TEST REPORT

Test Report No.: 10086FC

Applicant	:	TAIYO YUDEN Co., Ltd.
EUT	:	Wireless LAN Module
Model No.	:	WYSAAVDX7
Serial No.	:	1 (Conducted RF Test via Antenna Terminal)
		3 (Radiated Emission Test and Conducted Emission Test)
Issue Date	:	9 May 2011
Date of Test	:	1, 4, 6-8, April 2011 (Conducted RF Test via Antenna Terminal)
		5-8, 12, 13 April 2011 (Radiated Emission Test)
		18 April 2011 (Conducted Emission Test)
Standard	:	FCC Part 15 Subpart C
		ANSI C63.4: 2003
		KDB doc. No. 558074 "Measurement of Digital Transmission System Operating under § 15.247 (23 March 2005)"
		PUBLIC NOTICE DA 00-1407
Test Results	:	Pass

Approved By: 2011.5.9
Manager / Jiro Ogiwara

Reviewed By: 2011.5.9
/ Takeshi Matsumura

NVLAP LAB CODE 200607-0

: 2011.5.9
/ Yukihito Minegishi

Tested By: 2011.5.9
/ Masashi Tsukui

: 2011.5.9
/ Yukihito Minegishi

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Revised Record

Revised Record					
Number of Revised Time	Mark	Issue Date	Person in Charge	Detail of Revision	Approved By
Initial	-	9 May 2011	Masashi Tsukui	-	Jiro Ogiwara

1 Notice

1.1 General Information

TAIYO YUDEN CO., LTD. EMC Center.
5607-2, Nakamuroda-machi, Takasaki-shi, Gunma, 370-3347, Japan.

1. This laboratory is accredited as an ISO/IEC 17025:2005 testing facility by NVLAP. (NVLAP LAB CODE: 200607-0). Refer the certificate of the accreditation to Appendix 1.

2. This laboratory is listed by the Federal Communications Commission, Equipment Authorization Division (Registration Number: 606514) and listed by Industry Canada (No.4389A-1).

3. We hereby certify that no party to the applications authorized hereunder is subject to a denial of benefits, including FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C 853(a).

1.2 Test Report

1. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government.

2. The test results in this report relate only to the tested samples.

3. This report shall not be reproduced except in full, without the written approval of the TAIYO YUDEN CO., LTD. EMC Center.

4. The test results in this report are traceable to international standards.

5. The tests described in this report were conducted only within the accredited scope.

1.3 Test Condition

1. FCC 47CFR, Part 15 Subpart C regulation tests were performed in the shielded room, and radiated emission test was performed on the 10m semi-anechoic chamber located at TAIYO YUDEN CO., LTD. EMC Center, 5607-2 Nakamuroda-machi, Takaski-shi, Gunma, 370-3347 Japan.

2. The EUT was not modified for the tests described in this report.

3. The tests described in this report were conducted according to the methods in the test specification.

4. Special accessories or peripheral equipments specific to the EUT were not used for the tests described in this report.

2 Applicant Information

2.1 Customer Information

Company Name	TAIYO YUDEN Co., Ltd.
Address	8-1,Sakae-cho,Takasaki-shi,Gunma 370-8522,Japan

2.2 Product Description

EUT	Wireless LAN Module
Model No.	WYSAAVDX7
Serial No.	1 (Conducted RF Test via Antenna Terminal) 3 (Radiated Emission Test and Conducted Emission Test)
FCC ID	RYYWYSAAVDX7
Production Stage	Pre-Production
Type of Wide Band Modulation	IEEE 802.11b: DSSS, IEEE 802.11g/n: OFDM
Type of Modulation	DBPSK (1Mbps), DQPSK (2Mbps) and CCK (5.5/11Mbps) for 11b
	BPSK (6/9Mbps), QPSK (12/18Mbps), 16QAM (24/36Mbps) and 64QAM (48/54Mbps) for 11g
	BPSK (6.5/7.2Mbps), QPSK (13/14.4/19.5/21.7Mbps), 16QAM (26/28.9/39/43.3Mbps) and 64QAM (52/57.8/58.5/65/72.2Mbps) for 11n (BW*[1]: 20MHz)
	BPSK (13.5/15Mbps), QPSK (27/30/40.5/45Mbps), 16QAM (54/60/81/90Mbps) and 64QAM (108/120/121.5/135/150Mbps) for 11n (BW*[1]: 40MHz)
ITU Code	D1D, G1D
Power Supply	DC 5.00V
Operating Voltage Range	DC 3.50V Min. DC 5.50V Max.
Operating Temperature Range	-20.0 degree C Min. 55.0 degree C Max.
Dimensions of EUT	W 35.0mm * L 15.0mm * H 2.9mm
Antenna Type	Monopole
Max Antenna Gain	0.90dBi
Operating Clocks	38.4MHz.
Receipt Date of Tested Sample	11 March 2011 (Conducted RF Test via Antenna Terminal) 28 March 2011 (Radiated Emission Test and Conducted Emission Test)

*[1]: Bandwidth

This EUT is Wireless LAN Module
EUT operates in the unlicensed 2.4GHz ISM (Industrial Scientific Medical) band.

2.3 Summary of Test and Inspection Result

No.	Item	Test Procedure	Specification	Remarks	Tested	Worst Margin	Results
1	AC Powerline Conducted Emission	ANSI C63.4: 2003 *1	FCC 15.207	Conducted Emission Test	Performed	Peak 16.2 dB Average 6.8 dB Transmitting Mode: 2452MHz Type of Modulation IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps) Frequency: 16.59047MHz Line Phase: L2	Pass
2	6dB Bandwidth		FCC 15.247(a)(2)	Conducted RF Test via Antenna Terminal	Performed	-	Pass
3	Maximum Peak Output Power		FCC 15.247(b)(3)		Performed	-	Pass
4	Band Edge Compliance		FCC 15.247(d)		Performed	-	Pass
5	Spurious RF Conducted Emission		FCC 15.247(d)		Performed	-	Pass
6	Radiated Emission		FCC 15.247(d)	Radiated Emission Test	Performed	Peak 0.5 dB Average18.5 dB Transmitting Mode: 2462MHz Type of Modulation IEEE 802.11b: DBPSK (1Mbps) Frequency: 2483.500MHz Axial Direction: XY-Plane Antenna Polarization: Horizontal	Pass
7	Peak Power Spectral Density		FCC 15.247(e)	Conducted RF Test via Antenna Terminal	Performed	-	Pass

*1: These tests were also referred to KDB doc. No. 558074 “Measurement of Digital Transmission Systems Operating under Section 15.247” (23 March 2005).

3 System Test Configuration

3.1 Justification

1. Emission tests were performed with no deviation from the ANSI C63.4: 2003 and FCC 47CFR, Part 15, Section 15.247 regulation tests were performed with no deviation from the FCC KDB doc. No. 558074 “Measurement of Digital Transmission Systems Operating under Section 15.247” (23 March 2005) and Public Notice DA00-1407 released June 26, 2000.

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

3. Radiate testing in the range of 1GHz to 25GHz was investigated with the spectrum (peak detector function) under the FCC regulation section 15.209 (e) and 15.35 (b). Radiate testing in the range of 18GHz to 25GHz performed at an antenna to EUT distance of 1m. The level of any unwanted emissions from EUT did not exceed the level of the fundamental emission (Compliance with 15.209 (c)). And test result found to be compliance with FCC regulation section 15.209 (a) Radiated emission limits (500uV/m). Data is presented for the “worst case” measurements, that EUT was normal operated.

4. Radiate testing in the range of 30MHz to 1000MHz was performed at an antenna to EUT distance of 3m under the 15.209 (e) and 15.31(f)(1).

5. Tests were performed with the representative channel operation as follows.

   IEEE 802.11b, 802.11g and 11n (BW: 20MHz)

   a. Lowest Frequency channel: 1ch 2412MHz
   b. Middle Frequency channel: 6ch 2437MHz
   c. Highest Frequency channel: 11ch 2462MHz

   IEEE 802.11n (BW: 40MHz)

   a. Lowest Frequency channel: 3ch 2422MHz
   b. Middle Frequency channel: 6ch 2437MHz
   c. Highest Frequency channel: 9ch 2452MHz

3.2 Operating Modes

Transmitting Mode

Type of Modulation		IEEE 802.11b: DBPSK (1Mbps)
		IEEE 802.11g: BPSK (6Mbps)
		IEEE 802.11n (20MHz): BPSK (6.5Mbps)
		IEEE 802.11n (40MHz): BPSK (13.5Mbps)
Representative Channel	IEEE 802.11b IEEE 802.11g IEEE 802.11n (BW: 20MHz)	1ch 2412MHz (Lowest Frequency Channel)
		6ch 2437MHz (Middle Frequency Channel)
		11ch 2462MHz (Highest Frequency Channel)
	IEEE 802.11n (BW: 40MHz)	3ch 2422MHz (Lowest Frequency Channel)
		6ch 2437MHz (Middle Frequency Channel)
		9ch 2452MHz (Highest Frequency Channel)
Transmission wave		Burst wave (Radiated Emission Test and Conducted Emission Test) Continuous wave (Conducted RF Test via Antenna Terminal)

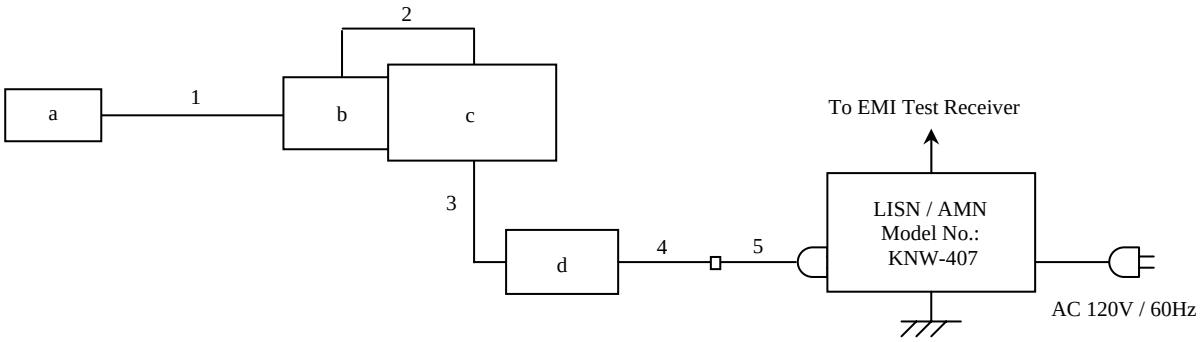
Remarks:

Software (Controller): Labtools Ver.MFG-8787-WIFI-SD-BT-SD-WIN-X86-1.2.6.2214.0.3.p155 software supplied by Marvell Semiconductor Inc was used to set up the Wireless LAN operating mode.

3.3 Configuration of Tested System

(1) Conducted Emission Test

These numbers and the marks in the picture are corresponding to the numbers and the marks in tables shown.
Power Supply of EUT: DC 5.00V from Note PC "c".



List of EUT and Accessories

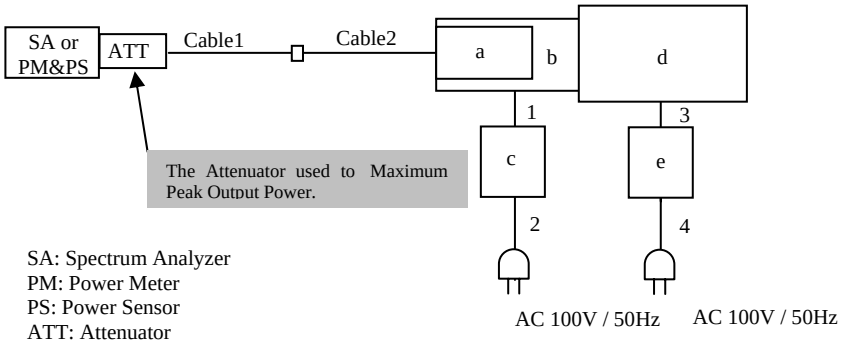
	Product Name	Model No.	Serial No.	Manufacturer	EUT / Accessory	FCC ID / DoC
a	Wireless LAN Module	WYSAAVDX7	3	TAIYO YUDEN	EUT	RYYWYSAAVDX7
b	Supporting Equipment	TE8048	12	TAIYO YUDEN	Accessory	-
c	Note PC	PP09S	EMC01	DELL	Accessory	DoC
d	AC Adapter for Note PC	FA65NS0-00	73245-85V-8656	DELL	Accessory	-

Interface Cables

	Cable Type	Model No.	Shielded	Ferrite Core	Length	Treatment for the Extra Length
1	Bus Cable	-	No	No	0.18m	-
2	Dedicated Cable	-	No	No	0.38m	-
3	DC Cable	-	Yes	Yes	1.95m	-
4	AC Cable	-	No	No	0.90m	Fold back and forth in the center
5	AC extension cable	-	No	No	5.00m	Fold back and forth in the center

(2) Conducted RF Test via Antenna Terminal

These numbers and the marks in the picture are corresponding to the numbers and the marks in tables shown.
Power Supply of EUT: DC 5.00V from Regulated DC Power Supply "c".



SA: Spectrum Analyzer
PM: Power Meter
PS: Power Sensor
ATT: Attenuator

List of EUT and Accessories

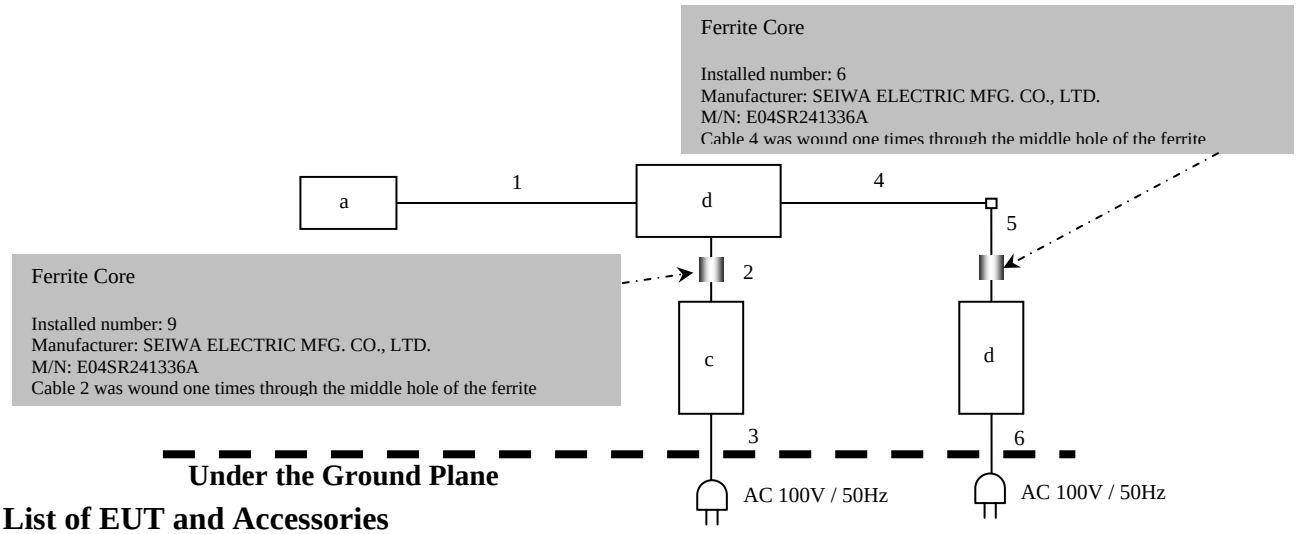
	Product Name	Model No.	Serial No.	Manufacturer	EUT / Accessory	FCC ID / DoC
a	Wireless LAN Module	WYSAAVDX7	1	TAIYO YUDEN	EUT	RYYWYSAAVDX7
b	Supporting Equipment	TE8048	5	TAIYO YUDEN	Accessory	-
c	Regulated DC Power Supply	PMC18-3A	FB000315	KIKUSUI	Accessory	-
d	Note PC	Pavilion dv9000	CNF7242VL	HP	Accessory	-
e	AC Adapter for Note PC	PPP012L-S	7509215001	HP	Accessory	-

Interface Cables

	Cable Type	Model No.	Shielded	Ferrite Core	Length	Treatment for the Extra Length
1	DC Cable	-	No	No	0.45m	-
2	AC Cable	-	No	No	2.30m	-
3	DC Cable	-	Yes	Yes	1.86m	-
4	AC Cable	-	No	No	1.80m	-

(3) Radiated Emission Test

These numbers and the marks in the picture are corresponding to the numbers and the marks in tables shown.
Power Supply of EUT: DC 5.00V from Regulated DC Power Supply "c".
DC 3.30V*1 from Regulated DC Power Supply "d".
*1: This voltage is applied to maintain the test mode according to customer's requests (the voltage is originally supplied from PCs). This voltage is utilized to decide the amplitude of the Interface voltage. Therefore there is no influence on test results by applying this voltage.



List of EUT and Accessories

	Product Name	Model No.	Serial No.	Manufacturer	EUT / Accessory	FCC ID / DoC
a	Wireless LAN Module	WYSAAVDX7	3	TAIYO YUDEN	EUT	RYYWYSAAVDX7
b	Supporting Equipment	TE8048	12	TAIYO YUDEN	Accessory	-
c	Regulated DC Power Supply	PA18-3A	6010074	KENWOOD	Accessory	-
d	Regulated DC Power Supply	PMC18-5A	NE001553	KIKUSUI	Accessory	-

Interface Cables

	Cable Type	Model No.	Shielded	Ferrite Core	Length	Notes
1	Bus Cable	-	No	No	0.18m	
2	DC Cable	-	No	No	0.50m	
3	AC Cable	-	No	No	1.98m	
4	DC Cable	-	No	No	0.58m	
5	DC Cable	-	No	No	0.43m	
6	AC Cable	-	No	No	2.48m	

3.4 Test Instruments

About test instruments for all tests, please refer to appendix 3.

4 Antenna Requirement

The EUT provides a permanently attached antenna and it was found to be compliant with FCC regulation section 15.203.

Antenna Type	Monopole
Antenna Gain	0.90dBi

5 AC Powerline Conducted Emission

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available data rates.

5.1 Test Setup

Conducted emission measurements were performed from 150kHz to 30MHz.
The test setup was made according to ANSI STD C63.4: 2003 clause 7 in the Shielded room.
The rear of non-conductive wooden table top was placed 0.4m from a vertical metal reference plane that one of the wall.
Rears of the peripherals were all aligned and flush with rear of non-conductive wooden tabletop.
The height of this table was 0.8m and 1.5m wide x 1.0m deep size.
The spacing between the each equipment was 10cm.
Connection of the PC connected EUT USB Adaptor to the Artificial Mains Network (AMN)/ Line Impedance Stabilization Network (LISN) was required.
The distance between the closet surface of the EUT and the closet surface of the AMN (LISN) was 0.8m.
Connection of the all other equipment to the second AMN (LISN) was required. The distance between the peripherals and the closet surface of the second AMN (LISN) was minimum 0.8m.
The second artificial mains network is terminated with 50 ohm terminator.
Where a mains flexible cord is provided by the manufacture this is 2.0m long and excess cable was folded back and forth as far as possible to 0.8m so as to from a bundle not exceeding 0.4 m in length.
Interconnecting cables of table top equipment that hang closer than 0.4m to the floor ground plane were folded back and forth forming a bundle 30 to 40cm long, hanging approximately in the middle between ground plane and table.
The measurement has been conducted with both L1 (Neutral) and L2 (Line) power supply polarization.
The maximum voltage emission was verified with the cable routing and the location of the peripherals.
The highest voltage emission has been recorded.
For further description of the configuration refer to separate document named “Test Setup Photos (10086FC)”.

Test Receiver Setting:

150kHz~30MHz:

Detector Mode	Quasi-Peak and Average
Bandwidth	10kHz

5.2 Conducted Emission Calculation

The basic equation with a sample calculation is as follows:

c.f. = CF + AL
CE = RA + c.f.

Where	c.f.	:	Correction Factor [dB]
	CE	:	Conducted Emission (Emission Level - Result) [dBuV]
	RA	:	Receiver Amplitude (Reading Level) [dBuV]
	CF	:	Cable Attenuation Loss [dB]
	AL	:	Attenuator Loss [dB]

Assume a receiver reading of 40.8dBuV is obtained.
The Factor of 3.4dB is added, giving a terminal voltage of 44.2dBuV. The 44.2dBuV value was mathematically converted to its corresponding level in uV.

CE = 40.8 + 3.4 = 44.2dBuV

Level in uV = Common Antilogarithm: 10 ^ (44.2 / 20) = 162.2uV

5.3 Test Results

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	3	Test Standard	:	FCC Part15 Subpart C §15.207
Power Supply	:	DC 5.00V	Temp. / Humid.	:	18.8 degree C / 41.4%
Operator	:	Masashi Tsukui			
Remark	:	Transmitting Mode			
		IEEE 802.11b: DBPSK (1Mbps)			

AC Powerline Conducted Emission: Lch (2412MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17679	L1	41.5	18.5	3.4	44.9	21.9	64.6	54.6	19.7	32.7	
3.73119	L1	23.9	11.4	3.3	27.2	14.7	56.0	46.0	28.8	31.3	
16.5899	L1	31.0	30.1	4.0	35.0	34.1	60.0	50.0	25.0	15.9	
0.19895	L2	39.8	21.9	3.4	43.2	25.3	63.7	53.7	20.5	28.4	
3.72447	L2	25.7	10.8	3.3	29.0	14.1	56.0	46.0	27.0	31.9	
16.62267	L2	39.0	38.4	3.8	42.8	42.2	60.0	50.0	17.2	7.8	

AC Powerline Conducted Emission: Mch (2437MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17597	L1	41.5	16.3	3.4	44.9	19.7	64.7	54.7	19.8	35.0	
3.6199	L1	25.0	14.2	3.3	28.3	17.5	56.0	46.0	27.7	28.5	
16.58977	L1	30.9	30.0	4.0	34.9	34.0	60.0	50.0	25.1	16.0	
0.18081	L2	40.8	20.4	3.4	44.2	23.8	64.4	54.4	20.2	30.6	
3.92537	L2	25.4	13.3	3.4	28.8	16.7	56.0	46.0	27.2	29.3	
16.59142	L2	33.4	33.3	3.8	37.2	37.1	60.0	50.0	22.8	12.9	

AC Powerline Conducted Emission: Hch (2462MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.183	L1	40.7	18.5	3.4	44.1	21.9	64.3	54.3	20.2	32.4	
3.57016	L1	25.4	15.2	3.3	28.7	18.5	56.0	46.0	27.3	27.5	
16.6228	L1	36.4	35.8	4.0	40.4	39.8	60.0	50.0	19.6	10.2	
0.17477	L2	40.7	17.3	3.4	44.1	20.7	64.7	54.7	20.6	34.0	
3.94191	L2	26.7	13.2	3.4	30.1	16.6	56.0	46.0	25.9	29.4	
16.62329	L2	38.9	38.7	3.8	42.7	42.5	60.0	50.0	17.3	7.5	

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	3	Test Standard	:	FCC Part15 Subpart C §15.207
Power Supply	:	DC 5.00V	Temp. / Humid.	:	18.8 degree C / 41.4%
Operator	:	Masashi Tsukui			
Remark	:	Transmitting Mode			
		IEEE 802.11g: BPSK (6Mbps)			

AC Powerline Conducted Emission: Lch (2412MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17654	L1	41.1	16.9	3.4	44.5	20.3	64.6	54.6	20.1	34.3	
3.57012	L1	26.1	15.1	3.3	29.4	18.4	56.0	46.0	26.6	27.6	
16.59097	L1	30.9	30.4	4.0	34.9	34.4	60.0	50.0	25.1	15.6	
0.17577	L2	41.3	18.0	3.4	44.7	21.4	64.7	54.7	20.0	33.3	
3.57469	L2	24.8	13.6	3.3	28.1	16.9	56.0	46.0	27.9	29.1	
16.5908	L2	33.4	32.9	3.8	37.2	36.7	60.0	50.0	22.8	13.3	

AC Powerline Conducted Emission: Mch (2437MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17936	L1	40.6	19.4	3.4	44.0	22.8	64.5	54.5	20.5	31.7	
3.84699	L1	22.8	10.2	3.4	26.2	13.6	56.0	46.0	29.8	32.4	
16.59129	L1	30.8	30.3	4.0	34.8	34.3	60.0	50.0	25.2	15.7	
0.17471	L2	38.8	17.3	3.4	42.2	20.7	64.7	54.7	22.5	34.0	
3.87936	L2	21.8	9.3	3.4	25.2	12.7	56.0	46.0	30.8	33.3	
16.58966	L2	33.3	32.5	3.8	37.1	36.3	60.0	50.0	22.9	13.7	

AC Powerline Conducted Emission: Hch (2462MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17734	L1	41.4	17.3	3.4	44.8	20.7	64.6	54.6	19.8	33.9	
3.51288	L1	25.9	15.3	3.3	29.2	18.6	56.0	46.0	26.8	27.4	
16.59103	L1	30.7	30.2	4.0	34.7	34.2	60.0	50.0	25.3	15.8	
0.17458	L2	41.0	17.1	3.4	44.4	20.5	64.7	54.7	20.3	34.2	
3.85966	L2	25.4	13.2	3.4	28.8	16.6	56.0	46.0	27.2	29.4	
16.59189	L2	33.1	32.5	3.8	36.9	36.3	60.0	50.0	23.1	13.7	

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	3	Test Standard	:	FCC Part15 Subpart C §15.207
Power Supply	:	DC 5.00V	Temp. / Humid.	:	18.8 degree C / 41.4%
Operator	:	Masashi Tsukui			
Remark	:	Transmitting Mode			
		IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps)			

AC Powerline Conducted Emission: Lch (2412MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.1786	L1	40.7	17.5	3.4	44.1	20.9	64.6	54.6	20.5	33.7	
3.56418	L1	25.3	15.0	3.3	28.6	18.3	56.0	46.0	27.4	27.7	
16.59121	L1	30.7	30.6	4.0	34.7	34.6	60.0	50.0	25.3	15.4	
0.17776	L2	40.6	19.1	3.4	44.0	22.5	64.6	54.6	20.6	32.1	
4.00489	L2	26.8	13.6	3.4	30.2	17.0	56.0	46.0	25.8	29.0	
16.59056	L2	33.3	33.0	3.8	37.1	36.8	60.0	50.0	22.9	13.2	

AC Powerline Conducted Emission: Mch (2437MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17546	L1	40.8	16.1	3.4	44.2	19.5	64.7	54.7	20.5	35.2	
3.44667	L1	25.8	14.7	3.3	29.1	18.0	56.0	46.0	26.9	28.0	
16.58989	L1	30.6	29.9	4.0	34.6	33.9	60.0	50.0	25.4	16.1	
0.17565	L2	40.5	18.1	3.4	43.9	21.5	64.7	54.7	20.8	33.2	
3.9799	L2	25.9	13.2	3.4	29.3	16.6	56.0	46.0	26.7	29.4	
16.58972	L2	33.3	32.5	3.8	37.1	36.3	60.0	50.0	22.9	13.7	

AC Powerline Conducted Emission: Hch (2462MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17658	L1	40.8	15.7	3.4	44.2	19.1	64.6	54.6	20.4	35.5	
3.70646	L1	25.0	14.2	3.3	28.3	17.5	56.0	46.0	27.7	28.5	
16.59161	L1	30.2	29.7	4.0	34.2	33.7	60.0	50.0	25.8	16.3	
0.17647	L2	40.5	18.4	3.4	43.9	21.8	64.7	54.7	20.8	32.9	
3.90935	L2	25.7	12.9	3.4	29.1	16.3	56.0	46.0	26.9	29.7	
16.58995	L2	31.0	30.2	3.8	34.8	34.0	60.0	50.0	25.2	16.0	

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	3	Test Standard	:	FCC Part15 Subpart C §15.207
Power Supply	:	DC 5.00V	Temp. / Humid.	:	18.8 degree C / 41.4%
Operator	:	Masashi Tsukui			

Remark : Transmitting Mode
IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)

AC Powerline Conducted Emission: Lch (2422MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17586	L1	40.9	16.3	3.4	44.3	19.7	64.7	54.7	20.4	35.0	
3.57457	L1	25.4	15.1	3.3	28.7	18.4	56.0	46.0	27.3	27.6	
16.59088	L1	39.5	39.2	4.0	43.5	43.2	60.0	50.0	16.5	6.8	
0.17725	L2	40.7	18.8	3.4	44.1	22.2	64.6	54.6	20.5	32.4	
3.86789	L2	25.0	13.3	3.4	28.4	16.7	56.0	46.0	27.6	29.3	
16.5912	L2	39.7	39.3	3.8	43.5	43.1	60.0	50.0	16.5	6.9	

AC Powerline Conducted Emission: Mch (2437MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17558	L1	40.9	16.3	3.4	44.3	19.7	64.7	54.7	20.4	35.0	
3.70327	L1	24.7	13.6	3.3	28.0	16.9	56.0	46.0	28.0	29.1	
16.59035	L1	39.5	39.0	4.0	43.5	43.0	60.0	50.0	16.5	7.0	
0.17486	L2	40.8	17.3	3.4	44.2	20.7	64.7	54.7	20.5	34.0	
3.91425	L2	25.6	13.4	3.4	29.0	16.8	56.0	46.0	27.0	29.2	
16.58938	L2	39.7	39.1	3.8	43.5	42.9	60.0	50.0	16.5	7.1	

AC Powerline Conducted Emission: Hch (2452MHz)

Frequency [MHz]	Line Phase	Reading [dB(uV)] QP / AV		Factor [dB]	Level [dB(uV)] QP / AV		Limit [dB(uV)] QP / AV		Margin [dB] QP / AV		Remark
0.17775	L1	40.6	17.5	3.4	44.0	20.9	64.6	54.6	20.6	33.7	
3.577	L1	25.6	14.4	3.3	28.9	17.7	56.0	46.0	27.1	28.3	
16.58995	L1	39.5	38.8	4.0	43.5	42.8	60.0	50.0	16.5	7.2	
0.17789	L2	40.3	18.8	3.4	43.7	22.2	64.6	54.6	20.9	32.4	
4.02616	L2	24.2	12.6	3.4	27.6	16.0	56.0	46.0	28.4	30.0	
16.59047	L2	40.0	39.4	3.8	43.8	43.2	60.0	50.0	16.2	6.8	

6 6dB Bandwidth

6.1 Test Setup

The spectrum analyzer was connected to the transmitter output port through the RF cable.

Spectrum Analyzer Setting:

Detector Mode	Peak
RBW	100kHz
VBW	300kHz
Span	20MHz*1
Sweep Time	Auto

*1: About the IEEE 802.11n (BW: 40MHz), the setting of span is 40 MHz.

6.2 Test Results

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	1	Test Standard	:	FCC Part15 C §15.247 (a)(2)
Power Supply	:	DC 5.00V	Temp. / Humid.	:	IEE 802.11b 25.2 degree C / 43.7%: 4 April 2011 IEE 802.11g, n(BW: 20MHz), n (BW: 40MHz) 23.8 degree C / 46.8%: 7 April 2011
Operator	:	Yukihito Minegishi			
Mode	:	Transmitting Mode			

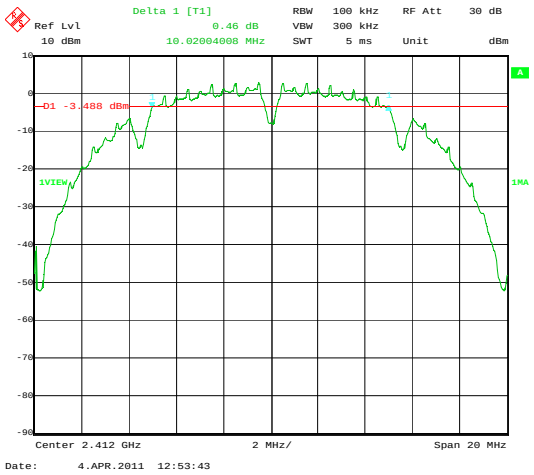
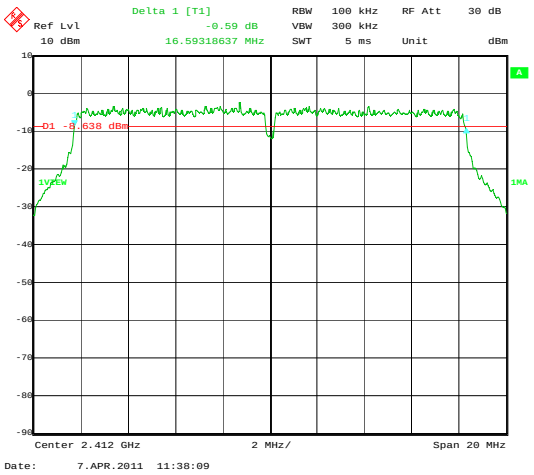
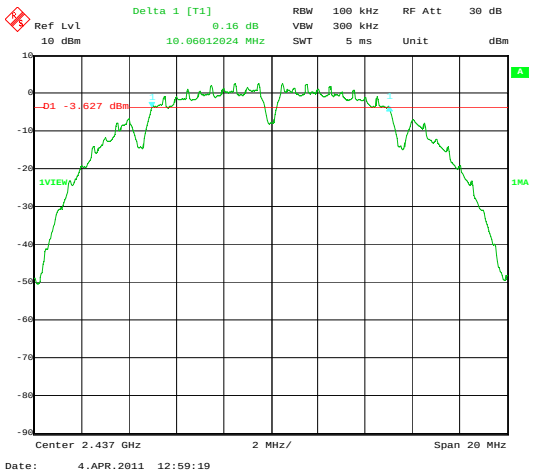
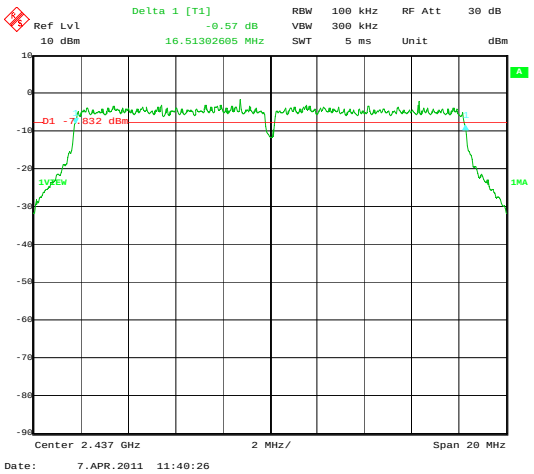
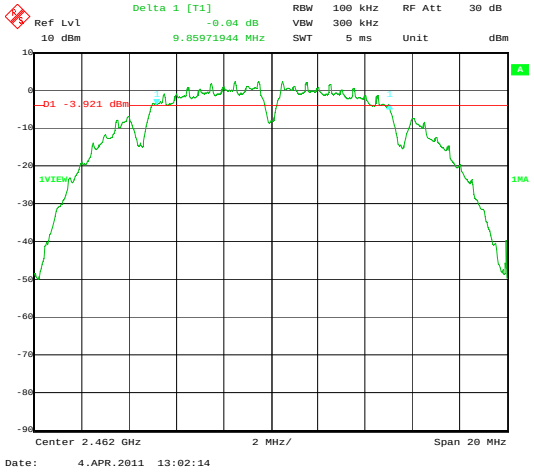
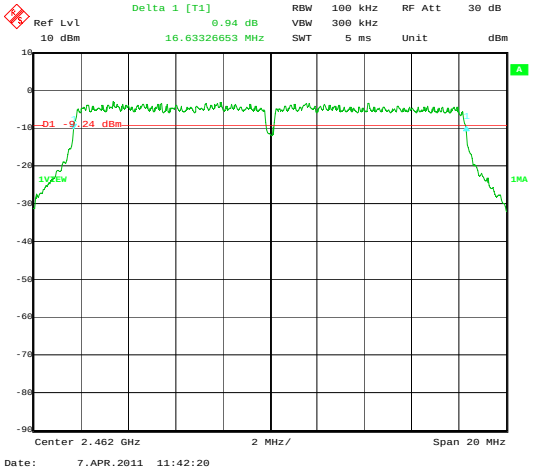
IEEE 802.11b: DBPSK (1Mbps), IEEE 802.11g: BPSK (6Mbps)

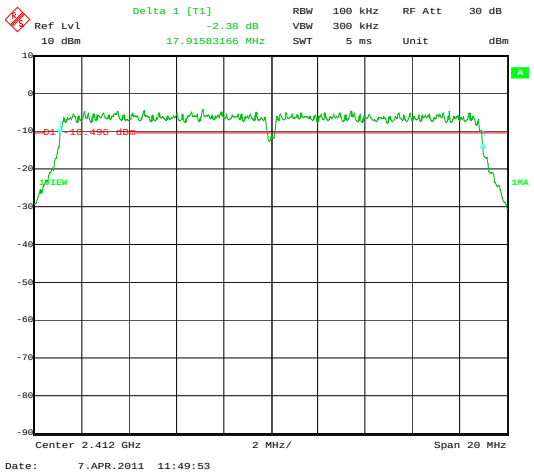
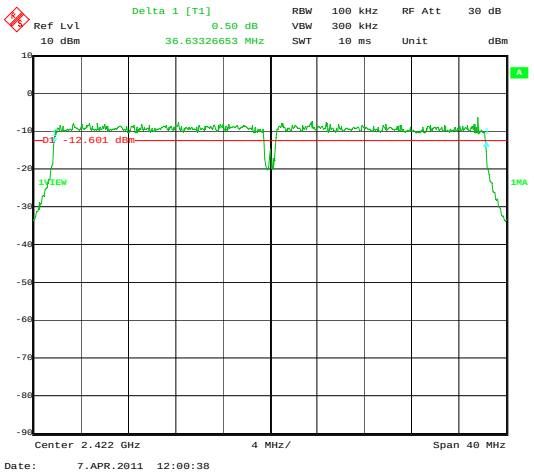
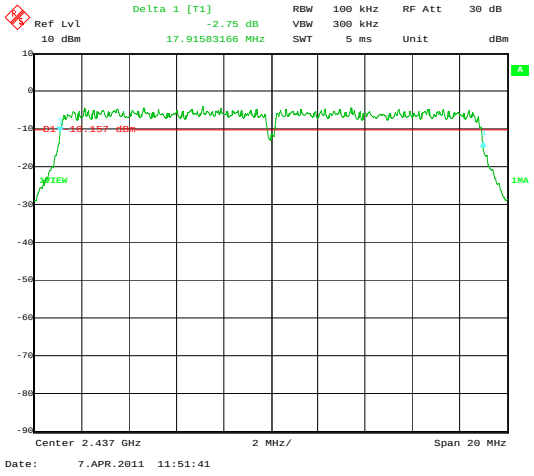
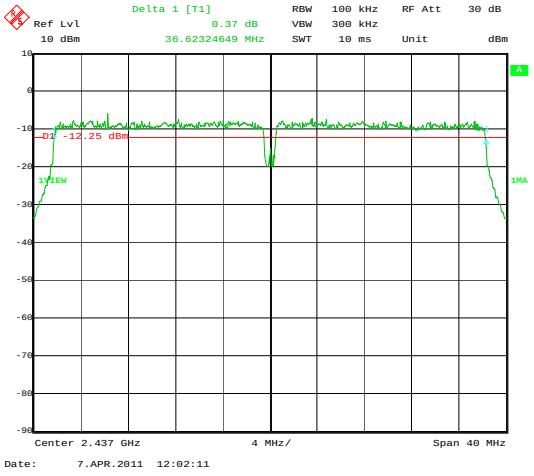
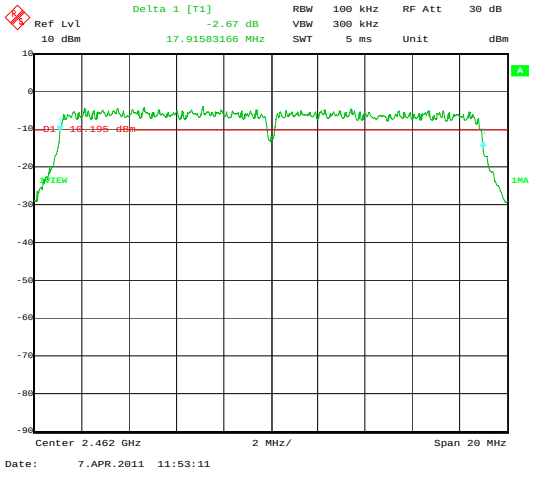
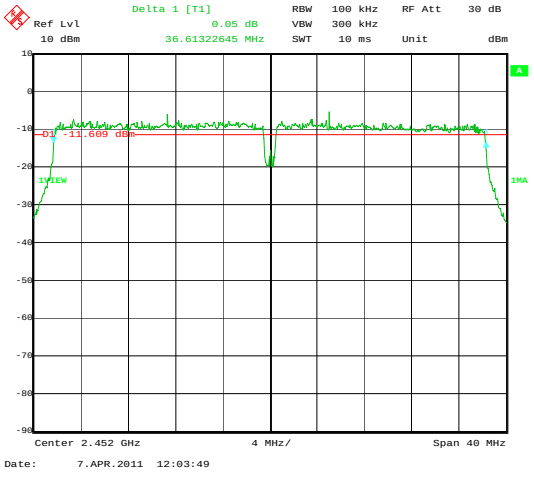
IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps), IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)

Channel	Frequency [MHz]	6dB Bandwidth [MHz]	Limit [MHz]
IEEE 802.11b: DBPSK (1Mbps)			
1ch(Lowest)	2412	10.02	>=0.5
6ch(Middle)	2437	10.06	>=0.5
11ch(Highest)	2462	9.86	>=0.5
IEEE 802.11g: BPSK (6Mbps)			
1ch (Lowest)	2412	16.59	>=0.5
6ch (Middle)	2437	16.51	>=0.5
11ch (Highest)	2462	16.63	>=0.5
IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps)			
1ch (Lowest)	2412	17.92	>=0.5
6ch (Middle)	2437	17.92	>=0.5
11ch (Highest)	2462	17.92	>=0.5
IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)			
3ch (Lowest)	2422	36.63	>=0.5
6ch (Middle)	2437	36.62	>=0.5
9ch (Highest)	2452	36.61	>=0.5

The spectrum data are attached next page. Display line indicates the 6dB offset below highest level.
It shows compliance with the requirement in part 15.247(a)(2).

Data of 6dB Bandwidth

802.11b: DBPSK (1Mbps) Modulation	802.11g: BPSK (6Mbps) Modulation
2412MHz (Lowest)	2412MHz (Lowest)
	
2437MHz (Middle)	2437MHz (Middle)
	
2462MHz (Highest)	2462MHz (Highest)
	

802.11n (BW: 20MHz): BPSK (6.5Mbps) Modulation	802.11n (BW: 40MHz): BPSK (13.5Mbps) Modulation
2412MHz (Lowest)	2422MHz (Lowest)
	
2437MHz (Middle)	2437MHz (Middle)
	
2462MHz (Highest)	2452MHz (Highest)
	

7 Maximum Peak Output Power

7.1 Test Setup

The peak power meter was connected to the transmitter output port through the RF cable and Attenuator.

7.2 Test Results

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	1	Test Standard	:	FCC Part15 C §15.247 (b)(3)
Power Supply	:	DC 5.00V	Temp. / Humid.	:	IEE 802.11b 24.7 degree C / 45.7%: 1 April 2011 IEE 802.11g, n(BW: 20MHz), n (BW: 40MHz) 22.7 degree C / 38.9%: 6 April 2011
Operator	:	Yukihito Minegishi			
Mode	:	Transmitting Mode			
		IEEE 802.11b: DBPSK (1Mbps), IEEE 802.11g: BPSK (6Mbps)			
		IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps), IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)			

Channel	Frequency [MHz]	Reading [dBm]	Cable Loss1 [dB]	Cable Loss2 [dB]	Result		Limit	
					[dBm]	[mW]	[dBm]	[mW]
IEEE 802.11b: DBPSK (1Mbps)								
1ch (Lowest)	2412	5.22	10.80	0.50	16.52	44.87	< 30.0	< 1000
6ch (Middle)	2437	5.40	10.79	0.50	16.69	46.67	< 30.0	< 1000
11ch (Highest)	2462	4.97	10.75	0.50	16.22	41.88	< 30.0	< 1000
IEEE 802.11g: BPSK (6Mbps)								
1ch (Lowest)	2412	8.63	10.80	0.50	19.93	98.40	< 30.0	< 1000
6ch (Middle)	2437	8.84	10.79	0.50	20.13	103.04	< 30.0	< 1000
11ch (Highest)	2462	8.39	10.75	0.50	19.64	92.04	< 30.0	< 1000
IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps)								
1ch (Lowest)	2412	7.96	10.80	0.50	19.26	84.33	< 30.0	< 1000
6ch (Middle)	2437	7.76	10.79	0.50	19.05	80.35	< 30.0	< 1000
11ch (Highest)	2462	7.74	10.75	0.50	18.99	79.25	< 30.0	< 1000
IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)								
3ch (Lowest)	2422	7.73	10.80	0.50	19.03	79.98	< 30.0	< 1000
6ch (Middle)	2437	7.83	10.79	0.50	19.12	81.66	< 30.0	< 1000
9ch (Highest)	2452	7.82	10.75	0.50	19.07	80.72	< 30.0	< 1000

Result = Reading + Cable Loss1 + Cable Loss2

Note: Cable Loss1: RF Cable + Attenuator
Cable Loss2: Conversion cable used for connecting to SMA type

8 Band Edge Compliance

8.1 Test Setup

The spectrum analyzer was connected to the transmitter output port through the RF cable.

Spectrum Analyzer Setting:

Detector Mode	Peak
RBW	100kHz
VBW	300kHz
Span	300MHz*1
Sweep Time	10s

*1: About the IEEE 802.11n (BW: 40MHz), the setting of Span is 500 MHz.

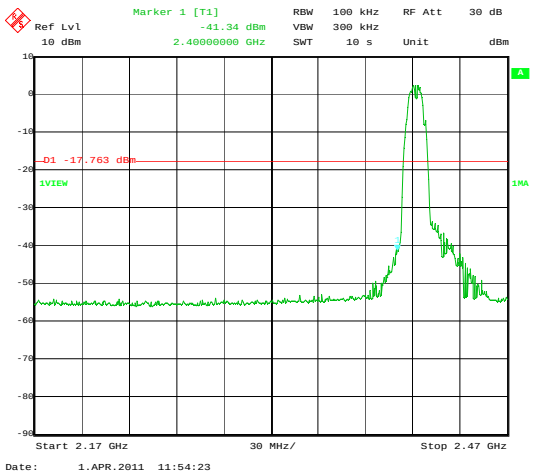
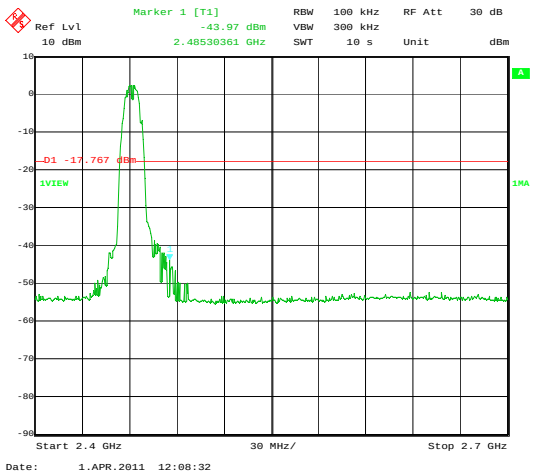
8.2 Test Results

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	1	Test Standard	:	FCC Part15 C §15.247 (d)
Power Supply	:	DC 5.00V	Temp. / Humid.	:	IEE 802.11b 24.7 degree C / 45.7%: 1 April 2011 IEE 802.11g, n(BW: 20MHz), n (BW: 40MHz) 22.7 degree C / 38.9%: 6 April 2011
Operator	:	Yukihito Minegishi			
Mode	:	Transmitting Mode			
		IEEE 802.11b: DBPSK (1Mbps), IEEE 802.11g: BPSK (6Mbps)			
		IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps), IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)			

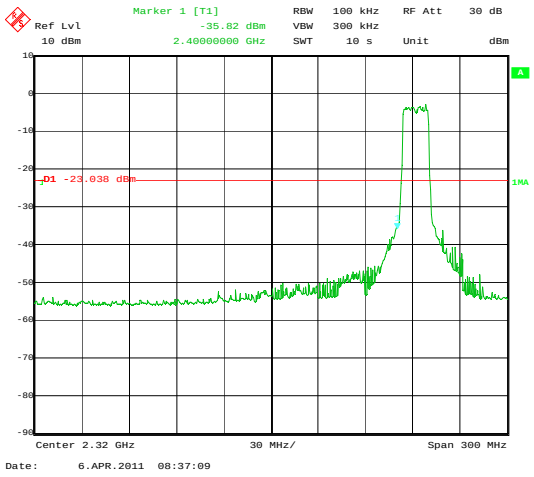
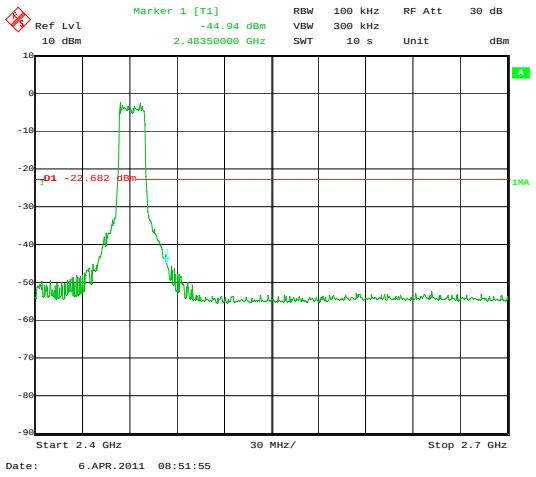
The spectrum data are attached next page. Display line indicates the 20dB offset below highest level.
It shows compliance with the requirement in part 15.247(d).

Data of Band Edge Compliance

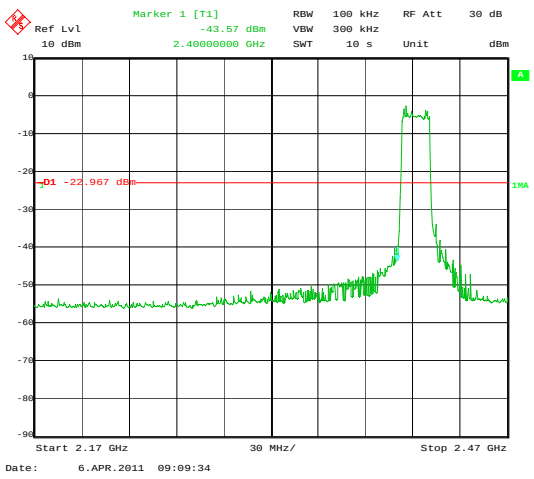
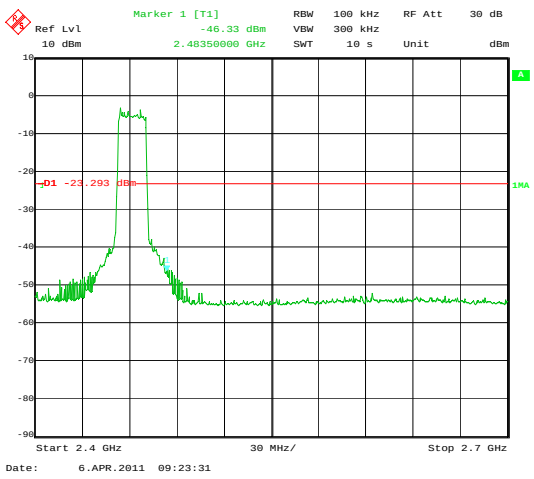
(1) IEEE 802.11b: DBPSK (1Mbps) Modulation

2412MHz (Lowest)	2462MHz (Highest)
	

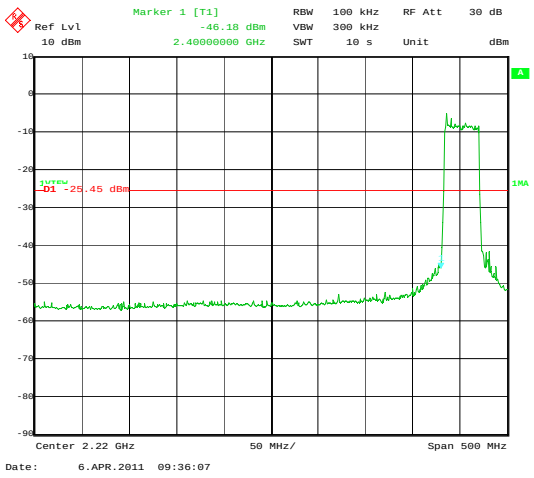
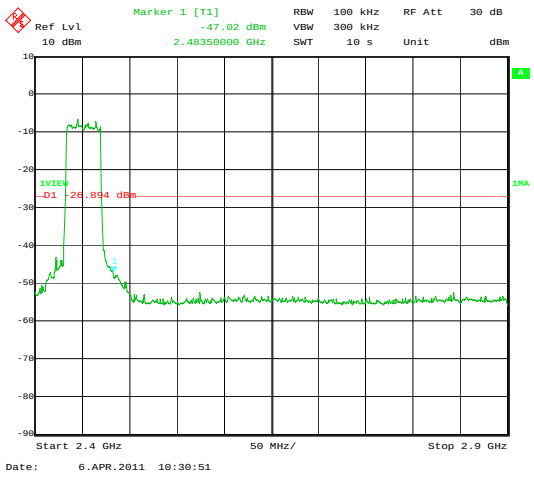
(2) IEEE 802.11g: BPSK (6Mbps) Modulation

2412MHz (Lowest)	2462MHz (Highest)
	

(3)IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps) Modulation

2412MHz (Lowest)	2462MHz (Highest)
	

(4)IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps) Modulation

2422MHz (Lowest)	2452MHz (Highest)
	

9 Spurious RF Conducted Emission

9.1 Test Setup

The spectrum analyzer was connected to the transmitter output port through the RF cable.

Spectrum Analyzer Setting:

Detector Mode	Peak
RBW	100kHz
VBW	300kHz
Sweep Time	10s

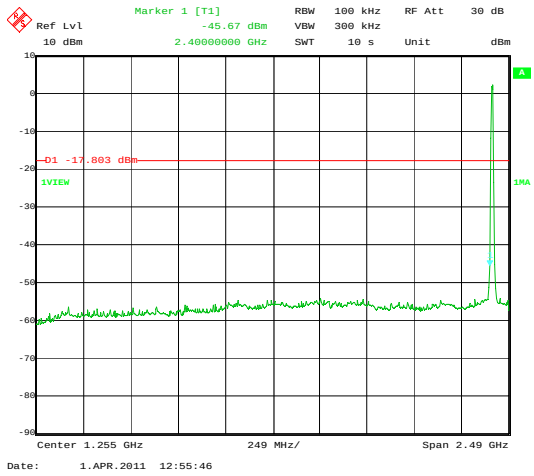
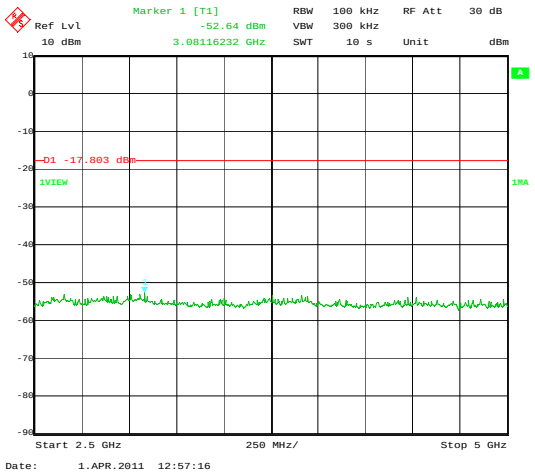
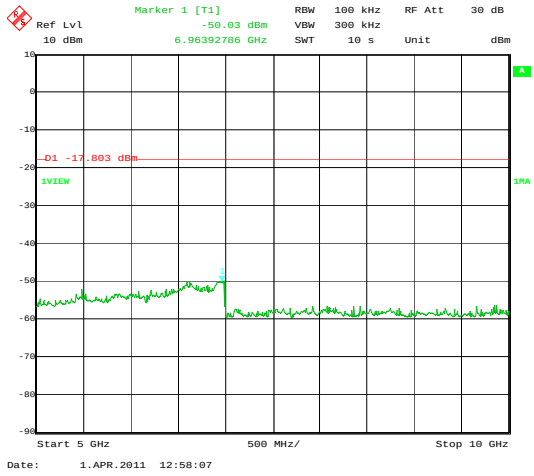
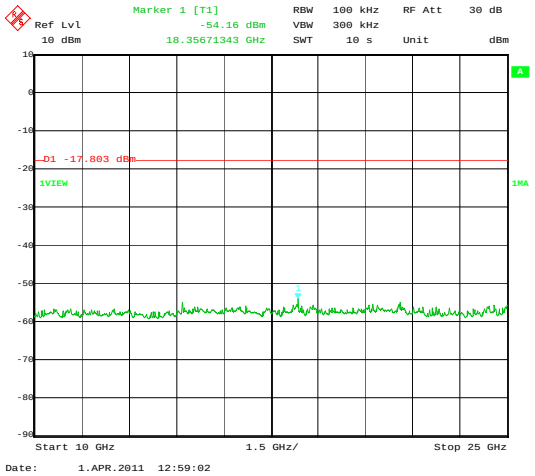
9.2 Test Results

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	1	Test Standard	:	FCC Part15 C §15.247 (d)
Power Supply	:	DC 5.00V	Temp. / Humid.	:	IEE 802.11b 24.7 degree C / 45.7%: 1 April 2011 IEE 802.11g, n(BW: 20MHz), n (BW: 40MHz) 22.7 degree C / 38.9%: 6 April 2011
Operator	:	Yukihito Minegishi			
Mode	:	Transmitting Mode			
		IEEE 802.11b: DBPSK (1Mbps), IEEE 802.11g: BPSK (6Mbps)			
		IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps), IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)			

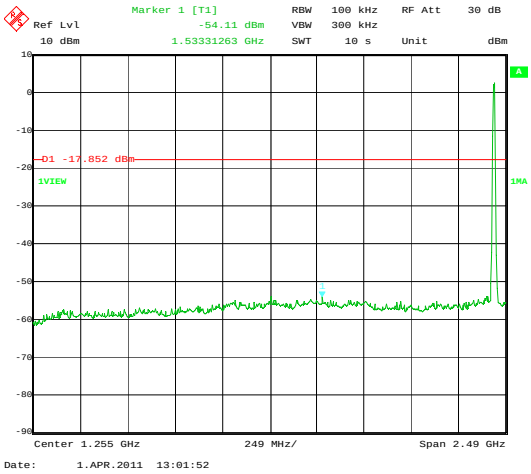
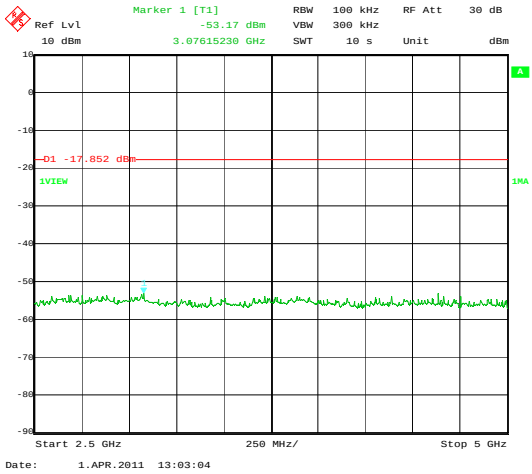
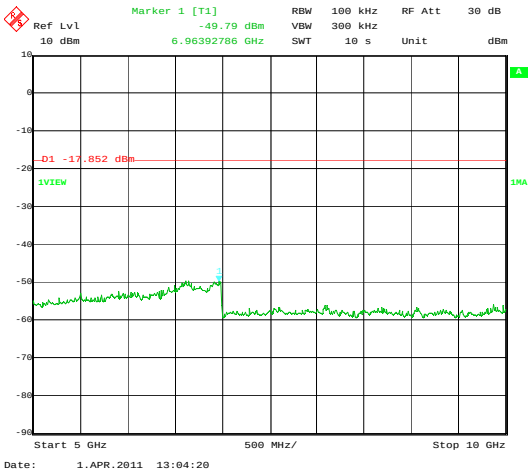
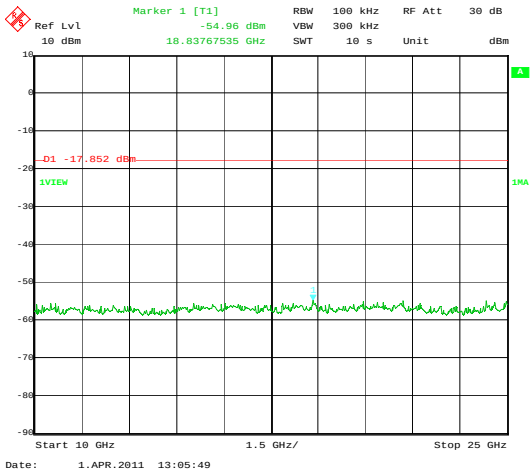
The spectrum data are attached next page. Display line indicates the 20dB offset below highest level.
It shows compliance with the requirement in part 15.247(d).

Data of Spurious Conducted Emission

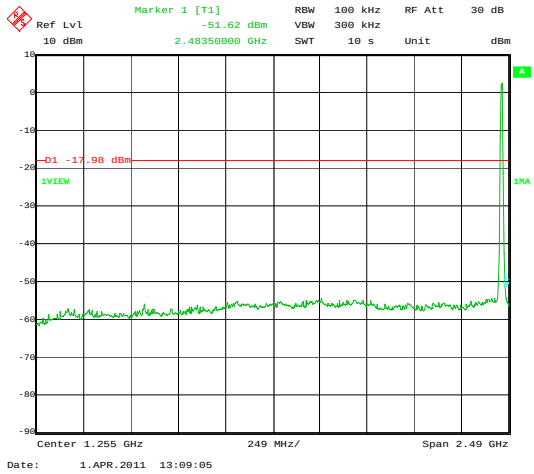
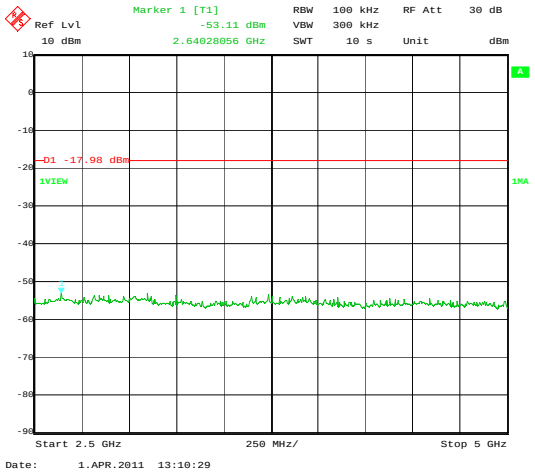
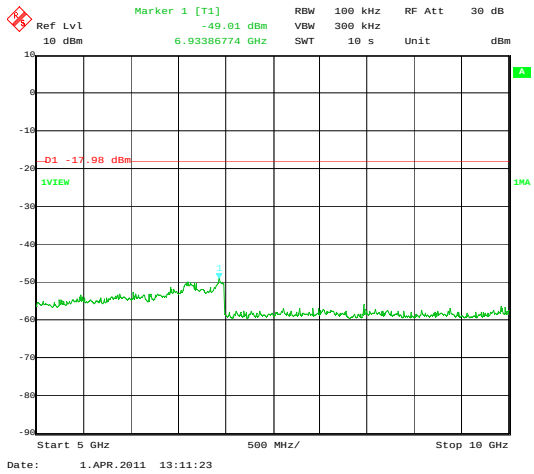
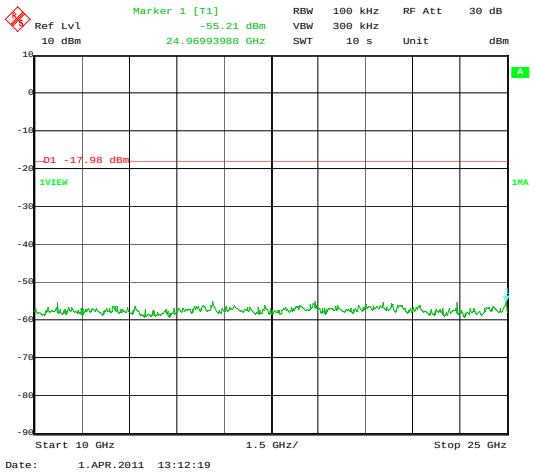
(1) IEEE 802.11b: DBPSK (1Mbps) Modulation: 2412MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

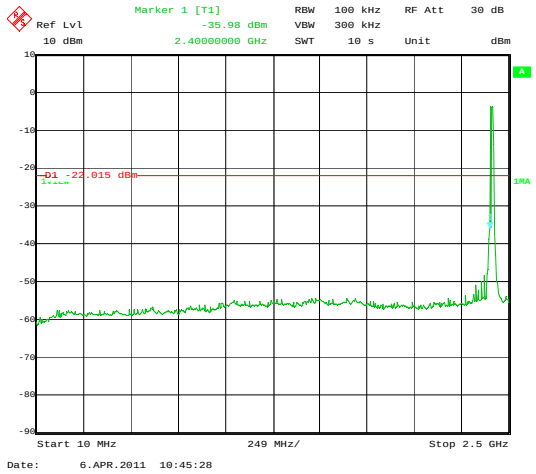
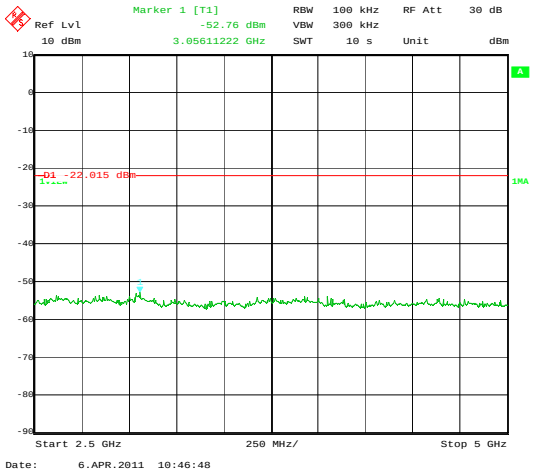
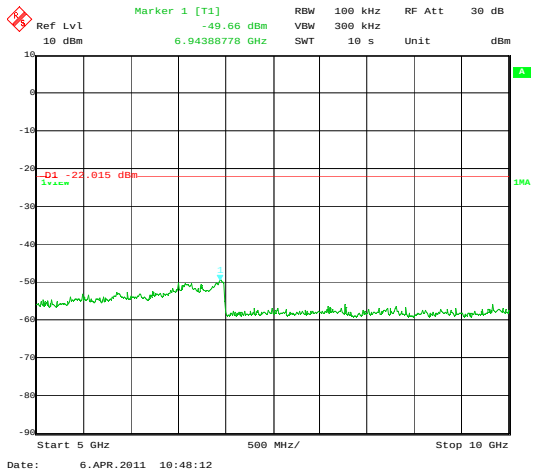
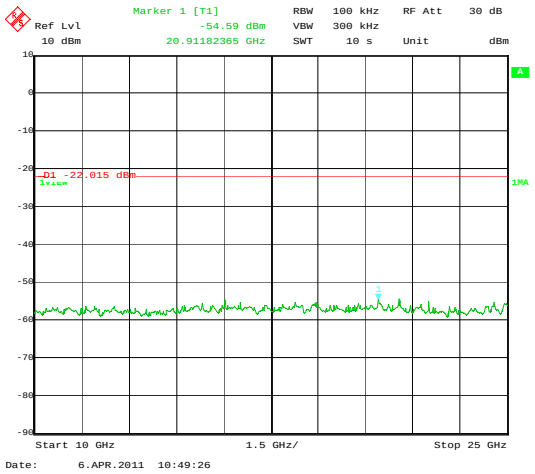
(2) IEEE 802.11b: DBPSK (1Mbps) Modulation: 2437MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

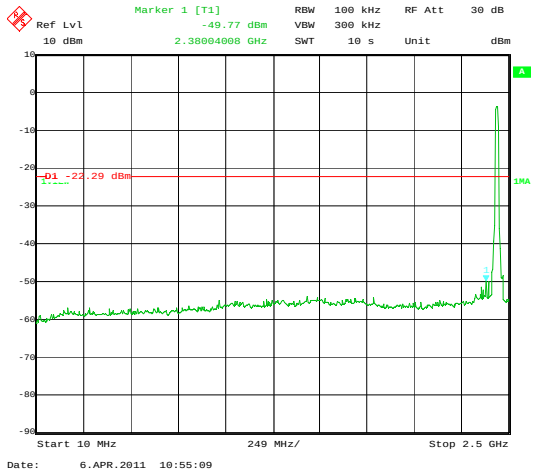
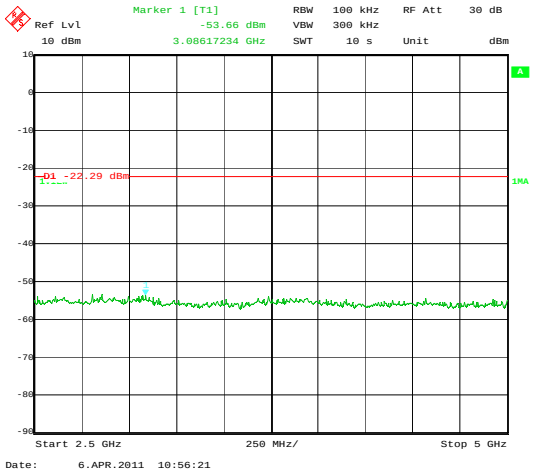
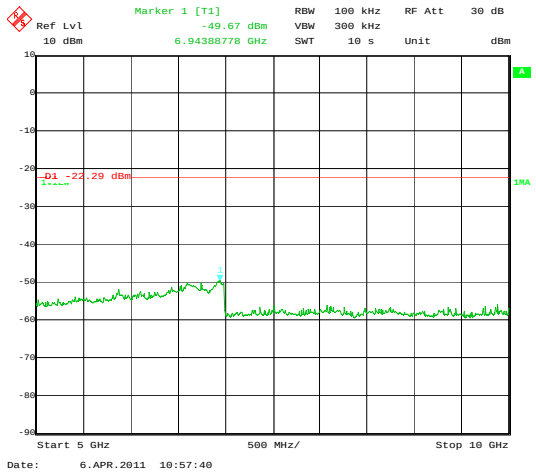
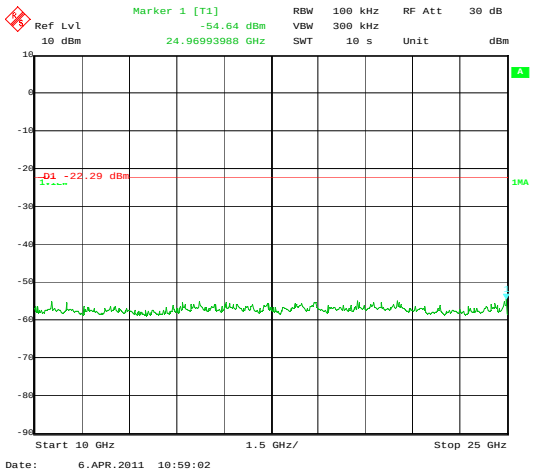
(3) IEEE 802.11b: DBPSK (1Mbps) Modulation: 2462MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

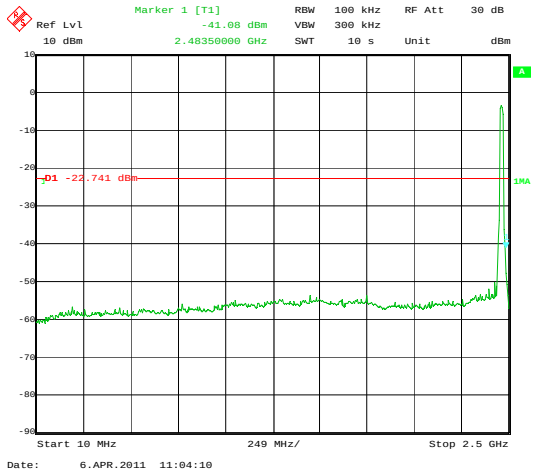
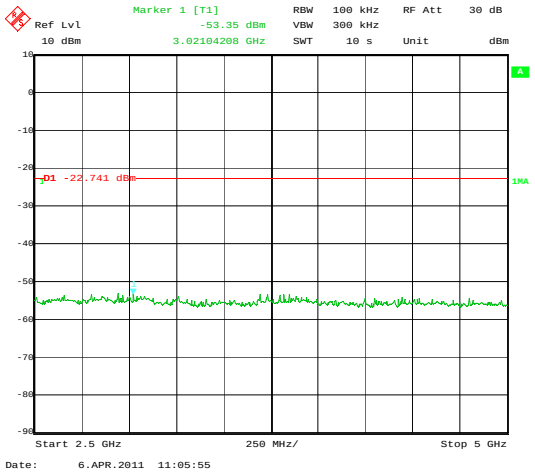
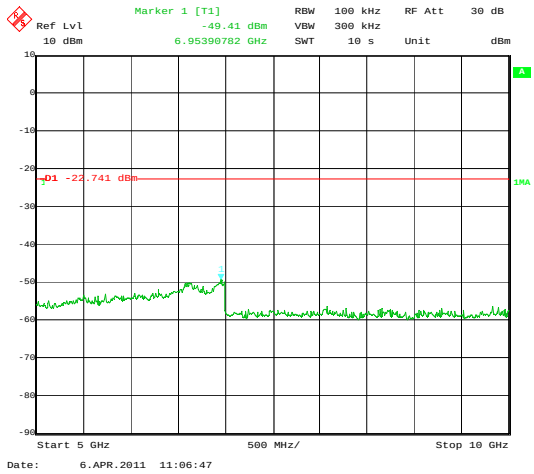
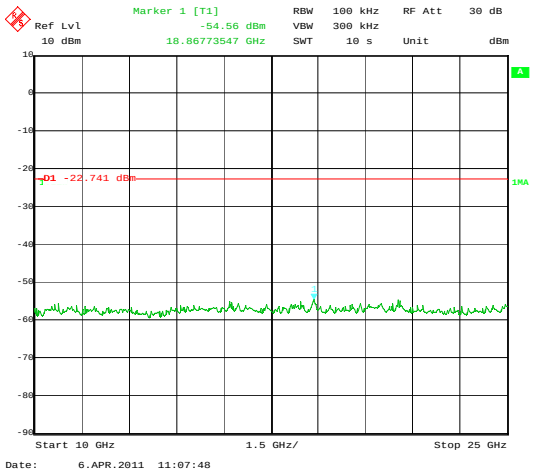
(4) IEEE 802.11g: BPSK (6Mbps) Modulation: 2412MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

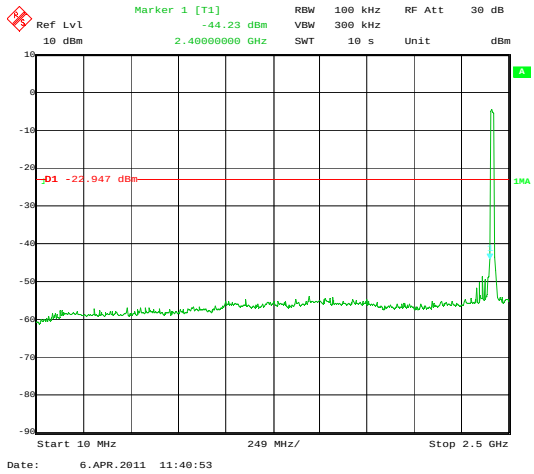
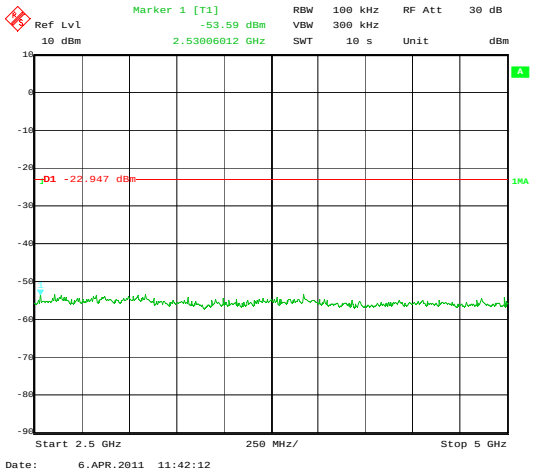
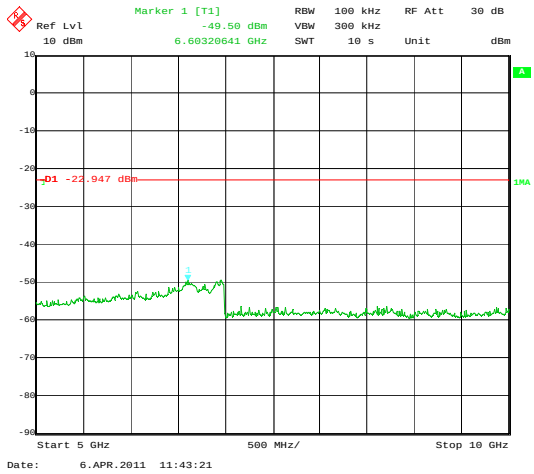
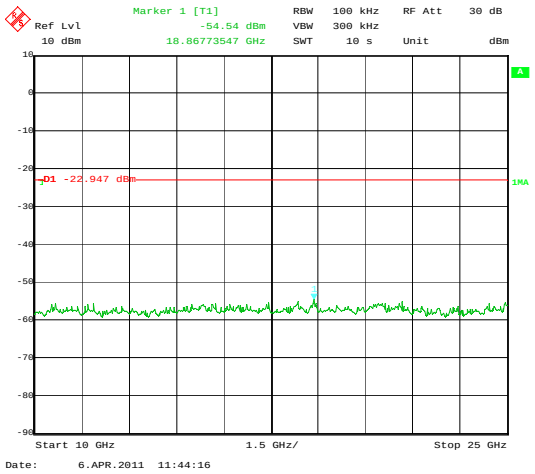
(5) IEEE 802.11g: BPSK (6Mbps) Modulation: 2437MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

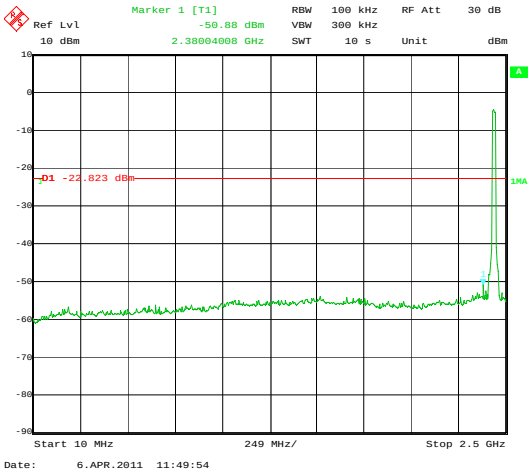
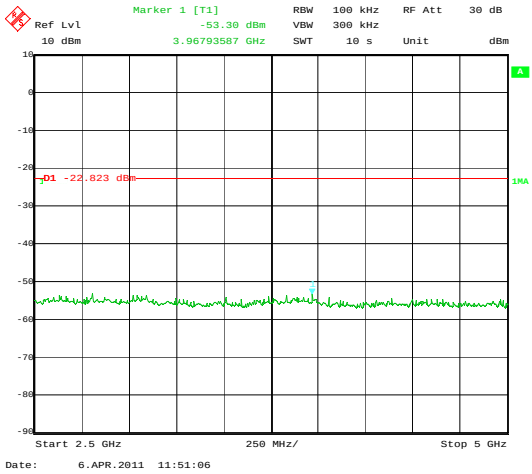
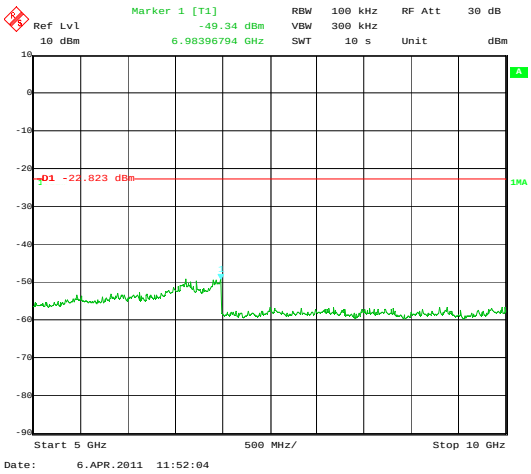
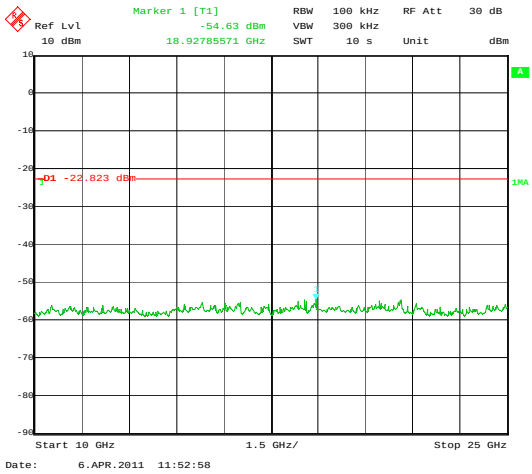
(6) IEEE 802.11g: BPSK (6Mbps) Modulation: 2462MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

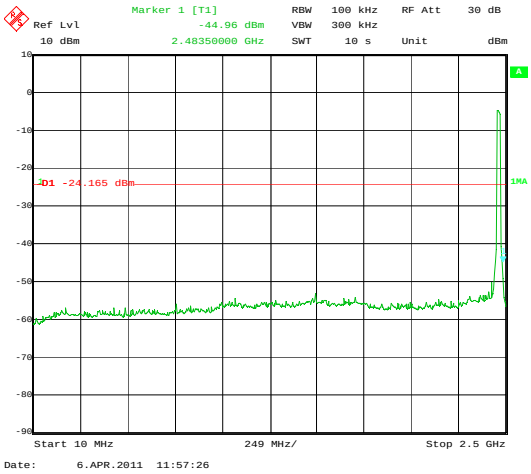
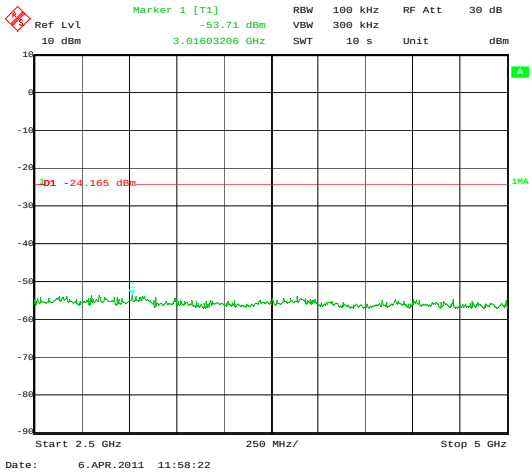
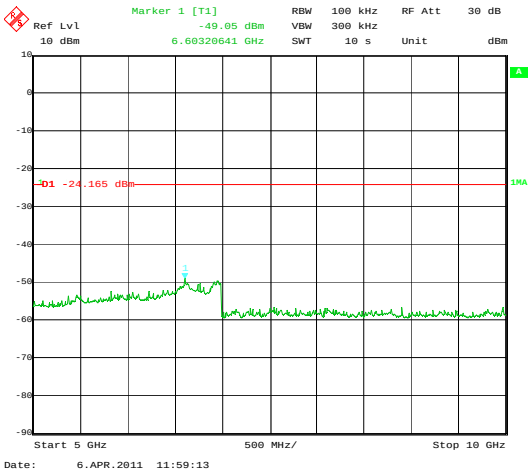
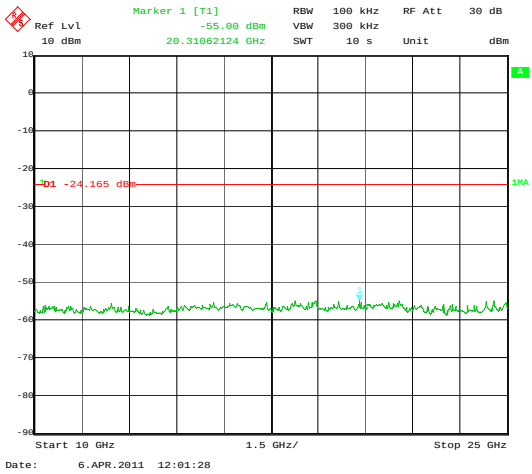
(7)IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps) Modulation: 2412MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

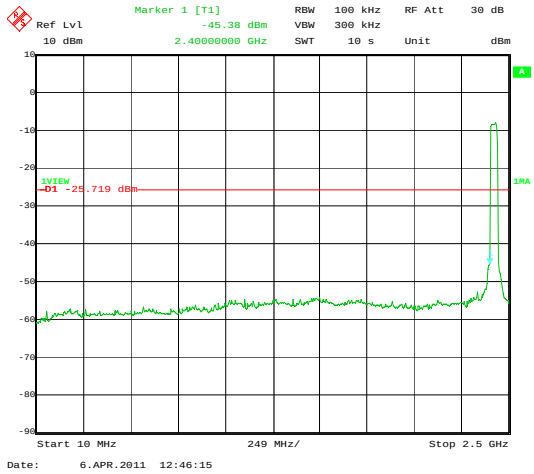
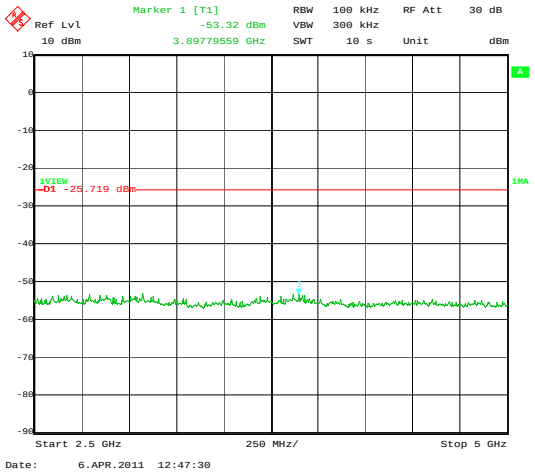
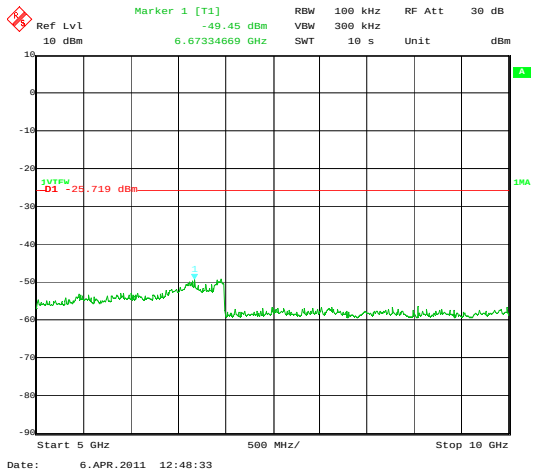
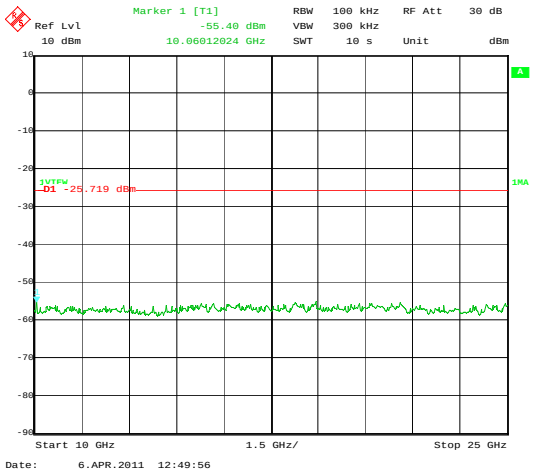
(8)IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps) Modulation: 2437MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

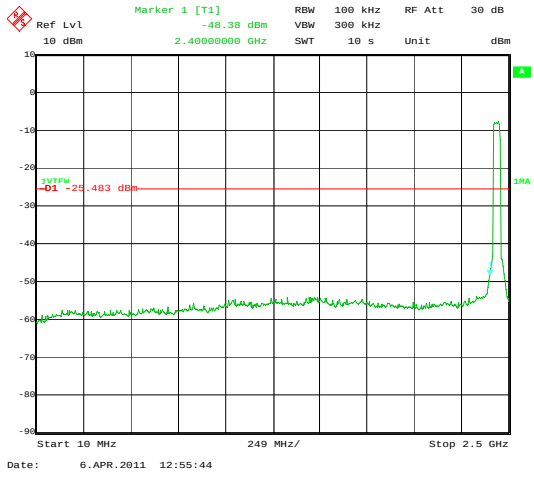
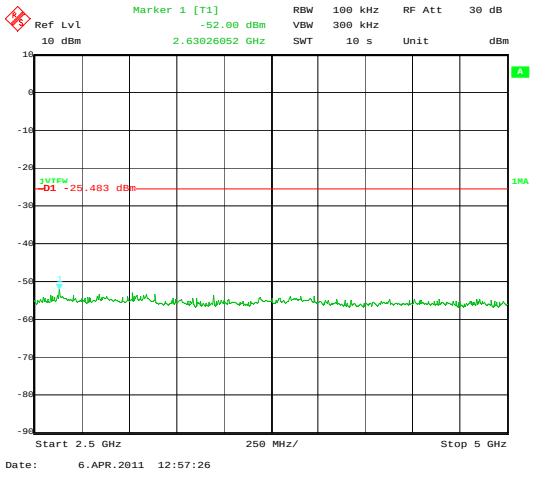
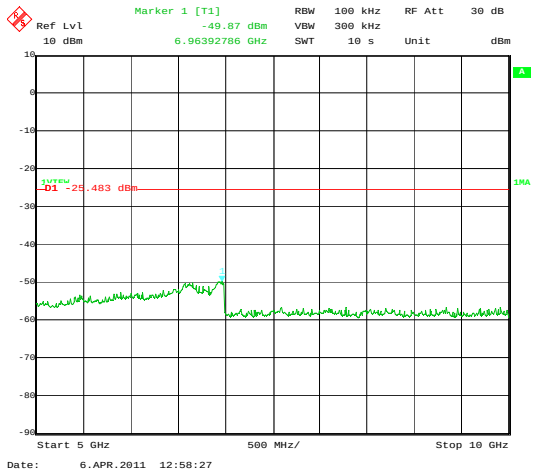
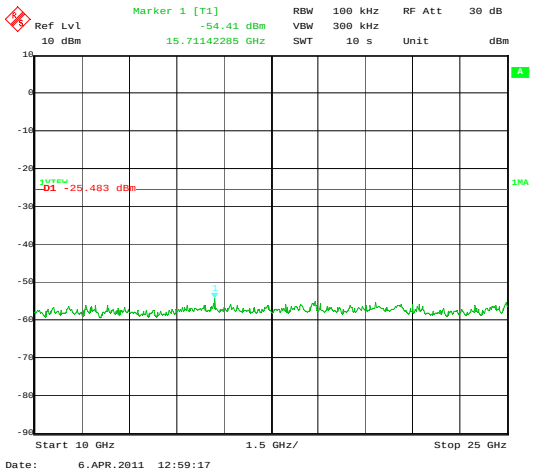
(9)IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps) Modulation: 2462MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

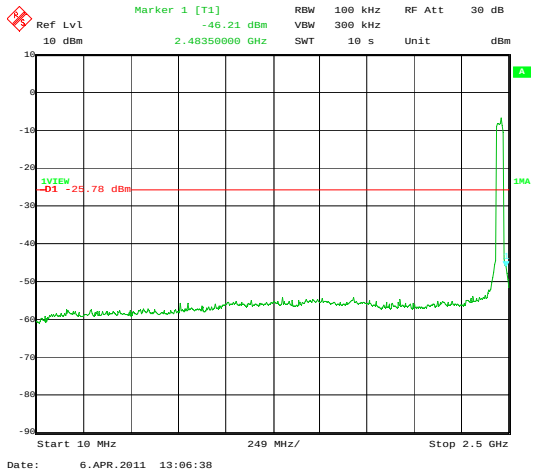
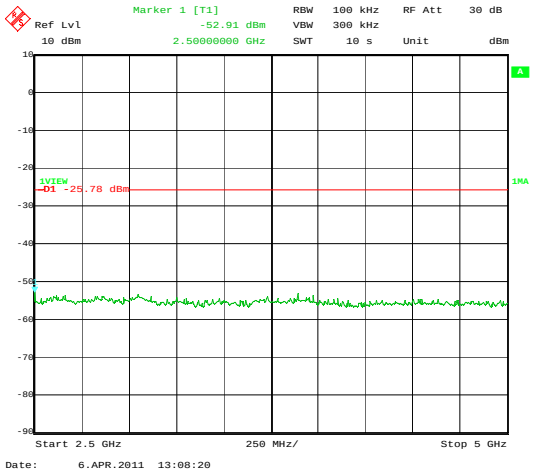
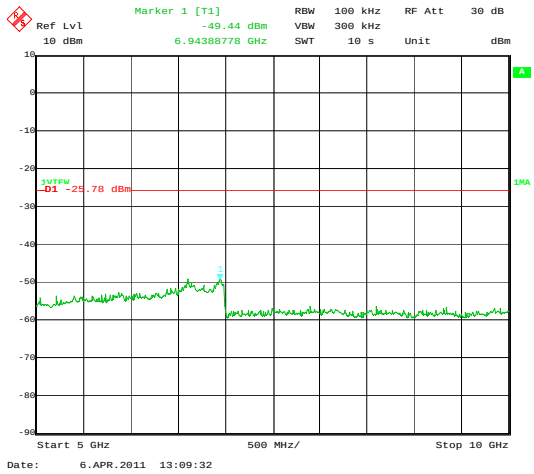
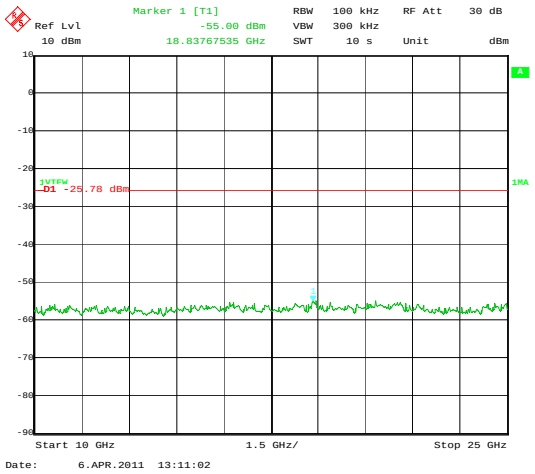
(10)IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps) Modulation: 2422MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

(11)IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps) Modulation: 2437MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	10GHz to 25GHz
	

(12)IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps) Modulation: 2452MHz

10MHz to 2.5GHz	2.5GHz to 5GHz
	
5GHz to 10GHz	**10GHz to 25GHz**
	

10 Radiated Emission

10.1 Test Setup

The test setup was made according to ANSI STD C63.4: 2003 clause 8 on the 10m semi-anechoic chamber, which allows a 3 or 1m distance measurement.
EUT was placed on non-conductive table (foam polystyrene).
The height of this table was 0.8m.
The measurement has been conducted with both horizontal and vertical antenna polarization.
For above 1GHz, the receiving antenna is fixed in the height that EUT is in the illumination area of the 3dB beamwidth of the antenna.
The turntable has been fully rotated. The highest radiation of the equipment has been recorded.
For further description of the configuration refer to separate document named “Test Setup Photos (10086FC)”.

Distance between equipment and antenna : 3m (30MHz to 18GHz)
1m (18GHz to 25GHz)

Test Receiver Setting:

30~1000MHz:

Detector Mode	Quasi-Peak
Bandwidth	120kHz

Spectrum Analyzer Setting:

1~25GHz:

Detector Mode	Peak and Average
Bandwidth	Peak: RBW: 1MHz, VBW: 1MHz
	Average: RBW: 1MHz, VBW: 10Hz

10.2 Radiated Emission Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain (if any) from the measured reading.
The basic equation with a sample calculation is as follows:

c.f. = AF + CF + AL - AG - DF
RE = RA + c.f.

Where c.f. : Correction Factor [dB (1/m)]
RE : Radiated Emission (Emission Level - Result) [dB (uV/m)]
RA : Receiver Amplitude (Reading Level) [dBuV]
AF : Antenna Factor [dB (1/m)]
CF : Cable Attenuation Loss [dB]
AG : Amplifier Gain [dB]
AL : Attenuator Loss [dB]
DF : Distance Factor
Distance between equipment and antenna: 3m = 0 [dB]
Distance between equipment and antenna: 1m = 9.5 [dB]

Assume a receiver reading of 36.5dBuV is obtained.
The Correction Factor of -2.0dB/m is added, giving a Radiated Emission of 34.5dBuV/m.
The 34.5dBuV/m value was mathematically converted to its corresponding level in uV/m.

RE = 36.5 + (-2.0) = 34.5dBuV/m
Level in uV/m = Common Antilogarithm: 10 ^ (34.5 / 20) = 53.1uV/m

10.3 Test Results

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	3	Test Standard	:	FCC Part15 C §15.247 (d)
Power Supply	:	DC 5.00V, 3.30V	Temp. / Humid.	:	Blow 1GHz XY-Plan: 18.3 degree C / 33.9% 12 April 2011 YZ, ZX-Plan: 18.3 degree C / 36.8% 13 April 2011 1-6GHz L, Hch: 15.8 degree C / 33.3% 5 April 2011 Mch: 17.8 degree C / 44.3% 7 April 2011 Above 6GHz 17.8 degree C / 44.3% 7 April 2011
Operator	:	Masashi Tsukui			
Mode	:	Transmitting Mode IEEE 802.11b: DBPSK (1Mbps)			

Radiated Emission: Lch (2412MHz)

Axial Direction: XY-Plane

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.428	H	36.2	-11.3	24.9	43.5	18.6	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	36.5	75.4	-3.6	32.9	71.8	54.0	74.0	21.1	2.2	
2390.000	H	36.1	66.7	-3.6	32.5	63.1	54.0	74.0	21.5	10.9	
4824.000	H	36.0	47.0	3.4	39.4	50.4	54.0	74.0	14.6	23.6	Floor Noise
7236.000	H	31.1	43.3	4.5	35.6	47.8	54.0	74.0	18.4	26.2	*Floor Noise
9648.000	H	30.8	42.4	7.4	38.2	49.8	54.0	74.0	15.8	24.2	*Floor Noise
12060.000	H	33.0	45.3	8.7	41.7	54.0	54.0	74.0	12.3	20.0	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.499	H	37.1	-11.3	25.8	43.5	17.7	*
638.852	H	30.3	0.5	30.8	46.0	15.2	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	36.5	75.8	-3.6	32.9	72.2	54.0	74.0	21.1	1.8	
2390.000	V	34.5	71.7	-3.6	30.9	68.1	54.0	74.0	23.1	5.9	
4824.000	H	37.2	45.7	3.4	40.6	49.1	54.0	74.0	13.4	24.9	
7236.000	H	31.1	43.3	4.5	35.6	47.8	54.0	74.0	18.4	26.2	*Floor Noise
9648.000	H	30.8	42.4	7.4	38.2	49.8	54.0	74.0	15.8	24.2	*Floor Noise
12060.000	H	33.0	45.3	8.7	41.7	54.0	54.0	74.0	12.3	20.0	Floor Noise

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.900	H	36.4	-11.3	25.1	43.5	18.4	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	43.7	67.0	-3.6	40.1	63.4	54.0	74.0	13.9	10.6	
2390.000	V	35.3	72.7	-3.6	31.7	69.1	54.0	74.0	22.3	4.9	
4824.000	H	36.5	46.8	3.4	39.9	50.2	54.0	74.0	14.1	23.8	
4824.000	V	37.1	46.9	3.4	40.5	50.3	54.0	74.0	13.5	23.7	
7236.000	H	31.1	43.3	4.5	35.6	47.8	54.0	74.0	18.4	26.2	*Floor Noise
9648.000	H	30.8	42.4	7.4	38.2	49.8	54.0	74.0	15.8	24.2	*Floor Noise
12060.000	H	33.0	45.3	8.7	41.7	54.0	54.0	74.0	12.3	20.0	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Radiated Emission: Mch (2437MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.461	H	37.1	-11.3	25.8	43.5	17.7	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	34.2	71.0	-3.6	30.6	67.4	54.0	74.0	23.4	6.6	
2390.000	V	32.5	65.5	-3.6	28.9	61.9	54.0	74.0	25.1	12.1	
2483.500	H	34.3	63.1	-3.5	30.8	59.6	54.0	74.0	23.2	14.4	
2483.500	V	33.1	58.4	-3.5	29.6	54.9	54.0	74.0	24.4	19.1	
4874.000	H	42.9	51.1	3.5	46.4	54.6	54.0	74.0	7.6	19.4	
4874.000	V	41.1	50.1	3.5	44.6	53.6	54.0	74.0	9.4	20.4	
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
627.210	H	31.9	0.2	32.1	46.0	13.9	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	32.9	67.6	-3.6	29.3	64.0	54.0	74.0	24.7	10.0	
2390.000	V	33.4	69.2	-3.6	29.8	65.6	54.0	74.0	24.2	8.4	
2483.500	H	33.5	61.5	-3.5	30.0	58.0	54.0	74.0	24.0	16.0	
2483.500	V	33.5	61.0	-3.5	30.0	57.5	54.0	74.0	24.0	16.5	
4874.000	H	42.7	51.2	3.5	46.2	54.7	54.0	74.0	7.8	19.3	
4874.000	V	43.4	51.9	3.5	46.9	55.4	54.0	74.0	7.1	18.6	
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.905	H	37.4	-11.3	26.1	43.5	17.4	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	32.8	66.9	-3.6	29.2	63.3	54.0	74.0	24.8	10.7	
2390.000	V	33.7	70.2	-3.6	30.1	66.6	54.0	74.0	23.9	7.4	
2483.500	H	33.2	59.5	-3.5	29.7	56.0	54.0	74.0	24.3	18.0	
2483.500	V	34.3	63.7	-3.5	30.8	60.2	54.0	74.0	23.2	13.8	
4874.000	H	39.5	48.2	3.5	43.0	51.7	54.0	74.0	11.0	22.3	
4874.000	H	45.1	54.3	3.5	48.6	57.8	54.0	74.0	5.4	16.2	
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Radiated Emission: Hch (2462MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.443	H	36.8	-11.3	25.5	43.5	18.0	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	39.0	77.0	-3.5	35.5	73.5	54.0	74.0	18.5	0.5	
2483.500	V	35.0	71.2	-3.5	31.5	67.7	54.0	74.0	22.5	6.3	
4924.000	H	44.8	53.7	3.7	48.5	57.4	54.0	74.0	5.5	16.6	
4924.000	V	43.3	52.3	3.7	47.0	56.0	54.0	74.0	7.0	18.0	
7386.000	H	32.0	44.7	4.6	36.6	49.3	54.0	74.0	17.4	24.7	Floor Noise
9848.000	H	31.1	41.7	7.4	38.5	49.1	54.0	74.0	15.5	24.9	*Floor Noise
12310.000	H	31.6	44.3	8.5	40.1	52.8	54.0	74.0	13.9	21.2	Floor Noise

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
637.430	H	32.3	0.4	32.7	46.0	13.3	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	38.4	76.0	-3.6	34.8	72.4	54.0	74.0	19.2	1.6	
2390.000	V	35.8	71.5	-3.6	32.2	67.9	54.0	74.0	21.8	6.1	
4924.000	H	42.0	51.0	3.7	45.7	54.7	54.0	74.0	8.3	19.3	
4924.000	V	44.4	53.0	3.7	48.1	56.7	54.0	74.0	5.9	17.3	
7386.000	H	32.0	44.7	4.6	36.6	49.3	54.0	74.0	17.4	24.7	Floor Noise
9848.000	H	31.1	41.7	7.4	38.5	49.1	54.0	74.0	15.5	24.9	*Floor Noise
12310.000	H	31.6	44.3	8.5	40.1	52.8	54.0	74.0	13.9	21.2	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.940	H	37.0	-11.3	25.7	43.5	17.8	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	35.2	69.8	-3.5	31.7	66.3	54.0	74.0	22.3	7.7	
2483.500	V	37.0	73.4	-3.5	33.5	69.9	54.0	74.0	20.5	4.1	
4924.000	H	42.4	50.9	3.7	46.1	54.6	54.0	74.0	7.9	19.4	
4924.000	V	45.1	54.5	3.7	48.8	58.2	54.0	74.0	5.2	15.8	
7386.000	H	32.0	44.7	4.6	36.6	49.3	54.0	74.0	17.4	24.7	Floor Noise
9848.000	H	31.1	41.7	7.4	38.5	49.1	54.0	74.0	15.5	24.9	*Floor Noise
12310.000	H	31.6	44.3	8.5	40.1	52.8	54.0	74.0	13.9	21.2	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	3	Test Standard	:	FCC Part15 C §15.247 (d)
Power Supply	:	DC 5.00V, 3.30V	Temp. / Humid.	:	Blow 1GHz XY-Plan: 18.3 degree C / 33.9% 12 April 2011 YZ, ZX-Plan: 18.3 degree C / 36.8% 13 April 2011 1-6GHz L, Hch: 15.8 degree C / 33.3% 5 April 2011 Mch: 17.8 degree C / 44.3% 7 April 2011 Above 6GHz 17.8 degree C / 44.3% 7 April 2011
Operator	:	Masashi Tsukui			
Mode	:	Transmitting Mode IEEE 802.11g: BPSK (6Mbps)			

Radiated Emission: Lch (2412MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.543	H	35.4	-11.3	24.1	43.5	19.4	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	37.3	71.3	-3.6	33.7	67.7	54.0	74.0	20.3	6.3	
2390.000	V	34.0	63.1	-3.6	30.4	59.5	54.0	74.0	23.6	14.5	
4824.000	H	36.0	47.0	3.4	39.4	50.4	54.0	74.0	14.6	23.6	Floor Noise
7236.000	H	31.1	43.3	4.5	35.6	47.8	54.0	74.0	18.4	26.2	*Floor Noise
9648.000	H	30.8	42.4	7.4	38.2	49.8	54.0	74.0	15.8	24.2	*Floor Noise
12060.000	H	33.0	45.3	8.7	41.7	54.0	54.0	74.0	12.3	20.0	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
630.740	H	31.3	0.3	31.6	46.0	14.4	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	36.0	69.9	-3.6	32.4	66.3	54.0	74.0	21.6	7.7	
2390.000	V	35.7	69.3	-3.6	32.1	65.7	54.0	74.0	21.9	8.3	
4824.000	H	36.0	47.0	3.4	39.4	50.4	54.0	74.0	14.6	23.6	Floor Noise
7236.000	H	31.1	43.3	4.5	35.6	47.8	54.0	74.0	18.4	26.2	*Floor Noise
9648.000	H	30.8	42.4	7.4	38.2	49.8	54.0	74.0	15.8	24.2	*Floor Noise
12060.000	H	33.0	45.3	8.7	41.7	54.0	54.0	74.0	12.3	20.0	Floor Noise

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.880	H	37.3	-11.3	26.0	43.5	17.5	

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	34.6	66.2	-3.6	31.0	62.6	54.0	74.0	23.0	11.4	
2390.000	V	36.2	69.4	-3.6	32.6	65.8	54.0	74.0	21.4	8.2	
4824.000	H	36.0	47.0	3.4	39.4	50.4	54.0	74.0	14.6	23.6	Floor Noise
7236.000	H	31.1	43.3	4.5	35.6	47.8	54.0	74.0	18.4	26.2	*Floor Noise
9648.000	H	30.8	42.4	7.4	38.2	49.8	54.0	74.0	15.8	24.2	*Floor Noise
12060.000	H	33.0	45.3	8.7	41.7	54.0	54.0	74.0	12.3	20.0	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Radiated Emission: Mch (2437MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.510	H	34.9	-11.3	23.6	43.5	19.9	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	35.1	68.1	-3.6	31.5	64.5	54.0	74.0	22.5	9.5	
2390.000	V	33.1	63.1	-3.6	29.5	59.5	54.0	74.0	24.5	14.5	
2483.500	H	35.3	64.1	-3.5	31.8	60.6	54.0	74.0	22.2	13.4	
2483.500	V	33.2	56.8	-3.5	29.7	53.3	54.0	74.0	24.3	20.7	
4874.000	H	31.8	44.5	3.5	35.3	48.0	54.0	74.0	18.7	26.0	Floor Noise
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
627.563	H	30.4	0.2	30.6	46.0	15.4	

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	33.5	64.1	-3.6	29.9	60.5	54.0	74.0	24.1	13.5	
2390.000	V	33.9	67.5	-3.6	30.3	63.9	54.0	74.0	23.7	10.1	
2483.500	H	34.8	62.5	-3.5	31.3	59.0	54.0	74.0	22.7	15.0	
2483.500	V	34.3	61.3	-3.5	30.8	57.8	54.0	74.0	23.2	16.2	
4874.000	H	31.8	44.5	3.5	35.3	48.0	54.0	74.0	18.7	26.0	Floor Noise
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.935	H	37.8	-11.3	26.5	43.5	17.0	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	33.2	62.3	-3.6	29.6	58.7	54.0	74.0	24.4	15.3	
2390.000	V	34.1	65.2	-3.6	30.5	61.6	54.0	74.0	23.5	12.4	
2483.500	H	33.6	59.2	-3.5	30.1	55.7	54.0	74.0	23.9	18.3	
2483.500	V	34.7	63.0	-3.5	31.2	59.5	54.0	74.0	22.8	14.5	
4874.000	H	31.8	44.5	3.5	35.3	48.0	54.0	74.0	18.7	26.0	Floor Noise
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Radiated Emission: Hch (2462MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.500	H	35.8	-11.3	24.5	43.5	19.0	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	37.1	73.4	-3.5	33.6	69.9	54.0	74.0	20.4	4.1	
2483.500	V	35.6	69.8	-3.5	32.1	66.3	54.0	74.0	21.9	7.7	
4924.000	H	31.1	43.4	3.7	34.8	47.1	54.0	74.0	19.2	26.9	Floor Noise
7386.000	H	32.0	44.7	4.6	36.6	49.3	54.0	74.0	17.4	24.7	Floor Noise
9848.000	H	31.1	41.7	7.4	38.5	49.1	54.0	74.0	15.5	24.9	*Floor Noise
12310.000	H	31.6	44.3	8.5	40.1	52.8	54.0	74.0	13.9	21.2	Floor Noise

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
633.940	H	30.8	0.4	31.2	46.0	14.8	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	38.6	76.7	-3.5	35.1	73.2	54.0	74.0	18.9	0.8	
2483.500	H	37.1	73.1	-3.5	33.6	69.6	54.0	74.0	20.4	4.4	
4924.000	H	31.1	43.4	3.7	34.8	47.1	54.0	74.0	19.2	26.9	Floor Noise
7386.000	H	32.0	44.7	4.6	36.6	49.3	54.0	74.0	17.4	24.7	Floor Noise
9848.000	H	31.1	41.7	7.4	38.5	49.1	54.0	74.0	15.5	24.9	*Floor Noise
12310.000	H	31.6	44.3	8.5	40.1	52.8	54.0	74.0	13.9	21.2	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.900	H	37.0	-11.3	31.2	43.5	17.8	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	35.1	68.0	-3.5	31.6	64.5	54.0	74.0	22.4	9.5	
2483.500	V	36.9	72.8	-3.5	33.4	69.3	54.0	74.0	20.6	4.7	
4924.000	H	31.1	43.4	3.7	34.8	47.1	54.0	74.0	19.2	26.9	Floor Noise
7386.000	H	32.0	44.7	4.6	36.6	49.3	54.0	74.0	17.4	24.7	Floor Noise
9848.000	H	31.1	41.7	7.4	38.5	49.1	54.0	74.0	15.5	24.9	*Floor Noise
12310.000	H	31.6	44.3	8.5	40.1	52.8	54.0	74.0	13.9	21.2	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	3	Test Standard	:	FCC Part15 C §15.247 (d)
Power Supply	:	DC 5.00V, 3.30V	Temp. / Humid.	:	Blow 1GHz XY-Plan: 18.3 degree C / 33.9% 12 April 2011 YZ, ZX-Plan: 18.3 degree C / 36.8% 13 April 2011 1-6GHz L, Hch: 15.6 degree C / 37.7% 6 April 2011 Mch: 17.8 degree C / 44.3% 7 April 2011 Above 6GHz 17.6 degree C / 43.8% 8 April 2011
Operator	:	Masashi Tsukui			
Mode	:	Transmitting Mode IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps)			

Radiated Emission: Lch (2412MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.440	H	36.7	-11.3	25.4	43.5	18.1	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	36.2	70.0	-3.6	32.6	66.4	54.0	74.0	21.4	7.6	
2390.000	H	33.7	62.8	-3.6	30.1	59.2	54.0	74.0	23.9	14.8	
4824.000	H	36.0	47.0	3.4	39.4	50.4	54.0	74.0	14.6	23.6	Floor Noise
7236.000	H	31.1	43.3	4.5	35.6	47.8	54.0	74.0	18.4	26.2	*Floor Noise
9648.000	H	30.8	42.4	7.4	38.2	49.8	54.0	74.0	15.8	24.2	*Floor Noise
12060.000	H	33.0	45.3	8.7	41.7	54.0	54.0	74.0	12.3	20.0	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
627.510	H	30.5	0.2	30.7	46.0	15.3	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	35.4	68.2	-3.6	31.8	64.6	54.0	74.0	22.2	9.4	
2390.000	V	35.3	67.8	-3.6	31.7	64.2	54.0	74.0	22.3	9.8	
4824.000	H	36.0	47.0	3.4	39.4	50.4	54.0	74.0	14.6	23.6	Floor Noise
7236.000	H	31.1	43.3	4.5	35.6	47.8	54.0	74.0	18.4	26.2	*Floor Noise
9648.000	H	30.8	42.4	7.4	38.2	49.8	54.0	74.0	15.8	24.2	*Floor Noise
12060.000	H	33.0	45.3	8.7	41.7	54.0	54.0	74.0	12.3	20.0	Floor Noise

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.855	H	37.5	-11.3	26.2	43.5	17.3	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	33.4	61.6	-3.6	29.8	58.0	54.0	74.0	24.2	16.0	
2390.000	V	35.7	68.8	-3.6	32.1	65.2	54.0	74.0	21.9	8.8	
4824.000	H	36.0	47.0	3.4	39.4	50.4	54.0	74.0	14.6	23.6	Floor Noise
7236.000	H	31.1	43.3	4.5	35.6	47.8	54.0	74.0	18.4	26.2	*Floor Noise
9648.000	H	30.8	42.4	7.4	38.2	49.8	54.0	74.0	15.8	24.2	*Floor Noise
12060.000	H	33.0	45.3	8.7	41.7	54.0	54.0	74.0	12.3	20.0	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Radiated Emission: Mch (2437MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.523	H	34.7	-11.3	23.4	43.5	20.1	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	33.0	65.9	-3.6	29.4	62.3	54.0	74.0	24.6	11.7	
2390.000	V	32.3	62.8	-3.6	28.7	59.2	54.0	74.0	25.3	14.8	
2483.500	H	33.5	63.0	-3.5	30.0	59.5	54.0	74.0	24.0	14.5	
2483.500	V	32.5	55.7	-3.5	29.0	52.2	54.0	74.0	25.0	21.8	
4874.000	H	31.8	44.5	3.5	35.3	48.0	54.0	74.0	18.7	26.0	Floor Noise
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
639.310	H	31.1	0.5	31.6	46.0	14.4	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	33.5	67.5	-3.6	29.9	63.9	54.0	74.0	24.1	10.1	
2390.000	V	35.7	65.1	-3.6	32.1	61.5	54.0	74.0	21.9	12.5	
2483.500	H	33.9	64.2	-3.5	30.4	60.7	54.0	74.0	23.6	13.3	
2483.500	V	35.7	59.8	-3.5	32.2	56.3	54.0	74.0	21.8	17.7	
4874.000	H	31.8	44.5	3.5	35.3	48.0	54.0	74.0	18.7	26.0	Floor Noise
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.860	H	38.3	-11.3	27.0	43.5	16.5	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	32.4	61.3	-3.6	28.8	57.7	54.0	74.0	25.2	16.3	
2390.000	V	32.8	63.8	-3.6	29.2	60.2	54.0	74.0	24.8	13.8	
2483.500	H	32.8	58.9	-3.5	29.3	55.4	54.0	74.0	24.7	18.6	
2483.500	V	33.3	62.4	-3.5	29.8	58.9	54.0	74.0	24.2	15.1	
4874.000	H	31.8	44.5	3.5	35.3	48.0	54.0	74.0	18.7	26.0	Floor Noise
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Radiated Emission: Hch (2462MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.470	H	36.1	-11.3	24.8	43.5	18.7	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	36.5	73.4	-3.5	33.0	69.9	54.0	74.0	21.0	4.1	
2483.500	V	34.6	68.6	-3.5	31.1	65.1	54.0	74.0	22.9	8.9	
4924.000	H	31.1	43.4	3.7	34.8	47.1	54.0	74.0	19.2	26.9	Floor Noise
7386.000	H	32.0	44.7	4.6	36.6	49.3	54.0	74.0	17.4	24.7	Floor Noise
9848.000	H	31.1	41.7	7.4	38.5	49.1	54.0	74.0	15.5	24.9	*Floor Noise
12310.000	H	31.6	44.3	8.5	40.1	52.8	54.0	74.0	13.9	21.2	Floor Noise

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
624.160	H	31.2	0.1	31.3	46.0	14.7	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	36.5	73.4	-3.5	33.0	69.9	54.0	74.0	21.0	4.1	
2483.500	V	36.1	72.9	-3.5	32.6	69.4	54.0	74.0	21.4	4.6	
4924.000	H	31.1	43.4	3.7	34.8	47.1	54.0	74.0	19.2	26.9	Floor Noise
7386.000	H	32.0	44.7	4.6	36.6	49.3	54.0	74.0	17.4	24.7	Floor Noise
9848.000	H	31.1	41.7	7.4	38.5	49.1	54.0	74.0	15.5	24.9	*Floor Noise
12310.000	H	31.6	44.3	8.5	40.1	52.8	54.0	74.0	13.9	21.2	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.870	H	37.6	-11.3	26.3	43.5	17.2	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	34.6	68.1	-3.5	31.1	64.6	54.0	74.0	22.9	9.4	
2483.500	V	36.0	71.9	-3.5	32.5	68.4	54.0	74.0	21.5	5.6	
4924.000	H	31.1	43.4	3.7	34.8	47.1	54.0	74.0	19.2	26.9	Floor Noise
7386.000	H	32.0	44.7	4.6	36.6	49.3	54.0	74.0	17.4	24.7	Floor Noise
9848.000	H	31.1	41.7	7.4	38.5	49.1	54.0	74.0	15.5	24.9	*Floor Noise
12310.000	H	31.6	44.3	8.5	40.1	52.8	54.0	74.0	13.9	21.2	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	3	Test Standard	:	FCC Part15 C §15.247 (d)
Power Supply	:	DC 5.00V, 3.30V	Temp. / Humid.	:	Blow 1GHz XY-Plan: 18.3 degree C / 33.9% 12 April 2011 YZ, ZX-Plan: 18.3 degree C / 36.8% 13 April 2011 1-6GHz L, Hch: 15.6 degree C / 37.7% 6 April 2011 Mch: 17.8 degree C / 44.3% 7 April 2011 Above 6GHz 17.6 degree C / 43.8% 8 April 2011
Operator	:	Masashi Tsukui			
Mode	:	Transmitting Mode IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)			

Radiated Emission: Lch (2412MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.500	H	35.4	-11.3	24.1	43.5	19.4	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	35.0	62.7	-3.6	31.4	59.1	54.0	74.0	22.6	14.9	
2390.000	V	33.9	57.4	-3.6	30.3	53.8	54.0	74.0	23.7	20.2	
4844.000	H	31.5	42.2	3.5	35.0	45.7	54.0	74.0	19.0	28.3	Floor Noise
7266.000	H	31.3	45.7	4.5	35.8	50.2	54.0	74.0	18.2	23.8	Floor Noise
9688.000	H	30.8	42.9	7.4	38.2	50.3	54.0	74.0	15.8	23.7	*Floor Noise
12110.000	H	32.4	42.6	8.7	41.1	51.3	54.0	74.0	12.9	22.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
634.280	H	30.5	0.4	30.9	46.0	15.1	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	35.0	62.3	-3.6	31.4	58.7	54.0	74.0	22.6	15.3	
2390.000	V	34.2	59.3	-3.6	30.6	55.7	54.0	74.0	23.4	18.3	
4844.000	H	31.5	42.2	3.5	35.0	45.7	54.0	74.0	19.0	28.3	Floor Noise
7266.000	H	31.3	45.7	4.5	35.8	50.2	54.0	74.0	18.2	23.8	Floor Noise
9688.000	H	30.8	42.9	7.4	38.2	50.3	54.0	74.0	15.8	23.7	*Floor Noise
12110.000	H	32.4	42.6	8.7	41.1	51.3	54.0	74.0	12.9	22.7	Floor Noise

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.750	H	37.9	-11.3	26.6	43.5	16.9	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	34.2	59.2	-3.6	30.6	55.6	54.0	74.0	23.4	18.4	
2390.000	V	34.3	59.1	-3.6	30.7	55.5	54.0	74.0	23.3	18.5	
4844.000	H	31.5	42.2	3.5	35.0	45.7	54.0	74.0	19.0	28.3	Floor Noise
7266.000	H	31.3	45.7	4.5	35.8	50.2	54.0	74.0	18.2	23.8	Floor Noise
9688.000	H	30.8	42.9	7.4	38.2	50.3	54.0	74.0	15.8	23.7	*Floor Noise
12110.000	H	32.4	42.6	8.7	41.1	51.3	54.0	74.0	12.9	22.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Radiated Emission: Mch (2437MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.462	H	35.3	-11.3	24.0	43.5	19.5	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	33.3	61.5	-3.6	29.7	57.9	54.0	74.0	24.3	16.1	
2390.000	V	32.2	55.4	-3.6	28.6	51.8	54.0	74.0	25.4	22.2	
2483.500	H	33.5	61.2	-3.5	30.0	57.7	54.0	74.0	24.0	16.3	
2483.500	V	32.4	54.1	-3.5	28.9	50.6	54.0	74.0	25.1	23.4	
4874.000	H	31.8	44.5	3.5	35.3	48.0	54.0	74.0	18.7	26.0	Floor Noise
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
637.010	H	31.4	0.4	31.8	46.0	14.2	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	33.4	61.9	-3.6	29.8	58.3	54.0	74.0	24.2	15.7	
2390.000	V	32.8	58.8	-3.6	29.2	55.2	54.0	74.0	24.8	18.8	
2483.500	H	34.1	64.1	-3.5	30.6	60.6	54.0	74.0	23.4	13.4	
2483.500	V	33.3	59.8	-3.5	29.8	56.3	54.0	74.0	24.2	17.7	
4874.000	H	31.8	44.5	3.5	35.3	48.0	54.0	74.0	18.7	26.0	Floor Noise
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.750	H	36.2	-11.3	24.9	43.5	18.6	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2390.000	H	32.4	56.4	-3.6	28.8	52.8	54.0	74.0	25.2	21.2	
2390.000	V	32.3	56.5	-3.6	28.7	52.9	54.0	74.0	25.3	21.1	
2483.500	H	32.7	56.4	-3.5	29.2	52.9	54.0	74.0	24.8	21.1	
2483.500	V	32.8	57.1	-3.5	29.3	53.6	54.0	74.0	24.7	20.4	
4874.000	H	31.8	44.5	3.5	35.3	48.0	54.0	74.0	18.7	26.0	Floor Noise
7311.000	H	33.4	44.2	4.6	38.0	48.8	54.0	74.0	16.0	25.2	Floor Noise
9748.000	H	30.6	41.7	7.4	38.0	49.1	54.0	74.0	16.0	24.9	*Floor Noise
12185.000	H	32.0	44.6	8.7	40.7	53.3	54.0	74.0	13.3	20.7	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Radiated Emission: Hch (2462MHz)

Axial Direction: XY-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
199.411	H	35.8	-11.3	24.5	43.5	19.0	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	35.1	69.1	-3.5	31.6	65.6	54.0	74.0	22.4	8.4	
2483.500	V	33.5	61.3	-3.5	30.0	57.8	54.0	74.0	24.0	16.2	
4904.000	H	30.9	44.2	3.6	34.5	47.8	54.0	74.0	19.5	26.2	Floor Noise
7356.000	H	31.5	45.0	4.6	36.1	49.6	54.0	74.0	17.9	24.4	Floor Noise
9808.000	H	30.6	43.8	7.4	38.0	51.2	54.0	74.0	16.0	22.8	*Floor Noise
12260.000	H	31.6	44.1	8.6	40.2	52.7	54.0	74.0	13.8	21.3	Floor Noise

Axial Direction: YZ-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
634.010	H	29.4	0.4	29.8	46.0	16.2	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	35.3	69.4	-3.5	31.8	65.9	54.0	74.0	22.2	8.1	
2483.500	V	34.6	66.8	-3.5	31.1	63.3	54.0	74.0	22.9	10.7	
4904.000	H	30.9	44.2	3.6	34.5	47.8	54.0	74.0	19.5	26.2	Floor Noise
7356.000	H	31.5	45.0	4.6	36.1	49.6	54.0	74.0	17.9	24.4	Floor Noise
9808.000	H	30.6	43.8	7.4	38.0	51.2	54.0	74.0	16.0	22.8	*Floor Noise
12260.000	H	31.6	44.1	8.6	40.2	52.7	54.0	74.0	13.8	21.3	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

Axial Direction: ZX-Plane

Below 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] QP	Factor [dB/m]	Level [dB(uV/m)] QP	Limit [dB(uV/m)] QP	Margin [dB] QP / AV / PK	Remark
197.880	H	37.4	-11.3	26.1	43.5	17.4	*

Above 1GHz

Frequency [MHz]	Pol. [H / V]	Reading [dB(uV)] AV / PK		Factor [dB/m]	Level [dB(uV/m)] AV / PK		Limit [dB(uV/m)] AV / PK		Margin [dB] AV / PK		Remark
2483.500	H	34.3	64.8	-3.5	30.8	61.3	54.0	74.0	23.2	12.7	
2483.500	V	34.9	66.8	-3.5	31.4	63.3	54.0	74.0	22.6	10.7	
4904.000	H	30.9	44.2	3.6	34.5	47.8	54.0	74.0	19.5	26.2	Floor Noise
7356.000	H	31.5	45.0	4.6	36.1	49.6	54.0	74.0	17.9	24.4	Floor Noise
9808.000	H	30.6	43.8	7.4	38.0	51.2	54.0	74.0	16.0	22.8	*Floor Noise
12260.000	H	31.6	44.1	8.6	40.2	52.7	54.0	74.0	13.8	21.3	Floor Noise

Note: * = Out of Restricted Band.
This frequency is out of the restricted bands, so radiated emission limits specified in Section 15.209 does not apply.

15.247(d):
Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

11 Peak Power Spectral Density

11.1 Test Setup

The test is performed in accordance with FCC Document “Measurement of Transmission Systems Operating under section 15.247”. PSD Option1 is used.
The spectrum analyzer was connected to the transmitter output port through the RF cable.

Spectrum Analyzer Setting:

Detector Mode	Peak
RBW	3kHz
VBW	10kHz
Span	1.5MHz
Sweep Time	500s

11.2 Test Results

Product	:	Wireless LAN Module	Model	:	WYSAAVDX7
Serial No.	:	1	Test Standard	:	FCC Part15 C §15.247 (e)
Power Supply	:	DC 5.00V	Temp. / Humid.	:	IEE 802.11b 23.5 degree C / 47.1%: 8 April 2011 IEE 802.11g, n(BW: 20MHz), n (BW: 40MHz) 23.8 degree C / 46.8%: 7 April 2011
Operator	:	Yukihito Minegishi			
Mode	:	Transmitting Mode			
		IEEE 802.11b: DBPSK (1Mbps), IEEE 802.11g: BPSK (6Mbps)			
		IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps), IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)			

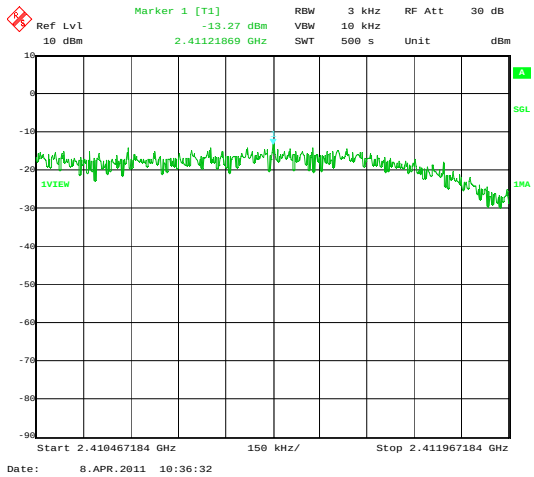
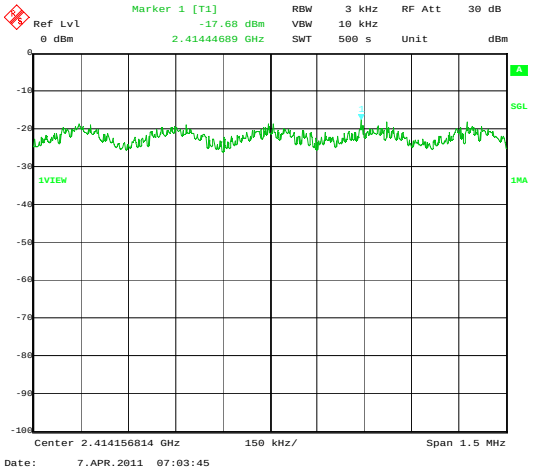
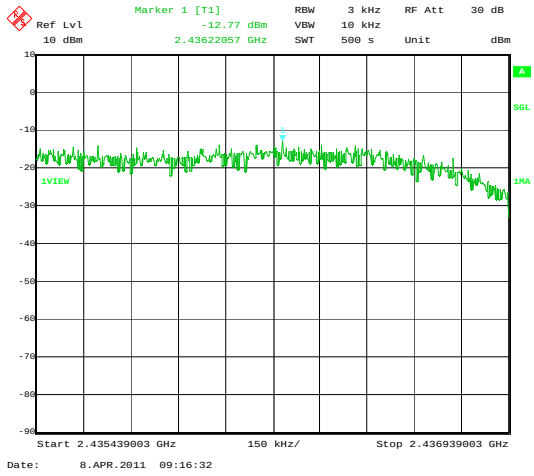
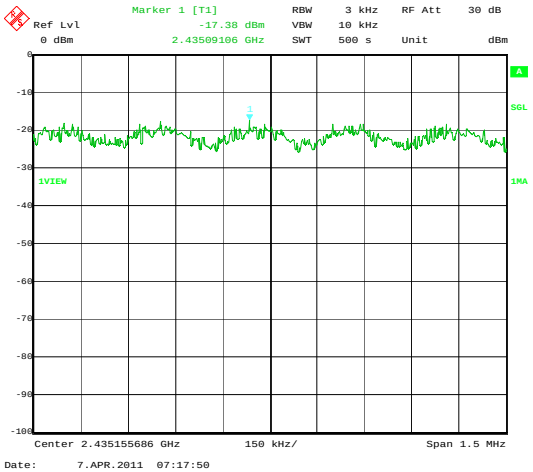
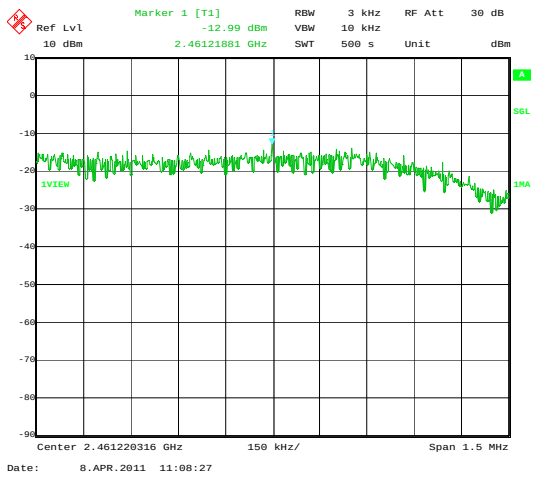
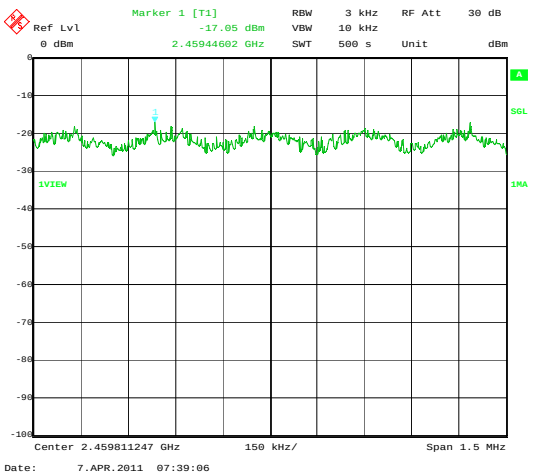
Channel	Frequency [MHz]	Reading [dBm]	Cable Loss1 [dB]	Cable Loss2 [dB]	Result [dBm]	Limit [dBm/3kHz]
IEEE 802.11b: DBPSK (1Mbps)						
1ch (Lowest)	2411.22	-13.27	0.66	0.50	-12.11	<= 8
6ch (Middle)	2436.22	-12.77	0.65	0.50	-11.62	<= 8
11ch (Highest)	2461.22	-12.99	0.63	0.50	-11.86	<= 8
IEEE 802.11g: BPSK (6Mbps)						
1ch (Lowest)	2414.45	-17.68	0.66	0.50	-16.52	<= 8
6ch (Middle)	2435.09	-17.38	0.65	0.50	-16.23	<= 8
11ch (Highest)	2459.45	-17.05	0.63	0.50	-15.92	<= 8
IEEE 802.11n (BW: 20MHz): BPSK (6.5Mbps)						
1ch (Lowest)	2414.16	-18.96	0.66	0.50	-17.80	<= 8
6ch (Middle)	2439.2	-18.61	0.65	0.50	-17.46	<= 8
11ch (Highest)	2459.78	-18.56	0.63	0.50	-17.43	<= 8
IEEE 802.11n (BW: 40MHz): BPSK (13.5Mbps)						
3ch (Lowest)	2429.79	-20.11	0.66	0.50	-18.95	<= 8
6ch (Middle)	2433.53	-19.67	0.65	0.50	-18.52	<= 8
9ch (Highest)	2448.54	-20.06	0.63	0.50	-18.93	<= 8

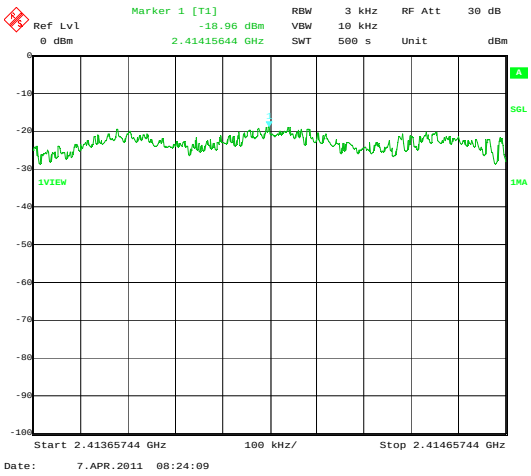
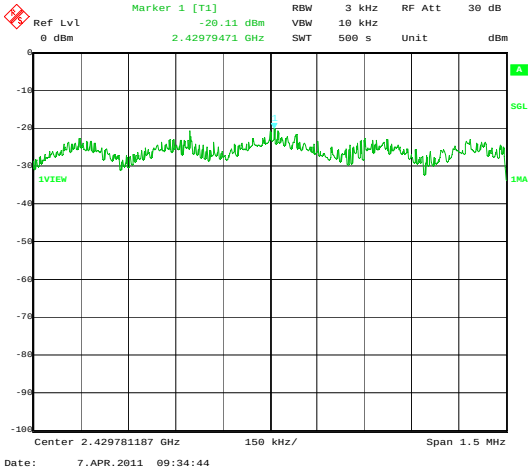
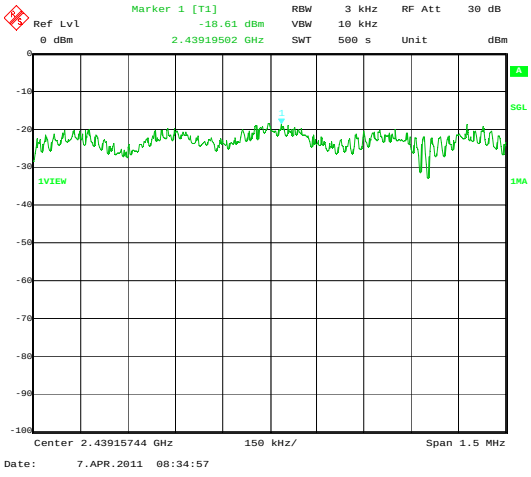
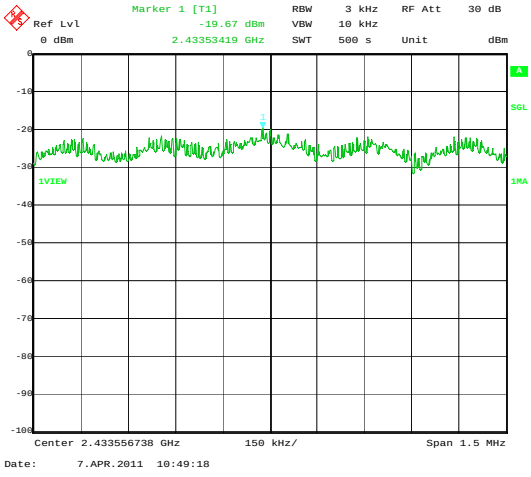
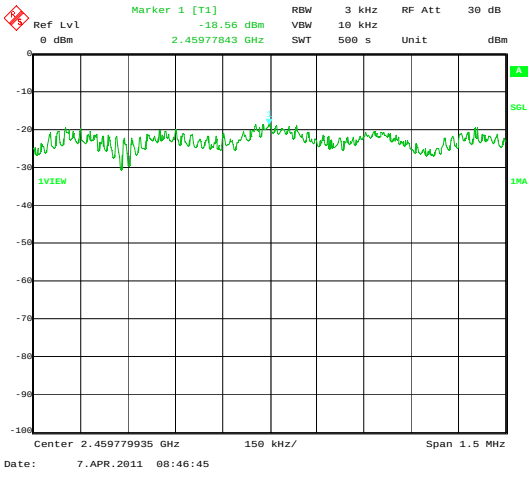
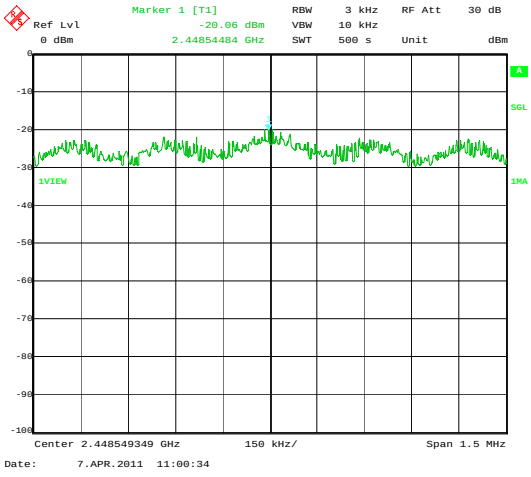
Result = Reading + Cable Loss 1 + Cable Loss2

Note: Cable Loss1: RF Cable
Cable Loss2: Conversion cable used for connecting to SMA type

The spectrum data are attached next page.

Data of Peak Power Spectral Density

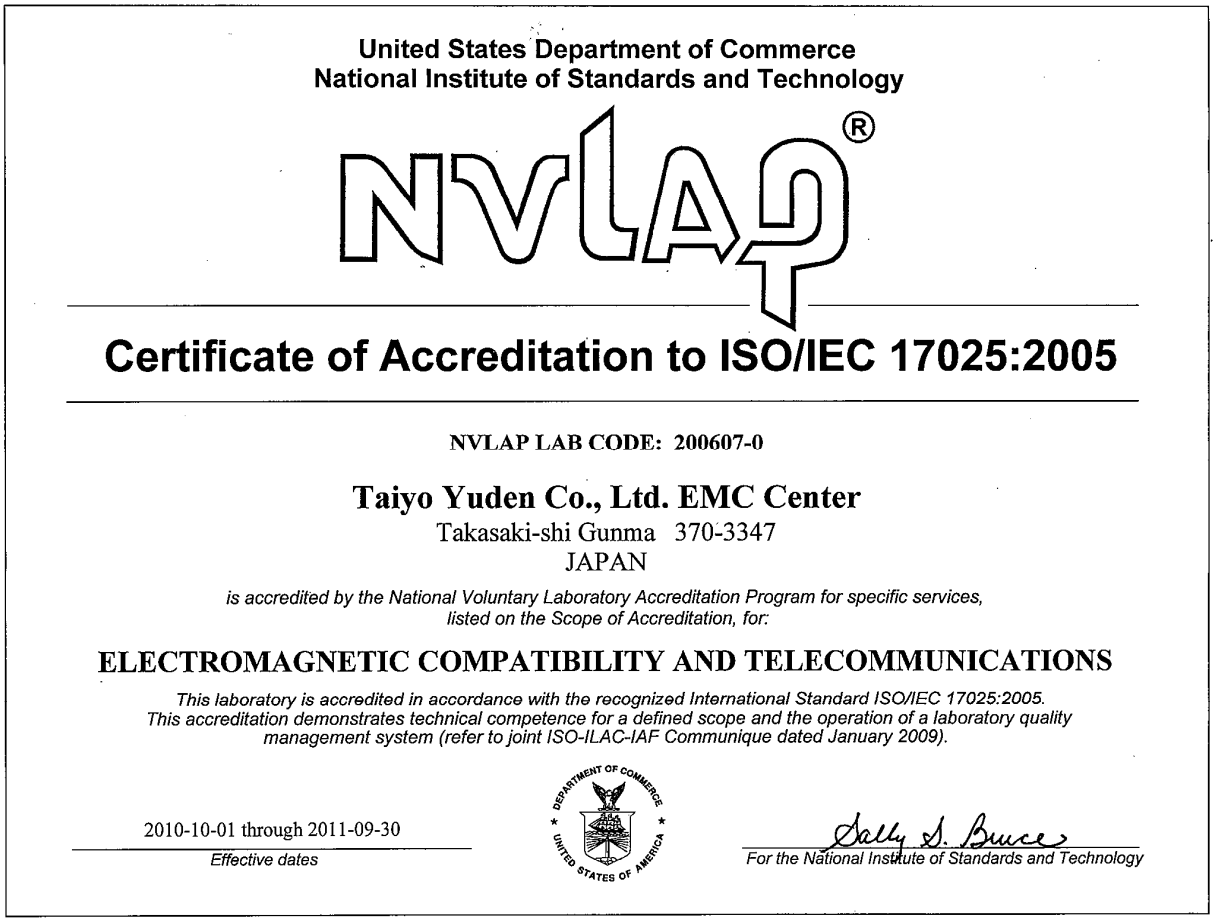
802.11b: DBPSK (1Mbps) Modulation	802.11g: BPSK (6Mbps) Modulation
2412MHz (Lowest)	2412MHz (Lowest)
	
2437MHz (Middle)	2437MHz (Middle)
	
2462MHz (Highest)	2462MHz (Highest)
	

802.11n (BW: 20MHz): BPSK (6.5Mbps) Modulation	802.11n (BW: 40MHz): BPSK (13.5Mbps) Modulation
2412MHz (Lowest)	2422MHz (Lowest)
	
2437MHz (Middle)	2437MHz (Middle)
	
2462MHz (Highest)	2452MHz (Highest)
	

12 Photos of Tested EUT and Test Setup

Setup photo with EUT has been submitted as separate document named “Test Setup Photos (10086FC)”.

13 Appendix 1: Certificate of Accreditation



United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 200607-0

Taiyo Yuden Co., Ltd. EMC Center
Takasaki-shi Gunma 370-3347
JAPAN

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2010-10-01 through 2011-09-30
Effective dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

Sally S. Bruce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

14 Appendix 2: Test Instruments

1. Conducted Emission Test

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date (Interval: 1 year)	
Shielded Room	TDK Co., Ltd	DA-06912	-	-	●
EMI Test Receiver	Rohde & Schwarz	ESHS 10	100005	14 July 2010	●
Spectrum Analyzer	Agilent Technologies	8563E	3416A02230	15 July 2010	●
AMN / LISN	KYORITSU ELECTRICAL WORK	KNW-407	8-680-1	21 December 2010	●
		KNW-242	8-818-8		○
Cable	SUHNER	RG223	CE-1	28 July 2010	●
		RG223	CE-2		●
		RG214	CE-3		●
Attenuator	KYORITSU	KPD-602	5K325		●
RF Selector	TOYO Corporation	NS4900	0302-009		●
Hygro Thermograph	SEKONIC	ST-200	HD01-000779	9 November 2010	●
Software	TOYO Corporation	EP5/CE Ver.2.0	0208085	-	●

2. Conducted RF Test via Antenna Terminal

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date (Interval: 1 year)	
Spectrum Analyzer	Rohde & Schwarz	FSIQ26	840061/0004	25 February 2011	●
	Agilent Technologies	E4446A	US42070181	28 October 2010	○
Power Meter	Anritsu Corporation	ML2495A	1031004	30 August 2010	●
	Agilent Technologies	E4416A	MY45100855	10 May 2010	○
Power Sensor	Anritsu Corporation	MA2411B	917210	30 August 2010	●
	Agilent Technologies	8482A	MY41094396	10 May 2010	○
RF Cable	SUHNER	SUCOFLEX 104	RF2-2	29 July 2010	●
		SUCOFLEX 104E	RF3-3	29 July 2010	○
Attenuator	Anritsu	MP721C	M67169	28 July 2010	●
Power Divider	Agilent Technologies	11636B	57733	2 September 2010	○
			57734		○
			57735		○
Multi Meter	Advantest	R6451A	67840312	6 December 2010	●
	Agilent Technologies	34401A	MY41038383	20 July 2010	○
Temperature Chamber	ESPEC	SU-261	92002840	17 May 2010	○
		PU-2KTH	14006759		○
Hygro Thermograph	SEKONIC	ST-200	HD01-000797	7 May 2010	●
			HD01-000779	9 November 2010	○

Note:
●: Applied by measurement.
○: Not applied by measurement.

3. Radiated Emission Test

Instrument	Manufacturer	Model No.	Serial No.	Calibration Date (Interval: 1 year)	
10m Anechoic Chamber	TDK Co., Ltd.	DA-06912	-	8 February 2011	●
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100148	15 July 2010	●
Spectrum Analyzer	Agilent Technologies	E4407B	MY44221019	29 April 2010	●
		E4446A	US42070181	28 October 2010	●
Amplifier	Agilent Technologies	83017A	3950M00169	27 July 2010	●
		8447D	2944A06812		●
RF Selector	TOYO Corporation	NS4900	0302-010		●
Tunable Filter	TOYO Corporation	NF-49BT	No.1		●
RF Filter	Microtronics	BRM50702-01	020		●
RF Cable	SUHNER	RG214	RG1		●
			RG3		●
			RG5		●
			RG7		●
	HP	HP8120-4782	163 9232	27 July 2010	●
	SUHNER	SUCOFLEX 106	SU1		●
		SUCOFLEX 103	SU5		●
			SU6		●
	HP	85381C	No.3		●
Attenuator	KYORITSU	KPD-602	220142		●
Antenna	Schwarzbeck	BBA9106	No.3	21 December 2010	○
		UHALP9108-A	0160		○
		VULB9160	3179		●
		VHA9103	No.3 (+D3-1, 2)		○
		UHA9105	No.3		○
	EMCO	3115	9403-4232	9 February 2011	●
		3116	9311-2227		●
Digital Multi Meter	Agilent Technologies	34401A	MY41038383	20 July 2010	●
Hygro Thermograph	SEKONIC	ST-200	HD01-000779	9 November 2010	●
Software	TOYO Corporation	EP5/RE Ver.5.1.30	0208086	-	●

Note:
●: Applied by measurement.
○: Not applied by measurement.