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

Report No.: 11-06-MAS-176-02

Client:	OpenPeak Inc.
Product:	Cisco CIUS 4G
Model:	CIUS-7-AT-K9
Series Model:	CIUS-7-K9
FCC ID:	VGBCSCO4G710
Manufacturer:	Celestica Thailand Ltd.
Date test item received:	2011/06/13
Date test campaign completed:	2011/08/18
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Client	: OpenPeak Inc.
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Manufacturer	: Celestica Thailand Ltd.
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EUT	: Cisco CIUS 4G
Brand/Trade name	: Cisco Systems, Inc.
Model No.	: CIUS-7-AT-K9
Series Model No.	: CIUS-7-K9
Power Source	: Adapter 1: (APD / DA-20A05) Input: 100-240Vac, 50-60Hz, 1.0A Max Output: 5V, 4A Max Adapter 2: (ENG / 3A-204DB05) Input: 100-240Vac, 50-60Hz, 0.5A Output: 5V, 4.0A
Regulations applied	: FCC 47 CFR, Part 15 Subpart C

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Table of Contents Page

1 GENERAL INFORMATION 5

1.1 Product Description 5
1.2 Characteristics of Device 5
1.3 Test Methodology 6
1.4 Test Facility 6
1.5 Test Summary 6

2 PROVISIONS APPLICABLE 7

2.1 Definition 7
2.2 Requirement for Compliance 8
2.3 Restricted Bands of Operation 10
2.4 Labeling Requirement 10
2.5 User Information 11

3. SYSTEM TEST CONFIGURATION 12

3.1 Devices for Tested System 12
3.2 Dscription of Test modes 13

4 CONDUCTED EMISSION MEASUREMENT 15

4.1 Standard Applicable 15
4.2 Measurement Procedure 15
4.3 Conducted Emission Data 16
4.4 Result Data Calculation 18
4.5 Conducted Measurement Equipment 18

5 ANTENNA REQUIREMENT 19

5.1 Standard Applicable 19
5.2 Antenna Construction and Directional Gain 19

6 EMISSION BANDWIDTH MEASUREMENT 20

6.1 Standard Applicable 20
6.2 Measurement Procedure 20
6.3 Measurement Equipment 20
6.4 Measurement Data 21

7 OUTPUT POWER MEASUREMENT 48

7.1 Standard Applicable 48
7.2 Measurement Procedure 48
7.3 Measurement Equipment 48
7.4 Measurement Data 49

8 POWER DENSITY MEASUREMENT 56

8.1 Standard Applicable 56
8.2 Measurement Procedure 56
8.3 Measurement Equipment 56
8.4 Measurement Data 57

9 SPURIOUS EMISSION - RF CONDUCTED MEASUREMENT 84

9.1 Standard Applicable 84
9.2 Measurement Procedure 84
9.3 Measurement Equipment 84
9.4 Measurement Data 85

10 RADIATED EMISSION MEASUREMENT 122

10.1 Standard Applicable 122
10.2 Measurement Procedure 122
10.3 Measuring Instrument 124
10.4 Radiated Emission Data 125
10.5 Field Strength Calculation 136

1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT : Cisco CIUS 4G
b) Trade Name : Cisco Systems, Inc.
c) Model No. : CIUS-7-AT-K9
d) Series Model No. : CIUS-7-K9
e) FCC ID : VGBCSCO4G710

1.2 Characteristics of Device

The EUT is a Mobile Collaboration Tablet. It conforms to the IEEE 802.11a/b/g/n protocal and operates in the unlicensed ISM Band at 2.4 GHz and 5.8GHz, and in the unlicensed U-NII Band at 5.2GHz, 5.3GHz and 5.6GHz.

RF chain	1T1R
Frequency Range	IEEE 802.11b/g, 802.11gn HT20: 2412MHz~2462MHz IEEE 802.11gn HT40: 2422MHz~2462MHz IEEE 802.11a, 802.11an HT20: 5.2GHz: 5180MHz ~5240MHz, 5.3G: 5260MHz ~5320MHz, 5.6GHz: 5500MHz~5700 MHz, 5.8G: 5745MHz ~5825MHz IEEE 802.11an HT40: 5.2GHz: 5190MHz ~5230MHz, 5.3G: 5270MHz ~5310MHz, 5.6GHz: 5510MHz~5670 MHz, 5.8G: 5745MHz ~5825MHz
Channel Spacing	IEEE 802.11b/g, 802.11gn HT20/HT40: 5MHz IEEE 802.11a, 802.11an HT20/ 40: 5MHz
Channel Number	IEEE 802.11b/g, 802.11gn HT20:13 Channels IEEE 802.11gn HT40: 9 Channels IEEE 802.11a, 802.11an HT20: 5.2GHz:13 Channels, 5.3GHz:13 Channels, 5.6GHz: 41Channels, 5.8G: 16Channels IEEE 802.11an HT40: 5.2GHz:9 Channels, 5.3GHz:9 Channels, 5.6GHz: 33 Channels,5.8G: 16Channels
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 IEEE 802.11gn HT40: 135, 121.5, 108, 81, 54, 40.5, 27, 13.5 Mbps IEEE 802.11a: 54, 48, 36, 24, 18, 12, 11, 9, 6 Mbps IEEE 802.11an HT20: 65, 58.5, 52, 39, 26, 19.5, 13, 6.5Mbps IEEE 802.11an 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 802.11gn HT20/40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11an HT20/40: OFDM (64QAM, 16QAM, QPSK, BPSK)

One antenna is used for this device:

	Antenna Type
Ant	802.11abgn WLAN Antenna

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.

1.5 Test Summary

Requirement	FCC Paragraph #	Test Pass
Antenna Requirement	15.203	☒
Conducted Emission	15.207	☒
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)	☒

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 (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.

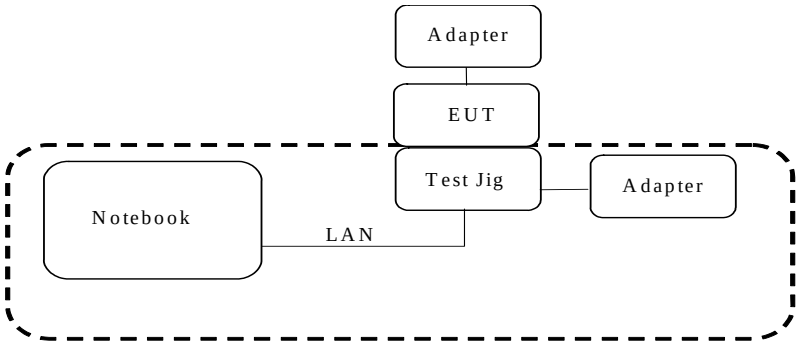
3. SYSTEM TEST CONFIGURATION

3.1 Devices for Tested System

Device	Manufacture	Model No.	Cable Description
* Cisco CIUS 4G	Celestica Thailand Ltd.	CIUS-7-AT-K9	2.5m*1, Unshielded Power Line / Adapter
Test Jig	N/A	N/A	1.8m*1, Unshielded Power Line 1.8m*1 Unshielded Signal Line
Notebook	HP	nx6320	3.1m*1, Unshielded Power Line

Remark

1. "*" means equipment under test.



Note: A HP notebook performs the control test mode. The notebook removes away after the control command is ready.

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 IEEE 802.11gn HT40 mode:

There are three channels have been tested as following:

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

IEEE 802.11gn HT40 mode: MCS0 13.5 Mbps data rate is the worse case for full testing.

3.2.3 IEEE 802.11a, 802.11an HT20 mode:

There are three channels have been tested as following:

Channel	Frequency (MHz)
Low = 149	5745
Middle = 157	5785
High = 165	5825

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

IEEE 802.11an HT20 mode: MCS0 6.5 Mbps data rate is the worse case for full testing.

3.2.4 IEEE 802.11an HT40 mode:

There are three channels have been tested as following:

Channel	Frequency (MHz)
Low = 151	5755
High = 159	5795

IEEE 802.11an HT40 mode: MCS0 13.5 Mbps data rate is the worse case for full testing.

3.2.5 Test Mode Description

3.2.5.1 Modulation Type

Test Mode	Modulation	Note
A	IEEE 802.11b	-
B	IEEE 802.11g	-
C	IEEE 802.11gn HT20 (note1)	-
D	IEEE 802.11gn HT40	-
E	IEEE 802.11a	-
F	IEEE 802.11an HT20 (note 1)	-
G	IEEE 802.11an HT40	-

Mode	IEEE 802.11b/g/gn HT20	IEEE 802.11gn HT40
Test Channel	Frequency (MHz)	Frequency (MHz)
Channel Low (L)	2412	2422
Channel Mid (M)	2437	2442
Channel High (H)	2462	2452

Mode	IEEE 802.11a/ an HT20	IEEE 802.11an HT40
Test Channel	Frequency (MHz)	Frequency (MHz)
Channel Low (L)	5745	5755
Channel Mid (M)	5785	n/a
Channel High (H)	5825	5795

3.2.5.2 Test Mode and Worse Case Determination

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

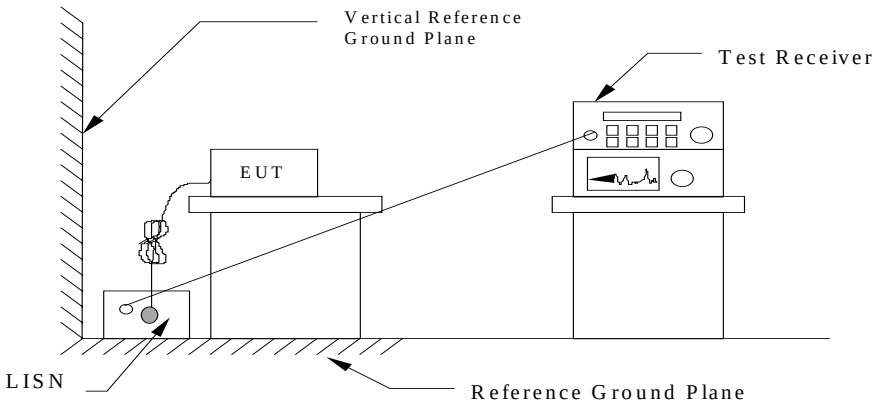
4.1 Standard Applicable

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.

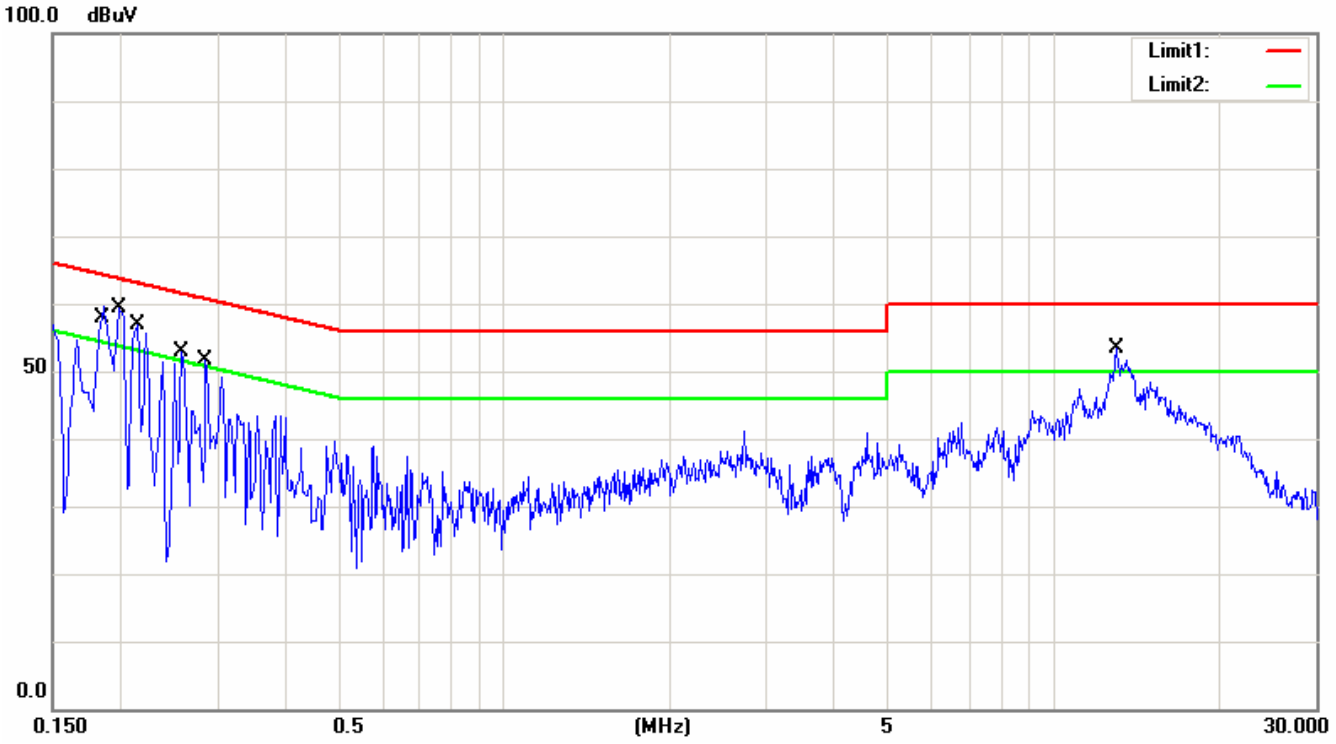
Figure 1 : Conducted emissions measurement configuration



4.3 Conducted Emission Data

File: 11-06-MAS-176 **Data:** #1 **Date:** 2011/8/18 **Temperature:** 25 ℃

Time: PM 06:39:43 **Humidity:** 62 %



Condition: **Phase:** **L1**

EUT: **Power:** **AC 110V/60Hz**

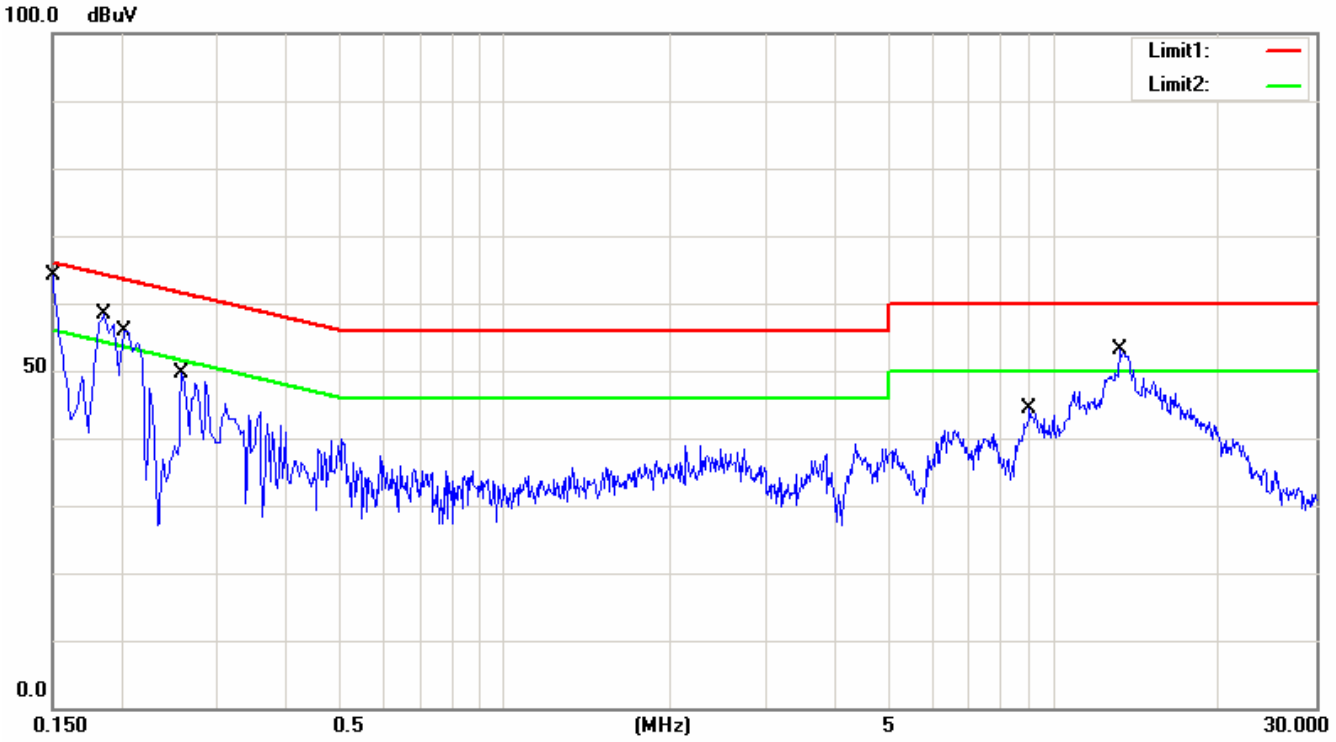
Model:

Test Mode: Adapter 1: (APD / DA-20A05)

No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV)		dB	(dBuV)	(dBuV)	(dB)
1	0.1824	49.33	QP	9.72	59.05	64.38	-5.33
2	0.1824	28.11	AVG	9.72	37.83	54.38	-16.55
3	0.1963	47.16	QP	9.72	56.88	63.77	-6.89
4	0.1963	28.23	AVG	9.72	37.95	53.77	-15.82
5	0.2150	43.92	QP	9.72	53.64	63.01	-9.37
6	0.2150	24.28	AVG	9.72	34.00	53.01	-19.01
7	0.2552	38.12	QP	9.72	47.84	61.59	-13.75
8	0.2552	18.45	AVG	9.72	28.17	51.59	-23.42
9	0.2855	38.32	QP	9.72	48.04	60.65	-12.61
10	0.2855	18.00	AVG	9.72	27.72	50.65	-22.93
11	12.9685	34.86	QP	9.93	44.79	60.00	-15.21
12	12.9685	28.11	AVG	9.93	38.04	50.00	-11.96

File: 11-06-MAS-176 **Data:** #2 **Date:** 2011/8/18 **Temperature:** 25 ℃

Time: PM 06:45:05 **Humidity:** 62 %



Condition: **Phase:** **N**

EUT: **Power:** **AC 110V/60Hz**

Model:

Test Mode: Adapter 1: (APD / DA-20A05)

No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV)		dB	(dBuV)	(dBuV)	(dB)
1	0.1500	18.60	QP	9.69	28.29	66.03	-37.74
2	0.1500	14.75	AVG	9.69	24.44	56.03	-31.59
3	0.1853	46.40	QP	9.68	56.08	64.24	-8.16
4	0.1853	25.37	AVG	9.68	35.05	54.24	-19.19
5	0.2002	44.29	QP	9.68	53.97	63.60	-9.63
6	0.2002	26.72	AVG	9.68	36.40	53.60	-17.20
7	0.2592	35.96	QP	9.68	45.64	61.46	-15.82
8	0.2592	19.66	AVG	9.68	29.34	51.46	-22.12
9	9.0462	27.60	QP	9.86	37.46	60.00	-22.54
10	9.0462	21.99	AVG	9.86	31.85	50.00	-18.15
11	13.1598	38.75	QP	9.94	48.69	60.00	-11.31
12	13.1598	32.00	AVG	9.94	41.94	50.00	-8.06

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	ESIC	07/04/2012
LISN	Rohde and Schwarz	ENV216	04/17/2012

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 radio utilizes with one dual band antenna, with the maximum gain as table below:

	Antenna Type	Peak gain (dBi)	
		2.4GHz Band	5.8GHz Band
Ant	802.11a/b/g/n FPC antenna	2.6	1.8

The highest gains of each type of antennas for all legacy / SISO modes test.

Band	Ant gain (dBi)
2.4 GHz	2.6
5.8 GHz	1.8

6 EMISSION BANDWIDTH MEASUREMENT

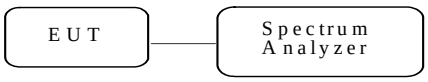
6.1 Standard Applicable

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	E4446A	09/26/2011

6.4 Measurement Data

6.4.1 IEEE 802.11b

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	10.1666	500	Page 23
M	10.1666	500	Page 24
H	10.1666	500	Page 25

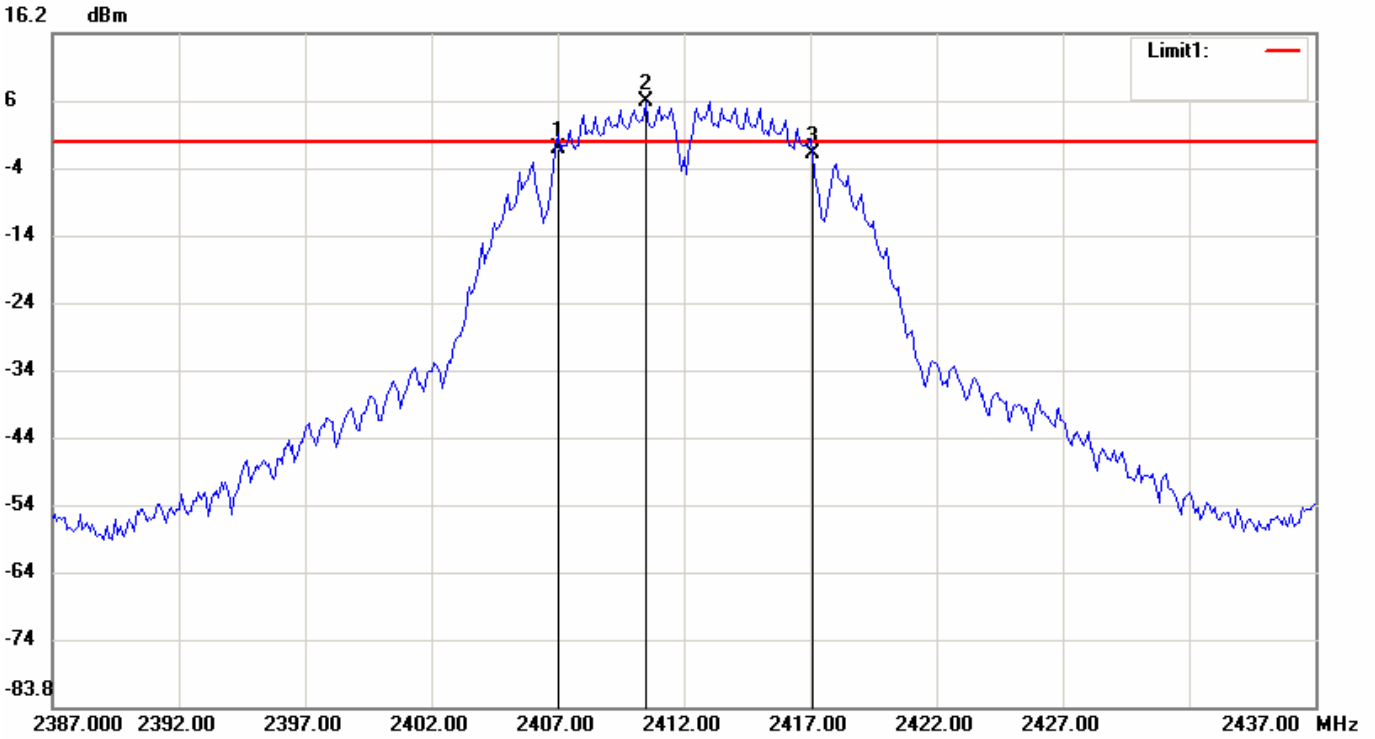
Note:

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: 11-06-MAS-176 Data: #1 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:06:40 **Humidity: 60 %**



Condition: **0.0199999999999996dBm** **Vertical**

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

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

Test Mode:

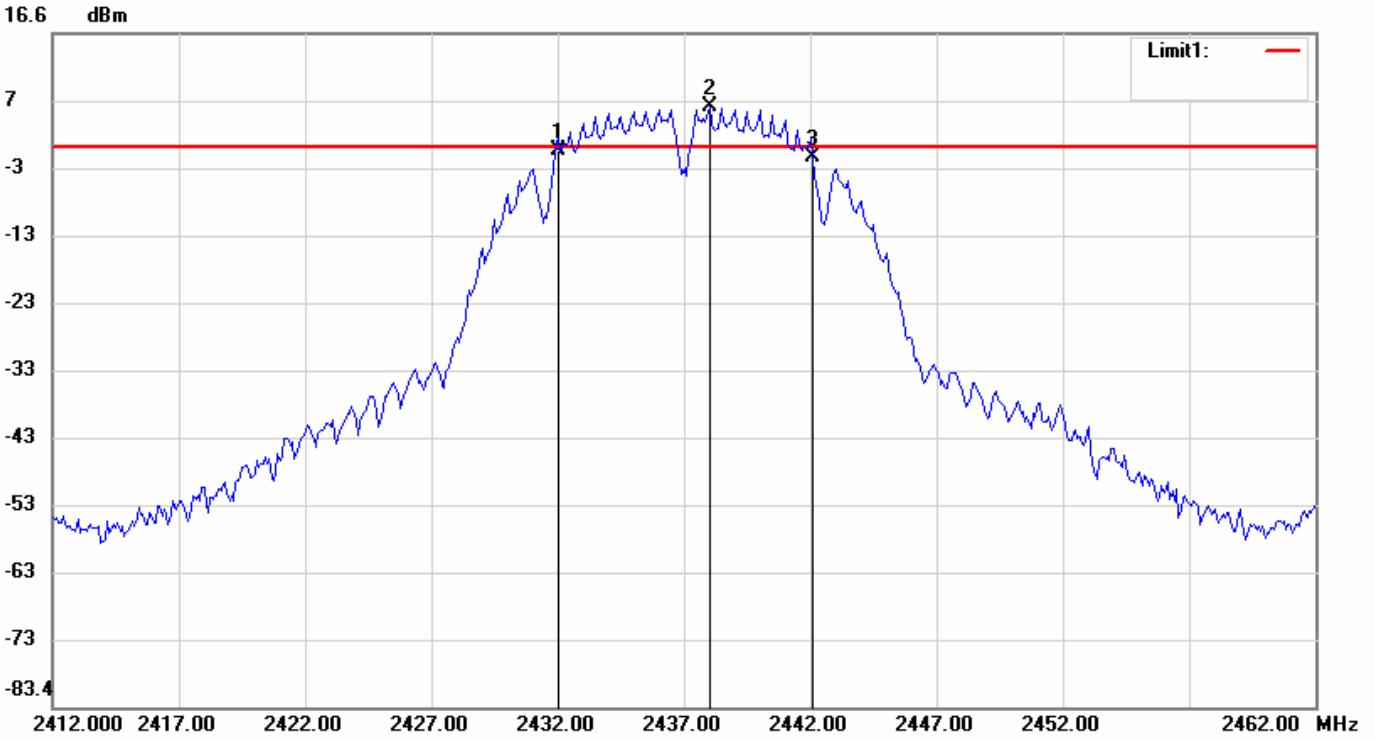
Note: **FCC-802.11b Channel 01-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2406.91670	-0.80
2	2410.50000	6.02
3	2417.08330	-1.63

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	10.1666	-0.83

File: 11-06-MAS-176 Data: #6 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:14:43 **Humidity: 60 %**



Condition: **-0.22dBm** **Vertical**

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

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

Test Mode:

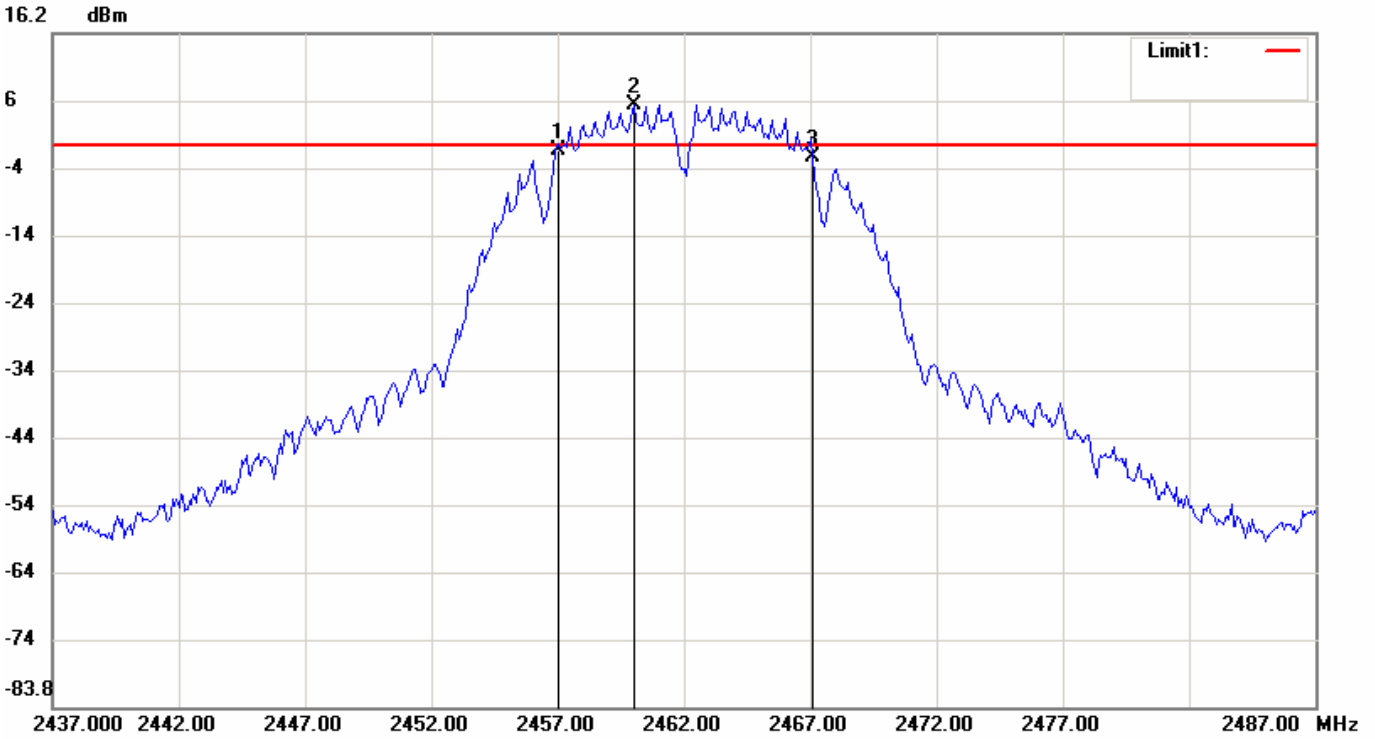
Note: **FCC-802.11b Channel 06-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2431.91670	-0.63
2	2438.00000	5.78
3	2442.08330	-1.74

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	10.1666	-1.11

File: 11-06-MAS-176 Data: #10 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:22:47 **Humidity: 60 %**



Condition: **-0.34dBm** **Vertical**

EUT: **Cisco Tablet** **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	2456.91670	-1.07
2	2460.00000	5.66
3	2467.08330	-2.11

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	10.1666	-1.04

6.4.2 IEEE 802.11g

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	16.5	500	Page 27
M	16.5	500	Page 28
H	16.5	500	Page 29

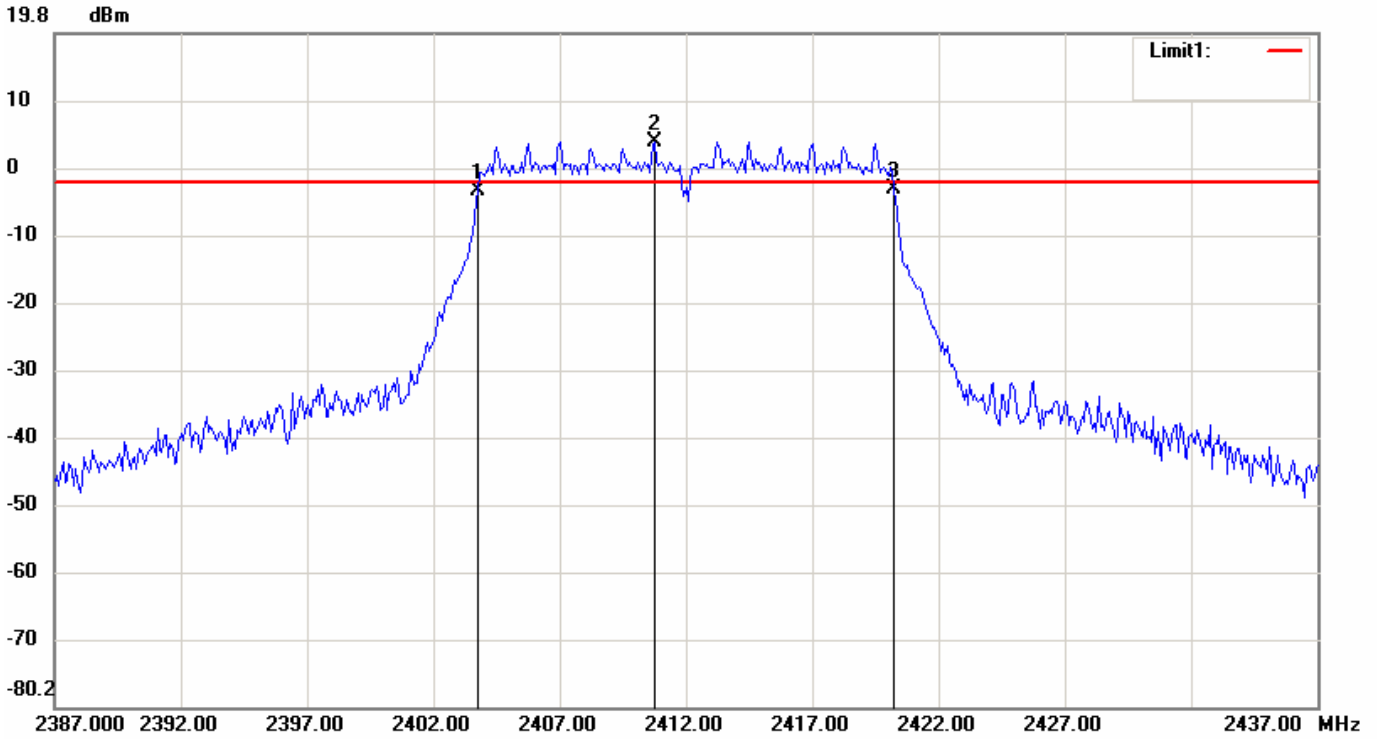
Note:

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≦f≦ 18GHz)*

File: 11-06-MAS-176 Data: #15 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:34:51 **Humidity: 60 %**



Condition: **-2.31dBm** **RF Conducted**

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

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

Test Mode:

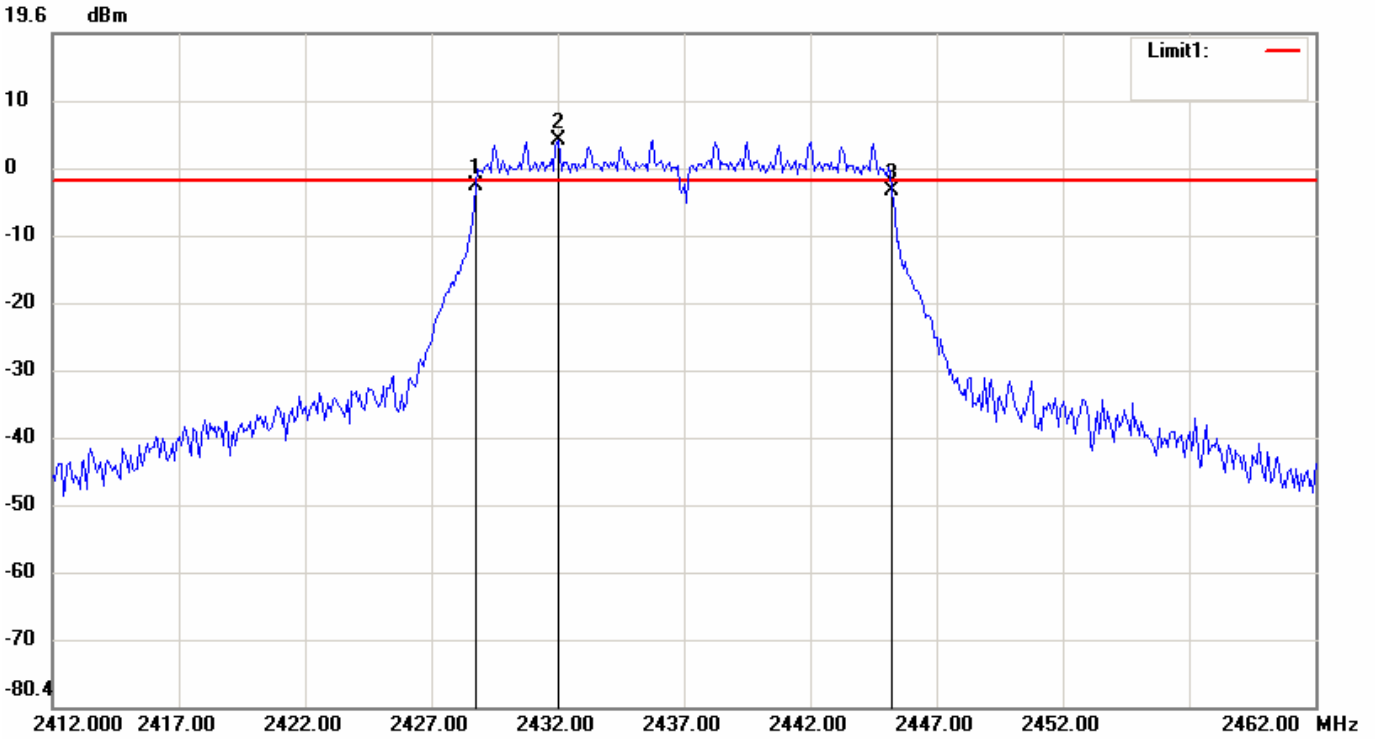
Note: **FCC-802.11g Channel 01-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2403.75000	-3.51
2	2410.75000	3.69
3	2420.25000	-3.46

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	16.5	0.05

File: 11-06-MAS-176 Data: #20 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:53:40 **Humidity: 60 %**



Condition: **-2.39dBm** **RF Conducted**

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

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

Test Mode:

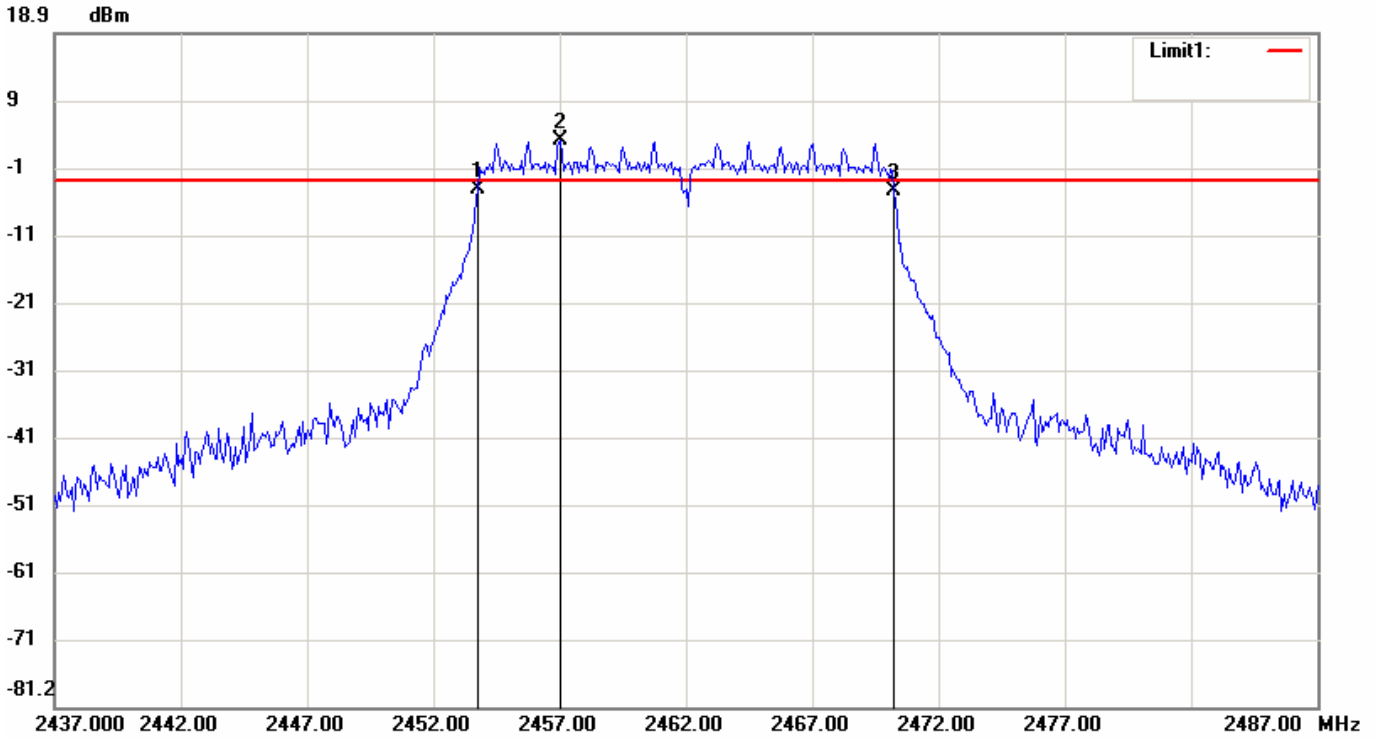
Note: **FCC-802.11g Channel 06-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2428.75000	-3.09
2	2432.00000	3.61
3	2445.25000	-3.79

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	16.5	-0.7

File: 11-06-MAS-176 Data: #24 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:02:00 **Humidity: 60 %**



Condition: **-3.13dBm** **RF Conducted**

EUT: **Cisco Tablet** **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	-4.26
2	2457.00000	2.87
3	2470.25000	-4.61

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	16.5	-0.35

6.4.3 IEEE 802.11gn, HT20

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

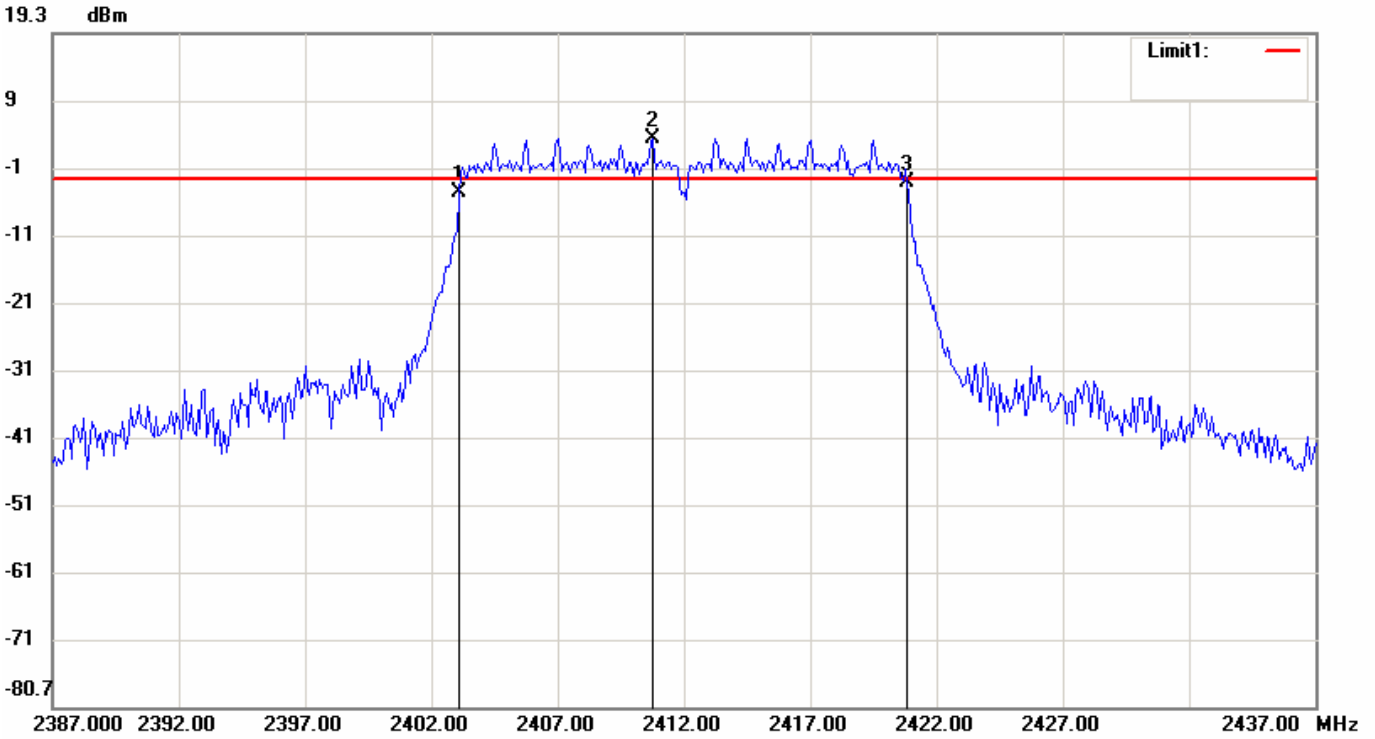
Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	17.75	500	Page 31
M	17.75	500	Page 32
H	17.75	500	Page 33

Note:

1.Please refer to page 31 to page 33 for chart
2. The estimated measurement uncertainty of the result measurement is 8.25×10^{-7} *(1GHz≦f≦ 18GHz)*

File: 11-06-MAS-176 Data: #29 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:13:34 **Humidity: 60 %**



Condition: **-2.34dBm** **RF Conducted**

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

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

Test Mode:

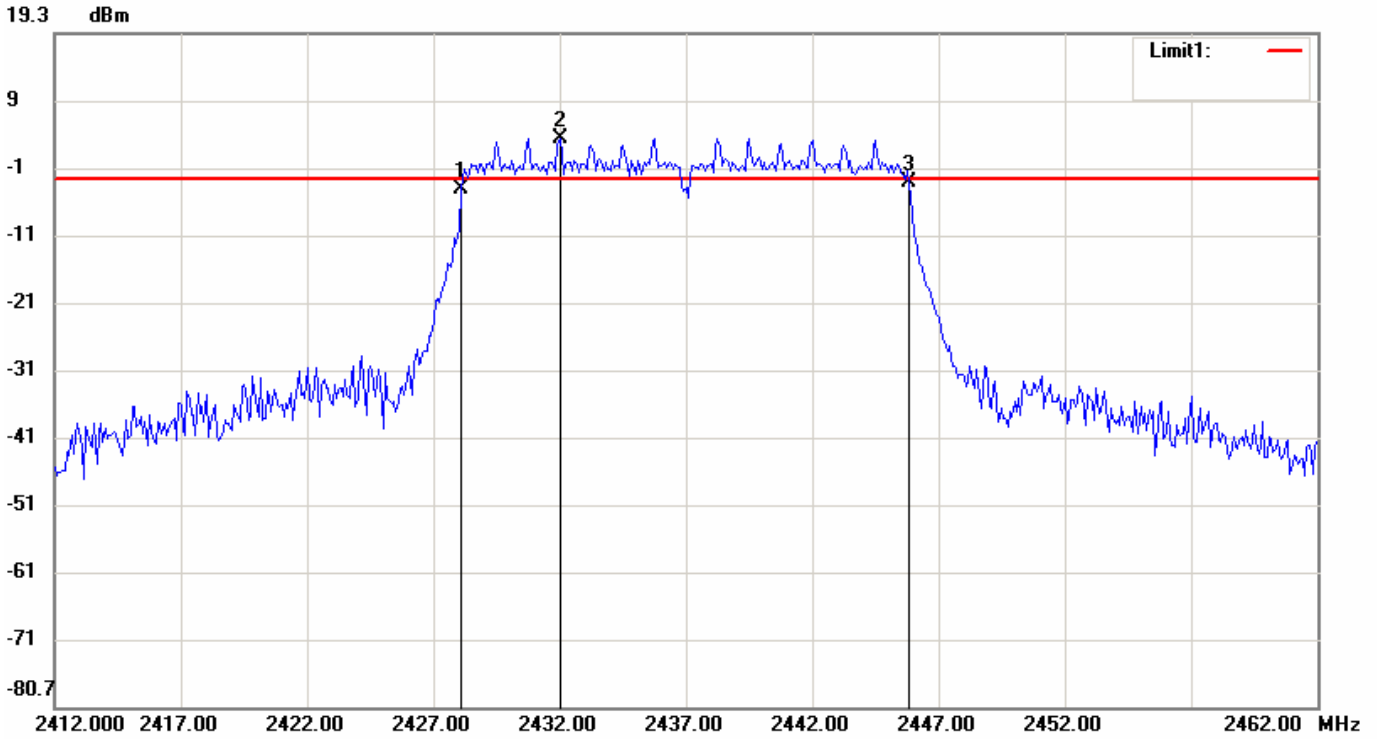
Note: **FCC-802.11gn_HT20 Channel 01-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2403.08330	-4.40
2	2410.75000	3.66
3	2420.83330	-2.89

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17.75	1.51

File: 11-06-MAS-176 Data: #34 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:21:09 **Humidity: 60 %**



Condition: **-2.3dBm** **RF Conducted**

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

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

Test Mode:

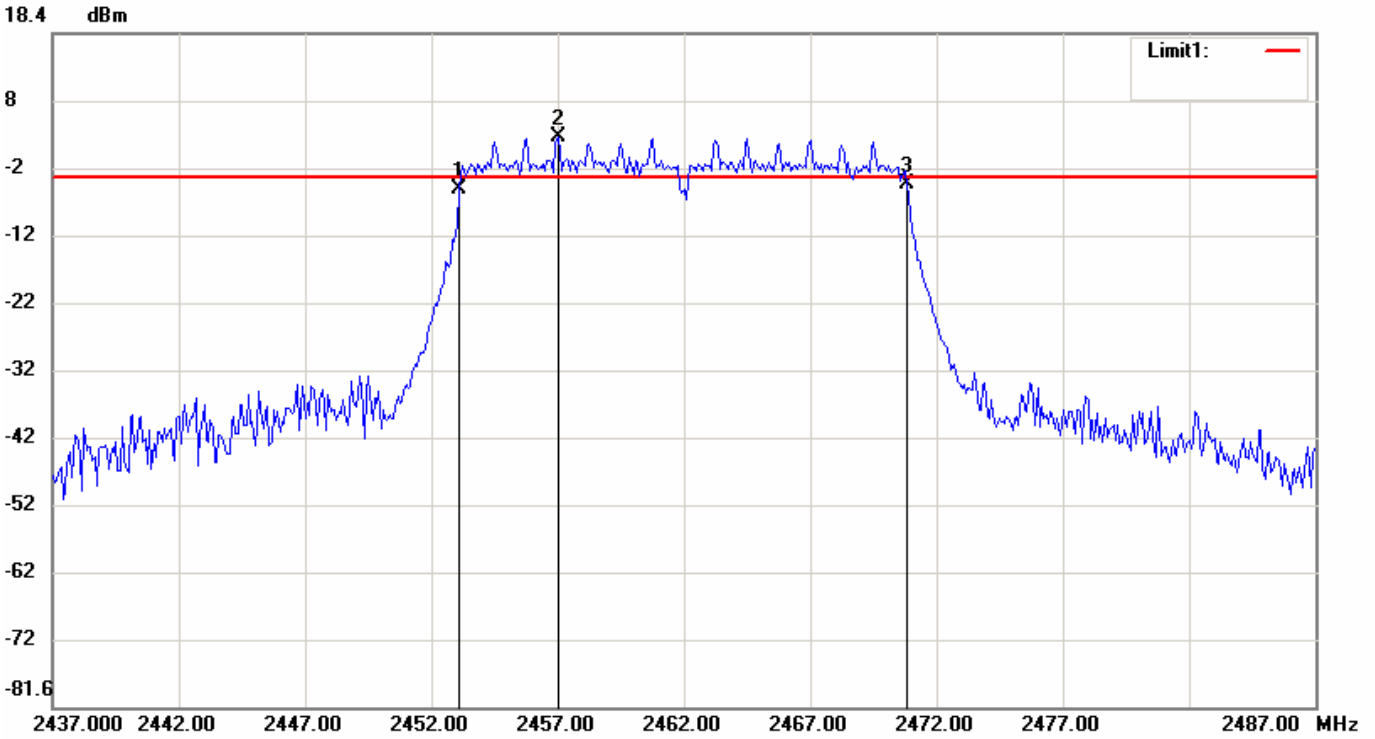
Note: **FCC-802.11gn_HT20 Channel 06-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2428.08330	-3.95
2	2432.00000	3.70
3	2445.83330	-2.76

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17.75	1.19

File: 11-06-MAS-176 Data: #38 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:29:05 **Humidity: 60 %**



Condition: **-3.06dBm** **RF Conducted**

EUT: **Cisco Tablet** **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	2453.08330	-4.81
2	2457.00000	2.94
3	2470.83330	-3.87

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17.75	0.94

6.4.4 IEEE 802.11gn, HT40

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	36.5	500	Page 35
M	36.5	500	Page 36
H	36.5	500	Page 37

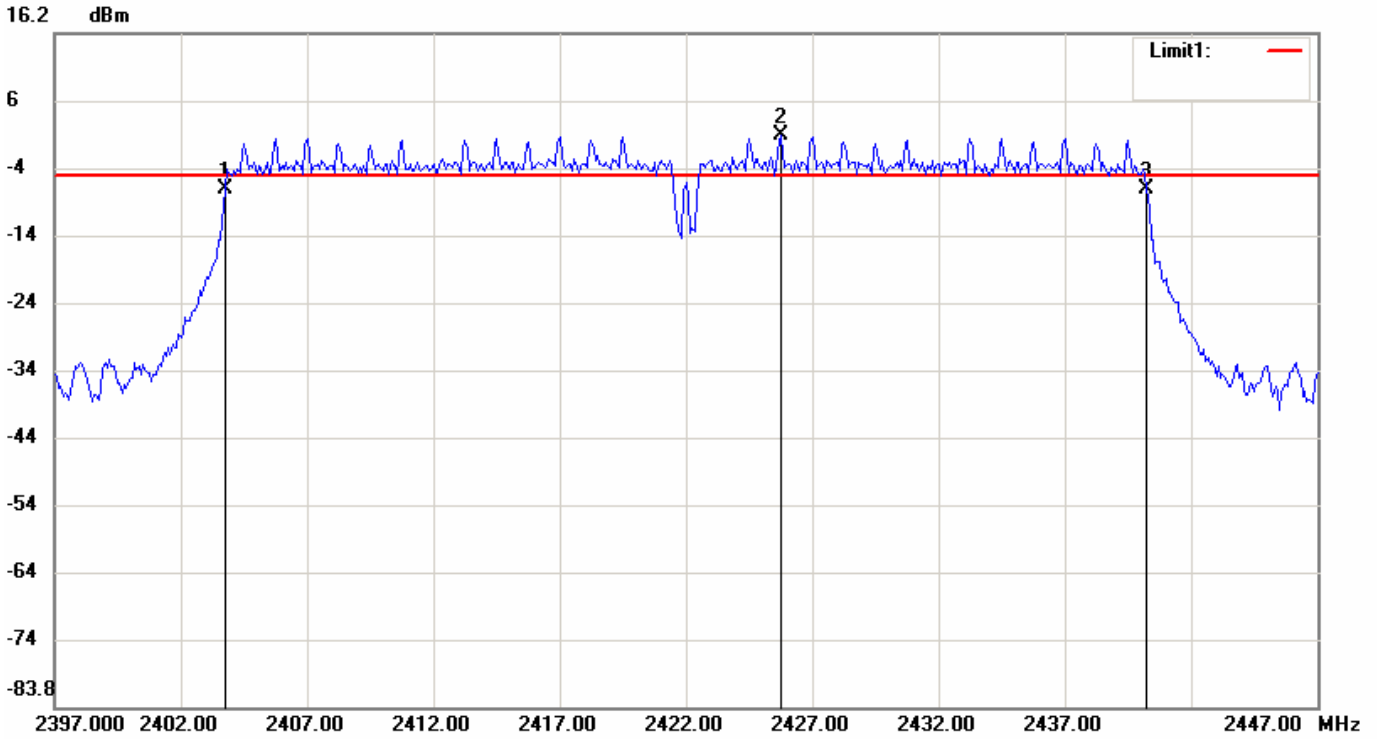
Note:

1.Please refer to page 35 to page 37 for chart

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

File: 11-06-MAS-176 Data: #43 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:39:34 **Humidity: 60 %**



Condition: **-5dBm** **RF Conducted**

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

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

Test Mode:

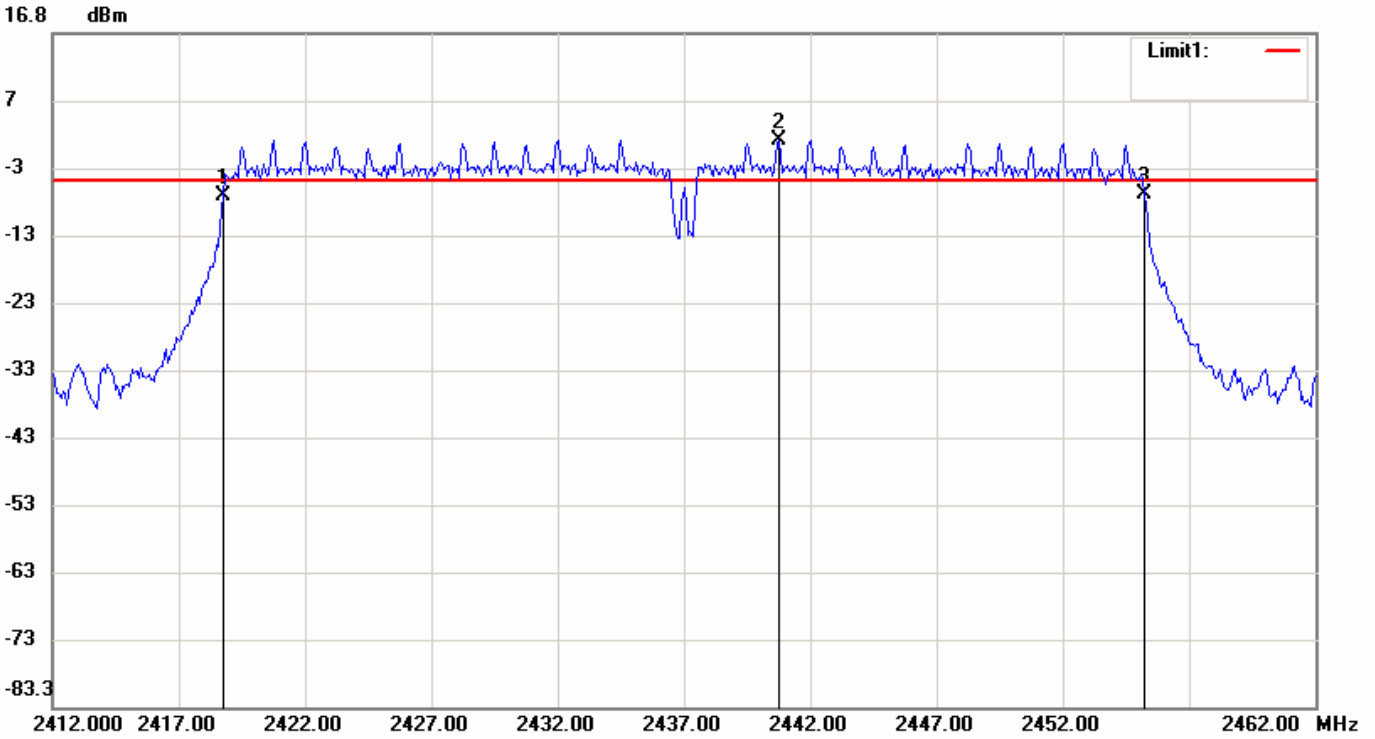
Note: **FCC-802.11gn_HT40 Channel 03-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2403.75000	-6.95
2	2425.75000	1.00
3	2440.25000	-6.98

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	36.5	-0.03

File: 11-06-MAS-176 Data: #48 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:47:53 **Humidity: 60 %**



Condition: **-5.06dBm** **RF Conducted**

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

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

Test Mode:

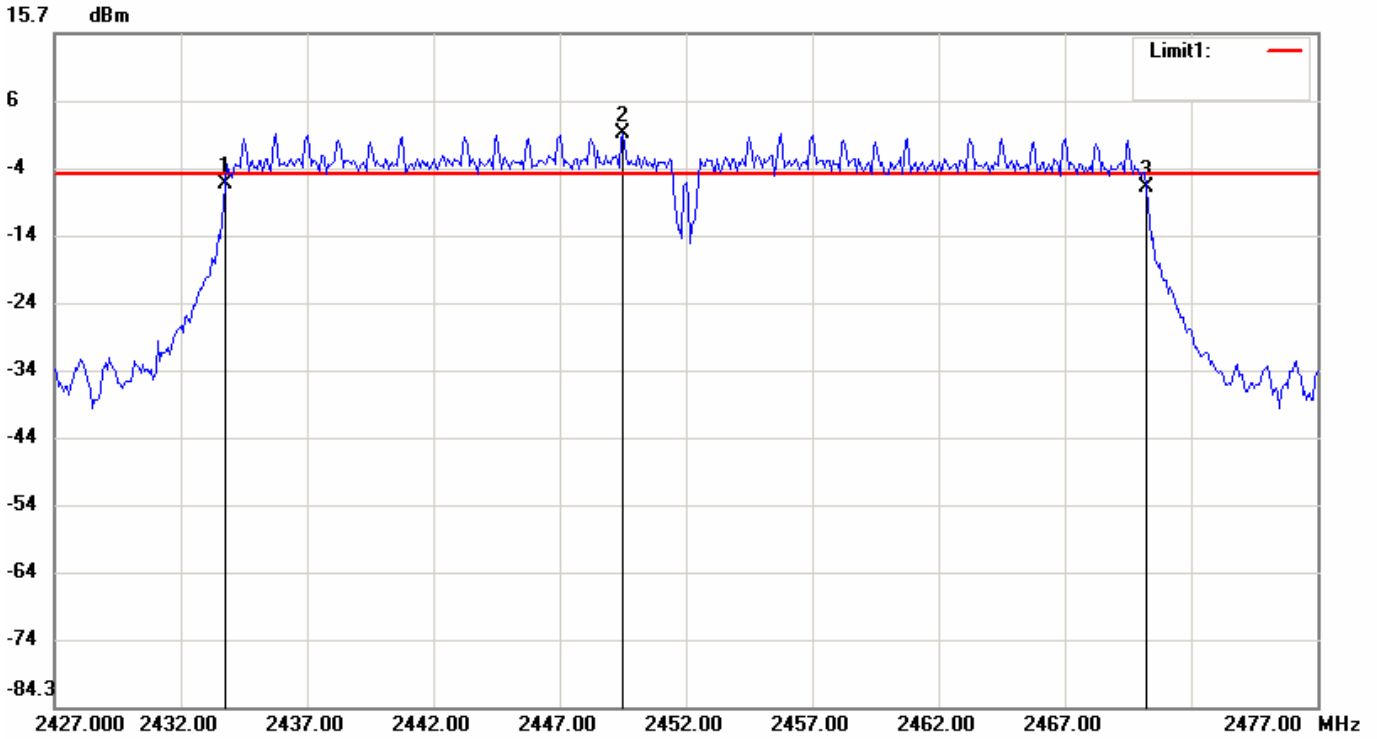
Note: **FCC-802.11gn_HT40 Channel 06-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2418.75000	-7.29
2	2440.75000	0.94
3	2455.25000	-7.19

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	36.5	0.1

File: 11-06-MAS-176 Data: #52 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:55:58 **Humidity: 60 %**



Condition: **-5.24dBm** **RF Conducted**

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

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

Test Mode:

Note: **FCC-802.11gn_HT40 Channel 09-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	2433.75000	-6.70
2	2449.50000	0.76
3	2470.25000	-7.21

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	36.5	-0.51

6.4.5 IEEE 802.11a

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	16.75	500	Page 39
M	16.75	500	Page 40
H	16.75	500	Page 41

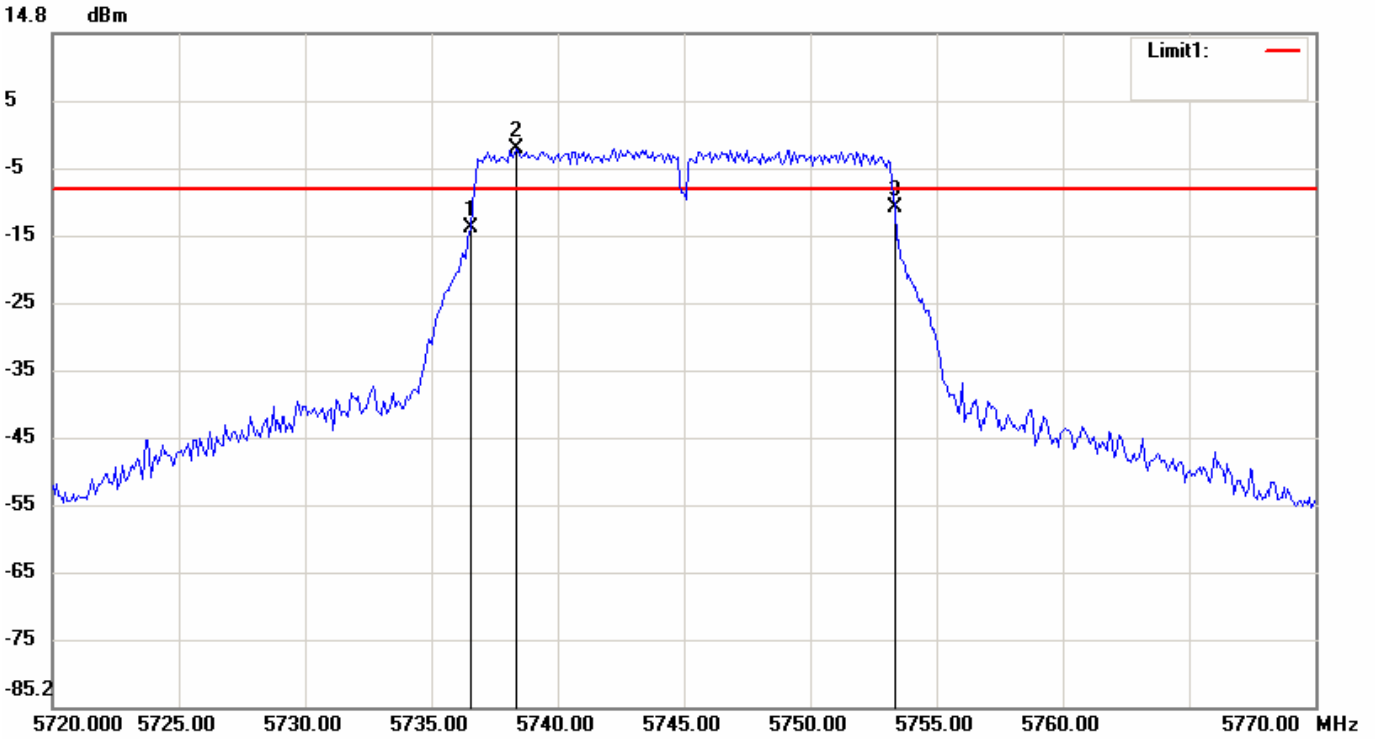
Note:

1.Please refer to page 39 to page 41 for chart

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

File: 11-06-MAS-176 Data: #95 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 01:58:10 **Humidity: 53 %**



Condition: **-8.23dBm** **RF Conducted**

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

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

Test Mode:

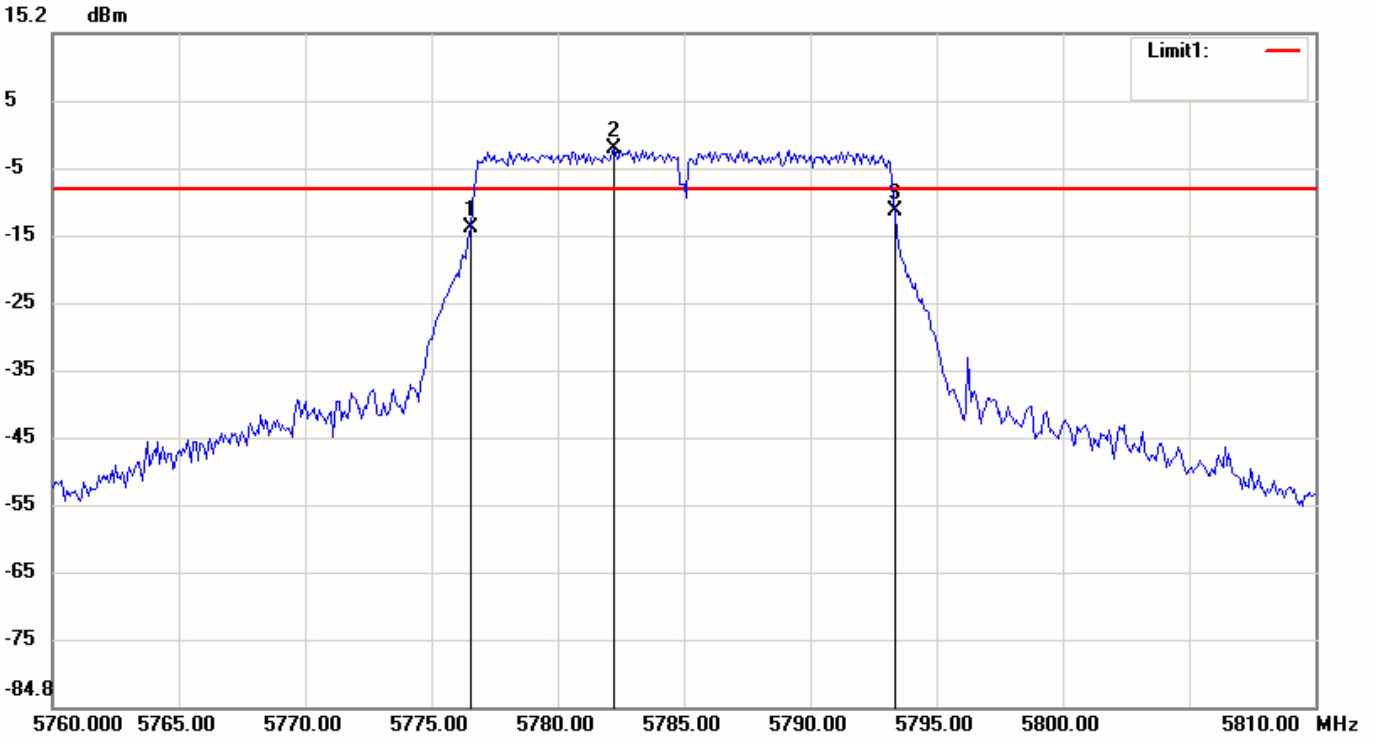
Note: **FCC-802.11a Channel 149-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	5736.58330	-14.04
2	5738.33330	-2.23
3	5753.33330	-11.19

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	16.75	2.85

File: 11-06-MAS-176 Data: #100 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 02:05:34 **Humidity: 53 %**



Condition: **-7.8dBm** **RF Conducted**

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

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

Test Mode:

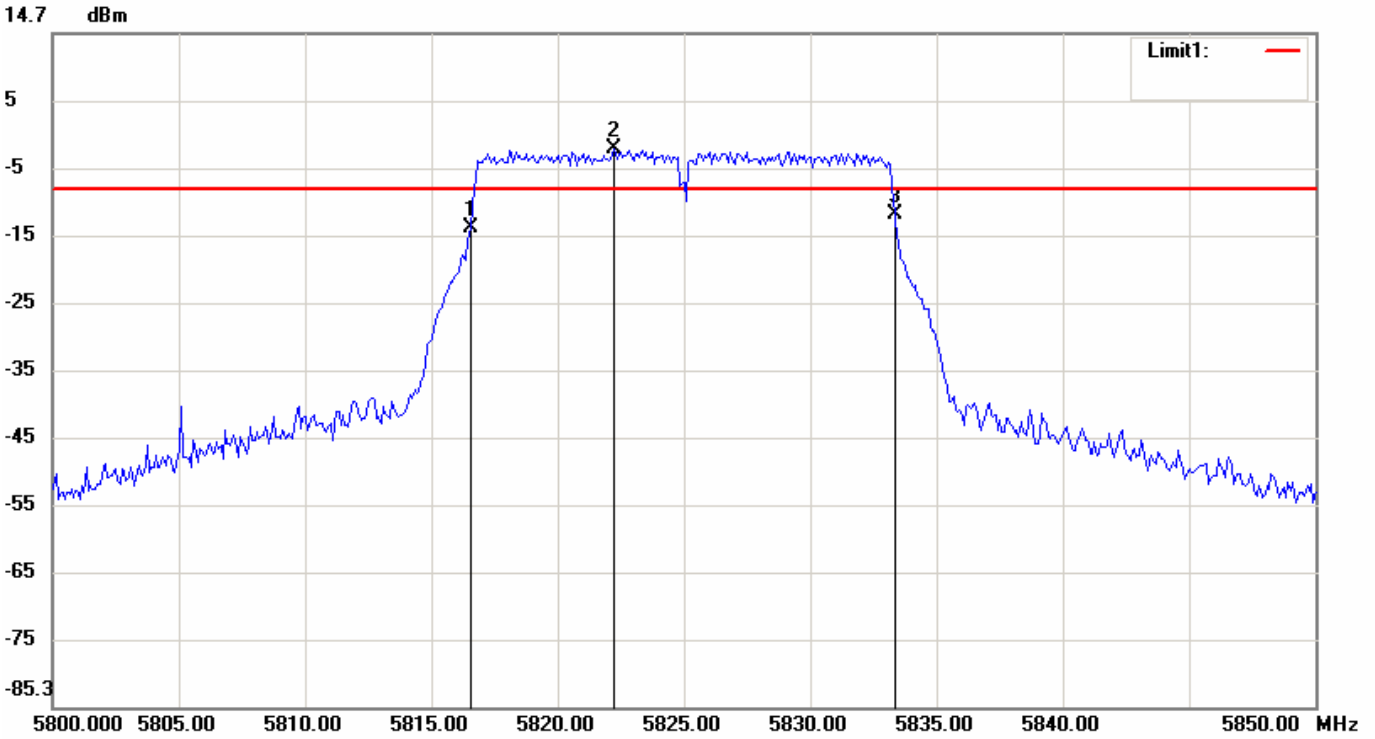
Note: **FCC-802.11a Channel 157-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	5776.58330	-13.68
2	5782.25000	-1.80
3	5793.33330	-11.28

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	16.75	2.4

File: 11-06-MAS-176 Data: #104 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 02:16:46 **Humidity: 53 %**



Condition: **-8.51dBm** **RF Conducted**

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

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

Test Mode:

Note: **FCC-802.11a Channel 1491-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	5816.58330	-14.12
2	5822.25000	-2.51
3	5833.33330	-12.26

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	16.75	1.86

6.4.6 IEEE 802.11a, HT20

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	17.8333	500	Page 43
M	17.7500	500	Page 44
H	17.9167	500	Page 45

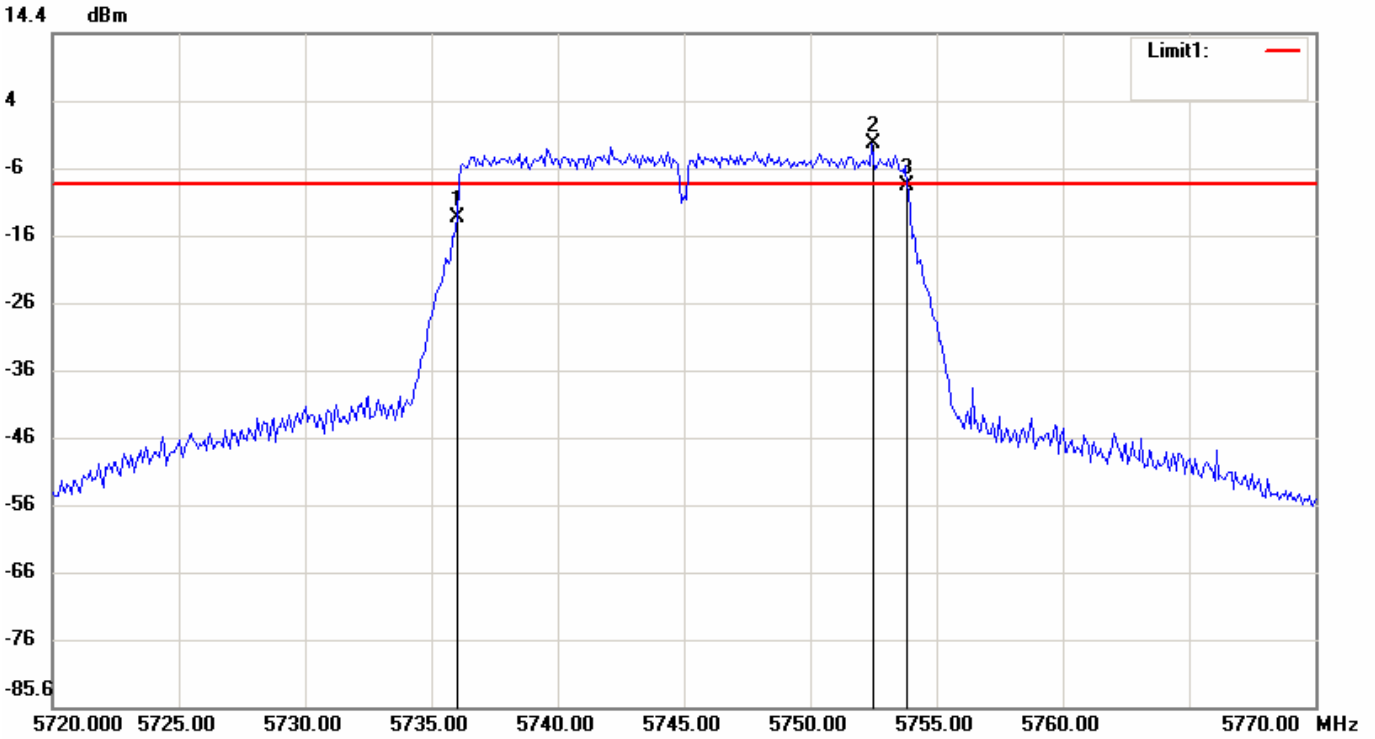
Note:

1.Please refer to page 43 to page 45 for chart

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

File: 11-06-MAS-176 Data: #109 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:09:24 **Humidity: 53 %**



Condition: **-8.1dBm** **RF Conducted**

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

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

Test Mode:

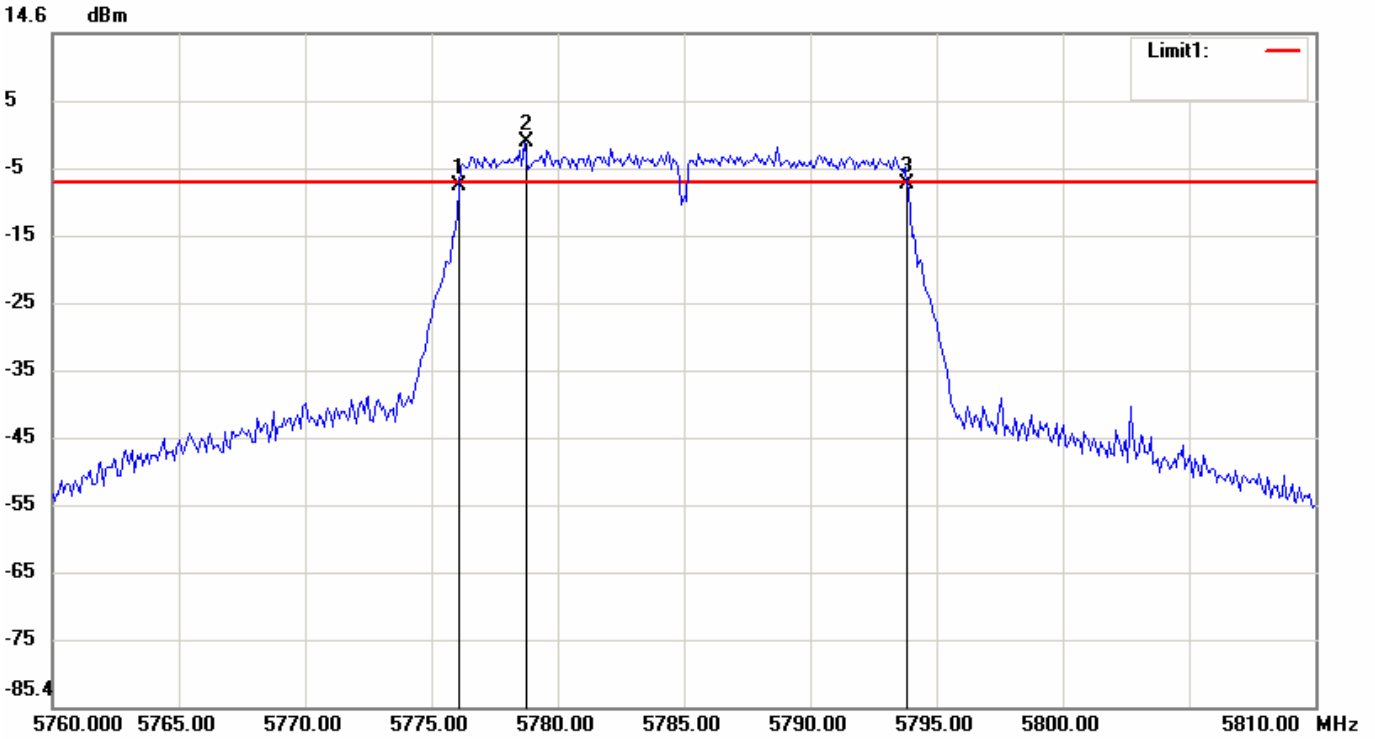
Note: **FCC-802.11an_HT20 Channel 149-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	5736.00000	-12.94
2	5752.41670	-2.10
3	5753.83330	-8.13

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17.8333	4.81

File: 11-06-MAS-176 Data: #114 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:17:08 **Humidity: 53 %**



Condition: **-7.46dBm** **RF Conducted**

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

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

Test Mode:

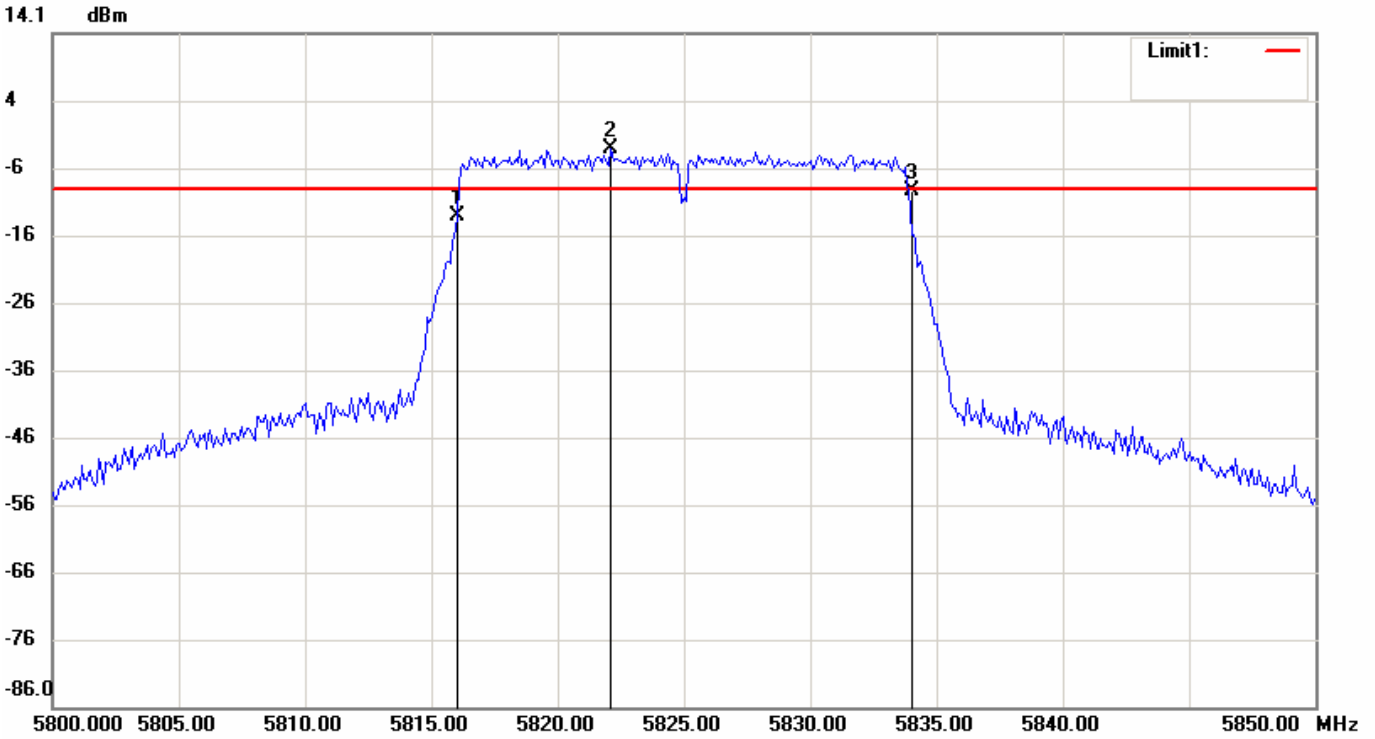
Note: **FCC-802.11an_HT20 Channel 157-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	5776.08330	-7.93
2	5778.66670	-1.46
3	5793.83330	-7.86

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17.75	0.07

File: 11-06-MAS-176 Data: #118 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:24:40 **Humidity: 53 %**



Condition: **-9.18dBm** **RF Conducted**

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

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

Test Mode:

Note: **FCC-802.11an_HT20 Channel 1491-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	5816.00000	-13.03
2	5822.08330	-3.18
3	5833.91670	-9.20

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	17.9167	3.83

6.4.7 IEEE 802.11a, HT40

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	6dB Bandwidth (MHz)	FCC Limit (kHz)	Chart
L	36.750	500	Page 47
H	36.666	500	Page 48

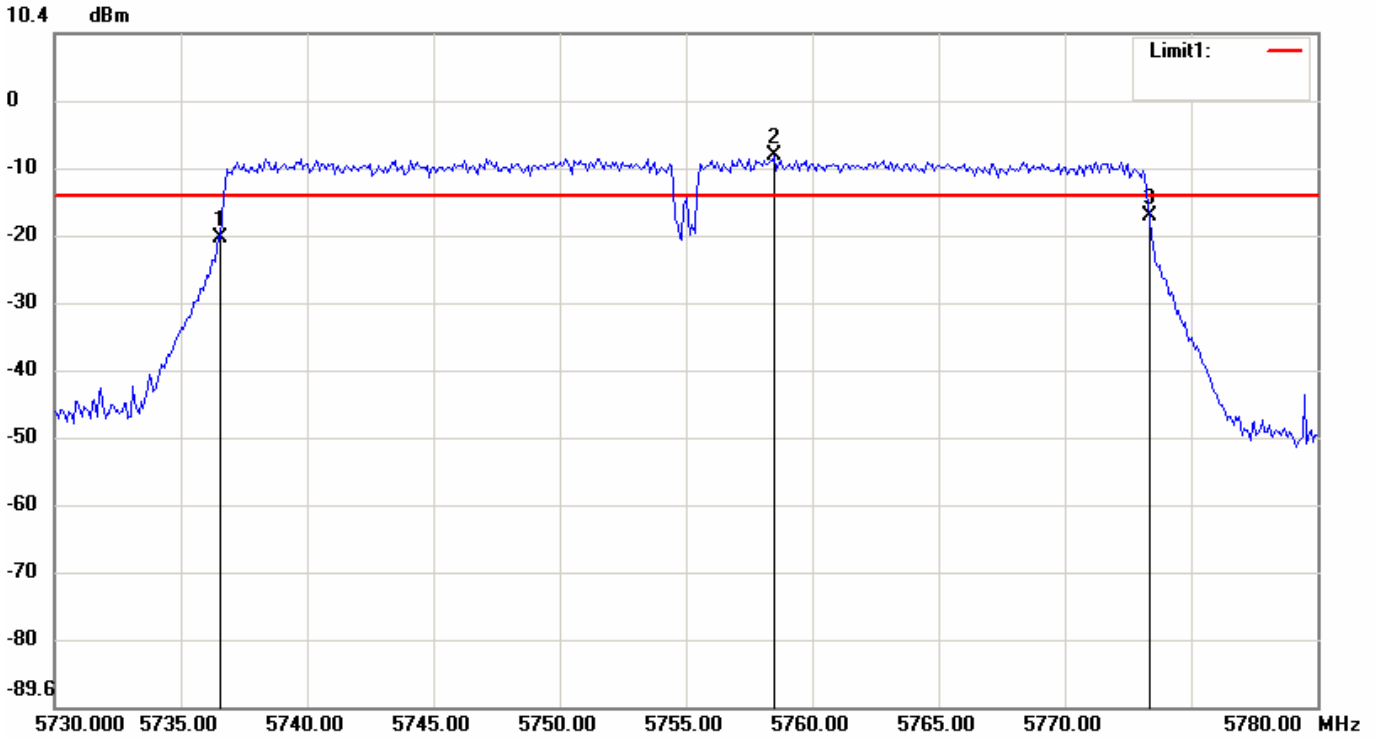
Note:

1.Please refer to page 47to page 48 for chart

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

File: 11-06-MAS-176 Data: #123 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:36:17 **Humidity: 53 %**



Condition: **-13.79dBm** **RF Conducted**

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

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

Test Mode:

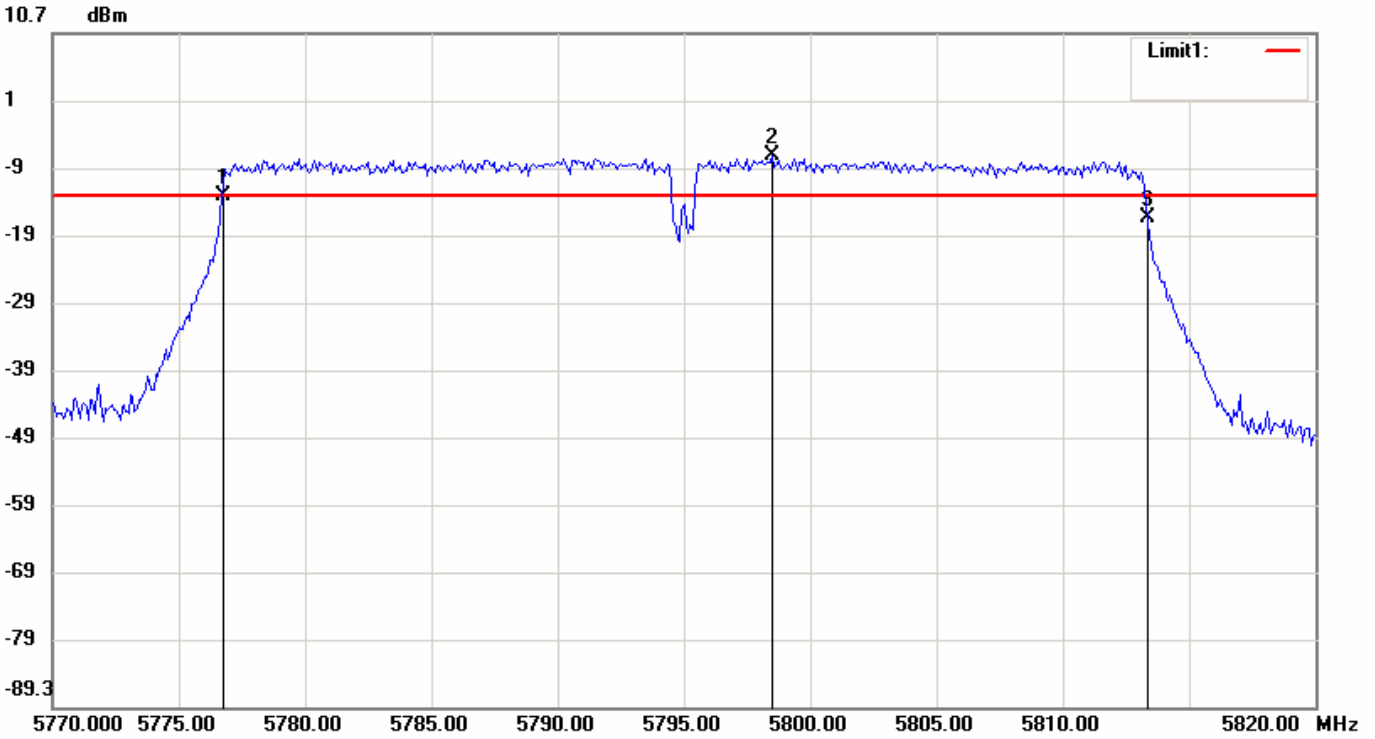
Note: **FCC-802.11an_HT40 Channel 151-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	5736.58330	-19.86
2	5758.50000	-7.79
3	5773.33330	-16.77

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	36.75	3.09

File: 11-06-MAS-176 Data: #128 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:43:29 **Humidity: 53 %**



Condition: **-13.46dBm** **RF Conducted**

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

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

Test Mode:

Note: **FCC-802.11an_HT40 Channel 159-6dB EBW**

No.	Frequency(MHz)	Level(dBm)
1	5776.66670	-13.52
2	5798.50000	-7.46
3	5813.33330	-16.61

No.		△Frequency(MHz)	△Level(dB)
1	mk3-mk1	36.6666	-3.09

7 OUTPUT POWER MEASUREMENT

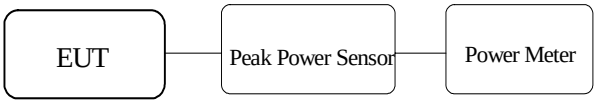
7.1 Standard Applicable

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 3.

Figure 2: Output power measurement configuration.



7.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Power Meter	Agilent	N1922A	11/01/2011
Peak Power Sensor	Agilent	N1912A	11/01/2011

7.4 Measurement Data

7.4.1 IEEE 802.11b

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (mW)	Chart
L	18.60	30.0	-
M	18.47	30.0	-
H	17.98	30.0	-

Note:

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

7.4.2 IEEE 802.11g

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (mW)	Chart
L	24.74	30.0	-
M	24.41	30.0	-
H	23.97	30.0	-

Note:

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

7.4.3 IEEE 802.11gn, HT20

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (mW)	Chart
L	24.52	30.0	-
M	24.43	30.0	-
H	23.91	30.0	-

Note:

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

7.4.4 IEEE 802.11gn, HT40

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (mW)	Chart
L	24.81	30.0	-
M	24.00	30.0	-
H	24.53	30.0	-

Note:

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

7.4.5 IEEE 802.11a

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (mW)	Chart
L	23.35	30.0	-
M	23.23	30.0	-
H	23.03	30.0	-

Note:

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

7.4.6 IEEE 802.11a, HT20

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (mW)	Chart
L	22.70	30.0	-
M	22.80	30.0	-
H	22.43	30.0	-

Note:

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

7.4.7 IEEE 802.11a, HT40

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Maximum Peak Output Power (dBm)	FCC Limit (mW)	Chart
L	23.06	30.0	-
H	23.62	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 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	E4446A	09/26/2011

8.4 Measurement Data

8.4.1 IEEE 802.11b

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

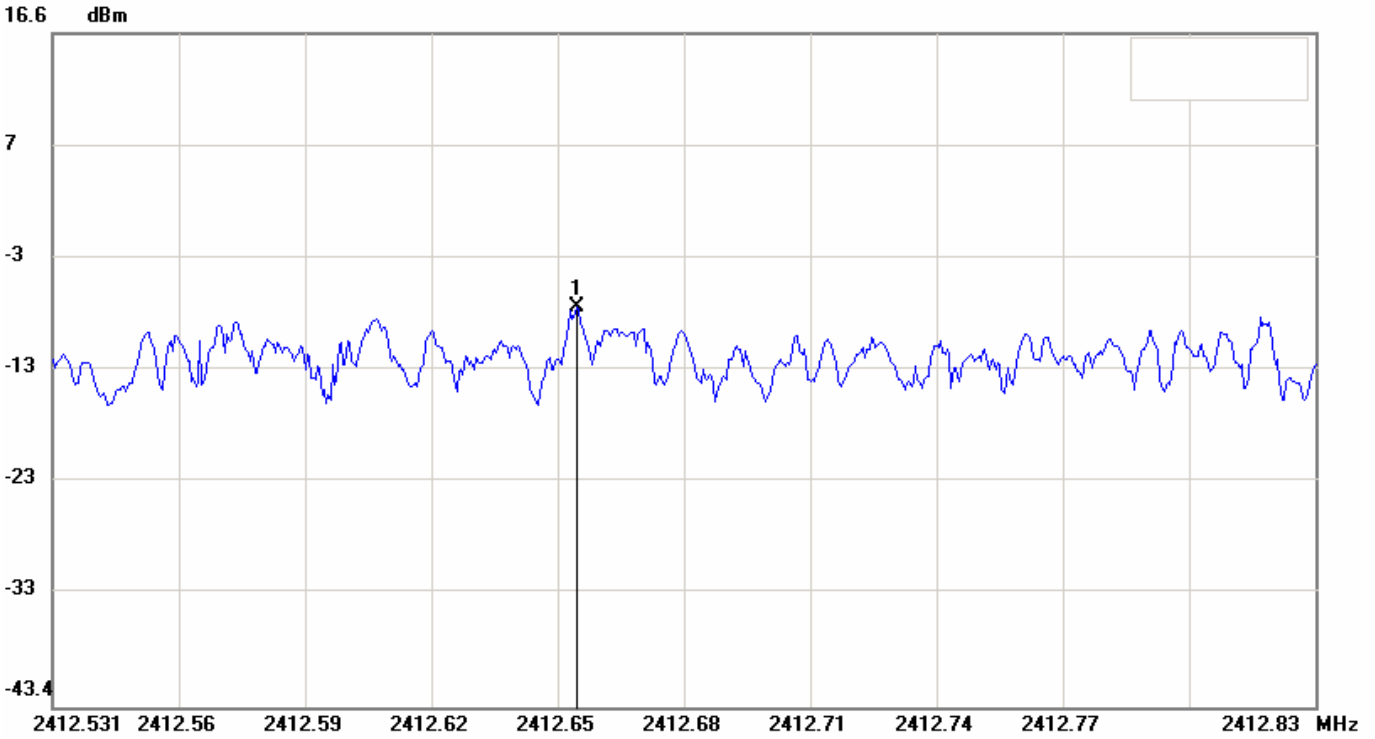
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-7.72	8	Page 59
M	-8.11	8	Page 60
H	-9.07	8	Page 61

Note:

1. *Please refer to page 59 to page 61 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: 11-06-MAS-176 Data: #4 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:11:08 **Humidity: 60 %**



Condition: **Vertical**

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

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

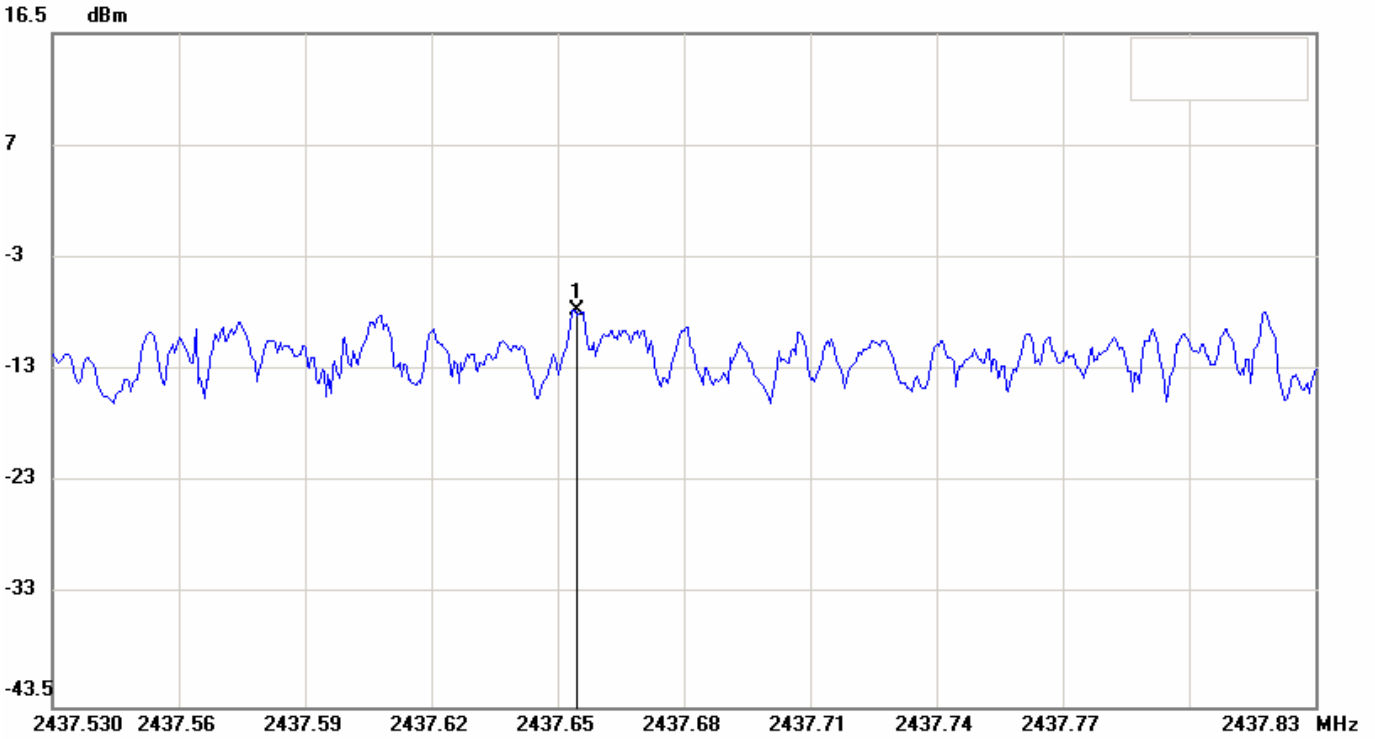
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2412.65520	-7.72

File: 11-06-MAS-176 Data: #9 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:19:08 **Humidity: 60 %**



Condition: **Vertical**

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

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

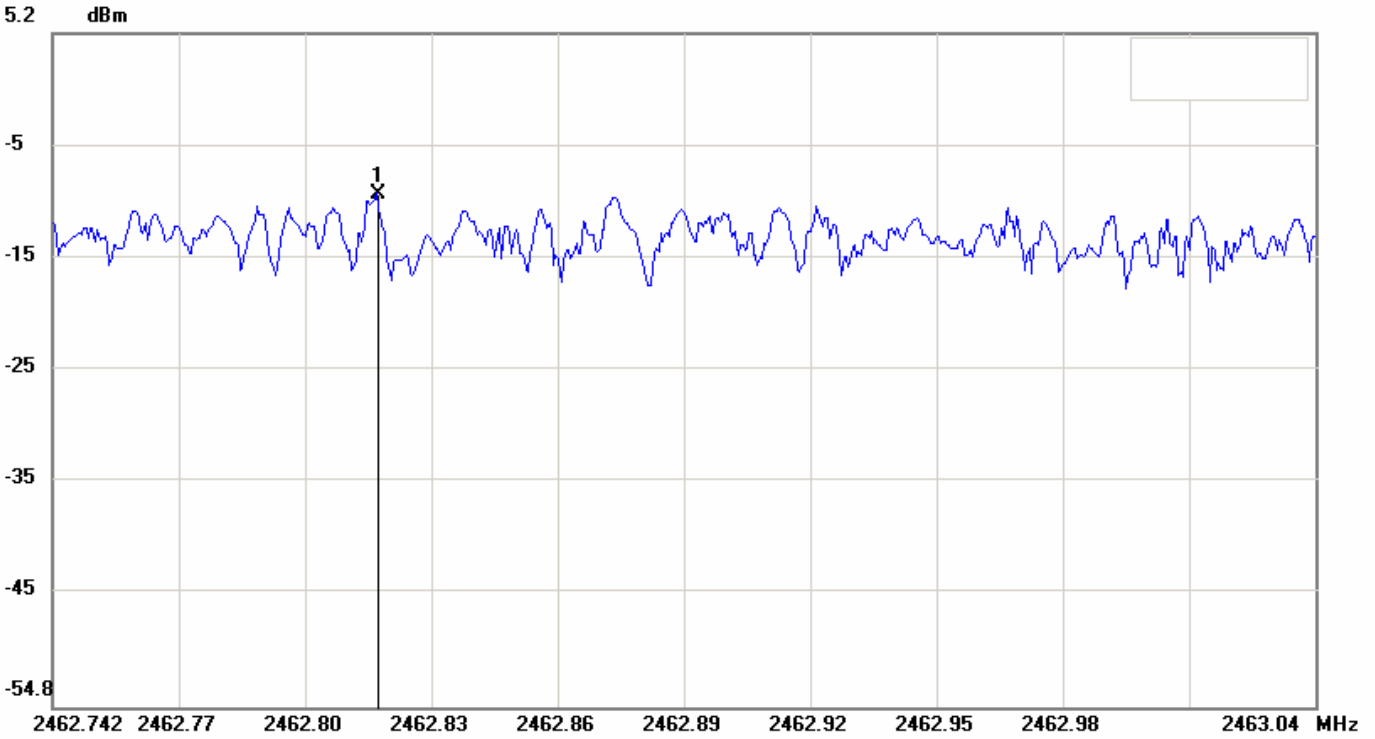
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2437.65410	-8.11

File: 11-06-MAS-176 Data: #13 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:27:34 **Humidity: 60 %**



Condition: **Vertical**

EUT: **Cisco Tablet** **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	2462.81950	-9.07

8.4.2 IEEE 802.11g

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

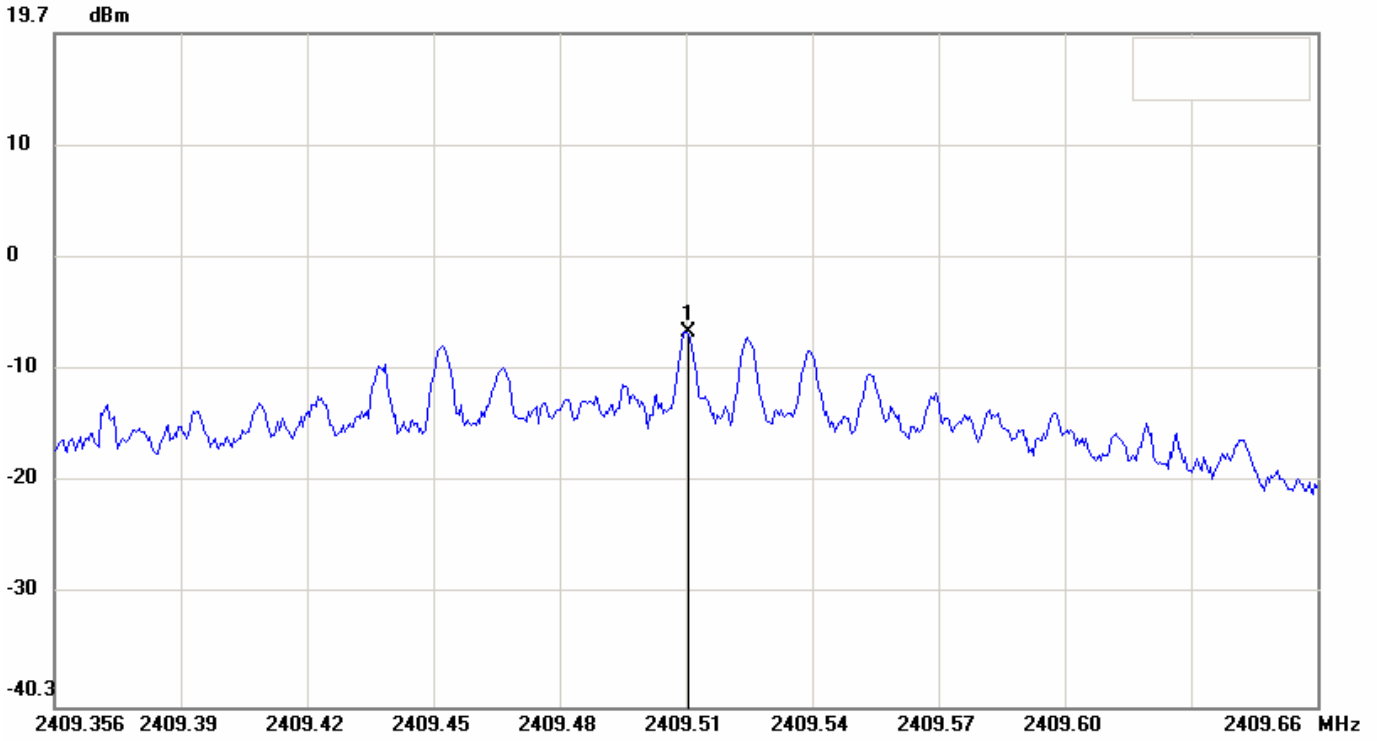
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-6.98	8	Page 63
M	-7.68	8	Page 64
H	-6.79	8	Page 65

Note:

1. *Please refer to page 63 to page 65 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: 11-06-MAS-176 Data: #18 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:44:44 **Humidity: 60 %**



Condition: **RF Conducted**

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

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

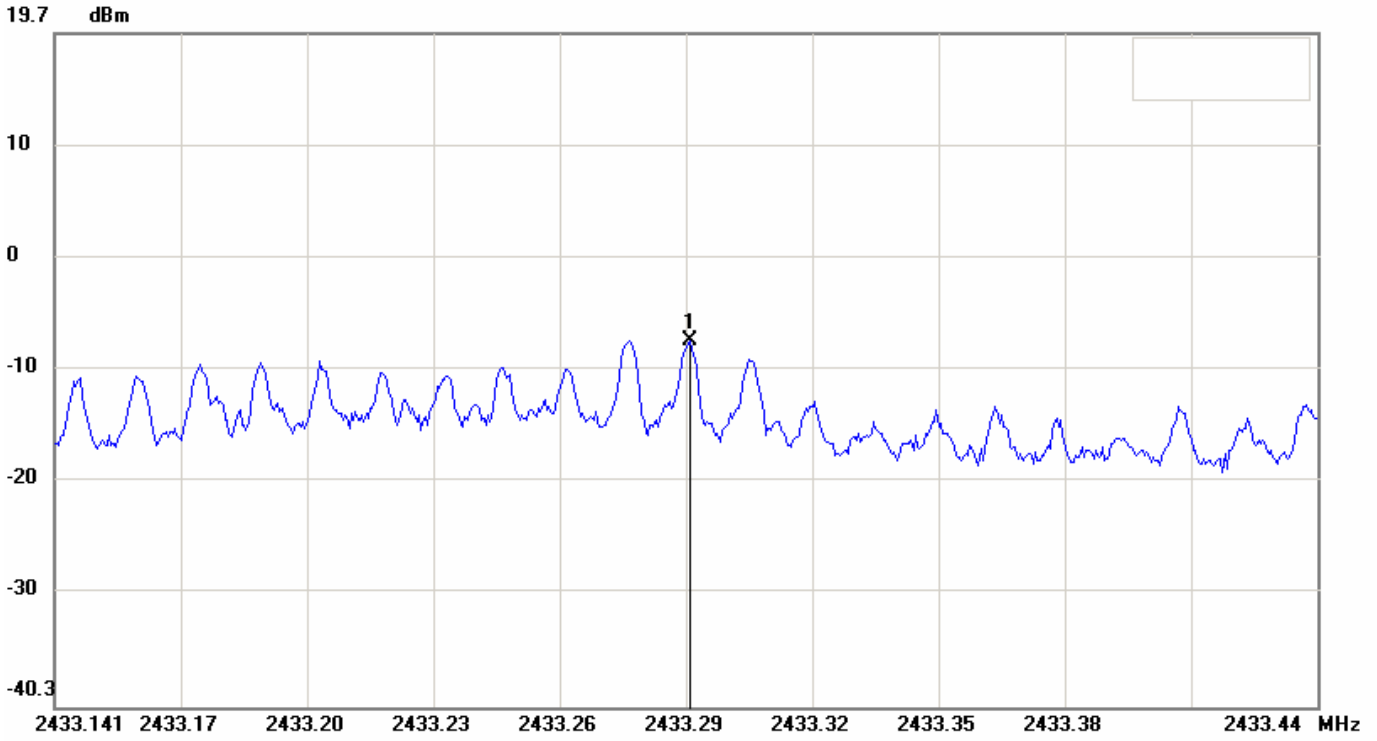
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2409.50560	-6.98

File: 11-06-MAS-176 Data: #23 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:58:06 **Humidity: 60 %**



Condition: **RF Conducted**

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

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

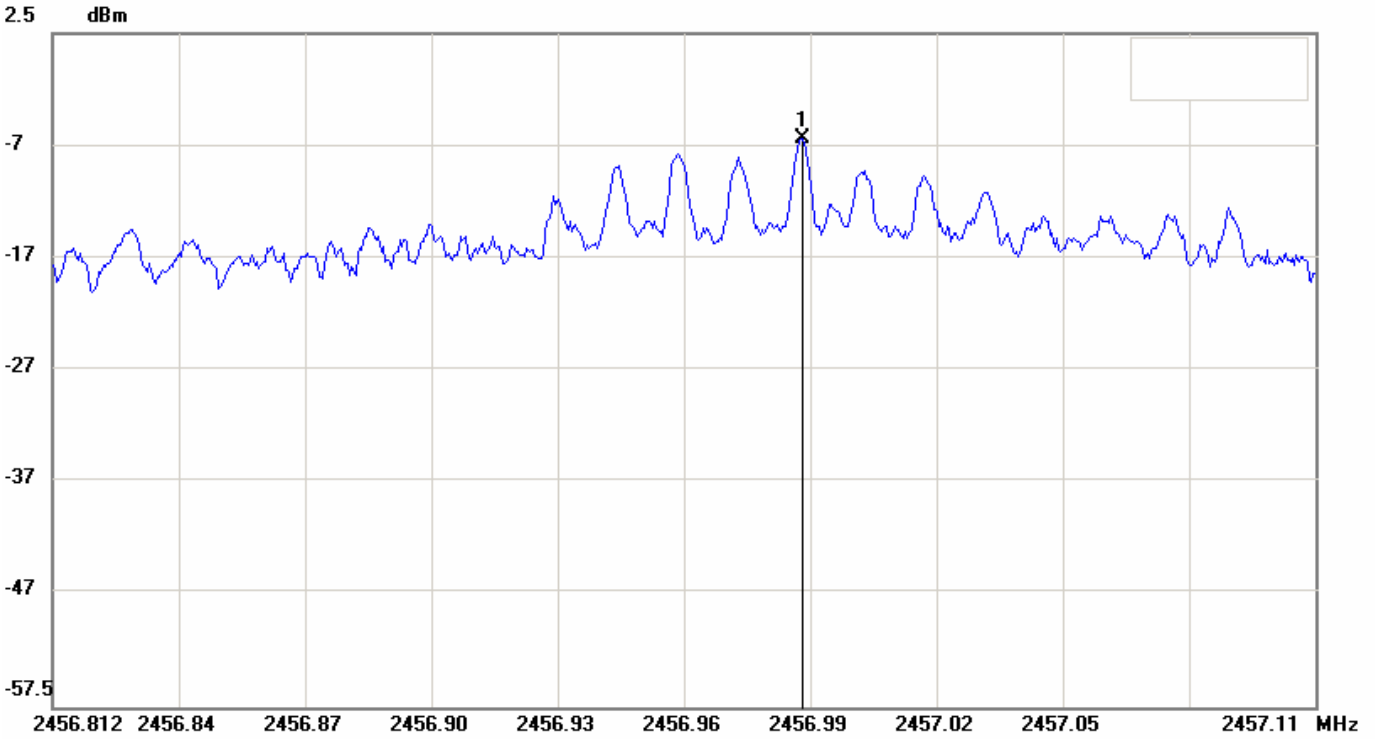
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2433.29200	-7.68

File: 11-06-MAS-176 Data: #27 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:06:47 **Humidity: 60 %**



Condition: **RF Conducted**

EUT: **Cisco Tablet** **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	2456.99000	-6.79

8.4.3 IEEE 802.11gn, HT20

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

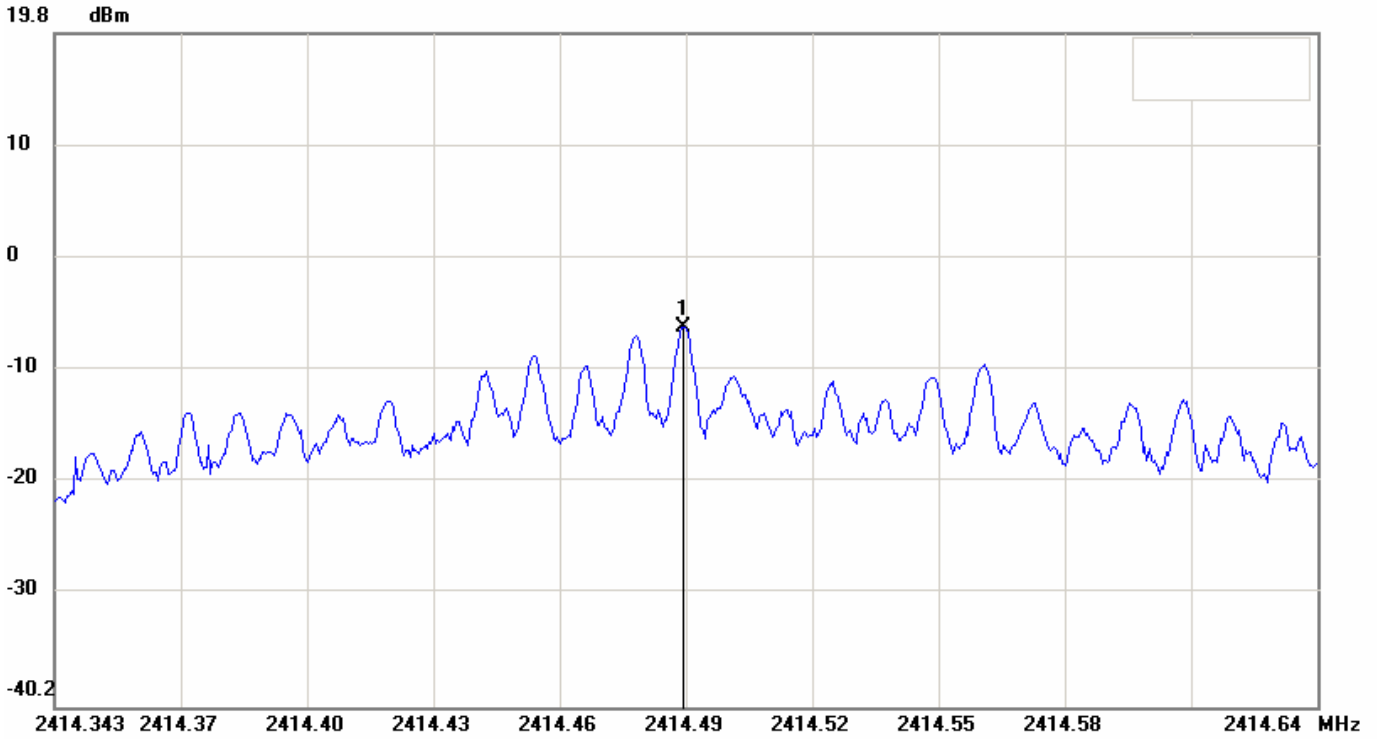
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-6.36	8	Page 67
M	-5.96	8	Page 68
H	-6.74	8	Page 69

Note:

1. *Please refer to page 67 to page 69 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: 11-06-MAS-176 Data: #32 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:18:01 **Humidity: 60 %**



Condition: **RF Conducted**

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

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

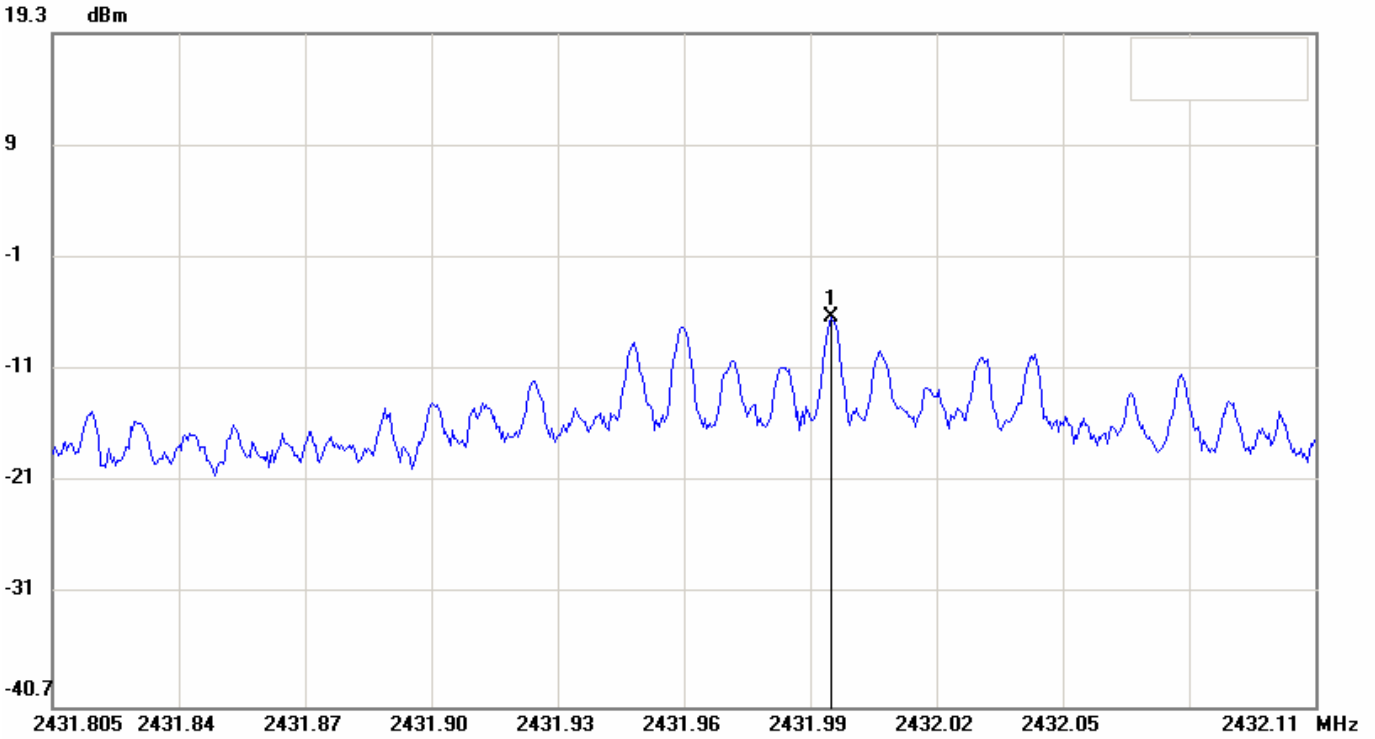
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2414.49280	-6.35

File: 11-06-MAS-176 Data: #37 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:25:35 **Humidity: 60 %**



Condition: **RF Conducted**

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

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

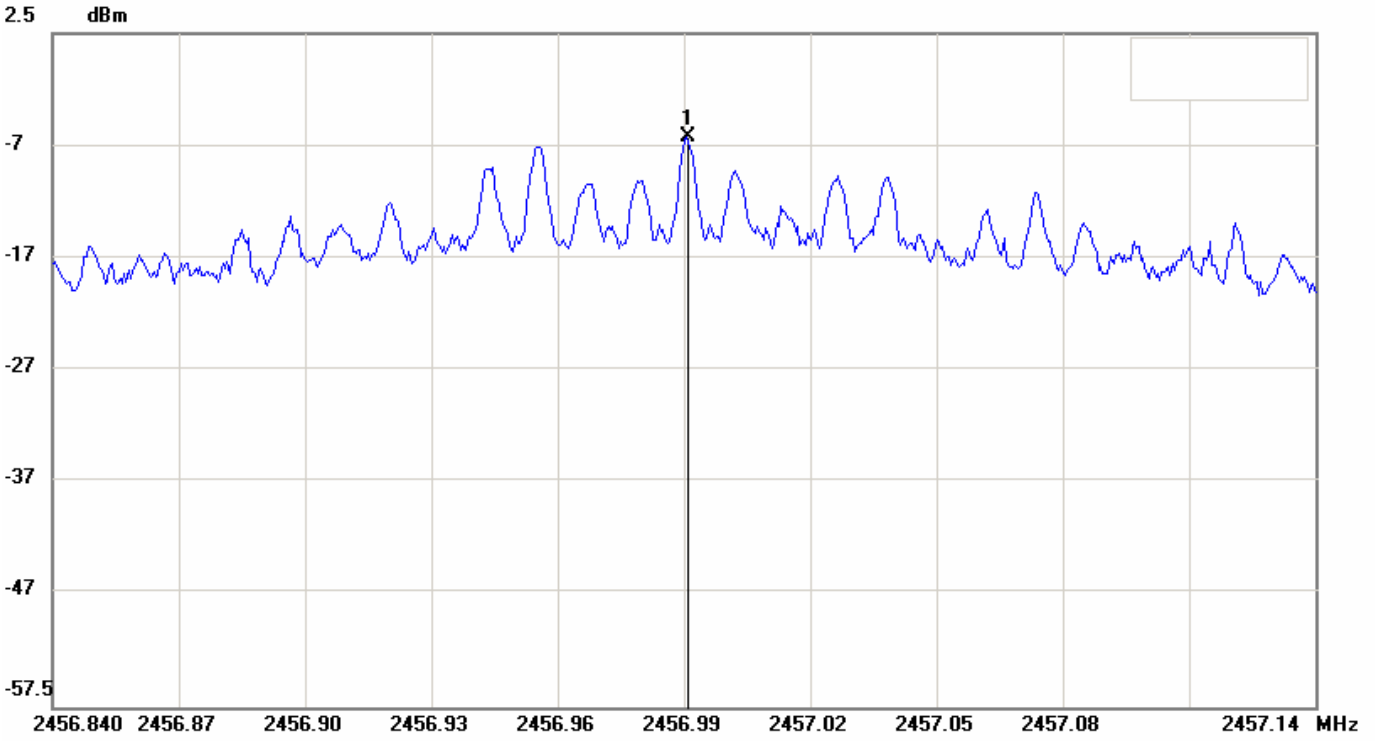
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2431.99030	-5.96

File: 11-06-MAS-176 Data: #41 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:33:53 **Humidity: 60 %**



Condition: **RF Conducted**

EUT: **Cisco Tablet** **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	2456.99030	-6.74

8.4.4 IEEE 802.11gn, HT40

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

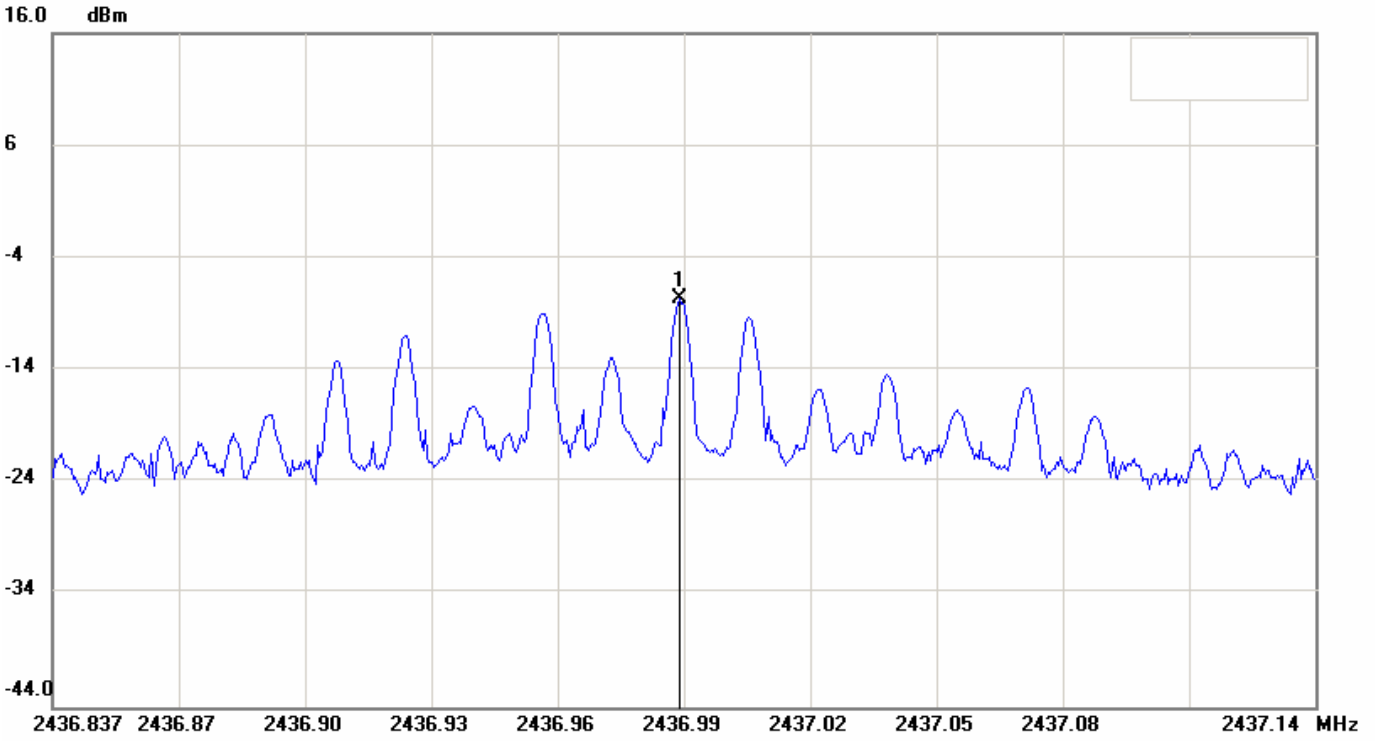
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-7.70	8	Page 71
M	-8.78	8	Page 72
H	-7.34	8	Page 73

Note:

1. *Please refer to page 71 to page 73 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: 11-06-MAS-176 Data: #46 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:44:00 **Humidity: 60 %**



Condition: **RF Conducted**

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

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

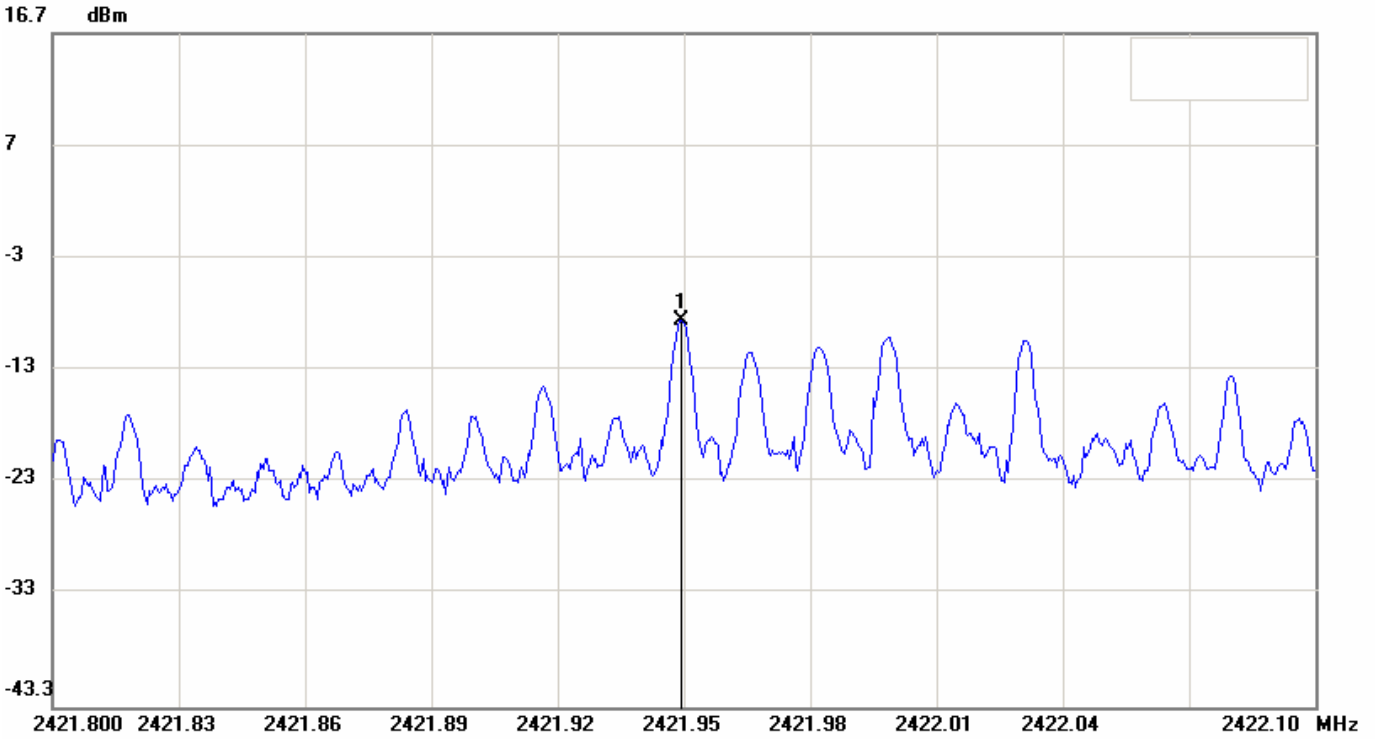
Test Mode:

Note: **FCC-802.11gn_HT40 Channel 03-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2436.98570	-7.70

File: 11-06-MAS-176 Data: #51 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:52:18 **Humidity: 60 %**



Condition: **RF Conducted**

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

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

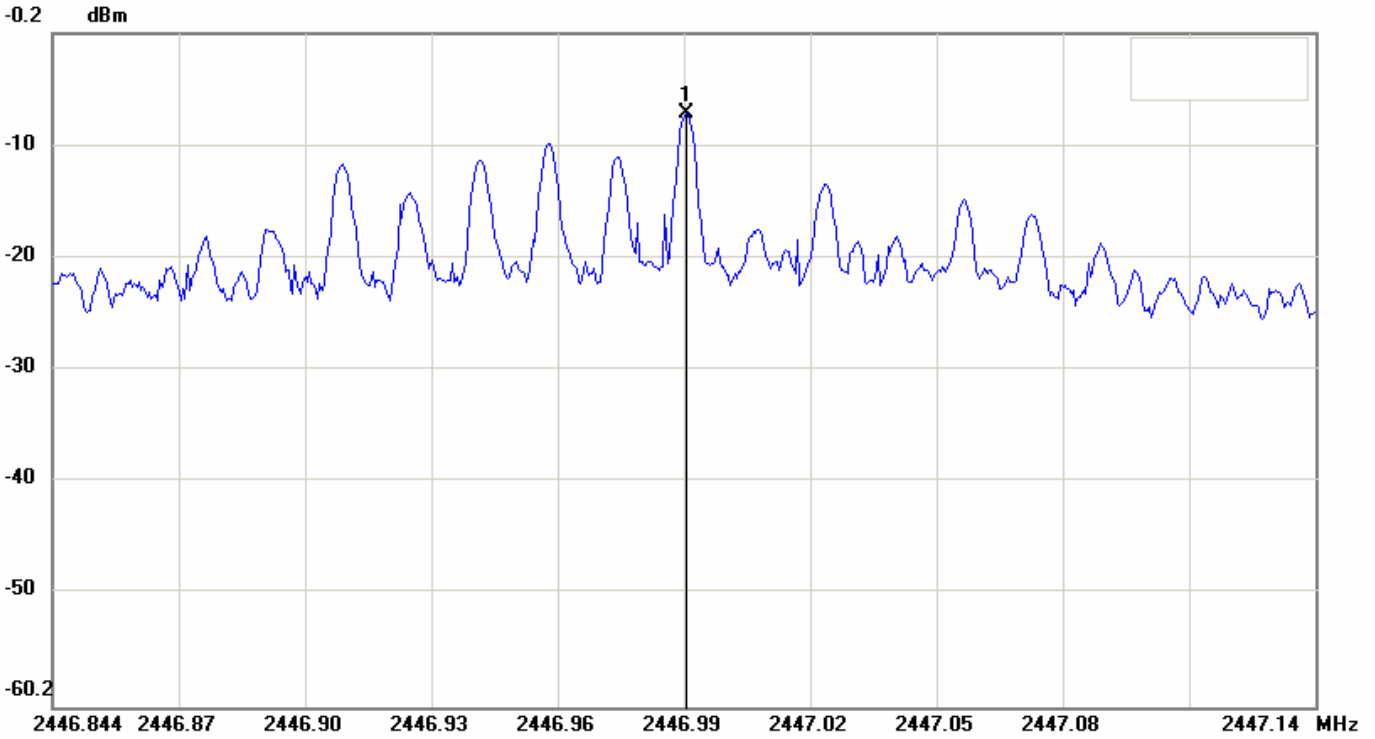
Test Mode:

Note: **FCC-802.11gn_HT40 Channel 06-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2421.94910	-8.78

File: 11-06-MAS-176 Data: #55 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 05:00:45 **Humidity: 60 %**



Condition: **RF Conducted**

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

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

Test Mode:

Note: **FCC-802.11gn_HT40 Channel 09-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	2446.99400	-7.34

8.4.5 IEEE 802.11a

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

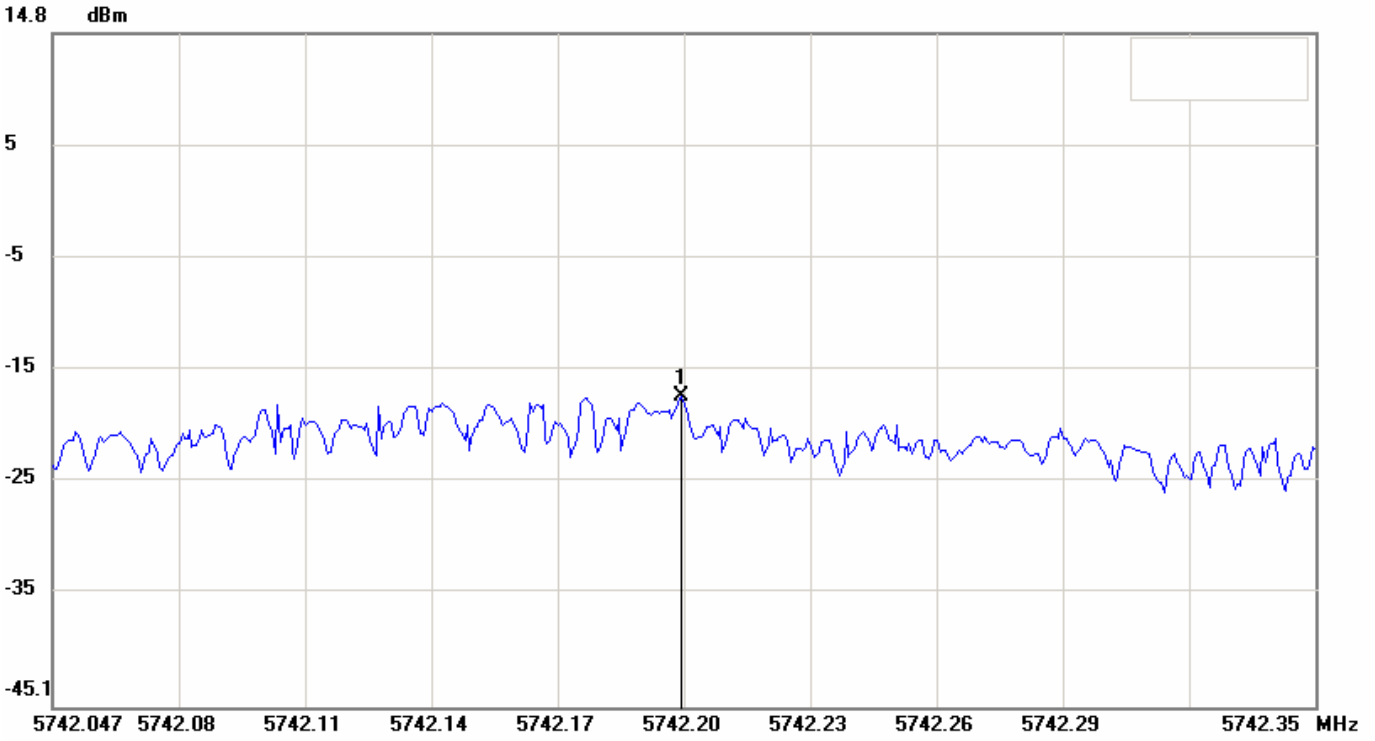
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-17.45	8	Page 75
M	-16.98	8	Page 76
H	-17.90	8	Page 77

Note:

1. *Please refer to page 75 to page 77 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: 11-06-MAS-176 Data: #98 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 02:02:39 **Humidity: 53 %**



Condition: **RF Conducted**

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

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

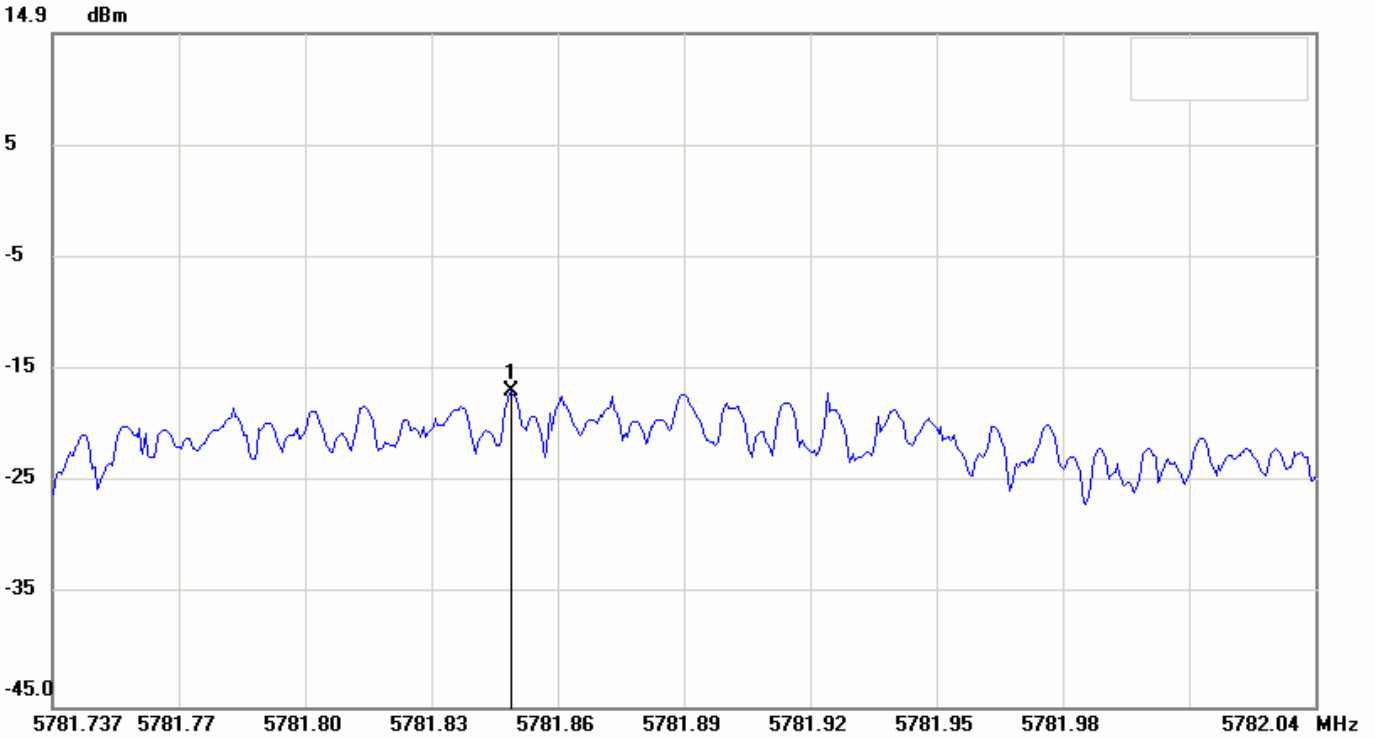
Test Mode:

Note: **FCC-802.11a Channel 149-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	5742.19690	-17.45

File: 11-06-MAS-176 Data: #103 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 02:09:59 **Humidity: 53 %**



Condition: **RF Conducted**

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

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

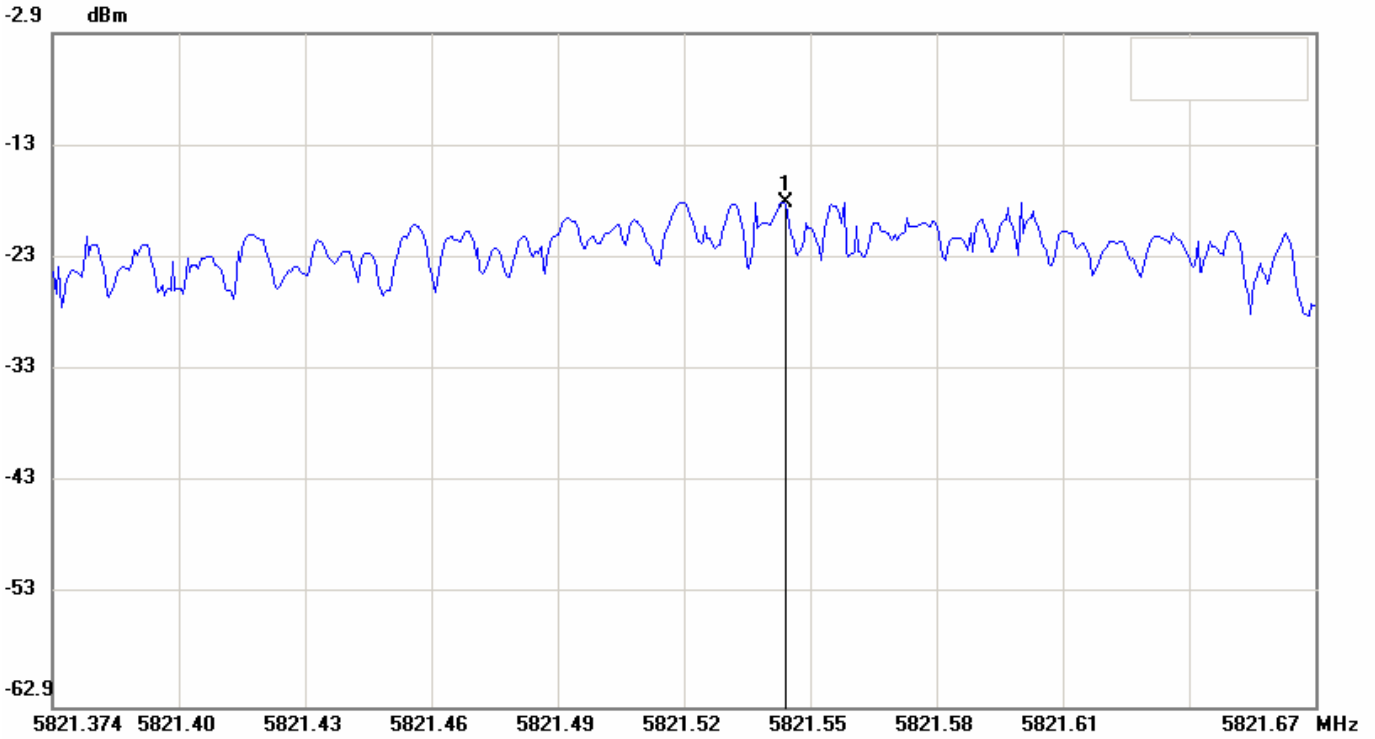
Test Mode:

Note: **FCC-802.11a Channel 157-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	5781.84590	-16.98

File: 11-06-MAS-176 Data: #107 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 02:21:34 **Humidity: 53 %**



Condition: **RF Conducted**

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

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

Test Mode:

Note: **FCC-802.11a Channel 1491-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	5821.54750	-17.90

8.4.6 IEEE 802.11a, HT20

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

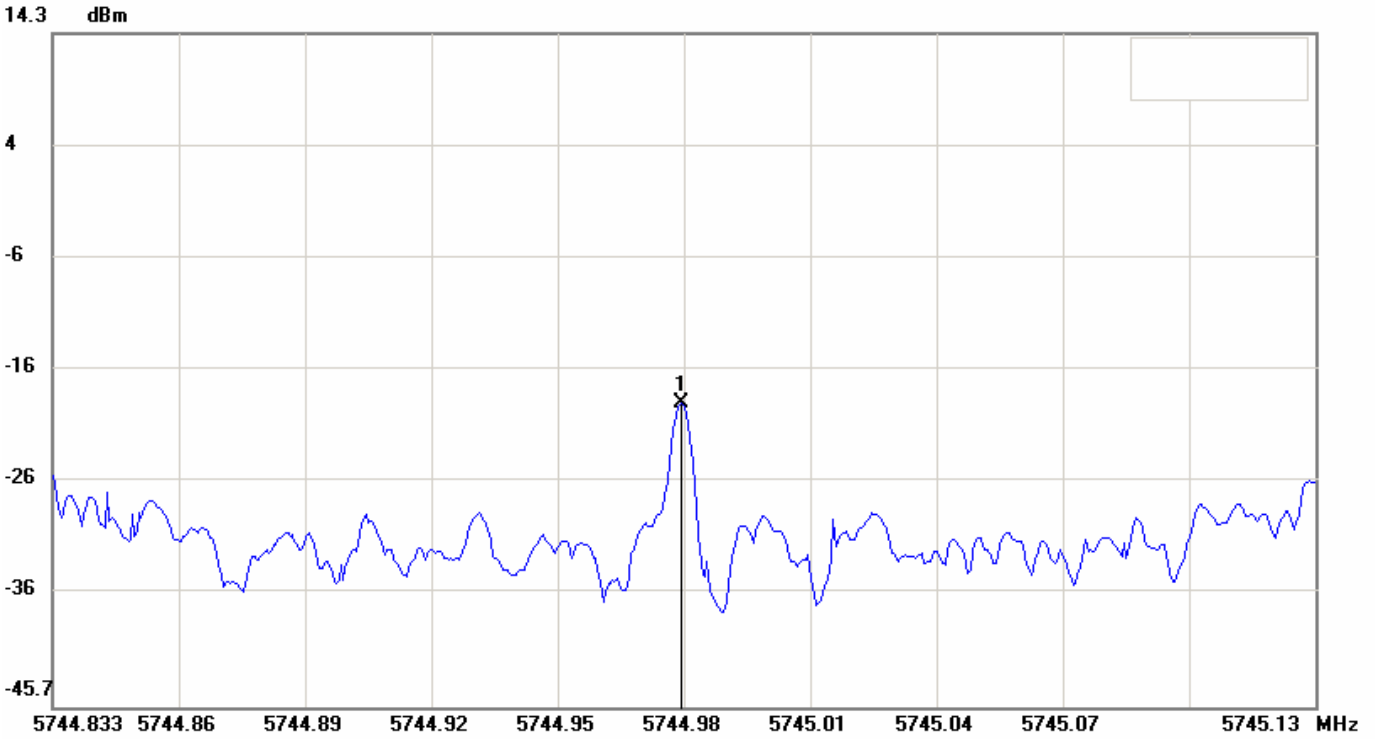
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-18.67	8	Page 79
M	-17.89	8	Page 80
H	-18.64	8	Page 81

Note:

1. *Please refer to page 79 to page 81 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: 11-06-MAS-176 Data: #112 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:13:52 **Humidity: 53 %**



Condition: **RF Conducted**

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

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

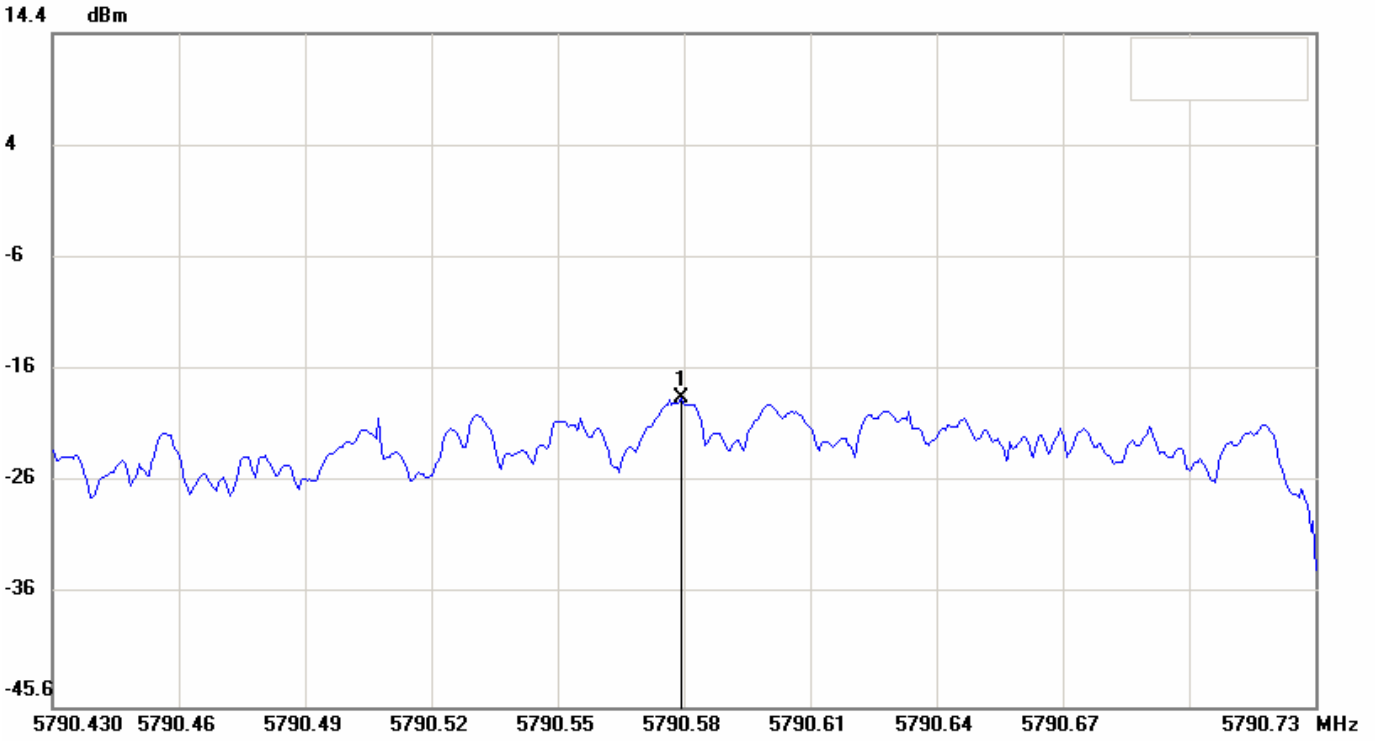
Test Mode:

Note: **FCC-802.11an_HT20 Channel 149-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	5744.98260	-18.69

File: 11-06-MAS-176 Data: #117 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:21:33 **Humidity: 53 %**



Condition: **RF Conducted**

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

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

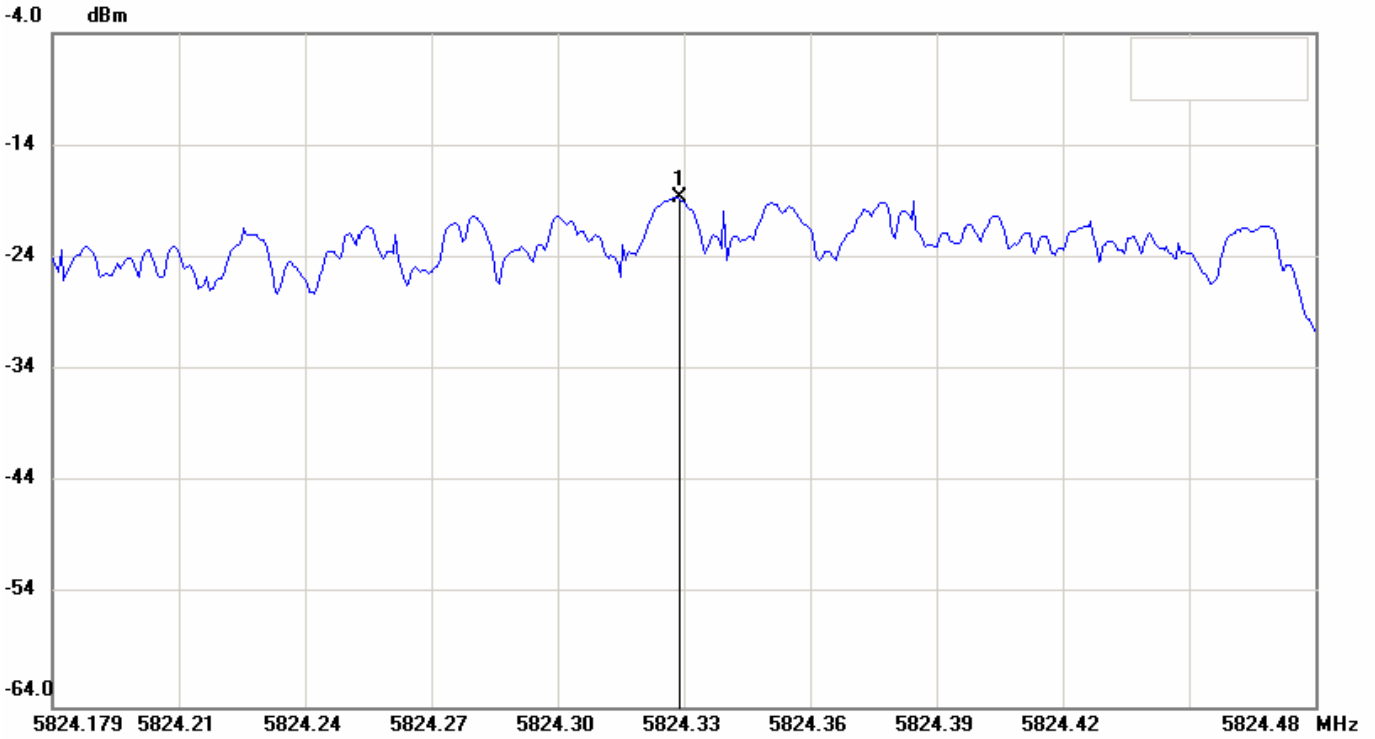
Test Mode:

Note: **FCC-802.11an_HT20 Channel 157-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	5790.57900	-17.99

File: 11-06-MAS-176 Data: #121 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:29:27 **Humidity: 53 %**



Condition: **RF Conducted**

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

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

Test Mode:

Note: **FCC-802.11an_HT20 Channel 1491-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	5824.32800	-18.64

8.4.7 IEEE 802.11a, HT40

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

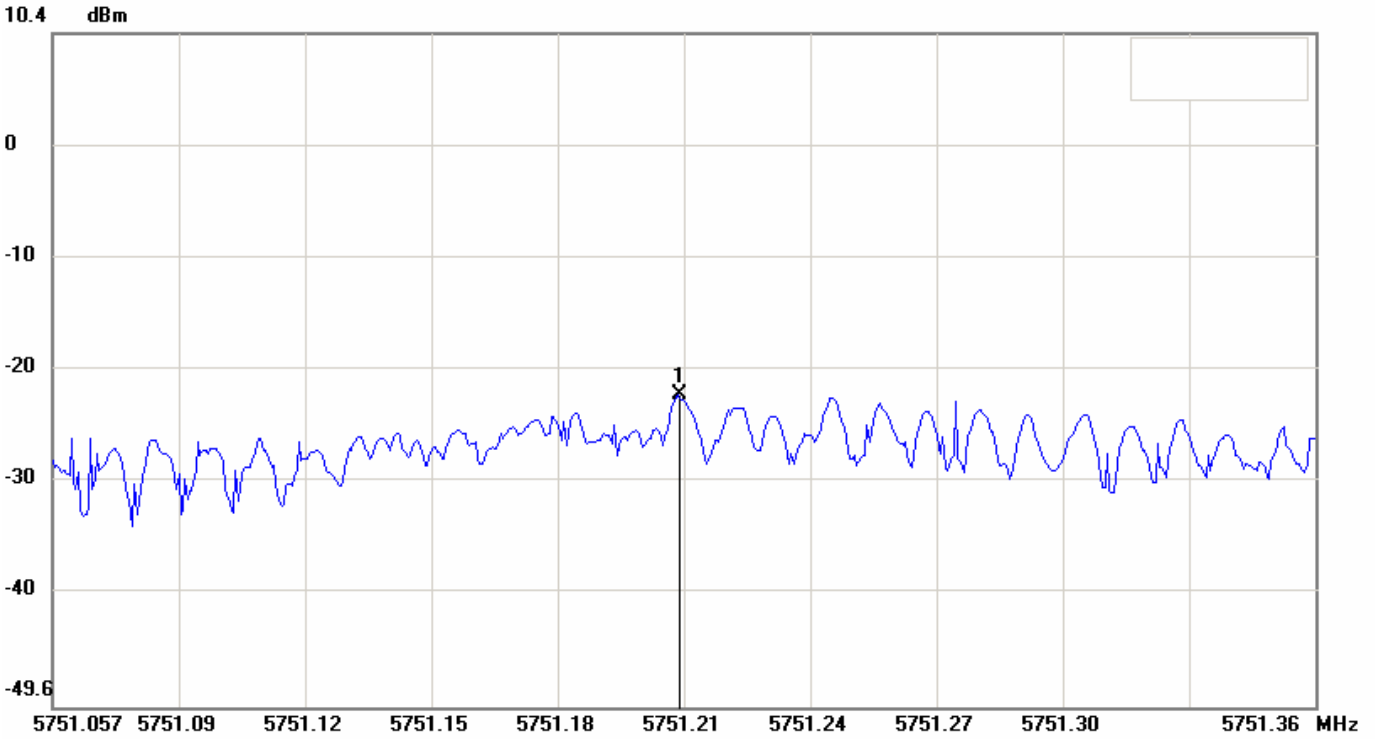
Channel	Peak Power Spectral Density (dBm)	FCC Limit (dBm)	Chart
L	-21.80	8	Page 83
H	-21.56	8	Page 84

Note:

1. *Please refer to page 83 to page 84 for chart*
2. *The estimated measurement uncertainty of the result measurement is ±1.5dB(1GHz≦f≦ 18GHz)*

File: 11-06-MAS-176 Data: #126 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:40:42 **Humidity: 53 %**



Condition: **RF Conducted**

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

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

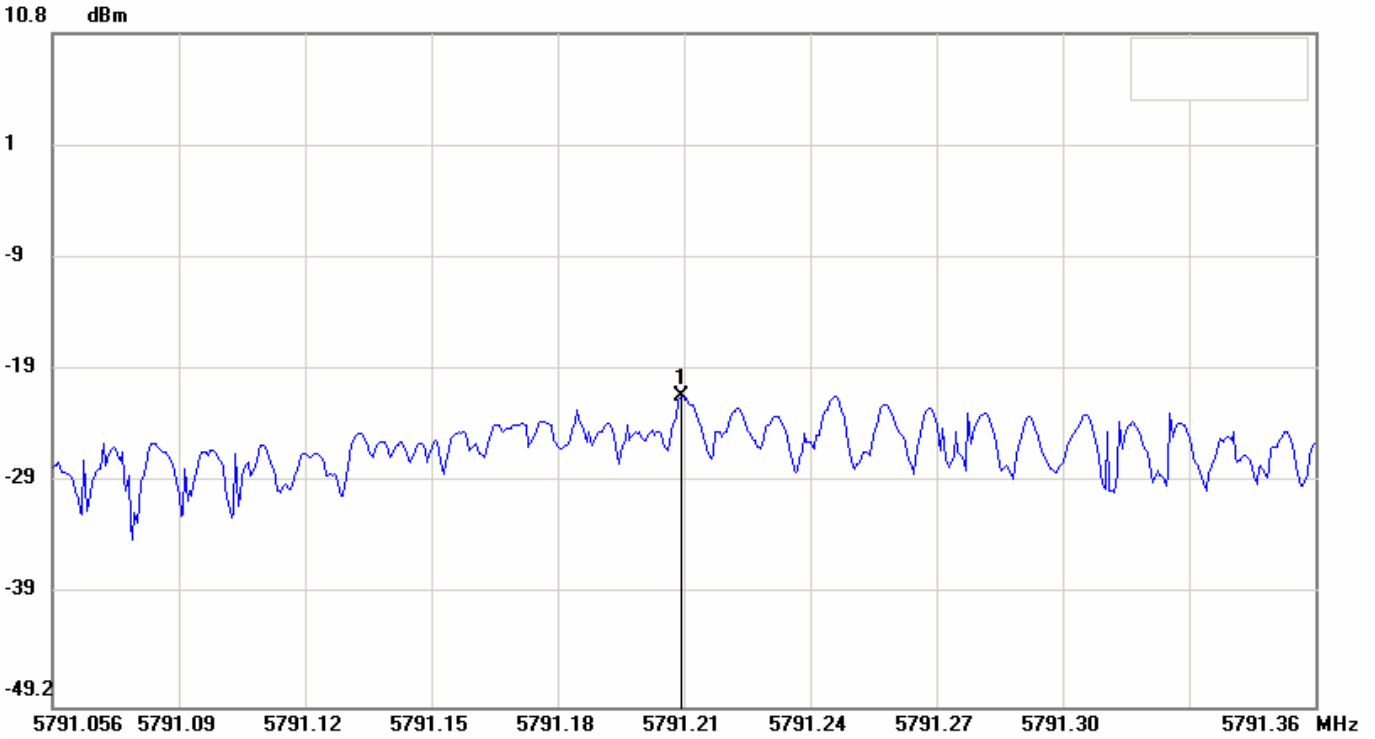
Test Mode:

Note: **FCC-802.11an_HT40 Channel 151-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	5751.20530	-21.80

File: 11-06-MAS-176 Data: #131 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:47:54 **Humidity: 53 %**



Condition: **RF Conducted**

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

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

Test Mode:

Note: **FCC-802.11an_HT40 Channel 159-Power Density (PK)**

No.	Frequency(MHz)	Level(dBm)
1	5791.20520	-21.56

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 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	E4446A	09/26/2011

9.4 Measurement Data

9.4.1 IEEE 802.11b

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

Channel	Frequency(MHz)	Chart
1	2412	Page 89, Page 91
6	2437	Page 92
11	2462	Page 90, Page 93

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 89 to page 93 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: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

Channel	Frequency(MHz)	Chart
1	2412	Page 94, Page 96
6	2437	Page 97
11	2462	Page 95, Page 98

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 94 to page 98 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: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

Channel	Frequency(MHz)	Chart
1	2412	Page 99, Page 101
6	2437	Page 102
11	2462	Page 100, Page 103

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 99 to page 103 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.

9.4.4 IEEE 802.11gn, HT40

Test Date: Jun. 29, 2011 Temperature: 24℃ Humidity: 60%

Channel	Frequency(MHz)	Chart
3	2422	Page 104, Page 106
6	2437	Page 107
9	2452	Page 105, Page 108

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 104 to page 108 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.

9.4.5 IEEE 802.11a

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Frequency(MHz)	Chart
149	5745	Page 109, Page 111
157	5785	Page 112
165	5825	Page 110, Page 113

Frequency Band: 5745 MHz ~ 5850 MHz
All out-of –band conducted emissions were more than 20dB below the carrier.

Note: 1. Please refer to page 109 to page 113 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.

9.4.6 IEEE 802.11a, HT20

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Frequency(MHz)	Chart
149	5745	Page 114, Page 116
157	5785	Page 117
165	5825	Page 115, Page 118

Frequency Band: 5745 MHz ~ 5850 MHz
All out-of –band conducted emissions were more than 20dB below the carrier.

Note: 1. Please refer to page 114 to page 118 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.

9.4.7 IEEE 802.11a, HT40

Test Date: Aug. 16, 2011 Temperature: 27℃ Humidity: 53%

Channel	Frequency(MHz)	Chart
151	5755	Page 119, Page 121
159	5795	Page 120, Page 122

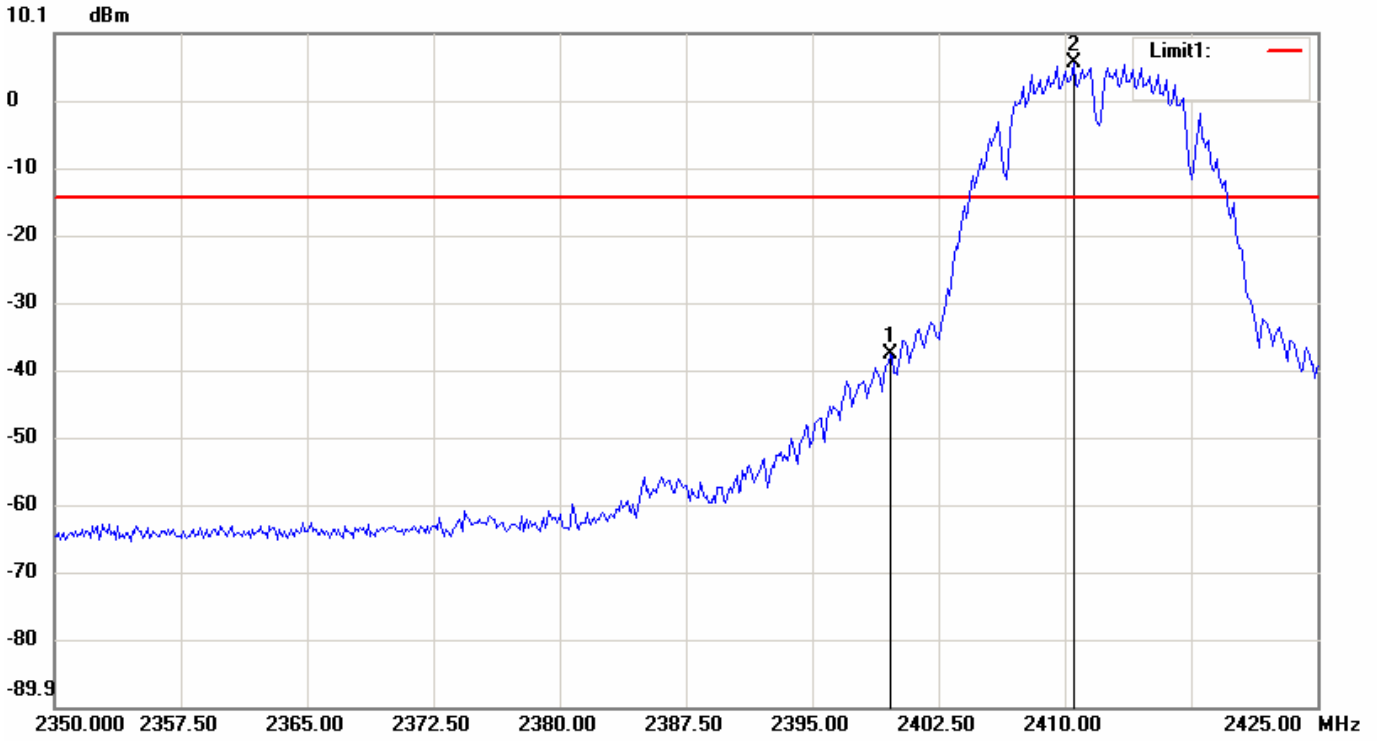
Frequency Band: 5745 MHz ~ 5850 MHz
All out-of –band conducted emissions were more than 20dB below the carrier.

Note: 1. Please refer to page 119 to page 122 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: 11-06-MAS-176 Data: #5 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:11:44 **Humidity: 60 %**



Condition: **-14.23dBm** **RF Conducted**

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

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

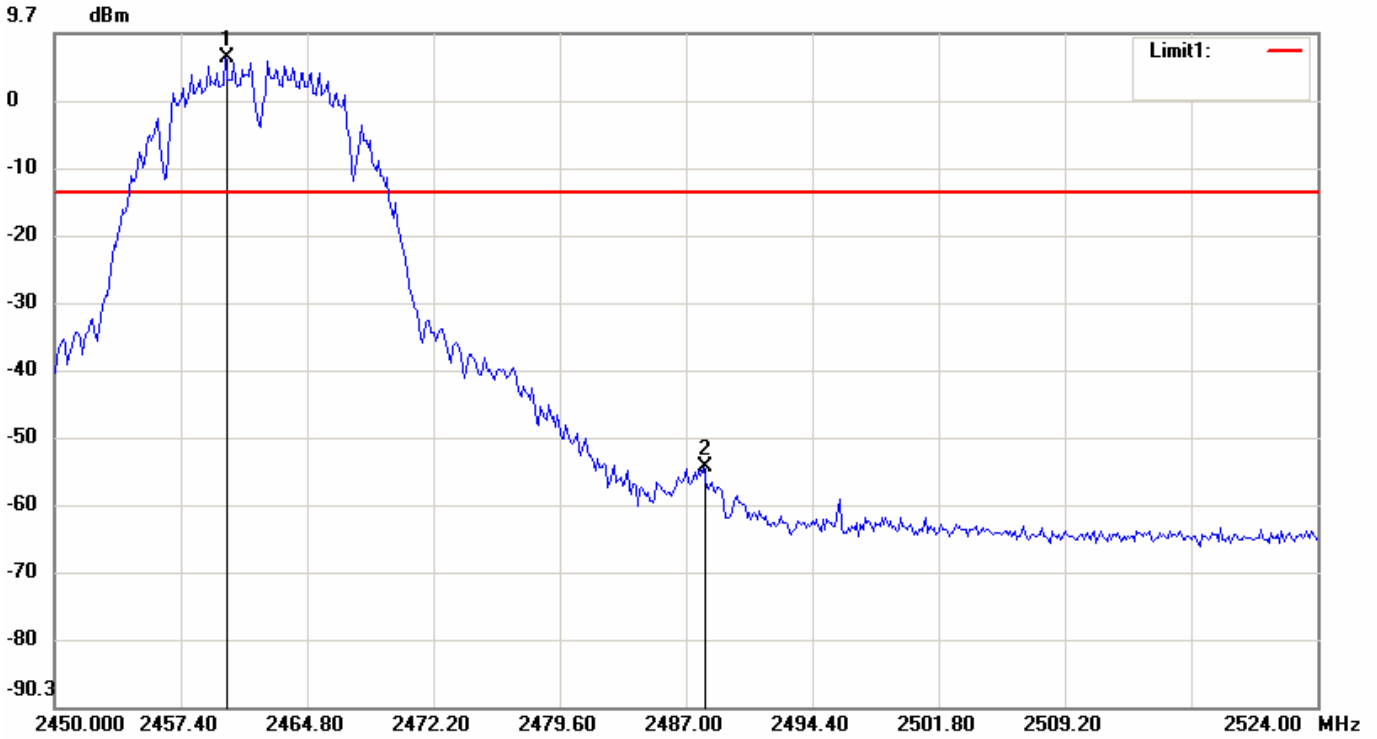
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2399.62500	-37.54
2	2410.50000	5.77

File: 11-06-MAS-176 Data: #14 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:28:09 **Humidity: 60 %**



Condition: **-13.86dBm** **RF Conducted**

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

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

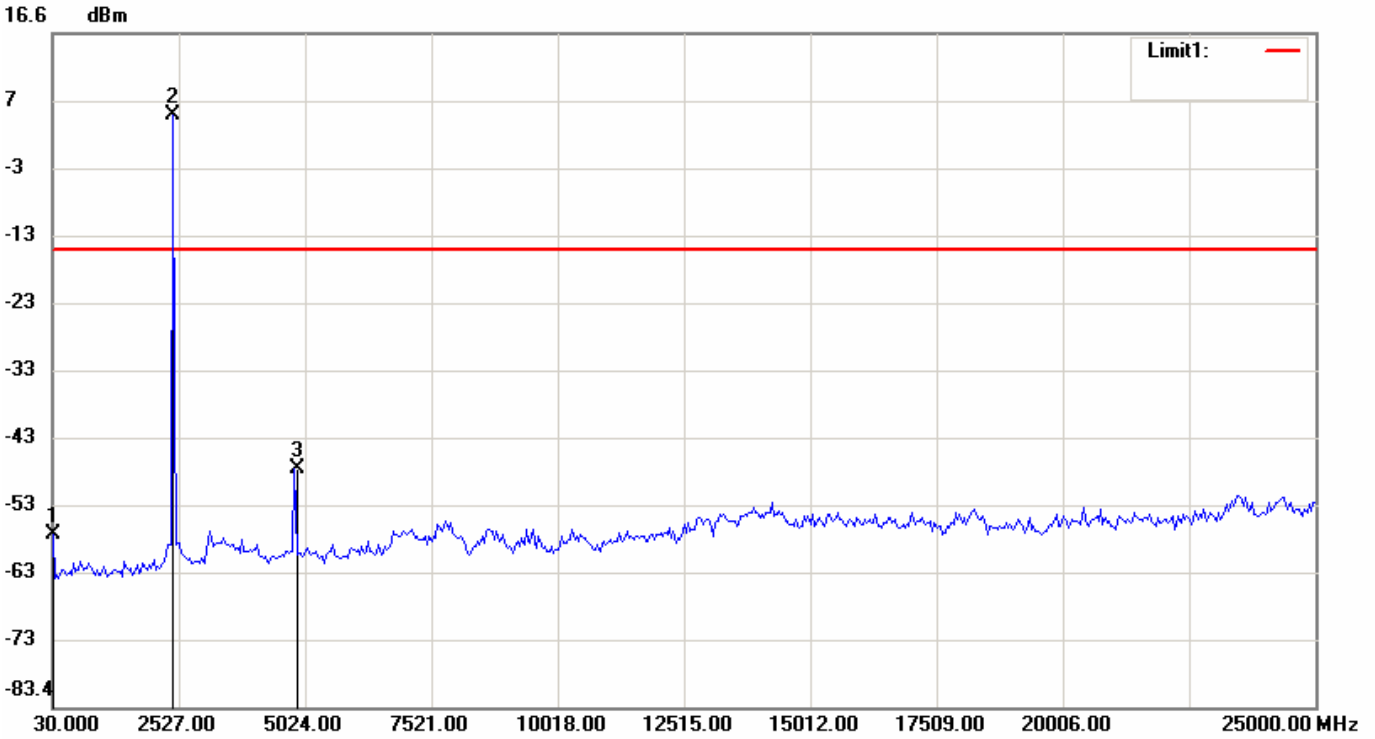
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2459.99000	6.14
2	2487.98670	-54.66

File: 11-06-MAS-176 Data: #2 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:07:32 **Humidity: 60 %**



Condition: **-15.64dBm** **RF Conducted**

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

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

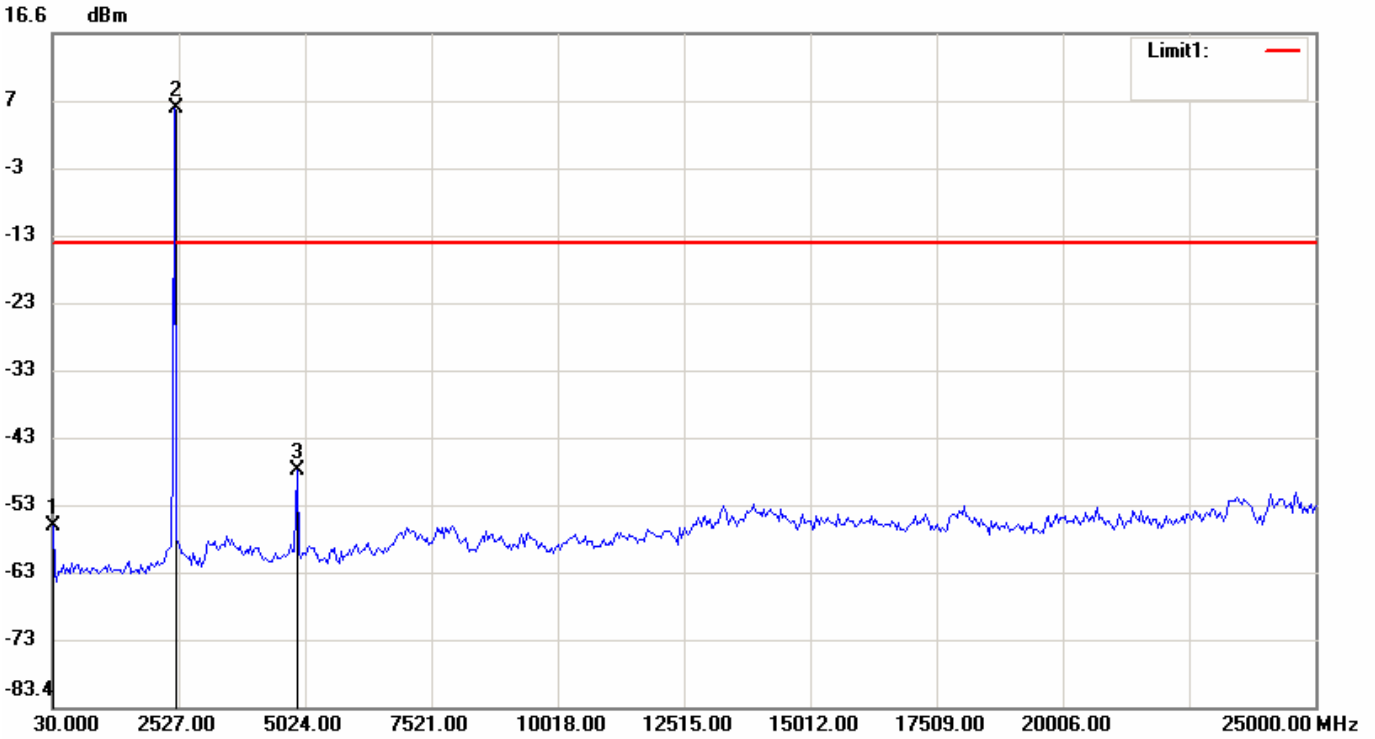
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-57.82
2	2402.15000	4.36
3	4815.91670	-48.04

File: 11-06-MAS-176 Data: #7 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:15:33 **Humidity: 60 %**



Condition: **-14.48dBm** **RF Conducted**

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

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

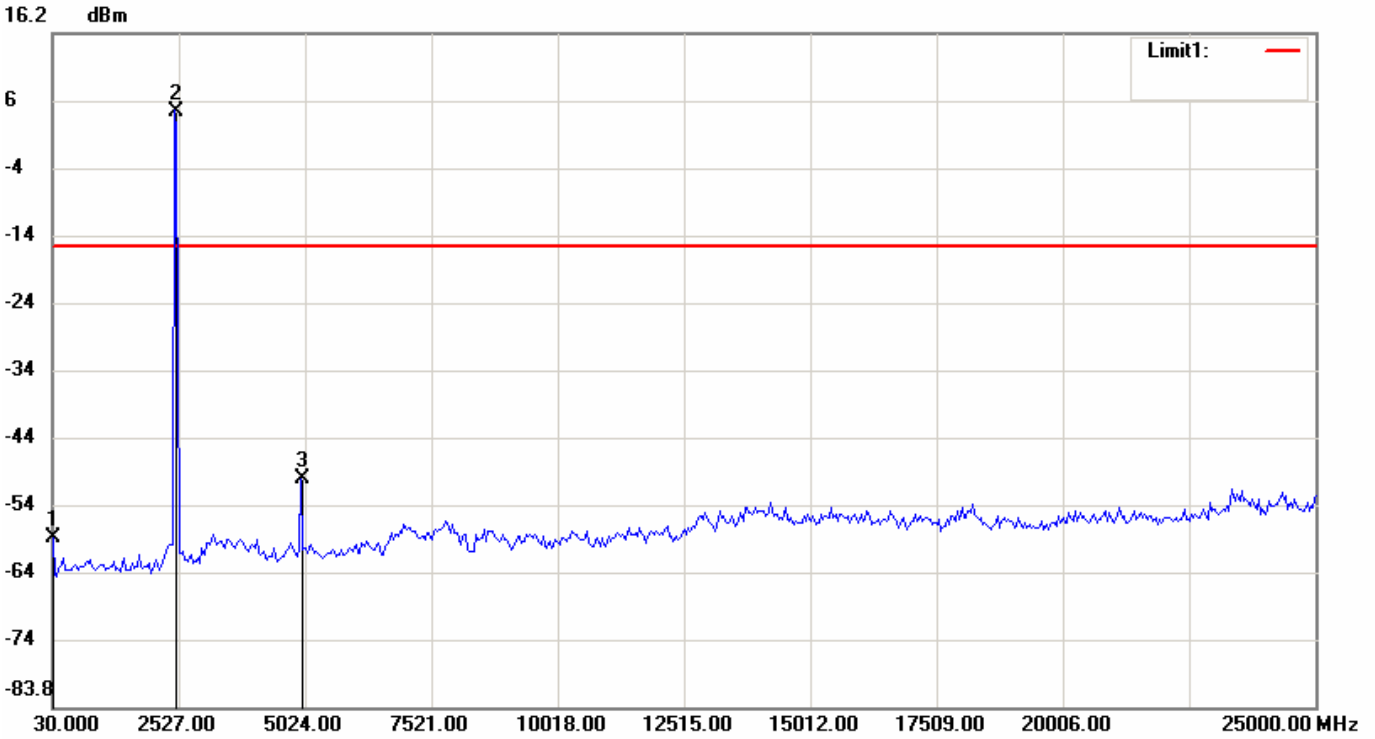
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-56.63
2	2443.76670	5.52
3	4857.53330	-48.42

File: 11-06-MAS-176 Data: #11 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:23:37 **Humidity: 60 %**



Condition: **-15.31dBm** **RF Conducted**

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

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

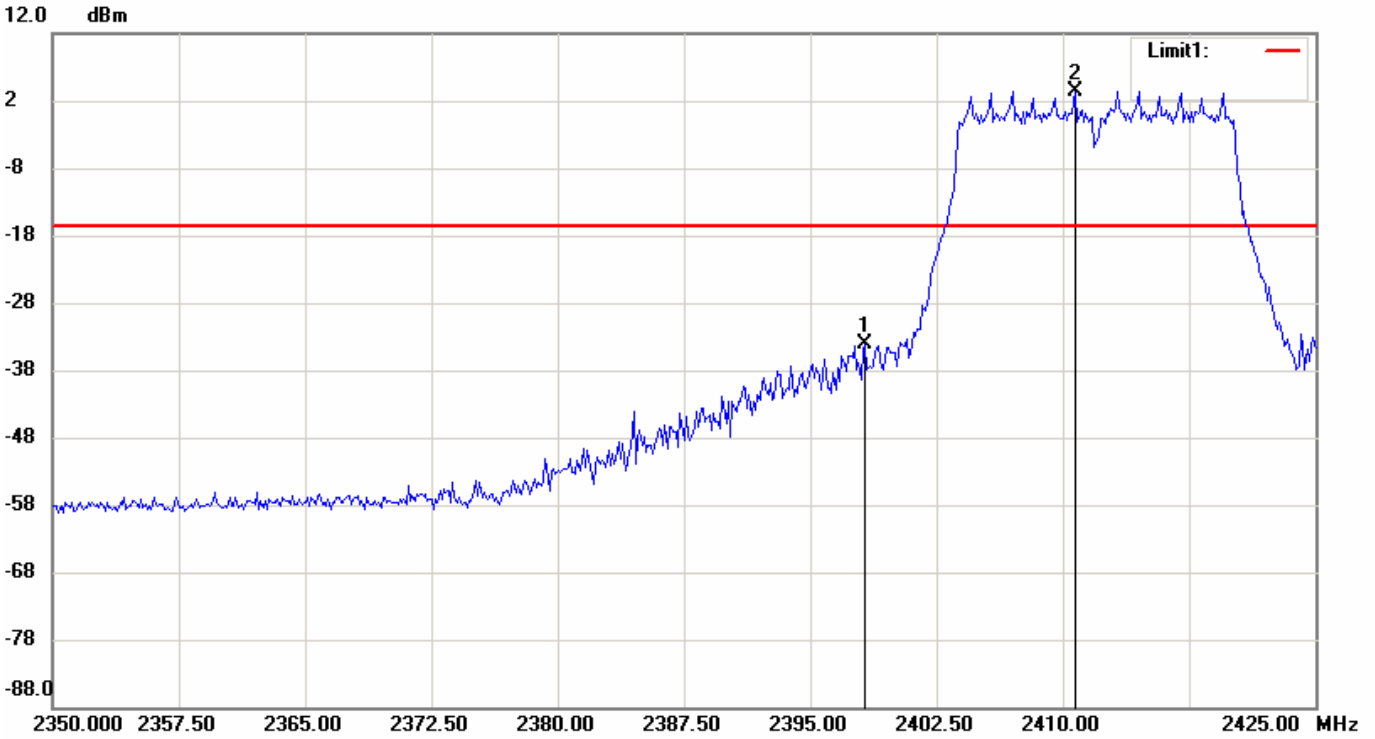
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-58.62
2	2443.76670	4.69
3	4940.76670	-49.98

File: 11-06-MAS-176 Data: #19 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:45:53 **Humidity: 60 %**



Condition: **-16.6dBm** **RF Conducted**

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

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

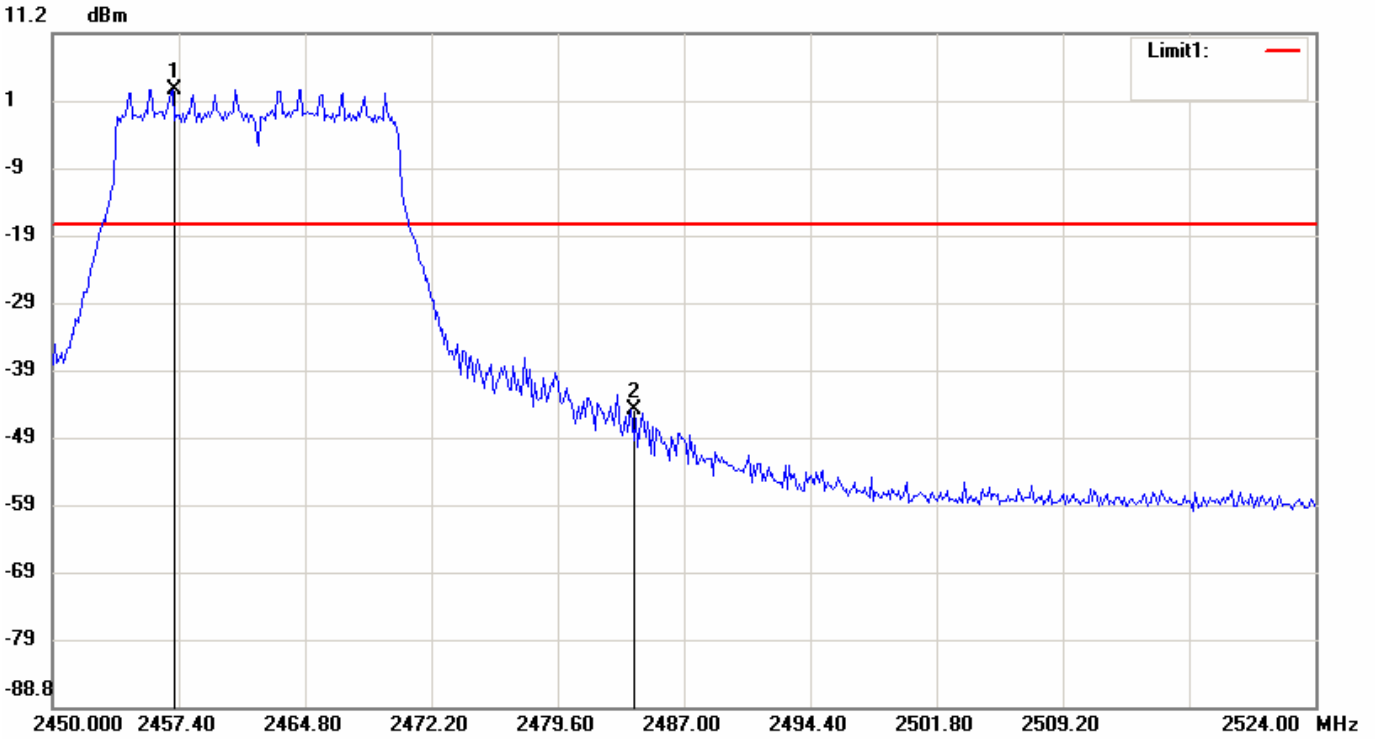
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2398.25000	-34.15
2	2410.75000	3.40

File: 11-06-MAS-176 Data: #28 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:07:23 **Humidity: 60 %**



Condition: **-17.15dBm** **RF Conducted**

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

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

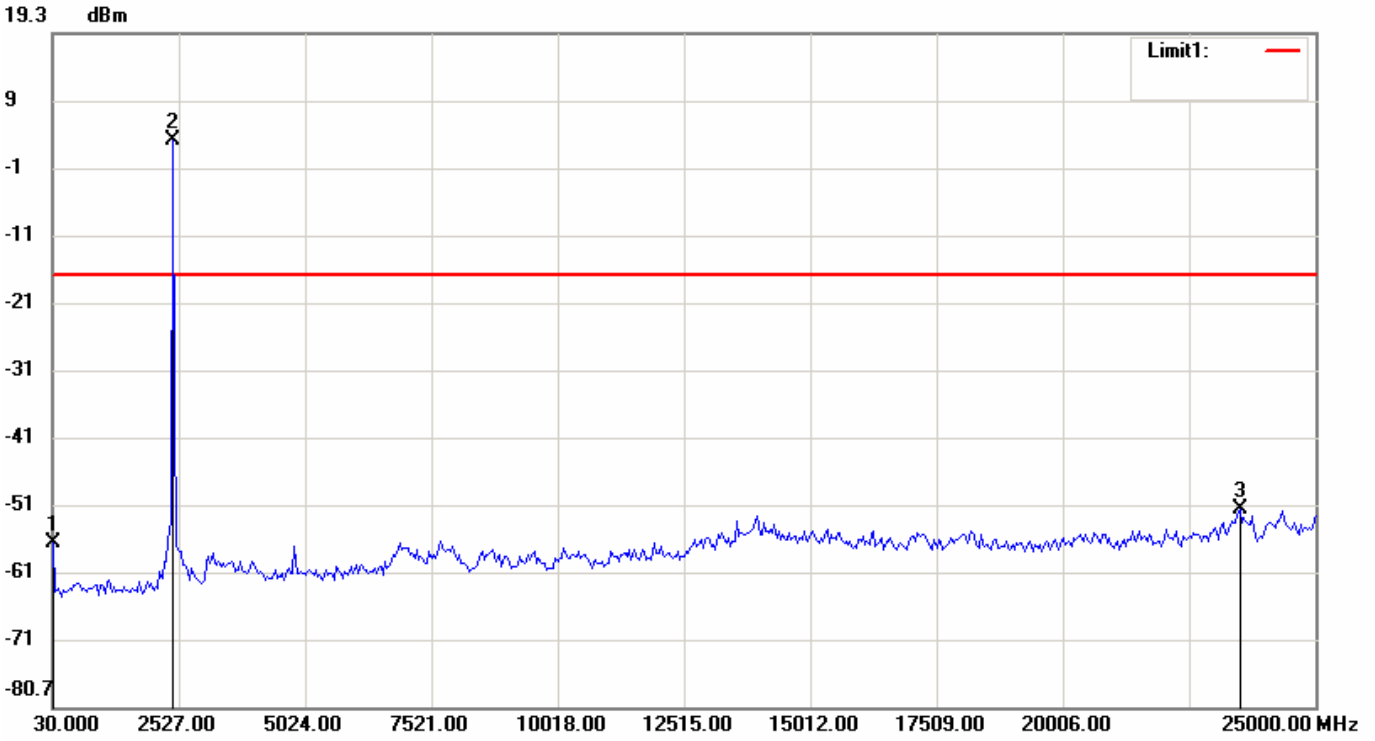
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2457.03000	2.85
2	2483.91670	-44.77

File: 11-06-MAS-176 Data: #16 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:35:41 **Humidity: 60 %**



Condition: **-16.56dBm** **RF Conducted**

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

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

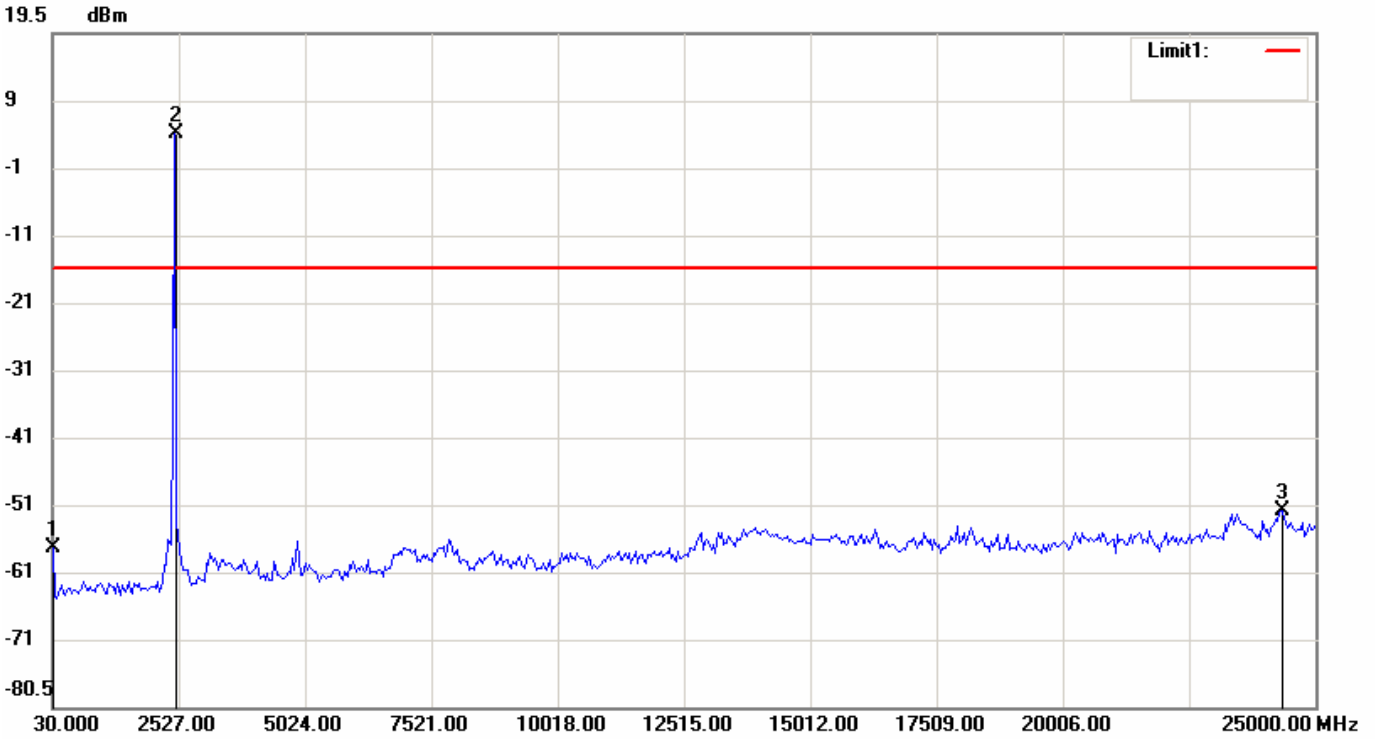
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-56.23
2	2402.15000	3.44
3	23501.80000	-51.44

File: 11-06-MAS-176 Data: #21 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 03:54:31 **Humidity: 60 %**



Condition: **-15.38dBm** **RF Conducted**

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

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

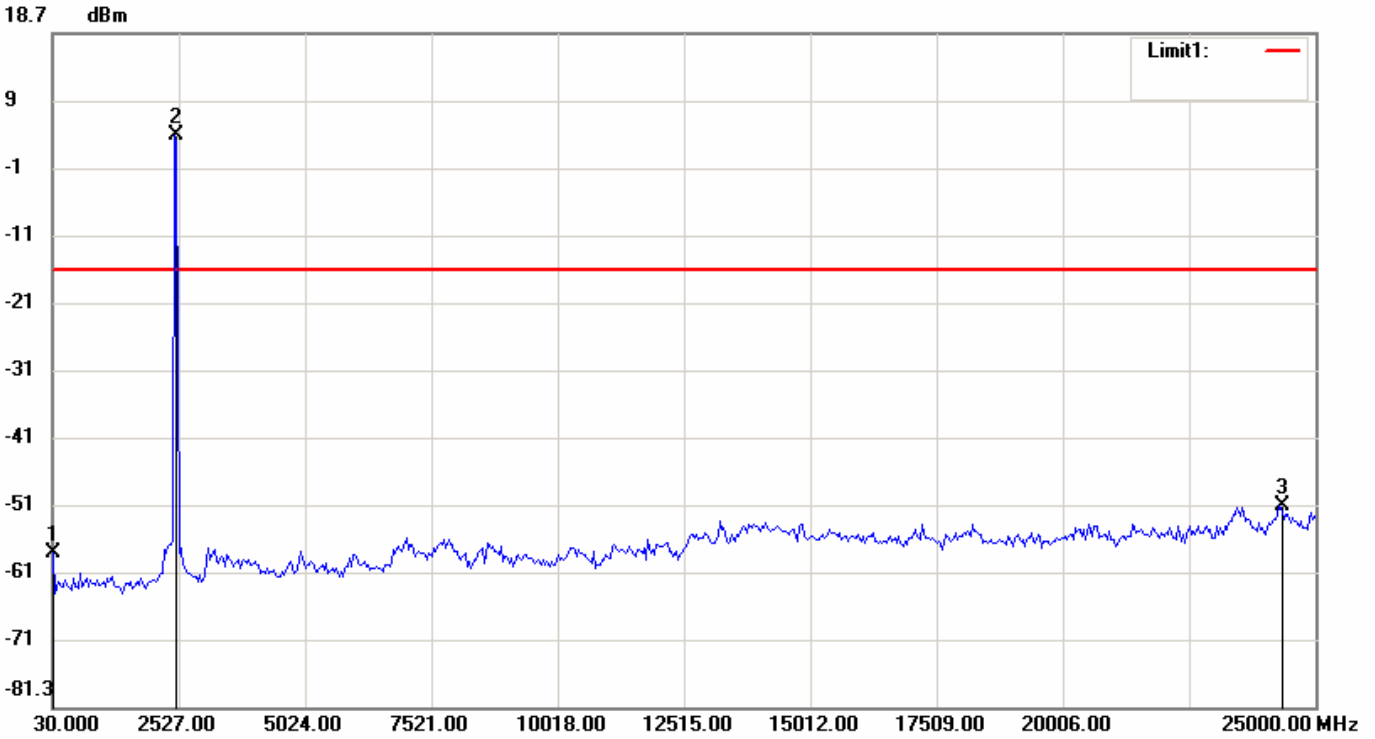
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-56.90
2	2443.76670	4.62
3	24334.13330	-51.51

File: 11-06-MAS-176 Data: #25 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:02:50 **Humidity: 60 %**



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

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

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

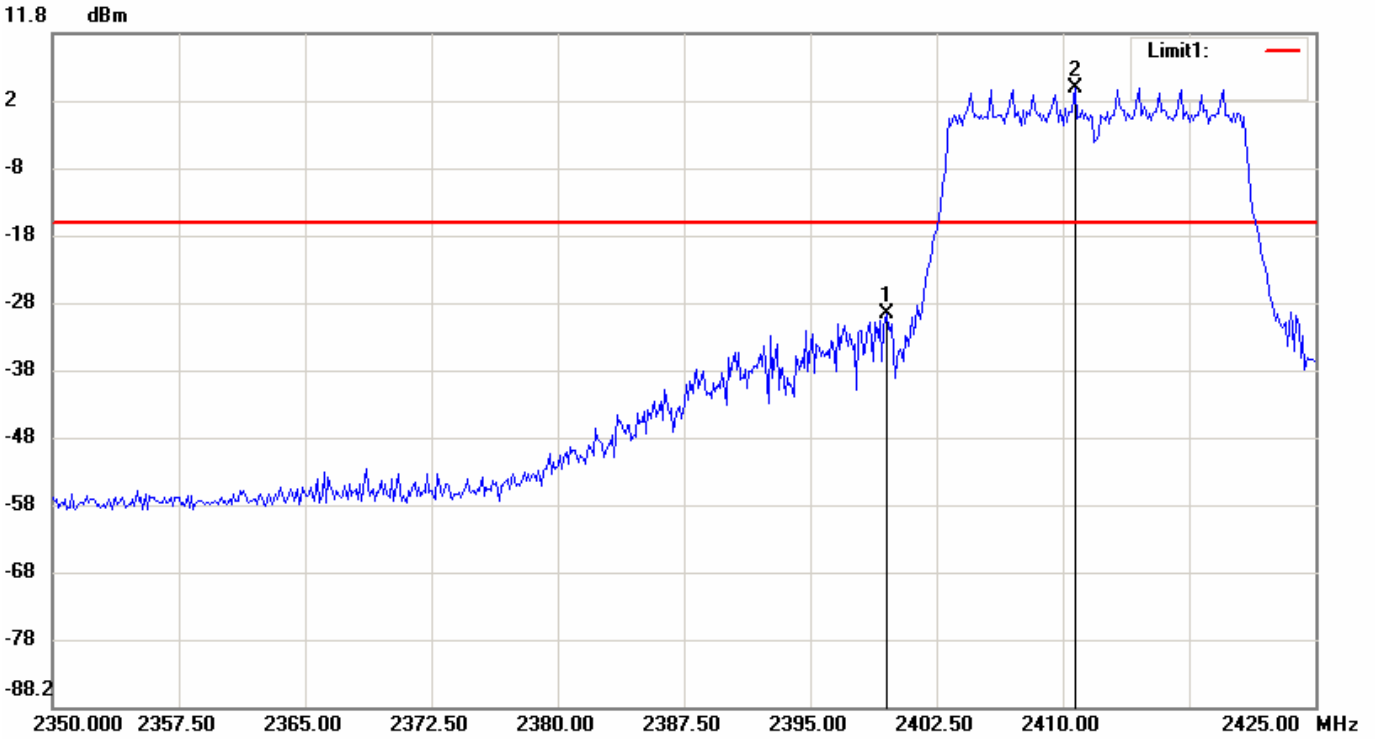
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-58.42
2	2443.76670	3.68
3	24292.51670	-51.39

File: 11-06-MAS-176 Data: #33 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:18:37 **Humidity: 60 %**



Condition: **-16.39dBm** **RF Conducted**

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

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

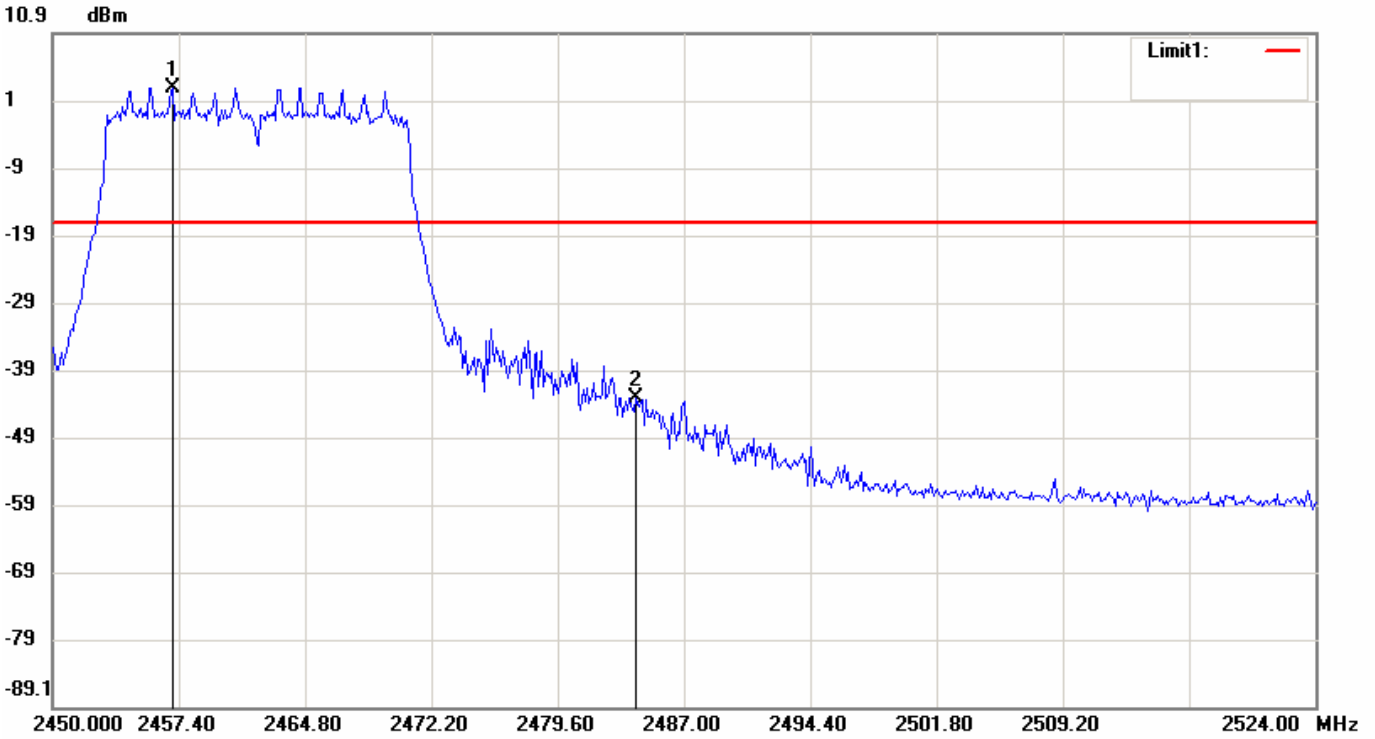
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2399.50000	-29.80
2	2410.75000	3.61

File: 11-06-MAS-176 Data: #42 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:34:28 **Humidity: 60 %**



Condition: **-17.09dBm** **RF Conducted**

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

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

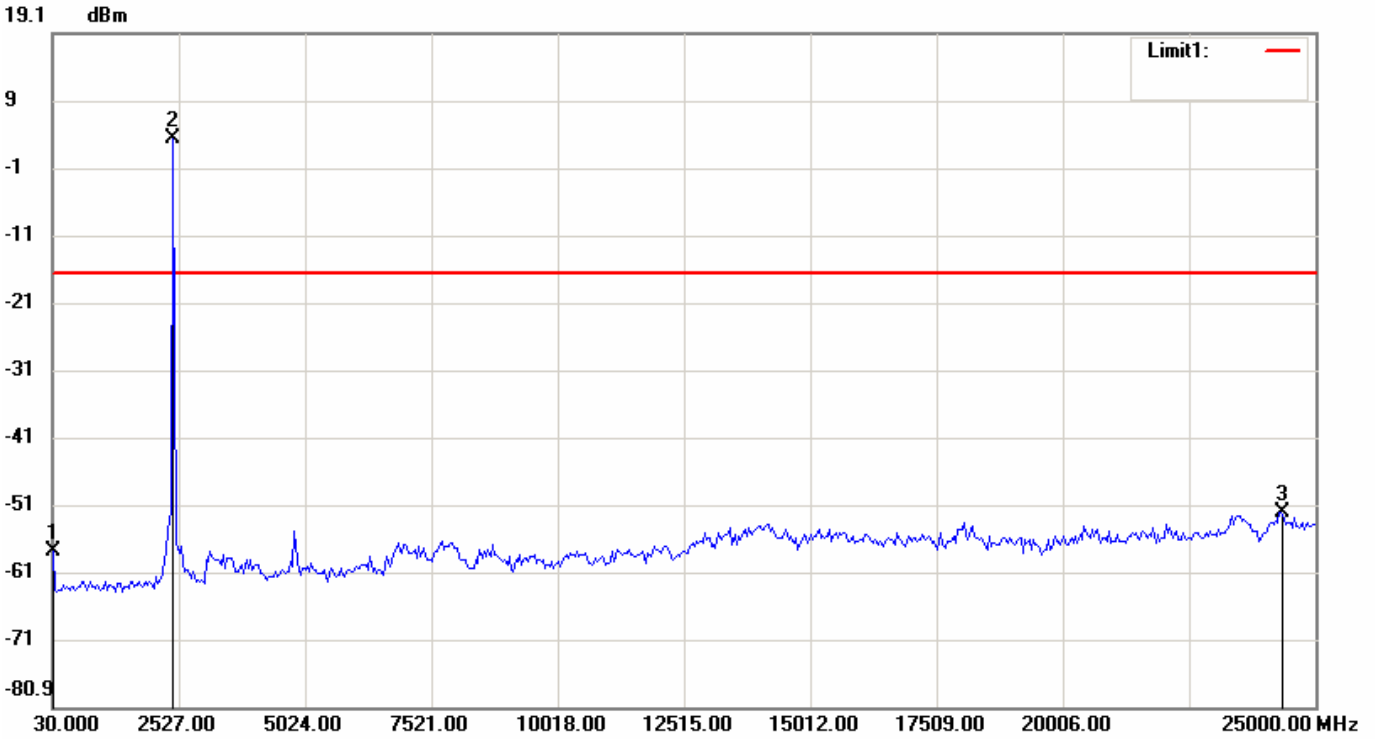
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	2457.03000	2.91
2	2484.16330	-43.29

File: 11-06-MAS-176 Data: #30 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:14:25 **Humidity: 60 %**



Condition: **-16.49dBm** **RF Conducted**

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

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

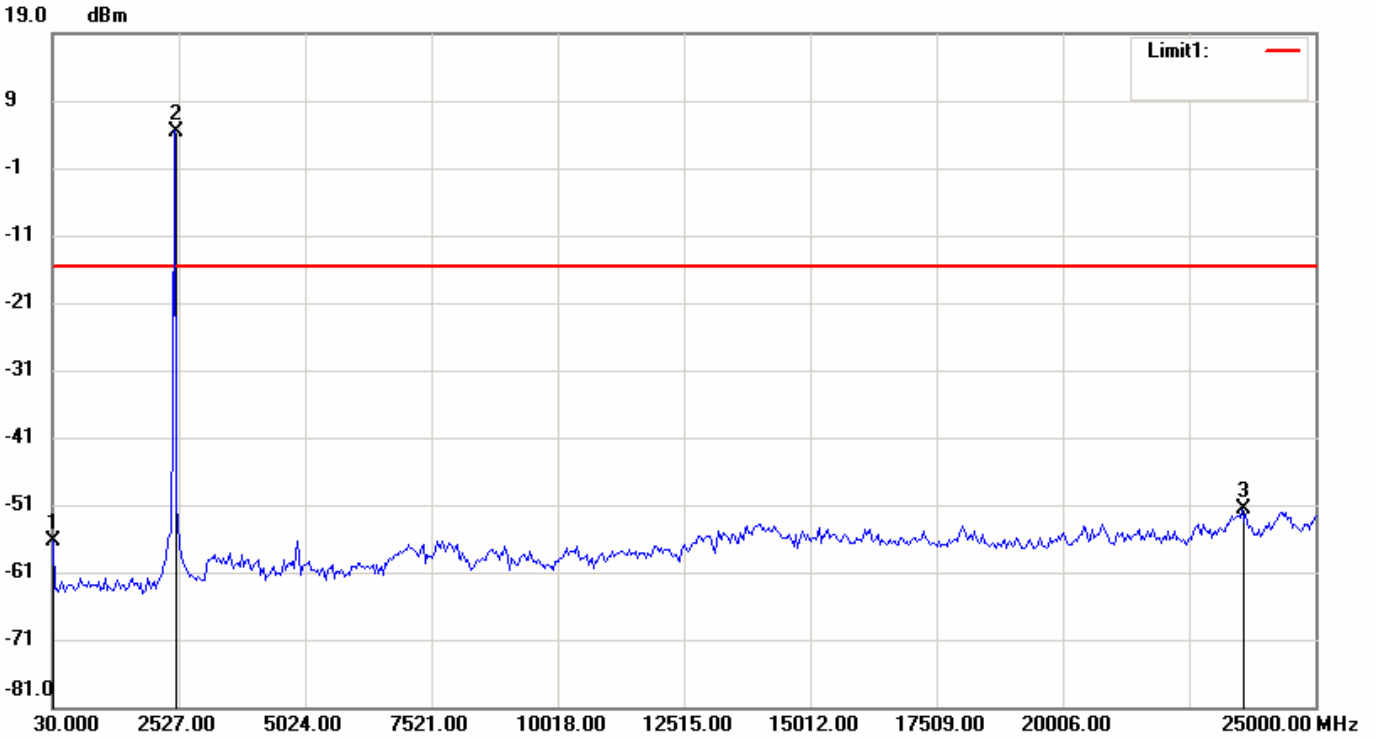
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-57.87
2	2402.15000	3.51
3	24292.51670	-52.13

File: 11-06-MAS-176 Data: #35 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:22:00 **Humidity: 60 %**



Condition: **-15.52dBm** **RF Conducted**

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

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

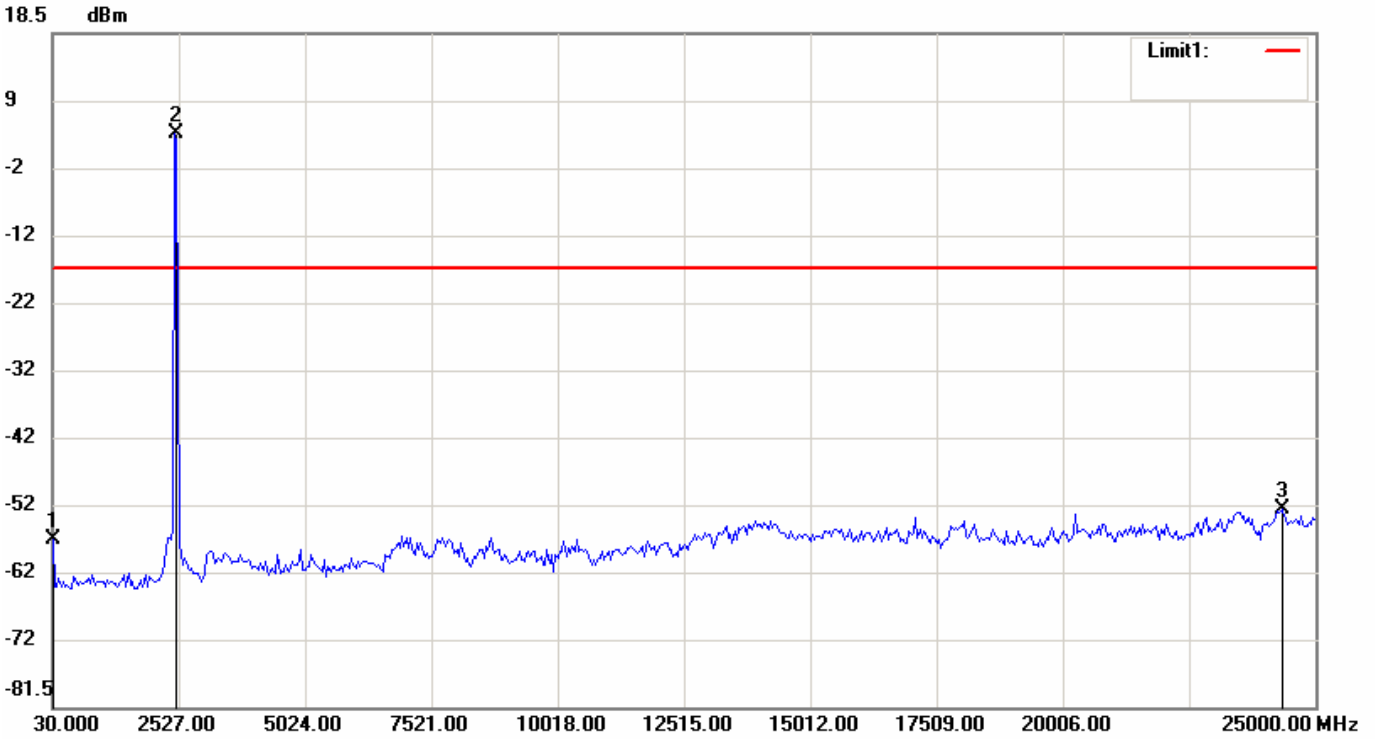
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-56.48
2	2443.76670	4.48
3	23543.41670	-51.57

File: 11-06-MAS-176 Data: #39 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:29:55 **Humidity: 60 %**



Condition: **-16.48dBm** **RF Conducted**

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

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

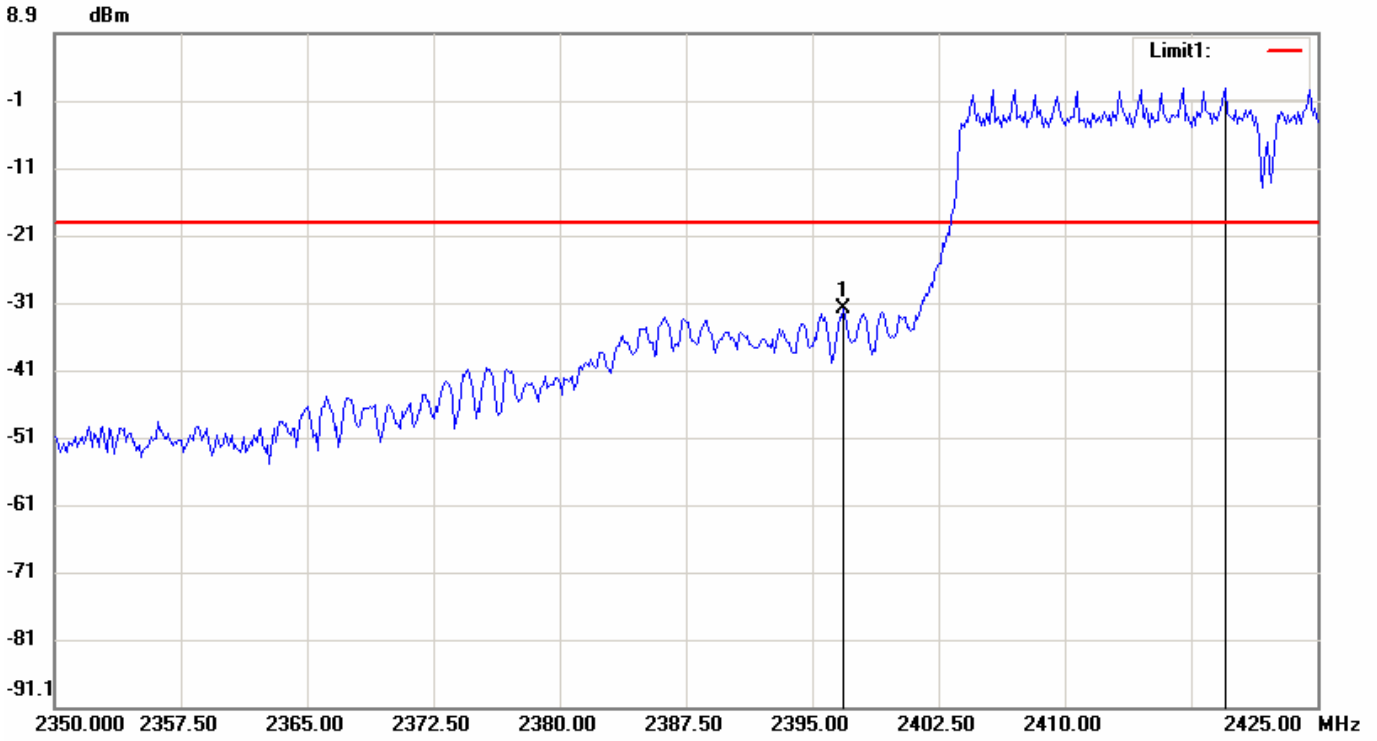
Test Mode:

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

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-56.53
2	2443.76670	3.52
3	24334.13330	-52.24

File: 11-06-MAS-176 Data: #47 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:44:37 **Humidity: 60 %**



Condition: **-19.17dBm** **RF Conducted**

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

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

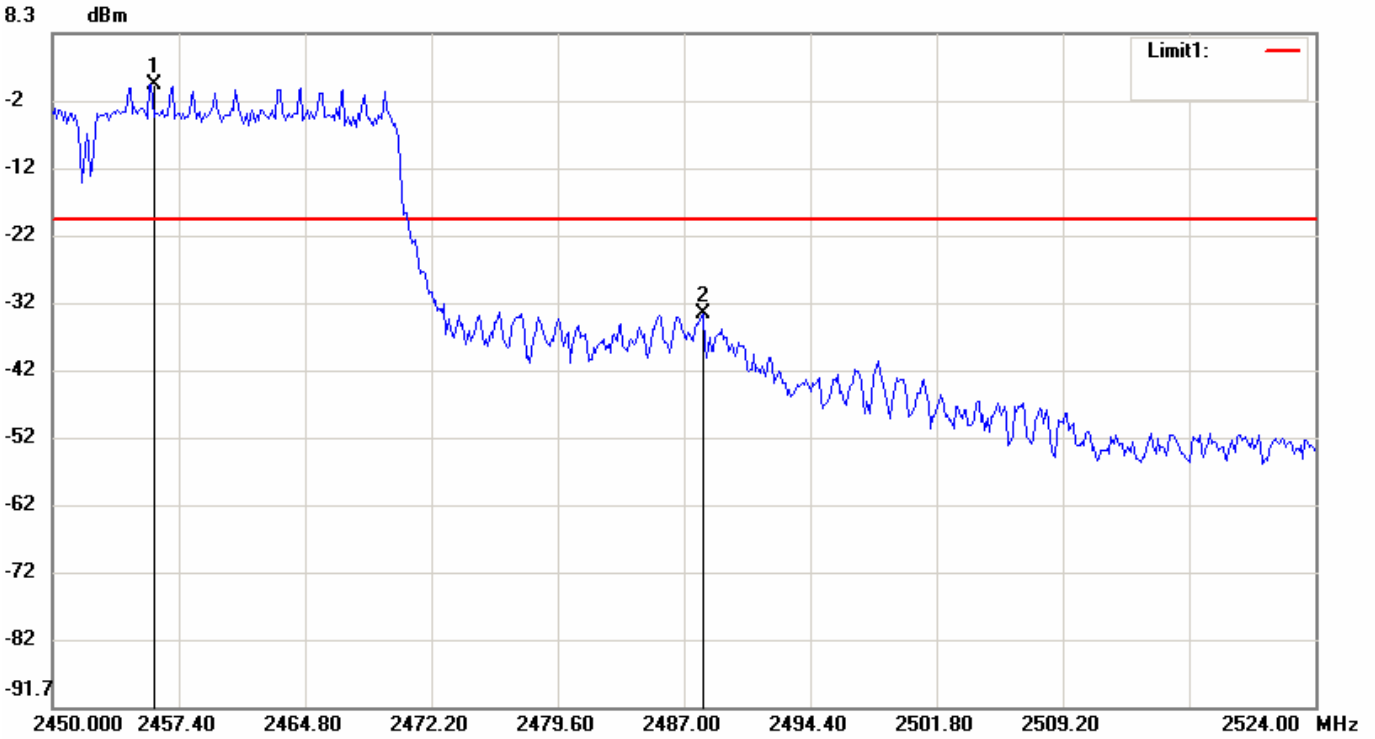
Test Mode:

Note: **FCC-802.11gn_HT40 Channel 03-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	2396.87500	-32.13
2	2419.50000	0.83

File: 11-06-MAS-176 Data: #56 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 05:01:21 **Humidity: 60 %**



Condition: **-19.39dBm** **RF Conducted**

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

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

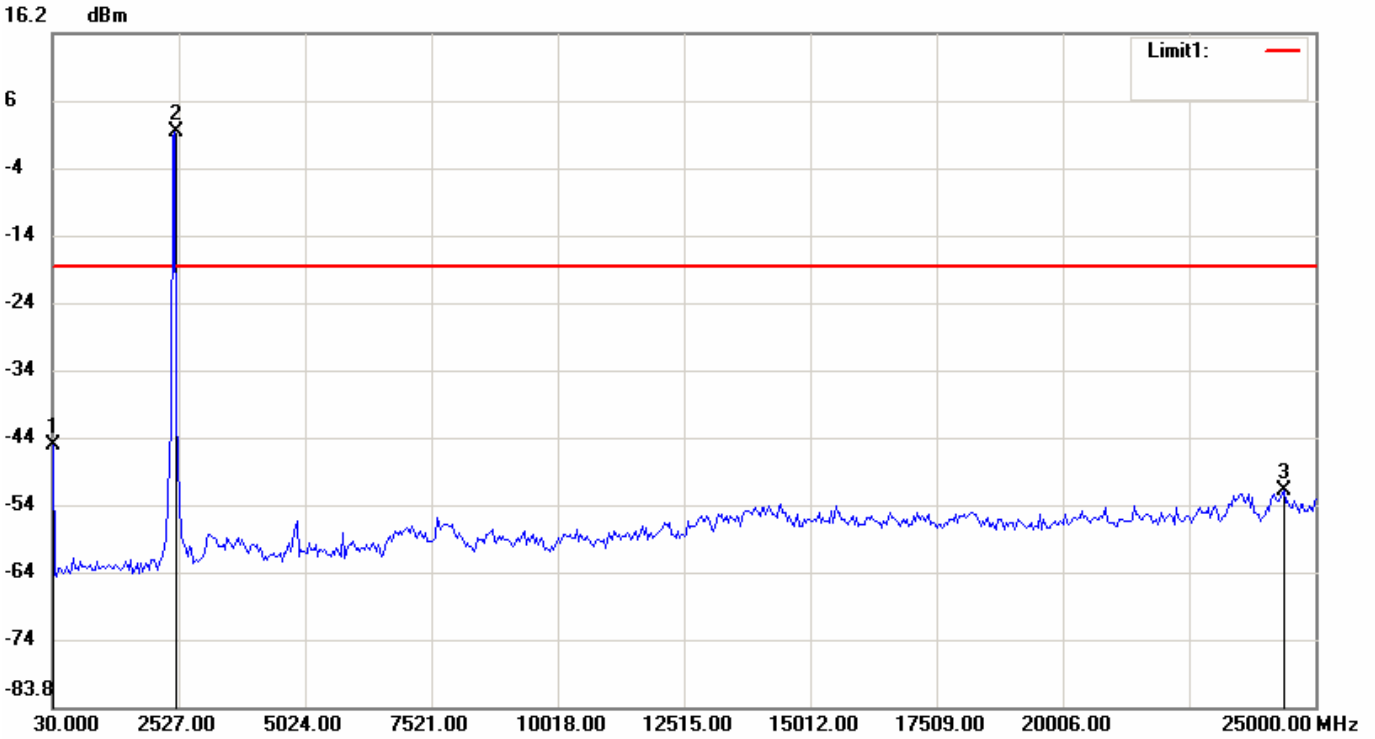
Test Mode:

Note: **FCC-802.11gn_HT40 Channel 09-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	2455.79670	0.61
2	2488.11000	-33.40

File: 11-06-MAS-176 Data: #44 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:40:25 **Humidity: 60 %**



Condition: **-18.5dBm** **RF Conducted**

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

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

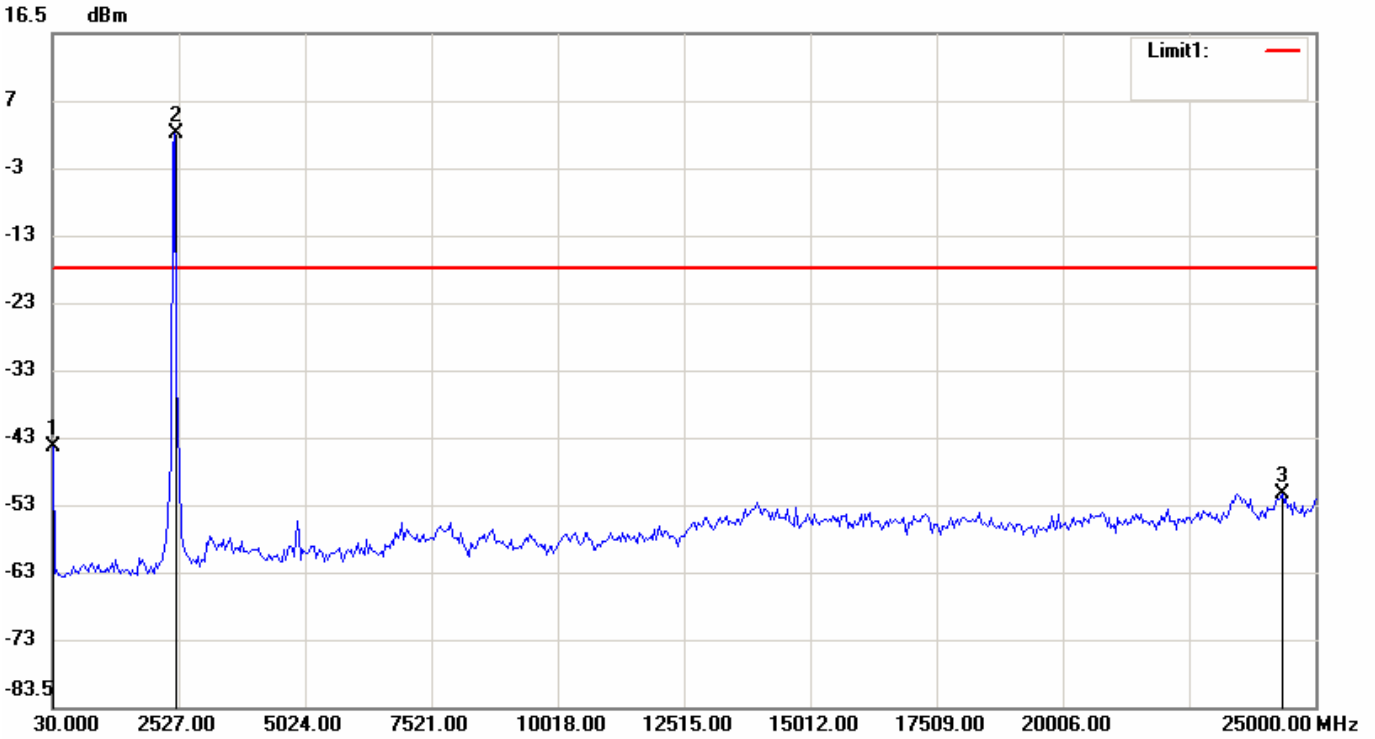
Test Mode:

Note: **FCC-802.11gn_HT40 Channel 03-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-44.84
2	2443.76670	1.50
3	24375.75000	-51.68

File: 11-06-MAS-176 Data: #49 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:48:43 **Humidity: 60 %**



Condition: **-18.39dBm** **RF Conducted**

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

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

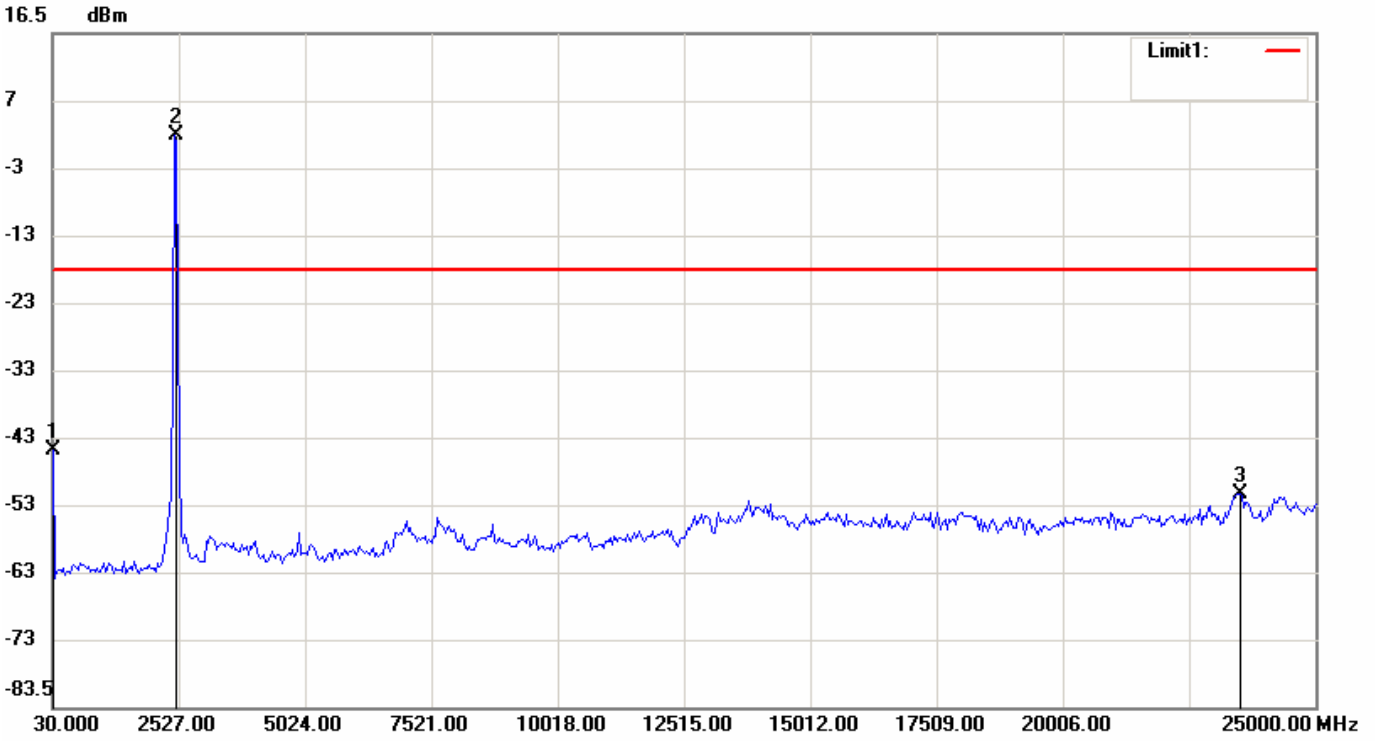
Test Mode:

Note: **FCC-802.11gn_HT40 Channel 06-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-44.87
2	2443.76670	1.61
3	24334.13330	-51.91

File: 11-06-MAS-176 Data: #53 **Date: 2011/6/29** **Temperature: 24 ℃**

Time: PM 04:56:48 **Humidity: 60 %**



Condition: **-18.65dBm** **RF Conducted**

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

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

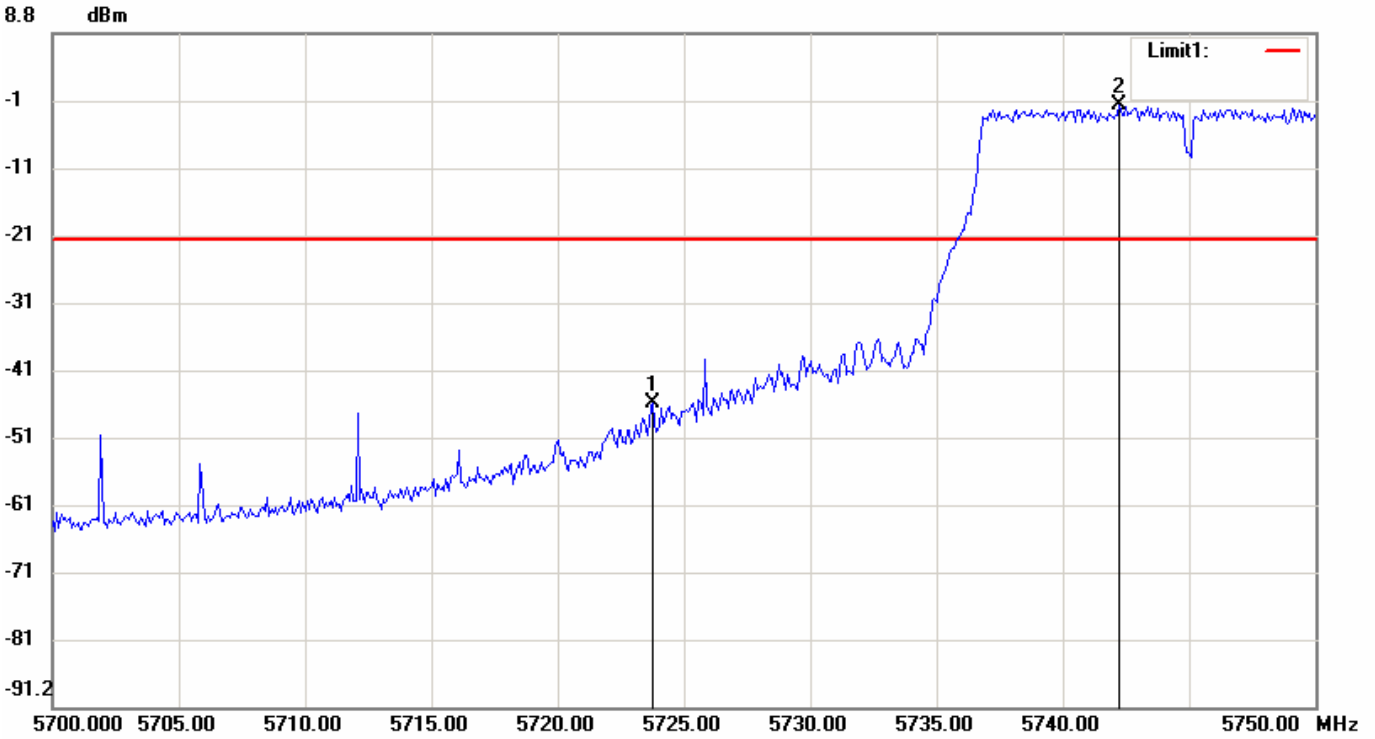
Test Mode:

Note: **FCC-802.11gn_HT40 Channel 09-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-45.32
2	2443.76670	1.35
3	23501.80000	-51.75

File: 11-06-MAS-176 Data: #99 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 02:03:15 **Humidity: 53 %**



Condition: **-21.78dBm** **RF Conducted**

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

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

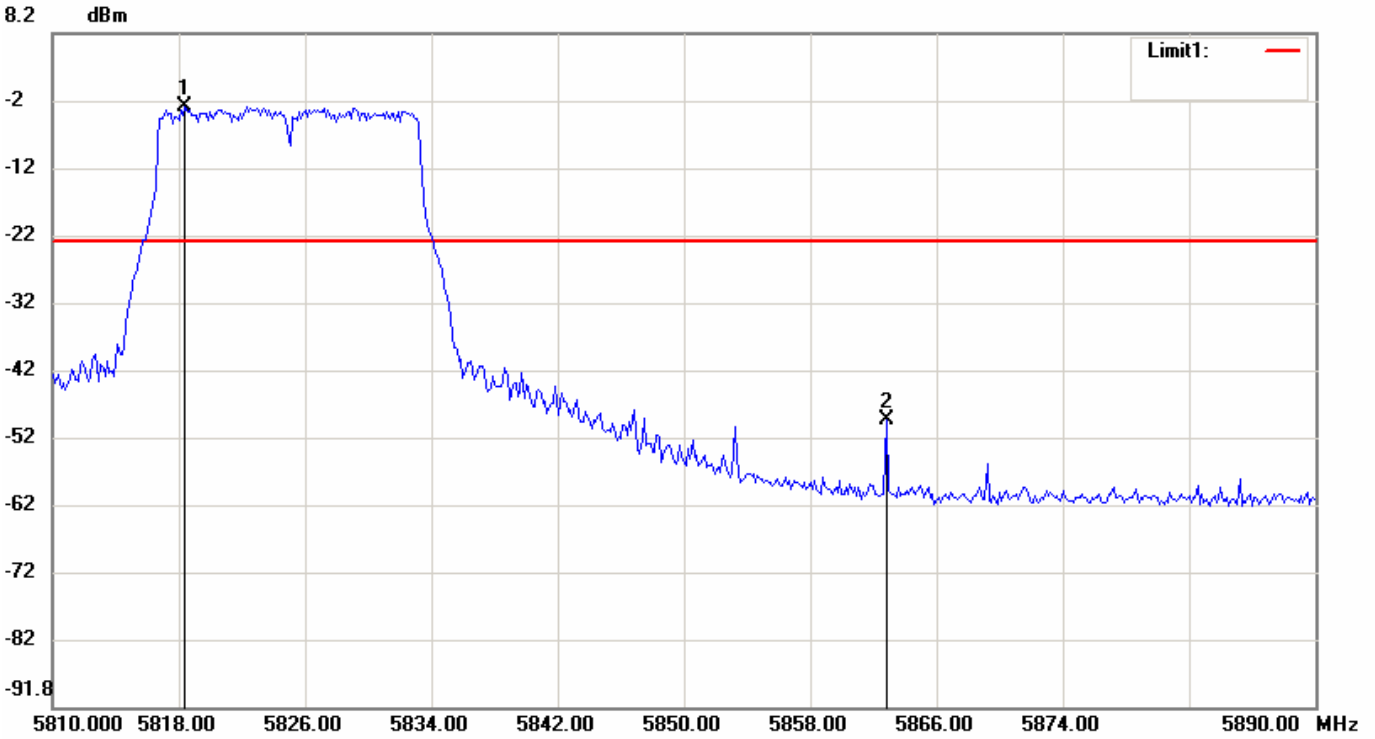
Test Mode:

Note: **FCC-802.11a Channel 149-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	5723.75000	-45.99
2	5742.25000	-1.78

File: 11-06-MAS-176 Data: #108 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 02:22:11 **Humidity: 53 %**



Condition: **-22.6dBm** **RF Conducted**

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

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

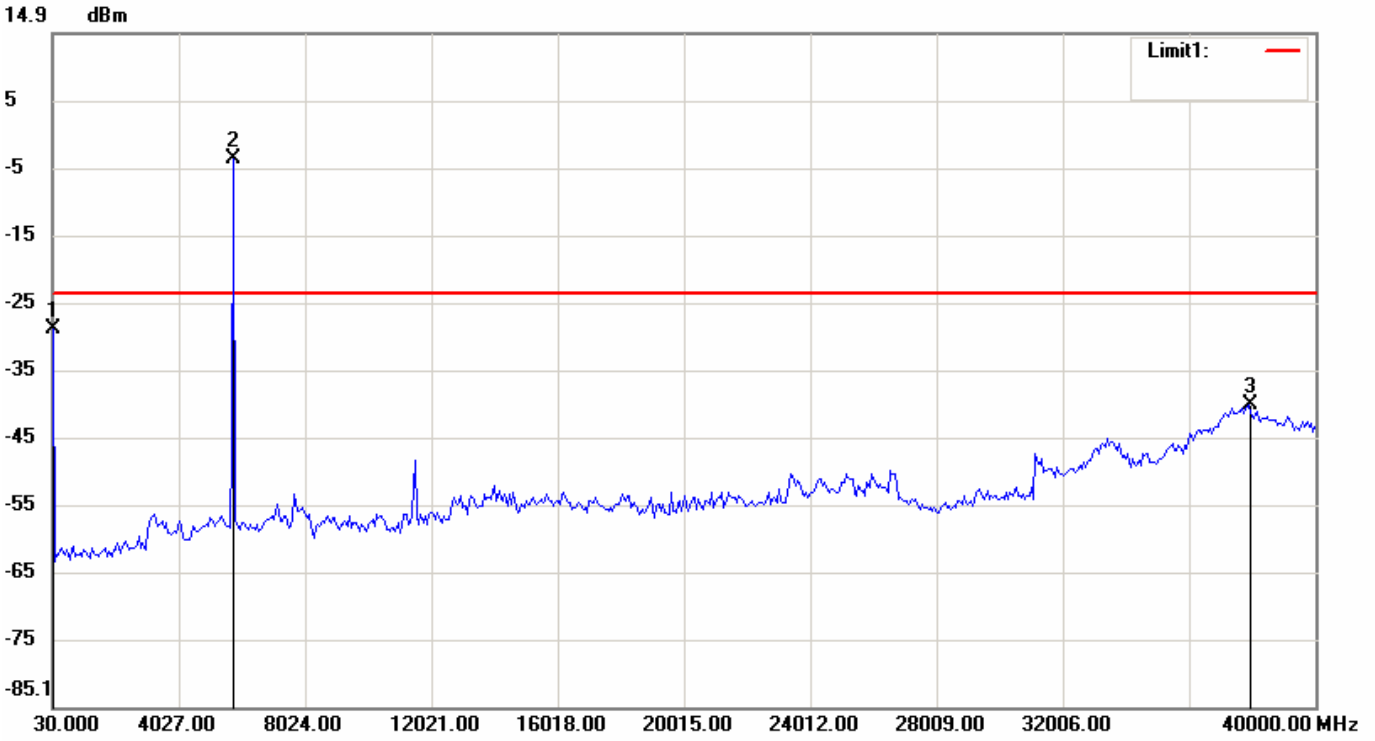
Test Mode:

Note: **FCC-802.11a Channel 1491-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	5818.40000	-2.60
2	5862.80000	-49.05

File: 11-06-MAS-176 Data: #96 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 01:59:01 **Humidity: 53 %**



Condition: **-23.67dBm** **RF Conducted**

EUT: **Cisco Tablet** **Sweep Time: 3819.92ms Att.: 20dB**

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

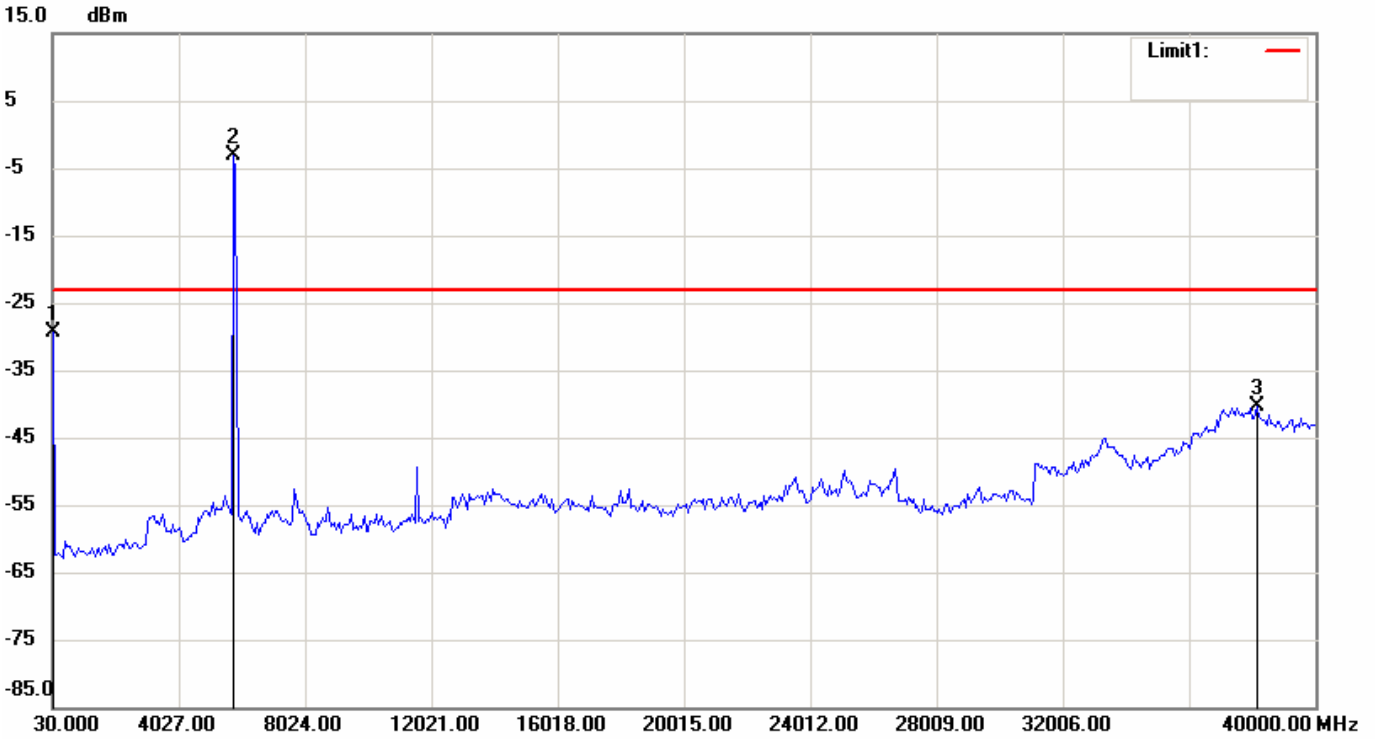
Test Mode:

Note: **FCC-802.11a Channel 149-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-29.02
2	5759.03330	-3.67
3	37868.26670	-40.31

File: 11-06-MAS-176 Data: #101 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 02:06:23 **Humidity: 53 %**



Condition: **-23.12dBm** **RF Conducted**

EUT: **Cisco Tablet** **Sweep Time: 3819.92ms Att.: 20dB**

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

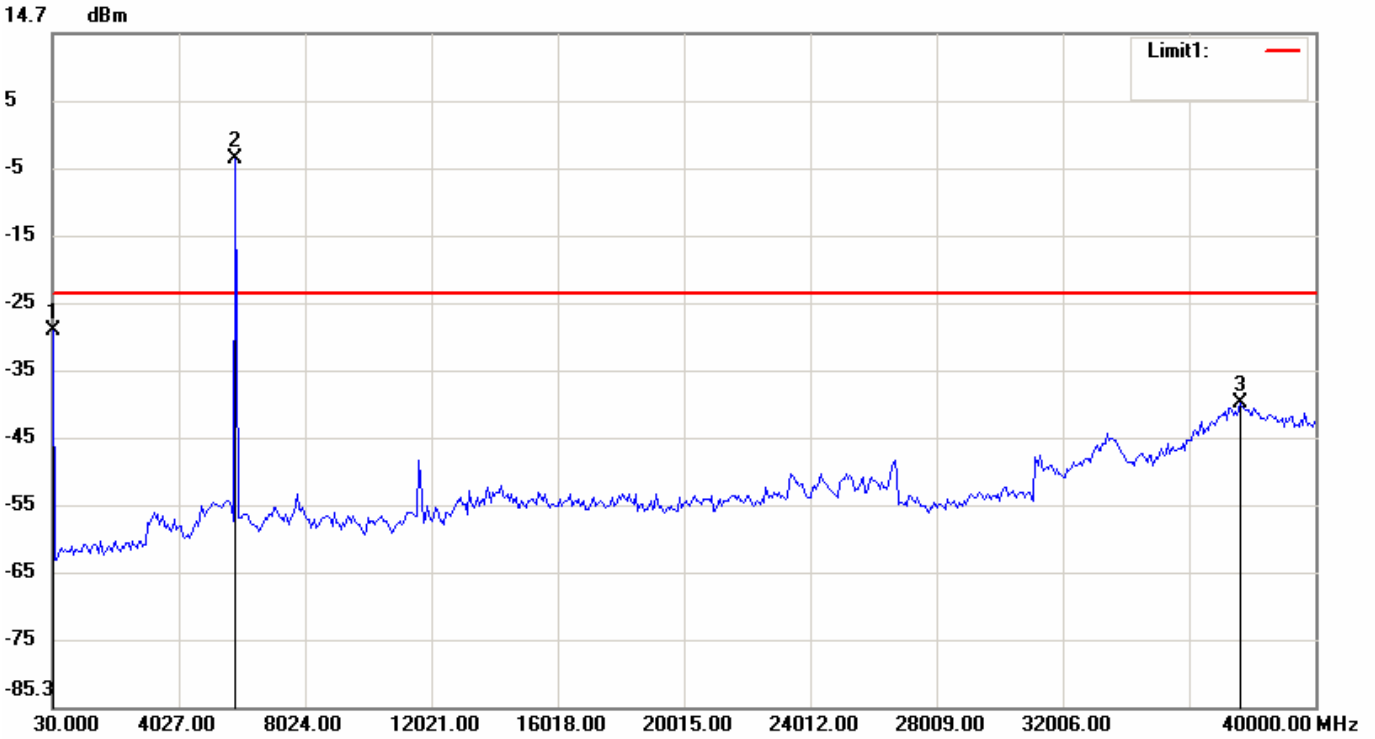
Test Mode:

Note: **FCC-802.11a Channel 157-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-29.26
2	5759.03330	-3.12
3	38134.73330	-40.40

File: 11-06-MAS-176 Data: #105 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 02:17:36 **Humidity: 53 %**



Condition: **-23.9dBm** **RF Conducted**

EUT: **Cisco Tablet** **Sweep Time: 3819.92ms Att.: 20dB**

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

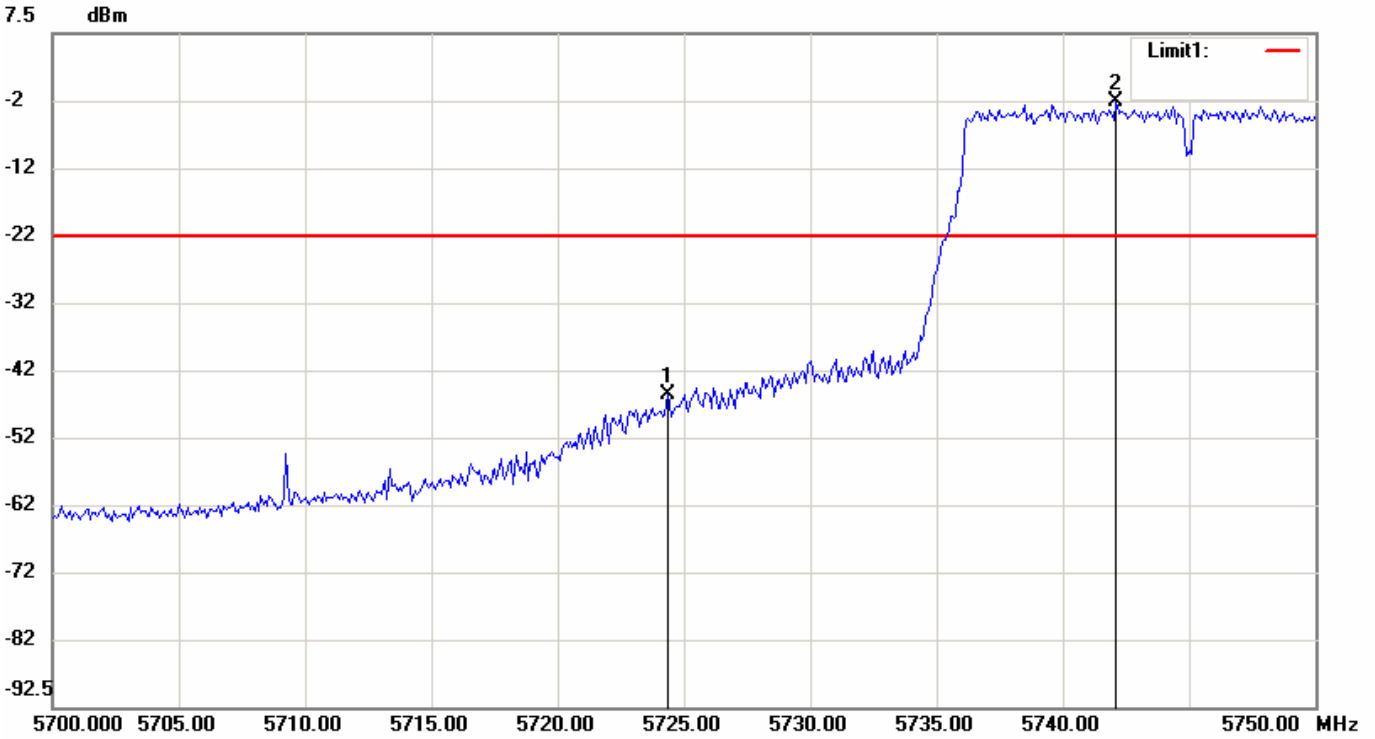
Test Mode:

Note: **FCC-802.11a Channel 1491-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-29.46
2	5825.65000	-3.90
3	37601.80000	-40.33

File: 11-06-MAS-176 Data: #113 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:14:28 **Humidity: 53 %**



Condition: **-22.71dBm** **RF Conducted**

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

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

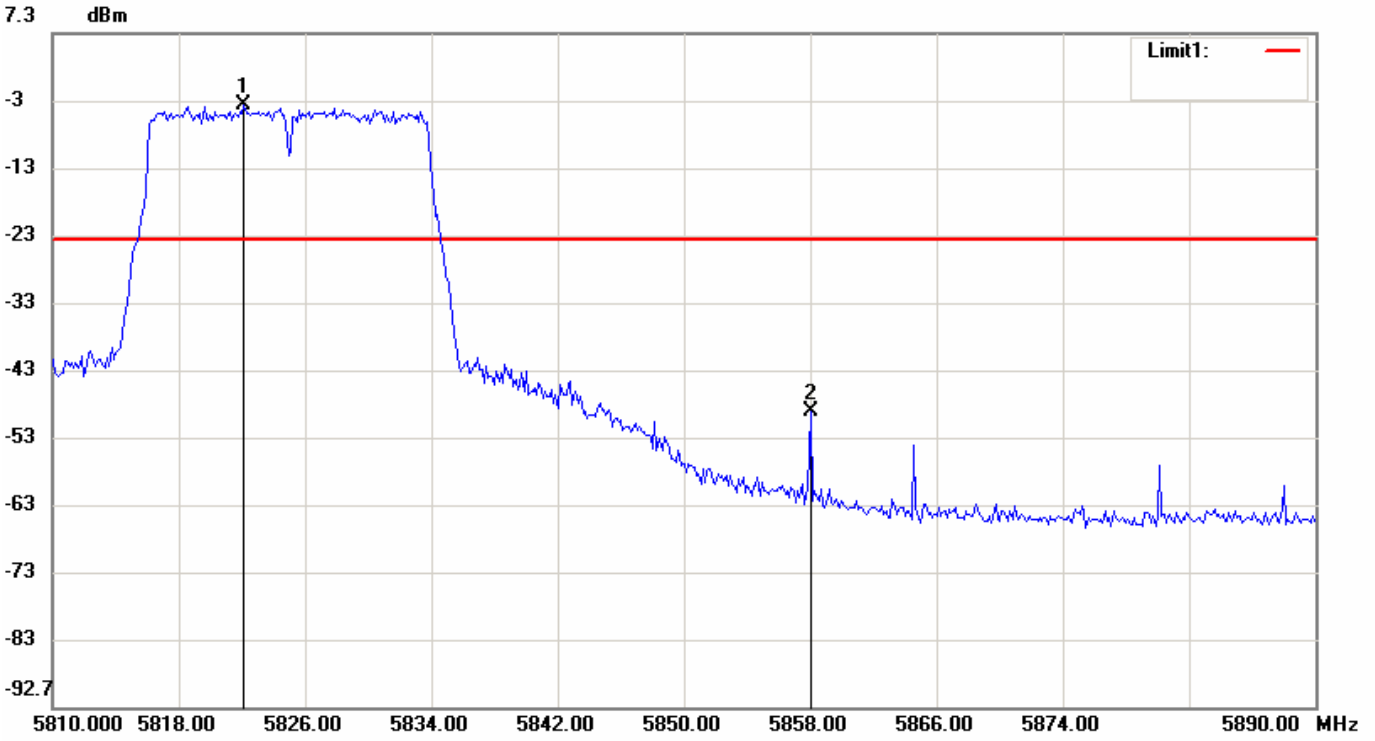
Test Mode:

Note: **FCC-802.11an_HT20 Channel 149-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	5724.33330	-46.10
2	5742.08330	-2.71

File: 11-06-MAS-176 Data: #122 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:30:03 **Humidity: 53 %**



Condition: **-23.24dBm** **RF Conducted**

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

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

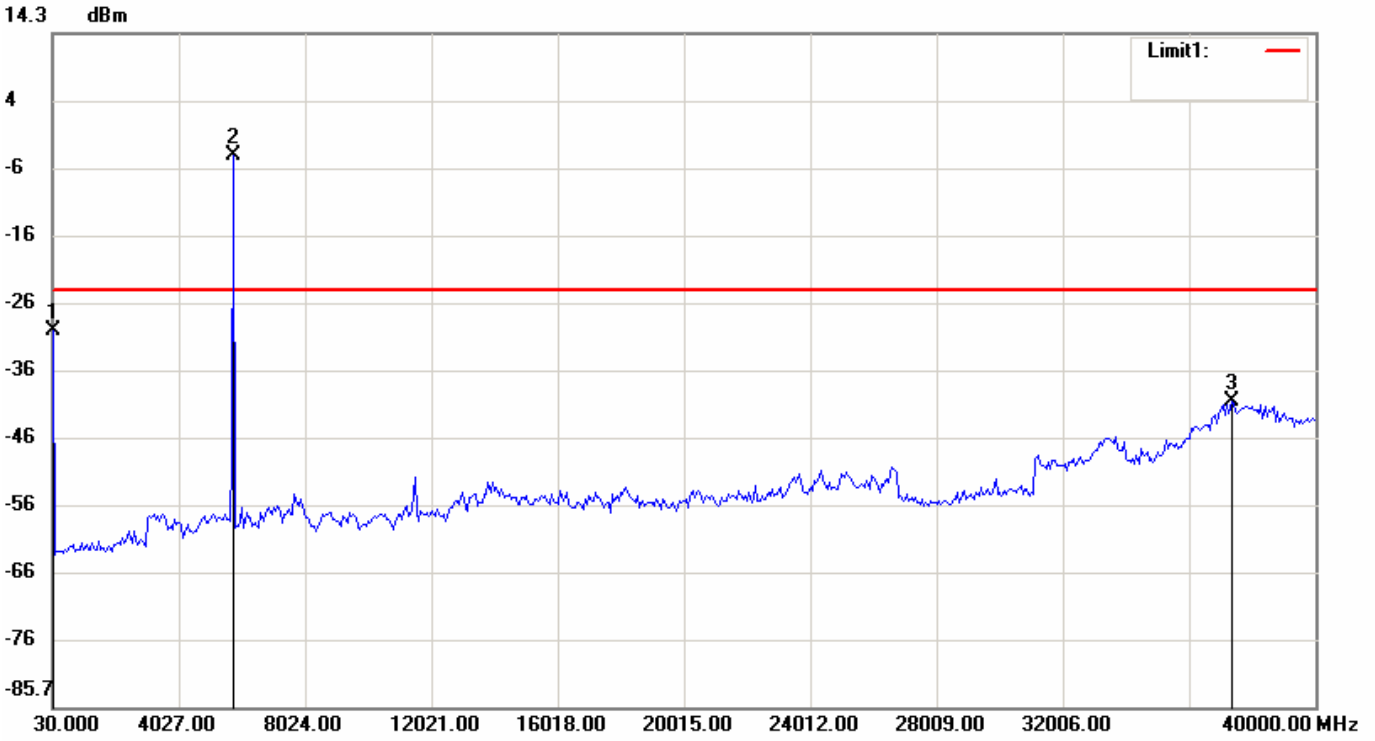
Test Mode:

Note: **FCC-802.11an_HT20 Channel 1491-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	5822.13330	-3.24
2	5858.00000	-48.84

File: 11-06-MAS-176 Data: #110 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:10:15 **Humidity: 53 %**



Condition: **-23.86dBm** **RF Conducted**

EUT: **Cisco Tablet** **Sweep Time: 3819.92ms Att.: 20dB**

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

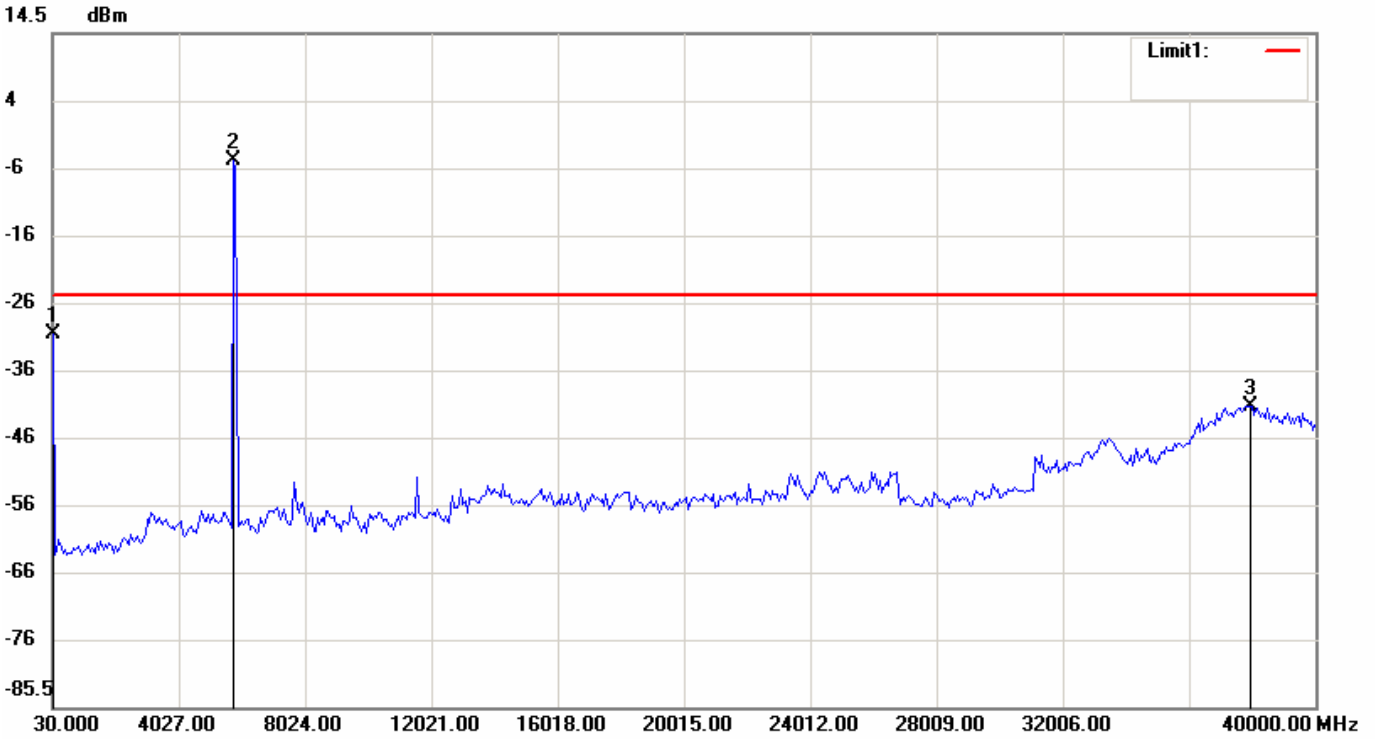
Test Mode:

Note: **FCC-802.11an_HT20 Channel 149-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-29.83
2	5759.03330	-3.86
3	37335.33330	-40.38

File: 11-06-MAS-176 Data: #115 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:17:58 **Humidity: 53 %**



Condition: **-24.44dBm** **RF Conducted**

EUT: **Cisco Tablet** **Sweep Time: 3819.92ms Att.: 20dB**

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

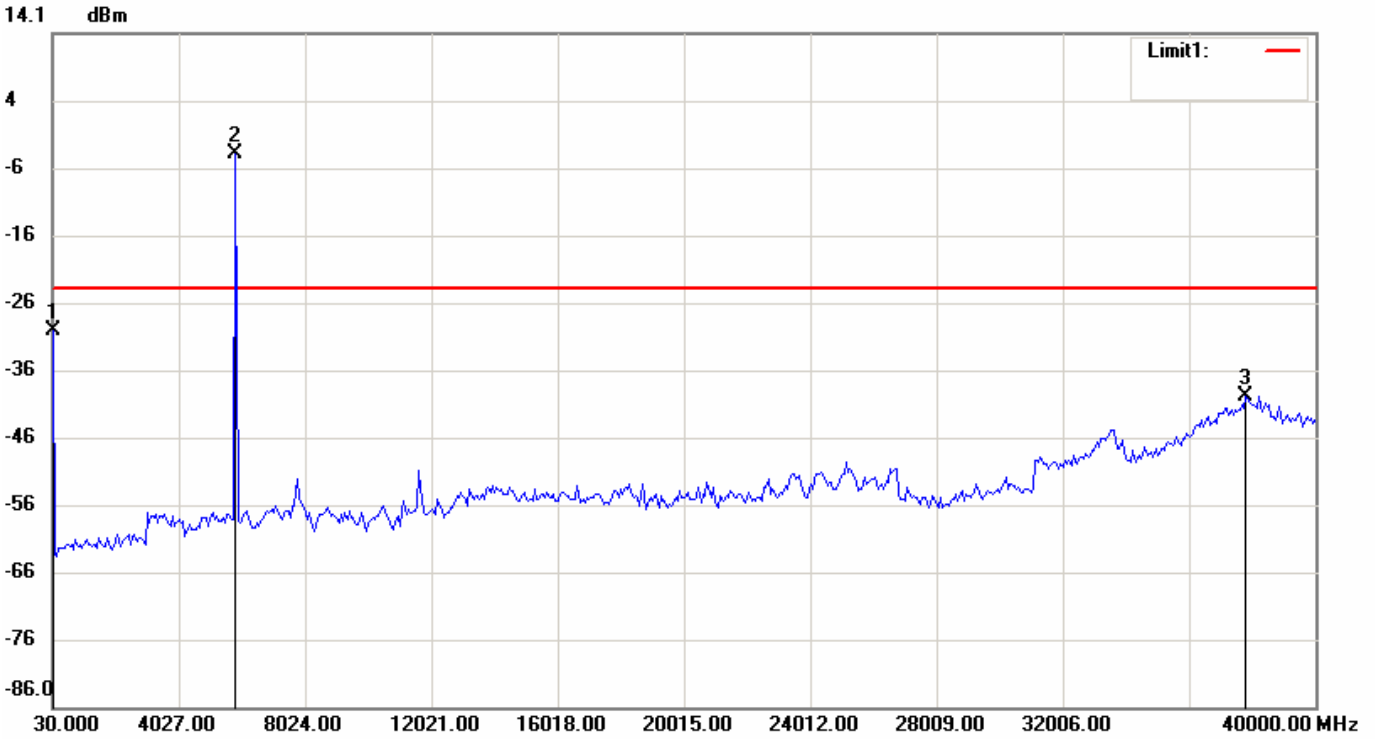
Test Mode:

Note: **FCC-802.11an_HT20 Channel 157-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-30.15
2	5759.03330	-4.44
3	37868.26670	-40.83

File: 11-06-MAS-176 Data: #119 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:25:30 **Humidity: 53 %**



Condition: **-23.72dBm** **RF Conducted**

EUT: **Cisco Tablet** **Sweep Time: 3819.92ms Att.: 20dB**

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

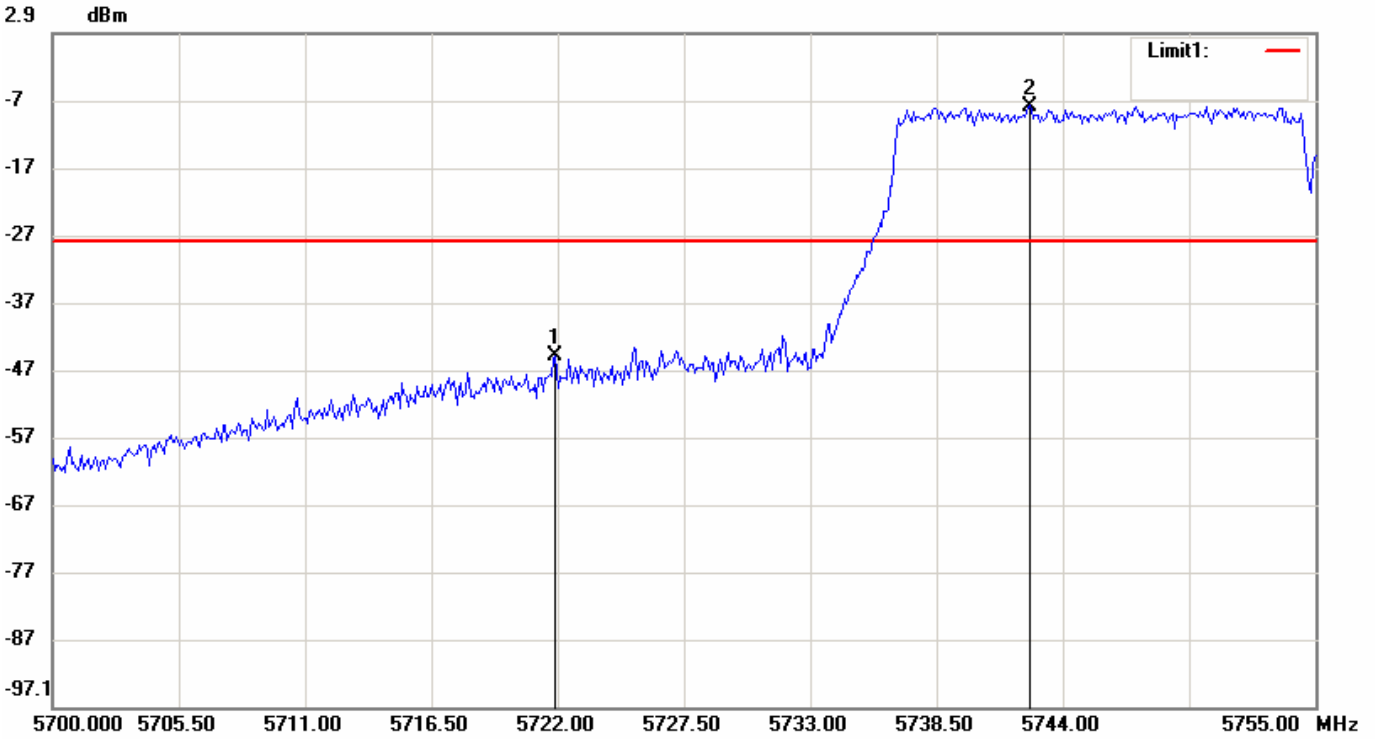
Test Mode:

Note: **FCC-802.11an_HT20 Channel 1491-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-30.16
2	5825.65000	-3.72
3	37801.65000	-39.78

File: 11-06-MAS-176 Data: #127 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:41:18 **Humidity: 53 %**



Condition: **-27.82dBm** **RF Conducted**

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

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

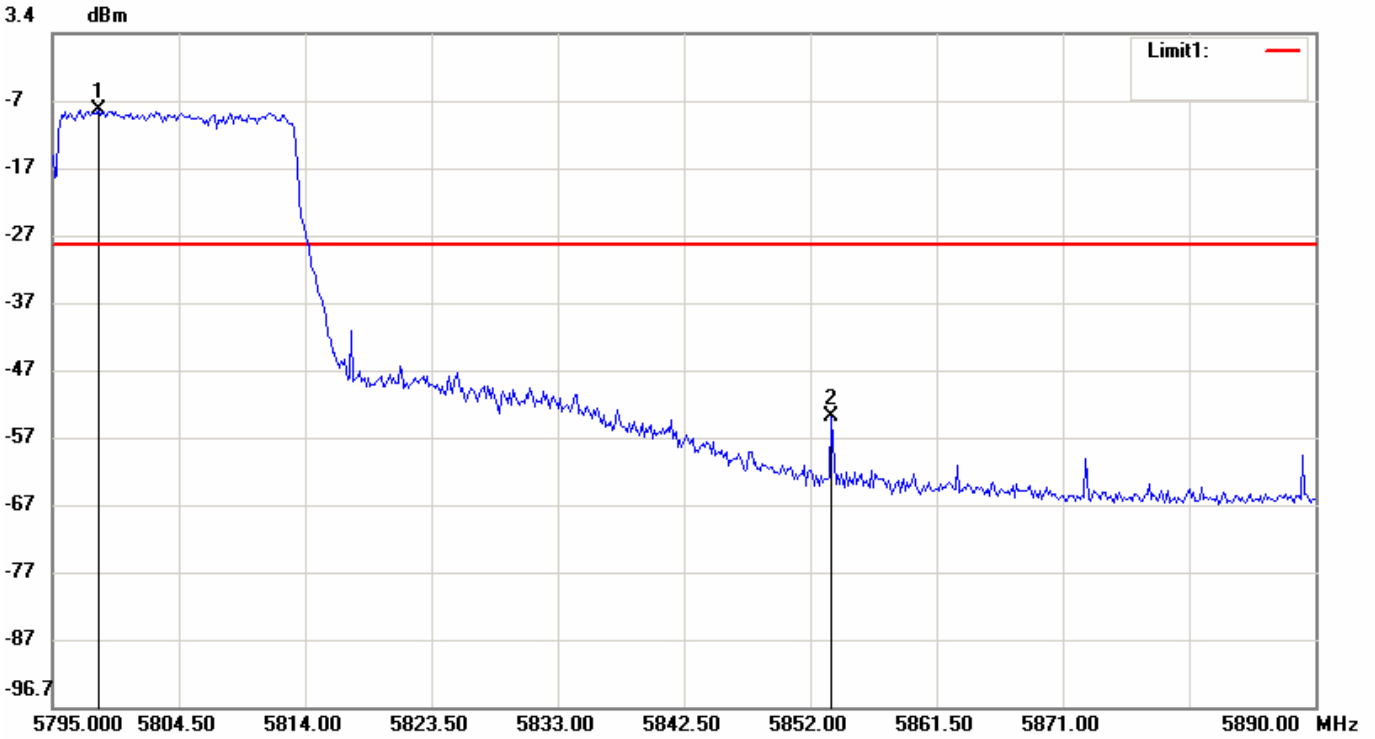
Test Mode:

Note: **FCC-802.11an_HT40 Channel 151-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	5721.90830	-44.94
2	5742.53330	-7.82

File: 11-06-MAS-176 Data: #132 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:48:30 **Humidity: 53 %**



Condition: **-27.97dBm** **RF Conducted**

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

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

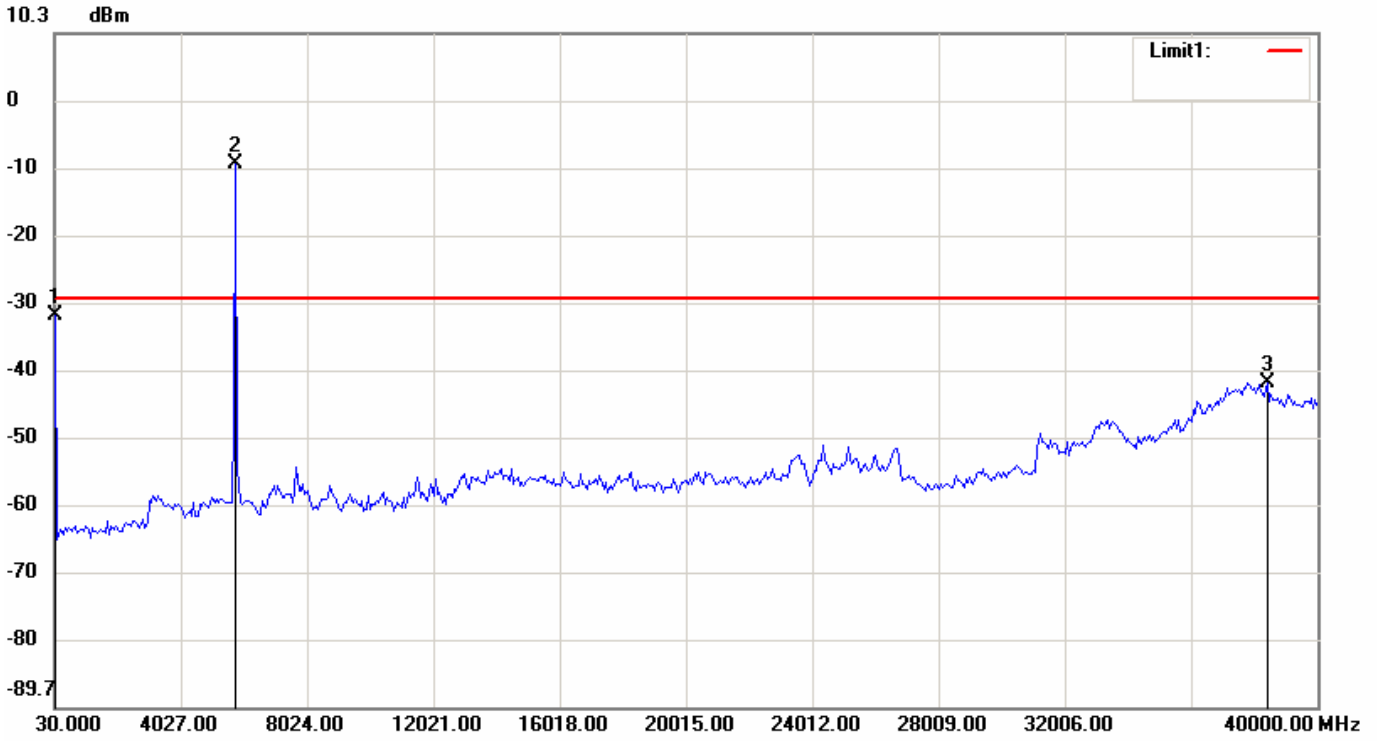
Test Mode:

Note: **FCC-802.11an_HT40 Channel 159-Bandedge**

No.	Frequency(MHz)	Level(dBm)
1	5798.48330	-7.97
2	5853.58330	-53.52

File: 11-06-MAS-176 Data: #124 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:37:07 **Humidity: 53 %**



Condition: **-29.05dBm** **RF Conducted**

EUT: **Cisco Tablet** **Sweep Time: 3819.92ms Att.: 20dB**

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

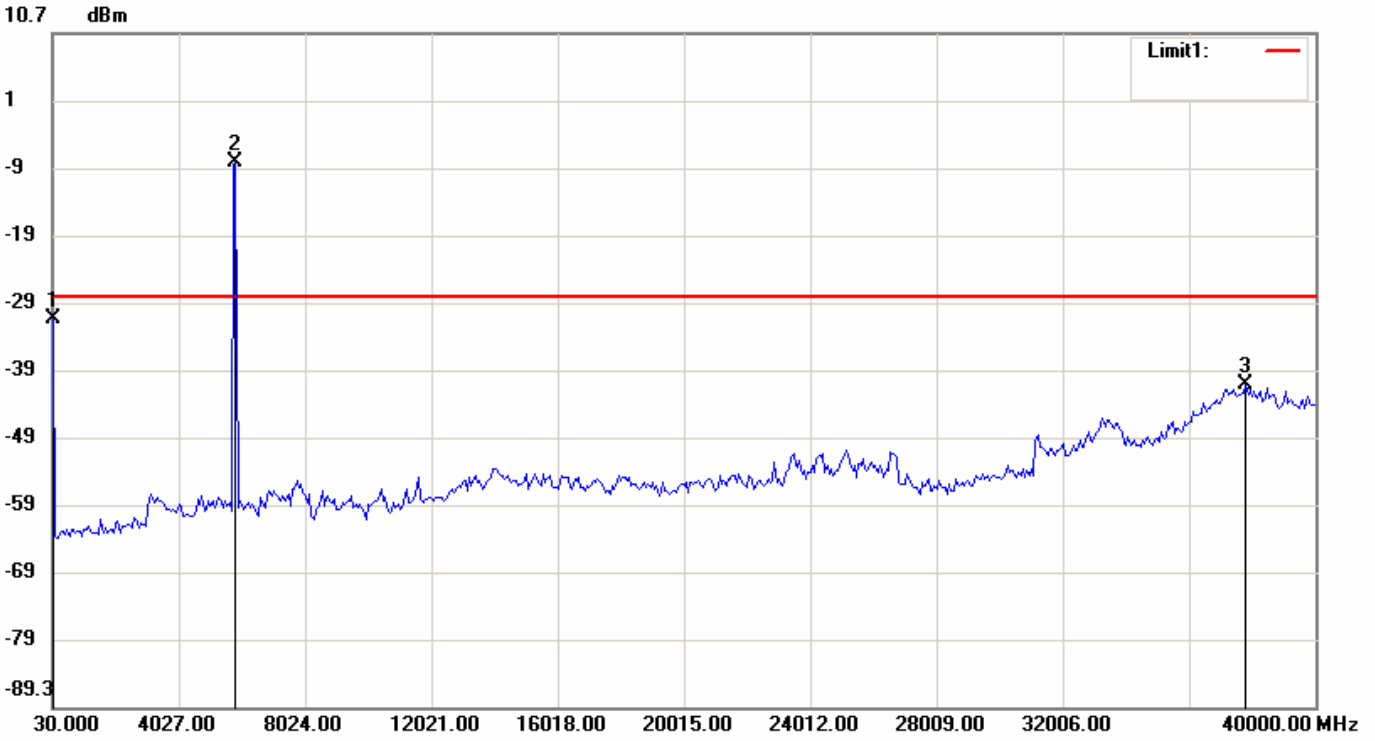
Test Mode:

Note: **FCC-802.11an_HT40 Channel 151-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-31.64
2	5759.03330	-9.05
3	38401.20000	-41.56

File: 11-06-MAS-176 Data: #129 **Date: 2011/8/16** **Temperature: 27 ℃**

Time: PM 03:44:19 **Humidity: 53 %**



Condition: **-28.53dBm** **RF Conducted**

EUT: **Cisco Tablet** **Sweep Time: 3819.92ms Att.: 20dB**

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

Test Mode:

Note: **FCC-802.11an_HT40 Channel 159-Conducted Spurious**

No.	Frequency(MHz)	Level(dBm)
1	30.0000	-31.62
2	5825.65000	-8.53
3	37801.65000	-41.48

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 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

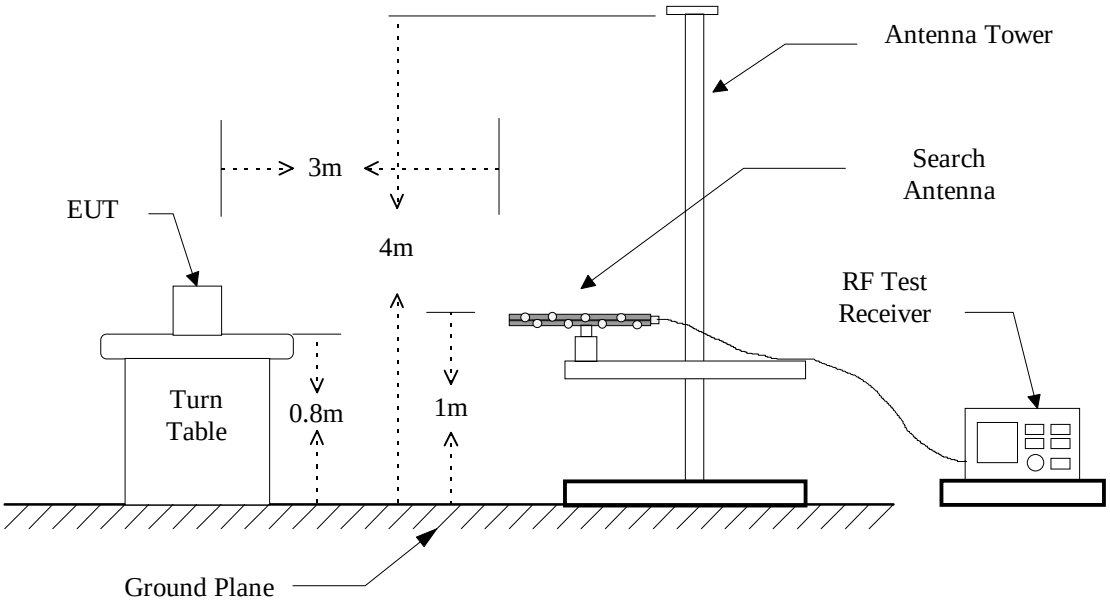
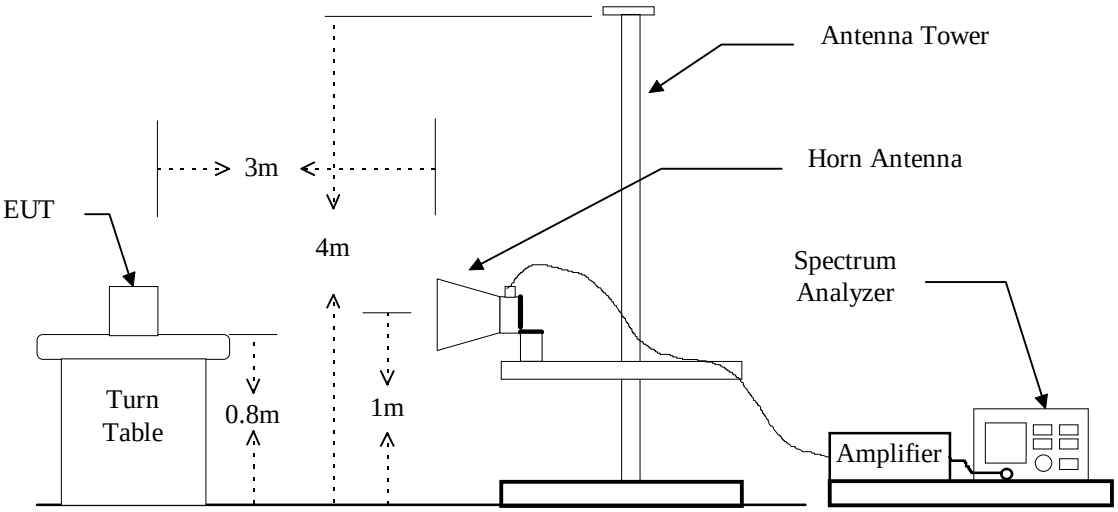


Figure 4 : Frequencies measured above 1 GHz configuration



10.3 Measuring Instrument

The following instrument are used for radiated emissions measurement :

Equipment	Manufacturer	Model No.	Next Cal. Due
EMI Test Receiver	R&S	ESIB7	07/25/2012
Spectrum Analyzer	Rohde & Schwarz	FSU46	11/25/2011
Horn Antenna	EMCO	3115	07/21/2012
BiLog Antenna	Schaffner	CBL 6112B	09/02/2011
Horn Antenna	EMCO	3116	07/21/2012
Preamplifier	Hewlett-Packard	8449B	10/10/2011

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: Aug. 11, 2011 Temperature: 28℃ Humidity: 55%

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	---	---	---	---	-2.3	---	---	74.0	54.0
7236.000	---	---	---	---	-0.3	---	---	74.0	54.0
14472.000	---	---	---	---	8.8	---	---	74.0	54.0
19296.000	---	---	---	---	-6.4	---	---	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	---	---	---	---	-2.3	---	---	74.0	54.0
7311.000	---	---	---	---	0.9	---	---	74.0	54.0
12185.000	---	---	---	---	4.2	---	---	74.0	54.0
19496.000	---	---	---	---	-6.4	---	---	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.
4924.000	---	---	---	---	-2.3	---	---	74.0	54.0
7386.000	---	---	---	---	0.9	---	---	74.0	54.0
12310.000	---	---	---	---	4.4	---	---	74.0	54.0
19696.000	---	---	---	---	-6.4	---	---	74.0	54.0
22158.000	---	---	---	---	-4.5	---	---	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.

10.4.1.1.2 IEEE 802.11g
Operation Mode: TX
Test Date: Aug. 11, 2011 Temperature: 28℃ Humidity: 55%

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	---	---	---	---	-2.3	---	---	74.0	54.0
7236.000	---	---	---	---	-0.3	---	---	74.0	54.0
9648.000	---	---	---	---	2.0	---	---	74.0	54.0
19296.000	---	---	---	---	-6.4	---	---	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	---	---	---	---	-2.3	---	---	74.0	54.0
7311.000	---	---	---	---	0.9	---	---	74.0	54.0
9748.000	---	---	---	---	2.3	---	---	74.0	54.0
19496.000	---	---	---	---	-6.4	---	---	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.
4924.000	---	---	---	---	-2.3	---	---	74.0	54.0
7386.000	---	---	---	---	0.9	---	---	74.0	54.0
9848.000	---	---	---	---	2.3	---	---	74.0	54.0
19696.000	---	---	---	---	-6.4	---	---	74.0	54.0
22158.000	---	---	---	---	-4.5	---	---	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.

10.4.1.1.3 IEEE 802.11gn, HT20
Operation Mode: TX
Test Date: Aug. 11, 2011 Temperature: 28℃ Humidity: 55%

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	---	---	---	---	-2.3	---	---	74.0	54.0
7236.000	---	---	---	---	-0.3	---	---	74.0	54.0
9648.000	---	---	---	---	2.0	---	---	74.0	54.0
19296.000	---	---	---	---	-6.4	---	---	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	---	---	---	---	-2.3	---	---	74.0	54.0
7311.000	---	---	---	---	0.9	---	---	74.0	54.0
9748.000	---	---	---	---	2.3	---	---	74.0	54.0
19496.000	---	---	---	---	-6.4	---	---	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.
4924.000	---	---	---	---	-2.3	---	---	74.0	54.0
7386.000	---	---	---	---	0.9	---	---	74.0	54.0
9848.000	---	---	---	---	2.3	---	---	74.0	54.0
19696.000	---	---	---	---	-6.4	---	---	74.0	54.0
22158.000	---	---	---	---	-4.5	---	---	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.

10.4.1.1.4 IEEE 802.11gn, HT40
Operation Mode: TX
Test Date: Aug. 11, 2011 Temperature: 28℃ Humidity: 55%

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	---	---	---	---	-2.3	---	---	74.0	54.0
7266.000	---	---	---	---	0.9	---	---	74.0	54.0
9688.000	---	---	---	---	2.0	---	---	74.0	54.0
19376.000	---	---	---	---	-6.4	---	---	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	---	---	---	---	-2.3	---	---	74.0	54.0
7311.000	---	---	---	---	0.9	---	---	74.0	54.0
9748.000	---	---	---	---	2.3	---	---	74.0	54.0
19496.000	---	---	---	---	-6.4	---	---	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	---	---	---	---	-2.3	---	---	74.0	54.0
7356.000	---	---	---	---	0.9	---	---	74.0	54.0
9808.000	---	---	---	---	2.3	---	---	74.0	54.0
19616.000	---	---	---	---	-6.4	---	---	74.0	54.0
22068.000	---	---	---	---	-4.5	---	---	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.

10.4.1.1.5 IEEE 802.11a
Operation Mode: TX
Test Date: Aug. 11, 2011 Temperature: 28℃ Humidity: 55%

a) Channel 149
Fundamental Frequency: 5745 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.
11490.000	55.4	43.6	58.8	43.8	4.39	63.2	48.2	74.0	54.0
17235.000	---	---	---	---	8.77	---	---	74.0	54.0

b) Channel 157
Fundamental Frequency: 5785 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.
11570.000	58.7	45.5	62.4	46.2	4.39	66.8	50.6	74.0	54.0
17355.000	---	---	---	---	9.42	---	---	74.0	54.0

c) Channel 165
Fundamental Frequency: 5825 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.
11650.000	58.5	45.9	63.1	46.3	4.40	67.5	50.7	74.0	54.0
17475.000	---	---	---	---	10.1	---	---	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.

10.4.1.1.6 IEEE 802.11a,HT20
Operation Mode: TX
Test Date: Aug. 11, 2011 Temperature: 28℃ Humidity: 55%

a) Channel 149
Fundamental Frequency: 5745 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.
11490.000	54.9	40.8	56.6	42.5	4.39	61.0	46.9	74.0	54.0
17235.000	---	---	---	---	8.77	---	---	74.0	54.0

b) Channel 157
Fundamental Frequency: 5785 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.
11570.000	57.1	44.1	62.2	45.6	4.39	66.6	50.0	74.0	54.0
17355.000	---	---	---	---	9.42	---	---	74.0	54.0

c) Channel 165
Fundamental Frequency: 5825 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.
11650.000	58.5	43.6	60.5	45.6	4.40	64.9	50.0	74.0	54.0
17475.000	---	---	---	---	10.06	---	---	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.

10.4.1.1.7 IEEE 802.11a,HT40
Operation Mode: TX
Test Date: Aug. 11, 2011 Temperature: 28℃ Humidity: 55%

a) Channel 151
Fundamental Frequency: 5755 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.
11510.000	51.8	39.6	53.6	42.3	4.40	58.0	46.7	74.0	54.0
17265.000	---	---	---	---	8.93	---	---	74.0	54.0

b) Channel 159
Fundamental Frequency: 5795 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.
11590.000	54.9	42.2	56.2	45.1	4.40	60.6	49.5	74.0	54.0
17385.000	---	---	---	---	9.58	---	---	74.0	54.0

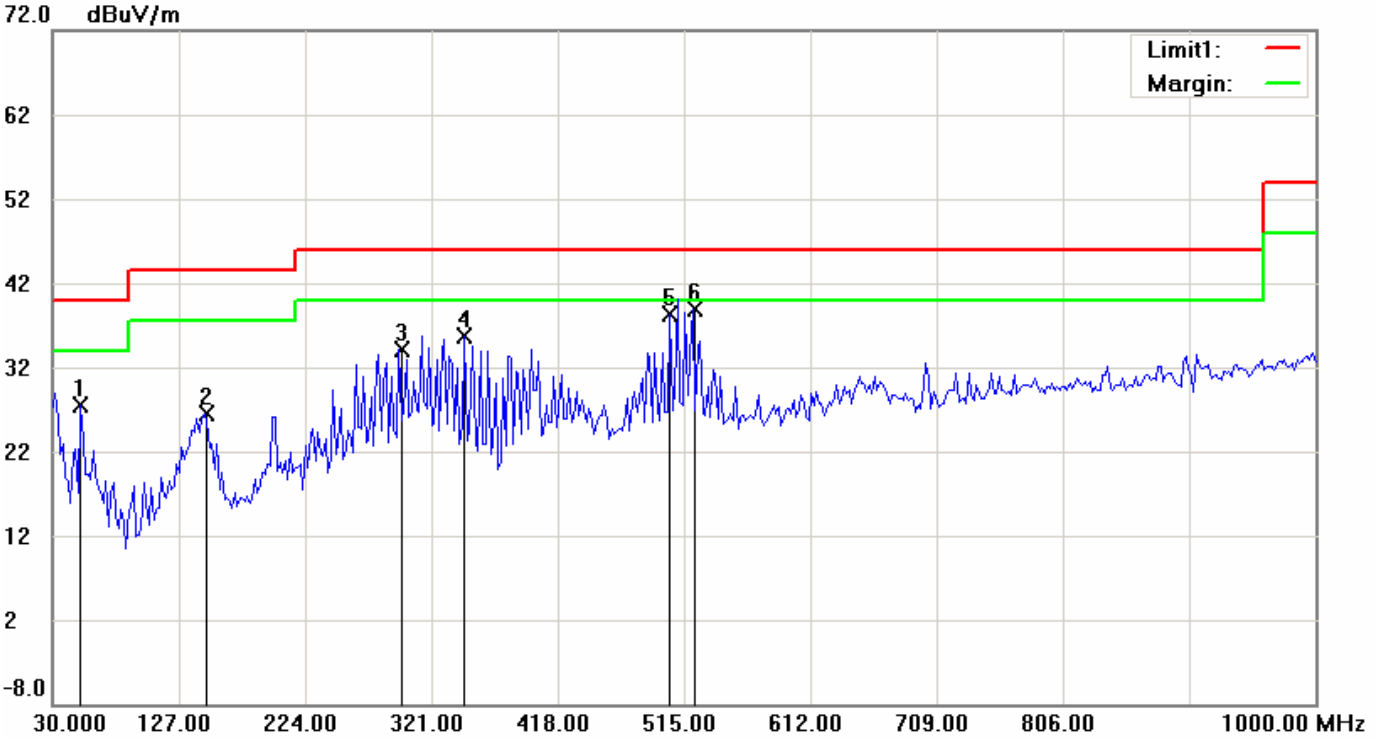
Note :
1. Item of margin shown in above table refer to average limit.
2. Remark "---" means that the emissions level is too low to be measured.

10.4.2 Spurious Emission

Operation Mode: Tx
a) Emission frequencies below 1 GHz

File: 11-06-MAS-176(5G) **Data:** #139 **Date:** 2011/8/11 **Temperature:** 28 ℃

Time: AM 11:56:35 **Humidity:** 55 %



Condition: FCC Part15 RE-Class B_30-1000MHz **Polarization:** Horizontal

EUT: **Distance:** 3m

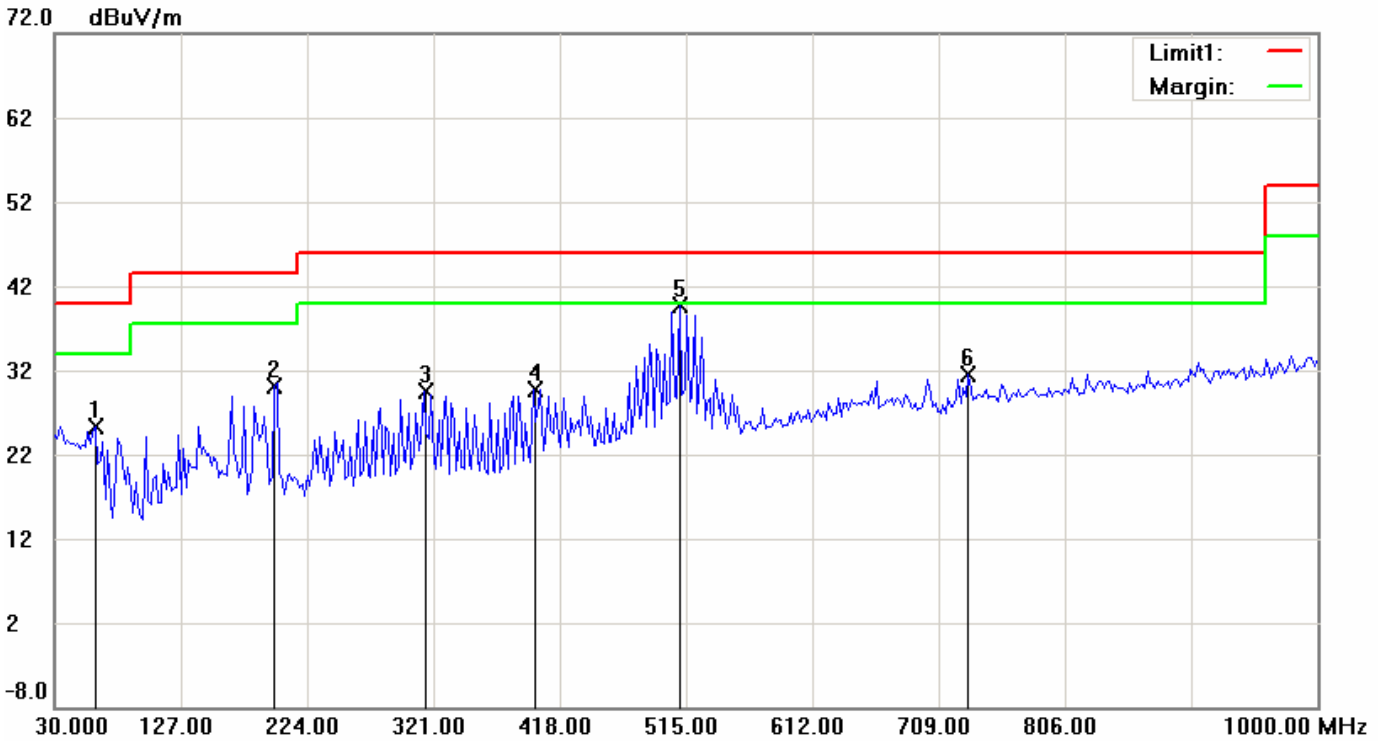
Model:

Test Mode:

No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV/m)		dB/m	(dBuV/m)	(dBuV/m)	(dB)
1	51.3828	17.62	peak	9.79	27.41	40.00	-12.59
2	146.6333	13.12	peak	13.30	26.42	43.50	-17.08
3	296.3126	16.58	peak	17.45	34.03	46.00	-11.97
4	346.8536	17.57	peak	18.16	35.73	46.00	-10.27
5	504.3086	14.21	peak	24.09	38.30	46.00	-7.70
6	521.8036	15.03	peak	23.82	38.85	46.00	-7.15

File: **11-06-MAS-176(5G)** **Data:** **#140** **Date:** **2011/8/11** **Temperature:** **28 ℃**

Time: **PM 12:00:39** **Humidity:** **55 %**



Condition: **FCC Part15 RE-Class B_30-1000MHz** **Polarization:** **Vertical**

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

Model:

Test Mode:

No.	Frequency	Reading	Detector	Corrected	Result	Limit	Margin
	(MHz)	(dBuV/m)		dB/m	(dBuV/m)	(dBuV/m)	(dB)
1	61.1022	17.00	peak	8.35	25.35	40.00	-14.65
2	199.1182	14.38	peak	15.64	30.02	43.50	-13.48
3	313.8076	11.82	peak	17.73	29.55	46.00	-16.45
4	397.3948	10.17	peak	19.58	29.75	46.00	-16.25
5	510.1403	15.70	peak	24.01	39.71	46.00	-6.29
6	731.7435	4.80	peak	26.68	31.48	46.00	-14.52

b) Emission frequencies above 1 GHz

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)
Radiated emission frequencies above 1 GHz to 25 GHz were too low to be measured.						

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: Aug. 11, 2011 Temperature: 28℃ Humidity: 55%

Operation Mode: TX

10.4.3.1 IEEE 802.11b

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.
L	2390.000	26.6	16.8	24.9	15.2	30.3	56.9	47.1	74	54
H	2483.500	28.0	16.2	26.1	14.8	30.3	58.3	46.5	74	54

10.4.3.2 IEEE 802.11g

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.
L	2390.000	26.3	17.1	25.7	16.2	30.3	56.6	47.4	74	54
H	2483.500	27.6	16.8	25.4	16.0	30.3	57.9	47.1	74	54

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

10.4.3.3 IEEE 802.11gn, HT20

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.
L	2390.000	25.3	15.8	26.5	15.8	30.3	56.8	46.1	74	54
H	2483.500	28.2	15.2	25.6	14.8	30.3	58.5	45.5	74	54

Test Date : Dec. 23, 2010 Temperature: 26℃ Humidity : 57%

10.4.3.4 IEEE 802.11gn, HT40

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.
L	2390.000	25.6	16.1	26.7	16.2	30.3	57.0	46.5	74	54
H	2483.500	28.7	15.2	26.3	15.1	30.3	59.0	45.4	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