

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; $\sigma = 5.46$ mho/m; $\epsilon_r = 47$; $\rho = 1000$ 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) = 0.548 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 = 7.45 V/m; Power Drift = -0.189 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.110 mW/g

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

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

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

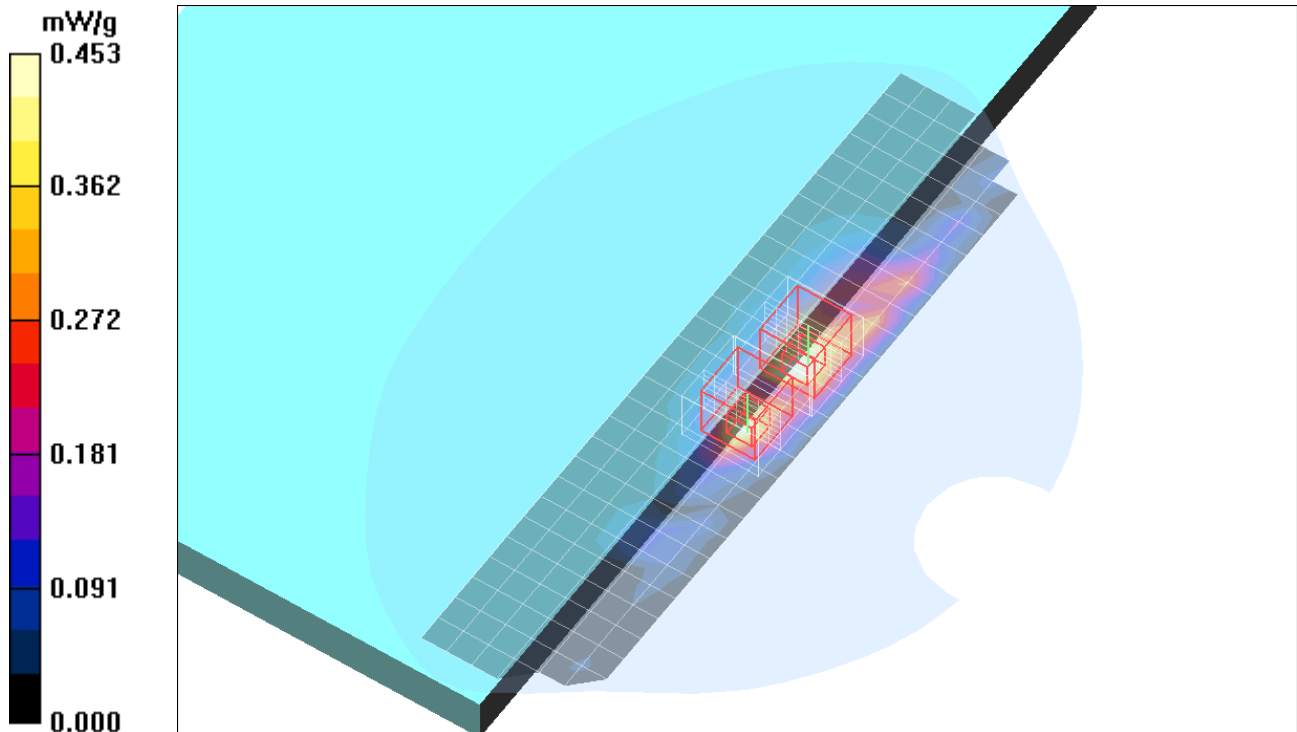
Reference Value = 7.45 V/m; Power Drift = -0.189 dB

Peak SAR (extrapolated) = 0.876 W/kg

SAR(1 g) = 0.241 mW/g; SAR(10 g) = 0.085 mW/g

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

Maximum value of SAR (measured) = 0.453 mW/g



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

Medium parameters used (interpolated): $f = 5260$ MHz; $\sigma = 5.46$ mho/m; $\epsilon_r = 47$; $\rho = 1000$ 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 (7x14x1):

Measurement grid: dx=10mm, dy=10mm
[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.565 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 = 10.8 V/m; Power Drift = -0.150 dB
Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.310 mW/g; SAR(10 g) = 0.107 mW/g

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

Maximum value of SAR (measured) = 0.613 mW/g

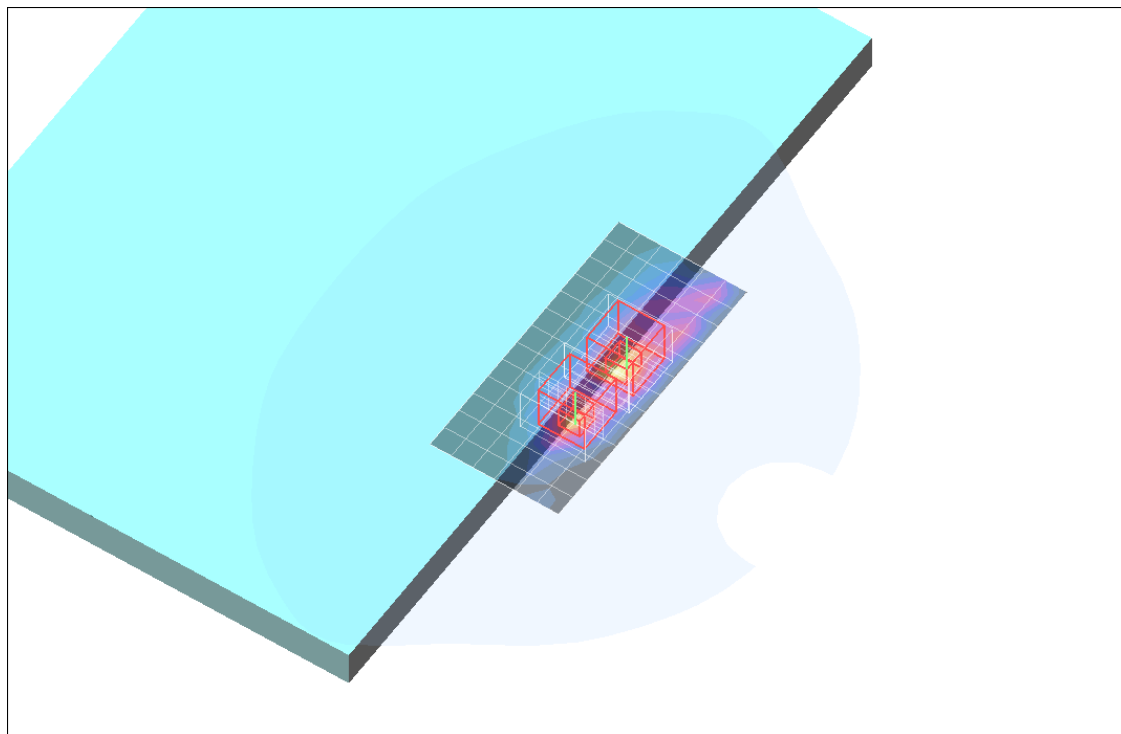
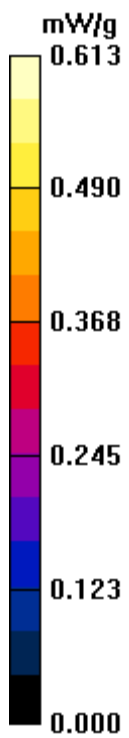
5.2 GHz HT20 mode M ch/Zoom Scan (8x8x8)/Cube 1:

Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 10.8 V/m; Power Drift = -0.150 dB
Peak SAR (extrapolated) = 0.895 W/kg

SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.085 mW/g

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

Maximum value of SAR (measured) = 0.449 mW/g



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Lap Held Position

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

Communication System: 802.11a; Frequency: 5190 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5190$ MHz; $\sigma = 5.37$ mho/m; $\epsilon_r = 47.1$; $\rho = 1000$ 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(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 L ch/Area Scan (6x14x1):

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

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

Maximum value of SAR (measured) = 0.157 mW/g

5.2 GHz HT40 mode L ch/Zoom Scan (8x8x8)/Cube 0:

Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 4.58 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 0.272 W/kg

SAR(1 g) = 0.075 mW/g; SAR(10 g) = 0.025 mW/g

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

Maximum value of SAR (measured) = 0.162 mW/g

5.2 GHz HT40 mode L ch/Zoom Scan (8x8x8)/Cube 1:

Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

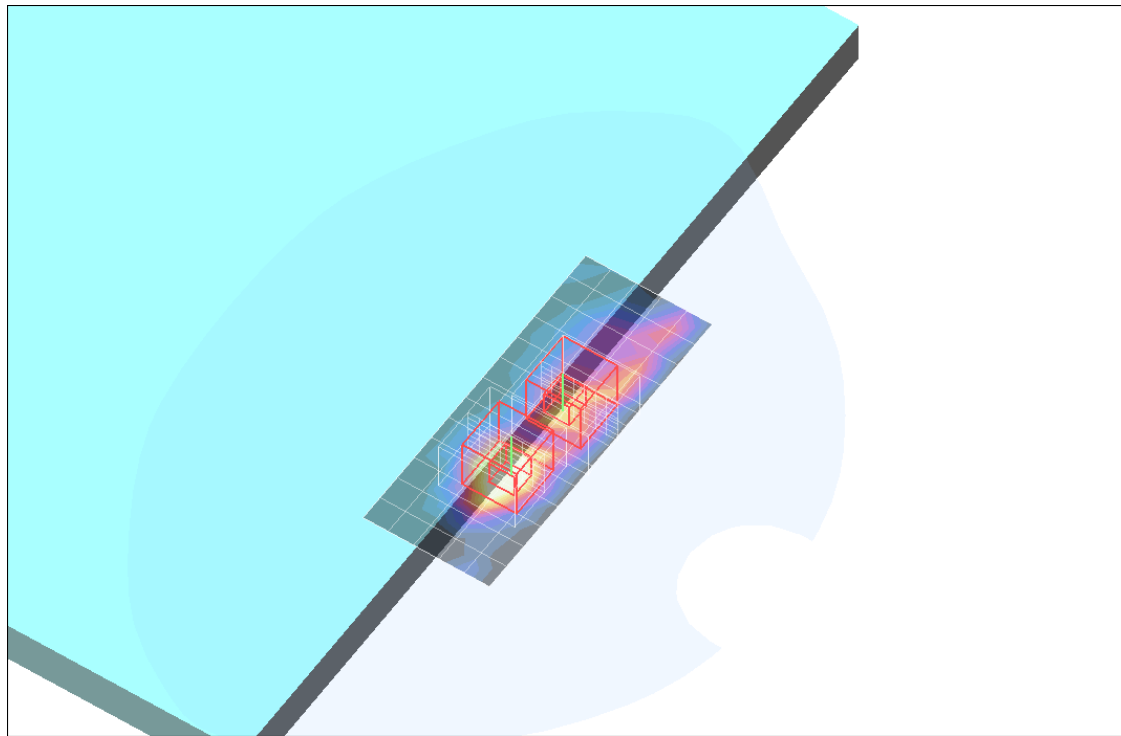
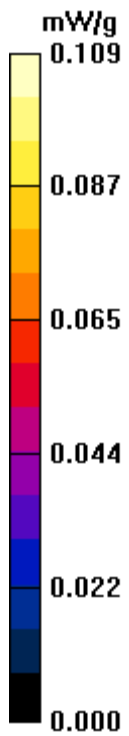
Reference Value = 4.58 V/m; Power Drift = -0.103 dB

Peak SAR (extrapolated) = 0.232 W/kg

SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.018 mW/g

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

Maximum value of SAR (measured) = 0.109 mW/g



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Medium parameters used (interpolated): $f = 5260$ MHz; $\sigma = 5.46$ mho/m; $\epsilon_r = 47$; $\rho = 1000$ 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 (6x14x1):

Measurement grid: dx=10mm, dy=10mm
[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.722 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 = 12.3 V/m; Power Drift = -0.128 dB
Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.146 mW/g

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

Maximum value of SAR (measured) = 0.784 mW/g

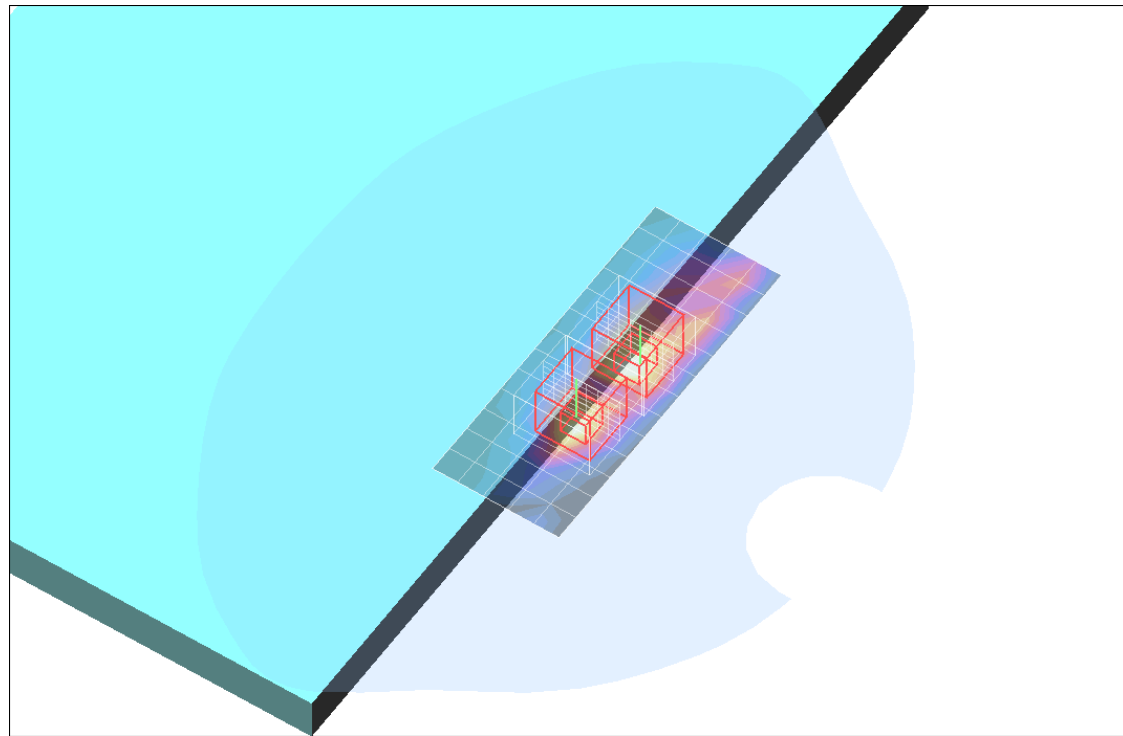
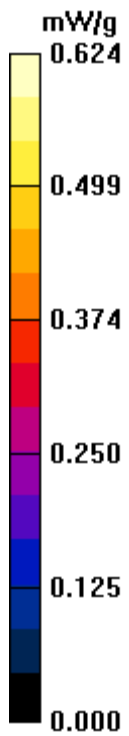
5.2 GHz HT40 mode M ch/Zoom Scan (8x8x8)/Cube 1:

Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm
Reference Value = 12.3 V/m; Power Drift = -0.128 dB
Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.337 mW/g; SAR(10 g) = 0.120 mW/g

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

Maximum value of SAR (measured) = 0.624 mW/g



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Lap Held Position

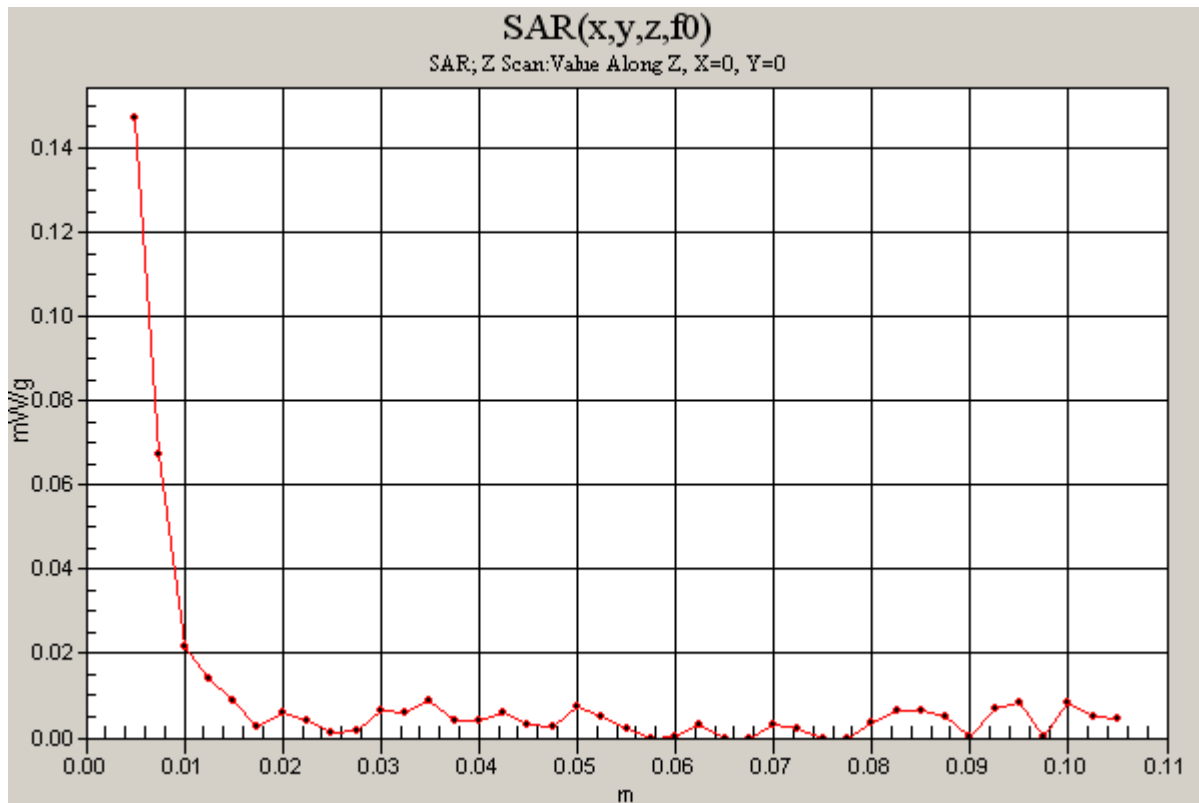
DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

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

5.2 GHz HT40 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) = 0.147 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

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

Communication System: 802.11a; Frequency: 5310 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5310$ MHz; $\sigma = 5.53$ 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 HT40 mode H ch/Area Scan (6x14x1):

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

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

Maximum value of SAR (measured) = 0.249 mW/g

5.2 GHz HT40 mode H ch/Zoom Scan (8x8x8)/Cube 0:

Measurement grid: dx=4.3mm, dy=4.3mm,

dz=3mm

Reference Value = 7.17 V/m; Power Drift = 0.188 dB

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.038 mW/g

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

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

5.2 GHz HT40 mode H ch/Zoom Scan (8x8x8)/Cube 1:

Measurement grid: dx=4.3mm, dy=4.3mm,

dz=3mm

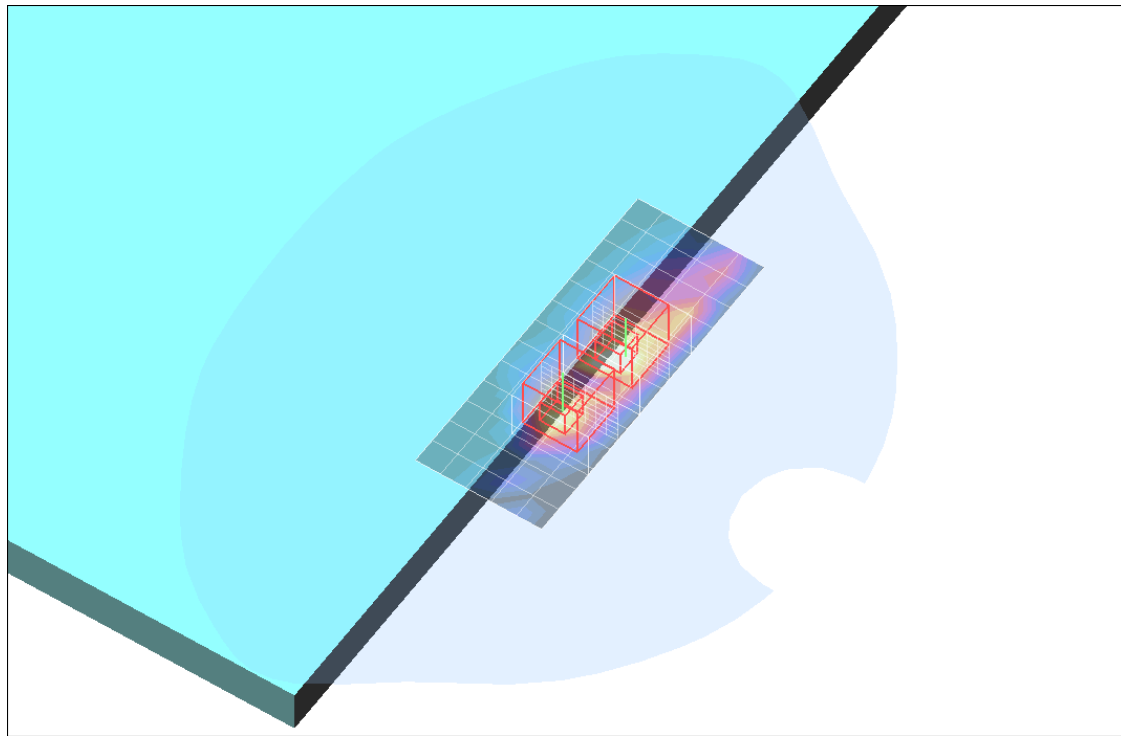
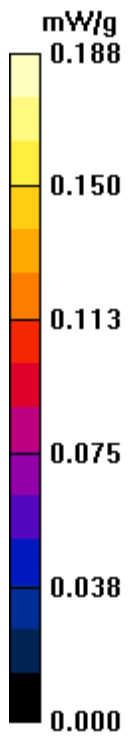
Reference Value = 7.17 V/m; Power Drift = 0.188 dB

Peak SAR (extrapolated) = 0.315 W/kg

SAR(1 g) = 0.095 mW/g; SAR(10 g) = 0.034 mW/g

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

Maximum value of SAR (measured) = 0.188 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; $\sigma = 6.04$ 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 (6x8x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 1.05 mW/g

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

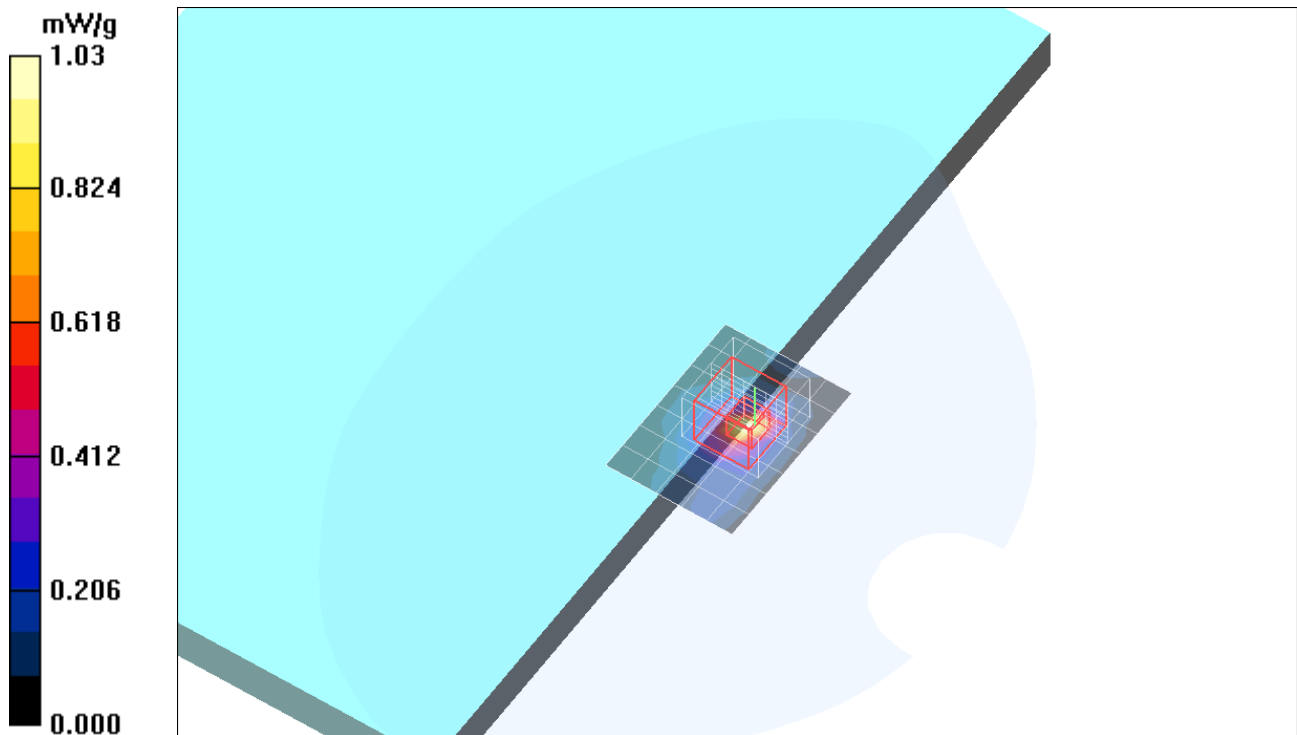
Reference Value = 13.8 V/m; Power Drift = 0.082 dB

Peak SAR (extrapolated) = 2.41 W/kg

SAR(1 g) = 0.490 mW/g; SAR(10 g) = 0.146 mW/g

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

Maximum value of SAR (measured) = 1.03 mW/g



Test Laboratory: Compliance Certification Services

Lap Held Position

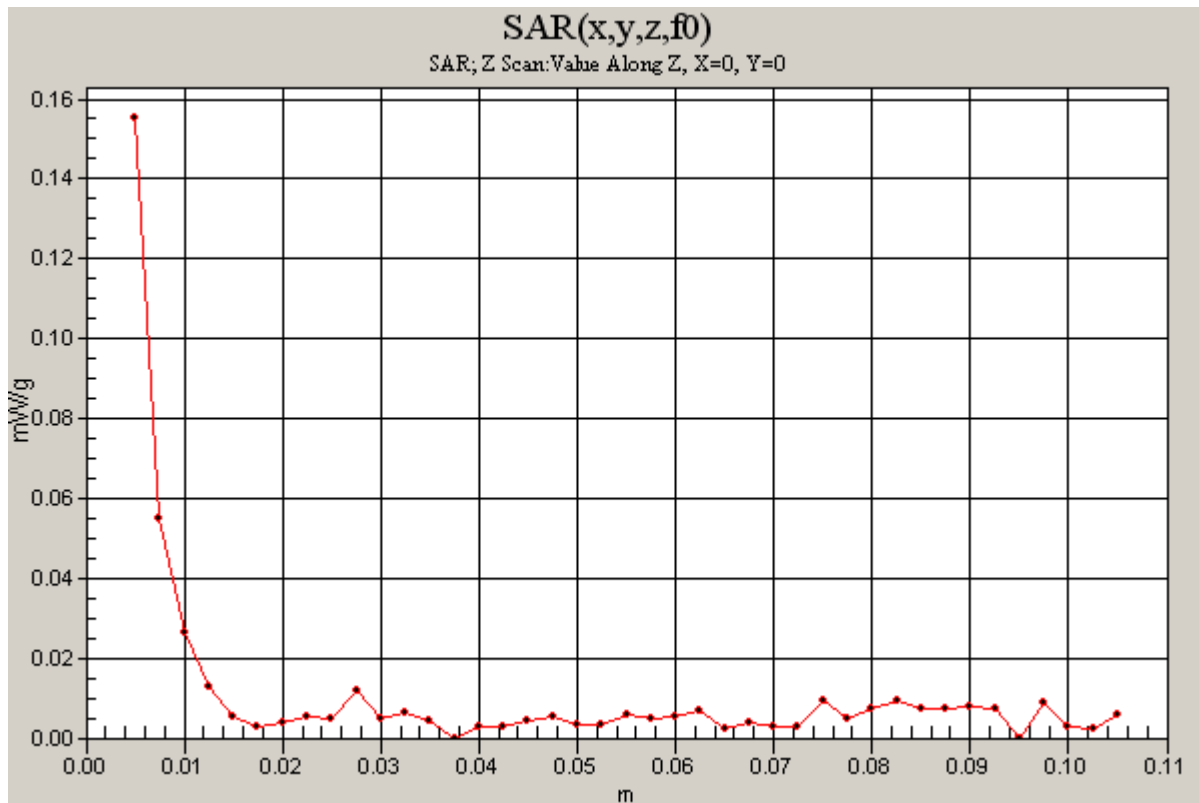
DUT: Apple MacBook Pro; Type: Laptop; Serial: N/A

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) = 0.155 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; $\sigma = 6.11$ 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 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) = 0.585 mW/g

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

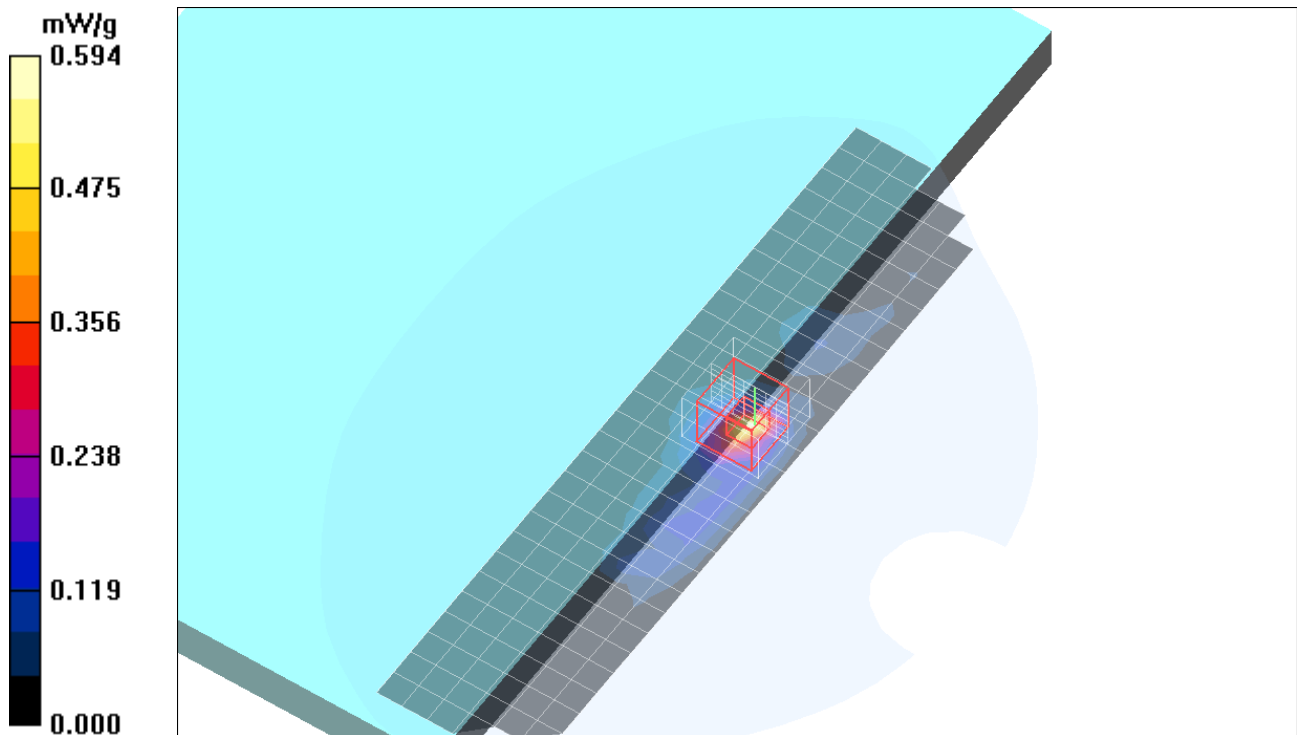
Reference Value = 4.42 V/m; Power Drift = -0.126 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.266 mW/g; SAR(10 g) = 0.079 mW/g

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

Maximum value of SAR (measured) = 0.594 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; $\sigma = 6.17$ 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 a mode H ch/Area Scan (6x8x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.363 mW/g

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

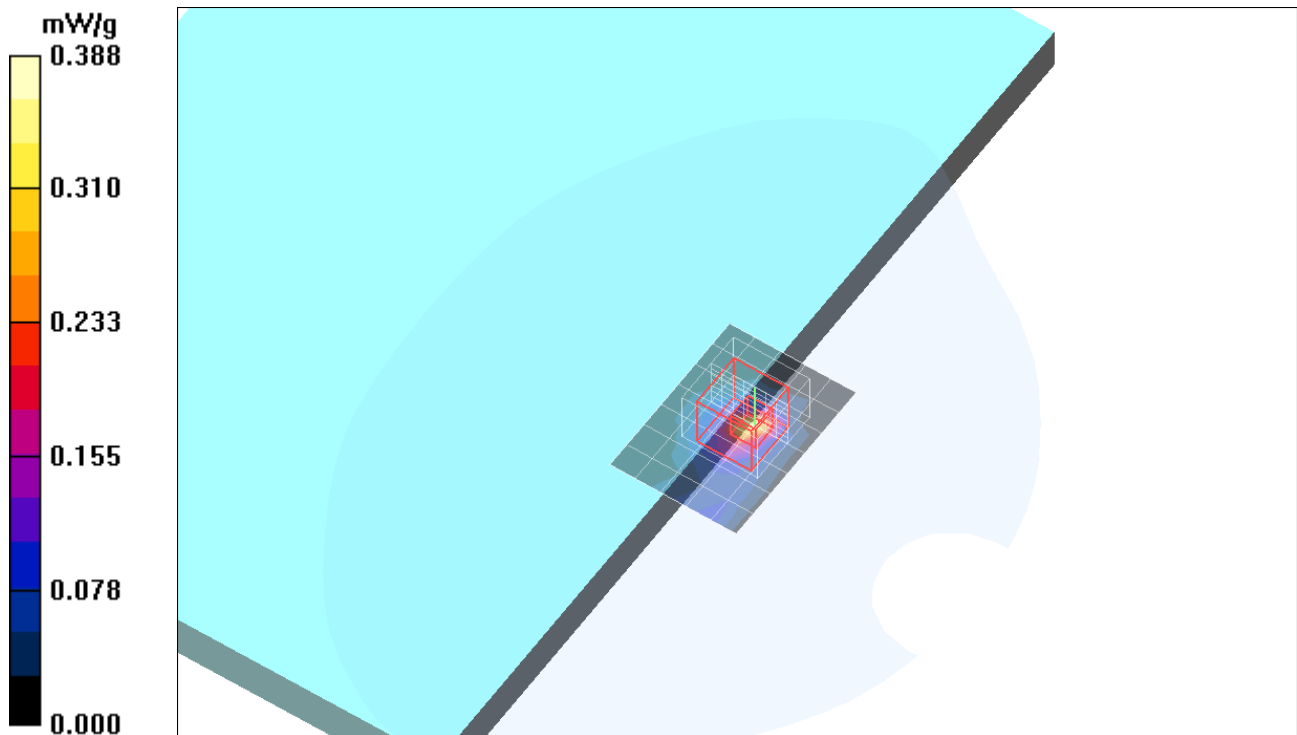
Reference Value = 8.11 V/m; Power Drift = 0.101 dB

Peak SAR (extrapolated) = 0.699 W/kg

SAR(1 g) = 0.167 mW/g; SAR(10 g) = 0.051 mW/g

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

Maximum value of SAR (measured) = 0.388 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; $\sigma = 6.11$ 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 HT20 mode M ch/Area Scan (6x8x1): Measurement grid: dx=10mm, dy=10mm

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

Maximum value of SAR (measured) = 0.527 mW/g

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

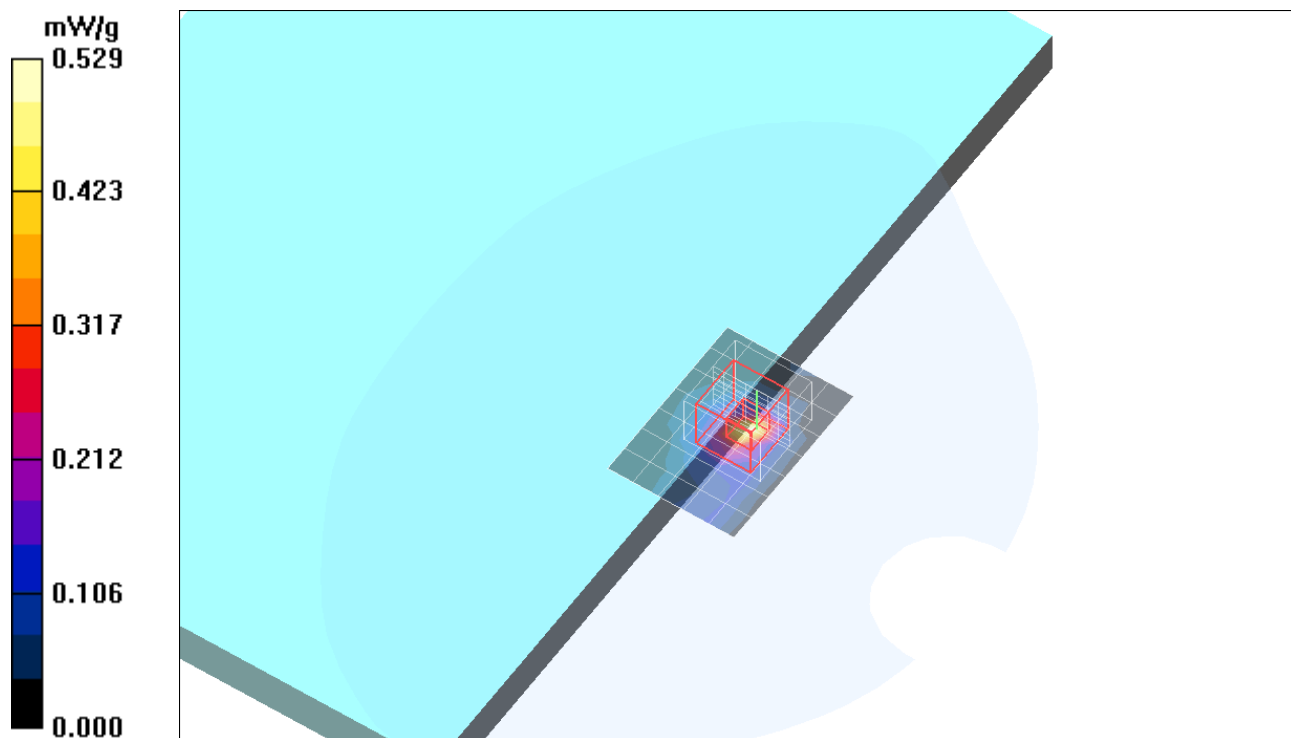
Reference Value = 9.56 V/m; Power Drift = 0.128 dB

Peak SAR (extrapolated) = 0.962 W/kg

SAR(1 g) = 0.229 mW/g; SAR(10 g) = 0.067 mW/g

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

Maximum value of SAR (measured) = 0.529 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; $\sigma = 6.11$ 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 M ch/Area Scan (6x8x1): Measurement grid: dx=10mm, dy=10mm

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

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

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

Reference Value = 10.1 V/m; Power Drift = 0.137 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.075 mW/g

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

Maximum value of SAR (measured) = 0.571 mW/g

