

Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

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

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.97$ mho/m; $\epsilon_r = 45.2$; $\rho = 1000$ kg/m³

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 a 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 - Main Ant - M ch/Area Scan (10x38x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.208 mW/g

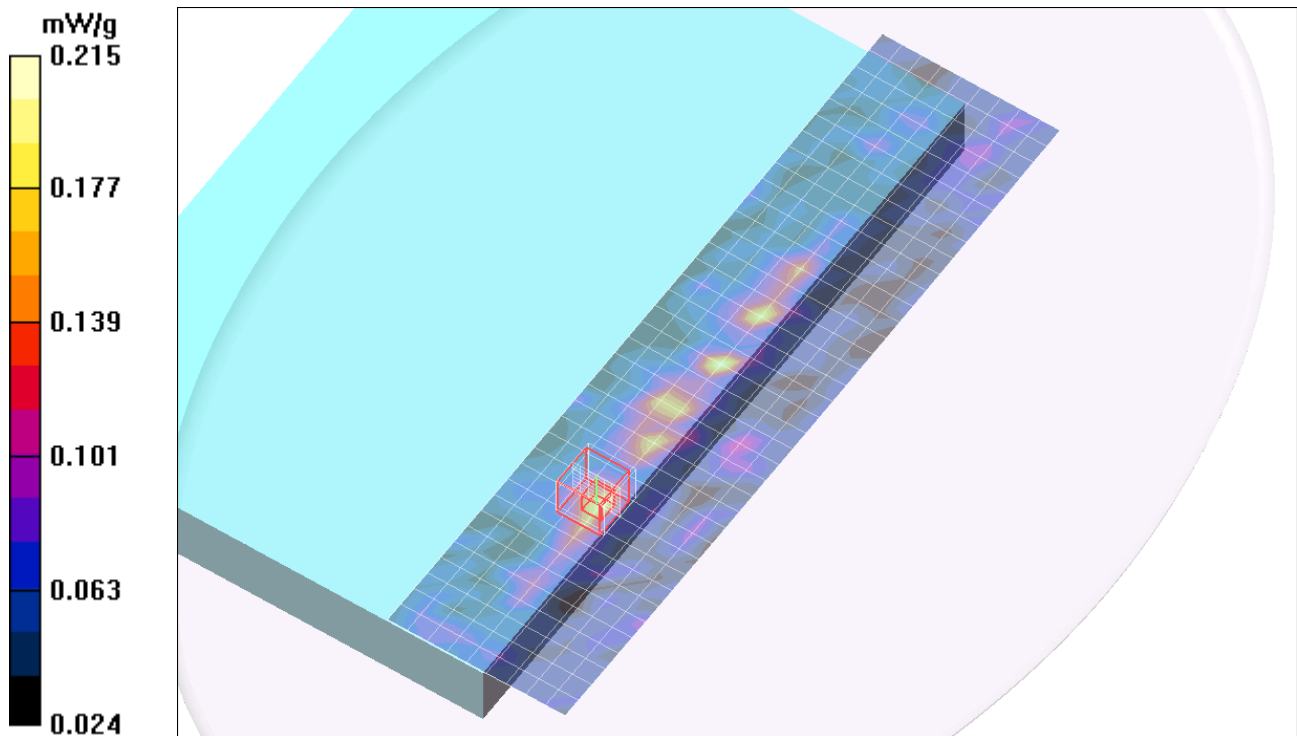
802.11a - Main Ant - M ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 3.16 V/m; Power Drift = 0.146 dB

Peak SAR (extrapolated) = 0.652 W/kg

SAR(1 g) = 0.131 mW/g; SAR(10 g) = 0.078 mW/g

Maximum value of SAR (measured) = 0.215 mW/g



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Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

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

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.84$ mho/m; $\epsilon_r = 45.6$; $\rho = 1000$ kg/m³

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 a 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 - AUX Ant - L ch/Area Scan (5x12x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.04 mW/g

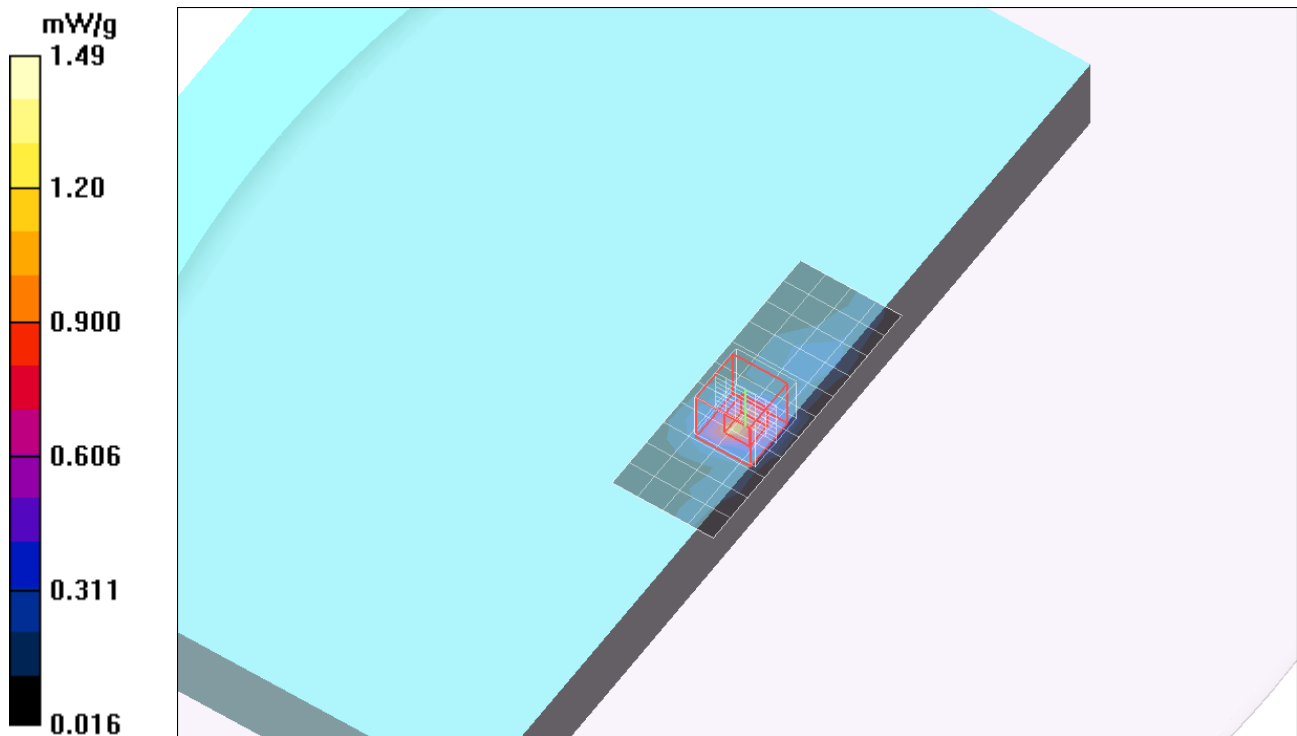
802.11a - AUX Ant - L ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 13.5 V/m; Power Drift = -0.145 dB

Peak SAR (extrapolated) = 3.41 W/kg

SAR(1 g) = 0.676 mW/g; SAR(10 g) = 0.213 mW/g

Maximum value of SAR (measured) = 1.49 mW/g



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

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.97$ mho/m; $\epsilon_r = 45.2$; $\rho = 1000$ kg/m³

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 a 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 - AUX Ant - M ch/Area Scan (6x24x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.26 mW/g

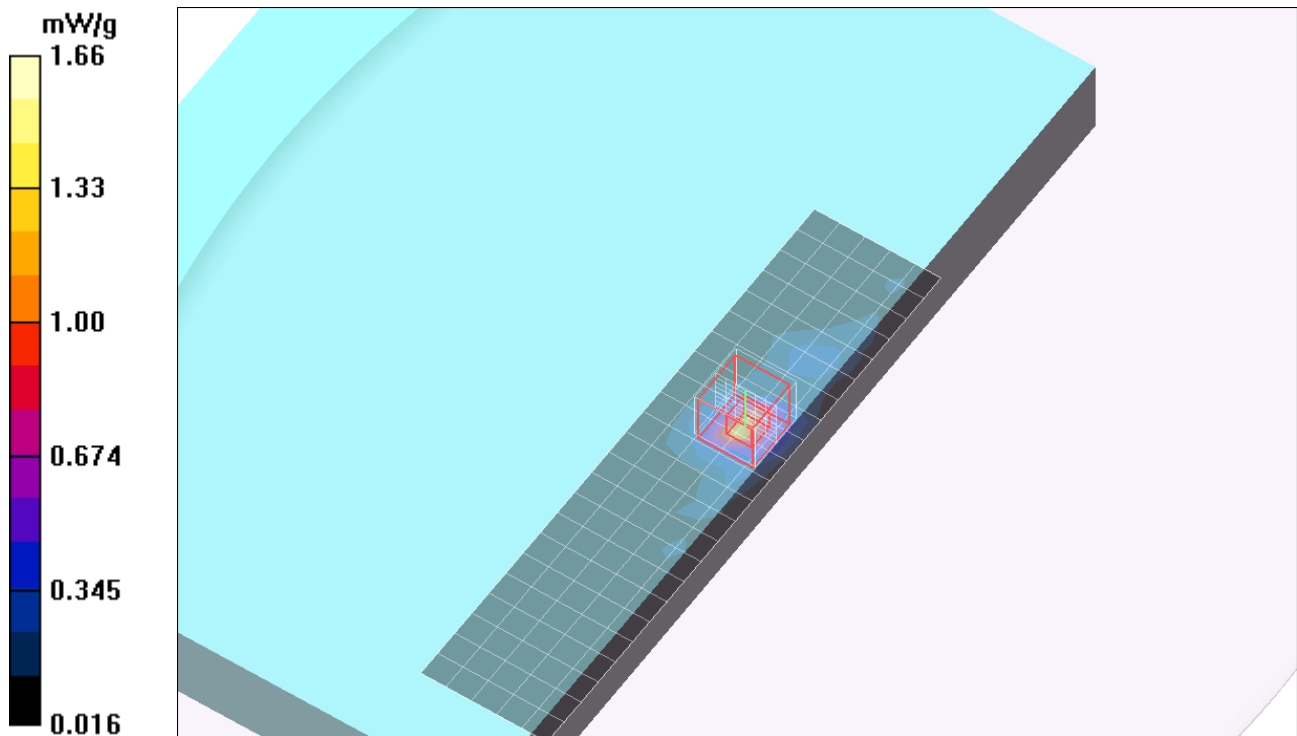
802.11a - AUX Ant - M ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 8.49 V/m; Power Drift = 0.196 dB

Peak SAR (extrapolated) = 4.32 W/kg

SAR(1 g) = 0.815 mW/g; SAR(10 g) = 0.252 mW/g

Maximum value of SAR (measured) = 1.66 mW/g



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Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

Communication System: 5500 band; Frequency: 5700 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5700$ MHz; $\sigma = 6.15$ mho/m; $\epsilon_r = 45.1$; $\rho = 1000$ kg/m³

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 a peak SAR value greater than 0.0012 W/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 - AUX Ant - H ch/Area Scan (5x12x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.39 mW/g

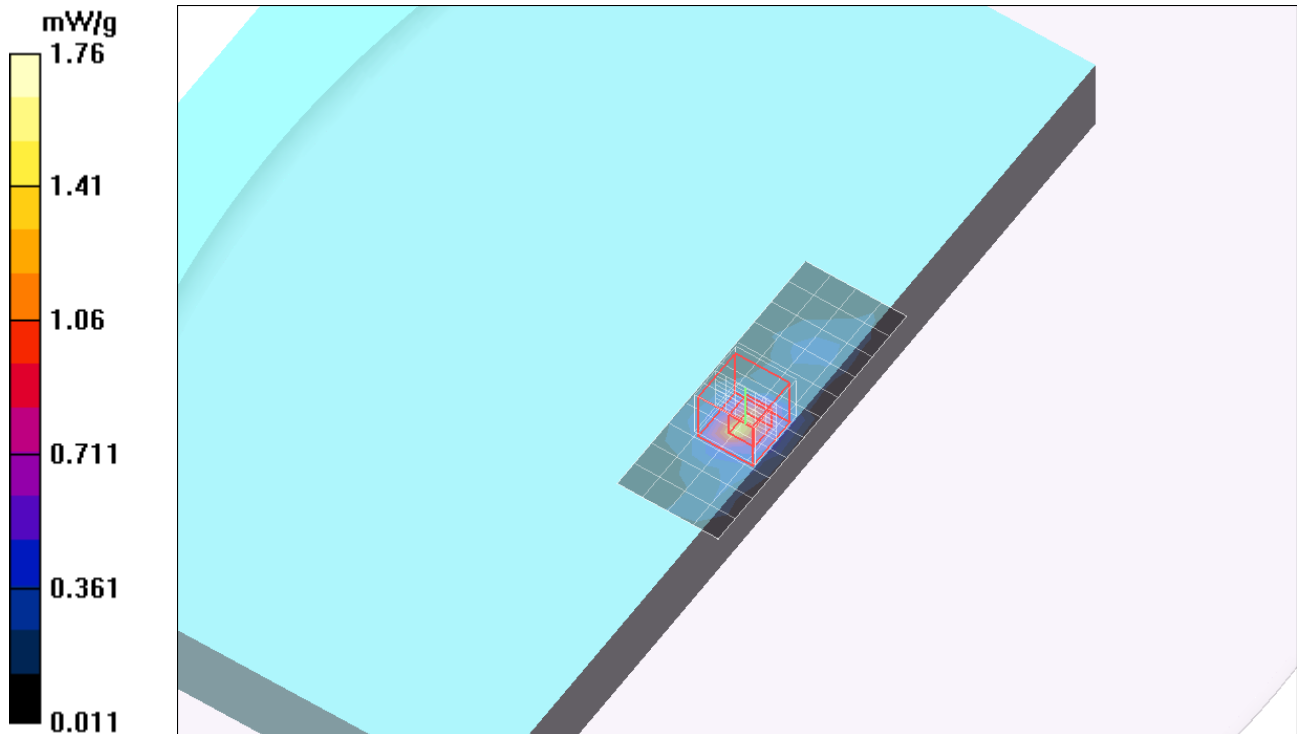
802.11a - AUX Ant - H ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 14.1 V/m; Power Drift = -0.158 dB

Peak SAR (extrapolated) = 4.79 W/kg

SAR(1 g) = 0.851 mW/g; SAR(10 g) = 0.263 mW/g

Maximum value of SAR (measured) = 1.76 mW/g



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Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

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

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.84$ mho/m; $\epsilon_r = 45.6$; $\rho = 1000$ kg/m³

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 a 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 - Main & AUX Ant - L ch/Area Scan (5x20x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.21 mW/g

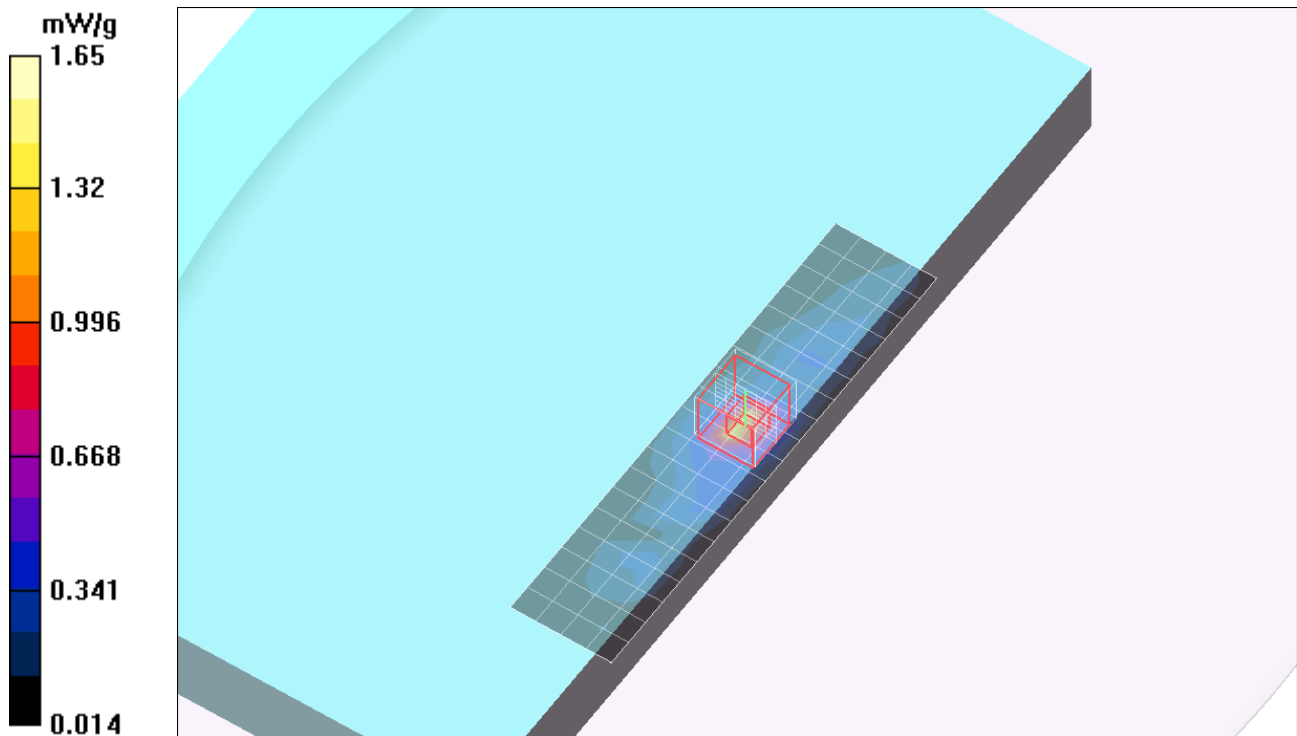
802.11a - Main & AUX Ant - L ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 14.3 V/m; Power Drift = -0.133 dB

Peak SAR (extrapolated) = 3.72 W/kg

SAR(1 g) = 0.796 mW/g; SAR(10 g) = 0.257 mW/g

Maximum value of SAR (measured) = 1.65 mW/g



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Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

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

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.97$ mho/m; $\epsilon_r = 45.2$; $\rho = 1000$ kg/m³

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 a 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 - Main & AUX Ant - M ch/Area Scan (6x24x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.40 mW/g

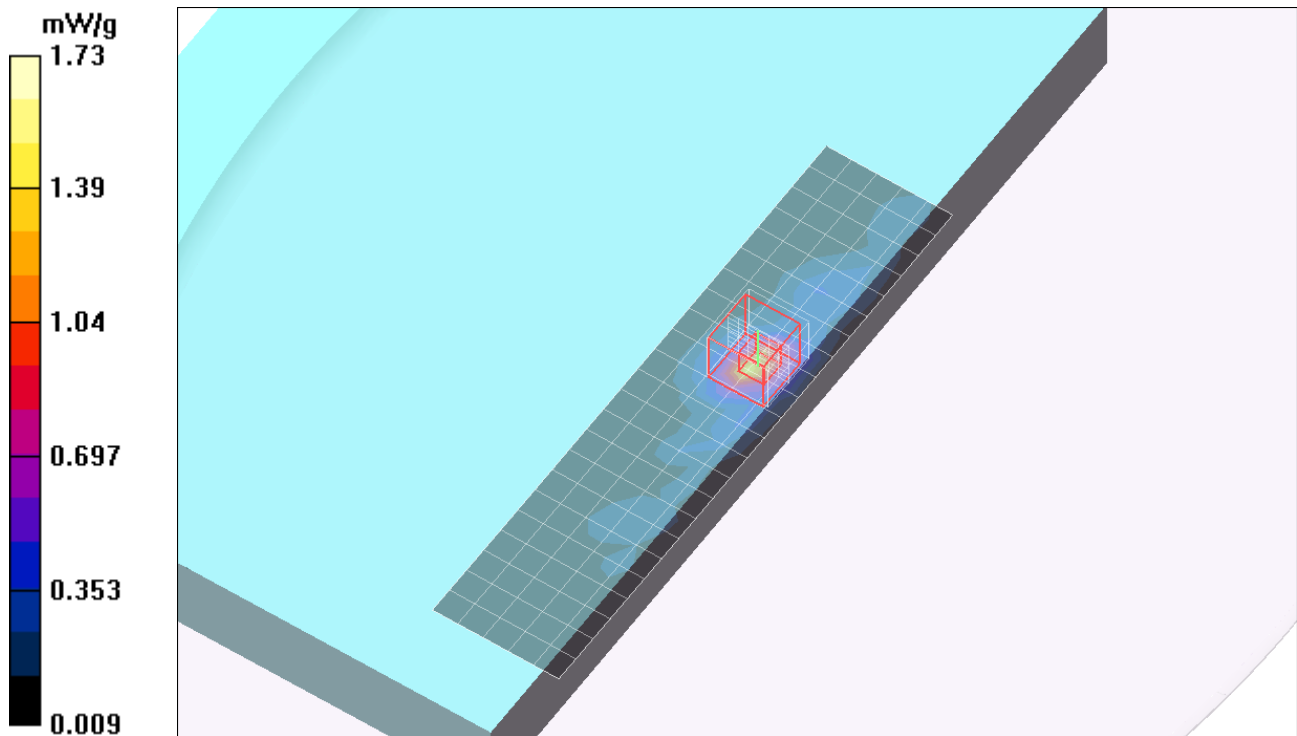
802.11a - Main & AUX Ant - M ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 9.49 V/m; Power Drift = 0.152 dB

Peak SAR (extrapolated) = 4.29 W/kg

SAR(1 g) = 0.851 mW/g; SAR(10 g) = 0.280 mW/g

Maximum value of SAR (measured) = 1.73 mW/g



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Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

Communication System: 5500 band; Frequency: 5700 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5700$ MHz; $\sigma = 6.15$ mho/m; $\epsilon_r = 45.1$; $\rho = 1000$ kg/m³

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 a 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 - Main & AUX Ant - H ch/Area Scan (5x20x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.51 mW/g

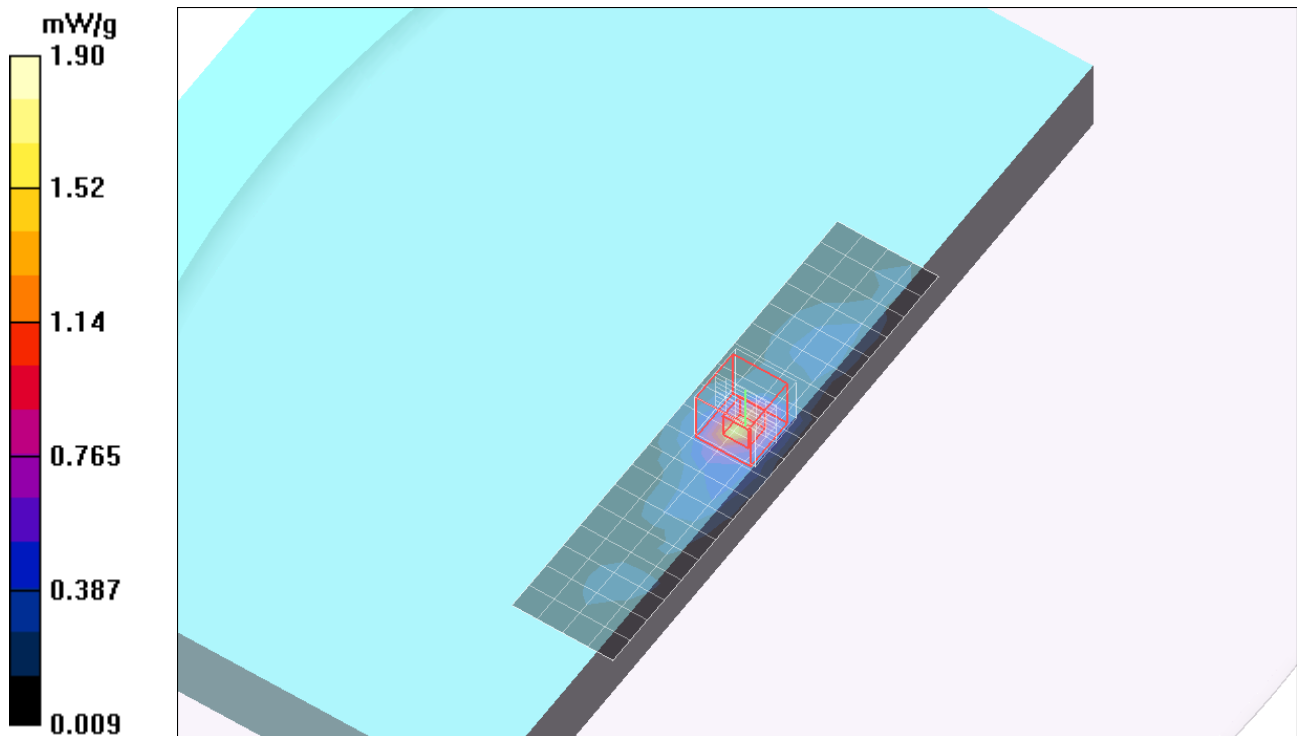
802.11a - Main & AUX Ant - H ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 15.0 V/m; Power Drift = -0.156 dB

Peak SAR (extrapolated) = 4.57 W/kg

SAR(1 g) = 0.876 mW/g; SAR(10 g) = 0.286 mW/g

Maximum value of SAR (measured) = 1.90 mW/g



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Lap Held Position

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

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.84$ mho/m; $\epsilon_r = 45.6$; $\rho = 1000$ kg/m³

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 a 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 - L ch/Area Scan (5x20x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.32 mW/g

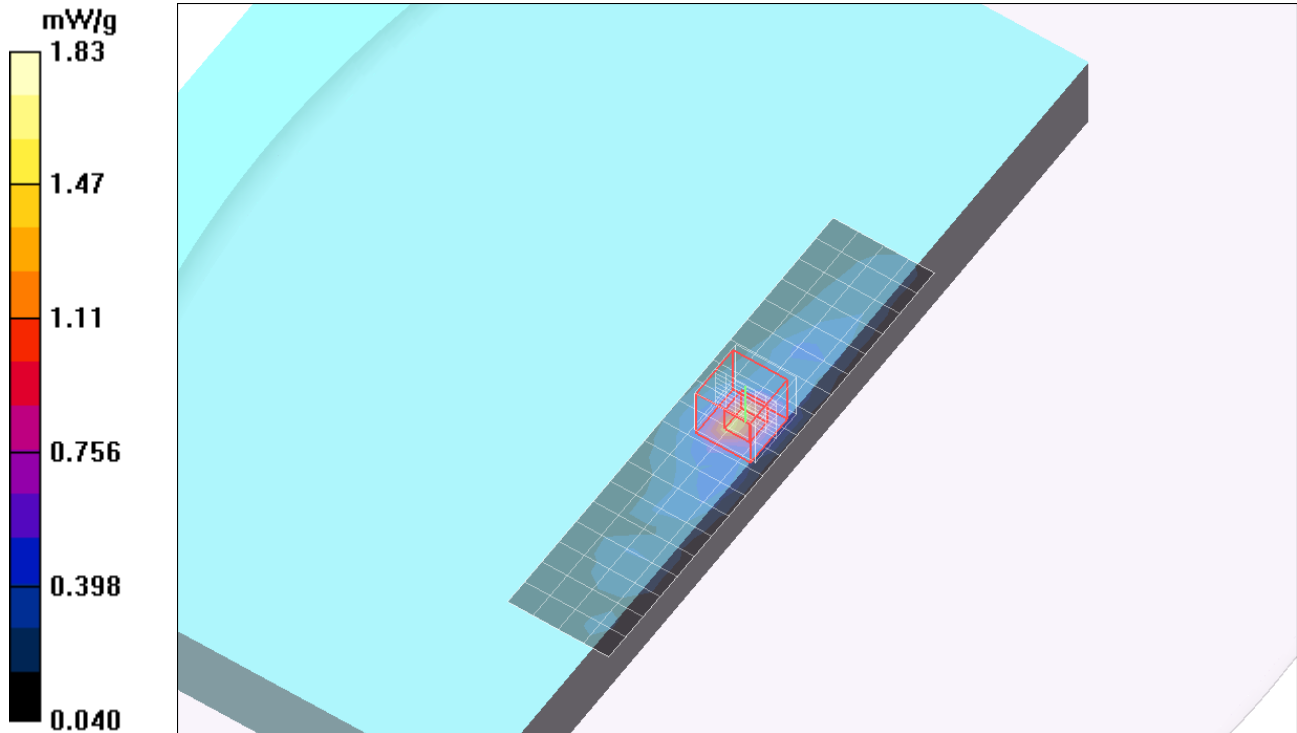
802.11n HT20 - L ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 14.8 V/m; Power Drift = -0.134 dB

Peak SAR (extrapolated) = 4.05 W/kg

SAR(1 g) = 0.865 mW/g; SAR(10 g) = 0.299 mW/g

Maximum value of SAR (measured) = 1.83 mW/g



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Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

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

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.97$ mho/m; $\epsilon_r = 45.2$; $\rho = 1000$ kg/m³

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 a 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 (5x20x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.42 mW/g

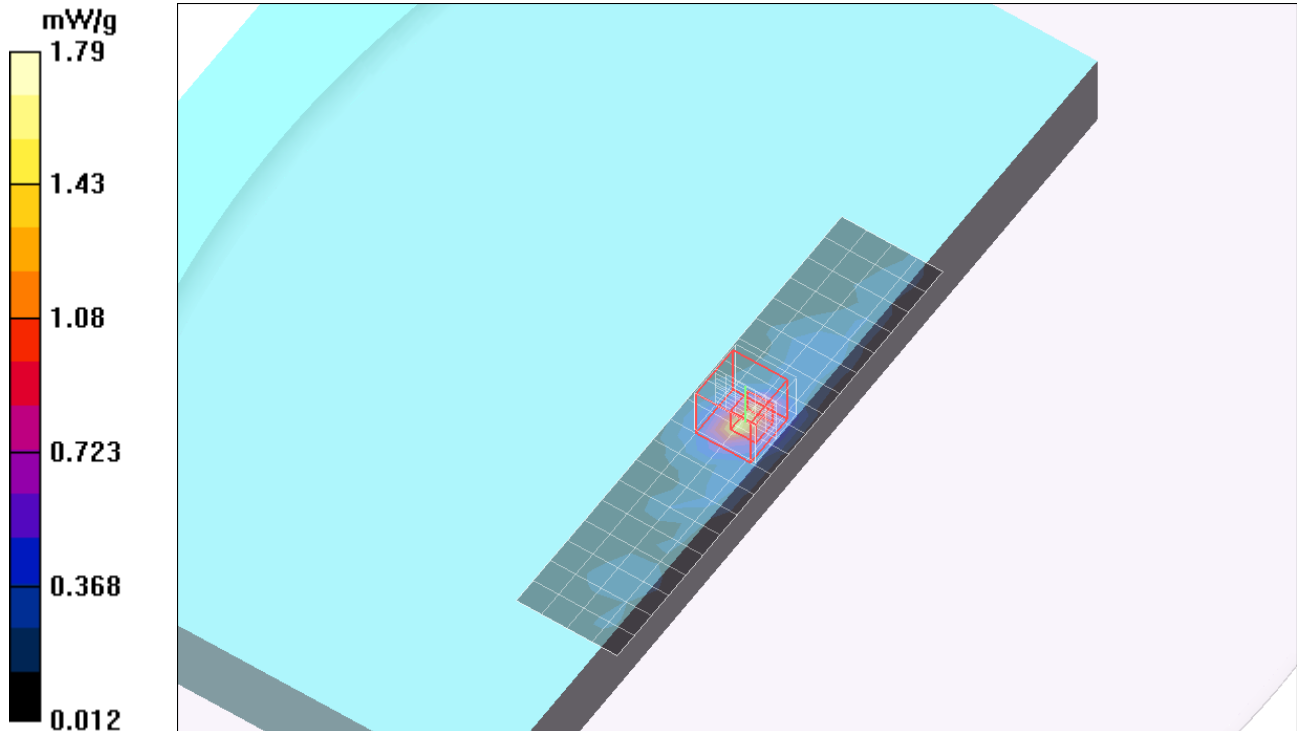
802.11n HT20 - M ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 15.0 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 4.40 W/kg

SAR(1 g) = 0.892 mW/g; SAR(10 g) = 0.312 mW/g

Maximum value of SAR (measured) = 1.79 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

Communication System: 5500 band; Frequency: 5700 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5700$ MHz; $\sigma = 6.15$ mho/m; $\epsilon_r = 45.1$; $\rho = 1000$ kg/m³

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 a peak SAR value greater than 0.0012 W/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 - H ch/Area Scan (5x20x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.57 mW/g

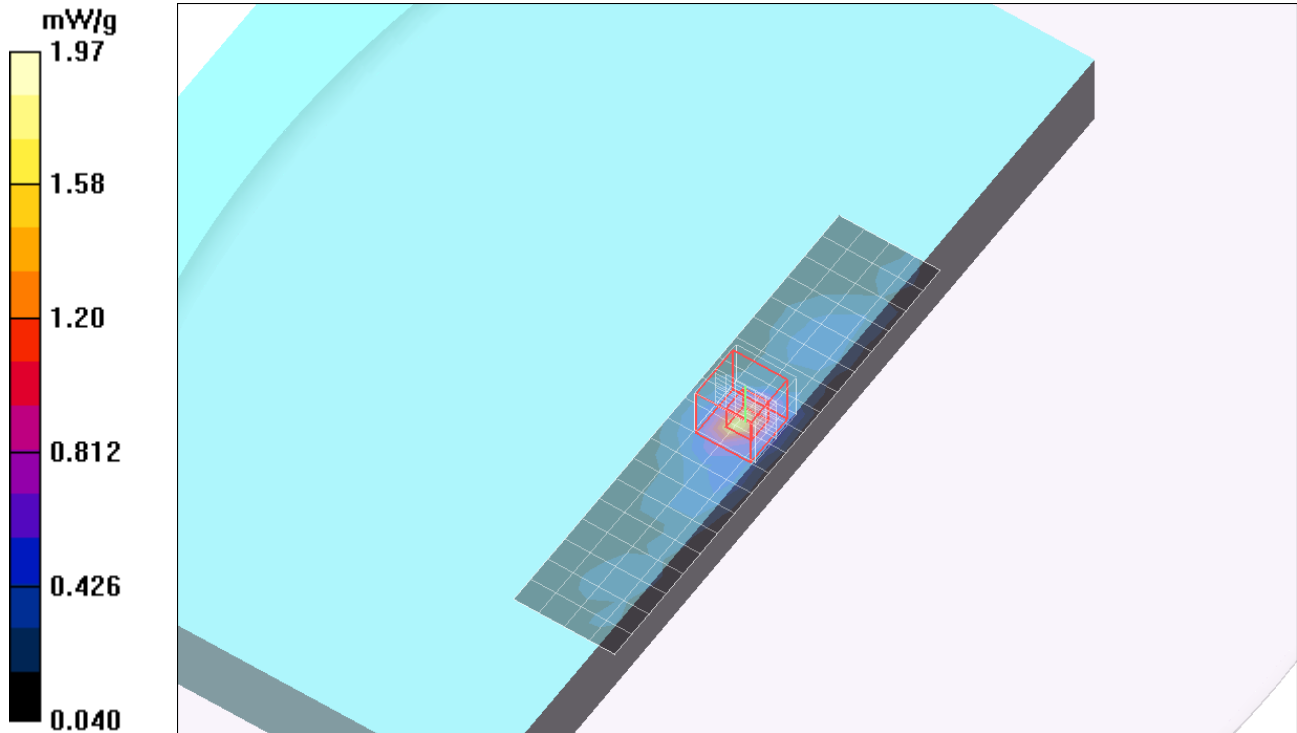
802.11n HT20 - H ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 15.2 V/m; Power Drift = -0.222 dB

Peak SAR (extrapolated) = 4.98 W/kg

SAR(1 g) = 0.927 mW/g; SAR(10 g) = 0.325 mW/g

Maximum value of SAR (measured) = 1.97 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

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

Medium parameters used (interpolated): $f = 5590$ MHz; $\sigma = 5.96$ mho/m; $\epsilon_r = 45.3$; $\rho = 1000$ kg/m³

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 a 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 (5x20x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.75 mW/g

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

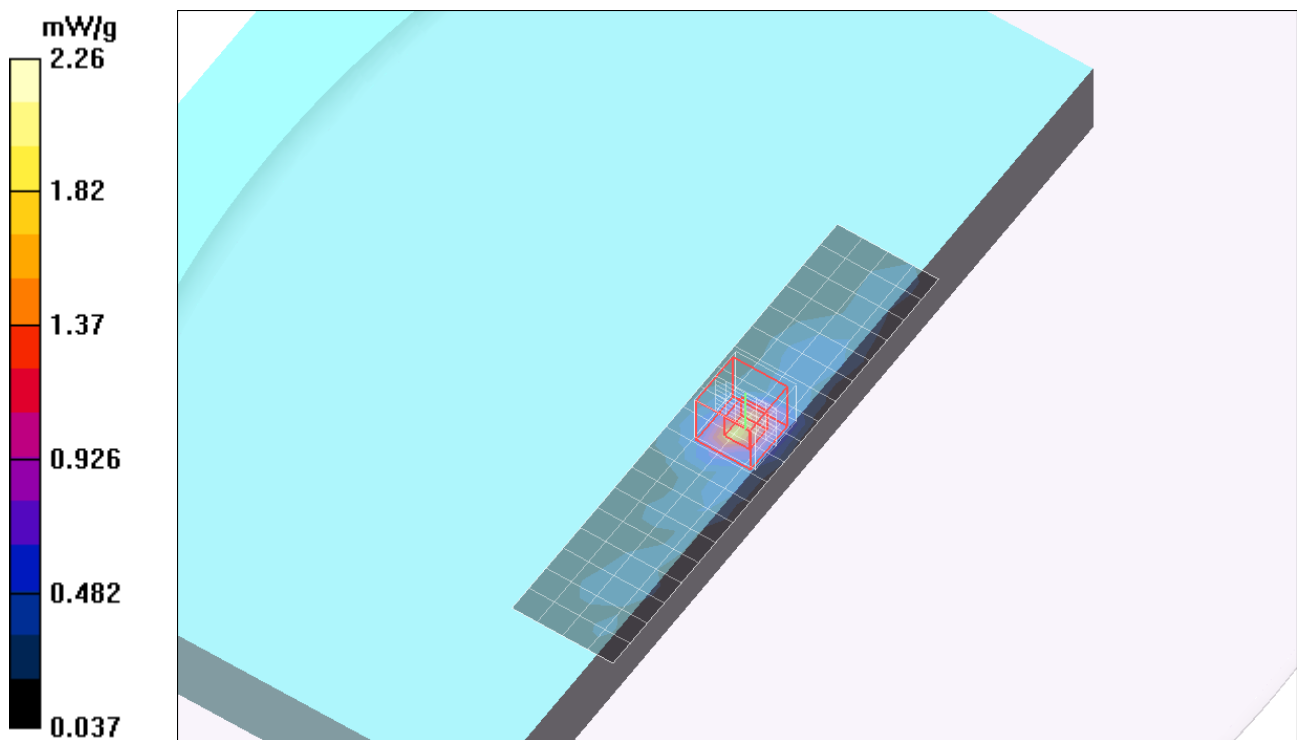
Reference Value = 16.2 V/m; Power Drift = -0.073 dB

Peak SAR (extrapolated) = 5.34 W/kg

SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.366 mW/g

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

Maximum value of SAR (measured) = 2.26 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

Communication System: 5500 band; Frequency: 5670 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5670$ MHz; $\sigma = 6.09$ mho/m; $\epsilon_r = 45.1$; $\rho = 1000$ kg/m³

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 a peak SAR value greater than 0.0012 W/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 (5x20x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.80 mW/g

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

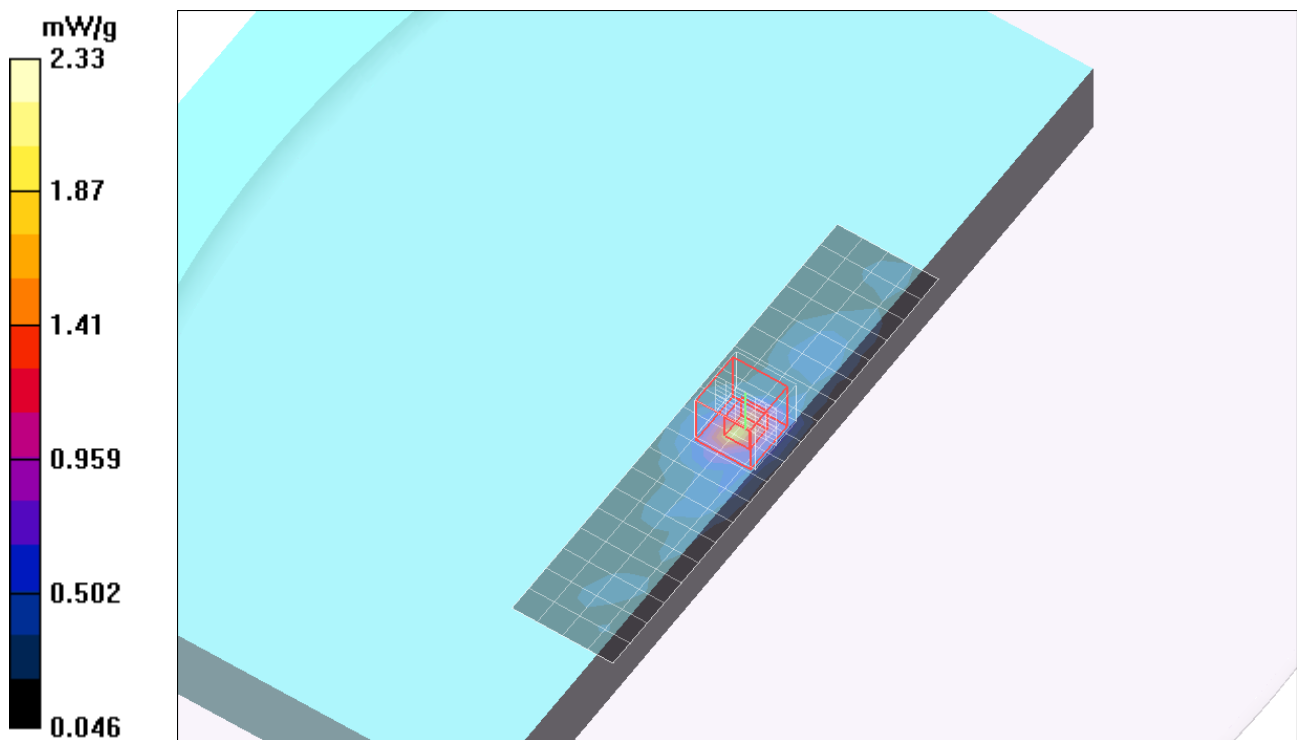
Reference Value = 16.4 V/m; Power Drift = -0.100 dB

Peak SAR (extrapolated) = 6.31 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.380 mW/g

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

Maximum value of SAR (measured) = 2.33 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

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

Medium parameters used (interpolated): $f = 5510$ MHz; $\sigma = 5.86$ mho/m; $\epsilon_r = 45.6$; $\rho = 1000$ kg/m³

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 a peak SAR value greater than 0.0012 W/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 (5x20x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.50 mW/g

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

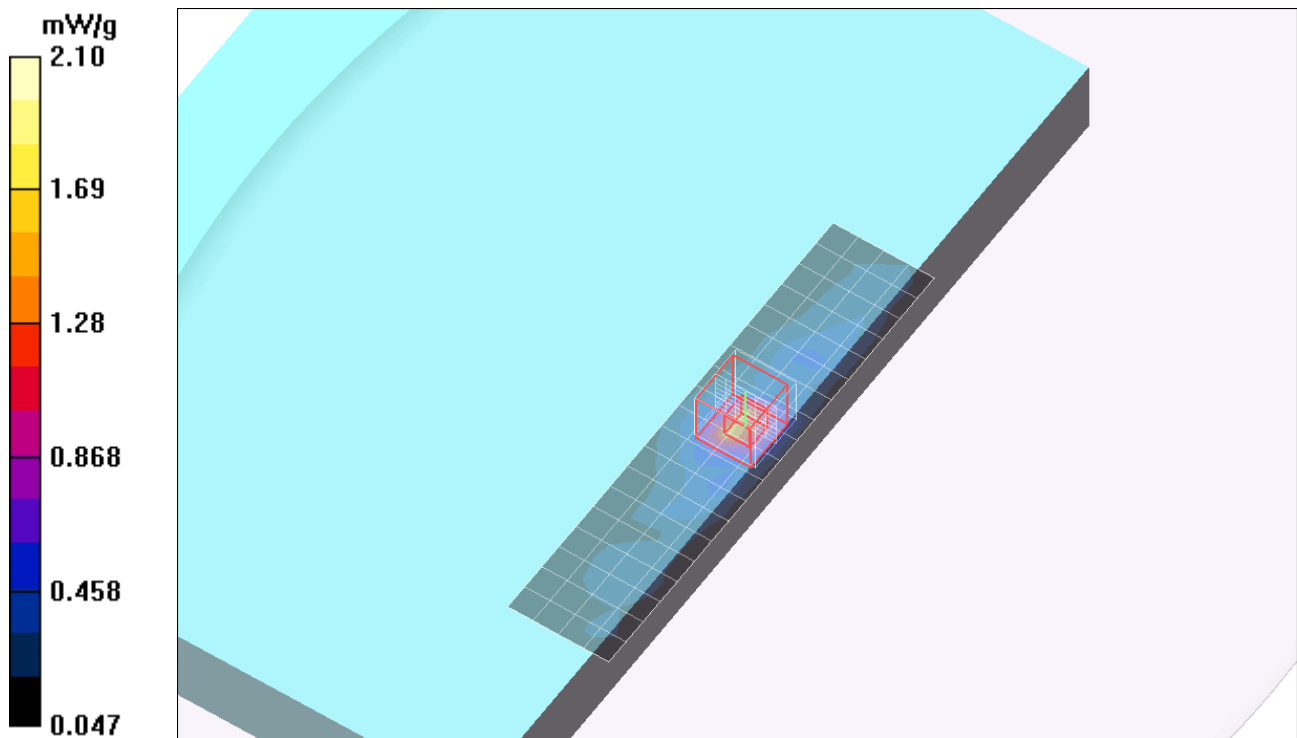
Reference Value = 16.2 V/m; Power Drift = -0.157 dB

Peak SAR (extrapolated) = 4.82 W/kg

SAR(1 g) = 0.995 mW/g; SAR(10 g) = 0.343 mW/g

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

Maximum value of SAR (measured) = 2.10 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook 15.4"; Type: laptop; Serial: Project No. 07U10976

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) = 0.434 mW/g

