

APPENDIX A: TEST CONFIGURATIONS AND TEST DATA

A1: TEST CONFIGURATION

Mode 1



Mode 2



Mode 3



EUT Photo



A2: TEST DATA

Date/Time: 04/28/03 15:48:18

Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 1 channel 01

DUT: PCMCIA Wireless Card ; Type: SMC2635W

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: DSSS
Medium: MSL2450 ($\sigma = 1.93$ mho/m, $\epsilon_r = 52.2$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The bottom of the card to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Area Scan (5x7x1): Measurement grid: dx=20mm, dy=20mm

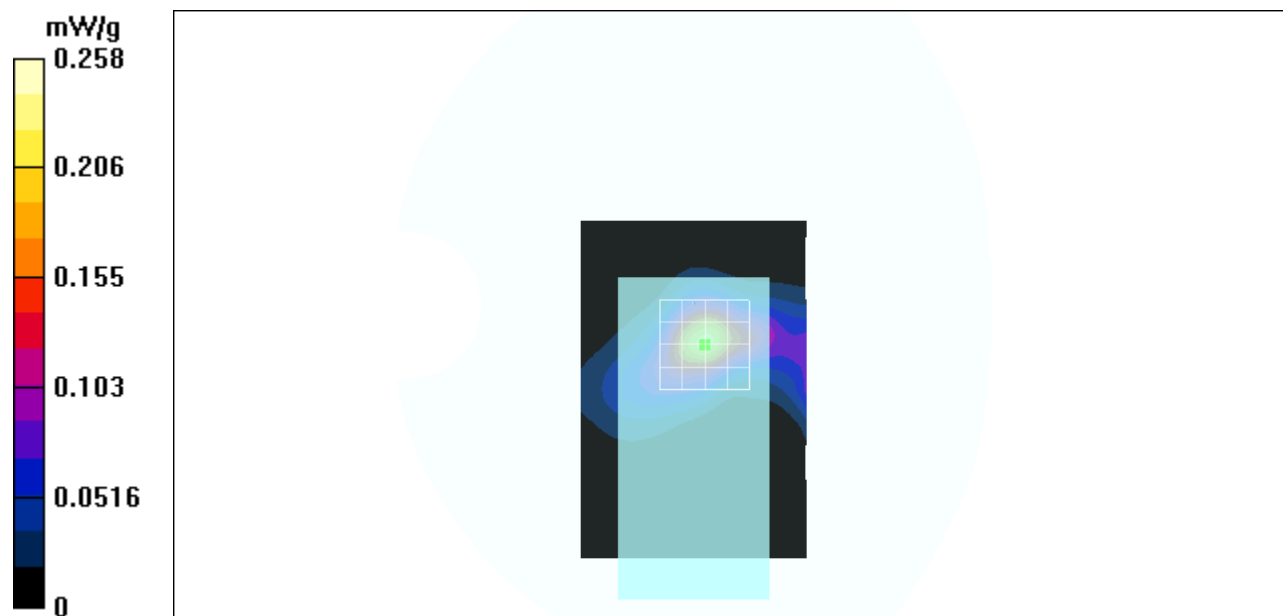
System testing procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.84 V/m

Peak SAR = 0.347 W/kg

SAR(1 g) = 0.206 mW/g; SAR(10 g) = 0.0971 mW/g

Power Drift = -0.2 dB



Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 1 channel 06

DUT: PCMCIA Wireless Card ; Type: SMC2635W

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: DSSS
Medium: MSL2450 ($\sigma = 1.95$ mho/m, $\epsilon_r = 52.18$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The bottom of the card to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Area Scan (5x7x1): Measurement grid: dx=20mm, dy=20mm

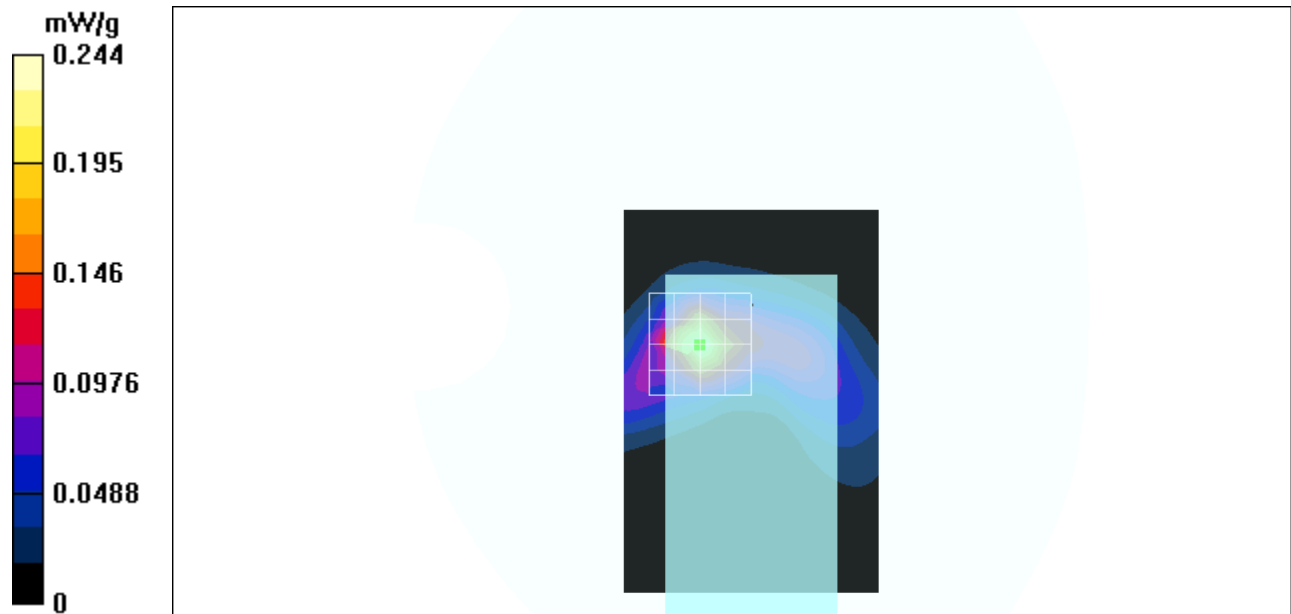
System testing procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.61 V/m

Peak SAR = 0.332 W/kg

SAR(1 g) = 0.194 mW/g; SAR(10 g) = 0.0914 mW/g

Power Drift = -0.2 dB



Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 1 channel 11

DUT: PCMCIA Wireless Card ; Type: SMC2635W

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: DSSS
Medium: MSL2450 ($\sigma = 1.99$ mho/m, $\epsilon_r = 52.1$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm

Phantom section: Flat Section ; Separation distance : 0mm(The bottom of the card to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Area Scan (5x7x1): Measurement grid: dx=20mm, dy=20mm

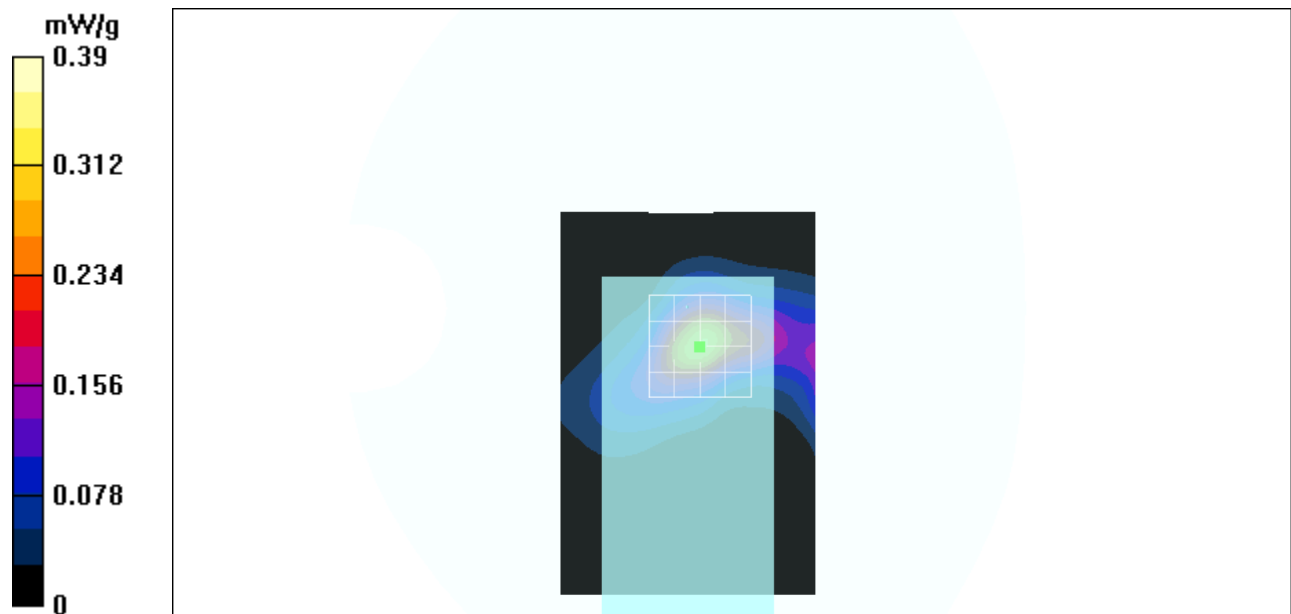
System testing procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.1 V/m

Peak SAR = 0.563 W/kg

SAR(1 g) = 0.326 mW/g; SAR(10 g) = 0.153 mW/g

Power Drift = -0.2 dB



Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 2 channel 01

DUT: PCMCIA Wireless Card ; Type: SMC2635W

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: DSSS

Medium: MSL2450 ($\sigma = 1.93$ mho/m, $\epsilon_r = 52.2$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm

Phantom section: Flat Section ; Separation distance : 15mm(The tip of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Area Scan (5x5x1): Measurement grid: dx=20mm, dy=20mm

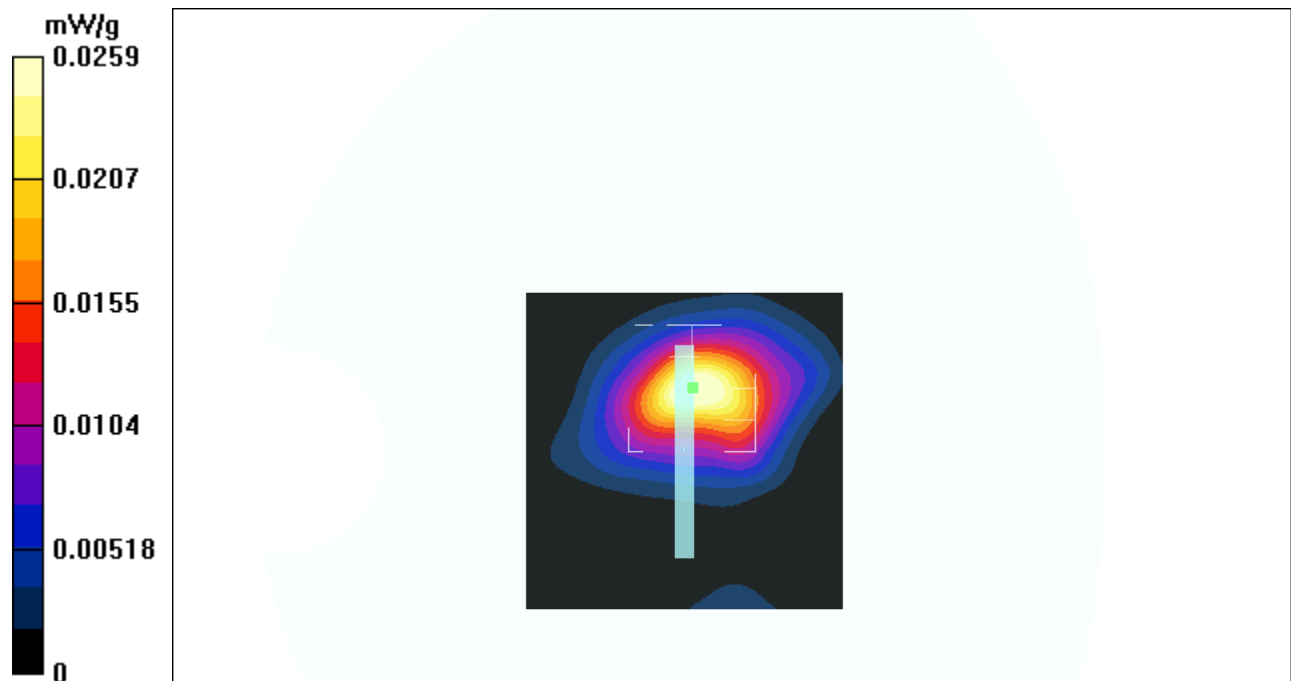
System testing procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.52 V/m

Peak SAR = 0.0683 W/kg

SAR(1 g) = 0.0224 mW/g; SAR(10 g) = 0.011 mW/g

Power Drift = -0.09 dB



Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 2 channel 06

DUT: PCMCIA Wireless Card ; Type: SMC2635W

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: DSSS

Medium: MSL2450 ($\sigma = 1.95$ mho/m, $\epsilon_r = 52.18$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm

Phantom section: Flat Section ; Separation distance : 15mm(The tip of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Area Scan (5x5x1): Measurement grid: dx=20mm, dy=20mm

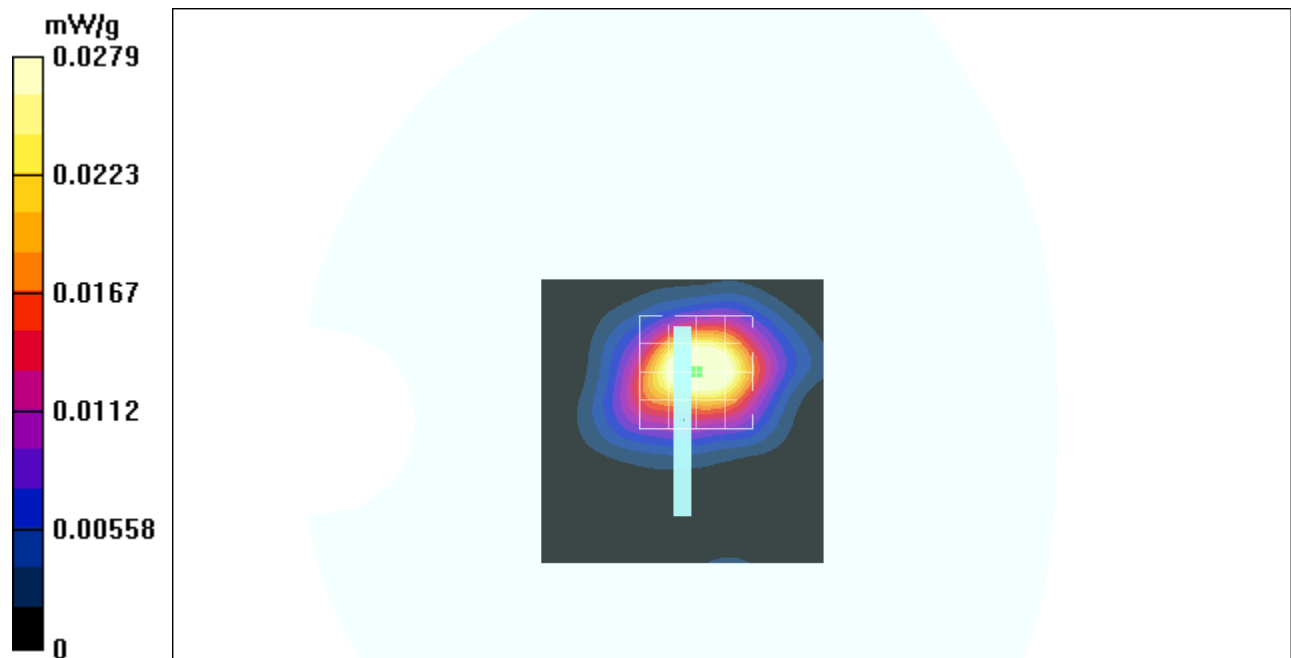
System testing procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.63 V/m

Peak SAR = 0.0543 W/kg

SAR(1 g) = 0.026 mW/g; SAR(10 g) = 0.0123 mW/g

Power Drift = -0.2 dB



Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 2 channel 11

DUT: PCMCIA Wireless Card ; Type: SMC2635W

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: DSSS
Medium: MSL2450 ($\sigma = 1.99$ mho/m, $\epsilon_r = 52.1$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 15mm(The tip of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Area Scan (5x5x1): Measurement grid: dx=20mm, dy=20mm

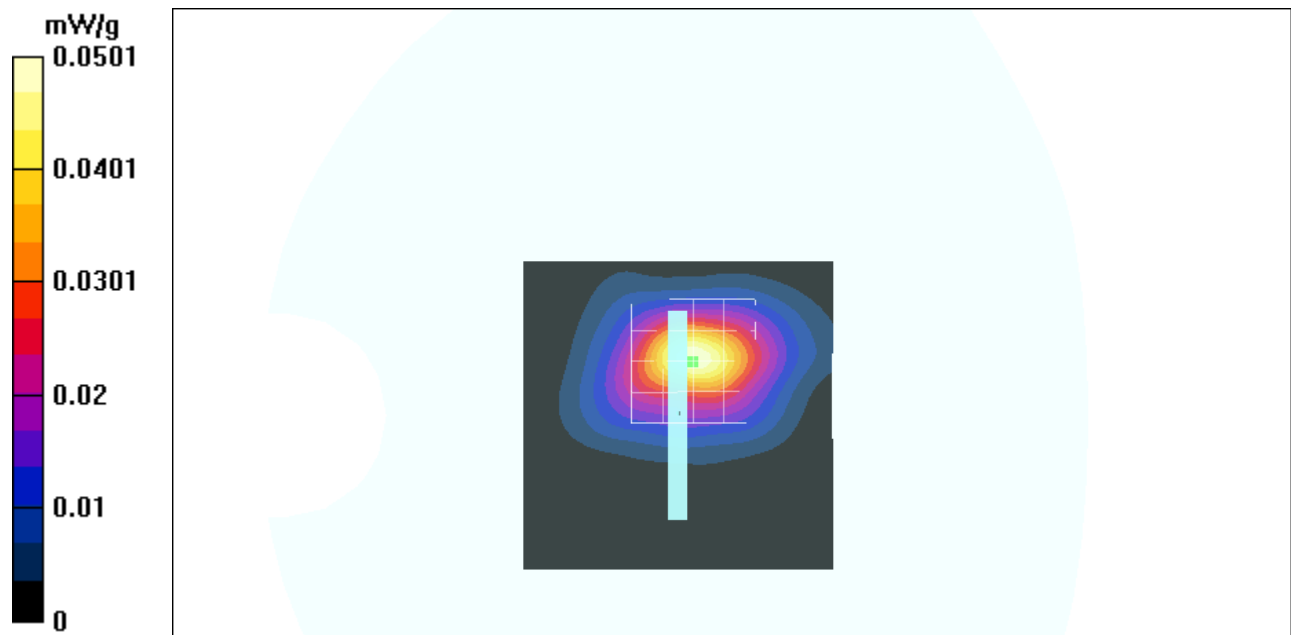
System testing procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.16 V/m

Peak SAR = 0.0724 W/kg

SAR(1 g) = 0.0379 mW/g; SAR(10 g) = 0.0186 mW/g

Power Drift = -0.1 dB



Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 3 channel 01

DUT: PCMCIA Wireless Card ; Type: SMC2635W

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: DSSS

Medium: MSL2450 ($\sigma = 1.93$ mho/m, $\epsilon_r = 52.2$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm

Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Area Scan (5x5x1): Measurement grid: dx=20mm, dy=20mm

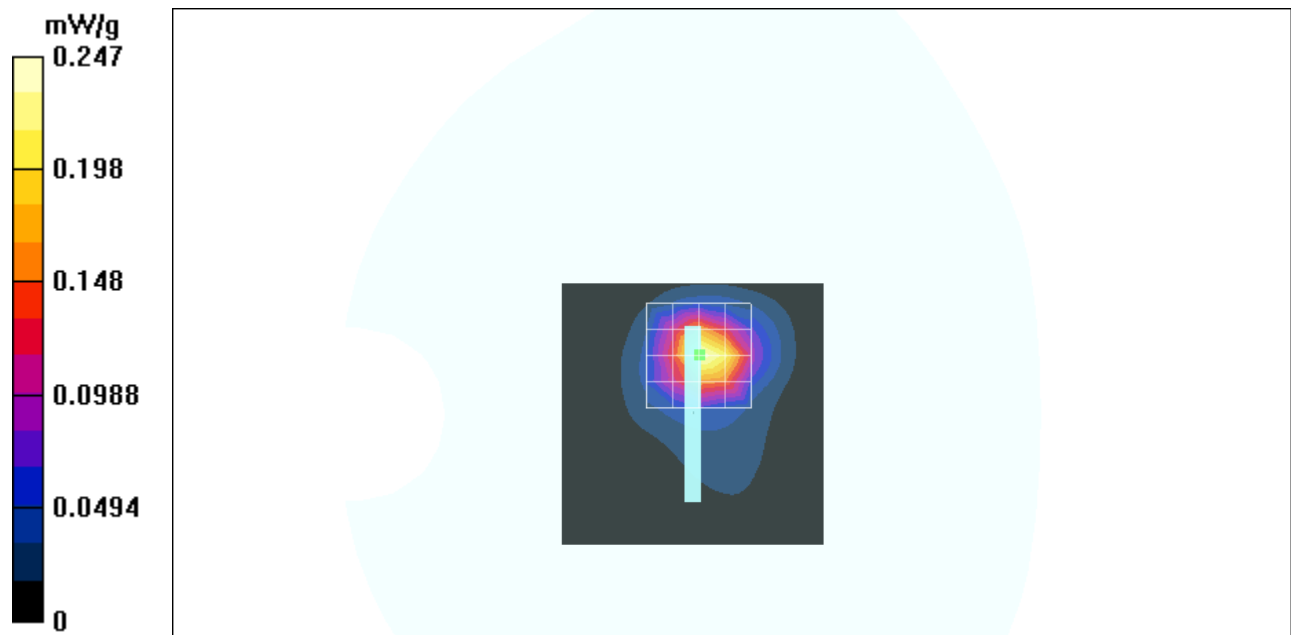
System testing procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.1 V/m

Peak SAR = 0.36 W/kg

SAR(1 g) = 0.214 mW/g; SAR(10 g) = 0.0959 mW/g

Power Drift = -0.4 dB



Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 3 channel 06

DUT: PCMCIA Wireless Card ; Type: SMC2635W

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: DSSS

Medium: MSL2450 ($\sigma = 1.95$ mho/m, $\epsilon_r = 52.18$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm

Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Area Scan (5x5x1): Measurement grid: dx=20mm, dy=20mm

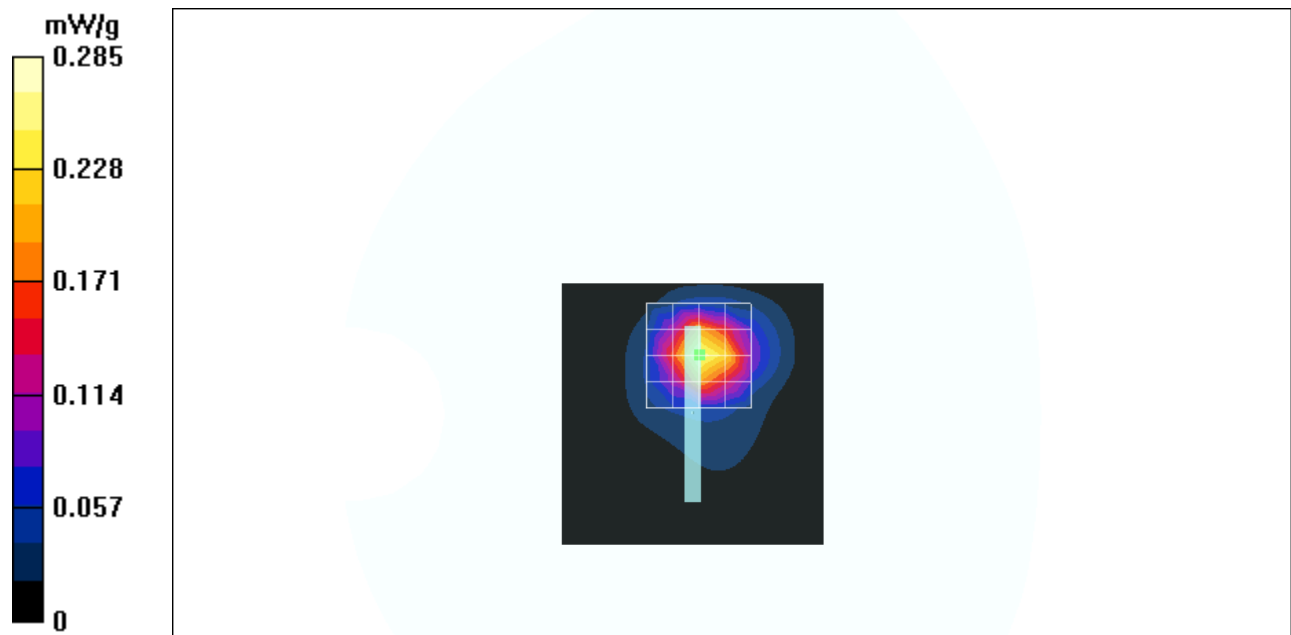
System testing procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.04 V/m

Peak SAR = 0.39 W/kg

SAR(1 g) = 0.234 mW/g; SAR(10 g) = 0.103 mW/g

Power Drift = -0.2 dB



Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 3 channel 11

DUT: PCMCIA Wireless Card ; Type: SMC2635W

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: DSSS

Medium: MSL2450 ($\sigma = 1.99$ mho/m, $\epsilon_r = 52.1$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm

Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Area Scan (5x5x1): Measurement grid: dx=20mm, dy=20mm

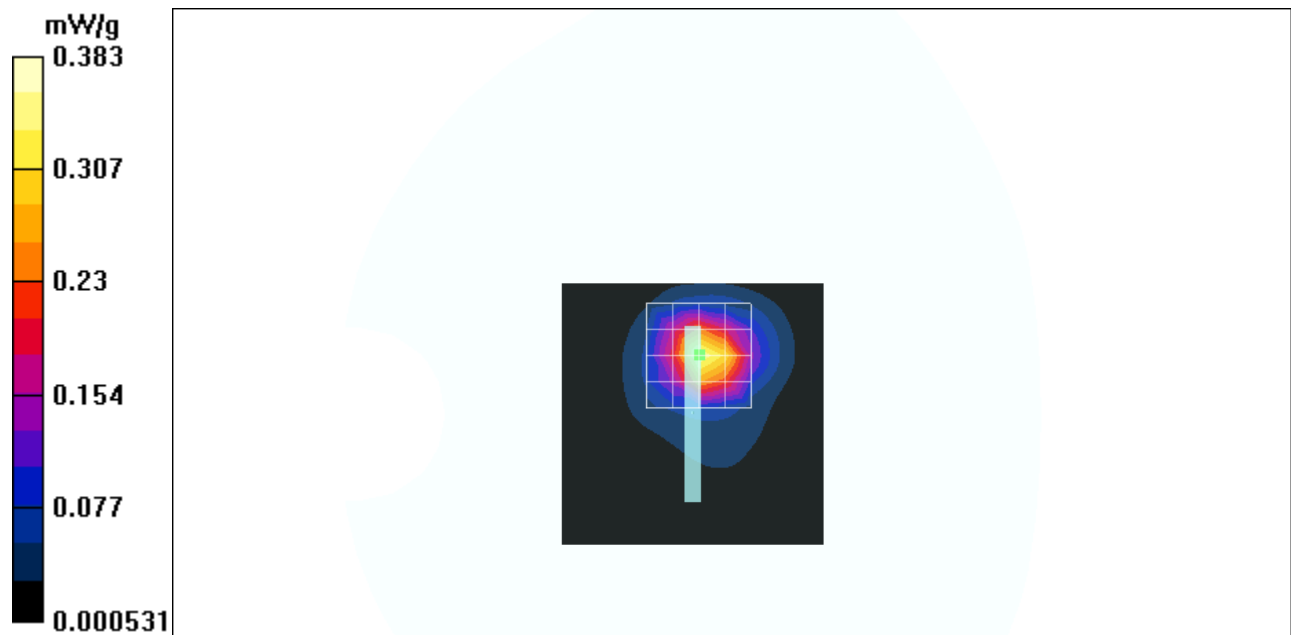
System testing procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.85 V/m

Peak SAR = 0.547 W/kg

SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.141 mW/g

Power Drift = -0.3 dB



A3: VALIDATION TEST DATA

Date/Time: 04/28/03 17:29:00

Test Laboratory: Advance Data Technology Corporation

System Validation Check-MSL2450MHz 2003-04-28

DUT: Dipole 2450 MHz ; Type: D2450V2

Communication System: CW ; Frequency: 2450 MHz; Duty Cycle: 1:1; Modulation type: CW

Medium: MSL2450 ($\sigma = 1.97$ mho/m, $\epsilon_r = 52.14$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm

Phantom section: Flat Section ; Separation distance : 10mm(The feetpoint of the dipole to the Phantom)

Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System Validation procedure/Area Scan (4x6x1): Measurement grid: dx=20mm, dy=20mm

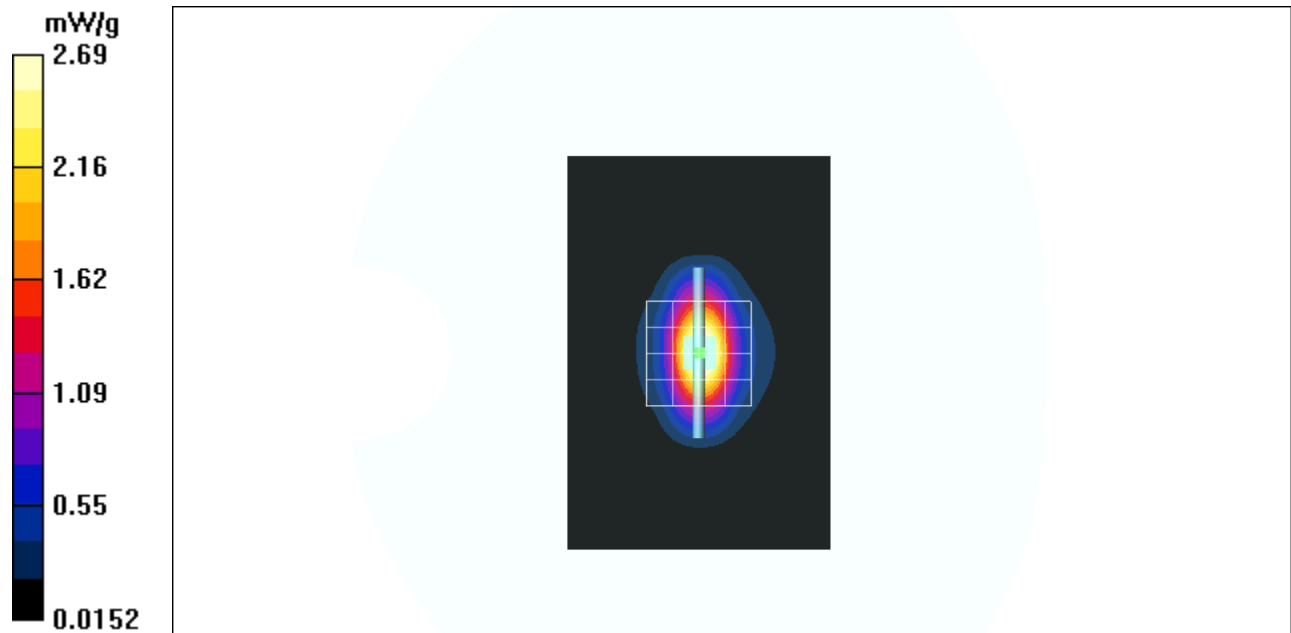
System Validation procedure/Zoon Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 39.9 V/m

Peak SAR = 3.98 W/kg

SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.22 mW/g

Power Drift = -0.2 dB



Test Laboratory: Advance Data Technology Corporation

SMC2635W Mode 1 channel 11

DUT: PCMCIA Wireless Card ; Type: SMC2635W

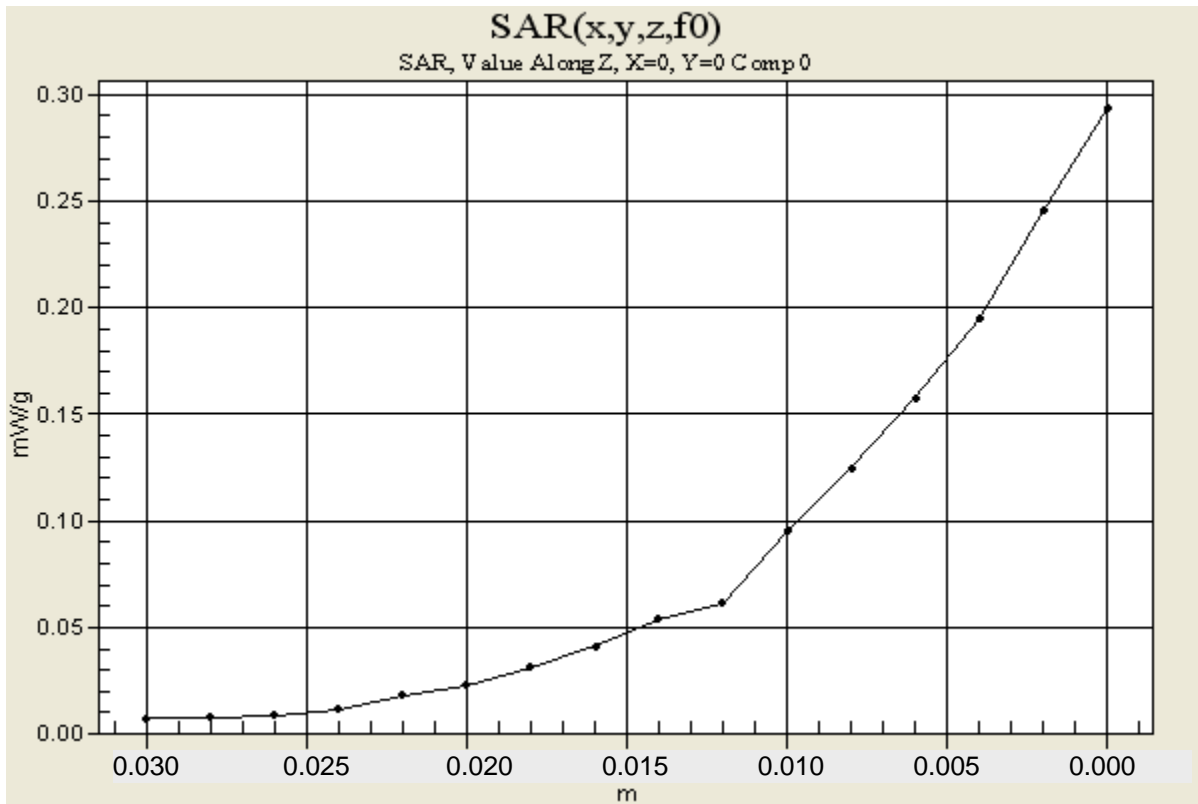
Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: DSSS
Medium: MSL2450 ($\sigma = 1.99$ mho/m, $\epsilon_r = 52.1$, $\rho = 1000$ kg/m³) ; Liquid level : 151mm
Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)

Antenna type : Internal Antenna ; Air temperature : 23.0 degrees ; Liquid temperature : 22.2 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 0mm (Fix Surface)
- Electronics: DAE3 Sn510; Calibrated: DAE not calibrated
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 33; Postprocessing SW: SEMCAD, V1.6 Build 109

System testing procedure/Z Scan (1x1x16): Measurement grid: dx=20mm, dy=20mm, dz=2mm



APPENDIX B: ADT SAR MEASUREMENT SYSTEM

