



Research In Motion Limited
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E-mail: info@rim.net

Our Ref: 02928-CERT-CORRESP_19433

May 29, 2001

Mr. Andy Leimer
Federal Communications Commission,
Equipment Authorization Division
Application Processing Branch
7435 Oakland Mills Road
Columbia, MD 21045

Subject: Response to the FCC Correspondence Reference # 19433 for additional information on RIM BlackBerry Wireless handheld FCC ID: L6AR1900G-1-4, 731 Confirmation # **EA100730**

The following addresses the comments on your **Correspondence Reference # 19433**, dated May 25, 2001.

ITEM 1:

The test setup photo "Test Configuration #1: EUT in Cradle with Headset" shows a headset connected to the BlackBerry handheld. The headset ear-bud is then attached to a stand to simulate the distance along a user's torso to their ear as shown in the attached page.

The antenna for the handheld is internal and there is no provision for operation using an external antenna. The jack on the handheld is designed to accommodate headset plugs as per the attached page.

ITEM 2:

Internal pictures of the handheld clearly showing the internal antenna location are presented here per your request in the attached page.

ITEM 3:

The BlackBerry handheld is primarily a data device with voice capability via the headset as an added feature. Both data and voice are digital GPRS/GSM and use a two-level Gaussian Minimum Shift Key (GMSK) frequency modulation. Thus the BW for both data and voice is the same.

ITEM 4:

AC line conducted measurements and plots are attached to this letter.

ITEM 5:

A Declaration of Conformity (DoC) compliance certificate is attached with this letter.

Should you have any questions please do not hesitate to call the undersigned.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'M. Attayi', followed by a vertical line.

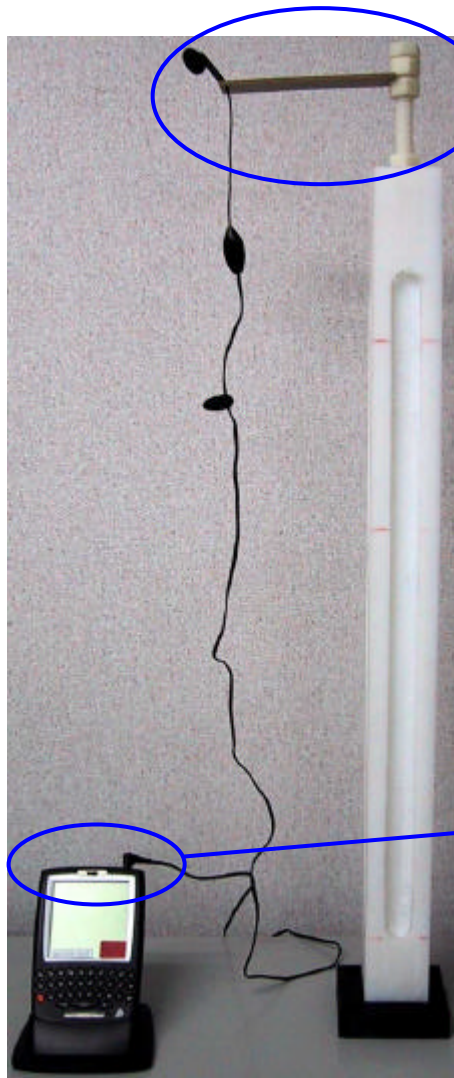
Masud Attayi, P.Eng.,
Senior Certification Engineer

Research In Motion Limited
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ITEM 1



R1900G-1-4 Test Configuration #1



Particle board

Headset ear-bud support detail

Headset plug connected



Handheld audio jack



ITEM 2

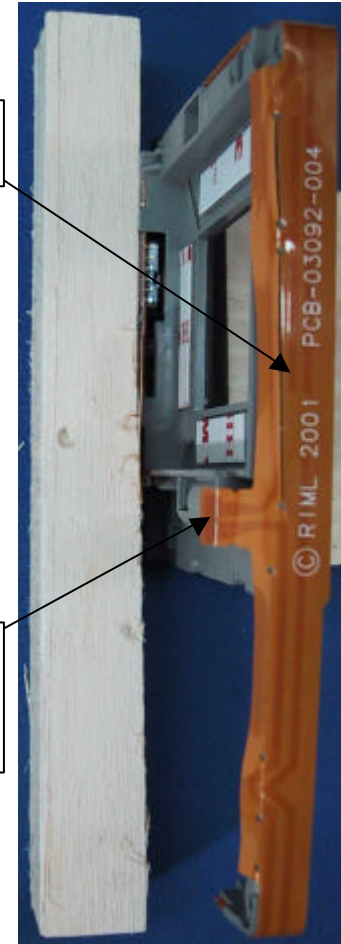


R1900G-1-4 Antenna



Antenna

Antenna
connector

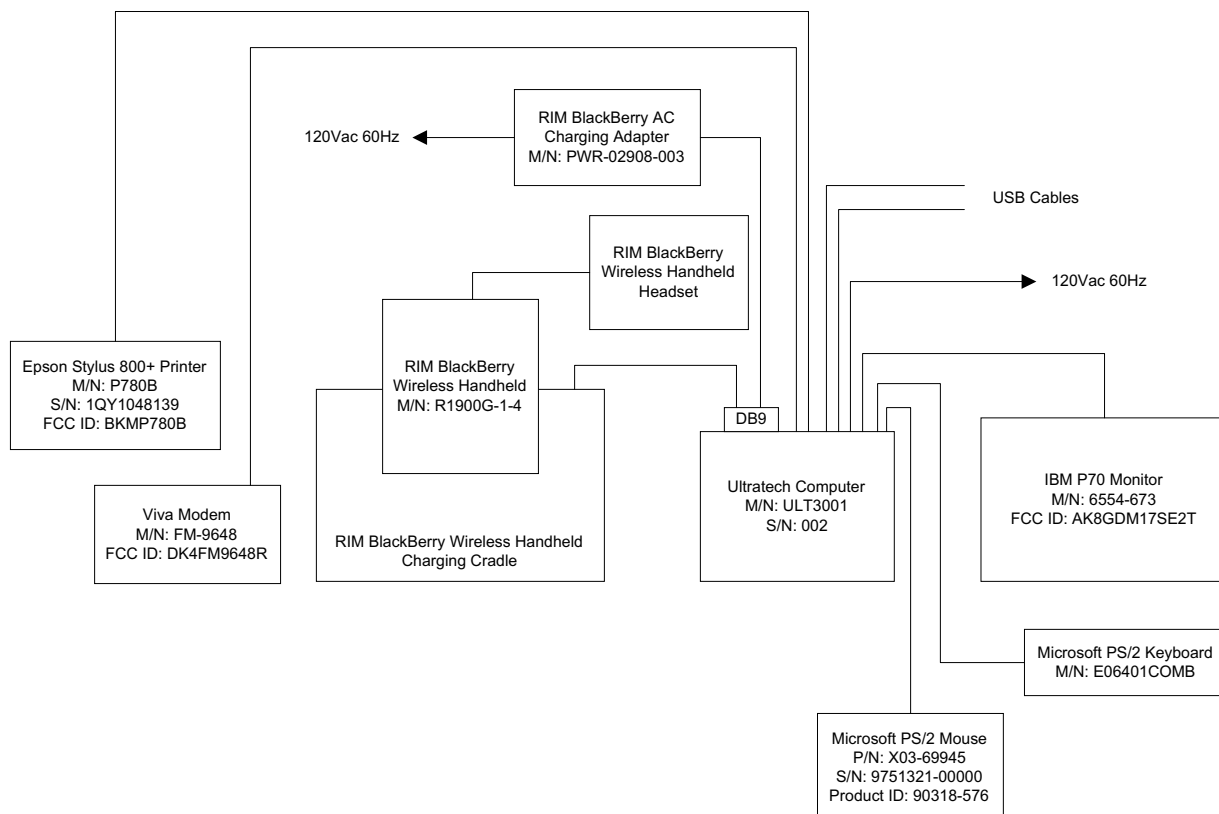


ITEM 4

Block Dia gram of AC Conducted Emissions Setup
AC Conducted Emissions Section of Report

3.3. BLOCK DIAGRAM OF TEST SETUP

Test Configuration #1: BlackBerry Wireless Handheld with PWR-02908-003 AC Charging Adapter



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3000 Bristol Circle, Oakville, Ontario, Canada L6H 6G4

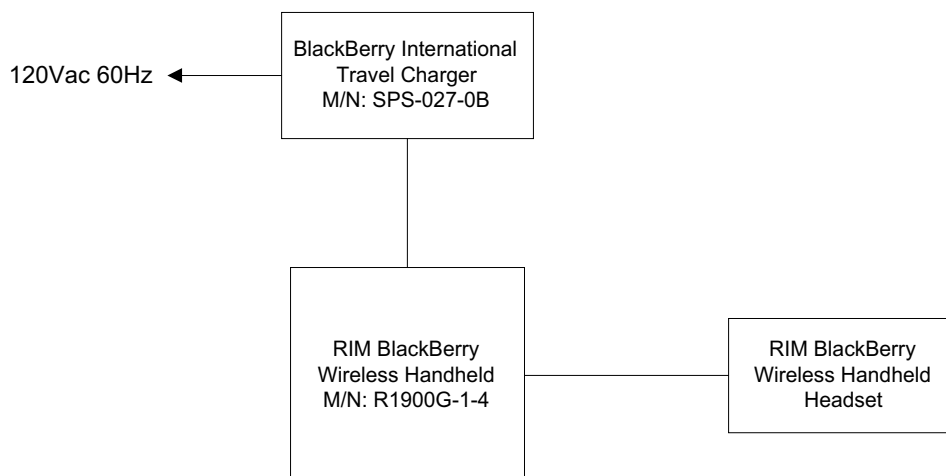
Tel. #: 905-829-1570, Fax. #: 905-829-8050, Email: vhk.ultratech@sympatico.ca, Website: <http://www.ultratech-labs.com>

File #: RIM3-FRX

April 17, 2001

- Assessed by ITI (UK) Competent Body, NVLAP (USA) Accreditation Body & ACA/AUSTEL (Australia)
- Accredited by Industry Canada (Canada) under ACC-LAB (Europe/Canada MRA and APEC/Canada MRA)
- Recognized/Listed by FCC (USA)

All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)

Test Configuration #2: BlackBerry Wireless Handheld with SPS-027-0B International Travel Charger**ULTRATECH GROUP OF LABS**

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5.4. AC POWERLINE CONDUCTED EMISSIONS @ FCC PART 15, SUBPART B, PARA.15.107(a)

5.4.1. Limits

The equipment shall meet the limits of the following table:

Test Frequency Range	Test Limits	EMI Detector Used	Measuring Bandwidth
0.45 to 30 MHz	48 dB μ V 61 dB μ V	Quasi-Peak (Narrow band) Quasi-Peak (Broad band)	RBW = 9 kHz, VBW > 9 kHz RBW = 9 kHz, VBW > 9 kHz

5.4.2. Method of Measurements

Refer to Exhibit 7 of this test report & ANSI C63-4:1992

5.4.3. Test Equipment List

Test Instruments	Manufacturer	Model No.	Serial No.	Frequency Range	Calibrated
Spectrum Analyzer	Hewlett Packard	HP 8593EM	3412A00103	9 kHz – 26.5 GHz	September 11, 2000
Transient Limiter	Hewlett Packard	11947A	310701998	9 kHz – 200 MHz 10 dB attenuation	September 11, 2000
L.I.S.N.	EMCO	3825/2	8907-1531	10 kHz – 100 MHz 50 Ohms / 50 μ H	November 23, 2000
12'x16'x12' RF Shielded Chamber	RF Shielding	--	--	--	--

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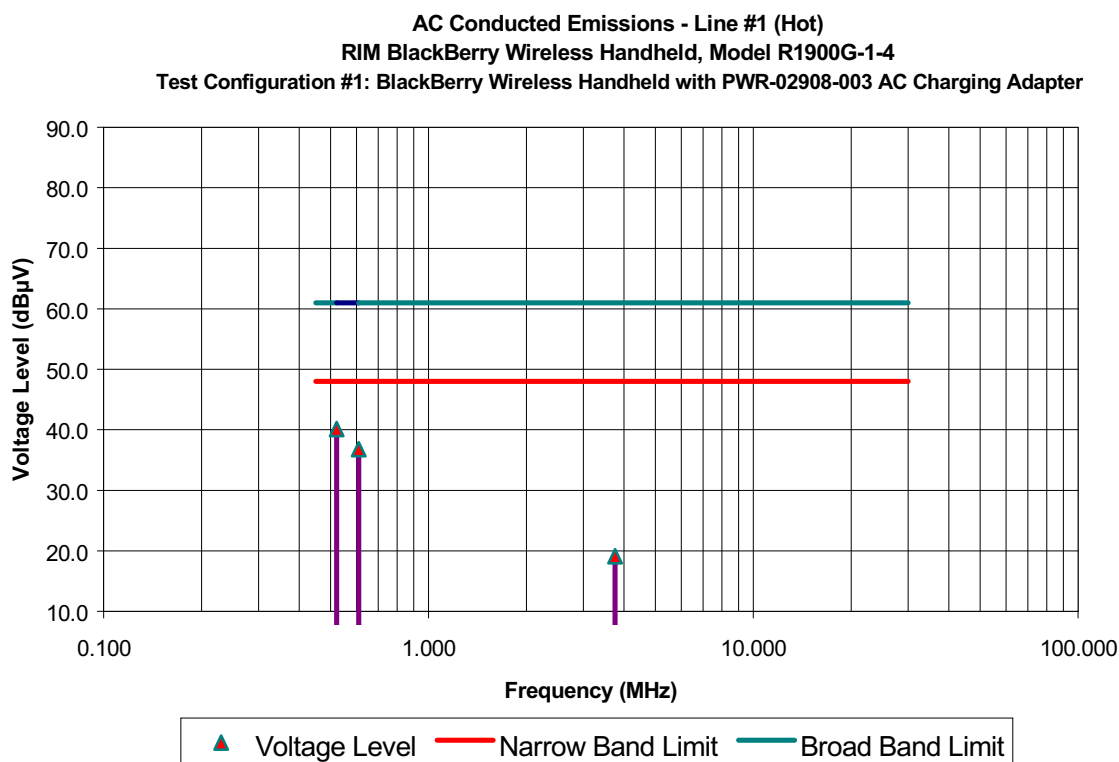
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5.4.4. Test data

• Test Configuration #1: BlackBerry Wireless Handheld with PWR-02908-003 AC Charging Adapter

Frequency (MHz)	RF Level (dBμV)	Receiver Detector (P/QP/AVG)	QP/NB Limit (dBμV)	QP/BB Limit (dBμV)	Margin (dB)	Pass / Fail	Line Tested (L1/L2)
0.521	40.1	QP	48.0	61.0	-7.9	PASS	L1
0.610	36.8	QP	48.0	61.0	-11.2	PASS	L1
3.750	19.1	QP	48.0	61.0	-28.9	PASS	L1
0.524	41.1	QP	48.0	61.0	-6.9	PASS	L2
0.468	28.1	QP	48.0	61.0	-19.9	PASS	L2
0.639	36.4	QP	48.0	61.0	-11.6	PASS	L2
4.093	25.0	QP	48.0	61.0	-23.0	PASS	L2

The emissions were scanned from 450 kHz to 30 MHz at AC mains Terminal via a LISN, and all emissions within 30 dB below the limits were recorded. Refer to plots #1 and 2 in Exhibit 9 Test Data Plots for details.



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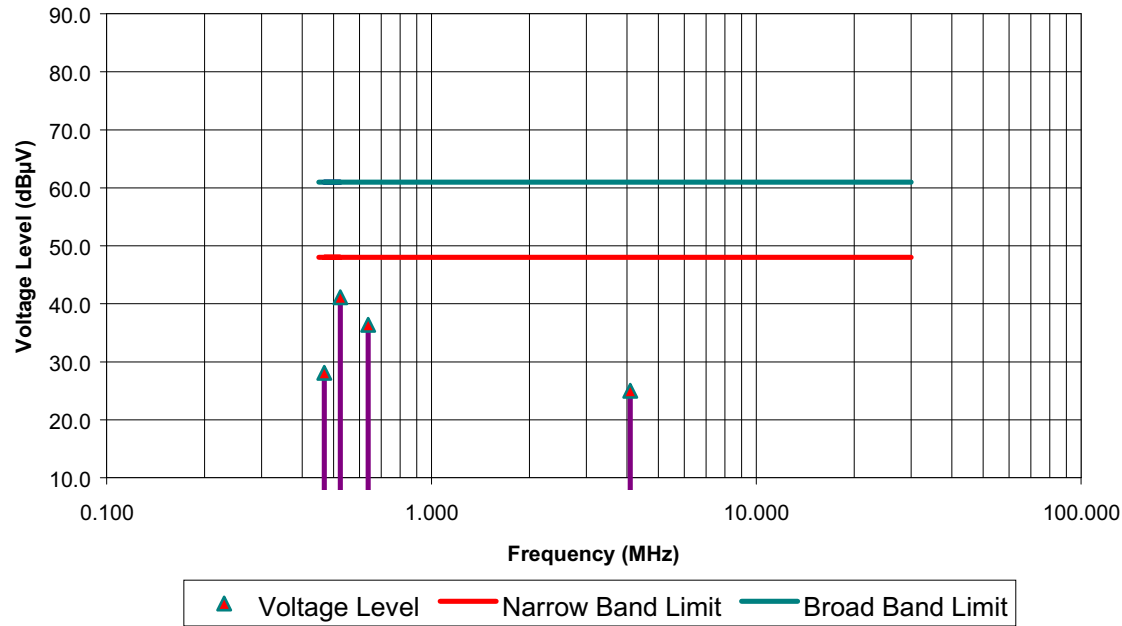
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AC Conducted Emissions - Line #2 (Neutral)
RIM BlackBerry Wireless Handheld, Model R1900G-1-4
Test Configuration #1: BlackBerry Wireless Handheld with PWR-02908-003 AC Charging Adapter



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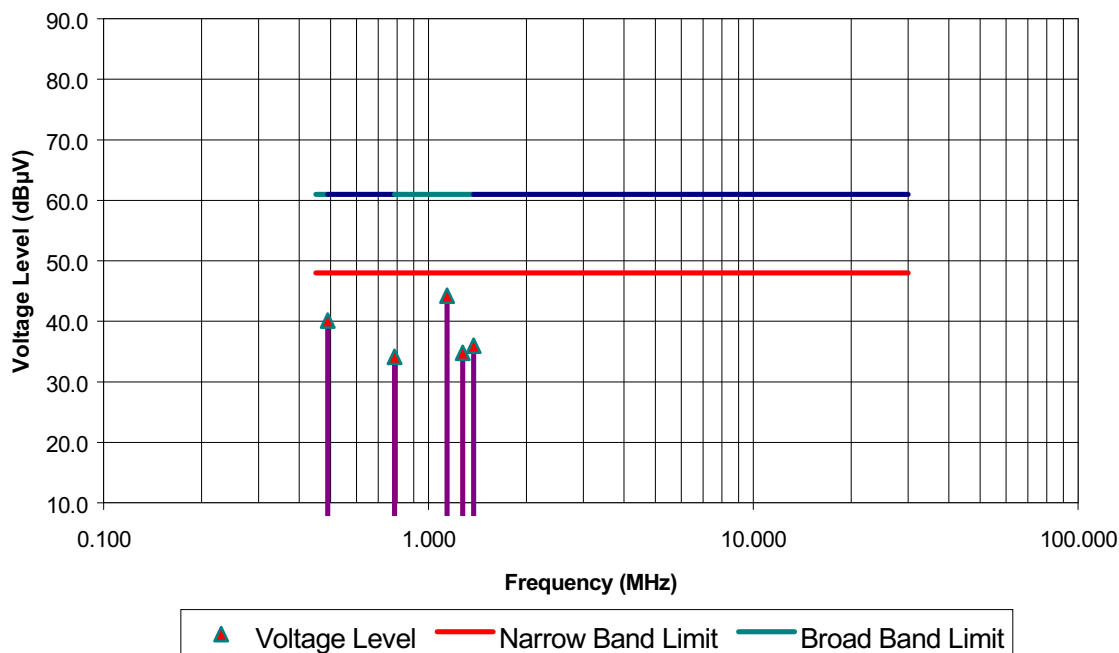
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Test Configuration #2: BlackBerry Wireless Handheld with SPS-027-0B International Travel Charger

Frequency (MHz)	RF Level (dBμV)	Receiver Detector (P/QP/AVG)	QP/NB Limit (dBμV)	QP/BB Limit (dBμV)	Margin (dB)	Pass / Fail	Line Tested (L1/L2)
0.489	40.12	QP	48.0	61.0	-7.9	PASS	L1
0.786	34.13	QP	48.0	61.0	-13.9	PASS	L1
1.141	44.21	QP	48.0	61.0	-3.8	PASS	L1
1.276	34.81	QP	48.0	61.0	-13.2	PASS	L1
1.377	35.96	QP	48.0	61.0	-12.0	PASS	L1
0.490	40.36	QP	48.0	61.0	-7.6	PASS	L2
0.688	35.24	QP	48.0	61.0	-12.8	PASS	L2
1.138	43.63	QP	48.0	61.0	-4.4	PASS	L2
0.786	35.43	QP	48.0	61.0	-12.6	PASS	L2
1.275	35.35	QP	48.0	61.0	-12.7	PASS	L2

The emissions were scanned from 450 kHz to 30 MHz at AC mains Terminal via a LISN, and all emissions within 30 dB below the limits were recorded. Refer to plots #3 and 4 in Exhibit 9 Test Data Plots for details.

AC Conducted Emissions - Line #1 (Hot)**RIM BlackBerry Wireless Handheld, Model R1900G-1-4****Test Configuration #2: BlackBerry Wireless Handheld with SPS-027-0B International Travel Charger****ULTRATECH GROUP OF LABS**

3000 Bristol Circle, Oakville, Ontario, Canada L6H 6G4

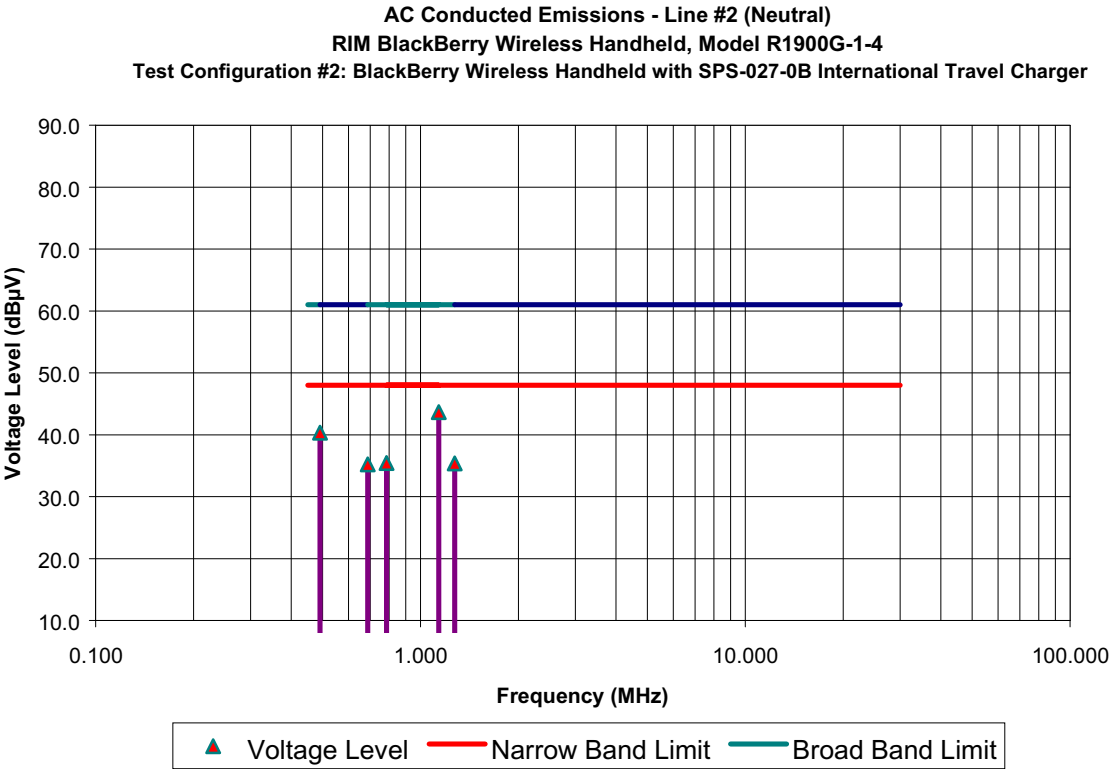
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5.4.5. Photographs of Test Setup

Test Configuration #1: BlackBerry Wireless Handheld with PWR-02908-003 AC Charging Adapter



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Test Configuration #2: BlackBerry Wireless Handheld with SPS-027-0B International Travel Charger



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All test results contained in this engineering test report are traceable to National Institute of Standards and Technology (NIST)

ITEM 5

Declaration of Conformity

FCC DECLARATION OF CONFORMITY (DoC)

Applicant's Name & Address:

Research In Motion Limited
295 Phillip Street
Waterloo, Ontario
Canada, N2L 3W8

Contact Person: Masud Attayi
Telephone No.: (519) 888-7465 x2442
Fax No.: (519) 888-6906
Email Address: mattayi@rim.net

US Representative's Name & Address:

Contact Person: N/A
Telephone No.: _____
Fax No.: _____
Email Address: _____

FCC DoC Assessed Test Lab.:

UltraTech Engineering Labs Inc.
3000 Bristol Circle
Oakville, Ontario
Canada L6H 6G4

Equipment Type/Environment:

Computing Devices for Home and Office Use

Trade Name / Model No.:

BlackBerry Wireless Handheld, Model R1900G-1-4

Year of Manufacture:

2001

Standard(s) to which Conformity is Declared:

The BlackBerry Wireless Handheld, Model R1900G-1-4, supplied by Research In Motion Limited, has been tested and found to comply with **FCC PART 15, SUBPART B - UNINTENTIONAL RADIATORS, CLASS B COMPUTING DEVICES FOR HOME & OFFICE USE.**

For detailed information please refer to the engineering test report, UltraTech File No.: RIM3-FRX, dated April 17, 2001.

I, the undersigned, hereby declare that the equipment as tested is representative within manufacturing tolerance to units.

Manufacturer

M. Attayi
Signature
MASUD ATTAYI
Full Name
SR. CERTIFICATION ENGINEER
Position
WATERLOO, ONTARIO
Place
MAY 29, 2001
Date

Legal Representative in U.S.

N/A
Signature

Full Name

Position

Place

Date
