

Plot 1

Date/Time: 1/22/2015 1:43:33 PM

Test Laboratory: Microsoft EMC

Ant A_Back_802.11n HT20_Ch. 1**DUT: 1645; Type: Handheld Computing Device; Serial: 000567345052**

Frequency: 2412 MHz; Ambient = 23.6 Celsius, Liquid = 21.4 Celsius

Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.907$ S/m; $\epsilon_r = 50.338$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(6.9, 6.9, 6.9); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1383; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL/01/22/15 HT20 mode Chain A Back 0 mm 2412 MHz/Area Scan (7x7x1): Measurement grid:
 $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 0.901 W/kg

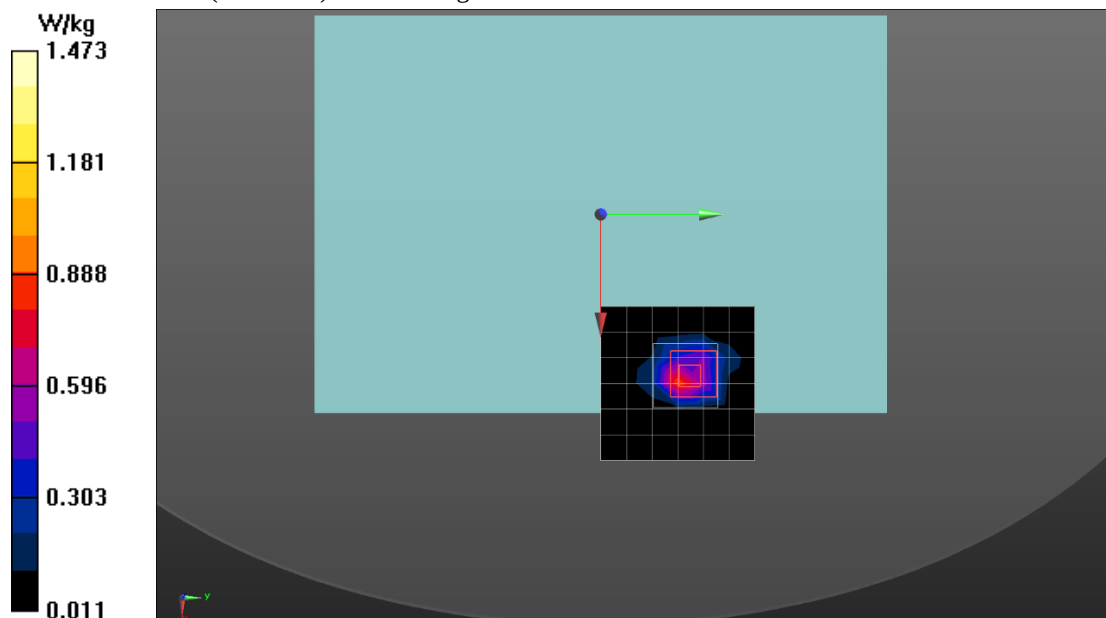
Flat-Section MSL/01/22/15 HT20 mode Chain A Back 0 mm 2412 MHz/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 27.556 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.31 W/kg

SAR(1 g) = 0.774 W/kg; SAR(10 g) = 0.271 W/kg

Maximum value of SAR (measured) = 1.47 W/kg



Plot 2

Date/Time: 1/22/2015 11:10:41 AM

Test Laboratory: Microsoft EMC

MIMO_Back_802.11n HT20_Ch. 6**DUT: 1645; Type: Handheld Computing Device; Serial: 000567345052**

Frequency: 2437 MHz; Ambient = 24 Celsius, Liquid = 22 Celsius

Medium parameters used: $f = 2437.31$ MHz; $\sigma = 1.94$ S/m; $\epsilon_r = 50.233$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(6.9, 6.9, 6.9); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1383; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL/01/22/15 HT20 mode Chain A+B Back 0mm 2437 MHz/Area Scan (7x19x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 1.11 W/kg

Flat-Section MSL/01/22/15 HT20 mode Chain A+B Back 0mm 2437 MHz/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 24.131 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.30 W/kg

SAR(1 g) = 0.761 W/kg; SAR(10 g) = 0.262 W/kg

Maximum value of SAR (measured) = 1.38 W/kg

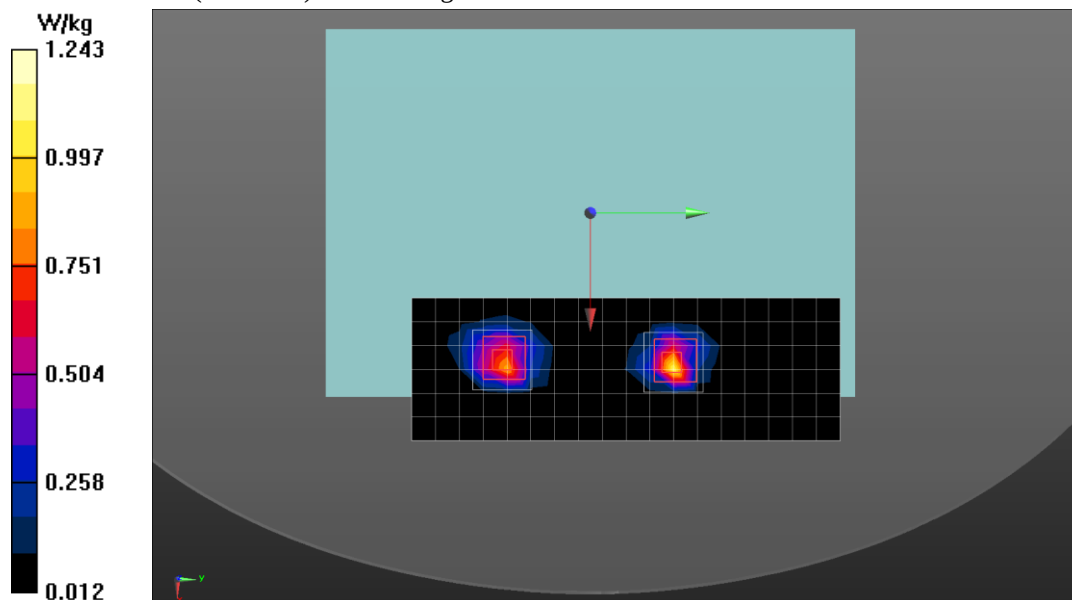
Flat-Section MSL/01/22/15 HT20 mode Chain A+B Back 0mm 2437 MHz/Zoom Scan (7x7x7)/Cube 1:Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 24.131 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.89 W/kg

SAR(1 g) = 0.695 W/kg; SAR(10 g) = 0.279 W/kg

Maximum value of SAR (measured) = 1.24 W/kg



Plot 3

Date/Time: 1/19/2015 4:09:27 PM

Test Laboratory: Microsoft EMC

Ant B_Top_802.11a_Ch. 48**DUT: 1645; Type: Handheld Computing Device; Serial: 000567345052**

Frequency: 5240 MHz; Ambient = 23.4 Celsius, Liquid = 22.1 Celsius

Medium parameters used (interpolated): $f = 5240$ MHz; $\sigma = 5.426$ S/m; $\epsilon_r = 46.981$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(4.38, 4.38, 4.38); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL/01/19/15 a mode Chain B Top 0 mm 5240 MHz Repeat/Area Scan (11x11x1): Measurement grid: $dx=8$ mm, $dy=8$ mm

Maximum value of SAR (measured) = 2.69 W/kg

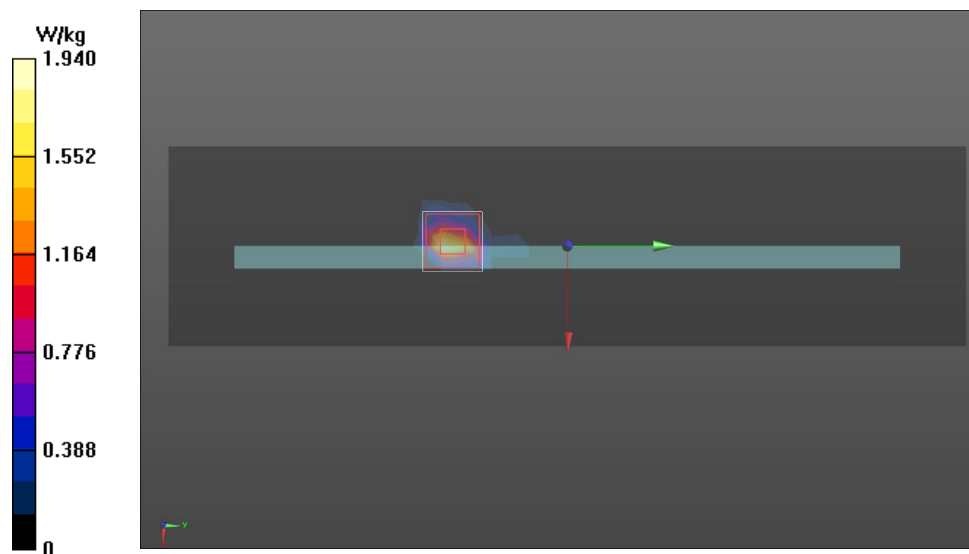
Flat-Section MSL/01/19/15 a mode Chain B Top 0 mm 5240 MHz Repeat/Zoom Scan (7x7x12)/Cube 0:Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 22.846 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 7.25 W/kg

SAR(1 g) = 1.33 W/kg; SAR(10 g) = 0.284 W/kg

Maximum value of SAR (measured) = 3.27 W/kg



Plot 4

Date/Time: 1/18/2015 7:25:02 PM

Test Laboratory: Microsoft EMC

MIMO_Top_802.11a_Ch. 60**DUT: 1645; Type: Handheld Computing Device; Serial: 000567345052**

Frequency: 5300 MHz; Ambient = 23.4 Celsius, Liquid = 22.1 Celsius

Medium parameters used (interpolated): $f = 5300$ MHz; $\sigma = 5.507$ S/m; $\epsilon_r = 46.884$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(4.11, 4.11, 4.11); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL/01/18/15 a mode Chain A+B Top 0 mm 5300 MHz/Area Scan (9x19x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.90 W/kg

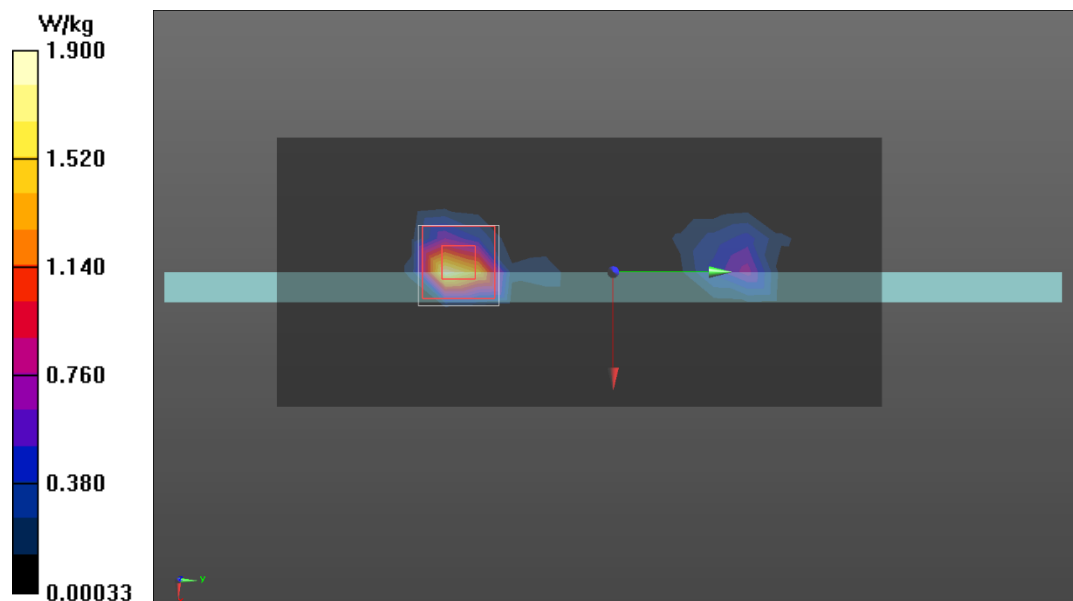
Flat-Section MSL/01/18/15 a mode Chain A+B Top 0 mm 5300 MHz/Zoom Scan (7x7x12)/Cube 0:Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 23.827 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 7.15 W/kg

SAR(1 g) = 1.29 W/kg; SAR(10 g) = 0.272 W/kg

Maximum value of SAR (measured) = 3.16 W/kg



Plot 5

Date/Time: 1/15/2015 7:32:19 PM

Test Laboratory: Microsoft EMC

Ant B_Top_802.11n_Ch. 134**DUT: 1645; Type: Handheld Computing Device; Serial: 00576345952**

Frequency: 5670 MHz; Ambient: 23 C; Liquid: 21 C

Medium parameters used: $f = 5670$ MHz; $\sigma = 5.846$ S/m; $\epsilon_r = 46.635$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(3.77, 3.77, 3.77); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1384; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL_Chain B/Chain B_802.11n HT40_Top 0mm_5670 MHz/Area Scan (6x9x1): Measurementgrid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.84 W/kg

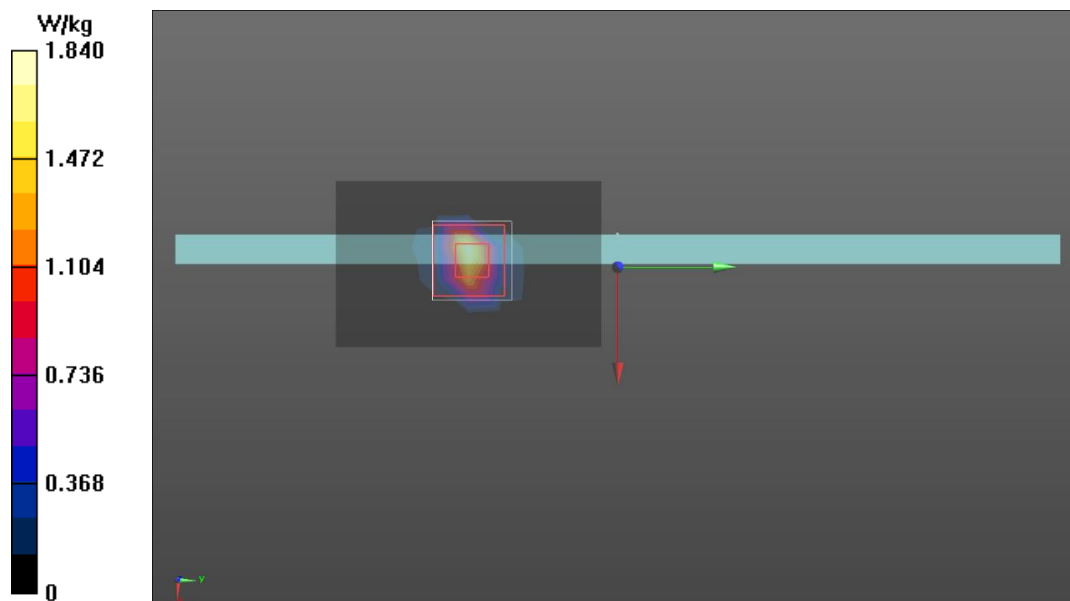
Flat-Section MSL_Chain B/Chain B_802.11n HT40_Top 0mm_5670 MHz/Zoom Scan (7x7x12)/Cube 0:Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 24.298 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 7.03 W/kg

SAR(1 g) = 1.21 W/kg; SAR(10 g) = 0.246 W/kg

Maximum value of SAR (measured) = 3.03 W/kg



Plot 6

Date/Time: 1/20/2015 3:06:07 PM

Test Laboratory: Microsoft EMC

Ant B_Top_802.11n_ch. 151**DUT: 1645; Type: Handheld Computing Device; Serial: 000200544952**

Frequency: 5755 MHz; Ambient: 24.5 C; Liquid: 21 C

Medium parameters used (interpolated): $f = 5755$ MHz; $\sigma = 6.019$ S/m; $\epsilon_r = 46.753$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(3.93, 3.93, 3.93); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1384; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL_Chain B 2/Repeatability_Chain B_802.11n HT40_Top 0mm with type cover_5755**MHz/Area Scan (6x9x1):** Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.844 W/kg

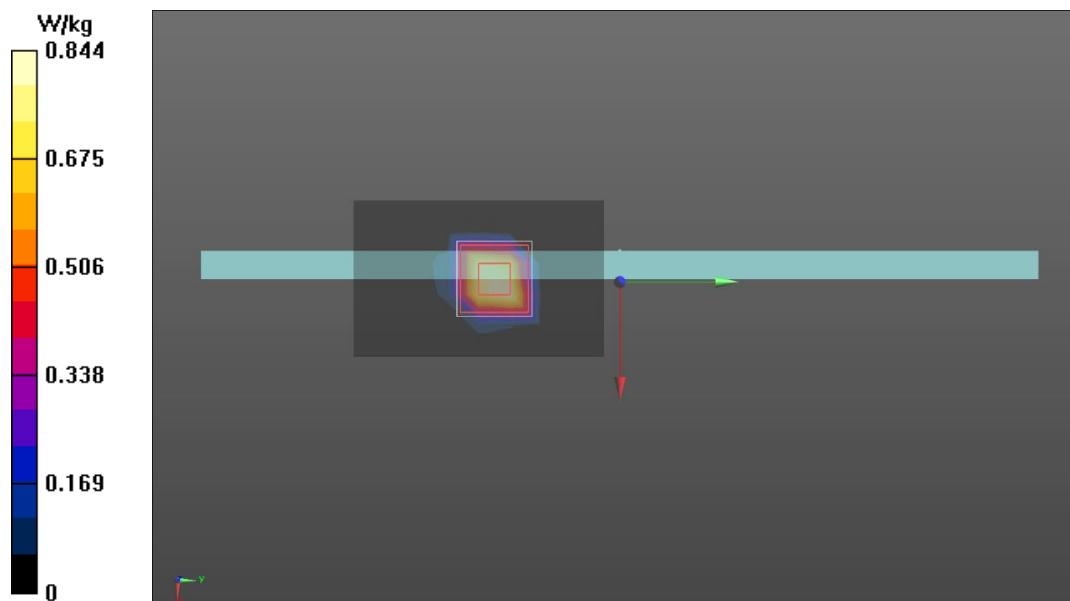
Flat-Section MSL_Chain B 2/Repeatability_Chain B_802.11n HT40_Top 0mm with type cover_5755**MHz/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 21.165 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 5.88 W/kg

SAR(1 g) = 0.974 W/kg; SAR(10 g) = 0.195 W/kg

Maximum value of SAR (measured) = 2.51 W/kg



Plot 7

Date/Time: 1/29/2015 9:35:49 PM

Test Laboratory: Microsoft EMC

SysCheck_MSL2450_1-29-2015

DUT: Dipole 2450 MHz D2450V2_916; Type: D2450V2; Serial: D2450V2 - SN:916

Frequency: 2450 MHz; Ambient = 23.5 Celsius, Liquid = 21.7 Celsius

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.914$ S/m; $\epsilon_r = 50.867$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(6.9, 6.9, 6.9); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1383; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies above 1 GHz/System Check 2450 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Area Scan (8x8x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 7.19 W/kg

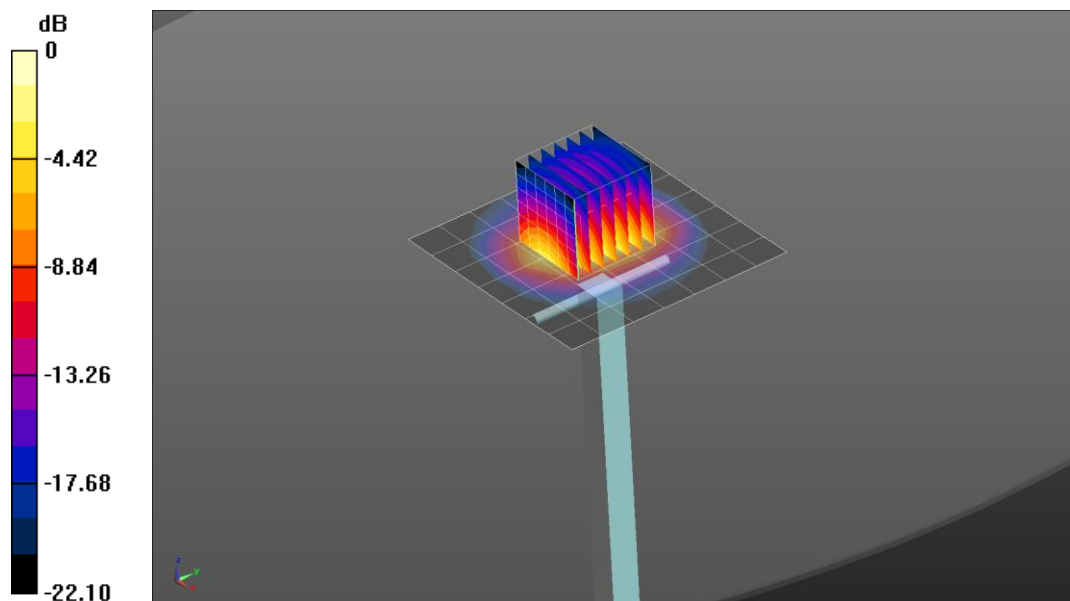
System Performance Check at Frequencies above 1 GHz/System Check 2450 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 62.240 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 10.6 W/kg

SAR(1 g) = 5.29 W/kg; SAR(10 g) = 2.48 W/kg

Maximum value of SAR (measured) = 7.97 W/kg



Plot 8

Date/Time: 1/30/2015 3:45:32 PM

Test Laboratory: Microsoft EMC

MSL_D5200_SystemPerformanceCheck_1-30-15**DUT: Dipole D5GHzV2_1158; Type: D5GHzV2; Serial: D5GHzV2 - SN:1158**

Frequency: 5200 MHz; Ambient: 25 C; Liquid: 21.2 C

Medium parameters used (interpolated): $f = 5200$ MHz; $\sigma = 5.329$ S/m; $\epsilon_r = 49.453$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(4.31, 4.31, 4.31); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1384; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies above 1 GHz/System Check 5200 MHz; d=10mm, Pin=20 dBm, dist=2.0mm (EX-Probe)/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 11.0 W/kg

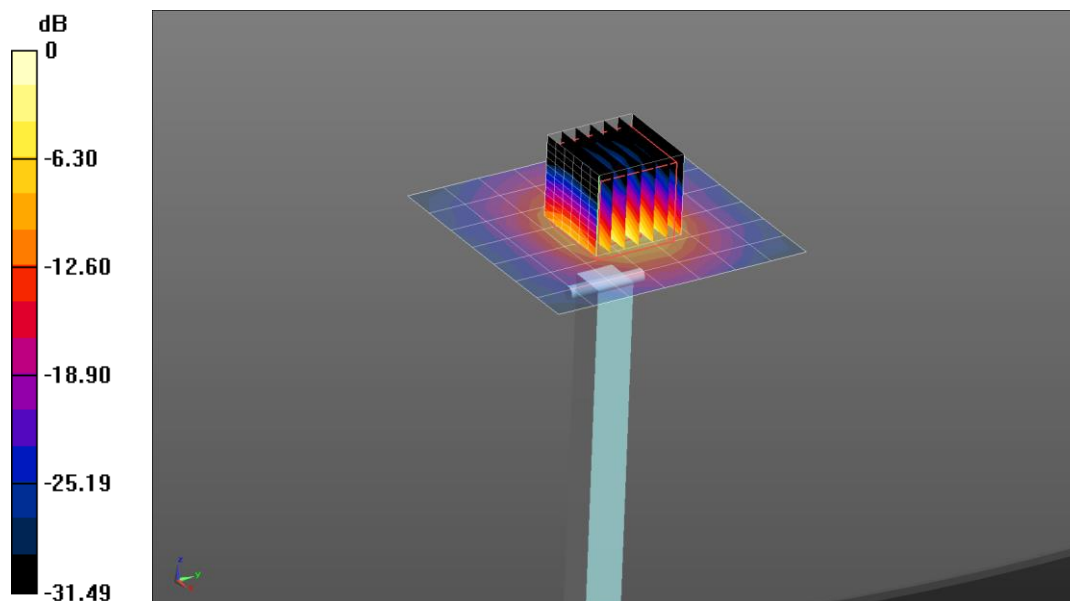
System Performance Check at Frequencies above 1 GHz/System Check 5200 MHz; d=10mm, Pin=20 dBm, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 59.282 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 33.1 W/kg

SAR(1 g) = 7.85 W/kg; SAR(10 g) = 2.22 W/kg

Maximum value of SAR (measured) = 16.5 W/kg



Plot 9

Date/Time: 1/14/2015 5:46:24 PM

Test Laboratory: Microsoft EMC

MSL_D5600_SystemPerformanceCheck_1-14-15

DUT: Dipole D5GHzV2_1158; Type: D5GHzV2; Serial: D5GHzV2 - SN:1158

Frequency: 5600 MHz; Ambient: 32.5 C; Liquid: 21.1 C

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.761$ S/m; $\epsilon_r = 46.746$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(3.77, 3.77, 3.77); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1384; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies above 1 GHz/System Check 5600 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Area Scan (8x8x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 9.88 W/kg

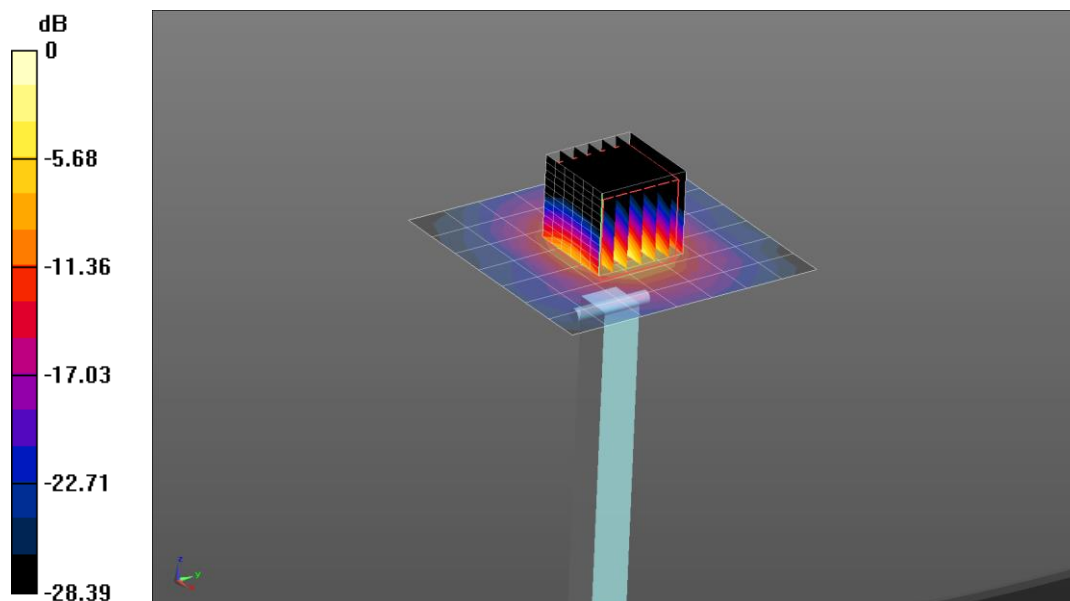
System Performance Check at Frequencies above 1 GHz/System Check 5600 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 59.746 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 34.7 W/kg

SAR(1 g) = 8.06 W/kg; SAR(10 g) = 2.22 W/kg

Maximum value of SAR (measured) = 17.1 W/kg



Plot 10

Date/Time: 1/14/2015 6:31:21 PM

Test Laboratory: Microsoft EMC

MSL_5800_SystemPerformanceCheck_1-14-15**DUT: Dipole D5GHzV2_1158; Type: D5GHzV2; Serial: D5GHzV2 - SN:1158**

Frequency: 5800 MHz; Ambient: 32.5 C; Liquid: 21.1 C

Medium parameters used: $f = 5800$ MHz; $\sigma = 6.015$ S/m; $\epsilon_r = 46.435$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(3.93, 3.93, 3.93); Calibrated: 7/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1384; Calibrated: 7/11/2014
- Phantom: ELI v5.0 - Front; Type: QDOVA002AA; Serial: TP:xxxx
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies above 1 GHz/System Check 5800 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Area Scan (8x8x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 9.49 W/kg

System Performance Check at Frequencies above 1 GHz/System Check 5800 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 53.879 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 32.7 W/kg

SAR(1 g) = 7.25 W/kg; SAR(10 g) = 2.01 W/kg

Maximum value of SAR (measured) = 15.7 W/kg

