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

Report No.: 13-04-MAS-114-03

Client:	FUJITSU TEN LIMITED
Product:	Car Navigation
Model:	FT0048A
FCC ID:	BABFT0048A
Manufacturer/supplier:	FUJITSU TEN LIMITED
Date test item received:	2013/04/15
Date test campaign completed:	2013/04/30
Date of issue:	2013/05/06

Total number of pages of this test report: 81 pages
Total number of pages of photos: External photos 1 pages
Internal photos 2 pages
Setup photos 1 pages

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Client	: FUJITSU TEN LIMITED
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Manufacturer	: FUJITSU TEN LIMITED
Address	: 2-28, Gosho-dori, 1-chome, Hyogo-ku, Kobe 652-8510 Japan
EUT	: Car Navigation
Trade name	: ----
Model No.	: FT0048A
Power Source	: 12Vdc battery
Regulations applied	: FCC 47 CFR, Part 15 Subpart C

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⑤ FCC Registration Number: 91095, 392735, 278818
⑥ Industry Canada Site Registration Number: IC 2949A-2

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1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT : Car Navigation
b) Trade Name : ----
c) Model No. : FT0048A
d) FCC ID : BABFT0048A

1.2 Characteristics of Device

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

RF chain	1T1R
Frequency Range	IEEE 802.11b/g, 802.11gn HT20: 2412MHz~2462MHz
Channel Spacing	IEEE 802.11b/g, 802.11gn HT20: 5MHz
Channel Number	IEEE 802.11b/g, 802.11gn HT20:11 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 802.11gn HT20: 65, 58.5, 52, 39, 26, 19.5, 13, 6.5Mbps
Type of Modulation	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11gn HT20: OFDM (64QAM, 16QAM, QPSK, BPSK)

1.3 Test Methodology

All testing were performed according to the procedures in ANSI C63.10 (2009) and FCC CFR 47 Part 2 and Part 15 and KDB 558074 D01 v02.

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.

1.5 Test Summary

Requirement	FCC Paragraph #	Test Pass
Antenna Requirement	15.203	☒
Conducted Emission	15.207	N/A
Emission Bandwidth	15.247 (a)(2)	☒
Output Power Requirement	15.247 (b)	☒
Power Density Requirement	15.247 (e)	☒
Spurious Emissions	15.247 (d)	☒
Radiated Emission	15.247 (d)	☒

Note: The test setup and measurement method for conductive output power measurements shown in this test report is different to the "Peak Output Power" test. Certain measurement uncertainty of peak power may be expected with the use of different power detection method or measuring equipment. Therefore, the conductive output power measurement results provided in this test report may be different to the specification of the device under test.

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 μ V	Average dB μ V
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 μ V/m	Radiated μ V/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 (d) , 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 (e) , 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.

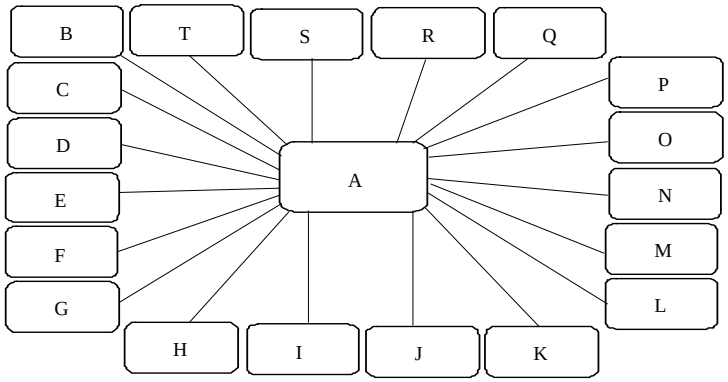
3. SYSTEM TEST CONFIGURATION

3.1 Devices for Tested System

No	Device	Manufacture	Model No.	Cable Description
A	* Car Navigation	FUJITSU TEN LIMITED	FT0048A	----
B	Display-1	N/A	N/A	3.82m*1, Unshielded Power Line 1.94m*1, Shielded Signal Line
C	Display-2	N/A	N/A	3.4m*1, Unshielded Power Line 1.94m*1, Shielded Signal Line
D	Display-3(RSE)	N/A	N/A	3.4m*1, Unshielded Power Line 3.5m*1, Unshielded Signal Line
E	Amplifier	N/A	N/A	3.4m*1, Unshielded Power Line 3.5m*1, Unshielded Signal Line
F	USB BOX	N/A	N/A	3.4m*1 Unshielded Signal Line
G	Air Conditioner ECU	TOYOTA	N/A	3.4m*1 Unshielded Signal Line
H	DCM	TOYOTA	N/A	3.46m*1 Unshielded Signal Line
I	VTR Jack	N/A	N/A	3.4m*1 Unshielded Signal Line
J	GPS Antenna	N/A	N/A	4.5m*1, Shielded Signal Line
K	XM Antenna	N/A	N/A	9.5m*1, Shielded Signal Line
L	USB / AUX	N/A	N/A	3.0m*1, Shielded Signal Line
M	USB Dongle	Transcend	N/A	3.0m*1, Shielded Signal Line
N	iPod none	Apple	N/A	1.8m*1 Shielded Signal Line(Audio)
O	Speaker-1	N/A	N/A	4.3m*1 Unshielded Signal Line
P	Speaker-2	N/A	N/A	3.4m*1 Unshielded Signal Line
Q	Steering SW	N/A	N/A	3.4m*1 Unshielded Signal Line
R	FM Antenna	N/A	N/A	4.53m*1 Unshielded Signal Line
S	Battery	YUASA	N/A	3.83m*1, Unshielded Power Line
T	Microphone	N/A	N/A	3.4m*1 Unshielded Signal Line

Remark

1. "*" means equipment under test.



2.

Test Software:	Tx Batch File		
Power setting:	Mode	Channel	Setting
	b	Low	N/A
		Mid	N/A
		High	N/A
	g	Low	N/A
		Mid	N/A
		High	N/A
	gn HT20	Low	N/A
		Mid	N/A
		High	N/A

3.2 Dscription of Test modes

3.2.1 IEEE 802.11b, 802.11g, 802.11gn 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 rate is the worse case for full testing.

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

IEEE 802.11gn HT20 mode: MCS0 6.5 Mbps data rateis the worse case for full testing.

3.2.2 Test Mode Description

3.2.2.1 Modulation Type

Test Mode	Modulation	Note
A	IEEE 802.11b	-
B	IEEE 802.11g	-
C	IEEE 802.11gn HT20 (note1)	-

Mode	IEEE 802.11b/g/gn HT20
Test Channel	Frequency (MHz)
Channel Low (L)	2412
Channel Mid (M)	2437
Channel High (H)	2462

3.2.2.2 Test Mode and Worse Case Determination

Item	Test Item	Test Mode	Test Frequency (MHz)
1	Conducted Emission	-	-
2	Emission Bandwidth	A，B，C	L，M，H
3	Output Power Requirement	A，B，C	L，M，H
4	Power Density Requirement	A，B，C	L，M，H
5	Spurious Emissions	A，B，C	L，M，H
6	Radiated Emission	A，B，C	L，M，H
6.1	Radiated Emission (below 1GHz)	B (note1)	M (Worse Case1)
6.2	Radiated Emission (above 1GHz)	A，B，C	L，M，H

note:

1. The worse case is determined as the modulation with highest output power.
2. The worse case is determined as the adaptor:1 with highest noise conducted emission. Choose that for final testing and record the result.

4 CONDUCTED EMISSION MEASUREMENT

This EUT is excused from investigation of conducted emission, for it is powered by battery only. According to §15.207 (d), measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

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

The antennas is a Surface mounting Antenna

Antenna Type	Inverted-F
Peak Antenna Gain	1.53 dBi

The directional gain of antenna doesn't greater than 6 dBi, the power won't be reduced.

6 EMISSION BANDWIDTH MEASUREMENT

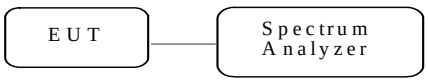
6.1 Standard Applicable

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 1. 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 1: Emission bandwidth measurement configuration.



6.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Agilent	E4446A	09/27/2013

6.4 Measurement Data

6.4.1 IEEE 802.11b

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	11.1666	500	Page 19
M	10.1666	500	Page 20
H	9.2500	500	Page 21

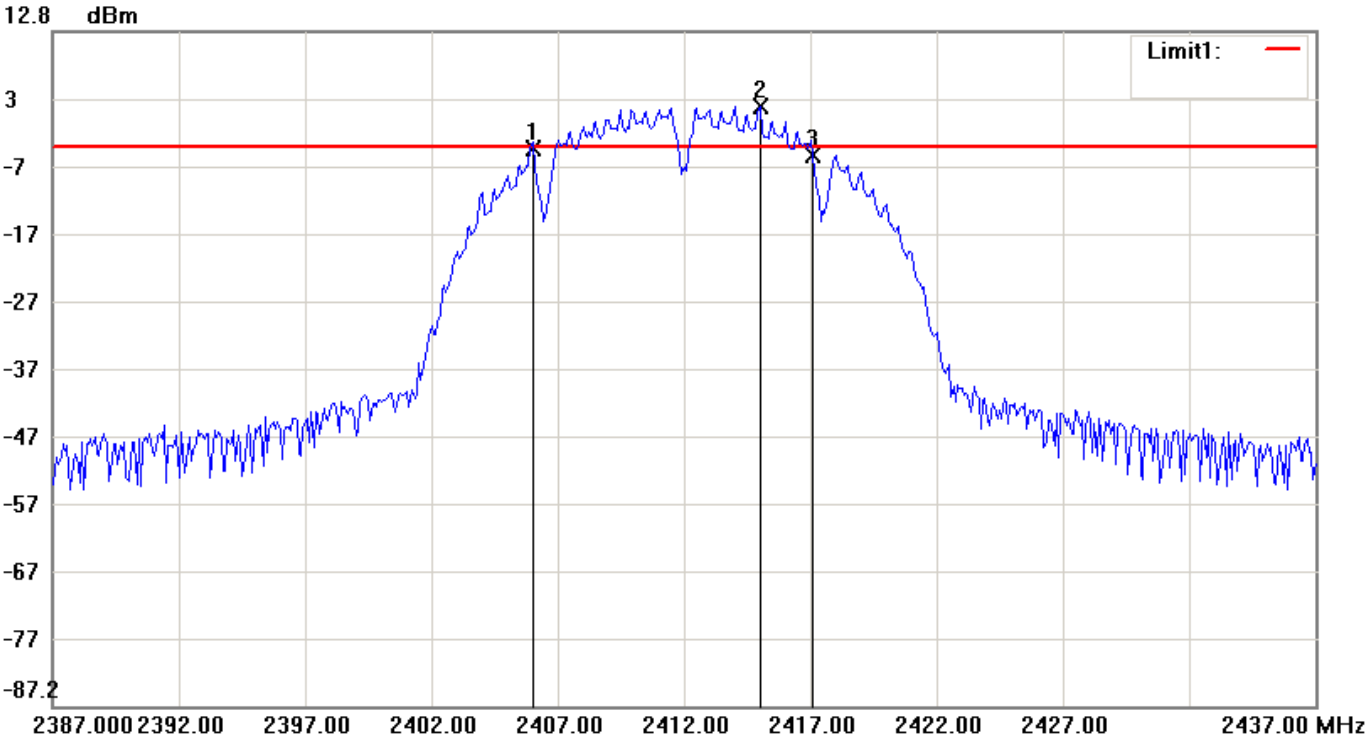
Note:

1. Please refer to page 19 to page 21 for chart

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

File: FT0048_B **Data: #1** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 10:22:04 **Humidity: 54 %**



Condition: **-4.32dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 20dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

Test Mode:

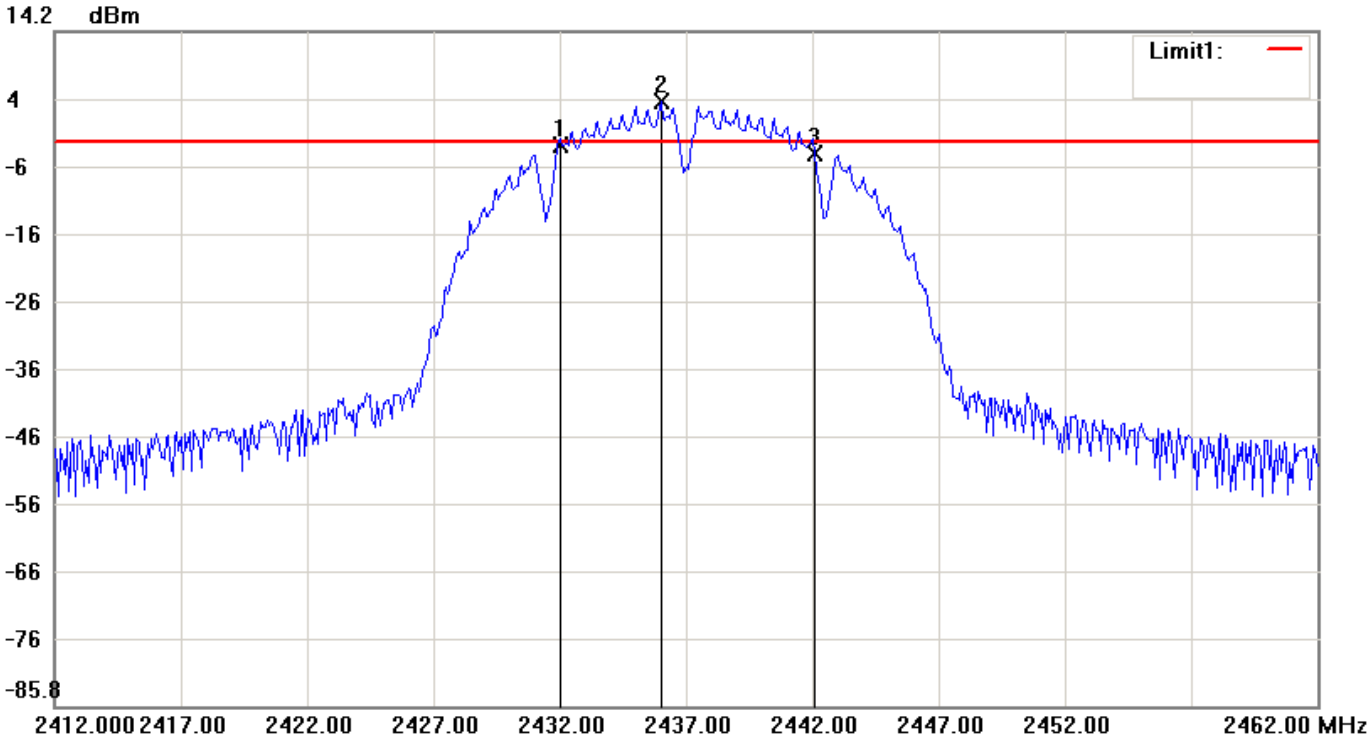
Note: **FCC-802.11b Channel 01-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2405.91670	-4.59
2	2415.00000	1.68
3	2417.08330	-5.61

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	11.1666	-1.02

File: FT0048_B **Data: #6** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 10:31:40 **Humidity: 54 %**



Condition: **-2.18dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 20dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

Test Mode:

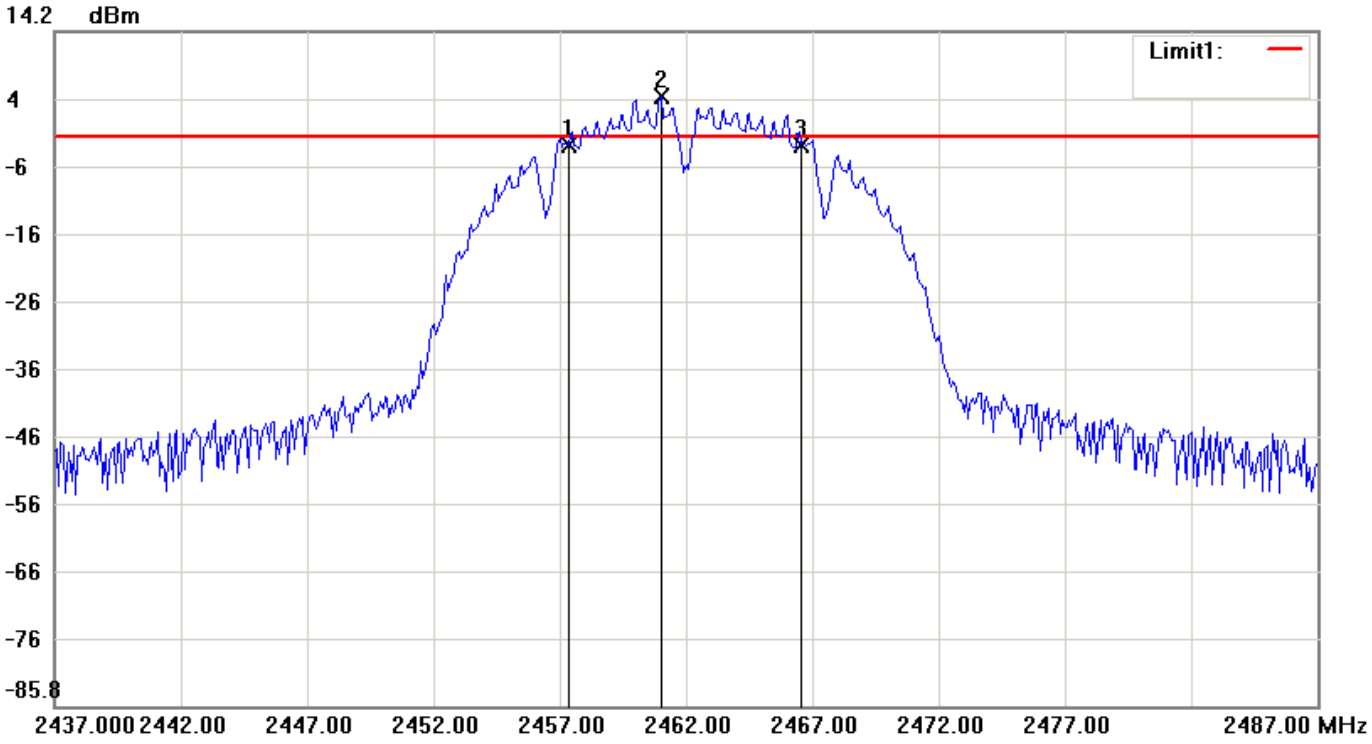
Note: **FCC-802.11b Channel 06-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2431.91670	-2.65
2	2436.00000	3.82
3	2442.08330	-4.01

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	10.1666	-1.36

File: FT0048_B **Data: #10** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 10:41:16 **Humidity: 54 %**



Condition: **-1.36dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 20dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

Test Mode:

Note: **FCC-802.11b channel 11-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2457.33330	-2.58
2	2461.00000	4.64
3	2466.58330	-2.57

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	9.25	0.01

6.4.2 IEEE 802.11g

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	16.1667	500	Page 23
M	16.1667	500	Page 24
H	16.4167	500	Page 25

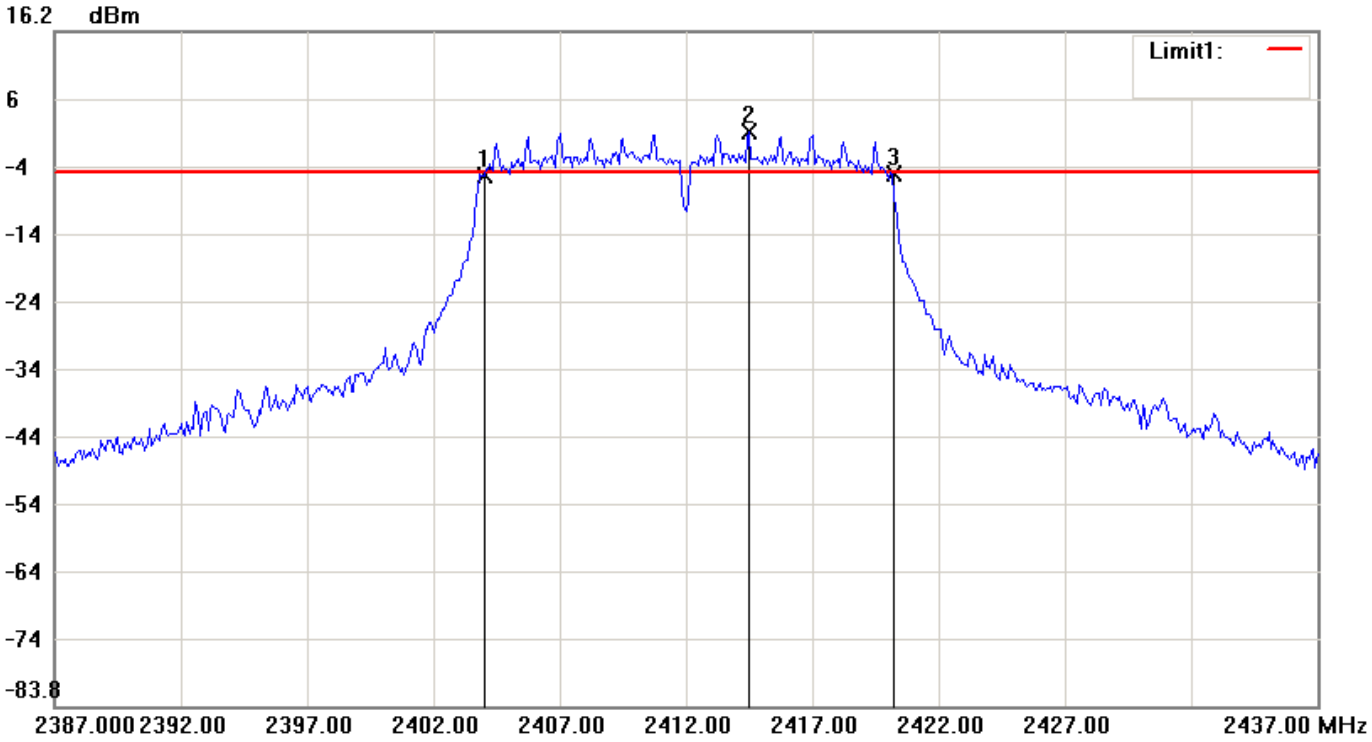
Note:

1.Please refer to page 23 to page 25 for chart

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

File: FT0048_G **Data: #1** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:27:38 **Humidity: 54 %**



Condition: **-4.81dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 20dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

Test Mode:

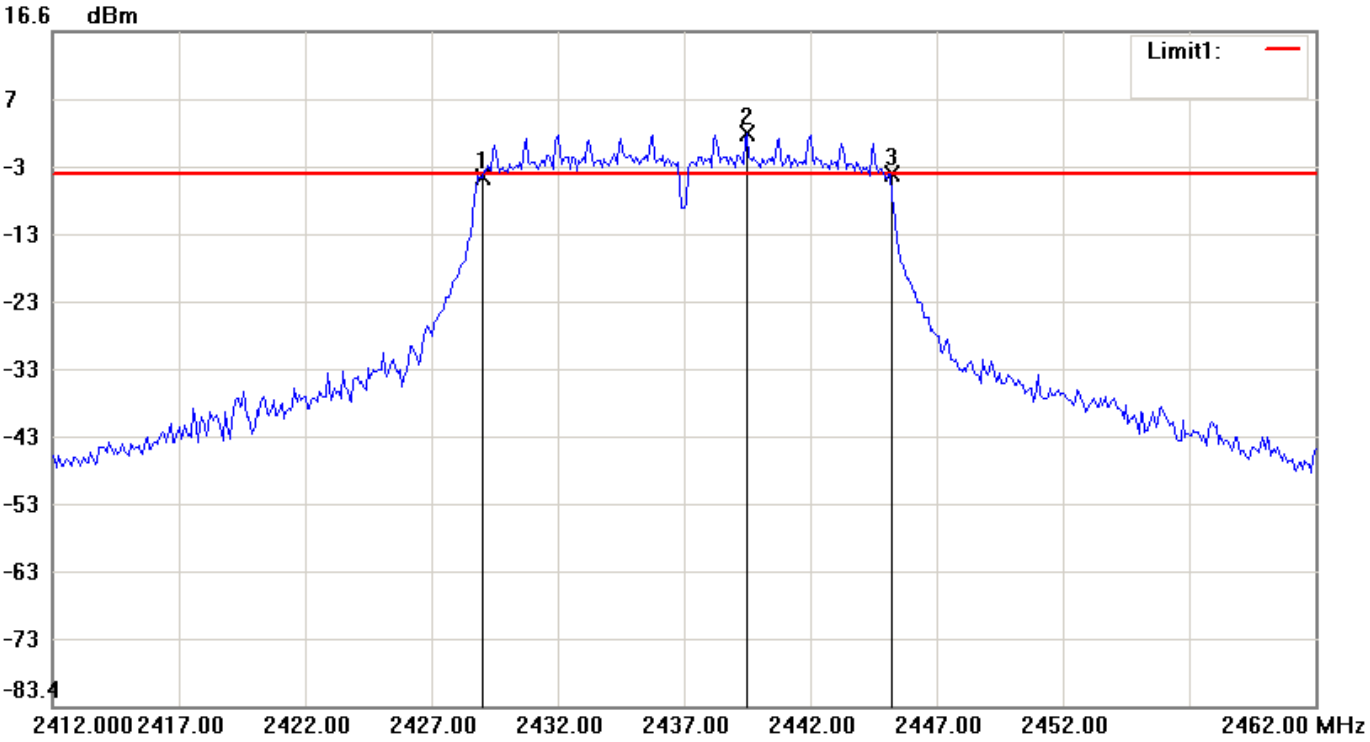
Note: **FCC-802.11g Channel 01-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2404.00000	-5.15
2	2414.50000	1.19
3	2420.16670	-4.93

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	16.1667	0.22

File: FT0048_G **Data: #6** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:36:24 **Humidity: 54 %**



Condition: **-4.57dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 20dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

Test Mode:

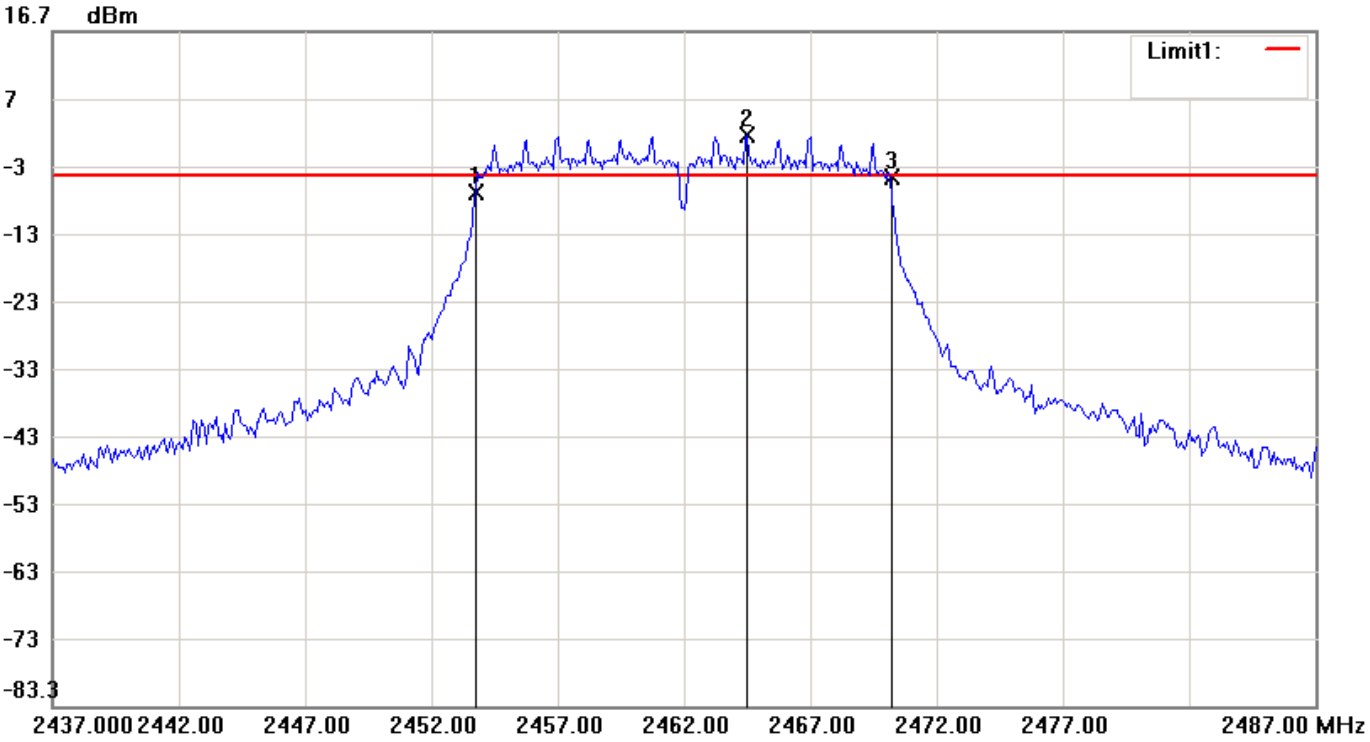
Note: **FCC-802.11g Channel 06-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2429.00000	-4.94
2	2439.50000	1.43
3	2445.16670	-4.64

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	16.1667	0.3

File: FT0048_G **Data: #10** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:49:54 **Humidity: 54 %**



Condition: **-4.68dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 20dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

Test Mode:

Note: **FCC-802.11g Channel 11-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2453.75000	-7.08
2	2464.50000	1.32
3	2470.16670	-4.88

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	16.4167	2.2

6.4.3 IEEE 802.11gn, HT20

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	17	500	Page 27
M	17	500	Page 28
H	17	500	Page 29

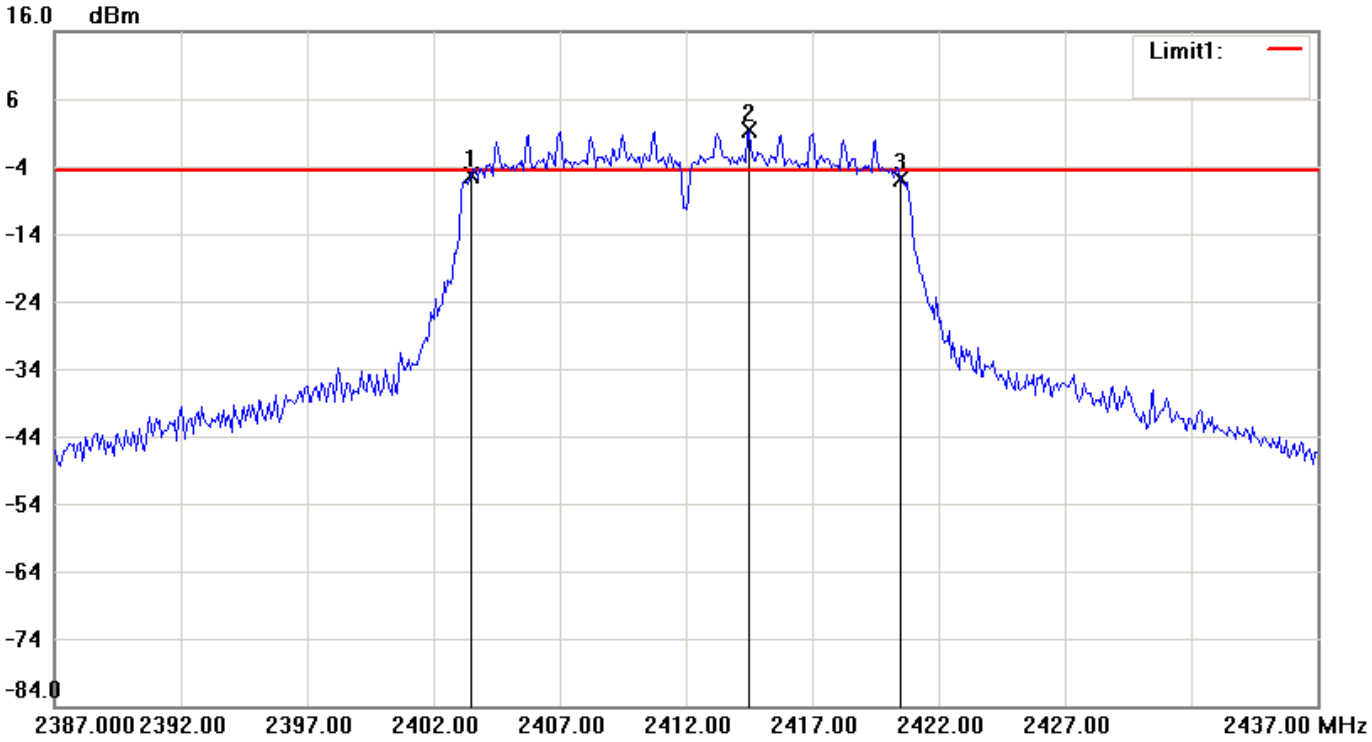
Note:

1.Please refer to page 27 to page 29 for chart

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

File: FT0048_HT20 Data: #1 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:14:16 **Humidity: 54 %**



Condition: **-4.7dBm** **RF Conducted**

EUT: **Sweep Time: 500ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

Test Mode:

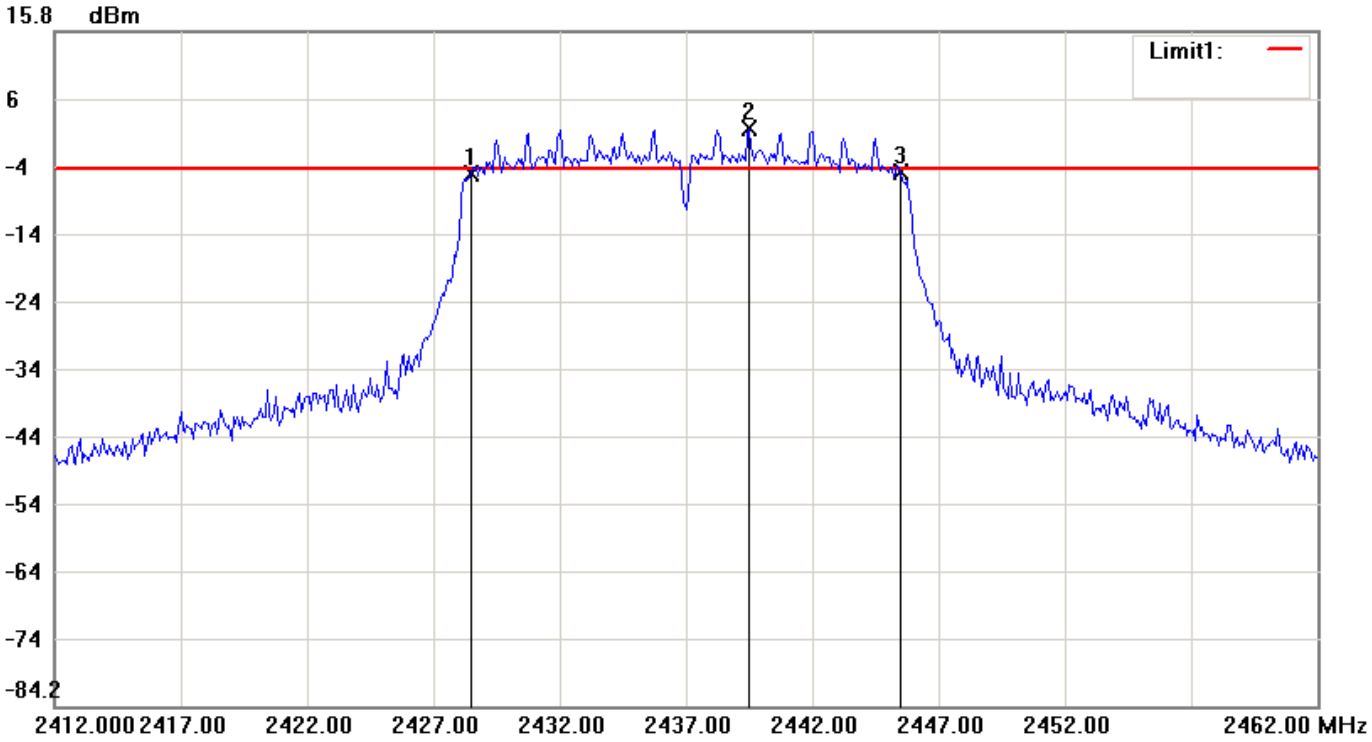
Note: **FCC-802.11gn_HT20 Channel 01-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2403.50000	-5.45
2	2414.50000	1.30
3	2420.50000	-5.83

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17	-0.38

File: FT0048_HT20 Data: #6 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:22:49 **Humidity: 54 %**



Condition: **-4.62dBm** **RF Conducted**

EUT: **Sweep Time: 500ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

Test Mode:

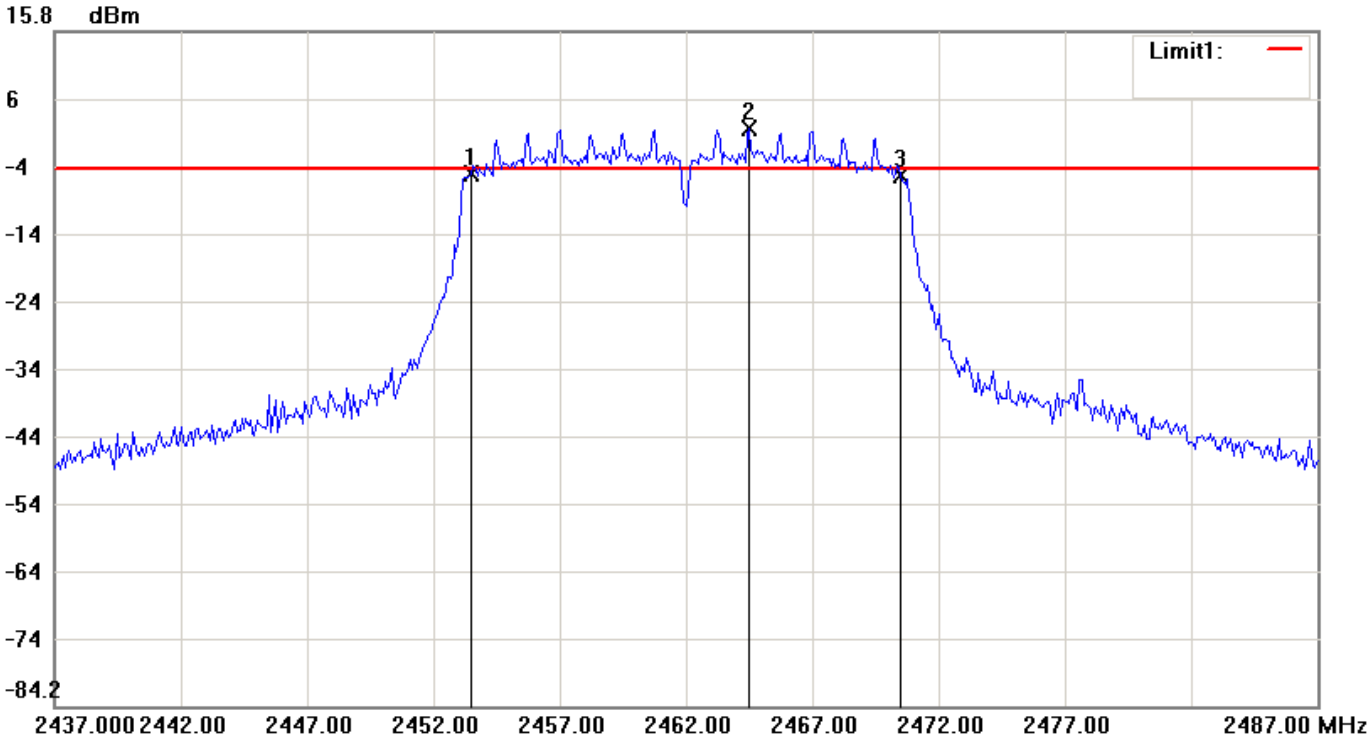
Note: **FCC-802.11gn_HT20 Channel 06-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2428.50000	-5.34
2	2439.50000	1.38
3	2445.50000	-4.94

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17	0.4

File: FT0048_HT20 Data: #10 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:30:45 **Humidity: 54 %**



Condition: **-4.62dBm** **RF Conducted**

EUT: **Sweep Time: 500ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

Test Mode:

Note: **FCC-802.11gn_HT20 Channel 11-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2453.50000	-5.26
2	2464.50000	1.38
3	2470.50000	-5.47

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17	-0.21

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. The test is performed in accordance with FCC KDB Publication No. 558074: Guidance on Measurements for Digital Transmission Systems (47 CFR 15.247)
2. Position the EUT as shown in figure 1.

7.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Power Meter	Agilent	N1912A	11/22/2013
Wideband Power Sensor	Agilent	N1922A	11/23/2013

7.4 Measurement Data

7.4.1 IEEE 802.11b

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (dBm)	Chart
L	16.42	30.0	-
M	16.63	30.0	-
H	16.72	30.0	-

Note:

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

7.4.2 IEEE 802.11g

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (dBm)	Chart
L	21.19	30.0	-
M	21.53	30.0	-
H	21.79	30.0	-

Note:

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

7.4.3 IEEE 802.11gn, HT20

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (dBm)	Chart
L	20.84	30.0	-
M	21.10	30.0	-
H	21.49	30.0	-

Note:

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

8 POWER DENSITY MEASUREMENT

8.1 Standard Applicable

According to 15.247(e), 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 1. 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	E4446A	09/27/2013

8.4 Measurement Data

8.4.1 IEEE 802.11b

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

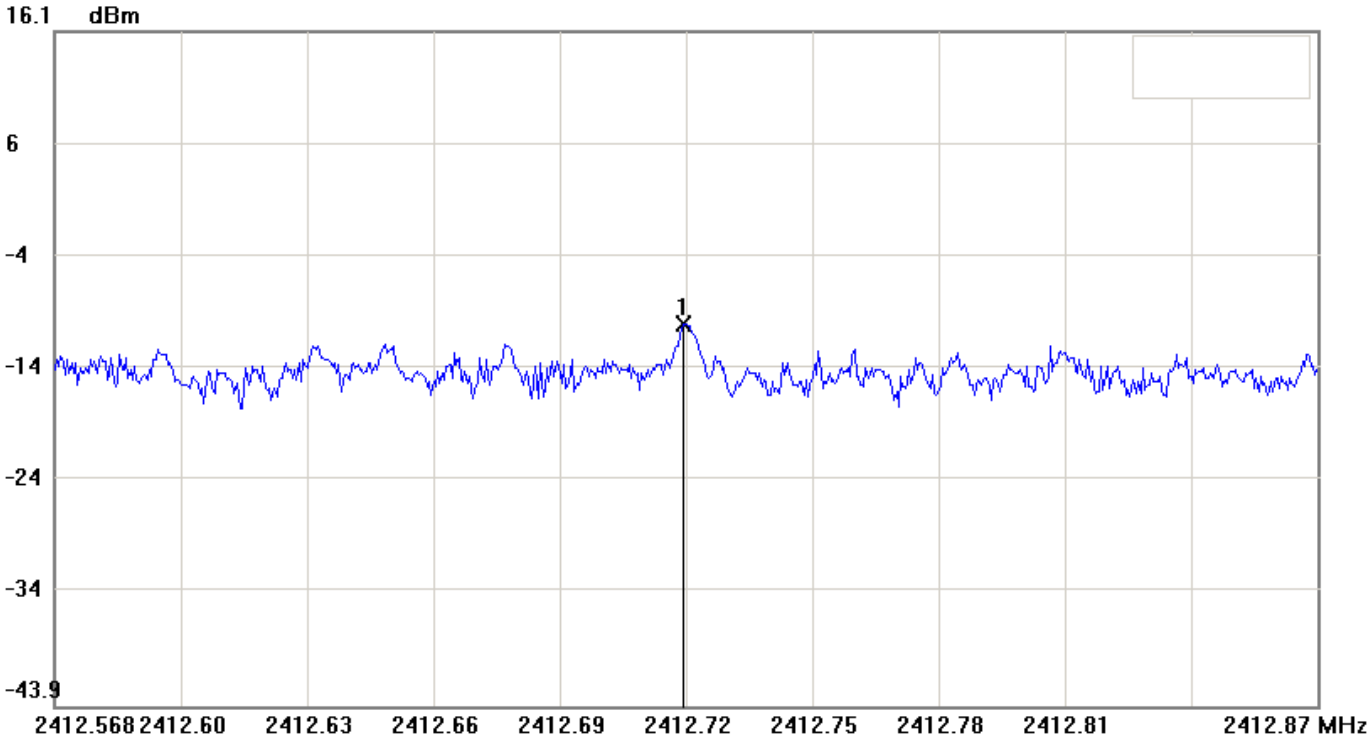
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-9.85	8	Page 36
M	-9.54	8	Page 37
H	-9.42	8	Page 38

Note:

1. *Please refer to page 36 to page 38 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: FT0048_B **Data: #19** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:06:54 **Humidity: 54 %**



Condition: **RF Conducted**

EUT: **Sweep Time: 100000ms Att.: 20dB**

Model: **RBW: 3 KHz VBW: 10 KHz**

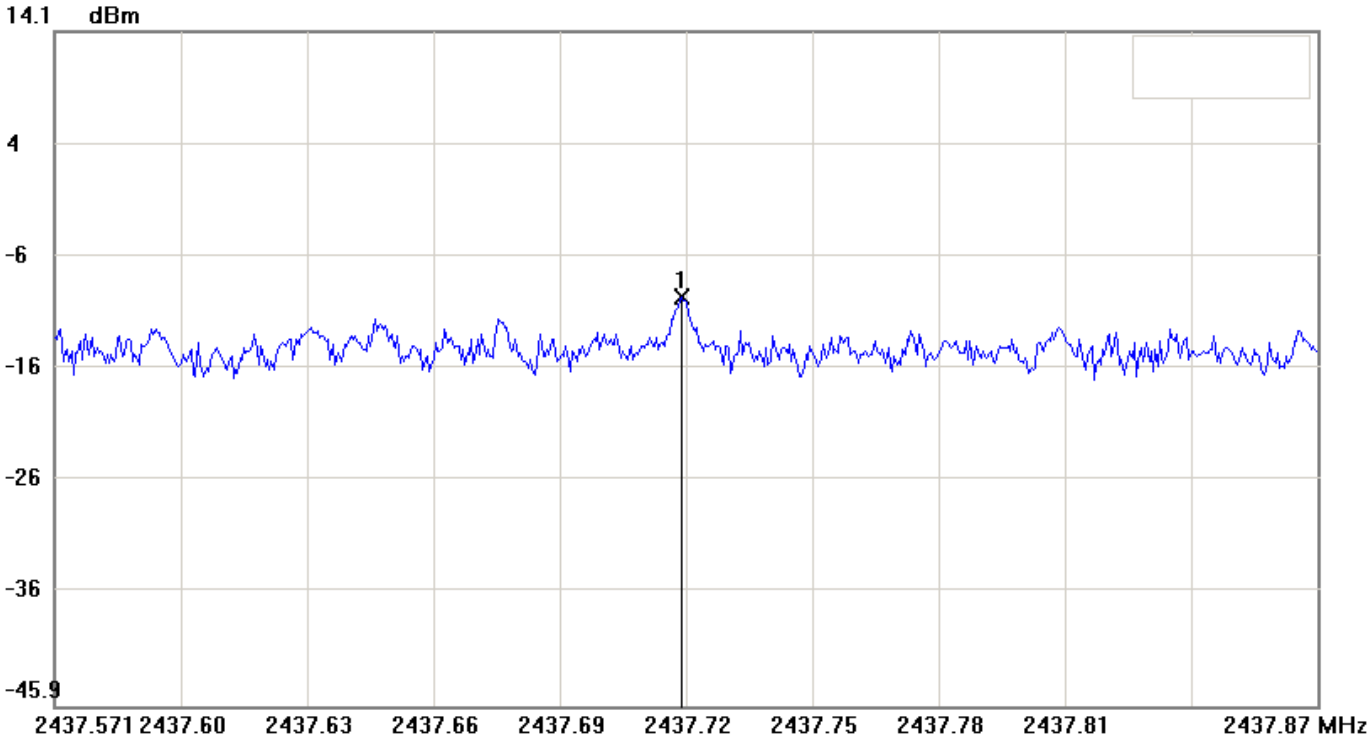
Test Mode:

Note: **FCC-802.11b Channel 01-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2412.71760	-9.85

File: FT0048_B **Data: #9** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 10:36:32 **Humidity: 54 %**



Condition: **RF Conducted**

EUT: **Sweep Time: 100000ms Att.: 20dB**

Model: **RBW: 3 KHz VBW: 10 KHz**

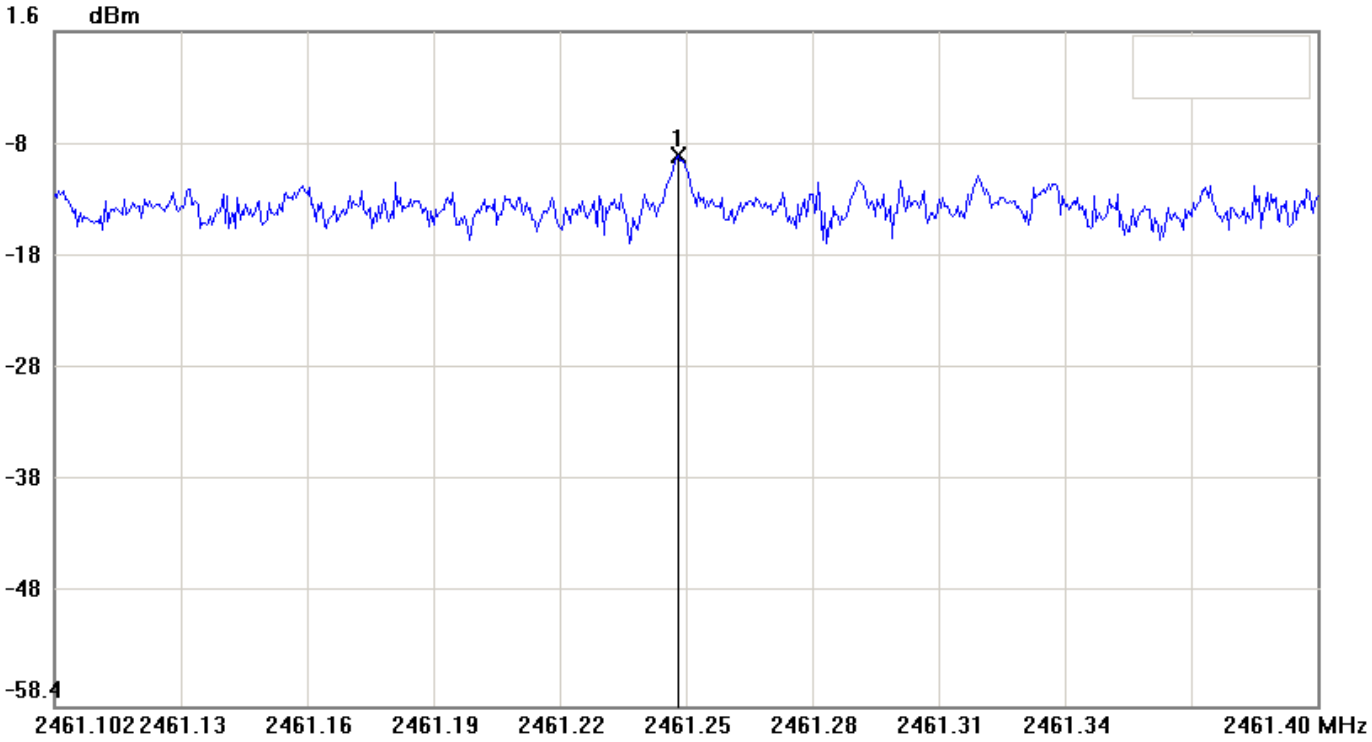
Test Mode:

Note: **FCC-802.11b Channel 06-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2437.71960	-9.54

File: FT0048_B **Data: #25** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:25:02 **Humidity: 54 %**



Condition: **RF Conducted**

EUT: **Sweep Time: 100000ms Att.: 10dB**

Model: **RBW: 3 KHz VBW: 10 KHz**

Test Mode:

Note: **FCC-802.11b Channel 11-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2461.25000	-9.42

8.4.2 IEEE 802.11g

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

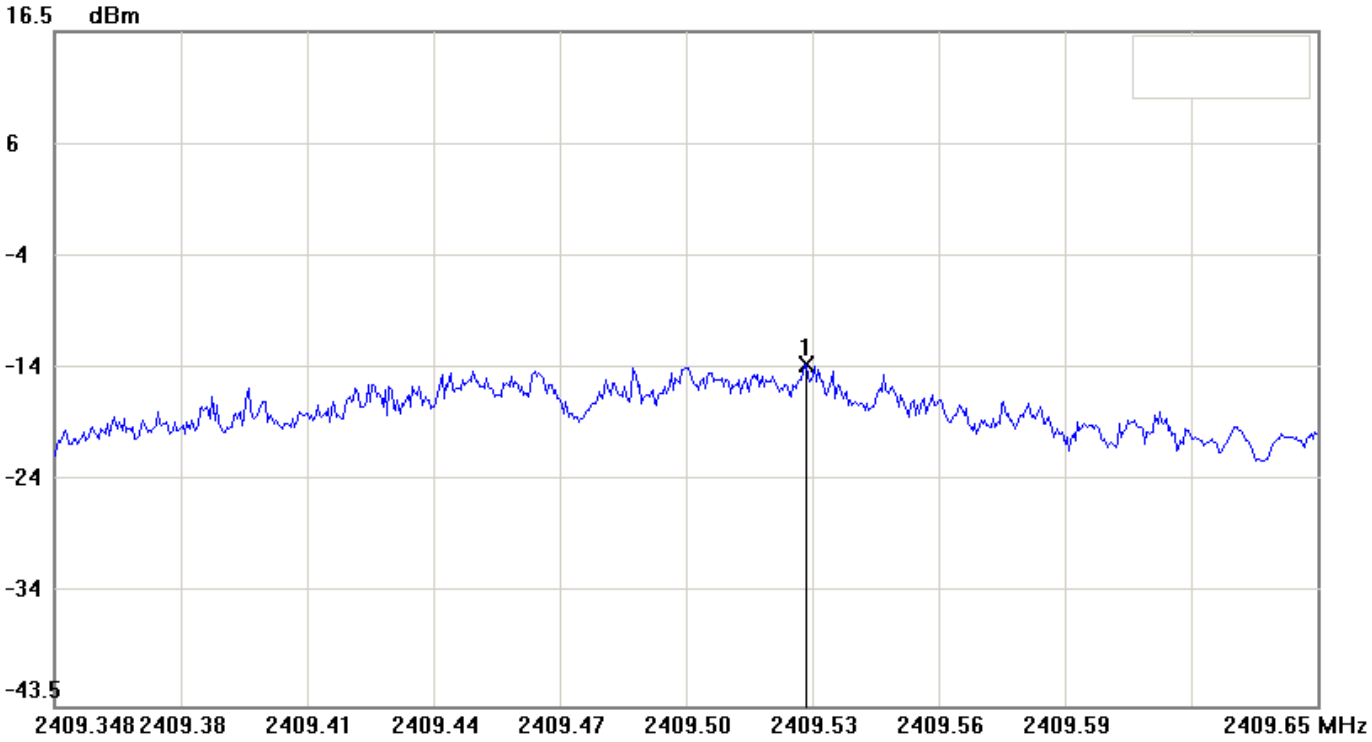
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-13.16	8	Page 40
M	-13.46	8	Page 41
H	-13.26	8	Page 42

Note:

1. *Please refer to page 40 to page 42 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: FT0048_G **Data: #4** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:32:08 **Humidity: 54 %**



Condition: **RF Conducted**

EUT: **Sweep Time: 100000ms Att.: 20dB**

Model: **RBW: 3 KHz VBW: 10 KHz**

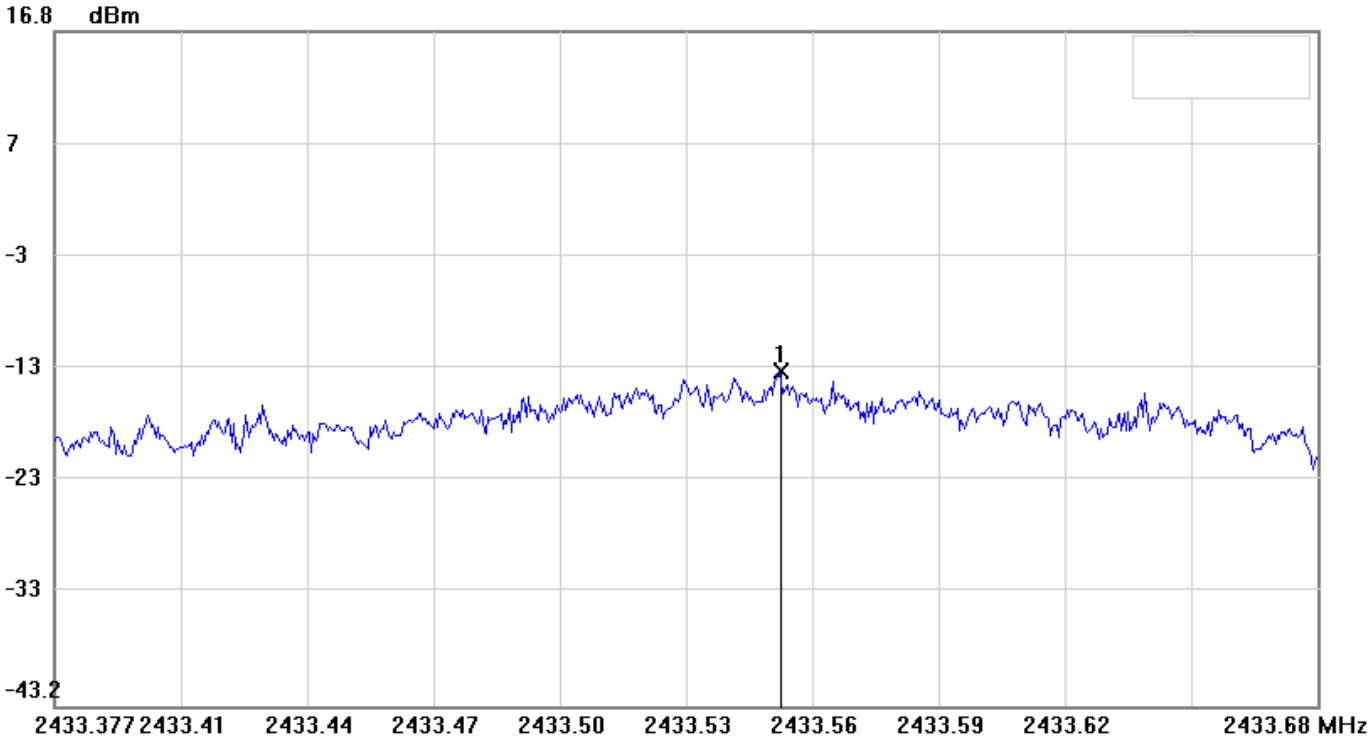
Test Mode:

Note: **FCC-802.11g Channel 01-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2409.52600	-13.16

File: FT0048_G **Data: #9** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:41:01 **Humidity: 54 %**



Condition: **RF Conducted**

EUT: **Sweep Time: 100000ms Att.: 20dB**

Model: **RBW: 3 KHz VBW: 10 KHz**

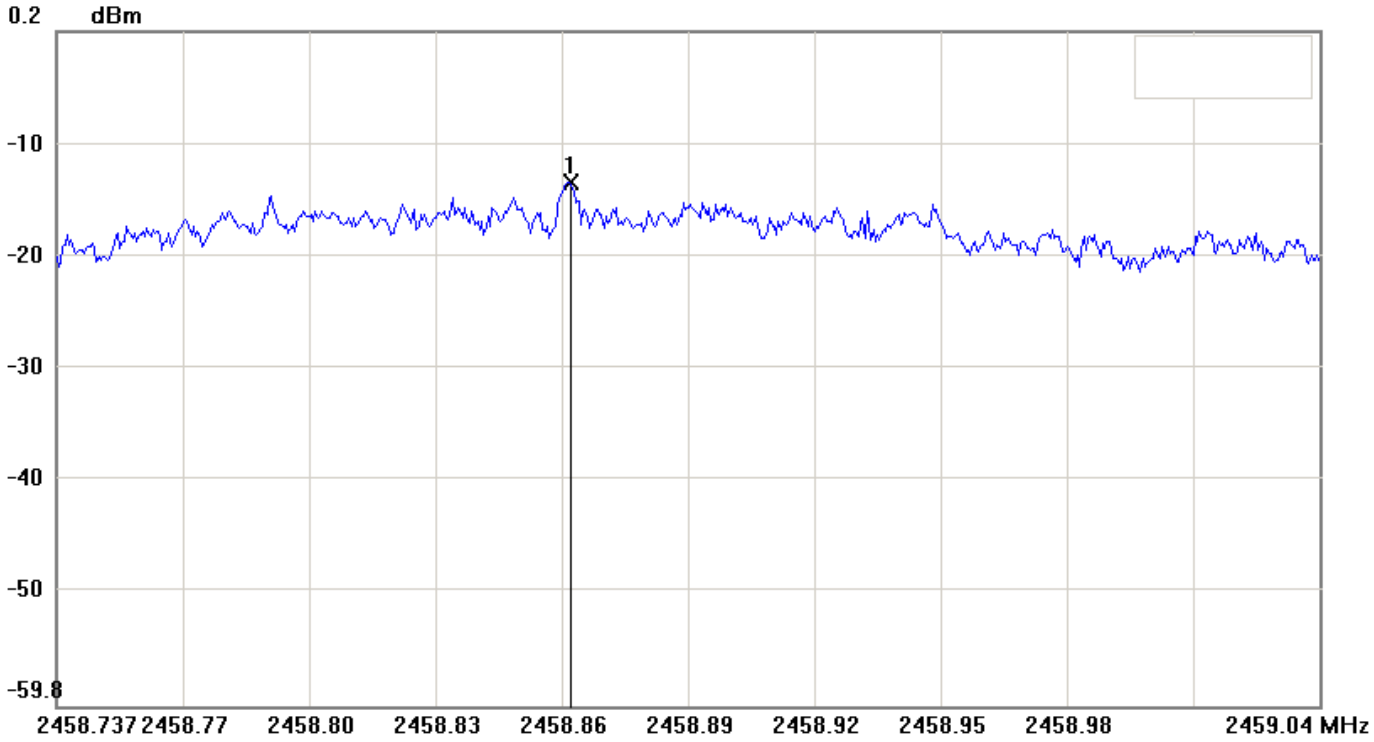
Test Mode:

Note: **FCC-802.11g Channel 06-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2433.54920	-13.46

File: FT0048_G **Data: #13** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:54:46 **Humidity: 54 %**



Condition: **RF Conducted**

EUT: **Sweep Time: 100000ms Att.: 10dB**

Model: **RBW: 3 KHz VBW: 10 KHz**

Test Mode:

Note: **FCC-802.11g Channel 11-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2458.85870	-13.26

8.4.3 IEEE 802.11gn, HT20

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

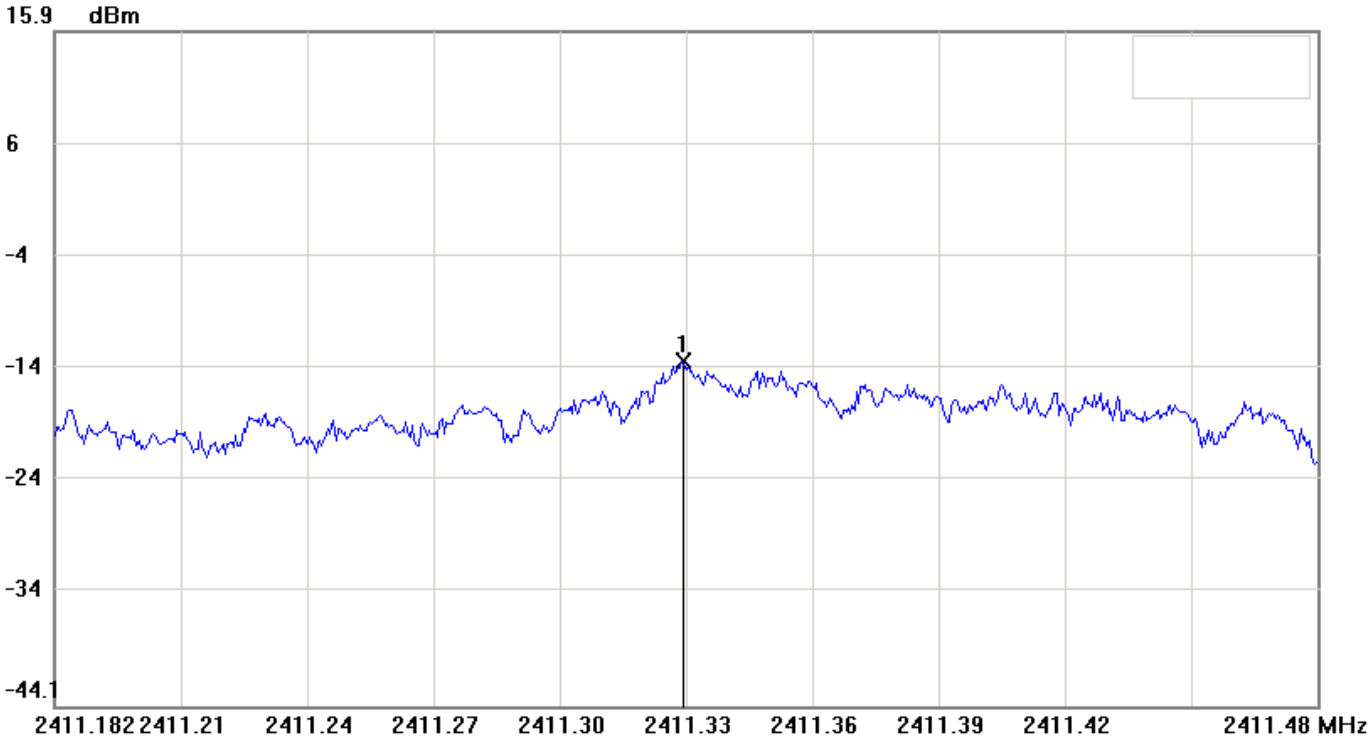
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-13.38	8	Page 44
M	-12.69	8	Page 45
H	-13.33	8	Page 46

Note:

1. *Please refer to page 44 to page 46 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: FT0048_HT20 Data: #4 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:19:09 **Humidity: 54 %**



Condition: **RF Conducted**

EUT: **Sweep Time: 100000ms Att.: 20dB**

Model: **RBW: 3 KHz VBW: 10 KHz**

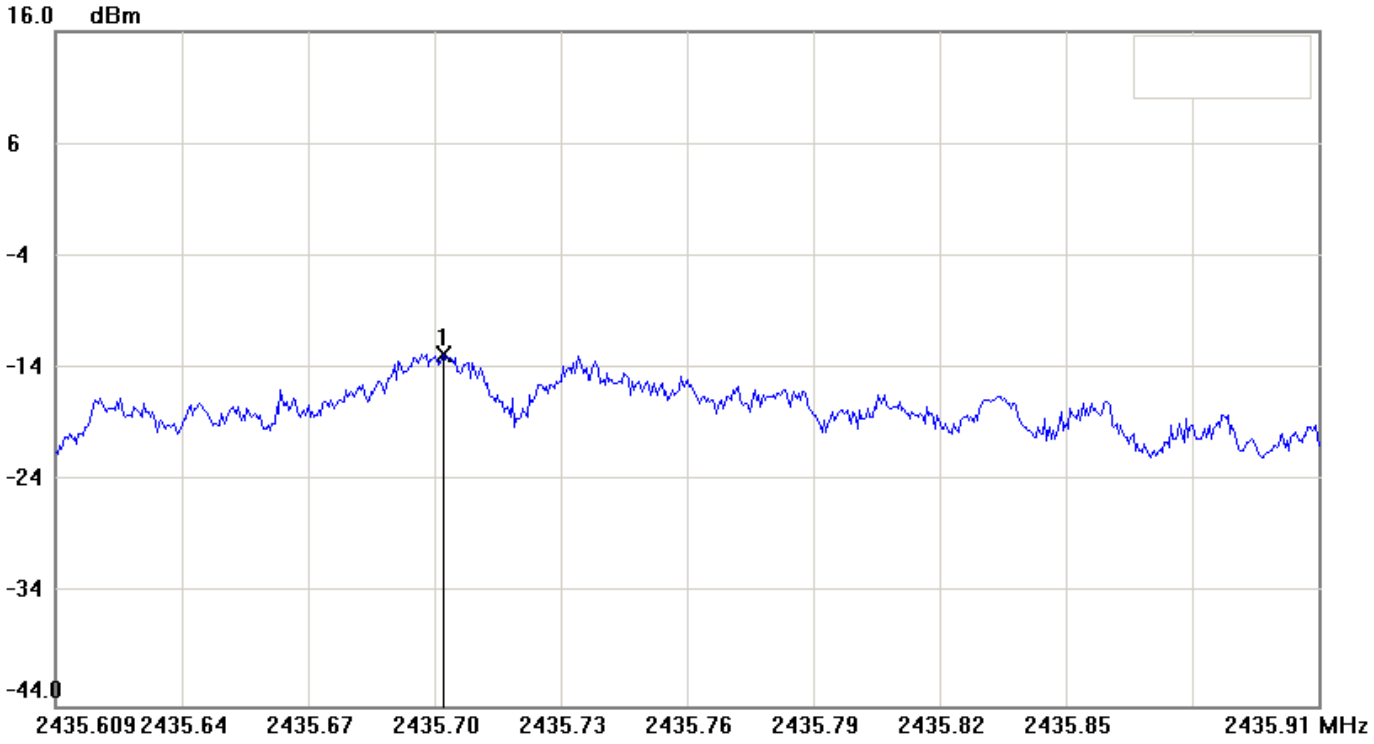
Test Mode:

Note: **FCC-802.11gn_HT20 Channel 01-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2411.33140	-13.38

File: FT0048_HT20 Data: #9 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:27:34 **Humidity: 54 %**



Condition: **RF Conducted**

EUT: **Sweep Time: 100000ms Att.: 20dB**

Model: **RBW: 3 KHz VBW: 10 KHz**

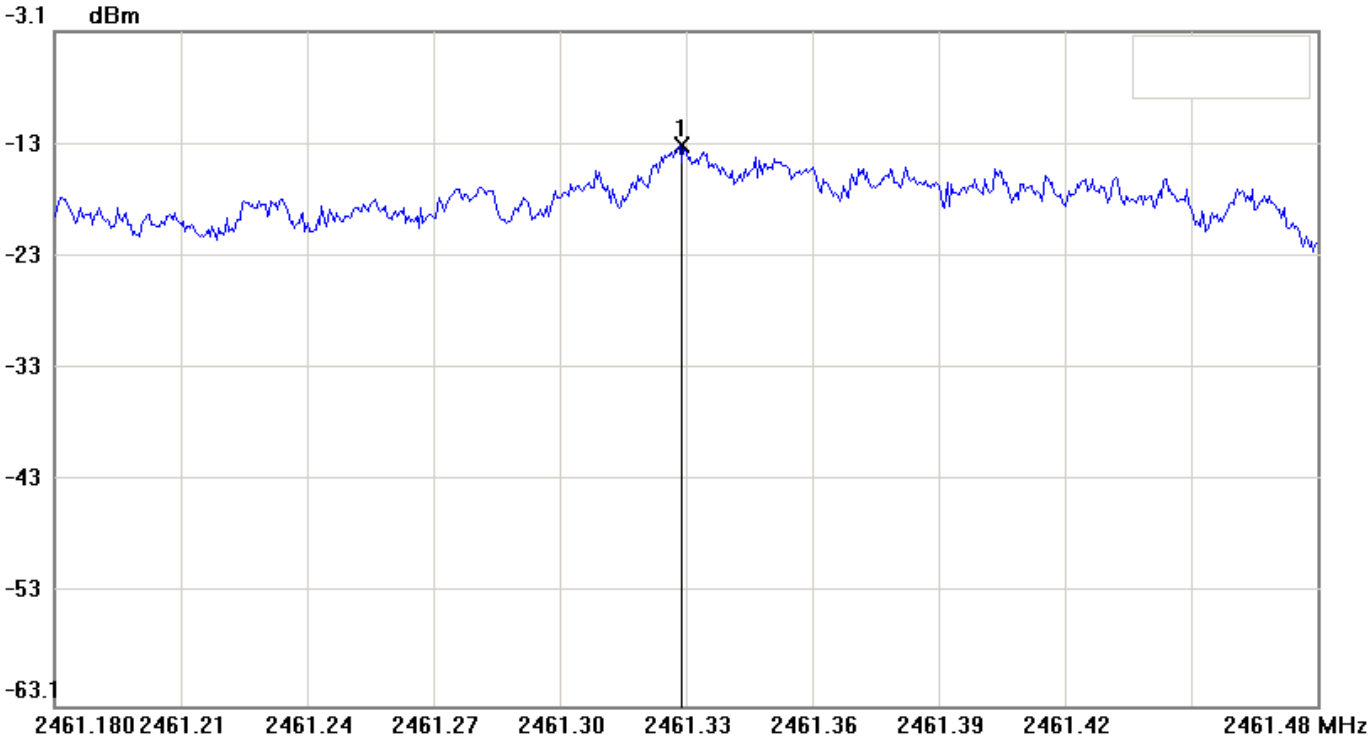
Test Mode:

Note: **FCC-802.11gn_HT20 Channel 06-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2435.70120	-12.69

File: FT0048_HT20 Data: #13 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:35:37 **Humidity: 54 %**



Condition: **RF Conducted**

EUT: **Sweep Time: 100000ms Att.: 10dB**

Model: **RBW: 3 KHz VBW: 10 KHz**

Test Mode:

Note: **FCC-802.11gn_HT20 Channel 11-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2461.32900	-13.33

9 SPURIOUS EMISSION - RF CONDUCTED MEASUREMENT

9.1 Standard Applicable

According to 12.247 (d) , 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 1. 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	E4446A	09/27/2013

9.4 Measurement Data

9.4.1 IEEE 802.11b

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

Channel	Frequency(MHz)	Chart
1	2412	Page 49, Page 51
6	2437	Page 52
11	2462	Page 50, Page 53

Frequency Band: 2400 MHz ~ 2483.5 MHz
All out-of –band conducted emissions were more than 20dB below the carrier.

Note: 1. Please refer to page 49 to page 53 for chart
2. An external attenuator is used as part of the test system for these measurements, the attenuation introduced by the external attenuator has not been explicitly compensated in the measured power level as it is irrelevant to these specific measurement results.

9.4.2 IEEE 802.11g

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

Channel	Frequency(MHz)	Chart
1	2412	Page 54, Page 56
6	2437	Page 57
11	2462	Page 55, Page 58

Frequency Band: 2400 MHz ~ 2483.5 MHz
All out-of –band conducted emissions were more than 20dB below the carrier.

Note: 1. Please refer to page 54 to page 58 for chart
2. An external attenuator is used as part of the test system for these measurements, the attenuation introduced by the external attenuator has not been explicitly compensated in the measured power level as it is irrelevant to these specific measurement results.

9.4.3 IEEE 802.11gn, HT20

Test Date: Apr. 25, 2013 Temperature: 20℃ Humidity: 54%

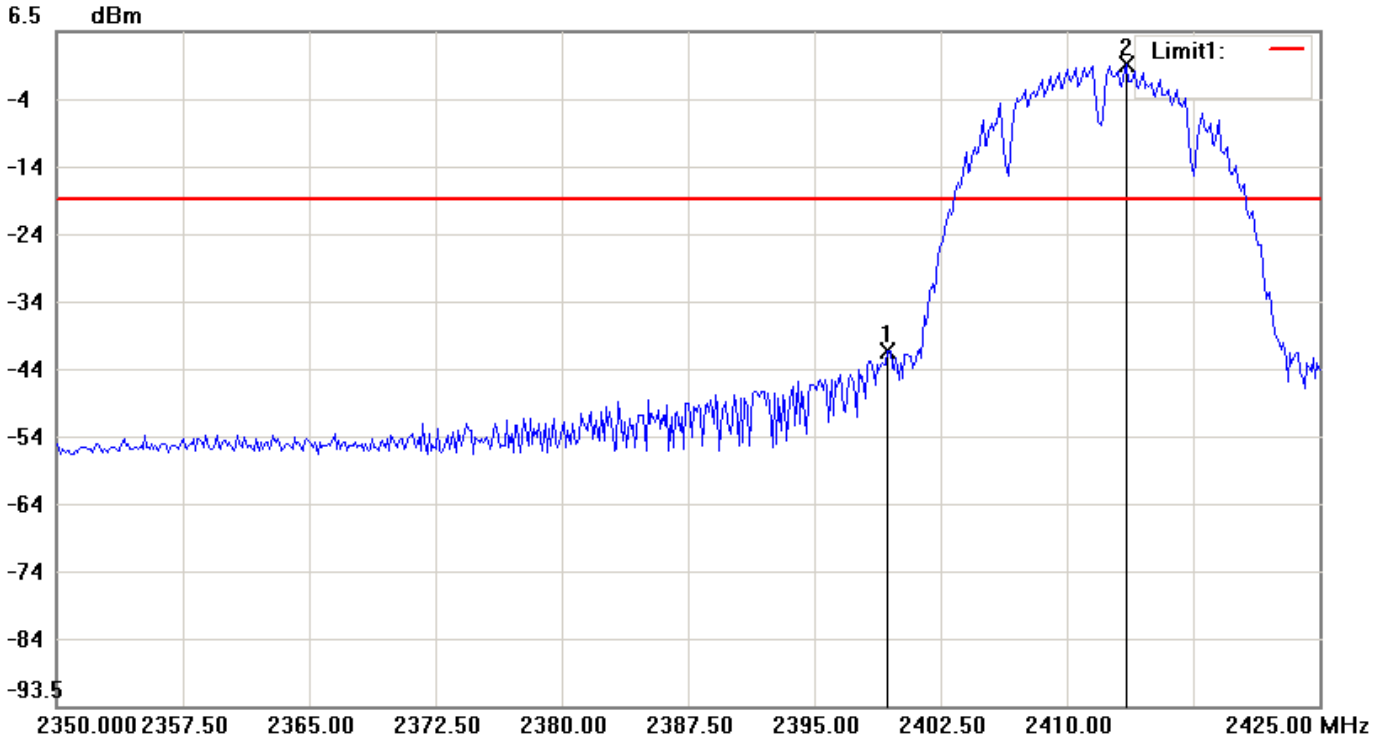
Channel	Frequency(MHz)	Chart
1	2412	Page 59, Page 61
6	2437	Page 62
11	2462	Page 60, Page 63

Frequency Band: 2400 MHz ~ 2483.5 MHz
All out-of –band conducted emissions were more than 20dB below the carrier.

Note: 1. Please refer to page 59 to page 63 for chart
2. An external attenuator is used as part of the test system for these measurements, the attenuation introduced by the external attenuator has not been explicitly compensated in the measured power level as it is irrelevant to these specific measurement results.

File: FT0048_B **Data: #5** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 10:27:19 **Humidity: 54 %**



Condition: **-18.48dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 10dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

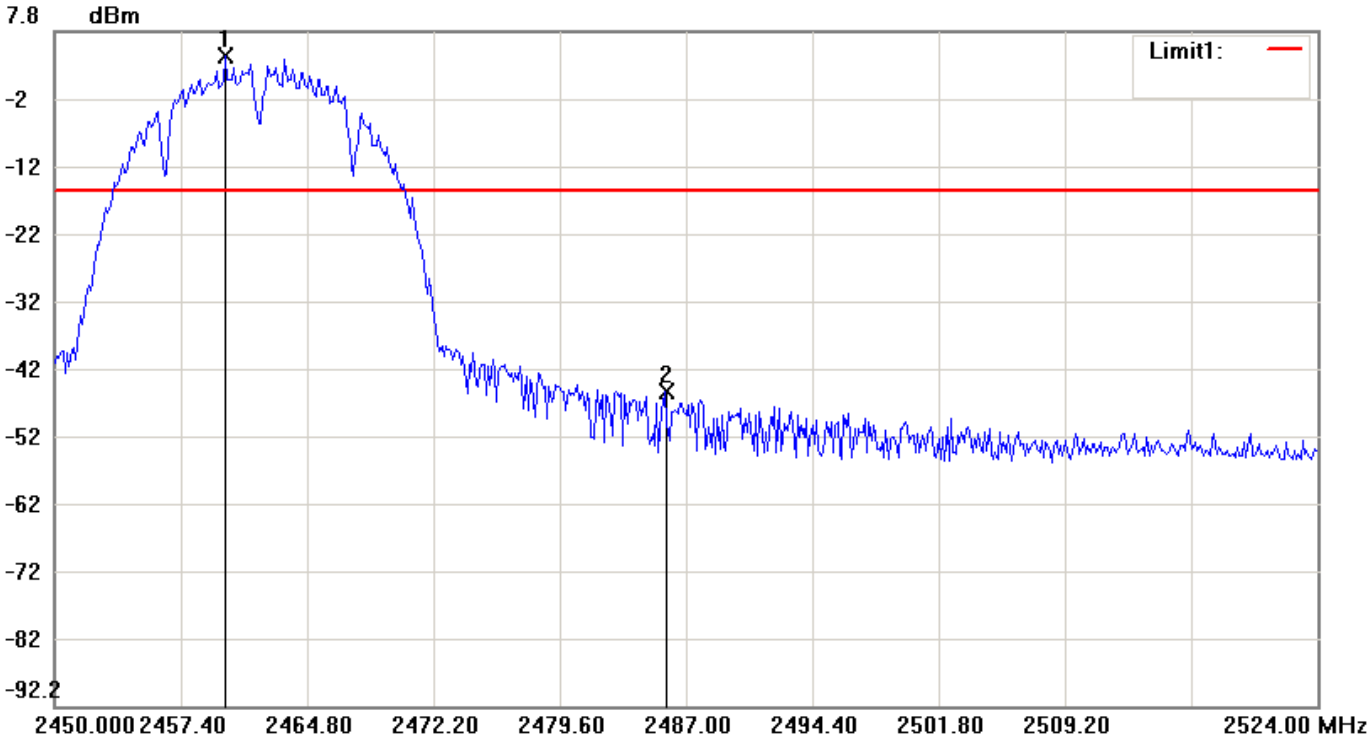
Test Mode:

Note: **FCC-802.11b Channel 01-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	2399.37500	-40.92
2	2413.50000	1.52

File: FT0048_B **Data: #14** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 10:46:54 **Humidity: 54 %**



Condition: **-15.94dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 10dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

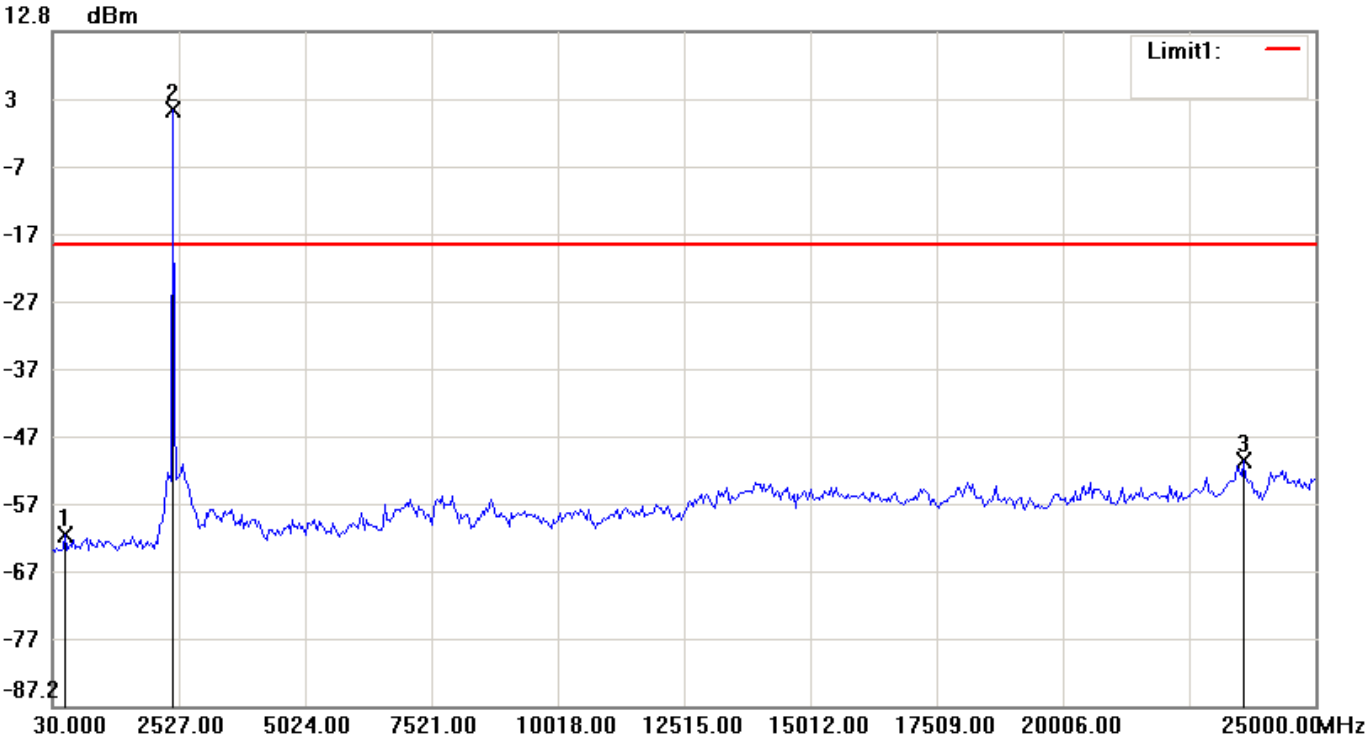
Test Mode:

Note: **FCC-802.11b Channel 11-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	2459.99000	4.06
2	2485.76670	-45.63

File: FT0048_B **Data: #2** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 10:22:55 **Humidity: 54 %**



Condition: **-18.87dBm** **RF Conducted**

EUT: **Sweep Time: 2386.4ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

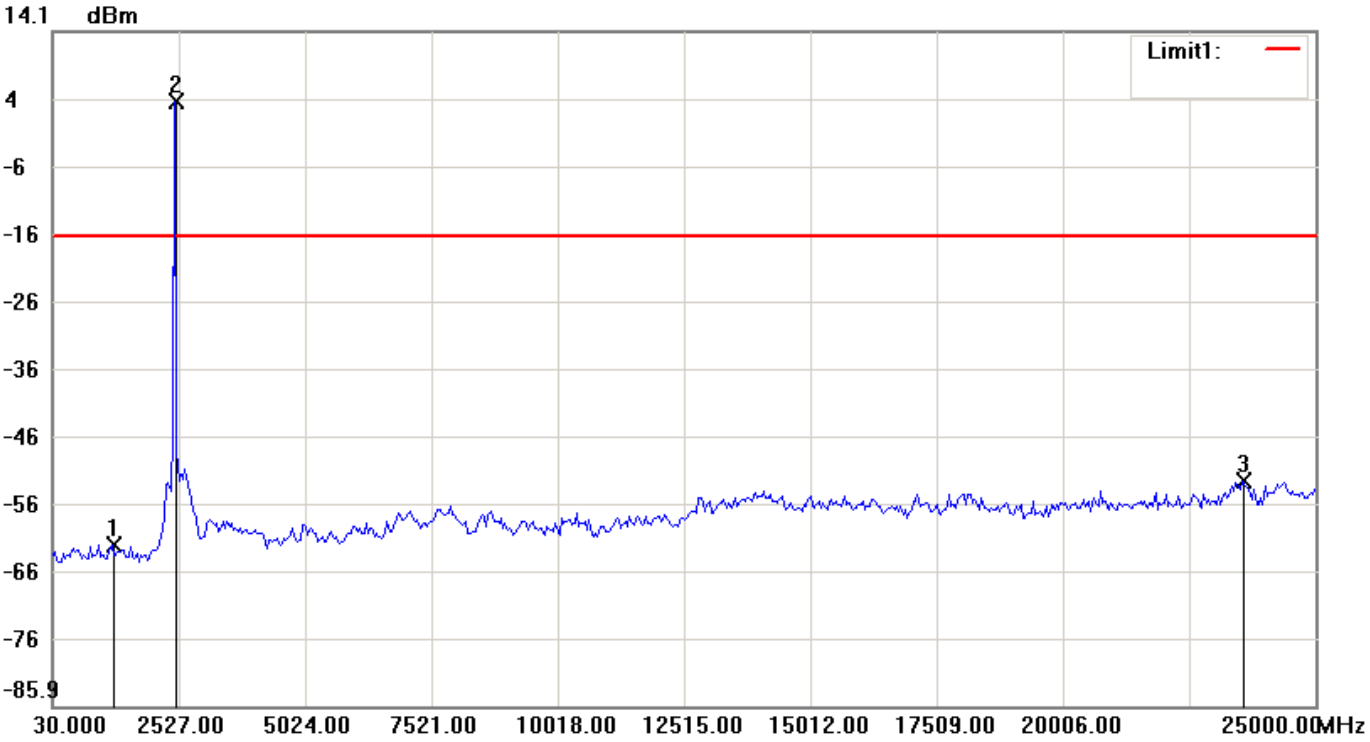
Test Mode:

Note: **FCC-802.11b Channel 01-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	279.7000	-61.93
2	2402.15000	1.13
3	23585.03330	-50.94

File: FT0048_B **Data: #7** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 10:32:37 **Humidity: 54 %**



Condition: **-16.32dBm** **RF Conducted**

EUT: **Sweep Time: 2386.4ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

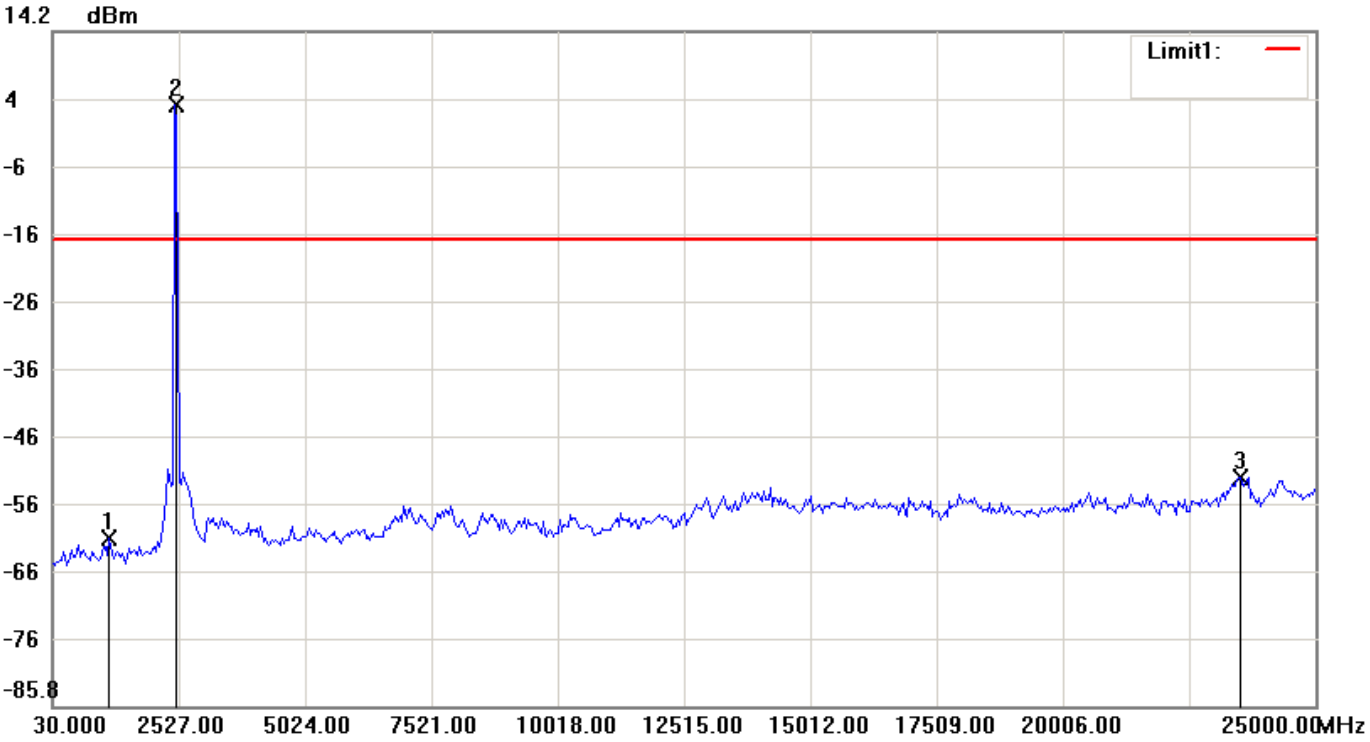
Test Mode:

Note: **FCC-802.11b Channel 06-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	1195.26670	-61.97
2	2443.76670	3.68
3	23543.41670	-52.47

File: FT0048_B **Data: #11** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 10:42:16 **Humidity: 54 %**



Condition: **-16.79dBm** **RF Conducted**

EUT: **Sweep Time: 2386.4ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

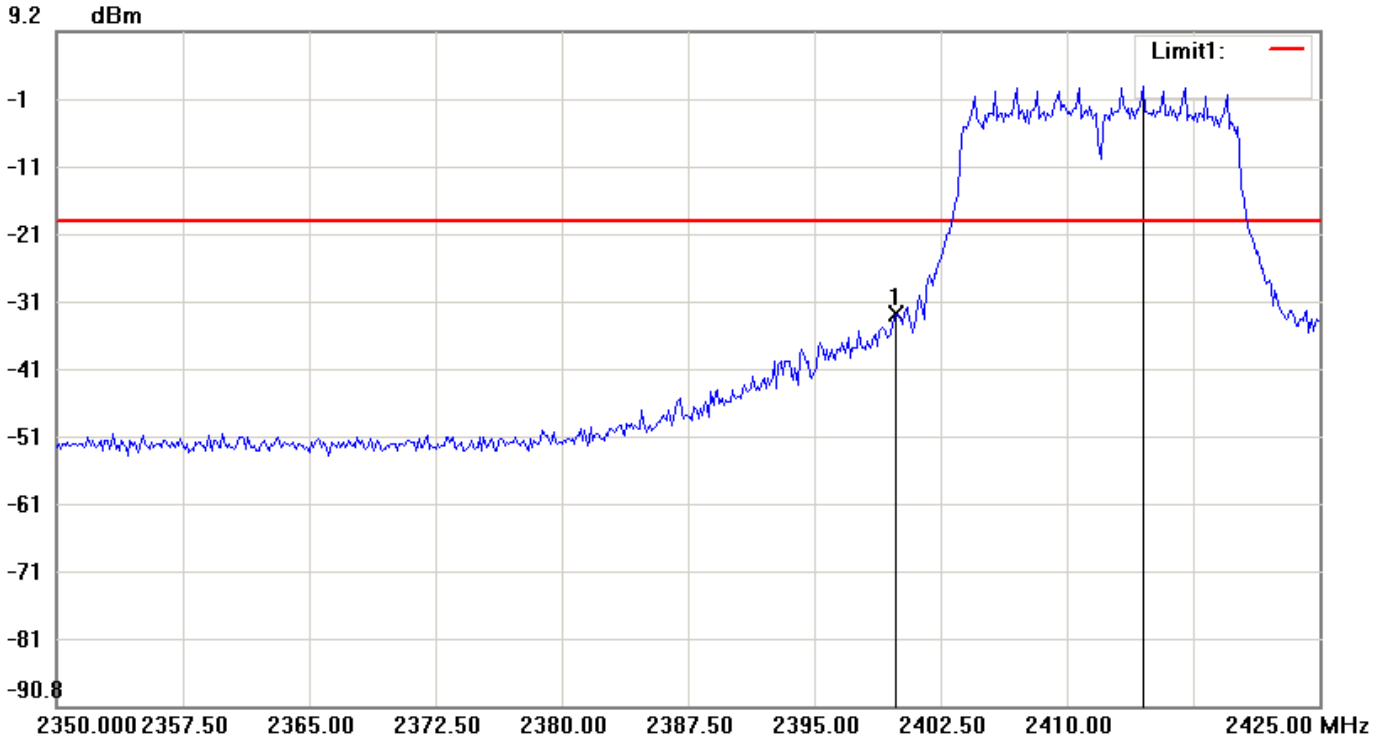
Test Mode:

Note: **FCC-802.11b channel 11-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	1153.65000	-60.96
2	2443.76670	3.21
3	23501.80000	-51.98

File: FT0048_G **Data: #5** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:32:51 **Humidity: 54 %**



Condition: **-18.9dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 10dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

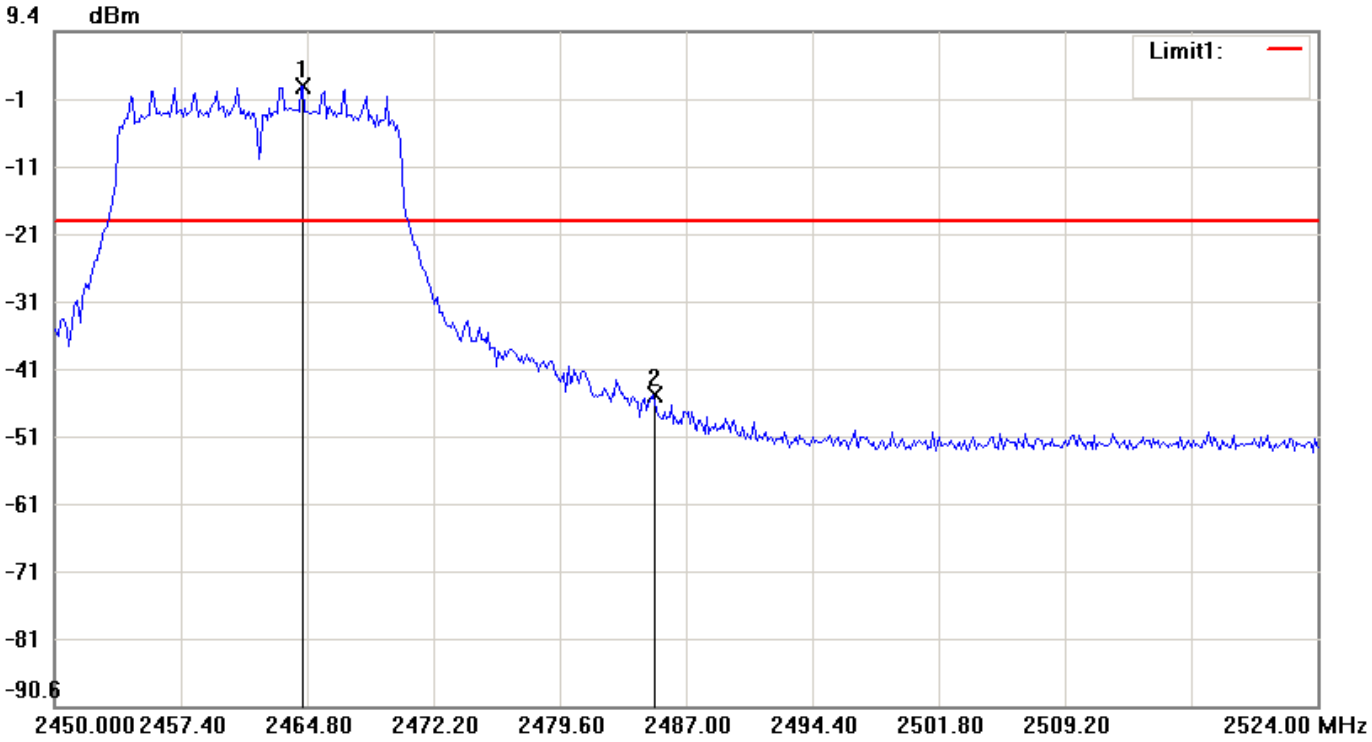
Test Mode:

Note: **FCC-802.11g Channel 01-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	2399.87500	-32.80
2	2414.50000	1.10

File: FT0048_G **Data: #14** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:55:34 **Humidity: 54 %**



Condition: **-18.74dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 10dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

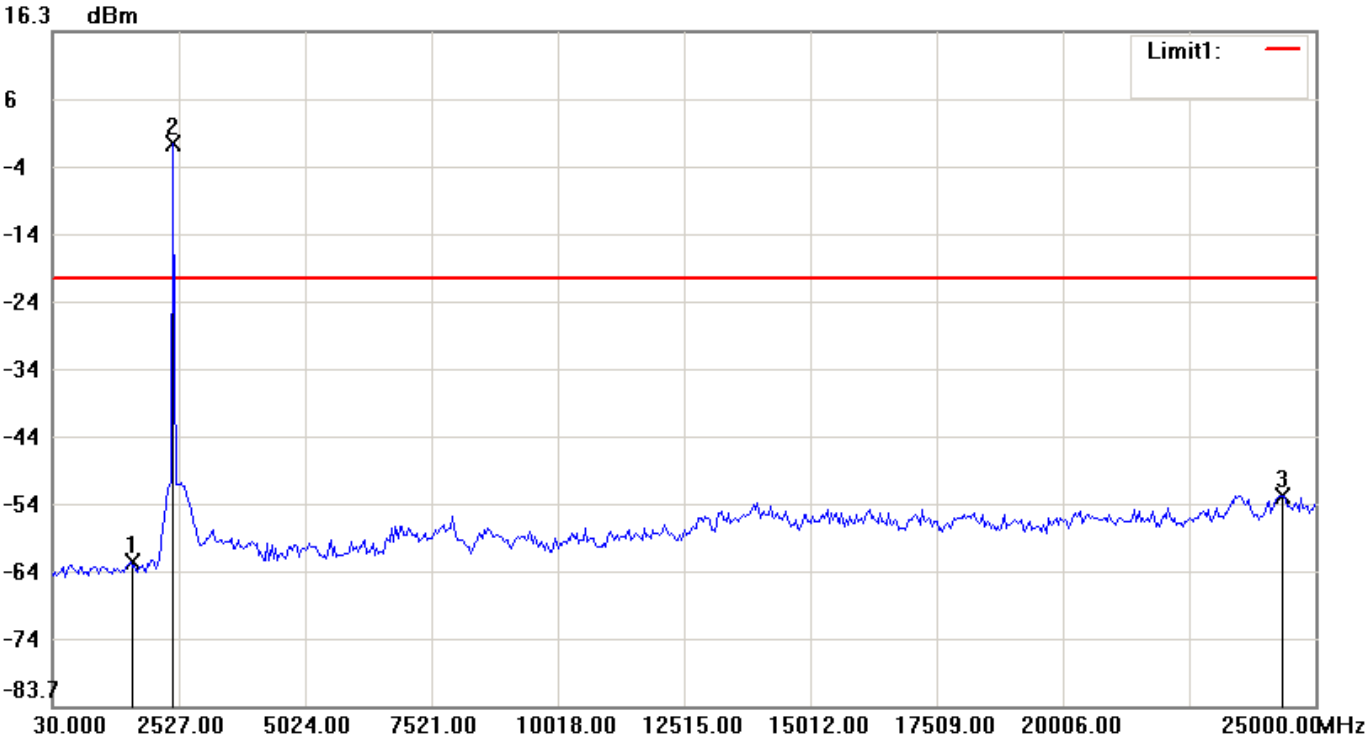
Test Mode:

Note: **FCC-802.11g Channel 11-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	2464.43000	1.26
2	2485.02670	-44.59

File: FT0048_G **Data: #2** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:28:29 **Humidity: 54 %**



Condition: **-20.27dBm** **RF Conducted**

EUT: **Sweep Time: 2386.4ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

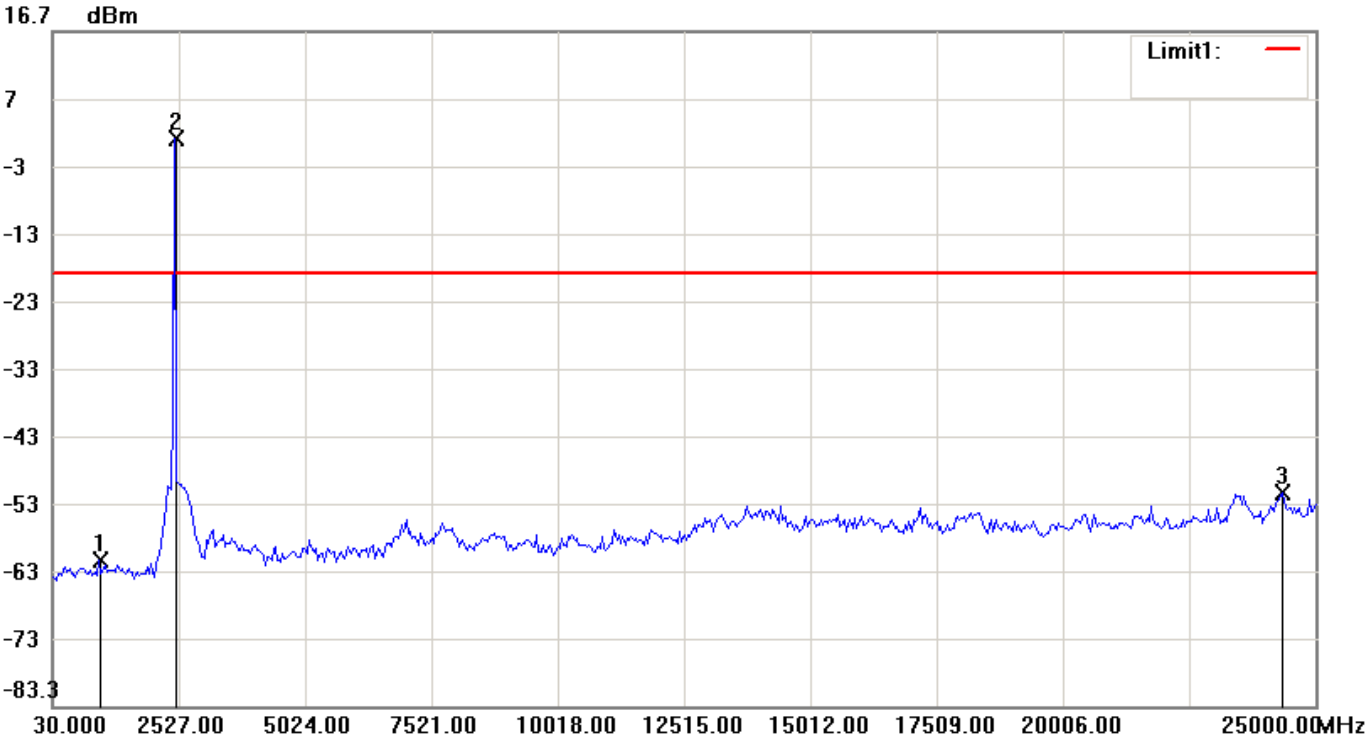
Test Mode:

Note: **FCC-802.11g Channel 01-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	1569.81670	-62.25
2	2402.15000	-0.27
3	24334.13330	-52.55

File: FT0048_G **Data: #7** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:37:16 **Humidity: 54 %**



Condition: **-19.05dBm** **RF Conducted**

EUT: **Sweep Time: 2386.4ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

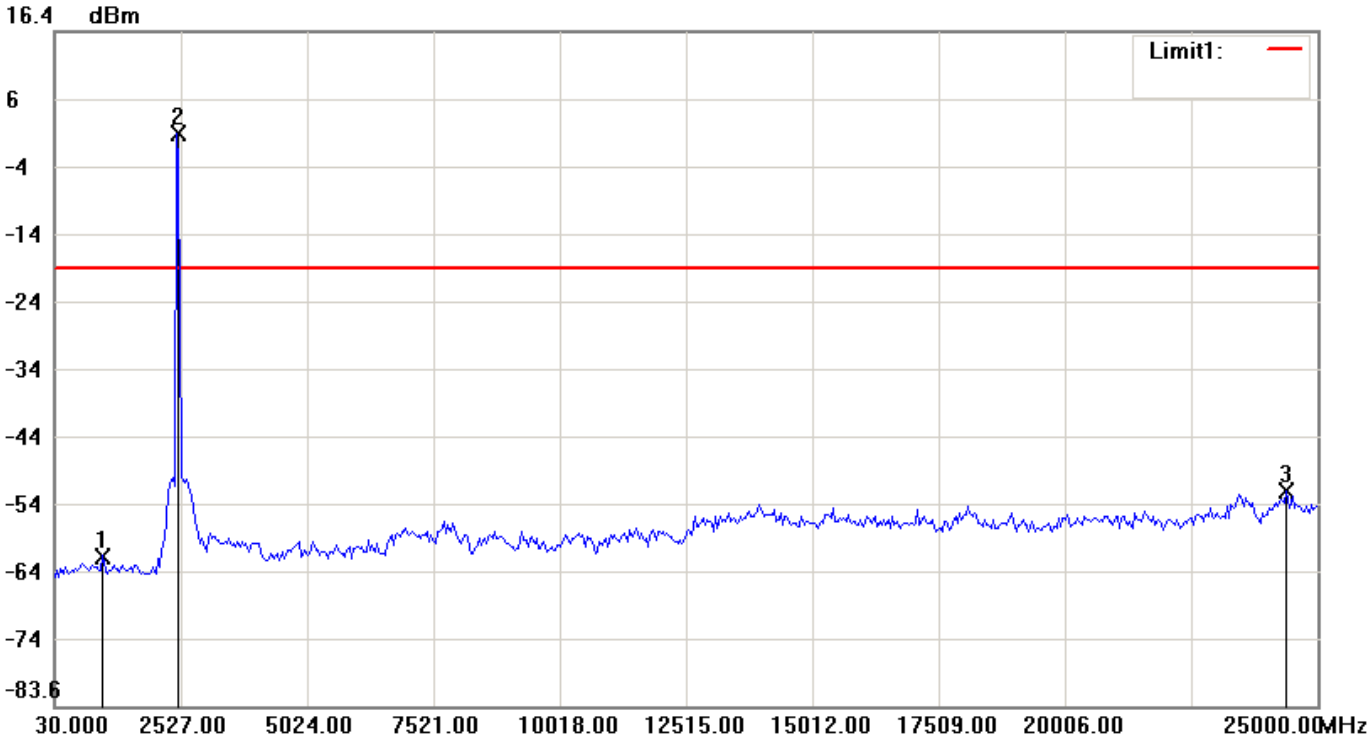
Test Mode:

Note: **FCC-802.11g Channel 06-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	945.5667	-61.70
2	2443.76670	0.95
3	24334.13330	-51.74

File: FT0048_G **Data: #11** **Date: 2013/4/25** **Temperature: 20 ℃**

Time: AM 11:50:46 **Humidity: 54 %**



Condition: **-18.56dBm** **RF Conducted**

EUT: **Sweep Time: 2386.4ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

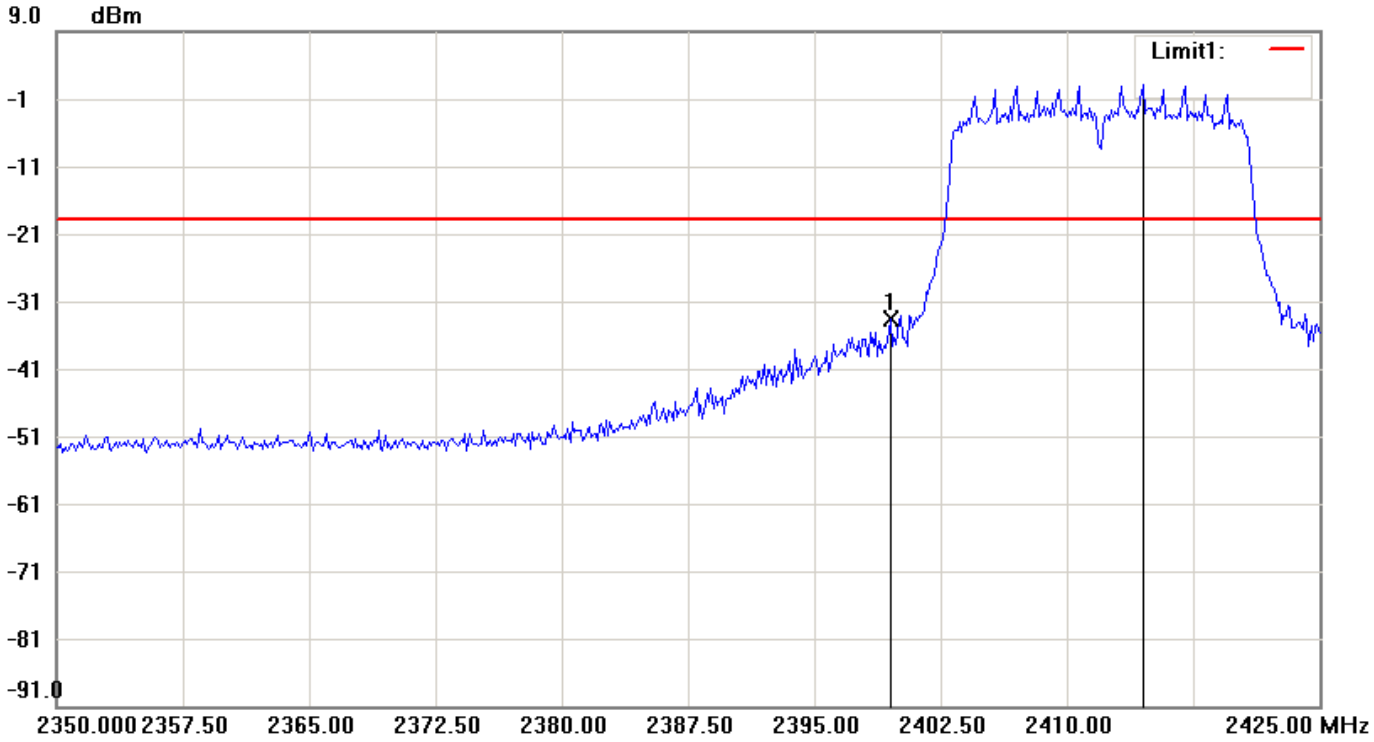
Test Mode:

Note: **FCC-802.11g Channel 11-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	987.1833	-61.31
2	2443.76670	1.44
3	24375.75000	-51.60

File: FT0048_HT20 Data: #5 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:19:45 **Humidity: 54 %**



Condition: **-18.85dBm** **RF Conducted**

EUT: **Sweep Time: 500ms Att.: 10dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

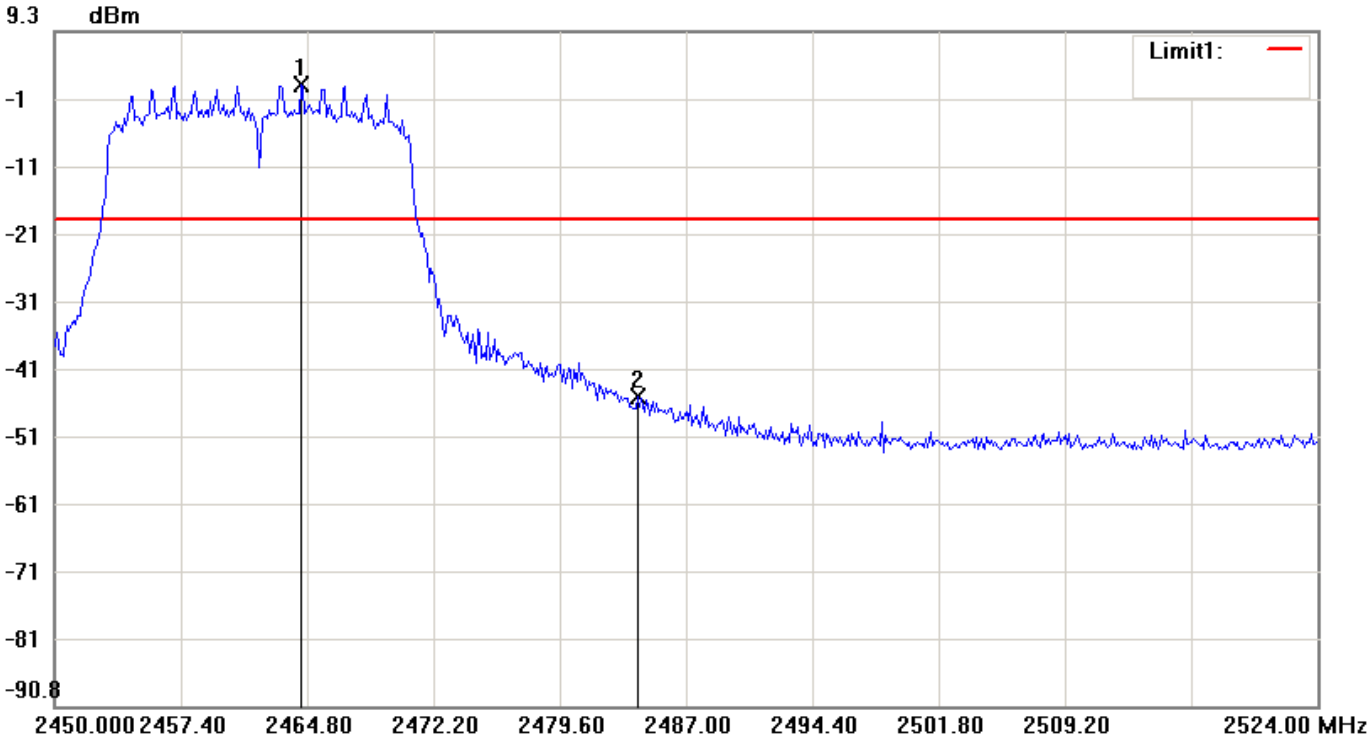
Test Mode:

Note: **FCC-802.11gn_HT20 Channel 01-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	2399.50000	-33.58
2	2414.50000	1.15

File: FT0048_HT20 Data: #14 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:36:12 **Humidity: 54 %**



Condition: **-18.71dBm** **RF Conducted**

EUT: **Sweep Time: 500ms** **Att.: 10dB**

Model: **RBW: 100 KHz** **VBW: 300 KHz**

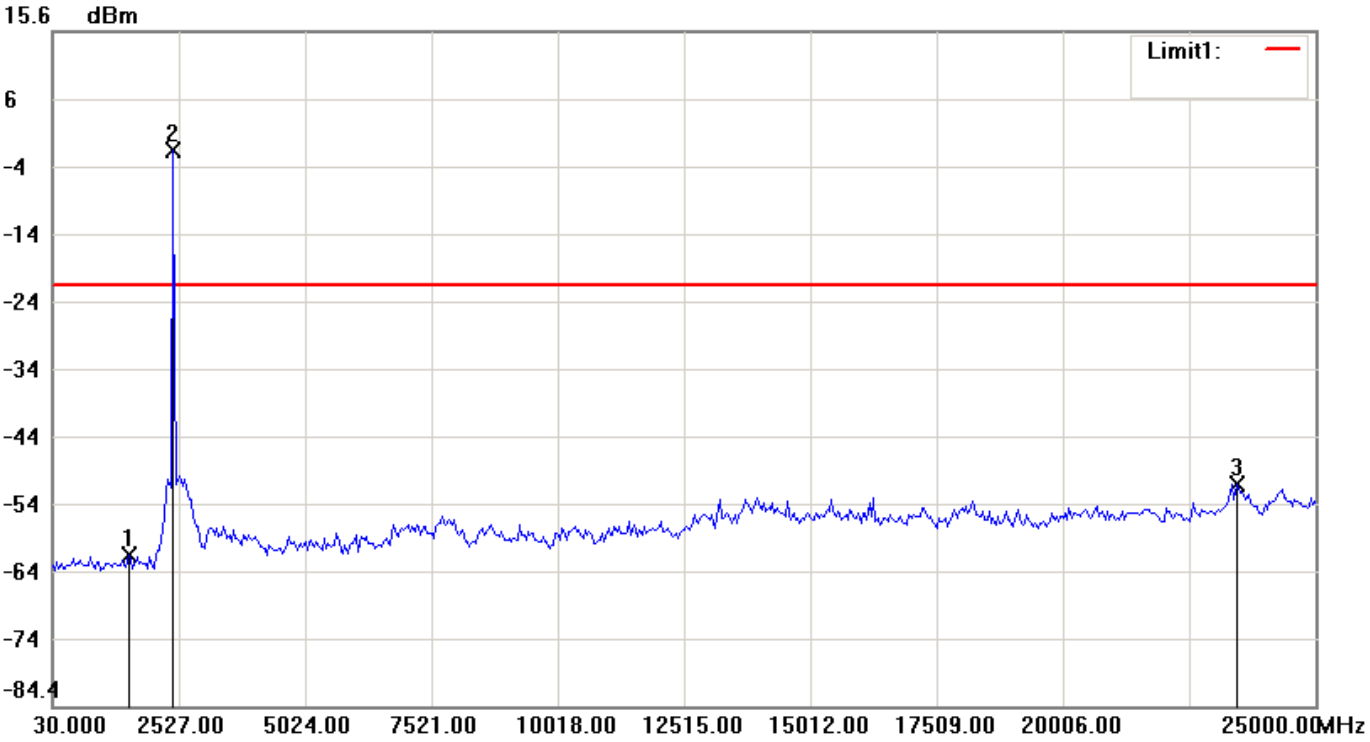
Test Mode:

Note: **FCC-802.11gn_HT20 Channel 11-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	2464.43000	1.29
2	2484.16330	-44.79

File: FT0048_HT20 Data: #2 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:15:17 **Humidity: 54 %**



Condition: **-22dBm** **RF Conducted**

EUT: **Sweep Time: 2386.4ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

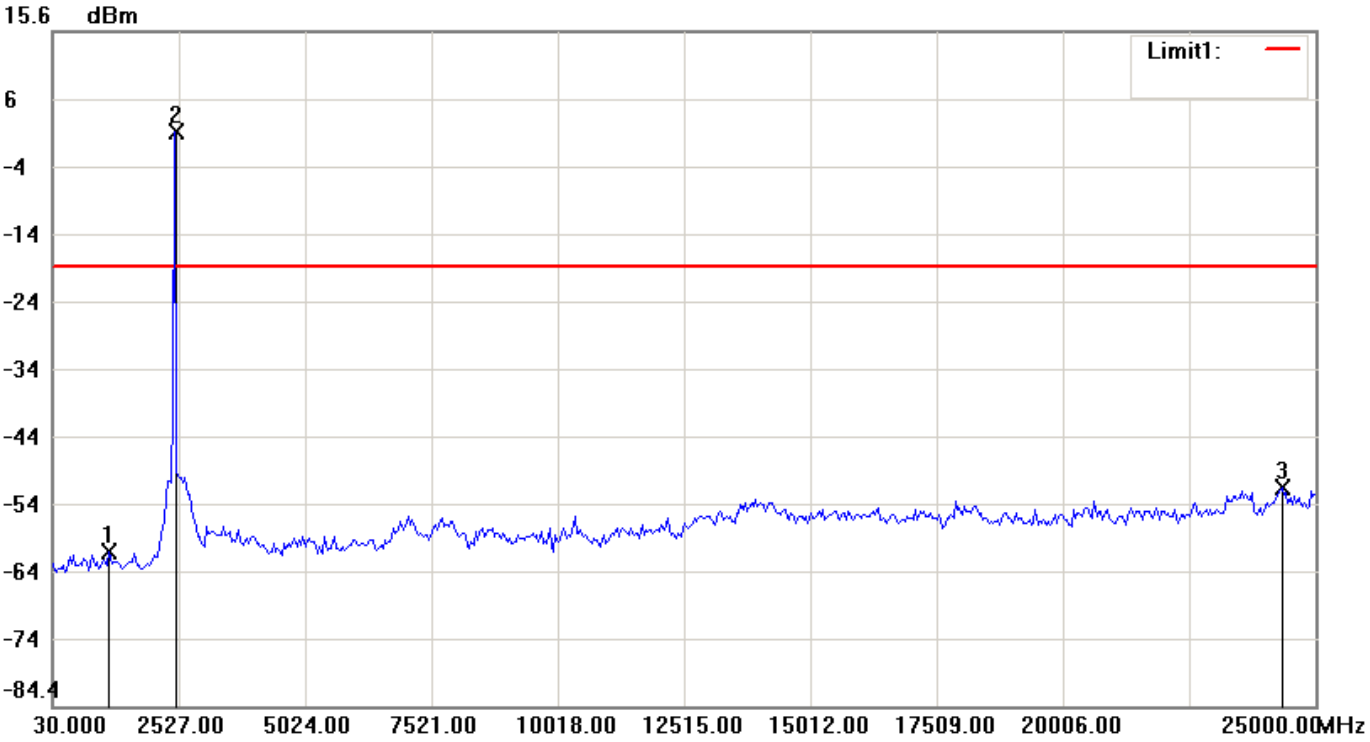
Test Mode:

Note: **FCC-802.11gn_HT20 Channel 01-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	1528.20000	-61.96
2	2402.15000	-2.00
3	23460.18330	-51.53

File: FT0048_HT20 Data: #7 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:23:40 **Humidity: 54 %**



Condition: **-19.29dBm** **RF Conducted**

EUT: **Sweep Time: 2386.4ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

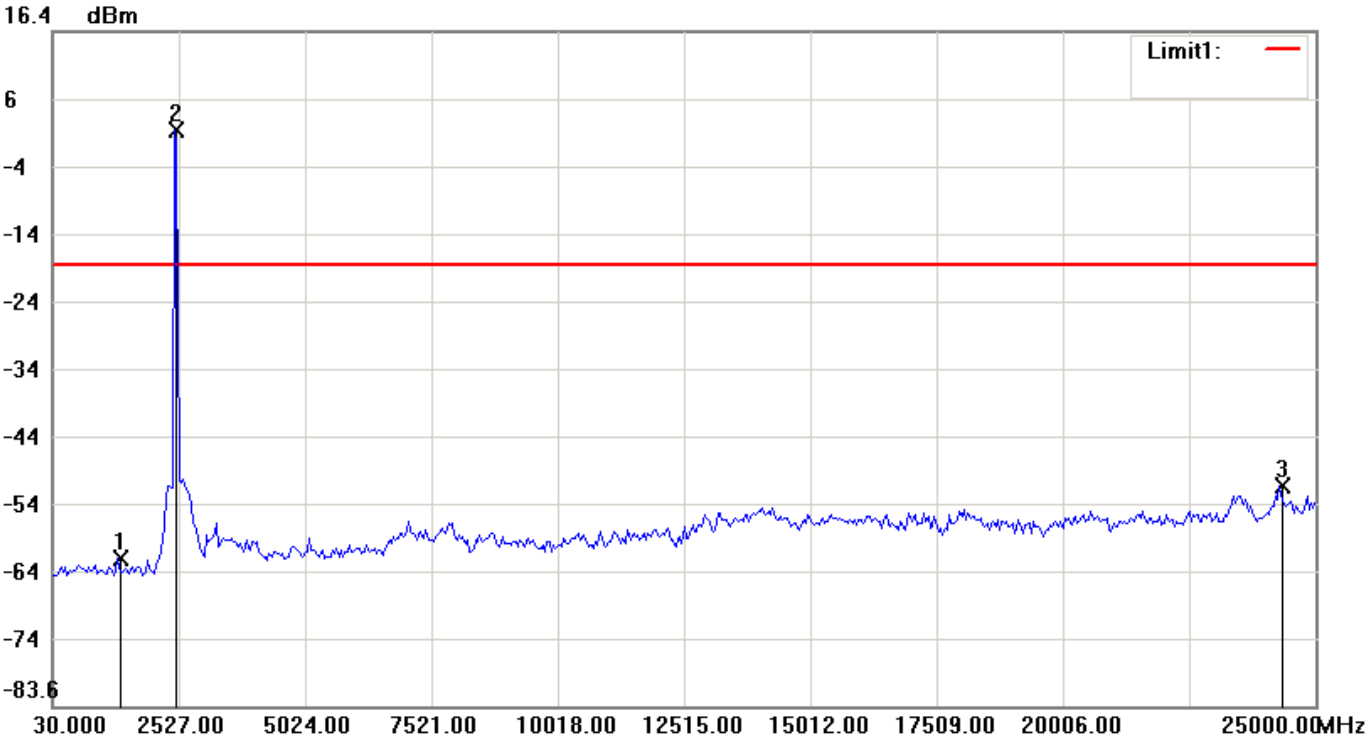
Test Mode:

Note: **FCC-802.11gn_HT20 Channel 06-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	1153.65000	-61.51
2	2443.76670	0.71
3	24334.13330	-52.05

File: FT0048_HT20 Data: #11 **Date: 2013/4/25** **Temperature: 20 ℃**

Time: PM 01:31:37 **Humidity: 54 %**



Condition: **-18.3dBm** **RF Conducted**

EUT: **Sweep Time: 2386.4ms Att.: 20dB**

Model: **RBW: 100 KHz VBW: 300 KHz**

Test Mode:

Note: **FCC-802.11gn_HT20 Channel 11-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	1320.11670	-61.66
2	2443.76670	1.70
3	24292.51670	-51.03

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 (d)

10.2 Measurement Procedure

A.Preliminary Measurement For Portable Devices.

For portable devices, the following procedure was performed to determine the maximum emission axis of EUT (X, Y and Z axis):

1. With the receiving antenna is H polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
2. With the receiving antennna is V polarization, rotate the EUT in turns with three orthogonal axes to determine the axis of maximum emission.
3. Compare the results derived from above two steps. The axis of maximum emission from EUT was determined and the configuration was used to perform the final measurement.
4. The position in which the maximum noise occurred was “X axis”. (Please see the test setup photos)

B. Final Measurement

1. Setup the configuration per figure 2 and 3 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 2 : Frequencies measured below 1 GHz configuration

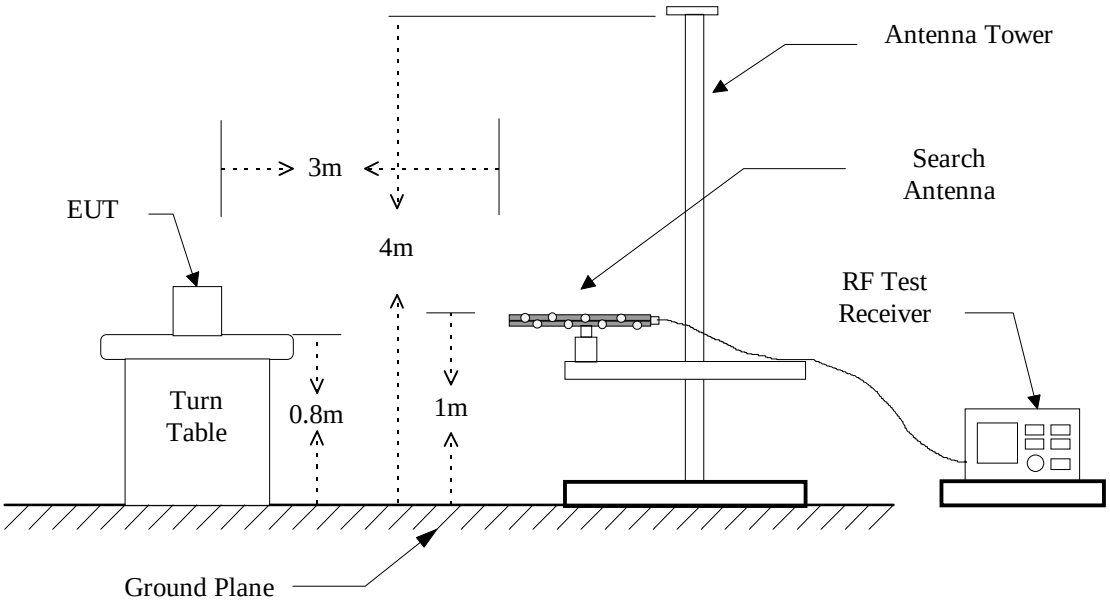
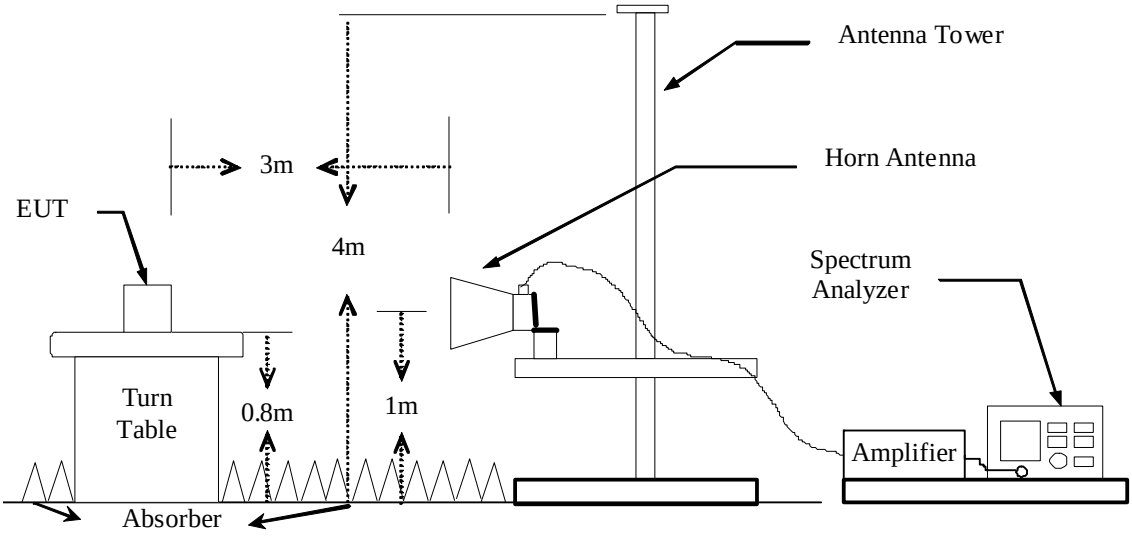


Figure 3 : Frequencies measured above 1 GHz configuration



10.3 Measuring Instrument

The following instrument are used for radiated emissions measurement :

Equipment	Manufacturer	Model No.	Next Cal. Due
EMI Test Receiver	R&S	ESIB7	07/10/2013
Spectrum Analyzer	Rohde & Schwarz	FSU46	01/08/2014
Horn Antenna	EMCO	3115	07/17/2013
BiLog Antenna	ETC	MCTD2986	11/25/2013
Horn Antenna	EMCO	3116	07/17/2013
Preamplifier	Hewlett-Packard	8449A	11/20/2013

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 Operation Mode: Tx

10.4.1.1.1 IEEE 802.11b
Test Date: Apr. 26, 2013 Temperature: 20℃ Humidity: 56%

a) Channel 1
Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV/m)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4824.000	---	---	---	---	-2.33	---	---	74.0	54.0
7236.000	---	---	---	---	0.57	---	---	74.0	54.0
14472.000	---	---	---	---	9.15	---	---	74.0	54.0
19296.000	---	---	---	---	12.10	---	---	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV/m)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4874.000	---	---	---	---	-2.21	---	---	74.0	54.0
7311.000	---	---	---	---	0.75	---	---	74.0	54.0
12185.000	---	---	---	---	4.57	---	---	74.0	54.0
19496.000	---	---	---	---	12.10	---	---	74.0	54.0

c) Channel 11
Fundamental Frequency: 2462 MHz

Frequency	Reading (dBuV/m)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4924.000	---	---	---	---	-2.09	---	---	74.0	54.0
7386.000	---	---	---	---	0.93	---	---	74.0	54.0
12310.000	---	---	---	---	4.62	---	---	74.0	54.0
19696.000	---	---	---	---	12.14	---	---	74.0	54.0
22158.000	---	---	---	---	11.86	---	---	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.

10.4.1.1.2 IEEE 802.11g

Test Date: Apr. 26, 2013 Temperature: 20℃ Humidity: 56%

a) Channel 1
Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV/m)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4824.000	---	---	---	---	-2.33	---	---	74.0	54.0
7236.000	---	---	---	---	0.57	---	---	74.0	54.0
14472.000	---	---	---	---	9.15	---	---	74.0	54.0
19296.000	---	---	---	---	12.10	---	---	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV/m)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4874.000	---	---	---	---	-2.21	---	---	74.0	54.0
7311.000	---	---	---	---	0.75	---	---	74.0	54.0
12185.000	---	---	---	---	4.57	---	---	74.0	54.0
19496.000	---	---	---	---	12.10	---	---	74.0	54.0

c) Channel 11
Fundamental Frequency: 2462 MHz

Frequency	Reading (dBuV/m)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4924.000	---	---	---	---	-2.09	---	---	74.0	54.0
7386.000	---	---	---	---	0.93	---	---	74.0	54.0
12310.000	---	---	---	---	4.62	---	---	74.0	54.0
19696.000	---	---	---	---	12.14	---	---	74.0	54.0
22158.000	---	---	---	---	11.86	---	---	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.

10.4.1.1.3 IEEE 802.11gn, HT20

Test Date: Apr. 26, 2013 Temperature: 20℃ Humidity: 56%

a) Channel 1
Fundamental Frequency: 2412 MHz

Frequency	Reading (dBuV/m)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4824.000	---	---	---	---	-2.33	---	---	74.0	54.0
7236.000	---	---	---	---	0.57	---	---	74.0	54.0
14472.000	---	---	---	---	9.15	---	---	74.0	54.0
19296.000	---	---	---	---	12.10	---	---	74.0	54.0

b) Channel 6
Fundamental Frequency: 2437 MHz

Frequency	Reading (dBuV/m)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4874.000	---	---	---	---	-2.21	---	---	74.0	54.0
7311.000	---	---	---	---	0.75	---	---	74.0	54.0
12185.000	---	---	---	---	4.57	---	---	74.0	54.0
19496.000	---	---	---	---	12.10	---	---	74.0	54.0

c) Channel 11
Fundamental Frequency: 2462 MHz

Frequency	Reading (dBuV/m)				Factor	Result @3m		Limit @3m	
	H		V		(dB)	(dBuV/m)		(dBuV/m)	
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.
4924.000	---	---	---	---	-2.09	---	---	74.0	54.0
7386.000	---	---	---	---	0.93	---	---	74.0	54.0
12310.000	---	---	---	---	4.62	---	---	74.0	54.0
19696.000	---	---	---	---	12.14	---	---	74.0	54.0
22158.000	---	---	---	---	11.86	---	---	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.

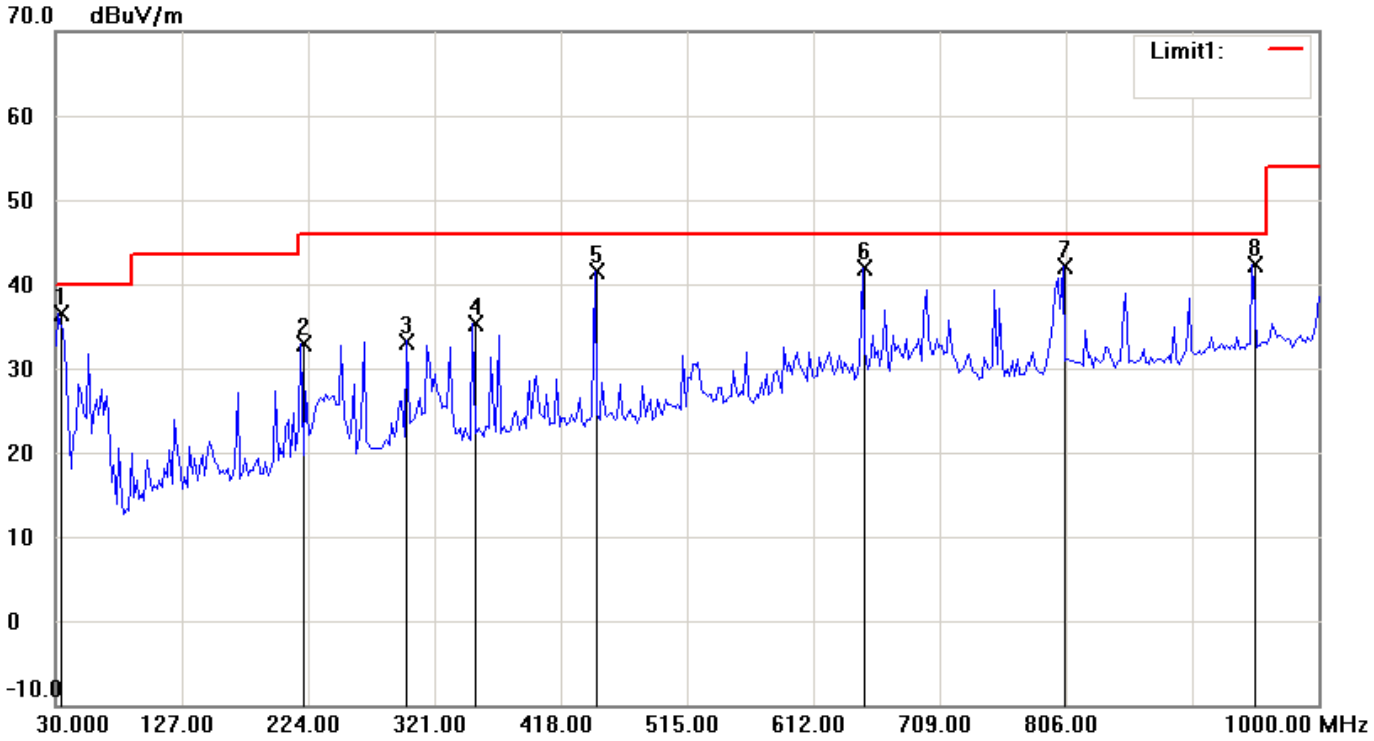
10.4.2 Spurious Emission

Operation Mode: Tx

10.4.2.1 Emission frequencies below 1 GHz

File: FT0048A_B **Data: #43** **Date: 2013/4/26** **Temperature: 20 ℃**

Time: PM 06:59:51 **Humidity: 56 %**

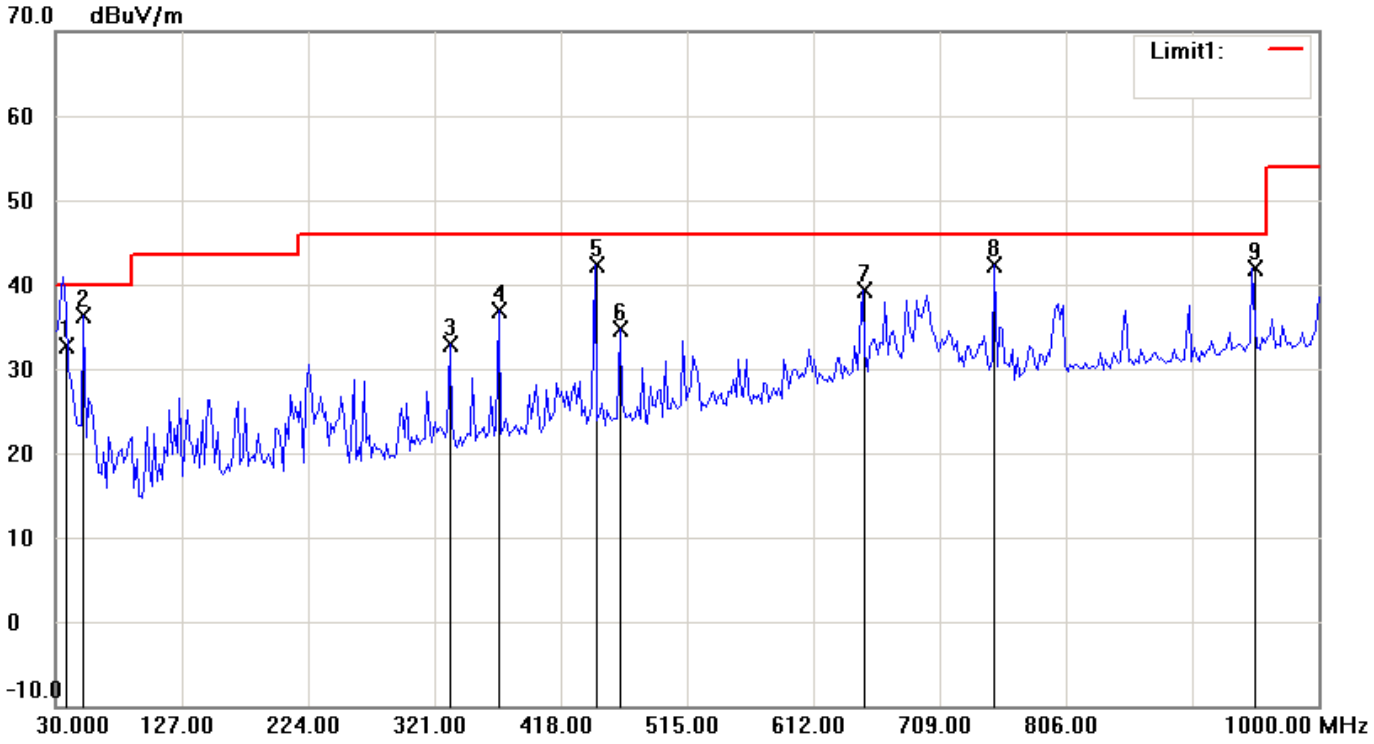


Condition: **FCC Part15 RE-Class B** **Polarization:** **Horizontal**

No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV/m)		dB/m	(dBuV/m)	(dBuV/m)	(dB)
1	31.9440	17.09	peak	19.39	36.48	40.00	-3.52
2	218.5571	18.63	peak	14.31	32.94	46.00	-13.06
3	300.2004	15.25	peak	17.95	33.20	46.00	-12.80
4	350.7415	16.10	peak	19.23	35.33	46.00	-10.67
5	444.0481	20.03	peak	21.40	41.43	46.00	-4.57
6	650.1002	16.48	peak	25.33	41.81	46.00	-4.19
7	803.6673	15.35	peak	26.82	42.17	46.00	-3.83
8	949.4590	12.70	peak	29.62	42.32	46.00	-3.68

File: **FT0048A_B** **Data:** **#42** **Date:** **2013/4/26** **Temperature:** **20 ℃**

Time: **PM 06:44:58** **Humidity:** **56 %**



Condition: **FCC Part15 RE-Class B** **Polarization:** **Vertical**

EUT: **Distance:** **3m**

Model:

Test Mode:

Note:

No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV/m)		dB/m	(dBuV/m)	(dBuV/m)	(dB)
1	35.9640	15.47	QP	17.27	32.74	40.00	-7.26
2	51.3828	26.12	peak	10.13	36.25	40.00	-3.75
3	333.2465	14.17	peak	18.78	32.95	46.00	-13.05
4	370.1804	17.17	peak	19.72	36.89	46.00	-9.11
5	444.0481	20.84	peak	21.40	42.24	46.00	-3.76
6	463.4870	12.93	peak	21.72	34.65	46.00	-11.35
7	650.1002	13.91	peak	25.33	39.24	46.00	-6.76
8	751.1824	16.37	peak	25.87	42.24	46.00	-3.76
9	949.4590	12.34	peak	29.62	41.96	46.00	-4.04

10.4.2.2 Emission frequencies above 1 GHz

10.4.2.2.1 IEEE 802.11b

10.4.2.2.1.1 Fundamental Frequency: 2412 MHz

Frequency	Ant Pol	Reading (dBuV/m) @3m		Correct Factor	Result (dBuV/m) @3m		Limit (dBuV/m) @3m	
(MHz)	H/V	Peak	AVG	(dB)	Peak	AVG	Peak	AVG
1024.6794	V	54.2	---	-14.38	39.8	---	74	54
1080.7691	H	55.9	---	-14.09	41.8	---	74	54
1091.9872	V	53.9	---	-14.03	39.9	---	74	54
1179.4872	H	56.4	---	-13.61	42.8	---	74	54
1179.4872	V	56.4	---	-13.61	42.8	---	74	54
1195.1922	V	58.5	---	-13.52	45.0	---	74	54
1197.4358	H	56.1	---	-13.51	42.6	---	74	54
1215.3846	V	56.1	---	-13.42	42.7	---	74	54
1244.5513	V	55.2	---	-13.28	41.9	---	74	54
1262.5000	V	54.7	---	-13.18	41.5	---	74	54
1298.3974	H	53.7	---	-13.00	40.7	---	74	54
1554.1666	H	52.9	---	-11.72	41.2	---	74	54
1554.1666	V	55.2	---	-11.72	43.5	---	74	54
1581.0896	V	53.4	---	-11.58	41.8	---	74	54
1776.2820	H	54.7	---	-10.56	44.1	---	74	54
1776.2820	V	56.4	---	-10.56	45.8	---	74	54
1996.1538	V	51.7	---	-9.41	42.3	---	74	54
2881.3590	H	52.4	---	-6.63	45.8	---	74	54
3130.0207	H	53.6	---	-5.86	47.7	---	74	54
3130.0207	V	54.8	---	-5.86	48.9	---	74	54
3328.9502	H	58.1	---	-5.34	52.8	---	74	54
3328.9502	V	56.4	---	-5.34	51.1	---	74	54

10.4.2.2.1.2 Fundamental Frequency: 2437 MHz

Frequency	Ant Pol	Reading (dBuV/m) @3m		Correct Factor	Result (dBuV/m) @3m		Limit (dBuV/m) @3m	
(MHz)	H/V	Peak	AVG	(dB)	Peak	AVG	Peak	AVG
1024.6794	V	53.5	---	-14.38	39.1	---	74	54
1080.7691	H	56.2	---	-14.09	42.1	---	74	54
1094.2308	V	55.7	---	-14.03	41.7	---	74	54
1179.4872	H	55.6	---	-13.61	42.0	---	74	54
1179.4872	V	56.1	---	-13.61	42.5	---	74	54
1192.9486	H	58.2	---	-13.53	44.7	---	74	54
1199.6794	H	54.7	---	-13.50	41.2	---	74	54
1199.6794	V	57.6	---	-13.50	44.1	---	74	54
1298.3974	H	52.6	---	-13.00	39.6	---	74	54
1298.3974	V	53.6	---	-13.00	40.6	---	74	54
1457.6922	V	52.6	---	-12.22	40.4	---	74	54
1554.1666	H	54.2	---	-11.72	42.5	---	74	54
1554.1666	V	55.0	---	-11.72	43.3	---	74	54
1581.0896	V	54.0	---	-11.58	42.4	---	74	54
1776.2820	H	54.6	---	-10.56	44.0	---	74	54
1778.5255	V	56.6	---	-10.55	46.1	---	74	54
1993.9103	V	56.7	---	-9.43	47.3	---	74	54
2881.3590	H	50.7	---	-6.63	44.1	---	74	54
3130.0207	H	54.7	---	-5.86	48.8	---	74	54
3130.0207	V	53.4	---	-5.86	47.5	---	74	54
3328.9502	H	58.0	---	-5.34	52.7	---	74	54
3328.9502	V	56.5	---	-5.34	51.2	---	74	54
4423.0625	H	50.7	---	-3.07	47.6	---	74	54
6661.0191	V	50.0	---	-0.68	49.3	---	74	54
15762.0432	H	51.0	35.0	3.49	54.5	38.5	74	54

10.4.2.2.1.3 Fundamental Frequency: 2462 MHz

Frequency	Ant Pol	Reading (dBuV/m) @3m		Correct Factor	Result (dBuV/m) @3m		Limit (dBuV/m) @3m	
(MHz)	H/V	Peak	AVG	(dB)	Peak	AVG	Peak	AVG
1024.6794	H	52.1	---	-14.38	37.7	---	74	54
1024.6794	V	53.1	---	-14.38	38.7	---	74	54
1078.5255	H	55.6	---	-14.11	41.5	---	74	54
1091.9872	V	57.0	---	-14.03	43.0	---	74	54
1179.4872	H	55.0	---	-13.61	41.4	---	74	54
1179.4872	V	55.9	---	-13.61	42.3	---	74	54
1197.4875	H	58.2	---	-13.51	44.7	---	74	54
1199.6794	V	57.1	---	-13.50	43.6	---	74	54
1298.3974	H	52.5	---	-13.00	39.5	---	74	54
1298.3974	V	52.7	---	-13.00	39.7	---	74	54
1554.1666	H	55.0	---	-11.72	43.3	---	74	54
1554.1666	V	54.9	---	-11.72	43.2	---	74	54
1581.0896	V	54.2	---	-11.58	42.6	---	74	54
1776.2820	H	55.1	---	-10.56	44.5	---	74	54
1776.2820	V	56.2	---	-10.56	45.6	---	74	54
1996.1538	V	54.4	---	-9.41	45.0	---	74	54
2000.6410	H	50.9	---	-9.40	41.5	---	74	54
2881.3590	H	52.3	---	-6.63	45.7	---	74	54
3130.0207	H	53.8	---	-5.86	47.9	---	74	54
3130.0207	V	53.3	---	-5.86	47.4	---	74	54
3328.9502	H	58.0	---	-5.34	52.7	---	74	54
3328.9502	V	55.8	---	-5.34	50.5	---	74	54
7779.9975	V	50.7	---	1.32	52.0	---	74	54

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).
   ±2.9dB (1GHz≦f<18GHz).
   ±3.5dB (18GHz≦f≦40GHz).

10.4.2.2.2 IEEE 802.11g

10.4.2.2.2.1 Fundamental Frequency: 2412 MHz

Frequency	Ant Pol	Reading (dBuV/m) @3m		Correct Factor	Result (dBuV/m) @3m		Limit (dBuV/m) @3m	
(MHz)	H/V	Peak	AVG	(dB)	Peak	(MHz)	H/V	Peak
1024.6794	V	54.1	---	-14.38	39.7	---	74	54
1078.5255	V	53.9	---	-14.11	39.8	---	74	54
1080.7691	H	55.4	---	-14.09	41.3	---	74	54
1094.2308	V	54.8	---	-14.03	40.8	---	74	54
1179.4872	H	55.7	---	-13.61	42.1	---	74	54
1195.1922	H	57.5	---	-13.52	44.0	---	74	54
1197.4358	V	58.1	---	-13.51	44.6	---	74	54
1298.3974	H	54.1	---	-13.00	41.1	---	74	54
1298.3974	V	54.5	---	-13.00	41.5	---	74	54
1332.0513	H	52.9	---	-12.84	40.1	---	74	54
1457.6922	V	53.5	---	-12.22	41.3	---	74	54
1554.1666	H	55.8	---	-11.72	44.1	---	74	54
1554.1666	V	55.3	---	-11.72	43.6	---	74	54
1581.2820	V	53.9	---	-11.58	42.3	---	74	54
1776.2820	H	54.9	---	-10.56	44.3	---	74	54
1776.2820	V	57.2	---	-10.56	46.6	---	74	54
1993.9103	V	51.0	---	-9.43	41.6	---	74	54
2881.3590	H	52.7	---	-6.63	46.1	---	74	54
2881.3590	V	50.6	---	-6.63	44.0	---	74	54
3130.0207	H	55.0	---	-5.86	49.1	---	74	54
3130.0207	V	54.4	---	-5.86	48.5	---	74	54
3328.9502	H	57.3	---	-5.34	52.0	---	74	54
3328.9502	V	55.7	---	-5.34	50.4	---	74	54
6661.0191	V	50.1	---	-0.68	49.4	---	74	54

10.4.2.2.2.2 Fundamental Frequency: 2437 MHz

Frequency	Ant Pol	Reading (dBuV/m) @3m		Correct Factor	Result (dBuV/m) @3m		Limit (dBuV/m) @3m	
(MHz)	H/V	Peak	AVG	(dB)	Peak	(MHz)	H/V	Peak
1024.6794	V	54.0	---	-14.38	39.6	---	74	54
1080.7691	H	55.3	---	-14.09	41.2	---	74	54
1094.2308	V	56.6	---	-14.03	42.6	---	74	54
1179.4872	H	55.3	---	-13.61	41.7	---	74	54
1179.4872	V	54.0	---	-13.61	40.4	---	74	54
1199.6794	H	58.0	---	-13.50	44.5	---	74	54
1298.3974	H	55.7	---	-13.00	42.7	---	74	54
1459.9358	V	52.2	---	-12.20	40.0	---	74	54
1554.1666	H	54.8	---	-11.72	43.1	---	74	54
1554.1666	V	54.9	---	-11.72	43.2	---	74	54
1581.0896	V	54.3	---	-11.58	42.7	---	74	54
1776.2820	H	54.9	---	-10.56	44.3	---	74	54
1776.2820	V	57.4	---	-10.56	46.8	---	74	54
1991.6666	V	52.9	---	-9.44	43.5	---	74	54
2157.6923	V	49.3	---	-8.96	40.3	---	74	54
2881.3590	H	51.1	---	-6.63	44.5	---	74	54
3130.0207	H	54.2	---	-5.86	48.3	---	74	54
3130.0207	V	53.4	---	-5.86	47.5	---	74	54
3328.9502	H	58.3	---	-5.34	53.0	---	74	54
3328.9502	V	55.0	---	-5.34	49.7	---	74	54
7779.9975	V	50.4	---	1.32	51.7	---	74	54
11923.9486	V	58.6	---	4.49	63.1	---	74	54

10.4.2.2.2.3 Fundamental Frequency: 2462 MHz

Frequency	Ant Pol	Reading (dBuV/m) @3m		Correct Factor	Result (dBuV/m) @3m		Limit (dBuV/m) @3m	
(MHz)	H/V	Peak	AVG	(dB)	Peak	(MHz)	H/V	Peak
1024.6794	V	53.1	---	-14.38	38.7	---	74	54
1080.7691	H	54.7	---	-14.09	40.6	---	74	54
1080.7691	V	53.3	---	-14.09	39.2	---	74	54
1094.2308	V	54.6	---	-14.03	40.6	---	74	54
1179.4872	H	56.0	---	-13.61	42.4	---	74	54
1179.4872	V	54.4	---	-13.61	40.8	---	74	54
1195.1922	V	56.4	---	-13.52	42.9	---	74	54
1197.4358	H	57.8	---	-13.51	44.3	---	74	54
1298.3974	H	55.5	---	-13.00	42.5	---	74	54
1298.3974	V	53.8	---	-13.00	40.8	---	74	54
1554.1666	H	55.0	---	-11.72	43.3	---	74	54
1554.1666	V	55.9	---	-11.72	44.2	---	74	54
1581.0896	V	53.8	---	-11.58	42.2	---	74	54
1776.2820	H	54.4	---	-10.56	43.8	---	74	54
1776.2820	V	57.6	---	-10.56	47.0	---	74	54
1998.3974	V	51.7	---	-9.41	42.3	---	74	54
2881.3590	H	52.1	---	-6.63	45.5	---	74	54
2881.3590	V	50.5	---	-6.63	43.9	---	74	54
3130.0207	H	54.0	---	-5.86	48.1	---	74	54
3130.0207	V	53.1	---	-5.86	47.2	---	74	54
3328.9502	H	57.0	---	-5.34	51.7	---	74	54
3328.9502	V	56.6	---	-5.34	51.3	---	74	54
6661.0191	V	49.8	---	-0.68	49.1	---	74	54
7779.9975	V	50.8	---	1.32	52.1	---	74	54

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).
   ±2.9dB (1GHz≦f<18GHz).
   ±3.5dB (18GHz≦f≦40GHz).

10.4.2.2.3 IEEE 802.11gn, HT20

10.4.2.2.3.1 Fundamental Frequency: 2412 MHz

Frequency	Ant Pol	Reading (dBuV/m) @3m		Correct Factor	Result (dBuV/m) @3m		Limit (dBuV/m) @3m	
(MHz)	H/V	Peak	AVG	(dB)	Peak	(MHz)	H/V	Peak
1024.6794	V	53.3	---	-14.38	38.9	---	74	54
1080.7691	H	55.4	---	-14.09	41.3	---	74	54
1080.7691	V	52.9	---	-14.09	38.8	---	74	54
1094.2308	V	52.9	---	-14.03	38.9	---	74	54
1179.4872	H	55.9	---	-13.61	42.3	---	74	54
1179.4872	V	54.2	---	-13.61	40.6	---	74	54
1195.1922	V	58.7	---	-13.52	45.2	---	74	54
1199.6784	H	57.5	---	-13.50	44.0	---	74	54
1298.3974	H	53.7	---	-13.00	40.7	---	74	54
1298.3974	V	53.6	---	-13.00	40.6	---	74	54
1544.1666	V	55.0	---	-11.77	43.2	---	74	54
1554.1666	H	55.8	---	-11.72	44.1	---	74	54
1776.2820	H	54.7	---	-10.56	44.1	---	74	54
1776.2820	V	57.3	---	-10.56	46.7	---	74	54
2000.6410	V	51.7	---	-9.40	42.3	---	74	54
2881.3590	H	51.5	---	-6.63	44.9	---	74	54
3130.0207	H	54.3	---	-5.86	48.4	---	74	54
3130.0207	V	54.0	---	-5.86	48.1	---	74	54
3328.9502	H	56.4	---	-5.34	51.1	---	74	54
3328.9502	V	55.8	---	-5.34	50.5	---	74	54

10.4.2.2.3.2 Fundamental Frequency: 2437 MHz

Frequency	Ant Pol	Reading (dBuV/m) @3m		Correct Factor	Result (dBuV/m) @3m		Limit (dBuV/m) @3m	
(MHz)	H/V	Peak	AVG	(dB)	Peak	(MHz)	H/V	Peak
1024.6794	H	52.1	---	-14.38	37.7	---	74	54
1024.6794	V	55.2	---	-14.38	40.8	---	74	54
1078.5255	V	53.3	---	-14.11	39.2	---	74	54
1080.7691	H	55.3	---	-14.09	41.2	---	74	54
1179.4872	H	55.0	---	-13.61	41.4	---	74	54
1179.4872	V	53.3	---	-13.61	39.7	---	74	54
1197.4358	H	55.2	---	-13.51	41.7	---	74	54
1199.6794	V	59.3	---	-13.50	45.8	---	74	54
1246.7950	V	52.5	---	-13.27	39.2	---	74	54
1298.3974	H	54.9	---	-13.00	41.9	---	74	54
1298.3974	V	53.5	---	-13.00	40.5	---	74	54
1332.0513	H	51.7	---	-12.84	38.9	---	74	54
1554.1666	H	55.5	---	-11.72	43.8	---	74	54
1554.1666	V	55.7	---	-11.72	44.0	---	74	54
1776.2820	H	55.1	---	-10.56	44.5	---	74	54
1776.2820	V	56.5	---	-10.56	45.9	---	74	54
1996.1538	V	54.1	---	-9.41	44.7	---	74	54
2881.3590	H	53.1	---	-6.63	46.5	---	74	54
2881.3590	V	53.3	---	-6.63	46.7	---	74	54
3130.0207	H	54.5	---	-5.86	48.6	---	74	54
3130.0207	V	53.3	---	-5.86	47.4	---	74	54
3328.9502	H	56.9	---	-5.34	51.6	---	74	54
3328.9502	V	55.5	---	-5.34	50.2	---	74	54
6661.0191	V	50.3	---	-0.68	49.6	---	74	54
7779.9975	V	50.8	---	1.32	52.1	---	74	54

10.4.2.2.3.3 Fundamental Frequency: 2462 MHz

Frequency	Ant Pol	Reading (dBuV/m) @3m		Correct Factor	Result (dBuV/m) @3m		Limit (dBuV/m) @3m	
(MHz)	H/V	Peak	AVG	(dB)	Peak	(MHz)	H/V	Peak
1024.6794	V	53.4	---	-14.38	39.0	---	74	54
1080.7691	H	55.4	---	-14.09	41.3	---	74	54
1091.9872	V	53.6	---	-14.03	39.6	---	74	54
1179.4872	H	55.5	---	-13.61	41.9	---	74	54
1179.4872	V	53.8	---	-13.61	40.2	---	74	54
1195.1922	H	57.3	---	-13.52	43.8	---	74	54
1195.1922	V	57.3	---	-13.52	43.8	---	74	54
1298.3974	H	54.0	---	-13.00	41.0	---	74	54
1298.3974	V	53.0	---	-13.00	40.0	---	74	54
1332.0513	H	51.5	---	-12.84	38.7	---	74	54
1332.0513	V	53.0	---	-12.84	40.2	---	74	54
1554.1666	H	54.6	---	-11.72	42.9	---	74	54
1554.1666	V	55.2	---	-11.72	43.5	---	74	54
1776.2820	H	55.7	---	-10.56	45.1	---	74	54
1776.2820	V	56.7	---	-10.56	46.1	---	74	54
1996.1538	V	55.5	---	-9.41	46.1	---	74	54
1998.3974	H	52.8	---	-9.41	43.4	---	74	54
2881.3590	H	50.9	---	-6.63	44.3	---	74	54
2881.3590	V	52.0	---	-6.63	45.4	---	74	54
3130.0207	H	54.2	---	-5.86	48.3	---	74	54
3130.0207	V	53.7	---	-5.86	47.8	---	74	54
3328.9502	H	58.1	---	-5.34	52.8	---	74	54
3328.9502	V	55.0	---	-5.34	49.7	---	74	54

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).
   ±2.9dB (1GHz≦f<18GHz).
   ±3.5dB (18GHz≦f≦40GHz).

10.4.3 Radiated Measurement at Bandedge with Fundamental Frequencies and co-location

Test Date: Apr. 26, 2013 Temperature: 20℃ Humidity: 56%

10.4.3.1 Operation Mode: Tx

10.4.3.1.1 IEEE 802.11b

Operation Channel	Test Frequency (MHz)	Reading (dBuV/m) 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	2390.000	39.2	15.1	35.4	14.4	30.3	69.5	45.4	74	54
11	2483.500	42.5	16.4	40.1	15.0	30.3	72.8	46.7	74	54

10.4.3.1.2 IEEE 802.11g

Operation Channel	Test Frequency (MHz)	Reading (dBuV/m) 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	2390.000	35.7	18.4	31.7	16.5	30.3	66.0	48.7	74	54
11	2483.500	40.7	19.3	35.0	16.9	30.3	71.0	49.6	74	54

Test Date: Mar. 21, 2011 Temperature: 17℃ Humidity: 54%

10.4.3.1.3 IEEE 802.11gn, HT20

Operation Channel	Test Frequency (MHz)	Reading (dBuV/m) 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	2390.000	37.9	18.8	32.5	15.6	30.3	68.2	49.1	74	54
11	2483.500	40.9	18.6	36.6	16.8	30.3	71.2	48.9	74	54

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