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	<b>Appendix A for the BlackBerry® Smartphone Model REY21CW SAR Report</b>			<b>1(13)</b>
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<b>Andrew Becker</b>	<b>February 23 – March 6 , 2012</b>	<b>RTS-5994-1203-47</b>	<b>L6AREY20CW</b>	<b>2503A-REY20CW</b>

**APPENDIX A: SAR DISTRIBUTION COMPARISON FOR ACCURACY VERIFICATION**

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Andrew Becker	February 23 – March 6 , 2012	RTS-5994-1203-47	L6AREY20CW	2503A-REY20CW

Date/Time: 2/27/2012 9:59:09 AM

Test Laboratory: RIM Testing Services

## DipoleValidation\_835MHz\_02\_27\_12\_Amb\_Tem\_22.6\_Liq\_Tem\_21.1C

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

Communication System: CW; Frequency: 835 MHz

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.891$  mho/m;  $\epsilon_r = 41.347$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.06, 6.06, 6.06); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Configuration/d=15mm, Pin=1000mW/Area Scan (31x121x1):** Measurement

grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) = 10.434 mW/g

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

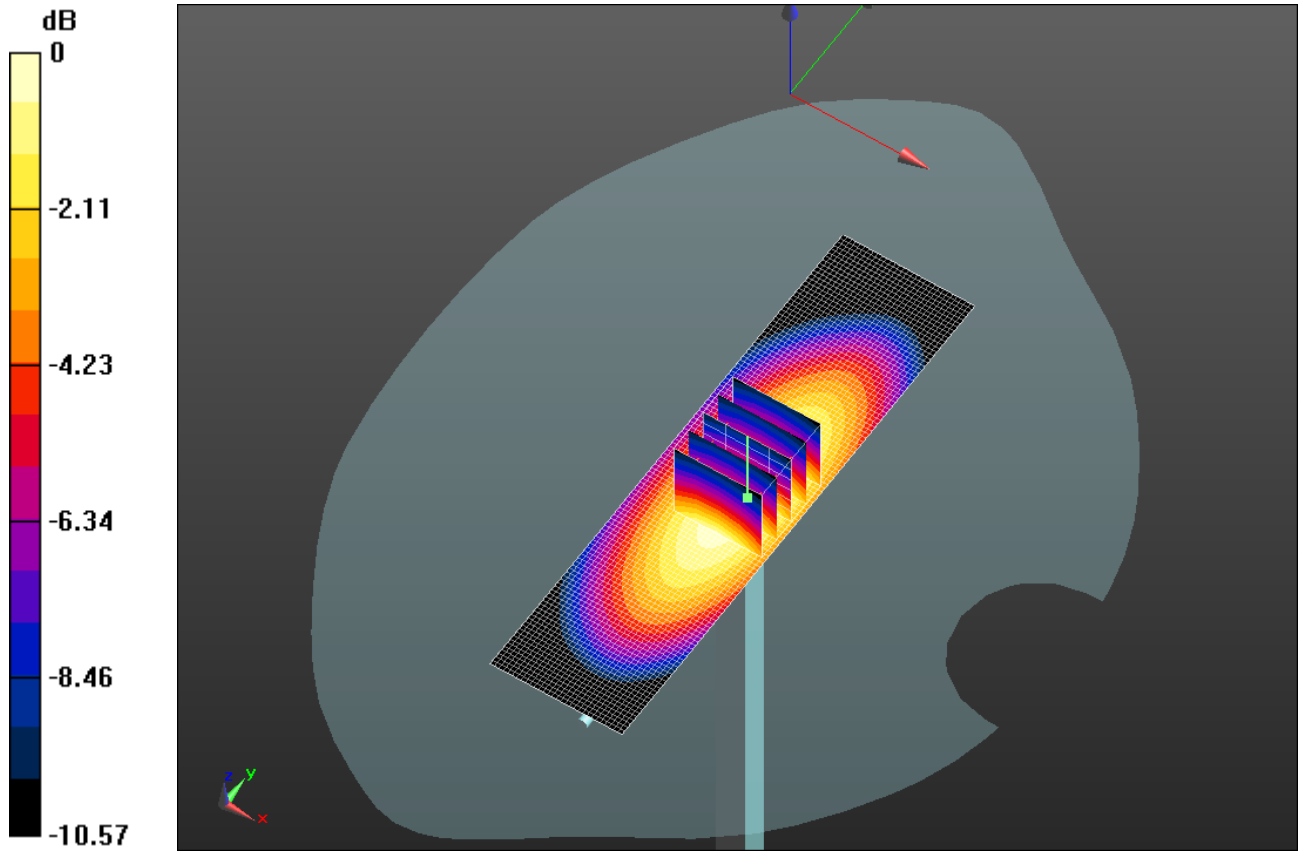
**(5x5x7)/Cube 0:** Measurement grid:  $dx=7.5$ mm,  $dy=7.5$ mm,  $dz=5$ mm

Reference Value = 110.7 V/m; Power Drift = 0.01 dB


Peak SAR (extrapolated) = 13.1100

**SAR(1 g) = 8.9 mW/g; SAR(10 g) = 5.83 mW/g**

Maximum value of SAR (measured) = 10.403 mW/g



0 dB = 10.400mW/g = 20.34 dB mW/g

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Date/Time: 2/28/2012 7:31:12 PM

Test Laboratory: RIM Testing Services

## DipoleValidation\_1900MHz\_02\_28\_12\_Amb\_Tem\_22.7\_Liq\_Tem\_20.3C

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

Communication System: CW; Frequency: 1900 MHz

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39.901$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.23, 5.23, 5.23); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Configuration/d=10mm, Pin=1000mW/Area Scan (31x61x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) = 50.708 mW/g

**Configuration/d=10mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube**

**0:** Measurement grid:  $dx=7.5$ mm,  $dy=7.5$ mm,  $dz=5$ mm

Reference Value = 192.7 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 71.9780

**SAR(1 g) = 39.7 mW/g; SAR(10 g) = 20.7 mW/g**

Maximum value of SAR (measured) = 50.503 mW/g

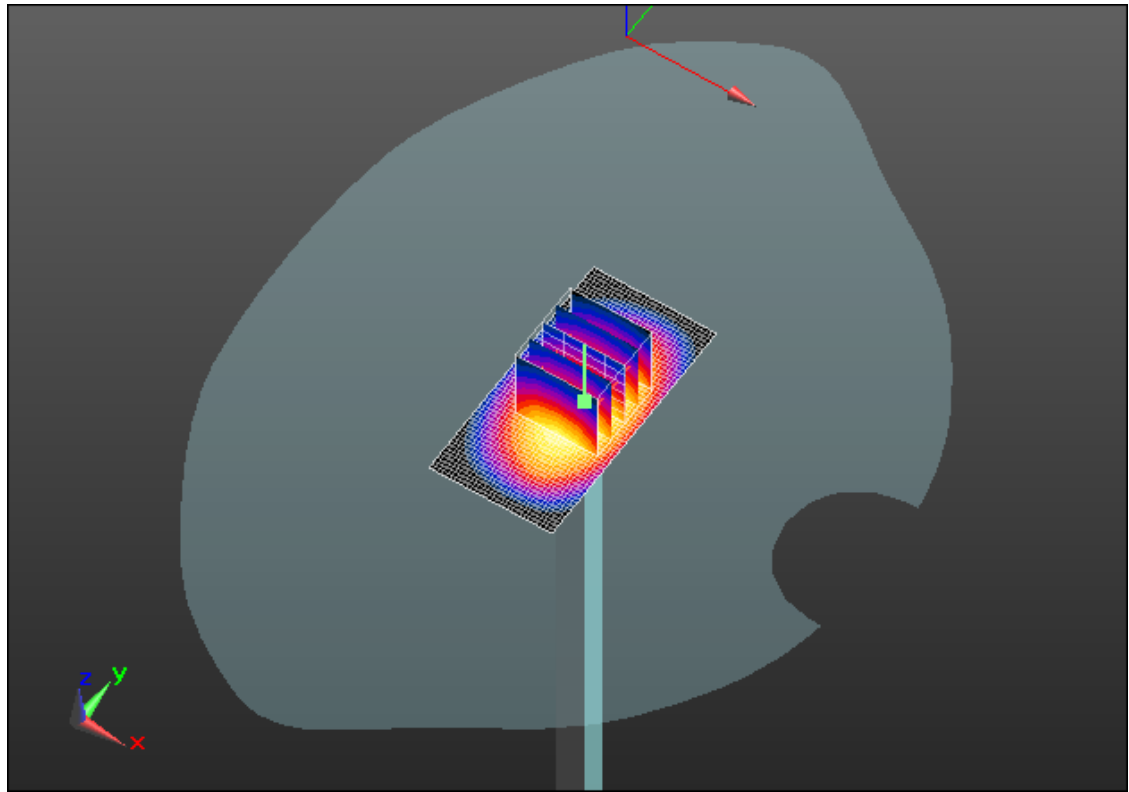
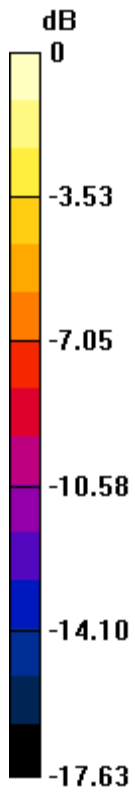
Author Data  
**Andrew Becker**

Dates of Test  
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0 dB = 50.500mW/g = 34.07 dB mW/g

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Date/Time: 3/5/2012 10:53:42 AM

Test Laboratory: RIM Testing Services

## DipoleValidation\_1900MHz\_03\_05\_12\_Amb\_Tem\_22.8\_Liq\_Tem\_21.3C

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

Communication System: CW; Frequency: 1900 MHz

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.398$  mho/m;  $\epsilon_r = 39.453$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ET3DV6 - SN1644; ConvF(5.1, 5.1, 5.1); Calibrated: 11/15/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 2.7, 32.7$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Configuration/d=10mm, Pin=1000mW/Area Scan (31x61x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) = 43.726 mW/g

**Configuration/d=10mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube**

**0:** Measurement grid:  $dx=7.5$ mm,  $dy=7.5$ mm,  $dz=5$ mm

Reference Value = 184.4 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 62.2240

**SAR(1 g) = 37.3 mW/g; SAR(10 g) = 19.9 mW/g**

Maximum value of SAR (measured) = 42.138 mW/g

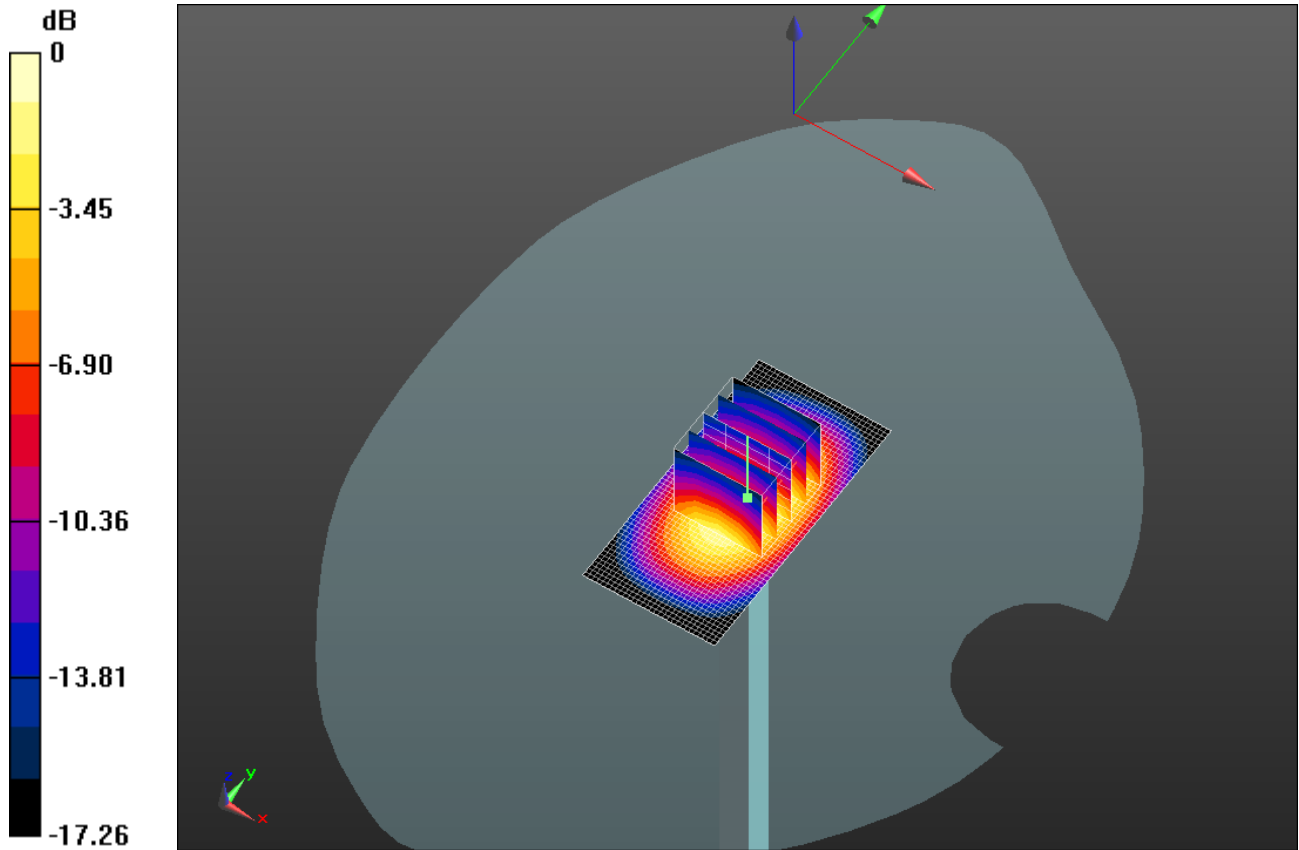
Author Data  
**Andrew Becker**

Dates of Test  
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0 dB = 42.140mW/g = 32.49 dB mW/g

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Date/Time: 2/22/2012 11:18:12 PM

Test Laboratory: RIM Testing Services

## DipoleValidation\_2450MHz\_02\_22\_12\_Amb\_Tem\_23.0\_Liq\_Tem\_21.5C

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

Communication System: CW; Frequency: 2450 MHz

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.818$  mho/m;  $\epsilon_r = 37.545$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.5, 4.5, 4.5); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2011
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Configuration/d=10mm, Pin=1000mW/Area Scan (31x41x1):** Measurement

grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) = 74.530 mW/g

**Configuration/d=10mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube**

**0:** Measurement grid:  $dx=7.5$ mm,  $dy=7.5$ mm,  $dz=5$ mm

Reference Value = 209.5 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 115.20

**SAR(1 g) = 56.3 mW/g; SAR(10 g) = 26.2 mW/g**

Maximum value of SAR (measured) = 73.794 mW/g



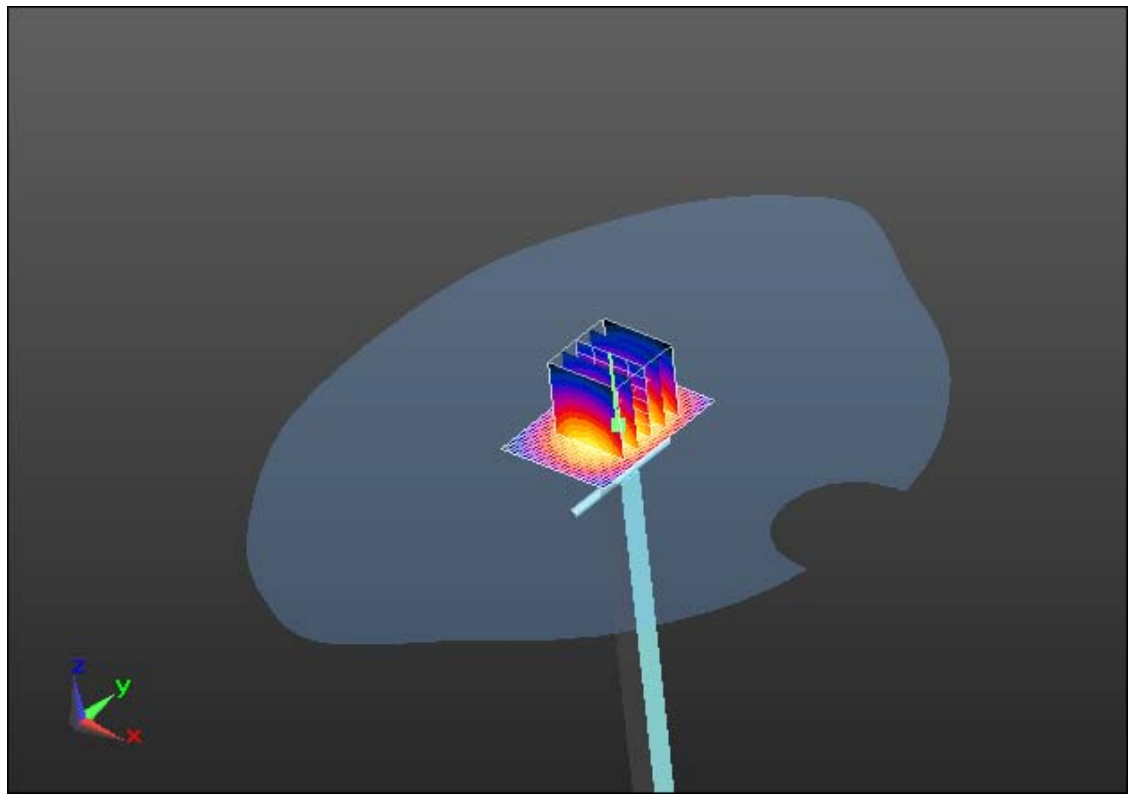
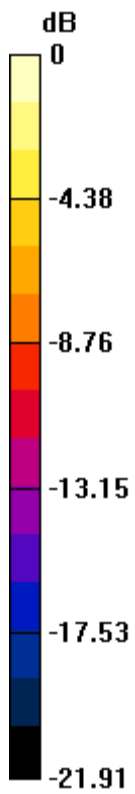
Author Data  
**Andrew Becker**

Dates of Test  
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0 dB = 73.790mW/g = 37.36 dB mW/g

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Date/Time: 2/24/2012 10:56:28 AM

Test Laboratory: RIM Testing Services

## DipoleValidation\_2450MHz\_02\_24\_12\_Amb\_Tem\_23.3\_Liq\_Tem\_22.3C

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

Communication System: CW; Frequency: 2450 MHz

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.761$  mho/m;  $\epsilon_r = 37.583$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.5, 4.5, 4.5); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Configuration/d=10mm, Pin=1000mW/Area Scan (31x41x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) = 74.456 mW/g

**Configuration/d=10mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube**

**0:** Measurement grid:  $dx=7.5$ mm,  $dy=7.5$ mm,  $dz=5$ mm

Reference Value = 211.4 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 112.90

**SAR(1 g) = 56.7 mW/g; SAR(10 g) = 26.8 mW/g**

Maximum value of SAR (measured) = 74.217 mW/g

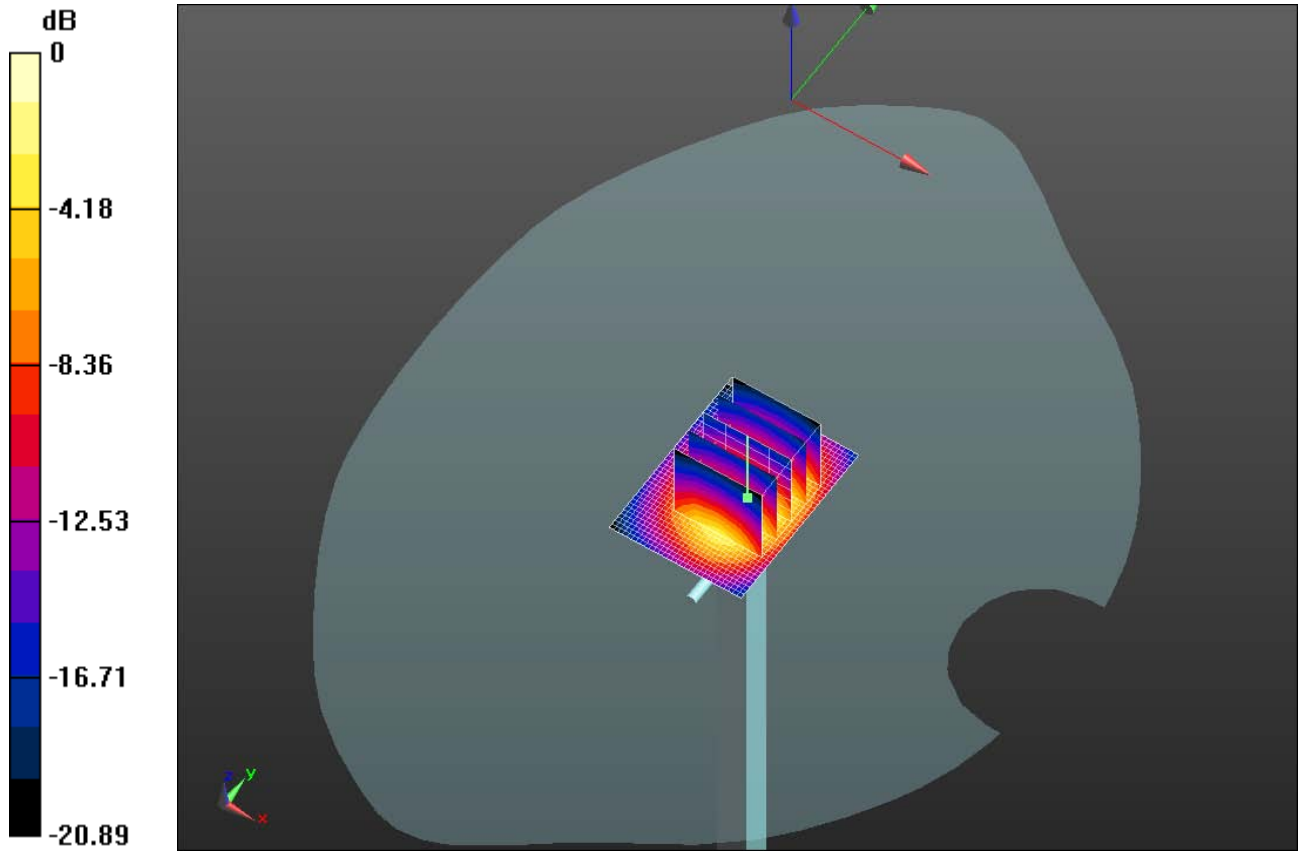
Author Data  
**Andrew Becker**

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0 dB = 74.220mW/g = 37.41 dB mW/g

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Date/Time: 3/6/2012 12:13:26 AM

Test Laboratory: RIM Testing Services

## DipoleValidation\_2450MHz\_03\_05\_12\_Amb\_Tem\_23.1\_Liq\_Tem\_19.9C

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

Communication System: CW; Frequency: 2450 MHz

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.853$  mho/m;  $\epsilon_r = 37.613$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.5, 4.5, 4.5); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

**Configuration/d=10mm, Pin=1000mW/Area Scan (31x41x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (interpolated) = 75.570 mW/g

**Configuration/d=10mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube**

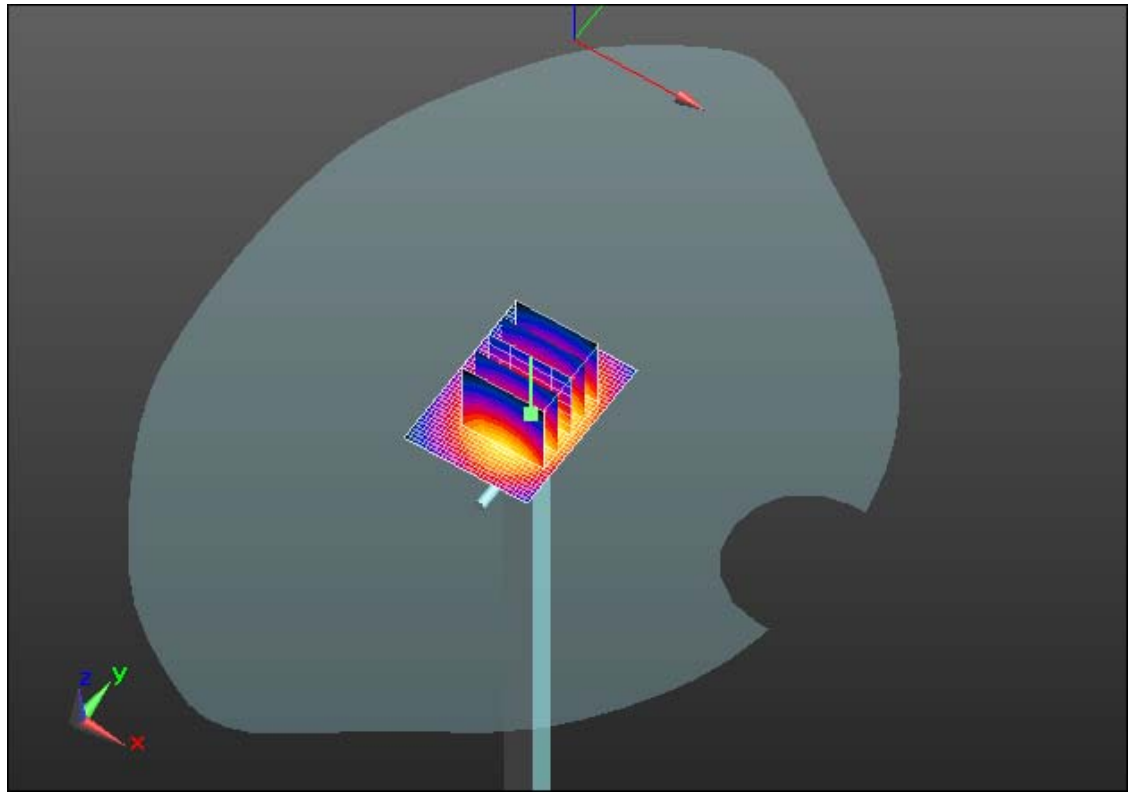
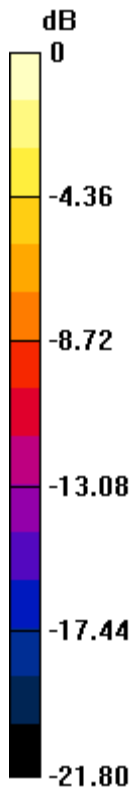
**0:** Measurement grid:  $dx=7.5$ mm,  $dy=7.5$ mm,  $dz=5$ mm

Reference Value = 206.9 V/m; Power Drift =  $-7e-005$  dB

Peak SAR (extrapolated) = 116.70

**SAR(1 g) = 57.5 mW/g; SAR(10 g) = 26.9 mW/g**

Maximum value of SAR (measured) = 76.156 mW/g



0 dB = 76.160mW/g = 37.63 dB mW/g