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-2068-0909-24

PRODUCT MODEL NO.: RCL21CW
TYPE NAME: BlackBerry® smartphone
FCC ID: L6ARCL20CW
IC: 2503A-RCL20CW

DATE: 17 September, 2009

Statement of Performance:

The BlackBerry® smartphone, model RCL21CW, part number CER-27171-001 Rev 2, and accessories perform within the requirements of the test standards when configured and operated RIM's instructions.

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:

Kevin Rose
Regulatory Compliance Specialist
Date: September 17, 2009

Reviewed by:

Michael Cino
Regulatory Compliance Intern
Date: 7 October, 2009

Reviewed and Approved by:

Masud S. Attayi, P.Eng.
Manager, Regulatory Compliance
Date: 7 October, 2009

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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 1, 2008, Class B Digital Devices, Unintentional Radiators
- IC ICES-003 Issue 4, February, 2004, Class B Digital Devices, Unintentional Radiators

B. Associated Document

1. 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
Waterloo, Ontario
Canada, N2L 3W8
Phone: 519 888 7465
Fax: 519 888 6906

440 Phillip Street
Waterloo, Ontario
Canada, N2L 5R9
Phone: 519 888 7465
Fax: 519 888 6906

The testing was performed from August 28 to September 10, 2009.

The sample EUT included:

SAMPLE	MODEL	CER NUMBER	PIN
1	RCL21CW	CER-27171-001 Rev 1	30D9ECAC
2	RCL21CW	CER-27171-001 Rev 1	30D9EABA
3	RCL21CW	CER-27171-001 Rev 1	30D9EBA0
4	RCL21CW	CER-27171-001 Rev 1	30D9E9CF

Conducted Emissions testing was performed on samples 2 and 4.
Radiated Emissions testing was performed on samples 1 and 3.

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-25966-001, with an output voltage of 5.0 volts dc.
4) Bluetooth Headset, part number HDW-23439-001.
5) M-S1 Series External Battery Charger, (EBC), part number HDW-12738-001.
6) BlackBerry® Remote Stereo Gateway, part number HDW-16007-001.
7) USB Y-Cable, part number HDW-19137-002, lead lengths of 26 cm and 11 cm.
8) Stereo Headset, part number HDW-14322-003 with a lead length of 1.3 metres.
9) Premium Stereo Headset, part number HDW-15766-005, 1.3 metres long.
10) USB Data Cable, part number HDW-06610-013, 0.30 metres long.
11) USB Data Cable, part number HDW-06610-009, 1.00 metres long.
12) USB Data Cable, part number HDW-06610-005, 1.50 metres long.
13) Visor Mount, part number HDW-23438-001.
14) USB Mini-to-Micro Adapter, part number HDW-26160-002

D. Support Equipment Used for the Testing of the EUT

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

E. Summary of Results

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

a) CONDUCTED AC LINE 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, PIN 30D9EABA and 30D9E9CF was in battery charging mode. The input voltage was 120 V, 60 Hz.

The following test configurations were measured:

1. The BlackBerry® smartphone, PIN 30D9EABA with the Premium Stereo Headset attached, was in CDMA CELL idle mode. The EBC was connected in parallel to the smartphone using a Mini-to-Micro USB Adapter and a USB Y-Cable. The USB Y-Cable was connected to the Captive Cable Charger (CCC).

2. The BlackBerry® smartphone, PIN 30D9EABA with the Stereo Headset attached, was in CDMA PCS idle mode and was connected to the CCC.

3. The BlackBerry® smartphone, PIN 30D9EABA while communicating with the Bluetooth Headset, was in CDMA CELL idle mode and connected to the CCC.

4. The BlackBerry® smartphone, PIN 30D9E9CF with the Stereo Headset attached, was in CDMA CELL idle mode and connected to the CCC. The mini to micro adapter is installed between the CCC and the EBC. The 0.3m USB cable goes from the External Battery Charger (EBC) to the BlackBerry® smartphone

5. The BlackBerry® smartphone, PIN 30D9EABA with the Premium Stereo Headset attached, was in Bluetooth Tx mode. The EBC was connected in parallel to the smartphone using a Mini-to-Micro USB Adapter and a USB Y-Cable. The USB Y-Cable was connected to the Folding Blade Charger (FBC).

6. The BlackBerry® smartphone, PIN 30D9EABA, was in CDMA PCS Tx mode and connected to the FBC.

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 test margin of 6.85 dB below the QP limit at 2.364 MHz using the quasi-peak detector, test configuration 6.

Measurement Uncertainty ±3.0 dB
To view the test data/plots, see APPENDIX 1.

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 Radiated measurements were done in a semi-anechoic chamber (SAC). The FCC registration number is **778487** and the IC file number is **2503B-1**. The EUT was measured on the low, middle and high channels.

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:

1. The BlackBerry® smartphone, PIN 30D9ECAC was in CDMA CELL idle mode, Continuous Audio Playback mode and communicating with the Bluetooth Headset.

2. The BlackBerry® smartphone, PIN 30D9ECAC was in CDMA CELL idle mode, High Speed USB mode, and connected to the Laptop via the 1.5m USB Cable.

3. The BlackBerry® smartphone, PIN 30D9ECAC was in CDMA CELL idle mode. The EBC was connected in parallel to the smartphone using a Mini-to-Micro USB Adapter and a USB Y-Cable. The USB Y-Cable was connected to the FBC.

4. The BlackBerry® smartphone, PIN 30D9ECAC with the Premium Stereo Headset attached, was in CDMA PCS idle mode and Continuous Audio Playback mode and connected to the CCC.

5. The BlackBerry® smartphone, PIN 30D9ECAC was in CDMA CELL, call was idle, in charging mode using a FBC. A Visor Mount was attached, audio is loopback during the test

6. The BlackBerry® smartphone, PIN 30D9ECAC, was in CDMA CELL idle mode, High Speed USB mode, and connected to the Laptop via the 1.0m USB Cable.

7. The BlackBerry® smartphone, PIN 30D9ECAC with the Stereo Headset attached, was in Bluetooth TX mode, Continuous Audio Playback mode, and connected to the FBC.

8. The BlackBerry® smartphone, PIN 30D9EBA0 with the Stereo Headset attached, was in 802.11b idle mode and Continuous Audio Playback mode. The EBC was connected in parallel to the smartphone using a Mini-to-Micro USB Adapter and a USB Y-Cable. The USB Y-Cable was connected to the CCC.

The sample EUT's radiated 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 test margin of 2.16 dB below the QP limit at 216.3 MHz using the quasi-peak detector, test configuration 6.

Sample Calculation:

Field Strength (dBµV/m) is calculated as follows:
FS = Measured Level (dBµV) + 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

UNIT	MANUFACTURER	MODEL	SERIAL NUMBER	CAL DUE DATE (YY MM DD)	USE
Preamplifier	Sonoma	310N/11909A	185831	09-11-07	Radiated Emissions
Preamplifier system	TDK RF Solutions	PA-02	080010	09-11-07	Radiated Emissions
EMC Analyzer	Agilent	E7405A	US40240226	09-11-17	Radiated Emissions
Digital Multimeter	Hewlett Packard	34401A	US36042324	09-10-03	Conducted/Radiated Emissions
Environment Monitor	Control Company	1870	230355190	10-01-30	Radiated Emissions
Environment Monitor	Control Company	1870	80117164	10-01-08	Conducted/Radiated Emissions
L.I.S.N.	Rohde & Schwarz	ENV216	100060	10-04-21	Conducted Emissions
Hybrid Log Antenna	EMC Automation	HLP-3003C	017401	10-09-26	Radiated Emissions
Horn Antenna	EMC Automation	HRN-0118	030101	10-07-22	Radiated Emissions
Universal Radio Communication Tester	Rohde & Schwarz	CMU 200	837493/073	09-12-08	Radiated Emissions
Universal Radio Communication Tester	Rohde & Schwarz	CMU 200	112394	09-12-08	Radiated/Conducted Emissions
EMI Test Receiver	Rohde & Schwarz	ESIB 40	100255	09-12-03	Radiated/Conducted Emissions
Bluetooth Tester	Rohde & Schwarz	CBT	100368	09-12-09	Radiated Emissions
Bluetooth Tester	Rohde & Schwarz	CBT	100370	09-12-09	Radiated/Conducted Emissions

APPENDIX 1 - AC LINE CONDUCTED EMISSIONS TEST DATA

AC Conducted Emissions Test Results
Test Configuration 1

The measurements were performed by Steven Wang.

The BlackBerry® smartphone PIN 30D9EABA was tested on September 03, 2009.

The environmental test conditions were: Temperature: 26 ºC
Pressure: 1026 mb
Relative Humidity: 22 %

Frequency (MHz)	Line	Reading (QP) (dBµV)	Correction Factor (dB)	Corrected Reading (QP) (dB)	Limit (QP) (dBµV)	Limit (AV) (dBµV)	Margin (QP) Limits (dB)
0.182	L1	36.05	9.78	45.83	64.42	54.42	-18.59
0.263	L1	31.00	9.85	40.85	61.35	51.35	-20.50
0.389	L1	27.88	9.76	37.64	58.10	48.10	-20.46
0.501	L1	23.53	9.66	33.20	56.00	46.00	-22.81
0.632	N	21.56	9.82	31.38	56.00	46.00	-24.62
3.507	L1	21.77	9.61	31.38	56.00	46.00	-24.62
9.182	L1	27.20	9.80	37.00	60.00	50.00	-23.00

All other emission levels had a test margin of 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.

AC Conducted Emissions Test Graphs

Test Configuration 1

Figure 1-1: L1 lines

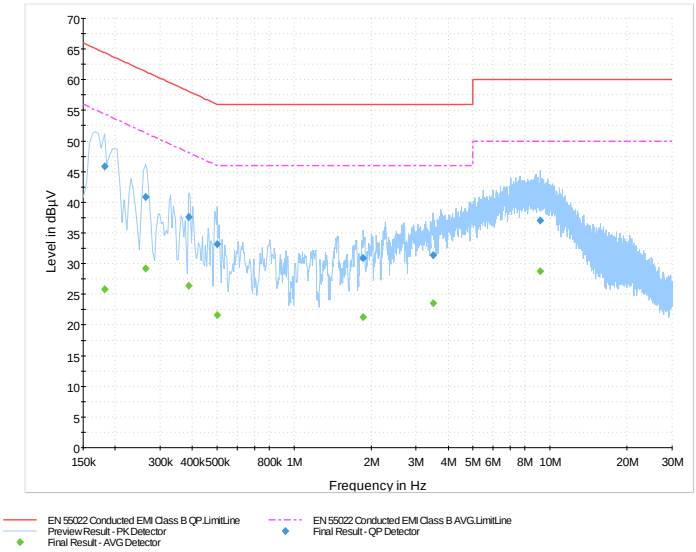
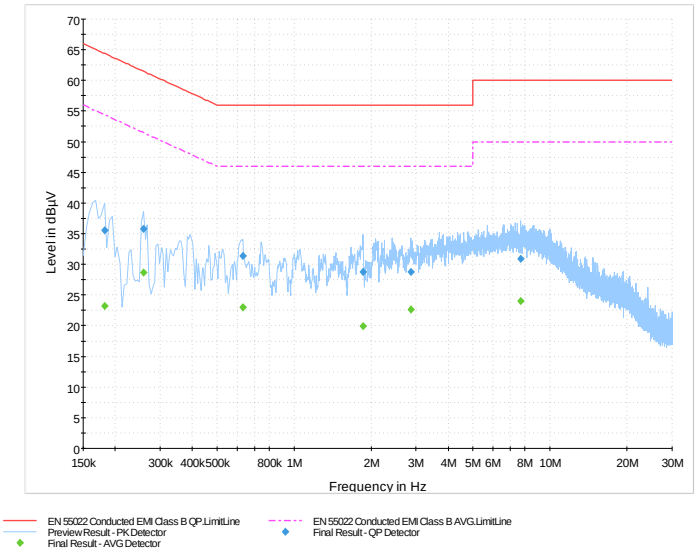


Figure 1-2: N Lines



AC Conducted Emissions Test Results
Test Configuration 2

The measurements were performed by Steven Wang.

The BlackBerry® smartphone PIN 30D9EABA was tested on September 03, 2009.

The environmental test conditions were: Temperature: 26 ºC
Pressure: 1026 mb
Relative Humidity : 22 %

Frequency (MHz)	Line	Reading (QP) (dBµV)	Correction Factor (dB)	Corrected Reading (QP) (dB)	Limit (QP) (dBµV)	Limit (AV) (dBµV)	Margin (QP) Limits (dB)
0.168	L1	35.31	9.94	45.26	65.06	55.06	-19.80
0.164	N	39.86	10.00	49.87	65.28	55.28	-15.42
0.429	L1	24.53	9.73	34.26	57.27	47.27	-23.01
0.884	N	24.79	9.70	34.49	56.00	46.00	-21.51
0.992	L1	30.70	9.52	40.22	56.00	46.00	-15.79
1.937	N	27.57	9.62	37.19	56.00	46.00	-18.81
2.193	L1	30.26	9.55	39.82	56.00	46.00	-16.18
3.399	N	26.49	9.61	36.10	56.00	46.00	-19.90
3.750	L1	29.17	9.63	38.80	56.00	46.00	-17.20
7.985	N	29.44	9.62	39.06	60.00	50.00	-20.94
8.795	L1	32.45	9.79	42.24	60.00	50.00	-17.76

All other emission levels had a test margin of 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.

AC Conducted Emissions Test Graphs

Test Configuration 2

Figure 1-3: L1 lines

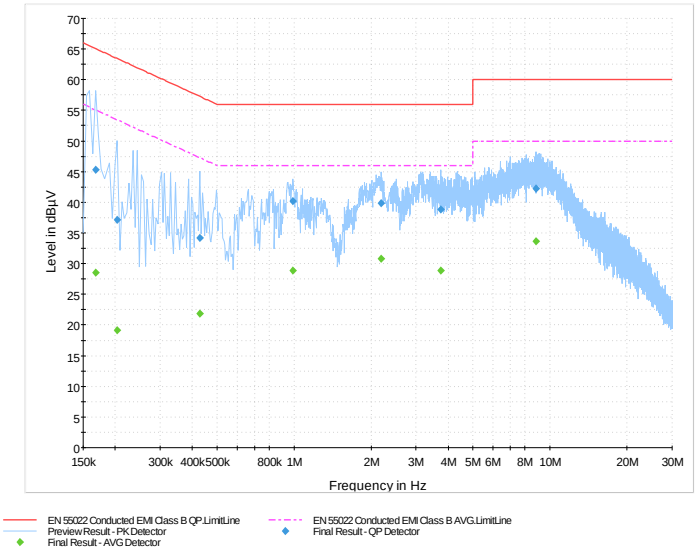
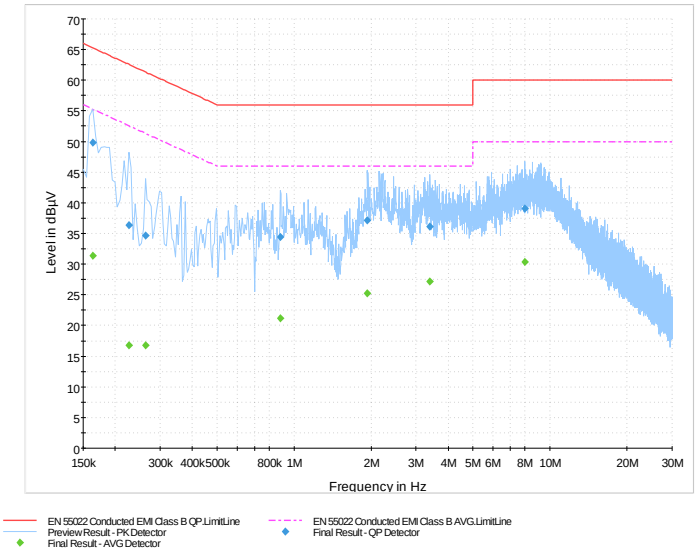


Figure 1-4: N Lines



AC Conducted Emissions Test Results
Test Configuration 3

The measurements were performed by Steven Wang.

The BlackBerry® smartphone PIN 30D9EABA was tested on September 03, 2009.

The environmental test conditions were: Temperature: 26 ºC
Pressure: 1026 mb
Relative Humidity: 22 %

Frequency (MHz)	Line	Reading (QP) (dBµV)	Correction Factor (dB)	Corrected Reading (QP) (dB)	Limit (QP) (dBµV)	Limit (AV) (dBµV)	Margin (QP) Limits (dB)
0.173	L1	39.38	9.88	49.26	64.84	54.84	-15.58
0.177	N	36.66	10.05	46.72	64.63	54.63	-17.91
0.249	N	27.47	9.81	37.28	61.79	51.79	-24.51
0.317	L1	27.01	9.80	36.81	59.80	49.80	-22.99
0.501	N	25.40	9.88	35.29	56.00	46.00	-20.71
0.956	L1	32.23	9.52	41.75	56.00	46.00	-14.25
1.050	N	22.47	9.64	32.11	56.00	46.00	-23.89
2.085	N	24.48	9.62	34.09	56.00	46.00	-21.91
2.112	L1	32.76	9.55	42.31	56.00	46.00	-13.69
3.219	N	24.52	9.61	34.13	56.00	46.00	-21.87
4.407	L1	31.60	9.64	41.24	56.00	46.00	-14.77
4.412	N	23.93	9.59	33.52	56.00	46.00	-22.48
7.688	N	26.43	9.62	36.05	60.00	50.00	-23.95
9.582	L1	33.66	9.81	43.47	60.00	50.00	-16.53

All other emission levels had a test margin of 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.

AC Conducted Emissions Test Graphs

Test Configuration 3

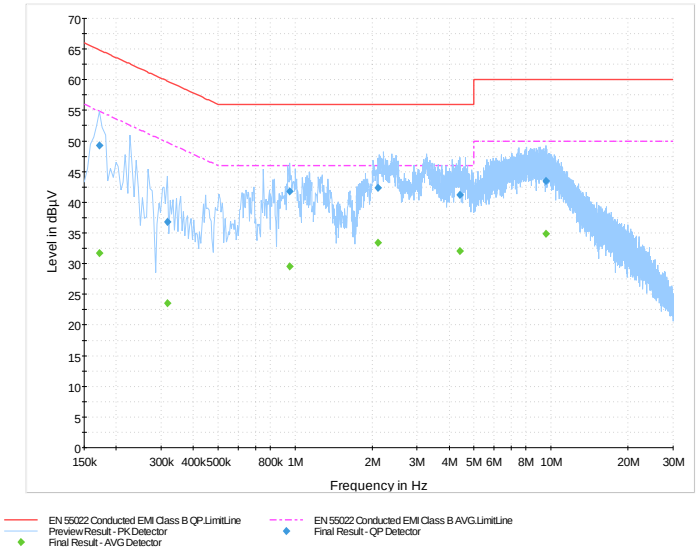


Figure 1-5: L1 lines

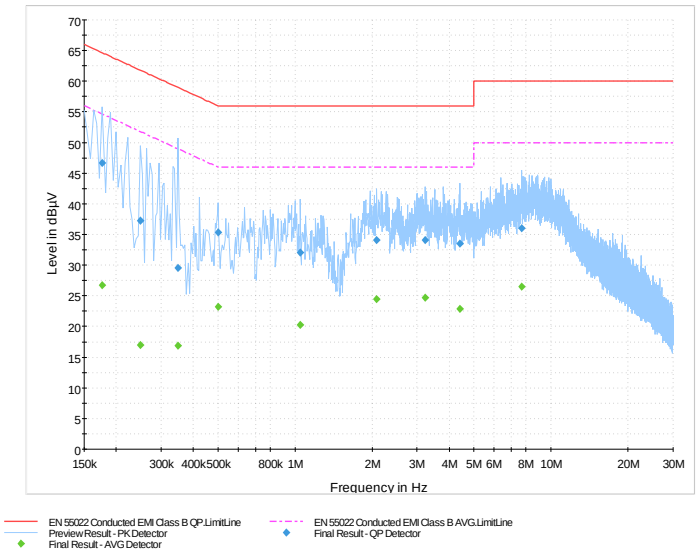


Figure 1-6: N Lines

AC Conducted Emissions Test Results
Test Configuration 4

The measurements were performed by Steven Wang.

The BlackBerry® smartphone PIN 30D9E9CF was tested on September 03, 2009.

The environmental test conditions were: Temperature: 26 ºC
Pressure: 1026 mb
Relative Humidity: 22 %

Frequency (MHz)	Line	Reading (QP) (dBµV)	Correction Factor (dB)	Corrected Reading (QP) (dB)	Limit (QP) (dBµV)	Limit (AV) (dBµV)	Margin (QP) Limits (dB)
0.182	N	29.35	10.04	39.39	64.42	54.42	-25.02
0.245	L1	30.63	9.87	40.50	61.94	51.94	-21.44
0.299	L1	28.32	9.83	38.14	60.28	50.28	-22.14
0.384	L1	28.00	9.76	37.77	58.19	48.19	-20.43

All other emission levels had a test margin of 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.

AC Conducted Emissions Test Graphs

Test Configuration 4

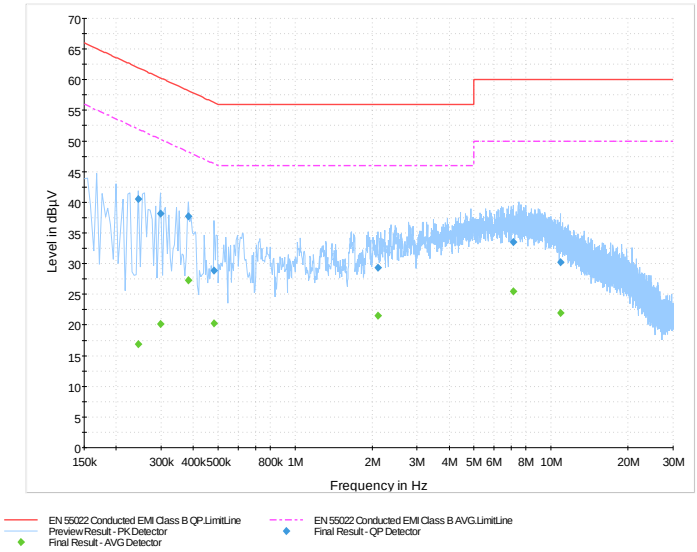


Figure 1-7: L1 lines

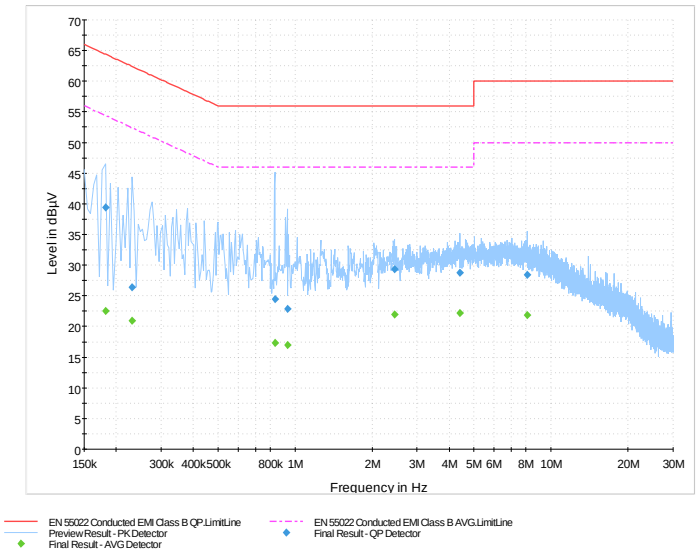


Figure 1-8: N Lines

AC Conducted Emissions Test Results
Test Configuration 5

The measurements were performed by Steven Wang.

The BlackBerry® smartphone PIN 30D9EABA was tested on September 03, 2009.

The environmental test conditions were: Temperature: 26 ºC
Pressure: 1026 mb
Relative Humidity: 22 %

Frequency (MHz)	Line	Reading (QP) (dBµV)	Correction Factor (dB)	Corrected Reading (QP) (dB)	Limit (QP) (dBµV)	Limit (AV) (dBµV)	Margin (QP) Limits (dB)
0.182	N	31.59	10.04	41.63	64.42	54.42	-22.79
0.182	L1	34.85	9.78	44.63	64.42	54.42	-19.79
0.263	L1	30.00	9.85	39.85	61.35	51.35	-21.50
0.308	N	29.54	9.82	39.36	60.04	50.04	-20.68
0.443	L1	32.27	9.72	41.99	57.01	47.01	-15.03
0.447	N	36.89	9.88	46.76	56.93	46.93	-10.17
0.812	L1	28.92	9.57	38.49	56.00	46.00	-17.51
0.893	N	31.27	9.69	40.96	56.00	46.00	-15.04
1.887	L1	35.34	9.53	44.87	56.00	46.00	-11.13
1.977	N	34.87	9.62	44.49	56.00	46.00	-11.51
2.283	N	36.24	9.61	45.85	56.00	46.00	-10.15
2.364	L1	39.60	9.55	49.15	56.00	46.00	**-6.85**
3.530	N	28.76	9.61	38.36	56.00	46.00	-17.64
4.911	L1	29.23	9.67	38.91	56.00	46.00	-17.09
8.619	L1	29.85	9.77	39.62	60.00	50.00	-20.38

All other emission levels had a test margin of greater than 25 dB.

Measurements were done with the quasi-peak detector.

See figure 1-9 and figure 1-10 for the measurement plot of the L1 and N lines of AC power line conducted emissions.

AC Conducted Emissions Test Graphs

Test Configuration 5

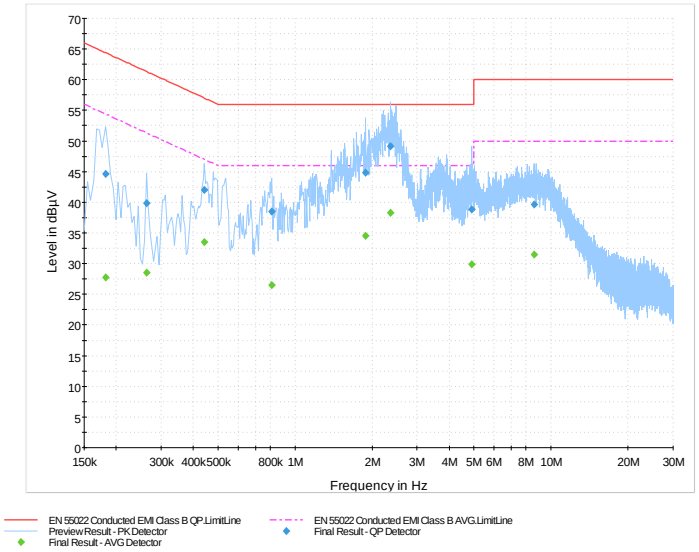


Figure 1-9: L1 lines

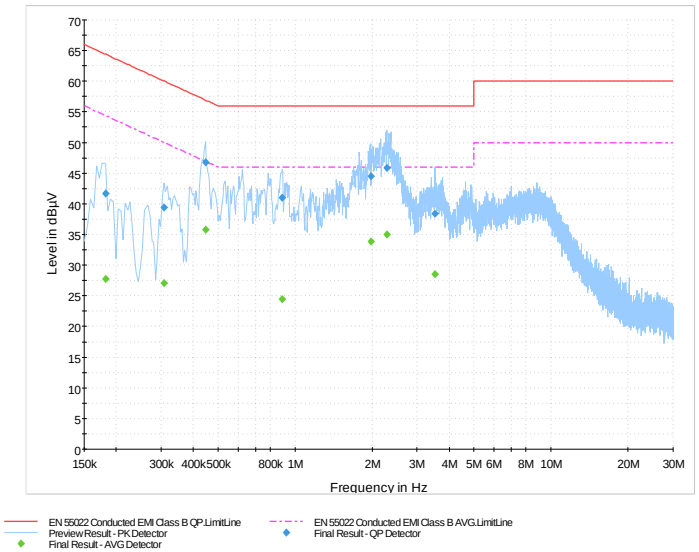


Figure 1-10: N Lines

AC Conducted Emissions Test Results
Test Configuration 6

The measurements were performed by Steven Wang.

The BlackBerry® smartphone PIN 30D9EABA was tested on September 03, 2009.

The environmental test conditions were: Temperature: 26 ºC
Pressure: 1026 mb
Relative Humidity: 22 %

Frequency (MHz)	Line	Reading (QP) (dBµV)	Correction Factor (dB)	Corrected Reading (QP) (dB)	Limit (QP) (dBµV)	Limit (AV) (dBµV)	Margin (QP) Limits (dB)
0.173	L1	34.56	9.88	44.44	64.84	54.84	-20.40
0.173	N	32.07	10.04	42.11	64.84	54.84	-22.73
0.335	N	27.86	9.84	37.70	59.34	49.34	-21.64
0.357	L1	23.83	9.78	33.61	58.80	48.80	-25.19
0.456	N	32.52	9.89	42.40	56.77	46.77	-14.36
0.542	L1	23.26	9.67	32.93	56.00	46.00	-23.07
0.776	N	28.02	9.75	37.77	56.00	46.00	-18.23
2.013	N	30.89	9.61	40.51	56.00	46.00	-15.50
2.274	L1	34.75	9.55	44.30	56.00	46.00	-11.70
2.283	N	32.73	9.61	42.34	56.00	46.00	-13.66
3.588	L1	25.95	9.61	35.57	56.00	46.00	-20.43
4.560	N	24.06	9.59	33.65	56.00	46.00	-22.35
4.731	L1	25.33	9.67	34.99	56.00	46.00	-21.01

All other emission levels had a test margin of greater than 25 dB.

Measurements were done with the quasi-peak detector.

See figure 1-11 and figure 1-12 for the measurement plot of the L1 and N lines of AC power line conducted emissions.

AC Conducted Emissions Test Graphs

Test Configuration 6

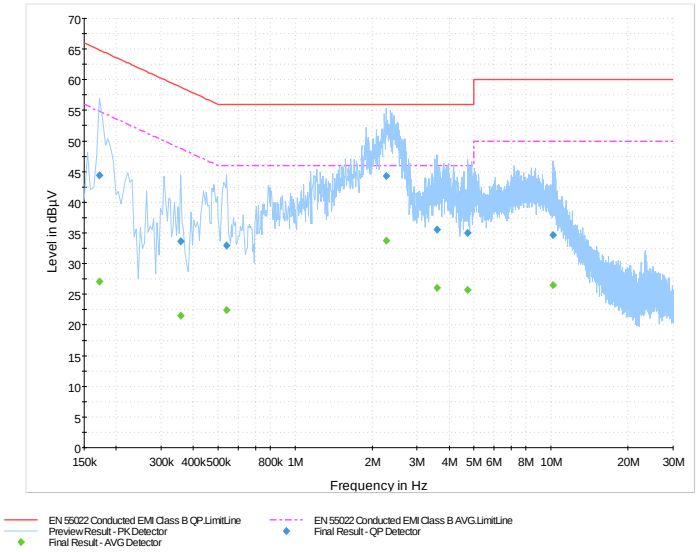


Figure 1-11: L1 lines

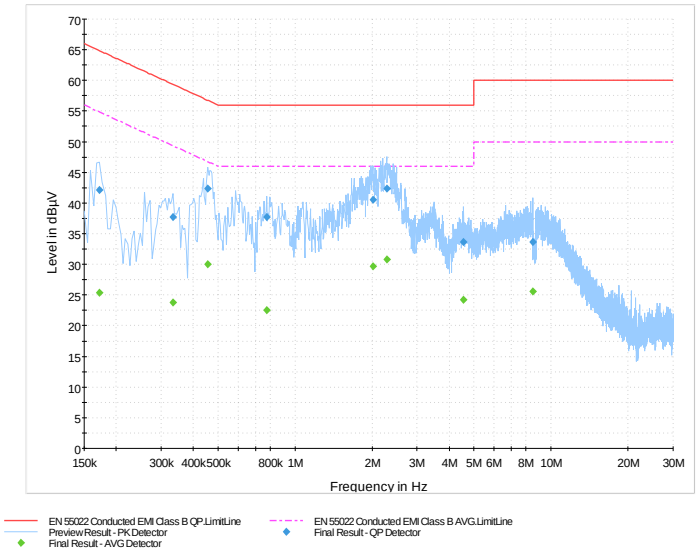


Figure 1-12: N Lines

APPENDIX 2 - RADIATED EMISSIONS TEST DATA

Radiated Emissions Test Results
Test Configuration 1

The measurements were performed by Kevin Rose.

The BlackBerry® smartphone, PIN 30D9ECAC was tested on August 31, 2009.

The environmental test conditions were: Temperature: 25 ºC
Pressure: 1015 mb
Relative Humidity: 32 %

Test Distance was 3.0 metres.

Frequency	Antenna		Test Angle	Detector	Measured Level	Correction Factor (dB/m)	Field Strength Level (reading +corr)	Limit @ 3.0 m	Test Margin
	Pol.	Height		(Q.P. or Peak)	(dBµV)				
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
53.500	V	1.40	33	Q.P.	57.65	-21.47	36.18	40.00	-3.82
155.350	H	1.65	352	Q.P.	38.05	-17.48	20.57	43.50	-22.93
155.700	V	1.93	55	Q.P.	37.02	-17.47	19.55	43.50	-23.95
336.200	V	1.95	90	Q.P.	34.44	-9.57	24.87	46.00	-21.13
372.750	V	2.03	352	Q.P.	34.80	-10.89	23.91	46.00	-22.09
375.100	H	1.86	352	Q.P.	34.68	-10.83	23.85	46.00	-22.15
427.000	H	2.26	173	Q.P.	37.71	-8.88	28.83	46.00	-17.17
533.700	H	1.65	322	Q.P.	42.61	-6.39	36.22	46.00	-9.78
552.200	H	1.75	353	Q.P.	42.51	-6.47	36.04	46.00	-9.96

All other emission levels had a test margin greater than 25 dB.

Radiated Emissions Test Results
Test Configuration 2

The measurements were performed by Fahd Faisal.

The BlackBerry® smartphone, PIN 30D9ECAC was tested on August 31, 2009.
The environmental test conditions were: Temperature: 24 ºC
Pressure: 1019 mb
Relative Humidity: 30 %

Test Distance was 3.0 metres.

Frequency	Antenna		Test Angle	Detector (Q.P. or Peak)	Measured Level (dBµV)	Correction Factor (dB/m)	Field Strength Level (reading +corr)	Limit @ 3.0 m	Test Margin
	Pol.	Height							
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
183.750	H	1.96	270	Q.P.	47.40	-16.52	30.88	43.50	-12.62
217.150	H	1.27	276	Q.P.	42.49	-14.62	27.87	46.00	-18.13
243.450	H	1.06	264	Q.P.	47.68	-15.37	32.31	46.00	-13.69
365.050	H	2.42	113	Q.P.	45.68	-11.08	34.60	46.00	-11.40
426.050	H	2.16	98	Q.P.	49.26	-8.89	40.37	46.00	-5.63
474.600	H	2.03	295	Q.P.	33.14	-7.66	25.48	46.00	-20.52
480.750	H	1.77	192	Q.P.	33.39	-8.00	25.39	46.00	-20.61
720.000	V	1.69	176	Q.P.	38.88	-2.31	36.57	46.00	-9.43
816.000	V	2.17	176	Q.P.	31.34	-0.71	30.63	46.00	-15.37

All other emission levels had a test margin greater than 25 dB.

Radiated Emissions Test Results
Test Configuration 3

The measurements were performed by Fahd Faisal.

The BlackBerry® smartphone, PIN 30D9ECAC was tested on September 09, 2009.

The environmental test conditions were: Temperature: 24 ºC
Pressure: 1018 mb
Relative Humidity: 31 %

Test Distance was 3.0 metres.

Frequency	Antenna		Test Angle	Detector	Measured Level	Correction Factor (dB/m)	Field Strength Level (reading +corr)	Limit @ 3.0 m	Test Margin
	Pol.	Height		(Q.P. or Peak)	(dBµV)				
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
47.90	V	1.41	42	Q.P.	57.76	-21.11	36.65	40.00	-3.35
52.30	V	1.40	353	Q.P.	55.68	-21.48	34.20	40.00	-5.80
67.30	V	1.46	58	Q.P.	43.31	-21.11	22.20	40.00	-17.80

All other emission levels had a test margin greater than 25 dB.

Radiated Emissions Test Results
Test Configuration 4

The measurements were performed by Fahd Faisal.

The BlackBerry® smartphone, PIN 30D9ECAC was tested on August 28, 2009

The environmental test conditions were: Temperature: 24 ºC
Pressure: 1019 mb
Relative Humidity: 30 %

Test Distance was 3.0 metres.

Frequency	Antenna		Test Angle	Detector	Measured Level	Correction Factor	Field Strength Level (reading +corr)	Limit @ 3.0 m	Test Margin
	Pol.	Height		(Q.P. or Peak)	(dBµV)	(dB/m)			
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
216.00	V	3.93	353	Q.P.	32.10	-14.57	17.53	43.50	-25.97
475.10	H	2.94	210	Q.P.	32.29	-7.67	24.62	46.00	-21.38

All other emission levels had a test margin greater than 25 dB.

Radiated Emissions Test Results
Test Configuration 5

The measurements were performed by Kevin Rose

The BlackBerry® smartphone, PIN 30D9ECAC was tested on August 28, 2009

The environmental test conditions were: Temperature: 25 ºC
Pressure: 1015 mb
Relative Humidity: 32 %

Test Distance was 3.0 metres.

Frequency	Antenna		Test Angle	Detector	Measured Level	Correction Factor (dB/m)	Field Strength Level (reading +corr)	Limit @ 3.0 m	Test Margin
	Pol.	Height		(Q.P. or Peak)	(dBµV)				
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
56.40	V	1.51	110	Q.P.	46.08	-21.49	24.59	40.00	-15.41
200.80	H	1.03	204	Q.P.	32.48	-13.67	18.81	43.50	-24.69
215.60	V	1.47	319	Q.P.	45.28	-14.55	30.73	43.50	-12.77
270.90	H	1.67	352	Q.P.	37.70	-14.45	23.25	46.00	-22.75
288.00	H	1.11	305	Q.P.	44.58	-14.11	30.47	46.00	-15.53
461.85	H	1.54	352	Q.P.	34.54	-7.53	27.01	46.00	-18.99
470.65	H	1.94	156	Q.P.	41.63	-7.56	34.07	46.00	-11.93

All other emission levels had a test margin greater than 25 dB.

Radiated Emissions Test Results
Test Configuration 6

The measurements were performed by Fahd Faisal.

The BlackBerry® smartphone, PIN 30D9ECAC was tested on August 31, 2009.

The environmental test conditions were: Temperature: 24 ºC
Pressure: 1019 mb
Relative Humidity: 30 %

Test Distance was 3.0 metres.

Frequency	Antenna		Test Angle	Detector	Measured Level	Correction Factor	Field Strength Level (reading +corr)	Limit @ 3.0 m	Test Margin
	Pol.	Height		(Q.P. or Peak)	(dBµV)	(dB/m)			
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
209.30	H	1.60	177	Q.P.	54.24	-14.06	40.18	43.50	-3.32
211.30	H	1.63	28	Q.P.	52.38	-14.24	38.14	43.50	-5.36
216.30	H	1.49	182	Q.P.	58.43	-14.59	43.84	46.00	**-2.16**
269.30	H	1.15	334	Q.P.	53.49	-14.35	39.14	46.00	-6.86
274.80	H	1.11	337	Q.P.	52.57	-14.56	38.01	46.00	-7.99
365.10	H	1.04	112	Q.P.	42.14	-11.08	31.06	46.00	-14.94
426.10	H	2.07	107	Q.P.	47.39	-8.89	38.50	46.00	-7.50
473.25	H	2.04	282	Q.P.	46.60	-7.63	38.97	46.00	-7.03
482.40	H	2.08	353	Q.P.	43.02	-7.97	35.05	46.00	-10.95

All other emission levels had a test margin greater than 25 dB.

Radiated Emissions Test Results
Test Configuration 7

The measurements were performed by Fahd Faisal.

The BlackBerry® smartphone, PIN 30D9ECAC was tested on September 01, 2009.

The environmental test conditions were: Temperature: 23 ºC
Pressure: 1023 mb
Relative Humidity: 31 %

Test Distance was 3.0 metres.

Frequency	Antenna		Test Angle	Detector	Measured Level	Correction Factor (dB/m)	Field Strength Level (reading +corr)	Limit @ 3.0 m	Test Margin
	Pol.	Height		(Q.P. or Peak)	(dBµV)				
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
125.00	H	3.01	352	Q.P.	54.77	-17.23	37.54	43.50	-5.96
454.10	H	2.40	166	Q.P.	50.01	-7.88	42.13	46.00	-3.87
487.65	H	1.89	232	Q.P.	49.37	-7.76	41.61	46.00	-4.39
502.90	H	1.58	213	Q.P.	49.44	-7.13	42.31	46.00	-3.69

All other emission levels had a test margin greater than 25 dB.

Radiated Emissions Test Results
Test Configuration 8

The measurements were performed by Fahd Faisal.

The BlackBerry® smartphone, PIN 30D9EBA0 was tested on September 03, 2009.

The environmental test conditions were: Temperature: 23 ºC
Pressure: 1018 mb
Relative Humidity: 32 %

Test Distance was 3.0 metres.

Frequency	Antenna		Test Angle	Detector (Q.P. or Peak)	Measured Level (dBµV)	Correction Factor (dB/m)	Field Strength Level (reading +corr)	Limit @ 3.0 m	Test Margin
	Pol.	Height							
(MHz)	(V/H)	(metres)	(Deg.)				(dBµV/m)	(dBµV/m)	(dB)
54.10	V	1.41	175	Q.P.	49.93	-21.48	28.45	40.00	-11.55
152.65	H	2.19	219	Q.P.	50.59	-17.39	33.20	43.50	-10.30
458.15	H	2.37	197	Q.P.	28.87	-7.66	21.21	46.00	-24.79
470.65	H	2.11	196	Q.P.	32.13	-7.56	24.57	46.00	-21.43
487.65	H	2.06	177	Q.P.	40.68	-7.76	32.92	46.00	-13.08
492.00	H	2.07	179	Q.P.	31.08	-7.51	23.57	46.00	-22.43
556.30	H	1.71	353	Q.P.	28.09	-6.40	21.69	46.00	-24.31

All other emission levels had a test margin greater than 25 dB.