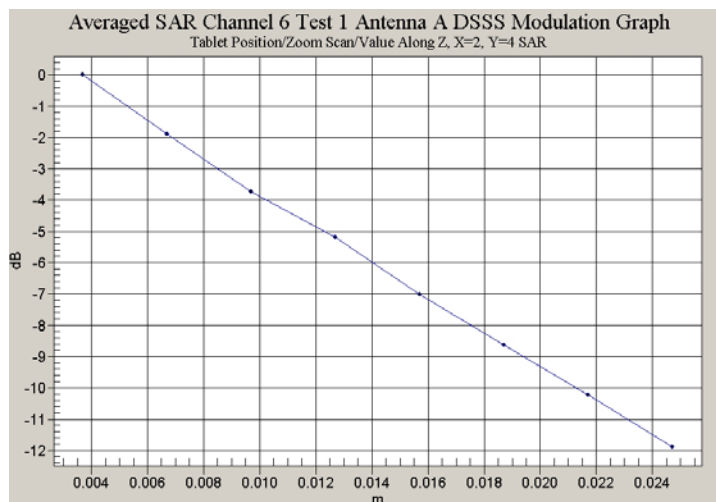


SAR MEASUREMENT PLOT 7

Ambient Temperature
Liquid Temperature
Humidity

21.5 Degrees Celsius
19.8 Degrees Celsius
63 %

SAR Z-axis graph for Plot 7



Test Date: 10 February 2004

File Name: [Validation 2450 MHz \(DAE442 Probe1380\) 10-02-04.da4](#)

DUT: Dipole 2450 MHz; Type: DV2450V2; Serial: 724

* Communication System: CW 2450 MHz; Frequency: 2450 MHz; Duty Cycle: 1:1

* Medium: Head 2450 MHz; ($\sigma = 1.7979$ mho/m, $\epsilon_r = 39.422$, $\rho = 1000$ kg/m³)

- Electronics: DAE3 Sn442; Probe: ET3DV6 - SN1380; ConvF(4.8, 4.8, 4.8)

- Phantom: SAM 22; Serial: 1260; Phantom section: Flat Section

Channel 1 Test/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 94.9 V/m

Power Drift = 0.1 dB

Maximum value of SAR = 14.7 mW/g

Channel 1 Test/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

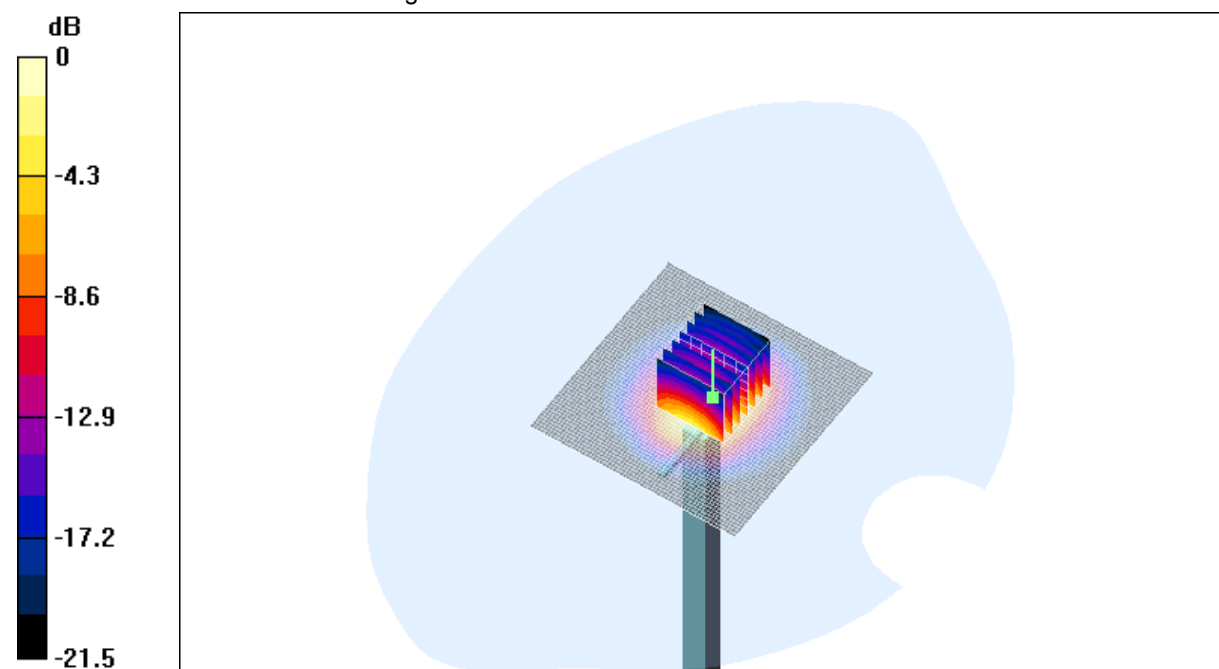
Peak SAR (extrapolated) = 26.7 W/kg

SAR(1 g) = 12.9 mW/g; SAR(10 g) = 6.12 mW/g

Reference Value = 94.9 V/m

Power Drift = 0.1 dB

Maximum value of SAR = 14.7 mW/g



0 dB = 14.7mW/g

SAR MEASUREMENT PLOT 8

Ambient Temperature
Liquid Temperature
Humidity

21.4 Degrees Celsius
20.6 Degrees Celsius
49 %

Test Date: 11 February 2004

File Name: [Validation 2450 MHz \(DAE442 Probe1380\) 11-02-04.da4](#)

DUT: Dipole 2450 MHz; Type: DV2450V2; Serial: 724

* Communication System: CW 2450 MHz; Frequency: 2450 MHz; Duty Cycle: 1:1

* Medium: Head 2450 MHz; ($\sigma = 1.79138$ mho/m, $\epsilon_r = 39.4646$, $\rho = 1000$ kg/m³)

- Electronics: DAE3 Sn442; Probe: ET3DV6 - SN1380; ConvF(4.8, 4.8, 4.8)

- Phantom: SAM 22; Serial: 1260; Phantom section: Flat Section

Channel 1 Test/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 94 V/m

Power Drift = 0.0 dB

Maximum value of SAR = 14.8 mW/g

Channel 1 Test/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

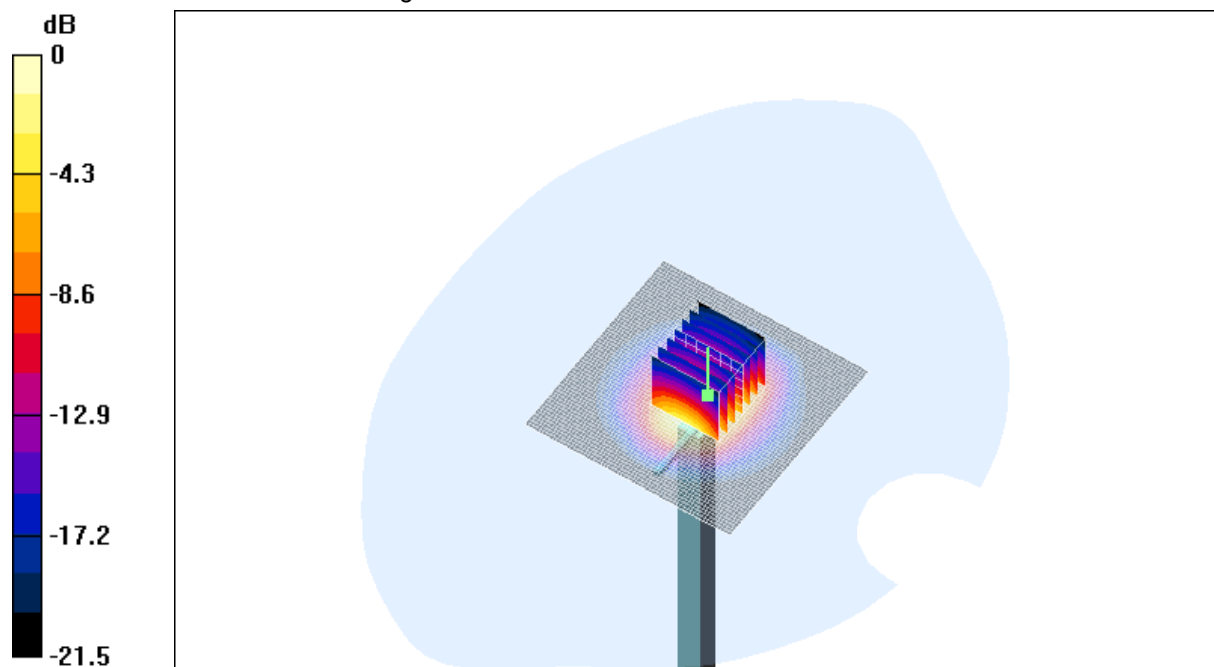
Peak SAR (extrapolated) = 26.5 W/kg

SAR(1 g) = 12.8 mW/g; SAR(10 g) = 6.03 mW/g

Reference Value = 94 V/m

Power Drift = 0.0 dB

Maximum value of SAR = 14.6 mW/g



SAR MEASUREMENT PLOT 9

Ambient Temperature
Liquid Temperature
Humidity

21.9 Degrees Celsius
20.8 Degrees Celsius
63 %

Test Date: 03 March 2004

File Name: [Validation 2450 MHz \(DAE442 Probe1380\) 03-03-04.da4](#)

DUT: Dipole 2450 MHz; Type: DV2450V2; Serial: 724

* Communication System: CW 2450 MHz; Frequency: 2450 MHz; Duty Cycle: 1:1

* Medium: Head 2450 MHz; ($\sigma = 1.8475$ mho/m, $\epsilon_r = 39.912$, $\rho = 1000$ kg/m³)

- Electronics: DAE3 Sn442; Probe: ET3DV6 - SN1380; ConvF(4.8, 4.8, 4.8)

- Phantom: SAM 22; Serial: 1260; Phantom section: Flat Section

Channel 1 Test/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 94.6 V/m

Power Drift = -0.004 dB

Maximum value of SAR = 15.6 mW/g

Channel 1 Test/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

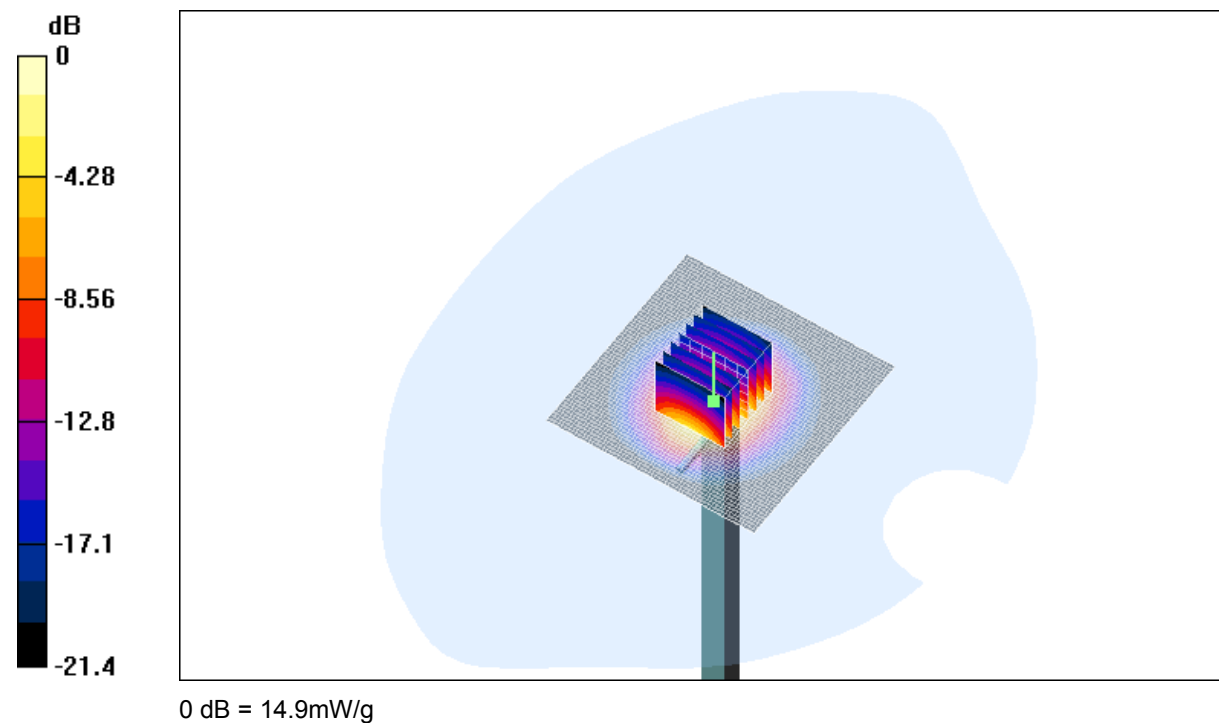
Peak SAR (extrapolated) = 27.3 W/kg

SAR(1 g) = 13.2 mW/g; SAR(10 g) = 6.29 mW/g

Reference Value = 94.6 V/m

Power Drift = -0.004 dB

Maximum value of SAR = 14.9 mW/g

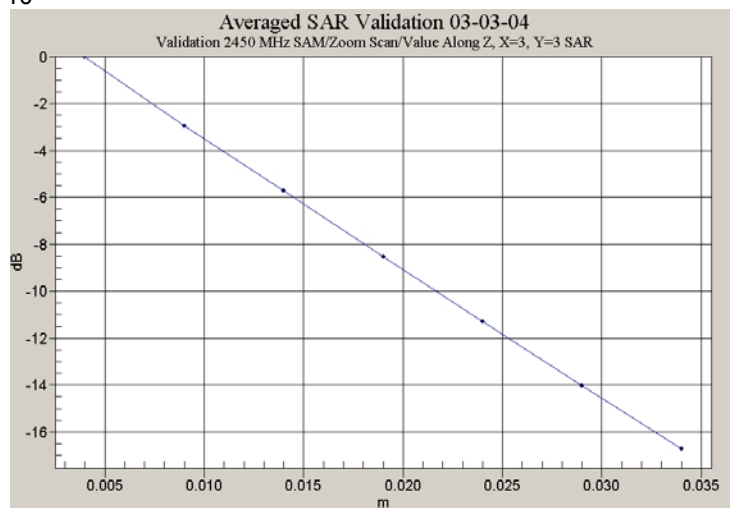


SAR MEASUREMENT PLOT 10

Ambient Temperature
Liquid Temperature
Humidity

21.5 Degrees Celsius
19.8 Degrees Celsius
63 %

Z-Axis Graph For Plot 10



APPENDIX C

SAR TESTING EQUIPMENT CALIBRATION CERTIFICATE ATTACHMENTS

Calibration Certificate Attachments

- | | |
|--|---------|
| 1. 2450 MHz Dipole Calibration Sheet | 6 Pages |
| 2. 2450 MHz E-Field Probe Calibration Sheet | 4 Pages |
| 3. Dielectric Properties of Flat phantom PL550 Phantom | 1 Page |