

EMI TEST REPORT

Test Report No. : 22KE0026-HO-2

Applicant : Nagano Japan Radio Co., Ltd.
Type of Equipment : Wireless LAN
Model No. : NJT-475
Test standard : FCC Part15 Subpart C,
Section15.207
Section15.247 (c) Out of Band Emission
FCC ID : D7LNJT475
Test Result : Complied

1. This test report shall not be reproduced in full or partial, without the written approval of A-PEX International Co., Ltd.
2. The results in this report apply only to the sample tested.
3. This equipment is in compliance with above regulation. We hereby certify that the data contain a true representation of the EMC profile.
4. The test results in this report are traceable to the national or international standards.
5. This test report does not constitute an endorsement by NIST/NVLAP or U.S. Government.

Date of test : June 17, 18 and 24, 2002

Issued date : June 28, 2002

Tested by : 
Hiroka Umeyama

Approved by : 
Tetsuya Hashimoto
Site Manager of EMC Head Office Division

A-PEX International Co., Ltd. EMC Head Office Division.

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SECTION 1: Client information

Company name : Nagano Japan Radio Co., Ltd.
Trade name : Nagano Japan Radio Co., Ltd.
Address : 1163 Shimogano, Inasato-machi, Nagano City, 381-2288 Japan
Telephone Number : +81-26-285-1078
Facsimile Number : +81-26-285-1037
Contact Person : Takeshi Iizuka

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment : Wireless LAN
Model No. : NJT-475
Serial No. : 5
Rating : AC Adaptor: AC 100-240V, 0.36-0.2A, 50-60Hz
Wireless LAN Unit: DC 5V
Country of Manufacture : JAPAN
Receipt Date of Sample : June 3, 2002
Condition of EUT : Engineering prototype

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2.2 Product Description

Model: NJT-475 is the Wireless LAN.

They are referred to as the EUT in this report.

It is intended to be used for the wireless data transmission from/to Personal Computers.

The specification is as following

Equipment Type: Transceiver

Frequency characteristics	: from 2412MHz to 2462MHz
Number of Channel/ Channel spacing	: 11 channels/ 5MHz
Modulation	: DSSS Direct Sequence spread spectrum (IEEE 802.11b)
Antenna Type	: $\lambda/2$ Dipole
Antenna Gain	: 2.15dBi

*FCC Part 15.31 (e)

The host device NJT-475 provide the LAN Module with stable power supply (DC: 5.0V), and the LAN Module complies power supply regulation.

*FCC Part 15.203 Antenna requirement

Wireless LAN Module and its antenna comply with this requirement since they are built in host device NJT-475 when they are put up for sale and they are used with a particular antenna connector.

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SECTION 3: Test specification, procedures and results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart C
 Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
 Section 15.207 Conducted Emissions
 Section 15.247 Operation within the Band 902-928MHz, 2400-2483.5MHz and
 5725-5850MHz

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	Conducted emission	ANSI C63.4:2000	Section 15.207 (FCC Part15 Subpart B Section 15.107)	N/A	N/A	11.5dB 20.02MHz L, A V	Complied
2	6dB Bandwidth	ANSI C63.4:2000	Section 15.247(a)(2)	N/A	Excluded *	N/A	N/A
3	Maximum Peak Output Power	ANSI C63.4:2000	Section 15.247(b)(1)	N/A	Excluded *	N/A	N/A
4	Out of Band Emission	ANSI C63.4:2000	Section 15.247 (c) (FCC Part15 Subpart B/ Section 15.109)	Conducted / Radiated	N/A	7.1dB ** 9748.0MHz, Vertical	Complied
5	Restricted Band Edges	ANSI C63.4:2000	Section 15.247 (c)	N/A	Excluded *	N/A	N/A
6	Power Density	ANSI C63.4:2000	Section 15.247 (d)	N/A	Excluded *	N/A	N/A

* For the Class II permissive change

* These tests were performed without any deviations from test procedure except for additions or exclusions.

**The limit was applied the same one of the restricted bands. The actual worst margin is 9.0dB at 332.99MHz (V).

3.3 Confirmation

A-PEX INTERNATIONAL Co., Ltd. hereby confirms that E.U.T., in the configuration tested, complies with the specifications FCC Part 15 Subpart C Section 15.207 and 247 (c) Out of Band Emission.

3.4 Uncertainty

Conducted Emission Test

The measurement uncertainty (with a 95% confidence level) for this test was ± 1.3 dB.

☐ The data listed in this test report may exceed the test limit because it does not have enough margin.

☒ The data listed in this test report has enough margin, more than the site margin.

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Out of Band Emission (Radiated) Test

The measurement uncertainty (with a 95% confidence level) for this test using Loop antenna is $\pm 1.9\text{dB}$.

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is $\pm 4.5\text{dB}$.

The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is $\pm 5.2\text{dB}$.

The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is $\pm 6.6\text{dB}$.

? The data listed in this test report may exceed the test limit because it does not have enough margin.

! The data listed in this test report has enough margin.

Out of Band Emission (Conducted) Test

The measurement uncertainty (with a 95% confidence level) for this test was $\pm 3.0\text{dB}$.

☐ The data listed in this test report may exceed the test limit because it does not have enough margin.

☒ The data listed in this test report has enough margin.

3.5 Test Location

A-PEX International Co., Ltd. EMC Head Office Division. No.1 semi Anechoic Chamber,
and No.3 Measurement room.

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This site has been fully described in a report submitted to FCC office, and listed on February, 2002 (Registration number: 313583).

*NVLAP Lab. code: 200572-0

3.6 Test setup, Data of EMI Test and Test instruments

Refer to APPENDIX 1 to 3.

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SECTION 4: Operation of E.U.T. during testing

4.1 Operating Modes

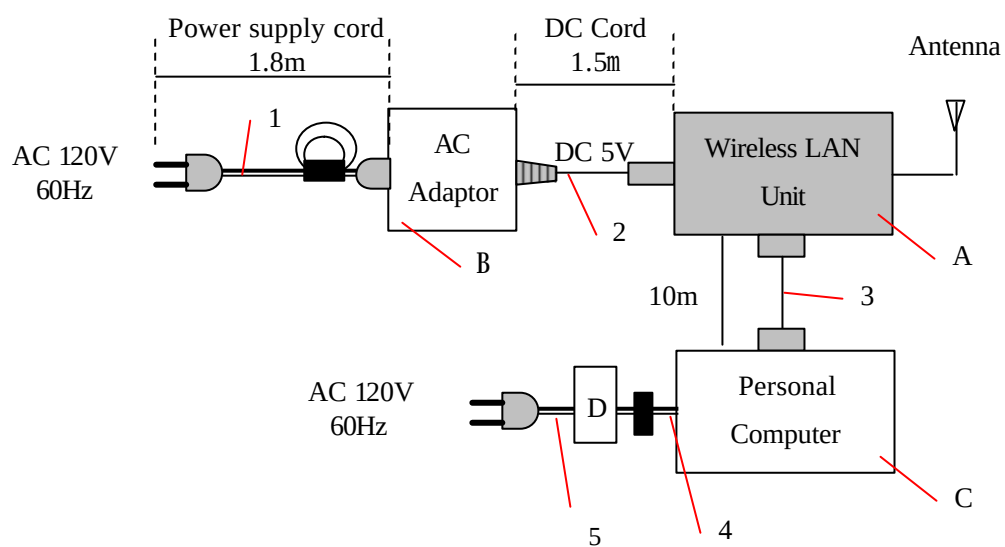
The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to typical use.

The operating mode/system was as follows:

- Operation mode :
1. Transmitting mode (ch 1: 2412MHz)
 2. Transmitting mode (ch 6: 2437MHz)
 3. Transmitting mode (ch 11: 2462MHz)
 4. Receiving mode (ch 6 : 2437MHz)

Justification: The system was configured in typical fashion (as a customer would normally use it) for testing.

4.2 Configuration and peripherals



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Description of EUT

No.	Item	Model number	Serial number	Manufacturer	FCC ID/DOC/others
A	Wireless LAN Unit	NJT-475	5	Nagano Japan Radio Co., Ltd	D7LNJT475

Support equipment

No.	Item	Model number	Serial number	Manufacturer	FCC ID
B	AC Adaptor	SQS15W5P-00	0204A0000001P	Nagano Japan Radio Co., Ltd.	N/A
C	Personal Computer	PPO1L	TW-04E641-128 00-1AP-3747	DELL	DoC
D	AC Adaptor	ADP-70EB	TH-09364U-17971- 1AK-E2WK	DELL	N/A

List of cables used

No.	Name	Length (m)	Shield	Remark
1	Power Supply Cord Set	1.8	N	Polyvinyl chloride
2	DC Cord (part of AC Adapter)	1.5	N	Polyvinyl chloride
3	LAN Cable	10	N	Polyvinyl chloride
4	DC Cord	1.5	N	Polyvinyl chloride
5	AC Power supply cord	1.5	N	Polyvinyl chloride

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SECTION 5: Conducted Emission

Test Procedure

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane. The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. I/O cables and AC cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane. Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN to the input power source. All unused 50 Ω connectors of the LISN were resistively terminated in 50 Ω when not connected to the measuring equipment.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT on a reference ground plane 7.0 x 6.0m in a No.1 semi Anechoic Chamber.

The EUT was connected to a Line Impedance Stabilization Network (LISN).

An overview sweep with peak detection has been performed.

The measurements have been performed with a CISPR quasi-peak detector (IF BW 9kHz).

Measurement range: 0.15-30MHz

Test data : APPENDIX 3

Test result : Pass

Test instruments : MTR-01, MCC-03, MLS-02

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SECTION 6: Out of Band Emission, Section 15.247 (c)**[Conducted]****Test Procedure**

The Out of Band Emission (Conducted) was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3

Test result : Pass

Test instruments : MTR-01, MCC-04

[Radiated]**Test Procedure**

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane.

Test was made with the antenna positioned in both the horizontal and vertical planes of polarization.

The Radiated Electric Field Strength intensity has been measured in the semi anechoic chamber (19.2x11.2x7.7m) with a ground plane and at a distance of 3m.

The measuring antenna height was varied between 1 to 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.

The measurements were performed for both vertical and horizontal antenna polarization.

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

Test data : APPENDIX 3

Test result : Pass

Test instruments : MTR-01, MCC-01, MCC-04, MCC-06, MHA-05, MPA-01
MBA-01, MLA-01, MPA-02, MAT-06, MCC-01
MBF-01, MBF-02, MBF-03, MHA-02

Test Procedure

The Power density was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3

Test result : Pass

Test instruments : MTR-01, MCC-04

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APPENDIX 1: Photographs of test setup

Page 12 : Conducted emission

Page 13 : Radiated emission

APPENDIX 2: Data of EMI test

Page 14-18 : Conducted emission

Page 19-35 : Out of Band Emission

*Reference data

Page 36 : Peak-out put power for Out of Band Emission (30-1000MHz) Limit

APPENDIX 3: Test instruments

Page 37 : Test instruments

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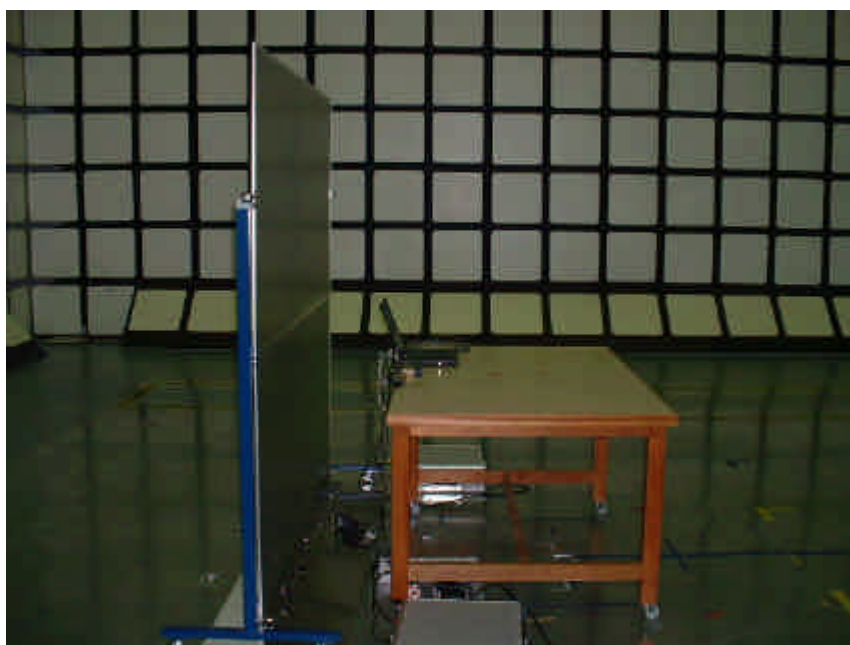
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APPENDIX 1: Photographs of test setup

Conducted emission



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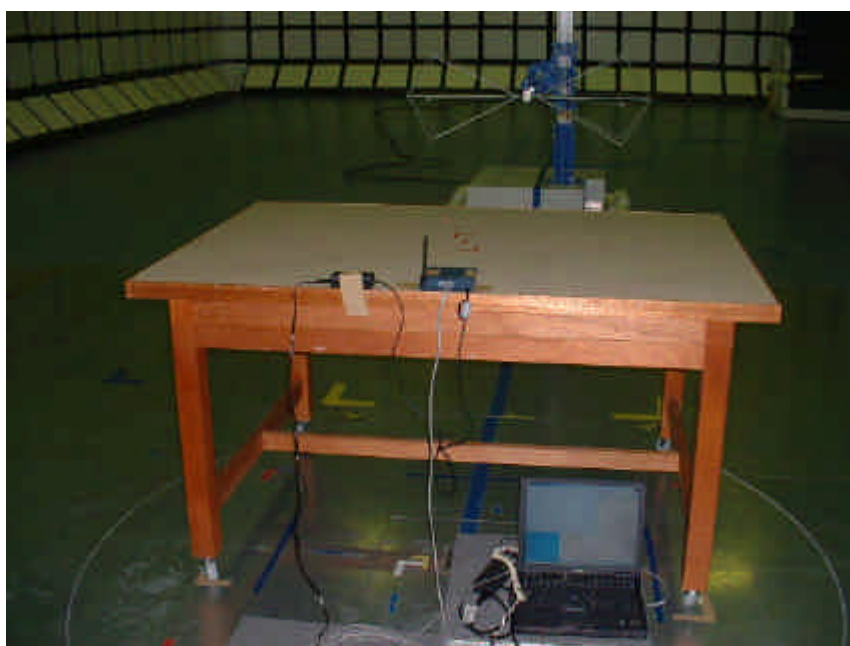
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Radiated emission



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DATA OF CONDUCTED EMISSION TEST

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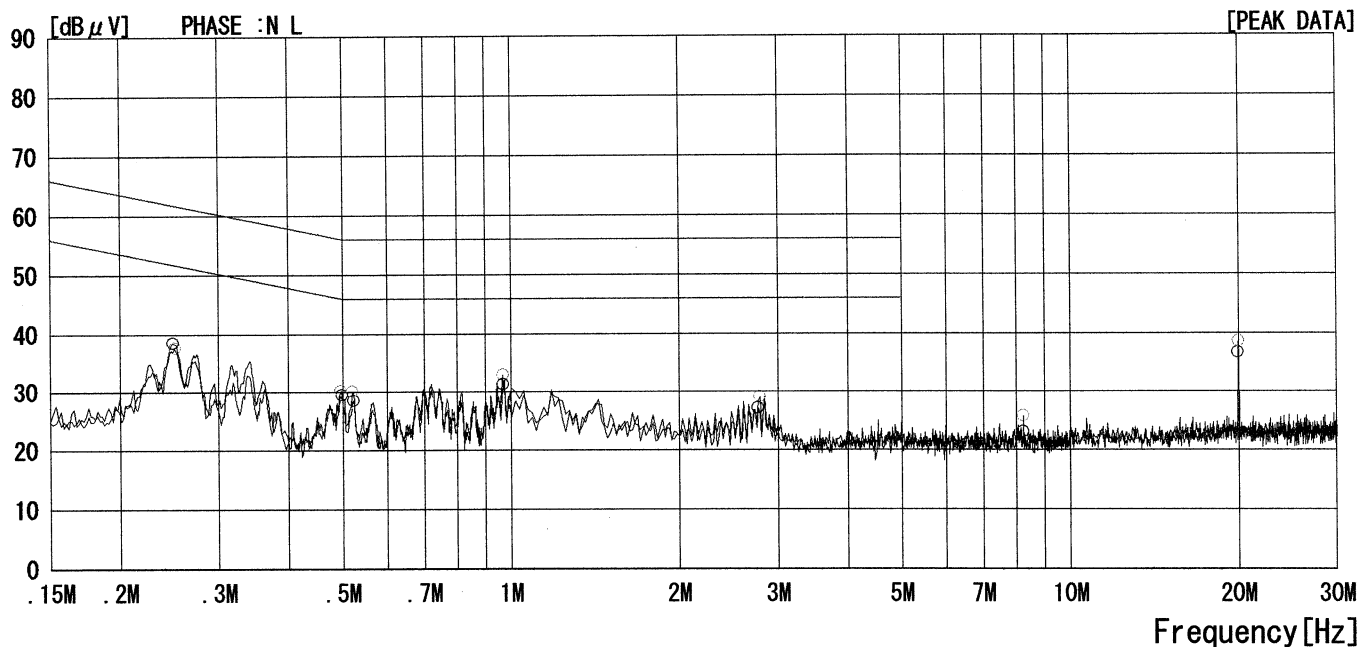
Date : 2002/06/24 09:59:11
18 H.O.

Applicant : Nagano Japan Radio Co.,Ltd
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC5V (AC120V / 60Hz)
Temp°C/Humi% : 25 / 65
Operator : HIROKA UMEYAMA

Mode / Remarks : Transmitting(ch6:2437MHz)

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)



NO	FREQ [MHz]	READING(PK) [dB μV]	C. F [dB]	RESULT [dB μV]	LIMIT		MARGIN		PHASE
					QP [dB μV]	AV [dB μV]	QP [dB]	AV [dB]	
1	0.24900	38.2	0.2	38.4	61.8	51.8	23.4	13.4	N
2	0.49900	29.3	0.2	29.5	56.0	46.0	26.5	16.5	N
3	0.52300	28.3	0.2	28.5	56.0	46.0	27.5	17.5	N
4	0.96900	31.0	0.3	31.3	56.0	46.0	24.7	14.7	N
5	2.76800	26.5	0.6	27.1	56.0	46.0	28.9	18.9	N
6	8.25000	21.8	1.2	23.0	60.0	50.0	37.0	27.0	N
7	19.98000	34.6	2.0	36.6	60.0	50.0	23.4	13.4	N
8	0.25100	37.4	0.2	37.6	61.7	51.7	24.1	14.1	L
9	0.49700	30.1	0.2	30.3	56.0	46.0	25.7	15.7	L
10	0.52100	29.9	0.2	30.1	56.0	46.0	25.9	15.9	L
11	0.96800	32.7	0.3	33.0	56.0	46.0	23.0	13.0	L
12	2.78600	28.5	0.6	29.1	56.0	46.0	26.9	16.9	L
13	8.25000	24.5	1.2	25.7	60.0	50.0	34.3	24.3	L
14	20.02000	36.5	2.0	38.5	60.0	50.0	21.5	11.5	L

CHART : WITHOUT FACTOR , CALCURATION : RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adeauate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

A-PEX INTERNATIONAL CO.,LTD. EMC HEAD OFFICE DIVISION

Date : 2002/06/24 10:16:30

18 H.V.

Applicant : Nagano Japan Redio Co.,Ltd
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC5V (AC120V / 60Hz)
Temp°C/Humi% : 25 / 65
Operator : HIROKA UMEYAMA

Mode / Remarks : Transmitting(ch1:2412MHz)

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)

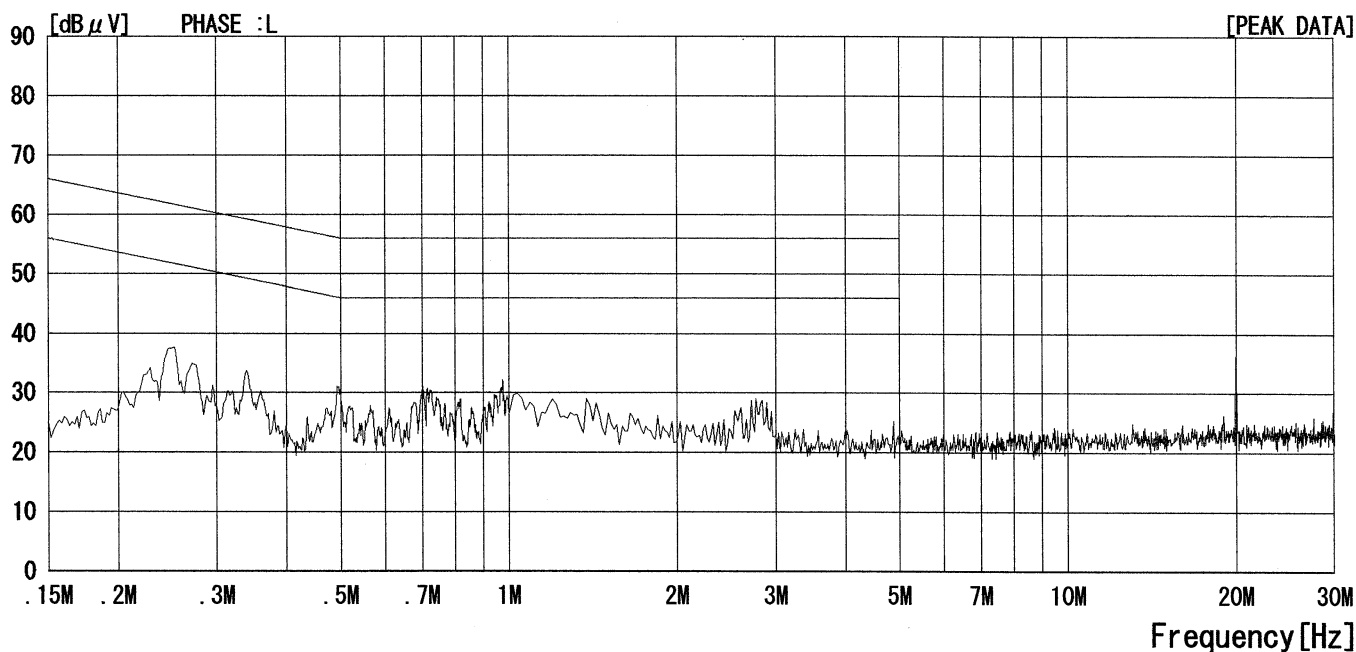
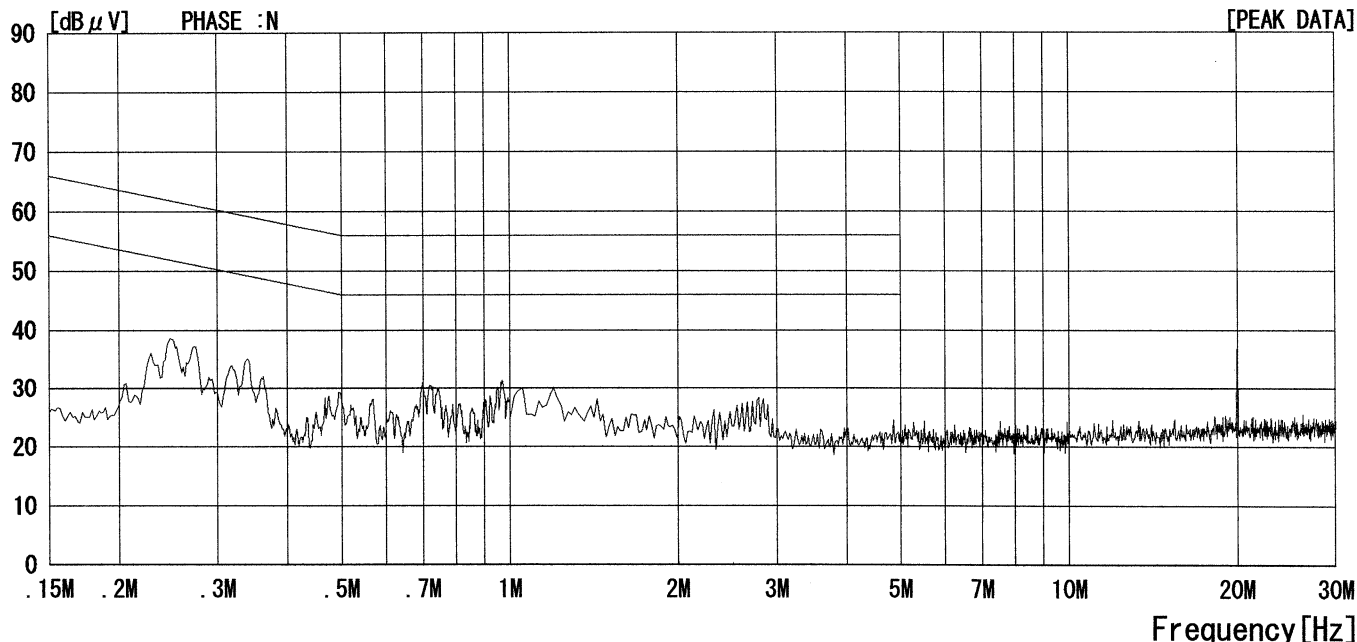


CHART : WITHOUT FACTOR , CALCURATION : RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adeauate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

A-PEX INTERNATIONAL CO., LTD. EMC HEAD OFFICE DIVISION

Date : 2002/06/24 09:59:11

18H.V.

Applicant : Nagano Japan Radio Co., Ltd
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC5V (AC120V / 60Hz)
Temp°C/Humi% : 25 / 65
Operator : HIROKA UMEYAMA

Mode / Remarks : Transmitting(ch6:2437MHz)

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)

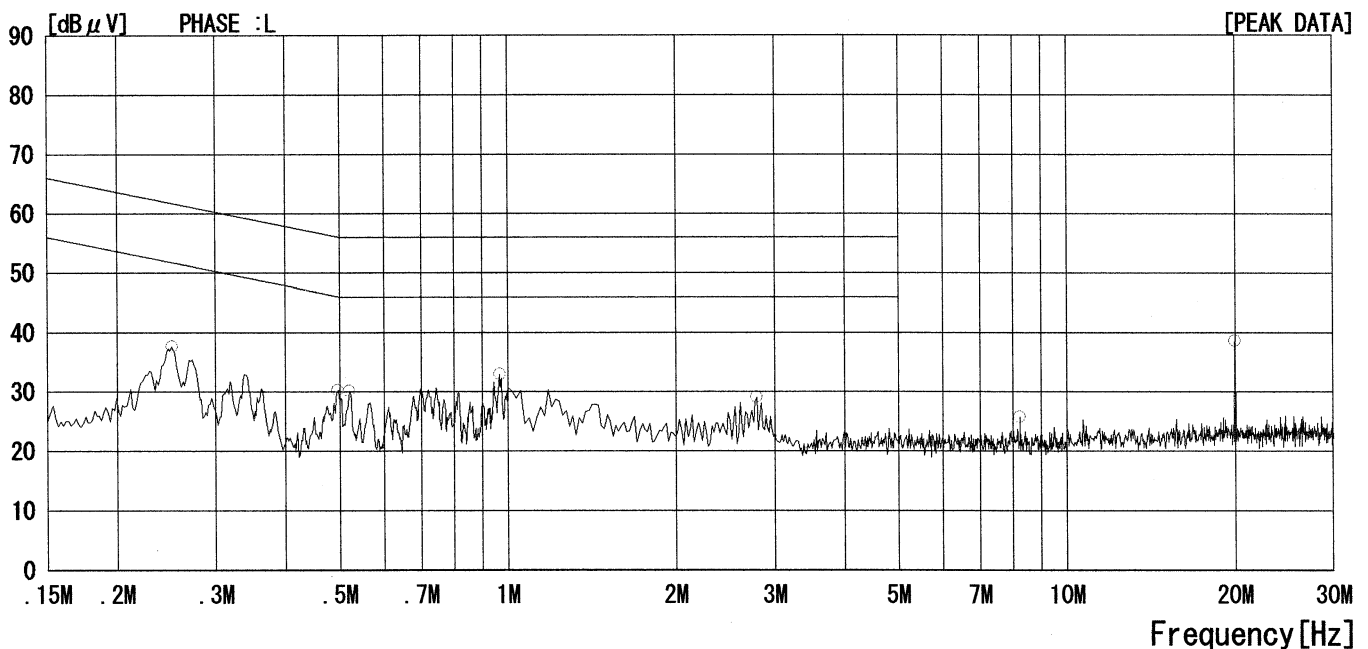
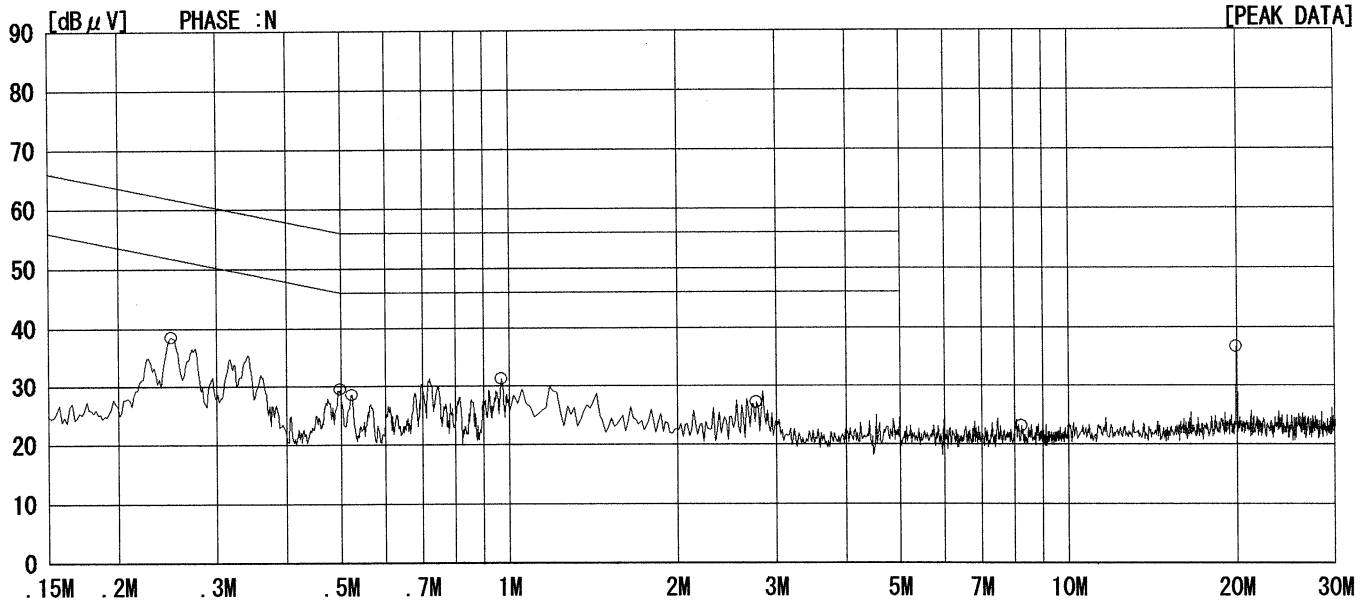


CHART : WITHOUT FACTOR , CALCURATION : RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adeauate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

A-PEX INTERNATIONAL CO., LTD. EMC HEAD OFFICE DIVISION

Date : 2002/06/24 10:20:49

18 u.v.

Applicant : Nagano Japan Radio Co., Ltd
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC5V (AC120V / 60Hz)
Temp°C/Humi% : 25 / 65
Operator : HIROKA UMEYAMA

Mode / Remarks : Transmitting(ch11:2462MHz)

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)

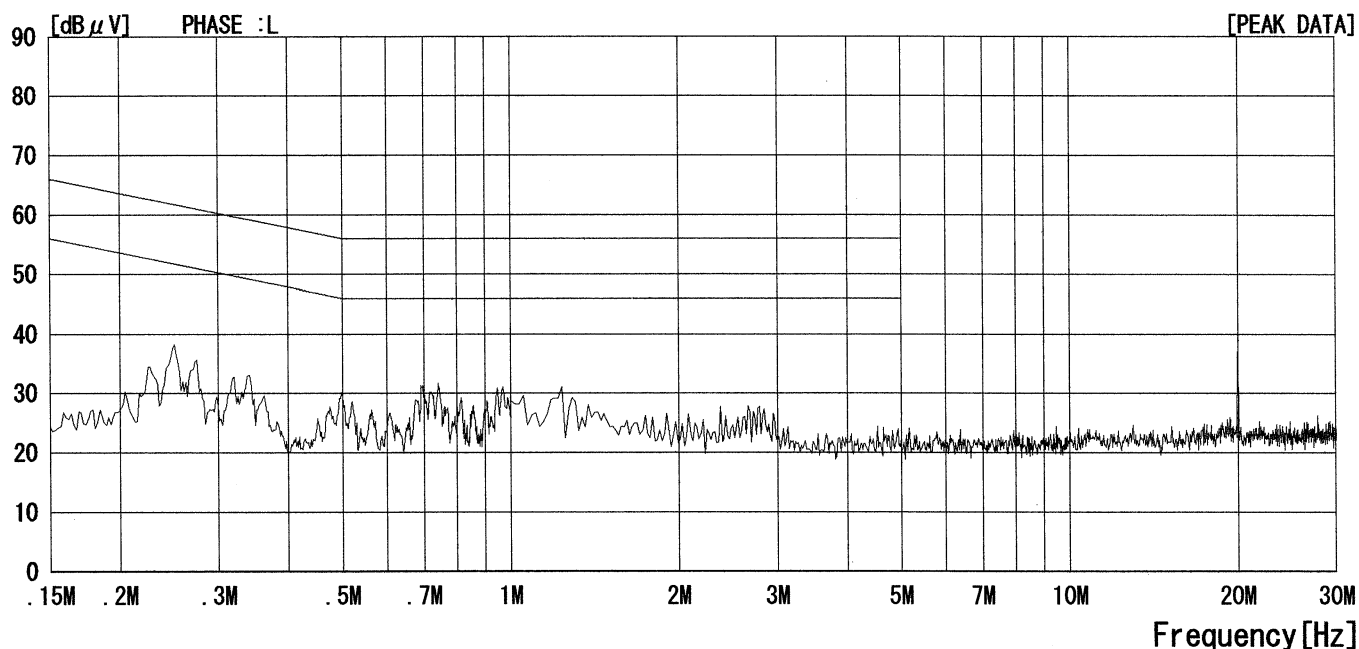
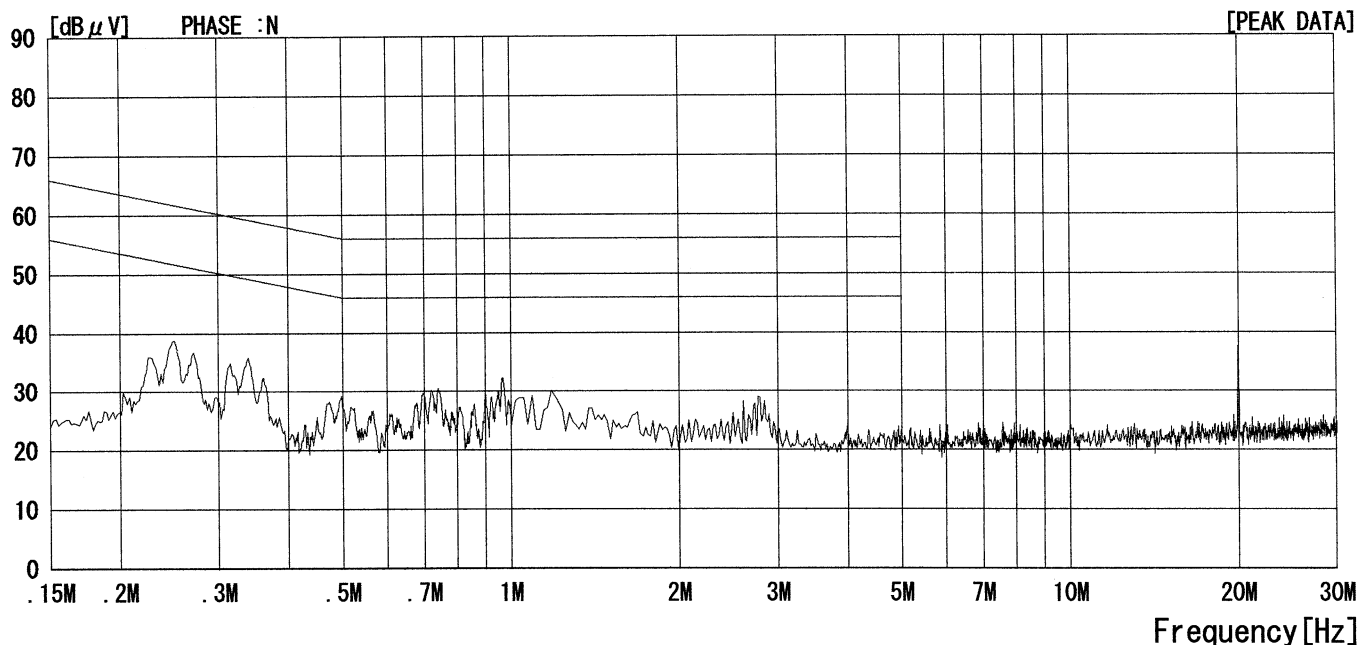


CHART : WITHOUT FACTOR , CALCURATION : RESULT=READING+C. F (LISN LOSS+CABLE LOSS)
Except for the above table : adeauate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

A-PEX INTERNATIONAL CO., LTD. EMC HEAD OFFICE DIVISION

Date : 2002/06/24 10:23:02
18H.V.

Applicant : Nagano Japan Radio Co., Ltd
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC5V (AC120V / 60Hz)
Temp°C/Humi% : 25 / 65
Operator : HIROKA UMEYAMA S

Mode / Remarks : Receiving(ch6:2437MHz)

LIMIT : FCC15C § 15.207 (QP)
FCC15C § 15.207 (AV)

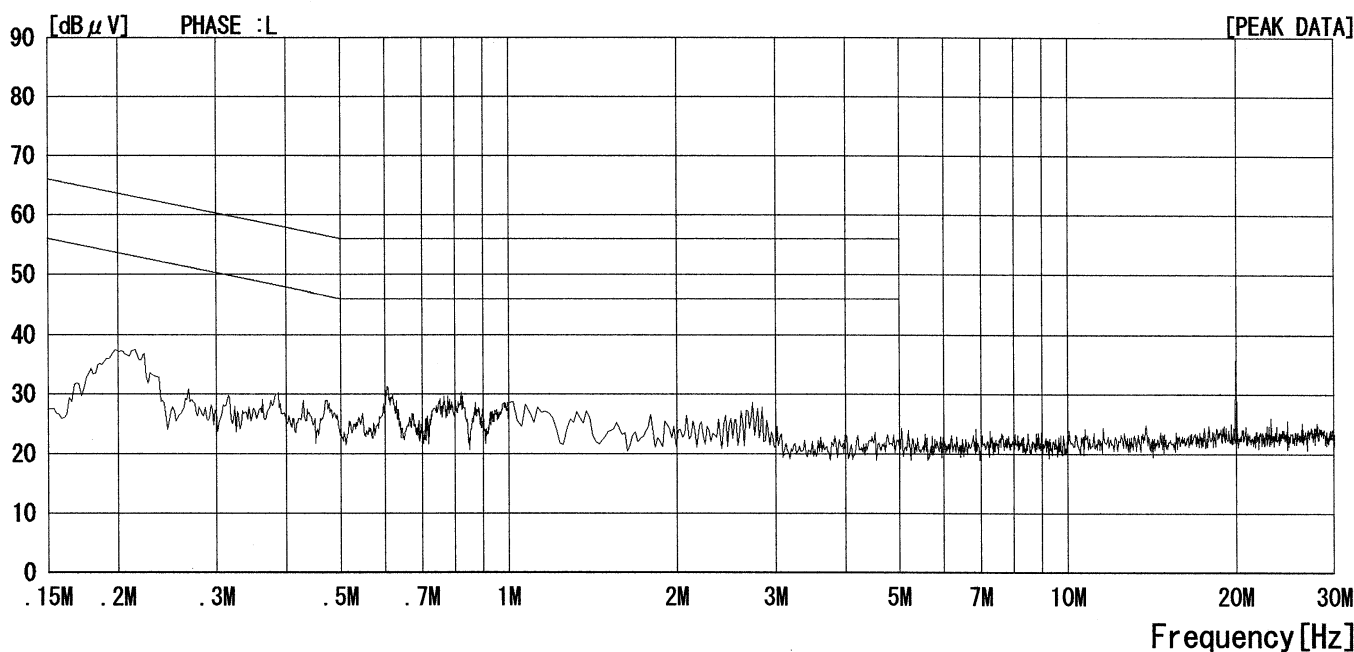
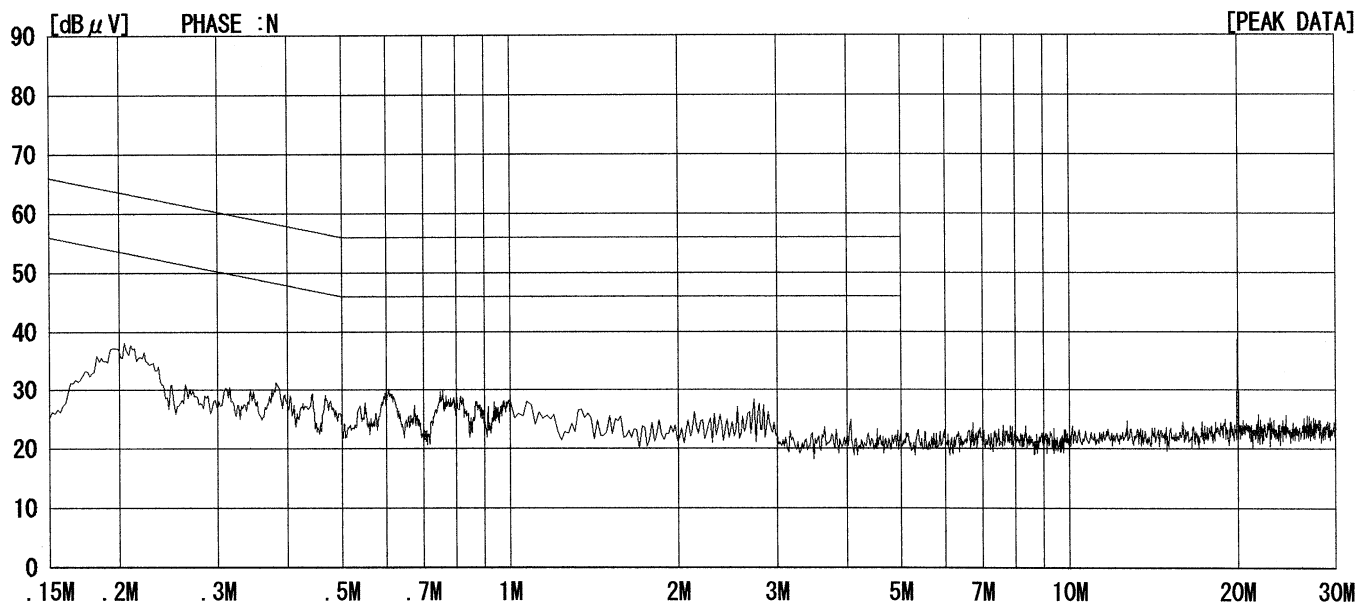


CHART : WITHOUT FACTOR , CALCURATION : RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adeauate margin data below the limits.

DATA OF RADIATED EMISSION TEST

A-PEX INTERNATIONAL EMC HEAD OFFICE DIVISION No.1 SEMI ANECHOIC CHAMBER
Date : 2002/06/17 18:35:20

Applicant : Nagano Japan Radio Co., Ltd.
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC 5V (AC 120V / 60Hz)
Temp°C/Humi% : 25 / 64
Operator : HIROKA UMEYAMA

[Signature]

Mode / Remarks : Transmitting(ch1:2412MHz)

LIMIT : FCC15C §15.247(c)

Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	59.990	28.0	7.4	7.4	24.1	18.7	71.3	52.6	280	213
2	79.980	36.6	6.9	7.7	24.0	27.2	71.3	44.1	223	256
3	187.000	32.9	15.4	8.8	23.9	33.2	71.3	38.1	203	198
----- Vertical -----										
4	59.990	43.3	7.4	7.4	24.1	34.0	71.3	37.3	100	359
5	79.980	42.2	6.9	7.7	24.0	32.8	71.3	38.5	100	0
6	187.000	40.1	15.4	8.8	23.9	40.4	71.3	30.9	258	100

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP. GAIN

DATA OF RADIATED EMISSION TEST

A-PEX INTERNATIONAL EMC HEAD OFFICE DIVISION No.1 SEMI ANECHOIC CHAMBER

Date : 2002/06/17 16:37:31

Applicant : Nagano Japan Radio Co., Ltd.
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC 5V (AC 120V / 60Hz)
Temp°C/Humi% : 25 / 64
Operator : HIROKA UMEYAMA

Mode / Remarks : Transmitting(ch1:2412MHz)

LIMIT : FCC15C §15.247(c)

Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	341.000	41.6	15.7	9.9	23.8	43.4	71.3	27.9	100	135
2	891.000	37.9	21.5	12.8	24.0	48.2	71.3	23.1	100	111
3	912.990	34.9	21.8	12.7	24.0	45.4	71.3	25.9	100	359
4	956.990	30.5	22.7	13.0	24.0	42.2	71.3	29.1	100	212
Vertical										
5	341.000	34.1	15.7	9.9	23.8	35.9	71.3	35.4	100	32
6	891.000	40.7	21.5	12.8	24.0	51.0	71.3	20.3	115	192
7	912.990	40.1	21.8	12.7	24.0	50.6	71.3	20.7	100	194
8	956.990	35.1	22.7	13.0	24.0	46.8	71.3	24.5	100	172

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP. GAIN

DATA OF RADIATED EMISSION TEST

A-PEX INTERNATIONAL EMC HEAD OFFICE DIVISION No.1 SEMI ANECHOIC CHAMBER

Date : 2002/06/17 17:37:37

Applicant : Nagano Japan Radio Co., Ltd.
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC 5V (AC 120V / 60Hz)
Temp°C/Humi% : 25 / 64
Operator : HIROKA UMEYAMA

S. UmeYama

Mode / Remarks : Transmitting (ch6:2437MHz)

LIMIT : FCC15C §15.247(c)

Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	59.990	27.9	7.4	7.4	24.1	18.6	71.3	52.7	400	271
2	79.980	36.6	6.9	7.7	24.0	27.2	71.3	44.1	205	203
3	187.000	33.7	15.4	8.8	23.9	34.0	71.3	37.3	178	144
Vertical										
4	59.990	44.6	7.4	7.4	24.1	35.3	71.3	36.0	100	209
5	79.980	42.6	6.9	7.7	24.0	33.2	71.3	38.1	100	0
6	187.000	40.4	15.4	8.8	23.9	40.7	71.3	30.6	100	266

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN

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DATA OF RADIATED EMISSION TEST

A-PEX INTERNATIONAL EMC HEAD OFFICE DIVISION No.1 SEMI ANECHOIC CHAMBER
Date : 2002/06/17 16:41:08

Applicant : Nagano Japan Radio Co., Ltd.
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC 5V (AC 120V / 60Hz)
Temp°C/Humi% : 25 / 64
Operator : HIROKA UMEYAMA

S. J. UmeYama

Mode / Remarks : Transmitting (ch6:2437MHz)

LIMIT : FCC15C §15.247(c)

Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	341.000	41.8	15.7	9.9	23.8	43.6	71.3	27.7	100	153
2	913.000	36.4	21.8	12.7	24.0	46.9	71.3	24.4	100	112
3	956.990	30.7	22.7	13.0	24.0	42.4	71.3	28.9	100	175
Vertical										
4	341.000	35.1	15.7	9.9	23.8	36.9	71.3	34.4	150	43
5	913.000	37.9	21.8	12.7	24.0	48.4	71.3	22.9	223	359
6	956.990	36.6	22.7	13.0	24.0	48.3	71.3	23.0	120	0

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN

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DATA OF RADIATED EMISSION TEST

A-PEX INTERNATIONAL EMC HEAD OFFICE DIVISION No.1 SEMI ANECHOIC CHAMBER
Date : 2002/06/17 18:21:46

Applicant : Nagano Japan Radio Co.,Ltd.
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC 5V (AC 120V / 60Hz)
Temp°C/Humi% : 25 / 64
Operator : HIROKA UMEYAMA S *[Signature]*

Mode / Remarks : Transmitting(ch11:2462MHz)

LIMIT : FCC15C §15.247(c)

Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	59.990	28.9	7.4	7.4	24.1	19.6	71.3	51.7	287	272
2	79.980	37.0	6.9	7.7	24.0	27.6	71.3	43.7	219	202
3	187.000	32.8	15.4	8.8	23.9	33.1	71.3	38.2	209	156
----- Vertical -----										
4	59.990	43.3	7.4	7.4	24.1	34.0	71.3	37.3	100	229
5	79.980	43.0	6.9	7.7	24.0	33.6	71.3	37.7	100	230
6	187.000	40.1	15.4	8.8	23.9	40.4	71.3	30.9	100	303

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP. GAIN

DATA OF RADIATED EMISSION TEST

A-PEX INTERNATIONAL EMC HEAD OFFICE DIVISION No.1 SEMI ANECHOIC CHAMBER
Date : 2002/06/17 16:38:05

Applicant : Nagano Japan Radio Co., Ltd.
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC 5V (AC 120V / 60Hz)
Temp°C/Humi% : 25 / 64
Operator : HIROKA UMEYAMA

H. UmeYama

Mode / Remarks : Transmitting(ch11:2462MHz)

LIMIT : FCC15C §15.247(c)

Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

No.	FREQ [MHz]	READING OP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	341.000	41.6	15.7	9.9	23.8	43.4	71.3	27.9	100	135
2	913.000	36.6	21.8	12.7	24.0	47.1	71.3	24.2	100	103
3	956.990	30.6	22.7	13.0	24.0	42.3	71.3	29.0	100	10
Vertical										
4	341.000	35.1	15.7	9.9	23.8	36.9	71.3	34.4	100	44
5	913.000	39.9	21.8	12.7	24.0	50.4	71.3	20.9	100	196
6	956.990	35.6	22.7	13.0	24.0	47.3	71.3	24.0	100	200

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP. GAIN

DATA OF RADIATED EMISSION TEST

A-PEX INTERNATIONAL EMC HEAD OFFICE DIVISION No.1 SEMI ANECHOIC CHAMBER
Date : 2002/06/17 16:36:13

Applicant : Nagano Japan Radio Co., Ltd.
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC 5V (AC 120V / 60Hz)
Temp°C/Humi% : 25 / 64
Operator : HIROKA UMEYAMA

Mode / Remarks : Receiving(ch6:2437MHz)

LIMIT : FCC15C §15.247(c)

Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	59.990	30.1	7.4	7.4	24.1	20.8	71.3	50.5	276	302
2	79.990	36.9	6.9	7.7	24.0	27.5	71.3	43.8	253	206
3	119.980	32.7	13.2	8.3	24.0	30.2	43.5	13.3	100	0
4	219.970	24.4	16.1	9.2	23.9	25.8	71.3	45.5	100	0
----- Vertical -----										
5	39.739	31.6	14.6	7.2	24.3	29.1	71.3	42.2	100	290
6	43.990	32.2	13.1	7.2	24.3	28.2	71.3	43.1	100	0
7	59.990	44.7	7.4	7.4	24.1	35.4	71.3	35.9	100	0
8	79.990	42.9	6.9	7.7	24.0	33.5	71.3	37.8	100	359
9	119.980	20.4	13.2	8.3	24.0	17.9	43.5	25.6	253	0
10	219.970	27.5	16.1	9.2	23.9	28.9	71.3	42.4	100	202

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN

DATA OF RADIATED EMISSION TEST

A-PEX INTERNATIONAL EMC HEAD OFFICE DIVISION No.1 SEMI ANECHOIC CHAMBER

Date : 2002/06/17 16:33:33

Applicant : Nagano Japan Radio Co., Ltd.
Kind of EUT : Wireless LAN
Model No. : NJT-475
Serial No. : 5

Report No. : 22KE0026-H0
Power : DC 5V (AC 120V / 60Hz)
Temp°C/Humi% : 25 / 64
Operator : HIROKA UMEYAMA

Mode / Remarks : Receiving(ch6:2437MHz)

LIMIT : FCC15C §15.247(c)

Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
Horizontal										
1	332.990	28.2	15.5	9.8	23.8	29.7	46.0	16.3	400	157
2	454.770	25.3	17.9	10.7	23.9	30.0	71.3	41.3	100	359
3	779.880	29.5	21.4	12.2	24.1	39.0	71.3	32.3	100	136
Vertical										
4	332.990	35.5	15.5	9.8	23.8	37.0	46.0	9.0	100	22
5	454.770	35.3	17.9	10.7	23.9	40.0	71.3	31.3	100	194
6	783.980	21.0	21.5	12.2	24.1	30.6	71.3	40.7	100	359

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz- HORN
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP. GAIN

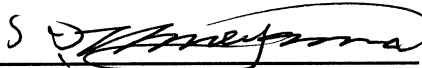
DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

A-PEX INTERNATIONAL CO., LTD.

EMC HEAD OFFICE DIVISON No.1 SEMI ANECHOIC CHAMBER

COMPANY : Nagano Japan Radio Co., Ltd.
EQUIPMENT : Wireless LAN
MODEL : NJT-475
S/N : 5
FCC ID : D7LNJT-475
POWER : DC5V
MODE : Tx (Ch1:2412MHz)

REPORT NO : 22KE0026-HO
REGULATION : Fcc Part15SubpartC 247(c)
TEST DISTANCE : -
DATE : 2002/6/24
Temperature : 24℃
Humidity : 50%


ENGINEER : Hiroka Umeyama

PK DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	ATTEN [dB]	RESULT		Limit PK dBuV/m	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
		[dBuV/m]	[dBuV/m]						[dB]	[dB]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + (Band Pass or ATTEN).													
1	2130.3	53.4	54.0	26.8	36.8	4.5	0.0	0.0	47.9	48.5	74.0	26.1	25.5
2	2695.3	44.1	44.0	27.9	36.8	5.3	0.0	0.0	40.5	40.4	74.0	33.5	33.6
3	4823.8	46.0	47.2	31.1	36.4	7.3	0.3	0.0	48.3	49.5	74.0	25.7	24.5
4	7236.0	43.1	43.0	35.3	36.5	9.4	0.2	0.0	51.5	51.4	74.0	22.5	22.6
5	9648.0	45.7	44.7	38.0	37.0	11.1	0.2	0.0	58.0	57.0	74.0	16.0	17.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac)													
6	12060.0	43.6	43.2	38.9	35.9	12.5	0.3	0.0	49.9	49.5	74.0	24.1	24.5
7	14472.0	43.1	43.1	40.6	35.9	13.6	0.3	0.0	52.2	52.2	74.0	21.8	21.8
8	16884.0	42.4	42.7	39.3	37.2	13.7	2.6	0.0	51.3	51.6	74.0	22.7	22.4
9	19296.0	43.1	42.8	40.7	35.9	15.4	0.0	0.0	53.8	53.5	74.0	20.2	20.5
10	21708.0	45.0	44.2	40.3	36.9	18.0	0.0	0.0	56.9	56.1	74.0	17.1	17.9
11	24120.0	44.2	45.0	39.9	35.7	17.2	0.0	0.0	56.1	56.9	74.0	17.9	17.1

AV DETECT

AV DEFECT													
No.	FREQ [MHz]	T/R READING HOR VER [dBuV/m]		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	ATTEN [dB]	RESULT HOR VER [dBuV/m]		Limit AV dBuV/m	MARGIN HOR VER [dB] [dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + (Band Pass or ATTEN).													
1	2130.3	50.3	50.6	26.8	36.8	4.5	0.0	0.0	44.8	45.1	54.0	9.2	8.9
2	2695.3	31.6	31.6	27.9	36.8	5.3	0.0	0.0	28	28	54.0	26	26.0
3	4824.0	33.0	35.2	31.1	36.4	7.3	0.3	0.0	35.3	37.5	54.0	18.7	16.5
4	7236.0	30.6	30.6	35.3	36.5	9.4	0.2	0.0	39.0	39.0	54.0	15.0	15.0
5	9648.0	32.9	32.7	38.0	37.0	11.1	0.2	0.0	45.2	45.0	54.0	8.8	9.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac)													
6	12060.0	30.9	30.7	38.9	35.9	12.5	0.3	0.0	37.2	37.0	54.0	16.8	17.0
7	14472.0	30.3	30.4	40.6	35.9	13.6	0.3	0.0	39.4	39.5	54.0	14.6	14.5
8	16884.0	30.4	30.2	39.3	37.2	13.7	2.6	0.0	39.3	39.1	54.0	14.7	14.9
9	19296.0	30.0	30.2	40.7	35.9	15.4	0.0	0.0	40.7	40.9	54.0	13.3	13.1
10	21708.0	31.9	31.8	40.3	36.9	18.0	0.0	0.0	43.8	43.7	54.0	10.2	10.3
11	24120.0	31.8	31.9	39.9	35.7	17.2	0.0	0.0	43.7	43.8	54.0	10.3	10.2

Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) =$

9.5 dB

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

A-PEX INTERNATIONAL CO., LTD.

EMC HEAD OFFICE DIVISON No.1 SEMI ANECHOIC CHAMBER

COMPANY : Nagano Japan Radio Co., Ltd.

EQUIPMENT : Wireless LAN

MODEL : NJT-475

S/N : 5

FCC ID : D7LNJT-475

POWER : DC5V

MODE : Tx (Ch6:2437MHz)

REPORT NO : 22KE0026-HO

REGULATION : Fcc Part15SubpartC 247(c)

TEST DISTANCE : -

DATE : 2002/6/24

Temperature : 24℃

Humidity : 50%



ENGINEER : Hiroka Umeyama

PK DETECT

No.	FREQ	T/R READING		ANT	AMP	CABLE	Band-Pass	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter		HOR	VER	PK	HOR	VER
	[MHz]	[dBuV/m]		[dB]	[dB]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + (Band Pass or ATTEN).													
1	2156.9	52.1	55.0	26.9	36.8	4.5	0.0	0.0	46.7	49.6	74.0	27.3	24.4
2	2695.3	44.0	44.0	27.9	36.8	5.3	0.0	0.0	40.4	40.4	74.0	33.6	33.6
3	4874.0	45.1	47.7	31.2	36.4	7.3	0.4	0.0	47.6	50.2	74.0	26.4	23.8
4	7311.0	43.3	43.3	35.4	36.6	9.4	0.2	0.0	51.7	51.7	74.0	22.3	22.3
5	9748.0	43.5	45.9	38.1	37.0	11.1	0.2	0.0	55.9	58.3	74.0	18.1	15.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac)													
6	12185.0	43.5	43.7	38.8	36.0	12.5	0.2	0.0	49.5	49.7	74.0	24.5	24.3
7	14622.0	43.6	43.3	40.6	36.0	13.8	0.3	0.0	52.8	52.5	74.0	21.2	21.5
8	17059.0	43.2	43.1	39.6	37.0	13.7	3.3	0.0	53.3	53.2	74.0	20.7	20.8
9	19496.0	43.1	43.1	40.4	36.1	15.6	0.0	0.0	53.5	53.5	74.0	20.5	20.5
10	21933.0	45.9	46.2	40.5	36.7	18.6	0.0	0.0	58.8	59.1	74.0	15.2	14.9
11	24370.0	44.7	44.2	40.2	36.3	17.7	0.0	0.0	56.8	56.3	74.0	17.2	17.7

AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	ATTEN [dB]	RESULT		Limit AV dBuV/m	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
		[dBuV/m]	[dBuV/m]						[dB]	[dB]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + (Band Pass or ATTEN).													
1	2158.3	46.5	51.6	26.9	36.8	4.5	0.0	0.0	41.1	46.2	54	12.9	7.8
2	2695.3	31.4	31.7	27.9	36.8	5.3	0.0	0.0	27.8	28.1	54.0	26.2	25.9
3	4874.0	32.0	33.1	31.2	36.4	7.3	0.4	0.0	34.5	35.6	54.0	19.5	18.4
4	7311.0	30.7	30.7	35.4	36.6	9.4	0.2	0.0	39.1	39.1	54.0	14.9	14.9
5	9748.0	31.0	34.5	38.1	37.0	11.1	0.2	0.0	43.4	46.9	54.0	10.6	7.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac)													
6	12185.0	30.9	31.0	38.8	36.0	12.5	0.2	0.0	36.9	37.0	54.0	17.1	17.0
7	14622.0	30.8	30.8	40.6	36.0	13.8	0.3	0.0	40.0	40.0	54.0	14.0	14.0
8	17059.0	30.3	30.3	39.6	37.0	13.7	3.3	0.0	40.4	40.4	54.0	13.6	13.6
9	19496.0	30.3	30.3	40.4	36.1	15.6	0.0	0.0	40.7	40.7	54.0	13.3	13.3
10	21933.0	33.1	33.0	40.5	36.7	18.6	0.0	0.0	46.0	45.9	54.0	8.0	8.1
11	24370.0	31.5	31.8	40.2	36.3	17.7	0.0	0.0	43.6	43.9	54.0	10.4	10.1

Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) = 9.5 \text{ dB}$

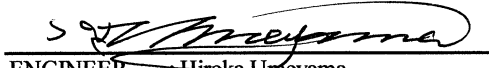
*Except for the above table : All other spurious emissions were less than 20dB for the limit.

DATA OF SPURIOUS EMISSIONS(1GHz to 26GHz)

A-PEX INTERNATIONAL CO., LTD.
EMC HEAD OFFICE DIVISON No.1 SEMI ANECHOIC CHAMBER

COMPANY : Nagano Japan Radio Co., Ltd.
EQUIPMENT : Wireless LAN
MODEL : NJT-475
S/N : 5
FCC ID : D7LNJT-475
POWER : DC5V
MODE : Tx (Ch11:2462MHz)

REPORT NO : 22KE0026-HO
REGULATION : Fcc Part15SubpartC 247(c)
TEST DISTANCE : -
DATE : 2002/6/24
Temperature : 24℃
Humidity : 50%


ENGINEER : Hiroka Umeyama

PK DETECT

No.	FREQ	T/R READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	ATTEN [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
	[MHz]	HOR	VER						HOR	VER		HOR	VER
		[dBuV/m]								[dBuV/m]			[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + (Band Pass or ATTEN).													
1	2182.3	52.1	51.0	26.9	36.8	4.6	0.0	0.0	46.8	45.7	74.0	27.2	28.3
2	2695.3	44.0	43.5	27.9	36.8	5.3	0.0	0.0	40.4	39.9	74.0	33.6	34.1
3	4924.0	44.2	46.3	31.3	36.4	7.3	0.5	0.0	46.9	49.0	74.0	27.1	25.0
4	7386.0	43.8	43.7	35.5	36.6	9.4	0.2	0.0	52.3	52.2	74.0	21.7	21.8
5	9848.0	44.5	46.2	38.2	37.0	11.2	0.3	0.0	57.2	58.9	74.0	16.9	15.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac)													
6	12310.0	43.8	43.9	38.8	36.0	12.5	0.2	0.0	49.8	49.9	74.0	24.2	24.1
7	14772.0	43.7	43.0	40.5	36.3	13.9	0.3	0.0	52.6	51.9	74.0	21.5	22.2
8	17234.0	42.9	42.7	40.1	36.8	13.9	4.2	0.0	54.8	54.6	74.0	19.2	19.4
9	19696.0	43.1	42.7	40.6	36.2	15.9	0.0	0.0	53.9	53.5	74.0	20.1	20.5
10	22158.0	44.0	44.2	40.6	36.7	18.4	0.0	0.0	56.8	57.0	74.0	17.2	17.0
11	24620.0	44.5	44.8	40.2	36.5	18.1	0.0	0.0	56.8	57.1	74.0	17.2	16.9

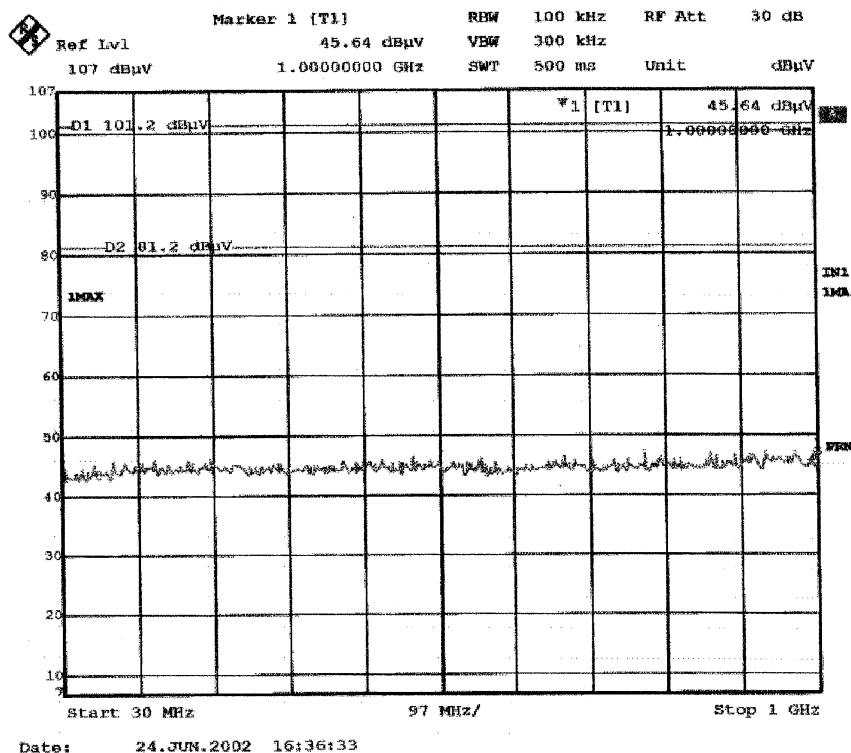
AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	ATTEN [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER						HOR	VER		HOR	VER
		[dBuV/m]							[dB]	[dB]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + (Band Pass or ATTEN).													
1	2182.3	47.6	45.7	26.9	36.8	4.6	0.0	0.0	42.3	40.4	54.0	11.7	13.6
2	2695.3	31.4	31.5	27.9	36.8	5.3	0.0	0.0	27.8	27.9	54.0	26.2	26.1
3	4924.0	32.7	33.1	31.3	36.4	7.3	0.5	0.0	35.4	35.8	54.0	18.6	18.2
4	7386.0	30.7	30.7	35.5	36.6	9.4	0.2	0.0	39.2	39.2	54.0	14.8	14.8
5	9848.0	31.8	32.8	38.2	37.0	11.2	0.3	0.0	44.5	45.5	54.0	9.6	8.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac)													
6	12310.0	30.8	31.0	38.8	36.0	12.5	0.2	0.0	36.8	37.0	54.0	17.2	17.0
7	14772.0	30.5	30.6	40.5	36.3	13.9	0.3	0.0	39.4	39.5	54.0	14.7	14.6
8	17234.0	30.1	30.1	40.1	36.8	13.9	4.2	0.0	42.0	42.0	54.0	12.0	12.0
9	19696.0	30.3	30.5	40.6	36.2	15.9	0.0	0.0	41.1	41.3	54.0	12.9	12.7
10	22158.0	31.8	31.8	40.6	36.7	18.4	0.0	0.0	44.6	44.6	54.0	9.4	9.4
11	24620.0	32.2	32.3	40.2	36.5	18.1	0.0	0.0	44.5	44.6	54.0	9.5	9.4

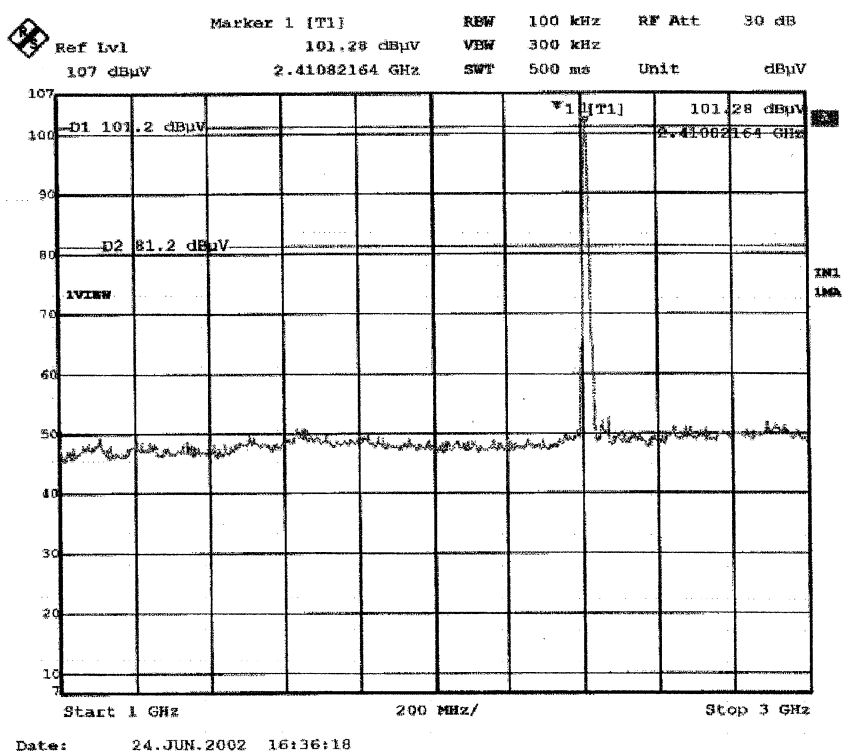
Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) = 9.5 \text{ dB}$

*Except for the above table : All other spurious emissions were less than 20dB for the limit.

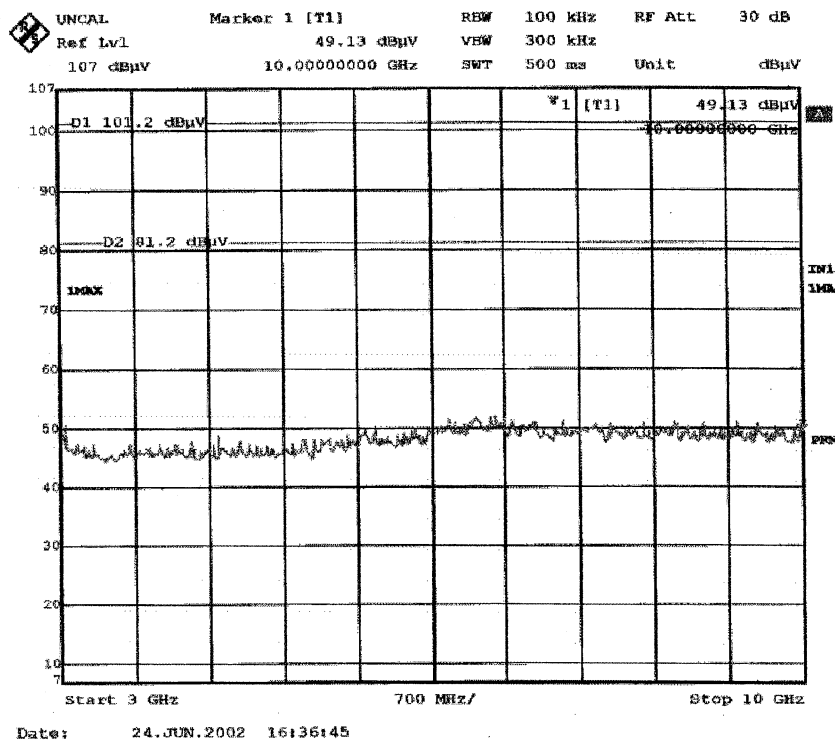
Out of Band Emission(Conducted) :Tx(Ch1:2412MHz)30MHz-1GHz



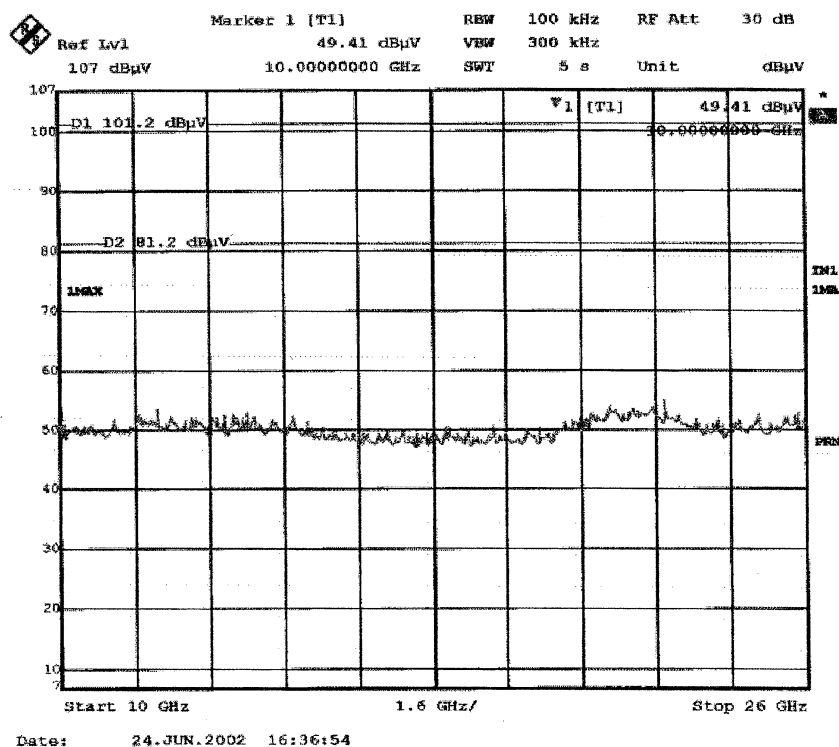
Out of Band Emission(Conducted) :Tx(Ch1:2412MHz)1GHz-3GHz



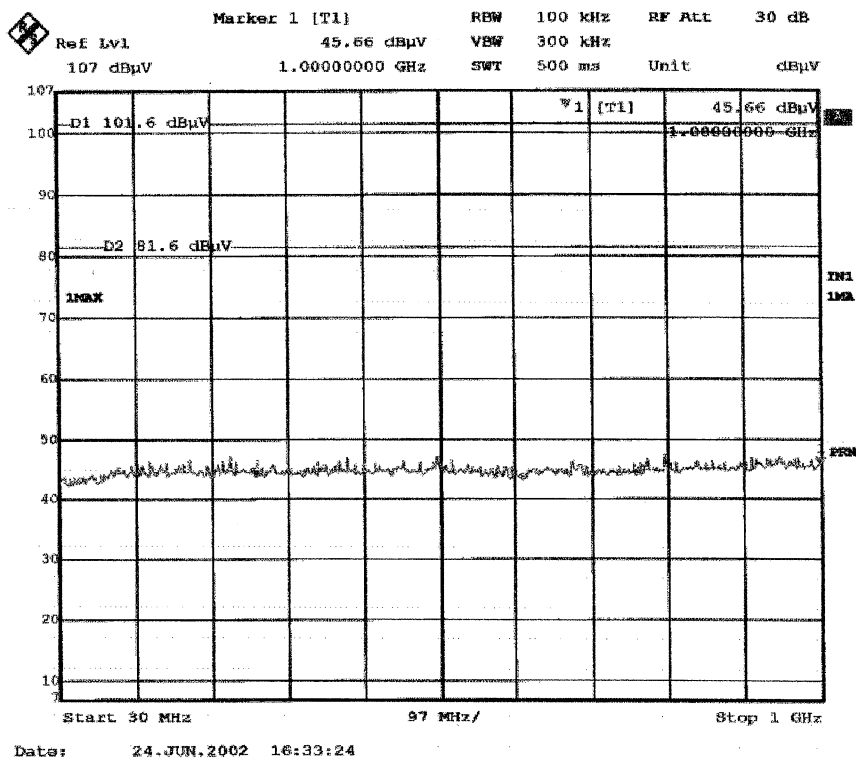
Out of Band Emission(Conducted) :Tx(Ch1:2412MHz)3GHz-10GHz



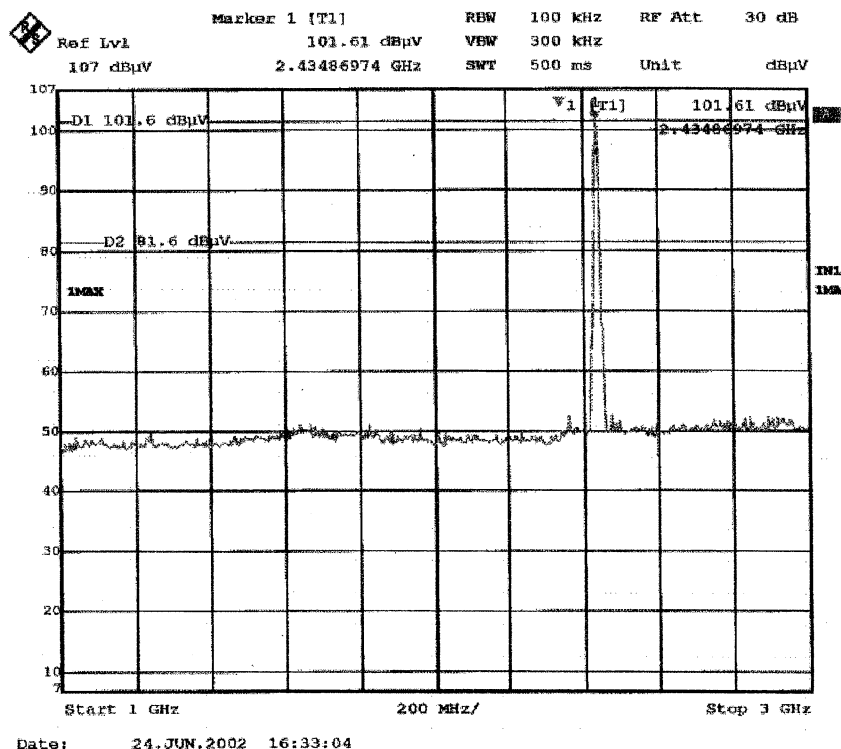
Out of Band Emission(Conducted) :Tx(Ch1:2412MHz)10GHz-26GHz



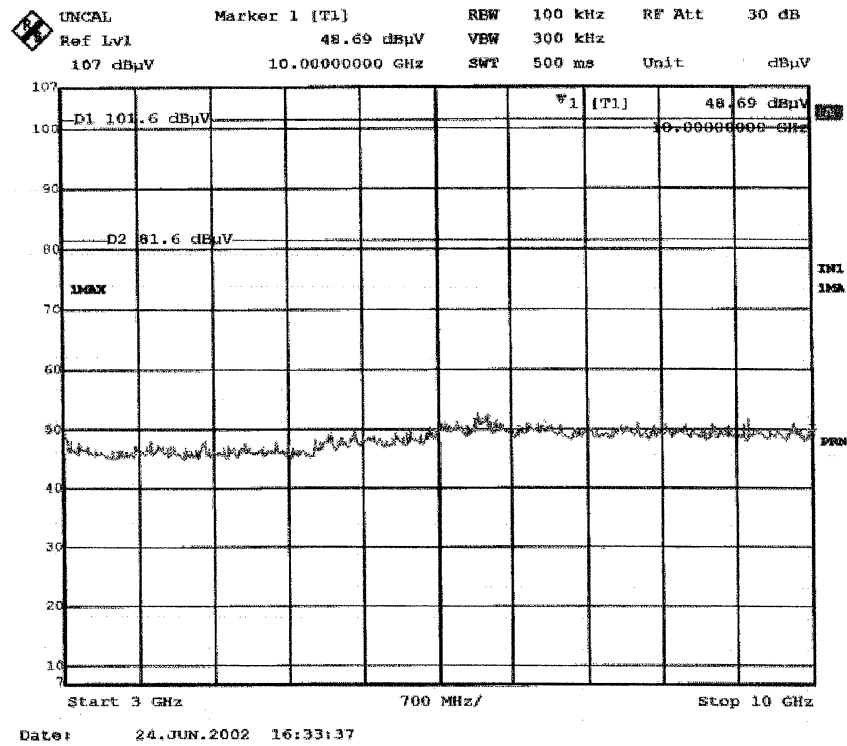
Out of Band Emission(Conducted) :Tx(Ch6:2437MHz)30MHz-1GHz



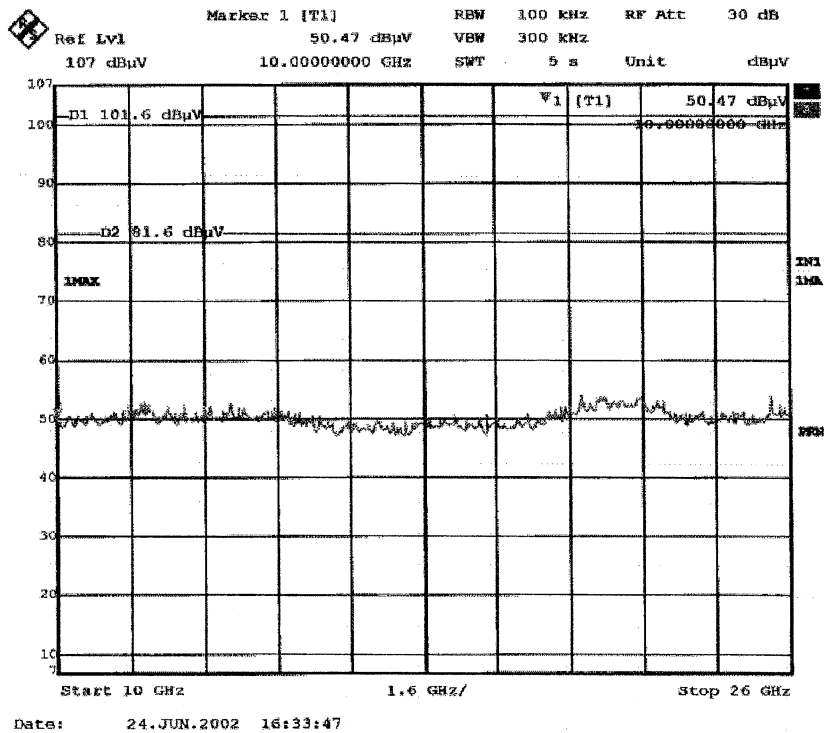
Out of Band Emission(Conducted) :Tx(Ch6:2437MHz)1GHz-3GHz



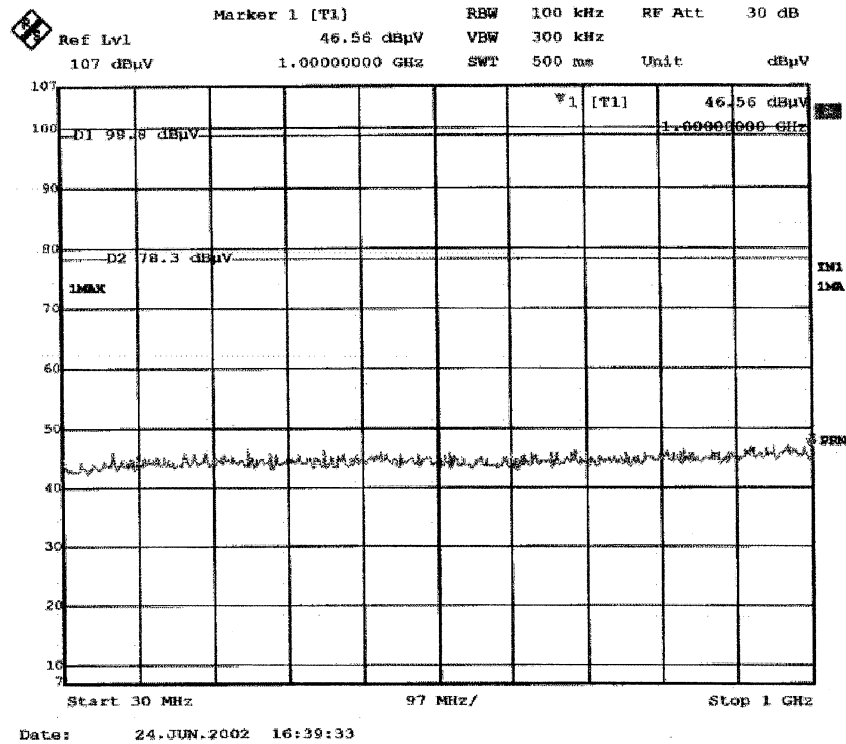
Out of Band Emission(Conducted) :Tx(Ch6:2437MHz)3GHz-10GHz



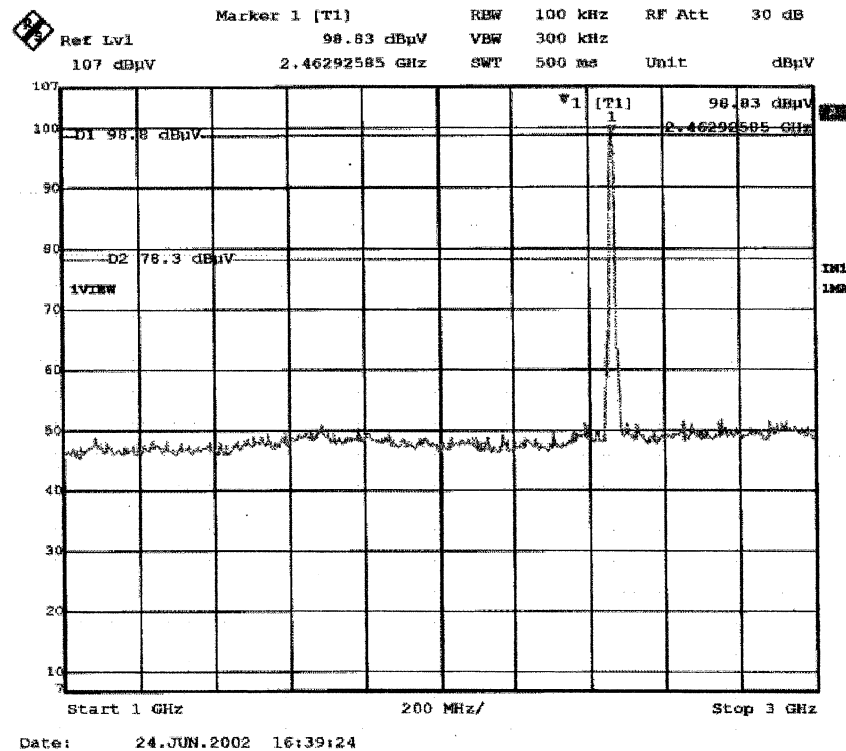
Out of Band Emission(Conducted) :Tx(Ch6:2437MHz)10GHz-26GHz



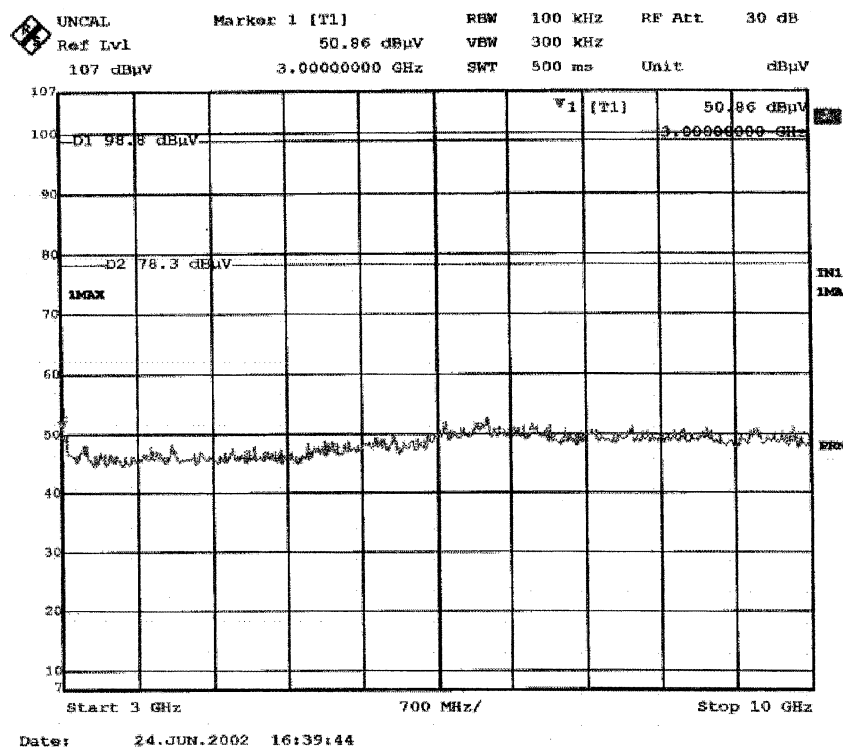
Out of Band Emission(Conducted) :Tx(Ch11:2462MHz)30MHz-1GHz



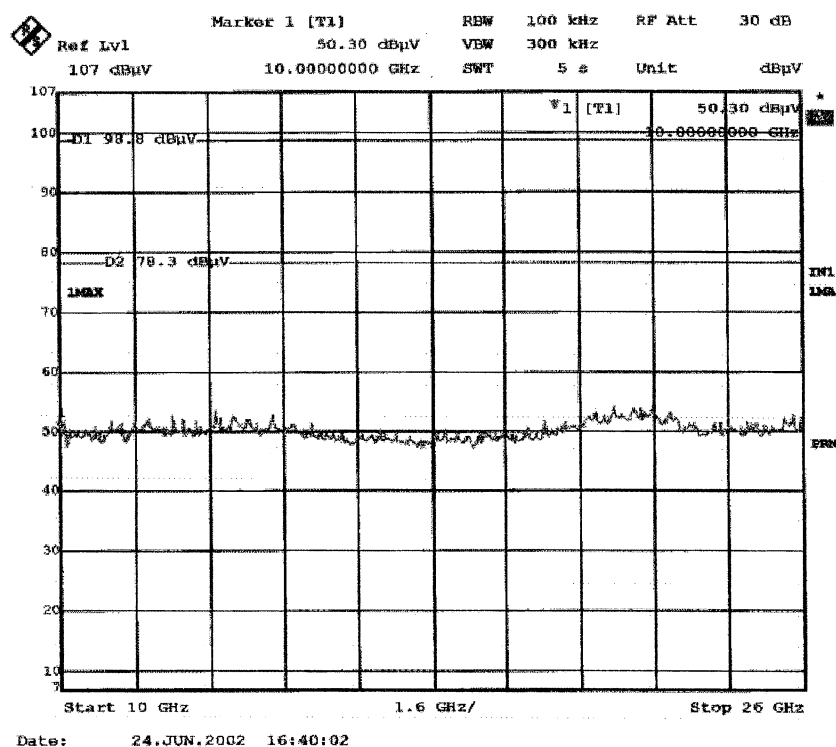
Out of Band Emission(Conducted) :Tx(Ch11:2462MHz)1GHz-3GHz



Out of Band Emission(Conducted) :Tx(Ch11:2462MHz)3GHz-10GHz



Out of Band Emission(Conducted) :Tx(Ch11:2462MHz)10GHz-26GHz



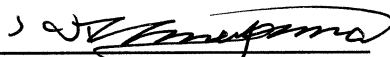
DATA OF PEAK OUTPUT POWER (RADIATED)

A-PEX INTERNATIONAL CO., LTD.

EMC HEAD OFFICE DIVISION No.1 SEMI ANECHOIC CHAMBER

COMPANY : Nagano Japan Radio Co., Ltd.
EQUIPMENT : Wireless LAN
MODEL : NJT-475
S/N : 5
FCC ID : D7LNJT-475
POWER : DC5V
MODE : Tx

REPORT NO : 22KE0026-HO
REGULATION : Fcc Part15SubpartC 247(b)(1)
TEST DISTANCE : 3m
DATE : 2002/6/24
Temperature : 25°C
Humidity : 50%


ENGINEER : Hiroka Umeyama

PK DETECT

CH	FREQ [MHz]	T/R READING		All Factor [dB]	E1		E		Limit 1W [mW]	Result		Result	
		HOR	VER		HOR	VER	HOR	VER		HOR	VER	HOR	VER
		[dBuV]			[dBuV/m]		[V/m]			[mW]		[dBm]	
Low	2412.0	63.3	61.7	30.8	94.1	92.5	0.0507	0.0422	1000.0	0.5	0.3	-3.3	-4.9
Mid	2437.0	63.0	61.5	30.8	93.8	92.3	0.0490	0.0412	1000.0	0.4	0.3	-3.6	-5.1
High	2462.0	62.2	60.3	31.0	93.2	91.3	0.0457	0.0367	1000.0	0.4	0.2	-4.2	-6.1

Sample Calculation :

All Factor = ANT Factor + Cable Loss

Low (2412MHz): ANT Factor (27.5dB) + Cable Loss(3.3dB)

Mid (2437MHz): ANT Factor (27.5dB) + Cable Loss(3.3dB)

High (2462MHz): ANT Factor (27.6dB) + Cable Loss(3.4dB)

Result = $(E \cdot d)^2 / (30 \cdot G)$

E1 : S/A Reading + All Factor

E : Converted to V/m

d : Test distance(3.0m)

G : Numeric Antenna Gain (1.64)

Test Report No : 22KE0026-HO-2

APPENDIX 3 Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE / CE	2001/12/29 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2001/12/27 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2001/12/01 * 12
MCC-01	Coaxial Cable	Suhner/storm/Agilent	421-014-10m, 421-014-16m, 421-014-7.5m, SF M86PE-15cm, 8765C, SFM141-15cm, SFM141-15cm, 8765C, SFM141-10cm, 8765C, 421-010-1m	RE	2001/12/27 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent	5D-2W-20m, 3D-2W-7.5m, 8765C, RG400/U-1.5m	CE	2001/12/27 * 12
MCC-04	Microwave Cable	Storm	421-011	RE	2002/01/14 * 12
MCC-06	Microwave Cable	Storm	421-011	RE	2002/01/14 * 12
MCC-11	Microwave coaxial cable	Suhner	SUCOFLEX 104	RE	2002/03/27 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE	2002/01/13 * 12
MHA-05	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2002/01/13 * 12
MLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2001/12/01 * 12
MLS-02	LISN	Schwarzbeck	NSLK8127	CE (EUT)	2002/01/08 * 12
MLS-03	LISN	Schwarzbeck	NSLK8127	CE	2002/01/08 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2002/02/09 * 12
MPA-02	Pre Amplifier	Agilent	87405A	RE	2001/12/27 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ES140	RE / CE	2001/11/13 * 12
MBF-01	SHF Bandpass Filter	M-City	5GHz BPF	RE	2002/04/30 * 12
MBF-02	SHF Bandpass Filter	M-City	8GHz BPF	RE	2002/04/30 * 12
MBF-03	SHF Bandpass Filter	M-City	13GHz BPF	RE	2002/04/30 * 12

All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

Test Item:

CE: Conducted emission,

RE: Radiated emission,