APPENDIX A – Test Data

Summary of Test Results

Test Date(s): June 11-15, 2004

Test Engineer: 

Table A-1. Summary of Test Results

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

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)
85.10	12.44	8.06	V	2.8	30	20.51	-9.5
202.23	9.50	16.60	H	1.4	225	26.11	-3.9
343.63	5.03	22.17	H	1.4	90	27.21	-9.8
406.50	3.95	23.86	H	1.6	300	27.81	-9.2
689.44	2.19	29.72	H	1.3	180	31.91	-5.1
914.62	-4.30	32.80	H	1.5	200	28.51	-8.5

Table A-2. Radiated Measurements at 10-meters

Sample #1 S/N: 456M006SSSS

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.

APPENDIX A – Test Data (Cont.)

Radiated Test Data/Plots

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.

FREQ (MHz)	Level (dBm)	AFCL (dB/m)	POL (H/V)	Height (m)	Azimuth (° angle)	F/S (uV/M)	Margin (dB)
84.71	12.89	8.02	V	2.6	30	20.91	-9.1
135.55	10.36	12.64	V	2.7	90	23.01	-7.0
169.40	8.74	14.86	V	2.4	180	23.61	-6.4
406.63	4.55	23.86	H	1.7	300	28.41	-8.6
546.81	0.05	27.06	H	1.6	225	27.11	-9.9
683.96	1.09	29.62	H	1.3	180	30.71	-6.3

Table A-2. Radiated Measurements at 10-meters

Sample #2 S/N: 456M005SSSS

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 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)
73.07	12.74	6.67	V	2.6	45	19.40	-10.6
202.23	6.70	16.60	V	2.7	225	23.31	-6.7
305.13	5.42	20.78	V	2.5	330	26.21	-10.8
406.86	3.24	23.86	H	1.7	300	27.11	-9.9
496.34	2.49	26.01	H	1.6	90	28.51	-8.5
682.91	0.10	29.60	H	1.3	180	29.71	-7.3

Table A-2. Radiated Measurements at 10-meters

Sample #3 S/N: 456M004SSSS

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).

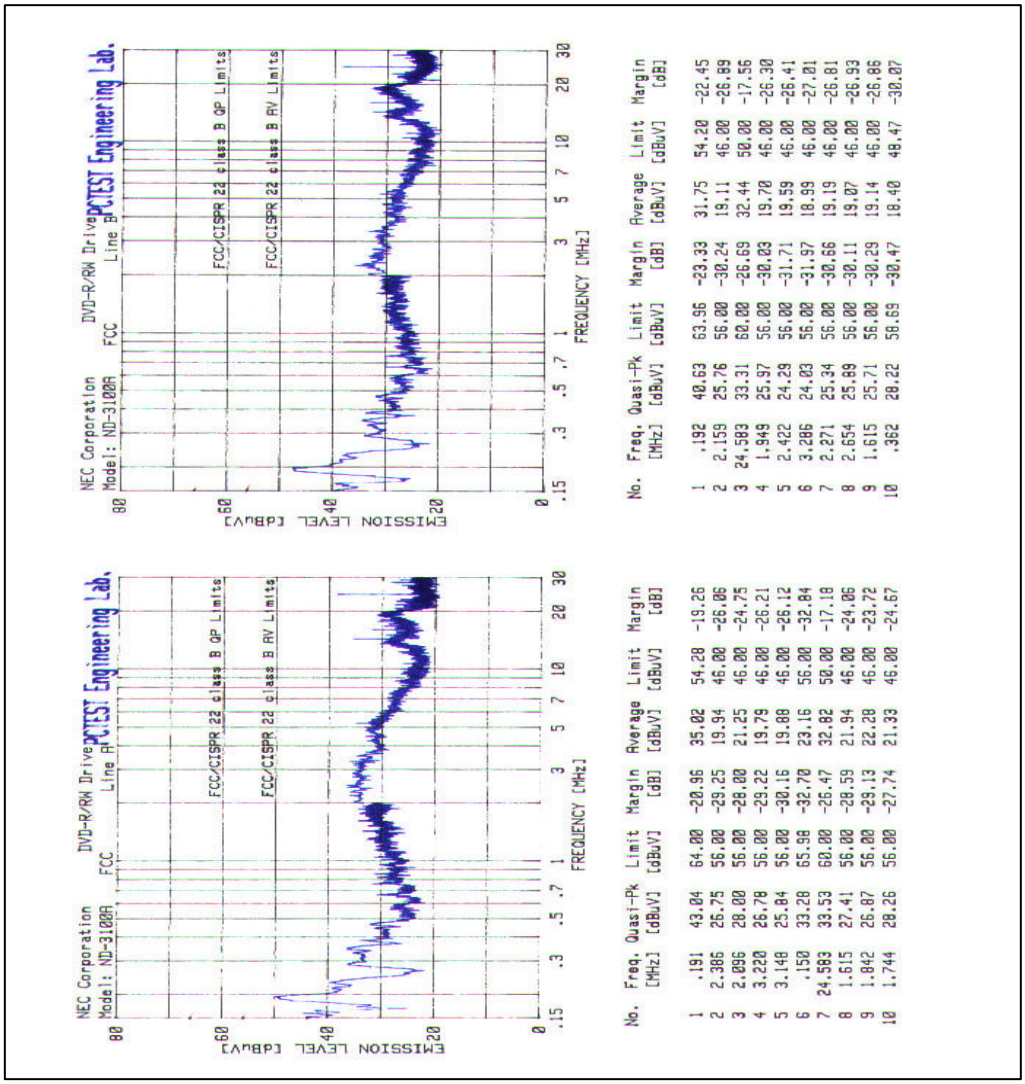
2 AFCL = Antenna Factor (Roberts dipole) and Cable Loss (30 ft. RG58C/U).

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 A – Test Data (Cont.)

Line-Conducted Test Data

Plot A-1. Line-Conducted Test Plot



Sample #1 S/N: 456M004SSSS

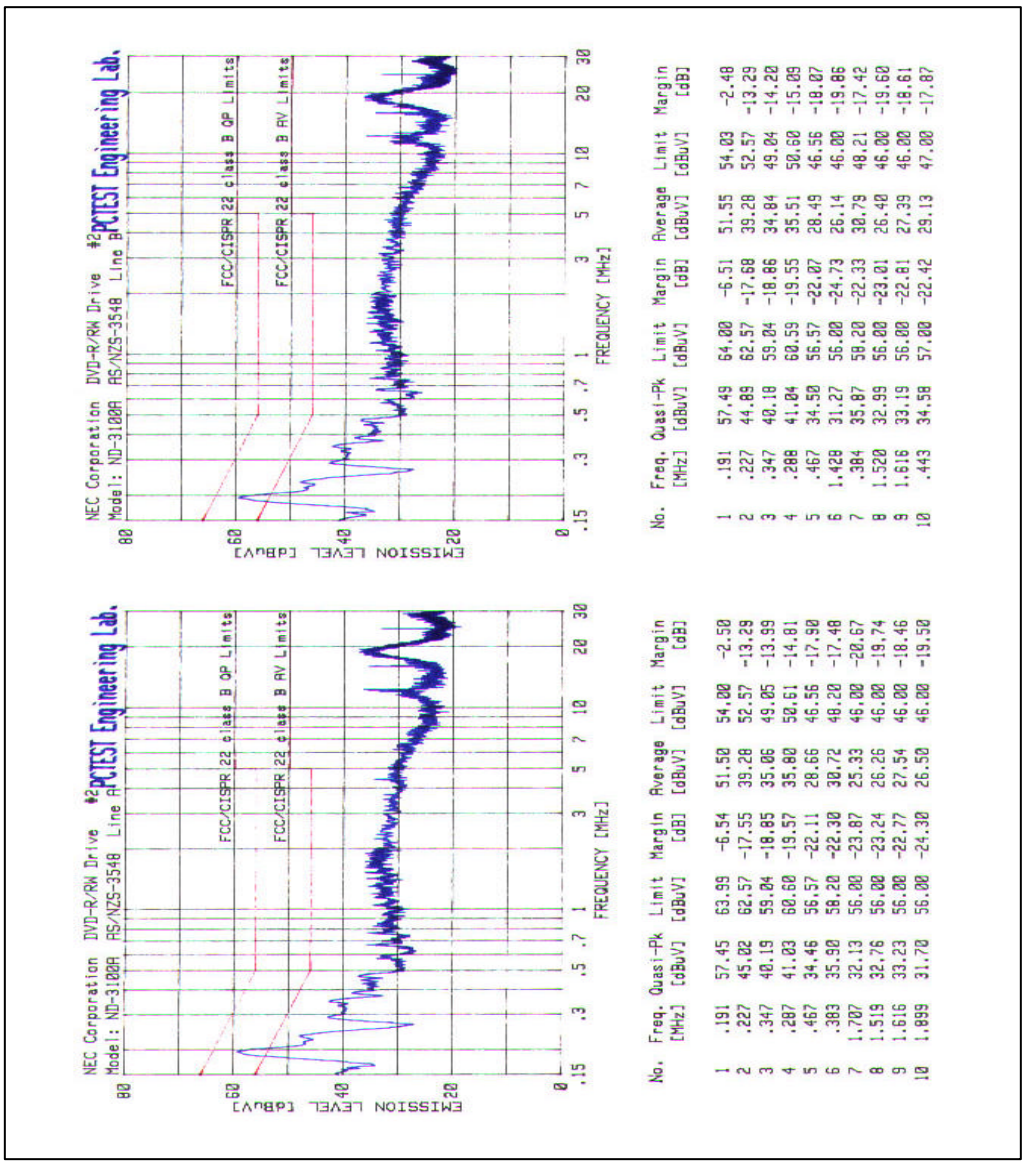
Notes:

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 A – Test Data (Cont.)

Line-Conducted Test Data

Plot A-2. Line-Conducted Test Plot



Sample #2 S/N: 456M005SSSS

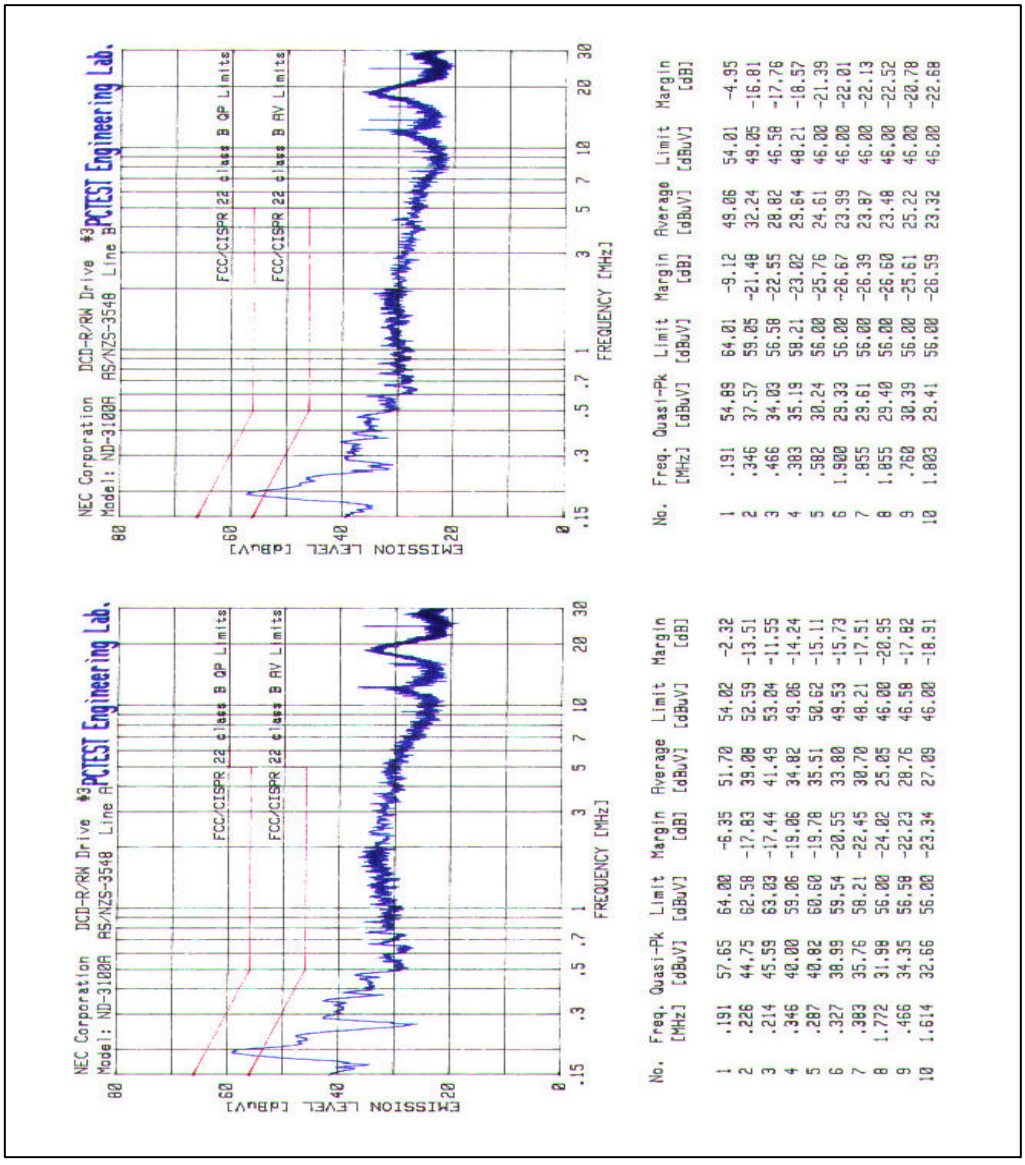
Notes:

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 A – Test Data (Cont.)

Line-Conducted Test Data

Plot A-3. Line-Conducted Test Plot



Sample #3 S/N: 456M004SSSS

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 A – Test Data (Cont.)

Test Support Equipment Used

1. **NEC Internal DVD R/RW Drive**	**FCC ID: A3DND-3100A (EUT)** 0.6 m. unshielded analog audio cable 0.6 m. unshielded digital audio cable	**S/N: 456M005SSSS**
2. GATEWAY Mid Tower PC	Model:GP6-450 1.8 m. unshielded AC power cord	S/N: 0011745565
3. SONY Monitor	Model: SDM-HS74 1.8 m. shielded D-SUB cable 1.8 m. unshielded AC power cord	S/N: N/A
4. H/P THINKJET Printer	FCC ID: DS16XU2225C 1.8 m. unshielded AC power cord 2.0 m. shielded parallel cable	S/N: 2651540366
5. LOGITECH Mouse	Model: JNZ211443 1.8 m. unshielded cable	S/N: hca30223393
6. GATEWAY Keyboard	Model: SK-9921 1.8 m. unshielded cable	S/N: C084851
7. ZOOM Modem	FCC ID: BDNV34MINI-EXT 1.8 m. unshielded DC power cord 1.6 m. shielded serial Cable	S/N: 1257ZM4X1012
8. SONY Headphones	Model: MDR-V2 2.0 m. shielded audio cable	S/N: PCT2006

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