APPENDIX A: SAR DISTRIBUTION COMPARISON FOR ACCURACY VERIFICATION

Date/Time: 10/5/2011 11:44:04 AM, Date/Time: 10/5/2011 11:48:50 AM

Test Laboratory: RIM Testing Services

DipoleValidation_835MHz_10_05_11_Amb_Tem_24.5_Liq_Tem_22.8C

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:446

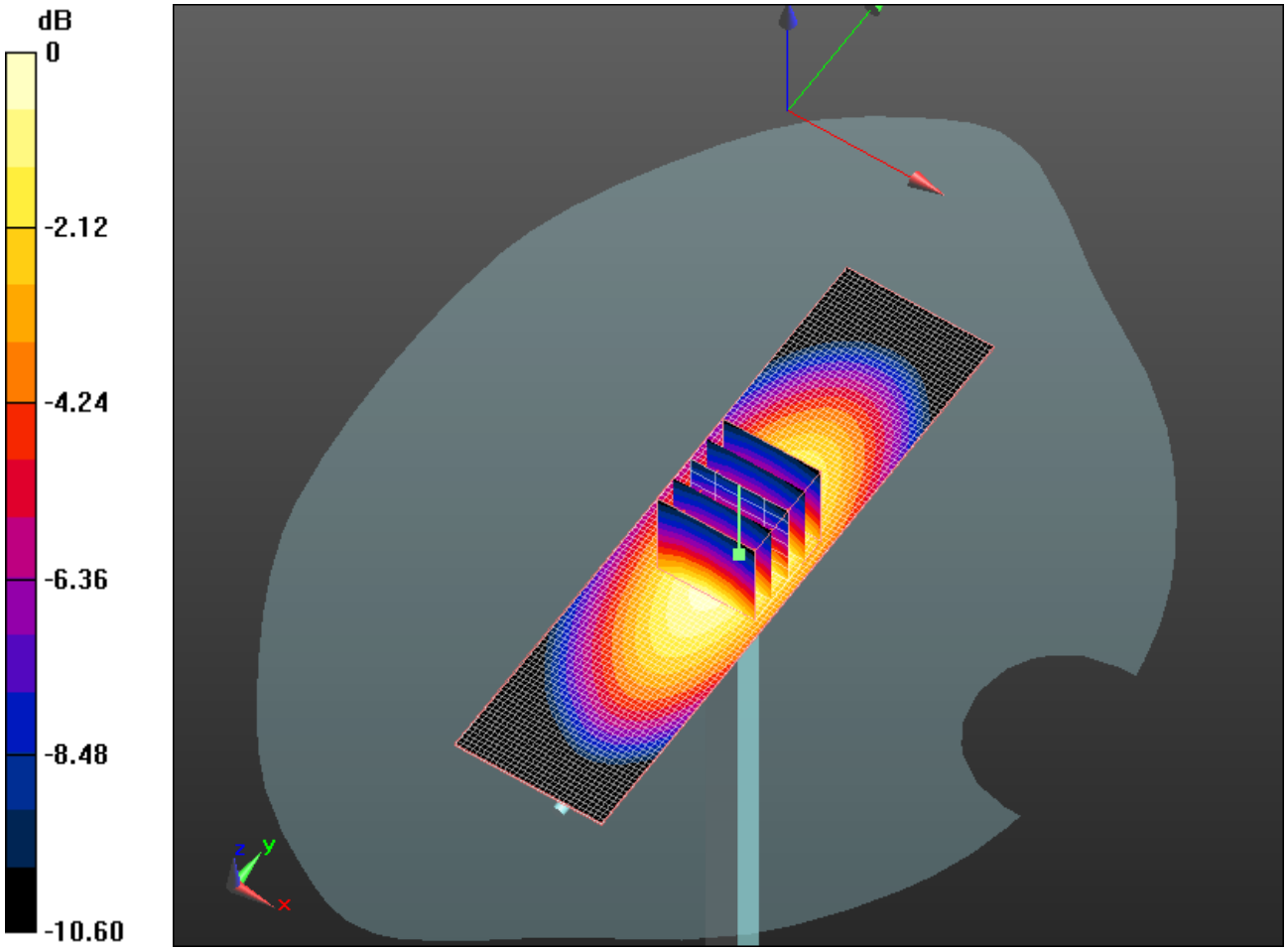
Communication System: CW; Frequency: 835 MHz
Medium parameters used: f = 835 MHz; σ = 0.872 mho/m; ε_r = 41.554; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.47, 6.47, 6.47); Calibrated: 1/13/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Configuration/d=15mm, Pin=1000mW/Area Scan (31x121x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 10.869 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 115.1 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 14.236 W/kg
SAR(1 g) = 9.39 mW/g; SAR(10 g) = 6.11 mW/g
Maximum value of SAR (measured) = 11.028 mW/g



0 dB = 11.030mW/g

Date/Time: 10/3/2011 11:24:53 AM, Date/Time: 10/3/2011 11:27:26 AM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_10_03_11_Amb_Tem_23.3_Liq_Tem_22.5C

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:545

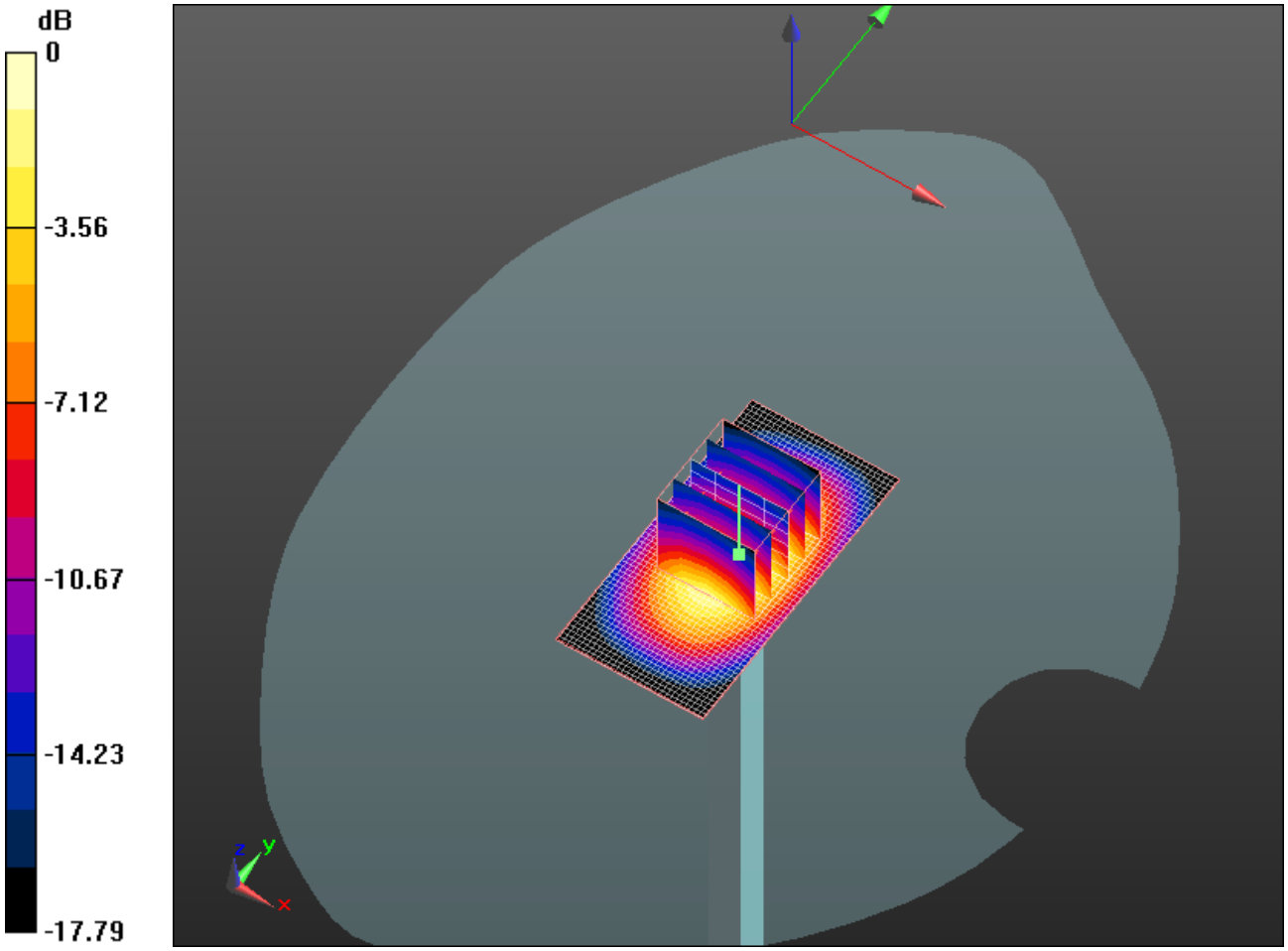
Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.388 mho/m; ε_r = 38.095; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.26, 5.26, 5.26); Calibrated: 1/13/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Configuration/d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 50.830 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 196.8 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 74.024 W/kg
SAR(1 g) = 40 mW/g; SAR(10 g) = 20.7 mW/g
Maximum value of SAR (measured) = 51.022 mW/g



0 dB = 51.020mW/g

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Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_10_17_11_Amb_Tem_24.0_Liq_Tem_22.6C

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:545

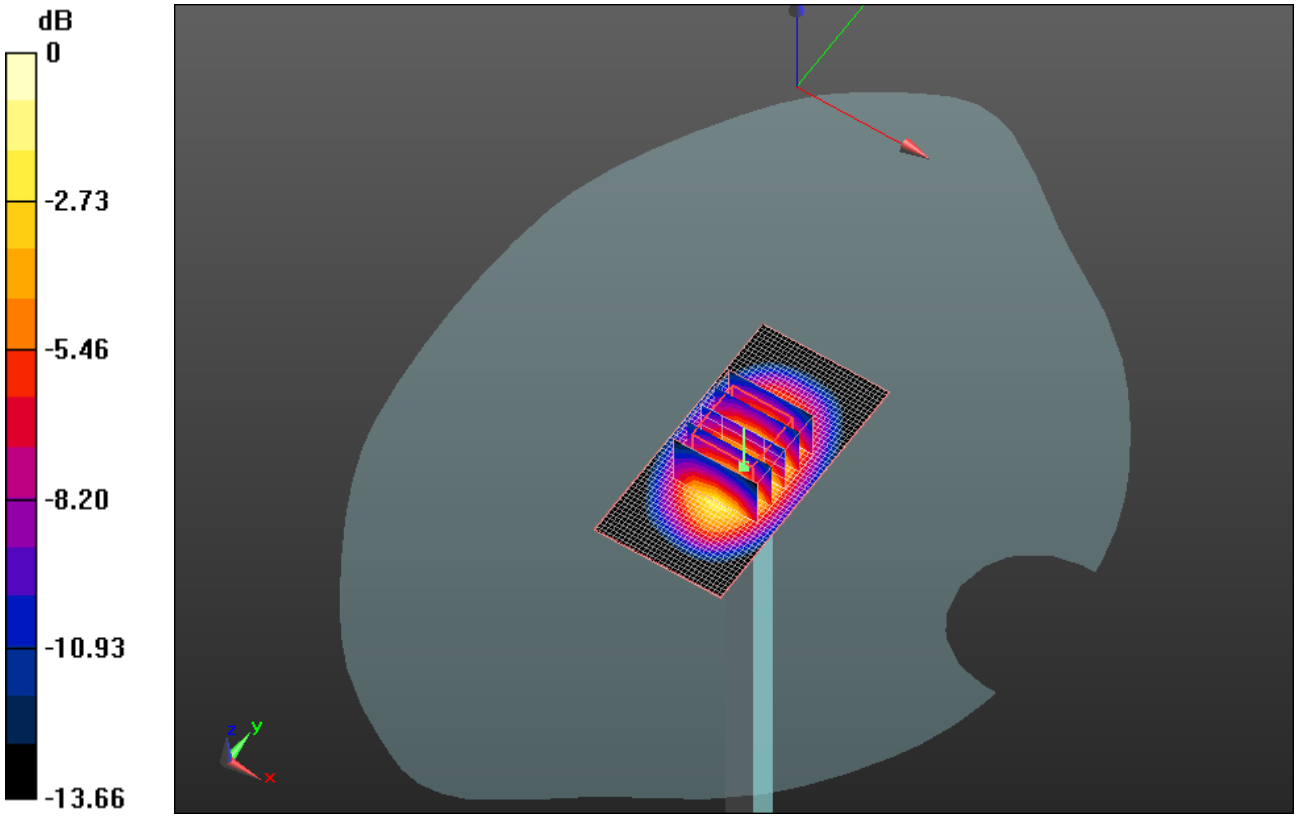
Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.384 mho/m; ε_r = 38.079; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.26, 5.26, 5.26); Calibrated: 1/13/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Configuration/d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 50.451 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) (5x5x5)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 194.9 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 71.998 W/kg
SAR(1 g) = 39.9 mW/g; SAR(10 g) = 20.7 mW/g
Maximum value of SAR (measured) = 50.642 mW/g



0 dB = 50.640mW/g

Date/Time: 10/25/2011 6:51:23 PM, Date/Time: 10/25/2011 6:53:53 PM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_10_25_11_Amb_Tem_23.1_Liq_Tem_22.6C

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:545

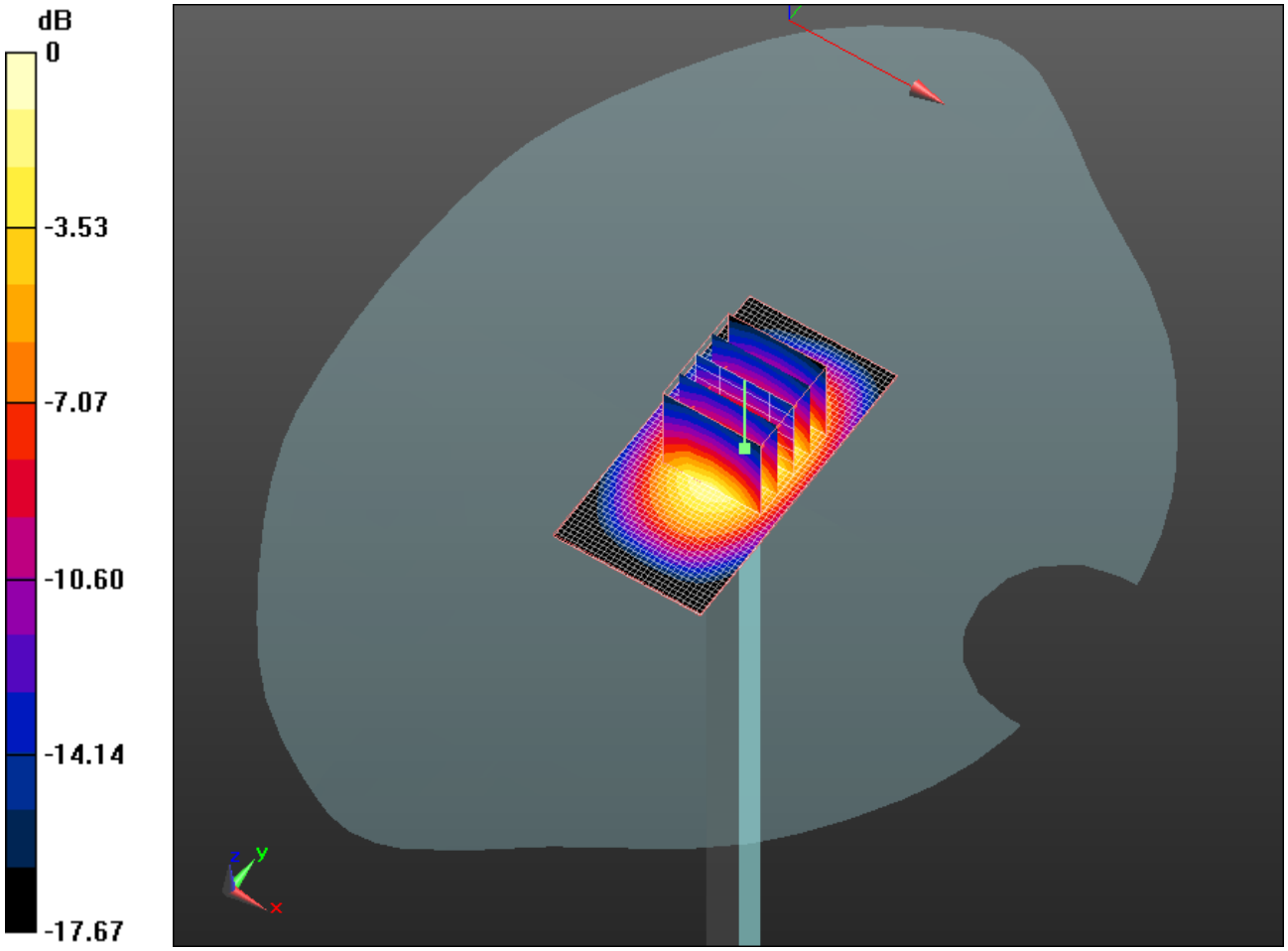
Communication System: CW; Frequency: 1900 MHz
Medium parameters used: f = 1900 MHz; σ = 1.409 mho/m; ε_r = 38.241; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.26, 5.26, 5.26); Calibrated: 1/13/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Configuration/d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 52.226 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 197.5 V/m; Power Drift = -0.0032 dB
Peak SAR (extrapolated) = 75.073 W/kg
SAR(1 g) = 40.9 mW/g; SAR(10 g) = 21.3 mW/g
Maximum value of SAR (measured) = 52.062 mW/g



0 dB = 52.060mW/g

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Test Laboratory: RIM Testing Services

DipoleValidation_2450MHz_10_11_11_Amb_Tem_22.9_Liq_Tem_22.4C

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:747

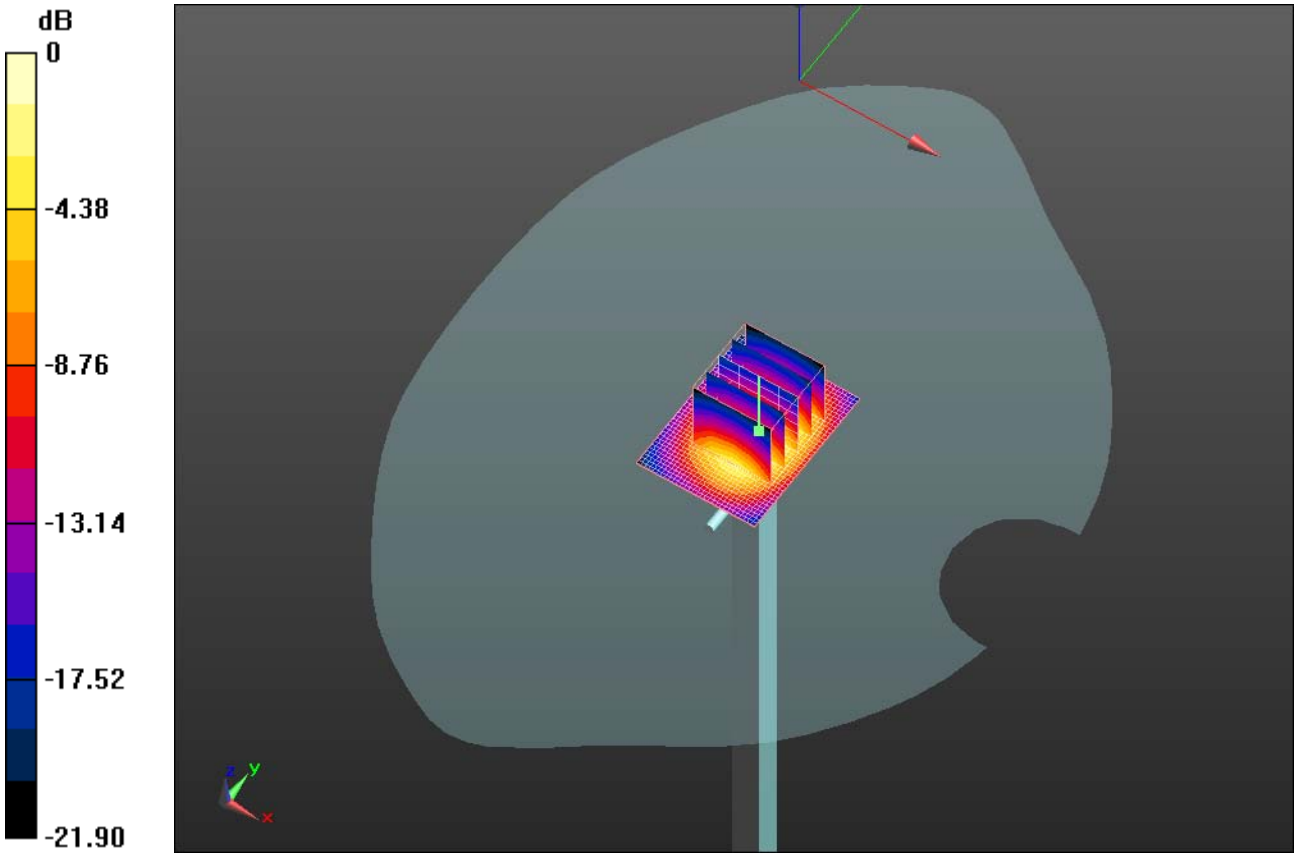
Communication System: CW; Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 1.886 mho/m; ε_r = 39.488; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.6, 4.6, 4.6); Calibrated: 1/13/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

Configuration/d=15mm, Pin=1000mW/Area Scan (31x41x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 75.868 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 208.5 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 116.5 W/kg
SAR(1 g) = 56.8 mW/g; SAR(10 g) = 26.5 mW/g
Maximum value of SAR (measured) = 74.979 mW/g



0 dB = 74.980mW/g

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Test Laboratory: RIM Testing Services

Dipole Validation_5200 MHz_09_27_11_Amb_Tem_22.8_ Liq_Tem_20.3C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1033

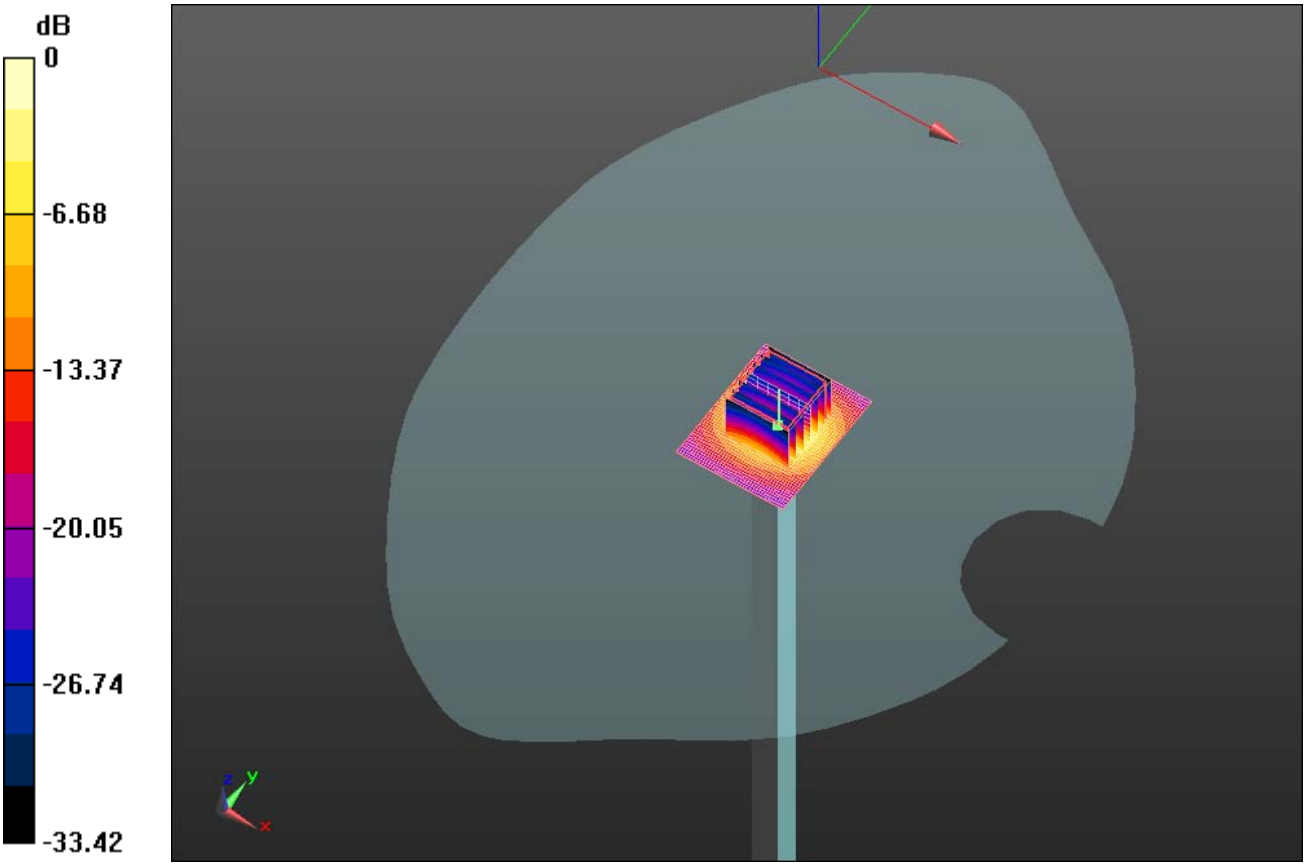
Communication System: CW; Frequency: 5200 MHz
Medium parameters used: f = 5200 MHz; σ = 4.944 mho/m; ε_r = 35.177; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3592; ConvF(4.5, 4.5, 4.5); Calibrated: 11/18/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

System Performance Check with D5GHzV2 Dipole/d=10mm, Pin=1000 mW, f=5200 MHz/Area Scan (41x51x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 186.9 mW/g

System Performance Check with D5GHzV2 Dipole/d=10mm, Pin=1000 mW, f=5200 MHz/Zoom Scan -Ext(24x24x20), Step (4x4x2.5mm), dist=2mm (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 198.5 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 312.4 W/kg
SAR(1 g) = 81.5 mW/g; SAR(10 g) = 23.4 mW/g
Maximum value of SAR (measured) = 170.8 mW/g



0 dB = 170.8mW/g

Date/Time: 9/27/2011 6:58:17 PM, Date/Time: 9/27/2011 7:07:07 PM

Test Laboratory: RIM Testing Services

Dipole Validation_5500 MHz_09_27_11_Amb_Tem_22.8_ Liq_Tem_20.3C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1033

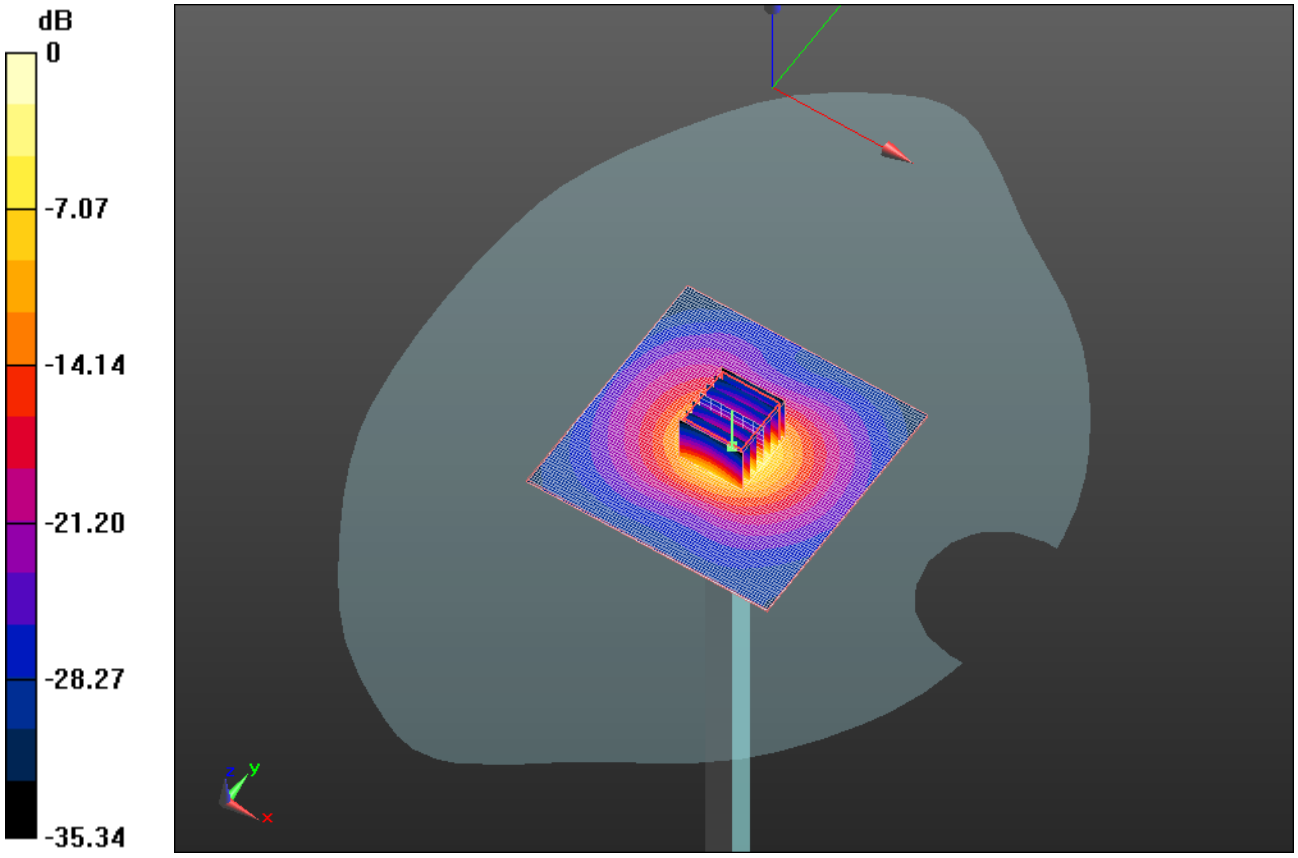
Communication System: CW-5GHz; Frequency: 5500 MHz
Medium parameters used: f = 5500 MHz; σ = 5.139 mho/m; ε_r = 33.685; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3592; ConvF(4.25, 4.25, 4.25); Calibrated: 11/18/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

System Performance Check with D5GHzV2 Dipole/d=10mm, Pin=1000mW, f=5500 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 168.2 mW/g

System Performance Check with D5GHzV2 Dipole/d=10mm, Pin=1000mW, f=5500 MHz/Zoom Scan - Ext(24x24x20), Step (4x4x2.5mm), dist=2mm (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 197.2 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 328.0 W/kg
SAR(1 g) = 80.6 mW/g; SAR(10 g) = 23 mW/g
Maximum value of SAR (measured) = 173.5 mW/g



0 dB = 173.5mW/g

Date/Time: 9/27/2011 7:31:11 PM, Date/Time: 9/27/2011 7:40:00 PM

Test Laboratory: RIM Testing Services

Dipole Validation_5800 MHz_09_27_11_Amb_Tem_22.8_ Liq_Tem_20.3C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1033

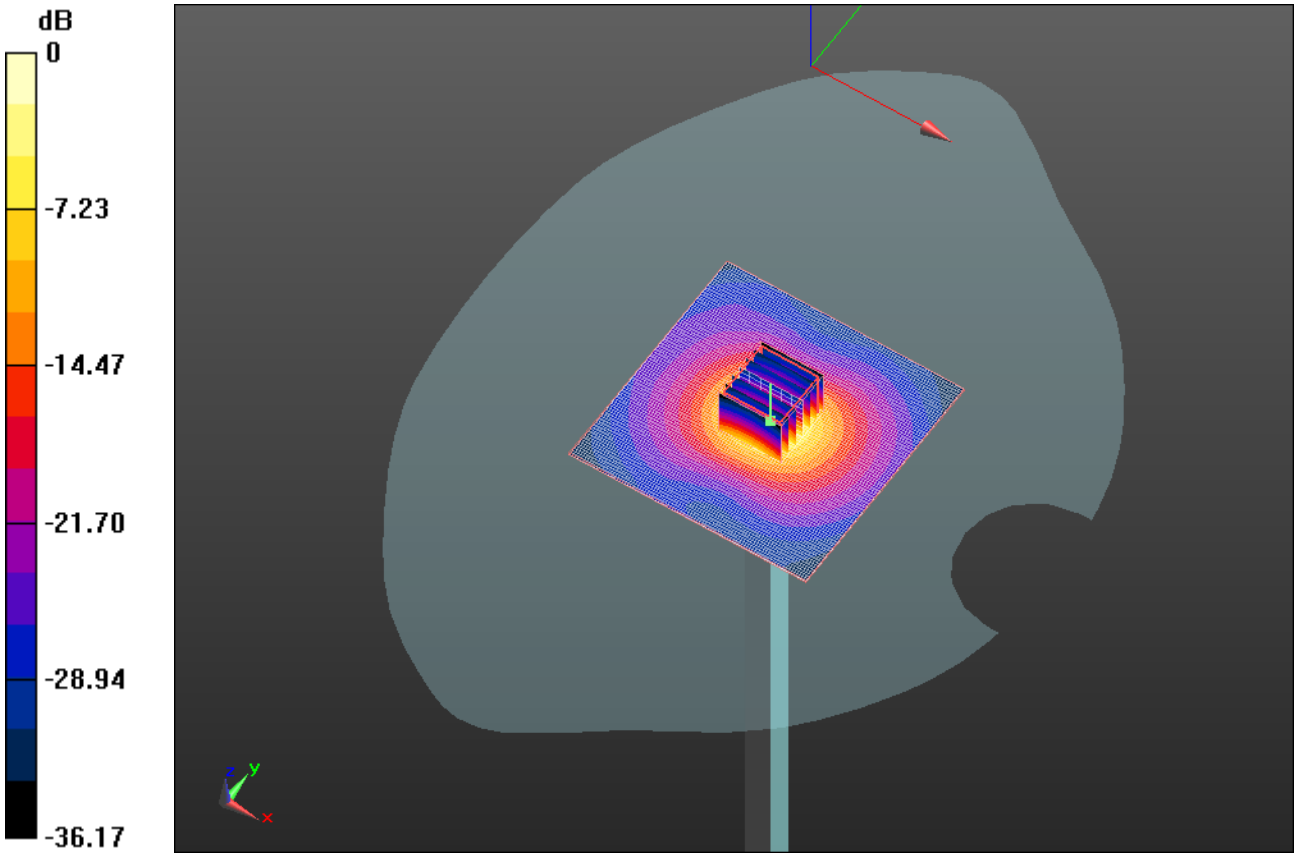
Communication System: CW-5GHz; Frequency: 5800 MHz
Medium parameters used: f = 5800 MHz; σ = 5.544 mho/m; ε_r = 33.981; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3592; ConvF(3.98, 3.98, 3.98); Calibrated: 11/18/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.4 (2829)

System Performance Check with D5GHzV2 Dipole/d=10mm, Pin=1000mW, f=5800 MHz/Area Scan (91x91x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (interpolated) = 166.1 mW/g

System Performance Check with D5GHzV2 Dipole/d=10mm, Pin=1000mW, f=5800 MHz/Zoom Scan -Ext(24x24x20), Step (4x4x2.5mm), dist=2mm (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm
Reference Value = 188.8 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 322.9 W/kg
SAR(1 g) = 78.6 mW/g; SAR(10 g) = 22.3 mW/g
Maximum value of SAR (measured) = 168.6 mW/g



0 dB = 168.6mW/g