



**FCC 47 CFR PART 15 SUBPART C AND ANSI C63.4:2003**  
**TEST REPORT**

**For**

**PCI-RF module**

**Model : MB92-EKI6340**

**Trade Name : ADVANTECH**

**Issued for**

**Advantech Co., Ltd.**

**No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District,  
Taipei 114, Taiwan, R.O.C.**

**Issued by**

**Compliance Certification Services Inc.**

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**Issued Date: May 07, 2012**



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## Revision History

<b>Rev.</b>	<b>Issue Date</b>	<b>Revisions</b>	<b>Effect Page</b>	<b>Revised By</b>
00	04/19/2012	Initial Issue	All Page 150	Winnie Chen
01	05/07/2012	Revised Maximum Permissible Exposure.	Page 144	Winnie Chen

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## 1. TEST REPORT CERTIFICATION

**Applicant** : Advantech Co., Ltd.  
**Address** : No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.  
**Equipment Under Test** : PCI-RF module  
**Model** : MB92-EKI6340  
**Trade Name** : ADVANTECH  
**Tested Date** : March 15 ~ April 18, 2012

APPLICABLE STANDARD	
Standard	Test Result
FCC Part 15 Subpart C AND ANSI C63.4:2003	PASS

WE HEREBY CERTIFY THAT: The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

*Approved by:*

Rex Liao  
Deputy Section Manager

*Reviewed by:*

Sb Lu  
Sr. Engineer



## 2. EUT DESCRIPTION

<b>Product Name</b>	PCI-RF module
<b>Model Number</b>	MB92-EKI6340
<b>Identify Number</b>	T120315033
<b>Received Date</b>	March 15, 2012
<b>Frequency Range</b>	IEEE 802.11a, IEEE 802.11n HT20 : 5745MHz ~ 5825MHz IEEE 802.11n HT40 : 5755MHz ~ 5815MHz IEEE 802.11b/g, 802.11n HT20 : 2412MHz~2462MHz IEEE 802.11n HT40 : 2422MHz~2452MHz
<b>Transmit Power</b>	IEEE 802.11a : 21.60dBm (0.1445W) IEEE 802.11n HT20 : 23.66dBm (0.2321W) IEEE 802.11n HT40 : 24.24dBm (0.2658W) IEEE 802.11b : 18.61dBm (0.0726W) IEEE 802.11g : 23.20dBm (0.2089W) IEEE 802.11n HT20 : 26.33dBm (0.4291W) IEEE 802.11n HT40 : 25.72dBm (0.3733W)
<b>Channel Spacing</b>	IEEE 802.11a, 802.11n HT20 : 20MHz IEEE 802.11n HT40 : 60MHz IEEE 802.11b/g, 802.11n HT20/HT40 : 5MHz
<b>Channel Number</b>	IEEE 802.11a, 802.11n HT20 : 5 Channels IEEE 802.11n HT40 : 2 Channels IEEE 802.11b/g, 802.11n HT20 : 11 Channels IEEE 802.11n HT40 : 7 Channels
<b>Transmit Data Rate</b>	IEEE 802.11a : 54, 48, 36, 24, 18, 12, 9, 6 Mbps IEEE 802.11b : 11, 5.5, 2, 1 Mbps IEEE 802.11g : 54, 48, 36, 24, 18, 12, 9, 6 Mbps IEEE 802.11n HT20 : 144.444, 130, 117, 115.556, 104, 86.667, 78, 72.2, 65, 58.5, 57.778, 52, 43.333, 39, 28.889, 26, 21.7, 19.5, 14.444, 13, 7.2, 6.5 Mbps IEEE 802.11n HT40 : 300, 270, 243, 240, 216, 180, 162, 150, 135, 121.5, 120, 108, 90, 81, 60, 54, 45, 40.5, 30, 27, 15, 13.5 Mbps
<b>Type of Modulation</b>	IEEE 802.11a : OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11b : DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g : OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20/40 : OFDM (64QAM, 16QAM, QPSK, BPSK)



Power Rating	3.3Vdc
Test Voltage	120Vac, 60Hz

**Antenna List :**

No.	Model	Type	2.4G Gain (dBi)	5G Gain (dBi)
1	AN2450-57B01RS	Dipole	2	1
2	SAA04-050280		8	
3	SAA04-22008A		4	7

**Antenna Operation Frequency :**

No.	Model	Type	2400~2483.5 (MHz)	5150~5250 (MHz)	5725~5850 (MHz)
1	AN2450-57B01RS	Dipole	O	O	O
2	SAA04-050280		O	X	X
3	SAA04-22008A		O	X	O

**Remark :**

1. The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.
2. For more details, please refer to the User's manual of the EUT.
3. This submittal(s) (test report) is intended for FCC ID: M82-EKI6340 filing to comply with Section 15.207, 15.209 and 15.247 of the FCC Part 15, Subpart C Rules.



### 3. DESCRIPTION OF TEST MODES

The EUT is an 802.11n MIMO transceiver in PCI-RF module form factor. It has two transmitter chains and two receive chains (2 x 2 configurations). IEEE 802.11a, IEEE 802.11b/g mode, Chain 0 transmitter.

#### Conducted Emission / Radiated Emission Test (Below 1 GHz)

1. The following test modes were scanned during the preliminary test:

No.	Pre-Test Mode
1	TX Mode

2. After the preliminary scan, the following test mode was found to produce the highest emission level.

Final Test Mode		
Emission	Radiated Emission	TX Mode
	Conducted Emission	TX Mode

*Remark : Then, the above highest emission mode of the configuration of the EUT and cable was chosen for all final test items.*

#### Conducted / Radiated Emission Test (Above 1 GHz)

##### IEEE 802.11a, 802.11n HT20 mode

The EUT had been tested under operating condition.

There are three channels have been tested as following :

Channel	Frequency (MHz)
Low	5745
Middle	5785
High	5825

IEEE 802.11a mode : 6Mbps data rate (worst case) were chosen for full testing.

IEEE 802.11n HT20 mode : 13Mbps data rate (worst case) were chosen for full testing.

##### IEEE 802.11n HT40 mode

The EUT had been tested under operating condition.

There are two channels have been tested as following :

Channel	Frequency (MHz)
Low	5755
High	5815

IEEE 802.11n HT40 mode : 27Mbps data rate (worst case) were chosen for full testing.



## IEEE 802.11b, 802.11g, 802.11n HT20 mode

The EUT had been tested under operating condition.

There are three channels have been tested as following :

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode : 1Mbps data rate (worst case) were chosen for full testing.

IEEE 802.11g mode : 6Mbps data rate (worst case) were chosen for full testing.

IEEE 802.11n HT20 mode : 13Mbps data rate (worst case) were chosen for full testing.

## IEEE 802.11n HT40 mode

The EUT had been tested under operating condition.

There are three channels have been tested as following :

Channel	Frequency (MHz)
Low	2422
Middle	2437
High	2452

IEEE 802.11n HT40 mode : 27Mbps data rate (worst case) were chosen for full testing.



## 4. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4: 2003 and FCC CFR 47, 15.207, 15.209 and 15.247.

## 5. FACILITIES AND ACCREDITATION

### 5.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

NO. 989-1 Wen Shan Rd., Shang Shan Village,  
Qionglin Shiang Hsinchu County 30741, Taiwan, R.O.C

The sites are constructed in conformance with the requirements of ANSI C63.4:2003 and CISPR 22. All receiving equipment conforms to CISPR 16-1-1, CISPR 16-1-2, CISPR 16-1-3, CISPR 16-1-4, CISPR 16-1-5.

### 5.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

**Taiwan**      TAF

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

<b>Canada</b>	INDUSTRY CANADA
<b>Japan</b>	VCCI
<b>Taiwan</b>	BSMI
<b>USA</b>	FCC MRA

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.ccsrf.com>



## 5.3 MEASUREMENT UNCERTAINTY

The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4-2.

PARAMETER	UNCERTAINTY
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 30 to 1000 MHz	+/- 3.5189
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 1 to 18GHz	+/- 2.5164
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 18 to 26 GHz	+/- 2.4967
Semi Anechoic Chamber (966 Chamber_B) / Radiated Emission, 26 to 40 GHz	+/- 2.7655
Conducted Emission (Mains Terminals), 9kHz to 30MHz	+/- 1.5923

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Consistent with industry standard (e.g. CISPR 22: 2006, clause 11, Measurement Uncertainty) determining compliance with the limits shall be base on the results of the compliance measurement. Consequently the measure emissions being less than the maximum allowed emission result in this be a compliant test or passing test.

The acceptable measurement uncertainty value without requiring revision of the compliance statement is base on conducted and radiated emissions being less than  $U_{CISPR}$  which is 3.6dB and 5.2dB respectively. CCS values (called  $U_{Lab}$  in CISPR 16-4-2) is less than  $U_{CISPR}$  as shown in the table above. Therefore, MU need not be considered for compliance.



## 6. SETUP OF EQUIPMENT UNDER TEST

### SUPPORT EQUIPMENT

No.	Product	Manufacturer	Model No.	Serial No.	FCC ID
1	Notebook PC	IBM (Lenovo)	ThinkPad T61 7663-AS6	L3F3864	DoC
2	Notebook PC	HP	ProBook 4421s	CNF03242PM	DoC

### SETUP DIAGRAM FOR TESTS

EUT & peripherals setup diagram is shown in appendix setup photos.

### EUT OPERATING CONDITION

1. Set up all computers like the setup diagram.
2. The “Atheros Radio Test <ART> Devilib Revision 0.9 BUILD #27 ART\_11n” software was used for testing.

The EUT driver software installed in the host support equipment during testing was Atheros AR5002, ANWI Diagnostic Kernel Drive.

- ⇒ Tx Antenna: ANT\_A, [ TX99 ]
- ⇒ Tx Data Rate: 1Mbps long (IEEE 802.11b mode, chain 0 TX)  
6Mbps (IEEE 802.11g mode, chain 0 TX)  
13Mbps (IEEE 802.11n HT20 mode, chain 0/1TX)  
27Mbps (IEEE 802.11n HT40 mode, chain 0/1TX)  
6Mbps (IEEE 802.11a mode, chain 0 TX)  
13Mbps (IEEE 802.11an HT20 mode, chain 0/1TX)  
27Mbps (IEEE 802.11an HT40 mode, chain 0/1TX)

- ⇒ Power control mode

Output Power: IEEE 802.11b Channel Low (2412MHz) = 13.5  
IEEE 802.11b Channel Middle (2437MHz) = 16.5  
IEEE 802.11b Channel High (2462MHz) = 12

Output Power: IEEE 802.11g Channel Low (2412MHz) = 10  
IEEE 802.11g Channel Middle (2437MHz) = 13.5  
IEEE 802.11g Channel High (2462MHz) = 7

Output Power: IEEE 802.11n HT20 Channel Low (2412MHz) = 9.5  
IEEE 802.11n HT20 Channel Middle (2437MHz) = 13.5  
IEEE 802.11n HT20 Channel High (2462MHz) = 6.5



Output Power: IEEE 802.11n HT40 Channel Low (2422MHz) = 5  
IEEE 802.11n HT40 Channel Middle (2437MHz) = 12  
IEEE 802.11n HT40 Channel High (2452MHz) = 4

Output Power: IEEE 802.11a Channel Low (5745MHz) = 9  
IEEE 802.11a Channel Middle (5785MHz) = 12  
IEEE 802.11a Channel High (5825MHz) = 10.5

Output Power: IEEE 802.11an HT20 Channel Low (5745MHz) = 10  
IEEE 802.11an HT20 Channel Middle (5785MHz) = 10  
IEEE 802.11an HT20 Channel High (5825MHz) = 9.5

Output Power: IEEE 802.11an HT40 Channel Low (5755MHz) = 11  
IEEE 802.11an HT40 Channel High (5815MHz) = 10

3. All of the functions are under run.
4. Start test.



## 7. FCC PART 15.247 REQUIREMENTS

### 7.1 6dB BANDWIDTH

#### LIMITS

§ 15.247(a) (2) For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

#### TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4407B	US41443108	08/09/2012

*Remark:* Each piece of equipment is scheduled for calibration once a year.

#### TEST SETUP



#### TEST PROCEDURE

The transmitter output was connected to a spectrum analyzer. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 KHz RBW and 300 KHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

**TEST RESULTS****IEEE 802.11a Mode**

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	5745	16.50	500	PASS
Middle	5785	16.50	500	PASS
High	5825	16.50	500	PASS

**IEEE 802.11n HT20 Mode (Two TX)**

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	5745	17.83	17.92	500	PASS
Middle	5785	17.75	17.92	500	PASS
High	5825	17.75	17.92	500	PASS

**IEEE 802.11n HT40 Mode (Two TX)**

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	5755	36.20	36.50	500	PASS
High	5815	36.30	36.50	500	PASS

**IEEE 802.11b Mode**

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	12.17	500	PASS
Middle	2437	12.17	500	PASS
High	2462	12.17	500	PASS

**IEEE 802.11g Mode**

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (kHz)	Pass / Fail
Low	2412	16.50	500	PASS
Middle	2437	16.50	500	PASS
High	2462	16.50	500	PASS

**IEEE 802.11n HT20 Mode (Two TX)**

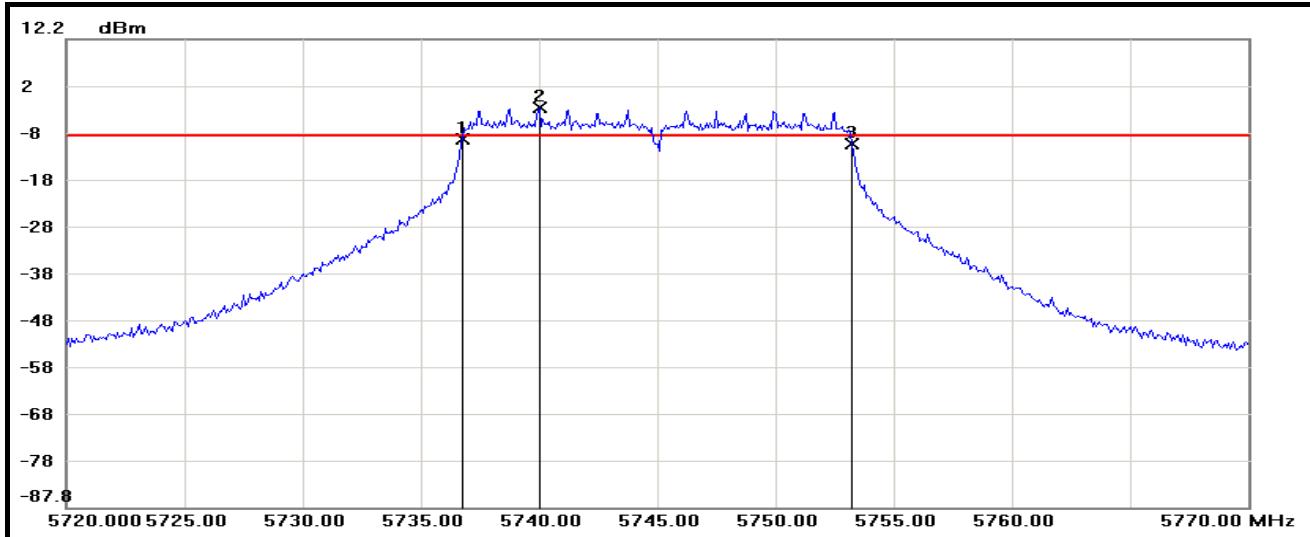
Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2412	17.83	17.83	500	PASS
Middle	2437	17.83	17.83	500	PASS
High	2462	17.83	17.92	500	PASS

**IEEE 802.11n HT40 Mode (Two TX)**

Channel	Channel Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1		
Low	2422	36.00	36.00	500	PASS
Middle	2437	36.17	36.42	500	PASS
High	2452	36.17	36.25	500	PASS

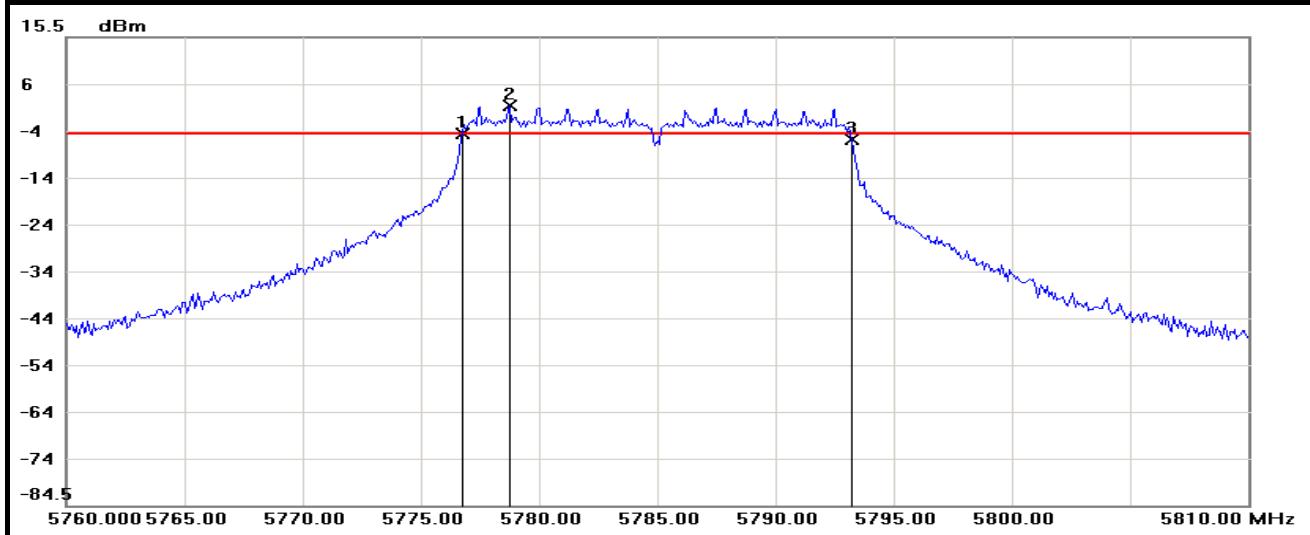


## IEEE 802.11a Mode / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5736.7500	-9.14	-8.48	-0.66
2	5740.0000	-2.48	-8.48	6.00
3	5753.2500	-10.22	-8.48	-1.74

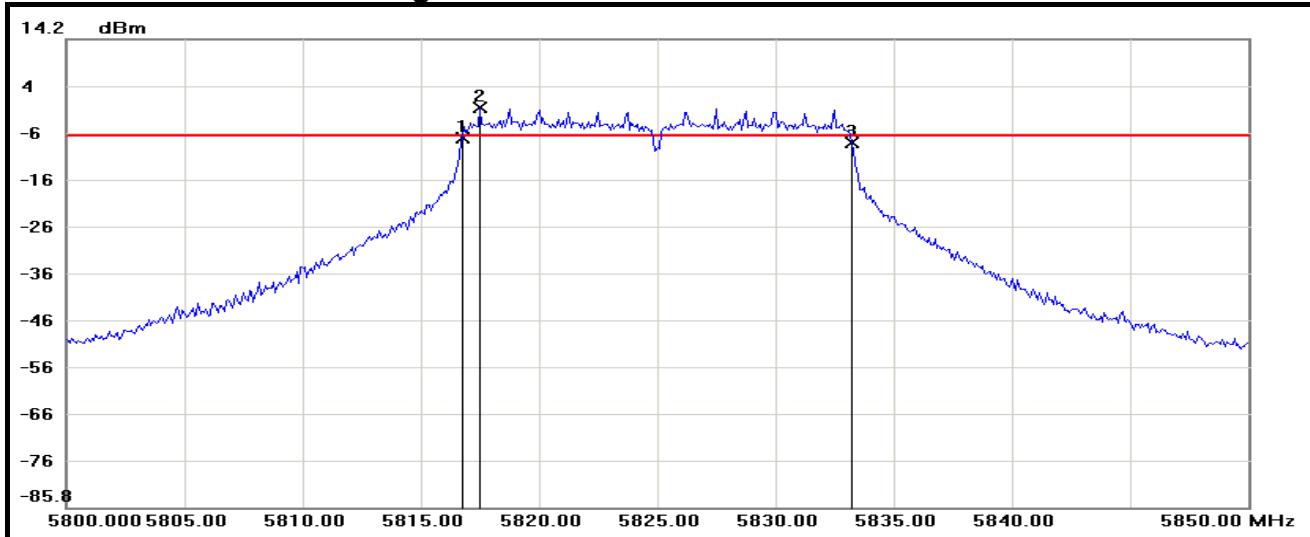
## IEEE 802.11a Mode / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5776.7500	-5.10	-5.00	-0.10
2	5778.7500	1.00	-5.00	6.00
3	5793.2500	-6.41	-5.00	-1.41



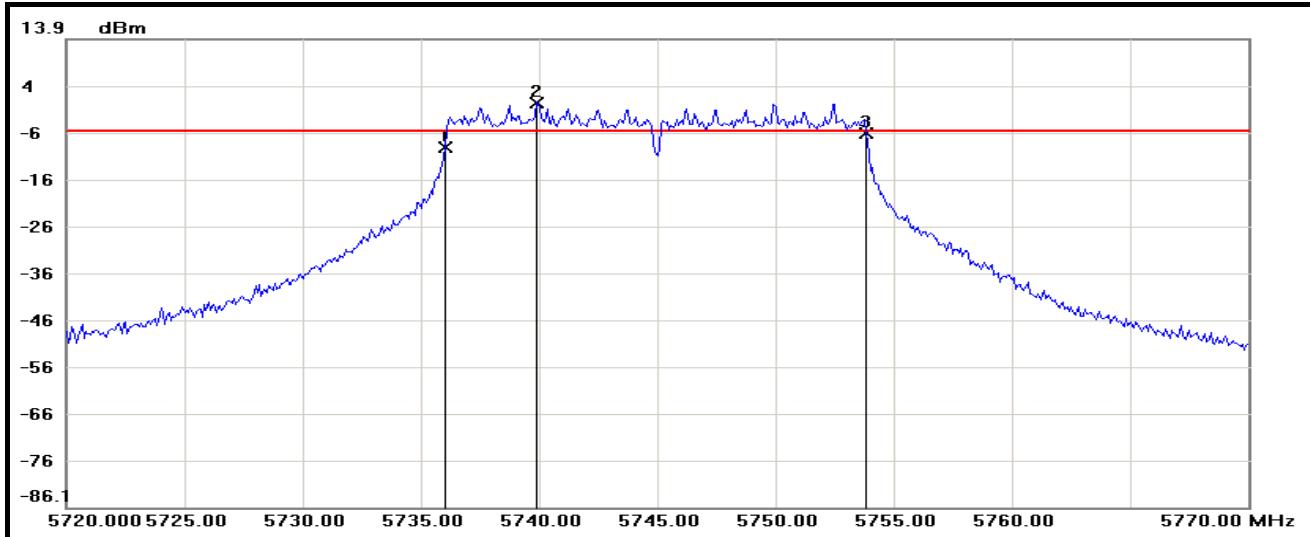
## IEEE 802.11a Mode / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5816.7500	-7.01	-6.41	-0.60
2	5817.5000	-0.41	-6.41	6.00
3	5833.2500	-7.96	-6.41	-1.55

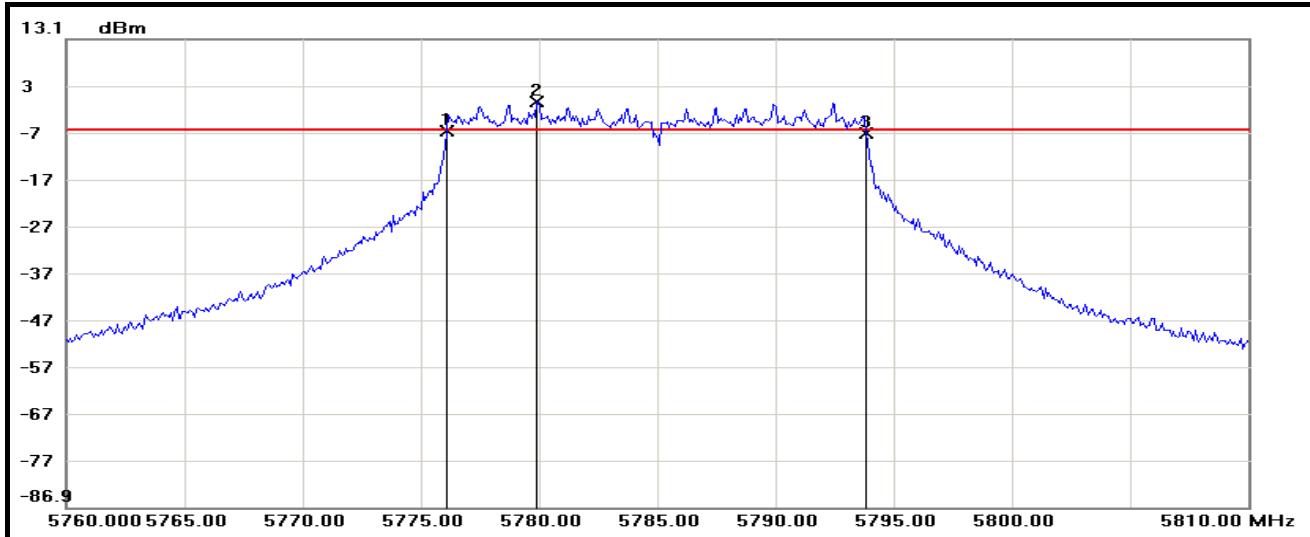


## IEEE 802.11n HT20 Mode / Chain 0 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5736.0000	-9.20	-5.61	-3.59
2	5739.9167	0.39	-5.61	6.00
3	5753.8333	-6.31	-5.61	-0.70

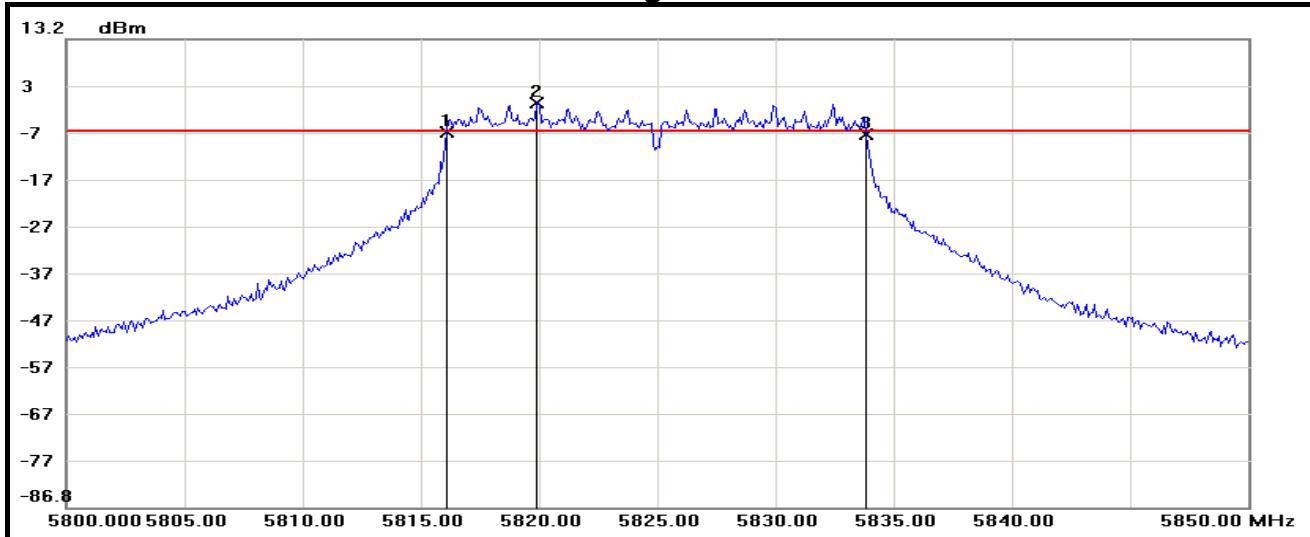
## IEEE 802.11n HT20 Mode / Chain 0 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5776.0833	-6.61	-6.34	-0.27
2	5779.9167	-0.34	-6.34	6.00
3	5793.8333	-6.98	-6.34	-0.64



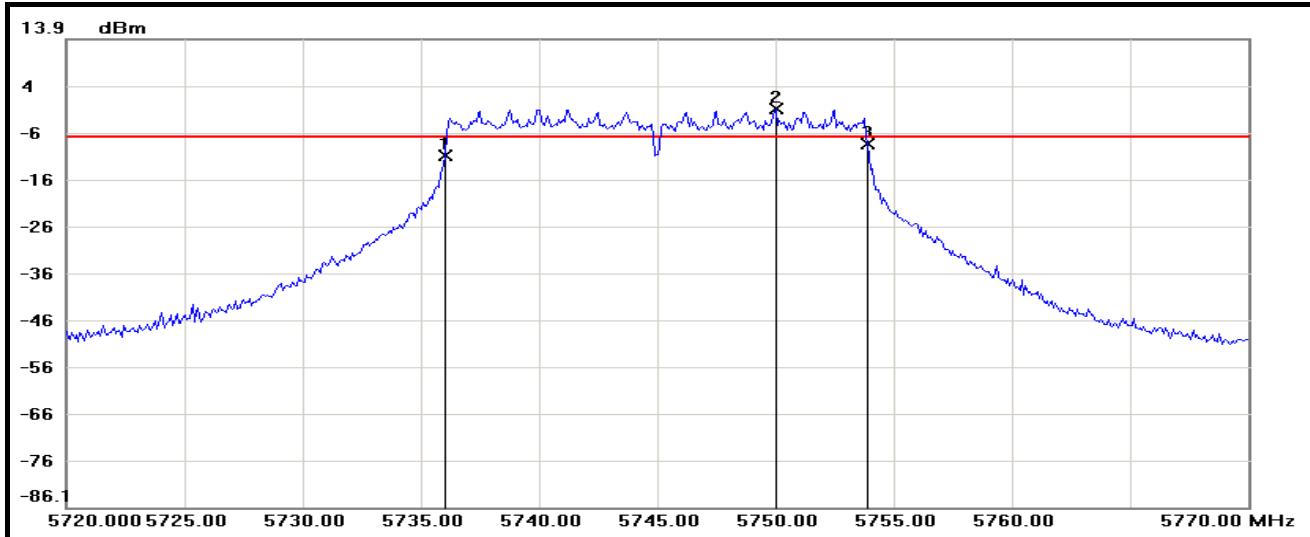
## IEEE 802.11n HT20 Mode / Chain 0 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5816.0833	-6.63	-6.56	-0.07
2	5819.9167	-0.56	-6.56	6.00
3	5833.8333	-7.11	-6.56	-0.55

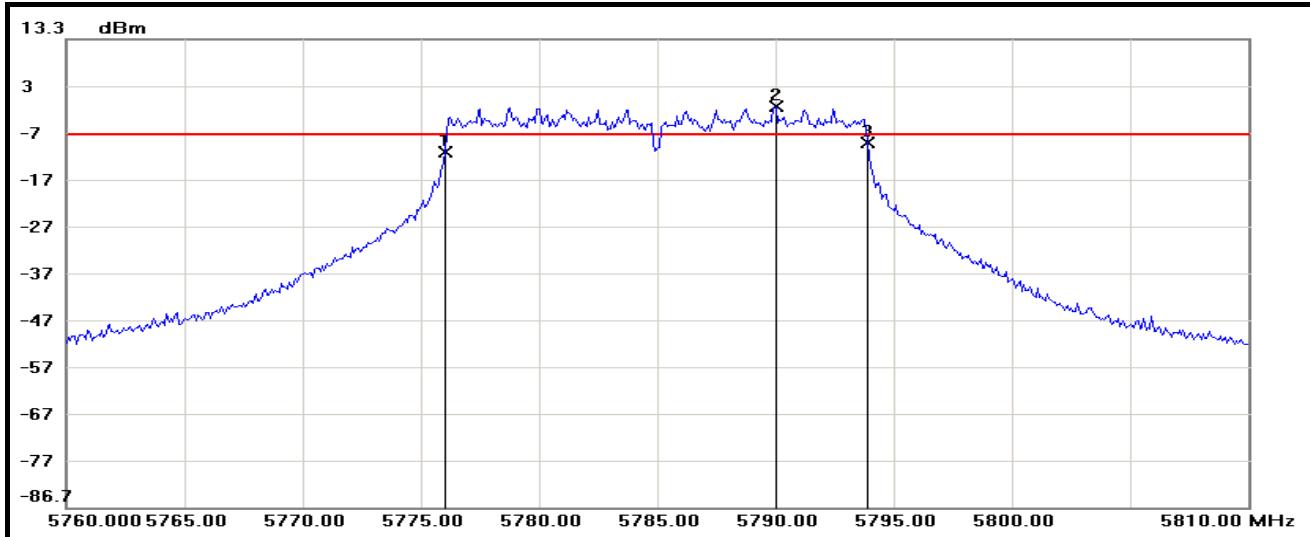


## IEEE 802.11n HT20 Mode / Chain 1 / CH Low

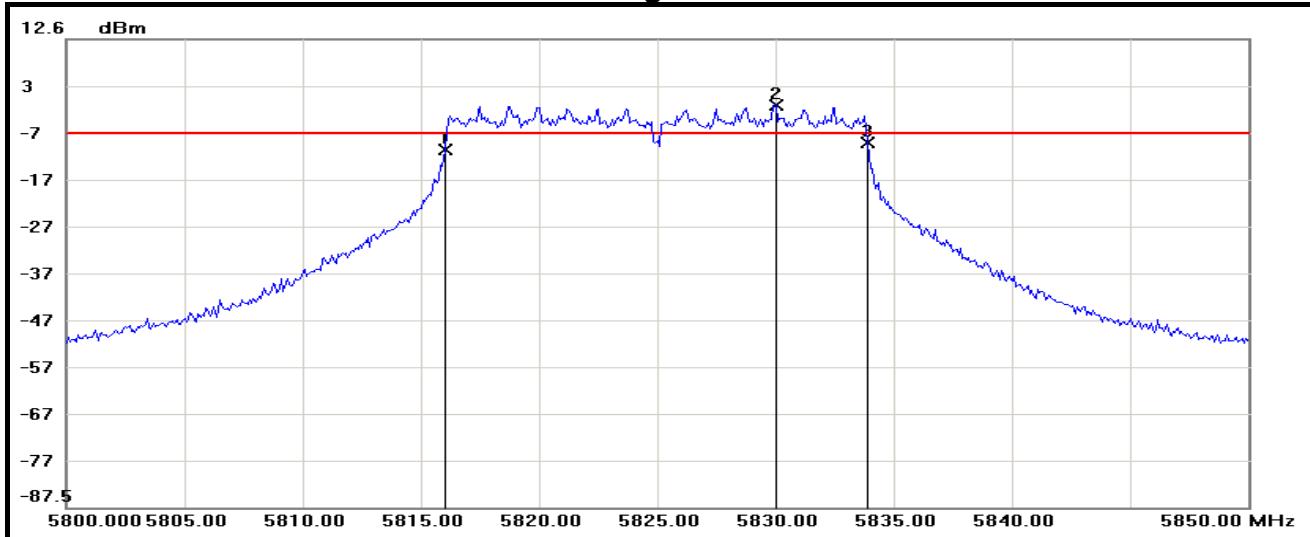


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5736.0000	-10.94	-7.05	-3.89
2	5750.0000	-1.05	-7.05	6.00
3	5753.9167	-8.52	-7.05	-1.47

## IEEE 802.11n HT20 Mode / Chain 1 / CH Middle



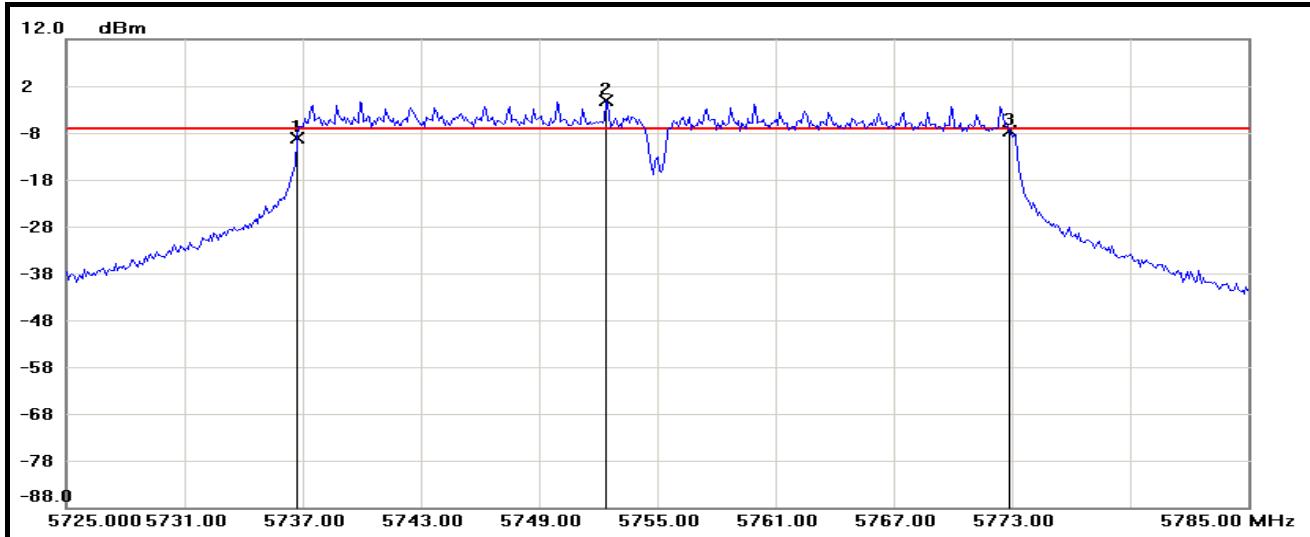
No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5776.0000	-10.96	-6.97	-3.99
2	5790.0000	-0.97	-6.97	6.00
3	5793.9167	-8.76	-6.97	-1.79

**IEEE 802.11n HT20 Mode / Chain 1 / CH High**

No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5816.0000	-10.97	-7.45	-3.52
2	5830.0000	-1.45	-7.45	6.00
3	5833.9167	-9.49	-7.45	-2.04

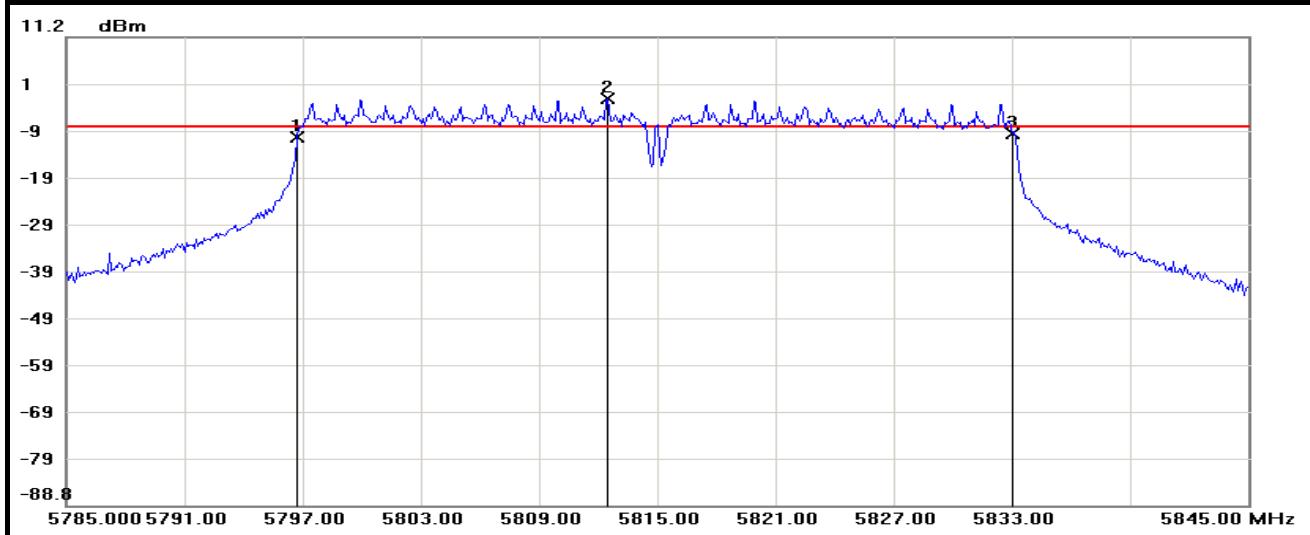


## IEEE 802.11n HT40 Mode / Chain 0 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5736.7000	-9.16	-7.19	-1.97
2	5752.4000	-1.19	-7.19	6.00
3	5772.9000	-7.63	-7.19	-0.44

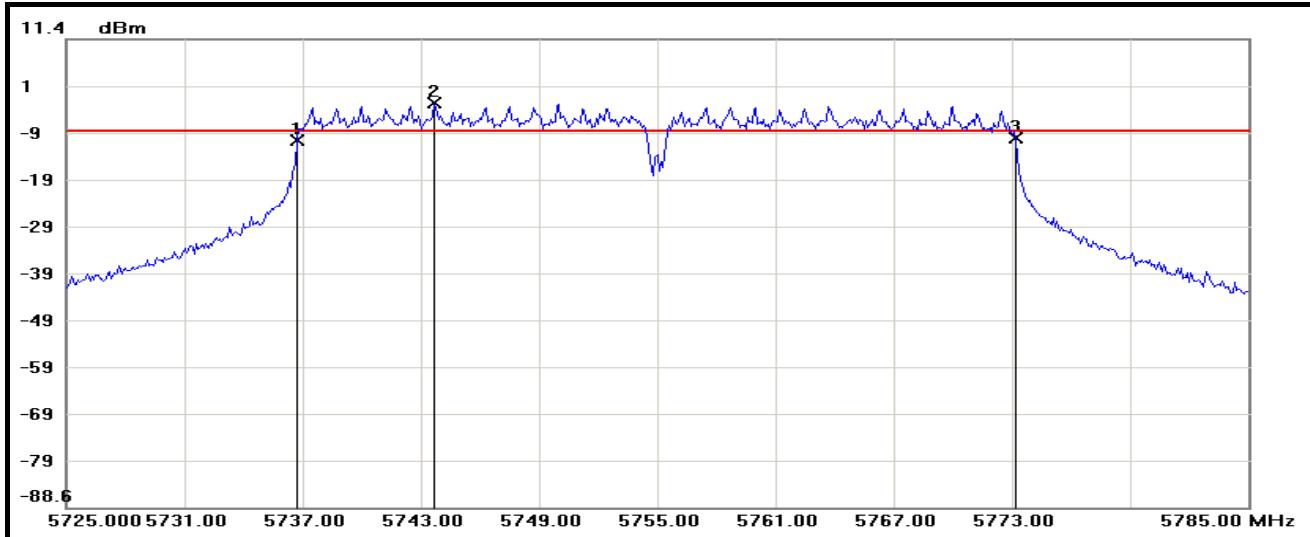
## IEEE 802.11n HT40 Mode / Chain 0 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5796.7000	-10.13	-8.06	-2.07
2	5812.5000	-2.06	-8.06	6.00
3	5833.0000	-9.40	-8.06	-1.34

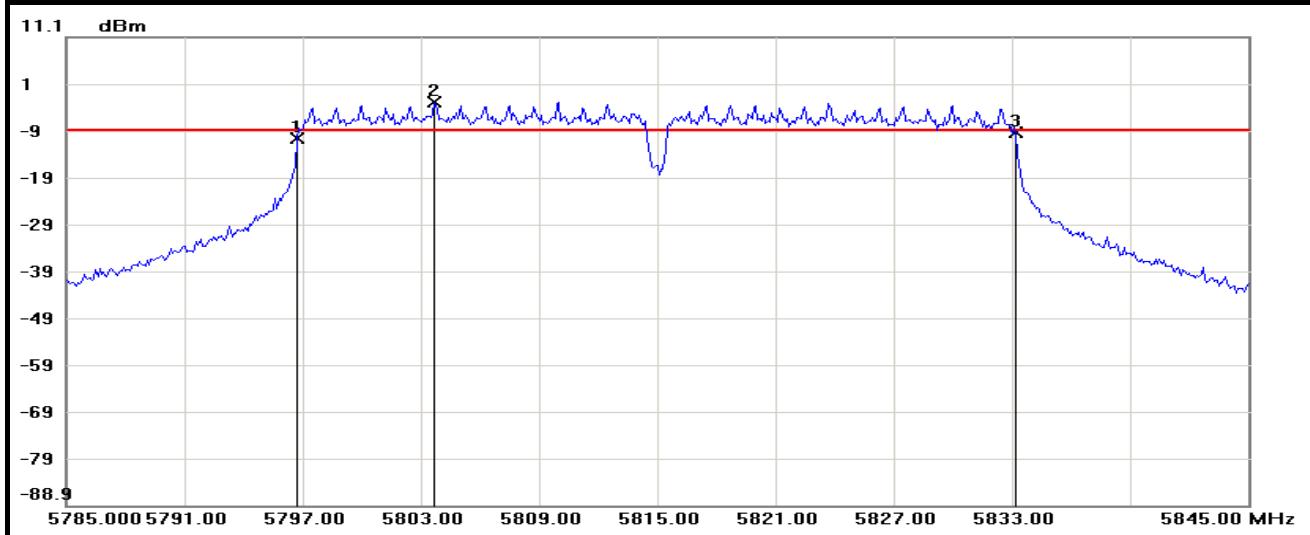


## IEEE 802.11n HT40 Mode / Chain 1 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5736.7000	-10.22	-8.27	-1.95
2	5743.7000	-2.27	-8.27	6.00
3	5773.2000	-9.67	-8.27	-1.40

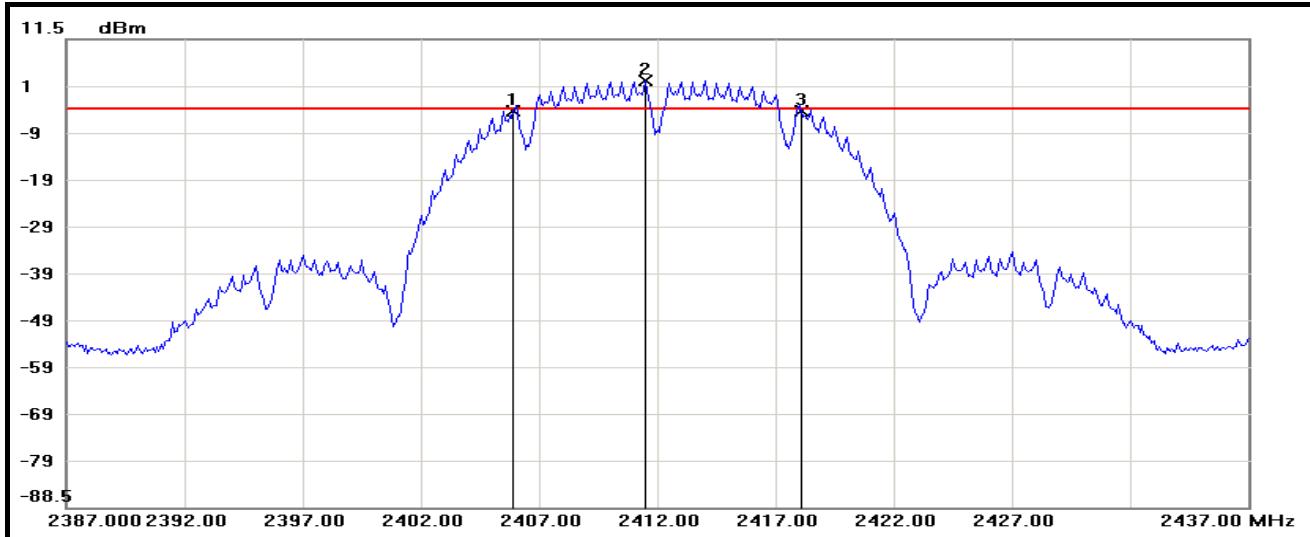
## IEEE 802.11n HT40 Mode / Chain 1 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5796.7000	-10.44	-8.71	-1.73
2	5803.7000	-2.71	-8.71	6.00
3	5833.2000	-9.35	-8.71	-0.64

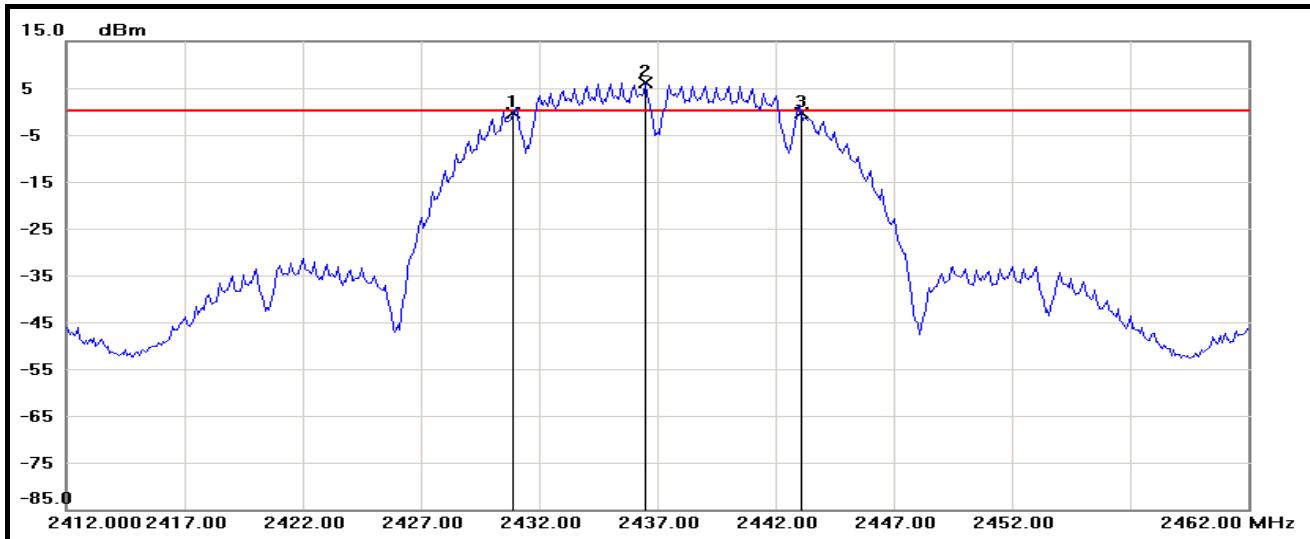


## IEEE 802.11b Mode / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2405.9167	-4.01	-3.37	-0.64
2	2411.5000	2.63	-3.37	6.00
3	2418.0833	-3.98	-3.37	-0.61

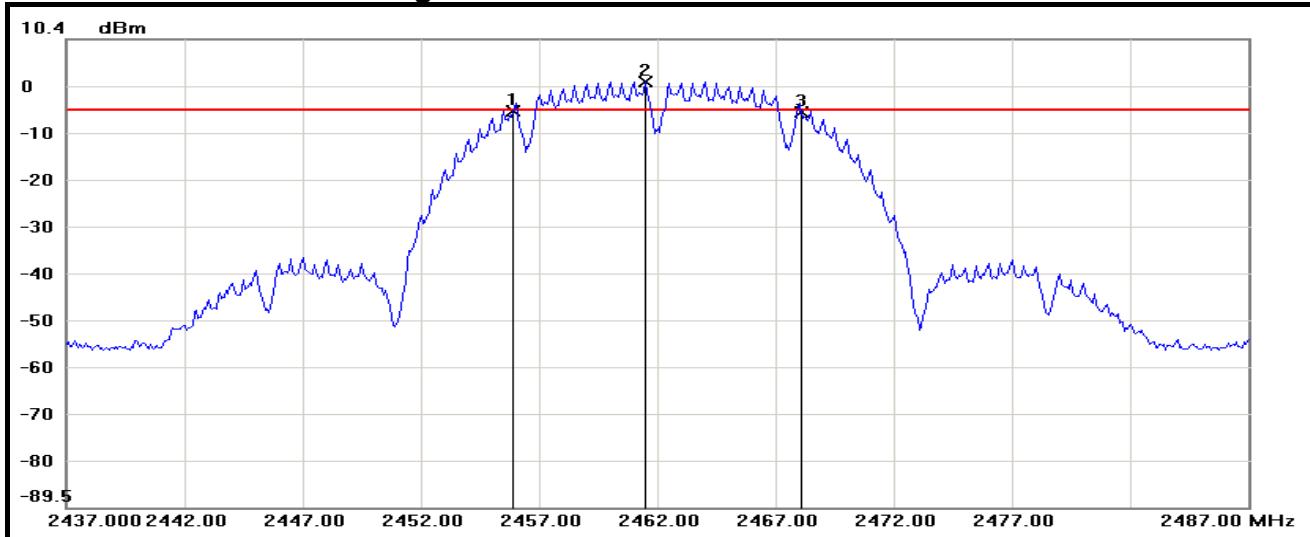
## IEEE 802.11b Mode / CH Middle



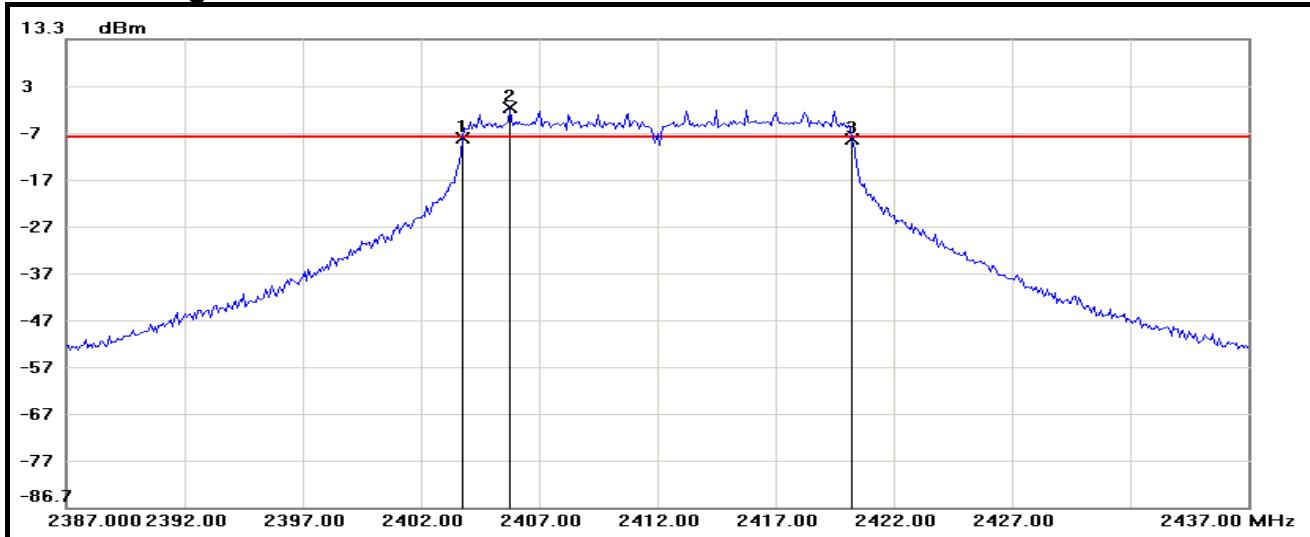
No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2430.9167	-0.47	0.10	-0.57
2	2436.5000	6.10	0.10	6.00
3	2443.0833	-0.42	0.10	-0.52



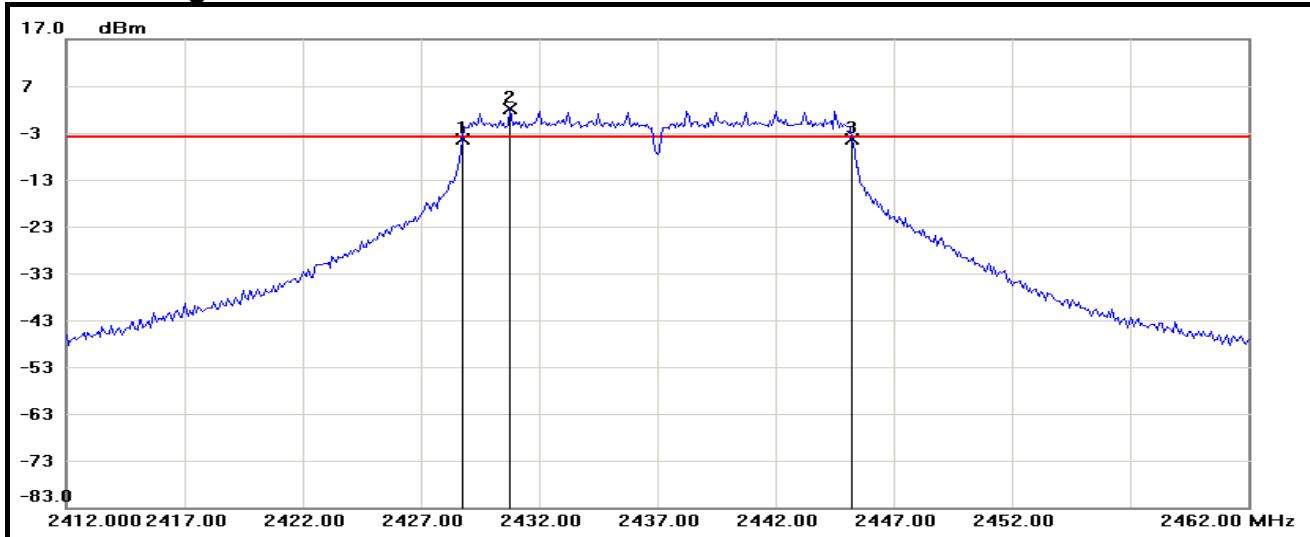
## IEEE 802.11b Mode / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2455.9167	-4.92	-4.67	-0.25
2	2461.5000	1.33	-4.67	6.00
3	2468.0833	-5.28	-4.67	-0.61

**IEEE 802.11g Mode / CH Low**

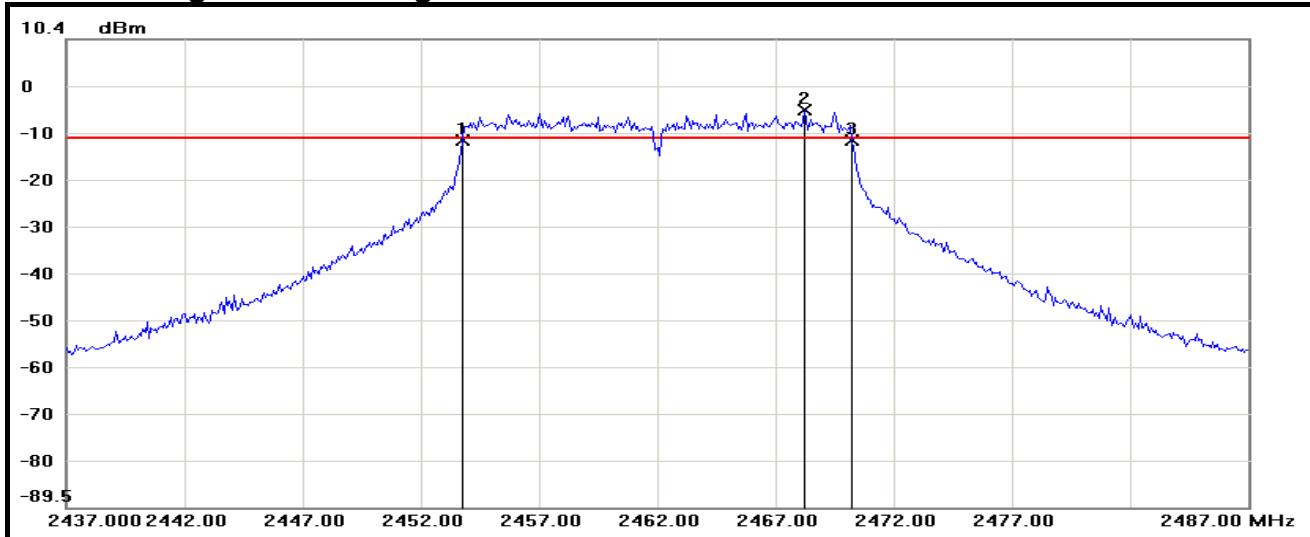
No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2403.7500	-7.83	-7.46	-0.37
2	2405.7500	-1.46	-7.46	6.00
3	2420.2500	-8.16	-7.46	-0.70

**IEEE 802.11g Mode / CH Middle**

No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2428.7500	-4.32	-3.90	-0.42
2	2430.7500	2.10	-3.90	6.00
3	2445.2500	-4.42	-3.90	-0.52



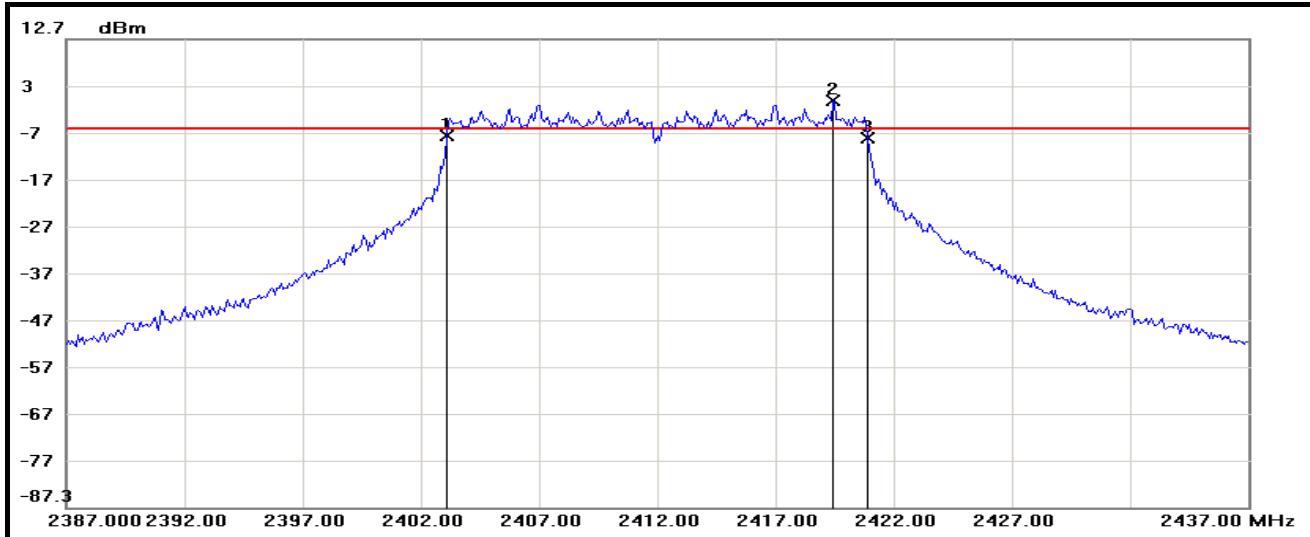
## IEEE 802.11g Mode / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2453.7500	-11.15	-10.79	-0.36
2	2468.2500	-4.79	-10.79	6.00
3	2470.2500	-11.14	-10.79	-0.35

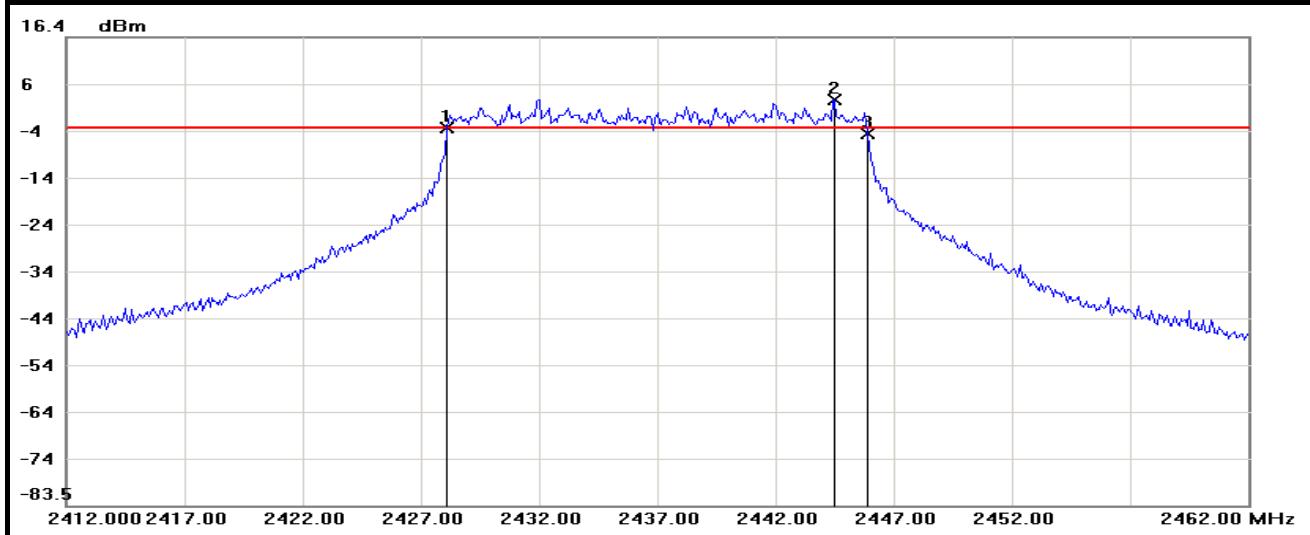


## IEEE 802.11n HT20 Mode / Chain 0 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2403.0833	-8.07	-6.45	-1.62
2	2419.4167	-0.45	-6.45	6.00
3	2420.9167	-8.38	-6.45	-1.93

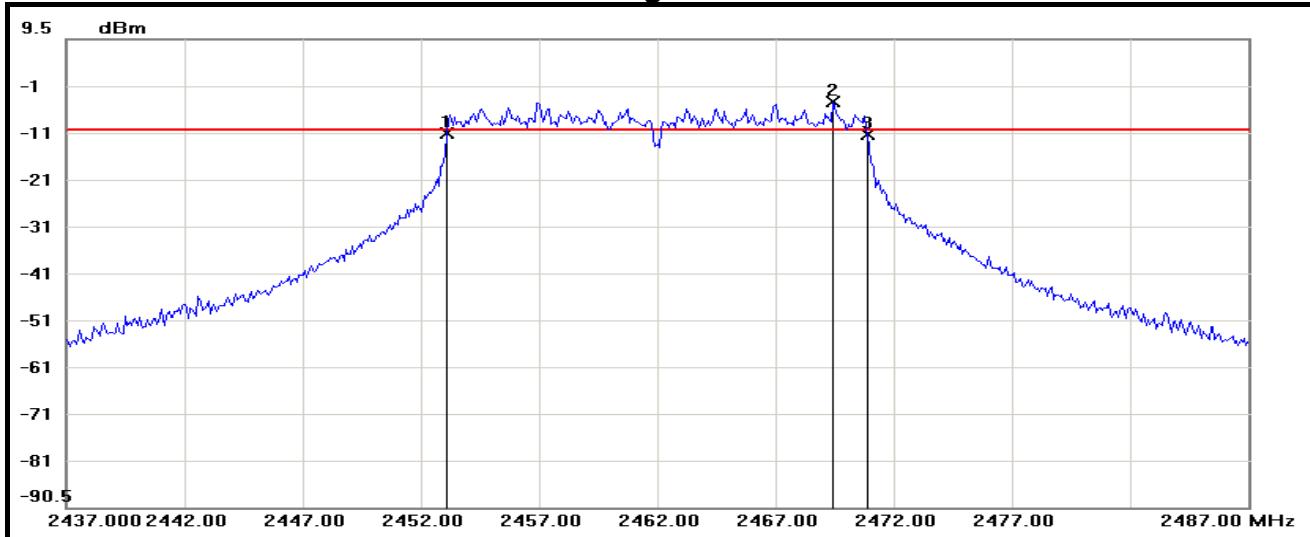
## IEEE 802.11n HT20 Mode / Chain 0 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2428.0833	-2.96	-2.83	-0.13
2	2444.5000	3.17	-2.83	6.00
3	2445.9167	-4.29	-2.83	-1.46



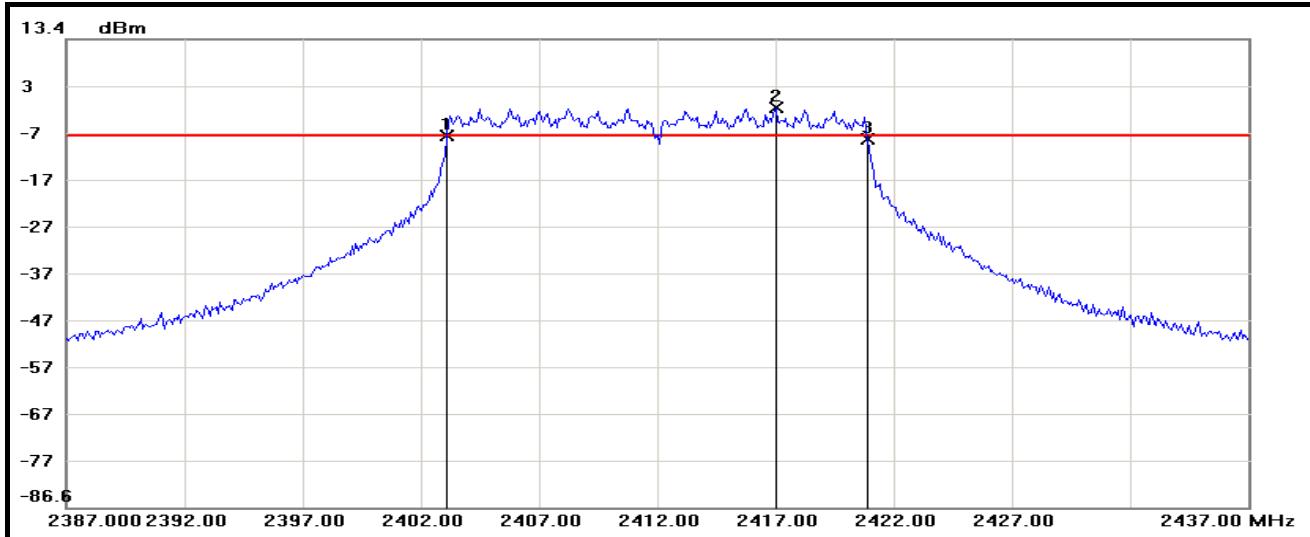
## IEEE 802.11n HT20 Mode / Chain 0 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2453.0833	-10.73	-9.87	-0.86
2	2469.4167	-3.87	-9.87	6.00
3	2470.9167	-10.96	-9.87	-1.09

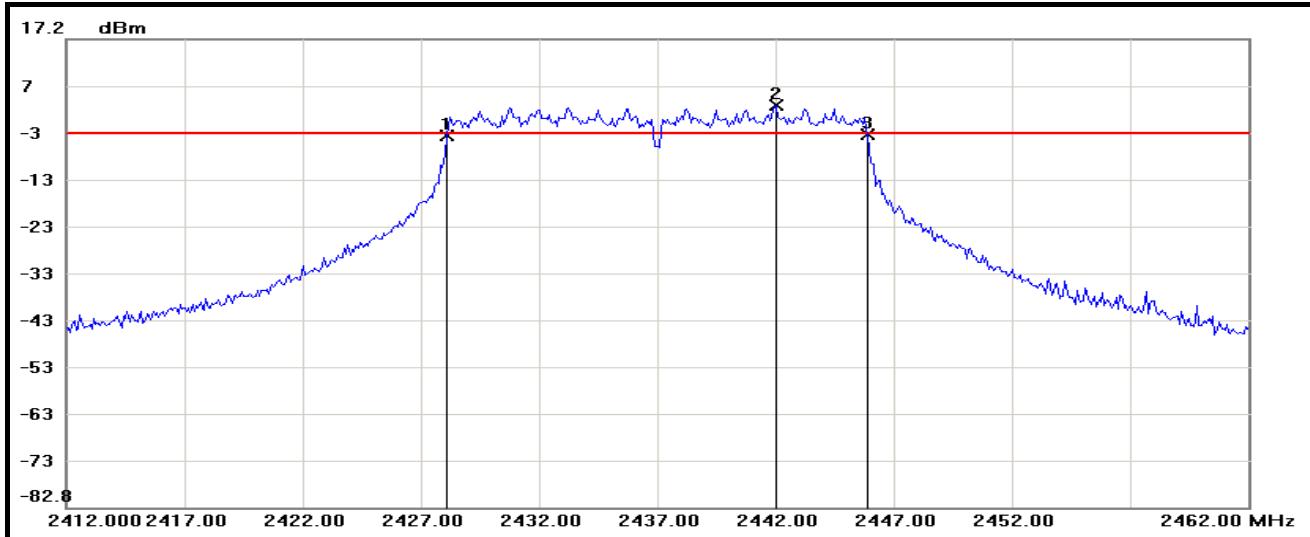


## IEEE 802.11n HT20 Mode / Chain 1 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2403.0833	-7.19	-7.18	-0.01
2	2417.0000	-1.18	-7.18	6.00
3	2420.9167	-7.87	-7.18	-0.69

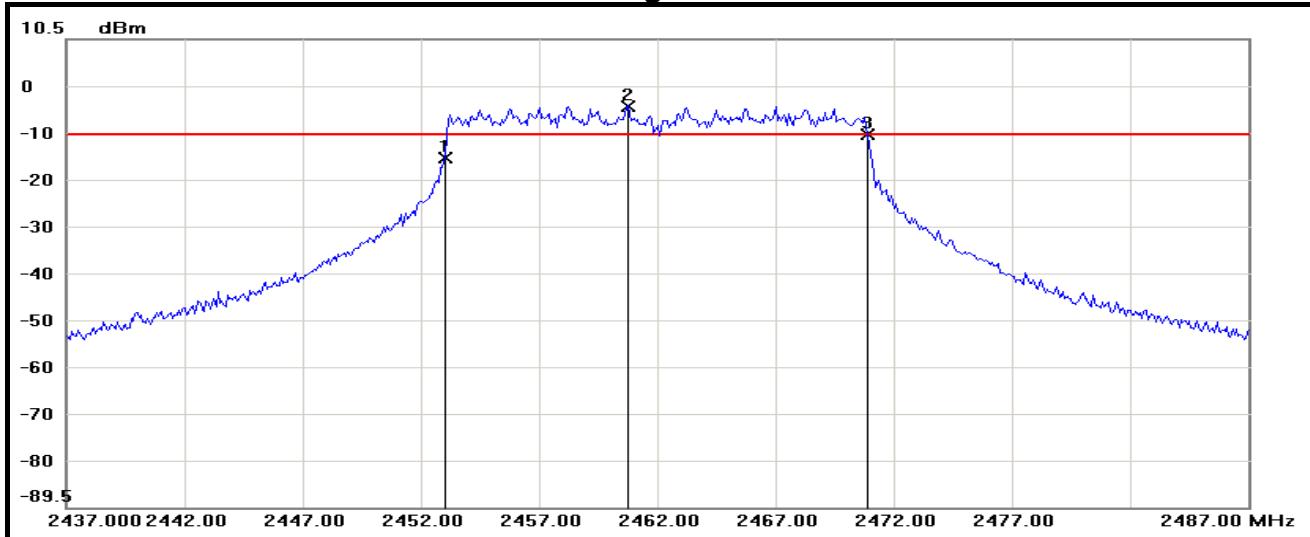
## IEEE 802.11n HT20 Mode / Chain 1 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2428.0833	-3.41	-2.86	-0.55
2	2442.0000	3.14	-2.86	6.00
3	2445.9167	-3.23	-2.86	-0.37



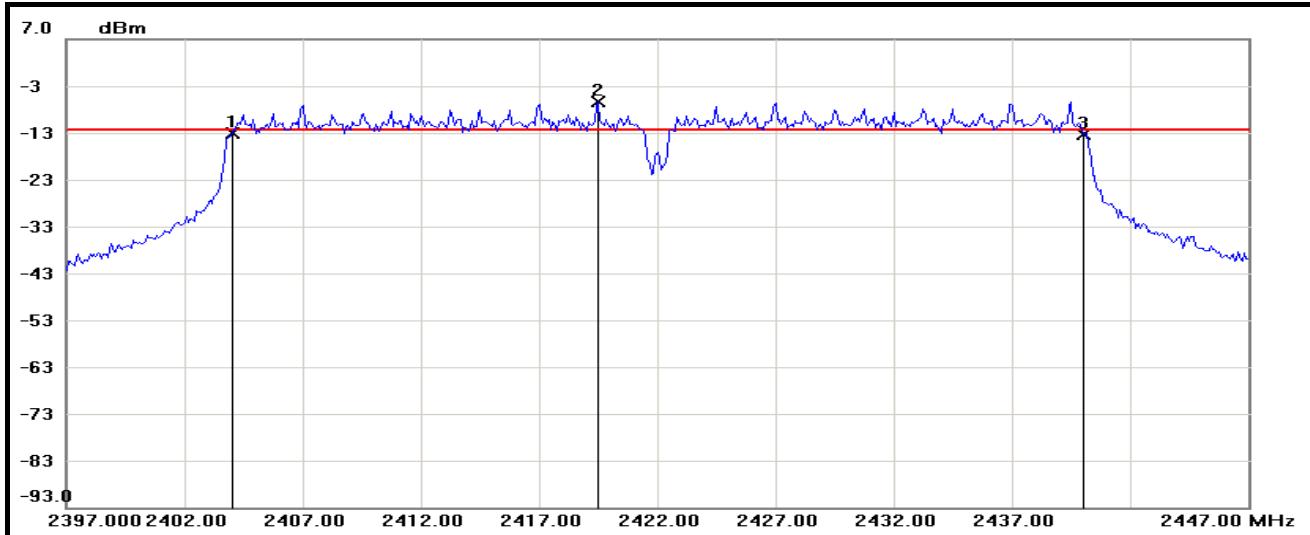
## IEEE 802.11n HT20 Mode / Chain 1 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2453.0000	-15.03	-9.79	-5.24
2	2460.7500	-3.79	-9.79	6.00
3	2470.9167	-9.95	-9.79	-0.16

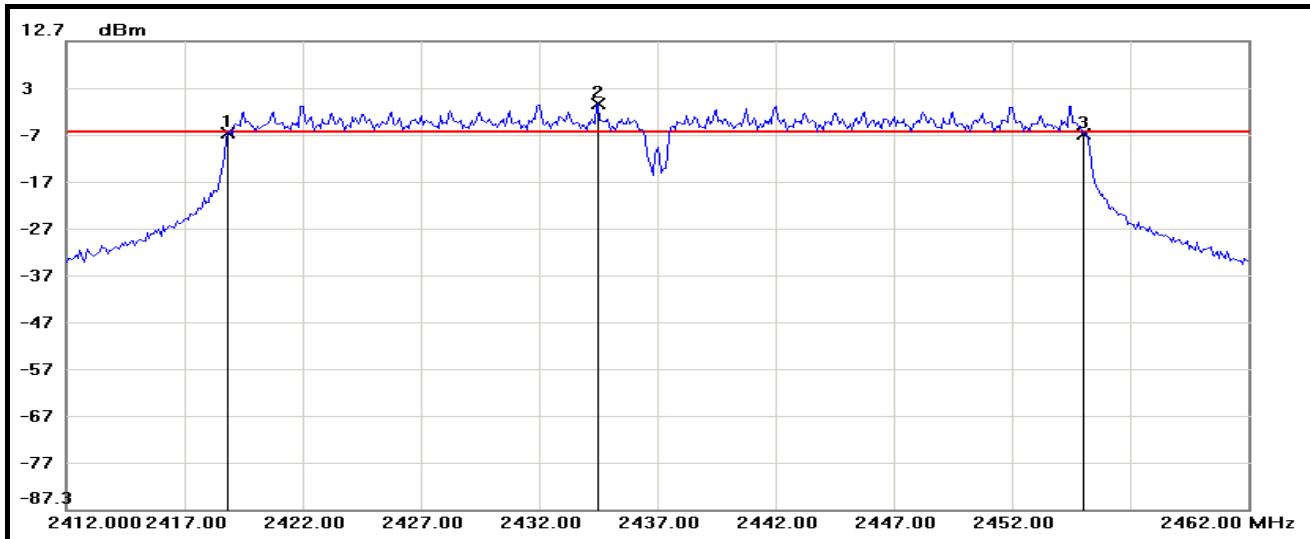


## IEEE 802.11n HT40 Mode / Chain 0 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2404.0000	-13.14	-12.31	-0.83
2	2419.5000	-6.31	-12.31	6.00
3	2440.0000	-13.35	-12.31	-1.04

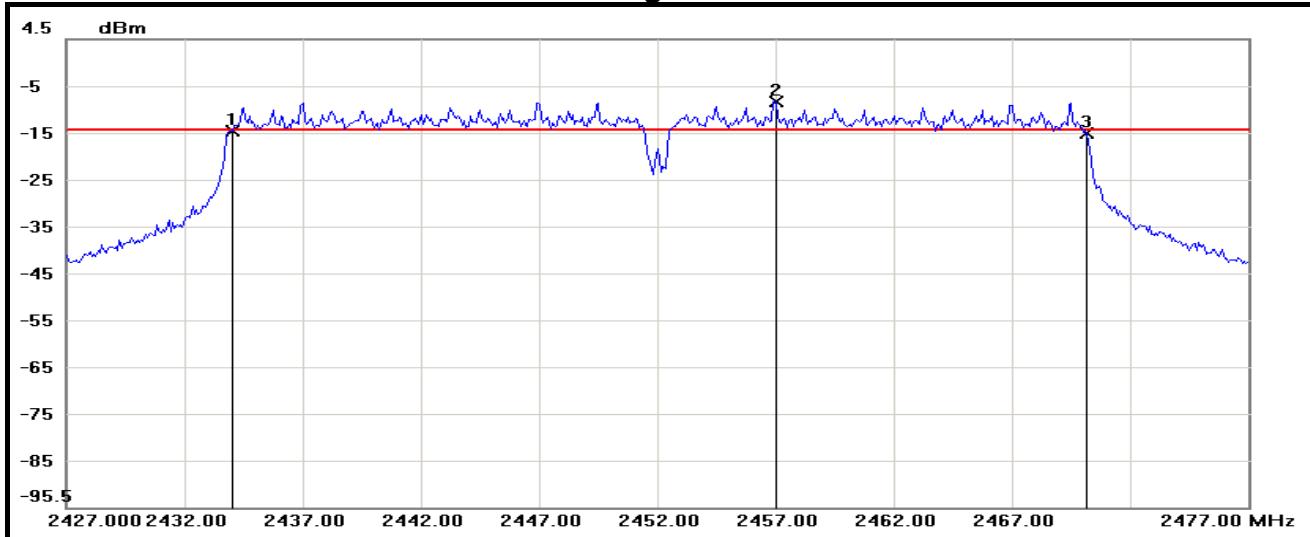
## IEEE 802.11n HT40 Mode / Chain 0 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2418.8333	-7.01	-6.55	-0.46
2	2434.5000	-0.55	-6.55	6.00
3	2455.0000	-7.23	-6.55	-0.68



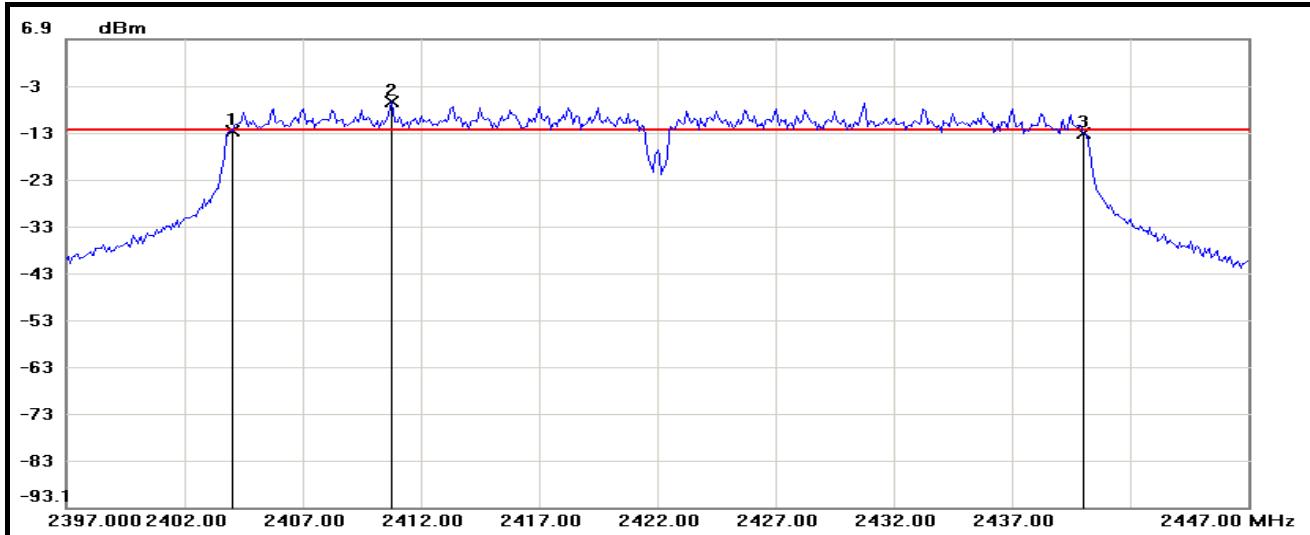
## IEEE 802.11n HT40 Mode / Chain 0 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2434.0000	-15.20	-14.88	-0.32
2	2457.0000	-8.88	-14.88	6.00
3	2470.1667	-15.72	-14.88	-0.84

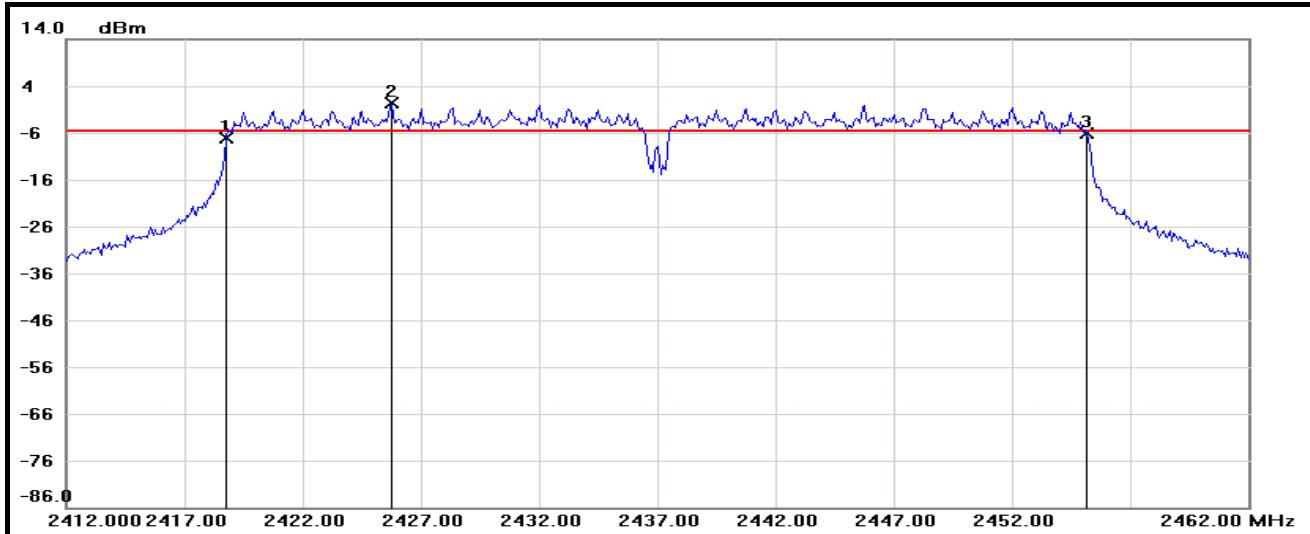


## IEEE 802.11n HT40 Mode / Chain 1 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2404.0000	-12.74	-12.46	-0.28
2	2410.7500	-6.46	-12.46	6.00
3	2440.0000	-13.27	-12.46	-0.81

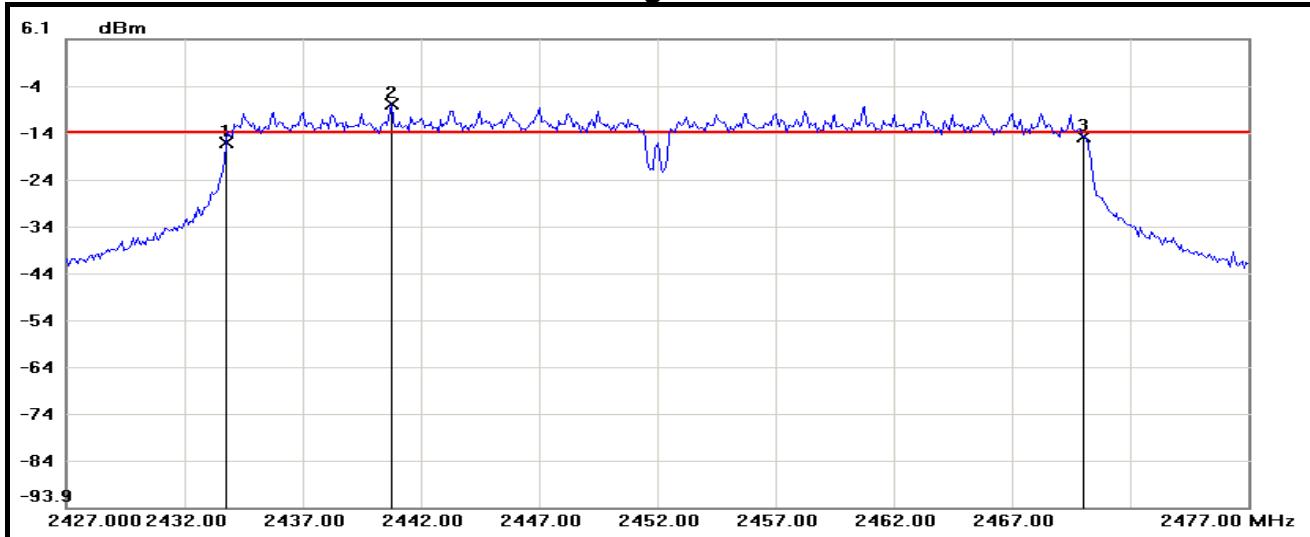
## IEEE 802.11n HT40 Mode / Chain 1 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2418.7500	-7.12	-5.70	-1.42
2	2425.7500	0.30	-5.70	6.00
3	2455.1667	-6.10	-5.70	-0.40



## IEEE 802.11n HT40 Mode / Chain 1 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2433.7500	-16.04	-13.81	-2.23
2	2440.7500	-7.81	-13.81	6.00
3	2470.0000	-14.85	-13.81	-1.04



## 7.2 MAXIMUM PEAK OUTPUT POWER

### LIMITS

§ 15.247(b) The maximum peak output power of the intentional radiator shall not exceed the following :

§ 15.247(b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands : 1 watt.

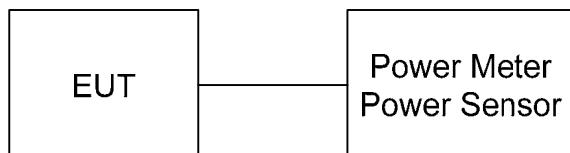
§ 15.247(b) (4) Except as shown in paragraphs (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Power Meter	ANRITSU	ML2495A	1149001	12/07/2012
Power Sensor	ANRITSU	MA2411B	1126148	12/14/2012

*Remark:* Each piece of equipment is scheduled for calibration once a year.

### TEST SETUP



### TEST PROCEDURE

The transmitter output is connected to the Power Meter. The Power Meter is set to the peak power detection.

**TEST RESULTS****IEEE 802.11a Mode**

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	5745	19.34	0.0859	29	0.7943	PASS
Middle	5785	21.60	0.1445	29	0.7943	PASS
High	5825	20.70	0.1175	29	0.7943	PASS

**Remark:**

1. At final test to get the worst-case emission at 6Mbps.
2. The maximum antenna gain is 7dBi which is more than 6dBi, the limit should be 0.7943W.

**IEEE 802.11n HT20 Mode (Two TX)**

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	
Low	5745	20.56	20.73	23.66	0.2321	29	0.7943	PASS
Middle	5785	20.41	20.56	23.50	0.2237	29	0.7943	PASS
High	5825	20.10	20.15	23.14	0.2058	29	0.7943	PASS

**Remark:**

1. At final test to get the worst-case emission at 13Mbps.
2. The maximum antenna gain is 7dBi which is more than 6dBi, the limit should be 0.7943W.
3. Total peak power = Chain 0 + Chain 1.

**IEEE 802.11n HT40 Mode (Two TX)**

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	
Low	5755	21.43	21.03	24.24	0.2658	29	0.7943	PASS
High	5815	20.58	20.33	23.47	0.2222	29	0.7943	PASS

**Remark:**

1. At final test to get the worst-case emission at 13Mbps.
2. The maximum antenna gain is 7dBi which is more than 6dBi, the limit should be 0.7943W.
3. Total peak power = Chain 0 + Chain 1.

**IEEE 802.11b Mode**

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	15.02	0.0318	28	0.6310	PASS
Middle	2437	18.61	0.0726	28	0.6310	PASS
High	2462	13.78	0.0239	28	0.6310	PASS

**Remark:**

1. At final test to get the worst-case emission at 1Mbps.
2. The maximum antenna gain is 8dBi which is more than 6dBi, the limit should be 0.6310W.

**IEEE 802.11g Mode**

Channel	Channel Frequency (MHz)	Peak Power		Peak Power Limit		Pass / Fail
		(dBm)	(W)	(dBm)	(W)	
Low	2412	19.66	0.0925	28	0.6310	PASS
Middle	2437	23.20	0.2089	28	0.6310	PASS
High	2462	15.89	0.0388	28	0.6310	PASS

**Remark:**

1. At final test to get the worst-case emission at 6Mbps.
2. The maximum antenna gain is 8dBi which is more than 6dBi, the limit should be 0.6310W.

**IEEE 802.11n HT20 Mode (Two TX)**

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	
Low	2412	19.35	20.28	22.85	0.1928	28	0.6310	PASS
Middle	2437	23.09	23.53	26.33	0.4291	28	0.6310	PASS
High	2462	15.83	17.05	19.49	0.0890	28	0.6310	PASS

**Remark:**

1. At final test to get the worst-case emission at 13Mbps.
2. The maximum antenna gain is 8dBi which is more than 6dBi, the limit should be 0.6310W..
3. Total peak power = Chain 0 + Chain 1.



## IEEE 802.11n HT40 Mode (Two TX)

Channel	Channel Frequency (MHz)	Peak Power (dBm)		Peak Power Total		Peak Power Limit		Pass / Fail
		Chain 0	Chain 1	(dBm)	(W)	(dBm)	(W)	
Low	2422	15.78	15.98	18.89	0.0775	28	0.6310	PASS
Middle	2437	22.49	22.92	25.72	0.3733	28	0.6310	PASS
High	2452	14.43	14.92	17.69	0.0588	28	0.6310	PASS

**Remark:**

1. At final test to get the worst-case emission at 13Mbps.
2. The maximum antenna gain is 8dBi which is more than 6dBi, the limit should be 0.6310W..
3. Total peak power = Chain 0 + Chain 1.



## 7.3 POWER SPECTRAL DENSITY

### LIMITS

§ 15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

### TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4407B	US41443108	08/09/2012

*Remark:* Each piece of equipment is scheduled for calibration once a year.

### TEST SETUP



### TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using RBW = 3KHz and VBW = RBW, set sweep time = span / 3KHz.

The power spectral density was measured and recorded.

The sweep time is allowed to be longer than span / 3KHz for a full response of the mixer in the spectrum analyzer.



## TEST RESULTS

### IEEE 802.11a Mode

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	5745	-17.07	8	PASS
Middle	5785	-13.37	8	PASS
High	5825	-14.02	8	PASS

*Remark:* At finial test to get the worst-case emission at 6Mbps.

### IEEE 802.11n HT20 Mode (Two TX)

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1			
Low	5745	-14.92	-15.12	-12.01	8	PASS
Middle	5785	-14.36	-16.48	-12.28	8	PASS
High	5825	-14.46	-17.24	-12.62	8	PASS

*Remark:*

1. At finial test to get the worst-case emission at 13Mbps.
2. Total power spectral density = Chain 0 + Chain 1.

### IEEE 802.11n HT40 Mode (Two TX)

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (kHz)	Pass / Fail
		Chain 0	Chain 1			
Low	5755	-15.98	-17.44	-13.64	8	PASS
High	5815	-17.03	-17.45	-14.22	8	PASS

*Remark:*

1. At finial test to get the worst-case emission at 27Mbps.
2. Total power spectral density = Chain 0 + Chain 1.

**IEEE 802.11b Mode**

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-10.54	8	PASS
Middle	2437	-6.91	8	PASS
High	2462	-11.54	8	PASS

*Remark:* At finial test to get the worst-case emission at 1Mbps.

**IEEE 802.11g Mode**

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)	Minimum Limit (dBm)	Pass / Fail
Low	2412	-14.97	8	PASS
Middle	2437	-10.93	8	PASS
High	2462	-16.56	8	PASS

*Remark:* At finial test to get the worst-case emission at 6Mbps.

**IEEE 802.11n HT20 Mode (Two TX)**

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2412	-15.96	-14.67	-12.26	8	PASS
Middle	2437	-10.95	-10.52	-7.72	8	PASS
High	2462	-17.93	-15.71	-13.67	8	PASS

*Remark:*

1. At finial test to get the worst-case emission at 13Mbps.
2. Total power spectral density = Chain 0 + Chain 1.



## IEEE 802.11n HT40 Mode (Two TX)

Channel	Channel Frequency (MHz)	Final RF Power Level in 3KHz BW (dBm)		PSD Total (dBm)	Minimum Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
Low	2422	-21.30	-21.27	-18.27	8	PASS
Middle	2437	-15.75	-14.63	-12.14	8	PASS
High	2452	-23.61	-22.68	-20.11	8	PASS

**Remark:**

1. At final test to get the worst-case emission at 27Mbps.
2. Total power spectral density = Chain 0 + Chain 1.

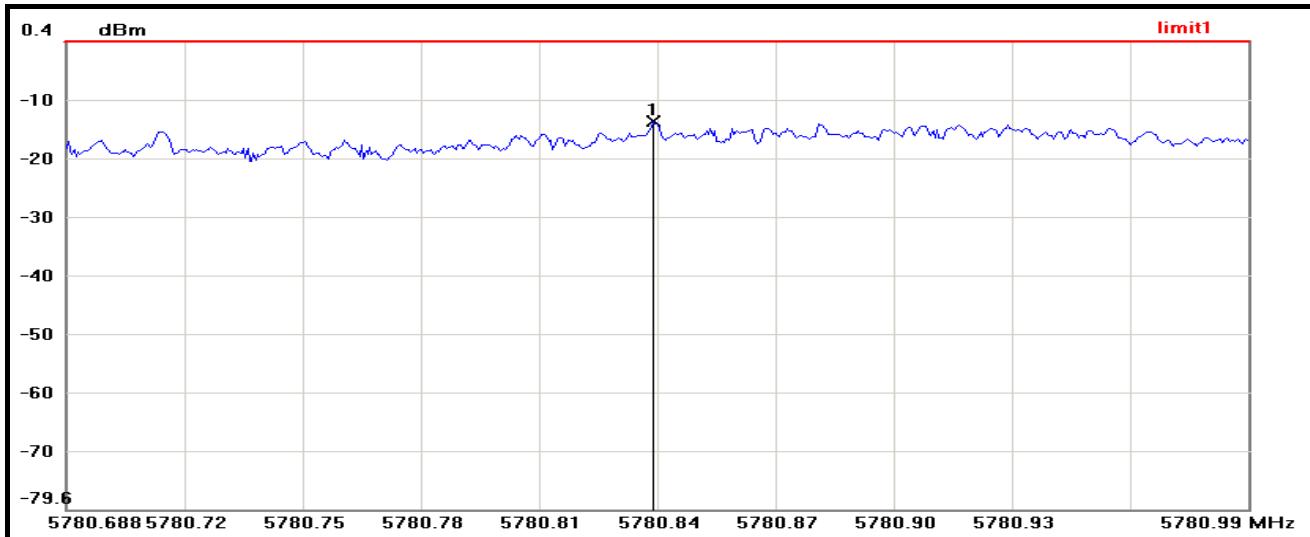


## IEEE 802.11a Mode / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5749.6305	-17.07	8	-25.07

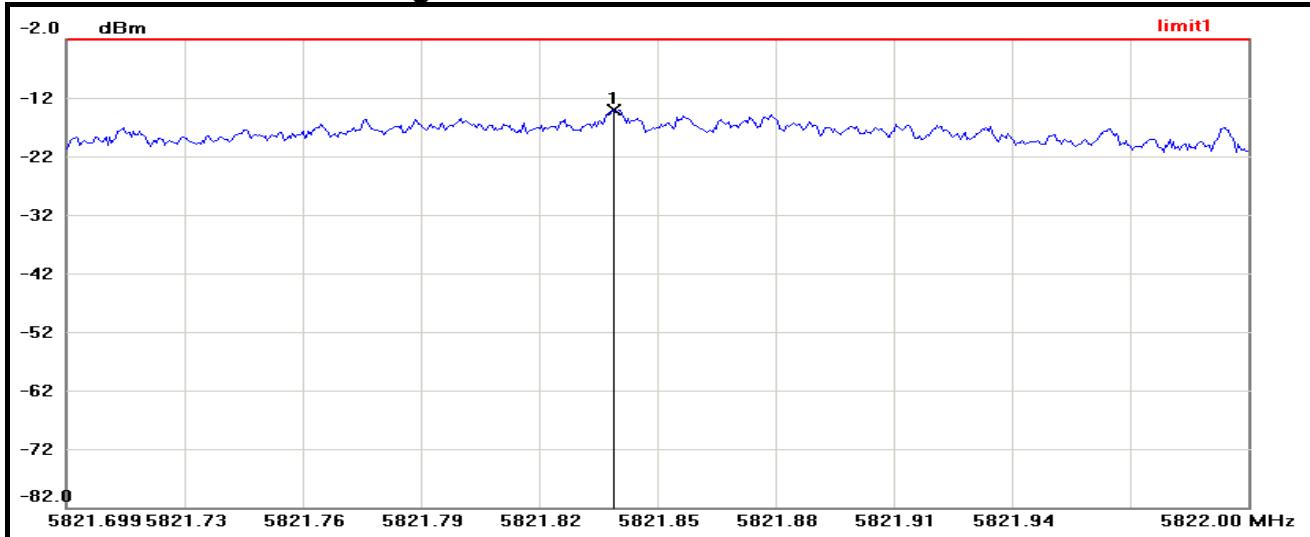
## IEEE 802.11a Mode / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5780.8365	-13.37	8.00	-21.37



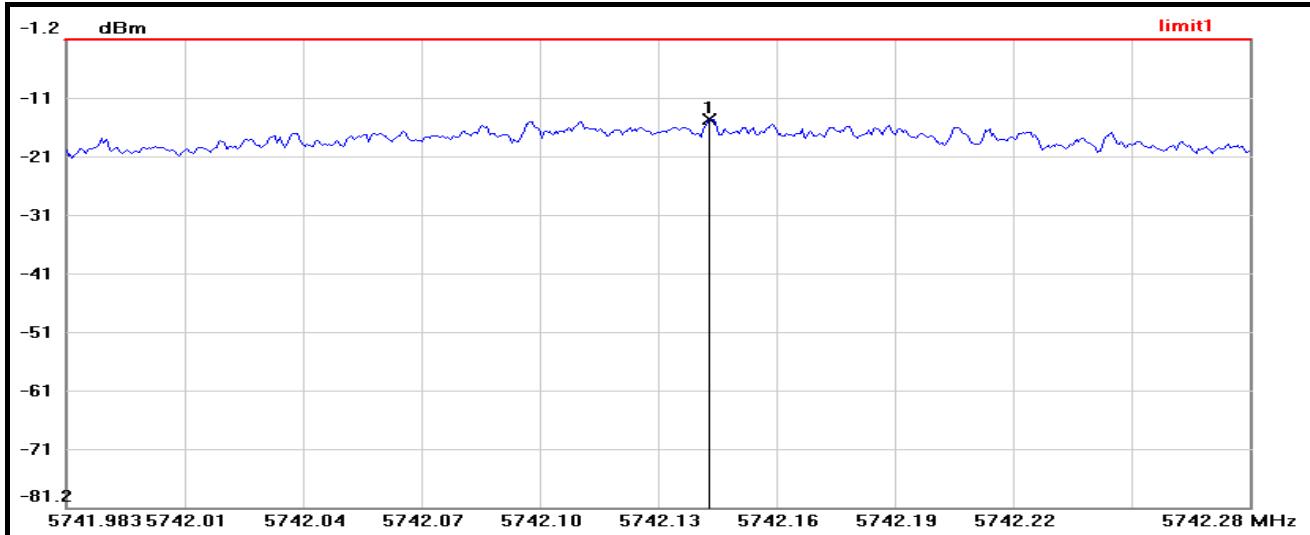
## IEEE 802.11a Mode / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5821.8385	-14.02	8.00	-22.02

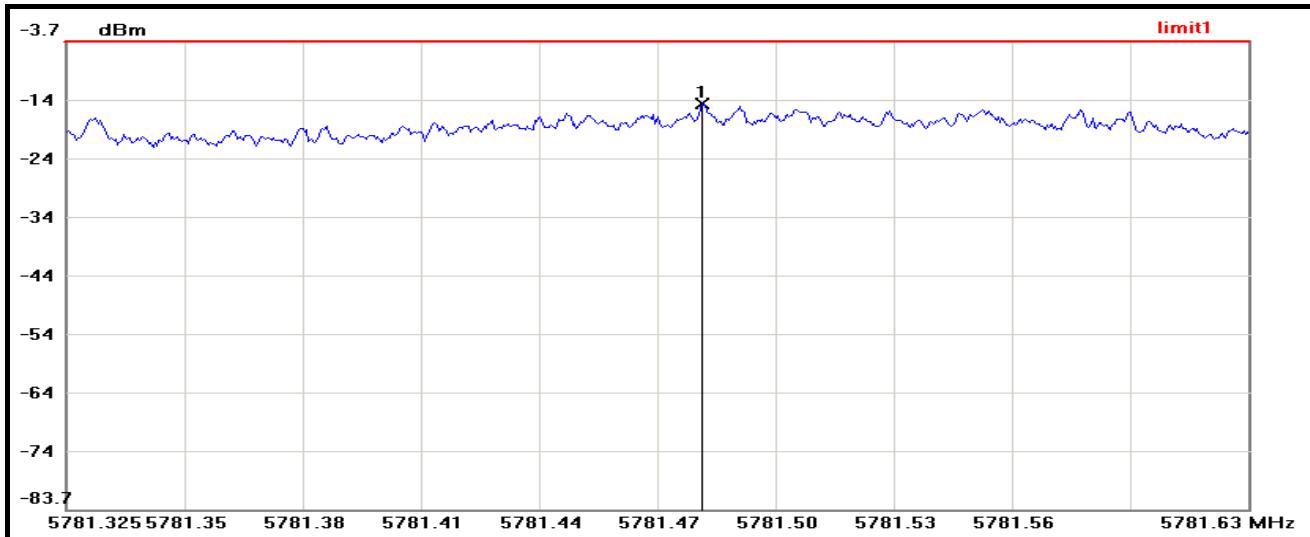


## IEEE 802.11n HT20 Mode / Chain 0 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5742.1455	-14.92	8	-22.92

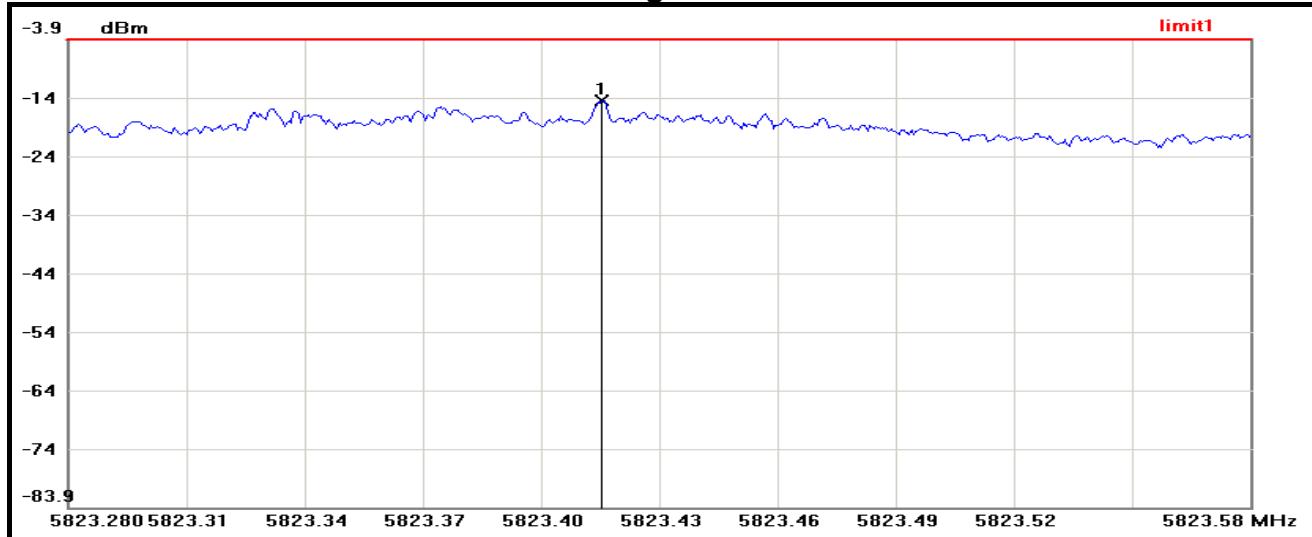
## IEEE 802.11n HT20 Mode / Chain 0 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5781.4865	-14.36	8.00	-22.36



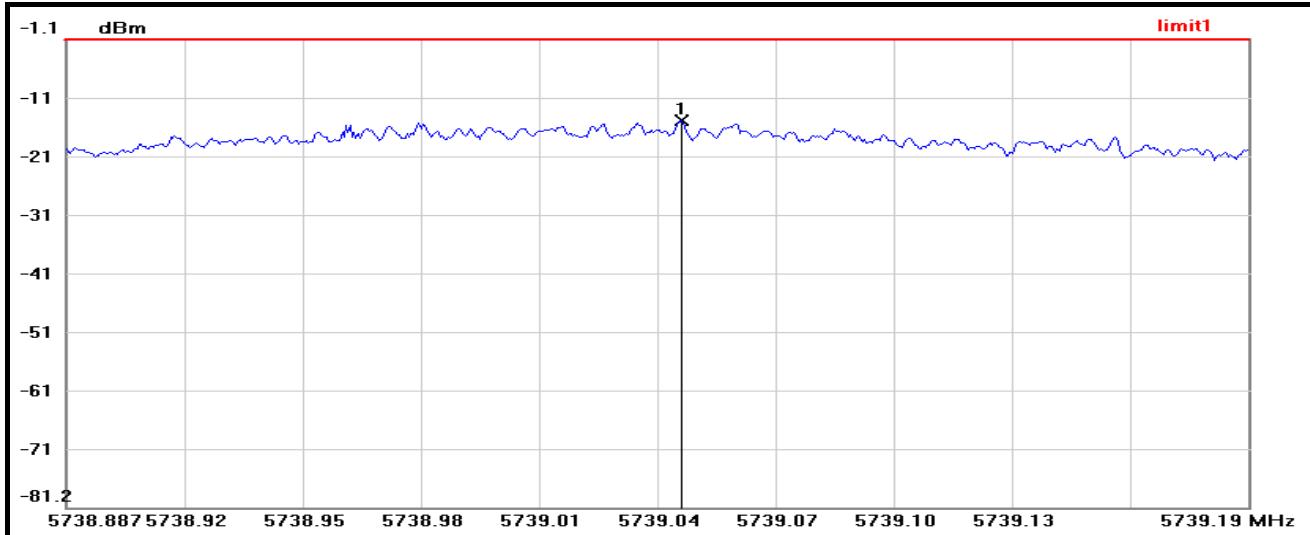
## IEEE 802.11n HT20 Mode / Chain 0 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5823.4155	-14.46	8.00	-22.46



## IEEE 802.11n HT20 Mode / Chain 1 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5739.0435	-15.12	8	-23.12

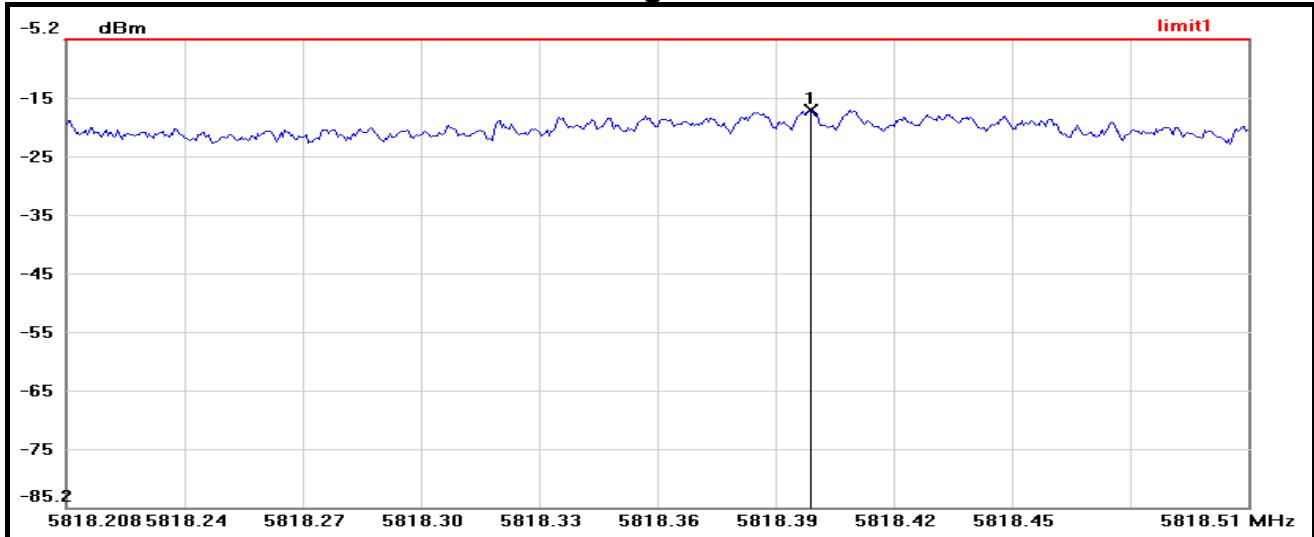
## IEEE 802.11n HT20 Mode / Chain 1 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5778.3835	-16.48	8.00	-24.48



## IEEE 802.11n HT20 Mode / Chain 1 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5818.3965	-17.24	8.00	-25.24



## IEEE 802.11n HT40 Mode / Chain 0 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5748.6465	-15.98	8	-23.98

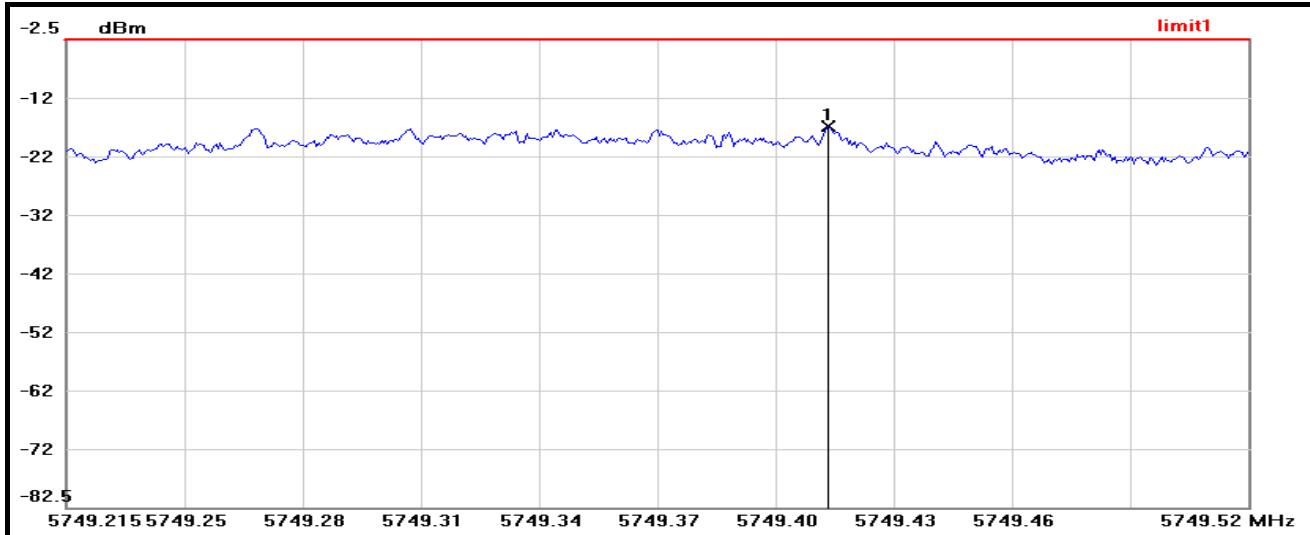
## IEEE 802.11n HT40 Mode / Chain 0 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5800.2320	-17.03	8.00	-25.03

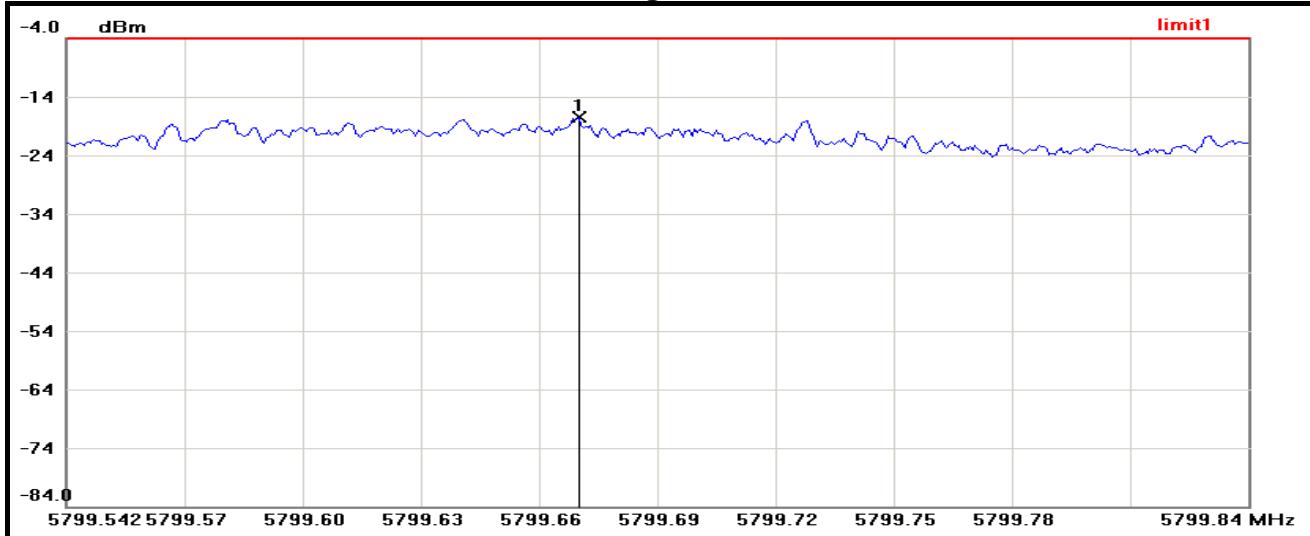


## IEEE 802.11n HT40 Mode / Chain 1 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5749.4085	-17.44	8	-25.44

## IEEE 802.11n HT40 Mode / Chain 1 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5799.6725	-17.45	8.00	-25.45

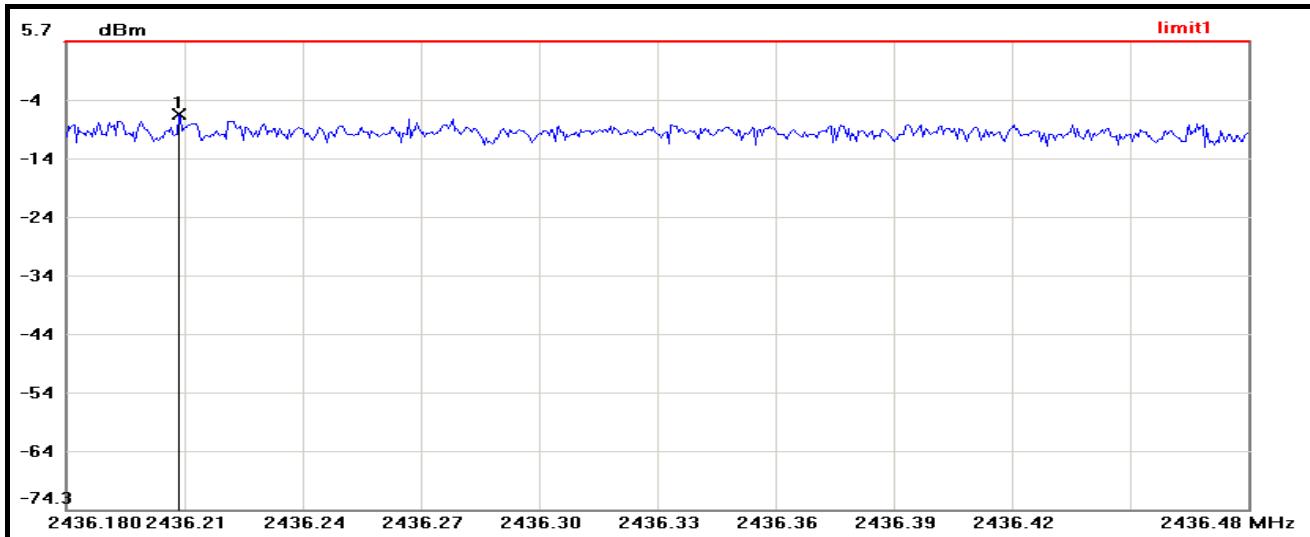


## IEEE 802.11b Mode / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2411.2095	-10.54	8.00	-18.54

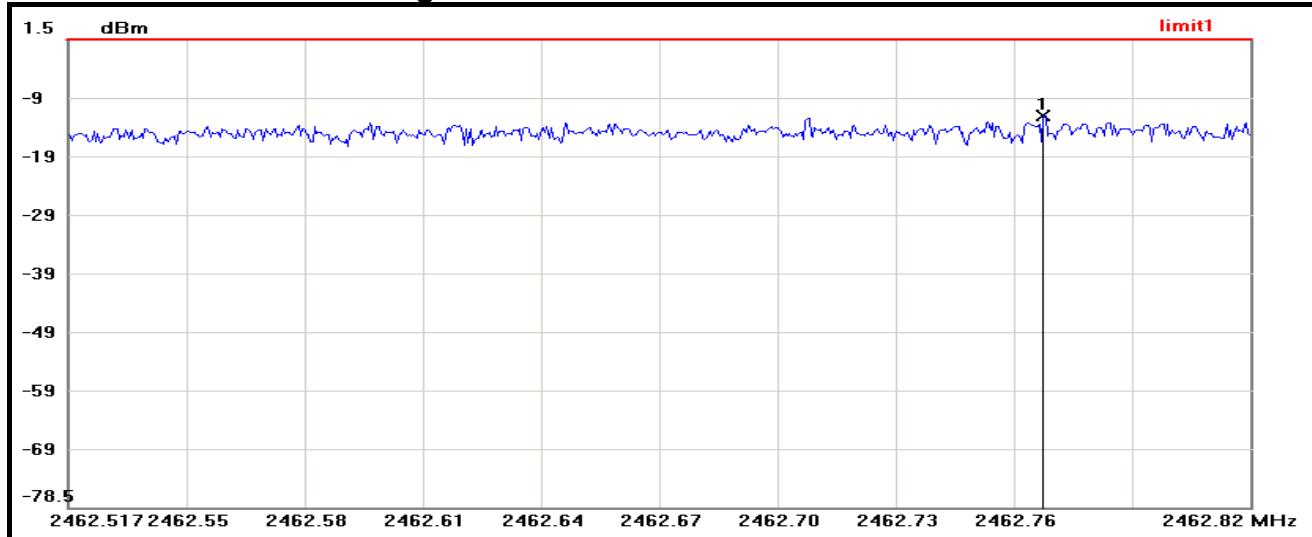
## IEEE 802.11b Mode / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2436.2085	-6.91	8.00	-14.91



## IEEE 802.11b Mode / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2462.7645	-11.54	8.00	-19.54

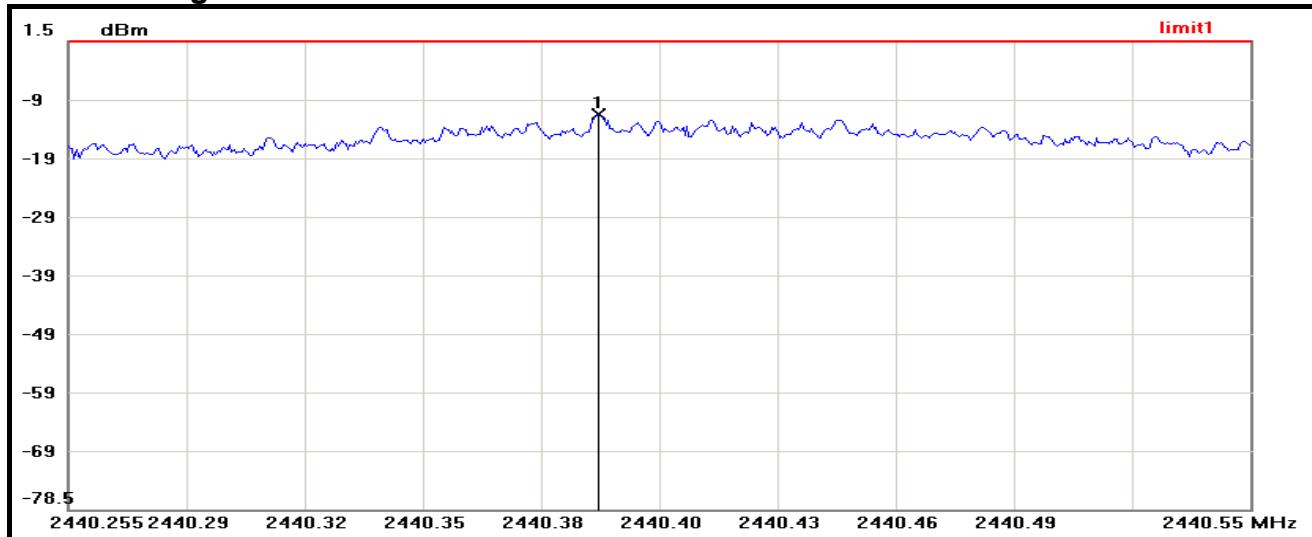


## IEEE 802.11g Mode / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2417.3190	-14.97	8.00	-22.97

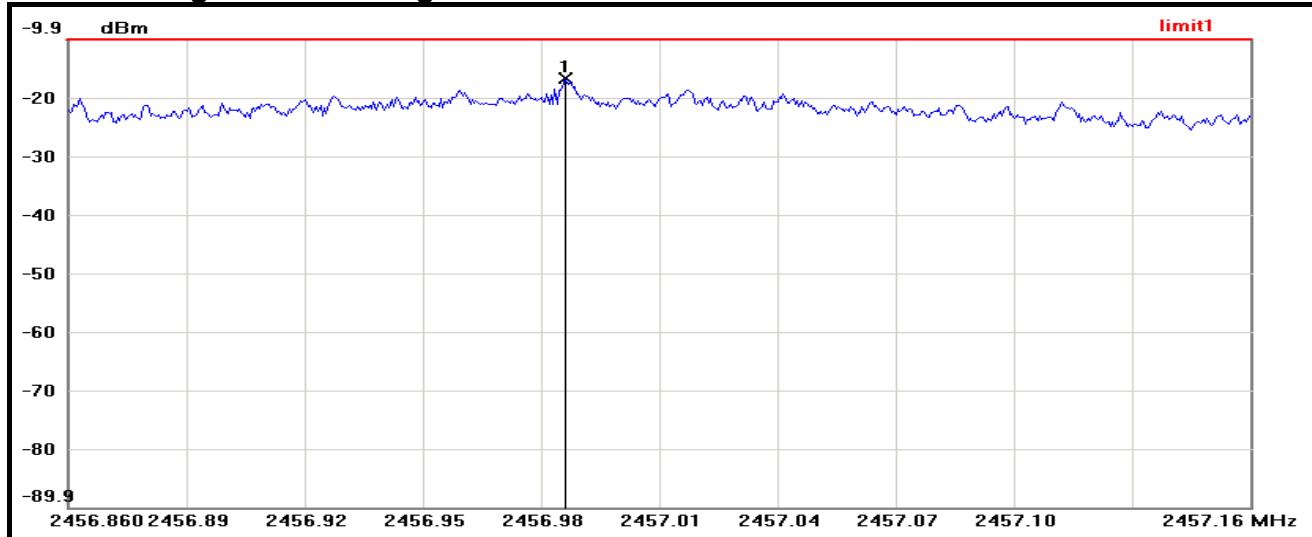
## IEEE 802.11g Mode / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2440.3895	-10.93	8.00	-18.93



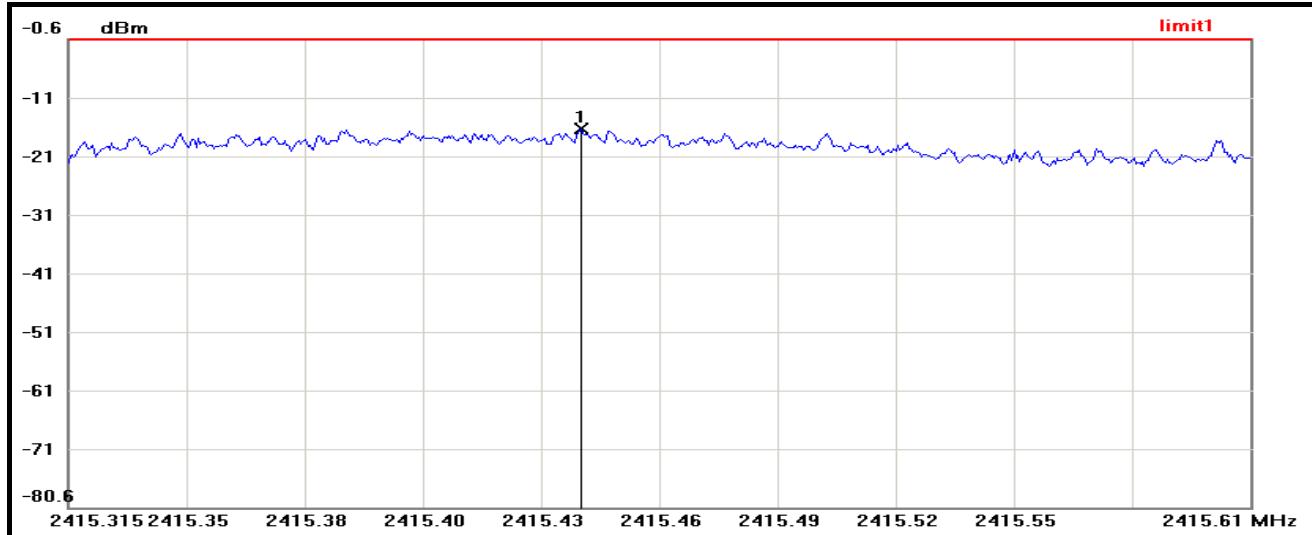
## IEEE 802.11g Mode / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2456.9860	-16.56	8.00	-24.56

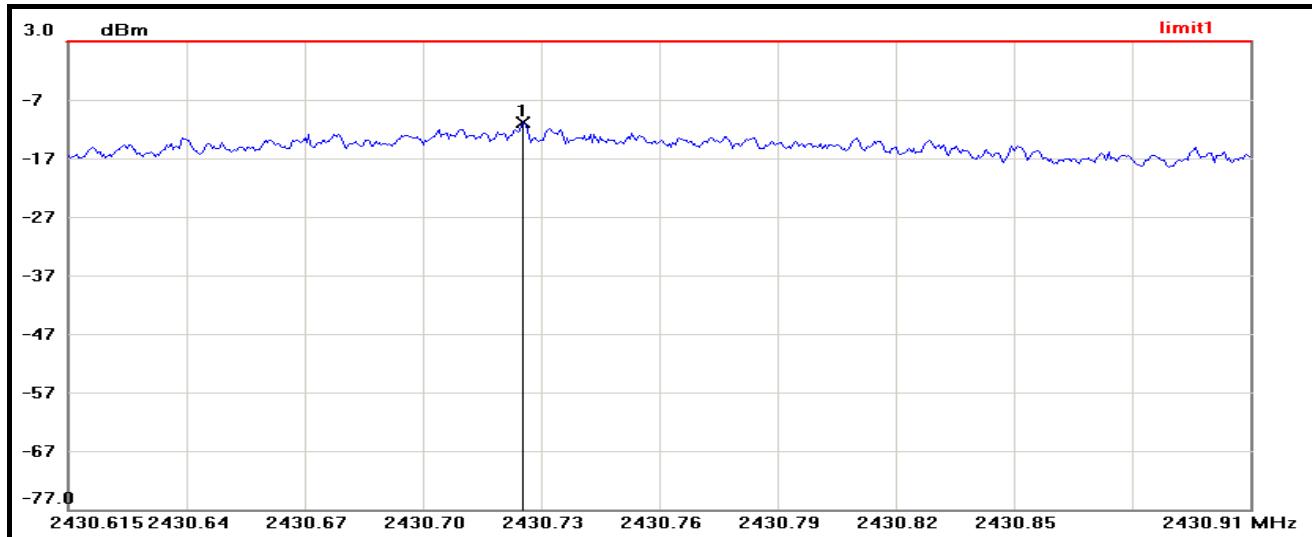


## IEEE 802.11n HT20 Mode / Chain 0 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2415.4450	-15.96	8.00	-23.96

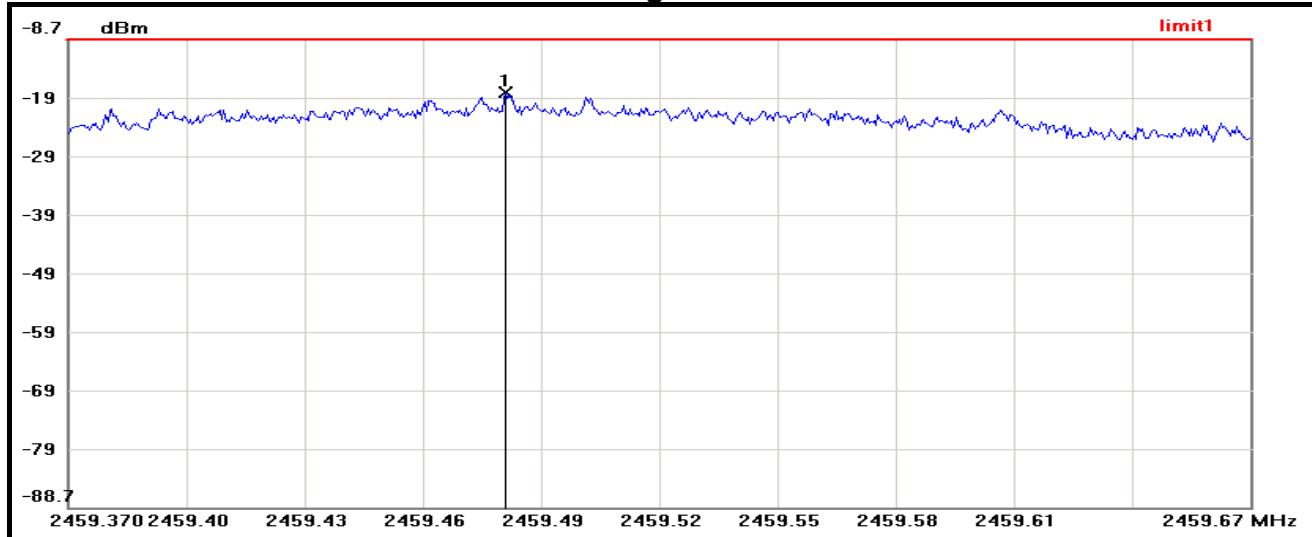
## IEEE 802.11n HT20 Mode / Chain 0 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2430.7305	-10.95	8.00	-18.95



## IEEE 802.11n HT20 Mode / Chain 0 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2459.4810	-17.93	8.00	-25.93



## IEEE 802.11n HT20 Mode / Chain 1 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2406.3710	-14.67	8.00	-22.67

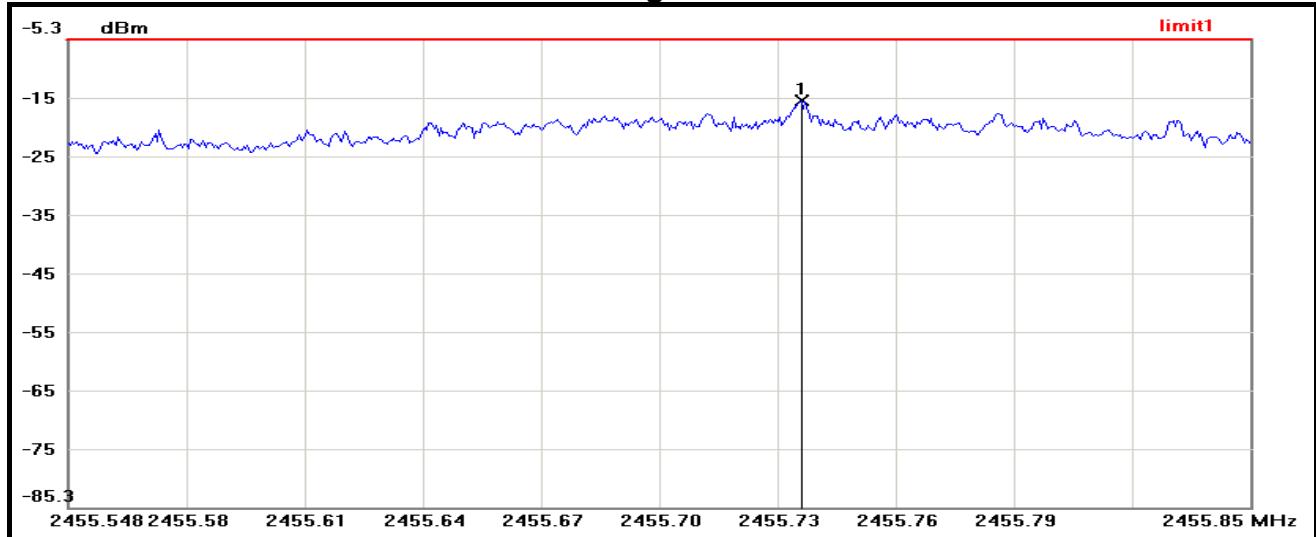
## IEEE 802.11n HT20 Mode / Chain 1 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2442.5830	-10.52	8.00	-18.52



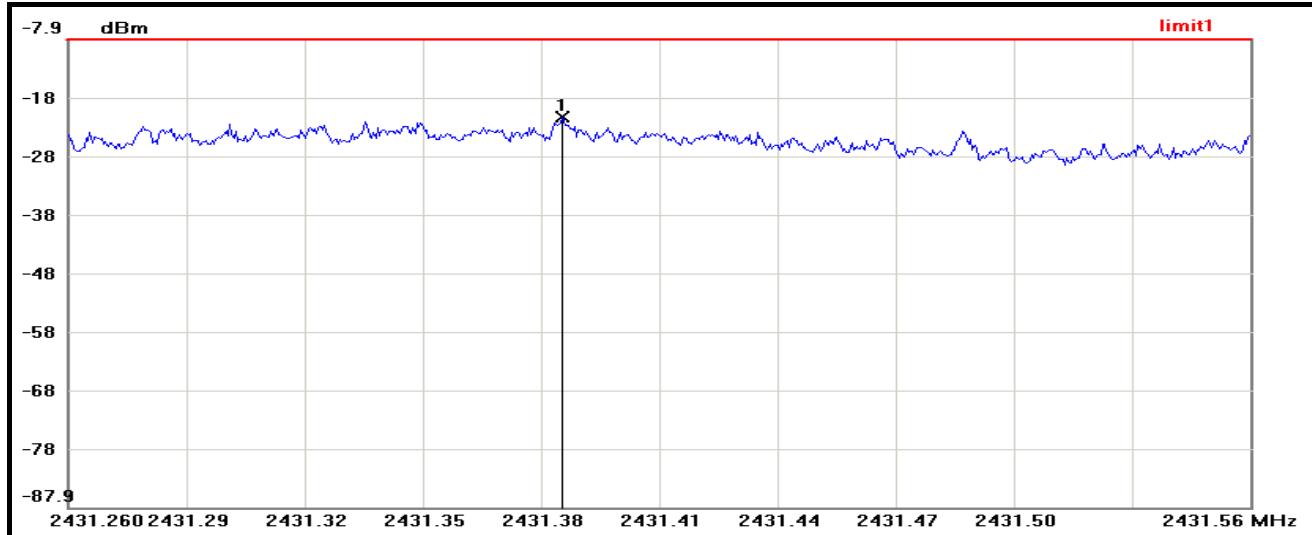
## IEEE 802.11n HT20 Mode / Chain 1 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2455.7335	-15.71	8.00	-23.71

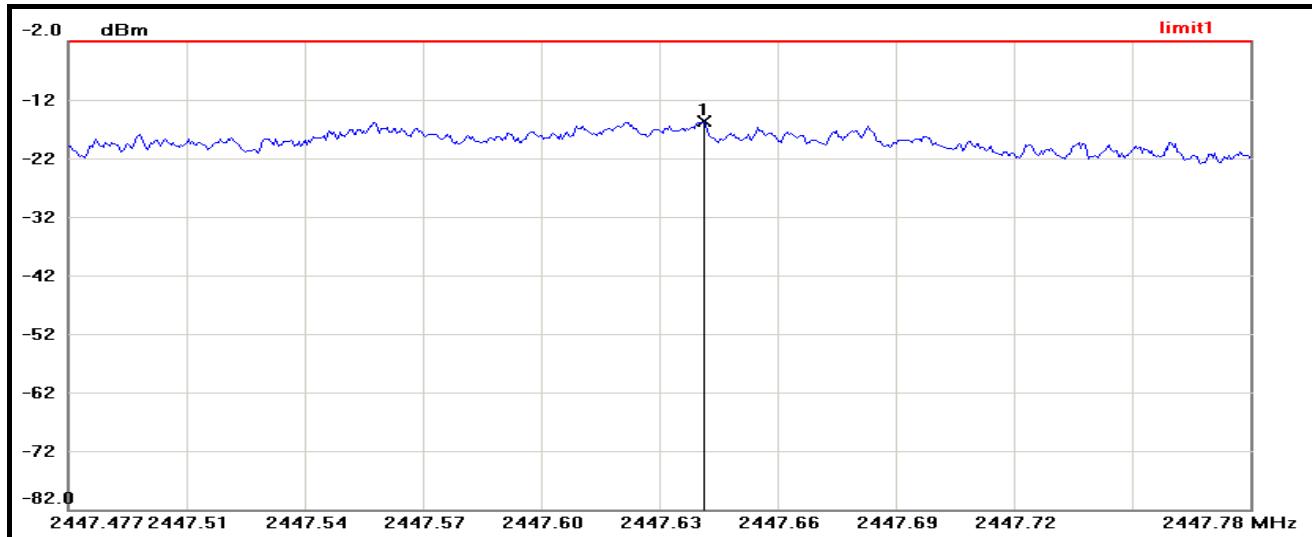


## IEEE 802.11n HT40 Mode / Chain 0 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2431.3855	-21.30	8.00	-29.30

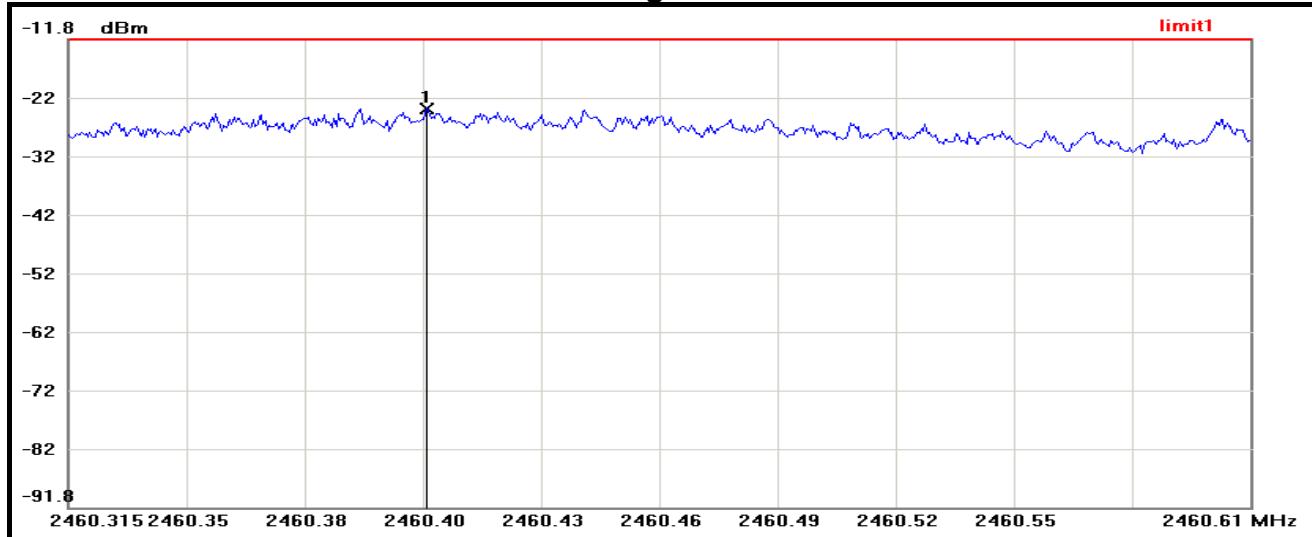
## IEEE 802.11n HT40 Mode / Chain 0 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2447.6390	-15.75	8.00	-23.75



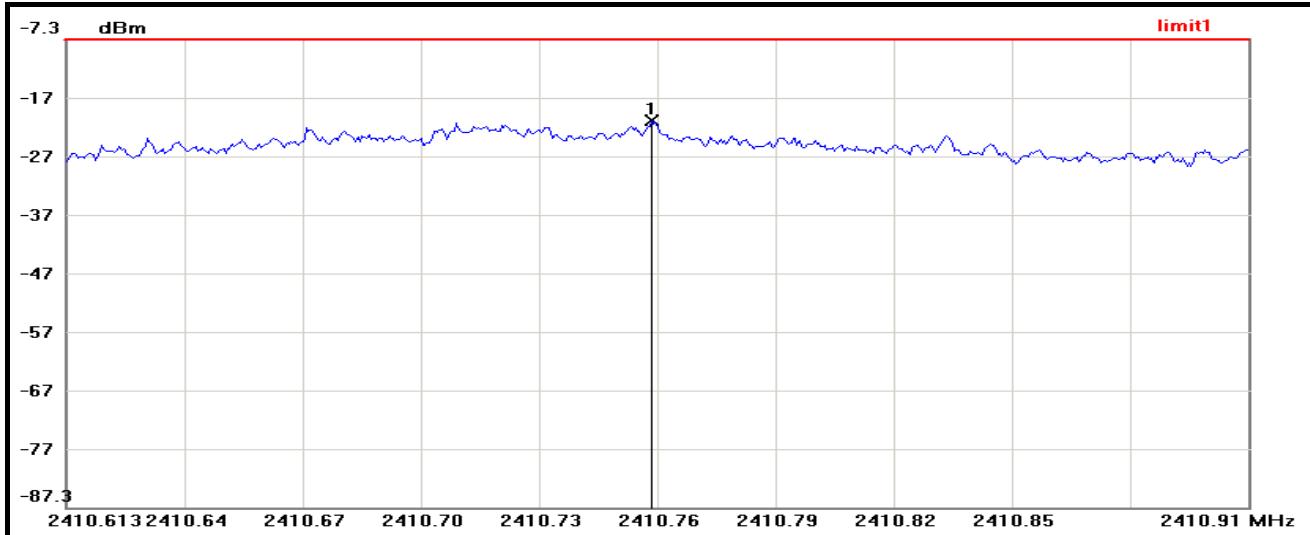
## IEEE 802.11n HT40 Mode / Chain 0 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2460.4060	-23.61	8.00	-31.61



## IEEE 802.11n HT40 Mode / Chain 1 / CH Low



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2410.7610	-21.27	8.00	-29.27

## IEEE 802.11n HT40 Mode / Chain 1 / CH Middle



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2428.5020	-14.63	8.00	-22.63



## IEEE 802.11n HT40 Mode / Chain 1 / CH High



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2440.0850	-22.68	8.00	-30.68



## 7.4 CONDUCTED SPURIOUS EMISSION

### LIMITS

§ 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 §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

### TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/19/2012

*Remark:* Each piece of equipment is scheduled for calibration once a year.

### TEST SETUP



### TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

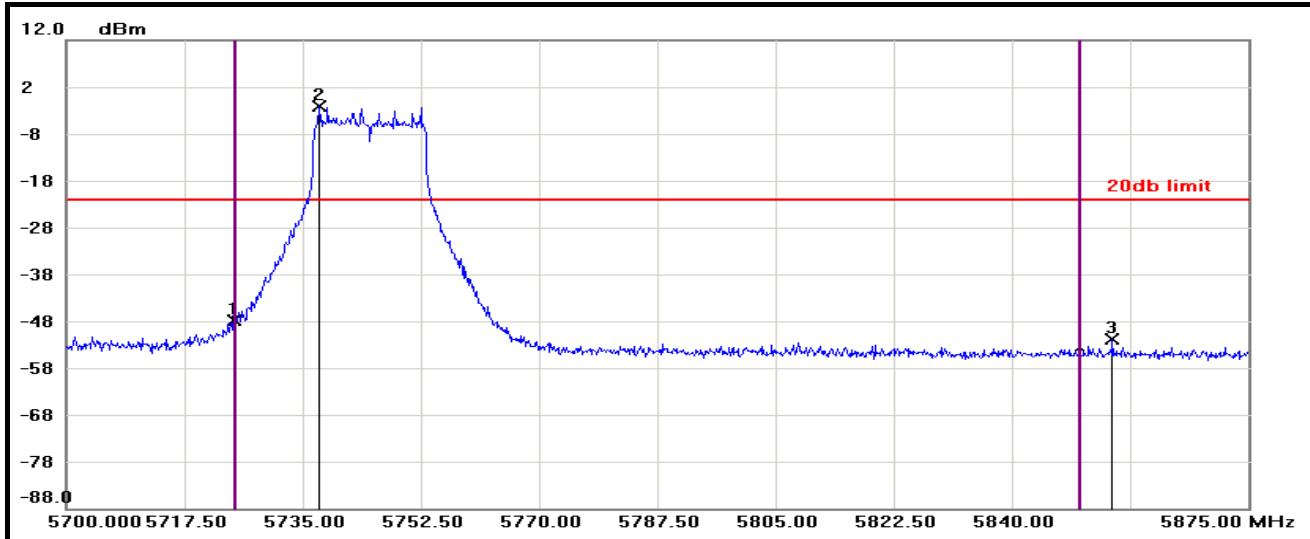
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 5.0 GHz band.



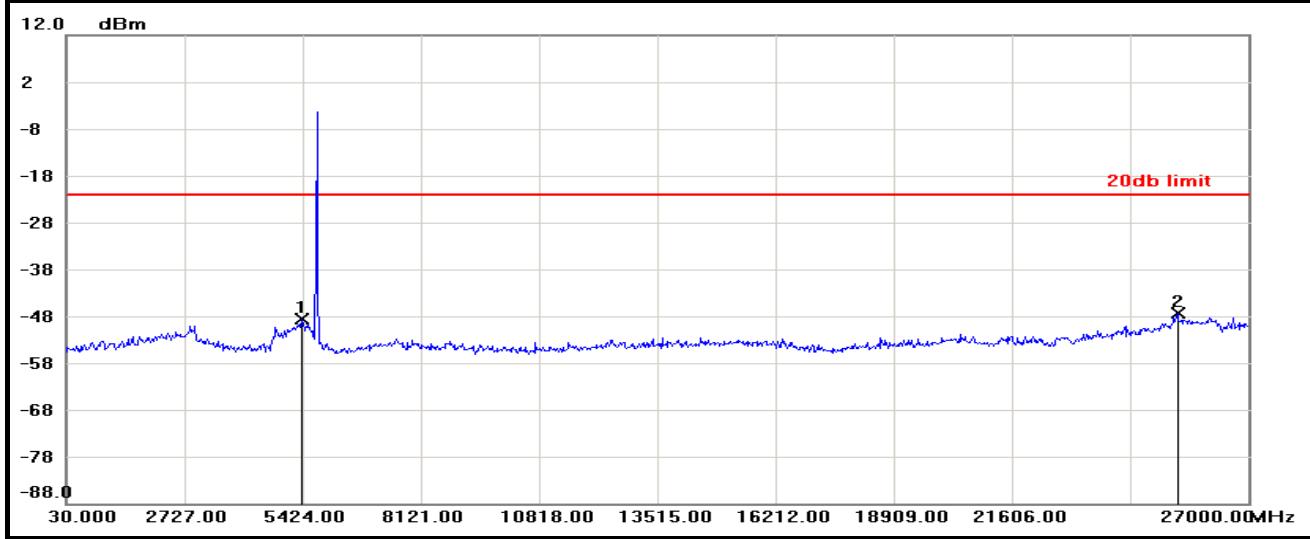
## TEST RESULTS

### IEEE 802.11a Mode / CH Low / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5724.8500	-47.93	-22.24	-25.69
2	5737.4500	-2.24	-22.24	20.00
3	5854.8750	-51.95	-22.24	-29.71

### IEEE 802.11a Mode / CH Low / 30MHz ~ 27GHz

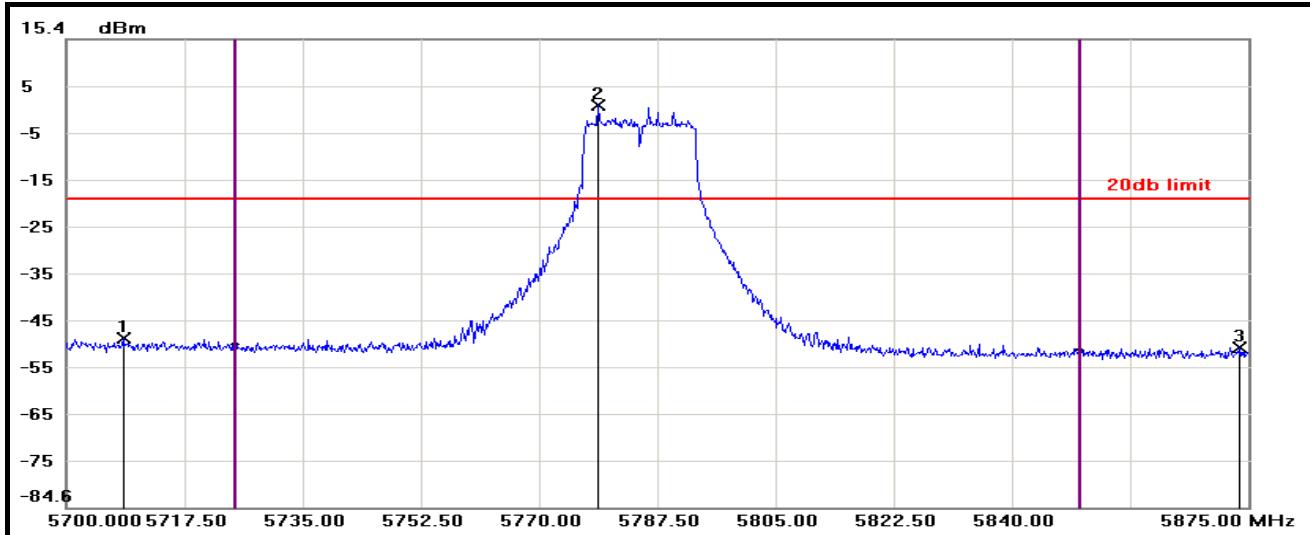


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5397.0300	-48.68	-22.24	-26.44
2	25381.8000	-47.39	-22.24	-25.15

**Remark:** There is no emission in 27GHz ~ 40GHz.

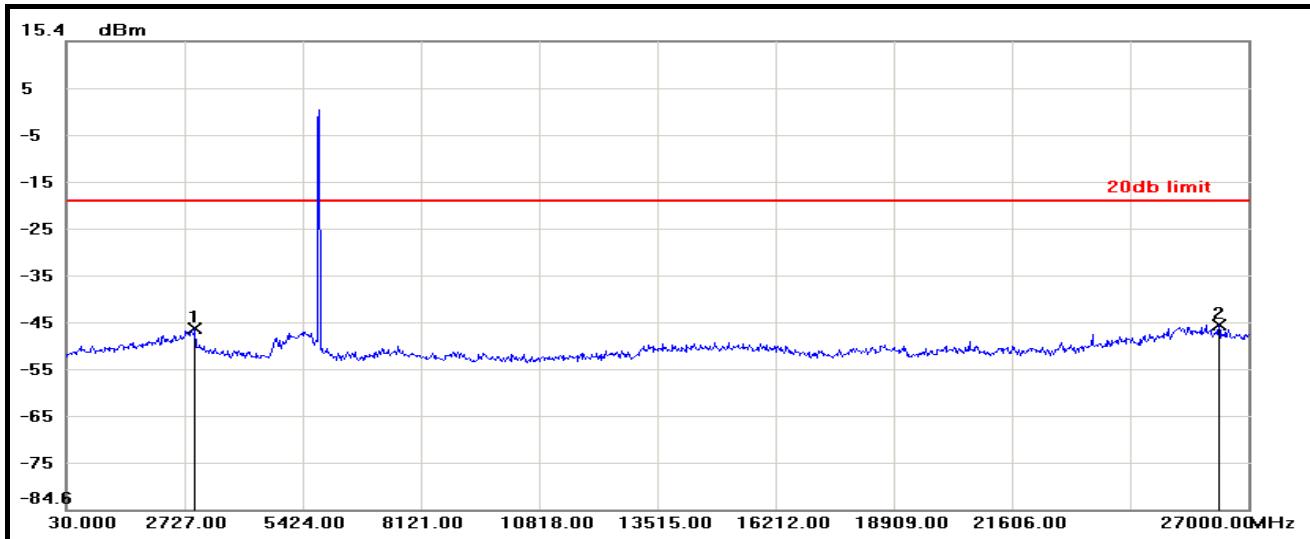


## IEEE 802.11a Mode / CH Middle / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5708.4000	-48.57	-18.76	-29.81
2	5778.7500	1.24	-18.76	20.00
3	5873.7750	-50.49	-18.76	-31.73

## IEEE 802.11a Mode / CH Middle / 30MHz ~ 27GHz

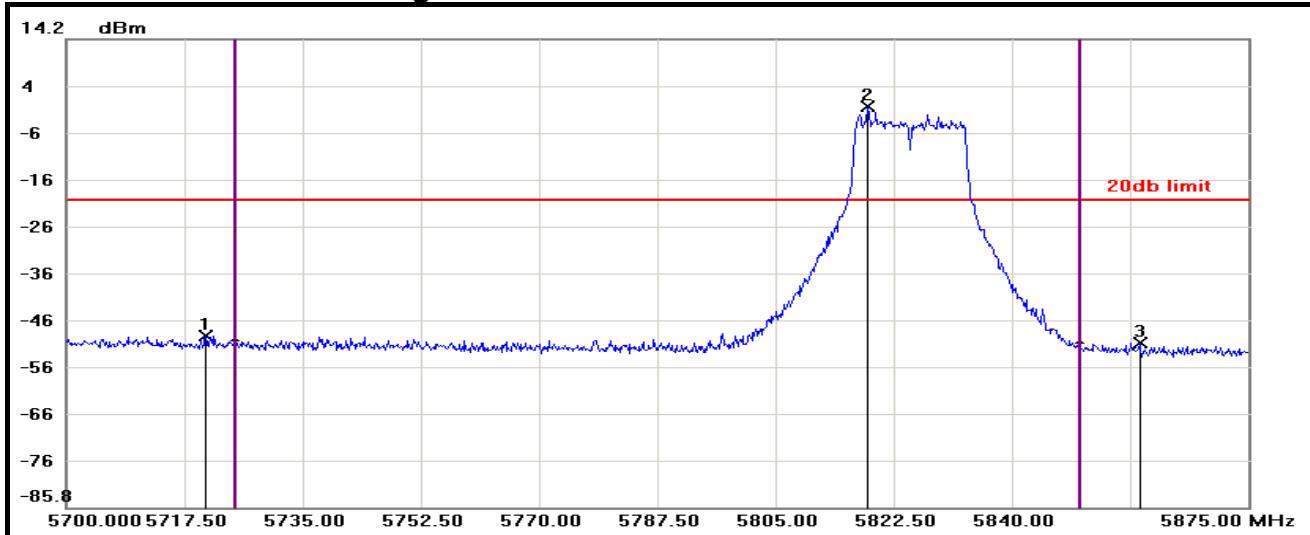


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2969.7300	-45.90	-18.76	-27.14
2	26325.7500	-45.15	-18.76	-26.39

**Remark:** There is no emission in 27GHz ~ 40GHz.

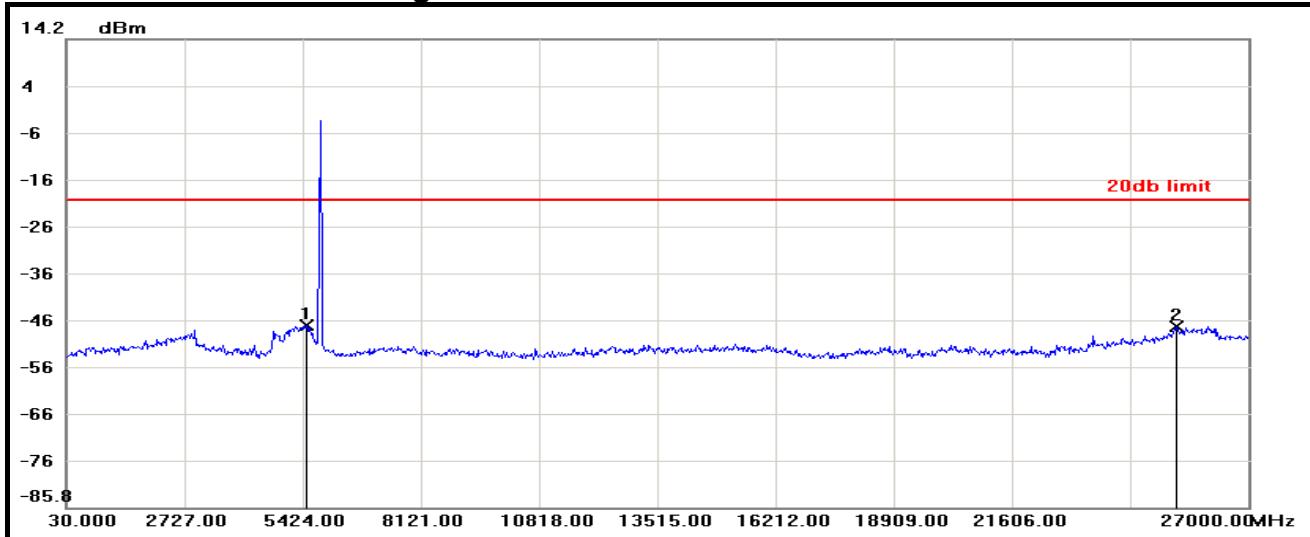


## IEEE 802.11a Mode / CH High / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5720.6500	-49.26	-20.16	-29.10
2	5818.6500	-0.16	-20.16	20.00
3	5858.9000	-50.73	-20.16	-30.57

## IEEE 802.11a Mode / CH High / 30MHz ~ 27GHz

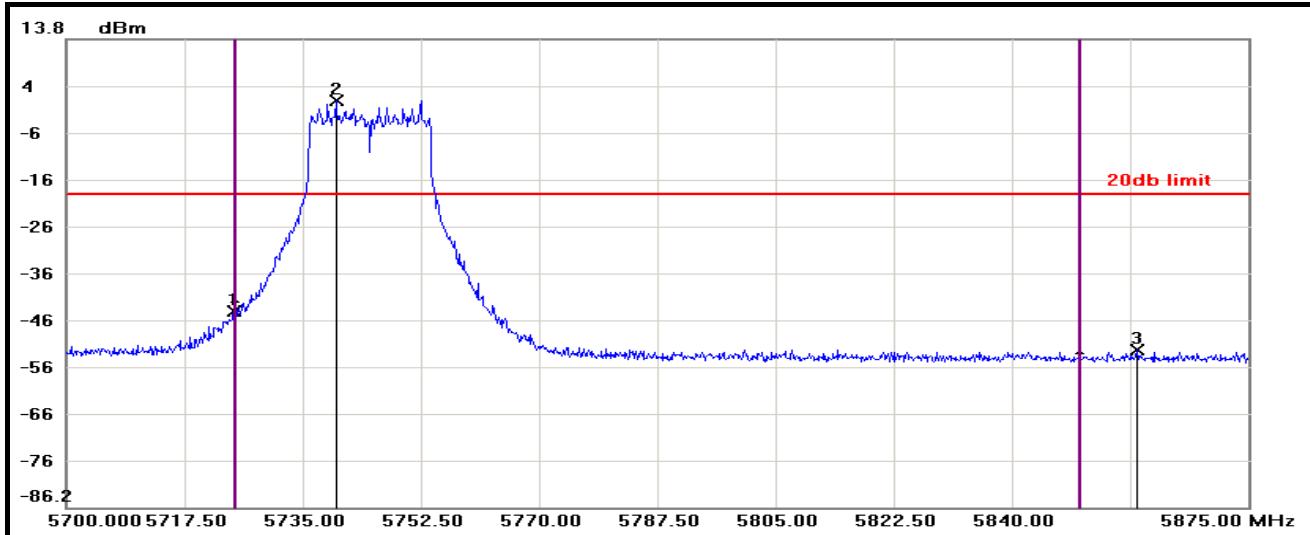


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5504.9100	-47.00	-20.16	-26.84
2	25354.8300	-47.22	-20.16	-27.06

**Remark:** There is no emission in 27GHz ~ 40GHz.

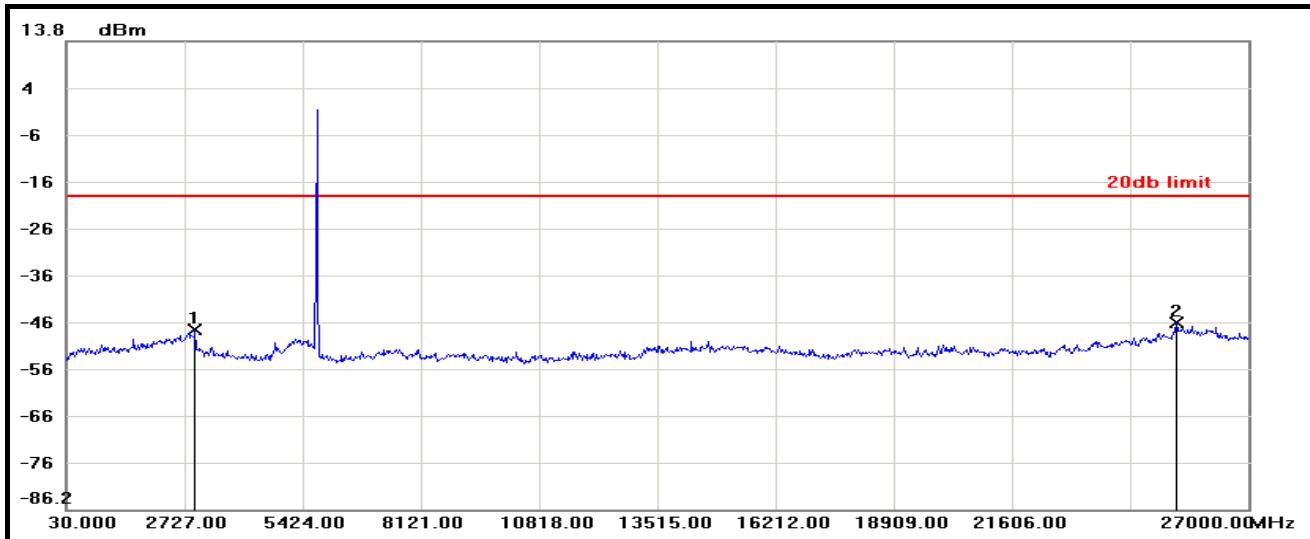


## IEEE 802.11n HT20 Mode / Chain 0 / CH Low / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5724.8500	-44.29	-19.35	-24.94
2	5739.9000	0.65	-19.35	20.00
3	5858.5500	-52.56	-19.35	-33.21

## IEEE 802.11n HT20 Mode / Chain 0 / CH Low / 30MHz ~ 27GHz

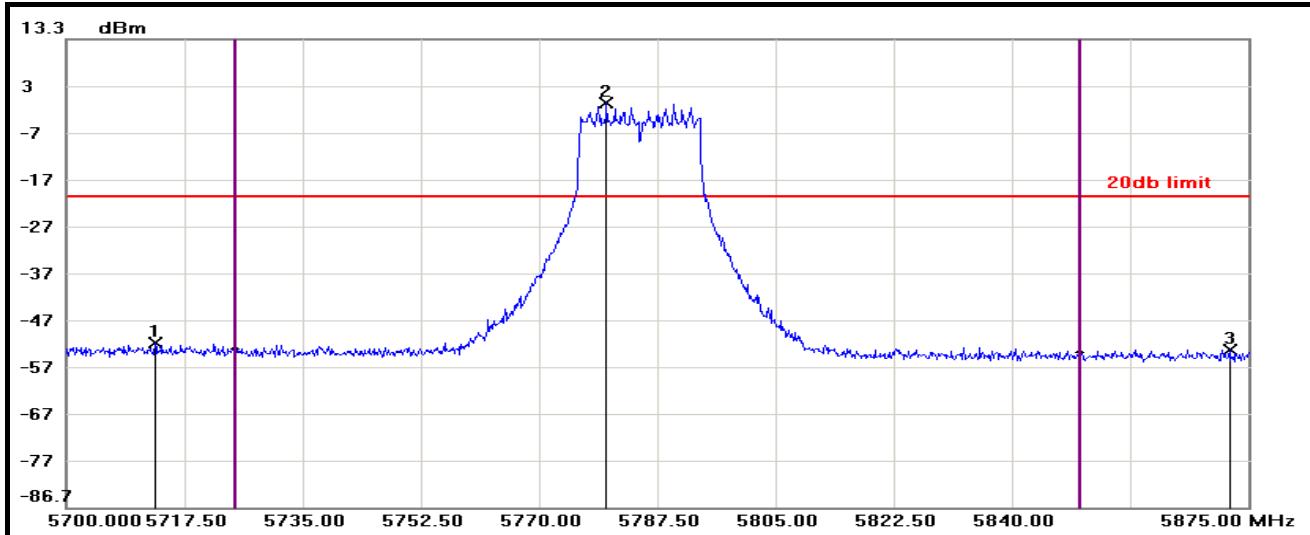


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2969.7300	-47.94	-19.35	-28.59
2	25354.8300	-46.37	-19.35	-27.02

**Remark:** There is no emission in 27GHz ~ 40GHz.

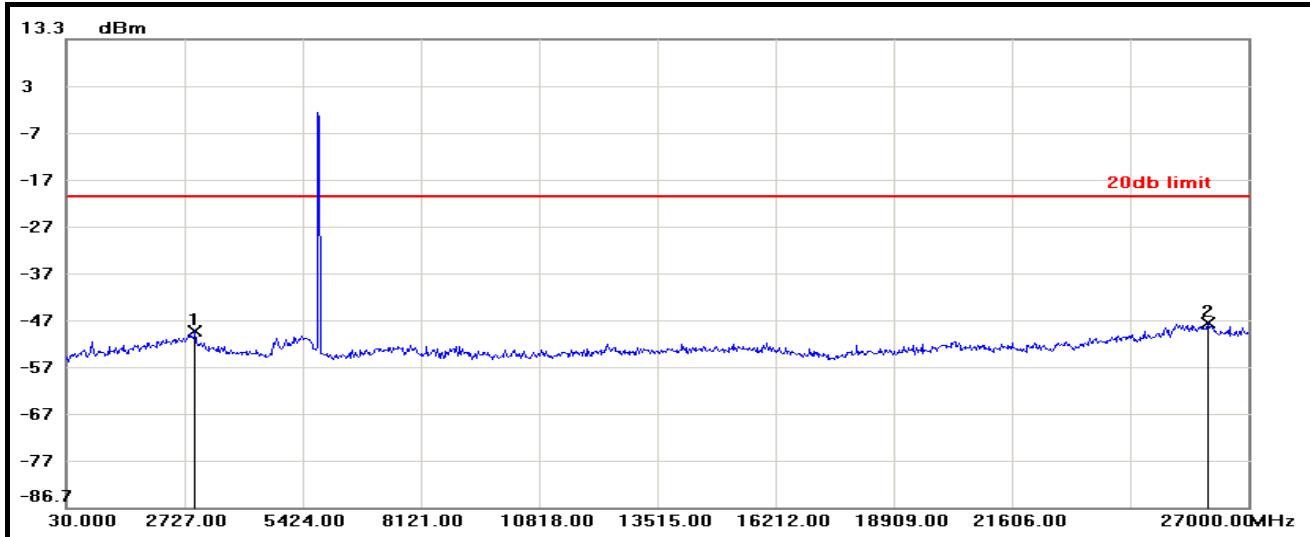


## IEEE 802.11n HT20 Mode / Chain 0 / CH Middle / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5713.1250	-51.56	-20.18	-31.38
2	5779.9750	-0.18	-20.18	20.00
3	5872.2000	-52.96	-20.18	-32.78

## IEEE 802.11n HT20 Mode / Chain 0 / CH Middle / 30MHz ~ 27GHz

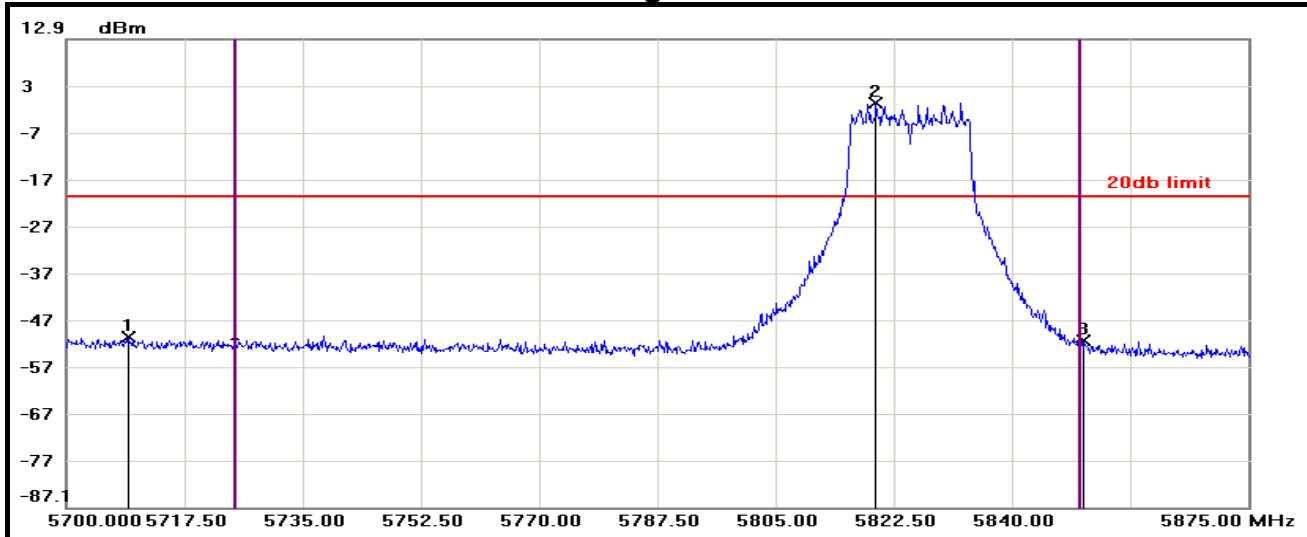


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2969.7300	-48.96	-20.18	-28.78
2	26083.0200	-47.37	-20.18	-27.19

**Remark:** There is no emission in 27GHz ~ 40GHz.

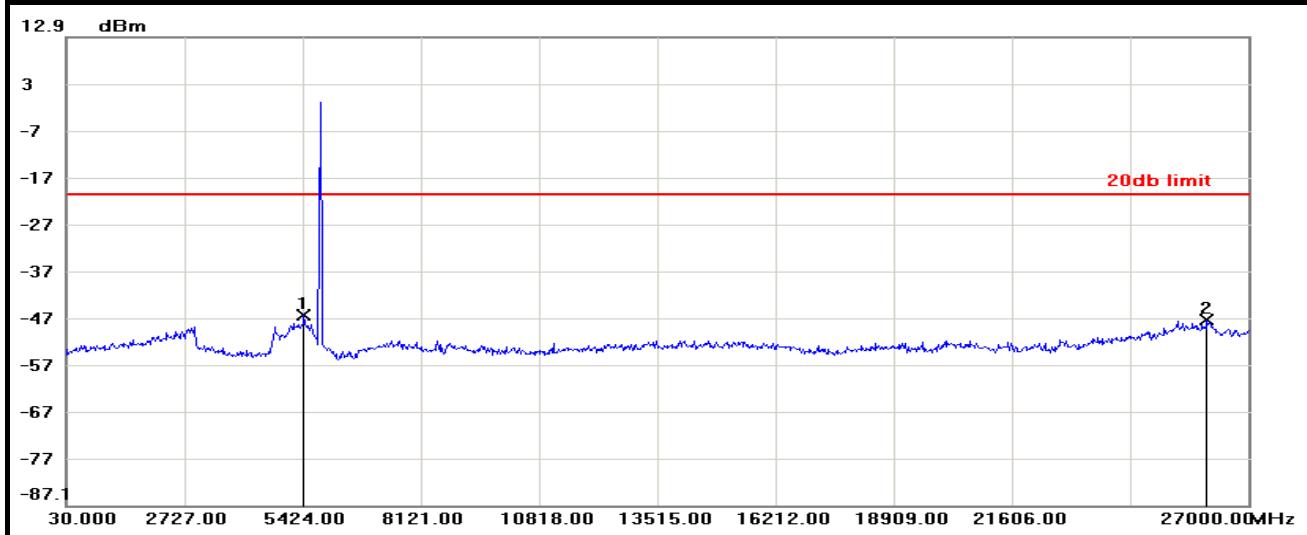


## IEEE 802.11n HT20 Mode / Chain 0 / CH High / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5709.1000	-50.83	-20.60	-30.23
2	5819.8750	-0.60	-20.60	20.00
3	5850.5000	-51.44	-20.60	-30.84

## IEEE 802.11n HT20 Mode / Chain 0 / CH High / 30MHz ~ 27GHz

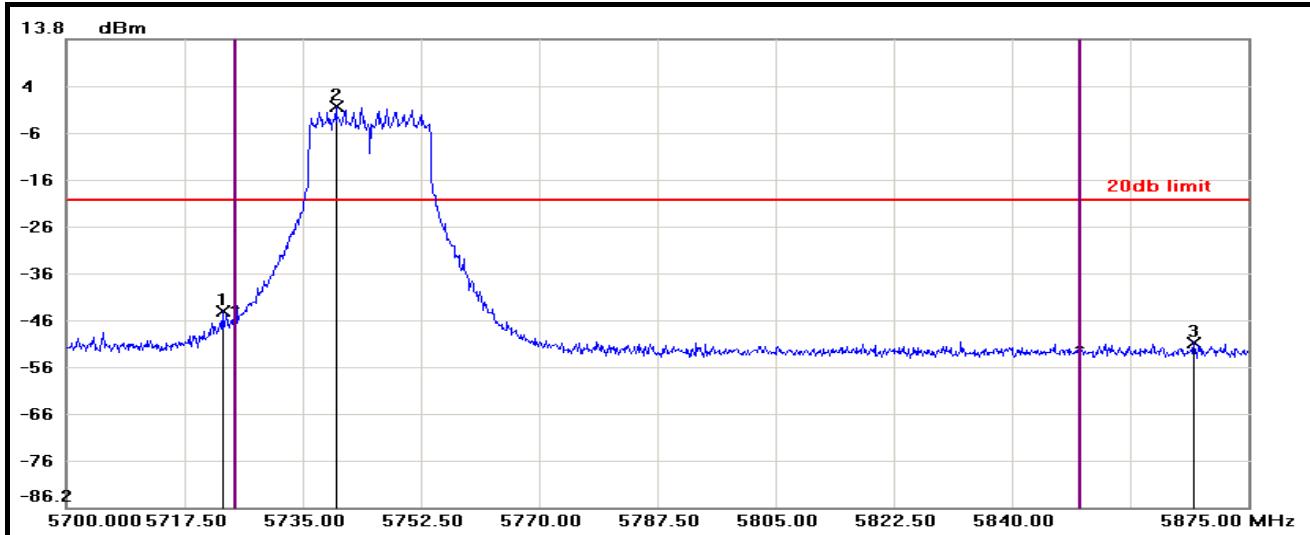


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5450.9700	-46.57	-20.60	-25.97
2	26056.0500	-47.57	-20.60	-26.97

**Remark:** There is no emission in 27GHz ~ 40GHz.

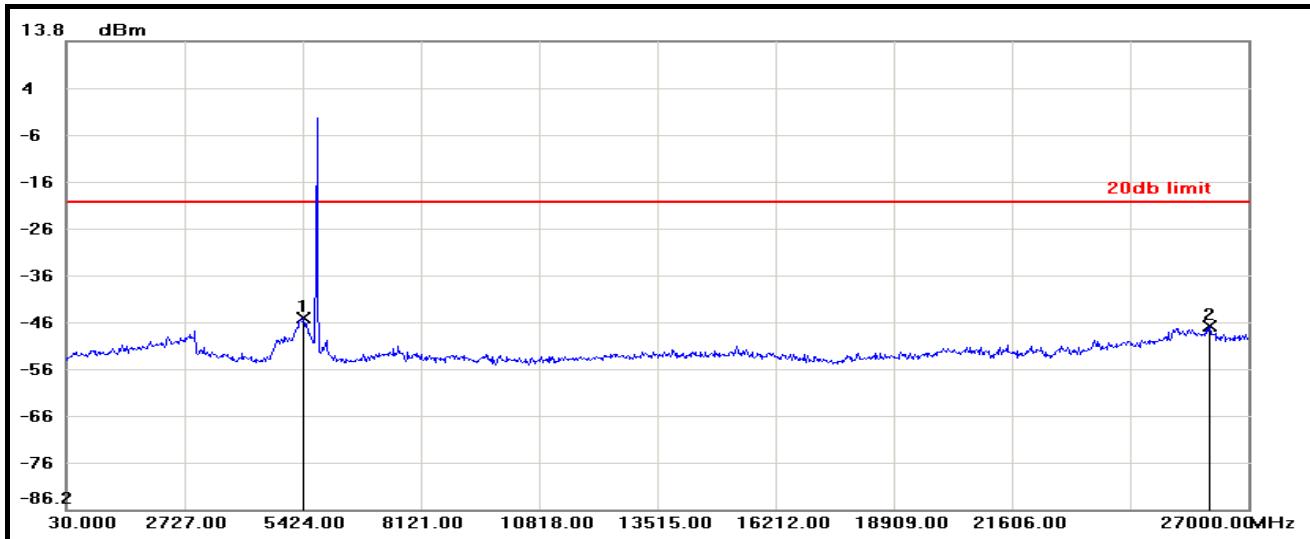


## IEEE 802.11n HT20 Mode / Chain 1 / CH Low / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5723.1000	-44.47	-20.71	-23.76
2	5739.9000	-0.71	-20.71	20.00
3	5866.9500	-50.99	-20.71	-30.28

## IEEE 802.11n HT20 Mode / Chain 1 / CH Low / 30MHz ~ 27GHz

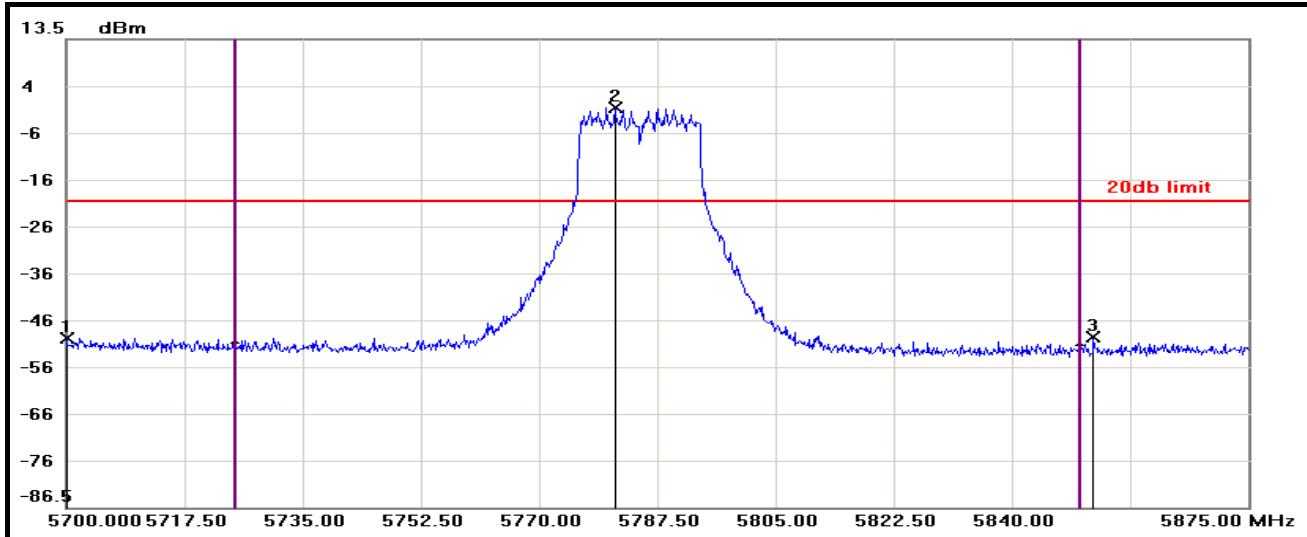


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5450.9700	-45.41	-20.71	-24.70
2	26109.9900	-47.16	-20.71	-26.45

**Remark:** There is no emission in 27GHz ~ 40GHz.

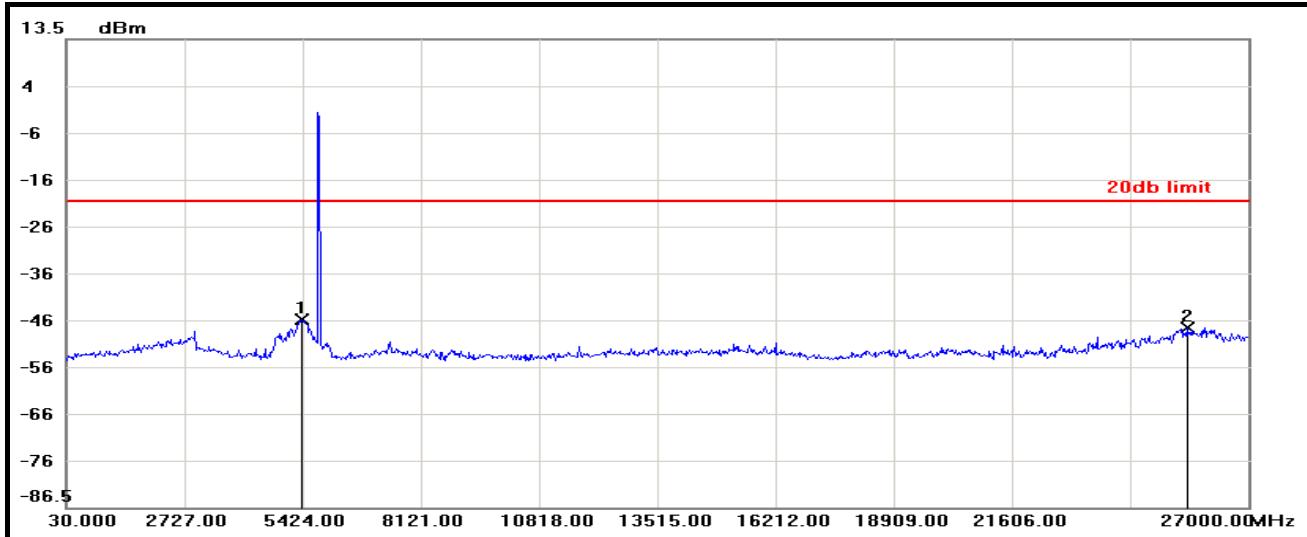


## IEEE 802.11n HT20 Mode / Chain 1 / CH Middle / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5700.0000	-50.38	-21.08	-29.30
2	5781.2000	-1.08	-21.08	20.00
3	5852.0750	-50.11	-21.08	-29.03

## IEEE 802.11n HT20 Mode / Chain 1 / CH Middle / 30MHz ~ 27GHz

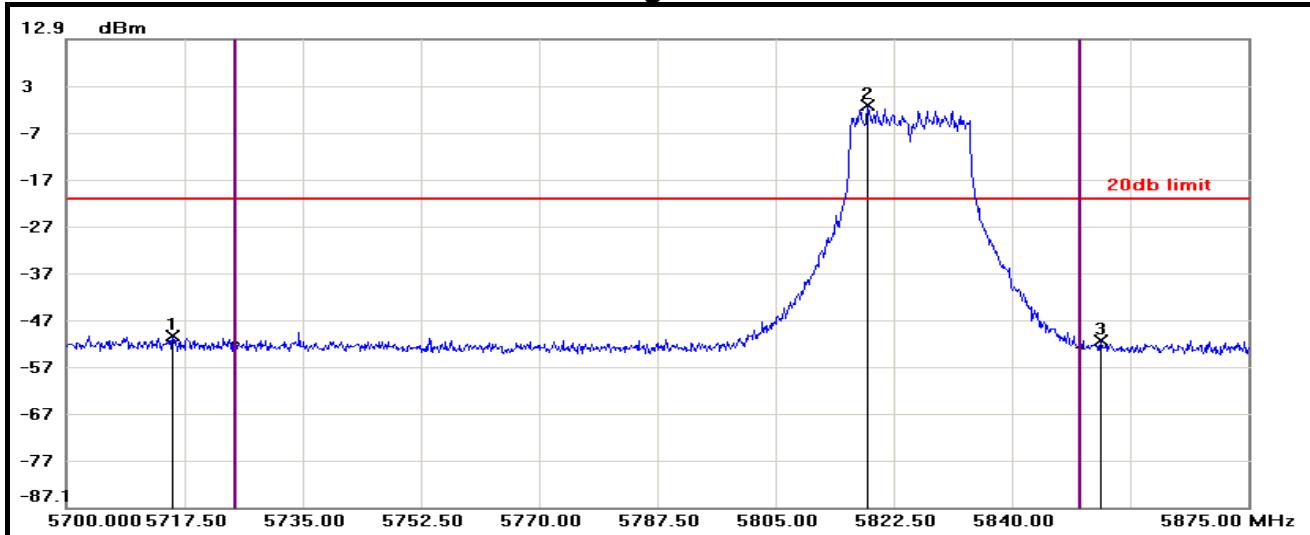


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5397.0300	-46.25	-21.08	-25.17
2	25597.5600	-48.16	-21.08	-27.08

**Remark:** There is no emission in 27GHz ~ 40GHz.

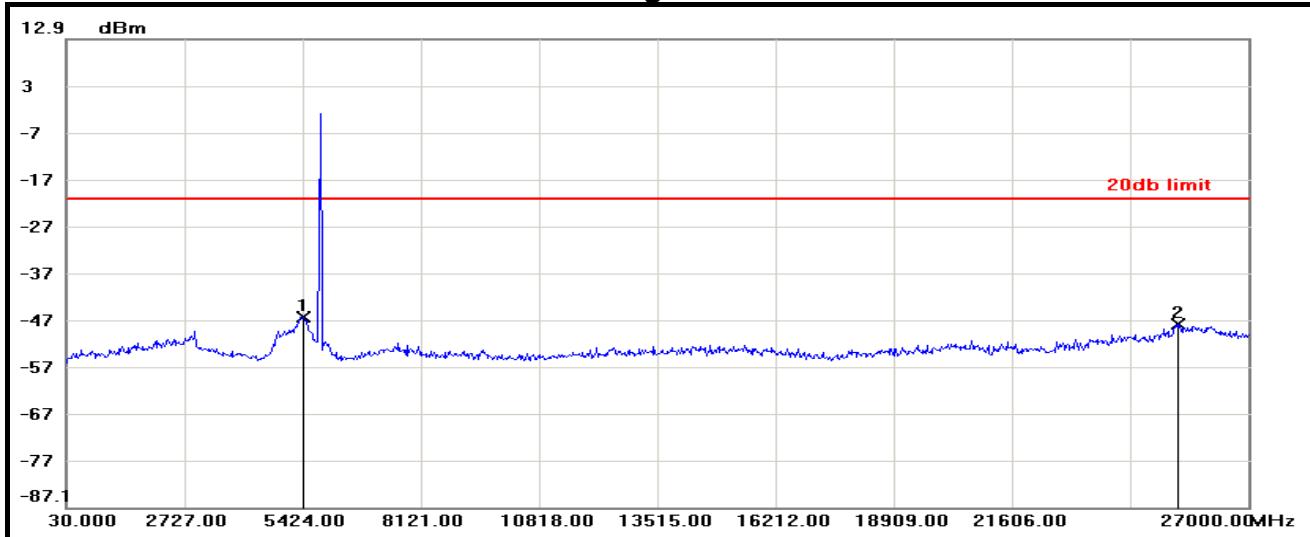


## IEEE 802.11n HT20 Mode / Chain 1 / CH High / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5715.7500	-50.51	-21.28	-29.23
2	5818.6500	-1.28	-21.28	20.00
3	5853.1250	-51.58	-21.28	-30.30

## IEEE 802.11n HT20 Mode / Chain 1 / CH High / 30MHz ~ 27GHz

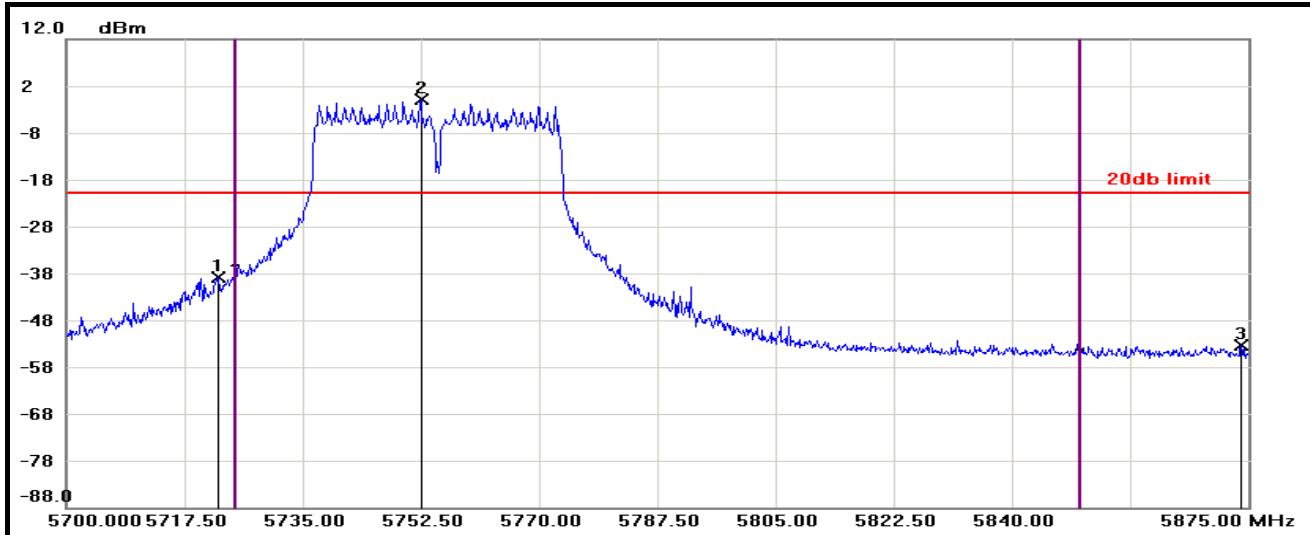


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5450.9700	-46.42	-21.28	-25.14
2	25408.7700	-48.01	-21.28	-26.73

**Remark:** There is no emission in 27GHz ~ 40GHz.

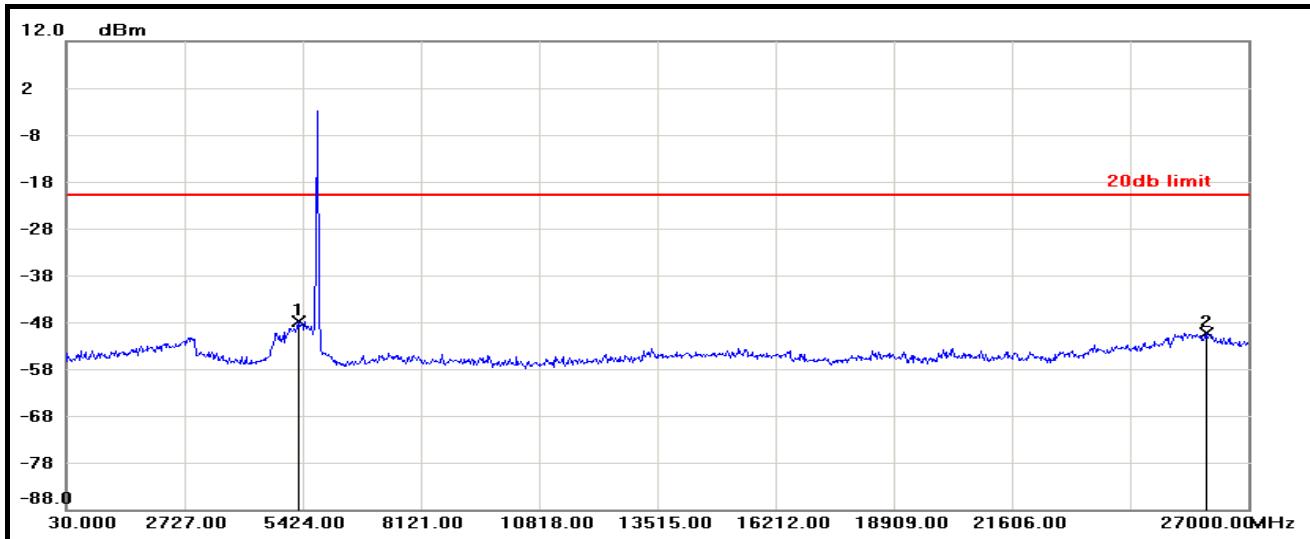


## IEEE 802.11n HT40 Mode / Chain 0 / CH Low / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5722.5750	-38.88	-20.93	-17.95
2	5752.5000	-0.93	-20.93	20.00
3	5873.9500	-53.51	-20.93	-32.58

## IEEE 802.11n HT40 Mode / Chain 0 / CH Low / 30MHz ~ 27GHz

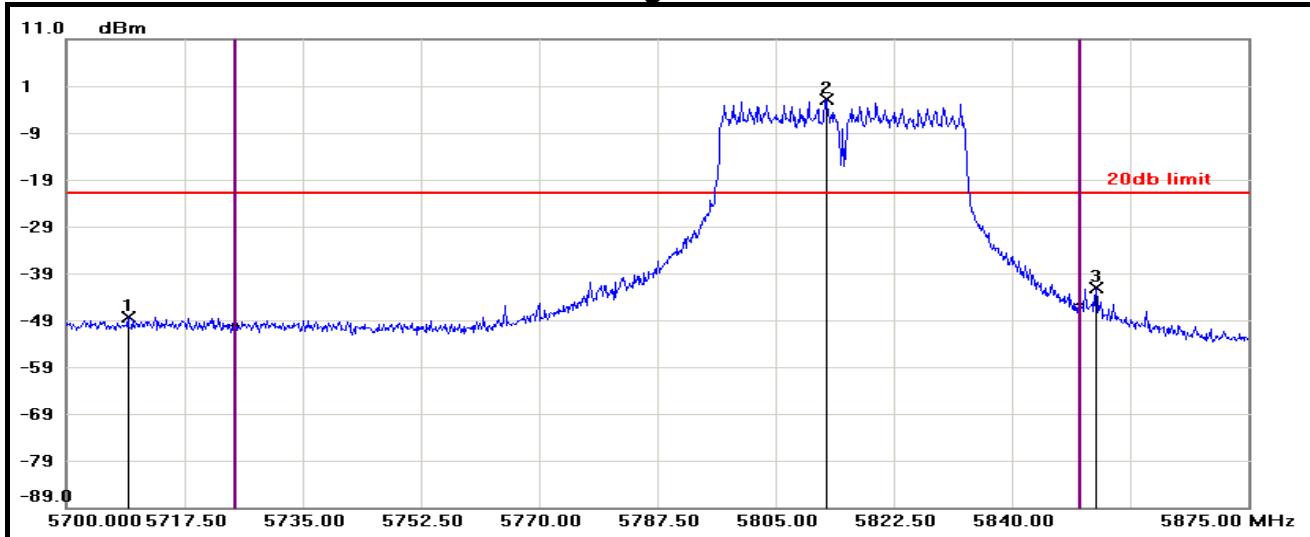


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5316.1200	-47.94	-20.93	-27.01
2	26029.0800	-50.39	-20.93	-29.46

**Remark:** There is no emission in 27GHz ~ 40GHz.

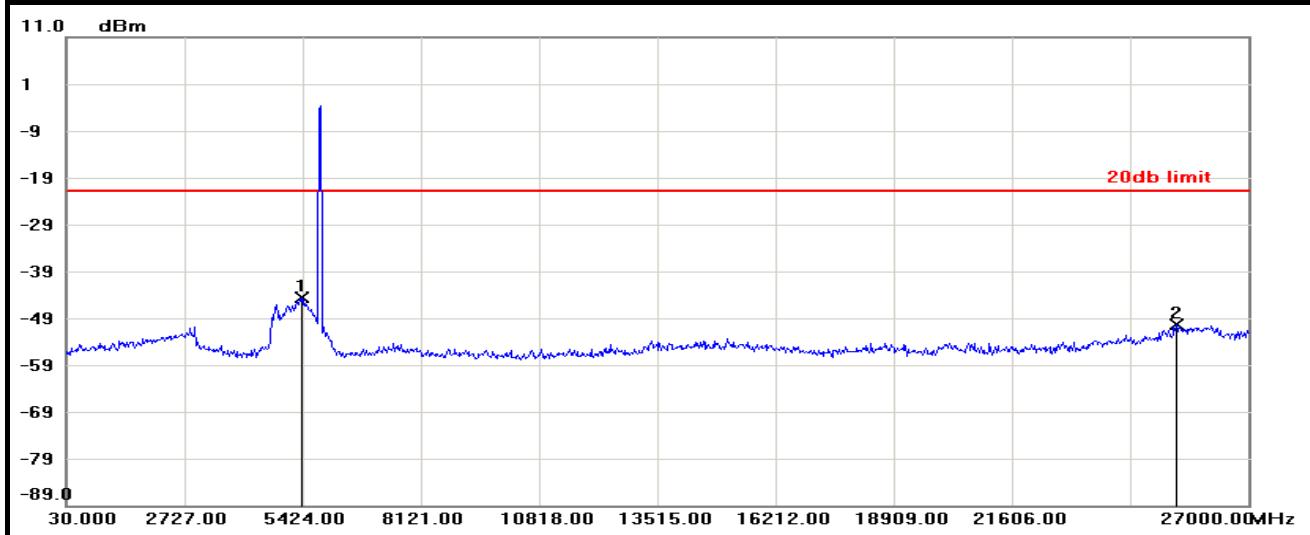


## IEEE 802.11n HT40 Mode / Chain 0 / CH High / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5709.1000	-48.29	-21.91	-26.38
2	5812.5250	-1.91	-21.91	20.00
3	5852.4250	-42.13	-21.91	-20.22

## IEEE 802.11n HT40 Mode / Chain 0 / CH High / 30MHz ~ 27GHz

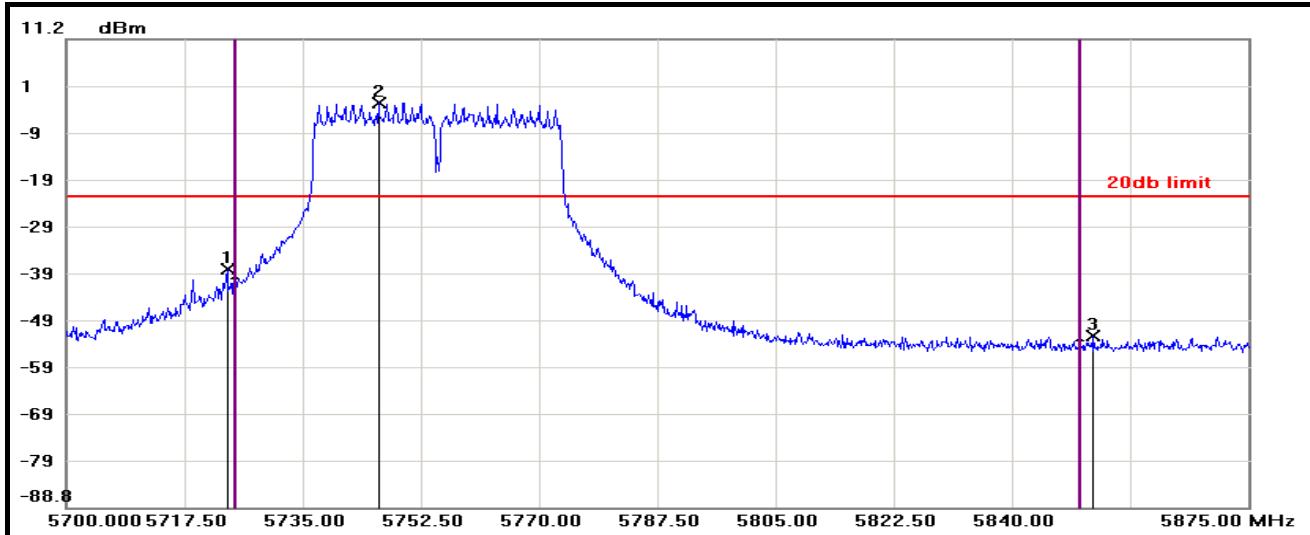


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5397.0300	-44.66	-21.91	-22.75
2	25354.8300	-50.25	-21.91	-28.34

**Remark:** There is no emission in 27GHz ~ 40GHz.

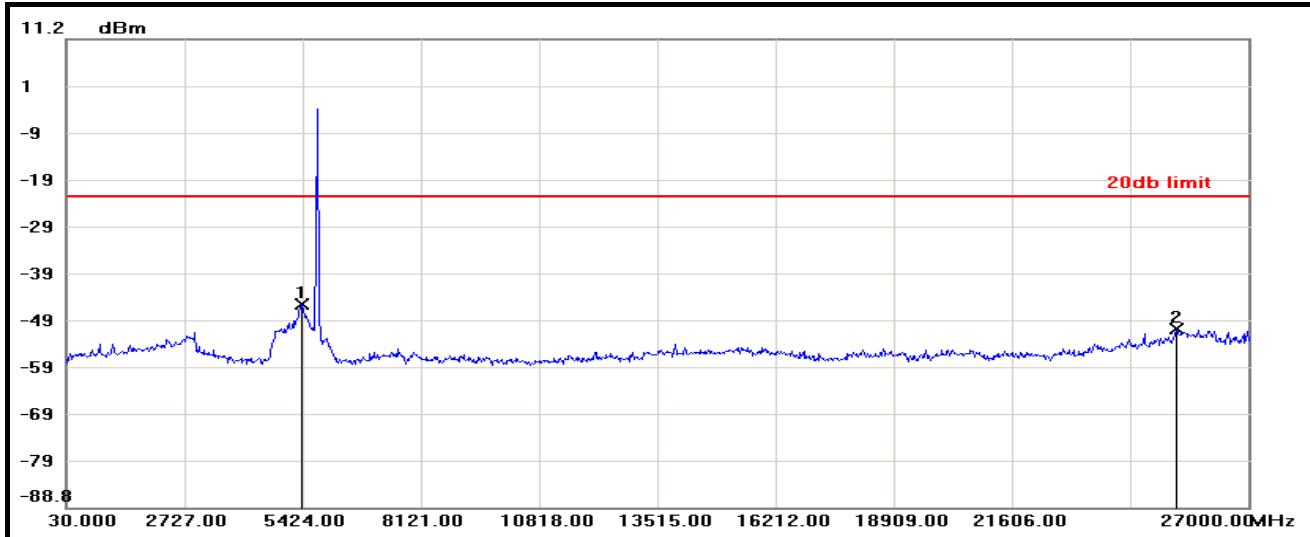


## IEEE 802.11n HT40 Mode / Chain 1 / CH Low / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5723.8000	-38.04	-22.43	-15.61
2	5746.2000	-2.43	-22.43	20.00
3	5852.0750	-52.06	-22.43	-29.63

## IEEE 802.11n HT40 Mode / Chain 1 / CH Low / 30MHz ~ 27GHz

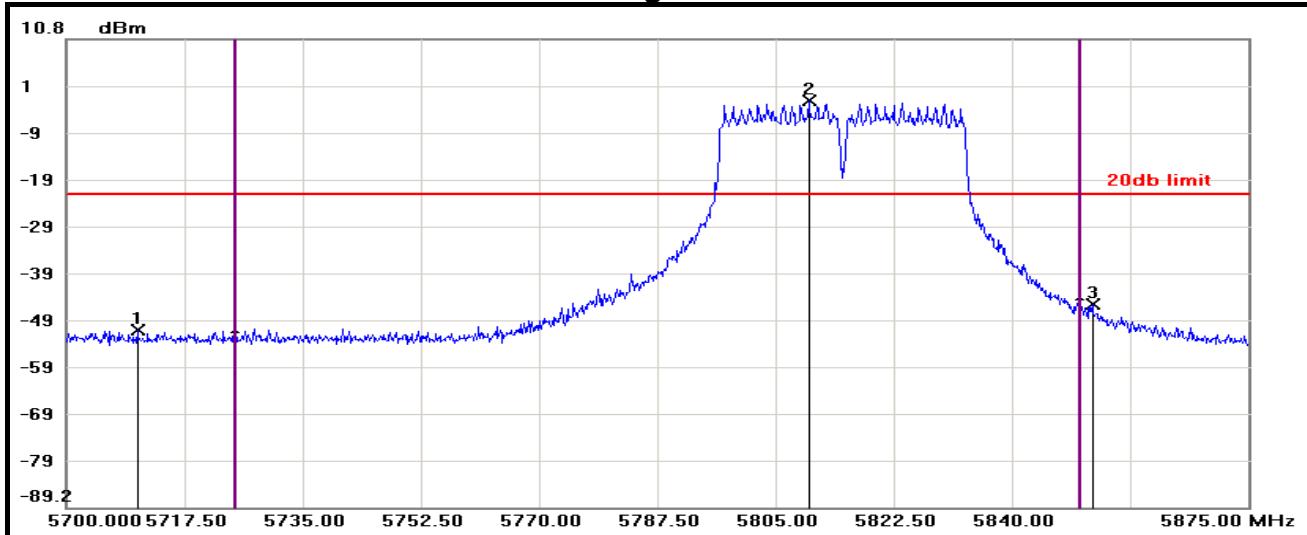


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5397.0300	-45.36	-22.43	-22.93
2	25354.8300	-50.73	-22.43	-28.30

**Remark:** There is no emission in 27GHz ~ 40GHz.

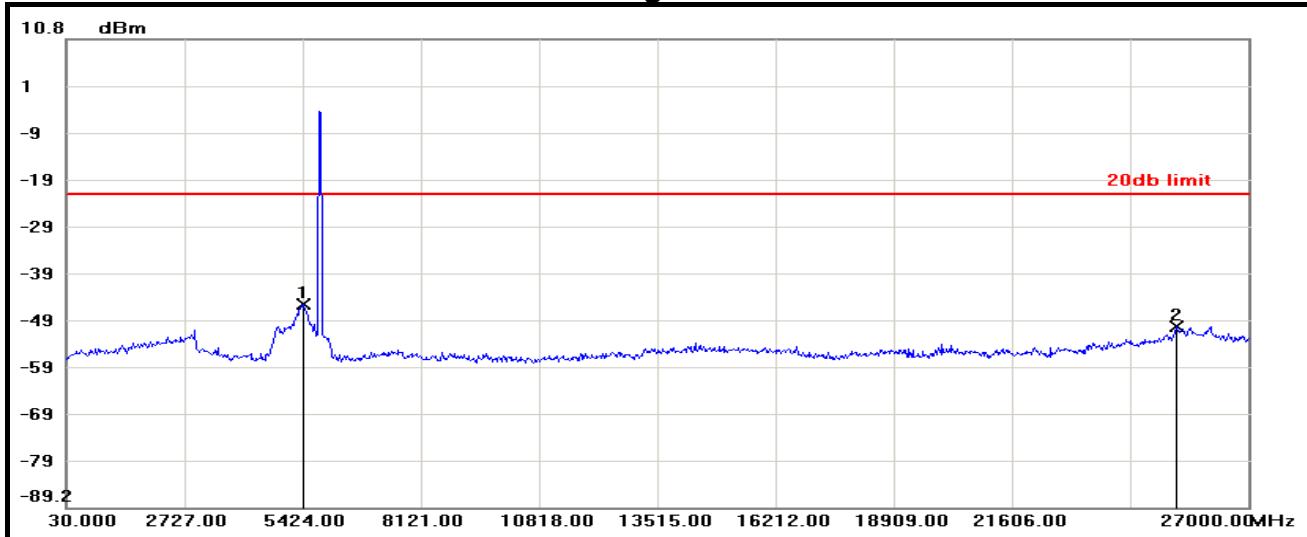


## IEEE 802.11n HT40 Mode / Chain 1 / CH High / 5.7GHz ~ 5.875GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5710.5000	-51.24	-22.46	-28.78
2	5809.9000	-2.46	-22.46	20.00
3	5851.9000	-45.95	-22.46	-23.49

## IEEE 802.11n HT40 Mode / Chain 1 / CH High / 30MHz ~ 27GHz

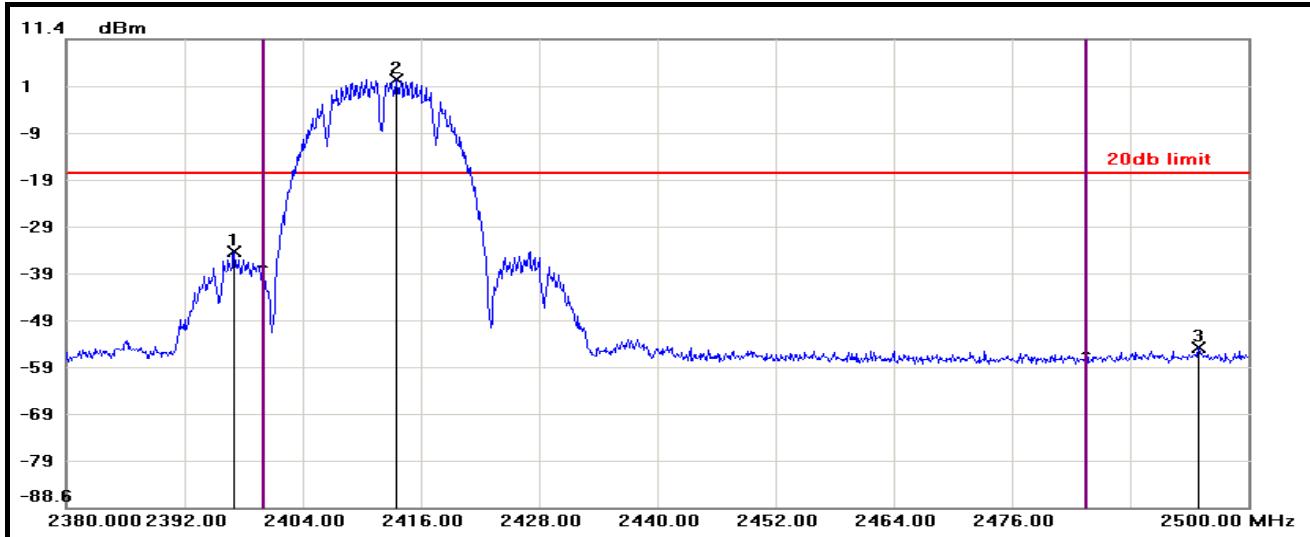


No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	5424.0000	-45.95	-22.46	-23.49
2	25354.8300	-50.54	-22.46	-28.08

**Remark:** There is no emission in 27GHz ~ 40GHz.

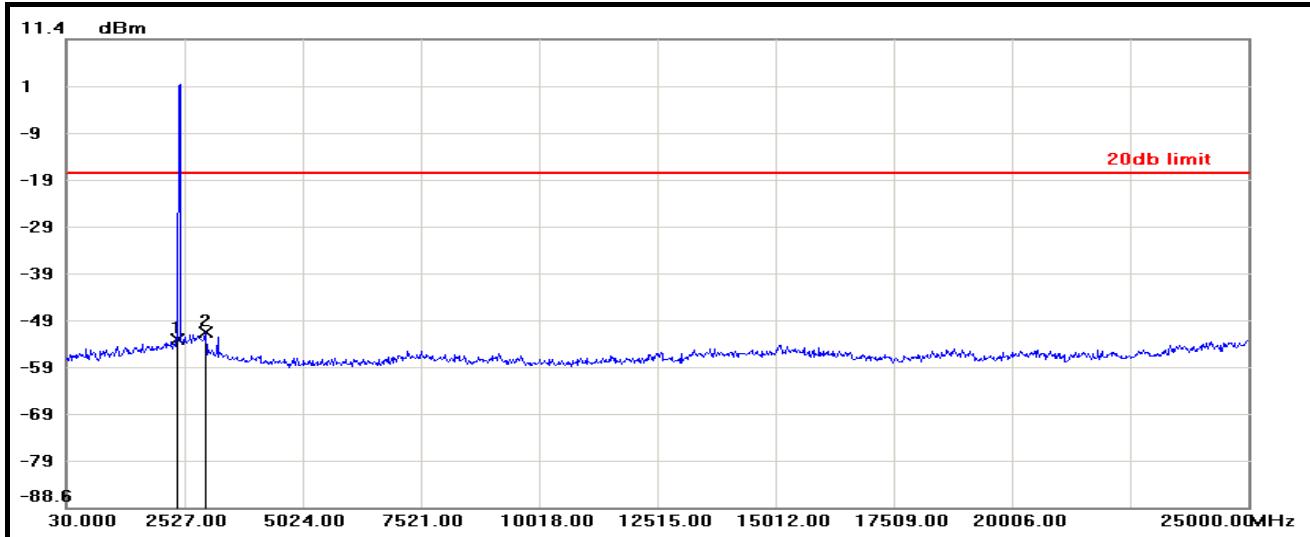


## IEEE 802.11b Mode / CH Low / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2397.0400	-34.01	-17.22	-16.79
2	2413.4800	2.78	-17.22	20.00
3	2494.9600	-54.44	-17.22	-37.22

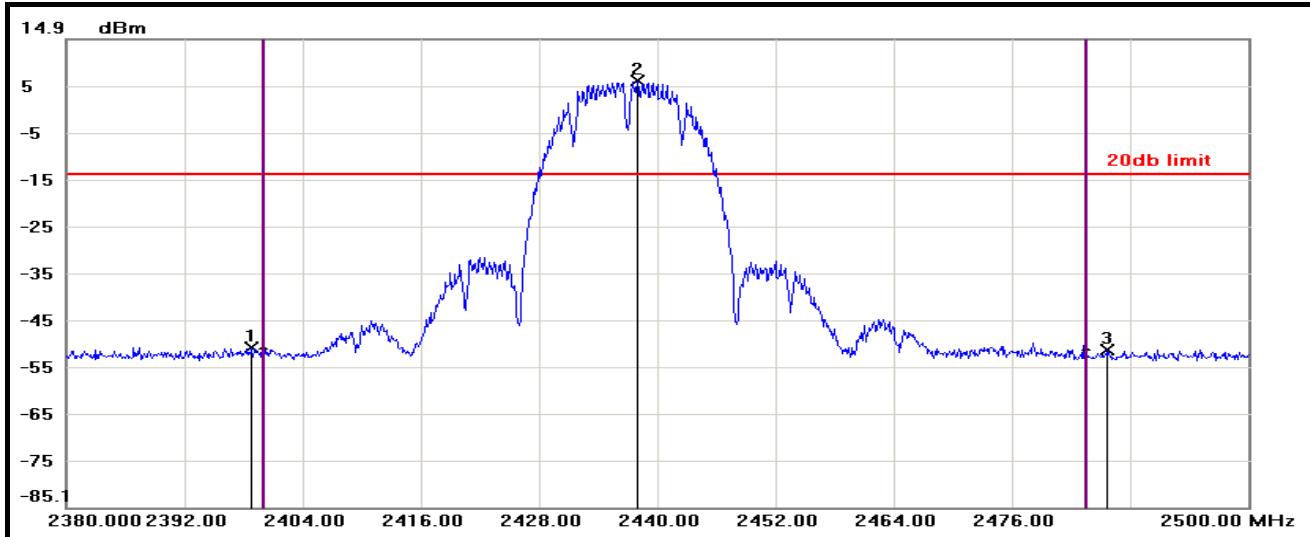
## IEEE 802.11b Mode / CH Low / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-52.62	-17.22	-35.40
2	2976.4600	-51.11	-17.22	-33.89

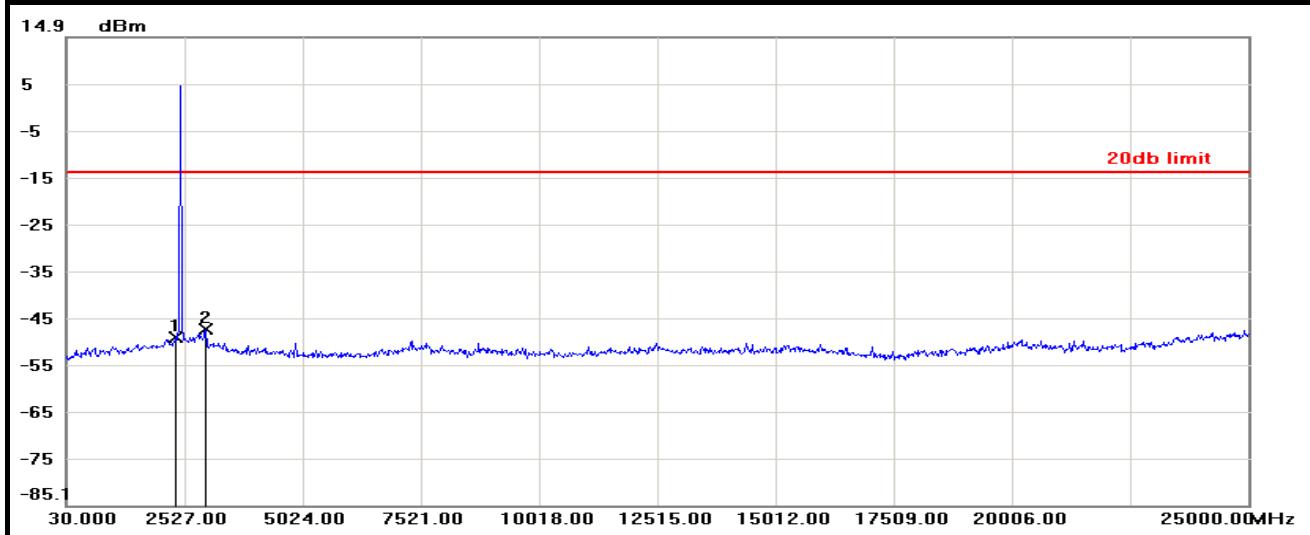


## IEEE 802.11b Mode / CH Middle / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2398.8400	-50.84	-13.86	-36.98
2	2437.9600	6.14	-13.86	20.00
3	2485.7200	-51.43	-13.86	-37.57

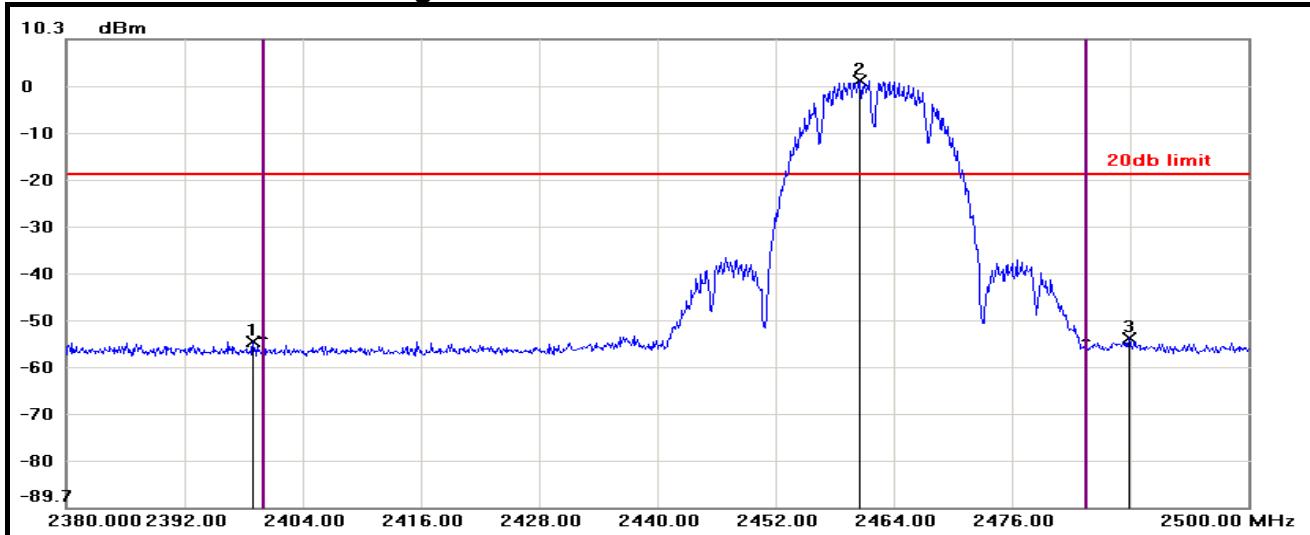
## IEEE 802.11b Mode / CH Middle / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2352.2100	-49.12	-13.86	-35.26
2	2976.4600	-47.43	-13.86	-33.57

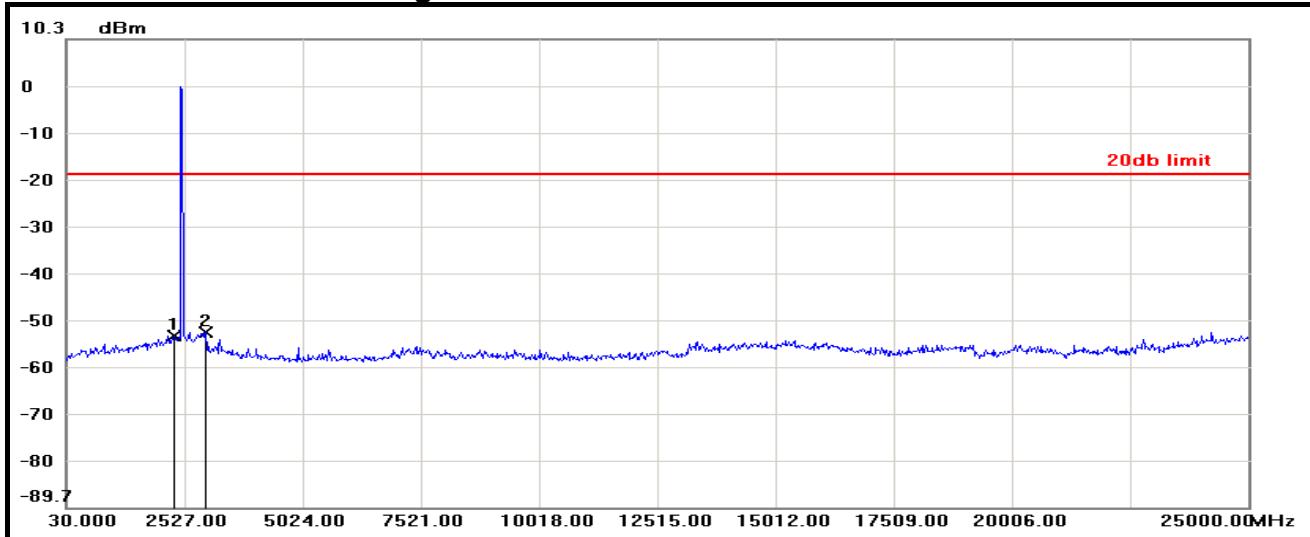


## IEEE 802.11b Mode / CH High / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2398.9600	-54.34	-18.45	-35.89
2	2460.5200	1.55	-18.45	20.00
3	2487.8800	-53.55	-18.45	-35.10

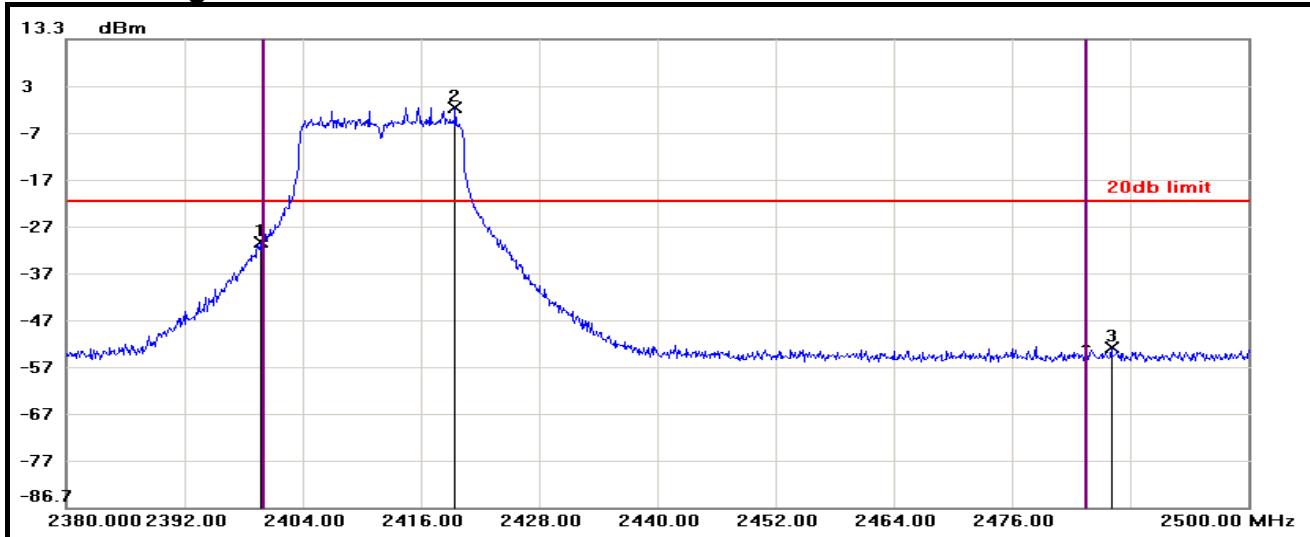
## IEEE 802.11b Mode / CH High / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2302.2700	-52.96	-18.45	-34.51
2	2976.4600	-52.16	-18.45	-33.71

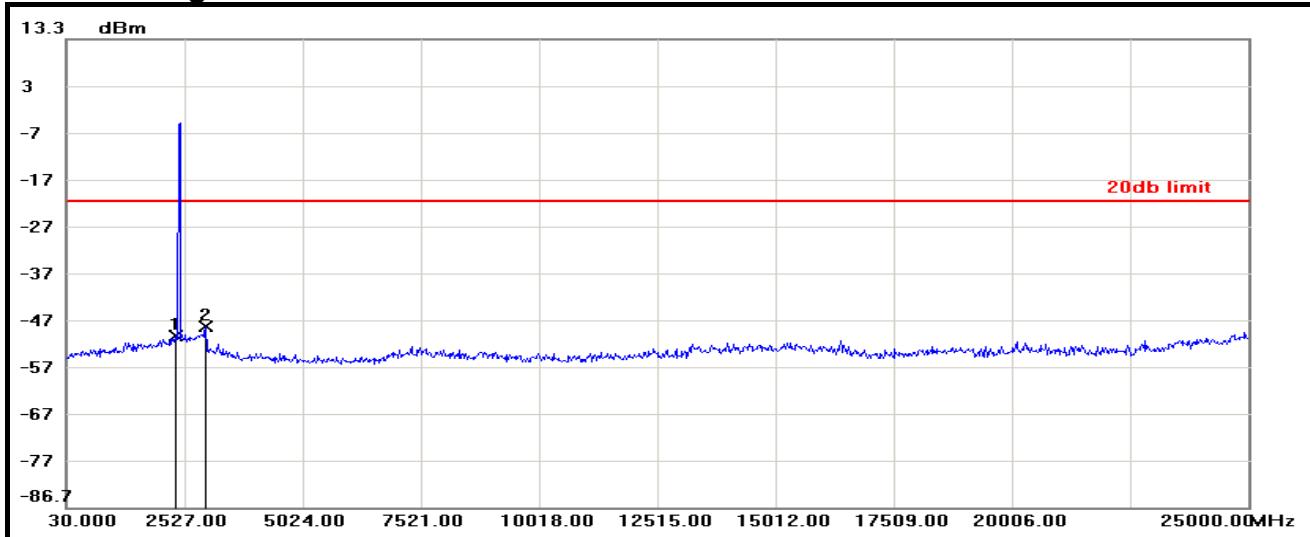


## IEEE 802.11g Mode / CH Low / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.8000	-29.99	-21.23	-8.76
2	2419.4800	-1.23	-21.23	20.00
3	2486.0800	-52.60	-21.23	-31.37

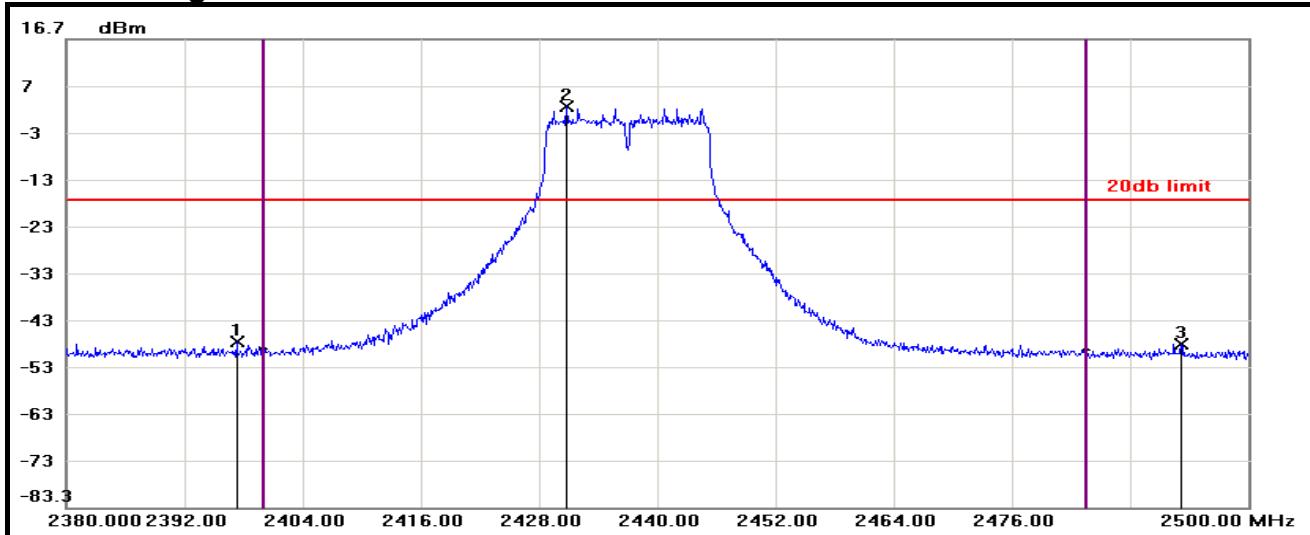
## IEEE 802.11g Mode / CH Low / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2327.2400	-50.14	-21.23	-28.91
2	2976.4600	-47.96	-21.23	-26.73

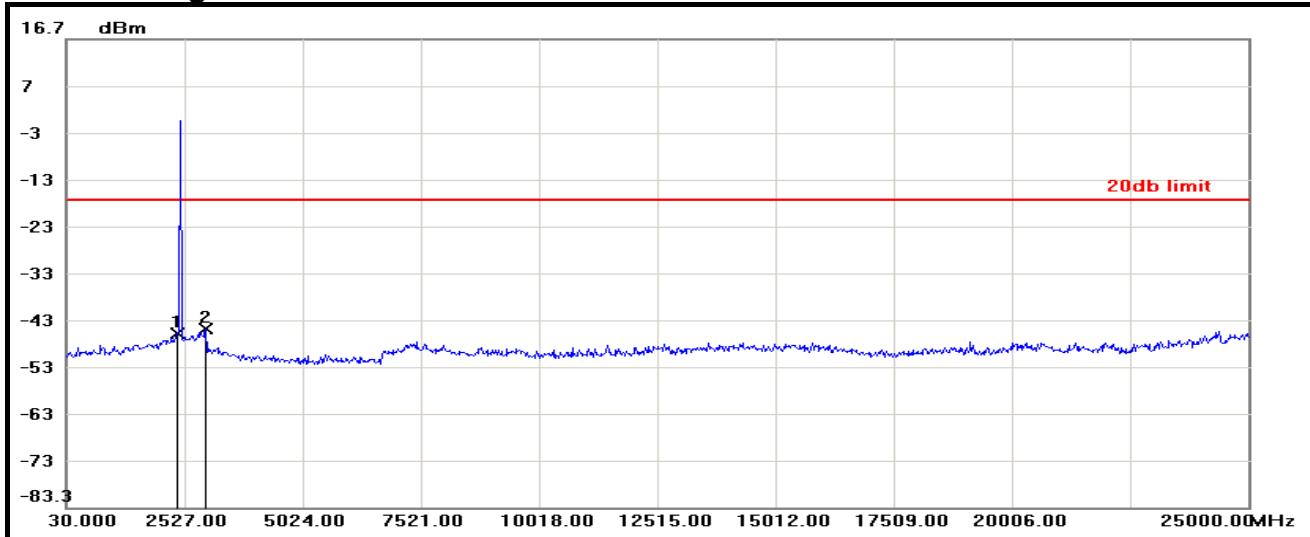


## IEEE 802.11g Mode / CH Middle / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2397.2800	-47.89	-17.73	-30.16
2	2430.7600	2.27	-17.73	20.00
3	2493.1600	-48.37	-17.73	-30.64

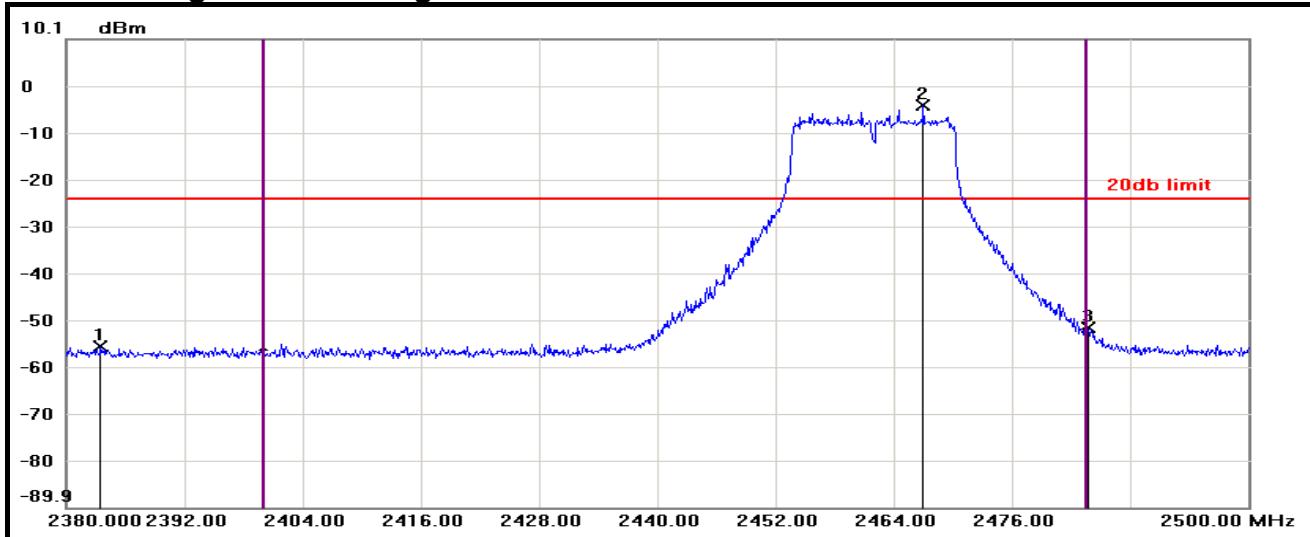
## IEEE 802.11g Mode / CH Middle / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-46.11	-17.73	-28.38
2	2976.4600	-45.19	-17.73	-27.46

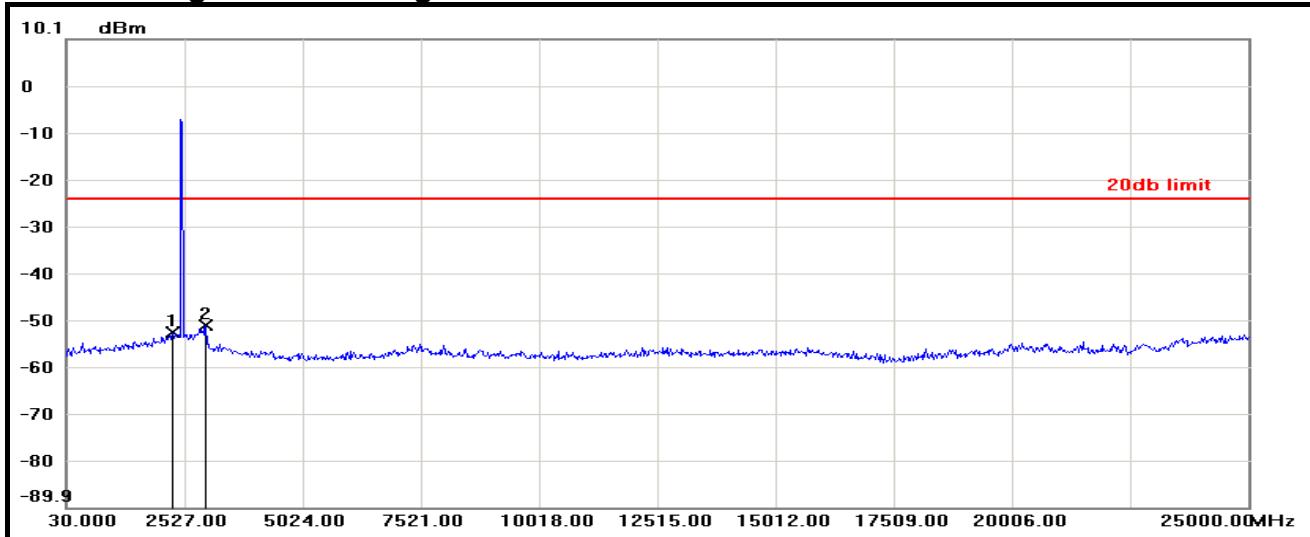


## IEEE 802.11g Mode / CH High / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2383.4800	-55.60	-24.17	-31.43
2	2467.0000	-4.17	-24.17	20.00
3	2483.8000	-51.49	-24.17	-27.32

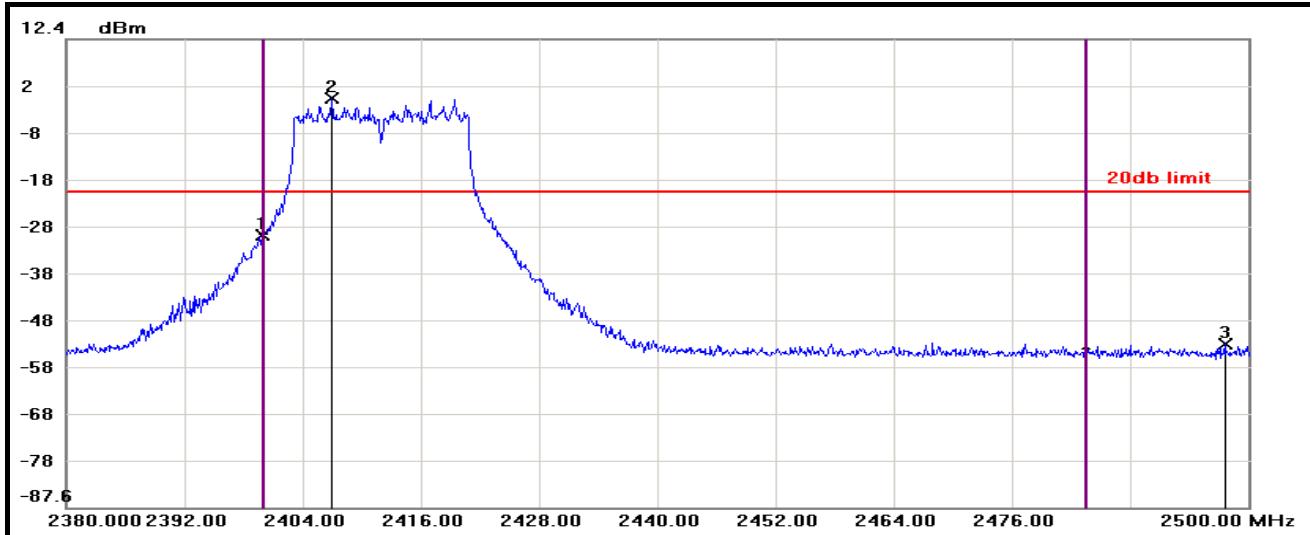
## IEEE 802.11g Mode / CH High / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2277.3000	-52.44	-24.17	-28.27
2	2976.4600	-51.05	-24.17	-26.88

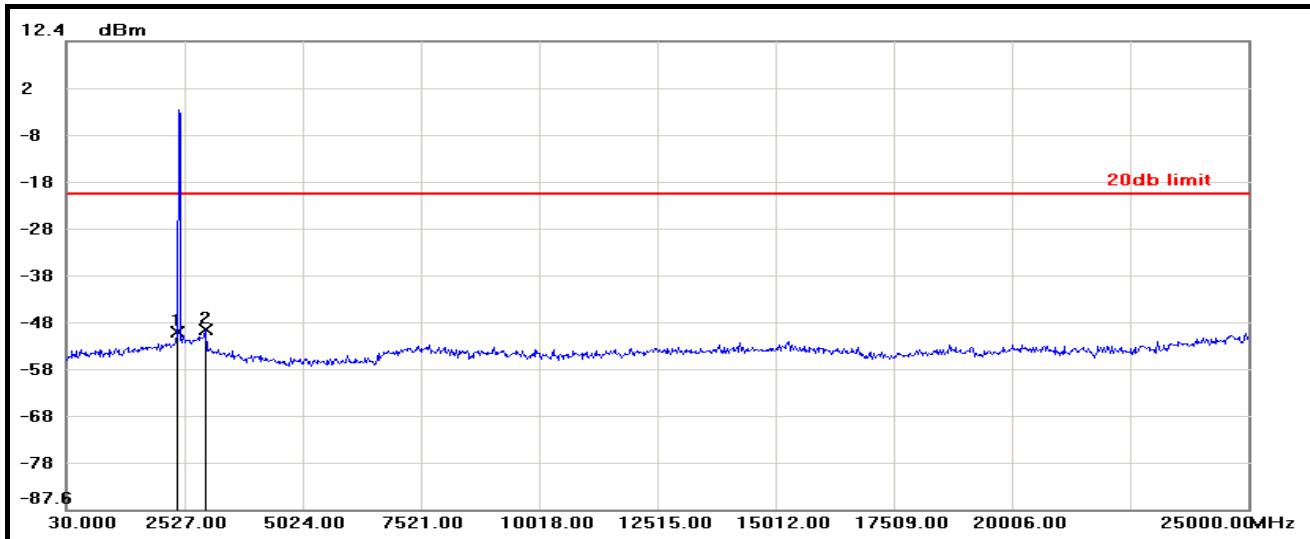


## IEEE 802.11n HT20 Mode / Chain 0 / CH Low / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.9200	-29.45	-20.23	-9.22
2	2407.0000	-0.23	-20.23	20.00
3	2497.6000	-52.62	-20.23	-32.39

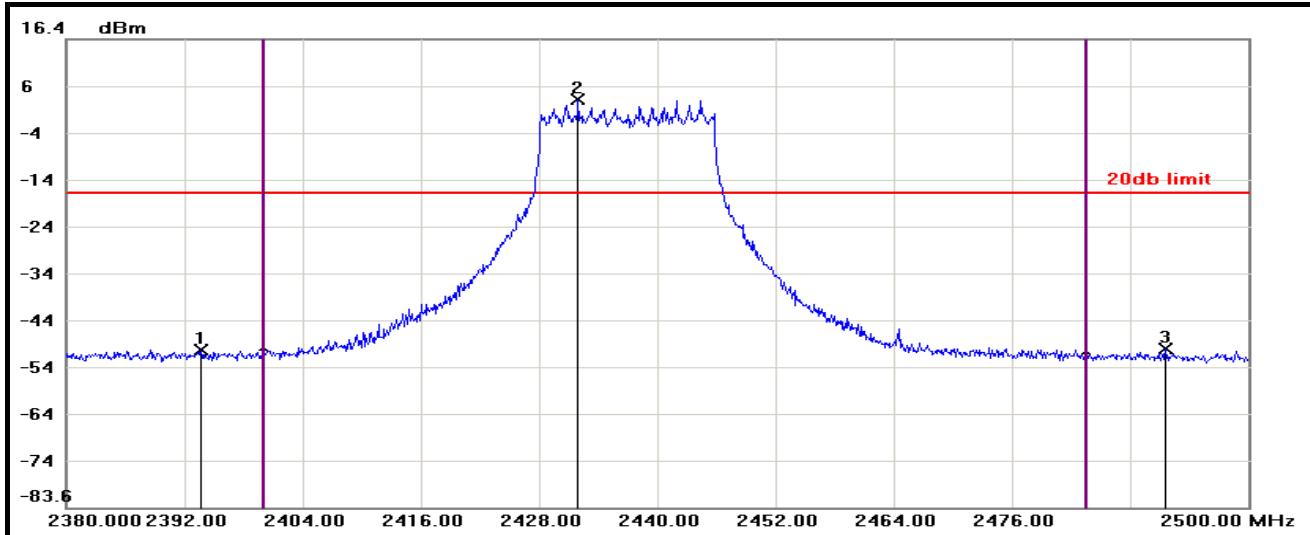
## IEEE 802.11n HT20 Mode / Chain 0 / CH Low / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-49.66	-20.23	-29.43
2	2976.4600	-49.30	-20.23	-29.07

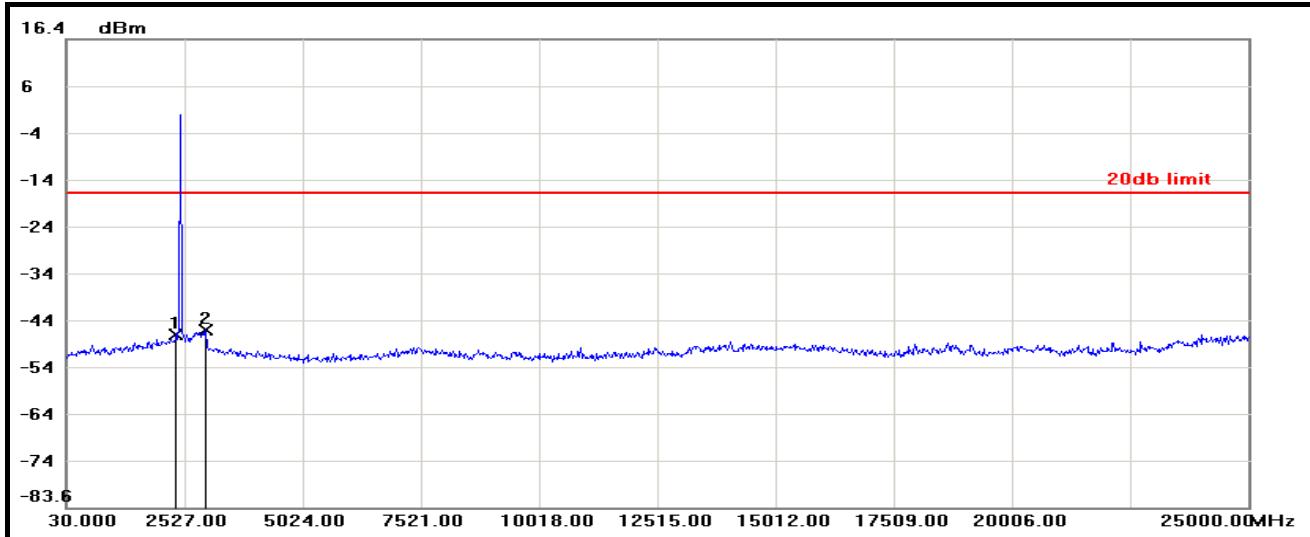


## IEEE 802.11n HT20 Mode / Chain 0 / CH Middle / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2393.6800	-49.94	-16.54	-33.40
2	2431.9600	3.46	-16.54	20.00
3	2491.6000	-49.59	-16.54	-33.05

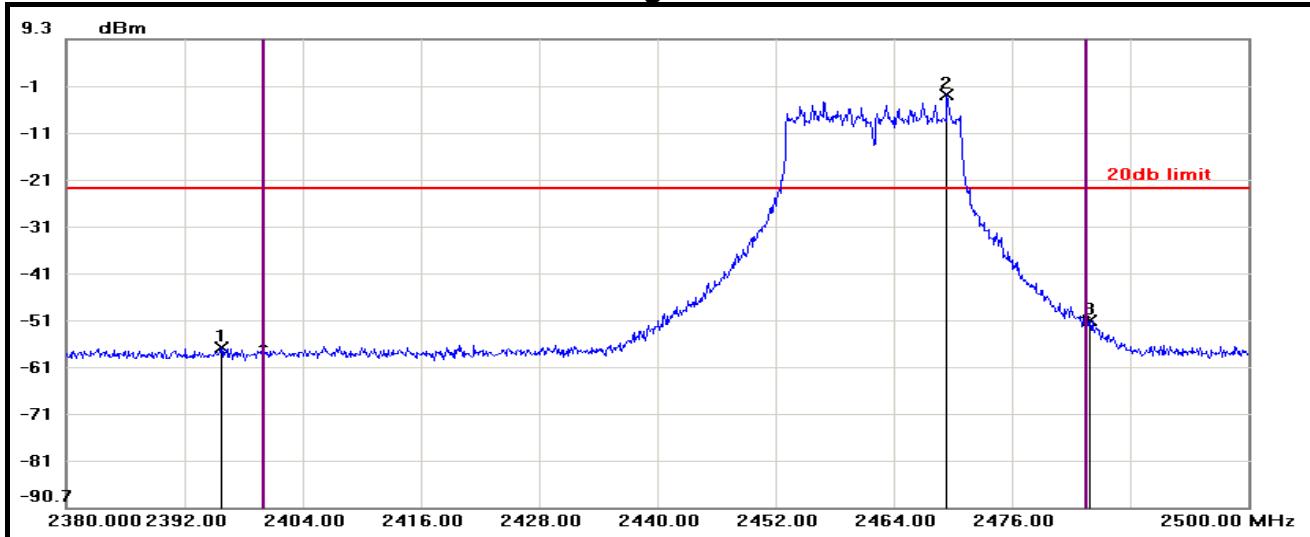
## IEEE 802.11n HT20 Mode / Chain 0 / CH Middle / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2352.2100	-46.80	-16.54	-30.26
2	2976.4600	-45.73	-16.54	-29.19

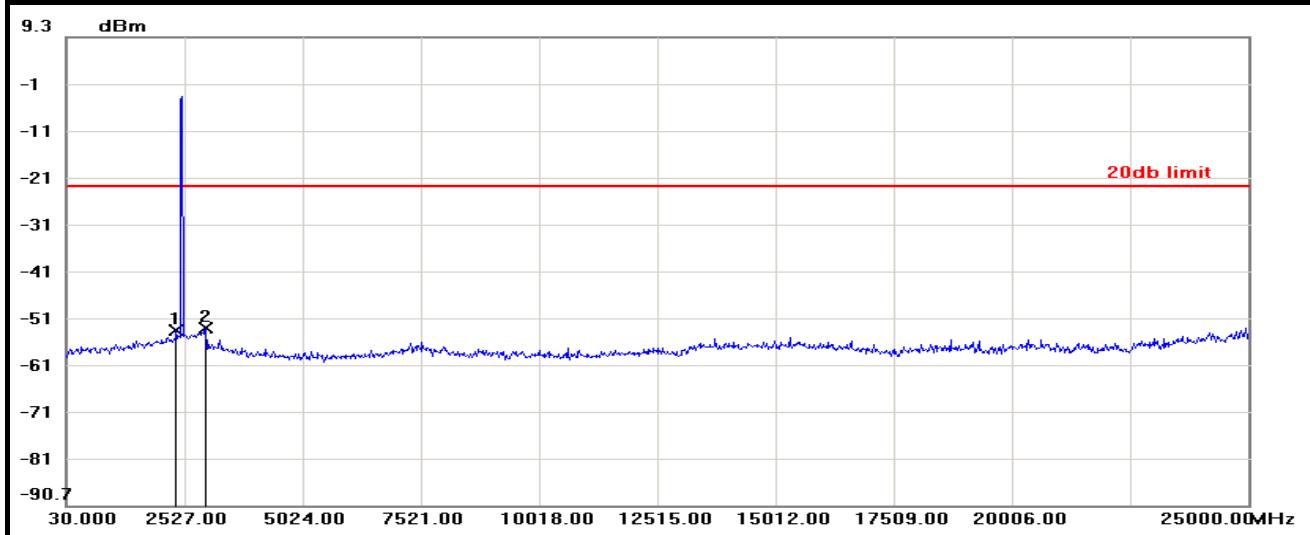


## IEEE 802.11n HT20 Mode / Chain 0 / CH High / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2395.7200	-56.67	-22.51	-34.16
2	2469.4000	-2.51	-22.51	20.00
3	2483.9200	-50.69	-22.51	-28.18

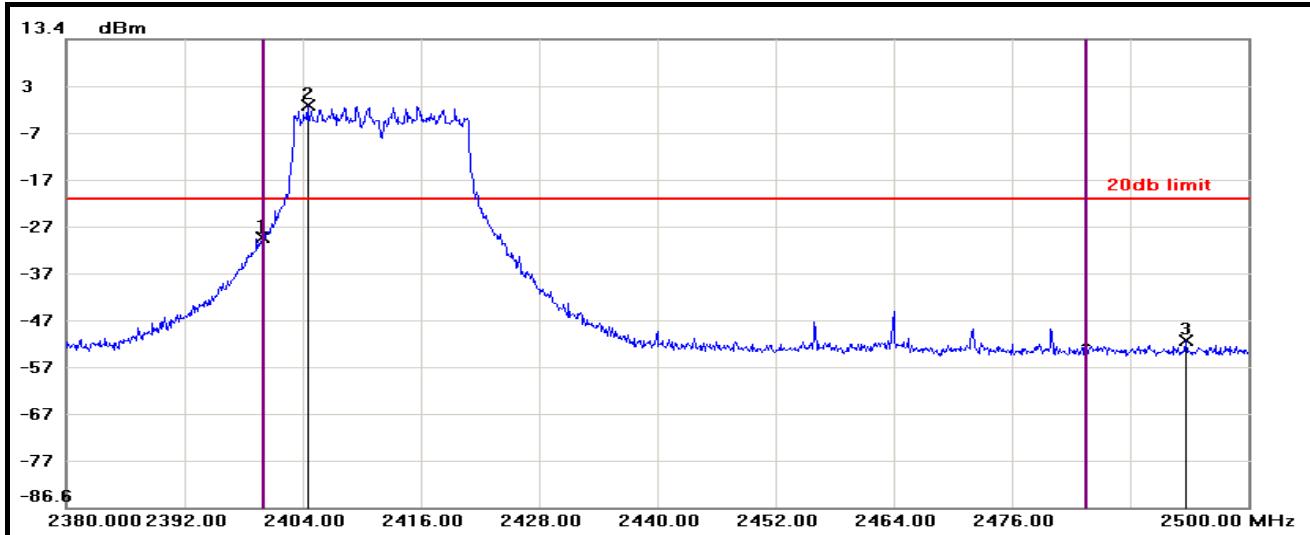
## IEEE 802.11n HT20 Mode / Chain 0 / CH High / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2352.2100	-53.36	-22.51	-30.85
2	2976.4600	-52.79	-22.51	-30.28

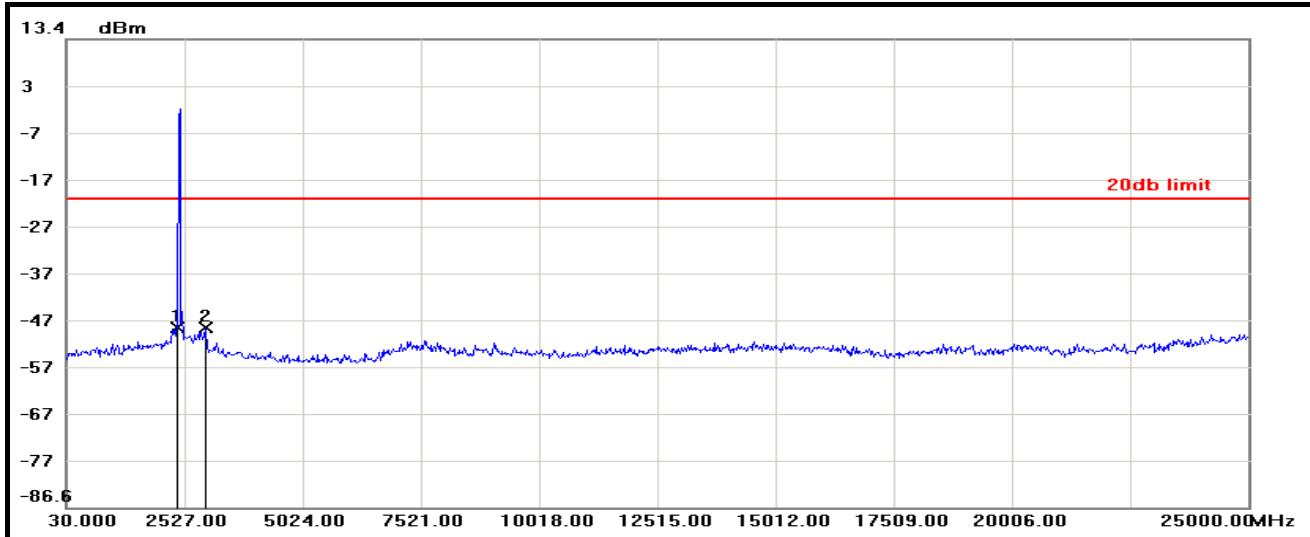


## IEEE 802.11n HT20 Mode / Chain 1 / CH Low / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.9200	-28.91	-20.72	-8.19
2	2404.4800	-0.72	-20.72	20.00
3	2493.6400	-50.84	-20.72	-30.12

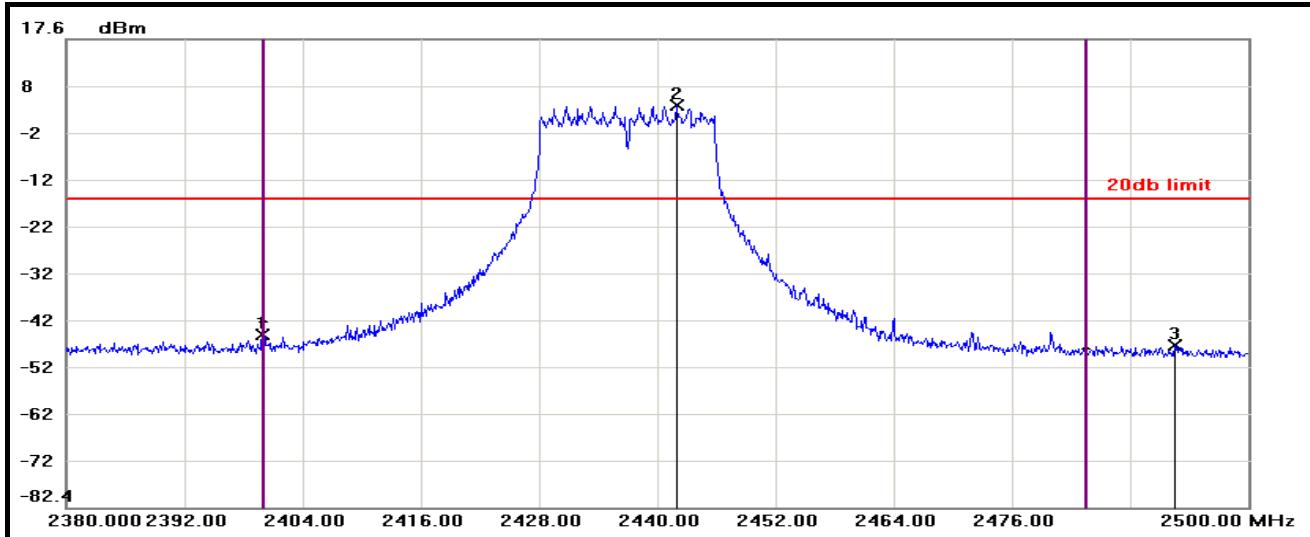
## IEEE 802.11n HT20 Mode / Chain 1 / CH Low / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-48.20	-20.72	-27.48
2	2976.4600	-48.12	-20.72	-27.40

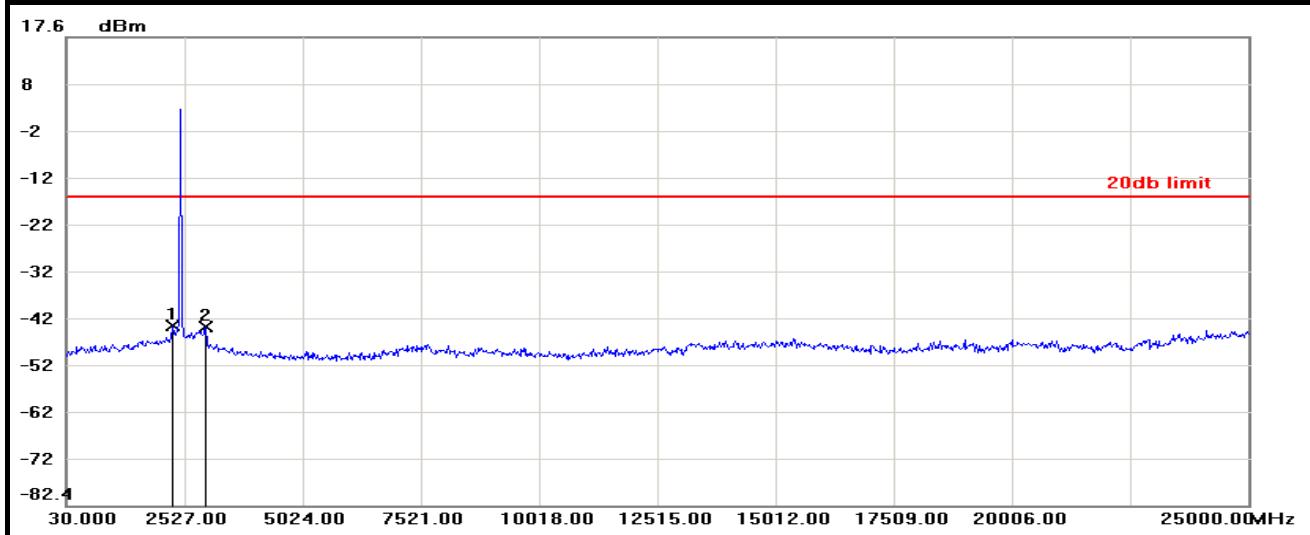


## IEEE 802.11n HT20 Mode / Chain 1 / CH Middle / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.9200	-45.48	-16.48	-29.00
2	2441.9200	3.52	-16.48	20.00
3	2492.5600	-47.84	-16.48	-31.36

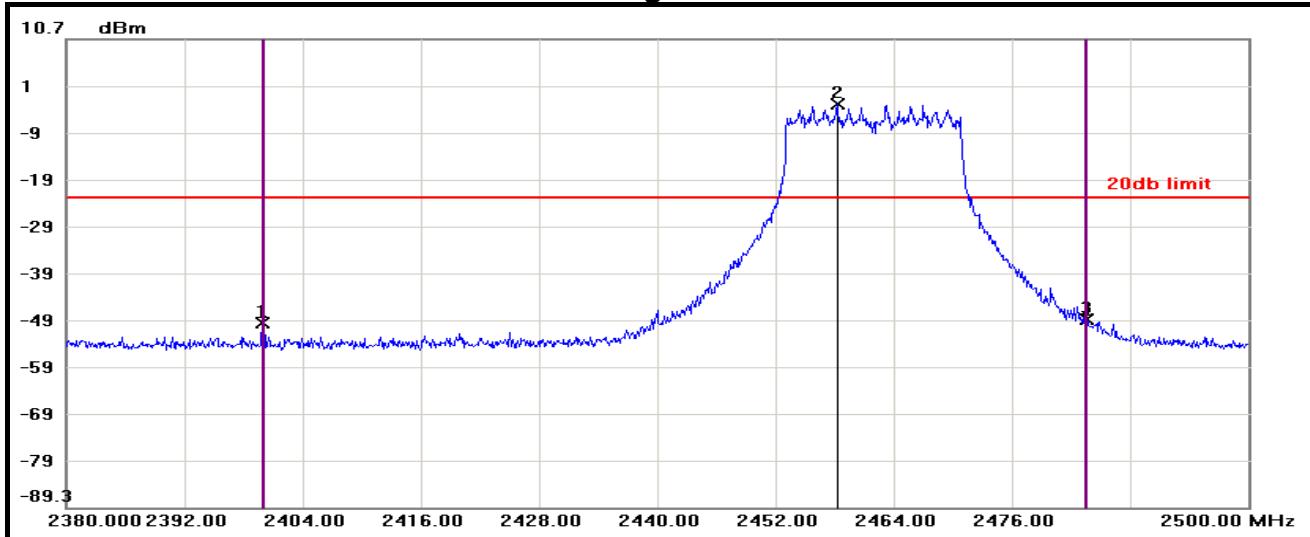
## IEEE 802.11n HT20 Mode / Chain 1 / CH Middle / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2277.3000	-44.07	-16.48	-27.59
2	2976.4600	-44.16	-16.48	-27.68

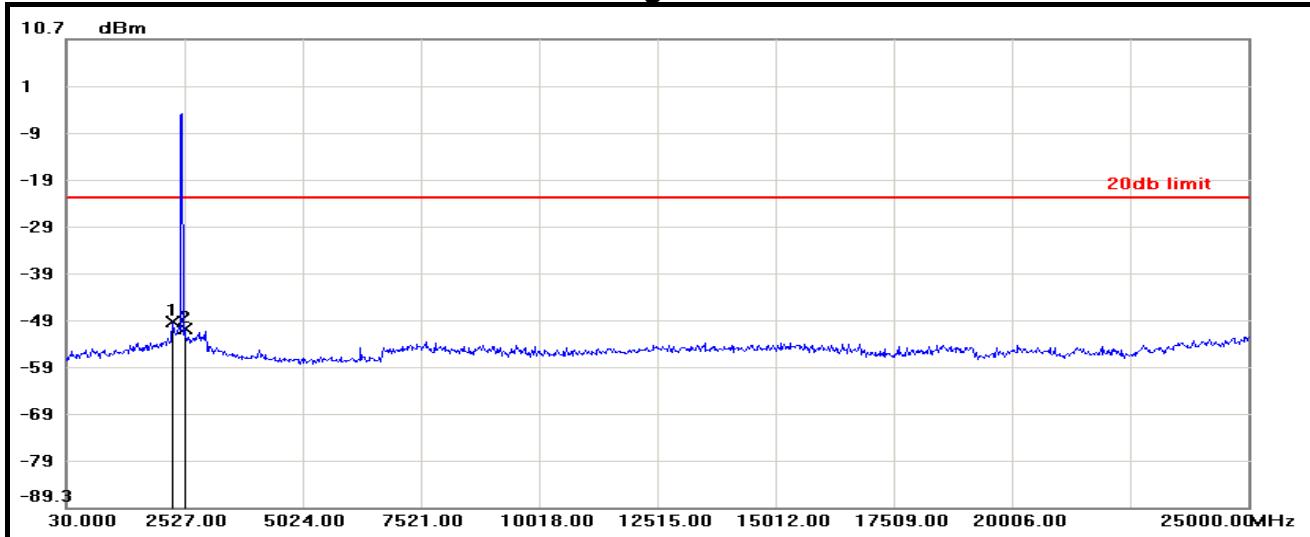


## IEEE 802.11n HT20 Mode / Chain 1 / CH High / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.9200	-49.84	-23.23	-26.61
2	2458.2400	-3.23	-23.23	20.00
3	2483.5600	-49.10	-23.23	-25.87

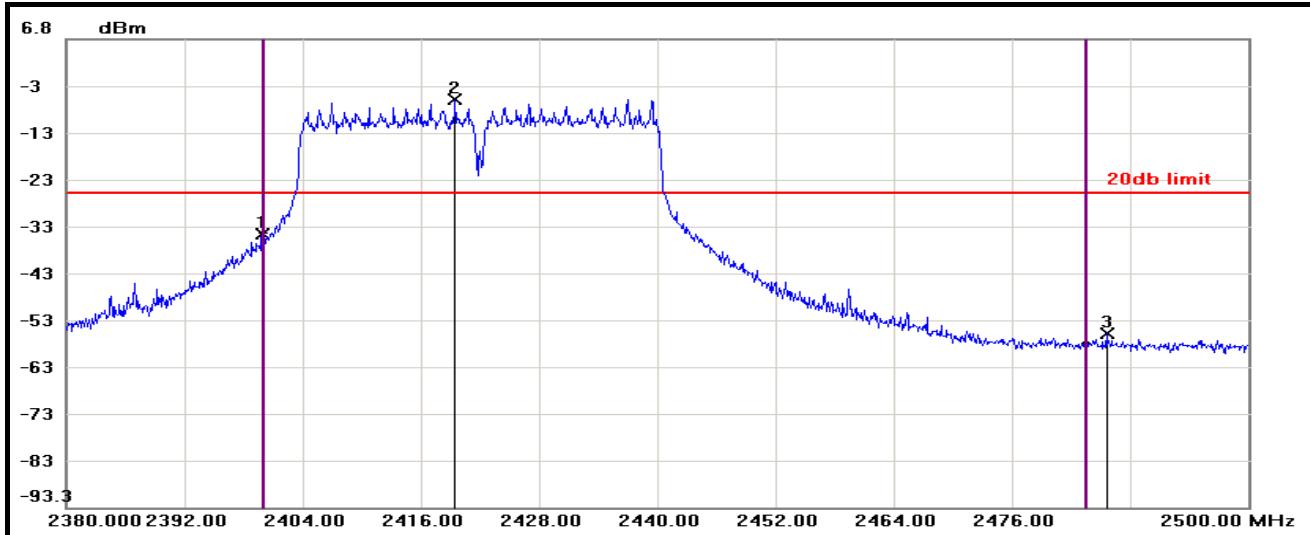
## IEEE 802.11n HT20 Mode / Chain 1 / CH High / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2277.3000	-49.74	-23.23	-26.51
2	2527.0000	-51.27	-23.23	-28.04

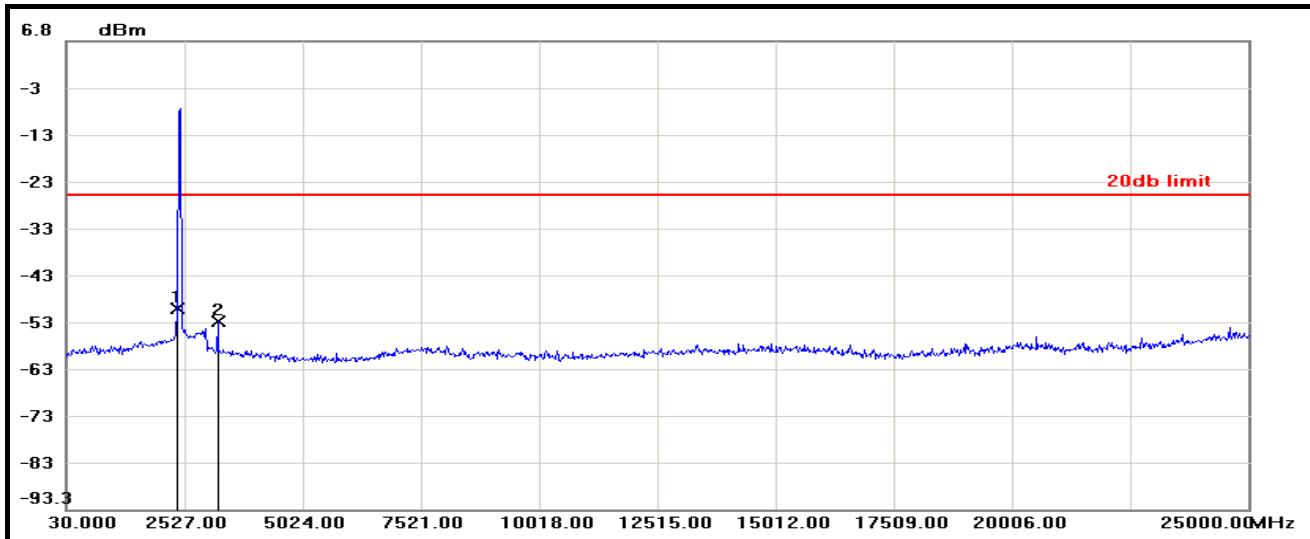


## IEEE 802.11n HT40 Mode / Chain 0 / CH Low / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.9200	-34.99	-26.06	-8.93
2	2419.4800	-6.06	-26.06	20.00
3	2485.6000	-56.15	-26.06	-30.09

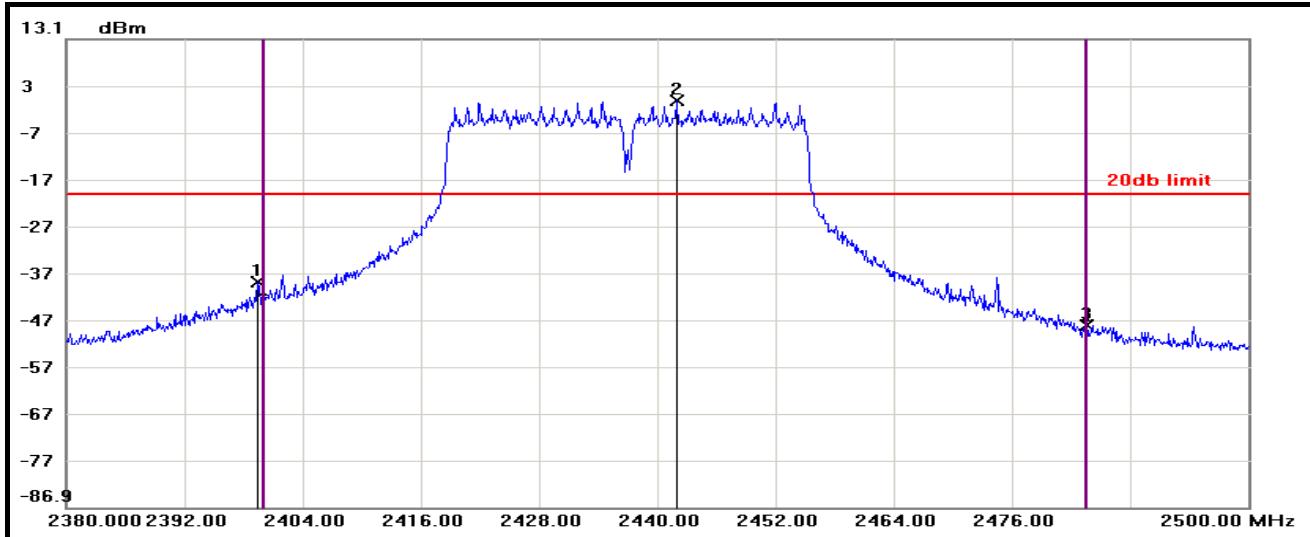
## IEEE 802.11n HT40 Mode / Chain 0 / CH Low / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-50.39	-26.06	-24.33
2	3226.1600	-53.19	-26.06	-27.13

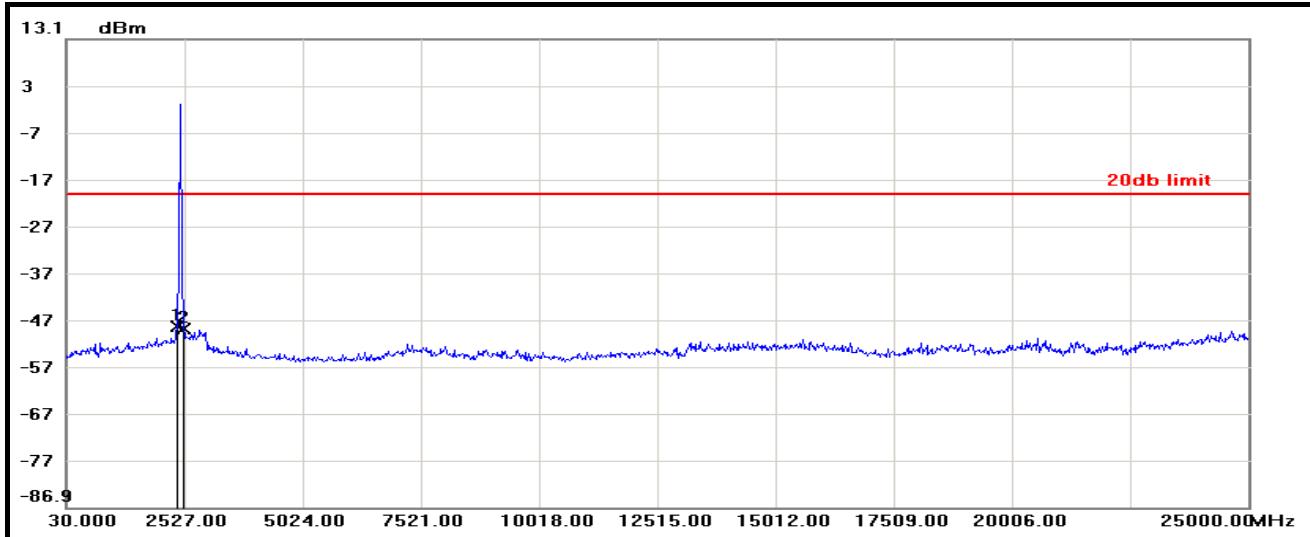


## IEEE 802.11n HT40 Mode / Chain 0 / CH Middle / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.4400	-38.88	-20.14	-18.74
2	2441.9200	-0.14	-20.14	20.00
3	2483.5600	-48.01	-20.14	-27.87

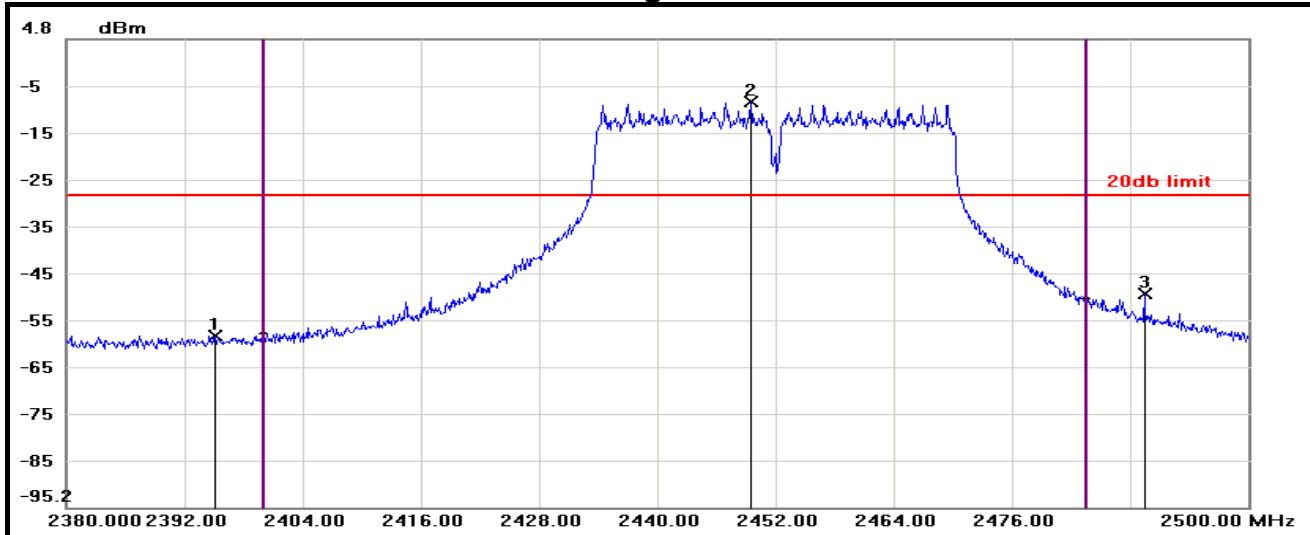
## IEEE 802.11n HT40 Mode / Chain 0 / CH Middle / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-48.40	-20.14	-28.26
2	2502.0300	-48.85	-20.14	-28.71

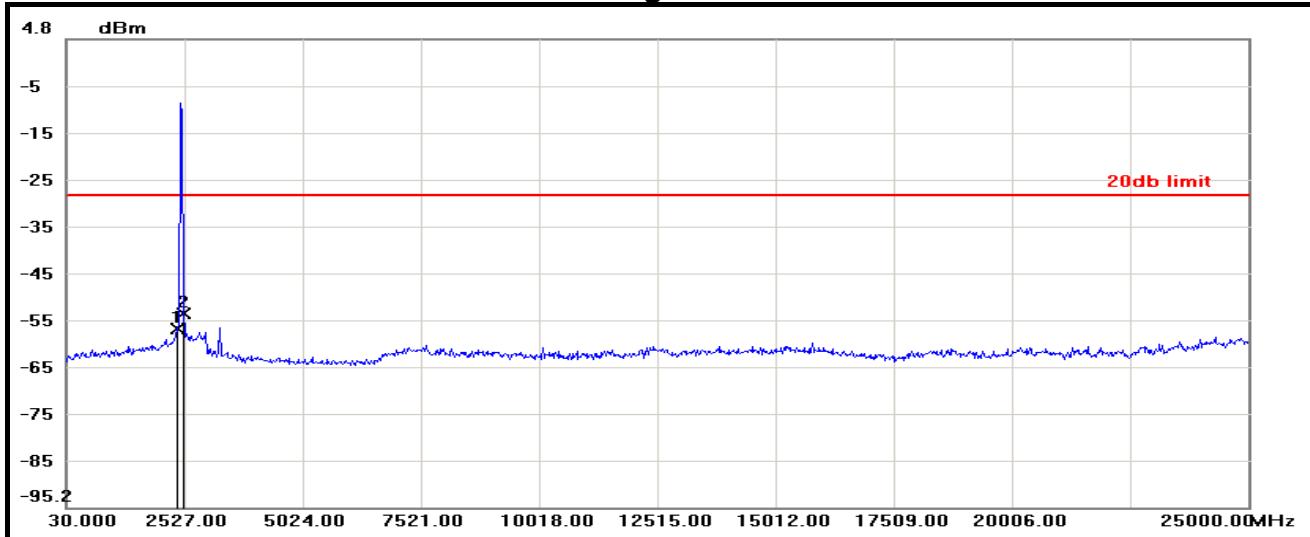


## IEEE 802.11n HT40 Mode / Chain 0 / CH High / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2395.1200	-58.45	-28.51	-29.94
2	2449.4800	-8.51	-28.51	20.00
3	2489.4400	-49.53	-28.51	-21.02

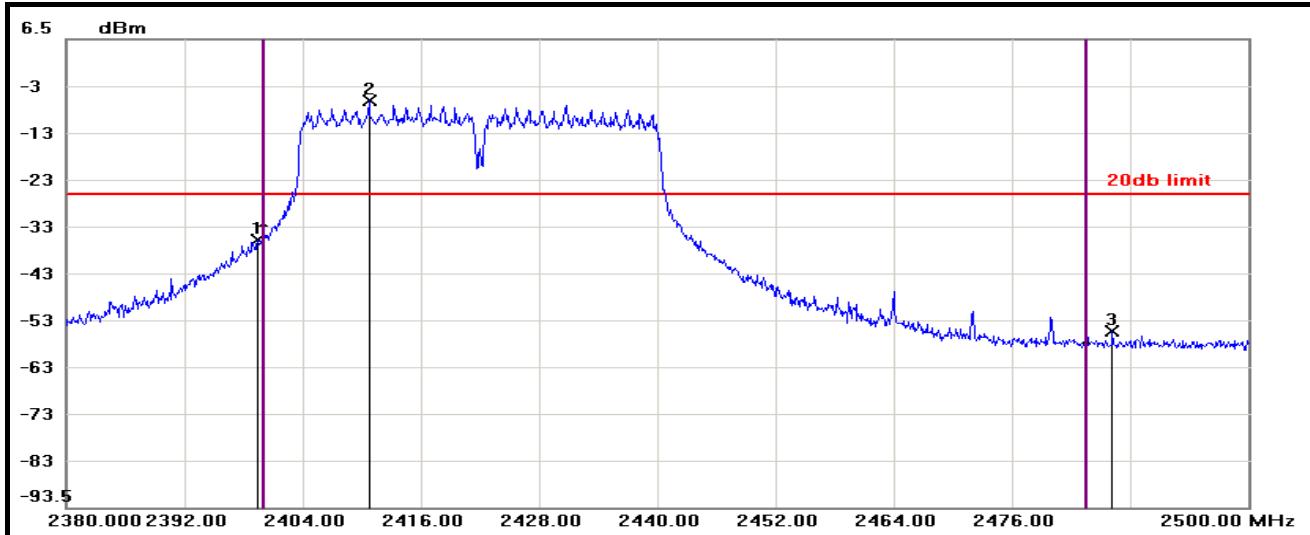
## IEEE 802.11n HT40 Mode / Chain 0 / CH High / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-57.16	-28.51	-28.65
2	2502.0300	-53.88	-28.51	-25.37

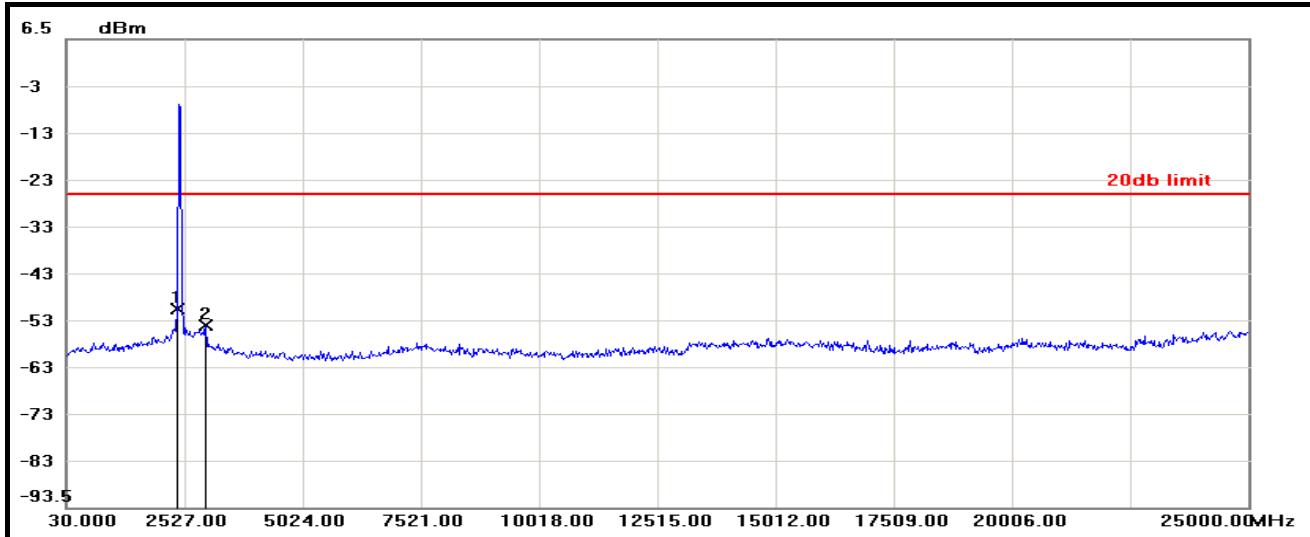


## IEEE 802.11n HT40 Mode / Chain 1 / CH Low / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.4400	-36.22	-26.67	-9.55
2	2410.7200	-6.67	-26.67	20.00
3	2486.2000	-55.91	-26.67	-29.24

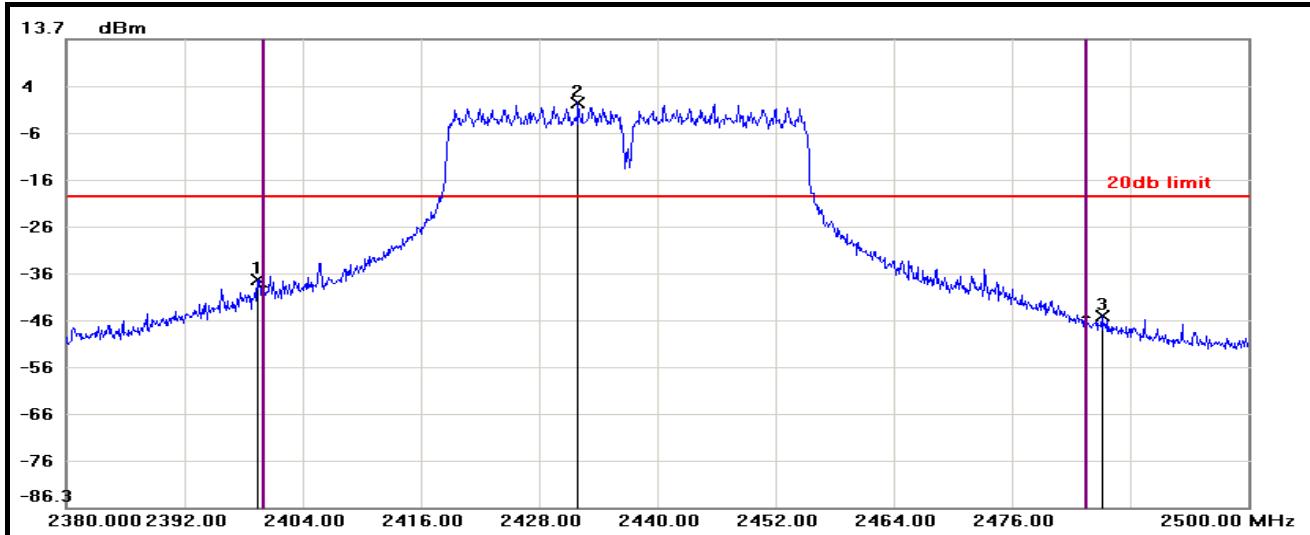
## IEEE 802.11n HT40 Mode / Chain 1 / CH Low / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-51.10	-26.67	-24.43
2	2976.4600	-54.52	-26.67	-27.85

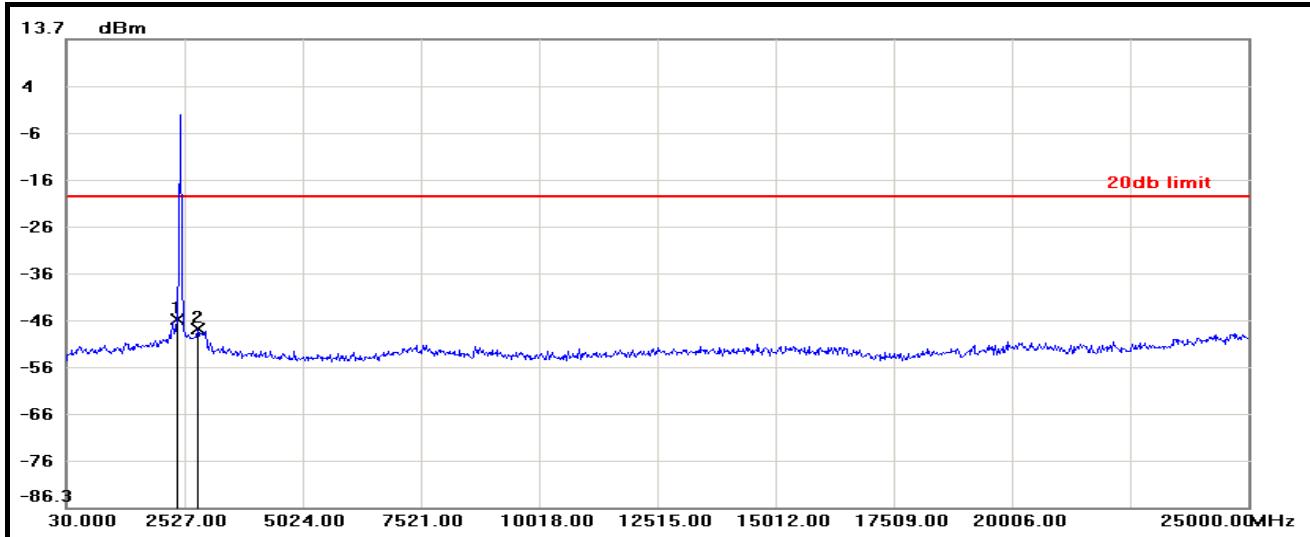


## IEEE 802.11n HT40 Mode / Chain 1 / CH Middle / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.4400	-37.68	-20.01	-17.67
2	2431.9600	-0.01	-20.01	20.00
3	2485.1200	-45.40	-20.01	-25.39

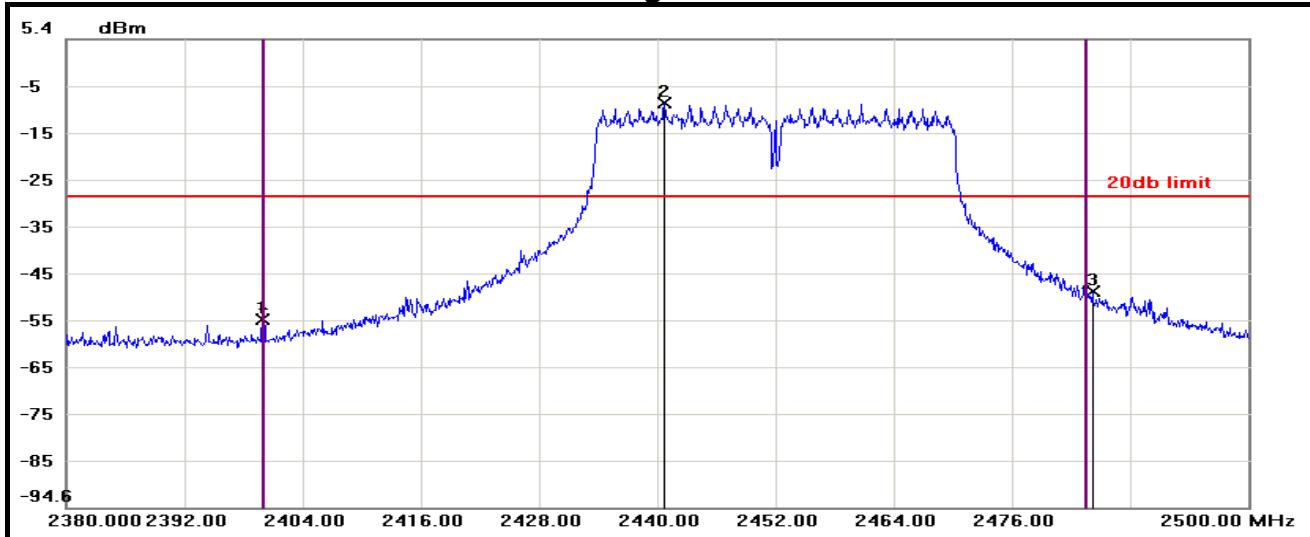
## IEEE 802.11n HT40 Mode / Chain 1 / CH Middle / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-46.30	-20.01	-26.29
2	2801.6700	-48.22	-20.01	-28.21

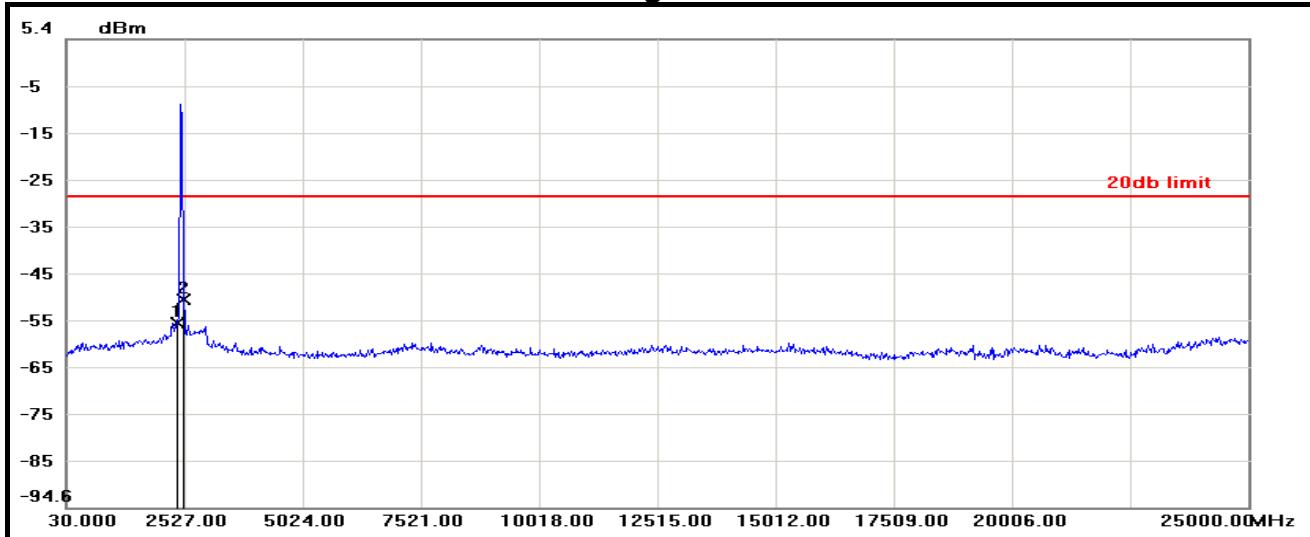


## IEEE 802.11n HT40 Mode / Chain 1 / CH High / 2.38GHz ~ 2.5GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2399.9200	-54.46	-28.27	-26.19
2	2440.7200	-8.27	-28.27	20.00
3	2484.1600	-48.40	-28.27	-20.13

## IEEE 802.11n HT40 Mode / Chain 1 / CH High / 30MHz ~ 25GHz



No.	Frequency(MHz)	Result(dBm)	Limit(dBm)	Margin(dBm)
1	2377.1800	-55.16	-28.27	-26.89
2	2502.0300	-50.16	-28.27	-21.89



## 7.5 RADIATED EMISSION

### LIMITS

(1) According to § 15.205 (a) Except as shown in paragraph (d) of this section, 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 - 5.15
<sup>1</sup> 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 - 3338	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )
13.36 - 13.41			

**Remark:**

- <sup>1</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.
- <sup>2</sup> Above 38.6

(2) According to § 15.205 (b) Except as provided in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.



(3) According to § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(KHz)	300
0.490 – 1.705	24000/F(KHz)	30
1.705 – 30.0	30	30
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

**Remark:** \*\*Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

(4) According to § 15.209 (b) In the emission table above, the tighter limit applies at the band edges.

## TEST EQUIPMENT

### Radiated Emission / 966Chamber\_B

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360132	06/19/2012
EMI Receiver	ROHDE & SCHWARZ	ESCS 30	826547/004	10/27/2012
Broadband Hybrid Bi-Log Antenna	Sunol Sciences	JB1	A100209-4	10/05/2012
Double-Ridged Waveguide Horn	ETS-LINDGREN	3117	00078733	12/06/2012
Horn Antenna	COM-POWER	AH-840	03077	12/06/2012
Pre-Amplifier	Agilent	8447D	2944A10052	07/19/2012
Pre-Amplifier	EMCI	EMC012645	980060	08/29/2012
LOOP Antenna	EMCO	6502	8905-2356	06/10/2012
Band Reject Notch Filter	Micro-Tronics	BRM05702-01	009	N.C.R

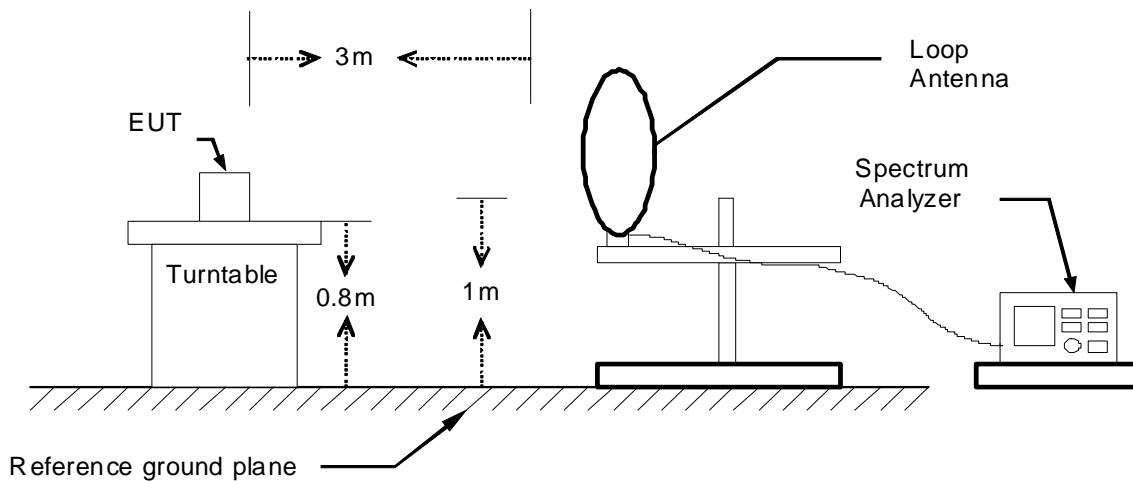
**Remark:** 1. Each piece of equipment is scheduled for calibration once a year.  
2. N.C.R = No Calibration Request.



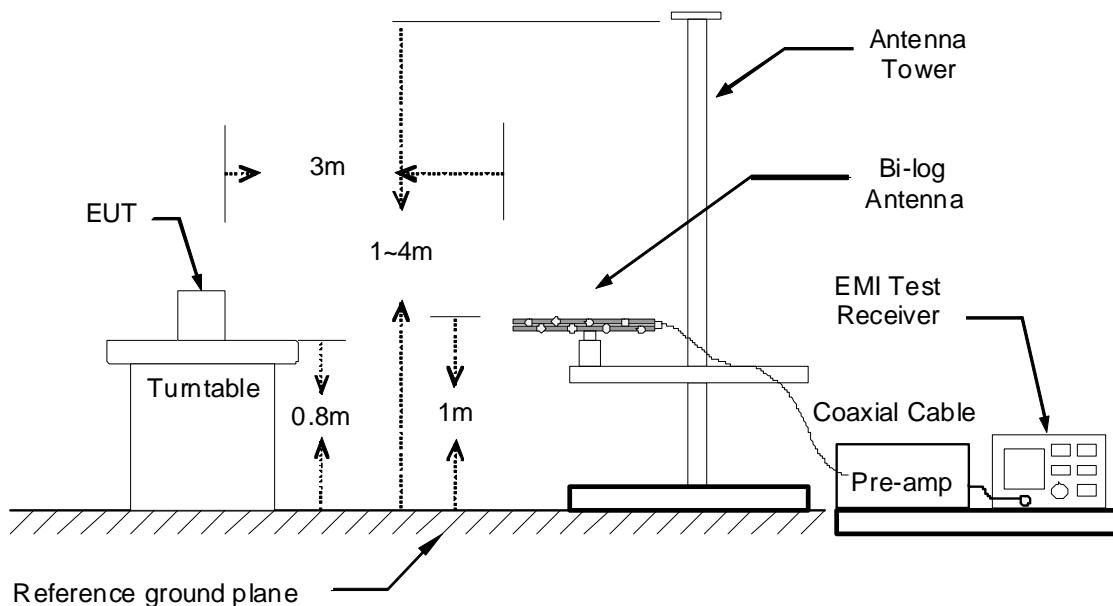
## TEST SETUP

The diagram below shows the test setup that is utilized to make the measurements for emission from below 1GHz.

### **9kHz ~ 30MHz**

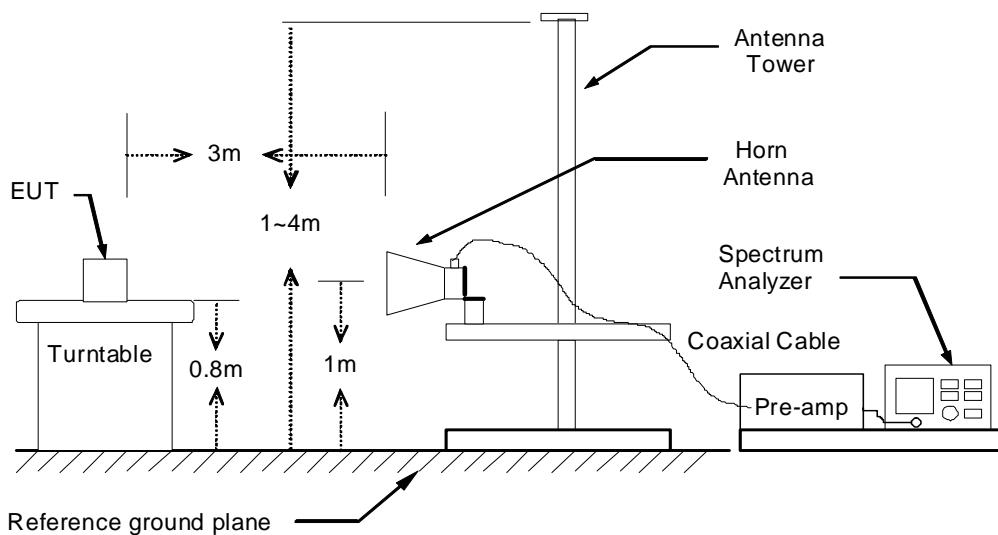


### **30MHz ~ 1GHz**





The diagram below shows the test setup that is utilized to make the measurements for emission above 1GHz.



## TEST PROCEDURE

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground. The table was rotated 360 degrees to determine the position of the highest radiation.
2. While measuring the radiated emission below 1GHz, the EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. While measuring the radiated emission above 1GHz, the EUT was set 3 meters away from the interference-receiving antenna.
3. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

### **Remark :**

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

**TEST RESULTS****Below 1 GHz (9kHz ~ 30MHz)**

No emission found between lowest internal used/generated frequency to 30MHz.

**Below 1 GHz (30MHz ~ 1GHz)**

<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/21
<b>Test Mode</b>	TX Mode / Antenna (3) / 5G	<b>Temp. &amp; Humidity</b>	22°C, 56%

966 Chamber_B at 3Meter / Horizontal						
Frequency (MHz)	Reading (dB $\mu$ V)	Correction Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Remark
107.60	56.43	-15.92	40.51	43.50	-2.99	Peak
140.58	53.90	-13.48	40.41	43.50	-3.09	Peak
232.73	58.08	-14.29	43.79	46.00	-2.21	Peak
270.56	55.79	-12.56	43.22	46.00	-2.78	Peak
339.43	55.55	-11.05	44.49	46.00	-1.51	Peak
372.41	53.20	-10.45	42.75	46.00	-3.25	QP
405.39	54.49	-9.89	44.59	46.00	-1.41	Peak
663.41	48.83	-5.80	43.03	46.00	-2.97	Peak

966 Chamber_B at 3Meter / Vertical						
Frequency (MHz)	Reading (dB $\mu$ V)	Correction Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Remark
32.91	47.07	-8.20	38.87	40.00	-1.13	Peak
145.43	51.08	-13.76	37.31	43.50	-6.19	Peak
339.43	54.47	-11.05	43.41	46.00	-2.59	Peak
407.33	50.76	-9.86	40.89	46.00	-5.11	Peak
436.43	48.80	-9.40	39.40	46.00	-6.60	Peak
663.41	43.76	-5.80	37.96	46.00	-8.04	Peak
967.02	37.56	-1.42	36.14	54.00	-17.86	Peak

**Remark:**

1. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.
2. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
3. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - PreAmp.Gain (dB)
4. Result (dB $\mu$ V/m) = Reading (dB $\mu$ V) + Correction Factor (dB/m)
5. Margin (dB) = Remark result (dB $\mu$ V/m) - Quasi-peak limit (dB $\mu$ V/m).



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/21
<b>Test Mode</b>	TX Mode / Antenna (2) / 2.4G	<b>Temp. &amp; Humidity</b>	22°C, 56%

966 Chamber_B at 3Meter / Horizontal						
Frequency (MHz)	Reading (dB $\mu$ V)	Correction Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Remark
140.58	53.31	-13.48	39.83	43.50	-3.67	Peak
192.96	54.39	-13.95	40.44	43.50	-3.06	Peak
210.42	55.10	-14.12	40.98	43.50	-2.52	QP
269.59	55.00	-12.63	42.37	46.00	-3.63	QP
310.33	52.80	-11.64	41.16	46.00	-4.84	Peak
666.32	45.73	-5.78	39.95	46.00	-6.05	Peak
733.25	42.59	-4.96	37.62	46.00	-8.38	Peak
889.42	36.12	-2.34	33.78	46.00	-12.22	Peak

966 Chamber_B at 3Meter / Vertical						
Frequency (MHz)	Reading (dB $\mu$ V)	Correction Factor (dB/m)	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Remark
43.58	54.00	-15.72	38.28	40.00	-1.72	QP
106.63	56.68	-16.10	40.58	43.50	-2.92	Peak
132.82	52.70	-13.51	39.19	43.50	-4.31	Peak
232.73	52.11	-14.29	37.82	46.00	-8.18	Peak
269.59	49.37	-12.63	36.74	46.00	-9.26	Peak
302.57	48.54	-11.80	36.74	46.00	-9.26	Peak
666.32	41.09	-5.78	35.31	46.00	-10.69	Peak
950.53	39.16	-1.88	37.29	46.00	-8.71	Peak

**Remark:**

1. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.
2. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
3. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - PreAmp.Gain (dB)
4. Result (dB $\mu$ V/m) = Reading (dB $\mu$ V) + Correction Factor (dB/m)
5. Margin (dB) = Remark result (dB $\mu$ V/m) - Quasi-peak limit (dB $\mu$ V/m).



## Above 1 GHz

<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/22
<b>Test Mode</b>	IEEE 802.11a TX / CH Low / Antenna (3)	<b>Temp. &amp; Humidity</b>	24°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1055.00	67.39	---	-16.86	50.53	---	74.00	54.00	-3.47	Peak
1255.00	67.27	---	-16.57	50.70	---	74.00	54.00	-3.30	Peak
1545.00	65.61	---	-15.84	49.78	---	74.00	54.00	-4.22	Peak
6012.00	52.31	---	-2.50	49.81	---	74.00	54.00	-4.19	Peak
6648.00	53.18	---	-1.95	51.23	---	74.00	54.00	-2.77	Peak
7428.00	50.93	---	-0.46	50.46	---	74.00	54.00	-3.54	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1080.00	67.18	---	-16.82	50.36	---	74.00	54.00	-3.64	Peak
1255.00	66.14	---	-16.57	49.57	---	74.00	54.00	-4.43	Peak
5350.00	71.57	58.30	-4.66	66.91	53.64	74.00	54.00	-0.36	AVG
6012.00	53.09	---	-2.50	50.59	---	74.00	54.00	-3.41	Peak
6732.00	51.93	---	-1.86	50.07	---	74.00	54.00	-3.93	Peak
7488.00	50.90	---	-0.31	50.59	---	74.00	54.00	-3.41	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/22
<b>Test Mode</b>	IEEE 802.11a TX / CH Middle / Antenna (3)	<b>Temp. &amp; Humidity</b>	24°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1065.00	67.35	---	-16.85	50.51	---	74.00	54.00	-3.49	Peak
1340.00	65.88	---	-16.45	49.42	---	74.00	54.00	-4.58	Peak
1535.00	66.31	---	-15.92	50.39	---	74.00	54.00	-3.61	Peak
6000.00	52.32	---	-2.51	49.81	---	74.00	54.00	-4.19	Peak
6756.00	52.39	---	-1.84	50.56	---	74.00	54.00	-3.44	Peak
7524.00	51.90	---	-0.25	51.65	---	74.00	54.00	-2.35	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1075.00	68.17	---	-16.83	51.34	---	74.00	54.00	-2.66	Peak
1235.00	67.14	---	-16.60	50.54	---	74.00	54.00	-3.46	Peak
1555.00	67.12	---	-15.75	51.37	---	74.00	54.00	-2.63	Peak
5420.00	70.05	56.61	-4.49	65.56	52.12	74.00	54.00	-1.88	AVG
6000.00	58.98	45.83	-2.51	56.47	43.32	74.00	54.00	-10.68	AVG
6744.00	53.06	---	-1.85	51.21	---	74.00	54.00	-2.79	Peak
7524.00	51.74	---	-0.25	51.49	---	74.00	54.00	-2.51	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/22
<b>Test Mode</b>	IEEE 802.11a TX / CH High / Antenna (3)	<b>Temp. &amp; Humidity</b>	24°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1090.00	67.05	---	-16.81	50.24	---	74.00	54.00	-3.76	Peak
1365.00	67.11	---	-16.42	50.70	---	74.00	54.00	-3.30	Peak
1625.00	64.77	---	-15.15	49.62	---	74.00	54.00	-4.38	Peak
6000.00	52.11	---	-2.51	49.61	---	74.00	54.00	-4.39	Peak
6564.00	51.91	---	-2.04	49.88	---	74.00	54.00	-4.12	Peak
7584.00	51.69	---	-0.19	51.50	---	74.00	54.00	-2.50	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1095.00	68.30	---	-16.80	51.50	---	74.00	54.00	-2.50	Peak
1260.00	66.97	---	-16.57	50.40	---	74.00	54.00	-3.60	Peak
1645.00	66.54	---	-14.98	51.56	---	74.00	54.00	-2.44	Peak
5380.00	70.40	56.49	-4.59	65.81	51.90	74.00	54.00	-2.10	AVG
6012.00	54.14	---	-2.50	51.64	---	74.00	54.00	-2.36	Peak
6624.00	52.42	---	-1.97	50.45	---	74.00	54.00	-3.55	Peak
7524.00	51.73	---	-0.25	51.48	---	74.00	54.00	-2.52	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/22
<b>Test Mode</b>	IEEE 802.11n HT20 TX / CH Low / Antenna (3)	<b>Temp. &amp; Humidity</b>	24°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1125.00	67.31	---	-16.76	50.55	---	74.00	54.00	-3.45	Peak
1400.00	66.79	---	-16.37	50.42	---	74.00	54.00	-3.58	Peak
1675.00	65.53	---	-14.72	50.81	---	74.00	54.00	-3.19	Peak
6024.00	52.39	---	-2.49	49.90	---	74.00	54.00	-4.10	Peak
6708.00	52.28	---	-1.89	50.39	---	74.00	54.00	-3.61	Peak
7572.00	51.69	---	-0.21	51.48	---	74.00	54.00	-2.52	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1165.00	66.83	---	-16.70	50.13	---	74.00	54.00	-3.87	Peak
1365.00	65.46	---	-16.42	49.05	---	74.00	54.00	-4.95	Peak
1595.00	65.84	---	-15.41	50.43	---	74.00	54.00	-3.57	Peak
5355.00	71.46	58.20	-4.65	66.81	53.55	74.00	54.00	-0.45	AVG
6000.00	60.13	45.97	-2.51	57.62	43.46	74.00	54.00	-10.54	AVG
6732.00	52.23	---	-1.86	50.37	---	74.00	54.00	-3.63	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/22
<b>Test Mode</b>	IEEE 802.11n HT20 TX / CH Middle / Antenna (3)	<b>Temp. &amp; Humidity</b>	24°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1060.00	67.17	---	-16.85	50.32	---	74.00	54.00	-3.68	Peak
1315.00	66.38	---	-16.49	49.89	---	74.00	54.00	-4.11	Peak
1635.00	66.51	---	-15.07	51.44	---	74.00	54.00	-2.56	Peak
6036.00	52.71	---	-2.48	50.23	---	74.00	54.00	-3.77	Peak
6456.00	51.98	---	-2.14	49.84	---	74.00	54.00	-4.16	Peak
6984.00	51.91	---	-1.60	50.31	---	74.00	54.00	-3.69	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1090.00	67.05	---	-16.81	50.24	---	74.00	54.00	-3.76	Peak
1300.00	66.00	---	-16.51	49.49	---	74.00	54.00	-4.51	Peak
1635.00	65.27	---	-15.07	50.21	---	74.00	54.00	-3.79	Peak
5365.00	72.62	58.39	-4.62	68.00	53.77	74.00	54.00	-0.23	AVG
6048.00	59.98	46.18	-2.47	57.51	43.71	74.00	54.00	-10.29	AVG
6684.00	52.27	---	-1.91	50.36	---	74.00	54.00	-3.64	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/22
<b>Test Mode</b>	IEEE 802.11n HT20 TX / CH High / Antenna (3)	<b>Temp. &amp; Humidity</b>	24°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1080.00	66.68	---	-16.82	49.86	---	74.00	54.00	-4.14	Peak
1280.00	67.18	---	-16.54	50.64	---	74.00	54.00	-3.36	Peak
1625.00	65.94	---	-15.15	50.79	---	74.00	54.00	-3.21	Peak
6000.00	52.63	---	-2.51	50.12	---	74.00	54.00	-3.88	Peak
6708.00	52.32	---	-1.89	50.44	---	74.00	54.00	-3.56	Peak
7464.00	51.45	---	-0.37	51.08	---	74.00	54.00	-2.92	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1150.00	67.41	---	-16.72	50.69	---	74.00	54.00	-3.31	Peak
1365.00	66.41	---	-16.42	49.99	---	74.00	54.00	-4.01	Peak
1610.00	66.53	---	-15.28	51.25	---	74.00	54.00	-2.75	Peak
5415.00	70.41	57.82	-4.50	65.91	53.32	74.00	54.00	-0.68	AVG
6036.00	60.08	46.11	-2.48	57.60	43.63	74.00	54.00	-10.37	AVG
6720.00	53.17	---	-1.87	51.29	---	74.00	54.00	-2.71	Peak
7428.00	51.48	---	-0.46	51.02	---	74.00	54.00	-2.98	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/22
<b>Test Mode</b>	IEEE 802.11n HT40 TX / CH Low / Antenna (3)	<b>Temp. &amp; Humidity</b>	24°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1105.00	67.84	---	-16.79	51.06	---	74.00	54.00	-2.94	Peak
1280.00	66.18	---	-16.54	49.64	---	74.00	54.00	-4.36	Peak
1600.00	66.98	---	-15.37	51.62	---	74.00	54.00	-2.38	Peak
6012.00	51.44	---	-2.50	48.94	---	74.00	54.00	-5.06	Peak
6552.00	51.94	---	-2.05	49.89	---	74.00	54.00	-4.11	Peak
7500.00	51.29	---	-0.28	51.02	---	74.00	54.00	-2.98	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1125.00	67.18	---	-16.76	50.42	---	74.00	54.00	-3.58	Peak
1330.00	66.51	---	-16.47	50.04	---	74.00	54.00	-3.96	Peak
1685.00	65.34	---	-14.64	50.70	---	74.00	54.00	-3.30	Peak
5380.00	71.18	57.79	-4.59	66.59	53.20	74.00	54.00	-0.80	AVG
6012.00	60.13	46.21	-2.50	57.63	43.71	74.00	54.00	-10.29	AVG
7536.00	51.34	---	-0.24	51.10	---	74.00	54.00	-2.90	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/22
<b>Test Mode</b>	IEEE 802.11n HT40 TX / CH High / Antenna (3)	<b>Temp. &amp; Humidity</b>	24°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1035.00	67.59	---	-16.89	50.70	---	74.00	54.00	-3.30	Peak
1330.00	66.52	---	-16.47	50.06	---	74.00	54.00	-3.94	Peak
1660.00	65.42	---	-14.85	50.57	---	74.00	54.00	-3.43	Peak
6024.00	53.21	---	-2.49	50.72	---	74.00	54.00	-3.28	Peak
6696.00	51.96	---	-1.90	50.06	---	74.00	54.00	-3.94	Peak
7608.00	50.77	---	-0.17	50.60	---	74.00	54.00	-3.40	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1130.00	67.20	---	-16.75	50.45	---	74.00	54.00	-3.55	Peak
1370.00	66.67	---	-16.41	50.26	---	74.00	54.00	-3.74	Peak
1635.00	64.83	---	-15.07	49.77	---	74.00	54.00	-4.23	Peak
5350.00	71.40	57.89	-4.66	66.74	53.23	74.00	54.00	-0.77	AVG
6012.00	59.70	46.44	-2.50	57.20	43.94	74.00	54.00	-10.06	AVG
6744.00	52.26	---	-1.85	50.41	---	74.00	54.00	-3.59	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11b TX / CH Low / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1048.00	54.80	---	-3.73	51.07	---	74.00	54.00	-2.93	Peak
1182.00	54.39	---	-3.29	51.09	---	74.00	54.00	-2.91	Peak
1356.00	53.48	---	-2.73	50.74	---	74.00	54.00	-3.26	Peak
3195.00	41.81	---	5.62	47.43	---	74.00	54.00	-6.57	Peak
4395.00	41.00	---	8.34	49.33	---	74.00	54.00	-4.67	Peak
4980.00	39.64	---	9.87	49.51	---	74.00	54.00	-4.49	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1048.00	54.97	---	-3.73	51.25	---	74.00	54.00	-2.75	Peak
1236.00	54.90	---	-3.12	51.78	---	74.00	54.00	-2.22	Peak
1530.00	54.09	---	-2.00	52.09	---	74.00	54.00	-1.91	Peak
3210.00	43.19	---	5.64	48.82	---	74.00	54.00	-5.18	Peak
4260.00	40.60	---	7.88	48.48	---	74.00	54.00	-5.52	Peak
4965.00	40.13	---	9.83	49.96	---	74.00	54.00	-4.04	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11b TX / CH Middle / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1098.00	54.84	---	-3.56	51.28	---	74.00	54.00	-2.72	Peak
1260.00	54.64	---	-3.04	51.60	---	74.00	54.00	-2.40	Peak
1390.00	52.87	---	-2.62	50.25	---	74.00	54.00	-3.75	Peak
3255.00	41.10	---	5.69	46.79	---	74.00	54.00	-7.21	Peak
3750.00	40.89	---	6.47	47.36	---	74.00	54.00	-6.64	Peak
4950.00	39.64	---	9.80	49.43	---	74.00	54.00	-4.57	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1064.00	55.49	---	-3.67	51.82	---	74.00	54.00	-2.18	Peak
1264.00	54.61	---	-3.03	51.58	---	74.00	54.00	-2.42	Peak
1410.00	53.12	---	-2.56	50.56	---	74.00	54.00	-3.44	Peak
2288.00	58.00	47.73	3.16	61.16	50.89	74.00	54.00	-3.11	AVG
3255.00	42.51	---	5.69	48.20	---	74.00	54.00	-5.80	Peak
4380.00	40.17	---	8.28	48.45	---	74.00	54.00	-5.55	Peak
4875.00	41.66	---	9.61	51.27	---	74.00	54.00	-2.73	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11b TX / CH High / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1082.00	54.24	---	-3.62	50.62	---	74.00	54.00	-3.38	Peak
1234.00	53.80	---	-3.13	50.68	---	74.00	54.00	-3.32	Peak
1416.00	53.09	---	-2.54	50.55	---	74.00	54.00	-3.45	Peak
3240.00	42.11	---	5.67	47.78	---	74.00	54.00	-6.22	Peak
4095.00	40.08	---	7.32	47.40	---	74.00	54.00	-6.60	Peak
4950.00	40.10	---	9.80	49.89	---	74.00	54.00	-4.11	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1006.00	53.77	---	-3.86	49.91	---	74.00	54.00	-4.09	Peak
1164.00	53.20	---	-3.35	49.85	---	74.00	54.00	-4.15	Peak
1320.00	53.26	---	-2.85	50.41	---	74.00	54.00	-3.59	Peak
3270.00	42.11	---	5.70	47.81	---	74.00	54.00	-6.19	Peak
4245.00	40.45	---	7.83	48.28	---	74.00	54.00	-5.72	Peak
4920.00	40.25	---	9.72	49.97	---	74.00	54.00	-4.03	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11g TX / CH Low / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1120.00	55.39	---	-3.49	51.89	---	74.00	54.00	-2.11	Peak
1244.00	53.80	---	-3.09	50.71	---	74.00	54.00	-3.29	Peak
1476.00	53.26	---	-2.35	50.92	---	74.00	54.00	-3.08	Peak
3225.00	41.82	---	5.65	47.47	---	74.00	54.00	-6.53	Peak
4845.00	39.16	---	9.54	48.70	---	74.00	54.00	-5.30	Peak
5790.00	39.23	---	11.36	50.59	---	74.00	54.00	-3.41	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1006.00	54.14	---	-3.86	50.28	---	74.00	54.00	-3.72	Peak
1172.00	53.80	---	-3.33	50.47	---	74.00	54.00	-3.53	Peak
1324.00	54.03	---	-2.84	51.19	---	74.00	54.00	-2.81	Peak
2288.00	58.77	48.22	3.16	61.93	51.38	74.00	54.00	-2.62	AVG
3210.00	43.04	---	5.64	48.67	---	74.00	54.00	-5.33	Peak
4110.00	40.78	---	7.37	48.15	---	74.00	54.00	-5.85	Peak
4875.00	39.12	---	9.61	48.74	---	74.00	54.00	-5.26	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11g TX / CH Middle / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1018.00	54.95	---	-3.82	51.13	---	74.00	54.00	-2.87	Peak
1146.00	53.52	---	-3.41	50.11	---	74.00	54.00	-3.89	Peak
1316.00	53.47	---	-2.86	50.60	---	74.00	54.00	-3.40	Peak
3240.00	41.67	---	5.67	47.34	---	74.00	54.00	-6.66	Peak
4860.00	40.12	---	9.58	49.69	---	74.00	54.00	-4.31	Peak
6030.00	38.89	---	11.84	50.73	---	74.00	54.00	-3.27	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1022.00	54.94	---	-3.81	51.14	---	74.00	54.00	-2.86	Peak
1134.00	54.28	---	-3.45	50.83	---	74.00	54.00	-3.17	Peak
1264.00	53.35	---	-3.03	50.32	---	74.00	54.00	-3.68	Peak
2288.00	60.31	48.88	3.16	63.47	52.04	74.00	54.00	-1.96	AVG
3345.00	42.51	---	5.78	48.29	---	74.00	54.00	-5.71	Peak
4395.00	40.62	---	8.34	48.96	---	74.00	54.00	-5.04	Peak
4905.00	40.04	---	9.69	49.73	---	74.00	54.00	-4.27	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11g TX / CH High / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1050.00	54.89	---	-3.72	51.17	---	74.00	54.00	-2.83	Peak
1220.00	54.63	---	-3.17	51.46	---	74.00	54.00	-2.54	Peak
1436.00	53.21	---	-2.48	50.74	---	74.00	54.00	-3.26	Peak
3435.00	42.35	---	5.88	48.23	---	74.00	54.00	-5.77	Peak
4215.00	40.78	---	7.73	48.51	---	74.00	54.00	-5.49	Peak
4950.00	39.88	---	9.80	49.68	---	74.00	54.00	-4.32	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1062.00	54.67	---	-3.68	50.99	---	74.00	54.00	-3.01	Peak
1214.00	53.58	---	-3.19	50.39	---	74.00	54.00	-3.61	Peak
1466.00	53.51	---	-2.38	51.13	---	74.00	54.00	-2.87	Peak
3240.00	41.91	---	5.67	47.58	---	74.00	54.00	-6.42	Peak
4095.00	40.32	---	7.32	47.64	---	74.00	54.00	-6.36	Peak
5010.00	39.63	---	9.94	49.57	---	74.00	54.00	-4.43	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11n HT20 TX / CH Low / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1076.00	54.78	---	-3.64	51.14	---	74.00	54.00	-2.86	Peak
1252.00	54.84	---	-3.07	51.77	---	74.00	54.00	-2.23	Peak
1428.00	54.01	---	-2.50	51.51	---	74.00	54.00	-2.49	Peak
3105.00	42.52	---	5.52	48.05	---	74.00	54.00	-5.95	Peak
3765.00	41.08	---	6.51	47.59	---	74.00	54.00	-6.41	Peak
4860.00	38.57	---	9.58	48.14	---	74.00	54.00	-5.86	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1102.00	53.98	---	-3.55	50.43	---	74.00	54.00	-3.57	Peak
1270.00	53.43	---	-3.01	50.42	---	74.00	54.00	-3.58	Peak
1382.00	53.26	---	-2.65	50.61	---	74.00	54.00	-3.39	Peak
3210.00	42.34	---	5.64	47.98	---	74.00	54.00	-6.02	Peak
4245.00	40.85	---	7.83	48.67	---	74.00	54.00	-5.33	Peak
4860.00	39.14	---	9.58	48.72	---	74.00	54.00	-5.28	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11n HT20 TX / CH Middle / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1066.00	54.42	---	-3.67	50.75	---	74.00	54.00	-3.25	Peak
1264.00	53.76	---	-3.03	50.73	---	74.00	54.00	-3.27	Peak
1430.00	53.02	---	-2.50	50.52	---	74.00	54.00	-3.48	Peak
3195.00	41.73	---	5.62	47.35	---	74.00	54.00	-6.65	Peak
4365.00	40.61	---	8.23	48.84	---	74.00	54.00	-5.16	Peak
5085.00	40.19	---	10.06	50.25	---	74.00	54.00	-3.75	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1002.00	54.36	---	-3.87	50.49	---	74.00	54.00	-3.51	Peak
1190.00	54.56	---	-3.27	51.29	---	74.00	54.00	-2.71	Peak
1330.00	54.33	---	-2.82	51.51	---	74.00	54.00	-2.49	Peak
2286.00	59.78	49.01	3.16	62.94	52.17	74.00	54.00	-1.83	AVG
3225.00	41.92	---	5.65	47.57	---	74.00	54.00	-6.43	Peak
4140.00	40.31	---	7.47	47.78	---	74.00	54.00	-6.22	Peak
4920.00	39.78	---	9.72	49.50	---	74.00	54.00	-4.50	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11n HT20 TX / CH High / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1030.00	54.39	---	-3.78	50.61	---	74.00	54.00	-3.39	Peak
1232.00	54.29	---	-3.13	51.16	---	74.00	54.00	-2.84	Peak
1386.00	53.07	---	-2.64	50.44	---	74.00	54.00	-3.56	Peak
3090.00	42.01	---	5.51	47.52	---	74.00	54.00	-6.48	Peak
4395.00	40.18	---	8.34	48.52	---	74.00	54.00	-5.48	Peak
4935.00	40.07	---	9.76	49.83	---	74.00	54.00	-4.17	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1030.00	55.58	---	-3.78	51.80	---	74.00	54.00	-2.20	Peak
1154.00	54.56	---	-3.38	51.17	---	74.00	54.00	-2.83	Peak
1334.00	54.40	---	-2.80	51.59	---	74.00	54.00	-2.41	Peak
3225.00	41.60	---	5.65	47.25	---	74.00	54.00	-6.75	Peak
4365.00	40.57	---	8.23	48.81	---	74.00	54.00	-5.19	Peak
5025.00	39.44	---	9.96	49.40	---	74.00	54.00	-4.60	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11n HT40 TX / CH Low / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1082.00	54.81	---	-3.62	51.19	---	74.00	54.00	-2.81	Peak
1214.00	53.67	---	-3.19	50.48	---	74.00	54.00	-3.52	Peak
1372.00	53.23	---	-2.68	50.55	---	74.00	54.00	-3.45	Peak
3225.00	41.41	---	5.65	47.07	---	74.00	54.00	-6.93	Peak
3885.00	41.46	---	6.76	48.22	---	74.00	54.00	-5.78	Peak
4995.00	39.21	---	9.91	49.12	---	74.00	54.00	-4.88	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1036.00	54.26	---	-3.76	50.50	---	74.00	54.00	-3.50	Peak
1208.00	53.97	---	-3.21	50.76	---	74.00	54.00	-3.24	Peak
1394.00	52.88	---	-2.61	50.27	---	74.00	54.00	-3.73	Peak
3225.00	41.97	---	5.65	47.63	---	74.00	54.00	-6.37	Peak
3990.00	40.18	---	6.98	47.16	---	74.00	54.00	-6.84	Peak
4860.00	39.76	---	9.58	49.34	---	74.00	54.00	-4.66	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11n HT40 TX / CH Middle / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1040.00	54.21	---	-3.75	50.45	---	74.00	54.00	-3.55	Peak
1154.00	54.17	---	-3.38	50.78	---	74.00	54.00	-3.22	Peak
1274.00	53.77	---	-3.00	50.77	---	74.00	54.00	-3.23	Peak
3165.00	41.61	---	5.59	47.20	---	74.00	54.00	-6.80	Peak
4425.00	40.37	---	8.44	48.81	---	74.00	54.00	-5.19	Peak
4935.00	39.74	---	9.76	49.50	---	74.00	54.00	-4.50	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1024.00	55.03	---	-3.80	51.23	---	74.00	54.00	-2.77	Peak
1188.00	53.61	---	-3.27	50.33	---	74.00	54.00	-3.67	Peak
1394.00	53.09	---	-2.61	50.47	---	74.00	54.00	-3.53	Peak
2390.00	60.52	49.90	3.50	64.02	53.40	74.00	54.00	-0.60	AVG
3255.00	41.40	---	5.69	47.08	---	74.00	54.00	-6.92	Peak
3885.00	39.98	---	6.76	46.74	---	74.00	54.00	-7.26	Peak
4935.00	39.82	---	9.76	49.58	---	74.00	54.00	-4.42	Peak

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



<b>Product Name</b>	PCI-RF module	<b>Test By</b>	Rueyyan Lin
<b>Test Model</b>	MB92-EKI6340	<b>Test Date</b>	2012/03/20
<b>Test Mode</b>	IEEE 802.11n HT40 TX / CH High / Antenna (2)	<b>Temp. &amp; Humidity</b>	22°C, 57%

966 Chamber_B at 3Meter / Horizontal									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1088.00	54.20	---	-3.60	50.60	---	74.00	54.00	-3.40	Peak
1372.00	53.25	---	-2.68	50.57	---	74.00	54.00	-3.43	Peak
1462.00	53.25	---	-2.39	50.86	---	74.00	54.00	-3.14	Peak
3240.00	41.71	---	5.67	47.38	---	74.00	54.00	-6.62	Peak
4290.00	39.89	---	7.98	47.87	---	74.00	54.00	-6.13	Peak
4950.00	39.99	---	9.80	49.78	---	74.00	54.00	-4.22	Peak

966 Chamber_B at 3Meter / Vertical									
Frequency (MHz)	Reading-PK (dBuV)	Reading-AV (dBuV)	Correction Factor (dB/m)	Result-PK (dBuV/m)	Result-AV (dBuV/m)	Limit-PK (dBuV/m)	Limit-AV (dBuV/m)	Margin (dB)	Remark
1036.00	54.18	---	-3.76	50.42	---	74.00	54.00	-3.58	Peak
1198.00	53.91	---	-3.24	50.67	---	74.00	54.00	-3.33	Peak
1406.00	53.66	---	-2.57	51.09	---	74.00	54.00	-2.91	Peak
3195.00	41.52	---	5.62	47.14	---	74.00	54.00	-6.86	Peak
4530.00	40.02	---	8.76	48.78	---	74.00	54.00	-5.22	Peak
4965.00	39.40	---	9.83	49.23	---	74.00	54.00	-4.77	Peak

**Remark:**

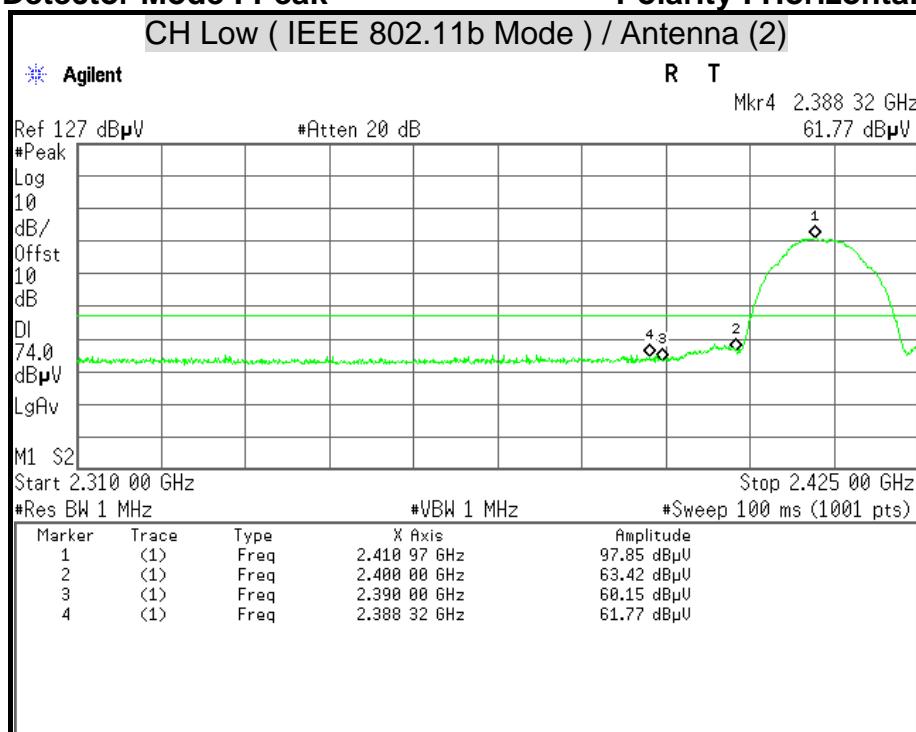
1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Average test would be performed if the peak result were greater than the average limit.
3. Data of measurement within this frequency range shown “ --- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with “ N/A ” remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
5. Result = Reading + Correction Factor  
Margin = Result - Limit  
Remark Peak = Result(PK) - Limit(AV)  
Remark AVG = Result(AV) - Limit(AV)



## Restricted Band Edges

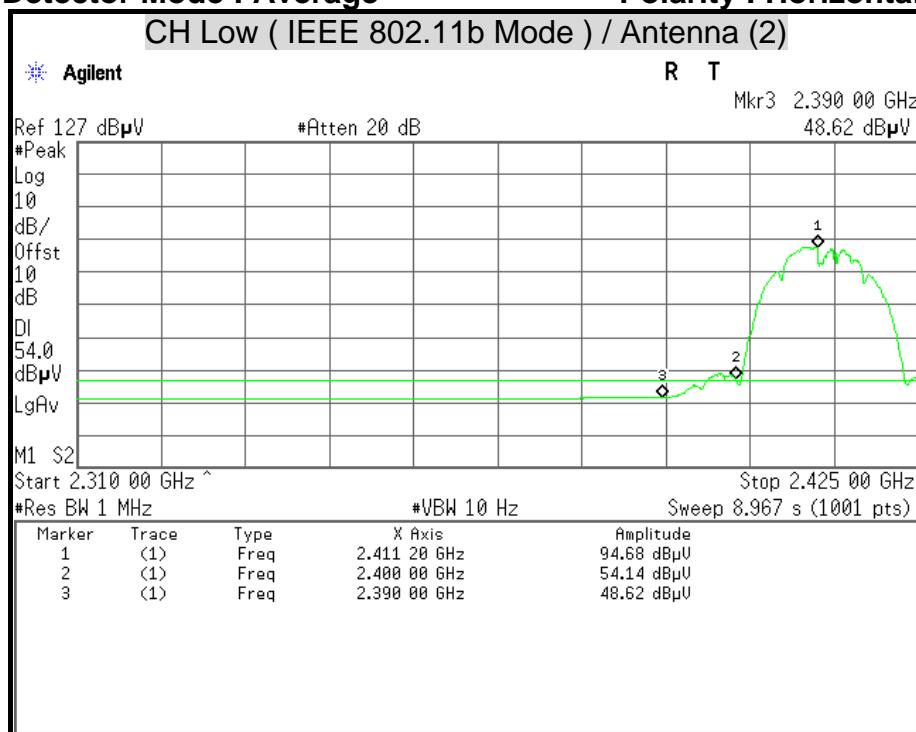
## Detector Mode : Peak

## Polarity : Horizontal



## Detector Mode : Average

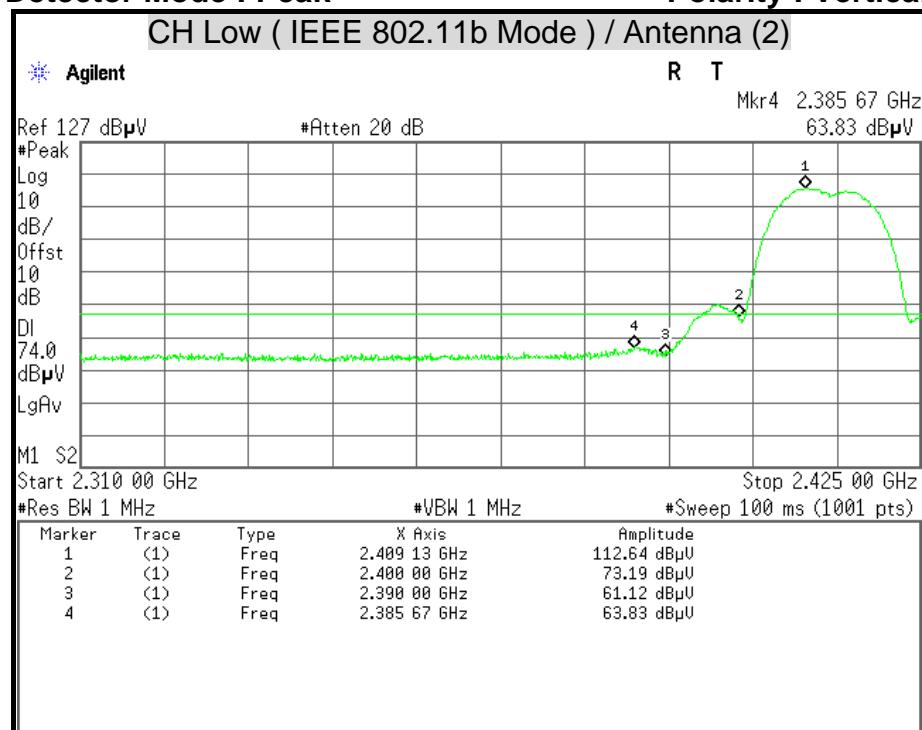
## Polarity : Horizontal





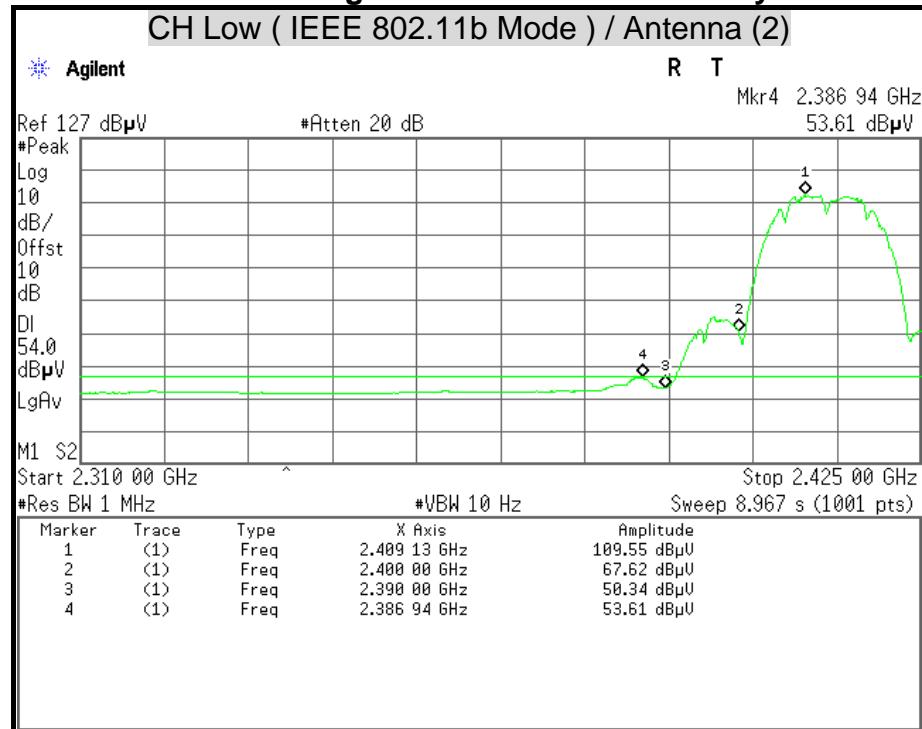
## Detector Mode : Peak

## Polarity : Vertical



## Detector Mode : Average

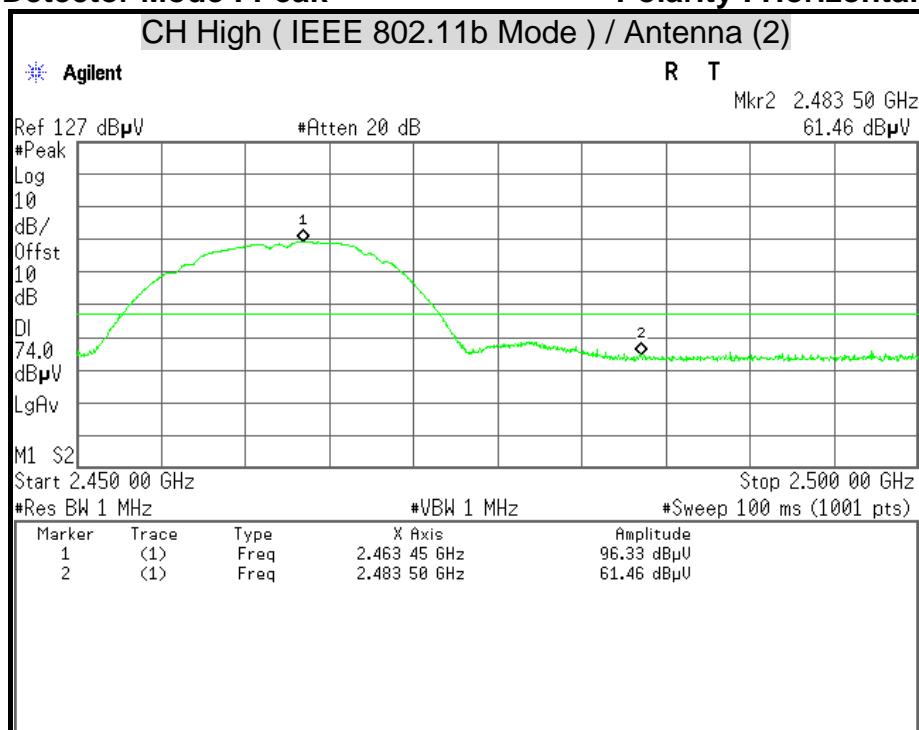
## Polarity : Vertical





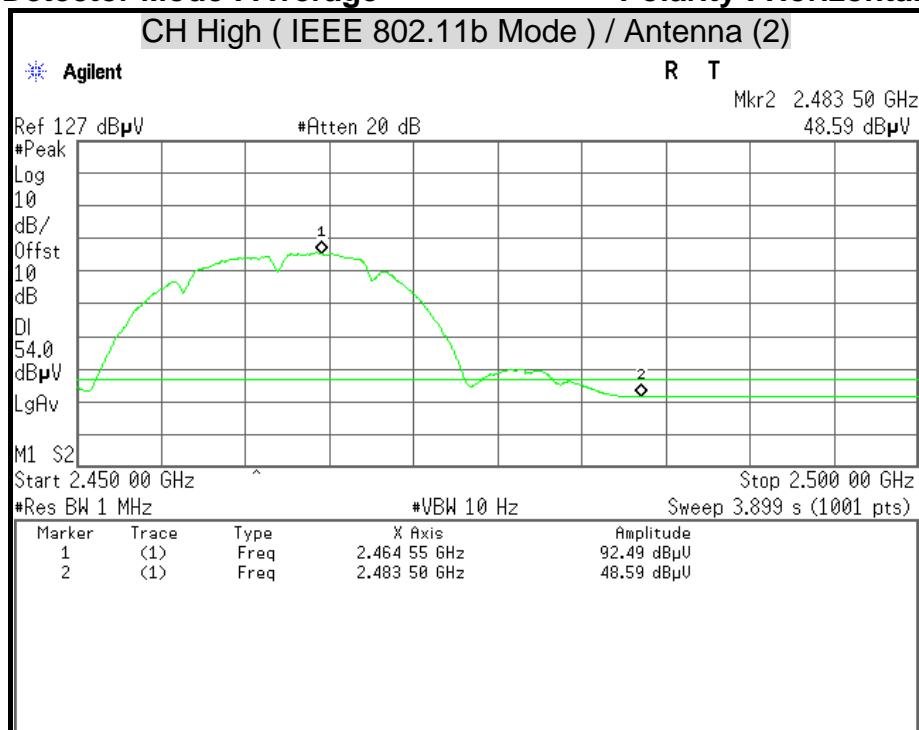
## Detector Mode : Peak

## Polarity : Horizontal



## Detector Mode : Average

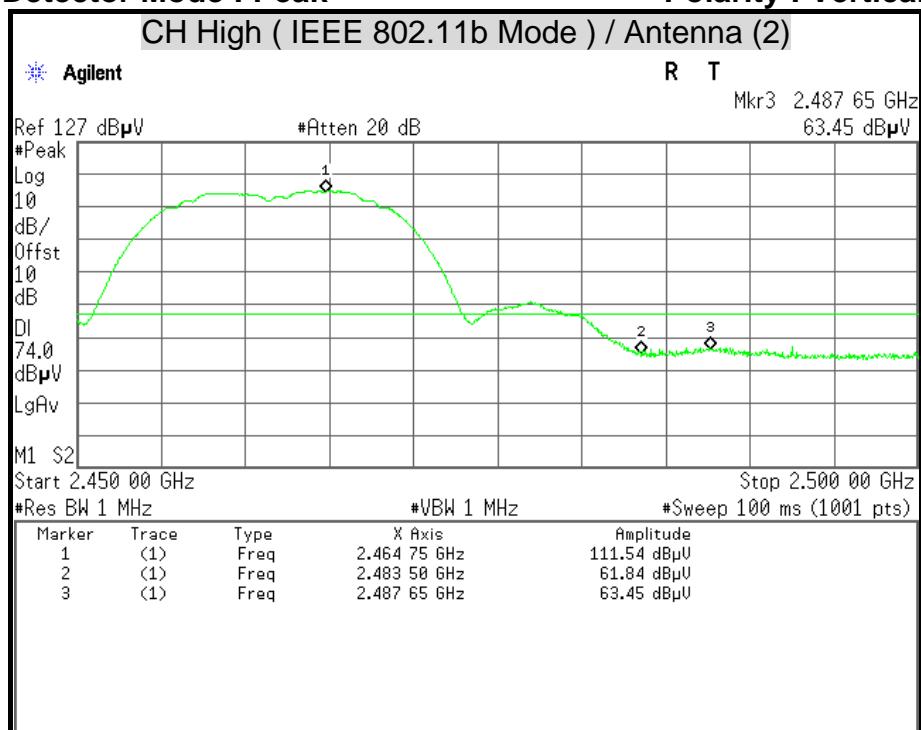
## Polarity : Horizontal





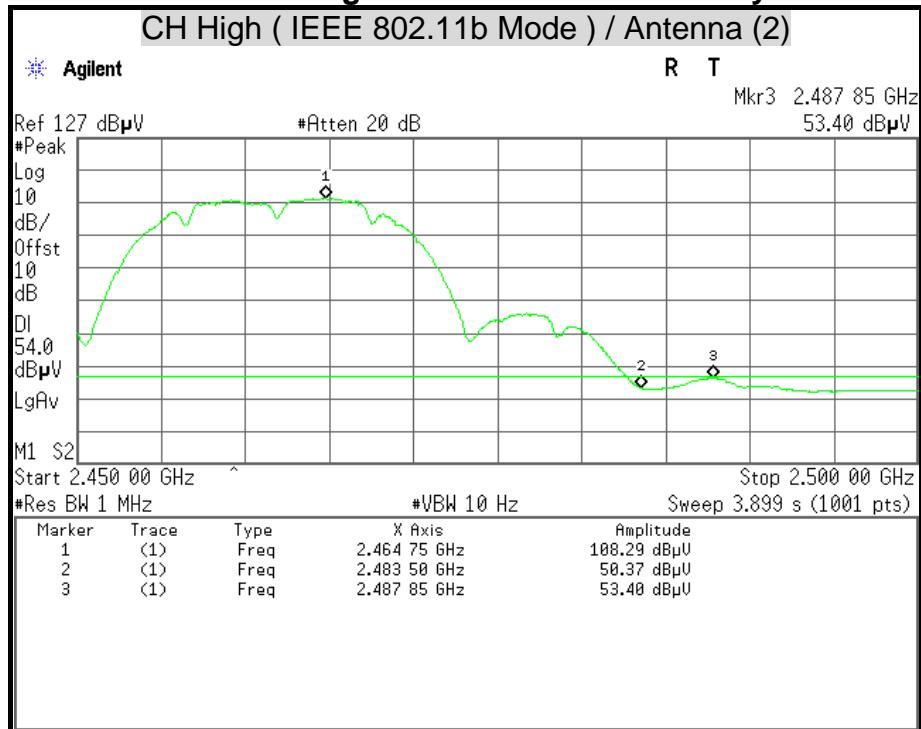
## Detector Mode : Peak

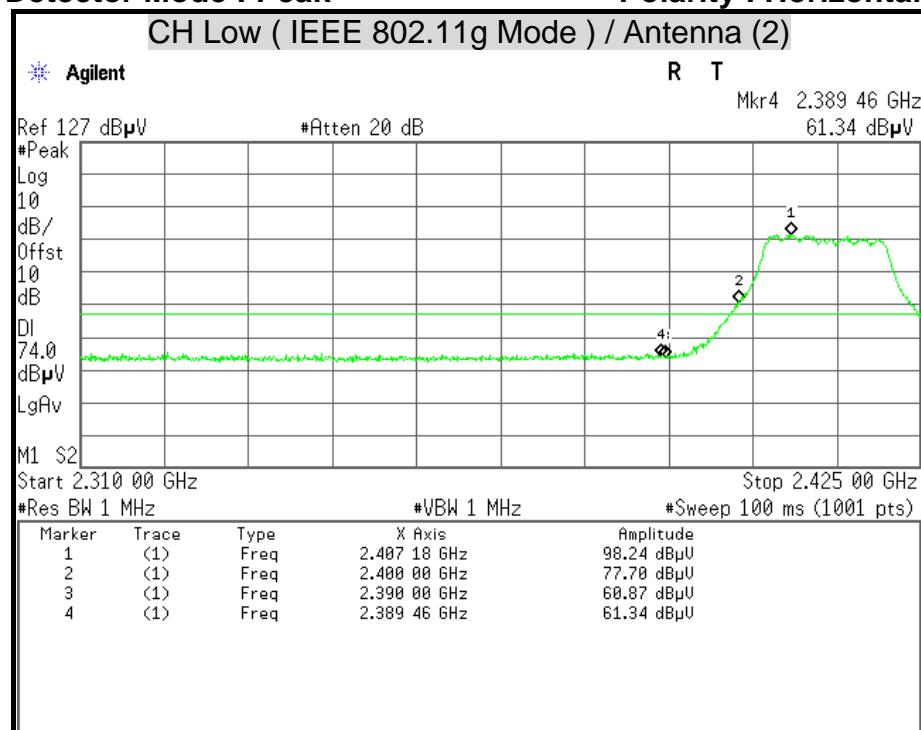
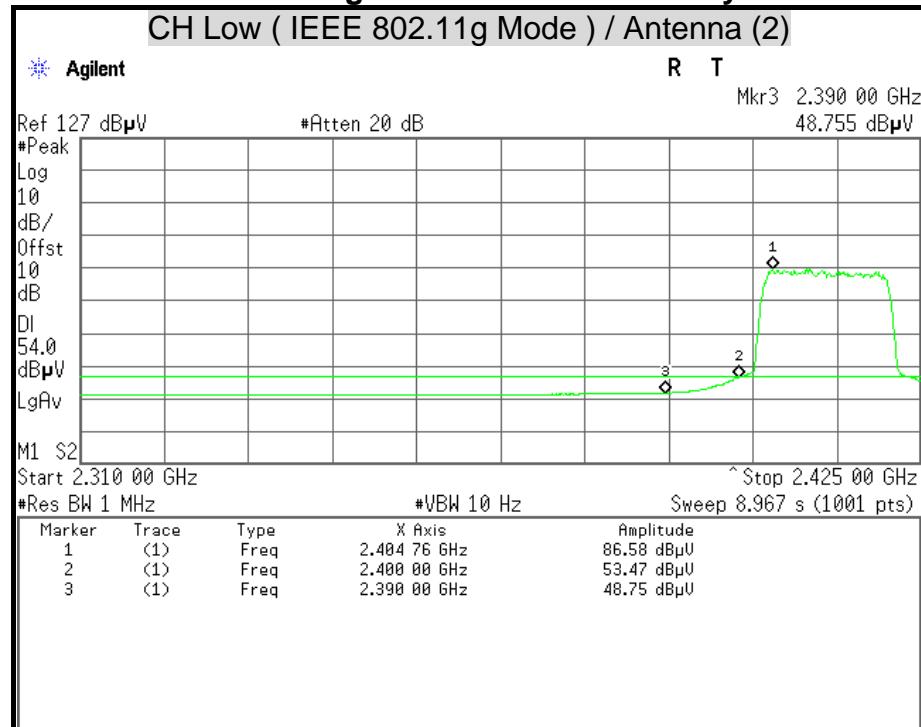
## Polarity : Vertical



## Detector Mode : Average

## Polarity : Vertical

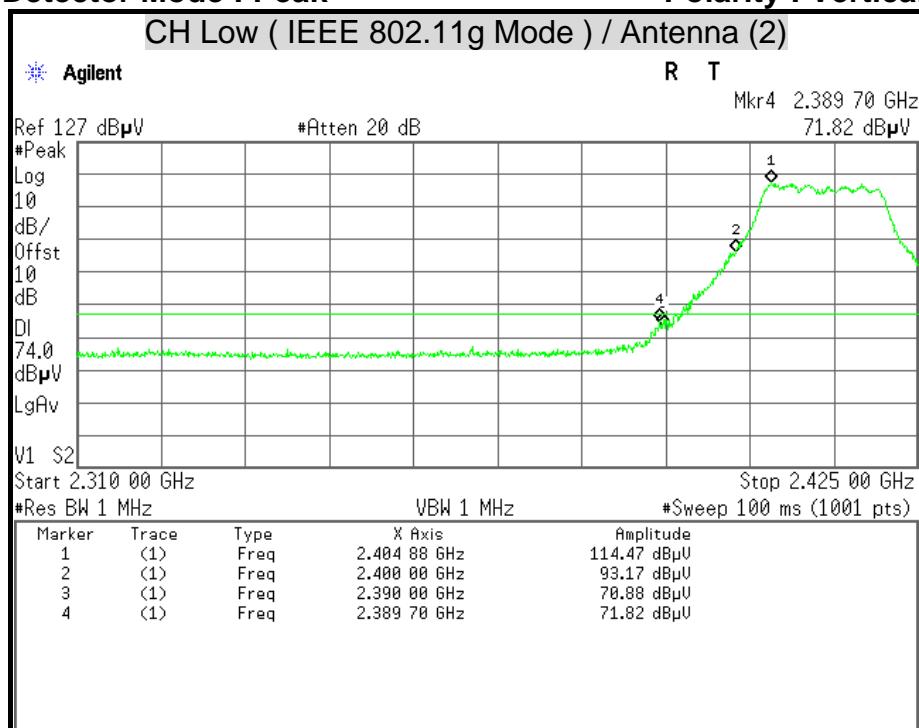


**Detector Mode : Peak****Polarity : Horizontal****Detector Mode : Average****Polarity : Horizontal**



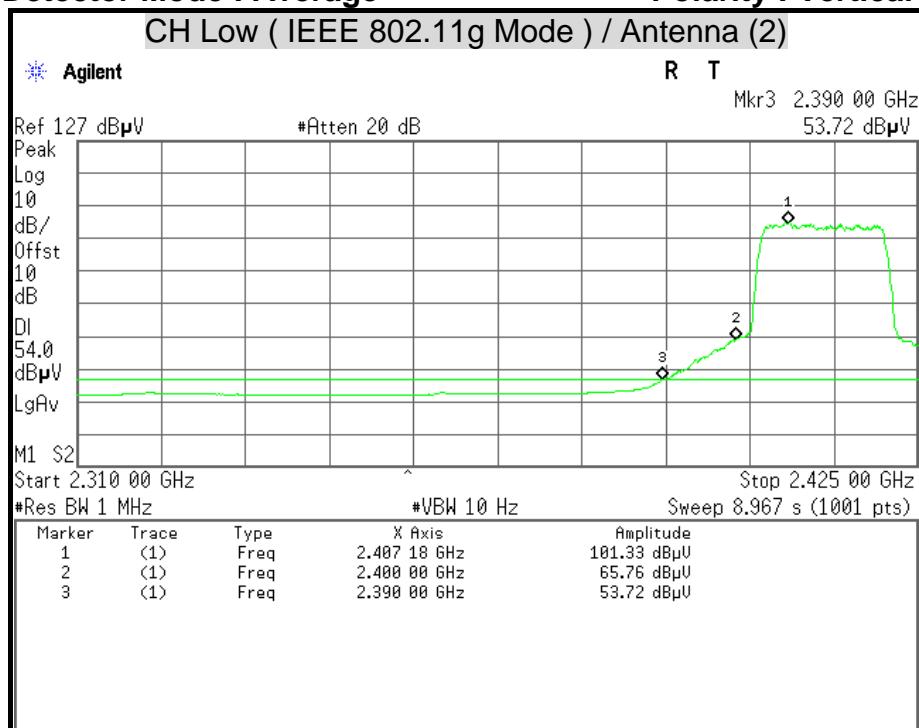
## Detector Mode : Peak

## Polarity : Vertical



## Detector Mode : Average

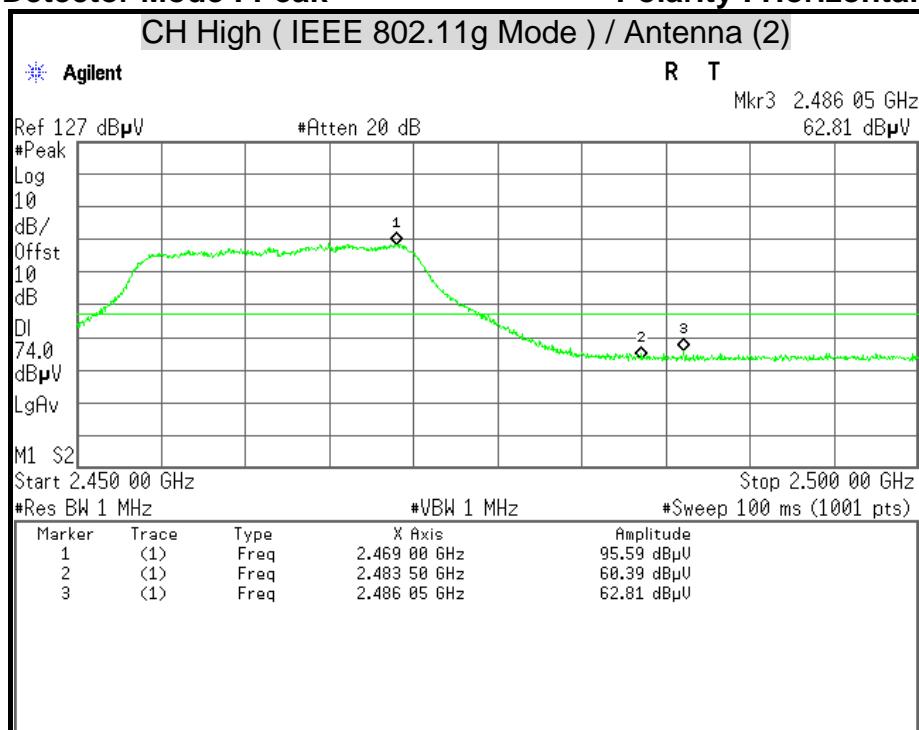
## Polarity : Vertical





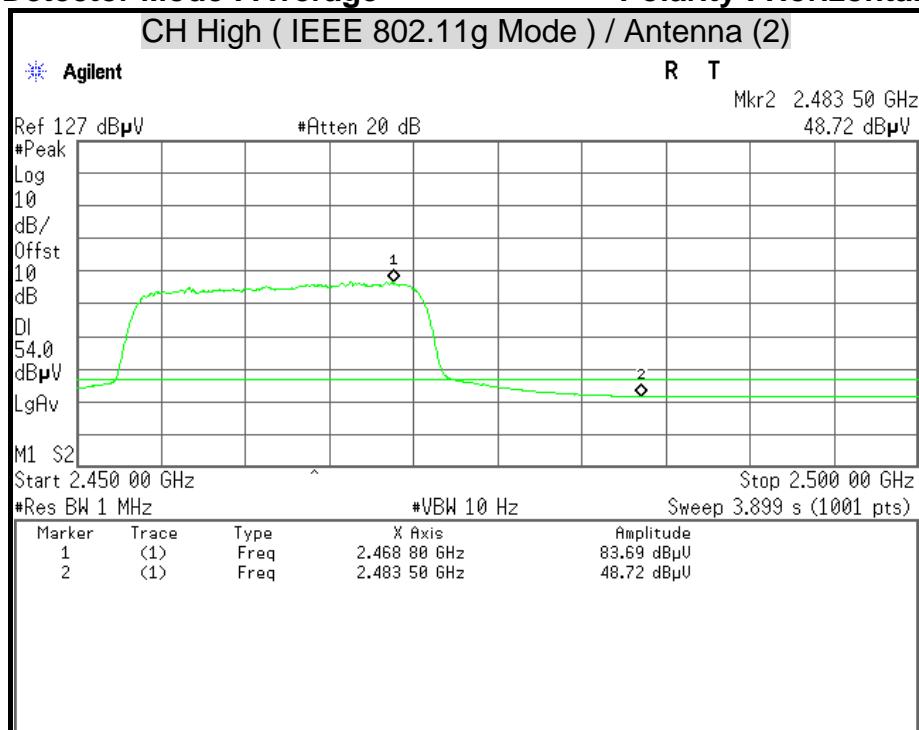
## Detector Mode : Peak

## Polarity : Horizontal



## Detector Mode : Average

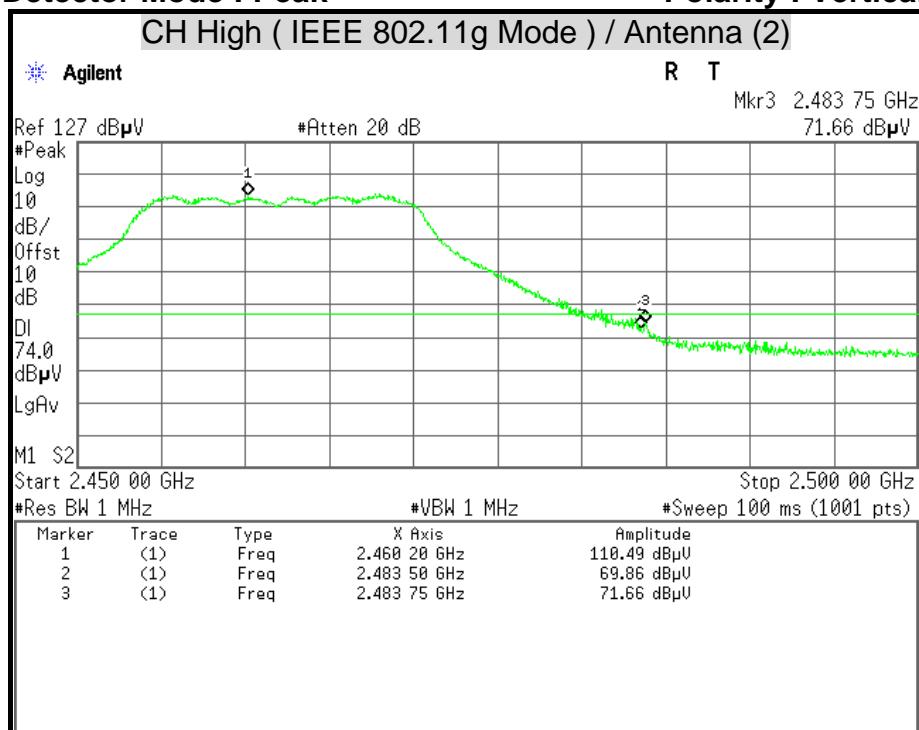
## Polarity : Horizontal





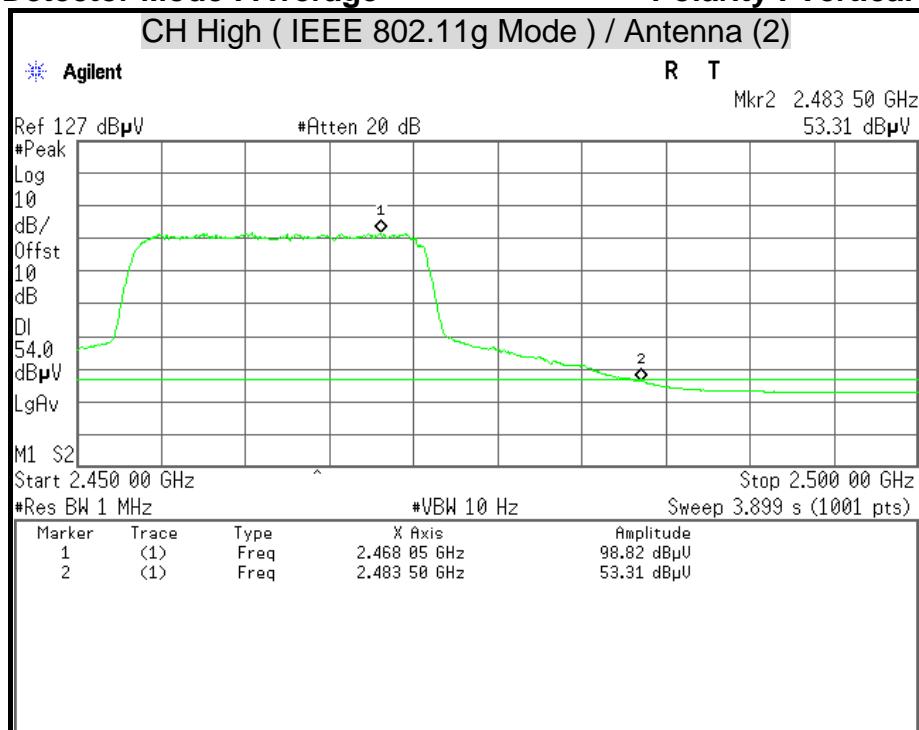
## Detector Mode : Peak

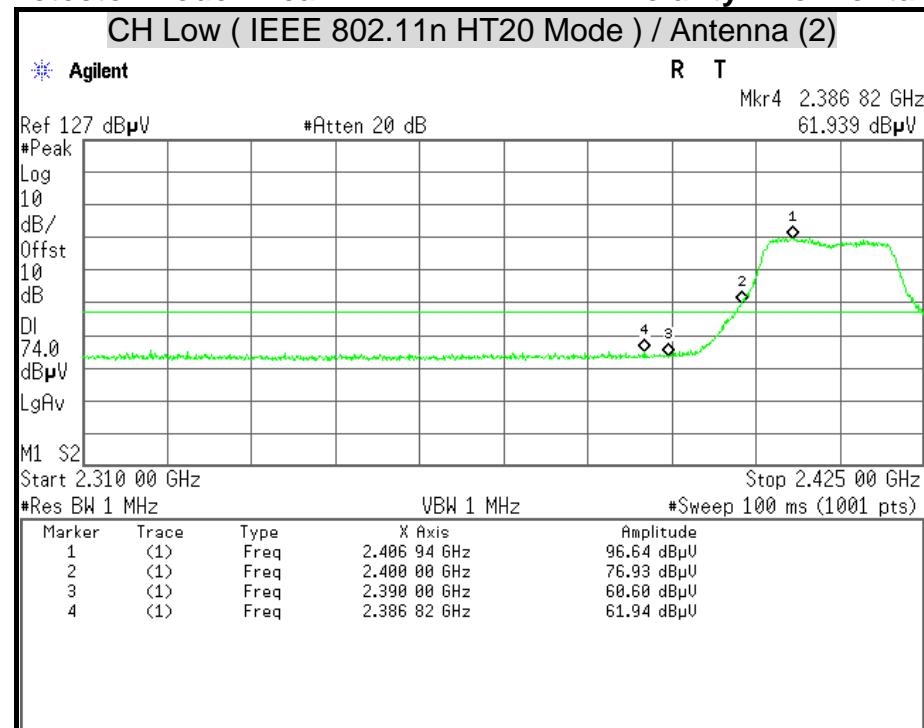
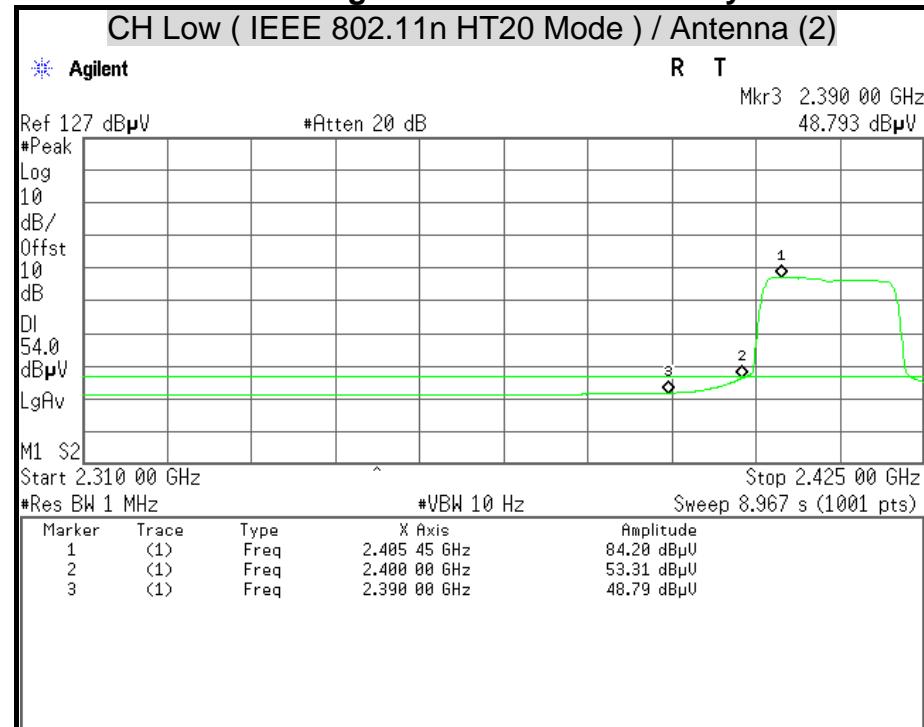
## Polarity : Vertical

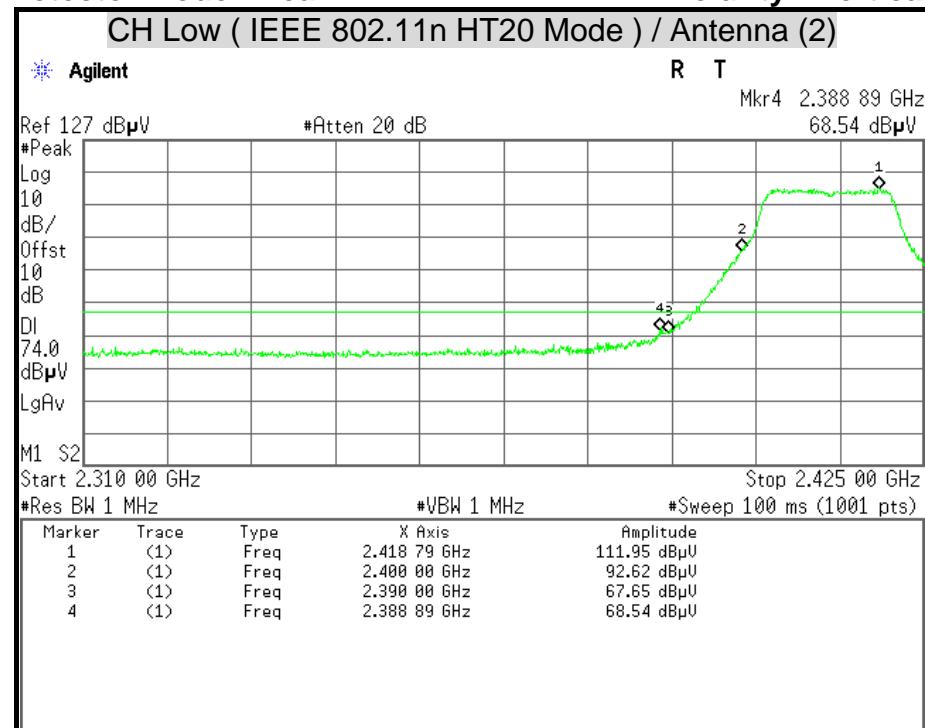
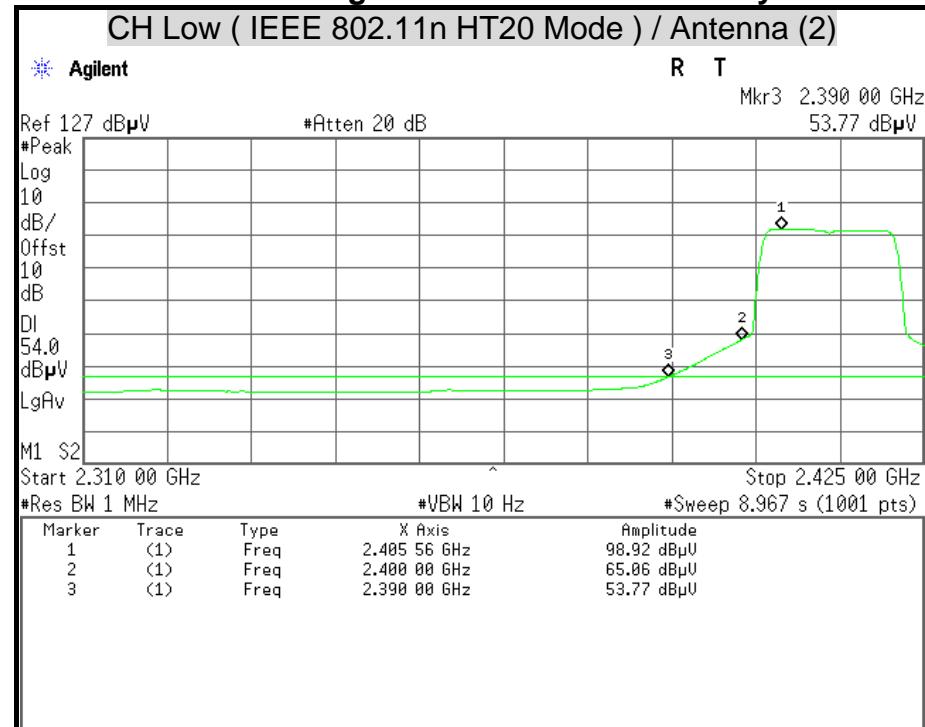


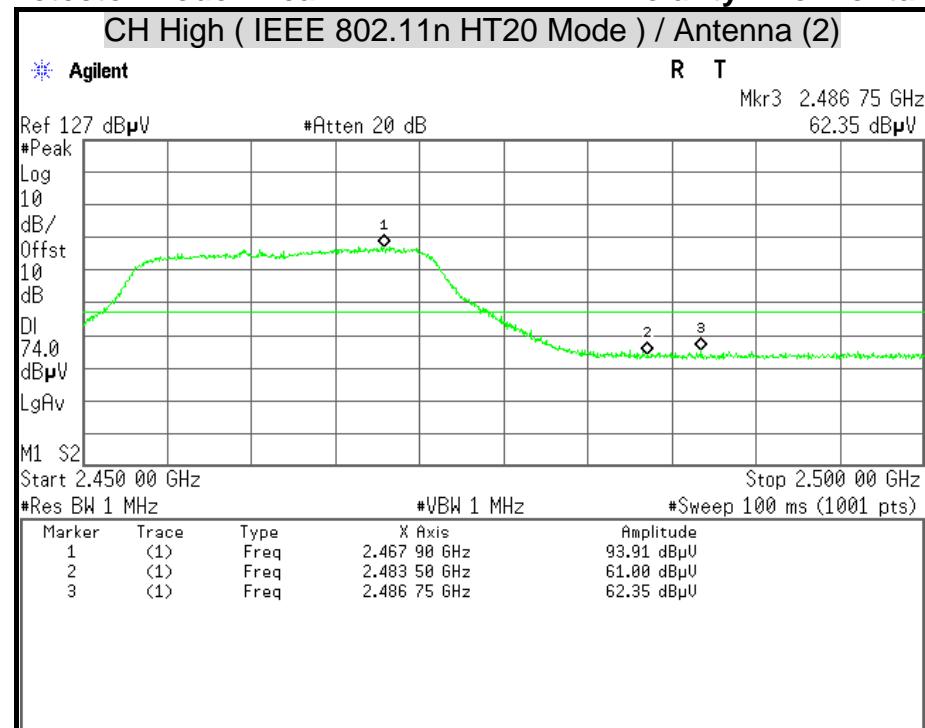
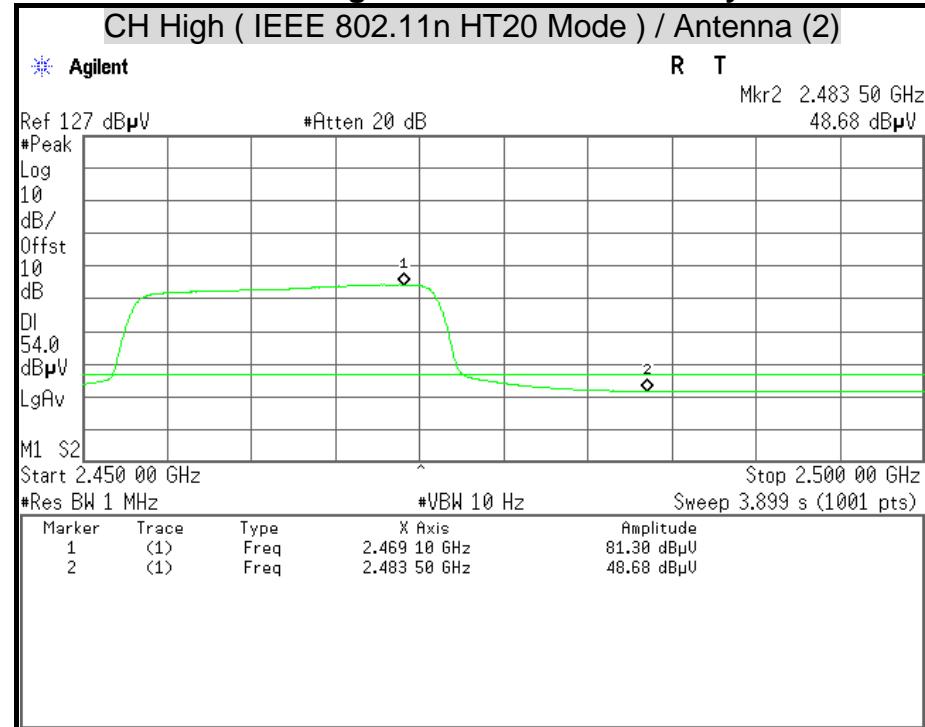
## Detector Mode : Average

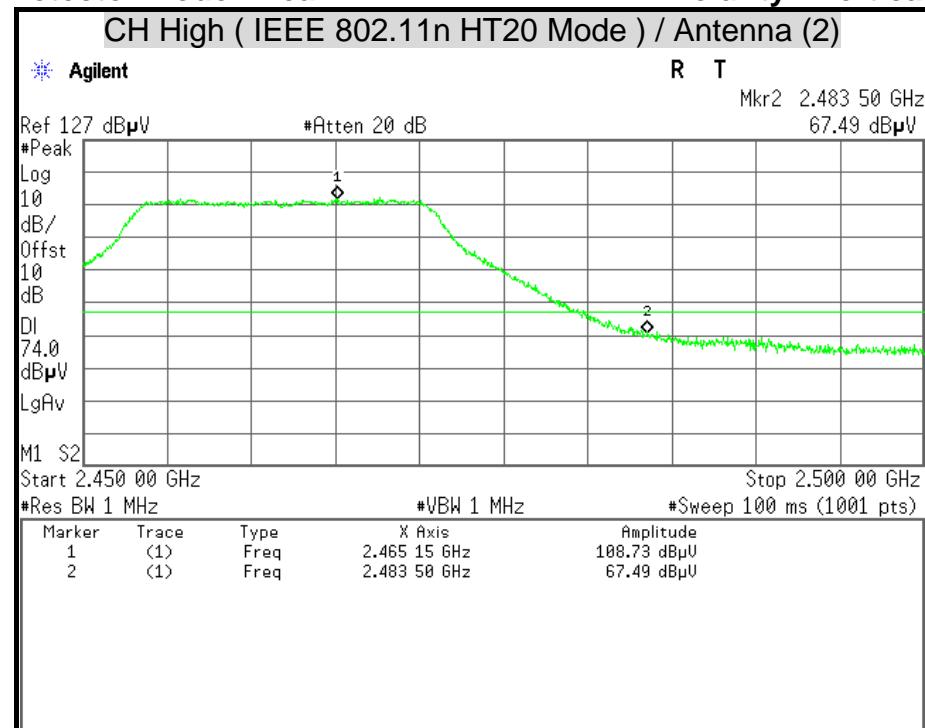
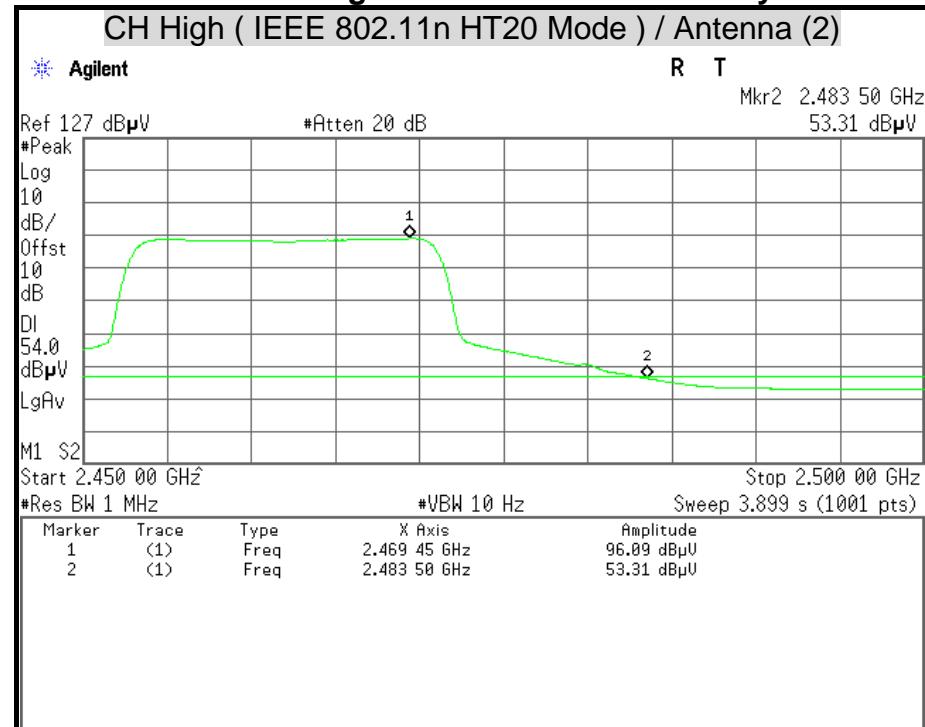
## Polarity : Vertical

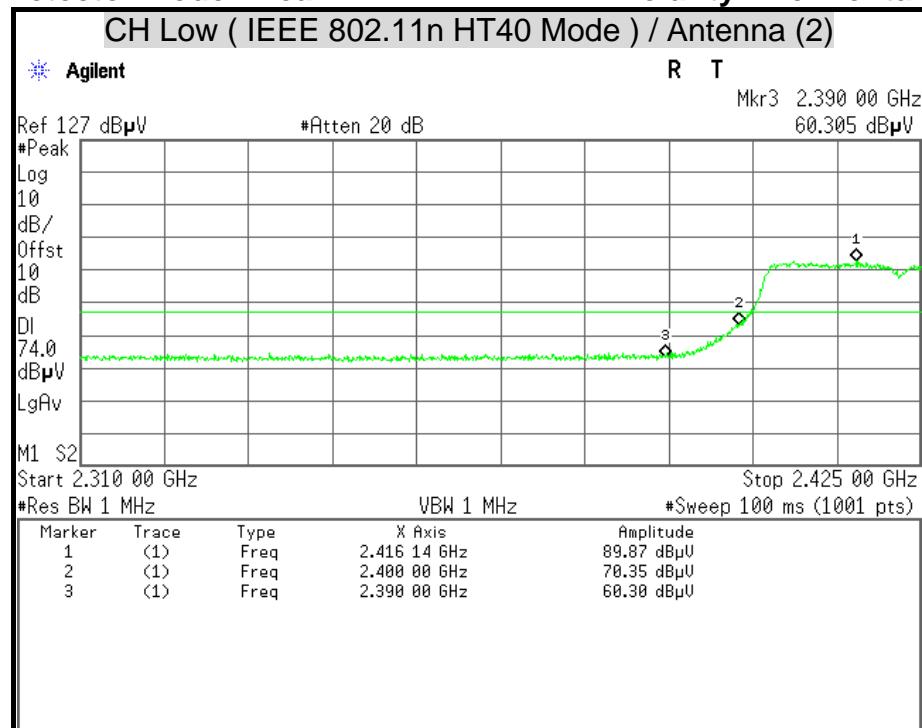
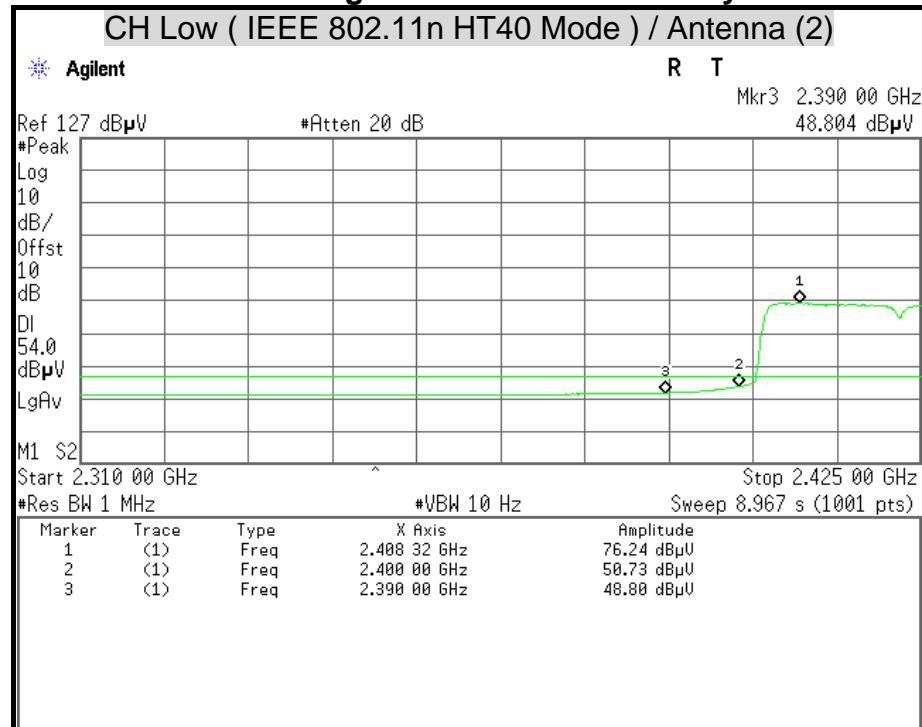


**Detector Mode : Peak****Polarity : Horizontal****Detector Mode : Average****Polarity : Horizontal**

**Detector Mode : Peak****Polarity : Vertical****Detector Mode : Average****Polarity : Vertical**

**Detector Mode : Peak****Polarity : Horizontal****Detector Mode : Average****Polarity : Horizontal**

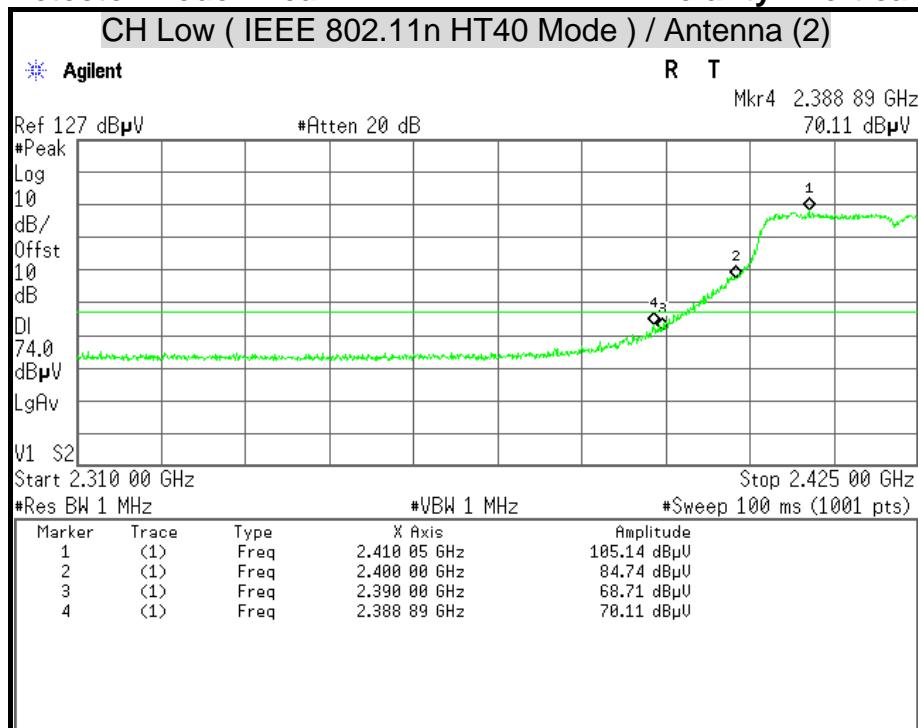
**Detector Mode : Peak****Polarity : Vertical****Detector Mode : Average****Polarity : Vertical**

**Detector Mode : Peak****Polarity : Horizontal****Detector Mode : Average****Polarity : Horizontal**



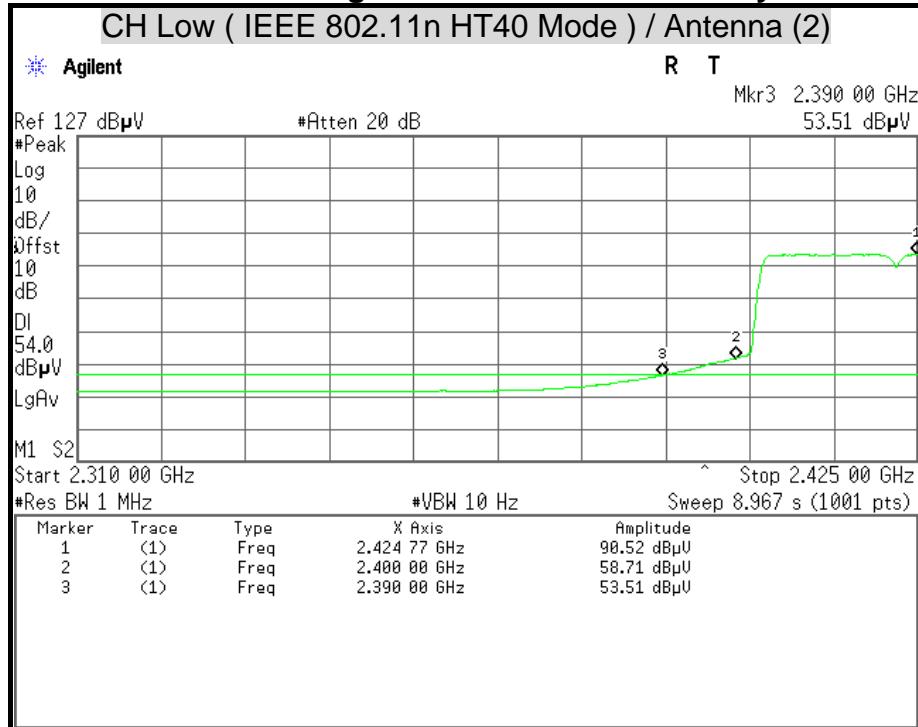
## Detector Mode : Peak

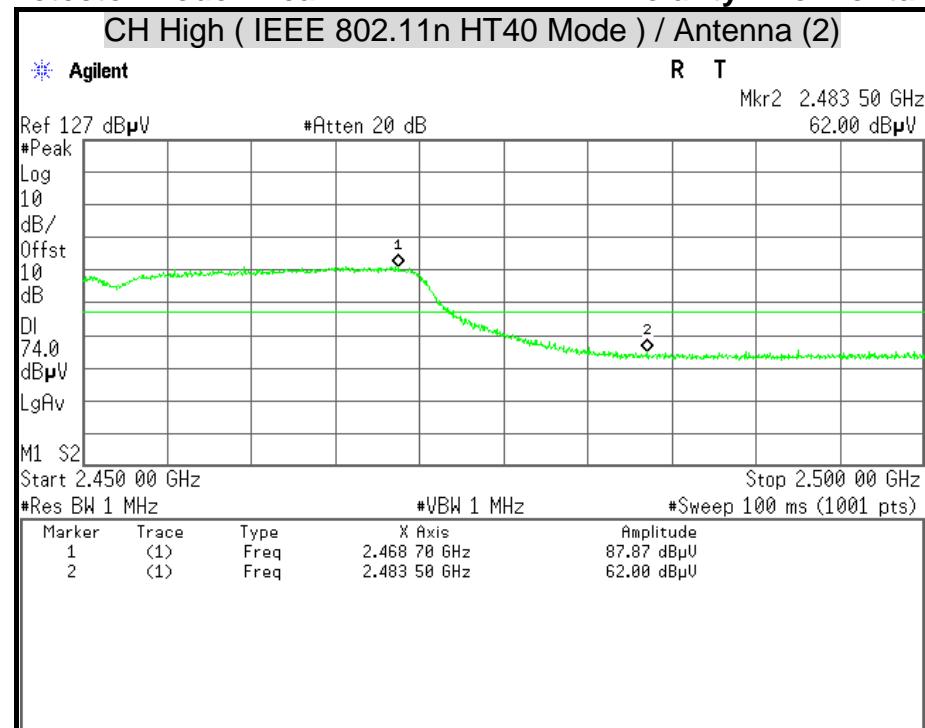
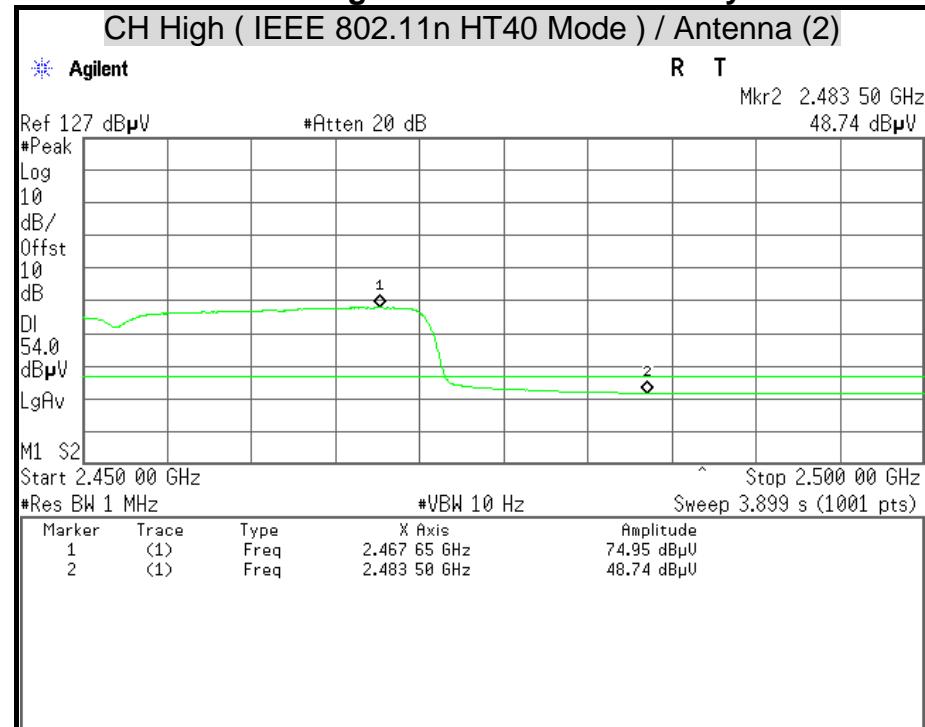
## Polarity : Vertical

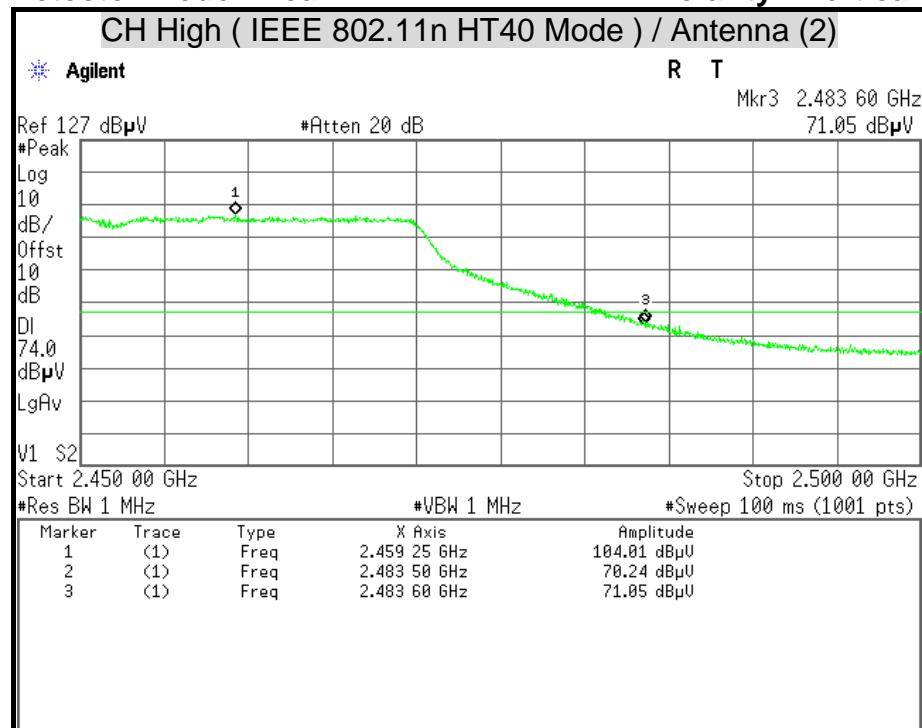
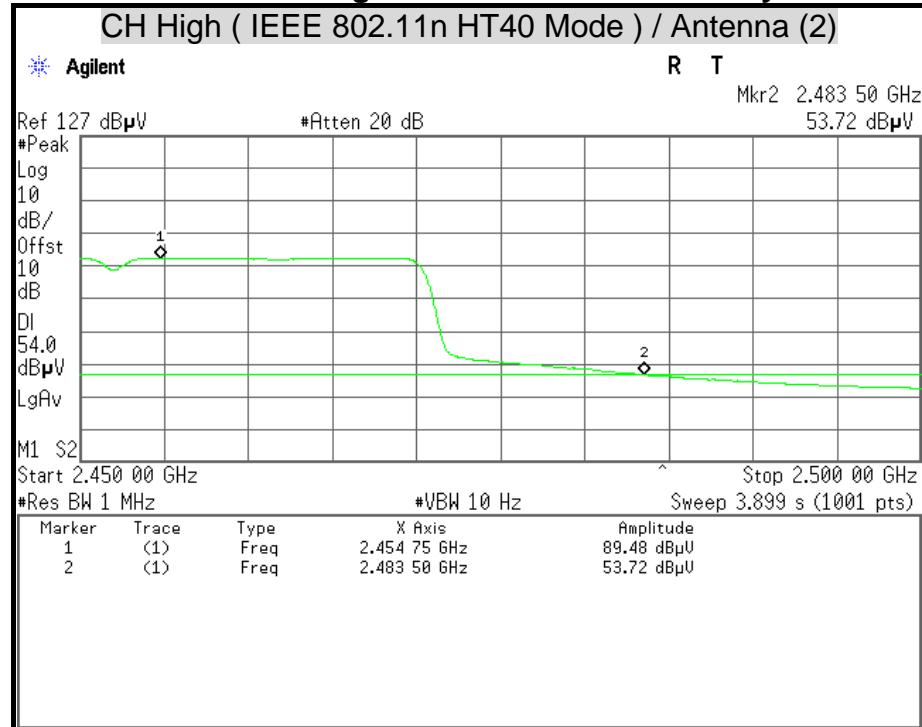


## Detector Mode : Average

## Polarity : Vertical



**Detector Mode : Peak****Polarity : Horizontal****Detector Mode : Average****Polarity : Horizontal**

**Detector Mode : Peak****Polarity : Vertical****Detector Mode : Average****Polarity : Vertical**



## 7.6 CONDUCTED EMISSION

### LIMITS

§ 15.207 (a) Except as shown in paragraph (b) and (c) this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Conducted Limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5.00	56	46
5.00 - 30.0	60	50

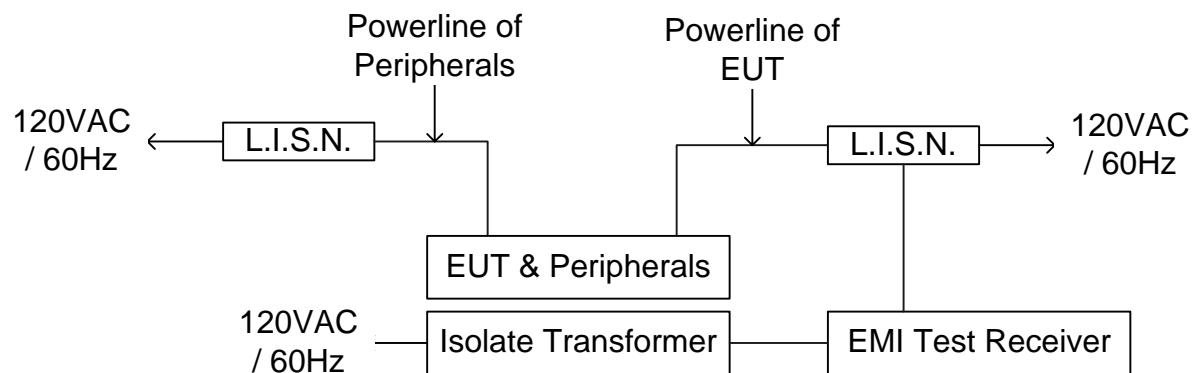
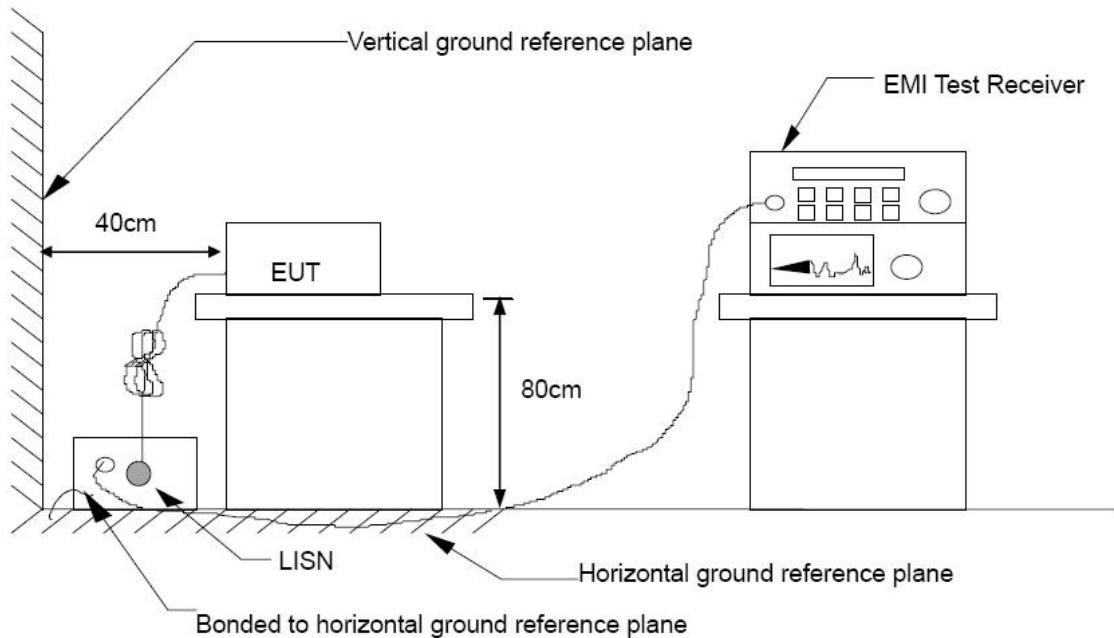
### TEST EQUIPMENT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-465	08/09/2012
L.I.S.N	SCHWARZBECK	NSLK 8127	8127-473	03/12/2013
EMI Receiver	ROHDE & SCHWARZ	ESCS 30	835418/008	10/20/2012
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	100117	09/14/2012

*Remark:* Each piece of equipment is scheduled for calibration once a year.



## TEST SETUP





## **TEST PROCEDURE**

The basic test procedure was in accordance with ANSI C63.4:2003.

The test procedure is performed in a 4m x 3m x 2.4m (LxWxH) shielded room.

The EUT along with its peripherals were placed on a 1.0m (W) x 1.5m (L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.

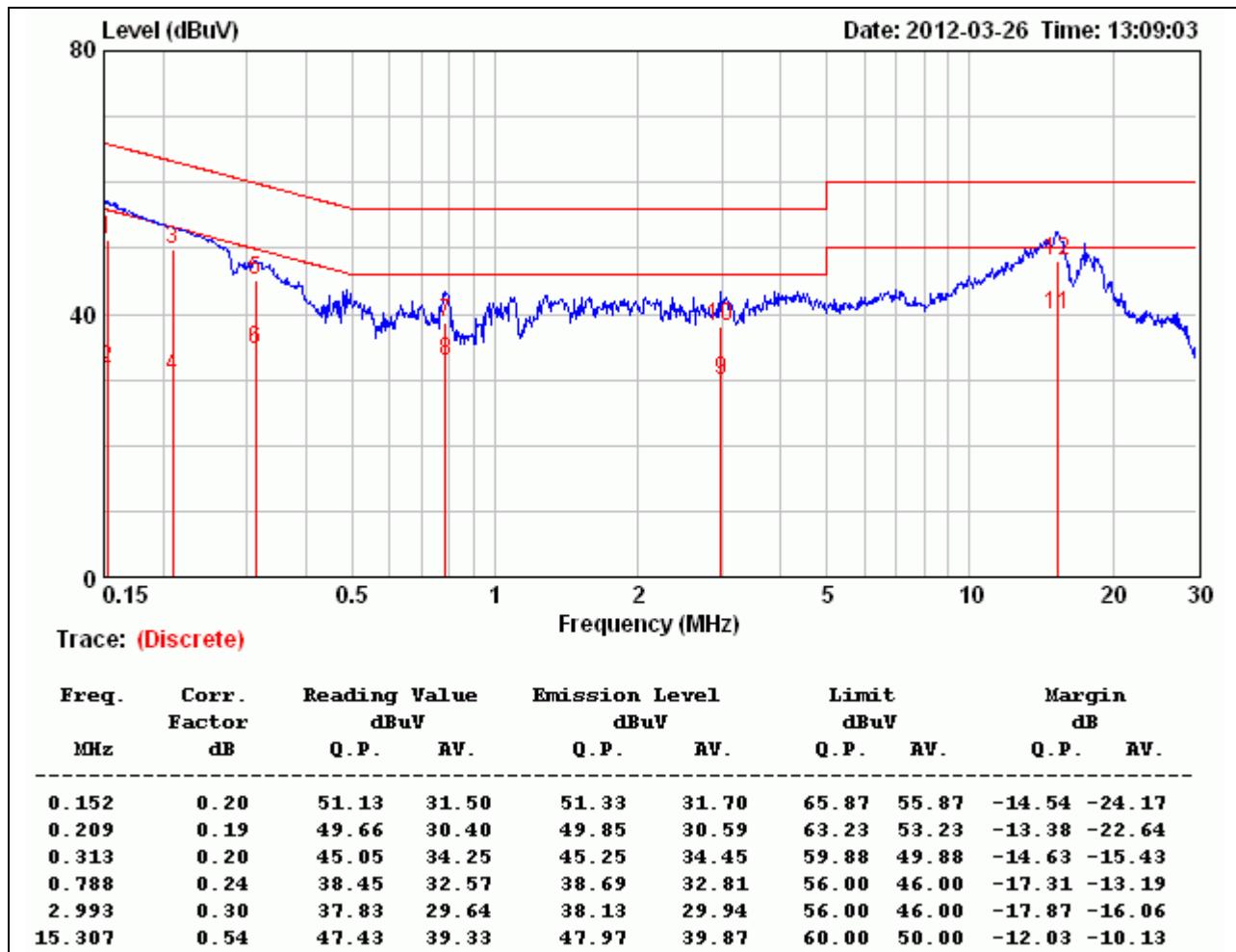
The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.

The EUT was located so that the distance between the boundary of the EUT and the closest surface of the LISN is 0.8 m. Where a mains flexible cord was provided by the manufacturer shall be 1 m long, or if in excess of 1 m, the excess cable was folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.

**TEST RESULTS**

Product Name	PCI-RF module	Test By	Rueyyan Lin
Test Model	MB92-EKI6340	Test Date	2012/03/26
Test Mode	TX Mode	Temp. & Humidity	22°C, 62%

LINE

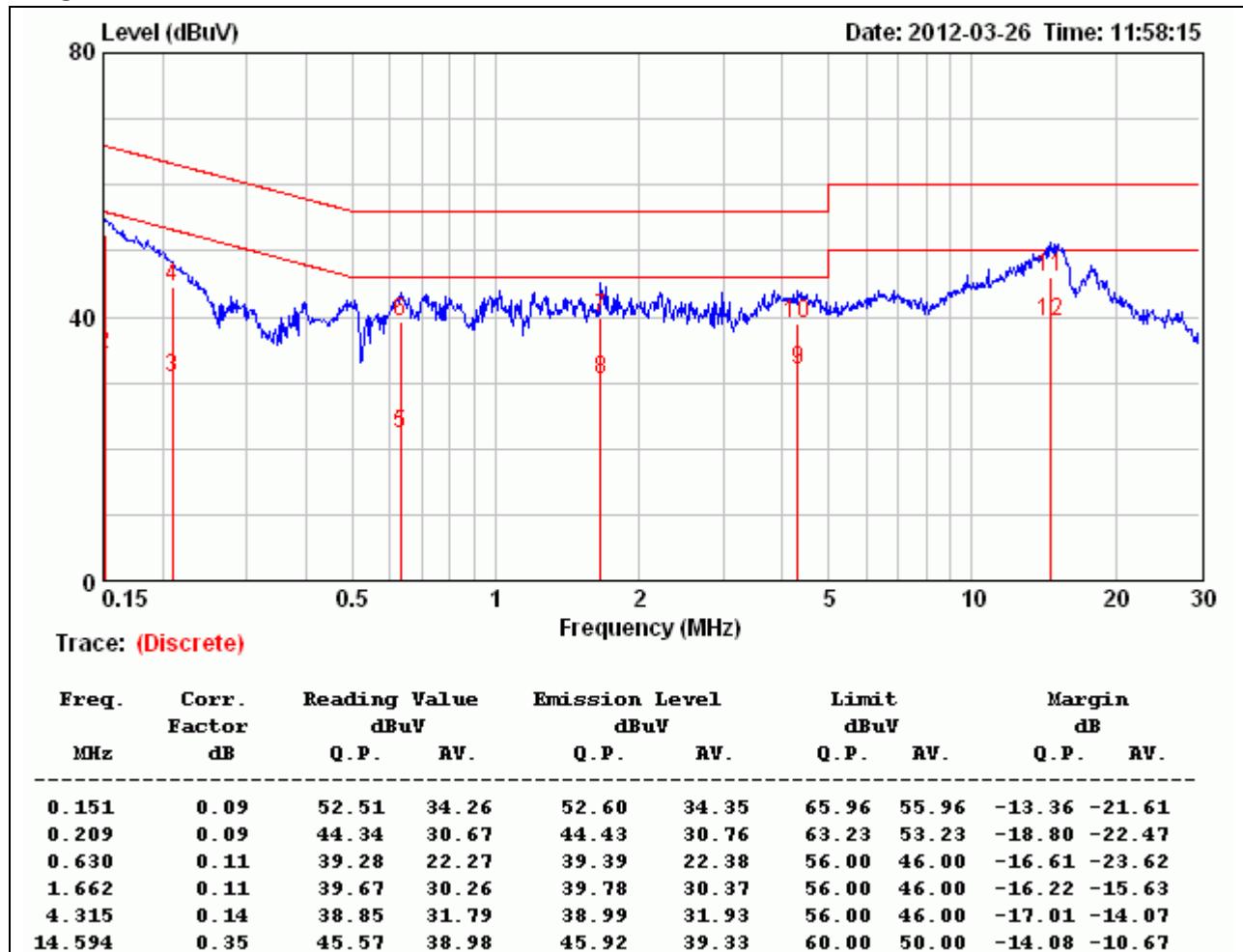
**Remark:**

1. Correction Factor = Insertion loss + Cable loss
2. Emission level = Reading Value + Correction factor
3. Margin value = Emission level – Limit value



Product Name	PCI-RF module	Test By	Rueyyan Lin
Test Model	MB92-EKI6340	Test Date	2012/03/26
Test Mode	TX Mode	Temp. & Humidity	22°C, 62%

## NEUTRAL



## Remark:

1. Correction Factor = Insertion loss + Cable loss
2. Emission level = Reading Value + Correction factor
3. Margin value = Emission level – Limit value