

## APPENDIX A: TEST CONFIGURATIONS AND TEST DATA

### A1: TEST CONFIGURATION

#### Mode 1 Bottom Position



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

## Mode 2 Bottom Position



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

# EUT Photo



## Liquid Level Photo

MSL 2450MHz D=155mm



## A2 : TEST DATA

Date/Time: 11/26/04 15:42:19

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### WLI-U2-KG54 11b Bottom Mode 1 Ch 1

**DUT: Wireless LAN 802.11g USB2.0 Adapter ; Type: WLI-U2-KG54 ; 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;  $\sigma = 1.96$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$

kg/m<sup>3</sup> ; Liquid level : 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.23, 4.23, 4.23) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

**Low Channel/Area Scan (5x8x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.059 mW/g

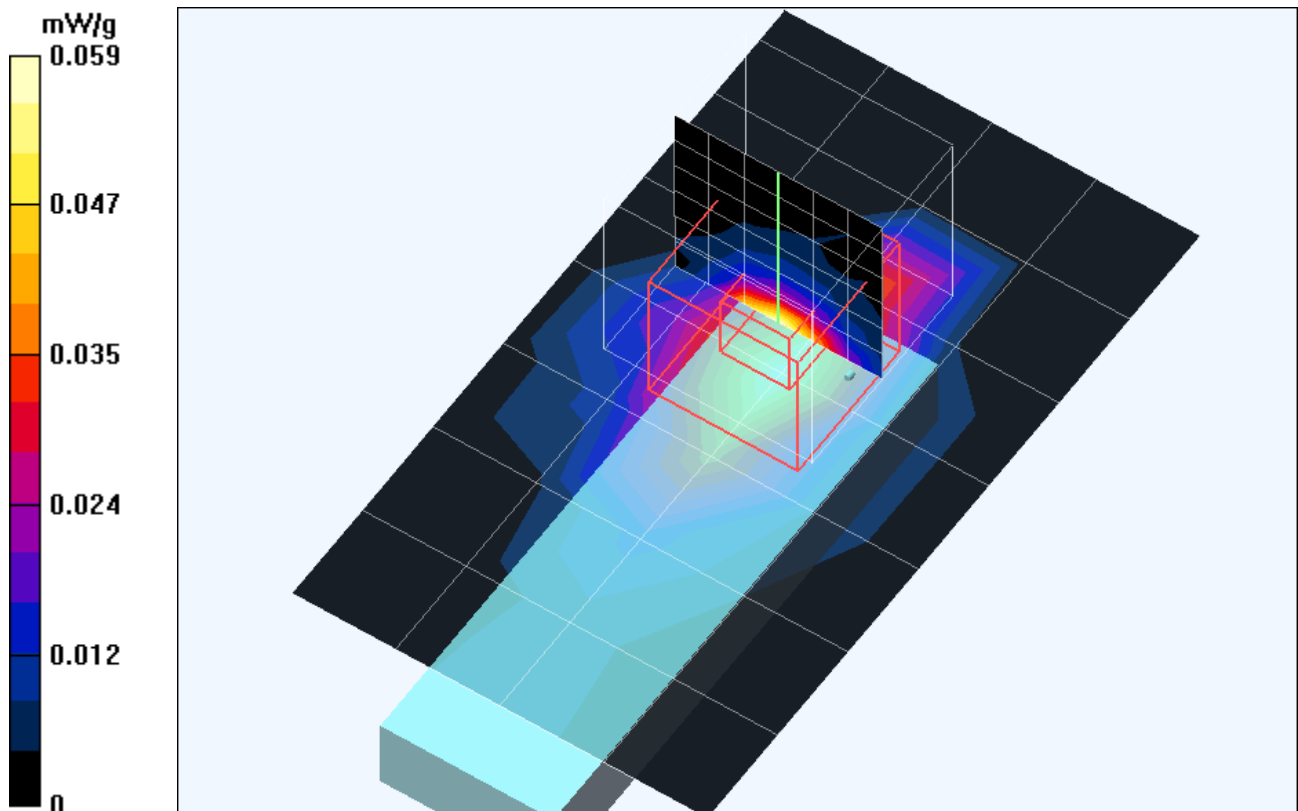
**Low Channel/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.23 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 0.230 W/kg

**SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.030 mW/g**

Maximum value of SAR (measured) = 0.088 mW/g



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### WLI-U2-KG54 11b Bottom Mode 1 Ch 6

**DUT: Wireless LAN 802.11g USB2.0 Adapter ; Type: WLI-U2-KG54 ; 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;  $\sigma = 1.99$  mho/m;  $\epsilon_r = 51.3$ ;  $\rho = 1000$

kg/m<sup>3</sup> ; Liquid level : 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.23, 4.23, 4.23) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

**Middle Channel/Area Scan (5x8x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.103 mW/g

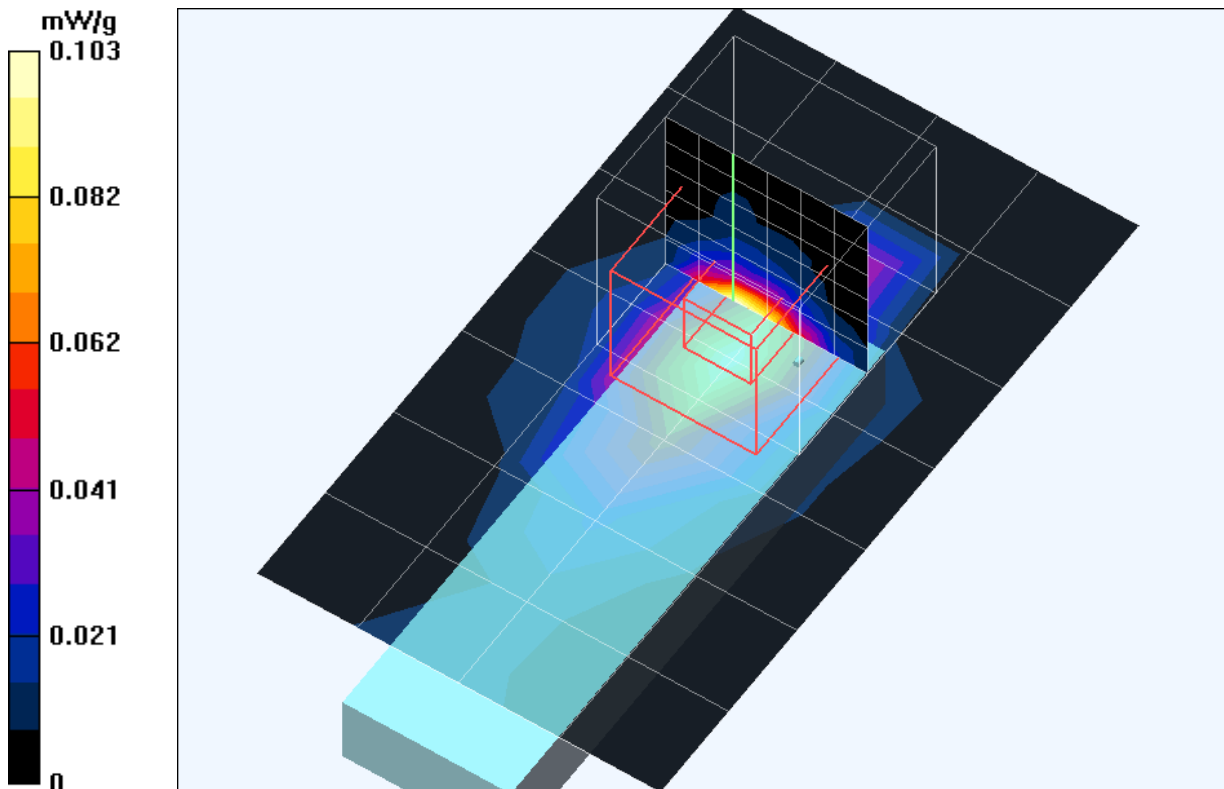
**Middle Channel/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.59 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 0.297 W/kg

**SAR(1 g) = 0.106 mW/g; SAR(10 g) = 0.043 mW/g**

Maximum value of SAR (measured) = 0.124 mW/g



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## WLI-U2-KG54 11b Bottom Mode 1 Ch 11

**DUT: Wireless LAN 802.11g USB2.0 Adapter ; Type: WLI-U2-KG54 ; 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;  $\sigma = 2.03$  mho/m;  $\epsilon_r = 51.2$ ;  $\rho = 1000$

kg/m<sup>3</sup> ; Liquid level : 155 mm

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

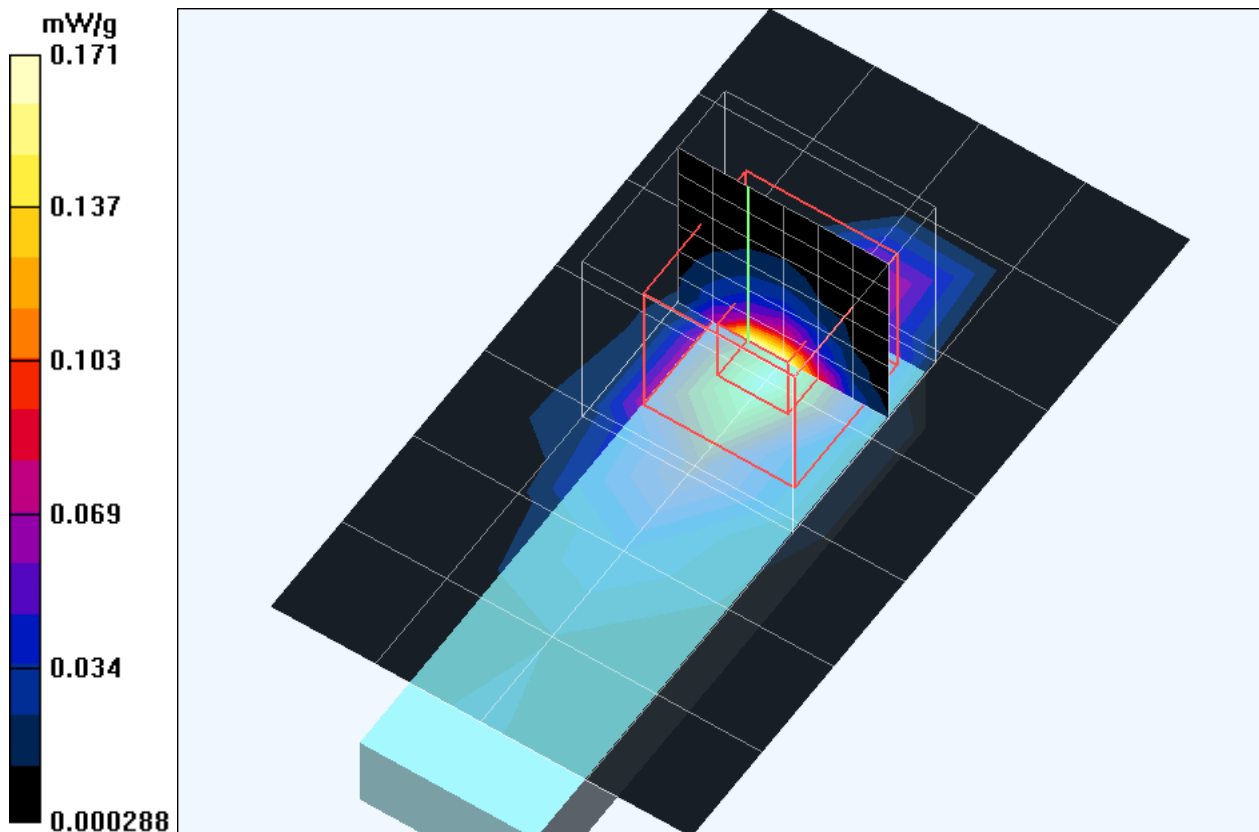
Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.23, 4.23, 4.23) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

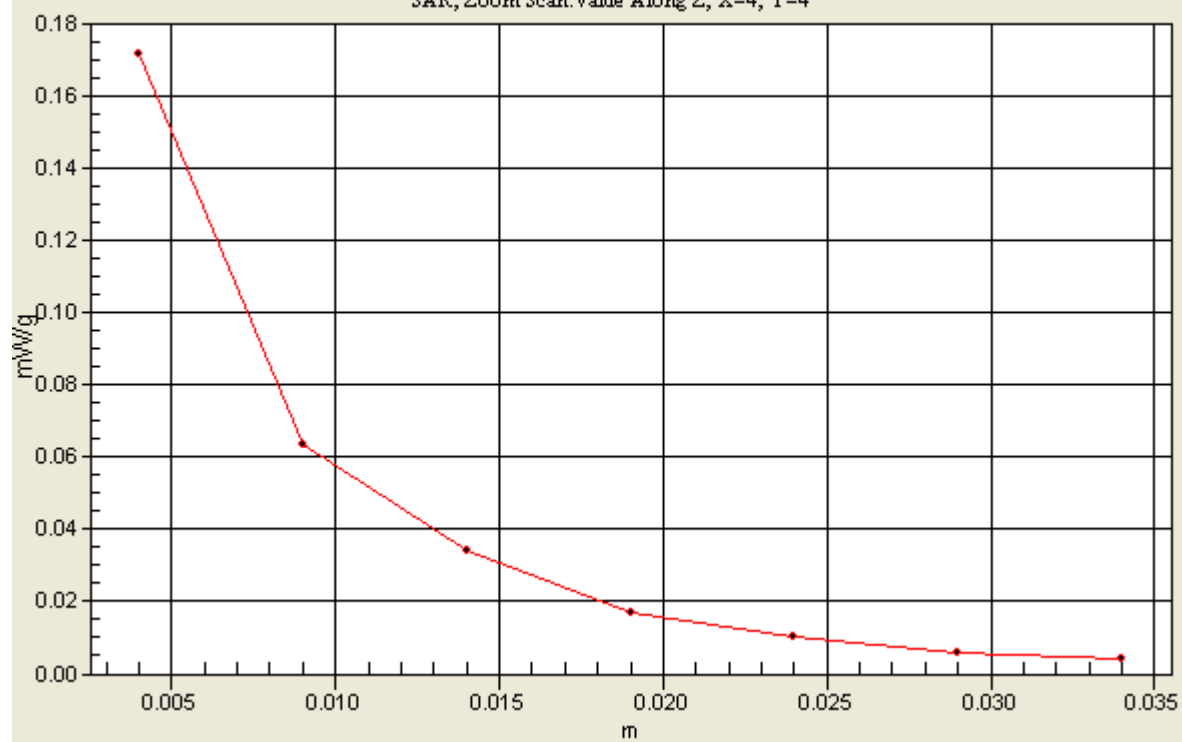
**High Channel/Area Scan (5x8x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.171 mW/g

**High Channel/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 3.02 V/m; Power Drift = -0.2 dB  
Peak SAR (extrapolated) = 0.546 W/kg  
**SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.063 mW/g**  
Maximum value of SAR (measured) = 0.172 mW/g



### 1g/10g Averaged SAR

SAR; Zoom Scan: Value Along Z, X=4, Y=4





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### WLI-U2-KG54 11g Bottom Mode 2 Ch 1

**DUT: Wireless LAN 802.11g USB2.0 Adapter ; Type: WLI-U2-KG54 ; Test Channel Frequency: 2412 MHz**

Communication System: 802.11g ; Frequency: 2412 MHz ; Duty Cycle: 1:1 ; Modulation type: OFDM

Medium: MSL2450 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.96$  mho/m;  $\epsilon_r = 51.4$ ;  $\rho = 1000$

kg/m<sup>3</sup> ; Liquid level : 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.23, 4.23, 4.23) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

**Low Channel/Area Scan (5x8x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.040 mW/g

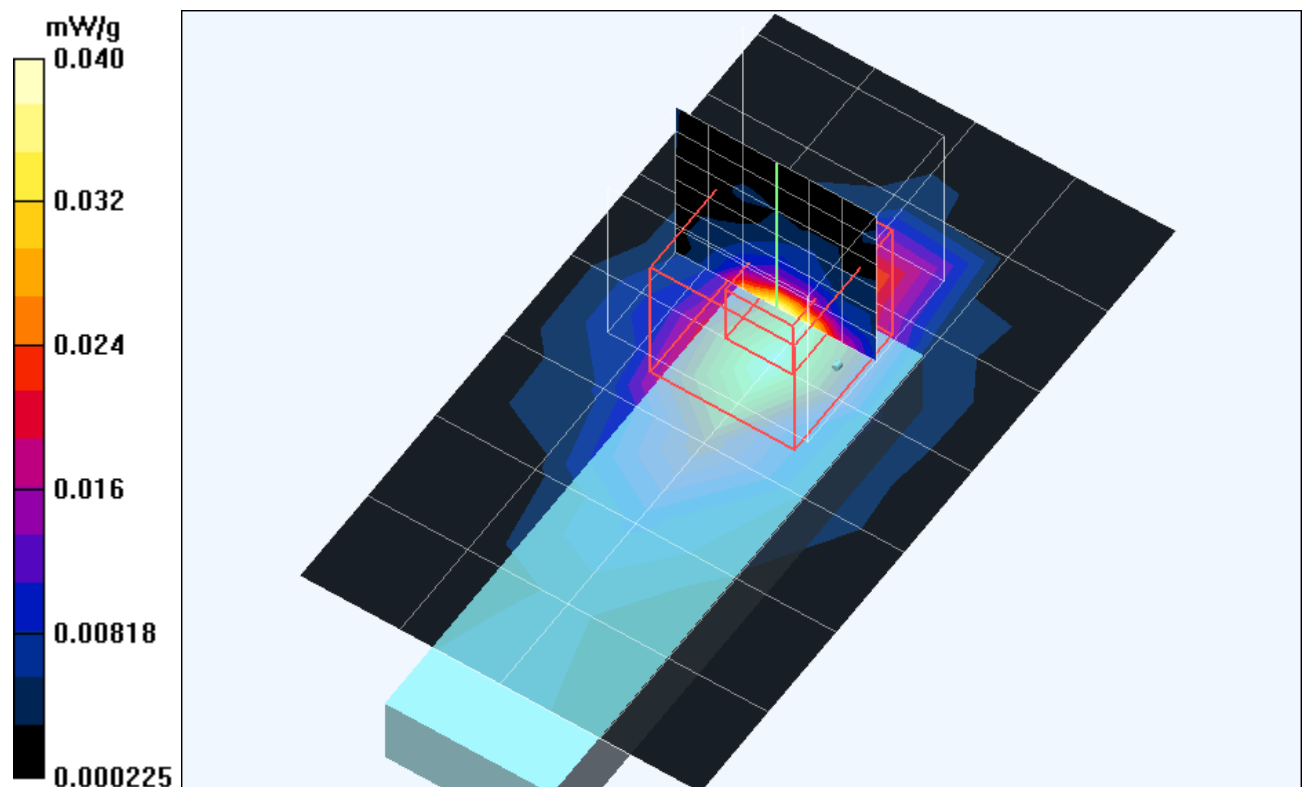
**Low Channel/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.39 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 0.141 W/kg

**SAR(1 g) = 0.048 mW/g; SAR(10 g) = 0.019 mW/g**

Maximum value of SAR (measured) = 0.056 mW/g



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### WLI-U2-KG54 11g Bottom Mode 2 Ch 6

**DUT: Wireless LAN 802.11g USB2.0 Adapter ; Type: WLI-U2-KG54 ; Test Channel Frequency: 2437 MHz**

Communication System: 802.11g ; Frequency: 2437 MHz ; Duty Cycle: 1:1 ; Modulation type: OFDM

Medium: MSL2450 Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.99$  mho/m;  $\epsilon_r = 51.3$ ;  $\rho = 1000$

kg/m<sup>3</sup> ; Liquid level : 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.23, 4.23, 4.23) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

**Middle Channel/Area Scan (5x8x1):** Measurement grid: dx=15mm, dy=15mm

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

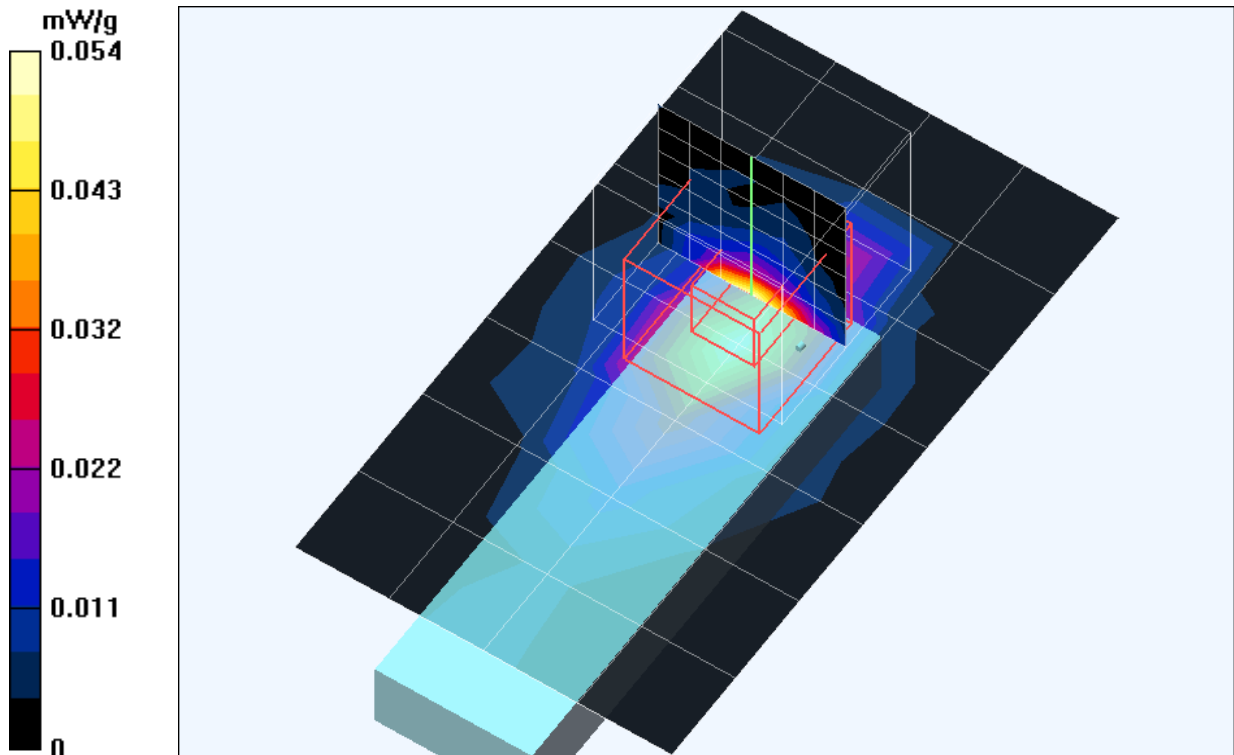
**Middle Channel/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.2 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 0.139 W/kg

**SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.021 mW/g**

Maximum value of SAR (measured) = 0.057 mW/g



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### WLI-U2-KG54 11g Bottom Mode 2 Ch 11

**DUT: Wireless LAN 802.11g USB2.0 Adapter ; Type: WLI-U2-KG54 ; Test Channel Frequency: 2462 MHz**

Communication System: 802.11g ; Frequency: 2462 MHz ; Duty Cycle: 1:1 ; Modulation type: OFDM

Medium: MSL2450 Medium parameters used:  $f = 2462$  MHz;  $\sigma = 2.03$  mho/m;  $\epsilon_r = 51.2$ ;  $\rho = 1000$

kg/m<sup>3</sup> ; Liquid level : 155 mm

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

Antenna type : Internal Antenna ; Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.23, 4.23, 4.23) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510 ; Calibrated: 2004/8/17
- Phantom: SAM 12 ; Type: SAM V4.0 ; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3 ; Postprocessing SW: SEMCAD, V1.8 Build 130

**High Channel/Area Scan (5x8x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.079 mW/g

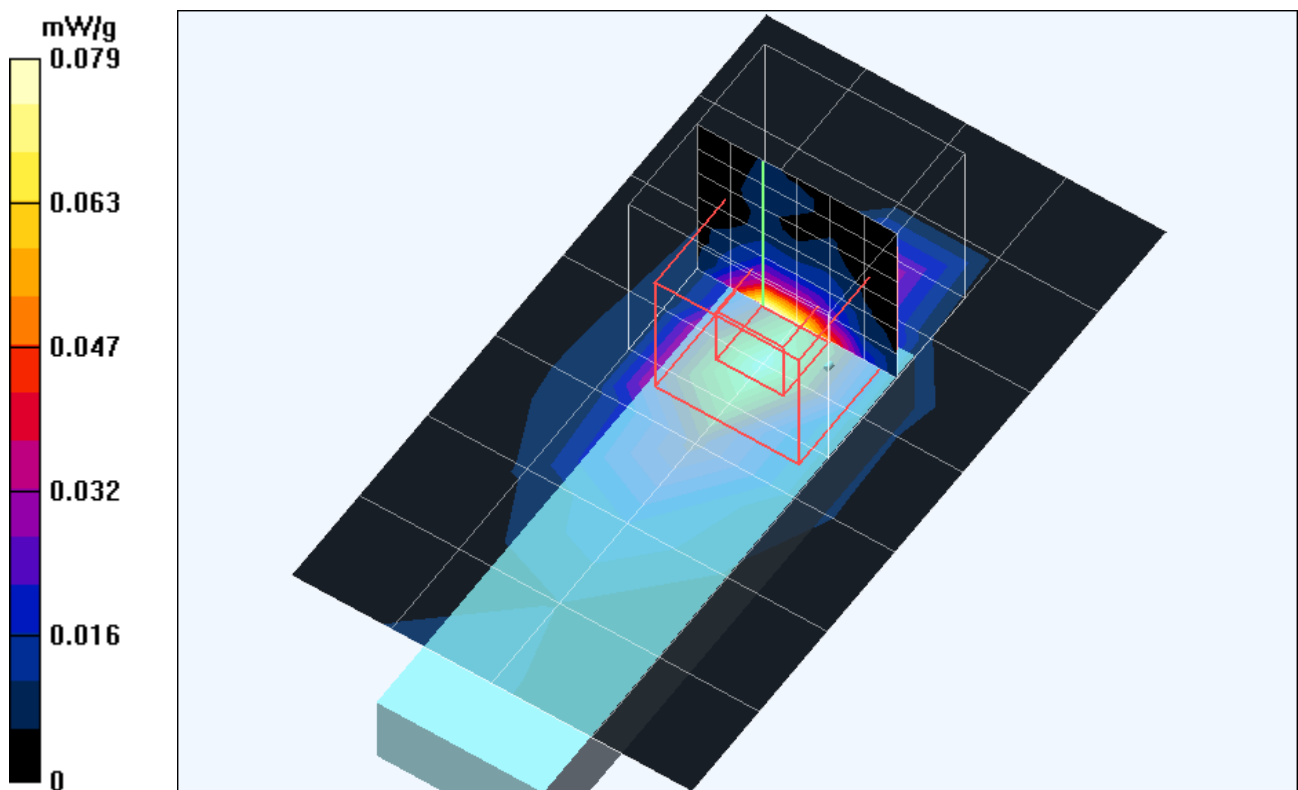
**High Channel/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.54 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 0.183 W/kg

**SAR(1 g) = 0.071 mW/g; SAR(10 g) = 0.030 mW/g**

Maximum value of SAR (measured) = 0.079 mW/g



# A3 : SYSTEM VALIDATION

Date/Time: 11/26/04 10:02:31

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## System Validation Check-MSL 2450MHz

**DUT: Dipole 2450 MHz ; Type: D2450V2 ; Serial: 716 ; Test Channel Frequency: 2450 MHz**

Communication System: CW ; Frequency: 2450 MHz; Duty Cycle: 1:1; Modulation type: CW  
Medium: MSL2450; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 2.01$  mho/m;  $\epsilon_r = 51.3$ ;  $\rho = 1000$

kg/m<sup>3</sup> ; Liquid level : 155mm

Phantom section: Flat Section ; Separation distance : 10 mm (The feetpoint of the dipole to the Phantom) Air temp. : 22.0 degrees ; Liquid temp. : 21.0 degrees

DASY4 Configuration:

- Probe: ET3DV6 - SN1687 ; ConvF(4.23, 4.23, 4.23) ; Calibrated: 2004/8/26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn510; Calibrated: 2004/8/17
- Phantom: SAM 12; Type: SAM V4.0; Serial: TP 1202
- Measurement SW: DASY4, V4.4 Build 3; Postprocessing SW: SEMCAD, V1.8 Build 130

**d=10mm, Pin=250mW/Area Scan (5x6x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 12.8 mW/g

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

Reference Value = 87.3 V/m; Power Drift = -0.1 dB

Peak SAR (extrapolated) = 23.7 W/kg

**SAR(1 g) = 12 mW/g; SAR(10 g) = 5.71 mW/g**

Maximum value of SAR (measured) = 13.9 mW/g

