

Test Laboratory: Compliance Certification Services

## Lapheld - 2.4 GHz Band

DUT: Broadcom PCI-E Mini card in Host HP Galileo; Type: 802.11bg; Serial: N/A

Communication System: 802.11bg; Frequency: 2437 MHz; Duty Cycle: 1:1.03

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.97$  mho/m;  $\epsilon_r = 51.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 23.0 deg. C; Liquid Temperature: 22.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**802.11b mode Main Ant - M ch/Area Scan (7x9x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.044 mW/g

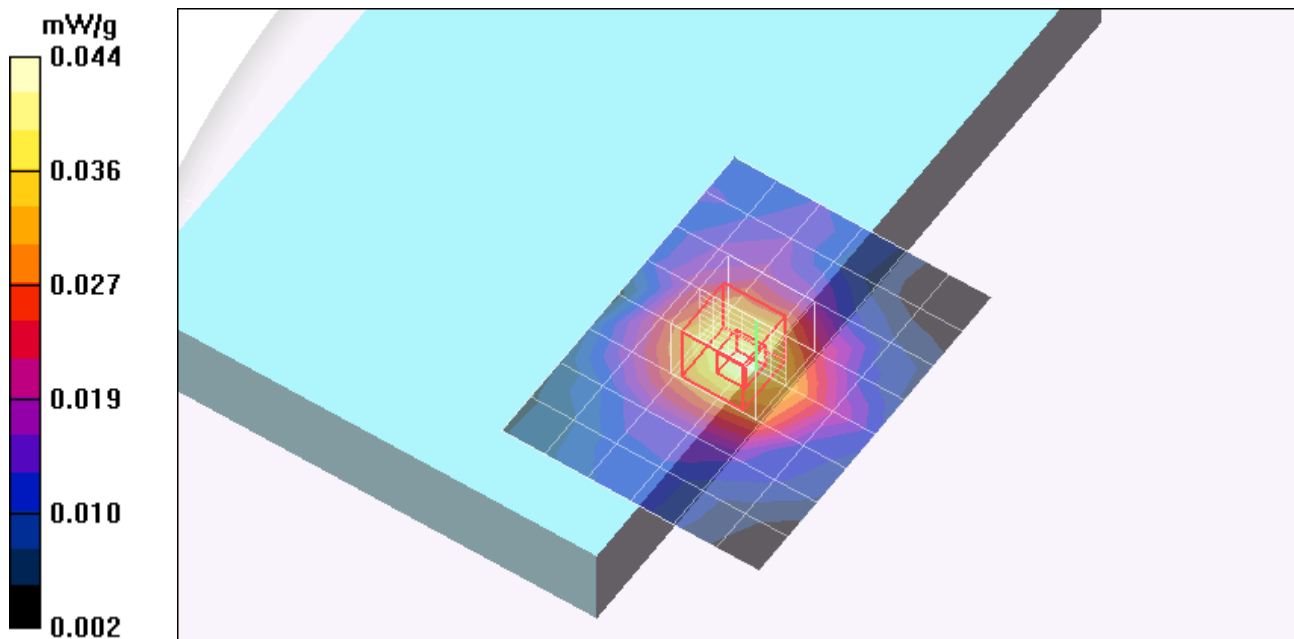
**802.11b mode Main Ant - M ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 4.87 V/m; Power Drift = -0.191 dB

Peak SAR (extrapolated) = 0.067 W/kg

**SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.018 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)



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Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.97$  mho/m;  $\epsilon_r = 51.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 23.0 deg. C; Liquid Temperature: 22.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**802.11b mode AUX Ant - M ch/Area Scan (7x9x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.055 mW/g

**802.11b mode AUX Ant - M ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

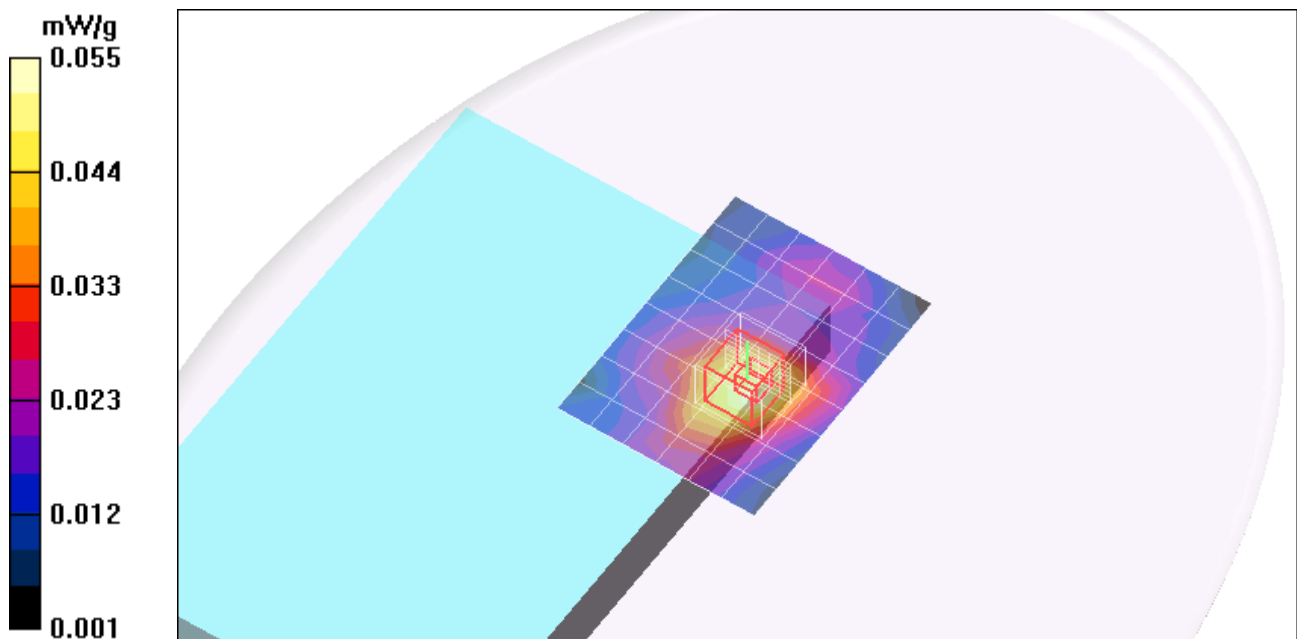
Reference Value = 4.80 V/m; Power Drift = 0.198 dB

Peak SAR (extrapolated) = 0.105 W/kg

**SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.025 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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



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### Lapheld - 2.4 GHz Band

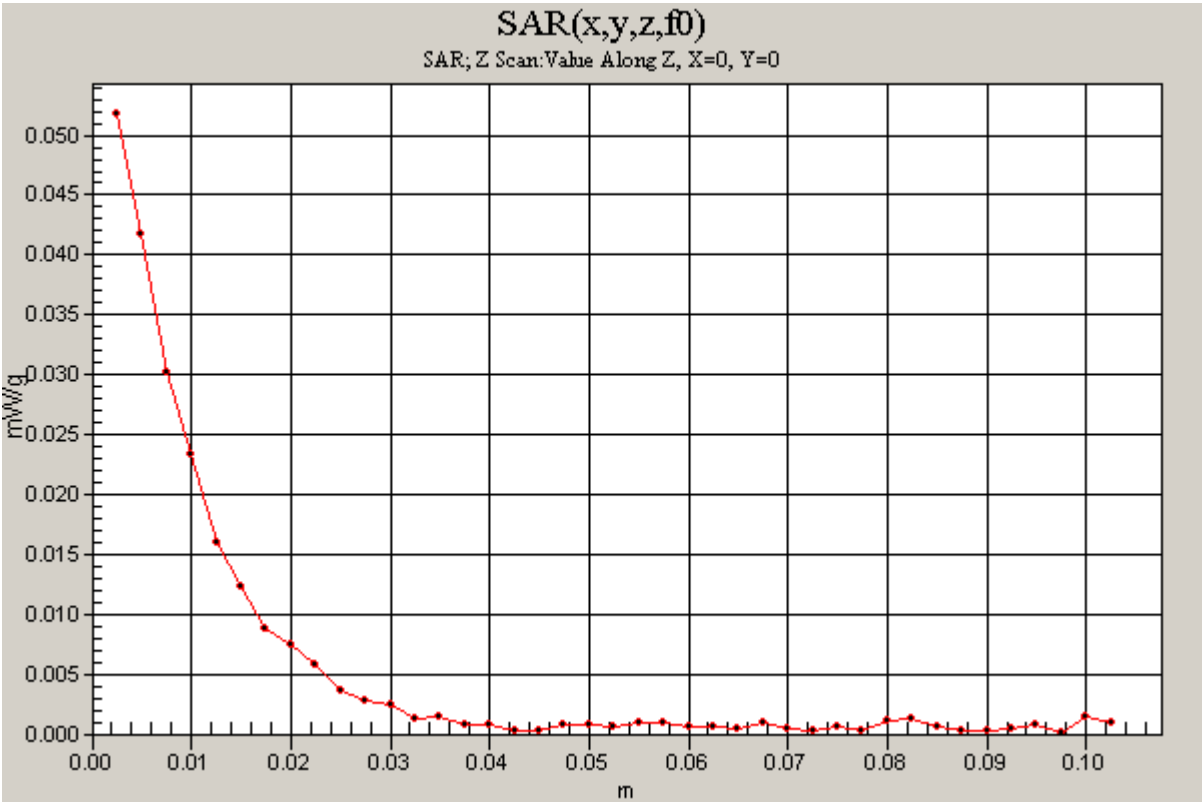
DUT: Broadcom PCI-E Mini card in Host HP Galileo; Type: 802.11bg; Serial: N/A

Communication System: 802.11bg; Frequency: 2437 MHz;Duty Cycle: 1:1.03

**802.11b mode AUX Ant - M ch/Z Scan (1x1x41):** Measurement grid: dx=20mm, dy=20mm, dz=2.5mm

Info: [Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.052 mW/g



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## Lapheld - 2.4 GHz Band

DUT: Broadcom PCI-E Mini card in Host HP Galileo; Type: 802.11bg; Serial: N/A

Communication System: 802.11bg; Frequency: 2437 MHz; Duty Cycle: 1:1.03

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.97$  mho/m;  $\epsilon_r = 51.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 23.0 deg. C; Liquid Temperature: 22.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**802.11n HT20 - M ch/Area Scan (7x21x1):** Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.010 mW/g

**802.11n HT20 - M ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 2.18 V/m; Power Drift = 0.433 dB

Peak SAR (extrapolated) = 0.022 W/kg

**SAR(1 g) = 0.00765 mW/g; SAR(10 g) = 0.00426 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.011 mW/g

**802.11n HT20 - M ch/Zoom Scan (7x7x9)/Cube 1:** Measurement grid: dx=5mm, dy=5mm, dz=3mm

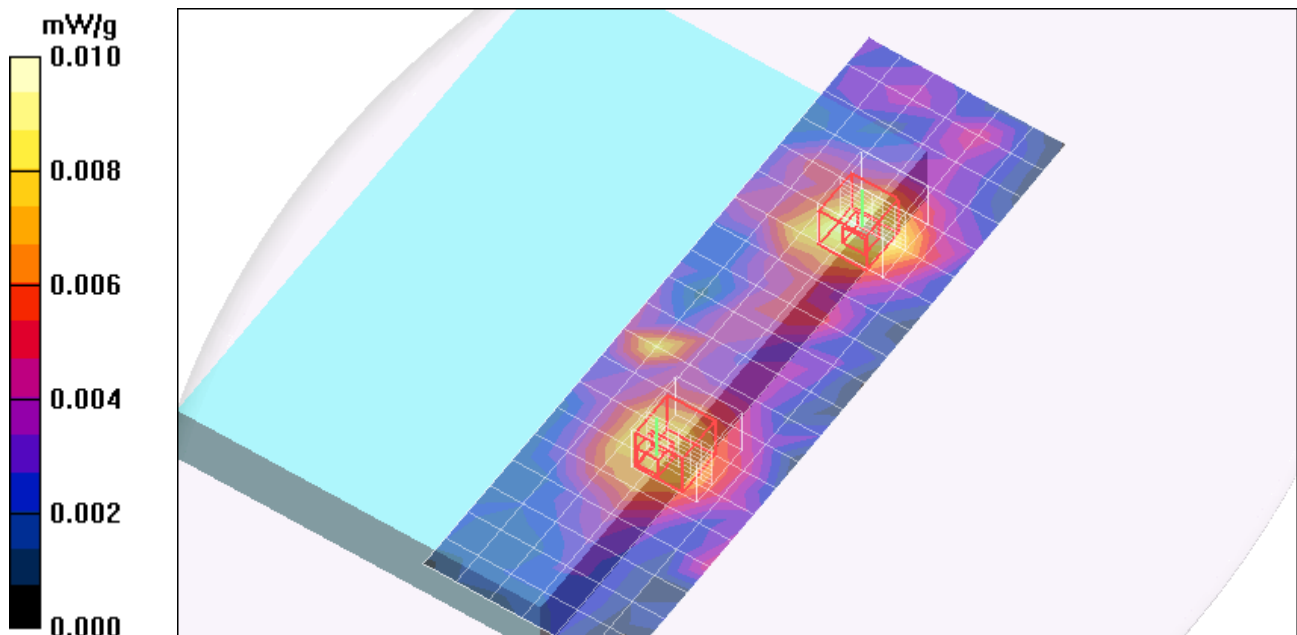
Reference Value = 2.18 V/m; Power Drift = 0.433 dB

Peak SAR (extrapolated) = 0.016 W/kg

**SAR(1 g) = 0.00631 mW/g; SAR(10 g) = 0.00346 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.009 mW/g



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## Lapheld - 5 GHz Bands

DUT: Broadcom PCI-E Mini card in Host HP Galileo; Type: 802.11bg; Serial: N/A

Communication System: 802.11agn; Frequency: 5300 MHz; Duty Cycle: 1:1.1  
Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.5$  mho/m;  $\epsilon_r = 46.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(3.92, 3.92, 3.92); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### 802.11a Legacy mode 5.2 GHz Band AUX Ant - M ch/Area Scan (9x9x1): Measurement grid:

$dx=10$ mm,  $dy=10$ mm

Maximum value of SAR (measured) = 0.016 mW/g

### 802.11a Legacy mode 5.2 GHz Band AUX Ant - M ch/Zoom Scan (7x7x9)/Cube 0:

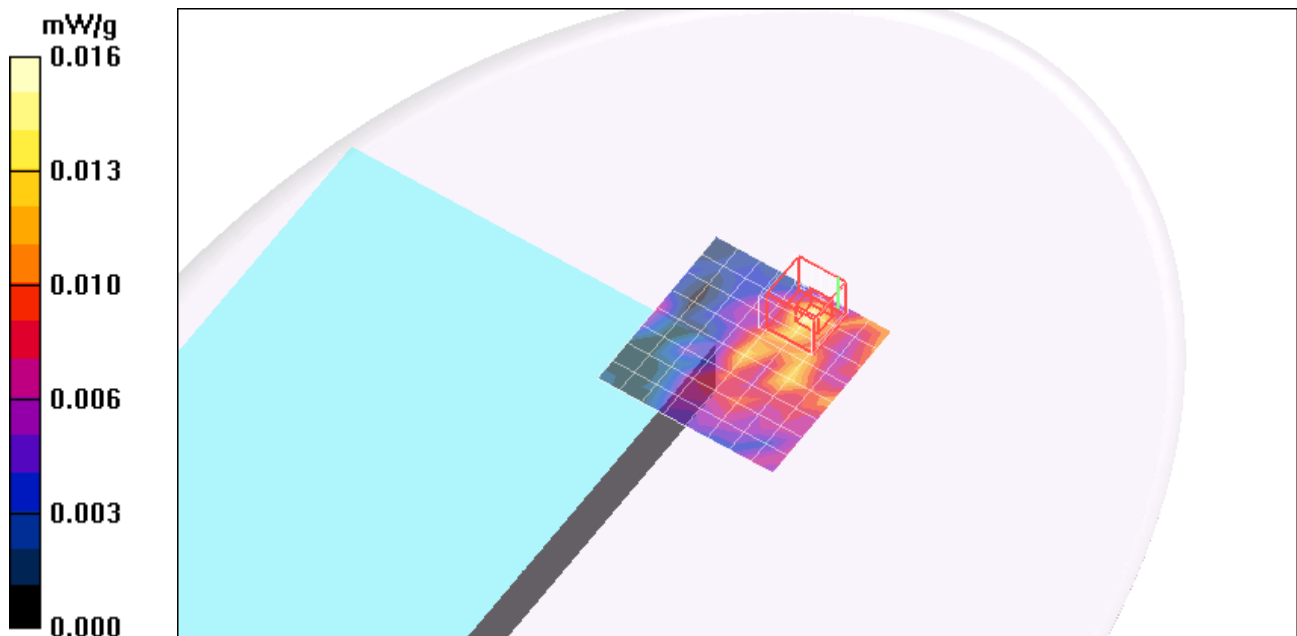
Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2.5$ mm

Reference Value = 1.49 V/m; Power Drift = -0.252 dB

Peak SAR (extrapolated) = 0.121 W/kg

**SAR(1 g) = 0.000688 mW/g; SAR(10 g) = 0.000101 mW/g**

Maximum value of SAR (measured) = 0.121 mW/g



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## Lapheld - 5 GHz Bands

DUT: Broadcom PCI-E Mini card in Host HP Galileo; Type: 802.11bg; Serial: N/A

Communication System: 802.11agn; Frequency: 5300 MHz; Duty Cycle: 1:1.1  
Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.5$  mho/m;  $\epsilon_r = 46.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(3.92, 3.92, 3.92); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### 802.11a Legacy mode 5.3 GHz Band Main Ant - M ch/Area Scan 2 (10x10x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.025 mW/g

### 802.11a Legacy mode 5.3 GHz Band Main Ant - M ch/Zoom Scan (7x7x9)/Cube 0:

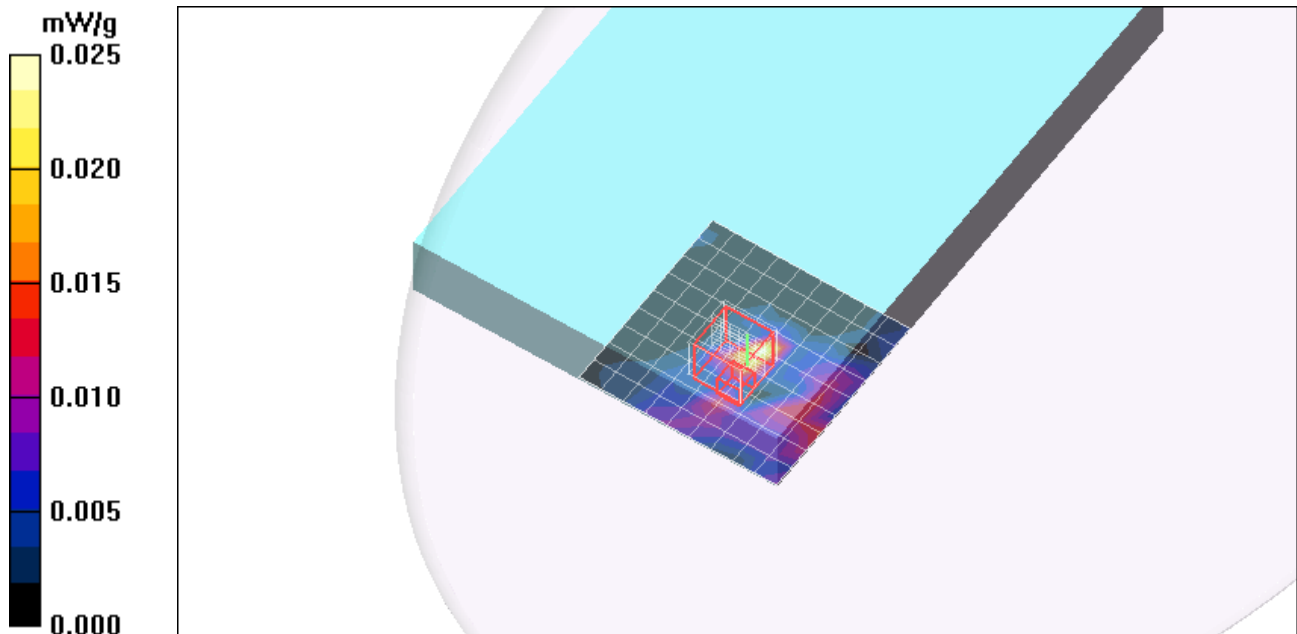
Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.78 V/m; Power Drift = 0.239 dB

Peak SAR (extrapolated) = 0.037 W/kg

**SAR(1 g) = 0.0069 mW/g; SAR(10 g) = 0.00285 mW/g**

Maximum value of SAR (measured) = 0.037 mW/g



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## Lapheld - 5 GHz Bands

DUT: Broadcom PCI-E Mini card in Host HP Galileo; Type: 802.11bg; Serial: N/A

Communication System: 802.11agn; Frequency: 5300 MHz; Duty Cycle: 1:1.1  
Medium parameters used:  $f = 5300$  MHz;  $\sigma = 5.5$  mho/m;  $\epsilon_r = 46.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(3.92, 3.92, 3.92); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### 802.11a Legacy mode 5.3 GHz Band AUX Ant - M ch/Area Scan (9x9x1): Measurement grid:

dx=10mm, dy=10mm

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

### 802.11a Legacy mode 5.3 GHz Band AUX Ant - M ch/Zoom Scan (7x7x9)/Cube 0:

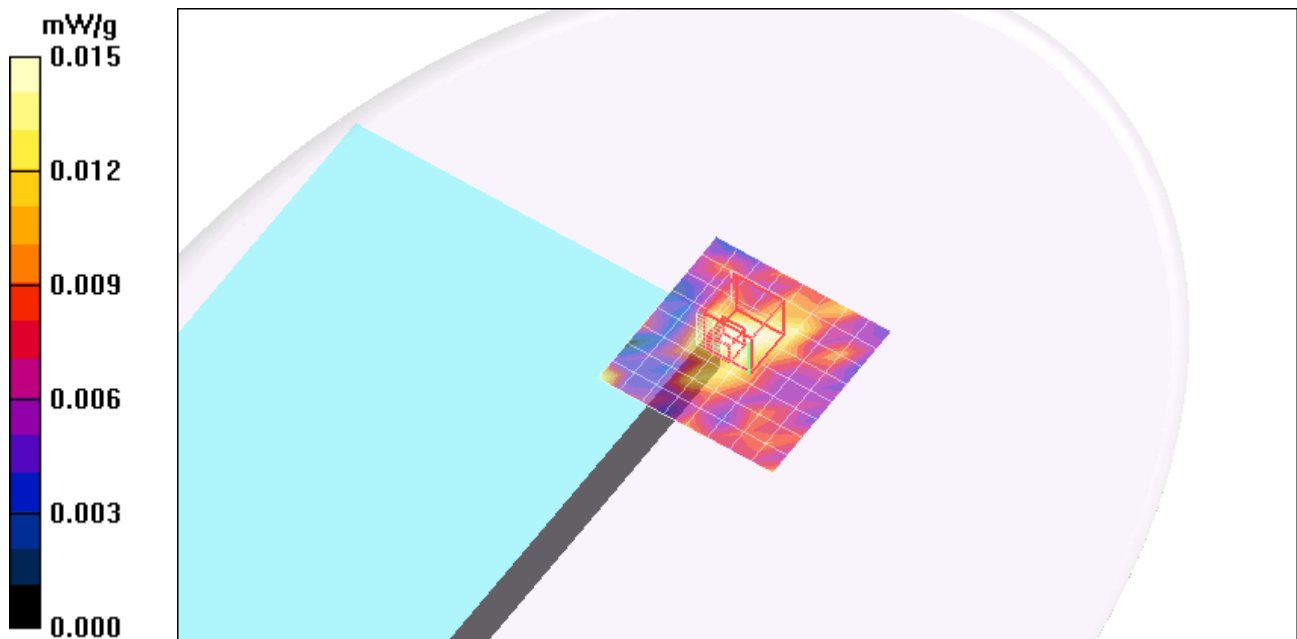
Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 1.56 V/m; Power Drift = 0.674 dB

Peak SAR (extrapolated) = 0.065 W/kg

**SAR(1 g) = 0.010 mW/g; SAR(10 g) = 0.00469 mW/g**

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



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## Lapheld - 5 GHz Bands

DUT: Broadcom PCI-E Mini card in Host HP Galileo; Type: 802.11bg; Serial: N/A

Communication System: 802.11agn; Frequency: 5590 MHz; Duty Cycle: 1:1.1

Medium parameters used (interpolated):  $f = 5590$  MHz;  $\sigma = 5.92$  mho/m;  $\epsilon_r = 46$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(3.5, 3.5, 3.5); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

### 802.11n HT40 mode 5.5 GHz Band AUX Ant - M ch/Area Scan (10x34x1): Measurement grid:

dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.036 mW/g

### 802.11n HT40 mode 5.5 GHz Band AUX Ant - M ch/Zoom Scan (7x7x9)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

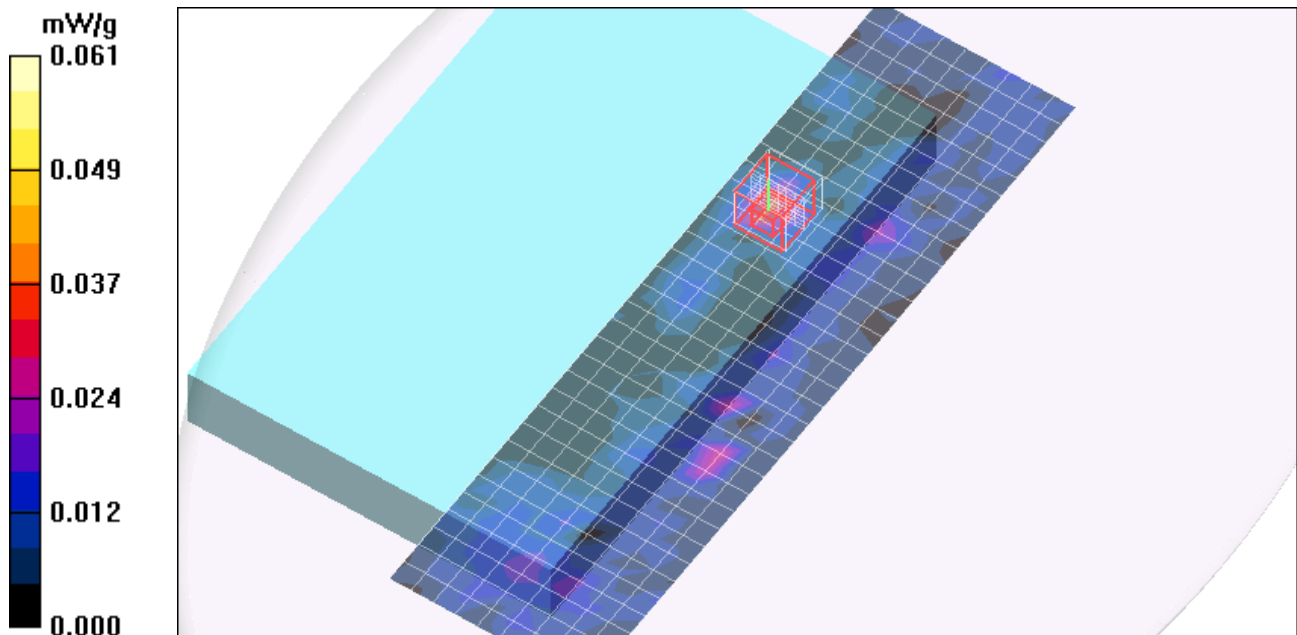
Reference Value = 1.32 V/m; Power Drift = 0.42 dB

Peak SAR (extrapolated) = 0.105 W/kg

**SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.00784 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.041 mW/g





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## Lapheld - 5 GHz Bands

DUT: Broadcom PCI-E Mini card in Host HP Galileo; Type: 802.11bg; Serial: N/A

Communication System: 802.11agn; Frequency: 5785 MHz; Duty Cycle: 1:1.1

Medium parameters used (interpolated):  $f = 5785$  MHz;  $\sigma = 6.19$  mho/m;  $\epsilon_r = 45.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Room Ambient Temperature: 25.0 deg. C; Liquid Temperature: 24.0 deg. C

DASY4 Configuration:

- Area Scan setting - Find Secondary Maximum Within: 2.0 dB and with peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(3.7, 3.7, 3.7); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

**802.11n HT20 mode 5.8 GHz Band - M ch/Area Scan (10x29x1):** Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

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

**802.11n HT20 mode 5.8 GHz Band - M ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid:

dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 2.37 V/m; Power Drift = 0.765 dB

Peak SAR (extrapolated) = 0.201 W/kg

**SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.015 mW/g**

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.089 mW/g

