EMI Partial Test Report

Tested in accordance with
Federal Communications Commission (FCC)
Personal Communications Services
CFR 47, Part 15 Subpart C
&
Industry Canada (IC) RSS-210, RSS-GEN

A division of Research In Motion Limited

REPORT NO.: RTS-2337-1010-32

PRODUCT MODEL NO.: RCY71UW
TYPE NAME: BlackBerry® smartphone
FCC ID: L6ARCY70UW
IC: 2503A-RCY70CW

DATE: October 20, 2010

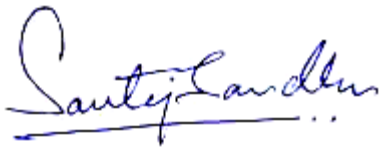
Statement of Performance:

The BlackBerry® smartphone, model RCY71UW, part number CER-30957-001 Rev. 5, and its accessories perform within the requirements of the test standards when configured and operated under RIM's operation 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:



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Date: October 21, 2010

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Date: October 21, 2010

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Table of Contents

A. Scope 4

B. Associated Documents 4

C. Product Identification 4

D. Support Equipment Used for the Testing of the EUT 5

E. Test Results Chart 6

F. Summary of Results 7

G. Compliance Test Equipment Used 8

APPENDIX 1 – BLUETOOTH RADIATED EMISSIONS TEST DATA 9

A. Scope

This report details the results of compliance tests which were performed in accordance to the requirements of:

- FCC CFR 47 Part 15, Subpart C, October, 2009
- Industry Canada, RSS-210, Issue 7, June 2007, Low Power Licence-Exempt Radiocommunication Devices
- Industry Canada, RSS-GEN, Issue 2, June 2007, General Requirements and Information for the Certification of Radiocommunication Equipment

B. Associated Documents

1. RCY71UW_HW_Declaration_CER-30957_Rev5
2. RCY71UW_HW_Declaration_CER-30957_Rev4
3. RCY71UW_HW_Declaration_CER-30957_Rev3
4. RTS-2337-1003-20

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 October 13 to October 14, 2010.

The sample EUT included:

SAMPLE	MODEL	CER NUMBER	PIN	Software
1	RCY71UW	CER-30957-001 Rev. 5	23123EAC	V6.0.0.246 (Platform 6.4.0.105) Bundle 695
2	RCY71UW	CER-30957-001 Rev. 5	23123EA4	V6.0.0.246 (Platform 6.4.0.105) Bundle 695

Samples 1 and 2 were used for Radiated Emissions testing.

Only the characteristics that may have been affected by the changes from model RCY71UW Rev 2 to model RCY71UW Rev 5 were re-tested.
For more details, refer to RCY71UW_HW_Declaration_CER-30957_Rev5, RCY71UW_HW_Declaration_CER-30957_Rev4 and RCY71UW_HW_Declaration_CER-30957_Rev3.

D. Support Equipment Used for the Testing of the EUT

No support equipment used. See section G. Compliance Test Equipment Used.

E. Test Results Chart

SPECIFICATION		TEST TYPE	Meets Requirements	TEST DATA
FCC CFR 47	IC			APPENDIX
Part 15.207	RSS-210 RSS-GEN	Conducted AC Line Emission	See Test Report RTS-2337-1003-20	-
Part 15.209 Part 15.247	RSS-210 RSS-GEN	BT Radiated Spurious Emissions	Pass	1
Part 15.209 Part 15.247	RSS-210 RSS-GEN	BT Radiated Band Edge Compliance	See Test Report RTS-2337-1003-20	-
Part 15.209 Part 15.247	RSS-210 RSS-GEN	802.11 b/g/n Radiated Spurious Emissions	See Test Report RTS-2337-1003-20	-
Part 15.209 Part 15.247	RSS-210 RSS-GEN	802.11 b/g/n Radiated Band Edge Compliance	See Test Report RTS-2337-1003-20	-
Part 15.247(a)	RSS-210	BT, 20 dB Bandwidth	See Test Report RTS-2337-1003-20	-
Part 15.247(a)	RSS-210	BT, Carrier Frequency Separation	See Test Report RTS-2337-1003-20	-
Part 15.247(a)	RSS-210	BT, Number of Hopping Frequencies	See Test Report RTS-2337-1003-20	-
Part 15.247(a)	RSS-210	BT, Time of Occupancy (Dwell Time)	See Test Report RTS-2337-1003-20	-
Part 15.247(b)	RSS-210	BT, Maximum Peak Conducted Output Power	See Test Report RTS-2337-1003-20	-
Part 15.247(c)	RSS-210	BT, Band-Edge Compliance of RF Conducted Emissions	See Test Report RTS-2337-1003-20	-
Part 15.247(c)	RSS-210	BT, Spurious RF Conducted Emissions	See Test Report RTS-2337-1003-20	-
Part 15.247(b)	RSS-210	802.11b/g/n, 6 dB Bandwidth	See Test Report RTS-2337-1003-20	-
Part 15.247(b)	RSS-210	802.11b/g/n, Maximum Conducted Output Power	See Test Report RTS-2337-1003-20	-
Part 15.247(b)	RSS-210	802.11b/g/n, Band-Edge	See Test Report RTS-2337-1003-20	-
Part 15.247(b)	RSS-210	802.11b/g/n, Peak Power Spectral Density	See Test Report RTS-2337-1003-20	-
Part 15.247(b)	RSS-210	802.11b/g/n, Spurious RF Conducted Emissions	See Test Report RTS-2337-1003-20	-

F. Summary of Results

1) RADIATED EMISSIONS

Radiated Spurious and Harmonic Emissions
The EUT was placed on a nonconductive styrofoam table, 80 cm high that was positioned on a remotely controlled turntable. The test distance used between the EUT and the receiving antenna was 3 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 25.0 GHz. Both the horizontal and vertical polarizations of the emissions were measured.

The measurements were done in a semi-anechoic chamber (SAC) below 1 GHz and a fully-anechoic room (FAR) above 1 GHz. The SAC's FCC registration number is **778487** and the Industry Canada (IC) file number is **2503B-1**. The FAR's FCC registration number is **959115** and the IC file number is **2503C-1**.

The EUT was configured and operated to produce the maximum radiated emissions while still keeping within RIM's specifications.

The BlackBerry® smartphone was measured in standalone configuration with Bluetooth transmitting in single frequency mode at middle channel (0) for packet type "DH5". The system's radiated emission levels were compared with respect to the FCC CFR 47 Part 15, Subpart C, 15.247 and RSS-210.

The Bluetooth harmonics were investigated up to the 10th harmonic. The worst case test margin was 4.03 dB below the accepted limit at 4804.024 MHz.

See APPENDIX 1 for the test data.

Measurement Uncertainty ±4.6 dB

G. Compliance Test Equipment Used

UNIT	MANUFACTURER	MODEL	SERIAL NUMBER	CAL DUE DATE (YY MM DD)	USE
EMI Test Receiver	Rohde & Schwarz	ESIB 40	100255	10-12-01	Conducted/Radiated Emissions
EMI Test Receiver	Rohde & Schwarz	ESU 40	100162	10-11-29	Conducted/Radiated Emissions
Hybrid Log Antenna	EMC Automation	HLP-3003C	017401	10-12-04	Radiated Emissions
Horn Antenna	ETS-Lindgren	3117	47563	11-07-15	Radiated Emissions
Preamplifier	Rohde & Schwarz	TS-ANA4-SP	001	11-02-17	Radiated Emissions
Preamplifier	Sonoma	310N/11909A	185831	10-11-14	Radiated Emissions
Preamplifier	Rohde & Schwarz	TS-ANA-SP	001	11-02-17	Radiated Emissions
Environment Monitor	Control Company	1870	230355189	11-01-08	Radiated Emissions
Environment Monitor	Control Company	1870	80117164	11-01-08	Radiated Emissions
Bluetooth Tester	Rohde & Schwarz	CBT35	100368	10-11-25	Radiated Emissions
Bluetooth Tester	Rohde & Schwarz	CBT35	100370	10-11-26	Radiated Emissions

APPENDIX 1 – BLUETOOTH RADIATED EMISSIONS TEST DATA

Radiated Emissions Test Results
Bluetooth Band

Date of Test: October 13, 2010
Measurements were performed by Quan Ma.

The environmental test conditions were: Temperature: 22 ºC
Pressure: 1012 mb
Relative Humidity: 27 %

The test distance was 3.0 metres with a EUT height of 0.8 metres, and sweep frequency of 30 MHz to 1 GHz.

The BlackBerry® smartphone, in Bluetooth Tx mode, was in USB up (open) position.

The frequency sweep measurements were performed in single frequency mode on channel 0 using packet types "DH5".

All emissions were in the noise floor.

Date of Test: October 13 to October 14, 2010
Measurements were performed by Adam Rusinek.

The environmental test conditions were: Temperature: 24 ºC
Pressure: 1009 - 1010 mb
Relative Humidity: 22 - 25 %

The test distance was 3.0 metres with a EUT height of 0.8 metres, and sweep frequency of 1GHz to 25GHz.

The BlackBerry® smartphone, in Bluetooth Tx mode, was in USB up (open) position.

The frequency sweep measurements were performed in single frequency mode on channel 0 using packet types "DH5".

Radiated Emissions Test Results cont'd
Bluetooth Band cont'd

Frequency (MHz)	Channel	Packet Type	Antenna Pol. (V/H)	Antenna Height (metres)	Test Angle (Deg.)	RBW / VBW	Measured Level (dBµV)	Correction Factor for preamp/antenna/ cables/ filter (dB/m)	Field Strength Level (reading+corr) (dBµV/m)	Limit @ 3.0 m (dBµV/m)	Test Margin (dB)
4804.024	0	DH5	H	1.00	231.00	1MHz/ 3MHz	45.51	18.11	63.62	74.00	-10.38
4804.024	0	DH5	H	1.00	231.00	1MHz/ 10Hz	31.86	18.11	49.97	54.00	**-4.03**
7206.458	0	DH5	H	1.00	130.00	1MHz/ 3MHz	38.42	15.88	54.31	74.00	-19.69
7206.458	0	DH5	H	1.00	130.00	1MHz/ 10Hz	25.07	15.88	40.95	54.00	-13.05

All other emissions had a test margin of greater than 25.0 dB.