

Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5180$ MHz; $\sigma = 5.26$ mho/m; $\epsilon_r = 46.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0deg. C; Liquid Temperature: 23.0 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(4.07, 4.07, 4.07); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.2 GHz a mode L ch/Area Scan (7x10x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.203 mW/g

5.2 GHz a mode L ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

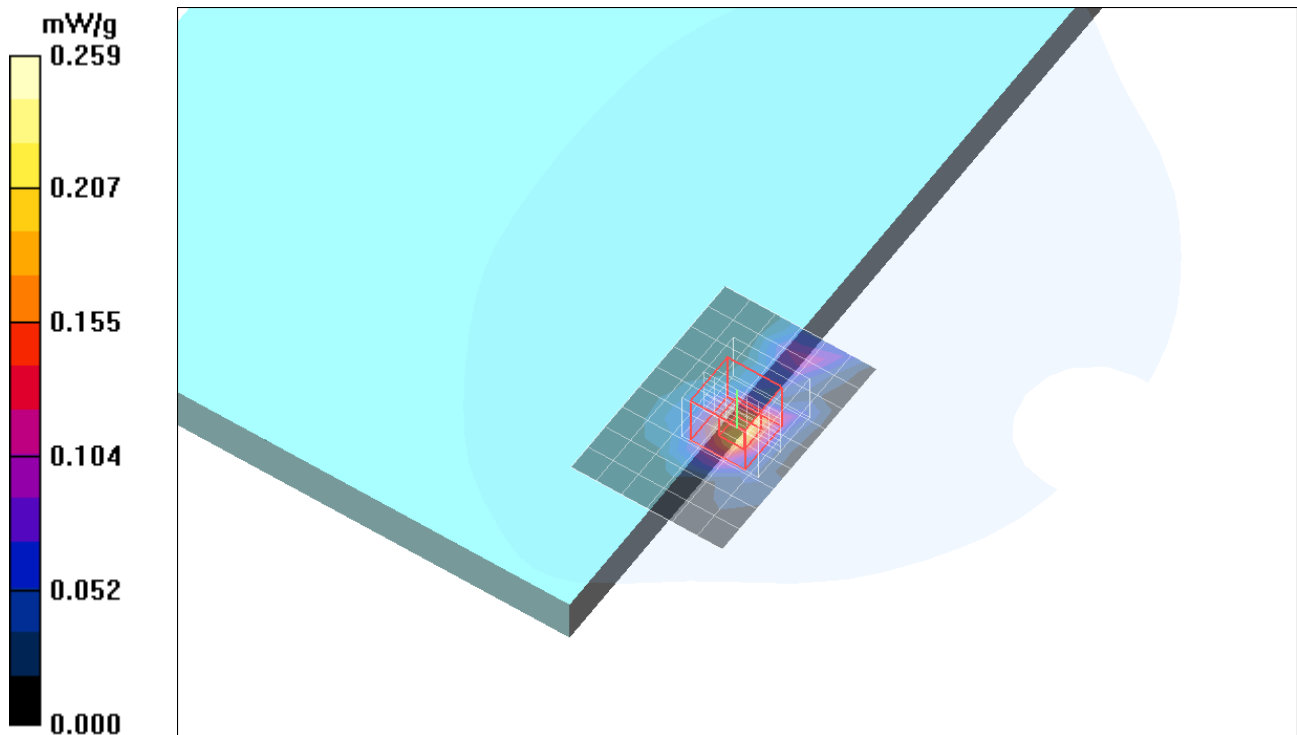
Reference Value = 7.12 V/m; Power Drift = -0.169 dB

Peak SAR (extrapolated) = 0.473 W/kg

SAR(1 g) = 0.124 mW/g; SAR(10 g) = 0.041 mW/g

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

Maximum value of SAR (measured) = 0.259 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5260$ MHz; $\sigma = 5.37$ mho/m; $\epsilon_r = 46.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0deg. C; Liquid Temperature: 23.0 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(4.07, 4.07, 4.07); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.2 GHz a mode M ch/Area Scan (7x31x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.510 mW/g

5.2 GHz a mode M ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

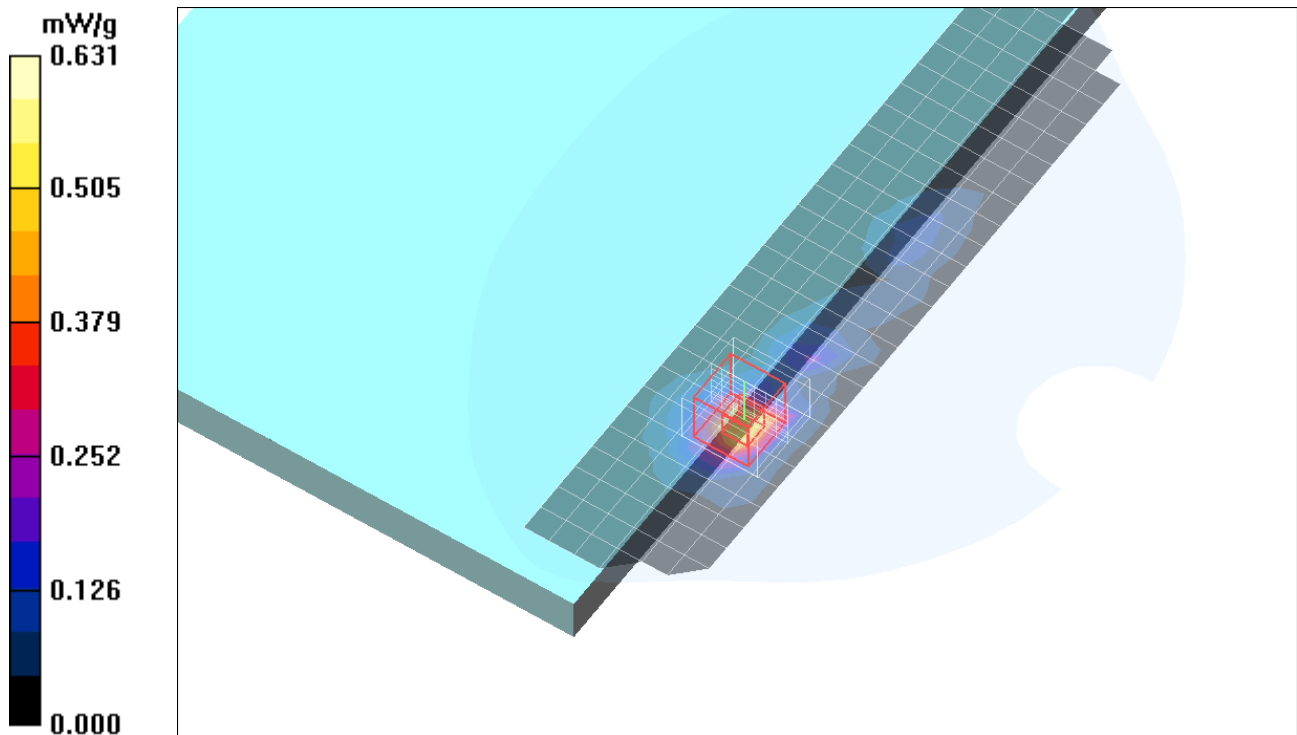
Reference Value = 2.90 V/m; Power Drift = 0.116 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.324 mW/g; SAR(10 g) = 0.107 mW/g

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

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



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Lap Held Position

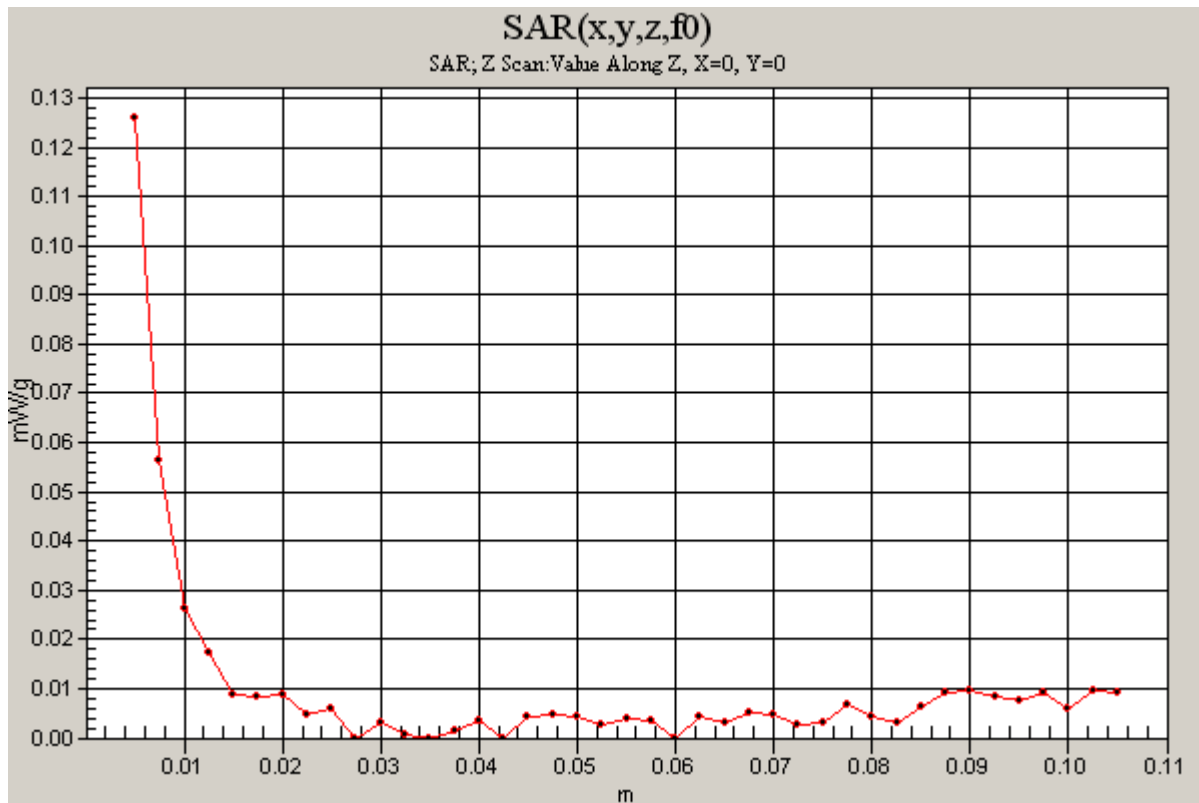
DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

5.2 GHz a mode 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) = 0.126 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5320$ MHz; $\sigma = 5.45$ mho/m; $\epsilon_r = 46.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0deg. C; Liquid Temperature: 23.0 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(4.07, 4.07, 4.07); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.2 GHz a mode H ch/Area Scan (7x10x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.337 mW/g

5.2 GHz a mode H ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

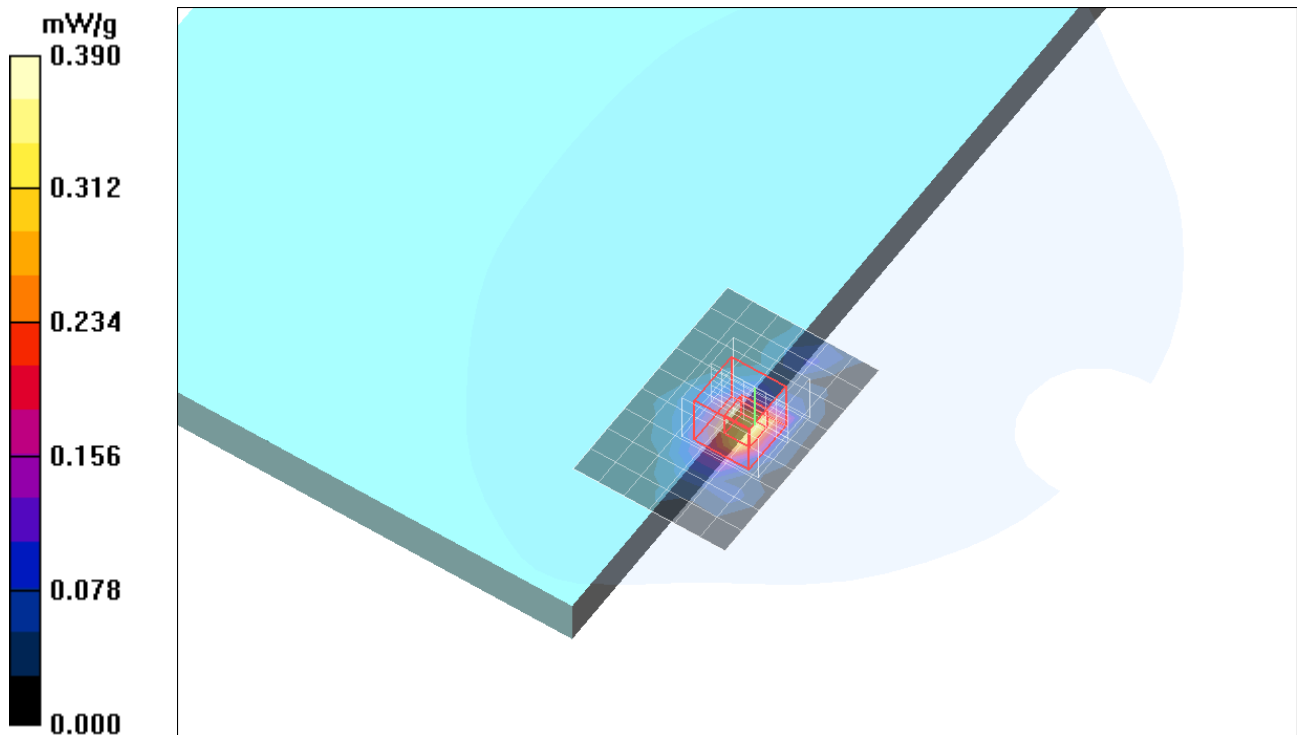
Reference Value = 8.95 V/m; Power Drift = -0.199 dB

Peak SAR (extrapolated) = 0.894 W/kg

SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.067 mW/g

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

Maximum value of SAR (measured) = 0.390 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5260$ MHz; $\sigma = 5.37$ mho/m; $\epsilon_r = 46.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0deg. C; Liquid Temperature: 23.0 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(4.07, 4.07, 4.07); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.2 GHz HT20 mode M ch/Area Scan (7x10x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.401 mW/g

5.2 GHz HT20 mode M ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

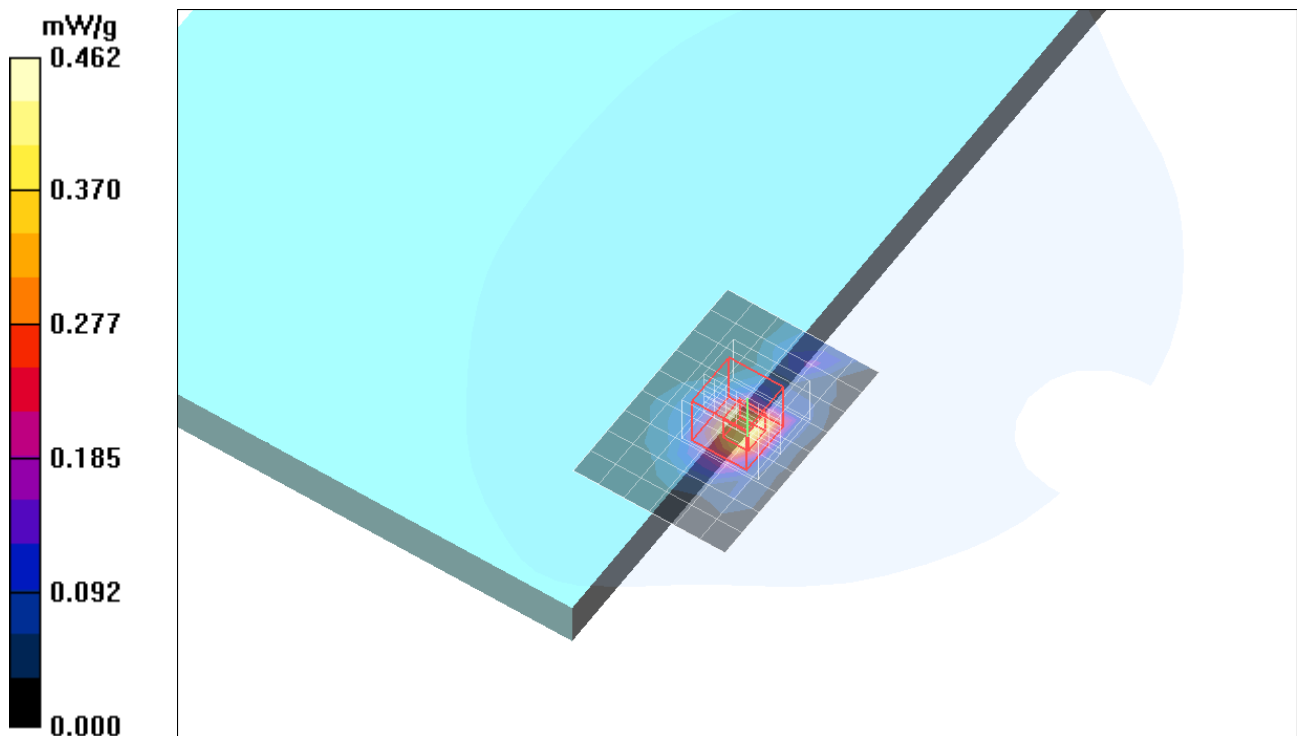
Reference Value = 9.82 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.249 mW/g; SAR(10 g) = 0.080 mW/g

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

Maximum value of SAR (measured) = 0.462 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5270 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5270$ MHz; $\sigma = 5.38$ mho/m; $\epsilon_r = 46.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0deg. C; Liquid Temperature: 23.0 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(4.07, 4.07, 4.07); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.2 GHz HT40 mode M ch/Area Scan (7x10x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.362 mW/g

5.2 GHz HT40 mode M ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

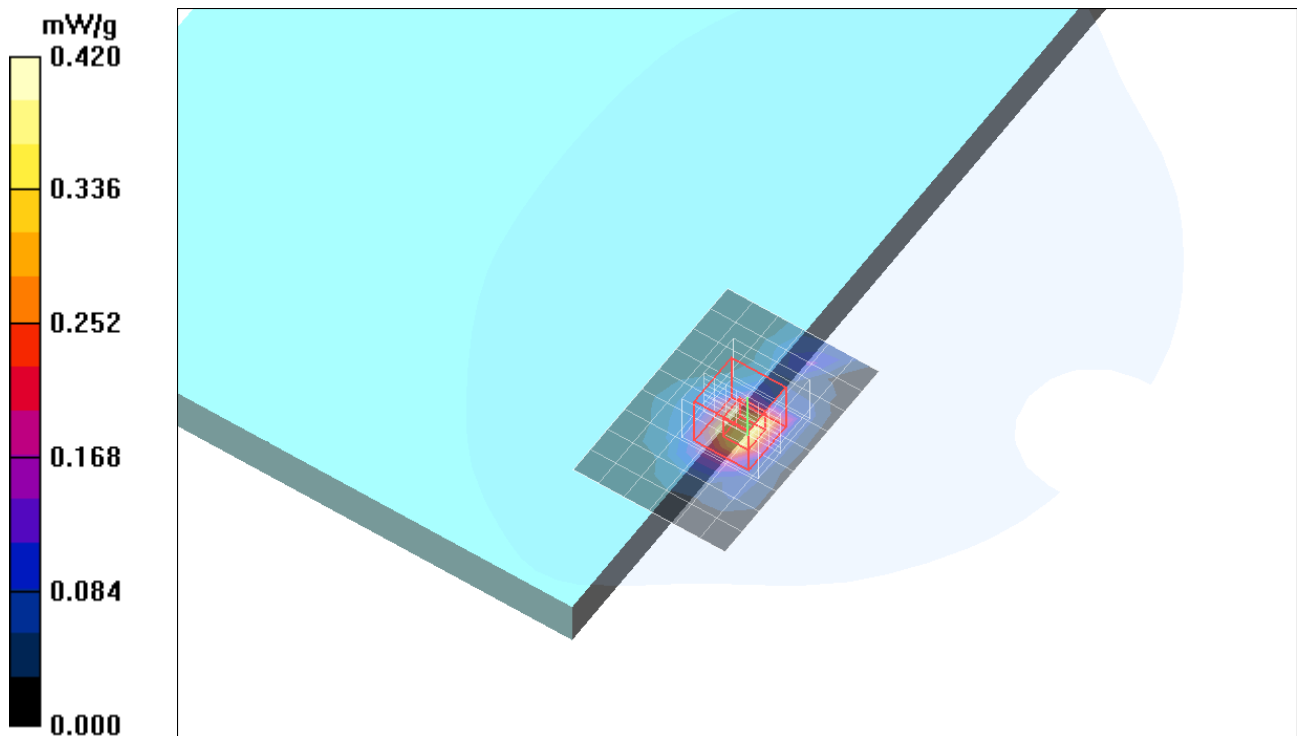
Reference Value = 9.47 V/m; Power Drift = -0.181 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.073 mW/g

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

Maximum value of SAR (measured) = 0.420 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 5.97$ mho/m; $\epsilon_r = 46.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0deg. C; Liquid Temperature: 23.0 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(3.76, 3.76, 3.76); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.8 GHz a mode L ch/Area Scan (7x15x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.633 mW/g

5.8 GHz a mode L ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

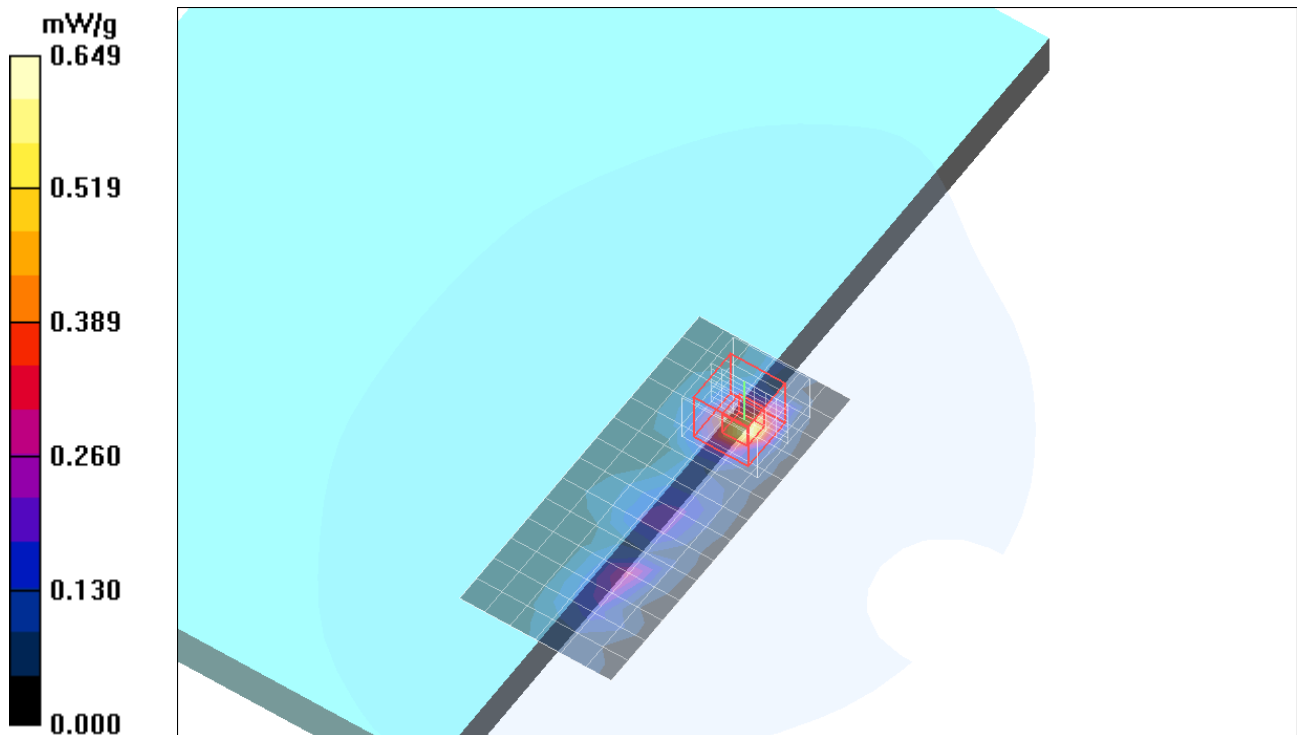
Reference Value = 11.2 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 1.64 W/kg

SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.096 mW/g

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

Maximum value of SAR (measured) = 0.649 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

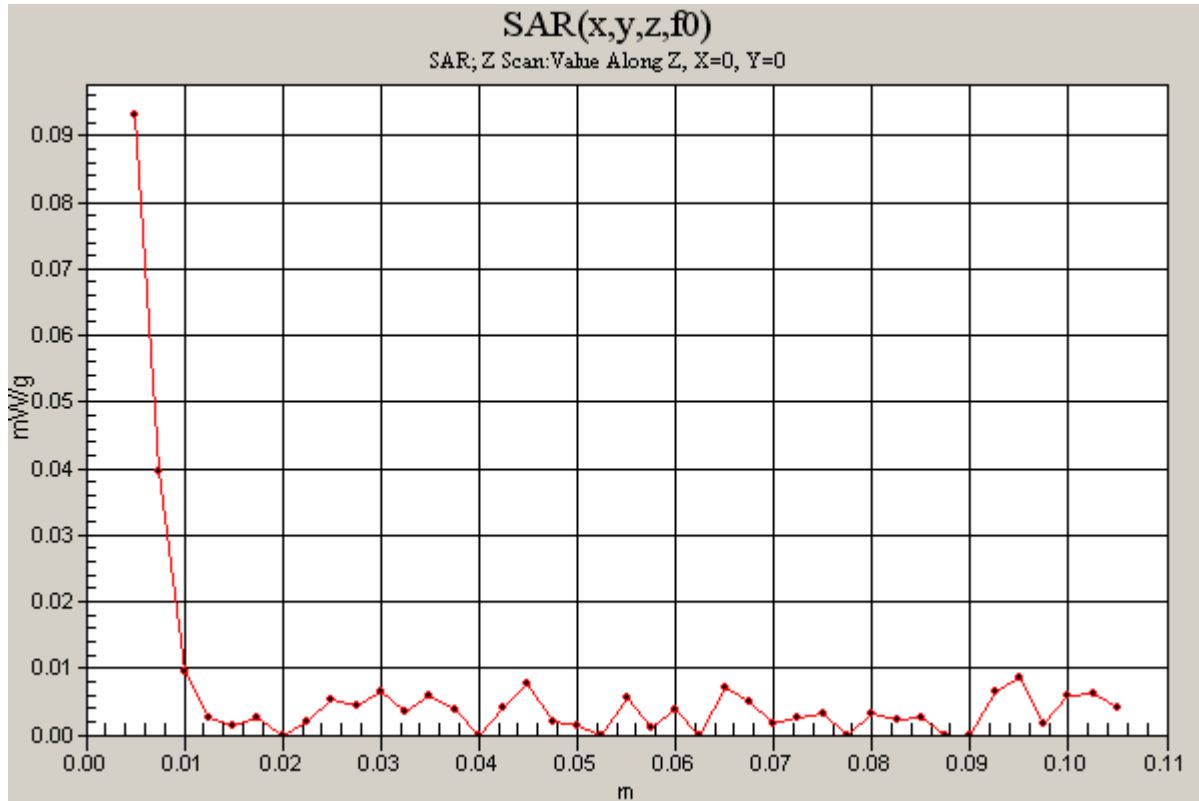
DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5745 MHz; Duty Cycle: 1:1

5.8 GHz a mode L 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) = 0.093 mW/g



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Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

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

Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 6.03$ mho/m; $\epsilon_r = 46.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0 deg. C; Liquid Temperature: 23.0 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(3.76, 3.76, 3.76); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.8 GHz a mode M ch/Area Scan (7x31x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.567 mW/g

5.8 GHz a mode M ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 4.72 V/m; Power Drift = 0.108 dB

Peak SAR (extrapolated) = 1.48 W/kg

SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.086 mW/g

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

Maximum value of SAR (measured) = 0.626 mW/g

5.8 GHz a mode M ch/Zoom Scan (8x8x8)/Cube 1: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

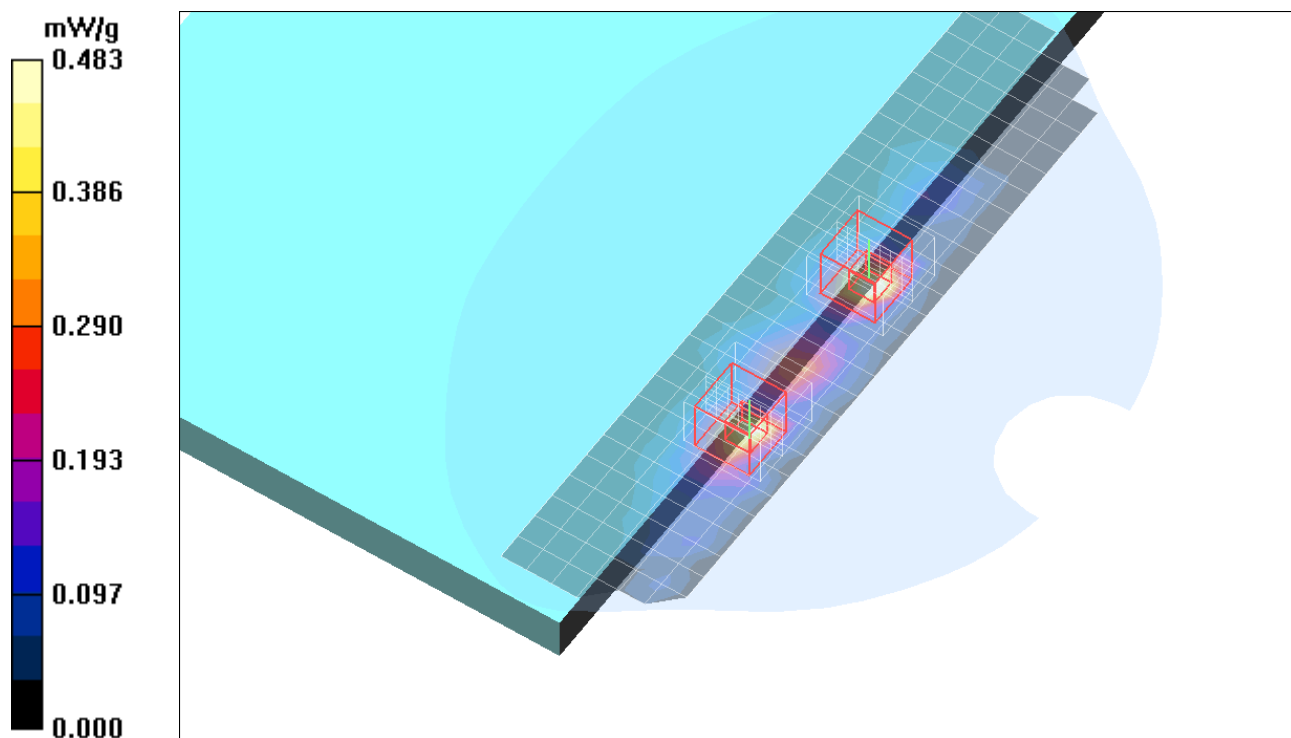
Reference Value = 4.72 V/m; Power Drift = 0.108 dB

Peak SAR (extrapolated) = 0.893 W/kg

SAR(1 g) = 0.216 mW/g; SAR(10 g) = 0.065 mW/g

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

Maximum value of SAR (measured) = 0.483 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5825$ MHz; $\sigma = 6.08$ mho/m; $\epsilon_r = 45.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 23.0deg. 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(3.76, 3.76, 3.76); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.8 GHz a mode H ch/Area Scan (7x15x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.394 mW/g

5.8 GHz a mode H ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

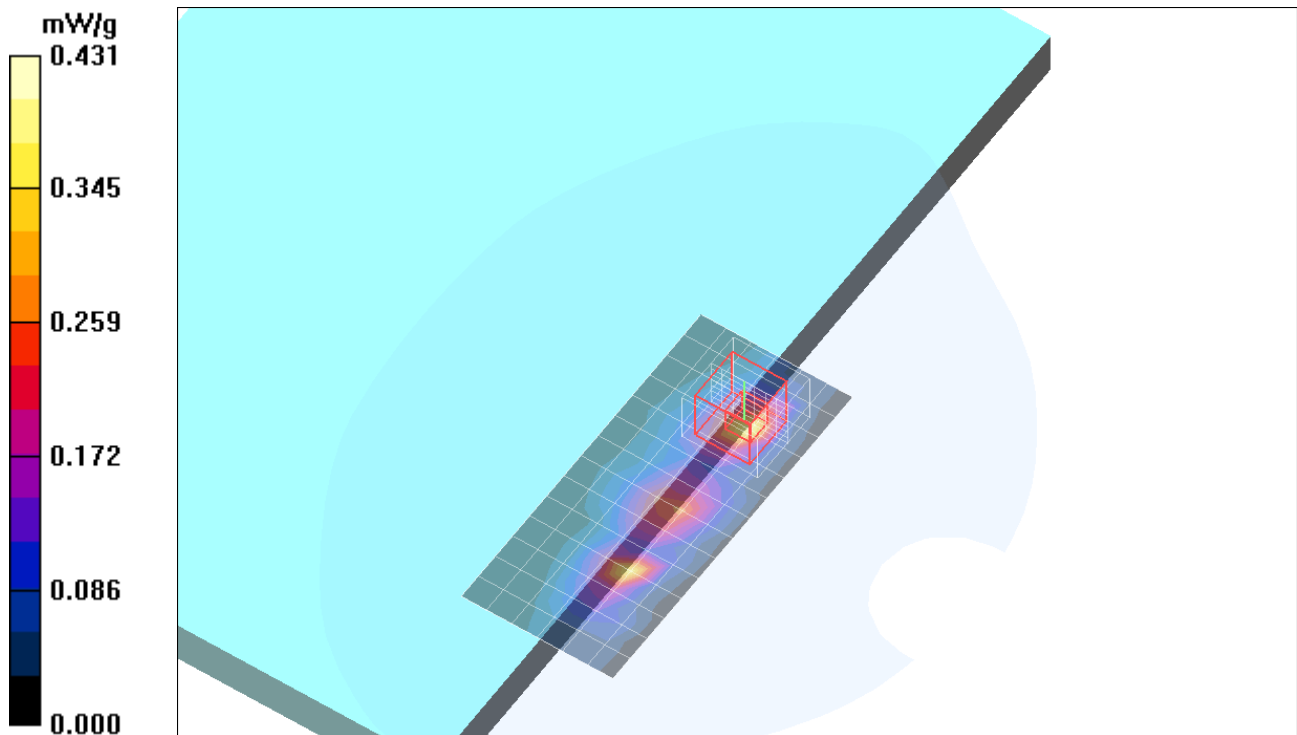
Reference Value = 8.83 V/m; Power Drift = -0.165 dB

Peak SAR (extrapolated) = 0.841 W/kg

SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.061 mW/g

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

Maximum value of SAR (measured) = 0.431 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

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

Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 6.03$ mho/m; $\epsilon_r = 46.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0deg. C; Liquid Temperature: 23.0 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(3.76, 3.76, 3.76); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.8 GHz HT20 mode M ch/Area Scan (7x14x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.337 mW/g

5.8 GHz HT20 mode M ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

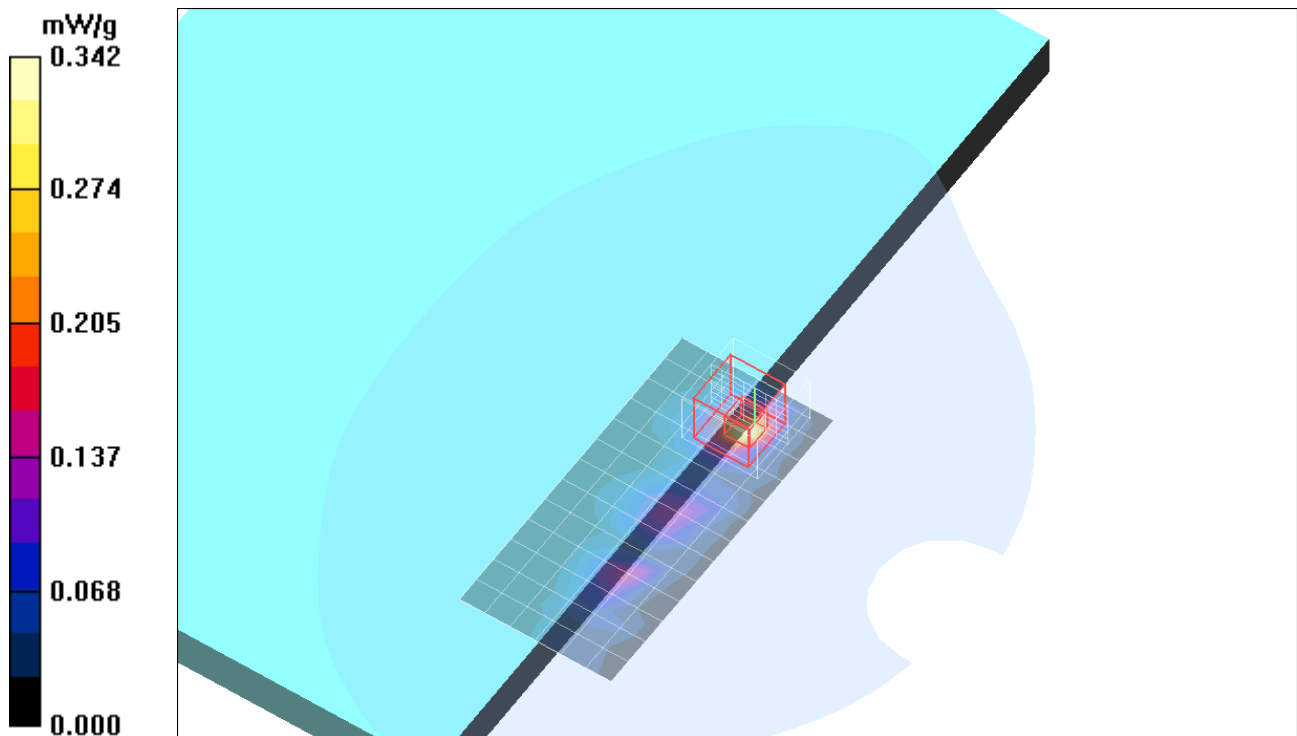
Reference Value = 7.96 V/m; Power Drift = -0.182 dB

Peak SAR (extrapolated) = 0.652 W/kg

SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.046 mW/g

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

Maximum value of SAR (measured) = 0.342 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

Communication System: 802.11a; Frequency: 5755 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5755$ MHz; $\sigma = 5.99$ mho/m; $\epsilon_r = 46$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0deg. C; Liquid Temperature: 23.0 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(3.76, 3.76, 3.76); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.8 GHz HT40 mode L ch/Area Scan (7x15x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.304 mW/g

5.8 GHz HT40 mode L ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

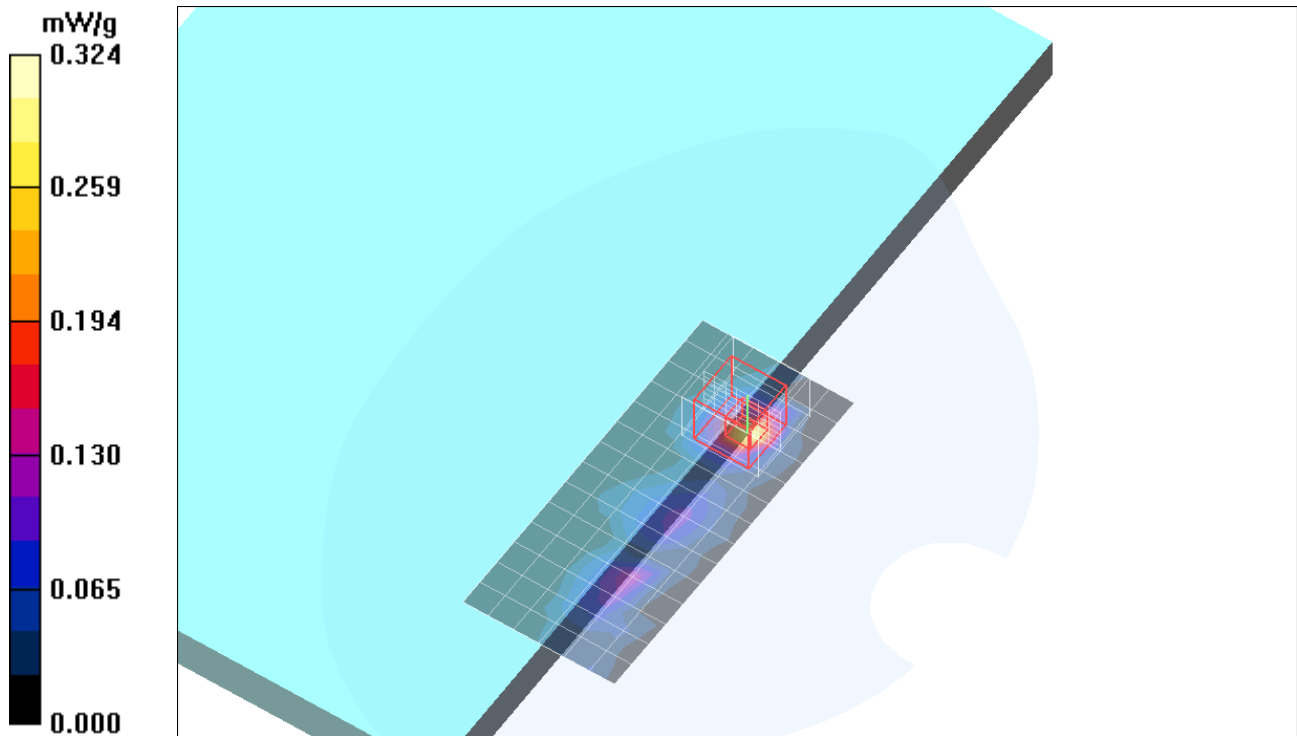
Reference Value = 7.56 V/m; Power Drift = -0.108 dB

Peak SAR (extrapolated) = 0.537 W/kg

SAR(1 g) = 0.135 mW/g; SAR(10 g) = 0.038 mW/g

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

Maximum value of SAR (measured) = 0.324 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

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

Medium parameters used (interpolated): $f = 5795$ MHz; $\sigma = 6.05$ mho/m; $\epsilon_r = 46.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 24.0deg. C; Liquid Temperature: 23.0 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(3.76, 3.76, 3.76); Calibrated: 5/30/2006
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 SN558; Calibrated: 1/20/2006
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 21; Postprocessing SW: SEMCAD, V1.8 Build 170

5.8 GHz HT40 mode H ch/Area Scan (7x15x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.273 mW/g

5.8 GHz HT40 mode H ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 7.38 V/m; Power Drift = 0.126 dB

Peak SAR (extrapolated) = 0.547 W/kg

SAR(1 g) = 0.126 mW/g; SAR(10 g) = 0.038 mW/g

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

Maximum value of SAR (measured) = 0.296 mW/g

