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APPENDIX A: SAR DISTRIBUTION COMPARISON FOR ACCURACY VERIFICATION

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Date/Time: 5/26/2011 6:37:25 PM, Date/Time: 5/26/2011 6:42:13 PM

Test Laboratory: RIM Testing Services

DipoleValidation_835MHz_Amb_Tem_23.8_Liq_Tem_22.3C_05_26_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: $f = 835 \text{ MHz}$; $\sigma = 0.874 \text{ mho/m}$; $\epsilon_r = 39.538$; $\rho = 1000 \text{ kg/m}^3$

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 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) = 10.038 mW/g

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

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

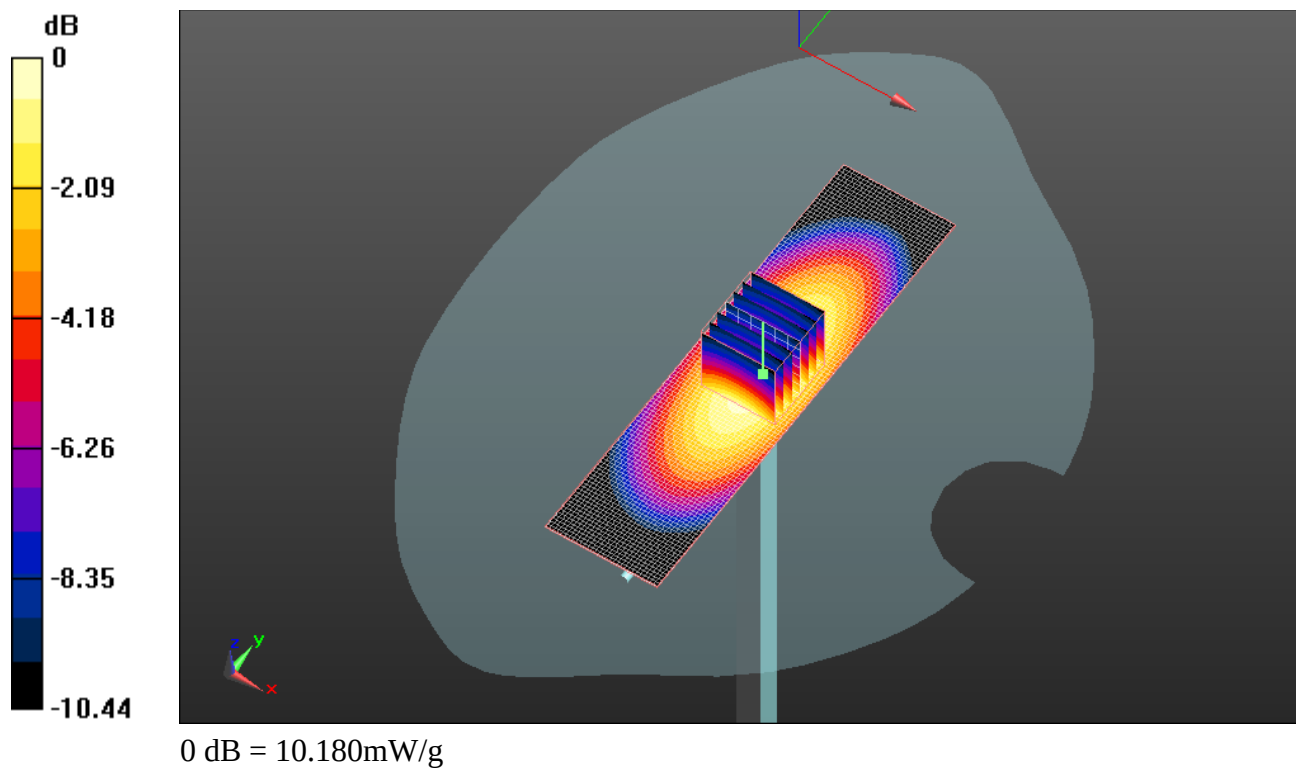
Reference Value = 108.8 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 14.146 W/kg

SAR(1 g) = 9.41 mW/g; SAR(10 g) = 6.16 mW/g

Maximum value of SAR (measured) = 10.176 mW/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)

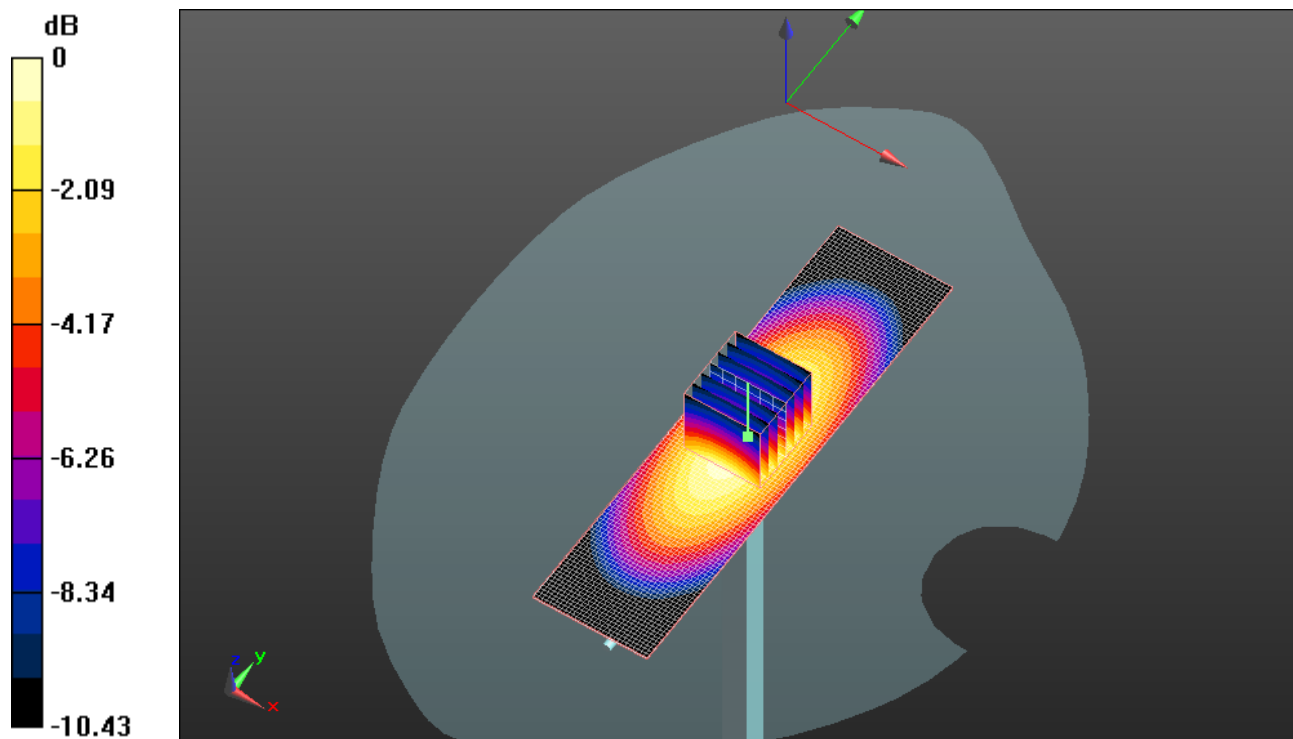
DASY5 Configuration:

- 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: 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: 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) = 42.866 mW/g

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

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

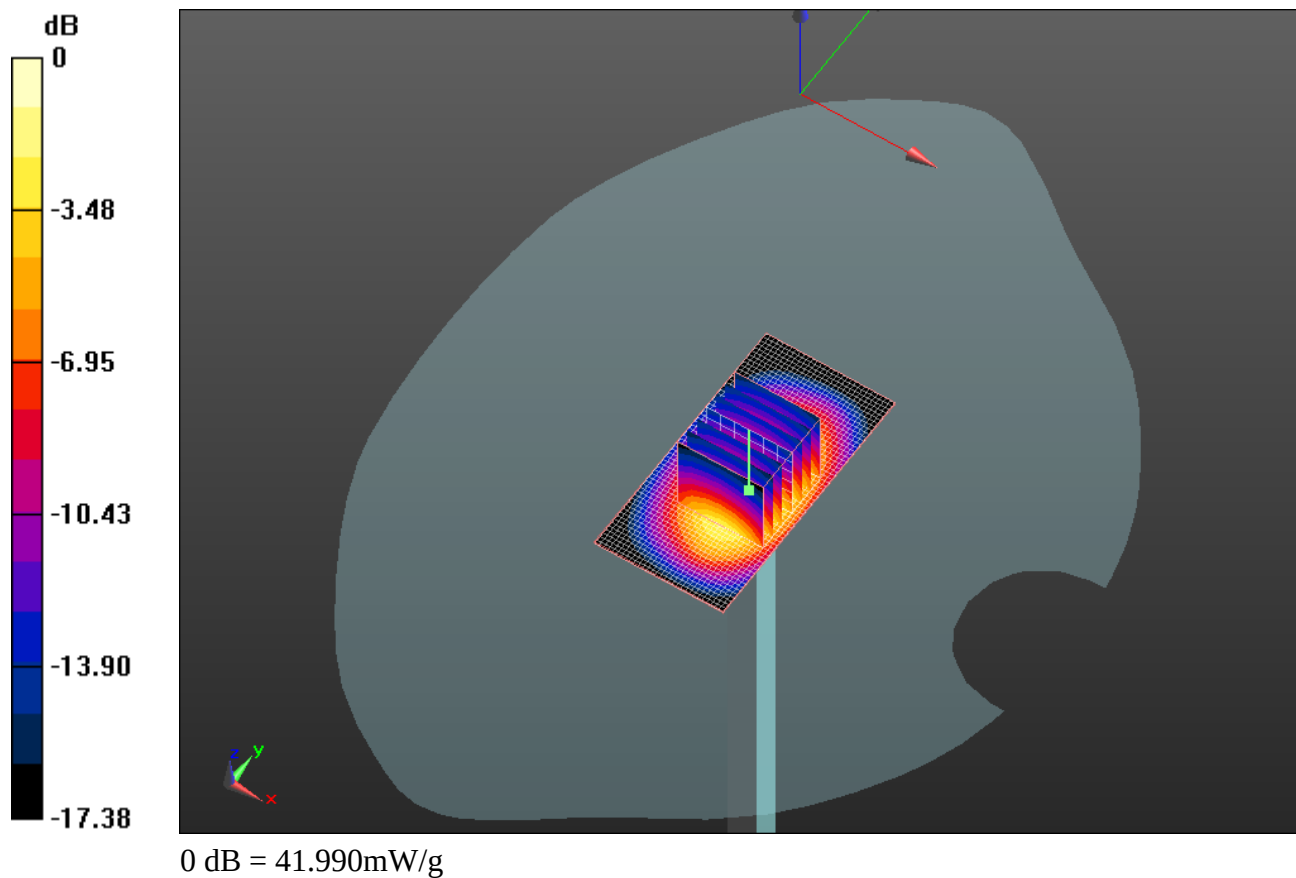
Reference Value = 177.3 V/m; Power Drift = -0.04 dB

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: $f = 1900 \text{ MHz}$; $\sigma = 1.373 \text{ mho/m}$; $\epsilon_r = 39.77$; $\rho = 1000 \text{ kg/m}^3$

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) = 44.456 mW/g

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

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

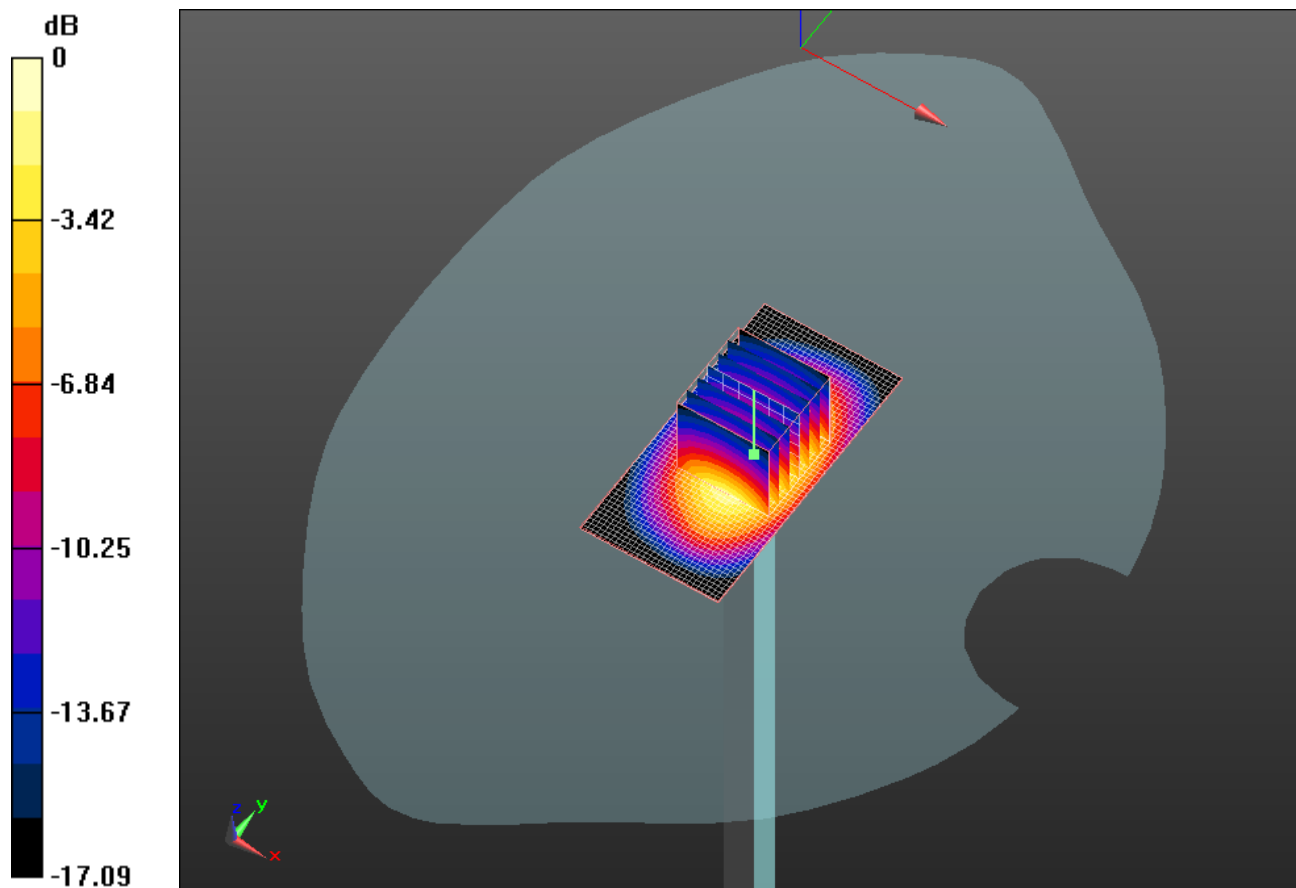
Reference Value = 180.3 V/m; Power Drift = 0.0046 dB

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

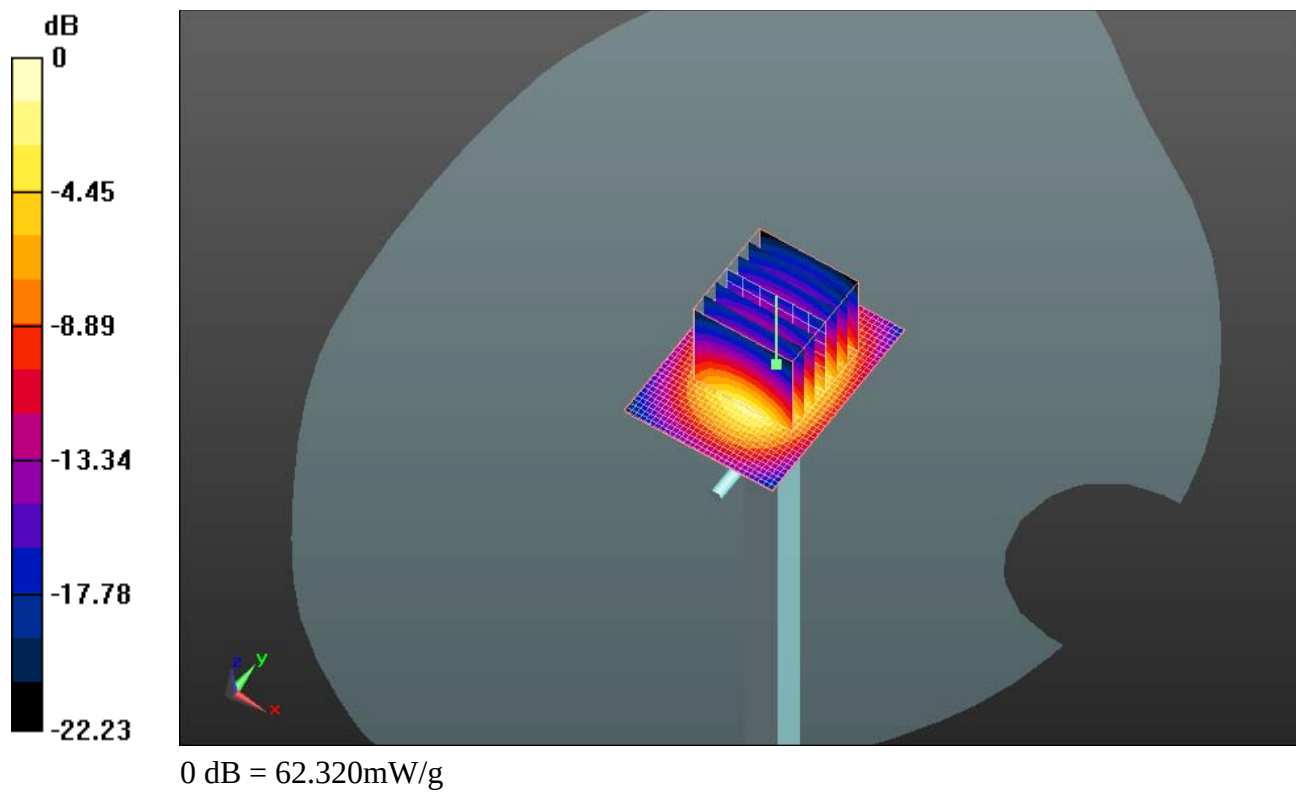
DASY5 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.6, 4.6, 4.6); Calibrated: 1/13/2011
- Sensor-Surface: 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 (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: 6/24/2011 6:28:43 PM, Date/Time: 6/24/2011 6:30:34 PM

Test Laboratory: RIM Testing Services

DipoleValidation_2450MHz_Amb_Tem_23.5_Liq_Tem_22.4C_06_23_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: $f = 2450 \text{ MHz}$; $\sigma = 1.874 \text{ mho/m}$; $\epsilon_r = 37.722$; $\rho = 1000 \text{ kg/m}^3$

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: 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) = 62.903 mW/g

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

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

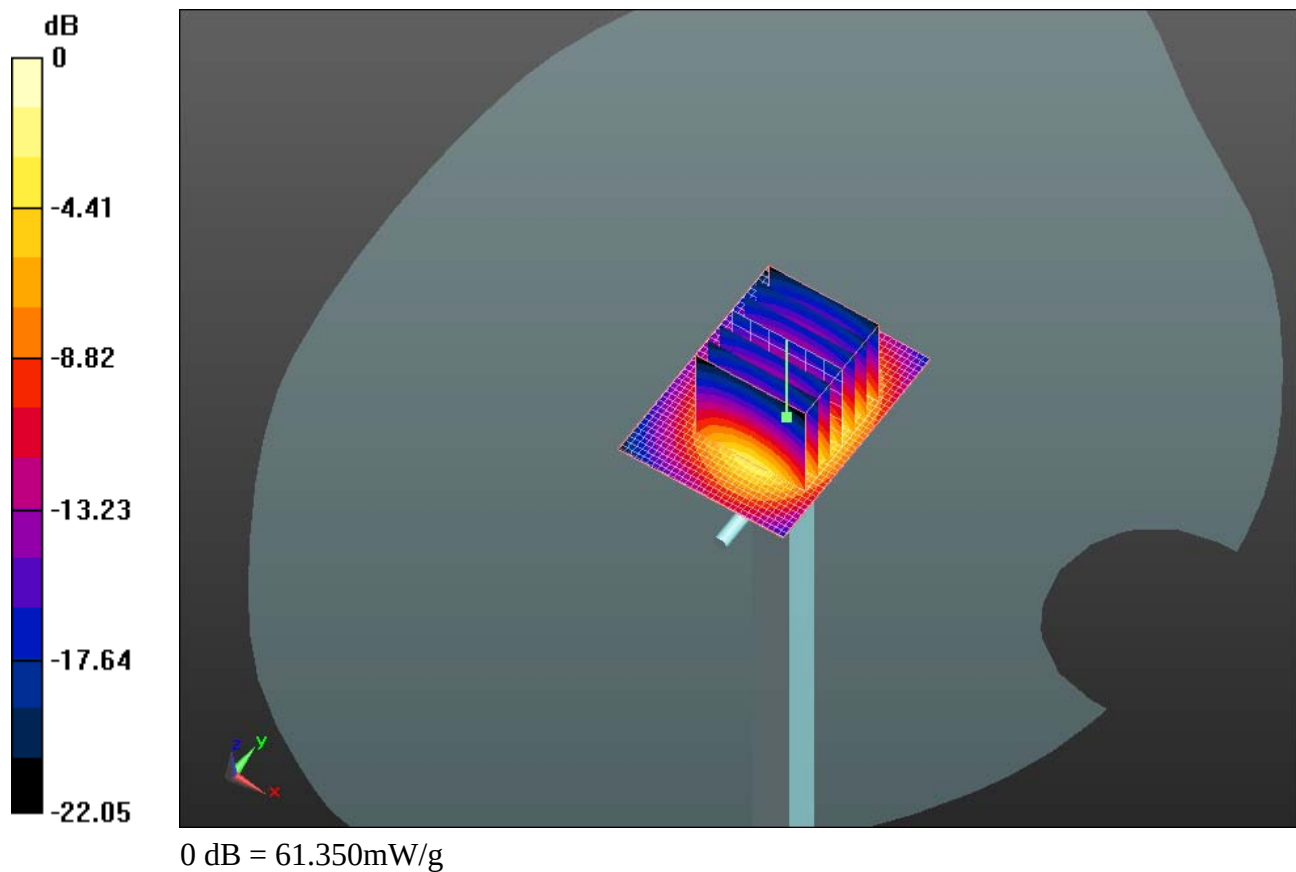
Reference Value = 183.0 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 112.5 W/kg

SAR(1 g) = 54 mW/g; SAR(10 g) = 25 mW/g

Maximum value of SAR (measured) = 61.351 mW/g

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Date/Time: 7/26/2011 10:21:54 AM, Date/Time: 7/26/2011 10:26:42 AM

Test Laboratory: RIM Testing Services

DipoleValidation_835MHz_Amb_Tem_23.2_Liq_Tem_22.2C_07_26_11

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

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.923 \text{ mho/m}$; $\epsilon_r = 42.263$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY4 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
- ; 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) = 9.489 mW/g

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

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

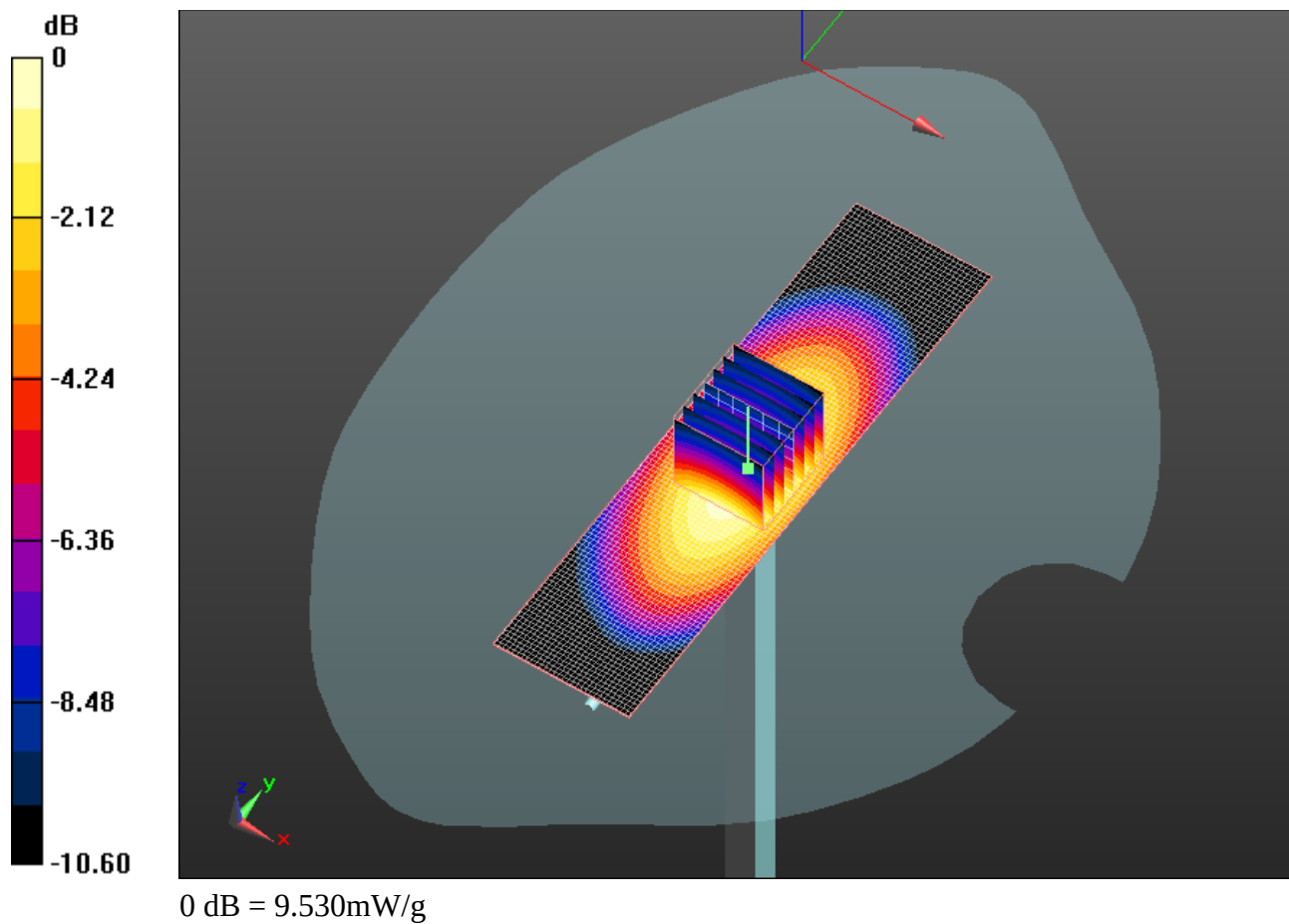
Reference Value = 103.7 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 13.340 W/kg

SAR(1 g) = 8.85 mW/g; SAR(10 g) = 5.75 mW/g

Maximum value of SAR (measured) = 9.535 mW/g

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Date/Time: 7/25/2011 10:53:18 AM, Date/Time: 7/25/2011 10:55:52 AM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_Amb_Tem_23.1_Liq_Tem_22.3_07_25_11

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

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.388 \text{ mho/m}$; $\epsilon_r = 40.638$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY4 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
- ; 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) = 44.860 mW/g

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

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

Reference Value = 180.9 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 72.798 W/kg

SAR(1 g) = 39.4 mW/g; SAR(10 g) = 20.4 mW/g

Maximum value of SAR (measured) = 44.291 mW/g

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