

**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/m<sup>3</sup>

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/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

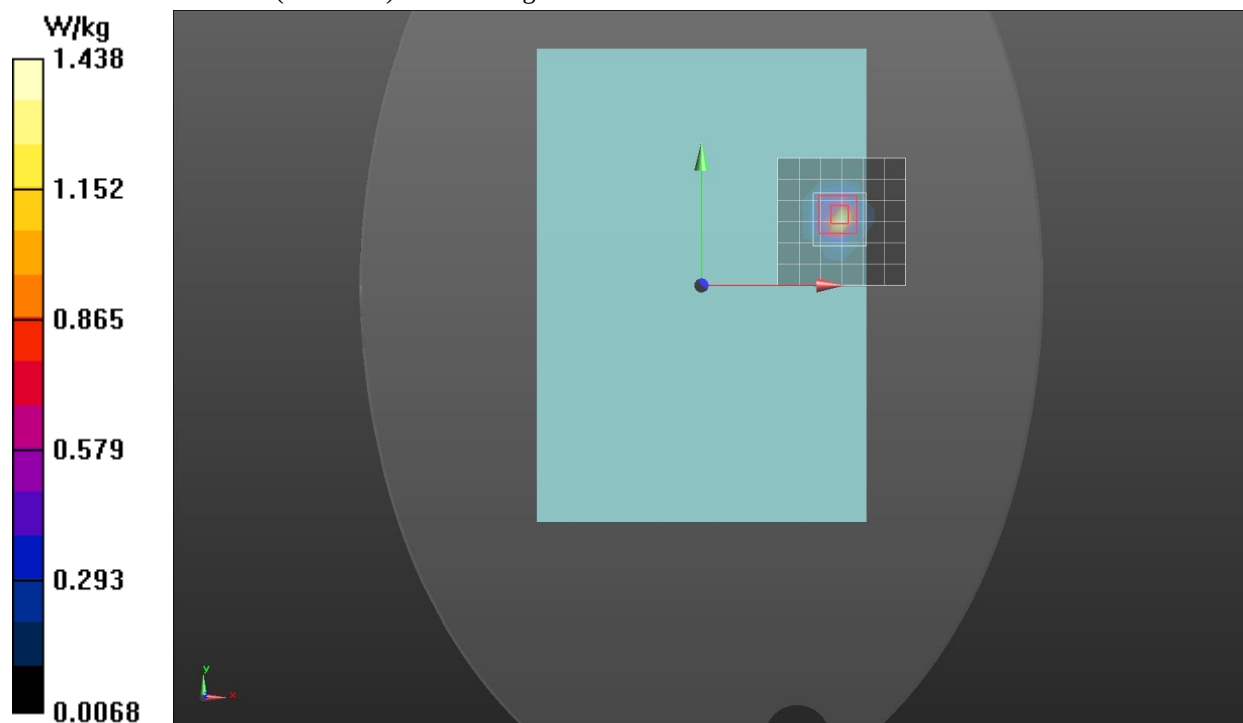
**Flat-Section MSL/02/27/15 HT20 mode Chain A Back 0mm 2462 MHz Repeat/Zoom Scan (7x7x7)/Cube 0:**Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

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/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (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
- DASY52 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

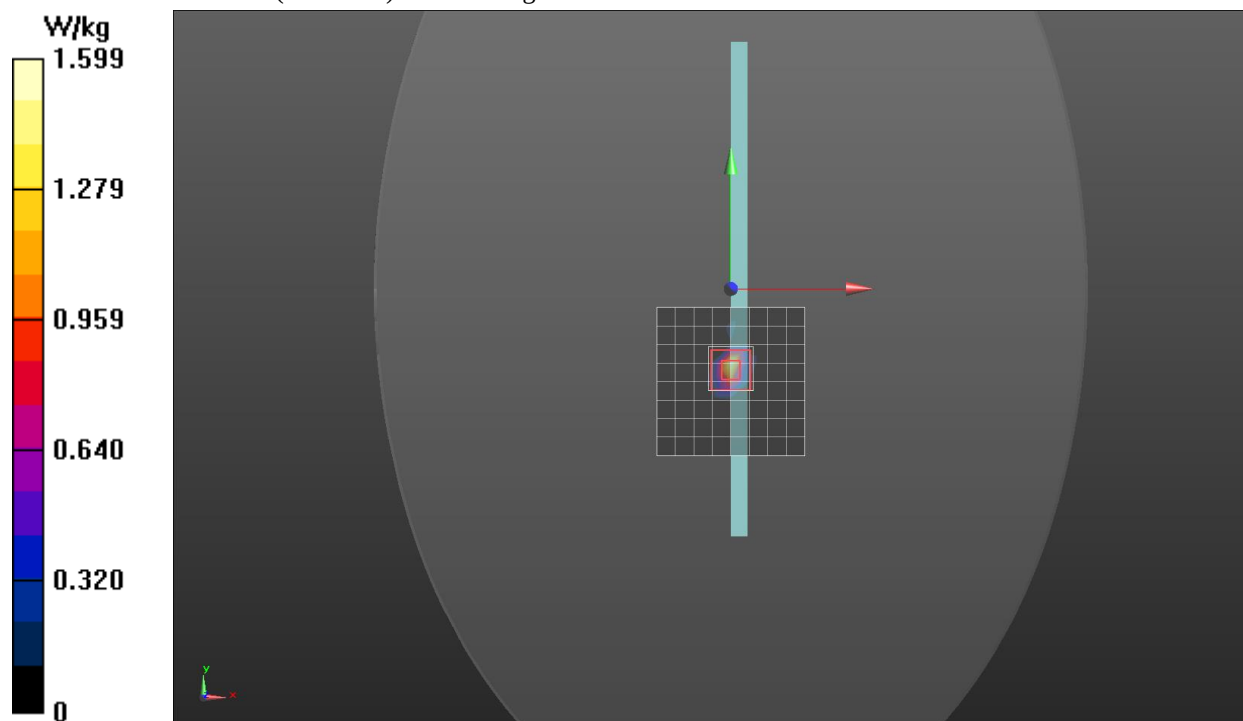
**Flat-Section MSL/03/17/15 HT40 mode Chain B Top 0 mm 5190 MHz Repeat/Zoom Scan (7x7x12)/Cube 0:**Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

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/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (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
- DASY52 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:**

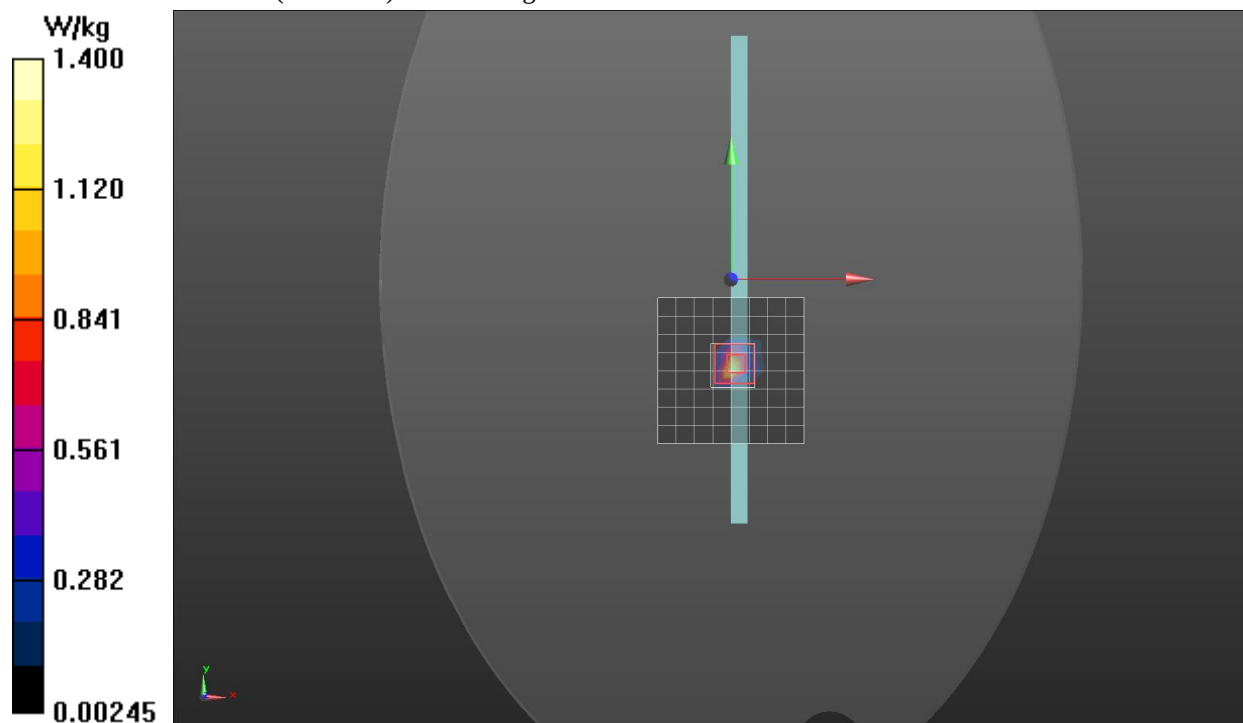
Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

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/m<sup>3</sup>

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
- 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**

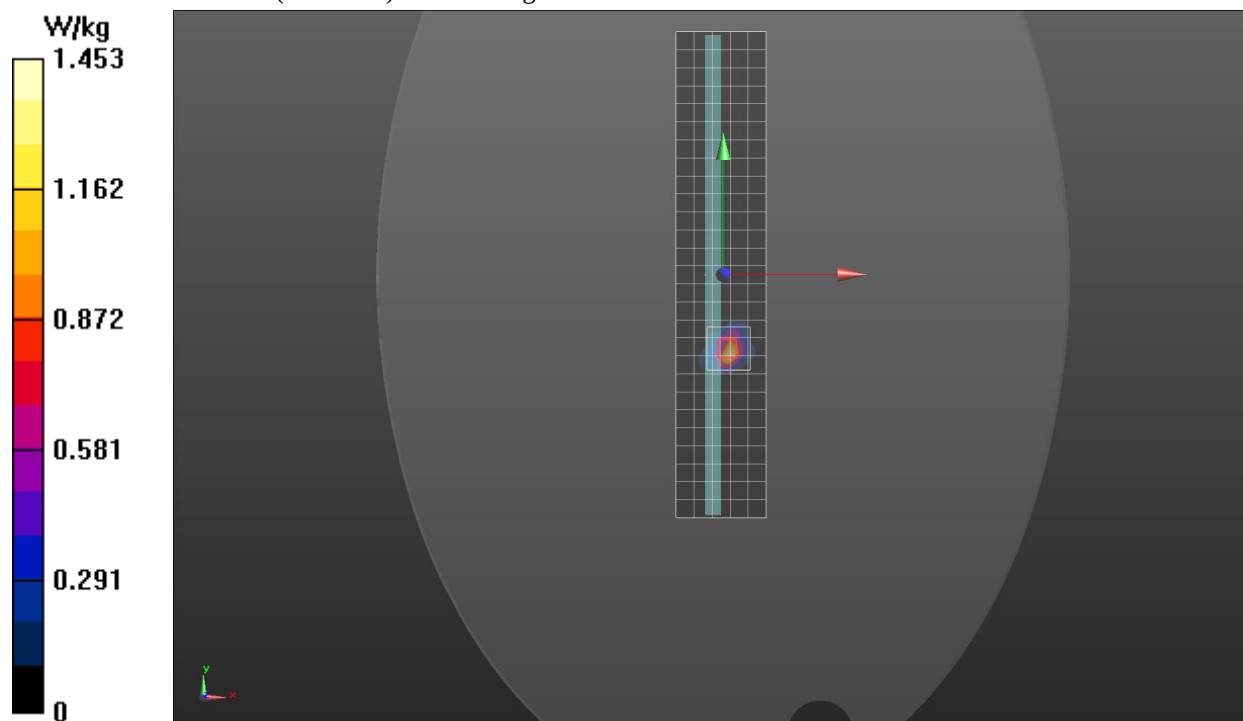
**0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

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/m<sup>3</sup>

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 (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
- DASY52 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

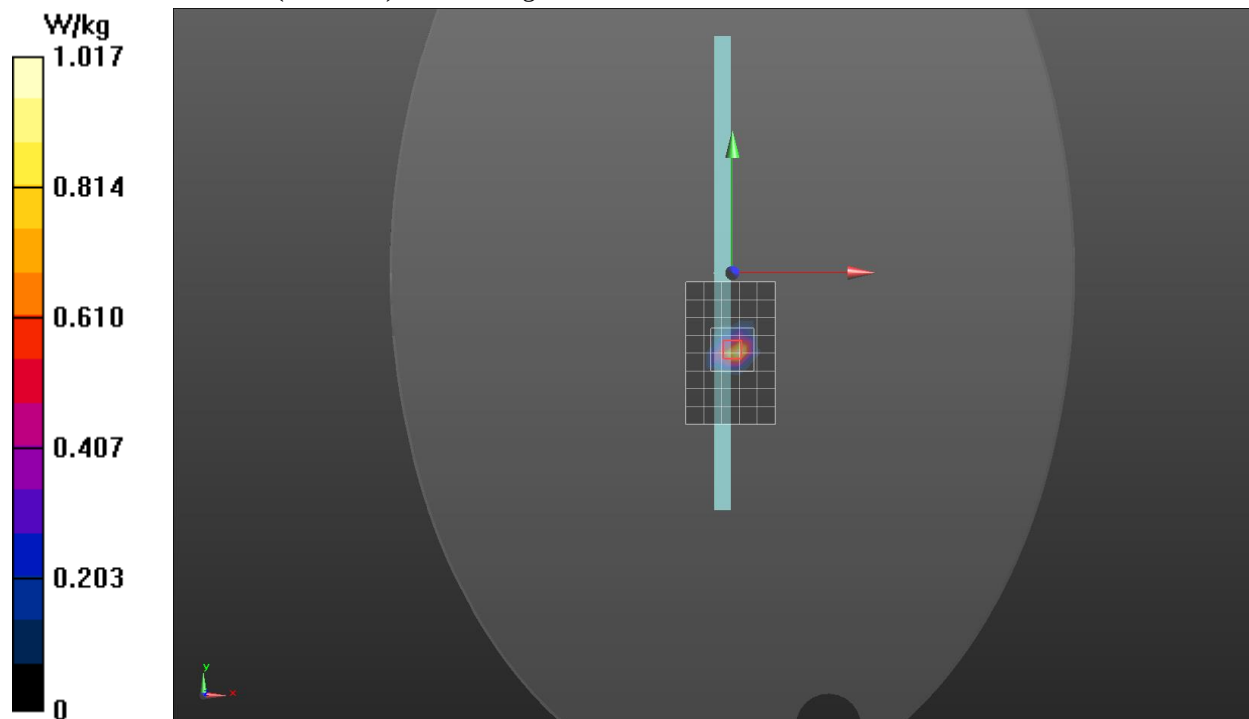
**Flat-Section MSL\_Chain B/Chain B\_802.11n HT40\_Top 0mm\_5755 MHz/Zoom Scan (7x7x12)/Cube 0:**Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

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/m<sup>3</sup>

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)

**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

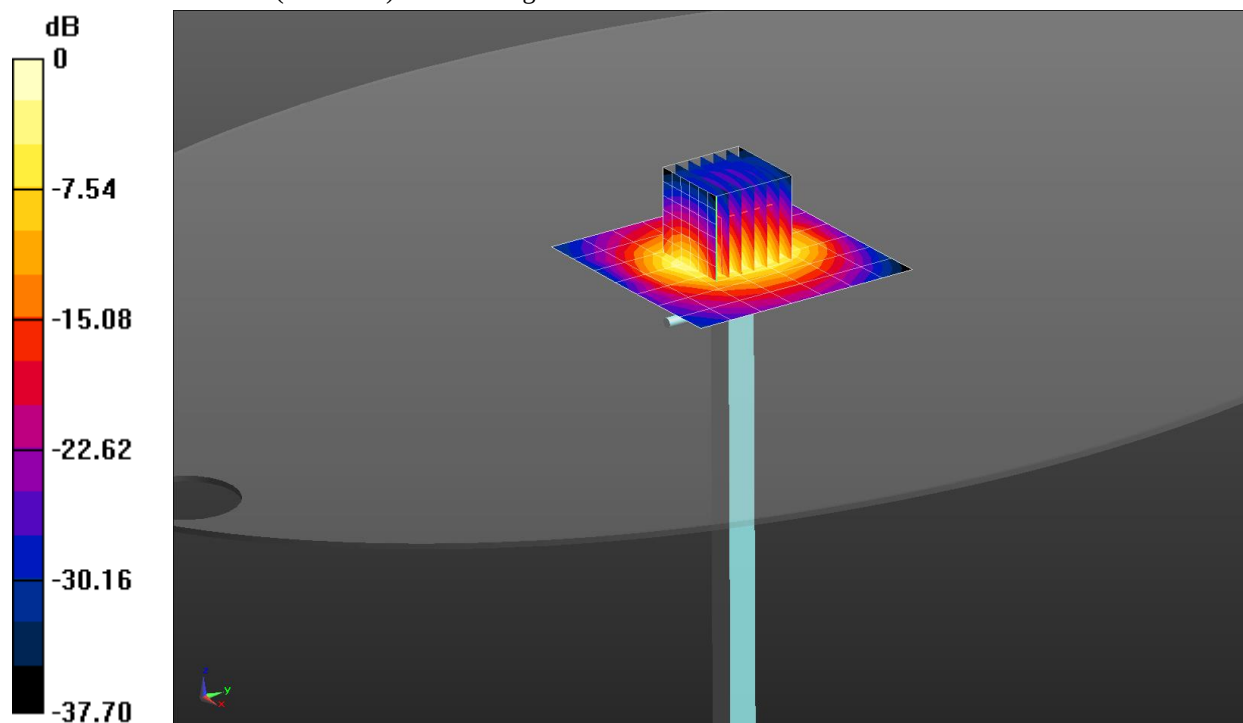
**System Performance Check at Frequencies above 1 GHz/System Check 2450 MHz;  $d=10$ mm,  $P_{in}=20$  dBm,  $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

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/m<sup>3</sup>

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;  $d=10$ mm,  $P_{in}=20$  dBm,  $dist=2.0$ mm (EX-Probe)/Area Scan (9x9x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm

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

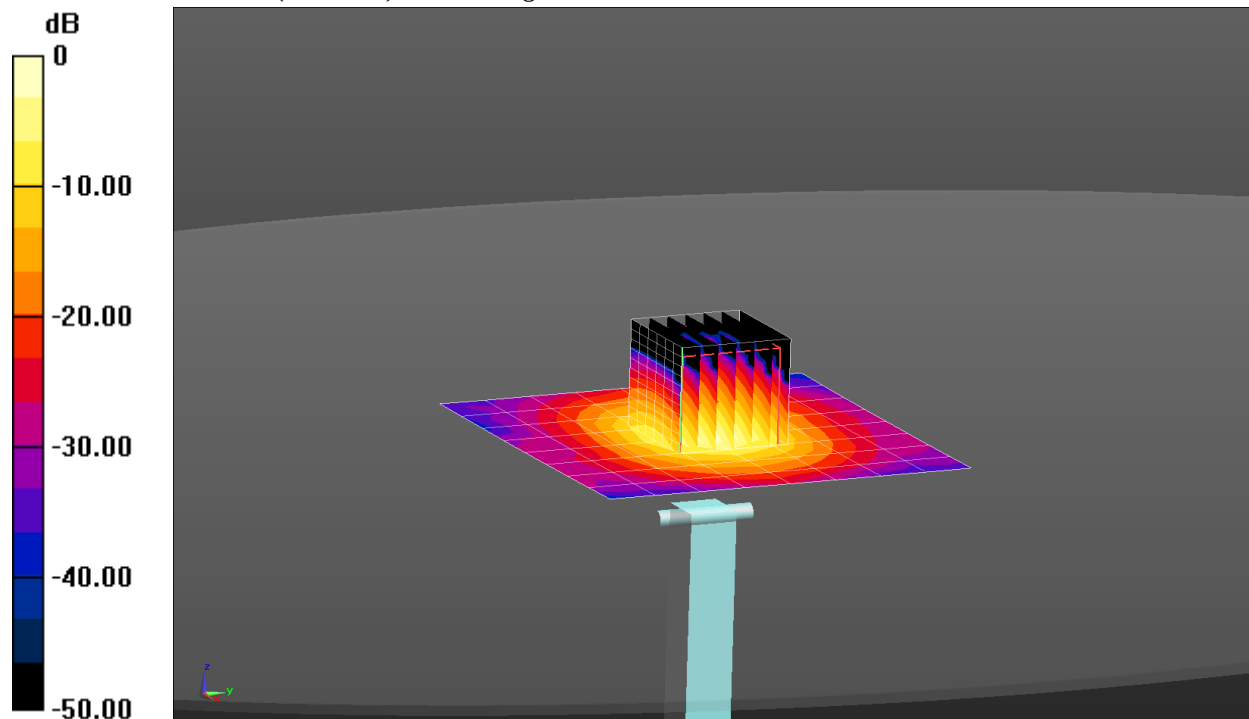
**System Performance Check at Frequencies above 1 GHz/System Check 5200 MHz;  $d=10$ mm,  $P_{in}=20$  dBm,  $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

Reference Value = 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/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (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
- DASY52 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

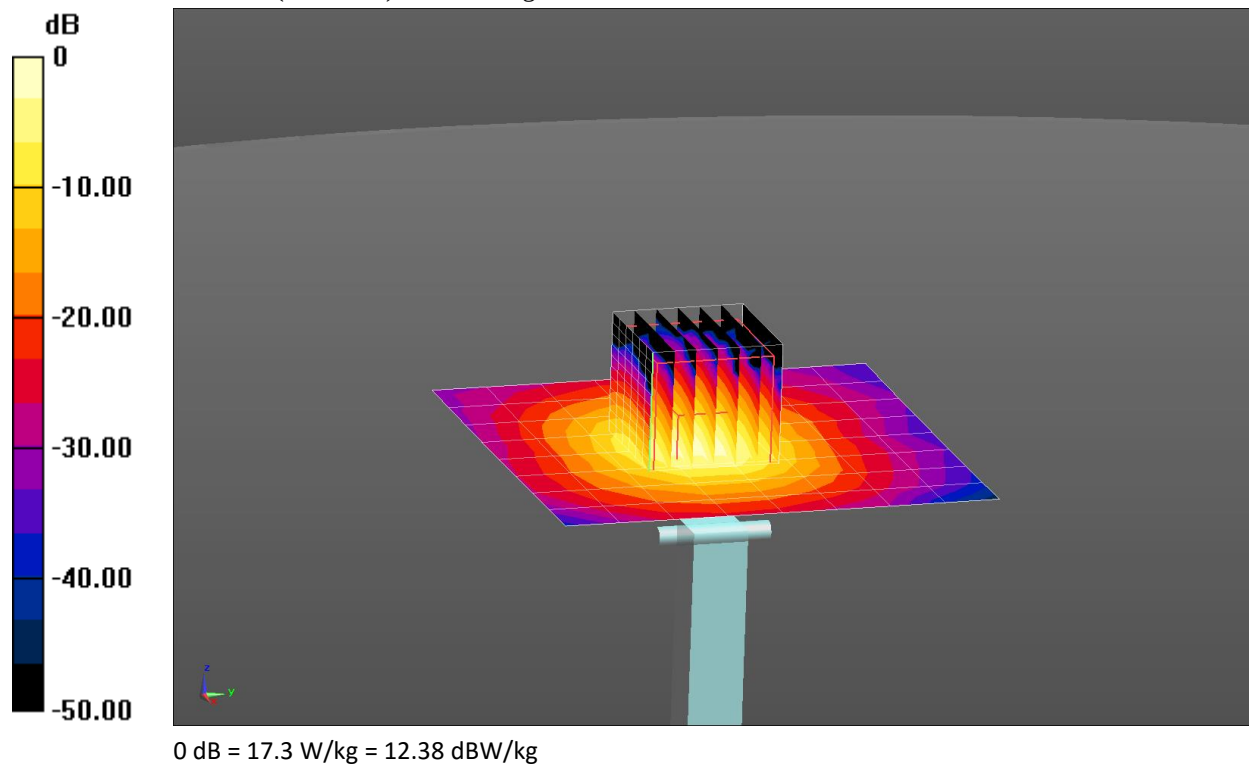
**System Performance Check at Frequencies above 1 GHz/System Check 5300 MHz;  $d=10$ mm,  $P_{in}=20$  dBm,  $dist=2.0$ mm (EX-Probe) 2/Zoom Scan (7x7x7) (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

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



## 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/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (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

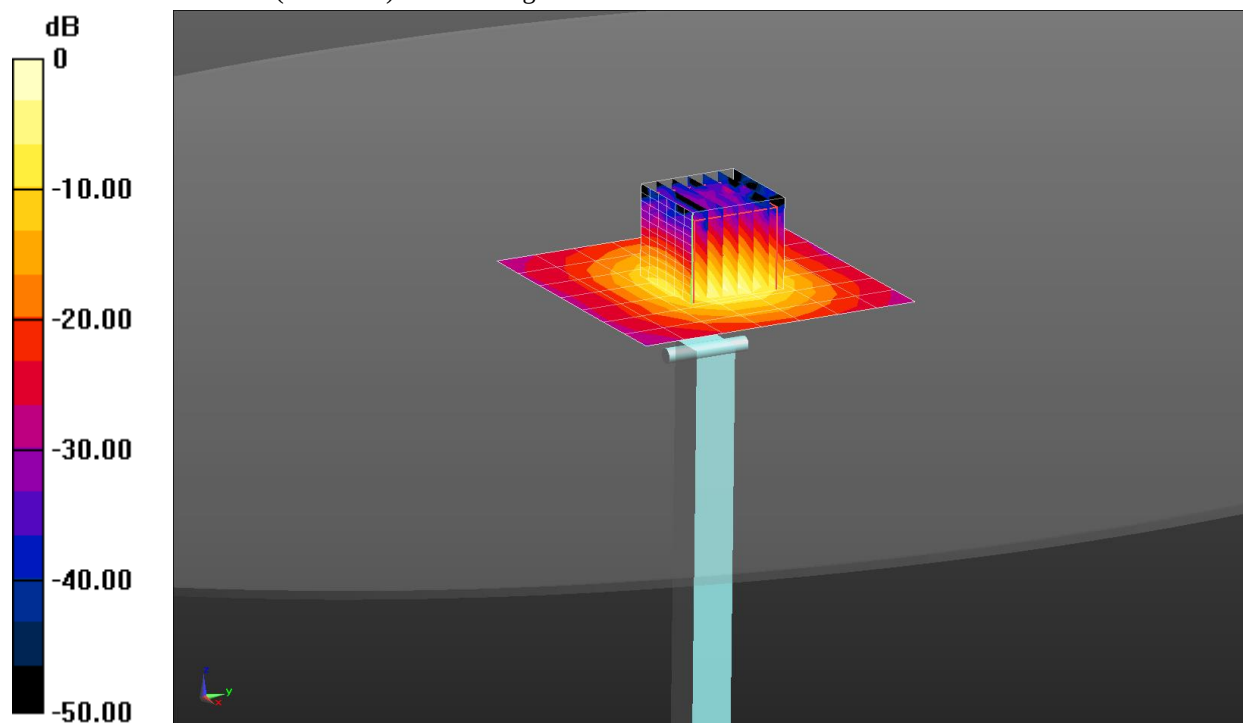
**System Performance Check at Frequencies above 1 GHz/System Check 5500 MHz;  $d=10$ mm,  $P_{in}=20$  dBm,  $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

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/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (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)

**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

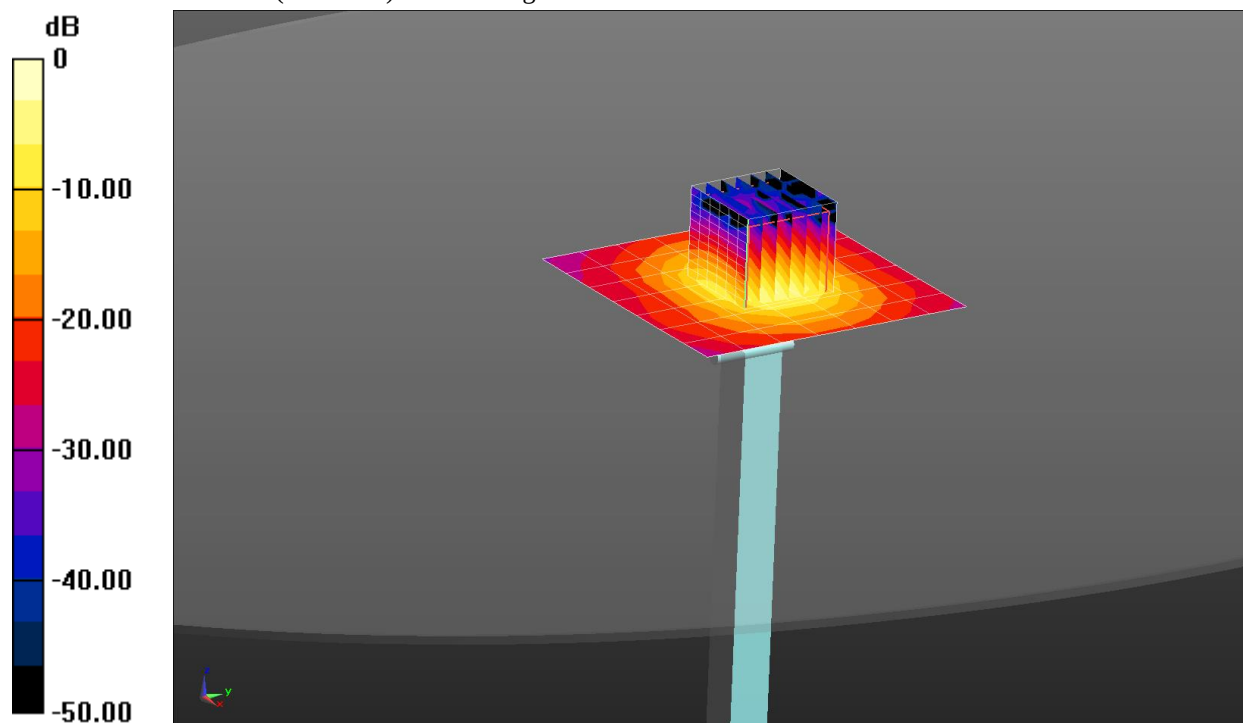
**System Performance Check at Frequencies above 1 GHz 2/System Check 5600 MHz;  $d=10$ mm,  $P_{in}=20$  dBm,  $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

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/m<sup>3</sup>

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

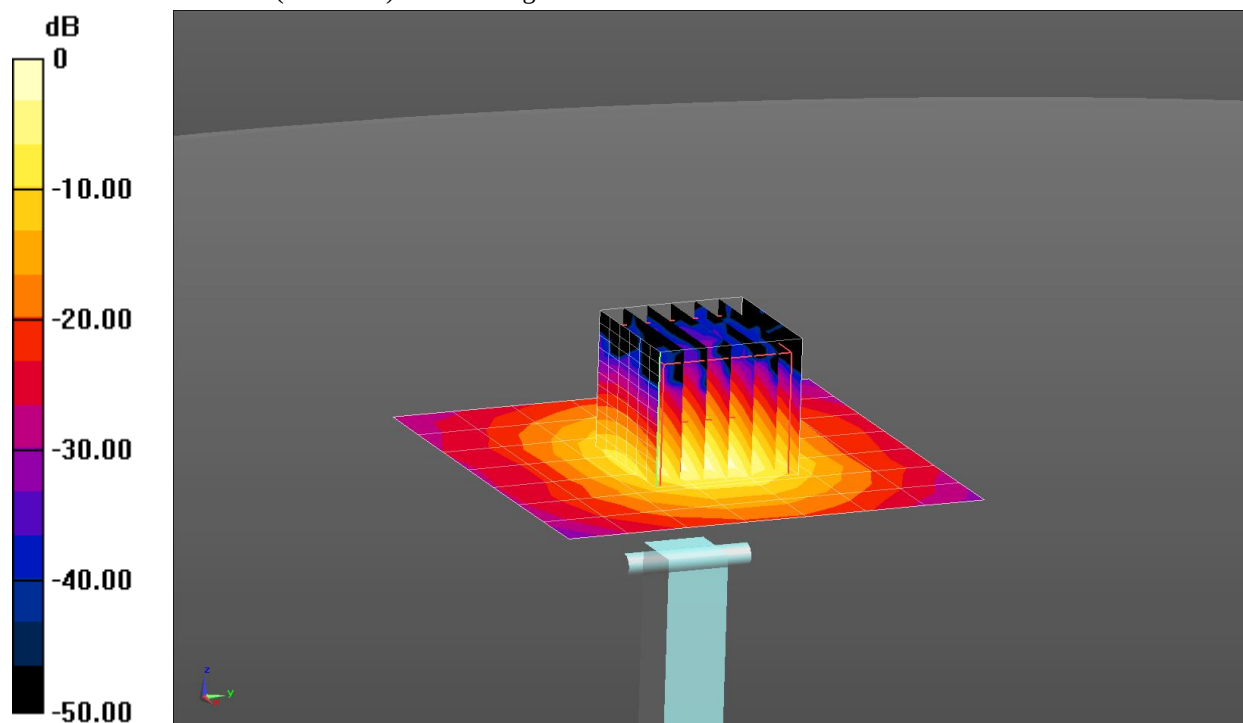
**System Performance Check at Frequencies above 1 GHz/System Check 5800 MHz;  $d=10$ mm,  $P_{in}=20$  dBm,  $dist=2.0$ mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

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