EMI Test Report

Tested in accordance with
Federal Communications Commission (FCC)
Personal Communications Services
CFR 47, Parts 15, Subpart B
&
Industry Canada (IC), ICES-003



A division of Research In Motion Limited

REPORT NO.: RTS-2337-1008-40

PRODUCT MODEL NO.: RDG71UW

TYPE NAME: BlackBerry® smartphone

FCC ID: L6ARDG70UW IC: 2503A-RDG70UW

DATE: August 18, 2010

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Testing Services™	EMI Test Report for the BlackBerry® smartphone Model RDG71UW	
Test Report No.	Dates of Test	FCC ID: L6ARDG70UW
RTS-2337-1008-40	July 28 to August 19, 2010	IC: 2503A-RDG70UW

Statement of Performance:

The BlackBerry® smartphone, model RDG71UW, part number CER-33874-001 Rev. 1 and accessories when configured and operated per RIM's operation instructions, and performs within the requirements of the test standards.

Declaration:

We hereby certify that:

The test data reported herein is an accurate record of the performance of the sample(s) tested.

The test results are valid for the tested unit (s) only.

The test equipment used was suitable for the tests performed and within manufacturer's published specifications and operating parameters.

The test methods were consistent with the methods described in the relevant standards.

Documented by:

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Regulatory Compliance Associate

Idan Resirch

Date: August 18, 2010

Reviewed by:

Michael Cino

Regulatory Compliance Associate

Date: August 20, 2010

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Manager, Regulatory Compliance

Date: August 23, 2010

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A. Scope

This report details the results of compliance tests that were performed in accordance with the requirements of:

- FCC CFR 47 Part 15, Subpart B, October 01, 2009 Class B Digital Devices, Unintentional Radiators
- IC ICES-003 Issue 4, February 2004, Class B Digital Devices, Unintentional Radiators

B. Associated Documents

None.

C. Product Identification

Manufactured by Research In Motion Limited whose headquarters is located at:

295 Phillip Street

Waterloo, Ontario

Canada, N2L 3W8

Phone: 519 888 7465 Fax: 519 888 6906

The equipment under test (EUT) was tested at the following locations:

RIM Testing Services EMI test facilities

 305 Phillip Street
 440 Phillip Street

 Waterloo, Ontario
 Waterloo, Ontario

 Canada, N2L 3W8
 Canada, N2L 5R9

 Phone: 519 888 7465
 Phone: 519 888 7465

 Fax: 519 888 6906
 Fax: 519 888 6906

The testing was performed from July 28 to August 19, 2010.

The sample EUT included:

SAMPLE	MODEL	CER NUMBER	PIN	Software
1	RDG71UW	CER-33874-001 Rev 1	229CD442	V6.0.0.129 (Platform 6.4.0.59) Bundle 259
2	RDG71UW	CER-33874-001 Rev 1	229CD443	V6.0.0.129 (Platform 6.4.0.59) Bundle 259

AC Conducted Testing was preformed on sample 1.

Radiated Emissions Testing was performed on sample 2.

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BlackBerry® smartphone Accessories Tested

- 1) Folding Blade Charger, part number HDW-17955-001 with an output voltage of 5.0 volts dc, 700 mA and attached USB cable with a lead length of 1.80 metres.
- 2) Captive Cable Charger, part number HDW-17957-003 with an output voltage of 5.0 volts dc, 700 mA and attached USB cable with a lead length of 1.80 metres.
- 3) Fixed Blade Charger, part number HDW-24481-001 (Model Number: RIM-C-0004ADUUS-001), with an output voltage of 5.0 volts dc.
- 4) Alternate Fixed Blade Charger, part number HDW-24481-001 (Model Number: PSM04A-050QRIM), with an output voltage of 5.0 volts dc.
- Charging POD HDW-24476-001 (Model Number: VP-09500102)
- 6) BlackBerry[®] Visor Mount(NA), part number HDW-23438-001.
- 7) Stereo Headset, part number HDW-14322-003 with a lead length of 1.3 metres.
- 8) Alternate Stereo Headset, part number HDW-24529-001, with a lead length of 1.1m.
- 9) Premium Stereo Headset, part number HDW-15766-005, 1.3 metres long.
- 10) USB Data Cable, part number HDW-06610-009, 1.00 metres long.
- 11) USB Data Cable, part number HDW-06610-003, 1.20 metres long.
- 12) USB Data Cable, part number HDW-06610-005, 1.50 metres long.
- 13) Bluetooth Headset, part number HDW-23439-001.

D. Support Equipment Used for the Testing of the EUT

1) IBM Thinkpad Lenovo T60p laptop, type 8742-C2U, product ID 8742C2U

E. Summary of Results

SPECIFICATION		TEST TYPF	Meets	Test Data
FCC CFR 47	IC	TEST TITE	Requirement	APPENDIX
Part 15, Subpart B	ICES-003	Conducted AC Line Emission	Yes	1
Part 15, Subpart B	ICES-003	Radiated Unintentional Spurious Emissions	Yes	2

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a) AC CONDUCTED EMISSIONS

The conducted emissions were measured using the test procedure outlined in CISPR Recommendation 22 through a 50 Ohm Line Impedance Stabilization Network (LISN), which was inserted in the power line to the equipment to provide the specified impedance for measurements. The EUT was placed on a nonconductive wooden table, 80 cm high that was positioned 40 cm from a vertical ground plane. The RF output of the network was connected to an EMI receiver system with characteristics that duplicate those of the receiver specified in CISPR Publication 16. BlackBerry® smartphone was in battery charging mode. The input voltage was 120 V, 60 Hz.

The following test configurations were measured:

Test Configuration	Operating Mode(s)	Charger + Accessories
1	GSM 850 Idle, Audio Playback	Folding Blade Charger + Stereo Headset
2	GSM1900 Idle, Video Playback	Fixed Blade Charger + 1.2m USB Cable+ POD + Bluetooth Headset
3	BT Tx, Audio Playback	Alternate Fixed Blade Charger + 1.2m USB Cable + Premium Stereo Headset
4	802.11b Tx	Captive Cable Charger + POD + Alternate Stereo Headset
5	UMTS II Idle, Audio Playback	Alternate Fixed Blade Charger + 1.0m USB Cable + POD + Alternate Stereo Headset

The sample EUT's conducted emissions were compared with respect to the FCC CFR 47 Part 15, Subpart B, and IC ICES-003, Class B limit. The sample EUT had a worst case emission level of 62.10 dB μ V or margin of 3.18 dB below the QP limit at 0.164 MHz using the quasi-peak detector, in Test Configuration 5.

Measurement Uncertainty ±3.0 dB

To view the test data/plots, see APPENDIX 1.

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b) RADIATED EMISSIONS

The radiated emissions from the EUT were measured using the methods outlined in CISPR Recommendation 22. The EUT was placed on a nonconductive styrofoam table, 80 cm high that was positioned on a remote controlled turntable. The test distance used between the EUT and the receiving antenna was three metres. The turntable was rotated to determine the azimuth of the peak emissions. Then the emissions were maximized by elevating the antenna in the range of 1 to 4 metres. The maximum emission level was recorded. The frequency range measured was from 30 MHz to 5.0 GHz. Both the horizontal and vertical polarizations of the emissions were measured.

The measurements were done in a semi-anechoic chamber. The FCC registration number is **778487** and the Industry Canada(IC) file number is **2503B-1**. The EUT was configured and operated to produce the maximum radiated emissions while still keeping within RIM's specifications.

The BlackBerry[®] smartphone was in battery charging mode for all configurations. The ac input voltage was 120V, 60Hz.

The following test configurations were measured:

Test Configuration	Operating Mode(s)	Charger + Accessories
1	GSM 850 Idle	Captive Cable Charger + Stereo Headset
2	GSM 850 Idle	Fixed Blade Charger + 1.5m USB Cable + Stereo Headset
3	UMTS II Idle + Audio playback	Alternate Fixed Blade Charger + 1.2m USB Cable + Alternate Stereo Headset
4	PCS 1900 Idle + High Speed USB	Laptop + 1.0m USB Cable + Visor Mount
5	Bluetooth Tx	Folding Blade Charger + Premium Stereo Headset
6	802.11b Tx, Audio Playback	Fixed Blade Charger + Premium Stereo Headset

The system's radiated emission levels were compared with respect to the FCC CFR 47 Part 15, Subpart B, and IC ICES-003, Class B limit.

The system met the requirements with a worst case emission level of 34.17 dB μ V/m, or 5.83 dB margin below the limit, at 71.900 MHz in Test Configuration 4.

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Sample Calculation:

Field Strength (dBµV/m) is calculated as follows:

 $FS = Measured Level (dB\mu V) + A.F. (dB/m) + Cable Loss (dB) - Preamp (dB) + Filter Loss (dB)$

Measurement Uncertainty ±4.6 dB

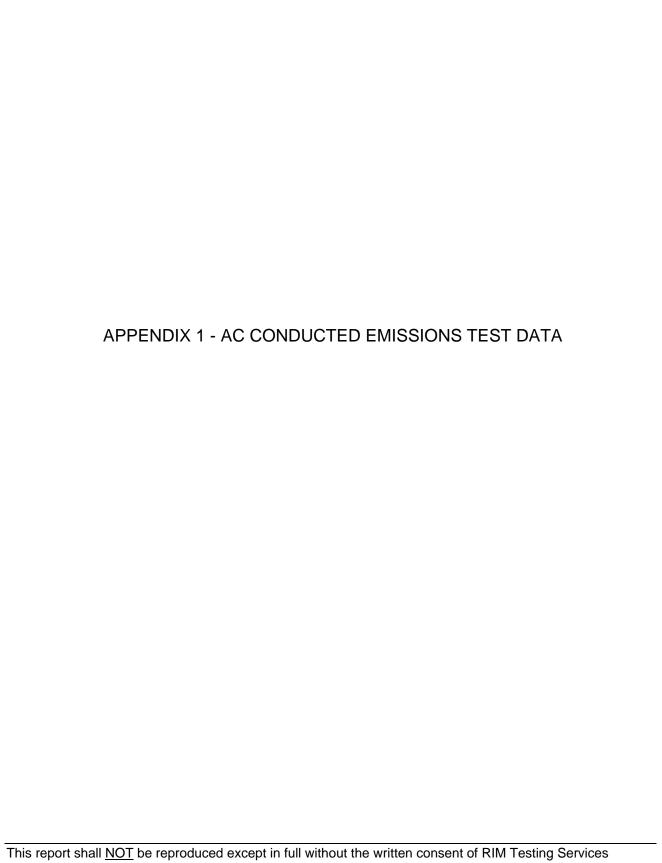
To view the test data see APPENDIX 2.

F. Compliance Test Equipment Used

<u>UNIT</u>	MANUFACTURER	MODEL	<u>SERIAL</u> <u>NUMBER</u>	CAL DUE DATE (YY MM DD)	USE
Preamplifier	Sonoma	310N/11909A	185831	10-11-14	Radiated Emissions
Preamplifier system	TDK RF Solutions	PA-02	080010	10-11-06	Radiated Emissions
EMC Analyzer	Rohde & Schwarz	ESIB 40	3942A00517	10-11-30	Radiated Emissions
Digital Multimeter	Hewlett Packard	34401A	US36042324	10-10-08	Conducted/Radiated Emissions
Environment Monitor	Control Company	1870	230355190	11-01-08	Radiated Emissions
Environment Monitor	Control Company	1870	80117164	11-01-08	Conducted/Radiated Emissions
L.I.S.N.	Rohde & Schwarz	ENV216	100060	10-12-11	Conducted Emissions
Hybrid Log Antenna	EMC Automation	HLP-3003C	017401	10-09-11	Radiated Emissions
Horn Antenna	EMC Automation	HRN-0118	030101	11-03-12	Radiated Emissions
Universal Radio Communication Tester	Rohde & Schwarz	CMU 200	837493/073	10-11-30	Radiated Emissions
Universal Radio Communication Tester	Rohde & Schwarz	CMU 200	112394	10-11-30	Radiated/Conducted Emissions
EMI Test Receiver	Rohde & Schwarz	ESU 40	100162	10-11-29	Radiated/Conducted Emissions
Bluetooth Tester	Rohde & Schwarz	СВТ	100368	10-11-26	Radiated Emissions
Bluetooth Tester	Rohde & Schwarz	СВТ	100370	10-11-30	Radiated/Conducted Emissions

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AC Conducted Emissions Test Results

The following tests were performed by Savtej Sandhu

Test Configuration: 1

Date of the test: August 03, 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 974 mb Humidity: 31 %

Frequency	Line	Reading (QP)	Correction Factor	Corrected Reading (QP)	Limit (QP)	Limit (AV)	Margin (QP) Limits
(MHz)		(dBµV)	(dB)	(dBµV)	(dBµV)	(dBµV)	(dB)
0.168	L1	37.90	11.08	48.98	65.06	55.06	-16.08
0.177	L1	38.03	11.02	49.05	64.63	54.63	-15.58
0.177	Ν	38.73	11.05	49.77	64.63	54.63	-14.85
0.227	Ν	34.11	10.69	44.80	62.58	52.58	-17.78
0.240	Ν	33.38	10.60	43.98	62.10	52.10	-18.12
0.267	L1	31.54	10.39	41.93	61.21	51.21	-19.28
0.276	L1	30.80	10.33	41.13	60.94	50.94	-19.81
0.308	L1	27.98	10.15	38.13	60.04	50.04	-21.90
0.326	Ν	29.15	10.14	39.29	59.57	49.57	-20.28
0.362	L1	25.09	10.07	35.16	58.69	48.69	-23.53
0.416	Ν	26.05	10.00	36.04	57.54	47.54	-21.49
0.420	L1	23.39	9.98	33.37	57.45	47.45	-24.08
0.425	N	23.90	9.98	33.88	57.36	47.36	-23.48
0.452	L1	28.33	9.94	38.27	56.85	46.85	-18.58
0.461	L1	26.38	9.93	36.31	56.68	46.68	-20.38
0.510	N	21.10	9.91	31.01	56.00	46.00	-24.99
1.635	L1	23.11	9.81	32.92	56.00	46.00	-23.08

All other emission levels had test margins greater than 25 dB.

Measurements were done with the quasi-peak detector.

See figure 1-1 and figure 1-2 for the measurement plot of the L1 and N lines of AC power line conducted emissions.

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AC Conducted Emissions Test Graphs

Test Configuration: 1

Figure 1-1: L1 lines

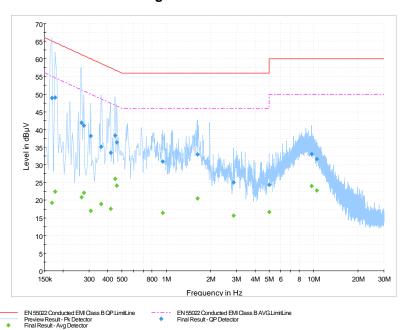
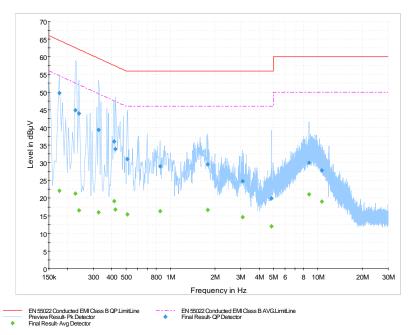


Figure 1-2: N Lines



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AC Conducted Emissions Test Results cont'd

Test Configuration: 2

Date of the test: August 03, 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 974 mb Humidity: 31 %

Frequency	Line	Reading (QP)	Correction Factor	Corrected Reading (QP)	Limit (QP)	Limit (AV)	Margin (QP) Limits
(MHz)		(dBµV)	(dB)	(dBµV)	(dBµV)	(dBµV)	(dB)
0.155	Ν	31.58	11.20	42.78	65.75	55.75	-22.98
0.164	L1	38.99	11.11	50.10	65.28	55.28	-15.18
0.164	Ν	31.11	11.14	42.25	65.28	55.28	-23.04
0.173	N	31.26	11.08	42.34	64.84	54.84	-22.50
0.285	L1	26.83	10.26	37.09	60.67	50.67	-23.58
0.339	L1	29.67	10.10	39.77	59.23	49.23	-19.45
0.402	L1	28.67	10.01	38.68	57.81	47.81	-19.14
0.614	L1	24.32	9.85	34.17	56.00	46.00	-21.83
0.753	L1	22.18	9.82	32.00	56.00	46.00	-24.00
2.094	L1	22.04	9.83	31.87	56.00	46.00	-24.13
2.279	L1	22.54	9.84	32.38	56.00	46.00	-23.62
3.008	L1	21.63	9.87	31.50	56.00	46.00	-24.50
3.845	L1	22.60	9.90	32.49	56.00	46.00	-23.51
4.569	Ν	21.67	9.91	31.59	56.00	46.00	-24.42

All other emission levels had test margins greater than 25 dB.

Measurements were done with the quasi-peak detector.

See figure 1-3 and figure 1-4 for the measurement plot of the L1 and N lines of AC power line conducted emissions.

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AC Conducted Emissions Test Graphs

Test Configuration: 2

Figure 1-3: L1 lines

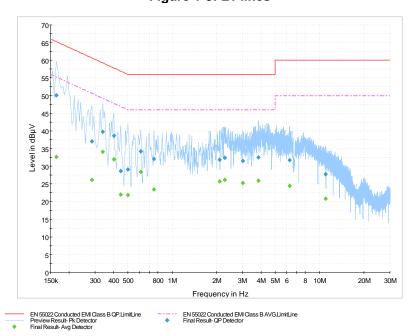
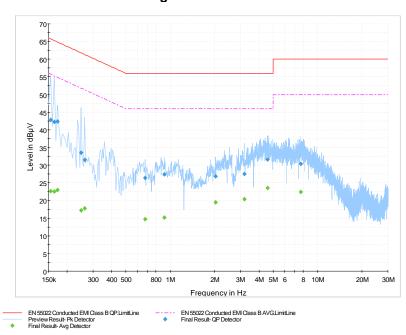


Figure 1-4: N Lines



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AC Conducted Emissions Test Results cont'd

Test Configuration: 3

Date of the test: August 03, 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 974 mb Humidity: 31 %

Frequency	Line	Reading (QP)	Correction Factor	Corrected Reading (QP)	Limit (QP)	Limit (AV)	Margin (QP) Limits
(MHz)		(dBµV)	(dB)	(dBµV)	(dBµV)	(dBµV)	(dB)
0.155	L1	49.08	11.17	60.25	65.75	55.75	-5.50
0.164	N	43.94	11.14	55.08	65.28	55.28	-10.21
0.227	Ζ	39.08	10.69	49.78	62.58	52.58	-12.80
0.254	L1	41.39	10.48	51.88	61.64	51.64	-9.76
0.326	L1	36.56	10.12	46.68	59.57	49.57	-12.88
0.326	Ν	31.08	10.14	41.22	59.57	49.57	-18.34
0.339	L1	31.00	10.10	41.10	59.23	49.23	-18.12
0.384	L1	25.35	10.04	35.39	58.19	48.19	-22.80
0.425	L1	23.70	9.97	33.67	57.36	47.36	-23.69
0.452	L1	28.00	9.94	37.93	56.85	46.85	-18.92
0.596	Ν	33.22	9.87	43.09	56.00	46.00	-12.91
0.600	L1	34.07	9.86	43.93	56.00	46.00	-12.07
0.902	Ν	24.97	9.81	34.79	56.00	46.00	-21.22
0.996	L1	27.07	9.80	36.87	56.00	46.00	-19.13
1.329	L1	26.77	9.80	36.57	56.00	46.00	-19.43
1.496	N	23.73	9.81	33.54	56.00	46.00	-22.46
2.157	L1	24.53	9.83	34.36	56.00	46.00	-21.64
3.782	L1	23.34	9.90	33.24	56.00	46.00	-22.76
9.294	N	26.36	9.98	36.34	60.00	50.00	-23.66
10.280	L1	29.06	9.97	39.03	60.00	50.00	-20.97
11.333	N	26.53	10.00	36.53	60.00	50.00	-23.47
13.443	L1	29.58	10.07	39.65	60.00	50.00	-20.36

All other emission levels had test margins greater than 25 dB.

Measurements were done with the quasi-peak detector.

See figure 1-5 and figure 1-6 for the measurement plot of the L1 and N lines of AC power line conducted emissions.

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AC Conducted Emissions Test Graphs

Test Configuration: 3

Figure 1-5: L1 lines

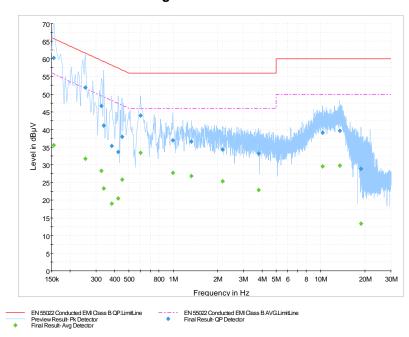
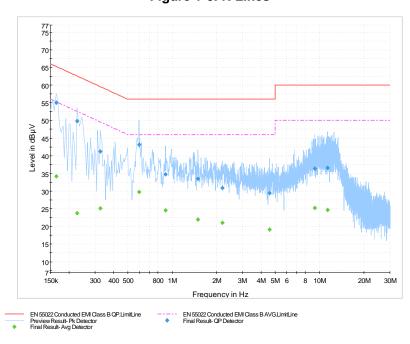


Figure 1-6: N Lines



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AC Conducted Emissions Test Results cont'd

Test Configuration: 4

Date of the test: August 03, 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 974 mb Humidity: 31 %

Frequency	Line	Reading (QP)	Correction Factor	Corrected Reading (QP)	Limit (QP)	Limit (AV)	Margin (QP) Limits
(MHz)		(dBµV)	(dB)	(dBµV)	(dBµV)	(dBµV)	(dB)
0.164	Ν	36.66	11.14	47.80	65.28	55.28	-17.48
0.173	L1	35.23	11.05	46.28	64.84	54.84	-18.56
0.177	Ν	34.13	11.05	45.18	64.63	54.63	-19.45
0.182	L1	34.93	10.99	45.91	64.42	54.42	-18.51
0.191	Ν	33.51	10.95	44.46	64.01	54.01	-19.55
0.195	L1	33.39	10.89	44.28	63.82	53.82	-19.54
0.227	L1	30.36	10.67	41.03	62.58	52.58	-21.55
0.240	L1	29.98	10.58	40.56	62.10	52.10	-21.54
0.249	L1	29.38	10.51	39.90	61.79	51.79	-21.89
0.276	Ν	27.75	10.34	38.09	60.94	50.94	-22.84
0.285	Ν	26.82	10.28	37.10	60.67	50.67	-23.57
0.425	Ν	27.21	9.98	37.19	57.36	47.36	-20.17
0.434	Ν	29.22	9.97	39.19	57.19	47.19	-18.00
0.452	L1	29.28	9.94	39.21	56.85	46.85	-17.63
0.888	L1	25.39	9.81	35.20	56.00	46.00	-20.80
0.906	N	22.21	9.81	32.02	56.00	46.00	-23.98

All other emission levels had test margins greater than 25 dB.

Measurements were done with the quasi-peak detector.

See figure 1-7 and figure 1-8 for the measurement plot of the L1 and N lines of AC power line conducted emissions.

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AC Conducted Emissions Test Results

Test Configuration: 4 cont'd

Frequency	Line	Reading (QP)	Correction Factor	Corrected Reading (QP)	Limit (QP)	Limit (AV)	Margin (QP) Limits
(MHz)		(dBµV)	(dB)	(dBµV)	(dBµV)	(dBµV)	(dB)
1.185	L1	26.83	9.80	36.63	56.00	46.00	-19.37
1.226	Ν	22.97	9.80	32.77	56.00	46.00	-23.23
1.293	L1	28.56	9.80	38.36	56.00	46.00	-17.64
1.586	Ν	25.47	9.81	35.28	56.00	46.00	-20.72
1.811	L1	29.53	9.82	39.34	56.00	46.00	-16.66
1.847	Ν	25.62	9.82	35.44	56.00	46.00	-20.56
2.067	Ν	26.77	9.83	36.61	56.00	46.00	-19.40
2.090	L1	28.98	9.83	38.80	56.00	46.00	-17.20
2.252	Ν	26.02	9.84	35.86	56.00	46.00	-20.14
2.603	L1	32.51	9.86	42.37	56.00	46.00	-13.63
2.643	Ν	26.63	9.86	36.49	56.00	46.00	-19.51
3.705	Ν	24.79	9.90	34.68	56.00	46.00	-21.32
3.741	L1	28.90	9.89	38.80	56.00	46.00	-17.20
7.859	L1	29.96	9.98	39.94	60.00	50.00	-20.06
10.541	L1	28.33	9.97	38.30	60.00	50.00	-21.70

All other emission levels had test margins greater than 25 dB.

Measurements were done with the quasi-peak detector.

See figure 1-7 and figure 1-8 for the measurement plot of the L1 and N lines of AC power line conducted emissions.

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AC Conducted Emissions Test Graphs

Test Configuration: 4

Figure 1-7: L1 lines

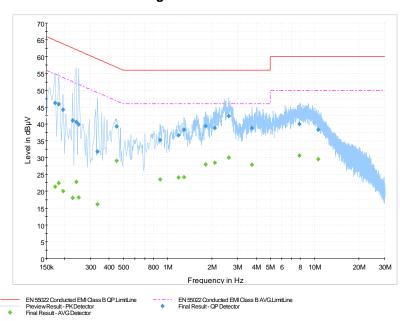
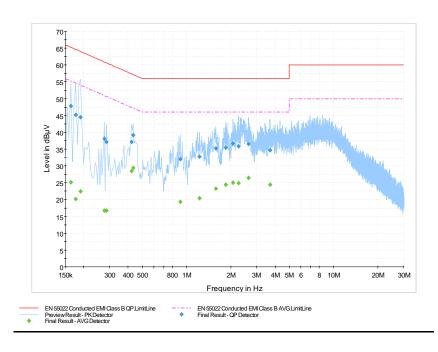


Figure 1-8: N Lines



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Testing Services™	EMI Test Report for the BlackBerry® smartphone Model RDG71 APPENDIX 1		
Test Report No.	Dates of Test	FCC ID: L6ARDG70UW	
RTS-2337-1008-40	July 28 to August 19, 2010	IC: 2503A-RDG70UW	

AC Conducted Emissions Test Results cont'd

Test Configuration: 5

Date of the test: August 03, 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 974 mb Humidity: 31 %

		Reading (QP)	Correction	Corrected	Limit (QP)	Limit (AV)	Margin (QP)
Freq uency	Line	(WF)	Factor	Reading (QP)	(QF)	(AV)	Limits
(MHz)		(dBµV)	(dB)	(dBµV)	(dBµV)	(dBµV)	(dB)
0.159	N	44.76	11.17	55.93	65.52	55.52	-9.58
0.164	L1	50.99	11.11	62.10	65.28	55.28	-3.18
0.218	L1	47.65	10.73	58.39	62.91	52.91	-4.53
0.236	Ν	36.50	10.63	47.13	62.25	52.25	-15.13
0.245	Ν	38.01	10.57	48.58	61.94	51.94	-13.36
0.294	L1	41.03	10.20	51.23	60.41	50.41	-9.18
0.321	Ν	32.04	10.14	42.19	59.68	49.68	-17.49
0.330	L1	34.16	10.12	44.28	59.45	49.45	-15.17
0.371	L1	32.78	10.06	42.83	58.49	48.49	-15.66
0.411	L1	28.53	9.99	38.52	57.63	47.63	-19.11
0.443	L1	30.38	9.95	40.33	57.01	47.01	-16.68
0.456	L1	26.20	9.93	36.14	56.77	46.77	-20.63
0.492	L1	27.58	9.91	37.49	56.13	46.13	-18.64
0.582	L1	34.16	9.86	44.02	56.00	46.00	-11.98
0.587	N	34.61	9.87	44.48	56.00	46.00	-11.52
0.735	N	29.97	9.83	39.80	56.00	46.00	-16.20

All other emission levels had test margins greater than 25 dB.

Measurements were done with the quasi-peak detector.

See figure 1-7 and figure 1-8 for the measurement plot of the L1 and N lines of AC power line conducted emissions.

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Testing Services™	EMI Test Report for the BlackBerry® APPEND	•
Test Report No.	Dates of Test	FCC ID: L6ARDG70UW
RTS-2337-1008-40	July 28 to August 19, 2010	IC: 2503A-RDG70UW

AC Conducted Emissions Test Results

Test Configuration: 5 cont'd

Frequency	Line	Reading (QP)	Correction Factor	Corrected Reading (QP)	Limit (QP)	Limit (AV)	Margin (QP) Limits
(MHz)		(dBµV)	(dB)	(dBµV)	(dBµV)	(dBµV)	(dB)
0.978	L1	26.28	9.80	36.08	56.00	46.00	-19.92
1.068	Ν	29.85	9.81	39.66	56.00	46.00	-16.34
1.307	L1	25.84	9.80	35.65	56.00	46.00	-20.36
1.338	Ν	24.88	9.81	34.68	56.00	46.00	-21.32
2.360	L1	24.53	9.84	34.37	56.00	46.00	-21.63
2.720	Ν	23.69	9.87	33.56	56.00	46.00	-22.44
4.407	Ν	21.45	9.91	31.35	56.00	46.00	-24.65
4.673	L1	25.07	9.90	34.97	56.00	46.00	-21.03
9.789	L1	30.19	9.97	40.16	60.00	50.00	-19.84
10.037	N	27.79	9.98	37.76	60.00	50.00	-22.24
10.487	Ν	25.83	9.98	35.80	60.00	50.00	-24.20
13.430	L1	27.87	10.07	37.94	60.00	50.00	-22.06

All other emission levels had test margins greater than 25 dB.

Measurements were done with the quasi-peak detector.

See figure 1-7 and figure 1-8 for the measurement plot of the L1 and N lines of AC power line conducted emissions.

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AC Conducted Emissions Test Graphs

Test Configuration: 5

Figure 1-9: L1 lines

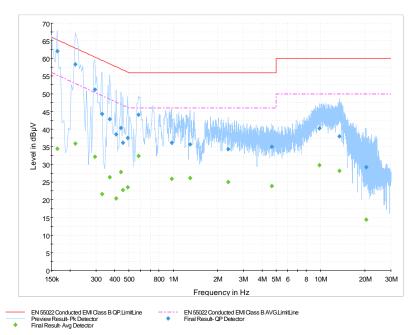
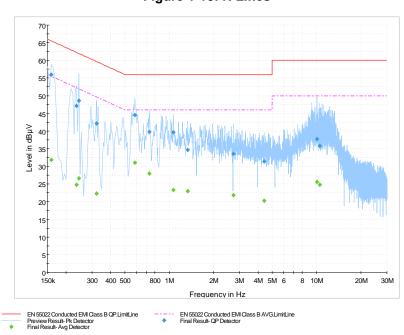
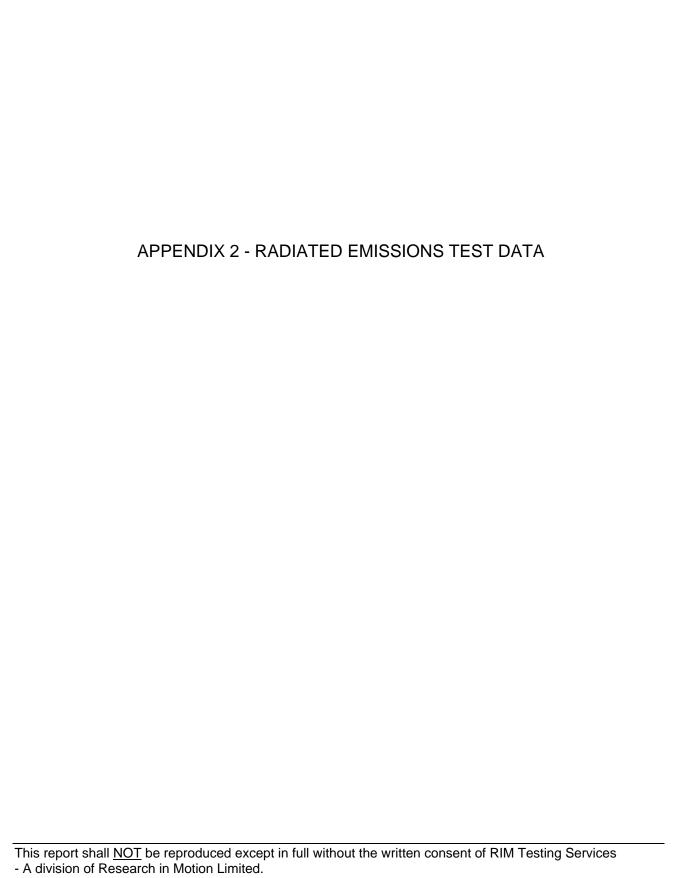


Figure 1-10: N Lines



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Testing Services™	EMI Test Report for the BlackBerry® smartphone Model RDG71UV APPENDIX 2						
Test Report No. RTS-2337-1008-40	1 1 00 (1 1 0 00 10	FCC ID: L6ARDG70UW IC: 2503A-RDG70UW					

Radiated Emissions Test Results

The following test were performed by Kevin Rose

Test Configuration: 1

Date of the test: July 28, 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 1003 mb Humidity: 32 %

	Ar	ntenna	Test	Datastan	Measured	Correction Factor for	Field Strength	Limit @	Test
Frequency	Pol.	Height	Angle	(Q.P. or	Level (dBµV)	preamp/ antenna / cables/ filter	Level (reading +corr)	3.0 m	Margin
(MHz)	(V/H)	(metres)	(Deg.)	Peak)		(dB/m)	(dBµV/m)	(dBµV/m)	(dB)
133.550	Н	1.82	349.00	Q.P.	39.71	-19.10	20.61	43.50	-22.89
222.750	V	1.42	354.00	Q.P.	39.77	-17.32	22.45	46.00	-23.55
257.900	V	1.44	240.00	Q.P.	39.93	-16.02	23.91	46.00	-22.09
412.750	Н	1.76	191.00	Q.P.	38.75	-10.89	27.86	46.00	-18.14
438.400	V	2.05	106.00	Q.P.	32.00	-10.46	21.54	46.00	-24.46

All other emission levels had test margins greater than 25 dB.

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Testing	EMI Test Report for the BlackBerry® smartphone Model RDG71L						
Services™	APPENDIX 2						
Test Report No. RTS-2337-1008-40	1 1 00 1 1 1 10 00 10	FCC ID: L6ARDG70UW IC: 2503A-RDG70UW					

Test Configuration: 2

Date of the test: July 28, 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 1003 mb Humidity: 32 %

	Ar	ntenna	Test		Measured	Correction Factor for	Field Strength	Limit @	Test
Frequency	Pol.	Height	Angle	Detector (Q.P. or	Level	preamp/ antenna/ cables/ filter	Level (reading +corr)	3.0 m	Margin
(MHz)	(V/H)	(metres)	(Deg.)	Peak)	(αΒμν)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)
33.600	V	1.42	273.00	Q.P.	47.11	-19.56	27.55	40.00	-12.45
38.300	V	1.43	192.00	Q.P.	47.46	-20.81	26.65	40.00	-13.35
50.400	V	1.45	107.00	Q.P.	46.49	-22.88	23.61	40.00	-16.39
86.750	V	1.42	307.00	Q.P.	39.01	-20.71	18.30	40.00	-21.70
206.350	Н	1.62	126.00	Q.P.	41.26	-15.42	25.84	43.50	-17.66
260.200	Н	1.13	36.00	Q.P.	41.32	-15.76	25.56	46.00	-20.44
321.250	V	1.56	202.00	Q.P.	37.49	-13.02	24.47	46.00	-21.53
All other e	missio	on levels l	nad test m	argins gre	eater than 25	5 dB.		·	·

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Testing	EMI Test Report for the BlackBerry® smartphone Model RDG71L						
Services™	APPENDIX 2						
Test Report No. RTS-2337-1008-40	1 1 00 1 1 1 10 00 10	FCC ID: L6ARDG70UW IC: 2503A-RDG70UW					

Test Configuration: 3

Date of the test: July 28, 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 1003 mb Humidity: 32 %

Eroguenev	Ar	ntenna	Test	Detector	Measured	Correction Factor for	Field Strength	Limit @	Test
Frequency	Pol.	Height	Angle	(Q.P. or	Level (dBµV)	preamp/ antenna/ cables/ filter	Level (reading +corr)	3.0 m	Margin
(MHz)	(V/H)	(metres)	(Deg.)	Peak)	(αυμν)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)
3758.00									
0	Н	1.91	191.00	Q.P.	45.91	10.15	56.06	74.00	-17.94
3758.00									
0	V	2.70	194.00	Q.P.	45.01	10.15	55.16	74.00	-18.84
All other emission levels had test margins greater than 25 dB.									

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Testing Services™	EMI Test Report for the BlackBerry® smartphone Model RDG71UV APPENDIX 2					
Test Report No. RTS-2337-1008-40	1 1 00 4 4 4 4 0 0 4 0	FCC ID: L6ARDG70UW IC: 2503A-RDG70UW				

Test Configuration: 4

Date of the test: July 29 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 1004 mb Humidity: 32 %

	Ar	ntenna	Test	Detector	Measured	Correction Factor for	Field Strength	Limit @	Test
Frequency	Pol.	Height	Angle	Detector (Q.P. or	Level (dBµV)	preamp/ antenna/ cables/ filter	Level (reading +corr)	3.0 m	Margin
(MHz)	(V/H)	(metres)	(Deg.)	Peak)	(αΒμν)	(dB/m)	(dBµV/m)	(dBµV/m)	(dB)
71.850	Н	1.89	264.00	Q.P.	55.14	-22.00	33.14	40.00	-6.86
71.900	Н	1.90	240.00	Q.P.	56.16	-21.99	34.17	40.00	-5.83
71.900	V	1.43	258.00	Q.P.	39.64	-21.99	17.65	40.00	-22.35
183.850	Н	1.06	36.00	Q.P.	41.27	-18.70	22.57	43.50	-20.93
244.600	Н	1.61	87.00	Q.P.	43.16	-17.03	26.13	46.00	-19.87
299.850	Н	1.13	112.00	Q.P.	40.70	-14.64	26.06	46.00	-19.94
366.250	V	2.52	354.00	Q.P.	36.34	-12.81	23.53	46.00	-22.47
432.000	V	1.61	30.00	Q.P.	40.29	-10.76	29.53	46.00	-16.47
528.000	Н	1.71	199.00	Q.P.	37.80	-8.44	29.36	46.00	-16.64
All other e	missio	on levels l	nad test m	argins gre	eater than 25	5 dB.	·	·	

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Testing Services™	EMI Test Report for the BlackBerry® smartphone Model RDG71UV APPENDIX 2					
Test Report No. RTS-2337-1008-40	1 1 00 4 4 4 4 0 0 4 0	FCC ID: L6ARDG70UW IC: 2503A-RDG70UW				

Test Configuration: 5

Date of the test: July 29 2010

The environmental conditions were: Temperature: 24 °C

Pressure: 1004 mb Humidity: 32 %

Frequency	Antenna		Test	Toet	Measured	Correction Factor for	Field Strength	Limit @	Test
	Pol.	Height	Angle	(Q.P. or Peak)	Level	preamp/ antenna/ cables/ filter (dB/m)	Level (reading +corr)	3.0 m	Margin
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
40.750	V	1.55	308.00	Q.P.	49.81	-21.33	28.48	40.00	-11.52
51.500	V	1.62	103.00	Q.P.	50.66	-22.94	27.72	40.00	-12.28
84.300	V	1.40	332.00	Q.P.	45.20	-20.85	24.35	40.00	-15.65
121.800	Н	3.08	332.00	Q.P.	48.17	-18.58	29.59	43.50	-13.91
124.200	Н	3.11	354.00	Q.P.	44.17	-18.69	25.48	43.50	-18.02
199.100	Н	1.77	328.00	Q.P.	44.18	-15.99	28.19	43.50	-15.31
210.600	Н	1.35	354.00	Q.P.	41.53	-15.73	25.80	43.50	-17.70
250.600	Н	1.34	168.00	Q.P.	42.48	-16.67	25.81	46.00	-20.19
250.650	Н	1.44	167.00	Q.P.	44.13	-16.67	27.46	46.00	-18.54
344.150	V	1.87	111.00	Q.P.	34.79	-10.33	24.46	46.00	-21.54
352.250	V	1.63	104.00	Q.P.	35.82	-11.42	24.40	46.00	-21.60
474.400	V	1.40	246.00	Q.P.	33.25	-9.58	23.67	46.00	-22.33
All other emission levels had test margins greater than 25 dB.									

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Testing Services™	EMI Test Report for the BlackBerry® smartphone Model RDG71UW APPENDIX 2				
Test Report No. RTS-2337-1008-40	1 1 00 4 4 4 4 0 0 4 0	FCC ID: L6ARDG70UW IC: 2503A-RDG70UW			

Test Configuration: 6

Date of the test: August 19 2010 The environmental conditions were: Temperature: 24 °C

Pressure: 1004 mb Humidity: 32 %

Frequency	Antenna		Test		Measured	Correction Factor for	Field Strength	Limit @	Test
	Pol.	Height	Angle	(Q.P. or Peak)	Level (dBµV)	preamp/ antenna/ cables/ filter (dB/m)	Level (reading +corr)	3.0 m	Margin
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
45.850	V	1.44	206.00	Q.P.	50.85	-22.25	28.60	40.00	-11.40
210.800	V	1.40	265.00	Q.P.	42.19	-15.74	26.45	43.50	-17.05
362.500	V	1.63	353.00	Q.P.	35.68	-12.79	22.89	46.00	-23.11
825.650	Н	1.38	155.00	Q.P.	23.02	-3.21	19.81	46.00	-26.19
All other emission levels had test margins greater than 25 dB.									

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