APPENDIX D – Test Data

Summary of Test Results

Test Date(s): July 13-14, 2005

Test Engineer: 

Table D-1. Summary of Test Results

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

APPENDIX D – 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)
67.70	-82.07	5.98	V	2.3	180	35.13	-9.1
71.73	-82.30	6.51	V	2.2	90	36.36	-8.8
135.76	-85.06	12.66	V	2.3	45	53.75	-8.9
158.20	-87.87	14.17	V	2.2	180	46.29	-10.2
372.67	-93.43	22.93	H	1.5	300	66.88	-9.5
428.87	-93.29	24.39	H	1.3	90	80.40	-7.9

Table D-2. Radiated Measurements at 3-meters

Sample #1 S/N: 56N1017S111

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.

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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.

APPENDIX D – 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)
67.70	-81.67	5.98	V	2.2	180	36.78	-8.7
124.40	-83.70	11.81	V	2.4	270	56.94	-8.4
135.76	-85.56	12.66	V	2.1	45	50.75	-9.4
169.61	-87.47	14.88	V	2.2	330	52.53	-9.1
237.55	-88.72	18.23	H	1.4	90	66.88	-9.5
372.67	-93.23	22.93	H	1.3	300	68.44	-9.3

Table D-2. Radiated Measurements at 3-meters

Sample #2 S/N: 56N1018S111

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.

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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.

APPENDIX D – 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)
71.73	-81.80	6.51	V	2.3	225	38.51	-8.3
124.34	-83.20	11.80	V	2.1	270	60.31	-7.9
158.20	-87.77	14.17	V	2.1	180	46.82	-10.1
169.48	-87.46	14.87	V	2.2	330	52.53	-9.1
372.71	-90.83	22.94	H	1.3	300	90.21	-6.9
428.87	-92.59	24.39	H	1.5	90	87.15	-7.2

Table D-2. Radiated Measurements at 3-meters

Sample #3 S/N: 56N1019S111

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.

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

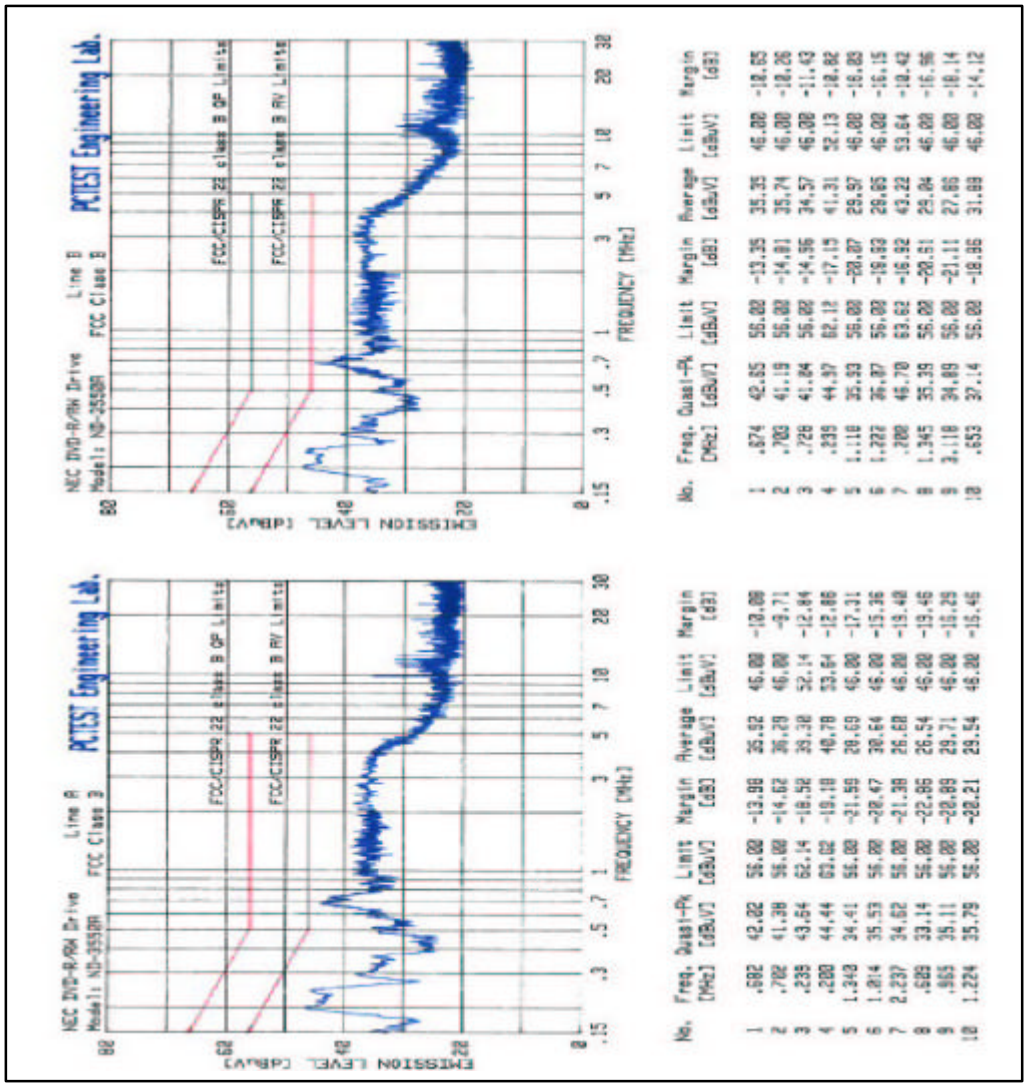
2 AFCL = Antenna Factor (Roberts dipole) and Cable Loss (30 ft. RG58C/U).

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.

APPENDIX D – Test Data (Cont.)

Line-Conducted Test Data

Plot D-1. Line-Conducted Test Plot



Sample #1 S/N: 56N1017S111

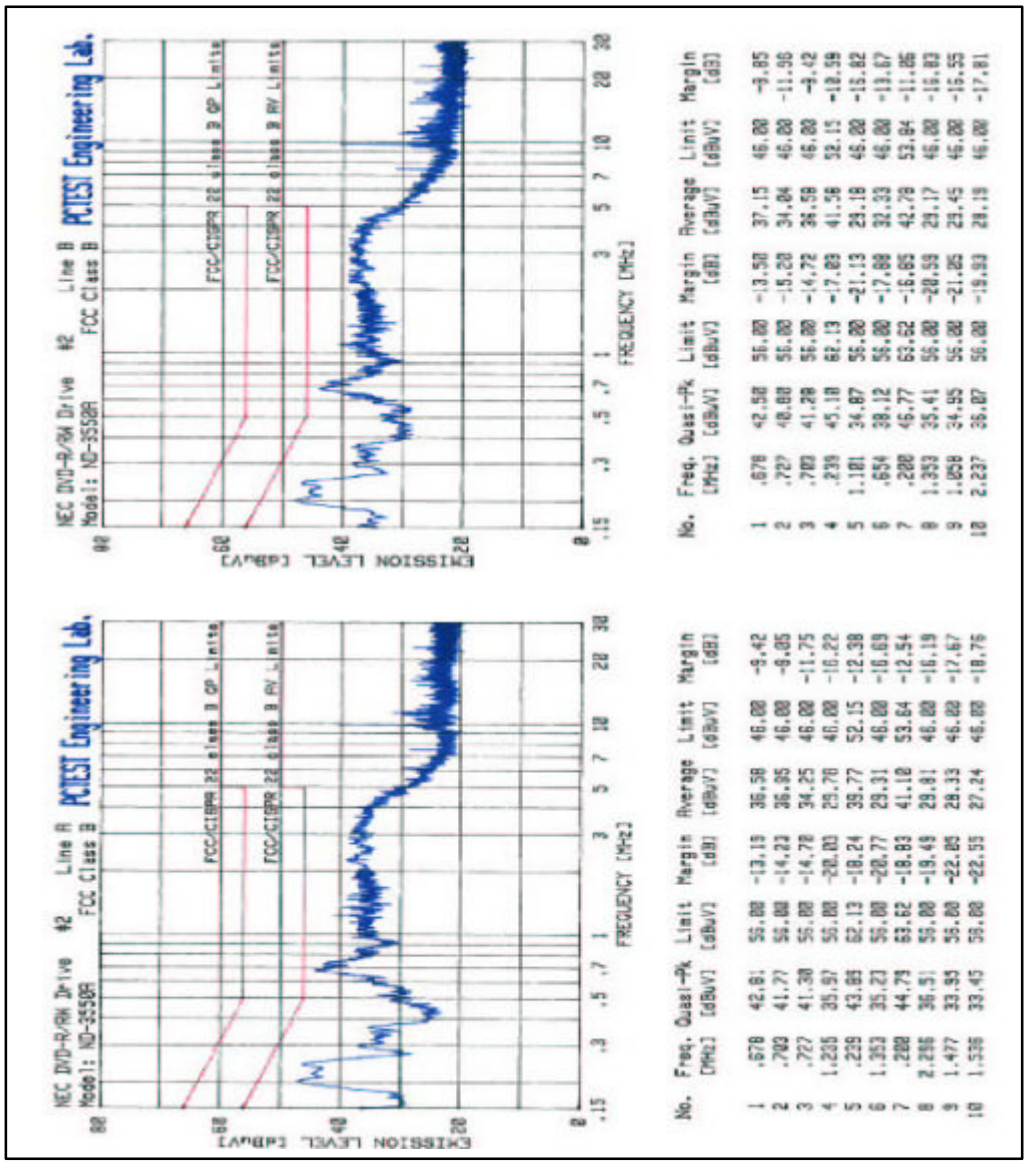
Notes:

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*.

APPENDIX D – Test Data (Cont.)

Line-Conducted Test Data

Plot D-2. Line-Conducted Test Plot



Sample #2 S/N: 56N1018S111

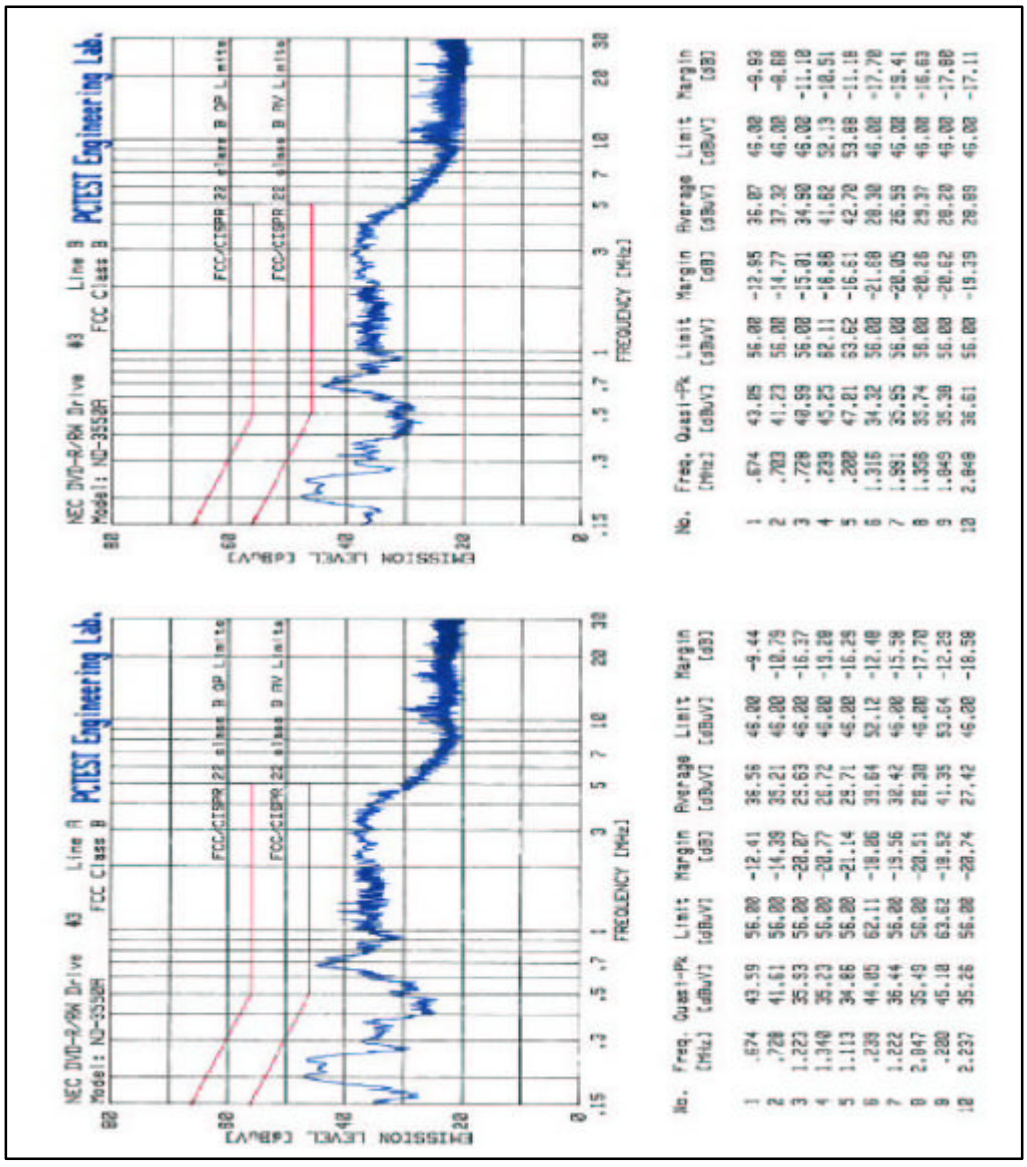
Notes:

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*.

APPENDIX D – Test Data (Cont.)

Line-Conducted Test Data

Plot D-3. Line-Conducted Test Plot



Sample #3 S/N: 56N1019S111

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*.

APPENDIX D – Test Data (Cont.)

Test Support Equipment Used

1. **NEC Internal DVD R/RW Drive**	**FCC ID: A3DND-3550A (EUT)** 0.6 m. unshielded analog audio cable 0.6 m. unshielded digital audio cable	**S/N: 56N1017S111** **S/N: 56N1018S111** **S/N: 56N1019S111**
2. GATEWAY Mid Tower PC	Model: MFATXPNT-MDSB-4100-ACP04 1.8 m. unshielded AC power cord	S/N: 0031627700
3. H/P THINKJET Printer	FCC ID: DS16XU2225C 1.8m Unshielded AC power cord 1.5 m. shielded parallel cable	S/N: 2604S10169
4. LOGITECH Mouse	Model: JNZ211443 1.8m shielded data cable	S/N: HCA31609334
5. GATEWAY Keyboard	Model: SK1510 1.8m shielded data cable	S/N: C924775
6. ZOOM Modem	FCC ID: BDNV34MINI-EXT 1.8 m. unshielded DC power cord 1.2 m. shielded serial cable	S/N: 3117M4X40211
7.SONY Monitor	Model: SDM-X53 1.8 m. unshielded AC power cord 1.8 m. shielded D-SUB cable	S/N: N/A

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