EXHIBIT A – Test Results

Radiated Measurements

§15.247(b) / §15.205 & §15.209

Transfer Rate:	2 Mbps
Distance of Measurements:	3 Meters
Channel:	01

Frequency (MHz)	Level (dBm)	Peak/ Average	AFCL (dB)	POL (H/V)	F/S (dBmV/m)	F/S (mV/m)	Margin (dB)
4804	- 103.0	Peak	40.39	V	44.39	165.8	- 9.6
7206	- 107.4	Peak	47.42	V	47.02	224.4	- 7.0
9608	- 125.0	Peak	50.30	V	32.30	41.2	- 21.7
12010	- 135.0						

Table A-1. Radiated Measurements @ 3 meters

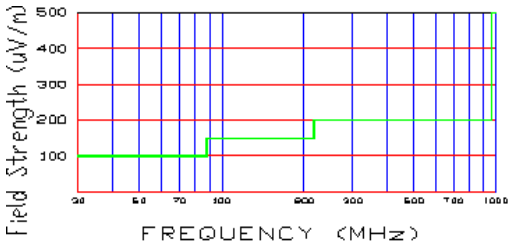

Figure A-1. Radiated limits at 3 meters.

NOTES:

1. All harmonics in the restricted bands specified in §15.205 are below the limit shown in Table G-1. (Note: * = Restricted Band measured frequency)
2. All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz
3. Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz
4. The peak emissions above 1 GHz are not more than 20 dB above the average limit.
5. The antenna is manipulated through typical positions, polarity and length during the tests.
6. The EUT is supplied with nominal AC voltage or/and a new/fully-recharged battery.
7. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
8. < - 135 are below the analyzer floor level.
9. Above 1 GHz, the limit is 500 µV/m (54dBµ/m) at 3 meters radiated.

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EXHIBIT A – Test Results (Cont.)

Radiated Measurements

§15.247(b) / §15.205 & §15.209

Transfer Rate:	2 Mbps
Distance of Measurements:	3 Meters
Channel:	40

Frequency (MHz)	Level (dBm)	Peak/ Average	AFCL (dB)	POL (H/V)	F/S (dBmV/m)	F/S (mV/m)	Margin (dB)
4880	- 101.5	Peak	40.50	V	46.00	199.5	- 8.0
7320	- 109.0	Peak	48.00	V	46.00	199.5	- 8.0
9760	- 127.1	Peak	50.30	V	30.20	32.4	- 23.8
12200	- 135.0						

Table A-2. Radiated Measurements @ 3 meters

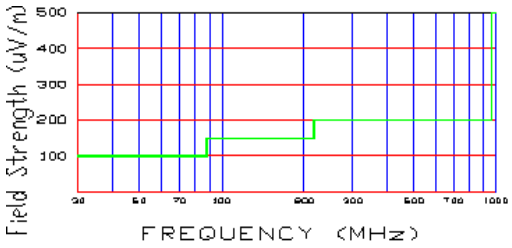

Figure A-2. Radiated limits at 3 meters.

NOTES:

1. All harmonics in the restricted bands specified in §15.205 are below the limit shown in Table G-1. (Note: * = Restricted Band measured frequency)
2. All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz
3. Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz
4. The peak emissions above 1 GHz are not more than 20 dB above the average limit.
5. The antenna is manipulated through typical positions, polarity and length during the tests.
6. The EUT is supplied with nominal AC voltage or/and a new/fully-recharged battery.
7. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
8. < - 135 are below the analyzer floor level.
9. Above 1 GHz, the limit is 500 µV/m (54dBµ/m) at 3 meters radiated.

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EXHIBIT A – Test Results (Cont.)

Radiated Measurements

§15.247(b) / §15.205 & §15.209

Transfer Rate:	2 Mbps
Distance of Measurements:	3 Meters
Channel:	79

Frequency (MHz)	Level (dBm)	Peak/ Average	AFCL (dB)	POL (H/V)	F/S (dBmV/m)	F/S (mV/m)	Margin (dB)
4960	- 102.3	Peak	40.70	V	45.40	186.2	- 8.6
7440	- 109.4	Peak	48.20	V	45.80	195.0	- 8.2
9920	- 130.0	Peak	50.40	V	27.40	23.4	- 26.6
12400	- 135.0						

Table A-3. Radiated Measurements @ 3 meters

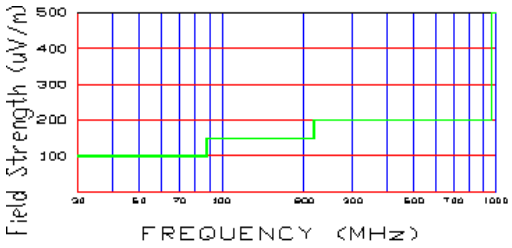

Figure A-3. Radiated limits at 3 meters.

NOTES:

1. All harmonics in the restricted bands specified in §15.205 are below the limit shown in Table G-1. (Note: * = Restricted Band measured frequency)
2. All harmonics/spurs are at least 20 dB below the highest emission in the authorized band using RBW = 100kHz
3. Average Measurements > 1GHz using RBW = 1 MHz VBW = 10 Hz
4. The peak emissions above 1 GHz are not more than 20 dB above the average limit.
5. The antenna is manipulated through typical positions, polarity and length during the tests.
6. The EUT is supplied with nominal AC voltage or/and a new/fully-recharged battery.
7. The spectrum is measured from 9kHz to the 10th harmonic and the worst-case emissions are reported.
8. < - 135 are below the analyzer floor level.
9. Above 1 GHz, the limit is 500 µV/m (54dBµ/m) at 3 meters radiated.

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EXHIBIT A – Test Results (Cont.)

Radiated Restricted Band Measurements

§15.205 / §15.209

Special attention is made for the EUT's harmonic and spurious radiated emission in the restricted bands of operations. The EUT was tested from 9kHz and up to the tenth harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHZ. Above 1 GHz, average measurement was used, using RBW 1MHz – VBW 10Hz and linearly polarized horn antennas. All harmonics/spurs are at least 20dB below the highest emission in the authorized band using RBW = 100kHz. In addition, peak measurements were taken to ensure that the peak levels are not more than 20dB above the average limit. All out of band emissions, other than those created by the spreading sequence, data sequence, and the carrier modulation must not exceed the limits show in Table G-1 per Section 15.209.

Frequency	F/S (mV/m)	Measured Distance (Meters)
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

Table A-4. Restricted Band Limits

TEST MEASUREMENT EQUIPMENT

HP 8562A	Spectrum Analyzer 50GHz
HP 8566B	Spectrum Analyzer 100Hz – 22GHz
HP 83017A	Microwave Analyzer 40dB Gain (0.5 – 26.5GHz)
HP 3784A	Digital Transmission Analyzer
EMCO 3115	Horn Antenna (1 – 18GHz)
HP 8495A	20dB Attenuator (DC-40GHz) 0 –70dB
HP 8493B	10dB Attenuator
MicroCoax Cables	Low Loss Microwave Cables (1 – 26.5GHz)
CDI Dipoles	Dipole Antennas (30 – 1000MHz)
EMCO 3116	Horn Antenna (18 – 40GHz)

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EXHIBIT A – Test Results (Cont.)

Radiated Restricted Band Measurements (Cont.)

§15.205 /§15.209

Operating Frequency: 2480 MHz

Distance of Measurements: 3 Meters

FREQ (MHz)	Level (dBm)	AFCL (dB/m)	POL (H/V)	F/S (dBµV/m)	F/S (uV/M)	Margin (dB)
2483.9	-105.0	33.0	V	35.0	56.2	-19.0
2484.5	-109.4	33.0	V	30.6	33.9	-23.4
2484.4	-104.2	33.1	V	35.9	62.4	-18.1
2485.1	-99.0	33.1	V	41.1	113.5	-12.9
2493.0	-105.3	33.2	V	34.9	55.6	-19.1
2496.0	-121.0	33.2	V	19.2	9.1	-34.8

Table A-5. Radiated Restricted Band Measurements at 3-meters

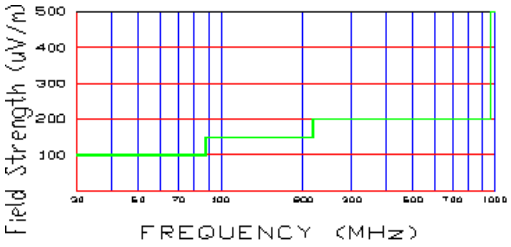

Figure A-4. Limits at 3 meters

NOTES:

1. The antenna is manipulated through typical positions, polarity and length during the testing.

2. The EUT is supplied with the minimal AC voltage or/and a new/fully re-charged battery.

3. The spectrum is measured from 9kHz up to the 10th harmonic and the worst-case emissions are reported.

4. The conducted limits are shown on Figure A-4. Above 1 GHz the limit is 500µV/m.

5. < -135dBm is below the analyzer measurement floor level.

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EXHIBIT B – Test Data (Cont.)

Summary of Test Results

Test Date(s): December 04, 2003

Test Engineer: 

Table B-1. Summary of Test Results

FCC Part 15 Section	Description	Result
15.107	Conducted Emissions	PASS
15.109	Radiated Spurious Emissions	PASS

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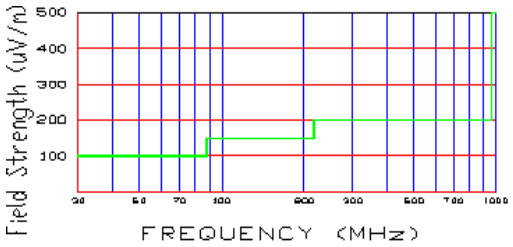
EXHIBIT B – Test Data (Cont.)

Radiated Test Data/Plots

FREQ (MHz)	Level (dBm)	AFCL (dB/m)	POL (H/V)	Height (m)	Azimuth (° angle)	F/S (uV/M)	Margin (dB)
76.34	-82.76	7.06	H	2.5	135	36.78	-8.7
127.23	-84.40	12.01	H	2.3	225	53.75	-8.9
165.44	-85.72	14.63	H	2.2	90	62.42	-7.6
191.38	-85.76	16.07	H	1.9	180	73.33	-6.2
211.30	-88.31	17.02	V	1.7	180	61.00	-7.8
236.82	-86.69	18.19	V	1.6	200	84.19	-7.5

Table B-2. Radiated Measurements at 3-meters



NOTES:

1. All modes of operation were investigated and the worst-case emissions are reported.

2. The radiated limits are shown on Figure A-1. Above 1 GHz the limit is 500µV/m.

Figure B-1. Limits at 3 meters

1 All readings are calibrated by HP8640B signal generator with accuracy traceable to the National Institute of Standards and Technology (NIST).

2 AFCL = Antenna Factor (Roberts dipole) and Cable Loss (30 ft. RG58C/U).

3 Measurements using CISPR quasi-peak mode. Above 1GHz, peak detector function mode is used with a resolution bandwidth of 1MHz and a video bandwidth of 1MHz. The peak level complies with the average limit. Peak mode is used with linearly polarized horn antenna and low-loss microwave cable.

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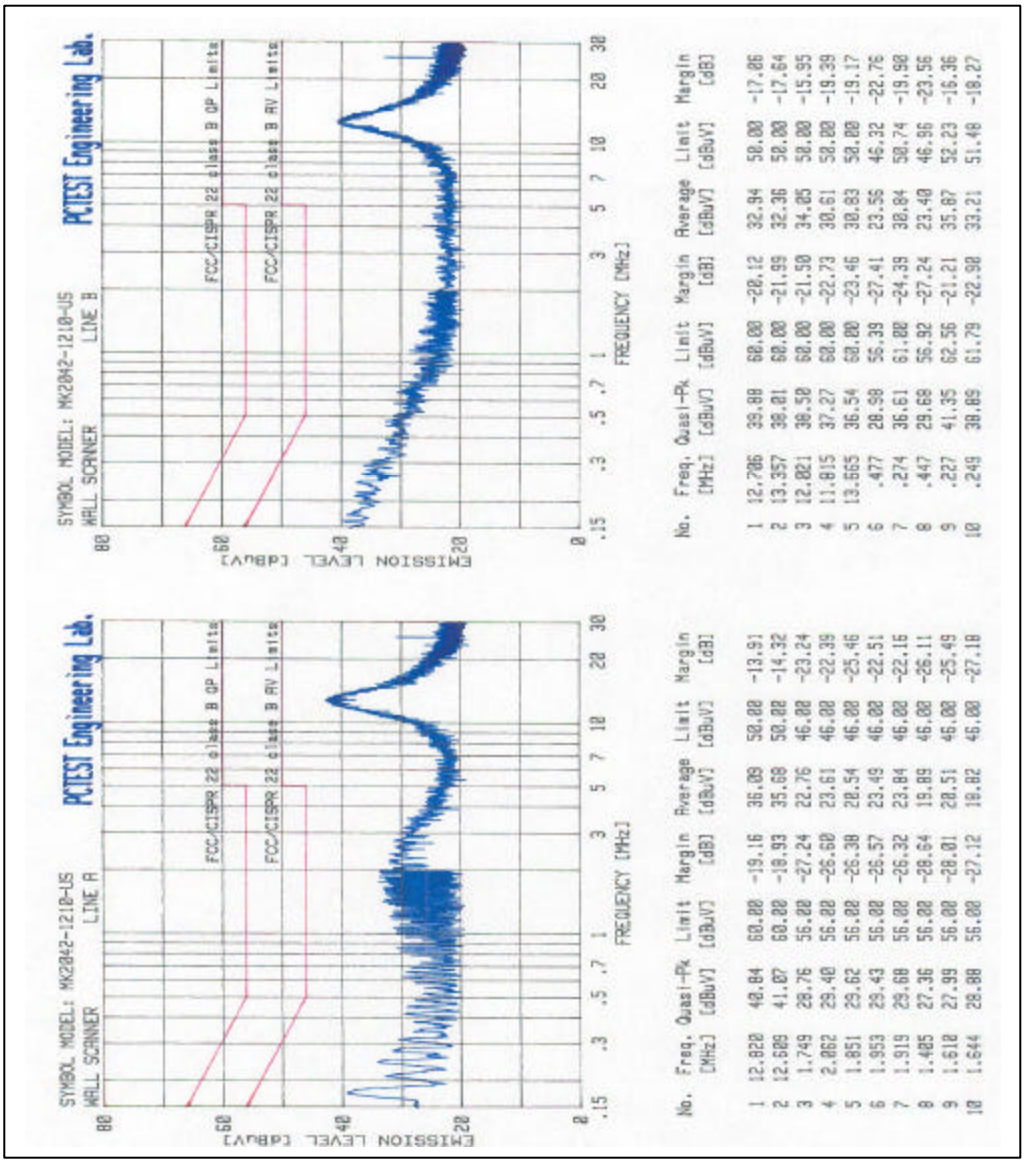
EXHIBIT B. TEST RESULTS (CONTINUED)

EXHIBIT B – Test Data (Cont.)

Line-Conducted Test Data

Plot B-1. Line-Conducted Test Plot



Notes:

1. All Modes of operation were investigated and the worst-case emissions are reported.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in EN55022.
3. Line A = Phase; Line B = Neutral
4. Deviations to the Specifications: *None*.

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