CONFORMANCE TEST REPORT
FOR
FCC 47 CFR, Part 15 Subpart C

Report No.: ET93S-06-080

Client:	Chung Nam Electronics Co., Ltd.
Product:	IEEE 802.11g WLAN Mini-PCI card
Model:	WLG100-3A
FCC ID:	Q72WLG100
Manufacturer/supplier:	Chung Nam Electronics Co., Ltd.

Date test item received:	2004/06/09
Date test campaign completed:	2004/06/24
Date of issue:	2004/07/28

Total number of pages of this test report: 82 pages

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Internal photos 6 pages
Setup photos 2 pages

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TEST REPORT CERTIFICATION

Client	: Chung Nam Electronics Co., Ltd.
Address	: 12/F, Chung Nam Building, No. 1 Lockhart Road, Hong Kong
Manufacturer	: Chung Nam Electronics Co., Ltd.
Address	: 12/F, Chung Nam Building, No. 1 Lockhart Road, Hong Kong
EUT	: IEEE 802.11g WLAN Mini-PCI card
Trade name	: CNE
Model No.	: WLG100-3A
Power Source	: Mini-PCI card: 3.3V DC via Notebook (Emachines / M5310) Notebook Power Adapter: LITE-ON Technology Corporation Model: PA-1900-05 Input: 100-240Vac, 50-60Hz, 1.5A Output: DC 18.5Vdc, 4.9A S/N: 3700531002
Regulations applied	: FCC 47 CFR, Part 15 Subpart C (2003)

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to believe the sellers from their legal and/or contractual obligations.

The compliance test is only certified for the test equipment and the results of the testing report relate only to the item tested. The compliance test of this report was conducted in accordance with the appropriate standards. It's not intention to assure the quality and performance of the product. This report shall not be reproduced except in full, without the approval of ETC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

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❷ ISO/IEC 17025: BSMI, CNLA, DGT, NVLAP, CCIBLAC, UL, Compliance

❸ Filing: FCC, Industry Canada, VCCI

❹ MRA: Australia, Hong Kong, New Zealand, Singapore, USA, Japan, Korea, China, APLAC through CNLA

NVLAP Lab Code 200133-0

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1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT : IEEE 802.11g WLAN Mini-PCI card
b) Trade Name : CNE
c) Model No. : WLG100-3A
d) Power Supply : Mini-PCI card: 3.3V DC via Notebook (Emachines / M5310)
Notebook Power Adapter: LITE-ON Technology Corporation
Model: PA-1900-05
Input: 100-240Vac, 50-60Hz, 1.5A
Output: DC 18.5Vdc, 4.9A
S/N: 3700531002

1.2 Characteristics of Device

The 802.11g WLAN Mini-PCI card is a complete wireless high speed Network Interface Card (NIC). It conforms to the IEEE 802.11g protocol and operates in the 2.45GHz ISM frequency bands.

It provides a complete reference design evaluation platform of hardware and software to system providers or integrators requiring wireless data communications capability and is ideal for intergration into computer platforms.

. Fully compliant with the IEEE 802.11g WLAN standards.

.FCC Certified Under Part 15 (pending) to Operate in the 2.45GHz Bands.

.Support for 54,48,36,24,18,12,9 and 6 Mbps OFDM, 11 and 5.5 Mbps CCK and legacy 2 and 1 Mbps data rates.

.Driver Supports Microsoft Windows ® 98/SE, ME, XP and 2000 (SR1).

1.3 Test Methodology

All testing were performed according to the procedures in ANSI C63.4 and FCC CFR 47 Part 2 and Part 15.

1.4 Test Facility

The semi-anechoic chamber and conducted measurement facility used to collect the radiated and conducted data are located inside the Building at No.8, Lane 29, Wen-ming Road, Lo-shan Tsun, Kweishan Hsiang, Taoyuan, Taiwan, R.O.C.
This site has been accreditation as a FCC filing site.

2 PROVISIONS APPLICABLE

2.1 Definition

Unintentional radiator:
A device that intentionally generates and radio frequency energy for use within the device, or that sends radio frequency signals by conduction to associated equipment via connecting wiring, but which is not intended to emit RF energy by radiation or induction.

Class A Digital Device:
A digital device which is marketed for use in commercial or business environment; exclusive of a device which is market for use by the general public, or which is intended to be used in the home.

Class B Digital Device :
A digital device which is marketed for use in a residential environment notwithstanding use in a commercial, business of industrial environment. Example of such devices that are marketed for the general public.

Note : A manufacturer may also qualify a device intended to be marketed in a commercial, business, or industrial environment as a Class B digital device, and in fact is encouraged to do so, provided the device complies with the technical specifications for a Class B Digital Device. In the event that a particular type of device has been found to repeatedly cause harmful interference to radio communications, the Commission may classify such a digital device as a Class B Digital Device, Regardless of its intended use.

Intentional radiator:
A device that intentionally generates and emits radio frequency energy by radiation or induction.

2.2 Requirement for Compliance

(1) Conducted Emission Requirement

For unintentional device, according to §15.107(a) Line Conducted Emission Limits is as following:

Frequency MHz	Quasi Peak dBμV	Average dBμV
0.15 - 0.5	66-56*	56-46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

*Decreases with the logarithm of the frequency.

For intentional device, according to §15.207(a) Line Conducted Emission Limits is same as above table.

(2) Radiated Emission Requirement

For unintentional device, according to §15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency MHz	Distance Meters	Radiated dBμV/m	Radiated μV/m
30 - 88	3	40.0	100
88 - 216	3	43.5	150
216 - 960	3	46.0	200
above 960	3	54.0	500

For intentional device, according to §15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

(3) Antenna Requirement

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

(4) Bandwidth Requirement

According to 12.247 (a)(2), systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

(5) Output Power Requirement

For systems using digital modulation , according to 15.247(b), the maximum peak output power of the intentional radiator shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(6) Spurious Emissions Measurement

According to 12.247 (c) , in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, 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)).

(7) Power Density Requirement

According to 12.247 (d) , for digitally modulated systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission..

2.3 Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below :

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42-16.423	399.9-410	4.5-5.25
0.495 - 0.505 **	16.69475 - 16.69525	608-614	5.35-5.46
2.1735 - 2.1905	16.80425 - 16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475 - 156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

2.4 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.5 User Information

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual.

The Federal Communications Commission Radio Frequency Interference Statement includes the following paragraph.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio / TV technician for help.

3. SYSTEM TEST CONFIGURATION

3.1 Justification

For both radiated and conducted emissions below 1 GHz, EUT was configured for testing and embeded in a Notebook PC as a customer would normally use it. Measurement was performed under the condition that a computer program, cTxRx 2.1.0.0, was exercised to simulate data communication of EUT, and the transmission rate can be set by this program.

3.2 Devices for Tested System

Device	Manufacture	Model No.	S/N No.	Cable Description
IEEE 802.11g WLAN Mini-PCI card*	Chung Nam Electronics Co., Ltd.	WLG100-3A	84500012398	N/A
Notebook PC	Emachines	M5310	N703820001683	4.0m, Unshielded Adapter Input 100-240Vac, 50-60Hz, 1.5A Output DC 18.5Vdc, 4.9A

Remark "*" means equipment under test.

The software and parameter setting :

Software:	CTxRx 2.1.0.0	
Parameter:	Power Level	30 dBm

4 CONDUCTED EMISSION MEASUREMENT

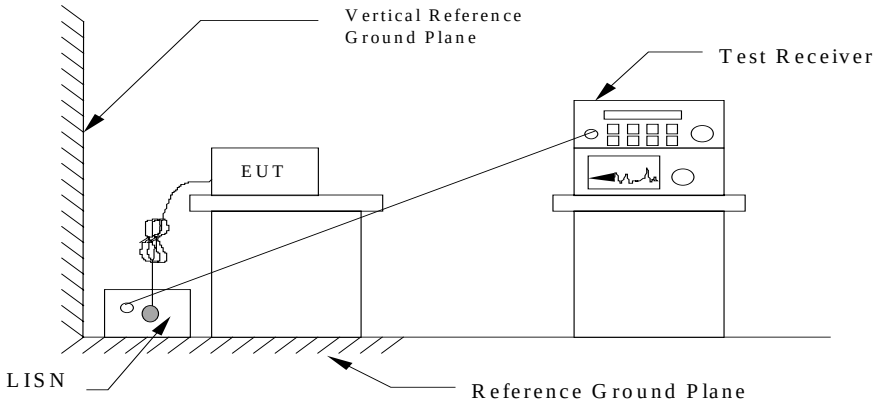
4.1 Standard Applicable

For unintentional and intentional device, Line Conducted Emission Limits are in accordance to § 15.107(a) and §15.207(a) respectively. Both Limits are identical specification.

4.2 Measurement Procedure

1. Setup the configuration per figure 1.
2. A preliminary scan with a spectrum monitor is performed to identify the frequency of emission that has the highest amplitude relative to the limit by operating the EUT in selected modes of operation, typical cable positions, and with a typical system configuration.
3. Record the 6 highest emissions relative to the limit.
4. Measure each frequency obtained from step 3 by a test receiver set on quasi peak detector function, and then record the accuracy frequency and emission level. If all emissions measured in the specified band are attenuated more than 20 dB from the limit, this step would be ignored, and the peak detector function would be used.
5. Confirm the highest three emissions with variation of the EUT cable configuration and record the final data.
6. Repeat all above procedures on measuring each operation mode of EUT.

Figure 1 : Conducted emissions measurement configuration



4.3 Conducted Emission Data

4.3.1 IEEE 802.11b

Operation Mode: CH 01

Test Date: Jun. 18, 2004 Temperature: 24℃ Humidity: 59 %

Freq. (MHz)	**Meter Reading** (dBuV)				**Factor** (dB)	**Result** (dBuV)				**Limit** (dBuV)		**Margins** (dB)
	Q.P Value		AVG. Value			Q.P Value		AVG. Value		Q.P Value	AVG. Value	Q.P. or AVG.
	L1	L2	L1	L2		L1	L2	L1	L2			
0.165	***	43.7	----	----	0.2	***	43.9	----	----	65.2	55.2	-21.3
0.181	45.8	***	----	----	0.2	46.0	***	----	----	64.4	54.4	-18.4
0.185	***	39.2	----	----	0.2	***	39.4	----	----	64.3	54.3	-24.9
0.228	39.9	***	----	----	0.2	40.1	***	----	----	62.5	52.5	-22.4
1.677	37.6	39.0	----	----	0.2	37.8	39.2	----	----	56.0	46.0	-16.8
1.724	***	39.6	----	----	0.2	***	39.8	----	----	56.0	46.0	-16.2
3.968	36.3	***	----	----	0.2	36.5	***	----	----	56.0	46.0	-19.5
4.285	***	40.2	----	----	0.2	***	40.4	----	----	56.0	46.0	-15.6
4.417	41.2	***	----	----	0.2	41.4	***	----	----	56.0	46.0	-14.6
4.433	***	38.2	----	----	0.2	***	38.4	----	----	56.0	46.0	-17.6
5.855	39.3	***	----	----	0.2	39.5	***	----	----	60.0	50.0	-20.5

Note:

1. “***” means the value was too low to be measured.
2. If the data table appeared symbol of "----" means the Q.P. value is under the limit of AVG. so, the AVG. value doesn't need to be measured.
3. The estimated measurement uncertainty of the result measurement is ±2.5dB.

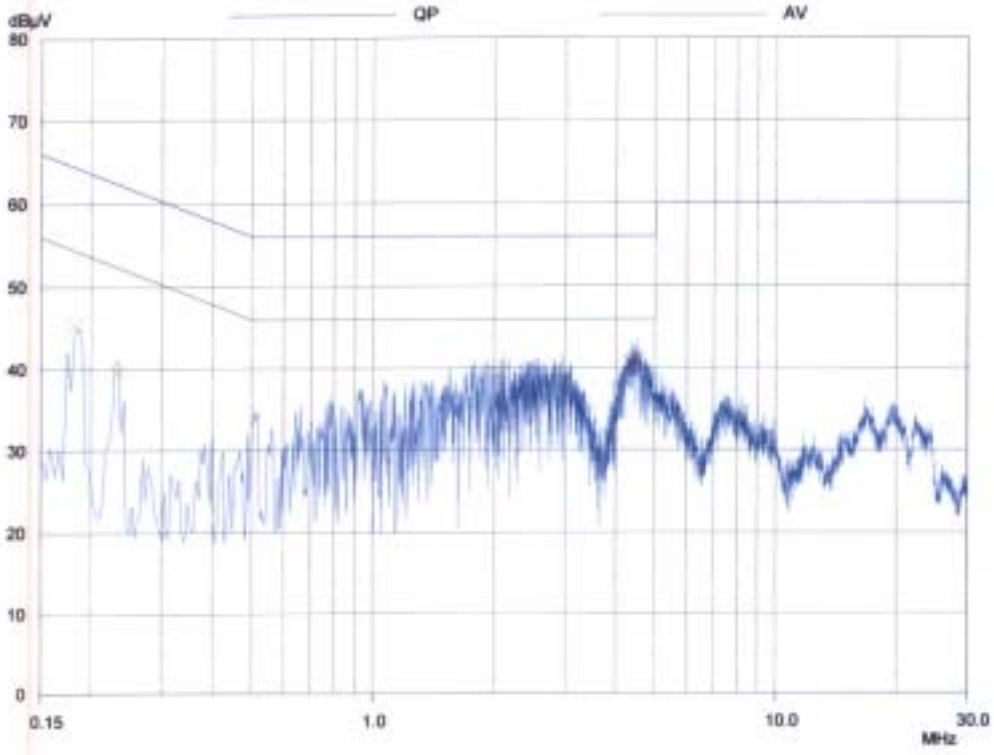
Note : Please refer to page 15 to page 16 for chart

Conducted Emission Test

EUT:	WIRELESS LAN (WLG 100 - 3A)
Manuf:	
Op Cond:	802.11b (CH01)
Operator:	LeeYing
Test Spec:	LP0002
Comment:	L1
Result File:	659_1343.dat : New Measurement

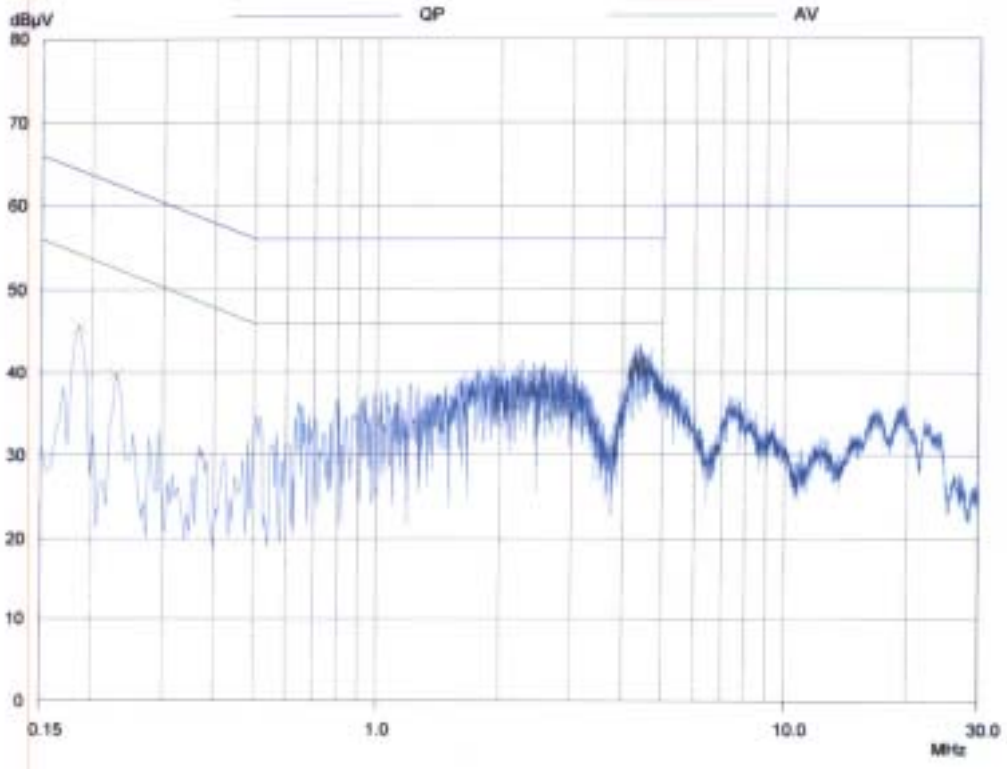
Final Measurement:

Detector:	X QP
Meas Time:	1sec
Peaks:	8
Acc Margin:	25 dB



Conducted Emission Test

EUT:	WIRELESS LAN (WLG 100 - 3A)
Manuf:	
Op Cond:	802.11b (CH01)
Operator:	LeeYing
Test Spec:	LP0002
Comment:	L2
Result File:	659_1343.dat : New Measurement
Final Measurement:	Detector: X QP Meas Time: 1sec Peaks: 8 Acc Margin: 25 dB



4.3.2 IEEE 802.11g

Operation Mode: CH 01

Test Date: Jun. 18, 2004 Temperature: 24℃ Humidity: 59 %

Freq. (MHz)	**Meter Reading** (dBuV)				**Factor** (dB)	**Result** (dBuV)				**Limit** (dBuV)		**Margins** (dB)
	Q.P Value		AVG. Value			Q.P Value		AVG. Value		Q.P Value	AVG. Value	Q.P. or AVG.
	L1	L2	L1	L2		L1	L2	L1	L2			
0.181	44.1	***	----	----	0.2	44.3	***	----	----	64.4	54.4	-20.1
0.185	***	33.0	----	----	0.2	***	33.2	----	----	64.3	54.3	-31.1
0.232	***	35.9	----	----	0.2	***	36.1	----	----	62.4	52.4	-26.3
1.978	***	37.9	----	----	0.2	***	38.1	----	----	56.0	46.0	-17.9
2.689	39.5	***	----	----	0.2	39.7	***	----	----	56.0	46.0	-16.3
4.320	40.9	***	----	----	0.2	41.1	***	----	----	56.0	46.0	-14.9
4.441	40.3	***	----	----	0.2	40.5	***	----	----	56.0	46.0	-15.5
4.453	***	31.9	----	----	0.2	***	32.1	----	----	56.0	46.0	-23.9
4.516	39.1	***	----	----	0.2	39.3	***	----	----	56.0	46.0	-16.7
4.539	***	40.9	----	----	0.2	***	41.1	----	----	56.0	46.0	-14.9
4.605	37.7	***	----	----	0.2	37.9	***	----	----	56.0	46.0	-18.1
4.688	***	30.9	----	----	0.2	***	31.1	----	----	56.0	46.0	-24.9

Note:

1. “***” means the value was too low to be measured.
2. If the data table appeared symbol of "----" means the Q.P. value is under the limit of AVG. so, the AVG. value doesn't need to be measured.
3. The estimated measurement uncertainty of the result measurement is ±2.5dB.

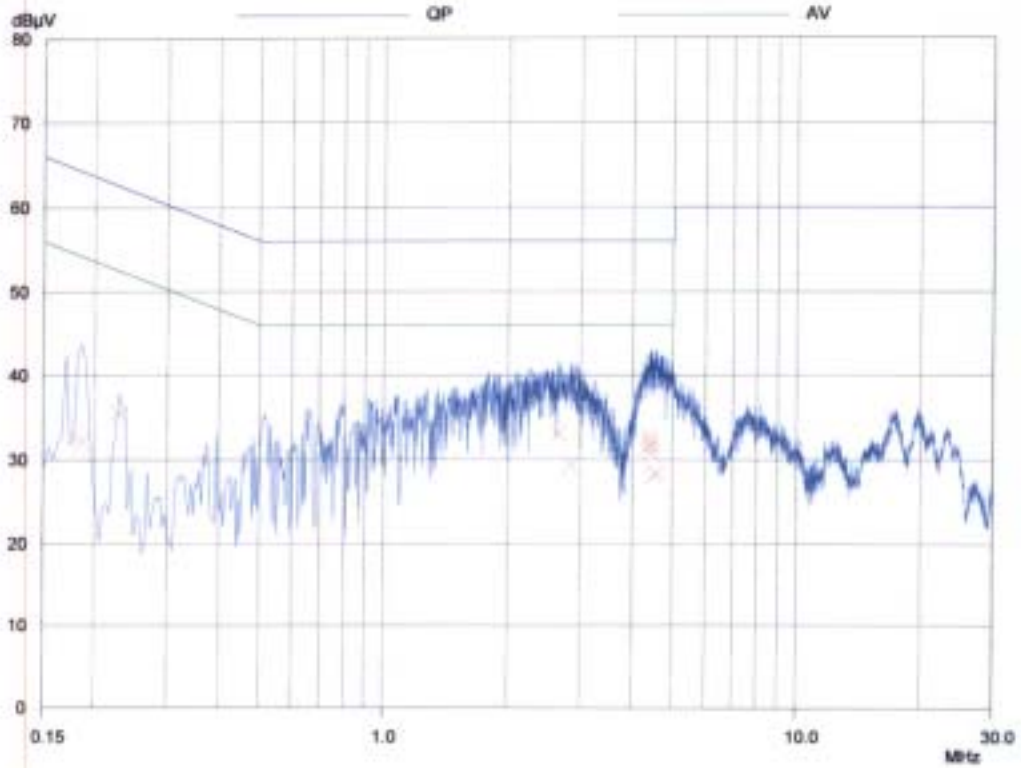
Note : Please refer to page 18 to page 19 for chart

Conducted Emission Test

EUT:	WIRELESS LAN (WLG 100 - 3A)
Manuf:	
Op Cond:	802.11g (CH1)
Operator:	LeeYing
Test Spec:	LP0002
Comment:	L1
Result File:	659_1343.dat : New Measurement

Final Measurement:

Detector:	X QP
Meas Time:	1sec
Peaks:	8
Acc Margin:	25 dB

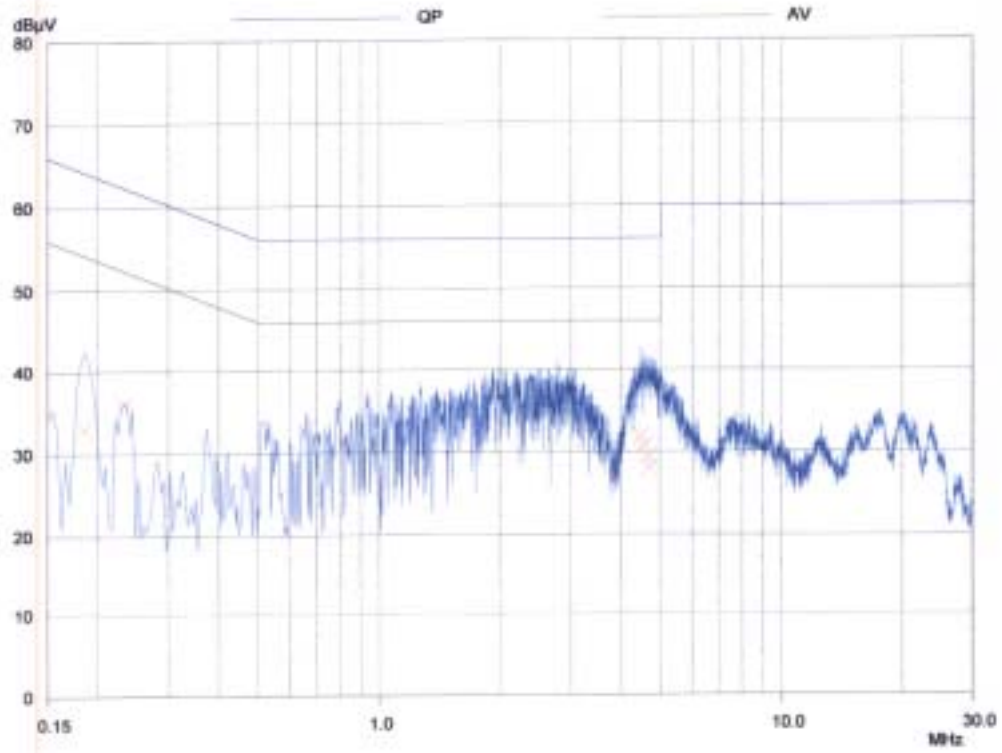


Conducted Emission Test

EUT:	WIRELESS LAN (WLG 100 - 3A)
Manuf:	
Op Cond:	802.11g (CH1)
Operator:	LeeYing
Test Spec:	LP0002
Comment:	L2
Result File:	659_1343.dat : New Measurement

Final Measurement:

Detector:	X QP
Meas Time:	1sec
Peaks:	8
Acc Margin:	25 dB



4.4 Result Data Calculation

The result data is calculated by adding the LISN Factor to the measured reading. The basic equation with a sample calculation is as follows:

RESULT = READING + LISN FACTOR (Included Cable Loss)

Assume a receiver reading of 22.5 dB μ V is obtained, and LISN Factor is 0.1 dB, then the total of disturbance voltage is 22.6 dB μ V.

RESULT = 22.5 + 0.1 = 22.6 dB μ V

Level in μ V = Common Antilogarithm[(22.6 dB μ V)/20]

= 13.48 μ V

4.5 Conducted Measurement Equipment

The following test equipment are used during the conducted test.

Equipment	Manufacturer	Model No.	Next Cal. Due
RF Test Receiver	Rohde and Schwarz	ESCS30	09/18/2004
Line Impedance Stabilization network	EMCO	3825	11/01/2004

5 ANTENNA REQUIREMENT

5.1 Standard Applicable

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
And according to §15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.2 Antenna Construction and Directional Gain

Antenna type: Inverted F Type Antenna.
Antenna gain: 0.369 dBi.

6 EMISSION BANDWIDTH MEASUREMENT

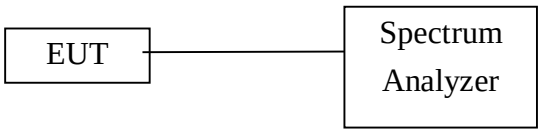
6.1 Standard Applicable

According to 15.247(a)(2), system using digital modulation techniques, the minimum 6dB bandwidth shall be at least 500 kHz.

6.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 2. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 6 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

Figure 2: Emission bandwidth measurement configuration.



6.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8564EC	09/16/2005

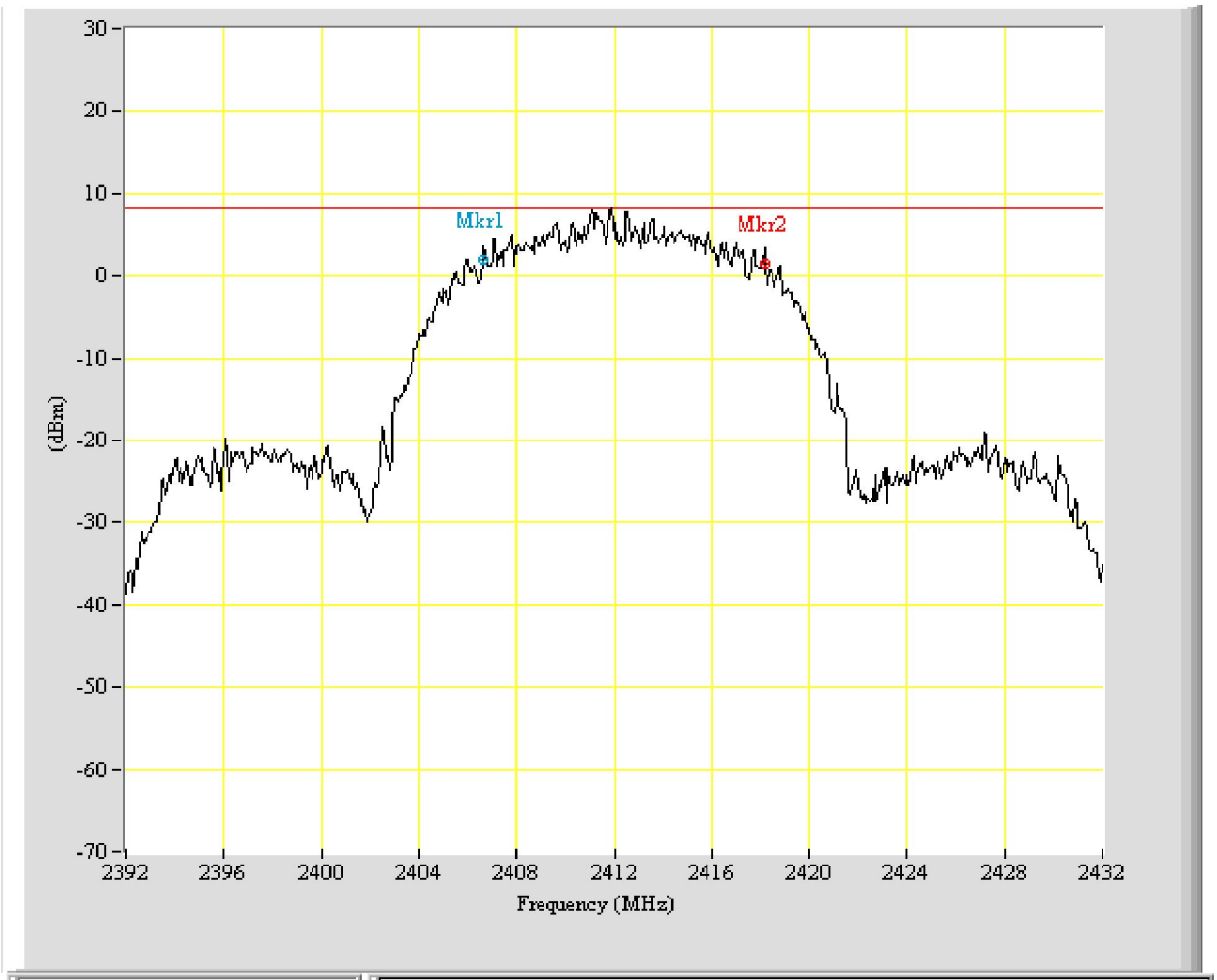
6.4 Measurement Data

6.4.1 IEEE 802.11b

Test Date: Jun. 24, 2004 Temperature: 23 ℃ Humidity: 59 %

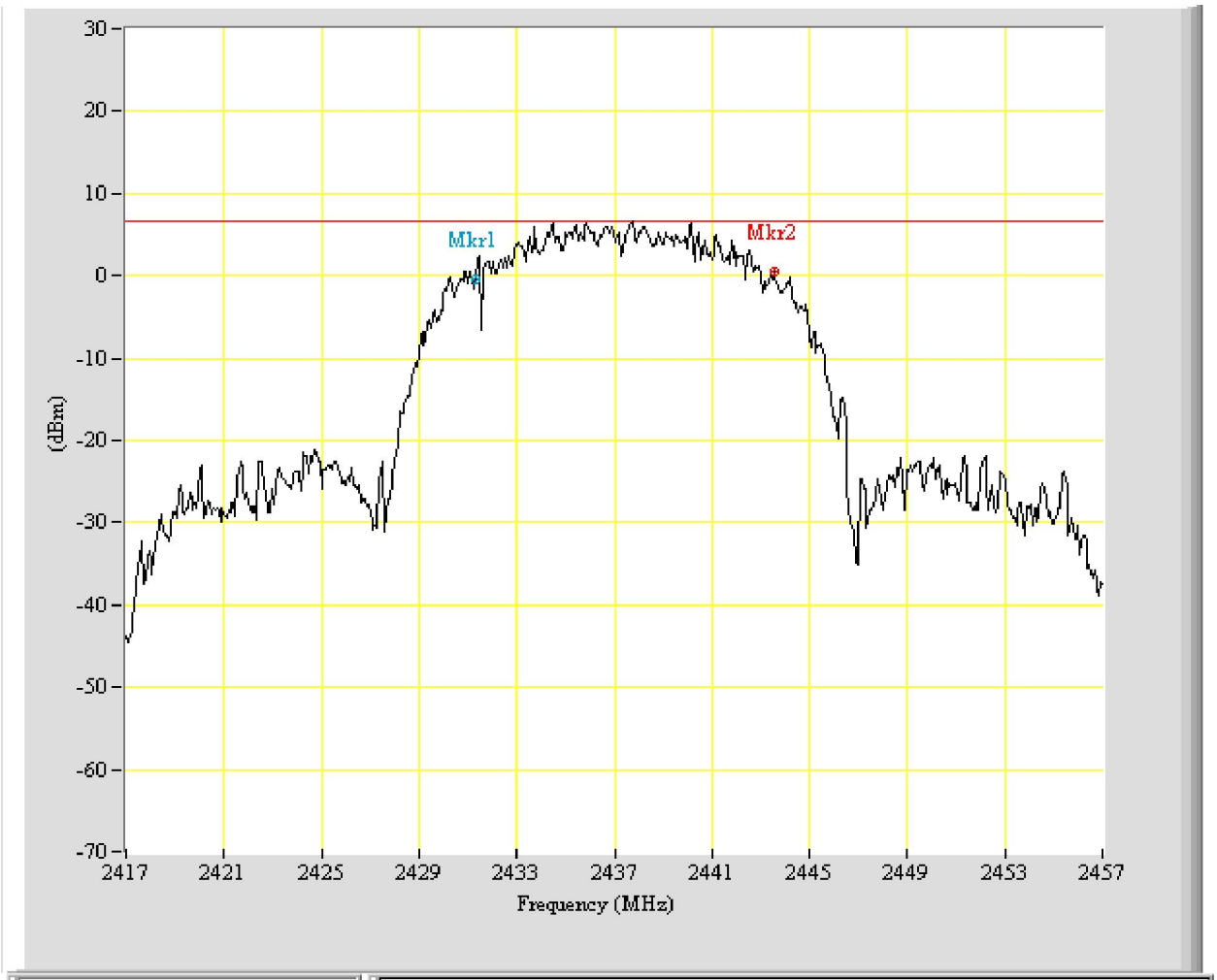
Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
1	2412	1	12.533	500	-
		2	12.400	500	-
		5.5	12.200	500	-
		11	11.600	500	Page 24
6	2437	1	12.667	500	-
		2	12.533	500	-
		5.5	12.200	500	Page 25
		11	12.333	500	-
11	2462	1	12.400	500	-
		2	12.533	500	-
		5.5	13.000	500	-
		11	11.600	500	Page 26

Note:
1.Please refer to page 24 to page 26 for chart
2. The estimated measurement uncertainty of the result measurement is 8.25×10^{-7} *(1GHz≦f≦ 18GHz)*



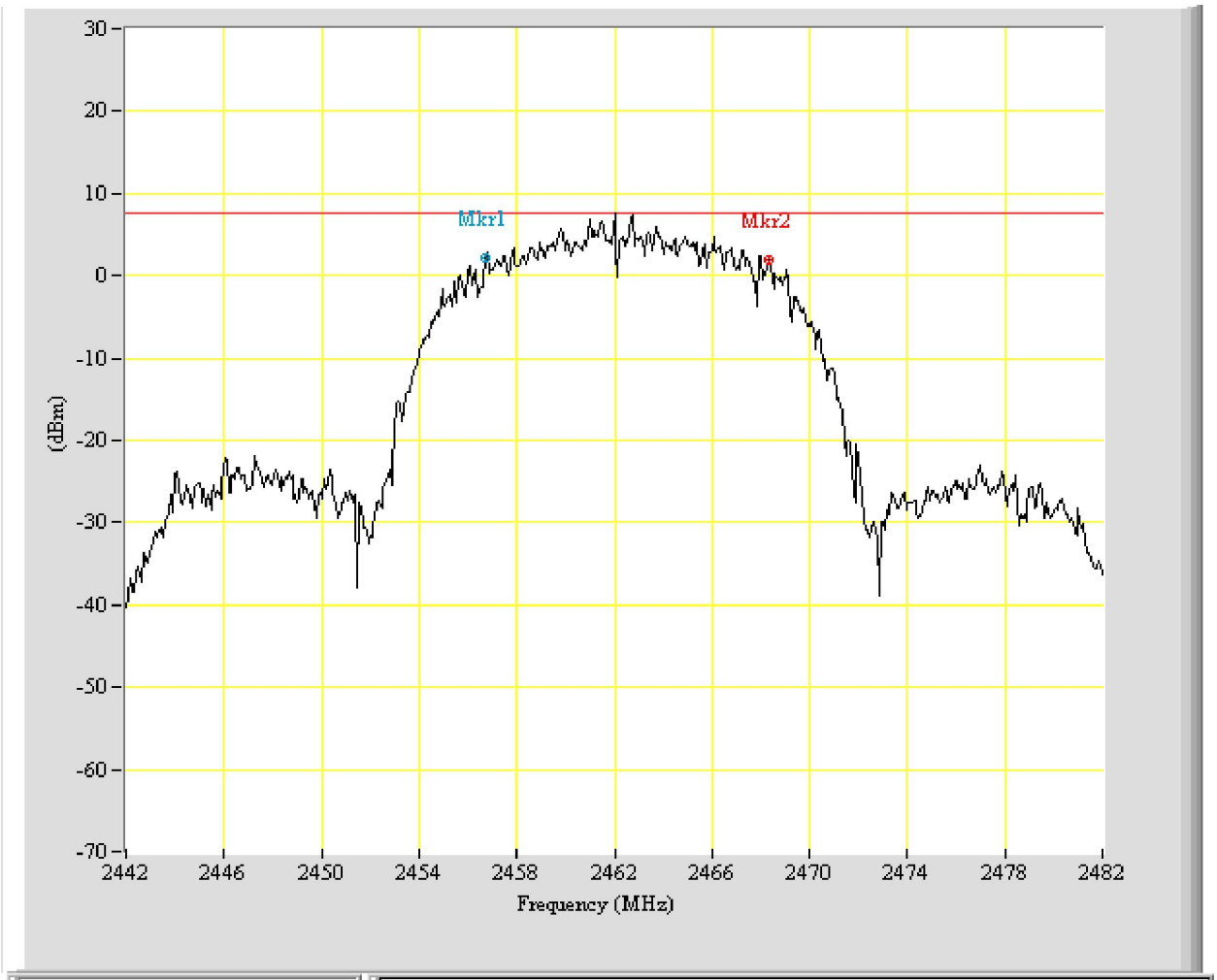
*Center 2412.0000MHz	Display Line 8.340dBm
*SPAN 40.0000MHz	Δ Marker -11.6000MHz -0.340dB
*RBW 100.00kHz	Mkr1 2406.600MHz 1.840dBm
*VBW 100.00kHz	Mkr2 2418.200MHz 1.500dBm
*SWP 50.00msec	
*ATTEN 40.00dB	
*RL 30.00dBm	

EUT: WLG100
Purpose: 6dB_BW
Condition: 802,11b_CH01_11Mbps
Note:



*Center 2437.0000MHz	Display Line 6.670dBm
*SPAN 40.0000MHz	Δ Marker -12.2000MHz 1.000dB
*RBW 100.00kHz	Mkr1 2431.333MHz -0.500dBm
*VBW 100.00kHz	Mkr2 2443.533MHz 0.500dBm
*SWP 50.00msec	
*ATTEN 40.00dB	
*RL 30.00dBm	

EUT: WLG100
Purpose: 6dB_BW
Condition: 802,11b_CH06_5,5Mbps
Note:



*Center 2462.0000MHz	Display Line 7.670dBm
*SPAN 40.0000MHz	Δ Marker -11.6000MHz -0.170dB
*RBW 100.00kHz	Mkr1 2456.733MHz 2.170dBm
*VBW 100.00kHz	Mkr2 2468.333MHz 2.000dBm
*SWP 50.00msec	
*ATTEN 40.00dB	
*RL 30.00dBm	

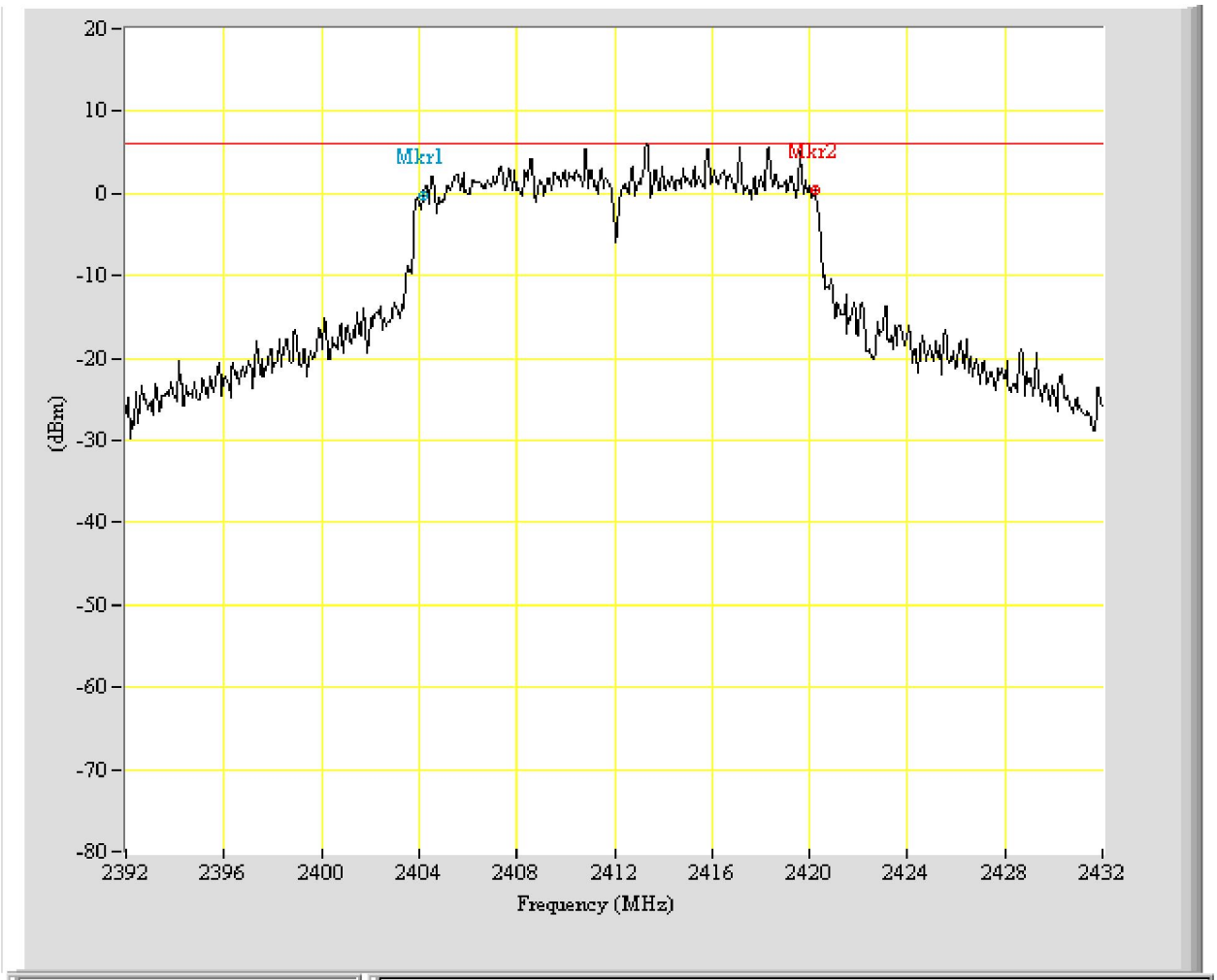
EUT: WLG100
Purpose: 6dB_BW
Condition: 802,11b_CH11_11Mbps
Note:

6.4.2 802.11g

Test Date: Jun. 24, 2004 Temperature: 23 ℃ Humidity: 59 %

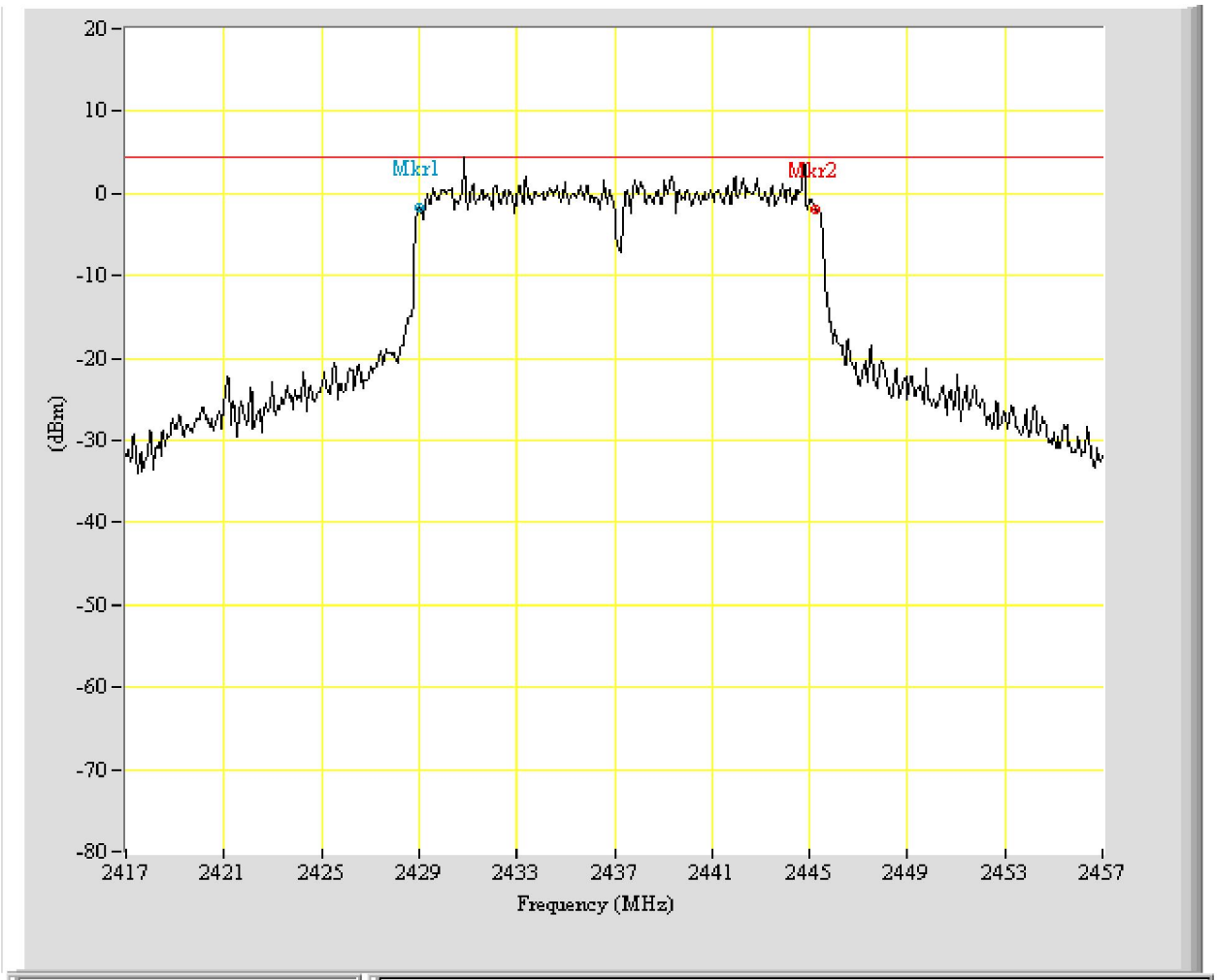
Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
1	2412	6	16.267	500	-
		9	16.133	500	Page 28
		12	16.333	500	-
		18	16.067	500	-
		24	16.533	500	-
		36	16.600	500	
		48	16.533	500	-
		54	16.533	500	-
6	2437	6	16.200	500	-
		9	16.400	500	-
		12	16.200	500	-
		18	16.200	500	Page 29
		24	16.533	500	-
		36	16.533	500	-
		48	16.267	500	-
		54	16.467	500	-
11	2462	6	16.267	500	-
		9	16.533	500	-
		12	16.200	500	Page 30
		18	16.467	500	-
		24	16.667	500	-
		36	16.533	500	-
		48	16.333	500	-
		54	16.667	500	-

Note:
1.Please refer to page 28to page 30 for chart
2. The estimated measurement uncertainty of the result measurement is 8.25×10^{-7} (1GHz≦f≦ 18GHz)



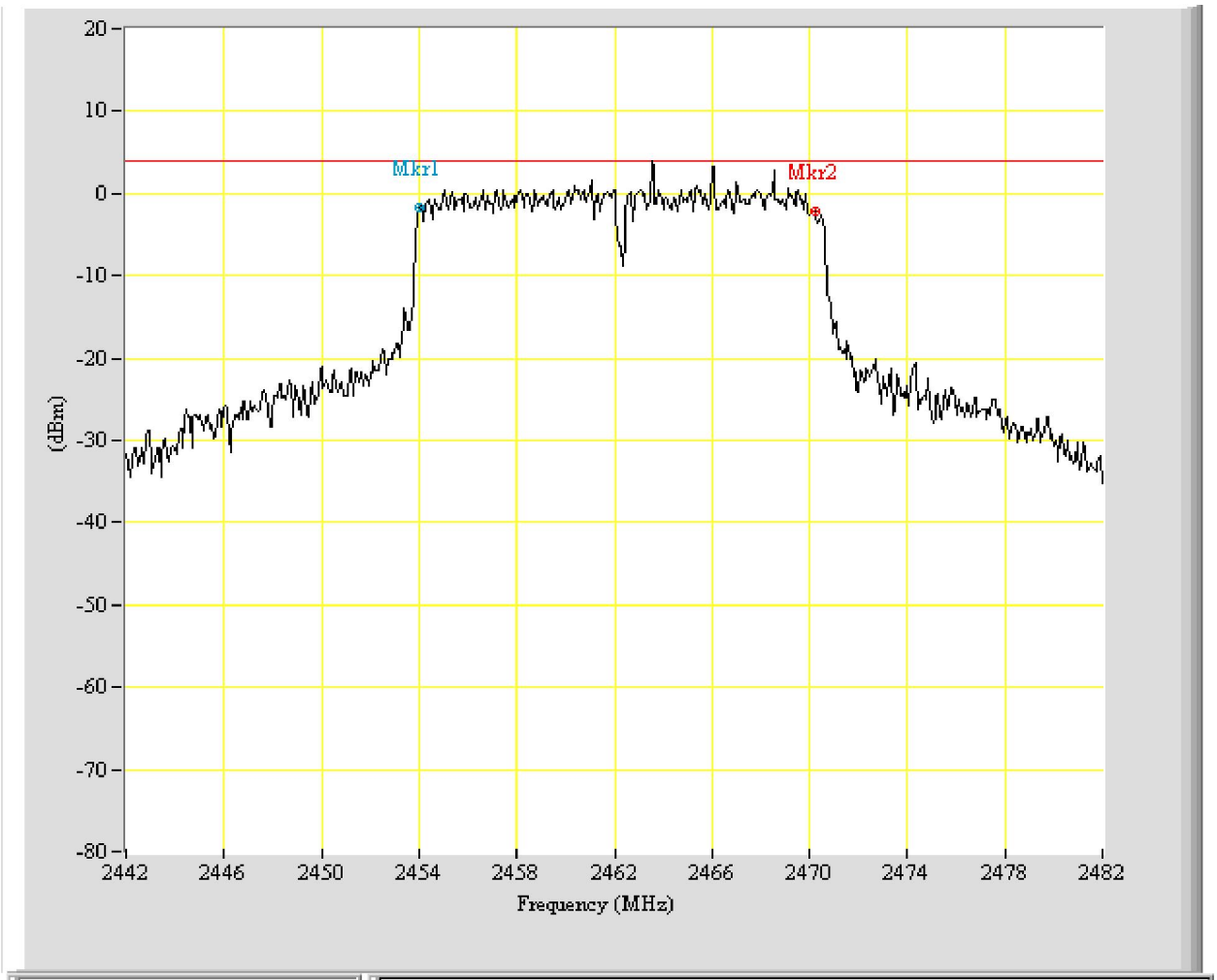
*Center 2412.0000MHz	Display Line 6.000dBm
*SPAN 40.0000MHz	Δ Marker -16.1333MHz 0.830dB
*RBW 100.00kHz	Mkr1 2404.133MHz -0.330dBm
*VBW 100.00kHz	Mkr2 2420.267MHz 0.500dBm
*SWP 50.00msec	
*ATTEN 30.00dB	
*RL 20.00dBm	

EUT: WLG100
Purpose: 6dB_BW
Condition: 802,11g_CH01_9Mbps
Note:



*Center 2437.0000MHz	Display Line 4.500dBm
*SPAN 40.0000MHz	Δ Marker -16.2000MHz -0.170dB
*RBW 100.00kHz	Mkr1 2429.000MHz -1.660dBm
*VBW 100.00kHz	Mkr2 2445.200MHz -1.830dBm
*SWP 50.00msec	
*ATTEN 30.00dB	
*RL 20.00dBm	

EUT: WLG100
Purpose: 6dB_BW
Condition: 802,11g_CH06_18Mbps
Note:



*Center 2462.0000MHz	Display Line 4.000dBm
*SPAN 40.0000MHz	Δ Marker -16.2000MHz -0.500dB
*RBW 100.00kHz	Mkr1 2454.000MHz -1.660dBm
*VBW 100.00kHz	Mkr2 2470.200MHz -2.160dBm
*SWP 50.00msec	
*ATTEN 30.00dB	
*RL 20.00dBm	

EUT: WLG100
Purpose: 6dB_BW
Condition: 802,11g_CH11_12Mbps
Note:

7 OUTPUT POWER MEASUREMENT

7.1 Standard Applicable

For direct sequence system, according to 15.247(b), the maximum peak output power of the transmitter shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

7.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 2. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 2 MHz and VBW to 3 MHz.
4. Measure the highest amplitude appearing on spectral display and record the level to calculate result data.
5. Repeat above procedures until all frequencies measured were complete.

7.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8564EC	09/16/2005

7.4 Measurement Data

7.4.1 IEEE 802.11b

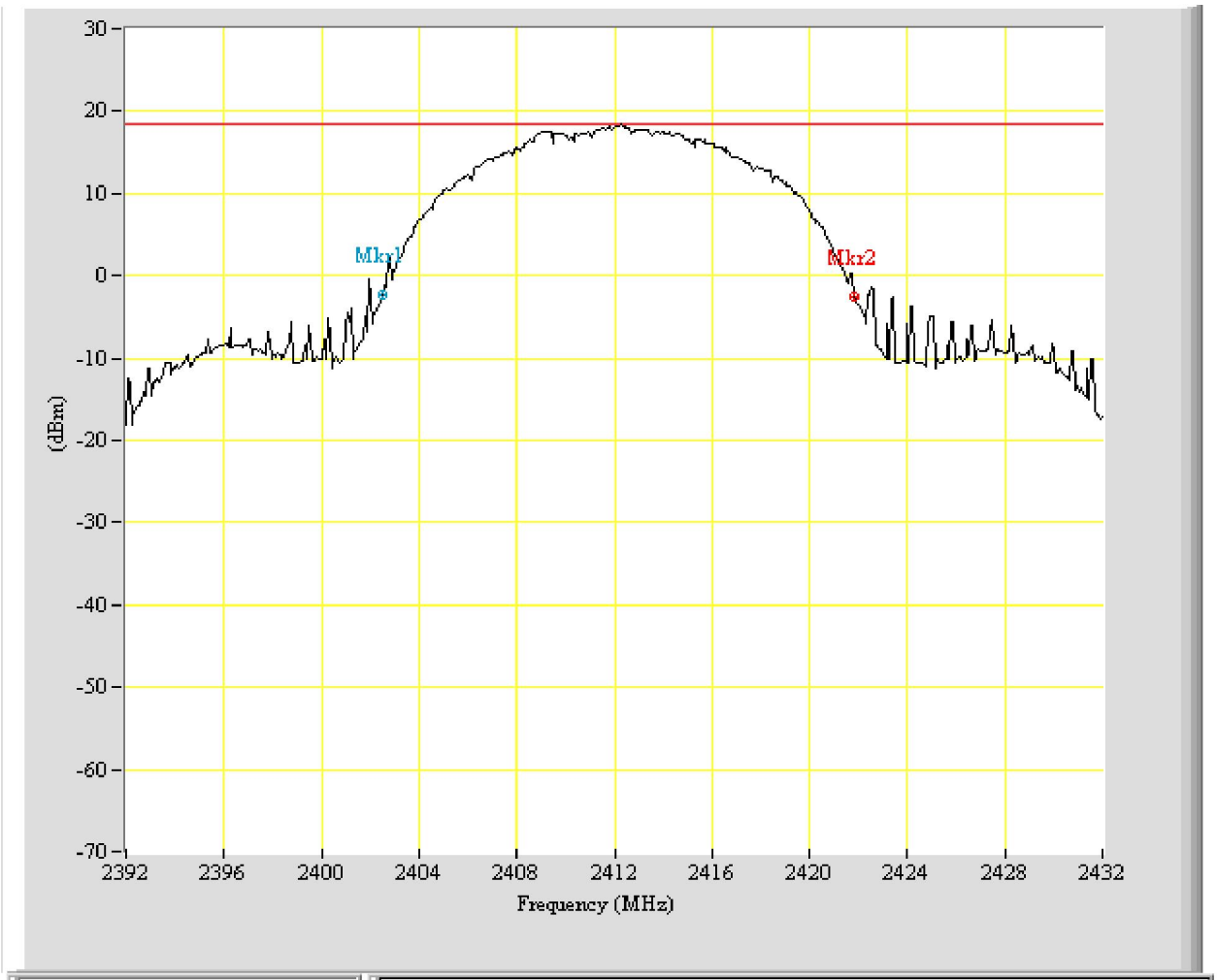
Test Date: Jun. 24, 2004 Temperature: 23 ℃ Humidity: 59 %

Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	Reading (dBm)	Cable Loss (dB)	Maximum Peak Output Power (dBm)	Maximum Peak Output Power (mW)	FCC Limit (mW)	Chart
1	2412	1	21.69	0.83	22.52	178.649	1000	-
		2	21.88	0.83	22.71	186.638	1000	-
		5.5	22.54	0.83	23.37	217.270	1000	-
		11	23.85	0.83	24.68	293.765	1000	Page 33
6	2437	1	21.58	0.66	22.24	167.494	1000	-
		2	21.67	0.66	22.33	171.002	1000	-
		5.5	22.27	0.66	22.93	196.336	1000	-
		11	23.50	0.66	24.16	260.615	1000	Page 34
11	2462	1	21.16	0.84	22.00	158.489	1000	-
		2	21.31	0.84	22.15	164.059	1000	-
		5.5	21.93	0.84	22.77	189.234	1000	-
		11	23.18	0.84	24.02	252.348	1000	Page 35

Note:

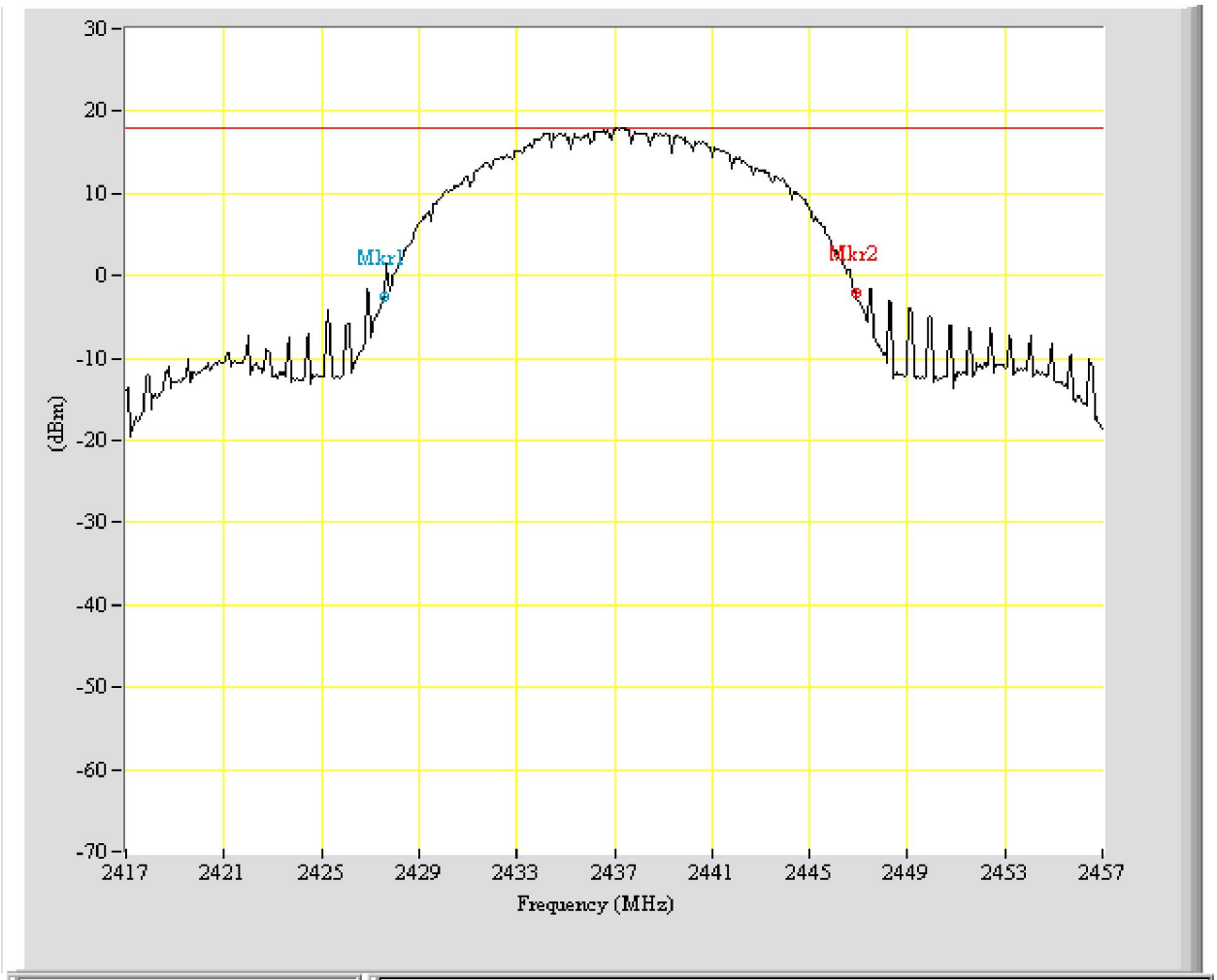
1.Please refer to page 33 to page 35 for chart

2. The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)



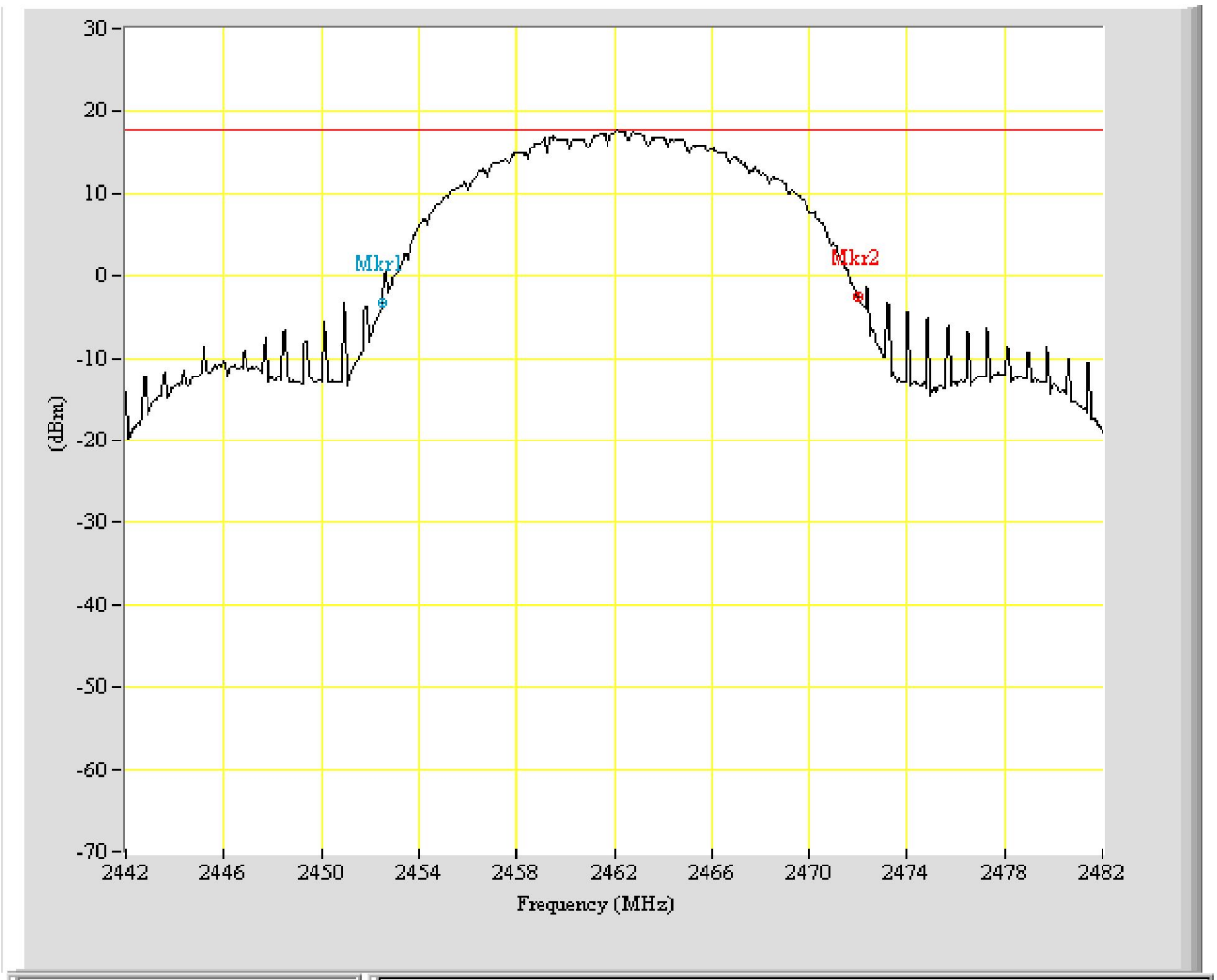
*Center 2412.0000MHz	Display Line 18.340dBm
*SPAN 40.0000MHz	Channel Power Across 19.267MHz BW Total 23.850dBm
*RBW 2000.00kHz	Δ Marker -19.2667MHz -0.170dB
*VBW 3000.00kHz	Mkr1 2402.533MHz -2.330dBm
*SWP 50.00msec	Mkr2 2421.800MHz -2.500dBm
*ATTEN 40.00dB	
*RL 30.00dBm	

EUT: WLG100
Purpose: Output_Pwr
Condition: 802,11b_CH01_11Mbps
Note:



*Center 2437.0000MHz	Display Line 18.000dBm
*SPAN 40.0000MHz	Channel Power Across 19.267MHz BW Total 23.500dBm
*RBW 2000.00kHz	Δ Marker -19.2667MHz 0.500dB
*VBW 3000.00kHz	Mkr1 2427.600MHz -2.660dBm
*SWP 50.00msec	Mkr2 2446.867MHz -2.160dBm
*ATTEN 40.00dB	
*RL 30.00dBm	

EUT: WLG100
Purpose: Output_Pwr
Condition: 802,11b_CH06_11Mbps
Note:



*Center 2462.0000MHz	Display Line 17.670dBm
*SPAN 40.0000MHz	Channel Power Across 19.467MHz BW Total 23.180dBm
*RBW 2000.00kHz	Δ Marker -19.4667MHz 0.670dB
*VBW 3000.00kHz	Mkr1 2452.533MHz -3.330dBm
*SWP 50.00msec	Mkr2 2472.000MHz -2.660dBm
*ATTEN 40.00dB	
*RL 30.00dBm	

EUT: WLG100
Purpose: Output_Pwr
Condition: 802,11b_CH11_11Mbps
Note: