

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report			Page 1(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW	

APPENDIX A: SAR DISTRIBUTION COMPARISON FOR ACCURACY VERIFICATION

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 2(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/8/2014 5:33:12 AM

Test Laboratory: BlackBerry RTS

DipoleValidation_750MHz_07_08_14_Amb_Tem_23.4C_Liq_Tem_22.1

C

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1021

Communication System: UID 0, CW (0); Frequency: 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.911 \text{ S/m}$; $\epsilon_r = 42.474$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.36, 6.36, 6.36); Calibrated: 1/22/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=1000mW, dist=3.0mm (ES-Probe)/Area Scan (41x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 109.2 V/m; Power Drift = -0.12 dB

Fast SAR: SAR(1 g) = 8.77 W/kg; SAR(10 g) = 5.83 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 10.1 W/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 3(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

**System Performance Check at Frequencies below 1 GHz/d=15mm,
Pin=1000mW, dist=3.0mm (ES-Probe)/Zoom Scan (5x5x7) (5x5x7)/Cube**

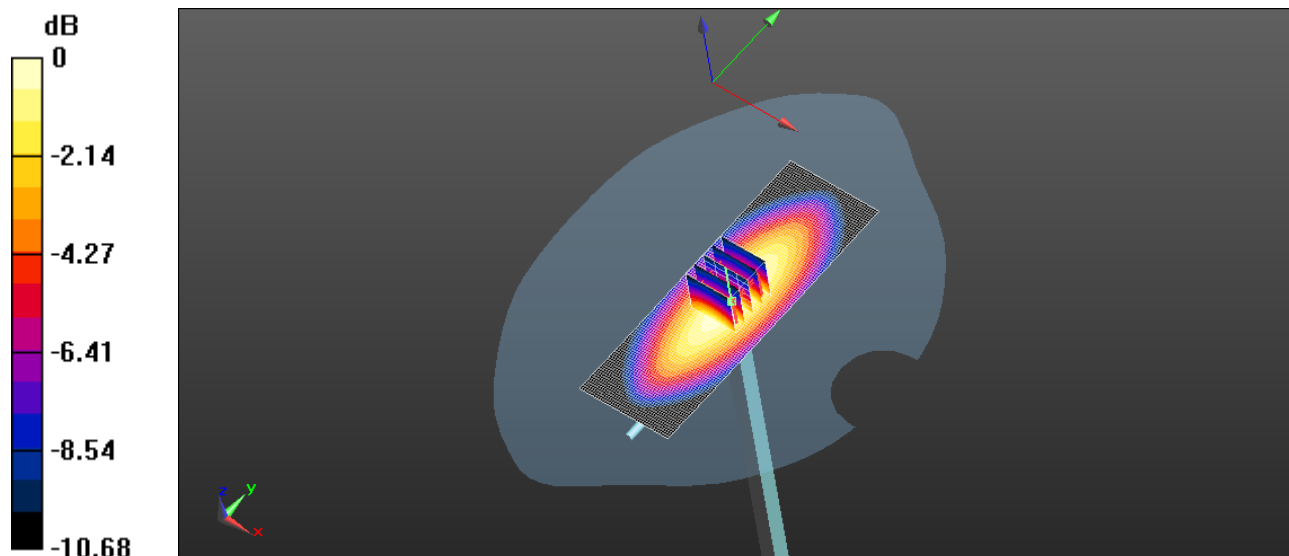
0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 109.2 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 12.9 W/kg

SAR(1 g) = 8.58 W/kg; SAR(10 g) = 5.58 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.1 W/kg



0 dB = 10.1 W/kg = 10.04 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 4(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/3/2014 1:20:52 AM

Test Laboratory: BlackBerry RTS

DipoleValidation_835MHz_07_03_14_Amb_Tem_23.3C_Liq_Tem_22.0

C

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

Communication System: UID 0, CW (0); Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.906 \text{ S/m}$; $\epsilon_r = 40.866$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.05, 6.05, 6.05); Calibrated: 1/22/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=1000mW, dist=3.0mm (ES-Probe)/Area Scan (41x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 115.9 V/m; Power Drift = -0.03 dB

Fast SAR: SAR(1 g) = 10.1 W/kg; SAR(10 g) = 6.67 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 11.7 W/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 5(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

**System Performance Check at Frequencies below 1 GHz/d=15mm,
Pin=1000mW, dist=3.0mm (ES-Probe)/Zoom Scan (5x5x7) (5x5x7)/Cube**

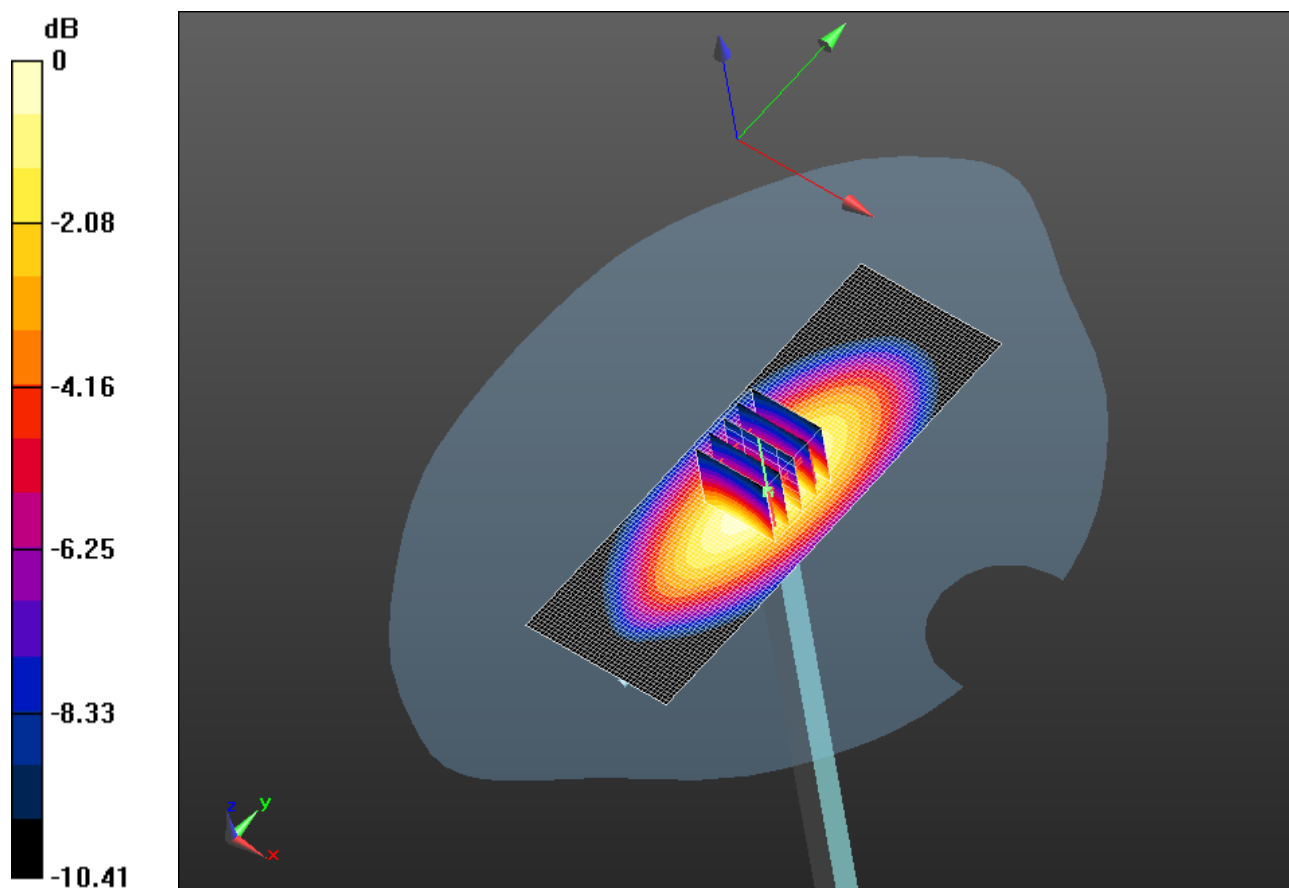
0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 115.9 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 14.9 W/kg

SAR(1 g) = 10 W/kg; SAR(10 g) = 6.56 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 11.7 W/kg



0 dB = 11.7 W/kg = 10.68 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 6(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/7/2014 2:35:18 AM

Test Laboratory: BlackBerry RTS

DipoleValidation_835MHz_07_07_14_Amb_Tem_23.5C_Liq_Tem_22.8

C

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

Communication System: UID 0, CW (0); Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.88 \text{ S/m}$; $\epsilon_r = 41.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.05, 6.05, 6.05); Calibrated: 1/22/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies below 1 GHz/d=15mm, Pin=1000mW, dist=3.0mm (ES-Probe)/Area Scan (41x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 114.8 V/m; Power Drift = -0.04 dB

Fast SAR: SAR(1 g) = 9.62 W/kg; SAR(10 g) = 6.31 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 10.9 W/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 7(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

**System Performance Check at Frequencies below 1 GHz/d=15mm,
Pin=1000mW, dist=3.0mm (ES-Probe)/Zoom Scan (5x5x7) (5x5x7)/Cube**

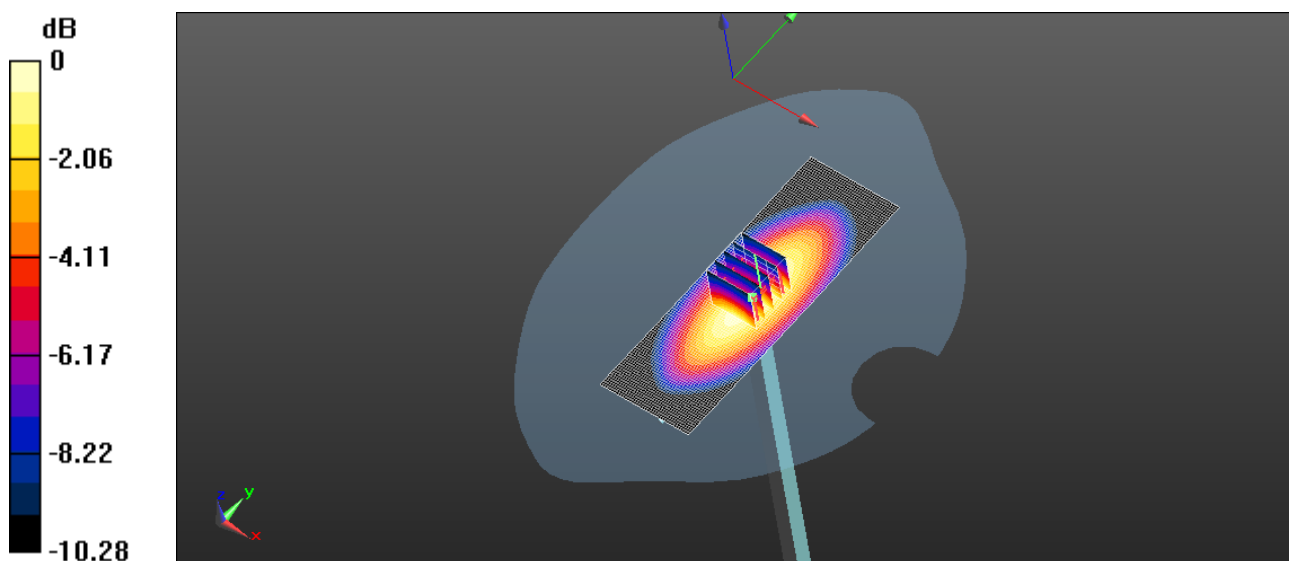
0: Measurement grid: dx=7.5mm, dy=7.5mm, dz=5mm

Reference Value = 114.8 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 13.7 W/kg

SAR(1 g) = 9.51 W/kg; SAR(10 g) = 6.26 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.8 W/kg



0 dB = 10.8 W/kg = 10.33 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 8(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/25/2014 3:31:40 PM

Test Laboratory: BlackBerry RTS

DipoleValidation_835MHz_07_25_14_Amb_Tem_23.7C_Liq_Tem_22.0C

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

Communication System: UID 0, CW (0); Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.885 \text{ S/m}$; $\epsilon_r = 40.074$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.05, 6.05, 6.05); Calibrated: 1/22/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**System Performance Check at Frequencies below 1 GHz/d=15mm,
Pin=1000mW, dist=3.0mm (ES-Probe)/Area Scan (41x121x1):** Interpolated
grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 116.9 V/m ; Power Drift = -0.02 dB

Fast SAR: SAR(1 g) = 9.89 W/kg; SAR(10 g) = 6.52 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 11.4 W/kg

**System Performance Check at Frequencies below 1 GHz/d=15mm,
Pin=1000mW, dist=3.0mm (ES-Probe)/Zoom Scan (5x5x7) (5x5x7)/Cube 0:**

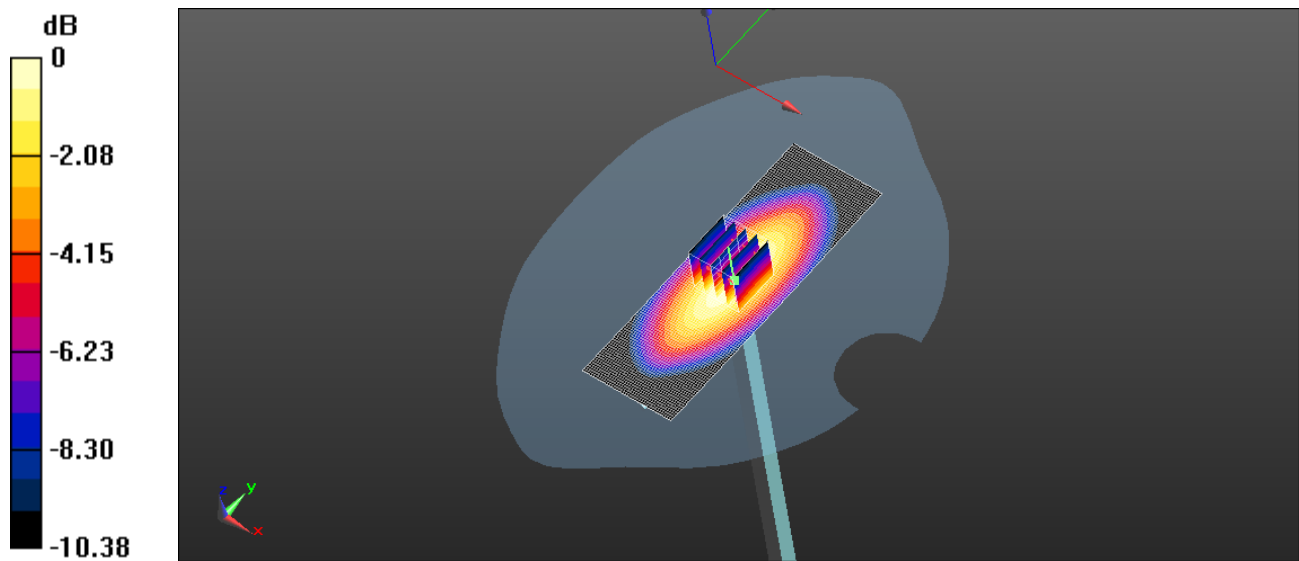
Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 116.9 V/m ; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 14.6 W/kg

SAR(1 g) = 9.81 W/kg; SAR(10 g) = 6.43 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 11.4 W/kg



0 dB = 11.4 W/kg = 10.57 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 10(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 6/23/2014 12:32:06 PM

Test Laboratory: BlackBerry RTS

DipoleValidation_1800MHz_06_23_14_Amb_Tem_23.6C_Liq_Tem_23.0 C

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

Communication System: UID 0, CW; Frequency: 1800 MHz

Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.447 \text{ S/m}$; $\epsilon_r = 38.952$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.24, 5.24, 5.24); Calibrated: 1/22/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/Dipole Validation_CW 1800 MHz_d=10mm,

Pin=1000mW/Area Scan (41x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

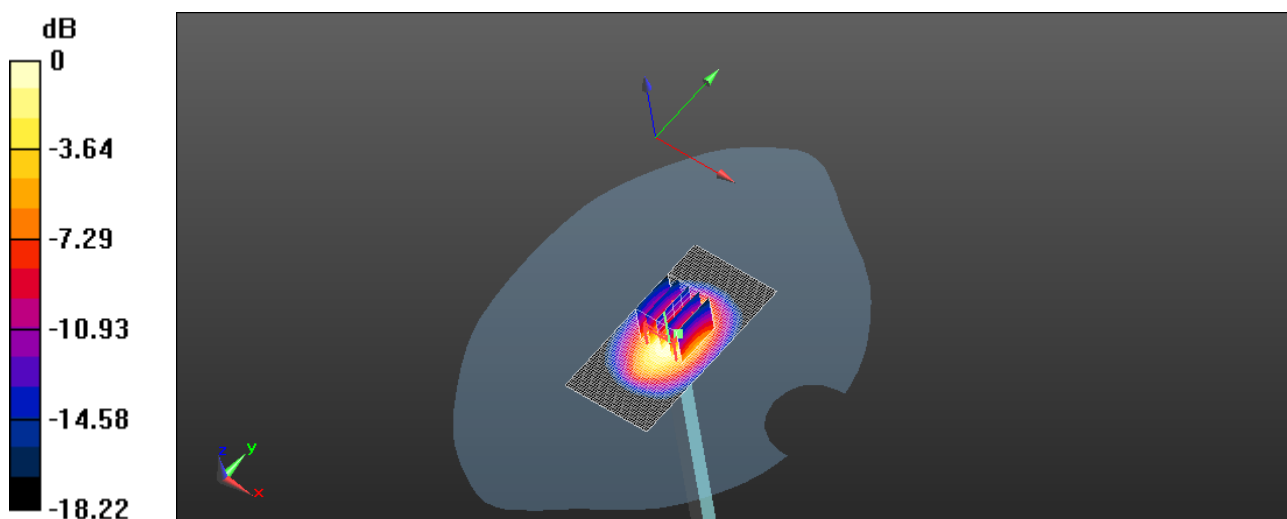
Reference Value = 185.5 V/m ; Power Drift = -0.02 dB

Fast SAR: SAR(1 g) = 37.9 W/kg ; SAR(10 g) = 20.1 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 47.2 W/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 11(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Configuration/Dipole Validation_CW 1800 MHz_d=10mm,
Pin=1000mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid:
dx=7.5mm, dy=7.5mm, dz=5mm
Reference Value = 185.5 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 68.6 W/kg
SAR(1 g) = 37.1 W/kg; SAR(10 g) = 19.3 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 46.4 W/kg



0 dB = 46.4 W/kg = 16.67 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 12(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/28/2014 1:10:41 PM

Test Laboratory: BlackBerry RTS

DipoleValidation_1800MHz_07_28_14_Amb_Tem_23.2C_Liq_Tem_22.8C

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

Communication System: UID 0, CW; Frequency: 1800 MHz

Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.458 \text{ S/m}$; $\epsilon_r = 38.422$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.24, 5.24, 5.24); Calibrated: 1/22/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/Dipole Validation_CW 1800 MHz_d=10mm,

Pin=1000mW/Area Scan (41x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 184.0 V/m ; Power Drift = -0.00 dB

Fast SAR: SAR(1 g) = 38.7 W/kg ; SAR(10 g) = 20.6 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 48.7 W/kg

Configuration/Dipole Validation_CW 1800 MHz_d=10mm,

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

Reference Value = 184.0 V/m ; Power Drift = -0.00 dB

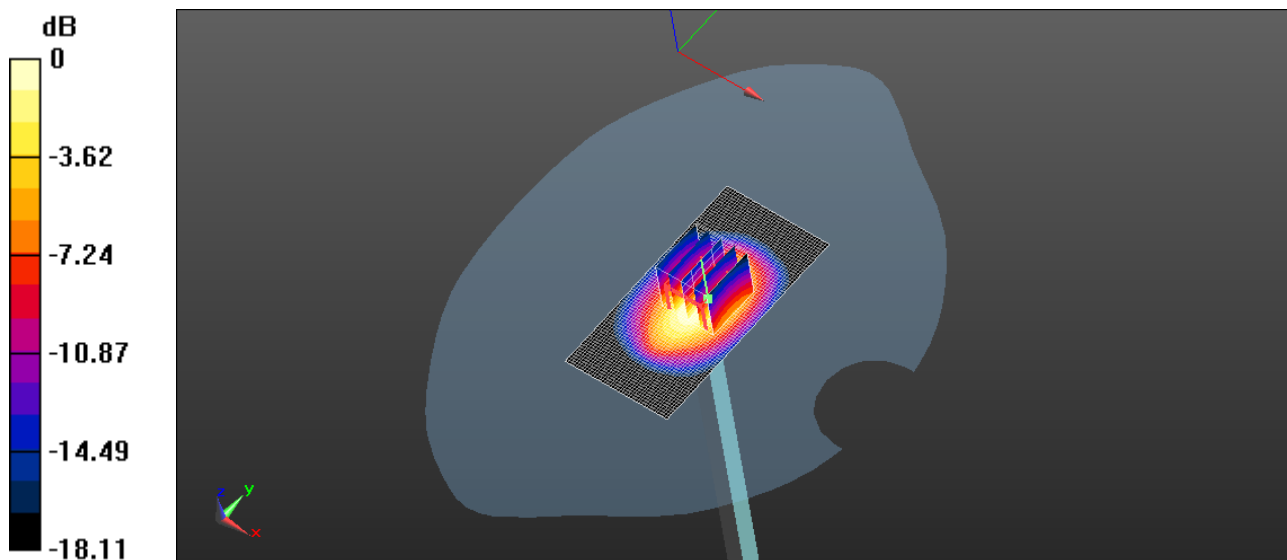
Peak SAR (extrapolated) = 69.3 W/kg

SAR(1 g) = 37.6 W/kg ; SAR(10 g) = 19.6 W/kg (SAR corrected for target

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 13(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

medium)

Maximum value of SAR (measured) = 47.0 W/kg



0 dB = 47.0 W/kg = 16.72 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 14(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/8/2014 5:03:24 PM

Test Laboratory: BlackBerry RTS

DipoleValidation_1900MHz_07_08_14_Amb_Tem_23.7C_Liq_Tem_22.7 C

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

Communication System: UID 0, CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.388 \text{ S/m}$; $\epsilon_r = 38.629$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.24, 5.24, 5.24); Calibrated: 1/22/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/d=10mm, Pin=1000mW/Area Scan (41x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 179.7 V/m ; Power Drift = 0.01 dB

Fast SAR: SAR(1 g) = 40.7 W/kg ; SAR(10 g) = 21.2 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 51.8 W/kg

Configuration/d=10mm, Pin=1000mW/Zoom Scan (5x5x7) (5x5x7)/Cube 0: Measurement grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

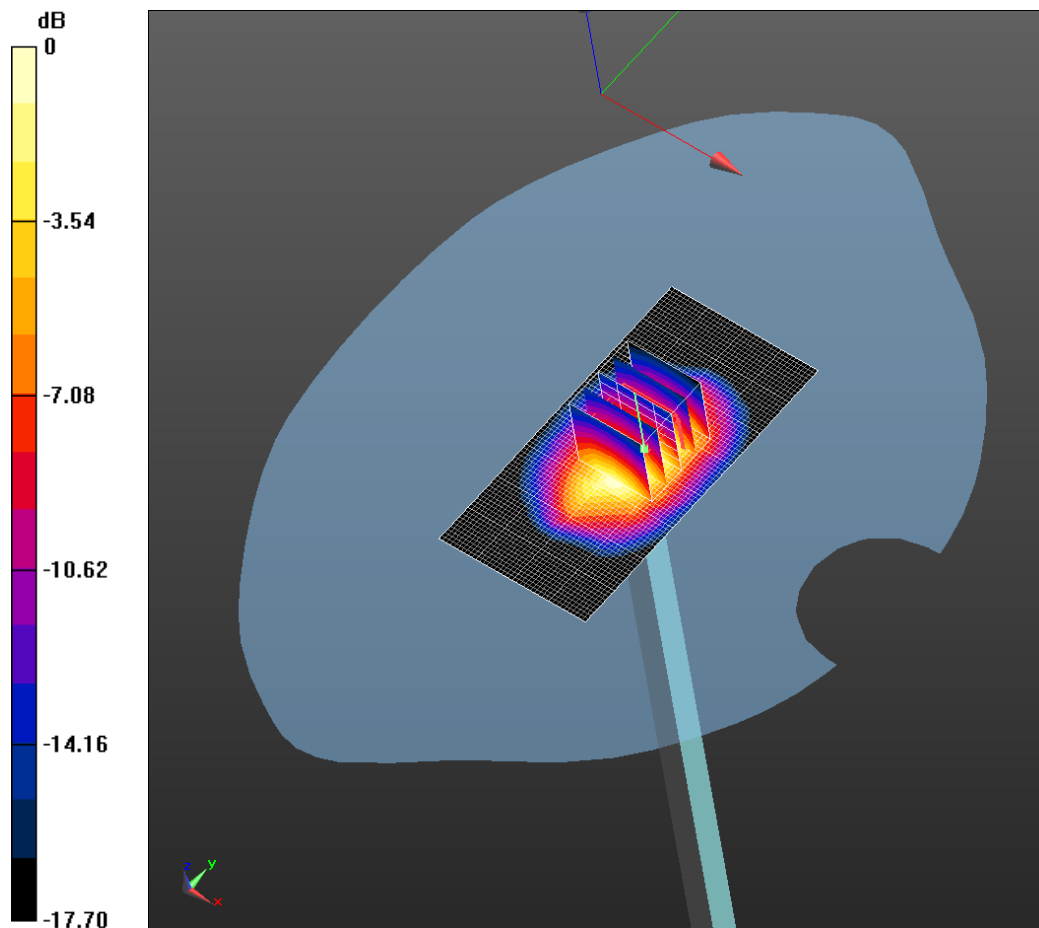
		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 15(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Reference Value = 179.7 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 73.0 W/kg

SAR(1 g) = 40.1 W/kg; SAR(10 g) = 21 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 50.1 W/kg



0 dB = 50.1 W/kg = 17.00 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 16(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/28/2014 9:45:11 PM

Test Laboratory: BlackBerry RTS

DipoleValidation_1900MHz_07_28_14_Amb_Tem_24.3C_Liq_Tem_22.3C

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

Communication System: UID 0, CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.378 \text{ S/m}$; $\epsilon_r = 39.815$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.24, 5.24, 5.24); Calibrated: 1/22/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

Configuration/d=10mm, Pin=1000mW/Area Scan (41x81x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 184.1 V/m ; Power Drift = -0.04 dB

Fast SAR: SAR(1 g) = 42.1 W/kg ; SAR(10 g) = 21.6 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 54.0 W/kg

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

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

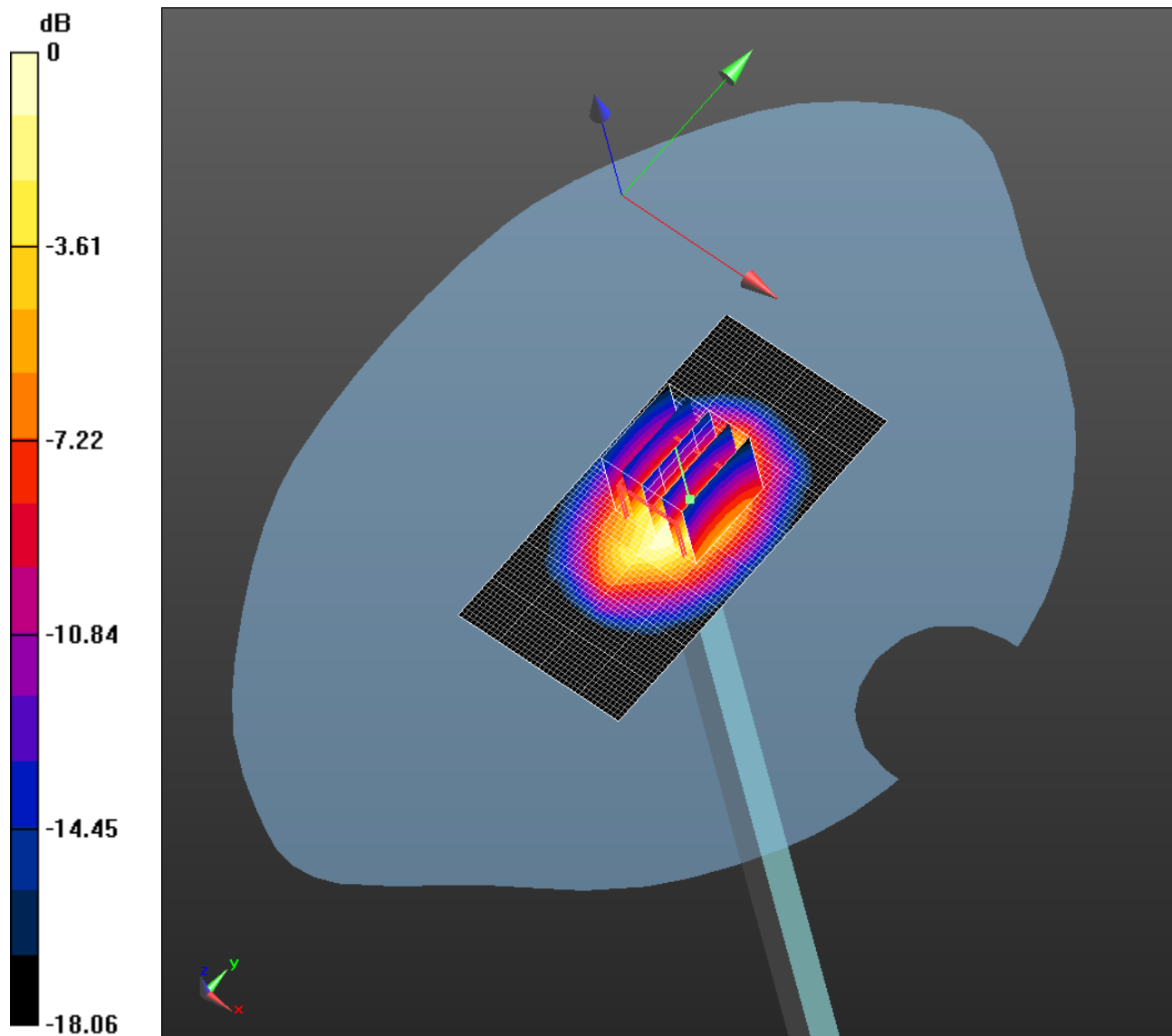
Reference Value = 184.1 V/m ; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 74.7 W/kg

SAR(1 g) = 41.2 W/kg ; SAR(10 g) = 21.4 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 50.9 W/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 17(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW



0 dB = 50.9 W/kg = 17.07 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 18(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/17/2014 3:39:24 PM

Test Laboratory: BlackBerry RTS

DipoleValidation_2450MHz_07_17_14_Amb_Tem_23.2C_Liq_Tem_22.0C

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:791

Communication System: UID 0, CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.882 \text{ S/m}$; $\epsilon_r = 38.39$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.64, 4.64, 4.64); Calibrated: 1/22/2014;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequencies between 2 GHz - 3

GHz/d=10mm, Pin=1000mW, dist=3.0mm (ES-Probe)/Area Scan

(41x81x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

Reference Value = 199.4 V/m ; Power Drift = -0.01 dB

Fast SAR: SAR(1 g) = 55.5 W/kg ; SAR(10 g) = 26.1 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 73.3 W/kg

System Performance Check at Frequencies between 2 GHz - 3

GHz/d=10mm, Pin=1000mW, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7)

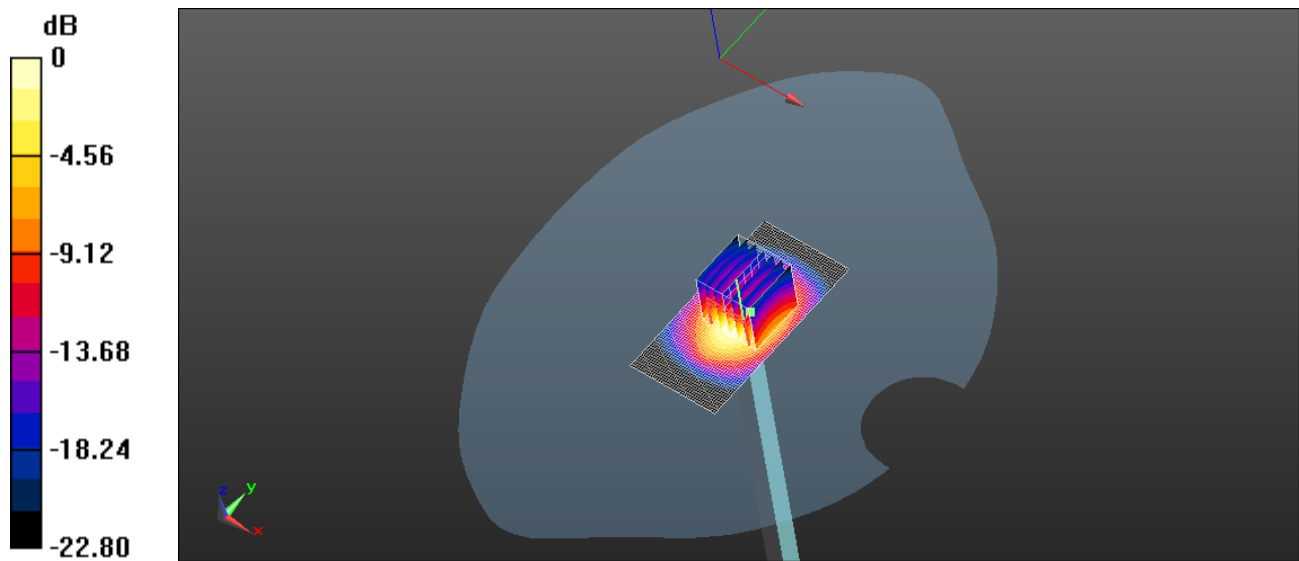
(7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 199.4 V/m ; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 113 W/kg

SAR(1 g) = 54.8 W/kg ; SAR(10 g) = 25.6 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 71.4 W/kg



0 dB = 71.4 W/kg = 18.54 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 20(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/30/2014 9:08:41 AM

Test Laboratory: BlackBerry RTS

DipoleValidation_5200MHz_07_30_14_Amb_Tem_24.2C_Liq_Tem_22.3C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN 1033

Communication System: UID 0, CW (0); Frequency: 5200 MHz

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.762$ S/m; $\epsilon_r = 35.066$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

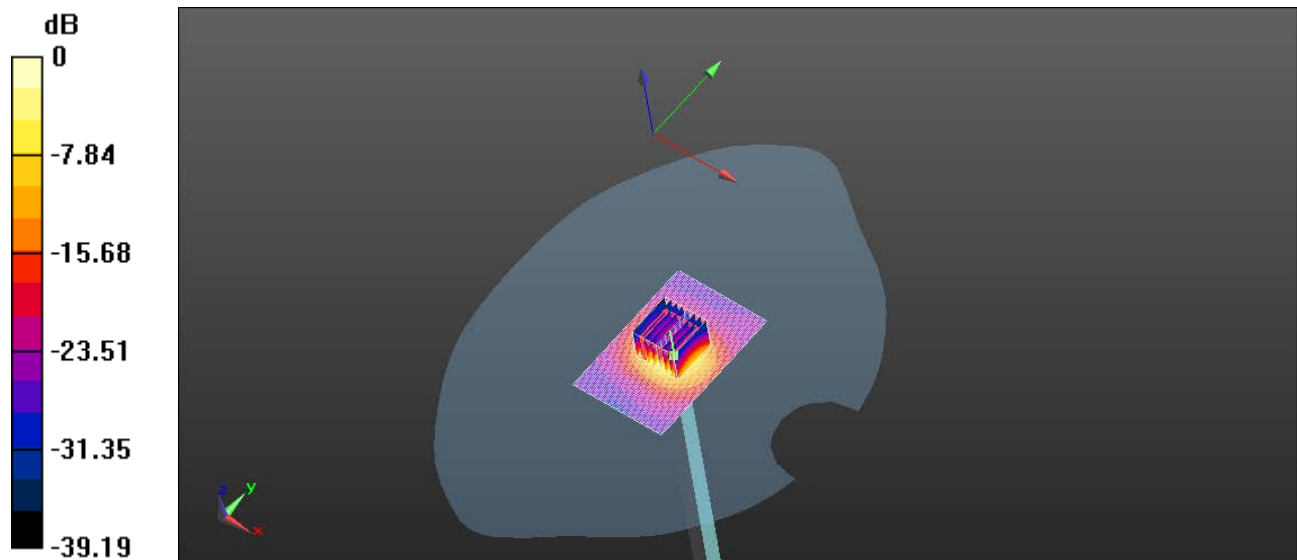
DASY Configuration:

- Probe: EX3DV4 - SN3548; ConvF(5.37, 5.37, 5.37); Calibrated: 1/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequency 5.2 GHz/d=10mm, Pin=1000mW, dist=2.0mm (EX-Probe)/Area Scan (61x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 197.9 V/m; Power Drift = -0.03 dB
Fast SAR: SAR(1 g) = 81.5 W/kg; SAR(10 g) = 23.1 W/kg (SAR corrected for target medium) Maximum value of SAR (interpolated) = 184 W/kg

System Performance Check at Frequency 5.2 GHz/d=10mm, Pin=1000mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x12) (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 197.9 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 340 W/kg
SAR(1 g) = 85.4 W/kg; SAR(10 g) = 24.8 W/kg (SAR corrected for target

medium)
 Maximum value of SAR (measured) = 174 W/kg



0 dB = 174 W/kg = 22.41 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 22(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/30/2014 11:03:04 AM

Test Laboratory: BlackBerry RTS

DipoleValidation_5500MHz_07_30_14_Amb_Tem_24.2C_Liq_Tem_22.3C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN 1033

Communication System: UID 0, CW (0); Frequency: 5500 MHz

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.111$ S/m; $\epsilon_r = 34.539$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3548; ConvF(4.94, 4.94, 4.94); Calibrated: 1/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequency 5.5 GHz/d=10mm,

Pin=1000mW, dist=2.0mm (EX-Probe)/Area Scan (61x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Reference Value = 197.9 V/m; Power Drift = -0.03 dB

Fast SAR: SAR(1 g) = 88.2 W/kg; SAR(10 g) = 24.4 W/kg (SAR corrected for target medium) Maximum value of SAR (interpolated) = 203 W/kg

System Performance Check at Frequency 5.5 GHz/d=10mm,

Pin=1000mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x12)

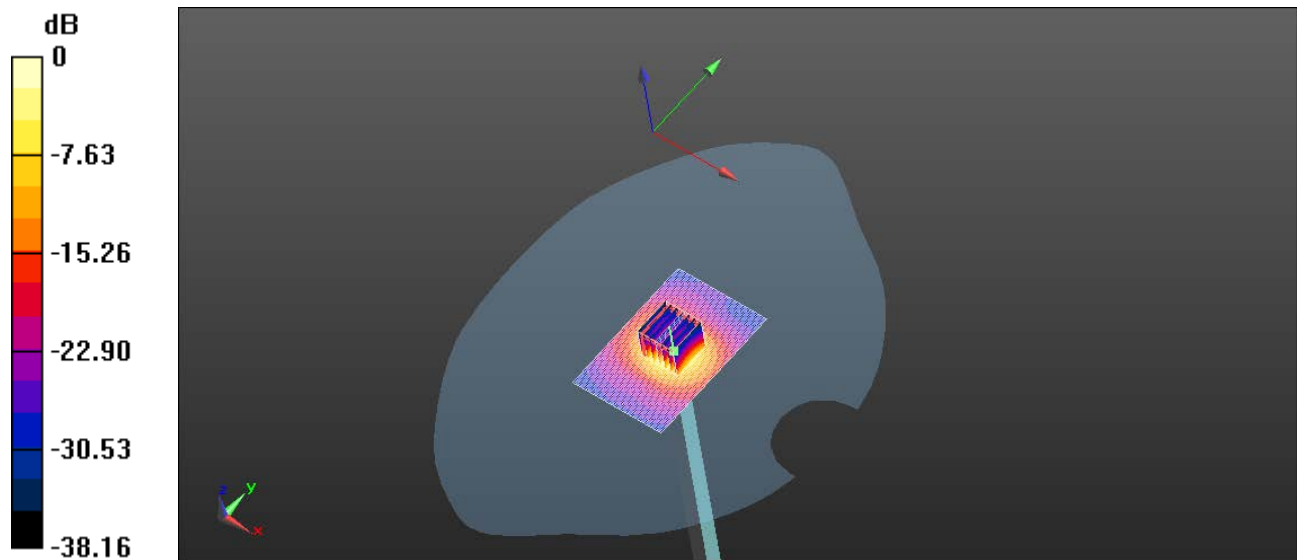
(7x7x12)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 197.9 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 389 W/kg

SAR(1 g) = 88.6 W/kg; SAR(10 g) = 25.5 W/kg (SAR corrected for target

medium)
 Maximum value of SAR (measured) = 183 W/kg



0 dB = 183 W/kg = 22.62 dBW/kg

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 24(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

Date/Time: 7/30/2014 11:56:50 AM

Test Laboratory: BlackBerry RTS

DipoleValidation_5800MHz_07_30_14_Amb_Tem_24.2C_Liq_Tem_22.3C

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN 1033

Communication System: UID 0, CW (0); Frequency: 5800 MHz

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 5.47 \text{ S/m}$; $\epsilon_r = 33.988$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 - SN3548; ConvF(4.76, 4.76, 4.76); Calibrated: 1/17/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection), $z = 1.0, 23.0$
- Electronics: DAE3 Sn472; Calibrated: 3/18/2014
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS 52.8.7(1137); SEMCAD X 14.6.10(7164)

System Performance Check at Frequency 5.8 GHz/d=10mm,

Pin=1000mW, dist=2.0mm (EX-Probe)/Area Scan (61x91x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 197.9 V/m; Power Drift = -0.03 dB

Fast SAR: SAR(1 g) = 79.6 W/kg; SAR(10 g) = 22 W/kg (SAR corrected for target medium) Maximum value of SAR (interpolated) = 185 W/kg

System Performance Check at Frequency 5.8 GHz/d=10mm,

Pin=1000mW, dist=2.0mm (EX-Probe)/Zoom Scan (7x7x12)

(8x8x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 197.9 V/m; Power Drift = -0.03 dB

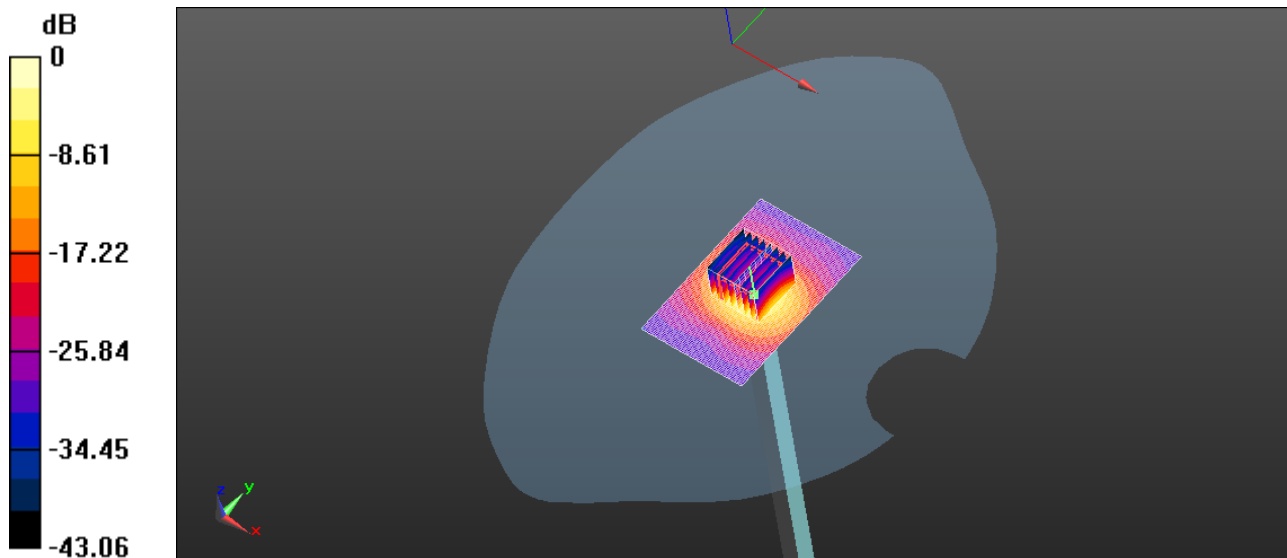
Peak SAR (extrapolated) = 358 W/kg

SAR(1 g) = 82.6 W/kg; SAR(10 g) = 23.8 W/kg (SAR corrected for target

		Document Appendix A for the BlackBerry® Smartphone Model RHA111LW SAR Report		Page 25(25)
Author Data Andrew Becker	Dates of Test June 23 – August 5, 2014	Test Report No RTS-6058-1408-04	FCC ID: L6ARHA110LW	IC ID: 2503A-RHA110LW

medium)

Maximum value of SAR (measured) = 174 W/kg



0 dB = 174 W/kg = 22.41 dBW/kg