

APPENDIX A: TEST CONFIGURATIONS AND TEST DATA

A1: TEST CONFIGURATION



The lateral of the EUT to the flat phantom distance 0 mm



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



The bottom of the EUT to the flat phantom distance 0 mm EUT Photo



Liquid Level Photo

MSL 2450MHz D=152mm



Date/Time: 2005/6/14 11:02:09

Test Laboratory: Advance Data Technology

Web PAD-Lateral Right Antenna 11b Mode 1

DUT: Web PAD ; Type: TWN-5213 ; Test Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz ; Duty Cycle: 1:1 ; Modulation type: CCK
Medium: MSL2450 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³ ; Liquid level : 152 mm

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

Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.5 Build 19 ; Postprocessing SW: SEMCAD, V1.8 Build 146

Low Channel 1/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.479 mW/g

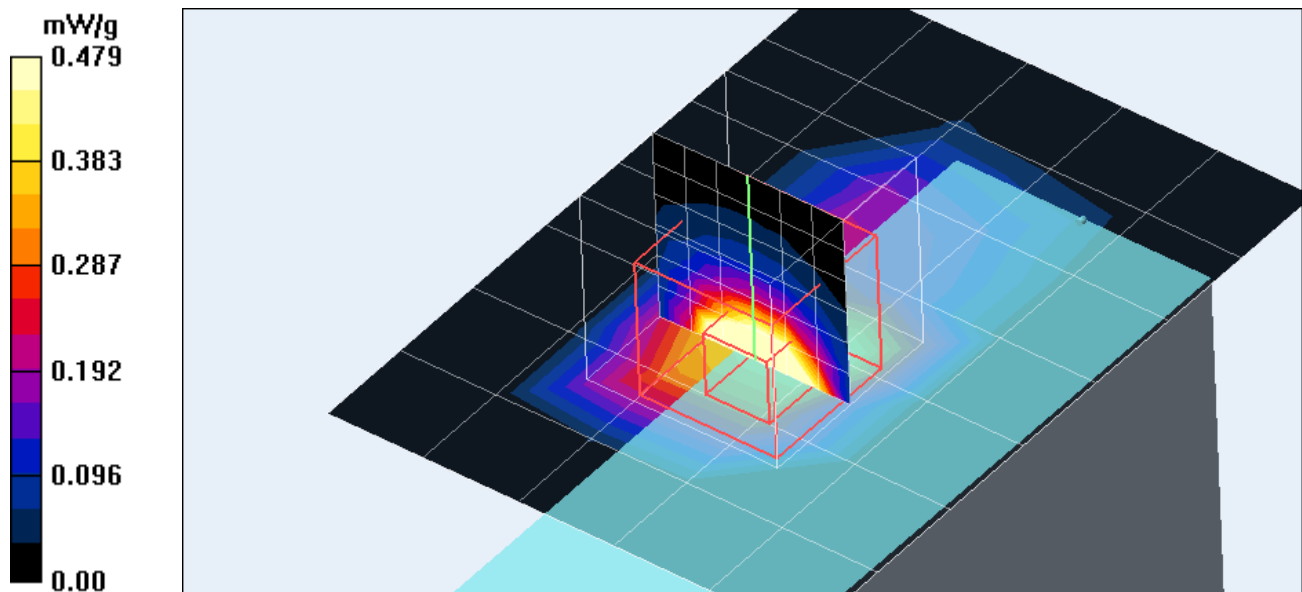
Low Channel 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

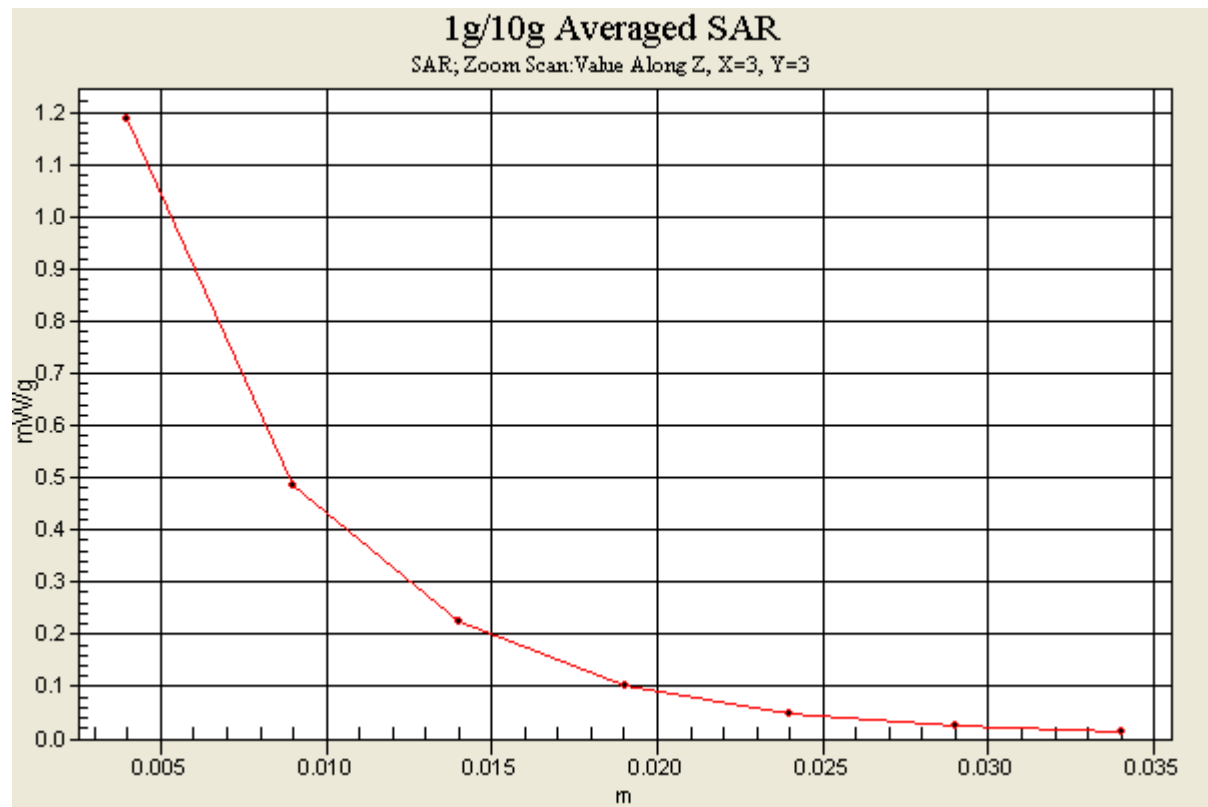
Reference Value = 4.51 V/m

Peak SAR (extrapolated) = 3.19 W/kg

SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.349 mW/g

Maximum value of SAR (measured) = 1.19 mW/g





Test Laboratory: Advance Data Technology

1.1.1 Web PAD-Lateral Right Antenna 11b Mode 1

DUT: Web PAD ; Type: TWN-5213 ; Test Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: CCK
Medium: MSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³ ; Liquid level : 152 mm

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

Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.5 Build 19 ; Postprocessing SW: SEMCAD, V1.8 Build 146

Middle Channel 6/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.413 mW/g

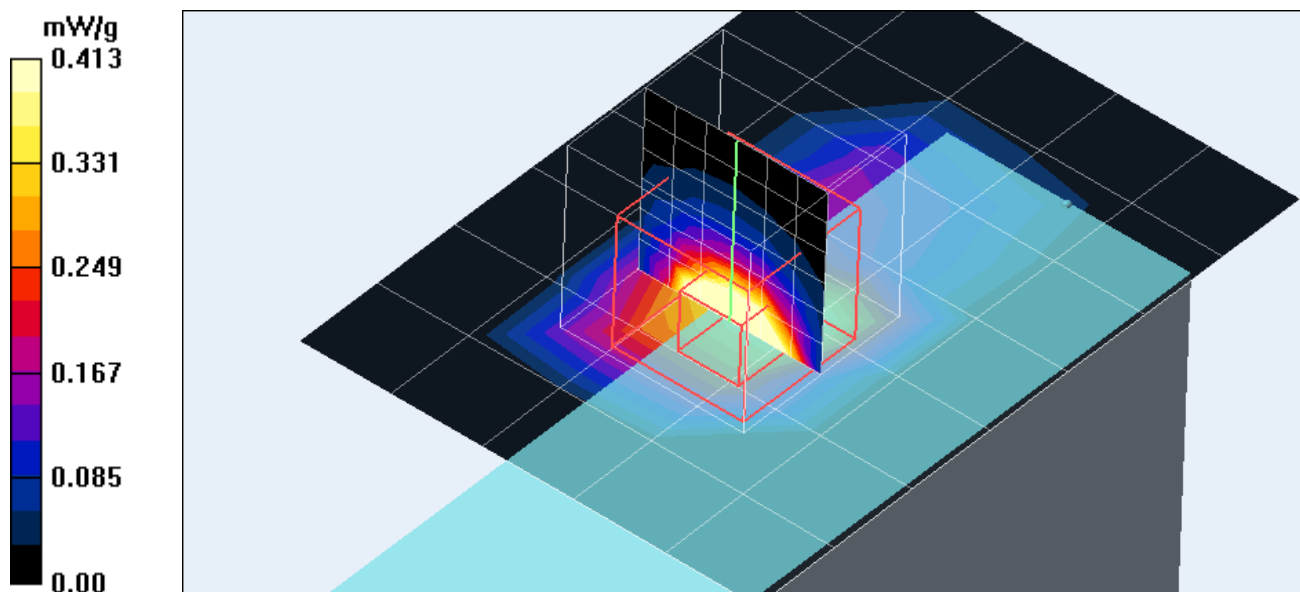
Middle Channel 6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.95 V/m

Peak SAR (extrapolated) = 2.72 W/kg

SAR(1 g) = 0.880 mW/g; SAR(10 g) = 0.293 mW/g

Maximum value of SAR (measured) = 1.000 mW/g



Date/Time: 2005/6/14 12:05:26

Test Laboratory: Advance Data Technology

1.1.2 Web PAD-Lateral Right Antenna 11b Mode 1

DUT: Web PAD ; Type: TWN-5213 ; Test Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz ; Duty Cycle: 1:1 ; Modulation type: CCK
Medium: MSL2450 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.05$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³ ; Liquid level : 152 mm

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

Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.5 Build 19 ; Postprocessing SW: SEMCAD, V1.8 Build 146

High Channel 11/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.392 mW/g

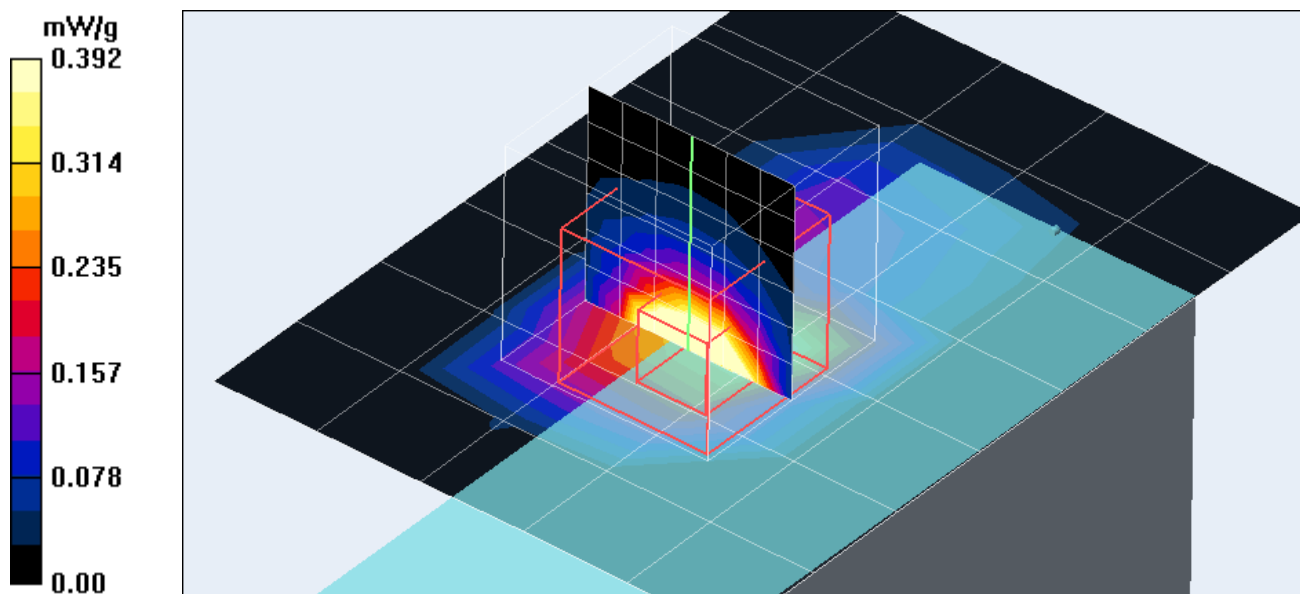
High Channel 11/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.63 V/m

Peak SAR (extrapolated) = 2.48 W/kg

SAR(1 g) = 0.789 mW/g; SAR(10 g) = 0.262 mW/g

Maximum value of SAR (measured) = 0.883 mW/g



Date/Time: 2005/6/14 13:47:00

Test Laboratory: Advance Data Technology

Web PAD-Tip Right Antenna 11b Mode 2

DUT: Web PAD ; Type: TWN-5213 ; Test Frequency: 2412 MHz

Communication System: 802.11b ; Frequency: 2412 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³ ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 0 mm (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 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2005/3/23
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Low Channel 1/Area Scan (8x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.064 mW/g

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

Reference Value = 2.71 V/m

Peak SAR (extrapolated) = 0.139 W/kg

SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.034 mW/g

Maximum value of SAR (measured) = 0.075 mW/g

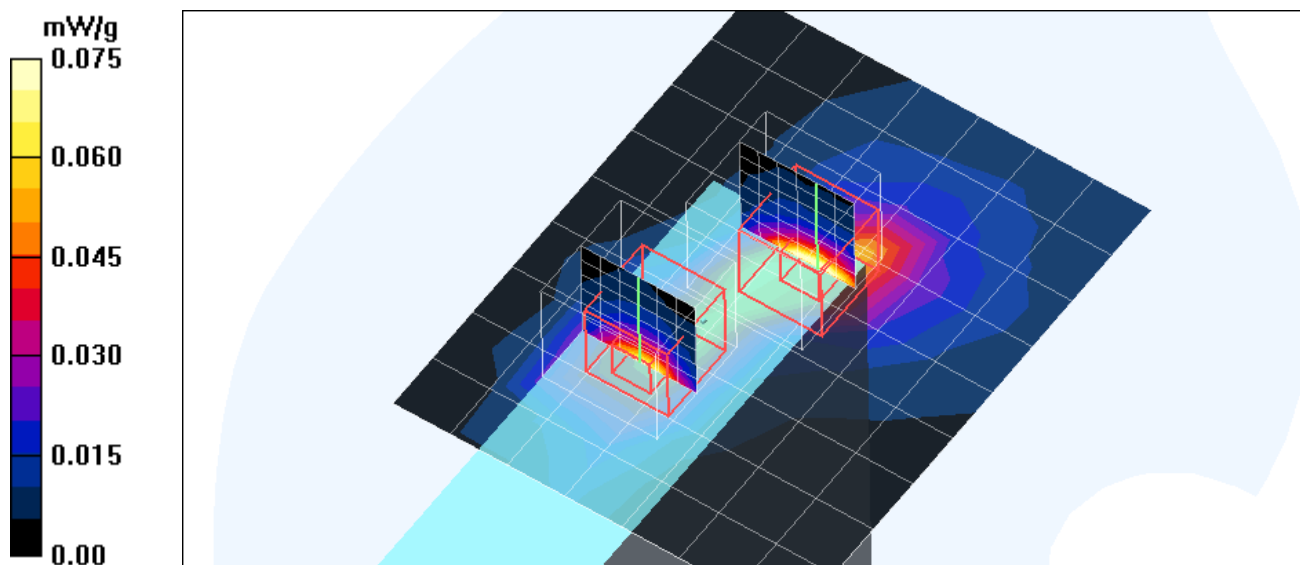
Low Channel 1/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

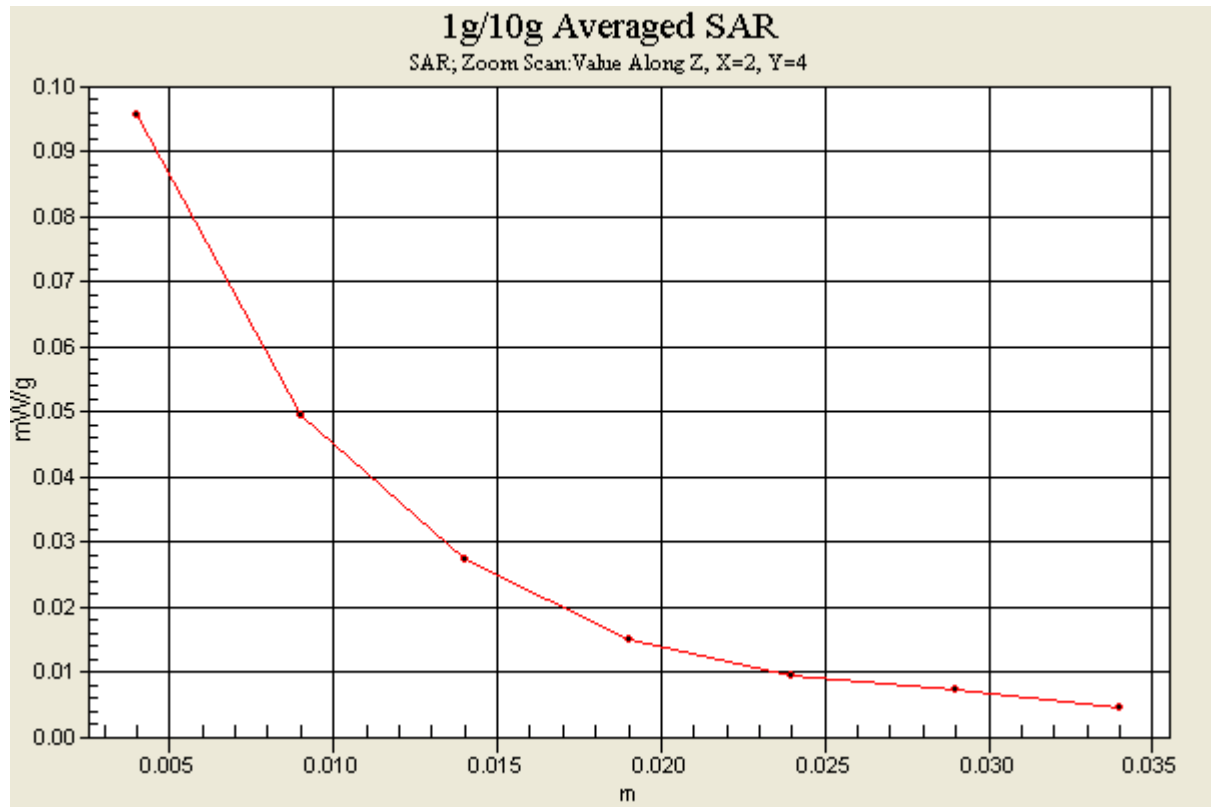
Reference Value = 2.71 V/m

Peak SAR (extrapolated) = 0.187 W/kg

SAR(1 g) = 0.082 mW/g; SAR(10 g) = 0.039 mW/g

Maximum value of SAR (measured) = 0.095 mW/g





Date/Time: 2005/6/14 14:28:36

Test Laboratory: Advance Data Technology

Web PAD-Tip Right Antenna 11b Mode 2

DUT: Web PAD ; Type: TWN-5213 ; Test Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³ ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 0 mm (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 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2005/3/23
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Middle Channel 6/Area Scan (8x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.067 mW/g

Middle Channel 6/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.52 V/m

Peak SAR (extrapolated) = 0.172 W/kg

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.034 mW/g

Maximum value of SAR (measured) = 0.083 mW/g

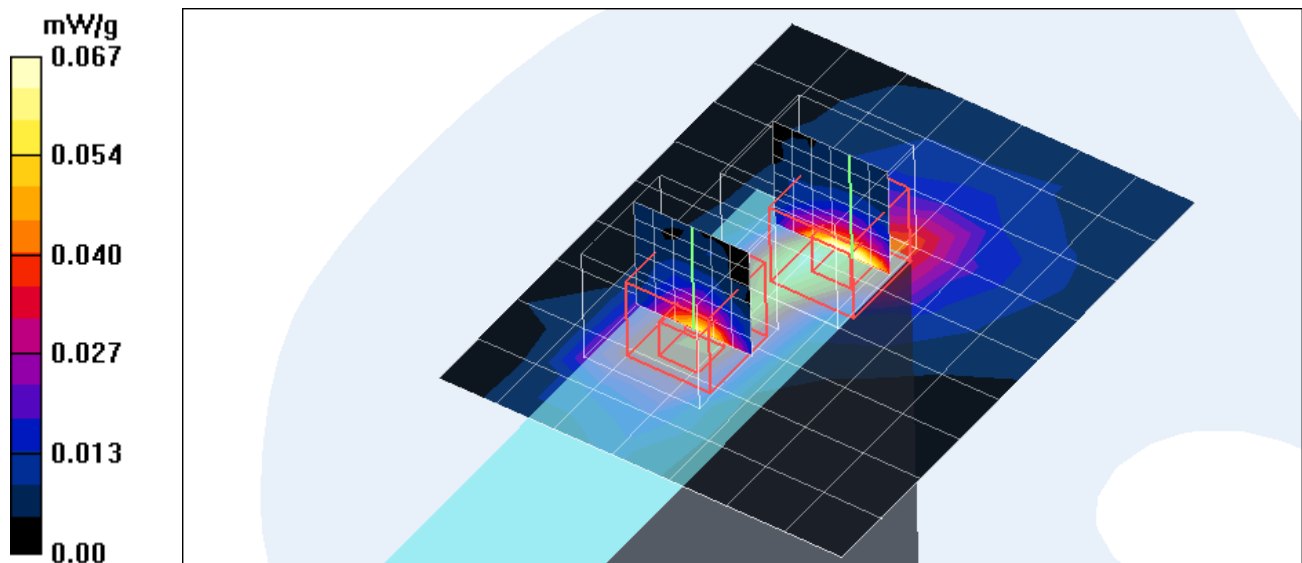
Middle Channel 6/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.52 V/m

Peak SAR (extrapolated) = 0.113 W/kg

SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.029 mW/g

Maximum value of SAR (measured) = 0.062 mW/g



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Test Laboratory: Advance Data Technology

Web PAD-Tip Right Antenna 11b Mode 2

DUT: Web PAD ; Type: TWN-5213 ; Test Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz; Duty Cycle: 1:1; Modulation type: CCK
Medium: MSL2450 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.05$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³ ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 0 mm (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 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2005/3/23
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

High Channel 11/Area Scan (8x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.060 mW/g

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

Reference Value = 2.28 V/m

Peak SAR (extrapolated) = 0.138 W/kg

SAR(1 g) = 0.062 mW/g; SAR(10 g) = 0.029 mW/g

Maximum value of SAR (measured) = 0.070 mW/g

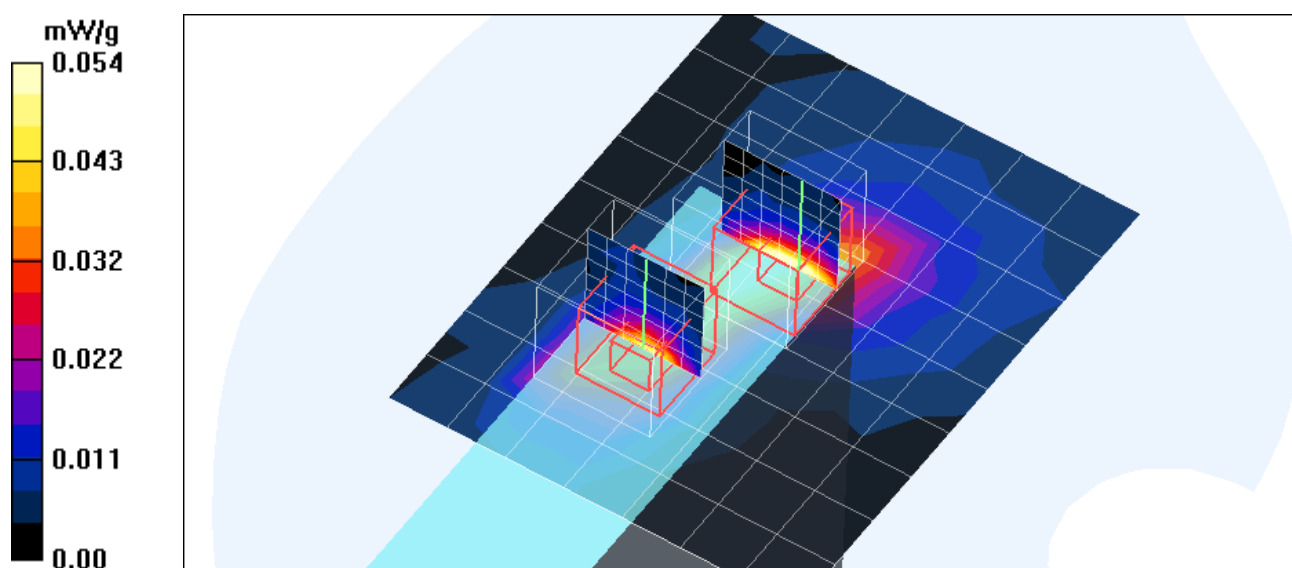
High Channel 11/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.28 V/m

Peak SAR (extrapolated) = 0.095 W/kg

SAR(1 g) = 0.048 mW/g; SAR(10 g) = 0.025 mW/g

Maximum value of SAR (measured) = 0.054 mW/g



Date/Time: 2005/6/14 15:42:21

Test Laboratory: Advance Data Technology

Web PAD-Bottom Right Antenna 11b Mode 3

DUT: Web PAD ; Type: TWN-5213 ; Test Channel Frequency: 2412 MHz

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

Medium: MSL2450 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$

kg/m^3 ; Liquid level : 152 mm

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

Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23

- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202

- Measurement SW: DASY4, V4.5 Build 19 ; Postprocessing SW: SEMCAD, V1.8 Build 146

Low Channel 1/Area Scan (7x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.019 mW/g

Low Channel 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.26 V/m

Peak SAR (extrapolated) = 0.032 W/kg

SAR(1 g) = 0.017 mW/g; SAR(10 g) = 0.010 mW/g

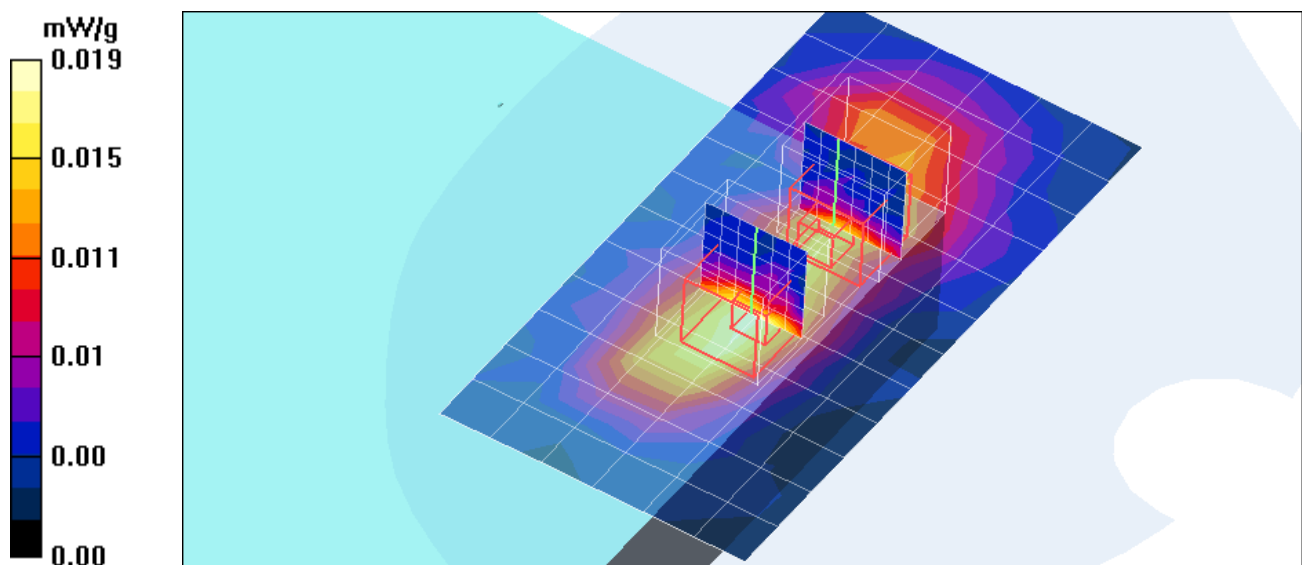
Low Channel 1/Zoom Scan (7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.26 V/m

Peak SAR (extrapolated) = 0.028 W/kg

SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.00872 mW/g

Maximum value of SAR (measured) = 0.015 mW/g



Date/Time: 2005/6/14 16:17:59

Test Laboratory: Advance Data Technology

Web PAD-Bottom Right Antenna 11b Mode 3

DUT: Web PAD ; Type: TWN-5213 ; Test Channel Frequency: 2437 MHz

Communication System: 802.11b ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: CCK
Medium: MSL2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³ ; Liquid level : 152 mm

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

Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.5 Build 19 ; Postprocessing SW: SEMCAD, V1.8 Build 146

Middle Channel/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.024 mW/g

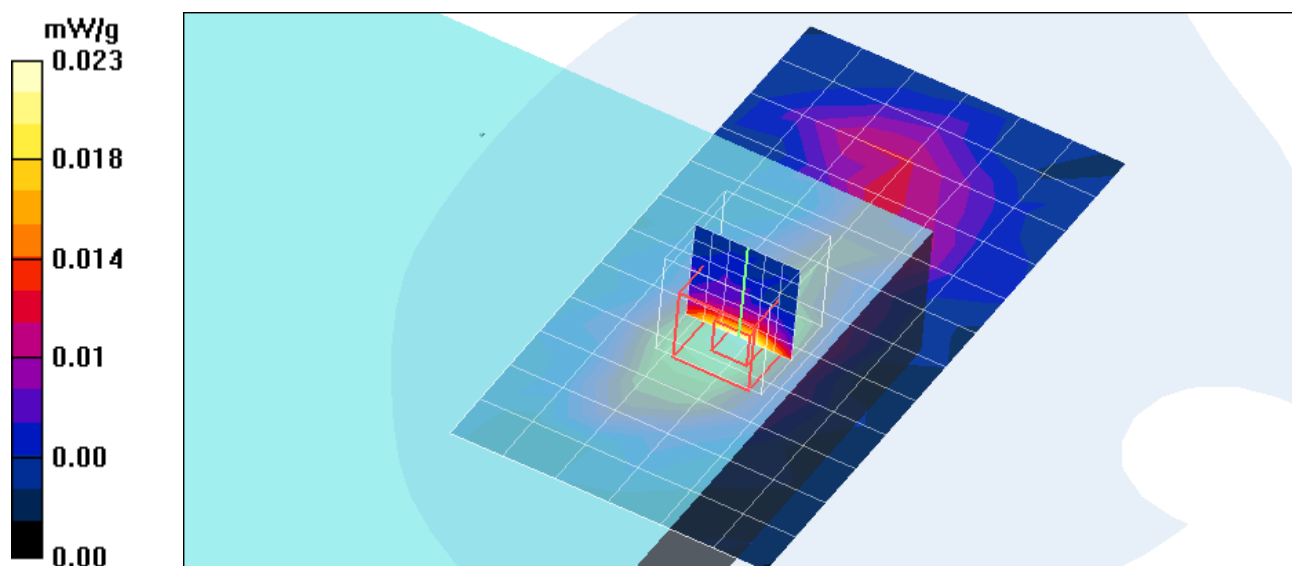
Middle Channel/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

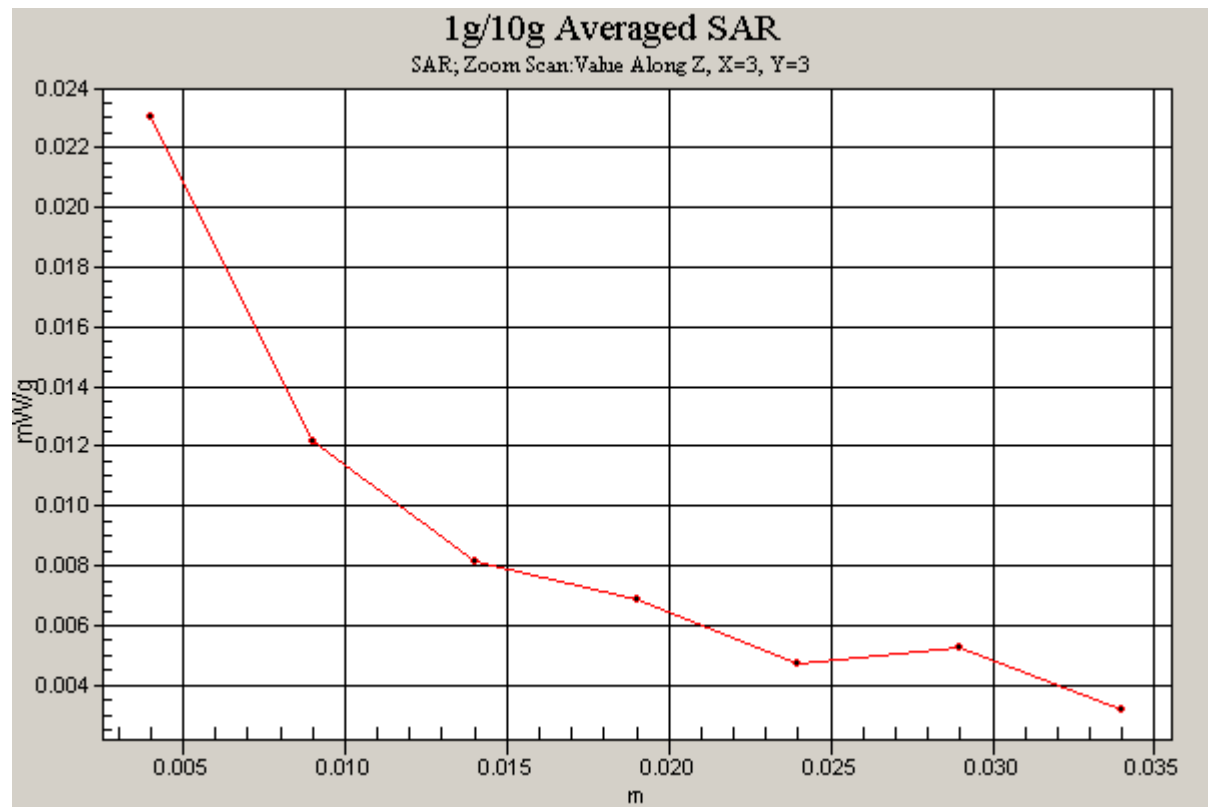
Reference Value = 2.18 V/m

Peak SAR (extrapolated) = 0.042 W/kg

SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.013 mW/g

Maximum value of SAR (measured) = 0.023 mW/g





Date/Time: 2005/6/14 16:48:46

Test Laboratory: Advance Data Technology

Web PAD-Bottom Right Antenna 11b Mode 3

DUT: Web PAD ; Type: TWN-5213 ; Test Channel Frequency: 2462 MHz

Communication System: 802.11b ; Frequency: 2462 MHz ; Duty Cycle: 1:1 ; Modulation type: CCK
Medium: MSL2450 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.05$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³ ; Liquid level : 152 mm

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

Antenna type : Internal Antenna ; Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579 ; Calibrated: 2005/3/23
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.5 Build 19 ; Postprocessing SW: SEMCAD, V1.8 Build 146

High Channel 11/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm

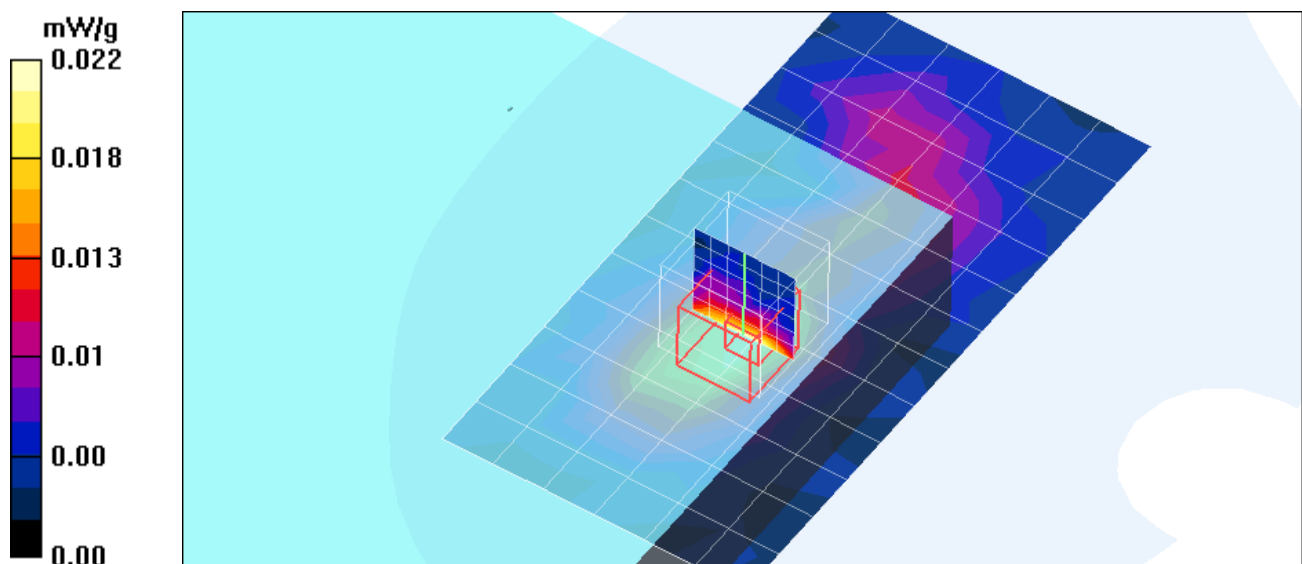
Maximum value of SAR (measured) = 0.022 mW/g

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

Reference Value = 1.99 V/m

Peak SAR (extrapolated) = 0.070 W/kg

SAR(1 g) = **0.019 mW/g**; SAR(10 g) = 0.011 mW/g



Date/Time: 2005/6/14 10:03:50

Test Laboratory: Advance Data Technology

System Validation Check-MSL 2450MHz

DUT: Dipole 2450 MHz ; Type: D2450V2 ; Serial: 737 ; Test Frequency: 2450 MHz

Communication System: CW ; Frequency: 2450 MHz; Duty Cycle: 1:1; Modulation type: CW
Medium: MSL2450; Medium parameters used: $f = 2450$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 53.4$; $\rho = 1000$ kg/m³ ; Liquid level : 152 mm

Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom) Air temp. : 23.0 degrees ; Liquid temp. : 22.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1790 ; ConvF(4.35, 4.35, 4.35) ; Calibrated: 2004/12/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2005/3/23
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

d=10mm, Pin=250mW/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 13.6 mW/g

d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 86.6 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 27.7 W/kg

SAR(1 g) = 12.7 mW/g; SAR(10 g) = 5.9 mW/g

Maximum value of SAR (measured) = 14.3 mW/g

