

Test Laboratory: Compliance Certification Services

Lapheld - 2.45 GHz band

DUT: MacBook; Type: n/a; Serial: n/a

Communication System: 802.11bg; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 25.0 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: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

802.11b Tx 0 M-ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.680 mW/g

802.11b Tx 0 M-ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 9.98 V/m; Power Drift = 0.420 dB

Peak SAR (extrapolated) = 0.994 W/kg

SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.297 mW/g

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

Maximum value of SAR (measured) = 0.708 mW/g

802.11b Tx 0 M-ch/Zoom Scan (7x7x9)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=3mm

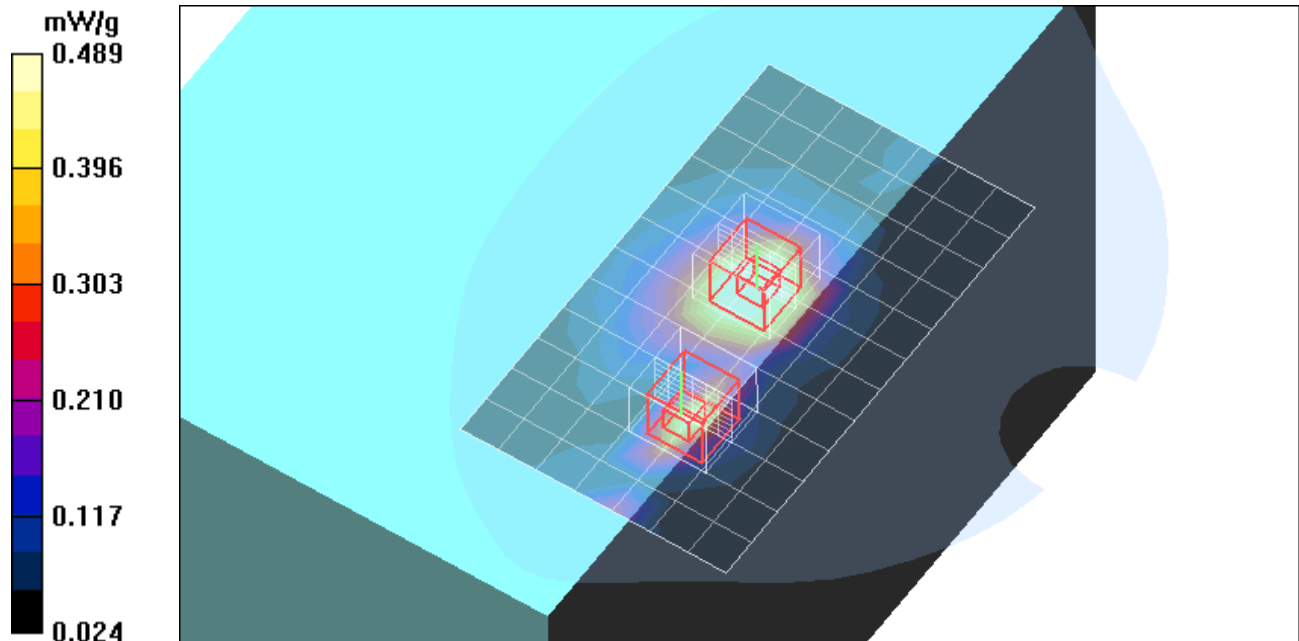
Reference Value = 9.98 V/m; Power Drift = 0.420 dB

Peak SAR (extrapolated) = 0.669 W/kg

SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.180 mW/g

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

Maximum value of SAR (measured) = 0.489 mW/g



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Phantom section: Flat Section

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- Probe: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

802.11b Tx 1 M-ch/Area Scan (8x11x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.708 mW/g

802.11b Tx 1 M-ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm

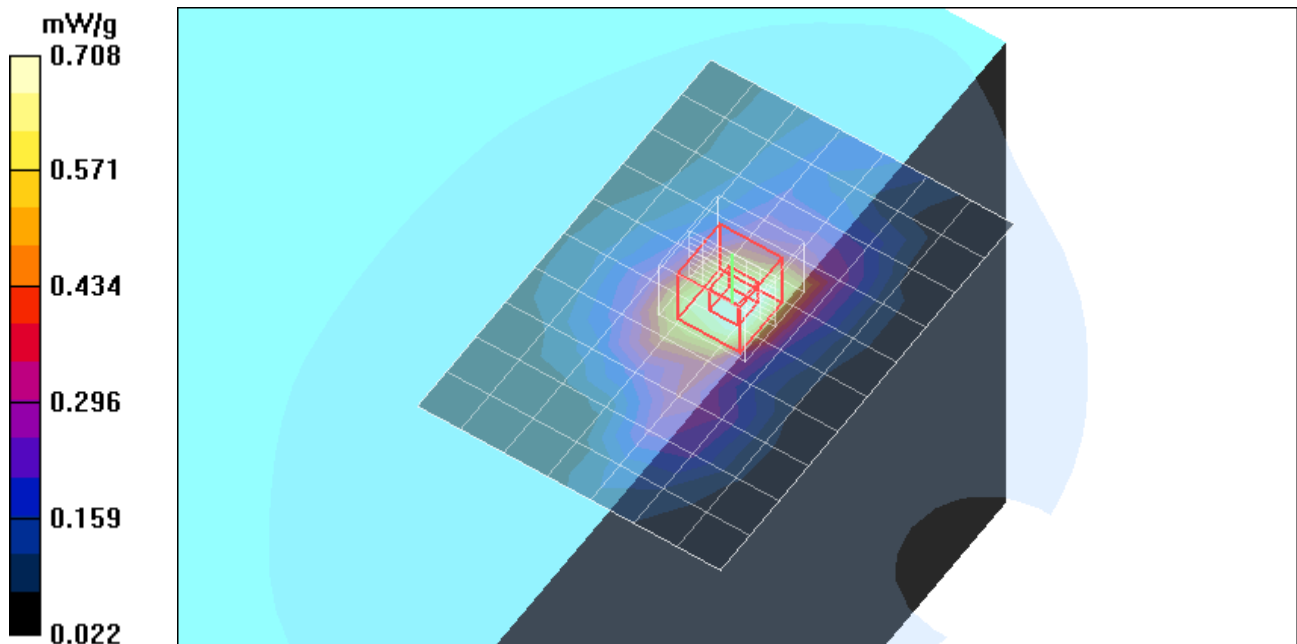
Reference Value = 16.1 V/m; Power Drift = -0.109 dB

Peak SAR (extrapolated) = 1.31 W/kg

SAR(1 g) = 0.680 mW/g; SAR(10 g) = 0.365 mW/g

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

Maximum value of SAR (measured) = 0.927 mW/g



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Phantom section: Flat Section

Room Ambient Temperature: 25.0 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: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

802.11g Tx 0 M-ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.705 mW/g

802.11g Tx 0 M-ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 9.74 V/m; Power Drift = 0.524 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.546 mW/g; SAR(10 g) = 0.299 mW/g

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

Maximum value of SAR (measured) = 0.722 mW/g

802.11g Tx 0 M-ch/Zoom Scan (7x7x9)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=3mm

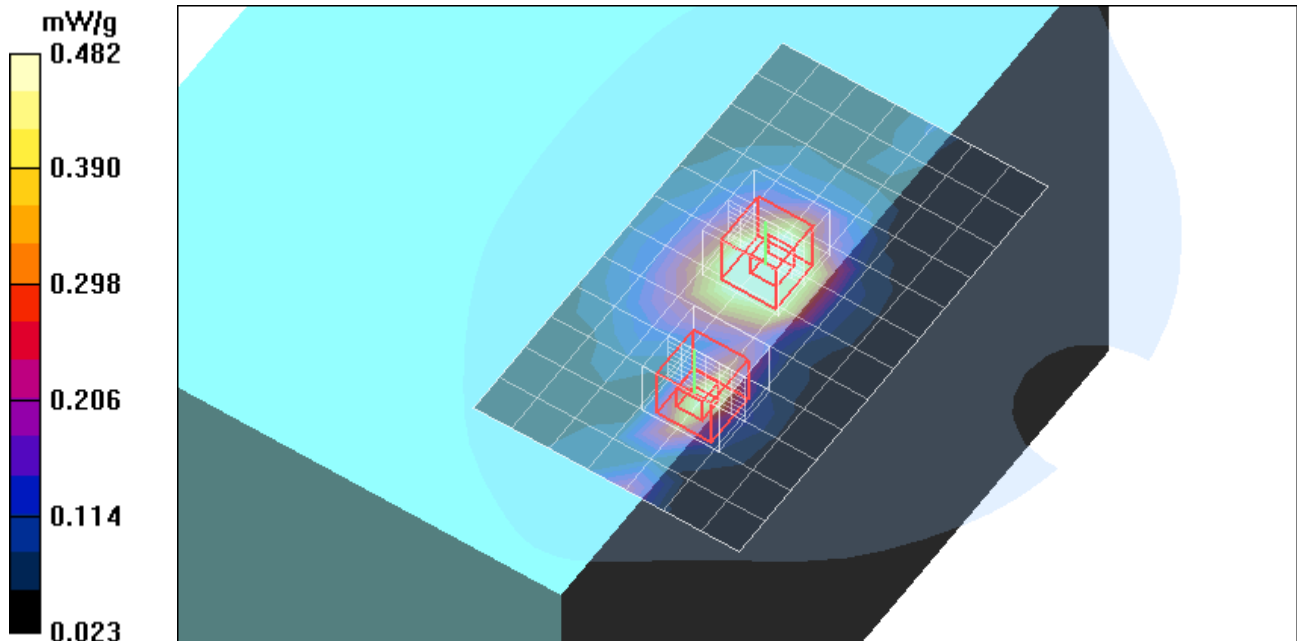
Reference Value = 9.74 V/m; Power Drift = 0.524 dB

Peak SAR (extrapolated) = 0.673 W/kg

SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.178 mW/g

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

Maximum value of SAR (measured) = 0.482 mW/g



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Communication System: 802.11bg; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 25.0 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: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
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- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

802.11g Tx 1 M-ch/Area Scan (8x11x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 0.700 mW/g

802.11g Tx 1 M-ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm

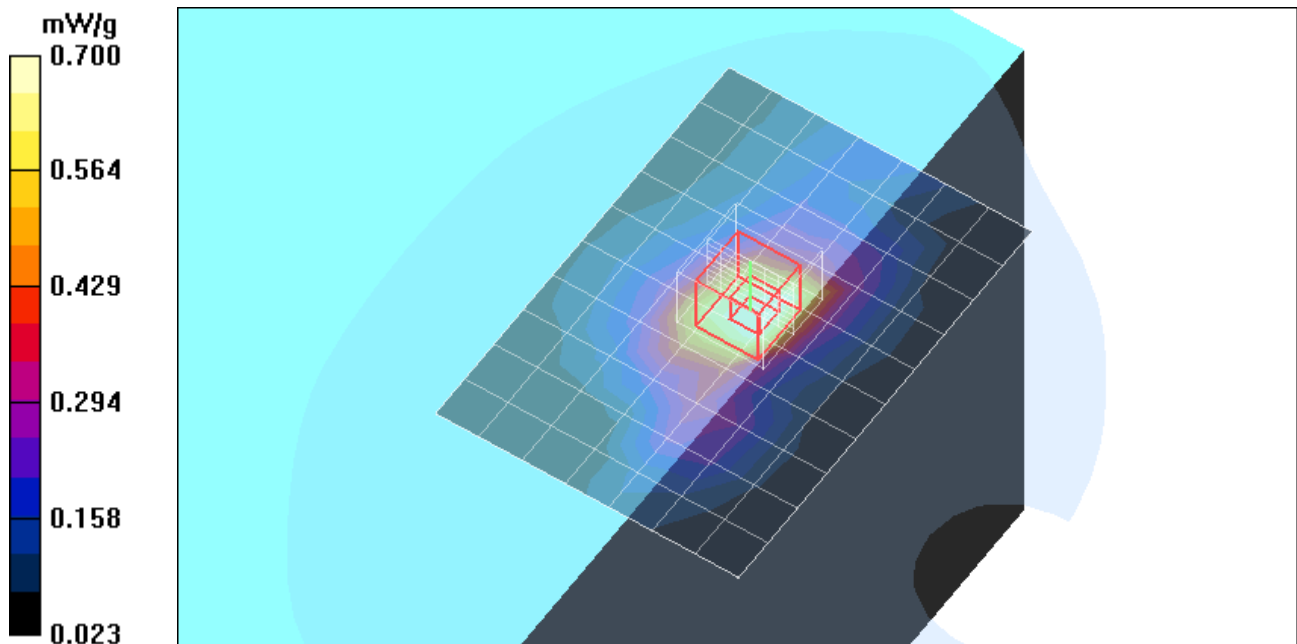
Reference Value = 16.0 V/m; Power Drift = -0.179 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.665 mW/g; SAR(10 g) = 0.358 mW/g

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

Maximum value of SAR (measured) = 0.907 mW/g



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Lapheld - 2.45 GHz band

DUT: MacBook; Type: n/a; Serial: n/a

Communication System: 802.11bg; Frequency: 2422 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2422$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 25.0 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: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

802.11n HT20 Tx 0 & Tx 1 L-ch/Area Scan (8x16x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 1.10 mW/g

802.11n HT20 Tx 0 & Tx 1 L-ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 22.4 V/m; Power Drift = 0.112 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1 g) = 0.836 mW/g; SAR(10 g) = 0.470 mW/g

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

802.11n HT20 Tx 0 & Tx 1 L-ch/Zoom Scan (7x7x9)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=3mm

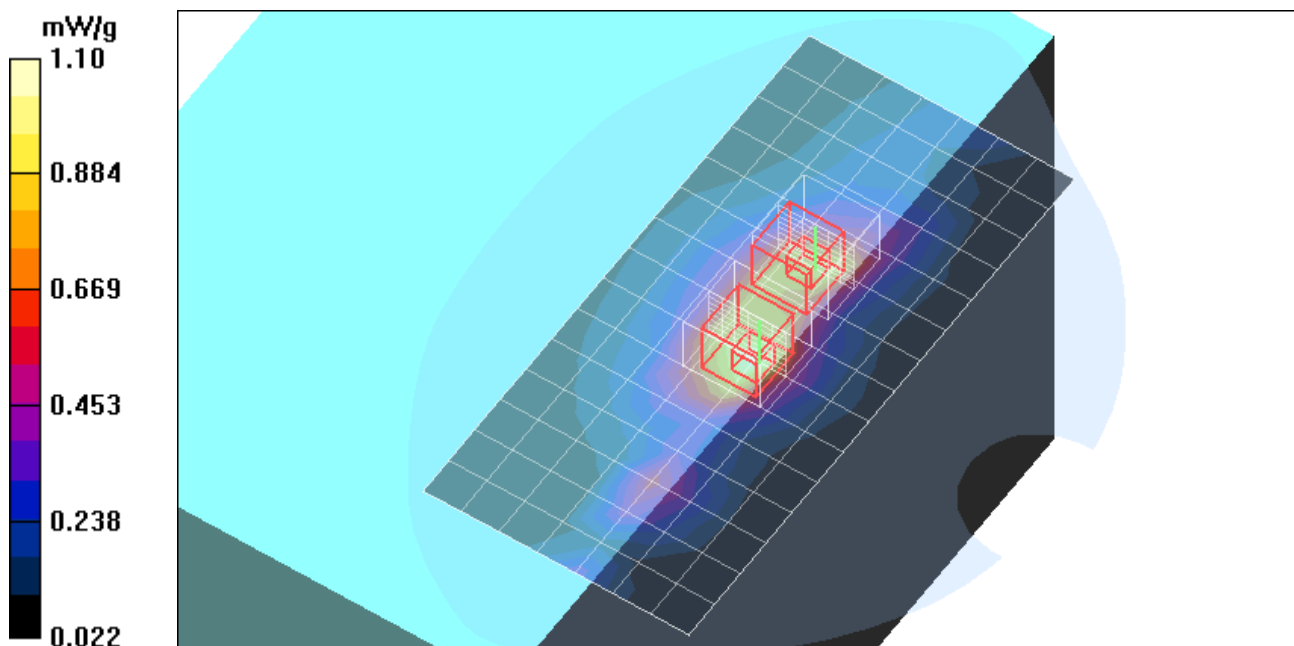
Reference Value = 22.4 V/m; Power Drift = 0.112 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.731 mW/g; SAR(10 g) = 0.420 mW/g

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

Maximum value of SAR (measured) = 0.962 mW/g



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Communication System: 802.11bg; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 25.0 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: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
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802.11n HT20 Tx 0 & Tx 1 M-ch/Area Scan (8x16x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 1.10 mW/g

802.11n HT20 Tx 0 & Tx 1 M-ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 22.2 V/m; Power Drift = 0.182 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 0.832 mW/g; SAR(10 g) = 0.465 mW/g

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

802.11n HT20 Tx 0 & Tx 1 M-ch/Zoom Scan (7x7x9)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=3mm

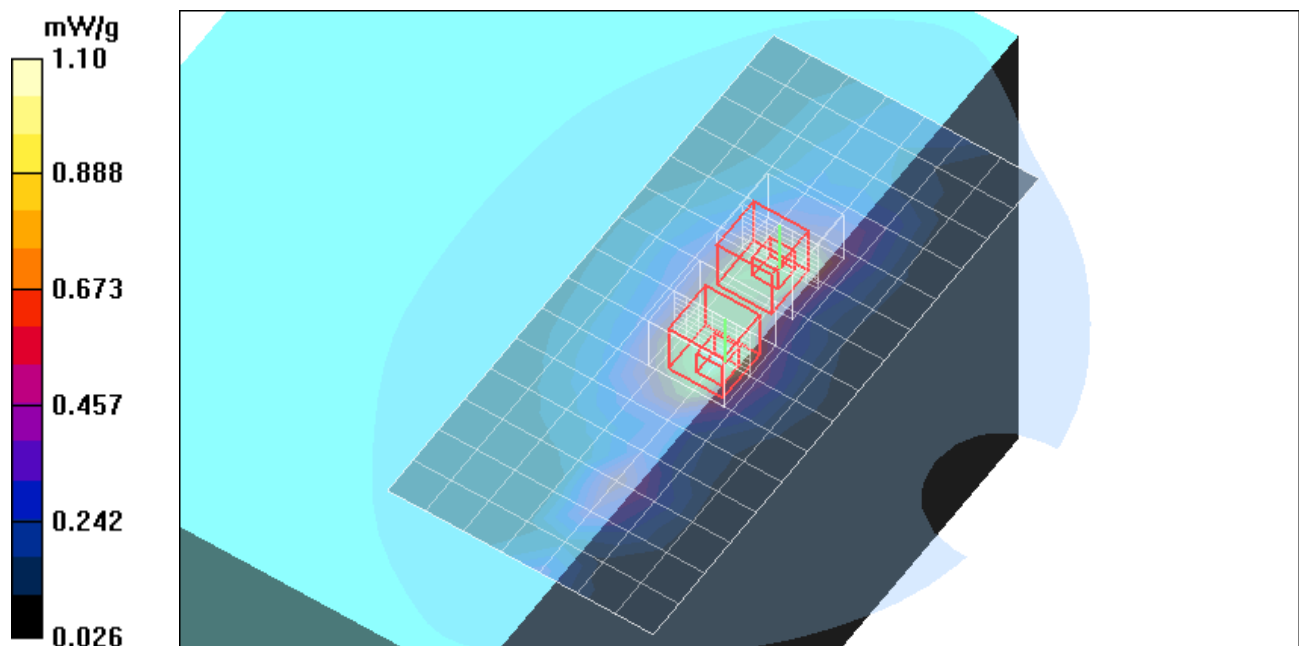
Reference Value = 22.2 V/m; Power Drift = 0.182 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.754 mW/g; SAR(10 g) = 0.430 mW/g

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

Maximum value of SAR (measured) = 1.00 mW/g



Test Laboratory: Compliance Certification Services

Lapheld - 2.45 GHz band

DUT: MacBook; Type: n/a; Serial: n/a

Communication System: 802.11bg; Frequency: 2452 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2452$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Room Ambient Temperature: 25.0 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: EX3DV3 - SN3531; ConvF(7.91, 7.91, 7.91); Calibrated: 4/23/2008
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn500; Calibrated: 11/16/2007
- Phantom: SAM 2; Type: SAM 2; Serial: 1050
- Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

802.11n HT20 Tx 0 & Tx 1 H-ch/Area Scan (8x16x1): Measurement grid: dx=15mm, dy=15mm

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

Maximum value of SAR (measured) = 1.14 mW/g

802.11n HT20 Tx 0 & Tx 1 H-ch/Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=3mm

Reference Value = 21.8 V/m; Power Drift = 0.151 dB

Peak SAR (extrapolated) = 1.56 W/kg

SAR(1 g) = 0.849 mW/g; SAR(10 g) = 0.476 mW/g

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

Maximum value of SAR (measured) = 1.11 mW/g

802.11n HT20 Tx 0 & Tx 1 H-ch/Zoom Scan (7x7x9)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=3mm

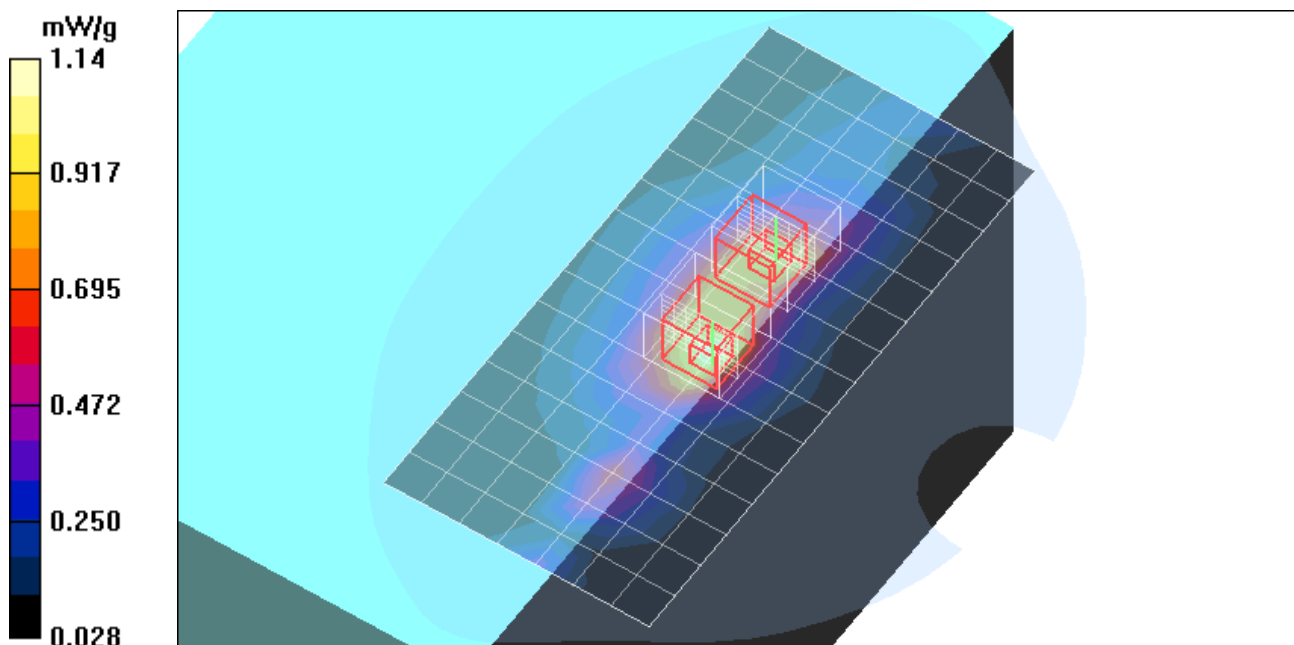
Reference Value = 21.8 V/m; Power Drift = 0.151 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.748 mW/g; SAR(10 g) = 0.432 mW/g

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

Maximum value of SAR (measured) = 0.995 mW/g



Test Laboratory: Compliance Certification Services

Lapheld - 2.45 GHz band

DUT: MacBook; Type: n/a; Serial: n/a

Communication System: 802.11bg; Frequency: 2452 MHz; Duty Cycle: 1:1

802.11n HT20 Tx 0 & Tx 1 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) = 1.12 mW/g

