Partial EMI Test Report

Tested in accordance with
Federal Communications Commission (FCC)
Personal Communications Services
CFR 47 Parts 2, 22 and 24
&
Industry Canada (IC) RSS- Gen, 132 and 133

A division of Research In Motion Limited

REPORT NO: RTS-5316-1109-83

PRODUCT MODEL NO:	REA71UW
TYPE NAME:	BlackBerry® smartphone
FCC ID:	L6AREA70UW
IC:	2503A-REA70UW
EMISSION DESIGNATOR (GSM):	244KGXW
EMISSION DESIGNATOR (EDGE):	250KG7W
EMISSION DESIGNATOR (WCDMA):	4M11F9W

DATE: October 6, 2011

Statement of Performance:

The BlackBerry® smartphone, model REA71UW, part number CER-41251-001 Rev2 and accessories performs within the requirements of the test standards when configured and operated per 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:

Nielven Olis
Regulatory Compliance Associate
Date: October 13, 2011

Reviewed by:

Savtej S. Sandhu
Regulatory Compliance Specialist
Date: October 14, 2011

Reviewed and Approved by:

Masud S. Attayi, P.Eng.
Manager, Regulatory Compliance
Date: October 14, 2011

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A) Scope

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

- FCC CFR 47 Part 2, Oct, 2010
- FCC CFR 47 Part 22, Subpart H, Cellular Radiotelephone Services, Oct., 2010
- FCC CFR 47 Part 24 Subpart E, Broadband PCS, Oct,. 2010
- Industry Canada, RSS-132 Issue 2, September 2005, Cellular Telephones Employing New Technologies Operating in the Bands 824-849 MHz and 869-894 MHz.
- Industry Canada, RSS-133 Issue 5, February 2009, 2 GHz Personal Communications Services.
- Industry Canada, RSS-GEN Issue 3, December 2010, General Requirements and Information for the Certification of Radiocommunication Equipment

B) Associated Documents

1. REA71UW-HW_Declaration_CER-41251-001-Rev2
2. MultiSourceDeclaration_REA71UW_7.0.0_b1755
3. Test Report: 2-0023-11-1-6a
4. Test Report: 2-0023-11-1-6b
5. Test Report: 2-0023-11-1-6a-A1
6. Test Report: 2-0023-11-1-6b-A1

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 on September 8, 2011.

The sample EUT included:

Sample	Model	CER NUMBER	PIN	Software Information
1	REA71UW	CER-41251-001 Rev1	27EB7986	v7.0.0.300 Plat. 9.0.0.190 Bundle 1482
2	REA71UW	CER-41251-001 Rev2	2830208A	v7.0.0.378 Plat. 9.32.0.14 Bundle 1755

RF Conducted Emissions testing was performed on samples 1 and 2.

Only the characteristics that have been affected by the changes from Model REA71UW Rev1 to REA71UW Rev2 were retested. For more information see document: REA71UW-HW_Declaration_CER-41251-001-Rev2

To view the differences between Bundle 1482 to 1755, see document: MultiSourceDeclaration_ REA71UW_b1755

D) Support Equipment Used for the Testing of the EUT

No support equipment required; for list of equipment refer to section H, Compliance Test Equipment Used.

E) Test Voltage

The ac input voltage was 120 volts, 60 Hz where applicable. This configuration was per RIM's specifications.

F) Test Results Chart

SPECIFICATION		TEST TYPE	RESULT	TEST DATA APPENDIX
FCC CFR 47	IC			
Part 2.1051 Part 22.917 Part 22.901	RSS-GEN, 4.9	GSM 850 Conducted Spurious Emissions	See test report: 2-0023-11-1-6a and 2-0023-11-1-6a-A1	-
Part 2.1051 Part 24.238(a)	RSS-GEN, 4.9	PCS 1900 Conducted Spurious Emissions	See test report: 2-0023-11-1-6a and 2-0023-11-1-6a-A1	-
Part 2.202 Part 22.917	RSS-GEN, 4.6	GSM 850 Occupied Bandwidth and Channel Mask	See test report: 2-0023-11-1-6a and 2-0023-11-1-6a-A1	-
Part 2.202 Part 24.238	RSS-GEN, 4.6	PCS 1900 Occupied Bandwidth and Channel Mask	See test report: 2-0023-11-1-6a and 2-0023-11-1-6a-A1	-
Part 2.1046(a)	RSS-133, 6.4 RSS-132, 4.4	GSM Conducted RF Output Power	Pass	1
Part 2.1055(a)(d) Part 22.917	RSS-132, 4.3	GSM 850 Frequency Stability vs. Temperature and Voltage	See test report: 2-0023-11-1-6a and 2-0023-11-1-6a-A1	-
Part 2.1055(a)(d) Part 24.235	RSS-132, 4.3	PCS 1900 Frequency Stability vs. Temperature and Voltage	See test report: 2-0023-11-1-6a and 2-0023-11-1-6a-A1	-
Part 22, Subpart H, Part 24, Subpart E	RSS-GEN, 4.9	GSM ERP, EIRP	See test report: 2-0023-11-1-6a and 2-0023-11-1-6a-A1	-
Part 22, Subpart H Part 24, Subpart E	RSS-GEN, 4.9	GSM Radiated Spurious/Harmonic Emissions	See test report: 2-0023-11-1-6a and 2-0023-11-1-6a-A1	-
Part 2.1051 Part 22.917 Part 22.901(d)	RSS-GEN, 4.9	UMTS Band 5 Conducted Spurious Emissions	See test report: 2-0023-11-1-6b and 2-0023-11-1-6b-A1	-
Part 2.1051 Part 24.238(a)	RSS-GEN, 4.9	UMTS Band 2 Conducted Spurious Emissions	See test report: 2-0023-11-1-6b and 2-0023-11-1-6b-A1	-
Part 2.202 Part 22.917	RSS-GEN, 4.6	UMTS Band 5 Occupied Bandwidth and Channel Mask	See test report: 2-0023-11-1-6b and 2-0023-11-1-6b-A1	-
Part 2.202 Part 24.238	RSS-GEN, 4.6	UMTS Band 2 Occupied Bandwidth and Channel Mask	See test report: 2-0023-11-1-6b and 2-0023-11-1-6b-A1	-
Part 2.1046(a)	RSS-133, 6.4 RSS-132, 4.4	UMTS Band 2 and 5 Conducted RF Output Power	Pass	2

Test Results Chart cont'd

Part 2.1055(a)(d) Part 22.917	RSS-132, 4.3	UMTS Band 5 Frequency Stability vs. Temperature and Voltage	See test report: 2-0023-11-1-6b and 2-0023-11-1-6b-A1	-
Part 2.1055(a)(d) Part 24.235	RSS-GEN, 4.7	UMTS Band 2 Frequency Stability vs. Temperature and Voltage	See test report: 2-0023-11-1-6b and 2-0023-11-1-6b-A1	-
Part 22, Subpart H	RSS-GEN, 4.9	UMTS Band 5 Radiated Spurious/Harmonic Emissions, ERP	See test report: 2-0023-11-1-6b and 2-0023-11-1-6b-A1	-
Part 24, Subpart E	RSS-GEN, 4.9	UMTS Band 2 Radiated Spurious/Harmonic Emissions, EIRP	See test report: 2-0023-11-1-6b and 2-0023-11-1-6b-A1	-

G) Summary of Results

1) Conducted Emission Measurements

a) The BlackBerry® smartphone met the requirements of the Tx Conducted RF output Power requirements in the GSM850 as per 47 CFR 2.1046, and RSS-GEN, 4.4. The EUT was measured on the low, middle and high channels.
See APPENDIX 1 for test data.

The BlackBerry® smartphone met the requirements of the Tx Conducted RF output Power requirements in the PCS1900 as per 47 CFR 2.1046, and RSS-GEN, 6.4. The EUT was on the low, middle and high channels.
See APPENDIX 1 for test data

b) The BlackBerry® smartphone met the requirements of the Tx Conducted RF output Power requirements in the UMTS band 5 as per 47 CFR 2.1046, and RSS-GEN, 4.4. The EUT was measured on the low, middle and high channels.
See APPENDIX 2 for test data.

The BlackBerry® smartphone met the requirements of the Tx Conducted RF output Power requirements in the UMTS band 2 as per 47 CFR 2.1046, and RSS-GEN, 6.4. The EUT was on the low, middle and high channels.
See APPENDIX 2 for test data

H) Compliance Test Equipment Used

UNIT	MANUFACTURER	MODEL	SERIAL NUMBER	CAL DUE DATE (YY MM DD)	USE
Universal Radio Communication Tester	Rohde & Schwarz	CMU 200	102204	11-11-30	RF Conducted Emissions

APPENDIX 1 – GSM CONDUCTED RF OUTPUT POWER TEST DATA

GSM Conducted RF Output Power Test Data

The conducted RF output power was measured on the BlackBerry® smartphone using the Communication Tester, Rohde & Schwarz, model CMU 200. The low, middle and high channels were measured at maximum output power. The insertion loss of the coaxial cable from the CMU 200 to the BlackBerry® smartphone was compensated for in the measurements.
Peak nominal output power is 33.0 dBm ±0.5 dB for GSM850 and 29.0 dBm ±0.5 dB for PCS.
Peak nominal output power is 31.0 dBm ±0.5 dB for GSM850 EDGE Mode (2-timeslot uplink) and 28.0 dBm ±0.5 dB for PCS EDGE Mode (2-timeslot uplink).

Date of Test: September 8, 2011

The environmental conditions were: Temperature: 22 °C
Humidity: 40 %

The measurements were performed by Daoud Attayi

Channel	Frequency (MHz)	Maximum Output Power (dBm)	Maximum Output Power (Watts)	Channel	Frequency (MHz)	Maximum Output Power (dBm)	Maximum Output Power (Watts)
GSM850				GSM850 Edge			
128	824.2	33.4	2.19	128	824.2	31.2	1.32
189	836.8	33.3	2.14	189	836.8	31.2	1.32
251	848.8	33.3	2.14	251	848.8	31.2	1.32
PCS				PCS Edge			
512	1850.2	28.8	0.76	512	1850.2	28.2	0.66
661	1880.0	29.0	0.79	661	1880.0	28.2	0.66
810	1909.8	29.0	0.79	810	1909.8	28.1	0.65

APPENDIX 2 – UMTS Band 2/5 CONDUCTED RF OUTPUT POWER TEST DATA

UMTS Band 2/5 Conducted RF Output Power Test Data

The measurements were performed by Daoud Attayi.

The conducted RF output power was measured using the CDMA base station simulator. Low, middle and high channels were measured at maximum radio output power at different service options and modes.
Peak nominal output power is 24.00 dBm ±0.50 dB for Band 5 and 22.00 dBm ±0.50 dB for Band 2.

Date of Test: September 8, 2011

The environmental test conditions were: Temperature 24 ºC
Relative Humidity 55 %

Test Results

	Band	**FDD V (850)**			**FDD II (1900)**		
	Channel	4132	4182	4233	9262	9400	9538
	Freq (MHz)	826.4	836.4	846.6	1852.4	1880.0	1907.6
Mode	**Subtest**	**Max burst averaged conducted power (dBm)**			**Max burst averaged conducted power (dBm)**		
Rel99	12.2 kbps RMC	24.07	24.06	24.17	21.78	21.76	22.11
Rel99	12.2 kbps AMR, SRB 3.4 kbps	24.13	24.07	24.13	21.84	21.72	22.10
Rel5 HSDPA	1	23.92	23.89	23.90	21.67	21.55	21.99
Rel5 HSDPA	2	23.92	23.89	23.90	21.70	21.57	22.00
Rel5 HSDPA	3	23.90	23.85	23.89	21.65	21.52	21.97
Rel5 HSDPA	4	23.95	23.90	23.92	21.64	21.53	21.99
Rel6 HSUPA	1	23.92	23.89	23.90	21.70	21.59	22.00
Rel6 HSUPA	2	23.96	23.84	23.91	21.68	21.56	21.97
Rel6 HSUPA	3	23.95	23.82	23.89	21.65	21.55	21.97
Rel6 HSUPA	4	23.96	23.83	23.92	21.63	21.50	21.95
Rel6 HSUPA	5	23.94	23.82	23.90	21.62	21.51	21.94