

**Plot 1**

Date/Time: 11/17/2016 7:23:48 PM

Test Laboratory: Microsoft EMC

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

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

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.957$  S/m;  $\epsilon_r = 50.617$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(7.21, 7.21, 7.21); Calibrated: 5/20/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 33.0$
- Electronics: DAE4 Sn1383; Calibrated: 5/18/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASYS52 52.8.8(1258); SEMCAD X 14.6.10(7164)

**System Validation @ 2450MHz/Pin = 100 mW/Area Scan (61x61x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Reference Value = 40.906 V/m; Power Drift = 0.06 dB

**Fast SAR: SAR(1 g) = 4.87 W/kg; SAR(10 g) = 2.1 W/kg**

Maximum value of SAR (interpolated) = 7.66 W/kg

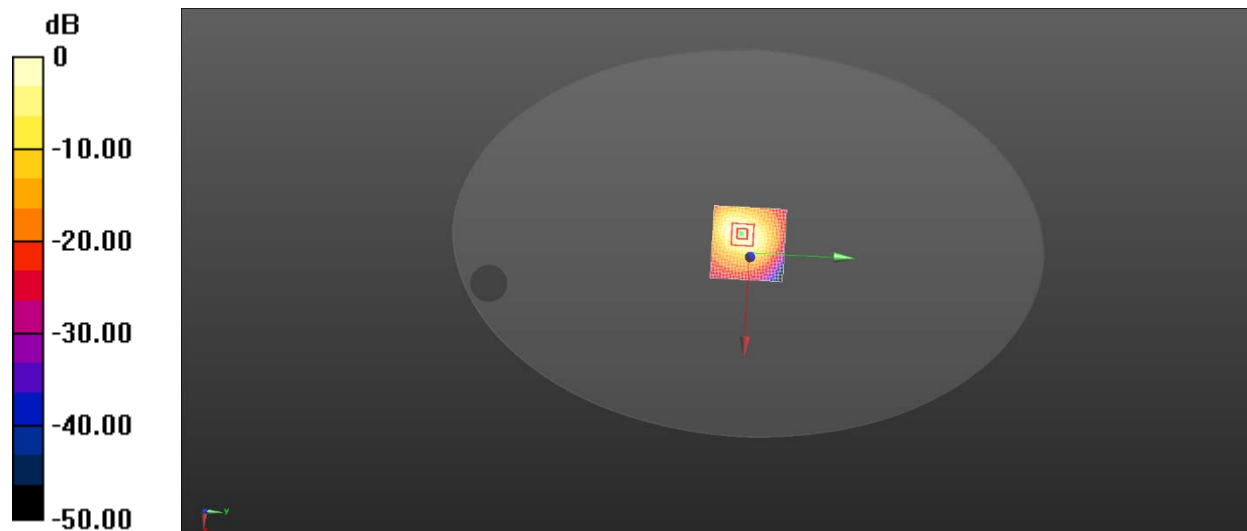
**System Validation @ 2450MHz/Pin = 100 mW/Zoom Scan (7x7x9)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=4mm

Reference Value = 40.906 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 9.87 W/kg

**SAR(1 g) = 4.77 W/kg; SAR(10 g) = 2.2 W/kg**

Maximum value of SAR (measured) = 7.33 W/kg



**Plot 2**

Date/Time: 11/17/2016 8:41:01 PM

Test Laboratory: Microsoft EMC

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

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

Medium parameters used:  $f = 5200$  MHz;  $\sigma = 5.454$  S/m;  $\epsilon_r = 47.087$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(4.24, 4.24, 4.24); Calibrated: 5/20/2016;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 5/18/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASYS52 52.8.8(1258); SEMCAD X 14.6.10(7164)

**System Validation @ 5200MHz Pin=100 mW/Area Scan (81x81x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm

Reference Value = 34.765 V/m; Power Drift = -0.03 dB

**Fast SAR: SAR(1 g) = 6.35 W/kg; SAR(10 g) = 1.83 W/kg**

Maximum value of SAR (interpolated) = 9.72 W/kg

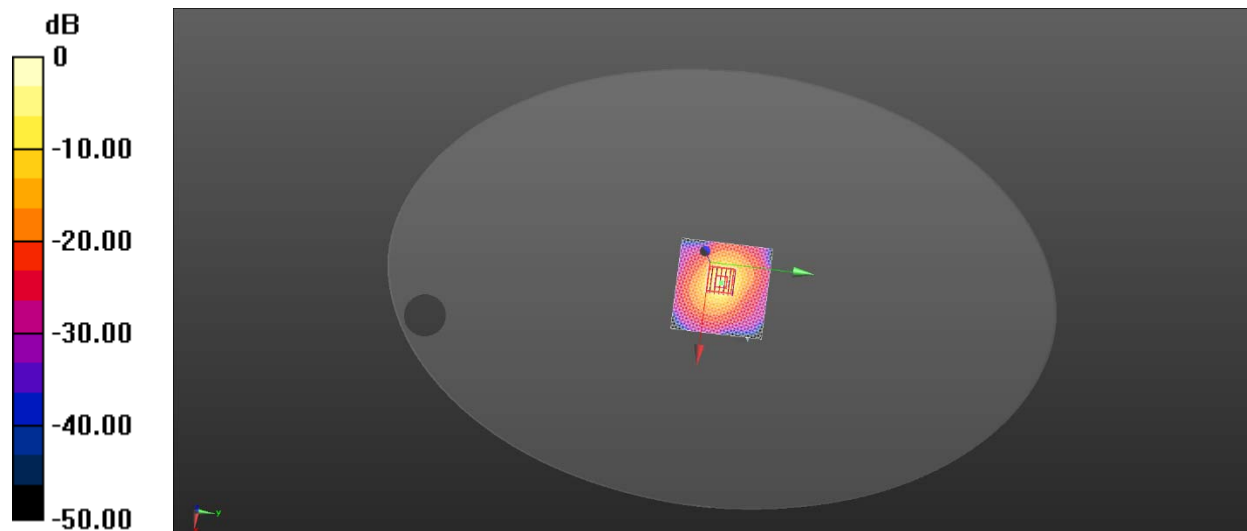
**System Validation @ 5200MHz Pin=100 mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

Reference Value = 34.765 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 31.7 W/kg

**SAR(1 g) = 7.77 W/kg; SAR(10 g) = 2.18 W/kg**

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



### Plot 3

Date/Time: 11/17/2016 9:14:52 PM

Test Laboratory: Microsoft EMC

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

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

Medium parameters used (interpolated):  $f = 5800$  MHz;  $\sigma = 6.164$  S/m;  $\epsilon_r = 46.976$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(3.77, 3.77, 3.77); Calibrated: 5/20/2016;
- Sensor-Surface: 3mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 5/18/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7164)

**System Validation @ 5800MHz Pin=100 mW/Area Scan (81x81x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm

Reference Value = 31.301 V/m; Power Drift = -0.04 dB

**Fast SAR: SAR(1 g) = 6.86 W/kg; SAR(10 g) = 1.92 W/kg**

Maximum value of SAR (interpolated) = 10.4 W/kg

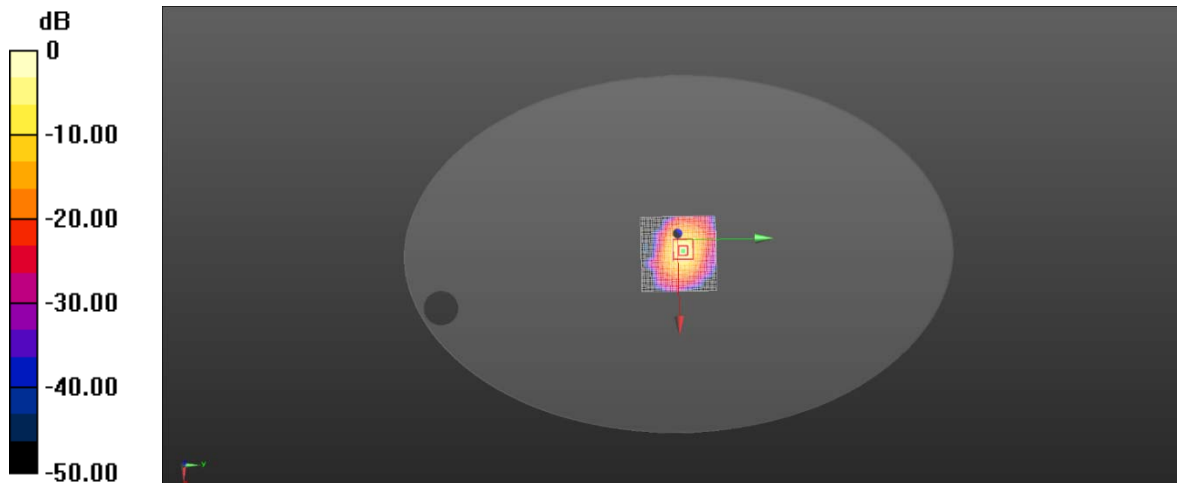
**System Validation @ 5800MHz Pin=100 mW/Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

Reference Value = 31.301 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 32.8 W/kg

**SAR(1 g) = 7.31 W/kg; SAR(10 g) = 2.02 W/kg**

Maximum value of SAR (measured) = 16.0 W/kg



**Plot 4**

Date/Time: 11/18/2016 9:18:08 PM

Test Laboratory: Microsoft EMC

**DUT: 1790; Type: USB Dongle; Serial: 40011393**

Communication System: UID 0, 802.11 2.4 GHz (0); Frequency: 2437 MHz

Medium parameters used:  $f = 2437$  MHz;  $\sigma = 1.949$  S/m;  $\epsilon_r = 50.753$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(7.21, 7.21, 7.21); Calibrated: 5/20/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 33.0$
- Electronics: DAE4 Sn1383; Calibrated: 5/18/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASYS2 52.8.8(1258); SEMCAD X 14.6.10(7164)

**Flat-Section MSL USB cable Powered/11/18/2016 g mode Vertical Front 5 mm 9 dBm Tune up 2437 MHz/Area Scan (81x61x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm

Reference Value = 8.739 V/m; Power Drift = 0.09 dB

**Fast SAR: SAR(1 g) = 0.104 W/kg; SAR(10 g) = 0.047 W/kg**

Maximum value of SAR (interpolated) = 0.155 W/kg

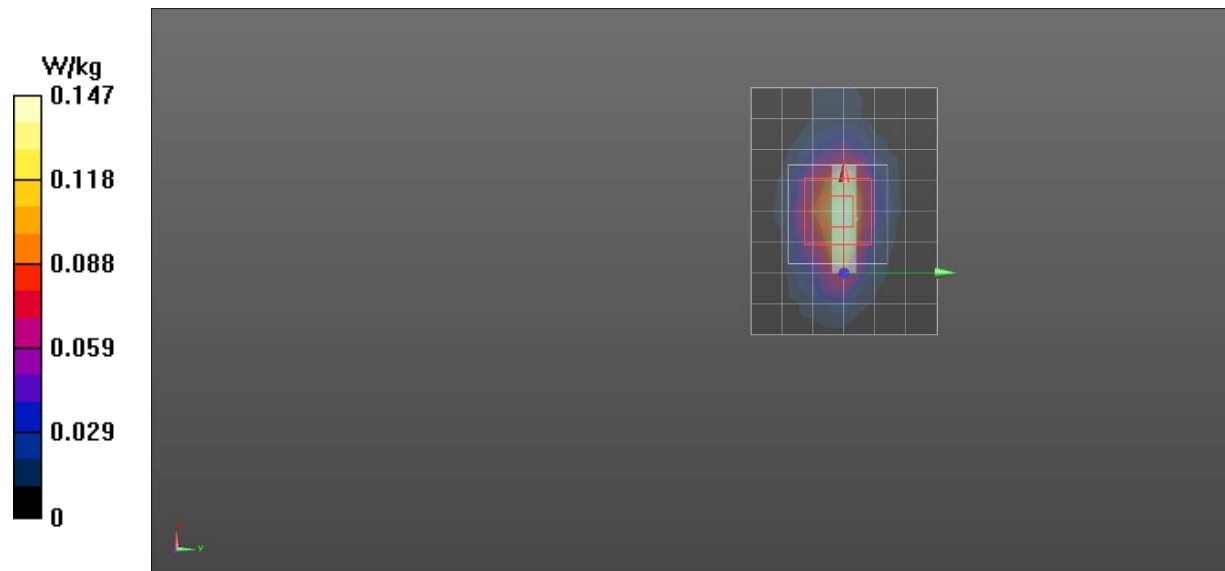
**Flat-Section MSL USB cable Powered/11/18/2016 g mode Vertical Front 5 mm 9 dBm Tune up 2437 MHz/Zoom Scan (9x9x9)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=4$ mm

Reference Value = 8.739 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.220 W/kg

**SAR(1 g) = 0.102 W/kg; SAR(10 g) = 0.045 W/kg**

Maximum value of SAR (measured) = 0.154 W/kg



## Plot 5

Date/Time: 11/18/2016 4:04:45 PM

Test Laboratory: Microsoft EMC

**DUT: 1790; Type: USB Dongle; Serial: 40011393**

Communication System: UID 0, CW (0); Frequency: 5220 MHz

Medium parameters used:  $f = 5220$  MHz;  $\sigma = 5.511$  S/m;  $\epsilon_r = 47.545$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(4.24, 4.24, 4.24); Calibrated: 5/20/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 5/18/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASYS2 52.8.8(1258); SEMCAD X 14.6.10(7164)

**Flat-Section MSL USB Port Powered/11/18/16 n mode Horizontal Up 5 mm 11 dBm Tune up 5220 MHz/Area Scan (81x101x1):** Interpolated grid:  $dx=0.8000$  mm,  $dy=0.8000$  mm

Reference Value = 13.842 V/m; Power Drift = 0.03 dB

**Fast SAR: SAR(1 g) = 0.458 W/kg; SAR(10 g) = 0.158 W/kg**

Maximum value of SAR (interpolated) = 0.897 W/kg

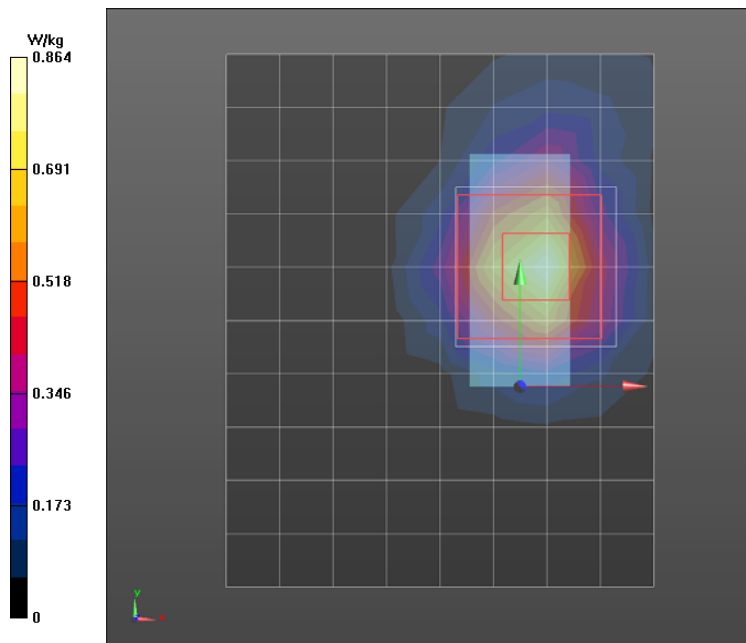
**Flat-Section MSL USB Port Powered/11/18/16 n mode Horizontal Up 5 mm 11 dBm Tune up 5220 MHz/Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

Reference Value = 13.842 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.56 W/kg

**SAR(1 g) = 0.446 W/kg; SAR(10 g) = 0.150 W/kg**

Maximum value of SAR (measured) = 0.864 W/kg



**Plot 6**

Date/Time: 11/18/2016 2:37:27 PM

Test Laboratory: Microsoft EMC

**DUT: 1790; Type: USB Dongle; Serial: 40011393**

Communication System: UID 0, CW (0); Frequency: 5805 MHz

Medium parameters used:  $f = 5805.05$  MHz;  $\sigma = 6.216$  S/m;  $\epsilon_r = 46.986$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3939; ConvF(3.77, 3.77, 3.77); Calibrated: 5/20/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 23.0$
- Electronics: DAE4 Sn1383; Calibrated: 5/18/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA001BB; Serial: TP:1218
- DASYS2 52.8.8(1258); SEMCAD X 14.6.10(7164)

**Flat-Section MSL USB Port Powered/11/18/16 n mode Vertical Up 5 mm 10.5 dBm Tune up 5805 MHz/Area Scan (81x101x1):** Interpolated grid:  $dx=0.8000$  mm,  $dy=0.8000$  mm

Reference Value = 13.064 V/m; Power Drift = 0.00 dB

**Fast SAR: SAR(1 g) = 0.396 W/kg; SAR(10 g) = 0.116 W/kg**

Maximum value of SAR (interpolated) = 0.855 W/kg

**Flat-Section MSL USB Port Powered/11/18/16 n mode Vertical Up 5 mm 10.5 dBm Tune up 5805 MHz/Zoom Scan (7x7x12)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=2$ mm

Reference Value = 13.064 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 2.27 W/kg

**SAR(1 g) = 0.389 W/kg; SAR(10 g) = 0.104 W/kg**

Maximum value of SAR (measured) = 0.880 W/kg

