

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			1 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Annex A: Measurement data and plots

A.1 MIF validation plots

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			2 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Test Laboratory: RIM Testing Services

MIF_measurements

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333CB445

Communication System: UID 0 - n/a

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: TCoil Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: AM1DV3 - 3062; ; Calibrated: 1/10/2013
- Sensor-Surface: 0mm (Fix Surface), z = 3.0
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Configuration/MIF Measurements/MIF_AM80%_1KHz_Measurement

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-1.31 dB		0.00 dB	Power OK
PMF	3.78 dB	1.545	0.00 dB	Power OK
Detector Level	0.21 dBm		0.00 dB	Power OK
RFAIP	-1.10 dBm		0.00 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_AM10%_1KHz_Measurement

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-9.33 dB		0.00 dB	Power OK

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		Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW		Page 3 (75)
Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW	

PMF	0.76 dB	1.092	0.00 dB	Power OK
Detector Level	0.51 dBm		0.00 dB	Power OK
RFAIP	-8.83 dBm		0.00 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_AM1%_1KHz_Measurement

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-19.30 dB		0.00 dB	Power OK
PMF	0.08 dB	1.010	0.00 dB	Power OK
Detector Level	0.48 dBm		0.00 dB	Power OK
RFAIP	-18.82 dBm		0.00 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_GSM_Measurement

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	3.46 dB		0.00 dB	Power OK
PMF	9.81 dB	3.093	0.01 dB	Power OK
Detector Level	-2.01 dBm		0.00 dB	Power OK
RFAIP	1.45 dBm		0.01 dB	(MIF+CF+Detector Level)

Configuration/MIF

Measurements/MIF_WCDMA_Voice_AMR12_2kps_Measurement

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-15.38 dB		0.05 dB	Power OK
PMF	0.09 dB	1.010	0.00 dB	Power OK
Detector Level	6.96 dBm		0.00 dB	Power OK
RFAIP	-8.42 dBm		0.06 dB	(MIF+CF+Detector Level)

Configuration/MIF

Measurements/MIF_WCDMA_voice_AMR4_75kps_Measurement

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
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		Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW		Page 4 (75)
Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW	

MIF	-14.47 dB		0.13 dB	Power OK
PMF	0.09 dB	1.011	0.01 dB	Power OK
Detector Level	6.94 dBm		0.03 dB	Power OK
RFAIP	-7.53 dBm		0.15 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_WCDMA_RMC_Measurement 2

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-25.43 dB		0.21 dB	Power OK
PMF	0.07 dB	1.009	0.01 dB	Power OK
Detector Level	6.99 dBm		0.00 dB	Power OK
RFAIP	-18.43 dBm		0.21 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_CDMA

FR_Speech_Service_SO3_RC3_Measurement

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-19.71 dB		0.34 dB	Power OK
PMF	0.32 dB	1.037	0.03 dB	Power OK
Detector Level	6.74 dBm		0.03 dB	Power OK
RFAIP	-12.97 dBm		0.38 dB	(MIF+CF+Detector Level)

Configuration/MIF

Measurements/MIF_CDMA_1_8th_Speech_Service_SO3_RC1_mute

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	2.76 dB		0.69 dB	Power OK
PMF	9.07 dB	2.840	0.72 dB	Power OK
Detector Level	-1.75 dBm		1.13 dB	Power OK
RFAIP	1.01 dBm		1.83 dB	(MIF+CF+Detector Level)

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			5 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Configuration/MIF Measurements/MIF_802.11b_Rate_1Mbps

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-12.67 dB		0.03 dB	Power OK
PMF	0.41 dB	1.049	0.02 dB	Power OK
Detector Level	1.45 dBm		0.01 dB	Power OK
RFAIP	-11.22 dBm		0.03 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11b_Rate_2Mbps

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-12.01 dB		0.02 dB	Power OK
PMF	0.47 dB	1.055	0.01 dB	Power OK
Detector Level	1.32 dBm		0.01 dB	Power OK
RFAIP	-10.69 dBm		0.03 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11b_Rate_5.5Mbps

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-9.59 dB		0.03 dB	Power OK
PMF	0.64 dB	1.077	0.02 dB	Power OK
Detector Level	1.22 dBm		0.00 dB	Power OK
RFAIP	-8.37 dBm		0.03 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11b_Rate_11Mbps

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-8.79 dB		0.00 dB	Power OK
PMF	0.77 dB	1.092	0.02 dB	Power OK
Detector Level	1.15 dBm		0.02 dB	Power OK
RFAIP	-7.64 dBm		0.02 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11g_Rate_6Mbps

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

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		Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW		Page 6 (75)
Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW	

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-10.32 dB		0.03 dB	Power OK
PMF	0.85 dB	1.103	0.03 dB	Power OK
Detector Level	1.39 dBm		0.09 dB	Power OK
RFAIP	-8.94 dBm		0.12 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11g_Rate_9Mbps

Calibration Factors: 1.090, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-9.58 dB		0.02 dB	Power OK
PMF	0.95 dB	1.116	0.03 dB	Power OK
Detector Level	1.31 dBm		0.00 dB	Power OK
RFAIP	-8.27 dBm		0.02 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11g_Rate_18Mbps

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-8.34 dB		0.01 dB	Power OK
PMF	1.07 dB	1.130	0.03 dB	Power OK
Detector Level	5.96 dBm		0.00 dB	Power OK
RFAIP	-2.38 dBm		0.02 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11g_Rate_54Mbps

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-8.67 dB		0.02 dB	Power OK
PMF	1.96 dB	1.253	0.06 dB	Power OK
Detector Level	2.96 dBm		0.01 dB	Power OK
RFAIP	-5.70 dBm		0.04 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11a_Rate_6Mbps

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
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		Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW		Page 7 (75)
Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW	

MIF	-10.44 dB		0.02 dB	Power OK
PMF	0.82 dB	1.099	0.02 dB	Power OK
Detector Level	1.28 dBm		0.01 dB	Power OK
RFAIP	-9.16 dBm		0.03 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11a_Rate_24Mbps

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-8.21 dB		0.03 dB	Power OK
PMF	1.36 dB	1.169	0.03 dB	Power OK
Detector Level	-0.37 dBm		0.02 dB	Power OK
RFAIP	-8.58 dBm		0.05 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11a_Rate_54Mbps

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-8.99 dB		0.01 dB	Power OK
PMF	1.83 dB	1.234	0.03 dB	Power OK
Detector Level	-2.09 dBm		0.01 dB	Power OK
RFAIP	-11.08 dBm		0.02 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11n_Rate_6.5Mbps

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-10.33 dB		0.01 dB	Power OK
PMF	0.93 dB	1.113	0.01 dB	Power OK
Detector Level	-1.38 dBm		0.01 dB	Power OK
RFAIP	-11.70 dBm		0.02 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11n_Rate_39Mbps

Calibration Factors: 1.090, 1.090; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-8.25 dB		0.01 dB	Power OK

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	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			8 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

PMF	1.45 dB	1.182	0.01 dB	Power OK
Detector Level	-4.27 dBm		0.01 dB	Power OK
RFAIP	-12.51 dBm		0.02 dB	(MIF+CF+Detector Level)

Configuration/MIF Measurements/MIF_802.11n_Rate_65Mbps

Calibration Factors: 1.089, 1.089; MIF Scale: 0.00 dB; Coupling Factor (CF): 0.00 dB

Quantity	Value [log]	[linear]	Fluctuation	Remark
MIF	-9.05 dB		0.01 dB	Power OK
PMF	1.86 dB	1.238	0.01 dB	Power OK
Detector Level	-5.76 dBm		0.01 dB	Power OK
RFAIP	-14.81 dBm		0.01 dB	(MIF+CF+Detector Level)

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW		Page 9 (75)
Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW

A.2 Dipole validation

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			Page 10 (75)
	Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW

Date/Time: 6/14/2013 12:57:02 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_835 MHz_06_13_13

DUT: HAC-Dipole 835 MHz; Type: CD835V3; Serial: 1089

Communication System: UID 0 - n/a, CW For MIF; Frequency: 835 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 9.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

CD835 Dipole E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - measurement distance from the probe sensor center to CD835 = 15mm/Hearing Aid Compatibility Test at 15mm distance (41x361x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 107.6 V/m; Power Drift = -0.07 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 110.3 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 M4 101.3 V/m	Grid 2 M4 106.1 V/m	Grid 3 M4 106.0 V/m
Grid 4 M4 60.13 V/m	Grid 5 M4 61.71 V/m	Grid 6 M4 61.10 V/m
Grid 7 M4	Grid 8 M4	Grid 9 M4

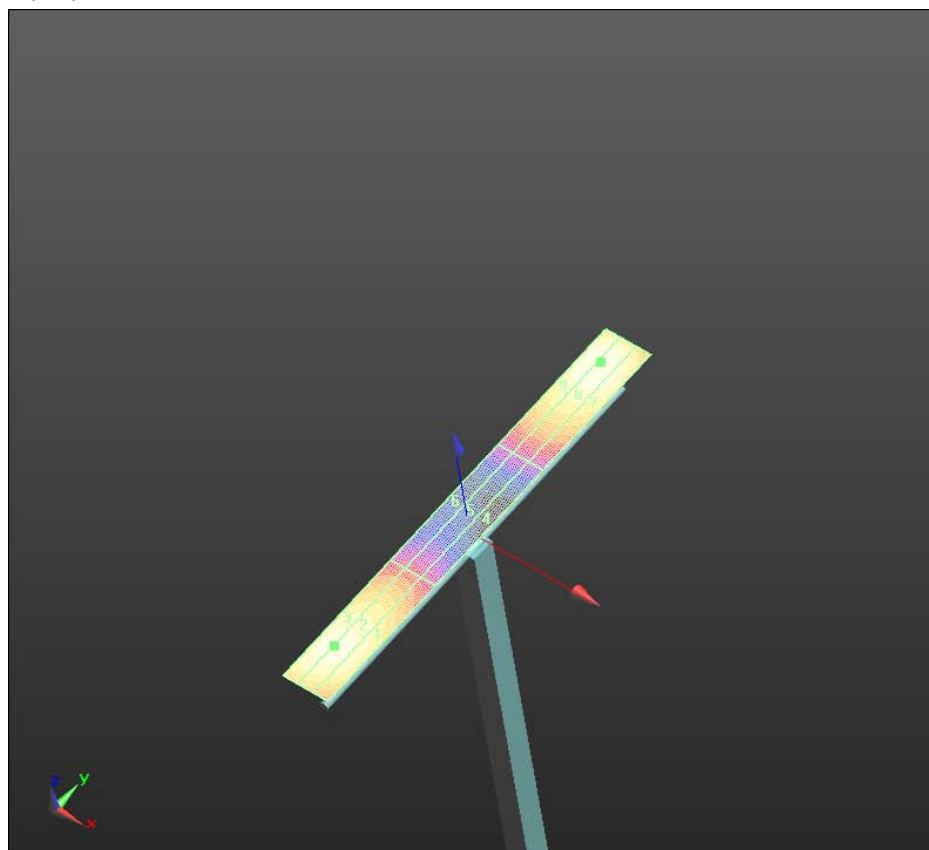
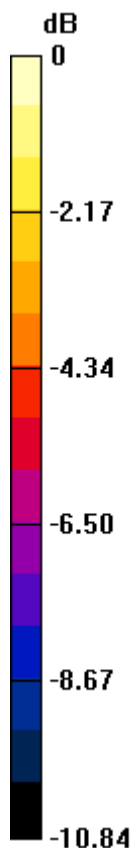
105.3 V/m	110.3 V/m	110.0 V/m
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Cursor:

Total = 110.3 V/m

E Category: M4

Location: -2.5, 78, 9.7 mm



0 dB = 110.3 V/m = 40.85 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			12 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 7/3/2013 6:23:02 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_835_validation_07_03_13

DUT: HAC-Dipole 835 MHz; Type: CD835V3; Serial: 1089

Communication System: UID 0 - n/a, CW For MIF; Frequency: 835 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 9.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

CD835 Dipole E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - measurement distance from the probe sensor center to CD835 = 15mm/Hearing Aid Compatibility Test at 15mm distance (41x361x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 103.6 V/m; Power Drift = -0.00 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 108.2 V/m

Near-field category: M4 (AWF 0 dB)

PMF scaled E-field

Grid 1 M4 101.7 V/m	Grid 2 M4 106.6 V/m	Grid 3 M4 106.6 V/m
Grid 4 M4 60.00 V/m	Grid 5 M4 61.35 V/m	Grid 6 M4 60.51 V/m
Grid 7 M4	Grid 8 M4	Grid 9 M4

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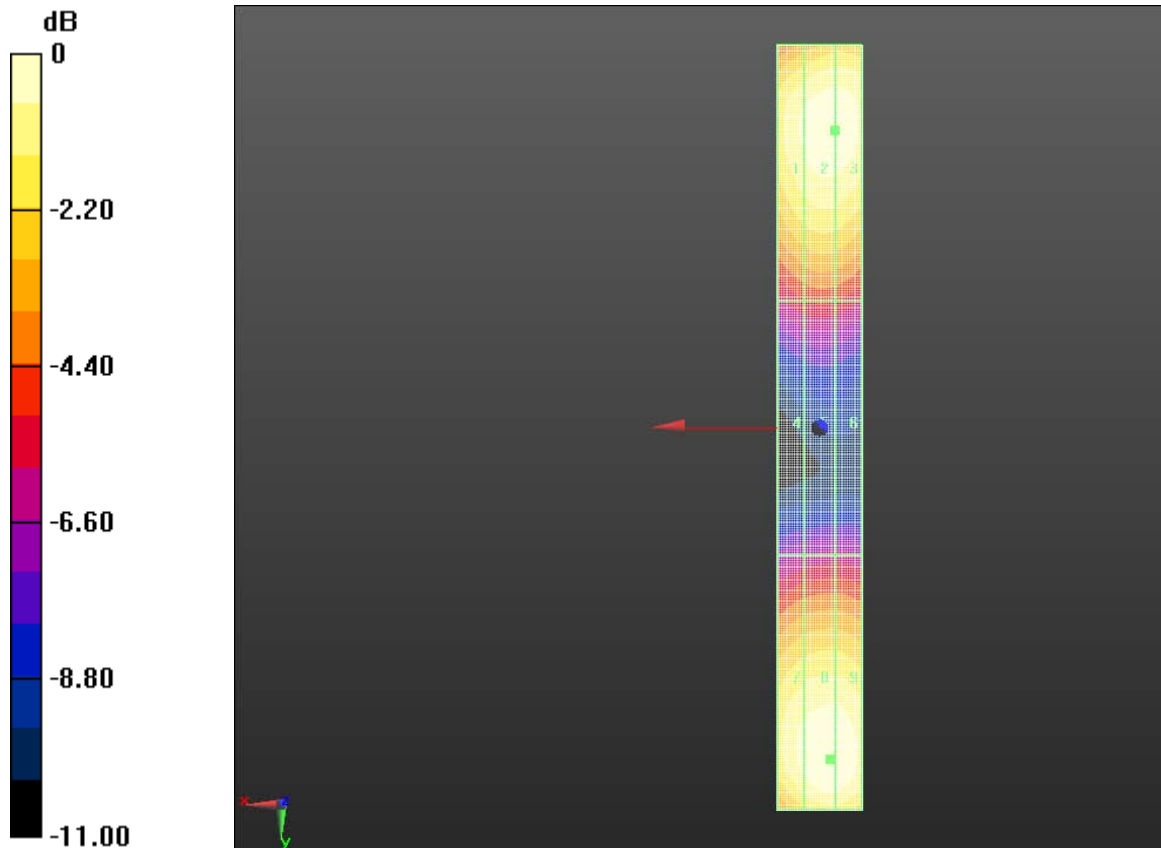
103.2 V/m	108.2 V/m	108.0 V/m
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Cursor:

Total = 108.2 V/m

E Category: M4

Location: -2.5, 78, 9.7 mm



0 dB = 108.2 V/m = 40.68 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			14 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 12:22:28 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_validation_1880 MHz_06_13_13

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1068

Communication System: UID 0 - n/a, CW For MIF; Frequency: 1880 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 9.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

CD1880 Dipole E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - measurement distance from the probe sensor center to CD1880 = 15mm/Hearing Aid Compatibility Test at 15mm distance (41x181x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 148.5 V/m; Power Drift = 0.00 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 85.34 V/m

Near-field category: M3 (AWF 0 dB)

PMF scaled E-field

Grid 1 M3 81.19 V/m	Grid 2 M3 84.90 V/m	Grid 3 M3 84.87 V/m
Grid 4 M3 67.01 V/m	Grid 5 M3 68.62 V/m	Grid 6 M3 68.24 V/m

Author Data
Daoud Attayi

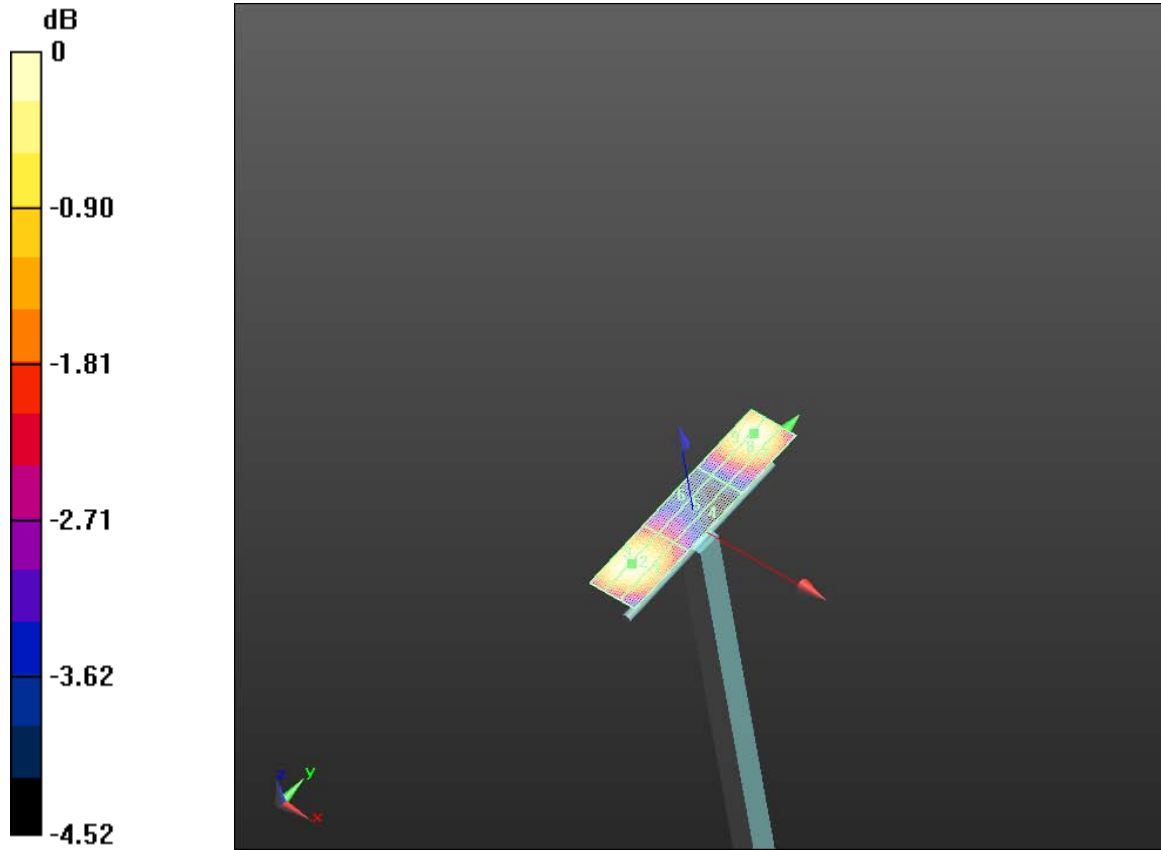
Dates of Test
June 13-July 04, 2013

Report No
RTS-6046-1308-32

FCC ID
L6ARGB140LW

Grid 7 M3 80.57 V/m	Grid 8 M3 85.33 V/m	Grid 9 M3 85.16 V/m
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Cursor:
 Total = 85.33 V/m
 E Category: M3
 Location: -2.5, 37.5, 9.7 mm



0 dB = 85.33 V/m = 38.62 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			16 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 7/3/2013 6:59:51 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_1880_validation_07_03_13

DUT: HAC Dipole 1880 MHz; Type: CD1880V3; Serial: 1068

Communication System: UID 0 - n/a, CW For MIF; Frequency: 1880 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 9.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

CD1880 Dipole E-Field measurement (E-field scan for ANSI C63.19-2011 compliance)/E Scan - measurement distance from the probe sensor center to CD1880 = 15mm/Hearing Aid Compatibility Test at 15mm distance (41x181x1):

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 148.9 V/m; Power Drift = -0.02 dB

PMR not calibrated. PMF = 1.000 is applied.

E-field emissions = 86.20 V/m

Near-field category: M3 (AWF 0 dB)

PMF scaled E-field

Grid 1 M3 83.02 V/m	Grid 2 M3 86.20 V/m	Grid 3 M3 85.98 V/m
Grid 4 M3 66.61 V/m	Grid 5 M3 67.81 V/m	Grid 6 M3 67.24 V/m
Grid 7 M3 80.74 V/m	Grid 8 M3 85.21 V/m	Grid 9 M3 85.02 V/m

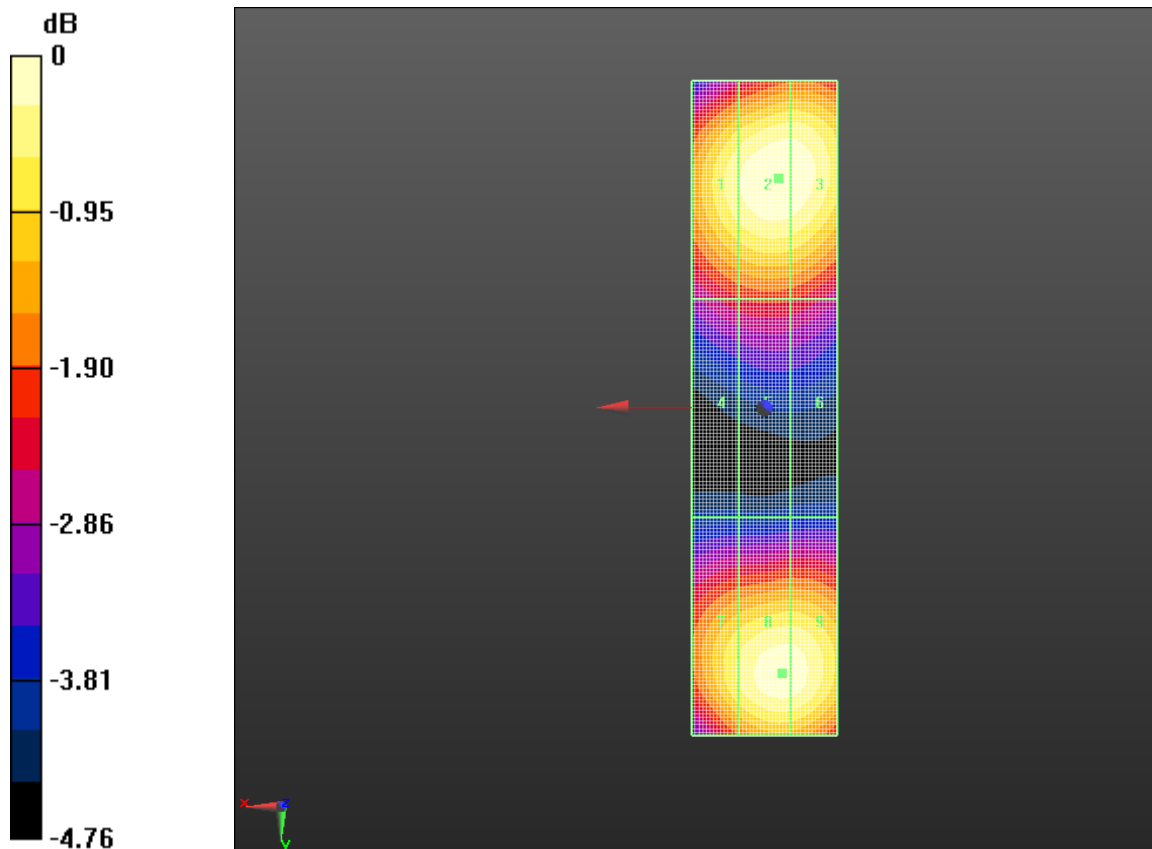
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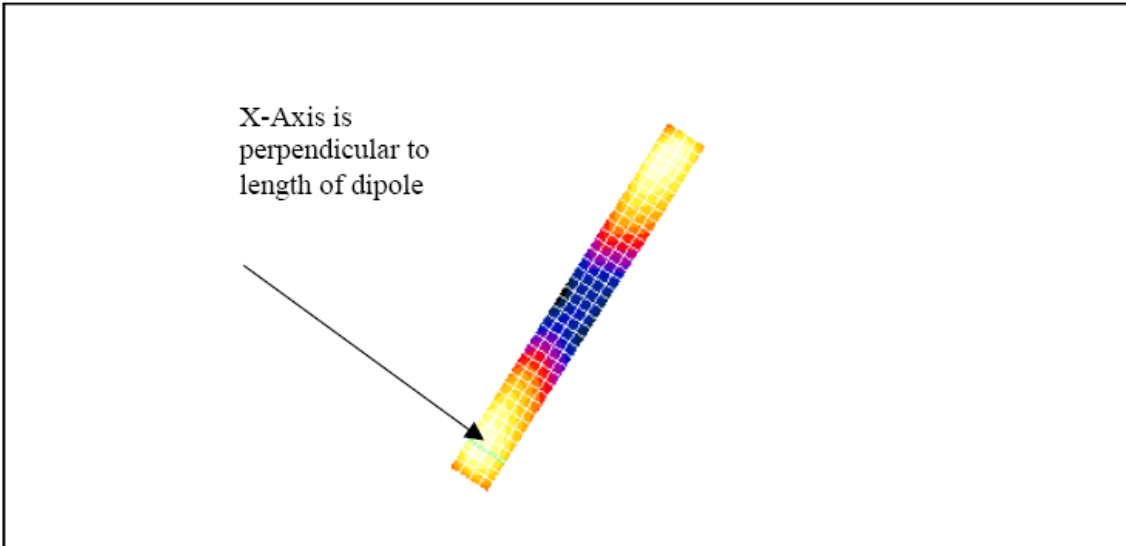
Total = 86.20 V/m

E Category: M3

Location: -2, -31.5, 9.7 mm



0 dB = 86.20 V/m = 38.71 dBV/m



The green line in this figure shows the axis along which the points lie.

Comparison of 5mm and 2mm step sizes

An additional set of measurements was taken: dipole validations were performed using 5mm and 2mm step sizes. The delta between the two readings is insignificant for both field types ($< 0.4\%$ for E and 0% for H), demonstrating that 5mm is sufficient. The plots follow.



Document

**Annex A to Hearing Aid Compatibility RF Emissions Test
Report for the BlackBerry® Smartphone model RGB141LW**

Page

19 (75)

Author Data

Daoud Attayi

Dates of Test

June 13-July 04, 2013

Report No

RTS-6046-1308-32

FCC ID

L6ARGB140LW

Date/Time: 14/07/2005 11:35:24 AM

Page 1 of 2

Date/Time: 14/07/2005 11:35:24 AM

Lab: RIM Testing Services (RTS)**Dipole Validation 1880 MHz_E-Field 07_14_05****DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³

Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):

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

Maximum value of Total (measured) = 134.8 V/m

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):

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

Maximum value of Total field (slot averaged) = 131.0 V/m

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

E in V/m (Time averaged) E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
123.2	138.1	138.4	123.2	138.1	138.4
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
80.9	92.3	92.2	80.9	92.3	92.2
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
119.8	131.0	130.7	119.8	131.0	130.7

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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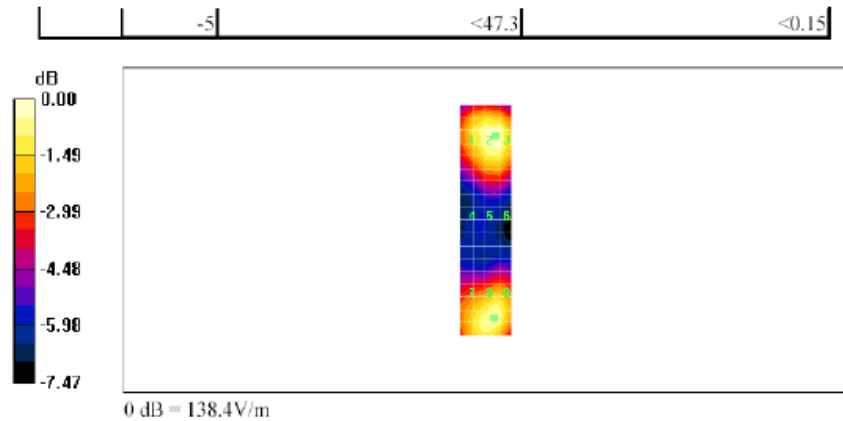
Document
**Annex A to Hearing Aid Compatibility RF Emissions Test
Report for the BlackBerry® Smartphone model RGB141LW**

Page
20 (75)

Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW
------------------------------------	---	--------------------------------------	------------------------------

Date/Time: 14/07/2005 11:35:24 AM

Page 2 of 2



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Document

**Annex A to Hearing Aid Compatibility RF Emissions Test
Report for the BlackBerry® Smartphone model RGB141LW**

Page

21 (75)Author Data
Daoud AttayiDates of Test
June 13-July 04, 2013Report No
RTS-6046-1308-32FCC ID
L6ARGB140LW

Date/Time: 14/07/2005 11:44:51 AM

Page 1 of 2

Date/Time: 14/07/2005 11:44:51 AM

Lab: RIM Testing Services (RTS)**Dipole Validation 1880 MHz_2mm step_E-Field 07_14_05****DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1000$ kg/m³
Phantom section: H Device Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2285; ConvF(1, 1, 1); Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (11x46x1):

Measurement grid: dx=2mm, dy=2mm
Maximum value of Total (measured) = 138.0 V/m

E Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (101x451x1):

Measurement grid: dx=2mm, dy=2mm
Maximum value of Total field (slot averaged) = 131.2 V/m

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

E in V/m (Time averaged) E in V/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
123.1	138.6	138.6	123.1	138.6	138.6
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
81.4	92.1	91.6	81.4	92.1	91.6
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
121.3	131.2	131.0	121.3	131.2	131.0

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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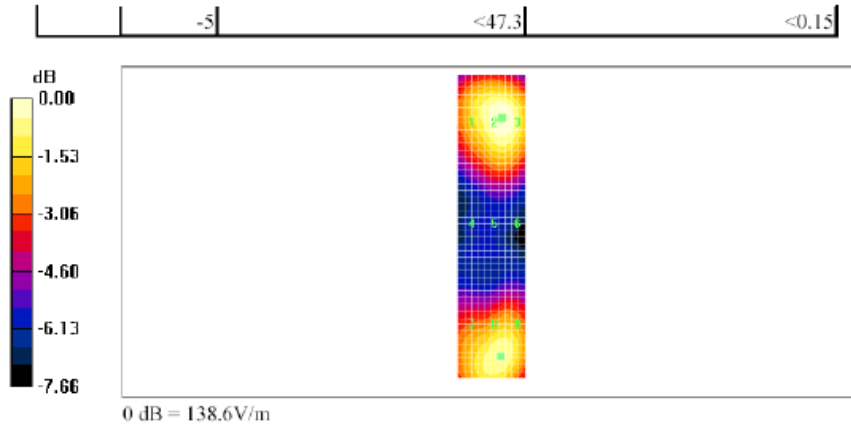
Document
**Annex A to Hearing Aid Compatibility RF Emissions Test
Report for the BlackBerry® Smartphone model RGB141LW**

Page
22 (75)

Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW
------------------------------------	---	--------------------------------------	------------------------------

Date/Time: 14/07/2005 11:44:51 AM

Page 2 of 2



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Document

**Annex A to Hearing Aid Compatibility RF Emissions Test
Report for the BlackBerry® Smartphone model RGB141LW**

Page

23 (75)Author Data
Daoud AttayiDates of Test
June 13-July 04, 2013Report No
RTS-6046-1308-32FCC ID
L6ARGB140LW

Date/Time: 14/07/2005 12:43:02 PM

Page 1 of 2

Date/Time: 14/07/2005 12:43:02 PM

Lab: RIM Testing Services (RTS)**HAC_H_Dipole_CW 1880_5 mm step_07_14_05****DUT: HAC Dipole 1880 MHz; Type: CD1880V3**

Communication System: CW; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Air Medium parameters used: $\sigma = 0$ mho/m, $\epsilon_r = 1$; $\rho = 1$ kg/m³

Phantom section: H Dipole Section

DASY4 Configuration:

- Probe: H3DV6 - SN6105; ; Calibrated: 10/12/2004
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn472; Calibrated: 03/01/2005
- Phantom: HAC Test Arch; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (5x19x1):

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

Maximum value of Total (measured) = 0.406 A/m

H Scan 10mm above CD 1880 MHz/Hearing Aid Compatibility Test (41x181x1):

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

Maximum value of Total field (slot averaged) = 0.406 A/m

Hearing Aid Near-Field Category: M2 (AWF 0 dB)

H in A/m (Time averaged) H in A/m (Slot averaged)

Grid 1	Grid 2	Grid 3	Grid 1	Grid 2	Grid 3
0.342	0.359	0.344	0.342	0.359	0.344
Grid 4	Grid 5	Grid 6	Grid 4	Grid 5	Grid 6
0.389	0.406	0.389	0.389	0.406	0.389
Grid 7	Grid 8	Grid 9	Grid 7	Grid 8	Grid 9
0.363	0.378	0.363	0.363	0.378	0.363

Category	AWF (dB)	Limits for E-Field Emissions (V/m)	Limits for H-Field Emissions (A/m)
M1	0	199.5 - 354.8	0.6 - 1.07
	-5	149.6 - 266.1	0.45 - 0.8
M2	0	112.2 - 199.5	0.34 - 0.6
	-5	84.1 - 149.6	0.25 - 0.45
M3	0	63.1 - 112.2	0.19 - 0.34
	-5	47.3 - 84.1	0.15 - 0.25
M4	0	<63.1	<0.19

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Document
**Annex A to Hearing Aid Compatibility RF Emissions Test
Report for the BlackBerry® Smartphone model RGB141LW**

Page
24 (75)

Author Data
Daoud Attayi

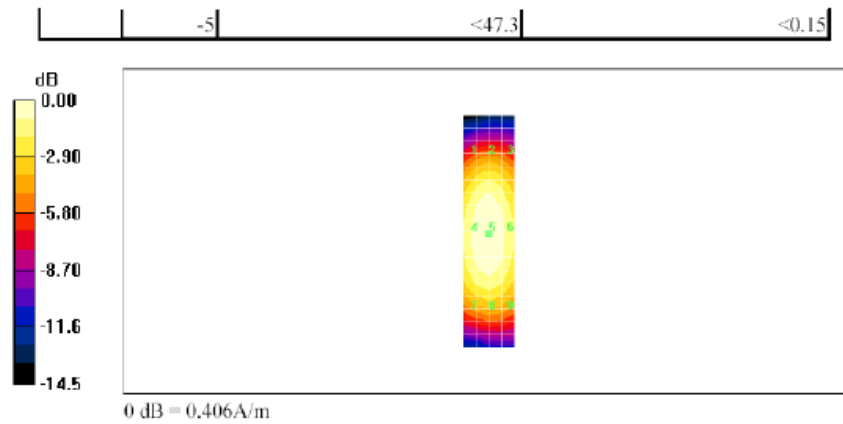
Dates of Test
June 13-July 04, 2013

Report No
RTS-6046-1308-32

FCC ID
L6ARGB140LW

Date/Time: 14/07/2005 12:43:02 PM

Page 2 of 2



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		Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW		Page 25 (75)
Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW	

A.3 RF emission field plots

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			26 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 2:03:37 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM850

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, GSM 850; Frequency: 824.2 MHz, Frequency: 836.8 MHz, Frequency: 848.8 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field GSM850 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 48.13 V/m; Power Drift = 0.07 dB

Applied MIF = 3.46 dB

RF audio interference level = 35.64 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 33.78 dBV/m	Grid 2 M4 34.68 dBV/m	Grid 3 M4 34.6 dBV/m
Grid 4 M4 34.74 dBV/m	Grid 5 M4 35.6 dBV/m	Grid 6 M4 35.42 dBV/m
Grid 7 M4	Grid 8 M4	Grid 9 M4

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	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			27 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

35.64 dBV/m	36.09 dBV/m	35.65 dBV/m
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**Device E-Field GSM850 measurement with ER probe/E Scan -
ER3D - 2011: 15 mm from Probe Center to the
Device_Mid_Chain/Hearing Aid Compatibility Test (101x101x1):**

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 54.95 V/m; Power Drift = 0.02 dB

Applied MIF = 3.46 dB

RF audio interference level = 36.86 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 34.49 dBV/m	Grid 2 M4 35.93 dBV/m	Grid 3 M4 35.93 dBV/m
Grid 4 M4 35.52 dBV/m	Grid 5 M4 36.86 dBV/m	Grid 6 M4 36.76 dBV/m
Grid 7 M4 36.62 dBV/m	Grid 8 M4 37.39 dBV/m	Grid 9 M4 37.04 dBV/m

**Device E-Field GSM850 measurement with ER probe/E Scan -
ER3D - 2011: 15 mm from Probe Center to the
Device_High_Chain/Hearing Aid Compatibility Test (101x101x1):**

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 55.84 V/m; Power Drift = -0.13 dB

Applied MIF = 3.46 dB

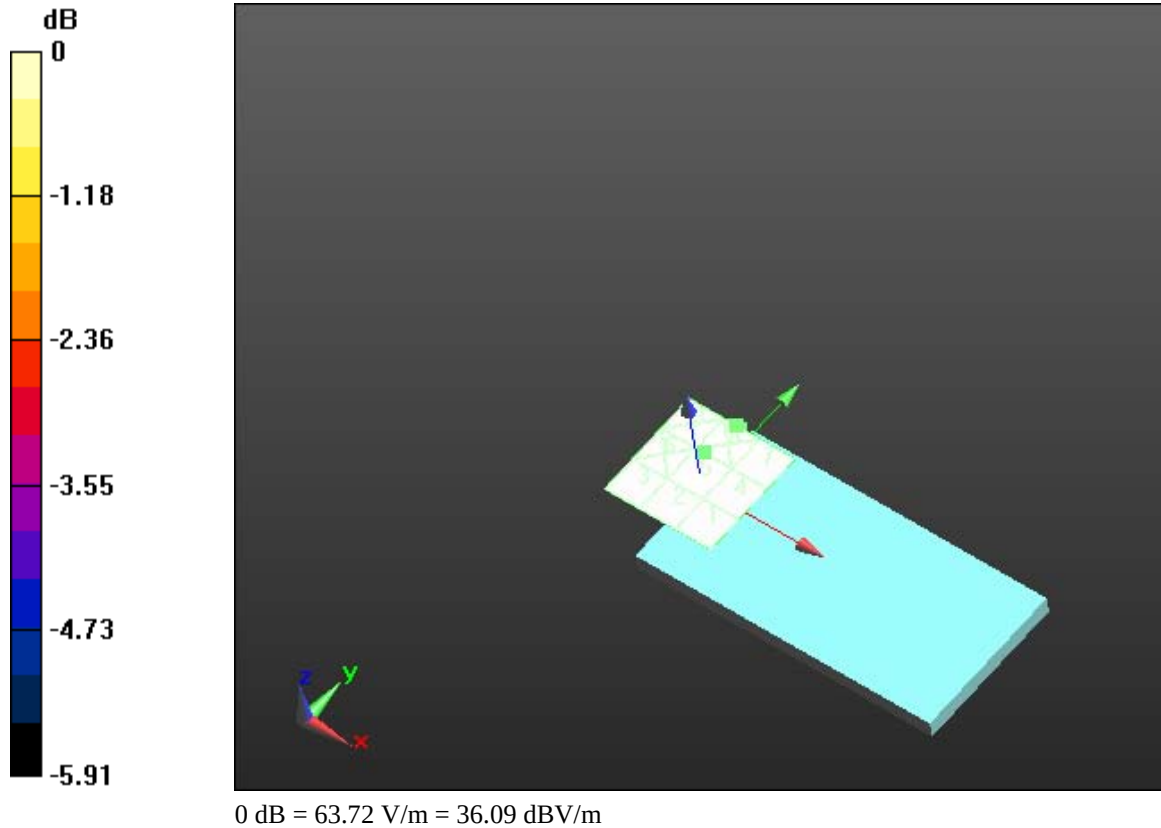
RF audio interference level = 36.78 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 34.55 dBV/m	Grid 2 M4 35.88 dBV/m	Grid 3 M4 35.85 dBV/m
Grid 4 M4	Grid 5 M4	Grid 6 M4

35.57 dBV/m	36.78 dBV/m	36.69 dBV/m
Grid 7 M4 36.54 dBV/m	Grid 8 M4 37.25 dBV/m	Grid 9 M4 36.92 dBV/m



	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			29 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 2:19:31 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM850-Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, GSM 850; Frequency: 836.8 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field GSM850 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Mid_Chan_telecoil/Hearing Aid

Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 54.84 V/m; Power Drift = 0.08 dB

Applied MIF = 3.46 dB

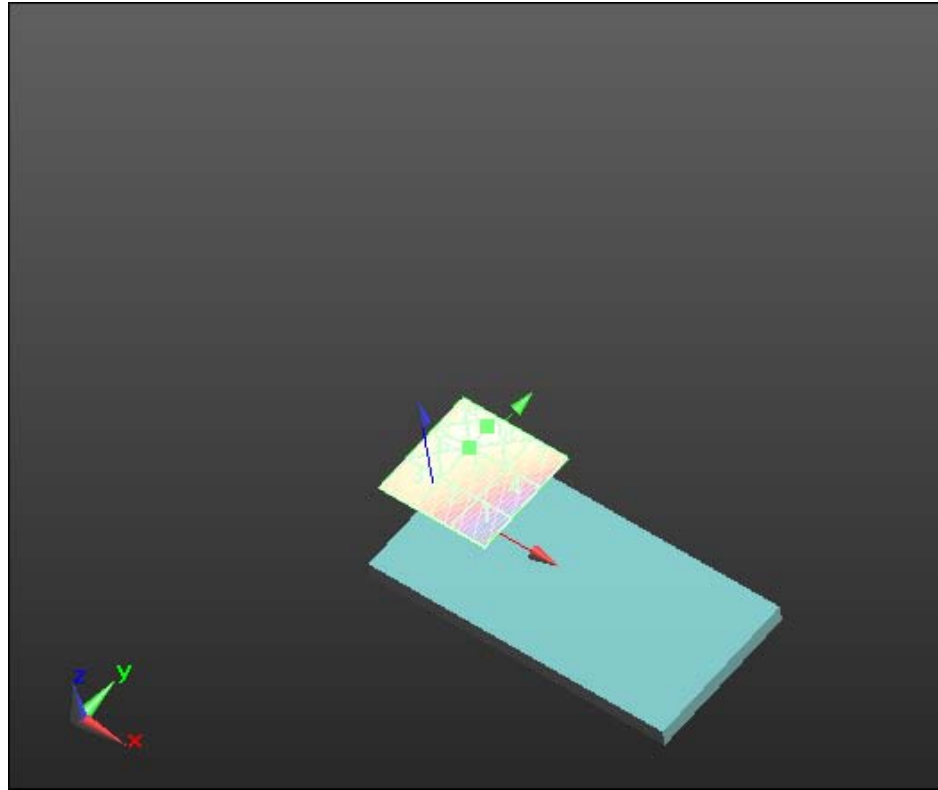
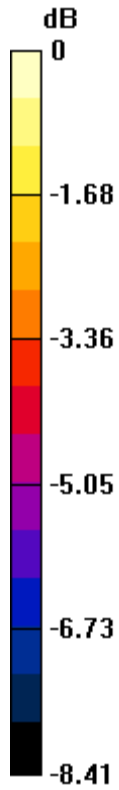
RF audio interference level = 37.08 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 34.15 dBV/m	Grid 2 M4 36.33 dBV/m	Grid 3 M4 36.74 dBV/m
Grid 4 M4 35.44 dBV/m	Grid 5 M4 37.08 dBV/m	Grid 6 M4 37.29 dBV/m
Grid 7 M4 36.77 dBV/m	Grid 8 M4 37.59 dBV/m	Grid 9 M4 37.6 dBV/m

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0 dB = 75.82 V/m = 37.60 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			31 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 3:00:36 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_V

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, WCDMA FDD V; Frequency: 826.4 MHz, Frequency: 836.4 MHz, Frequency: 846.6 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field UMTS band V measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan/Hearing Aid

Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 43.87 V/m; Power Drift = -0.03 dB

Applied MIF = -15.38 dB

RF audio interference level = 15.98 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 14.05 dBV/m	Grid 2 M4 15.12 dBV/m	Grid 3 M4 15.05 dBV/m
Grid 4 M4 15.05 dBV/m	Grid 5 M4 15.98 dBV/m	Grid 6 M4 15.87 dBV/m
Grid 7 M4 15.93 dBV/m	Grid 8 M4 16.45 dBV/m	Grid 9 M4 16.06 dBV/m

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	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			32 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

**Device E-Field UMTS band V measurement with ER probe/E Scan -
ER3D - 2011: 15 mm from Probe Center to the
Device_Mid_Chan/Hearing Aid Compatibility Test (101x101x1):**

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 53.61 V/m; Power Drift = 0.08 dB

Applied MIF = -15.38 dB

RF audio interference level = 17.95 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 15.72 dBV/m	Grid 2 M4 16.96 dBV/m	Grid 3 M4 16.94 dBV/m
Grid 4 M4 16.88 dBV/m	Grid 5 M4 17.95 dBV/m	Grid 6 M4 17.9 dBV/m
Grid 7 M4 17.89 dBV/m	Grid 8 M4 18.53 dBV/m	Grid 9 M4 18.19 dBV/m

**Device E-Field UMTS band V measurement with ER probe/E Scan -
ER3D - 2011: 15 mm from Probe Center to the
Device_High_Chan/Hearing Aid Compatibility Test (101x101x1):**

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 52.60 V/m; Power Drift = -0.03 dB

Applied MIF = -15.38 dB

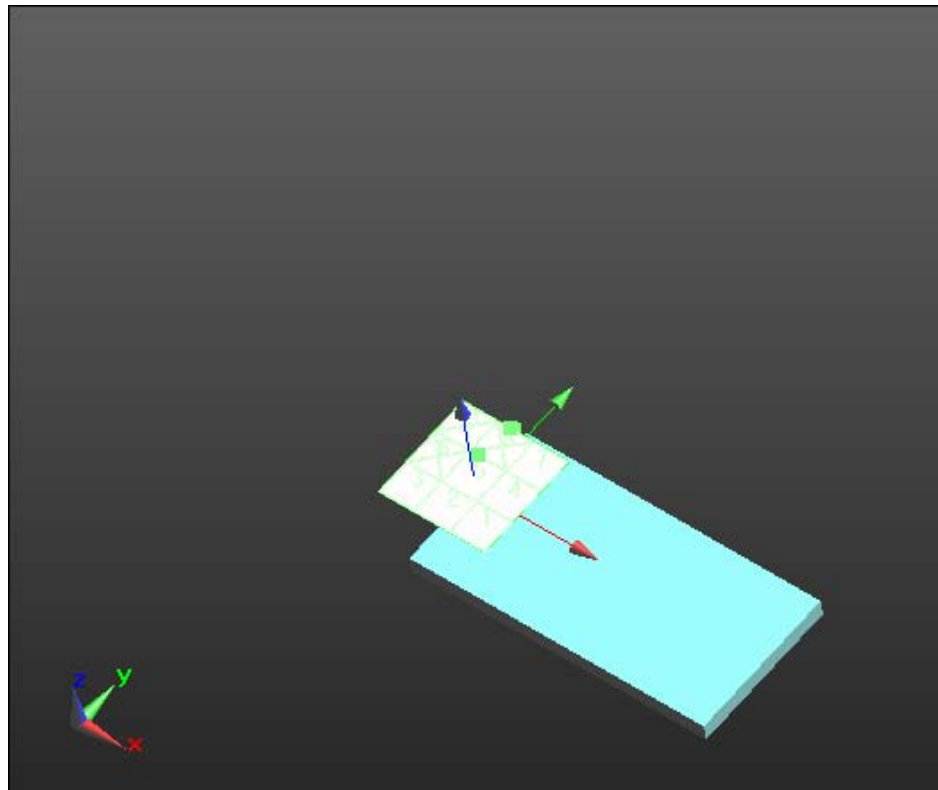
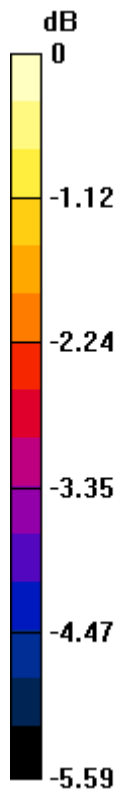
RF audio interference level = 17.67 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 15.41 dBV/m	Grid 2 M4 16.68 dBV/m	Grid 3 M4 16.62 dBV/m
Grid 4 M4	Grid 5 M4	Grid 6 M4

16.55 dBV/m	17.67 dBV/m	17.59 dBV/m
Grid 7 M4 17.57 dBV/m	Grid 8 M4 18.22 dBV/m	Grid 9 M4 17.88 dBV/m



0 dB = 6.647 V/m = 16.45 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			34 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 3:12:28 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_V-Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, WCDMA FDD V; Frequency: 836.4 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field UMTS band V measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Mid_Chan_telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 53.76 V/m; Power Drift = 0.07 dB

Applied MIF = -15.38 dB

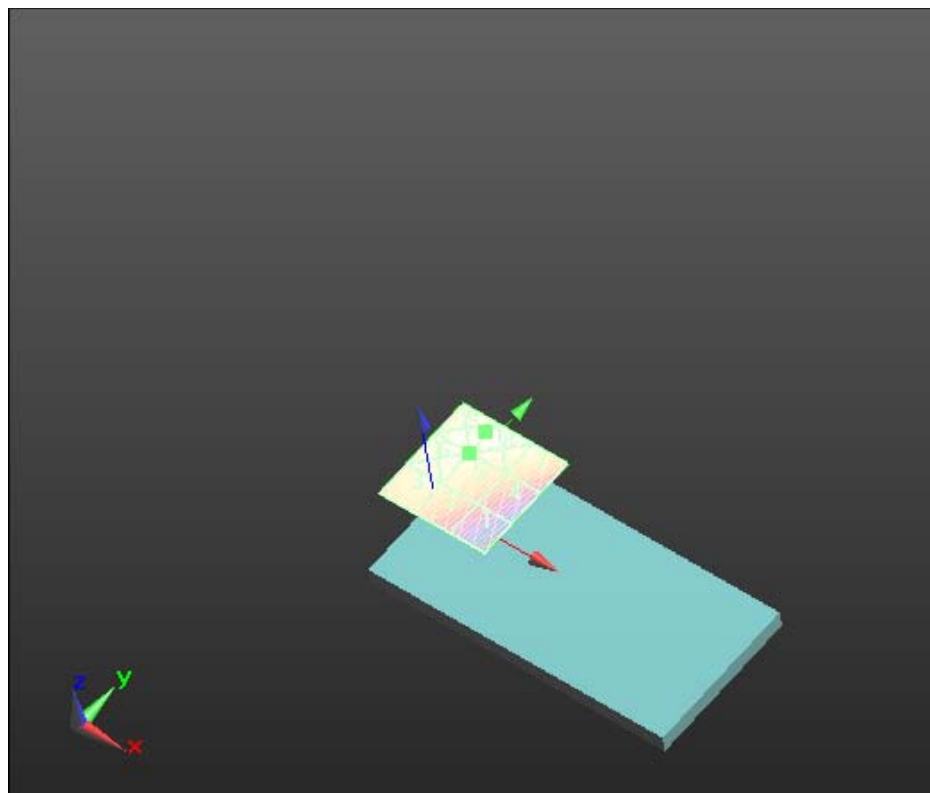
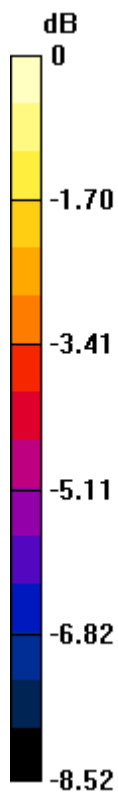
RF audio interference level = 18.11 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 15.19 dBV/m	Grid 2 M4 17.34 dBV/m	Grid 3 M4 17.73 dBV/m
Grid 4 M4 16.52 dBV/m	Grid 5 M4 18.11 dBV/m	Grid 6 M4 18.34 dBV/m
Grid 7 M4 17.79 dBV/m	Grid 8 M4 18.58 dBV/m	Grid 9 M4 18.59 dBV/m

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0 dB = 8.505 V/m = 18.59 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			36 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 2:28:09 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM1900

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, GSM 1900; Frequency: 1850.2 MHz, Frequency: 1880 MHz, Frequency: 1909.8 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

**Device E-Field GSM 1900 measurement with ER probe/E Scan - ER3D - 2011:
15 mm from Probe Center to the Device_Low_Chan/Hearing Aid Compatibility
Test (101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 18.89 V/m; Power Drift = -0.06 dB

Applied MIF = 3.46 dB

RF audio interference level = 31.64 dBV/m

Emission category: M3

MIF scaled E-field

Grid 1 M3 30.93 dBV/m	Grid 2 M3 31.64 dBV/m	Grid 3 M3 31.49 dBV/m
Grid 4 M4 27.12 dBV/m	Grid 5 M4 29.57 dBV/m	Grid 6 M4 29.64 dBV/m
Grid 7 M4 29.04 dBV/m	Grid 8 M3 32.2 dBV/m	Grid 9 M3 32.18 dBV/m

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	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			37 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

**Device E-Field GSM 1900 measurement with ER probe/E Scan -
ER3D - 2011: 15 mm from Probe Center to the
Device_Mid_Chan/Hearing Aid Compatibility Test (101x101x1):**

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 20.87 V/m; Power Drift = 0.14 dB

Applied MIF = 3.46 dB

RF audio interference level = 31.44 dBV/m

Emission category: M3

MIF scaled E-field

Grid 1 M3 30.03 dBV/m	Grid 2 M3 31.44 dBV/m	Grid 3 M3 31.43 dBV/m
Grid 4 M4 26.65 dBV/m	Grid 5 M4 29.94 dBV/m	Grid 6 M4 29.98 dBV/m
Grid 7 M4 27.77 dBV/m	Grid 8 M3 30.76 dBV/m	Grid 9 M3 30.75 dBV/m

**Device E-Field GSM 1900 measurement with ER probe/E Scan -
ER3D - 2011: 15 mm from Probe Center to the
Device_High_Chan/Hearing Aid Compatibility Test (101x101x1):**

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 19.97 V/m; Power Drift = 0.01 dB

Applied MIF = 3.46 dB

RF audio interference level = 30.77 dBV/m

Emission category: M3

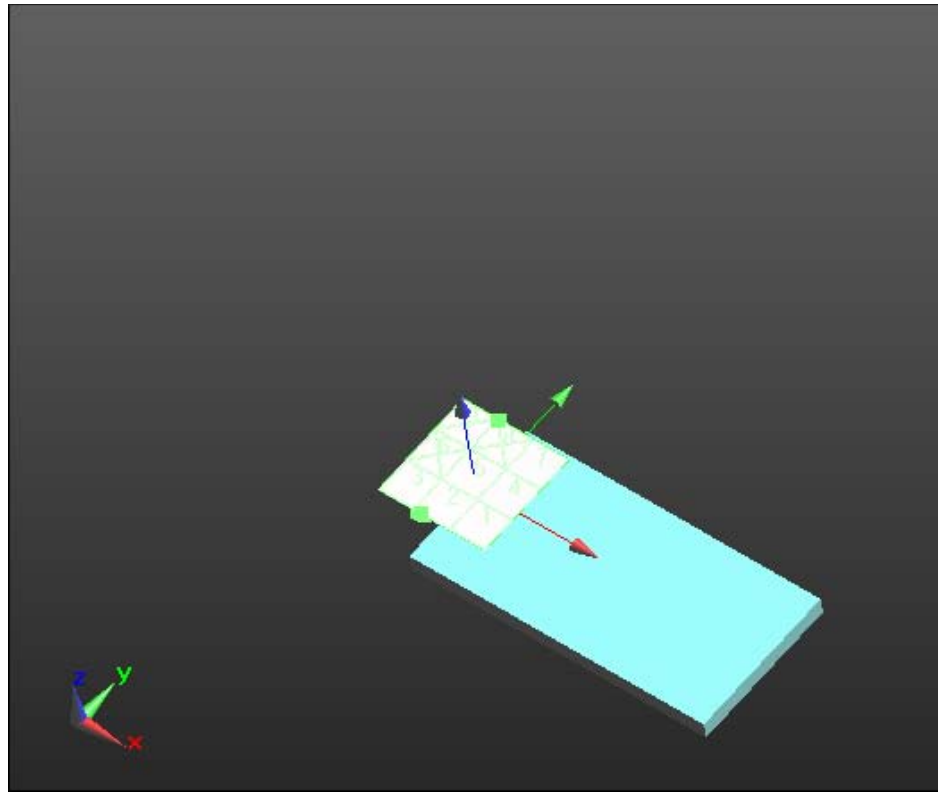
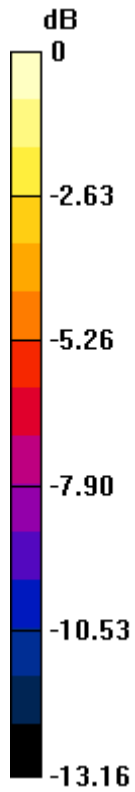
MIF scaled E-field

Grid 1 M4 29.65 dBV/m	Grid 2 M3 30.77 dBV/m	Grid 3 M3 30.69 dBV/m
Grid 4 M4 26.72 dBV/m	Grid 5 M4 29.79 dBV/m	Grid 6 M4 29.9 dBV/m
Grid 7 M4	Grid 8 M3	Grid 9 M3

27.84 dBV/m

31.46 dBV/m

31.46 dBV/m



0 dB = 40.72 V/m = 32.20 dBV/m

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			Page 39 (75)
	Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW

Date/Time: 6/14/2013 2:43:42 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM1900-Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, GSM 1900; Frequency: 1850.2 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field GSM 1900 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan_telecoil/Hearing Aid

Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 19.14 V/m; Power Drift = 0.06 dB

Applied MIF = 3.46 dB

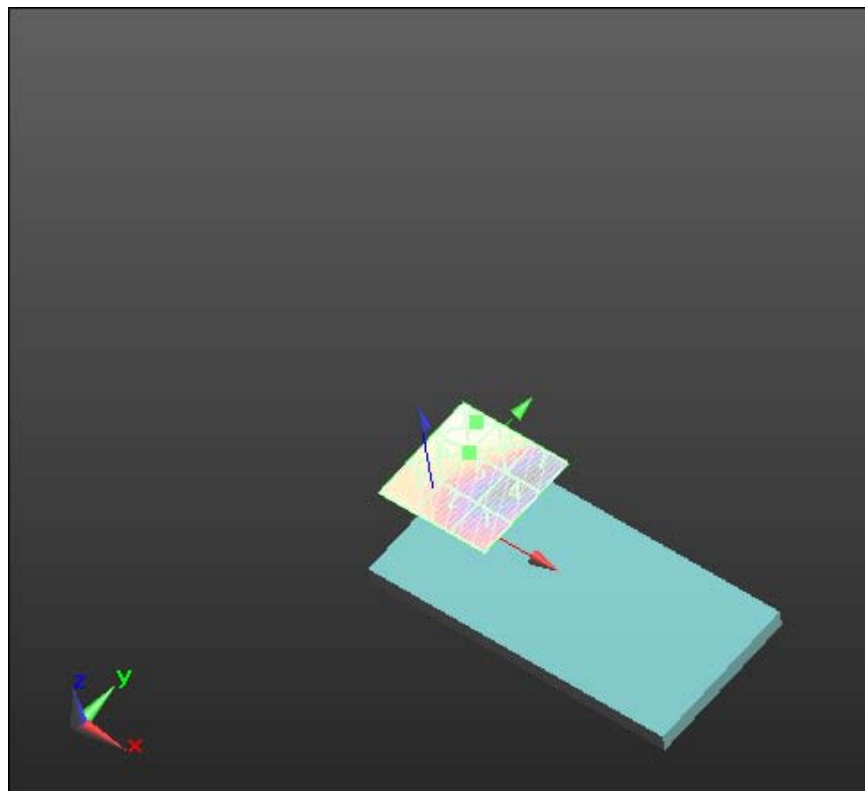
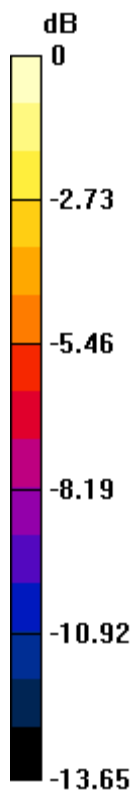
RF audio interference level = 30.56 dBV/m

Emission category: M3

MIF scaled E-field

Grid 1 M4 27.53 dBV/m	Grid 2 M4 29.39 dBV/m	Grid 3 M4 29.88 dBV/m
Grid 4 M4 25.35 dBV/m	Grid 5 M3 30.56 dBV/m	Grid 6 M3 31.86 dBV/m
Grid 7 M4 26.53 dBV/m	Grid 8 M3 32.44 dBV/m	Grid 9 M3 32.87 dBV/m

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0 dB = 44.00 V/m = 32.87 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			41 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 3:19:33 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_II

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, WCDMA FDD II; Frequency: 1852.4 MHz, Frequency: 1880 MHz, Frequency: 1907.6 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field UMTS band II measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan/Hearing Aid

Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 29.32 V/m; Power Drift = -0.01 dB

Applied MIF = -15.38 dB

RF audio interference level = 15.34 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 14.85 dBV/m	Grid 2 M4 16.05 dBV/m	Grid 3 M4 15.96 dBV/m
Grid 4 M4 11.55 dBV/m	Grid 5 M4 14.15 dBV/m	Grid 6 M4 14.13 dBV/m
Grid 7 M4 11.67 dBV/m	Grid 8 M4 15.34 dBV/m	Grid 9 M4 15.34 dBV/m

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	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			Page 42 (75)
	Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW

**Device E-Field UMTS band II measurement with ER probe/E Scan -
ER3D - 2011: 15 mm from Probe Center to the
Device_Mid_Chan/Hearing Aid Compatibility Test (101x101x1):**

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 31.32 V/m; Power Drift = -0.10 dB

Applied MIF = -15.38 dB

RF audio interference level = 15.51 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 14.42 dBV/m	Grid 2 M4 16.03 dBV/m	Grid 3 M4 16.02 dBV/m
Grid 4 M4 11.09 dBV/m	Grid 5 M4 14.58 dBV/m	Grid 6 M4 14.61 dBV/m
Grid 7 M4 12.19 dBV/m	Grid 8 M4 15.51 dBV/m	Grid 9 M4 15.51 dBV/m

**Device E-Field UMTS band II measurement with ER probe/E Scan -
ER3D - 2011: 15 mm from Probe Center to the
Device_High_Chan/Hearing Aid Compatibility Test (101x101x1):**

Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 29.67 V/m; Power Drift = -0.06 dB

Applied MIF = -15.38 dB

RF audio interference level = 15.73 dBV/m

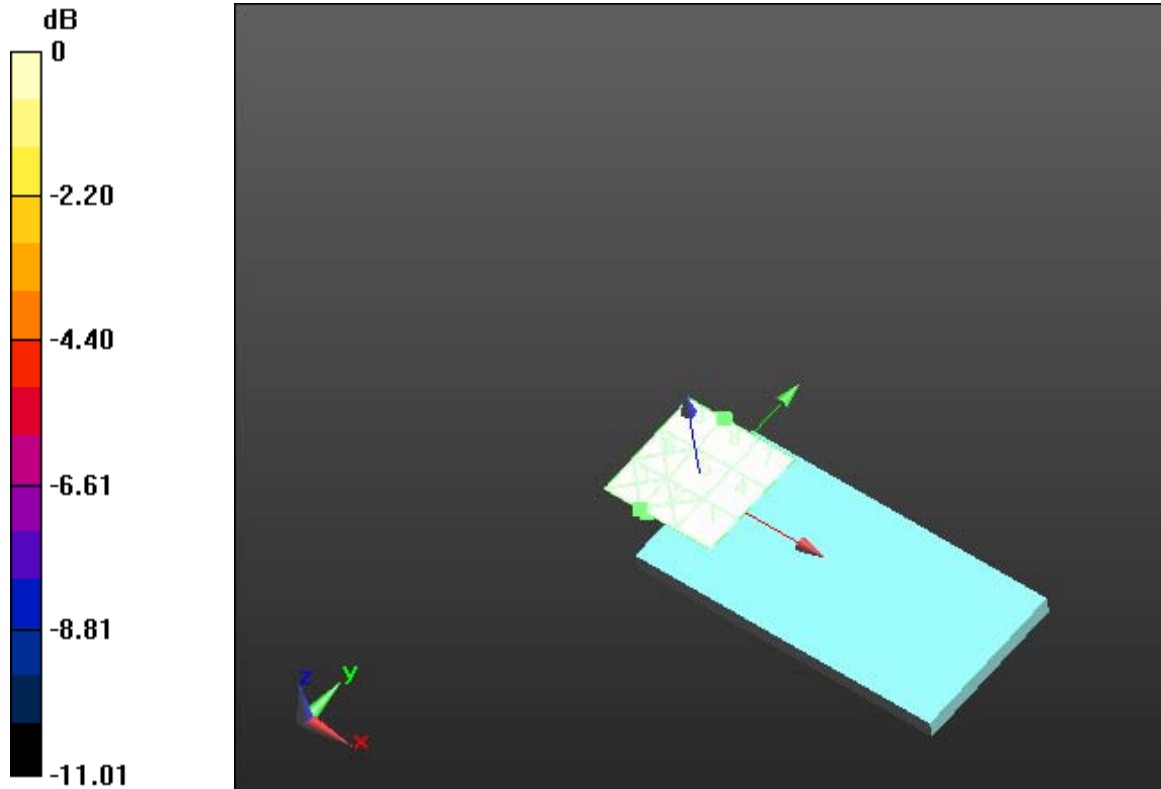
Emission category: M4

MIF scaled E-field

Grid 1 M4 14.1 dBV/m	Grid 2 M4 15.55 dBV/m	Grid 3 M4 15.55 dBV/m
Grid 4 M4 10.86 dBV/m	Grid 5 M4 14.4 dBV/m	Grid 6 M4 14.53 dBV/m

Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW
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Grid 7 M4 11.98 dBV/m	Grid 8 M4 15.73 dBV/m	Grid 9 M4 15.73 dBV/m
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0 dB = 6.345 V/m = 16.05 dBV/m

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			Page 44 (75)
	Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW

Date/Time: 6/14/2013 3:31:42 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_II-Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, WCDMA FDD II; Frequency: 1852.4 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASY52 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field UMTS band II measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan_telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 29.06 V/m; Power Drift = -0.05 dB

Applied MIF = -15.38 dB

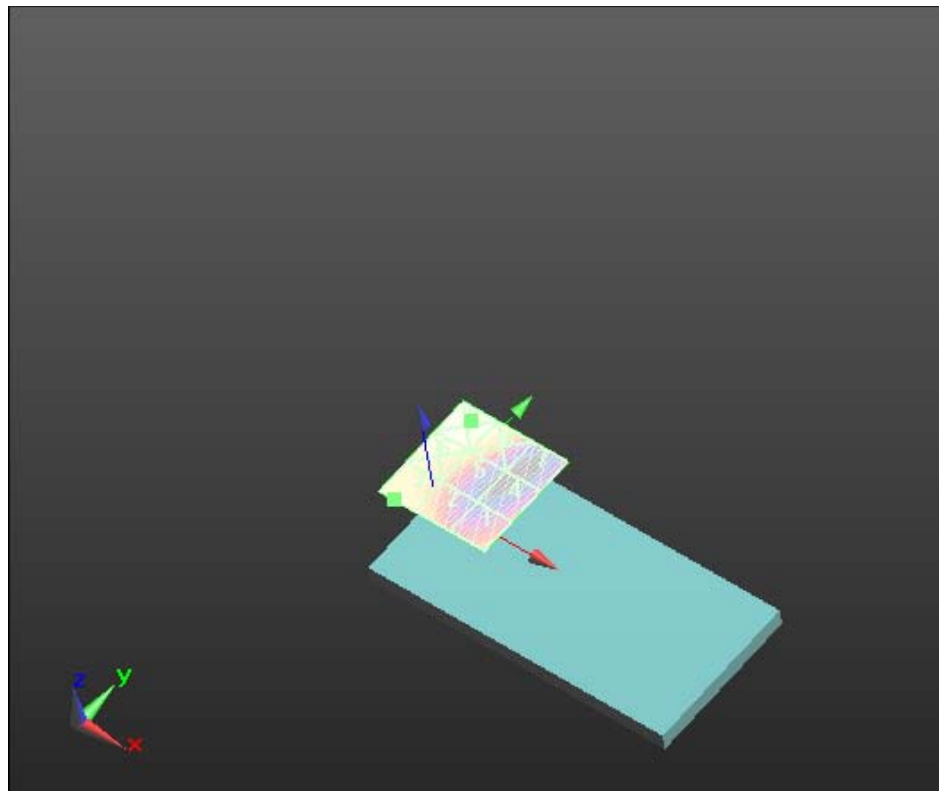
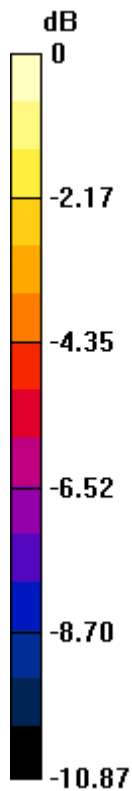
RF audio interference level = 14.67 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 12.42 dBV/m	Grid 2 M4 13.85 dBV/m	Grid 3 M4 14.67 dBV/m
Grid 4 M4 10.61 dBV/m	Grid 5 M4 13.51 dBV/m	Grid 6 M4 15.04 dBV/m
Grid 7 M4 9.63 dBV/m	Grid 8 M4 14.9 dBV/m	Grid 9 M4 15.65 dBV/m

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0 dB = 6.058 V/m = 15.65 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			46 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 4:45:21 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA850

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E285E

Communication System: UID 0 - n/a, CDMA 850, Communication System: UID 0 - n/a, CDMA 850 1/8th Rate; Frequency: 824.7 MHz, Frequency: 836.52 MHz, Frequency: 848.52 MHz
Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³
Phantom section: RF Section
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field CDMA850 BC0 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 54.92 V/m; Power Drift = 0.39 dB

Applied MIF = -19.71 dB

RF audio interference level = 13.33 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 12.59 dBV/m	Grid 2 M4 13.06 dBV/m	Grid 3 M4 12.92 dBV/m
Grid 4 M4 12.22 dBV/m	Grid 5 M4 13.1 dBV/m	Grid 6 M4 13.94 dBV/m
Grid 7 M4 11.87 dBV/m	Grid 8 M4 12.89 dBV/m	Grid 9 M4 13.33 dBV/m

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	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			47 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Device E-Field CDMA850 BC0 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Mid_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 63.34 V/m; Power Drift = 0.80 dB
Applied MIF = -19.71 dB
RF audio interference level = 15.21 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 M4 13.96 dBV/m	Grid 2 M4 15.01 dBV/m	Grid 3 M4 15.01 dBV/m
Grid 4 M4 13.41 dBV/m	Grid 5 M4 15.21 dBV/m	Grid 6 M4 15.13 dBV/m
Grid 7 M4 12.83 dBV/m	Grid 8 M4 14.97 dBV/m	Grid 9 M4 14.9 dBV/m

Device E-Field CDMA850 BC0 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_High_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm
Device Reference Point: 0, 0, -6.3 mm
Reference Value = 60.17 V/m; Power Drift = 1.09 dB
Applied MIF = -19.71 dB
RF audio interference level = 15.12 dBV/m
Emission category: M4

MIF scaled E-field

Grid 1 M4 14.6 dBV/m	Grid 2 M4 15.18 dBV/m	Grid 3 M4 15.04 dBV/m
Grid 4 M4 14.12 dBV/m	Grid 5 M4 15.12 dBV/m	Grid 6 M4 15.03 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			48 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Grid 7 M4 14.41 dBV/m	Grid 8 M4 14.65 dBV/m	Grid 9 M4 14.52 dBV/m
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**Device E-Field CDMA850 BC0 measurement with ER probe/E Scan
- ER3D - 2011: 15 mm from Probe Center to the
Device_Mid_Chain_1_8th_Rate/Hearing Aid Compatibility Test
(101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 22.81 V/m; Power Drift = 0.79 dB

Applied MIF = 2.76 dB

RF audio interference level = 28.03 dBV/m

Emission category: M4

MIF scaled E-field

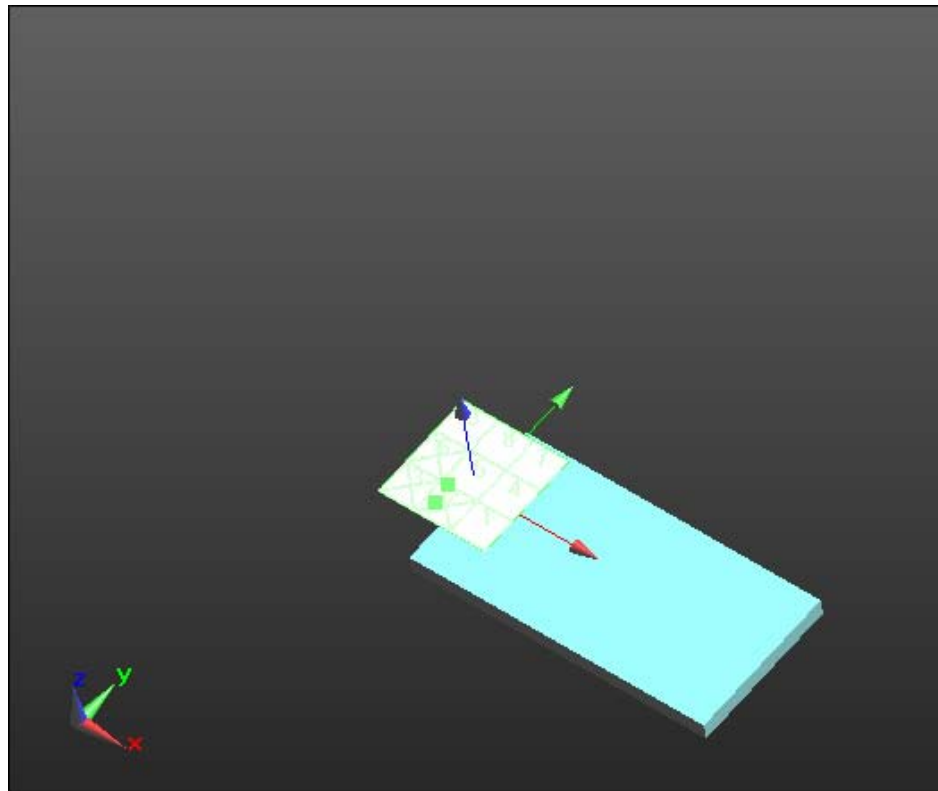
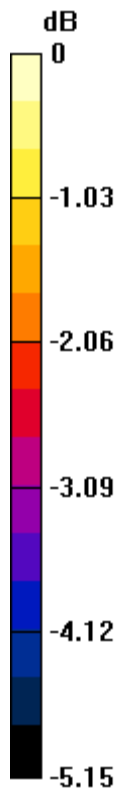
Grid 1 M4 27.46 dBV/m	Grid 2 M4 28.09 dBV/m	Grid 3 M4 28.07 dBV/m
Grid 4 M4 26.95 dBV/m	Grid 5 M4 28.03 dBV/m	Grid 6 M4 27.97 dBV/m
Grid 7 M4 26.27 dBV/m	Grid 8 M4 27.6 dBV/m	Grid 9 M4 27.59 dBV/m

Author Data
Daoud Attayi

Dates of Test
June 13-July 04, 2013

Report No
RTS-6046-1308-32

FCC ID
L6ARGB140LW



0 dB = 4.975 V/m = 13.94 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			50 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 5:02:34 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA850-Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E285E

Communication System: UID 0 - n/a, CDMA 850; Frequency: 836.52 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA; Serial: **Not Specified**
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field CDMA850 BC0 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the

Device_Mid_Chan_telecoil_Full_Rate/Hearing Aid Compatibility Test

(101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 70.61 V/m; Power Drift = -0.13 dB

Applied MIF = -19.71 dB

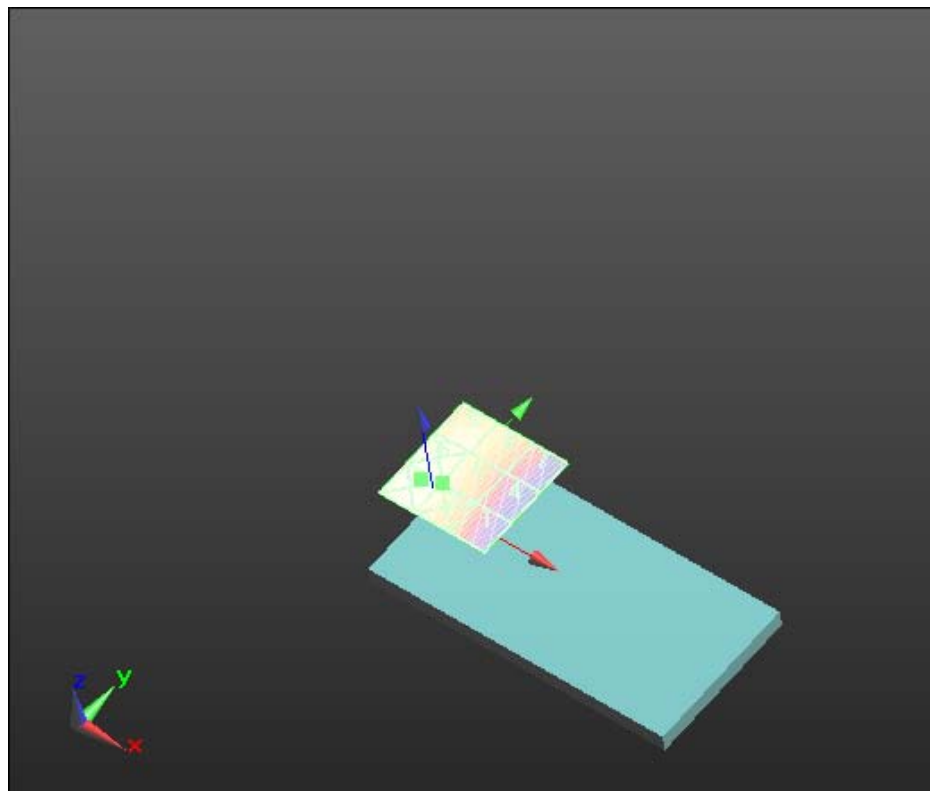
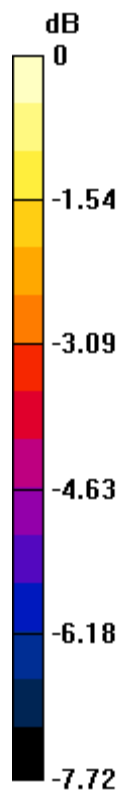
RF audio interference level = 14.74 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 12.83 dBV/m	Grid 2 M4 14.77 dBV/m	Grid 3 M4 15.29 dBV/m
Grid 4 M4 12.39 dBV/m	Grid 5 M4 14.74 dBV/m	Grid 6 M4 15.25 dBV/m
Grid 7 M4 12.52 dBV/m	Grid 8 M4 14.31 dBV/m	Grid 9 M4 14.67 dBV/m

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0 dB = 5.816 V/m = 15.29 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			52 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 3:45:19 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA1900

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, CDMA 1900, Communication System: UID 0 - n/a,
CDMA 1900 1/8th Rate; Frequency: 1851.25 MHz, Frequency: 1880 MHz, Frequency: 1908.5
MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

**Device E-Field CDMA1900 BC1 measurement with ER probe/E Scan - ER3D -
2011: 15 mm from Probe Center to the Device_Low_Chan_Full_Rate/Hearing
Aid Compatibility Test (101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 31.61 V/m; Power Drift = 0.05 dB

Applied MIF = -19.71 dB

RF audio interference level = 10.05 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 5.89 dBV/m	Grid 2 M4 9.99 dBV/m	Grid 3 M4 10.05 dBV/m
Grid 4 M4 5.59 dBV/m	Grid 5 M4 9.74 dBV/m	Grid 6 M4 9.85 dBV/m
Grid 7 M4	Grid 8 M4	Grid 9 M4

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	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			53 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

10.17 dBV/m	11.35 dBV/m	11.16 dBV/m
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**Device E-Field CDMA1900 BC1 measurement with ER probe/E
Scan - ER3D - 2011: 15 mm from Probe Center to the
Device_Mid_Chann_Full_Rate/Hearing Aid Compatibility Test**

(101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 27.20 V/m; Power Drift = -0.14 dB

Applied MIF = -19.71 dB

RF audio interference level = 9.50 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 5.3 dBV/m	Grid 2 M4 9.42 dBV/m	Grid 3 M4 9.5 dBV/m
Grid 4 M4 4.48 dBV/m	Grid 5 M4 8.92 dBV/m	Grid 6 M4 9.07 dBV/m
Grid 7 M4 9.63 dBV/m	Grid 8 M4 11.04 dBV/m	Grid 9 M4 10.84 dBV/m

**Device E-Field CDMA1900 BC1 measurement with ER probe/E
Scan - ER3D - 2011: 15 mm from Probe Center to the
Device_High_Chann_Full_Rate/Hearing Aid Compatibility Test**

(101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 24.03 V/m; Power Drift = 0.11 dB

Applied MIF = -19.71 dB

RF audio interference level = 8.64 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 4.31 dBV/m	Grid 2 M4 8.49 dBV/m	Grid 3 M4 8.64 dBV/m
Grid 4 M4	Grid 5 M4	Grid 6 M4

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			54 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

3.27 dBV/m	8.26 dBV/m	8.42 dBV/m
Grid 7 M4 8.2 dBV/m	Grid 8 M4 10.31 dBV/m	Grid 9 M4 10.24 dBV/m

**Device E-Field CDMA1900 BC1 measurement with ER probe/E
Scan - ER3D - 2011: 15 mm from Probe Center to the
Device_Low_Chann_1_8th_Rate/Hearing Aid Compatibility Test
(101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 11.26 V/m; Power Drift = -0.08 dB

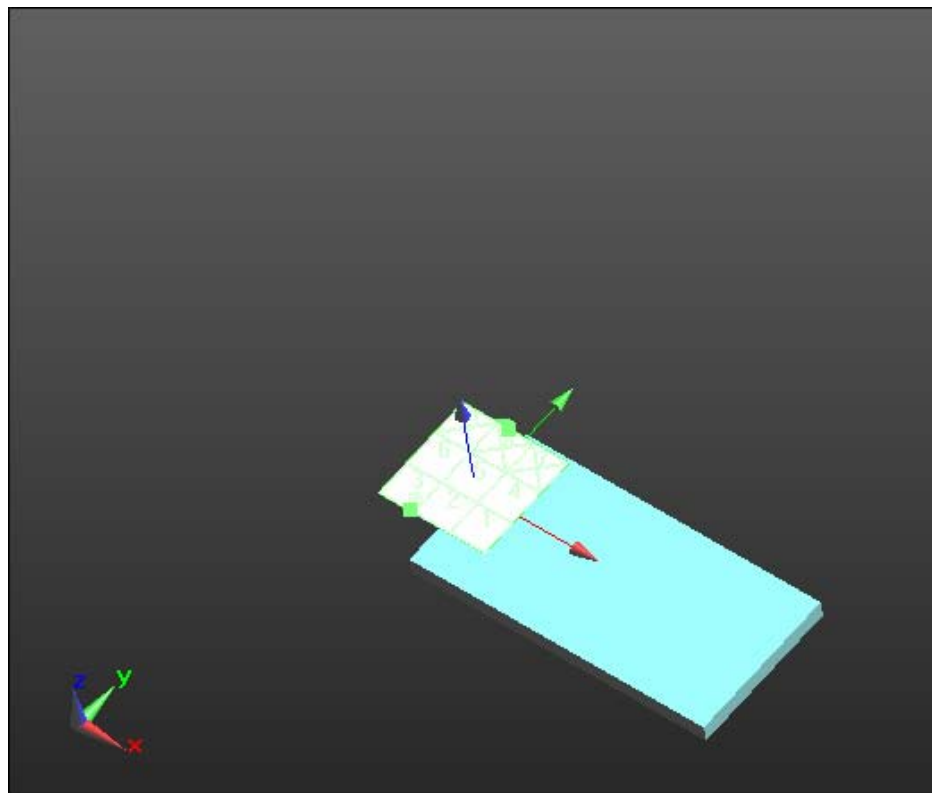
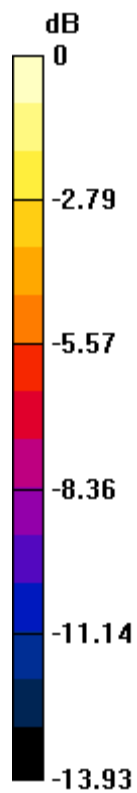
Applied MIF = 2.76 dB

RF audio interference level = 23.37 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 19.67 dBV/m	Grid 2 M4 23.34 dBV/m	Grid 3 M4 23.37 dBV/m
Grid 4 M4 19.14 dBV/m	Grid 5 M4 22.98 dBV/m	Grid 6 M4 23.1 dBV/m
Grid 7 M4 23.75 dBV/m	Grid 8 M4 24.78 dBV/m	Grid 9 M4 24.51 dBV/m



0 dB = 3.695 V/m = 11.35 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			56 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 6/14/2013 4:10:42 AM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA1900-Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 333E2865

Communication System: UID 0 - n/a, CDMA 1900; Frequency: 1851.25 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASY52 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field CDMA1900 BC1 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the

Device_Low_Chan_telecoil_Full_Rate/Hearing Aid Compatibility Test

(101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 30.57 V/m; Power Drift = -0.02 dB

Applied MIF = -19.71 dB

RF audio interference level = 10.66 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 6.16 dBV/m	Grid 2 M4 7.46 dBV/m	Grid 3 M4 9.76 dBV/m
Grid 4 M4 7.97 dBV/m	Grid 5 M4 10.11 dBV/m	Grid 6 M4 10.66 dBV/m
Grid 7 M4 11.9 dBV/m	Grid 8 M4 12.66 dBV/m	Grid 9 M4 12.66 dBV/m

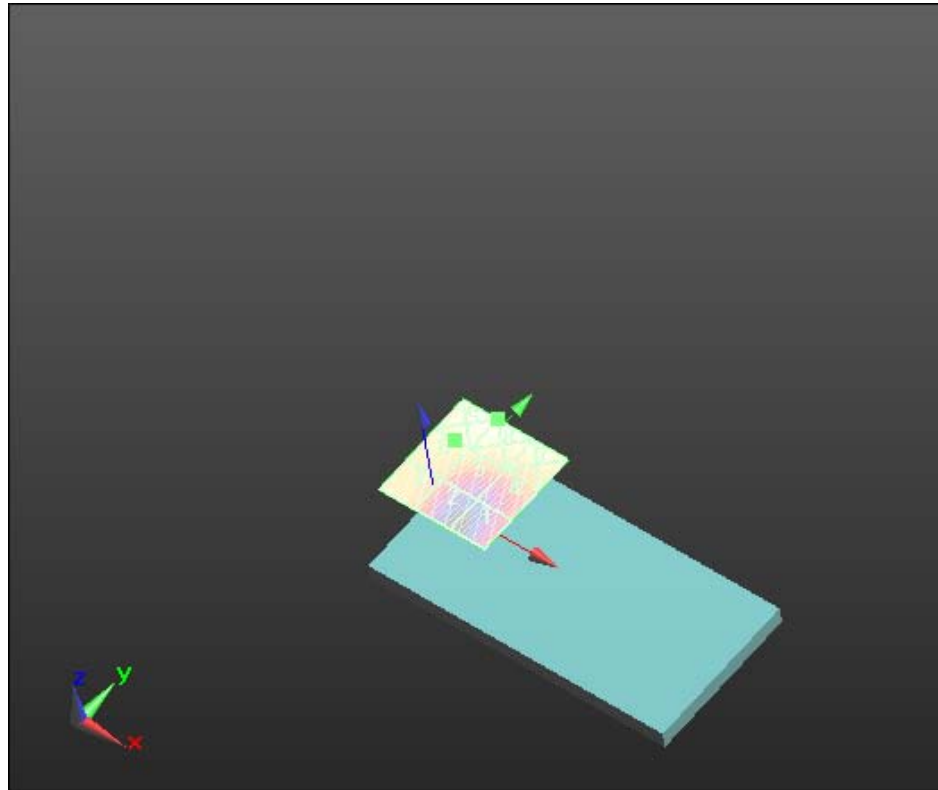
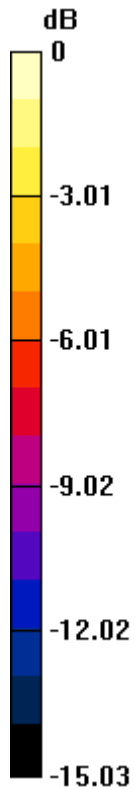
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Author Data
Daoud Attayi

Dates of Test
June 13-July 04, 2013

Report No
RTS-6046-1308-32

FCC ID
L6ARGB140LW



0 dB = 4.297 V/m = 12.66 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			58 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 7/3/2013 9:02:39 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM850_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 303E76AA

Communication System: UID 0 - n/a, GSM 850; Frequency: 836.8 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field GSM850 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Mid_Chan_telecoil/Hearing Aid

Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 58.53 V/m; Power Drift = -0.14 dB

Applied MIF = 3.46 dB

RF audio interference level = 37.61 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 34.5 dBV/m	Grid 2 M4 36.7 dBV/m	Grid 3 M4 37.09 dBV/m
Grid 4 M4 35.99 dBV/m	Grid 5 M4 37.61 dBV/m	Grid 6 M4 37.74 dBV/m
Grid 7 M4 37.33 dBV/m	Grid 8 M4 38.06 dBV/m	Grid 9 M4 38.06 dBV/m

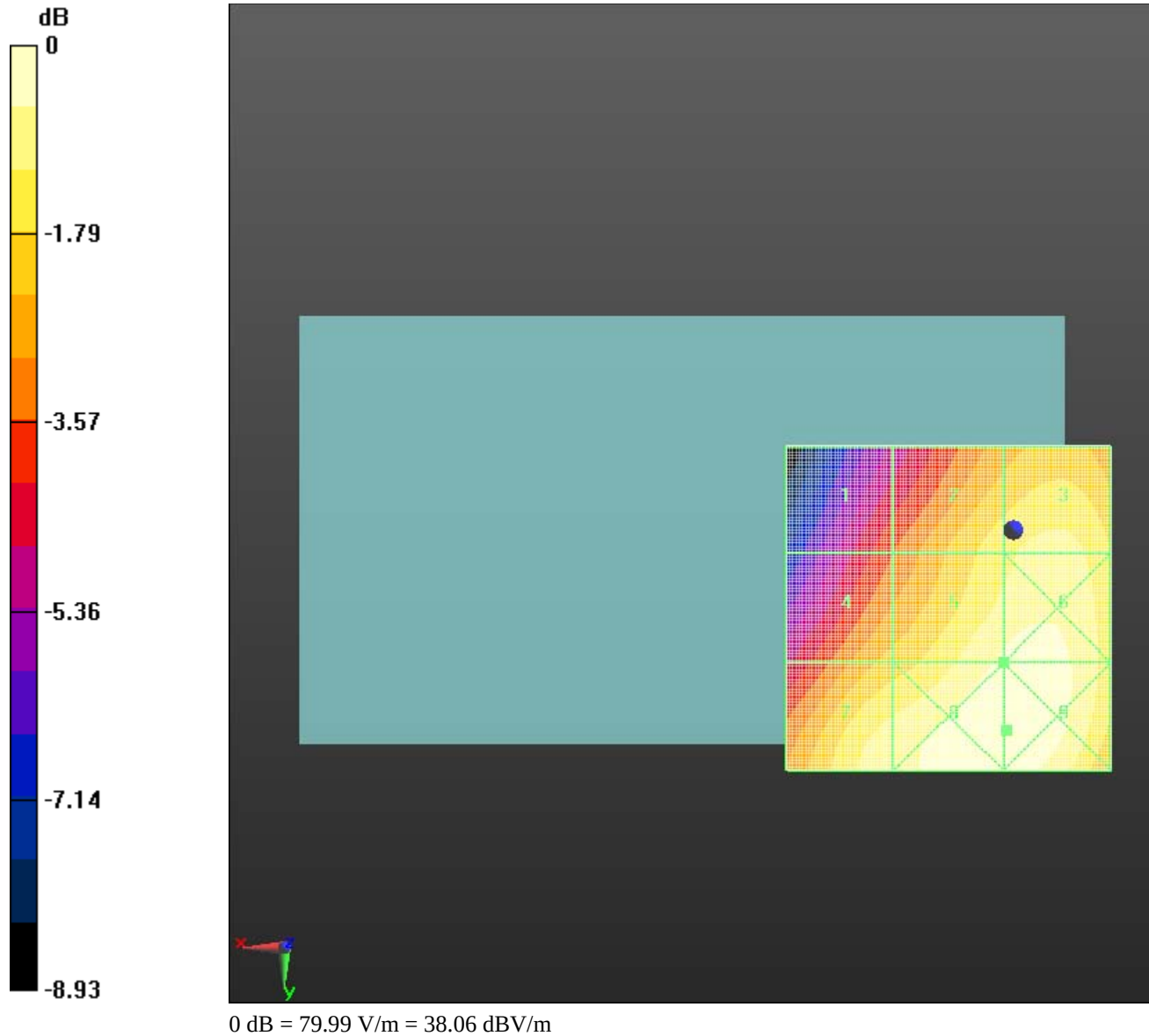
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Author Data
Daoud Attayi

Dates of Test
June 13-July 04, 2013

Report No
RTS-6046-1308-32

FCC ID
L6ARGB140LW



	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			Page 60 (75)
	Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW

Date/Time: 7/3/2013 9:33:20 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_Band_V_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 303E76AA

Communication System: UID 0 - n/a, WCDMA FDD V; Frequency: 836.4 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field UMTS band V measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Mid_Chan_telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 49.76 V/m; Power Drift = 0.08 dB

Applied MIF = -15.38 dB

RF audio interference level = 17.41 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 14.45 dBV/m	Grid 2 M4 16.65 dBV/m	Grid 3 M4 17.02 dBV/m
Grid 4 M4 15.81 dBV/m	Grid 5 M4 17.41 dBV/m	Grid 6 M4 17.59 dBV/m
Grid 7 M4 17.01 dBV/m	Grid 8 M4 17.81 dBV/m	Grid 9 M4 17.82 dBV/m

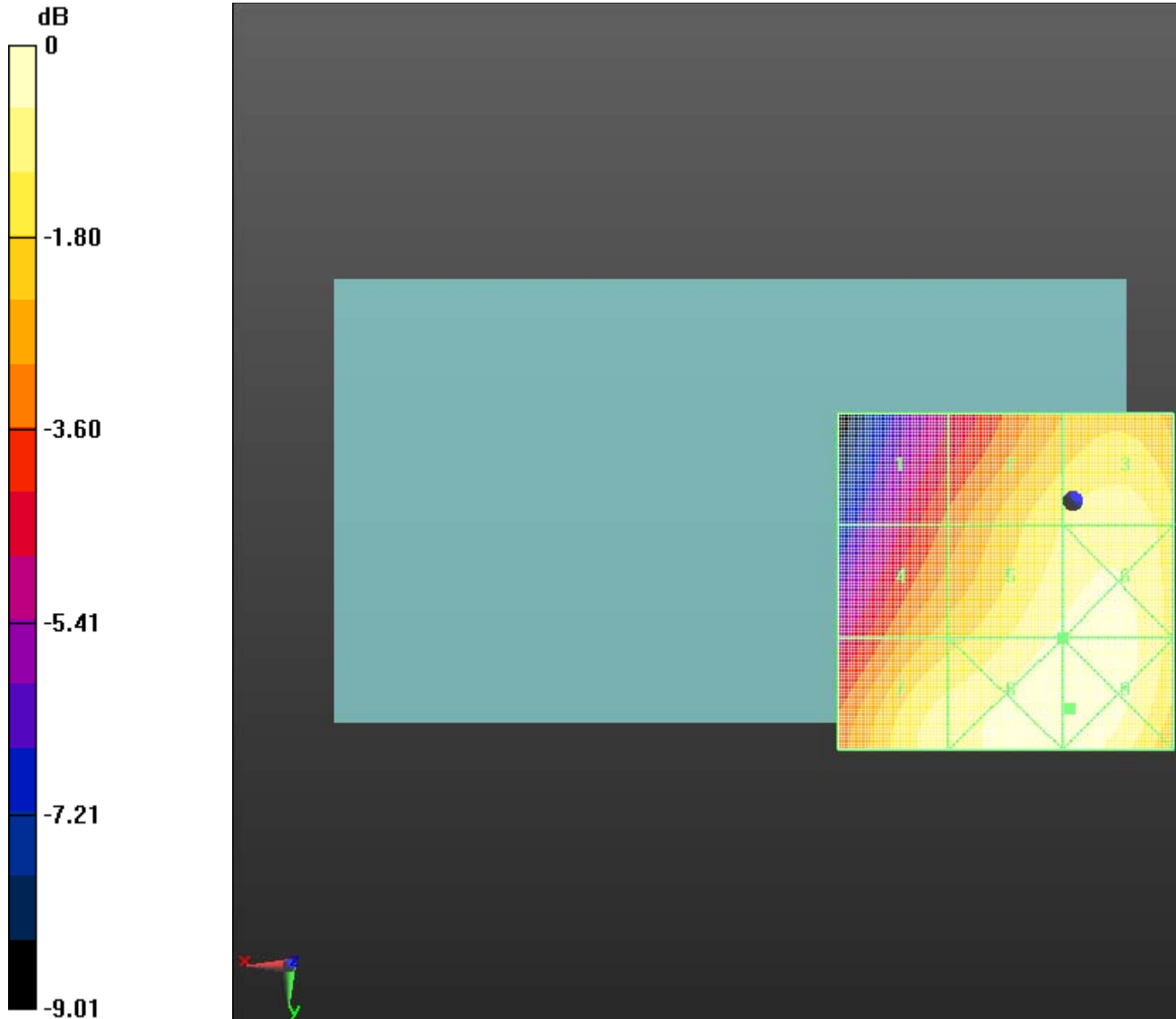
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Cursor:

Total = 17.82 dBV/m

E Category: M4

Location: 0.5, 31, 8.7 mm



0 dB = 7.782 V/m = 17.82 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			62 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 7/3/2013 9:08:46 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_GSM1900_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 303E76AA

Communication System: UID 0 - n/a, GSM 1900; Frequency: 1850.2 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field GSM 1900 measurement with ER probe/E Scan - ER3D - 2011:

15 mm from Probe Center to the Device_Low_Chan_telecoil/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 18.48 V/m; Power Drift = 0.09 dB

Applied MIF = 3.46 dB

RF audio interference level = 29.75 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 27.1 dBV/m	Grid 2 M4 29.14 dBV/m	Grid 3 M4 29.88 dBV/m
Grid 4 M4 25.12 dBV/m	Grid 5 M4 28.57 dBV/m	Grid 6 M3 30.45 dBV/m
Grid 7 M4 23.85 dBV/m	Grid 8 M4 29.75 dBV/m	Grid 9 M3 30.82 dBV/m

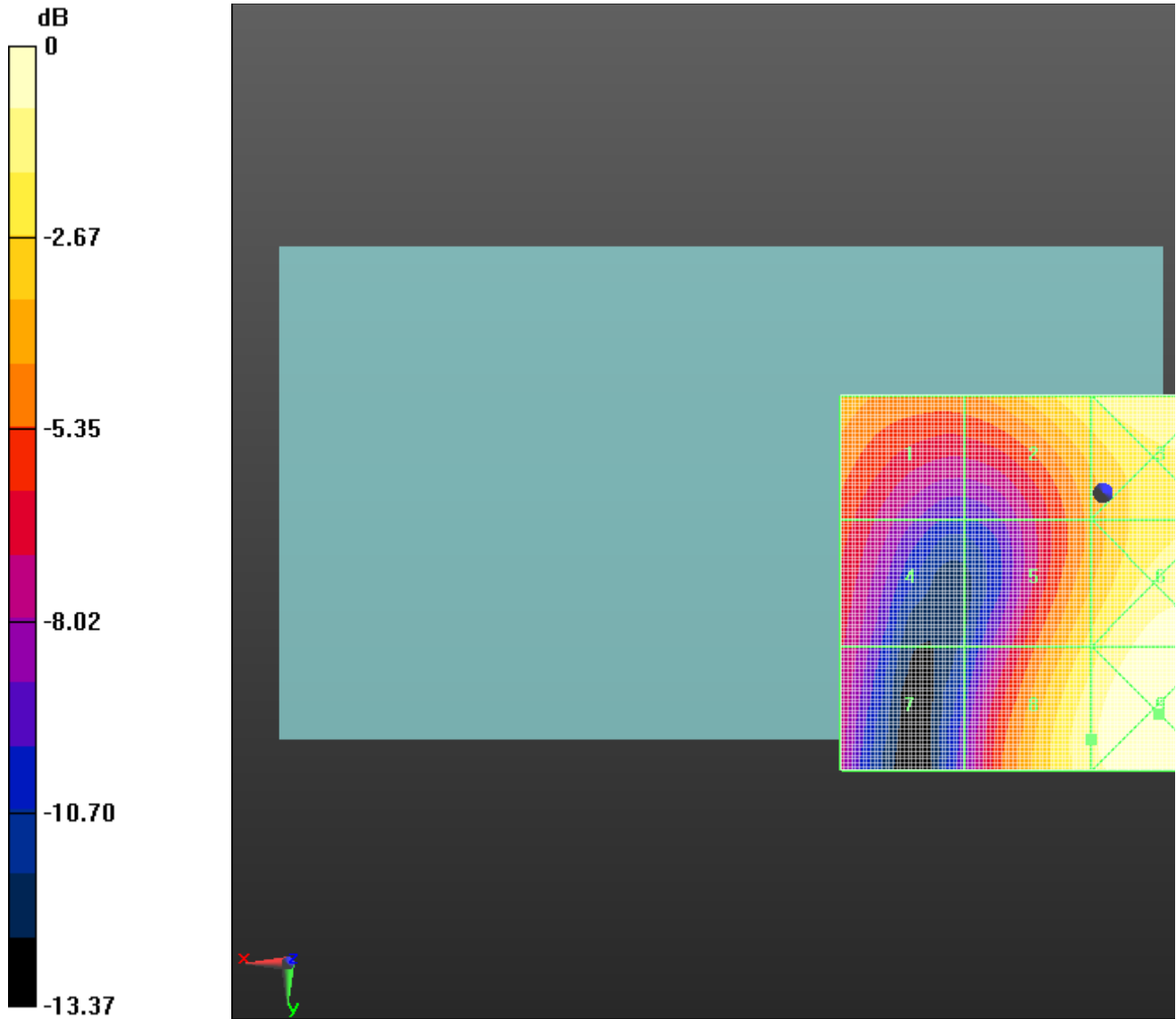
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Author Data
Daoud Attayi

Dates of Test
June 13-July 04, 2013

Report No
RTS-6046-1308-32

FCC ID
L6ARGB140LW



0 dB = 34.74 V/m = 30.82 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			64 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 7/3/2013 9:29:35 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_UMTS_Band_II

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 303E76AA

Communication System: UID 0 - n/a, WCDMA FDD II; Frequency: 1852.4 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field UMTS band II measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan/Hearing Aid

Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 29.87 V/m; Power Drift = -0.11 dB

Applied MIF = -15.38 dB

RF audio interference level = 14.53 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 14.87 dBV/m	Grid 2 M4 16.27 dBV/m	Grid 3 M4 16.2 dBV/m
Grid 4 M4 11.47 dBV/m	Grid 5 M4 14.52 dBV/m	Grid 6 M4 14.53 dBV/m
Grid 7 M4 9.23 dBV/m	Grid 8 M4 14.04 dBV/m	Grid 9 M4 14.14 dBV/m

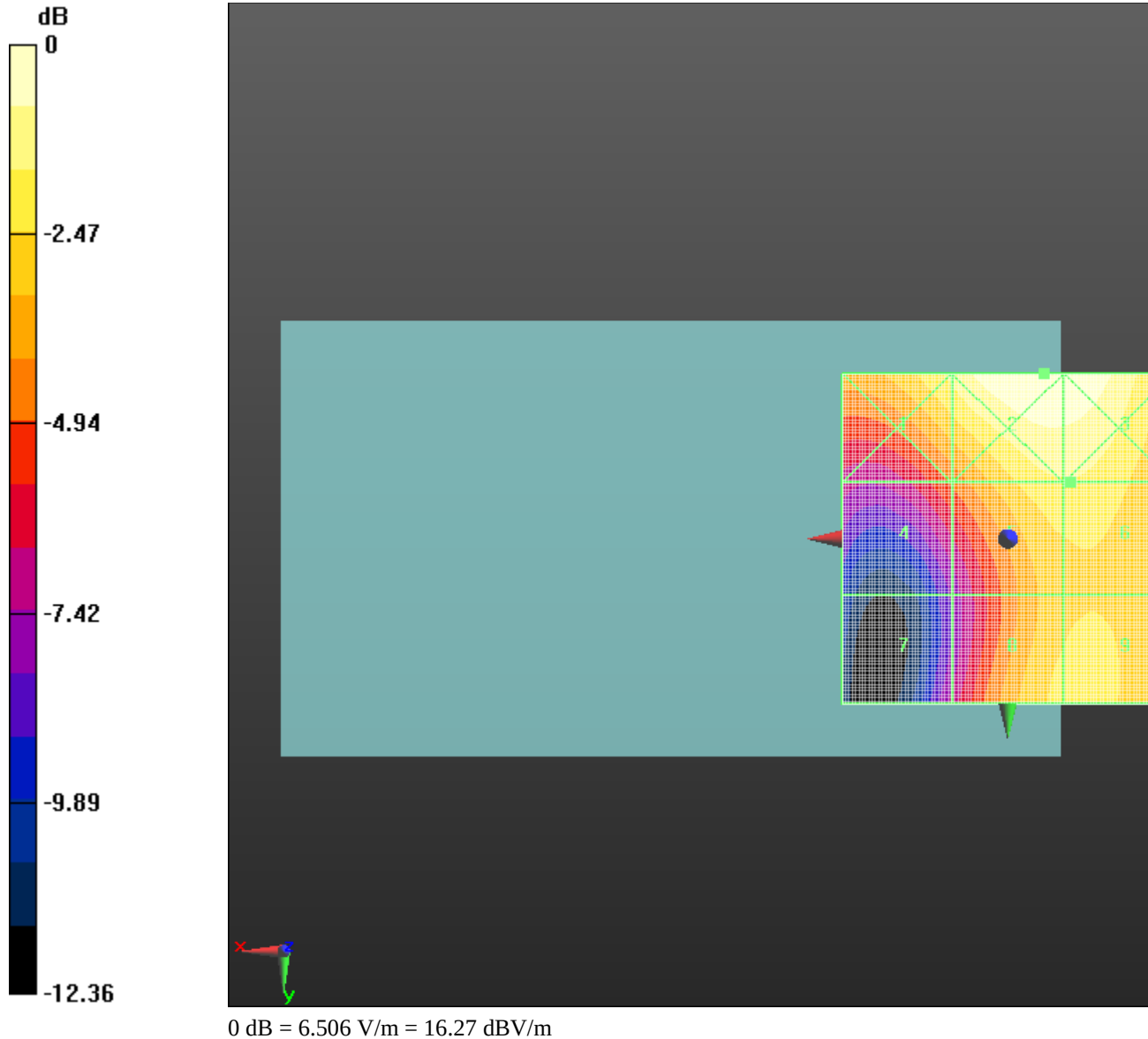
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Cursor:

Total = 16.27 dBV/m

E Category: M4

Location: -5.5, -25, 8.7 mm



	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			66 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 7/3/2013 10:04:01 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA800_BC10

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 303E76AA

Communication System: UID 0 - n/a, CDMA 800, Communication System: UID 0 - n/a, CDMA 800 1/8th Rate; Frequency: 817.9 MHz, Frequency: 820.5 MHz, Frequency: 823.1 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field CDMA800 BC10 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan_Full_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 59.90 V/m; Power Drift = -0.13 dB

Applied MIF = -19.71 dB

RF audio interference level = 14.09 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 13.91 dBV/m	Grid 2 M4 14.56 dBV/m	Grid 3 M4 14.31 dBV/m
Grid 4 M4 13.11 dBV/m	Grid 5 M4 14.09 dBV/m	Grid 6 M4 14 dBV/m
Grid 7 M4	Grid 8 M4	Grid 9 M4

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	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			Page 67 (75)
	Author Data Daoud Attayi	Dates of Test June 13-July 04, 2013	Report No RTS-6046-1308-32	FCC ID L6ARGB140LW

12.17 dBV/m	13.3 dBV/m	13.23 dBV/m
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**Device E-Field CDMA800 BC10 measurement with ER probe/E
Scan - ER3D - 2011: 15 mm from Probe Center to the
Device_Mid_Chan_Full_Rate/Hearing Aid Compatibility Test
(101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 54.68 V/m; Power Drift = 0.00 dB

Applied MIF = -19.71 dB

RF audio interference level = 13.46 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 13.38 dBV/m	Grid 2 M4 13.91 dBV/m	Grid 3 M4 13.61 dBV/m
Grid 4 M4 12.71 dBV/m	Grid 5 M4 13.46 dBV/m	Grid 6 M4 13.32 dBV/m
Grid 7 M4 11.74 dBV/m	Grid 8 M4 12.68 dBV/m	Grid 9 M4 12.56 dBV/m

**Device E-Field CDMA800 BC10 measurement with ER probe/E
Scan - ER3D - 2011: 15 mm from Probe Center to the
Device_High_Chan_Full_Rate/Hearing Aid Compatibility Test
(101x101x1):** Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 60.01 V/m; Power Drift = 0.01 dB

Applied MIF = -19.71 dB

RF audio interference level = 13.97 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4	Grid 2 M4	Grid 3 M4
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	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			68 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

13.73 dBV/m	14.3 dBV/m	13.97 dBV/m
Grid 4 M4 13.19 dBV/m	Grid 5 M4 13.97 dBV/m	Grid 6 M4 13.81 dBV/m
Grid 7 M4 12.61 dBV/m	Grid 8 M4 13.45 dBV/m	Grid 9 M4 13.28 dBV/m

Device E-Field CDMA800 BC10 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan_1_8th_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 21.73 V/m; Power Drift = 0.07 dB

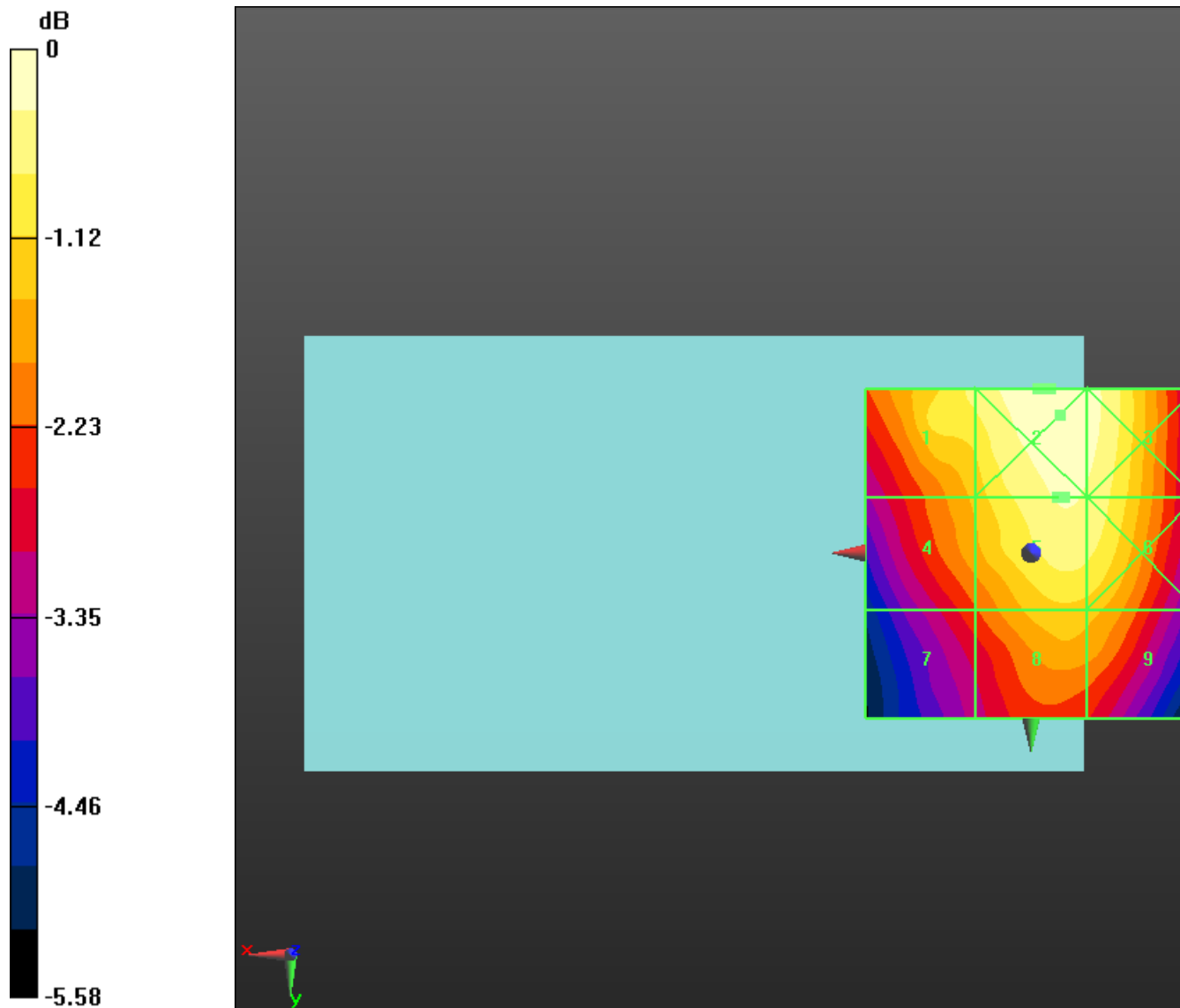
Applied MIF = 2.76 dB

RF audio interference level = 27.97 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 27.68 dBV/m	Grid 2 M4 28.3 dBV/m	Grid 3 M4 28.14 dBV/m
Grid 4 M4 26.93 dBV/m	Grid 5 M4 27.97 dBV/m	Grid 6 M4 27.88 dBV/m
Grid 7 M4 26.04 dBV/m	Grid 8 M4 27.1 dBV/m	Grid 9 M4 27.01 dBV/m



0 dB = 5.344 V/m = 14.56 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			70 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 7/3/2013 10:28:04 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA800_BC10_Telecoil

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 303E76AA

Communication System: UID 0 - n/a, CDMA 800 1/8th Rate; Frequency: 817.9 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field CDMA800 BC10 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the

Device_Low_Chan_telecoil_1_8th_Rate/Hearing Aid Compatibility Test

(101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 21.92 V/m; Power Drift = -0.03 dB

Applied MIF = 2.76 dB

RF audio interference level = 27.16 dBV/m

Emission category: M4

MIF scaled E-field

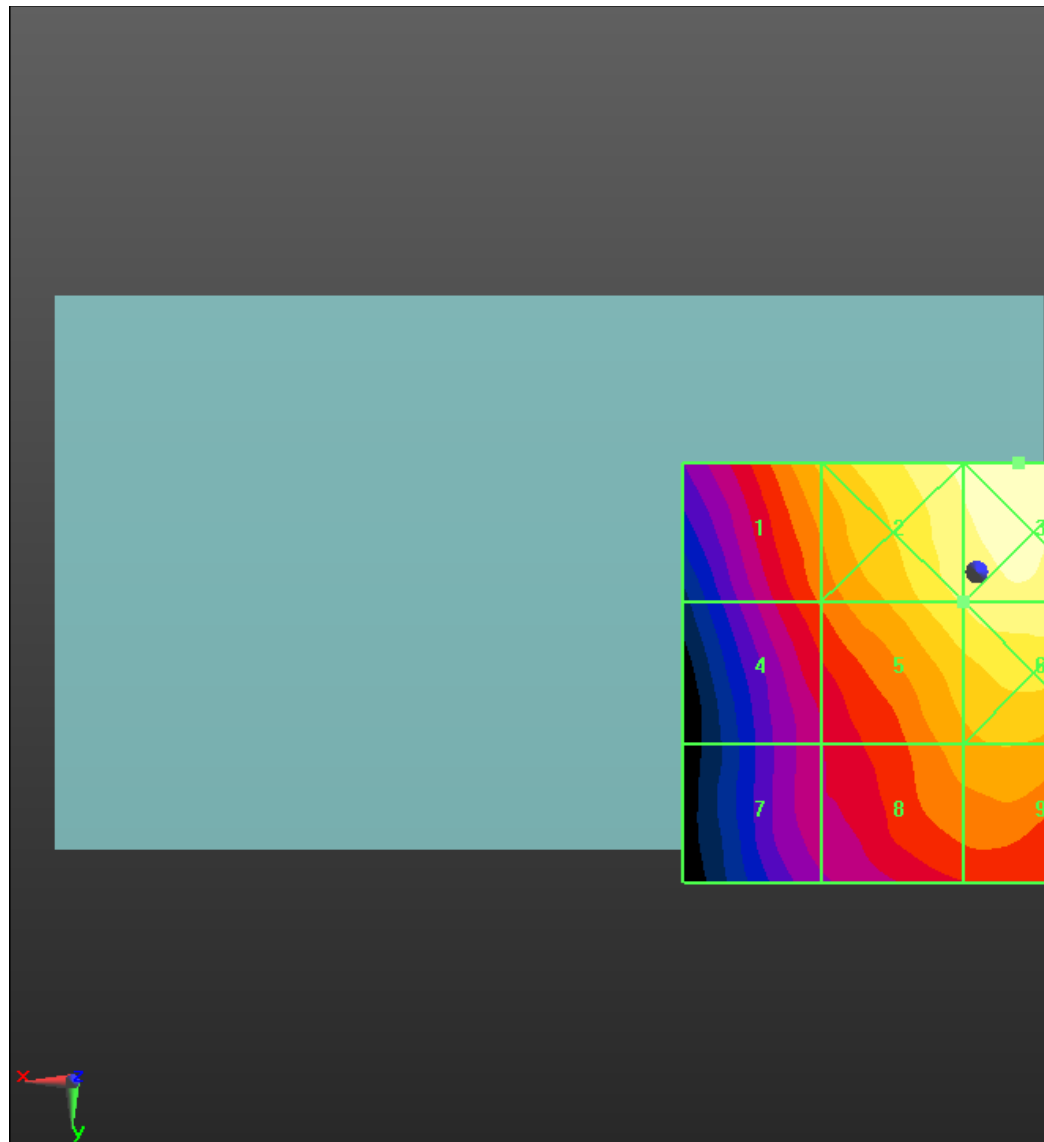
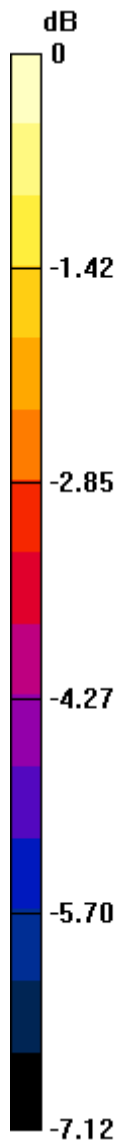
Grid 1 M4 26.3 dBV/m	Grid 2 M4 27.73 dBV/m	Grid 3 M4 28.06 dBV/m
Grid 4 M4 25.31 dBV/m	Grid 5 M4 27.16 dBV/m	Grid 6 M4 27.45 dBV/m
Grid 7 M4	Grid 8 M4	Grid 9 M4

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24.25 dBV/m

26 dBV/m

26.19 dBV/m



0 dB = 25.29 V/m = 28.06 dBV/m

	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			72 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 7/3/2013 9:51:31 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA850_BC0_1_8th_Rate

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 303E76AA

Communication System: UID 0 - n/a, CDMA 850 1/8th Rate; Frequency: 836.52 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field CDMA850 BC0 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Mid_Chan_1_8th_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 21.35 V/m; Power Drift = -0.01 dB

Applied MIF = 2.76 dB

RF audio interference level = 28.58 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 27.98 dBV/m	Grid 2 M4 29.02 dBV/m	Grid 3 M4 28.72 dBV/m
Grid 4 M4 26.86 dBV/m	Grid 5 M4 28.58 dBV/m	Grid 6 M4 28.52 dBV/m
Grid 7 M4 25.76 dBV/m	Grid 8 M4 27.81 dBV/m	Grid 9 M4 27.97 dBV/m

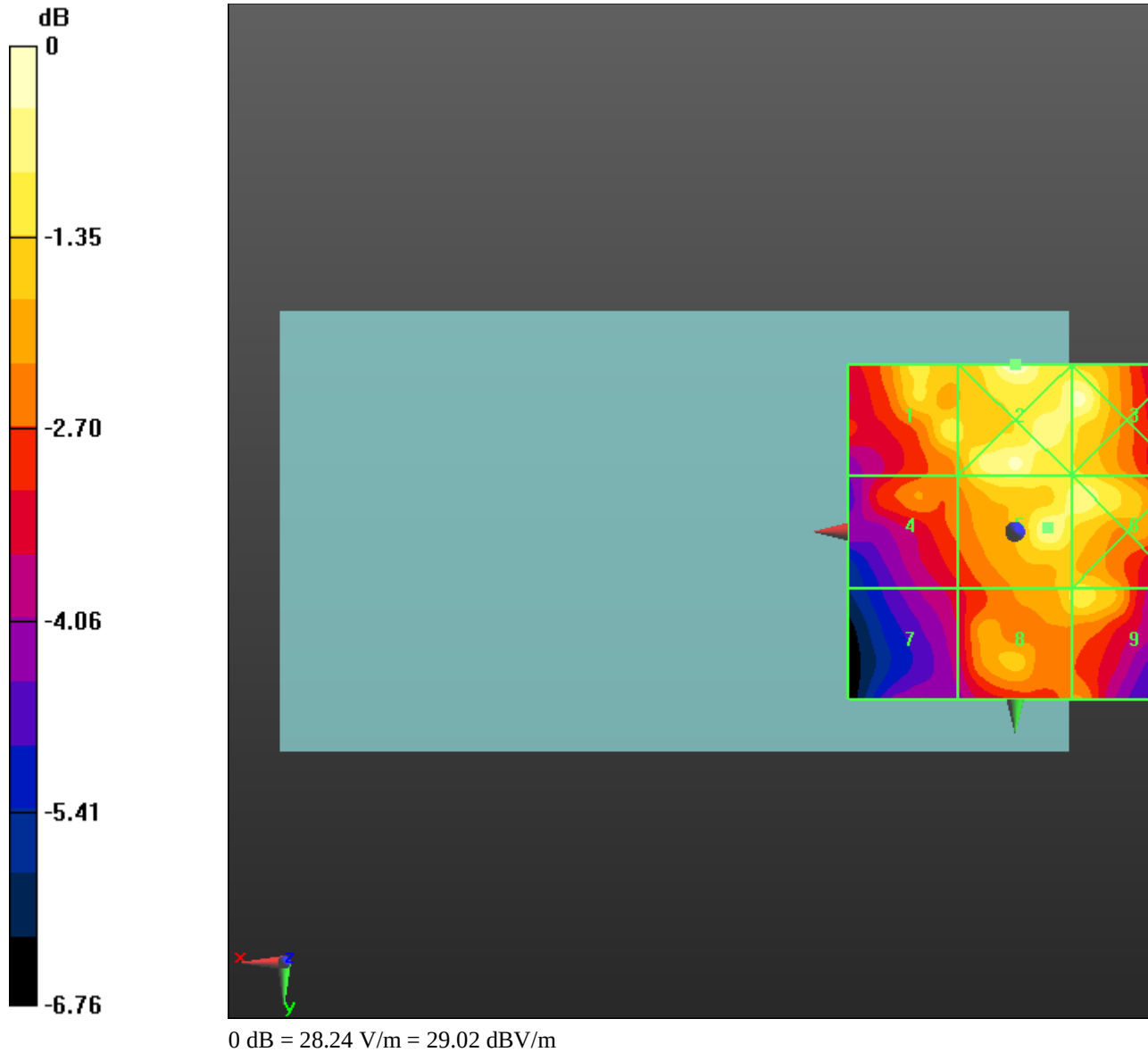
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Author Data
Daoud Attayi

Dates of Test
June 13-July 04, 2013

Report No
RTS-6046-1308-32

FCC ID
L6ARGB140LW



	Document			Page
	Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RGB141LW			74 (75)
Author Data	Dates of Test	Report No	FCC ID	
Daoud Attayi	June 13-July 04, 2013	RTS-6046-1308-32	L6ARGB140LW	

Date/Time: 7/3/2013 9:57:48 PM

Test Laboratory: RIM Testing Services

HAC RF_E-Field_CDMA1900_BC1_1_8th_Rate

DUT: BlackBerry Smartphone; Type: Sample ; Serial: 303E76AA

Communication System: UID 0 - n/a, CDMA 1900 1/8th Rate; Frequency: 1851.25 MHz

Medium parameters used: $\sigma = 0$ S/m, $\epsilon_r = 1$; $\rho = 0$ kg/m³

Phantom section: RF Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/11/2013;
- Sensor-Surface: (Fix Surface), z = 8.7
- Electronics: DAE4 Sn881; Calibrated: 1/14/2013
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA
- DASYS 52.8.6(1115); SEMCAD X 14.6.9(7117)

Device E-Field CDMA1900 BC1 measurement with ER probe/E Scan - ER3D - 2011: 15 mm from Probe Center to the Device_Low_Chan_1_8th_Rate/Hearing Aid Compatibility Test (101x101x1): Interpolated grid: dx=0.5000 mm, dy=0.5000 mm

Device Reference Point: 0, 0, -6.3 mm

Reference Value = 12.70 V/m; Power Drift = 0.27 dB

Applied MIF = 2.76 dB

RF audio interference level = 25.37 dBV/m

Emission category: M4

MIF scaled E-field

Grid 1 M4 21.2 dBV/m	Grid 2 M4 25.29 dBV/m	Grid 3 M4 25.37 dBV/m
Grid 4 M4 22.86 dBV/m	Grid 5 M4 25.25 dBV/m	Grid 6 M4 25.22 dBV/m
Grid 7 M4 27.31 dBV/m	Grid 8 M4 27.96 dBV/m	Grid 9 M4 27.56 dBV/m

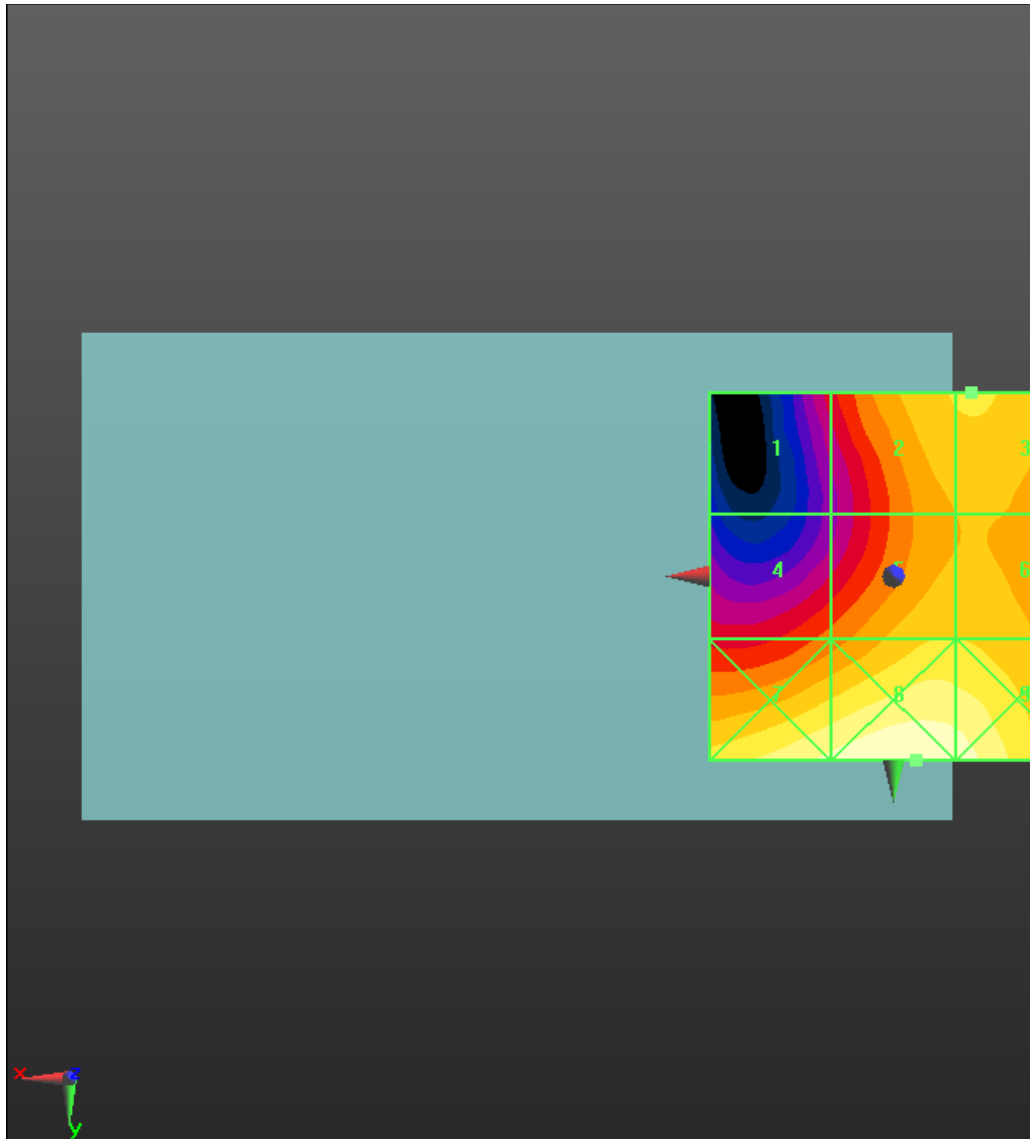
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Author Data
Daoud Attayi

Dates of Test
June 13-July 04, 2013

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0 dB = 25.00 V/m = 27.96 dBV/m