

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 1 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Annex A: Measurement data and plots

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 2 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

A.1 Dipole validation plots

 Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW		Page 3 (85)	
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 2:30:14 PM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_CW835_20.00dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x37x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 100.5 V/m; Power Drift = 0.226 dB

Maximum value of Total (measured) = 161.6 V/m

E Scan - measurement distance from the probe sensor center to

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 4 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x361x1):

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

Maximum value of peak Total field = 162.5 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 100.5 V/m; Power Drift = 0.226 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

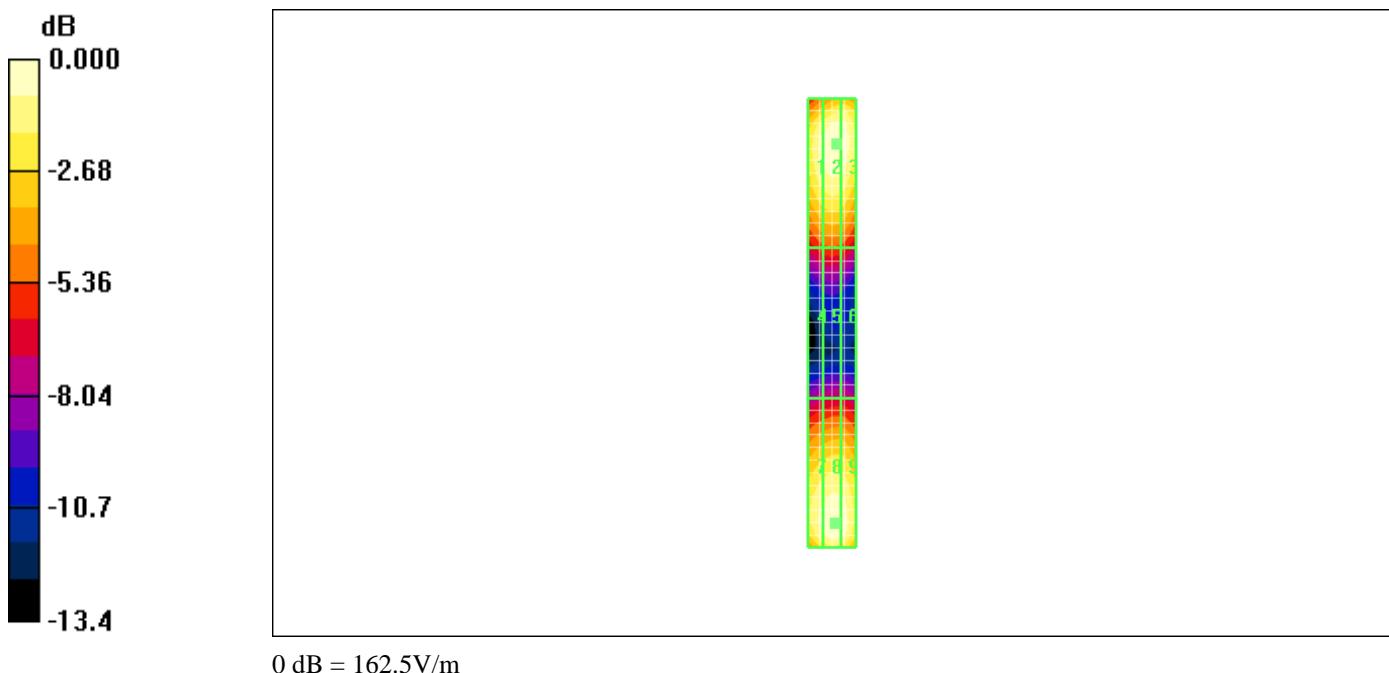
Grid 1 154.2 M4	Grid 2 162.5 M4	Grid 3 161.6 M4
Grid 4 85.0 M4	Grid 5 87.4 M4	Grid 6 85.3 M4
Grid 7 154.7 M4	Grid 8 162.0 M4	Grid 9 159.9 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

5 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>			Page 6 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 2:46:41 PM

Test Laboratory: RIM Testing Services

HAC_E_Dipole_CW1880_20.00dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 144.9 V/m; Power Drift = 0.048 dB

Maximum value of Total (measured) = 126.8 V/m

E Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 7 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

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

Maximum value of peak Total field = 128.4 V/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 144.9 V/m; Power Drift = 0.048 dB

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

Peak E-field in V/m

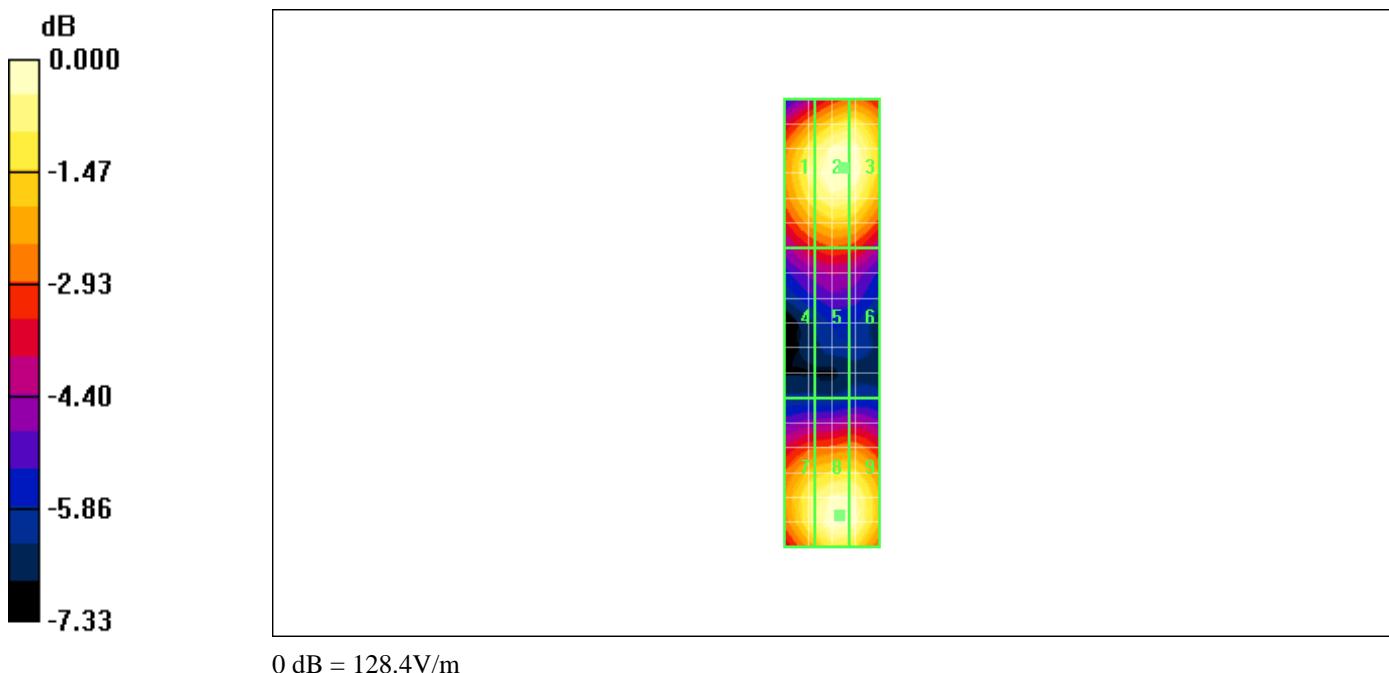
Grid 1	Grid 2	Grid 3
120.5 M2	128.0 M2	127.7 M2
Grid 4 87.4 M3	Grid 5 91.2 M3	Grid 6 90.0 M3
Grid 7 120.7 M2	Grid 8 128.4 M2	Grid 9 127.2 M2



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

8 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>			Page 9 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 3:16:35 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_CW835_20.00dBm

DUT: HAC-Dipole 835 MHz; Type: D835V3

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (5x13x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.484 A/m; Power Drift = 0.030 dB

Maximum value of Total (measured) = 0.459 A/m

H Scan - measurement distance from the probe sensor center to CD835 Dipole = 10mm/Hearing Aid Compatibility Test (41x121x1):

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW			Page 10 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW	

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

Maximum value of peak Total field = 0.459 A/m

Probe Modulation Factor = 1.00

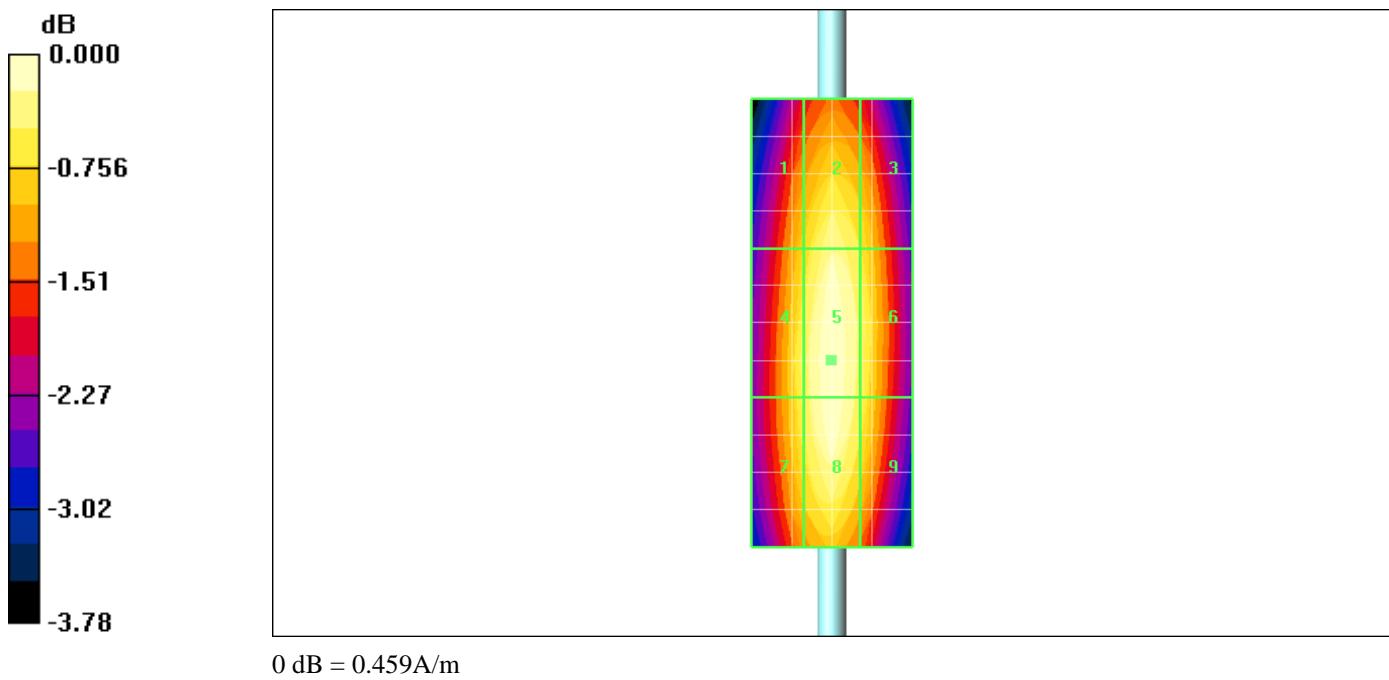
Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.484 A/m; Power Drift = 0.030 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 0.423 M4	Grid 2 0.445 M4	Grid 3 0.432 M4
Grid 4 0.440 M4	Grid 5 0.459 M4	Grid 6 0.442 M4
Grid 7	Grid 8	Grid 9

Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>			Page 12 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 2:57:22 PM

Test Laboratory: RIM Testing Services

HAC_H_Dipole_CW1880_20.00dBm

DUT: HAC Dipole 1880 MHz; Type: CD1880V3

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

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

Phantom section: RF Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (5x19x1):

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

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.480 A/m; Power Drift = 0.003 dB

Maximum value of Total (measured) = 0.453 A/m

H Scan - measurement distance from the probe sensor center to CD1880 Dipole = 10mm/Hearing Aid Compatibility Test (41x181x1):

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW			Page 13 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW	

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

Maximum value of peak Total field = 0.453 A/m

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.480 A/m; Power Drift = 0.003 dB

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

Peak H-field in A/m

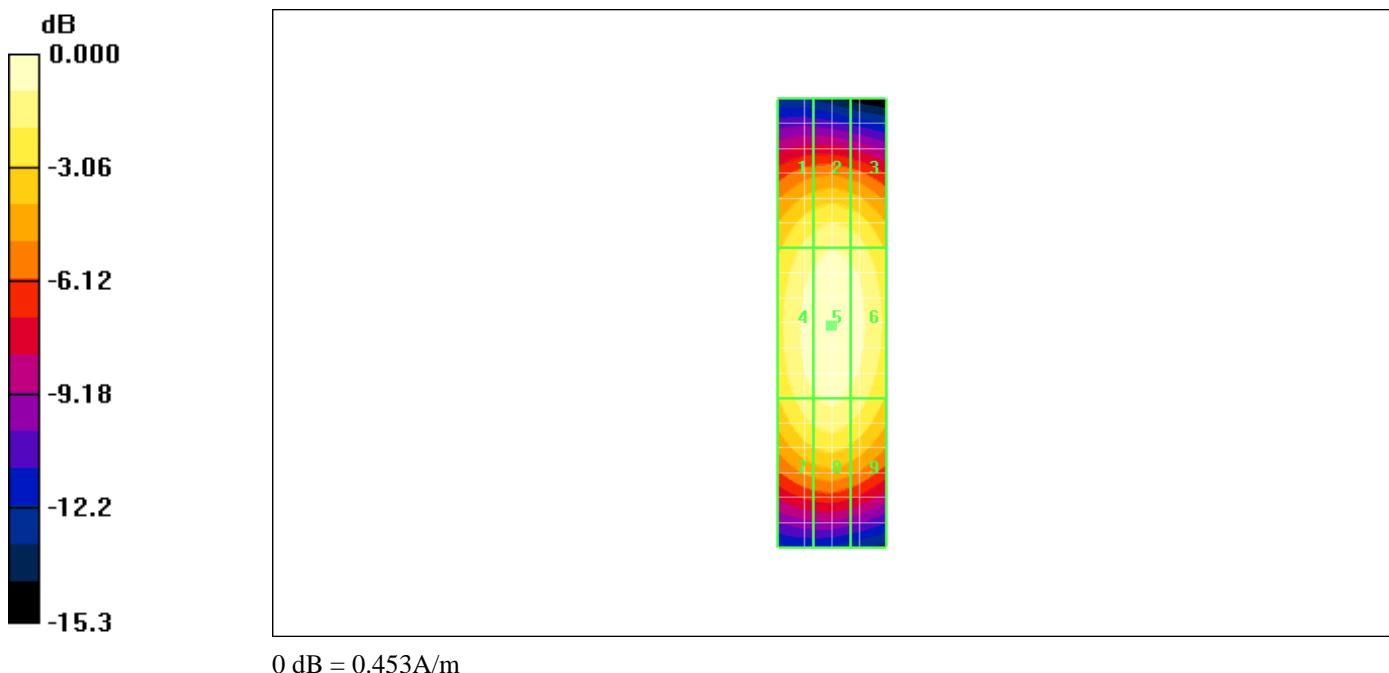
Grid 1 0.384 M2	Grid 2 0.403 M2	Grid 3 0.390 M2
Grid 4 0.431 M2	Grid 5 0.453 M2	Grid 6 0.433 M2
Grid 7 0.398 M2	Grid 8 0.415 M2	Grid 9 0.394 M2



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

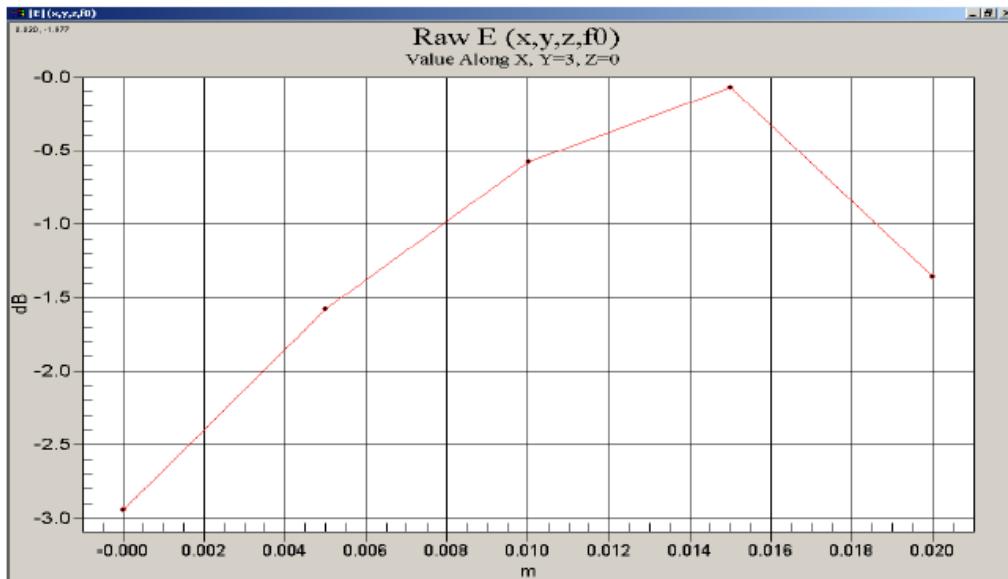
Page

14 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

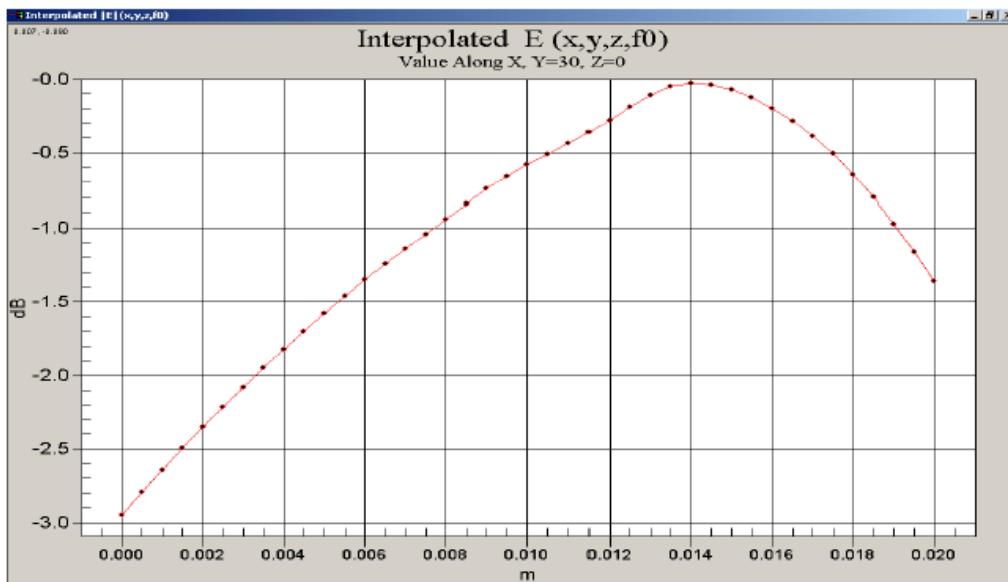
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW
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Justification of Step Size and Interpolation

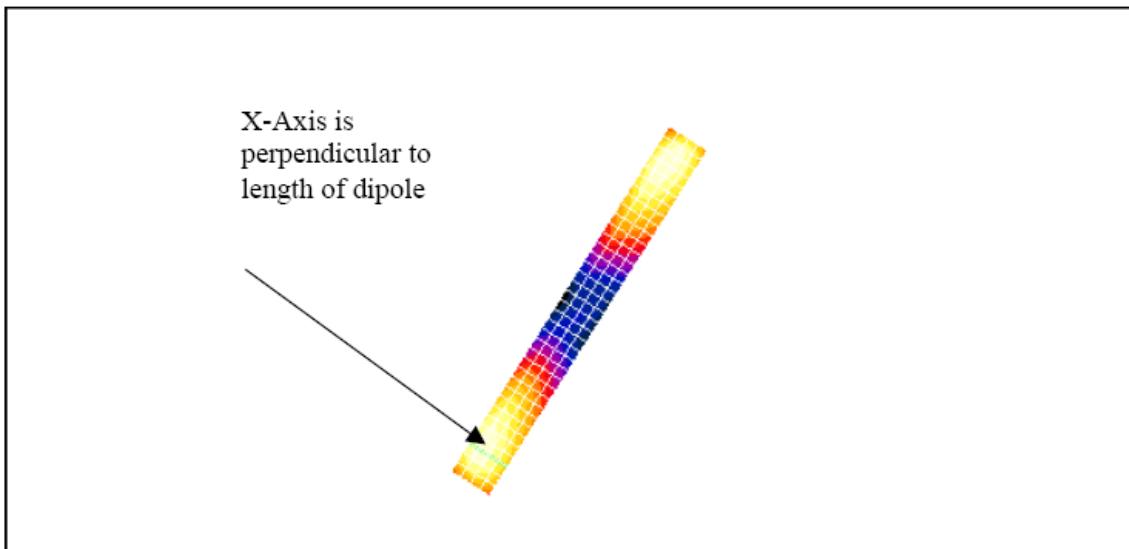
This section demonstrates that a 5mm step size with interpolation provides sufficient resolution for RF emissions measurements. The DASY 4 uses interpolation algorithms to derive 9 interpolated points between every measured point.



The figure above shows the raw measured field strength perpendicular to the length of the validation dipole. The TCB guidance slides require the 3dB width to be much larger than the step size. The width between -3dB points is > 21mm, at least 4 times the step size.



This figure shows the interpolated field strength perpendicular to the dipole. The interpolated points follow the raw points with no inconsistencies.



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 RCL22CW	Page 17 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

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
80.9	92.3	92.2	80.9	92.3	92.2
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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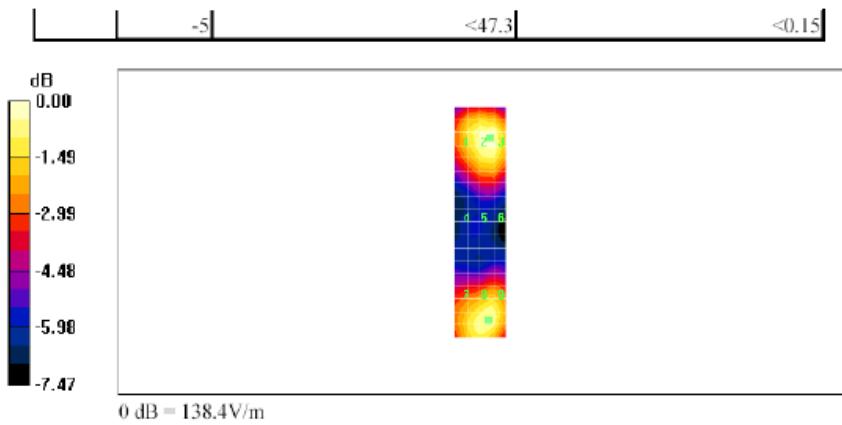
Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

18 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

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 RCL22CW	Page 19 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

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
81.4	92.1	91.6	81.4	92.1	91.6
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

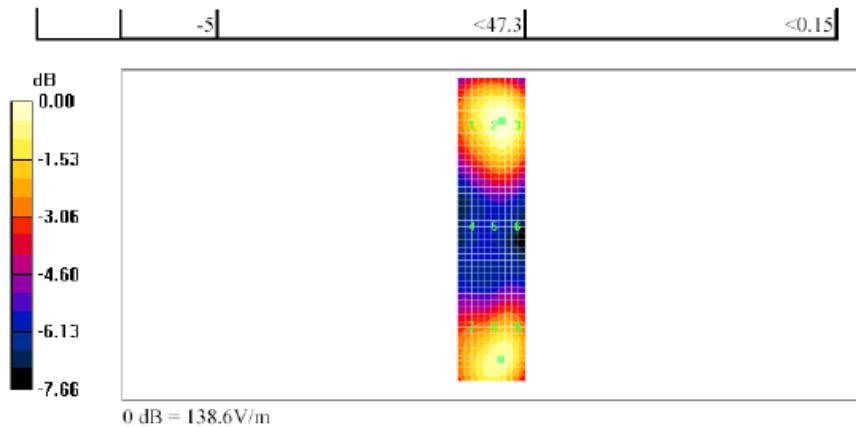
Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

20 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

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 RCL22CWPage
21 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

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
0.342	0.359	0.344
0.389	0.406	0.389
0.363	0.378	0.363

Grid 1	Grid 2	Grid 3
0.342	0.359	0.344
0.389	0.406	0.389
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 RCL22CW

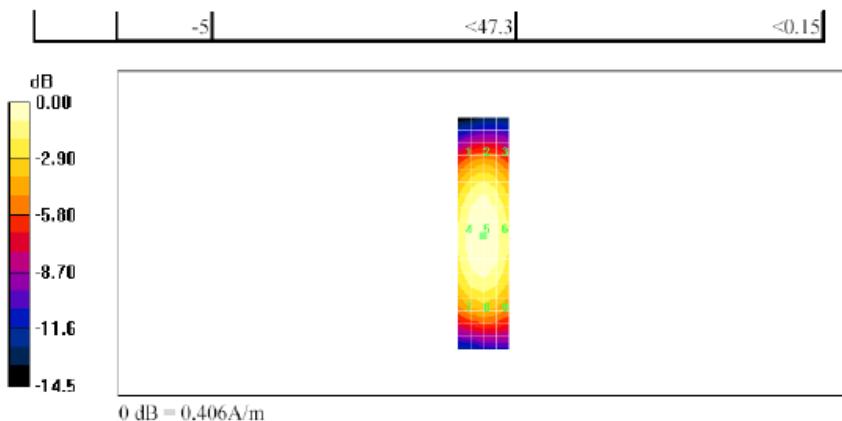
Page

22 (85)

Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

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 RCL22CW	Page 23 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 14/07/2005 12:53:40 PM

Page 1 of 2

Date/Time: 14/07/2005 12:53:40 PM

Lab: RIM Testing Services (RTS)

HAC_H_Dipole_CW 1880_2 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 (11x46x1):

Measurement grid: dx=2mm, dy=2mm

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

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

Measurement grid: dx=2mm, dy=2mm

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
0.347	0.361	0.348	0.347	0.361	0.348
0.394	0.406	0.391	0.394	0.406	0.391
0.367	0.380	0.365	0.367	0.380	0.365

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

file:///C:/Program%20Files/DASY4/Print_Templates/HAC_H_Dipole_CW%201880_2%... 14/07/2005



Document

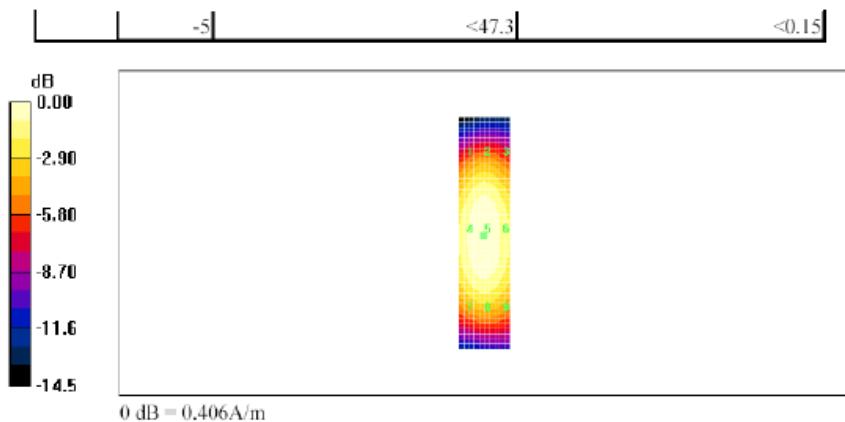
Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

24 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

Date/Time: 14/07/2005 12:53:40 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 RCL22CW	Page 25 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

A.2 RF emission field plots

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>			Page 26 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 4:51:05 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_800_low chan

DUT: BlackBerry Smartphone;

Communication System: CDMA 800; Frequency: 824.7 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 119.0 V/m; Power Drift = -0.054 dB

Maximum value of Total (measured) = 92.7 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 27 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 93.9 V/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 119.0 V/m; Power Drift = -0.054 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

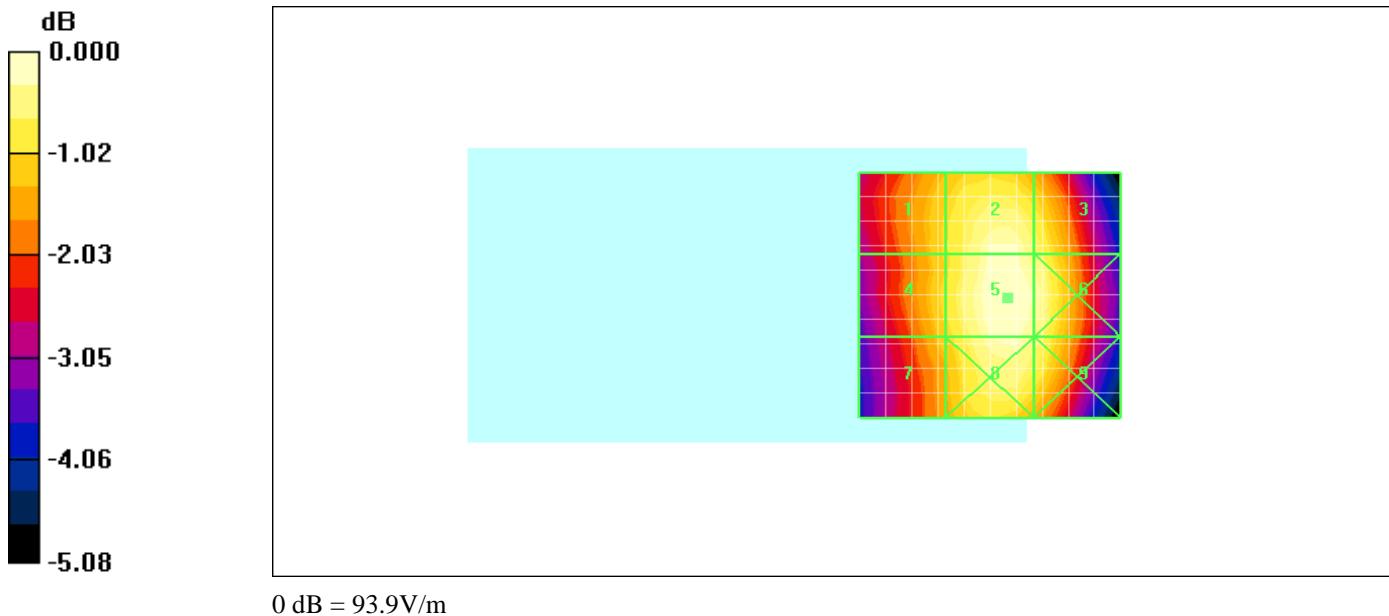
Grid 1	Grid 2	Grid 3
84.4 M4	92.3 M4	89.0 M4
Grid 4	Grid 5	Grid 6
84.8 M4	93.9 M4	91.7 M4
Grid 7	Grid 8	Grid 9
83.1 M4	92.3 M4	89.6 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

28 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 29 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 5:00:27 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_800_mid chan

DUT: BlackBerry Smartphone;

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 124.3 V/m; Power Drift = -0.005 dB

Maximum value of Total (measured) = 97.5 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW			Page 30 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID	L6ARCL20CW

Maximum value of peak Total field = 98.8 V/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 124.3 V/m; Power Drift = -0.005 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
86.0 M4	95.8 M4	94.1 M4
Grid 4	Grid 5	Grid 6
86.1 M4	98.8 M4	96.6 M4
Grid 7	Grid 8	Grid 9
84.5 M4	97.3 M4	95.2 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

31 (85)Author Data
Daoud Attayi

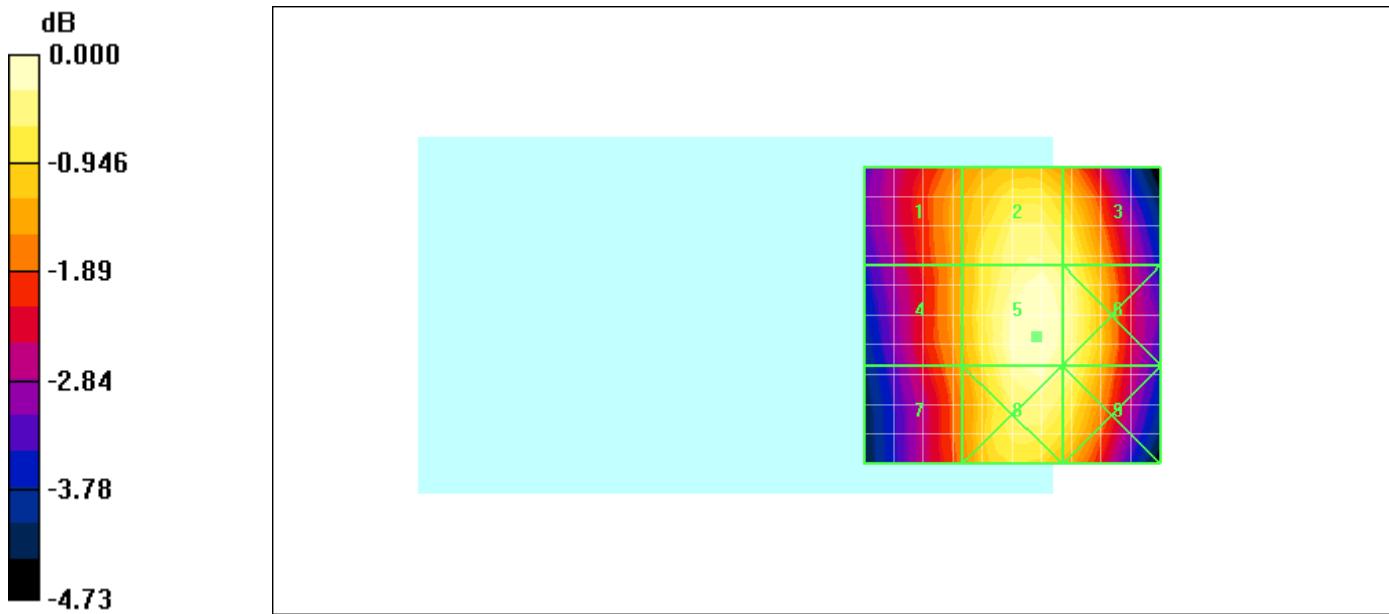
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 32 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 5:05:23 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_800_high chan

DUT: BlackBerry Smartphone;

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 116.8 V/m; Power Drift = -0.153 dB

Maximum value of Total (measured) = 90.5 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 33 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 91.8 V/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 116.8 V/m; Power Drift = -0.153 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
80.5 M4	90.1 M4	88.2 M4
Grid 4	Grid 5	Grid 6
80.5 M4	91.8 M4	90.3 M4
Grid 7	Grid 8	Grid 9
79.2 M4	90.1 M4	88.2 M4

Author Data
Daoud Attayi

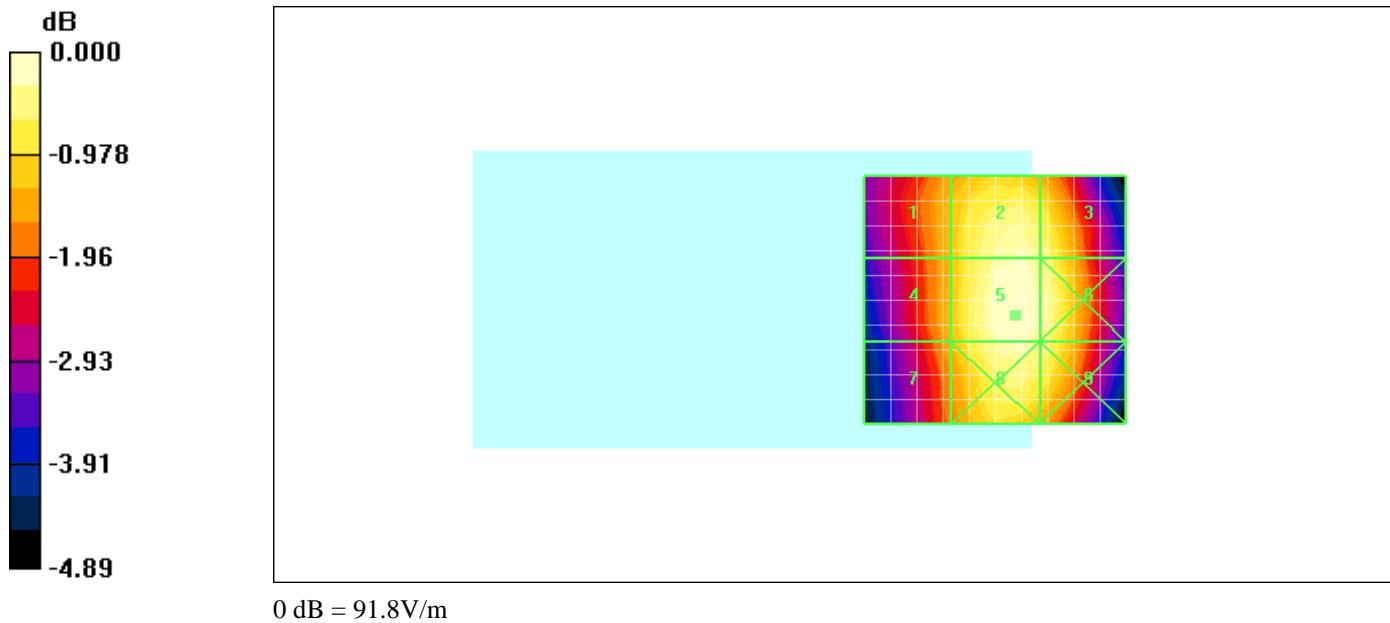
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June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		<p>Page 35 (85)</p>	
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 5:15:35 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_800_mid_chan_one_eighth

DUT: BlackBerry Smartphone;

Communication System: CDMA 800 1/8 th; Frequency: 836.52 MHz; Duty Cycle: 1:8.3

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 45.1 V/m; Power Drift = 0.084 dB

Maximum value of Total (measured) = 35.2 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 36 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

dx=5mm, dy=5mm

Maximum value of peak Total field = 89.4 V/m

Probe Modulation Factor = 2.53

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 45.1 V/m; Power Drift = 0.084 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
78.1 M4	87.2 M4	85.5 M4
Grid 4	Grid 5	Grid 6
78.9 M4	89.4 M4	87.1 M4
Grid 7	Grid 8	Grid 9
77.7 M4	87.7 M4	85.5 M4

Author Data
Daoud Attayi

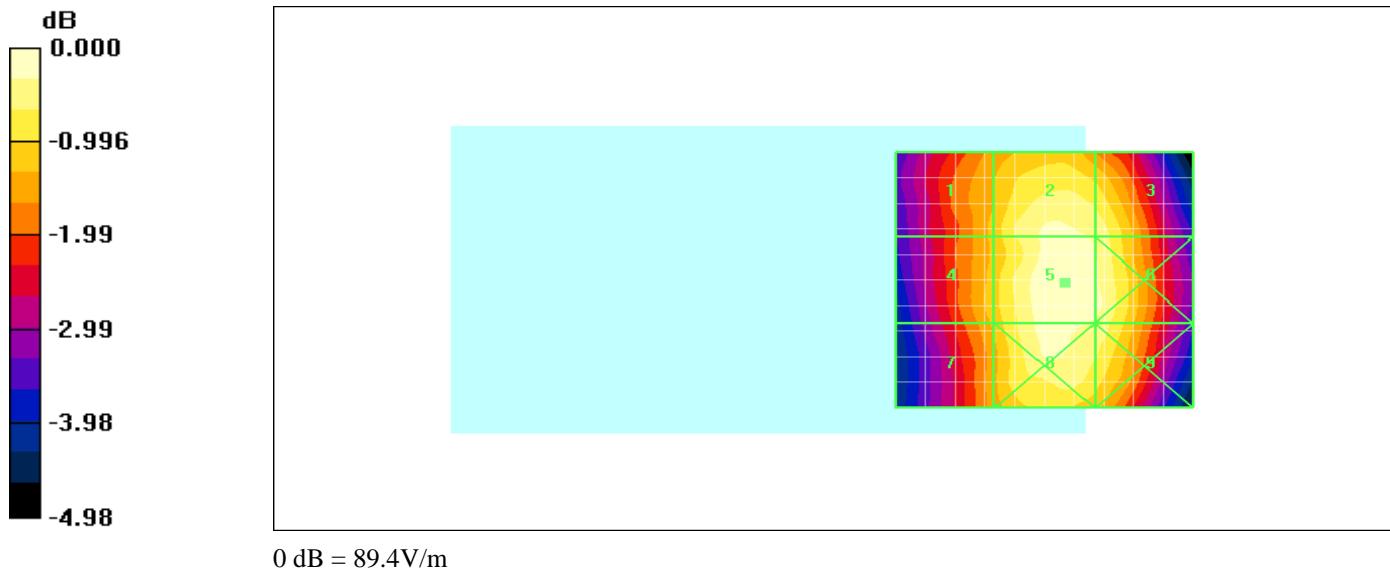
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>			Page 38 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 11:40:54 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_800_mid chan_T_Coil_Center

DUT: BlackBerry Smartphone;

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 131.3 V/m; Power Drift = -0.173 dB

Maximum value of Total (measured) = 101.9 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 39 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 100.9 V/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 131.3 V/m; Power Drift = -0.173 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
91.0 M4	93.8 M4	86.4 M4
Grid 4	Grid 5	Grid 6
92.9 M4	100.9 M4	94.6 M4
Grid 7	Grid 8	Grid 9
94.2 M4	103.0 M4	95.1 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

40 (85)Author Data
Daoud Attayi

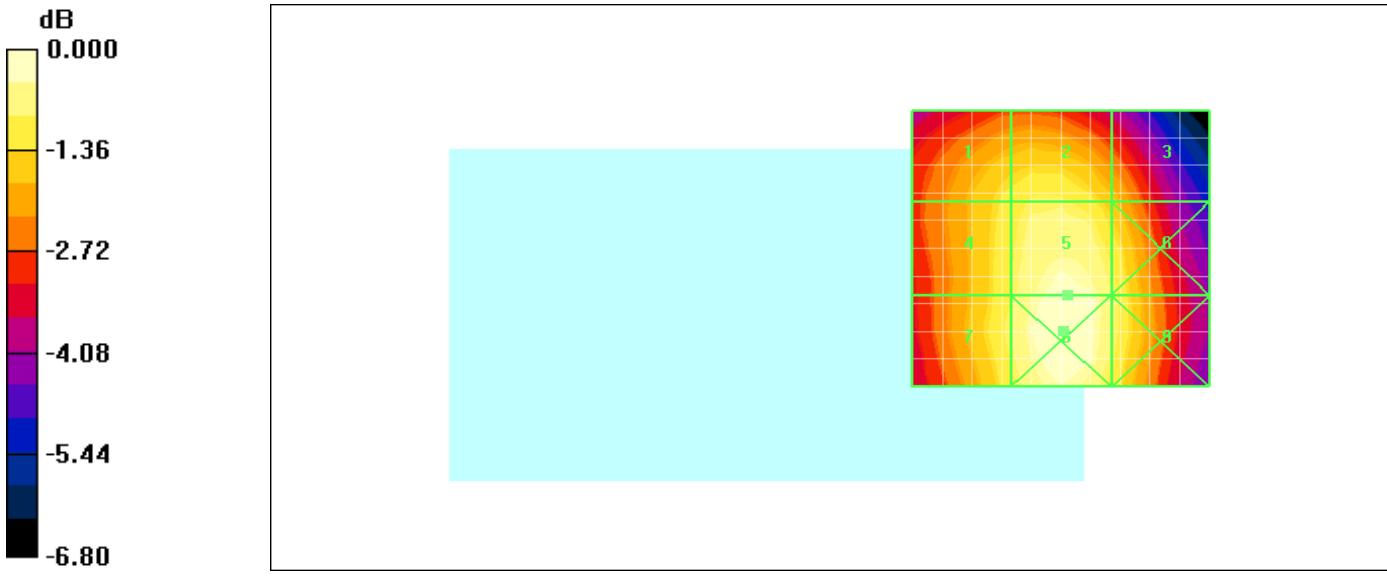
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>			Page 41 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 6:27:00 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_1900_low chan

DUT: BlackBerry Smartphone;

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 45.0 V/m; Power Drift = -0.027 dB

Maximum value of Total (measured) = 56.6 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 42 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 48.7 V/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 45.0 V/m; Power Drift = -0.027 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
43.5 M4	55.7 M4	55.2 M4
Grid 4	Grid 5	Grid 6
32.8 M4	48.7 M4	48.7 M4
Grid 7	Grid 8	Grid 9
46.4 M4	39.3 M4	34.0 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

43 (85)Author Data
Daoud Attayi

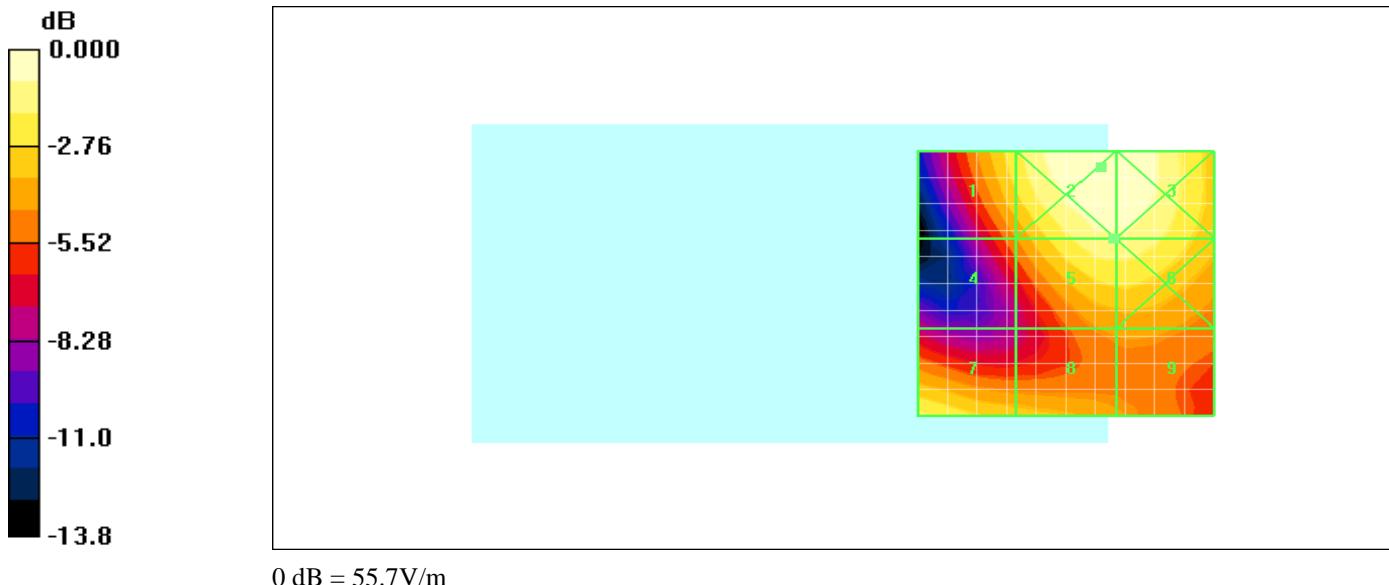
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 44 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 6:32:47 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_1900_mid chan

DUT: BlackBerry Smartphone;

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 33.0 V/m; Power Drift = -0.096 dB

Maximum value of Total (measured) = 42.6 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 45 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 36.3 V/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 33.0 V/m; Power Drift = -0.096 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
32.5 M4	42.0 M4	41.8 M4
Grid 4	Grid 5	Grid 6
24.8 M4	36.3 M4	36.3 M4
Grid 7	Grid 8	Grid 9
33.7 M4	32.1 M4	28.9 M4

Author Data
Daoud Attayi

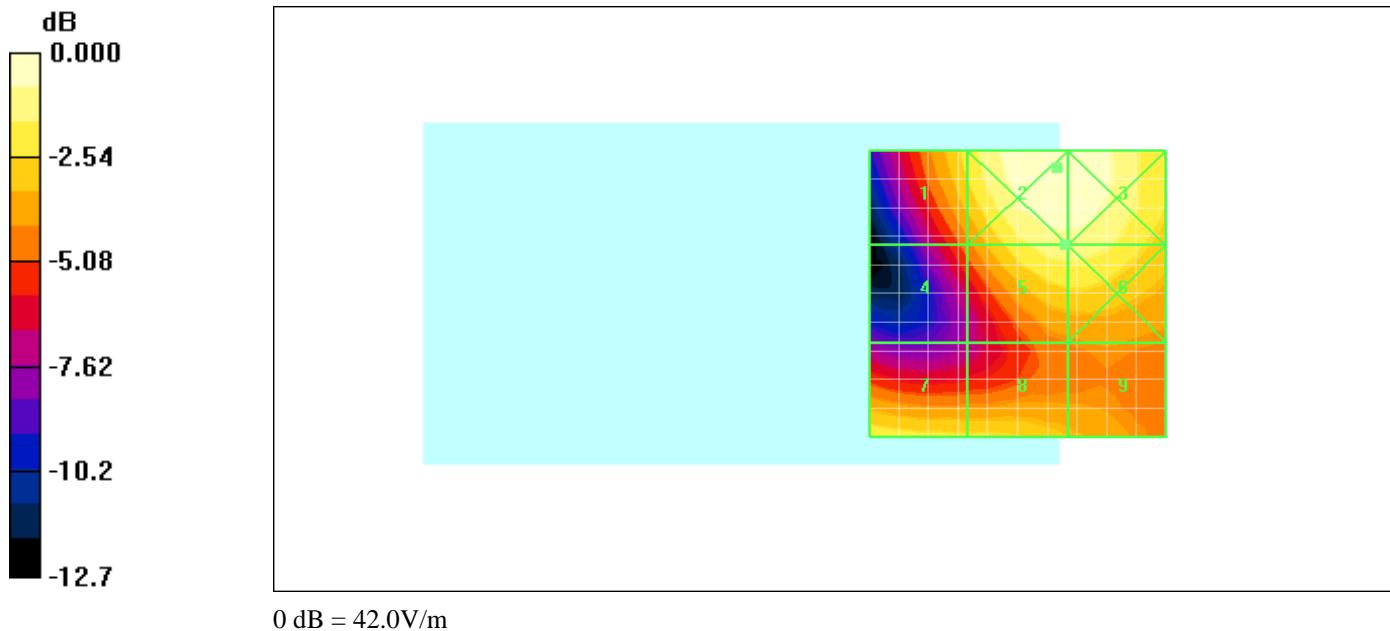
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 47 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 6:40:13 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_1900_high chan

DUT: BlackBerry Smartphone;

Communication System: CDMA 1900; Frequency: 1908.5 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface) Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 29.9 V/m; Power Drift = -0.052 dB

Maximum value of Total (measured) = 37.8 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 48 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 32.3 V/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 29.9 V/m; Power Drift = -0.052 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

Grid 1	Grid 2	Grid 3
30.3 M4	37.2 M4	36.9 M4
Grid 4	Grid 5	Grid 6
23.4 M4	32.3 M4	32.3 M4
Grid 7	Grid 8	Grid 9
30.7 M4	29.3 M4	25.8 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

49 (85)Author Data
Daoud Attayi

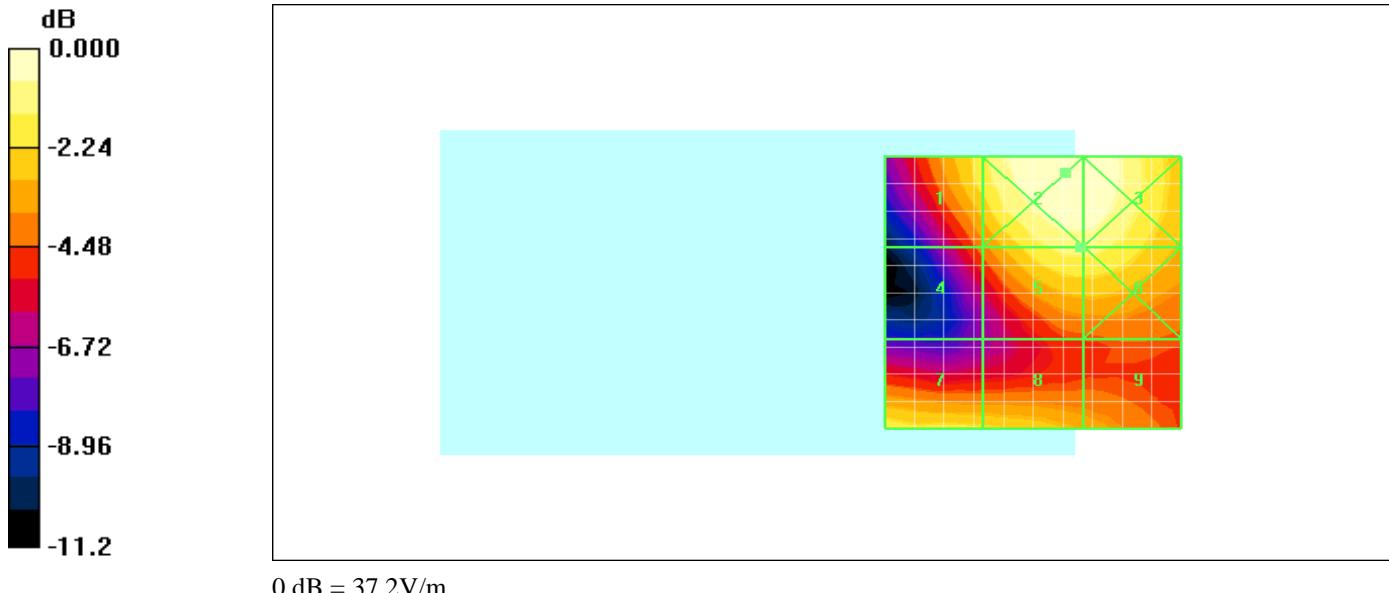
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 50 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 6:11:29 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_1900_low_chan_one_eighth

DUT: BlackBerry Smartphone;

Communication System: CDMA 1900 1/8th; Frequency: 1851.25 MHz; Duty

Cycle: 1:8.3

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid:

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.5 V/m; Power Drift = -0.092 dB

Maximum value of Total (measured) = 17.8 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW			Page 51 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW	

dx=5mm, dy=5mm

Maximum value of peak Total field = 40.3 V/m

Probe Modulation Factor = 2.49

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 15.5 V/m; Power Drift = -0.092 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

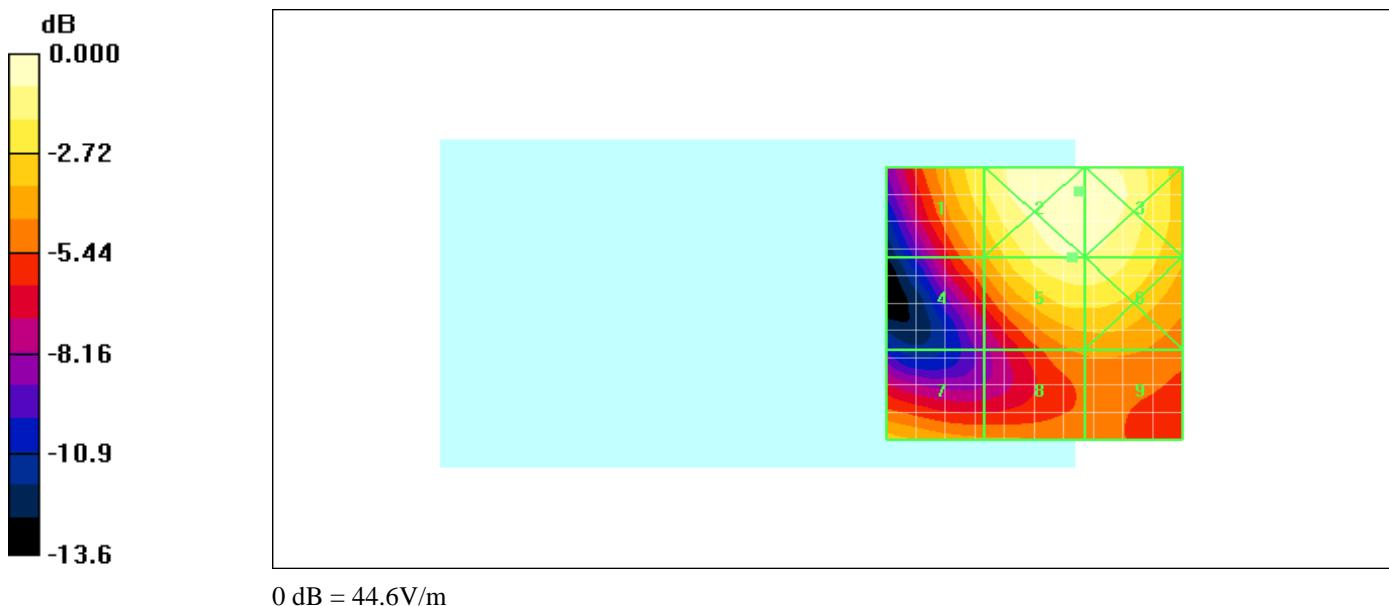
Grid 1	Grid 2	Grid 3
36.6 M4	44.6 M4	44.5 M4
Grid 4	Grid 5	Grid 6
28.8 M4	40.3 M4	40.0 M4
Grid 7	Grid 8	Grid 9
31.1 M4	27.6 M4	27.5 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

52 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>			Page 53 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 6:46:02 PM

Test Laboratory: RIM Testing Services

HAC_E_CDMA_1900_low chan_T_Coil_Center

DUT: BlackBerry Smartphone;

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: ER3DV6 - SN2286; ConvF(1, 1, 1); Calibrated: 1/8/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 41.6 V/m; Power Drift = -0.072 dB

Maximum value of Total (measured) = 52.3 V/m

E Scan - ER3D - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW			Page 54 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID	L6ARCL20CW

Maximum value of peak Total field = 50.9 V/m

Probe Modulation Factor = 0.980

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 41.6 V/m; Power Drift = -0.072 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak E-field in V/m

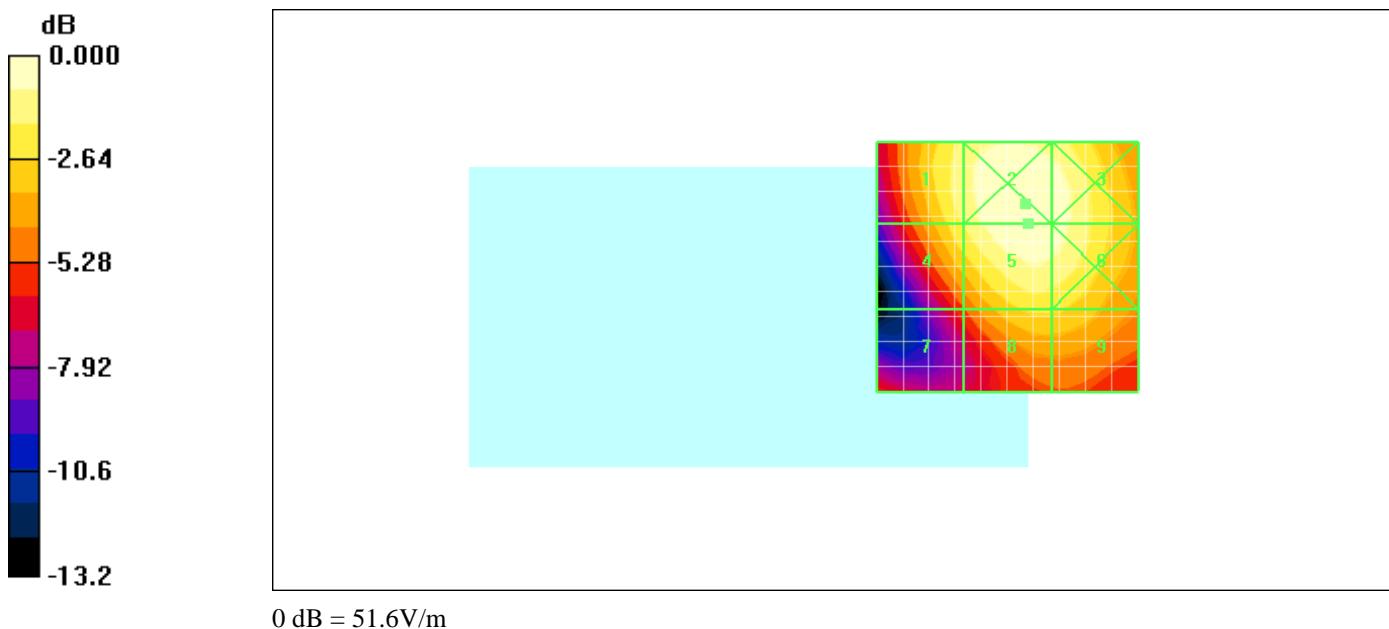
Grid 1	Grid 2	Grid 3
44.9 M4	51.6 M4	50.0 M4
Grid 4	Grid 5	Grid 6
42.2 M4	50.9 M4	49.4 M4
Grid 7	Grid 8	Grid 9
27.7 M4	38.9 M4	38.6 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

55 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 56 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 8:50:17 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_800_low_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 824.7 MHz; Duty Cycle: 1:1

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.104 A/m; Power Drift = -0.024 dB

Maximum value of Total (measured) = 0.201 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 57 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 0.201 A/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.104 A/m; Power Drift = -0.024 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.201 M4	0.140 M4	0.087 M4
Grid 4	Grid 5	Grid 6
0.188 M4	0.130 M4	0.079 M4
Grid 7	Grid 8	Grid 9
0.203 M4	0.140 M4	0.088 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

58 (85)Author Data
Daoud Attayi

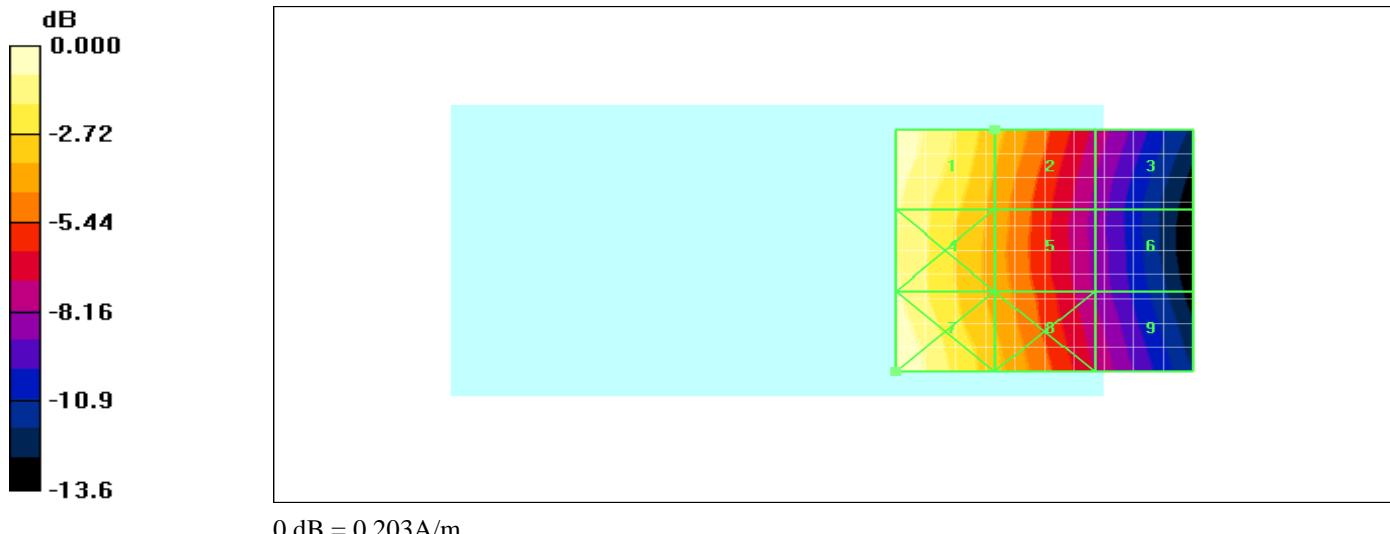
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 59 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 8:56:47 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_800_mid_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.110 A/m; Power Drift = -0.113 dB

Maximum value of Total (measured) = 0.207 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW			Page 60 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW	

Maximum value of peak Total field = 0.209 A/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.110 A/m; Power Drift = -0.113 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.209 M4	0.149 M4	0.093 M4
Grid 4	Grid 5	Grid 6
0.192 M4	0.137 M4	0.084 M4
Grid 7	Grid 8	Grid 9
0.208 M4	0.148 M4	0.091 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

61 (85)Author Data
Daoud Attayi

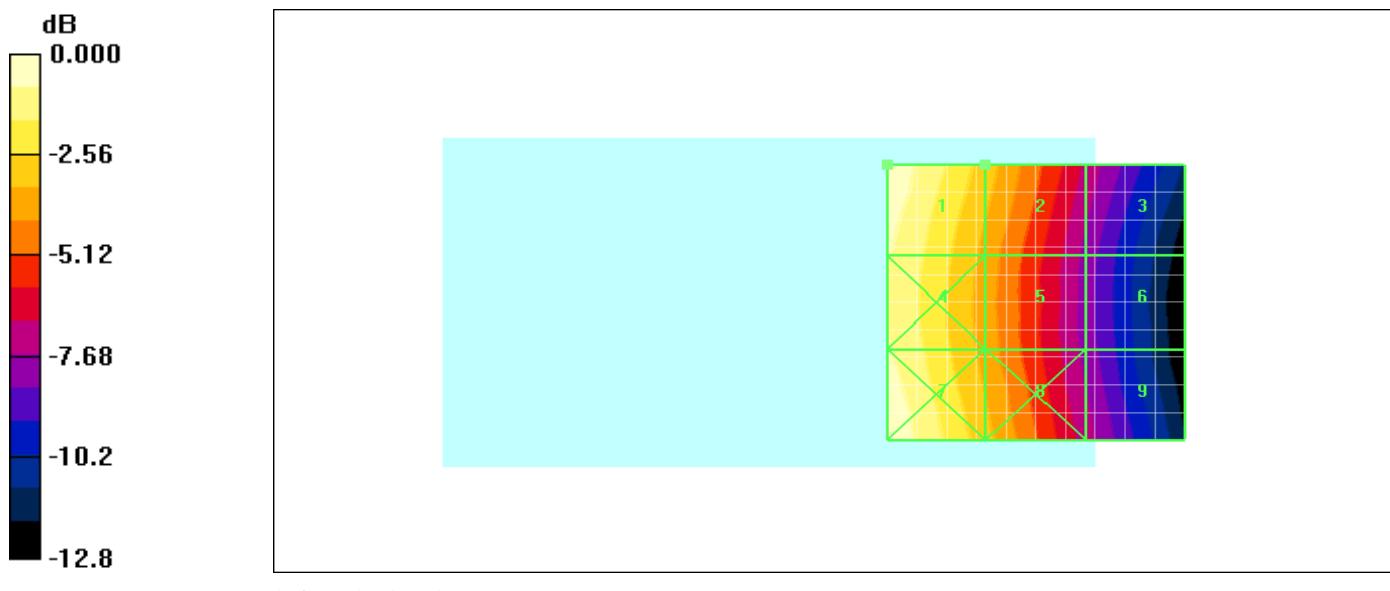
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 62 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 9:02:16 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_800_high_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 848.52 MHz; Duty Cycle: 1:1

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.112 A/m; Power Drift = -0.007 dB

Maximum value of Total (measured) = 0.204 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 63 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 0.195 A/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.112 A/m; Power Drift = -0.007 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.195 M4	0.141 M4	0.090 M4
Grid 4	Grid 5	Grid 6
0.187 M4	0.138 M4	0.092 M4
Grid 7	Grid 8	Grid 9
0.206 M4	0.151 M4	0.100 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

64 (85)Author Data
Daoud Attayi

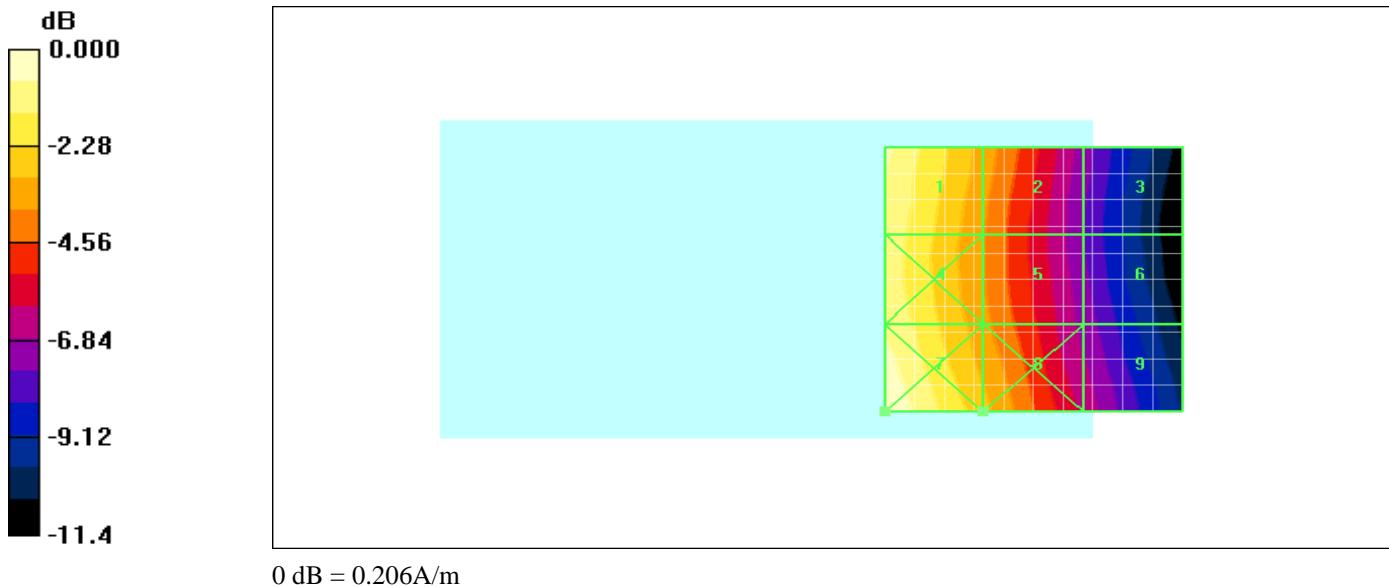
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>			Page 65 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 9:09:46 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_800_mid_chan_one_eighth

DUT: BlackBerry Smartphone

Communication System: CDMA 800 1/8 th; Frequency: 836.52 MHz; Duty Cycle: 1:8.3

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid:

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.039 A/m; Power Drift = 0.054 dB

Maximum value of Total (measured) = 0.074 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 66 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.182 A/m

Probe Modulation Factor = 2.46

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.039 A/m; Power Drift = 0.054 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

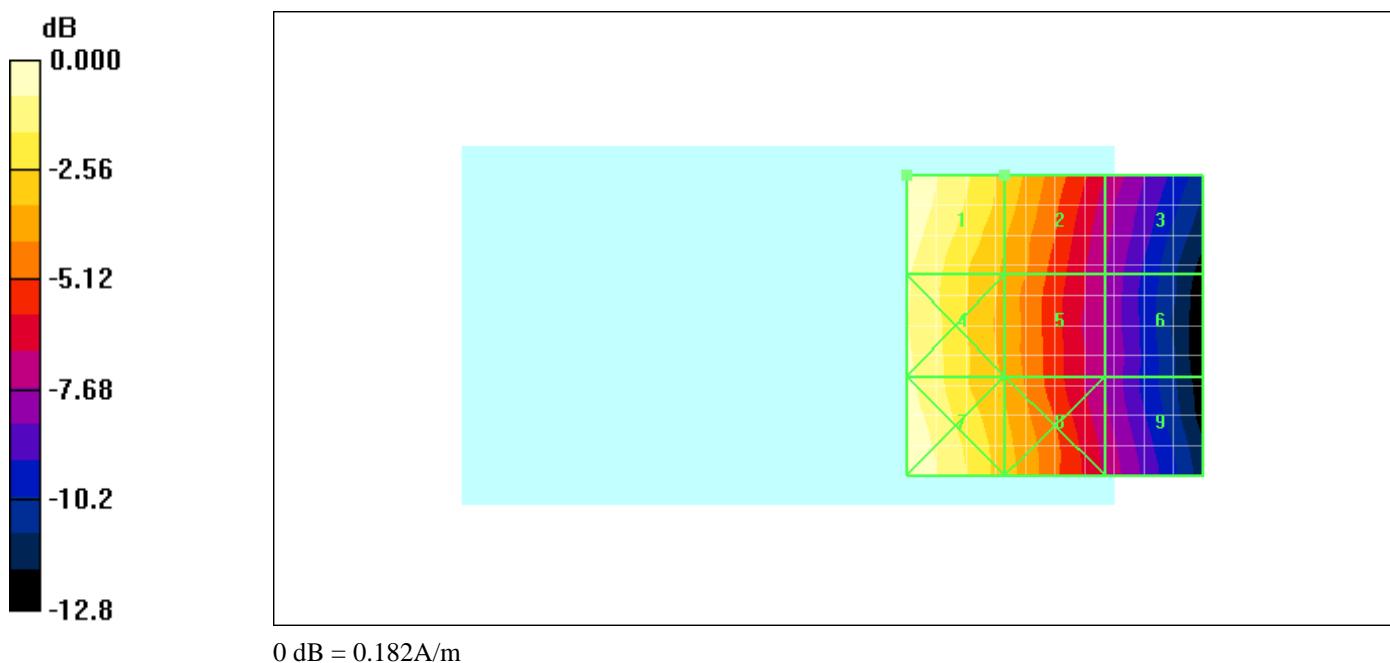
Grid 1 0.182 M4	Grid 2 0.131 M4	Grid 3 0.083 M4
Grid 4 0.168 M4	Grid 5 0.121 M4	Grid 6 0.075 M4
Grid 7 0.181 M4	Grid 8 0.128 M4	Grid 9 0.082 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

67 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 68 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 9:21:19 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_800_mid_chan_T_Coil_Center

DUT: BlackBerry Smartphone

Communication System: CDMA 800; Frequency: 836.52 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.109 A/m; Power Drift = 0.039 dB

Maximum value of Total (measured) = 0.195 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 69 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 0.197 A/m

Probe Modulation Factor = 1.01

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.109 A/m; Power Drift = 0.039 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.197 M4	0.140 M4	0.090 M4
Grid 4	Grid 5	Grid 6
0.193 M4	0.136 M4	0.084 M4
Grid 7	Grid 8	Grid 9
0.186 M4	0.129 M4	0.078 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

70 (85)Author Data
Daoud Attayi

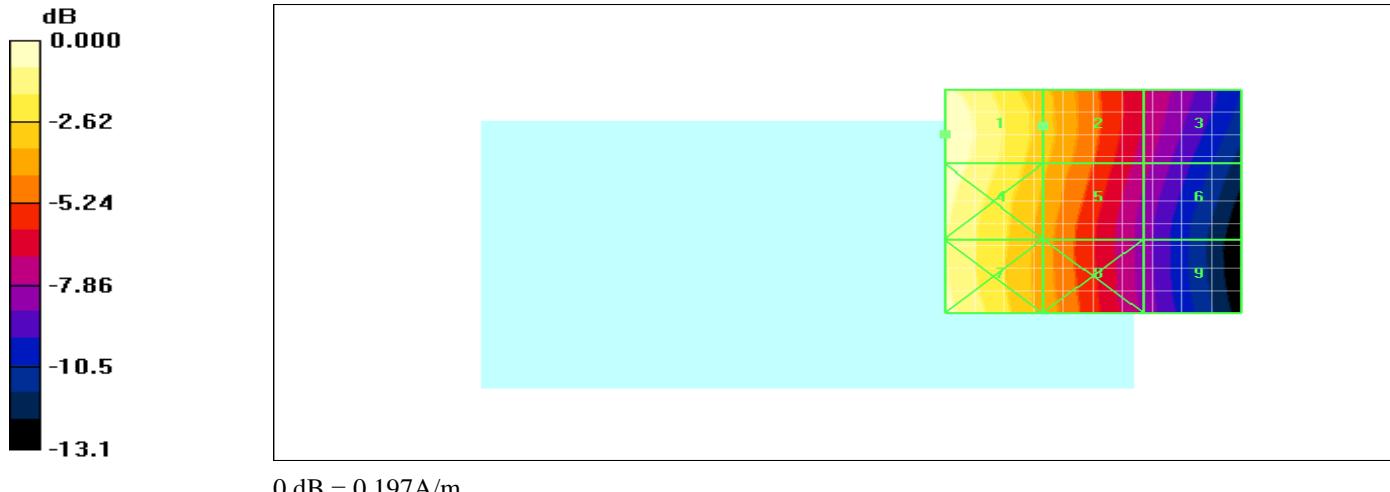
Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

 Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW		Page 71 (85)	
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW

Date/Time: 6/9/2010 9:38:39 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_1900_low_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.138 A/m; Power Drift = 0.062 dB

Maximum value of Total (measured) = 0.147 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 72 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 0.127 A/m

Probe Modulation Factor = 0.960

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.138 A/m; Power Drift = 0.062 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.141 M4	0.116 M4	0.099 M4
Grid 4	Grid 5	Grid 6
0.122 M4	0.126 M4	0.122 M4
Grid 7	Grid 8	Grid 9
0.124 M4	0.127 M4	0.123 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

73 (85)

Author Data
Daoud Attayi

Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 74 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 9:44:48 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_1900_mid_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.108 A/m; Power Drift = 0.142 dB

Maximum value of Total (measured) = 0.105 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 75 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 0.101 A/m

Probe Modulation Factor = 0.960

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.108 A/m; Power Drift = 0.142 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

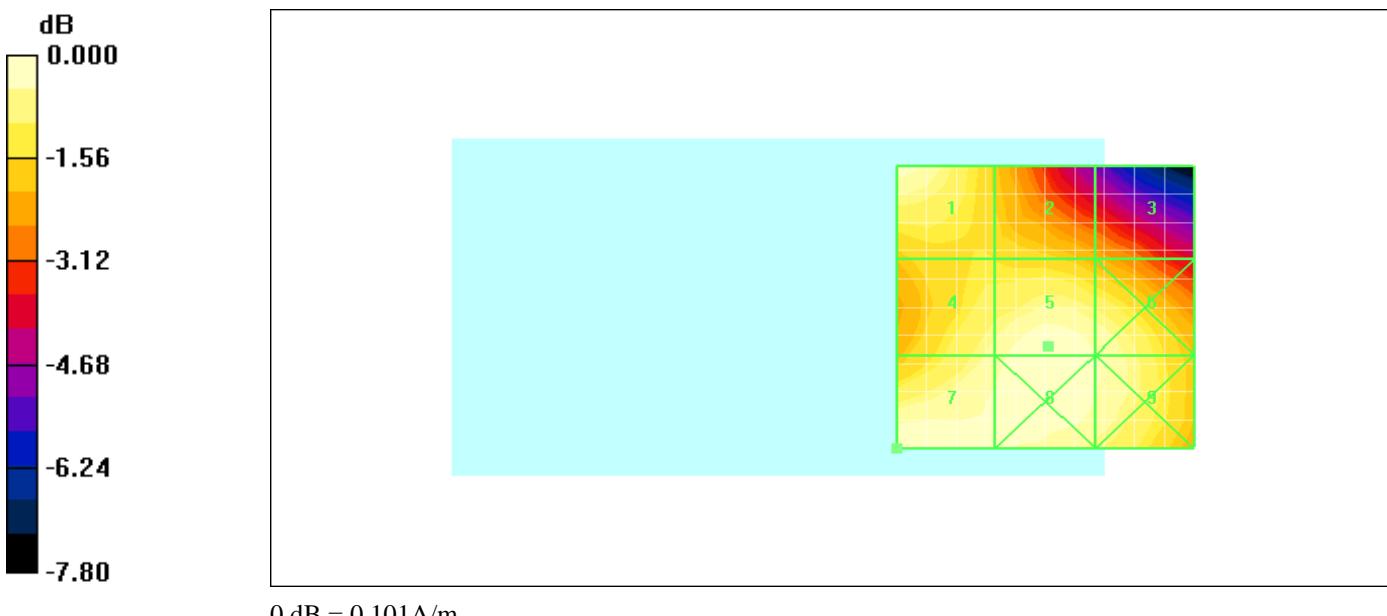
Grid 1	Grid 2	Grid 3
0.097 M4	0.084 M4	0.078 M4
Grid 4	Grid 5	Grid 6
0.093 M4	0.098 M4	0.095 M4
Grid 7	Grid 8	Grid 9
0.101 M4	0.099 M4	0.096 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

76 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 77 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 9:55:31 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_1900_high_chan

DUT: BlackBerry Smartphone

Communication System: CDMA 1900; Frequency: 1908.5 MHz; Duty Cycle: 1:1

Medium parameters used: $\sigma = 0 \text{ mho/m}$, $\epsilon_r = 1$; $\rho = 1 \text{ kg/m}^3$

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.100 A/m; Power Drift = 0.016 dB

Maximum value of Total (measured) = 0.102 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 78 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 0.098 A/m

Probe Modulation Factor = 0.960

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.100 A/m; Power Drift = 0.016 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

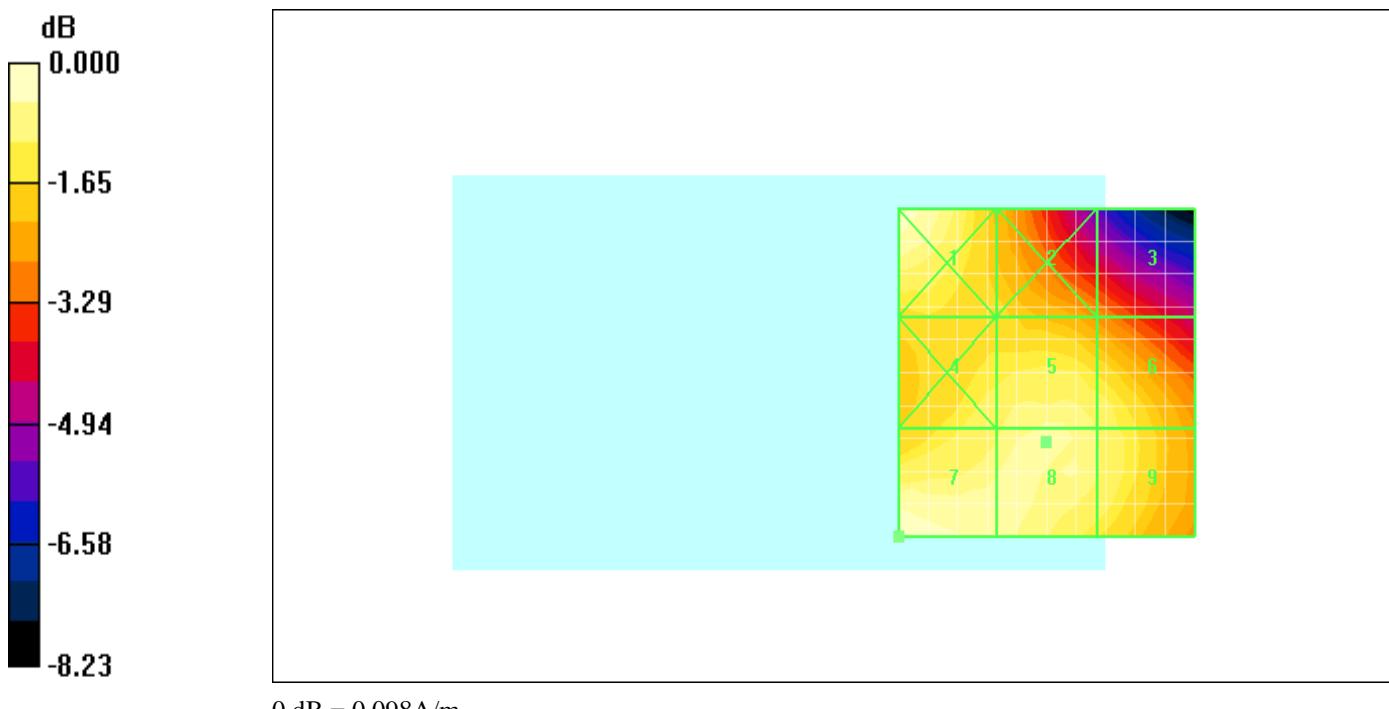
Grid 1	Grid 2	Grid 3
0.094 M4	0.079 M4	0.071 M4
Grid 4	Grid 5	Grid 6
0.086 M4	0.090 M4	0.086 M4
Grid 7	Grid 8	Grid 9
0.098 M4	0.091 M4	0.087 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

79 (85)Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 80 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 10:02:55 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_1900_low_chan_one_eighth

DUT: BlackBerry Smartphone

Communication System: CDMA 1900 1/8th; Frequency: 1851.25 MHz; Duty

Cycle: 1:8.3

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid:

dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.050 A/m; Power Drift = 0.024 dB

Maximum value of Total (measured) = 0.057 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the

Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid:

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW			Page 81 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64	FCC ID L6ARCL20CW	

dx=5mm, dy=5mm

Maximum value of peak Total field = 0.124 A/m

Probe Modulation Factor = 2.32

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.050 A/m; Power Drift = 0.024 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1 0.134 M4	Grid 2 0.113 M4	Grid 3 0.085 M4
Grid 4 0.117 M4	Grid 5 0.121 M4	Grid 6 0.110 M4
Grid 7 0.122 M4	Grid 8 0.124 M4	Grid 9 0.120 M4

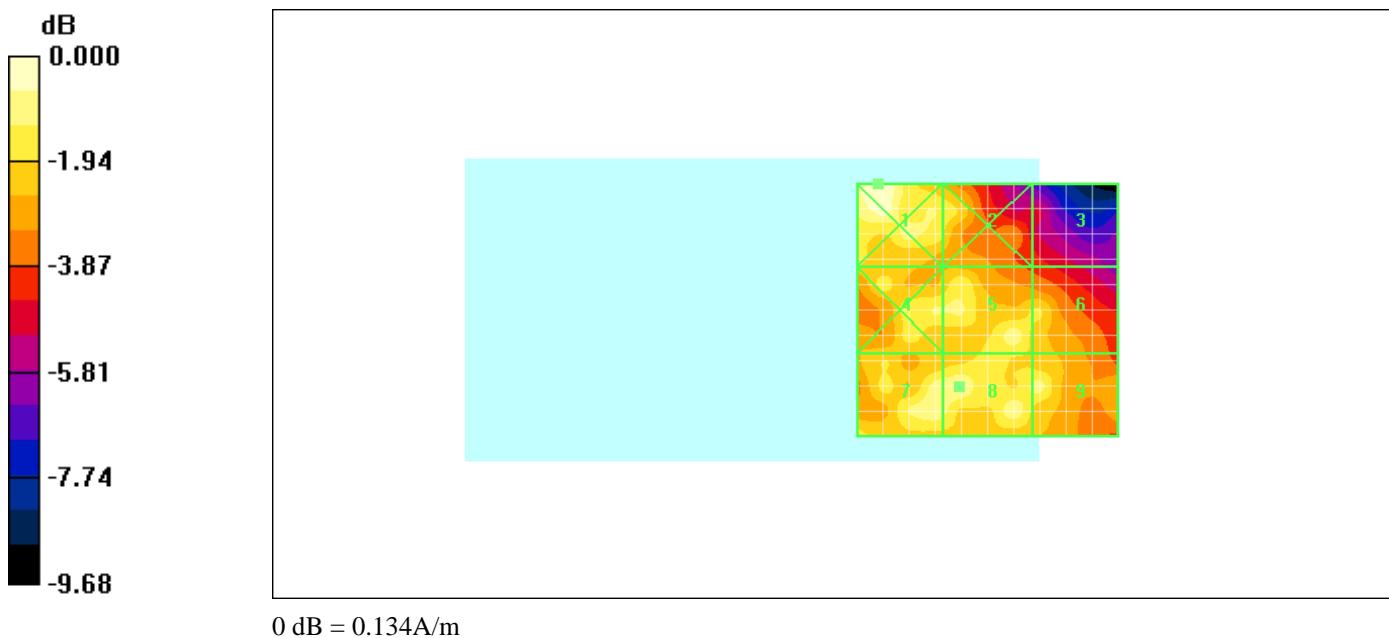


Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

82 (85)

Author Data
Daoud AttayiDates of Test
June 07-09, 2010Report No
RTS-2068-1006-64FCC ID
L6ARCL20CW

 <p>Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW</p>		Page 83 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Date/Time: 6/9/2010 10:10:07 PM

Test Laboratory: RIM Testing Services

HAC_H_CDMA_1900_low_chan_T_Coil_Center

DUT: BlackBerry Smartphone

Communication System: CDMA 1900; Frequency: 1851.25 MHz; Duty Cycle: 1:1

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

Phantom section: RF Section

DASY4 Configuration:

- Probe: H3DV6 - SN6168; ; Calibrated: 3/12/2010
- Sensor-Surface: 0mm (Fix Surface)Sensor-Surface: (Fix Surface)
- Electronics: DAE3 Sn473; Calibrated: 1/4/2010
- Phantom: HAC RF Test Arch with AMCC; Type: SD HAC P01 BA;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (11x11x1): Measurement grid: dx=5mm, dy=5mm

Probe Modulation Factor = 1.00

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.139 A/m; Power Drift = 0.017 dB

Maximum value of Total (measured) = 0.144 A/m

H Scan - H3DV6 - 2007: 15 mm from Probe Center to the Device/Hearing Aid Compatibility Test (101x101x1): Measurement grid: dx=5mm, dy=5mm

	Document Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW	Page 84 (85)
Author Data Daoud Attayi	Dates of Test June 07-09, 2010	Report No RTS-2068-1006-64

Maximum value of peak Total field = 0.127 A/m

Probe Modulation Factor = 0.960

Device Reference Point: 0.000, 0.000, -6.30 mm

Reference Value = 0.139 A/m; Power Drift = 0.017 dB

Hearing Aid Near-Field Category: M4 (AWF 0 dB)

Peak H-field in A/m

Grid 1	Grid 2	Grid 3
0.139 M4	0.108 M4	0.076 M4
Grid 4	Grid 5	Grid 6
0.129 M4	0.118 M4	0.108 M4
Grid 7	Grid 8	Grid 9
0.124 M4	0.127 M4	0.119 M4



Document

Annex A to Hearing Aid Compatibility RF Emissions Test Report for the BlackBerry® Smartphone model RCL22CW

Page

85 (85)Author Data
Daoud Attayi

Dates of Test

June 07-09, 2010

Report No

RTS-2068-1006-64

FCC ID

L6ARCL20CW