EMISSION TEST REPORT

Test Report No. : 21KE0066-YW-1

Applicant:	**Matsushita Electric Industrial Co.,Ltd.** **AVC Company Personal Computer Division**
Type of Equipment:	**Wireless LAN Module**
Model No.:	**WLM-1**
FCC ID:	**ACJ9TGWLM-1**
Test standard:	**Fcc Part15 Subpart C, Section 15.247 (c)** **Stand alone test**
Test Result:	**Complied**

The results in this report apply only to the sample tested.

Date of test: November 22 and 23 **Issued date:** November 26, 2001

Tested by: Naoki Sakamoto
Group Leader of EMC Section

Approved by: Kazutoyo Nakanishi
Site Operation Manager of EMC section

Testing Laboratory
A-pex International Co., Ltd.
108 Yokowa-cho, Ise-shi Mie-ken 516-1106 JAPAN
Telephone: +81 596 39 1485
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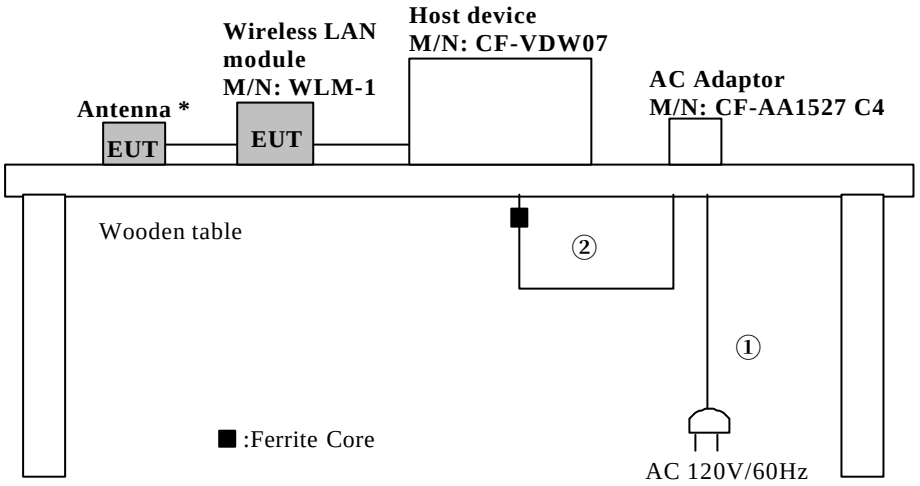
1 SYSTEM TEST CONFIGURATION

1.1 Justification

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

Test mode : Data Transmitting mode(bit rate : 11Mbps)
Performed the test about channels 1(Low), 6(Mid), and 11(High) among 11 channels of all Carrier frequencies.

1.2 Configuration of Tested System



* Two kinds of antenna were tested with the wireless LAN module one by one.
Antenna Part No. DFUP7099ZA, which is intended to use with Display: CF-VDW07 exclusively.
Antenna Part No. DFUP7100ZA, which is intended to use with Main unit: CF-07 exclusively.

Cabling was taken into consideration and test data was taken under worst case conditions.

List of cables used

No.	Name	Length (m)	Shield	Remark
①	AC Power Cable	1.7	N	Polyvinyl chloride
②	DC Power Cable	2.0	N	Polyvinyl chloride

2 TEST EQUIPMENT USED

Name	Manufacturer	Model	Control No.	Calibrated Until
Pre Amplifier	Hewlett Packard	8447D	AF-01	March 30, 2002
Pre Amplifier	Hewlett Packard	8449B	AF-04	November 3, 2002
Biconical Antenna	Schwarzbeck	BBA9106	BA-03	April 30, 2002
Logperiodic Antenna	Schwarzbeck	UHALP9108-A	LA-06	April 30, 2002
Horn Antenna	AH System, Inc	SAS-200/571	HA-01	May 19 , 2002
Horn Antenna	Schwarzbeck	BBHA9170	HA-03	November 21, 2002
Spectrum Analyzer	Hewlett packard	8567A	SA-04	March 30, 2002
Spectrum Analyzer	Advantest	R3271	SA-05	January 31, 2002
Test Receiver	Rohde & Schwarz	ESVS-10	TR-06	August 8, 2002

All measurement equipment is traceable to national standards.

3 SUMMARY OF TESTS

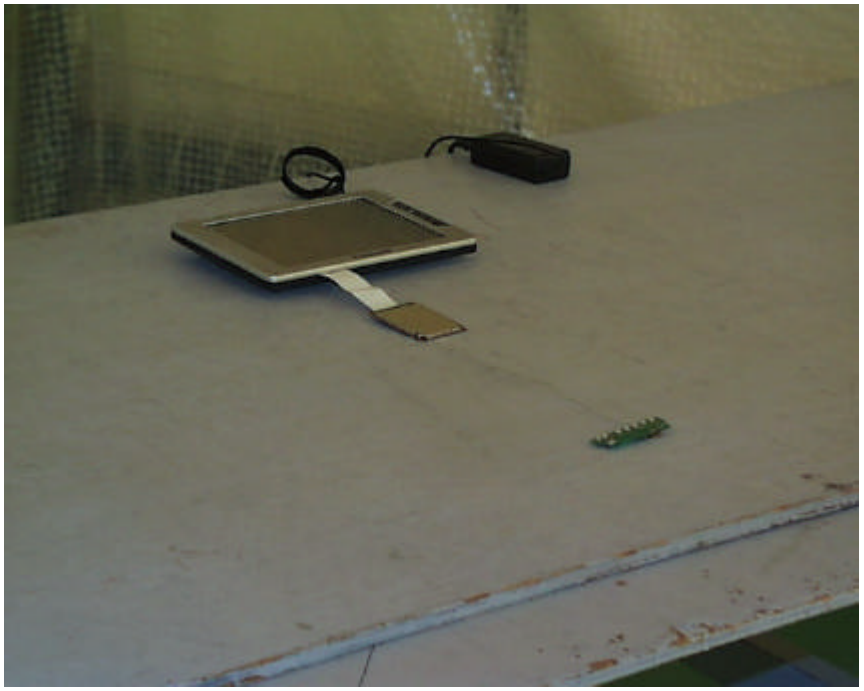
§ 15.247(c) Out of Band Emissions (Stand alone test)

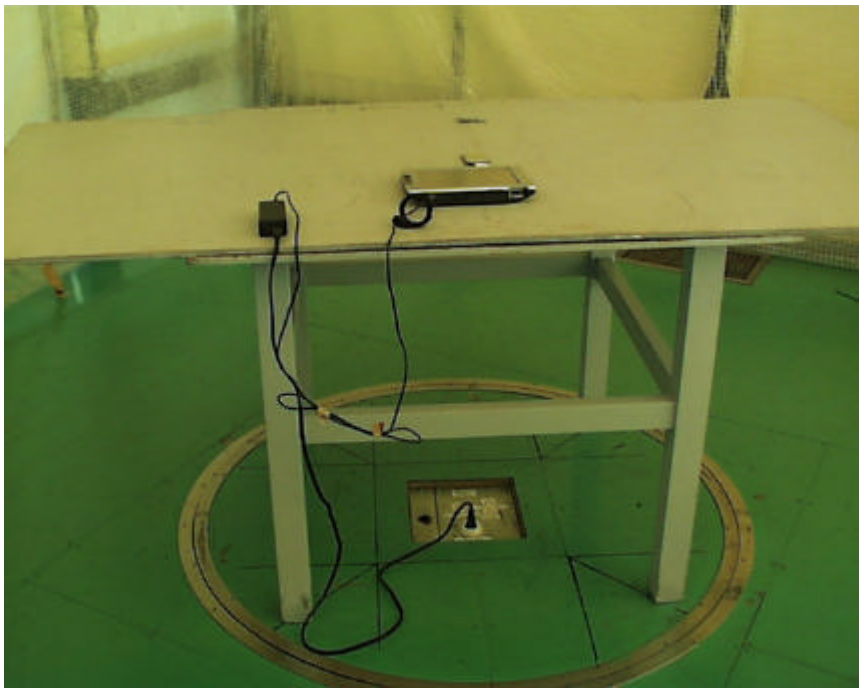
Test Procedure
EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane.
I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged 40cm height to the ground plane. Test was made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna was varied in height above the conducting ground plane to obtain the maximum signal strength.
The Radiated Electric Field Strength intensity has been measured on an open test site with a ground plane and at a distance of 3.0m in the frequency range of 30MHz to 8GHz and at a distance of 1.0m in the frequency range of 8GHz to 26GHz.
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.

Radiated Spurious emissions
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. The result was also satisfied the general limits specified in Sec.15.209(a).
Measurement range : 30MHz to 1000MHz CISPR QP Detector, IF BW 120kHz
: 1GHz to 26GHz PK and AV Detector
PK: RBW 1MHz, VBW 1MHz (Spectrum analyzer)
AV: RBW 1MHz, VBW 10Hz (Spectrum analyzer)

Test data : APPENDIX A1 to A18
Test result : Pass

Photographs of test setup (1)
Antenna Part No. DFUP7100ZA, exclusive use for Main Unit: CF-07





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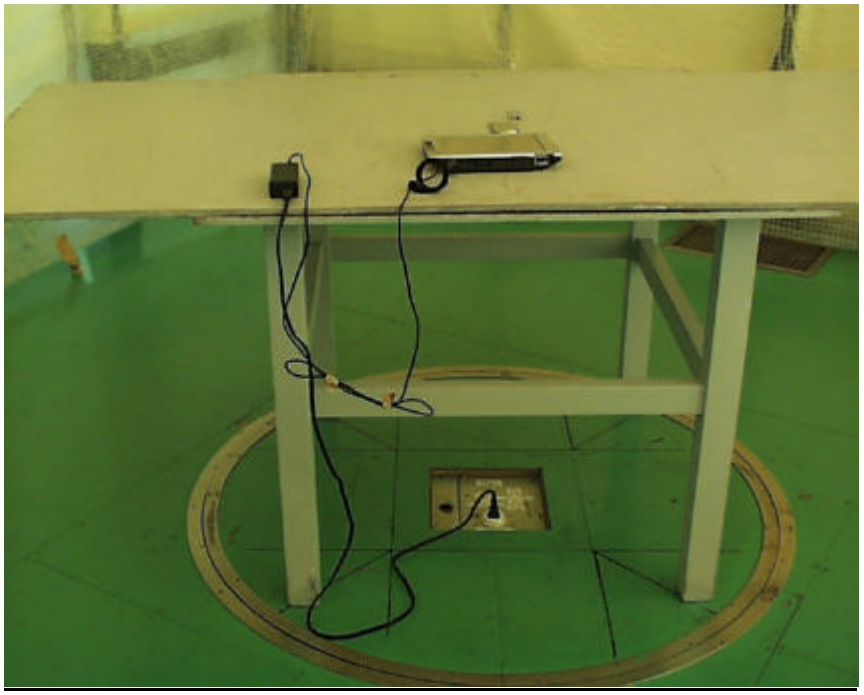
Photographs of test setup(2)
Antenna Part No. DFUP7099ZA, exclusive use for Display: CF-VDW07



PPENDIX

Test Data

Antenna part No. DFUP7099ZA, exclusive use for Display: CF-VDW07 A1 to A9

Antenna Part No. DFUP7100ZA, exclusive use for Main Unit: CF-07 A10 to A18

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DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No. : 21KE0066-YW-1

Applicant : Matsushita Electric Industrial Co.,Ltd.
Kind of Equipment : Wireless LAN Module
Model No. : WLM-1+ CF-VDW07 Antenna(Host device:CF-VDW07)
Serial No. :
Power : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch01 : 2412MHz)
Remarks : FCC ID : ACJ9TGWLM-1
Date : 11/22/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 41 %
Regulation : Fcc 15C §15.209(a)

Engineer : Naoki Sakamoto

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	43.52	BB	41.5	44.4	13.2	28.1	1.2	6.0	33.8	36.7	40.0	6.2	3.3
2.	50.21	BB	45.7	47.1	10.9	28.1	1.3	6.0	35.8	37.2	40.0	4.2	2.8
3.	56.90	BB	45.5	46.9	8.5	28.1	1.4	5.9	33.2	34.6	40.0	6.8	5.4
4.	63.58	BB	50.1	51.7	6.9	27.9	1.4	5.9	36.4	38.0	40.0	3.6	2.0
5.	70.29	BB	52.0	53.0	6.1	27.9	1.6	5.9	37.7	38.7	40.0	2.3	1.3
6.	76.98	BB	48.9	47.3	6.2	27.9	1.6	5.9	34.7	33.1	40.0	5.3	6.9
7.	80.34	BB	52.5	48.5	6.3	27.9	1.7	5.9	38.5	34.5	40.0	1.5	5.5
8.	83.67	BB	48.0	47.2	6.8	27.9	1.8	5.9	34.6	33.8	40.0	5.4	6.2
9.	90.38	BB	51.9	52.0	7.9	27.9	1.8	5.9	39.6	39.7	43.5	3.9	3.8
10.	93.70	BB	38.0	36.7	8.7	27.9	1.9	5.9	26.6	25.3	43.5	16.9	18.2
11.	97.07	BB	51.3	52.0	9.4	27.9	1.9	5.9	40.6	41.3	43.5	2.9	2.2
12.	100.41	BB	45.0	43.0	10.2	27.9	1.9	5.9	35.1	33.1	43.5	8.4	10.4
13.	103.77	BB	47.0	49.9	10.7	27.9	2.0	5.9	37.7	40.6	43.5	5.8	2.9
14.	117.17	BB	39.8	43.3	12.8	27.9	2.1	5.9	32.7	36.2	43.5	10.8	7.3
15.	123.86	BB	41.4	40.9	13.5	27.9	2.1	5.9	35.0	34.5	43.5	8.5	9.0
16.	130.56	BB	38.5	41.5	13.7	27.8	2.2	5.9	32.5	35.5	43.5	11.0	8.0
17.	137.26	BB	44.1	41.5	14.0	27.8	2.2	5.9	38.4	35.8	43.5	5.1	7.7
18.	143.95	BB	44.5	43.1	14.2	27.8	2.3	5.9	39.1	37.7	43.5	4.4	5.8
19.	150.64	BB	44.5	41.3	14.5	27.8	2.4	5.9	39.5	36.3	43.5	4.0	7.2
20.	160.68	BB	47.0	41.3	14.8	27.8	2.5	5.9	42.4	36.7	43.5	1.1	6.8
21.	164.06	BB	41.1	37.8	15.0	27.8	2.5	5.9	36.7	33.4	43.5	6.8	10.1
22.	170.73	BB	45.2	39.9	15.3	27.8	2.5	5.9	41.1	35.8	43.5	2.4	7.7
23.	177.45	BB	43.2	40.8	15.7	27.8	2.6	5.9	39.6	37.2	43.5	3.9	6.3
24.	184.15	BB	43.6	43.5	15.9	27.8	2.7	5.9	40.3	40.2	43.5	3.2	3.3
25.	190.85	BB	43.5	44.0	16.1	27.8	2.7	5.9	40.4	40.9	43.5	3.1	2.6
26.	197.55	BB	40.4	37.2	16.3	27.8	2.8	5.9	37.6	34.4	43.5	5.9	9.1
27.	200.90	BB	40.8	38.2	16.4	27.8	2.8	5.9	38.1	35.5	43.5	5.4	8.0
28.	210.95	BB	43.6	34.7	16.4	27.8	2.9	5.9	41.0	32.1	43.5	2.5	11.4
29.	220.98	BB	43.3	42.1	16.5	27.8	3.0	5.9	40.9	39.7	46.0	5.1	6.3
30.	241.03	BB	38.0	43.5	16.6	27.7	3.2	5.9	36.0	41.5	46.0	10.0	4.5
31.	321.37	BB	44.0	41.0	14.5	27.0	6.3	5.8	43.6	40.6	46.0	2.4	5.4
32.	358.28	BB	42.3	42.1	14.9	27.2	7.0	5.8	42.8	42.6	46.0	3.2	3.4
33.	371.58	BB	41.3	41.3	15.1	27.4	7.1	5.8	41.9	41.9	46.0	4.1	4.1
34.	522.24	BB	34.4	32.8	18.3	28.3	8.6	5.9	38.9	37.3	46.0	7.1	8.7
35.	562.54	BB	38.5	37.7	18.5	28.4	8.9	5.8	43.3	42.5	46.0	2.7	3.5

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions are more than 20dB below the limits.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic

DATA OF SUPURIOUS EMISSIONS(1GHz to 8GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-VDW07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch1 :2412MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 3m
DATE : 2001/11/22/2001
Temp./Humi. : 23℃/41%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	46.0	46.6	30.3	34.4	6.4	0.0	48.3	48.9	74.0	25.7	25.1
2	2.3900	44.3	44.7	31.3	34.5	7.0	0.0	48.1	48.5	74.0	25.9	25.5
3	4.1254	43.8	46.5	33.6	34.6	8.9	0.0	51.7	54.4	74.0	22.3	19.6
4	4.8240	44.0	52.2	35.4	34.5	9.9	0.0	54.8	63.0	74.0	19.2	11.0
5	7.2365	41.7	42.0	39.1	34.8	11.7	0.0	57.7	58.0	74.0	16.3	16.0

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	40.0	40.2	30.3	34.4	6.4	0.0	42.3	42.5	54.0	11.7	11.5
2	2.3900	32.0	32.3	31.3	34.5	7.0	0.0	35.8	36.1	54.0	18.2	17.9
3	4.1254	35.4	40.1	33.6	34.6	8.9	0.0	43.3	48.0	54.0	10.7	6.0
4	4.8240	32.4	39.3	35.4	34.5	9.9	0.0	43.2	50.1	54.0	10.8	3.9
5	7.2365	30.3	31.1	39.1	34.8	11.7	0.0	46.3	47.1	54.0	7.7	6.9

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + ATTEN.
Except for the above table : All other spurious emissions are more than 20dB below the limit.

DATA OF SUPURIOUS EMISSIONS(8GHz to 26GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-VDW07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch1 :2412MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 1m
DATE : 2001/11/22/2001
Temp./Humi. : 23℃/41%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit(1m)	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.6480	41.2	41.5	39.2	35.0	6.8	1.3	53.5	53.8	84.0	30.5	30.2
*2	12.0600	41.1	42.1	43.5	34.4	8.0	1.6	59.8	60.8	84.0	24.2	23.2
*3	14.4720	40.9	41.5	42.2	33.1	8.6	1.1	59.7	60.3	84.0	24.3	23.7
*4	16.8840	42.3	43.7	43.8	33.4	9.2	1.1	63	64.4	84.0	21.0	19.6
*5	19.2960	44.8	45.3	40.2	33.4	10.2	1.0	62.8	63.3	84.0	21.2	20.7
*6	21.7080	44.9	46.0	40.3	33.0	11.0	0.8	64	65.1	84.0	20.0	18.9
*7	24.1200	46.3	46.5	40.3	33.2	11.1	0.7	65.2	65.4	84.0	18.8	18.6

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit(1m)	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.6480	28.7	28.5	39.2	35.0	6.8	1.3	41.0	40.8	64.0	23.0	23.2
*2	12.0600	29.0	28.3	43.5	34.4	8.0	1.6	47.7	47.0	64.0	16.3	17.0
*3	14.4720	28.5	28.4	42.2	33.1	8.6	1.1	47.3	47.2	64.0	16.7	16.8
*4	16.8840	30.2	30.1	43.8	33.4	9.2	1.1	50.9	50.8	64.0	13.1	13.2
*5	19.2960	32.4	32.0	40.2	33.4	10.2	1.0	50.4	50.0	64.0	13.6	14.0
*6	21.7080	32.8	32.5	40.3	33.0	11.0	0.8	51.9	51.6	64.0	12.1	12.4
*7	24.1200	33.9	34.0	40.3	33.2	11.1	0.7	52.8	52.9	64.0	11.2	11.1

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + H.P.F(High Pass Filter)
1m Limit = 3m Limit(15.209) + 20Log(3/1)
Except for the above table : All other spurious emissions are more than 20dB below the limit.
*Emissions did not detect.

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No. : 21KE0066-YW-1

Applicant : Matsushita Electric Industrial Co.,Ltd.
Kind of Equipment : Wireless LAN Module
Model No. : WLM-1+ CF-VDW07 Antenna(Host device:CF-VDW07)
Serial No. :
Power : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch06 : 2437MHz)
Remarks : FCC ID : ACJ9TGWLM-1
Date : 11/22/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 41 %
Regulation : Fcc 15C §15.209(a)

Engineer : Naoki Sakamoto

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	43.52	BB	42.0	44.0	13.2	28.1	1.2	6.0	34.3	36.3	40.0	5.7	3.7
2.	50.21	BB	45.8	46.5	10.9	28.1	1.3	6.0	35.9	36.6	40.0	4.1	3.4
3.	56.70	BB	45.9	47.1	8.6	28.1	1.4	5.9	33.7	34.9	40.0	6.3	5.1
4.	63.60	BB	51.2	50.8	6.9	27.9	1.4	5.9	37.5	37.1	40.0	2.5	2.9
5.	73.00	BB	52.6	52.1	6.2	27.9	1.6	5.9	38.4	37.9	40.0	1.6	2.1
6.	76.98	BB	49.6	48.3	6.2	27.9	1.6	5.9	35.4	34.1	40.0	4.6	5.9
7.	80.40	BB	53.0	49.1	6.3	27.9	1.7	5.9	39.0	35.1	40.0	1.0	4.9
8.	83.67	BB	48.9	47.0	6.8	27.9	1.8	5.9	35.5	33.6	40.0	4.5	6.4
9.	90.39	BB	52.3	51.3	7.9	27.9	1.8	5.9	40.0	39.0	43.5	3.5	4.5
10.	93.70	BB	38.9	38.5	8.7	27.9	1.9	5.9	27.5	27.1	43.5	16.0	16.4
11.	97.07	BB	52.0	51.8	9.4	27.9	1.9	5.9	41.3	41.1	43.5	2.2	2.4
12.	100.40	BB	46.0	43.5	10.2	27.9	1.9	5.9	36.1	33.6	43.5	7.4	9.9
13.	103.79	BB	46.5	49.0	10.7	27.9	2.0	5.9	37.2	39.7	43.5	6.3	3.8
14.	117.17	BB	43.3	43.5	12.8	27.9	2.1	5.9	36.2	36.4	43.5	7.3	7.1
15.	123.84	BB	42.1	40.5	13.5	27.9	2.1	5.9	35.7	34.1	43.5	7.8	9.4
16.	130.60	BB	40.0	41.1	13.7	27.8	2.2	5.9	34.0	35.1	43.5	9.5	8.4
17.	137.30	BB	43.8	42.1	14.0	27.8	2.2	5.9	38.1	36.4	43.5	5.4	7.1
18.	143.96	BB	44.0	43.3	14.2	27.8	2.3	5.9	38.6	37.9	43.5	4.9	5.6
19.	150.64	BB	45.6	41.5	14.5	27.8	2.4	5.9	40.6	36.5	43.5	2.9	7.0
20.	160.68	BB	46.6	41.3	14.8	27.8	2.5	5.9	42.0	36.7	43.5	1.5	6.8
21.	164.07	BB	42.1	38.1	15.0	27.8	2.5	5.9	37.7	33.7	43.5	5.8	9.8
22.	170.75	BB	45.5	40.3	15.3	27.8	2.5	5.9	41.4	36.2	43.5	2.1	7.3
23.	177.44	BB	44.0	40.0	15.7	27.8	2.6	5.9	40.4	36.4	43.5	3.1	7.1
24.	184.20	BB	43.8	43.9	15.9	27.8	2.7	5.9	40.5	40.6	43.5	3.0	2.9
25.	190.86	BB	43.2	43.5	16.1	27.8	2.7	5.9	40.1	40.4	43.5	3.4	3.1
26.	197.54	BB	40.1	38.0	16.3	27.8	2.8	5.9	37.3	35.2	43.5	6.2	8.3
27.	200.92	BB	40.5	38.3	16.4	27.8	2.8	5.9	37.8	35.6	43.5	5.7	7.9
28.	210.95	BB	43.9	35.0	16.4	27.8	2.9	5.9	41.3	32.4	43.5	2.2	11.1
29.	221.00	BB	43.0	42.2	16.5	27.8	3.0	5.9	40.6	39.8	46.0	5.4	6.2
30.	241.00	BB	37.7	43.3	16.6	27.7	3.2	5.9	35.7	41.3	46.0	10.3	4.7
31.	321.36	BB	44.1	41.3	14.5	27.6	3.6	5.8	40.4	37.6	46.0	5.6	8.4
32.	358.30	BB	42.6	42.3	14.9	27.6	3.9	5.8	39.6	39.3	46.0	6.4	6.7
33.	371.58	BB	43.5	41.3	15.1	27.6	4.0	5.8	40.8	38.6	46.0	5.2	7.4
34.	522.24	BB	34.8	33.0	18.3	27.5	4.9	5.9	36.4	34.6	46.0	9.6	11.4
35.	562.55	BB	38.9	38.0	18.5	27.4	5.1	5.8	40.9	40.0	46.0	5.1	6.0

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions are more than 20dB below the limits.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic

DATA OF SUPURIOUS EMISSIONS(1GHz to 8GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-VDW07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch6 :2437MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 3m
DATE : 2001/11/22/2001
Temp./Humi. : 23℃/41%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	46.1	46.8	30.3	34.4	6.4	0.0	48.4	49.1	74.0	25.6	24.9
2	4.1254	44.0	46.5	33.6	34.6	8.9	0.0	51.9	54.4	74.0	22.1	19.6
3	4.8740	44.8	51.9	35.6	34.5	10.0	0.0	55.9	63.0	74.0	18.1	11.0
4	7.3110	41.8	42.0	39.2	34.9	11.7	0.0	57.8	58.0	74.0	16.2	16.0

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	40.1	40.3	30.3	34.4	6.4	0.0	42.4	42.6	54.0	11.6	11.4
2	4.1254	35.5	40.3	33.6	34.6	8.9	0.0	43.4	48.2	54.0	10.6	5.8
3	4.8740	33.0	39.1	35.6	34.5	10.0	0.0	44.1	50.2	54.0	9.9	3.8
4	7.3110	30.4	31.2	39.2	34.9	11.7	0.0	46.4	47.2	54.0	7.6	6.8

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + ATTEN.
Except for the above table : All other spurious emissions are more than 20dB below the limit.

DATA OF SUPURIOUS EMISSIONS(8GHz to 26GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-VDW07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch6 :2437MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 3m
DATE : 2001/11/22/2001
Temp./Humi. : 23℃/41%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.7480	41.3	41.4	39.2	35.0	6.9	1.3	53.7	53.8	84.0	30.3	30.2
*2	12.1850	41.2	42.2	43.4	34.3	8.0	1.5	59.8	60.8	84.0	24.2	23.2
*3	14.6220	41.2	41.7	42.6	33.1	8.6	1.1	60.4	60.9	84.0	23.6	23.1
*4	17.0590	42.0	43.7	43.8	33.2	9.2	1.1	62.9	64.6	84.0	21.1	19.4
*5	19.4960	44.8	45.4	40.2	33.4	10.4	1.4	63.4	64.0	84.0	20.6	20.0
*6	21.9330	44.9	45.9	40.3	33.0	11.1	0.6	63.9	64.9	84.0	20.1	19.1
*7	24.3700	46.2	46.4	40.3	33.2	11.8	0.5	65.6	65.8	84.0	18.4	18.2

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.7480	28.8	28.4	39.2	35.0	6.9	1.3	41.2	40.8	64.0	22.8	23.2
*2	12.1850	29.1	28.1	43.4	34.3	8.0	1.5	47.7	46.7	64.0	16.3	17.3
*3	14.6220	28.8	28.3	42.6	33.1	8.6	1.1	48.0	47.5	64.0	16.0	16.5
*4	17.0590	30.1	30.0	43.8	33.2	9.2	1.1	51.0	50.9	64.0	13.0	13.1
*5	19.4960	32.3	31.8	40.2	33.4	10.4	1.4	50.9	50.4	64.0	13.1	13.6
*6	21.9330	32.7	32.3	40.3	33.0	11.1	0.6	51.7	51.3	64.0	12.3	12.7
*7	24.3700	33.7	33.9	40.3	33.2	11.8	0.5	53.1	53.3	64.0	10.9	10.7

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + H.P.F(High Pass Filter)
1m Limit = 3m Limit(15.209) + 20Log(3/1)
Except for the above table : All other spurious emissions are more than 20dB below the limit.
*Emissions did not detect.

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No. : 21KE0066-YW-1

Applicant : Matsushita Electric Industrial Co.,Ltd.
Kind of Equipment : Wireless LAN Module
Model No. : WLM-1+ CF-VDW07 Antenna(Host device:CF-VDW07)
Serial No. :
Power : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch11 : 2462MHz)
Remarks : FCC ID : ACJ9TGWLM-1
Date : 11/22/2001
Test Distance : 3 m
Temperature : 23 ℃
Humidity : 41 %
Regulation : Fcc 15C §15.209(a)

Engineer : Naoki Sakamoto

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	43.52	BB	41.3	43.8	13.2	28.1	1.2	6.0	33.6	36.1	40.0	6.4	3.9
2.	50.21	BB	46.0	46.2	10.9	28.1	1.3	6.0	36.1	36.3	40.0	3.9	3.7
3.	56.66	BB	45.5	46.8	8.6	28.1	1.4	5.9	33.3	34.6	40.0	6.7	5.4
4.	63.59	BB	51.2	51.0	6.9	27.9	1.4	5.9	37.5	37.3	40.0	2.5	2.7
5.	72.90	BB	52.0	52.0	6.2	27.9	1.6	5.9	37.8	37.8	40.0	2.2	2.2
6.	76.98	BB	49.5	48.0	6.2	27.9	1.6	5.9	35.3	33.8	40.0	4.7	6.2
7.	80.40	BB	52.7	49.5	6.3	27.9	1.7	5.9	38.7	35.5	40.0	1.3	4.5
8.	83.68	BB	49.1	48.0	6.8	27.9	1.8	5.9	35.7	34.6	40.0	4.3	5.4
9.	90.40	BB	52.4	51.2	7.9	27.9	1.8	5.9	40.1	38.9	43.5	3.4	4.6
10.	93.70	BB	41.2	41.1	8.7	27.9	1.9	5.9	29.8	29.7	43.5	13.7	13.8
11.	97.10	BB	51.5	52.0	9.4	27.9	1.9	5.9	40.8	41.3	43.5	2.7	2.2
12.	104.10	BB	45.8	44.9	10.8	27.9	2.0	5.9	36.6	35.7	43.5	6.9	7.8
13.	103.80	BB	46.3	48.0	10.7	27.9	2.0	5.9	37.0	38.7	43.5	6.5	4.8
14.	117.17	BB	43.8	44.0	12.8	27.9	2.1	5.9	36.7	36.9	43.5	6.8	6.6
15.	123.84	BB	42.0	42.0	13.5	27.9	2.1	5.9	35.6	35.6	43.5	7.9	7.9
16.	130.60	BB	39.8	42.3	13.7	27.8	2.2	5.9	33.8	36.3	43.5	9.7	7.2
17.	137.31	BB	43.7	41.5	14.0	27.8	2.2	5.9	38.0	35.8	43.5	5.5	7.7
18.	143.96	BB	43.8	43.5	14.2	27.8	2.3	5.9	38.4	38.1	43.5	5.1	5.4
19.	150.64	BB	45.9	41.6	14.5	27.8	2.4	5.9	40.9	36.6	43.5	2.6	6.9
20.	160.68	BB	46.5	42.0	14.8	27.8	2.5	5.9	41.9	37.4	43.5	1.6	6.1
21.	164.07	BB	43.3	38.9	15.0	27.8	2.5	5.9	38.9	34.5	43.5	4.6	9.0
22.	170.76	BB	45.4	42.0	15.3	27.8	2.5	5.9	41.3	37.9	43.5	2.2	5.6
23.	177.44	BB	44.5	38.9	15.7	27.8	2.6	5.9	40.9	35.3	43.5	2.6	8.2
24.	184.19	BB	44.1	44.4	15.9	27.8	2.7	5.9	40.8	41.1	43.5	2.7	2.4
25.	190.86	BB	43.0	43.2	16.1	27.8	2.7	5.9	39.9	40.1	43.5	3.6	3.4
26.	197.54	BB	39.8	38.0	16.3	27.8	2.8	5.9	37.0	35.2	43.5	6.5	8.3
27.	200.92	BB	40.2	39.8	16.4	27.8	2.8	5.9	37.5	37.1	43.5	6.0	6.4
28.	210.95	BB	43.9	36.0	16.4	27.8	2.9	5.9	41.3	33.4	43.5	2.2	10.1
29.	220.99	BB	42.5	43.8	16.5	27.8	3.0	5.9	40.1	41.4	46.0	5.9	4.6
30.	241.10	BB	39.1	43.4	16.6	27.7	3.2	5.9	37.1	41.4	46.0	8.9	4.6
31.	321.36	BB	43.6	42.8	14.5	27.0	6.3	5.8	43.2	42.4	46.0	2.8	3.6
32.	358.30	BB	42.5	42.6	14.9	27.2	7.0	5.8	43.0	43.1	46.0	3.0	2.9
33.	371.68	BB	43.6	42.0	15.1	27.4	7.1	5.8	44.2	42.6	46.0	1.8	3.4
34.	522.24	BB	34.7	33.3	18.3	28.3	8.6	5.9	39.2	37.8	46.0	6.8	8.2
35.	562.80	BB	38.5	37.7	18.5	28.4	8.9	5.8	43.3	42.5	46.0	2.7	3.5

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions are more than 20dB below the limits.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic

DATA OF SUPURIOUS EMISSIONS(1GHz to 8GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-VDW07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch11 :2462MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 3m
DATE : 2001/11/22/2001
Temp./Humi. : 23℃/41%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	47.5	47.9	30.3	34.4	6.4	0.0	49.8	50.2	74.0	24.2	23.8
2	2.4850	46.1	47.3	31.3	34.5	7.1	0.0	50.0	51.2	74.0	24.0	22.8
3	4.1254	45.2	48.3	33.6	34.6	8.9	0.0	53.1	56.2	74.0	20.9	17.8
4	4.9240	49.3	49.7	35.8	34.5	10.1	0.0	60.7	61.1	74.0	13.3	12.9
5	7.3860	42.9	43.2	39.2	34.9	11.7	0.0	58.9	59.2	74.0	15.1	14.8

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	41.2	41.9	30.3	34.4	6.4	0.0	43.5	44.2	54.0	10.5	9.8
2	2.4850	34.5	35.9	31.3	34.5	7.1	0.0	38.4	39.8	54.0	15.6	14.2
3	4.1254	37.1	42.7	33.6	34.6	8.9	0.0	45.0	50.6	54.0	9.0	3.4
4	4.9240	37.3	37.4	35.8	34.5	10.1	0.0	48.7	48.8	54.0	5.3	5.2
5	7.3860	31.5	31.3	39.2	34.9	11.7	0.0	47.5	47.3	54.0	6.5	6.7

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + ATTEN.
Except for the above table : All other spurious emissions are more than 20dB below the limit.

DATA OF SUPURIOUS EMISSIONS(8GHz to 26GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-VDW07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch11 :2462MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 3m
DATE : 2001/11/22/2001
Temp./Humi. : 23℃/41%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.8480	41.3	41.4	39.2	35.0	7.0	1.1	53.6	53.7	84.0	30.4	30.3
*2	12.3100	41.2	42.2	43.4	34.3	8.1	1.5	59.9	60.9	84.0	24.1	23.1
*3	14.7720	41.2	41.7	42.6	33.1	8.7	1.2	60.6	61.1	84.0	23.4	22.9
*4	17.2340	42.0	43.7	43.8	33.2	9.5	0.8	62.9	64.6	84.0	21.1	19.4
*5	19.6960	44.8	45.4	40.2	33.4	10.4	1.6	63.6	64.2	84.0	20.4	19.8
*6	22.1580	44.9	45.9	40.3	33.0	11.1	0.7	64.0	65.0	84.0	20.0	19.0
*7	24.6200	46.2	46.4	40.3	33.2	11.9	0.6	65.8	66.0	84.0	18.2	18.0

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.8480	28.8	28.4	39.2	35.0	7.0	1.1	41.1	40.7	64.0	22.9	23.3
*2	12.3100	29.1	28.1	43.4	34.3	8.1	1.5	47.8	46.8	64.0	16.2	17.2
*3	14.7720	28.8	28.3	42.6	33.1	8.7	1.2	48.2	47.7	64.0	15.8	16.3
*4	17.2340	30.1	30.0	43.8	33.2	9.5	0.8	51.0	50.9	64.0	13.0	13.1
*5	19.6960	32.3	31.8	40.2	33.4	10.4	1.6	51.1	50.6	64.0	12.9	13.4
*6	22.1580	32.7	32.3	40.3	33.0	11.1	0.7	51.8	51.4	64.0	12.2	12.6
*7	24.6200	33.7	33.9	40.3	33.2	11.9	0.6	53.3	53.5	64.0	10.7	10.5

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + H.P.F(High Pass Filter)
1m Limit = 3m Limit(15.209) + 20Log(3/1)
Except for the above table : All other spurious emissions are more than 20dB below the limit.
*Emissions did not detect.

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No. : 21KE0066-YW-1

Applicant : Matsushita Electric Industrial Co.,Ltd.
Kind of Equipment : Wireless LAN Module
Model No. : WLM-1+ CF-07 Antenna(Host device:CF-VDW07)
Serial No. :
Power : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch01 : 2412MHz)
Remarks : FCC ID : ACJ9TGWLM-1
Date : 11/23/2001
Test Distance : 3 m
Temperature : 24 ℃
Humidity : 47 %
Regulation : Fcc 15C §15.209(a)

Engineer : Naoki Sakamoto

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	43.52	BB	42.0	45.2	13.2	28.1	1.2	6.0	34.3	37.5	40.0	5.7	2.5
2.	50.21	BB	44.6	44.4	10.9	28.1	1.3	6.0	34.7	34.5	40.0	5.3	5.5
3.	56.90	BB	46.1	42.5	8.5	28.1	1.4	5.9	33.8	30.2	40.0	6.2	9.8
4.	63.59	BB	49.5	52.3	6.9	27.9	1.4	5.9	35.8	38.6	40.0	4.2	1.4
5.	70.30	BB	51.6	51.7	6.1	27.9	1.6	5.9	37.3	37.4	40.0	2.7	2.6
6.	76.99	BB	49.3	47.7	6.2	27.9	1.6	5.9	35.1	33.5	40.0	4.9	6.5
7.	80.34	BB	52.8	49.4	6.3	27.9	1.7	5.9	38.8	35.4	40.0	1.2	4.6
8.	83.67	BB	47.9	47.1	6.8	27.9	1.8	5.9	34.5	33.7	40.0	5.5	6.3
9.	90.38	BB	53.3	52.7	7.9	27.9	1.8	5.9	41.0	40.4	43.5	2.5	3.1
10.	93.70	BB	37.7	37.0	8.7	27.9	1.9	5.9	26.3	25.6	43.5	17.2	17.9
11.	97.07	BB	52.2	53.0	9.4	27.9	1.9	5.9	41.5	42.3	43.5	2.0	1.2
12.	100.42	BB	44.4	45.7	10.2	27.9	1.9	5.9	34.5	35.8	43.5	9.0	7.7
13.	103.77	BB	47.8	51.5	10.7	27.9	2.0	5.9	38.5	42.2	43.5	5.0	1.3
14.	117.17	BB	39.7	42.9	12.8	27.9	2.1	5.9	32.6	35.8	43.5	10.9	7.7
15.	123.87	BB	41.6	43.3	13.5	27.9	2.1	5.9	35.2	36.9	43.5	8.3	6.6
16.	130.55	BB	38.4	42.0	13.7	27.8	2.2	5.9	32.4	36.0	43.5	11.1	7.5
17.	137.26	BB	44.3	42.3	14.0	27.8	2.2	5.9	38.6	36.6	43.5	4.9	6.9
18.	143.95	BB	45.1	45.1	14.2	27.8	2.3	5.9	39.7	39.7	43.5	3.8	3.8
19.	150.64	BB	45.5	46.0	14.5	27.8	2.4	5.9	40.5	41.0	43.5	3.0	2.5
20.	160.69	BB	46.0	46.6	14.8	27.8	2.5	5.9	41.4	42.0	43.5	2.1	1.5
21.	164.02	BB	42.3	38.6	15.0	27.8	2.5	5.9	37.9	34.2	43.5	5.6	9.3
22.	170.73	BB	44.2	43.0	15.3	27.8	2.5	5.9	40.1	38.9	43.5	3.4	4.6
23.	177.44	BB	43.5	43.0	15.7	27.8	2.6	5.9	39.9	39.4	43.5	3.6	4.1
24.	184.15	BB	43.3	44.5	15.9	27.8	2.7	5.9	40.0	41.2	43.5	3.5	2.3
25.	190.85	BB	43.7	44.0	16.1	27.8	2.7	5.9	40.6	40.9	43.5	2.9	2.6
26.	197.56	BB	40.2	39.0	16.3	27.8	2.8	5.9	37.4	36.2	43.5	6.1	7.3
27.	200.92	BB	40.9	41.1	16.4	27.8	2.8	5.9	38.2	38.4	43.5	5.3	5.1
28.	210.95	BB	43.3	38.8	16.4	27.8	2.9	5.9	40.7	36.2	43.5	2.8	7.3
29.	220.99	BB	43.1	43.1	16.5	27.8	3.0	5.9	40.7	40.7	46.0	5.3	5.3
30.	241.03	BB	38.7	43.0	16.6	27.7	3.2	5.9	36.7	41.0	46.0	9.3	5.0
31.	321.37	BB	43.3	41.4	14.5	27.0	6.3	5.8	42.9	41.0	46.0	3.1	5.0
32.	358.28	BB	42.8	41.3	14.9	27.2	7.0	5.8	43.3	41.8	46.0	2.7	4.2
33.	371.60	BB	43.0	42.3	15.1	27.4	7.1	5.8	43.6	42.9	46.0	2.4	3.1
34.	522.24	BB	36.9	34.2	18.3	28.3	8.6	5.9	41.4	38.7	46.0	4.6	7.3
35.	562.54	BB	38.8	37.4	18.5	28.4	8.9	5.8	43.6	42.2	46.0	2.4	3.8

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions are more than 20dB below the limits.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic

DATA OF SUPURIOUS EMISSIONS(1GHz to 8GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch1 :2412MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 3m
DATE : 2001/11/23/2001
Temp./Humi. : 24℃/47%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	45.5	46.1	30.3	34.4	6.4	0.0	47.8	48.4	74.0	26.2	25.6
2	2.3900	41.3	42.0	31.3	34.5	7.0	0.0	45.1	45.8	74.0	28.9	28.2
3	4.1254	43.3	46.3	33.6	34.6	8.9	0.0	51.2	54.2	74.0	22.8	19.8
4	4.8240	46.0	48.2	35.4	34.5	9.9	0.0	56.8	59.0	74.0	17.2	15.0
5	7.2365	41.9	41.9	39.1	34.8	11.7	0.0	57.9	57.9	74.0	16.1	16.1

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	39.3	39.8	30.3	34.4	6.4	0.0	41.6	42.1	54.0	12.4	11.9
2	2.3900	31.1	31.6	31.3	34.5	7.0	0.0	34.9	35.4	54.0	19.1	18.6
3	4.1254	35.1	39.7	33.6	34.6	8.9	0.0	43.0	47.6	54.0	11.0	6.4
4	4.8240	34.2	36.2	35.4	34.5	9.9	0.0	45.0	47.0	54.0	9.0	7.0
5	7.2365	31.0	30.9	39.1	34.8	11.7	0.0	47.0	46.9	54.0	7.0	7.1

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + ATTEN.
Except for the above table : All other spurious emissions are more than 20dB below the limit.

DATA OF SUPURIOUS EMISSIONS(8GHz to 26GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch1 :2412MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 1m
DATE : 2001/11/23/2001
Temp./Humi. : 24℃/47%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit(1m)	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.6480	41.4	41.6	39.2	35.0	6.8	1.3	53.7	53.9	84.0	30.3	30.1
*2	12.0600	41.0	42.0	43.5	34.4	8.0	1.6	59.7	60.7	84.0	24.3	23.3
*3	14.4720	40.8	41.6	42.2	33.1	8.6	1.1	59.6	60.4	84.0	24.4	23.6
*4	16.8840	42.1	43.4	43.8	33.4	9.2	1.1	62.8	64.1	84.0	21.2	19.9
*5	19.2960	44.4	45.5	40.2	33.4	10.2	1.0	62.4	63.5	84.0	21.6	20.5
*6	21.7080	45.1	46.2	40.3	33.0	11.0	0.8	64.2	65.3	84.0	19.8	18.7
*7	24.1200	46.4	46.4	40.3	33.2	11.1	0.7	65.3	65.3	84.0	18.7	18.7

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit(1m)	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.6480	28.8	28.7	39.2	35.0	6.8	1.3	41.1	41.0	64.0	22.9	23.0
*2	12.0600	28.9	28.8	43.5	34.4	8.0	1.6	47.6	47.5	64.0	16.4	16.5
*3	14.4720	28.8	28.7	42.2	33.1	8.6	1.1	47.6	47.5	64.0	16.4	16.5
*4	16.8840	30.0	30.3	43.8	33.4	9.2	1.1	50.7	51.0	64.0	13.3	13.0
*5	19.2960	32.2	32.3	40.2	33.4	10.2	1.0	50.2	50.3	64.0	13.8	13.7
*6	21.7080	32.5	32.4	40.3	33.0	11.0	0.8	51.6	51.5	64.0	12.4	12.5
*7	24.1200	34.0	33.9	40.3	33.2	11.1	0.7	52.9	52.8	64.0	11.1	11.2

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + H.P.F(High Pass Filter)
1m Limit = 3m Limit(15.209) + 20Log(3/1)
Except for the above table : All other spurious emissions are more than 20dB below the limit.
*Emissions did not detect.

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No. : 21KE0066-YW-1

Applicant : Matsushita Electric Industrial Co.,Ltd.
Kind of Equipment : Wireless LAN Module
Model No. : WLM-1+ CF-07 Antenna(Host device:CF-VDW07)
Serial No. :
Power : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch06 : 2437MHz)
Remarks : FCC ID : ACJ9TGWLM-1
Date : 11/23/2001
Test Distance : 3 m
Temperature : 24 ℃
Humidity : 47 %
Regulation : Fcc 15C §15.209(a)

Engineer : Naoki Sakamoto

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	43.52	BB	42.2	45.1	13.2	28.1	1.2	6.0	34.5	37.4	40.0	5.5	2.6
2.	50.21	BB	45.0	44.2	10.9	28.1	1.3	6.0	35.1	34.3	40.0	4.9	5.7
3.	57.00	BB	45.9	43.1	8.5	28.1	1.4	5.9	33.6	30.8	40.0	6.4	9.2
4.	63.61	BB	49.6	51.8	6.9	27.9	1.4	5.9	35.9	38.1	40.0	4.1	1.9
5.	70.30	BB	51.0	51.2	6.1	27.9	1.6	5.9	36.7	36.9	40.0	3.3	3.1
6.	77.00	BB	49.4	47.1	6.2	27.9	1.7	5.9	35.3	33.0	40.0	4.7	7.0
7.	80.34	BB	52.0	49.2	6.3	27.9	1.7	5.9	38.0	35.2	40.0	2.0	4.8
8.	83.67	BB	48.3	47.0	6.8	27.9	1.8	5.9	34.9	33.6	40.0	5.1	6.4
9.	90.38	BB	53.5	52.5	7.9	27.9	1.8	5.9	41.2	40.2	43.5	2.3	3.3
10.	93.66	BB	38.8	38.9	8.6	27.9	1.9	5.9	27.3	27.4	43.5	16.2	16.1
11.	97.07	BB	52.0	52.2	9.4	27.9	1.9	5.9	41.3	41.5	43.5	2.2	2.0
12.	100.42	BB	45.0	45.5	10.2	27.9	1.9	5.9	35.1	35.6	43.5	8.4	7.9
13.	103.77	BB	48.0	51.0	10.7	27.9	2.0	5.9	38.7	41.7	43.5	4.8	1.8
14.	117.17	BB	39.5	42.5	12.8	27.9	2.1	5.9	32.4	35.4	43.5	11.1	8.1
15.	123.88	BB	41.5	43.5	13.5	27.9	2.1	5.9	35.1	37.1	43.5	8.4	6.4
16.	130.55	BB	39.0	42.2	13.7	27.8	2.2	5.9	33.0	36.2	43.5	10.5	7.3
17.	137.26	BB	44.4	42.3	14.0	27.8	2.2	5.9	38.7	36.6	43.5	4.8	6.9
18.	143.98	BB	45.3	45.0	14.2	27.8	2.3	5.9	39.9	39.6	43.5	3.6	3.9
19.	150.64	BB	45.3	45.5	14.5	27.8	2.4	5.9	40.3	40.5	43.5	3.2	3.0
20.	160.71	BB	45.9	46.0	14.8	27.8	2.5	5.9	41.3	41.4	43.5	2.2	2.1
21.	164.02	BB	43.3	38.8	15.0	27.8	2.5	5.9	38.9	34.4	43.5	4.6	9.1
22.	170.85	BB	44.6	43.1	15.3	27.8	2.5	5.9	40.5	39.0	43.5	3.0	4.5
23.	177.44	BB	44.0	43.3	15.7	27.8	2.6	5.9	40.4	39.7	43.5	3.1	3.8
24.	184.15	BB	43.8	44.2	15.9	27.8	2.7	5.9	40.5	40.9	43.5	3.0	2.6
25.	190.86	BB	43.8	43.8	16.1	27.8	2.7	5.9	40.7	40.7	43.5	2.8	2.8
26.	197.58	BB	39.9	39.4	16.3	27.8	2.8	5.9	37.1	36.6	43.5	6.4	6.9
27.	200.94	BB	41.3	41.0	16.4	27.8	2.8	5.9	38.6	38.3	43.5	4.9	5.2
28.	210.95	BB	43.6	39.5	16.4	27.8	2.9	5.9	41.0	36.9	43.5	2.5	6.6
29.	221.00	BB	43.3	42.6	16.5	27.8	3.0	5.9	40.9	40.2	46.0	5.1	5.8
30.	241.00	BB	39.5	43.2	16.6	27.7	3.2	5.9	37.5	41.2	46.0	8.5	4.8
31.	321.37	BB	43.4	42.1	14.5	27.0	6.3	5.8	43.0	41.7	46.0	3.0	4.3
32.	358.30	BB	43.0	42.0	14.9	27.2	7.0	5.8	43.5	42.5	46.0	2.5	3.5
33.	371.60	BB	42.8	42.6	15.1	27.4	7.1	5.8	43.4	43.2	46.0	2.6	2.8
34.	522.24	BB	36.8	35.0	18.3	28.3	8.6	5.9	41.3	39.5	46.0	4.7	6.5
35.	562.58	BB	38.5	37.8	18.5	28.4	8.9	5.8	43.3	42.6	46.0	2.7	3.4

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions are more than 20dB below the limits.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic

DATA OF SUPURIOUS EMISSIONS(1GHz to 8GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch6 :2437MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 3m
DATE : 2001/11/23/2001
Temp./Humi. : 24℃/47%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	45.6	46.3	30.3	34.4	6.4	0.0	47.9	48.6	74.0	26.1	25.4
2	4.1254	43.8	46.0	33.6	34.6	8.9	0.0	51.7	53.9	74.0	22.3	20.1
3	4.8740	46.6	48.8	35.6	34.5	10.0	0.0	57.7	59.9	74.0	16.3	14.1
4	7.3110	41.8	41.9	39.2	34.9	11.7	0.0	57.8	57.9	74.0	16.2	16.1

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	39.3	40.0	30.3	34.4	6.4	0.0	41.6	42.3	54.0	12.4	11.7
2	4.1254	35.5	40.0	33.6	34.6	8.9	0.0	43.4	47.9	54.0	10.6	6.1
3	4.8740	34.5	37.1	35.6	34.5	10.0	0.0	45.6	48.2	54.0	8.4	5.8
4	7.3110	30.8	31.0	39.2	34.9	11.7	0.0	46.8	47.0	54.0	7.2	7.0

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + ATTEN.
Except for the above table : All other spurious emissions are more than 20dB below the limit.

DATA OF SUPURIOUS EMISSIONS(8GHz to 26GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch6 :2437MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 1m
DATE : 2001/11/23/2001
Temp./Humi. : 24℃/47%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.7480	41.6	41.9	39.2	35.0	6.9	1.3	54.0	54.3	84.0	30.0	29.7
*2	12.1850	41.3	42.3	43.4	34.3	8.0	1.5	59.9	60.9	84.0	24.1	23.1
*3	14.6220	41.5	41.8	42.6	33.1	8.6	1.1	60.7	61.0	84.0	23.3	23.0
*4	17.0590	42.2	44.0	43.8	33.2	9.2	1.1	63.1	64.9	84.0	20.9	19.1
*5	19.4960	44.9	45.5	40.2	33.4	10.4	1.4	63.5	64.1	84.0	20.5	19.9
*6	21.9330	45.2	46.0	40.3	33.0	11.1	0.6	64.2	65.0	84.0	19.8	19.0
*7	24.3700	45.9	46.5	40.3	33.2	11.8	0.5	65.3	65.9	84.0	18.7	18.1

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.7480	29.1	28.7	39.2	35.0	6.9	1.3	41.5	41.1	64.0	22.5	22.9
*2	12.1850	29.3	28.3	43.4	34.3	8.0	1.5	47.9	46.9	64.0	16.1	17.1
*3	14.6220	28.8	28.4	42.6	33.1	8.6	1.1	48.0	47.6	64.0	16.0	16.4
*4	17.0590	29.9	29.8	43.8	33.2	9.2	1.1	50.8	50.7	64.0	13.2	13.3
*5	19.4960	32.5	31.3	40.2	33.4	10.4	1.4	51.1	49.9	64.0	12.9	14.1
*6	21.9330	33.0	32.3	40.3	33.0	11.1	0.6	52.0	51.3	64.0	12.0	12.7
*7	24.3700	33.8	33.8	40.3	33.2	11.8	0.5	53.2	53.2	64.0	10.8	10.8

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + H.P.F(High Pass Filter)
1m Limit = 3m Limit(15.209) + 20Log(3/1)
Except for the above table : All other spurious emissions are more than 20dB below the limit.
*Emissions did not detect.

DATA OF RADIATION TEST

A-PEX INTERNATIONAL CO., LTD.
YOKOWA No.3 OPEN TEST SITE
Report No. : 21KE0066-YW-1

Applicant	:	Matsushita Electric Industrial Co.,Ltd.
Kind of Equipment	:	Wireless LAN Module
Model No.	:	WLM-1+ CF-07 Antenna(Host device:CF-VDW07)
Serial No.	:	
Power	:	DC3.3V(AC120V/60Hz)
Mode	:	Transmitting(Ch11 : 2462MHz)
Remarks	:	FCC ID : ACJ9TGWLM-1
Date	:	11/23/2001
Test Distance	:	3 m
Temperature	:	24 ℃
Humidity	:	47 %
Regulation	:	Fcc 15C §15.209(a)

Engineer : Naoki Sakamoto

No.	FREQ. [MHz]	ANT TYPE	READING HOR [dBμV]	READING VER [dBμV]	ANT FACTOR [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	ATTEN. [dB]	RESULT HOR [dBμV/m]	RESULT VER [dBμV/m]	LIMITS [dBμV/m]	MARGIN HOR [dB]	MARGIN VER [dB]
1.	43.52	BB	42.0	44.9	13.2	28.1	1.2	6.0	34.3	37.2	40.0	5.7	2.8
2.	50.21	BB	45.5	44.0	10.9	28.1	1.3	6.0	35.6	34.1	40.0	4.4	5.9
3.	57.01	BB	45.8	42.8	8.5	28.1	1.4	5.9	33.5	30.5	40.0	6.5	9.5
4.	63.60	BB	49.2	51.5	6.9	27.9	1.4	5.9	35.5	37.8	40.0	4.5	2.2
5.	70.30	BB	50.9	51.0	6.1	27.9	1.6	5.9	36.6	36.7	40.0	3.4	3.3
6.	77.00	BB	48.9	47.2	6.2	27.9	1.7	5.9	34.8	33.1	40.0	5.2	6.9
7.	80.35	BB	51.5	49.5	6.3	27.9	1.7	5.9	37.5	35.5	40.0	2.5	4.5
8.	83.70	BB	48.9	47.4	6.8	27.9	1.8	5.9	35.5	34.0	40.0	4.5	6.0
9.	90.40	BB	53.6	52.2	7.9	27.9	1.8	5.9	41.3	39.9	43.5	2.2	3.6
10.	93.62	BB	39.5	39.2	8.6	27.9	1.9	5.9	28.0	27.7	43.5	15.5	15.8
11.	97.05	BB	52.0	51.8	9.4	27.9	1.9	5.9	41.3	41.1	43.5	2.2	2.4
12.	100.44	BB	45.4	45.6	10.2	27.9	1.9	5.9	35.5	35.7	43.5	8.0	7.8
13.	103.78	BB	47.9	51.1	10.7	27.9	2.0	5.9	38.6	41.8	43.5	4.9	1.7
14.	117.17	BB	39.1	42.4	12.8	27.9	2.1	5.9	32.0	35.3	43.5	11.5	8.2
15.	123.88	BB	42.0	43.9	13.5	27.9	2.1	5.9	35.6	37.5	43.5	7.9	6.0
16.	130.56	BB	39.5	42.0	13.7	27.8	2.2	5.9	33.5	36.0	43.5	10.0	7.5
17.	137.22	BB	44.5	42.5	14.0	27.8	2.2	5.9	38.8	36.8	43.5	4.7	6.7
18.	144.00	BB	45.5	45.2	14.2	27.8	2.3	5.9	40.1	39.8	43.5	3.4	3.7
19.	150.66	BB	45.4	45.0	14.5	27.8	2.4	5.9	40.4	40.0	43.5	3.1	3.5
20.	160.70	BB	46.0	46.3	14.8	27.8	2.5	5.9	41.4	41.7	43.5	2.1	1.8
21.	164.00	BB	43.0	39.0	15.0	27.8	2.5	5.9	38.6	34.6	43.5	4.9	8.9
22.	170.80	BB	44.4	43.2	15.3	27.8	2.5	5.9	40.3	39.1	43.5	3.2	4.4
23.	177.42	BB	43.8	43.1	15.7	27.8	2.6	5.9	40.2	39.5	43.5	3.3	4.0
24.	184.17	BB	43.9	44.5	15.9	27.8	2.7	5.9	40.6	41.2	43.5	2.9	2.3
25.	190.88	BB	44.0	43.9	16.1	27.8	2.7	5.9	40.9	40.8	43.5	2.6	2.7
26.	197.60	BB	40.3	39.5	16.3	27.8	2.8	5.9	37.5	36.7	43.5	6.0	6.8
27.	200.92	BB	41.8	41.2	16.4	27.8	2.8	5.9	39.1	38.5	43.5	4.4	5.0
28.	210.95	BB	43.5	39.6	16.4	27.8	2.9	5.9	40.9	37.0	43.5	2.6	6.5
29.	220.98	BB	43.1	42.5	16.5	27.8	3.0	5.9	40.7	40.1	46.0	5.3	5.9
30.	241.01	BB	39.2	43.3	16.6	27.7	3.2	5.9	37.2	41.3	46.0	8.8	4.7
31.	321.38	BB	43.2	42.3	14.5	27.0	6.3	5.8	42.8	41.9	46.0	3.2	4.1
32.	358.33	BB	42.8	42.5	14.9	27.2	7.0	5.8	43.3	43.0	46.0	2.7	3.0
33.	371.58	BB	42.9	42.2	15.1	27.4	7.1	5.8	43.5	42.8	46.0	2.5	3.2
34.	522.23	BB	36.8	36.0	18.3	28.3	8.6	5.9	41.3	40.5	46.0	4.7	5.5
35.	562.57	BB	38.8	38.2	18.5	28.4	8.9	5.8	43.6	43.0	46.0	2.4	3.0

CALCULATION: READING + ANT.FACTOR + CABLE LOSS - AMP.GAIN + ATTEN.

All other spurious emissions are more than 20dB below the limits.
ANT.TYPE:30-300MHz Biconical,300-1000MHz Logperiodic

DATA OF SUPURIOUS EMISSIONS(1GHz to 8GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch11 :2462MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 3m
DATE : 2001/11/23/2001
Temp./Humi. : 24℃/47%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	45.6	46.3	30.3	34.4	6.4	0.0	47.9	48.6	74.0	26.1	25.4
2	2.4850	44.2	45.2	31.3	34.5	7.1	0.0	48.1	49.1	74.0	25.9	24.9
3	4.1254	44.0	46.1	33.6	34.6	8.9	0.0	51.9	54.0	74.0	22.1	20.0
4	4.9240	46.6	47.9	35.8	34.5	10.1	0.0	58.0	59.3	74.0	16.0	14.7
5	7.3860	42.0	42.1	39.2	34.9	11.7	0.0	58.0	58.1	74.0	16.0	15.9

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	ATTEN	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
1	2.0628	39.4	40.0	30.3	34.4	6.4	0.0	41.7	42.3	54.0	12.3	11.7
2	2.4850	33.6	34.1	31.3	34.5	7.1	0.0	37.5	38.0	54.0	16.5	16.0
3	4.1254	36.0	39.9	33.6	34.6	8.9	0.0	43.9	47.8	54.0	10.1	6.2
4	4.9240	34.4	36.0	35.8	34.5	10.1	0.0	45.8	47.4	54.0	8.2	6.6
5	7.3860	31.1	31.1	39.2	34.9	11.7	0.0	47.1	47.1	54.0	6.9	6.9

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + ATTEN.
Except for the above table : All other spurious emissions are more than 20dB below the limit.

DATA OF SUPURIOUS EMISSIONS(8GHz to 26GHz)

A-PEX INTERNATIONAL CO., LTD.
YOKOWA NO.3 OPEN SITE

COMPANY : Matsushita
EQUIPMENT : Wireless LAN Module
MODEL : WLM-1+ CF-07 Antenna
FCC ID : ACJ9TGWLM-1
POWER : DC3.3V(AC120V/60Hz)
Mode : Transmitting(Ch11 :2462MHz)

REPORT NO : 21KE0066-YW-1
REGULATION : Fcc Part15SubpartC 247 / 209
TEST DISTANCE : 1m
DATE : 2001/11/23/2001
Temp./Humi. : 24℃/47%

ENGINEER : Naoki.Sakamoto

PK DETECT(S/A : RBW 1MHz and VBW 1MHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	PK	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.8480	41.6	41.6	39.2	35.0	7.0	1.1	53.9	53.9	84.0	30.1	30.1
*2	12.3100	41.4	42.3	43.4	34.3	8.1	1.5	60.1	61.0	84.0	23.9	23.0
*3	14.7720	41.4	42.0	42.6	33.1	8.7	1.2	60.8	61.4	84.0	23.2	22.6
*4	17.2340	42.2	44.0	43.8	33.2	9.5	0.8	63.1	64.9	84.0	20.9	19.1
*5	19.6960	44.7	45.3	40.2	33.4	10.4	1.6	63.5	64.1	84.0	20.5	19.9
*6	22.1580	45.0	46.0	40.3	33.0	11.1	0.7	64.1	65.1	84.0	19.9	18.9
*7	24.6200	46.1	46.2	40.3	33.2	11.9	0.6	65.7	65.8	84.0	18.3	18.2

AV DETECT(S/A : RBW 1MHz and VBW 10Hz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	H.P.F	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS		HOR	VER	AV	HOR	VER
	[GHz]	[dBμV]	[dBμV]	[dB]	[dB]	[dB]	[dB]	dBμV/m	dBμV/m	dBμV/m	[dB]	[dB]
*1	9.8480	28.9	28.6	39.2	35.0	7.0	1.1	41.2	40.9	64.0	22.8	23.1
*2	12.3100	29.0	28.4	43.4	34.3	8.1	1.5	47.7	47.1	64.0	16.3	16.9
*3	14.7720	28.9	28.2	42.6	33.1	8.7	1.2	48.3	47.6	64.0	15.7	16.4
*4	17.2340	30.2	29.8	43.8	33.2	9.5	0.8	51.1	50.7	64.0	12.9	13.3
*5	19.6960	32.4	31.8	40.2	33.4	10.4	1.6	51.2	50.6	64.0	12.8	13.4
*6	22.1580	33.0	32.3	40.3	33.0	11.1	0.7	52.1	51.4	64.0	11.9	12.6
*7	24.6200	33.9	34.0	40.3	33.2	11.9	0.6	53.5	53.6	64.0	10.5	10.4

Sample Calculation :
RESULT=Reading + ANT Factor − Amp Gain + CABLE LOSS + H.P.F(High Pass Filter)
1m Limit = 3m Limit(15.209) + 20Log(3/1)
Except for the above table : All other spurious emissions are more than 20dB below the limit.
*Emissions did not detect.