APPENDIX A: TEST CONFIGURATIONS AND TEST DATA

A1: TEST CONFIGURATION

Mode 1

The bottom of the EUT to the phantom distance is 13mm

Mode 2

The Front of the EUT to the phantom distance is 10mm

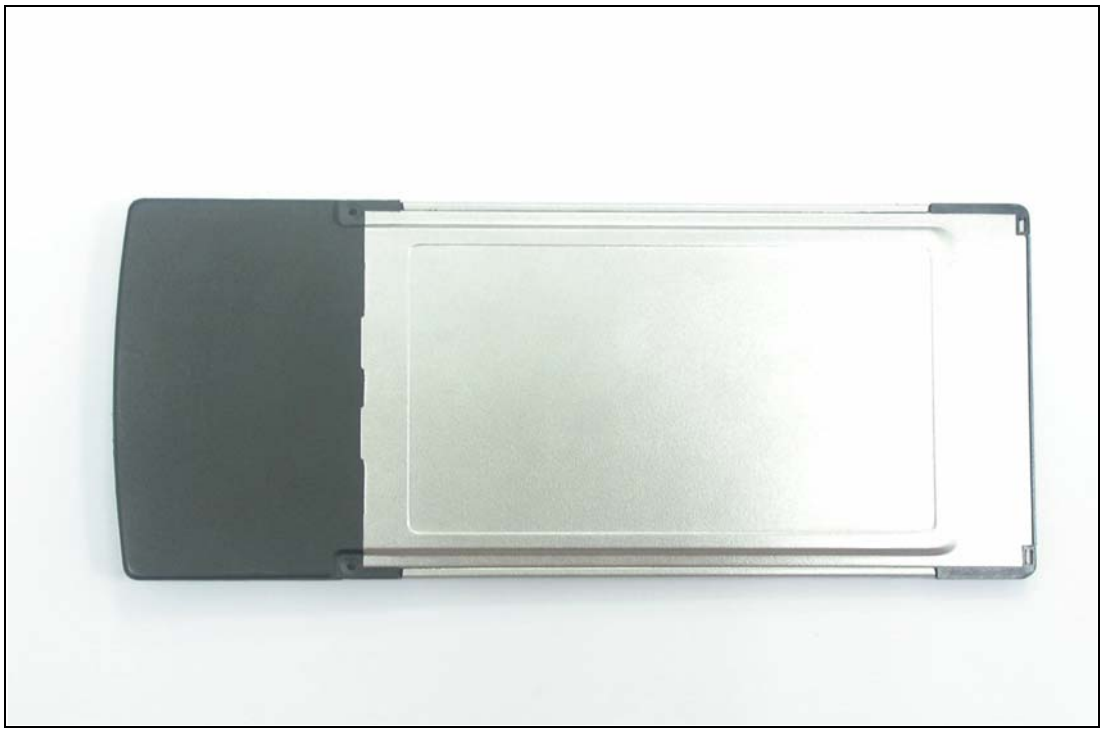
Mode 3

The tip of the EUT to the phantom distance is 0mm

Mode 4

The tip of the EUT to the phantom distance is 0mm

EUT Photo



Liquid Level Photo

2450MHz D=152mm

A2 : TEST DATA

Date/Time: 10/22/03 10:24:10

Test Laboratory: Advance Data Technology

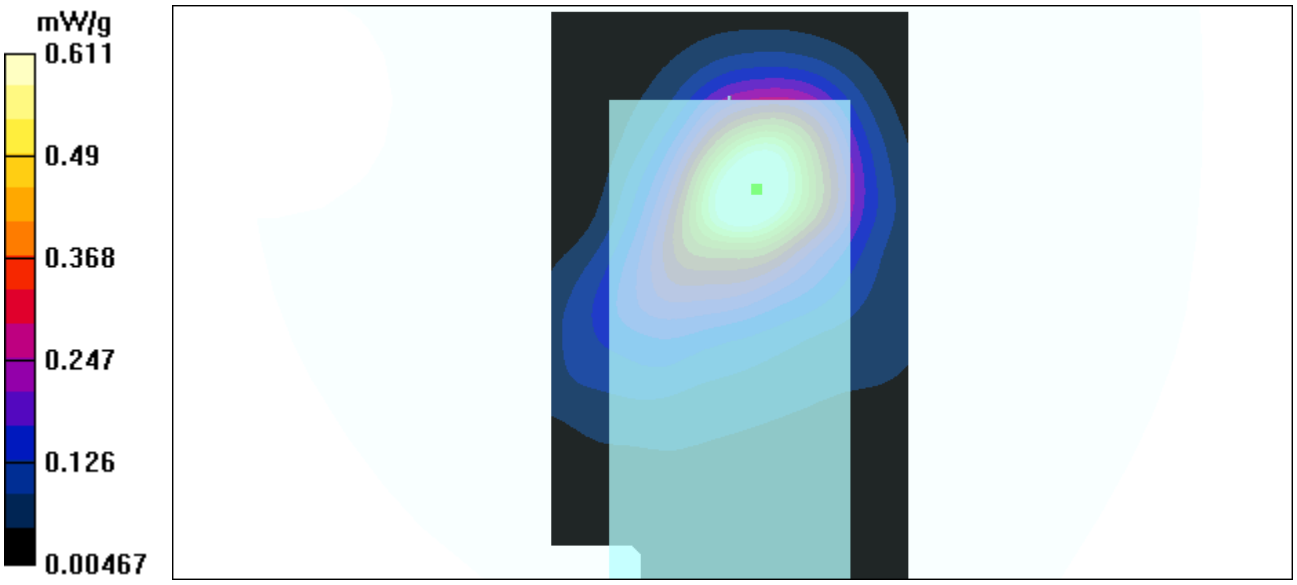
WPC54G V1.2 Mode 1

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.881 mho/m, ε_r = 52.937, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 13mm(The bottom of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 1/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 11.3 V/m
Power Drift = 0.06 dB
Maximum value of SAR = 0.691 mW/g

Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.569 mW/g; SAR(10 g) = 0.306 mW/g
Reference Value = 11.3 V/m
Power Drift = 0.06 dB
Maximum value of SAR = 0.611 mW/g



Date/Time: 10/22/03 10:53:22

Test Laboratory: Advance Data Technology

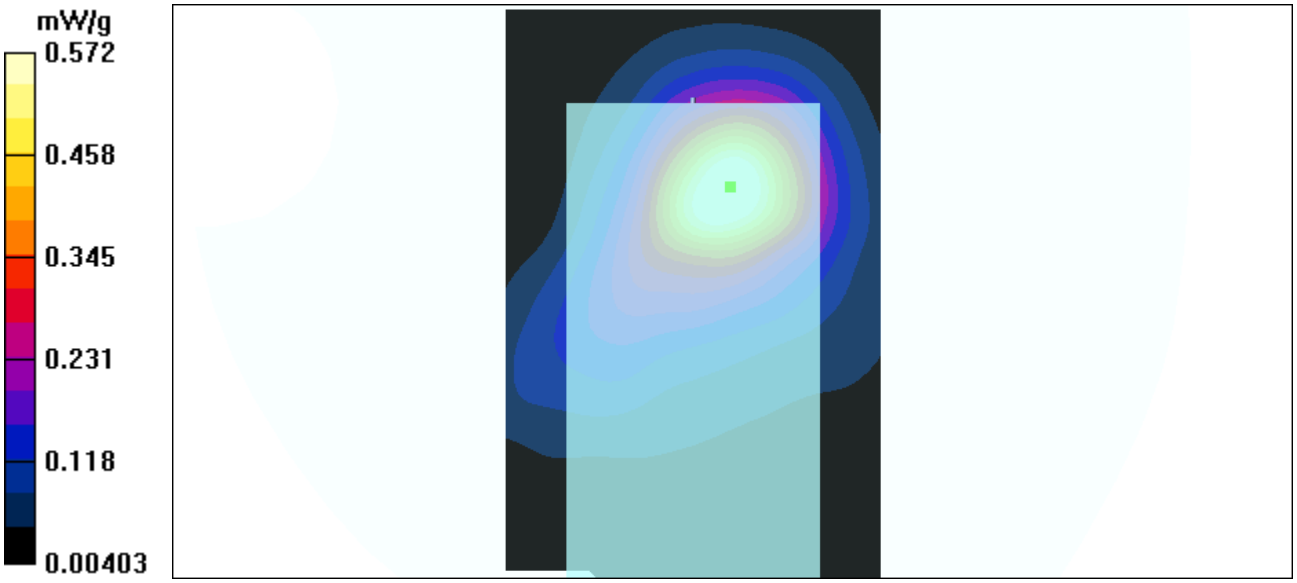
WPC54G V1.2 Mode 1

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.927 mho/m, ε_r = 52.876, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 13mm(The bottom of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 6/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 11.3 V/m
Power Drift = -0.3 dB
Maximum value of SAR = 0.615 mW/g

Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.535 mW/g; SAR(10 g) = 0.279 mW/g
Reference Value = 11.3 V/m
Power Drift = -0.3 dB
Maximum value of SAR = 0.572 mW/g



Date/Time: 10/22/03 11:11:26

Test Laboratory: Advance Data Technology

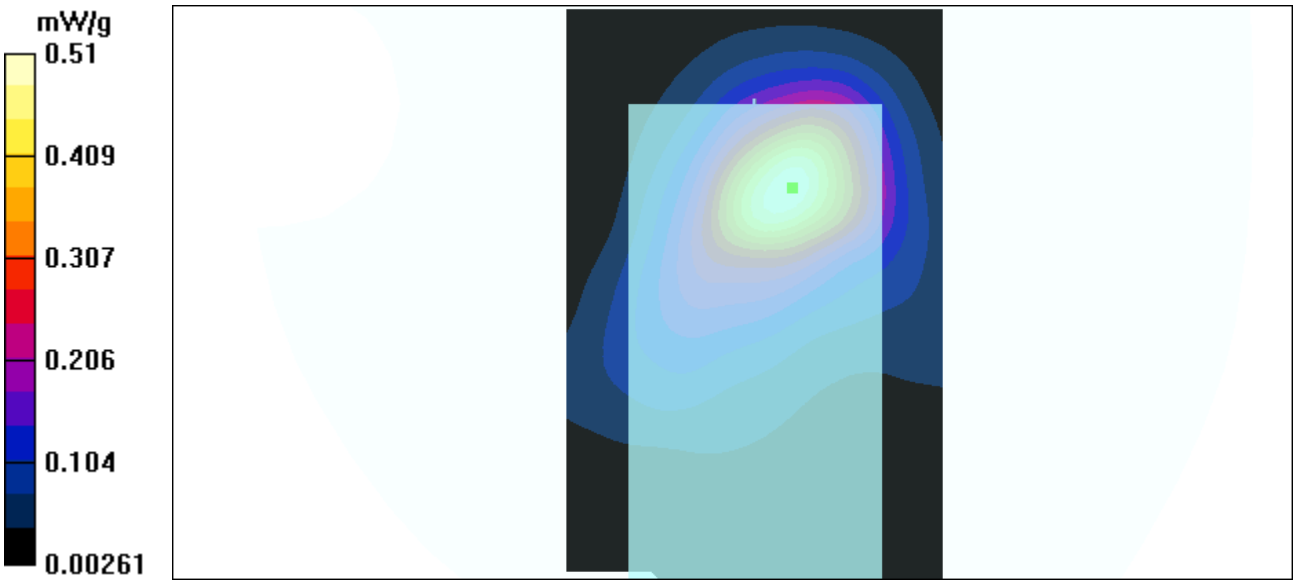
WPC54G V1-2 Mode 1

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.971 mho/m, ε_r = 52.783, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 13mm(The bottom of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 11/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 9.85 V/m
Power Drift = 0.3 dB
Maximum value of SAR = 0.505 mW/g

Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 1.05 W/kg
SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.222 mW/g
Reference Value = 9.85 V/m
Power Drift = 0.3 dB
Maximum value of SAR = 0.51 mW/g



Date/Time: 10/22/03 12:07:40

Test Laboratory: Advance Data Technology

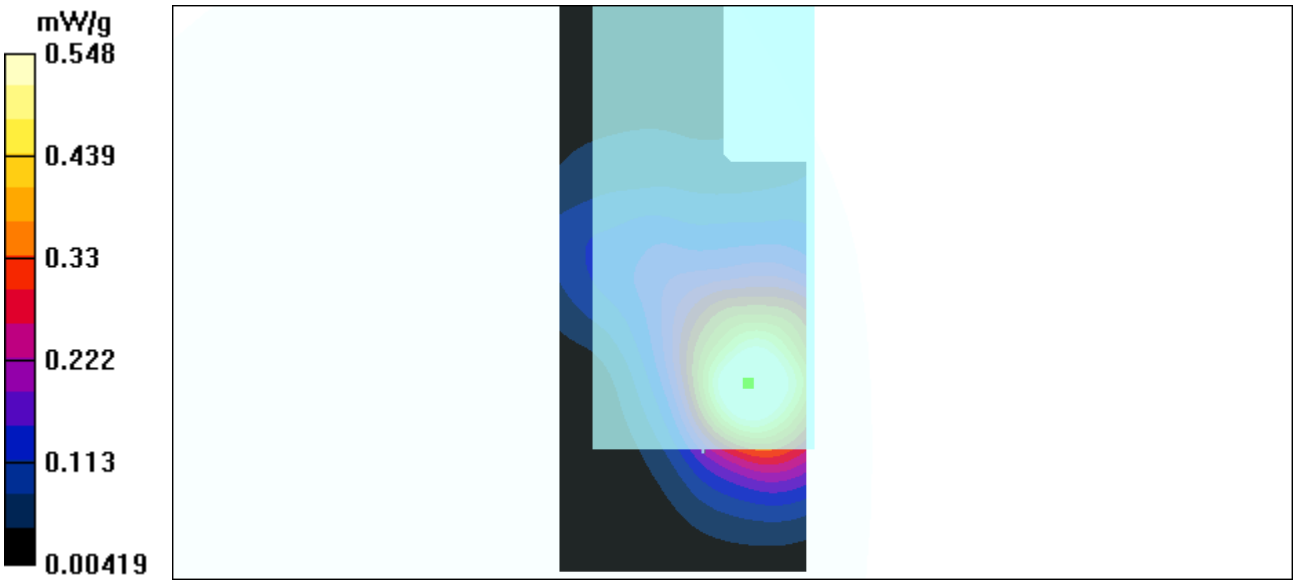
WPC54G V1-2 Mode 2

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.881 mho/m, ε_r = 52.937, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 10 mm(The front of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23 degrees ; Liquid temp. : 22 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541; Calibrated: 2003/1/14
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 1/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 11.8 V/m
Power Drift = -0.3 dB
Maximum value of SAR = 0.633 mW/g

Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.521 mW/g; SAR(10 g) = 0.283 mW/g
Reference Value = 11.8 V/m
Power Drift = -0.3 dB
Maximum value of SAR = 0.548 mW/g



Date/Time: 10/22/03 12:26:00

Test Laboratory: Advance Data Technology

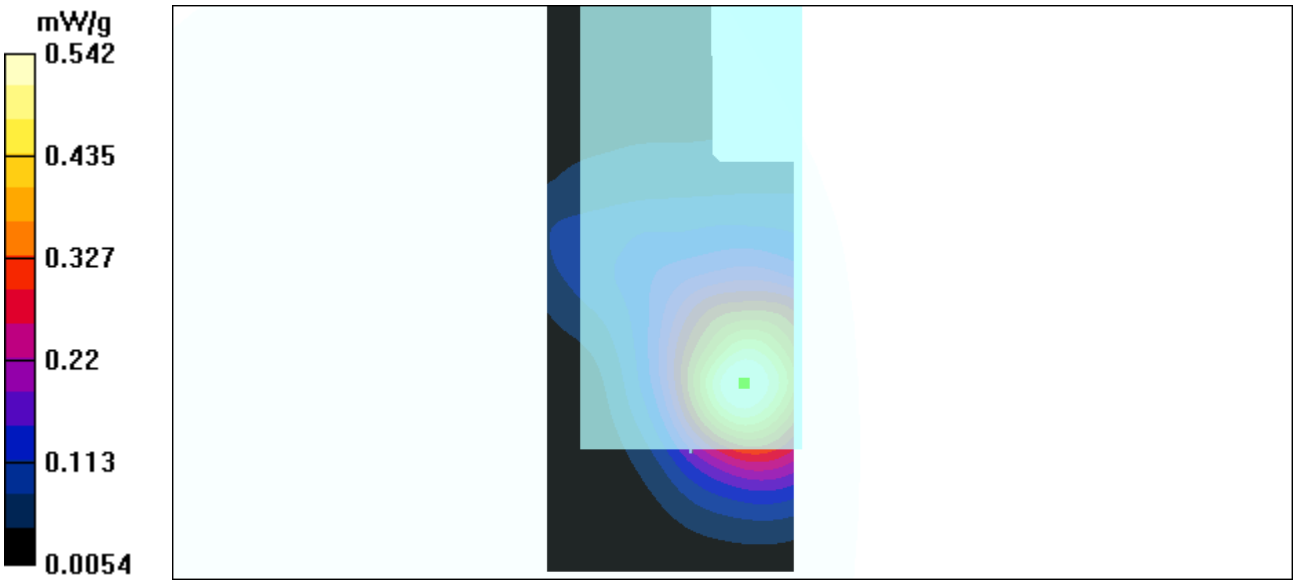
WPC54G V1.2 Mode 2

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.927 mho/m, ε_r = 52.876, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 10 mm(The front of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23 degrees ; Liquid temp. : 22 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541; Calibrated: 2003/1/14
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 6/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 11.8 V/m
Power Drift = -0.05 dB
Maximum value of SAR = 0.553 mW/g

Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.994 W/kg
SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.27 mW/g
Reference Value = 11.8 V/m
Power Drift = -0.05 dB
Maximum value of SAR = 0.542 mW/g



Date/Time: 10/22/03 13:20:56

Test Laboratory: Advance Data Technology

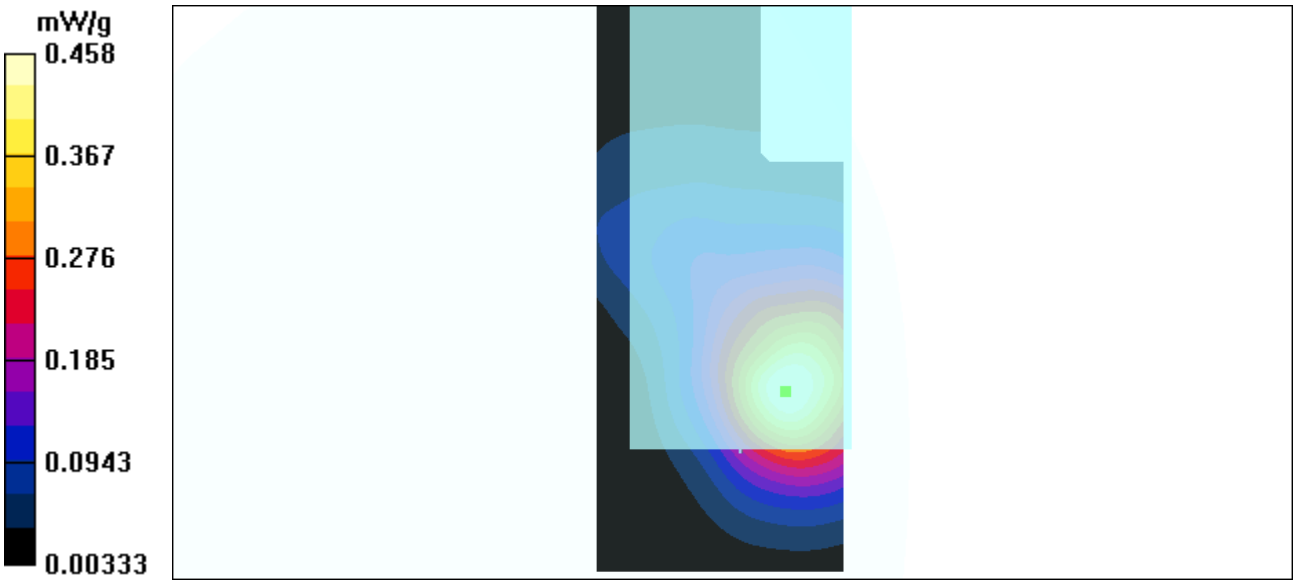
WPC54G V1.2 Mode 2

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.971 mho/m, ε_r = 52.783, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 10 mm(The front of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23 degrees ; Liquid temp. : 22 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541; Calibrated: 2003/1/14
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 11/Area Scan (41x71x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 10.7 V/m
Power Drift = 0.2 dB
Maximum value of SAR = 0.466 mW/g

Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.841 W/kg
SAR(1 g) = 0.433 mW/g; SAR(10 g) = 0.229 mW/g
Reference Value = 10.7 V/m
Power Drift = 0.2 dB
Maximum value of SAR = 0.458 mW/g



Date/Time: 10/22/03 13:57:08

Test Laboratory: Advance Data Technology

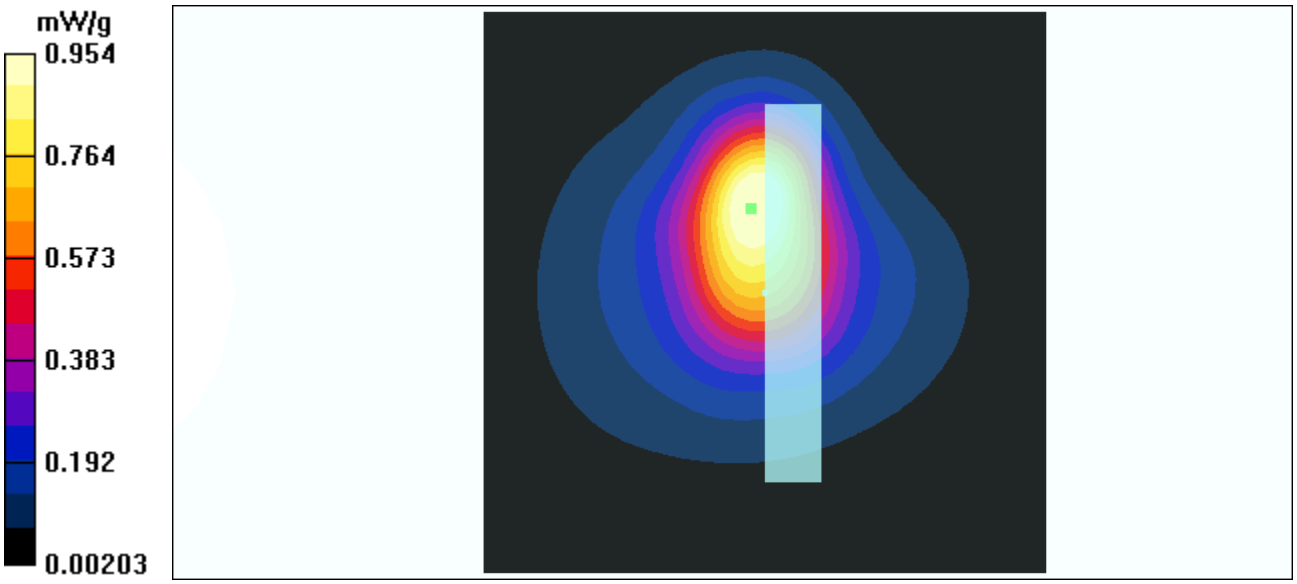
WPC54G V1.2 Mode 3

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.881 mho/m, ε_r = 52.94, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 1/Area Scan (41x41x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 20.4 V/m
Power Drift = 0.1 dB
Maximum value of SAR = 1.03 mW/g

Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 2.01 W/kg
SAR(1 g) = 0.849 mW/g; SAR(10 g) = 0.356 mW/g
Reference Value = 20.4 V/m
Power Drift = 0.1 dB
Maximum value of SAR = 0.954 mW/g



Date/Time: 10/22/03 14:13:54

Test Laboratory: Advance Data Technology

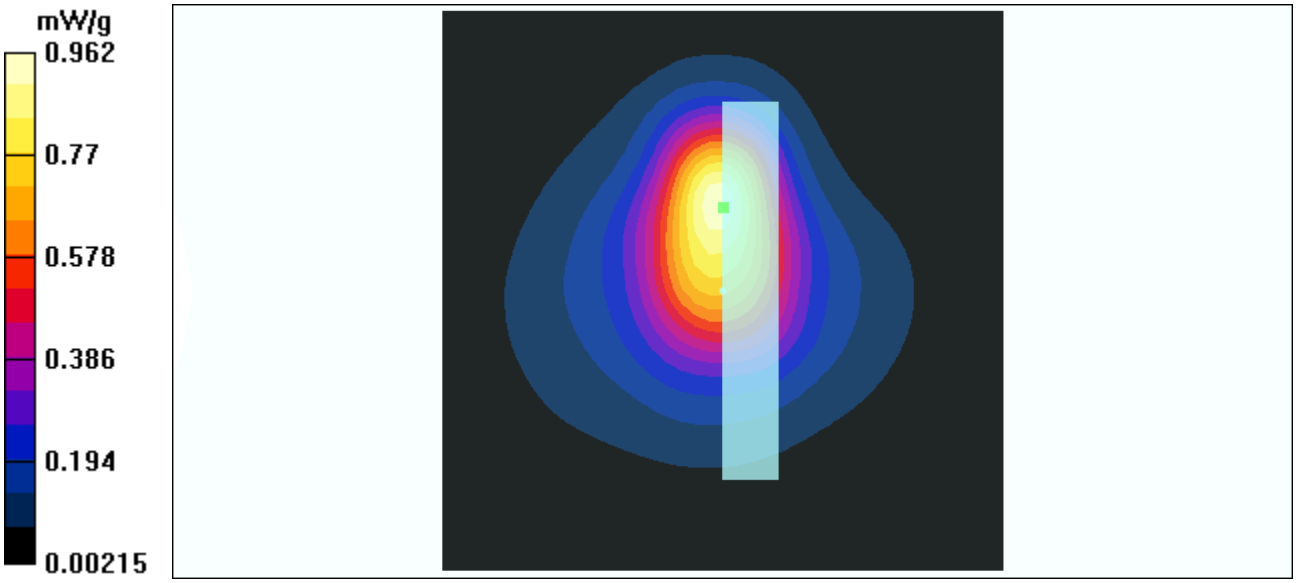
WPC54G V1.2 Mode 3

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.927 mho/m, ε_r = 52.88, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 6/Area Scan (41x41x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 20.5 V/m
Power Drift = -0.003 dB
Maximum value of SAR = 0.949 mW/g

Channel 6/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 0.847 mW/g; SAR(10 g) = 0.351 mW/g
Reference Value = 20.5 V/m
Power Drift = -0.003 dB
Maximum value of SAR = 0.962 mW/g



Date/Time: 10/22/03 14:31:54

Test Laboratory: Advance Data Technology

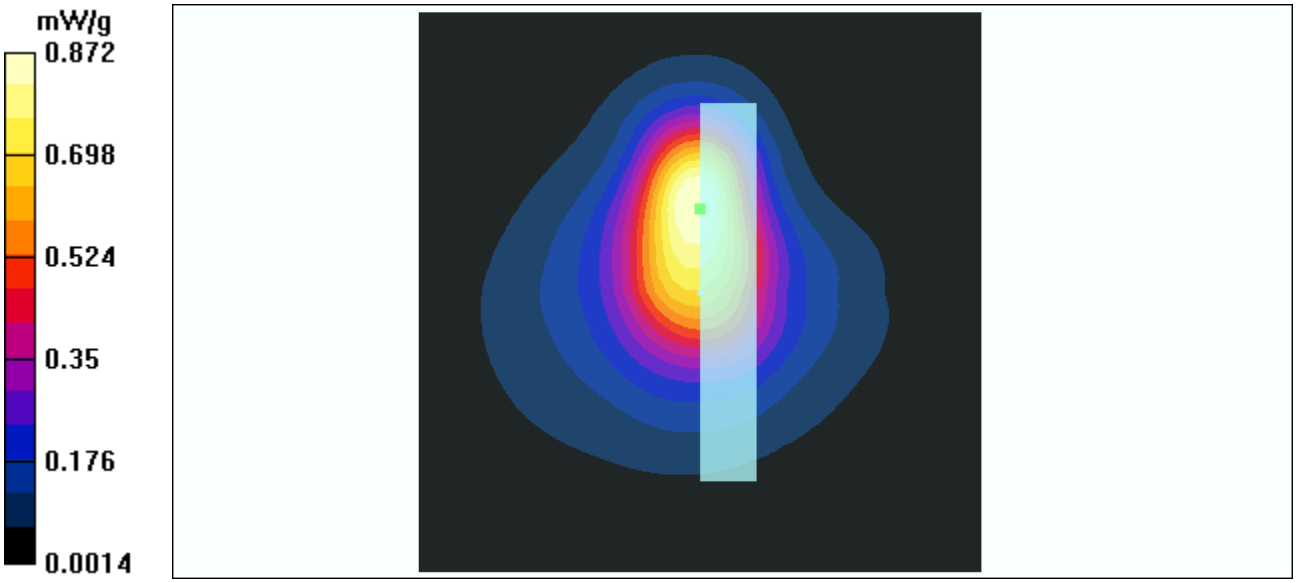
WPC54G V1.2 Mode 3

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.971 mho/m, ε_r = 52.78, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 11/Area Scan (41x41x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 19.9 V/m
Power Drift = -0.2 dB
Maximum value of SAR = 0.895 mW/g

Channel 11/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 1.87 W/kg
SAR(1 g) = 0.765 mW/g; SAR(10 g) = 0.321 mW/g
Reference Value = 19.9 V/m
Power Drift = -0.2 dB
Maximum value of SAR = 0.872 mW/g



Date/Time: 10/22/03 15:20:36

Test Laboratory: Advance Data Technology

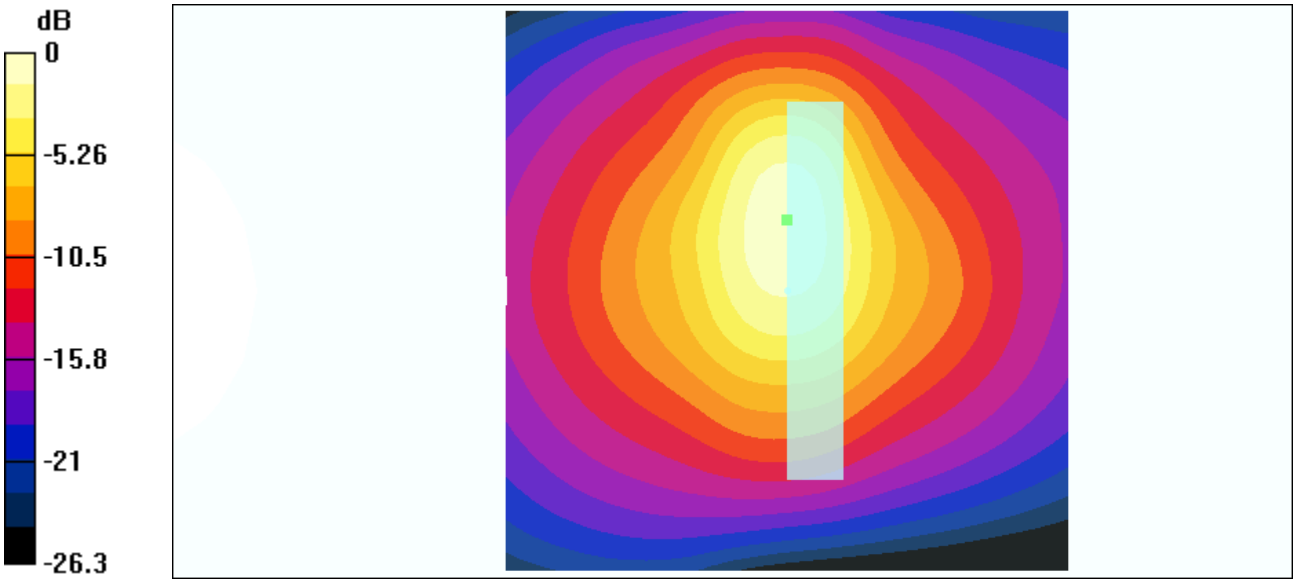
WPC54G V1.2 Mode 4

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2412 MHz

Communication System: 802.11g ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: OFDM
Medium: MSL2450 (σ = 1.881 mho/m, ε_r = 52.94, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 1/Area Scan (41x41x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 9.13 V/m
Power Drift = 0.4 dB
Maximum value of SAR = 0.176 mW/g

Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 0.406 W/kg
SAR(1 g) = 0.175 mW/g; SAR(10 g) = 0.0746 mW/g
Reference Value = 9.13 V/m
Power Drift = 0.4 dB
Maximum value of SAR = 0.199 mW/g



0 dB = 0.199mW/g

Date/Time: 10/22/03 14:31:54

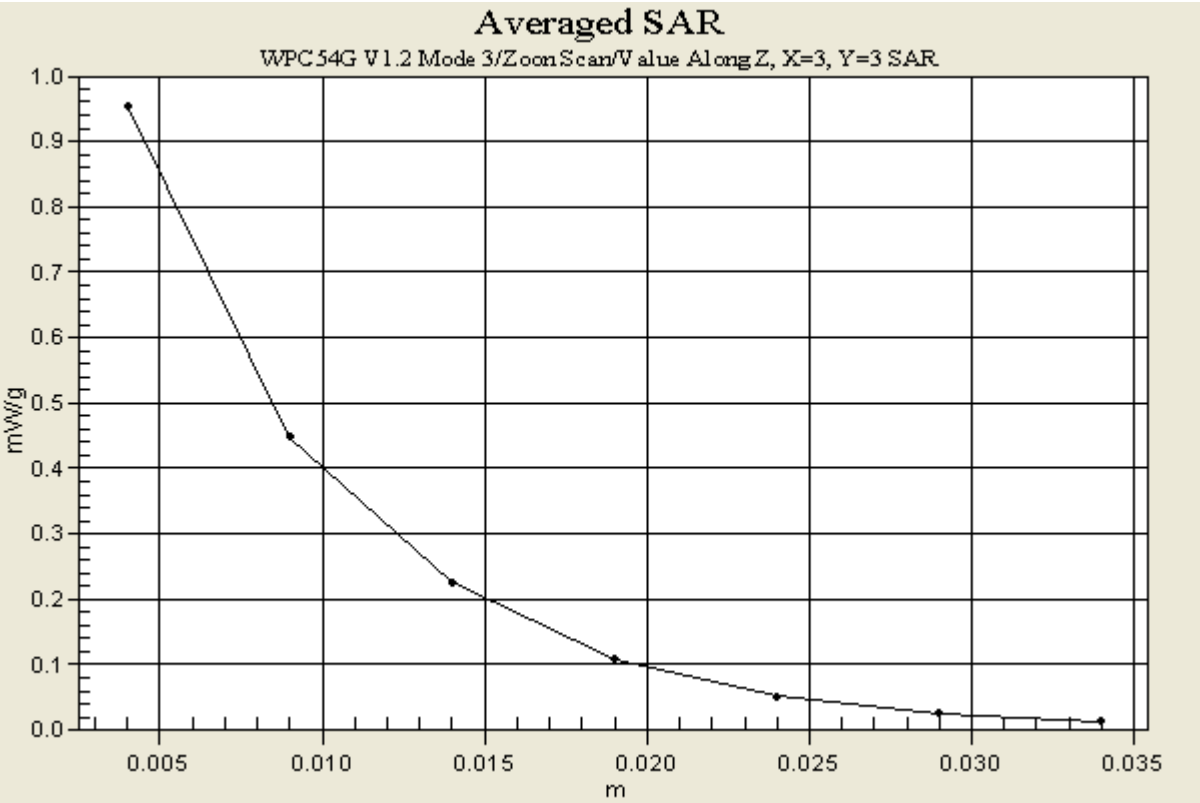
Test Laboratory: Advance Data Technology

WPC54G V1-2 Mode 3

DUT: Wireless-G Notebook Adapter ; Type: WPC54G V1.2 ; Test Channel Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 (σ = 1.881 mho/m, ε_r = 52.94, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 0mm(The tip of the EUT to the Phantom)
Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0degrees
DASY4 Configuration:
- Probe: ET3DV6 - SN1687; ConvF(4.4, 4.4, 4.4); Calibrated: 2002/9/28
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn541; Calibrated: 2003/1/14
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

Channel 1/Area Scan (41x41x1): Measurement grid: dx=20mm, dy=20mm
Reference Value = 20.4 V/m
Maximum value of SAR = 1.03 mW/g
Channel 1/Zoon Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 2.01 W/kg
SAR(1 g) = 0.849 mW/g; SAR(10 g) = 0.356 mW/g
Reference Value = 20.4 V/m
Power Drift = 0.1 dB
Maximum value of SAR = 0.954 mW/g



A3 : SYSTEM VALIDATION

Date/Time: 10/22/03 09:54:08

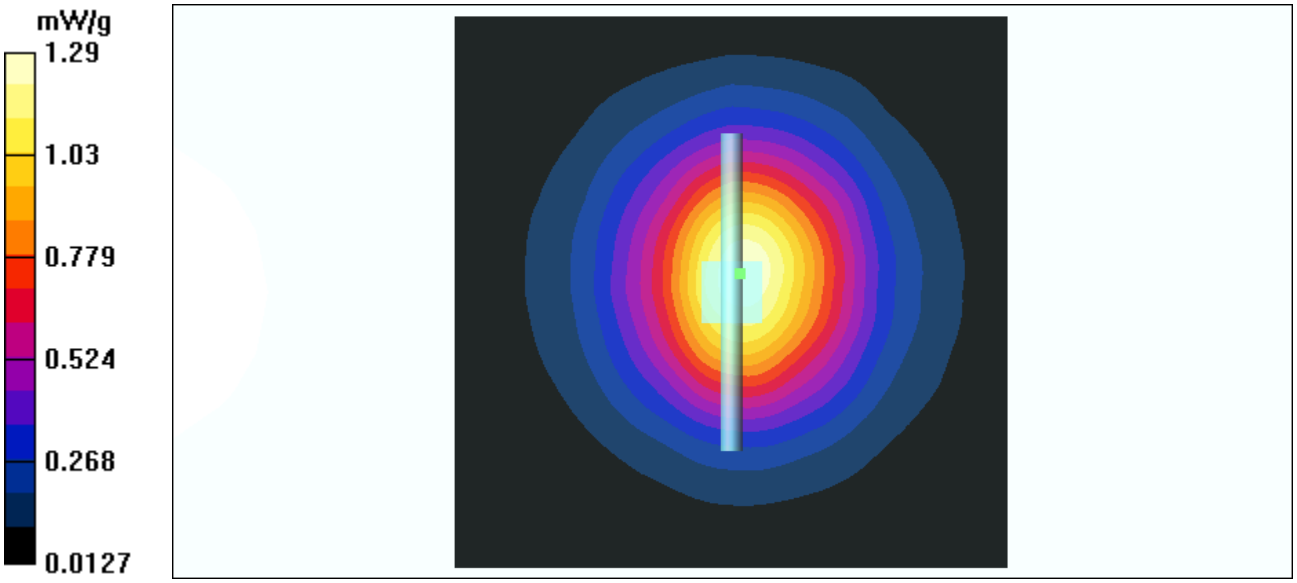
Test Laboratory: Advance Data Technology

SystemPerformanceCheck-Body 2450-2003-10-22

DUT: Dipole 2450 MHz ; Type: D2450V2

Communication System: CW ; Frequency: 2450 MHz; Duty Cycle: 1:1; Modulation type: CW
Medium: MSL2450 (σ = 1.949 mho/m, ε_r= 52.81, ρ = 1000 kg/m^3) ; Liquid level : 152mm
Phantom section: Flat Section ; Separation distance : 10mm(The feetpoint of the dipole to the Phantom)
Air temp. : 23.0 degrees ; Liquid temp. : 22 degrees

DASY4 Configuration:
- Probe: ET3DV6 - SN1686; ConvF(4.5, 4.5, 4.5); Calibrated: 2003/6/18
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510;
- Phantom: SAM Twin Phantom V4.0; Type: QD 000 P40 CA; Serial: TP-1150
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

d=10mm, Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 30 V/m
Power Drift = 0.05 dB
Maximum value of SAR = 1.32 mW/g

d=10mm, Pin=100mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 2.85 W/kg
SAR(1 g) = 5.71 mW/g; SAR(10 g) = 2.62 mW/g
Reference Value = 30 V/m
Power Drift = 0.05 dB
Maximum value of SAR = 1.30 mW/g