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	Appendix A for the BlackBerry® Smartphone Model RFQ111LW SAR Report			1(19)
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Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

APPENDIX A: SAR DISTRIBUTION COMPARISON FOR ACCURACY VERIFICATION

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Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

Date/Time: 4/15/2013 4:14:24 PM

Test Laboratory: RIM Testing Services

DipoleValidation_835MHz_04_15_13_Amb_Tem_23.6_Liq_Tem_21.4C

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

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.894 \text{ S/m}$; $\epsilon_r = 41.518$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.19, 6.19, 6.19); Calibrated: 1/10/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

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

grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 110.3 V/m ; Power Drift = -0.01 dB

Fast SAR: SAR(1 g) = 8.8 W/kg; SAR(10 g) = 5.86 W/kg

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

Configuration/d=15mm, 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 = 110.3 V/m ; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 13.1 W/kg

SAR(1 g) = 8.84 W/kg; SAR(10 g) = 5.78 W/kg

Maximum value of SAR (measured) = 10.3 W/kg

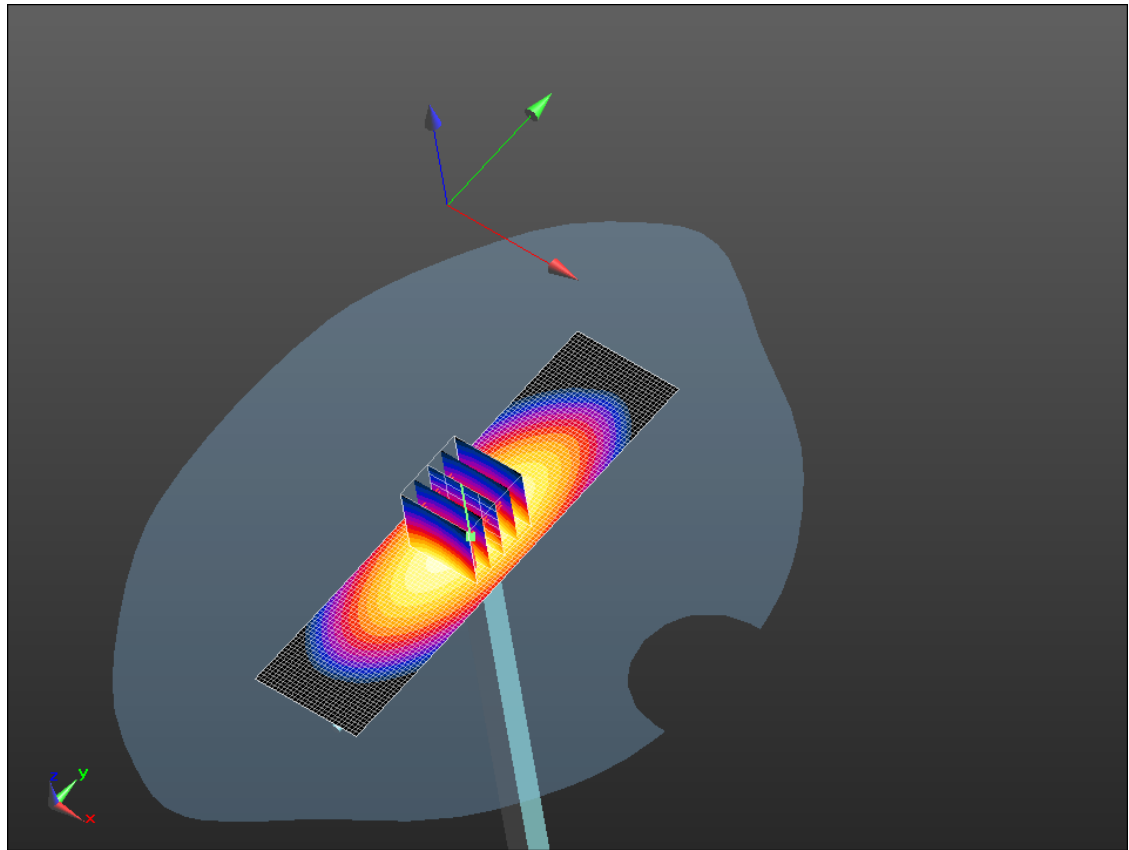
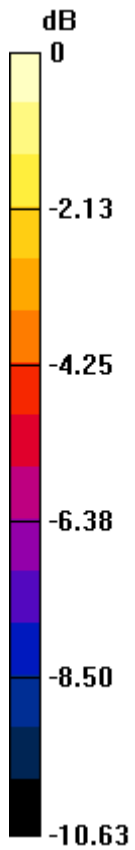
Author Data
Andrew Becker

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0 dB = 10.3 W/kg = 10.13 dBW/kg

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Author Data	Dates of Test	Test Report No	FCC ID:	IC
Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

Date/Time: 4/18/2013 12:11:10 AM

Test Laboratory: RIM Testing Services

DipoleValidation_835MHz_04_18_13_Amb_Tem_23.5_Liq_Tem_21.3C

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

Communication System: CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.897 \text{ S/m}$; $\epsilon_r = 40.95$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(6.19, 6.19, 6.19); Calibrated: 1/10/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

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

grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 110.4 V/m; Power Drift = -0.15 dB

Fast SAR: SAR(1 g) = 8.68 W/kg; SAR(10 g) = 5.76 W/kg

Maximum value of SAR (interpolated) = 10.0 W/kg

Configuration/d=15mm, 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 = 110.4 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 12.6 W/kg

SAR(1 g) = 8.52 W/kg; SAR(10 g) = 5.58 W/kg

Maximum value of SAR (measured) = 9.99 W/kg

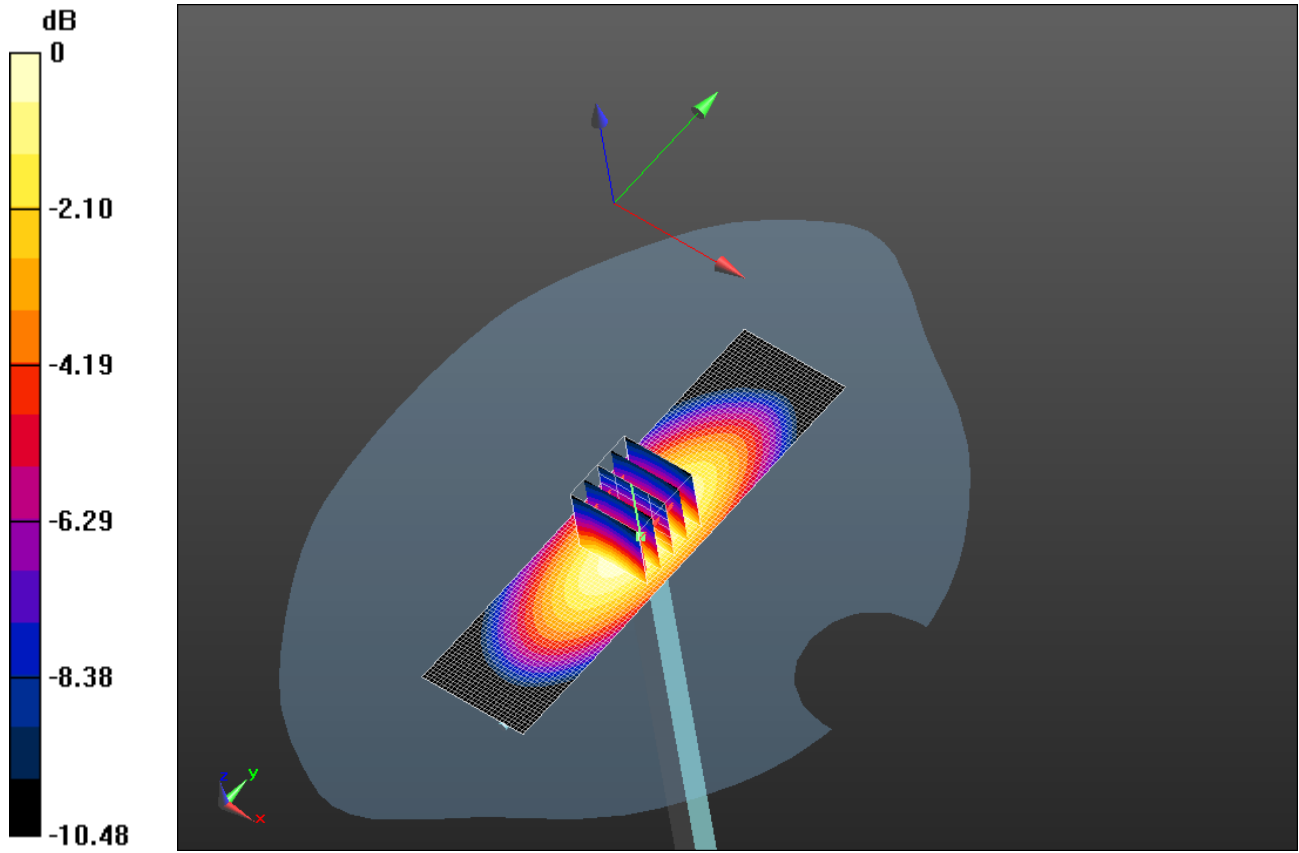
Author Data
Andrew Becker

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0 dB = 9.99 W/kg = 10.00 dBW/kg

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Author Data	Dates of Test	Test Report No	FCC ID:	IC
Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

Date/Time: 4/2/2013 5:20:39 AM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_04_02_13_Amb_Tem_24.0C_Liq_Tem_22.4 C

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d075

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.456$ S/m; $\epsilon_r = 38.441$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.35, 5.35, 5.35); Calibrated: 1/10/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

Configuration/d=10mm, Pin=1000mW/Area Scan (31x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Reference Value = 174.4 V/m; Power Drift = -0.08 dB

Fast SAR: SAR(1 g) = 38.2 W/kg; SAR(10 g) = 20.4 W/kg

Maximum value of SAR (interpolated) = 43.1 W/kg

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

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

Reference Value = 174.4 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 68.5 W/kg

SAR(1 g) = 37.3 W/kg; SAR(10 g) = 19.4 W/kg

Maximum value of SAR (measured) = 42.0 W/kg

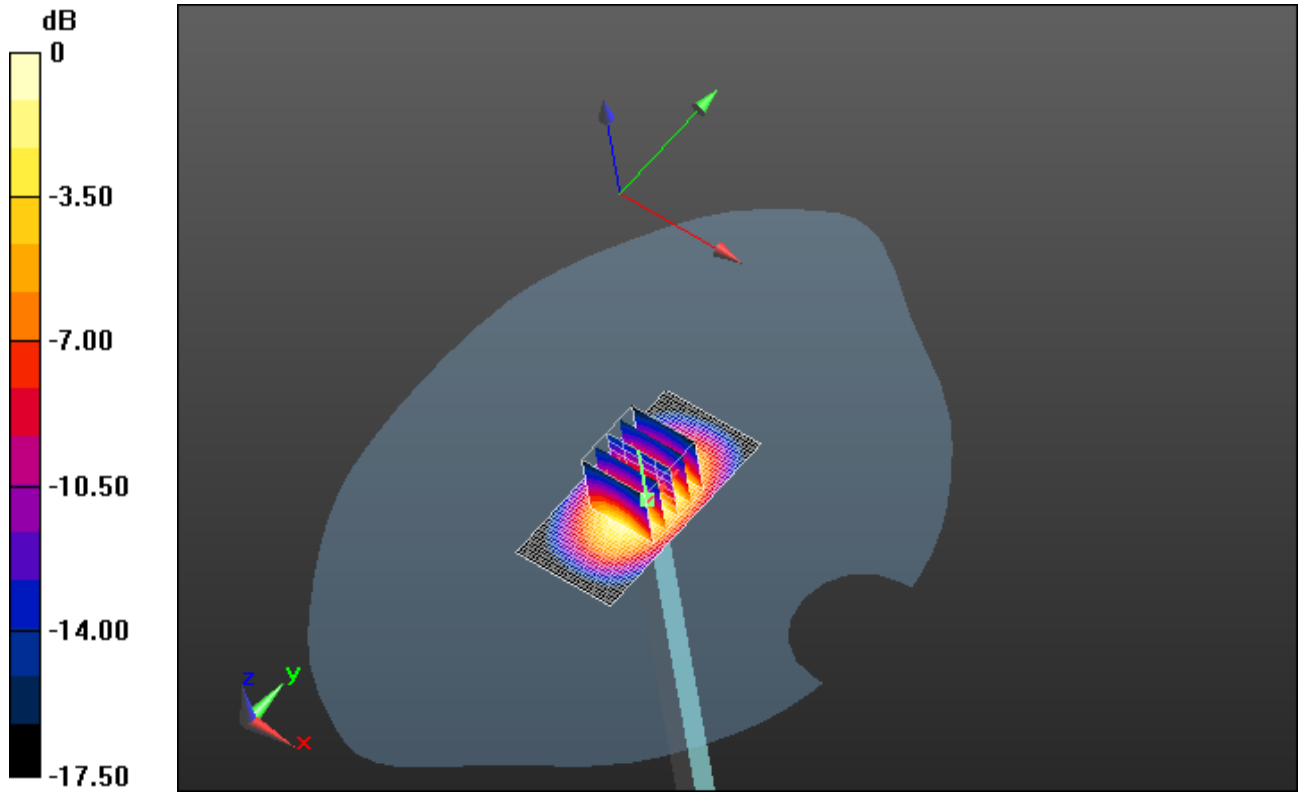
Author Data
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0 dB = 42.0 W/kg = 16.23 dBW/kg

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Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

Date/Time: 4/8/2013 12:58:08 AM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_04_08_13_Amb_Tem_23.4C_Liq_Tem_21.9

C

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

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.381$ S/m; $\epsilon_r = 38.283$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.35, 5.35, 5.35); Calibrated: 1/10/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

Configuration/d=10mm, Pin=1000mW/Area Scan (31x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Reference Value = 177.4 V/m; Power Drift = -0.05 dB

Fast SAR: SAR(1 g) = 37.3 W/kg; SAR(10 g) = 19.9 W/kg

Maximum value of SAR (interpolated) = 42.0 W/kg

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

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

Reference Value = 177.4 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 66.7 W/kg

SAR(1 g) = 36.8 W/kg; SAR(10 g) = 19.3 W/kg

Maximum value of SAR (measured) = 41.5 W/kg

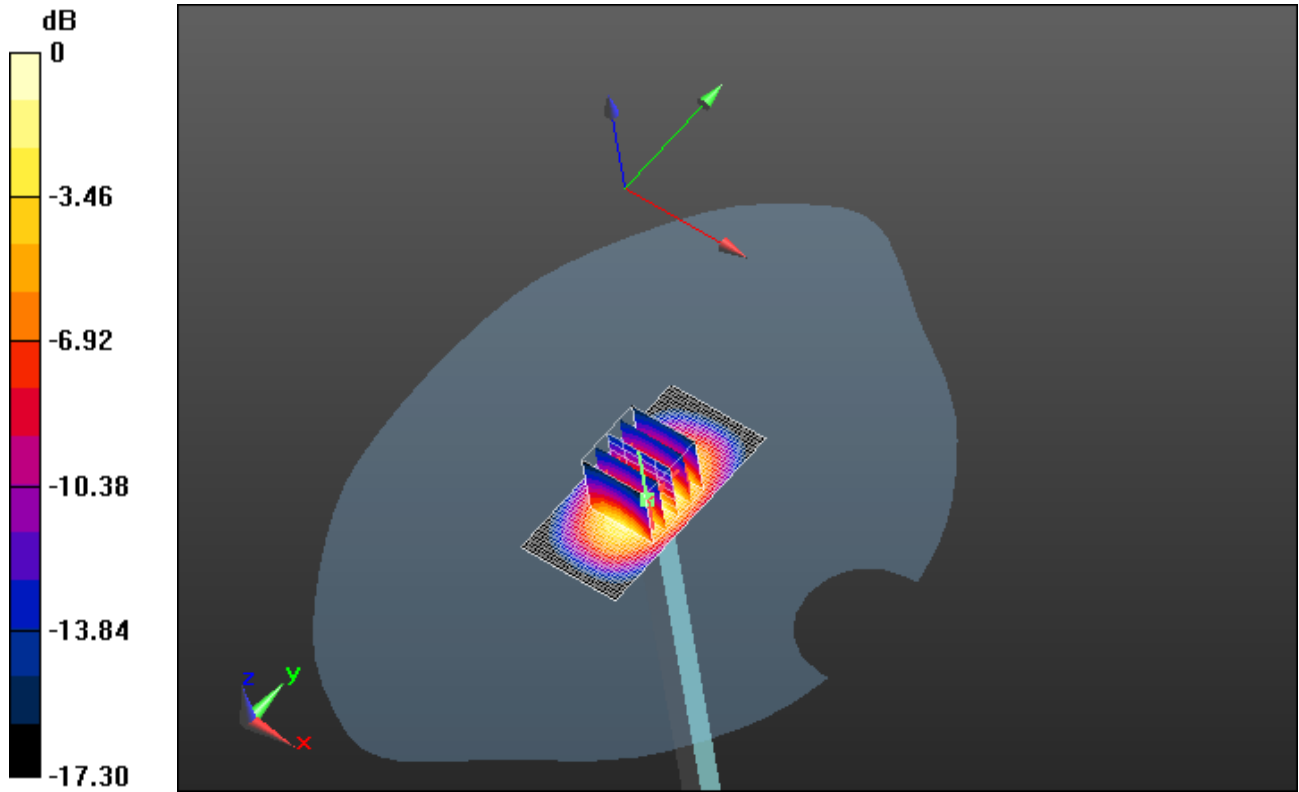
Author Data
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0 dB = 41.5 W/kg = 16.18 dBW/kg

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Author Data	Dates of Test	Test Report No	FCC ID:	IC
Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

Date/Time: 4/10/2013 11:45:50 AM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_04_10_13_Amb_Tem_23.8C_Liq_Tem_20.9 C

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

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.421$ S/m; $\epsilon_r = 39.477$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.35, 5.35, 5.35); Calibrated: 1/10/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

Configuration/d=10mm, Pin=1000mW/Area Scan (31x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Reference Value = 192.1 V/m; Power Drift = -0.00 dB

Fast SAR: SAR(1 g) = 39.3 W/kg; SAR(10 g) = 20.9 W/kg

Maximum value of SAR (interpolated) = 49.0 W/kg

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

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

Reference Value = 192.1 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 68.7 W/kg

SAR(1 g) = 38.3 W/kg; SAR(10 g) = 20 W/kg

Maximum value of SAR (measured) = 48.6 W/kg

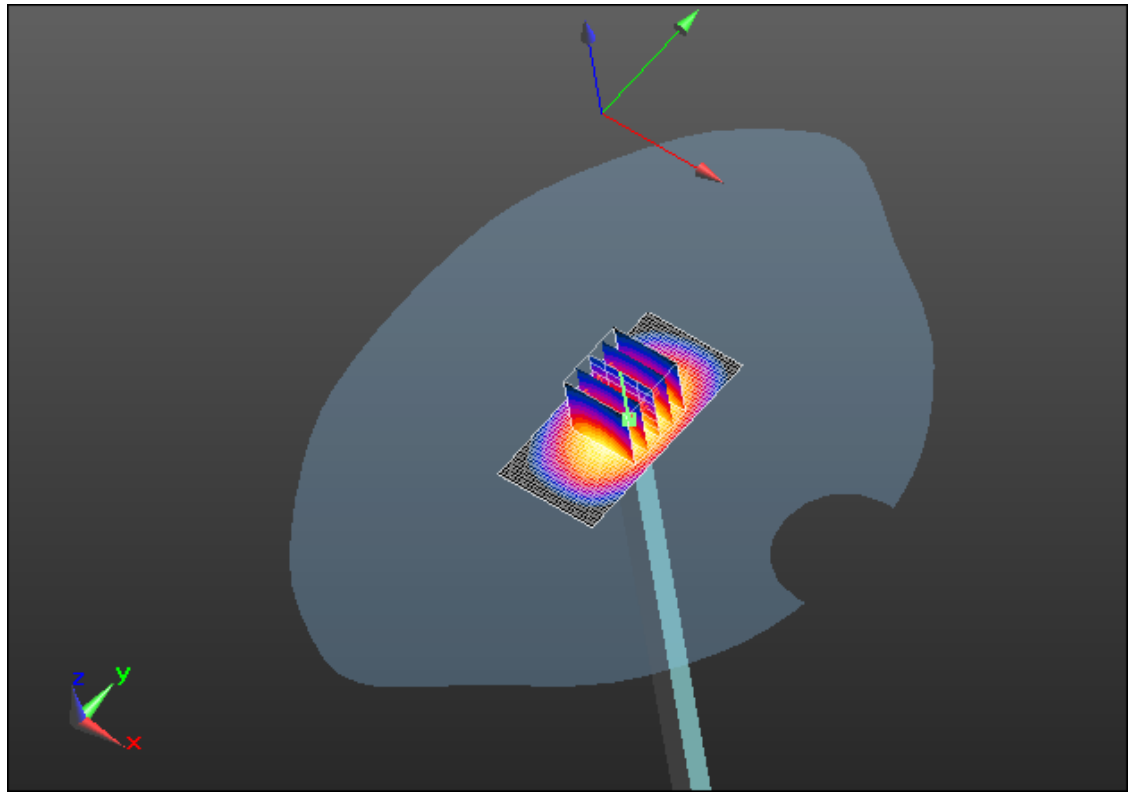
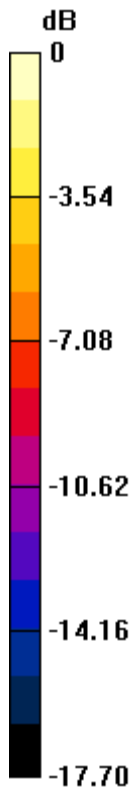
Author Data
Andrew Becker

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0 dB = 48.6 W/kg = 16.87 dBW/kg

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Author Data	Dates of Test	Test Report No	FCC ID:	IC
Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

Date/Time: 4/14/2013 6:07:39 PM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_04_14_13_Amb_Tem_23.4C_Liq_Tem_22.7 C

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

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.391$ S/m; $\epsilon_r = 38.533$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.35, 5.35, 5.35); Calibrated: 1/10/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

Configuration/d=10mm, Pin=1000mW/Area Scan (31x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Reference Value = 189.3 V/m; Power Drift = 0.01 dB

Fast SAR: SAR(1 g) = 37.3 W/kg; SAR(10 g) = 19.7 W/kg

Maximum value of SAR (interpolated) = 46.8 W/kg

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

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

Reference Value = 189.3 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 66.1 W/kg

SAR(1 g) = 36.8 W/kg; SAR(10 g) = 19.2 W/kg

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

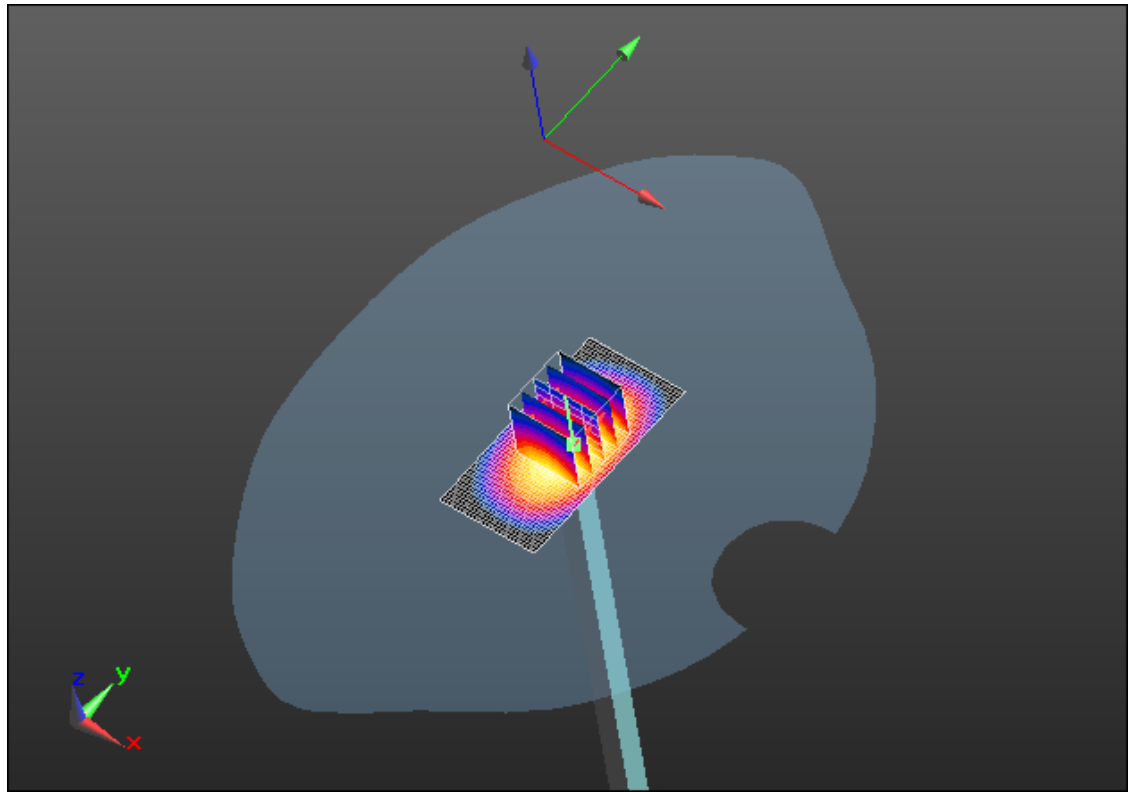
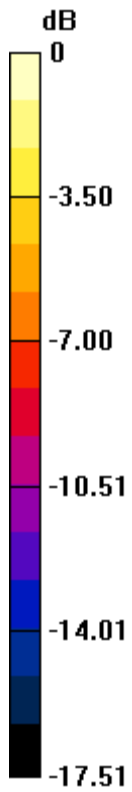
Author Data
Andrew Becker

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0 dB = 47.2 W/kg = 16.74 dBW/kg

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Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

Date/Time: 4/25/2013 1:05:05 AM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_04_25_13_Amb_Tem_23.5C_Liq_Tem_22.2 C

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

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.368$ S/m; $\epsilon_r = 38.74$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.35, 5.35, 5.35); Calibrated: 1/10/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

Configuration/d=10mm, Pin=1000mW/Area Scan (31x61x1): Interpolated
grid: $dx=1.500$ mm, $dy=1.500$ mm

Reference Value = 191.5 V/m; Power Drift = -0.06 dB

Fast SAR: SAR(1 g) = 36.9 W/kg; SAR(10 g) = 19.5 W/kg

Maximum value of SAR (interpolated) = 46.2 W/kg

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

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

Reference Value = 191.5 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 64.5 W/kg

SAR(1 g) = 36.4 W/kg; SAR(10 g) = 19.1 W/kg

Maximum value of SAR (measured) = 46.3 W/kg

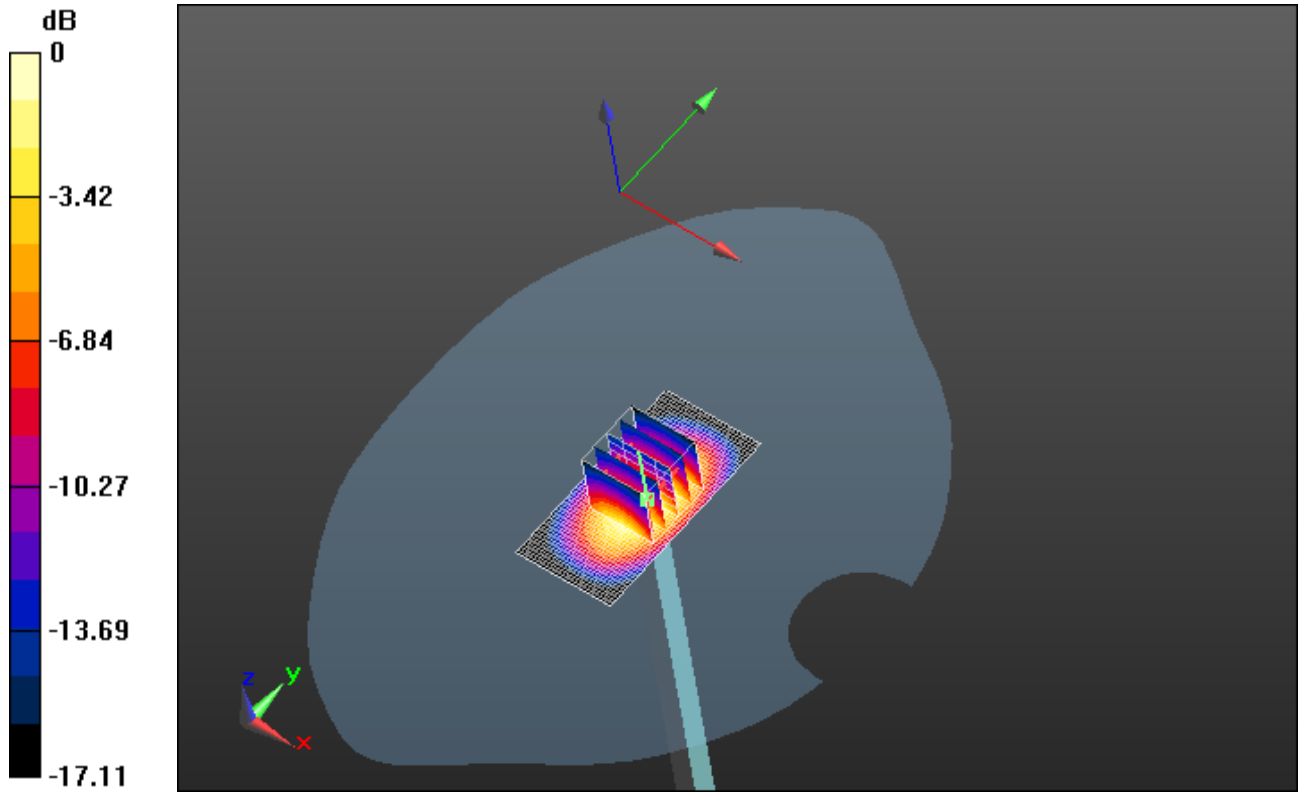
Author Data
Andrew Becker

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0 dB = 46.3 W/kg = 16.66 dBW/kg

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Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

Date/Time: 5/13/2013 1:06:25 AM

Test Laboratory: RIM Testing Services

DipoleValidation_1900MHz_05_13_13_Amb_Tem_23.6C_Liq_Tem_21.8 C

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

Communication System: CW; Frequency: 1900 MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.384$ S/m; $\epsilon_r = 39.152$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(5.35, 5.35, 5.35); Calibrated: 1/10/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

Configuration/d=10mm, Pin=1000mW/Area Scan (31x61x1): Interpolated
grid: $dx=1.500$ mm, $dy=1.500$ mm

Reference Value = 191.3 V/m; Power Drift = 0.00 dB

Fast SAR: SAR(1 g) = 37.3 W/kg; SAR(10 g) = 19.7 W/kg

Maximum value of SAR (interpolated) = 46.9 W/kg

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

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

Reference Value = 191.3 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 65.1 W/kg

SAR(1 g) = 36.7 W/kg; SAR(10 g) = 19.3 W/kg

Maximum value of SAR (measured) = 46.6 W/kg

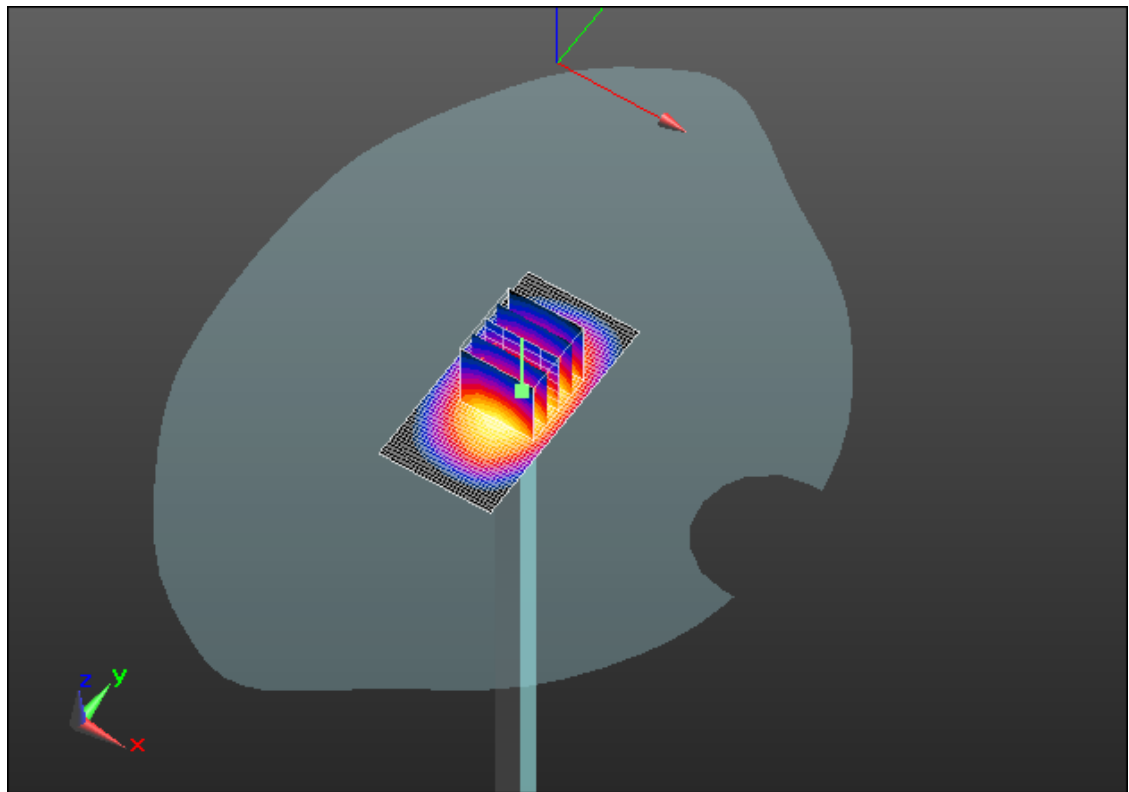
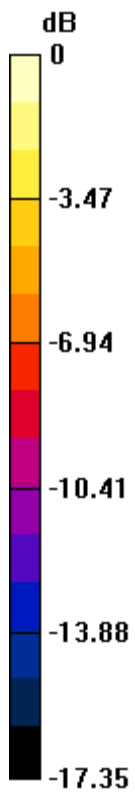
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Andrew Becker

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0 dB = 46.6 W/kg = 16.68 dBW/kg

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Author Data	Dates of Test	Test Report No	FCC ID:	IC
Andrew Becker	Apr 02 - May 14, 2013	RTS-6026-1305-18	L6ARFQ110LW	2503A-RFQ110LW

Date/Time: 4/29/2013 4:32:29 AM

Test Laboratory: RIM Testing Services

DipoleValidation_2450MHz_04_29_13_Amb_Tem_23.5C_Liq_Tem_21.3 C

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

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.8$ S/m; $\epsilon_r = 37.556$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY Configuration:

- Probe: ES3DV3 - SN3225; ConvF(4.65, 4.65, 4.65); Calibrated: 1/10/2013;
- Sensor-Surface: 3mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- DASYS2 52.8.4(1052); SEMCAD X 14.6.8(7028)

**System Performance Check at Frequencies above 1 GHz/d=10mm,
Pin=1000 mW, dist=3.0mm (ES-Probe)/Area Scan (61x71x1):** Interpolated
grid: $dx=1.200$ mm, $dy=1.200$ mm

Reference Value = 202.8 V/m; Power Drift = -0.04 dB

Fast SAR: SAR(1 g) = 51.9 W/kg; SAR(10 g) = 23.1 W/kg

Maximum value of SAR (interpolated) = 68.8 W/kg

**System Performance Check at Frequencies above 1 GHz/d=10mm,
Pin=1000 mW, dist=3.0mm (ES-Probe)/Zoom Scan (7x7x7) (7x8x7)/Cube**

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

Reference Value = 202.8 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 101 W/kg

SAR(1 g) = 52 W/kg; SAR(10 g) = 24.5 W/kg

Maximum value of SAR (measured) = 67.9 W/kg

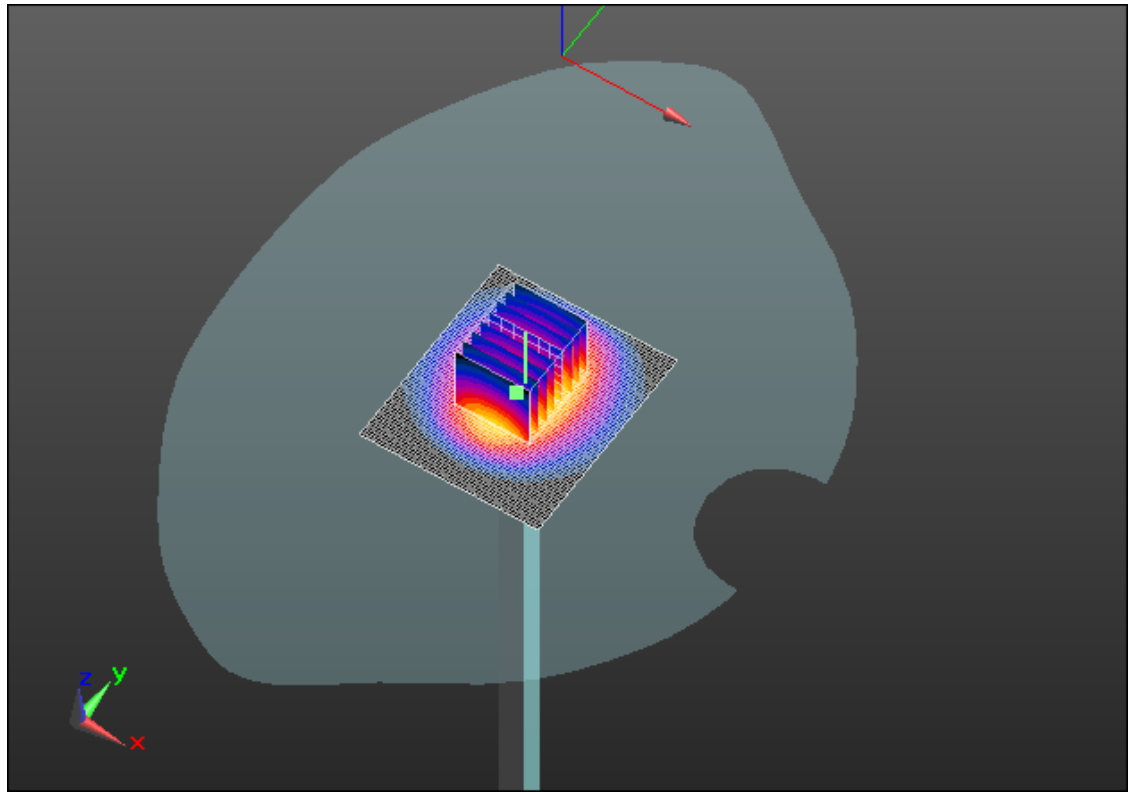
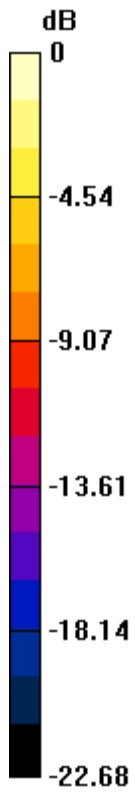
Author Data
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2503A-RFQ110LW



0 dB = 67.9 W/kg = 18.32 dBW/kg