

Plot 1

Date/Time: 2/27/2015 9:45:23 PM

Test Laboratory: Microsoft EMC

802.11n_Ant A_Back 0mm_2462 MHz**DUT: 1657; Type: Handheld Computing Device; Serial: 000085145252**

Communication System: UID 0, 802.11 2.4 GHz (0); Communication System Band: 802.11 2.4 GHz; Frequency: 2462 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.974$ S/m; $\epsilon_r = 51.05$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (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/02/27/15 HT20 mode Chain A Back 0mm 2462 MHz Repeat/Area Scan (7x7x1):Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 1.44 W/kg

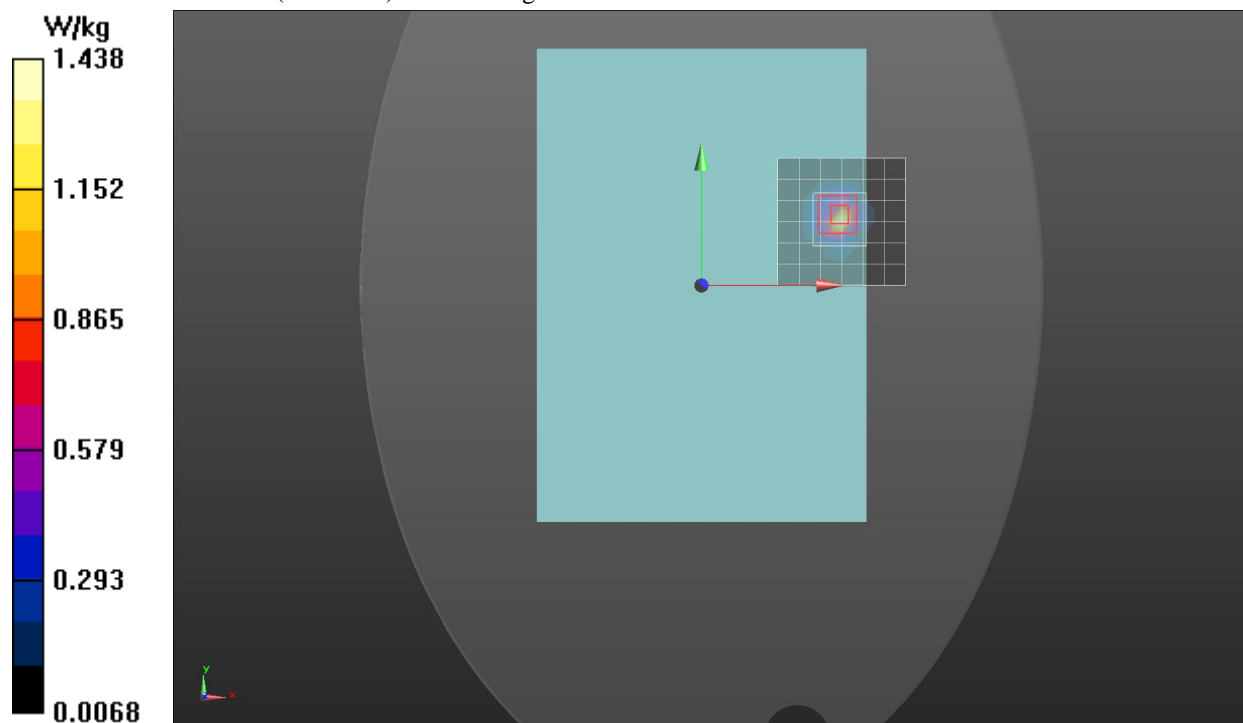
Flat-Section MSL/02/27/15 HT20 mode Chain A Back 0mm 2462 MHz Repeat/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 29.375 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 2.80 W/kg

SAR(1 g) = 0.917 W/kg; SAR(10 g) = 0.307 W/kg

Maximum value of SAR (measured) = 1.68 W/kg



Plot 2

Date/Time: 3/17/2015 2:31:09 PM

Test Laboratory: Microsoft EMC

802.11n HT40_Ant B_Top 0mm_5190 MHz
DUT: 1657; Type: Handheld Computing Device; Serial: 000085145252

Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz);

Frequency: 5190 MHz; Communication System PAR: 0 dB; PMF: 1

 Medium parameters used: $f = 5190$ MHz; $\sigma = 5.454$ S/m; $\epsilon_r = 48.628$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASYS 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
- DASYS2 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL/03/17/15 HT40 mode Chain B Top 0 mm 5190 MHz Repeat/Area Scan (9x9x1):

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

Maximum value of SAR (measured) = 1.60 W/kg

Flat-Section MSL/03/17/15 HT40 mode Chain B Top 0 mm 5190 MHz Repeat/Zoom Scan (7x7x12)/Cube 0:

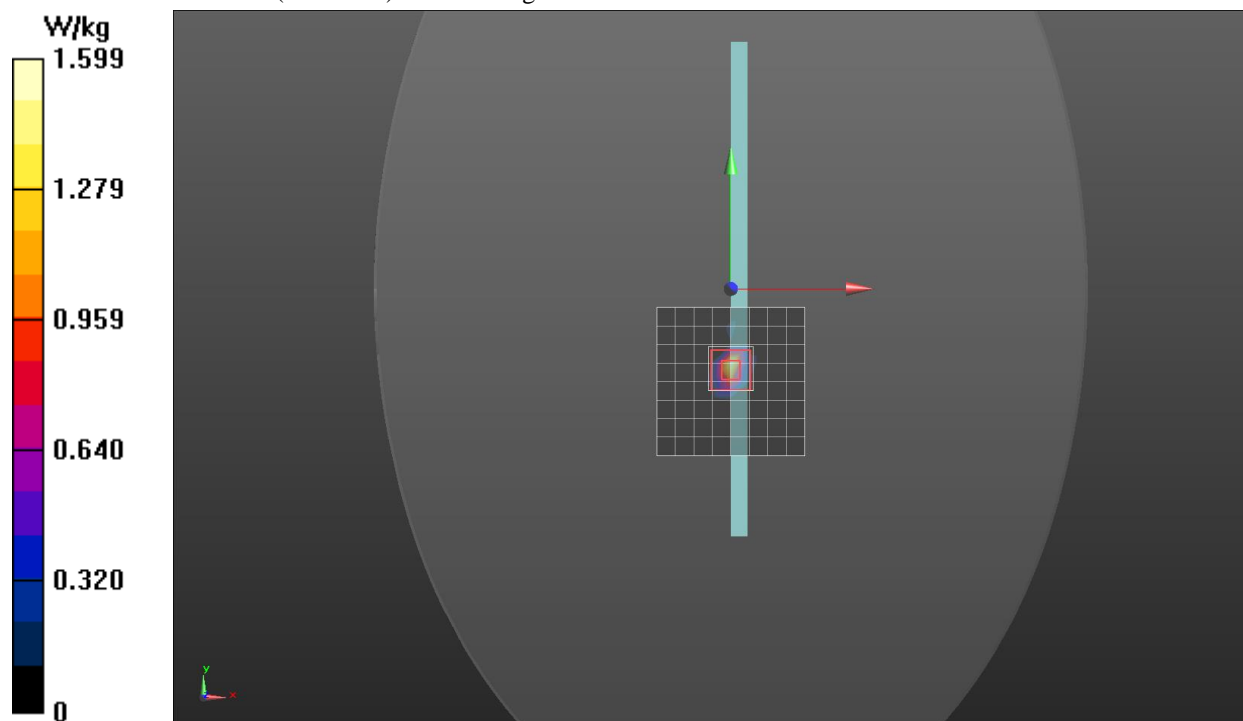
 Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 20.949 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 4.62 W/kg

SAR(1 g) = 0.823 W/kg; SAR(10 g) = 0.163 W/kg

Maximum value of SAR (measured) = 2.07 W/kg



Plot 3

Date/Time: 3/5/2015 11:20:35 PM

Test Laboratory: Microsoft EMC

802.11n HT40_Ant B_Top 0mm_5270 MHz

DUT: 1657; Type: Handheld Computing Device; Serial: 000085145252

Communication System: UID 0, CW (0); Communication System Band: D5GHz (5000.0 - 6000.0 MHz);

Frequency: 5270 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: $f = 5270$ MHz; $\sigma = 5.49$ S/m; $\epsilon_r = 47.796$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (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
- DASYS2 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL/03/05/15 HT40 mode Chain B Top 0 mm 5270 MHz/Area Scan (9x9x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.40 W/kg

Flat-Section MSL/03/05/15 HT40 mode Chain B Top 0 mm 5270 MHz/Zoom Scan (7x7x12)/Cube 0:

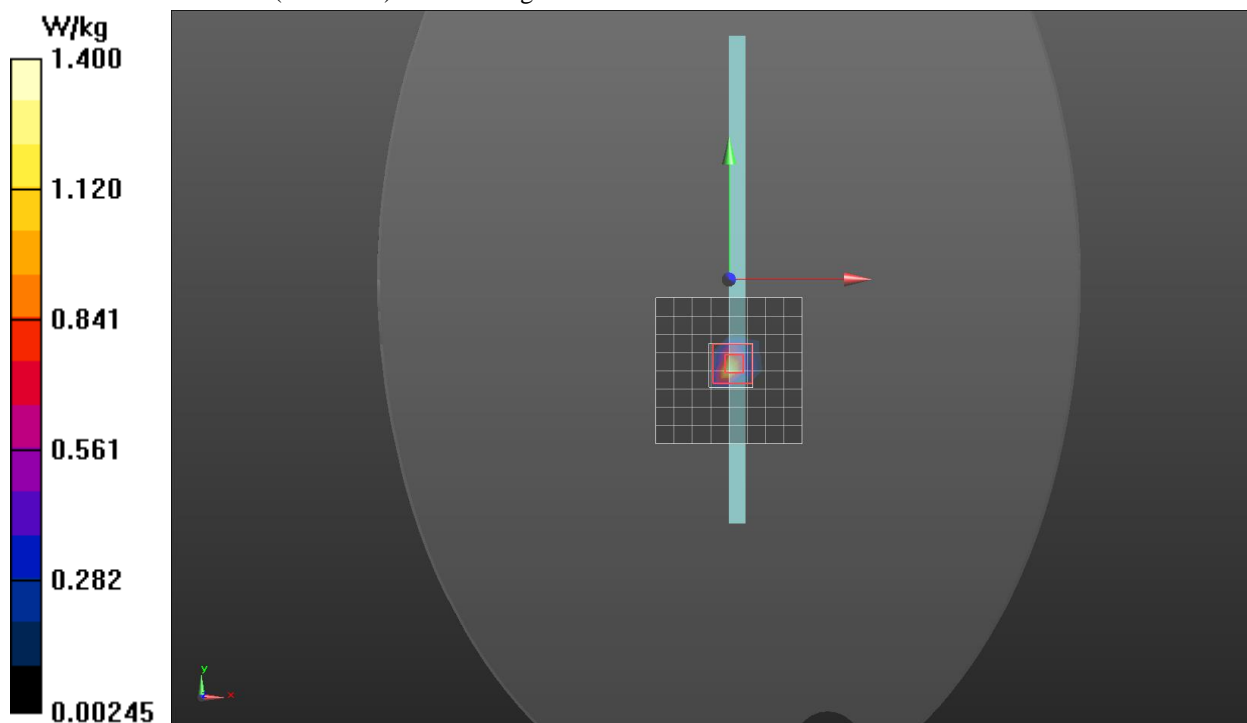
Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 17.115 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 4.72 W/kg

SAR(1 g) = 0.844 W/kg; SAR(10 g) = 0.176 W/kg

Maximum value of SAR (measured) = 1.98 W/kg



Plot 4

Date/Time: 3/6/2015 10:23:05 PM

Test Laboratory: Microsoft EMC

802.11n HT40_Ant B_Top 0mm_5670 MHz**DUT: 1657; Type: Handheld Computing Device; Serial: 000100645252**

Communication System: UID 0, 802.11 5GHz (0); Communication System Band: 5 GHz; Frequency: 5670 MHz; Communication System PAR: 0 dB; PMF: 1

Medium parameters used: $f = 5670$ MHz; $\sigma = 5.88$ S/m; $\epsilon_r = 46.364$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (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
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL_Chain B/Chain B_802.11n HT40_Top 0mm_5670 MHz_Repeat/Area Scan (6x28x1):Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.45 W/kg

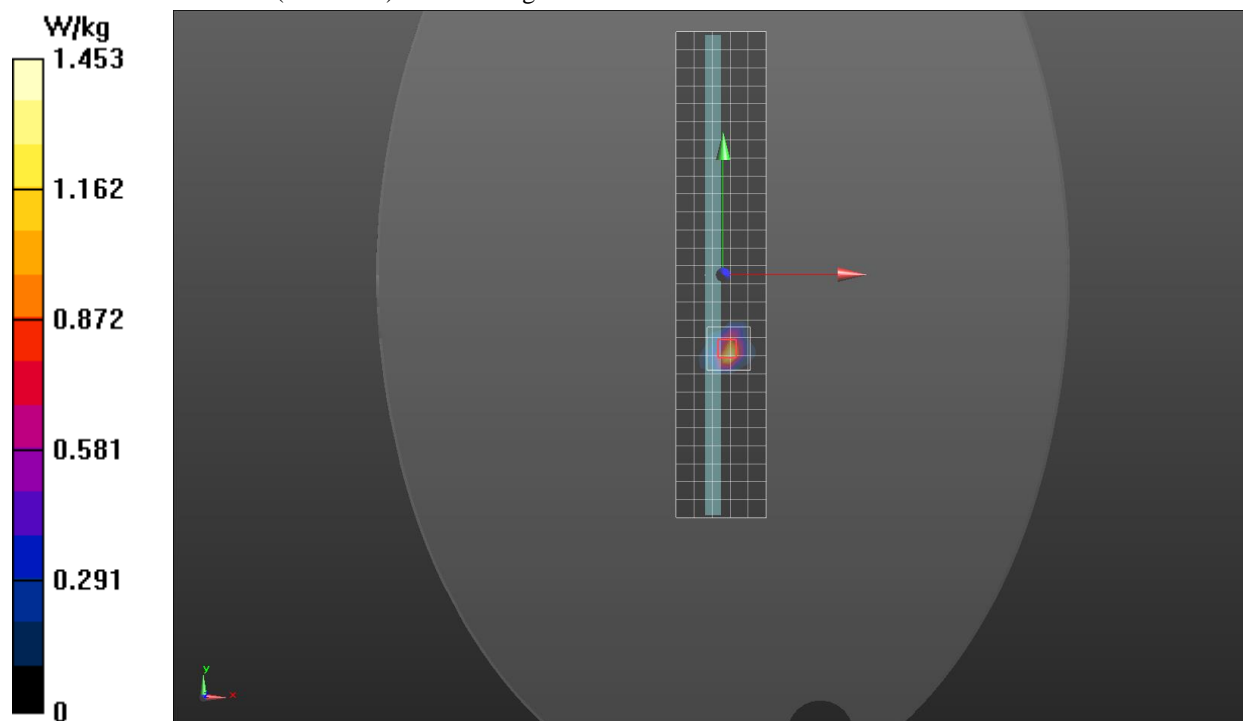
Flat-Section MSL_Chain B/Chain B_802.11n HT40_Top 0mm_5670 MHz_Repeat/Zoom Scan (7x7x12)/Cube**0:** Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 19.486 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 4.99 W/kg

SAR(1 g) = 0.834 W/kg

Maximum value of SAR (measured) = 2.14 W/kg



Plot 5

Date/Time: 3/8/2015 4:29:43 PM

Test Laboratory: Microsoft EMC

802.11n HT40_Ant B_Top 0mm_5755 MHz

DUT: 1657; Type: Handheld Computing Device; Serial: 000100645252

Communication System: UID 0, 802.11 5GHz (0); Frequency: 5755 MHz

Medium parameters used (interpolated): $f = 5755$ MHz; $\sigma = 6.149$ S/m; $\epsilon_r = 47.984$; $\rho = 1000$ 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 (Locations From Previous Scan Used)), 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
- DASYS2 52.8.7(1137); SEMCAD X 14.6.10(7164)

Flat-Section MSL_Chain B/Chain B_802.11n HT40_Top 0mm_5755 MHz/Area Scan (6x9x1): Measurement

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

Maximum value of SAR (measured) = 1.02 W/kg

Flat-Section MSL_Chain B/Chain B_802.11n HT40_Top 0mm_5755 MHz/Zoom Scan (7x7x12)/Cube 0:

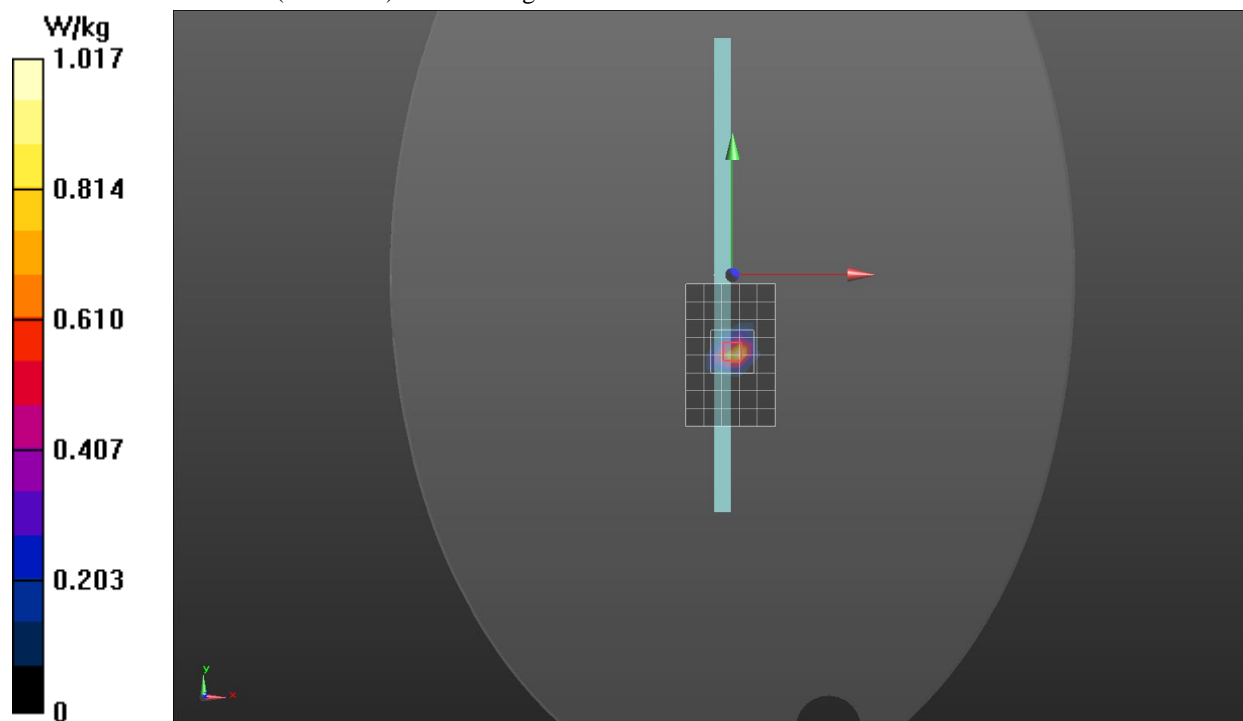
Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 17.927 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 4.09 W/kg

SAR(1 g) = 0.684 W/kg

Maximum value of SAR (measured) = 1.74 W/kg



Plot 6

Date/Time: 2/24/2015 12:00:58 PM

Test Laboratory: Microsoft EMC

System Performance Check D2450V2 02-24-2015

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

Communication System: UID 0, CW (0); Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.988$ S/m; $\epsilon_r = 52.416$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (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
- DASYS52 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) = 6.41 W/kg

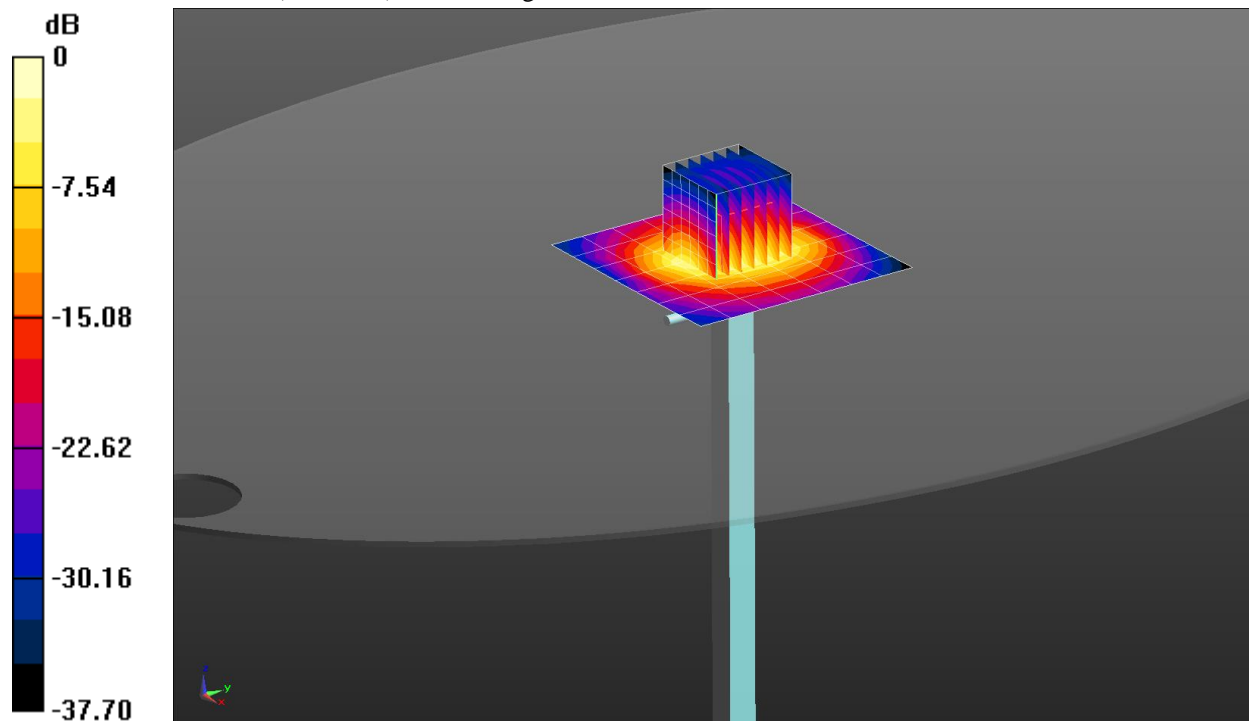
System Performance Check at Frequencies above 1 GHz/System Check 2450 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 61.981 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 10.6 W/kg

SAR(1 g) = 5.02 W/kg; SAR(10 g) = 2.28 W/kg

Maximum value of SAR (measured) = 7.78 W/kg



0 dB = 6.41 W/kg = 8.07 dBW/kg

Plot 7

Date/Time: 3/17/2015 10:51:05 AM

Test Laboratory: Microsoft EMC

System Performance Check D5200 03-17-2015

DUT: Dipole 5GHz D5GHzV2_1158; Type: Dipole ; Serial: 1158

Communication System: UID 0, CW (0); Frequency: 5200 MHz

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.468$ S/m; $\epsilon_r = 48.627$; $\rho = 1000$ 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
- DASYS2 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 (9x9x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 14.2 W/kg

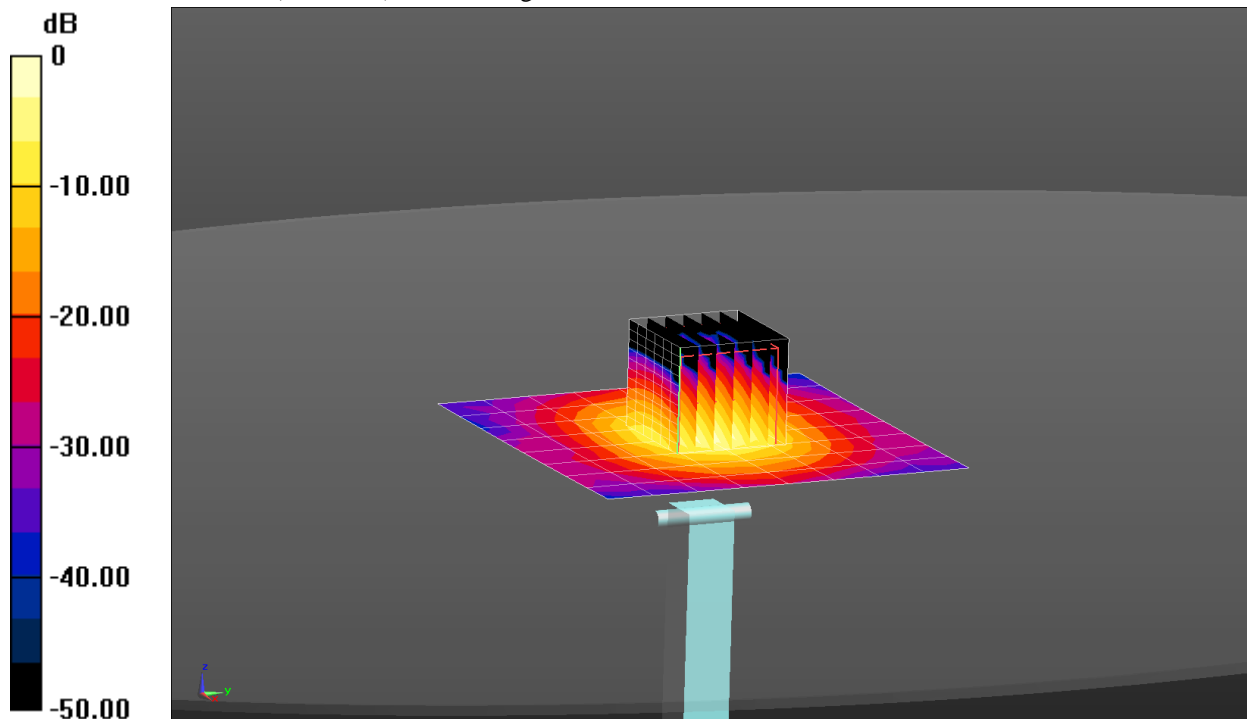
System Performance Check at Frequencies above 1 GHz/System Check 5200 MHz; d=10mm, Pin=20 dBm, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 54.864 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 30.4 W/kg

SAR(1 g) = 7.2 W/kg; SAR(10 g) = 2.03 W/kg

Maximum value of SAR (measured) = 15.0 W/kg



0 dB = 15.0 W/kg = 11.76 dBW/kg

Plot 8

Date/Time: 3/3/2015 3:04:08 PM

Test Laboratory: Microsoft EMC

System Performance Check D5300 3-03-2015

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:xxx

Communication System: UID 0, CW (0); Frequency: 5300 MHz

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.513$ S/m; $\epsilon_r = 47.782$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (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
- DASYS2 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies above 1 GHz/System Check 5300 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe) 2/Area Scan (9x9x1): Measurement grid: $dx=10$ mm, $dy=10$ mm
Maximum value of SAR (measured) = 13.9 W/kg

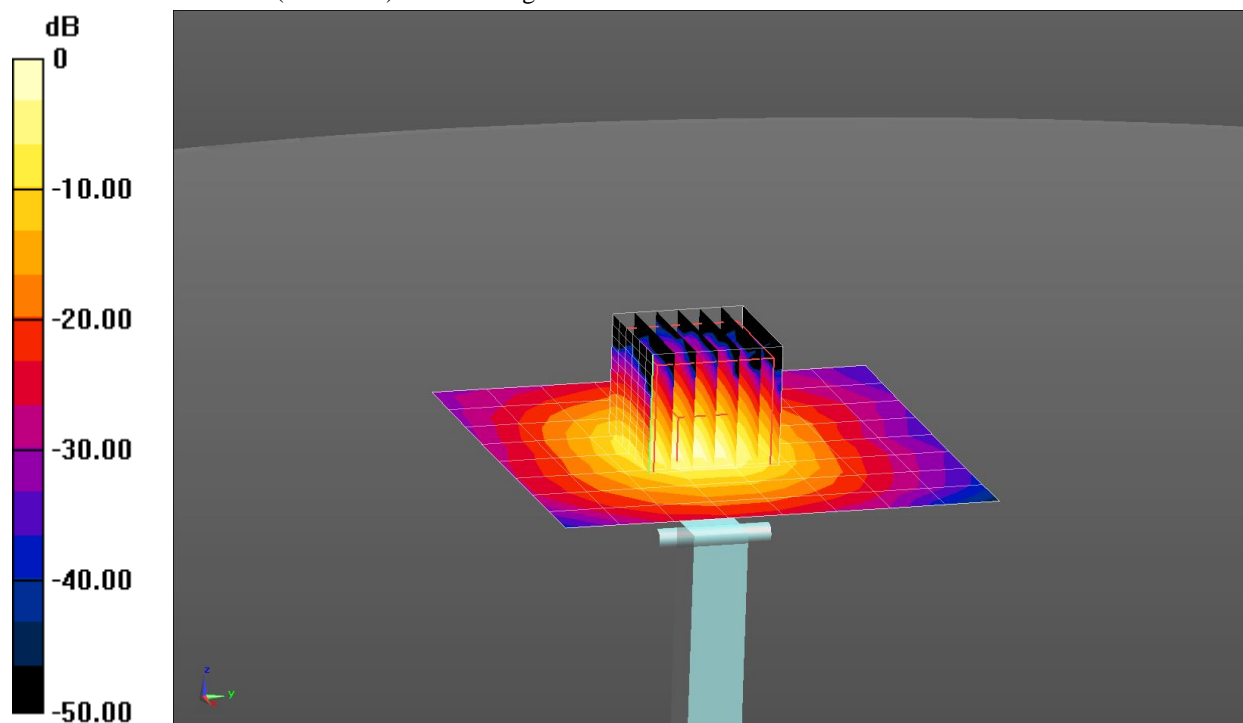
System Performance Check at Frequencies above 1 GHz/System Check 5300 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe) 2/Zoom Scan (7x7x7) (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 54.046 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 36.0 W/kg

SAR(1 g) = 8.16 W/kg; SAR(10 g) = 2.3 W/kg

Maximum value of SAR (measured) = 17.3 W/kg



0 dB = 17.3 W/kg = 12.38 dBW/kg

Plot 9

Date/Time: 3/4/2015 4:56:05 PM

Test Laboratory: Microsoft EMC

MSL_D5500_SystemPerformanceCheck_3-4-15

DUT: Dipole D5GHzV2_1159; Type: D5GHzV2; Serial: D5GHzV2 - SN:1159

Communication System: UID 0, CW (0); Frequency: 5500 MHz

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.651$ S/m; $\epsilon_r = 46.569$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(3.79, 3.79, 3.79); 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
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies above 1 GHz/System Check 5500 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) = 11.4 W/kg

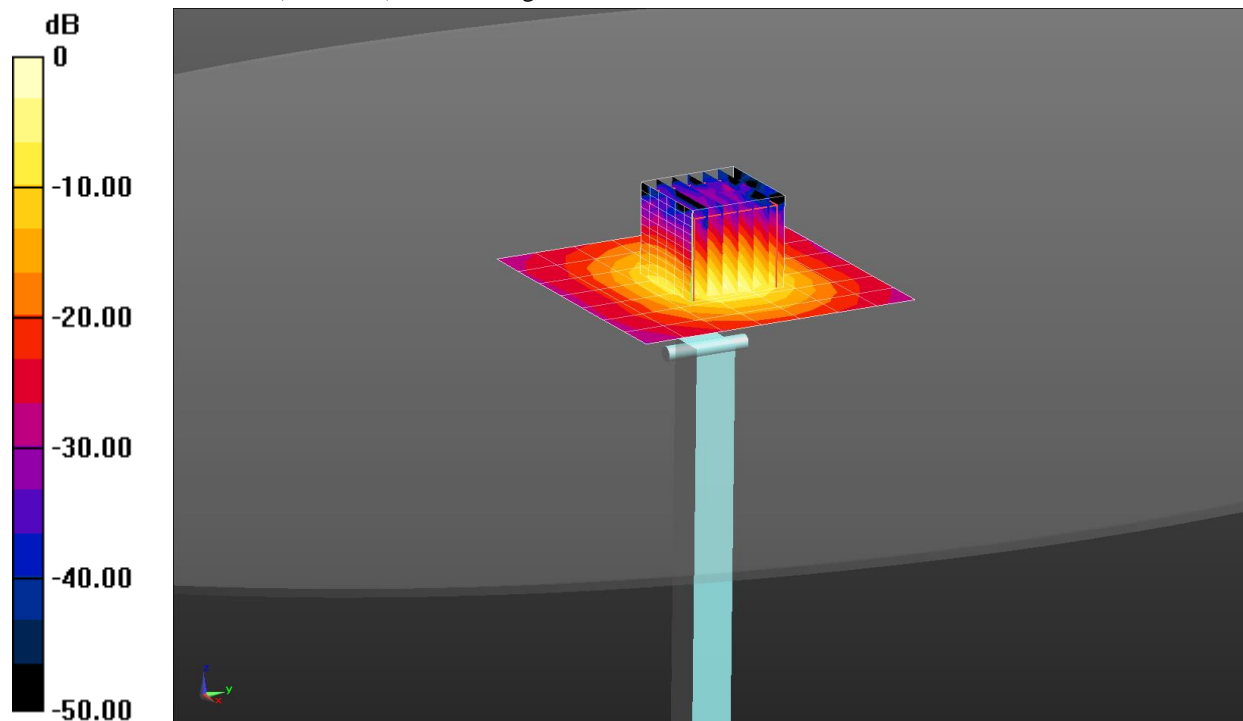
System Performance Check at Frequencies above 1 GHz/System Check 5500 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 58.407 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 34.4 W/kg

SAR(1 g) = 8.13 W/kg; SAR(10 g) = 2.29 W/kg

Maximum value of SAR (measured) = 17.2 W/kg



0 dB = 17.2 W/kg = 12.36 dBW/kg

Plot 10

Date/Time: 3/4/2015 6:45:05 PM

Test Laboratory: Microsoft EMC

MSL_D5600_SystemPerformanceCheck_3-4-15
DUT: Dipole D5GHzV2_1158; Type: D5GHzV2; Serial: D5GHzV2 - SN:1158

Communication System: UID 0, CW (0); Frequency: 5600 MHz

 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.791$ S/m; $\epsilon_r = 46.438$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASYS 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
- DASYS2 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies above 1 GHz 2/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) = 12.0 W/kg

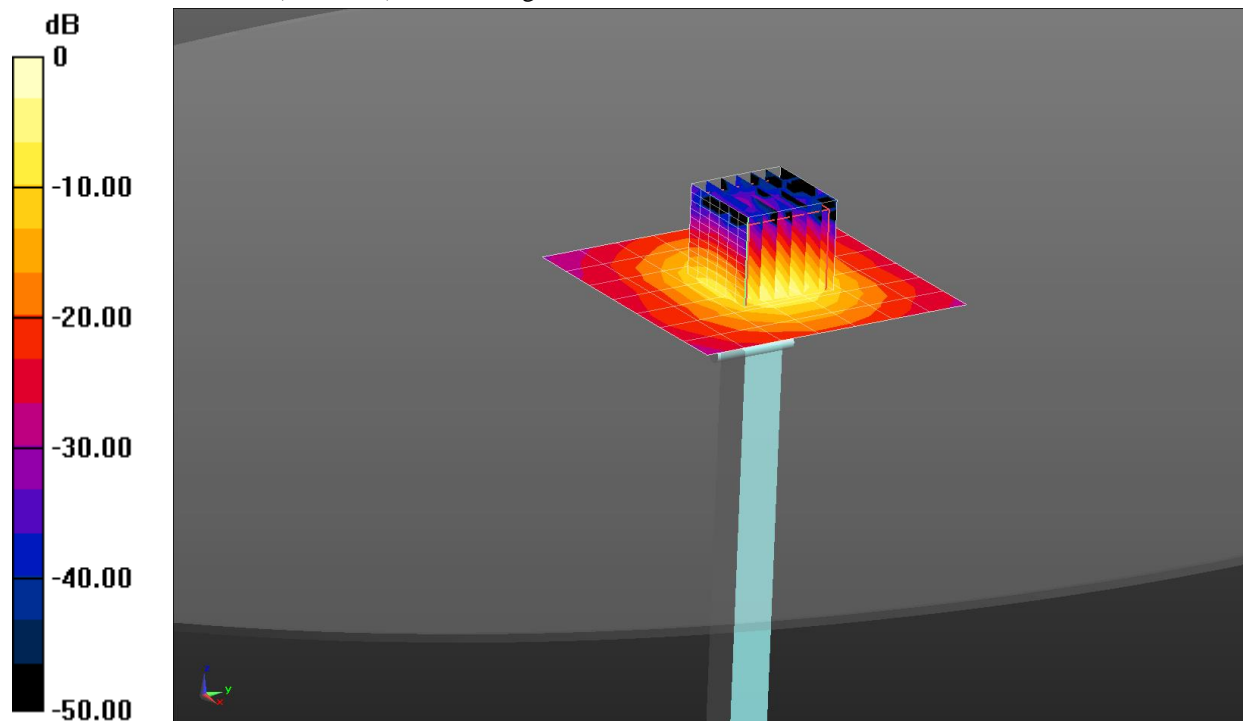
System Performance Check at Frequencies above 1 GHz 2/System Check 5600 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 57.605 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 35.8 W/kg

SAR(1 g) = 8.16 W/kg; SAR(10 g) = 2.25 W/kg

Maximum value of SAR (measured) = 17.7 W/kg



0 dB = 17.7 W/kg = 12.48 dBW/kg

Plot 11

Date/Time: 3/8/2015 10:50:45 AM

Test Laboratory: Microsoft EMC

MSL_D5800_SystemPerformanceCheck_3-8-15
DUT: Dipole D5GHzV2_1158; Type: D5GHzV2; Serial: D5GHzV2 - SN:1158

Communication System: UID 0, CW (0); Frequency: 5800 MHz

 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.212$ S/m; $\epsilon_r = 47.903$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (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
- DASY52 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) = 10.9 W/kg

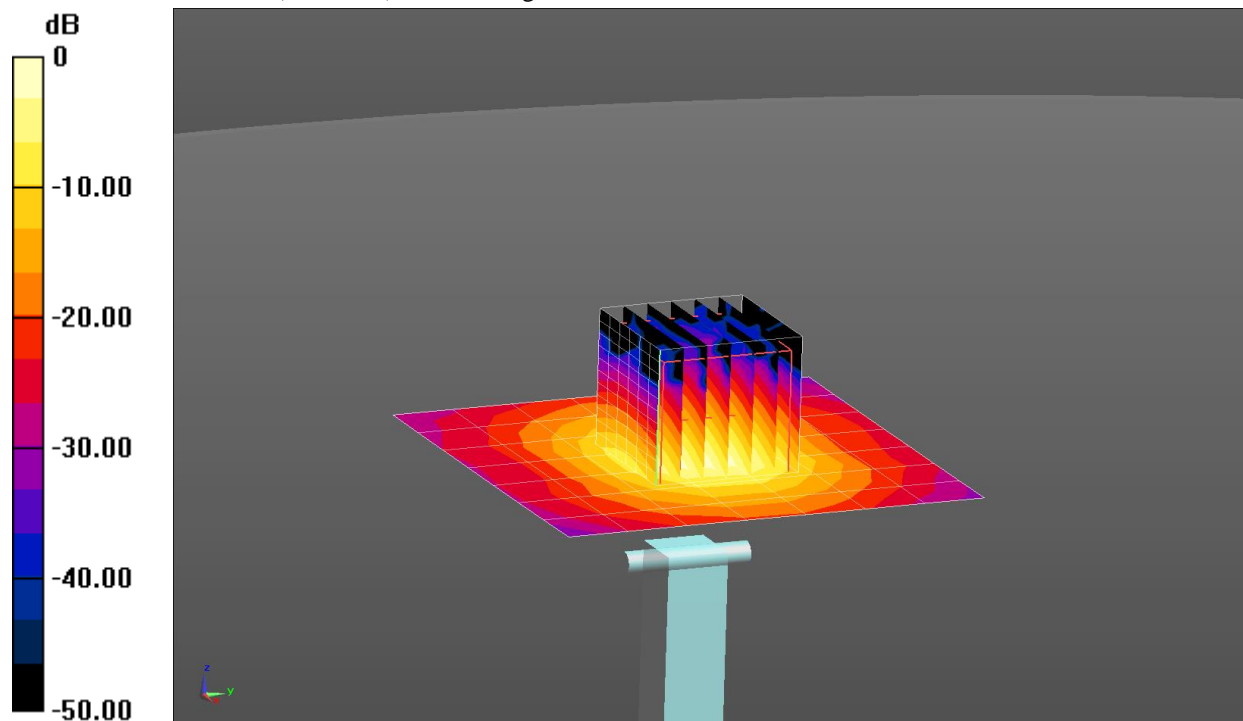
System Performance Check at Frequencies above 1 GHz/System Check 5800 MHz; $d=10$ mm, $P_{in}=20$ dBm, $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 56.165 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 35.3 W/kg

SAR(1 g) = 7.76 W/kg; SAR(10 g) = 2.15 W/kg

Maximum value of SAR (measured) = 16.8 W/kg



0 dB = 16.8 W/kg = 12.25 dBW/kg