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APPENDIX A: SAR DISTRIBUTION COMPARISON FOR ACCURACY VERIFICATION

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Date/Time: 5/10/2011 1:36:37 AM, Date/Time: 5/10/2011 1:41:27 AM

Test Laboratory: RIM Testing Services

DipoleValidation_835MHz_Amb_Tem_23.4_Liq_Tem_22.4C_05_10_11

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

Communication System: CW; Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.922 \text{ mho/m}$; $\epsilon_r = 42.279$; $\rho = 1000 \text{ kg/m}^3$

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: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/21/2011
- 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) = 10.770 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (7x7x7)/Cube

0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

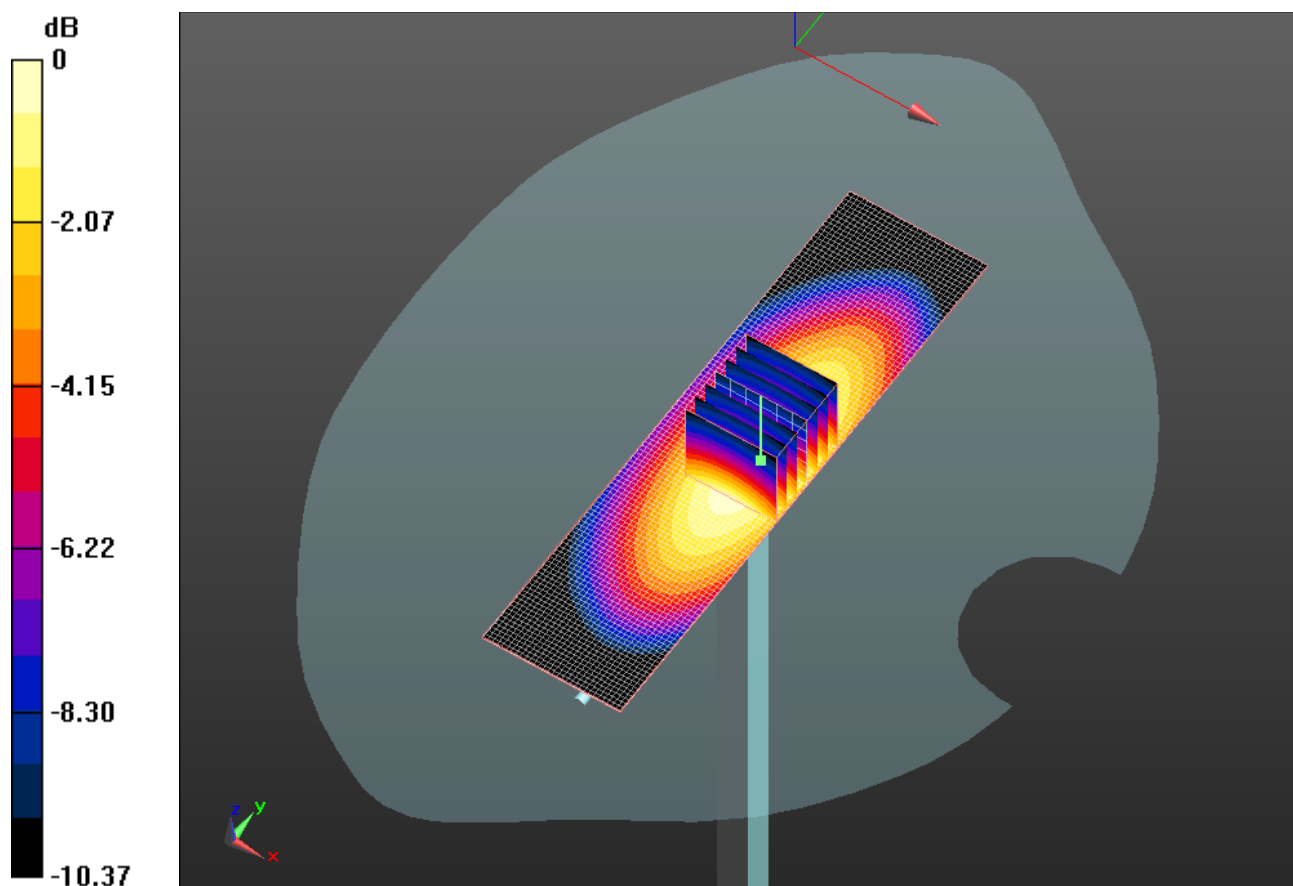
Reference Value = 106.3 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 14.698 W/kg

SAR(1 g) = 9.81 mW/g; SAR(10 g) = 6.42 mW/g

Maximum value of SAR (measured) = 10.562 mW/g

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0 dB = 10.560mW/g

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Date/Time: 6/6/2011 12:45:15 PM, Date/Time: 6/6/2011 12:50:01 PM

Test Laboratory: RIM Testing Services

DipoleValidation_835MHz_Amb_Tem_23.0_Liq_Tem_22.5C_06_06_11

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

Communication System: CW; Frequency: 835 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.894 \text{ mho/m}$; $\epsilon_r = 40.155$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

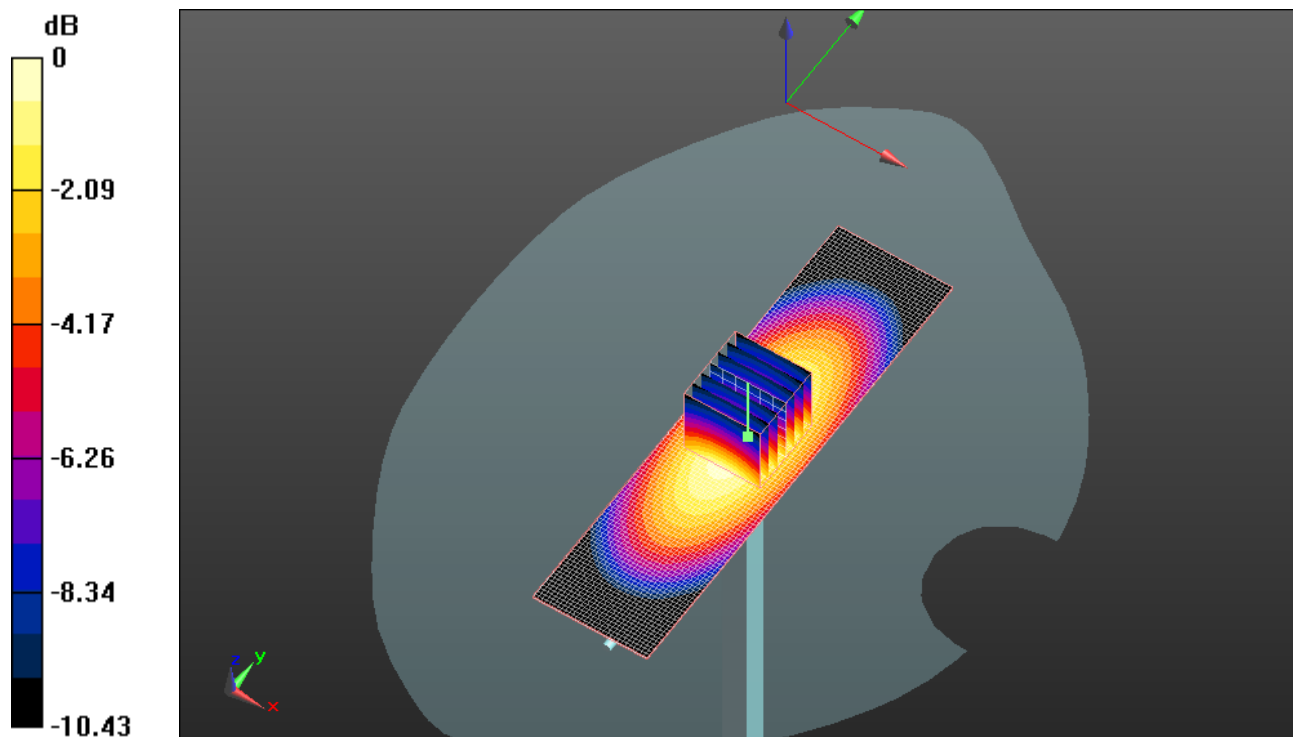
DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.47, 6.47, 6.47); Calibrated: 1/13/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASYS2, 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) = 9.820 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 107.4 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 13.991 W/kg
SAR(1 g) = 9.28 mW/g; SAR(10 g) = 6.05 mW/g
Maximum value of SAR (measured) = 10.043 mW/g

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0 dB = 10.040mW/g

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Date/Time: 4/13/2011 3:11:32 PM, Date/Time: 4/13/2011 3:14:07 PM

Test Laboratory: RIM Testing Services

DipoleValidation_1800MHz_Amb_Tem_24.2_Liq_Tem_22.5C

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d020

Communication System: CW; Frequency: 1800 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.382 \text{ mho/m}$; $\epsilon_r = 38.11$; $\rho = 1000 \text{ kg/m}^3$

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: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/21/2011
- 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) = 41.635 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (7x7x7)/Cube

0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

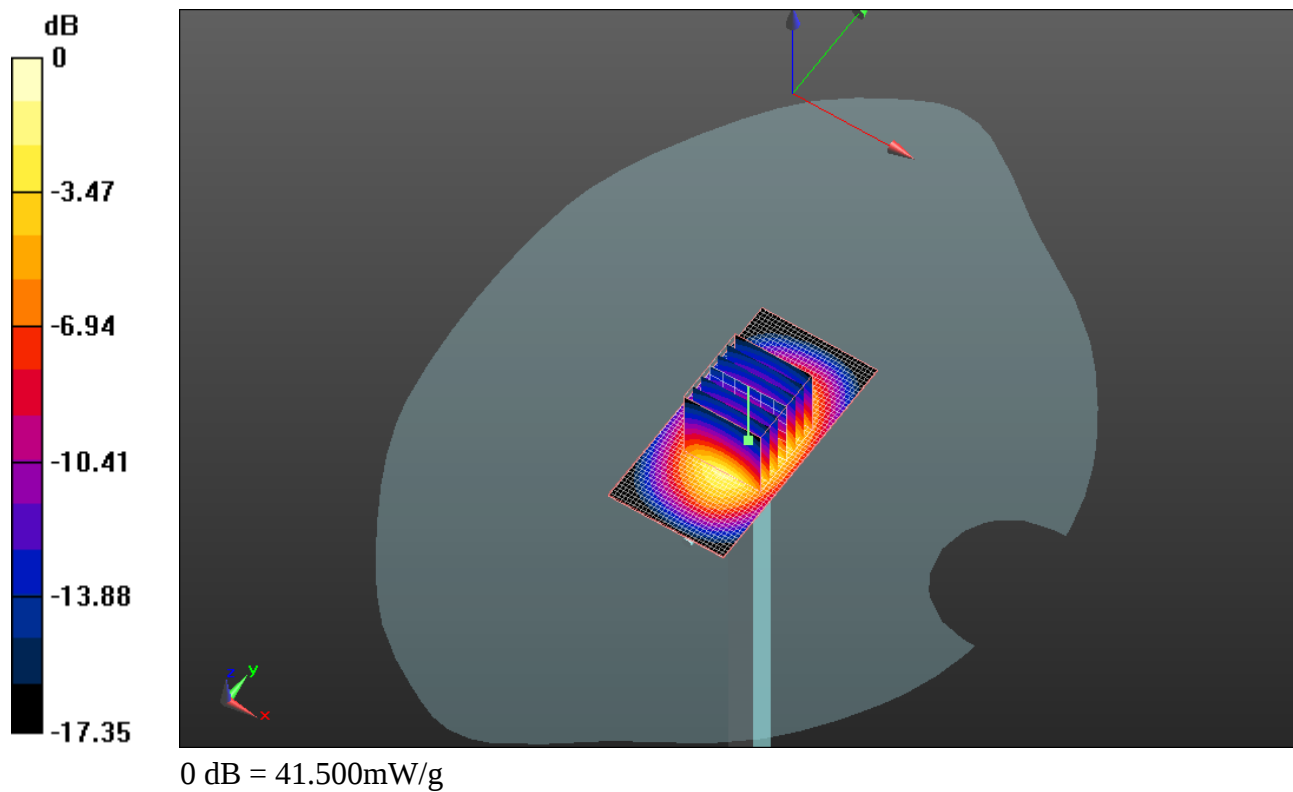
Reference Value = 176.0 V/m; Power Drift = 0.0026 dB

Peak SAR (extrapolated) = 68.469 W/kg

SAR(1 g) = 36.8 mW/g; SAR(10 g) = 19.2 mW/g

Maximum value of SAR (measured) = 41.499 mW/g

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Date/Time: 5/3/2011 9:59:00 AM, Date/Time: 5/3/2011 10:01:36 AM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_Amb_Tem_23.0_Liq_Tem_22.0_05_03_11

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

Communication System: CW; Frequency: 1900 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.354 \text{ mho/m}$; $\epsilon_r = 38.058$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

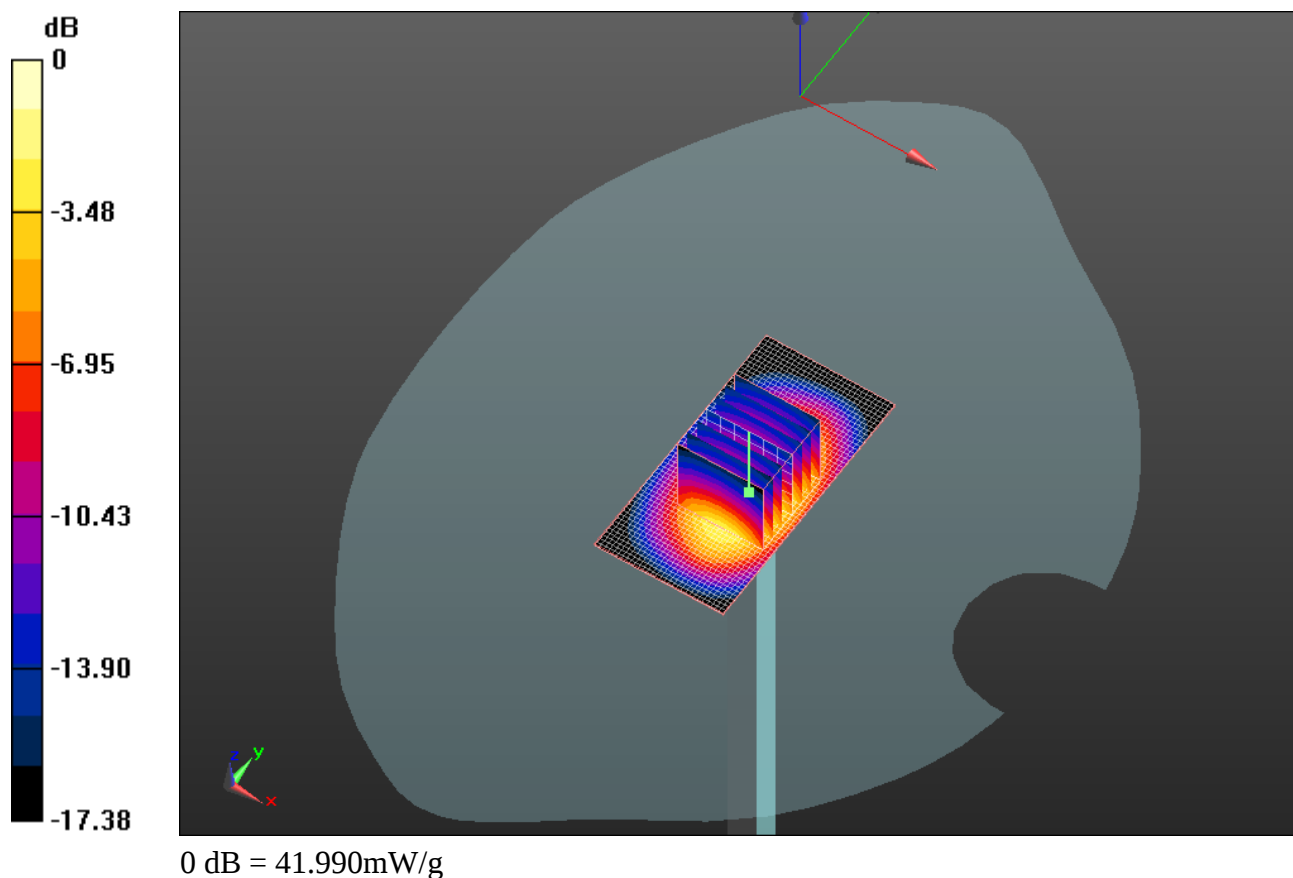
DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.26, 5.26, 5.26); Calibrated: 1/13/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/21/2011
- 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) = 42.866 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 177.3 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 67.802 W/kg
SAR(1 g) = 37.3 mW/g; SAR(10 g) = 19.6 mW/g
Maximum value of SAR (measured) = 41.985 mW/g

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Date/Time: 6/8/2011 8:25:06 PM, Date/Time: 6/8/2011 8:27:42 PM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_Amb_Tem_23.7_Liq_Tem_22.9_06_08_11

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

Communication System: CW; Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.373$ mho/m; $\epsilon_r = 39.77$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.26, 5.26, 5.26); Calibrated: 1/13/2011
- Sensor-Surface: 4mm (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) = 44.456 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (7x7x7)/Cube

0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

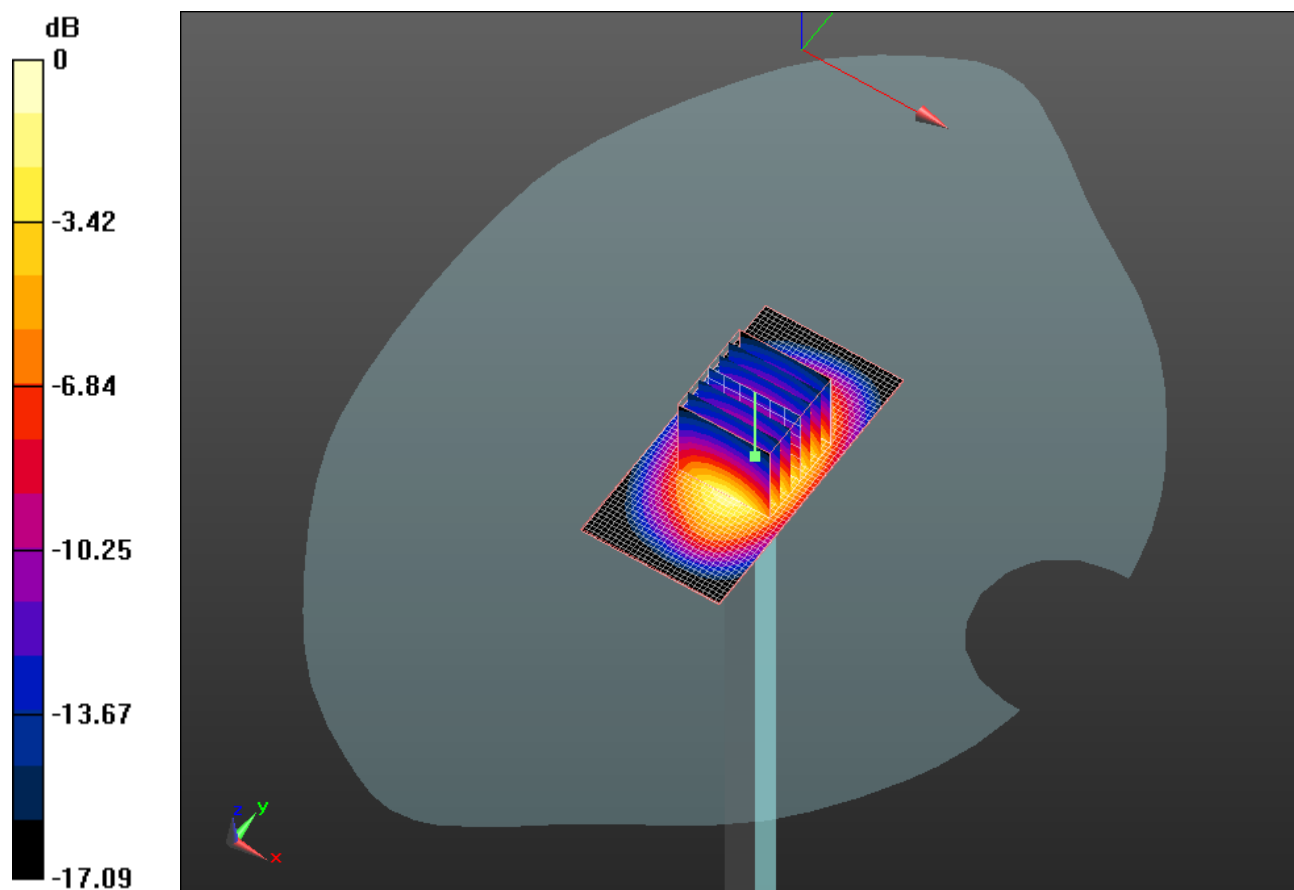
Reference Value = 180.3 V/m; Power Drift = 0.0046 dB

Peak SAR (extrapolated) = 70.827 W/kg

SAR(1 g) = 38.9 mW/g; SAR(10 g) = 20.4 mW/g

Maximum value of SAR (measured) = 43.683 mW/g

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0 dB = 43.680mW/g

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Date/Time: 4/26/2011 11:31:28 PM, Date/Time: 4/26/2011 11:33:21 PM

Test Laboratory: RIM Testing Services

DipoleValidation_2450MHz_Amb_Tem_23.5_Liq_Tem_22.3C

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

Communication System: CW; Frequency: 2450 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.886 \text{ mho/m}$; $\epsilon_r = 39.002$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

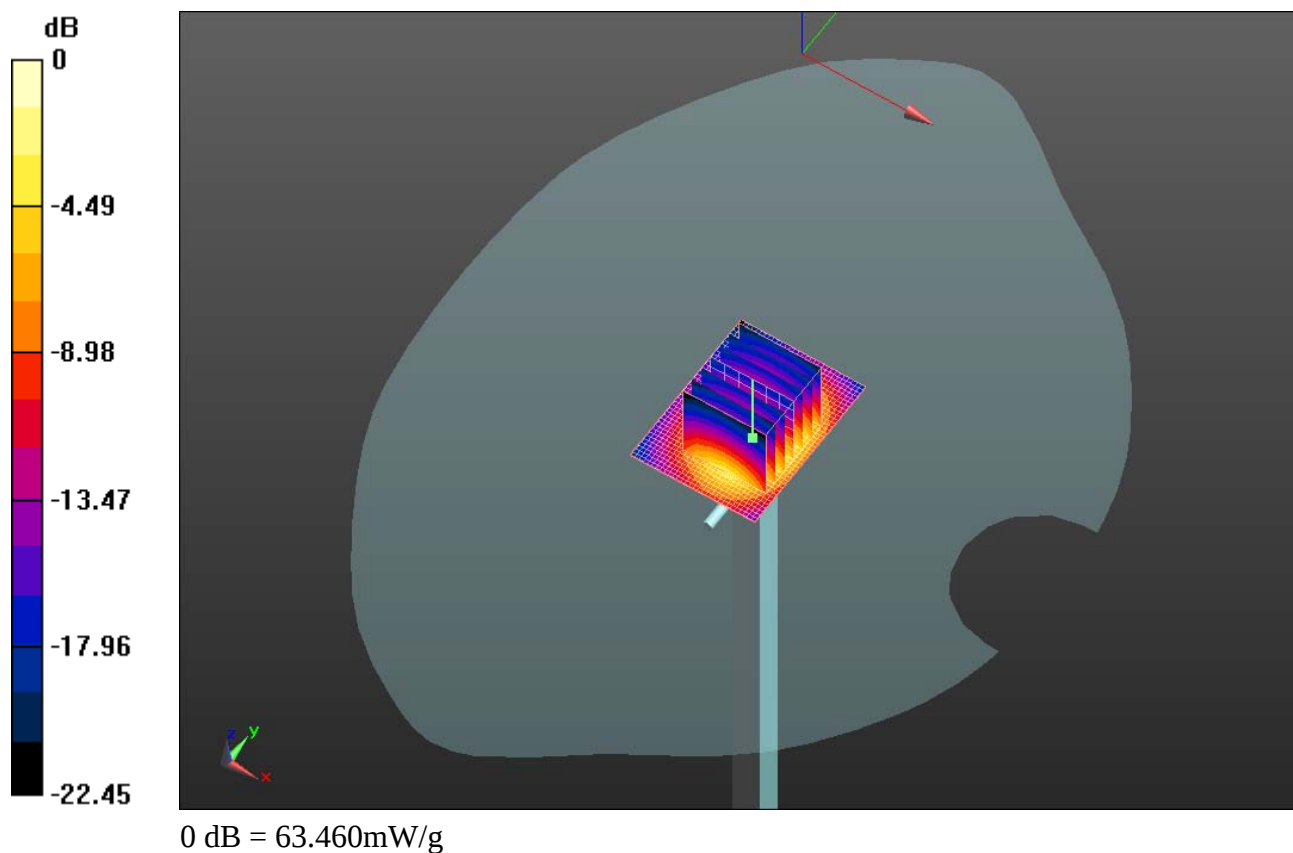
DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.6, 4.6, 4.6); Calibrated: 1/13/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/21/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASYS2, 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) = 65.108 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 180.5 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 115.1 W/kg
SAR(1 g) = 56 mW/g; SAR(10 g) = 25.9 mW/g
Maximum value of SAR (measured) = 63.463 mW/g

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Date/Time: 6/15/2011 7:18:50 PM, Date/Time: 6/15/2011 7:20:41 PM

Test Laboratory: RIM Testing Services

DipoleValidation_2450MHz_Amb_Tem_23.4_Liq_Tem_22.0C_06_15_11

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

Communication System: CW; Frequency: 2450 MHz; Communication System PAR: 0 dB
Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.879 \text{ mho/m}$; $\epsilon_r = 40.287$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

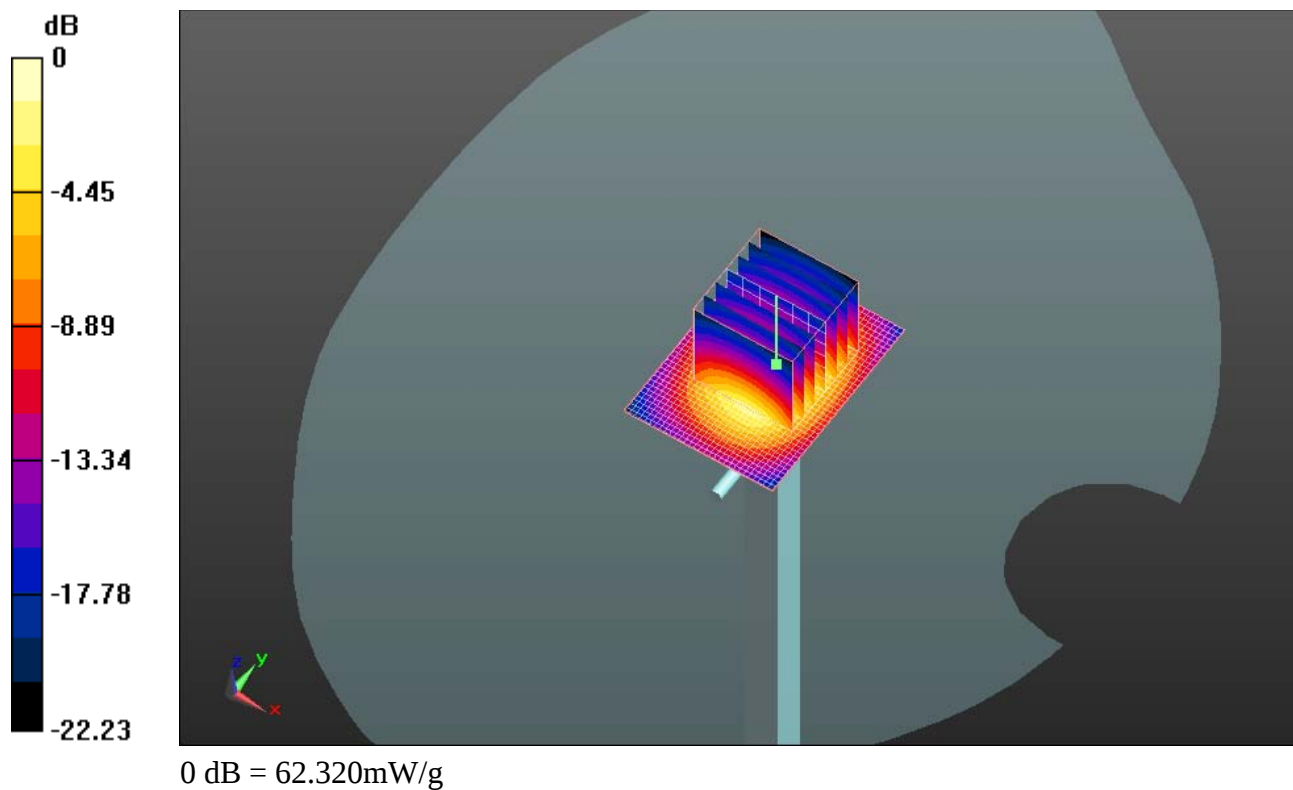
DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.6, 4.6, 4.6); Calibrated: 1/13/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASYS2, 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) = 65.541 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 184.2 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 114.6 W/kg
SAR(1 g) = 54.6 mW/g; SAR(10 g) = 25.3 mW/g
Maximum value of SAR (measured) = 62.317 mW/g

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Date/Time: 7/4/2011 10:50:11 PM, Date/Time: 7/4/2011 10:52:46 PM

Test Laboratory: RIM Testing Services

DipoleValidation_1800MHz_Amb_Tem_23.8_Liq_Tem_22.8C_07_04_11

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d020

Communication System: CW; Frequency: 1800 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.424 \text{ mho/m}$; $\epsilon_r = 40.62$; $\rho = 1000 \text{ kg/m}^3$

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: 4mm (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) = 42.994 mW/g

Configuration/d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (7x7x7)/Cube

0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

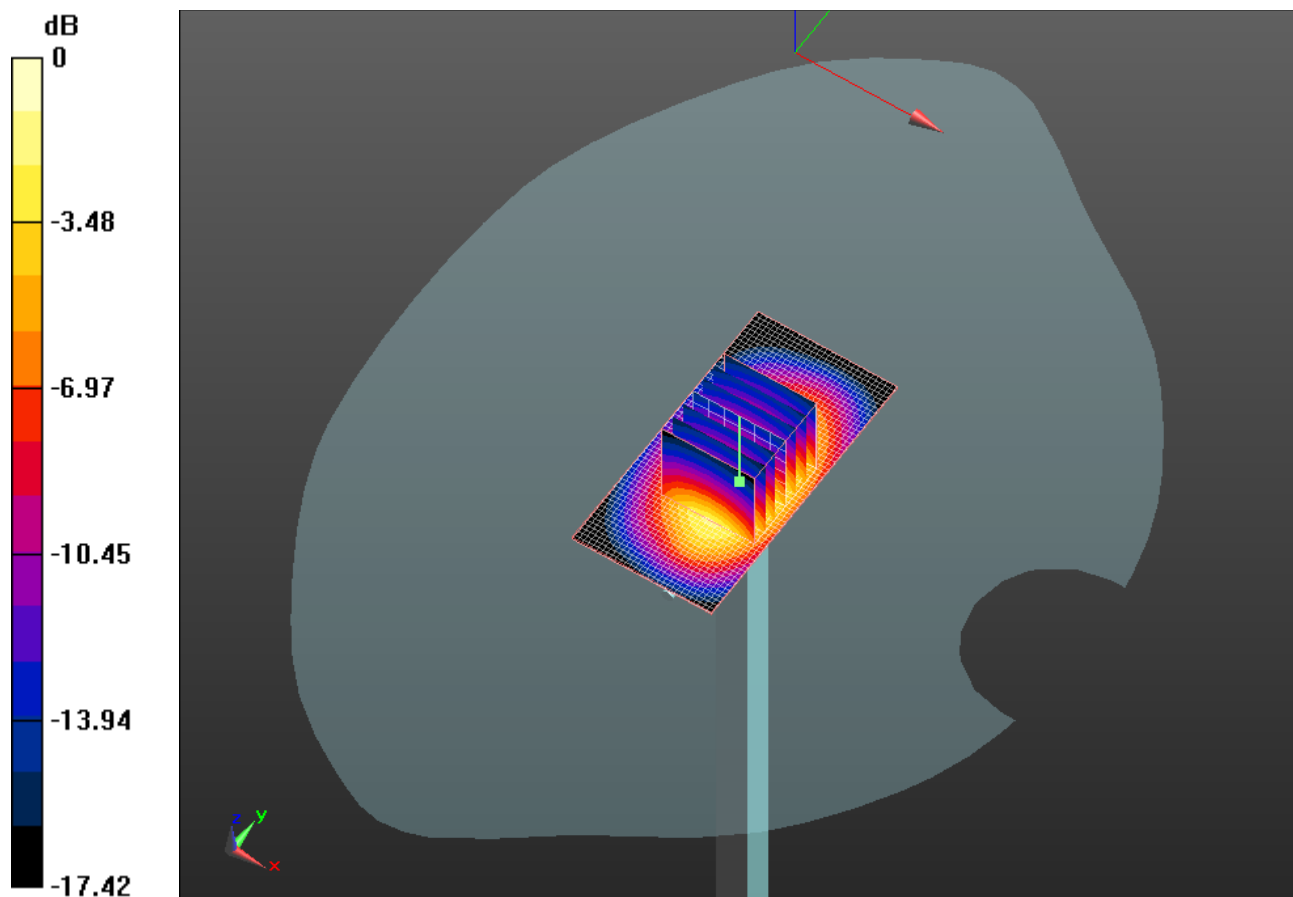
Reference Value = 173.1 V/m; Power Drift = -0.0089 dB

Peak SAR (extrapolated) = 70.153 W/kg

SAR(1 g) = 38 mW/g; SAR(10 g) = 19.9 mW/g

Maximum value of SAR (measured) = 42.745 mW/g

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0 dB = 42.740mW/g