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APPENDIX C2: SAR DISTRIBUTION PLOTS FOR MOBILE HOT SPOT

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Date/Time: 9/11/2012 10:46:34 AM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_temp_23.4_liq_temp_22.3C

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) = 0.782 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 = 21.912 V/m; Power Drift = -0.02 dB

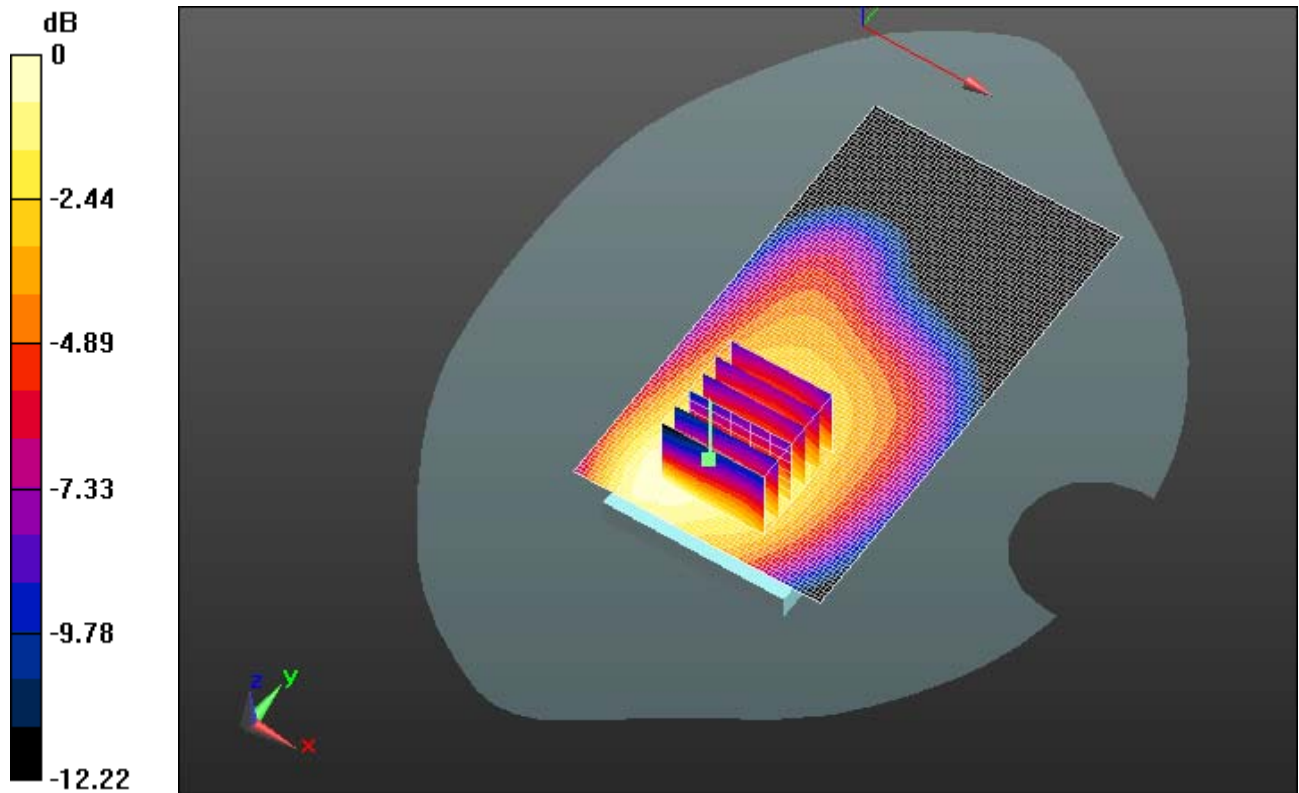
Peak SAR (extrapolated) = 1.1290

SAR(1 g) = 0.700 mW/g; SAR(10 g) = 0.482 mW/g


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

Maximum value of SAR (measured) = 0.802 mW/g

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0 dB = 0.800mW/g = -1.94 dB mW/g

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Date/Time: 9/11/2012 11:27:07 AM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_LTE_13_mid_chan_QPSK_RB_1_Offset_49
_amb_temp_23.6_liq_temp_22.3C**

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
- 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) = 0.749 mW/g

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

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


Reference Value = 21.082 V/m; Power Drift = -0.06 dB

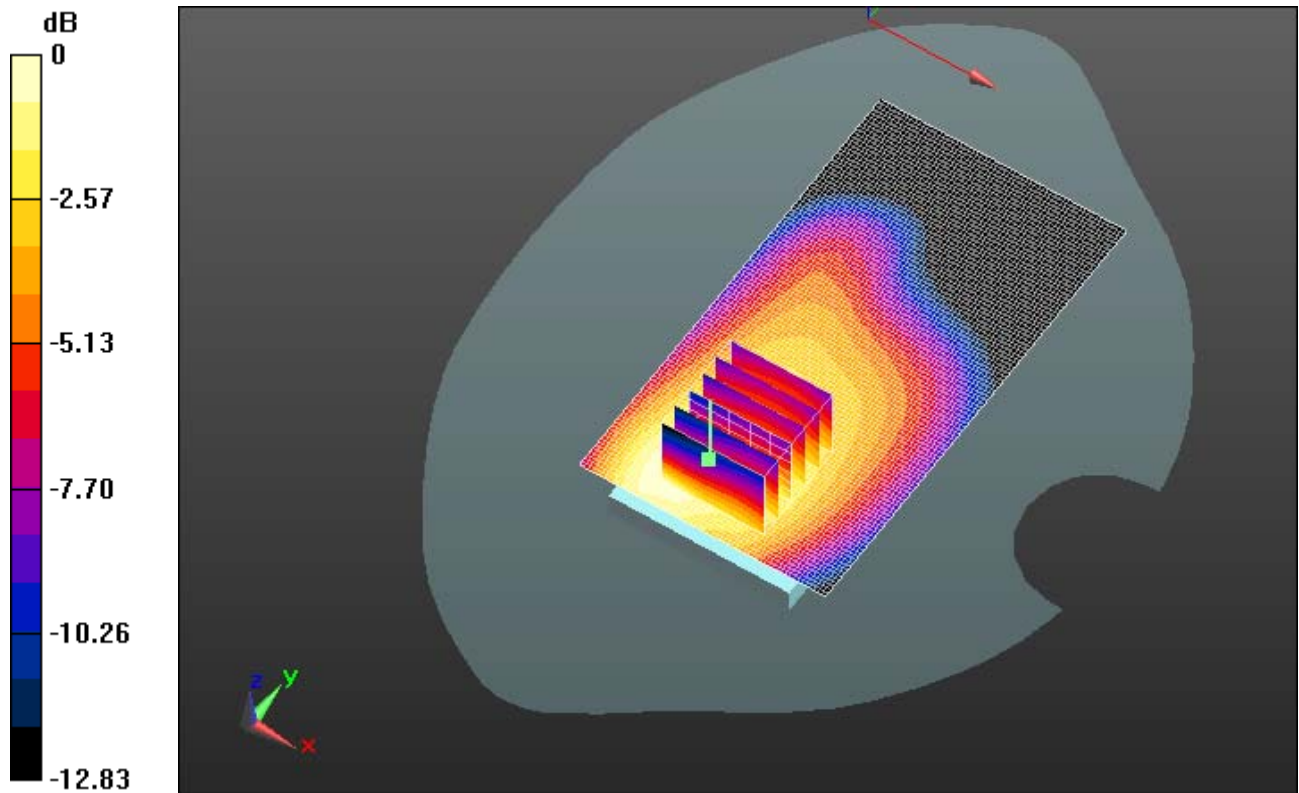
Peak SAR (extrapolated) = 1.0380

SAR(1 g) = 0.647 mW/g; SAR(10 g) = 0.444 mW/g


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

Maximum value of SAR (measured) = 0.750 mW/g

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0 dB = 0.750mW/g = -2.50 dB mW/g

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Date/Time: 9/11/2012 12:09:51 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_LTE_13_mid_chan_QPSK_RB_25_Offset_0
_amb_temp_23.6_liq_temp_22.3C**

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) = 0.628 mW/g

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

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


Reference Value = 19.328 V/m; Power Drift = 0.04 dB

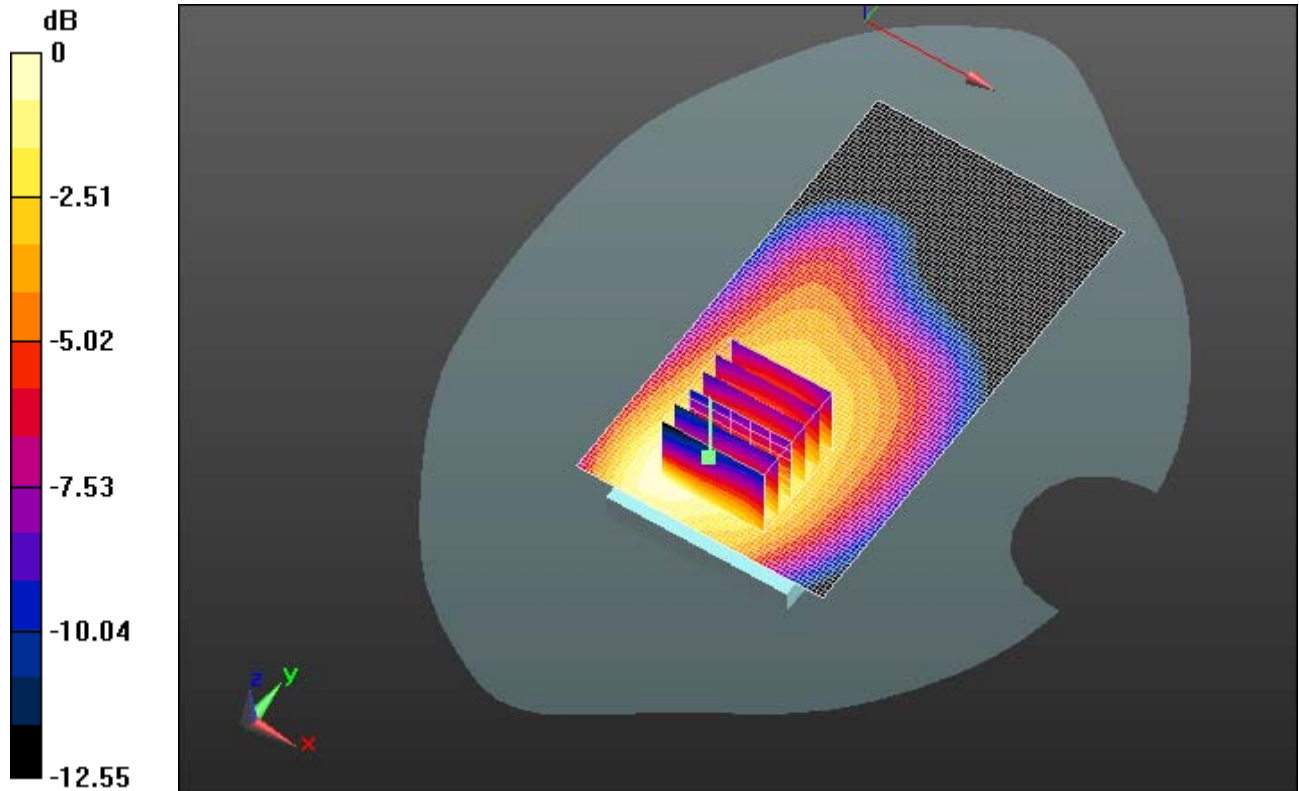
Peak SAR (extrapolated) = 0.9000

SAR(1 g) = 0.553 mW/g; SAR(10 g) = 0.380 mW/g


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

Maximum value of SAR (measured) = 0.639 mW/g

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0 dB = 0.640mW/g = -3.88 dB mW/g

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Date/Time: 9/11/2012 1:11:03 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_LTE_13_mid_chan_16QAM_RB_1_Offset_0
_amb_temp_23.3_liq_temp_22.4C

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) = 0.653 mW/g

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

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


Reference Value = 20.518 V/m; Power Drift = 0.06 dB

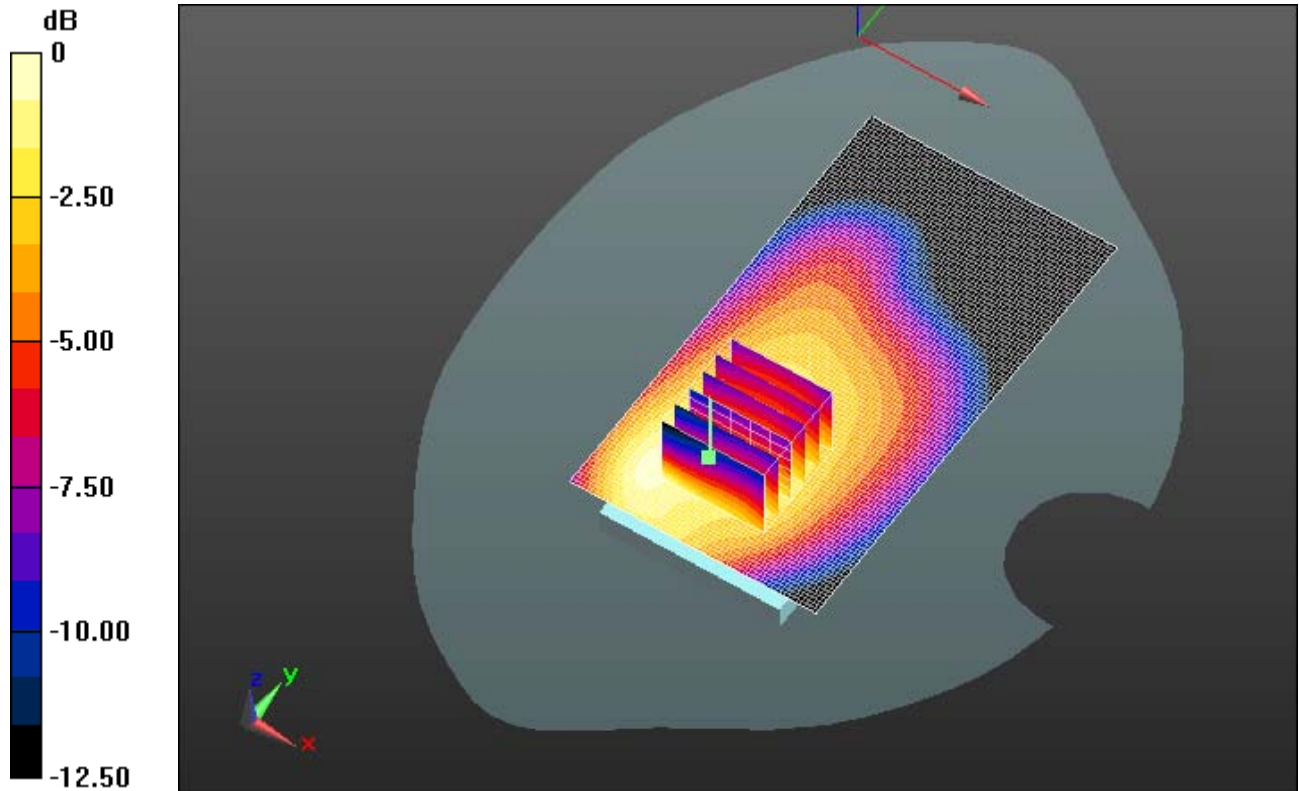
Peak SAR (extrapolated) = 0.8890

SAR(1 g) = 0.560 mW/g; SAR(10 g) = 0.388 mW/g


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

Maximum value of SAR (measured) = 0.648 mW/g

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0 dB = 0.650mW/g = -3.74 dB mW/g

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Date/Time: 9/11/2012 1:30:55 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_LTE_13_mid_chan_16QAM_RB_1_Offset_4
9_amb_temp_23.3_liq_temp_22.4C**

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) = 0.609 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 = 19.665 V/m; Power Drift = 0.0073 dB

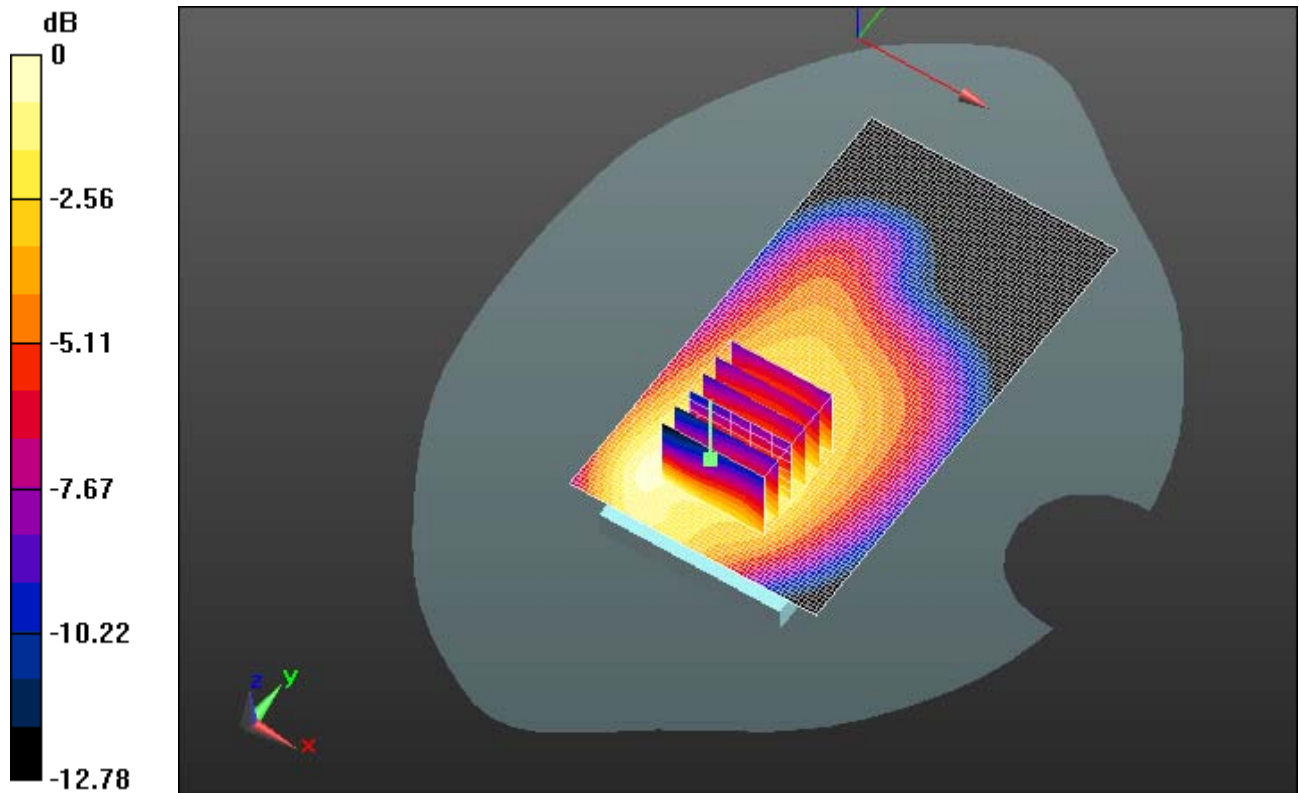
Peak SAR (extrapolated) = 0.8300

SAR(1 g) = 0.522 mW/g; SAR(10 g) = 0.359 mW/g


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

Maximum value of SAR (measured) = 0.610 mW/g

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0 dB = 0.610mW/g = -4.29 dB mW/g

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Date/Time: 9/11/2012 1:55:28 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_LTE_13_mid_chan_16QAM_RB_16_Offset_0_amb_temp_23.2_liq_temp_22.4C

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
- 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) = 0.498 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 = 17.856 V/m; Power Drift = 0.11 dB

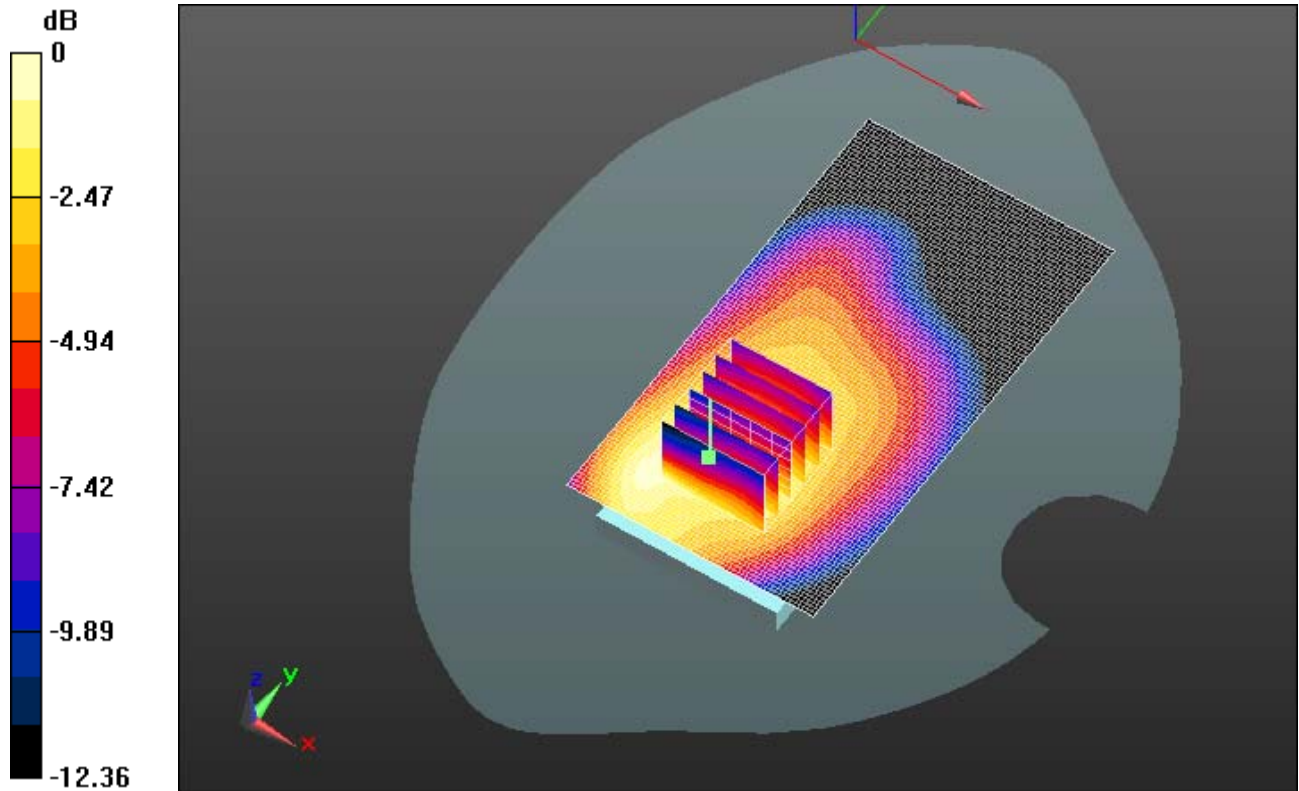
Peak SAR (extrapolated) = 0.7040

SAR(1 g) = 0.438 mW/g; SAR(10 g) = 0.301 mW/g


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

Maximum value of SAR (measured) = 0.511 mW/g

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0 dB = 0.510mW/g = -5.85 dB mW/g

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Date/Time: 9/11/2012 4:00:19 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_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): $f = 782$ 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) = 0.504 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 = 18.621 V/m; Power Drift = 0.009 dB

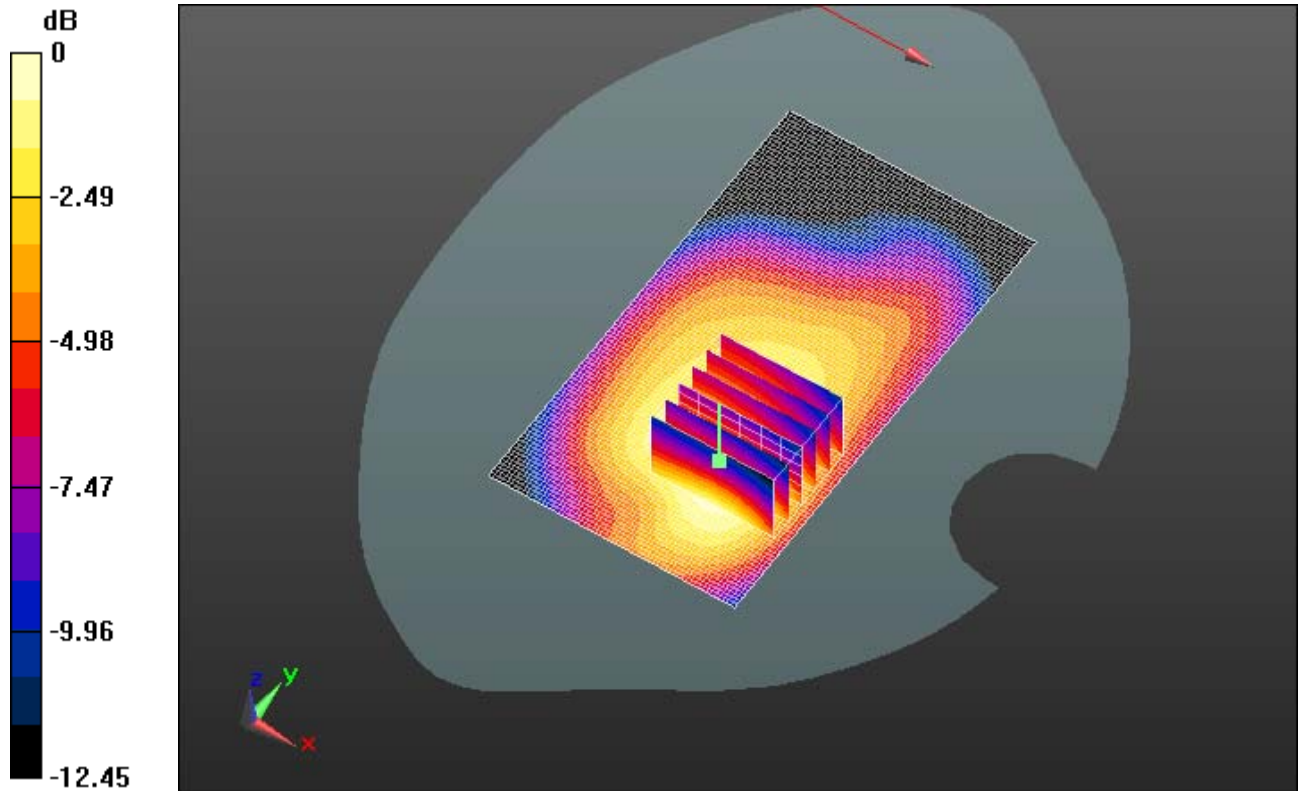
Peak SAR (extrapolated) = 0.6110

SAR(1 g) = 0.442 mW/g; SAR(10 g) = 0.316 mW/g


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

Maximum value of SAR (measured) = 0.496 mW/g

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

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Date/Time: 9/11/2012 10:22:25 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Left_LTE_13_mid_chan_QPSK_RB_1_Offset_0_a
mb_temp_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
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (31x101x1): Measurement grid:
dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.448 mW/g

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

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

Reference Value = 21.936 V/m; Power Drift = -0.0068 dB

Peak SAR (extrapolated) = 0.5690

SAR(1 g) = 0.403 mW/g; SAR(10 g) = 0.276 mW/g

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

Maximum value of SAR (measured) = 0.468 mW/g

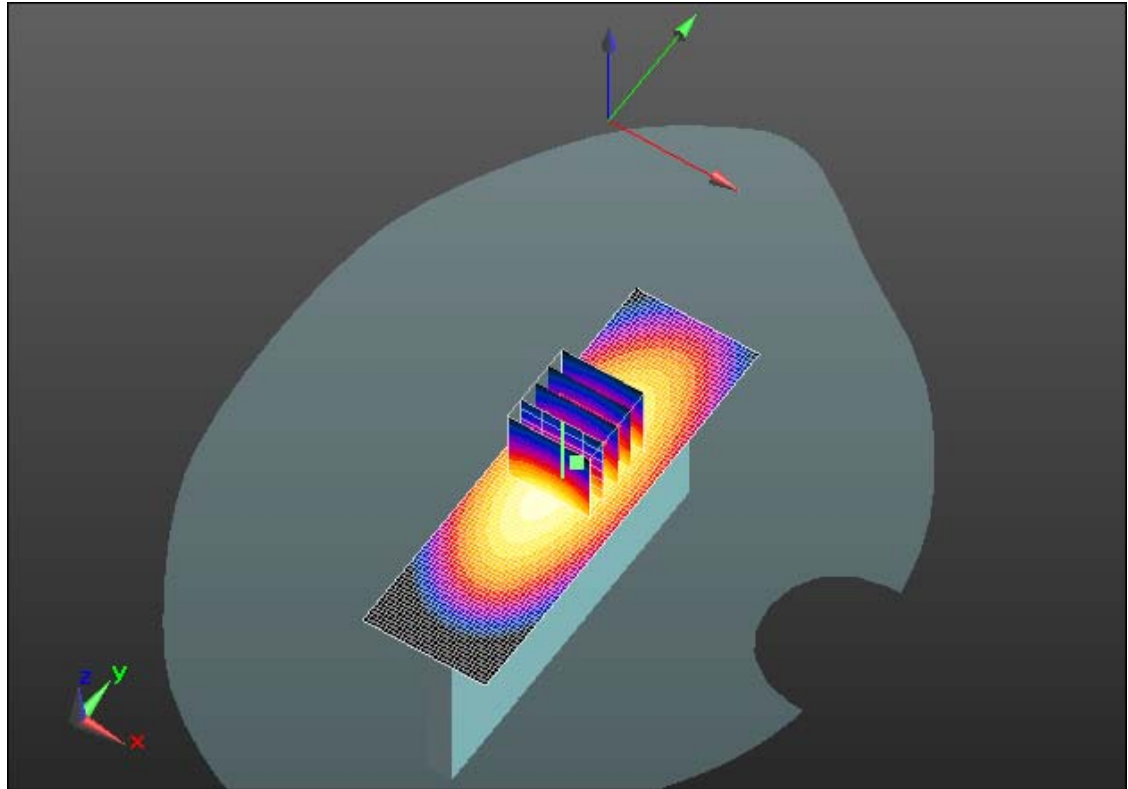
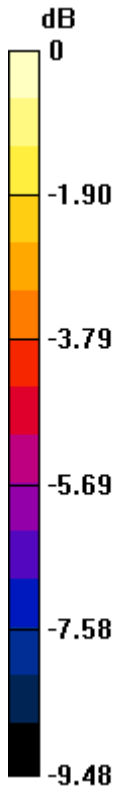
Author Data
Andrew Becker

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 = 0.470mW/g = -6.56 dB mW/g

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Date/Time: 9/11/2012 10:37:03 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Right_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_temp_23.4_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
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (31x101x1): Measurement grid:
dx=15mm, dy=15mm

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

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

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

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

Reference Value = 18.805 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.4000

SAR(1 g) = 0.287 mW/g; SAR(10 g) = 0.199 mW/g

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

Maximum value of SAR (measured) = 0.328 mW/g

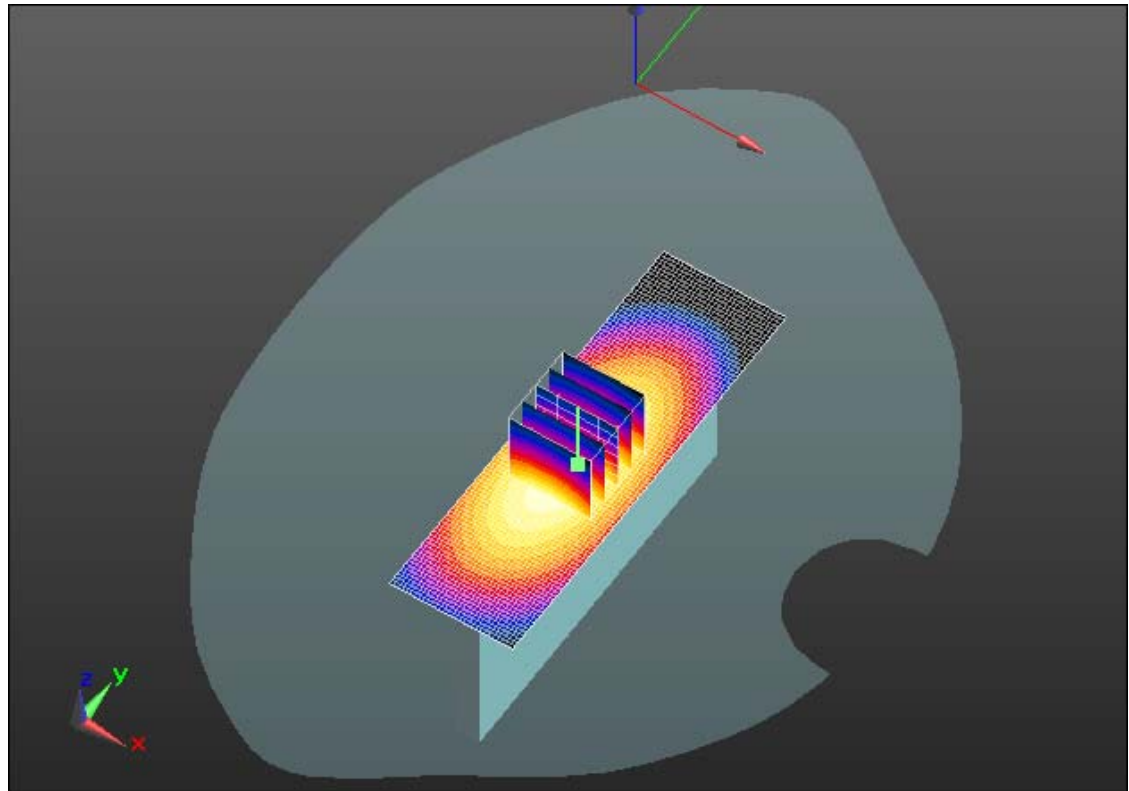
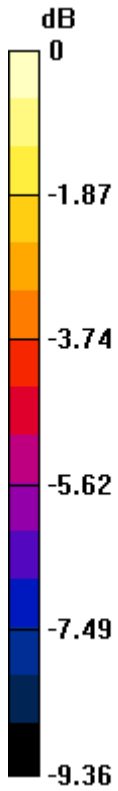
Author Data
Andrew Becker

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 = 0.330mW/g = -9.63 dB mW/g

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Date/Time: 9/11/2012 10:04:49 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Top_LTE_13_mid_chan_QPSK_RB_1_Offset_0_a
mb_temp_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 (41x61x1): Measurement grid:
dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.145 mW/g

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

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

Reference Value = 8.895 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.2620

SAR(1 g) = 0.134 mW/g; SAR(10 g) = 0.069 mW/g

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

Maximum value of SAR (measured) = 0.167 mW/g

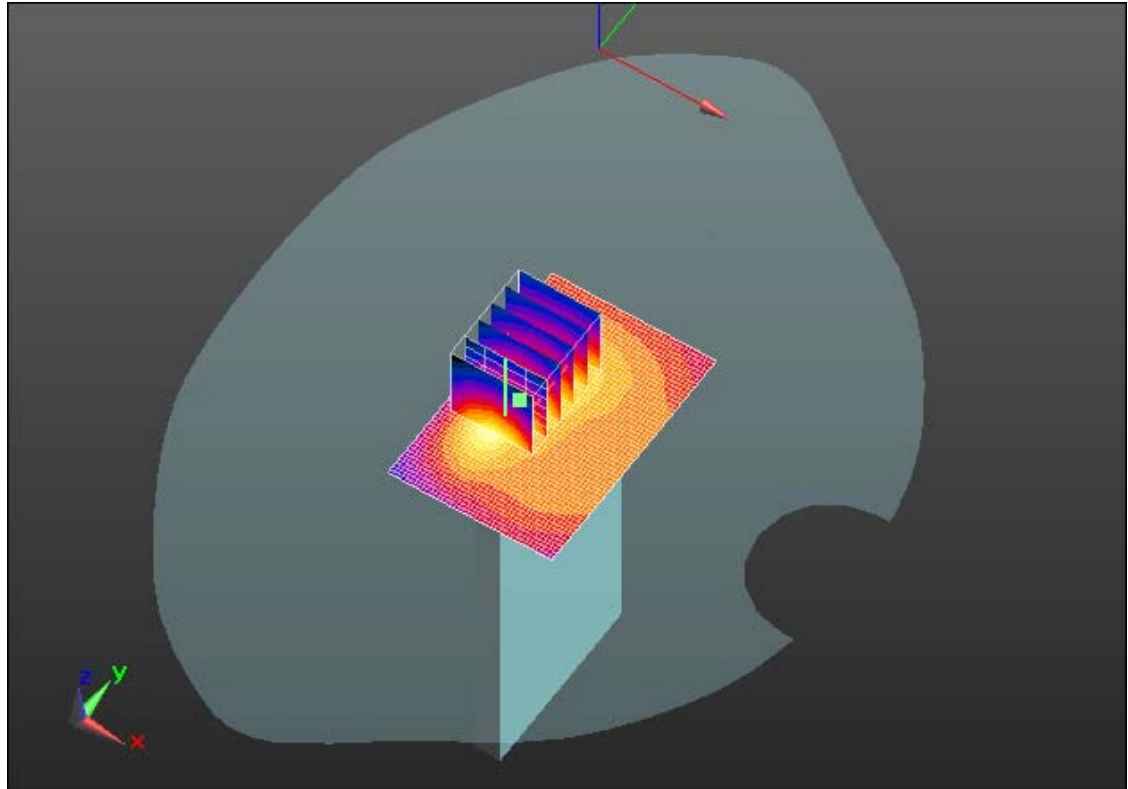
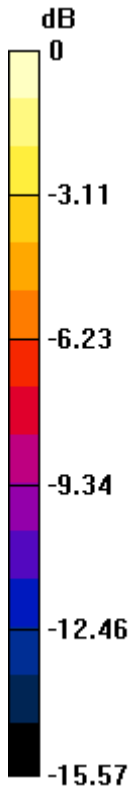
Author Data
Andrew Becker

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 = 0.170mW/g = -15.39 dB mW/g

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Date/Time: 9/11/2012 3:39:19 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_Headset_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
- 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) = 0.501 mW/g

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

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


Reference Value = 17.525 V/m; Power Drift = -0.21 dB

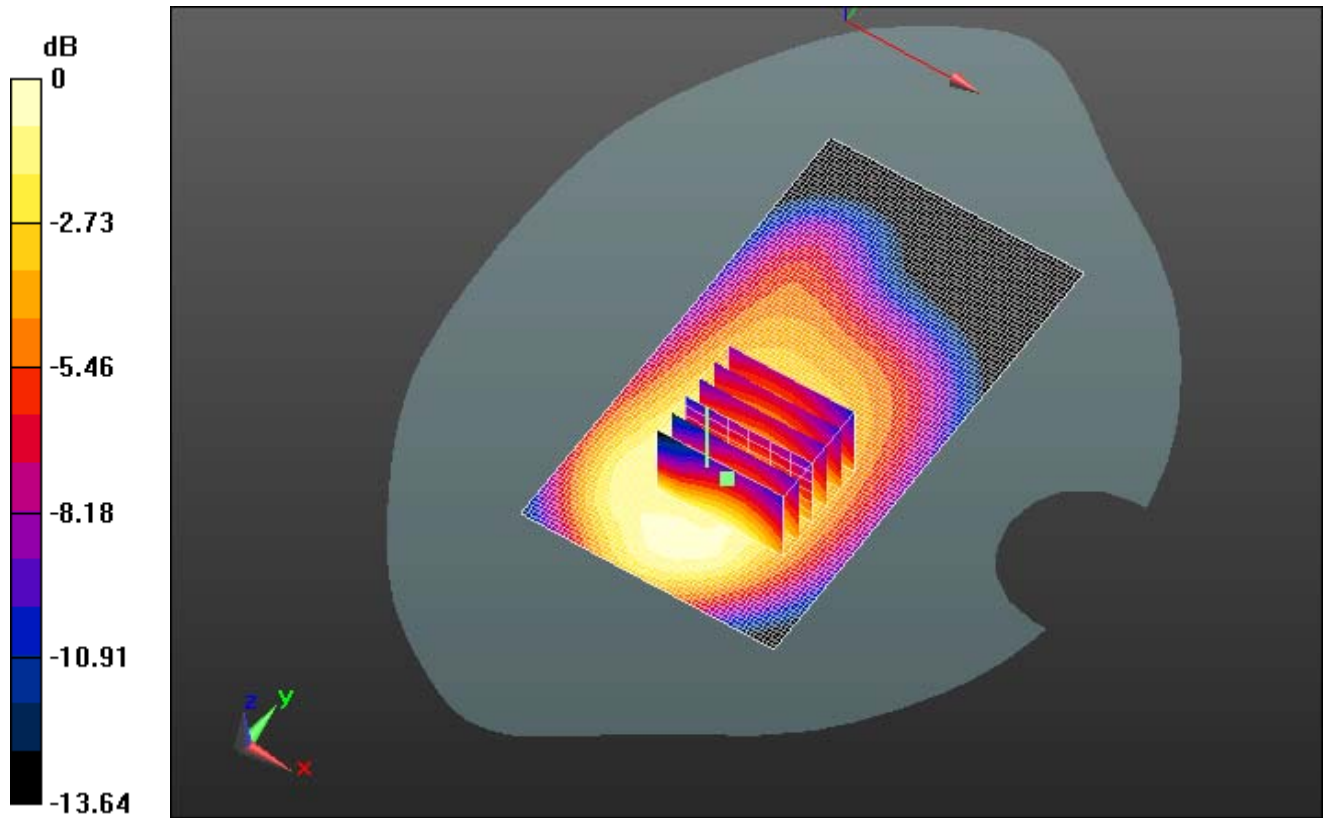
Peak SAR (extrapolated) = 0.6270

SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.308 mW/g


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

Maximum value of SAR (measured) = 0.507 mW/g

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0 dB = 0.510mW/g = -5.85 dB mW/g

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Date/Time: 10/29/2012 4:38:27 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_temp_23.2_liq_temp_22.6C

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

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

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.967$ mho/m; $\epsilon_r = 54.086$; $\rho = 1000$ 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) = 0.776 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 = 22.629 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.0000

SAR(1 g) = 0.641 mW/g; SAR(10 g) = 0.440 mW/g

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

Maximum value of SAR (measured) = 0.734 mW/g

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

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

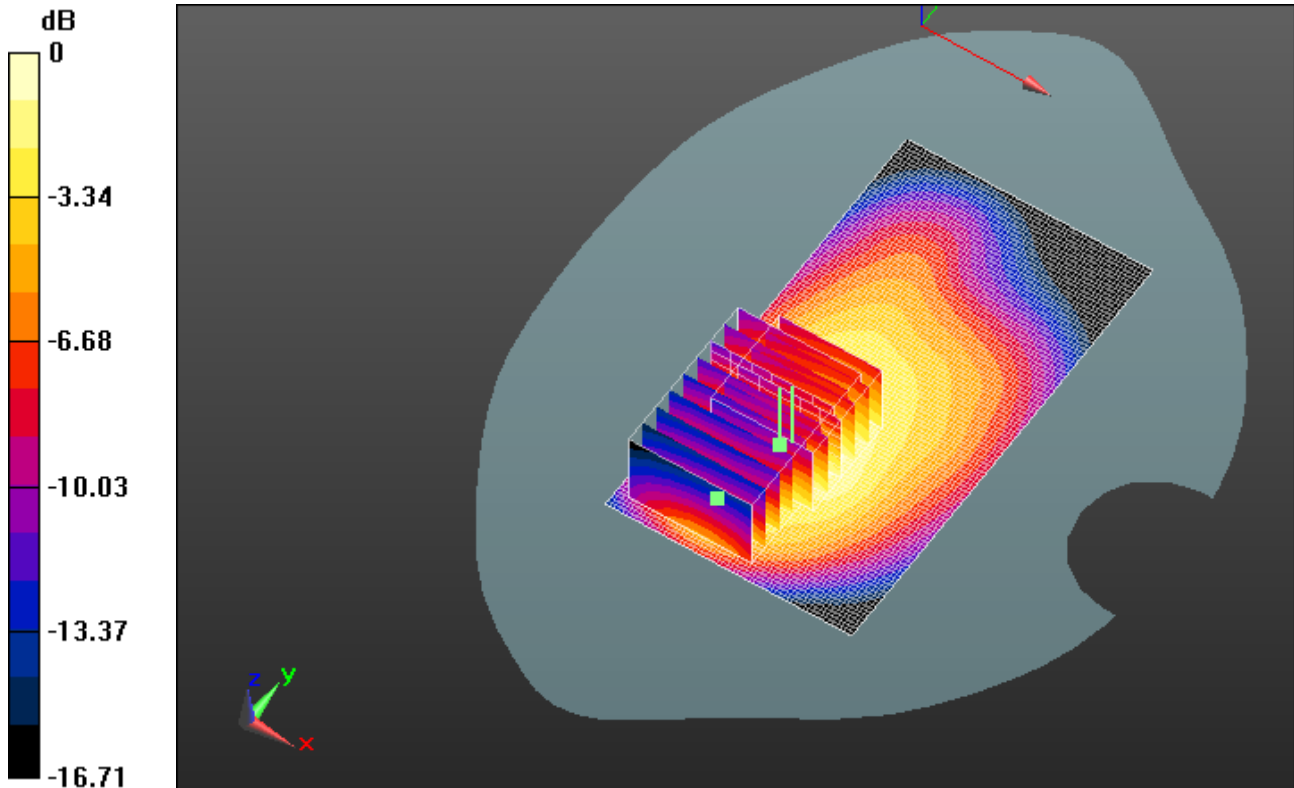
Reference Value = 22.629 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.0190


SAR(1 g) = 0.637 mW/g; SAR(10 g) = 0.436 mW/g

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

Maximum value of SAR (measured) = 0.735 mW/g



0 dB = 0.740mW/g = -2.62 dB mW/g

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Date/Time: 11/12/2012 11:50:25 AM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_temp_24.2_liq_temp_22.6C

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) = 0.304 mW/g

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

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


Reference Value = 13.540 V/m; Power Drift = -0.15 dB

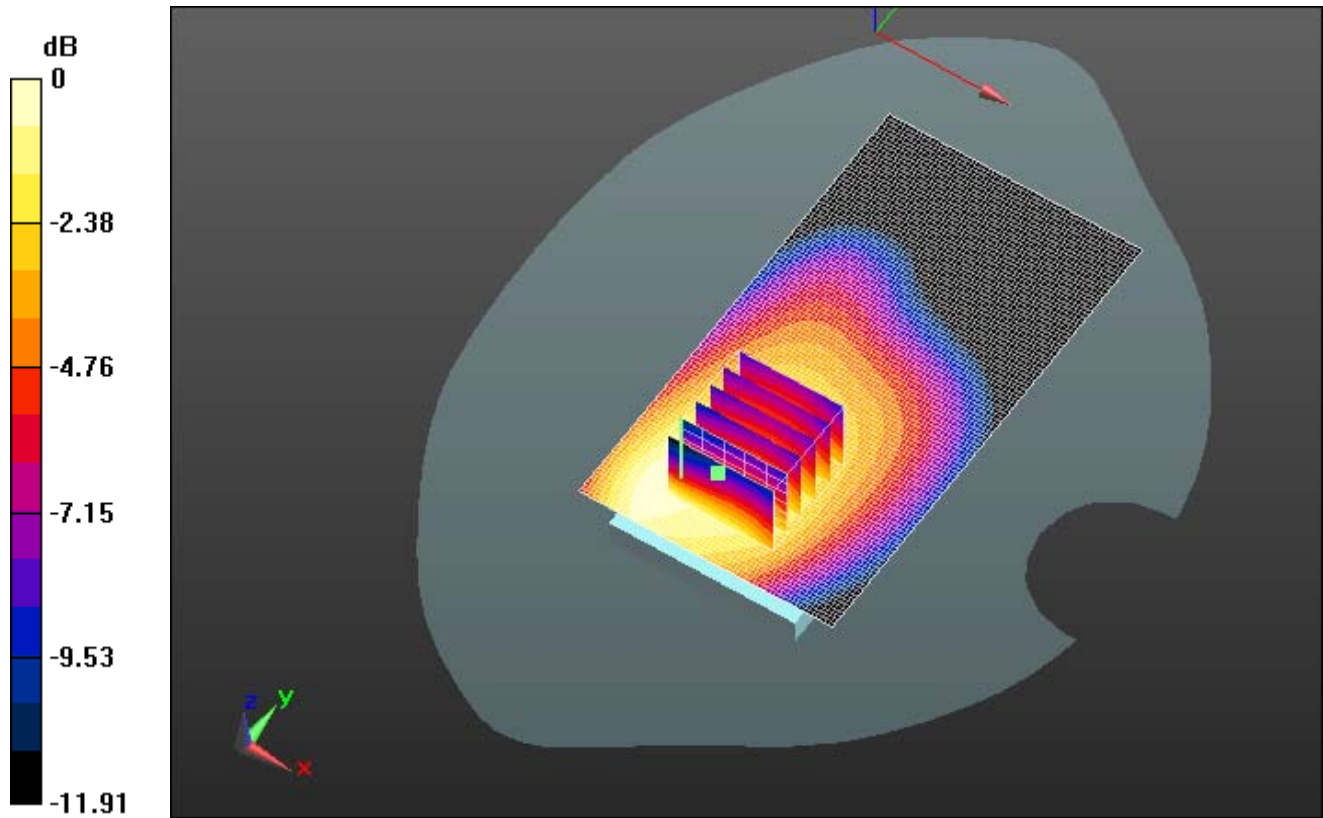
Peak SAR (extrapolated) = 0.4120

SAR(1 g) = 0.262 mW/g; SAR(10 g) = 0.182 mW/g


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

Maximum value of SAR (measured) = 0.304 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 12:13:52 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_LTE_13_mid_chan_QPSK_RB_1_Offset_49
_amb_temp_24.2_liq_temp_22.6C**

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) = 0.267 mW/g

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

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


Reference Value = 12.576 V/m; Power Drift = 0.0068 dB

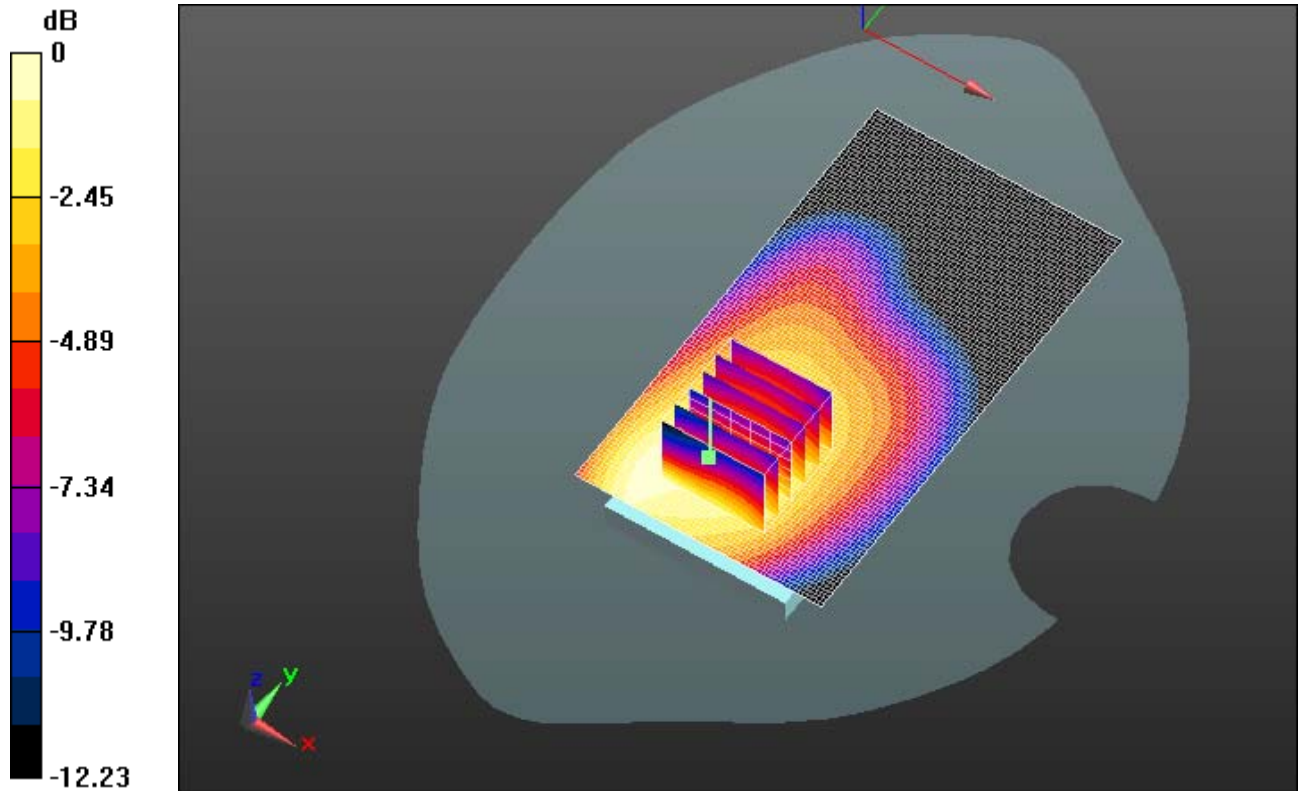
Peak SAR (extrapolated) = 0.3520

SAR(1 g) = 0.235 mW/g; SAR(10 g) = 0.163 mW/g


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

Maximum value of SAR (measured) = 0.272 mW/g

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0 dB = 0.270mW/g = -11.37 dB mW/g

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Date/Time: 11/12/2012 12:39:12 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_LTE_13_mid_chan_QPSK_RB_25_Offset_0
_amb_temp_24.1_liq_temp_22.4C**

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) = 0.243 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (6x7x7)/Cube 0:

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


Reference Value = 11.977 V/m; Power Drift = -0.06 dB

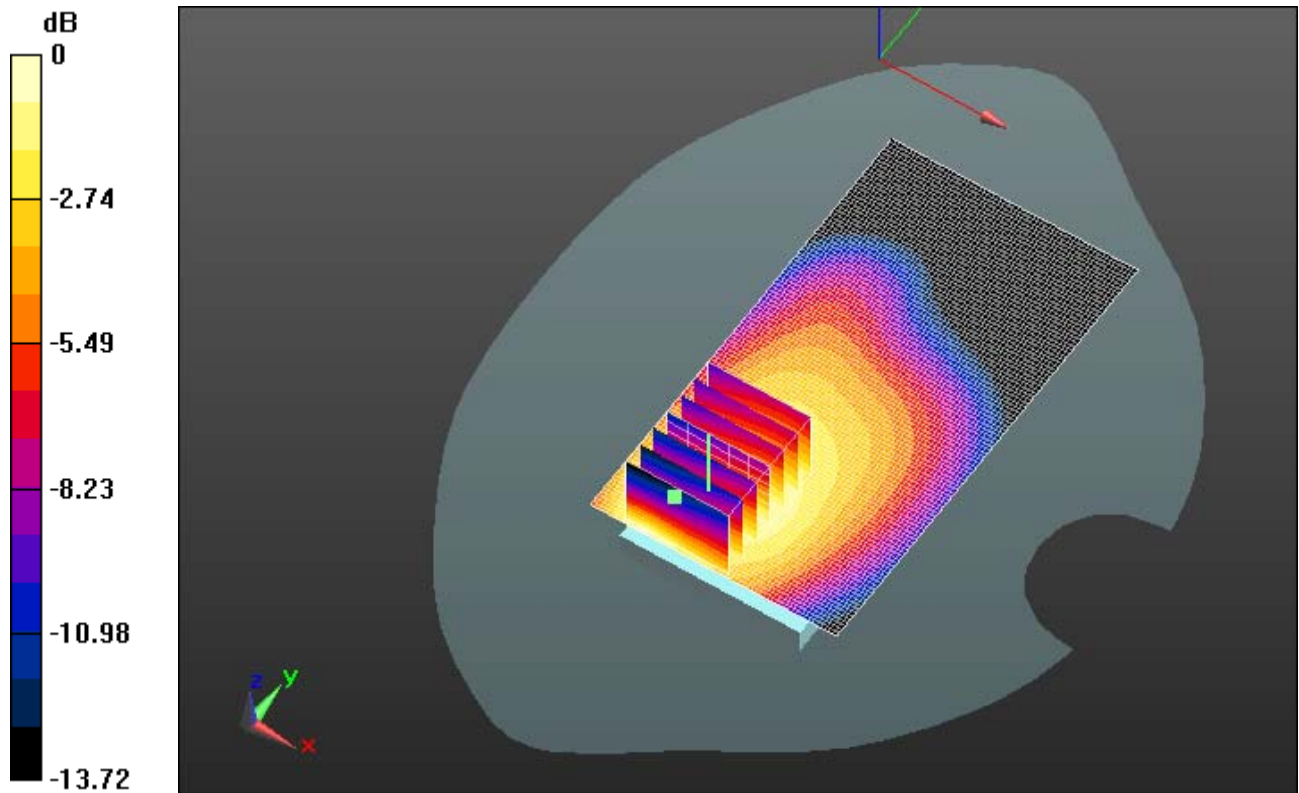
Peak SAR (extrapolated) = 0.3280

SAR(1 g) = 0.215 mW/g; SAR(10 g) = 0.148 mW/g


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

Maximum value of SAR (measured) = 0.247 mW/g

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0 dB = 0.250mW/g = -12.04 dB mW/g

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Date/Time: 11/12/2012 2:23:14 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_LTE_13_mid_chan_16QAM_RB_1_Offset_0
_amb_temp_24.1_liq_temp_22.4C**

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

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

Maximum value of SAR (interpolated) = 0.255 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 = 12.664 V/m; Power Drift = -0.05 dB

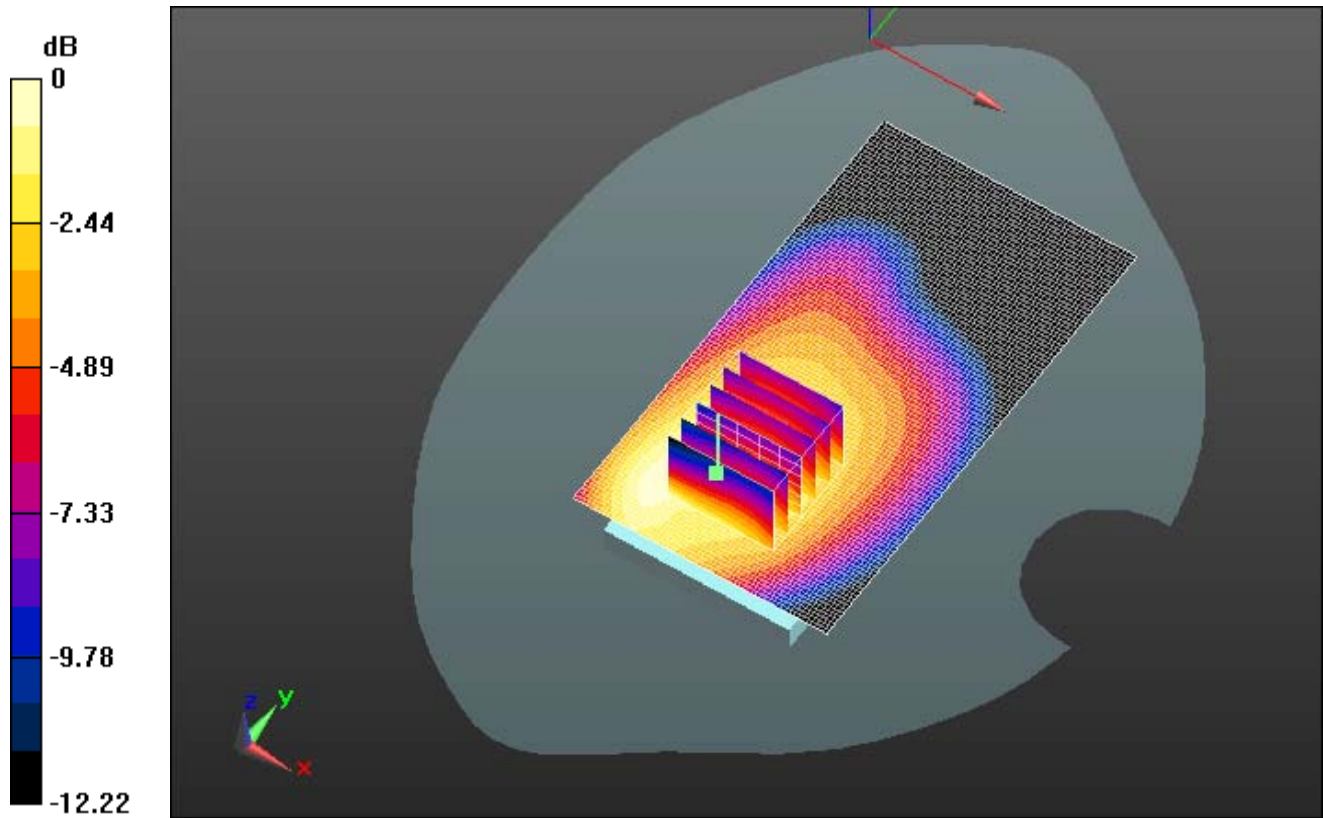
Peak SAR (extrapolated) = 0.3300

SAR(1 g) = 0.221 mW/g; SAR(10 g) = 0.153 mW/g


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

Maximum value of SAR (measured) = 0.255 mW/g

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0 dB = 0.260mW/g = -11.70 dB mW/g

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Date/Time: 11/12/2012 2:43:13 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_LTE_13_mid_chan_16QAM_RB_1_Offset_4
9_amb_temp_24.0_liq_temp_22.5C**

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) = 0.223 mW/g

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

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


Reference Value = 12.003 V/m; Power Drift = -0.04 dB

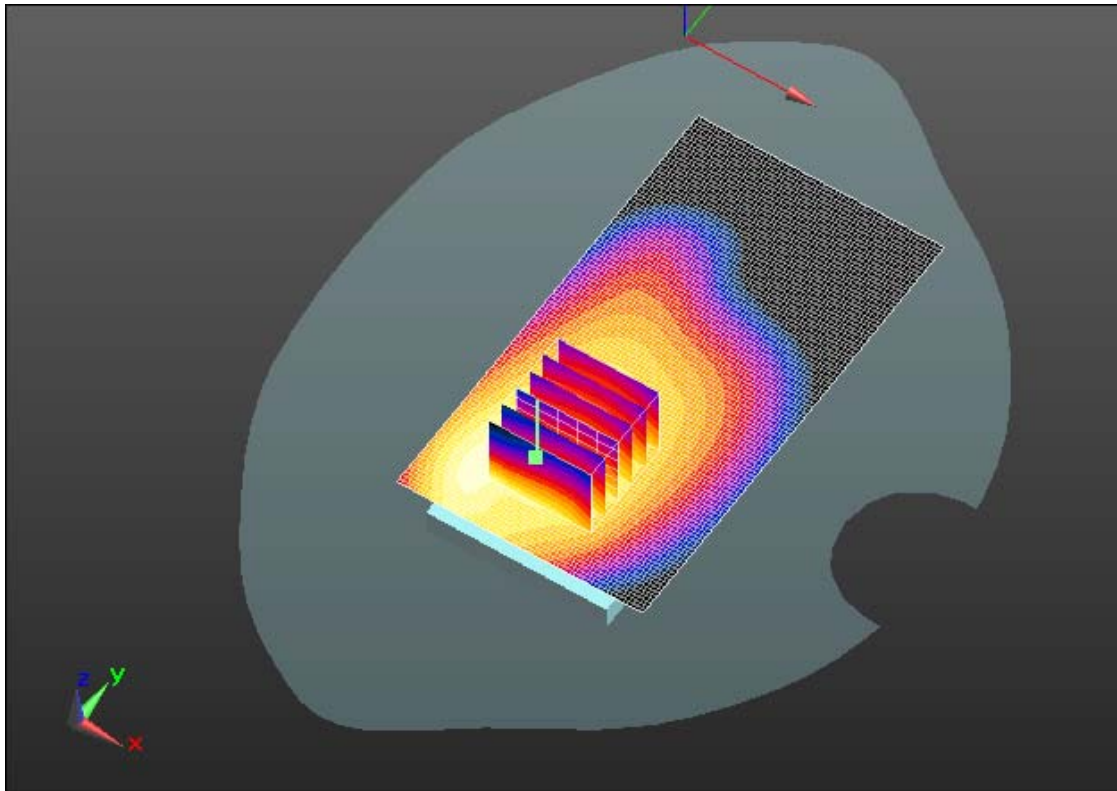
Peak SAR (extrapolated) = 0.2870

SAR(1 g) = 0.192 mW/g; SAR(10 g) = 0.134 mW/g


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

Maximum value of SAR (measured) = 0.222 mW/g

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

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Date/Time: 11/12/2012 3:02:51 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_LTE_13_mid_chan_16QAM_RB_16_Offset_0_amb_temp_24.0_liq_temp_22.5C

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

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

Maximum value of SAR (interpolated) = 0.194 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 = 11.092 V/m; Power Drift = 0.03 dB

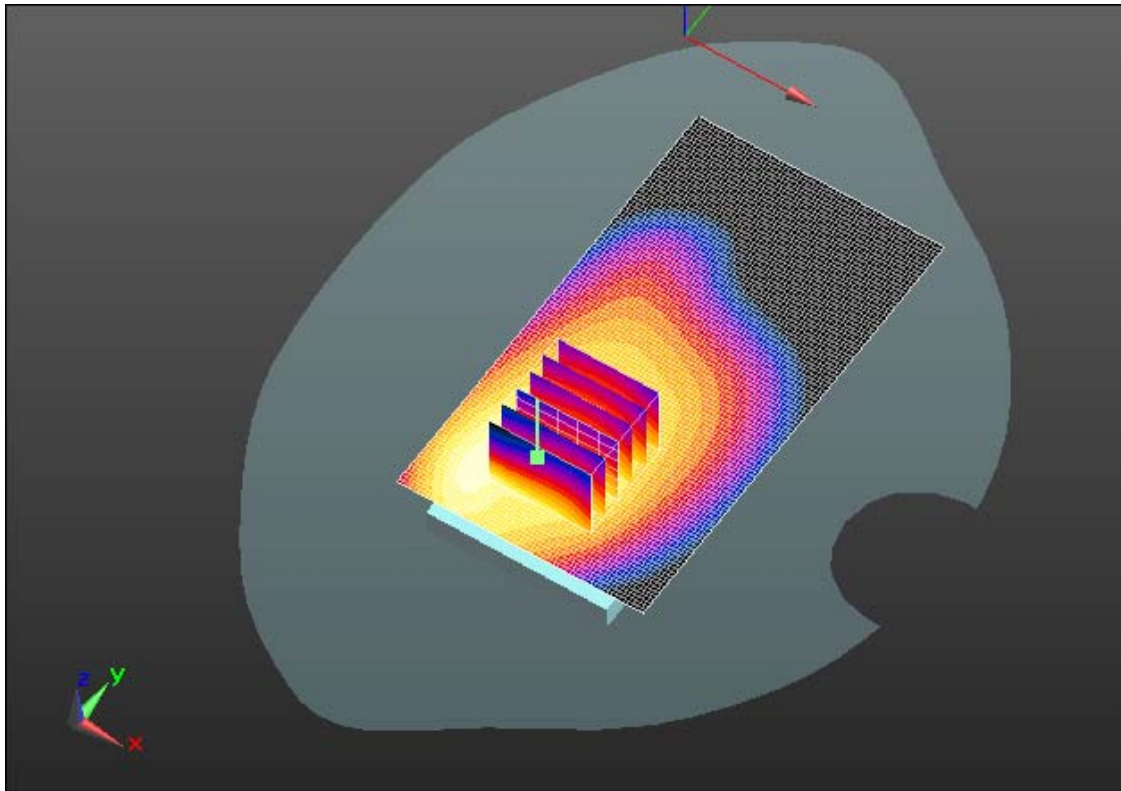
Peak SAR (extrapolated) = 0.2550

SAR(1 g) = 0.169 mW/g; SAR(10 g) = 0.117 mW/g


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

Maximum value of SAR (measured) = 0.194 mW/g

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0 dB = 0.190mW/g = -14.42 dB mW/g

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Date/Time: 11/12/2012 4:56:39 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Front_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_temp_23.1_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) = 0.234 mW/g

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

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


Reference Value = 12.642 V/m; Power Drift = -0.04 dB

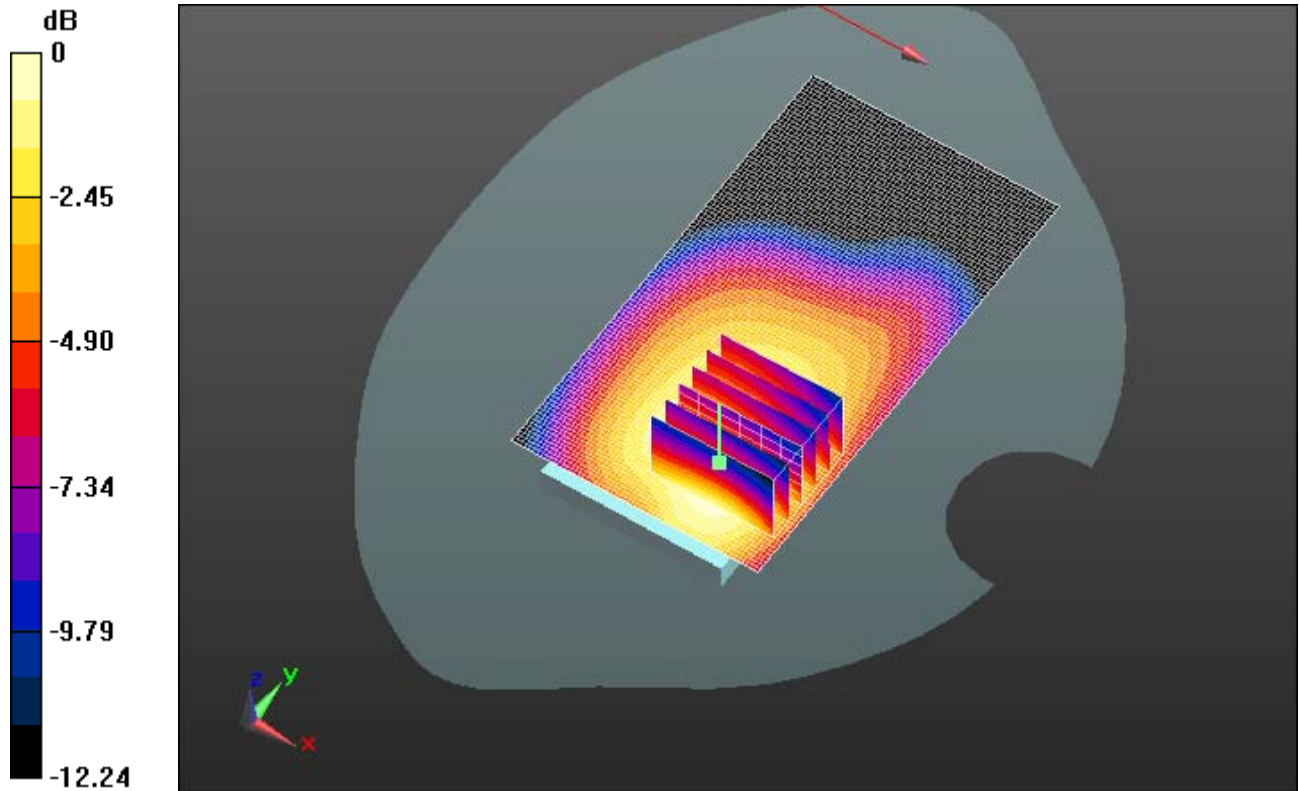
Peak SAR (extrapolated) = 0.2870

SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.148 mW/g


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

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

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

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Date/Time: 11/13/2012 10:07:20 AM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Left_LTE_13_mid_chan_QPSK_RB_1_Offset_0_a
mb_temp_23.8_liq_temp_23.1C**

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 (31x101x1): Measurement grid:
dx=15mm, dy=15mm

[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=7.5mm, dy=7.5mm, dz=5mm


Reference Value = 15.285 V/m; Power Drift = 0.04 dB

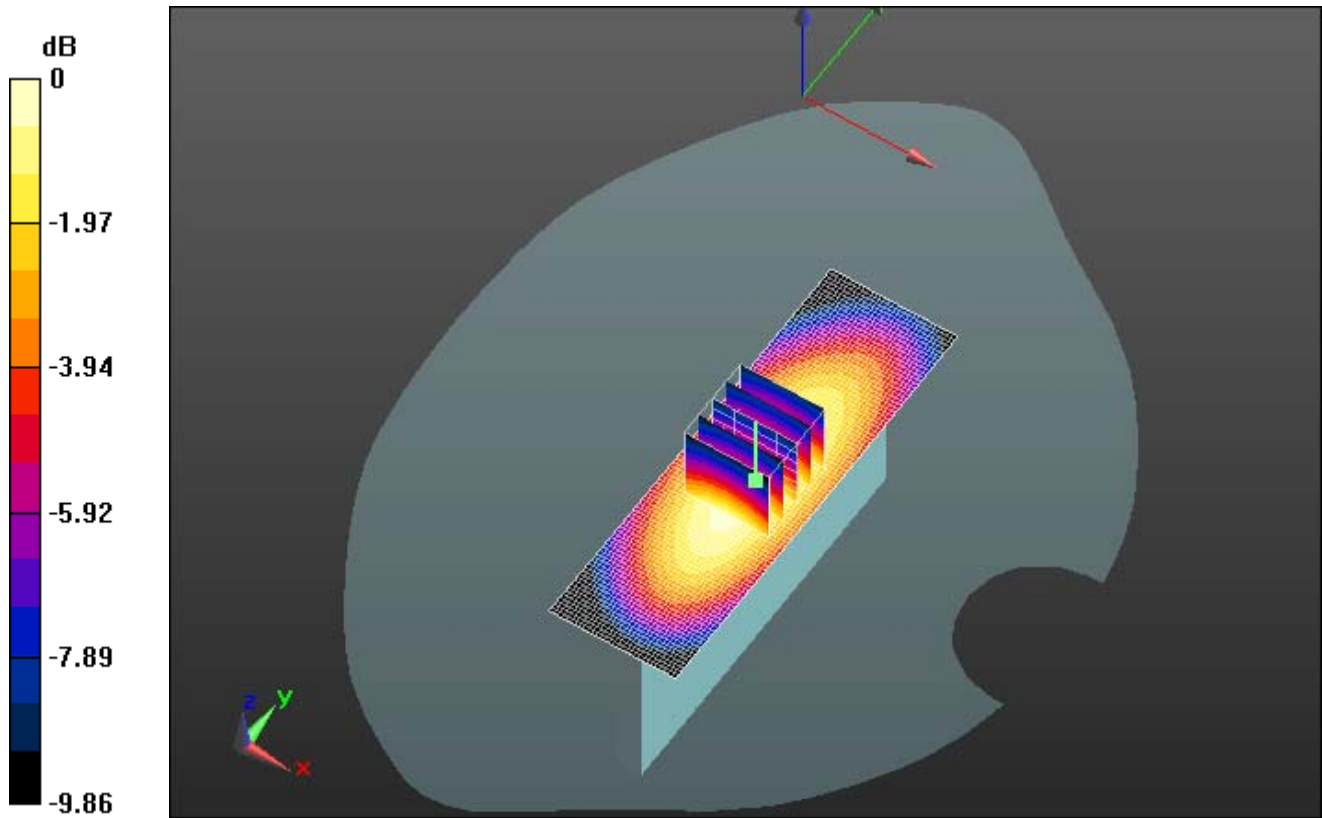
Peak SAR (extrapolated) = 0.2650

SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.128 mW/g


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

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

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

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Date/Time: 11/13/2012 10:43:30 AM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Right_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_temp_23.8_liq_temp_23.1C

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 (31x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

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

Maximum value of SAR (interpolated) = 0.144 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 = 12.131 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.1810

SAR(1 g) = 0.127 mW/g; SAR(10 g) = 0.087 mW/g

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

Maximum value of SAR (measured) = 0.146 mW/g

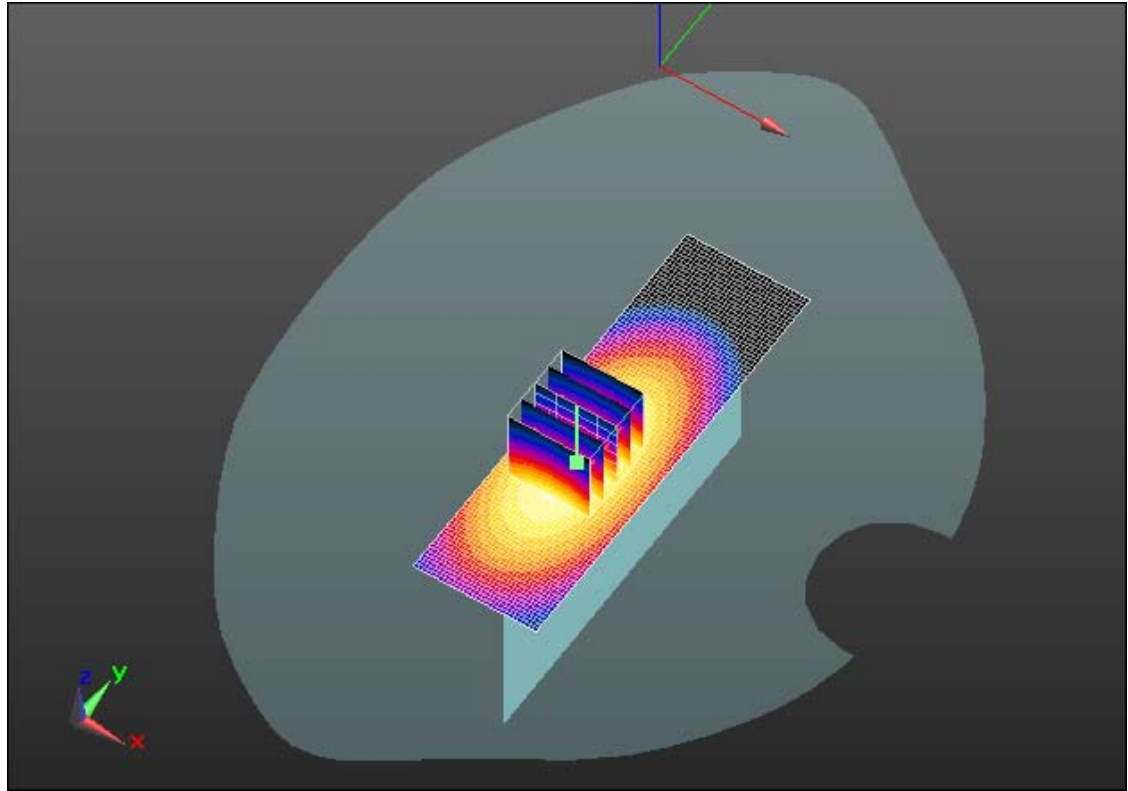
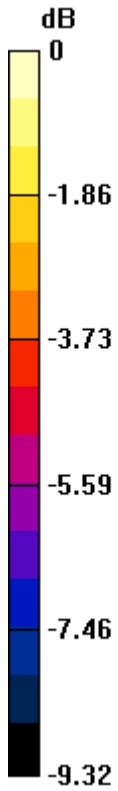
Author Data
Andrew Becker

Dates of Test
**Aug 21 – Nov 23, 2012
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RTS-6012-1211-32 Rev 3

FCC ID:
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IC ID
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0 dB = 0.150mW/g = -16.48 dB mW/g

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Date/Time: 11/13/2012 9:47:13 AM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Top_LTE_13_mid_chan_QPSK_RB_1_Offset_0_a
mb_temp_23.2_liq_temp_23.8C**

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

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

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.978$ mho/m; $\epsilon_r = 56.879$; $\rho = 1000$ 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 (41x61x1): Measurement grid:
dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.046 mW/g

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

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


Reference Value = 6.790 V/m; Power Drift = 0.07 dB

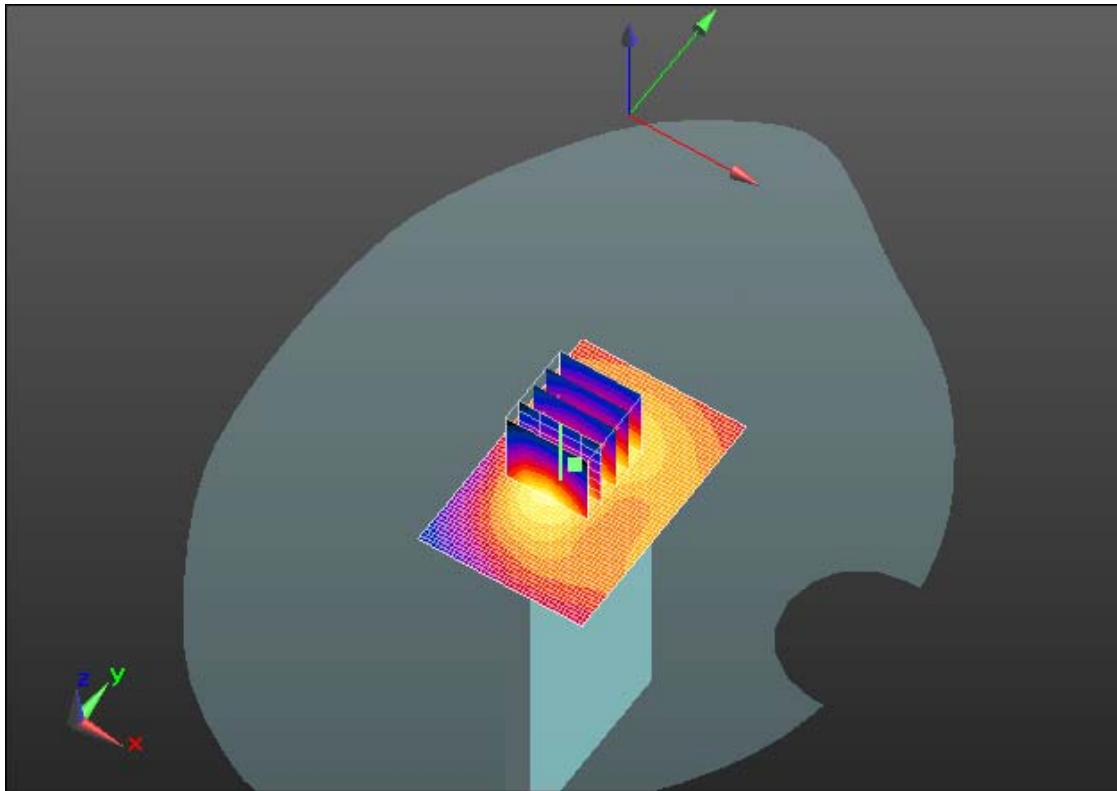
Peak SAR (extrapolated) = 0.0850

SAR(1 g) = 0.045 mW/g; SAR(10 g) = 0.025 mW/g


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

Maximum value of SAR (measured) = 0.056 mW/g

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0 dB = 0.060mW/g = -24.44 dB mW/g

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Date/Time: 11/12/2012 3:23:10 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_Headset_LTE_13_mid_chan_QPSK_RB_1_Offset_0_amb_temp_24.1_liq_temp_22.7C

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

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

Maximum value of SAR (interpolated) = 0.183 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 = 10.165 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 0.2340

SAR(1 g) = 0.161 mW/g; SAR(10 g) = 0.111 mW/g

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

Maximum value of SAR (measured) = 0.186 mW/g

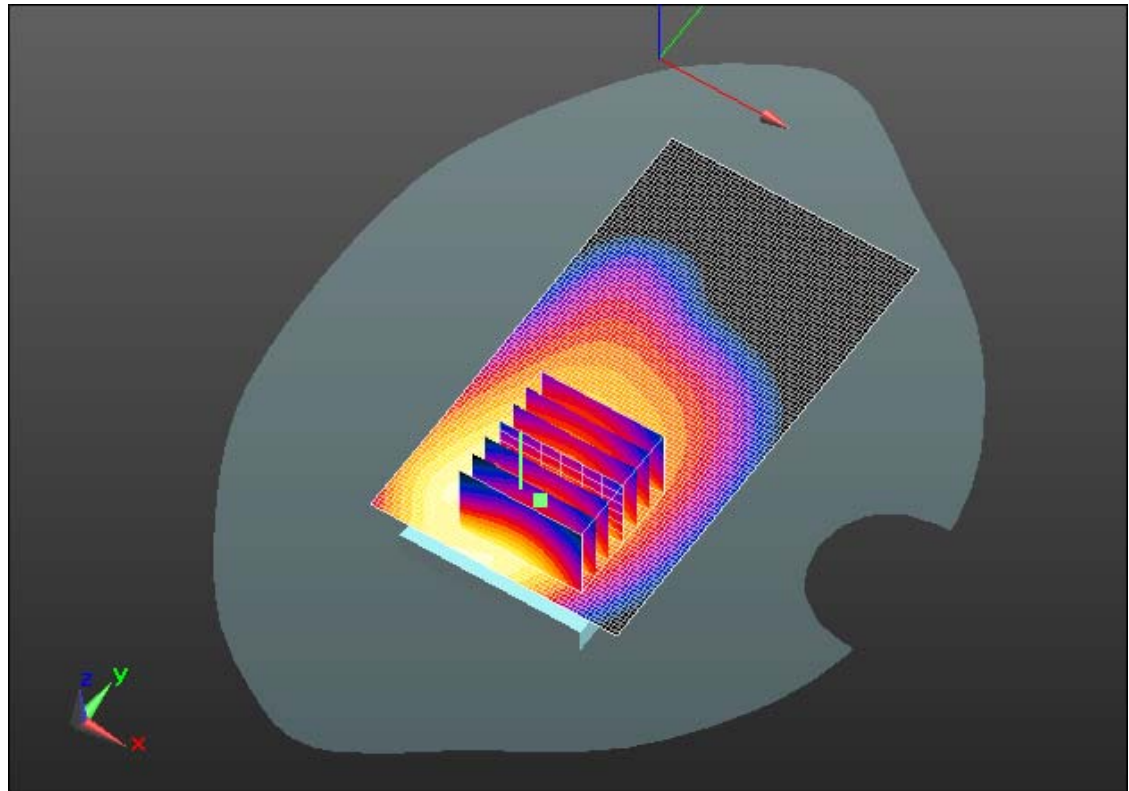
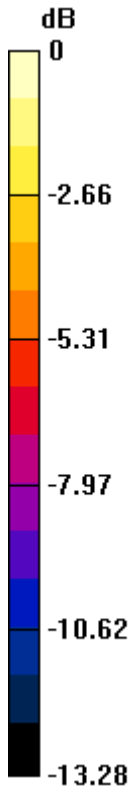
Author Data
Andrew Becker

Dates of Test
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0 dB = 0.190mW/g = -14.42 dB mW/g

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Date/Time: 8/30/2012 8:05:58 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_GPRS850_mid_chan_amb_temp_23.4_liq_t
emp_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=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.711 mW/g

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

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


Reference Value = 18.041 V/m; Power Drift = 0.11 dB

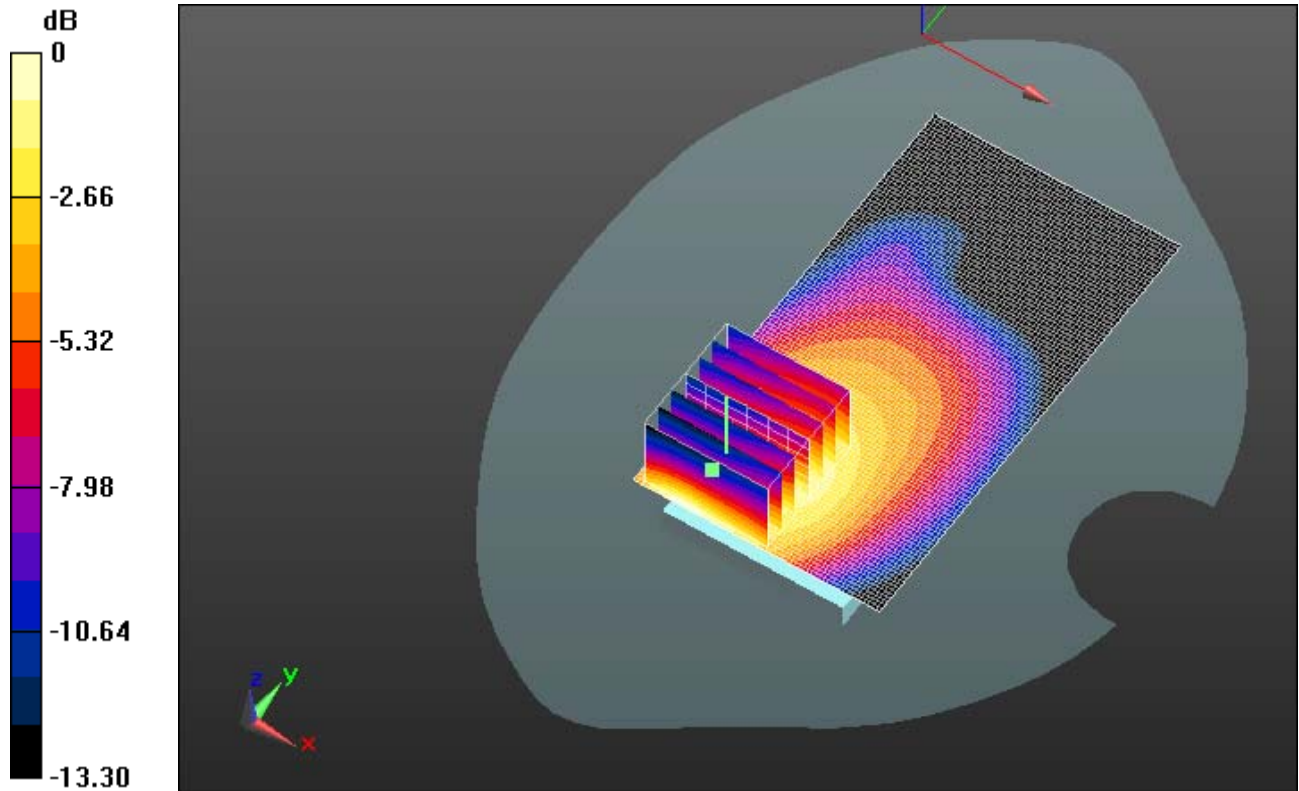
Peak SAR (extrapolated) = 0.9720

SAR(1 g) = 0.588 mW/g; SAR(10 g) = 0.398 mW/g


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

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

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0 dB = 0.690mW/g = -3.22 dB mW/g

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Date/Time: 8/30/2012 9:22:35 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Front_GPRS850_mid_chan_amb_temp_23.4_liq_t
emp_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=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.538 mW/g

Configuration/Touch position -/Zoom Scan (5x5x7) (8x8x7)/Cube 0:

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


Reference Value = 15.900 V/m; Power Drift = -0.14 dB

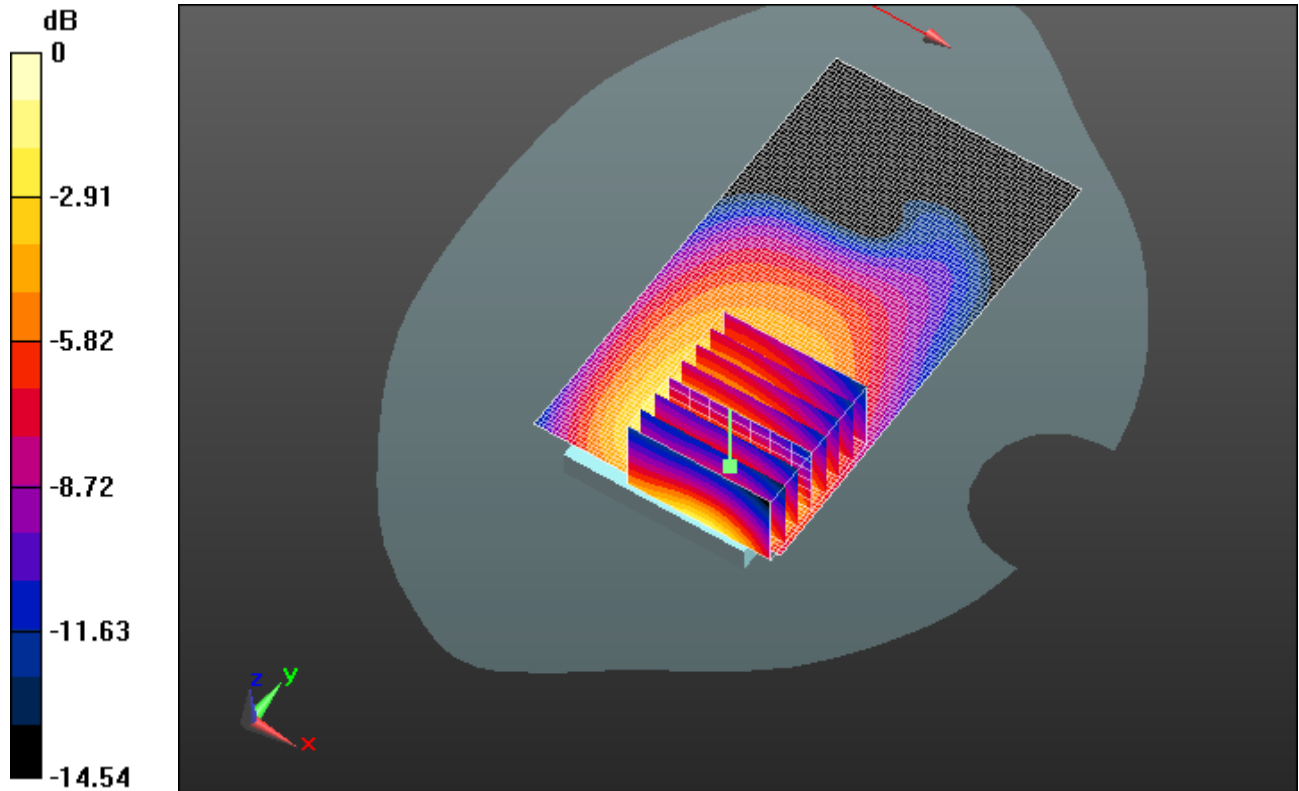
Peak SAR (extrapolated) = 0.6580

SAR(1 g) = 0.452 mW/g; SAR(10 g) = 0.308 mW/g


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

Maximum value of SAR (measured) = 0.520 mW/g

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0 dB = 0.520mW/g = -5.68 dB mW/g

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Date/Time: 8/30/2012 10:52:35 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Left_GPRS850_mid_chan_amb_temp_22.9C_liq_t
emp_22.6C**

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 (31x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

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

Maximum value of SAR (interpolated) = 0.260 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 = 16.749 V/m; Power Drift = -0.31 dB

Peak SAR (extrapolated) = 0.3210

SAR(1 g) = 0.220 mW/g; SAR(10 g) = 0.149 mW/g

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

Maximum value of SAR (measured) = 0.254 mW/g

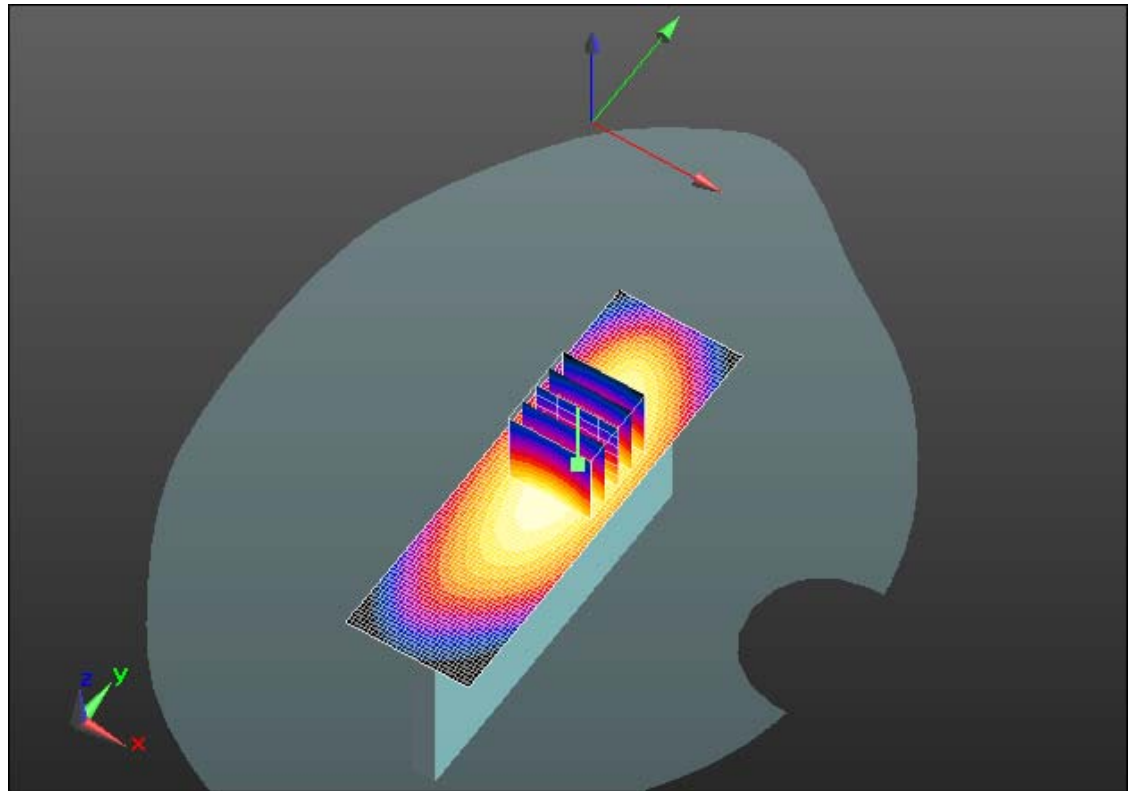
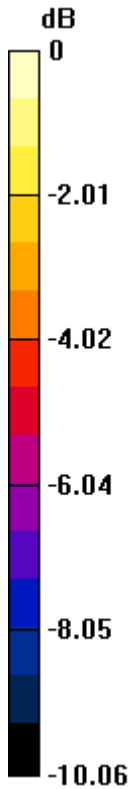
Author Data
Andrew Becker

Dates of Test
**Aug 21 – Nov 23, 2012
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FCC ID:
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IC ID
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0 dB = 0.250mW/g = -12.04 dB mW/g

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Date/Time: 8/30/2012 11:07:47 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Right_GPRS850_mid_chan_amb_temp_22.9C_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
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (31x101x1): Measurement grid:
dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.323 mW/g

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

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

Reference Value = 16.848 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.4120

SAR(1 g) = 0.290 mW/g; SAR(10 g) = 0.198 mW/g

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

Maximum value of SAR (measured) = 0.333 mW/g

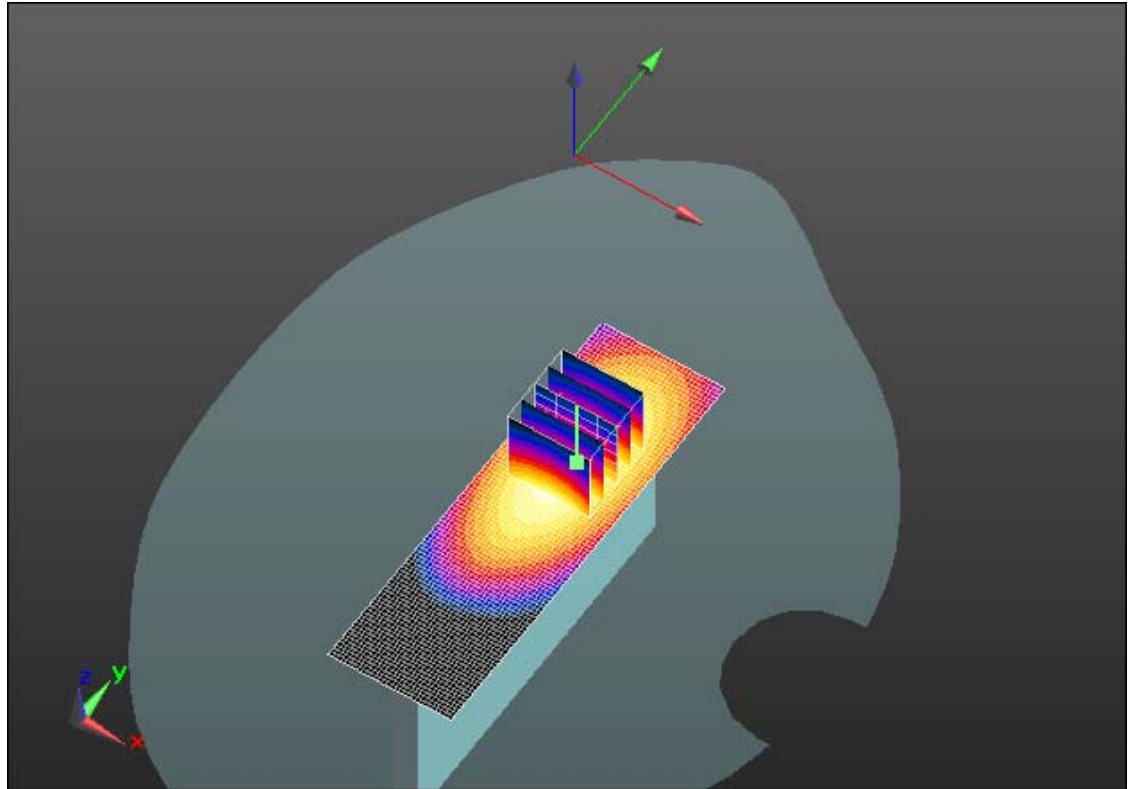
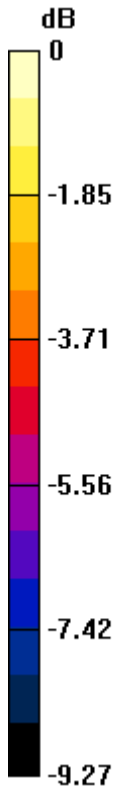
Author Data
Andrew Becker

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


Test Report No
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FCC ID:
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IC ID
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0 dB = 0.330mW/g = -9.63 dB mW/g

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Date/Time: 8/30/2012 11:25:21 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Top_GPRS850_mid_chan_amb_temp_22.9_liq_temper_22.5C

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 2A20270D

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 (41x61x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

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

Maximum value of SAR (interpolated) = 0.167 mW/g

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

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


Reference Value = 13.651 V/m; Power Drift = -0.12 dB

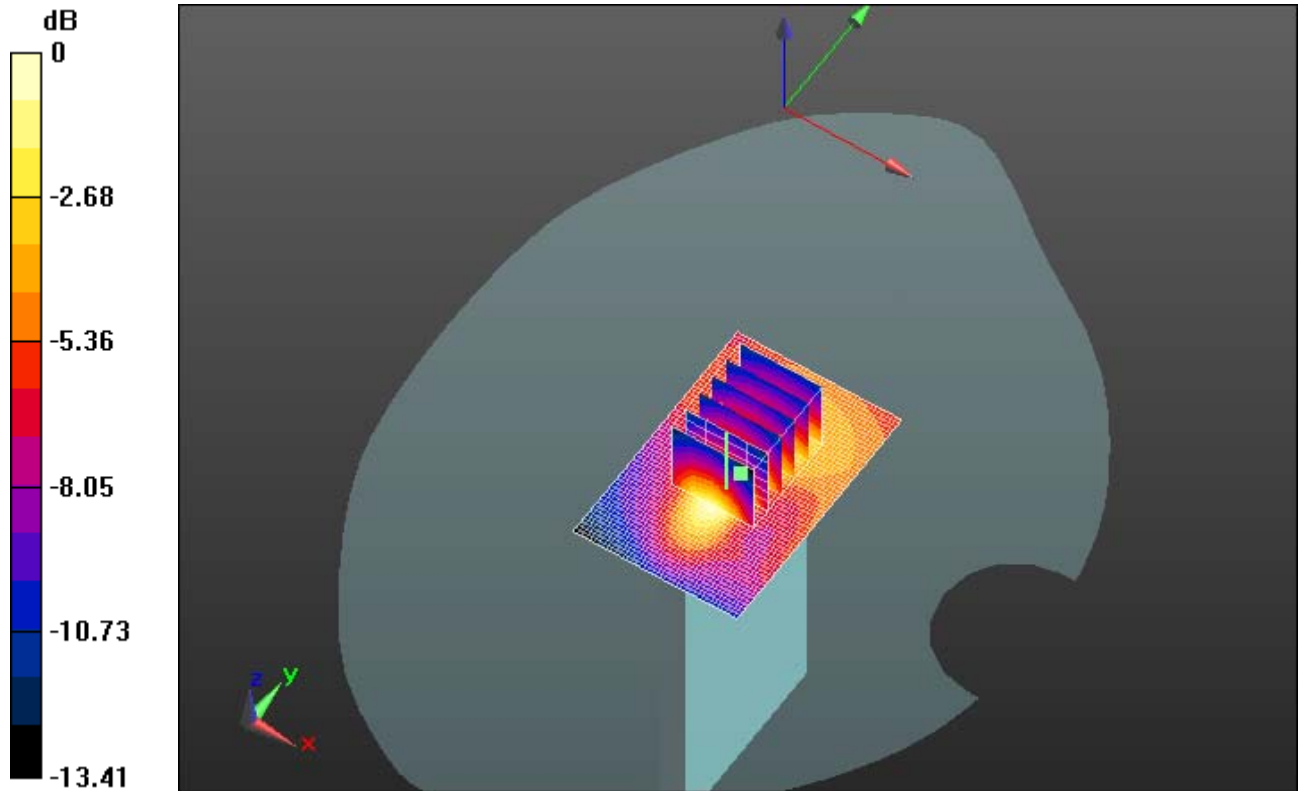
Peak SAR (extrapolated) = 0.2380

SAR(1 g) = 0.140 mW/g; SAR(10 g) = 0.080 mW/g


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

Maximum value of SAR (measured) = 0.173 mW/g

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0 dB = 0.170mW/g = -15.39 dB mW/g

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Date/Time: 8/30/2012 8:55:56 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_Headset_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
- 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) = 0.539 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 = 13.454 V/m; Power Drift = -0.43 dB

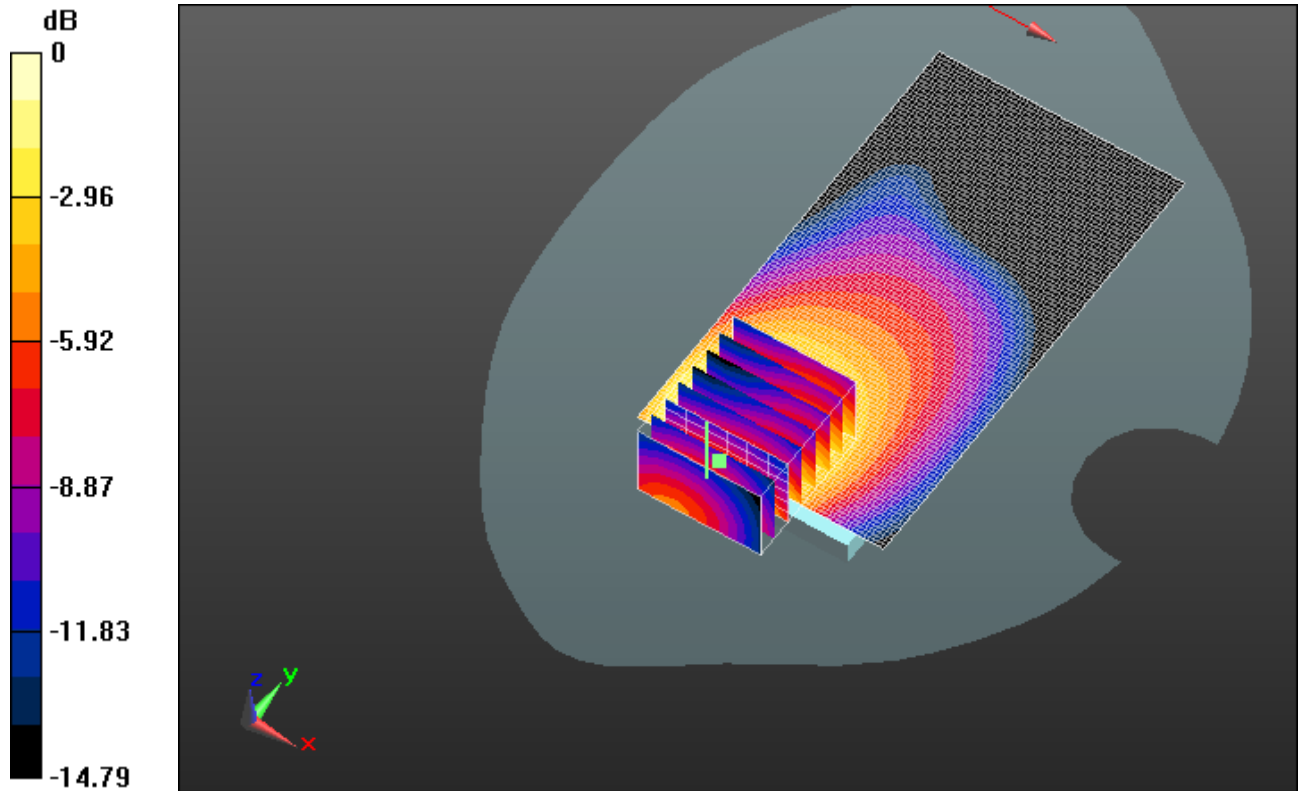
Peak SAR (extrapolated) = 0.7970

SAR(1 g) = 0.467 mW/g; SAR(10 g) = 0.269 mW/g


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

Maximum value of SAR (measured) = 0.537 mW/g

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

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Date/Time: 8/31/2012 2:06:45 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_GPRS850_3slots_mid_chan_amb_temp_23.
4_liq_temp_22.8C**

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

Communication System: GPRS 850 (3 slots); 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:
 $dx=15\text{mm}$, $dy=15\text{mm}$

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


Maximum value of SAR (interpolated) = 0.723 mW/g

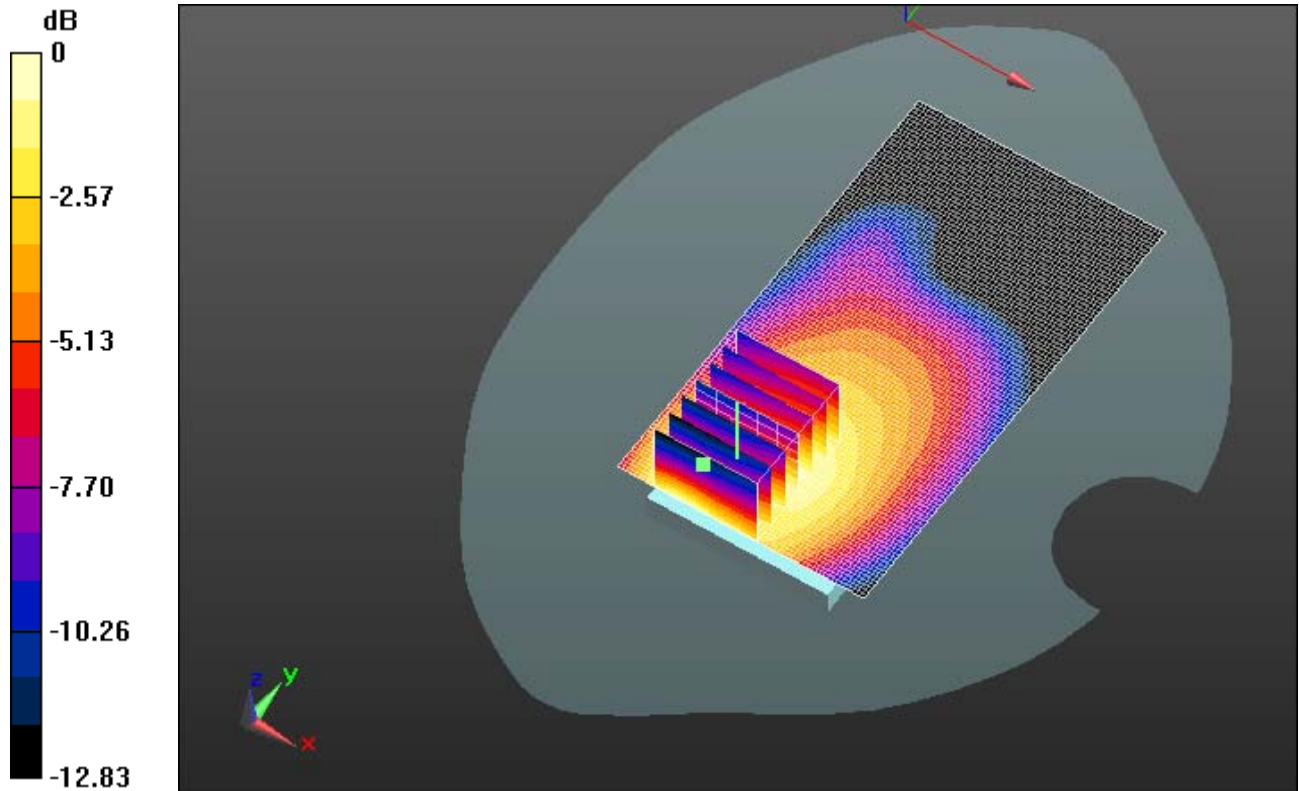
Configuration/Touch position -/Zoom Scan (5x5x7) (6x7x7)/Cube 0:

Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 19.456 V/m; Power Drift = -0.18 dB
 Peak SAR (extrapolated) = 0.9870
SAR(1 g) = 0.634 mW/g; SAR(10 g) = 0.431 mW/g


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

Maximum value of SAR (measured) = 0.734 mW/g

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0 dB = 0.730mW/g = -2.73 dB mW/g

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Date/Time: 8/31/2012 2:29:19 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_GPRS850_4slots_mid_chan_amb_temp_23.
4_liq_temp_22.8C**

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

Communication System: GPRS 850 (4 slots); 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=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.719 mW/g

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

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


Reference Value = 19.490 V/m; Power Drift = -0.06 dB

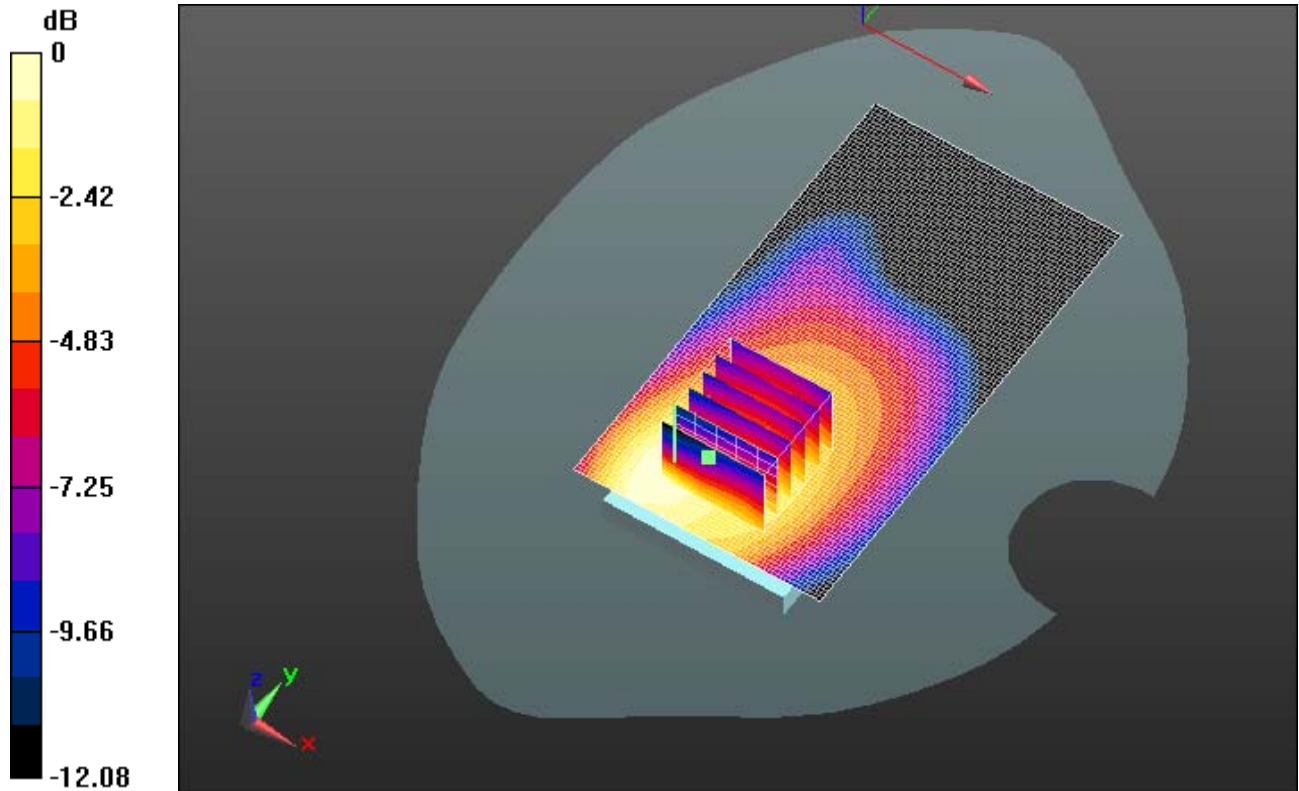
Peak SAR (extrapolated) = 1.0030

SAR(1 g) = 0.631 mW/g; SAR(10 g) = 0.428 mW/g


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

Maximum value of SAR (measured) = 0.732 mW/g

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0 dB = 0.730mW/g = -2.73 dB mW/g

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Date/Time: 10/30/2012 1:43:28 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_3slots_GPRS850_mid_chan_amb_temp_23.
8_liq_temp_22.6C**

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

Communication System: GPRS 850 (3 slots); Frequency: 836.8 MHz
Medium parameters used (interpolated): $f = 836.8$ MHz; $\sigma = 0.951$ mho/m; $\epsilon_r = 53.491$; $\rho = 1000$ 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) = 0.697 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 = 20.733 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.9400
SAR(1 g) = 0.621 mW/g; SAR(10 g) = 0.428 mW/g

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

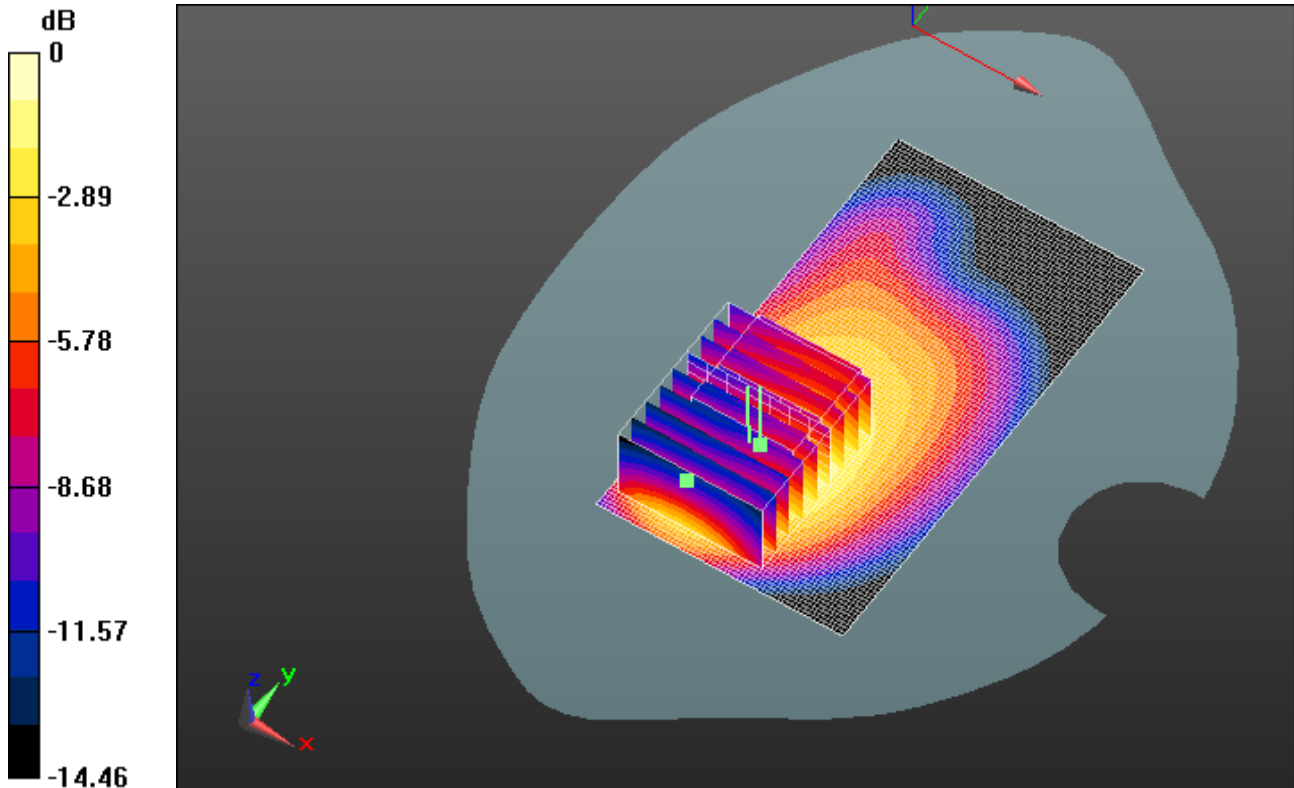
Maximum value of SAR (measured) = 0.728 mW/g

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Configuration/Touch position -/Zoom Scan 2 (5x5x7) (8x9x7)/Cube 0:

Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm
 Reference Value = 20.733 V/m; Power Drift = -0.10 dB
 Peak SAR (extrapolated) = 0.9130
SAR(1 g) = 0.608 mW/g; SAR(10 g) = 0.420 mW/g

[Info: Interpolated medium parameters used for SAR evaluation.](#)
 Maximum value of SAR (measured) = 0.708 mW/g



0 dB = 0.710mW/g = -2.97 dB mW/g

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Date/Time: 11/21/2012 4:57:24 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_CDMA850_mid_chan_amb_temp_22.6_liq_t
emp_23.8C**

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
- 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) = 0.817 mW/g

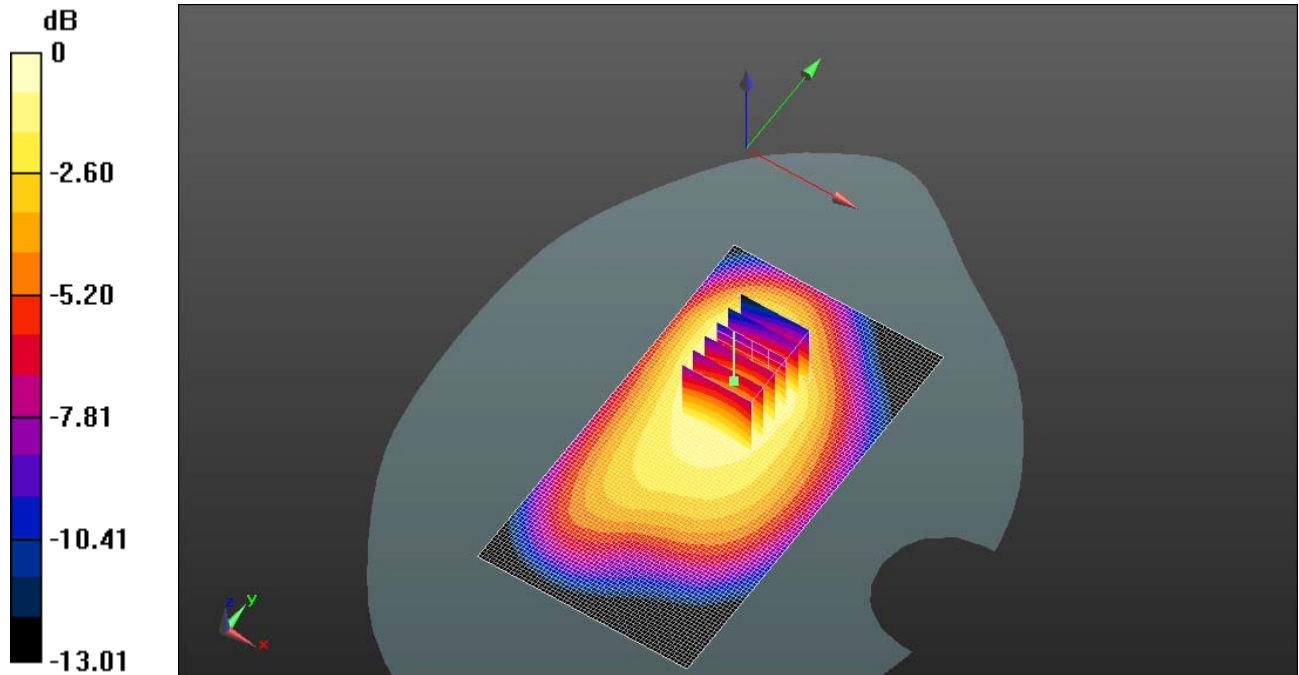
Configuration/Touch position -/Zoom Scan (5x5x7) (5x6x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
 Reference Value = 24.836 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 1.0280
SAR(1 g) = 0.718 mW/g; SAR(10 g) = 0.509 mW/g


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

Maximum value of SAR (measured) = 0.819 mW/g

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0 dB = 0.820mW/g = -1.72 dB mW/g

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Date/Time: 11/21/2012 5:31:39 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Front_CDMA850_mid_chan_amb_temp_23.3_liq_t
emp_22.6C**

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) = 0.728 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 = 25.661 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.8930

SAR(1 g) = 0.662 mW/g; SAR(10 g) = 0.493 mW/g

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

Maximum value of SAR (measured) = 0.739 mW/g

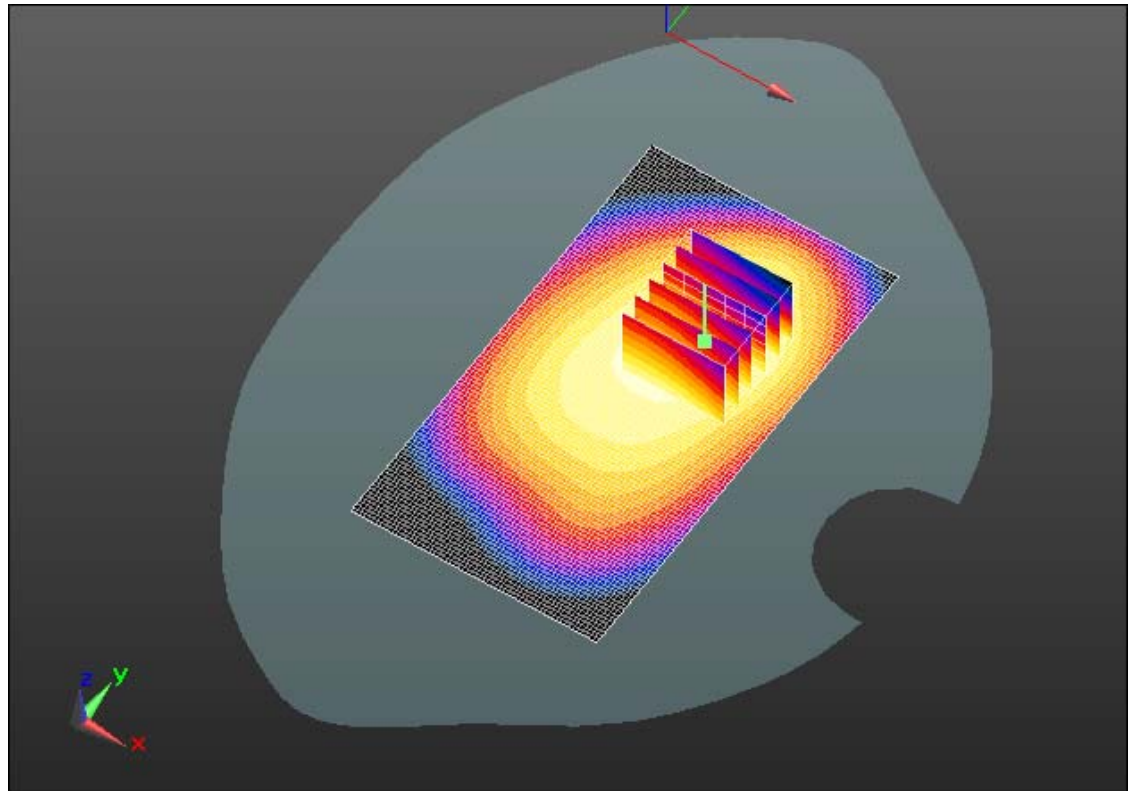
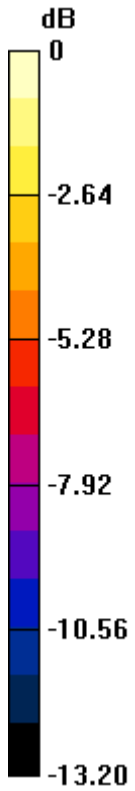
Author Data
Andrew Becker

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 = 0.740mW/g = -2.62 dB mW/g

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Date/Time: 11/21/2012 8:58:29 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Left_CDMA850_mid_chan_amb_temp_23.0C_liq_t
emp_22.6C**

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
- DASYS 52 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (31x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

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

Maximum value of SAR (interpolated) = 0.523 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 = 23.814 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.6410

SAR(1 g) = 0.458 mW/g; SAR(10 g) = 0.316 mW/g

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

Maximum value of SAR (measured) = 0.524 mW/g

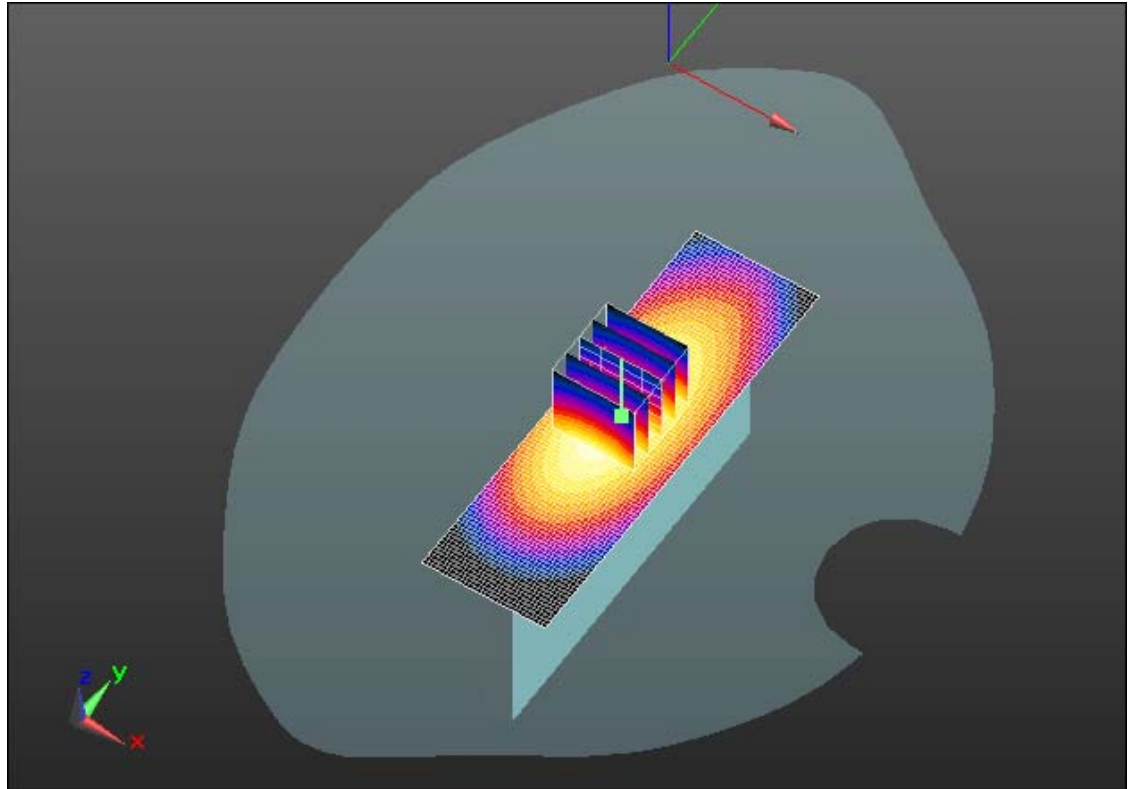
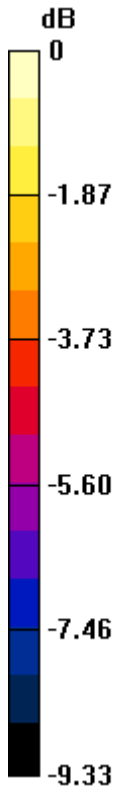
Author Data
Andrew Becker

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 = 0.520mW/g = -5.68 dB mW/g

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Date/Time: 11/21/2012 8:37:19 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Right_CDMA850_mid_chan_amb_temp_23.0C_liq
_temp_22.6C**

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 (31x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

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

Maximum value of SAR (interpolated) = 0.523 mW/g


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

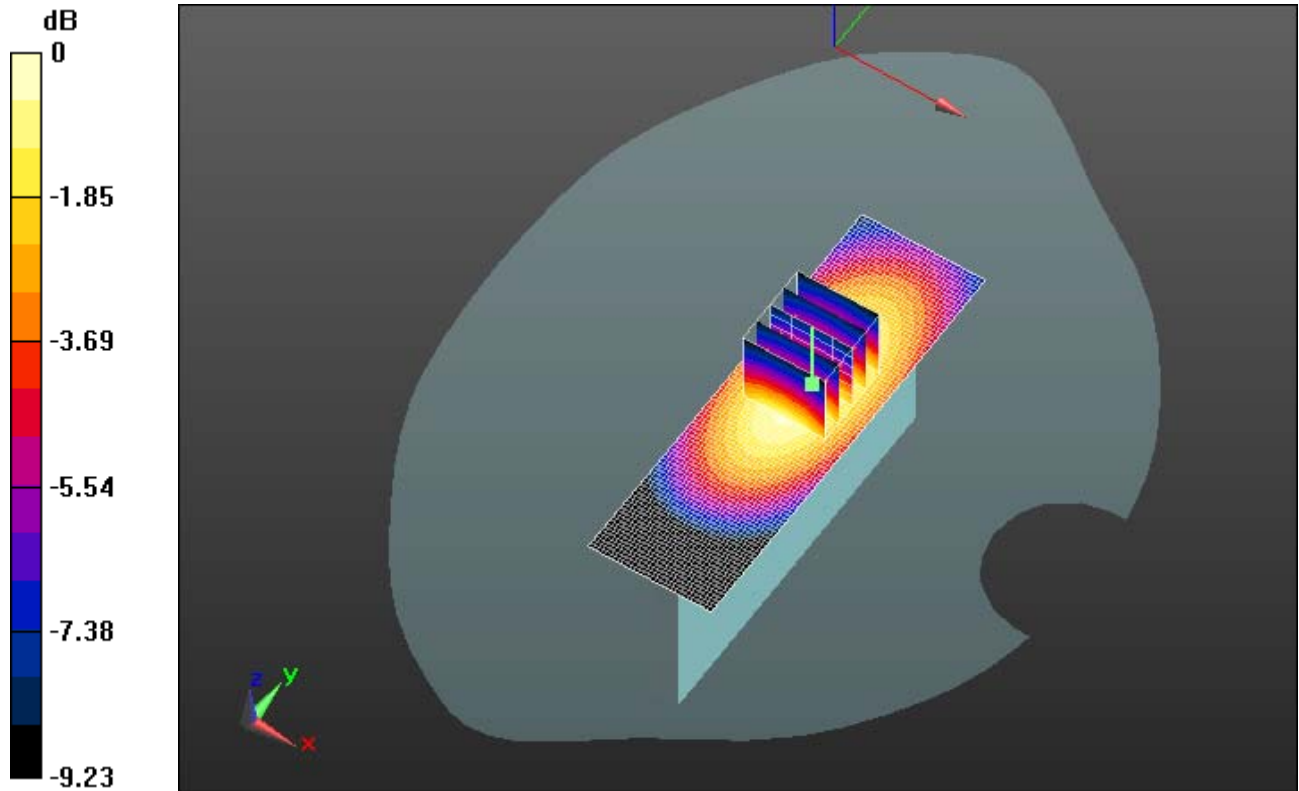
Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
Reference Value = 23.413 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.6510

SAR(1 g) = 0.469 mW/g; SAR(10 g) = 0.324 mW/g


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

Maximum value of SAR (measured) = 0.536 mW/g

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

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Date/Time: 11/21/2012 9:33:12 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Bottom_CDMA850_mid_chan_amb_temp_22.8_liq
_temp_22.4C**

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
- DASYS 52.8.0(692); SEMCAD X 14.6.4(4989)

Configuration/Touch position -/Area Scan (41x61x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

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

Maximum value of SAR (interpolated) = 0.181 mW/g


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

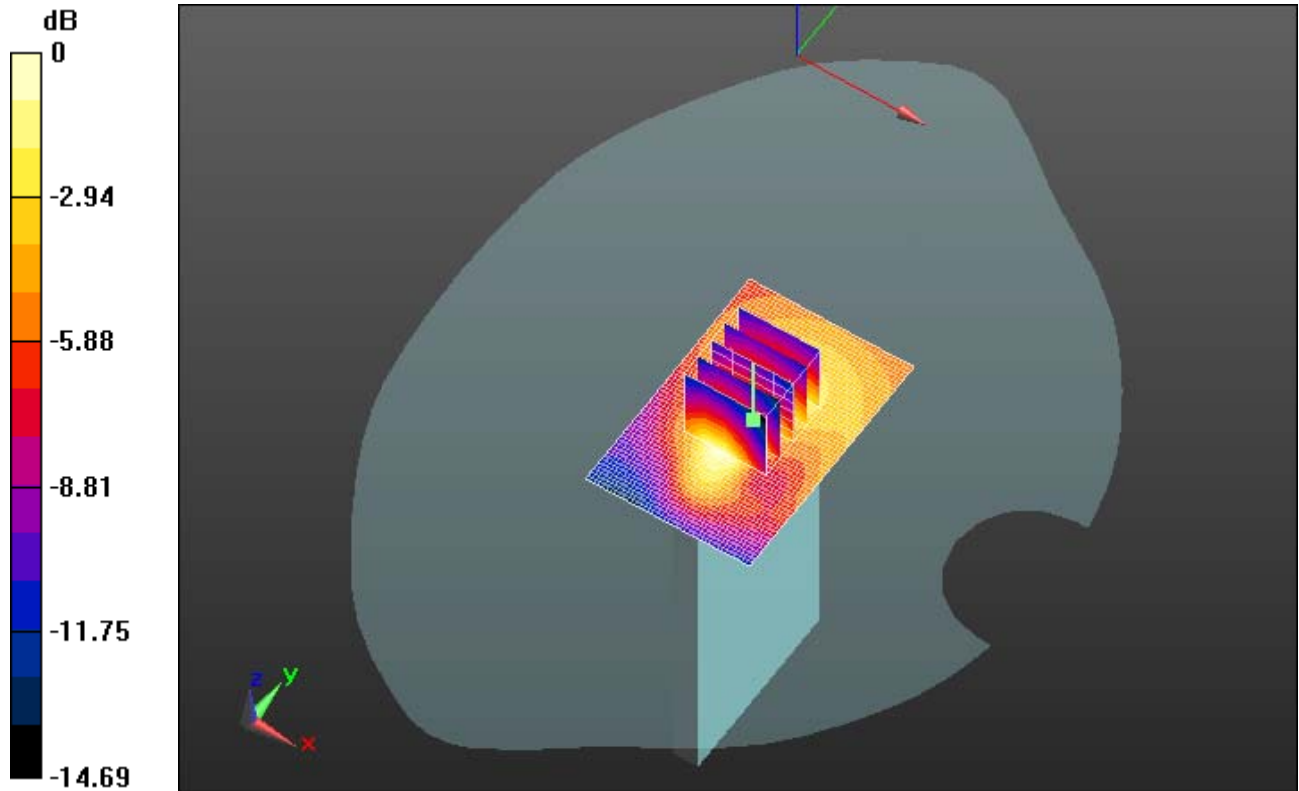
Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
Reference Value = 14.170 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.2560

SAR(1 g) = 0.148 mW/g; SAR(10 g) = 0.085 mW/g


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

Maximum value of SAR (measured) = 0.176 mW/g

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0 dB = 0.180mW/g = -14.89 dB mW/g

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Date/Time: 11/21/2012 5:59:22 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_Headset_CDMA850_mid_chan_amb_temp_23.3_liq_temp_22.6C

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
- 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) = 0.814 mW/g


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

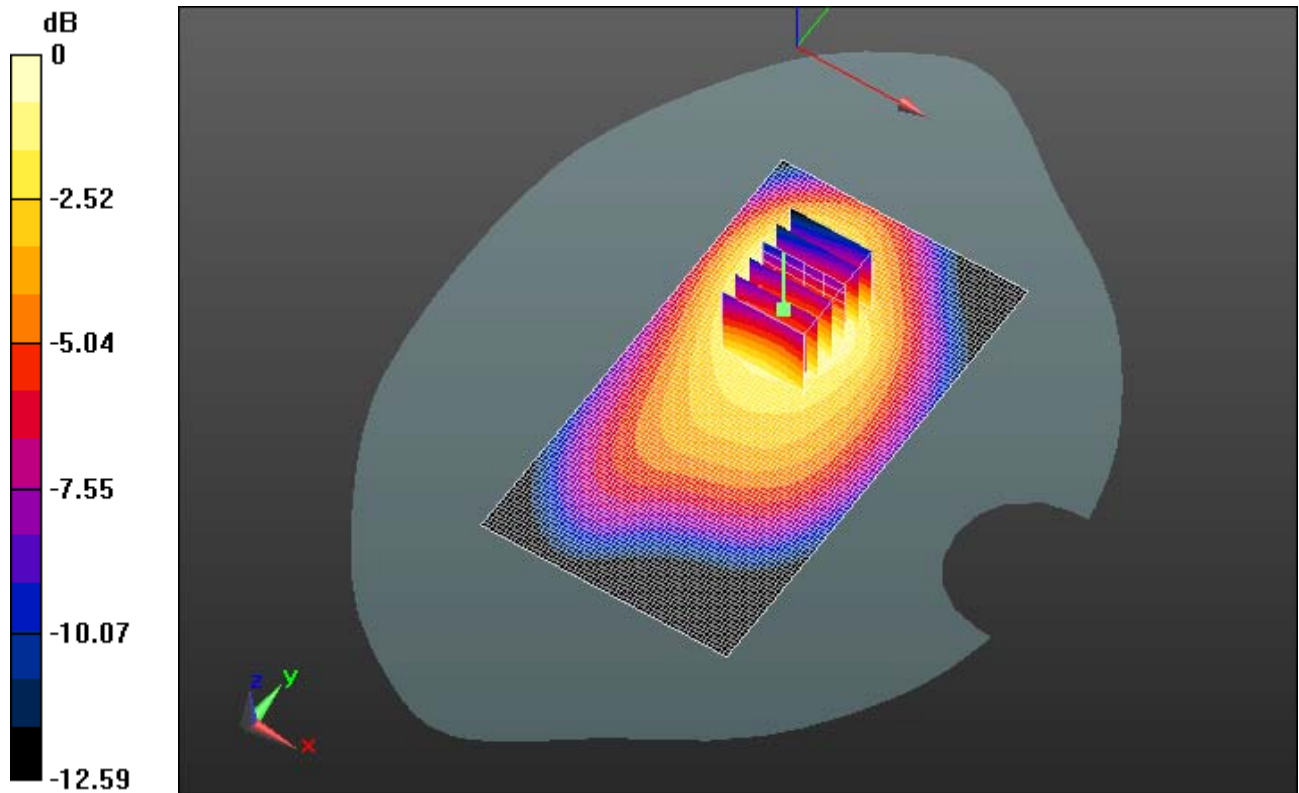
Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
Reference Value = 22.074 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.0490

SAR(1 g) = 0.699 mW/g; SAR(10 g) = 0.481 mW/g


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

Maximum value of SAR (measured) = 0.798 mW/g

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0 dB = 0.800mW/g = -1.94 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: 10/23/2012 5:58:41 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_GPRS1900_mid_chan_amb_temp_23.5_liq_ temp_22.1C

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
- 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) = 0.877 mW/g

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


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

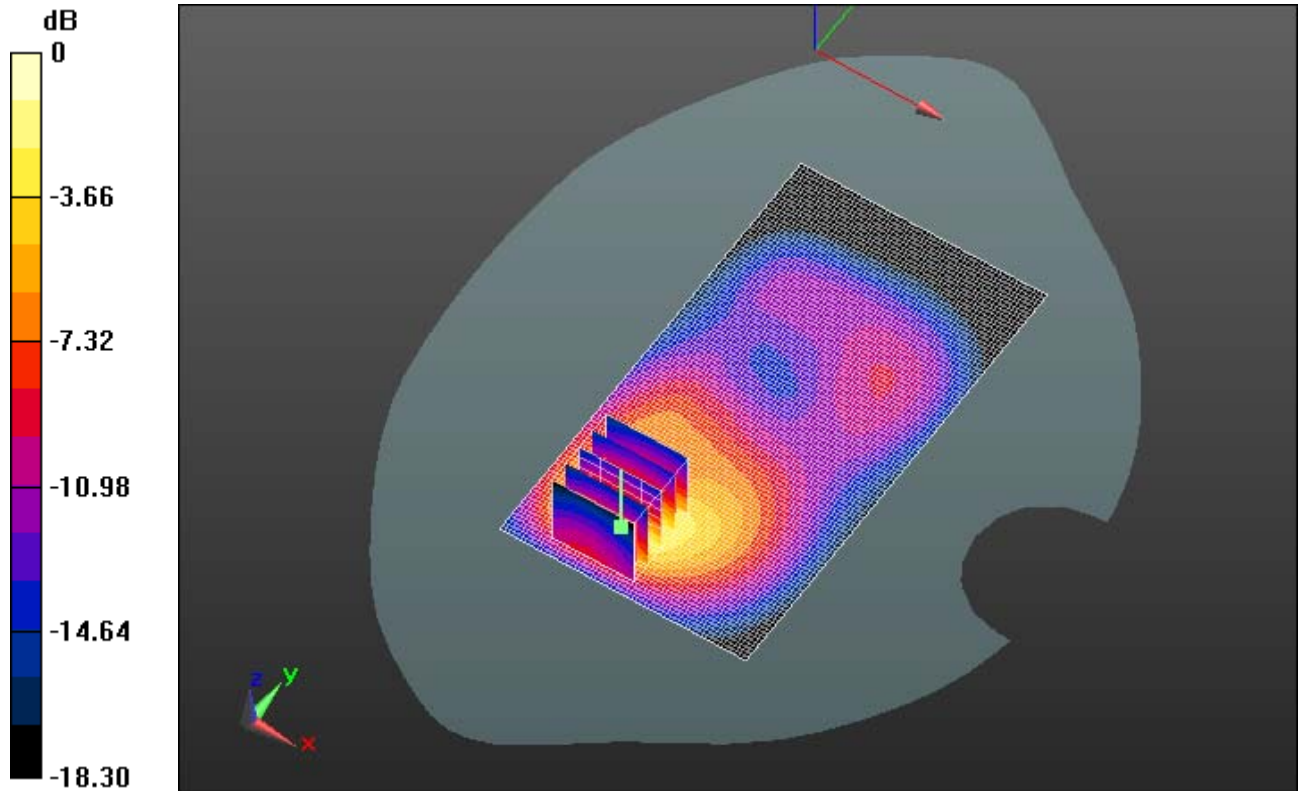
Reference Value = 7.039 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.4440


SAR(1 g) = 0.776 mW/g; SAR(10 g) = 0.390 mW/g

Maximum value of SAR (measured) = 1.003 mW/g

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0 dB = 1.000mW/g = 0 dB mW/g

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Date/Time: 10/23/2012 6:20:09 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Front_GPRS1900_mid_chan_amb_temp_23.5_liq_temp_22.1C

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) = 0.287 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 = 5.517 V/m; Power Drift = 0.0045 dB

Peak SAR (extrapolated) = 0.3790

SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.143 mW/g

Maximum value of SAR (measured) = 0.289 mW/g

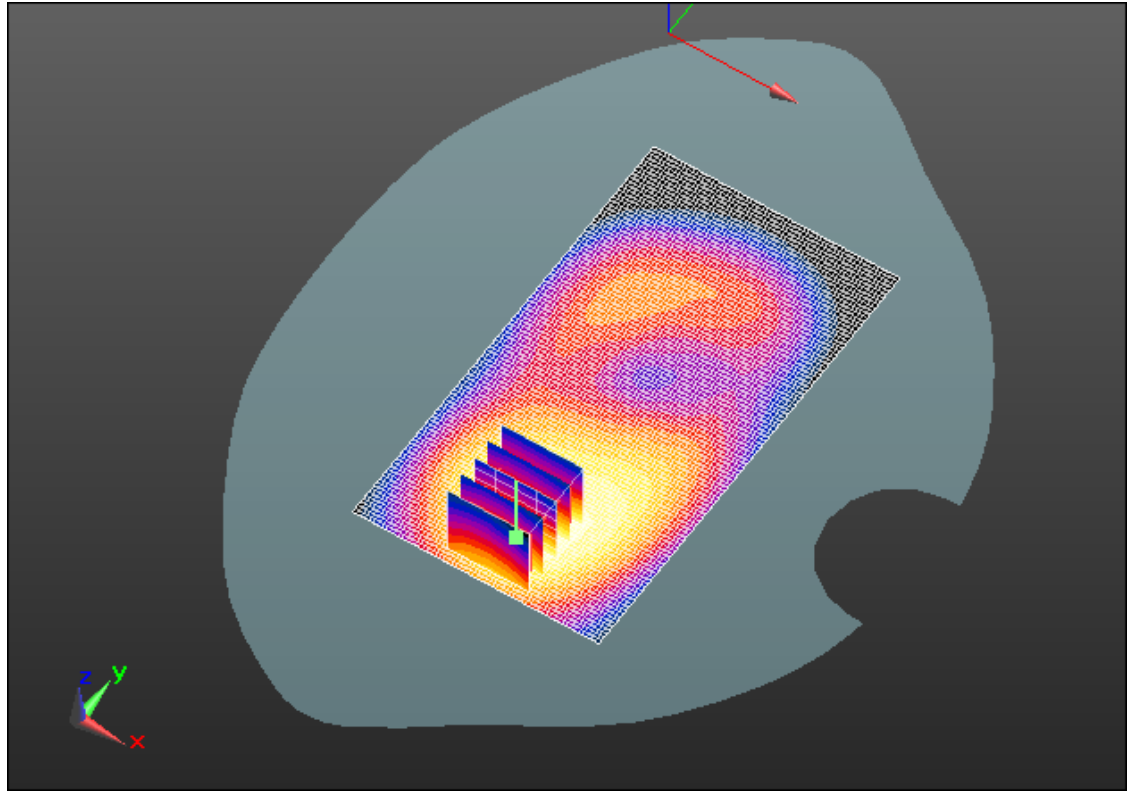
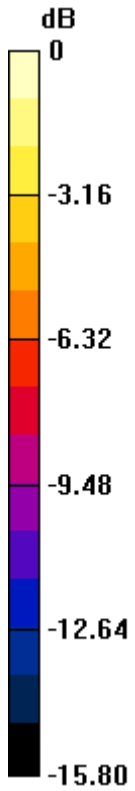
Author Data
Andrew Becker

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

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Date/Time: 10/23/2012 7:28:15 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Left_GPRS1900_mid_chan_amb_temp_23.8C_liq
_temp_22.0C**

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 (31x101x1): Measurement grid:

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

Maximum value of SAR (interpolated) = 0.121 mW/g

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


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

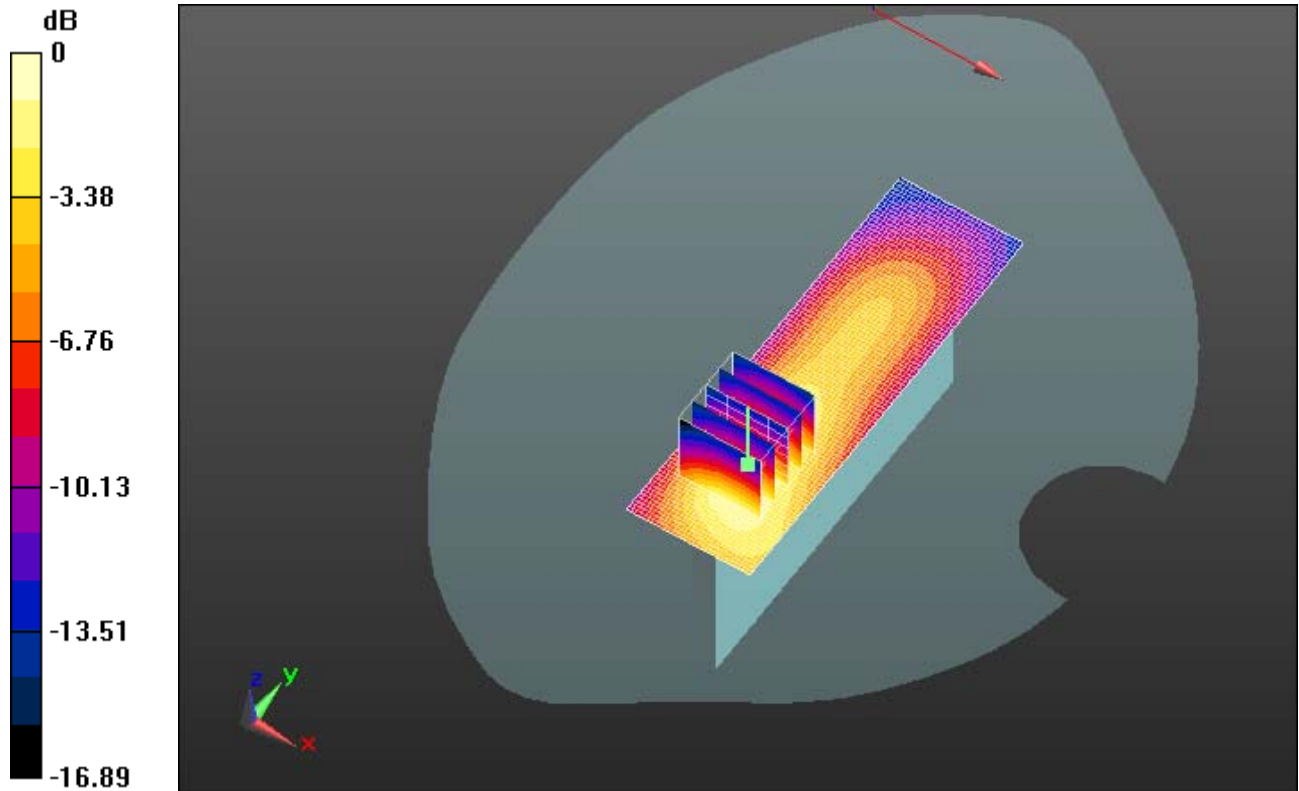
Reference Value = 6.613 V/m; Power Drift = 0.0073 dB

Peak SAR (extrapolated) = 0.1760


SAR(1 g) = 0.103 mW/g; SAR(10 g) = 0.058 mW/g

Maximum value of SAR (measured) = 0.128 mW/g

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

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Date/Time: 10/23/2012 7:04:27 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Right_GPRS1900_mid_chan_amb_temp_23.8C_li
q_temp_22.0C**

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 (31x101x1): Measurement grid:

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

Maximum value of SAR (interpolated) = 0.050 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 = 4.923 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.0690

SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.026 mW/g

Maximum value of SAR (measured) = 0.051 mW/g

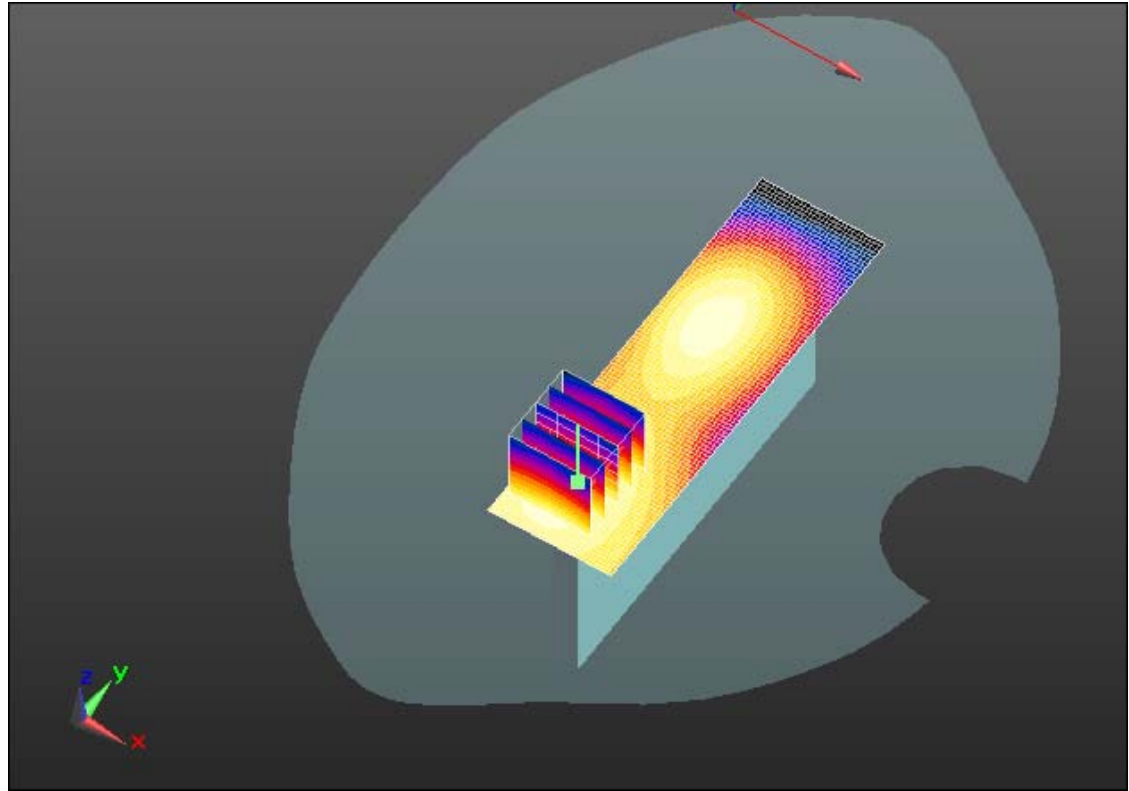
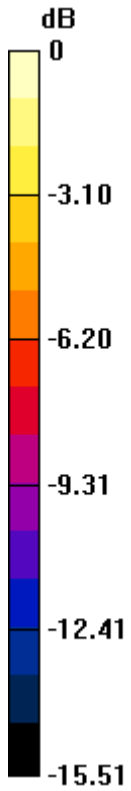
Author Data
Andrew Becker

Dates of Test
**Aug 21 – Nov 23, 2012
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0 dB = 0.050mW/g = -26.02 dB mW/g

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Date/Time: 10/23/2012 7:57:13 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Top_GPRS1900_mid_chan_amb_temp_23.8C_liq
_temp_22.0C**

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 (41x61x1): Measurement grid:

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

Maximum value of SAR (interpolated) = 0.240 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 = 10.327 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.3230

SAR(1 g) = 0.199 mW/g; SAR(10 g) = 0.116 mW/g

Maximum value of SAR (measured) = 0.243 mW/g

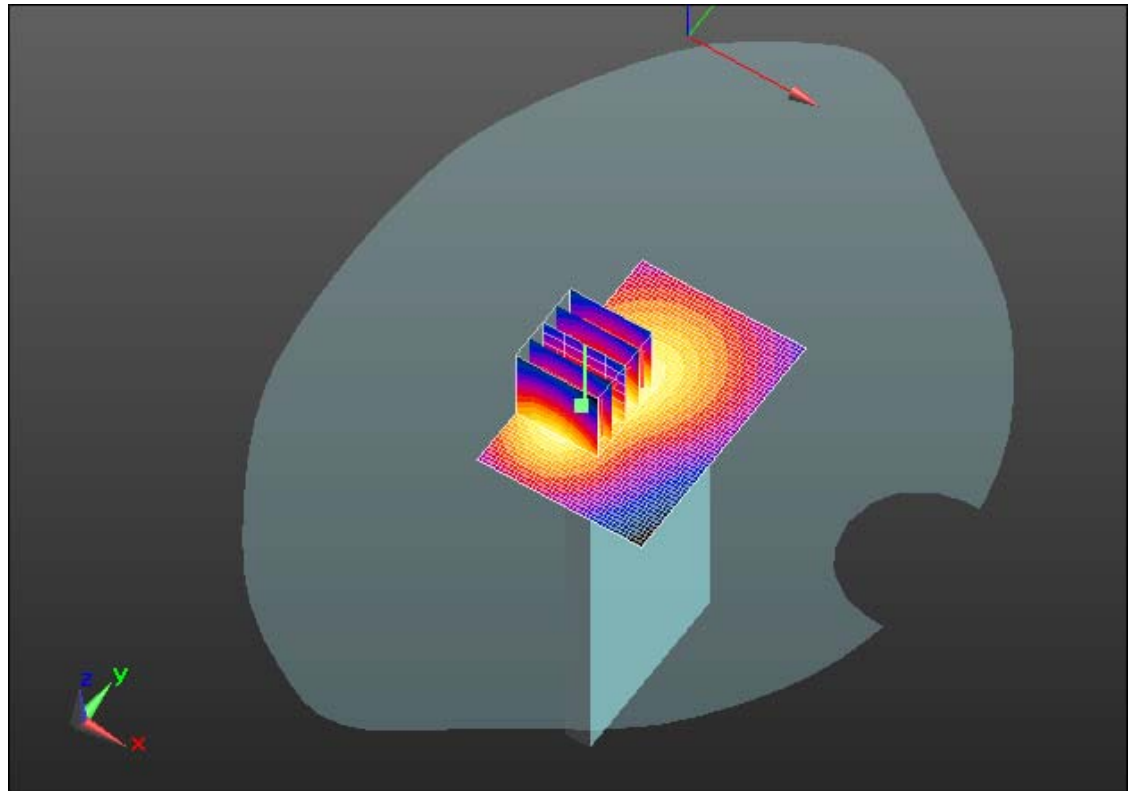
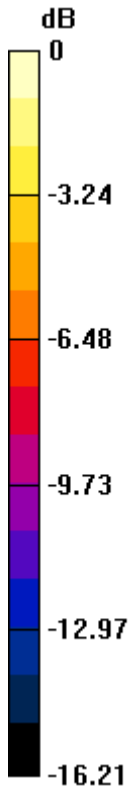
Author Data
Andrew Becker

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0 dB = 0.240mW/g = -12.40 dB mW/g

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Date/Time: 10/23/2012 9:04:33 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_Headset_GPRS1900_mid_chan_amb_temp
_23.4_liq_temp_21.8C**

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) = 0.480 mW/g

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


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

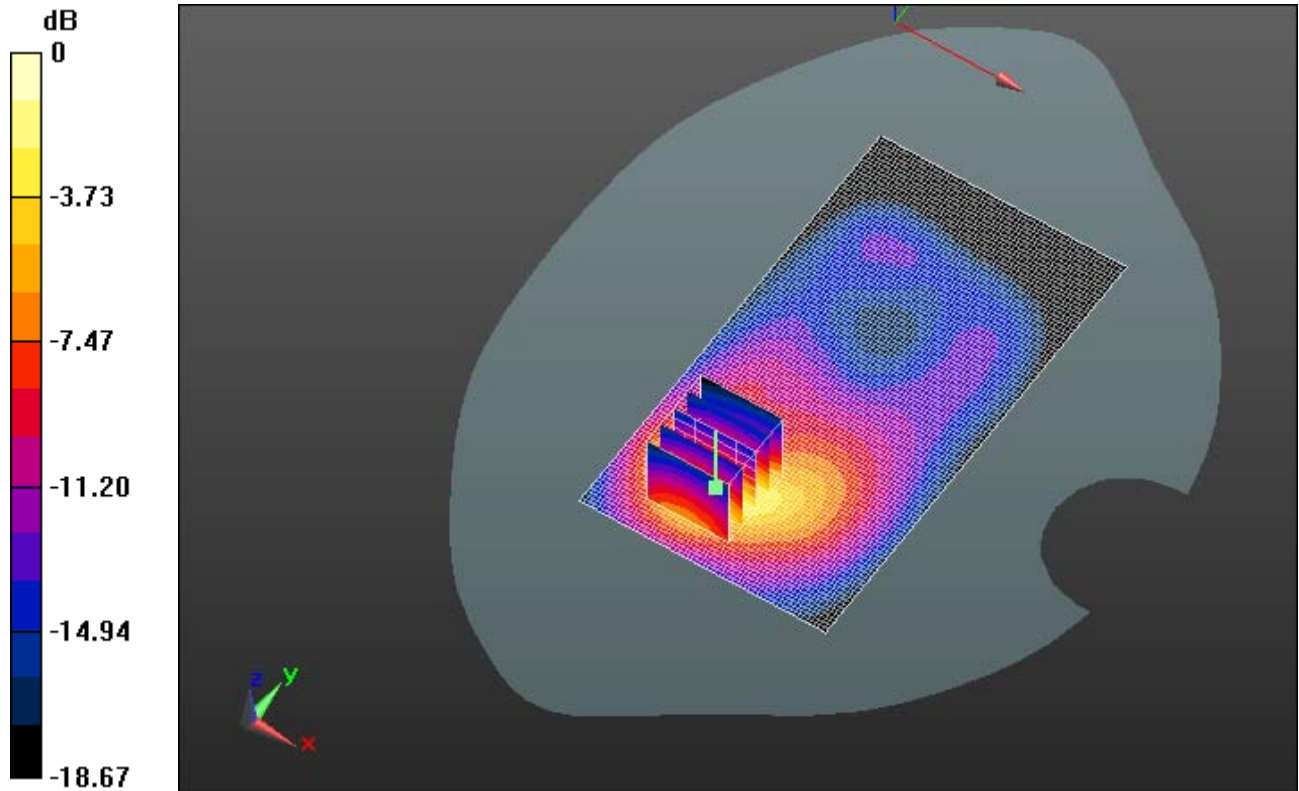
Reference Value = 4.751 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.7710


SAR(1 g) = 0.402 mW/g; SAR(10 g) = 0.194 mW/g

Maximum value of SAR (measured) = 0.530 mW/g

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0 dB = 0.530mW/g = -5.51 dB mW/g

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Date/Time: 10/23/2012 9:42:04 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_3slots_GPRS1900_mid_chan_amb_temp_2
3.4_liq_temp_21.8C**

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

Communication System: GPRS 1900 (3-slots); 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) = 0.768 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 = 7.225 V/m; Power Drift = -0.00013 dB
Peak SAR (extrapolated) = 1.1760
SAR(1 g) = 0.638 mW/g; SAR(10 g) = 0.322 mW/g
Maximum value of SAR (measured) = 0.756 mW/g

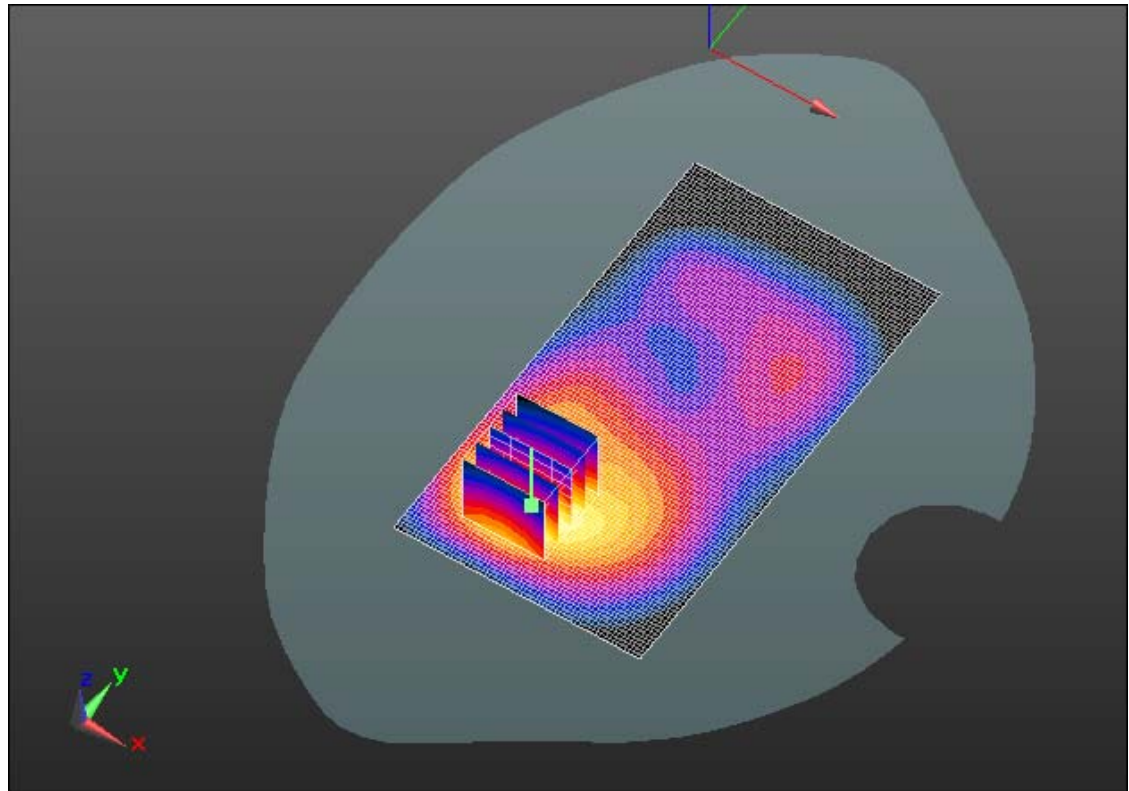
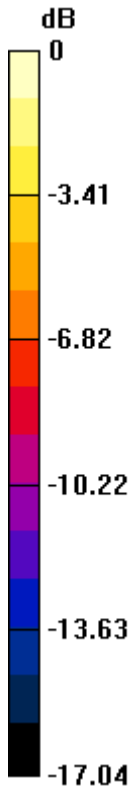
Author Data
Andrew Becker

Dates of Test
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0 dB = 0.760mW/g = -2.38 dB mW/g

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Date/Time: 10/23/2012 9:59:52 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_4slots_GPRS1900_mid_chan_amb_temp_2
3.4_liq_temp_21.8C**

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


Communication System: GPRS 1900 (4-slots); 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)

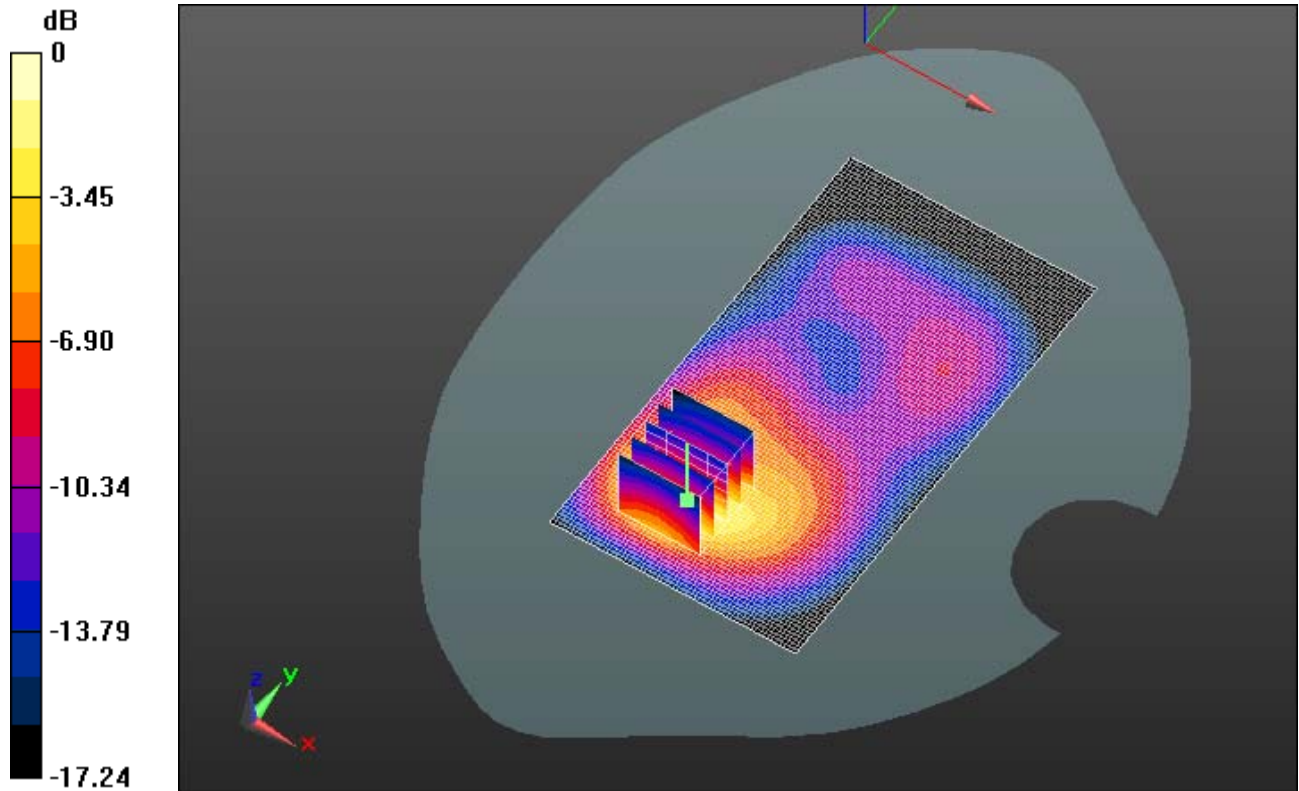
DASY Configuration:

- 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) = 0.746 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 = 7.187 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 1.2630
SAR(1 g) = 0.682 mW/g; SAR(10 g) = 0.340 mW/g
Maximum value of SAR (measured) = 0.815 mW/g

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

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Date/Time: 10/23/2012 12:43:26 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Front_CDMA1900_mid_chan_amb_temp_23.8_liq
_temp_22.6C**

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

Communication System: CDMA 1900; Frequency: 1880 MHz

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

Phantom section: Flat Section

Measurement Standard: DASY5 (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
- DASY52 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) = 0.429 mW/g

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


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

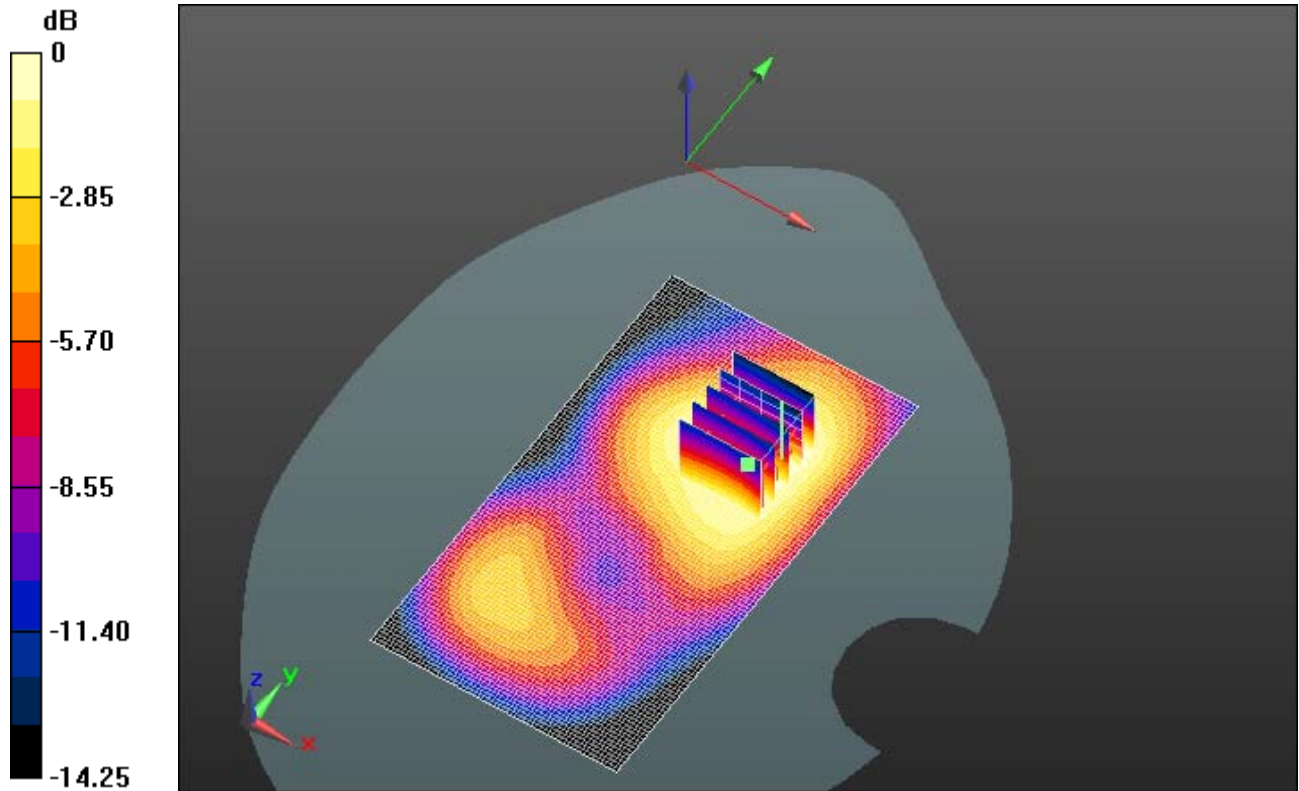
Reference Value = 8.798 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.6340


SAR(1 g) = 0.386 mW/g; SAR(10 g) = 0.241 mW/g

Maximum value of SAR (measured) = 0.471 mW/g

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0 dB = 0.470mW/g = -6.56 dB mW/g

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Date/Time: 10/23/2012 3:56:56 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Left_CDMA1900_mid_chan_amb_temp_23.6C_liq
_temp_22.5C**

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

Communication System: CDMA 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 (31x101x1): Measurement grid:

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

Maximum value of SAR (interpolated) = 0.552 mW/g

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


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

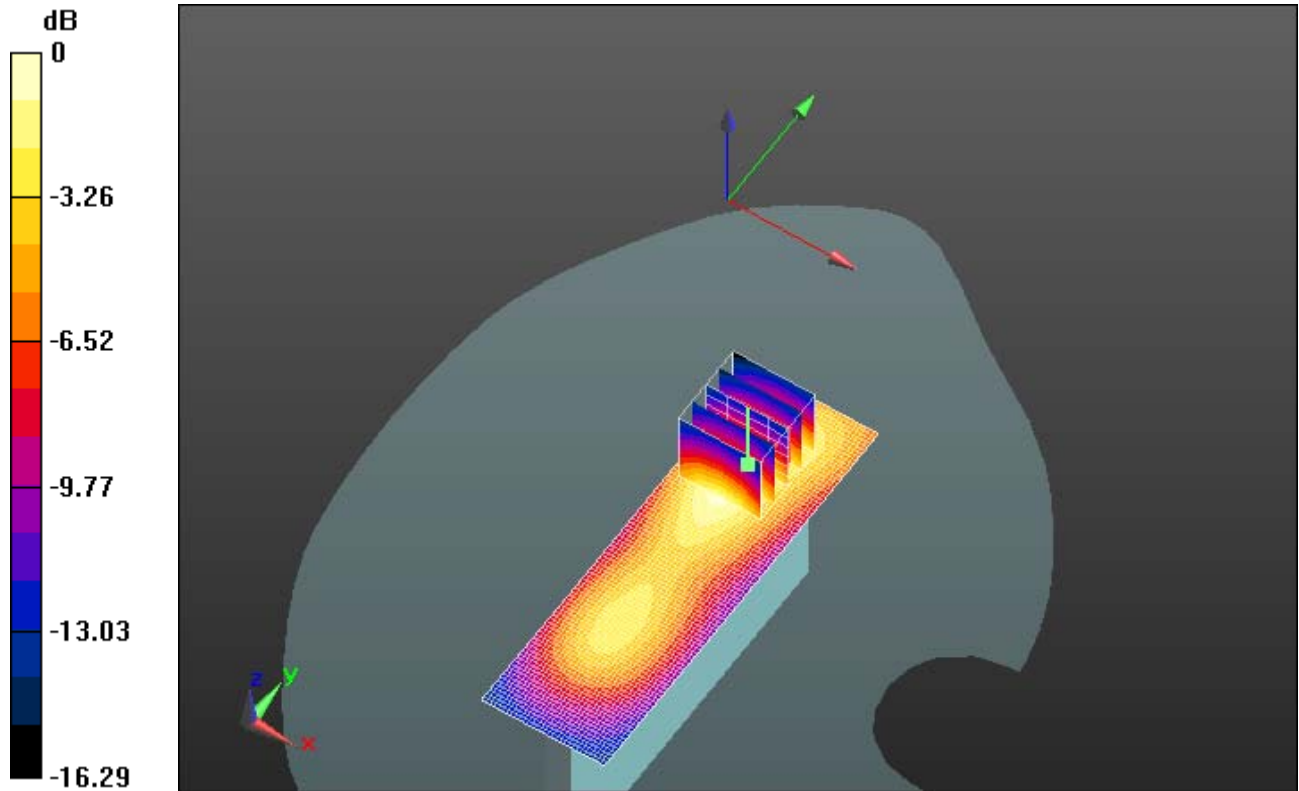
Reference Value = 12.819 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.7480


SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.258 mW/g

Maximum value of SAR (measured) = 0.554 mW/g

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0 dB = 0.550mW/g = -5.19 dB mW/g

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Date/Time: 10/23/2012 4:15:40 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Right_CDMA1900_mid_chan_amb_temp_23.7C_li
q_temp_22.5C**

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

Communication System: CDMA 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 (31x101x1): Measurement grid:

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

Maximum value of SAR (interpolated) = 0.222 mW/g

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


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

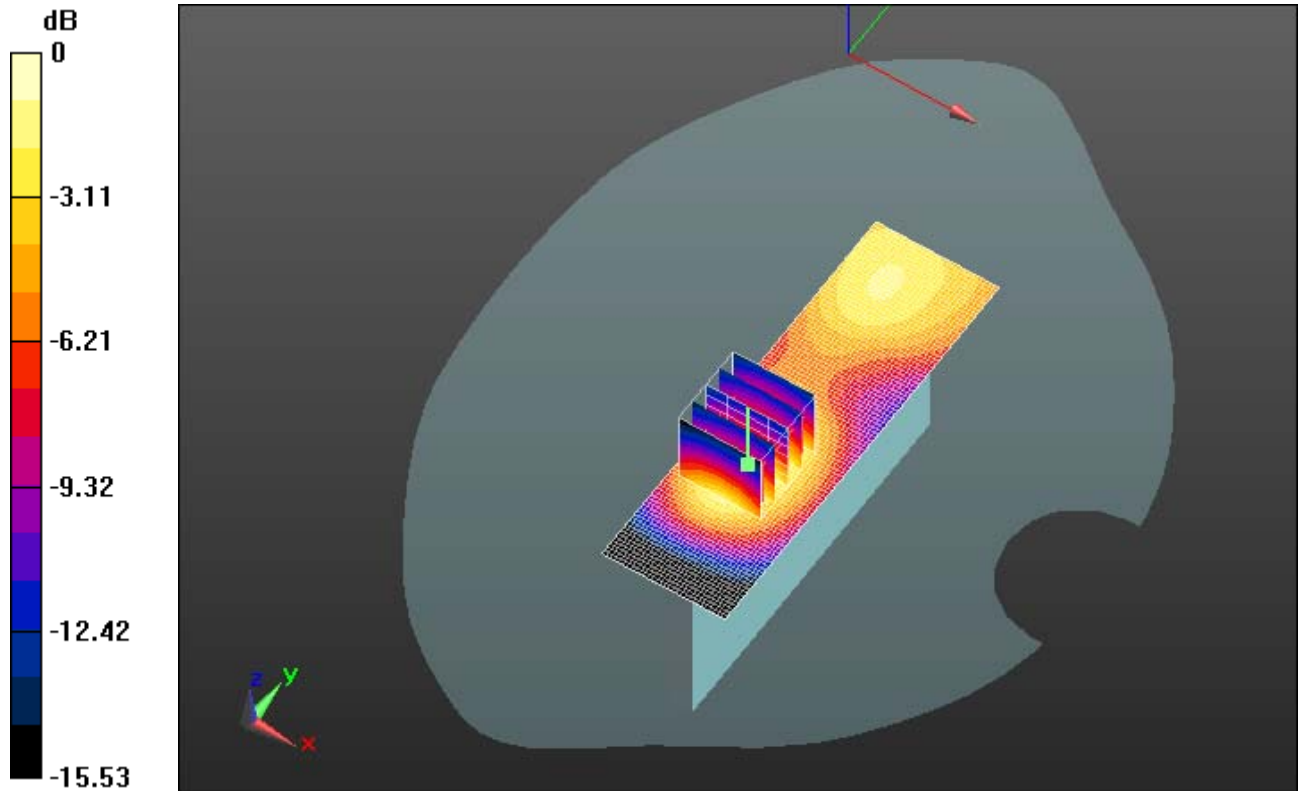
Reference Value = 9.478 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.2890


SAR(1 g) = 0.179 mW/g; SAR(10 g) = 0.104 mW/g

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

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

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Date/Time: 10/23/2012 3:27:44 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Bottom_CDMA1900_mid_chan_amb_temp_23.6_li
q_temp_22.4C**

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

Communication System: CDMA 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 (41x61x1): Measurement grid:

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

Maximum value of SAR (interpolated) = 0.700 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 = 16.234 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.9620

SAR(1 g) = 0.562 mW/g; SAR(10 g) = 0.306 mW/g

Maximum value of SAR (measured) = 0.701 mW/g

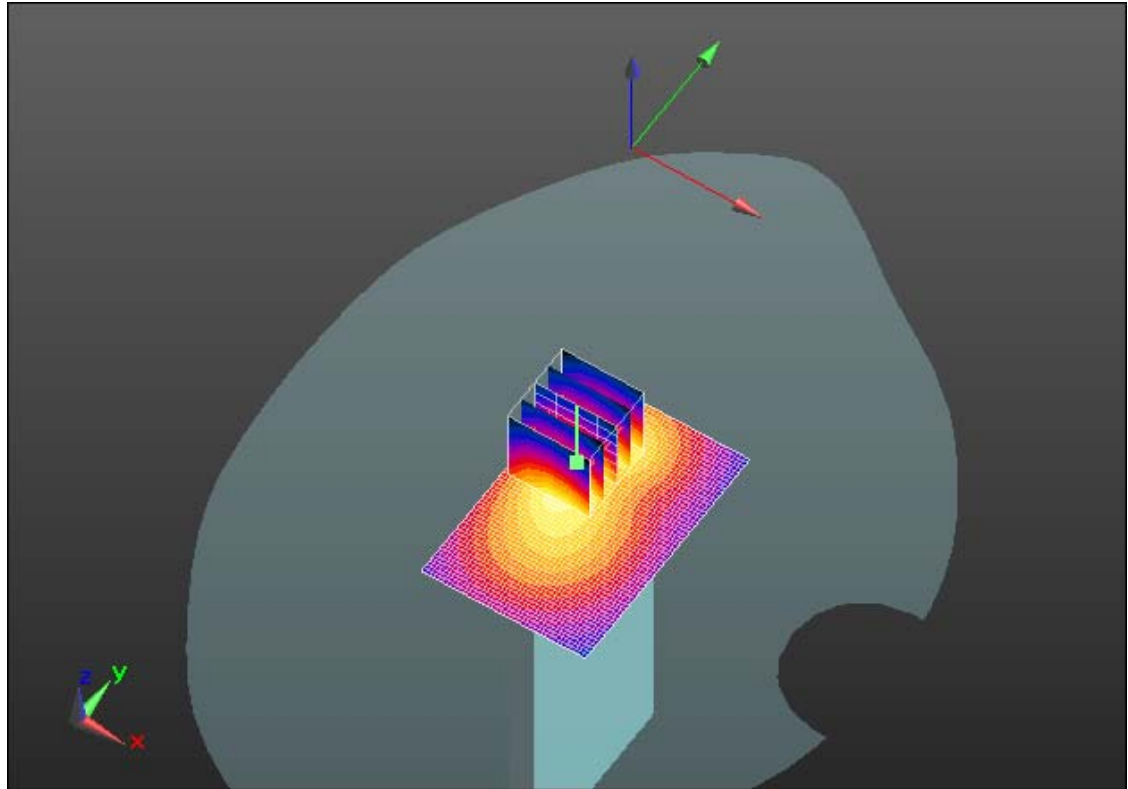
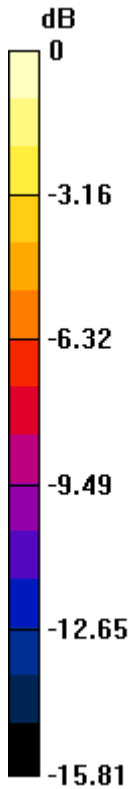
Author Data
Andrew Becker

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 = 0.700mW/g = -3.10 dB mW/g

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Date/Time: 10/23/2012 2:19:29 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_Headset_CDMA1900_high_chan_amb_tem
p_23.8_liq_temp_22.7C**

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) = 1.079 mW/g

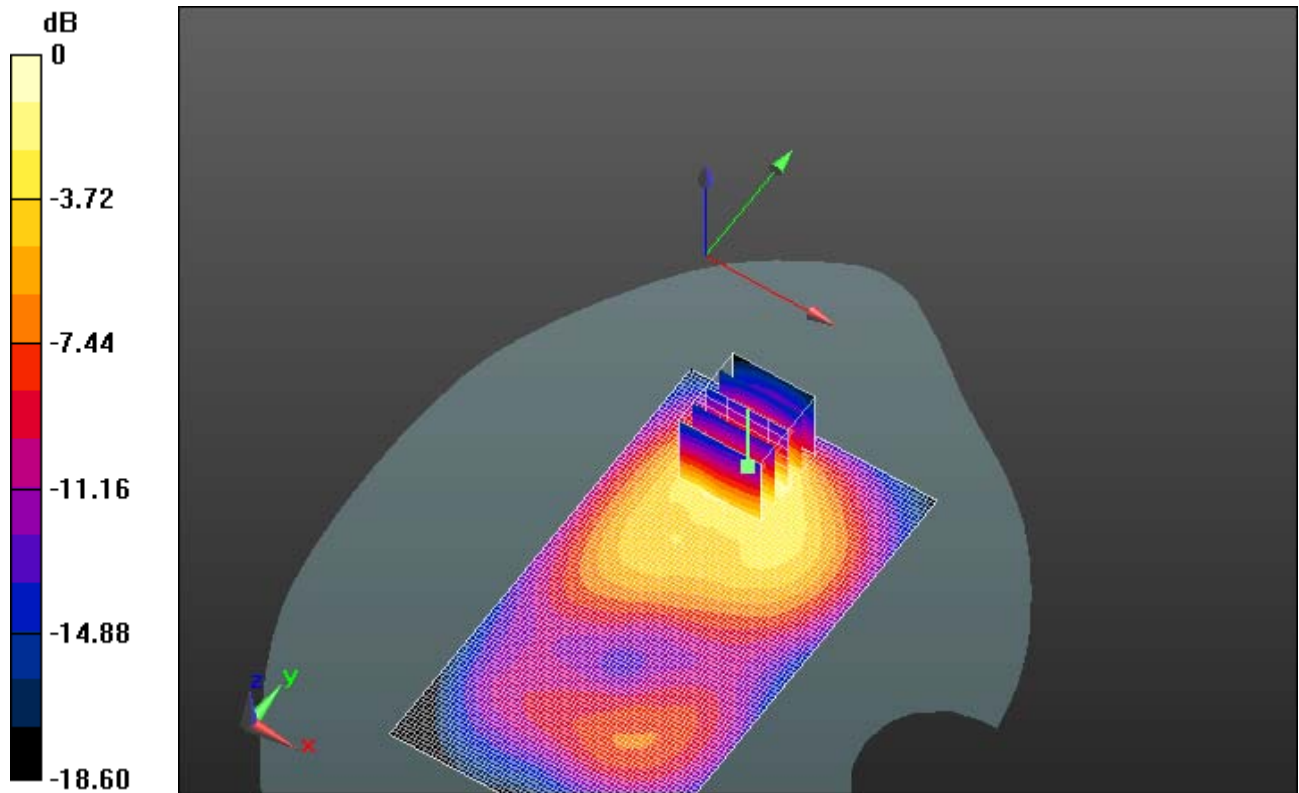
Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
 Reference Value = 9.221 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 1.5150
SAR(1 g) = 0.836 mW/g; SAR(10 g) = 0.435 mW/g


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

Maximum value of SAR (measured) = 1.091 mW/g

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

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Date/Time: 11/22/2012 12:21:56 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_CDMA1900_low_chan_amb_temp_24.1_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; $\sigma = 1.518$ mho/m; $\epsilon_r = 51.102$; $\rho = 1000$ 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) = 0.989 mW/g

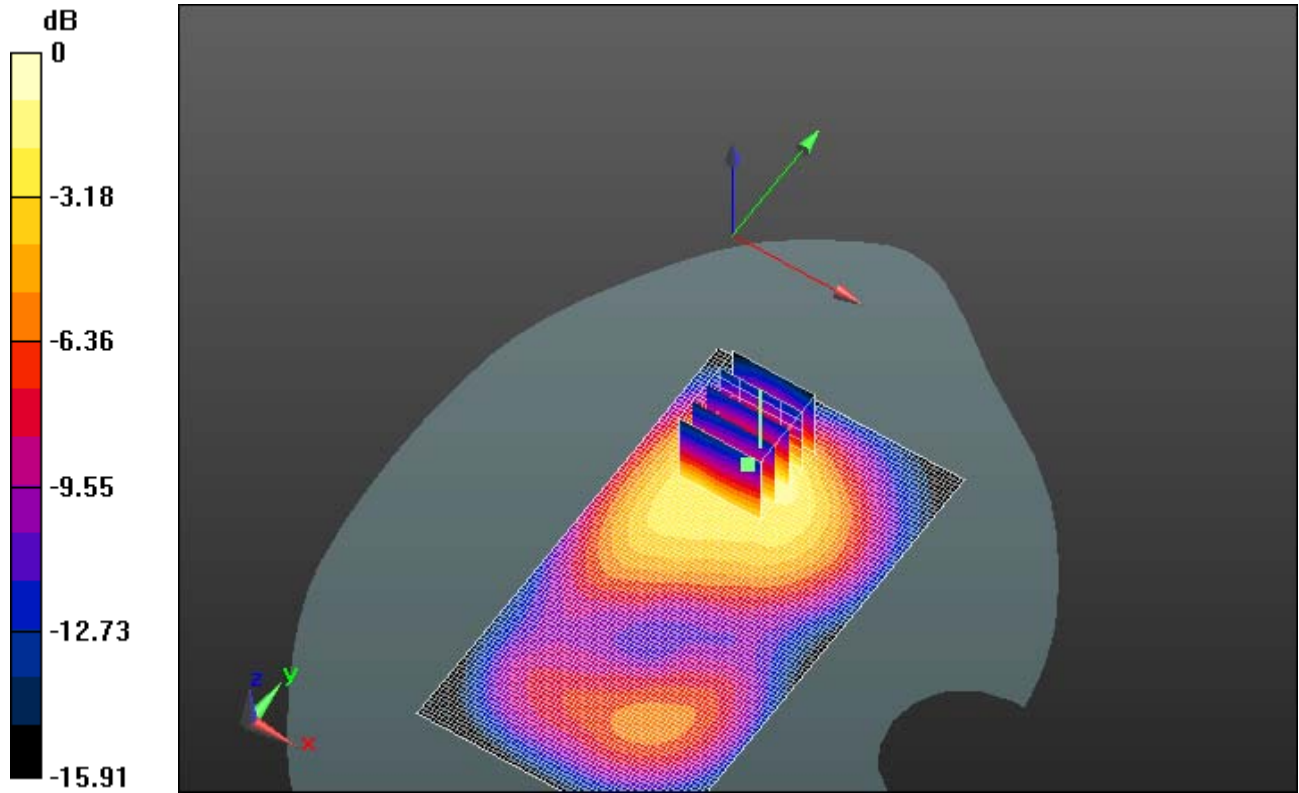
Configuration/Touch position -/Zoom Scan (5x5x7) (5x5x7)/Cube 0:

Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
Reference Value = 9.747 V/m; Power Drift = -0.0084 dB
Peak SAR (extrapolated) = 1.3810
SAR(1 g) = 0.787 mW/g; SAR(10 g) = 0.422 mW/g


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

Maximum value of SAR (measured) = 0.947 mW/g

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0 dB = 0.950mW/g = -0.45 dB mW/g

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Date/Time: 11/22/2012 12:00:25 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_CDMA1900_mid_chan_amb_temp_24.4_liq_ temp_22.8C

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

Communication System: CDMA 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.548$ mho/m; $\epsilon_r = 50.952$; $\rho = 1000$ 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

Maximum value of SAR (interpolated) = 1.114 mW/g

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


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

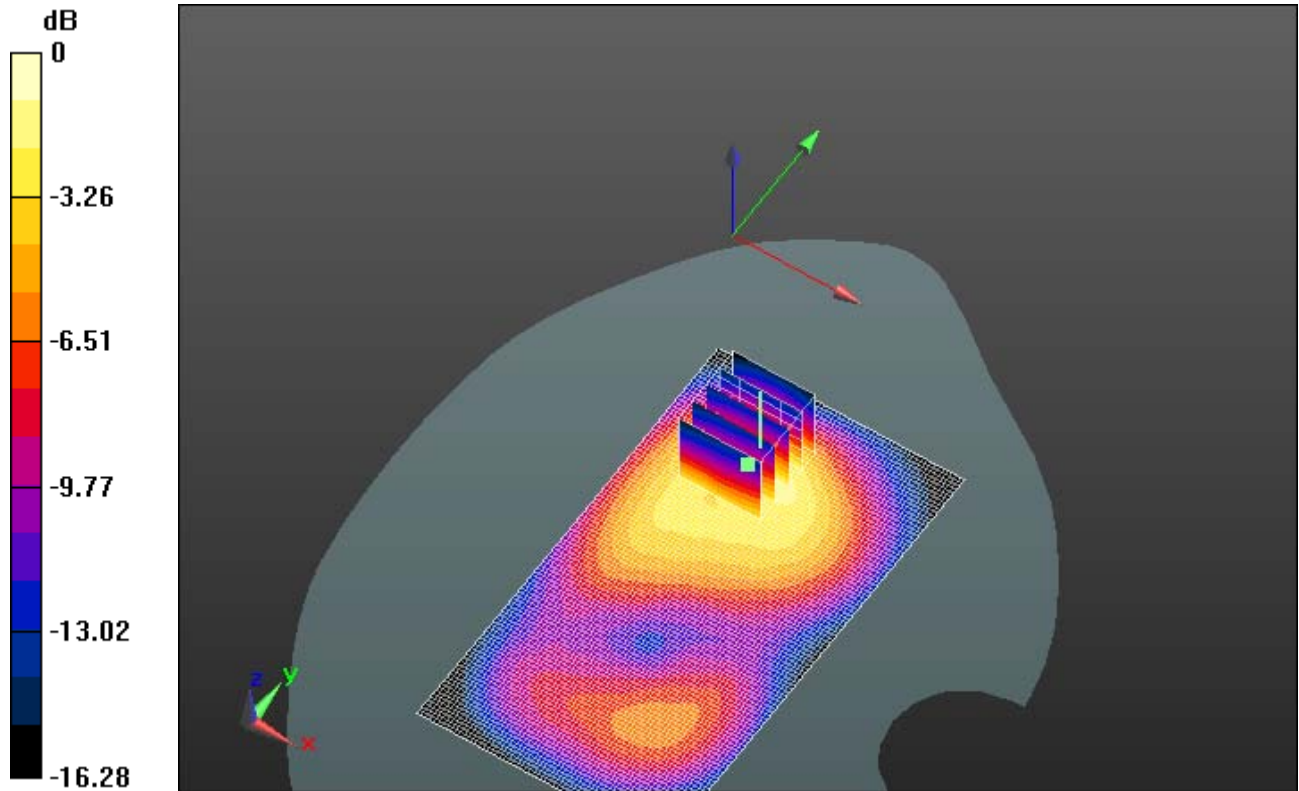
Reference Value = 10.451 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.6360


SAR(1 g) = 0.909 mW/g; SAR(10 g) = 0.480 mW/g

Maximum value of SAR (measured) = 1.118 mW/g

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0 dB = 1.120mW/g = 0.98 dB mW/g

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Date/Time: 11/22/2012 12:38:52 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_CDMA1900_high_chan_amb_temp_24.1_liq
_temp_22.7C**

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

Communication System: CDMA 1900; Frequency: 1908.5 MHz
Medium parameters used (interpolated): $f = 1908.5$ MHz; $\sigma = 1.577$ mho/m; $\epsilon_r = 50.839$;
 $\rho = 1000$ 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

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

Maximum value of SAR (interpolated) = 1.031 mW/g


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

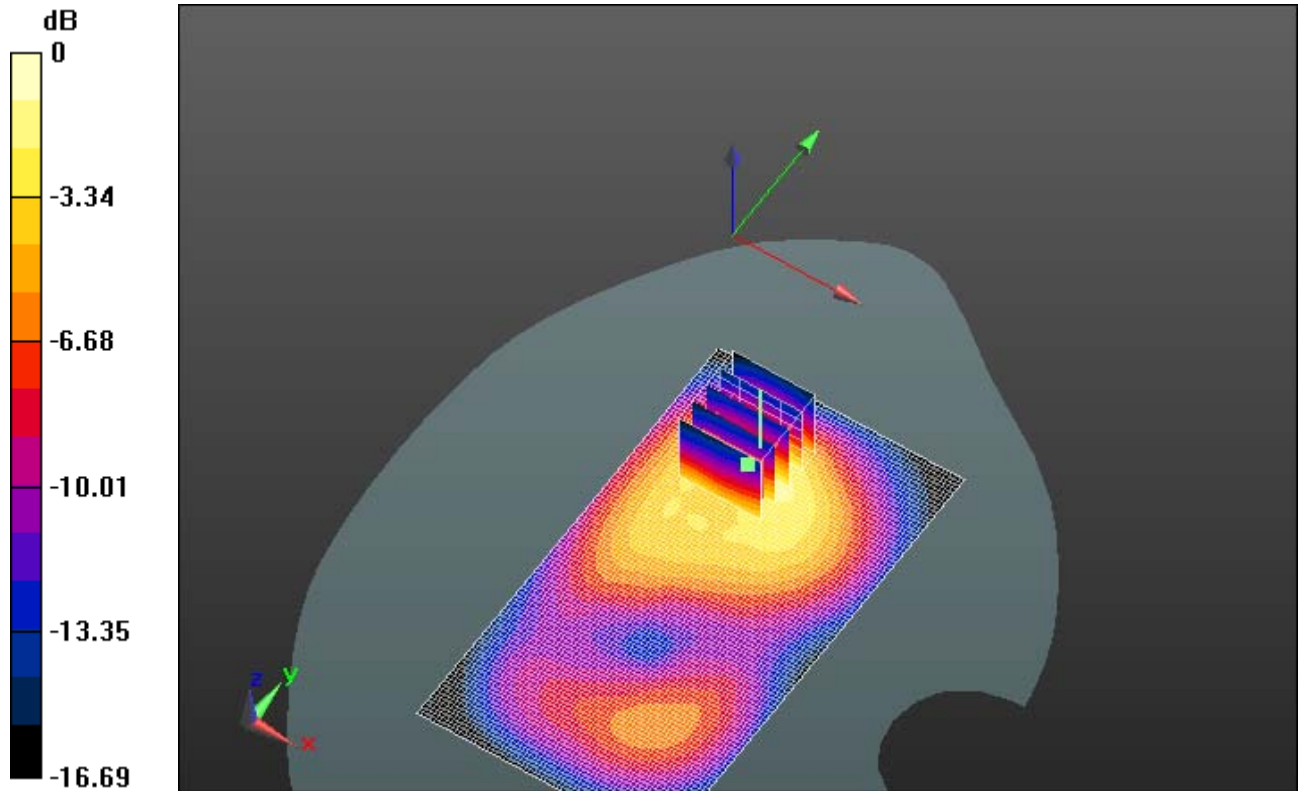
Measurement grid: $dx=7.5$ mm, $dy=7.5$ mm, $dz=5$ mm
Reference Value = 10.517 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.5260

SAR(1 g) = 0.844 mW/g; SAR(10 g) = 0.439 mW/g


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

Maximum value of SAR (measured) = 1.055 mW/g

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0 dB = 1.060mW/g = 0.51 dB mW/g

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Date/Time: 8/23/2012 10:46:01 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_802.11b_high_chan_amb_temp_23.2_liq_temper_22.6C

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) = 0.478 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 = 4.453 V/m; Power Drift = 0.02 dB

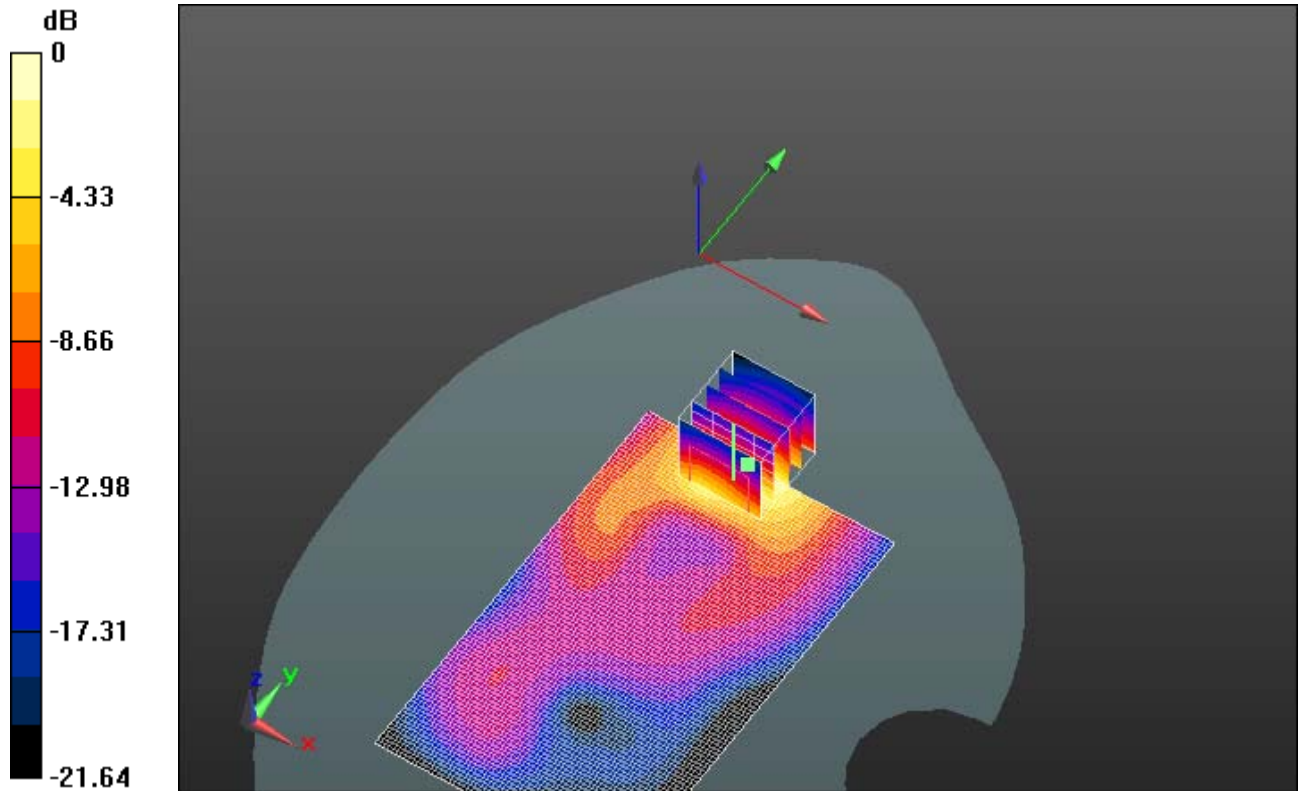
Peak SAR (extrapolated) = 0.8780

SAR(1 g) = 0.422 mW/g; SAR(10 g) = 0.196 mW/g


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

Maximum value of SAR (measured) = 0.520 mW/g

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0 dB = 0.520mW/g = -5.68 dB mW/g

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Date/Time: 8/23/2012 11:54:22 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Front_802.11b_high_chan_amb_temp_23.2_liq_temp_22.6C

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) = 0.437 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 = 4.381 V/m; Power Drift = 0.17 dB

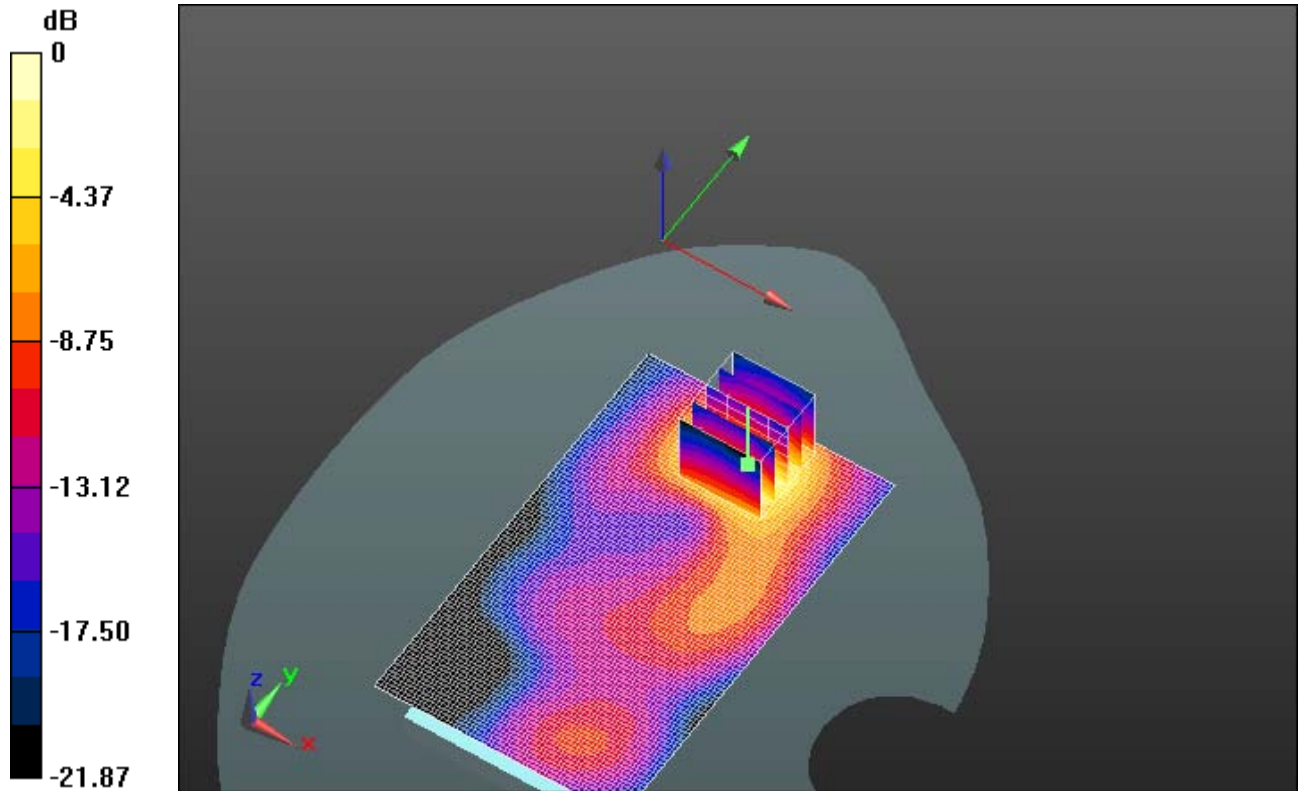
Peak SAR (extrapolated) = 0.8130

SAR(1 g) = 0.398 mW/g; SAR(10 g) = 0.187 mW/g


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

Maximum value of SAR (measured) = 0.487 mW/g

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0 dB = 0.490mW/g = -6.20 dB mW/g

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Date/Time: 8/24/2012 10:08:15 AM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Left_802.11b_high_chan_amb_temp_23.6_liq_tem
p_22.2C**

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 (31x101x1): Measurement grid:
dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.162 mW/g

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

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


Reference Value = 6.941 V/m; Power Drift = 0.07 dB

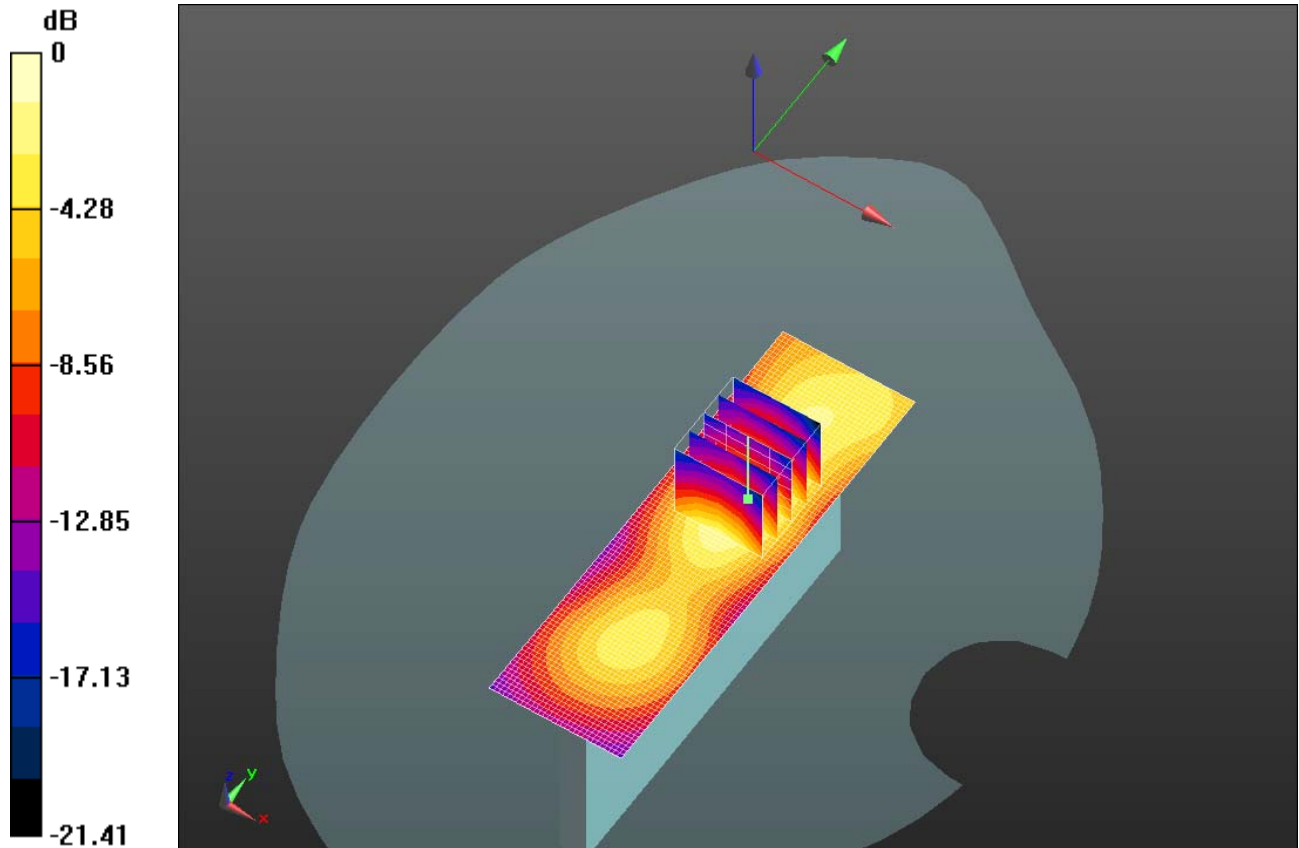
Peak SAR (extrapolated) = 0.2500

SAR(1 g) = 0.129 mW/g; SAR(10 g) = 0.066 mW/g


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

Maximum value of SAR (measured) = 0.163 mW/g

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0 dB = 0.160mW/g = -15.92 dB mW/g

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Date/Time: 8/24/2012 10:25:27 AM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Right_802.11b_high_chan_amb_temp_23.4_liq_tem
mp_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 (31x101x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm

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

Maximum value of SAR (interpolated) = 0.014 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 = 1.491 V/m; Power Drift = -0.004 dB

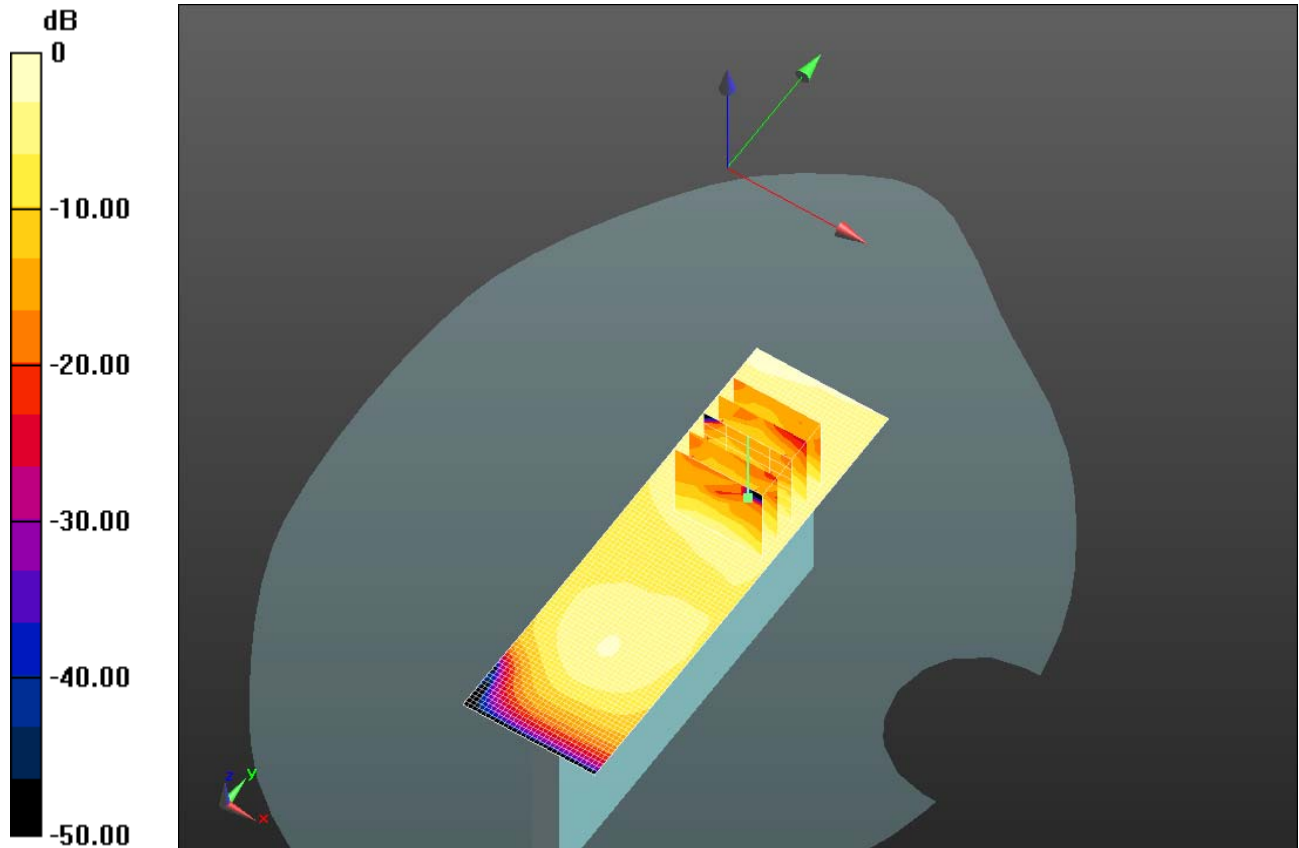
Peak SAR (extrapolated) = 0.0250

SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00663 mW/g


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

Maximum value of SAR (measured) = 0.016 mW/g

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0 dB = 0.020mW/g = -33.98 dB mW/g

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Date/Time: 8/24/2012 10:45:52 AM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Bottom_802.11b_high_chan_amb_temp_23.3_liq_t
emp_22.4C**

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 (41x61x1): Measurement grid:
dx=15mm, dy=15mm

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

Maximum value of SAR (interpolated) = 0.533 mW/g

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

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


Reference Value = 13.714 V/m; Power Drift = 0.02 dB

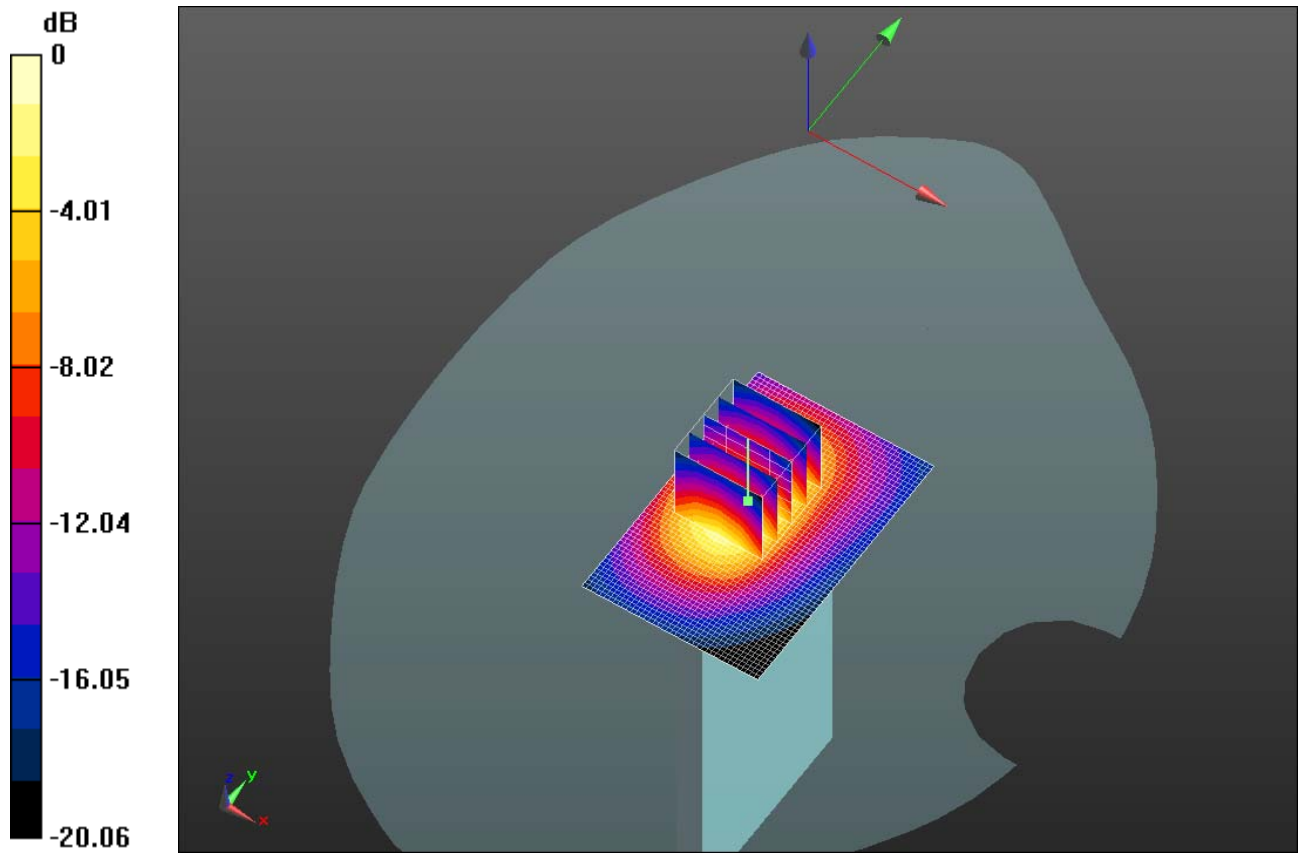
Peak SAR (extrapolated) = 0.7670

SAR(1 g) = 0.406 mW/g; SAR(10 g) = 0.209 mW/g


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

Maximum value of SAR (measured) = 0.513 mW/g

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0 dB = 0.510mW/g = -5.85 dB mW/g

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Date/Time: 8/23/2012 11:05:05 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_Headset_802.11b_high_chan_amb_temp_2 3.3_liq_temp_22.6C

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
- DASYS2 52.8.0(692); SEMCAD X 14.6.4(4989)

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

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

Maximum value of SAR (interpolated) = 0.436 mW/g

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

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


Reference Value = 4.591 V/m; Power Drift = 0.03 dB

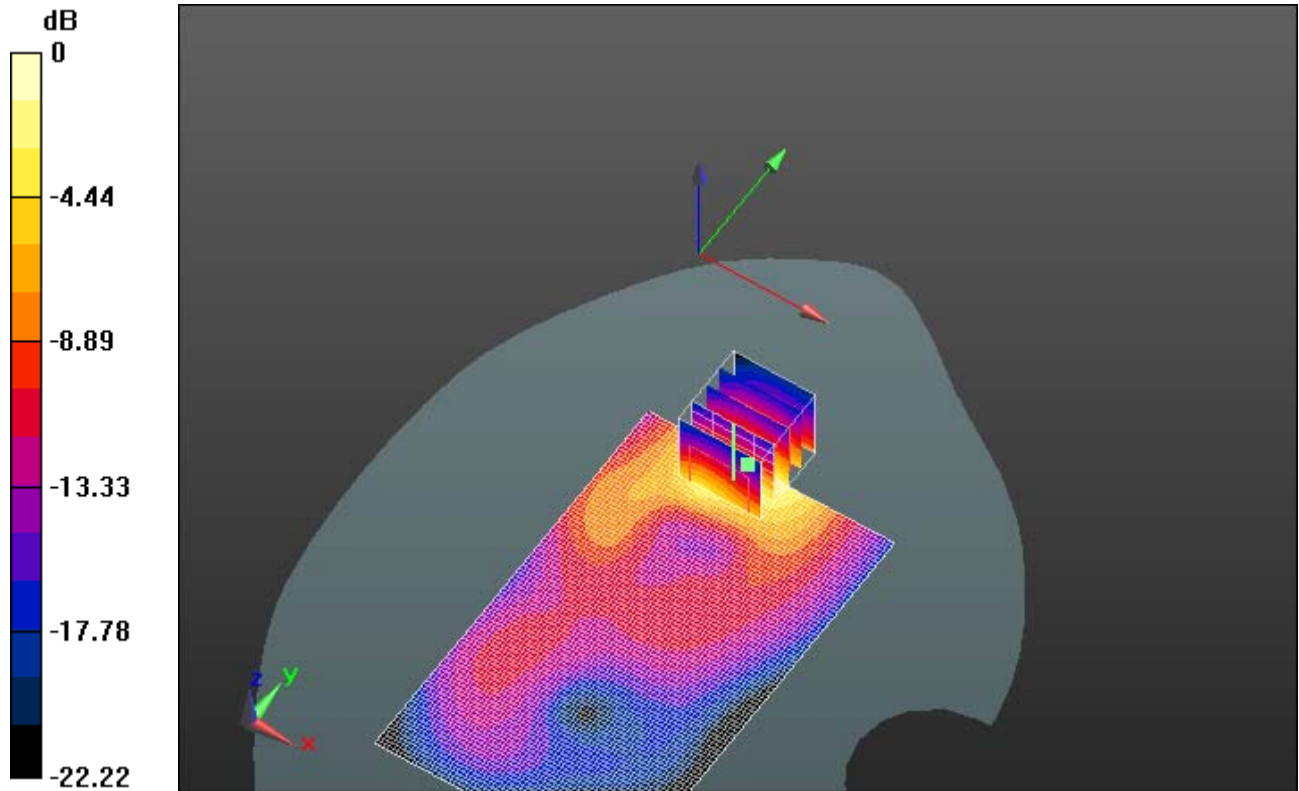
Peak SAR (extrapolated) = 0.7980

SAR(1 g) = 0.381 mW/g; SAR(10 g) = 0.176 mW/g


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

Maximum value of SAR (measured) = 0.465 mW/g


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0 dB = 0.470mW/g = -6.56 dB mW/g

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

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Date/Time: 1/8/2013 4:10:26 PM

Test Laboratory: RIM Testing Services

MHS_10mm_Spacer_Back_CDMA1900_mid_chan_amb_temp_23.5_liq_ temp_22.5C_Repeat_Scan

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

Communication System: CDMA 1900; Frequency: 1880 MHz

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.529 \text{ S/m}$; $\epsilon_r = 51.81$; $\rho = 1000 \text{ kg/m}^3$

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
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

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

Maximum value of SAR (interpolated) = 0.855 W/kg

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


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

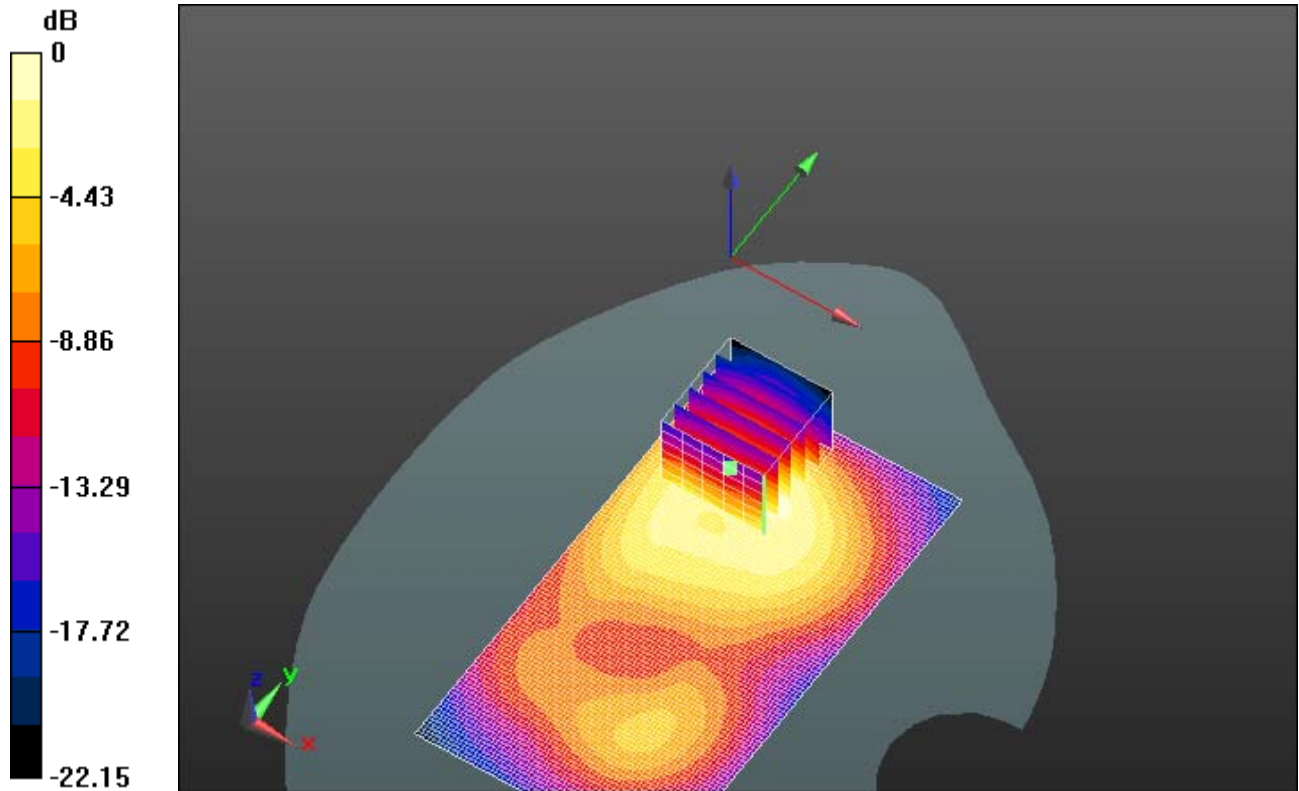
Reference Value = 10.359 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.51 W/kg


SAR(1 g) = 0.885 W/kg; SAR(10 g) = 0.470 W/kg

Maximum value of SAR (measured) = 0.953 W/kg

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0 dB = 0.855 W/kg = -0.68 dBW/kg

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Date/Time: 1/7/2013 7:56:58 PM

Test Laboratory: RIM Testing Services

**MHS_10mm_Spacer_Back_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) = 0.447 W/kg

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

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

Reference Value = 4.292 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.912 W/kg

SAR(1 g) = 0.397 W/kg; SAR(10 g) = 0.182 W/kg

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

Maximum value of SAR (measured) = 0.448 W/kg

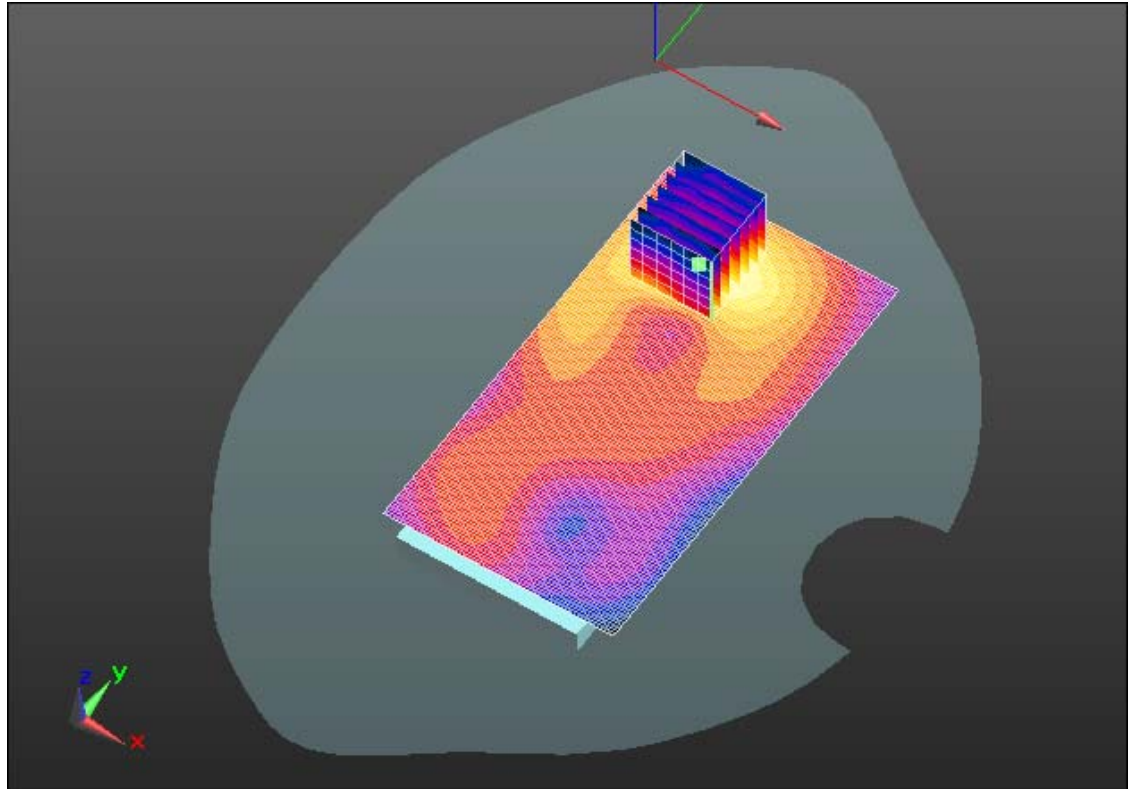
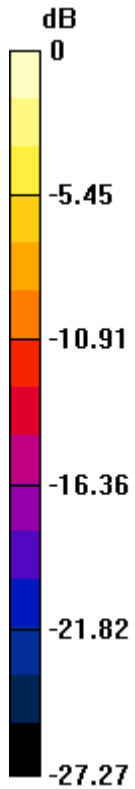
Author Data
Andrew Becker

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


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L6ARFA90LW

IC ID
2503A-RFA90LW



0 dB = 0.447 W/kg = -3.50 dBW/kg

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Z axis plot for the worst case MHS configuration

