

EMI Test Report

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

RIM Testing Services (RTS)

REPORT NO.: RTS-0181-0506-03

PRODUCT MODEL NO.: RAV20CW
TYPE NAME: BlackBerry Wireless Handheld
FCC ID: L6ARAV20CW
IC: 2503A-RAV20CW

Date: _____August 23, 2005_____

RTS

RIM Testing Services

Report No. RTS-0181-0506-03

Test Date: June 15 to 29, 2005

Statement of Performance:

The BlackBerry Wireless Handheld, model RAV20CW ASY-10007-00x and accessories when configured and operated per RIM's operation instructions, 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.

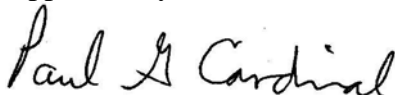
Tested and Reviewed by:



Masud S. Attayi, P.Eng.

Date: August 24, 2005

Approved by:



Paul G. Cardinal, Ph.D.
Manager

Date: August 25, 2005

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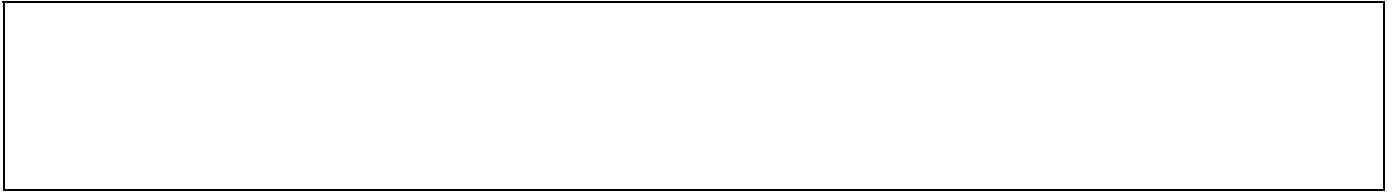
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Report No. RTS-0181-0506-03

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Test Date: June 15 to 29, 2005

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, Dec. 08, 2003, Class B Digital Devices, Unintentional Radiators

IC ICES-003 Issue 3, Class B Digital Devices, Unintentional Radiators

B) Product Identification

The equipment under test (EUT) was tested at the RIM Testing Services (RTS) EMI test facility, located at:

305 Phillip Street
Waterloo, Ontario
Canada, N2L 3W8
Phone: 519 888 7465
Fax: 519 888 6906

The testing began on June 15, 2005 and was completed on June 29, 2005. The sample EUT included:

1. BlackBerry Wireless Handheld, model number RAV20CW, ASY-10007-00x, ID number 003B2-40, FCC ID L6ARAV20CW, IC: 2503A-RAV20CW.
2. Travel Charger, model number PSM05R-050CH, part number ASY-07559-001 with an output voltage of 5.0 volts dc, 0.5 amps and attached USB cable with a lead length of 0.71 metres.
3. External Battery Charger model number BCM6720A, part number ASY-07042-002 with a dc output of 4.2 volts, 0.75 amps for charging the internal battery and 5.1 volts, 0.75 amps for charging an external battery.
4. North American Travel Charger, model number PSM04A-050RIM, part number ASY-07040-001 with an output voltage of 5.0 volts dc, 0.85 amps and attached USB cable with a lead length of 0.73 metres.
5. Rapid Battery Travel Charger, model number PSM08R-050RIM, part number ASY-07041-001 with an output voltage of 5.0 volts dc, 1.6 amps and attached USB cable with a lead length of 0.85 metres.
6. USB data cable, model number HDW-06610-001, 1.45 metres long.
7. Headset, model number HDW-03458-001. The lead length was 1.25 metres long.

The transmit frequency bands for the Handheld are: Cellular 824 to 849 MHz, PCS 1850 to 1910 MHz and Bluetooth 2402 to 2480 MHz.

C) Support Equipment Used for the Testing of the EUT

- 1) PC System, Myraid, model EN-P3B-7, serial number CCC0004078
- 2) Monitor, ViewSonic, model number VCDTS23103-2M, serial number 24B022952648
- 3) Printer, H/P, model number C5884A, serial number US8251W0VQ

D) Test Voltage

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

E) Test Results Chart

SPECIFICATION	Test Type	MEETS REQUIREMENTS	Performed By
FCC CFR 47 Part 15, Subpart B IC ICES-003	Class B	Yes	Masud Attayi

F) Modifications to EUT

No modifications were required on the EUT.

G) Summary of Results

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.

The following test configurations were measured:

1. The Handheld in battery charging mode was connected to the Travel Charger, part number ASY-07559-001. The ac input to the Travel Charger was 120 volts, 60 Hz.
2. The Handheld in battery charging mode, was connected via the detachable USB cable to the External Battery Charger, part number ASY-07042-002. The ac input to the External Battery Charger was 120 volts, 60 Hz.
3. The Handheld in battery charging mode was connected to the North American Travel Charger, part number ASY-07040-001. The ac input to the North American Travel Charger was 120 volts, 60 Hz.
4. The Handheld in battery charging mode was connected to the Rapid Battery Travel Charger, part number ASY-07041-001. The ac input to the Rapid Battery Travel Charger was 120 volts, 60 Hz.

The sample EUT's conducted emissions were compared with respect to the FCC CFR 47 Part 15, Subpart B (CISPR 22) and IC ICES-003, Class B limit.

The sample EUT had a worse case test margin of 14.53 dB at 1.107 MHz using the average detector and 8.33 dB at 1.115 MHz using the quasi peak detector with the North American Travel Charger, test configuration 3.

Measurement Uncertainty ± 2.0 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. At this point 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 1.0 GHz. Both the horizontal and vertical polarisations of the emissions were measured.

The measurements were done in a semi-anechoic chamber. The semi-anechoic chamber FCC registration number is **778487** and the Industry Canada file number is **IC4240**.

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

The following test configurations were measured:

1. The Handheld in battery charging mode was connected to the Travel Charger, part number ASY-07559-001. The ac input was 120 volts, 60 Hz.
2. The Handheld in battery charging mode was connected to the External Battery Charger, part number ASY-07042-002 via the detachable USB cable model number HDW-06610-001. The ac input was 120 volts, 60 Hz.
3. The Handheld in battery charging mode was connected to the North American Travel Charger, part number ASY-07040-001. The ac input was 120 volts, 60 Hz.
4. The Handheld in battery charging mode was connected to the Rapid Battery Travel Charger, part number ASY-07041-001.
5. The Handheld in 1xRTT idle mode was connected to the support PC via the USB data cable for charging and data link. The ac input was 120 volts, 60 Hz.
6. The Handheld in EVDO cellular mode was connected to the support PC via the USB data cable for charging and data link. The ac input was 120 volts, 60 Hz.
7. The Handheld in EVDO PCS mode was connected to the support PC via the USB data cable for charging and data link. The ac input was 120 volts, 60 Hz.

The system's radiated emission levels in idle mode 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 worse case emission test margin of 7.17 dB at 48.531 MHz with the Handheld in 1xRTT idle mode connected to the support PC via the USB data cable for charging and data link, test configuration 5.

RTS

RIM Testing Services

Report No. RTS-0181-0506-03

Test Date: June 15 to 29, 2005

Sample Calculation:

Field Strength (dB μ V/m) is calculated as follows:

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

Measurement Uncertainty ± 4.0 dB

To view the test data see APPENDIX 2.

H) Compliance Test Equipment Used

<u>UNIT</u>	<u>MANUFACTURER</u>	<u>MODEL</u>	<u>SERIAL NUMBER</u>	<u>CAL DUE DATE (YY MM DD)</u>	<u>USE</u>
Preamplifier	Sonoma	310N/11909A	185831	05-11-26	Radiated Emissions
Preamplifier system	TDK RF Solutions	PA-02	080010	06-01-13	Radiated Emissions
EMI Receiver	Agilent	85462A	3942A00517	05-08-30	Conducted/Radiated Emissions
RF Filter Section	Agilent	85460A	3704A00481	05-08-30	Conducted/Radiated Emissions
Digital Multimeter	Hewlett Packard	34401A	US38042324	05-07-20	Conducted/Radiated Emissions
L.I.S.N.	Emco	3816/2	1120	05-08-18	Conducted Emissions
Impulse Limiter	Rohde & Schwarz	ESHS-Z2	836248/052	05-11-12	Conducted Emissions
Environment Monitor	Control Company	1870	230355190	06-01-11	Radiated Emissions
Hybrid Log Antenna	TDK	HLP-3003C	17301	05-07-21	Radiated Emissions

APPENDIX 1

AC CONDUCTED EMISSIONS TEST DATA/PLOTS

AC Conducted Emissions Test Results

June 28, 2005

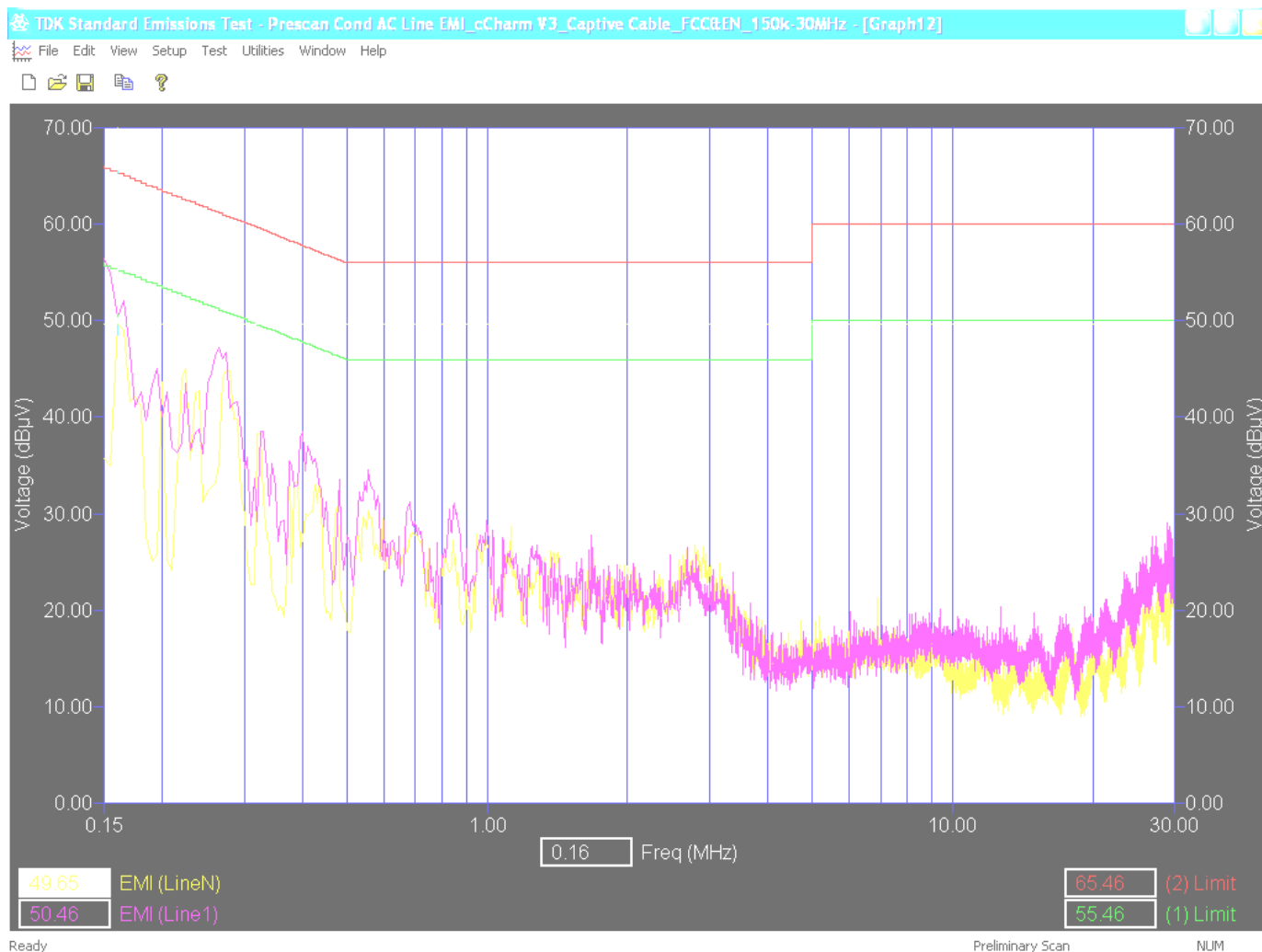
Test Configuration 1

FCC CFR 47 Part 15, Subpart B (CISPR 22), IC ICES-003, Class B

Frequency (MHz)	Line	Reading (QP) (dBμV)	Correction Factors for Impulse Limiter, LISN, Cable (dB)	QP Level (reading + Corr.Factor) (dB)	(QP) Limit (dBμV)	(AVG) Limit (dBμV)	Margin (QP) Limits (dB)	Margin (AVG) Limits (dB)
0.150	L1	43.91	9.98	53.89	66.00	56.00	-12.11	-2.11
0.152	N	41.78	9.98	51.76	65.46	55.46	-13.70	-3.70
0.201	L1	30.62	9.98	40.60	63.82	53.82	-23.22	-13.22
0.202	N	30.32	9.98	40.30	63.61	53.61	-23.31	-13.31
0.216	L1	29.19	9.98	39.17	62.63	52.63	-23.46	-13.46
0.219	N	29.06	9.98	39.04	62.63	52.63	-23.59	-13.59
0.231	N	28.01	9.98	37.99	62.10	52.10	-24.11	-14.11
0.271	L1	31.45	9.98	41.43	61.27	51.27	-19.84	-9.84
0.272	N	30.19	9.98	40.17	60.97	50.97	-20.80	-10.80
0.324	N	20.70	9.98	30.68	59.58	49.58	-28.90	-18.90
0.331	L1	21.20	9.98	31.18	59.58	49.58	-28.40	-18.40
0.407	L1	21.82	9.97	31.79	57.85	47.85	-26.06	-16.06

See graph 1 for the measurement plot.

AC Conducted Emissions Test Graph 1



Test Configuration 1

AC Conducted Emissions Test Results cont'd

June 28, 2005

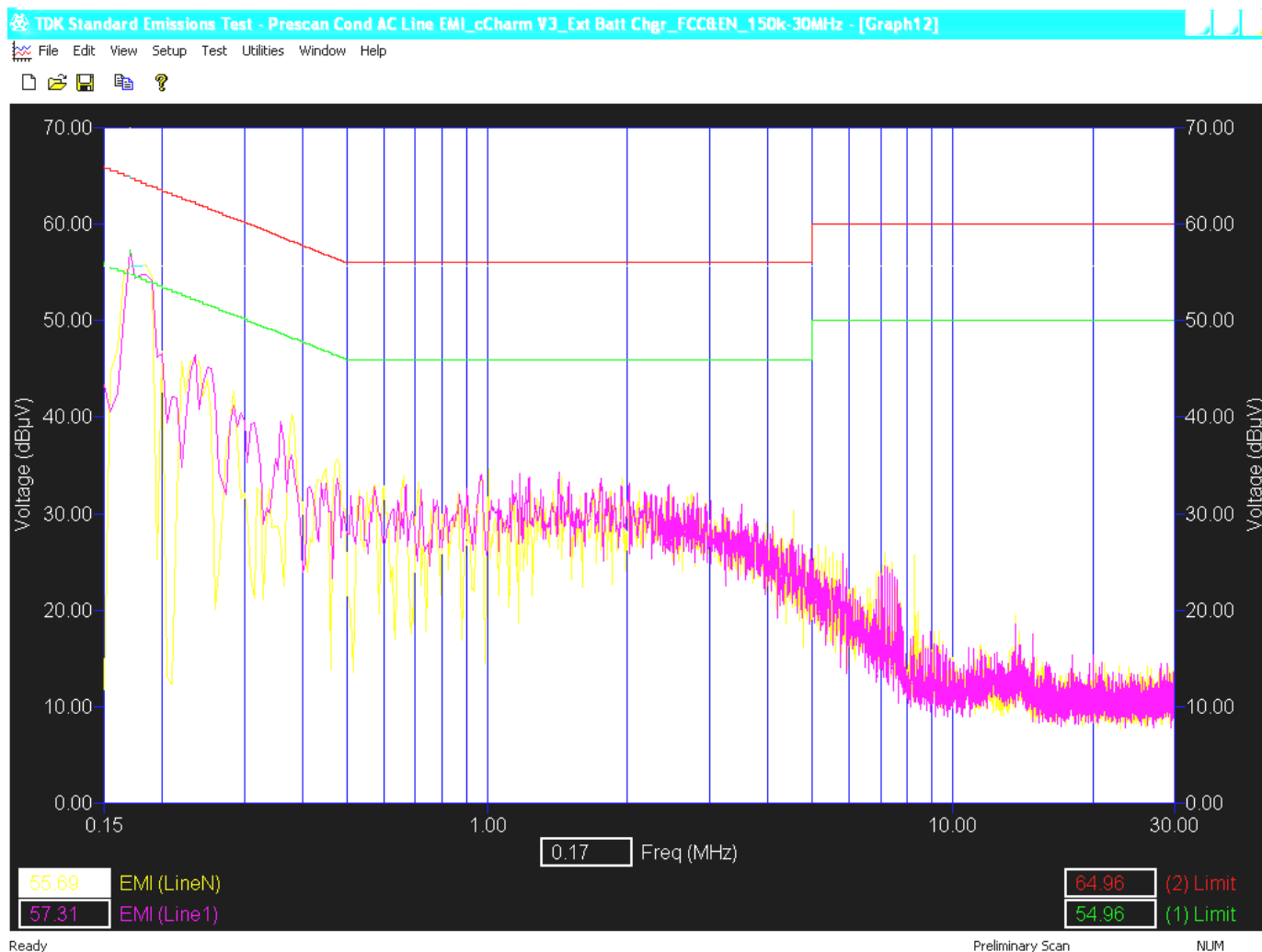
Test Configuration 2

FCC CFR 47 Part 15, Subpart B (CISPR 22), IC ICES-003, Class B

Frequency (MHz)	Line	Reading (QP) (dBµV)	Correction Factors for Impulse Limiter, LISN, Cable (dB)	QP Level (reading + Corr.Factor) (dB)	(QP) Limit (dBµV)	(AVG) Limit (dBµV)	Margin (QP) Limits (dB)	Margin (AVG) Limits (dB)
0.176	N	41.18	9.98	51.16	64.26	54.26	-13.10	-3.10
0.179	L1	42.08	9.98	52.06	64.96	54.96	-12.90	-2.90
0.188	N	40.87	9.98	50.85	63.61	53.61	-12.76	-2.76
0.238	N	32.27	9.98	42.25	62.27	52.27	-20.02	-10.02
0.241	L1	32.51	9.98	42.49	62.27	52.27	-19.78	-9.78
0.243	L1	31.49	9.98	41.47	61.76	51.76	-20.29	-10.29
0.285	L1	27.79	9.98	37.77	60.67	50.67	-22.90	-12.90
0.291	N	24.70	9.98	34.68	60.67	50.67	-25.99	-15.99
0.303	L1	25.42	9.98	35.40	59.84	49.84	-24.44	-14.44
0.358	L1	24.69	9.97	34.66	58.73	48.73	-24.06	-14.06
0.384	N	26.13	9.97	36.10	58.28	48.28	-22.18	-12.18
0.479	N	22.12	9.99	32.11	56.43	46.43	-24.31	-14.31

All other emission levels had a test margin of greater than 25 dB.
See graph 2 for the measurement plot.

AC Conducted Emissions Test Graph 2



Test Configuration 2

AC Conducted Emissions Test Results cont'd

June 28, 2005

Test Configuration 3

FCC CFR 47 Part 15, Subpart B (CISPR 22), IC ICES-003, Class B

Frequency (MHz)	Line	Reading (QP) (dBµV)	Correction Factors for Impulse Limiter, LISN, Cable (dB)	Level (QP) (reading + Corr.Factor) (dB)	Limit (QP) (dBµV)	Margin (QP) Limits (dB)
0.560	N	32.07	10.00	42.07	56.00	-13.93
0.743	N	34.25	9.99	44.24	56.00	-11.76
0.874	L1	37.18	10.00	47.18	56.00	-8.82
0.975	L1	34.51	10.02	44.53	56.00	-11.47
1.108	N	35.64	10.01	45.65	56.00	-10.35
1.115	L1	37.66	10.01	47.67	56.00	-8.33
1.115	N	34.19	10.01	44.20	56.00	-11.80
1.192	L1	35.81	10.02	45.83	56.00	-10.17
1.457	L1	33.48	10.03	43.51	56.00	-12.49
1.531	N	31.65	10.04	41.69	56.00	-14.31
1.778	L1	32.92	10.05	42.97	56.00	-13.03
1.796	N	31.03	10.05	41.08	56.00	-14.92

Measurements were done with the quasi-peak detector.
See graph 3 for the measurement plot.

AC Conducted Emissions Test Results cont'd

June 28, 2005

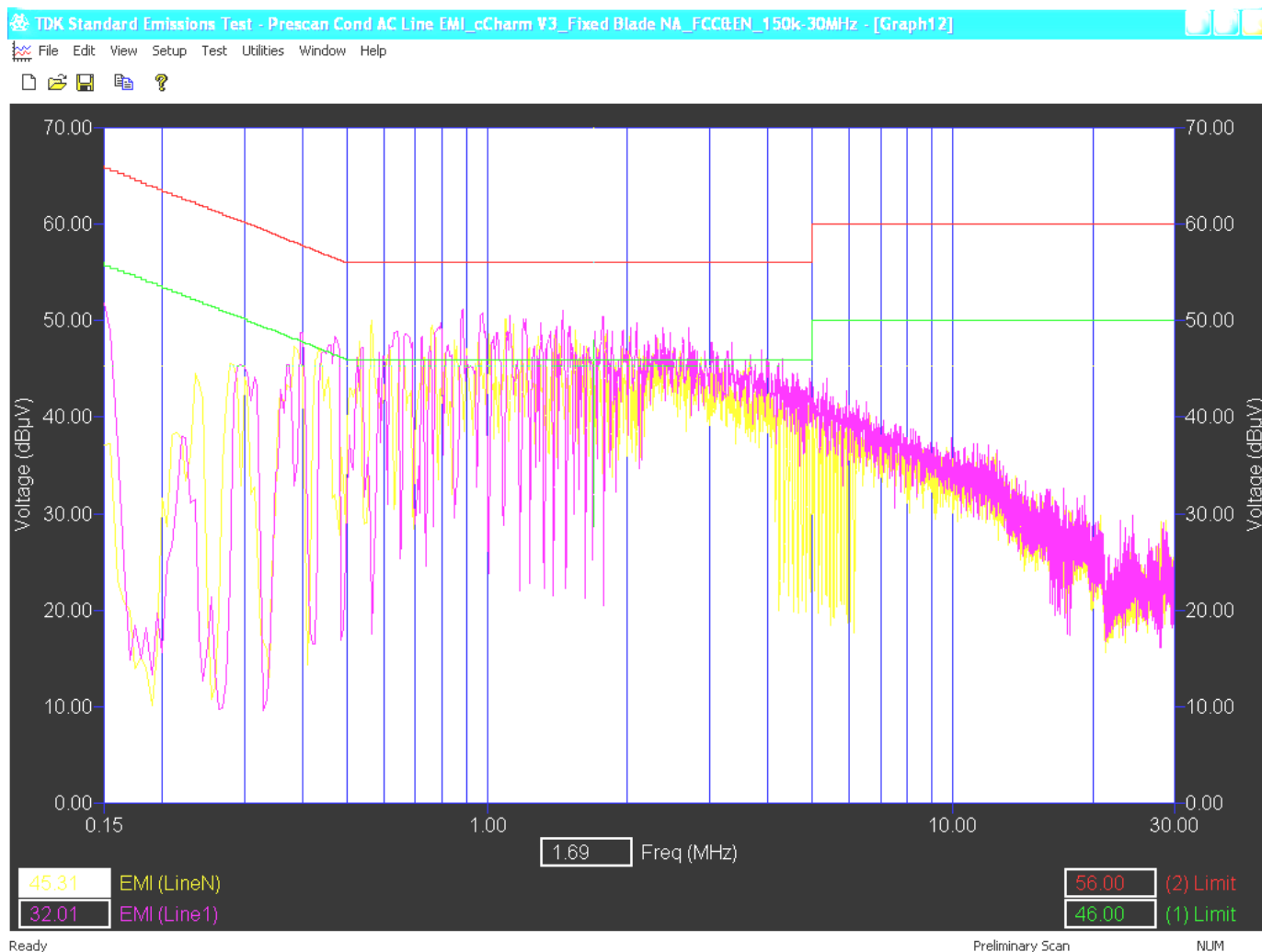
Test Configuration 3

FCC CFR 47 Part 15, Subpart B (CISPR 22), IC ICES-003, Class B

Frequency (MHz)	Line	Reading (AVE.) (dBμV)	Correction Factors for Impulse Limiter, LISN, Cable (dB)	Level (AVE.) (reading + Corr.Factor) (dB)	Limit (AVE.) (dBμV)	Margin (AVE.) Limits (dB)
0.553	N	15.24	10.00	25.24	46.00	-20.76
0.759	N	5.47	9.99	15.46	46.00	-30.54
0.872	L1	17.50	10.00	27.50	46.00	-18.50
0.964	L1	17.28	10.02	27.30	46.00	-18.70
1.107	L1	21.46	10.01	31.47	46.00	-14.53
1.109	N	20.28	10.01	30.29	46.00	-15.71
1.118	N	11.59	10.01	21.60	46.00	-24.40
1.186	L1	21.36	10.02	31.38	46.00	-14.62
1.461	L1	13.75	10.03	23.78	46.00	-22.22
1.558	N	14.16	10.04	24.20	46.00	-21.80
1.757	L1	11.94	10.05	21.99	46.00	-24.01
1.798	N	11.99	10.05	22.04	46.00	-23.96

Measurements were done with the average detector.
See graph 3 for the measurement plot.

AC Conducted Emissions Test Graph 3



Test Configuration 3

AC Conducted Emissions Test Results cont'd

June 28, 2005

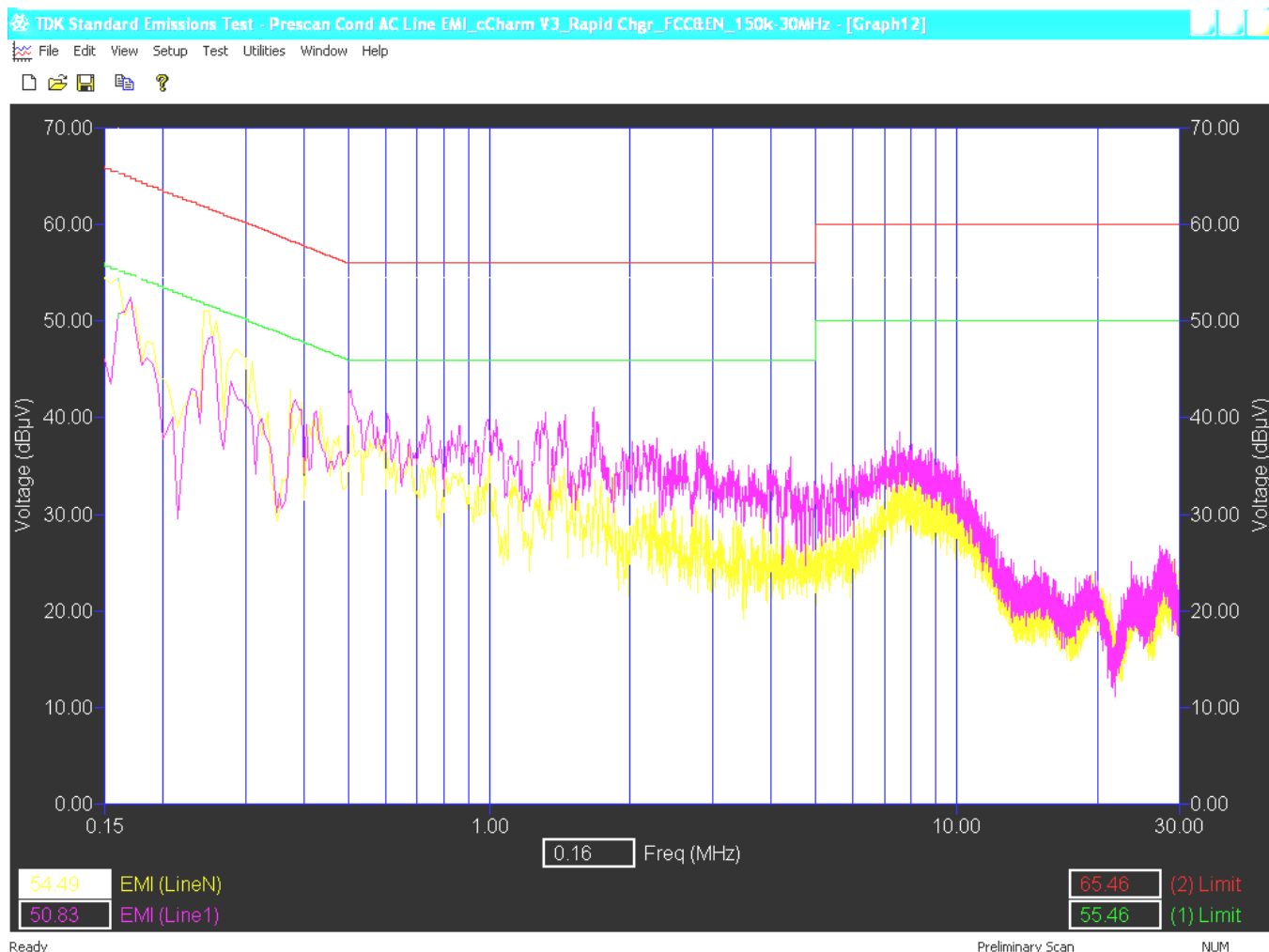
Test Configuration 4

FCC CFR 47 Part 15, Subpart B (CISPR 22), IC ICES-003, Class B

Frequency (MHz)	Line	Reading (QP) (dBμV)	Correction Factors for Impulse Limiter, LISN, Cable (dB)	QP Level (reading + Corr.Factor) (dB)	(QP) Limit (dBμV)	(AVG) Limit (dBμV)	Margin (QP) Limits (dB)	Margin (AVG) Limits (dB)
0.154	N	39.56	9.98	49.54	65.46	55.46	-15.92	-5.92
0.160	L1	39.00	9.98	48.98	64.96	54.96	-15.98	-5.98
0.255	L1	34.14	9.98	44.12	61.59	51.59	-17.47	-7.47
0.256	N	35.78	9.98	45.76	61.76	51.76	-16.00	-6.00
0.280	N	29.37	9.98	39.35	60.52	50.52	-21.17	-11.17
0.306	N	26.98	9.98	36.96	59.97	49.97	-23.01	-13.01
0.382	N	27.93	9.97	37.90	58.39	48.39	-20.49	-10.49
0.423	N	24.12	9.98	34.10	57.16	47.16	-23.06	-13.06
0.506	L1	29.98	10.00	39.98	56.00	46.00	-16.02	-6.02
0.563	L1	25.18	10.00	35.18	56.00	46.00	-20.82	-10.82
1.316	L1	25.68	10.02	35.70	56.00	46.00	-20.30	-10.30
1.678	L1	24.56	10.04	34.60	56.00	46.00	-21.40	-11.40

See graph 4 for the measurement plot.

AC Conducted Emissions Test Graph 4



Test Configuration 4

APPENDIX 2

RADIATED EMISSIONS TEST DATA

Radiated Emissions Test Results**Test Configuration 1**

FCC CFR 47 Part 15, Subpart B, Class B

June 15, 2005

Test distance was 3.0 metres.

Frequency (MHz)	Antenna		Test Angle (Deg.)	Detector (Q.P. or Peak)	Measured Level (dB μ V)	Correction Factors for preamp/antenna/cables/ filter (dB/m)	Field Strength Level (reading+corr.) (dB μ V/m)	Limit @ 3.0 m (dB μ V/m)	Test Margin (dB)
	Pol. (V/H)	Height (metres)							
30.33	V	3.35	35	Q.P.	33.17	-17.89	15.28	40.00	-24.72
46.691	V	1.81	198	Q.P.	49.40	-21.69	27.71	40.00	-12.29
47.746	V	2.8	209	Q.P.	47.42	-21.79	25.63	40.00	-14.37
50.203	H	3.56	283	Q.P.	50.40	-22.07	28.33	40.00	-11.67
51.274	V	2.99	323	Q.P.	54.68	-21.95	32.73	40.00	-7.27
52.945	H	3.92	264	Q.P.	45.07	-21.80	23.27	40.00	-16.73
63.745	V	3.19	9	Q.P.	38.09	-22.06	16.03	40.00	-23.97
90.942	V	1.55	204	Q.P.	42.79	-20.15	22.64	43.50	-20.86
103.326	H	2.66	124	Q.P.	40.32	-19.22	21.10	43.50	-22.40
106.708	H	2.94	110	Q.P.	42.06	-18.84	23.22	43.50	-20.28
110.712	H	2.67	130	Q.P.	41.58	-18.57	23.01	43.50	-20.49
122.475	H	2.92	316	Q.P.	38.32	-18.42	19.90	43.50	-23.60

Radiated Emissions Test Results cont'd**Test Configuration 2**

FCC CFR 47 Part 15, Subpart B, Class B

June 16, 2005

Test Distance was 3.0 metres.

Frequency (MHz)	Antenna		Test Angle (Deg.)	Detector (Q.P. or Peak)	Measured Level (dB μ V)	Correction Factors for preamp/antenna/cables/ filter (dB/m)	Field Strength Level (reading+corr.) (dB μ V/m)	Limit @ 3.0 m (dB μ V/m)	Test Margin (dB)
	Pol. (V/H)	Height (metres)							
81.458	V	3.81	210	Q.P.	37.31	-20.68	16.63	40.00	-23.37

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

Radiated Emissions Test Results cont'd**Test Configuration 3**

FCC CFR 47 Part 15, Subpart B, Class B

June 17, 2005

Test Distance was 3.0 metres.

Frequency (MHz)	Antenna		Test Angle (Deg.)	Detector (Q.P. or Peak)	Measured Level (dB μ V)	Correction Factors for preamp/antenna/cables/ filter (dB/m)	Field Strength Level (reading+corr.) (dB μ V/m)	Limit @ 3.0 m (dB μ V/m)	Test Margin (dB)
	Pol. (V/H)	Height (metres)							
40.813	V	1.78	51	Q.P.	34.80	-20.71	14.09	40.00	-25.91

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

Radiated Emissions Test Results cont'd**Test Configuration 4**

FCC CFR 47 Part 15, Subpart B, Class B

June 17, 2005

Test Distance was 3.0 metres.

Frequency (MHz)	Antenna		Test Angle (Deg.)	Detector (Q.P. or Peak)	Measured Level (dB μ V)	Correction Factors for preamp/antenna/cables/ filter (dB/m)	Field Strength Level (reading+corr.) (dB μ V/m)	Limit @ 3.0 m (dB μ V/m)	Test Margin (dB)
	Pol. (V/H)	Height (metres)							
36.822	V	1.70	201	Q.P	38.42	-19.57	18.85	40.00	-21.15
77.467	V	1.56	230	Q.P	40.65	-21.26	19.41	40.00	-20.59
950.461	H	1.15	258	Q.P	20.71	0.48	21.19	46.00	-24.81

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

Radiated Emissions Test Results cont'd**Test Configuration 5**

FCC CFR 47 Part 15, Subpart B, Class B

June 15, 2005

Test Distance was 3.0 metres.

Frequency (MHz)	Antenna		Test Angle (Deg.)	Detector (Q.P. or Peak)	Measured Level (dBµV)	Correction Factors for preamp/antenna/cables/ filter (dB/m)	Field Strength Level (reading+corr.) (dBµV/m)	Limit @ 3.0 m (dBµV/m)	Test Margin (dB)
	Pol. (V/H)	Height (metres)							
30.350	V	2.91	360	Q.P	39.35	-17.89	21.46	40.00	-18.54
36.817	V	1.73	311	Q.P	49.05	-19.57	29.48	40.00	-10.52
48.531	H	4.00	187	Q.P	54.74	-21.91	32.83	40.00	-7.17
134.187	H	1.59	96	Q.P	47.25	-18.02	29.23	43.50	-14.27
184.331	H	1.12	86	Q.P	45.40	-17.28	28.12	43.50	-15.38
195.342	H	1.00	93	Q.P	44.35	-15.62	28.73	43.50	-14.77
201.288	H	1.38	93	Q.P	43.41	-14.73	28.70	43.50	-14.80
901.205	H	2.16	40	Q.P	30.30	-0.50	29.80	46.00	-16.20
901.264	V	2.08	145	Q.P	34.37	-0.50	33.87	46.00	-12.13
905.602	V	1.40	13	Q.P	37.62	-0.44	37.18	46.00	-8.82
960.133	V	2.01	66	Q.P	34.85	1.00	35.85	54.00	-18.15

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

Radiated Emissions Test Results cont'd**Test Configuration 6**

FCC CFR 47 Part 15, Subpart B, Class B

June 14, 2005

Test Distance was 3.0 metres.

Frequency (MHz)	Antenna		Test Angle (Deg.)	Detector (Q.P. or Peak)	Measured Level (dBµV)	Correction Factors for preamp/antenna/cables/ filter (dB/m)	Field Strength Level (reading+corr.) (dBµV/m)	Limit @ 3.0 m (dBµV/m)	Test Margin (dB)
	Pol. (V/H)	Height (metres)							
48.381	H	3.30	169	Q.P.	54.05	-21.89	32.16	40.00	-7.84
50.224	V	1.57	110	Q.P.	45.26	-22.05	23.21	40.00	-16.79
72.006	V	1.47	224	Q.P.	47.44	-21.59	25.85	40.00	-14.15
85.112	V	2.08	156	Q.P.	40.47	-20.12	20.35	40.00	-19.65
134.095	H	1.46	95	Q.P.	46.42	-18.02	28.40	43.50	-15.10
145.233	H	1.35	96	Q.P.	45.21	-18.00	27.19	43.50	-16.31
195.379	H	1.35	108	Q.P.	43.89	-15.62	28.27	43.50	-15.23
259.088	H	1.14	97	Q.P.	36.57	-14.88	21.69	46.00	-24.31
360.060	V	1.52	42	Q.P.	44.04	-11.59	32.45	46.00	-13.55
701.874	V	1.82	357	Q.P.	36.64	-3.94	32.70	46.00	-13.30
704.261	H	1.97	32	Q.P.	33.59	-3.92	29.67	46.00	-16.33
905.586	V	2.08	150	Q.P.	33.51	-0.44	33.07	46.00	-12.93

Radiated Emissions Test Results cont'd

Test Configuration 7

FCC CFR 47 Part 15, Subpart B, Class B

June 14, 2005

Test Distance was 3.0 metres.

Frequency (MHz)	Antenna		Test Angle (Deg.)	Detector (Q.P. or Peak)	Measured Level (dBµV)	Correction Factors for preamp/antenna/cables/ filter (dB/m)	Field Strength Level (reading+corr.) (dBµV/m)	Limit @ 3.0 m (dBµV/m)	Test Margin (dB)
	Pol. (V/H)	Height (metres)							
32.502	V	3.99	166	Q.P.	39.26	-18.38	20.88	40.00	-19.12
37.065	V	1.95	219	Q.P.	45.66	-19.64	26.02	40.00	-13.98
48.926	H	3.92	168	Q.P.	52.76	-21.95	30.81	40.00	-9.19
49.822	V	1.52	8	Q.P.	43.18	-22.05	21.13	40.00	-18.87
134.036	H	1.85	86	Q.P.	46.84	-18.02	28.82	43.50	-14.68
145.287	H	2.51	92	Q.P.	44.68	-18.01	26.67	43.50	-16.83
184.425	H	1.67	96	Q.P.	45.54	-17.28	28.26	43.50	-15.24
195.35	H	1.15	97	Q.P.	43.06	-15.62	27.44	43.50	-16.06
200.213	H	1.54	86	Q.P.	43.08	-14.79	28.29	43.50	-15.21
201.302	V	1.44	107	Q.P.	42.11	-14.73	27.38	43.50	-16.12
704.300	V	2.08	347	Q.P.	40.12	-3.92	36.20	46.00	-9.80
960.101	V			Q.P.	36.85	1.00	37.85	54.00	-16.15