

Test Laboratory: Compliance Certification Services

### 5.2 GHz Band

DUT: Lenovo; Type: Y650; Serial: n/a

Communication System: 802.11abgn; Frequency: 5200 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5200 \text{ MHz}$ ;  $\sigma = 5.46 \text{ mho/m}$ ;  $\epsilon_r = 47.9$ ;  $\rho = 1000 \text{ kg/m}^3$

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 a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(4.21, 4.21, 4.21); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 10/20/2008
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a/Area Scan (11x17x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.676 mW/g

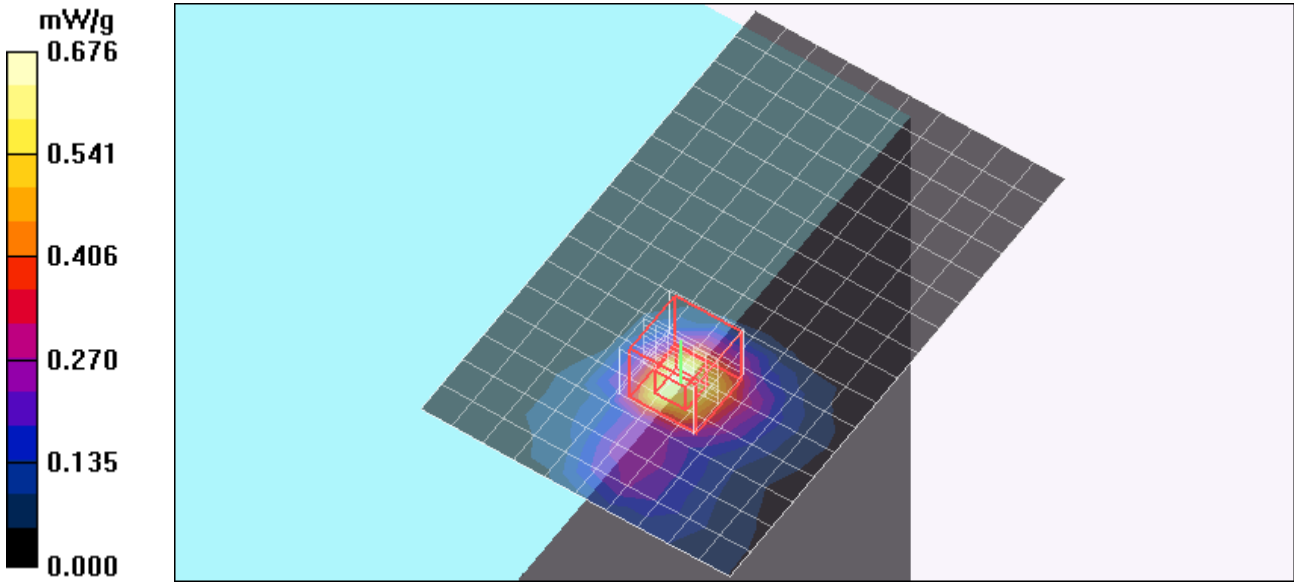
**802.11a/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.00 V/m; Power Drift = -0.285 dB

Peak SAR (extrapolated) = 1.17 W/kg

**SAR(1 g) = 0.388 mW/g; SAR(10 g) = 0.150 mW/g**

Maximum value of SAR (measured) = 0.602 mW/g



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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 a peak SAR value greater than 0.0012W/kg
- Probe: EX3DV3 - SN3531; ConvF(4.21, 4.21, 4.21); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 10/20/2008
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11n/Area Scan (11x17x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.631 mW/g

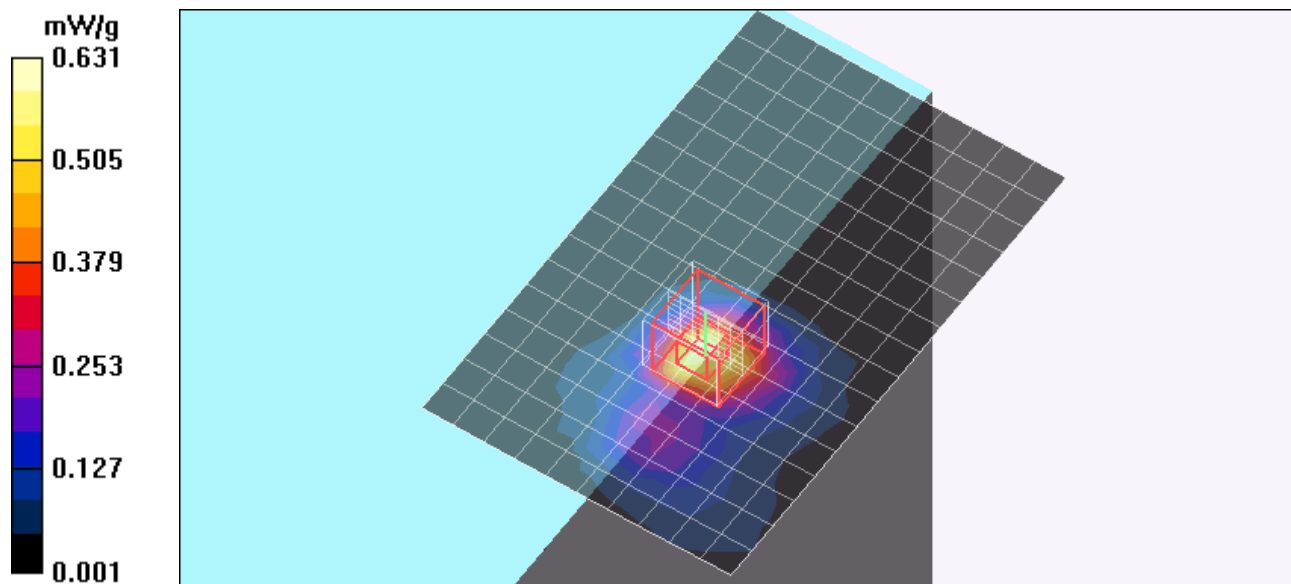
**802.11n/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.86 V/m; Power Drift = -0.485 dB

Peak SAR (extrapolated) = 1.37 W/kg

**SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.167 mW/g**

Maximum value of SAR (measured) = 0.690 mW/g



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## 5.3 GHz Band

DUT: Lenovo; Type: Y650; Serial: n/a

Communication System: 802.11abgn; Frequency: 5280 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5280$  MHz;  $\sigma = 5.54$  mho/m;  $\epsilon_r = 48.1$ ;  $\rho = 1000$  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 a 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 Sn427; Calibrated: 10/20/2008
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a/Area Scan (10x17x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.640 mW/g

**802.11a/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

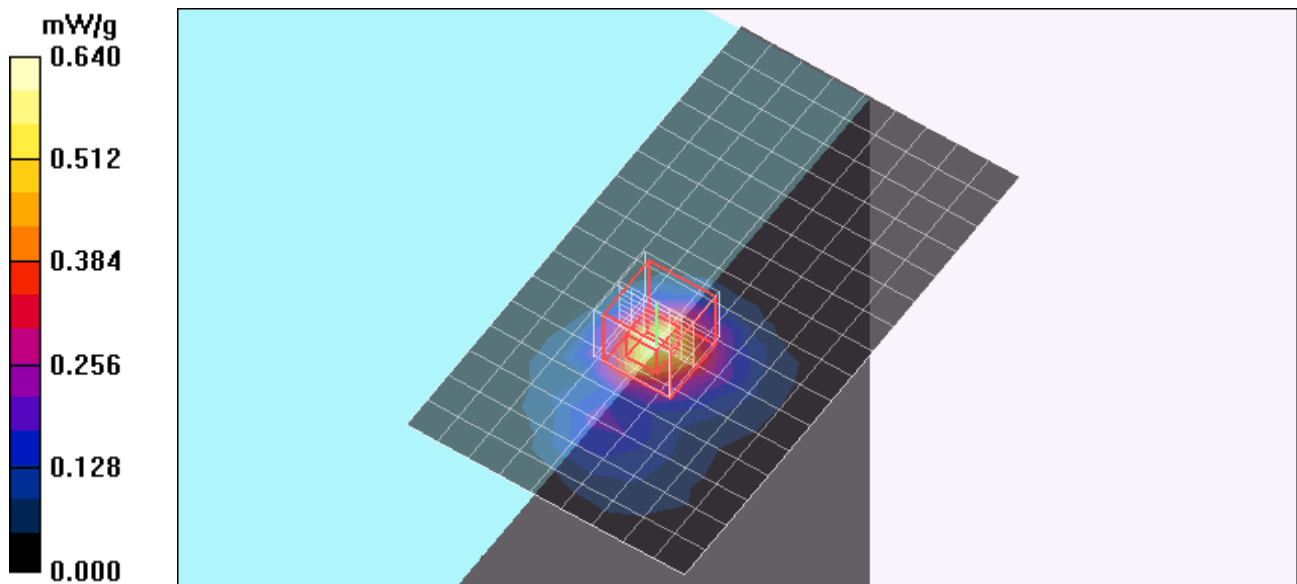
Reference Value = 9.12 V/m; Power Drift = -0.155 dB

Peak SAR (extrapolated) = 1.25 W/kg

**SAR(1 g) = 0.405 mW/g; SAR(10 g) = 0.153 mW/g**

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

Maximum value of SAR (measured) = 0.642 mW/g



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## 5.3 GHz Band

DUT: Lenovo; Type: Y650; Serial: n/a

Communication System: 802.11abgn; Frequency: 5280 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5280$  MHz;  $\sigma = 5.54$  mho/m;  $\epsilon_r = 48.1$ ;  $\rho = 1000$  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 a 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 Sn427; Calibrated: 10/20/2008
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11n/Area Scan (10x17x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.500 mW/g

**802.11n/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

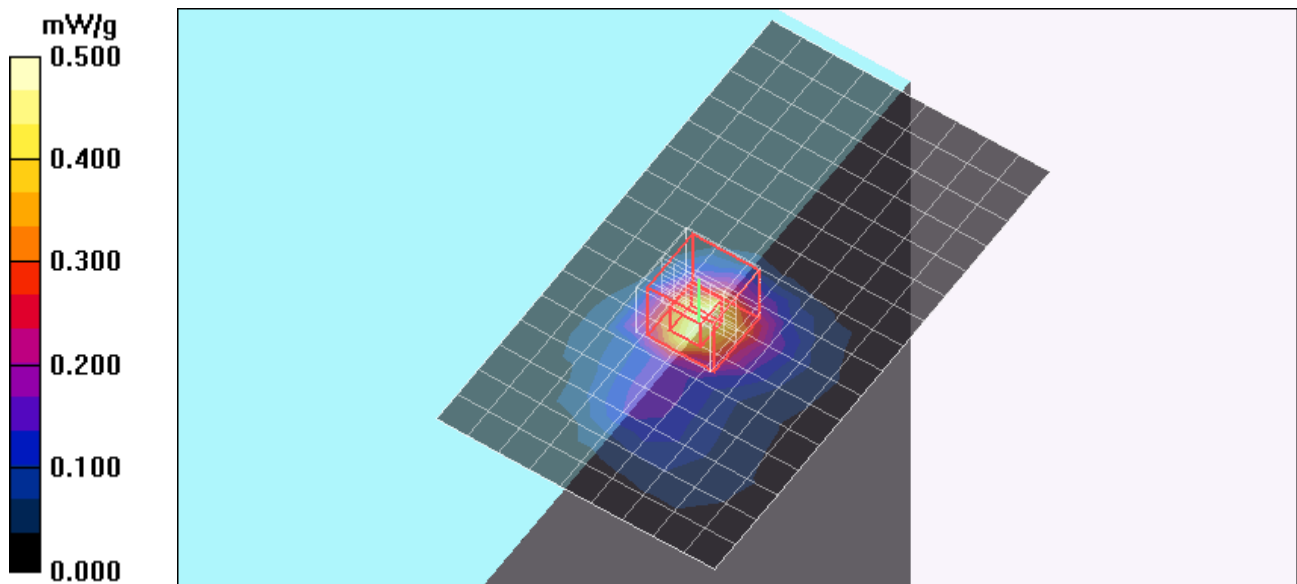
Reference Value = 9.03 V/m; Power Drift = -0.285 dB

Peak SAR (extrapolated) = 1.03 W/kg

**SAR(1 g) = 0.330 mW/g; SAR(10 g) = 0.125 mW/g**

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

Maximum value of SAR (measured) = 0.533 mW/g



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## 5.5 GHz Band

DUT: Lenovo; Type: Y650; Serial: n/a

Communication System: 802.11abgn; Frequency: 5600 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.98$  mho/m;  $\epsilon_r = 47.5$ ;  $\rho = 1000$  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 a 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 Sn427; Calibrated: 10/20/2008
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a/Area Scan (10x17x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.08 mW/g

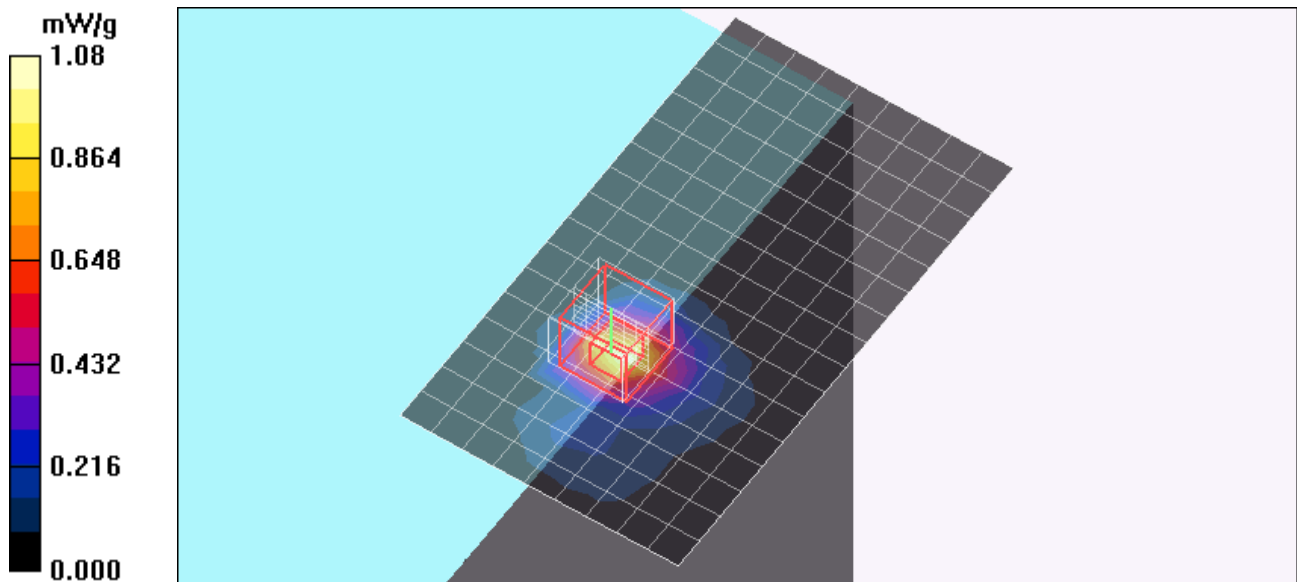
**802.11a/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 9.45 V/m; Power Drift = 0.276 dB

Peak SAR (extrapolated) = 2.52 W/kg

**SAR(1 g) = 0.715 mW/g; SAR(10 g) = 0.249 mW/g**

Maximum value of SAR (measured) = 1.17 mW/g



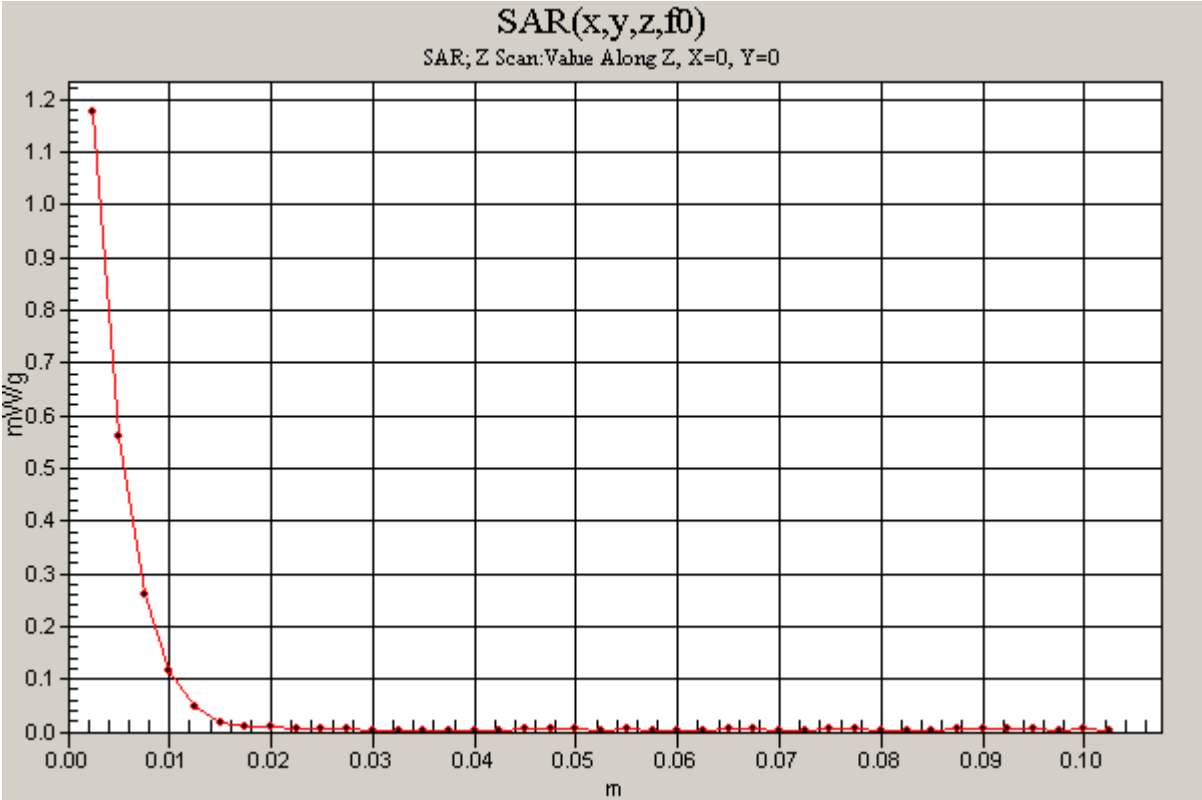
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### 5.5 GHz Band

DUT: Lenovo; Type: Y650; Serial: n/a

Communication System: 802.11abgn; Frequency: 5600 MHz;Duty Cycle: 1:1

**802.11a/Z Scan (1x1x41):** Measurement grid: dx=20mm, dy=20mm, dz=2.5mm  
Maximum value of SAR (measured) = 1.18 mW/g



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## 5.5 GHz Band

DUT: Lenovo; Type: Y650; Serial: n/a

Communication System: 802.11abgn; Frequency: 5600 MHz; Duty Cycle: 1:1  
 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.98$  mho/m;  $\epsilon_r = 47.5$ ;  $\rho = 1000$  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 a 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 Sn427; Calibrated: 10/20/2008
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11n/Area Scan (10x17x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.07 mW/g

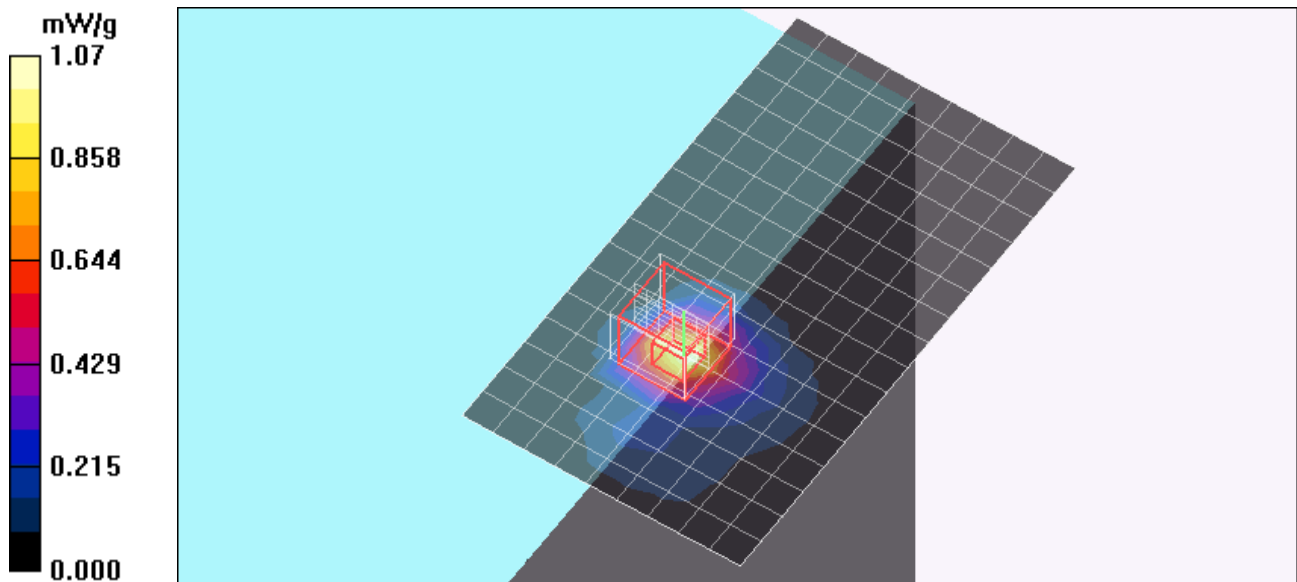
**802.11n/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 9.70 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 2.47 W/kg

**SAR(1 g) = 0.714 mW/g; SAR(10 g) = 0.244 mW/g**

Maximum value of SAR (measured) = 1.15 mW/g



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## 5.8 GHz Band

DUT: Lenovo; Type: Y650; Serial: n/a

Communication System: 802.11abgn; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5785$  MHz;  $\sigma = 6.25$  mho/m;  $\epsilon_r = 47.1$ ;  $\rho = 1000$  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 a 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 Sn427; Calibrated: 10/20/2008
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11a/Area Scan (10x17x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.02 mW/g

**802.11a/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

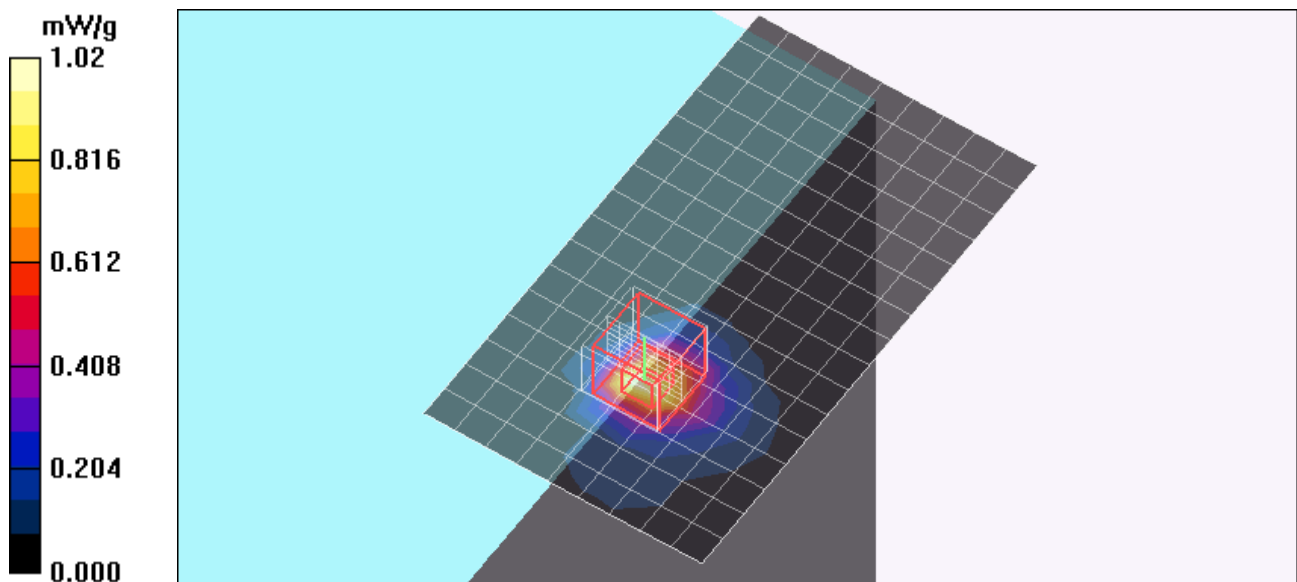
Reference Value = 5.33 V/m; Power Drift = -1.14 dB

Peak SAR (extrapolated) = 2.46 W/kg

**SAR(1 g) = 0.683 mW/g; SAR(10 g) = 0.232 mW/g**

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

Maximum value of SAR (measured) = 1.13 mW/g





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## 5.8 GHz Band

DUT: Lenovo; Type: Y650; Serial: n/a

Communication System: 802.11abgn; Frequency: 5795 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5795$  MHz;  $\sigma = 6.27$  mho/m;  $\epsilon_r = 47$ ;  $\rho = 1000$  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 a 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 Sn427; Calibrated: 10/20/2008
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**802.11n/Area Scan (10x17x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.997 mW/g

**802.11n/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 9.79 V/m; Power Drift = -0.467 dB

Peak SAR (extrapolated) = 2.22 W/kg

**SAR(1 g) = 0.610 mW/g; SAR(10 g) = 0.209 mW/g**

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

Maximum value of SAR (measured) = 0.996 mW/g

