EMI TEST REPORT

Test Report No. : 25EE0175-HO-1

Applicant	**:**	**Matsushita Electric Industrial Co., Ltd.**
Type of Equipment	**:**	**Wireless LAN Unit**
Model No.	**:**	**TXANP07VKA1**
Test standard	**:**	**FCC Part 15 Subpart C Section 15.207, Section 15.247 : 2004**
FCC ID	**:**	**ACJTXANP07VKA1**
Test Result	**:**	**Complied**

1. This test report shall not be reproduced in full or partial, without the written approval of UL Apex 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.

Date of test: February 22 to 28, 2005

Tested by:

Makoto Kosaka
EMC Service

Hiroka Umeyama
EMC Service

Approved by :

Naoki Sakamoto
Group Leader of
EMC Service

UL Apex Co., Ltd.
Head Office EMC Lab.
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone : +81 596 24 8116
Facsimile : +81 596 24 8124

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SECTION 1: Client information

Company Name	:	Matsushita Electric Industrial Co., Ltd.
Address	:	2-15 Matsuba-cho Kadoma-shi Osaka, 571-8503 Japan
Telephone Number	:	+81-6-6905-4369
Facsimile Number	:	+81-6-6905-4376
Contact Person	:	Yasuhiro Kakimoto

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

2.1 Identification of E.U.T.

Type of Equipment	:	Wireless LAN unit
Model No.	:	TXANP07VKA1
Serial No.	:	084822 (for Radiated Spurious Emission and Conducted Emission tests) 084821 (for other tests)
Rating	:	DC3.3V
Country of Manufacture	:	Japan
Receipt Date of Sample	:	Feburuary 22, 2005
Condition of EUT	:	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product Description

Equipment Type	: Transceiver
Frequency of operation	: 2412-2462MHz (IEEE802.11b/g)
Transmission method	: DSSS
Modulation Techniques	: OFDM,CCK,QPSK,BPSK
Channel number	: 11channels
Power control	: Non
Mode of operation	: Duplex
Antenna Type	: High frequency multi layer chip antenna
Antenna Gain	: 1.6dBi
Antenna Connector Type	: UFL

FCC 15.31 (e)
The EUT does not have its own power supply, but regulated power of 3.3V is supplied from the limited product. (LCD Projector produced by Matsushita Electric Industrial Co., Ltd.) Therefore, the equipment meets this requirement.

FCC Part 15.203 Antenna requirement
The antenna of the equipment uses the special connector (TYPE: UFL), it is complied with the requirement.

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part15 Subpart C : 2004
Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits : 2004
Section 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz : 2004

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin *0	Results
1	Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	Section 15.207	-	N/A	20.6dB 0.6510MHz, Phase L IEEE802.11g Mid ch	Complied
2	6dB Bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(a)(2)	Conducted	N/A	See data.	Complied
3	Maximum Peak Output Power	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(b)(3)	Conducted	N/A	See data.	Complied
4	Spurious Emission	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (d) Section 15.209	Conducted/ Radiated	N/A	0.8dB 479.996MHz,HOR IEEE802.11g Mid Ch	Complied
5	Restricted Band Edges	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (d)	Conducted/ Radiated	N/A	See data.	Complied
6	Power Density	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (e)	Conducted	N/A	See data.	Complied

Note: UL Apex's EMI Work Procedures No.QPM05 and QPM15.
*0) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Uncertainty:
*In case of the margin below the EMC Head Office's uncertainty.
The data listed in this report meets the limits unless the uncertainty is taken into consideration.

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

Spurious Emission (Radiated)
The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ±4.5dB(3m)/ ±4.7dB(10m).
The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ±5.2dB(3m)/ ±3.8dB(10m).
The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is ±6.6dB.

Other test except Conducted Emission and Spurious Emission (Radiated)
The measurement uncertainty (with a 95% confidence level) for this test is ±3.0dB.

*These tests were also referred to "Guidance on Measurement for Digital Transmission Systems Section15.247".
*These tests were performed without any deviations from test procedure except for additions or exclusions.

3.3 Addition to standards

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99% Occupied Band Width	RSS210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004 + Amendment4:2004	RSS210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004 + Amendment4:2004	Conducted	N/A	N/A	N/A

3.4 Test Location

UL Apex Co., Ltd. Head Office EMC Lab. *NVLAP Lab. code: 200572-0
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone : +81 596 24 8116
Facsimile : +81 596 24 8124

	Listed date (for FCC)	FCC Registration Number	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 semi-anechoic chamber	February 01, 2002	313583	IC4247	19.2 x 11.2 x 7.7m	7.0 x 6.0m	Preparation room
No.2 semi-anechoic chamber	June 05, 2002	846015	IC4247-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 shielded room	-	-	-	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.4 measurement room	-	-	-	3.1 x 5.0 x 2.7m	N/A	-

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0m for No.1 and No.2 semi-anechoic and No.3 shielded room.

3.5 Test set up, Test instruments and Data of EMI

Refer to APPENDIX 1 to 3.

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

4.1 Operating Modes

The EUT was operating in a manner similar to typical use during the tests.

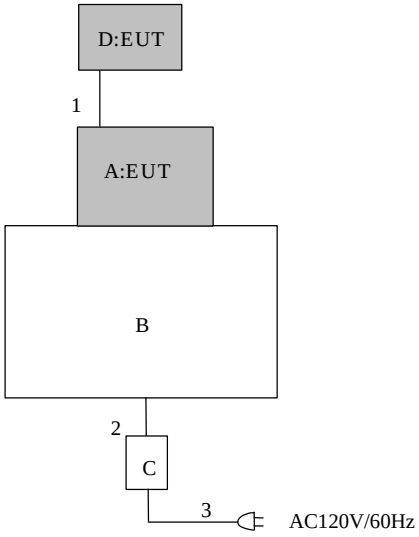
Packet Type : Maximum
Payload : PN9
Operation : Transmitting mode(IEEE802.11b/11g)
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)
Conditions : 1) Data Rate:IEEE802.11b:1,2,5.6,11, IEEE802.11g:6,9,12,18,24,36,48,54 Mbps
2) Antenna : ANT-1 (*The ANT-1 port is only used.)
3) Cable length : 90mm (*The length is fixed.)
*We pre-confirmed the above conditions on EUT and performed the final test with the following conditions;

	IEEE802.11b	IEEE802.11g
Conducted emission test	1)Rate:11Mbps	1)Rate:54Mbps
	2)Antenna:Main	
	3)Cable:9cm	
Radiated emission test	1)Rate:11Mbps	1)Rate:54Mbps
	2)Antenna:Main	
	3)Cable:9cm	
Other tests	1)Rate:11Mbps	1)Rate:12Mbps, 54Mbps
	2)Antenna:Main	
	3)Cable:9cm	

<The details>

Conducted emission test : The above conditions did not affect the test result so that the test was made with these conditions in the above table.
Radiated emission test : As for Rate, 11Mbps (Maximum transmission rate of 11b) and 54Mbps (Maximum transmission rate of 11g) had worst margins.
Other tests : As for Rate, 11Mbps(Maximum transmission rate of 11b) and 12Mbps (11g) had worst margins.
The test was also performed with Maximum transmission rate 54Mbps of 11g.

4.2 Configuration and peripherals



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

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	FCC ID	Remarks
A	Wireless LAN unit (Module)	TXANP07VKA1	084822 *1 084821 *2	Matsushita Electric Industrial Co., Ltd.	ACJTXANP07VKA1	EUT
B *1	Notebook Personal Computer	PC-LM800J72DH	1700983EA	NEC	-	-
B *2	Notebook Personal Computer	CF-29	4LKSA79497	Matsushita Electric Industrial Co., Ltd.	DOC	-
B *1	AC Adaptor	ADP61	1556459KA	NEC	-	-
C *2	AC Adaptor	CF-AA1653A	04Y10424B	Matsushita Electric Industrial Co., Ltd.	-	-
D	Wireless LAN unit (Antenna)	TXANP07VKA1	084822 *1 084821 *2	Matsushita Electric Industrial Co., Ltd.	ACJTXANP07VKA1	EUT

List of cables used

No.	Name	Length (m)	Shield	Backshell Material
1	Antenna Cable	0.09	Y	(Coaxial Cable)
2	DC Cable	1.5 *1 1.8 *2	N	Polyvinyl chloride
3	AC Cable	1.0 *1 1.8 *2	N	Polyvinyl chloride

*1 : for Radiated Spurious Emission and Conducted Emission tests
*2 : for other tests

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. EUT was located 80cm from a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN) and excess AC cable was bundled in center .
1) For the tests on EUT with other peripherals (as a whole system)
I/O cable 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.
2) For the tests on EUT itself (as a stand alone equipment)
Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN /(AMN) to the input power source. All unused 50ohm connectors of the LISN(AMN) were resistively terminated in 50ohm when not connected to the measuring equipment.
The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber or a Measurement Room.
The EUT was connected to a LISN (AMN).
An overview sweep with peak detection has been performed.
The measurements have been performed with a CISPR quasi-peak detector (IF BW 9 kHz).
Measurement range: 0.15-30MHz

Test data : **APPENDIX 3**
Test result : **Pass**

SECTION 6: Spurious Emission

[Conducted]

Test Procedure
The Out of Band Emission was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3
Test result : Pass

[Radiated]

Test Procedure
EUT was placed on the size, 0.5m by 0.5m, raised 80cm above the conducting ground plane.
The Radiated Electric Field Strength intensity has been measured in a Semi Anechoic Chamber with a ground plane and at a distance of 3m(Below 10GHz) and 1m(Upper 10GHz).
The height of the measuring varied between 1 and 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 with the Test Receiver or the Spectrum Analyzer.
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.

20dBc was applied to the frequency over the limit of FCC 15.209 and outside the restricted band of 15.205.

Frequency	Below 1GHz	Above 1GHz
Instrument used	Test Receiver / Spectrum Analyzer	Spectrum Analyzer
Detector IF Bandwidth	QP: BW 120kHz(T/R) 20dBc : RBW:100kHz/VBW: 300kHz (S/A)	PK: RBW:1MHz/VBW: 1MHz AV: RBW:1MHz/VBW:10Hz 20dBc : RBW:100kHz/VBW:300kHz

Test data : APPENDIX 3
Test result : Pass

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

SECTION 7: Bandwidth

Test Procedure
The bandwidth was measured with a spectrum analyzer connected to the antenna port.

Test data **: APPENDIX 3**
Test result **: Pass**

SECTION 8: Maximum Peak Output Power

Test Procedure
The Maximum Peak Output Power was measured with a spectrum analyzer connected to the antenna port.
The test was made with the spectrum analyzer that has a function of channel-power measurement.

Test data **: APPENDIX 3**
Test result **: Pass**

SECTION 9: Peak Power Density

Test Procedure
The Peak Power Density was measured with a spectrum analyzer connected to the antenna port.

Test data **: APPENDIX 3**
Test result **: Pass**

APPENDIX 1: Photographs of test setup

Conducted Emission

Front

Rear

Spurious Emission (Radiated)

Front

Rear

Worst Case Position (Z-axis:Horizontal / Y-axis:Vertical)

X-axis

Y-axis

Z-axis

APPENDIX 2:Test instruments

EMI test equipment

Control No.	(Conducted Emission)Instrument	Manufacturer	Model No	Item	Calibration Date * Interval(month)
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	CE/RE	2004/04/12 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	CE	2005/02/02 * 12
MRENT-14	Spectrum Analyzer	Advantest	R3273	CE	2005/02/21 * 12
MCC-13	Coaxial Cable	Fujikura/Agilent	-	CE	2005/02/24 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	CE(EUT)	2005/02/04 * 12
MBTR10	Spectrum Analyzer	Rohde & Schwarz	FSP30	AT	2004/11/02 * 12
MAT-20	Attenuator(10dB)(above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-110	RE/AT	2005/01/11 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2004/10/14 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2004/10/14 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2004/12/16 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2005/02/24 * 12
MPA-06	Pre Amplifier	Hewlett Packard	8447D	RE	2004/08/29 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2005/01/10 * 12
MCC-04	Microwave Cable 1-40G	Storm	421-011	RE	2005/01/05 * 12
MCC-21	Microwave Cable	Storm	-	RE	2004/05/01 * 12
MCC-22	Microwave Cable	Storm	-	RE	2004/05/01 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2005/02/05 * 12
MHF-02	High Pass Filter	Tokimec	TF323DCA	RE	2004/09/18 * 12
MHA-01	Horn Antenna	EMCO	3160-09	RE	2005/01/10 * 12

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

Test Item:

CE: Conducted emission
RE: Spurious emission(Radiated)
AT: Other tests

APPENDIX 3: Data of EMI test

Conducted Emission

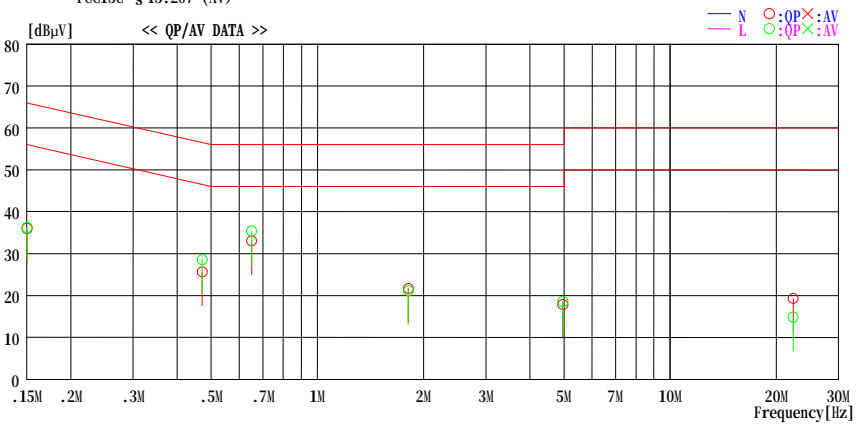
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 18:06:56

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 23deg.C / 28%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch6 2437MHz

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



NO	FREQ	READING QP	READING AV	C.F	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	0.1500	36.0	----	0.0	36.0	----	66.0	----	30.0	----	N
2	0.4708	25.7	----	0.0	25.7	----	56.5	----	30.8	----	N
3	0.6510	33.0	----	0.1	33.1	----	56.0	----	22.9	----	N
4	1.8115	21.5	----	0.2	21.7	----	56.0	----	34.3	----	N
5	4.9634	17.5	----	0.4	17.9	----	56.0	----	38.1	----	N
6	22.3160	18.1	----	1.2	19.3	----	60.0	----	40.7	----	N
7	0.1500	36.2	----	0.0	36.2	----	66.0	----	29.8	----	L
8	0.4708	28.6	----	0.0	28.6	----	56.5	----	27.9	----	L
9	0.6510	35.3	----	0.1	35.4	----	56.0	----	20.6	----	L
10	1.8115	21.0	----	0.2	21.2	----	56.0	----	34.8	----	L
11	4.9634	18.2	----	0.4	18.6	----	56.0	----	37.4	----	L
12	22.3160	13.7	----	1.2	14.9	----	60.0	----	45.1	----	L

CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

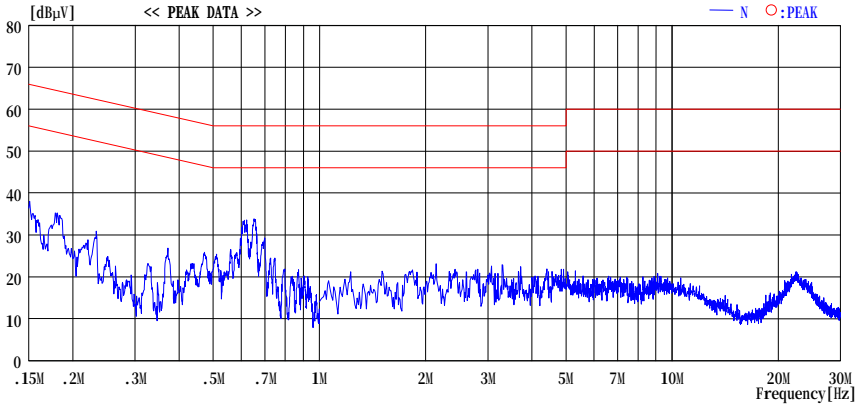
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 18:21:07

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 23deg.C / 28%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11b 11Mbps ch1 2412MHz

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



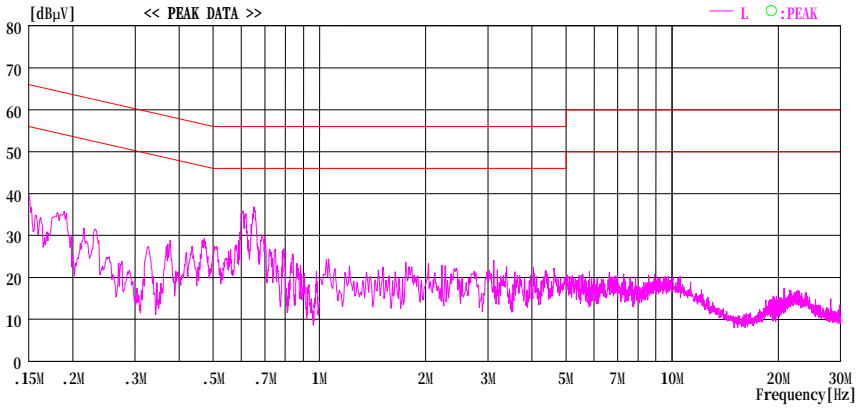


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

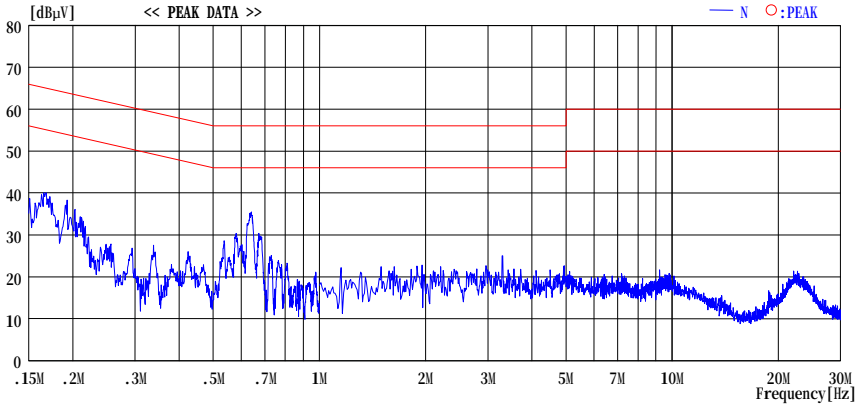
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 18:28:01

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 23deg.C / 28%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11b 11Mbps ch6 2437MHz

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



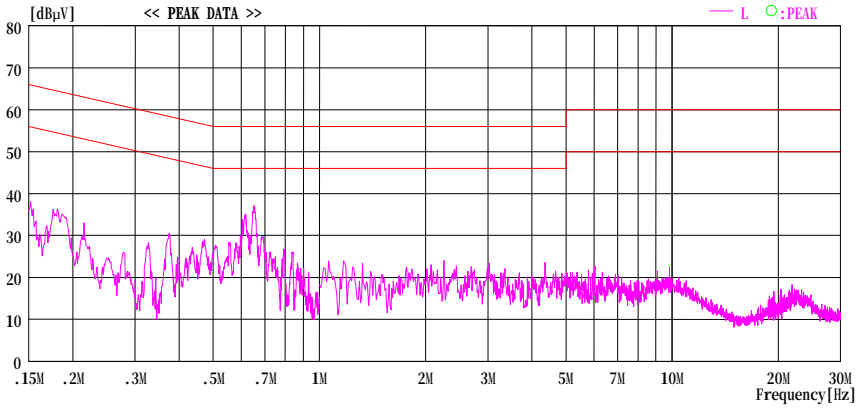


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

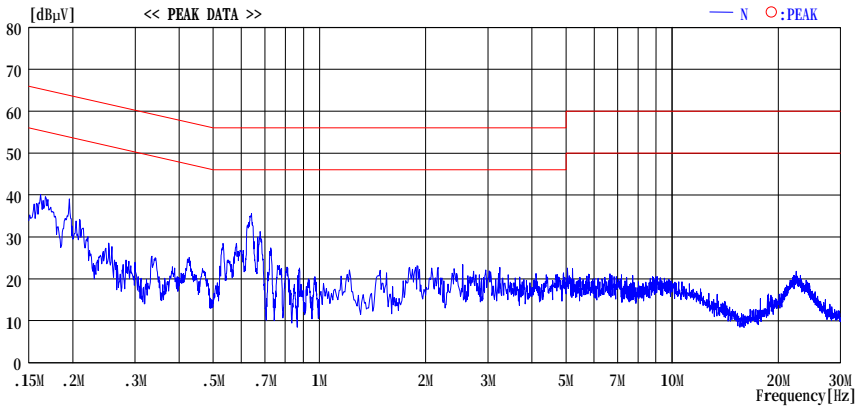
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 18:33:21

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 23deg.C / 28%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11b 11Mbps ch11 2462MHz

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



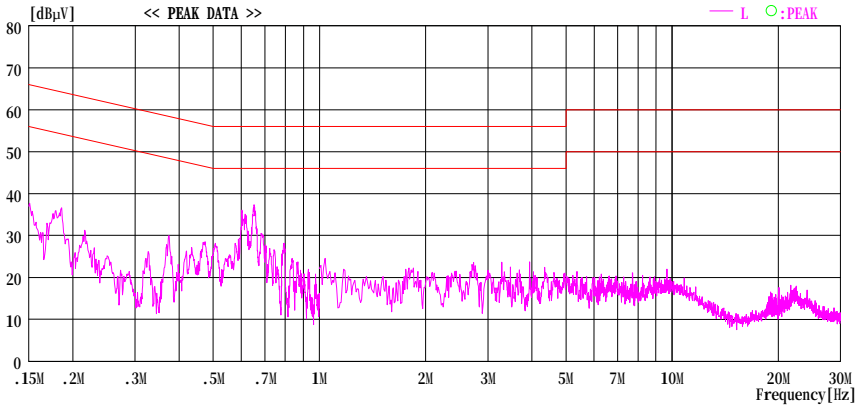


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

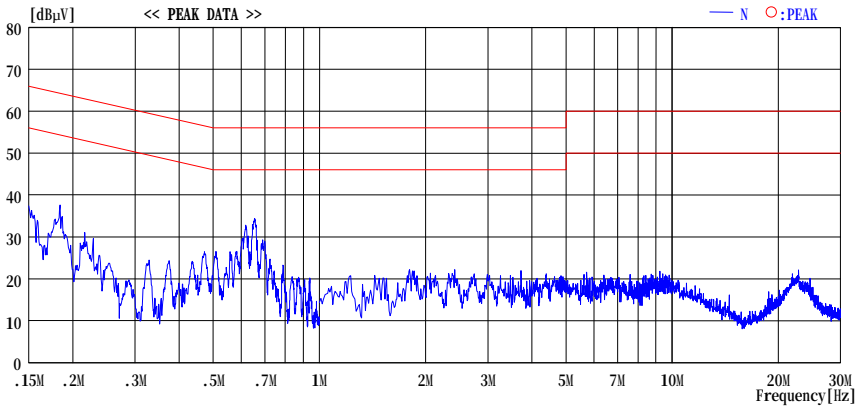
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 18:01:21

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 23deg.C / 28%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch1 2412MHz

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



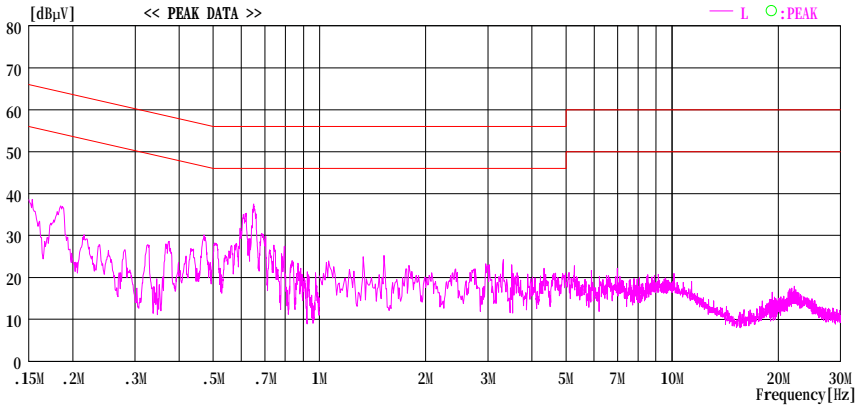


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

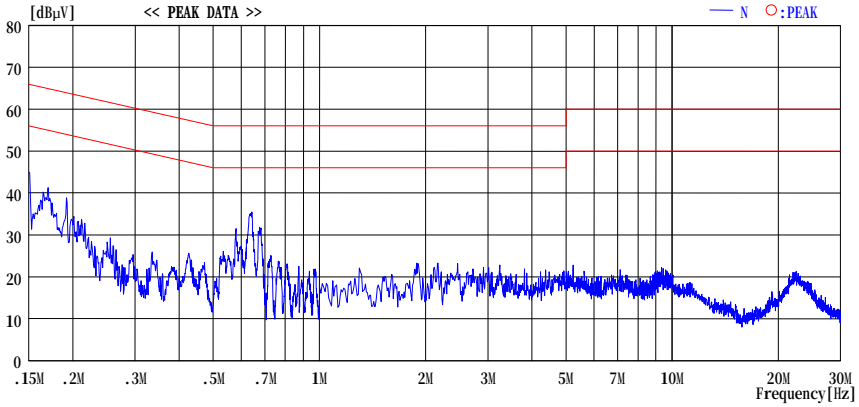
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 18:06:56

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 23deg.C / 28%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch6 2437MHz

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



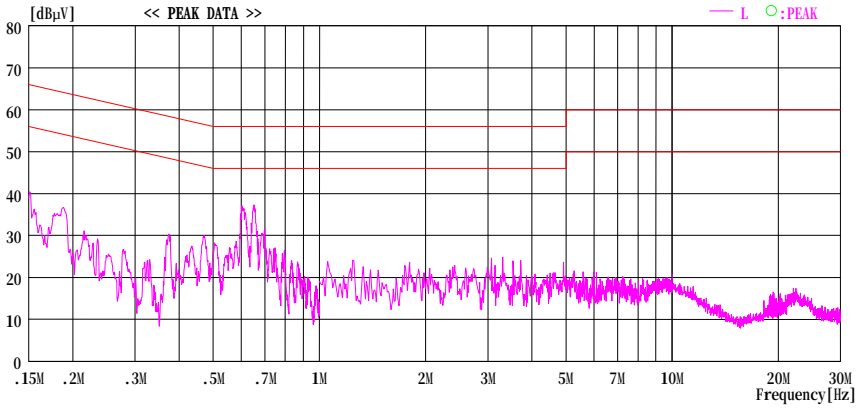


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

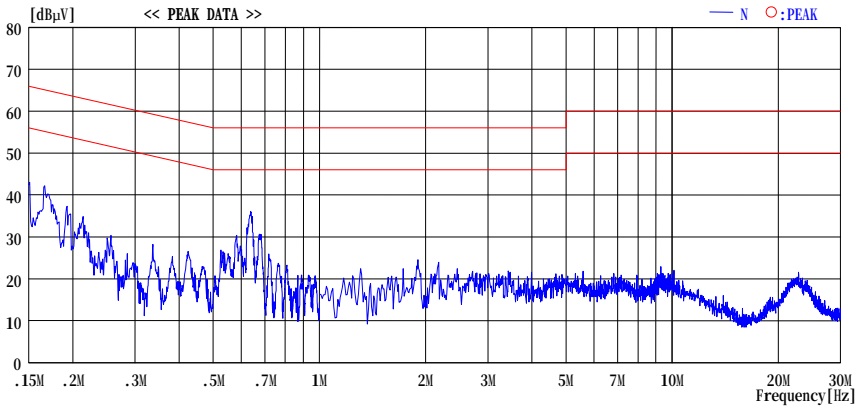
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 18:11:00

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 23deg.C / 28%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch11 2462MHz

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



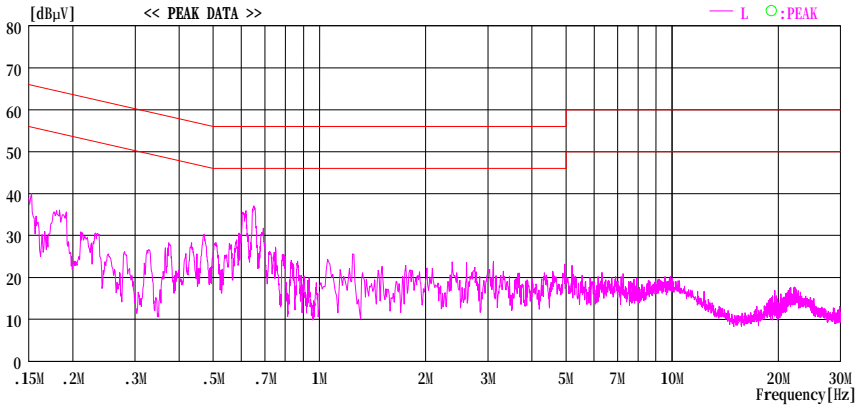


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

6dB Bandwidth(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Measurement Room

Company	: Matsushita Electric Industrial Co., Ltd.	REPORT NO	: 25EE0175-HO
Equipment	: Wireless LAN unit	REGULATION	: FCC 15.247(b)(3)
Model	: TXANP07VKA1	TEST DISTANCE	: -
Sample No.	: 084821	DATE	: February 22. 2005
Power	: DC3.3V	TEMPERATURE	: 23deg.C
Mode	: Tx IEEE 802.11b/g	HUMIDITY	: 34%
		ENGINEER	: Hiroka Umeyama

[IEEE802.11b : 11Mbps]

Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2412.0	12.200	500.0
Mid	2437.0	11.700	500.0
High	2462.0	11.600	500.0

[IEEE802.11g : 54Mbps]

Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2412.0	16.500	500.0
Mid	2437.0	16.500	500.0
High	2462.0	16.600	500.0

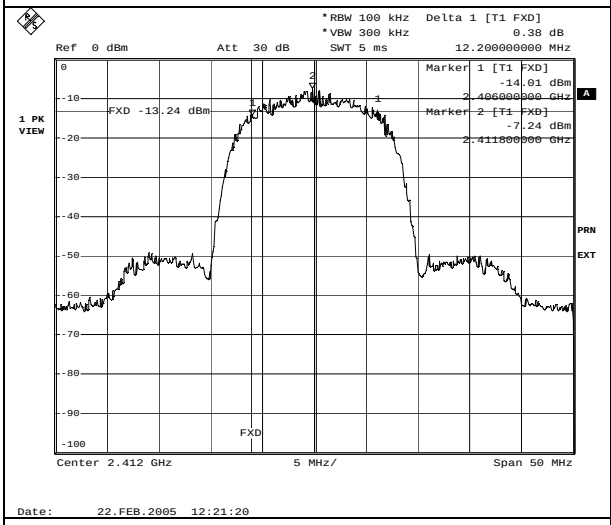
[IEEE802.11g : 12Mbps]

Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2412.0	16.600	500.0
Mid	2437.0	16.500	500.0
High	2462.0	16.600	500.0

6dB Bandwidth(DSSS and other forms of modulation)

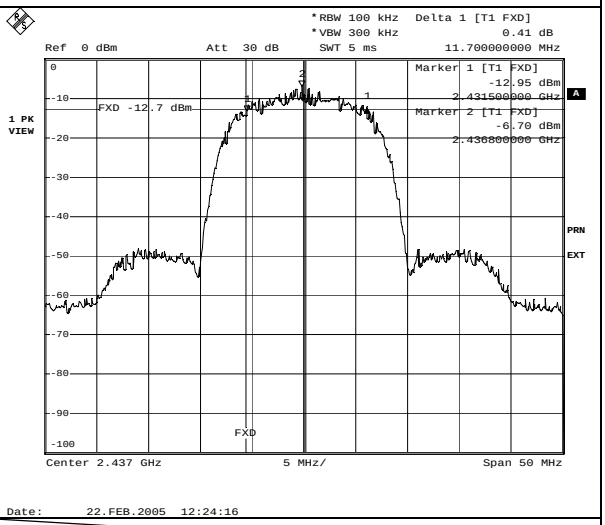
IEEE802.11b 11Mbps

Ch:Low



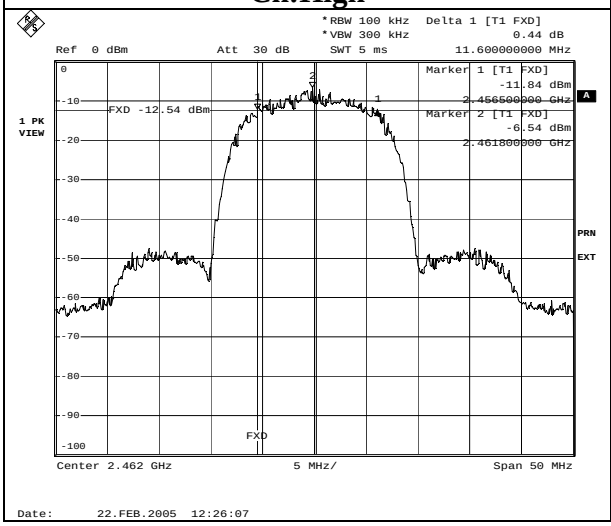
Date: 22.FEB.2005 12:21:20

Ch:Mid



Date: 22.FEB.2005 12:24:16

Ch:High

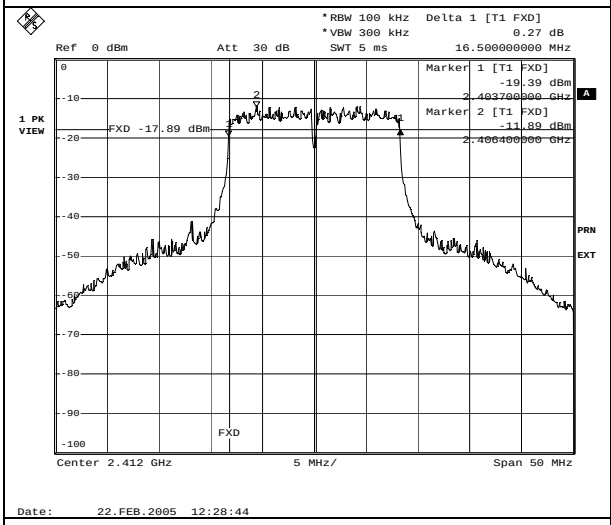


Date: 22.FEB.2005 12:26:07

6dB Bandwidth(DSSS and other forms of modulation)

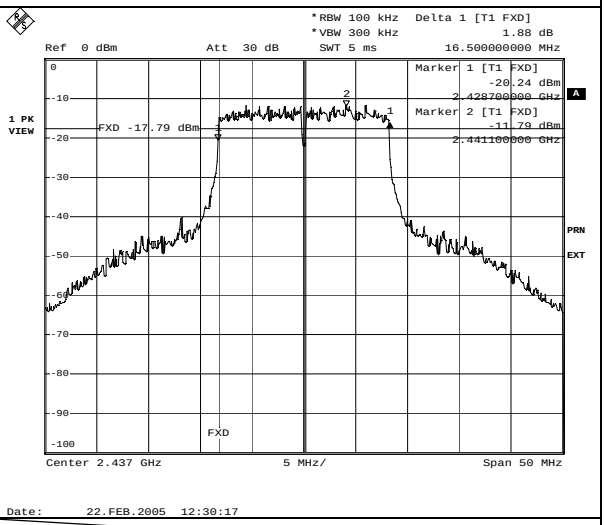
IEEE802.11g 54Mbps

Ch:Low



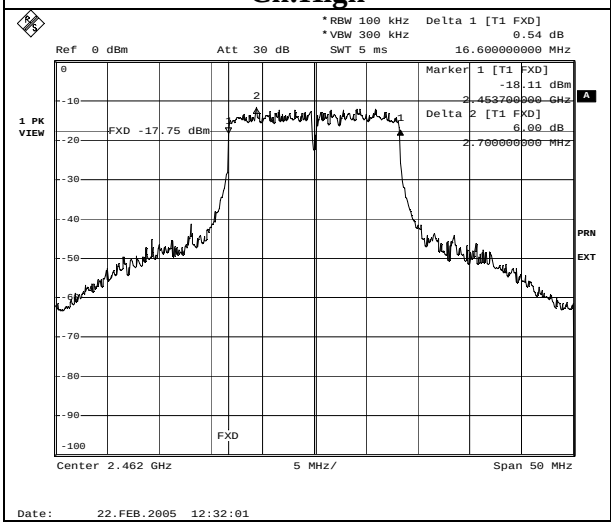
Date: 22.FEB.2005 12:28:44

Ch:Mid



Date: 22.FEB.2005 12:30:17

Ch:High



Date: 22.FEB.2005 12:32:01

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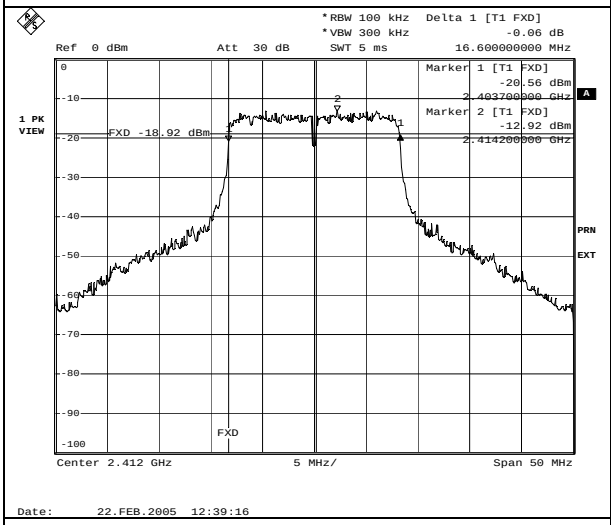
Telephone : +81 596 24 8116
Facsimile : +81 596 24 8124

6dB Bandwidth(DSSS and other forms of modulation)

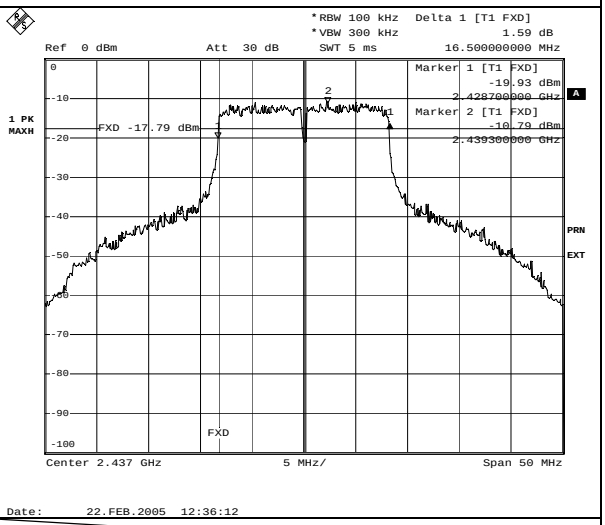
IEEE802.11g 12Mbps

Ch:Low



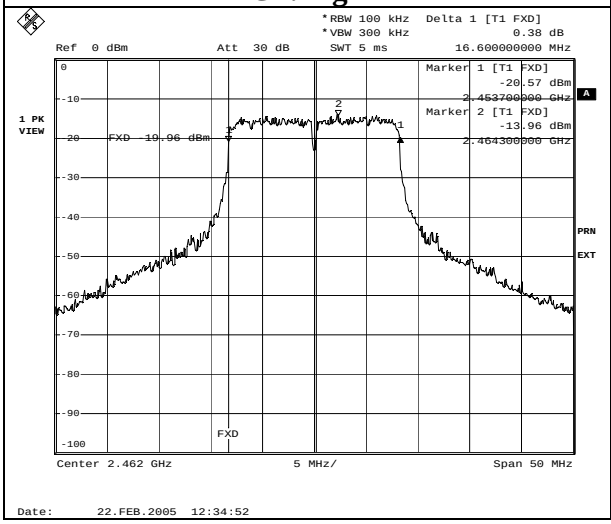
Date: 22.FEB.2005 12:39:16

Ch:Mid



Date: 22.FEB.2005 12:36:12

Ch:High



Date: 22.FEB.2005 12:34:52

Maximum Peak OutPut Power (DSSS and other forms of modulation)

UL Apex Co., Ltd. Head Office EMC Lab. No.3 Measurement Room

Company : Matsushita Electric Industrial Co., Ltd.
Equipment : Wireless LAN unit
Model : TXANP07VKA1
Sample No. : 084821
Power : DC3.3V
Mode : Tx IEEE 802.11b

REPORT NO : 25EE0175-HO
REGULATION : FCC 15.247(b)(3)
TEST DISTANCE : -
DATE : February 22. 2005
TEMPERATURE : 23deg.C
HUMIDITY : 34%
ENGINEER : Hiroka Umeyama

[IEEE802.11b : 11Mbps]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	8.10	1.13	10.00	19.23	30.00	10.77
Mid	2437.0	8.52	1.13	10.00	19.65	30.00	10.35
High	2462.0	8.70	1.13	10.00	19.83	30.00	10.17

Sample Calculation:
Result = Reading + Cable Loss + Attenuator
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

Maximum Peak OutPut Power (DSSS and other forms of modulation)

UL Apex Co., Ltd. Head Office EMC Lab. No.3 Measurement Room

Company : Matsushita Electric Industrial Co., Ltd.
Equipment : Wireless LAN unit
Model : TXANP07VKA1
Sample No. : 084821
Power : DC3.3V
Mode : Tx IEEE 802.11g

REPORT NO : 25EE0175-HO
REGULATION : FCC 15.247(b)(3)
TEST DISTANCE : -
DATE : February 22. 2005
TEMPERATURE : 23deg.C
HUMIDITY : 34%
ENGINEER : Hiroka Umeyama

[IEEE802.11g : 54Mbps]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	8.19	1.13	10.00	19.32	30.00	10.68
Mid	2437.0	8.60	1.13	10.00	19.73	30.00	10.27
High	2462.0	8.05	1.13	10.00	19.18	30.00	10.82

[IEEE802.11g : 12Mbps]

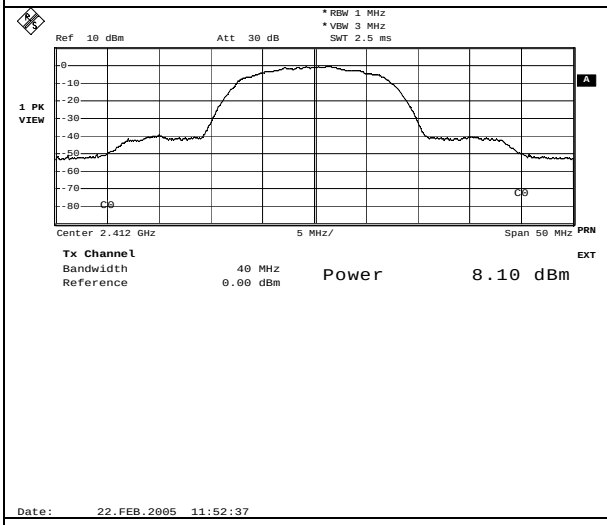
Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low	2412.0	8.11	1.13	10.00	19.24	30.00	10.76
Mid	2437.0	10.15	1.13	10.00	21.28	30.00	8.72
High	2462.0	7.23	1.13	10.00	18.36	30.00	11.64

Sample Calculation:
Result = Reading + Cable Loss + Attenuator
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

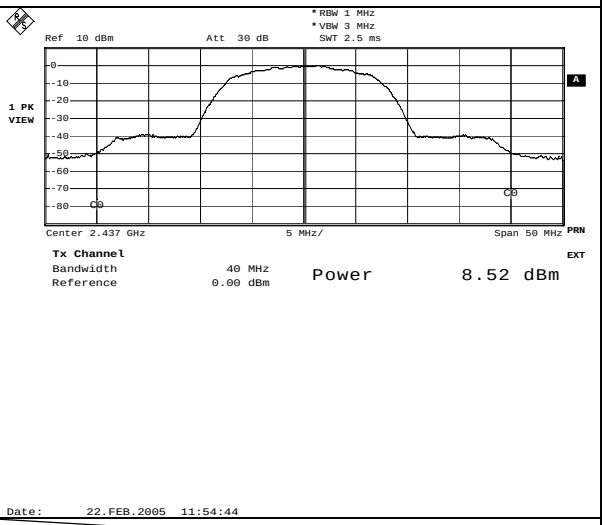
Maximum Peak OutPut Power (DSSS and other forms of modulation)

IEEE802.11b 11Mbps

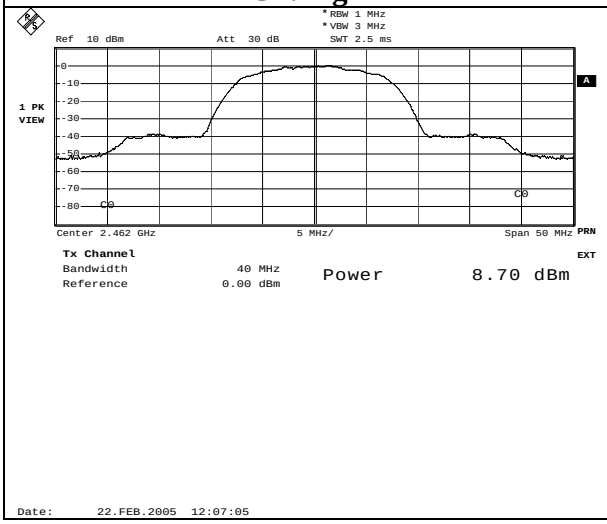
Ch:Low



Ch:Mid



Ch:High



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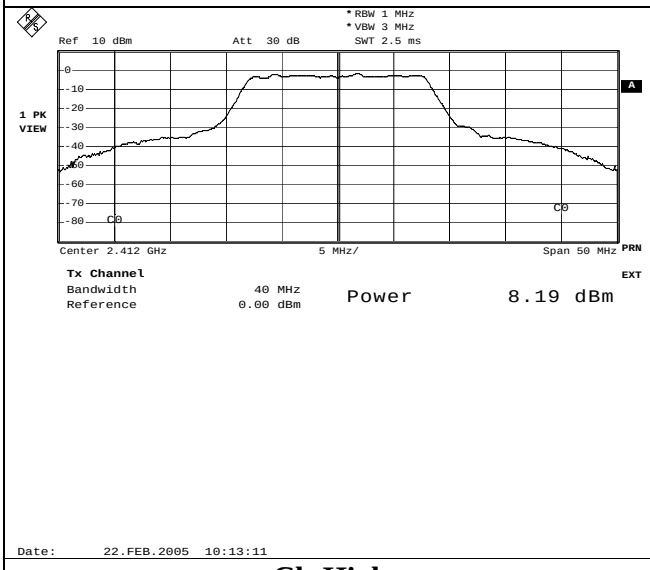
Maximum Peak OutPut Power (DSSS and other forms of modulation)

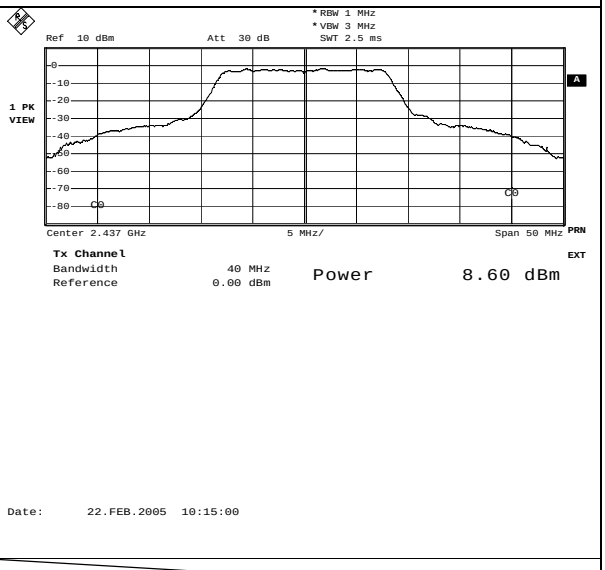
IEEE802.11g 54Mbps

Ch:Low



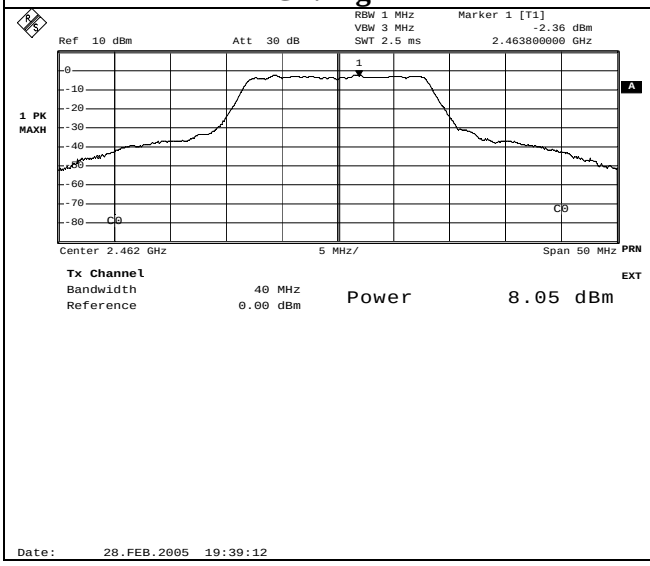
Date: 22.FEB.2005 10:13:11

Ch:Mid



Date: 22.FEB.2005 10:15:00

Ch:High



Date: 28.FEB.2005 19:39:12

UL Apex Co., Ltd.
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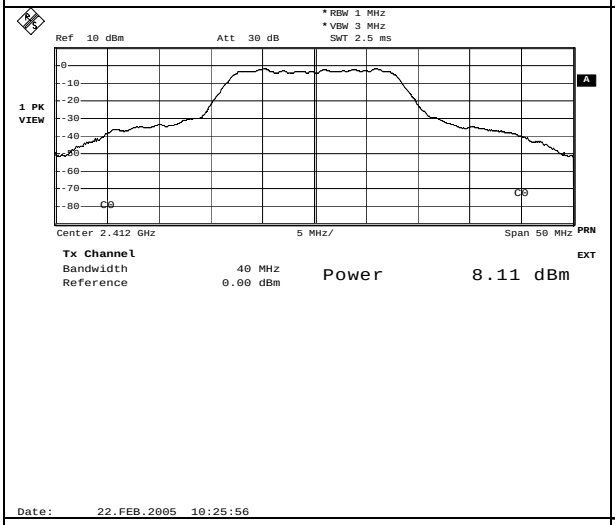
Telephone : +81 596 24 8116
Facsimile : +81 596 24 8124

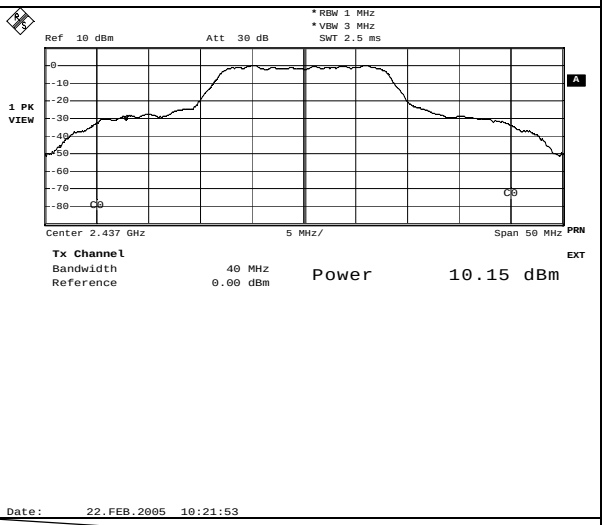
Maximum Peak OutPut Power (DSSS and other forms of modulation)

IEEE802.11g 12Mbps

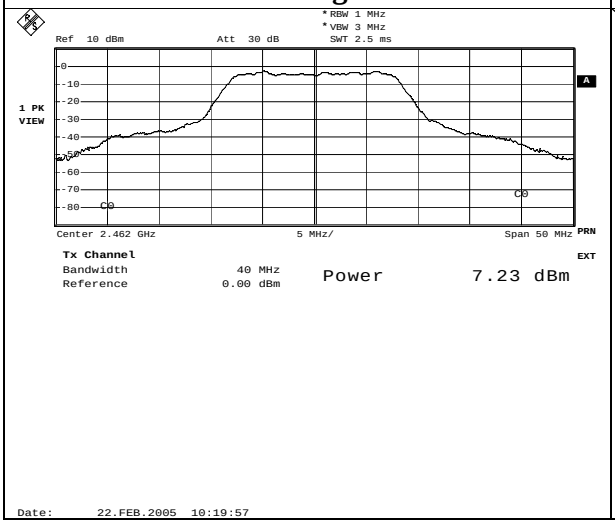
Ch:Low



Ch:Mid



Ch:High



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Radiated Spurious Emission(DSSS and other forms of modulation)

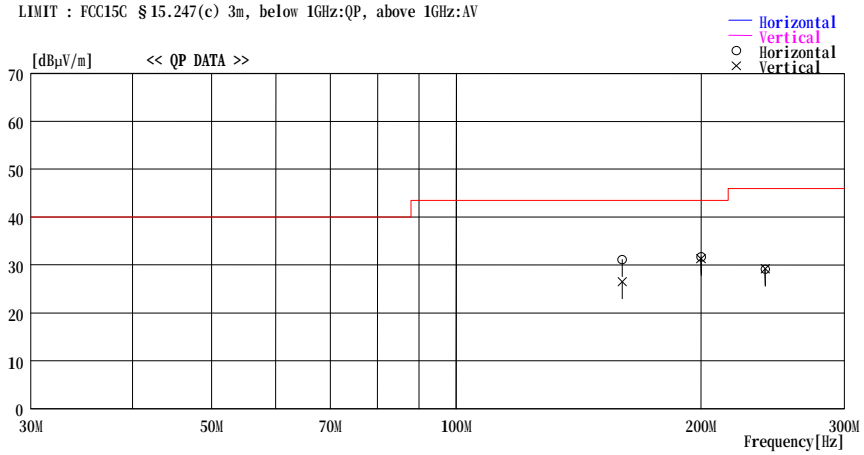
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 15:49:08

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11b 11Mbps ch1 2412MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	159.999	34.2	16.8	7.4	27.3	31.1	43.5	12.4	114	10
2	199.999	34.1	17.1	7.6	27.1	31.7	43.5	11.8	150	216
3	239.999	31.0	17.1	7.9	26.9	29.1	46.0	16.9	150	209
----- Vertical ------										
4	159.999	29.6	16.8	7.4	27.3	26.5	43.5	17.0	225	290
5	199.999	33.7	17.1	7.6	27.1	31.3	43.5	12.2	100	6
6	239.999	31.1	17.1	7.9	26.9	29.2	46.0	16.8	220	90

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

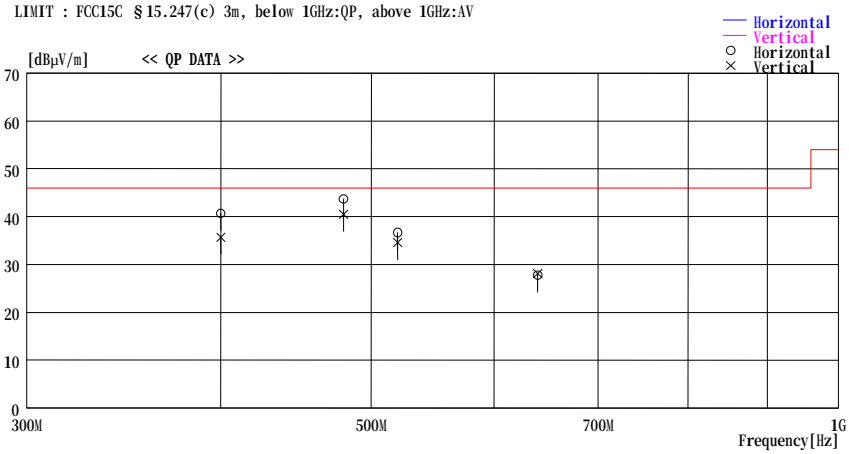
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 12:57:05

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11b 11Mbps ch1 2412MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	399.996	41.0	18.6	8.6	27.5	40.7	46.0	5.3	213	158
2	479.996	44.0	18.8	8.9	28.0	43.7	46.0	2.3	168	32
3	519.995	36.6	19.1	9.2	28.2	36.7	46.0	9.3	145	30
4	639.995	26.4	20.0	9.7	28.3	27.8	46.0	18.2	117	216
----- Vertical ------										
5	399.996	36.0	18.6	8.6	27.5	35.7	46.0	10.3	144	95
6	479.996	40.8	18.8	8.9	28.0	40.5	46.0	5.5	139	85
7	519.996	34.5	19.1	9.2	28.2	34.6	46.0	11.4	141	94
8	639.995	26.7	20.0	9.7	28.3	28.1	46.0	17.9	100	131

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

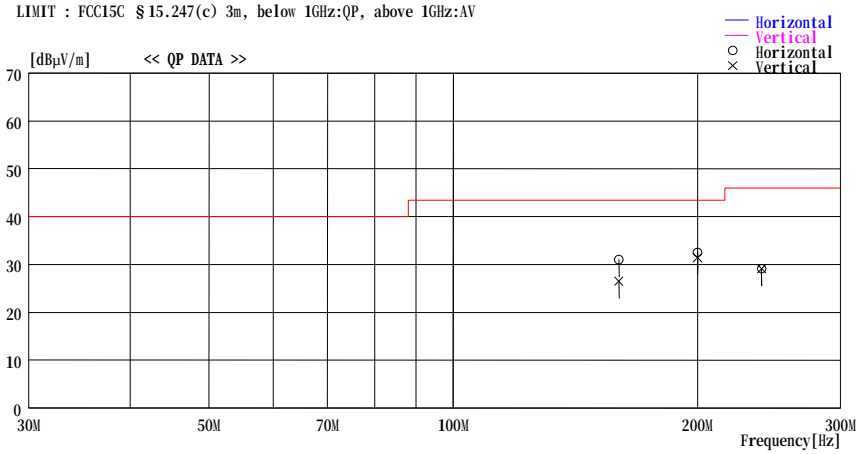
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 16:01:49

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11b 11Mbps ch6 2437MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	159.999	34.1	16.8	7.4	27.3	31.0	43.5	12.5	114	12
2	199.999	35.0	17.1	7.6	27.1	32.6	43.5	10.9	148	212
3	239.999	31.0	17.1	7.9	26.9	29.1	46.0	16.9	150	210
----- Vertical ------										
4	159.999	29.6	16.8	7.4	27.3	26.5	43.5	17.0	226	300
5	199.999	33.8	17.1	7.6	27.1	31.4	43.5	12.1	100	10
6	239.999	31.0	17.1	7.9	26.9	29.1	46.0	16.9	215	90

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

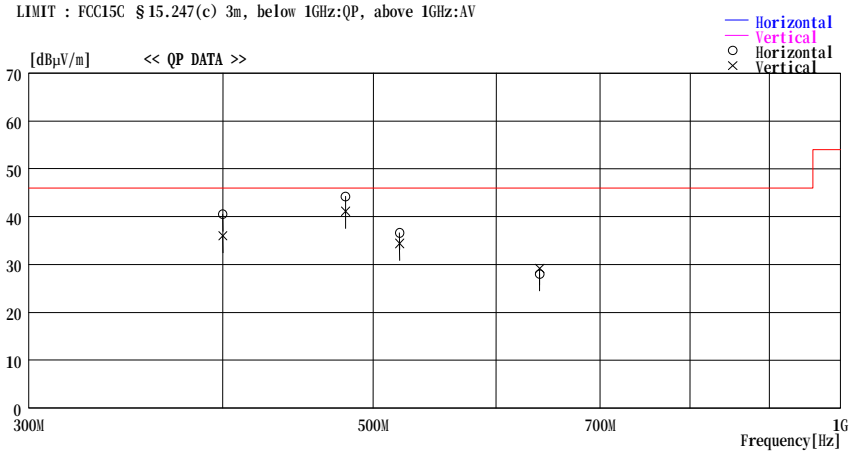
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 13:26:27

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11b 11Mbps ch6 2437MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	399.996	40.8	18.6	8.6	27.5	40.5	46.0	5.5	212	159
2	479.996	44.5	18.8	8.9	28.0	44.2	46.0	1.8	160	14
3	519.996	36.5	19.1	9.2	28.2	36.6	46.0	9.4	145	28
4	639.995	26.6	20.0	9.7	28.3	28.0	46.0	18.0	122	218
----- Vertical ------										
5	399.996	36.3	18.6	8.6	27.5	36.0	46.0	10.0	136	106
6	479.996	41.4	18.8	8.9	28.0	41.1	46.0	4.9	132	96
7	519.996	34.3	19.1	9.2	28.2	34.4	46.0	11.6	136	98
8	639.995	27.8	20.0	9.7	28.3	29.2	46.0	16.8	100	118

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

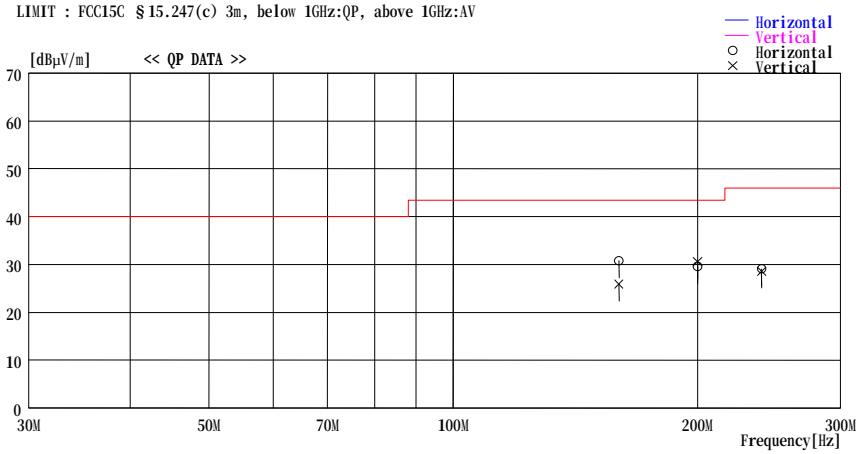
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 16:24:50

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11b 11Mbps ch11 2462MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	159.999	33.9	16.8	7.4	27.3	30.8	43.5	12.7	116	7
2	199.999	32.0	17.1	7.6	27.1	29.6	43.5	13.9	150	210
3	239.999	31.0	17.1	7.9	26.9	29.1	46.0	16.9	150	207
----- Vertical ------										
4	159.999	29.0	16.8	7.4	27.3	25.9	43.5	17.6	230	300
5	199.999	33.0	17.1	7.6	27.1	30.6	43.5	12.9	100	10
6	239.999	30.5	17.1	7.9	26.9	28.6	46.0	17.4	210	95

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

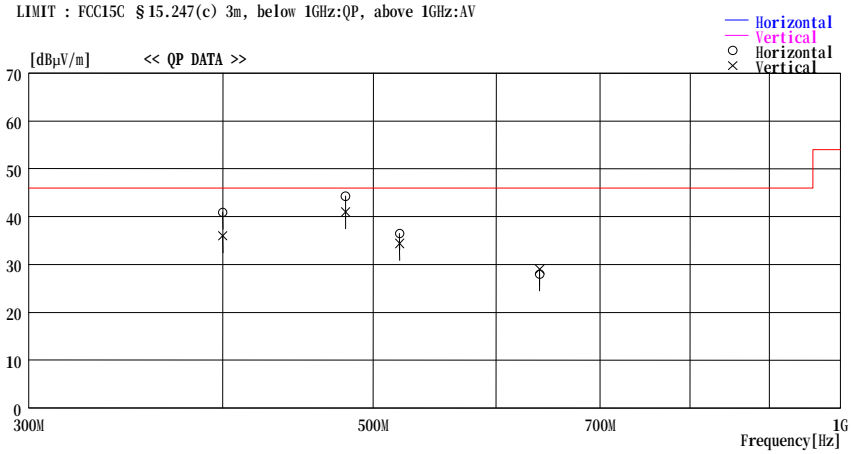
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 13:51:12

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11b 11Mbps ch11 2462MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	399.995	41.2	18.6	8.6	27.5	40.9	46.0	5.1	210	159
2	479.995	44.6	18.8	8.9	28.0	44.3	46.0	1.7	166	22
3	519.995	36.4	19.1	9.2	28.2	36.5	46.0	9.5	138	26
4	639.995	26.6	20.0	9.7	28.3	28.0	46.0	18.0	123	220
----- Vertical ------										
5	399.995	36.3	18.6	8.6	27.5	36.0	46.0	10.0	135	110
6	479.995	41.3	18.8	8.9	28.0	41.0	46.0	5.0	132	95
7	519.995	34.3	19.1	9.2	28.2	34.4	46.0	11.6	135	100
8	639.995	27.6	20.0	9.7	28.3	29.0	46.0	17.0	100	119

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

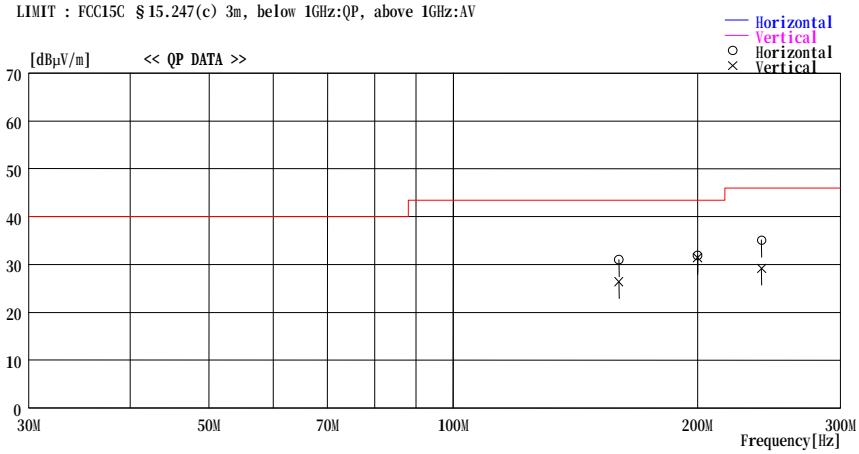
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 09:20:44

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch1 2412MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	159.999	34.1	16.8	7.4	27.3	31.0	43.5	12.5	114	9
2	199.999	34.3	17.1	7.6	27.1	31.9	43.5	11.6	149	215
3	239.999	37.0	17.1	7.9	26.9	35.1	46.0	10.9	149	210
----- Vertical ------										
4	159.999	29.5	16.8	7.4	27.3	26.4	43.5	17.1	226	297
5	199.999	33.8	17.1	7.6	27.1	31.4	43.5	12.1	100	0
6	239.999	31.1	17.1	7.9	26.9	29.2	46.0	16.8	221	85

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

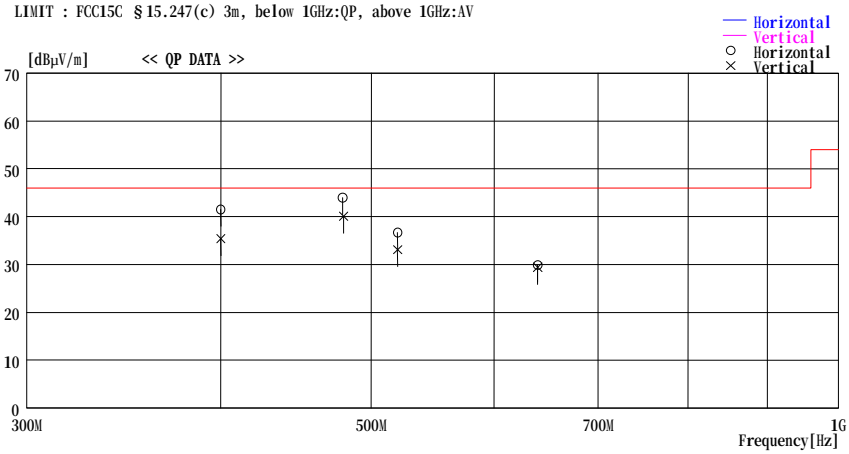
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 09:33:25

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch1 2412MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	399.997	41.8	18.6	8.6	27.5	41.5	46.0	4.5	215	167
2	479.203	44.3	18.8	8.9	28.0	44.0	46.0	2.0	140	29
3	519.997	36.6	19.1	9.2	28.2	36.7	46.0	9.3	146	29
4	639.997	28.5	20.0	9.7	28.3	29.9	46.0	16.1	117	223
----- Vertical ------										
5	399.997	35.7	18.6	8.6	27.5	35.4	46.0	10.6	141	122
6	479.997	40.4	18.8	8.9	28.0	40.1	46.0	5.9	100	123
7	519.997	33.0	19.1	9.2	28.2	33.1	46.0	12.9	125	118
8	639.997	28.0	20.0	9.7	28.3	29.4	46.0	16.6	100	121

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

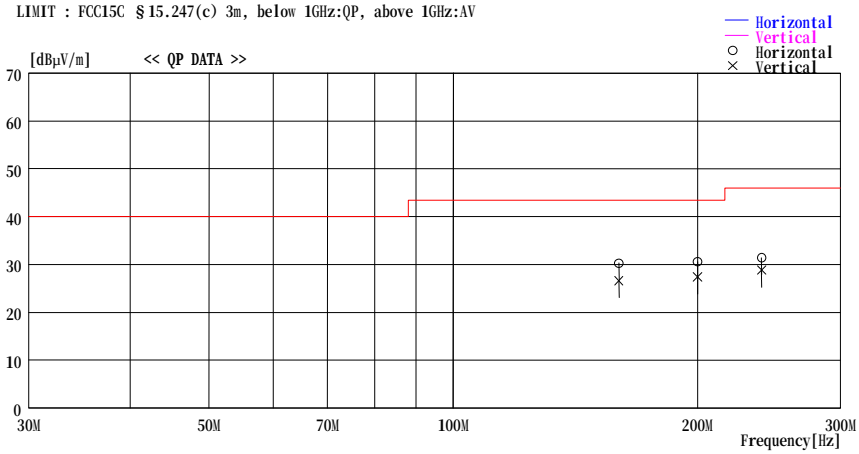
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 14:27:52

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch6 2437MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	159.998	33.4	16.8	7.4	27.3	30.3	43.5	13.2	126	37
2	199.998	33.0	17.1	7.6	27.1	30.6	43.5	12.9	167	195
3	239.998	33.3	17.1	7.9	26.9	31.4	46.0	14.6	130	229
----- Vertical ------										
4	159.998	29.7	16.8	7.4	27.3	26.6	43.5	16.9	318	305
5	199.998	29.8	17.1	7.6	27.1	27.4	43.5	16.1	190	301
6	239.998	30.7	17.1	7.9	26.9	28.8	46.0	17.2	211	5

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

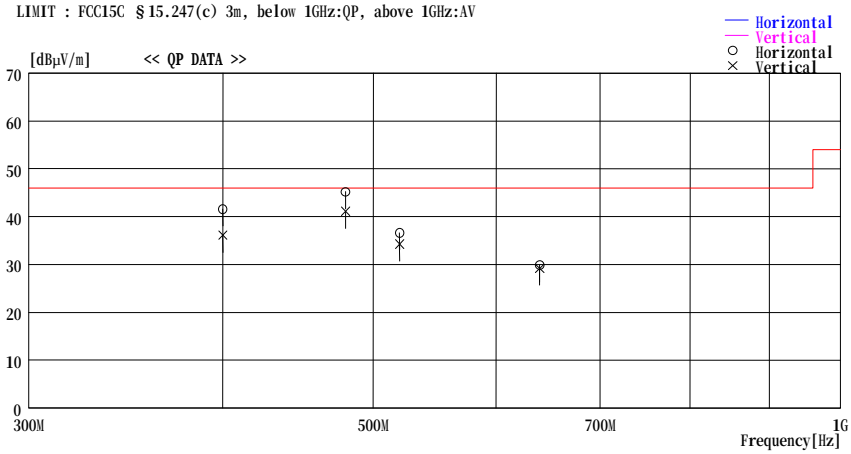
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 10:35:07

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch6 2437MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	399.996	41.9	18.6	8.6	27.5	41.6	46.0	4.4	211	164
2	479.996	45.5	18.8	8.9	28.0	45.2	46.0	0.8	175	22
3	519.996	36.5	19.1	9.2	28.2	36.6	46.0	9.4	142	28
4	639.996	28.5	20.0	9.7	28.3	29.9	46.0	16.1	116	216
----- Vertical ------										
5	399.997	36.4	18.6	8.6	27.5	36.1	46.0	9.9	137	106
6	479.996	41.4	18.8	8.9	28.0	41.1	46.0	4.9	132	96
7	519.996	34.2	19.1	9.2	28.2	34.3	46.0	11.7	136	97
8	639.996	27.8	20.0	9.7	28.3	29.2	46.0	16.8	100	117

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

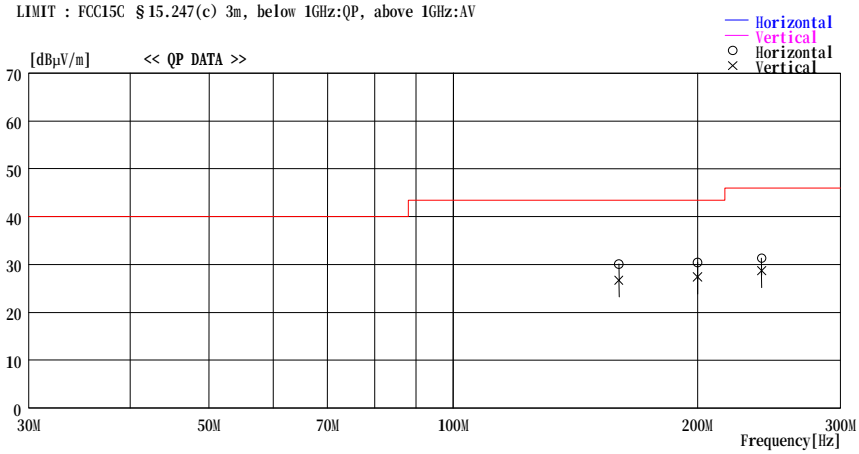
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 15:09:53

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch11 2462MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	159.998	33.2	16.8	7.4	27.3	30.1	43.5	13.4	130	34
2	199.998	32.8	17.1	7.6	27.1	30.4	43.5	13.1	170	200
3	239.998	33.2	17.1	7.9	26.9	31.3	46.0	14.7	132	230
----- Vertical ------										
4	159.998	29.8	16.8	7.4	27.3	26.7	43.5	16.8	318	300
5	199.998	29.8	17.1	7.6	27.1	27.4	43.5	16.1	192	300
6	239.998	30.6	17.1	7.9	26.9	28.7	46.0	17.3	210	8

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

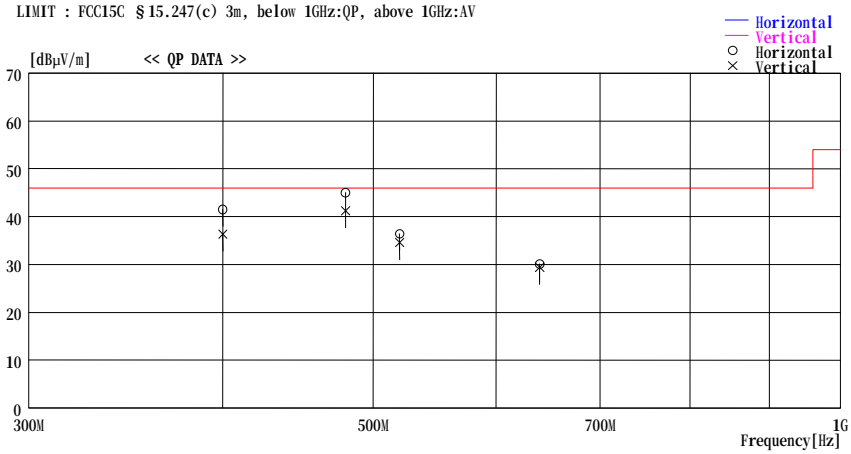
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/02/26 11:26:25

Applicant	: Matsushita Electric Industrial Co., Ltd.	Report No.	: 25EE0175-HO
Kind of EUT	: Wireless LAN Unit	Power	: AC120V/60Hz(EUT DC 3.3V)
Model No.	: TXANP07VKA1	Temp°C/Humi%	: 19deg.C / 29%
Serial No.	: 084822	Operator	: Makoto Kosaka

Mode / Remarks : Tx 11g 54Mbps ch11 2462MHz EUT Position Hor(Z-axis) Ver(Y-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV



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	399.996	41.8	18.6	8.6	27.5	41.5	46.0	4.5	208	169
2	479.996	45.3	18.8	8.9	28.0	45.0	46.0	1.0	174	21
3	519.996	36.3	19.1	9.2	28.2	36.4	46.0	9.6	148	28
4	639.995	28.7	20.0	9.7	28.3	30.1	46.0	15.9	120	217
----- Vertical ------										
5	399.996	36.6	18.6	8.6	27.5	36.3	46.0	9.7	144	95
6	479.996	41.5	18.8	8.9	28.0	41.2	46.0	4.8	132	85
7	519.996	34.5	19.1	9.2	28.2	34.6	46.0	11.4	144	90
8	639.995	28.0	20.0	9.7	28.3	29.4	46.0	16.6	100	127

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY	: Matsushita Electric Industrial Co.,Ltd.	REGULATION	: Fcc Part15 Subpart C 15.247 (d)
EQUIPMENT	: Wireless LAN Unit	TEST DISTANCE	: 3m / 1m
MODEL	: TXANP07VKA1	DATE	: 02/24 and 28/2005
SAMPLE NO.	: 084822	TEMPERATURE	: 24, 23deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 32, 30%
MODE	: Transmitting (11b / 11Mbps / CH1:2412MHz)	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz , VBW:1MHz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2390.0	50.3	48.1	30.5	36.4	5.7	10.0	60.1	57.9	74.0	13.9	16.1
2	4824.0	45.6	44.8	35.2	36.0	8.3	0.0	53.1	52.3	74.0	20.9	21.7
3	7236.0	41.3	42.0	37.7	36.0	10.1	0.4	53.5	54.2	74.0	20.5	19.8
4	9648.0	44.7	44.5	37.0	36.4	12.3	0.2	57.8	57.6	74.0	16.2	16.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12060.0	43.6	43.8	41.6	36.1	14.3	0.2	54.1	54.3	74.0	19.9	19.7
6	14472.0	42.9	42.6	41.8	34.6	15.2	0.1	55.9	55.6	74.0	18.1	18.4
7	16884.0	45.0	45.0	45.2	35.0	16.6	1.1	63.4	63.4	74.0	10.6	10.6
8	19296.0	44.6	44.5	41.6	34.1	18.6	2.1	63.3	63.2	74.0	10.7	10.8
9	21708.0	44.7	44.8	40.4	34.7	19.4	2.0	62.3	62.4	74.0	11.7	11.6
10	24120.0	46.4	46.6	41.0	35.6	21.6	0.2	64.1	64.3	74.0	9.9	9.7

AV DETECT (RBW: 1MHz , VBW:10Hz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2390.0	38.0	35.7	30.5	36.4	5.7	10.0	47.8	45.5	54.0	6.2	8.5
2	4824.0	34.2	33.1	35.2	36.0	8.3	0.0	41.7	40.6	54.0	12.3	13.4
3	7236.0	29.6	29.6	37.7	36.0	10.1	0.4	41.8	41.8	54.0	12.2	12.2
4	9648.0	32.0	33.6	37.0	36.4	12.3	0.2	45.1	46.7	54.0	8.9	7.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12060.0	30.0	30.0	41.6	36.1	14.3	0.2	40.5	40.5	54.0	13.5	13.5
6	14472.0	28.8	29.3	41.8	34.6	15.2	0.1	41.8	42.3	54.0	12.2	11.7
7	16884.0	31.6	31.6	45.2	35.0	16.6	1.1	50.0	50.0	54.0	4.0	4.0
8	19296.0	31.6	31.6	41.6	34.1	18.6	2.1	50.3	50.3	54.0	3.7	3.7
9	21708.0	31.7	31.8	40.4	34.7	19.4	2.0	49.3	49.4	54.0	4.7	4.6
10	24120.0	32.7	32.8	41.0	35.6	21.6	0.2	50.4	50.5	54.0	3.6	3.5

20dBc(Fundamental 2412MHz) (RBW: 100kHz , VBW:300kHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	Atten. or	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	HOR	VER	20dBc	HOR	VER
	[MHz]	[dBuV/m]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	2412.0	98.7	95.4	30.5	36.4	5.7	10.0	108.5	105.2	-	-	-
2	2400.0	54.5	51.8	30.5	36.4	5.7	10.0	64.3	61.6	Funda-20dB	24.2	23.6

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY	: Matsushita Electric Industrial Co.,Ltd.	REGULATION	: Fcc Part15 Subpart C 15.247 (d)
EQUIPMENT	: Wireless LAN Unit	TEST DISTANCE	: 3m / 1m
MODEL	: TXANP07VKA1	DATE	: 02/24 and 28/2005
SAMPLE NO.	: 084822	TEMPERATURE	: 24, 23deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 32, 30%
MODE	: Transmitting (11b / 11Mbps / CH6:2437MHz)	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz , VBW:1MHz)

No.	Freq.	Reading HOR	Reading VER	Ant. Factor	Amp. Gain	Cable Loss	Atten. or Filter	Result HOR	Result VER	Limit PK	Margin HOR	Margin VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	4874.0	45.6	44.8	35.5	36.0	8.4	1.0	54.5	53.7	74.0	19.5	20.3
2	7311.0	41.3	42.5	37.9	36.0	10.2	0.5	53.9	55.1	74.0	20.1	18.9
3	9748.0	44.7	44.5	36.9	36.4	12.4	0.2	57.8	57.6	74.0	16.2	16.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	42.7	43.8	41.6	36.0	14.4	0.3	53.5	54.6	74.0	20.5	19.4
5	14622.0	41.7	42.6	42.1	35.1	15.3	0.2	54.7	55.6	74.0	19.3	18.4
6	17059.0	44.6	44.6	45.3	34.9	16.6	1.1	63.2	63.2	74.0	10.8	10.8
7	19496.0	44.6	44.5	41.4	34.3	18.9	2.3	63.4	63.3	74.0	10.6	10.7
8	21933.0	44.8	44.8	40.5	34.2	19.3	1.1	62.0	62.0	74.0	12.0	12.0
9	24370.0	46.4	46.6	41.1	35.7	21.6	0.6	64.5	64.7	74.0	9.5	9.3

AV DETECT (RBW: 1MHz , VBW:10Hz)

No.	Freq.	Reading HOR	Reading VER	Ant. Factor	Amp. Gain	Cable Loss	Atten. or Filter	Result HOR	Result VER	Limit AV	Margin HOR	Margin VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	4874.0	34.2	33.1	35.5	36.0	8.4	1.0	43.1	42.0	54.0	10.9	12.0
2	7311.0	29.6	29.7	37.9	36.0	10.2	0.5	42.2	42.3	54.0	11.8	11.7
3	9748.0	32.0	33.6	36.9	36.4	12.4	0.2	45.1	46.7	54.0	8.9	7.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	29.7	29.8	41.6	36.0	14.4	0.3	40.5	40.6	54.0	13.5	13.4
5	14622.0	29.1	29.3	42.1	35.1	15.3	0.2	42.1	42.3	54.0	11.9	11.7
6	17059.0	31.7	31.6	45.3	34.9	16.6	1.1	50.3	50.2	54.0	3.7	3.8
7	19496.0	31.6	31.6	41.4	34.3	18.9	2.3	50.4	50.4	54.0	3.6	3.6
8	21933.0	31.7	31.7	40.5	34.2	19.3	1.1	48.9	48.9	54.0	5.1	5.1
9	24370.0	32.7	32.8	41.1	35.7	21.6	0.6	50.8	50.9	54.0	3.2	3.1

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY	: Matsushita Electric Industrial Co.,Ltd.	REGULATION	: Fcc Part15 Subpart C 15.247 (d)
EQUIPMENT	: Wireless LAN Unit	TEST DISTANCE	: 3m / 1m
MODEL	: TXANP07VKA1	DATE	: 02/24 and 28/2005
SAMPLE NO.	: 084822	TEMPERATURE	: 24, 23deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 32, 30%
MODE	: Transmitting (11b / 11bps / CH11:2462MHz)	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz , VBW:1MHz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	52.2	49.9	30.5	36.4	5.8	10.0	62.1	59.8	74.0	11.9	14.2
2	4924.0	44.3	42.0	35.8	35.9	8.4	1.0	53.6	51.3	74.0	20.4	22.7
3	7386.0	42.0	41.7	38.0	36.0	10.2	0.6	54.8	54.5	74.0	19.2	19.5
4	9848.0	44.8	44.9	36.8	36.4	12.4	0.3	57.9	58.0	74.0	16.1	16.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12310.0	43.7	43.8	41.7	35.9	14.4	0.4	54.8	54.9	74.0	19.2	19.1
6	14772.0	42.3	42.5	42.4	35.6	15.5	0.4	55.5	55.7	74.0	18.5	18.3
7	17234.0	44.6	44.8	44.9	35.0	16.7	1.0	62.7	62.9	74.0	11.3	11.1
8	19696.0	44.6	44.5	41.2	34.6	19.1	1.8	62.6	62.5	74.0	11.4	11.5
9	22158.0	44.8	44.8	40.5	34.1	19.5	0.9	62.1	62.1	74.0	11.9	11.9
10	24620.0	46.5	46.6	41.1	35.5	21.6	0.9	65.1	65.2	74.0	8.9	8.8

AV DETECT (RBW: 1MHz , VBW:10Hz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	40.2	37.7	30.5	36.4	5.8	10.0	50.1	47.6	54.0	3.9	6.4
2	4924.0	34.3	31.2	35.8	35.9	8.4	1.0	43.6	40.5	54.0	10.4	13.5
3	7386.0	29.6	29.7	38.0	36.0	10.2	0.6	42.4	42.5	54.0	11.6	11.5
4	9848.0	33.2	34.6	36.8	36.4	12.4	0.3	46.3	47.7	54.0	7.7	6.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12310.0	29.7	30.0	41.7	35.9	14.4	0.4	40.8	41.1	54.0	13.2	12.9
6	14772.0	29.2	29.2	42.4	35.6	15.5	0.4	42.4	42.4	54.0	11.6	11.6
7	17234.0	31.8	31.6	44.9	35.0	16.7	1.0	49.9	49.7	54.0	4.1	4.3
8	19696.0	31.6	31.6	41.2	34.6	19.1	1.8	49.6	49.6	54.0	4.4	4.4
9	22158.0	31.7	31.7	40.5	34.1	19.5	0.9	49.0	49.0	54.0	5.0	5.0
10	24620.0	32.7	32.8	41.1	35.5	21.6	0.9	51.3	51.4	54.0	2.7	2.6

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY	: Matsushita Electric Industrial Co.,Ltd.	REGULATION	: Fcc Part15 Subpart C 15.247 (d)
EQUIPMENT	: Wireless LAN Unit	TEST DISTANCE	: 3m / 1m
MODEL	: TXANP07VKA1	DATE	: 02/24 and 28/2005
SAMPLE NO.	: 084822	TEMPERATURE	: 24, 23deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 32, 30%
MODE	: Transmitting (11g / 54Mbps / CH1:2412MHz)	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz , VBW:1MHz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2390.0	60.7	58.7	30.5	36.4	5.7	10.0	70.5	68.5	74.0	3.5	5.5
2	4824.0	43.5	45.0	35.2	36.0	8.3	0.0	51.0	52.5	74.0	23.0	21.5
3	7236.0	41.4	41.8	37.7	36.0	10.1	0.4	53.6	54.0	74.0	20.4	20.0
4	9648.0	44.0	44.0	37.0	36.4	12.3	0.2	57.1	57.1	74.0	16.9	16.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12060.0	43.2	43.2	41.6	36.1	14.3	0.2	53.7	53.7	74.0	20.3	20.3
6	14472.0	42.1	42.3	41.8	34.6	15.2	0.1	55.1	55.3	74.0	18.9	18.7
7	16884.0	44.3	44.7	45.2	35.0	16.6	1.1	62.7	63.1	74.0	11.3	10.9
8	19296.0	44.6	44.5	41.6	34.1	18.6	2.1	63.3	63.2	74.0	10.7	10.8
9	21708.0	44.8	44.9	40.4	34.7	19.4	2.0	62.4	62.5	74.0	11.6	11.5
10	24120.0	46.4	46.6	41.0	35.6	21.6	0.2	64.1	64.3	74.0	9.9	9.7

AV DETECT (RBW: 1MHz , VBW:10Hz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2390.0	42.5	40.8	30.5	36.4	5.7	10.0	52.3	50.6	54.0	1.7	3.4
2	4824.0	30.7	32.6	35.2	36.0	8.3	0.0	38.2	40.1	54.0	15.8	13.9
3	7236.0	29.7	29.7	37.7	36.0	10.1	0.4	41.9	41.9	54.0	12.1	12.1
4	9648.0	32.3	33.2	37.0	36.4	12.3	0.2	45.4	46.3	54.0	8.6	7.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12060.0	29.8	30.2	41.6	36.1	14.3	0.2	40.3	40.7	54.0	13.7	13.3
6	14472.0	28.6	29.4	41.8	34.6	15.2	0.1	41.6	42.4	54.0	12.4	11.6
7	16884.0	31.5	31.7	45.2	35.0	16.6	1.1	49.9	50.1	54.0	4.1	3.9
8	19296.0	31.6	31.6	41.6	34.1	18.6	2.1	50.3	50.3	54.0	3.7	3.7
9	21708.0	31.7	31.8	40.4	34.7	19.4	2.0	49.3	49.4	54.0	4.7	4.6
10	24120.0	32.7	32.8	41.0	35.6	21.6	0.2	50.4	50.5	54.0	3.6	3.5

20dBc(Fundamental 2412MHz) (RBW: 100kHz , VBW:300kHz)

No.	FREQ	S/A READING		ANT	AMP	CABLE	Atten. or	RESULT		Limit	MARGIN	
		HOR	VER	Factor	GAIN	LOSS	Filter	HOR	VER	20dBc	HOR	VER
	[MHz]	[dBuV/m]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	2412.0	89.7	89.9	30.5	36.4	5.7	10.0	99.5	99.7	-	-	-
2	2400.0	60.1	57.2	30.5	36.4	5.7	10.0	69.9	67.0	Funda-20dB	9.6	12.7

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY	: Matsushita Electric Industrial Co.,Ltd.	REGULATION	: Fcc Part15 Subpart C 15.247 (d)
EQUIPMENT	: Wireless LAN Unit	TEST DISTANCE	: 3m / 1m
MODEL	: TXANP07VKA1	DATE	: 02/24 and 28/2005
SAMPLE NO.	: 084822	TEMPERATURE	: 24, 23deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 32, 30%
MODE	: Transmitting (11g / 54Mbps / CH6:2437MHz)	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz , VBW:1MHz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	4874.0	44.1	43.0	35.5	36.0	8.4	1.0	53.0	51.9	74.0	21.0	22.1
2	7311.0	42.6	41.8	37.9	36.0	10.2	0.5	55.2	54.4	74.0	18.8	19.6
3	9748.0	43.4	44.0	36.9	36.4	12.4	0.2	56.5	57.1	74.0	17.5	16.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	43.7	42.7	41.6	36.0	14.4	0.3	54.5	53.5	74.0	19.5	20.5
5	14622.0	42.9	42.7	42.1	35.1	15.3	0.2	55.9	55.7	74.0	18.1	18.3
6	17059.0	45.8	45.0	45.3	34.9	16.6	1.1	64.4	63.6	74.0	9.6	10.4
7	19496.0	44.6	44.5	41.4	34.3	18.9	2.3	63.4	63.3	74.0	10.6	10.7
8	21933.0	44.8	45.0	40.5	34.2	19.3	1.1	62.0	62.2	74.0	12.0	11.8
9	24370.0	46.4	46.6	41.1	35.7	21.6	0.6	64.5	64.7	74.0	9.5	9.3

AV DETECT (RBW: 1MHz , VBW:10Hz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	4874.0	34.1	31.8	35.5	36.0	8.4	1.0	43.0	40.7	54.0	11.0	13.3
2	7311.0	29.8	29.7	37.9	36.0	10.2	0.5	42.4	42.3	54.0	11.6	11.7
3	9748.0	32.7	34.4	36.9	36.4	12.4	0.2	45.8	47.5	54.0	8.2	6.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
4	12185.0	29.8	29.7	41.6	36.0	14.4	0.3	40.6	40.5	54.0	13.4	13.5
5	14622.0	29.2	29.6	42.1	35.1	15.3	0.2	42.2	42.6	54.0	11.8	11.4
6	17059.0	31.9	31.7	45.3	34.9	16.6	1.1	50.5	50.3	54.0	3.5	3.7
7	19496.0	31.6	31.6	41.4	34.3	18.9	2.3	50.4	50.4	54.0	3.6	3.6
8	21933.0	31.7	31.8	40.5	34.2	19.3	1.1	48.9	49.0	54.0	5.1	5.0
9	24370.0	32.7	32.8	41.1	35.7	21.6	0.6	50.8	50.9	54.0	3.2	3.1

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

COMPANY	: Matsushita Electric Industrial Co.,Ltd.	REGULATION	: Fcc Part15 Subpart C 15.247 (d)
EQUIPMENT	: Wireless LAN Unit	TEST DISTANCE	: 3m / 1m
MODEL	: TXANP07VKA1	DATE	: 02/24 and 28/2005
SAMPLE NO.	: 084822	TEMPERATURE	: 24, 23deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 32, 30%
MODE	: Transmitting (11g / 54bps / CH11:2462MHz)	ENGINEER	: Makoto Kosaka

PK DETECT (RBW: 1MHz , VBW:1MHz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	61.6	56.9	30.5	36.4	5.8	10.0	71.5	66.8	74.0	2.5	7.2
2	4924.0	44.0	42.2	35.8	35.9	8.4	1.0	53.3	51.5	74.0	20.7	22.5
3	7386.0	41.3	42.5	38.0	36.0	10.2	0.6	54.1	55.3	74.0	19.9	18.7
4	9848.0	42.8	43.7	36.8	36.4	12.4	0.3	55.9	56.8	74.0	18.1	17.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12310.0	43.8	42.9	41.7	35.9	14.4	0.4	54.9	54.0	74.0	19.1	20.0
6	14772.0	43.1	43.7	42.4	35.6	15.5	0.4	56.3	56.9	74.0	17.7	17.1
7	17234.0	45.1	45.3	44.9	35.0	16.7	1.0	63.2	63.4	74.0	10.8	10.6
8	19696.0	44.6	44.3	41.2	34.6	19.1	1.8	62.6	62.3	74.0	11.4	11.7
9	22158.0	44.9	44.9	40.5	34.1	19.5	0.9	62.2	62.2	74.0	11.8	11.8
10	24620.0	46.4	46.6	41.1	35.5	21.6	0.9	65.0	65.2	74.0	9.0	8.8

AV DETECT (RBW: 1MHz , VBW:10Hz)

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	2483.5	42.8	40.7	30.5	36.4	5.8	10.0	52.7	50.6	54.0	1.3	3.4
2	4924.0	30.4	29.8	35.8	35.9	8.4	1.0	39.7	39.1	54.0	14.3	14.9
3	7386.0	29.7	29.7	38.0	36.0	10.2	0.6	42.5	42.5	54.0	11.5	11.5
4	9848.0	30.4	30.5	36.8	36.4	12.4	0.3	43.5	43.6	54.0	10.5	10.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac												
5	12310.0	29.8	29.8	41.7	35.9	14.4	0.4	40.9	40.9	54.0	13.1	13.1
6	14772.0	29.2	29.6	42.4	35.6	15.5	0.4	42.4	42.8	54.0	11.6	11.2
7	17234.0	31.8	31.7	44.9	35.0	16.7	1.0	49.9	49.8	54.0	4.1	4.2
8	19696.0	31.6	31.6	41.2	34.6	19.1	1.8	49.6	49.6	54.0	4.4	4.4
9	22158.0	31.7	31.7	40.5	34.1	19.5	0.9	49.0	49.0	54.0	5.0	5.0
10	24620.0	32.7	32.7	41.1	35.5	21.6	0.9	51.3	51.3	54.0	2.7	2.7

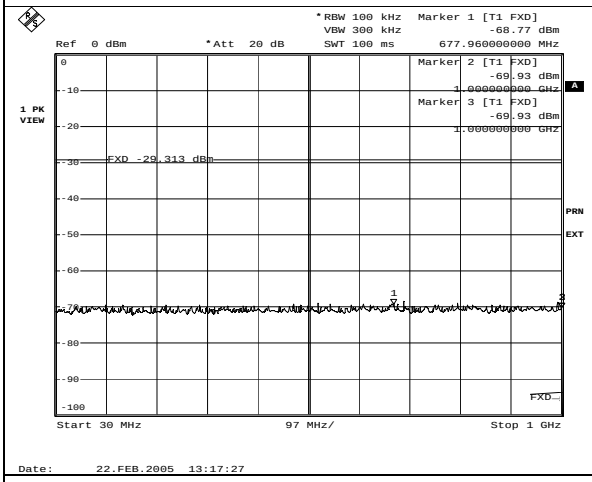
Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5 dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Conducted Spurious Emission(DSSS and other forms of modulation)

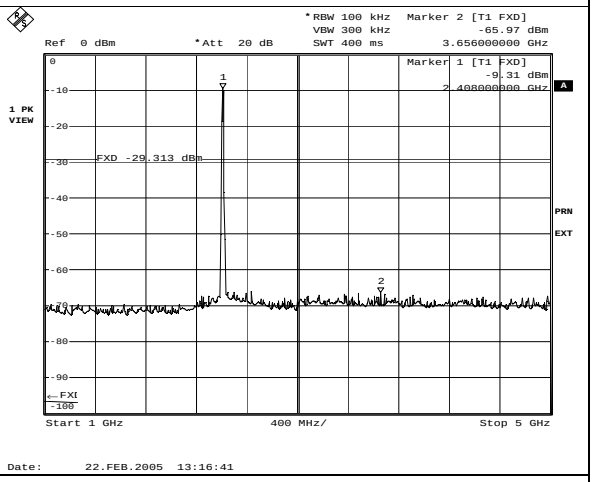
IEEE802.11b 11Mbps Ch : Low

30MHz-1GHz



Date: 22.FEB.2005 13:17:27

1GHz-5GHz



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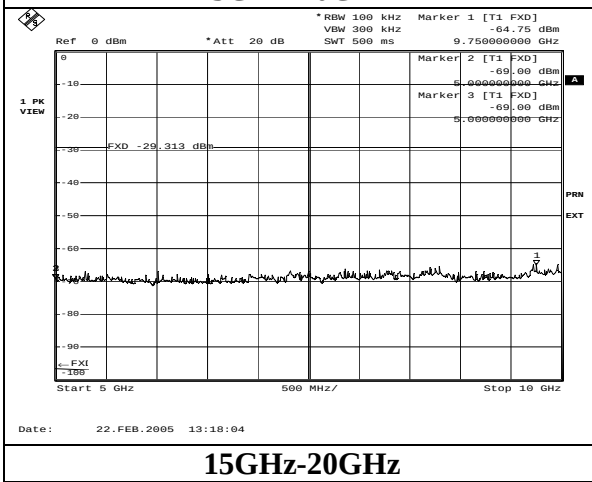
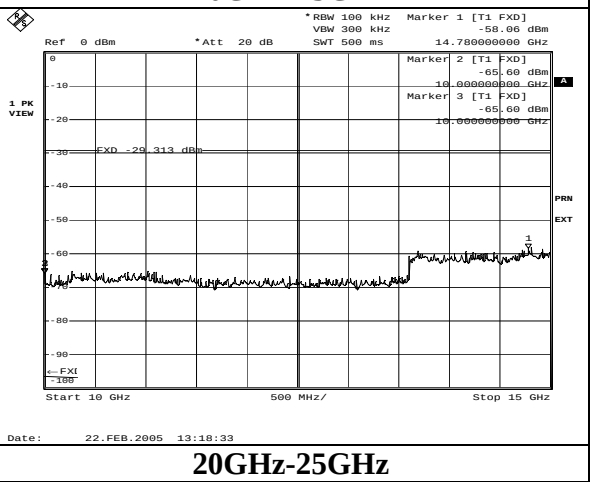
5GHz-10GHz



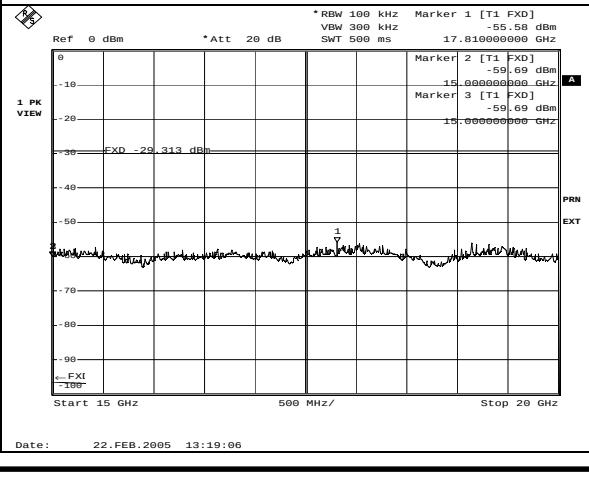
Date: 22.FEB.2005 13:18:04

10GHz-15GHz



Date: 22.FEB.2005 13:18:33

15GHz-20GHz



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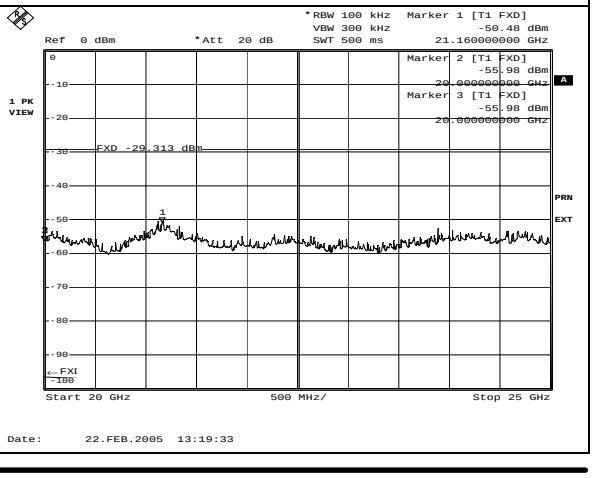
20GHz-25GHz



Date: 22.FEB.2005 13:19:33

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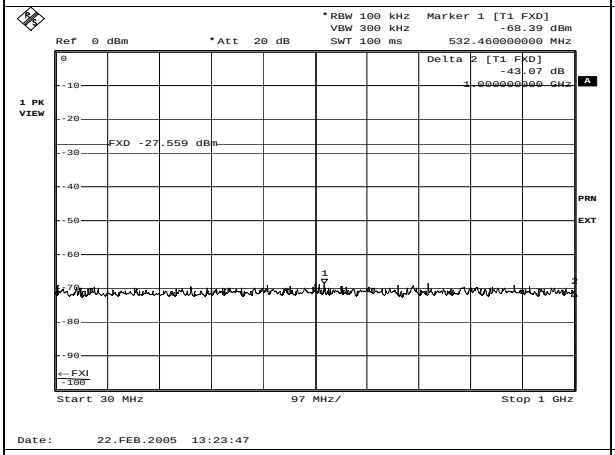
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11b 11Mbps Ch : Mid

30MHz-1GHz



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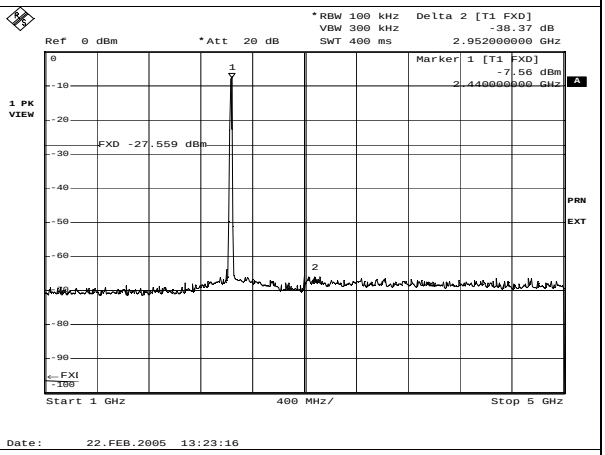
1GHz-5GHz



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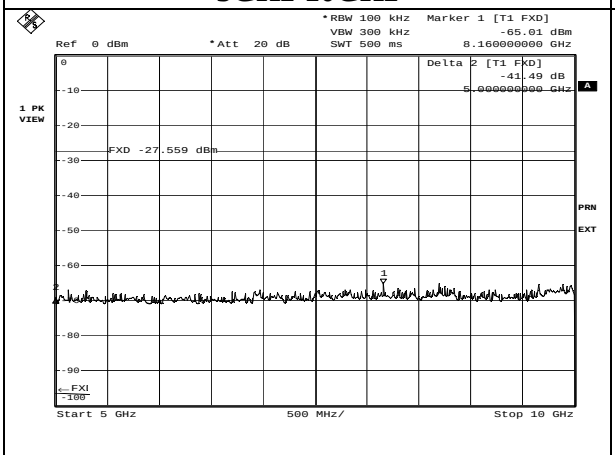
5GHz-10GHz



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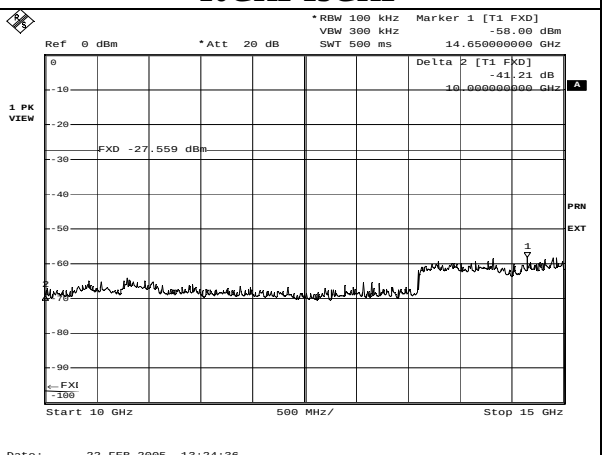
10GHz-15GHz



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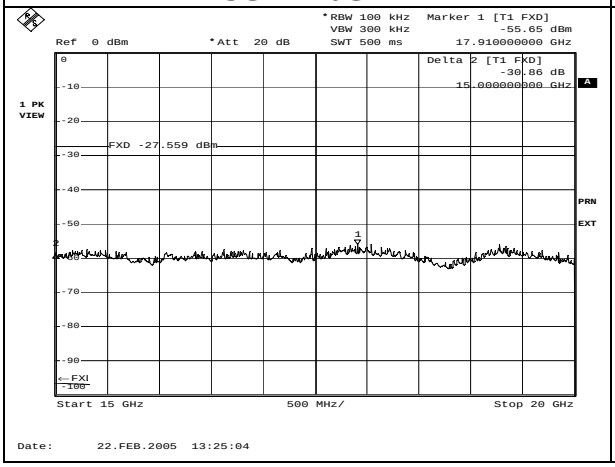
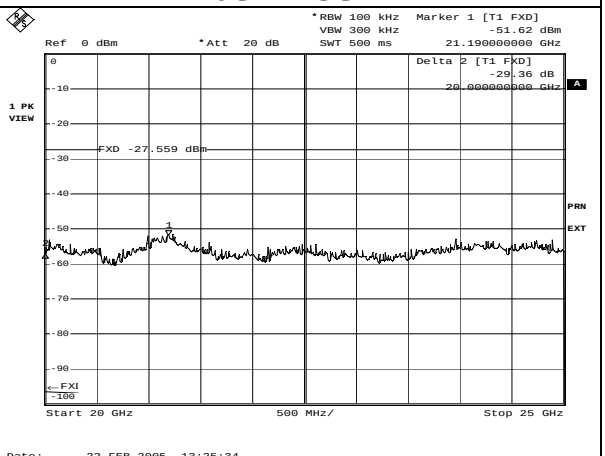
15GHz-20GHz



Date: 22.FEB.2005 13:25:04

20GHz-25GHz



Date: 22.FEB.2005 13:25:34

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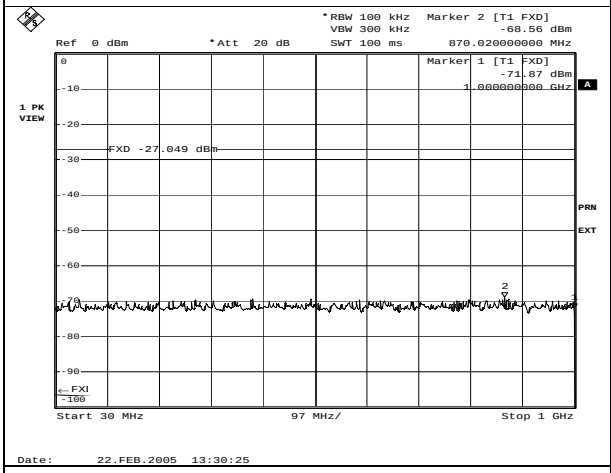
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11b 11Mbps Ch : High

30MHz-1GHz



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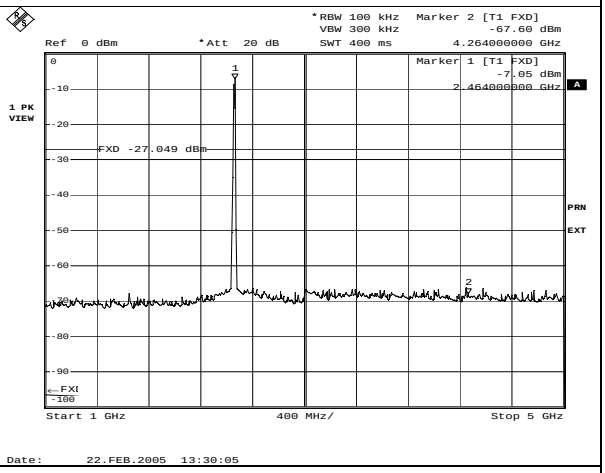
1GHz-5GHz



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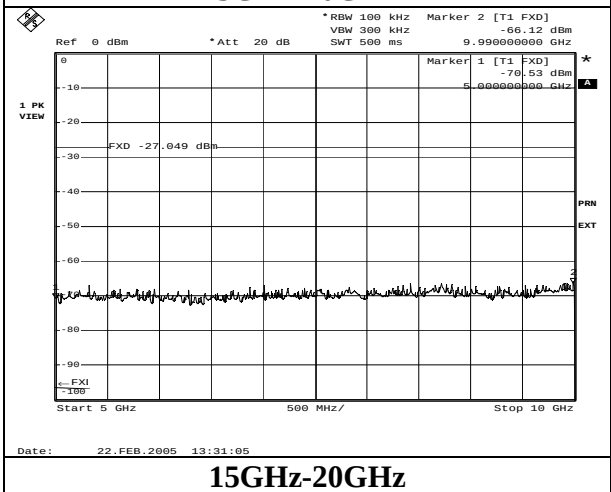
5GHz-10GHz



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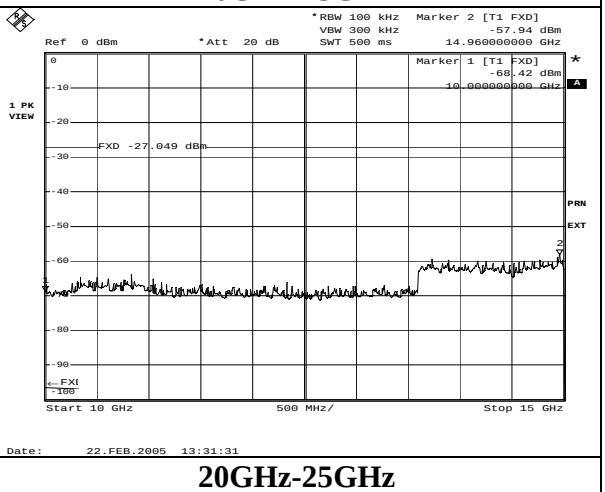
10GHz-15GHz



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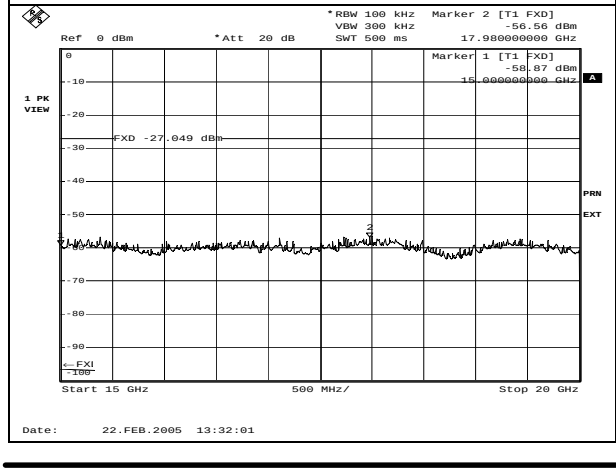
15GHz-20GHz



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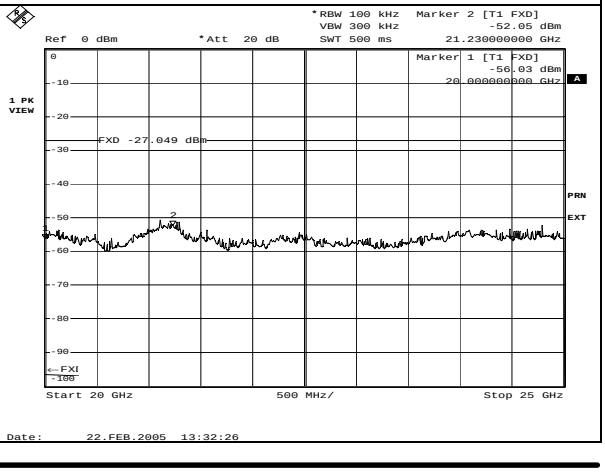
20GHz-25GHz



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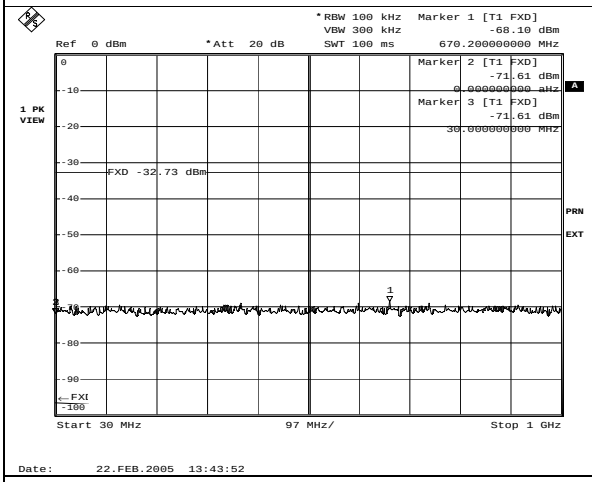
Conducted Spurious Emission(DSSS and other forms of modulation)

IEEE802.11g 54Mbp Ch : Low

30MHz-1GHz



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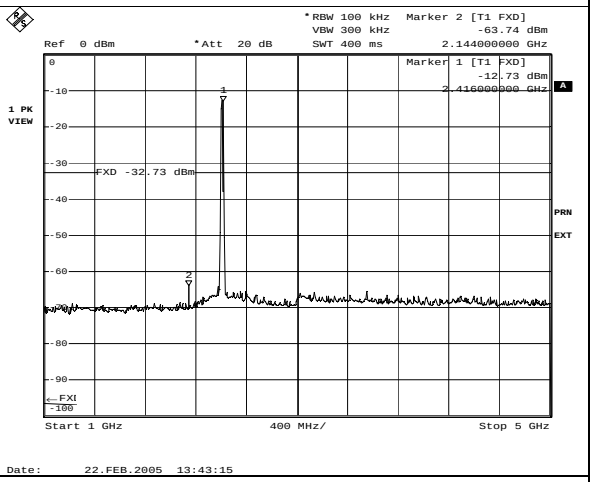
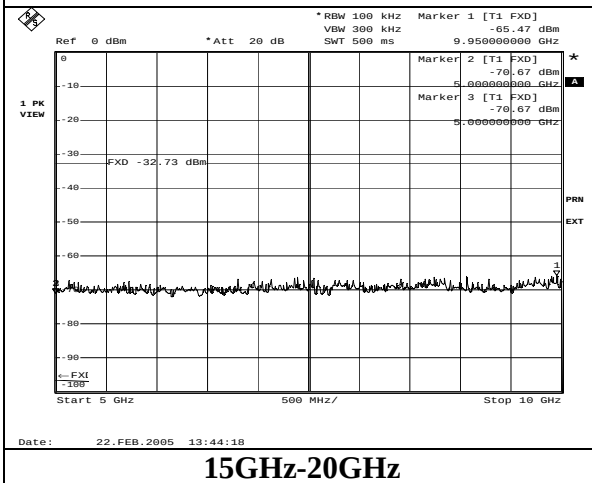
1GHz-5GHz



Date: 22.FEB.2005 13:43:15

5GHz-10GHz



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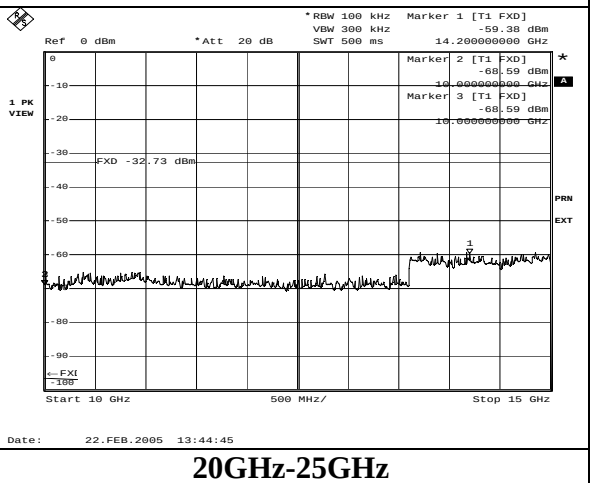
10GHz-15GHz



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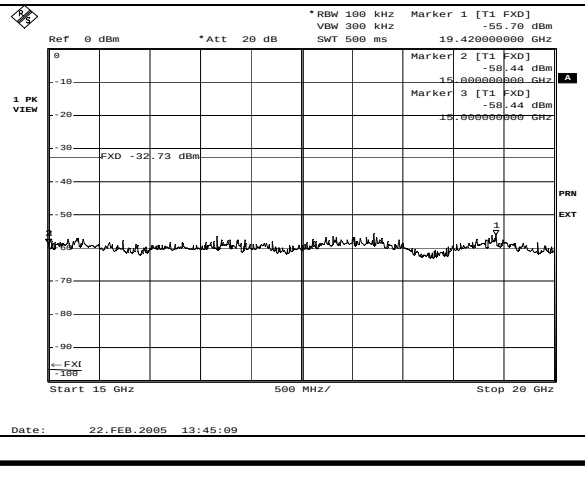
15GHz-20GHz



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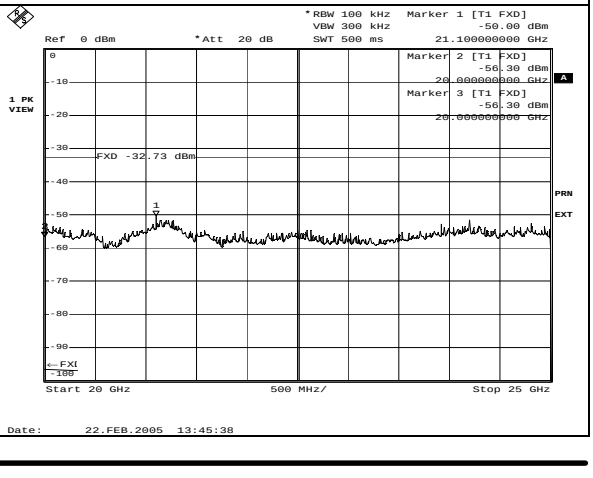
20GHz-25GHz



Date: 22.FEB.2005 13:45:38

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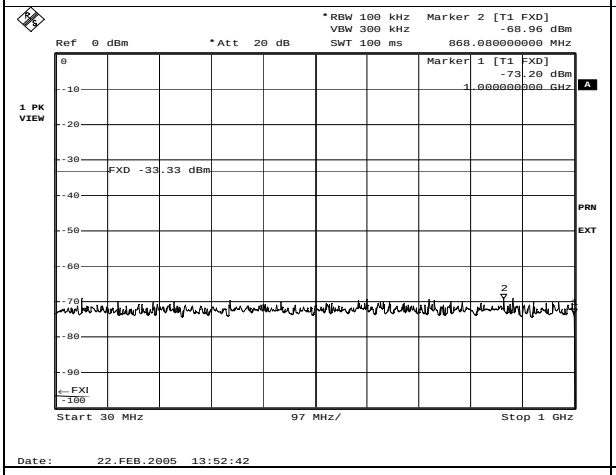
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11g 54Mbps Ch : Mid

30MHz-1GHz



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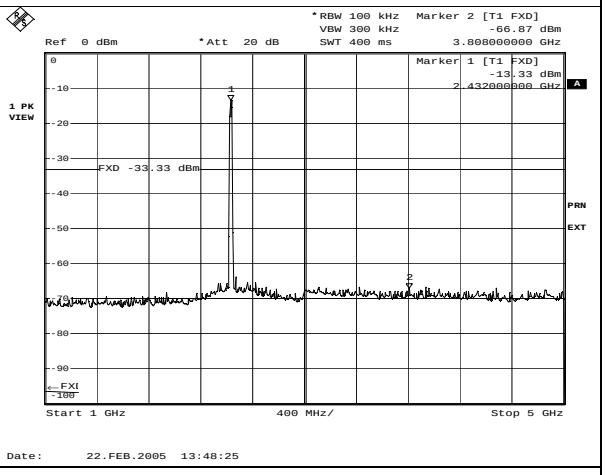
1GHz-5GHz



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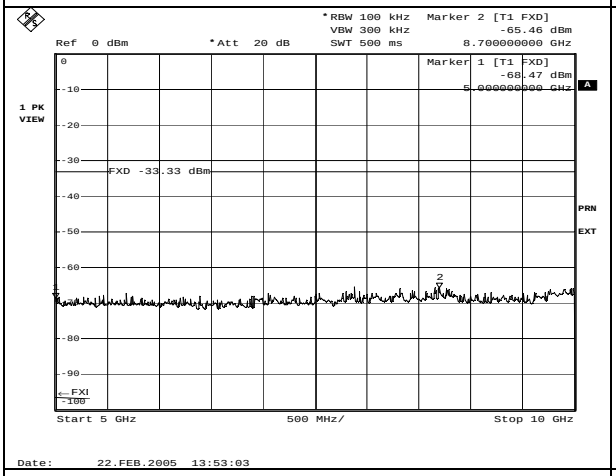
5GHz-10GHz



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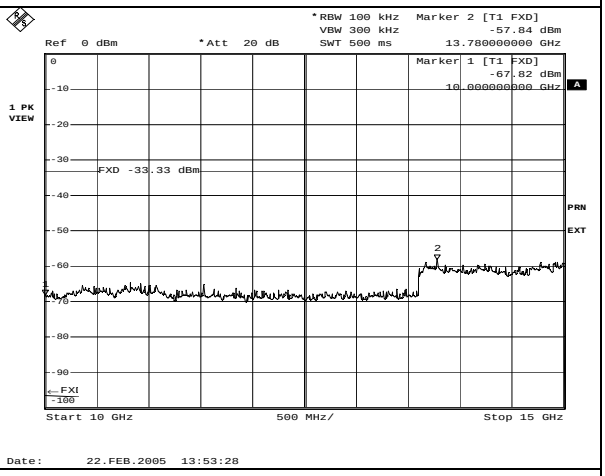
10GHz-15GHz



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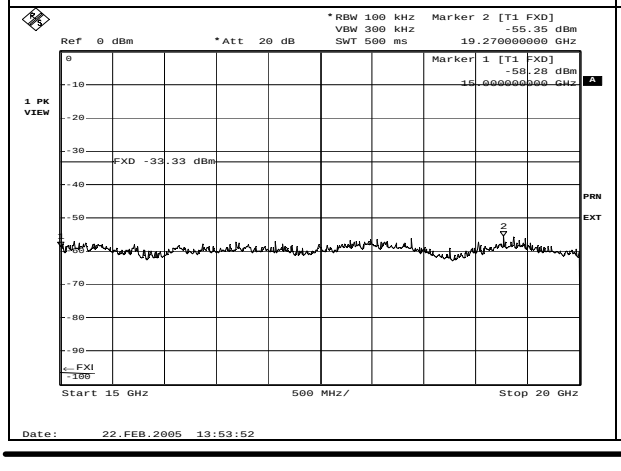
15GHz-20GHz



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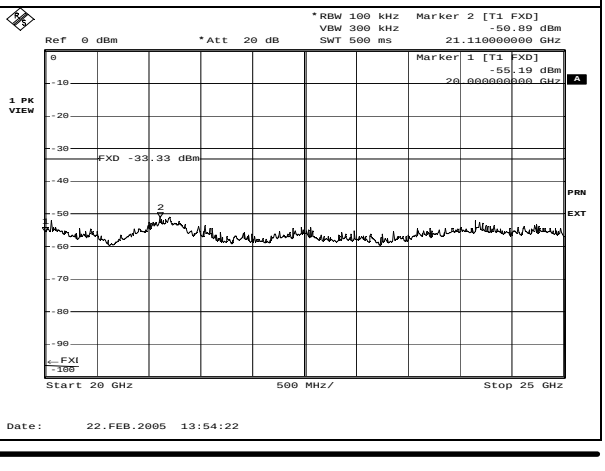
20GHz-25GHz



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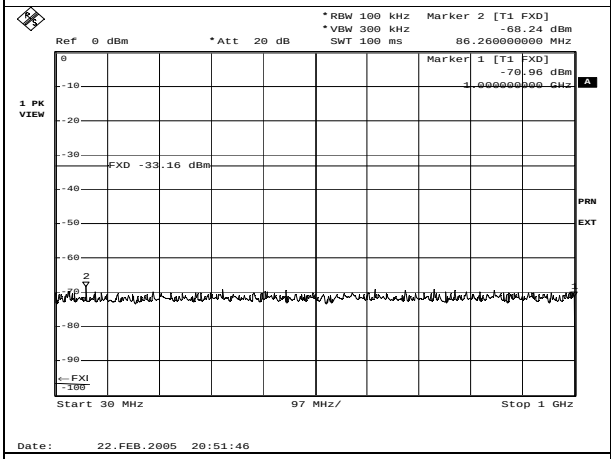
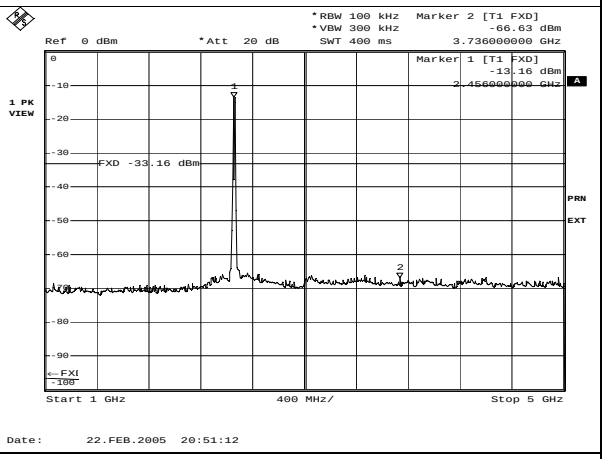
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11g 54Mbps Ch : High

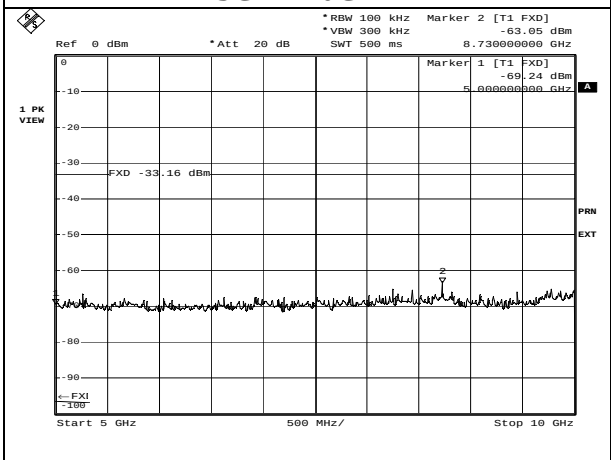
30MHz-1GHz



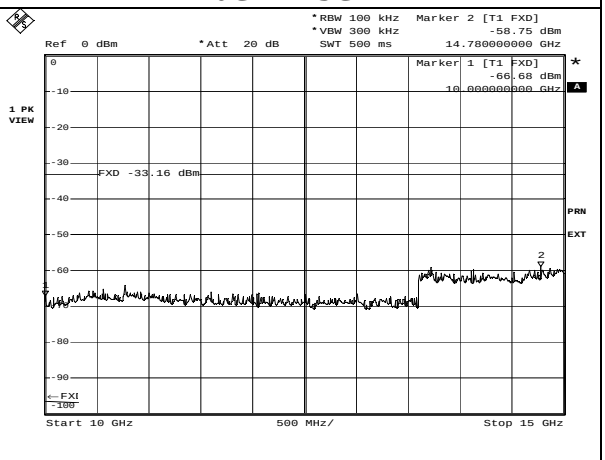
1GHz-5GHz



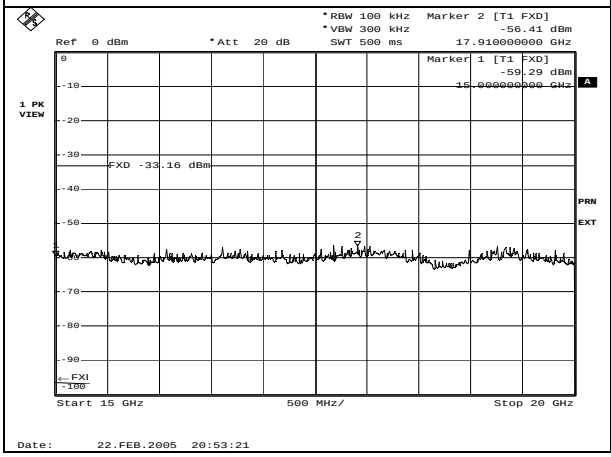
5GHz-10GHz



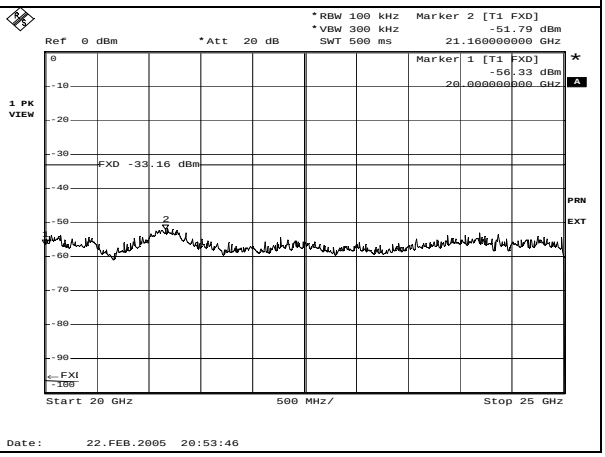
10GHz-15GHz



15GHz-20GHz



20GHz-25GHz



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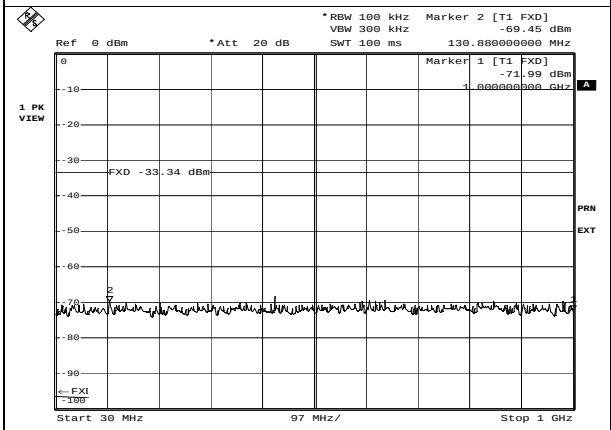
Conducted Spurious Emission(DSSS and other forms of modulation)

IEEE802.11g 12Mbps Ch : Low

30MHz-1GHz



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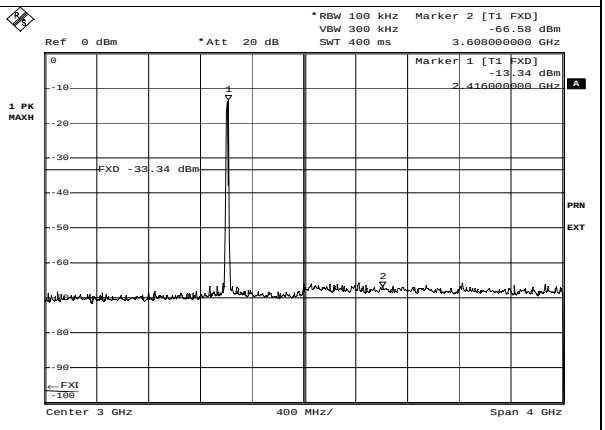
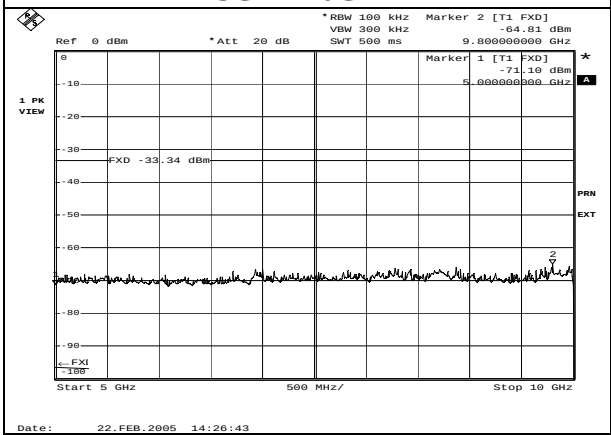
1GHz-5GHz



Date: 22.FEB.2005 14:10:47

5GHz-10GHz



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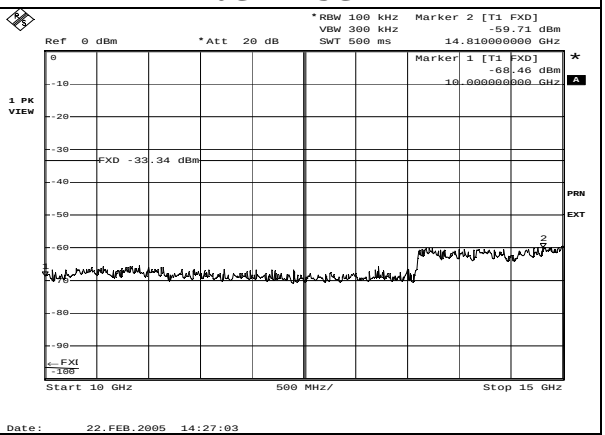
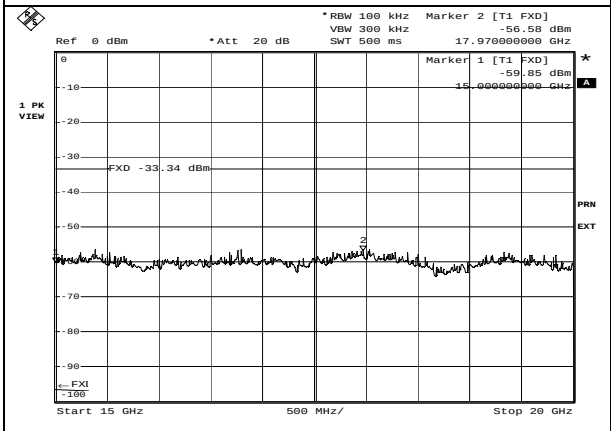
10GHz-15GHz



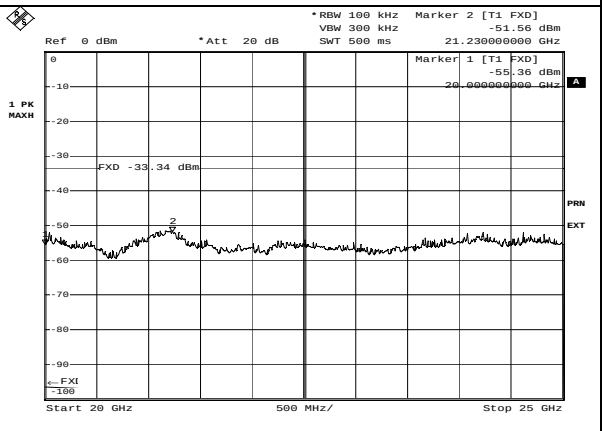
Date: 22.FEB.2005 14:27:03

15GHz-20GHz



Date: 22.FEB.2005 14:27:29

20GHz-25GHz



Date: 22.FEB.2005 14:27:48

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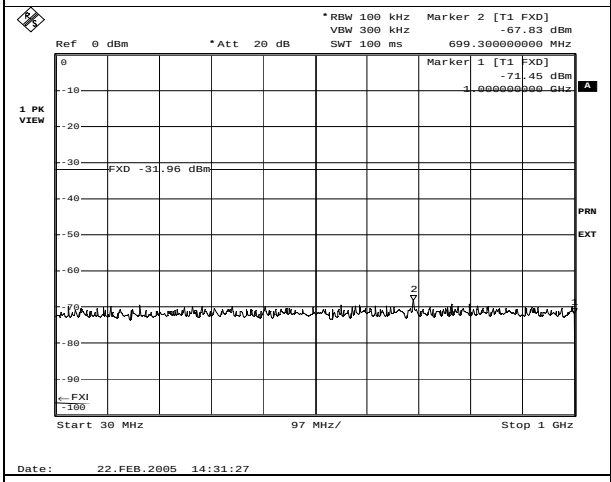
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11g 12Mbps Ch : Mid

30MHz-1GHz



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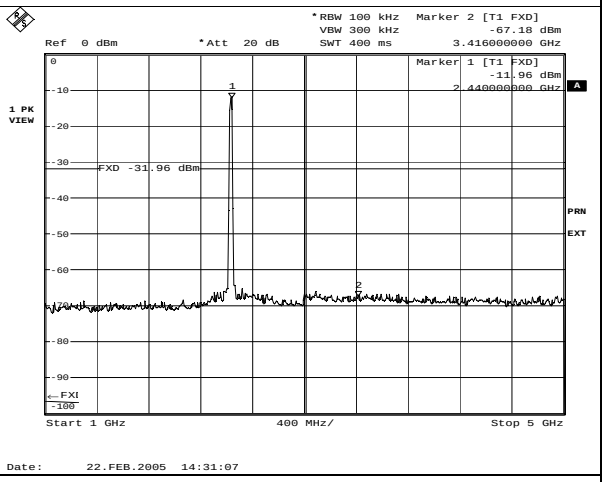
1GHz-5GHz



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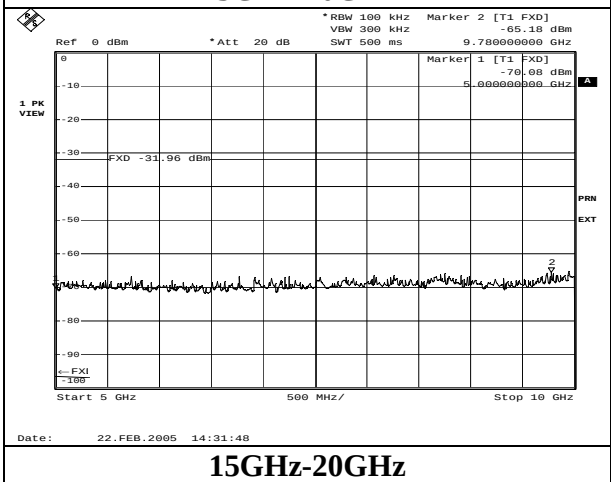
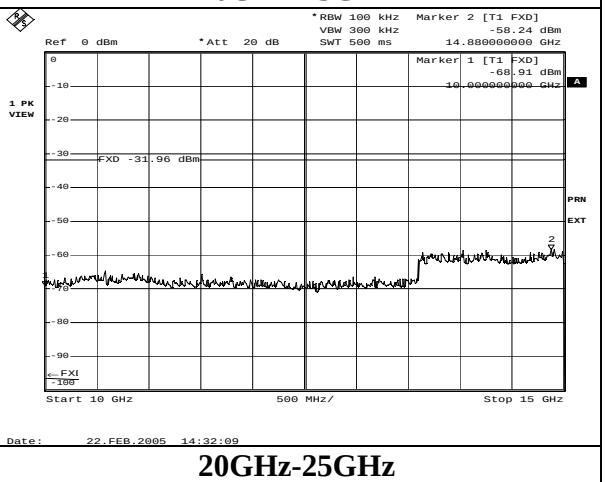
5GHz-10GHz



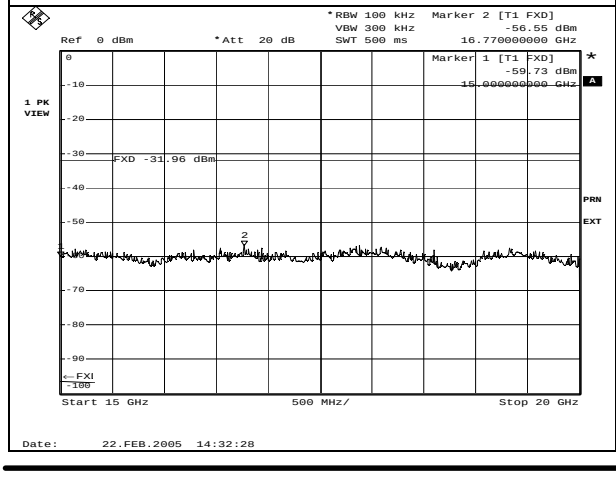
Date: 22.FEB.2005 14:31:48

10GHz-15GHz



Date: 22.FEB.2005 14:32:09

15GHz-20GHz



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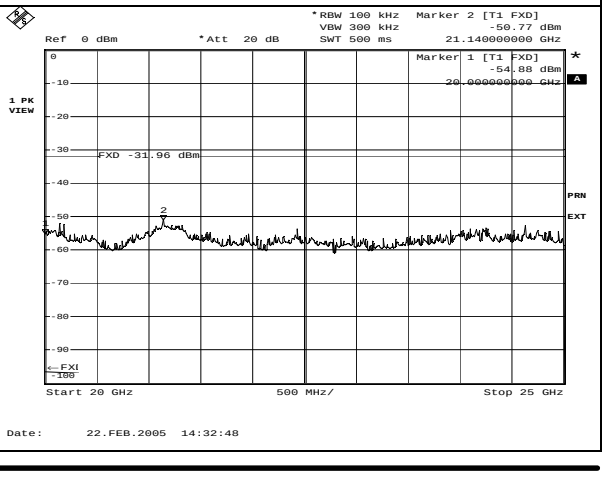
20GHz-25GHz



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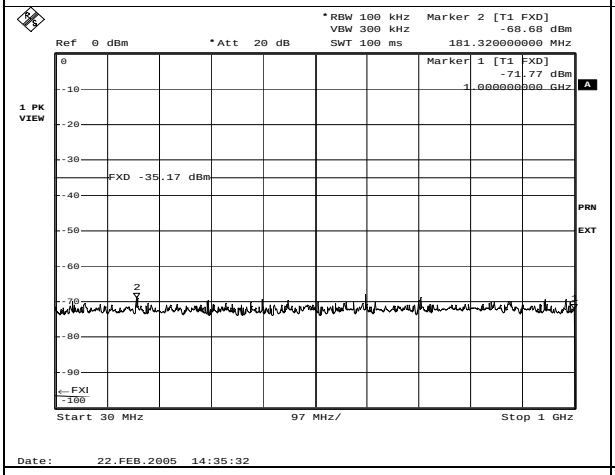
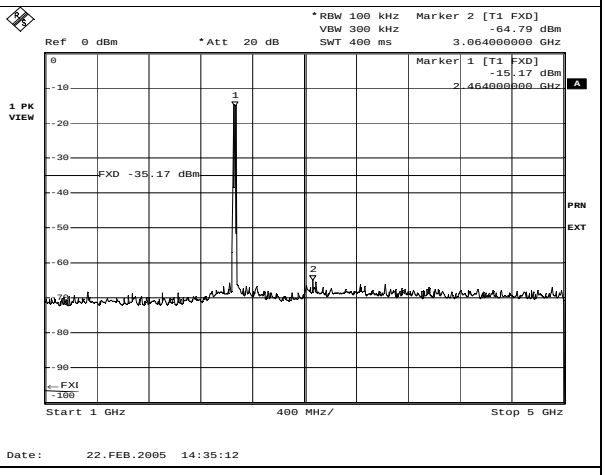
Conducted Spurious Emission(DSSS and other forms of modulation)
IEEE802.11g 12Mbps Ch : High

30MHz-1GHz



Date: 22.FEB.2005 14:35:32

1GHz-5GHz



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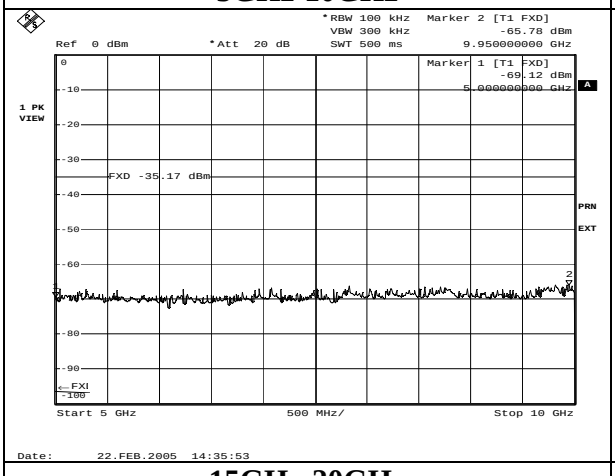
5GHz-10GHz



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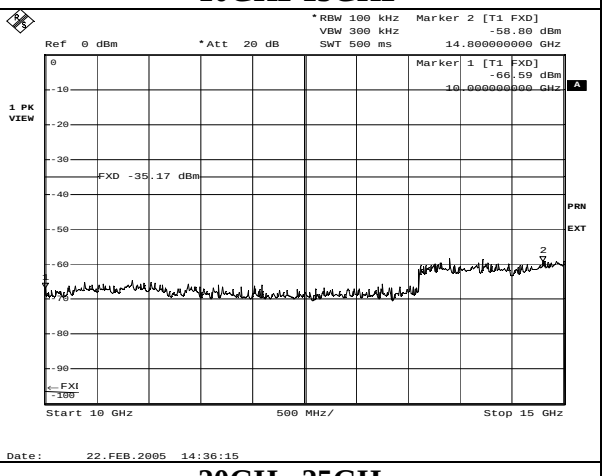
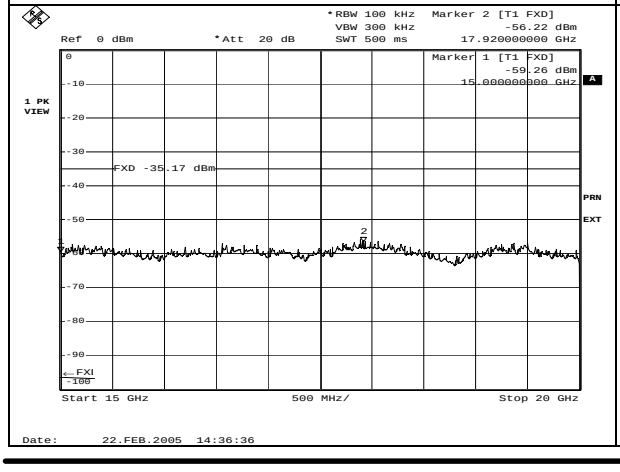
10GHz-15GHz



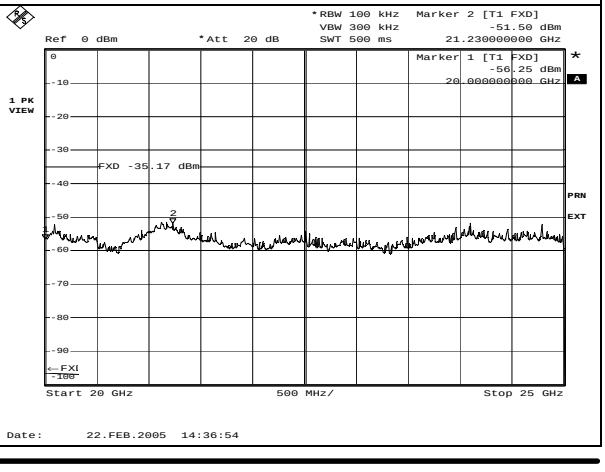
Date: 22.FEB.2005 14:36:15

15GHz-20GHz



Date: 22.FEB.2005 14:36:36

20GHz-25GHz



Date: 22.FEB.2005 14:36:54

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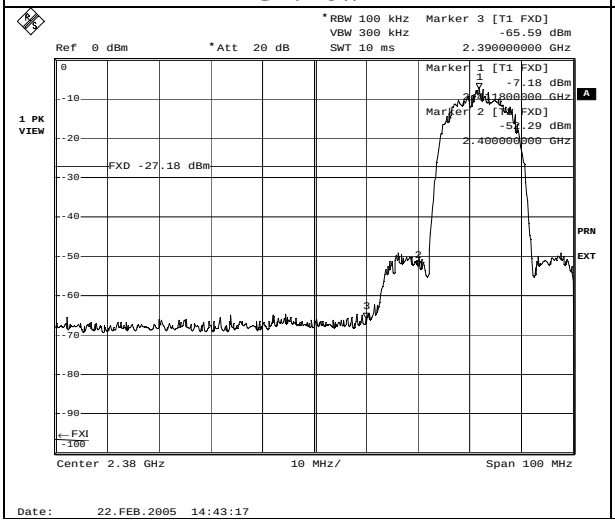
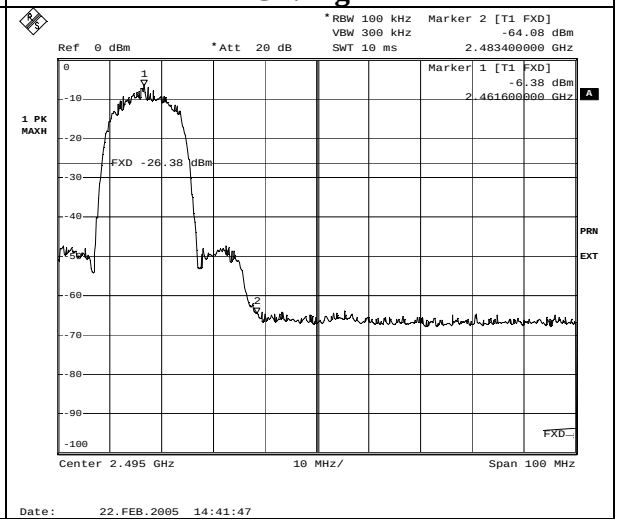
Conducted emission Band Edge compliance (DSSS and other forms of modulation)

IEEE802.11b 11Mbps

Ch:Low



Ch:High



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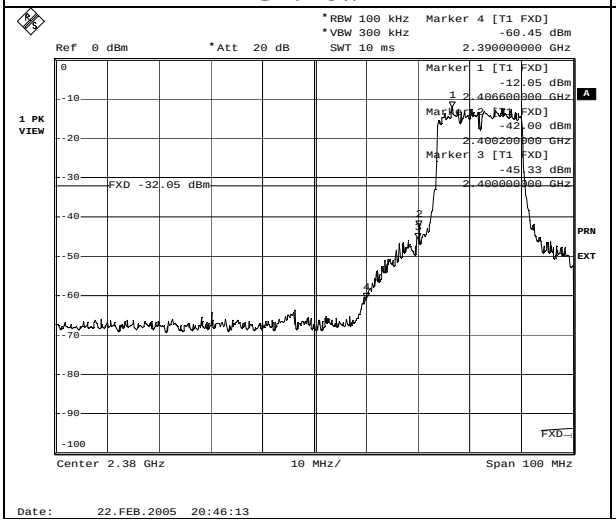
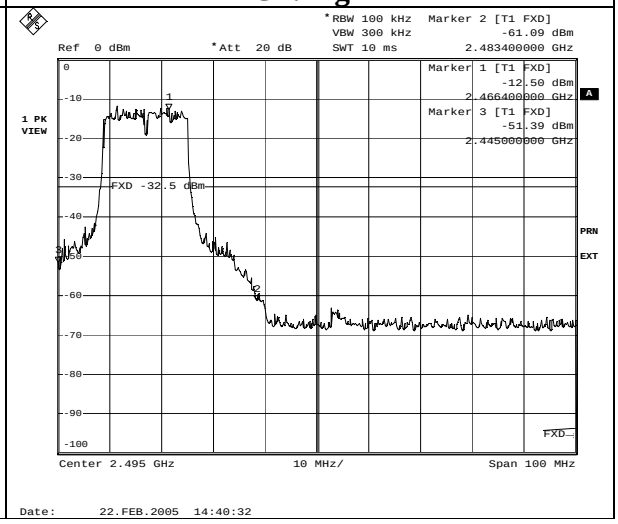
Conducted emission Band Edge compliance (DSSS and other forms of modulation)

IEEE802.11g 54Mbps

Ch:Low



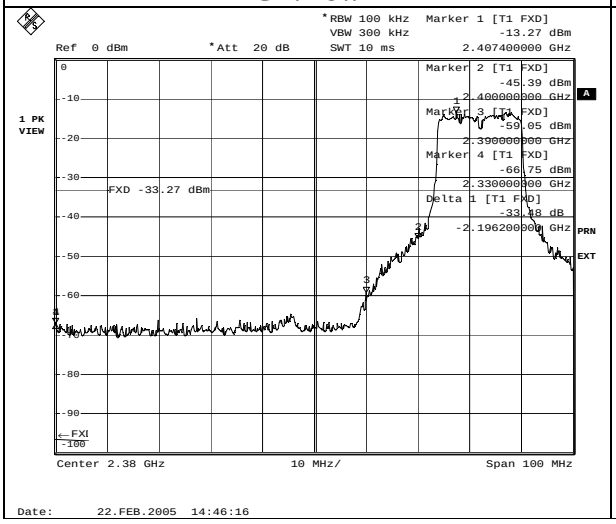
Ch:High



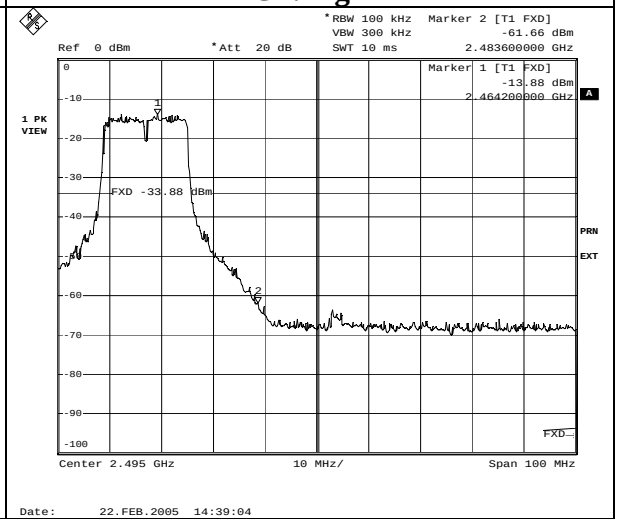
Conducted emission Band Edge compliance (DSSS and other forms of modulation)

IEEE802.11g 12Mbps

Ch:Low



Ch:High



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Power Density (DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Measurement Room

Company	: Matsushita Electric Industrial Co., Ltd.	REPORT NO	: 25EE0175-HO
Equipment	: Wireless LAN unit	REGULATION	: FCC 15.247(e)
Model	: TXANP07VKA1	TEST DISTANCE	: -
Sample No.	: 084821	DATE	: February 22. 2005
Power	: DC3.3V	TEMPERATURE	: 23deg.C
Mode	: Tx IEEE 802.11b/g	HUMIDITY	: 34%
		ENGINEER	: Hiroka Umeyama

[IEEE802.11b : 11Mbps]

Ch	Freq. [MHz]	Reading [dBm]	Cable [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-21.16	1.13	10.0	-10.0	8.0	18.0
Mid	2437.0	-20.76	1.13	10.0	-9.6	8.0	17.6
High	2462.0	-20.76	1.13	10.0	-9.6	8.0	17.6

[IEEE802.11g : 54Mbps]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-26.63	1.13	10.0	-15.5	8.0	23.5
Mid	2437.0	-26.15	1.13	10.0	-15.0	8.0	23.0
High	2462.0	-27.20	1.13	10.0	-16.1	8.0	24.1

[IEEE802.11g : 12Mbps]

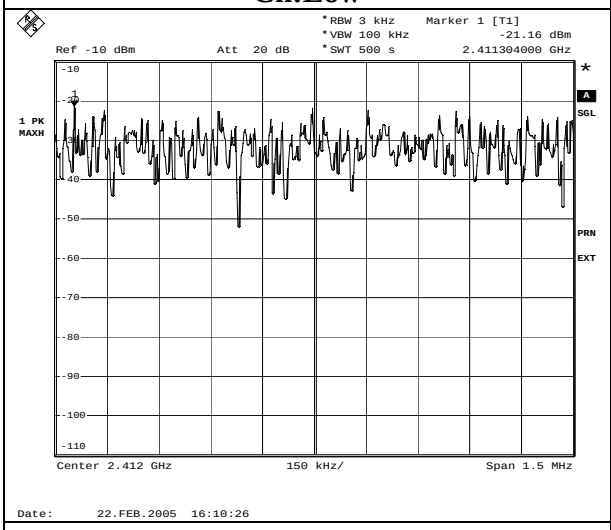
Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-26.87	1.13	10.0	-15.7	8.0	23.7
Mid	2437.0	-25.47	1.13	10.0	-14.3	8.0	22.3
High	2462.0	-27.58	1.13	10.0	-16.5	8.0	24.5

Sample Calculation:
Result = Reading + Cable Loss + Attenuator
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

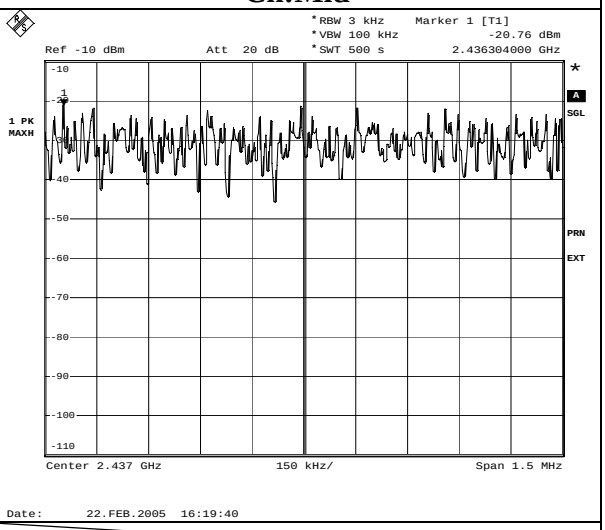
Power Density(DSSS and other forms of modulation)

IEEE802.11b 11Mbps

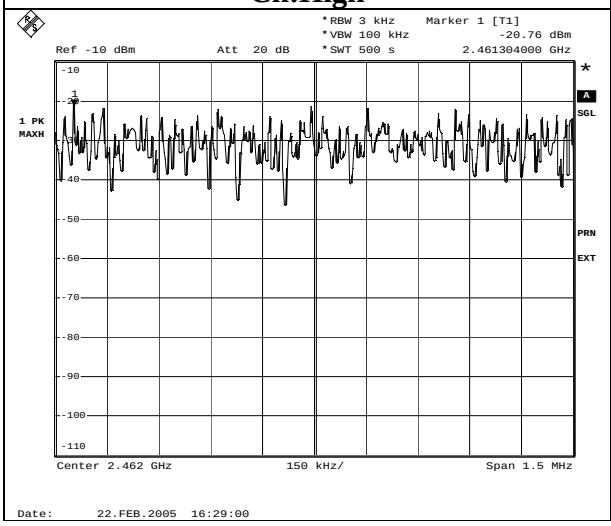
Ch:Low



Ch:Mid



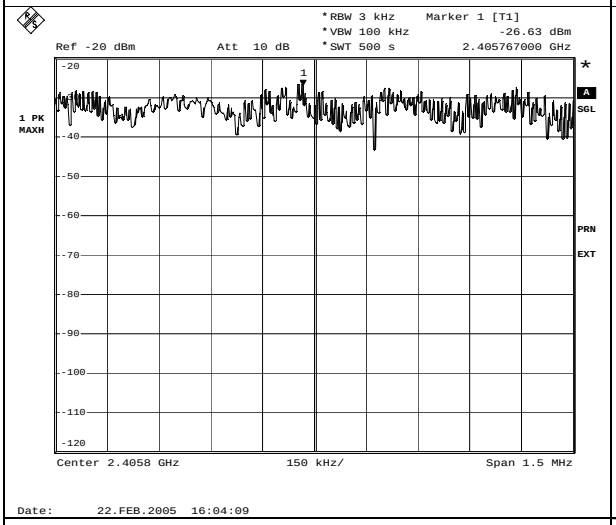
Ch:High



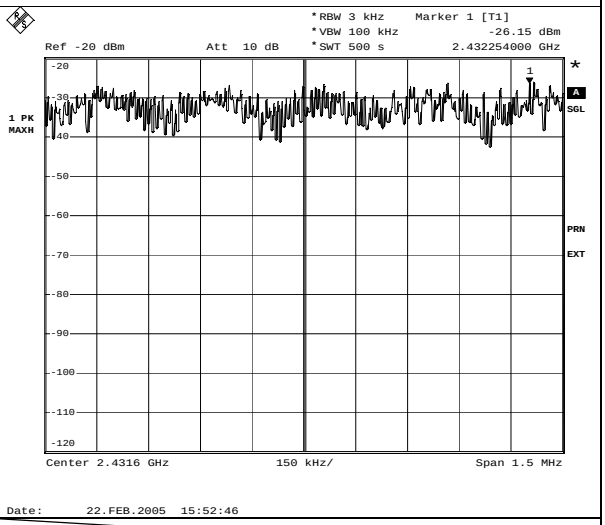
Power Density(DSSS and other forms of modulation)

IEEE802.11g 54Mbps

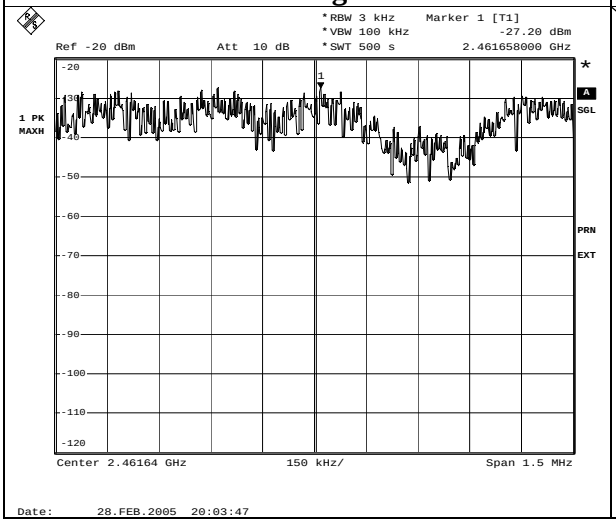
Ch:Low



Ch:Mid



Ch:High



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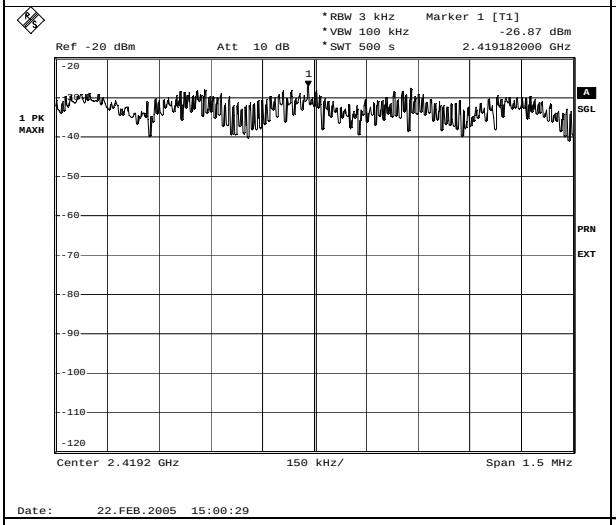
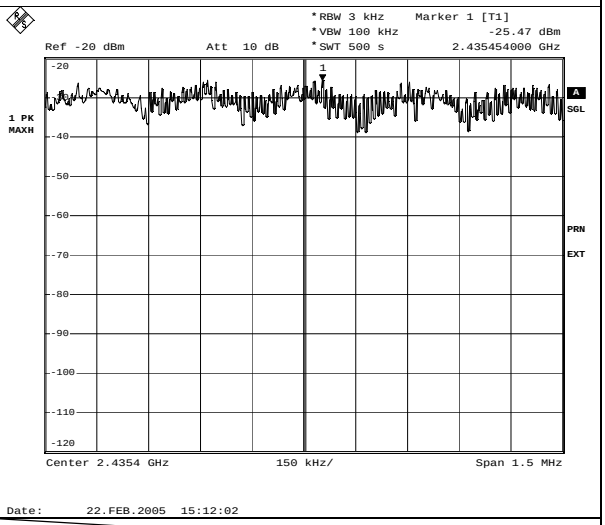
Power Density(DSSS and other forms of modulation)

IEEE802.11g 12Mbps

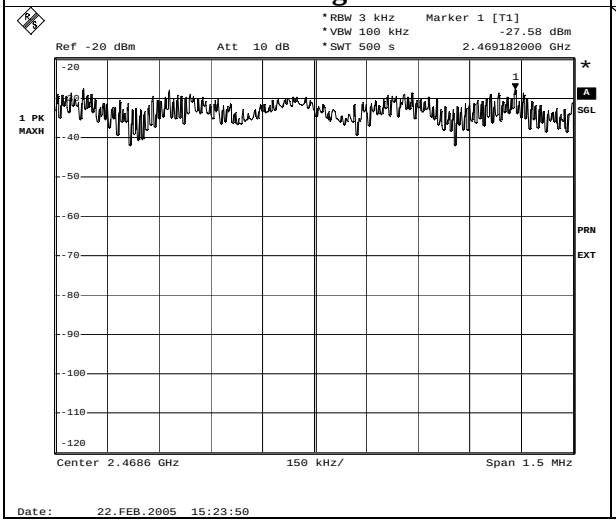
Ch:Low



Ch:Mid



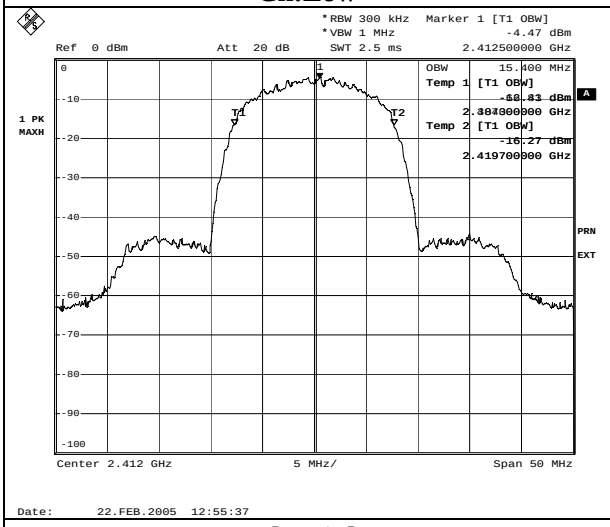
Ch:High



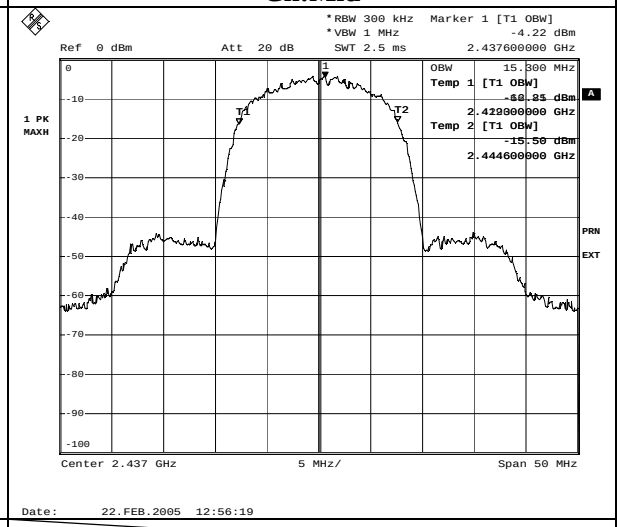
99%Occupied Bandwidth(DSSS and other forms of modulation)

IEEE802.11b 11Mbps

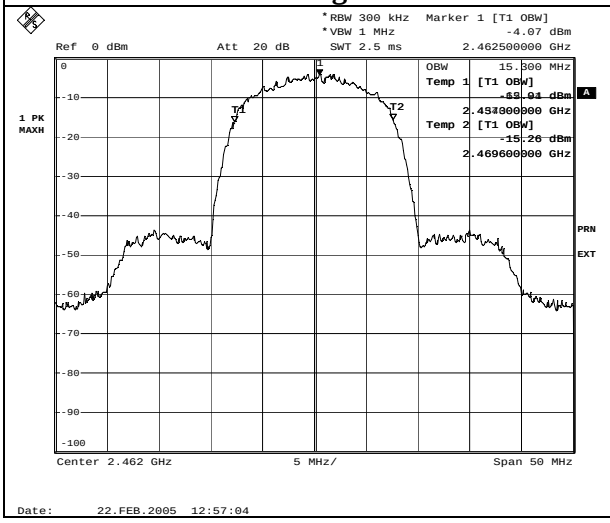
Ch:Low



Ch:Mid



Ch:High



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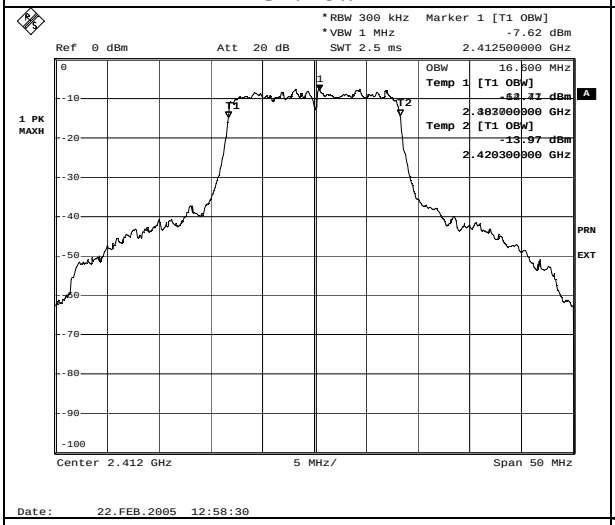
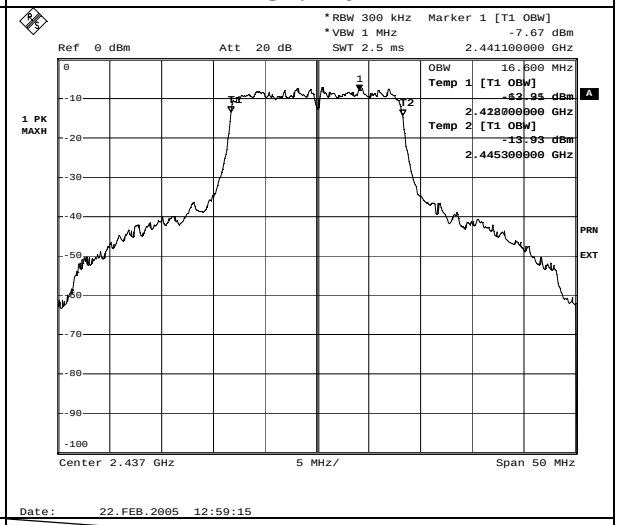
99%Occupied Bandwidth(DSSS and other forms of modulation)

IEEE802.11g 54Mbps

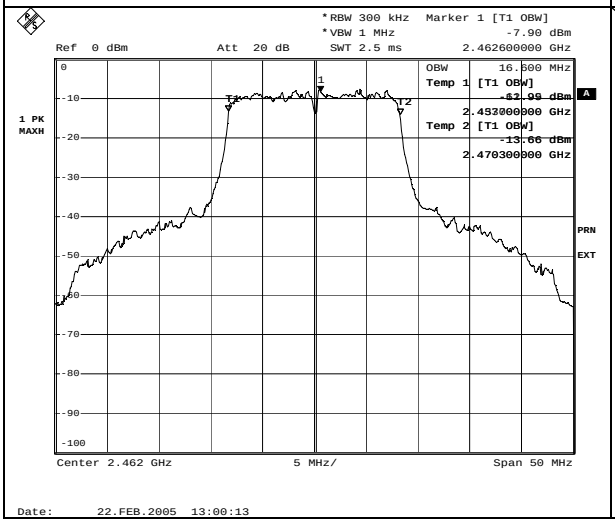
Ch:Low



Ch:Mid



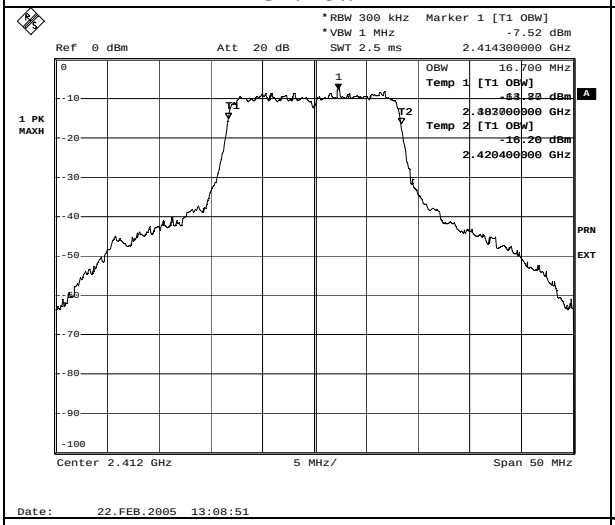
Ch:High



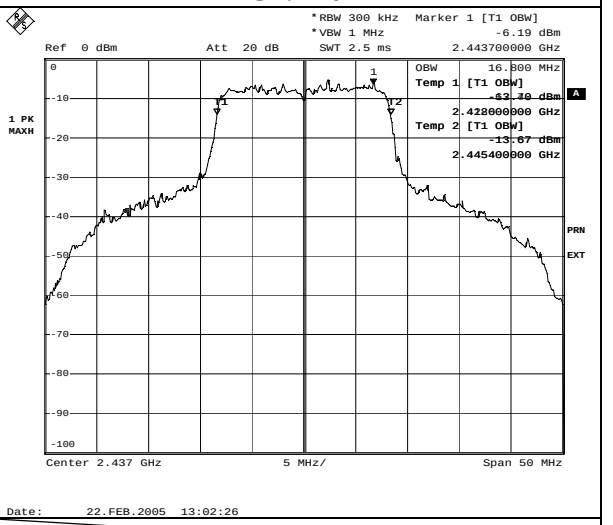
99%Occupied Bandwidth(DSSS and other forms of modulation)

IEEE802.11g 12Mbps

Ch:Low



Ch:Mid



Ch:High