

**APPENDIX A – Test Data**

**Summary of Test Results**



Test Date(s): December 29, 2004

Test Engineer:

*Matt Smith*

**Table A-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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**APPENDIX A – 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)
84.01	-83.44	7.94	V	1.9	30	37.63	-8.5
121.52	-85.80	11.61	V	2.1	180	43.70	-10.7
132.08	-86.96	12.37	V	2.2	225	41.74	-11.1
178.70	-86.33	13.64	V	2.4	160	51.93	-9.2
303.95	-90.24	20.74	H	1.3	330	75.04	-8.5
572.66	-97.68	27.59	H	1.2	90	70.03	-9.1



**Table A-2. Radiated Measurements at 3-meters**

**Sample #1 S/N: 4YPM006SSS**

**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.

- 
- 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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**APPENDIX A – 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)
84.73	-84.11	8.02	V	1.9	30	35.13	-9.1
118.59	-86.47	11.37	V	2.3	160	39.41	-11.6
132.78	-87.32	12.42	V	2.2	225	40.32	-11.4
203.30	-90.55	16.65	H	1.4	60	45.24	-10.4
304.96	-91.67	20.78	H	1.4	330	63.88	-9.9
813.19	-100.01	31.51	H	1.1	270	84.19	-7.5



**Table A-2. Radiated Measurements at 3-meters**

**Sample #2 S/N: 4YPM007SSS**

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.

- 
- 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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**APPENDIX A – 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)
84.54	-83.19	8.00	V	1.9	30	38.95	-8.2
118.35	-84.35	11.35	V	2.4	160	50.17	-9.5
135.26	-87.02	12.62	V	2.1	225	42.71	-10.9
156.21	-85.13	14.03	V	2.2	90	62.42	-7.6
203.31	-90.35	16.65	H	1.3	60	46.29	-10.2
304.33	-91.15	20.76	H	1.3	330	67.66	-9.4



**Table A-2. Radiated Measurements at 3-meters**

**Sample #3 S/N: 4YPM008SSS**

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.

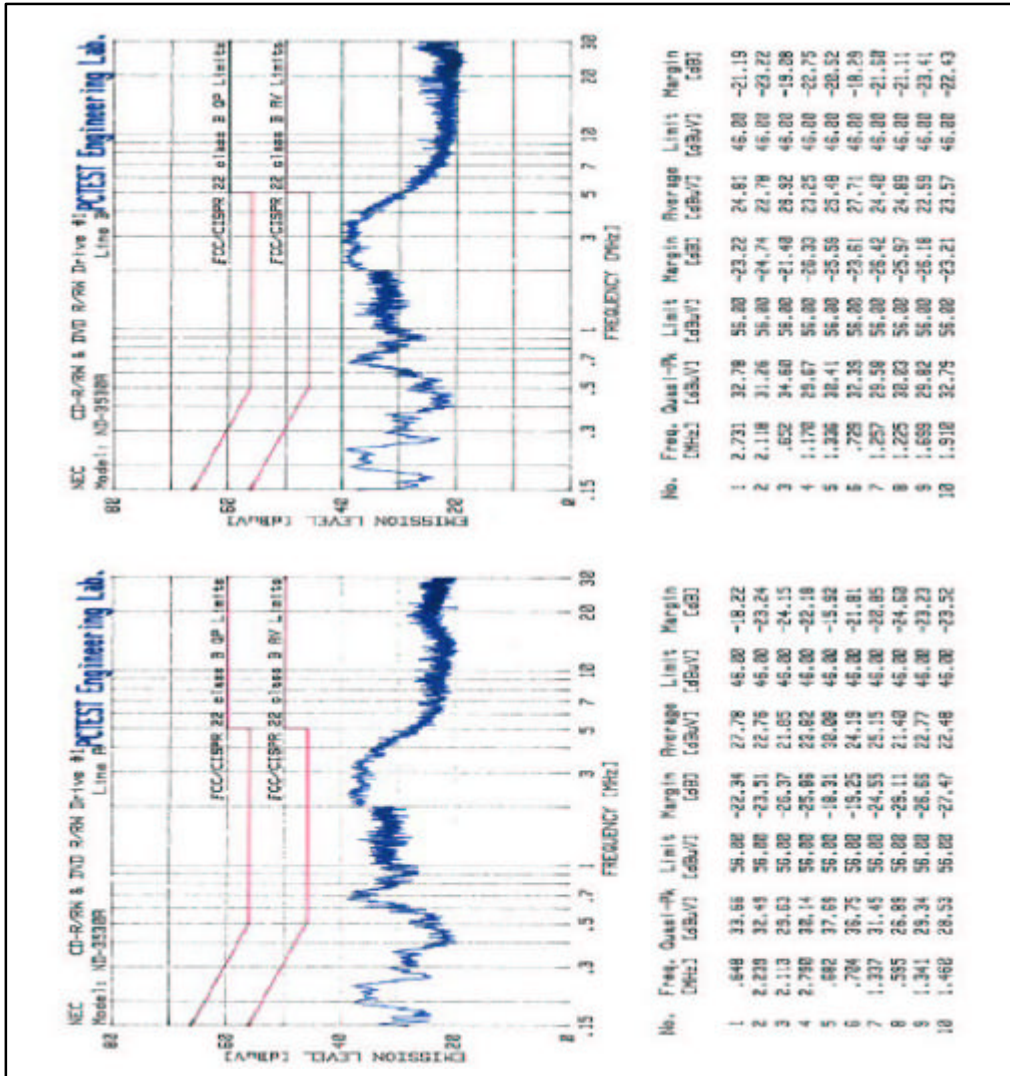
- 
- 1 All readings are calibrated by HP8640B signal generator with accuracy traceable to the National Institute of Standards and Technology (NIST).
  - 2 AFCL = Antenna Factor (Roberts dipole) and Cable Loss (30 ft. RG58C/U).
  - 3 Measurements using CISPR quasi-peak mode. Above 1GHz, peak detector 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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**APPENDIX A – Test Data (Cont.)**

**Line-Conducted Test Data**

Plot A-1. Line-Conducted Test Plot



Sample #1 S/N: 4YPM006SSS

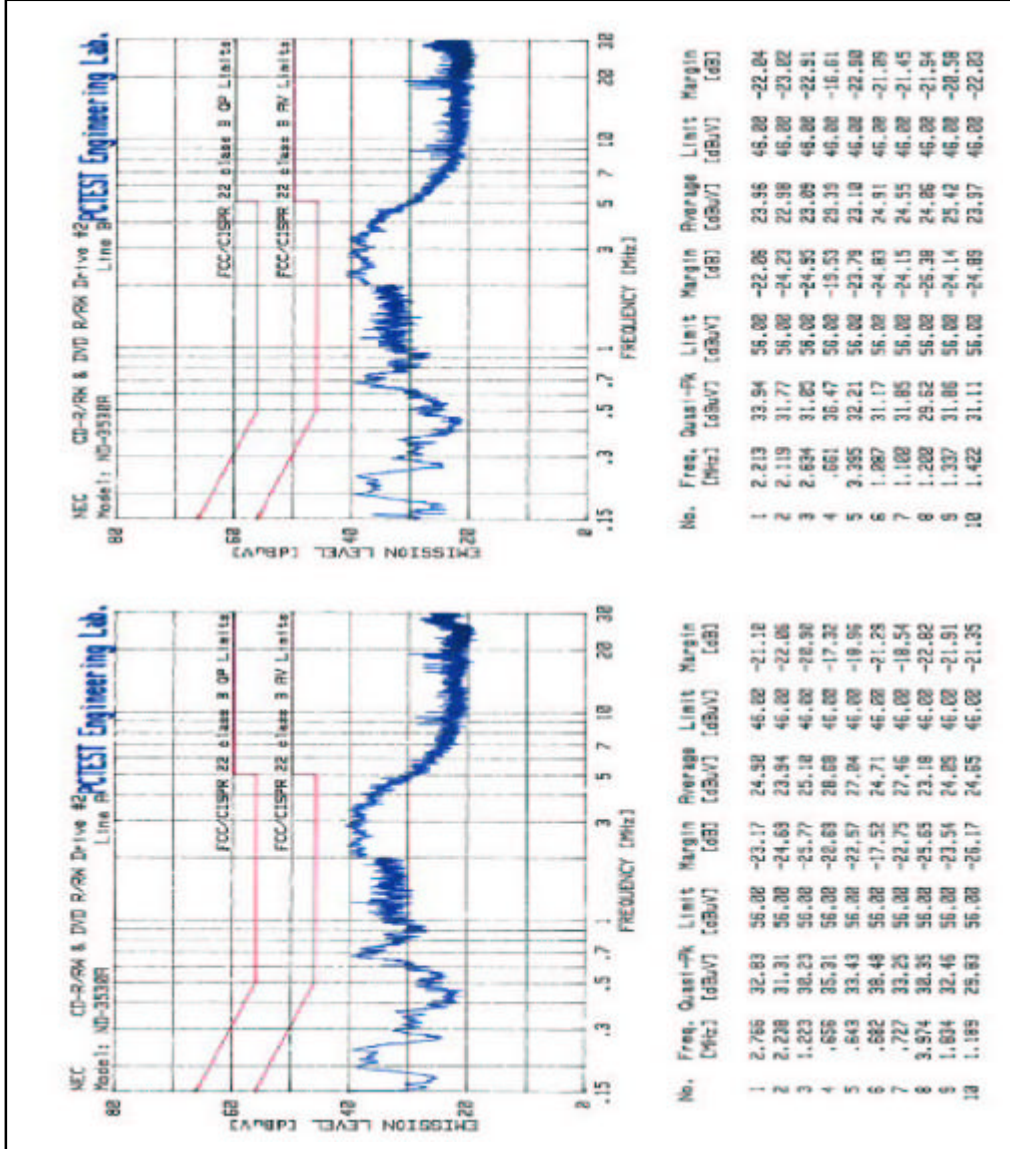
Notes:

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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**APPENDIX A – Test Data (Cont.)**  
**Line-Conducted Test Data**

Plot A-2. Line-Conducted Test Plot



Sample #2 S/N: 4YPM007SSS

Notes:

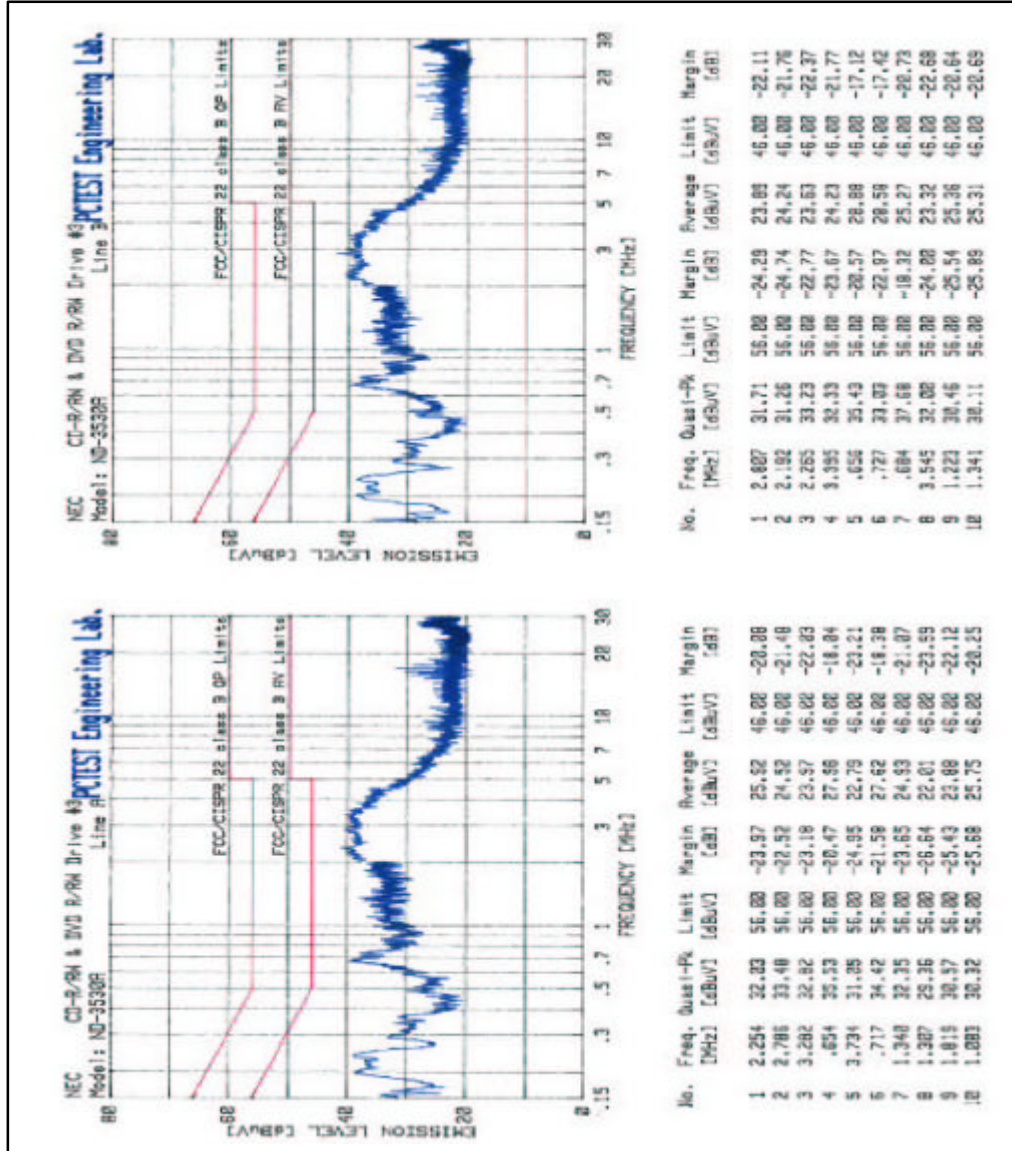
1. All Modes of operation were investigated and the worst-case emissions are reported.
2. The limit for Class B device(s) from 150kHz to 30MHz are specified in EN55022.
3. Line A = Phase; Line B = Neutral
4. Deviations to the Specifications: *None.*

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**APPENDIX A – Test Data (Cont.)**

**Line-Conducted Test Data**

**Plot A-3. Line-Conducted Test Plot**



**Sample #3 S/N: 4YPM008SSS**

**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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**APPENDIX A – Test Data (Cont.)**

**Test Support Equipment Used**

- |                                |   |   |
|--------------------------------|---|---|
| 1. NEC Internal DVD R/RW Drive | Model: ND-3530A (EUT)   | S/N: 4YPM006SSS<br>4YPM007SSS<br>4YPM008SSS |
| 2. GATEWAY Mid Tower PC        | Model: MFATXPNT-MDSB-4100-ACP04<br>1.8 m. unshielded AC power cord                        | S/N: 0031627700                             |
| 3. H/P THINKJET Printer        | FCC ID: DS16XU2225C<br>1.8 m. unshielded AC power cord<br>1.5 m. shielded parallel cable  | S/N: 2604S10169                             |
| 5. LOGITECH Mouse              | Model: JNZ211443<br>1.8 m. shielded data cable  | S/N: HCA31609334                            |
| 6. GATEWAY Keyboard            | Model: SK1510<br>1.8 m. shielded cable  | S/N: C924775                                |
| 7. ZOOM Modem                  | FCC ID: BDNV34MINI-EXT<br>1.8 m. unshielded DC power cord<br>1.2 m. shielded serial cable | S/N: 3117M4X40211                           |
| 8. SONY Monitor                | Model: SDM-X53<br>1.8 m. shielded D-SUB cable<br>1.8 m. unshielded AC power cord          | S/N: N/A                                    |

Note: See Attachment G – Test Setup Photographs, for actual system test setup.

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