

Plot 1

Date/Time: 8/7/2017 11:25:05 PM

Test Laboratory: Microsoft EMC

1832_802.11b_Chain B_Top 0mm_2462 MHz_8dBmPS**DUT: 1832; Type: Portable Computing Device; Serial: 012795472657**

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

Medium parameters used: $f = 2462$ MHz; $\sigma = 2.017$ S/m; $\epsilon_r = 53.701$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(7.45, 7.45, 7.45); Calibrated: 7/20/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1384; Calibrated: 7/17/2017
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1217
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

Flat-Section MSL_Chain B/Chain B_802.11b_Top 0mm_2462 MHz/Area Scan (6x16x1):Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.59 W/kg

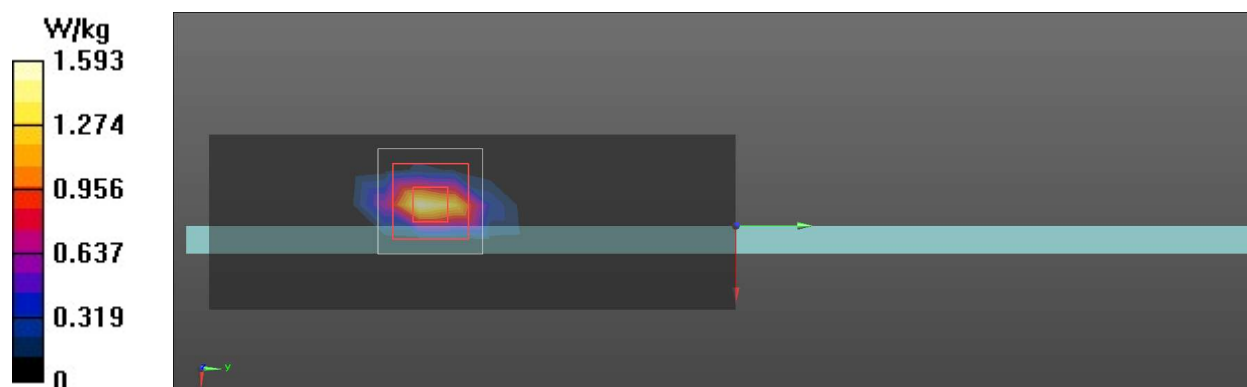
Flat-Section MSL_Chain B/Chain B_802.11b_Top 0mm_2462 MHz/Zoom Scan (7x7x7)/Cube 0:Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 29.63 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 2.83 W/kg

SAR(1 g) = 0.944 W/kg; SAR(10 g) = 0.296 W/kg

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



Plot 2

Date/Time: 8/15/2017 12:15:33 AM

Test Laboratory: Microsoft EMC

1832_802.11nHT40_Chain A_Top 0mm_5230 MHz_8dBmPS_Keyboard**DUT: 1832; Type: Portable Computing Device; Serial: 012795472657**

Communication System: UID 0, 802.11 5GHz (0); Communication System Band: 5 GHz; Frequency: 5230 MHz

Medium parameters used: $f = 5230$ MHz; $\sigma = 5.351$ S/m; $\epsilon_r = 47.451$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(4.68, 4.68, 4.68); Calibrated: 7/20/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1384; Calibrated: 7/17/2017
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1217
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

Flat-Section MSL_Chain A/Chain A_802.11nHT40_Top 0mm_5230 MHz_PS8_Keyboard Reversed/Area Scan (6x16x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.50 W/kg

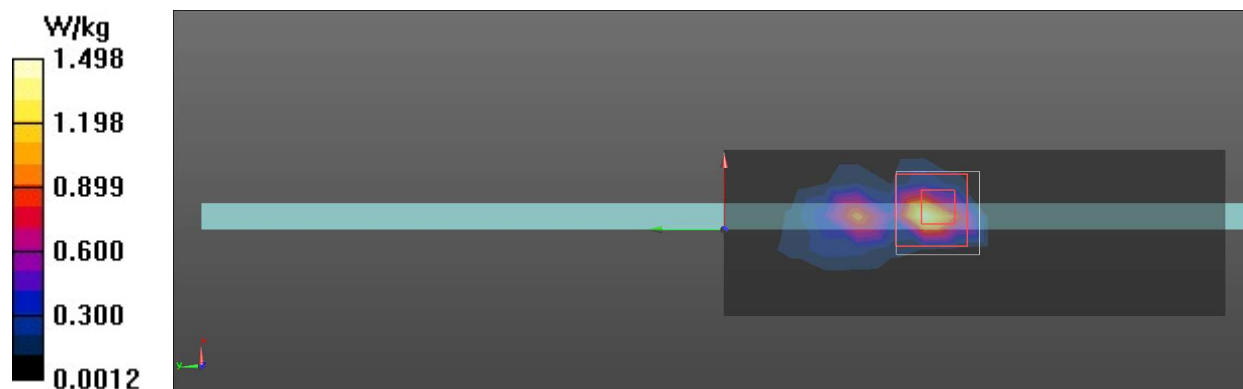
Flat-Section MSL_Chain A/Chain A_802.11nHT40_Top 0mm_5230 MHz_PS8_Keyboard Reversed/Zoom Scan (6x6x12)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=2$ mm

Reference Value = 14.96 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 6.32 W/kg

SAR(1 g) = 0.833 W/kg; SAR(10 g) = 0.162 W/kg

Maximum value of SAR (measured) = 1.95 W/kg



Plot 3

Date/Time: 8/18/2017 2:20:46 PM

Test Laboratory: Microsoft EMC

1832_802.11nHT40_Chain B_Top 0mm_5670 MHz_7dBmPS**DUT: 1832; Type: Portable Computing Device; Serial: 012795472657**

Communication System: UID 0, CW (0); Frequency: 5670 MHz

Medium parameters used: $f = 5670$ MHz; $\sigma = 5.951$ S/m; $\epsilon_r = 47.529$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(3.93, 3.93, 3.93); Calibrated: 4/27/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 4/19/2017
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

Flat-Section MSL 2 2 2/8/18/2017 HT40 5670MHz Chain B Top 0 mm 7dBm power setting**repeat/Area Scan (9x12x1):** Measurement grid: $dx=8$ mm, $dy=8$ mm

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

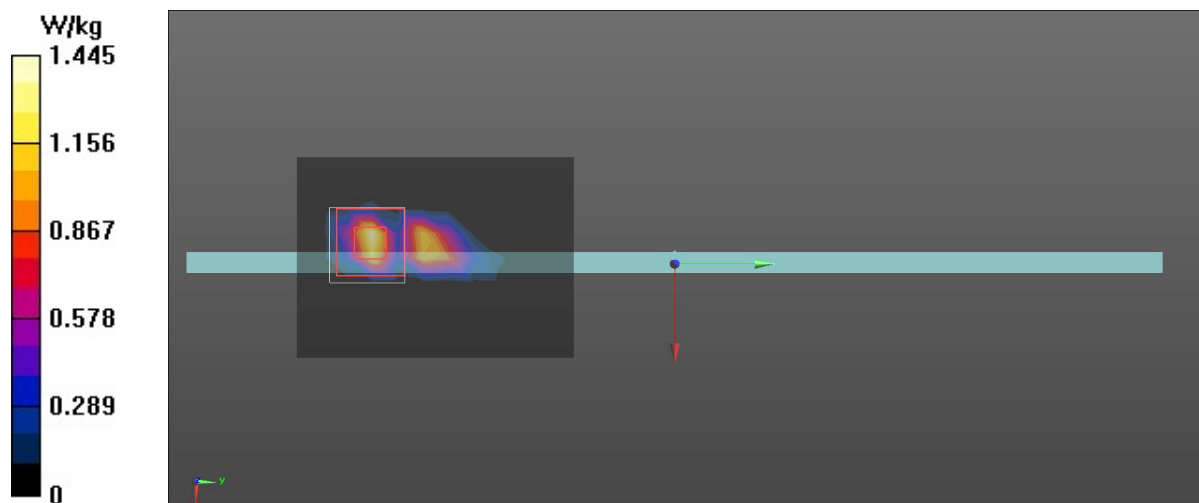
Flat-Section MSL 2 2 2/8/18/2017 HT40 5670MHz Chain B Top 0 mm 7dBm power setting**repeat/Zoom Scan (7x7x12)/Cube 0:** Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 24.55 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 7.20 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.175 W/kg

Maximum value of SAR (measured) = 2.97 W/kg



Plot 4

Date/Time: 8/16/2017 6:44:27 PM

Test Laboratory: Microsoft EMC

1832_802.11a_Chain B_Top 0mm_5745 MHz_8dBmPS_keyboard**DUT: 1832; Type: Portable Computing Device; Serial: 012795472657**

Communication System: UID 0, CW (0); Frequency: 5745 MHz

Medium parameters used: $f = 5745$ MHz; $\sigma = 5.78$ S/m; $\epsilon_r = 47.611$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(4.16, 4.16, 4.16); Calibrated: 4/27/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 4/19/2017
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

Flat-Section MSL 2/8/16/2017 a 5745MHz Chain B Top 0 mm 9dBm power setting +Keyboard/Area**Scan (9x12x1):** Measurement grid: $dx=8$ mm, $dy=8$ mm

Maximum value of SAR (measured) = 2.06 W/kg

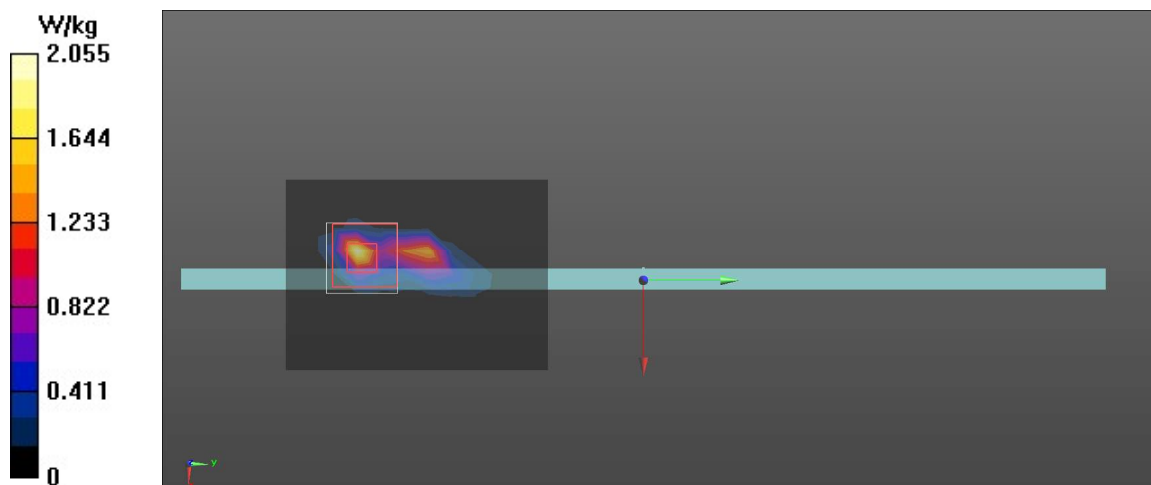
Flat-Section MSL 2/8/16/2017 a 5745MHz Chain B Top 0 mm 9dBm power setting +Keyboard/Zoom**Scan (7x7x12)/Cube 0:** Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 20.69 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 8.18 W/kg

SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.205 W/kg

Maximum value of SAR (measured) = 3.18 W/kg



Plot 5

Date/Time: 8/7/2017 7:20:47 PM

Test Laboratory: Microsoft EMC

MSL_SystemPerformanceCheck-D2450_8-7-17**DUT: Dipole 2450 MHz D2450V2_917; Type: D2450V2; Serial: D2450V2 - SN:917**

Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz:

Medium parameters used: $f = 2450$ MHz; $\sigma = 2.007$ S/m; $\epsilon_r = 53.703$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(7.45, 7.45, 7.45); Calibrated: 7/20/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1384; Calibrated: 7/17/2017
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1217
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

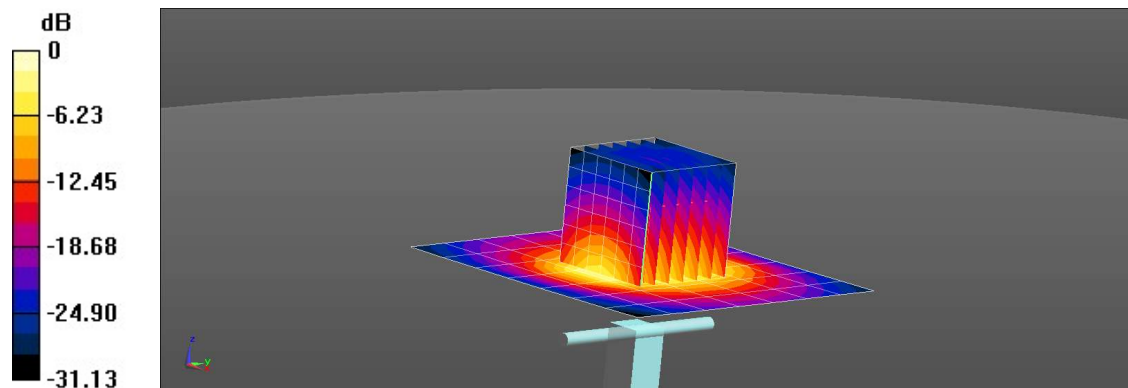
System Performance Check at Frequencies above 1 GHz/System Check 2450 MHz; d=10mm, Pin=20 dBm, dist=2.0mm (EX-Probe)/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 5.26 W/kg**System Performance Check at Frequencies above 1 GHz/System Check 2450 MHz; d=10mm, Pin=20 dBm, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 63.10 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 10.7 W/kg

SAR(1 g) = 5.24 W/kg; SAR(10 g) = 2.43 W/kg

Maximum value of SAR (measured) = 7.99 W/kg



Plot 6

Date/Time: 8/14/2017 8:00:35 PM

Test Laboratory: Microsoft EMC

MSL 5250MHz_SystemPerformanceCheck-D5GHz_8-14-17**DUT: Dipole D5GHzV2_1159; Type: D5GHzV2; Serial: D5GHzV2 - SN:1159**

Communication System: UID 0, CW (0); Communication System Band: D5250 (5250.0 MHz); Frequency: 5250 MHz

Medium parameters used: $f = 5250$ MHz; $\sigma = 5.385$ S/m; $\epsilon_r = 47.424$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3940; ConvF(4.68, 4.68, 4.68); Calibrated: 7/20/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1384; Calibrated: 7/17/2017
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1217
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

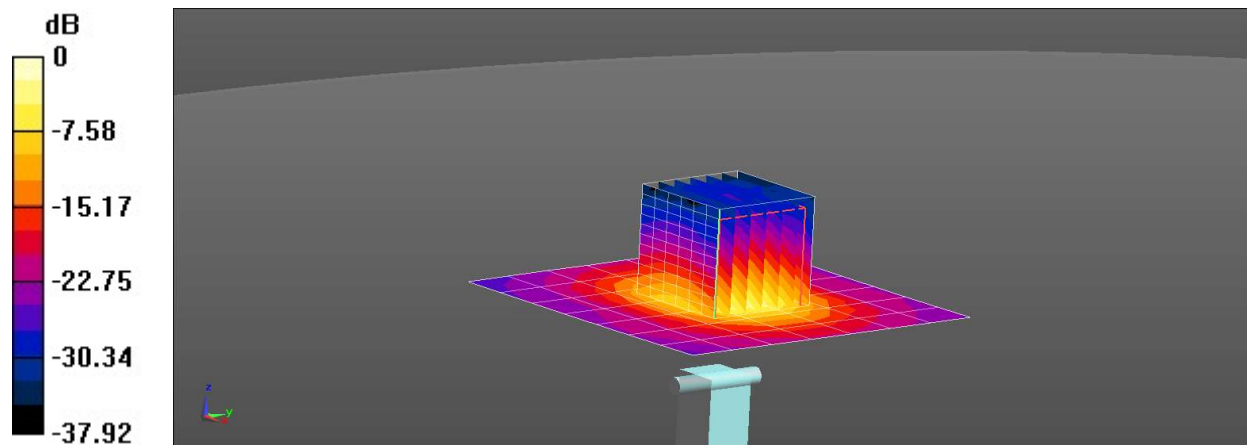
System Performance Check at Frequencies above 1 GHz/System Check 5250 MHz; d=10mm, Pin=20 dBm, dist=2.0mm (EX-Probe)/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.61 W/kg**System Performance Check at Frequencies above 1 GHz/System Check 5250 MHz; d=10mm, Pin=20 dBm, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x7) (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 57.55 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 32.6 W/kg

SAR(1 g) = 7.68 W/kg; SAR(10 g) = 2.15 W/kg

Maximum value of SAR (measured) = 16.1 W/kg



Plot 7

Date/Time: 8/7/2017 2:25:46 PM

Test Laboratory: Microsoft EMC

System Verification_MSL 5600MHz (08-07-2017)**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1159**

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

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.979$ S/m; $\epsilon_r = 46.394$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(3.93, 3.93, 3.93); Calibrated: 4/27/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 4/19/2017
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

System Verification @ 5600MHz/Pin=100mW/Area Scan (9x9x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 9.50 W/kg

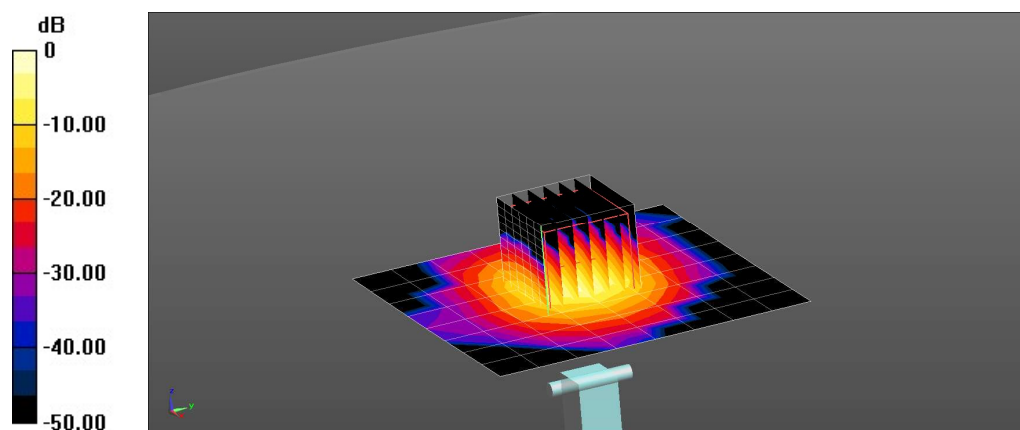
System Verification @ 5600MHz/Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 35.48 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 37.9 W/kg

SAR(1 g) = 8.5 W/kg; SAR(10 g) = 2.34 W/kg

Maximum value of SAR (measured) = 18.5 W/kg



Plot 8

Date/Time: 8/14/2017 1:19:27 PM

Test Laboratory: Microsoft EMC

System Verification_MSL 5750MHz (08-14-2017)**DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1159**

Communication System: UID 0, CW (0); Frequency: 5750 MHz

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.787$ S/m; $\epsilon_r = 47.607$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(4.16, 4.16, 4.16); Calibrated: 4/27/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 4/19/2017
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASY52 52.10.0(1444); SEMCAD X 14.6.10(7416)

System Verification @ 5750MHz/Pin=100mW/Area Scan (9x9x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 9.18 W/kg

System Verification @ 5750MHz/Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 35.27 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 35.1 W/kg

SAR(1 g) = 7.54 W/kg; SAR(10 g) = 2.1 W/kg

Maximum value of SAR (measured) = 16.4 W/kg

