

FCC TEST REPORT

for

47 CFR Part 15 Subpart C

Equipment : IEEE 802.11g PCMCIA Card Bus

Model No. : 1. ZPlus-G160

2. VD870G

FCC ID : RIW-ZWX-G160

Filing Type : Certification

Applicant : ZINWELL CORPORATION
2, Wen-Hua Road, Hsinchu Industrial
Park, Hsinchu Hsien 303, Taiwan

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SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

Table of Contents

History of this test report.....	ii
CERTIFICATE OF COMPLIANCE.....	1
1. General Description of Equipment under Test.....	2
1.1. Applicant.....	2
1.2. Manufacturer.....	2
1.3. Basic Description of Equipment under Test.....	2
1.4. Feature of Equipment under Test.....	3
2 Test Configuration of Equipment under Test.....	4
2.1. Test Manner.....	4
2.2. Description of Test System.....	4
2.3. Connection Diagram of Test System.....	5
3 Operation of Equipment under Test.....	6
4 General Information of Test.....	7
4.1. Test Voltage.....	7
4.2. Standard for Methods of Measurement.....	7
4.3. Test in Compliance with.....	7
4.4. Frequency Range Investigated.....	7
4.5. Test Distance.....	7
5 Report of Measurements and Examinations.....	8
5.1. List of Measurements and Examinations.....	8
5.2. 6dB Bandwidth.....	9
5.3. Power Spectral Density.....	17
5.4. Band Edges Measurement.....	25
5.5. Peak Output Power.....	33
6. Test of Conducted Emission.....	35
6.1. Major Measuring Instruments.....	35
6.2. Test Procedures.....	35
6.3. Test Result of Conducted Emission.....	36
7. Test of Radiated Emission.....	38
7.1. Major Measuring Instruments.....	38
7.2. Test Procedures.....	39
7.3. Typical Test Setup Layout of Radiated Emission.....	39
7.4. Test Result of Radiated Emission.....	40
8. Antenna Requirements.....	74
8.1. Standard Applicable.....	74
8.2. Antenna Connected Construction.....	74
9. RF Exposure.....	75
9.1. Limit For Maximum Permissible Exposure (MPE).....	75
9.2. MPE Calculations.....	76
9.3. FCC Radiation Exposure Statement.....	77
10. List of Measuring Equipments Used.....	78
11. Uncertainty Measurement.....	79
Appendix A. Photographs of EUT External	
Appendix B. Photographs of EUT Internal	
Appendix C. Photographs of Setup	

History of this test report

Original Report Issue Date: July 22, 2004

No additional attachment.

Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

CERTIFICATE OF COMPLIANCE
for
47 CFR Part 15 Subpart C

Equipment : IEEE 802.11g PCMCIA Card Bus
Model No. : 1. ZPlus-G160
2. VD870G
FCC ID : RIW-ZWX-G160
Filing Type : Certification
Applicant : ZINWELL CORPORATION
2, Wen-Hua Road, Hsinchu Industrial
Park, Hsinchu Hsien 303, Taiwan

HEREBY CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 - 2001** and the equipment under test was **passed** all test items required in FCC Part 15 subpart C, relative to the equipment under test. Testing was carried out on July 19, 2004 at **SPORTON International Inc.** LAB.

 8/6/2004

Daniel Lee
Manager

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

SPORTON International Inc.

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FCC ID : RIW-ZWX-G160
Page No. : 1 of 80
Issued Date : July 22, 2004

1. General Description of Equipment under Test

1.1. Applicant

ZINWELL CORPORATION

2, Wen-Hua Road, Hsinchu Industrial Park, Hsinchu Hsien 303, Taiwan

1.2 Manufacturer

ZINWELL CORPORATION

2, Wen-Hua Road, Hsinchu Industrial Park, Hsinchu Hsien 303, Taiwan

1.3 Basic Description of Equipment under Test

Equipment	: IEEE 802.11g PCMCIA Card Bus
Trade Name	: ZINWELL VTECH
Model No.	: ZPlus-G160 VD870G
FCC ID	: RIW-ZWX-G160
DC Power Cable	: DC 3.3V

1.4 Feature of Equipment under Test

Product Feature & Specification				
1. Type of Modulation	OFDM (54 Mbps)			
2. Number of Channels	USA/Canada:11	V	European:13	
	Japan:13.14		Other:	
3. Frequency Band	2.4GHz~2.4835GHz			
4. Carrier Frequency of each channel	2412MHz+(n-1)*5MHz, n=1~11			
5. Channel Spacing	5MHz			
6. Maximum Output Power to Antenna (Normal Condition)	802.11b:13.3dBm			
	802.11g:13.5dBm			
7. Type of Antenna Connector	N/A			
8. Antenna Type	Integrated Antenna			
9. Antenna Gain	0 dBi			
10. Function Type	Transmitter		Transceiver	V
11. Power Rating (DC/AC Voltage)	DC 3.3V			
12. Duty Cycle	100%			
13. Basic function of product	Wireless LAN for data networking applications			

2 Test Configuration of Equipment under Test

2.1 Test Manner

- a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2001 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
- b. The complete test system included EPSON Printer, DELL Notebook, COMPAQ Notebook as remote workstation and EUT for EMI test.
- c. The EUT can operate on eleven channels from 2412MHz to 2462MHz. (as listed in section 1.4).
- d. The following test modes were pretested for conduction test:

Mode 1: PING LINK

The following test modes were pretested for radiation test:

Mode 1: 11b TX CH01 (2412MHz)

Mode 2: 11b TX CH06 (2437MHz)

Mode 3: 11b TX CH11 (2462MHz)

Mode 4: 11g TX CH01 (2412MHz)

Mode 5: 11g TX CH06 (2437MHz)

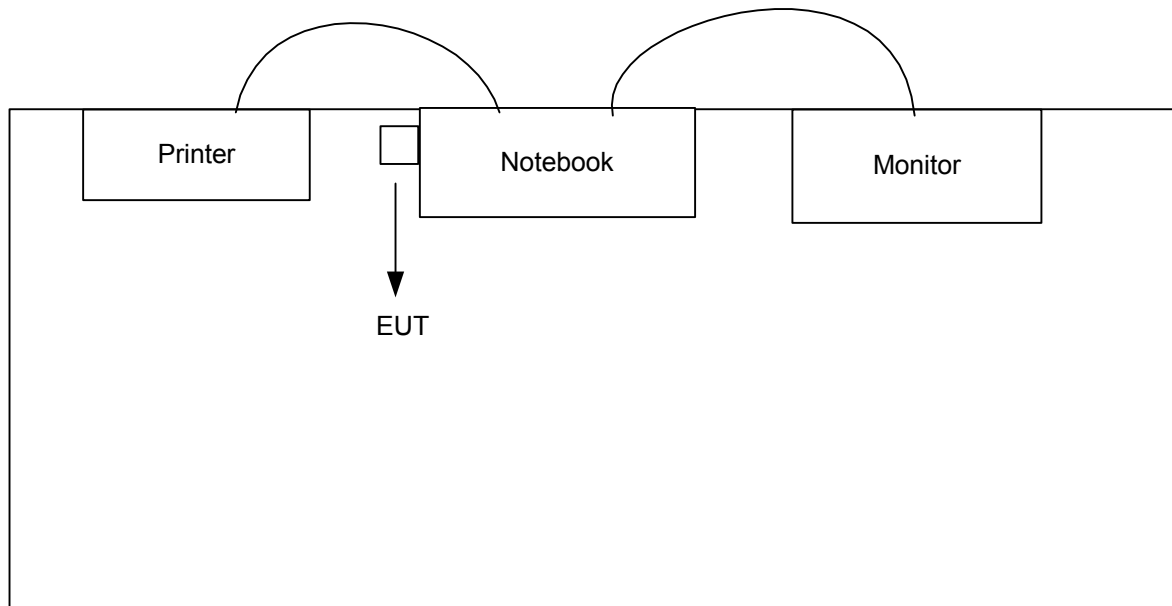
Mode 6: 11g TX CH11 (2462MHz)

- e. Frequency range investigated: conduction 150 kHz to 30 MHz, radiation 30 MHz to 25000MHz.

2.2 Description of Test System

Item	Asset	Model Name	Power Cord	S/N
1.	Notebook (DELL)	PP05L	Non-Shielded	SP0030
2.	Monitor (VIEWSONIC)	VCDTS21553-3P	Non-Shielded, 1.7m	SP0040
3.	Printer (EPSON)	SYTLUS COLOR 680	Non-Shielded, 1.35m	SP0050

2.3 Connection Diagram of Test System



3 Operation of Equipment under Test

An executive program, EMCTEST.EXE on WIN2000 continuously generating a complete line of "H" pattern, was used as the test software.

The program was executed as follows:

- a. Turn on the power of all equipment.
- b. The PC reads the test program from the hard disk drive and runs it.
- c. The PC sends "H" messages to the monitor, and the monitor displays "H" patterns on the screen.
- d. The PC sends "H" messages to the printer, then the printer prints them on the paper.
- e. The PC sends "H" messages to the internal hard disk , and the hard disk reads and writes the message.
- f. Repeat the steps from c to e.

At the same time, the following program was executed:

"CRTV- II " sends continuous transmitting.

4 General Information of Test

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park,
Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
TEL : 886-3-327-3456
FAX : 886-3-318-0055
Test Site No : CO01-HY, 03CH06-HY

4.1 Test Voltage

110V/ 60Hz

4.2 Standard for Methods of Measurement

ANSI C63.4-2001

4.3 Test in Compliance with

47 CFR Part 15 Subpart C

4.4 Frequency Range Investigated

- a. Conduction: from 150 kHz to 30 MHz
- b. Radiation: from 30 MHz to 25000 MHz

4.5 Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.

5 Report of Measurements and Examinations

5.1 List of Measurements and Examinations

FCC Rule	Description of Test	Result
15.207	Conducted Emission	Pass
15.247(a)(2)	6dB Bandwidth	Pass
15.247(b)	Maximum Peak Output Power	Pass
15.209(a)	Radiated Emission	Pass
15.247 (c)	100kHz Bandwidth of Frequency Band Edges	Pass
15.247(d)	Power Spectral Density	Pass
15.203 15.247(b)(4)	Antenna Requirement	Pass
1.1307 2.1091	RF Exposure	Pass

5.2 6dB Bandwidth

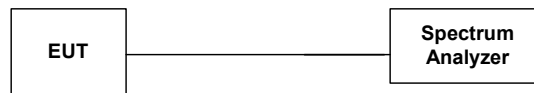
5.2.1 Measuring Instruments :

As described in chapter 10 of this test report.

5.2.2 Test Procedure :

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW of spectrum analyzer to 100kHz and VBW to 100kHz.
3. The 6 dB bandwidth is defined as the frequency range where the power is higher than the peak power minus 6dB.

5.2.3 Test Setup Layout :



5.2.4 Test Result :

- Mode 1~3 : WLAN 802.11b
- Temperature : 26°C
- Relative Humidity : 53%

Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	11.76	0.5	Mode 1
06	2437	12.08	0.5	Mode 2
11	2462	11.92	0.5	Mode 3

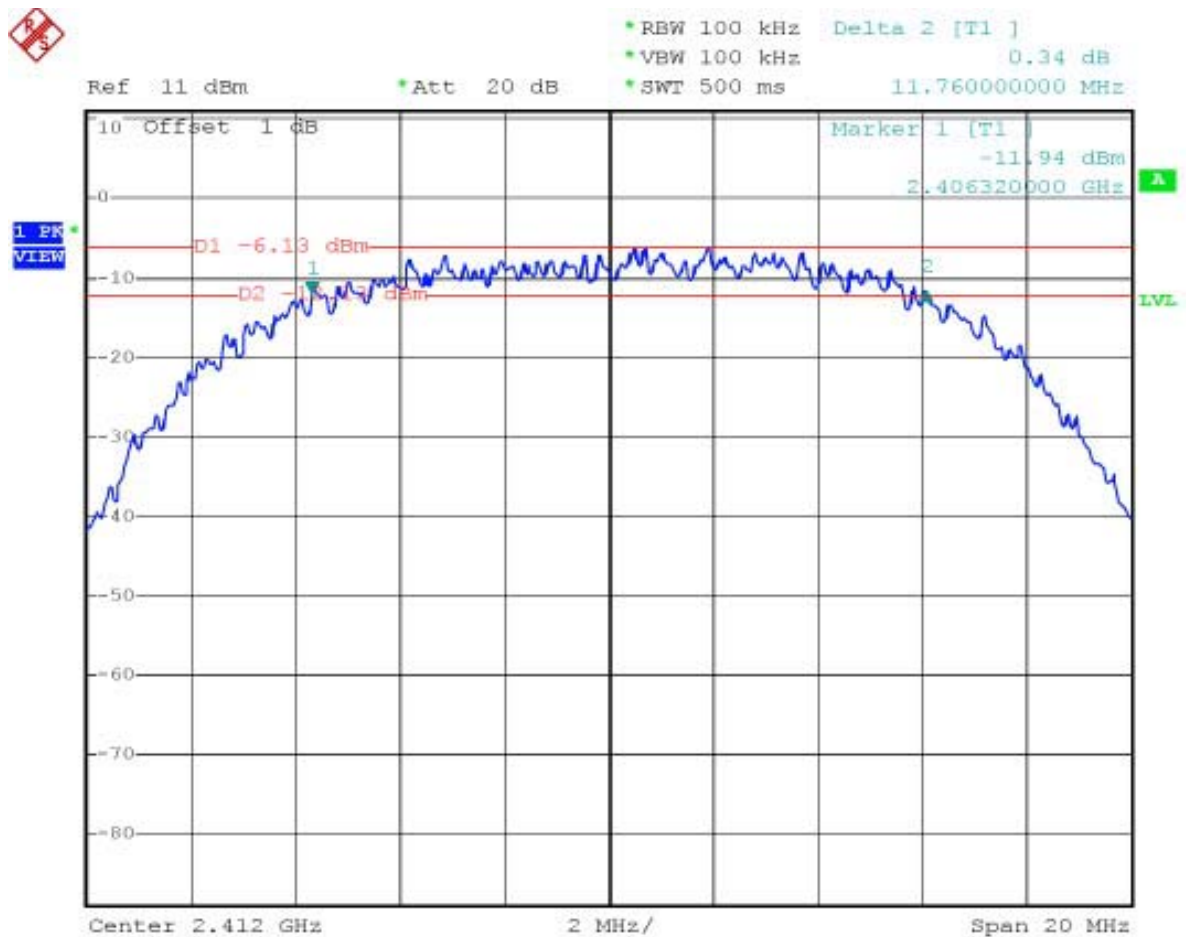
5.2.5 Test Result :

- Mode 4~6 : WLAN 802.11g
- Temperature : 26°C
- Relative Humidity : 53%

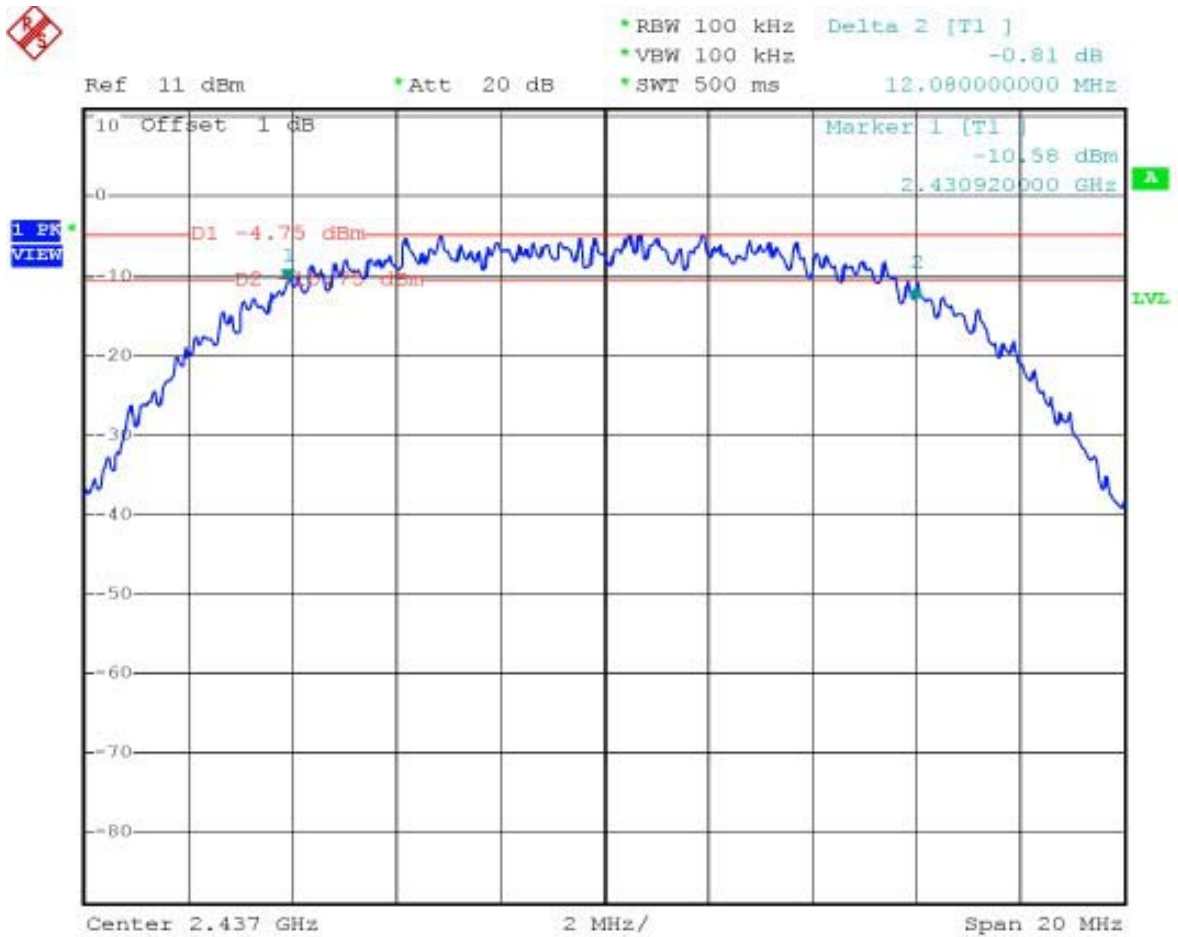
Channel	Frequency (MHz)	6dB Emission bandwidth (MHz)	Limits (MHz)	Plot Ref. No.
01	2412	16.52	0.5	Mode 4
06	2437	16.48	0.5	Mode 5
11	2462	16.48	0.5	Mode 6

5.2.6 6dB Bandwidth

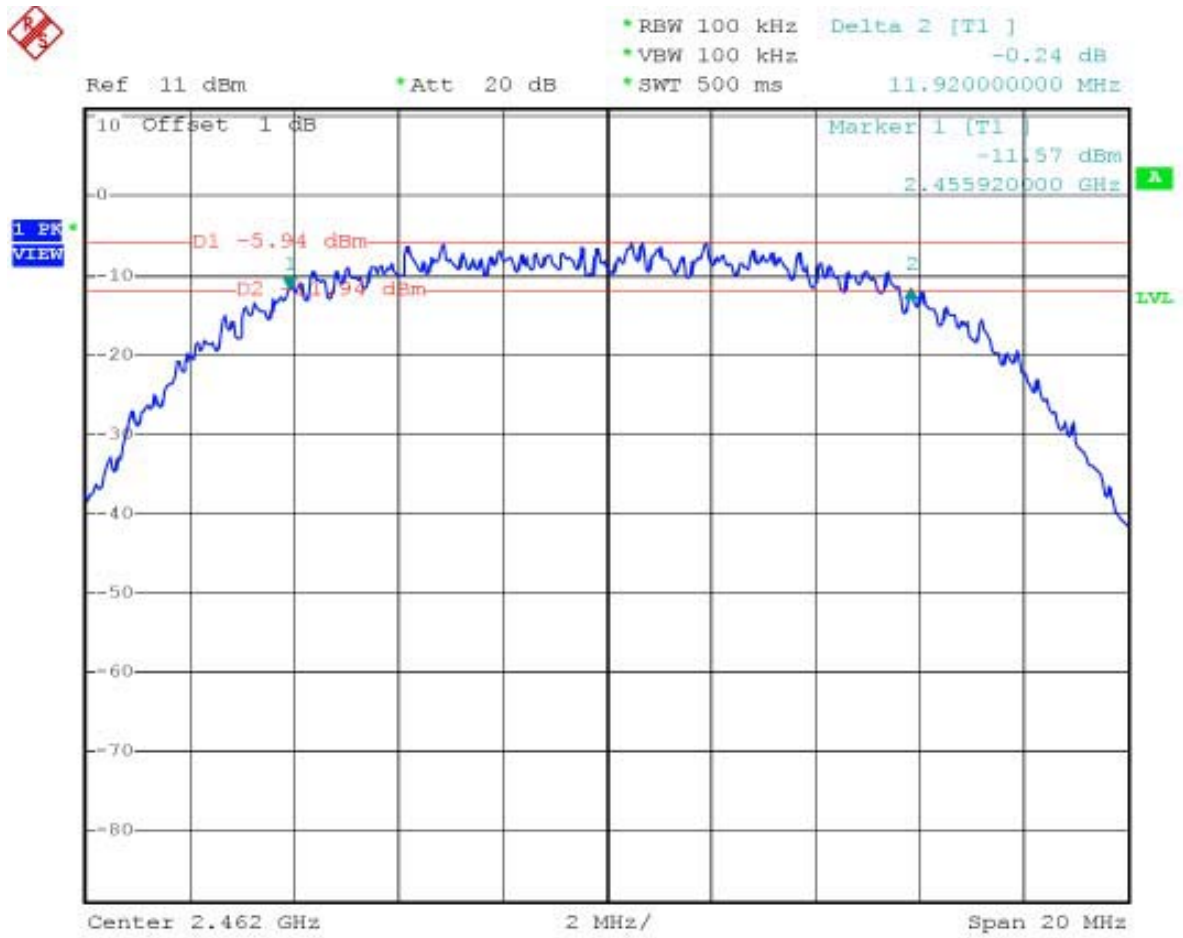
Mode 1 : 802.11b CH01 (2412MHz)



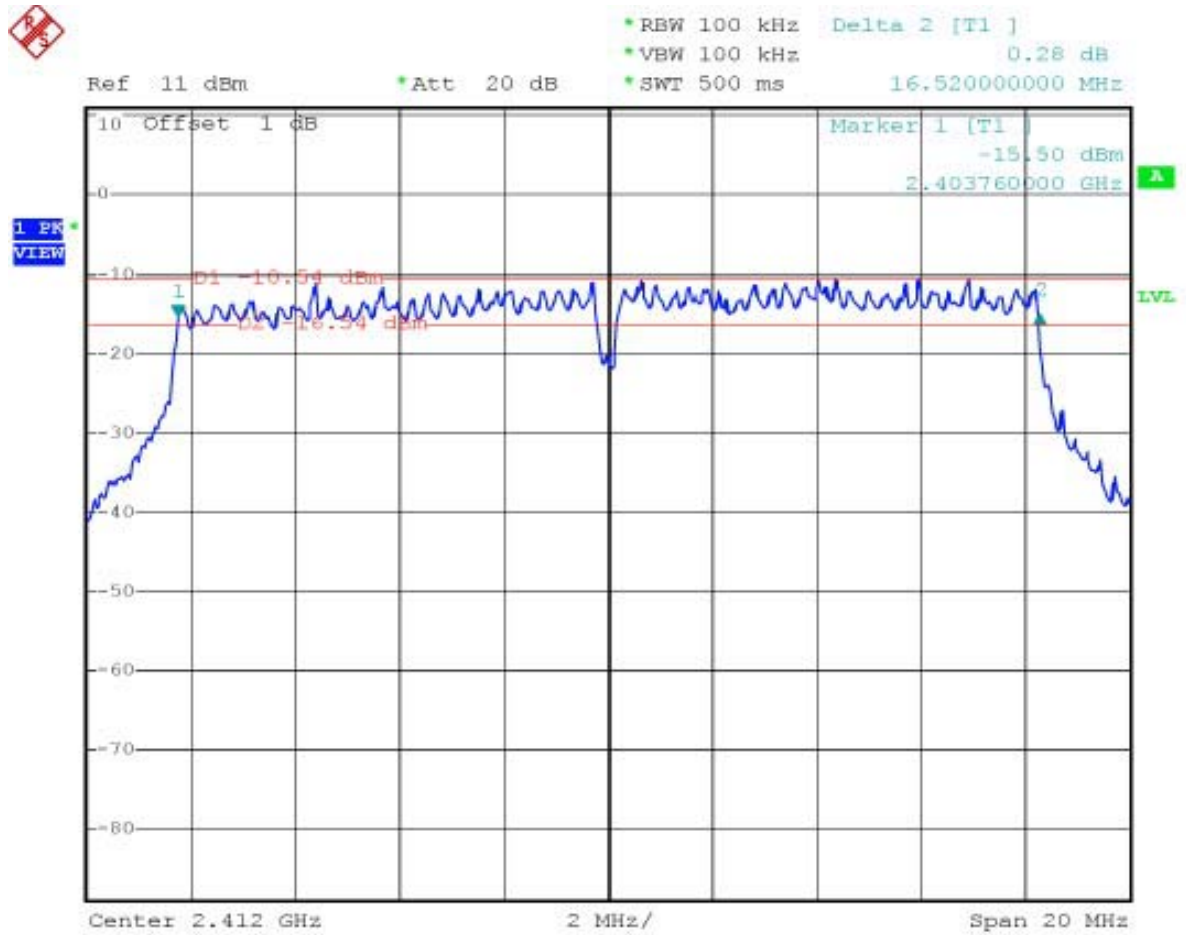
Mode 2 : 802.11b CH06 (2437MHz)



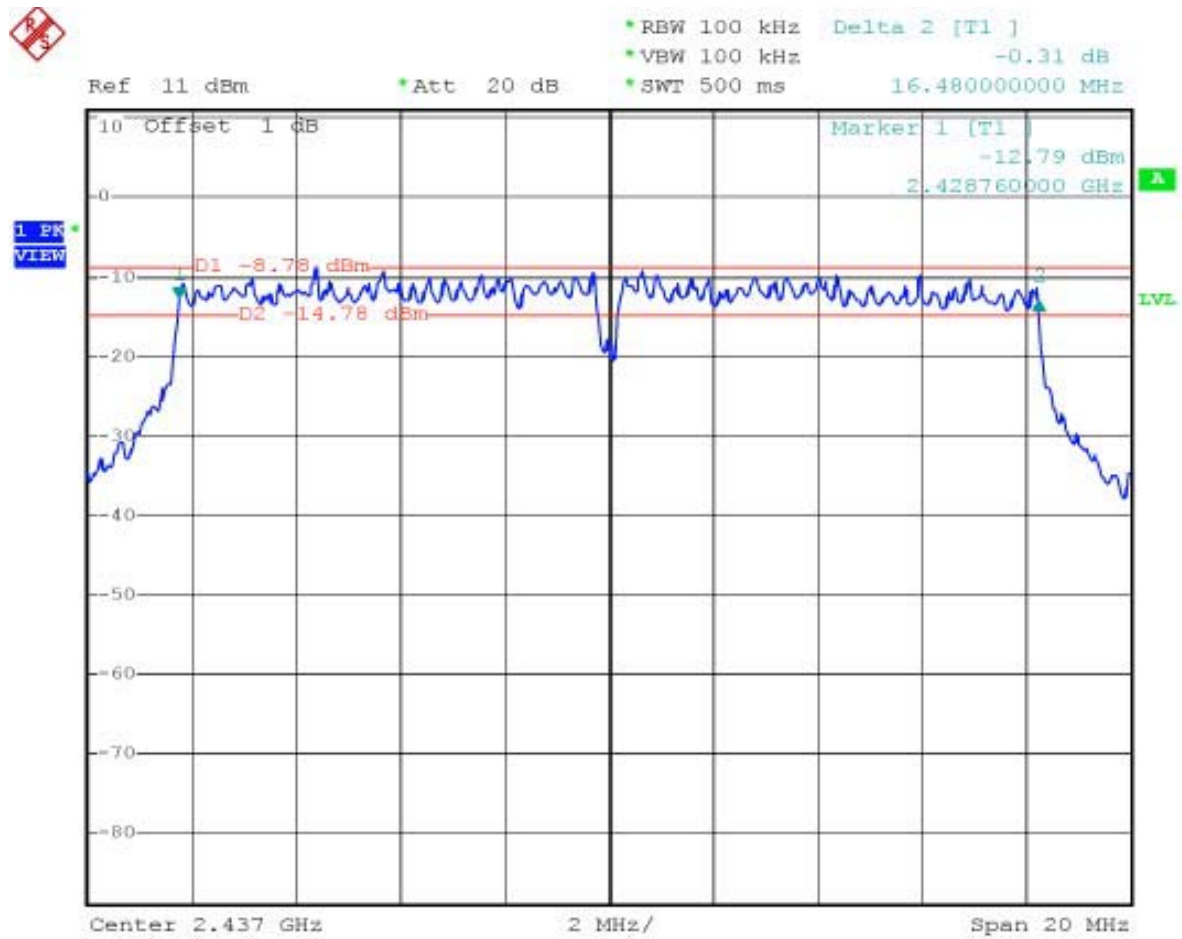
Mode 3 : 802.11b CH11(2462MHz)



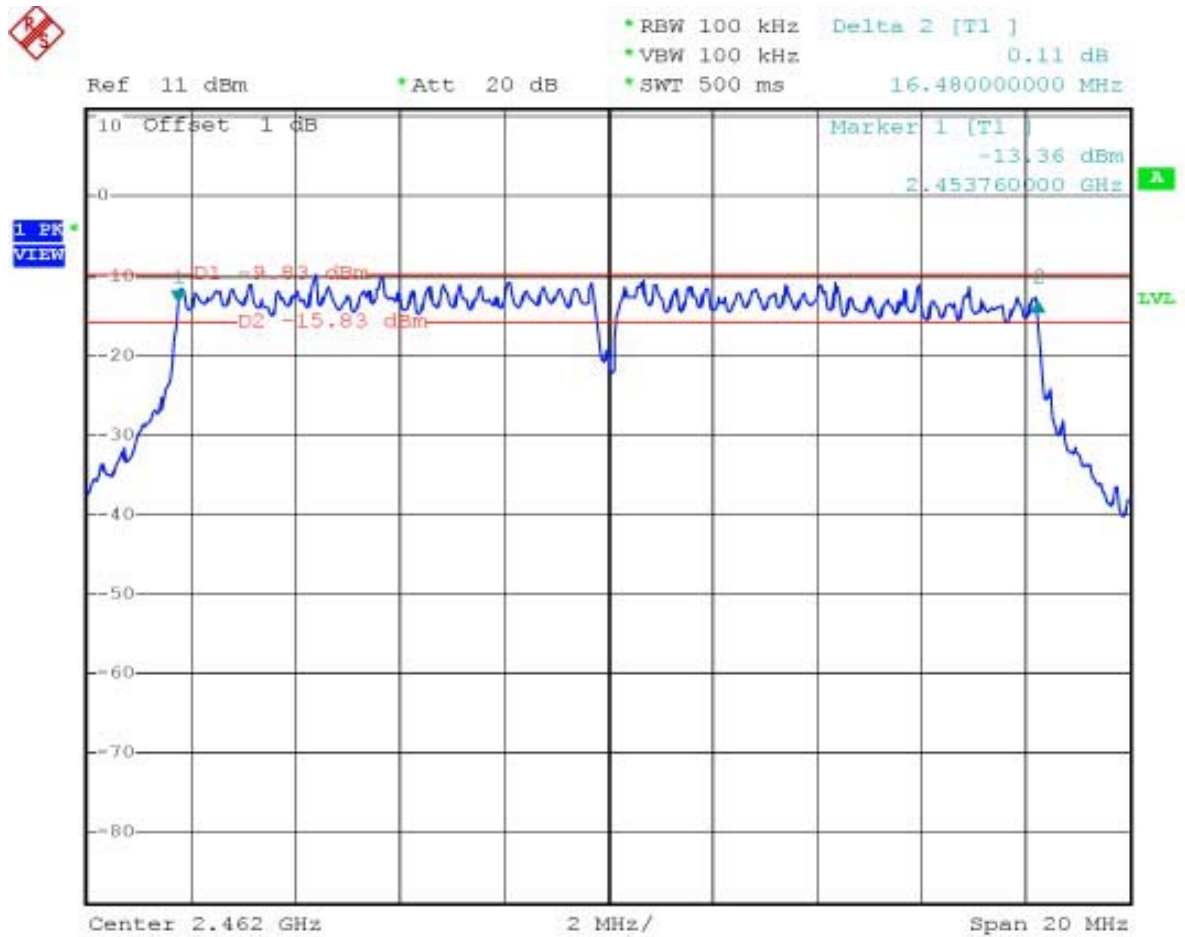
Mode 4 : 802.11g CH01 (2412MHz)



Mode 5 : 802.11g CH06 (2437MHz)



Mode 6 : 802.11g CH11(2462MHz)



5.3 Power Spectral Density

5.3.1 Measuring Instruments :

As described in chapter 10 of this test report.

5.3.2 Test Procedure :

1. The transmitter output was connected to spectrum analyzer.
2. The spectrum analyzer's resolution bandwidth was set at 3kHz RBW and 30kHz VBW as that of the fundamental frequency. Set the sweep time=span/3kHz.
3. The power spectral density was measured and recorded.
4. The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

5.3.3 Test Setup Layout :



5.3.4 Test Result :

- Mode 1~3: WLAN 802.11b
- Temperature : 26°C,
- Relative Humidity : 53%

Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-20.89	8	Mode 1
06	2437	-17.95	8	Mode 2
11	2462	-19.49	8	Mode 3

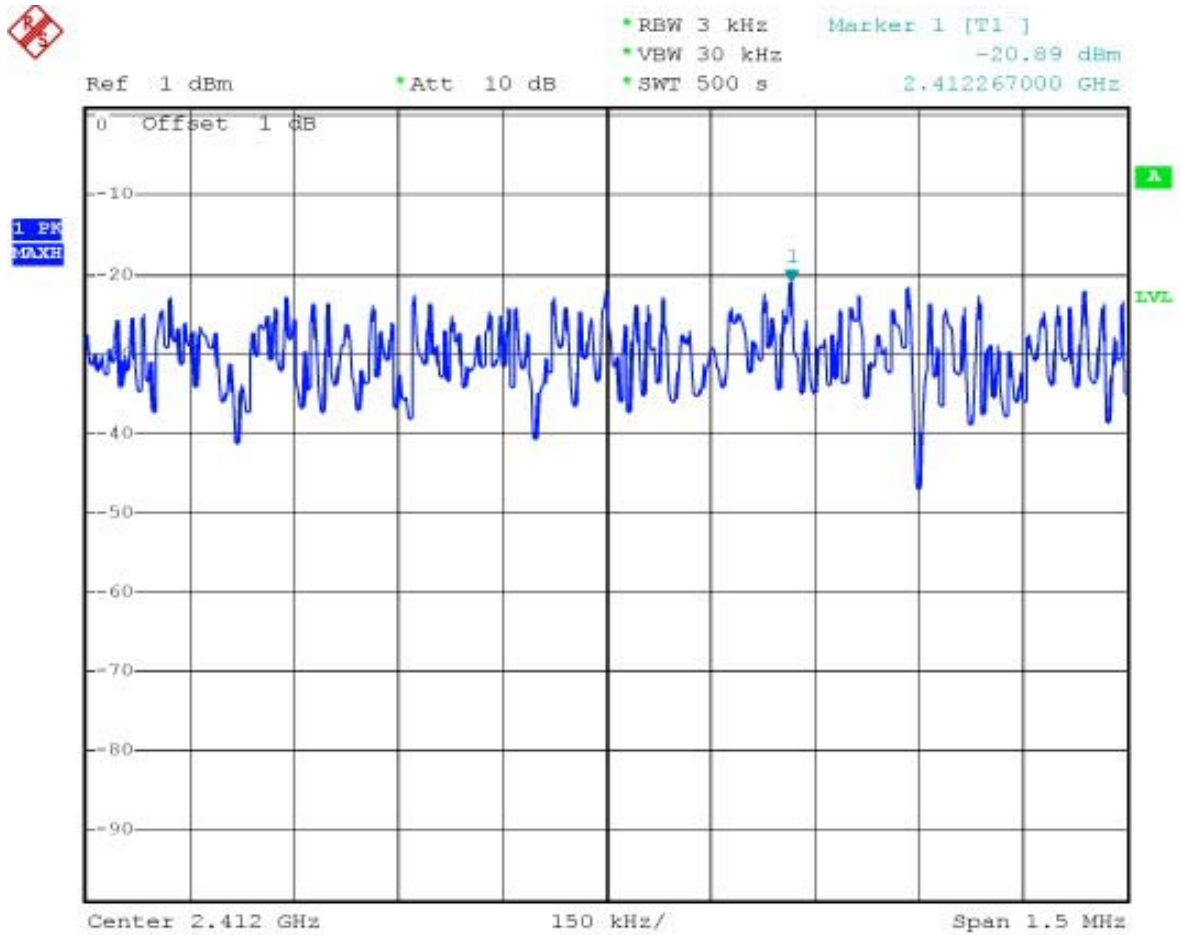
5.3.5 Test Result :

- Mode 4~6: WLAN 802.11g
- Temperature : 26C,
- Relative Humidity : 53%

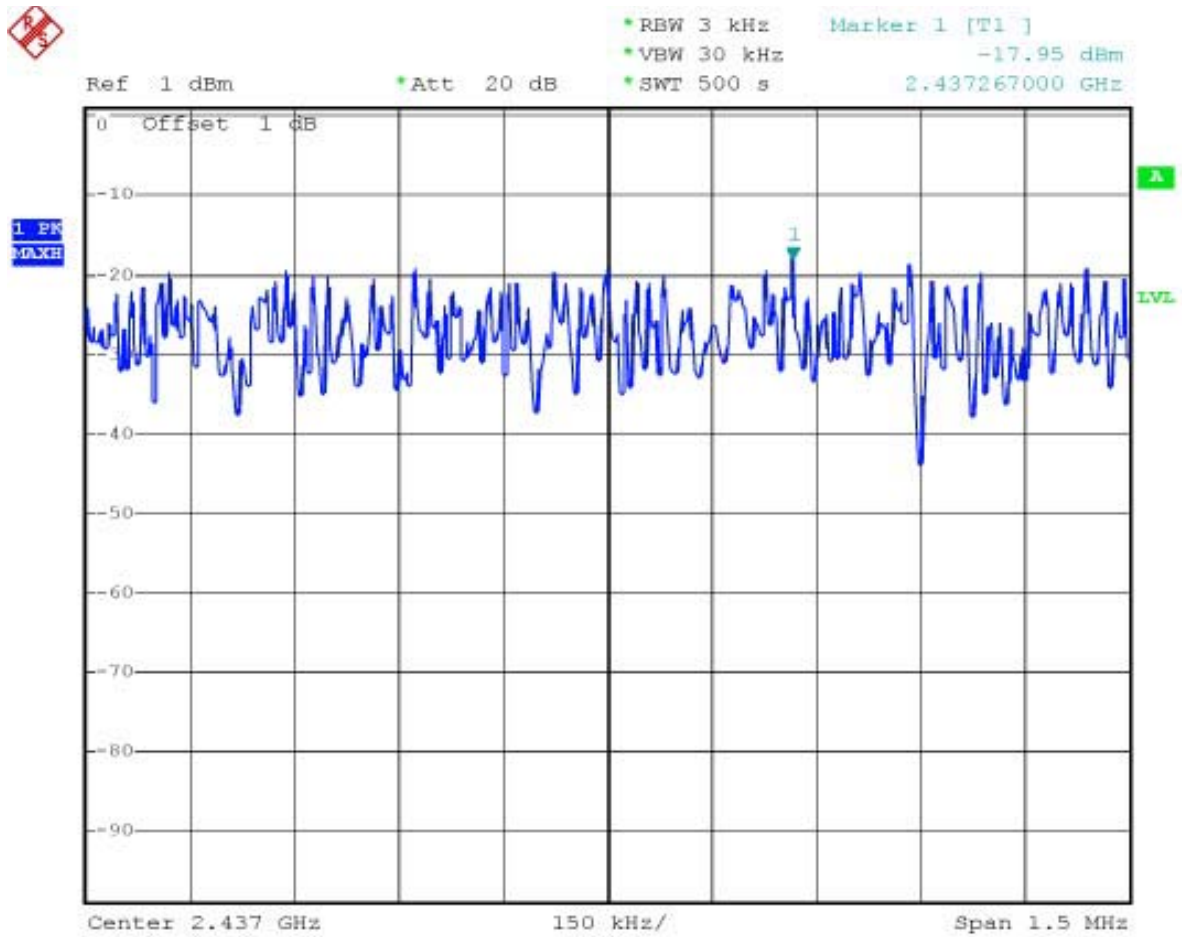
Channel	Frequency (MHz)	Power Spectral Density (dBm)	Limits (dBm)	Plot Ref. No.
01	2412	-24.15	8	Mode 1
06	2437	-24.00	8	Mode 2
11	2462	-22.18	8	Mode 3

5.3.6 Power Spectral Density

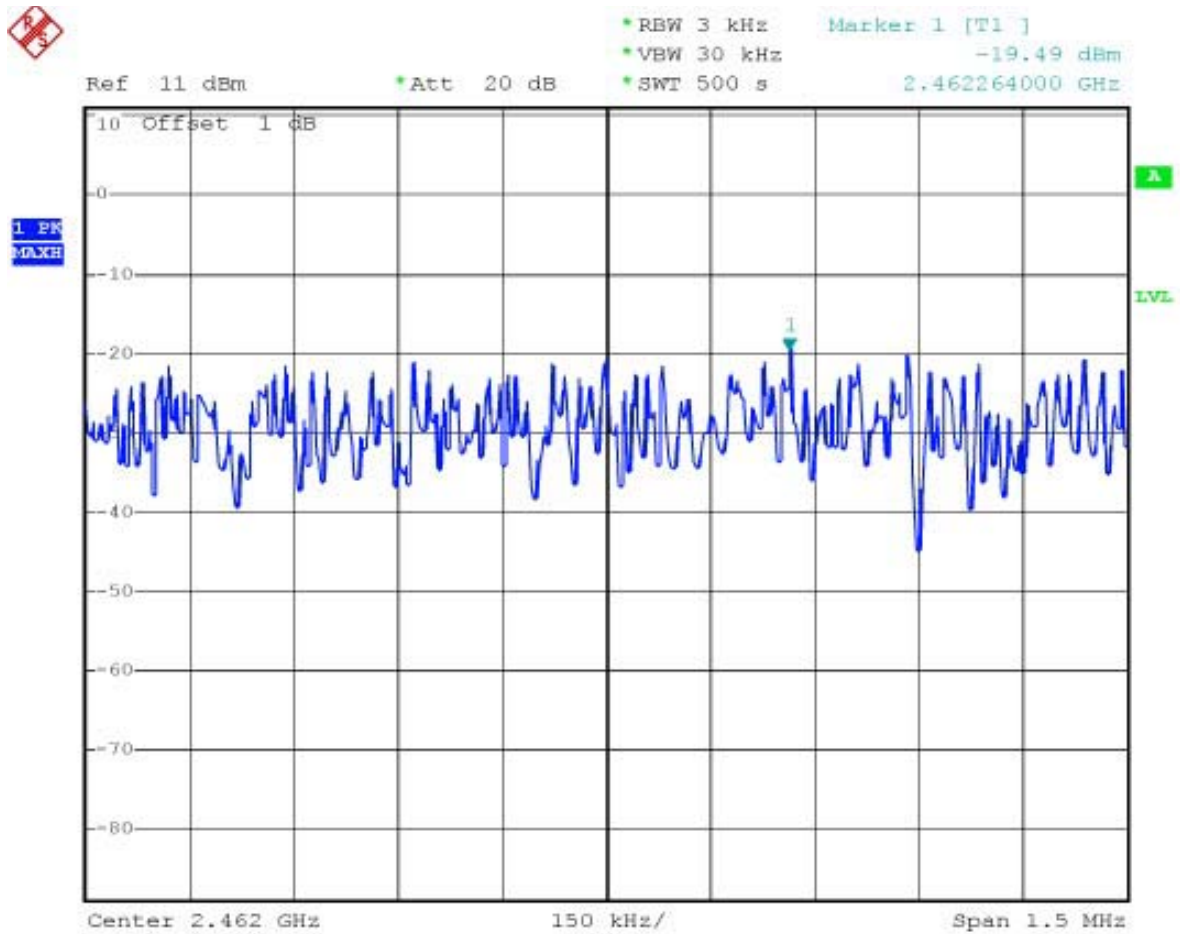
Mode 1 : 802.11b CH01(2412MHz)



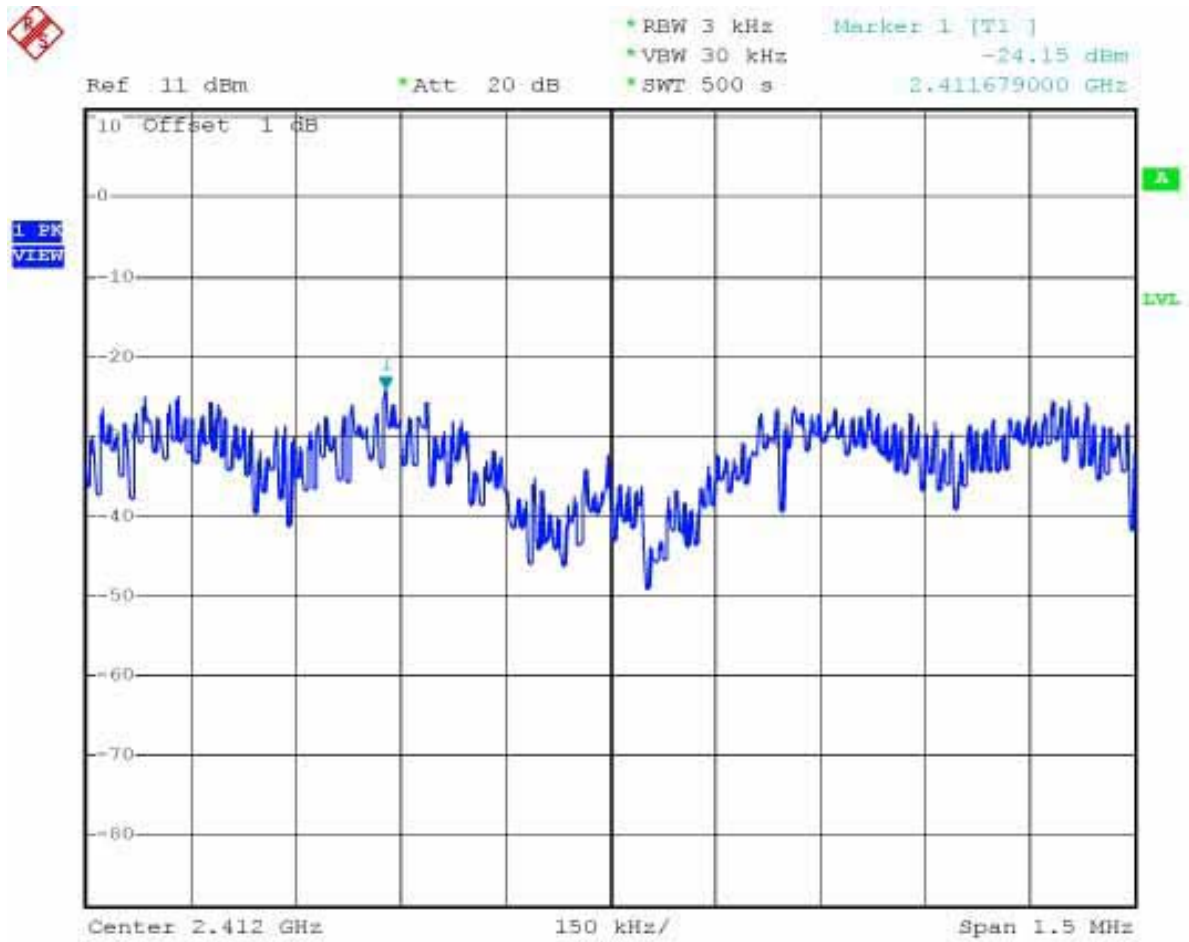
Mode 2 : 802.11b CH06 (2437MHz)



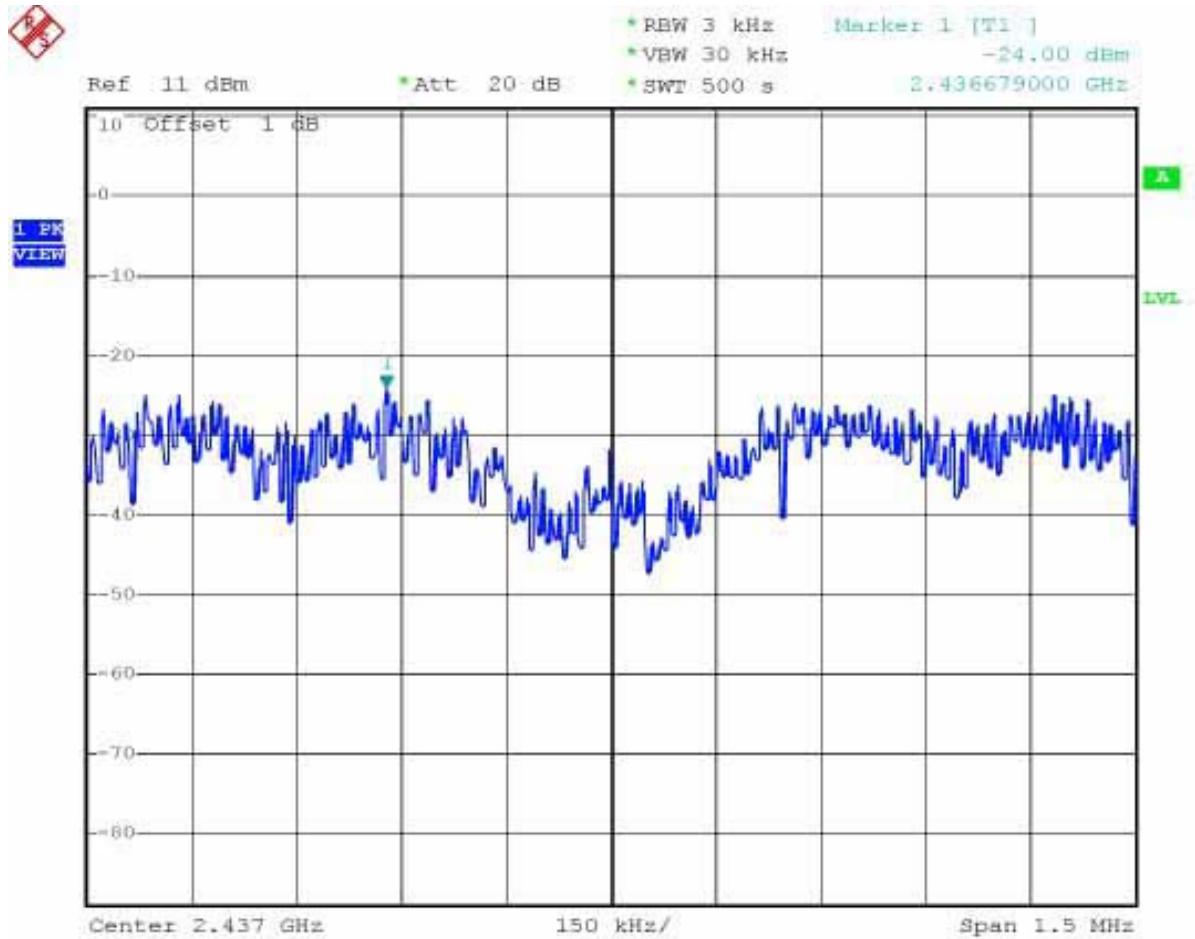
Mode 3 : 802.11b CH11 (2462MHz)



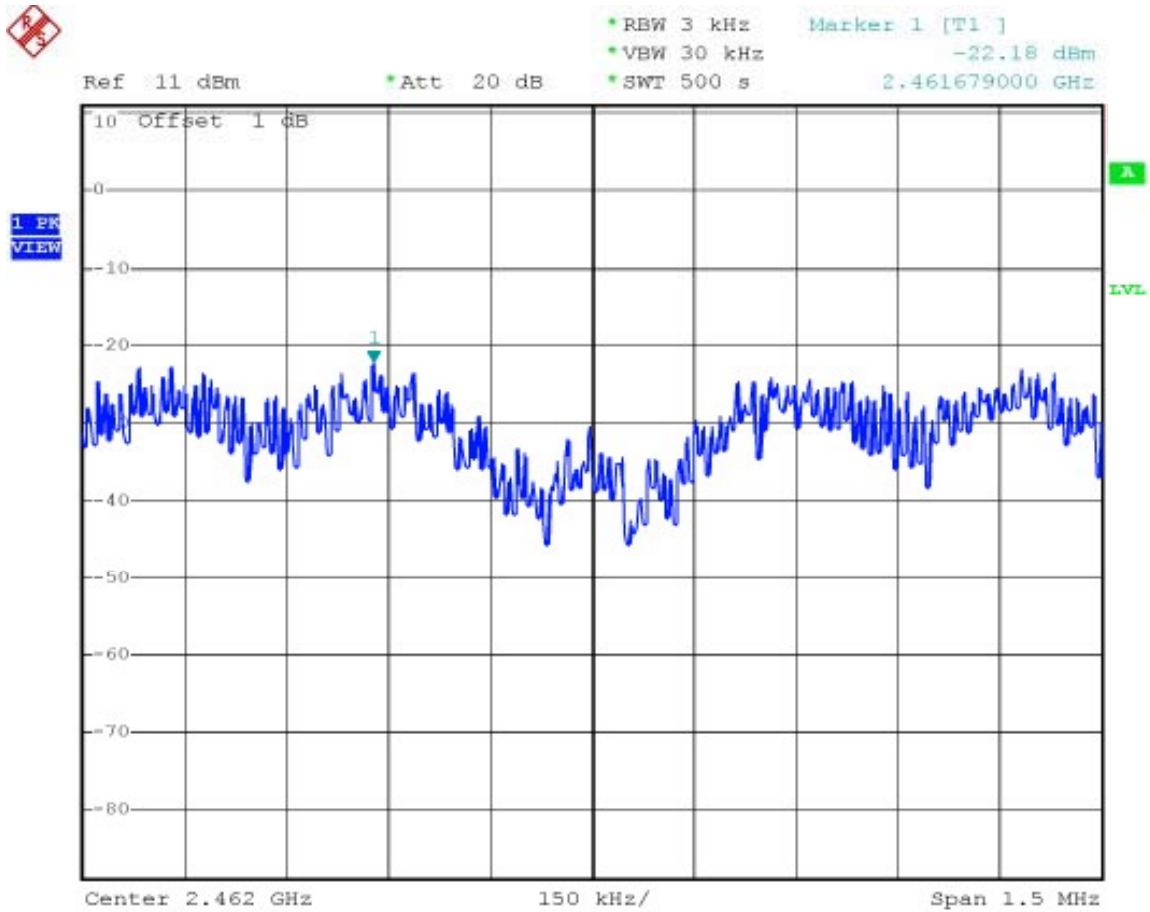
Mode 4 : 802.11g CH01(2412MHz)



Mode 5 : 802.11g CH06 (2437MHz)



Mode 6 : 802.11g CH11 (2462MHz)



5.4 Band Edges Measurement

5.4.1 Measuring Instruments :

As described in chapter 10 of this test report.

5.4.2 Test Procedure :

1. The transmitter output was connected to the spectrum analyzer via a low lose cable.
2. Set both RBW and VBW of spectrum analyzer to 100kHz with suitable frequency span including 100 kHz bandwidth from band edge.
3. The band edges was measured and recorded.

5.4.3 Test Result :

- Mode 1 and 3 : WLAN 802.11b
- Temperature : 26°C,
- Relative Humidity : 53%

- Test Result in lower band (Channel 1) : PASS
- Test Result in higher band (Channel 11) : PASS

5.4.4 Note on Band Edge Emission

802.11b

CH01 (H)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Preamp Factor (dB)	Cable Loss (dB)	Detect Mode
2390.00	54.53	-22.47	74.00	64.15	28.40	44.34	3.33	Peak
2390.00	41.15	-12.85	54.00	53.77	28.40	44.34	3.33	A.V.

CH01(V)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Preamp Factor (dB)	Cable Loss (dB)	Detect Mode
2390.00	51.81	-22.19	74.00	67.75	28.40	44.34	0.00	Peak
2390.00	37.83	-16.17	54.00	53.78	28.40	44.34	0.00	A.V.

CH11 (H)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Preamp Factor (dB)	Cable Loss (dB)	Detect Mode
2483.50	54.60	-19.40	74.00	67.03	28.48	44.31	3.40	Peak
2483.50	42.47	-11.53	54.00	54.90	28.48	44.31	3.40	A.V.

CH11(V)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Preamp Factor (dB)	Cable Loss (dB)	Detect Mode
2483.50	54.86	-19.14	74.00	67.29	28.48	44.31	3.40	Peak
2483.50	39.56	-14.44	54.00	51.99	28.48	44.31	3.40	A.V.

5.4.5 Test Result :

- Mode 4 and 6 : WLAN 802.11g
- Temperature : 26°C,
- Relative Humidity : 53%

- Test Result in lower band (Channel 1) : PASS
- Test Result in higher band (Channel 11) : PASS

5.4.6 Note on Band Edge Emission

802.11g

CH01 (H)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Preamp Factor (dB)	Cable Loss (dB)	Detect Mode
2390.00	48.86	-25.14	74.00	61.48	28.40	44.34	3.33	Peak
2390.00	38.15	-15.85	54.00	50.77	28.40	44.34	3.33	A.V.

CH01(V)

Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Preamp Factor (dB)	Cable Loss (dB)	Detect Mode
2390.00	53.88	-20.12	74.00	66.49	28.40	44.34	3.33	Peak
2390.00	42.67	-11.33	54.00	55.29	28.40	44.34	3.33	A.V.

CH11 (H)

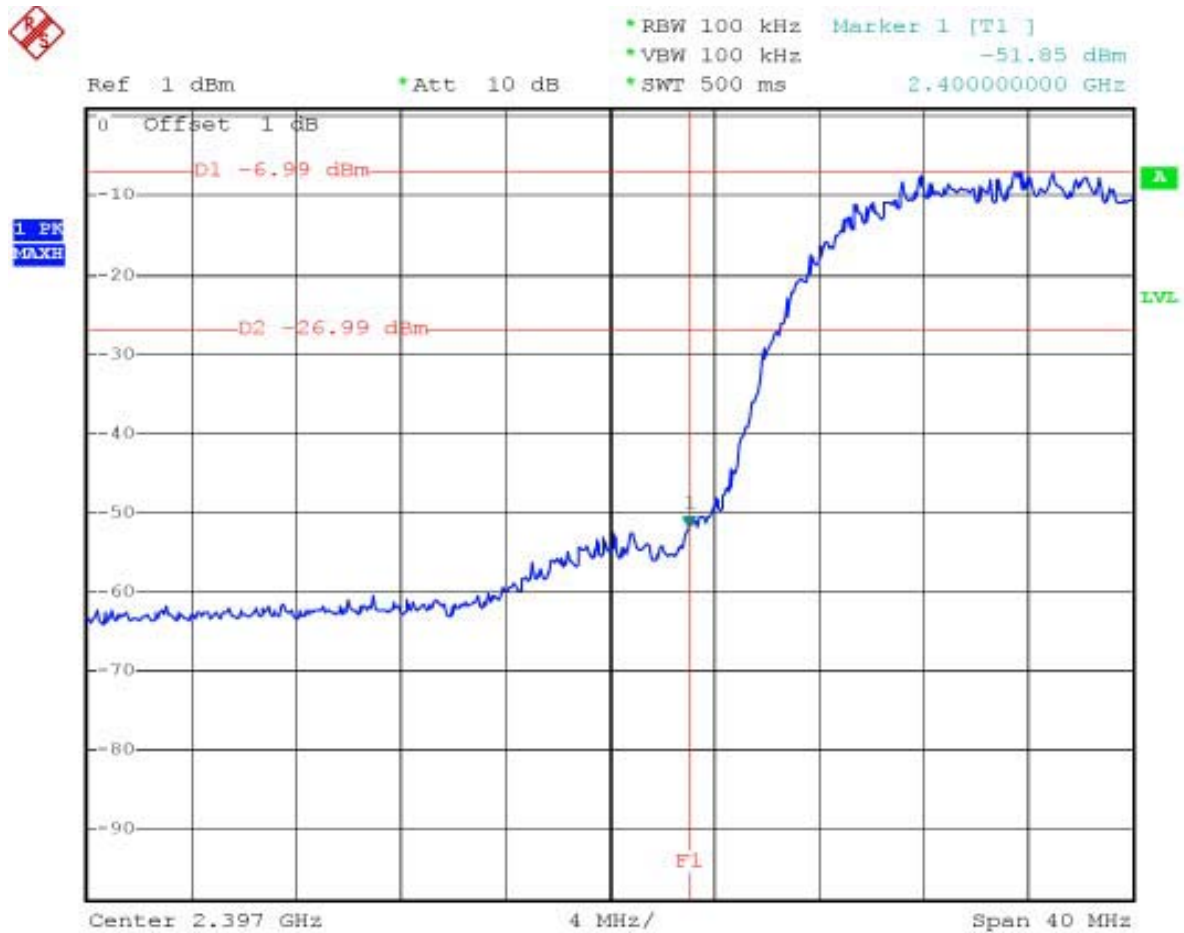
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Preamp Factor (dB)	Cable Loss (dB)	Detect Mode
2483.50	74.10	0.10	74.00	86.53	28.48	44.31	3.40	Peak
2483.50	45.61	-8.39	54.00	58.04	28.48	44.31	3.40	A.V.

CH11(V)

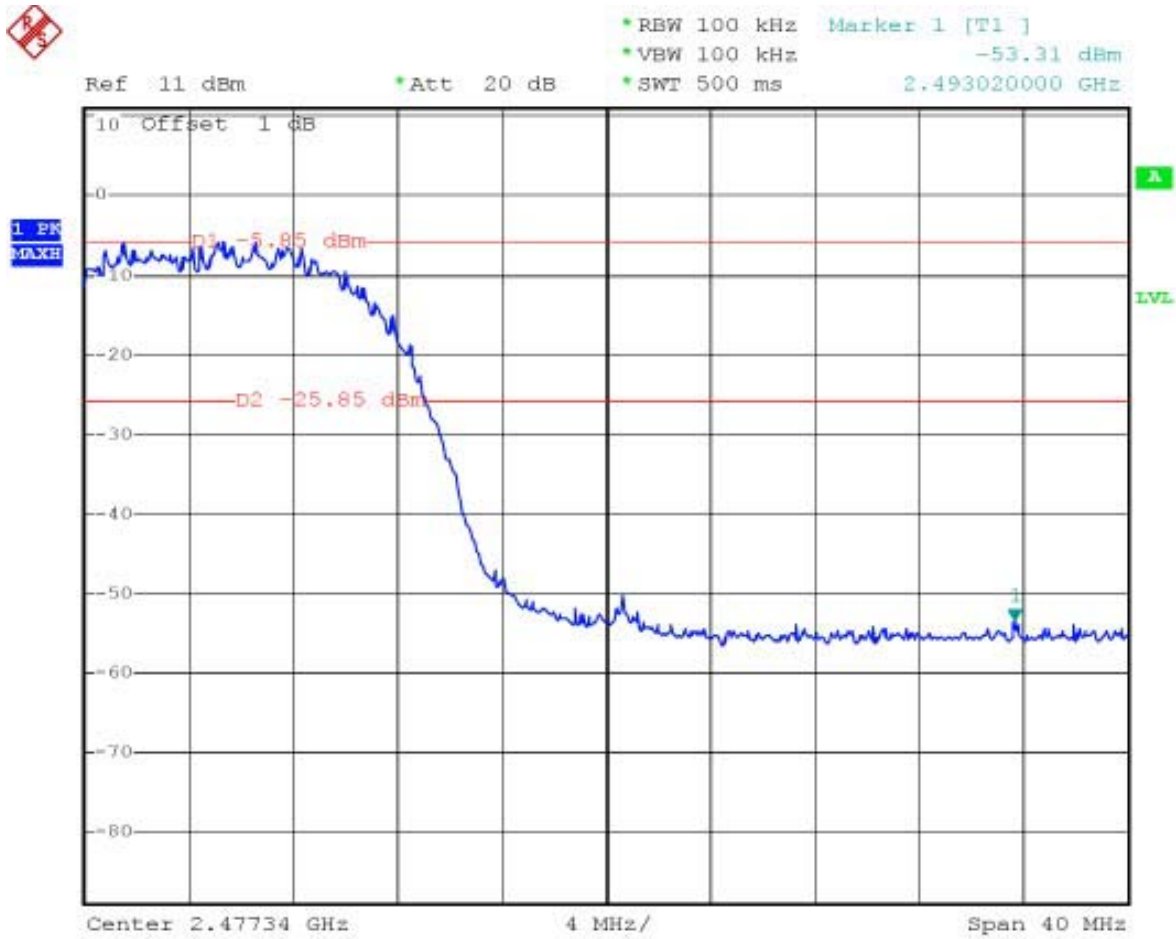
Frequency (MHz)	Level (dBuV/m)	Over Limit (dB)	Limit Line (dBuV/m)	Read Level (dBuV)	Probe Factor (dB)	Preamp Factor (dB)	Cable Loss (dB)	Detect Mode
2483.50	65.21	-8.79	74.00	77.64	28.48	44.31	3.40	Peak
2483.50	40.45	-13.55	54.00	52.88	28.48	44.31	3.40	A.V.

5.4.7 20dB Band Edge

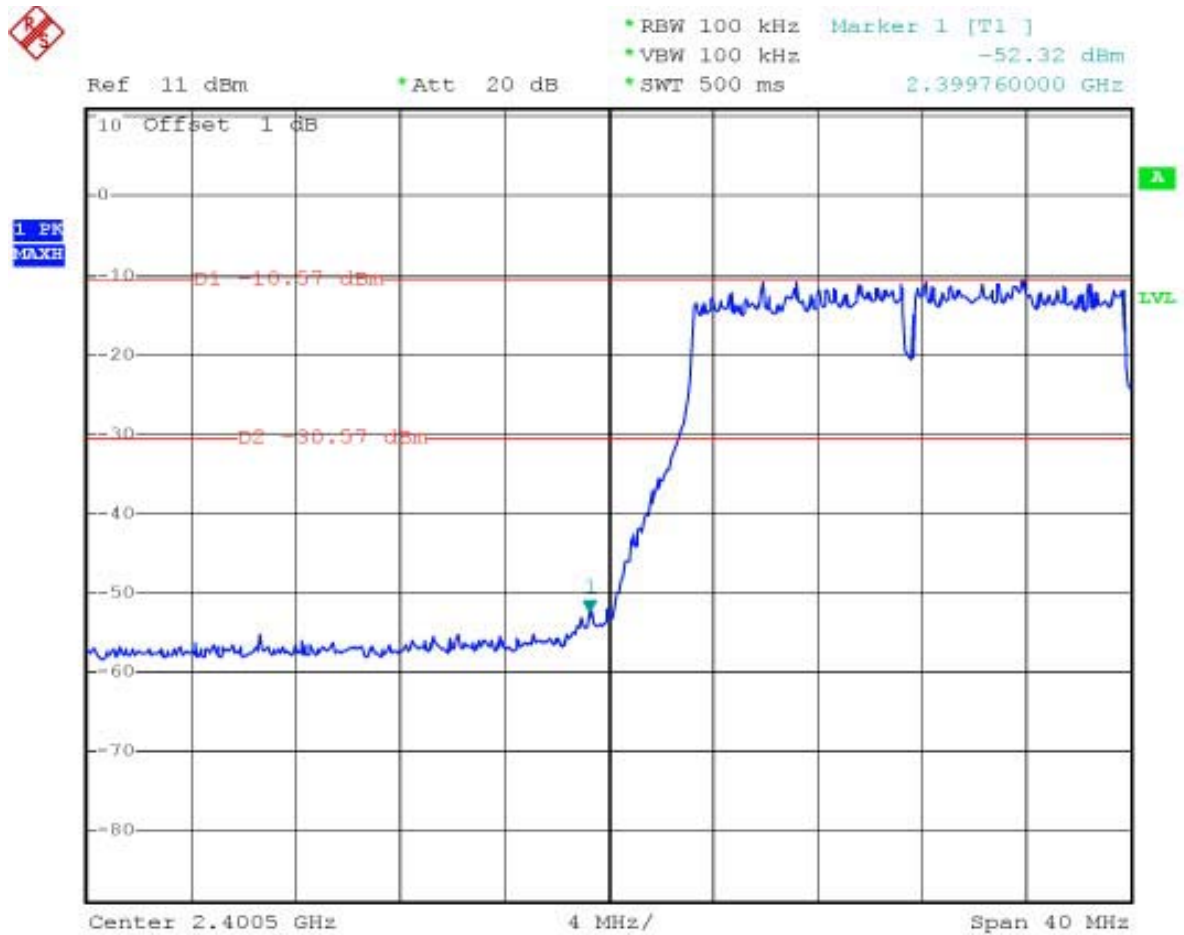
Mode1 : 802.11b CH01 (2412MHz)



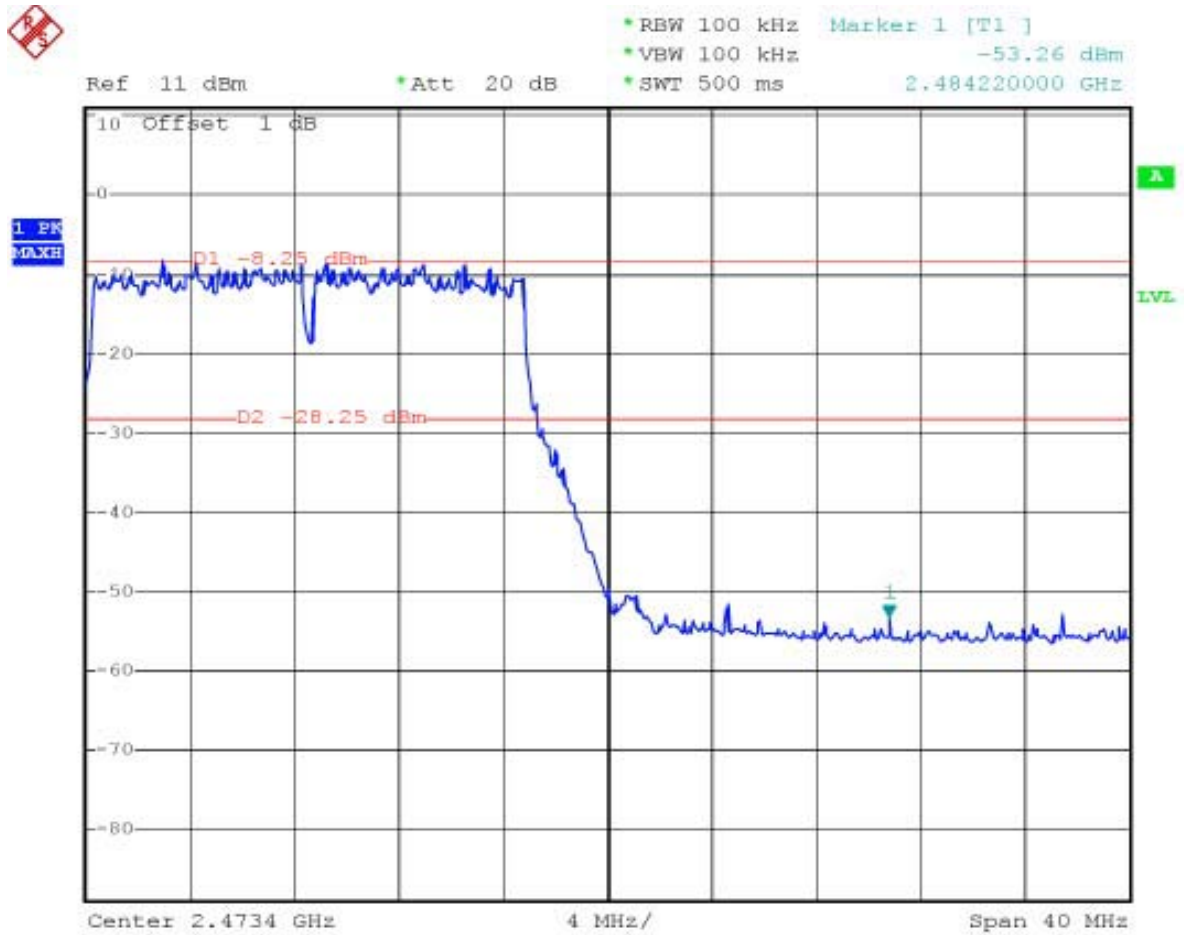
Mode 2 : 802.11b CH11 (2462MHz)



Mode3 : 802.11g CH01 (2412MHz)



Mode 4 : 802.11g CH11 (2462MHz)



5.5 Peak Output Power

5.5.1 Measuring Instruments :

As described in chapter 10 of this test report.

5.5.2 Test Procedure :

The antenna port (RF output) of the EUT was connected to the input (RF input) of a power meter.
The power is equal to the reading level on power meter plus cable loss at the EUT antenna terminal.

5.5.3 Test Setup Layout :



5.5.4 Test Result :

- Mode 1~3 : WLAN 802.11b
- Temperature : 25°C
- Relative Humidity : 52 %

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	11.08	1W/30 dBm
06	2437	12.57	1W/30 dBm
11	2462	13.3	1W/30 dBm

5.5.5 Test Result :

- Mode 4~6 : WLAN 802.11g
- Temperature : 25°C
- Relative Humidity : 52 %

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
01	2412	11.4	1W/30 dBm
06	2437	13.06	1W/30 dBm
11	2462	13.5	1W/30 dBm

6. Test of Conducted Emission

Conducted emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in ANSI C63.4-2001 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

6.1. Major Measuring Instruments

● Test Receiver	(R&S ESCS 30)
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

6.2. Test Procedures

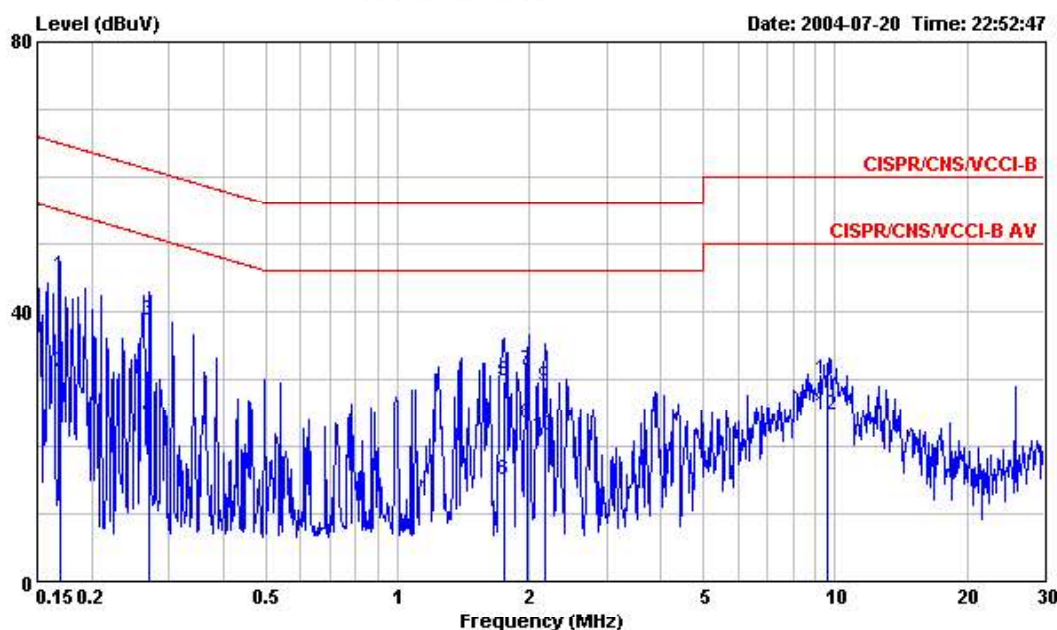
- a. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- b. Connect EUT to the power port of the line impedance stabilization network (LISN).
- c. All the support units are connect to the other LISN.
- d. The LISN provides 50 ohm coupling impedance for the measuring instrument.
- e. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
- f. Both sides of AC line were checked for maximum conducted interference.
- g. The frequency range from 150 kHz to 30 MHz was searched.
- h. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

6.3. Test Result of Conducted Emission

6.3.1 Frequency Range of Test : 150kHz to 30 MHz

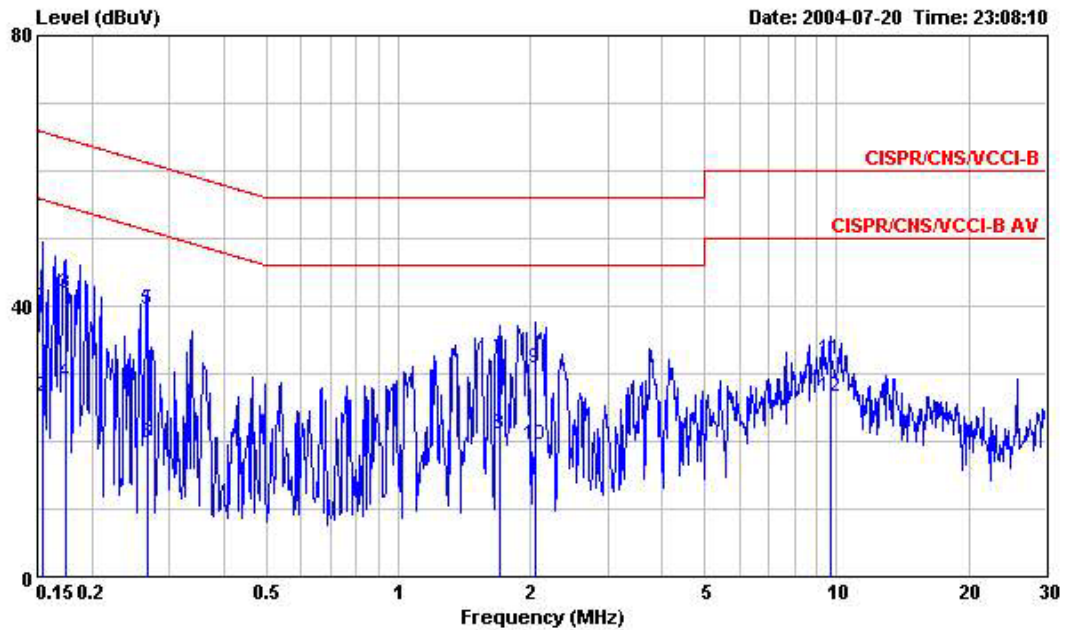
- Test Mode : Mode 1 Operating
- Temperature : 26°C
- Relative Humidity : 53 %

■ The test that passed at minimum margin was marked by the frame in the following table.




Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B 2004 2001/004 LINE
 EUT : Wireless Card Bus
 POWER: 120Vac/60Hz
 MODEL : ZWX-G160
 MEMO : PING LINK

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
			dB	dBuV	dBuV	dB	dB	
1	@0.1690900	45.31	-19.69	65.00	45.20	0.10	0.01	QP
2	0.1690900	31.05	-23.95	55.00	30.94	0.10	0.01	Average
3	0.2698580	38.74	-22.38	61.12	38.63	0.10	0.01	QP
4	0.2698580	24.08	-27.04	51.12	23.97	0.10	0.01	Average
5	1.748	29.70	-26.30	56.00	29.58	0.10	0.02	QP
6	1.748	14.97	-31.03	46.00	14.85	0.10	0.02	Average
7	1.981	31.20	-24.80	56.00	31.08	0.10	0.02	QP
8	1.981	23.50	-22.50	46.00	23.38	0.10	0.02	Average
9	2.170	28.82	-27.18	56.00	28.68	0.11	0.03	QP
10	2.170	21.66	-24.34	46.00	21.52	0.11	0.03	Average
11	9.630	29.98	-30.02	60.00	29.67	0.20	0.11	QP
12	9.630	24.69	-25.31	50.00	24.38	0.20	0.11	Average



Site : CO04-HY
 Condition : CISPR/CNS/VCCI-B 2004 2001/004 NEUTRAL
 EUT : Wireless Card Bus
 POWER: 120Vac/60Hz
 MODEL : ZWX-G160
 MEMO : PING LINK

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.1539970	40.11	-25.67	65.78	40.00	0.10	0.01	QP
2	0.1539970	26.65	-29.13	55.78	26.54	0.10	0.01	Average
3	0.1740280	41.79	-22.98	64.77	41.68	0.10	0.01	QP
4	0.1740280	28.75	-26.02	54.77	28.64	0.10	0.01	Average
5	0.2672510	39.50	-21.70	61.20	39.39	0.10	0.01	QP
6	0.2672510	19.69	-31.51	51.20	19.58	0.10	0.01	Average
7	1.702	32.02	-23.98	56.00	31.90	0.10	0.02	QP
8	1.702	21.07	-24.93	46.00	20.95	0.10	0.02	Average
9	2.050	30.71	-25.29	56.00	30.59	0.10	0.02	QP
10	2.050	19.58	-26.42	46.00	19.46	0.10	0.02	Average
11	9.650	32.06	-27.94	60.00	31.75	0.20	0.11	QP
12	9.650	26.61	-23.39	50.00	26.30	0.20	0.11	Average

Test Engineer : 
 Jay

7. Test of Radiated Emission

Radiated emissions from 30 MHz to 25 GHz were measured according to the methods defined in ANSI C63.4-2001. The EUT was placed, 0.8 meter above the ground plane, as shown in section 5.6.3. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions

7.1. Major Measuring Instruments

- Amplifier (MITEQ AFS44)
 - RF Gain 40 dB
 - Signal Input 100 MHz to 26.5 GHz

- Amplifier (PA-103)
 - RF Gain 30 dB
 - Signal Input 100 MHz to 1 GHz

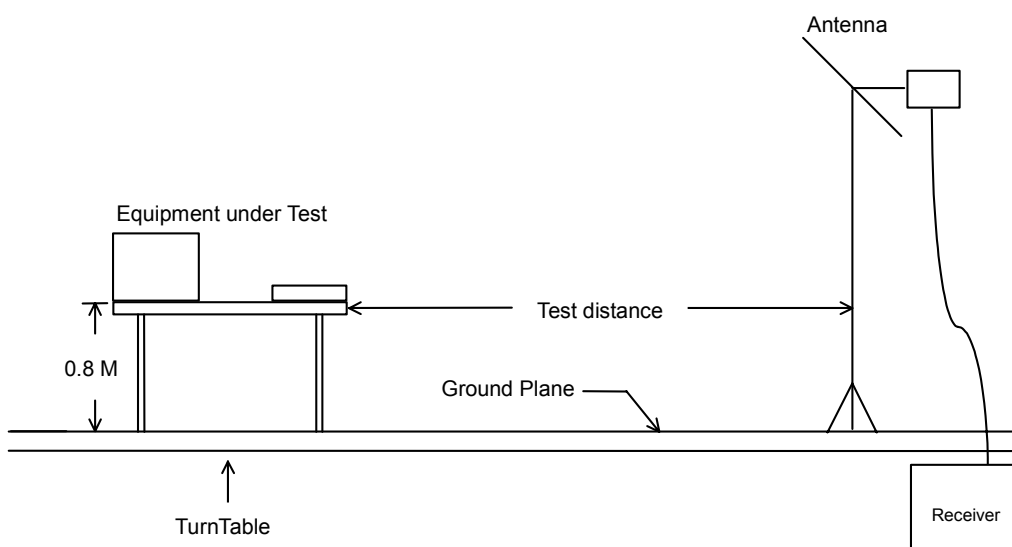
- Spectrum analyzer (R&S FSP40)
 - Attenuation 10 dB
 - Start Frequency 1 GHz
 - Stop Frequency 25 GHz
 - Resolution Bandwidth 1 MHz
 - Video Bandwidth 1 MHz
 - Signal Input 9 kHz to 40 GHz

- Spectrum analyzer (R&S FSP40)
 - Attenuation 10 dB
 - Start Frequency 30MHz
 - Stop Frequency 1 GHz
 - Resolution Bandwidth 120 KHz
 - Video Bandwidth 300KHz
 - Signal Input 9 kHz to 40 GHz

7.2. Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

7.3. Typical Test Setup Layout of Radiated Emission

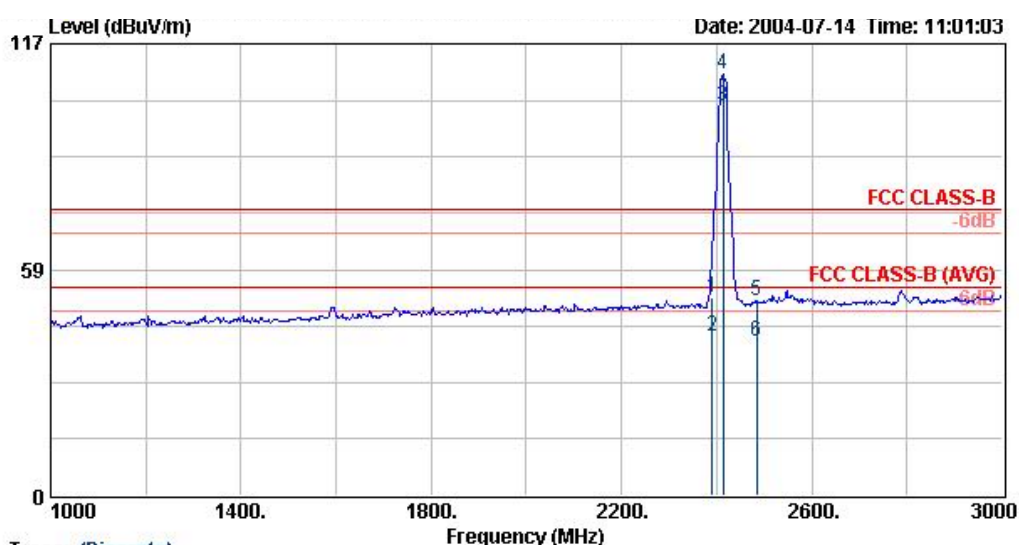


7.4. Test Result of Radiated Emission

7.4.1 Test Mode: Mode 1 (11b TX CH01)

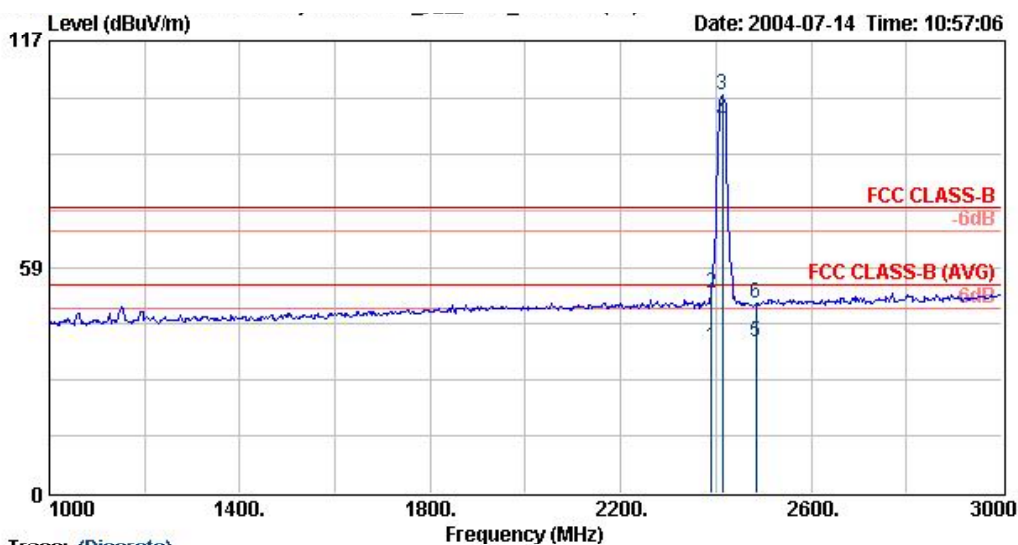
- Test Distance : 3 m
- Temperature : 26°C
- Relative Humidity :53%
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading : Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

■ The test that passed at minimum margin was marked by the frame in the following table.



Trace: (Discrete)
 Site : 03CH06
 Condition : FCC CLASS-B 3m HF-HORN AH-118 HORIZONTAL
 EUT : IEEE802.11g Wireless CardBus
 Power : 120Vac/60Hz
 Model : ZWX-G160
 Memo : 11b TX CH01 2412MHz

	Freq	Over Limit	Limit Line	Level	ReadAntenna Level	Preamp Factor	Cable Loss	Remark
	MHz	dB	dBuV/m	dBuV/m	dBuV	dB/m	dB	
1	2390.00	-22.47	74.00	51.53	64.15	28.40	44.34	Peak
2	2390.00	-12.85	54.00	41.15	53.77	28.40	44.34	Average
3 @	2414.00			101.12	113.70	28.41	44.34	Average
4 @	2414.00			109.08	121.65	28.41	44.34	Peak
5	2483.50	-23.55	74.00	50.45	62.88	28.48	44.31	Peak
6	2483.50	-14.12	54.00	39.88	52.31	28.48	44.31	Average



Trace: (Discrete)

Site : 03CH06
 Condition : FCC CLASS-B 3m HF-HORN AH-118 VERTICAL
 EUT : IEEE802.11g Wireless CardBus
 Power : 120Vac/60Hz
 Model : ZWX-G160
 Memo : 11b TX CH01 2412MHz

	Freq	Over Limit	Limit Line	Level	ReadAntenna Level	Preamp Factor	Cable Loss	Remark
	MHz	dB	dBuV/m	dBuV/m	dBuV	dB/m	dB	
1	2390.00	-16.17	54.00	37.83	53.78	28.40	44.34	0.00 Average
2	2390.00	-22.19	74.00	51.81	67.75	28.40	44.34	0.00 Peak
3 X	2414.00			103.21	119.13	28.41	44.34	0.00 Peak 1
4 @	2414.00			96.12	112.04	28.41	44.34	0.00 Average
5	2483.50	-15.03	54.00	38.97	51.40	28.48	44.31	3.40 Average
6	2483.50	-24.80	74.00	49.20	61.64	28.48	44.31	3.40 Peak

Remark: #3 and 4 fundamental frequency.


Frequency from 3000MHz to 25000MHz, the emission emitted by the EUT is too low to be measured.

■ Field strength of fundamental and harmonics

Frequency (MHz)	Polarity	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Limits (dBuV/m)	Emission (dBuV/m)	Margin (dB)	Detect Mode
2414.000	H	28.41	3.35	77.32	44.34	-	109.08	-	Peak
2414.000	H	28.41	3.35	69.36	44.34	-	101.12	-	AV
2414.000	V	28.41	0.00	74.80	44.34	-	103.21	-	Peak
2414.000	V	28.41	0.00	67.71	44.34	-	96.12	-	AV
4824.000	V/H	-	-	-	-	-	-	-	AV/Peak
7236.000	V/H	-	-	-	-	-	-	-	AV/Peak
9648.000	V/H	-	-	-	-	-	-	-	AV/Peak
12060.000	V/H	-	-	-	-	-	-	-	AV/Peak
14472.000	V/H	-	-	-	-	-	-	-	AV/Peak
16884.000	V/H	-	-	-	-	-	-	-	AV/Peak
19296.000	V/H	-	-	-	-	-	-	-	AV/Peak
21708.000	V/H	-	-	-	-	-	-	-	AV/Peak
24120.000	V/H	-	-	-	-	-	-	-	AV/Peak

Remark:

1. The emission emitted by the EUT is too low to be measured except the emission listed above,
2. Reading = Reading on SA-Preamp Factor

Test Engineer : 
Jay