FCC TEST REPORT

REPORT NO.: RF910103R02
MODEL NO.: NWH2210, NWH2610
RECEIVED: Dec. 18, 2001
TESTED: Dec. 20, 2001 ~ Feb. 1, 2002

APPLICANT: NATIONAL DATACOMM CORPORATION
ADDRESS: 4F, NO.24-2, INDUSTRY EAST 4TH ROAD, SCIENCE PARK,HSINCHU, TAIWAN, R.O.C

ISSUED BY: Advance Data Technology Corporation
LAB LOCATION: 47 14th Lin, Chiapau Tsun, Linko, Taipei, Taiwan, R.O.C.

0528
ILAC MRA

Lab Code: 200102-0

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1 CERTIFICATION

PRODUCT :	11Mbps Wireless Ethernet Client
BRAND NAME :	NDC
MODEL NO. :	NWH2210, NWH2610
APPLICANT :	NATIONAL DATACOMM CORPORATION
STANDARDS :	47 CFR Part 15, Subpart C (Section 15.247), ANSI C63.4-1992, Canada RSS 210, New Zealand RFS 29

We, **Advance Data Technology Corporation**, hereby certify that one sample of the designation has been tested in our facility from Dec. 20, 2001 ~ Feb. 1, 2002. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions herein specified.

TESTED BY : Gary Chang , DATE: Feb. 19. 2002
Gary Chang

CHECKED BY : Demi Chen , DATE: Feb. 19, 2002
Demi Chen

APPROVED BY : Alan Lane , DATE: Feb. 19, 2002
Dr. Alan Lane, Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: 47 CFR Part 15, Subpart C			
Standard Section	**Test Type and Limit**	**Result**	**REMARK**
15.207	AC Power Conducted Emission Limit: 48dBuV	PASS	Meet the requirement of limit Minimum passing margin is –14.47dBuV at 2.5324MHz
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	PASS	Meet the requirement of limit
15.247(b)	Maximum Peak Output Power Limit: max. 30dBm	PASS	Meet the requirement of limit
15.247(c)	Radiated Emissions Limit: Table 15.209	PASS	Meet the requirement of limit Minimum passing margin is –3.2dBuV at 560.00MHz
15.247(d)	Power Spectral Density Limit: max. 8dBm	PASS	Meet the requirement of limit
15.247(c)	Band Edge Measurement Limit: 20 dB less than the peak value of fundamental frequency	PASS	Meet the requirement of limit

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	11Mbps Wireless Ethernet Client
MODEL NO.	NWH2210, NWH2610
POWER SUPPLY	5.1VDC from AC adapter
MODULATION TYPE	BPSK, QPSK, CCK
RADIO TECHNOLOGY	DSSS
TRANSFER RATE	1/2/5.5/11/22Mbps
FREQUENCY RANGE	2412MHz ~ 2462MHz
NUMBER OF CHANNEL	11
OUTPUT POWER	15.9dBm
ANTENNA TYPE	Dipole antenna
POWER CABLE	1.8m (Nonshielded)
I/O PORTS	RJ45 port
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT is operated with the following power adapter.

Model No. :	HES10-05020-0-2
Input Power :	100-240VAC
Output Power :	5.1V/1A

2. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

3.2 DESCRIPTION OF TEST MODES

Eleven channels are provided in this EUT.

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

NOTE:

1. Below 1 GHz, the channel 1, 6, and 11 were pre-tested in chamber. The channel 11, worst case one, was chosen for final test.
2. Above 1 GHz, the channel 1, 6, and 11 were tested individually.

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is an 11Mbps Wireless Ethernet Client. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC CFR 47 Part 15, Subpart C. (15.247)

ANSI C63.4 : 1992, Canada RSS 210, New Zealand RFS 29

All tests have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK	DELL	PP01L	TW-09C748-12800-19O-B220	FCC DoC APPROVED
2	USB 10/100 Fast Ethernet	D-Link	DU-E100	UR15001767	FCC DoC APPROVED

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA

NOTE: All power cords of the above support units are non shielded (1.8m).

4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY (MHz)	Class B (dBuV)	
	Quasi-peak	Average
0.45 – 30	48	-

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. All emanations from a class B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
ROHDE & SCHWARZ Test Receiver	ESHS30	828109/007	July 4, 2002
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ESH3-Z5	839135/006	July 3, 2002
* ROHDE & SCHWARZ 4-wire ISN	ENY41	838119/028	Dec. 2, 2002
* ROHDE & SCHWARZ 2-wire ISN	ENY22	837497/016	Dec. 2, 2002
EMCO-L.I.S.N. (for peripheral)	3825/2	9204-1964	July 3, 2002
Software	Cond-V2J	NA	NA
RF cable (JYEBAO)	RG-58A/U	Cable-C02.01	July 5, 2002
HP Terminator (For EMCO LISN)	11593A	E1-01-298	Feb. 20, 2003
HP Terminator (For EMCO LISN)	11593A	E1-01-299	Feb. 20, 2003
Shielded Room	Site 2	ADT-C02	NA
VCCI Site Registration No.	Site 2	C-240	NA

NOTE: 1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.

2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

3. "*": These equipment are used for conducted telecom port test only (if tested).

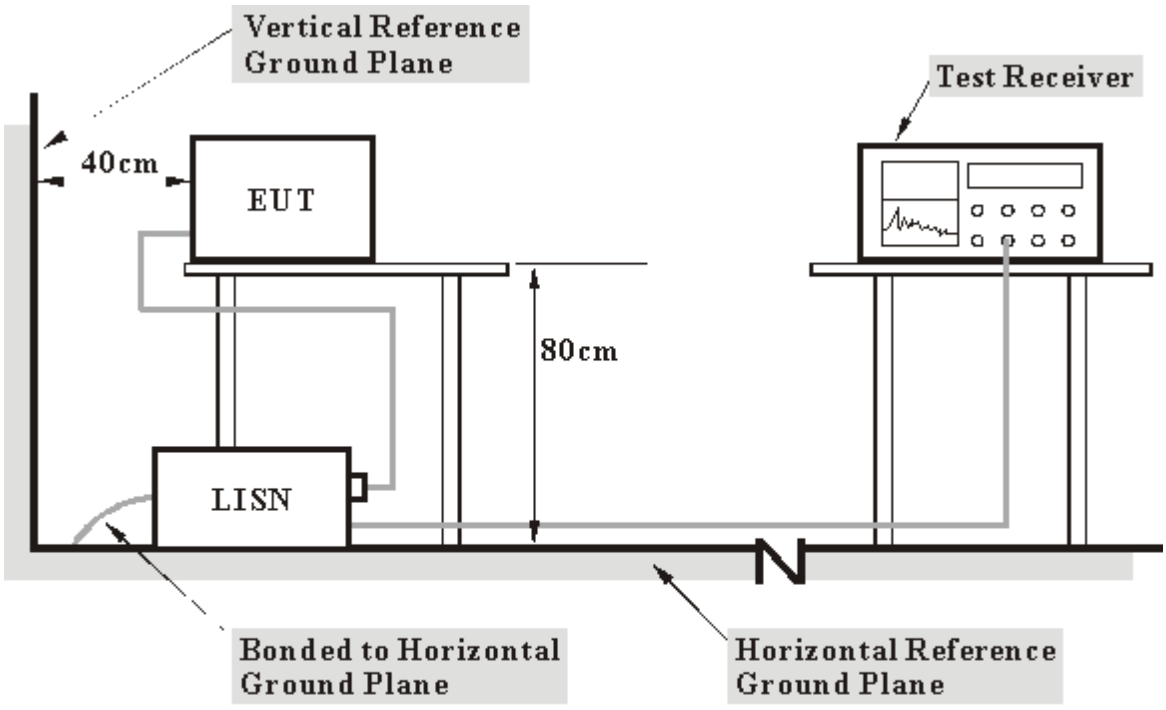
4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 450 kHz to 30 MHz was searched. Emission levels over 10dB under the prescribed limits could not be reported

4.1.4 TEST SETUP



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.5 EUT OPERATING CONDITIONS

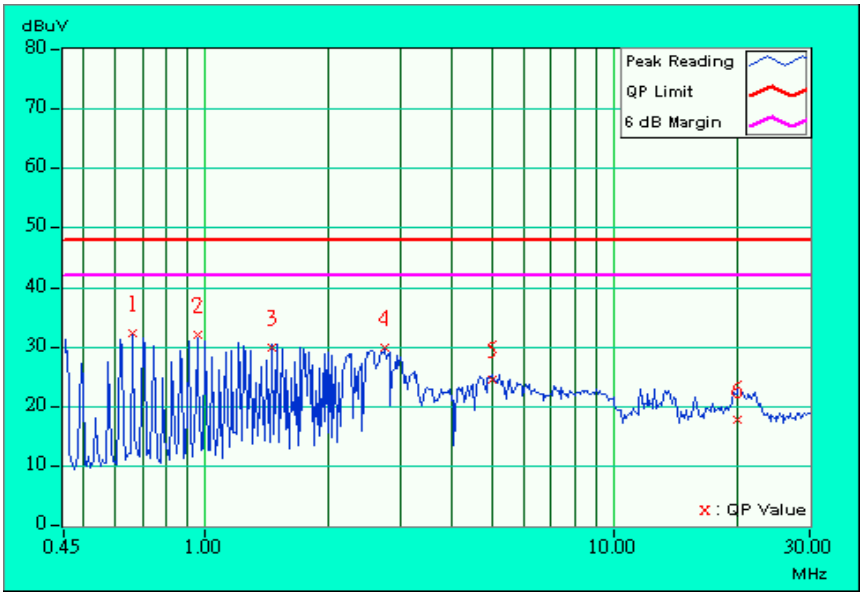
a. Placed the EUT on the testing table.
b. Prepared another computer system to act as a communication partner and placed it outside of testing area.
c. The communication partner run a test program to enable EUT under transmission/receiving condition continuously at specific channel frequency via an RJ 45 cable.
d. The communication partner sent data to EUT by command "PIN".

4.1.6 TEST RESULTS

EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.665	0.10	31.39	-	31.49	-	48.00	-	-16.51	-
2	0.954	0.10	31.13	-	31.23	-	48.00	-	-16.77	-
3	1.454	0.10	28.85	-	28.95	-	48.00	-	-19.05	-
4	2.739	0.17	28.88	-	29.05	-	48.00	-	-18.95	-
5	5.023	0.33	23.57	-	23.90	-	48.00	-	-24.10	-
6	20.048	1.00	16.80	-	17.80	-	48.00	-	-30.20	-

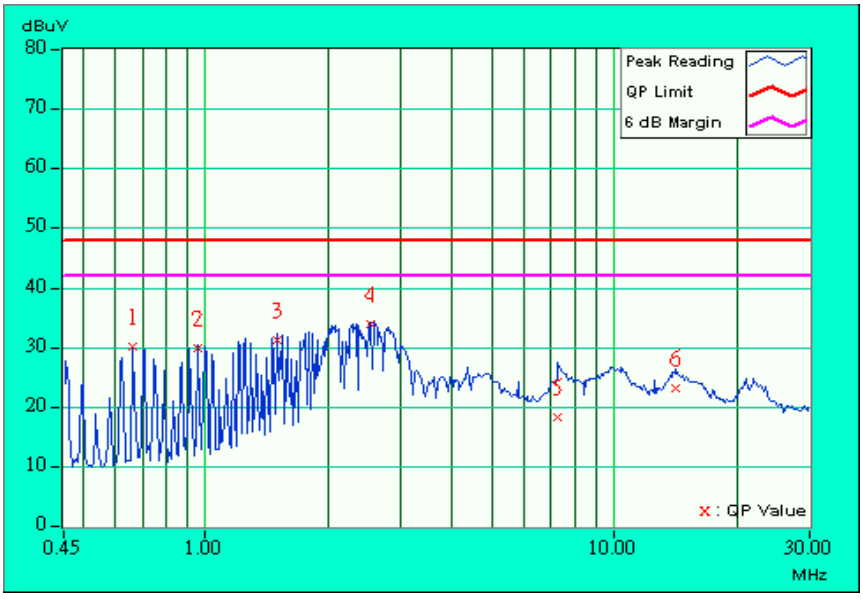
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 1	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.663	0.10	29.58	-	29.68	-	48.00	-	-18.32	-
2	0.957	0.10	29.24	-	29.34	-	48.00	-	-18.66	-
3	1.496	0.10	30.77	-	30.87	-	48.00	-	-17.13	-
4	2.532	0.15	33.38	-	33.53	-	48.00	-	-14.47	-
5	7.282	0.35	17.71	-	18.06	-	48.00	-	-29.94	-
6	14.158	0.57	22.73	-	23.30	-	48.00	-	-24.70	-

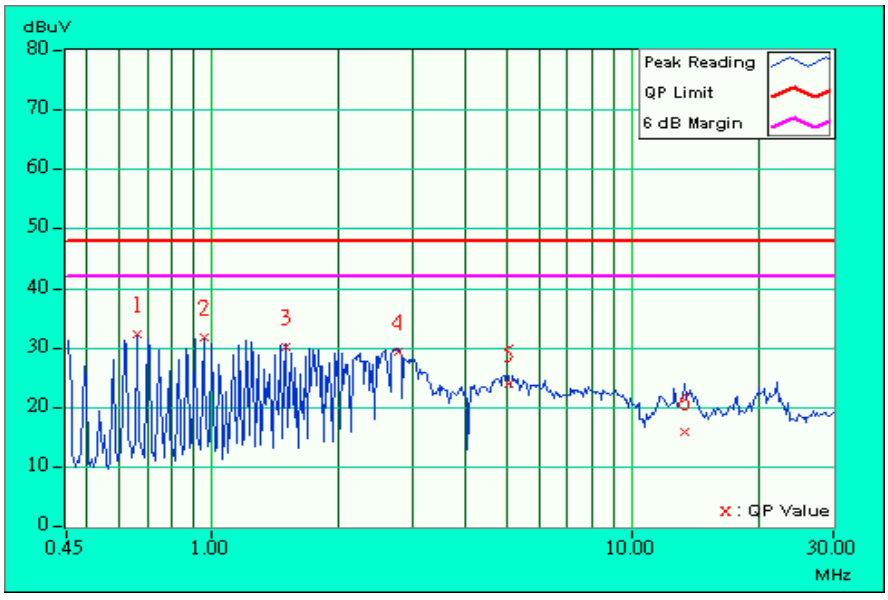
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.663	0.10	31.65	-	31.75	-	48.00	-	-16.25	-
2	0.954	0.10	31.15	-	31.25	-	48.00	-	-16.75	-
3	1.494	0.10	29.59	-	29.69	-	48.00	-	-18.31	-
4	2.781	0.18	28.62	-	28.80	-	48.00	-	-19.20	-
5	5.063	0.34	23.33	-	23.67	-	48.00	-	-24.33	-
6	13.328	0.70	15.13	-	15.83	-	48.00	-	-32.17	-

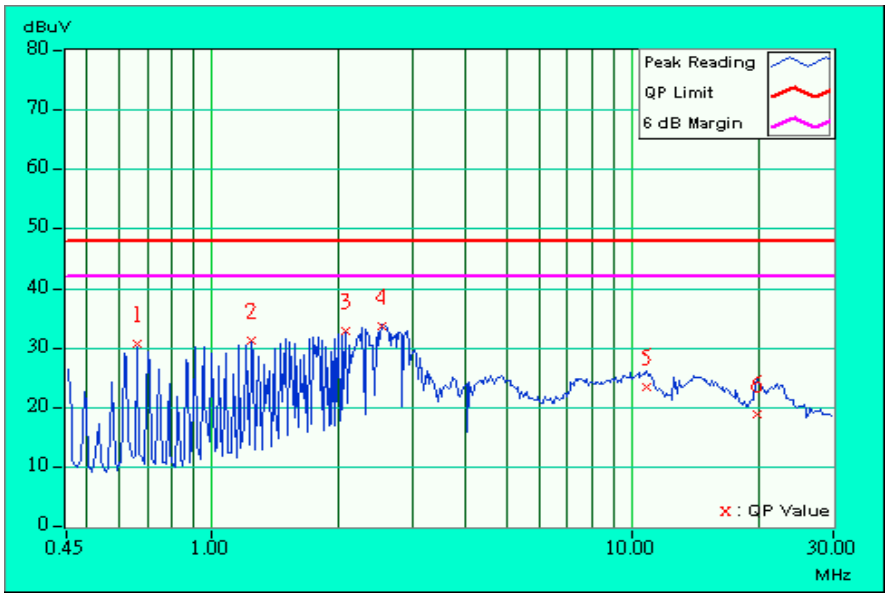
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 6	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.663	0.10	29.81	-	29.91	-	48.00	-	-18.09	-
2	1.245	0.10	30.38	-	30.48	-	48.00	-	-17.52	-
3	2.073	0.11	31.98	-	32.09	-	48.00	-	-15.91	-
4	2.532	0.15	32.81	-	32.96	-	48.00	-	-15.04	-
5	10.829	0.43	22.76	-	23.19	-	48.00	-	-24.81	-
6	19.781	0.79	17.98	-	18.77	-	48.00	-	-29.23	-

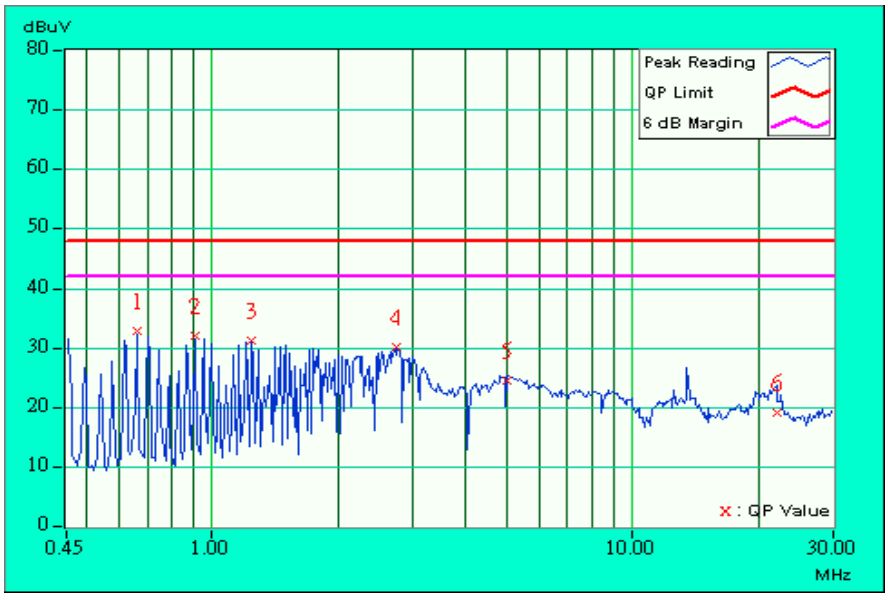
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	20 deg. C, 50%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq. (MHz)	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.663	0.10	31.77	-	31.87	-	48.00	-	-16.13	-
2	0.912	0.10	30.96	-	31.06	-	48.00	-	-16.94	-
3	1.244	0.10	30.28	-	30.38	-	48.00	-	-17.62	-
4	2.736	0.17	29.00	-	29.17	-	48.00	-	-18.83	-
5	5.018	0.33	23.45	-	23.78	-	48.00	-	-24.22	-
6	22.013	1.04	18.15	-	19.19	-	48.00	-	-28.81	-

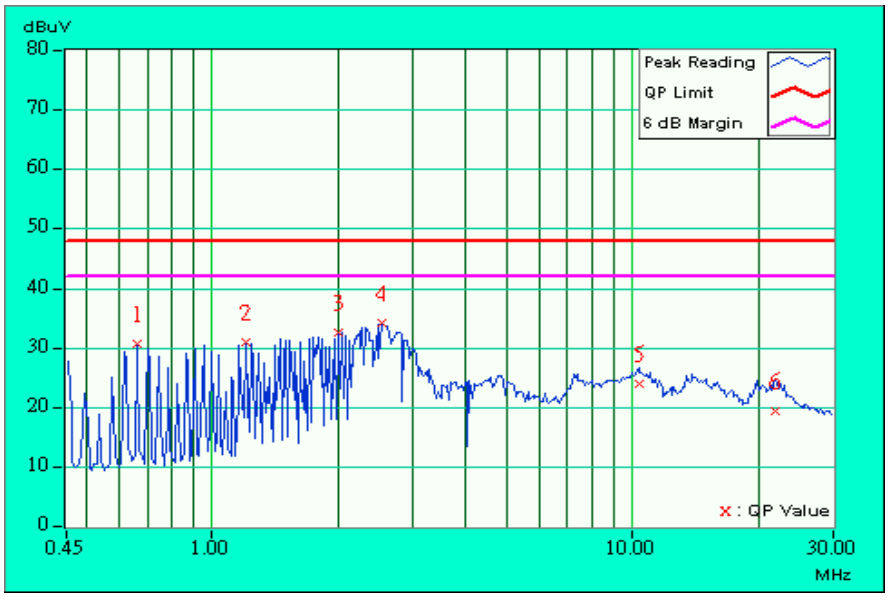
Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 11	**6dB BANDWIDTH**	10 kHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: James Lee	

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	QP.	AV.	QP.	AV.	QP.	AV.	QP.	AV.
1	0.663	0.10	29.85	-	29.95	-	48.00	-	-18.05	-
2	1.203	0.10	30.18	-	30.28	-	48.00	-	-17.72	-
3	1.990	0.10	31.66	-	31.76	-	48.00	-	-16.24	-
4	2.530	0.15	33.34	-	33.49	-	48.00	-	-14.51	-
5	10.331	0.41	23.24	-	23.65	-	48.00	-	-24.35	-
6	21.806	0.84	18.44	-	19.28	-	48.00	-	-28.72	-

Remarks:
1. "*": Undetectable
2. QP. and AV. are abbreviations of quasi-peak and average individually.
3. "-": NA
4. The emission levels of other frequencies were very low against the limit.
5. Margin value = Emission level - Limit value
6. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Field strength limits are at the distance of 3 meters, emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field Strength of Fundamental	
	uV/m	dBuV/m
30-88	100	40.0
88-216	150	43.5
216-960	200	46.0
Above 960	500	54.0

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
* HP Spectrum Analyzer	8590L	3544A01176	May 7, 2002
* HP Preamplifier	8447D	2944A08485	May 7, 2002
* HP Preamplifier	8449B	3008A01201	Dec. 06, 2002
* HP Preamplifier	8449B	3008A01292	Aug. 21, 2002
* ROHDE & SCHWARZ TEST RECEIVER	ESMI	839013/007 839379/002	Jan. 27, 2003
SCHWARZBECK Tunable Dipole Antenna	VHA 9103 UHA 9105	E101051 E101055	Nov. 23, 2002
* CHASE BILOG Antenna	CBL6112A	2221	Aug. 2, 2002
* SCHWARZBECK Horn Antenna	BBHA9120-D1	D130	July 6, 2002
* EMCO Horn Antenna	3115	9312-4192	April 15, 2002
* EMCO Turn Table	1060	1115	NA
* SHOSHIN Tower	AP-4701	A6Y005	NA
* Software	AS61D4	NA	NA
* ANRITSU RF Switches	MP59B	M35046	Aug. 2, 2002
* TIMES RF cable	LMR-600	CABLE-ST5-01	Aug. 2, 2002
* Antenna (Horn)	BBHA9120-D	D130	July 10, 2002
Open Field Test Site	Site 5	ADT-R05	July 28, 2002
VCCI Site Registration No.	Site 5	R-1039	NA
Site Registration No.	FCC: 90422 Canada IC: IC 3789 VCCI : R-1039		

NOTE: 1.The measurement uncertainty is less than +/- 3.0dB, which is calculated as per the NAMAS document NIS81.

2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

3."*" = These equipments are used for the final measurement.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

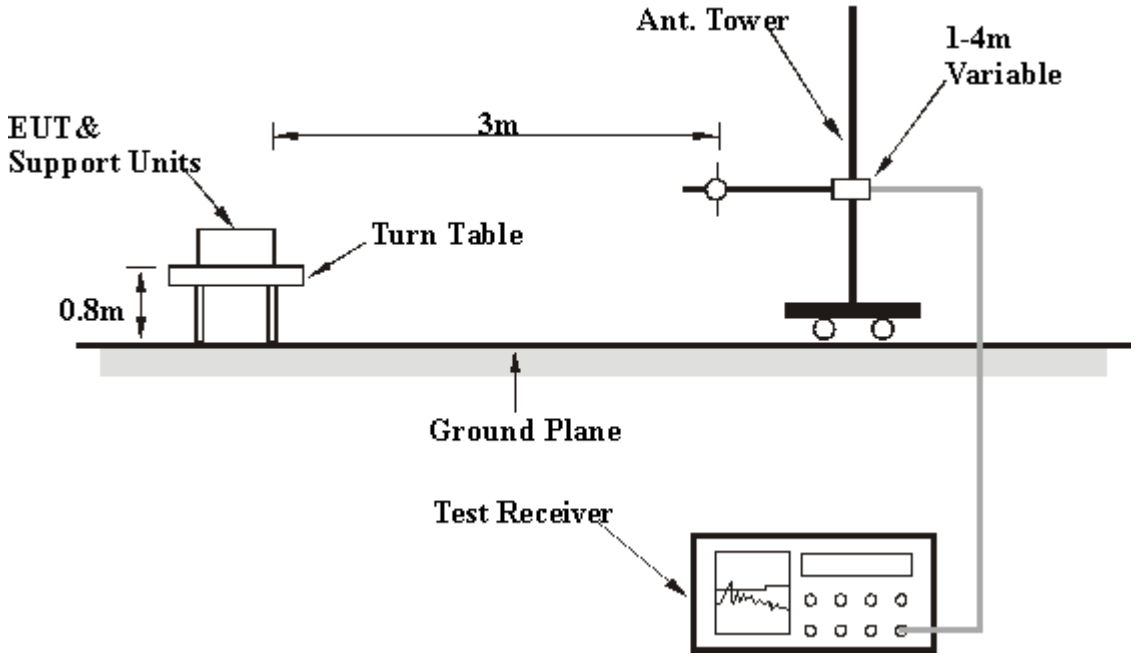
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using the quasi-peak method or average method as specified and then reported in Data sheet peak mode and QP mode.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 300 Hz for Average detection (AV) at frequency above 1GHz.

4.2.4 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.5 EUT OPERATING CONDITIONS

Same as 4.1.5.

4.2.6 TEST RESULTS

EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 1005 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	120.00	31.7 QP	43.50	-11.80	1.18H	45	19.00	11.65	1.08	0.00	-12.73
2	160.00	31.9 QP	43.50	-11.60	2.67H	156	21.00	9.62	1.26	0.00	-10.89
3	200.00	34.4 QP	43.50	-9.10	1.50H	160	24.00	8.98	1.42	0.00	-10.41
4	220.00	32.6 QP	46.00	-13.40	1.26H	342	21.00	10.12	1.51	0.00	-11.63
5	240.00	39.0 QP	46.00	-7.00	1.88H	123	26.00	11.41	1.62	0.00	-13.03
6	308.00	32.3 QP	46.00	-13.70	1.35H	77	17.00	13.38	1.91	0.00	-15.29
7	360.00	34.7 QP	46.00	-11.30	1.04H	299	18.00	14.58	2.08	0.00	-16.66
8	400.00	34.3 QP	46.00	-11.70	1.35H	257	16.00	16.11	2.24	0.00	-18.35
9	440.00	42.7 QP	46.00	-3.30	2.33H	354	24.00	16.32	2.38	0.00	-18.70
10	460.00	36.0 QP	46.00	-10.00	2.18H	13	17.00	16.53	2.43	0.00	-18.97
11	480.00	40.4 QP	46.00	-5.60	1.03H	333	21.00	16.92	2.47	0.00	-19.39
12	500.00	36.8 QP	46.00	-9.20	1.65H	126	17.00	17.26	2.50	0.00	-19.77
13	560.00	43.6 QP	46.00	-2.40	2.21H	66	22.80	18.09	2.71	0.00	-20.81
14	600.00	38.4 QP	46.00	-7.60	2.15H	77	17.00	18.61	2.83	0.00	-21.45
15	616.00	35.7 QP	46.00	-10.30	1.25H	101	14.00	18.82	2.89	0.00	-21.71
16	640.00	38.1 QP	46.00	-7.90	1.72H	48	16.00	19.12	2.99	0.00	-22.12
17	680.00	38.4 QP	46.00	-7.60	1.30H	104	16.00	19.28	3.10	0.00	-22.38
18	720.00	39.9 QP	46.00	-6.10	1.43H	184	17.00	19.68	3.20	0.00	-22.87
19	748.00	33.4 QP	46.00	-12.60	1.70H	254	10.00	20.14	3.26	0.00	-23.40
20	800.00	36.0 QP	46.00	-10.00	1.21H	175	12.00	20.69	3.32	0.00	-24.01
21	880.00	35.2 QP	46.00	-10.80	1.30H	133	11.00	20.68	3.55	0.00	-24.23
22	920.00	34.6 QP	46.00	-11.40	1.29H	240	10.00	20.96	3.66	0.00	-24.63

NOTE: 1 Emission level = Raw Value - Correction Factor
2 Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3 The other emission levels were very low against the limit.
4 Margin value = Emission level - Limit value

EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 11	**FREQUENCY RANGE**	30-1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	20deg. C, 70%RH, 1005 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	80.00	34.2 QP	40.00	-5.80	1.62V	104	26.00	7.33	0.85	0.00	-8.18
2	160.00	28.9 QP	43.50	-14.60	1.15V	136	18.00	9.62	1.26	0.00	-10.89
3	200.00	36.4 QP	43.50	-7.10	1.07V	357	26.00	8.98	1.42	0.00	-10.41
4	220.00	32.6 QP	46.00	-13.40	1.88V	104	21.00	10.12	1.51	0.00	-11.63
5	240.00	36.0 QP	46.00	-10.00	1.06V	193	23.00	11.41	1.62	0.00	-13.03
6	331.75	32.6 QP	46.00	-13.40	1.23V	61	16.80	13.82	1.98	0.00	-15.80
7	360.00	33.7 QP	46.00	-12.30	1.81V	263	17.00	14.58	2.08	0.00	-16.66
8	400.00	37.3 QP	46.00	-8.70	1.54V	37	19.00	16.11	2.24	0.00	-18.36
9	440.00	42.7 QP	46.00	-3.30	1.37V	347	24.00	16.32	2.38	0.00	-18.70
10	480.00	42.4 QP	46.00	-3.60	1.51V	348	23.00	16.92	2.47	0.00	-19.39
11	500.00	36.8 QP	46.00	-9.20	1.31V	244	17.00	17.26	2.50	0.00	-19.77
12	560.00	42.8 QP	46.00	-3.20	1.21V	60	22.00	18.09	2.71	0.00	-20.81
13	600.00	37.1 QP	46.00	-8.90	1.05V	114	15.70	18.61	2.83	0.00	-21.45
14	640.00	37.1 QP	46.00	-8.90	1.06V	253	15.00	19.12	2.99	0.00	-22.12
15	680.00	38.4 QP	46.00	-7.60	1.24V	152	16.00	19.28	3.10	0.00	-22.39
16	704.00	33.3 QP	46.00	-12.70	1.78V	5	10.80	19.38	3.16	0.00	-22.55
17	748.00	35.4 QP	46.00	-10.60	1.74V	22	12.00	20.14	3.26	0.00	-23.41
18	792.00	34.9 QP	46.00	-11.10	1.63V	191	11.00	20.60	3.31	0.00	-23.91
19	800.00	38.0 QP	46.00	-8.00	1.74V	69	14.00	20.69	3.32	0.00	-24.02
20	840.00	36.0 QP	46.00	-10.00	1.67V	55	12.00	20.52	3.46	0.00	-23.99

NOTE: 1 Emission level = Raw Value - Correction Factor

2 Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)

3 The other emission levels were very low against the limit.

4 Margin value = Emission level - Limit value

EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 1	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2038.0	46.2 PK	74.00	-27.80	1.53H	228	51.00	25.20	4.86	34.90	4.84
2	*2413.0	90.0 PK	-	-	1.44H	315	57.80	27.11	5.10	0.00	-32.21
3	*2413.0	85.2 AV	-	-	1.44H	315	53.00	27.11	5.10	0.00	-32.21
4	4076.0	50.4 PK	74.00	-23.60	1.49H	82	48.00	30.13	6.78	34.52	-2.39
5	4824.0	51.0 PK	74.00	-23.00	1.15H	336	47.00	31.43	7.23	34.63	-4.02

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2038.0	46.2 PK	74.00	-27.80	1.32V	351	51.00	25.20	4.86	34.90	4.84
2	*2413.0	96.2 PK	-	-	2.10V	25	64.00	27.11	5.10	0.00	-32.22
3	*2413.0	88.2 AV	-	-	2.10V	25	56.00	27.11	5.10	0.00	-32.22
4	4076.0	49.4 PK	74.00	-24.60	1.08V	8	47.00	30.13	6.78	34.52	-2.39
5	4824.0	50.9 PK	74.00	-23.10	1.38V	93	46.90	31.43	7.23	34.63	-4.02

NOTE: 1. Emission level = Raw Value - Correction Factor
2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 6	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 hPa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.0	47.2 PK	74.00	-26.80	1.08H	356	51.70	25.41	4.96	34.90	4.53
2	*2438.5	92.4 PK	-	-	1.62H	99	60.00	27.33	5.08	0.00	-32.41
3	*2438.5	86.4 AV	-	-	1.62H	99	54.00	27.33	5.08	0.00	-32.41
4	4126.0	50.3 PK	74.00	-23.70	1.52H	36	47.80	30.32	6.70	34.56	-2.46
5	4874.0	50.9 PK	74.00	-23.10	1.48H	74	46.80	31.47	7.21	34.63	-4.05

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2063.0	46.7 PK	74.00	-27.30	1.00V	26	51.20	25.41	4.96	34.90	4.53
2	*2438.5	98.1 PK	-	-	1.00V	188	65.70	27.33	5.08	0.00	-32.40
3	*2438.5	89.4 AV	-	-	1.00V	188	57.00	27.33	5.08	0.00	-32.40
4	4126.0	50.5 PK	74.00	-23.50	1.22V	335	48.00	30.32	6.70	34.56	-2.46
5	4874.0	51.1 PK	74.00	-22.90	1.17V	14	47.00	31.47	7.21	34.63	-4.06

NOTE: 1. Emission level = Raw Value - Correction Factor
2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency

EUT	11Mbps Wireless Ethernet Client	**MODEL**	NWH2210, NWH2610
MODE	Channel 11	**FREQUENCY RANGE**	Above 1000 MHz
INPUT POWER (SYSTEM)	120Vac, 60Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	20 deg. C, 70%RH, 1005 Hpa	**TESTED BY**: Gary Chang	

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.0	47.7 PK	74.00	-26.30	1.46H	6	52.00	25.62	5.02	34.90	4.26
2	*2461.0	91.1 PK	-	-	2.11H	313	58.70	27.33	5.08	0.00	-32.40
3	*2461.0	85.4 AV	-	-	2.11H	313	53.00	27.33	5.08	0.00	-32.40
4	2485.0	47.7 PK	74.00	-26.30	1.52H	355	50.00	27.54	5.06	34.90	2.31
5	4176.0	49.5 PK	74.00	-24.50	1.46H	49	47.00	30.41	6.68	34.58	-2.51
6	4924.0	50.9 PK	74.00	-23.10	1.19H	250	46.80	31.51	7.21	34.62	-4.10

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-Amp. Factor (dB)	Correction Factor (dB/m)
1	2088.0	45.7 PK	74.00	-28.30	1.85V	9	50.00	25.62	5.02	34.90	4.26
2	*2461.0	94.4 PK	-	-	1.11V	34	62.00	27.33	5.08	0.00	-32.40
3	*2461.0	89.4 AV	-	-	1.11V	34	57.00	27.33	5.08	0.00	-32.40
4	2485.0	47.7 PK	74.00	-26.30	1.27V	142	50.00	27.54	5.06	34.90	2.31
5	4176.0	49.5 PK	74.00	-24.50	1.57V	32	47.00	30.41	6.68	34.58	-2.51
6	4924.0	50.9 PK	74.00	-23.10	1.43V	284	46.80	31.51	7.21	34.62	-4.10

NOTE: 1. Emission level= Raw Value - Correction Factor
2. Correction Factor = External Preamp. Gain - Ant. Factor - Cable loss
(External Preamp. Gain = 0, when the test receiver is used for the test.)
3. The other emission levels were very low against the limit.
4. Margin value = Emission level - Limit value
5. The limit value is defined as per 15.247
6. " * " : Fundamental frequency