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APPENDIX A: SAR DISTRIBUTION COMPARISON FOR ACCURACY VERIFICATION

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Date/Time: 6/21/2010 3:11:01 PM

Test Laboratory: RIM Testing Services

DipoleValidation_835MHz_Amb_Tem_22.8_Liq_Tem_22.0C_06_21_10

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

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

Medium parameters used: $f = 835$ MHz; $\sigma = 0.888$ mho/m; $\epsilon_r = 42.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.12, 6.12, 6.12); Calibrated: 12/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 109.1 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 14.3 W/kg

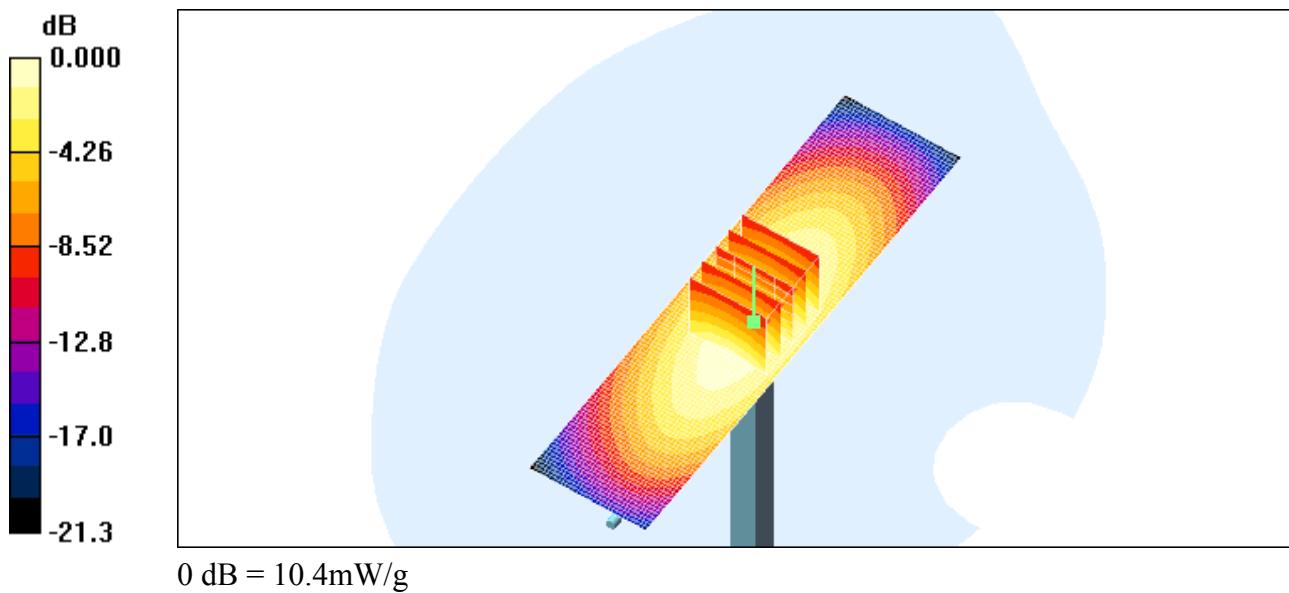
SAR(1 g) = 9.63 mW/g; SAR(10 g) = 6.32 mW/g

Maximum value of SAR (measured) = 10.4 mW/g

d=15mm, Pin=1000mW/Area Scan (31x121x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 10.4 mW/g

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Date/Time: 6/22/2010 5:42:48 PM

Test Laboratory: RIM Testing Services

DipoleValidation_835MHz_Amb_Tem_23.1_Liq_Tem_22.5C_06_22_10

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

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

Medium parameters used: $f = 835$ MHz; $\sigma = 0.857$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.12, 6.12, 6.12); Calibrated: 12/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 106.1 V/m; Power Drift = 0.003 dB

Peak SAR (extrapolated) = 13.1 W/kg

SAR(1 g) = 8.83 mW/g; SAR(10 g) = 5.77 mW/g

Maximum value of SAR (measured) = 9.52 mW/g

d=15mm, Pin=1000mW/Area Scan (31x121x1): Measurement grid: dx=15mm, dy=15mm

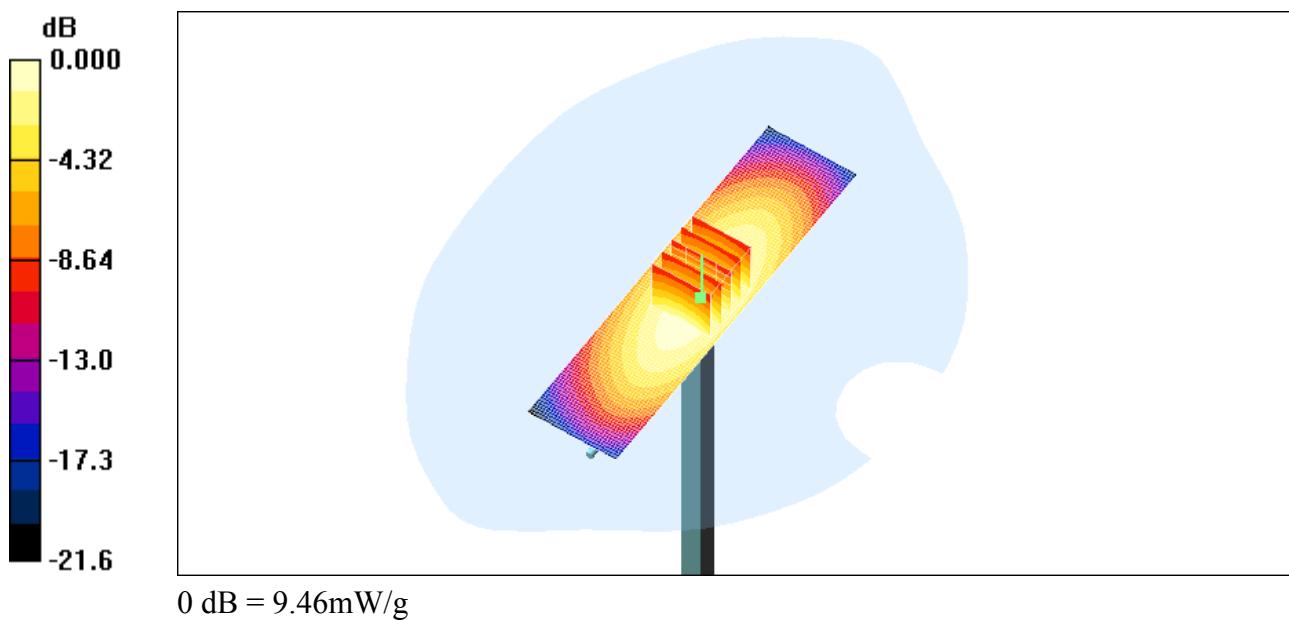
Maximum value of SAR (interpolated) = 9.46 mW/g



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Date/Time: 7/15/2010 7:35:11 PM

Test Laboratory: RIM Testing Services

DipoleValidation_1710MHz_Amb_Tem_23.0_Liq_Tem_22.2_C

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

Communication System: CW; Frequency: 1710 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1710 \text{ MHz}$; $\sigma = 1.3 \text{ mho/m}$; $\epsilon_r = 41.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.14, 5.14, 5.14); Calibrated: 12/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 171.2 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 58.0 W/kg

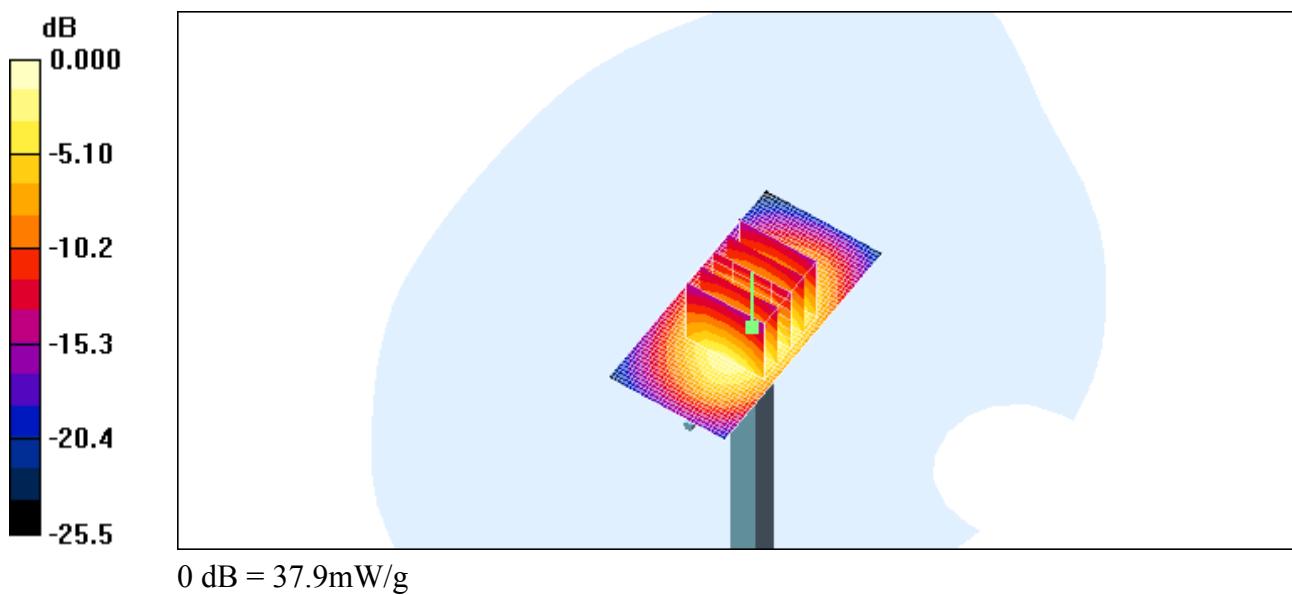
SAR(1 g) = 33.3 mW/g; SAR(10 g) = 18 mW/g

Maximum value of SAR (measured) = 37.6 mW/g

d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 37.9 mW/g

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Date/Time: 6/14/2010 10:15:49 PM

Test Laboratory: RIM Testing Services

DipoleValidation_1800MHz_Amb_Tem_23.0_Liq_Tem_22.0_C_06_14_1
0

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

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1800$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.14, 5.14, 5.14); Calibrated: 12/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 172.7 V/m; Power Drift = -0.031 dB

Peak SAR (extrapolated) = 64.6 W/kg

SAR(1 g) = 36.2 mW/g; SAR(10 g) = 19.2 mW/g

Maximum value of SAR (measured) = 40.7 mW/g

d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: dx=15mm, dy=15mm

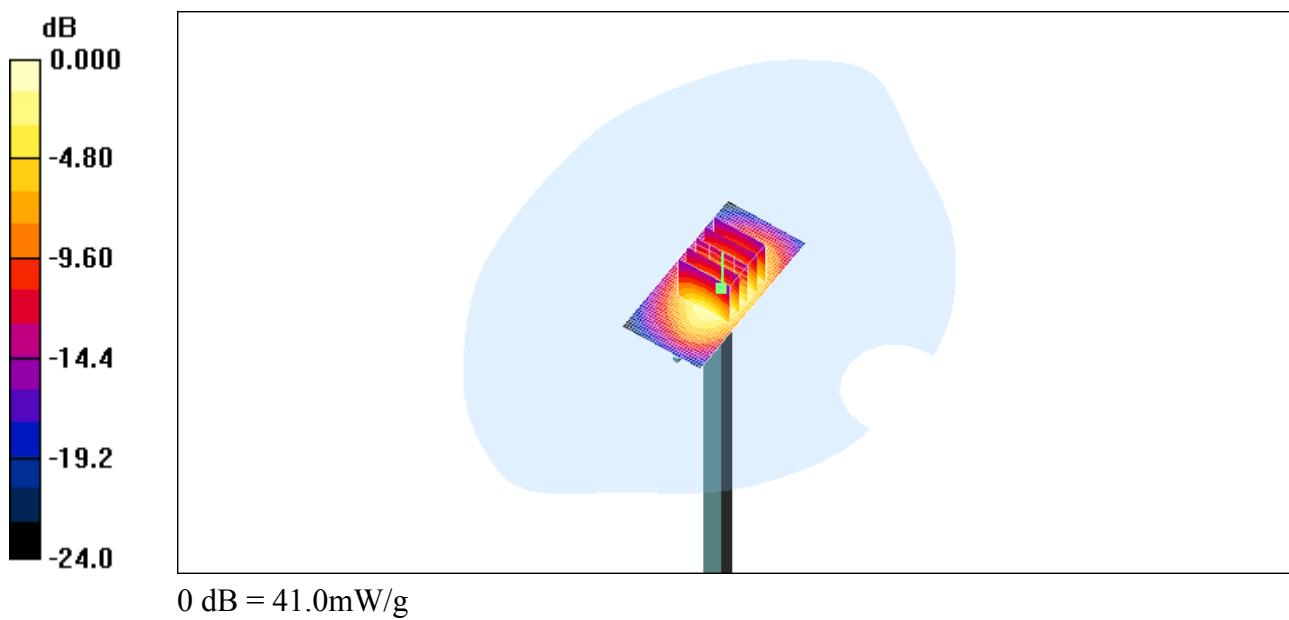
Maximum value of SAR (interpolated) = 41.0 mW/g



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Date/Time: 6/14/2010 11:17:07 AM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_Amb_Tem_23.4_Liq_Tem_22.0C_06_14_10

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

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

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.41 \text{ mho/m}$; $\epsilon_r = 40.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.14, 5.14, 5.14); Calibrated: 12/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 179.5 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 74.4 W/kg

SAR(1 g) = 40.5 mW/g; SAR(10 g) = 21 mW/g

Maximum value of SAR (measured) = 45.0 mW/g

d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

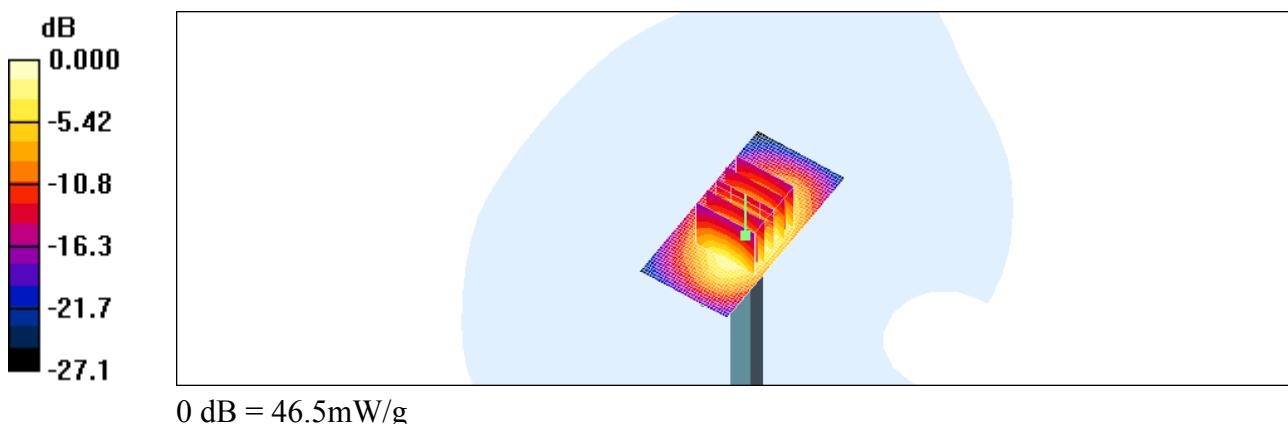
Maximum value of SAR (interpolated) = 46.5 mW/g



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Date/Time: 6/16/2010 11:46:25 PM

Test Laboratory: RIM Testing Services

DipoleValidation_2450MHz_Amb_Tem_23.2_Liq_Tem_22.6_C_06_16_1

0

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

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.53, 4.53, 4.53); Calibrated: 12/11/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 184.6 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 112.4 W/kg

SAR(1 g) = 54 mW/g; SAR(10 g) = 24.8 mW/g

Maximum value of SAR (measured) = 61.9 mW/g

d=15mm, Pin=1000mW/Area Scan (31x51x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 65.9 mW/g

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