

Test Laboratory: Compliance Certification Services

## Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10937

Communication System: 5500 band; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.96$  mho/m;  $\epsilon_r = 46.2$ ;  $\rho = 1000$  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: EX3DV4 - SN3552; ConvF(3.69, 3.69, 3.69); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 11/16/2006
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**802.11a - M ch/Area Scan (10x39x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.426 mW/g

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

Reference Value = 7.58 V/m; Power Drift = -0.166 dB

Peak SAR (extrapolated) = 0.025 W/kg

**SAR(1 g) = 0.00207 mW/g; SAR(10 g) = 0.000909 mW/g**

Maximum value of SAR (measured) = 0.013 mW/g

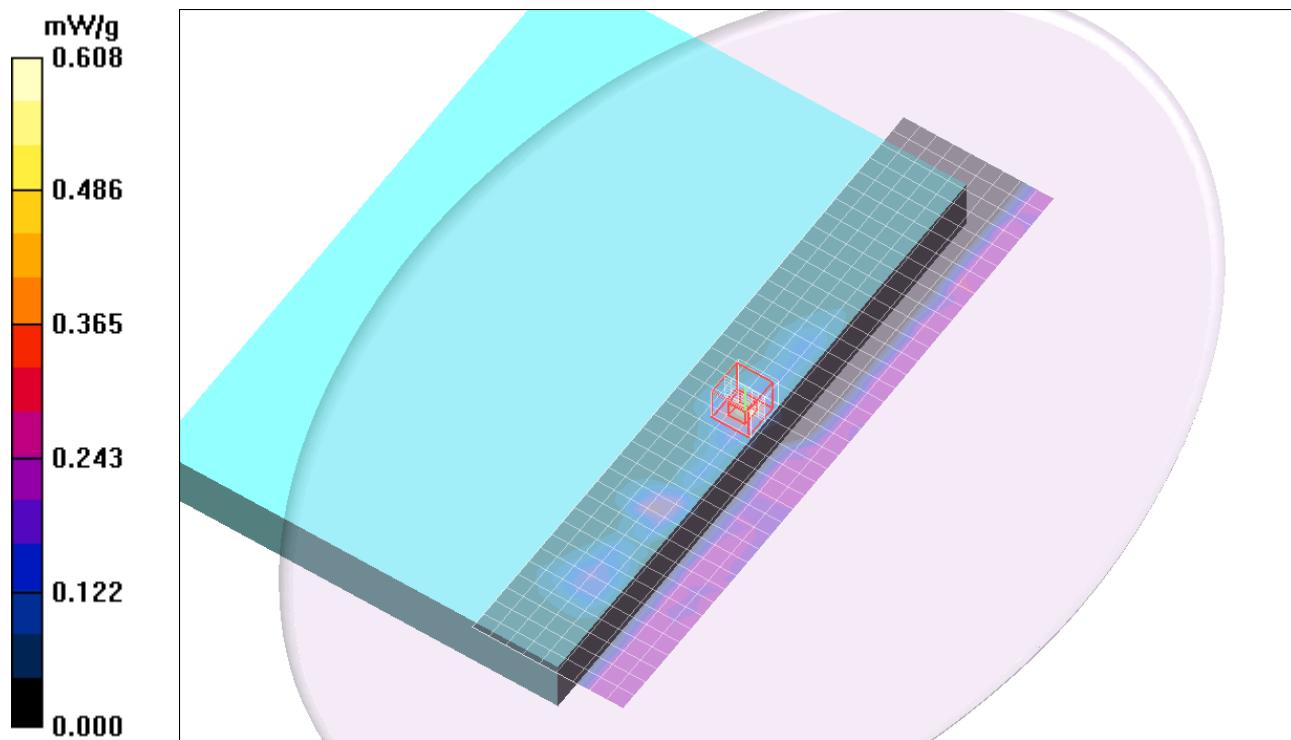
**802.11a - M ch/Zoom Scan (7x7x9)/Cube 1:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.58 V/m; Power Drift = -0.166 dB

Peak SAR (extrapolated) = 1.43 W/kg

**SAR(1 g) = 0.290 mW/g; SAR(10 g) = 0.085 mW/g**

Maximum value of SAR (measured) = 0.608 mW/g



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Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.96$  mho/m;  $\epsilon_r = 46.2$ ;  $\rho = 1000$  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: EX3DV4 - SN3552; ConvF(3.69, 3.69, 3.69); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 11/16/2006
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**802.11n HT20 - M ch/Area Scan (8x19x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.766 mW/g

**802.11n HT20 - M ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.53 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 1.69 W/kg

**SAR(1 g) = 0.429 mW/g; SAR(10 g) = 0.236 mW/g**

Maximum value of SAR (measured) = 0.712 mW/g

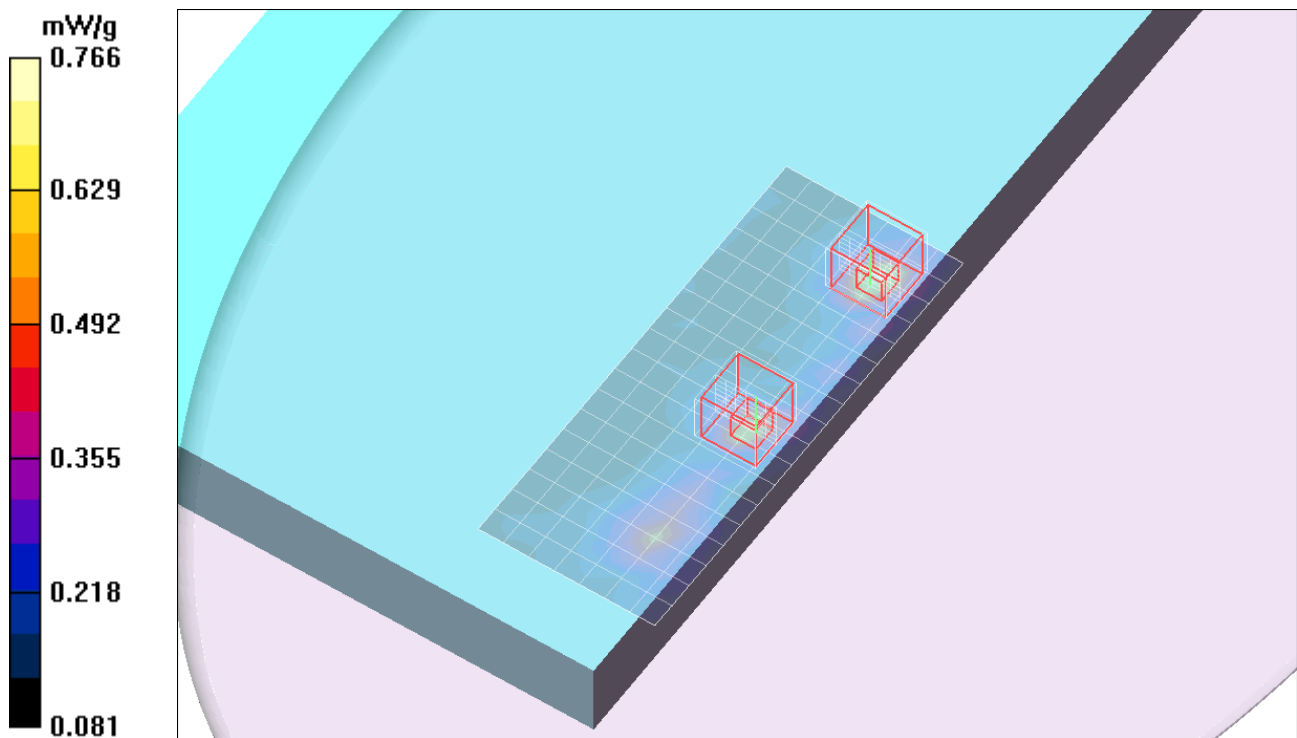
**802.11n HT20 - M ch/Zoom Scan (7x7x9)/Cube 1:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.53 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 1.53 W/kg

**SAR(1 g) = 0.386 mW/g; SAR(10 g) = 0.222 mW/g**

Maximum value of SAR (measured) = 0.605 mW/g



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## Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10937

Communication System: 5500 band; Frequency: 5510 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5510$  MHz;  $\sigma = 5.81$  mho/m;  $\epsilon_r = 46.6$ ;  $\rho = 1000$  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: EX3DV4 - SN3552; ConvF(3.69, 3.69, 3.69); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 11/16/2006
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**802.11n HT40 - L ch/Area Scan (8x19x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.30 mW/g

**802.11n HT40 - L ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 15.5 V/m; Power Drift = -0.125 dB

Peak SAR (extrapolated) = 3.03 W/kg

**SAR(1 g) = 0.719 mW/g; SAR(10 g) = 0.312 mW/g**

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

Maximum value of SAR (measured) = 1.31 mW/g

**802.11n HT40 - L ch/Zoom Scan (7x7x9)/Cube 1:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

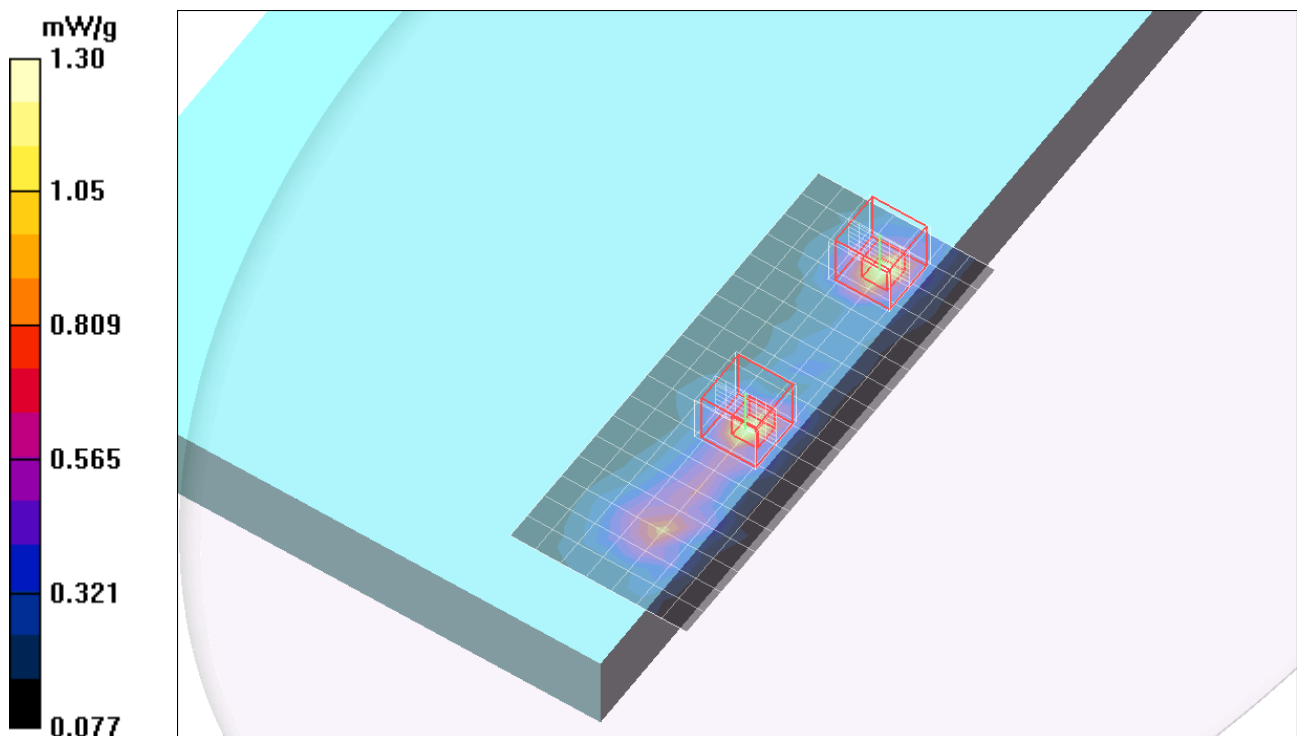
Reference Value = 15.5 V/m; Power Drift = -0.125 dB

Peak SAR (extrapolated) = 3.04 W/kg

**SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.302 mW/g**

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

Maximum value of SAR (measured) = 1.21 mW/g



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## Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10937

Communication System: 5500 band; Frequency: 5590 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5590$  MHz;  $\sigma = 5.95$  mho/m;  $\epsilon_r = 46.3$ ;  $\rho = 1000$  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: EX3DV4 - SN3552; ConvF(3.69, 3.69, 3.69); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 11/16/2006
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**802.11n HT40 - M ch/Area Scan (8x19x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.29 mW/g

**802.11n HT40 - M ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.30 V/m; Power Drift = 0.195 dB

Peak SAR (extrapolated) = 3.10 W/kg

**SAR(1 g) = 0.716 mW/g; SAR(10 g) = 0.312 mW/g**

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

Maximum value of SAR (measured) = 1.30 mW/g

**802.11n HT40 - M ch/Zoom Scan (7x7x9)/Cube 1:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

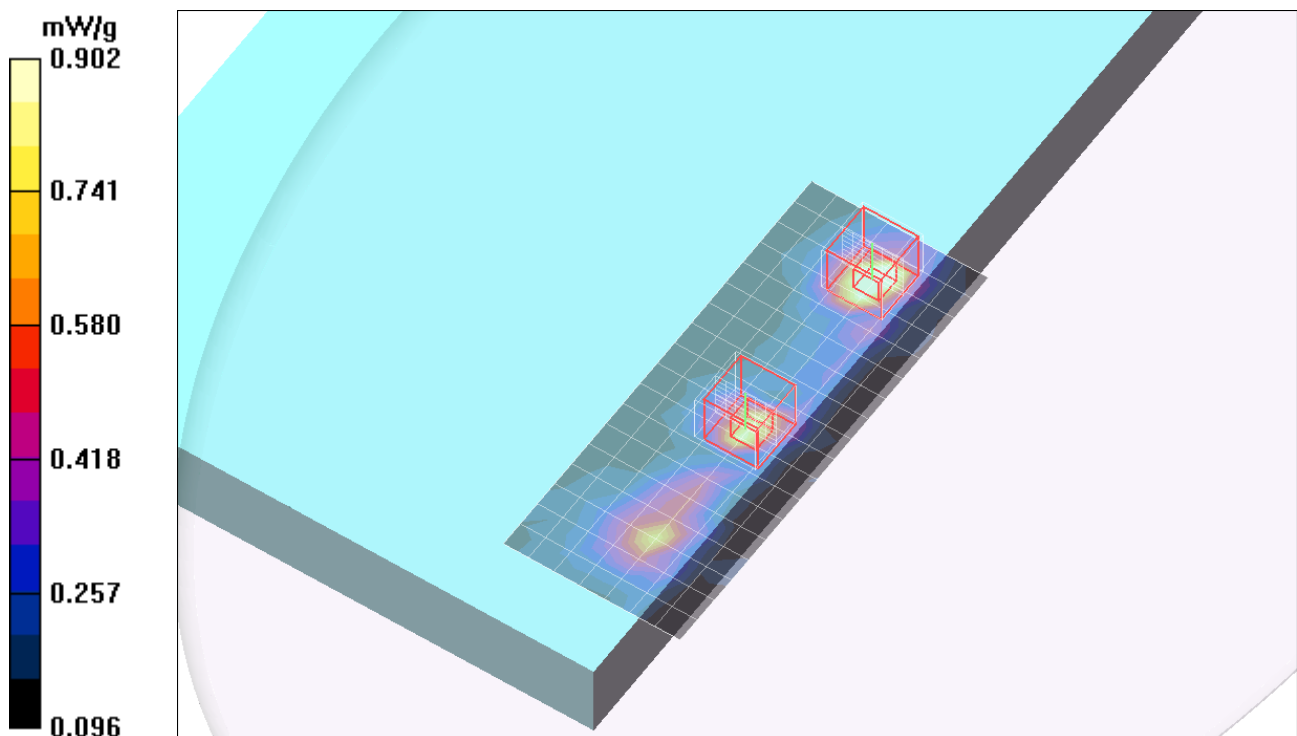
Reference Value = 7.30 V/m; Power Drift = 0.195 dB

Peak SAR (extrapolated) = 1.95 W/kg

**SAR(1 g) = 0.529 mW/g; SAR(10 g) = 0.262 mW/g**

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

Maximum value of SAR (measured) = 0.902 mW/g



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## Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10937

Communication System: 5500 band; Frequency: 5690 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5690$  MHz;  $\sigma = 6.12$  mho/m;  $\epsilon_r = 46.1$ ;  $\rho = 1000$  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: EX3DV4 - SN3552; ConvF(3.69, 3.69, 3.69); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn427; Calibrated: 11/16/2006
- Phantom: Flat Phantom ELI4.0; Type: QDOVA001BA; Serial: SN:1003
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**802.11n HT40 - H ch/Area Scan (8x19x1):** Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.94 mW/g

**802.11n HT40 - H ch/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

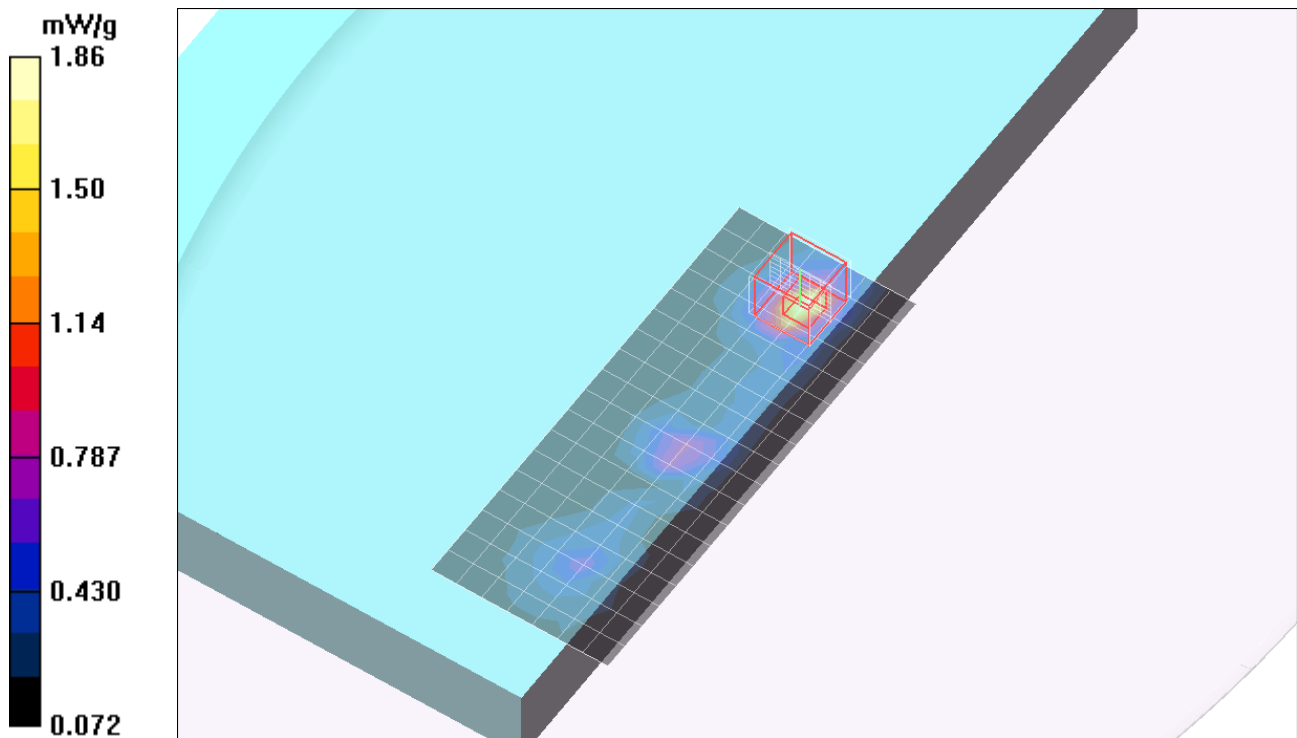
Reference Value = 18.3 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 4.48 W/kg

**SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.417 mW/g**

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

Maximum value of SAR (measured) = 1.86 mW/g



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DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10937

Communication System: 5500 band; Frequency: 5690 MHz;Duty Cycle: 1:1

**802.11n HT40 - H 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) = 0.410 mW/g

