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

Report No.: 08-06-MAS-194-01

Client:	NETRONIX, INC.
Product:	Wireless 802.11n PCI Card
Model:	W483、WFN-48、LCS-8031N1、AWPCI047N、ENLWI-N2
FCC ID:	NOI-W483
Manufacturer/supplier:	NETRONIX, INC.

Date test item received:	2008/06/24
Date test campaign completed:	2008/07/24
Date of issue:	2008/07/24

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Total number of pages of this test report: 118 pages

Total number of pages of photos: External photos 1 pages

Internal photos 4 pages

Setup photos 2 pages

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Client	: NETRONIX, INC.
Address	: No 945, Boai St, Jubei City. Hsinchu, Taiwan, 30265 R.O.C.
Manufacturer	: NETRONIX, INC.
Address	: No 945, Boai St, Jubei City. Hsinchu, Taiwan, 30265 R.O.C.
EUT	: Wireless 802.11n PCI Card
Trade name/ Model No.	: (1) NETRONIX / W483 (2) ViSTOR / WFN-48 (3) Longshine / LCS-8031N1 (4) ALFA / AWPCI047N (5) Encore / ENLWI-N2 Note: Model different description: There is no difference for models W483、WFN-48、LCS-8031N1、AWPCI047N and ENLWI-N2 except for the model difference.
Power Source	: AC 110V, 60Hz
Regulations applied	: FCC 47 CFR, Part 15 Subpart C (2007)

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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② ISO/IEC 17025: BSMI, CNLA, DGT, NVLAP, CCIBLAC, UL, Compliance

③ Filing: FCC, Industry Canada, VCCI

④ MRA: Australia, Hong Kong, New Zealand, Singapore, USA, Japan, Korea, China, APLAC through CNLA

⑤ FCC Registration Number: 90588, 91094, 91095

NVLAP Lab Code 200133-0

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1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT : Wireless 802.11n PCI Card

b) Trade name/ Model No. : NETRONIX/W483、ViSTOR/WFN-48、Longshine/ LCS-8031N1、ALFA/AWPCI047N、Encore/ENLWI-N2

c) FCC ID : NOI-W483

1.2 Characteristics of Device

The EUT is a 2.4 GHz Wireless 802.11n PCI Card. It conforms to the IEEE 802.11b/g/n protocal and operates in the unlicensed ISM Band at 2.4 GHz.

RF chain	1T2R
Frequency Range	IEEE 802.11b/g, 802.11n HT20: 2412MHz~2462MHz IEEE 802.11n HT40: 2422MHz~2452MHz
Channel Spacing	IEEE 802.11b/g, 802.11n HT20/HT40: 5MHz
Channel Number	IEEE 802.11b/g, 802.11n HT20:11 Channels IEEE 802.11n HT40: 7 Channels
Transmit Data Rate	IEEE 802.11b: 11, 5.5, 2, 1 Mbps IEEE 802.11g: 54, 48, 36, 24, 18, 12, 11, 9, 6 Mbps IEEE 802.11n HT20: 65, 58.5, 52, 39, 26, 19.5, 13, 6.5Mbps IEEE 802.11n HT40: 135, 121.5, 108, 81, 54, 40.5, 27, 13.5 Mbps
Type of Modulation	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20/40: OFDM (64QAM, 16QAM, QPSK, BPSK)
Emission Designators	IEEE 802.11b: 14M9G1D IEEE 802.11g: 16M6W7D IEEE 802.11n HT20: 17M6W7D IEEE 802.11n HT40: 36M1W7D

1.3 Test Methodology

All testing were performed according to the procedures in ANSI C63.4 (2003) 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 dB μV	Average dB μV
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 dB μV/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 15.247 (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 15.247 (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 15.247 (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 Devices for Tested System

Device	Manufacture	Model No.	Cable Description
Wireless 802.11n PCI Card*	NETRONIX, INC.	W483 WFN-48 LCS-8031N1 AWPCI047N ENLWI-N2	----
PC	HP	DC5100MT	1.8m Unshielded Power Line
Keyboard	Logitech	Y-SM48	2.0m Unshielded Signal Line
Monitor	Lemel	L1520	1.8m Unshielded Power Line 1.8m Unshielded Signal Line with a core
Mouse	Lemel	M857C	1.8m Unshielded Signal Line
Printer	HP	C2175A	1.7m Unshielded Signal Line 2.4m Unshielded Power Line/Adapter

Note:

1.Remark "*" means equipment under test.

2.

Test Software:	RT2860QA.exe Rev.V1_1_0_1 (OFDM CCK Bug)		
Power setting:	802.11b/g/n HT20	Low	TX power =(00)h
		Mid	TX power =(00)h
		High	TX power =(00)h
	802.11b/g/n HT40	Low	TX power =(00)h
		Mid	TX power =(00)h
		High	TX power =(00)h

3.2 Dscription of Test modes

3.2.1 IEEE 802.11b, 802.11g, 802.11n HT20 mode:

There are three channels have been tested as following:

Channel	Frequency (MHz)
Low = 1	2412
Middle = 6	2437
High = 11	2462

IEEE 802.11b mode: 1 Mbps data rateis the worse case for full testing.

IEEE 802.11g mode: 6 Mbps data rateis the worse case for full testing.

IEEE 802.11n HT20 mode: 6.5 Mbps data rateis the worse case for full testing.

3.2.2 IEEE 802.11n HT40 mode:

There are three channels have been tested as following:

Channel	Frequency (MHz)
Low = 3	2422
Middle = 6	2437
High = 9	2452

IEEE 802.11n HT40 mode: 13.5 Mbps data rateis the worse case for full testing.

4 CONDUCTED EMISSION MEASUREMENT

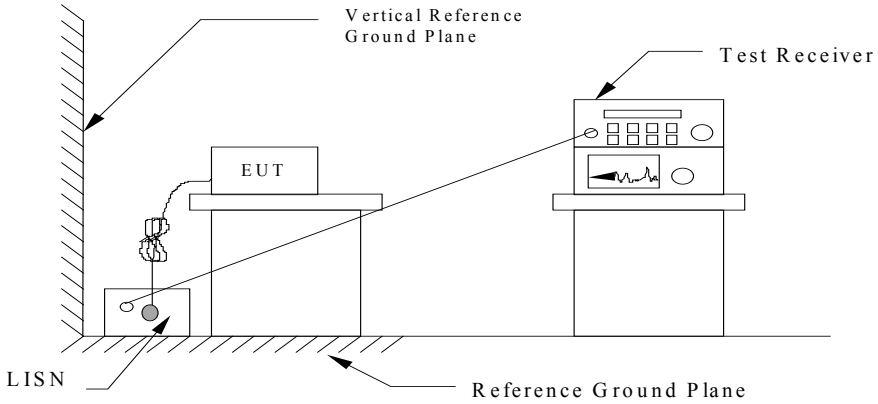
4.1 Standard Applicable

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.

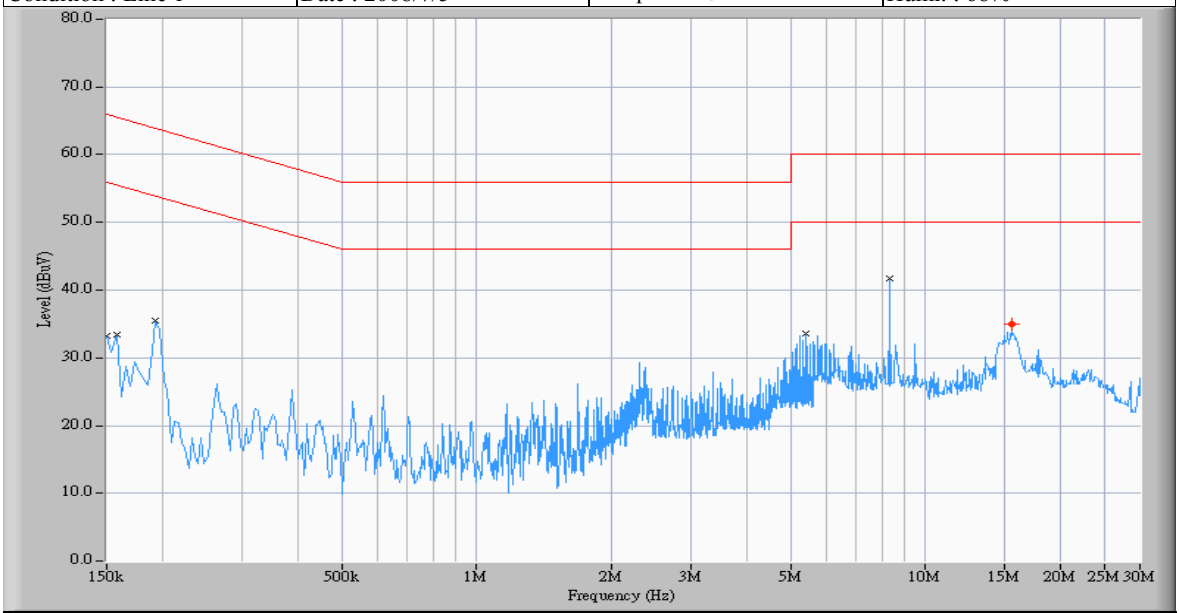
Figure 1 : Conducted emissions measurement configuration



4.3 Conducted Emission Data

4.3.1 Operation Mode: IEEE 802.11b

EUT :	Model : W483	Status : FCC-11b-L1	
Condition : Line 1	Date : 2008/7/5	Temp. : 25℃	Humi. : 68%

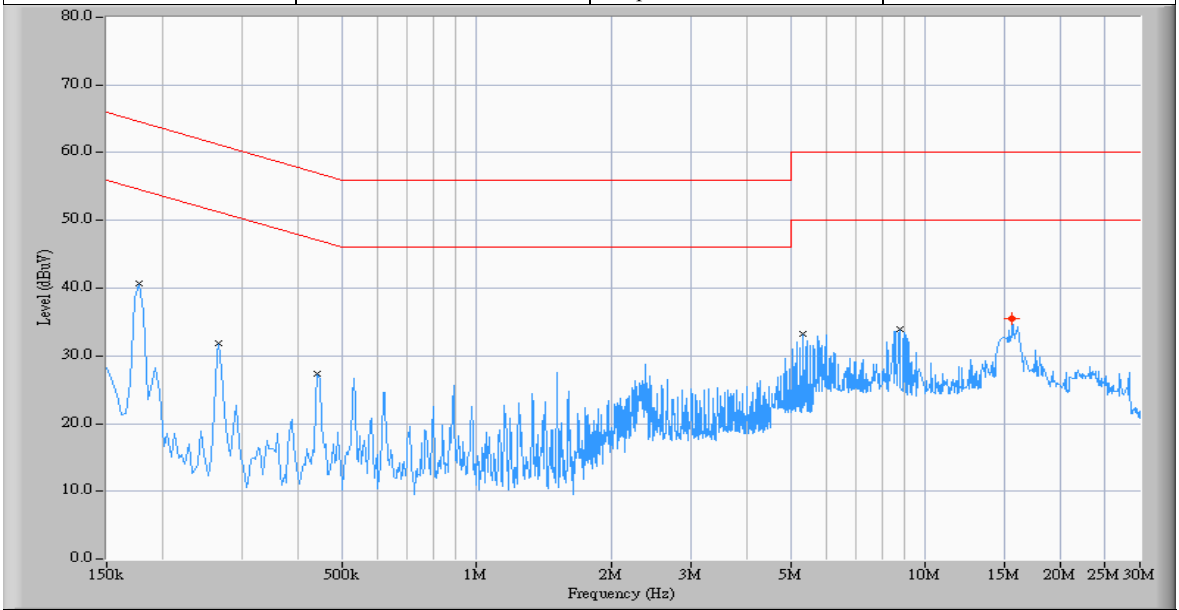


	Freq (MHz)	QP Level (dBuV)	AVG Level (dBuV)	Factor (dB)	QP Result (dBuV)	AVG Result (dBuV)	QP Limit (dBuV)	AVG Limit (dBuV)	QP Margin (dB)	AVG Margin (dB)
1	0.150	33.3	----	0.3	33.6	----	66.0	56.0	-32.4	----
2	0.158	33.4	----	0.3	33.7	----	65.6	55.6	-31.9	----
3	0.193	35.6	----	0.3	35.9	----	63.9	53.9	-28.0	----
4	5.392	33.5	----	0.2	33.7	----	60.0	50.0	-26.3	----
5	8.298	41.7	----	0.2	41.9	----	60.0	50.0	-18.1	----
6	15.560	35.0	----	0.4	35.4	----	60.0	50.0	-24.6	----

Note:

1. Place of measurement: EMC LAB. of the ETC.
2. "***" means the value was too low to be measured.
3. 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.
4. "#" means the noise was too low, so record the peak value.
5. The estimated measurement uncertainty of the result measurement is ±2.5dB.

EUT :	Model : W483	Status : FCC-11b-L2	
Condition : Line 2	Date : 2008/7/5	Temp. : 25℃	Humi. : 68%



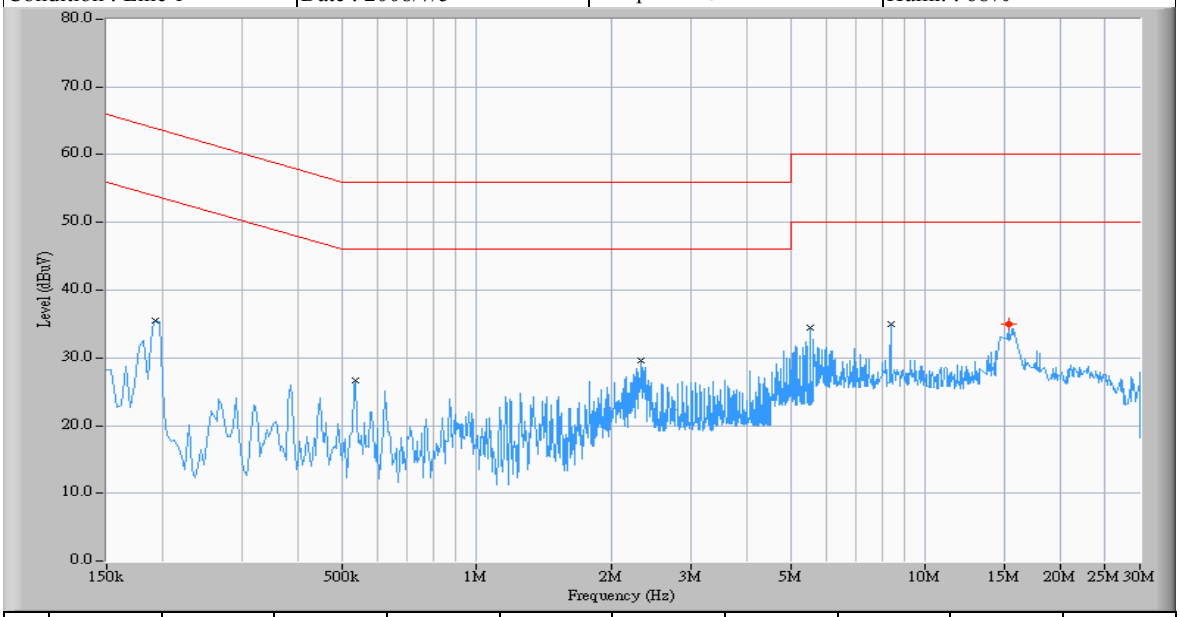
	Freq (MHz)	QP Level (dBuV)	AVG Level (dBuV)	Factor (dB)	QP Result (dBuV)	AVG Result (dBuV)	QP Limit (dBuV)	AVG Limit (dBuV)	QP Margin (dB)	AVG Margin (dB)
1	0.177	40.6	----	0.3	40.9	----	64.6	54.6	-23.7	----
2	0.267	31.9	----	0.2	32.1	----	61.2	51.2	-29.1	----
3	0.443	27.3	----	0.2	27.5	----	57.0	47.0	-29.5	----
4	5.322	33.3	----	0.2	33.5	----	60.0	50.0	-26.5	----
5	8.744	33.9	----	0.2	34.1	----	60.0	50.0	-25.9	----
6	15.541	35.4	----	0.4	35.8	----	60.0	50.0	-24.2	----

Note:

1. Place of measurement: EMC LAB. of the ETC.
2. "***" means the value was too low to be measured.
3. 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.
4. "#" means the noise was too low, so record the peak value.
5. The estimated measurement uncertainty of the result measurement is ±2.5dB.

4.3.2 Operation Mode: IEEE 802.11g

EUT :	Model : W483	Status : FCC-11g-L1	
Condition : Line 1	Date : 2008/7/5	Temp. : 25℃	Humi. : 68%

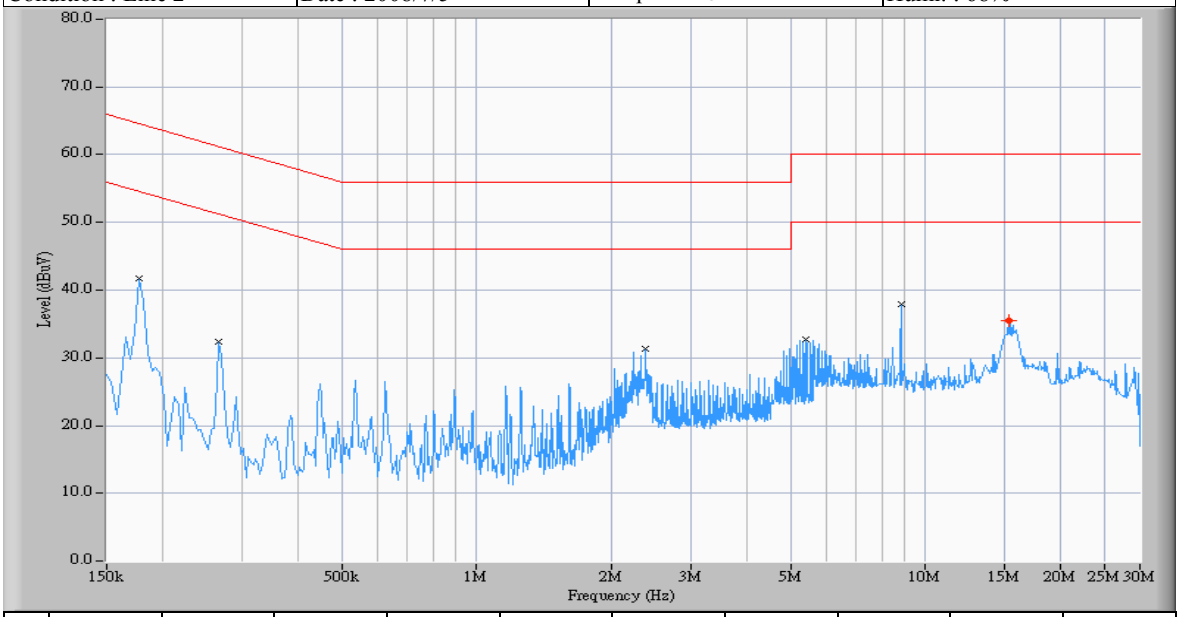


	Freq (MHz)	QP Level (dBuV)	AVG Level (dBuV)	Factor (dB)	QP Result (dBuV)	AVG Result (dBuV)	QP Limit (dBuV)	AVG Limit (dBuV)	QP Margin (dB)	AVG Margin (dB)
1	0.193	35.5	----	0.3	35.8	----	63.9	53.9	-28.1	----
2	0.537	26.6	----	0.2	26.8	----	56.0	46.0	-29.2	----
3	2.318	29.6	----	0.2	29.8	----	56.0	46.0	-26.2	----
4	5.529	34.4	----	0.2	34.6	----	60.0	50.0	-25.4	----
5	8.365	35.0	----	0.2	35.2	----	60.0	50.0	-24.8	----
6	15.330	35.0	----	0.4	35.4	----	60.0	50.0	-24.6	----

Note:

1. Place of measurement: EMC LAB. of the ETC.
2. "***" means the value was too low to be measured.
3. 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.
4. "#" means the noise was too low, so record the peak value.
5. The estimated measurement uncertainty of the result measurement is ±2.5dB.

EUT :	Model : W483	Status : FCC-11g-L2	
Condition : Line 2	Date : 2008/7/5	Temp. : 25℃	Humi. : 68%



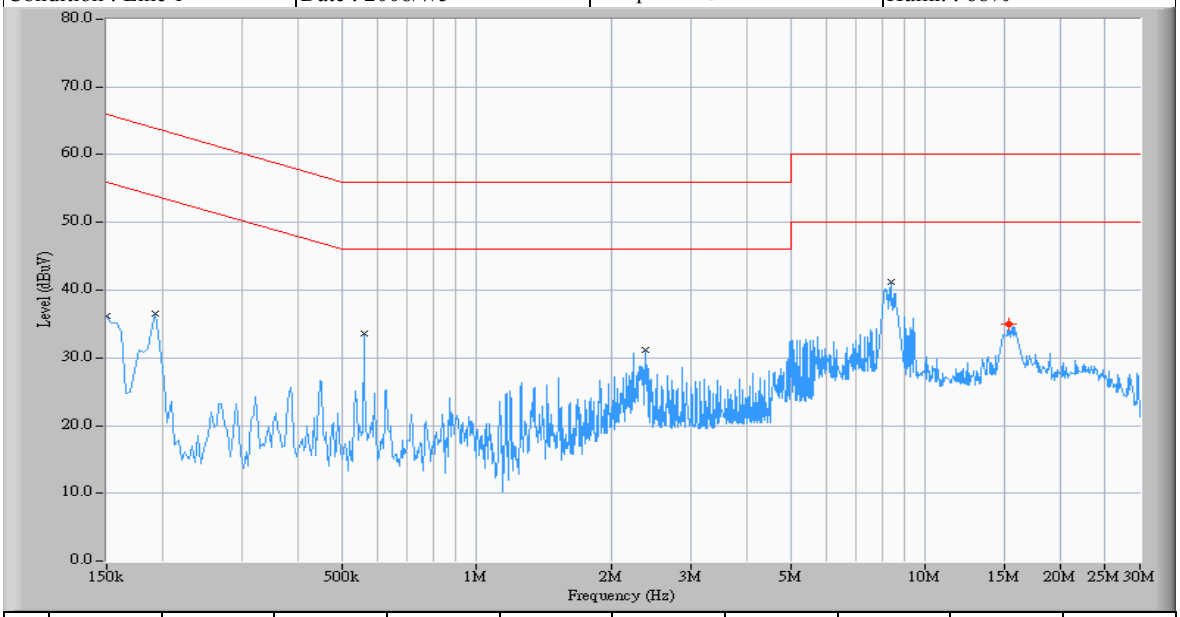
	Freq (MHz)	QP Level (dBuV)	AVG Level (dBuV)	Factor (dB)	QP Result (dBuV)	AVG Result (dBuV)	QP Limit (dBuV)	AVG Limit (dBuV)	QP Margin (dB)	AVG Margin (dB)
1	0.177	41.7	----	0.3	42.0	----	64.6	54.6	-22.6	----
2	0.267	32.5	----	0.2	32.7	----	61.2	51.2	-28.5	----
3	2.377	31.3	----	0.2	31.5	----	56.0	46.0	-24.5	----
4	5.388	32.8	----	0.2	33.0	----	60.0	50.0	-27.0	----
5	8.822	38.0	----	0.2	38.2	----	60.0	50.0	-21.8	----
6	15.361	35.5	----	0.4	35.9	----	60.0	50.0	-24.1	----

Note:

1. Place of measurement: EMC LAB. of the ETC.
2. "***" means the value was too low to be measured.
3. 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.
4. "#" means the noise was too low, so record the peak value.
5. The estimated measurement uncertainty of the result measurement is ±2.5dB.

4.3.3 Operation Mode: IEEE 802.11n, HT20

EUT :	Model : W483	Status : FCC-11n-HT20-L1	
Condition : Line 1	Date : 2008/7/5	Temp. : 25℃	Humi. : 68%

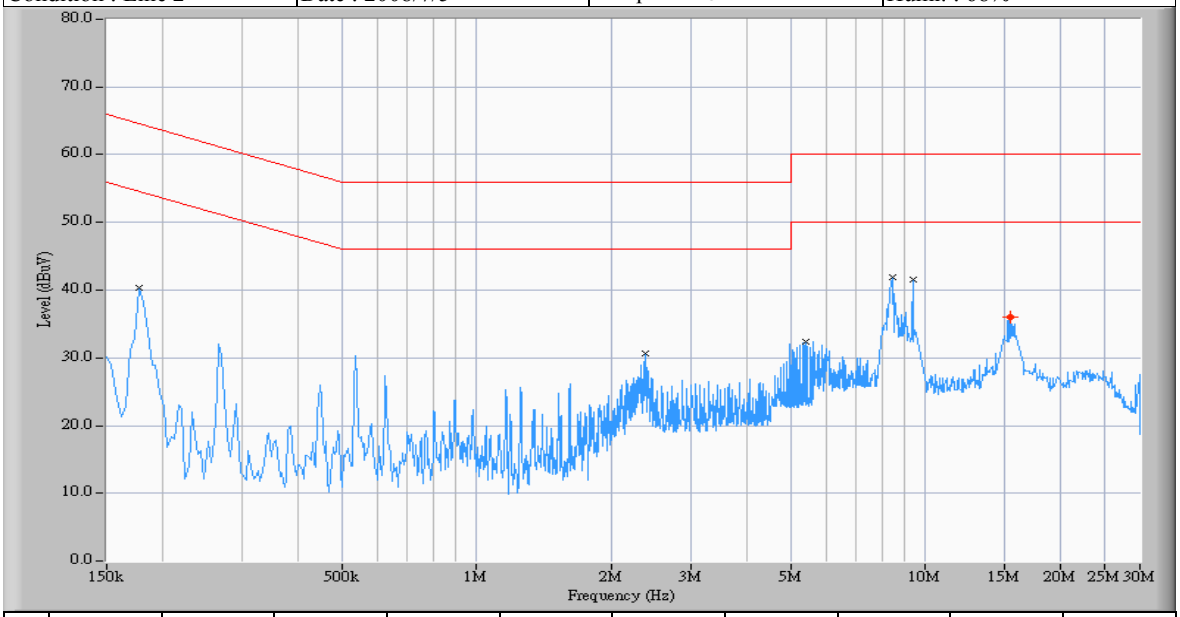


	Freq (MHz)	QP Level (dBuV)	AVG Level (dBuV)	Factor (dB)	QP Result (dBuV)	AVG Result (dBuV)	QP Limit (dBuV)	AVG Limit (dBuV)	QP Margin (dB)	AVG Margin (dB)
1	0.150	36.1	----	0.3	36.4	----	66.0	56.0	-29.6	----
2	0.193	36.5	----	0.3	36.8	----	63.9	53.9	-27.1	----
3	0.560	33.5	----	0.2	33.7	----	56.0	46.0	-22.3	----
4	2.377	31.1	----	0.2	31.3	----	56.0	46.0	-24.7	----
5	8.377	41.2	----	0.2	41.4	----	60.0	50.0	-18.6	----
6	15.310	35.0	----	0.4	35.4	----	60.0	50.0	-24.6	----

Note:

1. Place of measurement: EMC LAB. of the ETC.
2. "***" means the value was too low to be measured.
3. 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.
4. "#" means the noise was too low, so record the peak value.
5. The estimated measurement uncertainty of the result measurement is ±2.5dB.

EUT :	Model : W483	Status : FCC-11n-HT20-L2	
Condition : Line 2	Date : 2008/7/5	Temp. : 25℃	Humi. : 68%



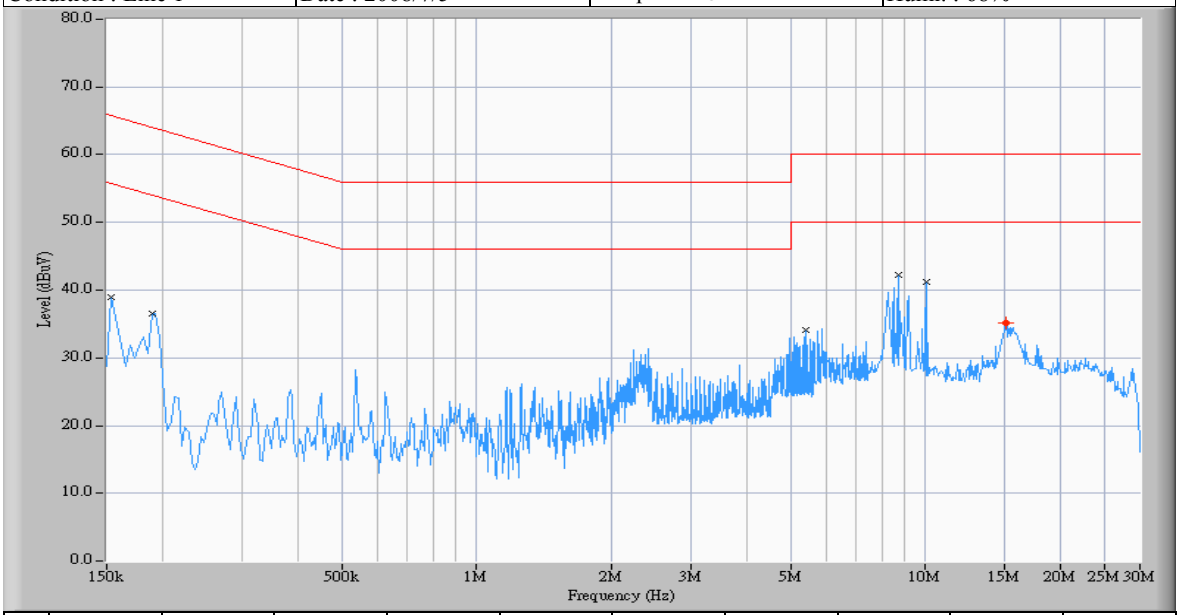
	Freq (MHz)	QP Level (dBuV)	AVG Level (dBuV)	Factor (dB)	QP Result (dBuV)	AVG Result (dBuV)	QP Limit (dBuV)	AVG Limit (dBuV)	QP Margin (dB)	AVG Margin (dB)
1	0.177	40.3	----	0.3	40.6	----	64.6	54.6	-24.0	----
2	2.380	30.7	----	0.2	30.9	----	56.0	46.0	-25.1	----
3	5.388	32.3	----	0.2	32.5	----	60.0	50.0	-27.5	----
4	8.451	41.9	----	0.2	42.1	----	60.0	50.0	-17.9	----
5	9.373	41.5	----	0.2	41.7	----	60.0	50.0	-18.3	----
6	15.388	36.1	----	0.4	36.5	----	60.0	50.0	-23.5	----

Note:

1. Place of measurement: EMC LAB. of the ETC.
2. “***” means the value was too low to be measured.
3. 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.
4. “#” means the noise was too low, so record the peak value.
5. The estimated measurement uncertainty of the result measurement is ±2.5dB.

4.3.4 Operation Mode: IEEE 802.11n, HT40

EUT :	Model : W483	Status : FCC-11n-HT40-L1	
Condition : Line 1	Date : 2008/7/5	Temp. : 25℃	Humi. : 68%

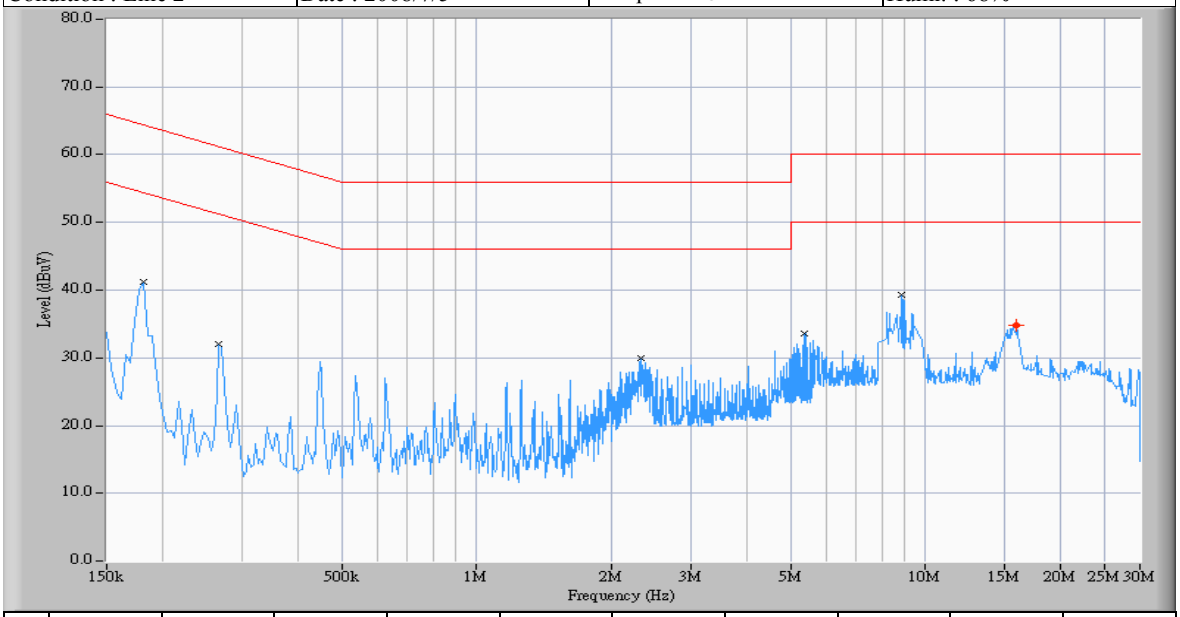


	Freq (MHz)	QP Level (dBuV)	AVG Level (dBuV)	Factor (dB)	QP Result (dBuV)	AVG Result (dBuV)	QP Limit (dBuV)	AVG Limit (dBuV)	QP Margin (dB)	AVG Margin (dB)
1	0.154	38.9	----	0.3	39.2	----	65.8	55.8	-26.6	----
2	0.189	36.5	----	0.3	36.8	----	64.1	54.1	-27.3	----
3	5.388	34.1	----	0.2	34.3	----	60.0	50.0	-25.7	----
4	8.732	42.3	----	0.2	42.5	----	60.0	50.0	-17.5	----
5	10.005	41.2	----	0.2	41.4	----	60.0	50.0	-18.6	----
6	15.146	35.1	----	0.4	35.5	----	60.0	50.0	-24.5	----

Note:

1. Place of measurement: EMC LAB. of the ETC.
2. "***" means the value was too low to be measured.
3. 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.
4. "#" means the noise was too low, so record the peak value.
5. The estimated measurement uncertainty of the result measurement is ±2.5dB.

EUT :	Model : W483	Status : FCC-11n-HT40-L2	
Condition : Line 2	Date : 2008/7/5	Temp. : 25℃	Humi. : 68%



	Freq (MHz)	QP Level (dBuV)	AVG Level (dBuV)	Factor (dB)	QP Result (dBuV)	AVG Result (dBuV)	QP Limit (dBuV)	AVG Limit (dBuV)	QP Margin (dB)	AVG Margin (dB)
1	0.181	41.2	----	0.3	41.5	----	64.4	54.4	-22.9	----
2	0.267	32.1	----	0.2	32.3	----	61.2	51.2	-28.9	----
3	2.314	30.0	----	0.2	30.2	----	56.0	46.0	-25.8	----
4	5.384	33.6	----	0.2	33.8	----	60.0	50.0	-26.2	----
5	8.818	39.3	----	0.2	39.5	----	60.0	50.0	-20.5	----
6	15.947	34.9	----	0.4	35.3	----	60.0	50.0	-24.7	----

Note:

1. Place of measurement: EMC LAB. of the ETC.
2. "***" means the value was too low to be measured.
3. 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.
4. "#" means the noise was too low, so record the peak value.
5. The estimated measurement uncertainty of the result measurement is ±2.5dB.

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)

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	08/07/2008
LISN	EMCO	37100/2M	02/12/2009

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
Antenna type	Dipole
Antenna Connector	SMA Plug Reverse
Antenna gain	1.8 dBi

6 EMISSION BANDWIDTH MEASUREMENT

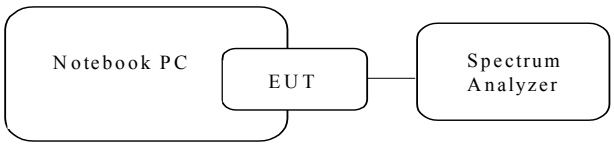
6.1 Standard Applicable

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	Agilent	8564EC	10/10/2008

6.4 Measurement Data

6.4.1 IEEE 802.11b

Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

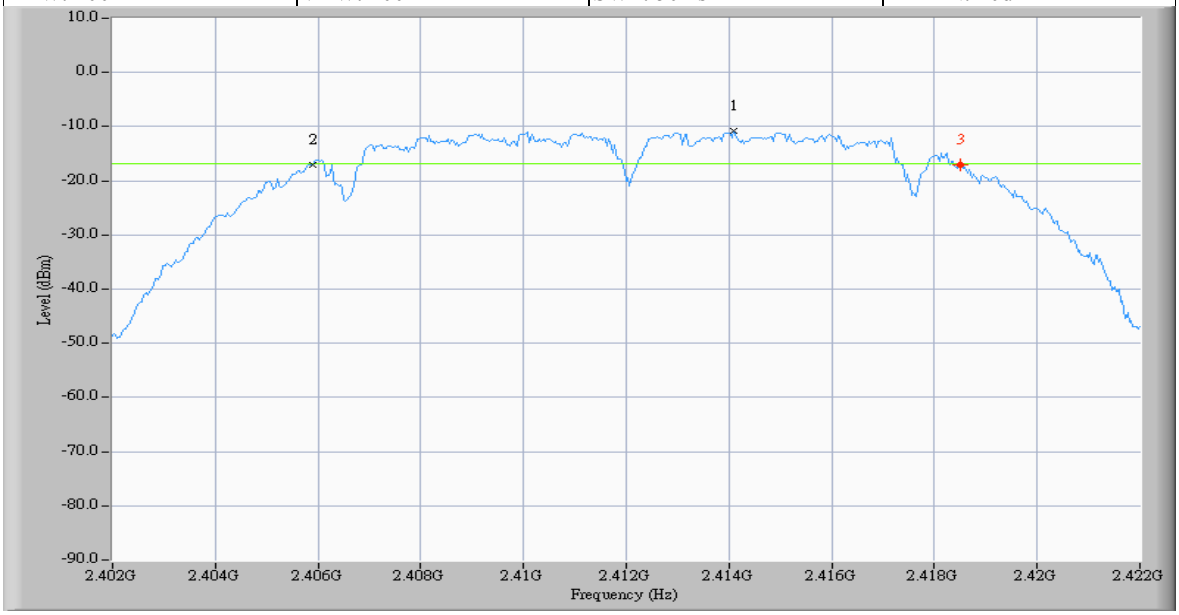
Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
1	2412	1	12.600	500	Page 26
6	2437	1	12.833	500	Page 27
11	2462	1	12.734	500	Page 28

Note:

1.Please refer to page 26 to page 28 for chart

2. The estimated measurement uncertainty of the result measurement is 8.25×10^{-7} *(1GHz≦f≦ 18GHz)*

EUT :	Model : W483	Status : WLAN-11b-CH01-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB

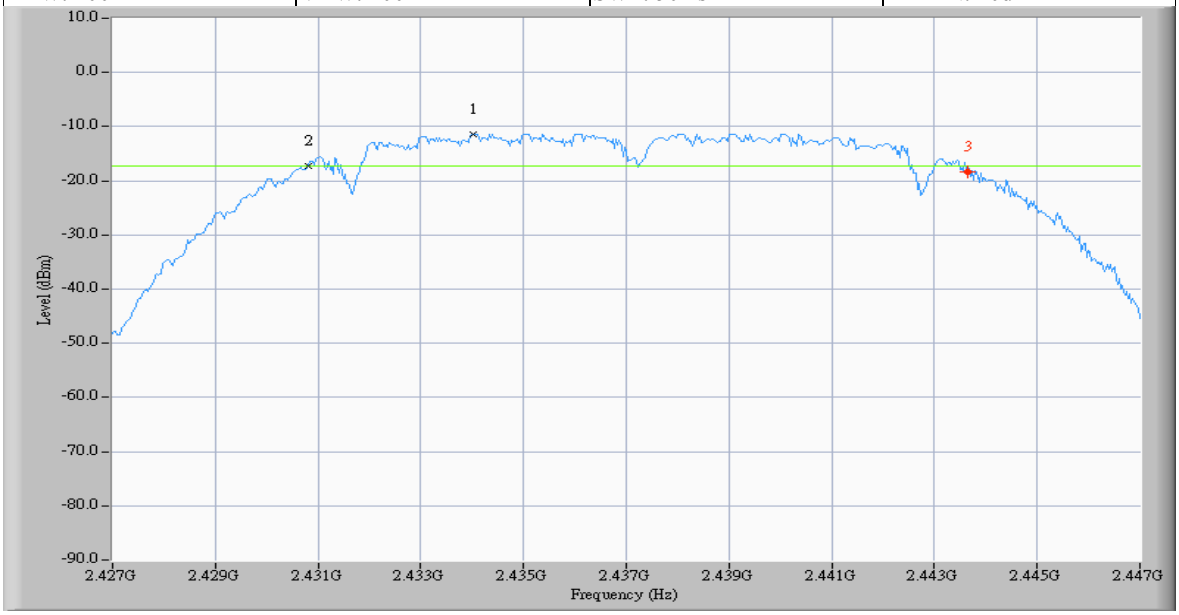


Test Request: (-16.8dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2414.100	-10.8
2	2405.900	-17.2
3	2418.500	-17.2

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	12.600	0.0

EUT :	Model : W483	Status : WLAN-11b-CH06-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB

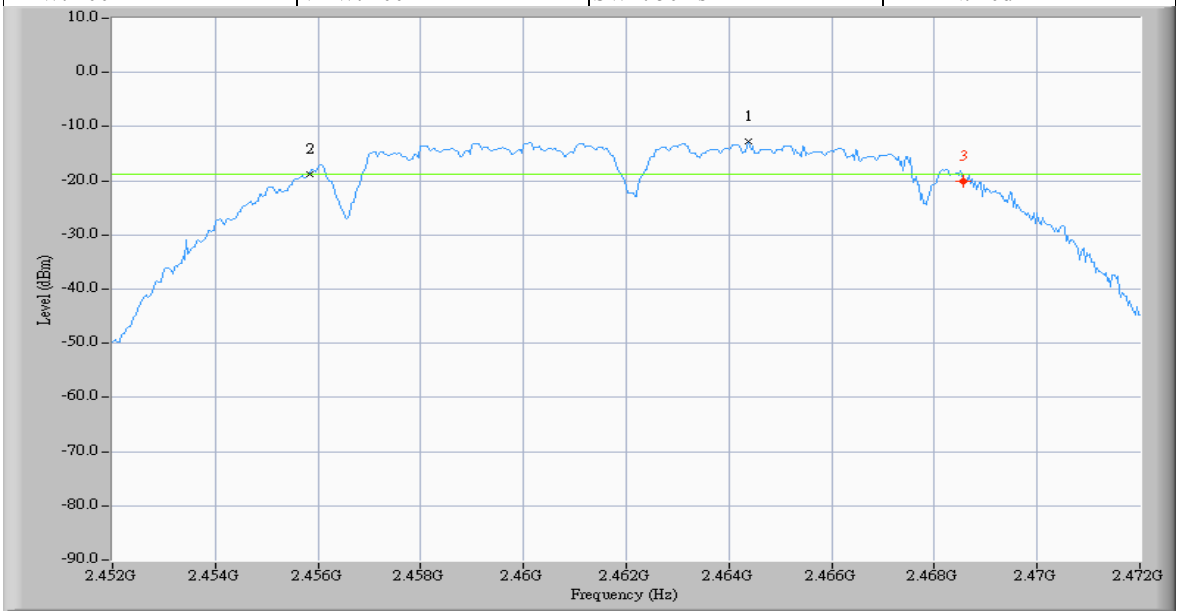


Test Request: (-17.3dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2434.033	-11.3
2	2430.800	-17.3
3	2443.633	-18.3

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	12.833	-1.0

EUT :	Model : W483	Status : WLAN-11b-CH11-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB



Test Request: (-18.8dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2464.367	-12.8
2	2455.833	-18.8
3	2468.567	-20.2

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	12.734	-1.4

6.4.2 IEEE 802.11g

Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

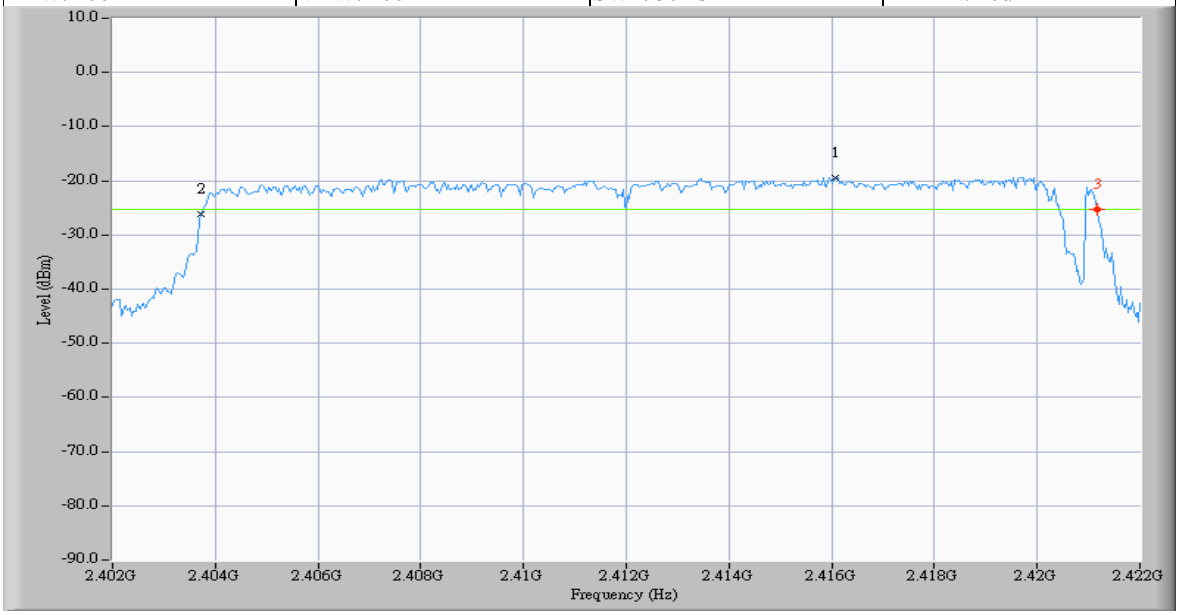
Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
1	2412	6	17.434	500	Page 30
6	2437	6	17.000	500	Page 31
11	2462	6	16.967	500	Page 32

Note:

1.Please refer to page 30 to page 32 for chart

2. The estimated measurement uncertainty of the result measurement is 8.25×10^{-7} *(1GHz≦f≦ 18GHz)*

EUT :	Model : W483	Status : WLAN-11g-CH01-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB

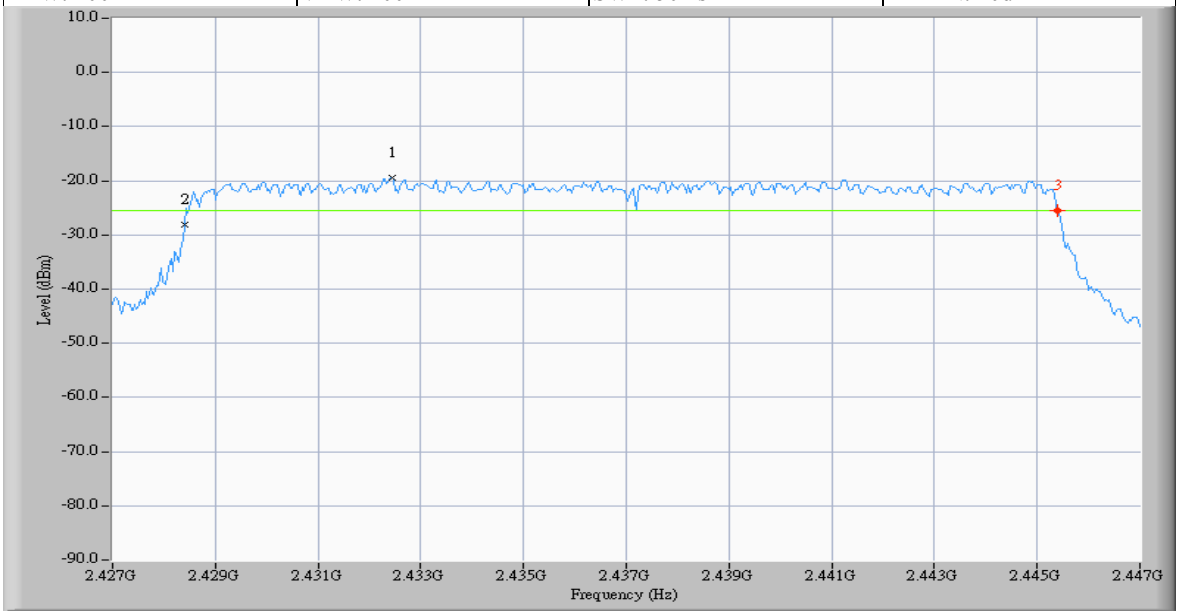


Test Request: (-25.3dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2416.067	-19.3
2	2403.733	-26.2
3	2421.167	-25.3

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	17.434	0.9

EUT :	Model : W483	Status : WLAN-11g-CH06-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB

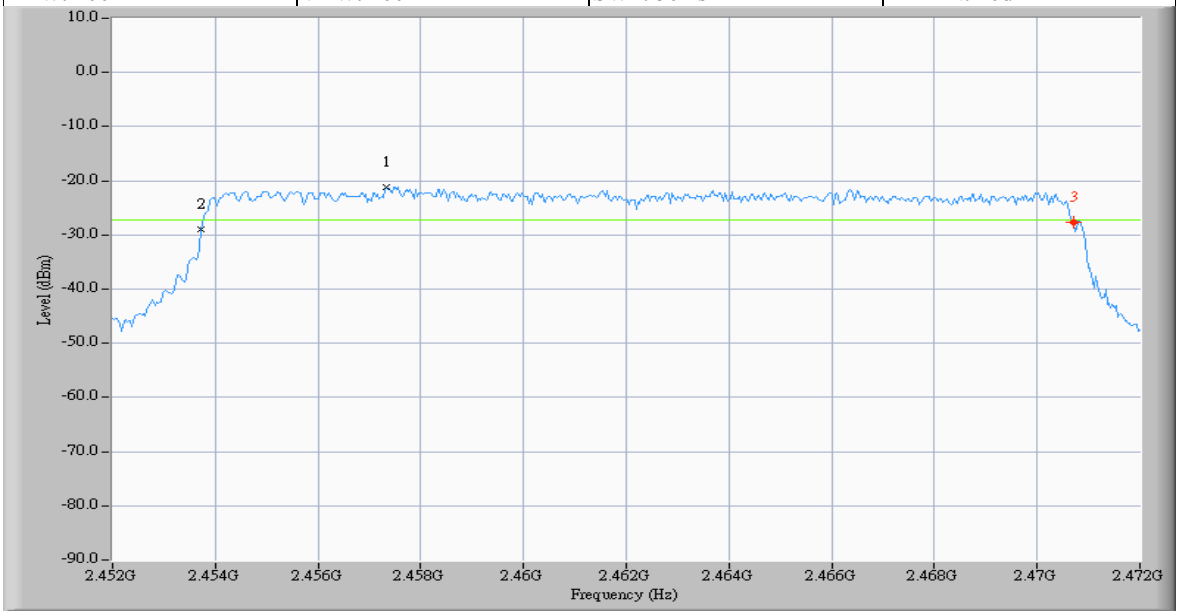


Test Request: (-25.5dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2432.433	-19.5
2	2428.400	-28.0
3	2445.400	-25.5

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	17.000	2.5

EUT :	Model : W483	Status : WLAN-11g-CH11-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB



Test Request: (-27.2dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2457.333	-21.2
2	2453.733	-29.0
3	2470.700	-27.7

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	16.967	1.3

6.4.3 IEEE 802.11n, HT20

Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

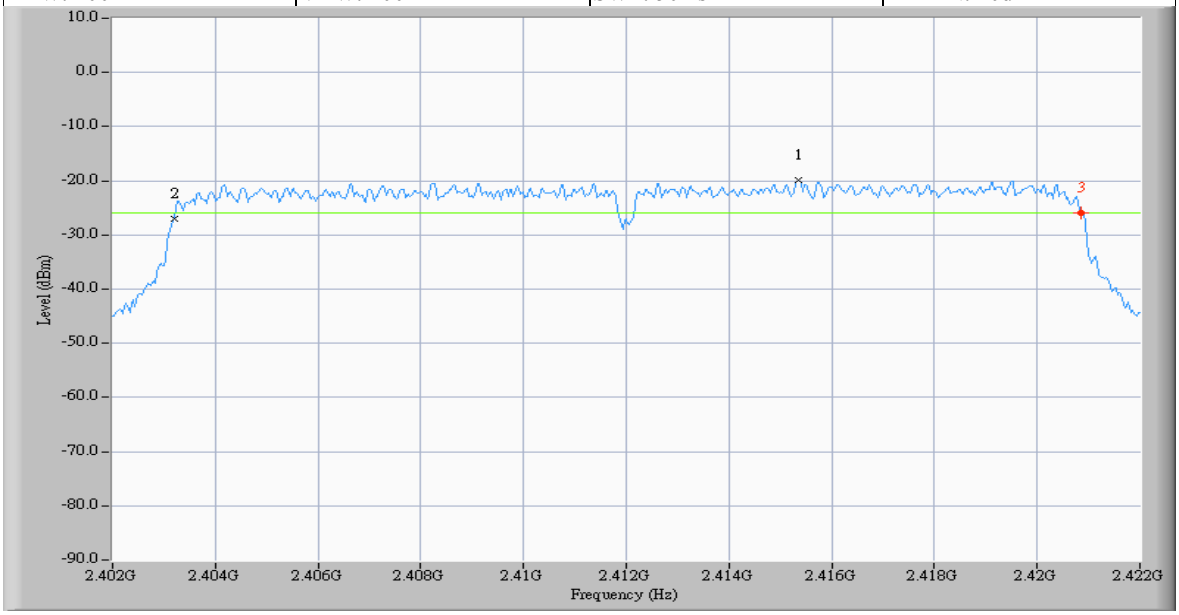
Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
1	2412	6.5	17.467	500	Page 34
6	2437	6.5	16.634	500	Page 35
11	2462	6.5	16.667	500	Page 36

Note:

1.Please refer to page 34 to page 36 for chart

2. The estimated measurement uncertainty of the result measurement is 8.25×10^{-7} *(1GHz≦f≦ 18GHz)*

EUT :	Model : W483	Status : WLAN-11nHT20-CH01-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB

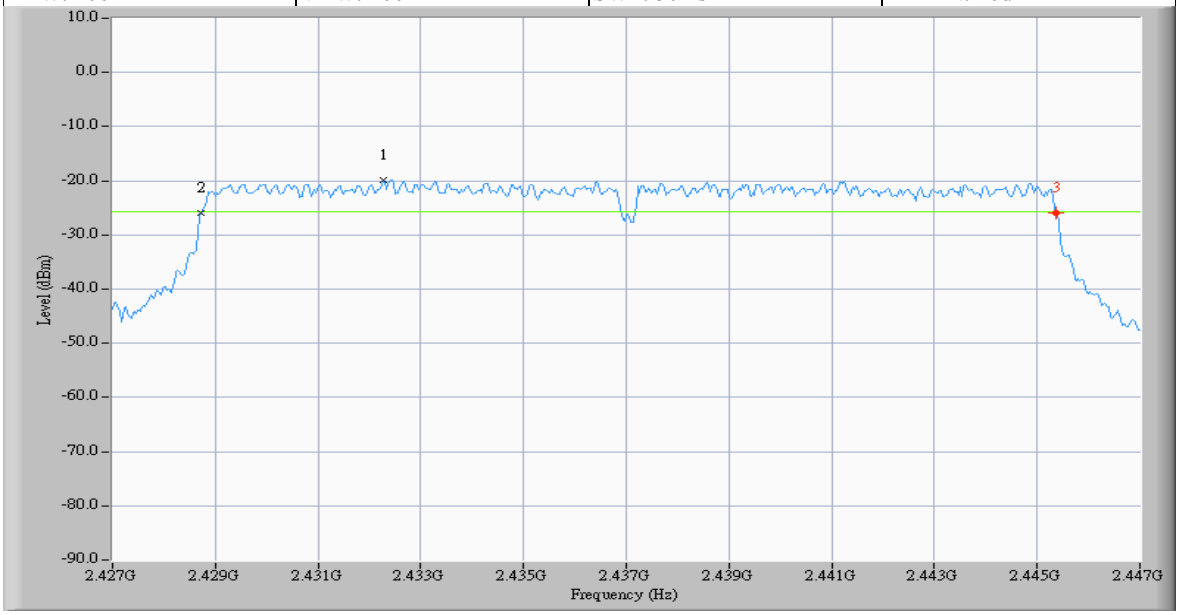


Test Request: (-25.83dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2415.367	-19.8
2	2403.300	-27.0
3	2420.767	-26.0

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	17.467	1.0

EUT :	Model : W483	Status : WLAN-11nHT20-CH06-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB

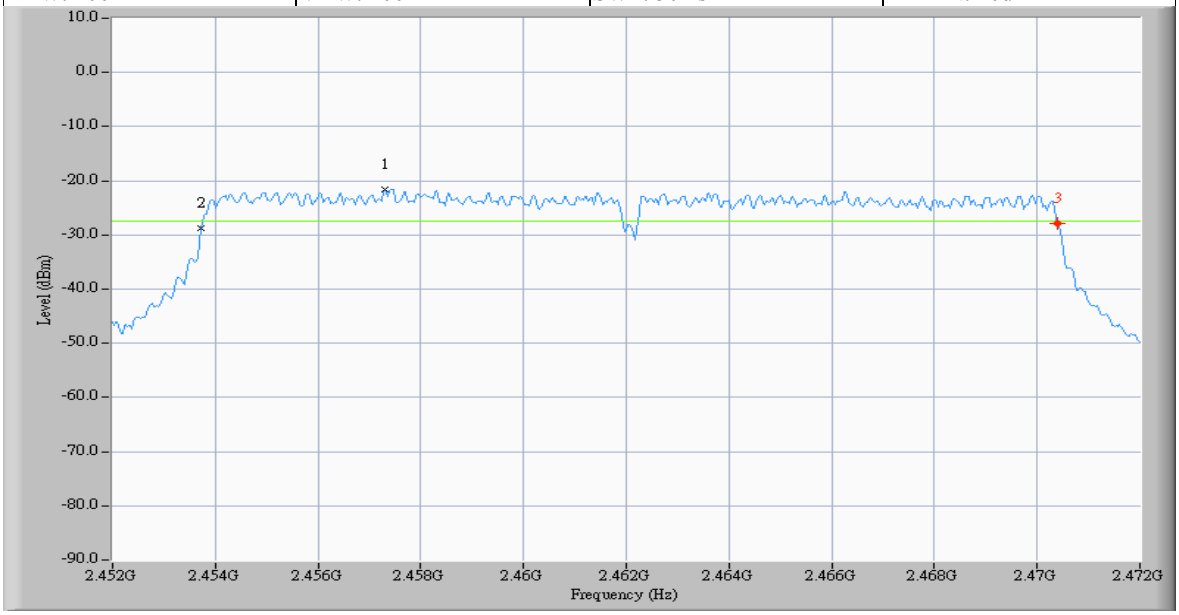


Test Request: (-25.8dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2432.267	-19.8
2	2428.733	-26.0
3	2445.367	-25.8

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	16.634	0.2

EUT :	Model : W483	Status : WLAN-11nHT20-CH11-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB



Test Request: (-27.5dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2457.300	-21.5
2	2453.733	-28.8
3	2470.400	-27.8

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	16.667	1.0

6.4.4 IEEE 802.11n, HT40

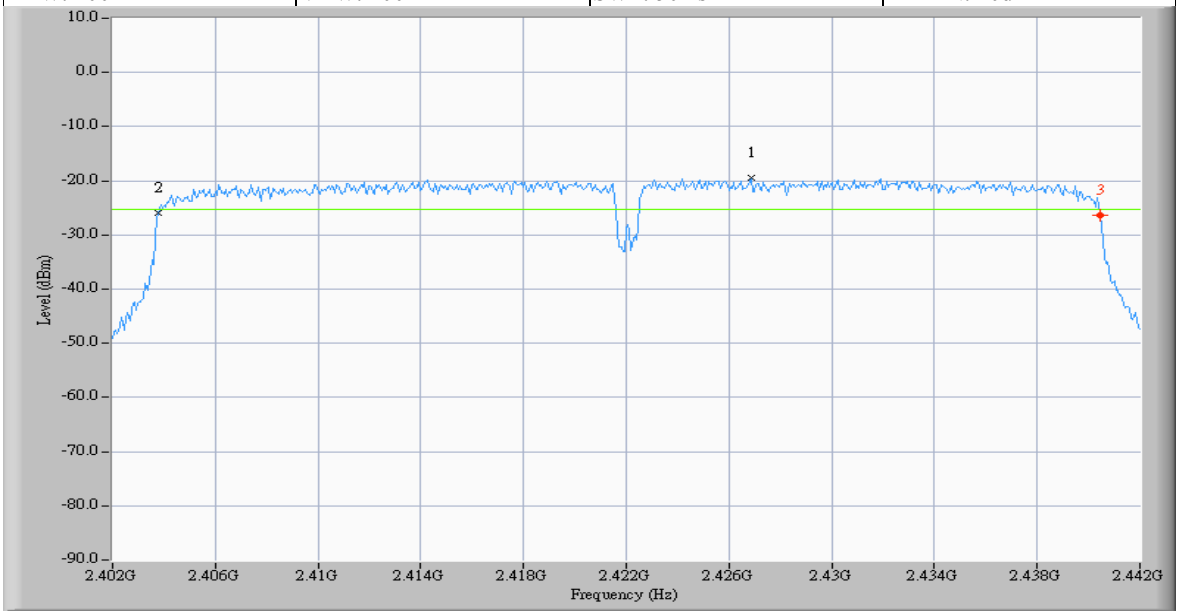
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
3	2422	13.5	36.667	500	Page 38
6	2437	13.5	36.933	500	Page 39
9	2452	13.5	37.000	500	Page 40

Note:

1.Please refer to page 38 to page 40 for chart
2. The estimated measurement uncertainty of the result measurement is 8.25×10^{-7} *(1GHz* $\leqq f \leqq$ *18GHz)*

EUT :	Model : W483	Status : WLAN-11nHT40-CH03-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB

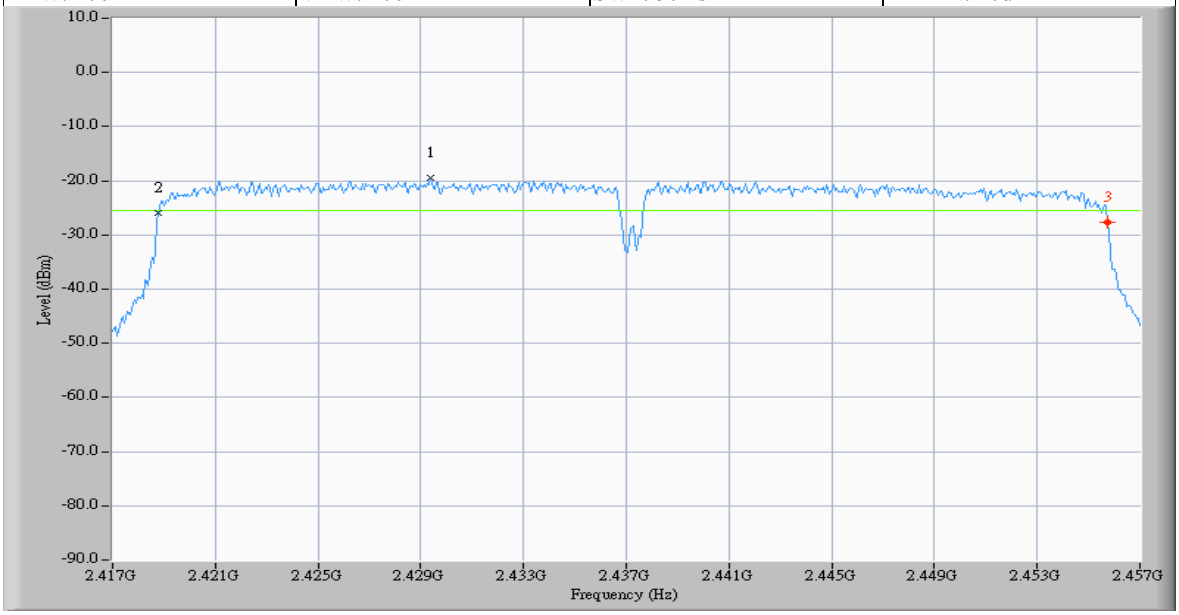


Test Request: (-25.33dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2426.867	-19.3
2	2403.800	-26.0
3	2440.467	-26.3

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	36.667	-0.3

EUT :	Model : W483	Status : WLAN-11nHT40-CH06-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB

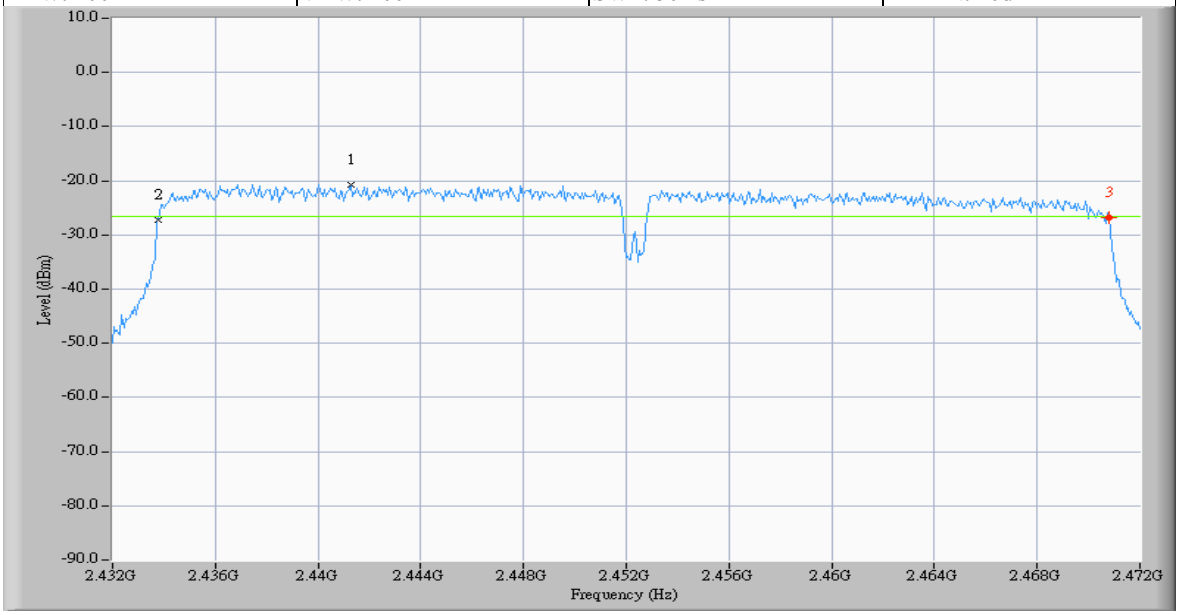


Test Request: (-25.50dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2429.400	-19.5
2	2418.800	-26.0
3	2455.733	-27.7

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	36.933	-1.7

EUT :	Model : W483	Status : WLAN-11nHT40-CH09-6dB-BW	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 100 kHz	SWP: 50ms	ATTEN: 20dB



Test Request: (-26.66dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2441.267	-20.7
2	2433.800	-27.2
3	2470.800	-26.8

		△Frequency (MHz)	△Level (dB)
1	Mkr 3 - Mkr 2	37.000	0.4

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 3. 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.
3. Measure the highest value appearing on power meter and record the level to calculate result data.
4. Repeat above procedures until all frequencies measured were complete.

7.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Rohde & Schwarz	FSU46	11/23/2008

7.4 Measurement Data

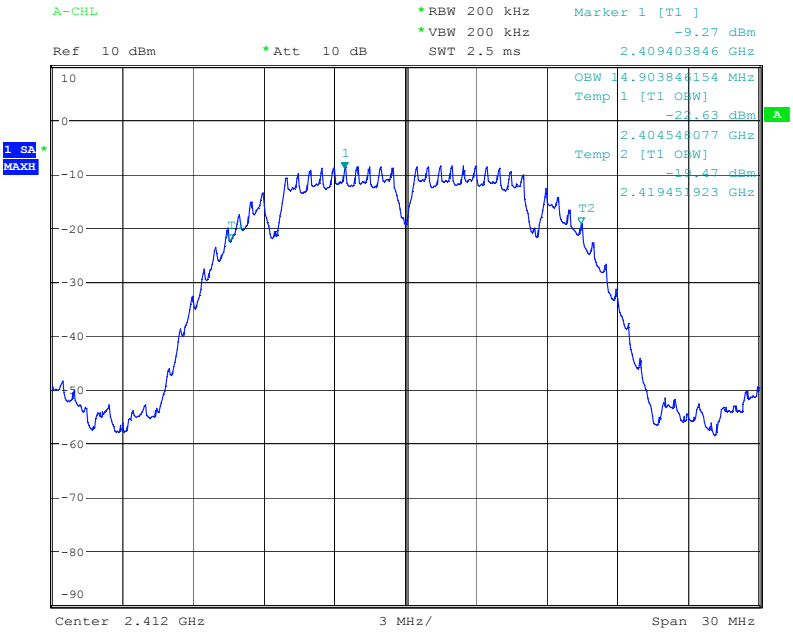
7.4.1 IEEE 802.11b

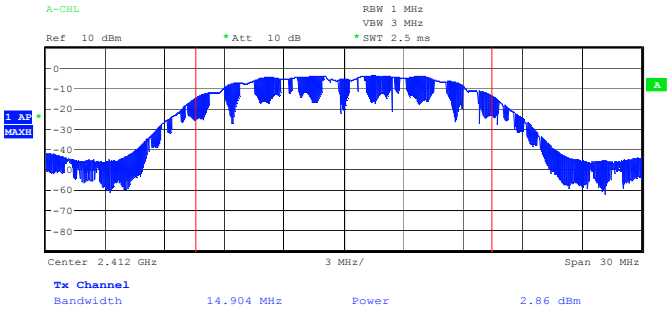
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

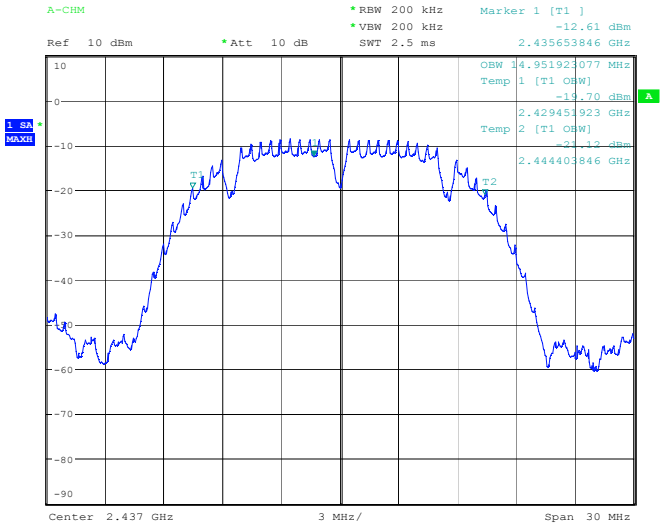
Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	Reading (dBm)	Attenuator & Cable Loss (dB)	Maximum Peak Output Power (dBm)	Maximum Peak Output Power (mW)	FCC Limit (mW)	Chart
1	2412	1	2.86	10.0	12.86	19.320	1000	Page 43
6	2437	1	2.77	10.0	12.77	18.923	1000	Page 44
11	2462	1	1.08	10.0	11.08	12.823	1000	Page 45

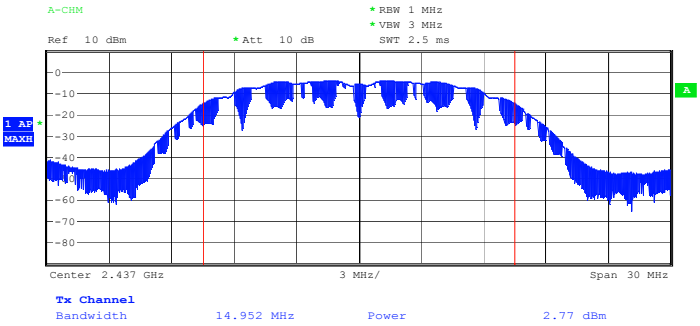
Note:

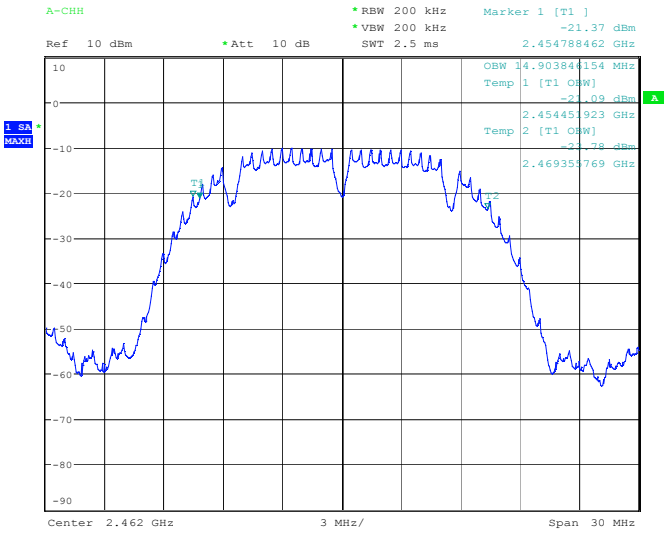
1.Please refer to page 43 to page 45 for chart
2.The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦18GHz)

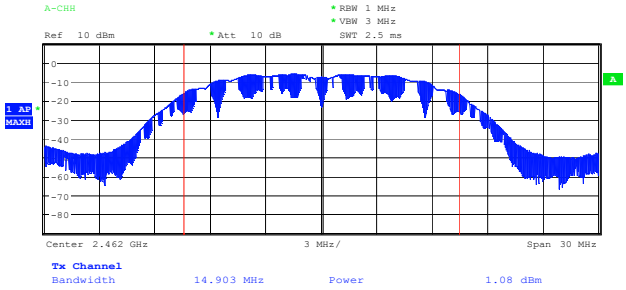

A-CHL
*RBW 200 kHz
*VBW 200 kHz
Ref 10 dBm
*Att 10 dB
SWT 2.5 ms
Marker 1 [T1]
-9.27 dBm
2.409403846 GHz
OBW 14.903846154 MHz
Temp 1 [T1 OBW]
-22.63 dBm
2.404548077 GHz
Temp 2 [T1 OBW]
-19.47 dBm
2.419451923 GHz
1 SA
MAXH
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.412 GHz
3 MHz/
Span 30 MHz


A-CHL
RBW 1 MHz
VBW 3 MHz
Ref 10 dBm
*Att 10 dB
*SWT 2.5 ms
A
0
-10
-20
-30
-40
-60
-70
-80
Center 2.412 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
14.904 MHz
Power
2.86 dBm


A-CHM
RBW 200 kHz
VBW 200 kHz
SWT 2.5 ms
Marker 1 [T1]
-12.61 dBm
2.435653846 GHz
Ref 10 dBm
Att 10 dB
OBW 14.951923077 MHz
Temp 1 [T1 OBW]
-19.70 dBm
2.429451923 GHz
Temp 2 [T1 OBW]
-21.12 dBm
2.444403846 GHz
1 SA
MAXH
A
Center 2.437 GHz
3 MHz/
Span 30 MHz


A-CHM
RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Ref 10 dBm
Att 10 dB
1 AP
MAXH
A
Center 2.437 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
14.952 MHz
Power
2.77 dBm


A-CHH
RBW 200 kHz
VBW 200 kHz
SWT 2.5 ms
Marker 1 [T1]
-21.37 dBm
2.454788462 GHz
Ref 10 dBm
Att 10 dB
OBW 14.903846154 MHz
Temp 1 [T1 OBW]
-21.09 dBm
2.454451923 GHz
Temp 2 [T1 OBW]
-21.78 dBm
2.469353769 GHz
1 SA
MAXH
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.462 GHz
3 MHz/
Span 30 MHz


A-CHH
RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Ref 10 dBm
Att 10 dB
1 AP
MAXH
A
0
-10
-20
-30
-40
-60
-70
-80
Center 2.462 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
14.903 MHz
Power
1.08 dBm

7.4.2 IEEE 802.11g

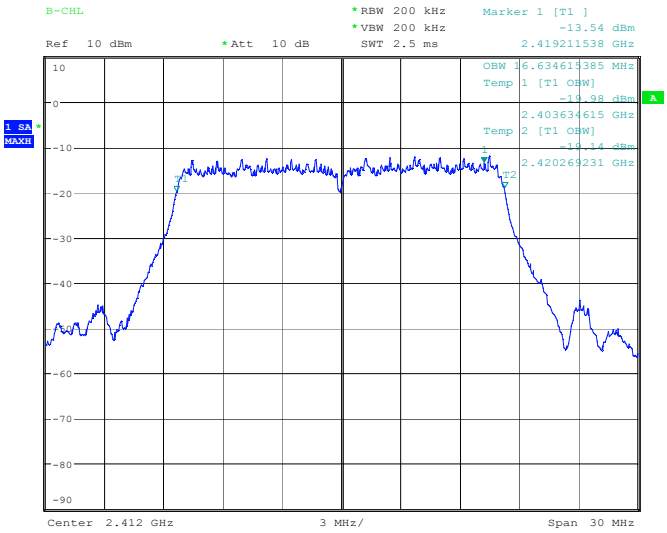
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

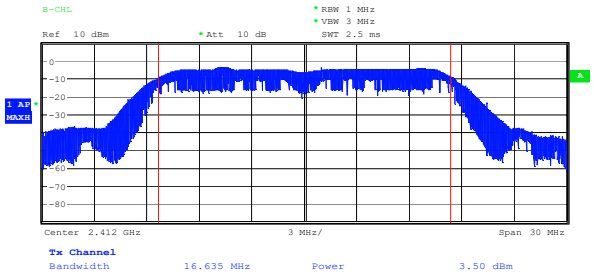
Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	Reading (dBm)	Attenuator & Cable Loss (dB)	Maximum Peak Output Power (dBm)	Maximum Peak Output Power (mW)	FCC Limit (mW)	Chart
1	2412	6	3.50	10.0	13.50	22.387	1000	Page 47
6	2437	6	3.44	10.0	13.44	22.080	1000	Page 48
11	2462	6	1.75	10.0	11.75	14.962	1000	Page 49

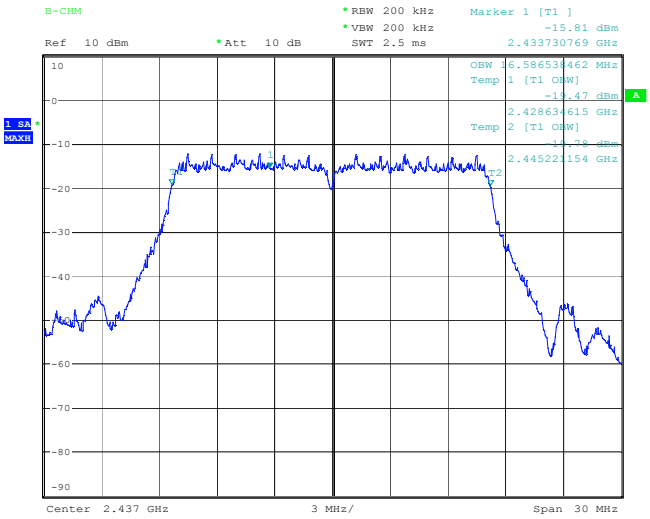
Note:

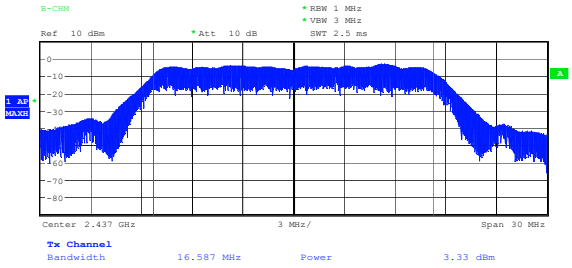
1.Please refer to page 47 to page 49 for chart

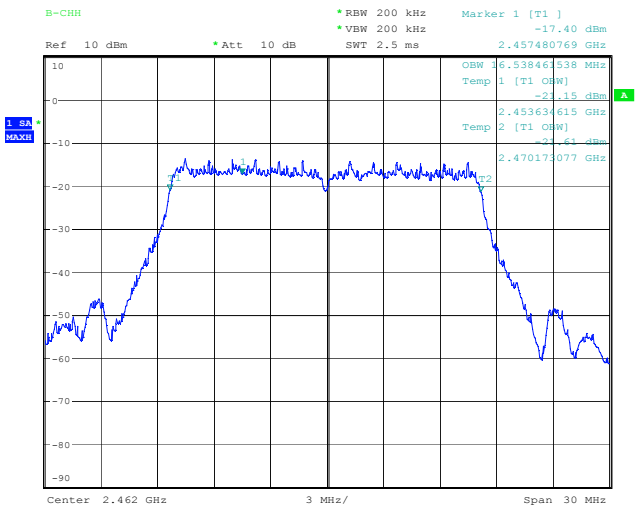
2.The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦18GHz)

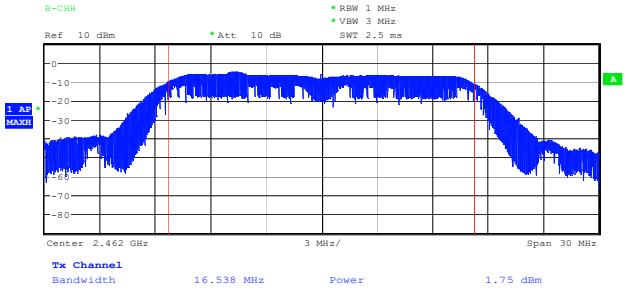

B-CHL
RBW 200 kHz
VBW 200 kHz
SWT 2.5 ms
Marker 1 [T1]
-13.54 dBm
2.419211538 GHz
Ref 10 dBm
Att 10 dB
OBW 16.634615385 MHz
Temp 1 [T1 OBW]
-19.98 dBm
2.403634615 GHz
Temp 2 [T1 OBW]
-19.14 dBm
2.420269231 GHz
1 SA
MAXH
A
Center 2.412 GHz
3 MHz/
Span 30 MHz


B-CHL
RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Ref 10 dBm
Att 10 dB
1 AP
MAXH
A
Center 2.412 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
16.635 MHz
Power
3.50 dBm


B-CHM
RBW 200 kHz
VBW 200 kHz
SWT 2.5 ms
Marker 1 [T1]
-15.81 dBm
2.433730769 GHz
Ref 10 dBm
Att 10 dB
OBW 16.586538462 MHz
Temp 1 [T1 OBW]
-19.47 dBm
2.428634615 GHz
Temp 2 [T1 OBW]
-19.78 dBm
2.445221154 GHz
1 SA
MAXH
A
Center 2.437 GHz
3 MHz/
Span 30 MHz


B-CHM
RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Ref 10 dBm
Att 10 dB
1 AP
MAXH
A
Center 2.437 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
16.587 MHz
Power
3.33 dBm


B-CHH
RBW 200 kHz
VBW 200 kHz
SWT 2.5 ms
Marker 1 [T1]
-17.40 dBm
2.457480769 GHz
Ref 10 dBm
Att 10 dB
OBW 16.538461538 MHz
Temp 1 [T1 OBW]
-22.15 dBm
2.453634615 GHz
Temp 2 [T1 OBW]
-21.61 dBm
2.470173077 GHz
1 SA
MAXH
A
Center 2.462 GHz
3 MHz/
Span 30 MHz


B-CHH
RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Ref 10 dBm
Att 10 dB
1 AP
MAXH
A
Center 2.462 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
16.538 MHz
Power
1.75 dBm

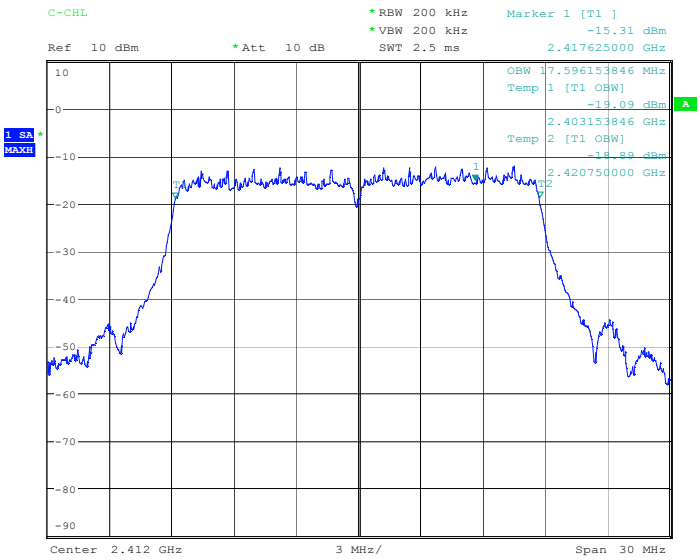
7.4.3 IEEE 802.11n, HT20

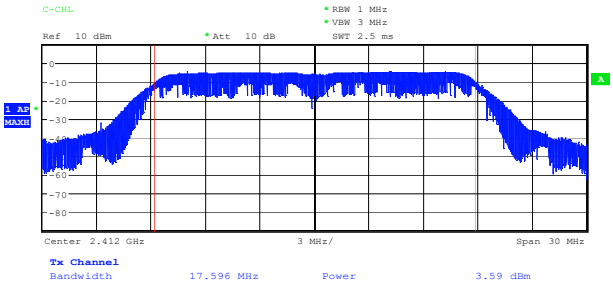
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

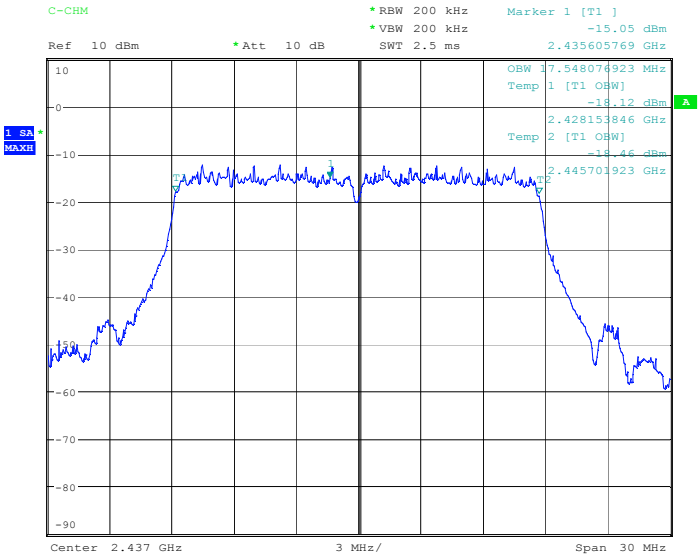
Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	Reading (dBm)	Attenuator & Cable Loss (dB)	Maximum Peak Output Power (dBm)	Maximum Peak Output Power (mW)	FCC Limit (mW)	Chart
1	2412	6.5	3.59	10.0	13.59	22.856	1000	Page 51
6	2437	6.5	3.62	10.0	13.62	23.014	1000	Page 52
11	2462	6.5	2.01	10.0	12.01	15.885	1000	Page 53

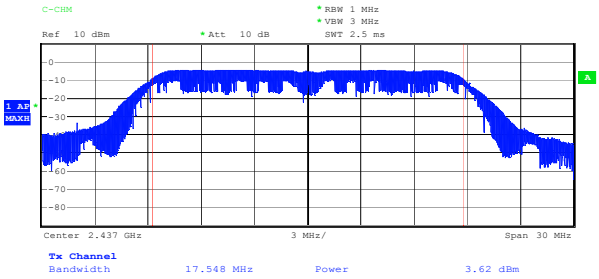
Note:

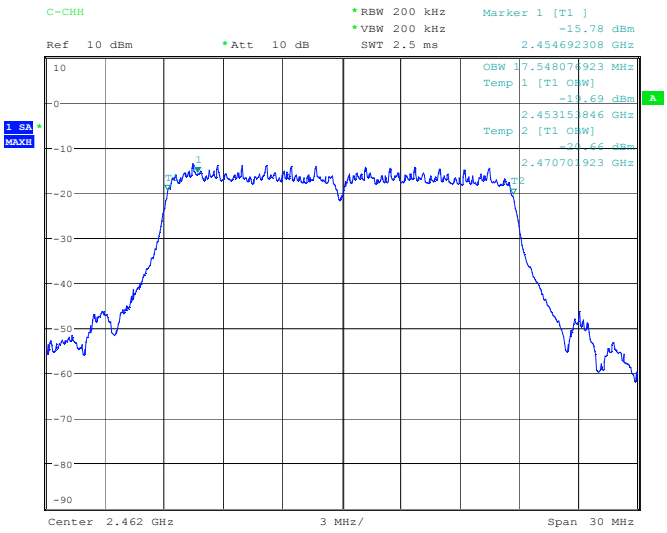
1.Please refer to page 51 to page 53 for chart
2.The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦18GHz)

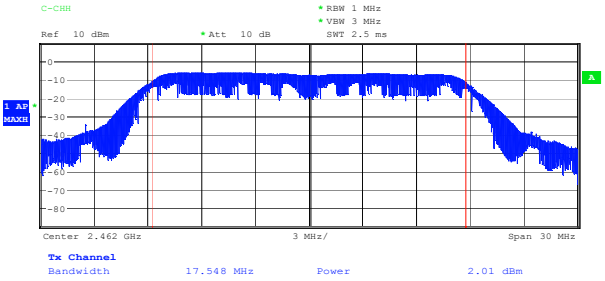

C-CHL
*RBW 200 kHz
*VBW 200 kHz
Marker 1 [T1]
-15.31 dBm
Ref 10 dBm
*Att 10 dB
SWT 2.5 ms
2.417625000 GHz
OBW 17.596153846 MHz
Temp 1 [T1 OBW]
-19.09 dBm
2.403153846 GHz
Temp 2 [T1 OBW]
-19.89 dBm
2.420750000 GHz
1 SA
MAXH
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.412 GHz
3 MHz/
Span 30 MHz


C-CHL
*RBW 1 MHz
*VBW 3 MHz
Ref 10 dBm
*Att 10 dB
SWT 2.5 ms
1 AP
MAXH
A
0
-10
-20
-30
-60
-70
-80
Center 2.412 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
17.596 MHz
Power
3.59 dBm


C-CHM
*RBW 200 kHz
*VBW 200 kHz
SWT 2.5 ms
Marker 1 [T1]
-15.05 dBm
2.435605769 GHz
Ref 10 dBm
*Att 10 dB
OBW 17.548076923 MHz
Temp 1 [T1 OBW]
-18.12 dBm
2.428153846 GHz
Temp 2 [T1 OBW]
-18.46 dBm
2.445701923 GHz
1 SA
MAXH
A
Center 2.437 GHz
3 MHz/
Span 30 MHz


C-CHM
*RBW 1 MHz
*VBW 3 MHz
SWT 2.5 ms
Ref 10 dBm
*Att 10 dB
1 AP
MAXH
A
Center 2.437 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
17.548 MHz
Power
3.62 dBm


C-CHH
RBW 200 kHz
VBW 200 kHz
Ref 10 dBm
Att 10 dB
SWT 2.5 ms
Marker 1 [T1]
-15.78 dBm
2.454692308 GHz
OBW 17.548076923 MHz
Temp 1 [T1 OBW]
-19.69 dBm
2.453153846 GHz
Temp 2 [T1 OBW]
2.470701923 GHz
1 SA
MAXH
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.462 GHz
3 MHz/
Span 30 MHz


C-CHH
RBW 1 MHz
VBW 3 MHz
Ref 10 dBm
Att 10 dB
SWT 2.5 ms
1 AP
MAXH
A
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.462 GHz
3 MHz/
Span 30 MHz
Tx Channel
Bandwidth
17.548 MHz
Power
2.01 dBm

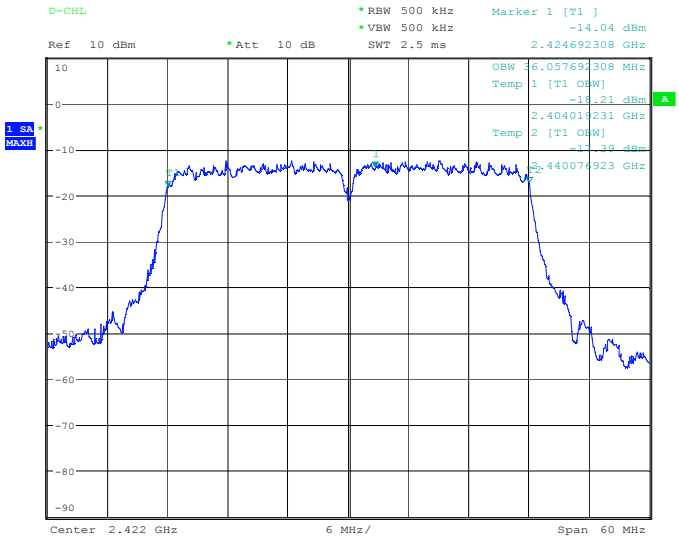
7.4.4 IEEE 802.11n, HT40

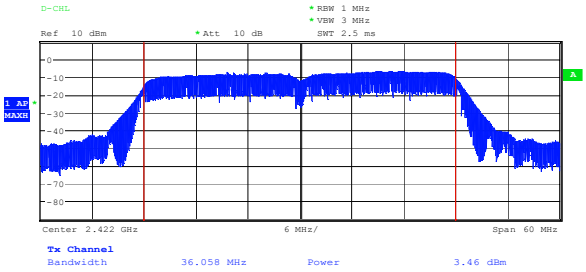
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

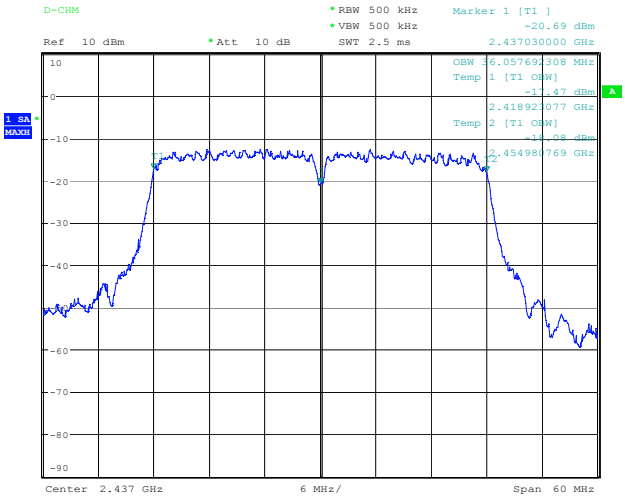
Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	Reading (dBm)	Attenuator & Cable Loss (dB)	Maximum Peak Output Power (dBm)	Maximum Peak Output Power (mW)	FCC Limit (mW)	Chart
3	2422	13.5	3.46	10.0	13.46	22.182	1000	Page 55
6	2437	13.5	3.33	10.0	13.33	21.528	1000	Page 56
9	2452	13.5	2.53	10.0	12.53	17.906	1000	Page 57

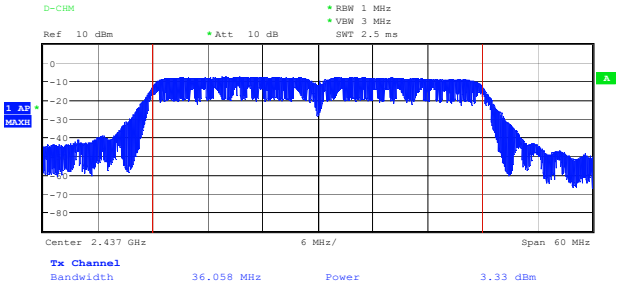
Note:

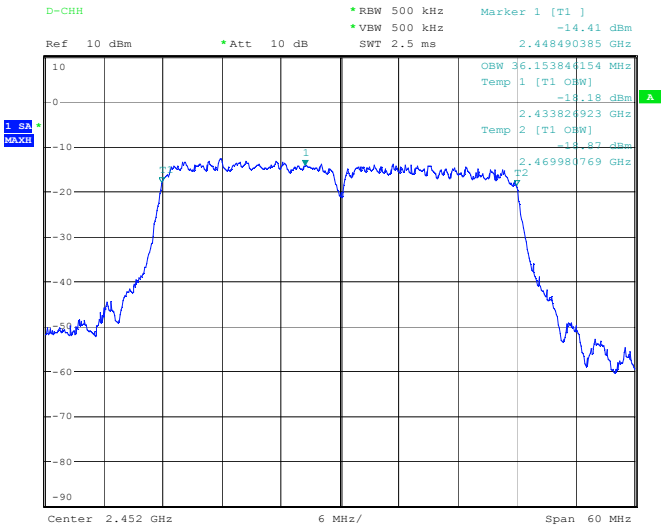
1.Please refer to page 55 to page 57 for chart
2.The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦18GHz)

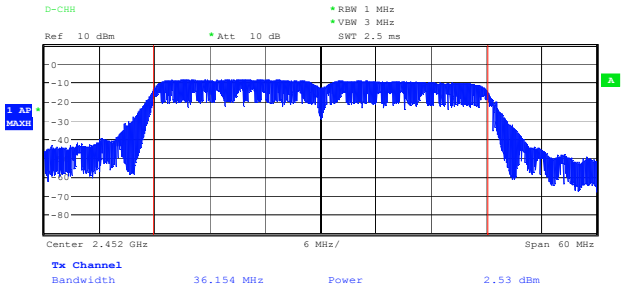

D-CHL
*RBW 500 kHz
*VBW 500 kHz
SWT 2.5 ms
Marker 1 [T1]
-14.04 dBm
2.424692308 GHz
Ref 10 dBm
*Att 10 dB
OBW 36.057692308 MHz
Temp 1 [T1 OBW]
-18.21 dBm
2.404019231 GHz
Temp 2 [T1 OBW]
-17.39 dBm
2.440076923 GHz
1 SA
MAXH
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.422 GHz
6 MHz/
Span 60 MHz


D-CHL
*RBW 1 MHz
*VBW 3 MHz
Ref 10 dBm
*Att 10 dB
SWT 2.5 ms
1 AP
MAXH
A
0
-10
-20
-30
-40
-70
-80
Center 2.422 GHz
6 MHz/
Span 60 MHz
Tx Channel
Bandwidth
36.058 MHz
Power
3.46 dBm


D-CHM
RBW 500 kHz
VBW 500 kHz
SWT 2.5 ms
Marker 1 [T1]
-20.69 dBm
2.437030000 GHz
Ref 10 dBm
Att 10 dB
OBW 36.057692308 MHz
Temp 1 [T1 OBW]
-12.47 dBm
2.418923077 GHz
Temp 2 [T1 OBW]
-12.08 dBm
2.454980769 GHz
1 SA
MAXH
A
Center 2.437 GHz
6 MHz/
Span 60 MHz


D-CHM
RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Ref 10 dBm
Att 10 dB
1 AP
MAXH
A
Center 2.437 GHz
6 MHz/
Span 60 MHz
Tx Channel
Bandwidth
36.058 MHz
Power
3.33 dBm


D-CHH
*RBW 500 kHz
*VBW 500 kHz
Ref 10 dBm
*Att 10 dB
SWT 2.5 ms
Marker 1 [T1]
-14.41 dBm
2.448490385 GHz
OBW 36.153846154 MHz
Temp 1 [T1 OBW]
-18.18 dBm
2.433826923 GHz
Temp 2 [T1 OBW]
-18.87 dBm
2.469980769 GHz
1 SA
MAXH
A
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
Center 2.452 GHz
6 MHz/
Span 60 MHz


D-CHH
*RBW 1 MHz
*VBW 3 MHz
Ref 10 dBm
*Att 10 dB
SWT 2.5 ms
1 AP
MAXH
A
0
-10
-20
-30
-40
-50
-60
-70
-80
Center 2.452 GHz
6 MHz/
Span 60 MHz
Tx Channel
Bandwidth 36.154 MHz
Power 2.53 dBm

8 POWER DENSITY MEASUREMENT

8.1 Standard Applicable

According to 15.247(d), for direct sequence systems, the transmitted power density averaged over any 1 second interval shall not be greater than 8 dBm in any 3 kHz bandwidth within these bands.

8.2 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 EUT to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Adjust the center frequency of spectrum analyzer on highest level appearing on spectral display within a 300 kHz frequency span.
4. Set the spectrum analyzer on a 3 kHz resolution bandwidth and 10 kHz video bandwidth as well as max. hold function, then record the measurement result.
5. Repeat above procedures until all measured frequencies were complete.

8.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Agilent	8564EC	10/10/2008

8.4 Measurement Data

8.4.1 IEEE 802.11b

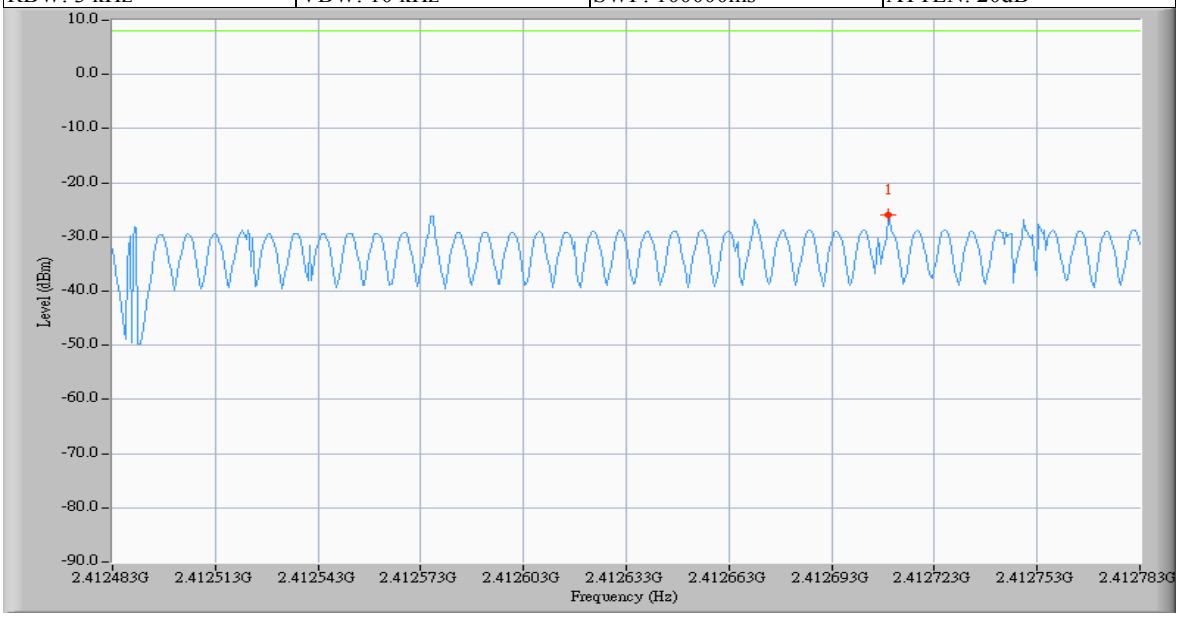
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	Reading (dBm)	Cable Loss (dB)	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
1	2412	1	-26.8	20.0	-6.8	8	Page 60
6	2437	1	-27.0	20.0	-7.0	8	Page 61
11	2462	1	-29.2	20.0	-9.2	8	Page 62

Note:

1. *Please refer to page 60 to page 62 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

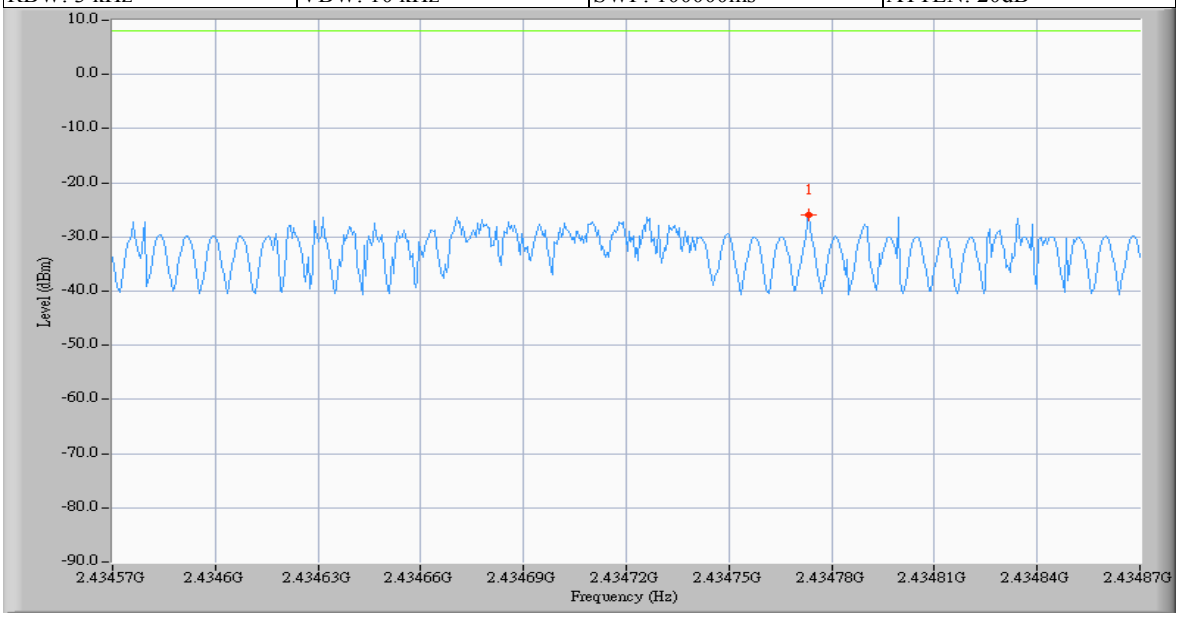
EUT :	Model : W483	Status : WLAN-11b-CH01-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2412.710	-26.8	20.0	-6.8	8.0	-14.8

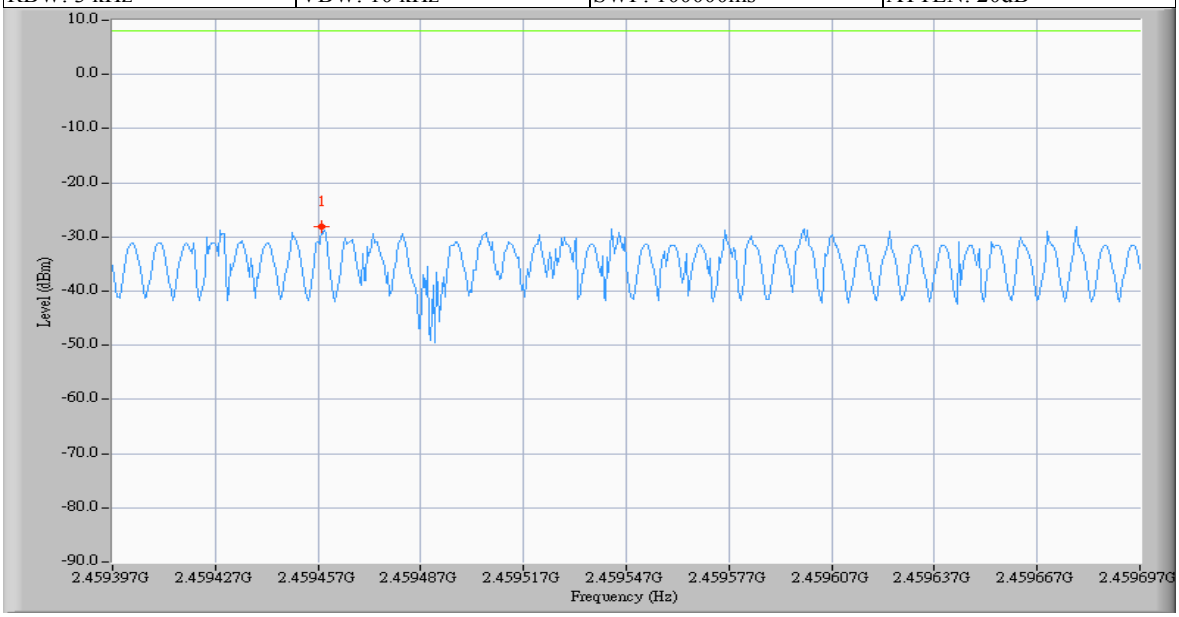
EUT :	Model : W483	Status : WLAN-11b-CH06-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2434.773	-27.0	20.0	-7.0	8.0	-15.0

EUT :	Model : W483	Status : WLAN-11b-CH11-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2459.458	-29.2	20.0	-9.2	8.0	-17.2

8.4.2 IEEE 802.11g

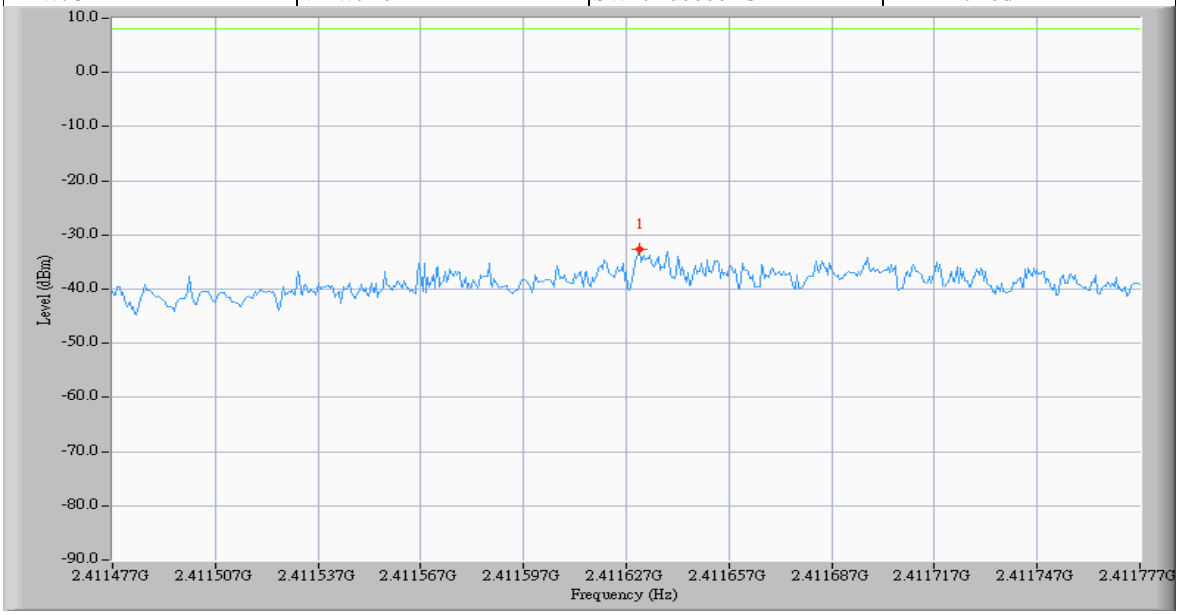
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	Reading (dBm)	Cable Loss (dB)	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
1	2412	6	-32.7	20.0	-12.7	8	Page 64
6	2437	6	-33.7	20.0	-13.7	8	Page 65
11	2462	6	-36.3	20.0	-16.3	8	Page 66

Note:

1. *Please refer to page 64 to page 66 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

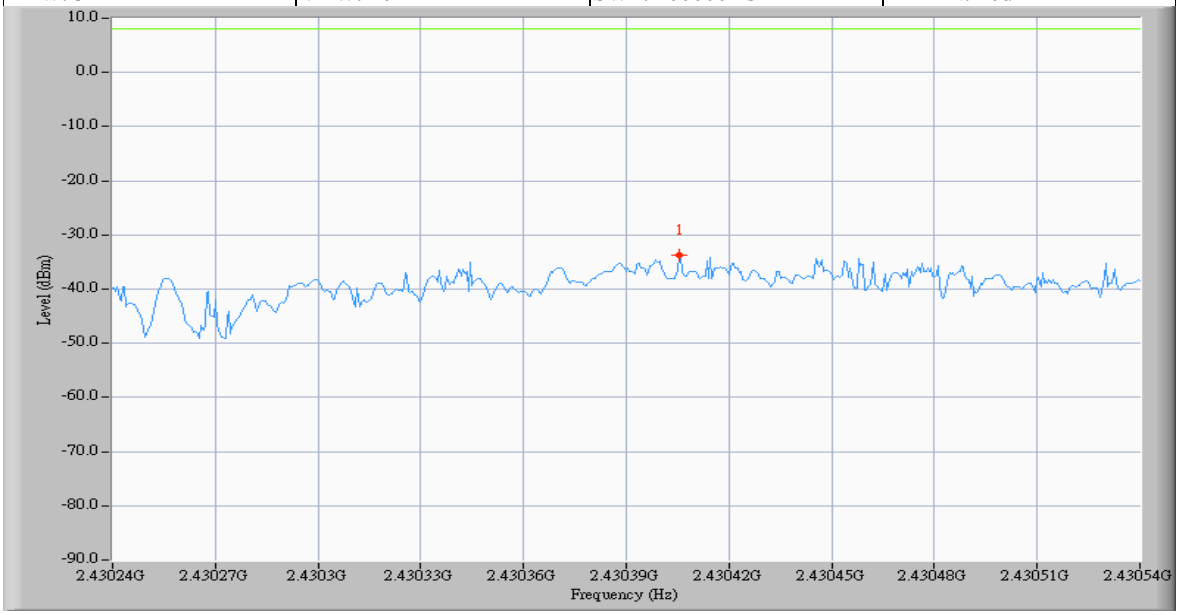
EUT :	Model : W483	Status : WLAN-11g-CH01-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2411.631	-32.7	20.0	-12.7	8.0	-20.7

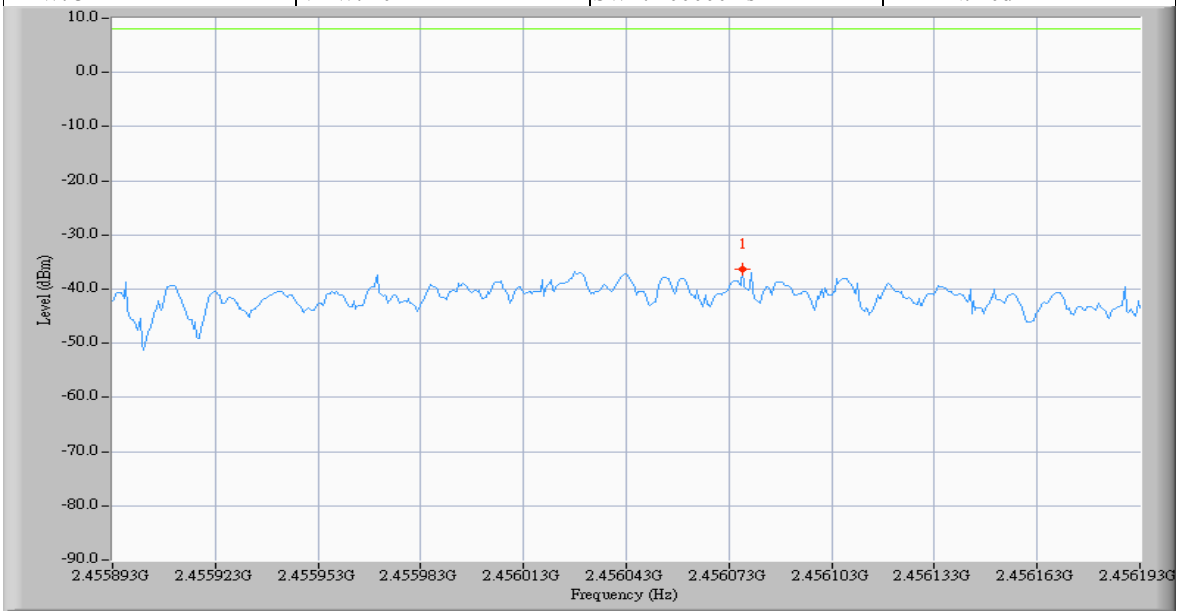
EUT :	Model : W483	Status : WLAN-11g-CH06-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2430.405	-33.7	20.0	-13.7	8.0	-21.7

EUT :	Model : W483	Status : WLAN-11g-CH11-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2456.077	-36.3	20.0	-16.3	8.0	-24.3

8.4.3 IEEE 802.11n, HT20

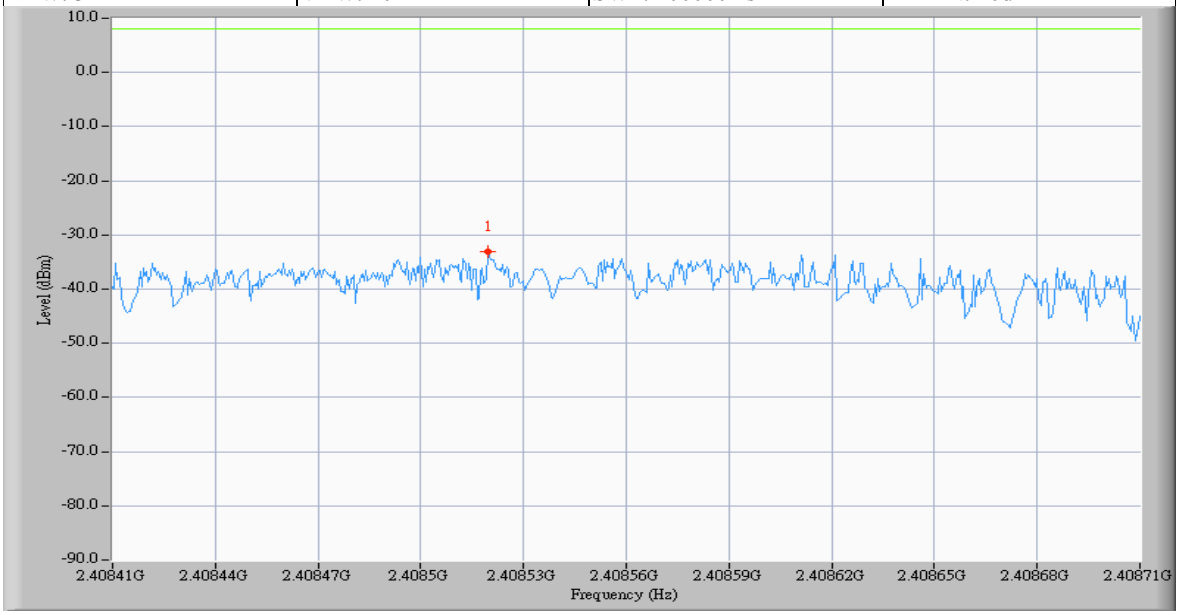
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	Reading (dBm)	Cable Loss (dB)	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
1	2412	6.5	-33.2	20.0	-13.2	8	Page 68
6	2437	6.5	-33.7	20.0	-13.7	8	Page 69
11	2462	6.5	-34.8	20.0	-14.8	8	Page 70

Note:

1. *Please refer to page 68 to page 70 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

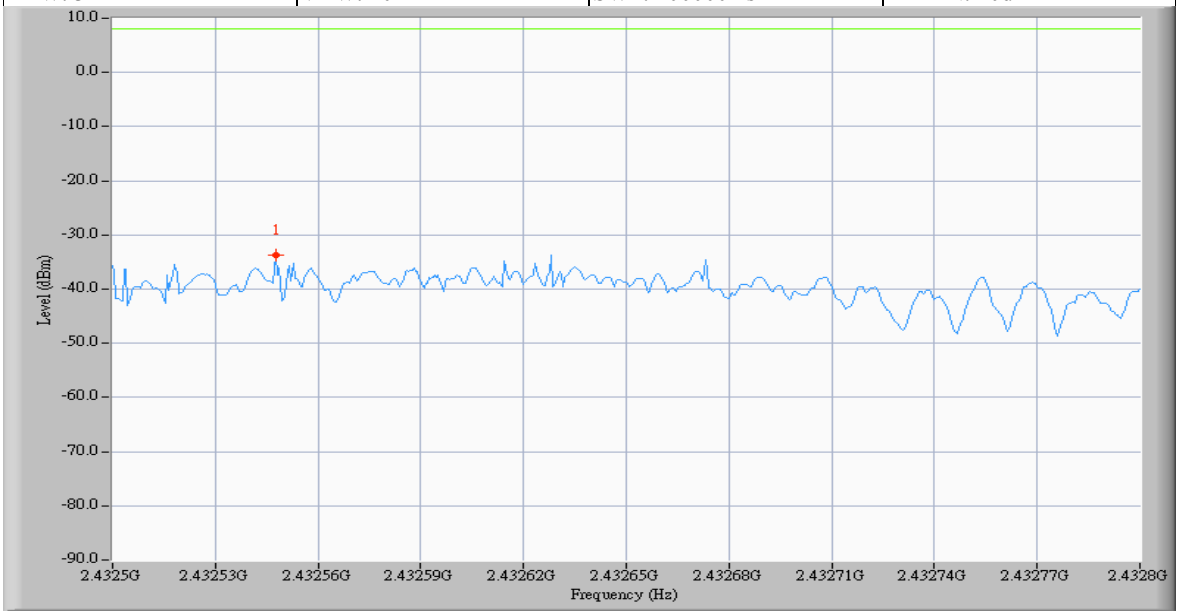
EUT :	Model : W483	Status : WLAN-11nHT20-CH01-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2408.519	-33.2	20.0	-13.2	8.0	-21.2

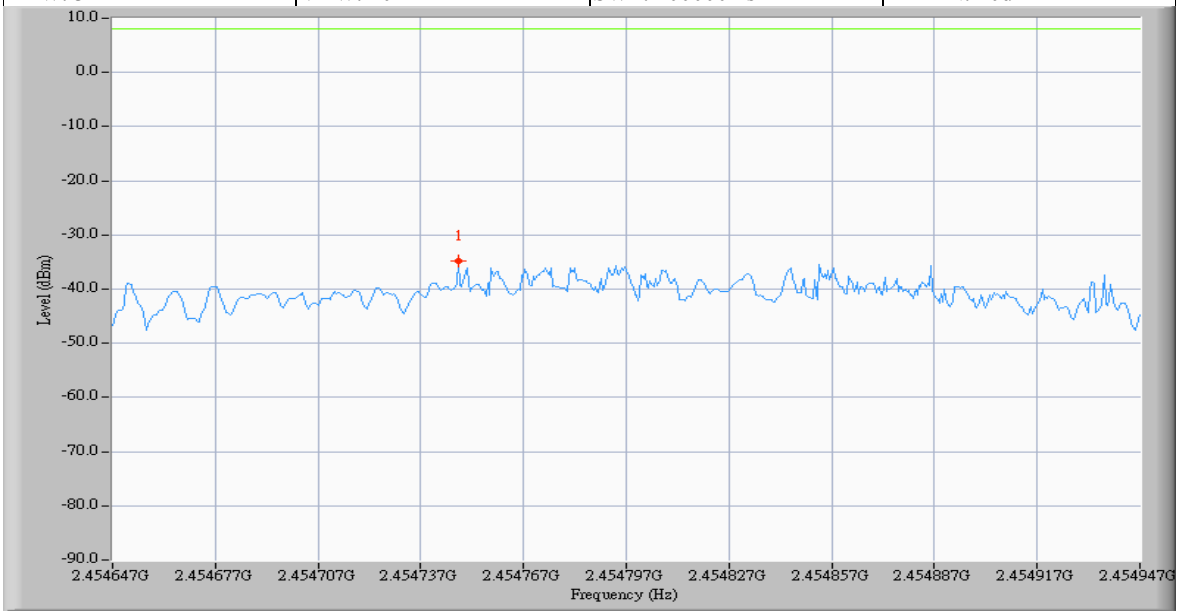
EUT :	Model : W483	Status : WLAN-11nHT20-CH06-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2432.548	-33.7	20.0	-13.7	8.0	-21.7

EUT :	Model : W483	Status : WLAN-11nHT20-CH11-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2454.748	-34.8	20.0	-14.8	8.0	-22.8

8.4.4 IEEE 802.11n, HT40

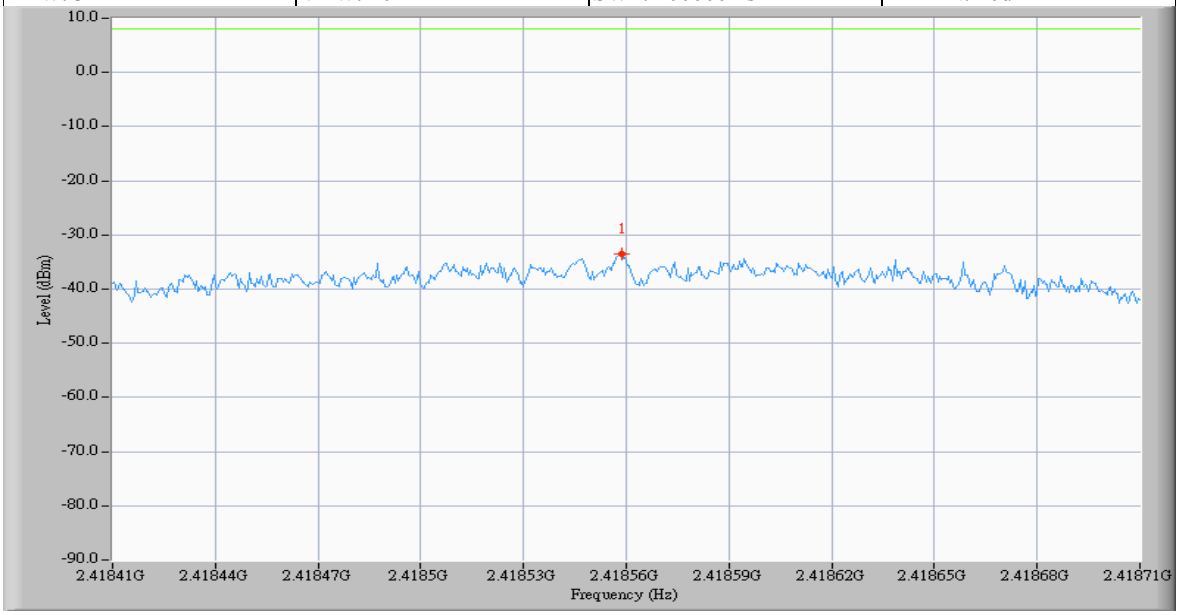
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

Channel	Frequency (MHz)	Data Transfer Rate (Mbps)	Reading (dBm)	Cable Loss (dB)	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
3	2422	13.5	-33.5	20.0	-13.5	8	Page 72
6	2437	13.5	-33.5	20.0	-13.5	8	Page 73
9	2452	13.5	-33.8	20.0	-13.8	8	Page 74

Note:

1. *Please refer to page 72 to page 74 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

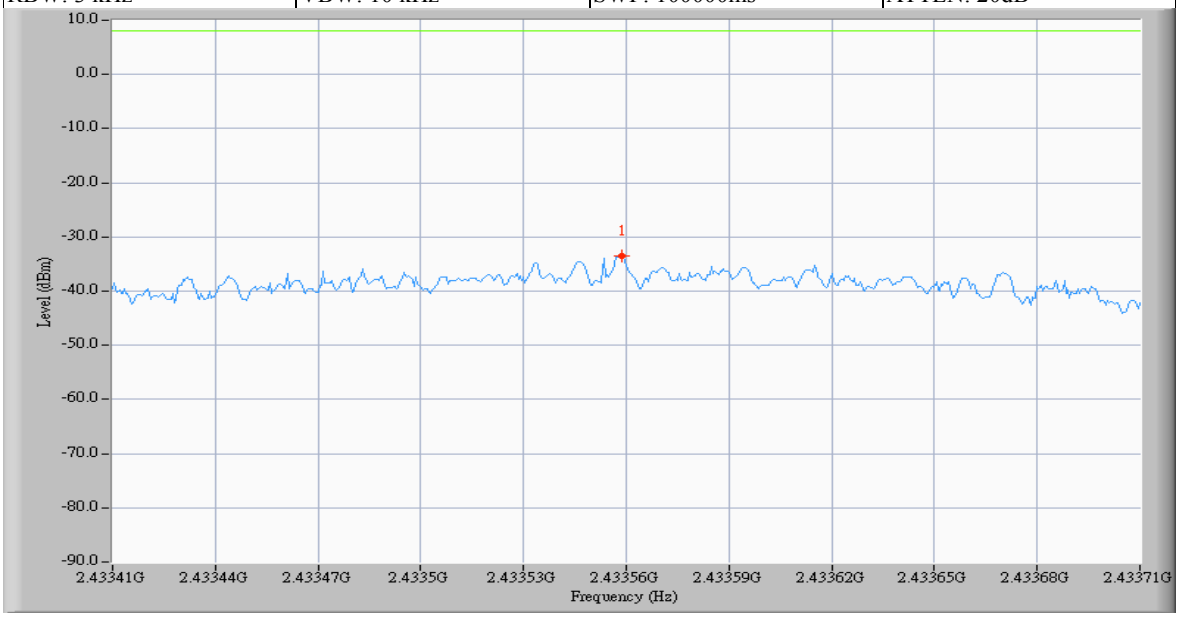
EUT :	Model : W483	Status : WLAN-11nHT40-CH03-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2418.559	-33.5	20.0	-13.5	8.0	-21.5

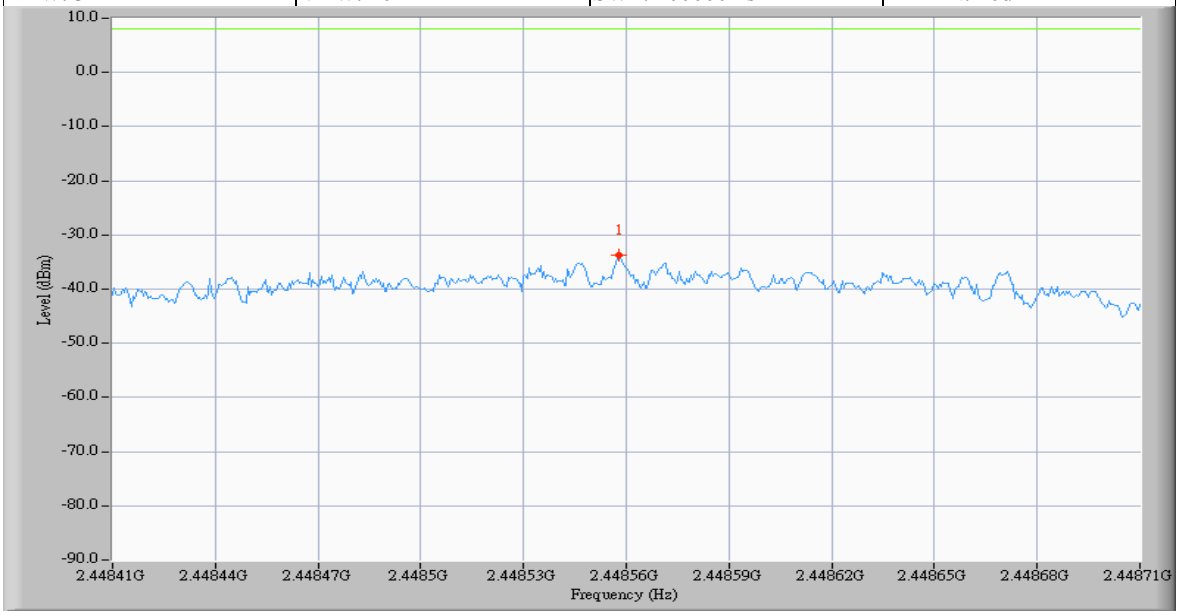
EUT :	Model : W483	Status : WLAN-11b-CH06-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2433.559	-33.5	20.0	-13.5	8.0	-21.5

EUT :	Model : W483	Status : WLAN-11nHT40-CH09-PwrDensity	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 3 kHz	VBW: 10 kHz	SWP: 100000ms	ATTEN: 20dB



Test Request: (8dBm)

	Freq (MHz)	PK Level (dBm)	Factor (dB)	PK Result (dBm)	PK Limit (dBm)	PK Margin (dB)
1	2448.558	-33.8	20.0	-13.8	8.0	-21.8

9 SPURIOUS EMISSION - RF CONDUCTED MEASUREMENT

9.1 Standard Applicable

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)).

9.2 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 both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

9.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Agilent	8564EC	10/10/2008

9.4 Measurement Data

9.4.1 IEEE 802.11b

Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

Channel	Frequency(MHz)	Chart
1	2412	Page 78, Page 80
6	2437	Page 81
11	2462	Page 79, Page 82

All out-of –band conducted emissions were more than 20dB below the carrier.

Note: Please refer to page 78 to page 82 for chart

9.4.2 IEEE 802.11g

Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

Channel	Frequency(MHz)	Chart
1	2412	Page 83, Page 85
6	2437	Page 86
11	2462	Page 84, Page 87

All out-of –band conducted emissions were more than 20dB below the carrier.

Note: Please refer to page 83 to page 87 for chart

9.4.3 IEEE 802.11n, HT20

Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

Channel	Frequency(MHz)	Chart
1	2412	Page 88, Page 90
6	2437	Page 91
11	2462	Page 89 Page 92

All out-of –band conducted emissions were more than 20dB below the carrier.

Note: Please refer to page 88 to page 92 for chart

9.4.4 IEEE 802.11n, HT40

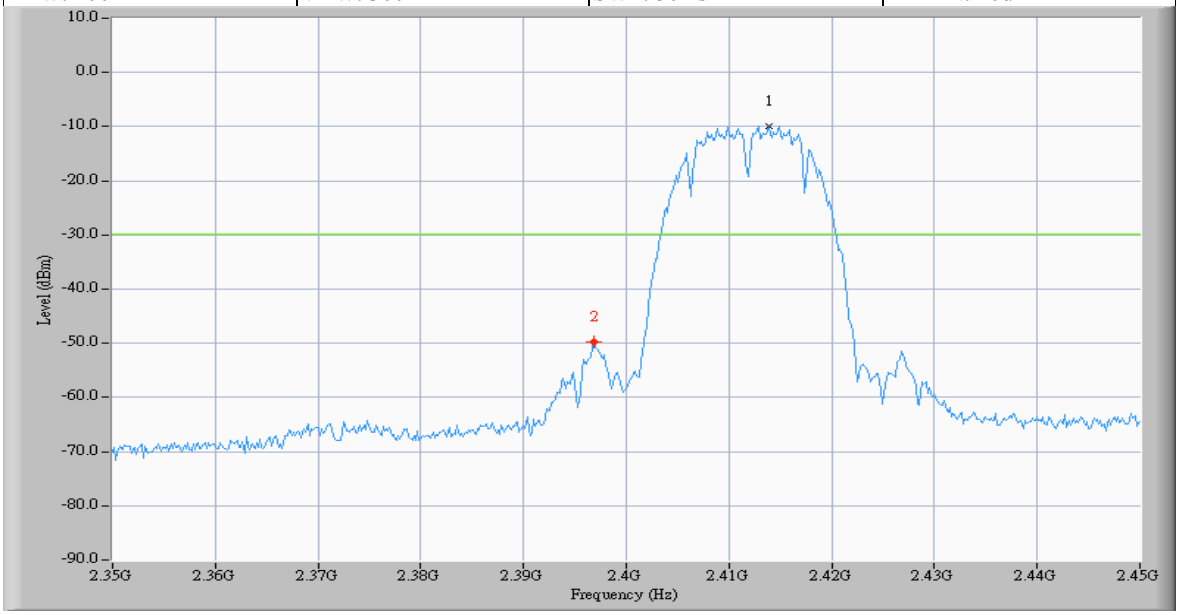
Test Date: Jul. 02, 2008 Temperature: 26℃ Humidity: 54%

Channel	Frequency(MHz)	Chart
3	2422	Page 93, Page 95
6	2437	Page 96
9	2452	Page 94, Page 97

All out-of –band conducted emissions were more than 20dB below the carrier.

Note: Please refer to page 93 to page 97 for chart

EUT :	Model : W483	Status : WLAN-11b-CH01-Band Edge	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 50ms	ATTEN: 10dB

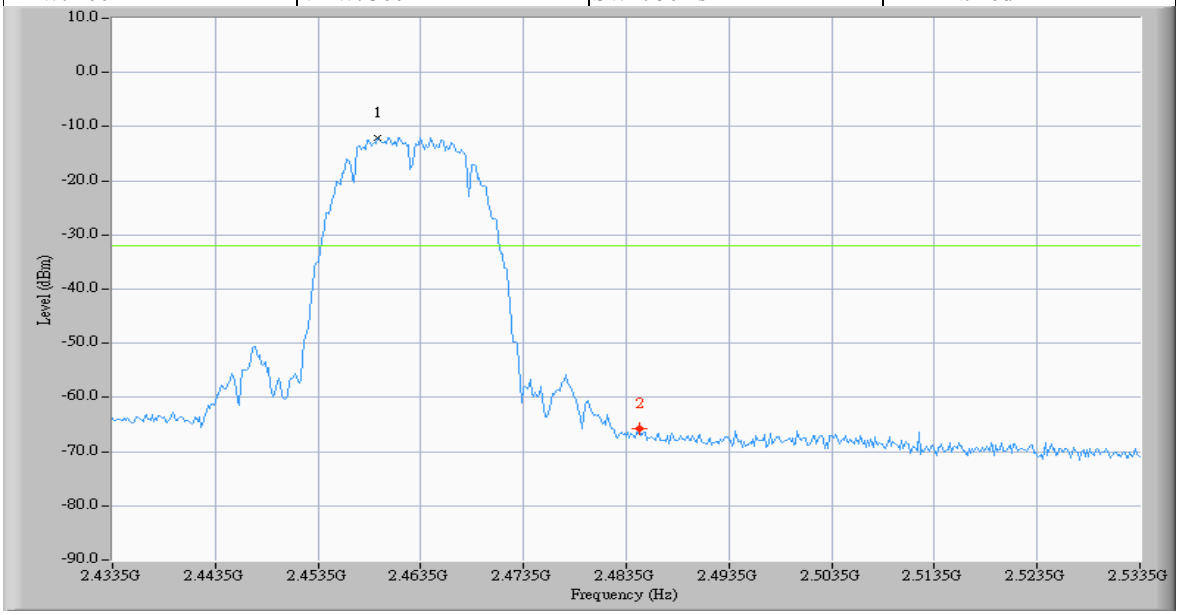


Test Request: (-29.8dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2413.833	-9.8
2	2396.833	-49.7

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	17.000	39.9

EUT :	Model : W483	Status : WLAN-11b-CH11-Band Edge	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 50ms	ATTEN: 10dB

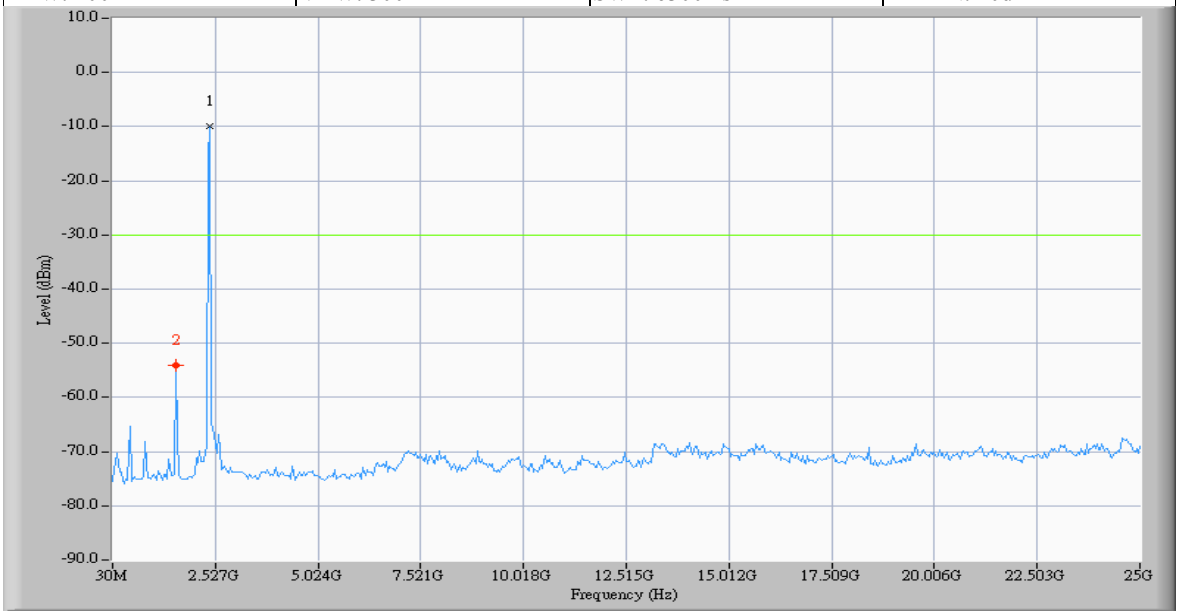


Test Request: (-32.0dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2459.333	-12.0
2	2484.833	-65.8

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-25.500	53.8

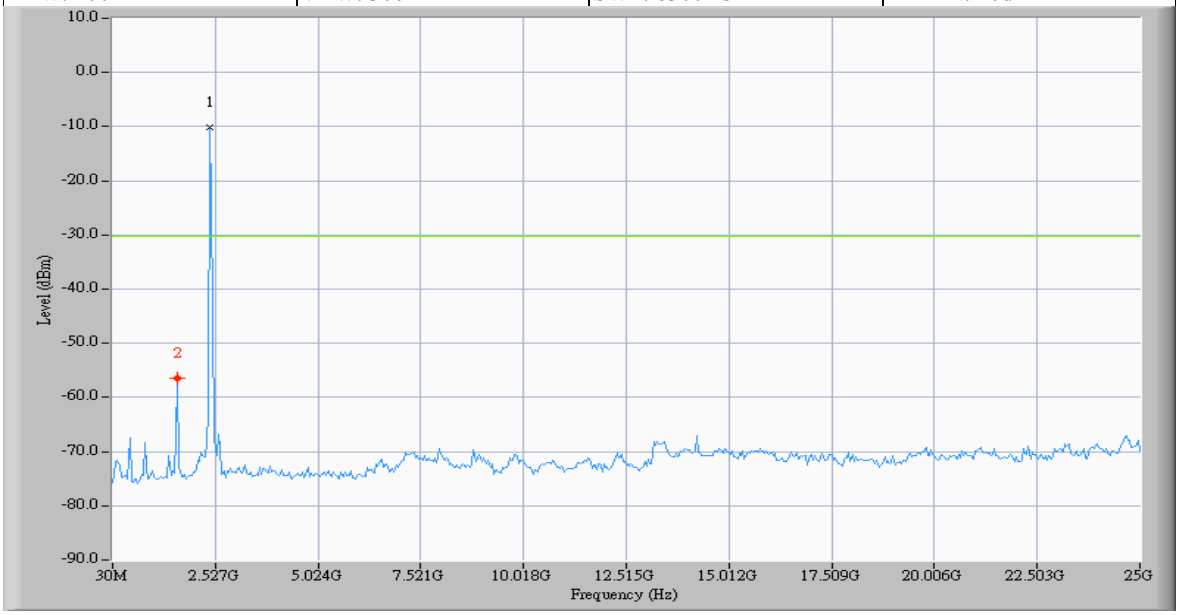
EUT :	Model : W483	Status : WLAN-11b-CH01-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-30.0dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	832.333	44.0

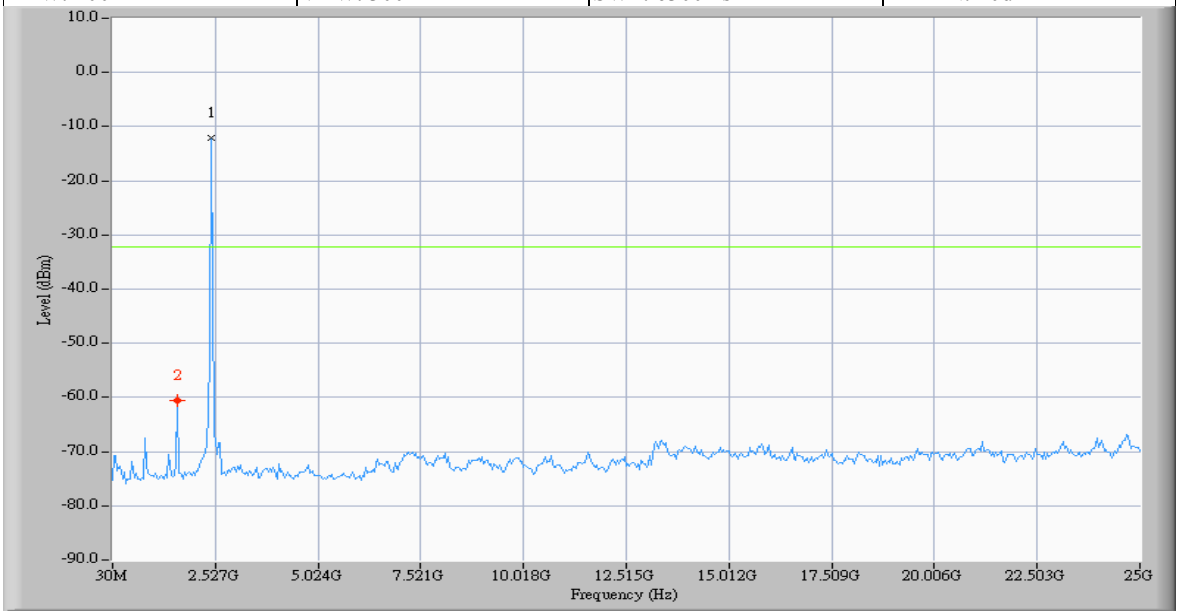
EUT :	Model : W483	Status : WLAN-11b-CH06-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-30.2dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	790.717	46.3

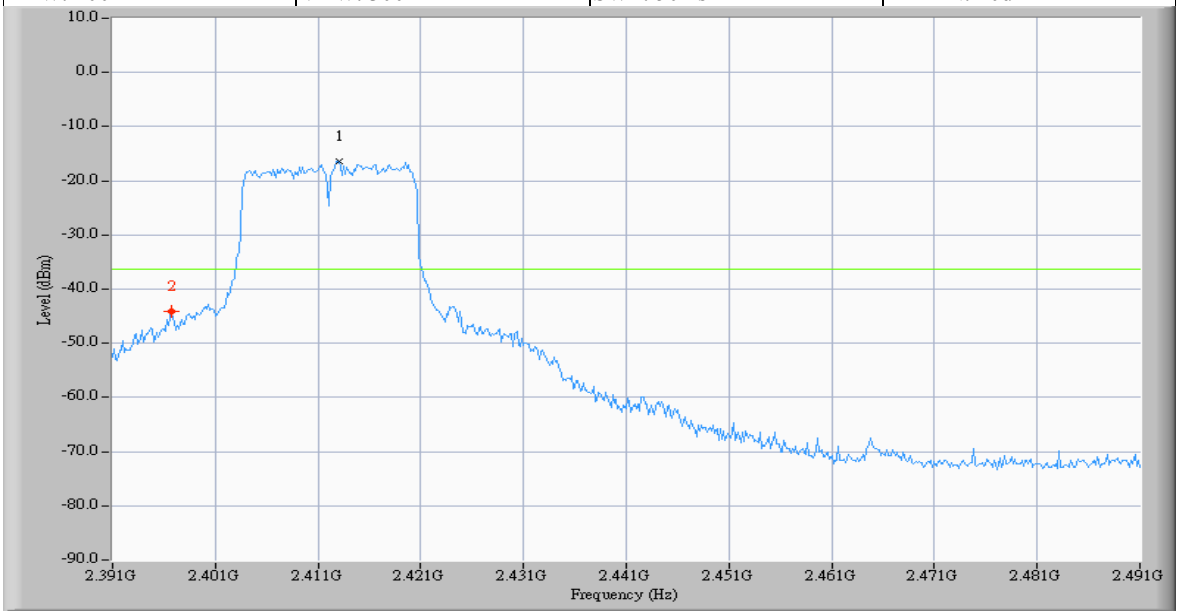
EUT :	Model : W483	Status : WLAN-11b-CH11-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-32.2dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	832.334	48.5

EUT :	Model : W483	Status : WLAN-11g-CH01-Band Edge	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 50ms	ATTEN: 10dB

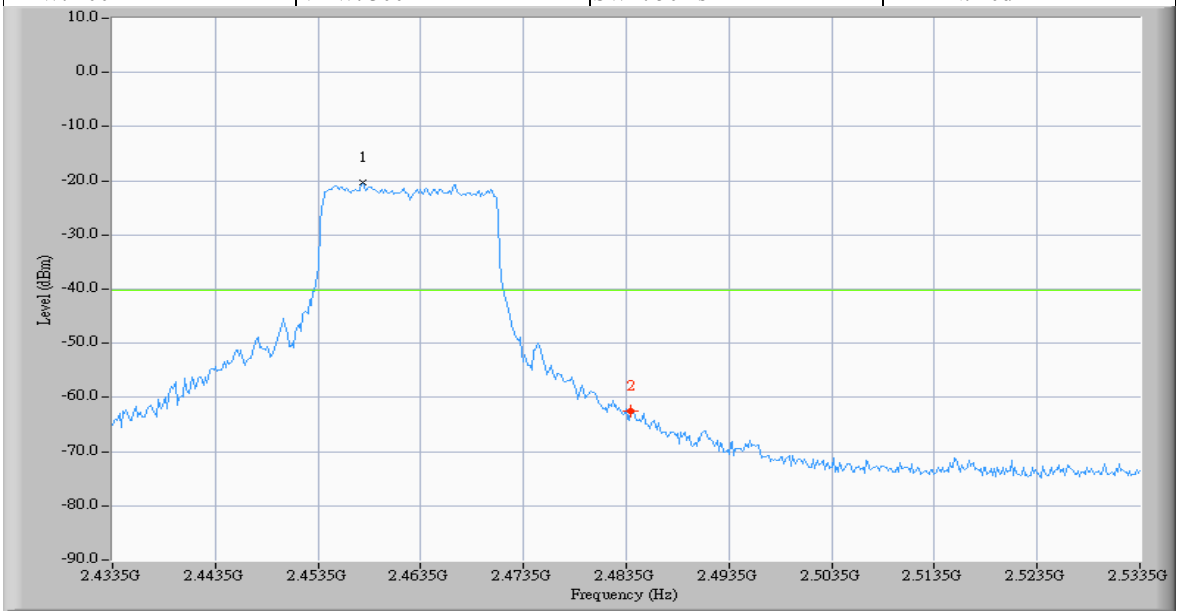


Test Request: (-36.3dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2413.000	-16.3
2	2396.667	-44.2

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	16.333	27.9

EUT :	Model : W483	Status : WLAN-11g-CH11-Band Edge	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 50ms	ATTEN: 10dB

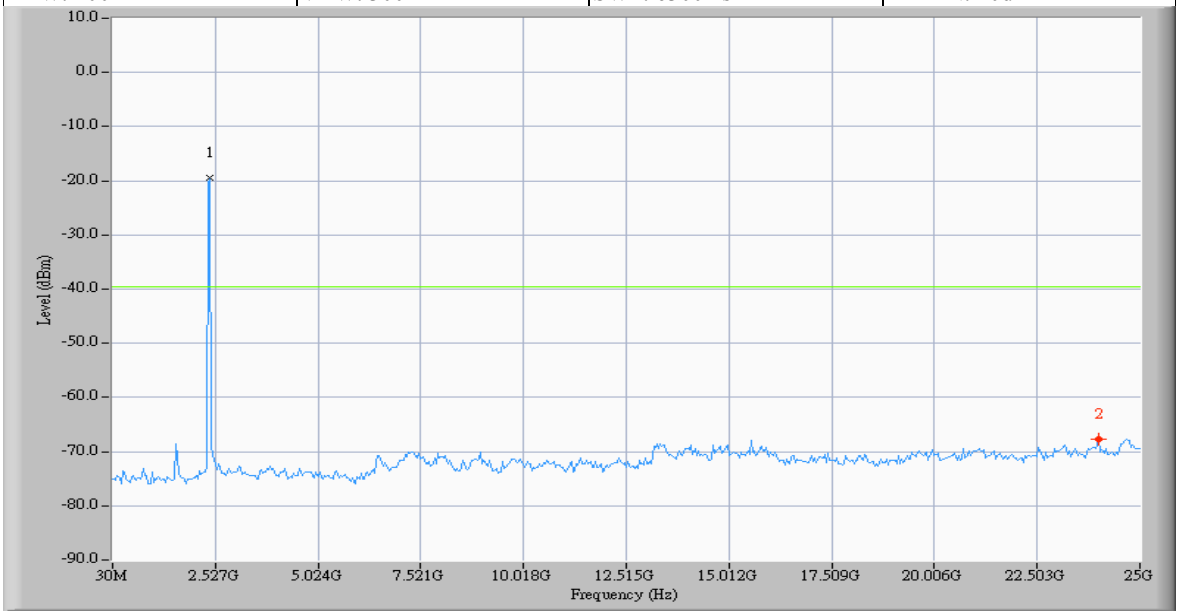


Test Request: (-40.3dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2457.833	-20.3
2	2484.000	-62.5

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-26.167	42.2

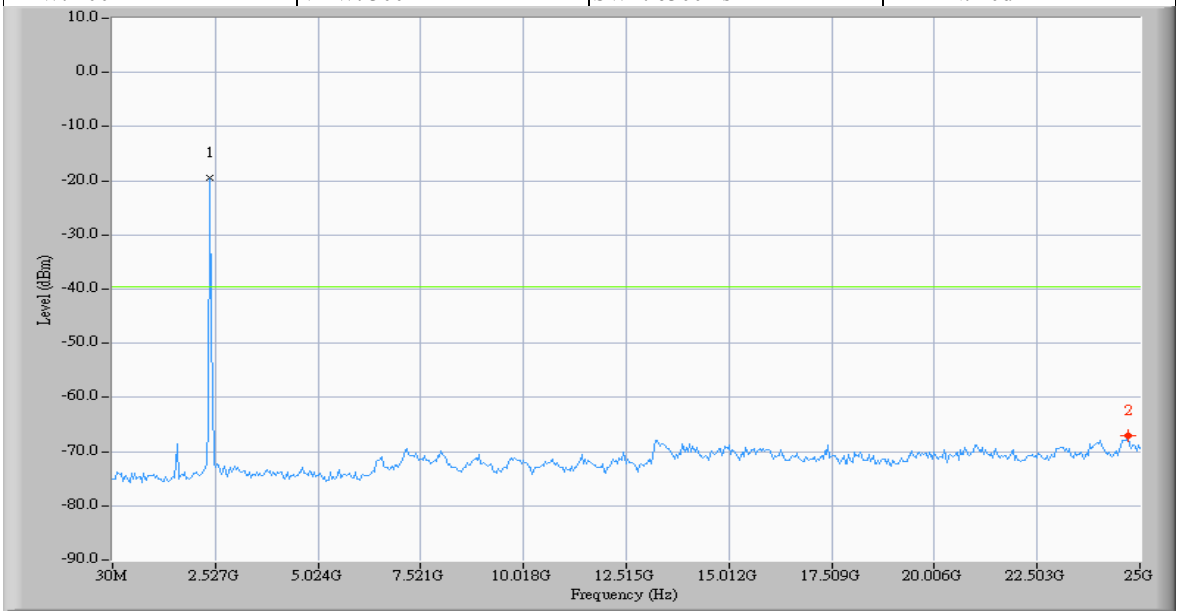
EUT :	Model : W483	Status : WLAN-11g-CH01-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-39.5dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-21599.050	48.2

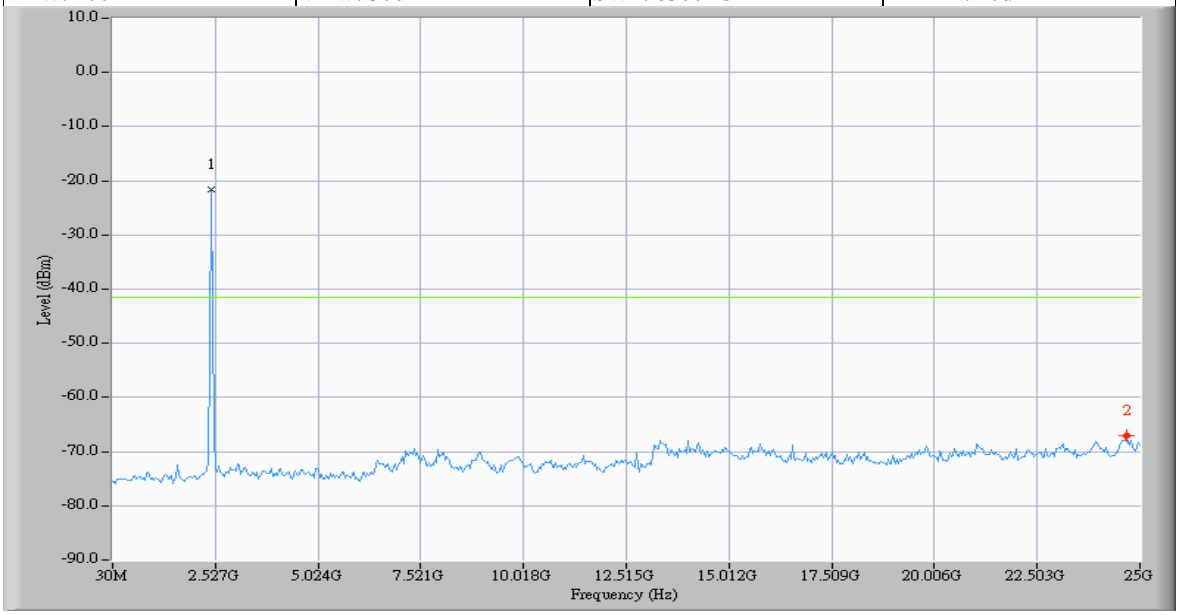
EUT :	Model : W483	Status : WLAN-11g-CH06-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-39.5dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-22306.533	47.7

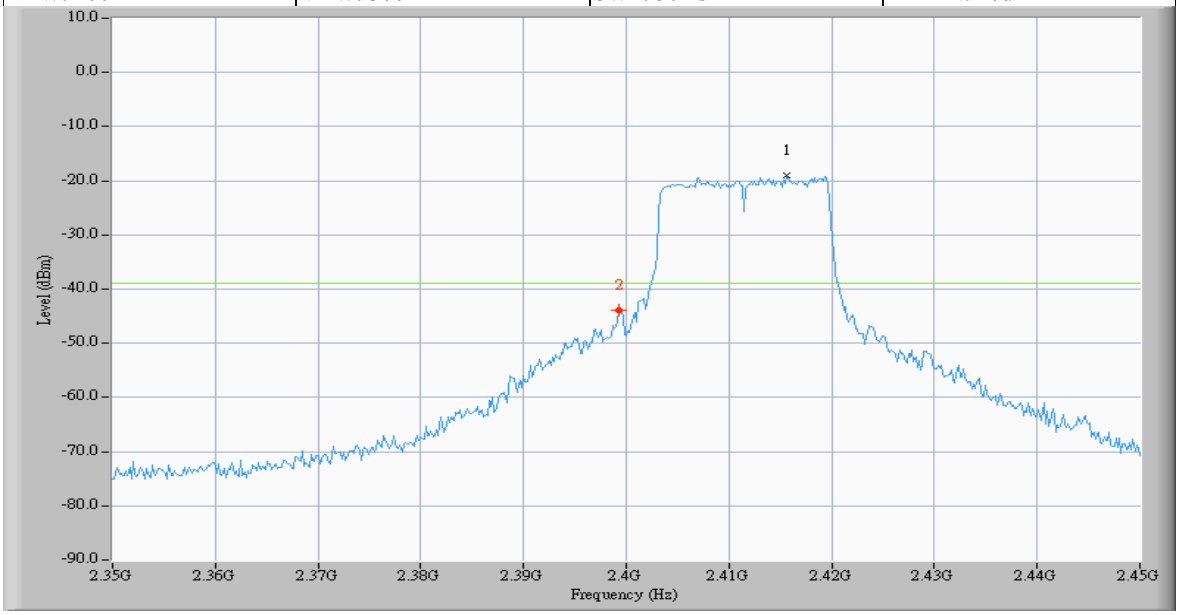
EUT :	Model : W483	Status : WLAN-11g-CH11-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-41.5dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-22223.300	45.5

EUT :	Model : W483	Status : WLAN-11nHT20-CH01-Band Edge	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 50ms	ATTEN: 10dB

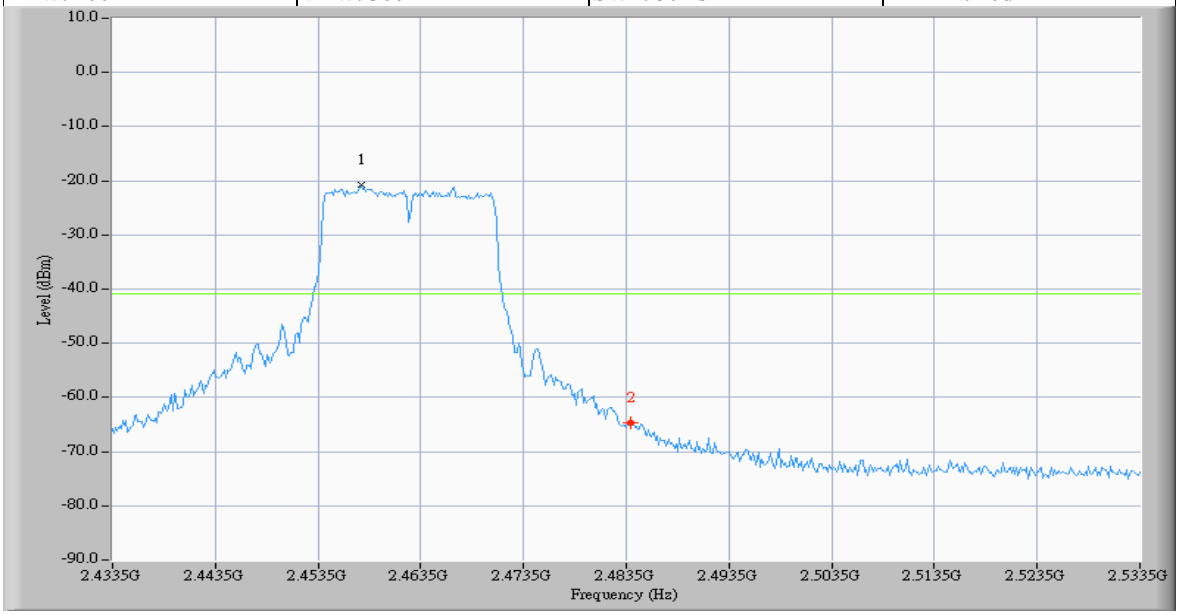


Test Request: (-39.0dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2415.667	-19.0
2	2399.333	-43.8

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	16.334	24.8

EUT :	Model : W483	Status : WLAN-11nHT20-CH11-Band Edge	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 50ms	ATTEN: 10dB

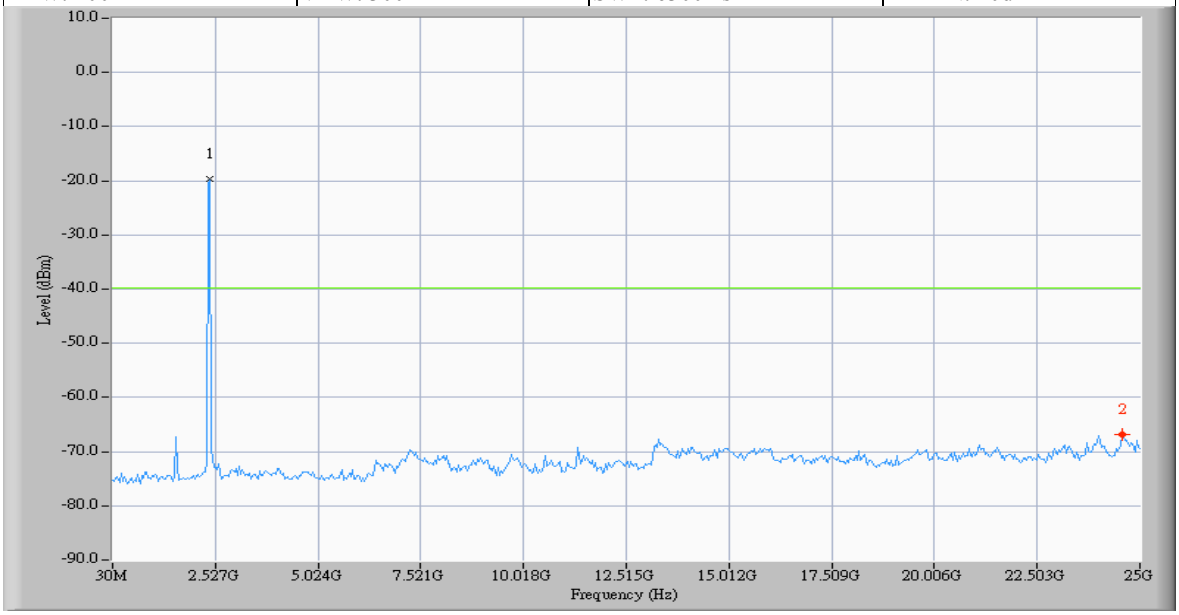


Test Request: (-40.8dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2457.667	-20.8
2	2484.000	-64.7

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-26.333	43.9

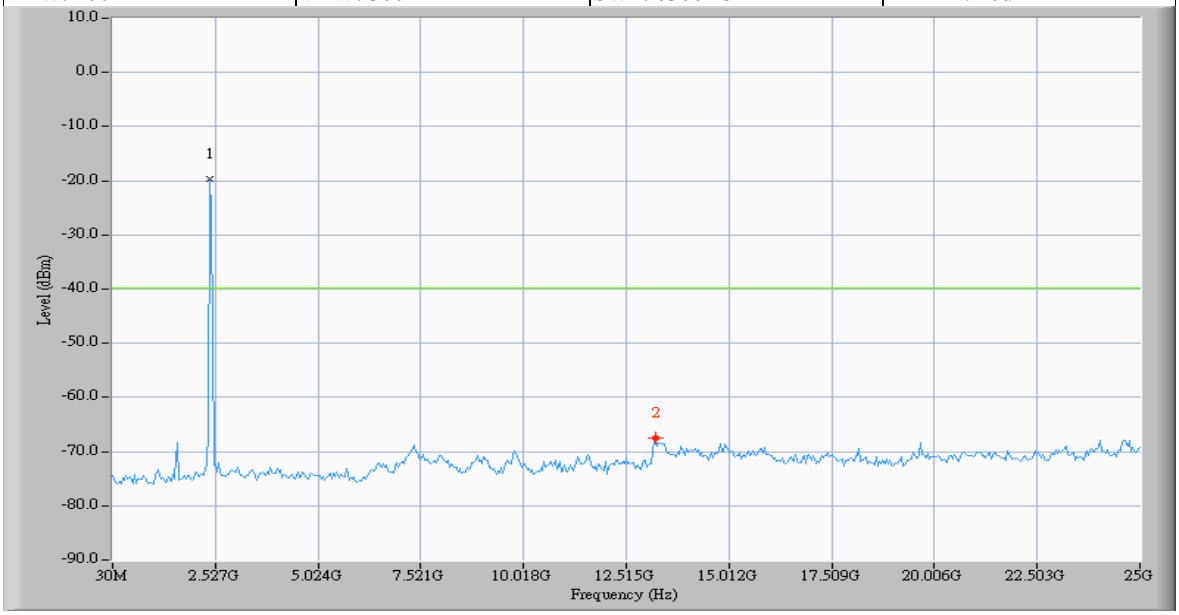
EUT :	Model : W483	Status : WLAN-11nHT20-CH01-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-39.7dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-22181.683	47.1

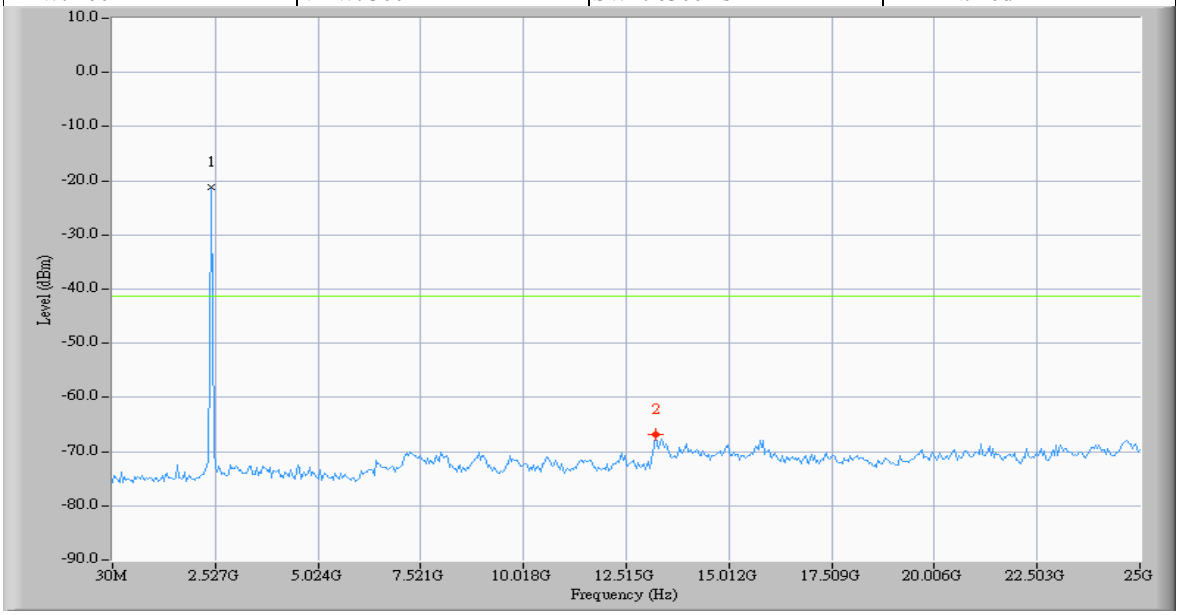
EUT :	Model : W483	Status : WLAN-11nHT20-CH06-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-39.7dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-10820.333	47.8

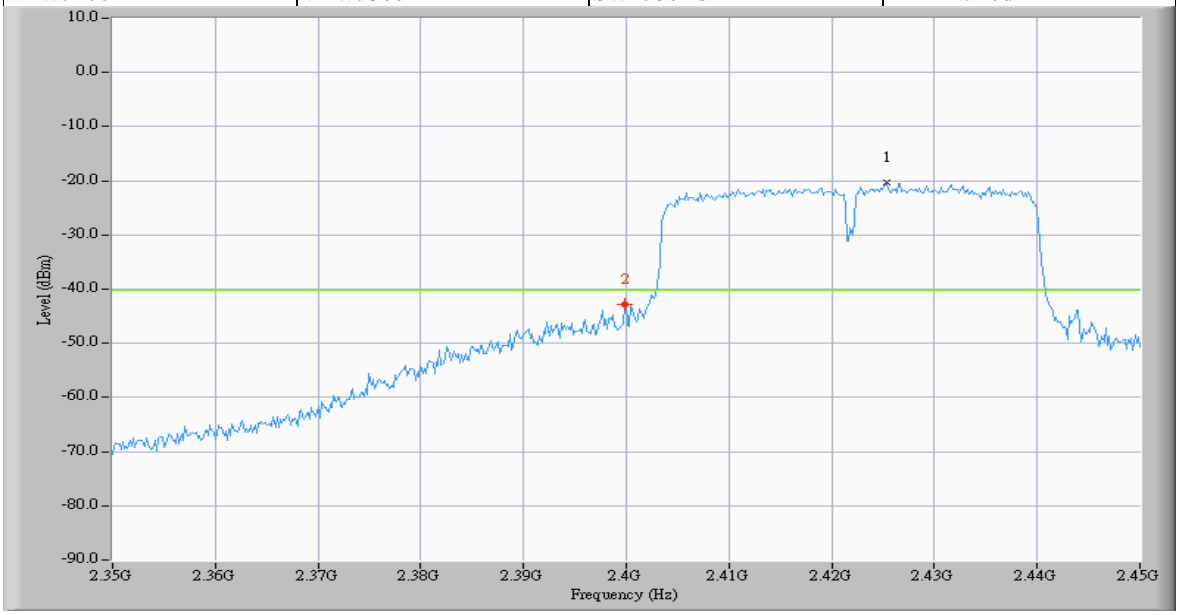
EUT :	Model : W483	Status : WLAN-11nHT20-CH11-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-41.2dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-10778.716	45.6

EUT :	Model : W483	Status : WLAN-11nHT40-CH03-Band Edge	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 50ms	ATTEN: 10dB

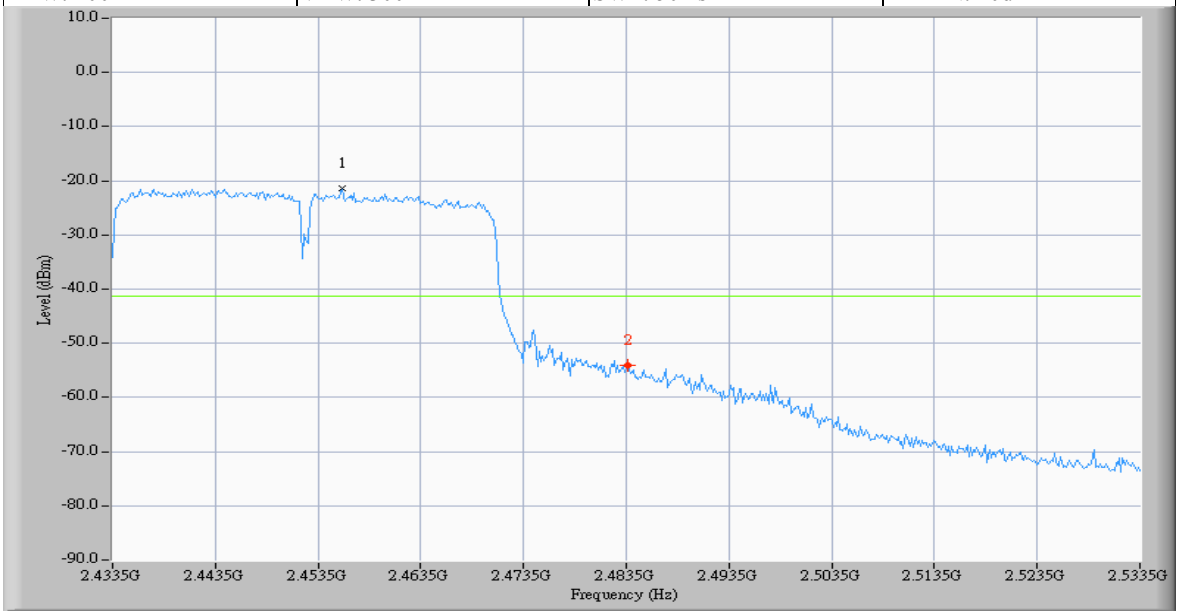


Test Request: (-40.3dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2425.333	-20.3
2	2399.833	-42.8

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	25.500	22.5

EUT :	Model : W483	Status : WLAN-11nHT40-CH09-Band Edge	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 50ms	ATTEN: 10dB

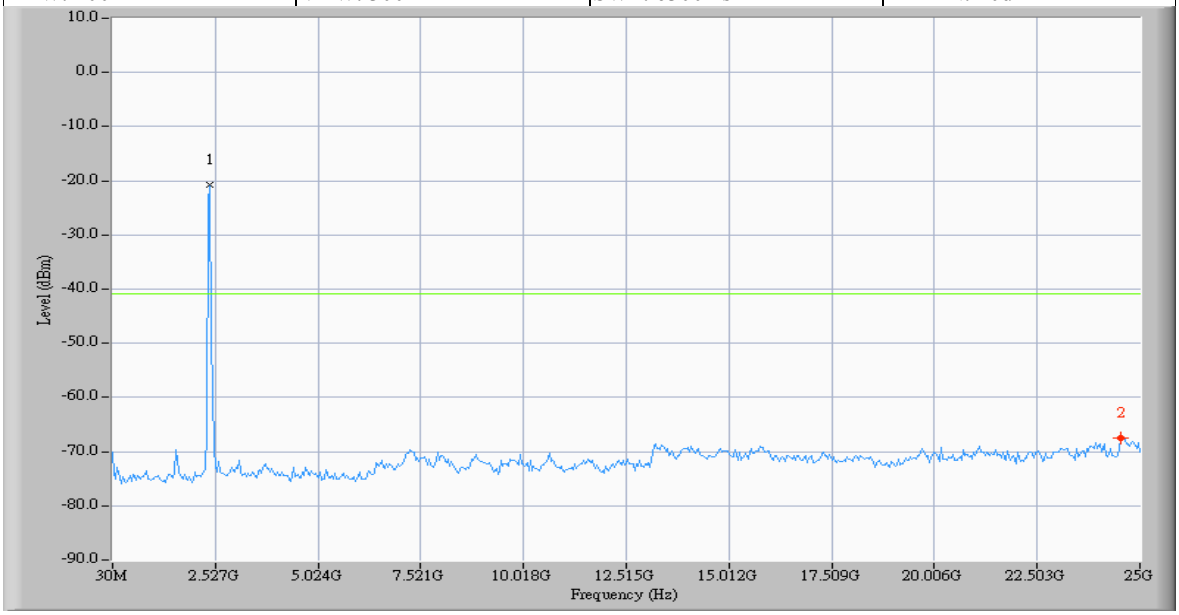


Test Request: (-41.3dBm)

Mkr	Frequency (MHz)	Level (dBm)
1	2455.833	-21.3
2	2483.667	-54.0

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-27.834	32.7

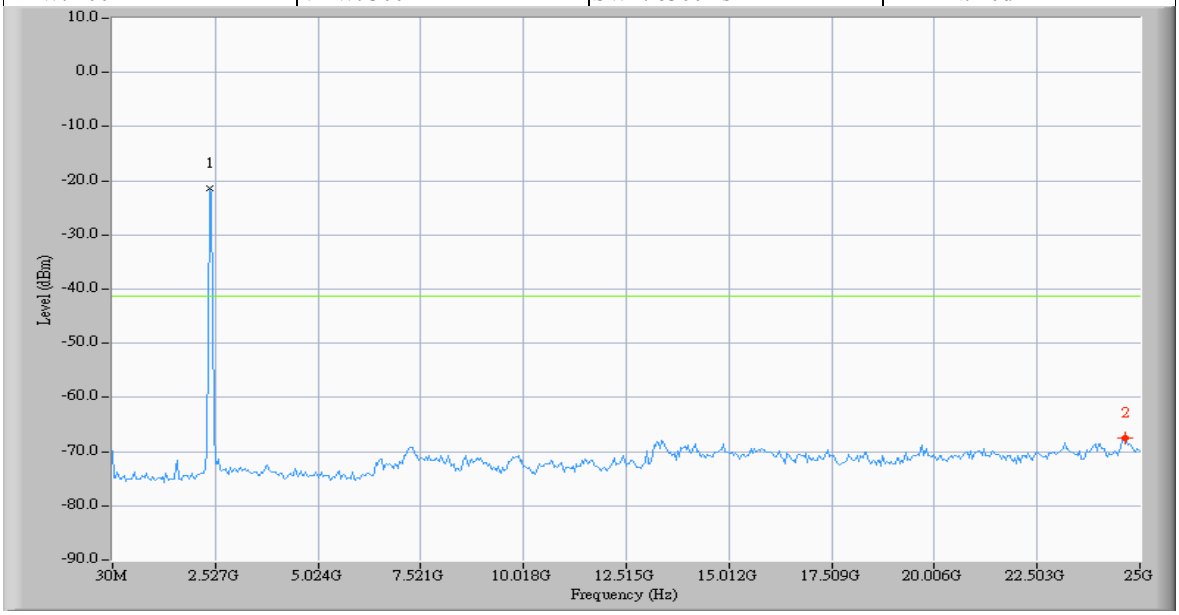
EUT :	Model : W483	Status : WLAN-11nHT40-CH03-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-40.8dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-22140.067	46.7

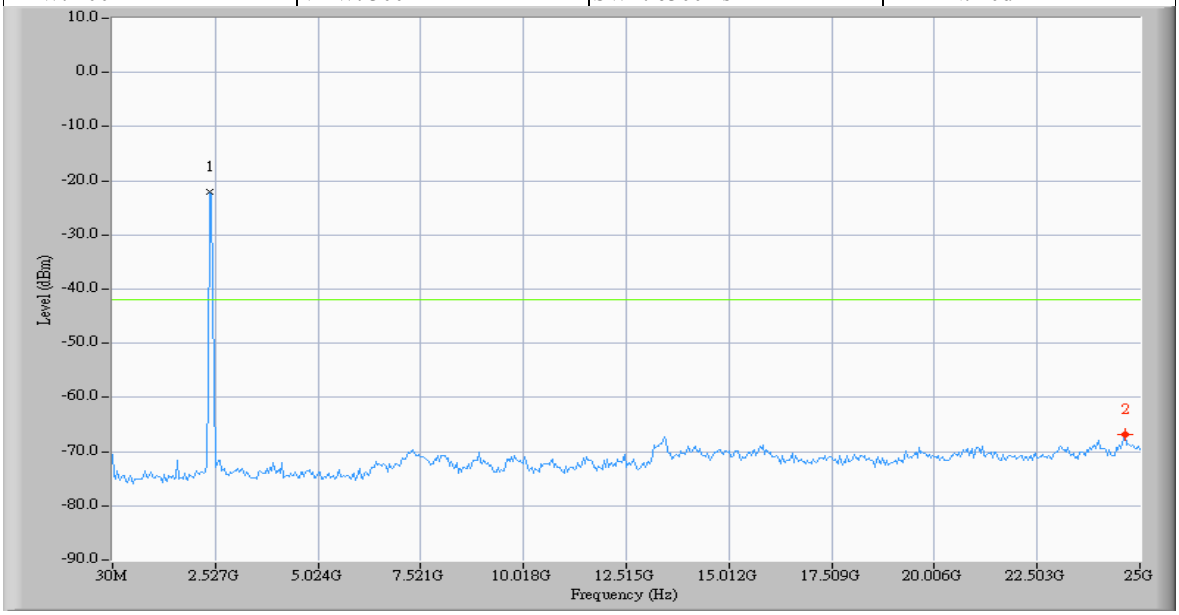
EUT :	Model : W483	Status : WLAN-11nHT40-CH06-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-41.3dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-22223.300	46.2

EUT :	Model : W483	Status : WLAN-11nHT40-CH09-BandEdge_All	
Condition : RF Conduction	Date : 2008/7/2	Temp. : 26℃	Humi. : 54%
RBW: 100 kHz	VBW: 300 kHz	SWP: 6300ms	ATTEN: 10dB



Test Request: (-42.0dBm)

		△Frequency (MHz)	△Level (dB)
1	Mkr 1 - Mkr 2	-22223.300	44.8

10 RADIATED EMISSION MEASUREMENT

10.1 Standard Applicable

For unintentional radiator, the radiated emission shall comply with §15.109(a).

For intentional radiators, according to §15.247 (a), operation under this provision is limited to frequency hopping and direct sequence spread spectrum, and the out band emission shall be comply with §15.247 (c)

10.2 Measurement Procedure

A. Final Measurement

1. Setup the configuration per figure 3 and 4 for frequencies measured below and above 1 GHz respectively.
2. For emission frequencies measured below 1 GHz, it is performed in a semi-anechoic chamber to determine the accurate frequencies of higher emissions. For emission frequencies measured above 1 GHz, a pre-scan be performed with a 1 meter measuring distance before final test.
3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 120 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.
4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 ° with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading. A RF test receiver is also used to confirm emissions measured.
   Note : A filter was used to avoid pre-amplifier saturated when measure TX operation mode.
5. Repeat step 4 until all frequencies need to be measured were complete.
6. Repeat step 5 with search antenna in vertical polarized orientations.
7. Check the three frequencies of highest emission with varying the datarate, placement of ANT. cables associated with EUT to obtain the worse case and record the result.

Figure 3 : Frequencies measured below 1 GHz configuration

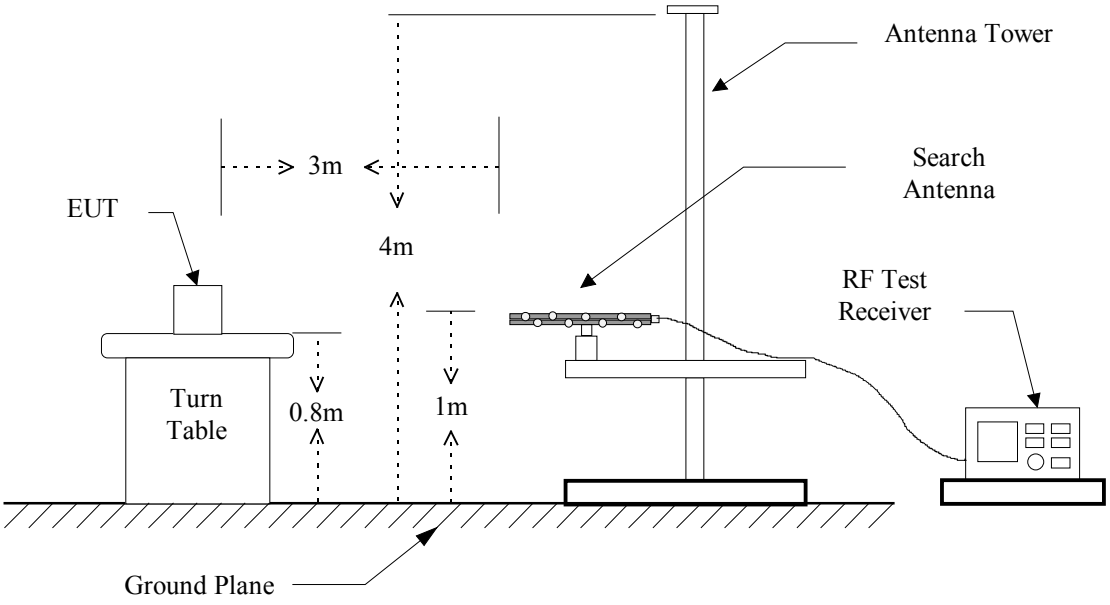
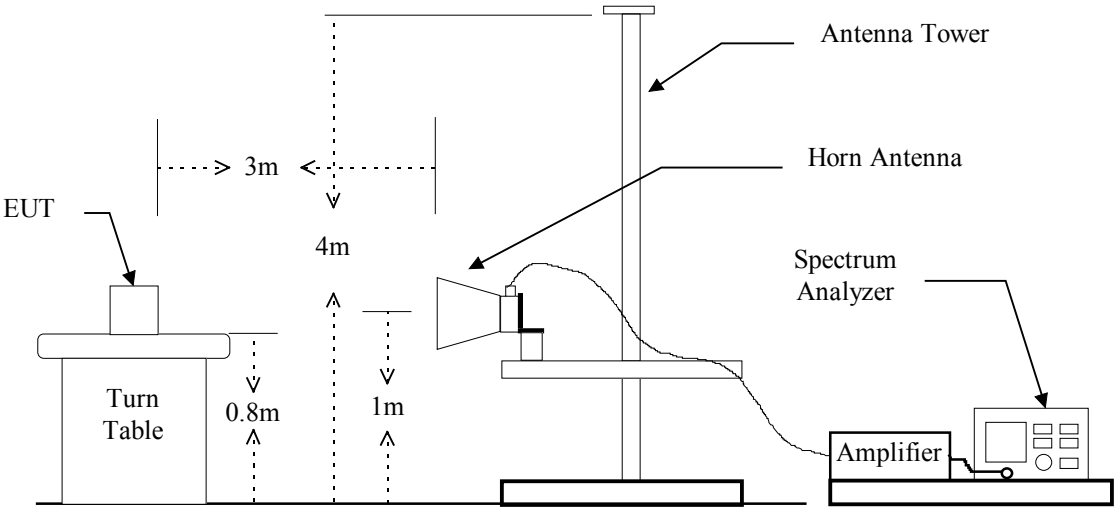


Figure 4 : Frequencies measured above 1 GHz configuration



10.3 Measuring Instrument

The following instrument are used for radiated emissions measurement :

Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
EMI Receiver	R&S	ESIB 7	100328	07/17/2009
BiLog Antenna	Schaffner	CBL 6112B	2927	07/03/2009
Horn Antenna	EMCO	3115	9107-3729	06/12/2009
PRE-Amplifier	Agilent	8449B	3008A01648	09/20/2008
Spectrum Analyzer	R&S	FSU46	13040904-001	11/23//2008
Spectrum Analyzer	Agilent	8564EC	4123A00585	10/10/2008

Measuring instrument setup in measured frequency band when specified detector function is used :

Frequency Band (MHz)	Instrument	Function	Resolution Bandwidth	Video Bandwidth
30 to 1000	RF Test Receiver	Quasi-Peak	120 kHz	300 kHz
	Spectrum Analyzer	Peak	120 kHz	300 kHz
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
	Spectrum Analyzer	Average	1 MHz	10 Hz

10.4 Radiated Emission Data

10.4.1 Harmonic

10.4.1.1 IEEE 802.11b
Operation Mode: TX
Test Date: Jul. 18, 2008 Temperature: 27℃ Humidity: 63%

a) Channel 1
Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4824.000	---	---	---	---	0.5	---	---	74.0	54.0
12060.000	---	---	---	---	5.8	---	---	74.0	54.0
14472.000	---	---	---	---	10.5	---	---	74.0	54.0
19296.000	---	---	---	---	13.3	---	---	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4874.000	---	---	---	---	0.5	---	---	74.0	54.0
7311.000	---	---	---	---	3.7	---	---	74.0	54.0
12185.000	---	---	---	---	5.8	---	---	74.0	54.0
19496.000	---	---	---	---	13.3	---	---	74.0	54.0

c) Channel 11
Fundamental Frequency: 2462 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4924.000	---	---	---	---	0.5	---	---	74.0	54.0
7386.000	---	---	---	---	3.7	---	---	74.0	54.0
12310.000	---	---	---	---	5.8	---	---	74.0	54.0
19696.000	---	---	---	---	13.3	---	---	74.0	54.0
22158.000	---	---	---	---	13.5	---	---	74.0	54.0

Note :
1. Item of margin shown in above table refer to average limit.
2. Remark "---" means that the emissions level is too low to be measured.

10.4.1.2 IEEE 802.11g
Operation Mode: TX
Test Date: Jul. 18, 2008 Temperature: 27℃ Humidity: 63%

a) Channel 1
Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4824.000	---	---	---	---	0.5	---	---	74.0	54.0
12060.000	---	---	---	---	5.8	---	---	74.0	54.0
14472.000	---	---	---	---	10.5	---	---	74.0	54.0
19296.000	---	---	---	---	13.3	---	---	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4874.000	---	---	---	---	0.5	---	---	74.0	54.0
7311.000	---	---	---	---	3.7	---	---	74.0	54.0
12185.000	---	---	---	---	5.8	---	---	74.0	54.0
19496.000	---	---	---	---	13.3	---	---	74.0	54.0

c) Channel 11
Fundamental Frequency: 2462 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4924.000	---	---	---	---	0.5	---	---	74.0	54.0
7386.000	---	---	---	---	3.7	---	---	74.0	54.0
12310.000	---	---	---	---	5.8	---	---	74.0	54.0
19696.000	---	---	---	---	13.3	---	---	74.0	54.0
22158.000	---	---	---	---	13.5	---	---	74.0	54.0

Note :

1. Item of margin shown in above table refer to average limit.
2. Remark "---" means that the emissions level is too low to be measured.

10.4.1.3 IEEE 802.11n, HT20
Operation Mode: TX
Test Date: Jul. 18, 2008 Temperature: 27℃ Humidity: 63%

a) Channel 1
Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4824.000	---	---	---	---	0.5	---	---	74.0	54.0
12060.000	---	---	---	---	5.8	---	---	74.0	54.0
14472.000	---	---	---	---	10.5	---	---	74.0	54.0
19296.000	---	---	---	---	13.3	---	---	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4874.000	---	---	---	---	0.5	---	---	74.0	54.0
7311.000	---	---	---	---	3.7	---	---	74.0	54.0
12185.000	---	---	---	---	5.8	---	---	74.0	54.0
19496.000	---	---	---	---	13.3	---	---	74.0	54.0

c) Channel 11
Fundamental Frequency: 2462 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4924.000	---	---	---	---	0.5	---	---	74.0	54.0
7386.000	---	---	---	---	3.7	---	---	74.0	54.0
12310.000	---	---	---	---	5.8	---	---	74.0	54.0
19696.000	---	---	---	---	13.3	---	---	74.0	54.0
22158.000	---	---	---	---	13.5	---	---	74.0	54.0

Note :
1. Item of margin shown in above table refer to average limit.
2. Remark "---" means that the emissions level is too low to be measured.

10.4.1.4 IEEE 802.11n, HT40
Operation Mode: TX
Test Date: Jul. 18, 2008 Temperature: 27℃ Humidity: 63%

a) Channel 3
Fundamental Frequency: 2422 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4844.000	---	---	---	---	0.5	---	---	74.0	54.0
7266.000	---	---	---	---	5.8	---	---	74.0	54.0
12110.000	---	---	---	---	10.5	---	---	74.0	54.0
19376.000	---	---	---	---	13.3	---	---	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4874.000	---	---	---	---	0.5	---	---	74.0	54.0
7311.000	---	---	---	---	3.7	---	---	74.0	54.0
12185.000	---	---	---	---	5.8	---	---	74.0	54.0
19496.000	---	---	---	---	13.3	---	---	74.0	54.0

c) Channel 9
Fundamental Frequency: 2452 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4904.000	---	---	---	---	0.5	---	---	74.0	54.0
7356.000	---	---	---	---	3.7	---	---	74.0	54.0
12260.000	---	---	---	---	5.8	---	---	74.0	54.0
19616.000	---	---	---	---	13.3	---	---	74.0	54.0
22068.000	---	---	---	---	13.5	---	---	74.0	54.0

Note :

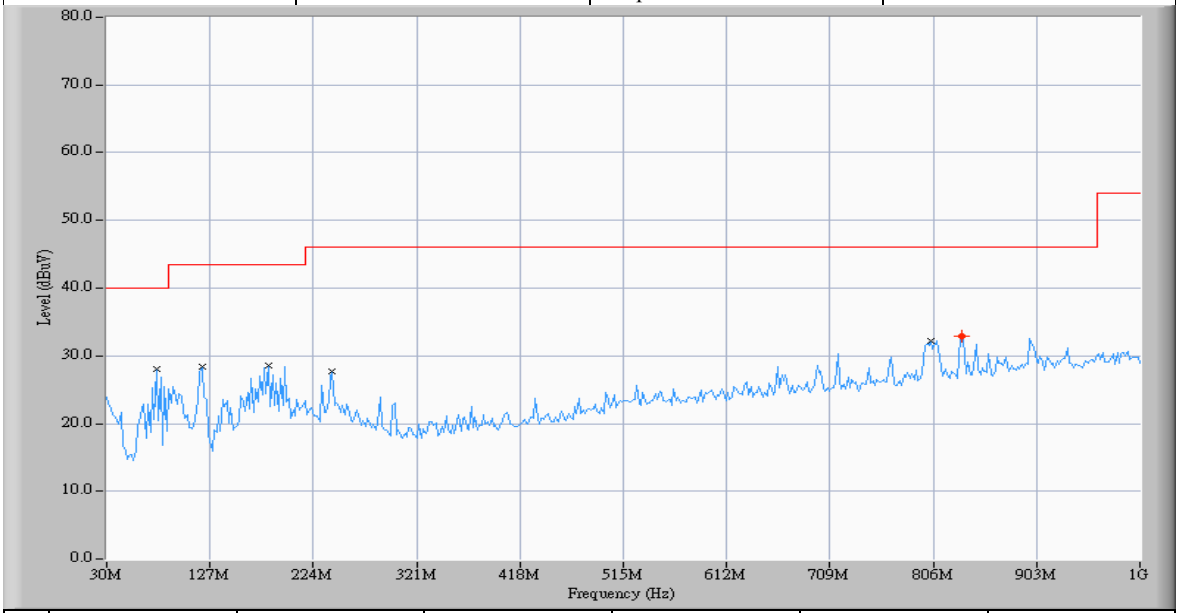
1. Item of margin shown in above table refer to average limit.
2. Remark "---" means that the emissions level is too low to be measured.

10.4.2 Spurious Emission

10.4.2.1 Operation Mode: IEEE 802.11b

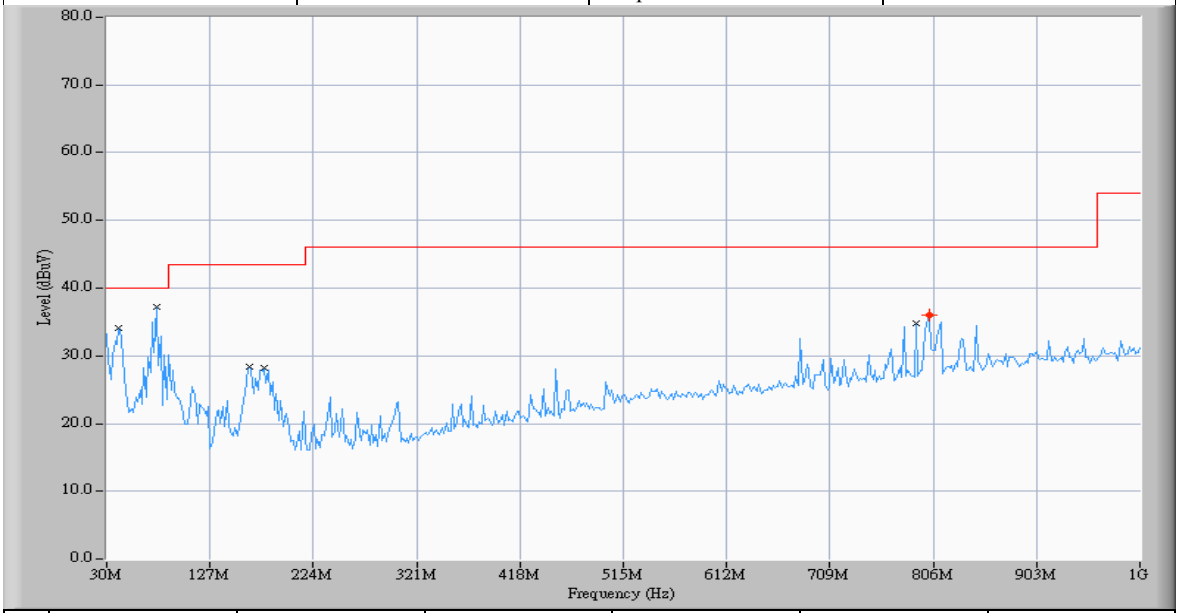
10.4.2.1.1 Emission frequencies below 1 GHz

EUT :	Model : W483	Status : 11b-H	
Condition : Horizontal	Date : 2008/6/29	Temp. : 26℃	Humi. : 69%



	Freq (MHz)	QP Level (dBuV)	Factor (dB/m)	QP Result (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
1	76.653	19.7	8.3	28.0	40.0	-12.0
2	119.419	13.8	14.6	28.4	43.5	-15.1
3	181.623	16.7	11.9	28.6	43.5	-14.9
4	241.884	12.7	15.0	27.7	46.0	-18.3
5	803.667	6.1	26.2	32.3	46.0	-13.7
6	832.826	6.3	26.6	32.9	46.0	-13.1

EUT :	Model : W483	Status : 11b-V	
Condition : Vertical	Date : 2008/6/29	Temp. : 26℃	Humi. : 69%



	Freq (MHz)	QP Level (dBuV)	Factor (dB/m)	QP Result (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
1	41.663	20.1	14.1	34.2	40.0	-5.8
2	76.653	29.0	8.3	37.3	40.0	-2.7
3	164.128	16.3	12.1	28.4	43.5	-15.1
4	177.735	16.2	12.0	28.2	43.5	-15.3
5	790.060	8.8	26.0	34.8	46.0	-11.2
6	801.723	9.8	26.2	36.0	46.0	-10.0

10.4.2.1.2 Emission frequencies above 1 GHz

a) Channel 1
Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	53.6	51.3	54.3	52.4	-12.3	42.0	40.1	74.0	54.0
1601.282	---	---	53.7	50.3	-11.0	42.7	39.3	74.0	54.0
2388.782	67.9	52.2	69.2	53.7	-6.8	62.4	46.9	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	53.1	50.2	53.6	48.9	-12.3	41.3	37.9	74.0	54.0
1601.282	---	---	53.3	48.7	-11.0	42.3	37.7	74.0	54.0
2388.782	57.2	46.6	61.5	48.6	-6.8	54.7	41.8	74.0	54.0

c) Channel 11
Fundamental Frequency: 2462 MHz

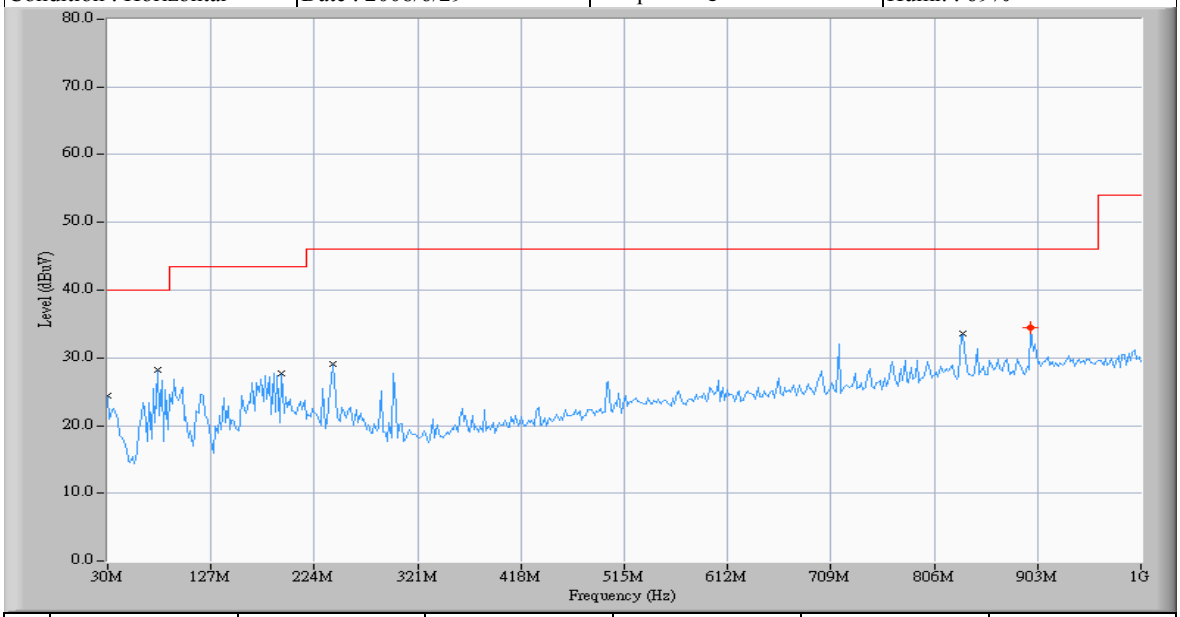
Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	54.2	50.2	54.2	51.2	-12.3	41.9	38.9	74.0	54.0
1601.282	---	---	53.2	49.2	-11.0	42.2	38.2	74.0	54.0
2388.782	57.3	46.4	63.7	50.2	-6.8	56.9	43.4	74.0	54.0

Note:
1. Place of Measurement: Measuring site of the ETC.
2. If the data table appeared symbol of "***" means the value was too low to be measured.
3. The estimated measurement uncertainty of the result measurement is
   ±4.6dB (30MHz≦f<300MHz).
   ±4.4dB (300MHz≦f≦1000MHz).
4. Remark “---” means that the emissions level is too low to be measured.

10.4.2.2 Operation Mode: IEEE 802.11g

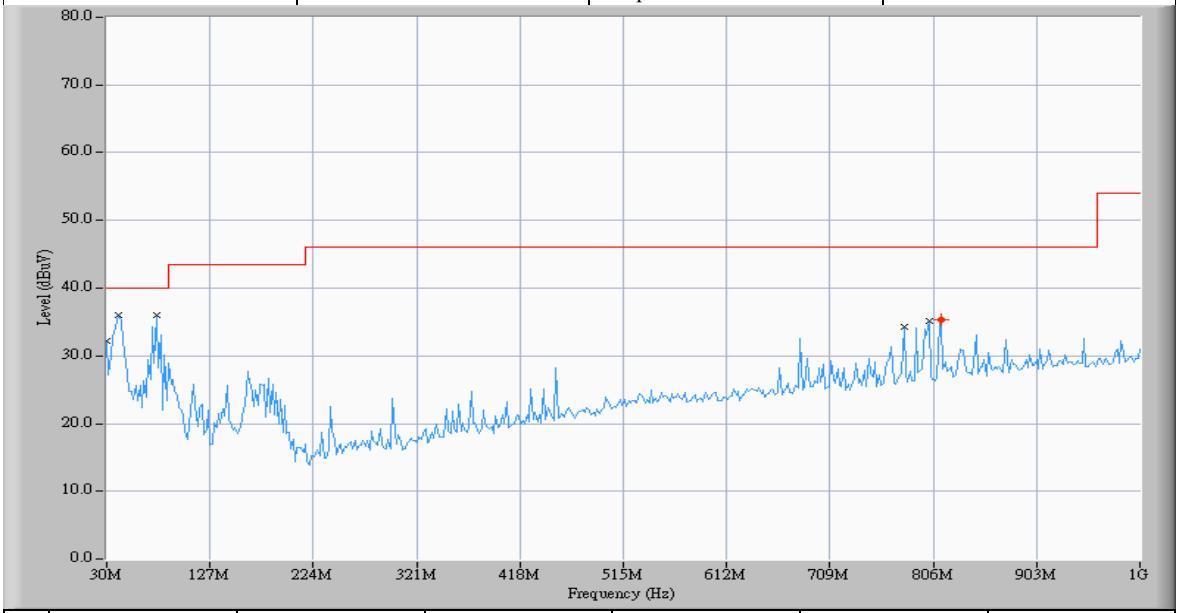
10.4.2.2.1 Emission frequencies below 1 GHz

EUT :	Model : W483	Status : 11g-H	
Condition : Horizontal	Date : 2008/6/29	Temp. : 26℃	Humi. : 69%



	Freq (MHz)	QP Level (dBuV)	Factor (dB/m)	QP Result (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
1	30.000	4.7	19.7	24.4	40.0	-15.6
2	76.653	19.9	8.3	28.2	40.0	-11.8
3	193.287	15.5	12.2	27.7	43.5	-15.8
4	241.884	14.1	15.0	29.1	46.0	-16.9
5	832.826	7.0	26.6	33.6	46.0	-12.4
6	896.974	6.8	27.6	34.4	46.0	-11.6

EUT :	Model : W483	Status : 11g-V	
Condition : Vertical	Date : 2008/6/29	Temp. : 26℃	Humi. : 69%



	Freq (MHz)	QP Level (dBuV)	Factor (dB/m)	QP Result (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
1	30.000	12.4	19.7	32.1	40.0	-7.9
2	41.663	22.0	14.1	36.1	40.0	-3.9
3	76.653	27.7	8.3	36.0	40.0	-4.0
4	778.397	8.4	25.9	34.3	46.0	-11.7
5	801.723	9.0	26.2	35.2	46.0	-10.8
6	813.387	8.9	26.4	35.3	46.0	-10.7

10.4.2.2.2 Emission frequencies above 1 GHz

a) Channel 1
Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	54.3	52.2	54.2	50.7	-12.3	42.0	39.9	74.0	54.0
1601.282	---	---	57.6	53.5	-11.0	46.6	42.5	74.0	54.0
2388.782	67.2	51.9	68.8	53.5	-6.8	62.0	46.7	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	52.5	50.5	53.7	50.1	-12.3	41.4	38.2	74.0	54.0
1601.282	---	---	56.4	52.2	-11.0	45.4	41.2	74.0	54.0
2388.782	59.1	48.3	62.3	49.2	-6.8	55.5	42.4	74.0	54.0

c) Channel 11
Fundamental Frequency: 2462 MHz

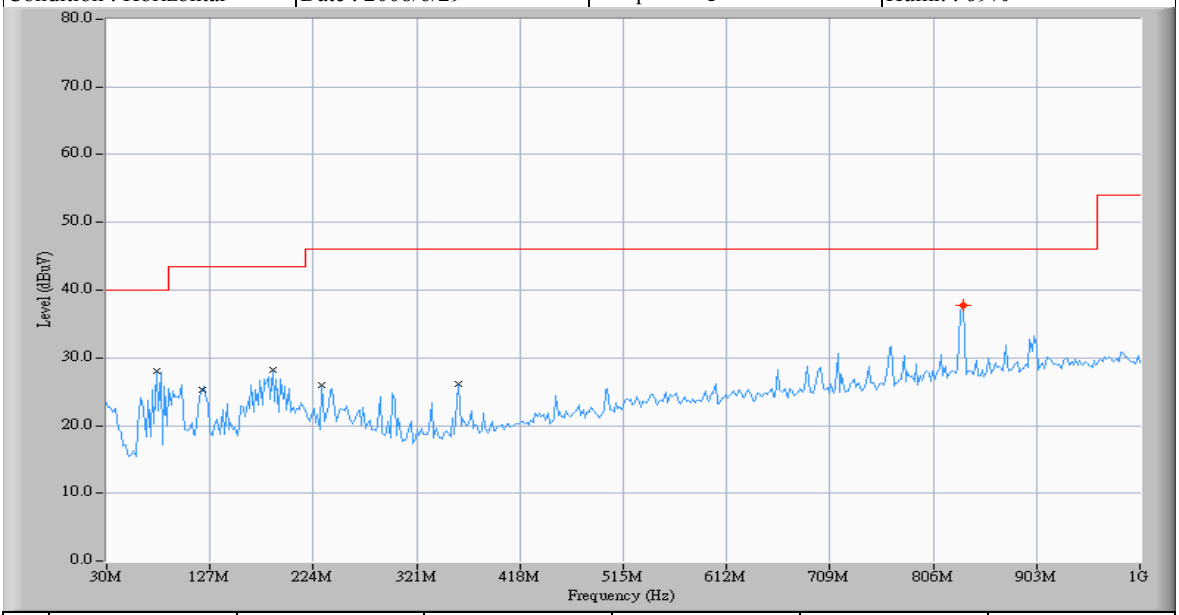
Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	54.5	51.1	52.6	49.3	-12.3	42.2	38.8	74.0	54.0
1601.282	---	---	56.0	52.6	-11.0	45.0	41.6	74.0	54.0
2388.782	58.4	48.4	62.1	48.9	-6.8	55.3	42.1	74.0	54.0

Note:
1. Place of Measurement: Measuring site of the ETC.
2. If the data table appeared symbol of "***" means the value was too low to be measured.
3. The estimated measurement uncertainty of the result measurement is
   ±4.6dB (30MHz≦f<300MHz).
   ±4.4dB (300MHz≦f≦1000MHz).
4. Remark “---” means that the emissions level is too low to be measured.

10.4.2.3 Operation Mode: IEEE 802.11n, HT20

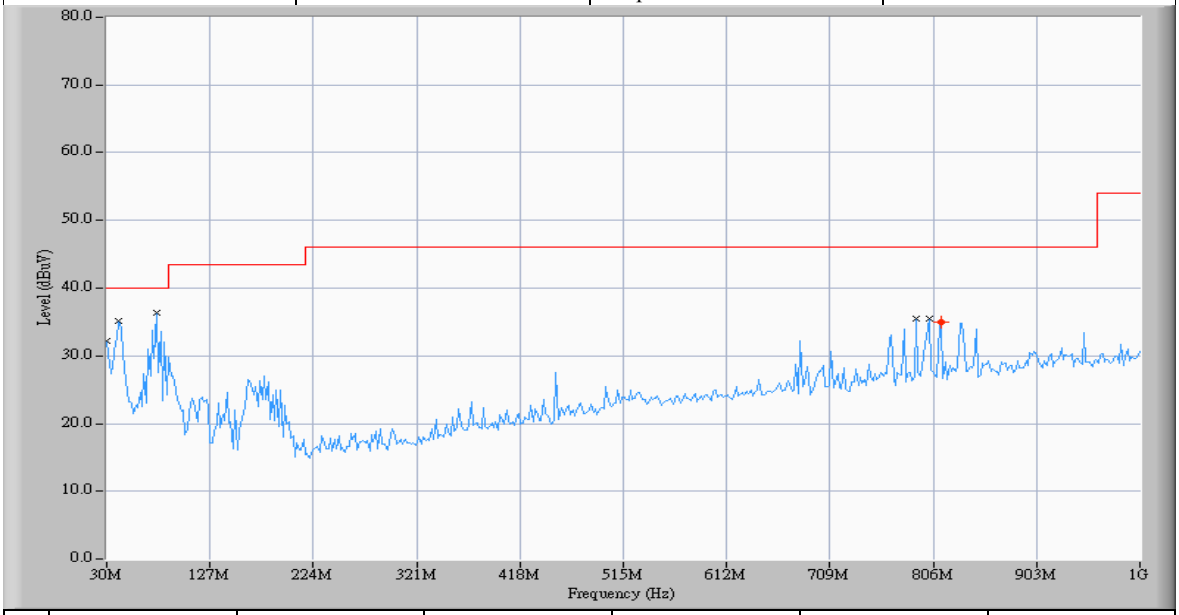
10.4.2.3.1 Emission frequencies below 1 GHz

EUT :	Model : W483	Status : 11n-HT20-H	
Condition : Horizontal	Date : 2008/6/29	Temp. : 26℃	Humi. : 69%



	Freq (MHz)	QP Level (dBuV)	Factor (dB/m)	QP Result (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
1	76.653	19.7	8.3	28.0	40.0	-12.0
2	119.419	10.7	14.6	25.3	43.5	-18.2
3	185.511	16.2	12.0	28.2	43.5	-15.3
4	232.164	11.8	14.1	25.9	46.0	-20.1
5	360.461	7.1	19.0	26.1	46.0	-19.9
6	834.770	11.0	26.7	37.7	46.0	-8.3

EUT :	Model : W483	Status : 11n-HT20-V	
Condition : Vertical	Date : 2008/6/29	Temp. : 26℃	Humi. : 69%



	Freq (MHz)	QP Level (dBuV)	Factor (dB/m)	QP Result (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
1	30.000	12.5	19.7	32.2	40.0	-7.8
2	41.663	21.1	14.1	35.2	40.0	-4.8
3	76.653	28.1	8.3	36.4	40.0	-3.6
4	790.060	9.4	26.0	35.4	46.0	-10.6
5	801.723	9.3	26.2	35.5	46.0	-10.5
6	813.387	8.6	26.4	35.0	46.0	-11.0

10.4.2.3.2 Emission frequencies above 1 GHz

a) Channel 1
Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	53.3	49.9	59.1	53.7	-12.3	46.8	41.4	74.0	54.0
1601.282	---	---	57.4	53.5	-11.0	46.3	42.5	74.0	54.0
2388.782	67.4	51.3	68.6	53.6	-6.8	61.8	46.8	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	53.7	50.3	58.0	52.7	-12.3	45.7	40.4	74.0	54.0
1601.282	---	---	56.6	52.4	-11.0	45.6	41.4	74.0	54.0
2388.782	58.9	47.9	63.1	49.7	-6.8	56.3	42.9	74.0	54.0

c) Channel 11
Fundamental Frequency: 2462 MHz

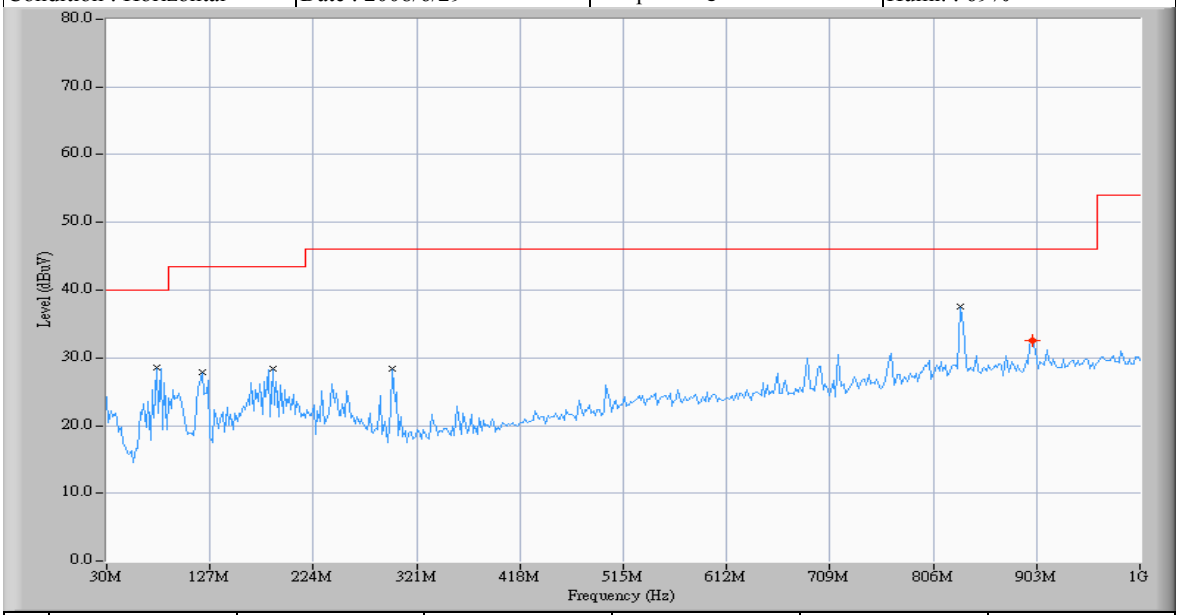
Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	54.3	50.9	58.7	53.4	-12.3	46.4	41.1	74.0	54.0
1601.282	---	---	56.9	53.2	-11.0	45.9	42.2	74.0	54.0
2388.782	59.2	48.7	63.3	50.1	-6.8	56.5	43.3	74.0	54.0

Note:
1. Place of Measurement: Measuring site of the ETC.
2. If the data table appeared symbol of "***" means the value was too low to be measured.
3. The estimated measurement uncertainty of the result measurement is
   ±4.6dB (30MHz≦f<300MHz).
   ±4.4dB (300MHz≦f≦1000MHz).
4. Remark “---” means that the emissions level is too low to be measured.

10.4.2.4 Operation Mode: IEEE 802.11n, HT40

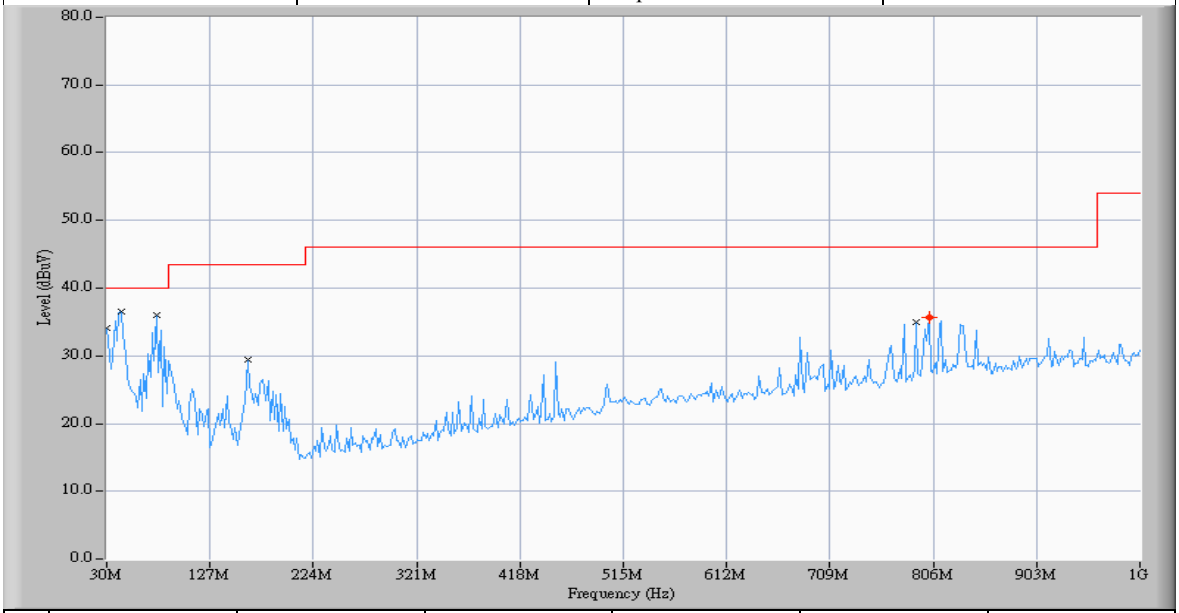
10.4.2.4.1 Emission frequencies below 1 GHz

EUT :	Model : W483	Status : 11n-HT40-H	
Condition : Horizontal	Date : 2008/6/29	Temp. : 26℃	Humi. : 69%



	Freq (MHz)	QP Level (dBuV)	Factor (dB/m)	QP Result (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
1	76.653	20.3	8.3	28.6	40.0	-11.4
2	119.419	13.2	14.6	27.8	43.5	-15.7
3	185.511	16.5	12.0	28.5	43.5	-15.0
4	298.257	11.5	16.9	28.4	46.0	-17.6
5	830.882	11.0	26.6	37.6	46.0	-8.4
6	898.918	5.0	27.6	32.6	46.0	-13.4

EUT :	Model : W483	Status : 11n-HT40-V	
Condition : Vertical	Date : 2008/6/29	Temp. : 26℃	Humi. : 69%



	Freq (MHz)	QP Level (dBuV)	Factor (dB/m)	QP Result (dBuV/m)	QP Limit (dBuV/m)	QP Margin (dB)
1	30.000	14.4	19.7	34.1	40.0	-5.9
2	43.607	23.4	13.1	36.5	40.0	-3.5
3	76.653	27.7	8.3	36.0	40.0	-4.0
4	162.184	17.5	12.0	29.5	43.5	-14.0
5	790.060	9.0	26.0	35.0	46.0	-11.0
6	801.723	9.5	26.2	35.7	46.0	-10.3

10.4.2.4.2 Emission frequencies above 1 GHz

a) Channel 1

Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	54.0	50.8	55.2	50.4	-12.3	42.9	38.5	74.0	54.0
1601.282	---	---	52.9	50.1	-11.0	41.9	39.1	74.0	54.0
2388.782	66.3	50.7	67.9	52.7	-6.8	61.1	45.9	74.0	54.0

b) Channel 6

Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	53.6	50.4	54.7	52.6	-12.3	42.4	40.3	74.0	54.0
1601.282	---	---	56.8	52.6	-11.0	45.8	41.6	74.0	54.0
2388.782	60.1	46.8	62.2	48.6	-6.8	55.4	41.8	74.0	54.0

c) Channel 11

Fundamental Frequency: 2462 MHz

Frequency	Reading (dBuV)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
1441.987	53.7	50.3	53.0	50.1	-12.3	41.4	38.0	74.0	54.0
1601.282	---	---	53.2	47.3	-11.0	42.2	36.3	74.0	54.0
2388.782	59.2	46.6	62.3	47.8	-6.8	55.5	41.0	74.0	54.0

Note:

1. Place of Measurement: Measuring site of the ETC.
2. If the data table appeared symbol of "***" means the value was too low to be measured.
3. The estimated measurement uncertainty of the result measurement is
   ±4.6dB (30MHz≦f<300MHz).
   ±4.4dB (300MHz≦f≦1000MHz).
4. Remark “---” means that the emissions level is too low to be measured.

10.4.2.5 IEEE 802.11b

Test Date: Jul. 18, 2008 Temperature: 27℃ Humidity: 63%

Operation Mode: TX

Operation Channel	Test Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.
1	2389.231	29.4	16.3	34.3	18.0	30.3	64.6	48.3	74.0	54.0
11	2483.579	30.6	16.8	35.2	21.6	30.3	65.5	51.9	74.0	54.0

10.4.2.6 IEEE 802.11g

Test Date: Jul. 18, 2008 Temperature: 27℃ Humidity: 63%

Operation Mode: TX

Operation Channel	Test Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.
1	2389.872	30.4	16.7	33.1	18.1	30.3	63.4	48.4	74.0	54.0
11	2483.553	30.7	16.5	32.7	18.2	30.3	63.0	48.5	74.0	54.0

Note :

1. Remark "---" means that the emissions level is too low to be measured.
2. The result is the highest value of radiated emission from restrict band of 2310 ~ 2390 MHz and 2483.5 ~ 2500 MHz.

10.4.2.7 IEEE 802.11n, HT20

Test Date: Jul. 18, 2008 Temperature: 27℃ Humidity: 63%

Operation Mode: TX

Operation Channel	Test Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.
1	2389.103	29.8	16.7	33.2	18.1	30.3	63.5	48.4	74.0	54.0
11	2483.553	30.3	16.3	32.8	17.8	30.3	63.1	48.1	74.0	54.0

10.4.2.8 IEEE 802.11n, HT40

Test Date: Jul. 18, 2008 Temperature: 27℃ Humidity: 63%

Operation Mode: TX

Operation Channel	Test Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Result @3m (dBuV/m) Ave	Limit @3m (dBuV/m) Peak	Limit @3m (dBuV/m) Ave.
3	2389.487	30.8	17.1	32.1	17.6	30.3	62.4	48.4	74.0	54.0
9	2484.055	28.9	15.8	32.2	17.2	30.3	62.5	47.5	74.0	54.0

Note :

1. Remark "---" means that the emissions level is too low to be measured.
2. The result is the highest value of radiated emission from restrict band of 2310 ~ 2390 MHz and 2483.5 ~ 2500 MHz.

10.5 Field Strength Calculation

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

Result = Reading + Corrected Factor

where

Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain