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Author Data Andrew Becker	Dates of Test Aug 21 – Nov 23, 2012 Jan. 07-11, 2013	Test Report No RTS-6012-1211-32 Rev 3	FCC ID: L6ARFA90LW	IC ID 2503A-RFA90LW

APPENDIX C1: SAR DISTRIBUTION PLOTS FOR BODY-WORN CONFIGURATION

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Date/Time: 9/11/2012 3:19:35 PM

Test Laboratory: RIM Testing Services

**15mm_Spacer_Back_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_t
emp_23.2_liq_temp_22.1C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: LTE 700_Band 13; Frequency: 782 MHz

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.998$ mho/m; $\epsilon_r = 55.077$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.27, 6.27, 6.27); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.569 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (6x6x7)/Cube 0:

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

Reference Value = 21.080 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.6840

SAR(1 g) = 0.500 mW/g; SAR(10 g) = 0.360 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.563 mW/g

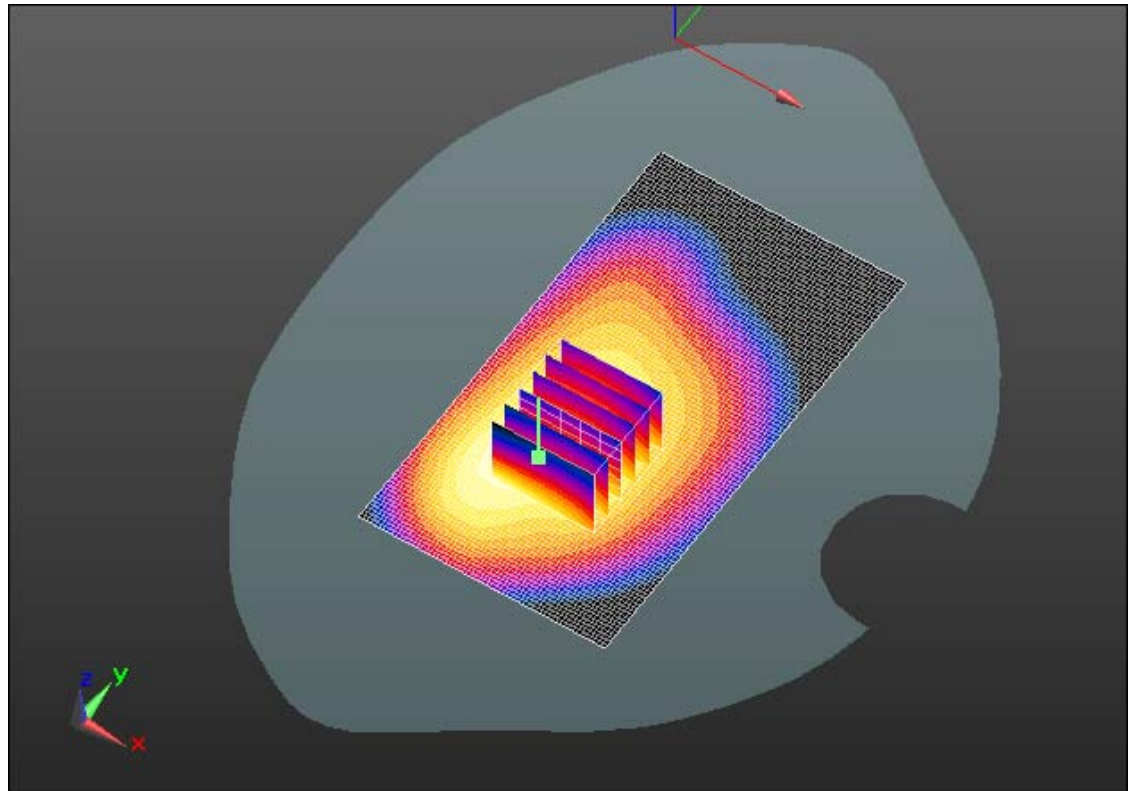
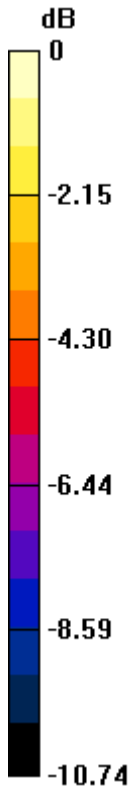
Author Data
Andrew Becker

Dates of Test
**Aug 21 – Nov 23, 2012
Jan. 07-11, 2013**


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0 dB = 0.560mW/g = -5.04 dB mW/g

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Test Laboratory: RIM Testing Services

**Vertical_Holster_Back_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_
temp_23.1_liq_temp_22.0C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: LTE 700_Band 13; Frequency: 782 MHz

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.998$ mho/m; $\epsilon_r = 55.077$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.27, 6.27, 6.27); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.392 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (6x6x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm


Reference Value = 18.142 V/m; Power Drift = 0.0034 dB

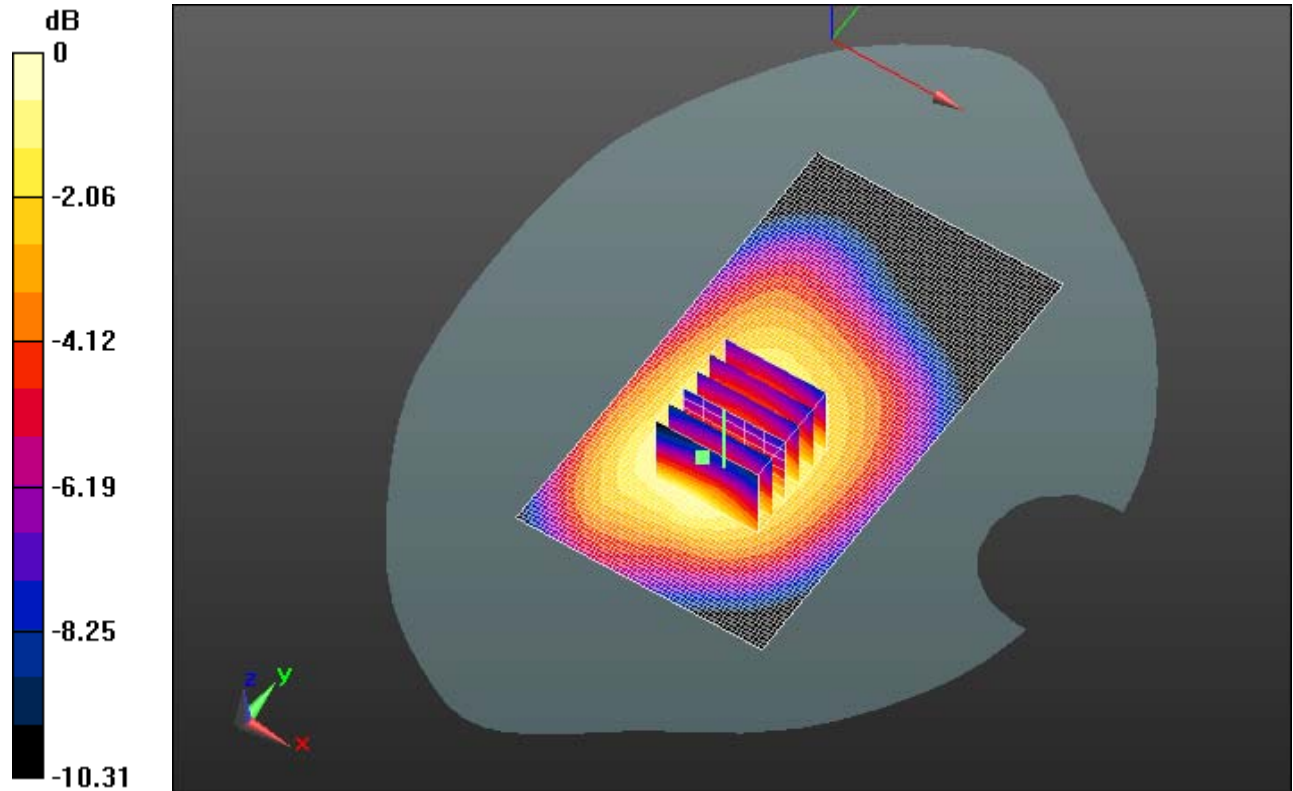
Peak SAR (extrapolated) = 0.4470

SAR(1 g) = 0.350 mW/g; SAR(10 g) = 0.257 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.392 mW/g

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0 dB = 0.390mW/g = -8.18 dB mW/g

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Date/Time: 9/11/2012 4:53:38 PM

Test Laboratory: RIM Testing Services

**Vertical_Holster_Front_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_
temp_23.1_liq_temp_22.0C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: LTE 700_Band 13; Frequency: 782 MHz

Medium parameters used (interpolated): $f = 782 \text{ MHz}$; $\sigma = 0.998 \text{ mho/m}$; $\epsilon_r = 55.077$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.27, 6.27, 6.27); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15\text{mm}$, $dy=15\text{mm}$

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.307 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:

Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$


Reference Value = 16.576 V/m; Power Drift = 0.0098 dB

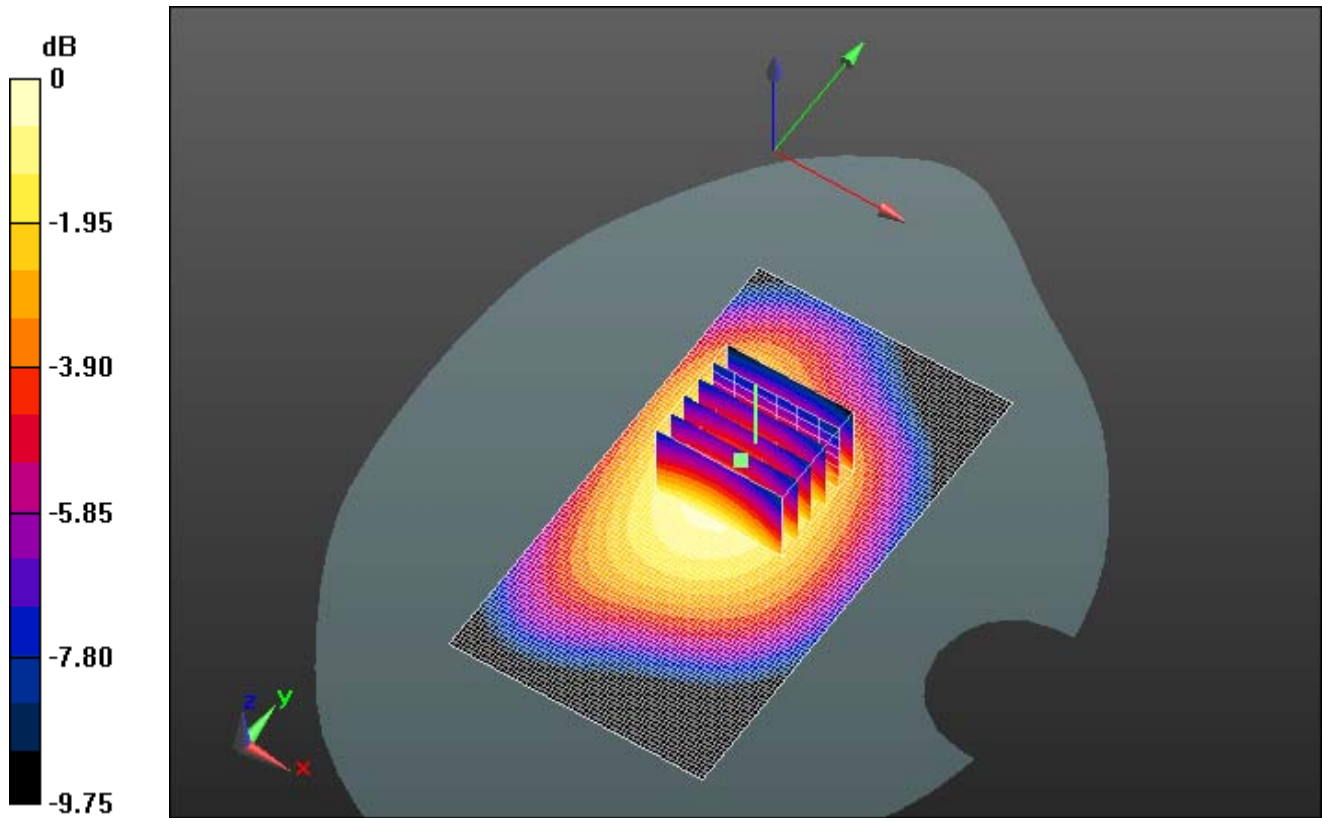
Peak SAR (extrapolated) = 0.3590

SAR(1 g) = 0.270 mW/g; SAR(10 g) = 0.201 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.301 mW/g

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0 dB = 0.300mW/g = -10.46 dB mW/g

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Date/Time: 11/12/2012 3:46:59 PM

Test Laboratory: RIM Testing Services

**15mm_Spacer_Back_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_t
emp_23.2_liq_temp_22.3C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F9758

Communication System: LTE 700_Band 13; Frequency: 782 MHz

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.997$ mho/m; $\epsilon_r = 54.834$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.27, 6.27, 6.27); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.239 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (6x6x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 13.227 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.2900

SAR(1 g) = 0.212 mW/g; SAR(10 g) = 0.152 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.240 mW/g

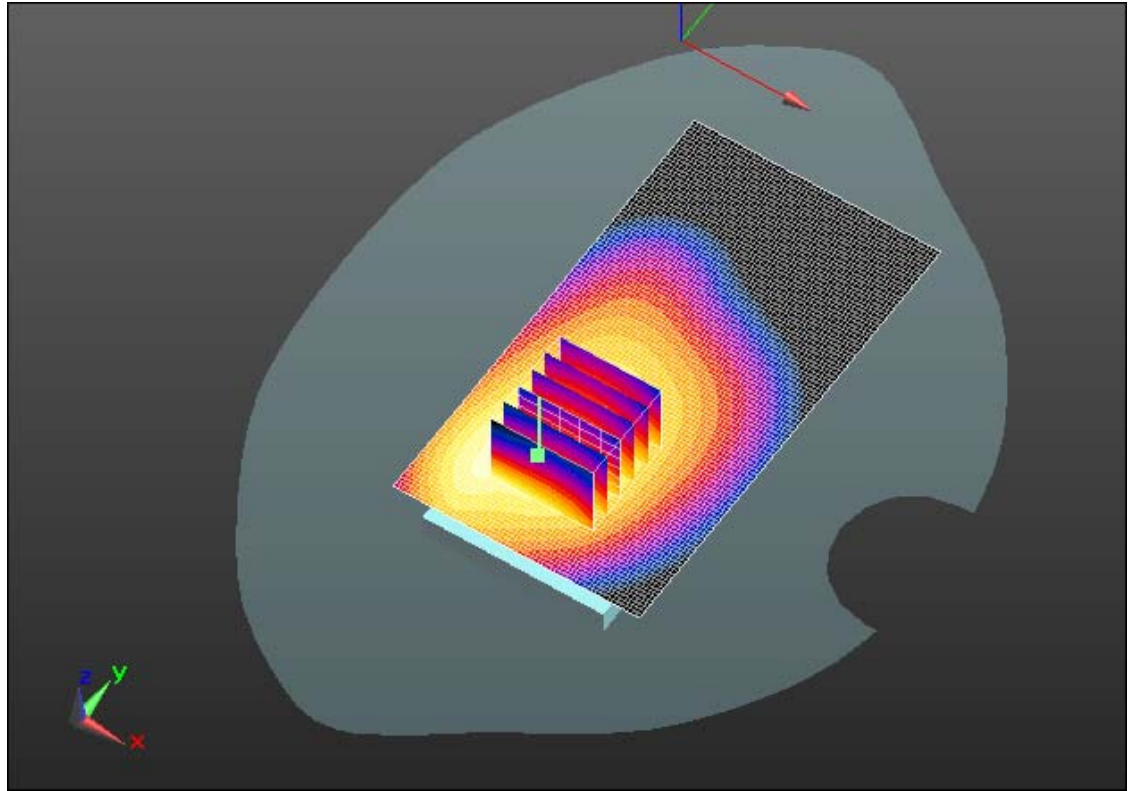
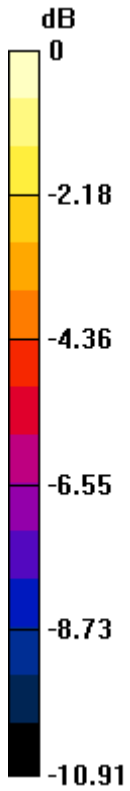
Author Data
Andrew Becker

Dates of Test
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Jan. 07-11, 2013


Test Report No
RTS-6012-1211-32
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0 dB = 0.240mW/g = -12.40 dB mW/g

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Date/Time: 11/12/2012 4:12:12 PM

Test Laboratory: RIM Testing Services

**Vertical_Holster_Back_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_
temp_23.2_liq_temp_22.3C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F9758

Communication System: LTE 700_Band 13; Frequency: 782 MHz

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.997$ mho/m; $\epsilon_r = 54.834$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.27, 6.27, 6.27); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.140 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm


Reference Value = 11.237 V/m; Power Drift = 0.05 dB

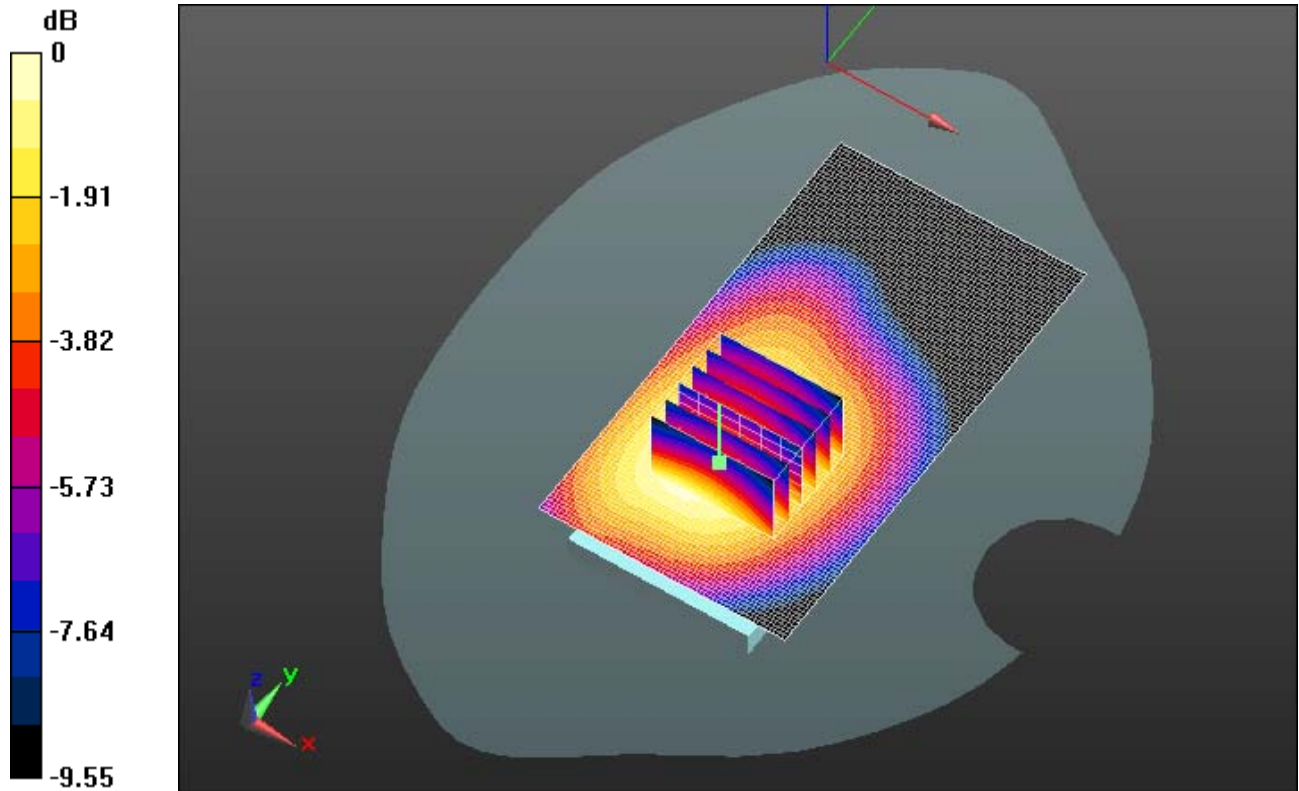
Peak SAR (extrapolated) = 0.1640

SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.095 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.140 mW/g

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0 dB = 0.140mW/g = -17.08 dB mW/g

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Date/Time: 11/12/2012 4:34:38 PM

Test Laboratory: RIM Testing Services

**Vertical_Holster_Front_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_
temp_23.2_liq_temp_22.1C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F9758

Communication System: LTE 700_Band 13; Frequency: 782 MHz

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.997$ mho/m; $\epsilon_r = 54.834$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.27, 6.27, 6.27); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.125 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm


Reference Value = 10.872 V/m; Power Drift = -0.06 dB

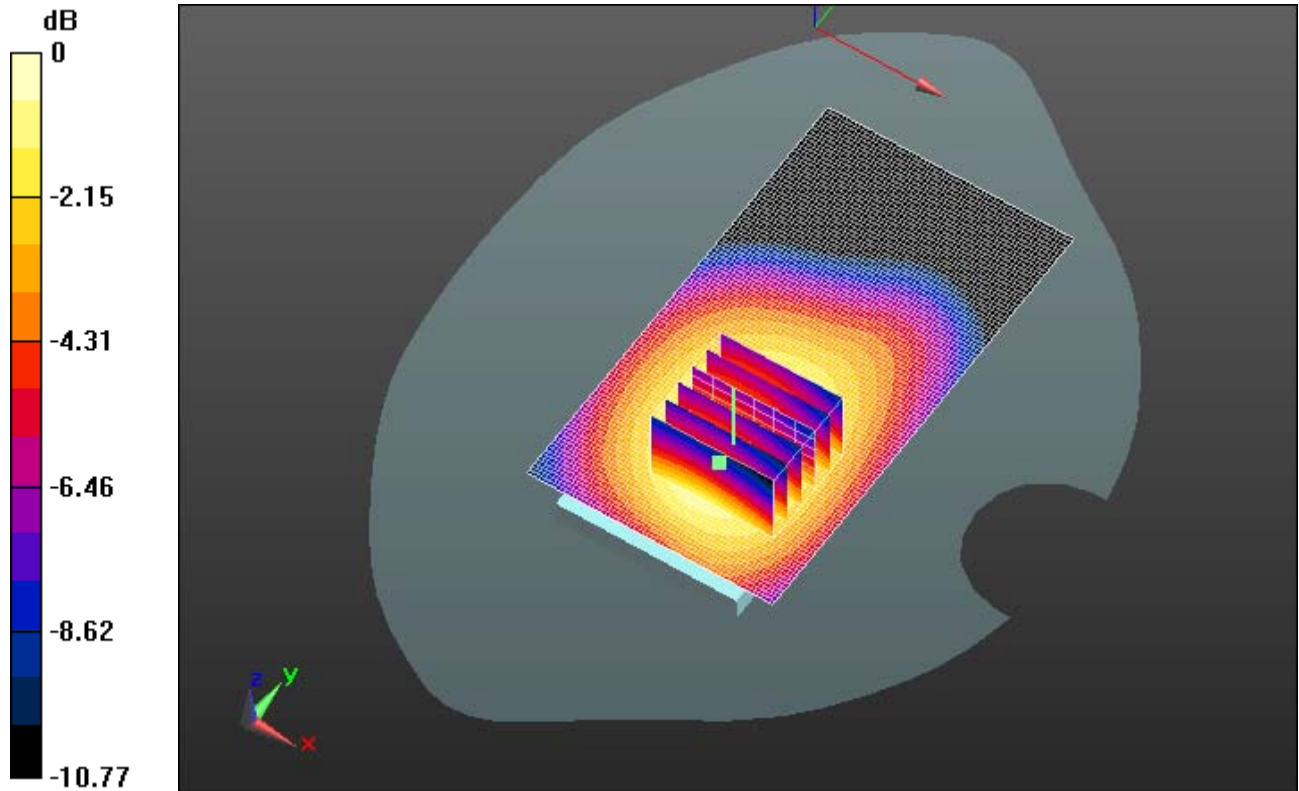
Peak SAR (extrapolated) = 0.1460

SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.085 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.126 mW/g

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0 dB = 0.130mW/g = -17.72 dB mW/g

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Date/Time: 8/30/2012 7:40:17 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_GPRS850_mid_chan_amb_temp_23.3_liq_temp_2 2.8C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: GPRS 850; Frequency: 836.8 MHz

Medium parameters used (interpolated): $f = 836.8$ MHz; $\sigma = 0.975$ mho/m; $\epsilon_r = 52.66$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.07, 6.07, 6.07); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.456 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x7x7)/Cube 0:

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


Reference Value = 17.099 V/m; Power Drift = -0.10 dB

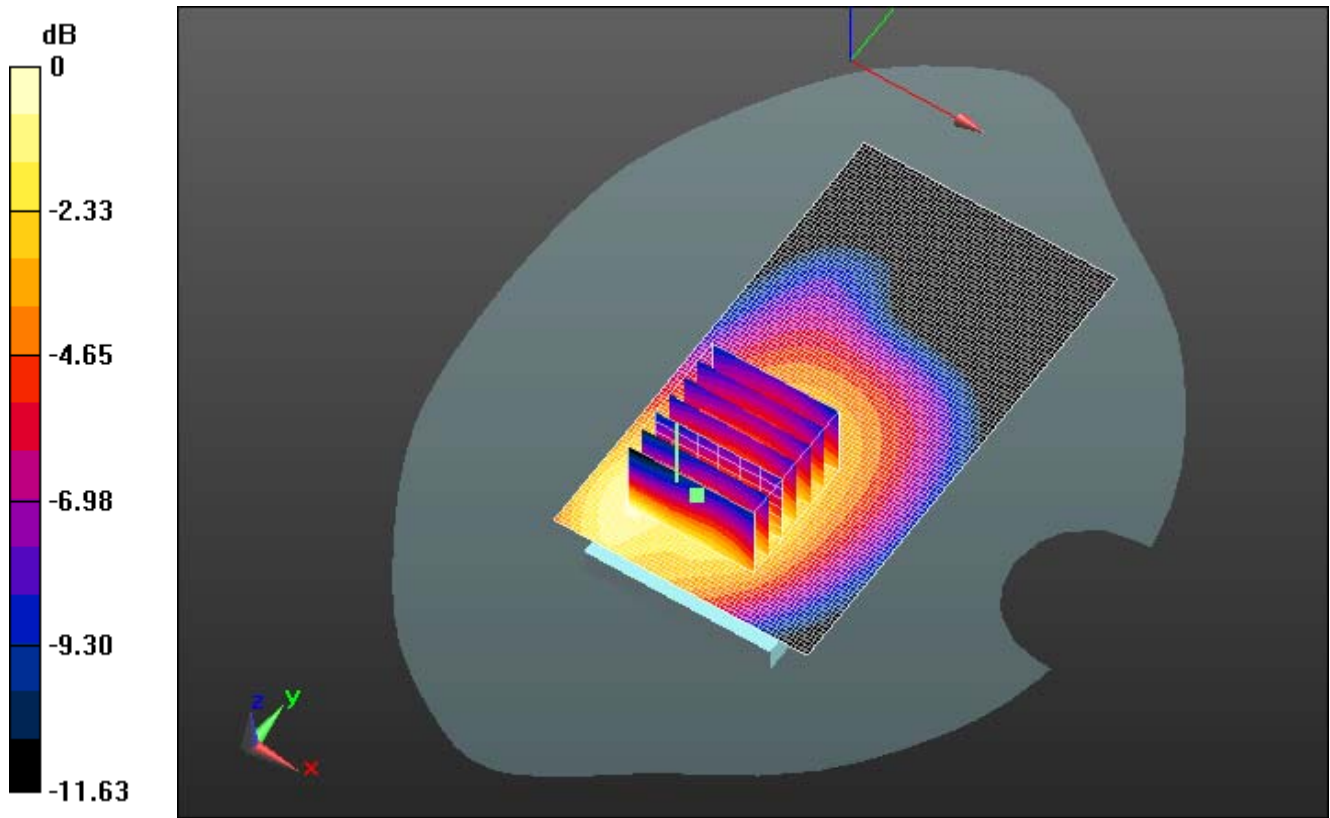
Peak SAR (extrapolated) = 0.5720

SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.278 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.458 mW/g

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0 dB = 0.460mW/g = -6.74 dB mW/g

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Date/Time: 8/30/2012 9:49:14 PM

Test Laboratory: RIM Testing Services

Vertical_Holster_Back_GPRS850_mid_chan_amb_temp_23.4_liq_temp_22.8C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: GPRS 850; Frequency: 836.8 MHz

Medium parameters used (interpolated): $f = 836.8$ MHz; $\sigma = 0.975$ mho/m; $\epsilon_r = 52.66$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.07, 6.07, 6.07); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.327 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x8x7)/Cube 0:

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


Reference Value = 16.185 V/m; Power Drift = -0.15 dB

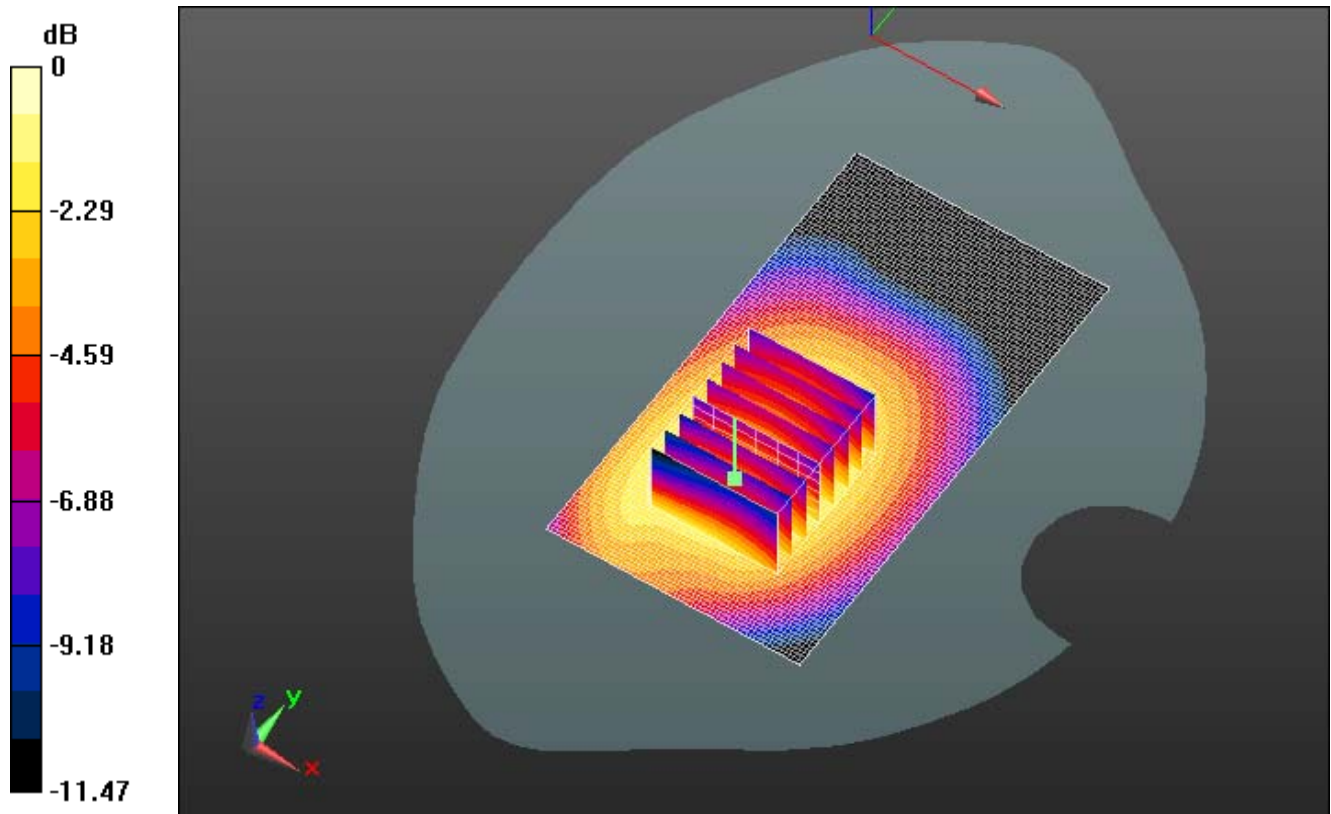
Peak SAR (extrapolated) = 0.3780

SAR(1 g) = 0.289 mW/g; SAR(10 g) = 0.215 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.319 mW/g

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0 dB = 0.320mW/g = -9.90 dB mW/g

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Date/Time: 8/30/2012 10:17:43 PM

Test Laboratory: RIM Testing Services

Vertical_Holster_Front_GPRS850_mid_chan_amb_temp_22.9_liq_temp_22.7C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: GPRS 850; Frequency: 836.8 MHz

Medium parameters used (interpolated): $f = 836.8$ MHz; $\sigma = 0.975$ mho/m; $\epsilon_r = 52.66$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.07, 6.07, 6.07); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.279 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x8x7)/Cube 0:

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


Reference Value = 14.917 V/m; Power Drift = -0.22 dB

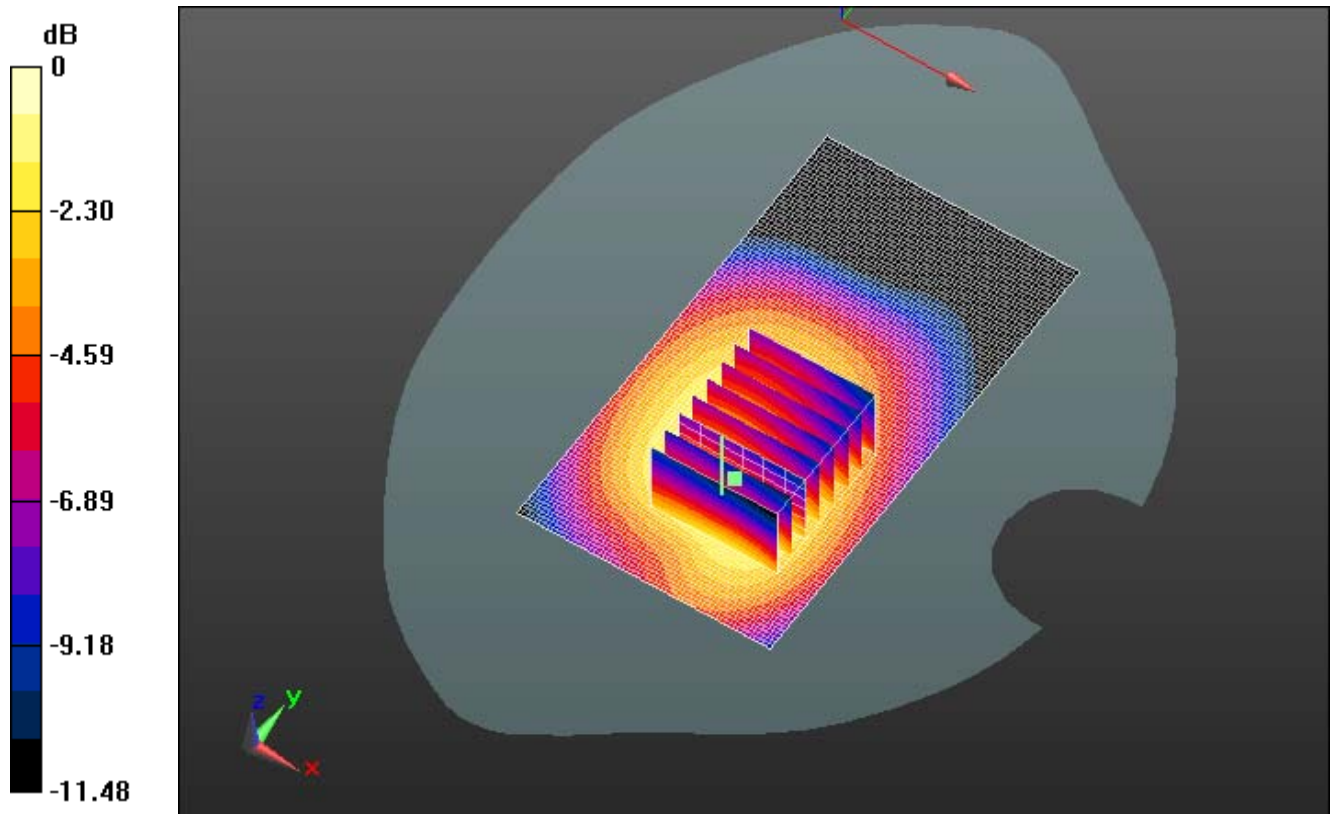
Peak SAR (extrapolated) = 0.3300

SAR(1 g) = 0.249 mW/g; SAR(10 g) = 0.184 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.276 mW/g

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0 dB = 0.280mW/g = -11.06 dB mW/g

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Date/Time: 8/31/2012 9:27:05 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_CDMA850_mid_chan_amb_temp_23.0_liq_temp_2 2.7C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: CDMA 850; Frequency: 836.52 MHz
Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 52.664$;
 $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.07, 6.07, 6.07); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)


Maximum value of SAR (interpolated) = 0.837 mW/g

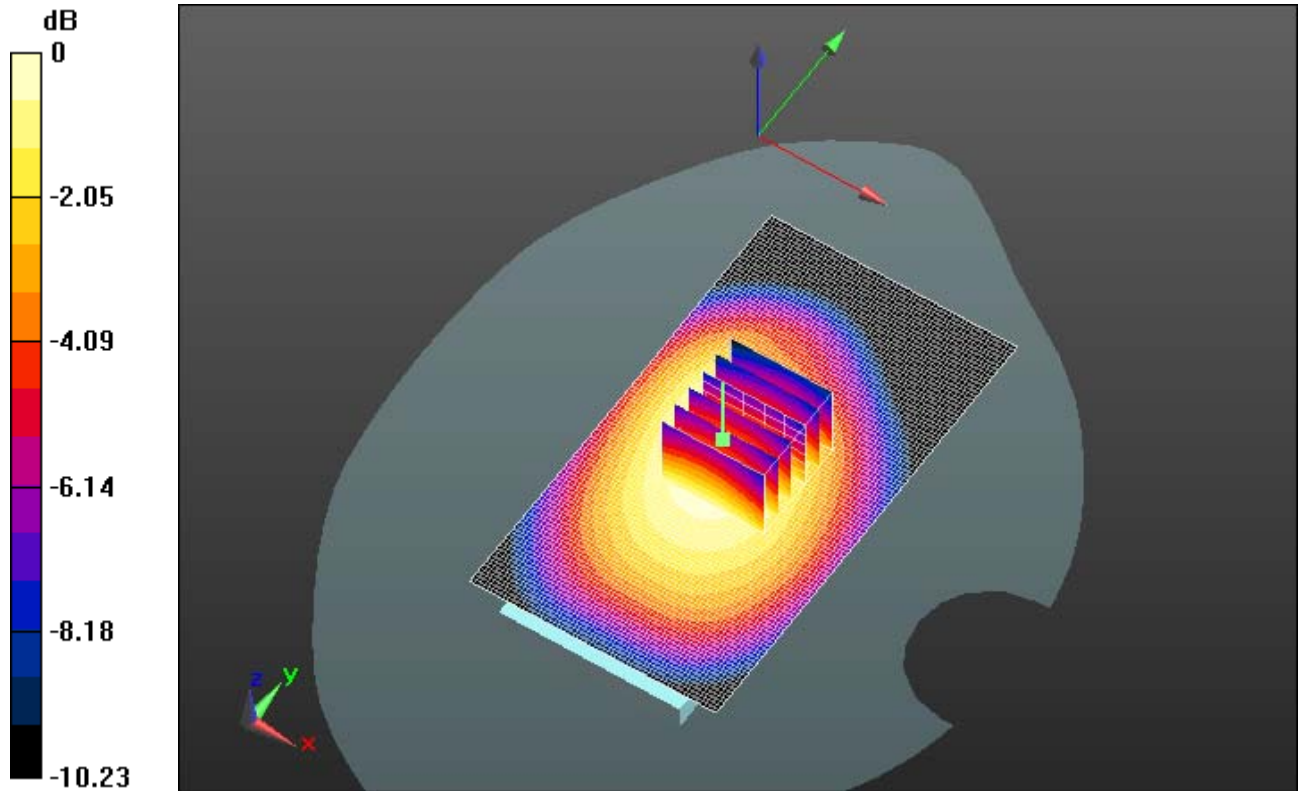
Configuration/Touch position -/Zoom Scan (5x5x7) (6x6x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
Reference Value = 27.901 V/m; Power Drift = 0.00053 dB
Peak SAR (extrapolated) = 0.9740
SAR(1 g) = 0.735 mW/g; SAR(10 g) = 0.549 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.813 mW/g

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0 dB = 0.810mW/g = -1.83 dB mW/g

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Date/Time: 8/31/2012 11:13:22 PM

Test Laboratory: RIM Testing Services

Vertical_Holster_Back_CDMA850_mid_chan_amb_temp_23.0_liq_temp_22.9C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: CDMA 850; Frequency: 836.52 MHz

Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 52.664$;
 $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.07, 6.07, 6.07); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.573 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:

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

Reference Value = 22.352 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.6500

SAR(1 g) = 0.517 mW/g; SAR(10 g) = 0.394 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.571 mW/g

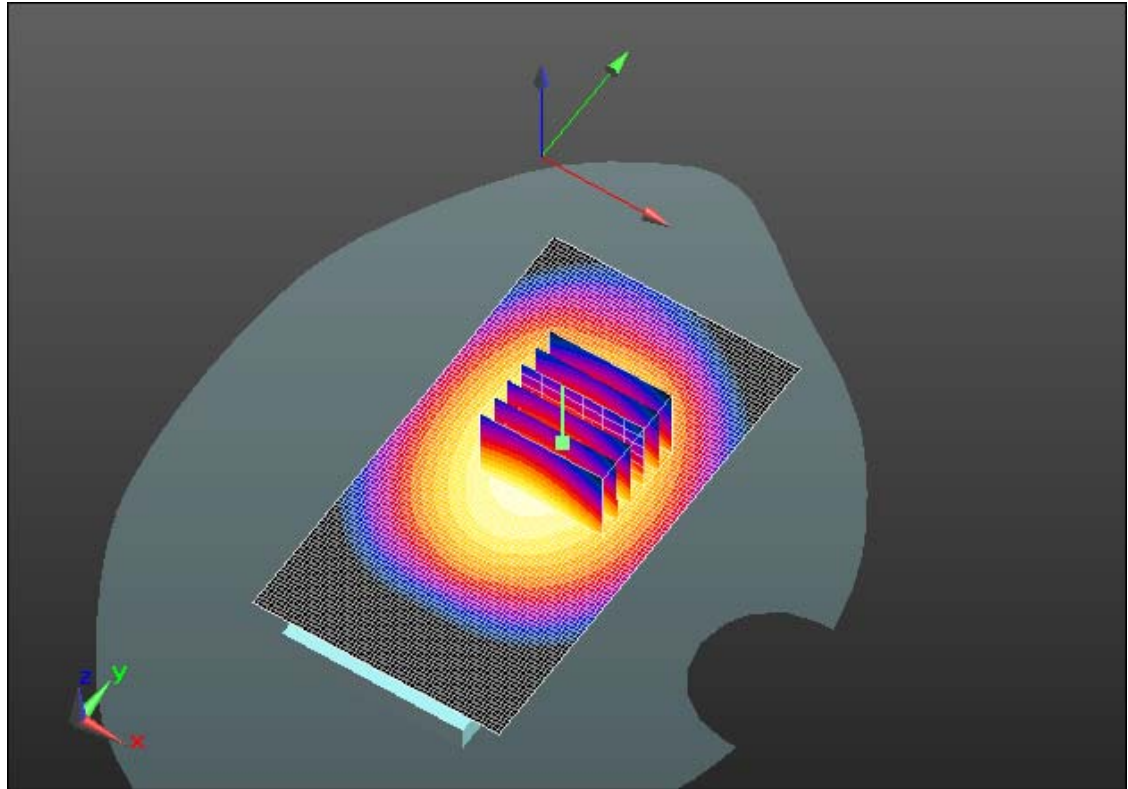
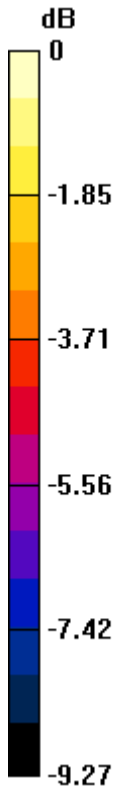
Author Data
Andrew Becker

Dates of Test
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0 dB = 0.570mW/g = -4.88 dB mW/g

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	Author Data Andrew Becker	Dates of Test Aug 21 – Nov 23, 2012 Jan. 07-11, 2013	Test Report No RTS-6012-1211-32 Rev 3	FCC ID: L6ARFA90LW

Date/Time: 8/31/2012 11:34:09 PM

Test Laboratory: RIM Testing Services

Vertical_Holster_Front_CDMA850_mid_chan_amb_temp_23.0_liq_temp _22.9C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: CDMA 850; Frequency: 836.52 MHz

Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 52.664$;
 $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.07, 6.07, 6.07); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.625 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:

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


Reference Value = 21.728 V/m; Power Drift = 0.02 dB

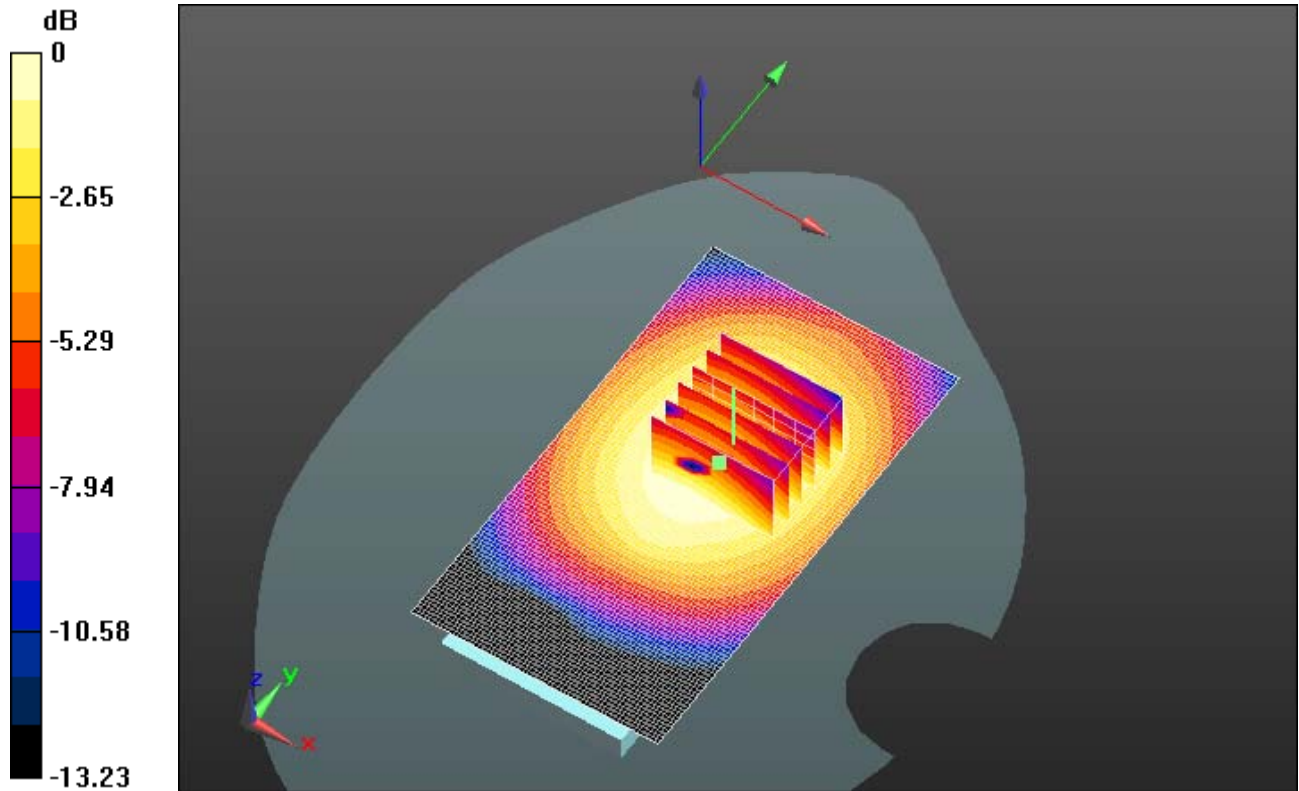
Peak SAR (extrapolated) = 0.7140

SAR(1 g) = 0.570 mW/g; SAR(10 g) = 0.438 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.624 mW/g

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0 dB = 0.620mW/g = -4.15 dB mW/g

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Date/Time: 11/21/2012 10:32:54 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_CDMA850_mid_chan_amb_temp_22.8_liq_temp_2 2.5C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: CDMA 850; Frequency: 836.52 MHz

Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 52.591$;
 $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.07, 6.07, 6.07); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.911 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (6x6x7)/Cube 0:

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

Reference Value = 28.964 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.0510

SAR(1 g) = 0.812 mW/g; SAR(10 g) = 0.612 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.893 mW/g

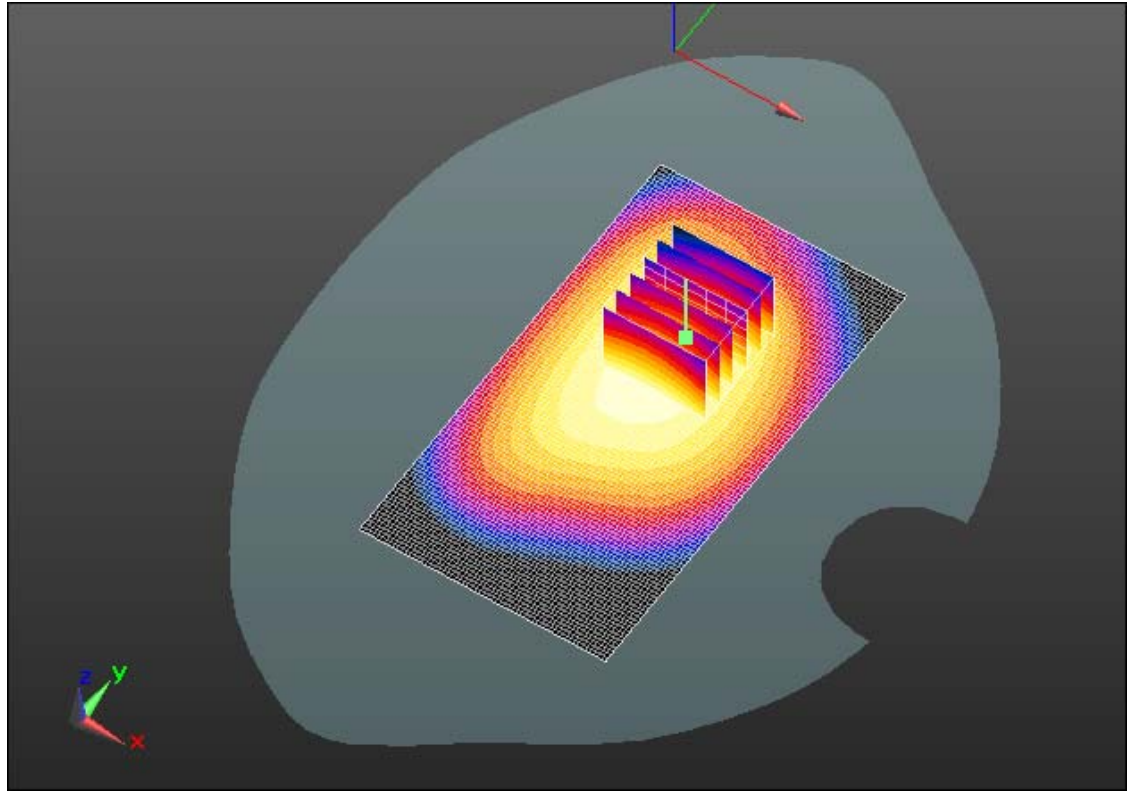
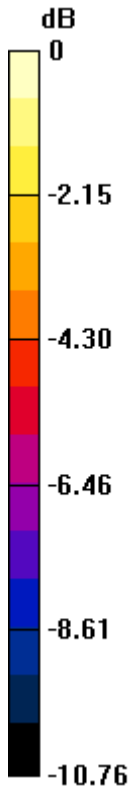
Author Data
Andrew Becker

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0 dB = 0.890mW/g = -1.01 dB mW/g

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Date/Time: 11/21/2012 11:02:34 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_CDMA850_low_chan_amb_temp_22.8_liq_temp_2 2.5C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: CDMA 850; Frequency: 824.7 MHz

Medium parameters used: $f = 825$ MHz; $\sigma = 0.952$ mho/m; $\epsilon_r = 52.74$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.07, 6.07, 6.07); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.861 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (6x6x7)/Cube 0:

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

Reference Value = 28.039 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.9820

SAR(1 g) = 0.764 mW/g; SAR(10 g) = 0.575 mW/g

Maximum value of SAR (measured) = 0.847 mW/g

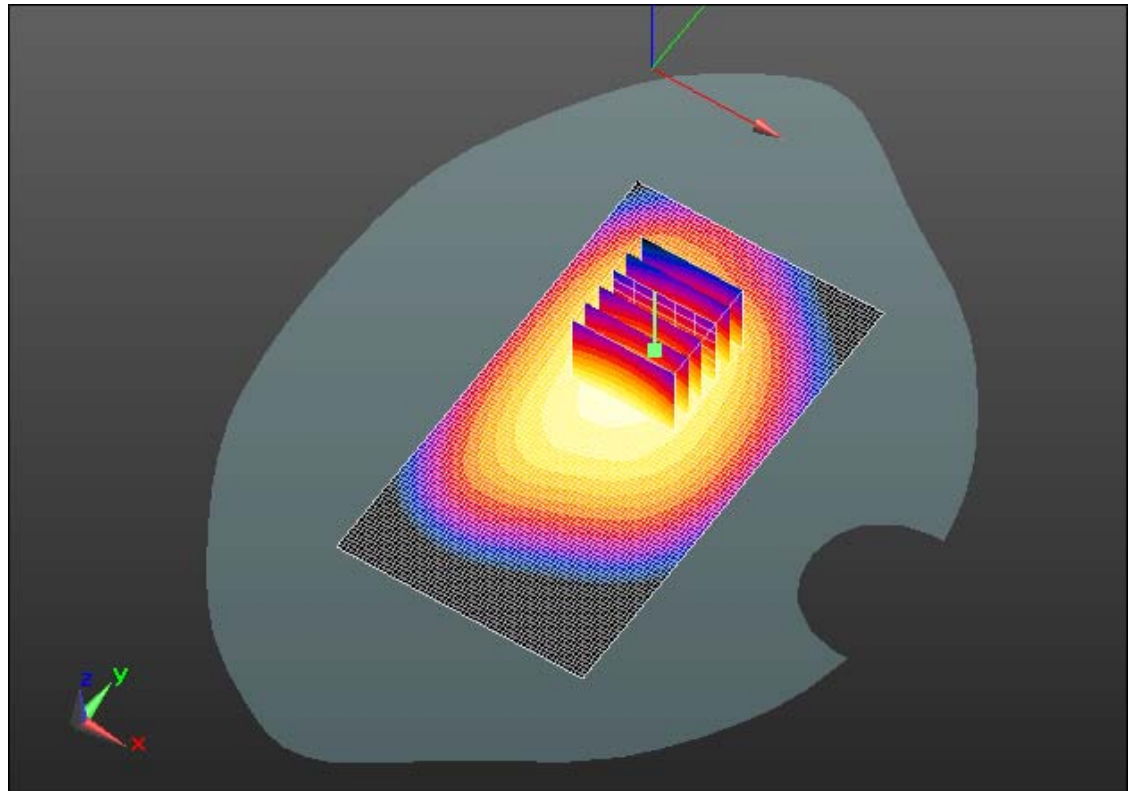
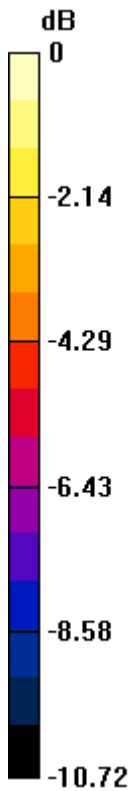
Author Data
Andrew Becker

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0 dB = 0.850mW/g = -1.41 dB mW/g

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Date/Time: 11/21/2012 11:21:27 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_CDMA850_high_chan_amb_temp_22.8_liq_temp_22.5C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: CDMA 850; Frequency: 848.52 MHz
Medium parameters used (interpolated): $f = 848.52$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 52.478$;
 $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.07, 6.07, 6.07); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.692 mW/g


Configuration/Touch position -/Zoom Scan (5x5x7) (6x6x7)/Cube 0:

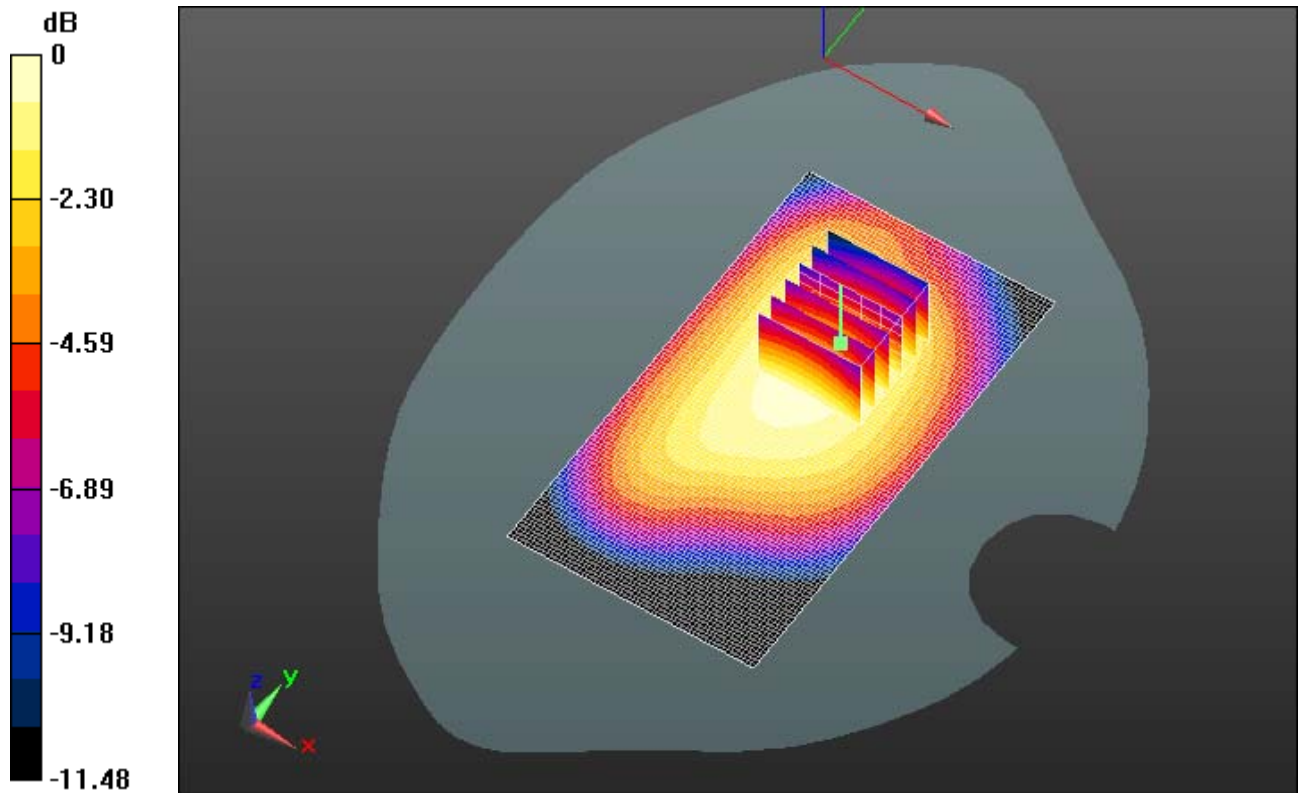
Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
Reference Value = 24.861 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.7890

SAR(1 g) = 0.610 mW/g; SAR(10 g) = 0.455 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.674 mW/g

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0 dB = 0.670mW/g = -3.48 dB mW/g

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Date/Time: 10/23/2012 11:11:37 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_GPRS1900_mid_chan_amb_temp_23.7_liq_temp_21.7C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: GPRS 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.485$ mho/m; $\epsilon_r = 51.584$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.351 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

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

Reference Value = 5.203 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.5240

SAR(1 g) = 0.316 mW/g; SAR(10 g) = 0.177 mW/g

Maximum value of SAR (measured) = 0.389 mW/g

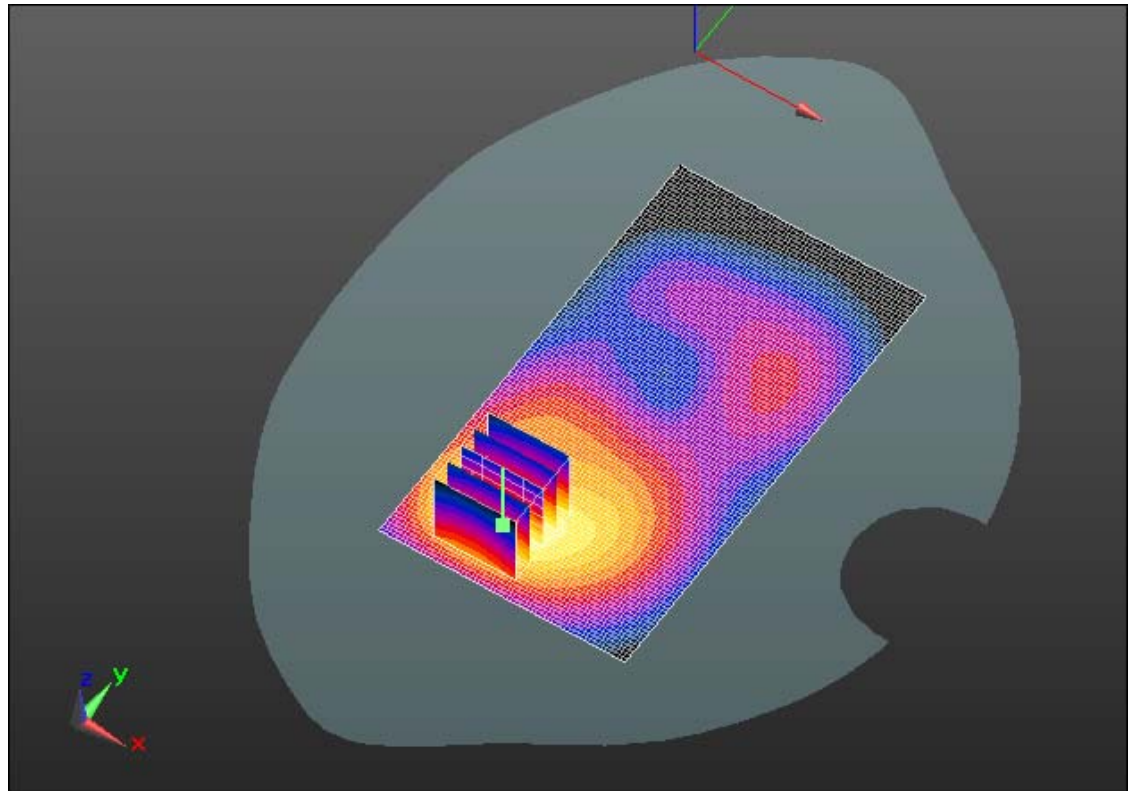
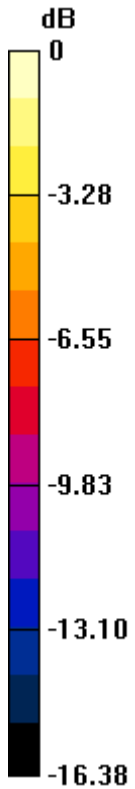
Author Data
Andrew Becker

Dates of Test
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0 dB = 0.390mW/g = -8.18 dB mW/g

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Date/Time: 10/23/2012 11:52:16 PM

Test Laboratory: RIM Testing Services

Vertical_Holster_Back_GPRS1900_mid_chan_amb_temp_23.7_liq_temp_21.7C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: GPRS 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.485$ mho/m; $\epsilon_r = 51.584$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.226 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

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

Reference Value = 4.239 V/m; Power Drift = 0.32 dB

Peak SAR (extrapolated) = 0.3070

SAR(1 g) = 0.189 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.230 mW/g

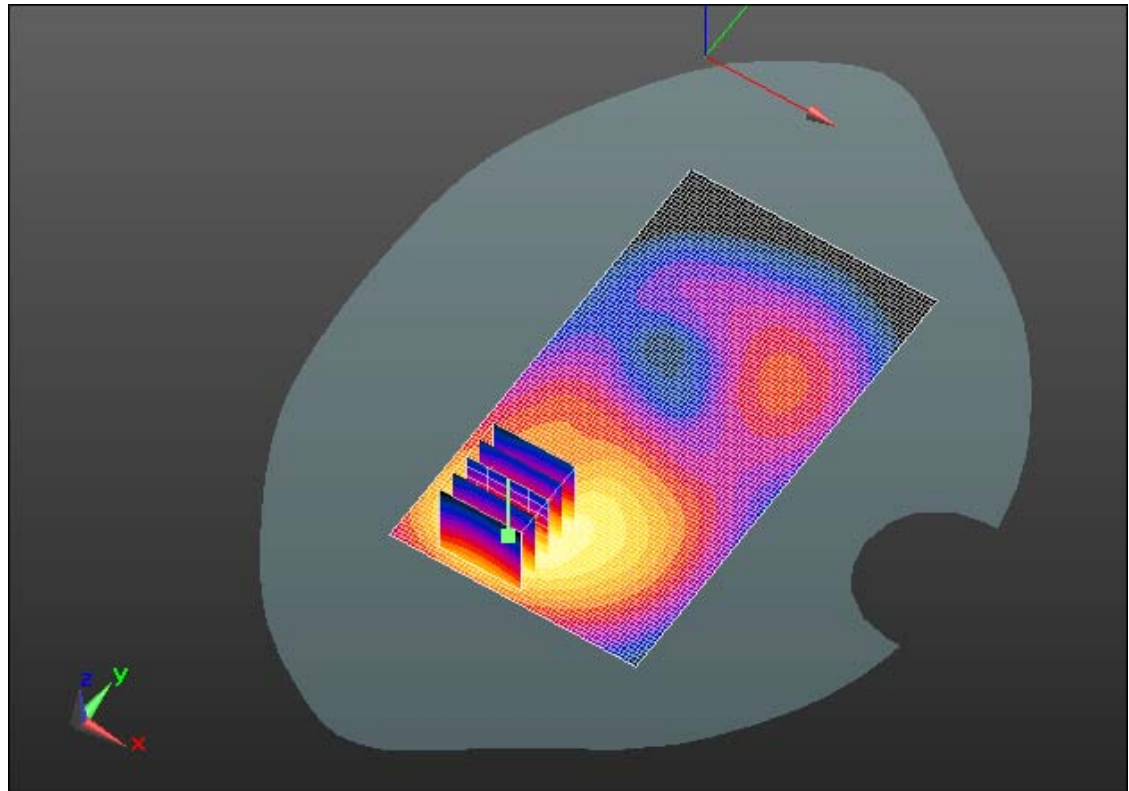
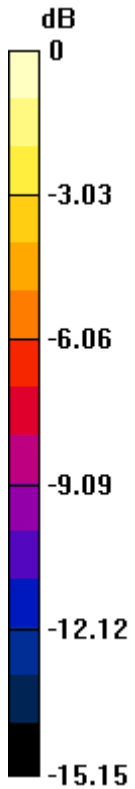
Author Data
Andrew Becker

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0 dB = 0.230mW/g = -12.77 dB mW/g

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Date/Time: 10/24/2012 12:10:51 AM

Test Laboratory: RIM Testing Services

Vertical_Holster_Front_GPRS1900_mid_chan_amb_temp_23.7_liq_tem p_21.7C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: GPRS 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.485$ mho/m; $\epsilon_r = 51.584$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.076 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

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

Reference Value = 3.910 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.1010

SAR(1 g) = 0.066 mW/g; SAR(10 g) = 0.042 mW/g

Maximum value of SAR (measured) = 0.075 mW/g

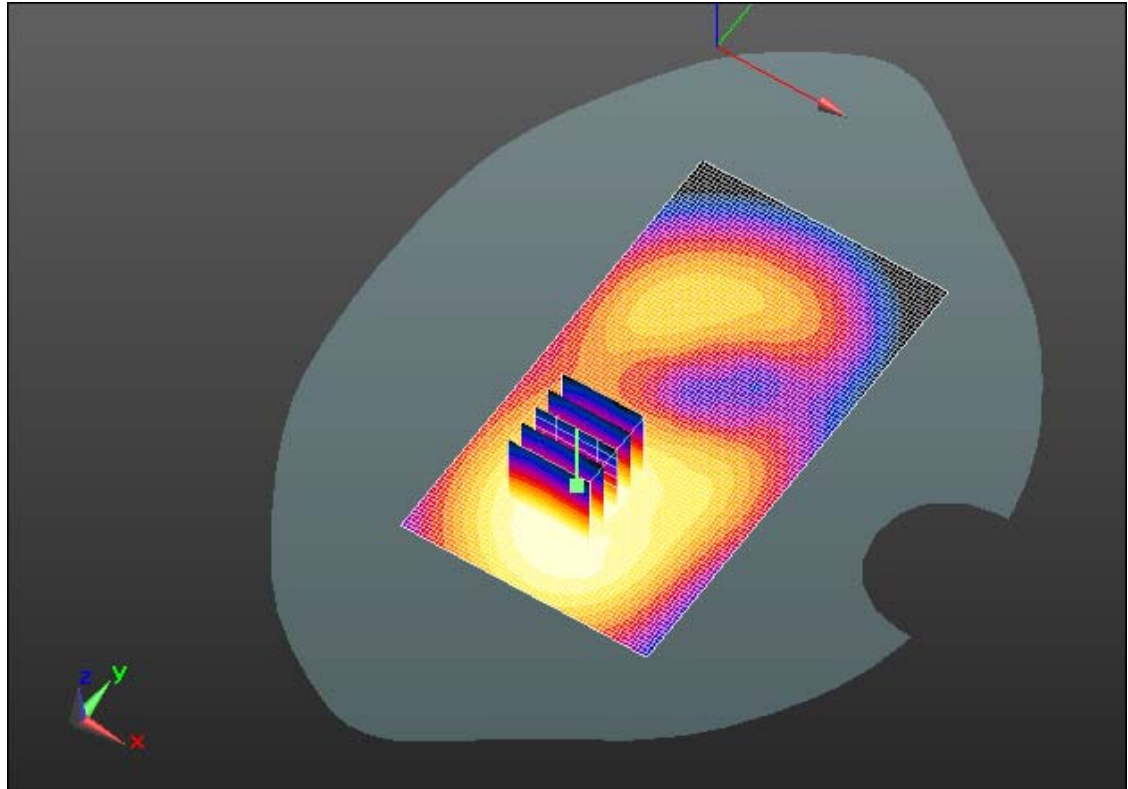
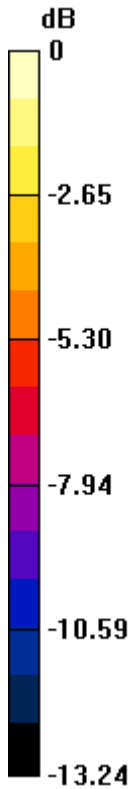
Author Data
Andrew Becker

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0 dB = 0.080mW/g = -21.94 dB mW/g

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Date/Time: 10/2/2012 10:01:45 AM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_CDMA1900_low_chan_amb_temp_23.5_liq_temp_22.8C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: CDMA 1900; Frequency: 1851.25 MHz

Medium parameters used (interpolated): $f = 1851.25$ MHz; $\sigma = 1.532$ mho/m; $\epsilon_r = 51.196$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.081 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:

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

Reference Value = 11.055 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.4500

SAR(1 g) = 0.901 mW/g; SAR(10 g) = 0.530 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.033 mW/g

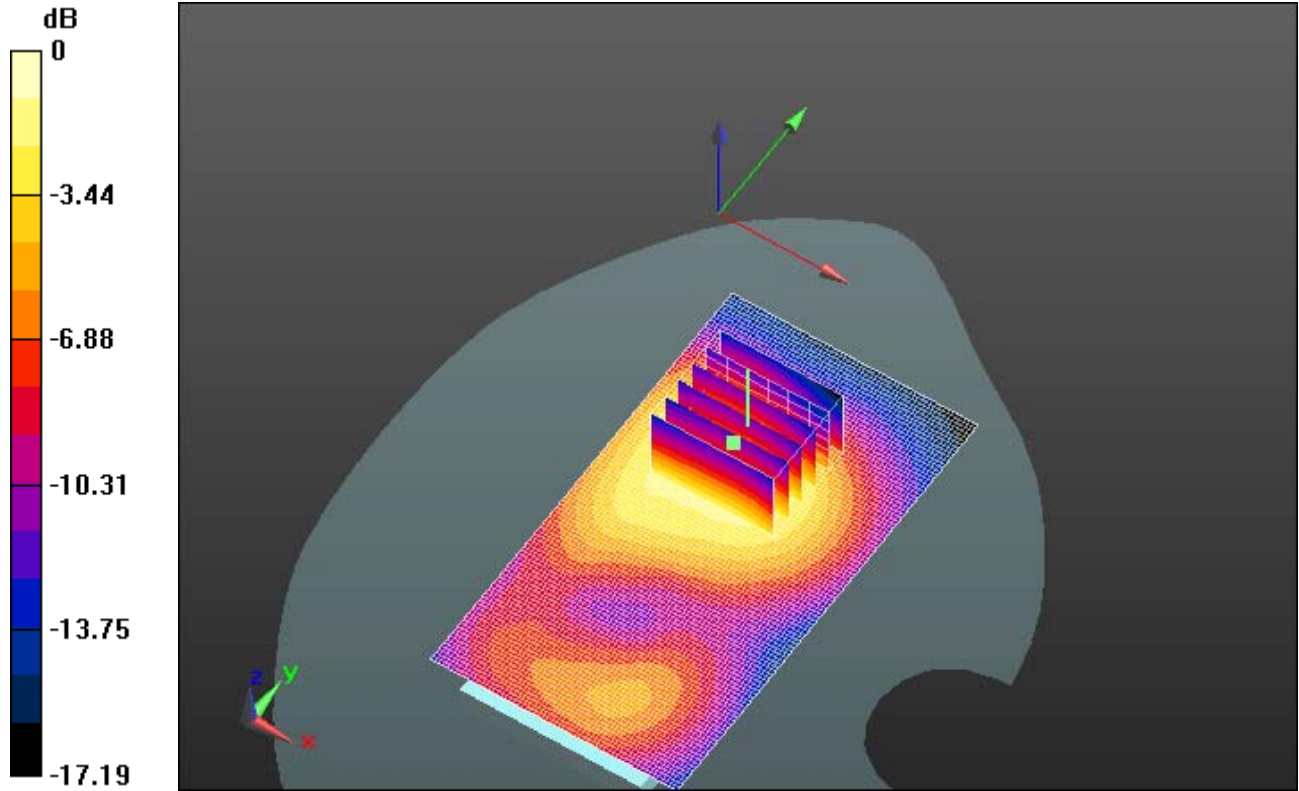
Author Data
Andrew Becker

Dates of Test
**Aug 21 – Nov 23, 2012
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0 dB = 1.030mW/g = 0.26 dB mW/g

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Date/Time: 10/2/2012 9:38:40 AM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_CDMA1900_mid_chan_amb_temp_23.4_liq_temp_22.9C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: CDMA 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.564$ mho/m; $\epsilon_r = 51.079$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 1.234 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:


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

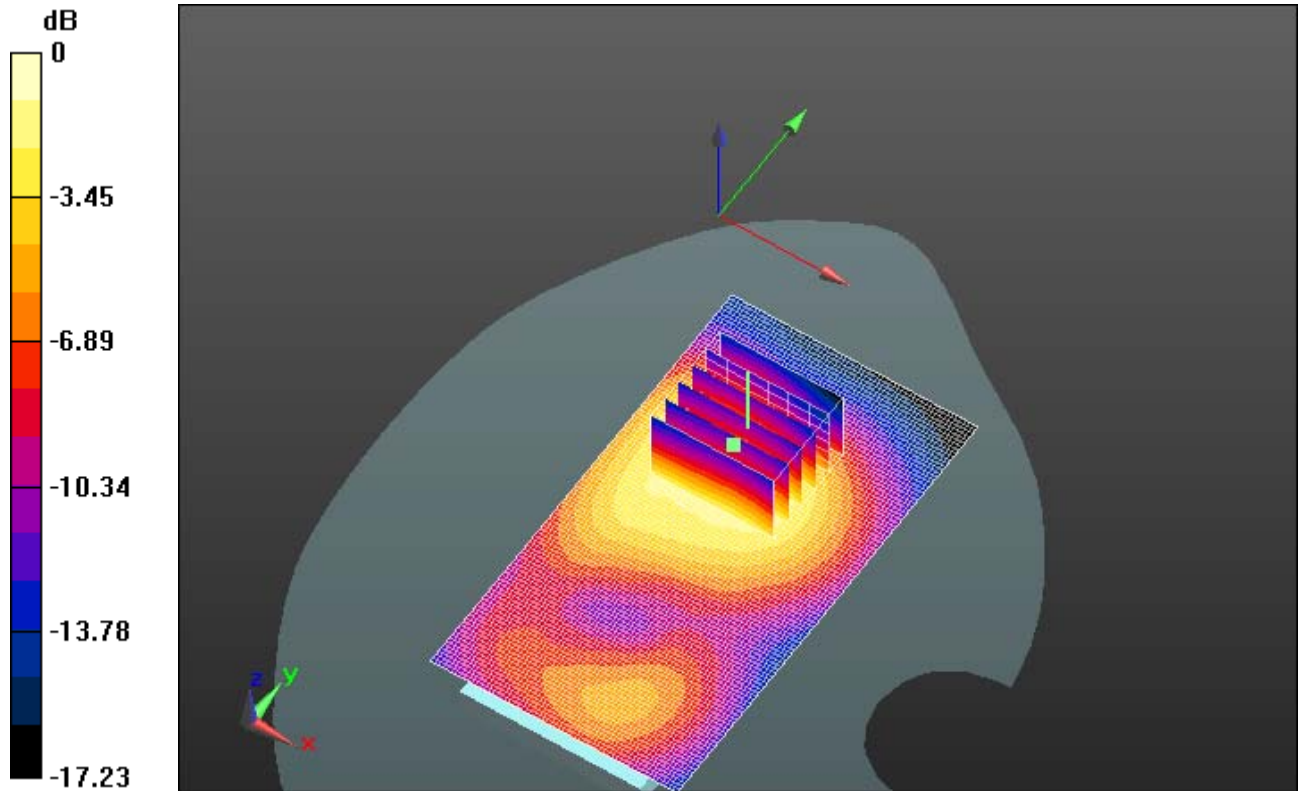
Reference Value = 12.424 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.6710


SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.588 mW/g

Maximum value of SAR (measured) = 1.188 mW/g

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0 dB = 1.190mW/g = 1.51 dB mW/g

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	Author Data Andrew Becker	Dates of Test Aug 21 – Nov 23, 2012 Jan. 07-11, 2013	Test Report No RTS-6012-1211-32 Rev 3	FCC ID: L6ARFA90LW

Date/Time: 10/2/2012 10:24:20 AM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_CDMA1900_high_chan_amb_temp_23.5_liq_temp_22.8C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: CDMA 1900; Frequency: 1908.5 MHz

Medium parameters used (interpolated): $f = 1908.5$ MHz; $\sigma = 1.598$ mho/m; $\epsilon_r = 50.95$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.066 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:

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


Reference Value = 12.594 V/m; Power Drift = -0.06 dB

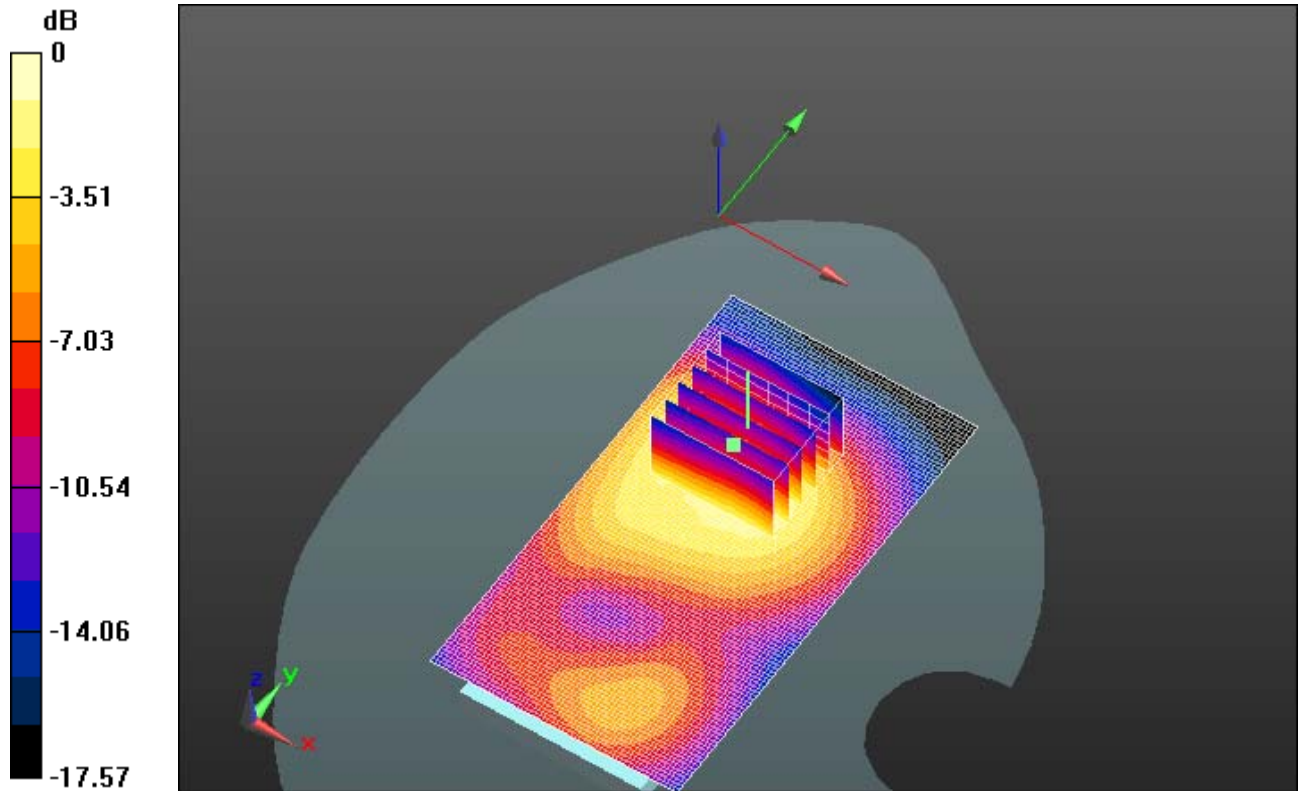
Peak SAR (extrapolated) = 1.5050

SAR(1 g) = 0.897 mW/g; SAR(10 g) = 0.514 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.066 mW/g

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0 dB = 1.070mW/g = 0.59 dB mW/g

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Date/Time: 10/2/2012 11:41:30 AM

Test Laboratory: RIM Testing Services

**Vertical_Holster_Back_CDMA1900_mid_chan_amb_temp_23.3_liq_tem
p_22.7C_T2**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: CDMA 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.564$ mho/m; $\epsilon_r = 51.079$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.751 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:


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

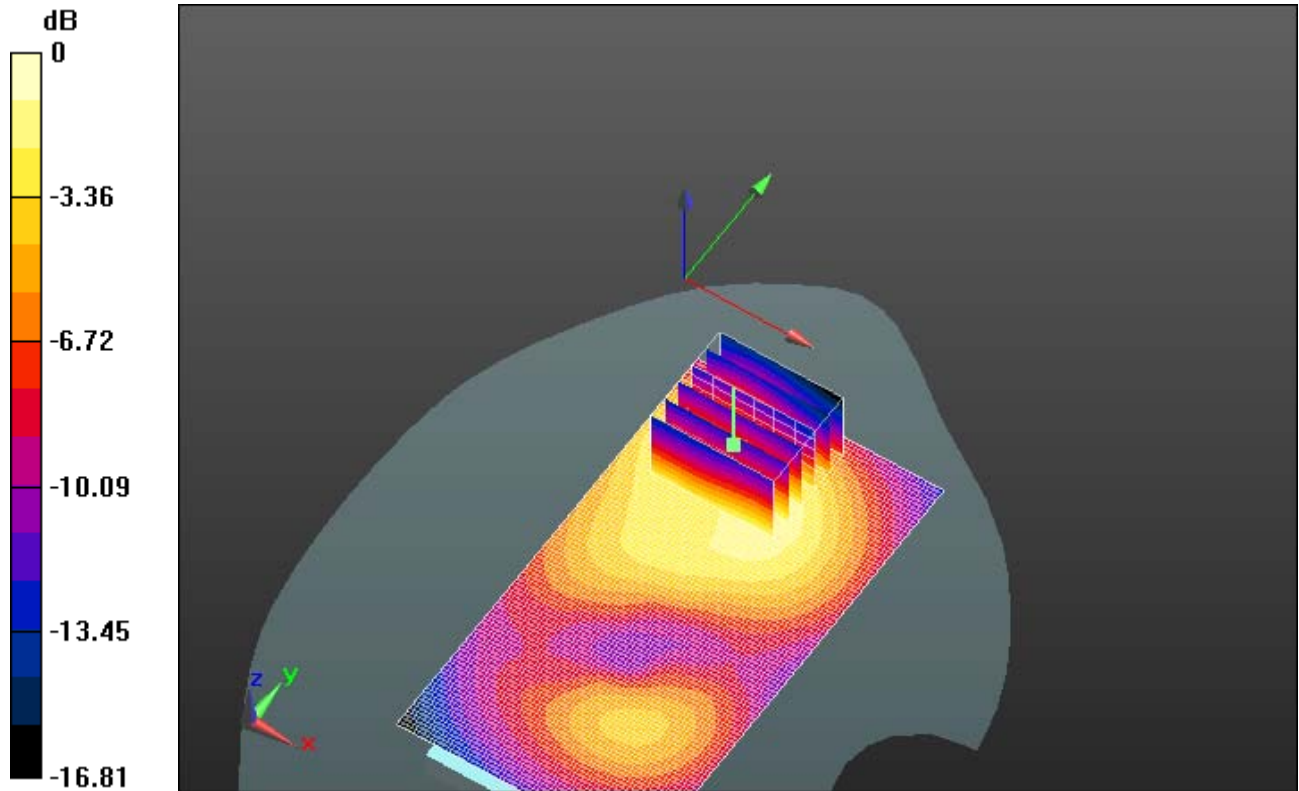
Reference Value = 5.887 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.0280


SAR(1 g) = 0.639 mW/g; SAR(10 g) = 0.377 mW/g

Maximum value of SAR (measured) = 0.764 mW/g

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0 dB = 0.760mW/g = -2.38 dB mW/g

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Date/Time: 10/2/2012 12:19:38 PM

Test Laboratory: RIM Testing Services

Vertical_Holster_Front_CDMA1900_mid_chan_amb_temp_23.3_liq_tem p_22.7C_T2

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: CDMA 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.564$ mho/m; $\epsilon_r = 51.079$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.301 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:


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

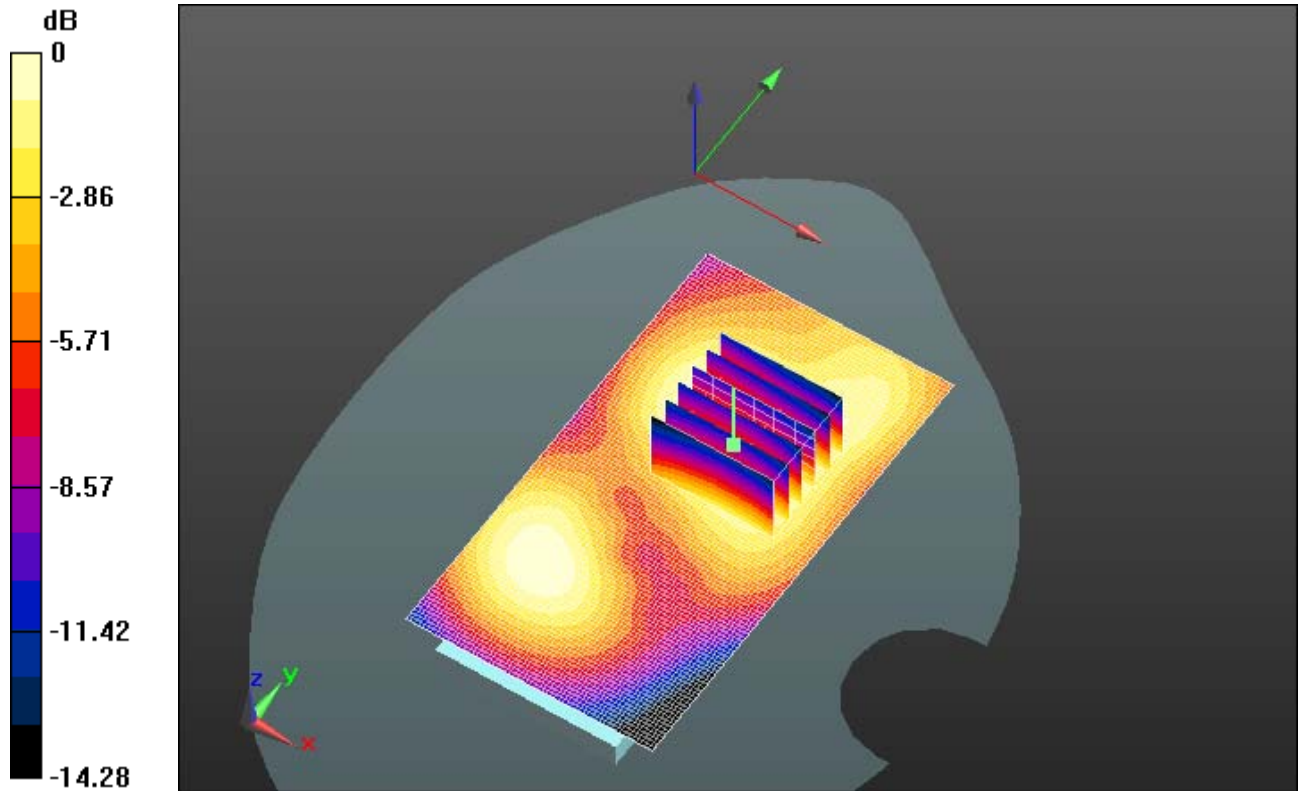
Reference Value = 6.406 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.3760


SAR(1 g) = 0.252 mW/g; SAR(10 g) = 0.166 mW/g

Maximum value of SAR (measured) = 0.293 mW/g

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0 dB = 0.290mW/g = -10.75 dB mW/g

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Date/Time: 10/25/2012 11:40:50 AM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_CDMA1900_low_chan_amb_temp_23.6_liq_temp_22.7C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: CDMA 1900; Frequency: 1851.25 MHz

Medium parameters used (interpolated): $f = 1851.25$ MHz; $\sigma = 1.456$ mho/m; $\epsilon_r = 51.586$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 1.058 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 9.741 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.4660

SAR(1 g) = 0.896 mW/g; SAR(10 g) = 0.530 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.077 mW/g

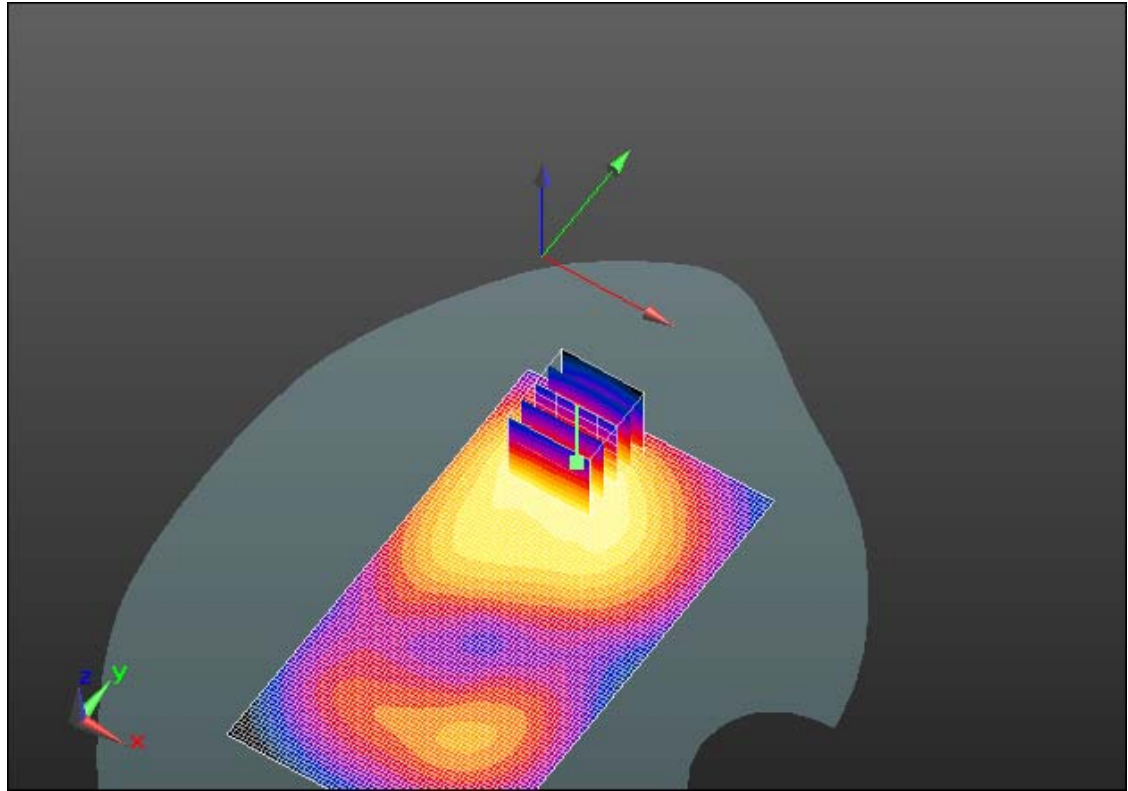
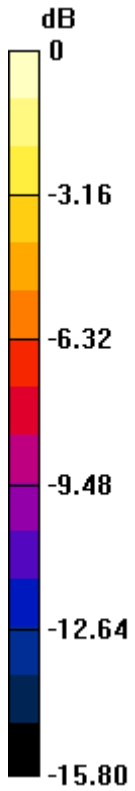
Author Data
Andrew Becker

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L6ARFA90LW

IC ID
2503A-RFA90LW



0 dB = 1.080mW/g = 0.67 dB mW/g

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Date/Time: 11/23/2012 9:42:41 AM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_CDMA1900_mid_chan_amb_temp_23.5_liq_temp_22.6C

DUT: BlackBerry Smartphone; Type: Sample; Serial: 332F96D2

Communication System: CDMA 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.359$ mho/m; $\epsilon_r = 38.547$; $\rho = 1000$ kg/m³

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 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 1.110 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (6x6x7)/Cube 0:

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

Reference Value = 12.301 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.6120

SAR(1 g) = 0.952 mW/g; SAR(10 g) = 0.553 mW/g

Maximum value of SAR (measured) = 1.153 mW/g


Configuration/Touch position -/Zoom Scan 2 (5x5x7) (7x9x7)/Cube 0:

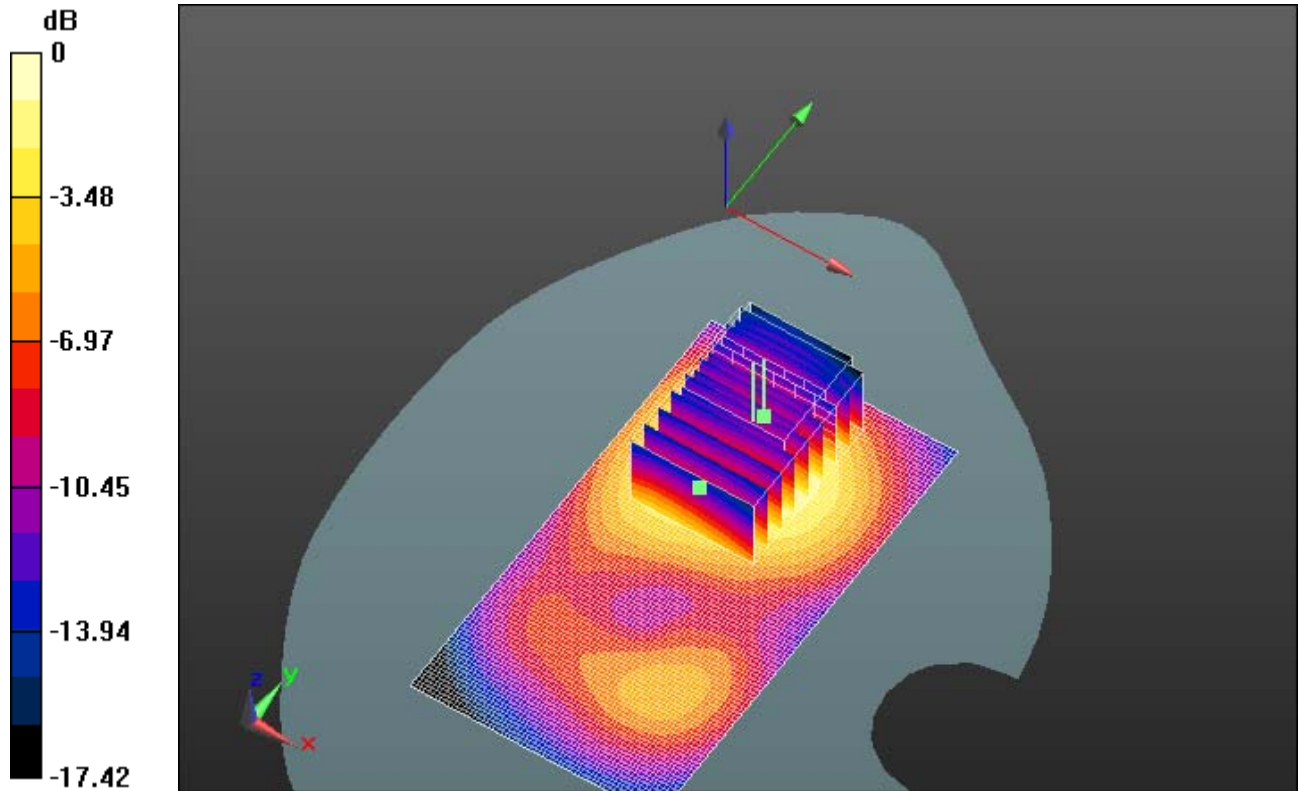
Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 12.301 V/m; Power Drift = -0.01 dB


Peak SAR (extrapolated) = 1.5780

SAR(1 g) = 0.947 mW/g; SAR(10 g) = 0.553 mW/g

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0 dB = 1.150mW/g = 1.21 dB mW/g

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Date/Time: 10/25/2012 11:58:43 AM

Test Laboratory: RIM Testing Services

**15mm_Spacer_Back_CDMA1900_high_chan_amb_temp_23.9_liq_temp
_22.5C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: CDMA 1900; Frequency: 1908.5 MHz
Medium parameters used (interpolated): $f = 1908.5$ MHz; $\sigma = 1.518$ mho/m; $\epsilon_r = 51.566$;
 $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)


Maximum value of SAR (interpolated) = 1.092 mW/g

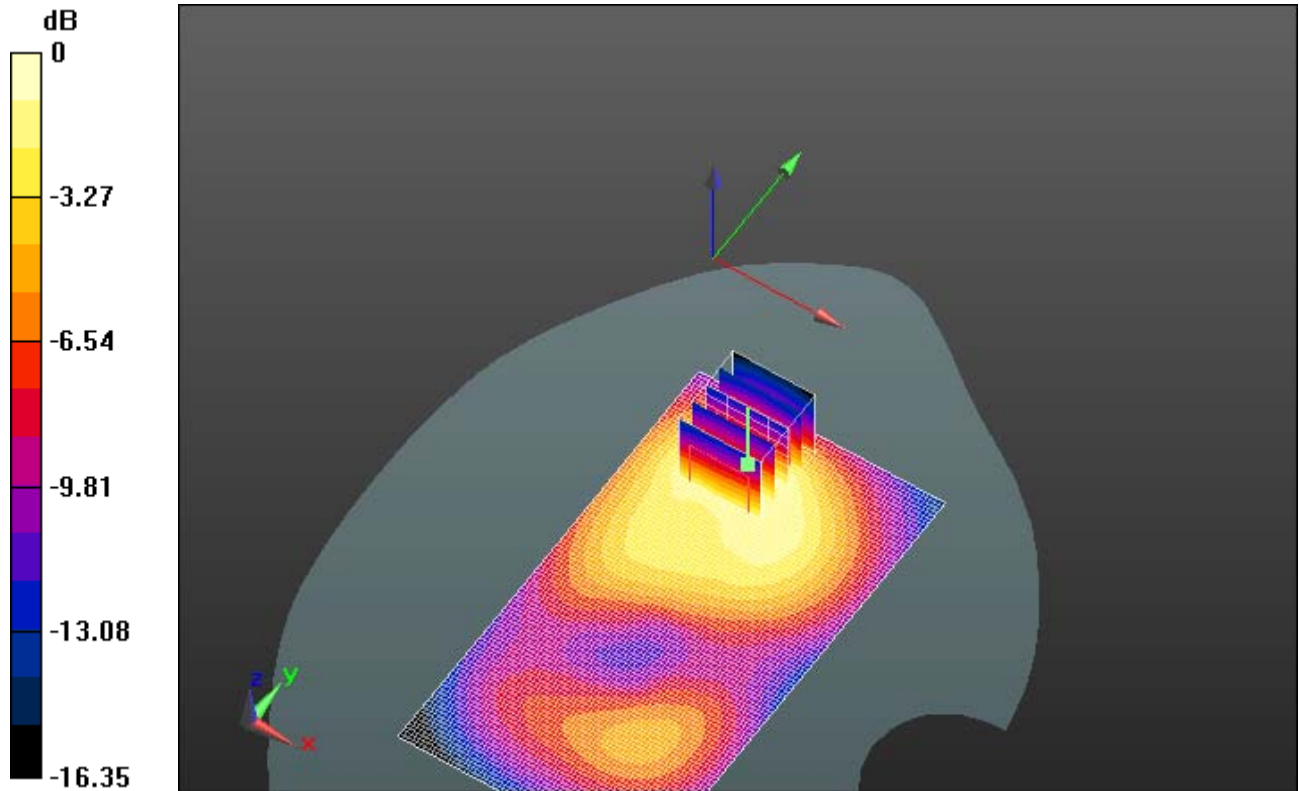
Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
Reference Value = 10.228 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.5020
SAR(1 g) = 0.902 mW/g; SAR(10 g) = 0.524 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.094 mW/g

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0 dB = 1.090mW/g = 0.75 dB mW/g

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Date/Time: 11/16/2012 12:46:43 PM

Test Laboratory: RIM Testing Services

Vertical_Holster_Back_CDMA1900_mid_chan_amb_temp_23.5_liq_tem p_22.4C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: CDMA 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.555$ mho/m; $\epsilon_r = 51.231$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.864 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (6x6x7)/Cube 0:

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

Reference Value = 6.137 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.2420

SAR(1 g) = 0.765 mW/g; SAR(10 g) = 0.445 mW/g


Maximum value of SAR (measured) = 0.904 mW/g

Configuration/Touch position -/Zoom Scan 2 (5x5x7) (8x7x7)/Cube 0:

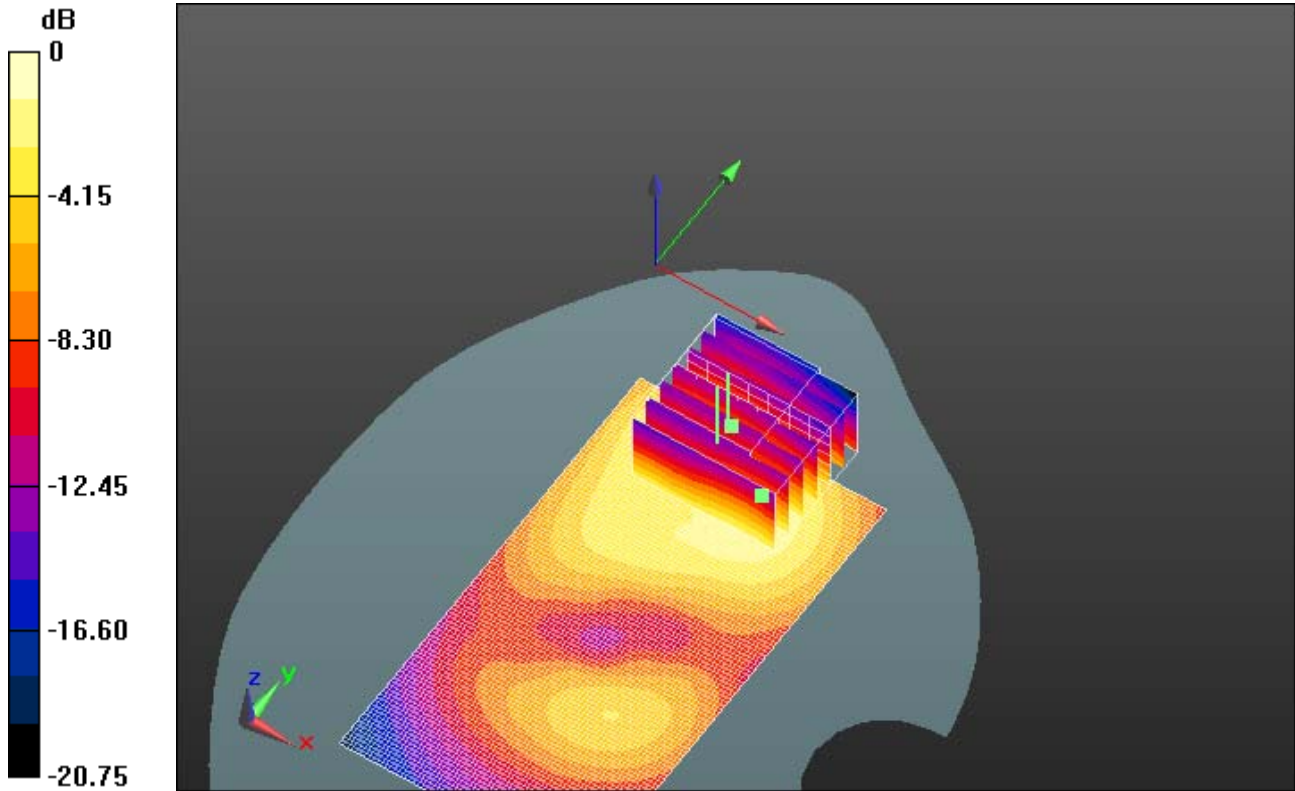
Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm

Reference Value = 6.137 V/m; Power Drift = -0.0015 dB


Peak SAR (extrapolated) = 1.2270

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SAR(1 g) = 0.758 mW/g; SAR(10 g) = 0.443 mW/g
 Maximum value of SAR (measured) = 0.888 mW/g



0 dB = 0.890mW/g = -1.01 dB mW/g

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Date/Time: 11/16/2012 2:02:27 PM

Test Laboratory: RIM Testing Services

Vertical_Holster_Front_CDMA1900_mid_chan_amb_temp_23.7_liq_tem p_22.6C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: CDMA 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.555$ mho/m; $\epsilon_r = 51.231$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.92, 4.92, 4.92); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x111x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (interpolated) = 0.287 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

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

Reference Value = 6.858 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.3640

SAR(1 g) = 0.241 mW/g; SAR(10 g) = 0.153 mW/g

Maximum value of SAR (measured) = 0.284 mW/g

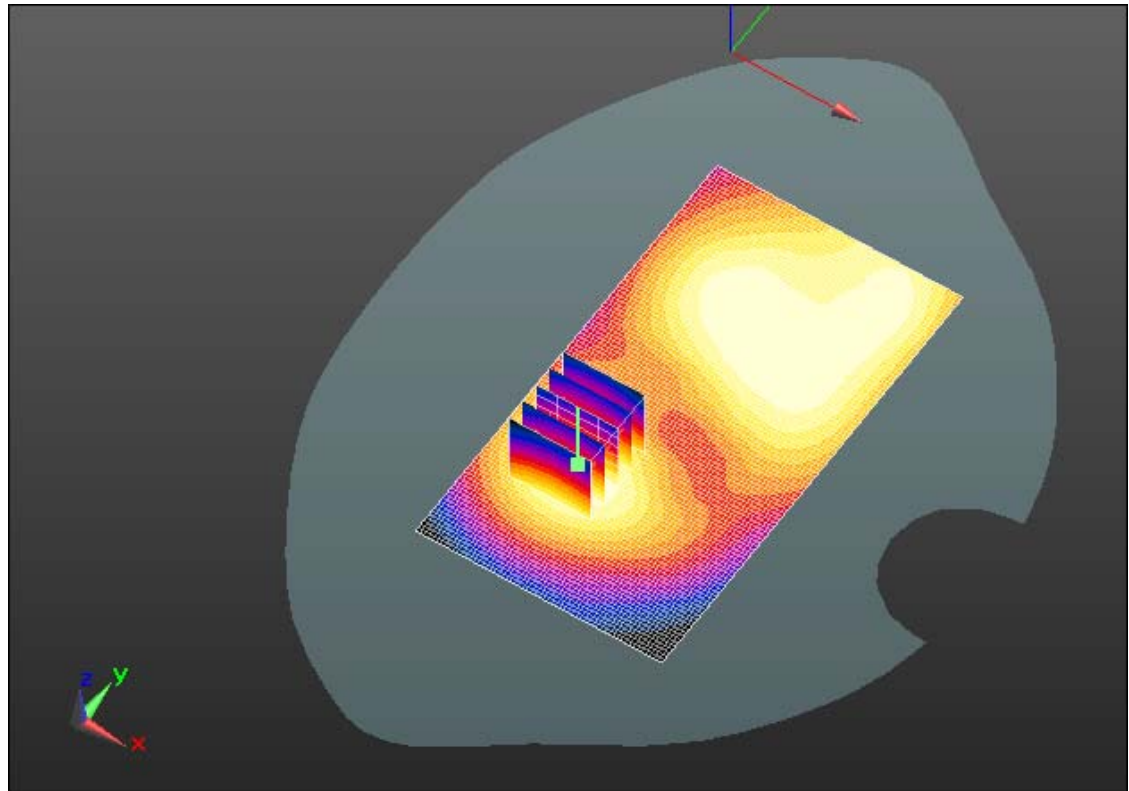
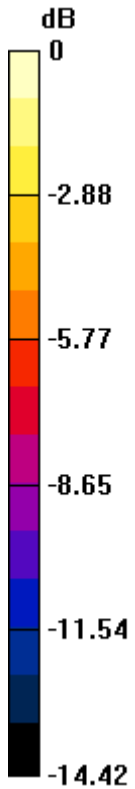
Author Data
Andrew Becker

Dates of Test
**Aug 21 – Nov 23, 2012
Jan. 07-11, 2013**


Test Report No
**RTS-6012-1211-32
Rev 3**

FCC ID:
L6ARFA90LW

IC ID
2503A-RFA90LW



0 dB = 0.280mW/g = -11.06 dB mW/g

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Date/Time: 8/23/2012 11:22:16 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_802.11b_high_chan_11_amb_temp_23.3_liq_temp_22.5C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: 802.11 b (2450); Frequency: 2462 MHz

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 52.604$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.3, 4.3, 4.3); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.214 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

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

Reference Value = 3.280 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.3240

SAR(1 g) = 0.170 mW/g; SAR(10 g) = 0.089 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.215 mW/g

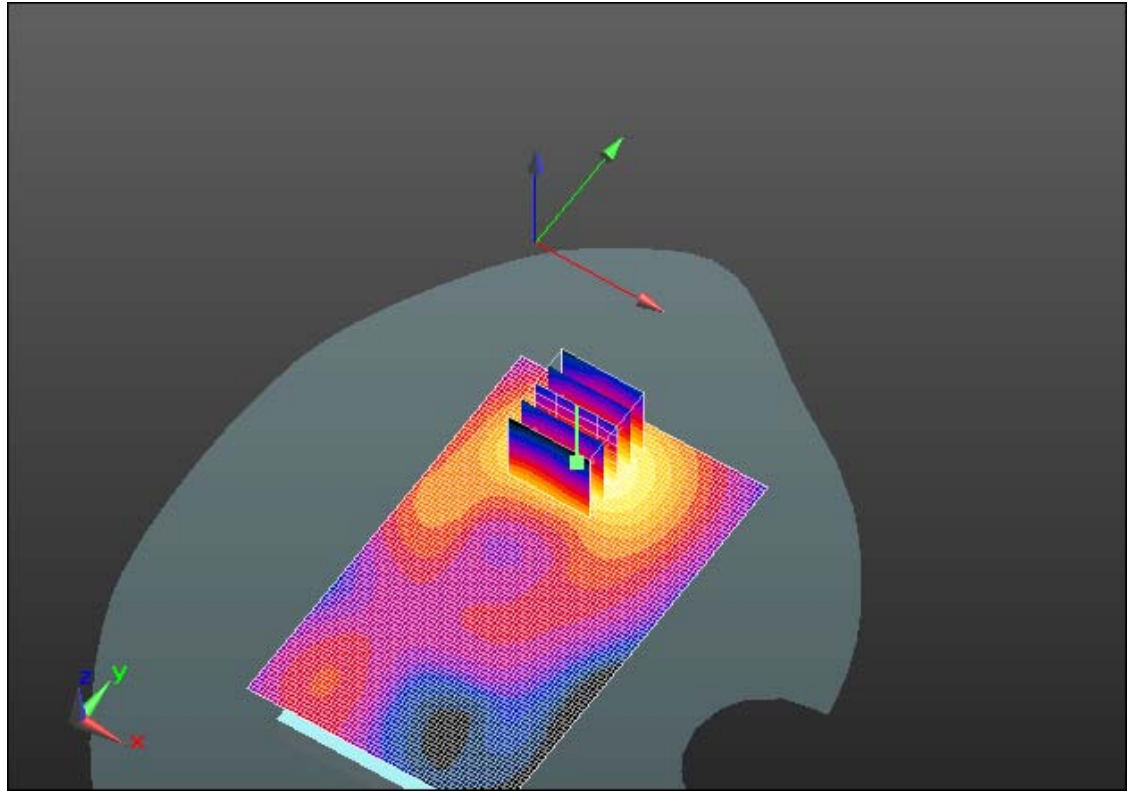
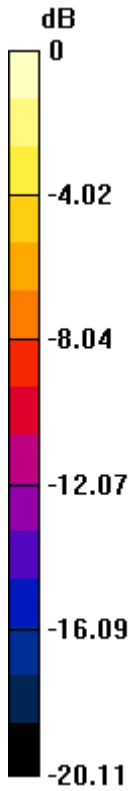
Author Data
Andrew Becker

Dates of Test
**Aug 21 – Nov 23, 2012
Jan. 07-11, 2013**


Test Report No
**RTS-6012-1211-32
Rev 3**

FCC ID:
L6ARFA90LW

IC ID
2503A-RFA90LW



0 dB = 0.210mW/g = -13.56 dB mW/g

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	Author Data Andrew Becker	Dates of Test Aug 21 – Nov 23, 2012 Jan. 07-11, 2013	Test Report No RTS-6012-1211-32 Rev 3	FCC ID: L6ARFA90LW

Date/Time: 8/23/2012 11:38:43 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Front_802.11b_high_chan_11_amb_temp_23.3_liq_temp_22.5C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: 802.11 b (2450); Frequency: 2462 MHz

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 52.604$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.3, 4.3, 4.3); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.213 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

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

Reference Value = 3.540 V/m; Power Drift = 0.41 dB

Peak SAR (extrapolated) = 0.3510

SAR(1 g) = 0.186 mW/g; SAR(10 g) = 0.096 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.226 mW/g

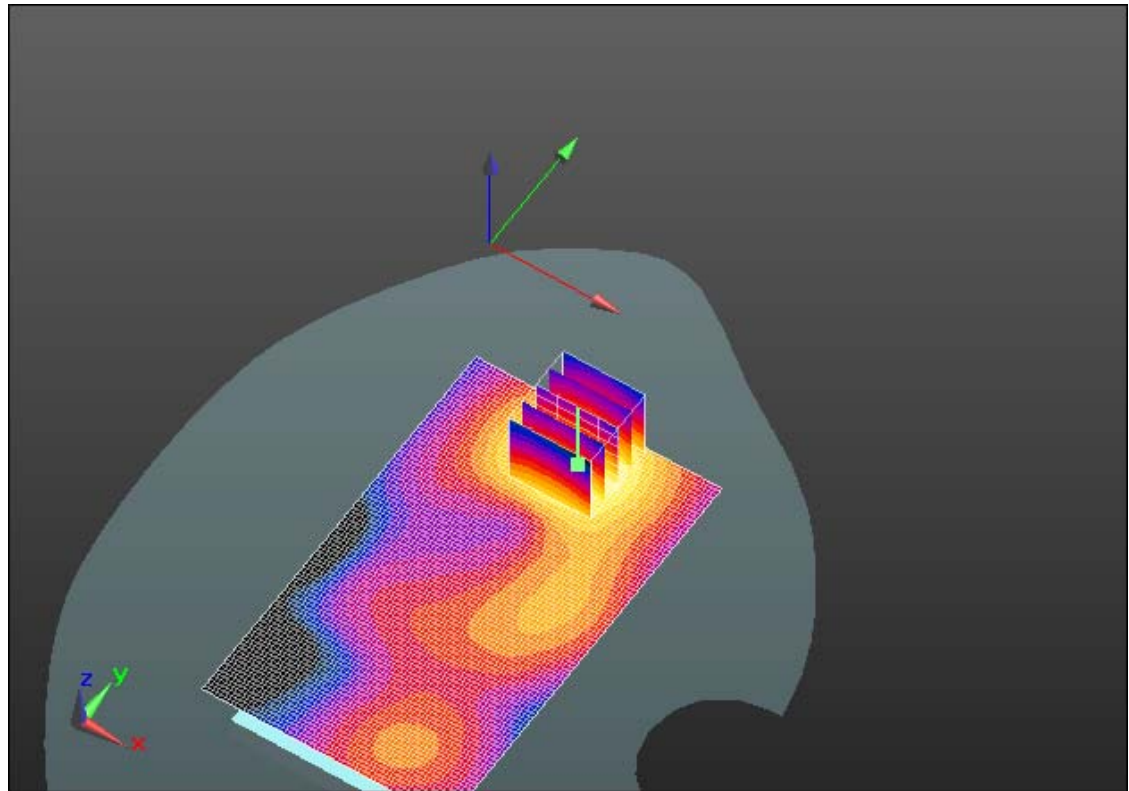
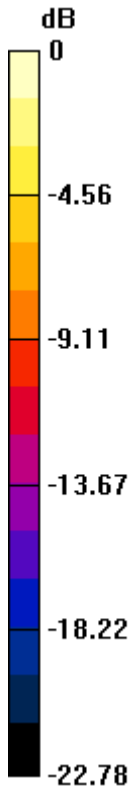
Author Data
Andrew Becker

Dates of Test
**Aug 21 – Nov 23, 2012
Jan. 07-11, 2013**


Test Report No
**RTS-6012-1211-32
Rev 3**

FCC ID:
L6ARFA90LW

IC ID
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0 dB = 0.230mW/g = -12.77 dB mW/g

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Date/Time: 8/24/2012 12:10:57 AM

Test Laboratory: RIM Testing Services

Vertical_Holster_Back_802.11b_high_chan_amb_temp_23.3_liq_temp_2 2.8C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: 802.11 b (2450); Frequency: 2462 MHz

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 52.604$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.3, 4.3, 4.3); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.170 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

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

Reference Value = 2.071 V/m; Power Drift = 0.31 dB

Peak SAR (extrapolated) = 0.2490

SAR(1 g) = 0.136 mW/g; SAR(10 g) = 0.075 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.169 mW/g

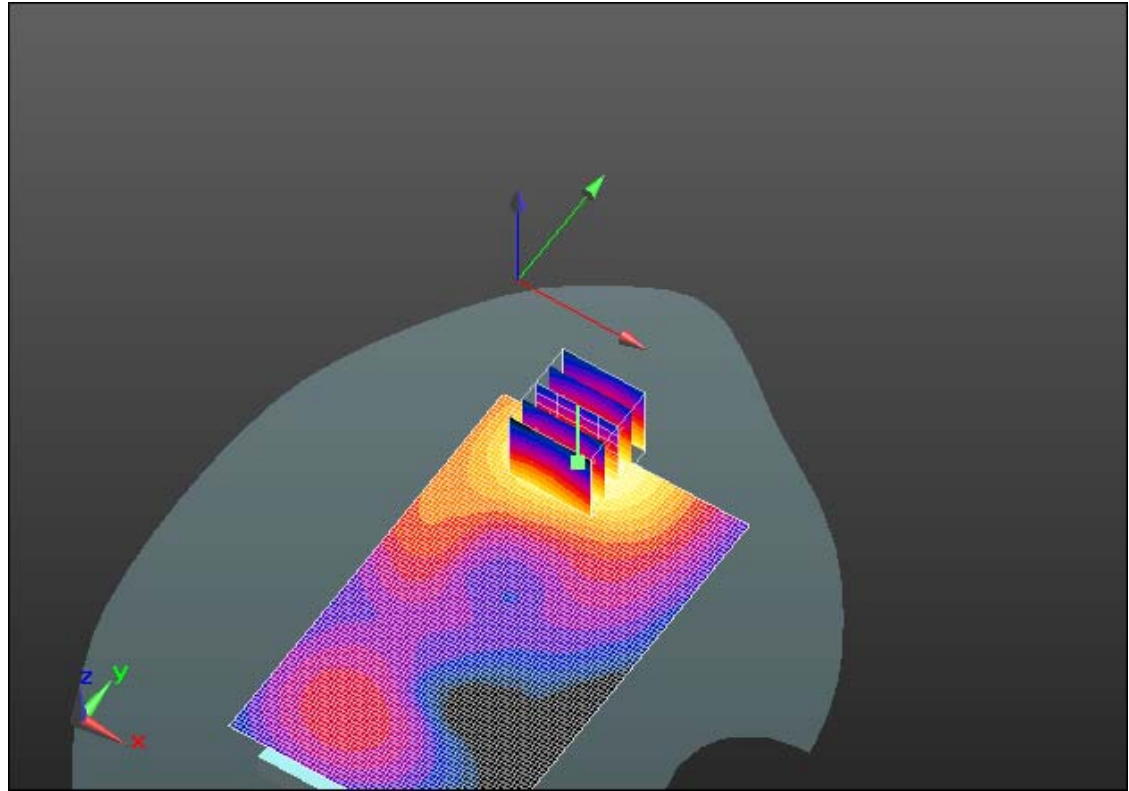
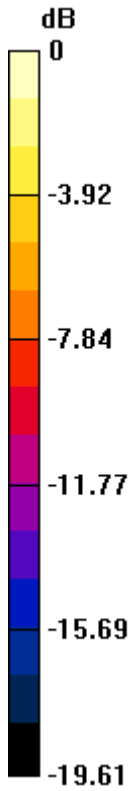
Author Data
Andrew Becker

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Aug 21 – Nov 23, 2012
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RTS-6012-1211-32
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0 dB = 0.170mW/g = -15.39 dB mW/g

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Date/Time: 8/24/2012 12:28:10 AM

Test Laboratory: RIM Testing Services

Vertical_Holster_Front_802.11b_high_chan_amb_temp_23.3_liq_temp_2 2.8C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: 802.11 b (2450); Frequency: 2462 MHz

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.94$ mho/m; $\epsilon_r = 52.604$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.3, 4.3, 4.3); Calibrated: 1/11/2012
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (61x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.199 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

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


Reference Value = 3.123 V/m; Power Drift = -0.10 dB

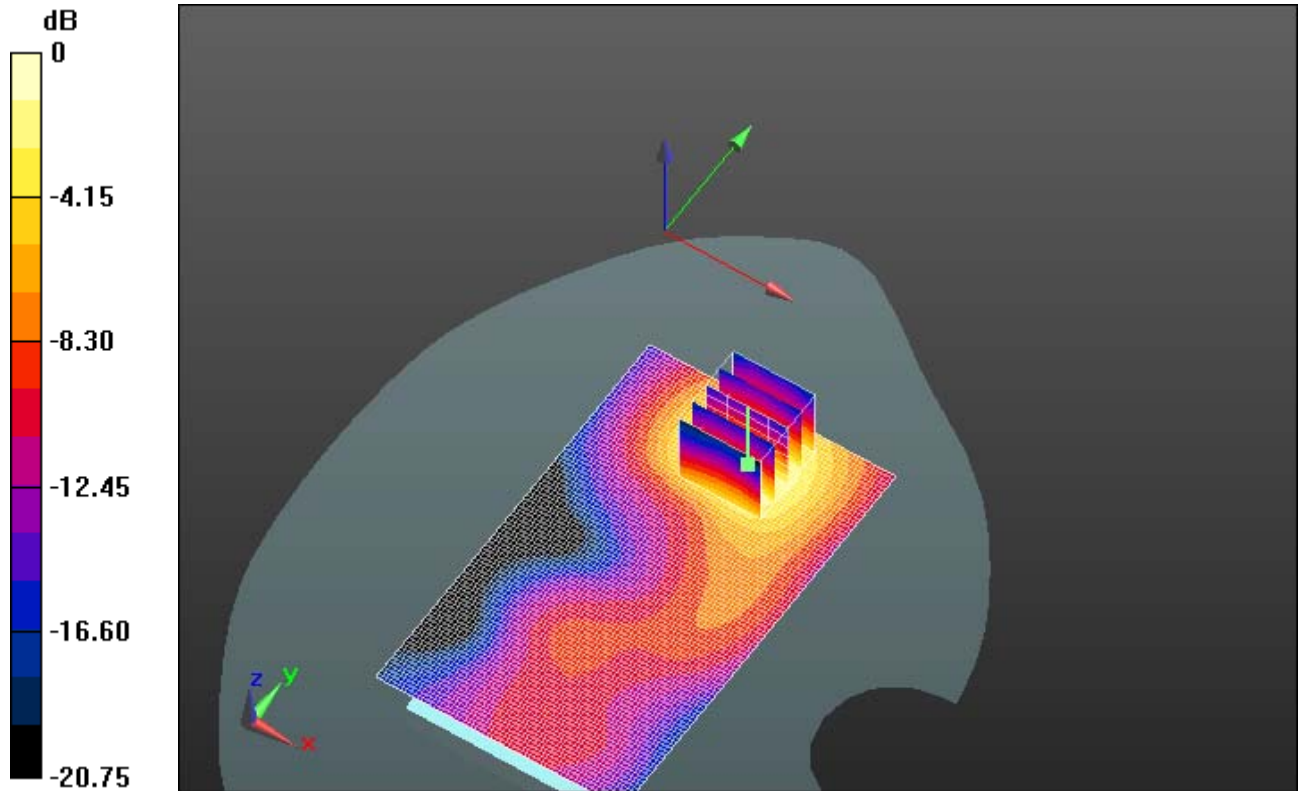
Peak SAR (extrapolated) = 0.3040

SAR(1 g) = 0.166 mW/g; SAR(10 g) = 0.090 mW/g


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.206 mW/g

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0 dB = 0.210mW/g = -13.56 dB mW/g

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Date/Time: 8/21/2012 11:38:06 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_802.11a_low_band_chan_36_amb_temp_23.9_liq_temp_21.4C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A4A5839

Communication System: 802.11a ; Frequency: 5180 MHz

Medium parameters used: $f = 5180$ MHz; $\sigma = 5.275$ mho/m; $\epsilon_r = 47.175$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3592; ConvF(4.05, 4.05, 4.05); Calibrated: 11/16/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position - 2/Area Scan (91x151x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.228 mW/g

Configuration/Touch position - 2/Zoom Scan -Ext(24x24x20), Step

(4x4x2.5mm), dist=2mm (8x8x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 5.472 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.3910

SAR(1 g) = 0.123 mW/g; SAR(10 g) = 0.050 mW/g

Maximum value of SAR (measured) = 0.220 mW/g

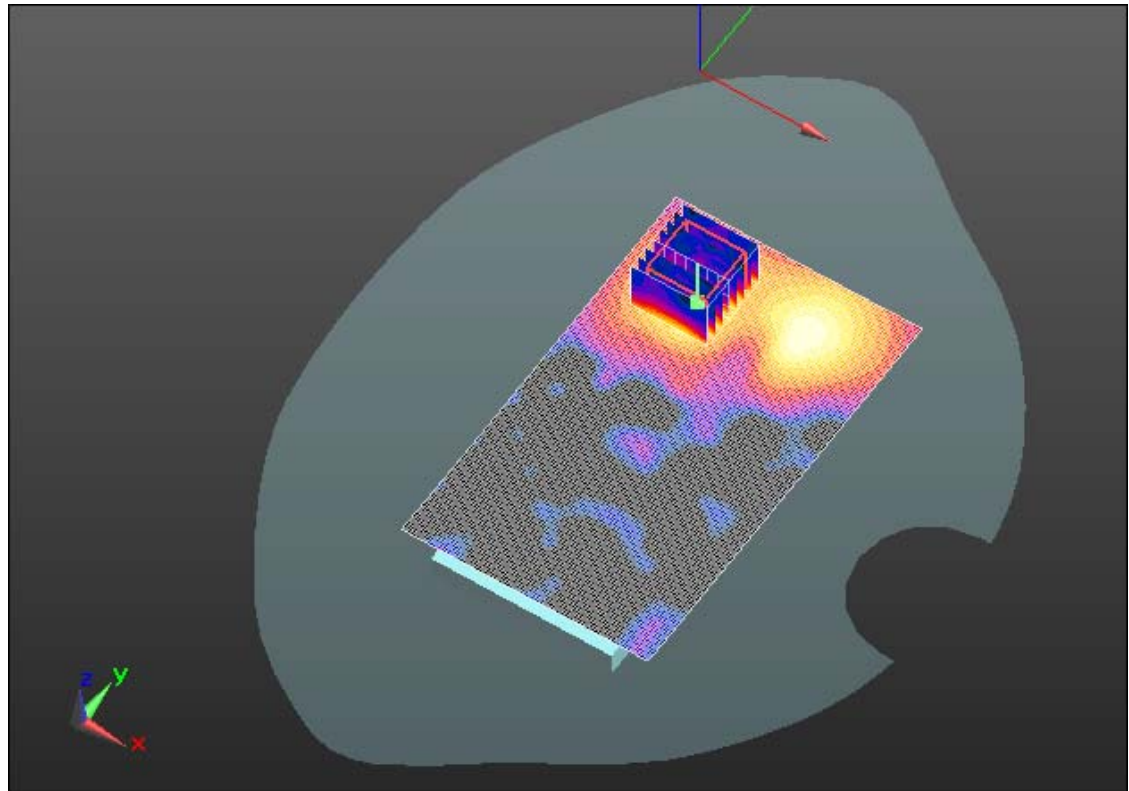
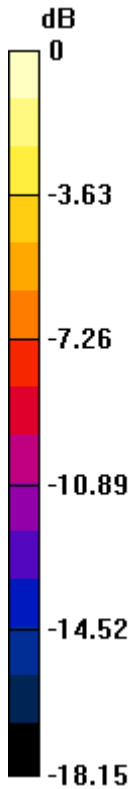
Author Data
Andrew Becker

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0 dB = 0.220mW/g = -13.15 dB mW/g

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Date/Time: 8/22/2012 12:35:04 AM

Test Laboratory: RIM Testing Services

**15mm_Spacer_Back_802.11a_mid_band_chan_52_amb_temp_24.0_liq
_temp_21.4C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A4A5839

Communication System: 802.11a ; Frequency: 5260 MHz

Medium parameters used: $f = 5260$ MHz; $\sigma = 5.384$ mho/m; $\epsilon_r = 47.009$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3592; ConvF(4.05, 4.05, 4.05); Calibrated: 11/16/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position - 2/Area Scan (91x151x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.290 mW/g

Configuration/Touch position - 2/Zoom Scan -Ext(24x24x20), Step

(4x4x2.5mm), dist=2mm (9x9x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 6.313 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.5230

SAR(1 g) = 0.158 mW/g; SAR(10 g) = 0.063 mW/g

Maximum value of SAR (measured) = 0.288 mW/g

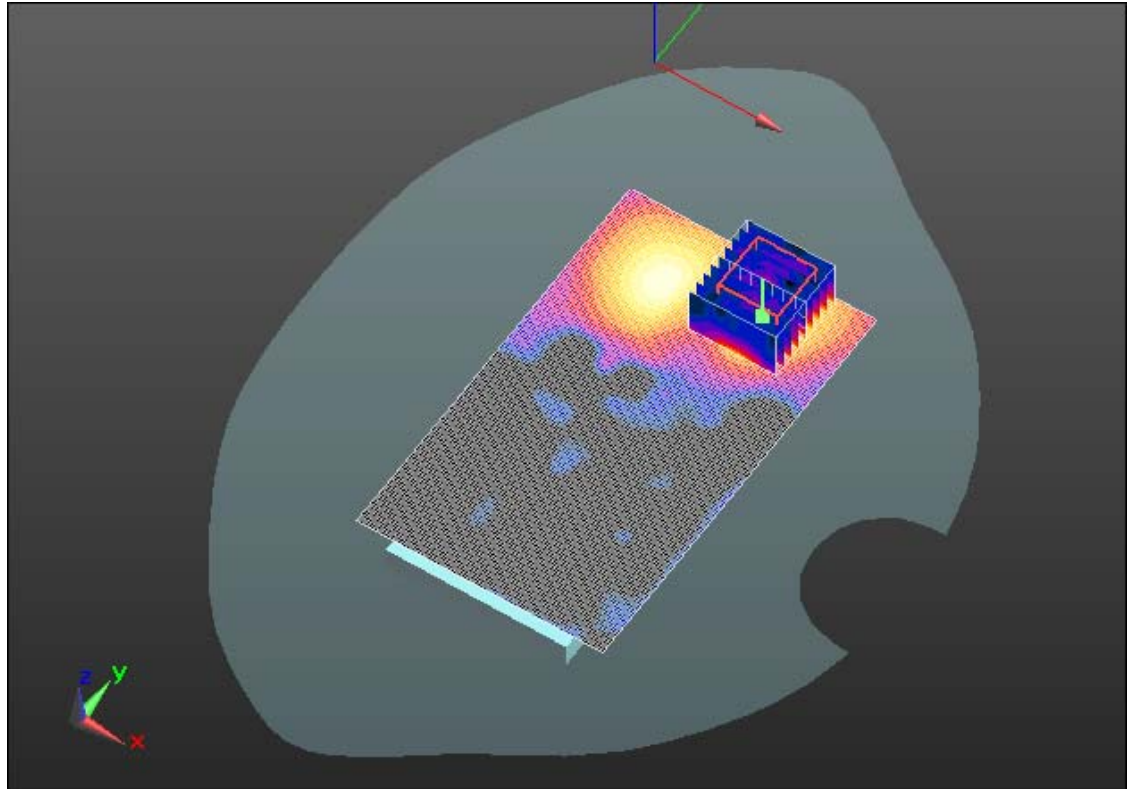
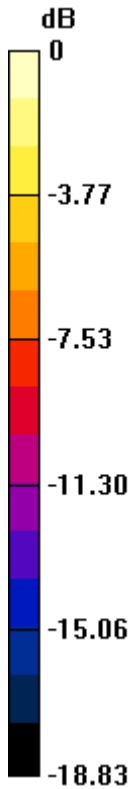
Author Data
Andrew Becker

Dates of Test
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Test Report No
RTS-6012-1211-32
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0 dB = 0.290mW/g = -10.75 dB mW/g

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Date/Time: 8/22/2012 1:59:12 AM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_802.11a_upper_band_I_chan_104_amb_temp_24.1_liq_temp_21.4C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A4A5839

Communication System: 802.11a ; Frequency: 5520 MHz

Medium parameters used: $f = 5520$ MHz; $\sigma = 5.657$ mho/m; $\epsilon_r = 46.723$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3592; ConvF(3.62, 3.62, 3.62); Calibrated: 11/16/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position - 2/Area Scan (91x151x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.228 mW/g

Configuration/Touch position - 2/Zoom Scan -Ext(24x24x20), Step

(4x4x2.5mm), dist=2mm (9x9x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 5.125 V/m; Power Drift = 0.21 dB

Peak SAR (extrapolated) = 0.4210

SAR(1 g) = 0.120 mW/g; SAR(10 g) = 0.048 mW/g

Maximum value of SAR (measured) = 0.217 mW/g

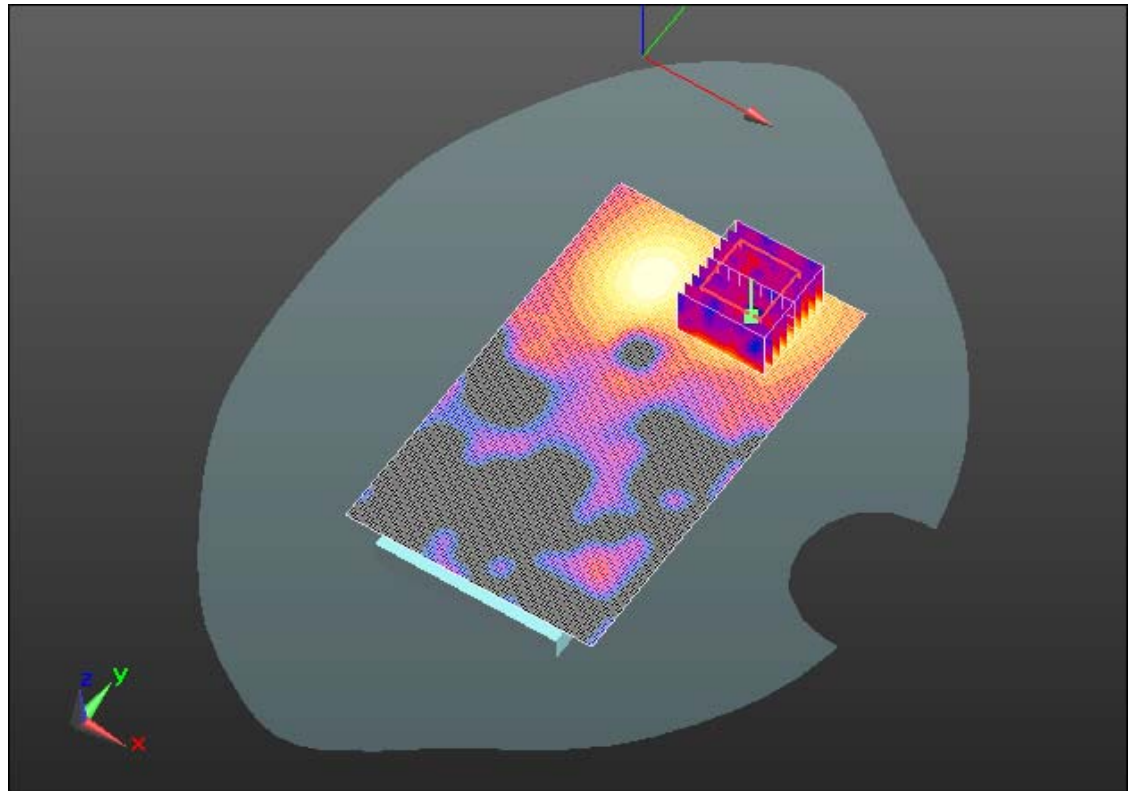
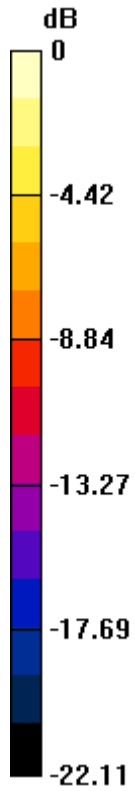
Author Data
Andrew Becker

Dates of Test
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0 dB = 0.220mW/g = -13.15 dB mW/g

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Date/Time: 8/22/2012 8:56:57 AM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_802.11a_upper_band_II_chan_165_amb_temp_23
.3_liq_temp_22.5C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A4A5839

Communication System: 802.11a ; Frequency: 5825 MHz

Medium parameters used: $f = 5825$ MHz; $\sigma = 5.949$ mho/m; $\epsilon_r = 46.613$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3592; ConvF(3.54, 3.54, 3.54); Calibrated: 11/16/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position - 2/Area Scan (91x151x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.604 mW/g

Configuration/Touch position - 2/Zoom Scan -Ext(24x24x20), Step


(4x4x2.5mm), dist=2mm (9x9x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

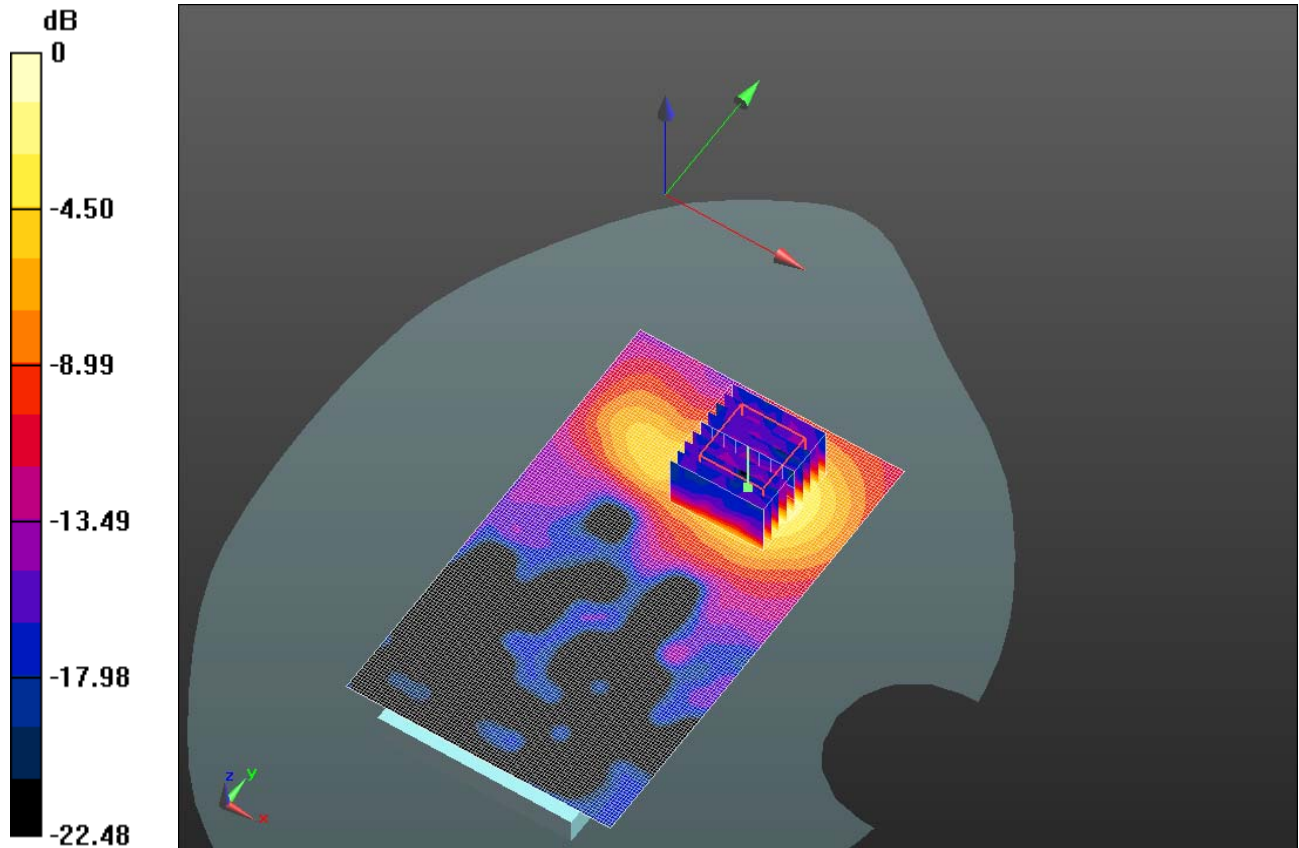
Reference Value = 1.814 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.0160


SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.127 mW/g

Maximum value of SAR (measured) = 0.582 mW/g

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0 dB = 0.580mW/g = -4.73 dB mW/g

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Date/Time: 8/22/2012 9:47:13 AM

Test Laboratory: RIM Testing Services

15mm_Spacer_Front_802.11a_upper_band_II_chan_165_amb_temp_23
.5_liq_temp_22.4C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A4A5839

Communication System: 802.11a ; Frequency: 5825 MHz

Medium parameters used: $f = 5825$ MHz; $\sigma = 5.949$ mho/m; $\epsilon_r = 46.613$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3592; ConvF(3.54, 3.54, 3.54); Calibrated: 11/16/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position - 2/Area Scan (91x151x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.090 mW/g

Configuration/Touch position - 2/Zoom Scan -Ext(24x24x20), Step

(4x4x2.5mm), dist=2mm (9x12x9)/Cube 0: Measurement grid: $dx=4$ mm,


$dy=4$ mm, $dz=2.5$ mm

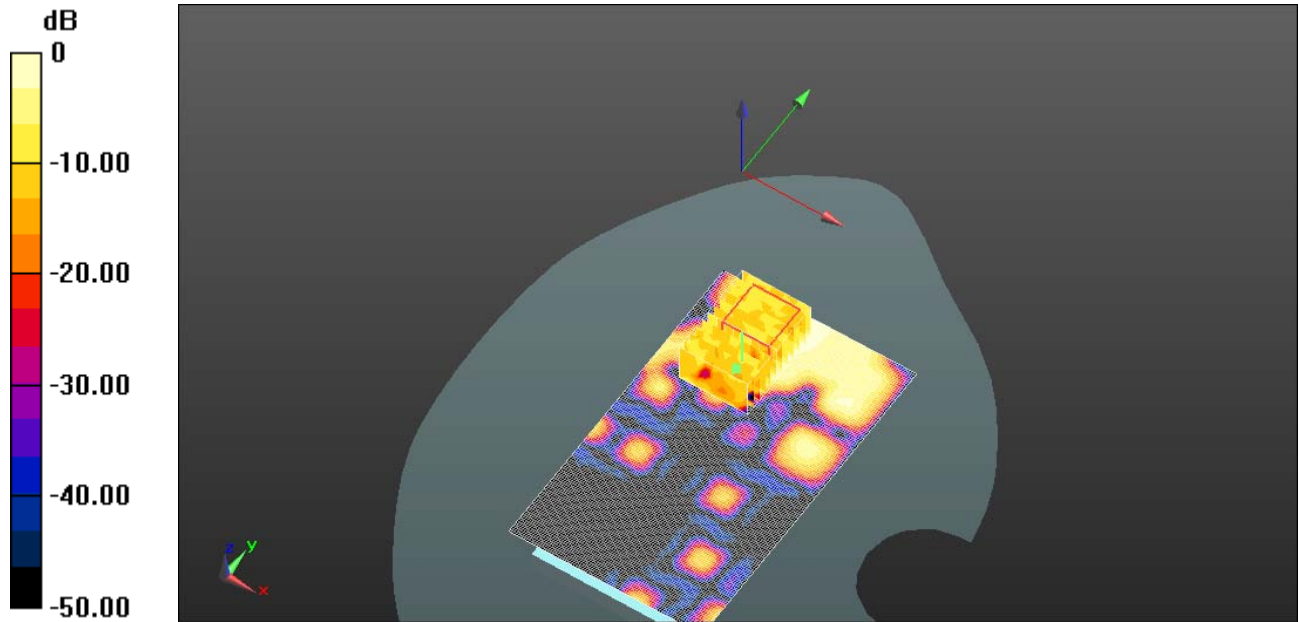
Reference Value = 3.863 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.1420


SAR(1 g) = 0.042 mW/g; SAR(10 g) = 0.017 mW/g

Maximum value of SAR (measured) = 0.078 mW/g

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0 dB = 0.080mW/g = -21.94 dB mW/g

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Date/Time: 8/22/2012 10:37:30 AM

Test Laboratory: RIM Testing Services

**Leather_Holster_Back_802.11a_upper_band_II_chan_165_amb_temp_2
3.5_liq_temp_22.3C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A4A5839

Communication System: 802.11a ; Frequency: 5825 MHz

Medium parameters used: $f = 5825$ MHz; $\sigma = 5.949$ mho/m; $\epsilon_r = 46.613$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3592; ConvF(3.54, 3.54, 3.54); Calibrated: 11/16/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position - 2/Area Scan (91x151x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.364 mW/g

Configuration/Touch position - 2/Zoom Scan -Ext(24x24x20), Step


(4x4x2.5mm), dist=2mm (9x9x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

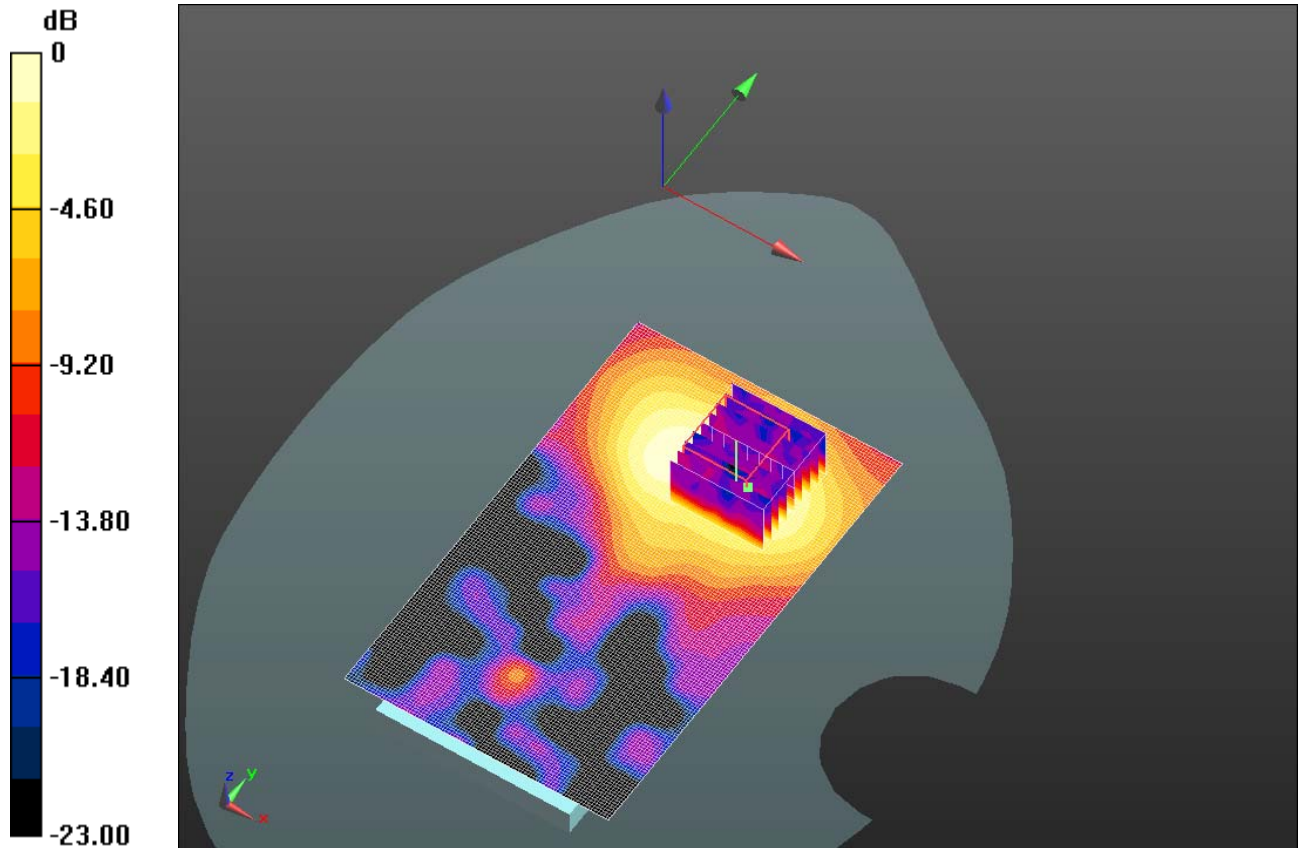
Reference Value = 8.298 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.6400


SAR(1 g) = 0.196 mW/g; SAR(10 g) = 0.088 mW/g

Maximum value of SAR (measured) = 0.355 mW/g

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0 dB = 0.350mW/g = -9.12 dB mW/g

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Date/Time: 8/22/2012 11:26:49 AM

Test Laboratory: RIM Testing Services

**15mm_Spacer_Back_HS_802.11a_upper_band_II_chan_165_amb_tem
p_23.5_liq_temp_22.3C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A4A5839

Communication System: 802.11a ; Frequency: 5825 MHz

Medium parameters used: $f = 5825$ MHz; $\sigma = 5.949$ mho/m; $\epsilon_r = 46.613$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3592; ConvF(3.54, 3.54, 3.54); Calibrated: 11/16/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position - 2/Area Scan (91x151x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.555 mW/g

Configuration/Touch position - 2/Zoom Scan -Ext(24x24x20), Step


(4x4x2.5mm), dist=2mm (9x9x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

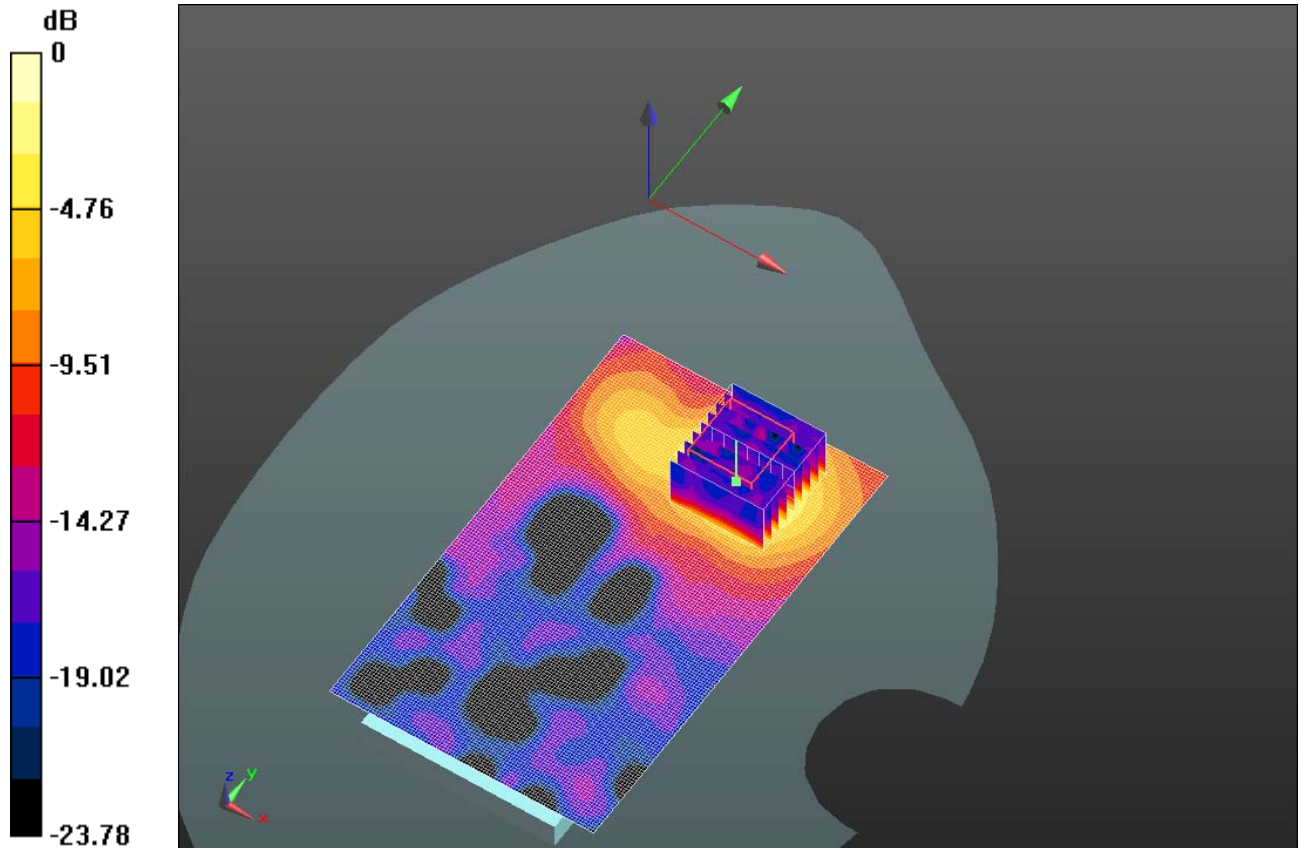
Reference Value = 10.230 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.9710


SAR(1 g) = 0.292 mW/g; SAR(10 g) = 0.115 mW/g

Maximum value of SAR (measured) = 0.543 mW/g

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0 dB = 0.540mW/g = -5.35 dB mW/g

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Date/Time: 11/8/2012 11:39:40 AM

Test Laboratory: RIM Testing Services

**15mm_Spacer_Back_802.11a_upper_band_II_chan_165_amb_temp_24
.3_liq_temp_22.2C**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: 802.11a ; Frequency: 5825 MHz
Medium parameters used: $f = 5825$ MHz; $\sigma = 6.313$ mho/m; $\epsilon_r = 45.779$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3548; ConvF(4.19, 4.19, 4.19); Calibrated: 1/14/2012
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 21.0$
- Electronics: DAE3 Sn473; Calibrated: 1/13/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position - 2/Area Scan (91x151x1): Measurement grid:
 $dx=10$ mm, $dy=10$ mm
Maximum value of SAR (interpolated) = 0.526 mW/g

Configuration/Touch position - 2/Zoom Scan -Ext(24x24x20), Step (4x4x2.5mm), dist=2mm (9x9x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm
Reference Value = 1.796 V/m; Power Drift = 0.34 dB
Peak SAR (extrapolated) = 0.8420
SAR(1 g) = 0.264 mW/g; SAR(10 g) = 0.094 mW/g
Maximum value of SAR (measured) = 0.499 mW/g

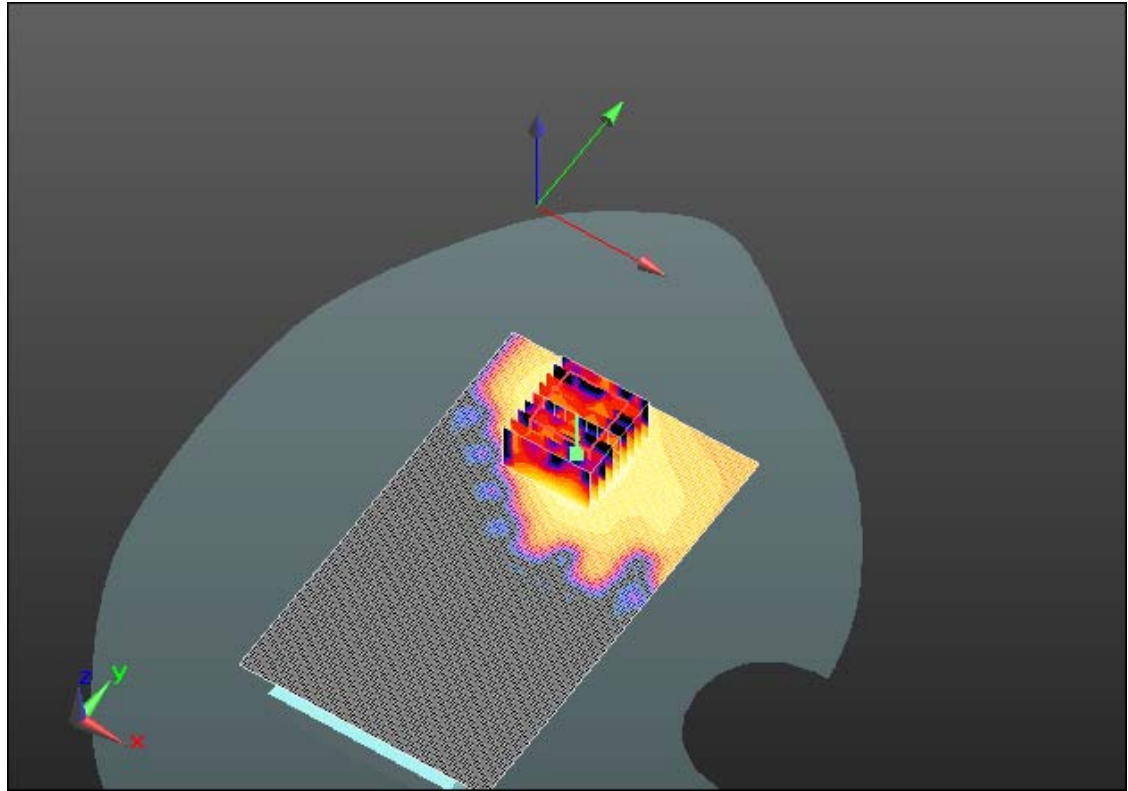
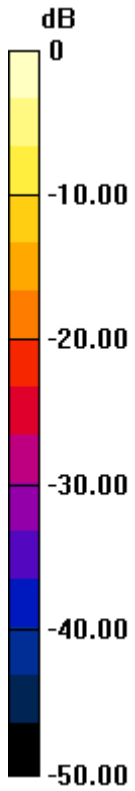
Author Data
Andrew Becker

Dates of Test
**Aug 21 – Nov 23, 2012
Jan. 07-11, 2013**


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**RTS-6012-1211-32
Rev 3**

FCC ID:
L6ARFA90LW


IC ID
2503A-RFA90LW



0 dB = 0.500mW/g = -6.02 dB mW/g

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Additional measurement plots as per latest (Oct. 24, 2012) KDBs:

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Date/Time: 1/9/2013 3:05:27 PM

Test Laboratory: RIM Testing Services

**15mm_Spacer_Back_CDMA850_mid_chan_amb_temp_23.6C_liq_temp
_22.6C_Repeat_Scan**

DUT: BlackBerry Smartphone; Type: Sample; Serial: 332F96D2

Communication System: CDMA 850; Frequency: 836.52 MHz

Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.969$ S/m; $\epsilon_r = 52.726$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ET3DV6 - SN1644; ConvF(6.06, 6.06, 6.06); Calibrated: 11/13/2012;
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 2.7, 32.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

Configuration/Touch position -/Area Scan (61x111x1): Interpolated grid:
 $dx=1.500$ mm, $dy=1.500$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.818 W/kg

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:

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


Reference Value = 27.897 V/m; Power Drift = 0.25 dB

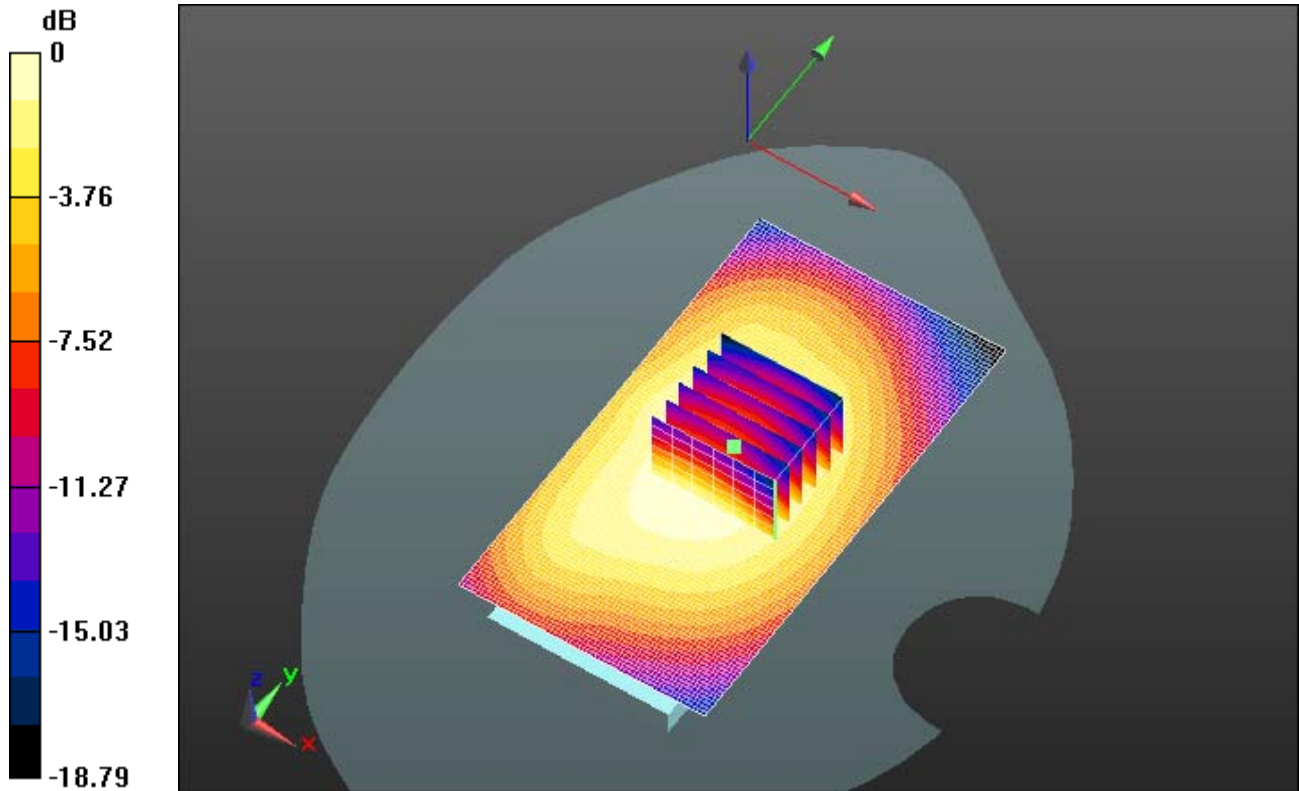
Peak SAR (extrapolated) = 0.967 W/kg

SAR(1 g) = 0.788 W/kg; SAR(10 g) = 0.592 W/kg


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.832 W/kg

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0 dB = 0.818 W/kg = -0.87 dBW/kg

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Date/Time: 1/8/2013 3:18:01 PM

Test Laboratory: RIM Testing Services

**15mm_Spacer_Back_CDMA1900_mid_chan_amb_temp_23.2C_liq_tem
p_21.3C_Repeat_Scan**

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2

Communication System: CDMA 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.529$ S/m; $\epsilon_r = 51.81$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ET3DV6 - SN1644; ConvF(4.75, 4.75, 4.75); Calibrated: 11/13/2012;
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 2.7, 32.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Configuration/Touch position -/Area Scan (61x111x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.01 W/kg

Configuration/Touch position -/Zoom Scan (5x5x7) (7x6x7)/Cube 0:

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

Reference Value = 11.141 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.871 W/kg; SAR(10 g) = 0.533 W/kg

Maximum value of SAR (measured) = 0.962 W/kg

Configuration/Touch position -/Zoom Scan 2 (5x5x7) (8x7x7)/Cube 0:


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

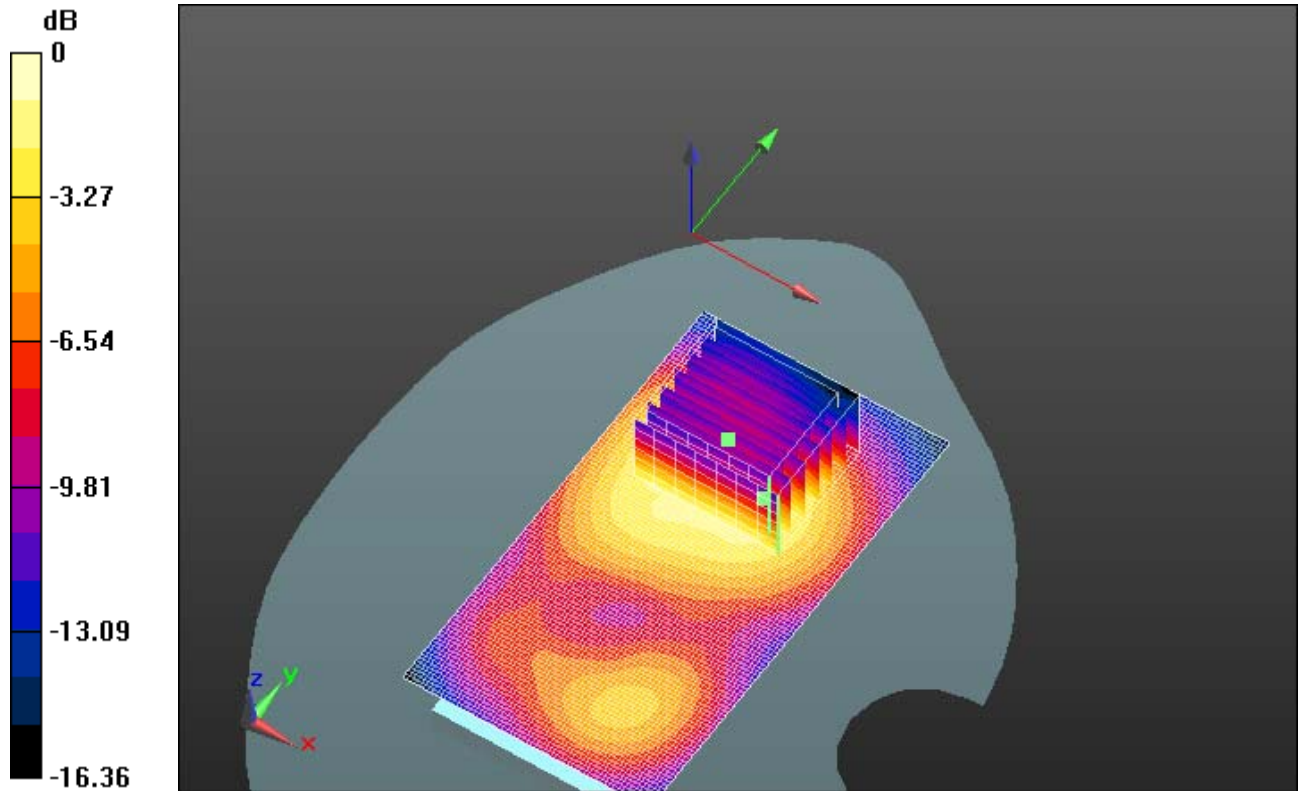
Reference Value = 11.141 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.33 W/kg


SAR(1 g) = 0.873 W/kg; SAR(10 g) = 0.532 W/kg

Maximum value of SAR (measured) = 0.921 W/kg

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0 dB = 1.01 W/kg = 0.05 dBW/kg

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Date/Time: 1/7/2013 7:23:54 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Front_802.11b_high_chan_11_amb_temp_23.8_liq_temp_21.7C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332BEDBD

Communication System: 802.11 b (2450); Frequency: 2462 MHz

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.919$ S/m; $\epsilon_r = 51.58$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ET3DV6 - SN1644; ConvF(4.11, 4.11, 4.11); Calibrated: 11/13/2012;
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 2.7, 32.7$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)

Configuration/Touch position -/Area Scan (71x131x1): Interpolated grid:
 $dx=1.200$ mm, $dy=1.200$ mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (interpolated) = 0.187 W/kg

Configuration/Touch position -/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

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


Reference Value = 3.276 V/m; Power Drift = -0.04 dB

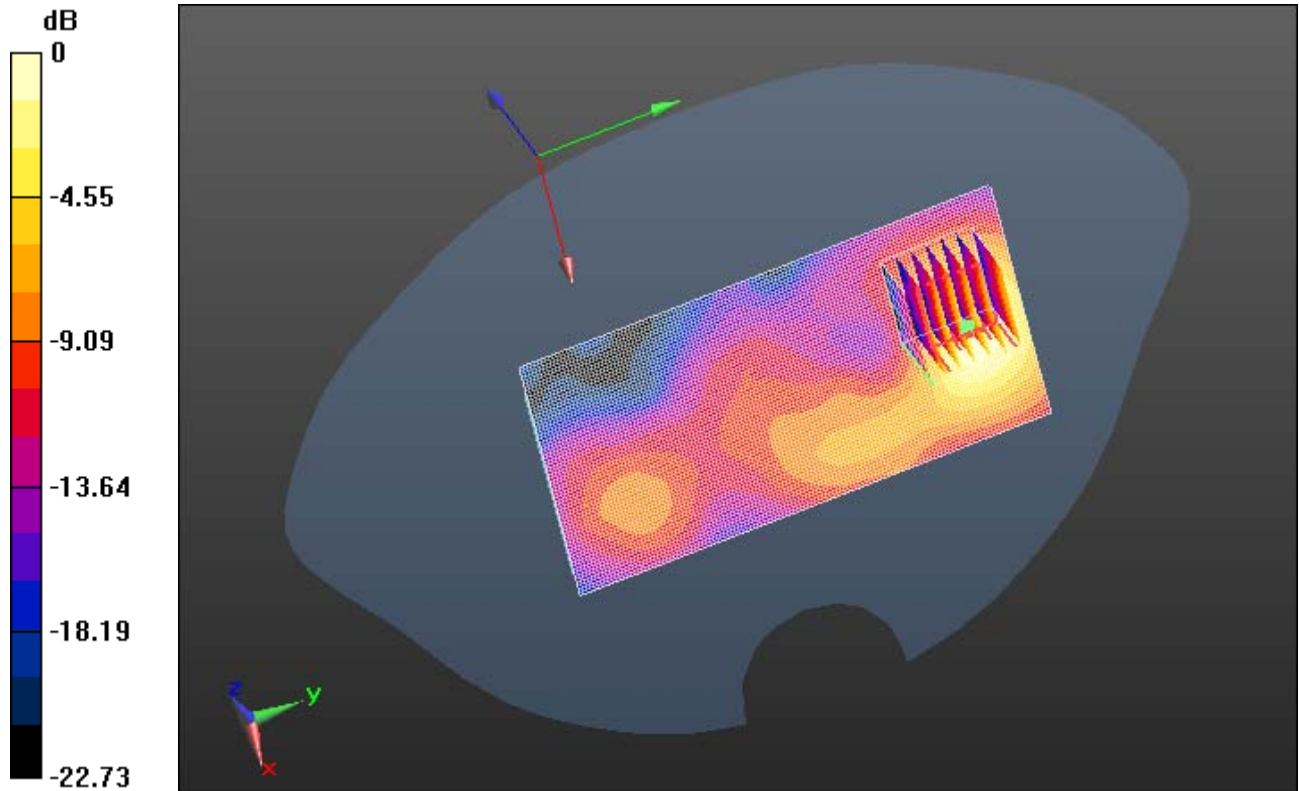
Peak SAR (extrapolated) = 0.339 W/kg

SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.086 W/kg


[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.180 W/kg

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0 dB = 0.187 W/kg = -7.29 dBW/kg

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Date/Time: 1/10/2013 10:37:59 PM

Test Laboratory: RIM Testing Services

15mm_Spacer_Back_802.11a_upper_band_II_chan_165_amb_temp_23
.3_liq_temp_21.2C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 332F96D2


Communication System: 802.11a ; Frequency: 5825 MHz
Medium parameters used: $f = 5825$ MHz; $\sigma = 6.102$ S/m; $\epsilon_r = 45.881$; $\rho = 1000$ kg/m³
Phantom section: Flat Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

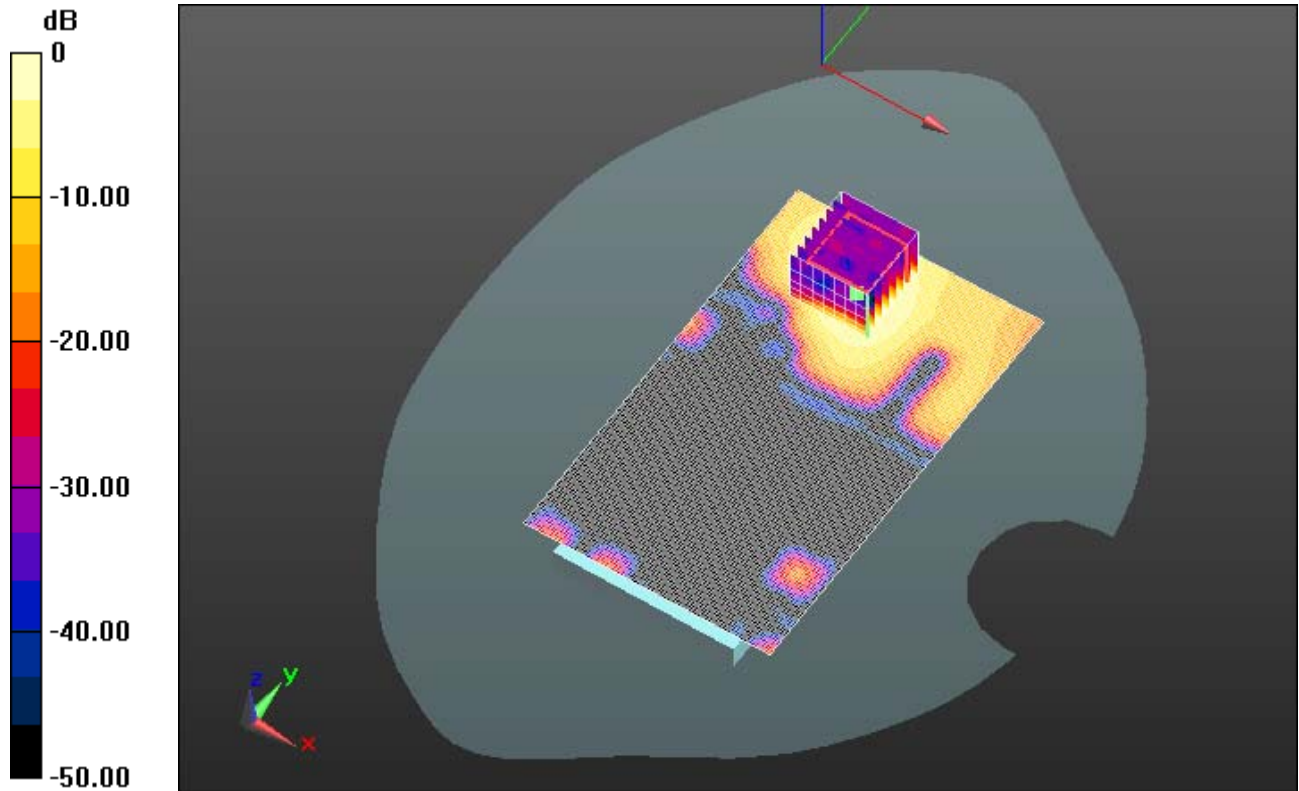
DASY Configuration:

- Probe: EX3DV4 - SN3592; ConvF(3.57, 3.57, 3.57); Calibrated: 11/14/2012;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE3 Sn472; Calibrated: 3/7/2012
- Phantom: SAM 2; Type: SAM 4.0; Serial: 1080
- DASYS 52.8.4(1052); SEMCAD X 14.6.8(7028)


Configuration/Touch position - 2/Area Scan (91x151x1): Interpolated grid:
 $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 0.456 W/kg

Configuration/Touch position - 2/Zoom Scan -Ext(24x24x22), Step (4x4x2.0mm), dist=2mm (8x8x6)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm
Reference Value = 1.820 V/m; Power Drift = 1.00 dB
Peak SAR (extrapolated) = 0.869 W/kg
SAR(1 g) = 0.234 W/kg; SAR(10 g) = 0.088 W/kg
Maximum value of SAR (measured) = 0.463 W/kg

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0 dB = 0.456 W/kg = -3.41 dBW/kg

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Z axis plot for the worst case body configuration

