



MEASUREMENT REPORT

IC RSS-210 WLAN 802.11b/g/n

IC:	7849A-WLE200N2
APPLICANT:	Compex Systems Pte Ltd.

Application Type: Certification
Product: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER
Model No.: WLE200N2
Brand Name: Compex
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15.247
IC Specification(s): RSS-210 Issue 8
Test Procedure(s): ANSI C63.10-2009
KDB 558074 D01v03r01, KDB 662911 D01v02r01
Test Date: February 07 ~ 17, 2014

Reviewed By :

Sunny Sun

(Engineer: Sunny Sun)

Approved By :

Robin Wu

(Manager: Robin Wu)

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01v03r01. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

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Revision History

Report No.	Version	Description	Issue Date
1401RSU01501	Rev. 01	Initial report	02-26-2014
1401RSU01501	Rev. 02	Add calibration interval	02-27-2014

§2.1033 General Information

Applicant:	Compex Systems Pte Ltd.
Applicant Address:	No 135 Joo Seng Road, #08-01 PM Industrial Building Singapore 368363
Manufacturer:	Compex Systems Pte Ltd.
Manufacturer Address:	No 135 Joo Seng Road, #08-01 PM Industrial Building Singapore 368363
Test Site:	MRT Technology (Suzhou) Co., Ltd
Test Site Address:	D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China
MRT IC Registration No.:	11384A
IC SPECIFICATION(S):	RSS-210 Issue 8
Model Name:	WLE200N2
IC:	7849A-WLE200N2
Test Device Serial No.:	N/A <input checked="" type="checkbox"/> Production <input type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering
FCC Classification:	Digital Transmission System (DTS)
Date(s) of Test:	February 07 ~ 12, 2014
Test Report S/N:	1401RSU01501

1. INTRODUCTION

1.1. Scope

Measurement and determination of electromagnetic emissions (EMC) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2. MRT Test Location

The map below shows the location of the MRT LABORATORY, its proximity to the Taihu Lake. These measurement tests were conducted at the MRT Technology (Suzhou) Co., Ltd. Facility located at D8 Building, Youxin Industrial Park, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on September 30, 2013.



2. PRODUCT INFORMATION

2.1. Equipment Description

Product Name	WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER
Model No.	WLE200N2
Frequency Range	802.11b/g/n: 2412 ~ 2462 MHz
Maximum Output Power	802.11b/g/n: 802.11b: 18.12dBm 802.11g: 23.34dBm 802.11n-HT20: 26.90dBm 802.11n-HT40: 26.87dBm
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM

2.2. Description of Available Antennas

Frequency Band (GHz)	Type	Model No.	Antenna Gain (dBi)
2.4 ~ 2.5	Dual Band Omni Directional Antenna	SAA04-22008A	4.5
2.4 ~ 2.5	Omni Directional Antenna	WD12020124G	2.0

Note: The antenna (yellow marker) was used in this test report.

2.3. Frequency / Channel Operation

Channel for 802.11b/g/n-HT20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	N/A	N/A

Channel for 802.11n-HT40

Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz
06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	N/A	N/A	N/A	N/A

2.4. Device Capabilities

This device contains the following capabilities:

802.11b/g/n WLAN (DTS)

Note: 2.4GHz WLAN (DTS) operation is possible in 20MHz and 40MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = peak per the guidance of Section 6.0 b) of KDB 558074 D01v03r01. The RBW and VBW were both greater than $50/T$, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

- 802.11b – 99.74%
- 802.11g 20MHz Bandwidth – 98.43%
- 802.11n 20MHz Bandwidth – 98.12%
- 802.11n 40MHz Bandwidth – 96.09%

2.5. Test Configuration

The WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER IC: 7849A-WLE200N2 was tested per the guidance of KDB 558074 D01v03r01. ANSI C63.10-2009 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.6. Test Software

The test utility software used during testing was ART Version 2.1.

Power Parameter Value of the test software setting:

Test Mode	Test Channel	Chain 0	Chain 1	Test Mode	Test Channel	Chain 0	Chain 1	Chain 0+1
802.11b	2412	16	16	n-HT20	2412	12	13	12.5
	2437	16	16		2437	16	16	16
	2462	16	16		2462	12.5	10.5	10
802.11g	2412	13	13.5	n-HT40	2422	9.5	11	10
	2437	16	16		2437	16	16	16
	2462	13	12		2452	11	11	9

2.7. EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

2.8. Labeling Requirements

Per 2.1074 & 15.19; Docket 95-19

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase.

However, when the device is so small wherein placement of the label with specified statement is not practical, only the trade name and FCC ID must be displayed on the device per Section 15.19(a)(5).

Please see attachment for FCC ID label and label location.

3. DESCRIPTION OF TEST

3.1. Evaluation Procedure

The measurement procedures described in the American National Standard for Testing Unlicensed Wireless Devices (ANSI C63.10-2009), and the guidance provided in KDB 558074 D01v03r01 were used in the measurement of the **WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER IC: 7849A-WLE200N2**.

Deviation from measurement procedure.....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. The shielding effectiveness of the shielded room is in accordance with MIL-Std-285. A 1m x 2m wooden table 80cm high is placed 40cm away from the vertical wall and 80cm away from the sidewall of the shielded room. Two 10kHz-30MHz, 50 Ω /50 μ H Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room floor. Power to the LISNs is filtered by external high-current high-insertion loss power line filters. These filters attenuate ambient signal noise from entering the measurement lines. These filters are also bonded to the shielded enclosure.

The EUT is powered from one LISN and the support equipment is powered from the second LISN. If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply line(s) will be connected to the second LISN. All interconnecting cables more than 1 meter were shortened to a 1 meter length by non-inductive bundling (serpentine fashion) and draped over the back edge of the test table. All cables were at least 40cm above the horizontal reference ground-plane. Power cables for support equipment were routed down to the second LISN while ensuring that that cables were not draped over the second LISN.

Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the receiver and exploratory measurements were made to determine the frequencies producing the maximum emission from the EUT. The receiver was scanned from 150kHz to 30MHz. The detector function was set to peak mode for exploratory measurements while the bandwidth of the analyzer was set to 9kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Each emission was also maximized by varying: power lines, the mode of operation or resolution, clock or data exchange speed, scrolling H pattern to the EUT and/or support equipment whichever determined the worst-case emission. Once the worst case emissions have been identified, the one EUT cable configuration/arrangement and mode of operation that produced these emissions is used for final measurements on the same test site. Line conducted emissions test results are shown in Section 7.7.

3.3. Radiated Emissions

The radiated test facilities consisted of an indoor 3 meter semi-anechoic chamber used for final measurements and exploratory measurements, when necessary. The measurement area is contained within the semi-anechoic chamber which is shielded from any ambient interference. For measurements above 1GHz absorbers are arranged on the floor between the turn table and the antenna mast in such a way so as to maximize the reduction of reflections. For measurements below 1GHz, the absorbers are removed. An MF Model 210SS turntable is used for radiated measurement. It is a continuously rotatable, remote controlled, metallic turntable and 2 meters (6.56 ft.) in diameter. The turn table is flush with the raised floor of the chamber in order to maintain its function as a ground plane. An 80cm high PVC support structure is placed on top of the turntable.

For all measurements, the spectrum was scanned through all EUT azimuths and from 1 to 4 meter receive antenna height using a broadband antenna from 30MHz up to the upper frequency shown in 15.33(b)(1) depending on the highest frequency generated or used in the device or on which the device operates or tunes. For frequencies above 1GHz, linearly polarized double ridge horn antennas were used. For frequencies below 30MHz, a calibrated loop antenna was used. When exploratory measurements were necessary, they were performed at 1 meter test distance inside the semi-anechoic chamber using broadband antennas, broadband amplifiers, and spectrum analyzers to determine the frequencies and modes producing the maximum emissions. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The test set-up was placed on top of the 0.8 meter high, 1 x 1.5 meter table. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each emission. Appropriate precaution was taken to ensure that all emissions from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, if applicable, turntable azimuth, and receive antenna height was noted for each frequency found.

Final measurements were made in the semi-anechoic chamber using calibrated, linearly polarized broadband and horn antennas. The test setup was configured to the setup that produced the worst case emissions. The spectrum analyzer was set to investigate all frequencies required for testing to compare the highest radiated disturbances with respect to the specified limits. The turntable containing the EUT was rotated through 360 degrees and the height of the receive antenna was varied 1 to 4 meters and stopped at the azimuth and height producing the maximum emission. Each emission was maximized by changing the orientation of the EUT through three orthogonal planes and changing the polarity of the receive antenna, whichever produced the worst-case emissions. According to 3dB Beamwidth of horn antenna, the horn antenna should be always directed to the EUT when rising height.

4. ANTENNA REQUIREMENTS

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.”

- The antenna of the WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER is **permanently attached**.
- There are no provisions for connection to an external antenna.

Conclusion:

The **WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER IC: 7849A-WLE200N2** unit complies with the requirement of §15.203.

5. TEST EQUIPMENT CALIBRATION DATA

AC Conducted Emissions Test Equipment

Instrument	Manufacturer	Type No.	Serial No.	Cali. interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	101209	1 year	2014/07/16
Two-Line V-Network	R&S	ENV216	101683	1 year	2014/07/21
Two-Line V-Network	R&S	ENV216	101684	1 year	2014/07/21
Temperature/ Meter Humidity	Anymetre	TH101B	SR2-01	1 year	2014/08/15

Radiated Test Equipment

Instrument	Manufacturer	Type No.	Serial No.	Cali. interval	Cal. Date
Spectrum Analyzer	Agilent	E4447A	MY45300136	1 year	2014/08/15
Preamplifier	MRT	AP01G18	1310002	1 year	2014/10/08
Preamplifier	MRT	AP18G40	1310003	1 year	2014/10/08
Loop Antenna	Schwarzbeck	FMZB1519	1519-041	1 year	2014/09/12
TRILOG Antenna	Schwarzbeck	VULB9162	9162-047	1 year	2014/09/12
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1167	1 year	2014/09/12
Broadband Horn Antenna	Schwarzbeck	BBHA9170	9170-549	1 year	2014/09/12
Temperature/Humidity Meter	Anymetre	TH101B	AC1-01	1 year	2014/08/15

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Serial No.	Cali. interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9010A	MY51440164	1 year	2014/08/15
Power Meter	Anritsu	ML2495A	0905006	1 year	2014/11/01
Power Sensor	Anritsu	MA2411B	0846014	1 year	2014/11/01
Temperature/Humidity Meter	Anymetre	TH101B	TR3-01	1 year	2014/08/15

6. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

AC Conducted Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 150kHz~30MHz: $\pm 3.5\text{dB}$
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz ~ 1GHz: $\pm 4.2\text{dB}$ 1GHz ~ 40GHz: $\pm 4.7\text{dB}$

7. TEST RESULT

7.1. Summary

Company Name: Compex Systems Pte Ltd.
IC: 7849A-WLE200N2
FCC Classification: Digital Transmission System (DTS)
Data Rate(s) Tested: 1Mbps ~ 11Mbps (b);
6Mbps ~ 54Mbps (g);
13.0/14.4Mbps ~ 130.0/144.0Mbps (n-HT20MHz BW);
27.0/30.0Mbps ~ 270.0/300.0Mbps (n-HT40MHz BW);

RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
RSS-210 [A8.2]	6dB Bandwidth	$\geq 500\text{kHz}$	Conducted	Pass	Section 7.2
RSS-210 [A8.4]	Output Power	$\leq 1\text{Watt}$		Pass	Section 7.3
RSS-210 [A8.2]	Power Spectral Density	$\leq 8\text{dBm} / 3\text{kHz Band}$		Pass	Section 7.4
RSS-210 [A8.5]	Band Edge / Out-of-Band Emissions	$\geq 20\text{dBc(Peak)}$		Pass	Section 7.5
RSS-210 [A8.5]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	Pass	Section 7.6
RSS-Gen [7.2.2]	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.7

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables and attenuators.

7.2. 6dB Bandwidth Measurement §15.247(a)(2); RSS-210 [A8.2]**7.2.1. Test Limit**

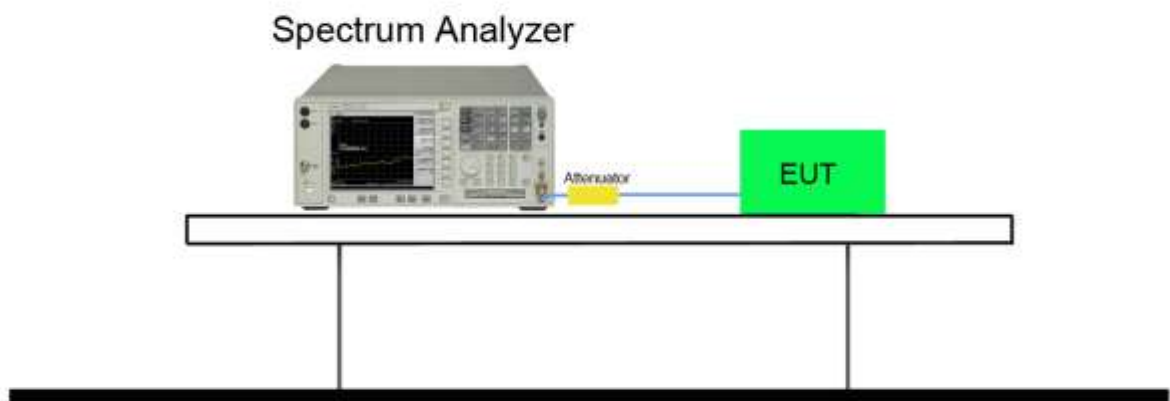
The minimum 6dB bandwidth shall be at least 500 kHz.

7.2.2. Test Procedure used

KDB 558074 D01v03r01 – Section 8.2 Option 2

7.2.3. Test Setting

1. The Spectrum's automatic bandwidth measurement capability was used to perform the 6dB bandwidth measurement. The "X" dB bandwidth parameter was set to $X = 6$. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. Set RBW = 100 kHz
3. VBW $\geq 3 \times$ RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. Allow the trace was allowed to stabilize

7.2.4. Test Setup

7.2.5. Test Result

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	99% Bandwidth (MHz)	Result
Chain 0							
802.11b	1	01	2412	10.12	≥ 0.5	14.07	Pass
802.11b	1	06	2437	10.12	≥ 0.5	14.07	Pass
802.11b	1	11	2462	10.11	≥ 0.5	14.08	Pass
Chain 1							
802.11b	1	01	2412	10.11	≥ 0.5	14.04	Pass
802.11b	1	06	2437	10.11	≥ 0.5	14.04	Pass
802.11b	1	11	2462	10.11	≥ 0.5	14.04	Pass

802.11b 6dB Bandwidth - Chain 0

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



802.11b 6dB Bandwidth - Chain 1

Channel 01 (2412MHz)



Channel 06 (2437MHz)



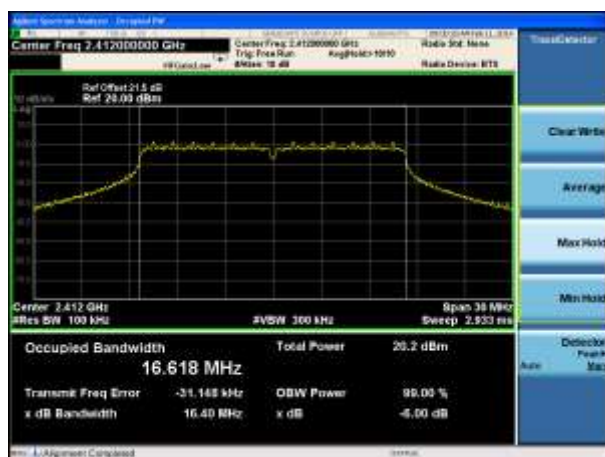
Channel 11 (2462MHz)



Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	99% Bandwidth (MHz)	Result
Chain 0							
802.11g	6	01	2412	16.40	≥ 0.5	16.62	Pass
802.11g	6	06	2437	16.42	≥ 0.5	16.77	Pass
802.11g	6	11	2462	16.42	≥ 0.5	16.64	Pass
Chain 1							
802.11g	6	01	2412	16.40	≥ 0.5	16.63	Pass
802.11g	6	06	2437	16.44	≥ 0.5	16.74	Pass
802.11g	6	11	2462	16.42	≥ 0.5	16.61	Pass

802.11g 6dB Bandwidth – Chain 0

Channel 01 (2412MHz)



Channel 06 (2437MHz)

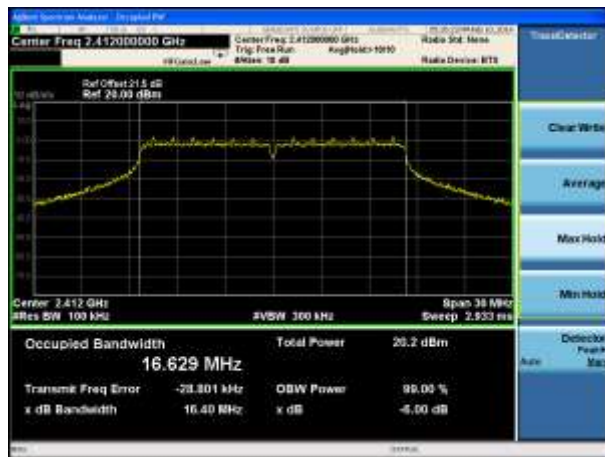


Channel 11 (2462MHz)



802.11g 6dB Bandwidth – Chain 1

Channel 01 (2412MHz)



Channel 06 (2437MHz)



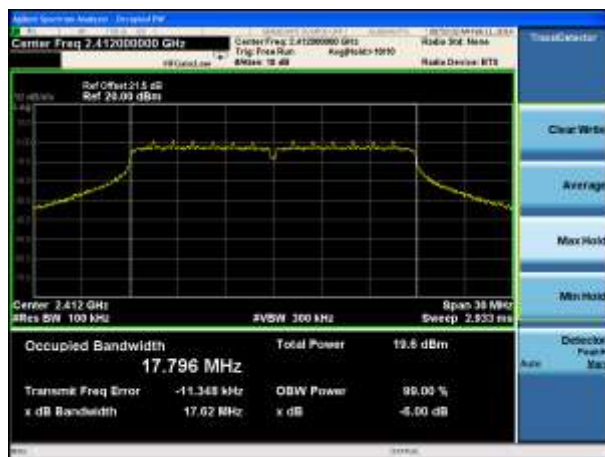
Channel 11 (2462MHz)



Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	99% Bandwidth (MHz)	Result
Chain 0							
802.11n-HT20	6.5/7.2	01	2412	17.62	≥ 0.5	17.80	Pass
802.11n-HT20	6.5/7.2	06	2437	17.63	≥ 0.5	17.87	Pass
802.11n-HT20	6.5/7.2	11	2462	17.62	≥ 0.5	17.81	Pass
Chain 1							
802.11n-HT20	6.5/7.2	01	2412	17.64	≥ 0.5	17.82	Pass
802.11n-HT20	6.5/7.2	06	2437	17.64	≥ 0.5	17.88	Pass
802.11n-HT20	6.5/7.2	11	2462	17.63	≥ 0.5	17.80	Pass
Chain 0 / Chain 0 + 1							
802.11n-HT20	13.0/14.4	01	2412	17.70	≥ 0.5	17.78	Pass
802.11n-HT20	13.0/14.4	06	2437	17.71	≥ 0.5	17.87	Pass
802.11n-HT20	13.0/14.4	11	2462	17.70	≥ 0.5	17.79	Pass
Chain 1 / Chain 0 + 1							
802.11n-HT20	13.0/14.4	01	2412	17.77	≥ 0.5	17.82	Pass
802.11n-HT20	13.0/14.4	06	2437	17.76	≥ 0.5	17.52	Pass
802.11n-HT20	13.0/14.4	11	2462	17.80	≥ 0.5	17.79	Pass

802.11n-HT20 6dB Bandwidth – Chain 0

Channel 01 (2412MHz)



Channel 06 (2437MHz)

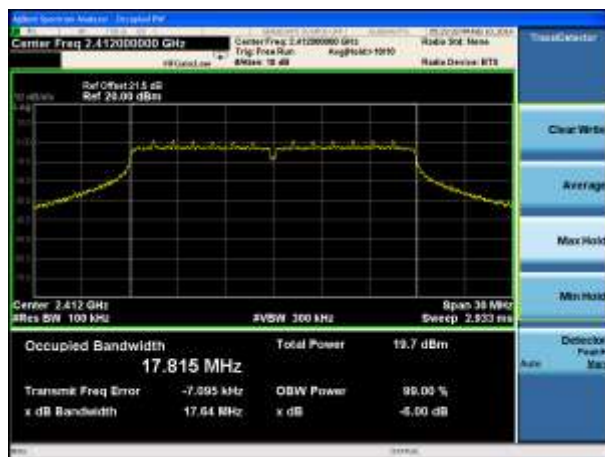


Channel 11 (2462MHz)



802.11n-HT20 6dB Bandwidth – Chain 1

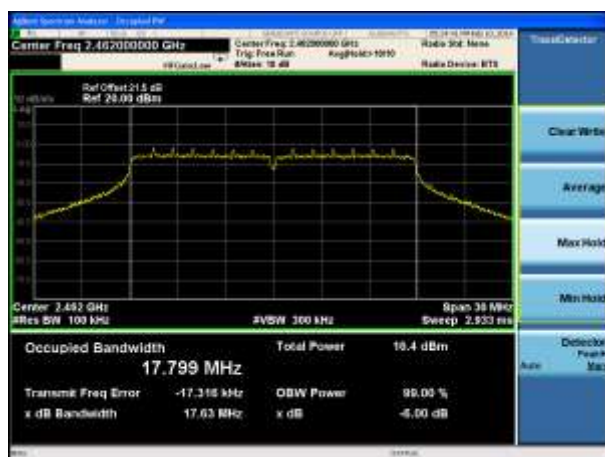
Channel 01 (2412MHz)



Channel 06 (2437MHz)

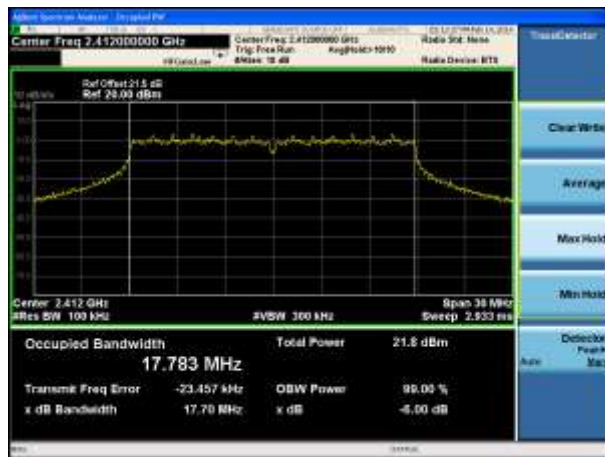


Channel 11 (2462MHz)



802.11n-HT20 6dB Bandwidth – Chain 0 / Chain 0 + 1

Channel 01 (2412MHz)



Channel 06 (2437MHz)

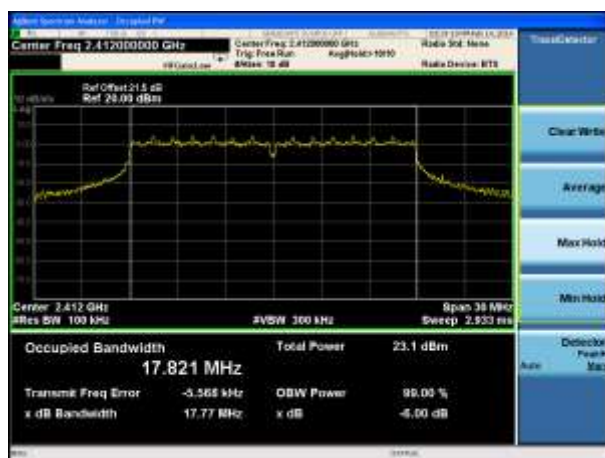


Channel 11 (2462MHz)

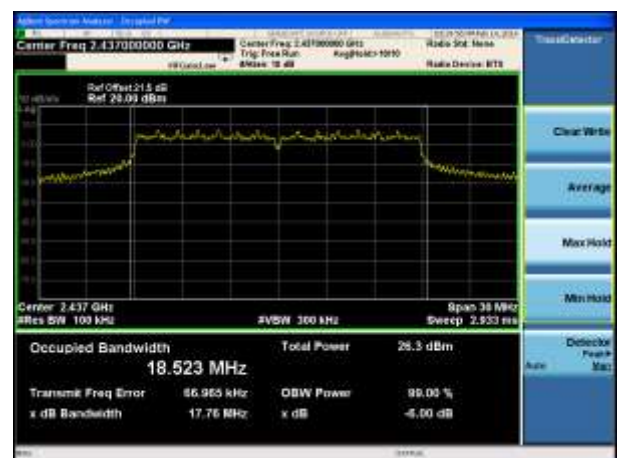


802.11n-HT20 6dB Bandwidth – Chain 1 / Chain 0 + 1

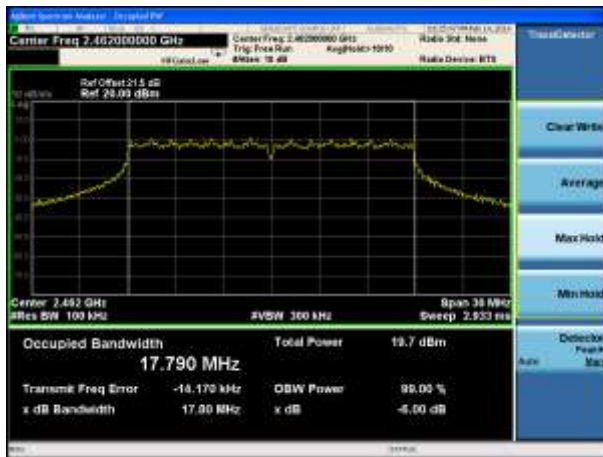
Channel 01 (2412MHz)



Channel 06 (2437MHz)



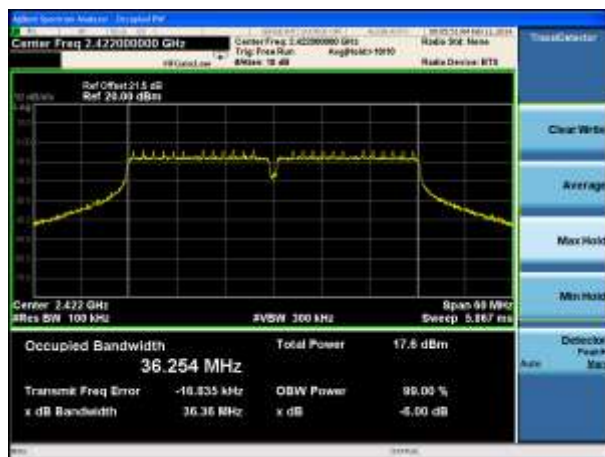
Channel 11 (2462MHz)



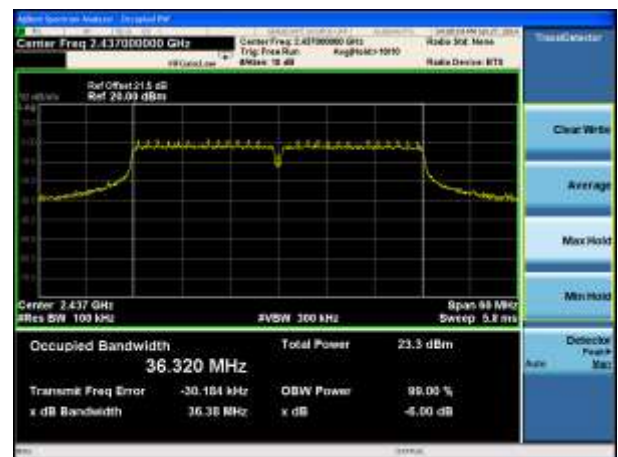
Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	99% Bandwidth (MHz)	Result
Chain 0							
802.11n-HT40	13.5/15.0	03	2422	36.36	≥ 0.5	36.25	Pass
802.11n-HT40	13.5/15.0	06	2437	36.38	≥ 0.5	36.32	Pass
802.11n-HT40	13.5/15.0	09	2452	36.36	≥ 0.5	36.26	Pass
Chain 1							
802.11n-HT40	13.5/15.0	03	2422	36.35	≥ 0.5	36.25	Pass
802.11n-HT40	13.5/15.0	06	2437	36.38	≥ 0.5	36.31	Pass
802.11n-HT40	13.5/15.0	09	2452	36.34	≥ 0.5	36.23	Pass
Chain 0 / Chain 0 + 1							
802.11n-HT40	27.0/30.0	03	2422	36.34	≥ 0.5	36.16	Pass
802.11n-HT40	27.0/30.0	06	2437	36.39	≥ 0.5	36.32	Pass
802.11n-HT40	27.0/30.0	09	2452	36.14	≥ 0.5	36.15	Pass
Chain 1 / Chain 0 + 1							
802.11n-HT40	27.0/30.0	03	2422	36.40	≥ 0.5	36.17	Pass
802.11n-HT40	27.0/30.0	06	2437	36.45	≥ 0.5	36.64	Pass
802.11n-HT40	27.0/30.0	09	2452	36.38	≥ 0.5	36.16	Pass

802.11n-HT40 6dB Bandwidth – Chain 0

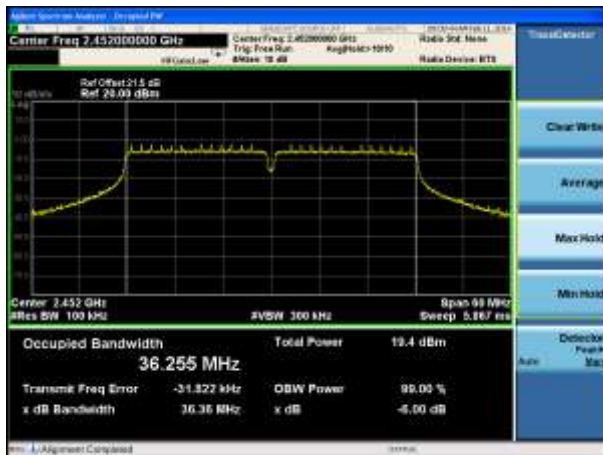
Channel 03 (2422MHz)



Channel 06 (2437MHz)

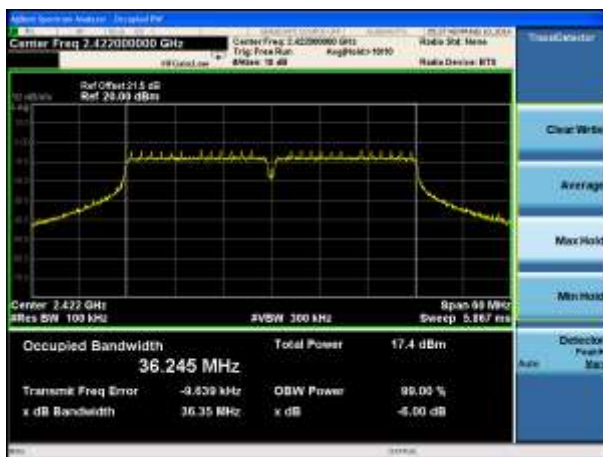


Channel 09 (2452MHz)

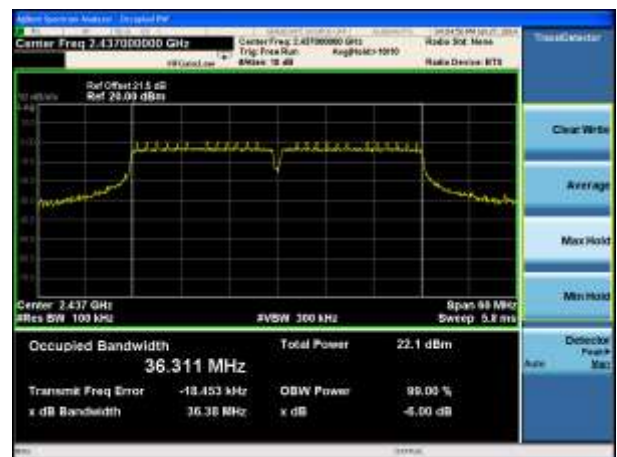


802.11n-HT40 6dB Bandwidth – Chain 1

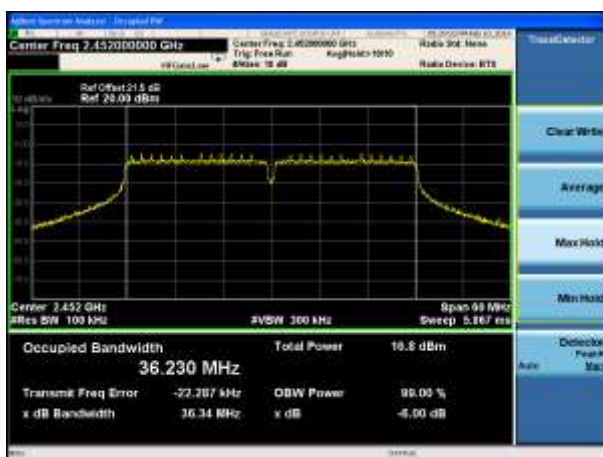
Channel 03 (2422MHz)



Channel 06 (2437MHz)

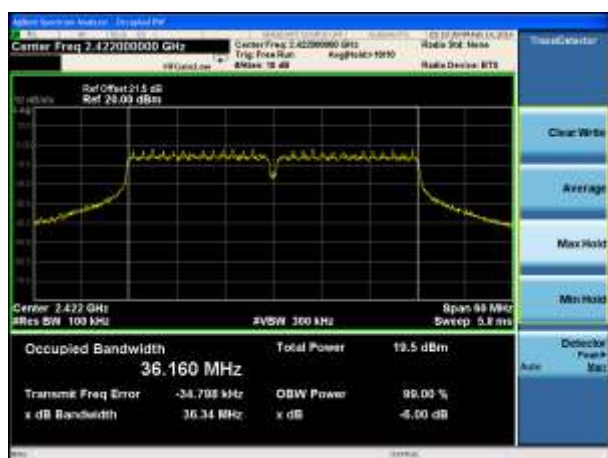


Channel 09 (2452MHz)

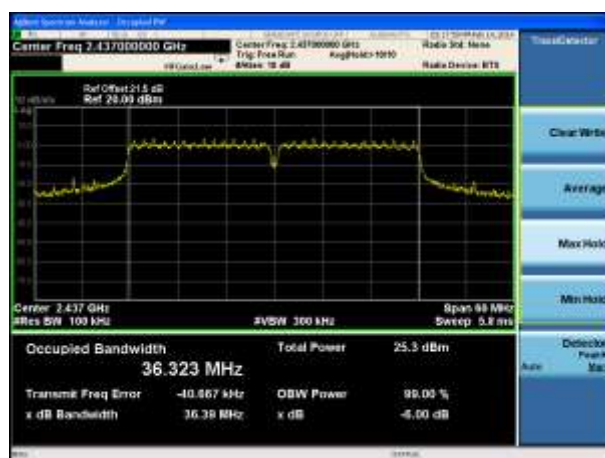


802.11n-HT40 6dB Bandwidth – Chain 0 / Chain 0 + 1

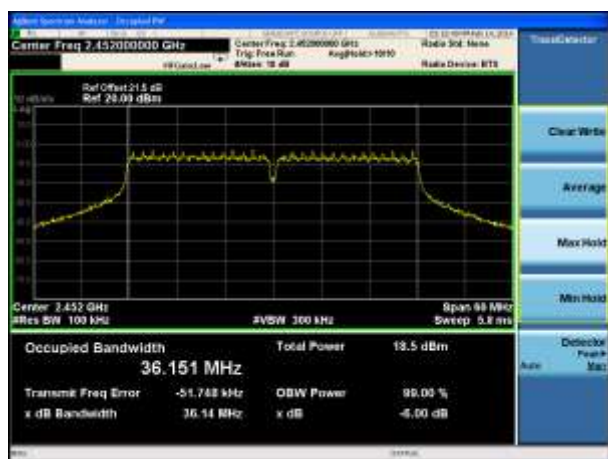
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)

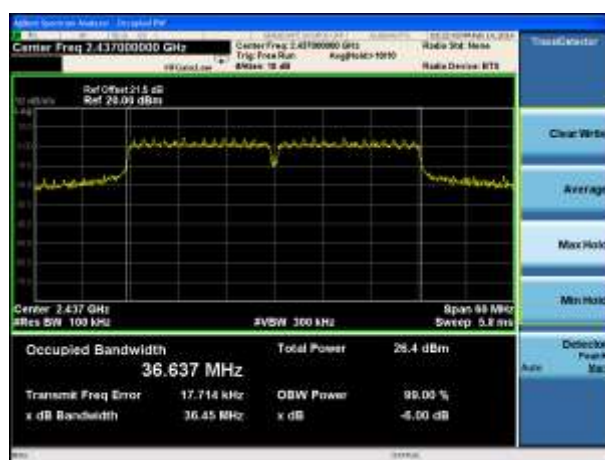


802.11n-HT40 6dB Bandwidth – Chain 1 / Chain 0 + 1

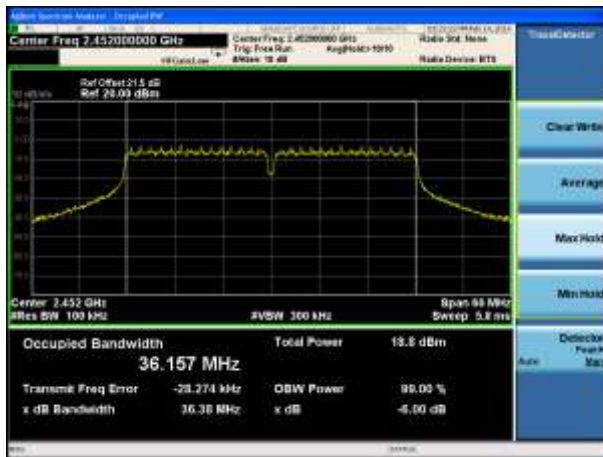
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



7.3. Output Power Measurement §15.247(b)(3); RSS-210 [A8.4]

7.3.1. Test Limit

systems employing digital modulation techniques operating in the bands 2400-2483.5 MHz and 5725-5850 MHz, the maximum peak conducted output power shall not exceed 1 W, the e.i.r.p. shall not exceed 4 W.

7.3.2. Test Procedure Used

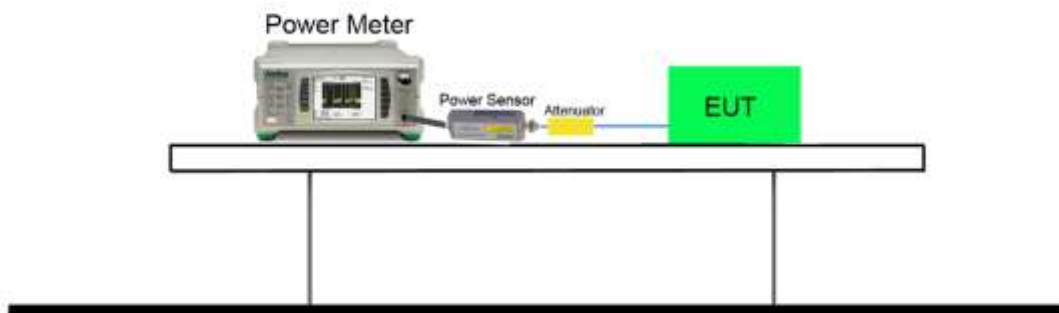
KDB 558074 D01v03r01 - Section 9.1.3 PKPM1 Peak Power Method (for signals with BW \leq 50MHz)

7.3.3. Test Setting

Method PKPM1 (Peak Power Measurement of Signals with DTS BW \leq 50MHz)

Peak power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The pulse sensor employs a VBW = 50MHz so this method was only used for signals whose DTS bandwidth was less than or equal to 50MHz.

7.3.4. Test Setup



7.3.5. Test Result

Power output test was verified over all data rates of each mode shown as below, and then choose the maximum power output (yellow marker) for final test of each Channel.

MCS Index for 802.11n	N _{Tx}	Data Rate (Mbps)					
		b	g	20MHz Bandwidth		40MHz Bandwidth	
				800ns GI	400ns GI	800ns GI	400ns GI
0	1	1	6	6.5	7.2	13.5	15.0
1	1	2	9	13.0	14.4	27.0	30.0
2	1	5.5	12	19.5	21.7	40.5	45.0
3	1	11	18	26.0	28.9	54.0	60.0
4	1	--	24	39.0	43.3	81.0	90.0
5	1	--	36	52.0	57.8	108.0	120.0
6	1	--	48	58.5	65.0	121.5	135.0
7	1	--	54	65.0	72.2	135.0	150.0
8	2	1	6	13.0	14.4	27.0	30.0
9	2	2	9	26.0	28.9	54.0	60.0
10	2	5.5	12	39.0	43.3	81.0	90.0
11	2	11	18	52.0	57.8	108.0	120.0
12	2	--	24	78.0	86.7	162.0	180.0
13	2	--	36	104.0	115.6	216.0	240.0
14	2	--	48	117.0	130.0	243.0	270.0
15	2	--	54	130.0	144.0	270.0	300.0

Output power at various data rates for Chain 0

Test Mode	Bandwidth	Frequency (MHz)	Channel	Data Rate (Mbps)	Peak Power (dBm)
802.11b	20	2437	6	1	18.12
				5.5	18.03
				11	17.95
802.11g	20	2437	6	6	23.34
				24	23.15
				54	23.01
802.11n	20	2437	6	6.5/7.2(MCS0)	23.61
				39/43.3(MCS4)	23.50
				65/72.2(MCS7)	23.22
802.11n	40	2437	6	13.5/15(MCS0)	23.28
				81/90(MCS4)	23.16
				135/150(MCS7)	23.07

Test Mode	N _{Tx}	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Chain 0 Peak Power (dBm)	Chain 1 Peak Power (dBm)	Total Peak Power (dBm)	Limit (dBm)	E.I.R.P (dBm)	E.I.R.P Limit (dBm)	Result
b	1	1	1	2412	17.93	--	17.93	≤30	22.43	≤36	Pass
b	1	1	6	2437	18.12	--	18.12	≤30	22.62	≤36	Pass
b	1	1	11	2462	18.10	--	18.10	≤30	22.60	≤36	Pass
b	1	1	1	2412	--	18.02	18.02	≤30	22.52	≤36	Pass
b	1	1	6	2437	--	17.34	17.34	≤30	21.84	≤36	Pass
b	1	1	11	2462	--	16.62	16.62	≤30	21.12	≤36	Pass
g	1	6	1	2412	21.16	--	21.16	≤30	25.66	≤36	Pass
g	1	6	6	2437	23.34	--	23.34	≤30	27.84	≤36	Pass
g	1	6	11	2462	21.58	--	21.58	≤30	26.08	≤36	Pass
g	1	6	1	2412	--	21.26	21.26	≤30	25.76	≤36	Pass
g	1	6	6	2437	--	22.51	22.51	≤30	27.01	≤36	Pass
g	1	6	11	2462	--	19.81	19.81	≤30	24.31	≤36	Pass
n-HT20	1	6.5/7.2	1	2412	20.34	--	20.34	≤30	24.84	≤36	Pass
n-HT20	1	6.5/7.2	6	2437	23.61	--	23.61	≤30	28.11	≤36	Pass
n-HT20	1	6.5/7.2	11	2462	21.25	--	21.25	≤30	25.75	≤36	Pass
n-HT20	1	6.5/7.2	1	2412	--	20.76	20.76	≤30	25.26	≤36	Pass
n-HT20	1	6.5/7.2	6	2437	--	22.39	22.39	≤30	26.89	≤36	Pass
n-HT20	1	6.5/7.2	11	2462	--	18.25	18.25	≤30	22.75	≤36	Pass
n-HT20	2	13.0/14.4	1	2412	21.60	22.24	24.94	≤30	29.44	≤36	Pass
n-HT20	2	13.0/14.4	6	2437	23.70	24.07	26.90	≤30	31.40	≤36	Pass
n-HT20	2	13.0/14.4	11	2462	19.87	19.80	22.85	≤30	27.35	≤36	Pass
n-HT40	1	13.5/15.0	3	2422	18.07	--	18.07	≤30	22.57	≤36	Pass
n-HT40	1	13.5/15.0	6	2437	23.28	--	23.28	≤30	27.78	≤36	Pass
n-HT40	1	13.5/15.0	9	2452	19.90	--	19.90	≤30	24.40	≤36	Pass
n-HT40	1	13.5/15.0	3	2422	--	18.12	18.12	≤30	22.62	≤36	Pass
n-HT40	1	13.5/15.0	6	2437	--	22.76	22.76	≤30	27.26	≤36	Pass
n-HT40	1	13.5/15.0	9	2452	--	18.37	18.37	≤30	22.87	≤36	Pass
n-HT40	2	27.0/30.0	3	2422	18.76	19.83	22.34	≤30	26.84	≤36	Pass
n-HT40	2	27.0/30.0	6	2437	23.87	23.84	26.87	≤30	31.37	≤36	Pass
n-HT40	2	27.0/30.0	9	2452	18.27	18.52	21.41	≤30	25.91	≤36	Pass

Note: The E.I.R.P power = Peak Power + Antenna Gain.

Test Result of Average Output Power (Reporting Only)

Test Mode	N _{Tx}	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Chain 0 Average Power (dBm)	Chain 1 Average Power (dBm)	Total Average Power (dBm)	Limit (dBm)	Result
b	1	1	1	2412	15.54	--	15.54	≤30	Pass
b	1	1	6	2437	15.84	--	15.84	≤30	Pass
b	1	1	11	2462	16.33	--	16.33	≤30	Pass
b	1	1	1	2412	--	15.70	15.70	≤30	Pass
b	1	1	6	2437	--	15.01	15.01	≤30	Pass
b	1	1	11	2462	--	14.35	14.35	≤30	Pass
g	1	6	1	2412	13.30	--	13.30	≤30	Pass
g	1	6	6	2437	15.82	--	15.82	≤30	Pass
g	1	6	11	2462	13.61	--	13.61	≤30	Pass
g	1	6	1	2412	--	13.50	13.50	≤30	Pass
g	1	6	6	2437	--	15.12	15.12	≤30	Pass
g	1	6	11	2462	--	11.18	11.18	≤30	Pass
n-HT20	1	6.5/7.2	1	2412	12.44	--	12.44	≤30	Pass
n-HT20	1	6.5/7.2	6	2437	16.15	--	16.15	≤30	Pass
n-HT20	1	6.5/7.2	11	2462	13.36	--	13.36	≤30	Pass
n-HT20	1	6.5/7.2	1	2412	--	13.12	13.12	≤30	Pass
n-HT20	1	6.5/7.2	6	2437	--	15.02	15.02	≤30	Pass
n-HT20	1	6.5/7.2	11	2462	--	9.81	9.81	≤30	Pass
n-HT20	2	13.0/14.4	1	2412	13.64	15.40	17.62	≤30	Pass
n-HT20	2	13.0/14.4	6	2437	16.65	17.94	20.35	≤30	Pass
n-HT20	2	13.0/14.4	11	2462	11.46	11.74	14.61	≤30	Pass
n-HT40	1	13.5/15.0	3	2422	10.08	--	10.08	≤30	Pass
n-HT40	1	13.5/15.0	6	2437	15.87	--	15.87	≤30	Pass
n-HT40	1	13.5/15.0	9	2452	11.87	--	11.87	≤30	Pass
n-HT40	1	13.5/15.0	3	2422	--	10.56	10.56	≤30	Pass
n-HT40	1	13.5/15.0	6	2437	--	14.57	14.57	≤30	Pass
n-HT40	1	13.5/15.0	9	2452	--	10.02	10.02	≤30	Pass
n-HT40	2	27.0/30.0	3	2422	10.85	12.48	14.75	≤30	Pass
n-HT40	2	27.0/30.0	6	2437	16.92	17.85	20.42	≤30	Pass
n-HT40	2	27.0/30.0	9	2452	10.12	10.65	13.40	≤30	Pass

7.4. Power Spectral Density Measurement §15.247(e); RSS-210 [A8.2]

7.4.1. Test Limit

The maximum permissible power spectral density is 8 dBm in any 3 kHz band.

As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

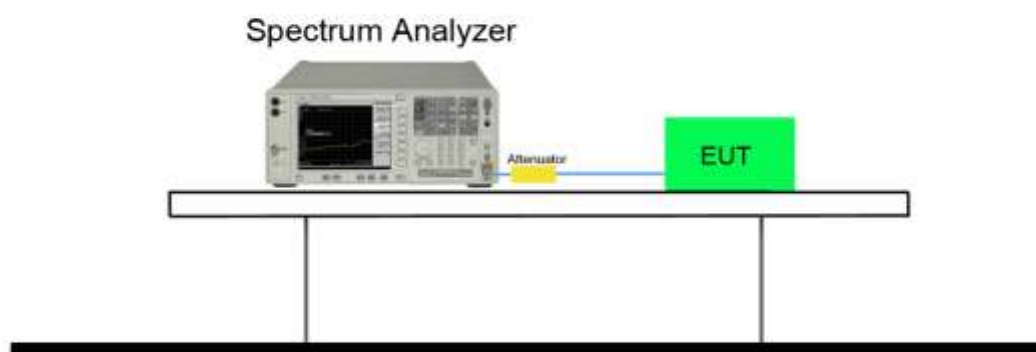
7.4.2. Test Procedure Used

KDB 558074 D01v03r01 - Section 10.2 Method PKPSD

7.4.3. Test Setting

1. Analyzer was set to the center frequency of the DTS Channel under investigation
2. Span = 1.5 times the DTS Channel bandwidth
3. RBW = 100kHz
4. VBW = 300kHz
5. Detector = peak
6. Sweep time = auto couple
7. Trace mode = max hold
8. Trace was allowed to stabilize

7.4.4. Test Setup



7.4.5. Test Result

Test Mode	N _{Tx}	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Chain 0 PSD (dBm)	Chain 1 PSD (dBm)	Total PSD (dBm)	Limit (dBm / 3kHz)	Result
11b	1	1	1	2412	-6.959	--	-6.959	≤8.0	Pass
11b	1	1	6	2437	-7.536	--	-7.536	≤8.0	Pass
11b	1	1	11	2462	-7.004	--	-7.004	≤8.0	Pass
11b	1	1	1	2412	--	-8.475	-8.475	≤8.0	Pass
11b	1	1	6	2437	--	-8.741	-8.741	≤8.0	Pass
11b	1	1	11	2462	--	-9.582	-9.582	≤8.0	Pass
11g	1	6	1	2412	-11.404	--	-11.404	≤8.0	Pass
11g	1	6	6	2437	-9.302	--	-9.302	≤8.0	Pass
11g	1	6	11	2462	-12.015	--	-12.015	≤8.0	Pass
11g	1	6	1	2412	--	-12.085	-12.085	≤8.0	Pass
11g	1	6	6	2437	--	-10.595	-10.595	≤8.0	Pass
11g	1	6	11	2462	--	-15.037	-15.037	≤8.0	Pass
11n-HT20	1	6.5/7.2	1	2412	-13.091	--	-13.091	≤8.0	Pass
11n-HT20	1	6.5/7.2	6	2437	-9.246	--	-9.246	≤8.0	Pass
11n-HT20	1	6.5/7.2	11	2462	-12.428	--	-12.428	≤8.0	Pass
11n-HT20	1	6.5/7.2	1	2412	--	-12.981	-12.981	≤8.0	Pass
11n-HT20	1	6.5/7.2	6	2437	--	-10.384	-10.384	≤8.0	Pass
11n-HT20	1	6.5/7.2	11	2462	--	-16.462	-16.462	≤8.0	Pass
11n-HT20	2	13.0/14.4	1	2412	-11.904	-9.401	-7.460	≤8.0	Pass
11n-HT20	2	13.0/14.4	6	2437	-8.035	-7.417	-4.700	≤8.0	Pass
11n-HT20	2	13.0/14.4	11	2462	-13.505	-13.400	-10.44	≤8.0	Pass
11n-HT40	1	13.5/15.0	3	2422	-17.973	--	-17.973	≤8.0	Pass
11n-HT40	1	13.5/15.0	6	2437	-12.035	--	-12.035	≤8.0	Pass
11n-HT40	1	13.5/15.0	9	2452	-15.337	--	-15.337	≤8.0	Pass
11n-HT40	1	13.5/15.0	3	2422	--	-17.211	-17.211	≤8.0	Pass
11n-HT40	1	13.5/15.0	6	2437	--	-13.145	-13.145	≤8.0	Pass
11n-HT40	1	13.5/15.0	9	2452	--	-18.579	-18.579	≤8.0	Pass
11n-HT40	2	27.0/30.0	3	2422	-17.076	-16.096	-13.55	≤8.0	Pass
11n-HT40	2	27.0/30.0	6	2437	-11.150	-9.232	-7.080	≤8.0	Pass
11n-HT40	2	27.0/30.0	9	2452	-17.948	-17.408	-14.66	≤8.0	Pass

802.11b PSD – Chain 0

Channel 01 (2412MHz)



Channel 06 (2437MHz)



Channel 11 (2462MHz)



802.11b PSD – Chain 1

Channel 01 (2412MHz)



Channel 06 (2437MHz)

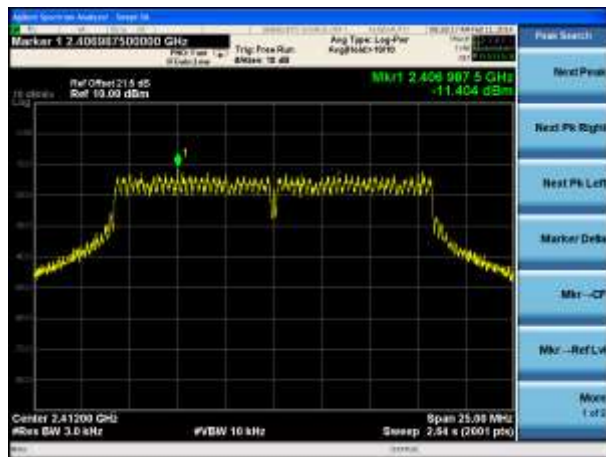


Channel 11 (2462MHz)

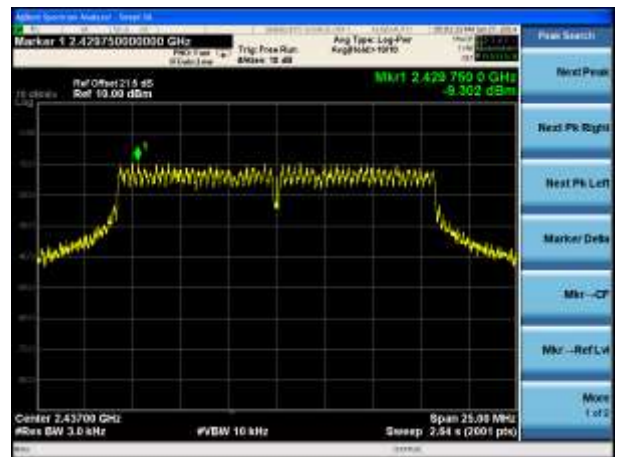


802.11g PSD – Chain 0

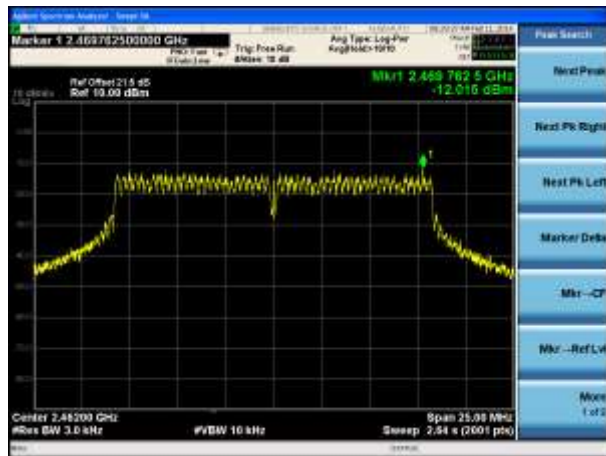
Channel 01 (2412MHz)



Channel 06 (2437MHz)

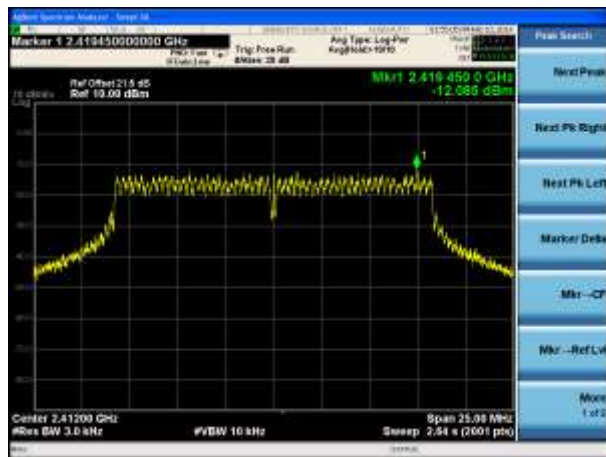


Channel 11 (2462MHz)

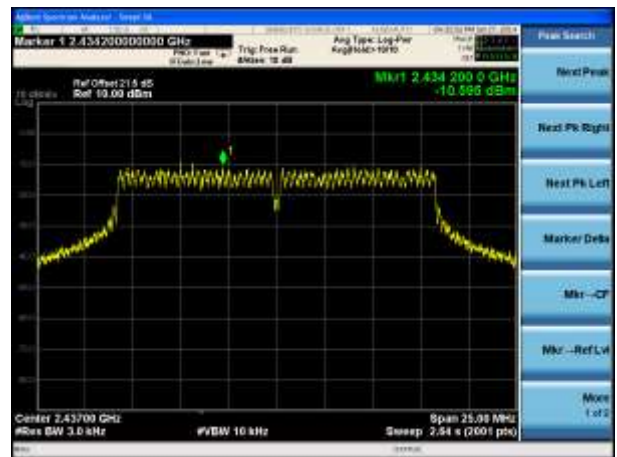


802.11g PSD – Chain 1

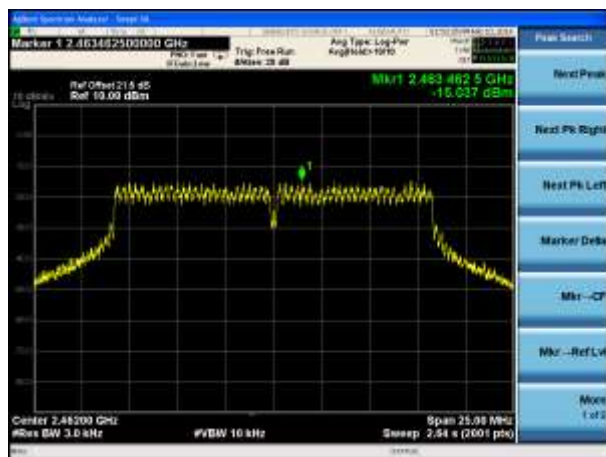
Channel 01 (2412MHz)



Channel 06 (2437MHz)

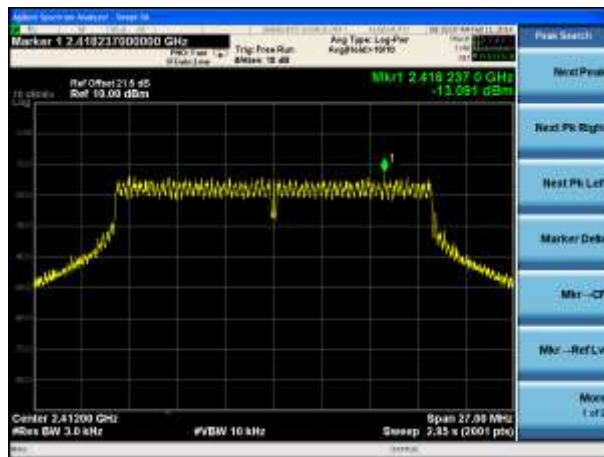


Channel 11 (2462MHz)

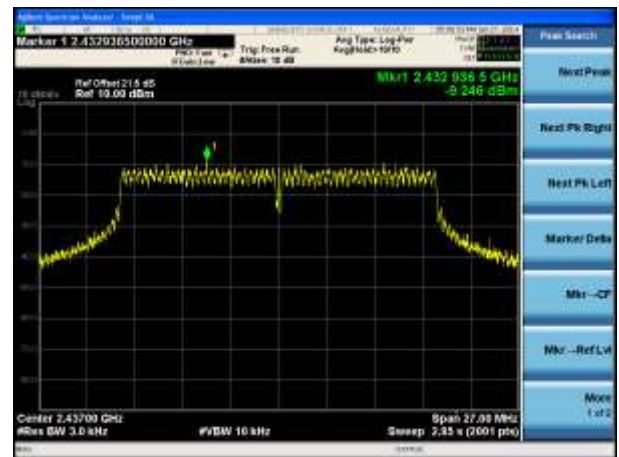


802.11n-HT20 PSD – Chain 0

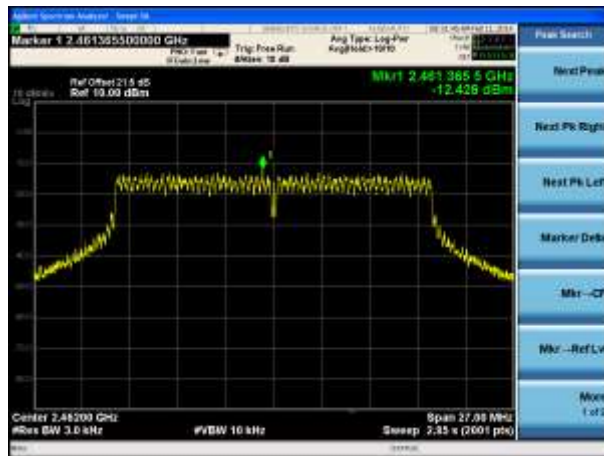
Channel 01 (2412MHz)



Channel 06 (2437MHz)

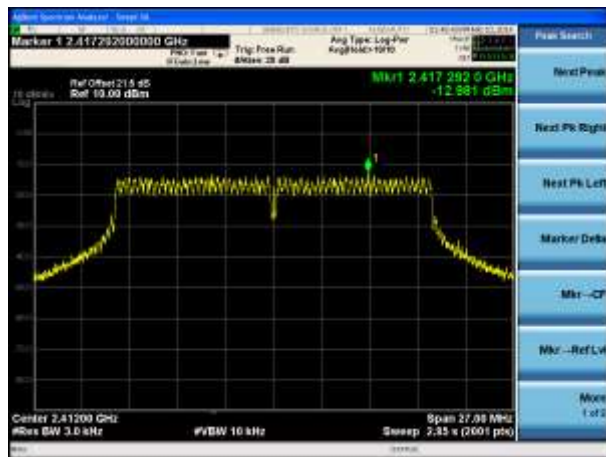


Channel 11 (2462MHz)

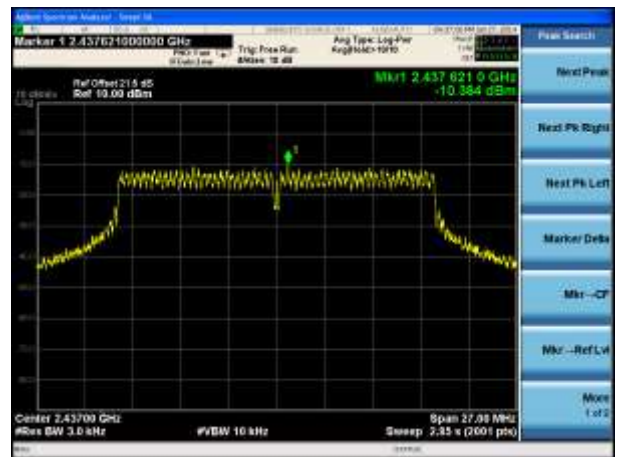


802.11n-HT20 PSD – Chain 1

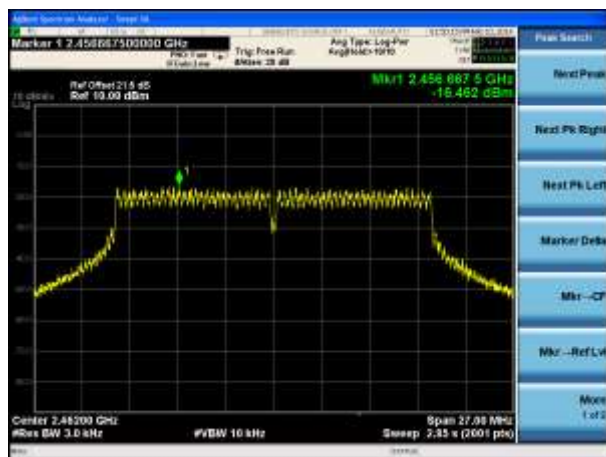
Channel 01 (2412MHz)



Channel 06 (2437MHz)

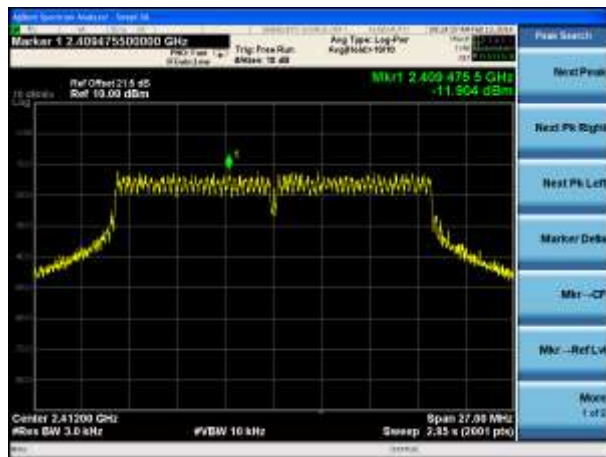


Channel 11 (2462MHz)

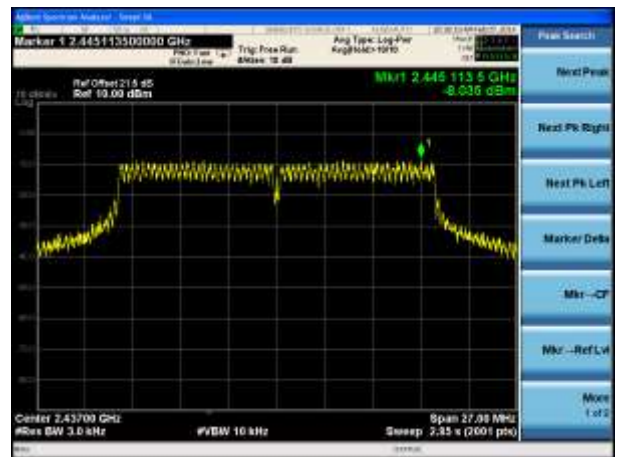


802.11n-HT20 PSD – Chain 0 / Chain 0 + 1

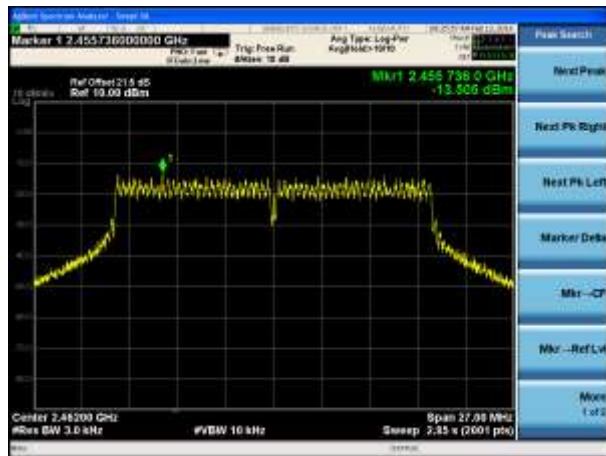
Channel 01 (2412MHz)



Channel 06 (2437MHz)

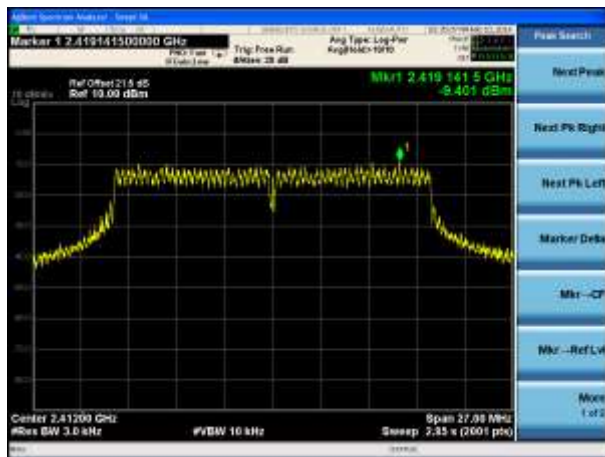


Channel 11 (2462MHz)



802.11n-HT20 PSD – Chain 1 / Chain 0 + 1

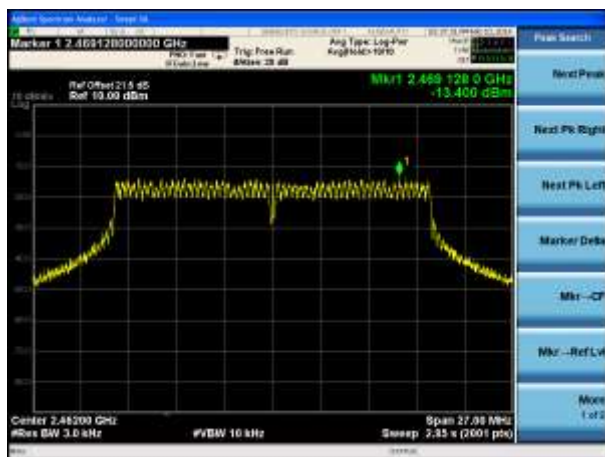
Channel 01 (2412MHz)



Channel 06 (2437MHz)

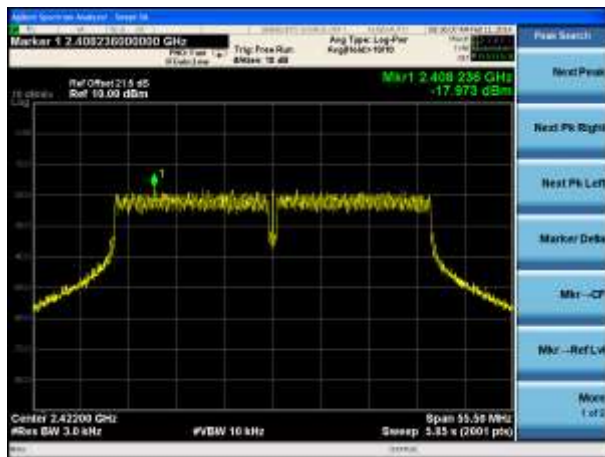


Channel 11 (2462MHz)

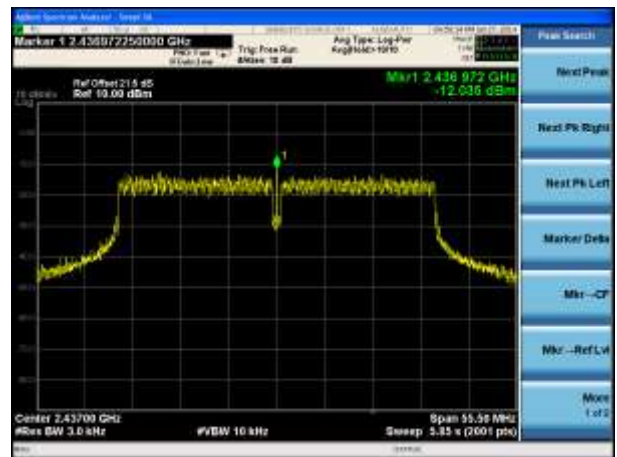


802.11n-HT40 PSD – Chain 0

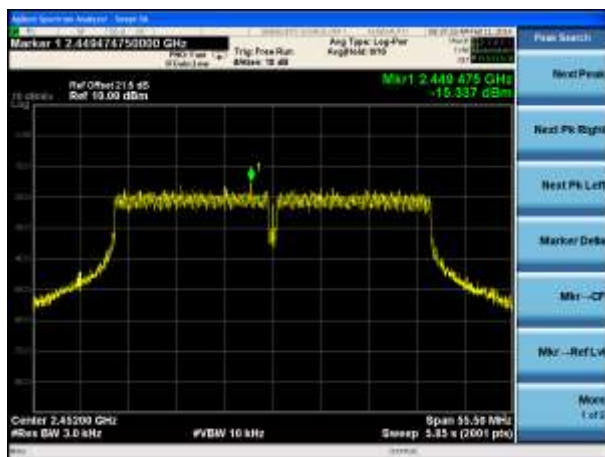
Channel 03 (2422MHz)



Channel 06 (2437MHz)

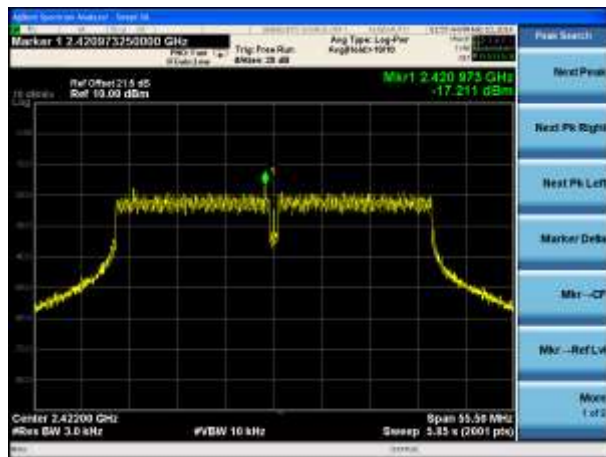


Channel 09 (2452MHz)

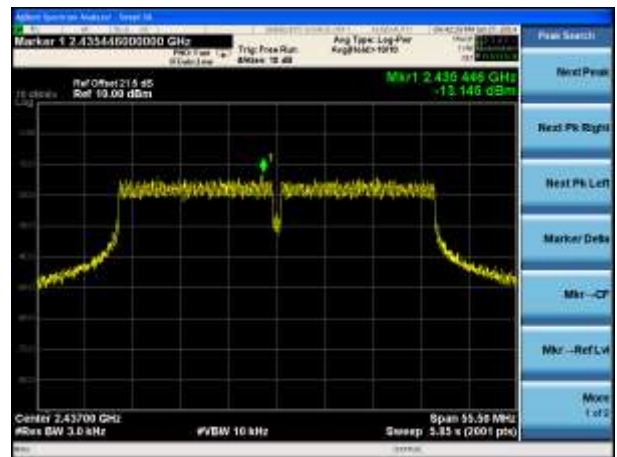


802.11n-HT40 PSD – Chain 1

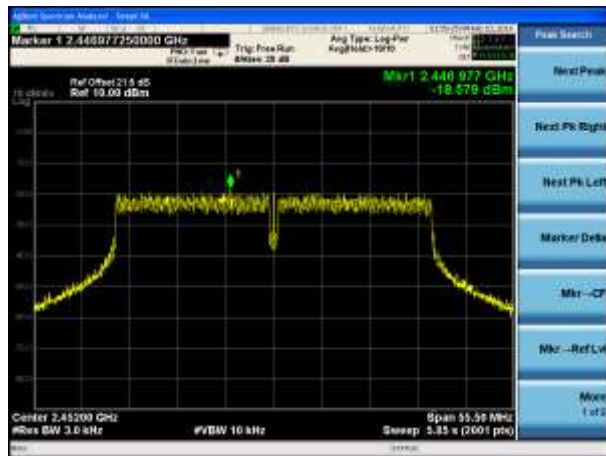
Channel 03 (2422MHz)



Channel 06 (2437MHz)

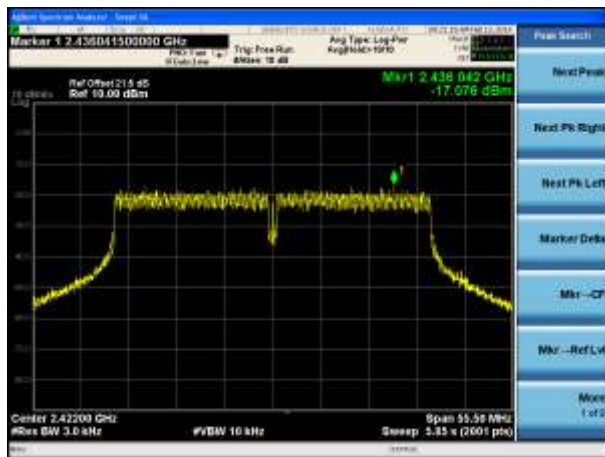


Channel 09 (2452MHz)

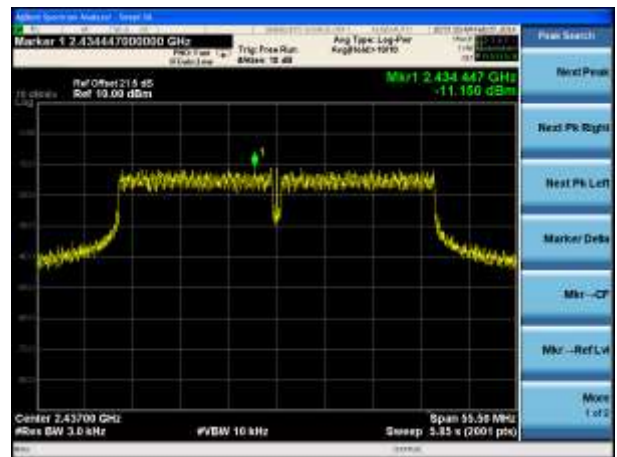


802.11n-HT40 PSD – Chain 0 / Chain 0 + 1

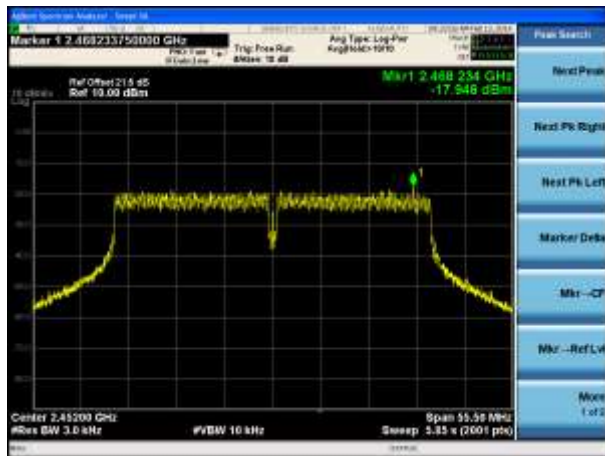
Channel 03 (2422MHz)



Channel 06 (2437MHz)

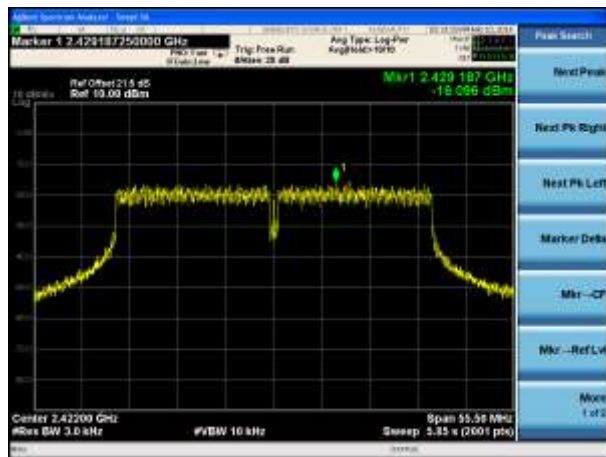


Channel 09 (2452MHz)

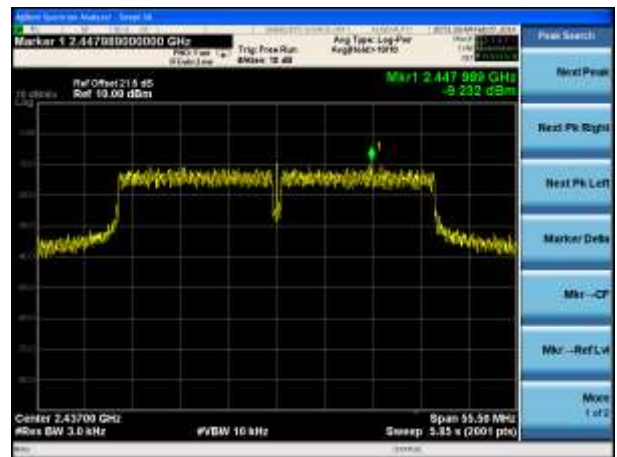


802.11n-HT40 PSD – Chain 1 / Chain 0 + 1

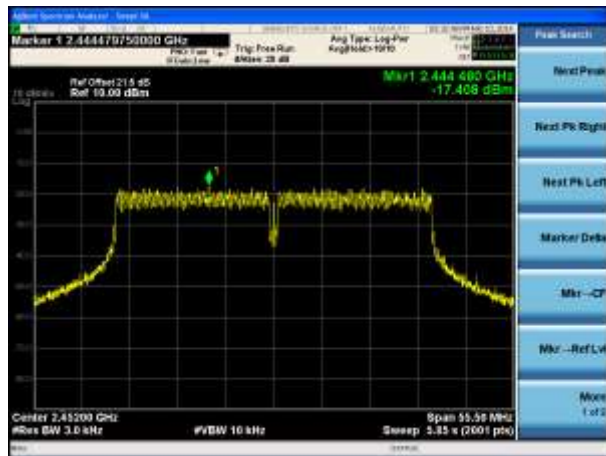
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



7.5. Conducted Band Edge and Out-of-Band Emissions §15.247(d); RSS-210 [A8.5]

7.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 30dB below the fundamental emission level, as determined from the in-band power measurement of the DTS Channel performed in a 100kHz bandwidth per the PSD procedure.

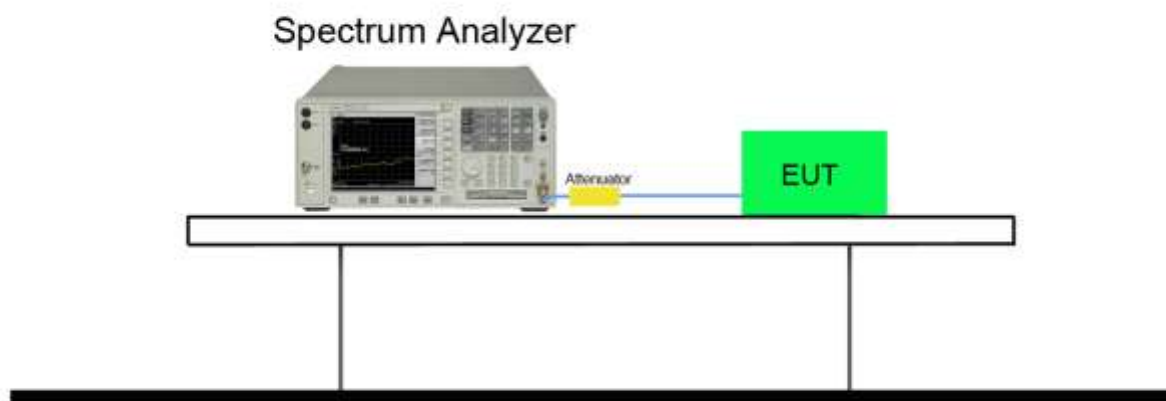
7.5.2. Test Procedure Used

KDB 558074 D01v03r01 – Section 11.3

7.5.3. Test Settling

1. RBW = 100kHz
2. VBW = 300kHz
3. Detector = Peak
4. Trace mode = max hold
5. Sweep time = auto couple
6. The trace was allowed to stabilize

7.5.4. Test Setup



7.5.5. Test Result

Test Mode	N _{Tx}	Data Rate	Channel No.	Frequency (MHz)	Limit	Result
802.11b	1	1Mbps	01	2412	20dBc	Pass
802.11b	1	1Mbps	06	2437	20dBc	Pass
802.11b	1	1Mbps	11	2462	20dBc	Pass

802.11b Out-of-Band Emissions – Chain 0

Channel 01 (2412MHz)

100kHz PSD reference Level



Low Band Edge

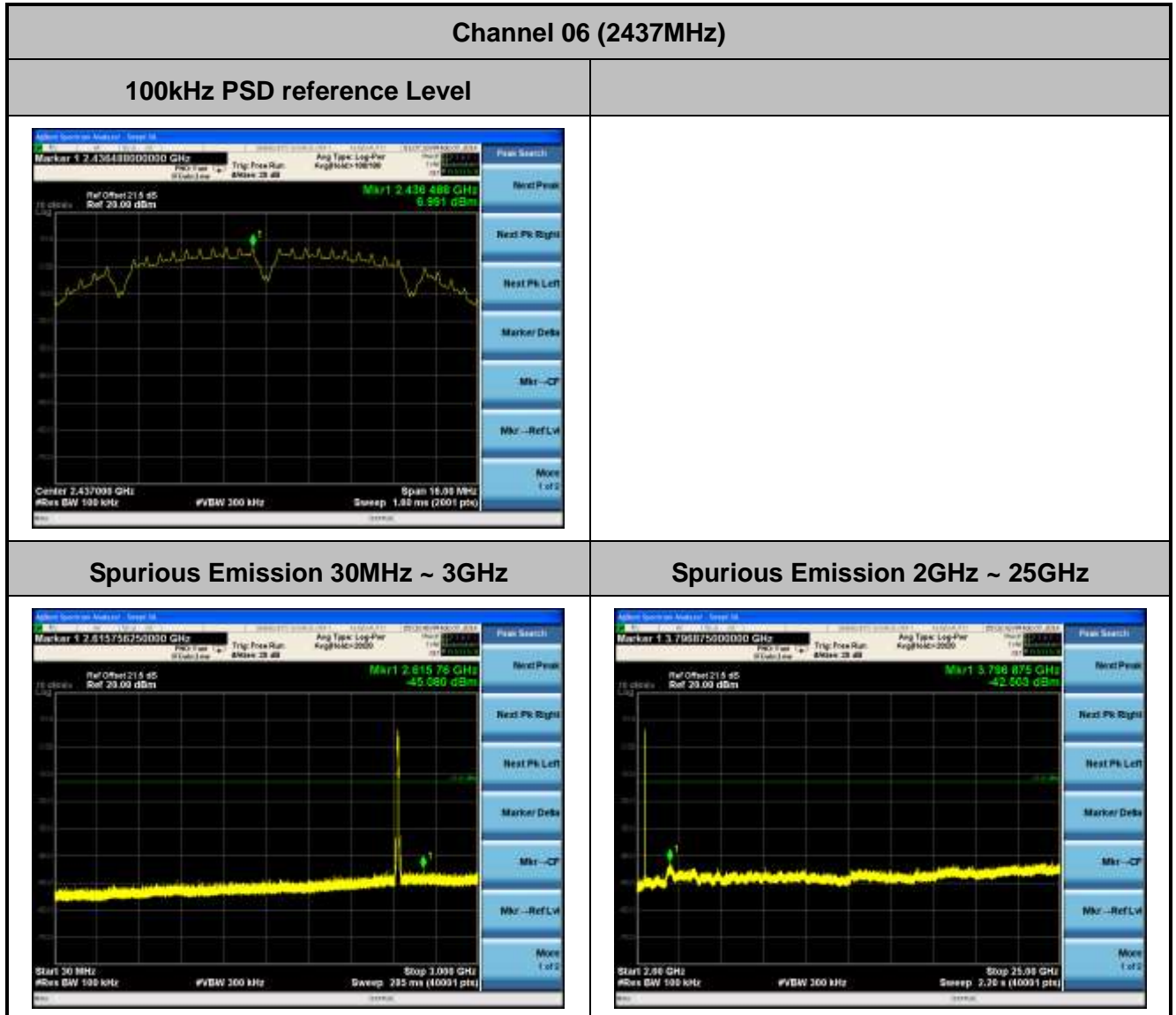


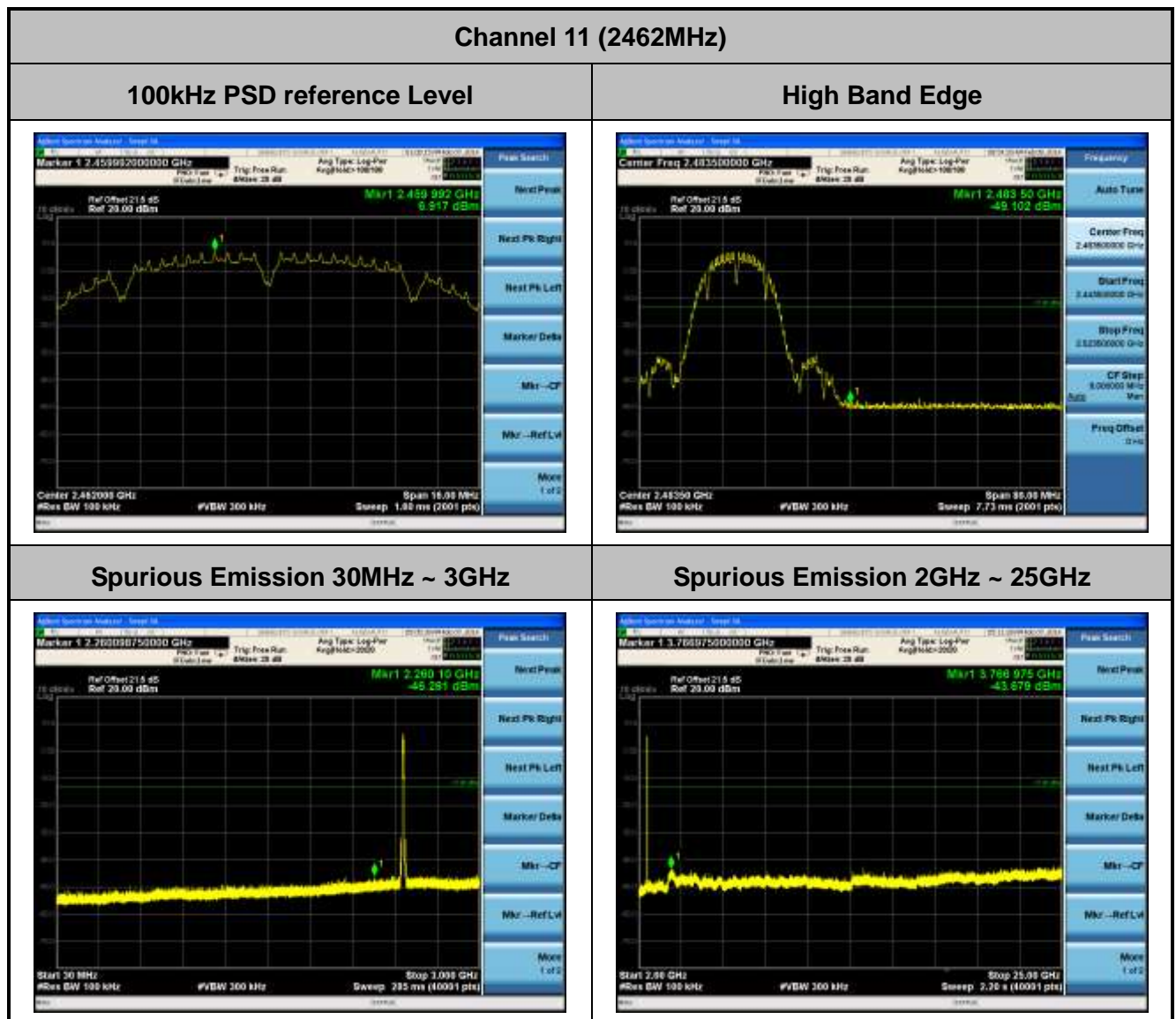
Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz







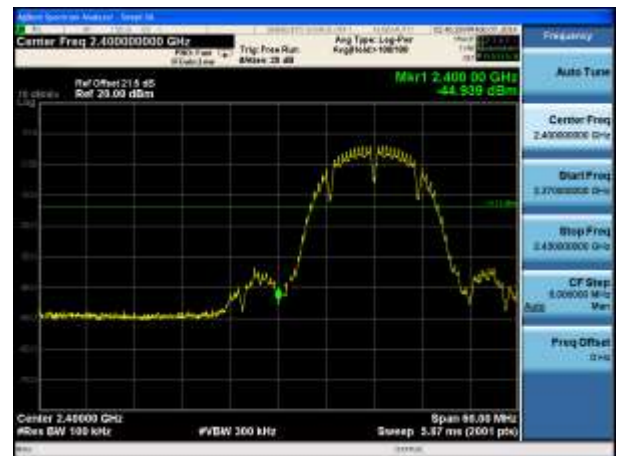
802.11b Out-of-Band Emissions – Chain 1

Channel 01 (2412MHz)

100kHz PSD reference Level



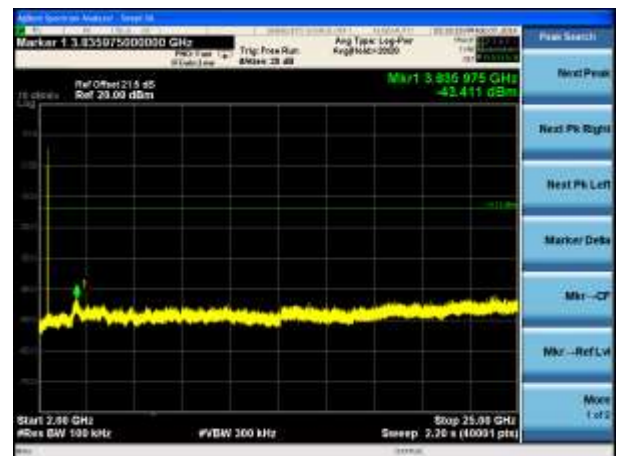
Low Band Edge



Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz

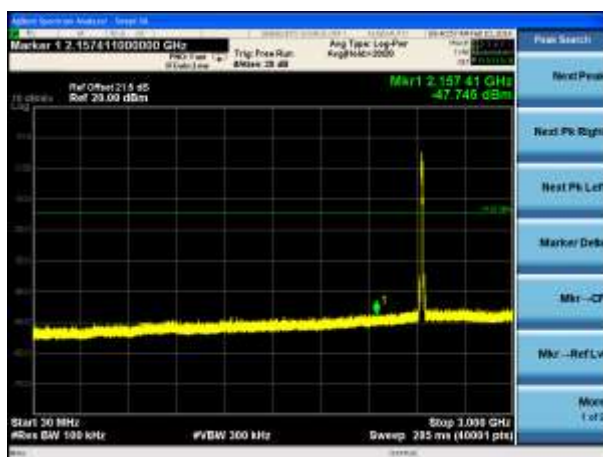


Channel 06 (2437MHz)

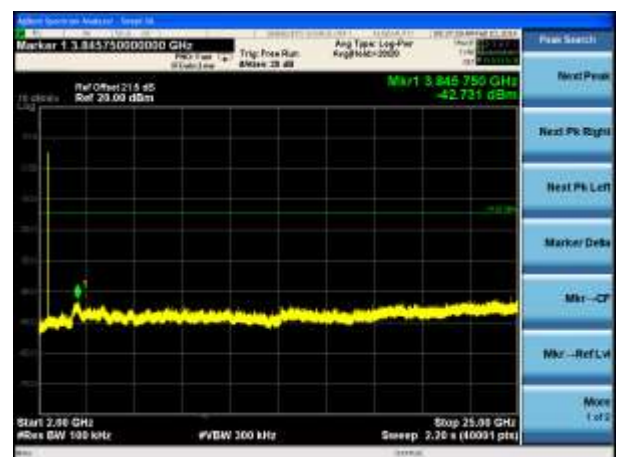
100kHz PSD reference Level



Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz

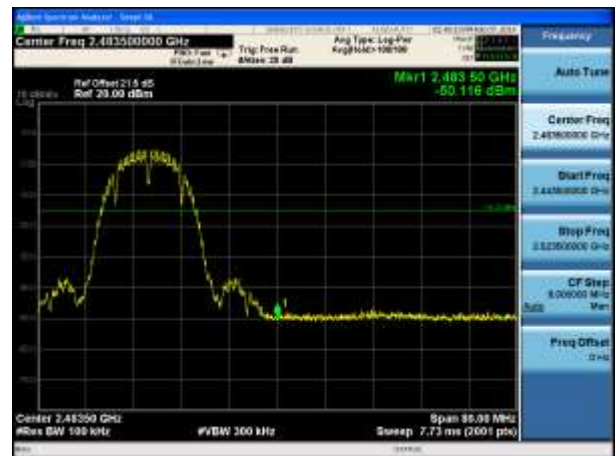


Channel 11 (2462MHz)

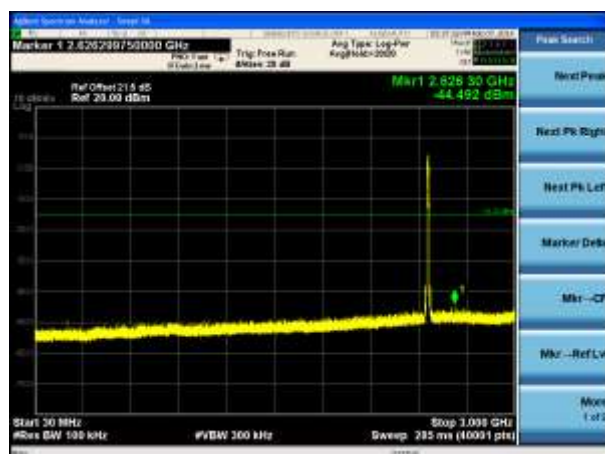
100kHz PSD reference Level



High Band Edge



Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz



Test Mode	N _{Tx}	Data Rate	Channel No.	Frequency (MHz)	Limit	Result
802.11g	1	6Mbps	01	2412	20dBc	Pass
802.11g	1	6Mbps	06	2437	20dBc	Pass
802.11g	1	6Mbps	11	2462	20dBc	Pass

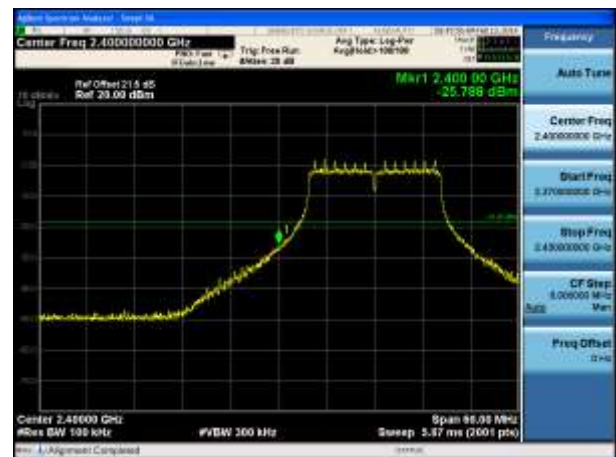
802.11g Out-of-Band Emissions – Chain 0

Channel 01 (2412MHz)

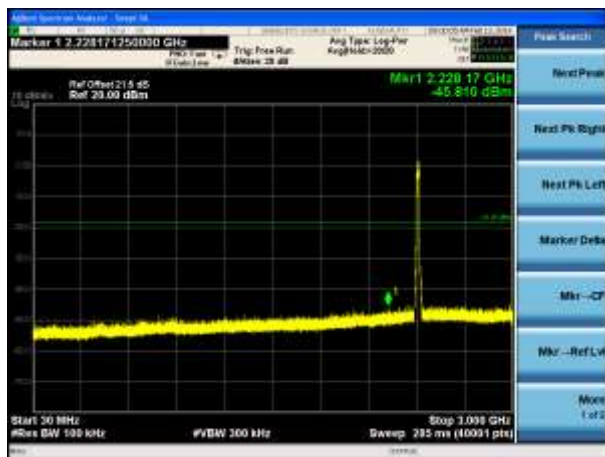
100kHz PSD reference Level



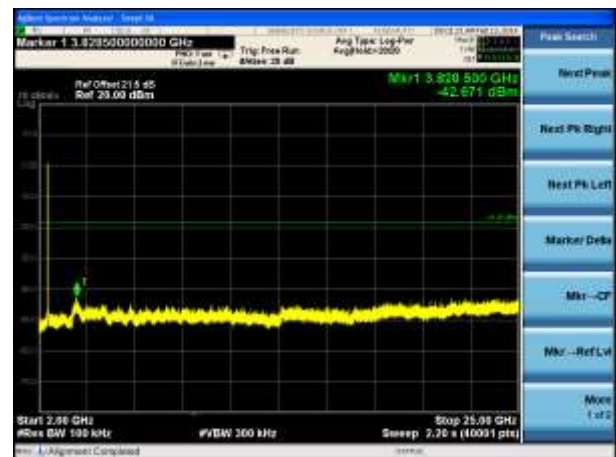
Low Band Edge



Spurious Emission 30MHz ~ 3GHz

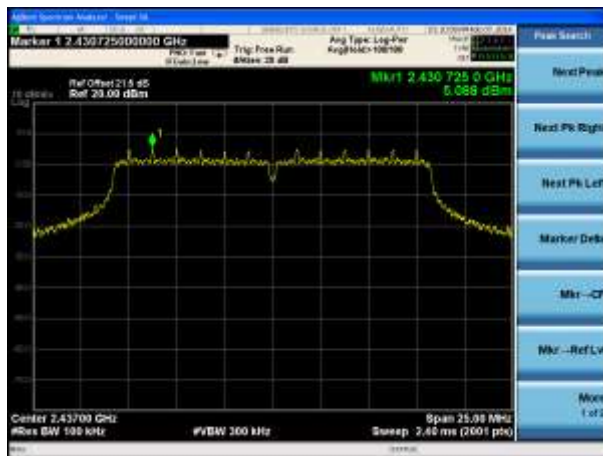


Spurious Emission 2GHz ~ 25GHz



Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission 30MHz ~ 3GHz

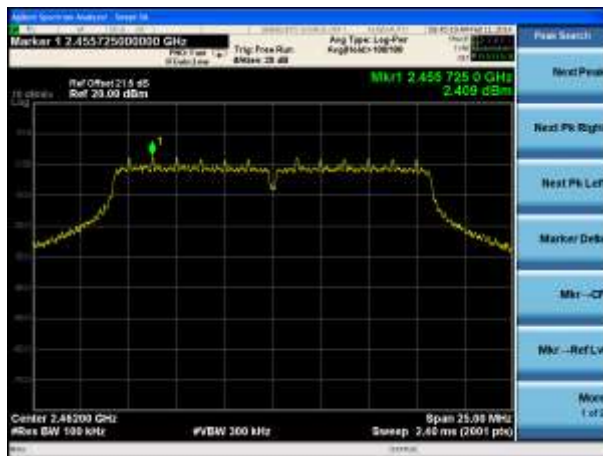


Spurious Emission 2GHz ~ 25GHz

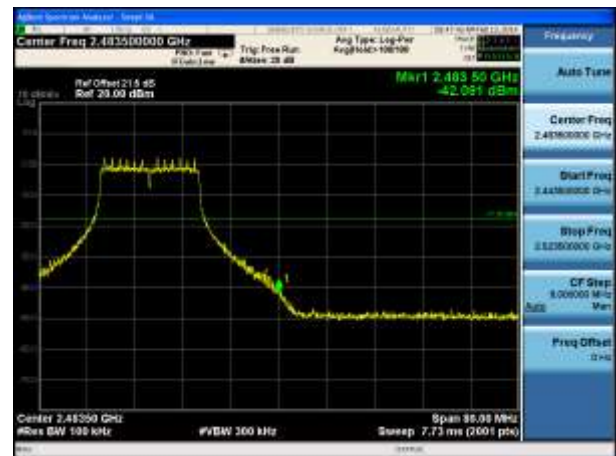


Channel 11 (2462MHz)

100kHz PSD reference Level



High Band Edge



Spurious Emission 30MHz ~ 3GHz



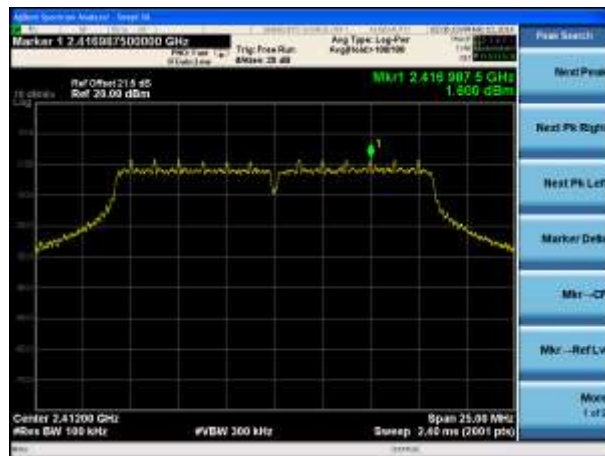
Spurious Emission 2GHz ~ 25GHz



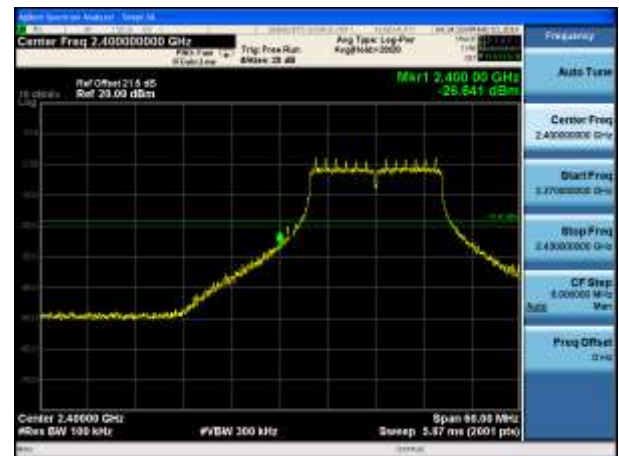
802.11g Out-of-Band Emissions – Chain 1

Channel 01 (2412MHz)

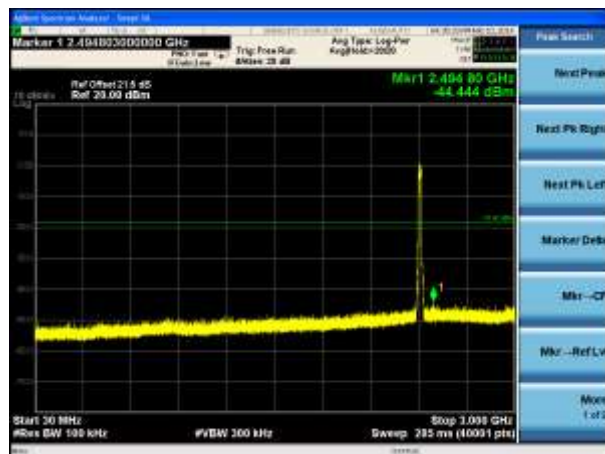
100kHz PSD reference Level



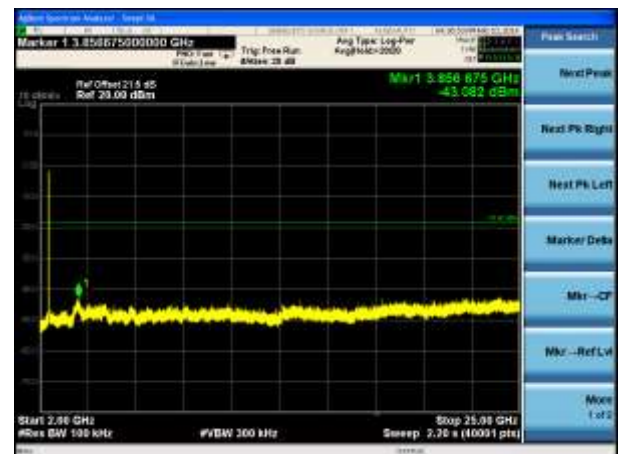
Low Band Edge

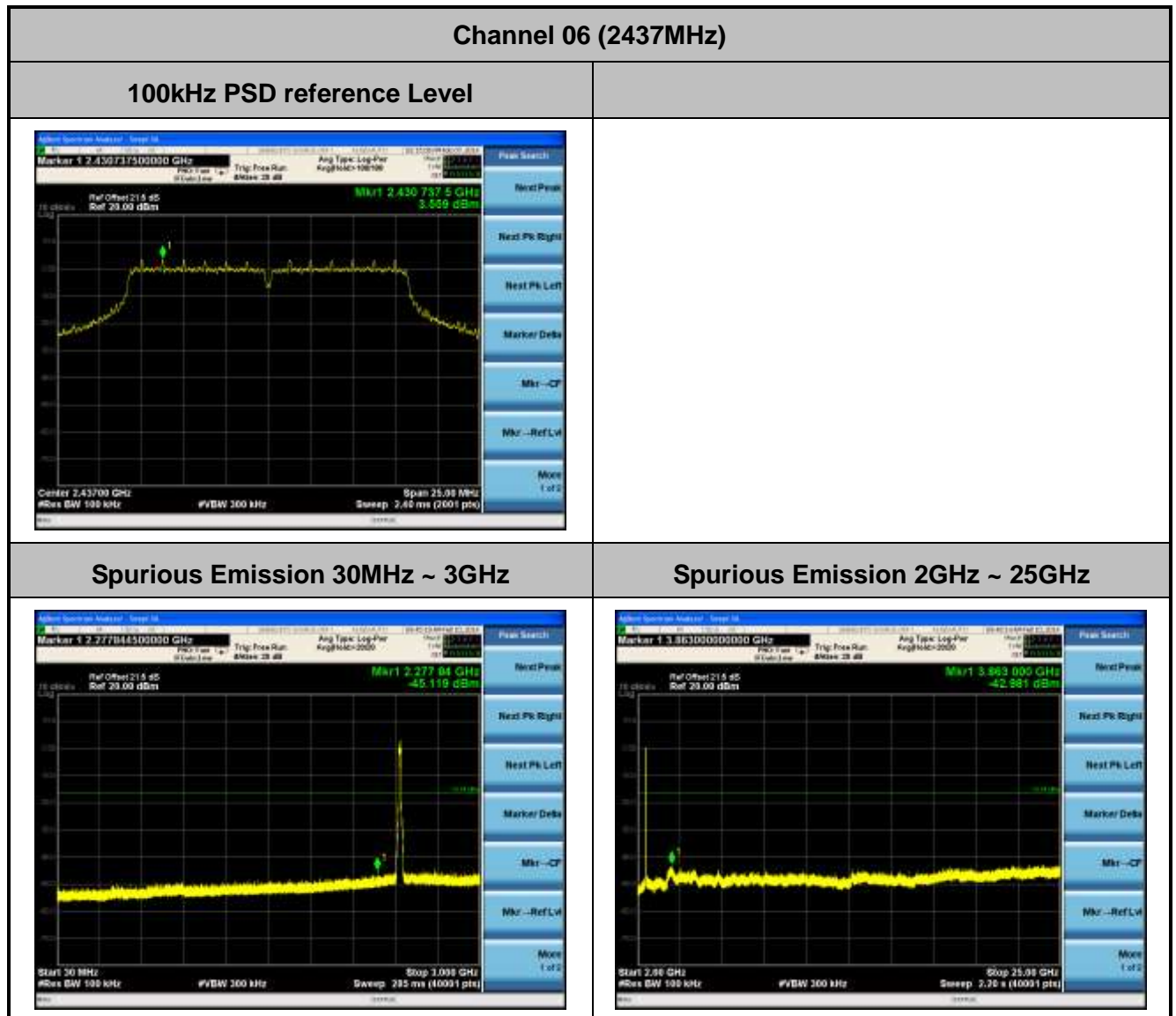


Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz



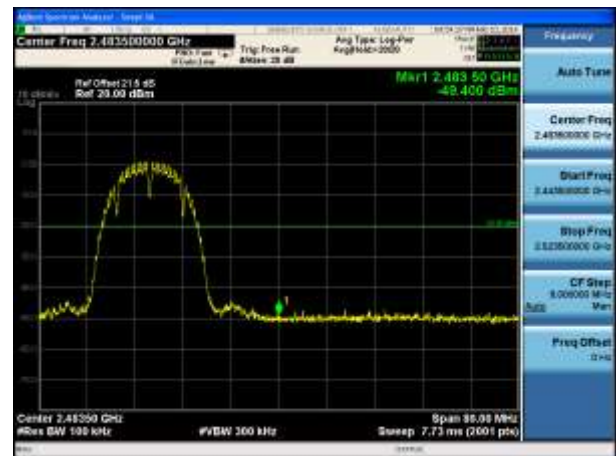


Channel 11 (2462MHz)

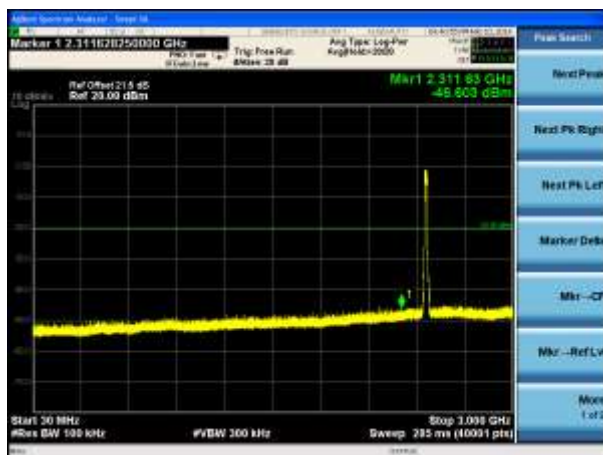
100kHz PSD reference Level



High Band Edge



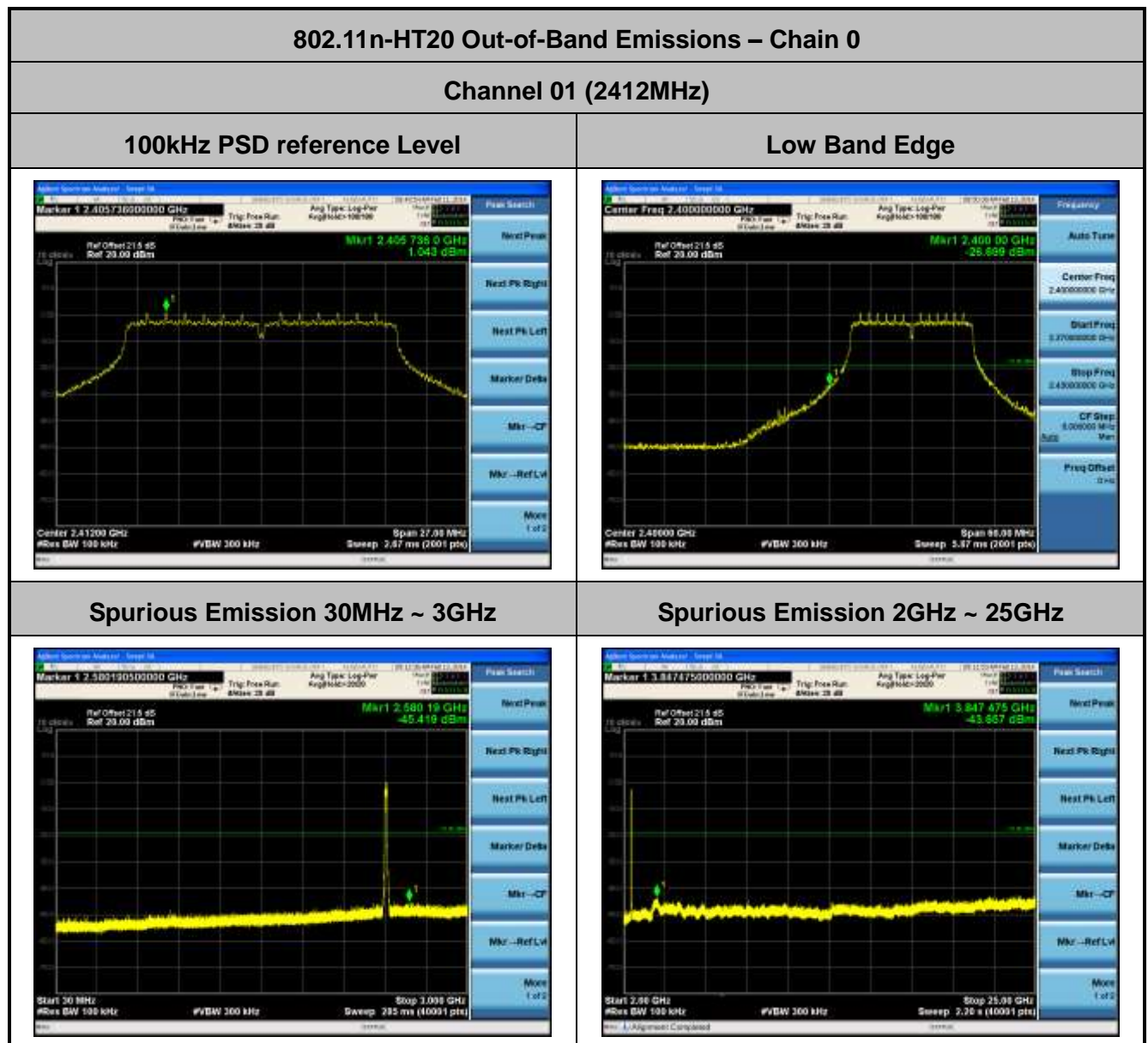
Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz

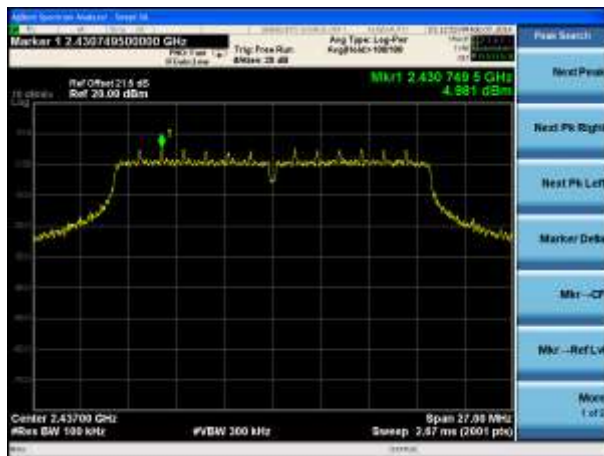


Test Mode	N _{Tx}	Data Rate	Channel No.	Frequency (MHz)	Limit	Result
802.11n-HT20	1	6.5/7.2Mbps	01	2412	20dBc	Pass
802.11n-HT20	1	6.5/7.2Mbps	06	2437	20dBc	Pass
802.11n-HT20	1	6.5/7.2Mbps	11	2462	20dBc	Pass
802.11n-HT20	2	13/14.4Mbps	01	2412	20dBc	Pass
802.11n-HT20	2	13/14.4Mbps	06	2437	20dBc	Pass
802.11n-HT20	2	13/14.4Mbps	11	2462	20dBc	Pass



Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission 30MHz ~ 3GHz

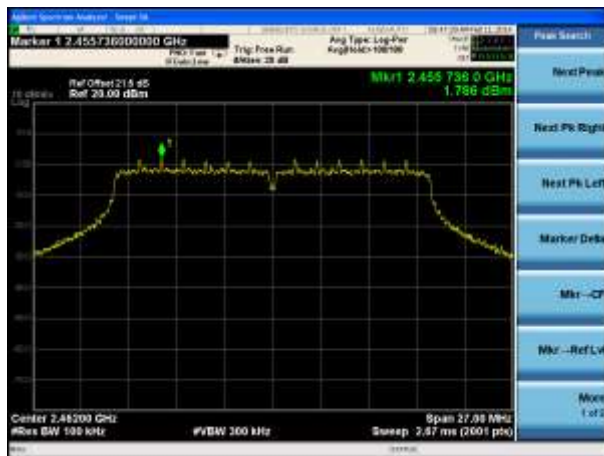


Spurious Emission 2GHz ~ 25GHz



Channel 11 (2462MHz)

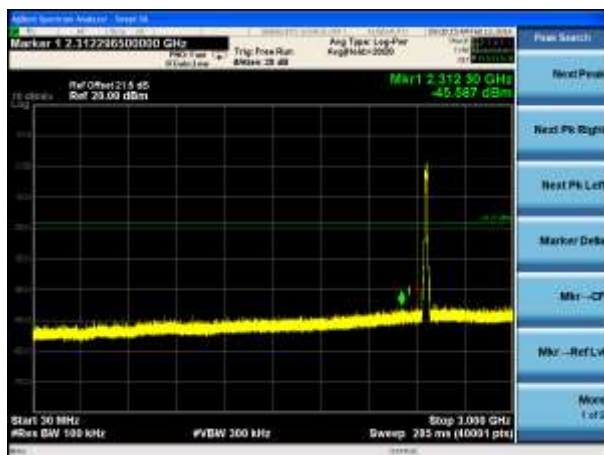
100kHz PSD reference Level



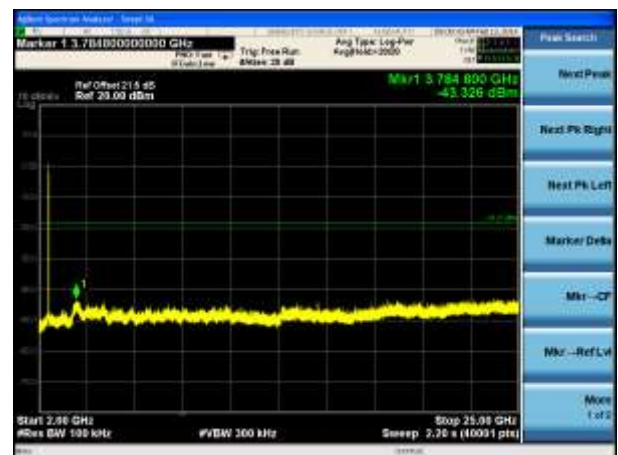
High Band Edge



Spurious Emission 30MHz ~ 3GHz



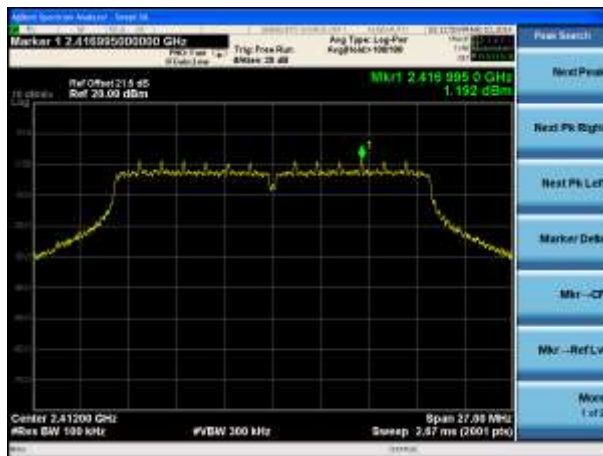
Spurious Emission 2GHz ~ 25GHz



802.11n-HT20 Out-of-Band Emissions – Chain 1

Channel 01 (2412MHz)

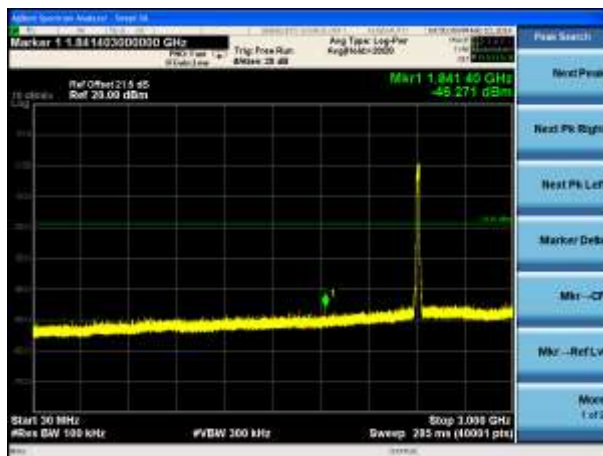
100kHz PSD reference Level



Low Band Edge



Spurious Emission 30MHz ~ 3GHz

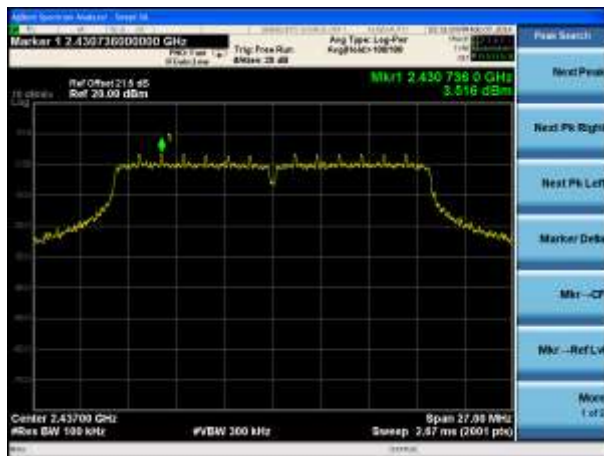


Spurious Emission 2GHz ~ 25GHz

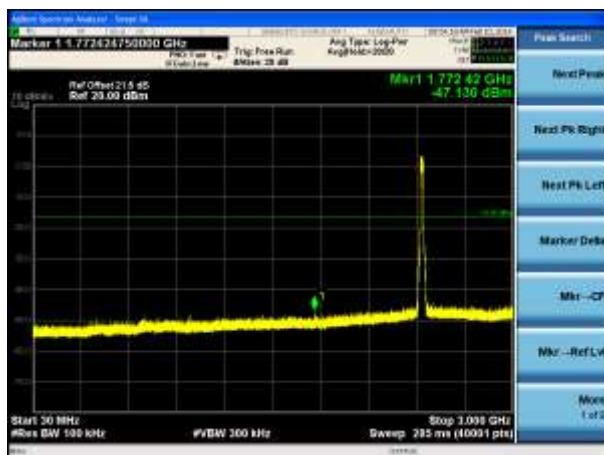


Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission 30MHz ~ 3GHz

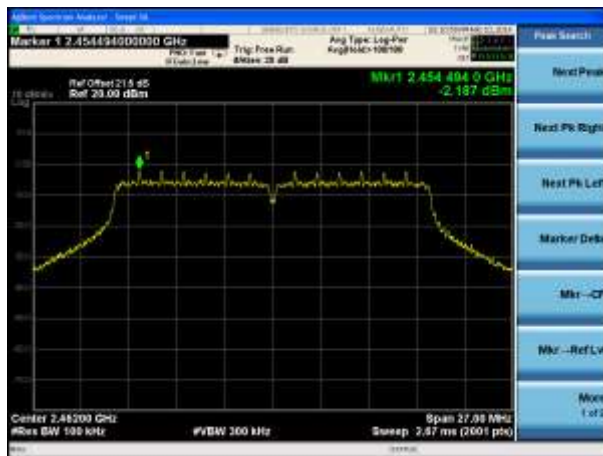


Spurious Emission 2GHz ~ 25GHz

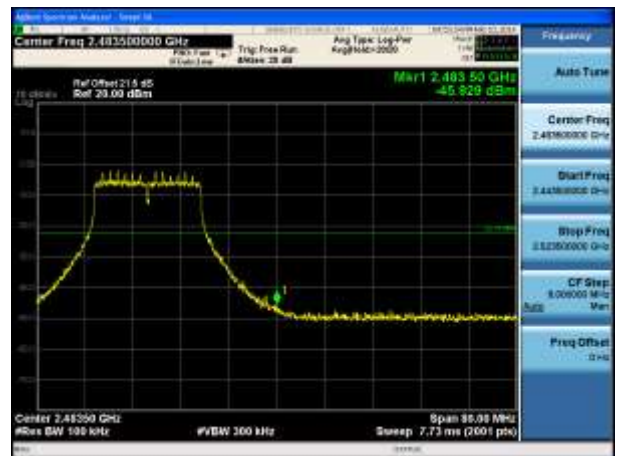


Channel 11 (2462MHz)

100kHz PSD reference Level



High Band Edge



Spurious Emission 30MHz ~ 3GHz



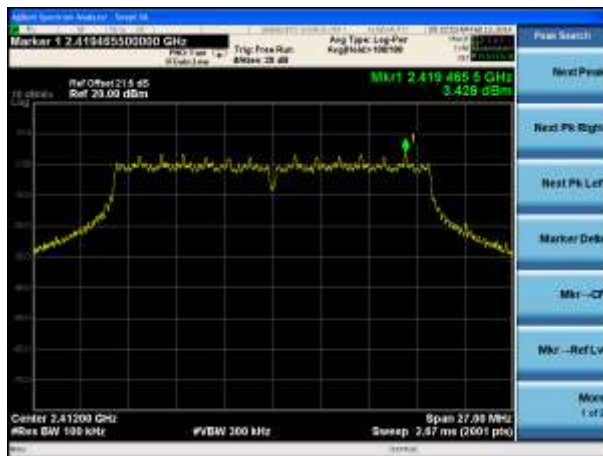
Spurious Emission 2GHz ~ 25GHz



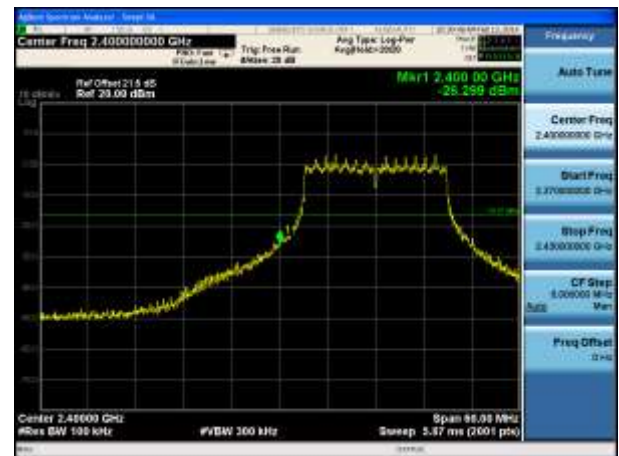
802.11n-HT20 Out-of-Band Emissions – Chain 0 / Chain 0 + 1

Channel 01 (2412MHz)

100kHz PSD reference Level



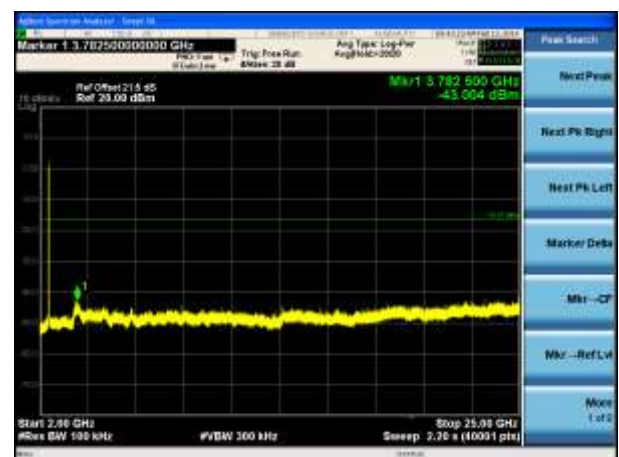
Low Band Edge



Spurious Emission 30MHz ~ 3GHz

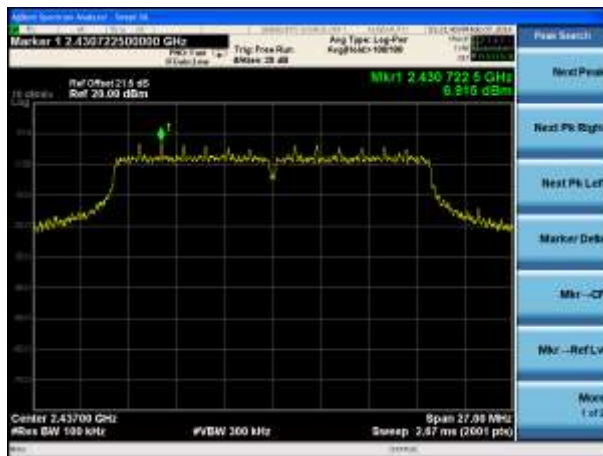


Spurious Emission 2GHz ~ 25GHz

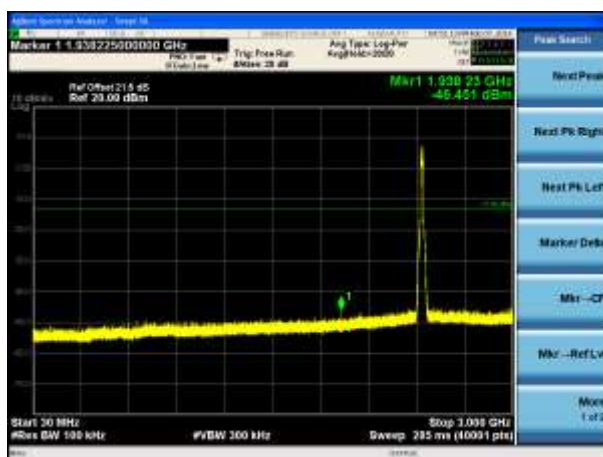


Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission 30MHz ~ 3GHz

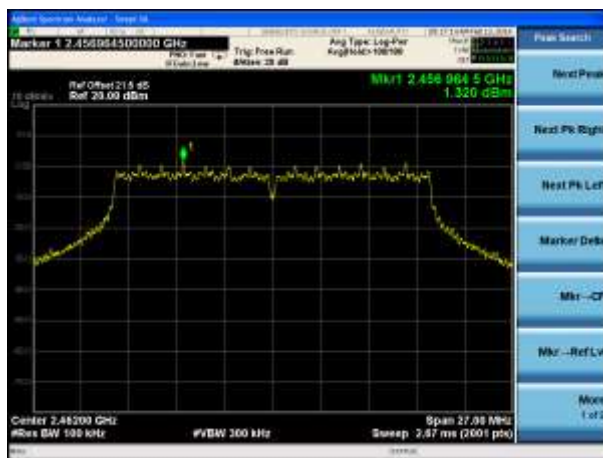


Spurious Emission 2GHz ~ 25GHz

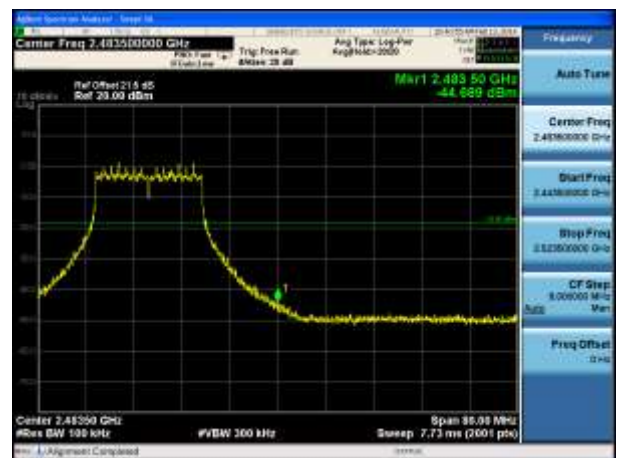


Channel 11 (2462MHz)

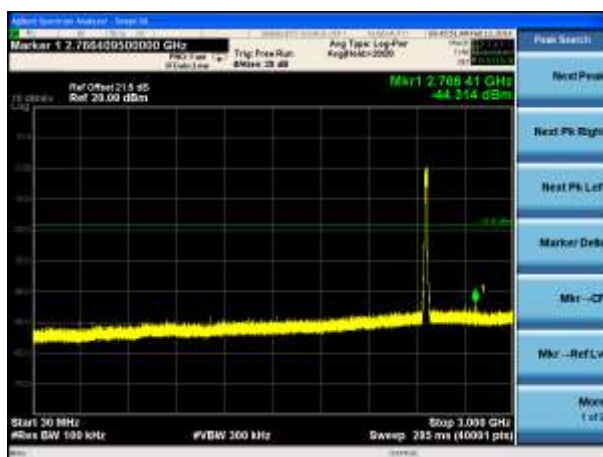
100kHz PSD reference Level



High Band Edge



Spurious Emission 30MHz ~ 3GHz



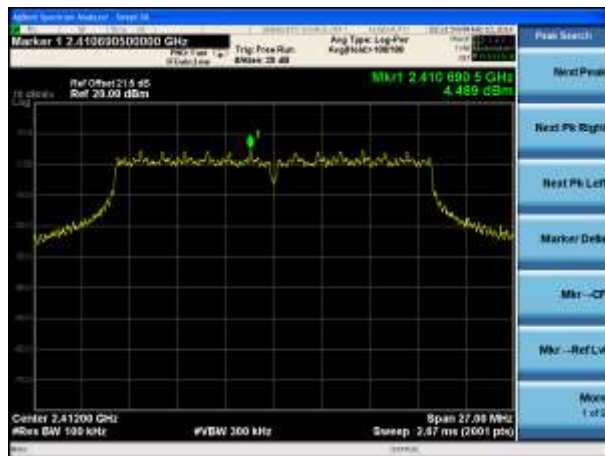
Spurious Emission 2GHz ~ 25GHz



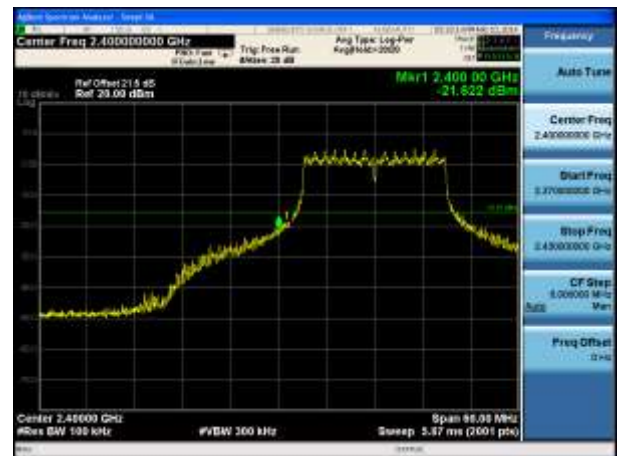
802.11n-HT20 Out-of-Band Emissions – Chain 1 / Chain 0 + 1

Channel 01 (2412MHz)

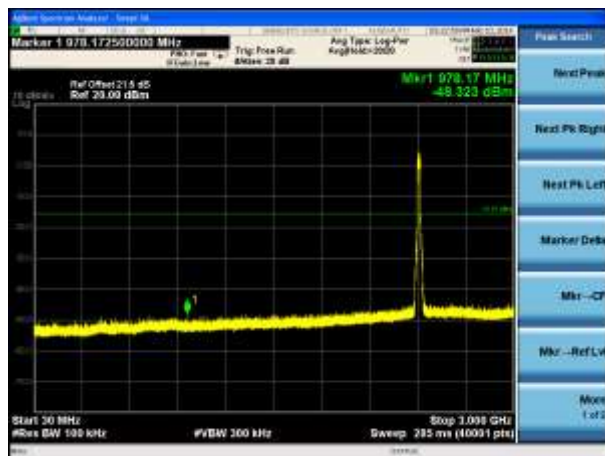
100kHz PSD reference Level



Low Band Edge



Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz

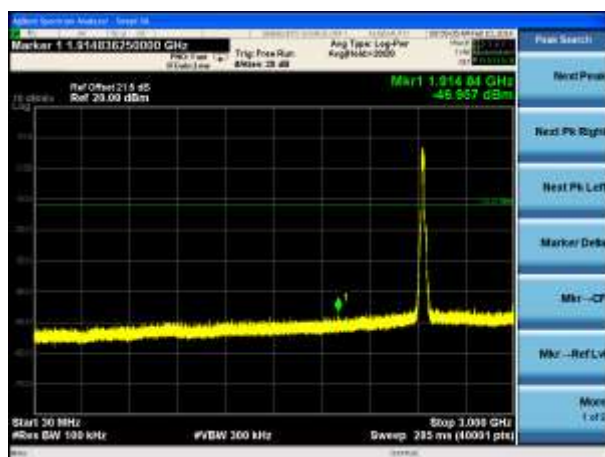


Channel 06 (2437MHz)

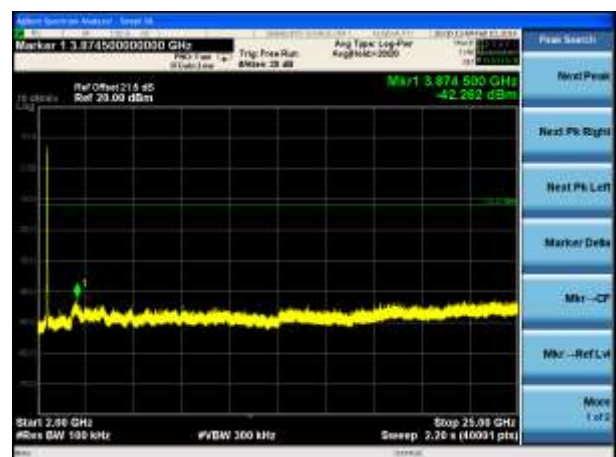
100kHz PSD reference Level



Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz

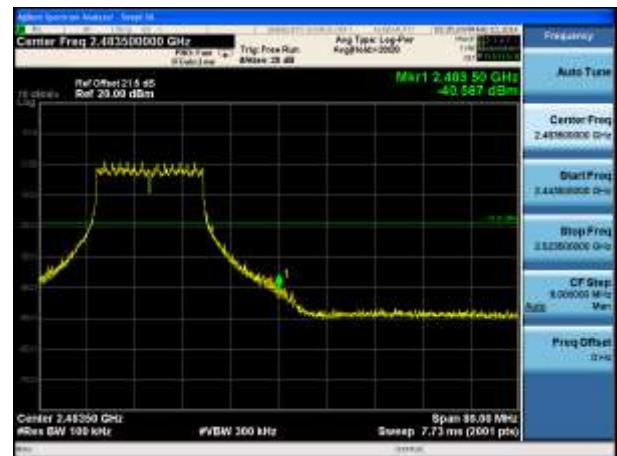


Channel 11 (2462MHz)

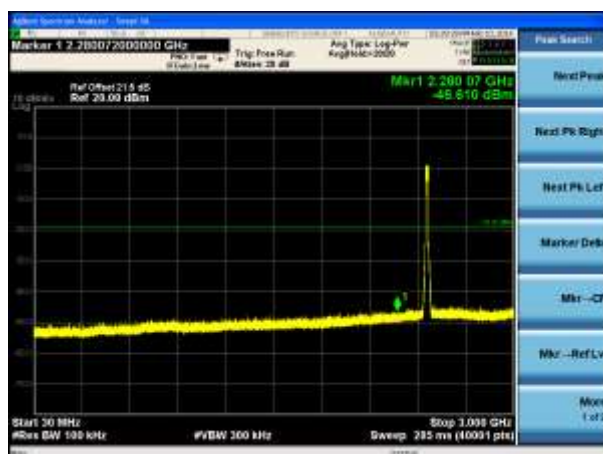
100kHz PSD reference Level



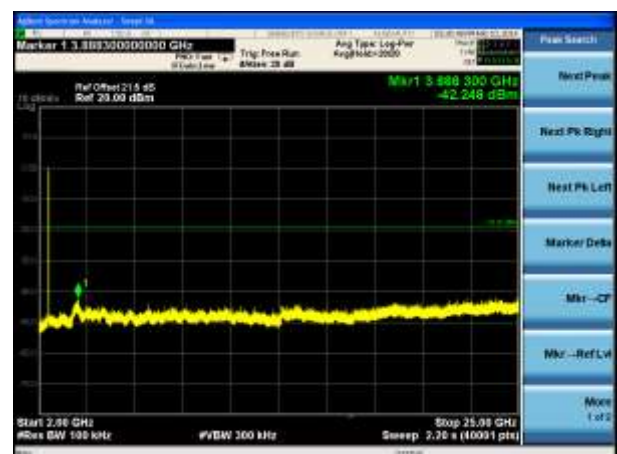
High Band Edge



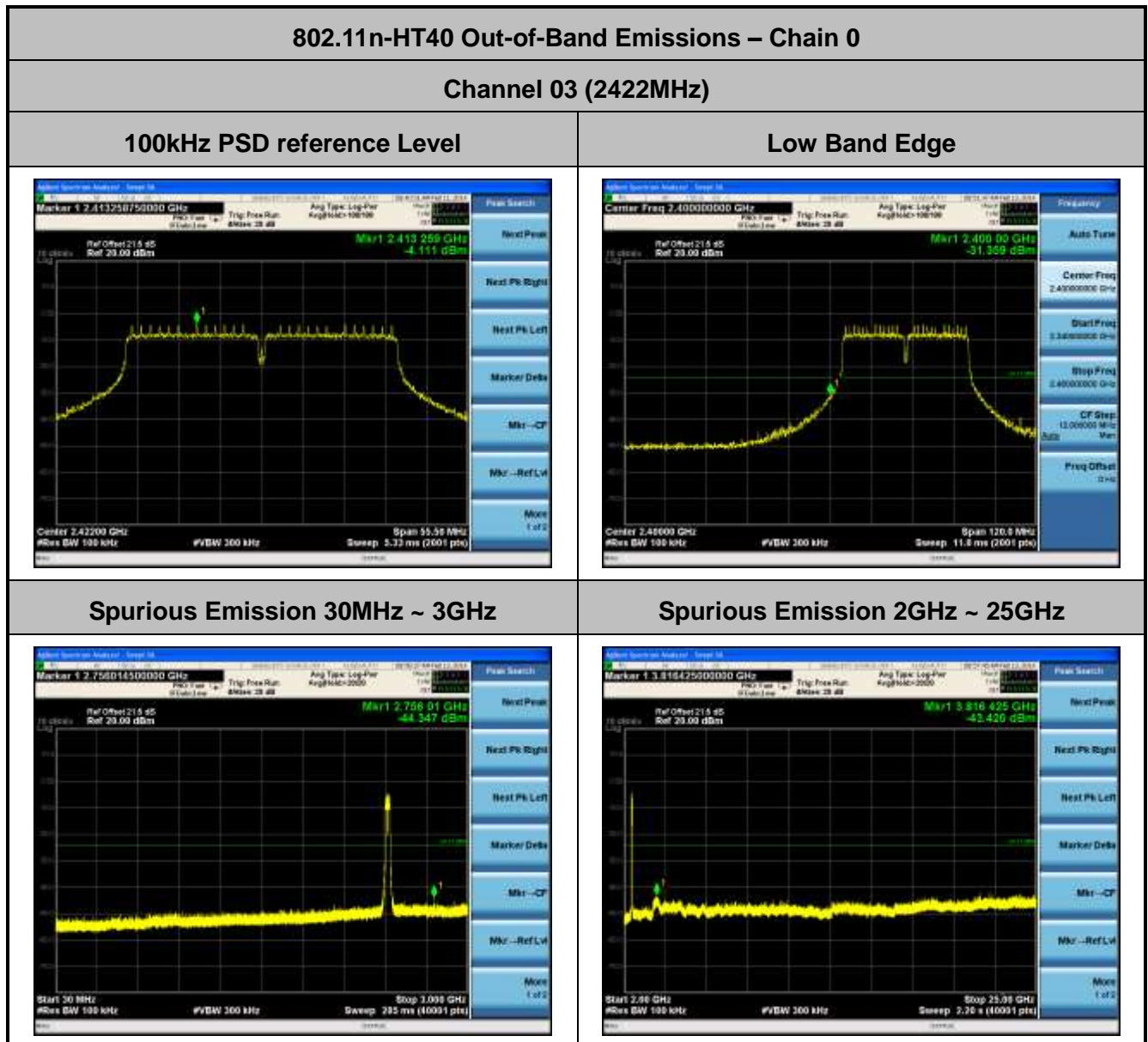
Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz

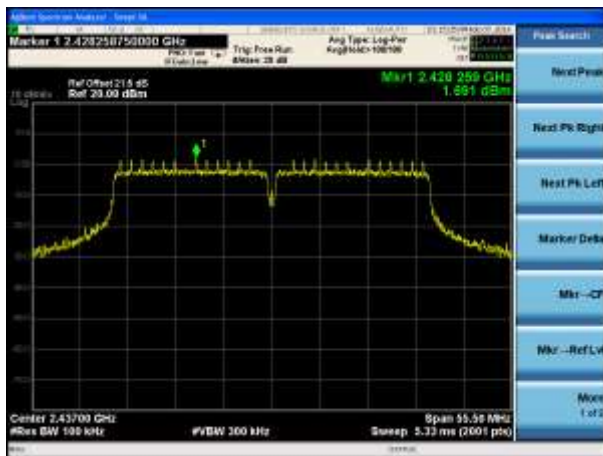


Test Mode	N _{Tx}	Data Rate	Channel No.	Frequency (MHz)	Limit	Result
802.11n-HT40	1	13.5/15Mbps	03	2422	20dBc	Pass
802.11n-HT40	1	13.5/15Mbps	06	2437	20dBc	Pass
802.11n-HT40	1	13.5/15Mbps	09	2452	20dBc	Pass
802.11n-HT40	2	27/30Mbps	03	2422	20dBc	Pass
802.11n-HT40	2	27/30Mbps	06	2437	20dBc	Pass
802.11n-HT40	2	27/30Mbps	09	2452	20dBc	Pass

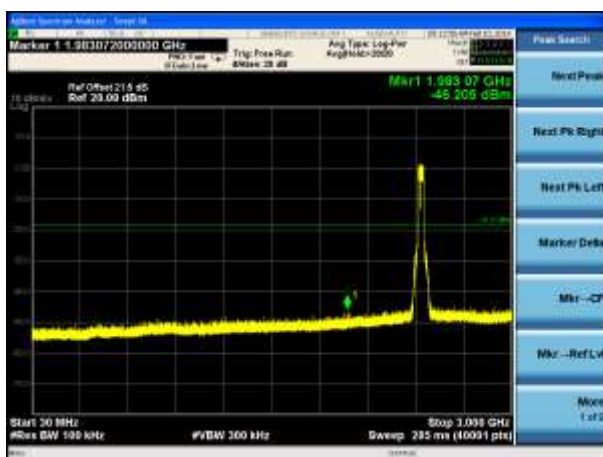


Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission 30MHz ~ 3GHz

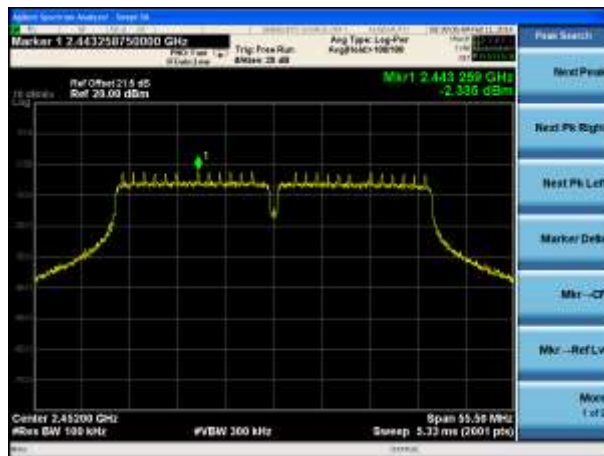


Spurious Emission 2GHz ~ 25GHz

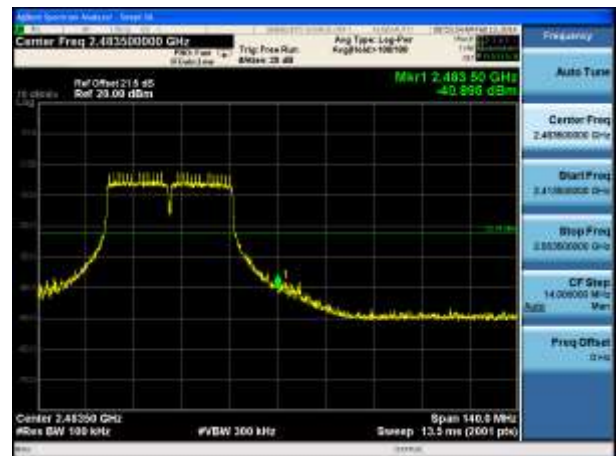


Channel 09 (2452MHz)

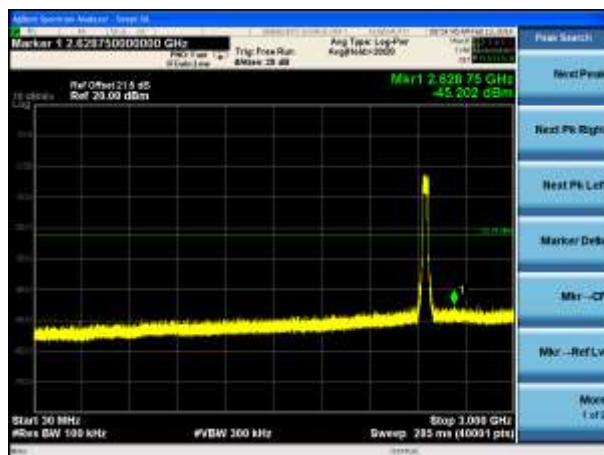
100kHz PSD reference Level



High Band Edge



Spurious Emission 30MHz ~ 3GHz



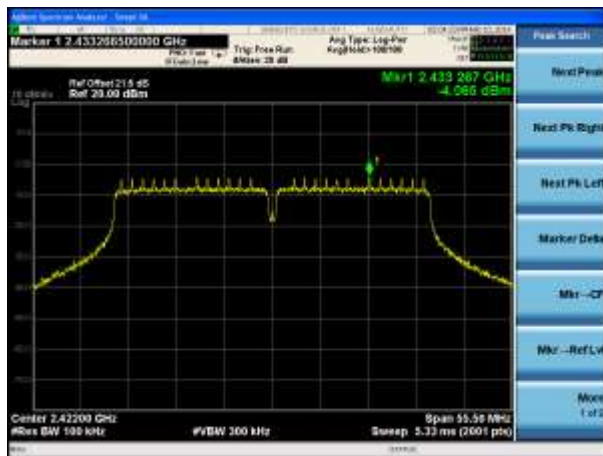
Spurious Emission 2GHz ~ 25GHz



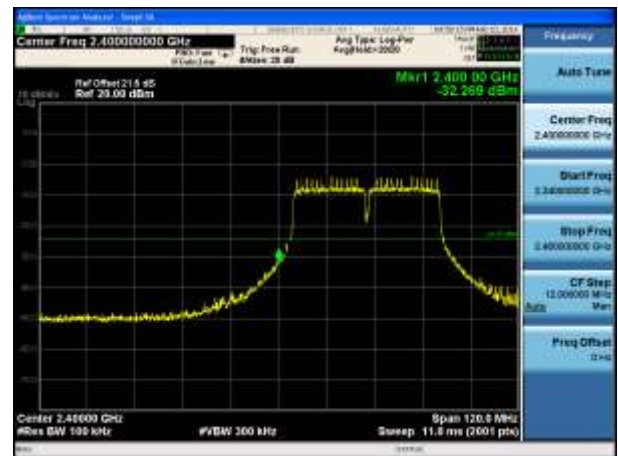
802.11n-HT40 Out-of-Band Emissions – Chain 1

Channel 03 (2422MHz)

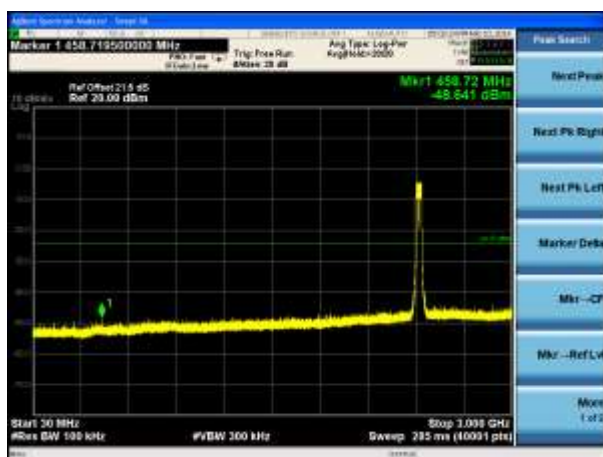
100kHz PSD reference Level



Low Band Edge



Spurious Emission 30MHz ~ 3GHz

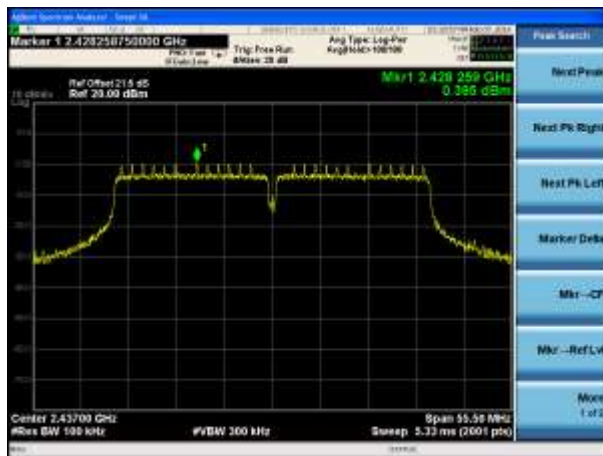


Spurious Emission 2GHz ~ 25GHz

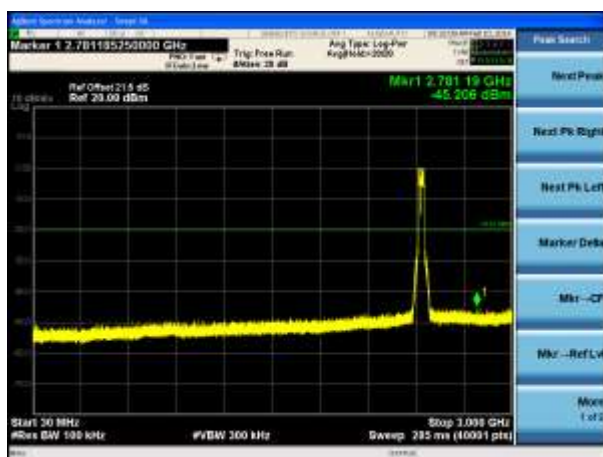


Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission 30MHz ~ 3GHz

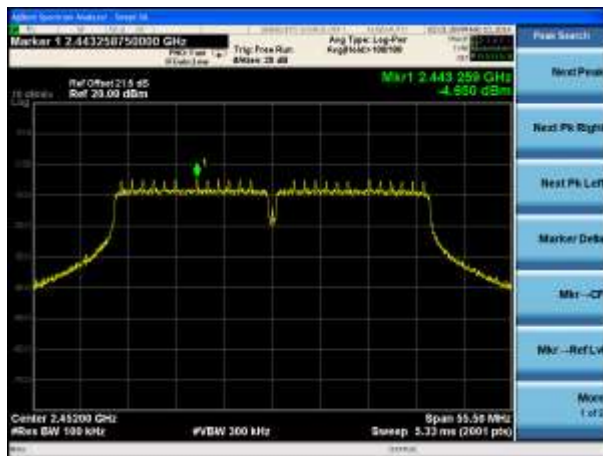


Spurious Emission 2GHz ~ 25GHz

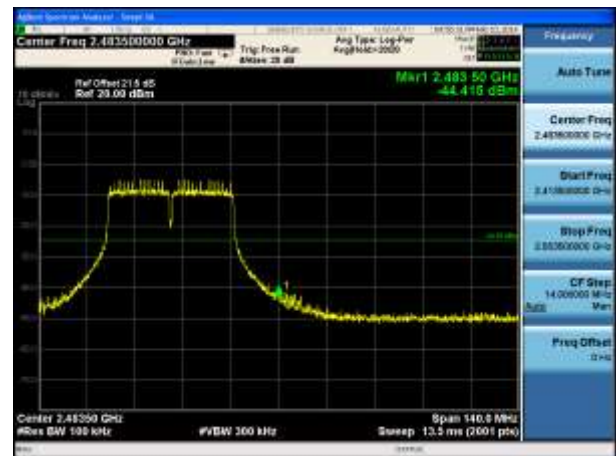


Channel 09 (2452MHz)

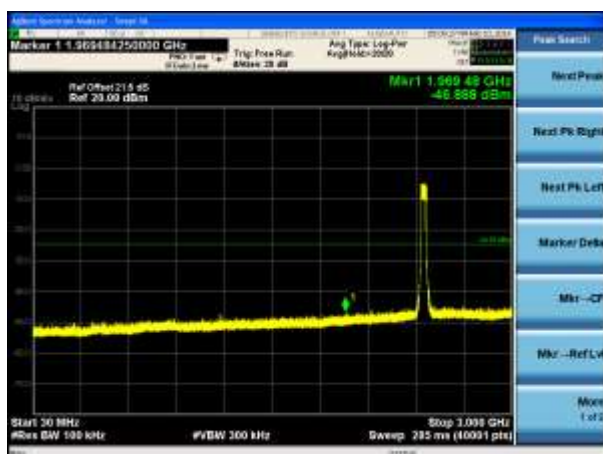
100kHz PSD reference Level



High Band Edge



Spurious Emission 30MHz ~ 3GHz



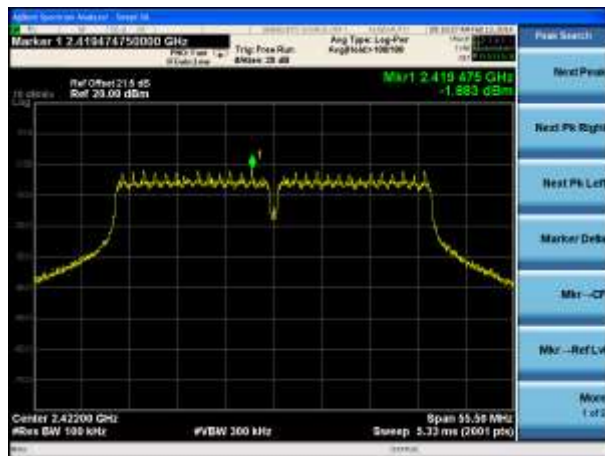
Spurious Emission 2GHz ~ 25GHz



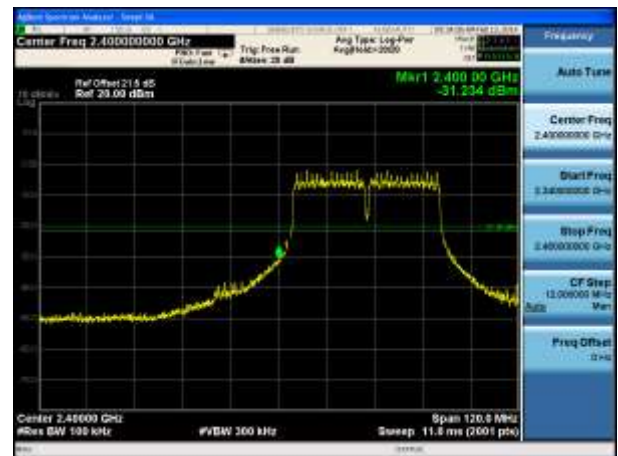
802.11n-HT40 Out-of-Band Emissions – Chain 0 / Chain 0 + 1

Channel 03 (2422MHz)

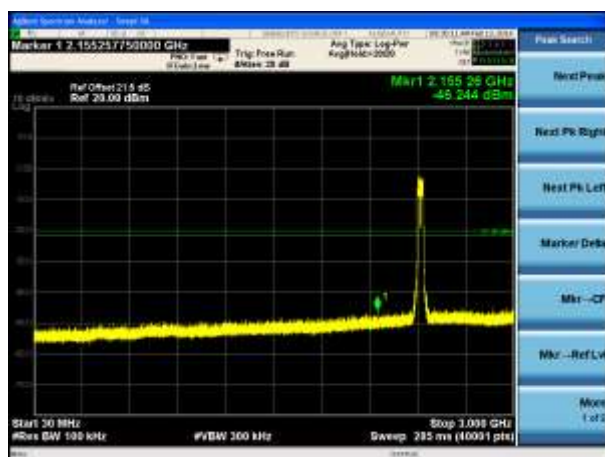
100kHz PSD reference Level



Low Band Edge

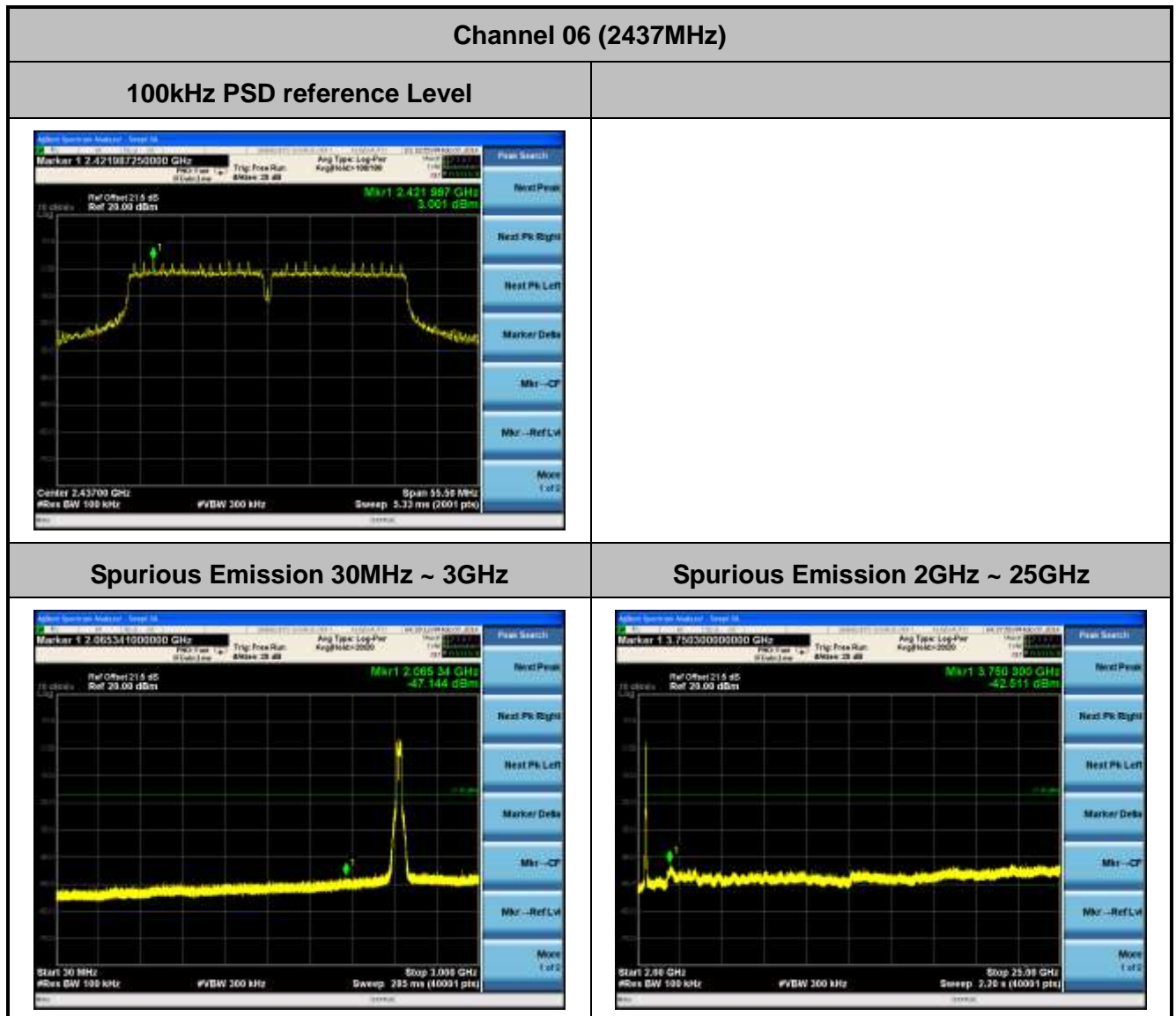


Spurious Emission 30MHz ~ 3GHz



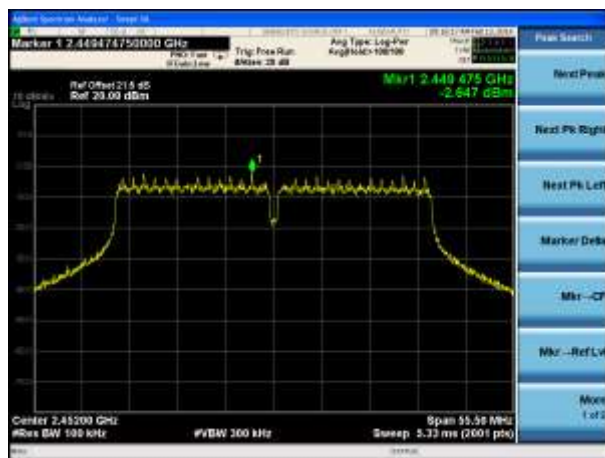
Spurious Emission 2GHz ~ 25GHz



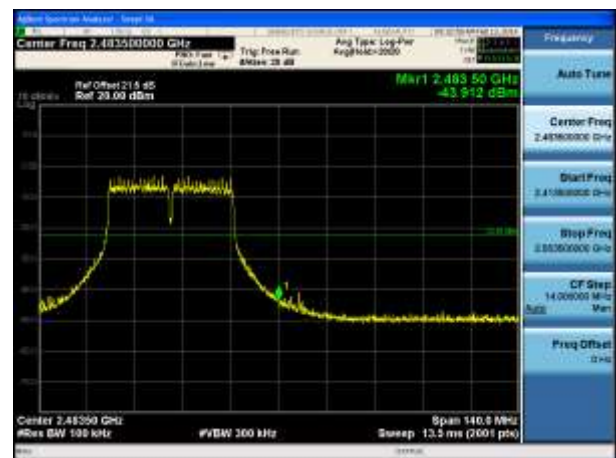


Channel 09 (2452MHz)

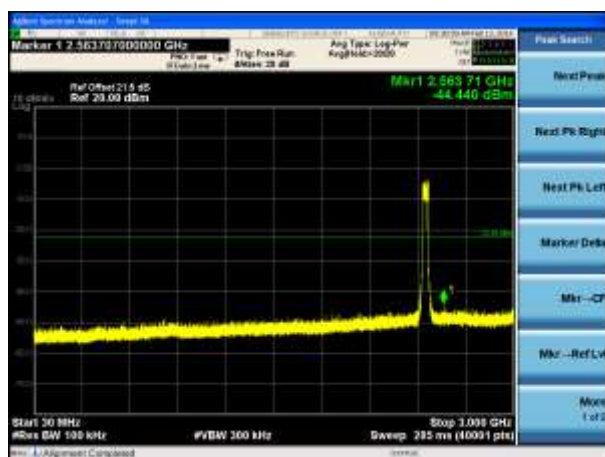
100kHz PSD reference Level



High Band Edge



Spurious Emission 30MHz ~ 3GHz



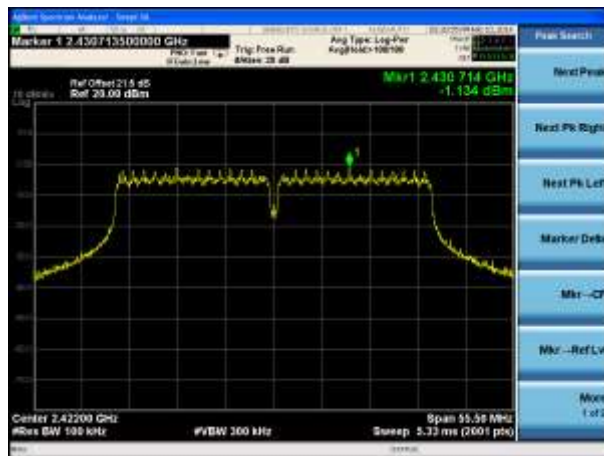
Spurious Emission 2GHz ~ 25GHz



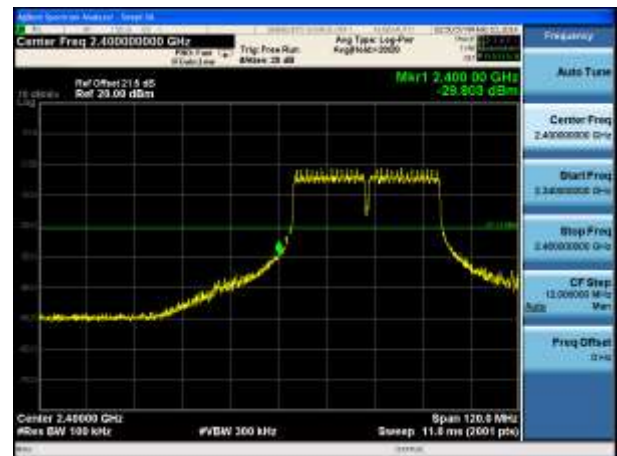
802.11n-HT40 Out-of-Band Emissions – Chain 1 / Chain 0 + 1

Channel 03 (2422MHz)

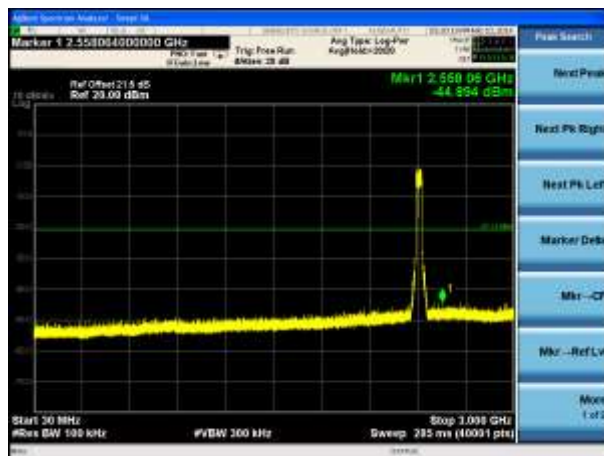
100kHz PSD reference Level



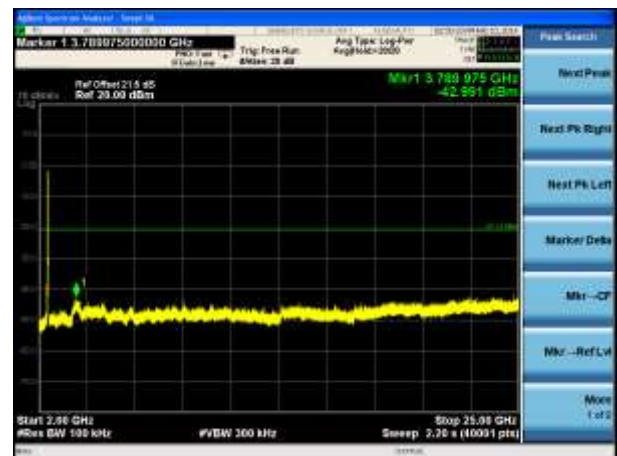
Low Band Edge



Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz

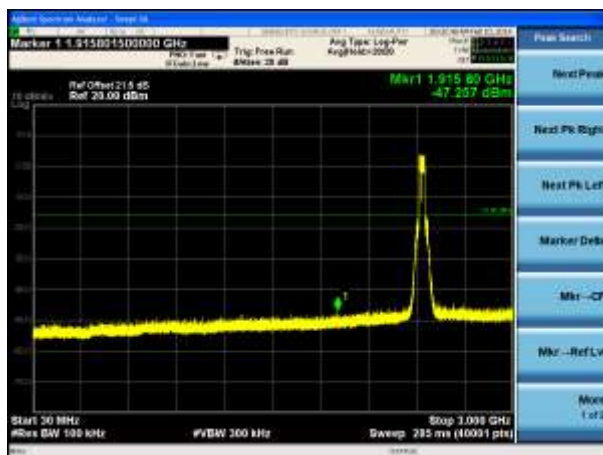


Channel 06 (2437MHz)

100kHz PSD reference Level



Spurious Emission 30MHz ~ 3GHz

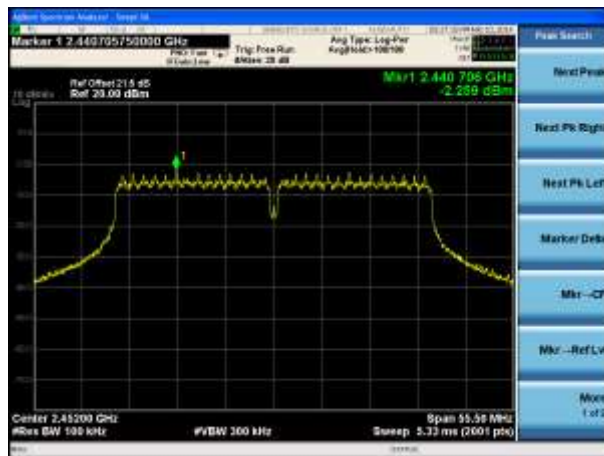


Spurious Emission 2GHz ~ 25GHz

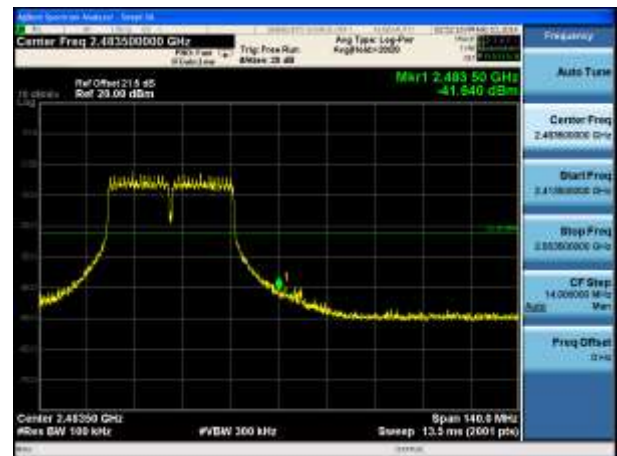


Channel 09 (2452MHz)

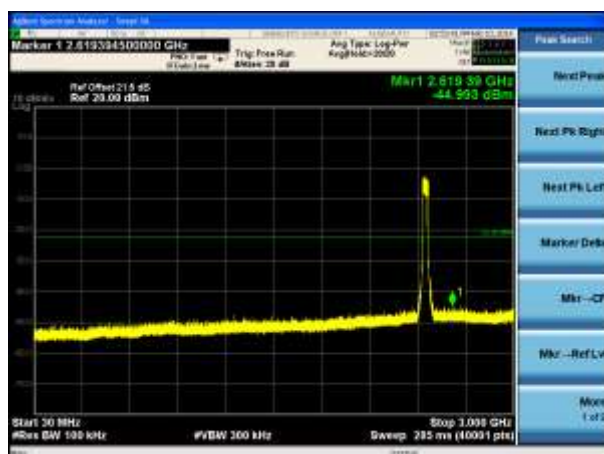
100kHz PSD reference Level



High Band Edge



Spurious Emission 30MHz ~ 3GHz



Spurious Emission 2GHz ~ 25GHz



7.6. Radiated Band Edge and Spurious Emission Measurement §15.247(d) / §15.205 & §15.209: RSS-210 [A8.5]

7.6.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [V/m]	Measured Distance [Meters]
0.009 – 0.490	2400/F (kHz)	300
0.490 – 1.705	24000/F (kHz)	30
1.705 - 30	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

7.6.2. Test Procedure Used

KDB 558074 D01v03r01 – Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v03r01 – Section 12.2.4 (peak power measurements)

KDB 558074 D01v03r01 – Section 12.2.5 (average power measurements)

7.6.3. Test Setting

Peak Field Strength Measurements per Section 12.2.4 of KDB 558074 D01v03r01

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold

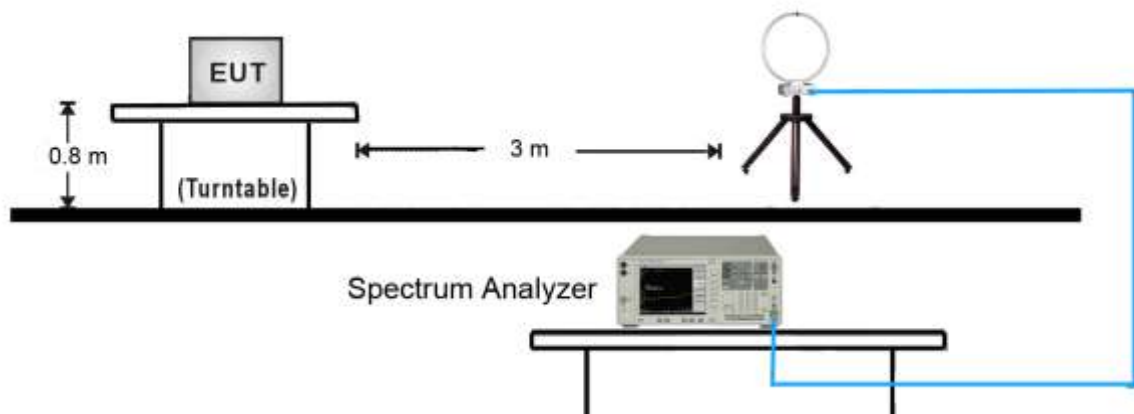
7. Trace was allowed to stabilize

Average Field Strength Measurements per Section 12.2.5.1 of KDB 558074 D01v03r01

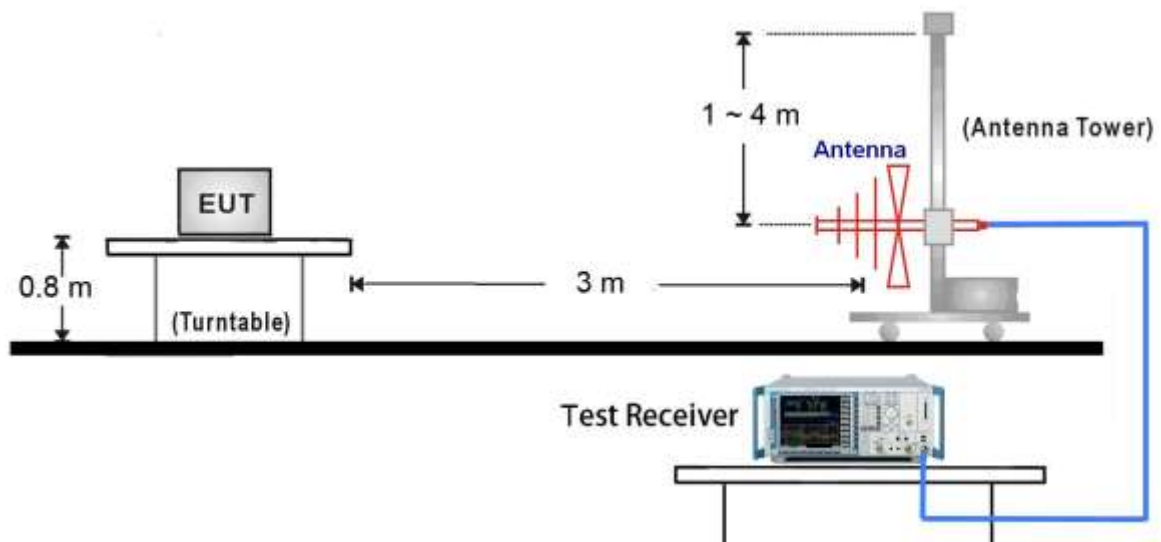
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = power average (RMS)
5. Number of measurement points = 1001 (Number of points must be $> 2 \times \text{span/RBW}$)
6. Sweep time = auto
7. Trace (RMS) averaging was performed over at least 100 traces

7.6.4. Test Setup

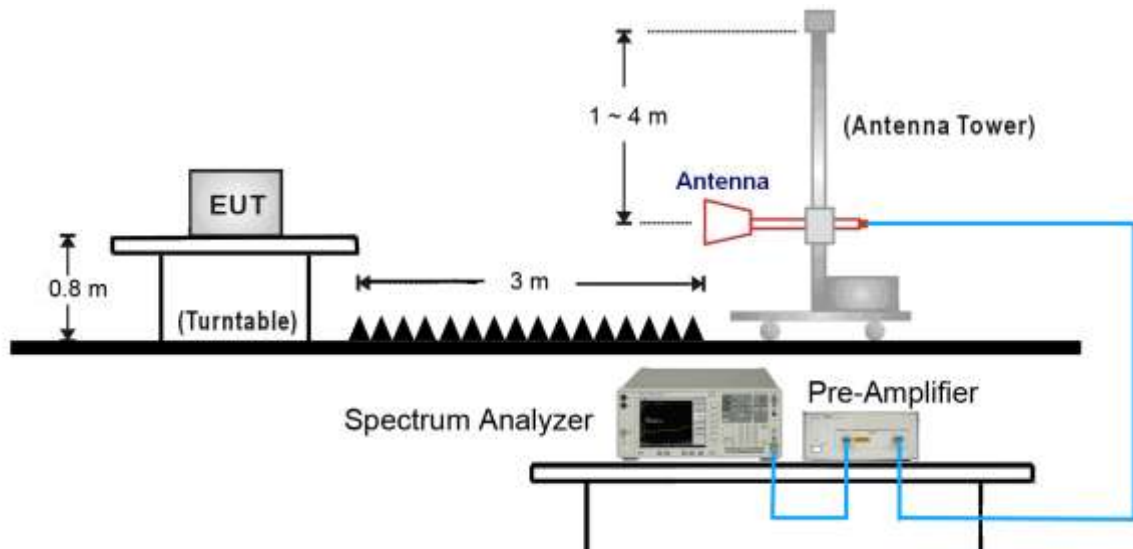
9kHz ~ 30MHz Test Setup:



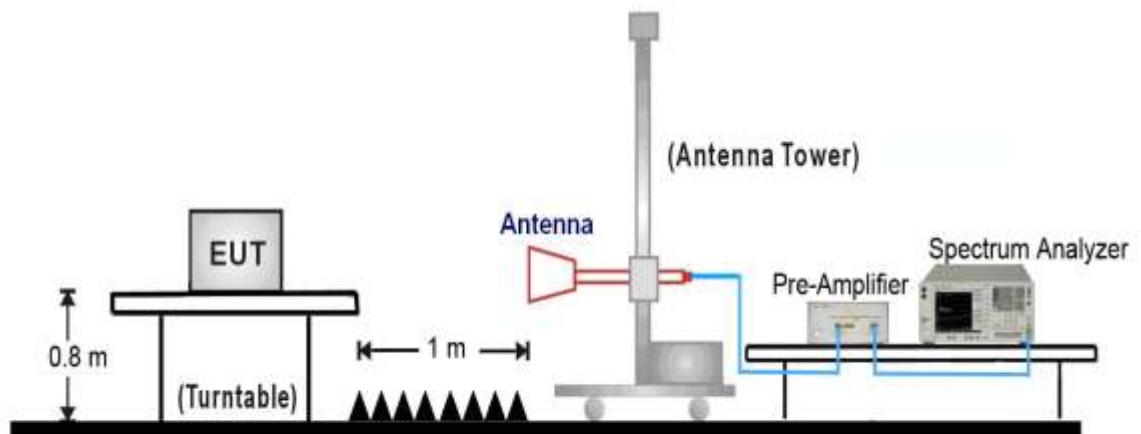
30MHz ~ 1GHz Test Setup:



1GHz ~18GHz Test Setup:



18GHz ~40GHz Test Setup:



7.6.5. Test Result of Radiated Spurious Emission

Test Mode:	802.11b – Chain 0	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3187.6	36.0	3.6	39.6	87.1	-47.5	Peak	Horizontal
*	3597.2	37.1	4.0	41.1	87.1	-46.0	Peak	Horizontal
	4824.0	37.4	6.4	43.8	74.0	-30.2	Peak	Horizontal
	7258.0	36.2	13.9	50.1	74.0	-23.9	Peak	Horizontal
*	3218.5	39.8	3.5	43.3	87.1	-43.8	Peak	Vertical
*	3547.8	36.1	4.1	40.2	87.1	-46.9	Peak	Vertical
	4825.0	41.0	6.4	47.4	74.0	-26.6	Peak	Vertical
	7258.0	35.7	13.9	49.6	74.0	-24.4	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (107.1dBμV/m).

Test Mode:	802.11b – Chain 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3183.5	35.7	3.6	39.3	87.3	-48.0	Peak	Horizontal
*	3497.3	36.7	3.9	40.6	87.3	-46.7	Peak	Horizontal
	4874.0	36.0	6.6	42.6	74.0	-31.4	Peak	Horizontal
	7311.0	34.3	14.0	48.3	74.0	-25.7	Peak	Horizontal
*	3217.5	36.1	3.5	39.6	87.3	-47.7	Peak	Vertical
*	3573.5	36.1	4.0	40.1	87.3	-47.2	Peak	Vertical
	4876.0	43.9	6.6	50.5	74.0	-23.5	Peak	Vertical
	7311.0	34.3	14.0	48.3	74.0	-25.7	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (107.3dBμV/m).

Test Mode:	802.11b – Chain 0	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3185.4	35.6	3.6	39.2	87.5	-48.3	Peak	Horizontal
*	3590.2	36.1	4.0	40.1	87.5	-47.4	Peak	Horizontal
	4924.0	36.7	6.7	43.4	74.0	-30.6	Peak	Horizontal
	7386.0	34.3	14.1	48.4	74.0	-25.6	Peak	Horizontal
*	3286.5	39.1	3.2	42.3	87.5	-45.2	Peak	Vertical
*	3579.6	36.1	4.0	40.1	87.5	-47.4	Peak	Vertical
	4927.0	46.2	6.7	52.9	74.0	-21.1	Peak	Vertical
	7386.0	34.6	14.1	48.7	74.0	-25.3	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (107.5dBμV/m).

Test Mode:	802.11b – Chain 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3183.6	35.0	3.6	38.6	89.3	-50.7	Peak	Horizontal
*	3590.5	35.9	4.0	39.9	89.3	-49.4	Peak	Horizontal
	4824.0	36.8	6.4	43.2	74.0	-30.8	Peak	Horizontal
	7256.0	36.7	13.9	50.6	74.0	-23.4	Peak	Horizontal
*	3218.5	38.6	3.5	42.1	89.3	-47.2	Peak	Vertical
*	3588.7	36.1	4.0	40.1	89.3	-49.2	Peak	Vertical
	4825.0	40.8	6.4	47.2	74.0	-26.8	Peak	Vertical
	7256.0	35.4	13.9	49.3	74.0	-24.7	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (109.3dBμV/m).

Test Mode:	802.11b – Chain 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3082.5	36.7	3.5	40.2	89.5	-49.3	Peak	Horizontal
*	3482.4	35.4	3.8	39.2	89.5	-50.3	Peak	Horizontal
	4874.0	35.2	6.6	41.8	74.0	-32.2	Peak	Horizontal
	7311.0	34.5	14.0	48.5	74.0	-25.5	Peak	Horizontal
*	3127.8	35.8	3.6	39.4	89.5	-50.1	Peak	Vertical
*	3533.4	35.1	4.0	39.1	89.5	-50.4	Peak	Vertical
	4876.0	40.8	6.6	47.4	74.0	-26.6	Peak	Vertical
	7311.0	34.8	14.0	48.8	74.0	-25.2	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (109.5dBμV/m).

Test Mode:	802.11b – Chain 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3167.4	35.0	3.6	38.6	89.6	-51.0	Peak	Horizontal
*	3576.4	36.0	4.0	40.0	89.6	-49.6	Peak	Horizontal
	4924.0	36.6	6.7	43.3	74.0	-30.7	Peak	Horizontal
	7386.0	34.7	14.1	48.8	74.0	-25.2	Peak	Horizontal
*	3091.0	42.1	3.5	45.6	89.6	-44.0	Peak	Vertical
*	3507.5	35.9	3.9	39.8	89.6	-49.8	Peak	Vertical
	4927.0	44.4	6.7	51.1	74.0	-22.9	Peak	Vertical
	7386.0	34.6	14.1	48.7	74.0	-25.3	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (109.6dBμV/m).

Test Mode:	802.11g – Chain 0	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	7236.0	34.1	13.8	47.9	94.0	-46.1	Peak	Horizontal
*	8452.4	34.1	14.5	48.6	94.0	-45.4	Peak	Horizontal
	4226.5	35.9	4.9	40.8	74.0	-33.2	Peak	Horizontal
	4824.0	35.7	6.4	42.1	74.0	-31.9	Peak	Horizontal
*	7236.0	34.0	13.8	47.8	94.0	-46.2	Peak	Vertical
*	8656.3	34.3	14.8	49.1	94.0	-44.9	Peak	Vertical
	4123.3	35.8	4.6	40.4	74.0	-33.6	Peak	Vertical
	4824.0	35.6	6.4	42.0	74.0	-32.0	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (114.0dBμV/m).

Test Mode:	802.11g – Chain 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3100.1	35.7	3.5	39.2	95.8	-56.6	Peak	Horizontal
*	3579.7	36.2	4.0	40.2	95.8	-55.6	Peak	Horizontal
	4876.0	37.3	6.6	43.9	74.0	-30.1	Peak	Horizontal
	7311.0	34.2	14.0	48.2	74.0	-25.8	Peak	Horizontal
*	3100.5	36.3	3.5	39.8	95.8	-56.0	Peak	Vertical
*	3596.0	36.2	4.0	40.2	95.8	-55.6	Peak	Vertical
	4876.0	38.9	6.6	45.5	74.0	-28.5	Peak	Vertical
	7311.0	33.5	14.0	47.5	74.0	-26.5	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (115.8dBμV/m).

Test Mode:	802.11g – Chain 0	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3102.4	36.1	3.5	39.6	97.1	-57.5	Peak	Horizontal
*	3596.5	35.5	4.0	39.5	97.1	-57.6	Peak	Horizontal
	4924.0	35.6	6.7	42.3	74.0	-31.7	Peak	Horizontal
	7386.0	34.2	14.1	48.3	74.0	-25.7	Peak	Horizontal
*	3102.7	35.8	3.5	39.3	97.1	-57.8	Peak	Vertical
*	3577.0	35.9	4.0	39.9	97.1	-57.2	Peak	Vertical
	4924.0	35.4	6.7	42.1	74.0	-31.9	Peak	Vertical
	7386.0	34.3	14.1	48.4	74.0	-25.6	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (117.1dBμV/m).

Test Mode:	802.11g – Chain 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3081.8	35.9	3.5	39.4	91.0	-51.6	Peak	Horizontal
*	3482.8	36.8	3.8	40.6	91.0	-50.4	Peak	Horizontal
	4824.0	37.8	6.4	44.2	74.0	-29.8	Peak	Horizontal
	7256.0	35.9	13.9	49.8	74.0	-24.2	Peak	Horizontal
*	3218.5	40.6	3.5	44.1	91.0	-46.9	Peak	Vertical
*	3549.6	36.0	4.1	40.1	91.0	-50.9	Peak	Vertical
	4816.5	38.4	6.4	44.8	74.0	-29.2	Peak	Vertical
	7258.0	35.5	13.9	49.4	74.0	-24.6	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (111.0dBμV/m).

Test Mode:	802.11g – Chain 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3213.8	36.3	3.5	39.8	93.7	-53.9	Peak	Horizontal
*	3597.7	35.6	4.0	39.6	93.7	-54.1	Peak	Horizontal
	4874.0	35.4	6.6	42.0	74.0	-32.0	Peak	Horizontal
	7311.0	34.7	14.0	48.7	74.0	-25.3	Peak	Horizontal
*	3252.5	39.3	3.4	42.7	93.7	-51.0	Peak	Vertical
*	3582.3	36.6	4.0	40.6	93.7	-53.1	Peak	Vertical
	4874.0	37.1	6.6	43.7	74.0	-30.3	Peak	Vertical
	7311.0	34.5	14.0	48.5	74.0	-25.5	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (113.7dBμV/m).

Test Mode:	802.11g – Chain 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3031.5	37.6	3.4	41.0	88.5	-47.5	Peak	Horizontal
*	3537.0	36.5	4.0	40.5	88.5	-48.0	Peak	Horizontal
	4924.0	36.0	6.7	42.7	74.0	-31.3	Peak	Horizontal
	7386.0	34.6	14.1	48.7	74.0	-25.3	Peak	Horizontal
*	3083.8	35.4	3.5	38.9	88.5	-49.6	Peak	Vertical
*	3538.7	35.1	4.0	39.1	88.5	-49.4	Peak	Vertical
	4918.5	39.2	6.7	45.9	74.0	-28.1	Peak	Vertical
	7386.0	33.9	14.1	48.0	74.0	-26.0	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (108.5dBμV/m).

Test Mode:	802.11n-HT20 – Chain 0	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3218.5	38.6	3.5	42.1	89.2	-47.1	Peak	Horizontal
*	3567.5	35.7	4.1	39.8	89.2	-49.4	Peak	Horizontal
	4824.0	35.4	6.4	41.8	74.0	-32.2	Peak	Horizontal
	7256.0	36.0	13.9	49.9	74.0	-24.1	Peak	Horizontal
*	3218.5	42.1	3.5	45.6	89.2	-43.6	Peak	Vertical
*	3549.7	35.6	4.1	39.7	89.2	-49.5	Peak	Vertical
	4825.0	40.2	6.4	46.6	74.0	-27.4	Peak	Vertical
	7258.0	35.4	13.9	49.3	74.0	-24.7	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (109.2dBμV/m).

Test Mode:	802.11n-HT20 – Chain 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3176.3	36.3	3.6	39.9	91.3	-51.4	Peak	Horizontal
*	3543.2	36.0	4.0	40.0	91.3	-51.3	Peak	Horizontal
	4874.0	36.6	6.6	43.2	74.0	-30.8	Peak	Horizontal
	7311.0	34.3	14.0	48.3	74.0	-25.7	Peak	Horizontal
*	3252.5	42.6	3.4	46.0	91.3	-45.3	Peak	Vertical
*	3581.5	36.7	4.0	40.7	91.3	-50.6	Peak	Vertical
	4876.0	40.7	6.6	47.3	74.0	-26.7	Peak	Vertical
	7311.0	34.4	14.0	48.4	74.0	-25.6	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (111.3dBμV/m).

Test Mode:	802.11n-HT20 – Chain 0	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3178.6	36.1	3.6	39.7	87.9	-48.2	Peak	Horizontal
*	3591.9	36.8	4.0	40.8	87.9	-47.1	Peak	Horizontal
	4924.0	35.7	6.7	42.4	74.0	-31.6	Peak	Horizontal
	7386.0	34.8	14.1	48.9	74.0	-25.1	Peak	Horizontal
*	3286.5	40.9	3.2	44.1	87.9	-43.8	Peak	Vertical
*	3574.9	35.9	4.0	39.9	87.9	-48.0	Peak	Vertical
	4927.0	43.9	6.7	50.6	74.0	-23.4	Peak	Vertical
	7386.0	34.0	14.1	48.1	74.0	-25.9	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (107.9dBμV/m).

Test Mode:	802.11n-HT20 – Chain 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3079.3	36.3	3.5	39.8	89.2	-49.4	Peak	Horizontal
*	3583.6	36.5	4.0	40.5	89.2	-48.7	Peak	Horizontal
	4824.0	35.7	6.4	42.1	74.0	-31.9	Peak	Horizontal
	7256.0	35.8	13.9	49.7	74.0	-24.3	Peak	Horizontal
*	3218.5	40.2	3.5	43.7	89.2	-45.5	Peak	Vertical
*	3567.4	36.0	4.1	40.1	89.2	-49.1	Peak	Vertical
	4824.0	37.3	6.4	43.7	74.0	-30.3	Peak	Vertical
	7256.0	36.5	13.9	50.4	74.0	-23.6	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (109.2dBμV/m).

Test Mode:	802.11n-HT20 – Chain 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3257.6	35.5	3.3	38.8	92.0	-53.2	Peak	Horizontal
*	3519.8	35.3	3.9	39.2	92.0	-52.8	Peak	Horizontal
	4874.0	35.7	6.6	42.3	74.0	-31.7	Peak	Horizontal
	7311.0	34.7	14.0	48.7	74.0	-25.3	Peak	Horizontal
*	3252.5	39.1	3.4	42.5	92.0	-49.5	Peak	Vertical
*	3596.3	36.4	4.0	40.4	92.0	-51.6	Peak	Vertical
	4874.0	38.0	6.6	44.6	74.0	-29.4	Peak	Vertical
	7311.0	34.4	14.0	48.4	74.0	-25.6	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (112.0dBμV/m).

Test Mode:	802.11n-HT20 – Chain 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3097.5	35.4	3.5	38.9	86.5	-47.6	Peak	Horizontal
*	3588.4	36.2	4.0	40.2	86.5	-46.3	Peak	Horizontal
	4924.0	35.4	6.7	42.1	74.0	-31.9	Peak	Horizontal
	7386.0	34.6	14.1	48.7	74.0	-25.3	Peak	Horizontal
*	3177.8	36.0	3.6	39.6	86.5	-46.9	Peak	Vertical
*	3590.7	36.4	4.0	40.4	86.5	-46.1	Peak	Vertical
	4924.0	36.0	6.7	42.7	74.0	-31.3	Peak	Vertical
	7386.0	34.4	14.1	48.5	74.0	-25.5	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (106.5dBμV/m).

Test Mode:	802.11n-HT20 – Chain 0 + 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3059.4	35.4	3.5	38.9	90.2	-51.3	Peak	Horizontal
*	3518.8	35.0	3.9	38.9	90.2	-51.3	Peak	Horizontal
	4824.0	36.2	6.4	42.6	74.0	-31.4	Peak	Horizontal
	7256.0	35.6	13.9	49.5	74.0	-24.5	Peak	Horizontal
*	3218.5	44.1	3.5	47.6	90.2	-42.6	Peak	Vertical
*	3584.2	36.7	4.0	40.7	90.2	-49.5	Peak	Vertical
	4825.0	42.5	6.4	48.9	74.0	-25.1	Peak	Vertical
	7256.0	37.2	13.9	51.1	74.0	-22.9	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (110.2dBμV/m).

Test Mode:	802.11n-HT20 – Chain 0 + 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3027.2	35.7	3.4	39.1	93.1	-54.0	Peak	Horizontal
*	3522.5	35.3	3.9	39.2	93.1	-53.9	Peak	Horizontal
	4874.0	36.2	6.6	42.8	74.0	-31.2	Peak	Horizontal
	7311.0	34.4	14.0	48.4	74.0	-25.6	Peak	Horizontal
*	3088.0	36.0	3.5	39.5	93.1	-53.6	Peak	Vertical
*	3507.5	35.7	3.9	39.6	93.1	-53.5	Peak	Vertical
	4874.0	37.8	6.6	44.4	74.0	-29.6	Peak	Vertical
	7311.0	35.1	14.0	49.1	74.0	-24.9	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (113.1dBμV/m).

Test Mode:	802.11n-HT20 – Chain 0 + 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3134.9	35.9	3.6	39.5	89.4	-49.9	Peak	Horizontal
*	3567.5	35.7	4.1	39.8	89.4	-49.6	Peak	Horizontal
	4924.0	37.3	6.7	44.0	74.0	-30.0	Peak	Horizontal
	7386.0	34.1	14.1	48.2	74.0	-25.8	Peak	Horizontal
*	3218.3	35.8	3.5	39.3	89.4	-50.1	Peak	Vertical
*	3567.4	36.1	4.1	40.2	89.4	-49.2	Peak	Vertical
	4924.0	36.7	6.7	43.4	74.0	-30.6	Peak	Vertical
	7386.0	34.5	14.1	48.6	74.0	-25.4	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (109.4dBμV/m).

Test Mode:	802.11n-HT40 – Chain 0	Test Site:	AC1
Test Channel:	03	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3218.6	36.2	3.5	39.7	84.6	-44.9	Peak	Horizontal
*	3511.6	35.6	3.9	39.5	84.6	-45.1	Peak	Horizontal
	4844.0	34.9	6.5	41.4	74.0	-32.6	Peak	Horizontal
	7266.0	35.3	13.9	49.2	74.0	-24.8	Peak	Horizontal
*	3227.0	41.0	3.5	44.5	84.6	-40.1	Peak	Vertical
*	3576.4	36.6	4.0	40.6	84.6	-44.0	Peak	Vertical
	4978.0	43.2	6.8	50.0	74.0	-24.0	Peak	Vertical
	7266.0	35.4	13.9	49.3	74.0	-24.7	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (104.6dBμV/m).

Test Mode:	802.11n-HT40 – Chain 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3201.5	37.6	3.5	41.1	92.8	-51.7	Peak	Horizontal
*	3527.5	35.4	4.0	39.4	92.8	-53.4	Peak	Horizontal
	4874.0	35.6	6.6	42.2	74.0	-31.8	Peak	Horizontal
	7311.0	34.0	14.0	48.0	74.0	-26.0	Peak	Horizontal
*	3252.5	41.3	3.4	44.7	92.8	-48.1	Peak	Vertical
*	3553.5	35.3	4.1	39.4	92.8	-53.4	Peak	Vertical
	4874.0	40.5	6.6	47.1	74.0	-26.9	Peak	Vertical
	7311.0	34.7	14.0	48.7	74.0	-25.3	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (112.8dBμV/m).

Test Mode:	802.11n-HT40 – Chain 0	Test Site:	AC1
Test Channel:	09	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3213.8	36.6	3.5	40.1	85.0	-44.9	Peak	Horizontal
*	3534.3	36.1	4.0	40.1	85.0	-44.9	Peak	Horizontal
	4904.0	35.6	6.7	42.3	74.0	-31.7	Peak	Horizontal
	7356.0	34.5	14.0	48.5	74.0	-25.5	Peak	Horizontal
*	3269.5	41.8	3.3	45.1	85.0	-39.9	Peak	Vertical
*	3579.0	35.6	4.0	39.6	85.0	-45.4	Peak	Vertical
	4901.5	42.3	6.7	49.0	74.0	-25.0	Peak	Vertical
	7356.0	34.0	14.0	48.0	74.0	-26.0	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (105.0dBμV/m).

Test Mode:	802.11n-HT40 – Chain 1	Test Site:	AC1
Test Channel:	03	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3156.3	35.1	3.6	38.7	84.0	-45.3	Peak	Horizontal
*	3547.9	36.4	4.1	40.5	84.0	-43.5	Peak	Horizontal
	4844.0	35.3	6.5	41.8	74.0	-32.2	Peak	Horizontal
	7266.0	35.5	13.9	49.4	74.0	-24.6	Peak	Horizontal
*	3227.0	38.6	3.5	42.1	84.0	-41.9	Peak	Vertical
*	3537.6	36.4	4.0	40.4	84.0	-43.6	Peak	Vertical
	4844.0	36.3	6.5	42.8	74.0	-31.2	Peak	Vertical
	7266.0	35.2	13.9	49.1	74.0	-24.9	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (104.0dBμV/m).

Test Mode:	802.11n-HT40 – Chain 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3016.8	35.6	3.4	39.0	89.3	-50.3	Peak	Horizontal
*	3575.2	36.4	4.0	40.4	89.3	-48.9	Peak	Horizontal
	4874.0	35.1	6.6	41.7	74.0	-32.3	Peak	Horizontal
	7311.0	35.2	14.0	49.2	74.0	-24.8	Peak	Horizontal
*	3168.4	36.0	3.6	39.6	89.3	-49.7	Peak	Vertical
*	3591.5	37.0	4.0	41.0	89.3	-48.3	Peak	Vertical
	4874.0	36.8	6.6	43.4	74.0	-30.6	Peak	Vertical
	7311.0	35.1	14.0	49.1	74.0	-24.9	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (109.3dBμV/m).

Test Mode:	802.11n-HT40 – Chain 1	Test Site:	AC1
Test Channel:	09	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3137.5	36.2	3.6	39.8	84.7	-44.9	Peak	Horizontal
*	3594.8	36.8	4.0	40.8	84.7	-43.9	Peak	Horizontal
	4904.0	35.5	6.7	42.2	74.0	-31.8	Peak	Horizontal
	7356.0	34.6	14.0	48.6	74.0	-25.4	Peak	Horizontal
*	3269.5	39.0	3.3	42.3	84.7	-42.4	Peak	Vertical
*	3583.4	36.2	4.0	40.2	84.7	-44.5	Peak	Vertical
	4904.0	38.0	6.7	44.7	74.0	-29.3	Peak	Vertical
	7356.0	34.0	14.0	48.0	74.0	-26.0	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (104.7dBμV/m).

Test Mode:	802.11n-HT40 – Chain 0 + 1	Test Site:	AC1
Test Channel:	03	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3199.3	35.7	3.5	39.2	84.0	-44.8	Peak	Horizontal
*	3561.9	35.2	4.1	39.3	84.0	-44.7	Peak	Horizontal
	4844.0	36.7	6.5	43.2	74.0	-30.8	Peak	Horizontal
	7266.0	34.9	13.9	48.8	74.0	-25.2	Peak	Horizontal
*	3227.0	44.6	3.5	48.1	84.0	-35.9	Peak	Vertical
*	3559.1	35.8	4.1	39.9	84.0	-44.1	Peak	Vertical
	4842.0	40.9	6.5	47.4	74.0	-26.6	Peak	Vertical
	7266.0	35.4	13.9	49.3	74.0	-24.7	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (104.0dBμV/m).

Test Mode:	802.11n-HT40 – Chain 0 + 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3008.8	35.7	3.4	39.1	91.1	-52.0	Peak	Horizontal
*	3594.3	35.7	4.0	39.7	91.1	-51.4	Peak	Horizontal
	4874.0	36.9	6.6	43.5	74.0	-30.5	Peak	Horizontal
	7311.0	34.8	14.0	48.8	74.0	-25.2	Peak	Horizontal
*	3252.5	44.9	3.4	48.3	91.1	-42.8	Peak	Vertical
*	3561.9	35.9	4.1	40.0	91.1	-51.1	Peak	Vertical
	4876.0	42.5	6.6	49.1	74.0	-24.9	Peak	Vertical
	7311.0	34.7	14.0	48.7	74.0	-25.3	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (111.1dBμV/m).

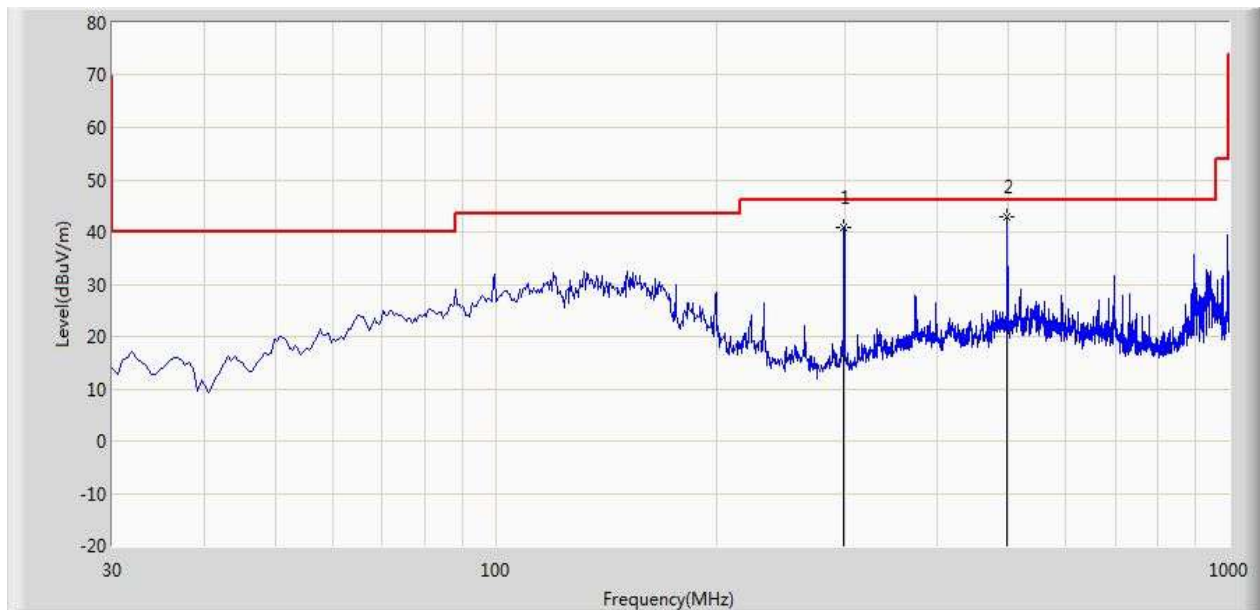
Test Mode:	802.11n-HT40 – Chain 0 + 1	Test Site:	AC1
Test Channel:	09	Test Engineer:	Roy Cheng
Remark:	1. There is the ambient noise within frequency range 9kHz~30MHz and 18GHz~25GHz, the permissible value is not show in the report. 2. Average measurement was not performed if peak level lower than average limit.		

Mark	Frequency (MHz)	Reading Level (dBμV/m)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3269.5	44.5	3.3	47.8	85.3	-37.5	Peak	Horizontal
*	3586.8	36.2	4.0	40.2	85.3	-45.1	Peak	Horizontal
	4901.5	46.2	6.7	52.9	74.0	-21.1	Peak	Horizontal
	7356.0	34.2	14.0	48.2	74.0	-25.8	Peak	Horizontal
*	3269.5	45.2	3.3	48.5	85.3	-36.8	Peak	Vertical
*	3482.0	40.3	3.8	44.1	85.3	-41.2	Peak	Vertical
	4893.0	45.3	6.7	52.0	74.0	-22.0	Peak	Vertical
	7356.0	35.4	14.0	49.4	74.0	-24.6	Peak	Vertical

Note: “*” is not in restricted band, its limit is 20dBc of the fundamental emission level (105.3dBμV/m).

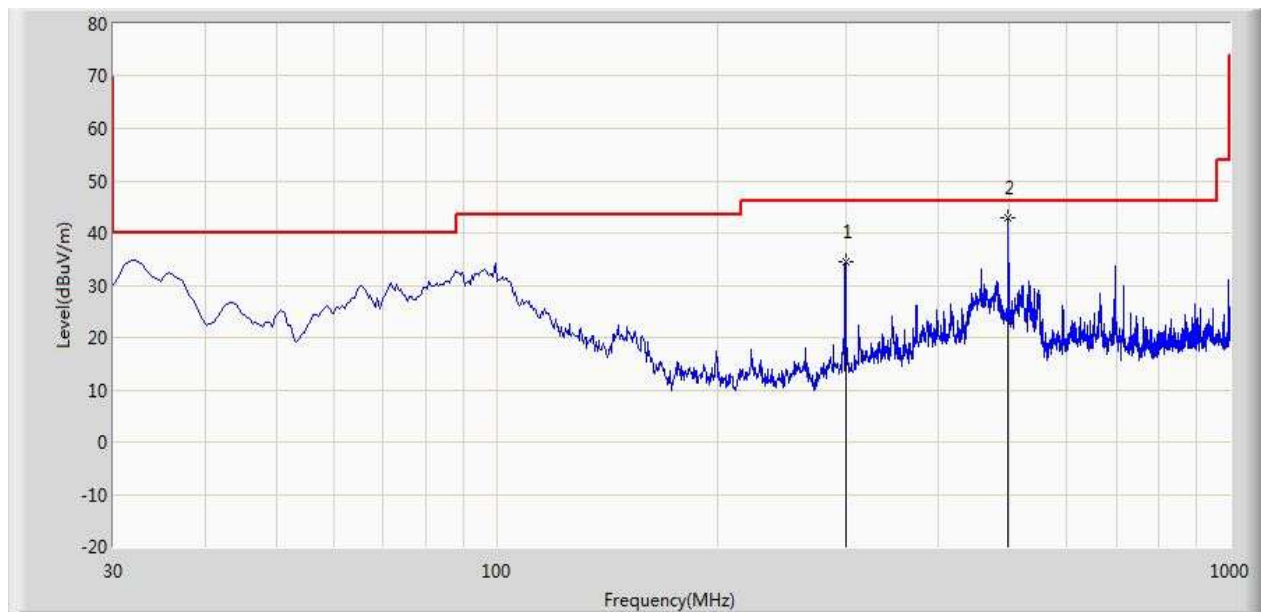
The worst case of Radiated Emission between 30MHz to 1GHz:

Tested by	Roy Cheng	Test Data	2014-02-10- 10:03:23
Site	AC1	Power	AC 120V/60Hz
Limit	FCC_PART 15.209	Polarity	Horizontal
Antenna	VULB_9162	EUT	WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER
Worst Case Mode: 802.11n-HT20 Channel 2412MHz Chain 0 + 1			



Freq (MHz)	Level (dBμV/m)	Reading (dBμV)	Detector	Factor (dB)	Limit (dBμV/m)	Over Limit (dB)
298.690	40.844	60.695	Peak	-19.851	46.00	-5.156
498.025	42.956	59.825	Peak	-16.869	46.00	-3.044

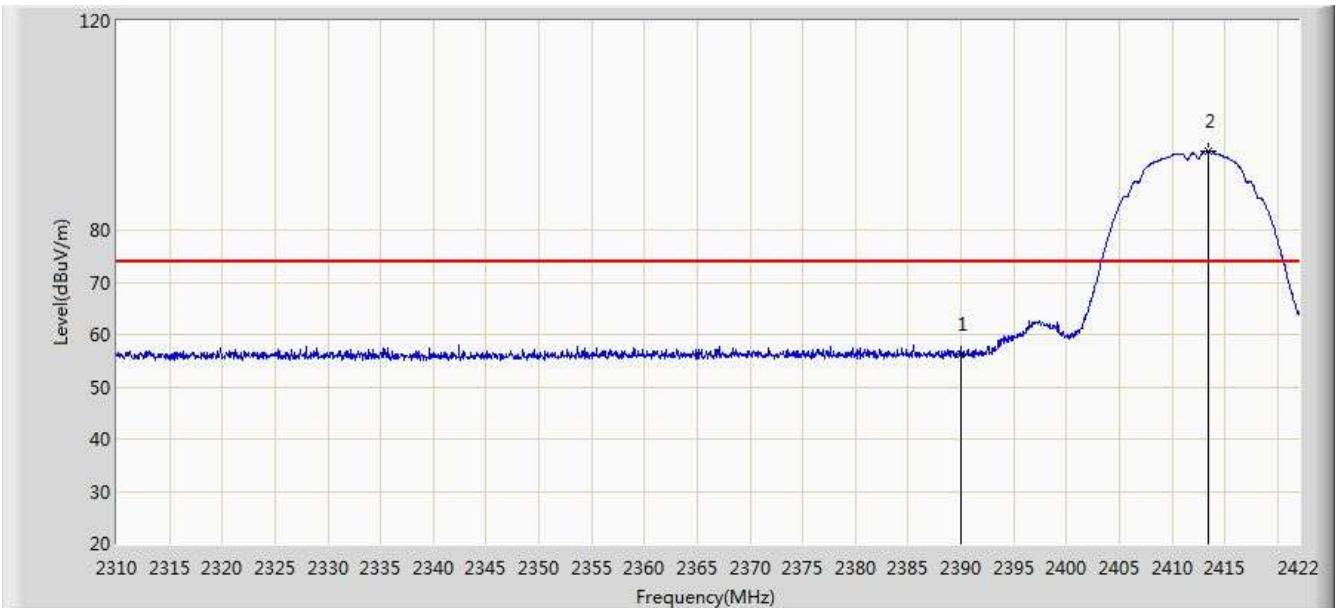
Tested by	Roy Cheng	Test Data	2014-02-10- 10:04:40
Site	AC1	Power	AC 120V/60Hz
Limit	FCC_PART 15.209	Polarity	Vertical
Antenna	VULB_9162	EUT	WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER
Worst Case Mode: 802.11n-HT20 Channel 2412MHz Chain 0 + 1			



Freq (MHz)	Level (dBuV/m)	Reading (dBuV)	Detector	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)
299.175	34.513	54.342	Peak	-19.829	46.000	-11.487
498.025	42.956	59.825	Peak	-16.869	46.000	-3.044

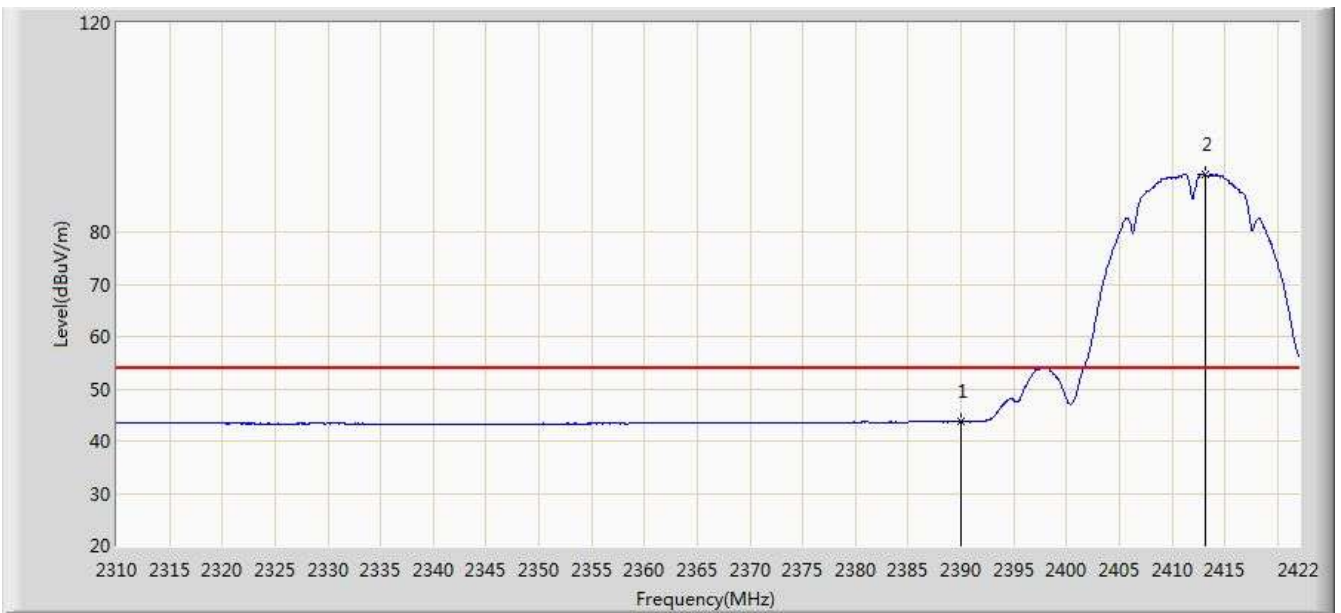
7.6.6. Test Result of Radiated Band Edge

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 15:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2412MHz Chain 0	



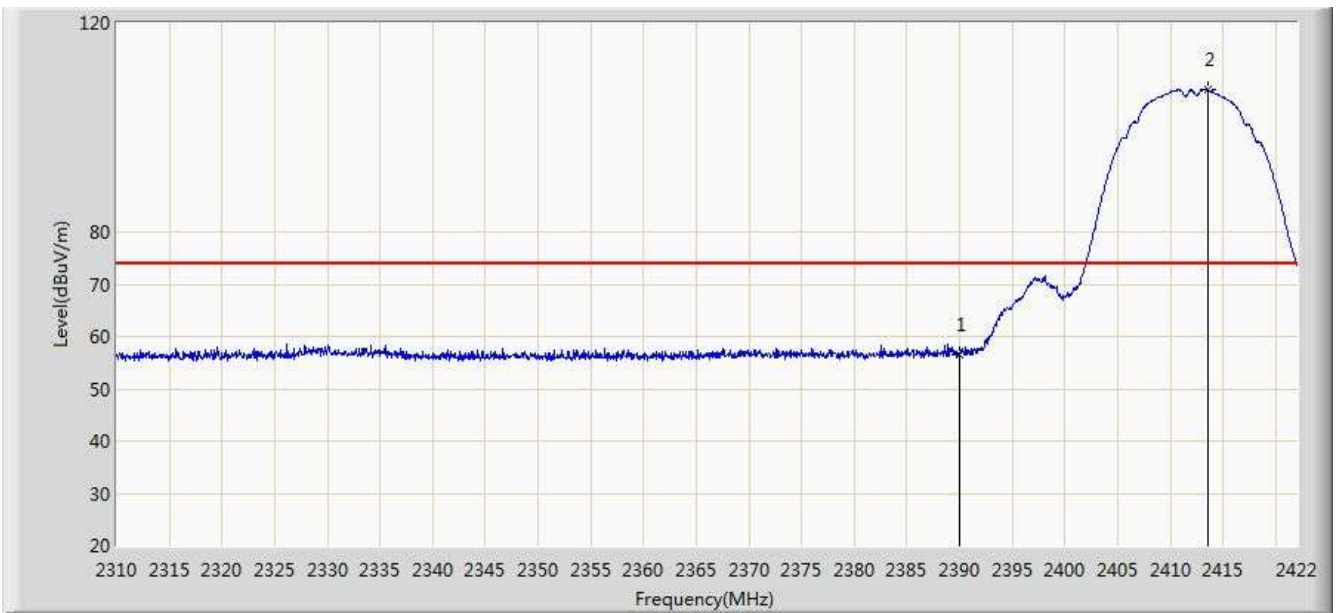
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	56.139	25.455	-17.861	74.000	30.684	PK
2		*	2413.432	95.054	64.411	N/A	N/A	30.643	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 15:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2412MHz Chain 0	



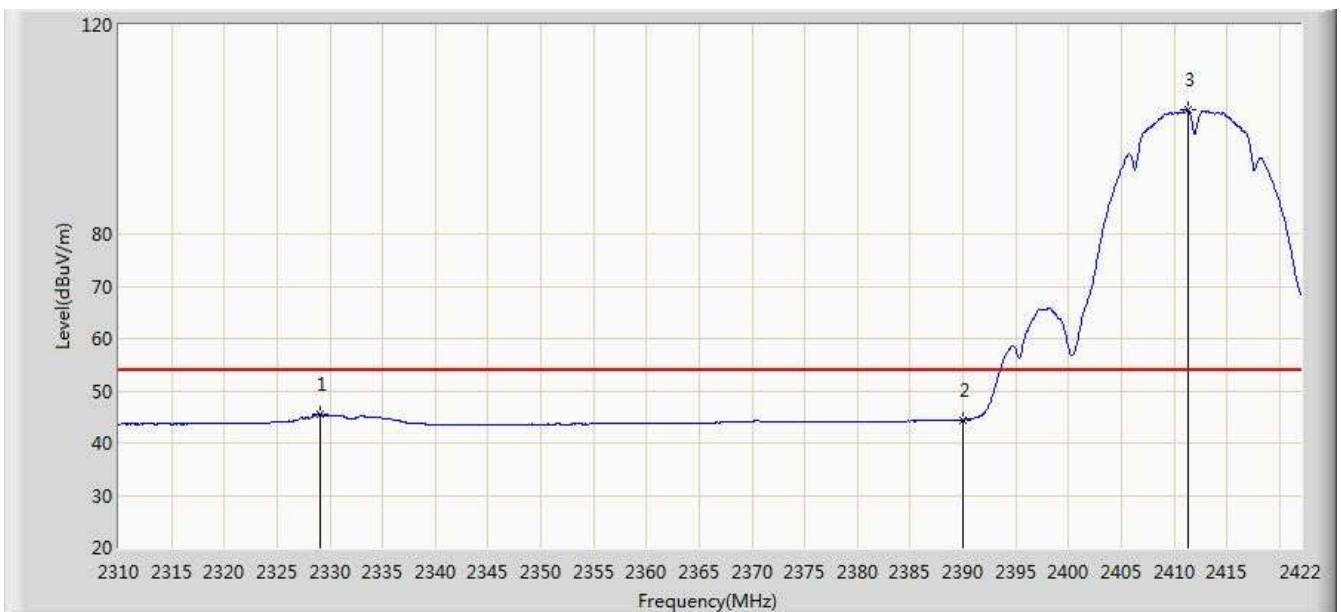
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	43.678	12.994	-10.322	54.000	30.684	AV
2		*	2413.208	90.988	60.345	N/A	N/A	30.643	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 15:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2412MHz Chain 0	



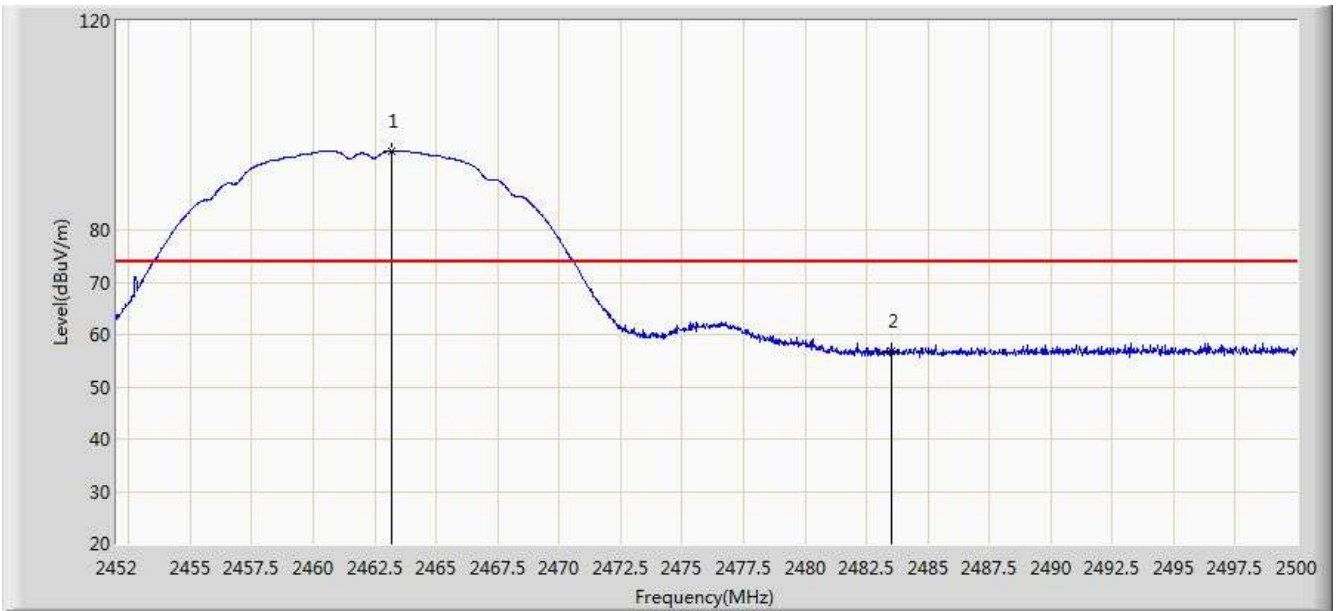
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	56.578	25.894	-17.422	74.000	30.684	PK
2		*	2413.600	107.138	76.496	N/A	N/A	30.642	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 15:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2412MHz Chain 0	



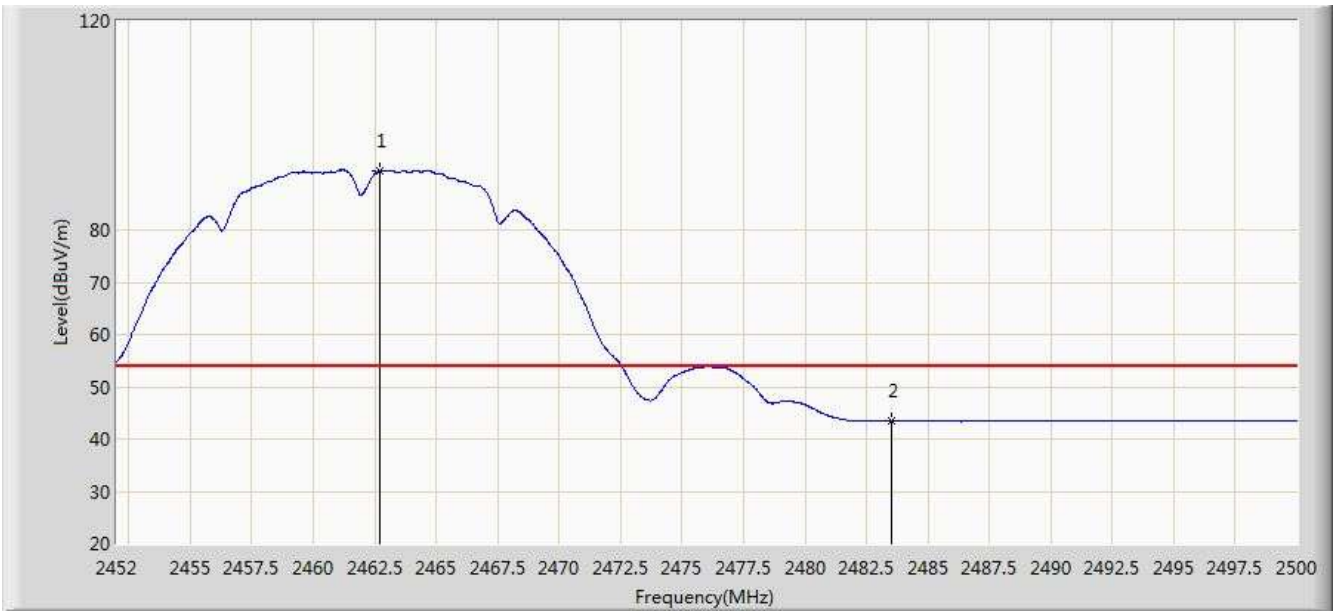
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2329.096	45.424	14.552	-8.576	54.000	30.872	AV
2			2390.000	44.432	13.748	-9.568	54.000	30.684	AV
3		*	2411.304	103.700	73.054	N/A	N/A	30.646	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 15:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2462MHz Chain 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.184	95.120	64.506	N/A	N/A	30.613	PK
2			2483.500	56.820	26.147	-17.180	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 16:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2462MHz Chain 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2462.728	91.355	60.742	N/A	N/A	30.613	AV
2			2483.500	43.398	12.725	-10.602	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 16:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2462MHz Chain 0	



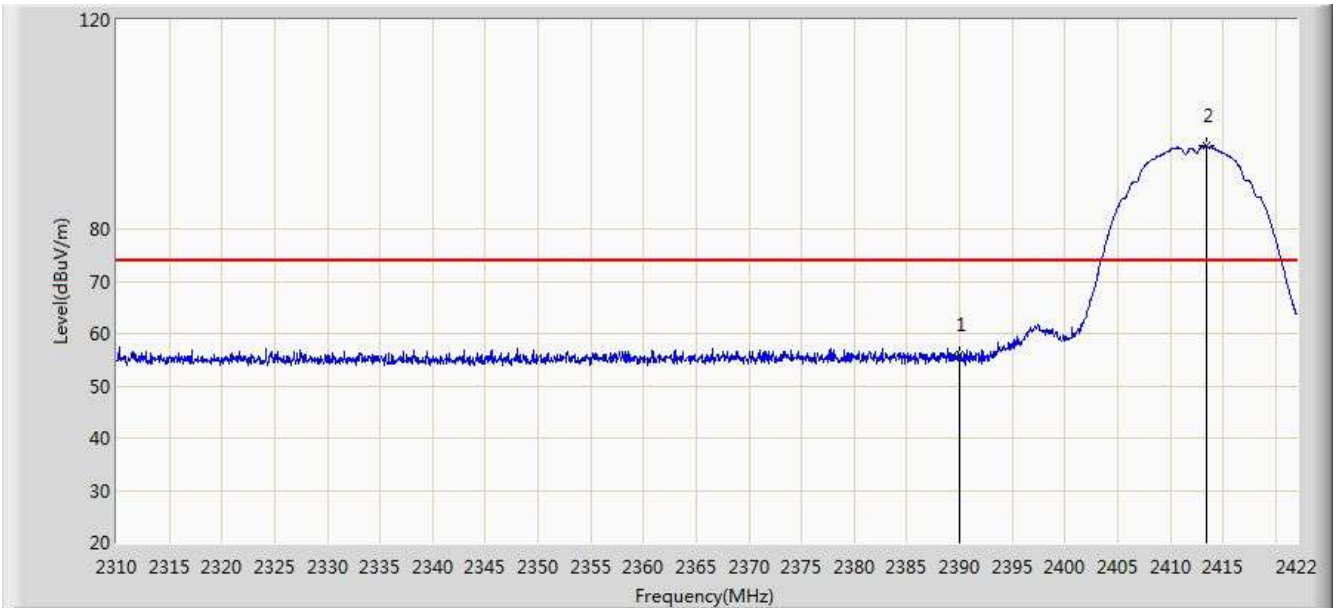
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2463.400	107.509	76.895	N/A	N/A	30.615	PK
2			2483.500	57.014	26.341	-16.986	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 16:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2462MHz Chain 0	



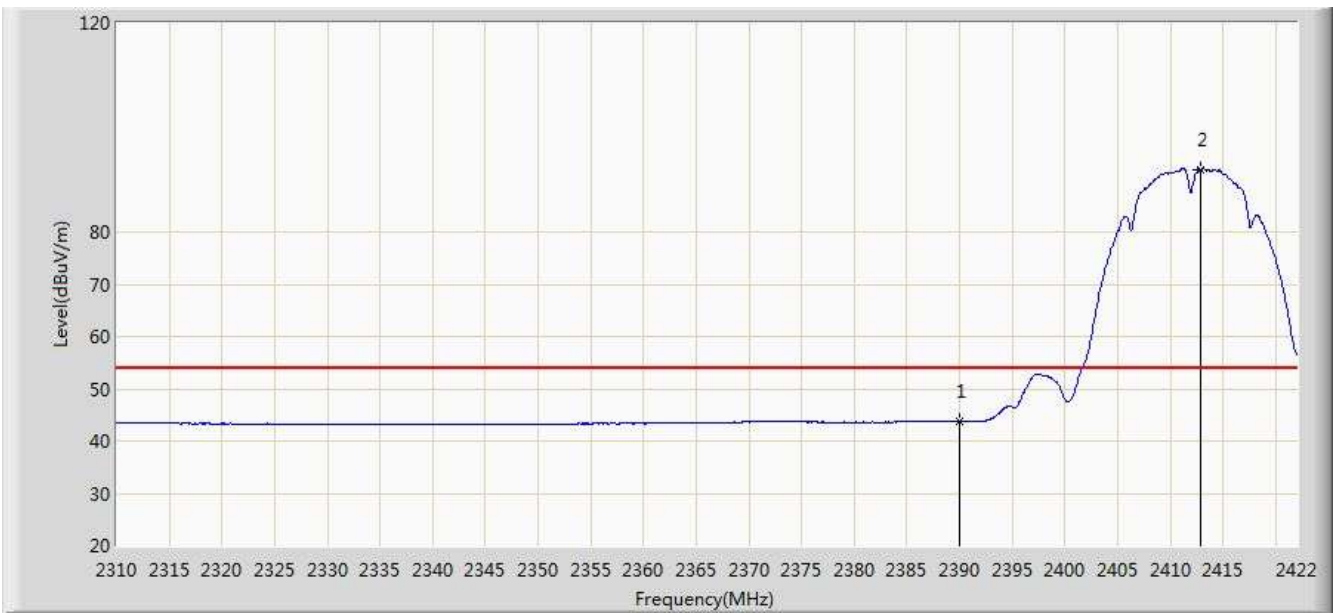
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.240	104.145	73.535	N/A	N/A	30.611	AV
2			2483.500	44.621	13.948	-9.379	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2412MHz Chain 1	



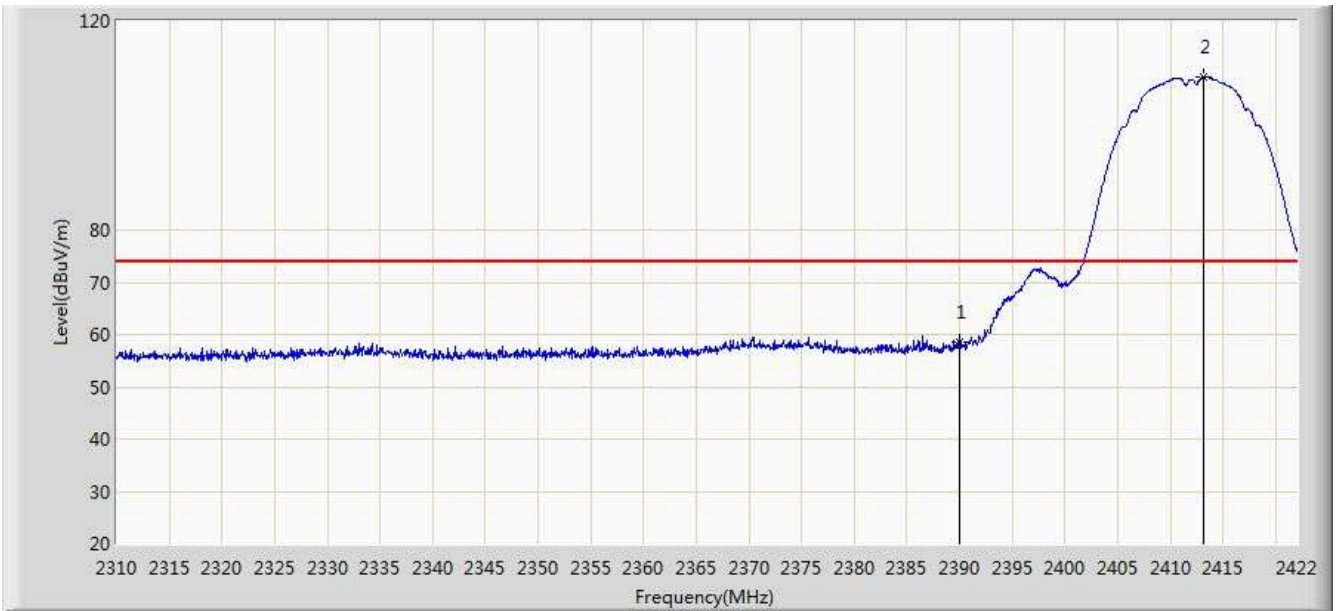
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	55.889	25.205	-18.111	74.000	30.684	PK
2		*	2413.432	95.813	65.170	N/A	N/A	30.643	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2412MHz Chain 1	



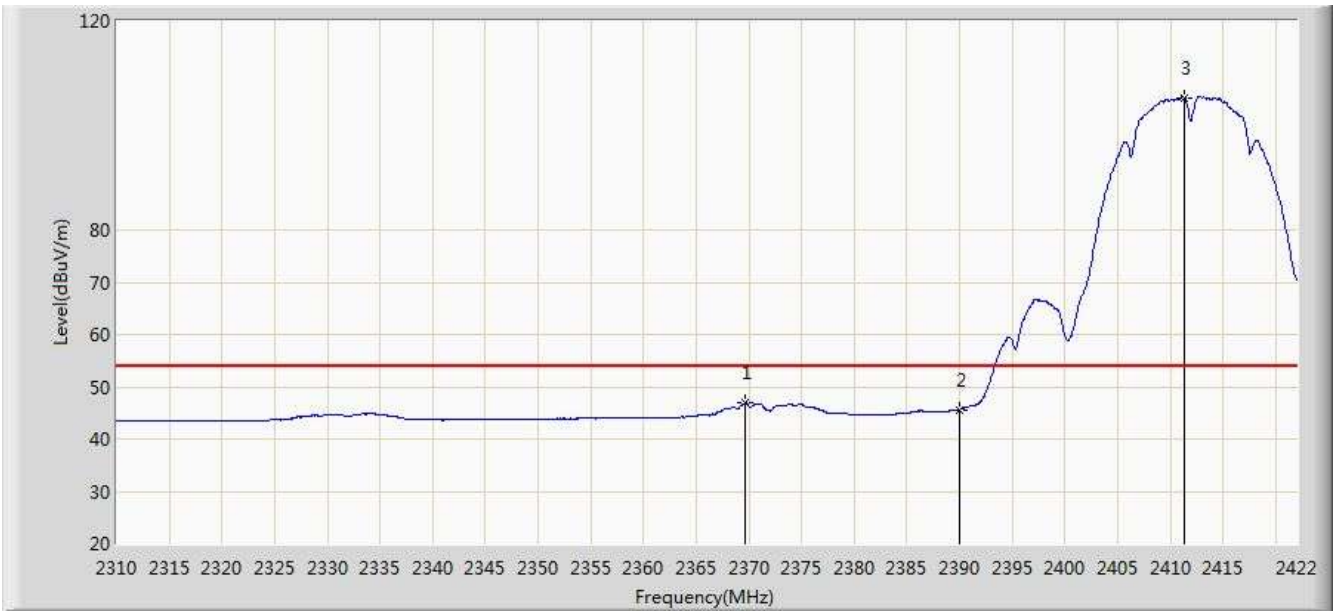
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	43.705	13.021	-10.295	54.000	30.684	AV
2		*	2412.872	91.972	61.329	N/A	N/A	30.644	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:13
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2412MHz Chain 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	58.559	27.875	-15.441	74.000	30.684	PK
2		*	2413.152	109.313	78.670	N/A	N/A	30.643	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:16
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2412MHz Chain 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2369.640	46.871	16.141	-7.129	54.000	30.730	AV
2			2390.000	45.626	14.942	-8.374	54.000	30.684	AV
3		*	2411.304	105.307	74.661	N/A	N/A	30.646	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2462MHz Chain 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.000	96.252	65.642	N/A	N/A	30.609	PK
2			2483.500	55.955	25.282	-18.045	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:22
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2462MHz Chain 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.240	92.849	62.239	N/A	N/A	30.611	AV
2			2483.500	43.378	12.705	-10.622	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2462MHz Chain 1	



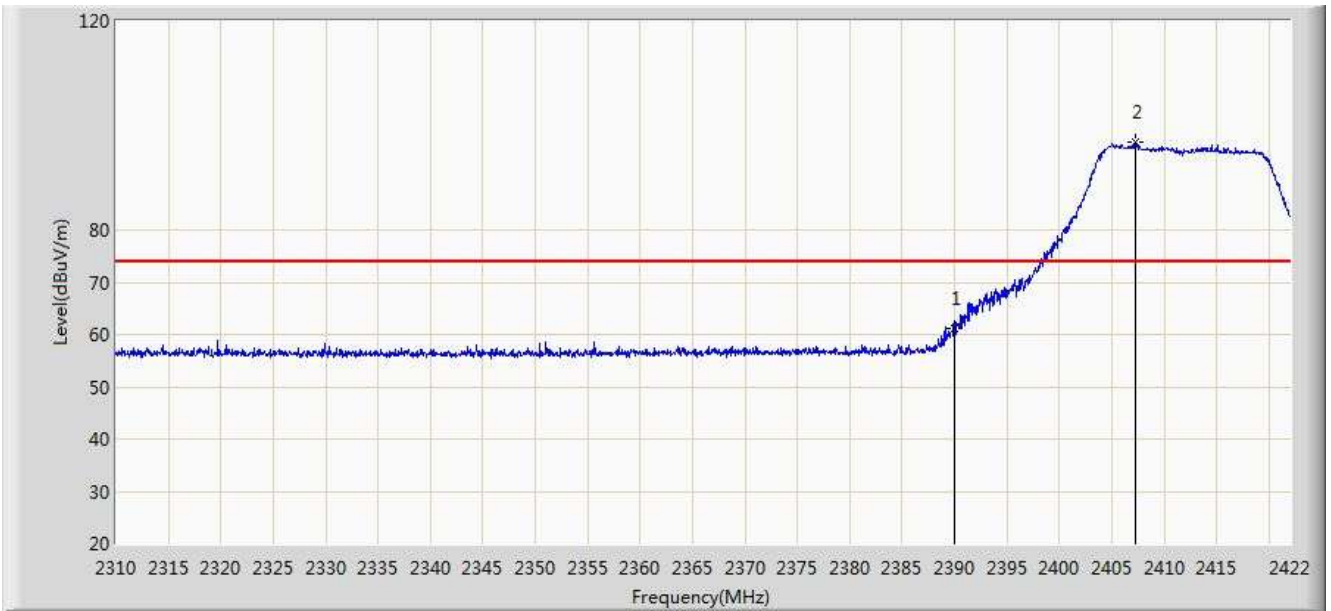
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2460.856	109.635	79.025	N/A	N/A	30.609	PK
2			2483.500	57.374	26.701	-16.626	74.000	30.673	PK
3			2492.656	60.141	29.442	-13.859	74.000	30.699	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11b Channel 2462MHz Chain 1	



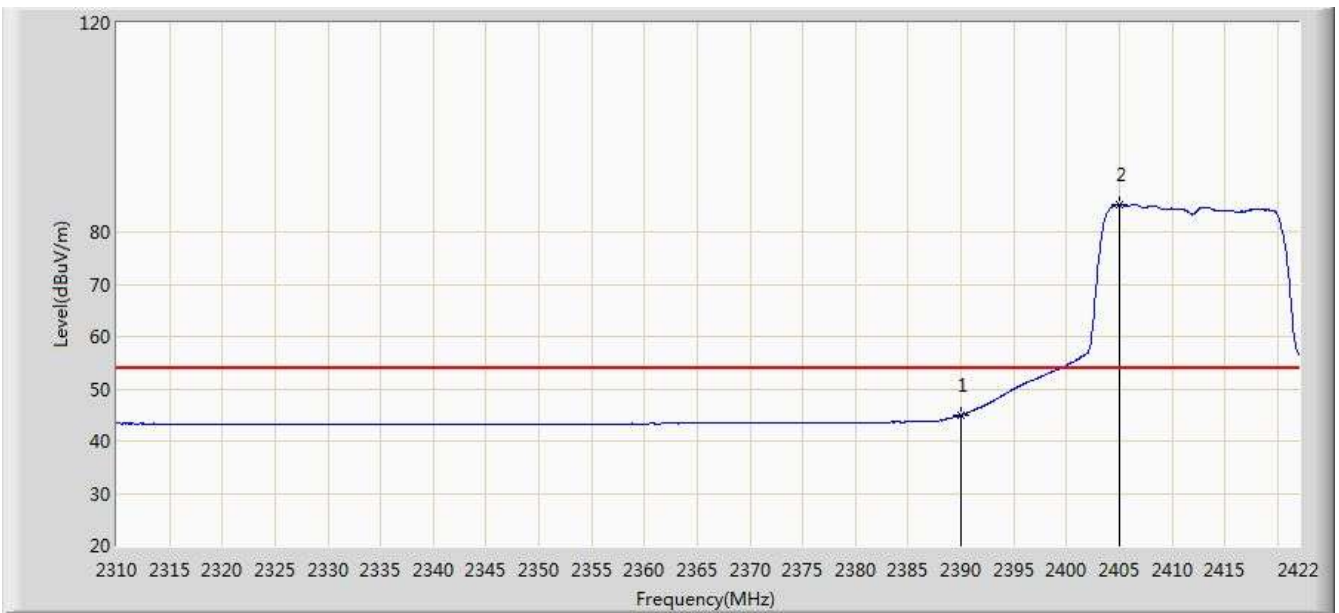
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2461.096	106.201	75.591	N/A	N/A	30.610	AV
2			2483.500	45.195	14.522	-8.805	54.000	30.673	AV
3			2499.592	46.834	16.116	-7.166	54.000	30.719	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 16:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2412MHz Chain 0	



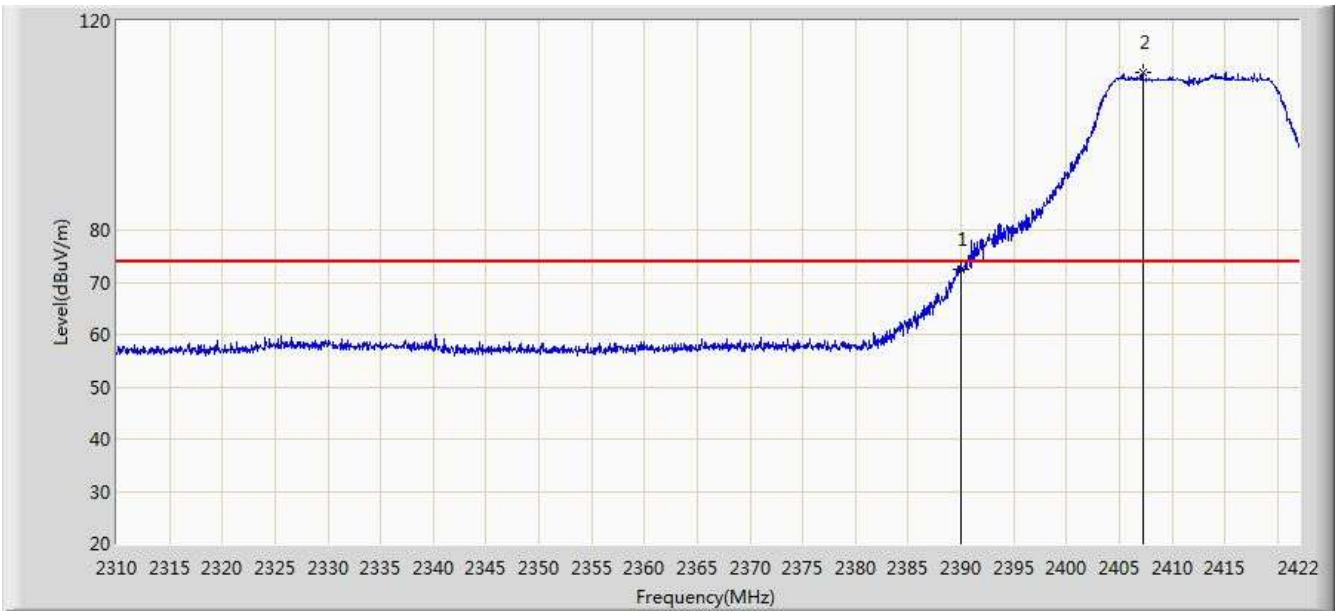
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.179	30.495	-12.821	74.000	30.684	PK
2		*	2407.328	96.708	66.056	N/A	N/A	30.652	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 16:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2412MHz Chain 0	



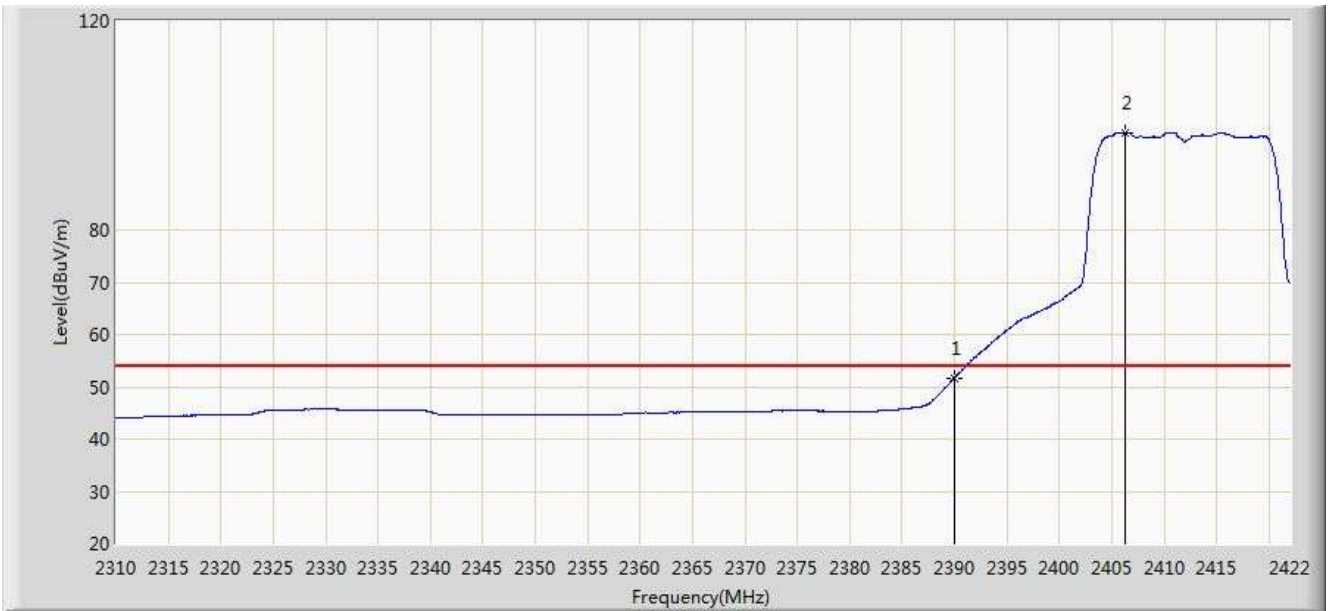
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	45.012	14.328	-8.988	54.000	30.684	AV
2		*	2405.032	85.222	54.566	N/A	N/A	30.656	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 10:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2412MHz Chain 0	



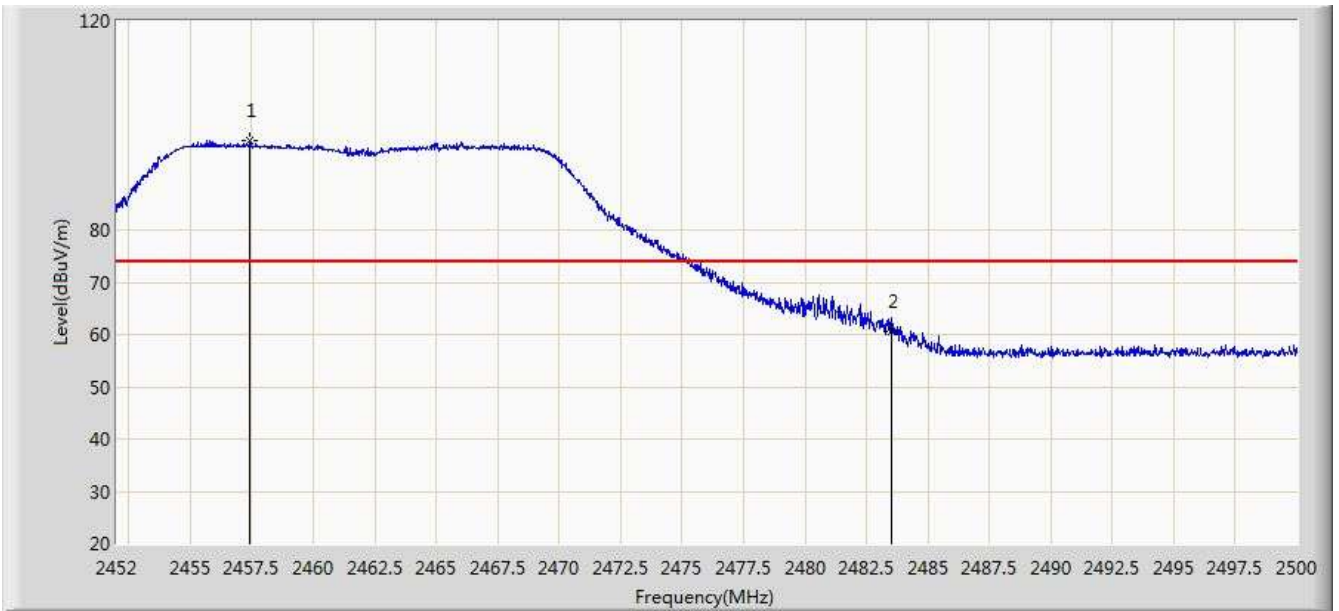
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	72.501	41.817	-1.499	74.000	30.684	PK
2		*	2407.216	110.030	79.377	N/A	N/A	30.653	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 10:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2412MHz Chain 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	51.711	21.027	-2.289	54.000	30.684	AV
2		*	2406.264	98.452	67.798	N/A	N/A	30.654	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 16:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2462MHz Chain 0	



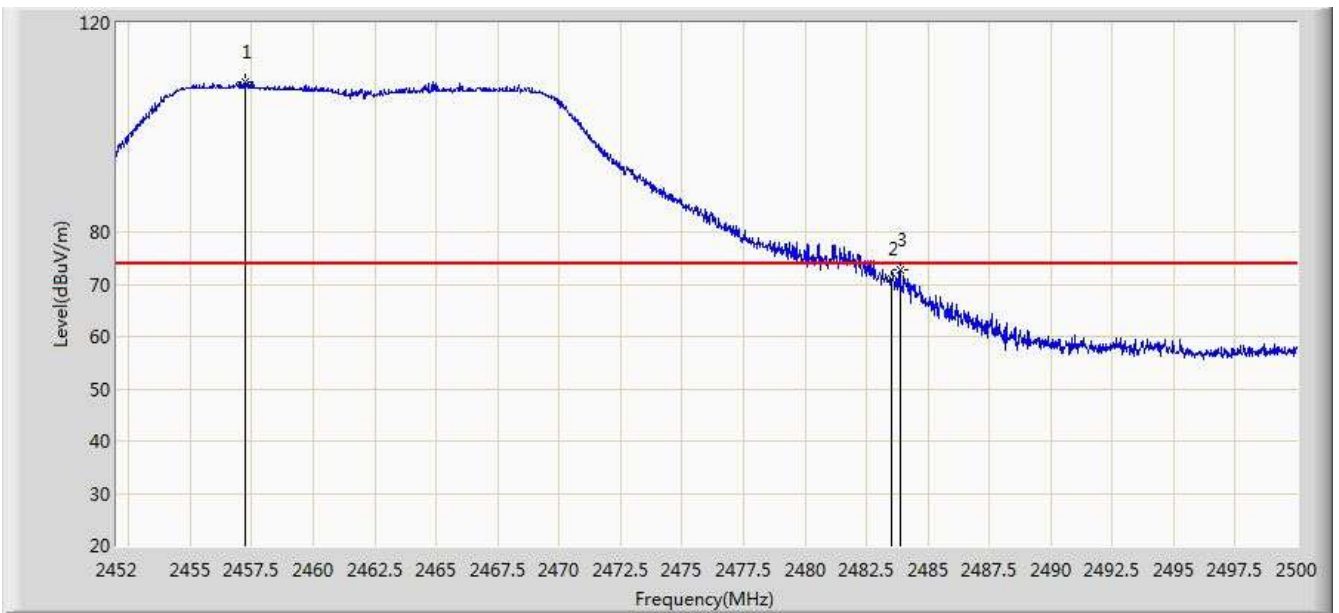
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2457.424	97.214	66.609	N/A	N/A	30.604	PK
2			2483.500	60.533	29.860	-13.467	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 16:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2462MHz Chain 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2456.464	85.691	55.088	N/A	N/A	30.603	AV
2			2483.500	45.023	14.350	-8.977	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 10:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2462MHz Chain 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2457.232	108.820	78.216	N/A	N/A	30.604	PK
2			2483.500	71.008	40.335	-2.992	74.000	30.673	PK
3			2483.872	72.729	42.055	-1.271	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 10:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2462MHz Chain 0	



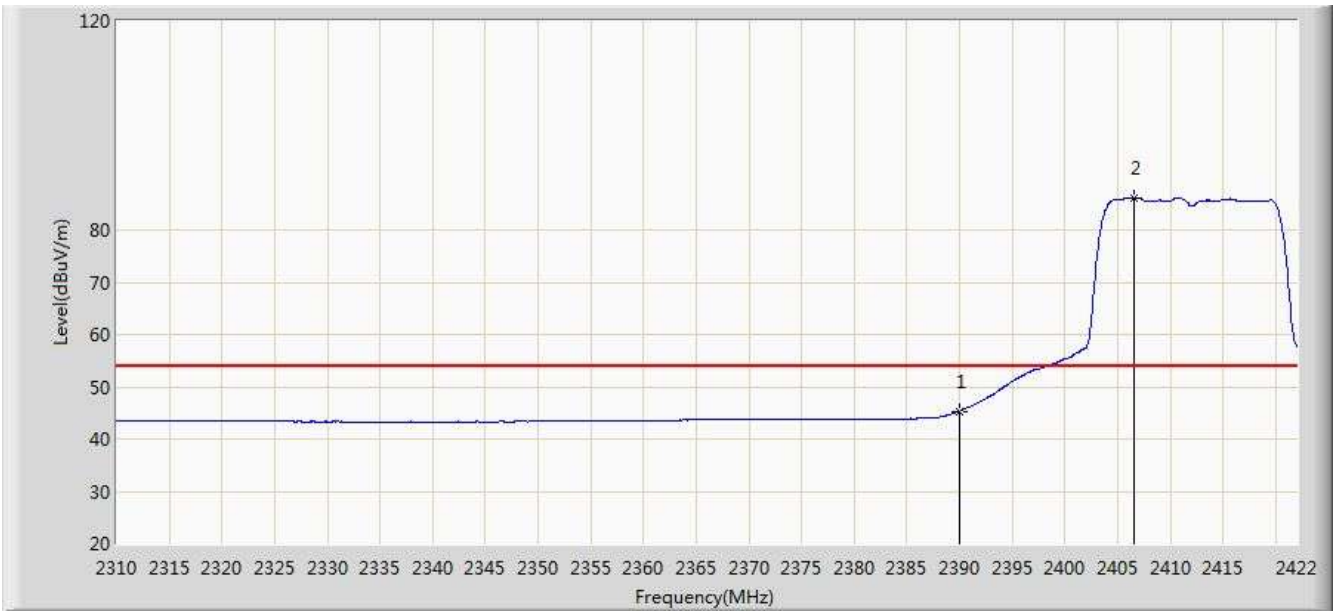
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2454.736	96.865	66.264	N/A	N/A	30.601	AV
2			2483.500	50.866	20.193	-3.134	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2412MHz Chain 1	



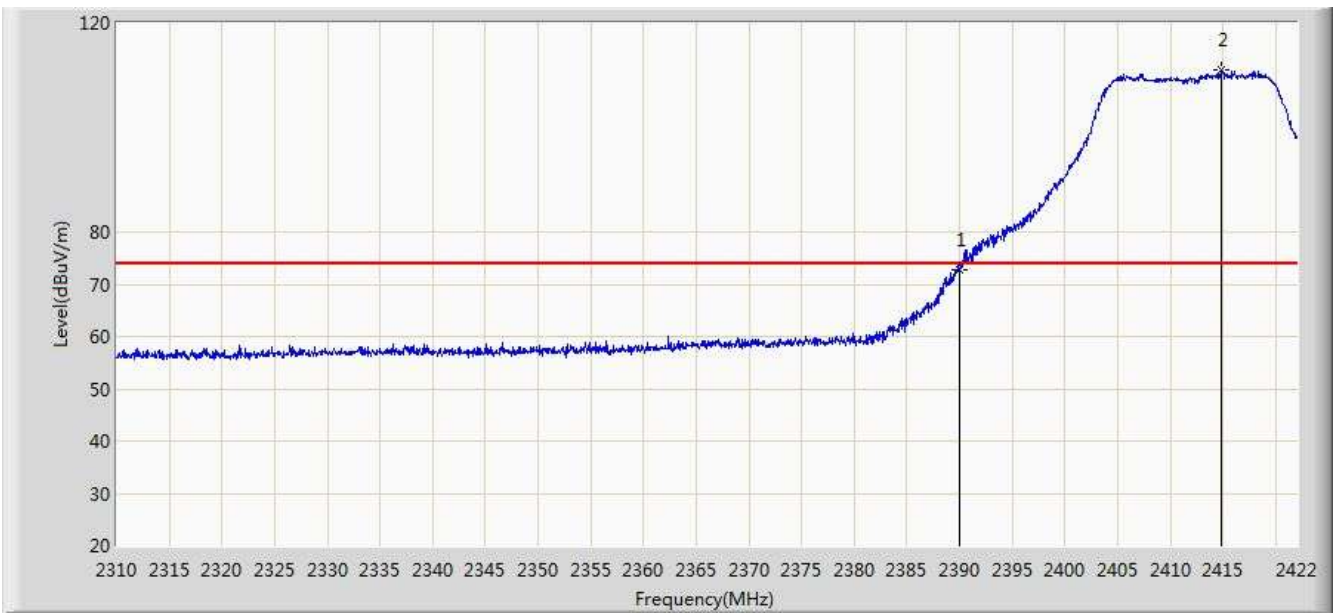
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	60.596	29.912	-13.404	74.000	30.684	PK
2		*	2405.648	97.785	67.130	N/A	N/A	30.656	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:33
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2412MHz Chain 1	



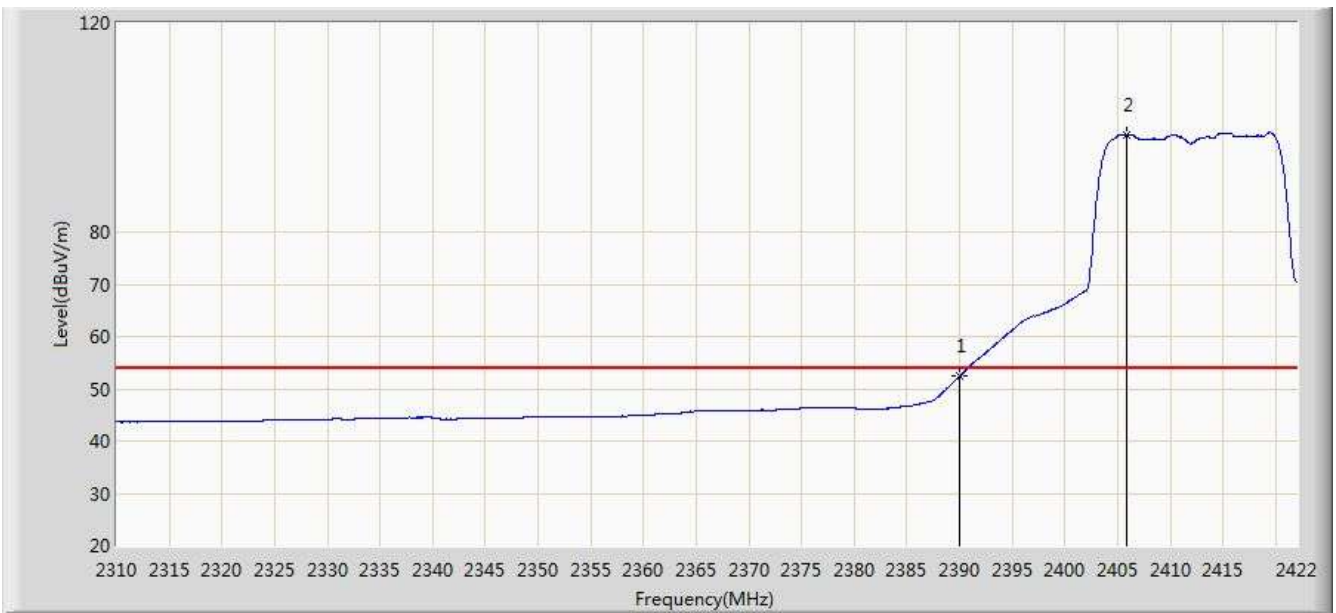
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	45.340	14.656	-8.660	54.000	30.684	AV
2		*	2406.600	86.071	55.417	N/A	N/A	30.653	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:52
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2412MHz Chain 1	



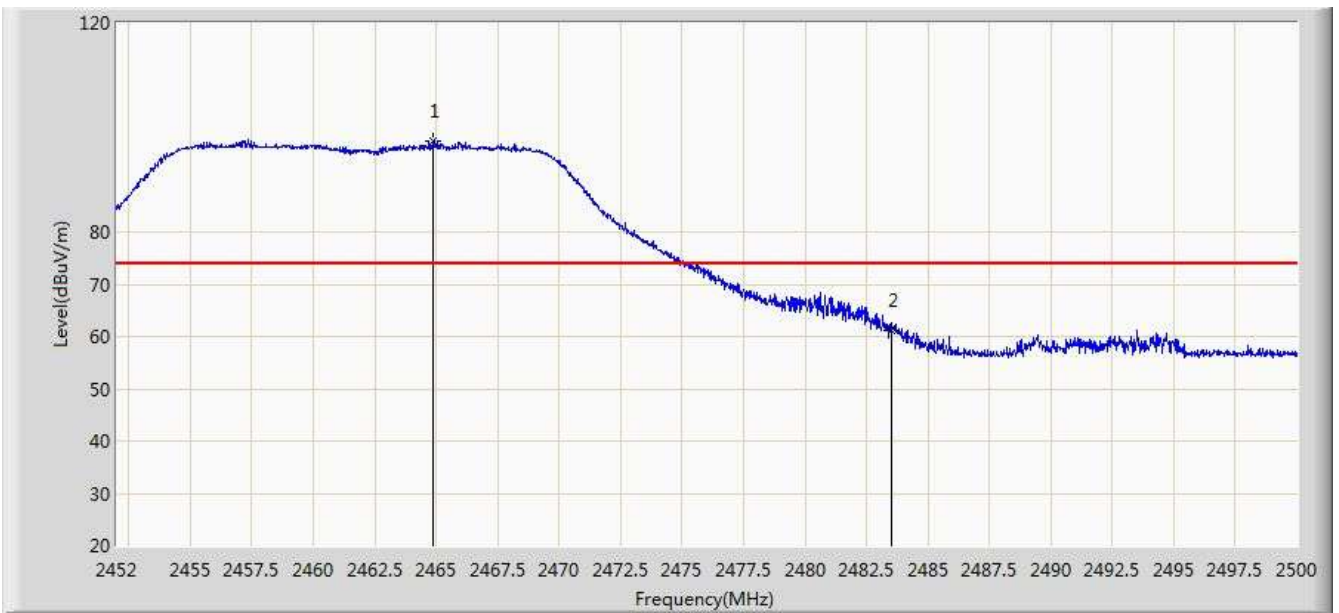
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	72.631	41.947	-1.369	74.000	30.684	PK
2		*	2414.888	110.958	80.318	N/A	N/A	30.640	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:55
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2412MHz Chain 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	52.352	21.668	-1.648	54.000	30.684	AV
2		*	2405.928	98.626	67.971	N/A	N/A	30.655	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 17:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2462MHz Chain 1	



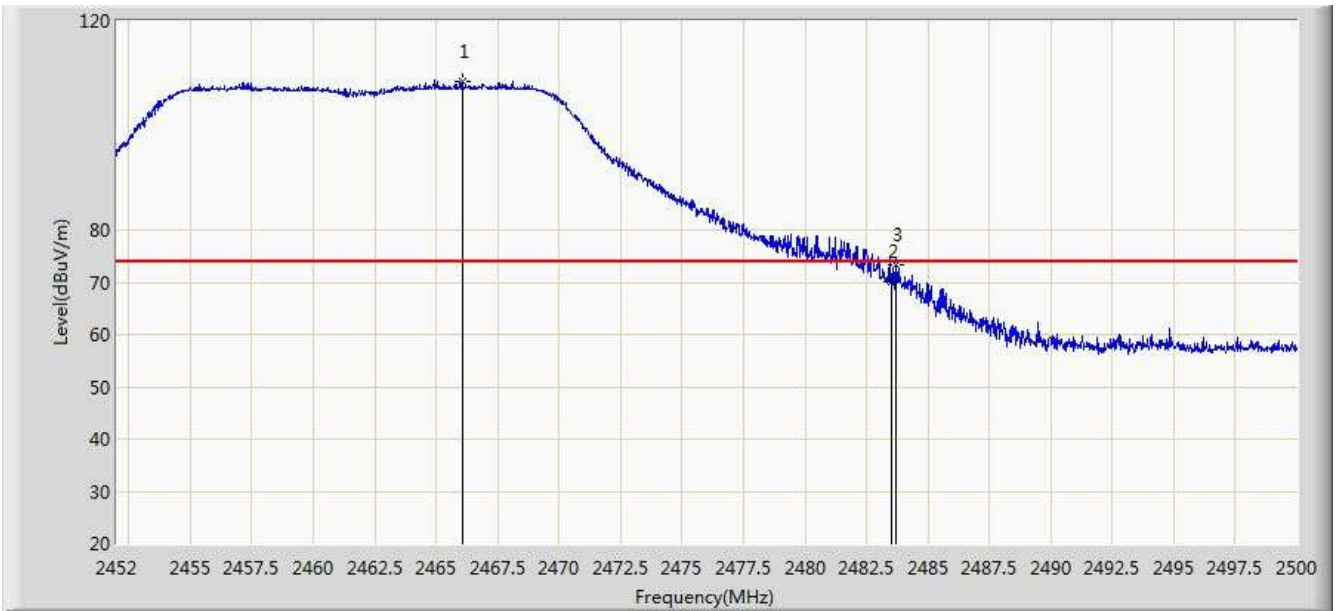
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2464.888	97.409	66.791	N/A	N/A	30.618	PK
2			2483.500	61.300	30.627	-12.700	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/07 - 18:01
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2462MHz Chain 1	



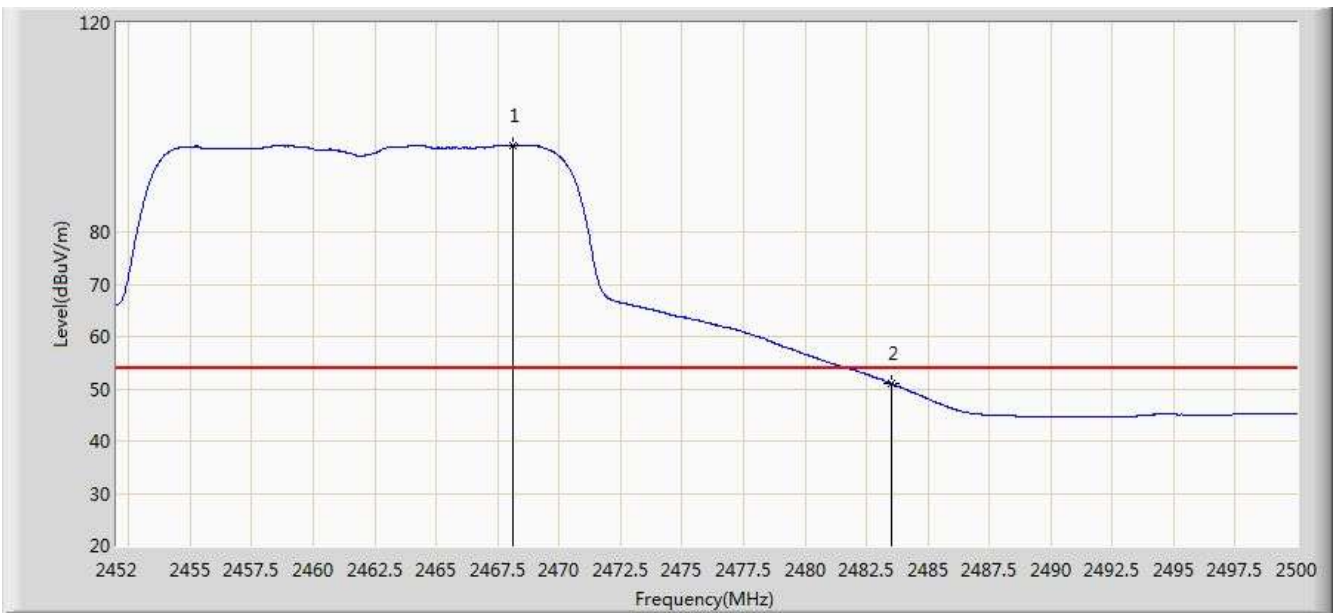
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2455.192	85.696	55.095	N/A	N/A	30.601	AV
2			2483.500	44.710	14.037	-9.290	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 11:11
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2462MHz Chain 1	



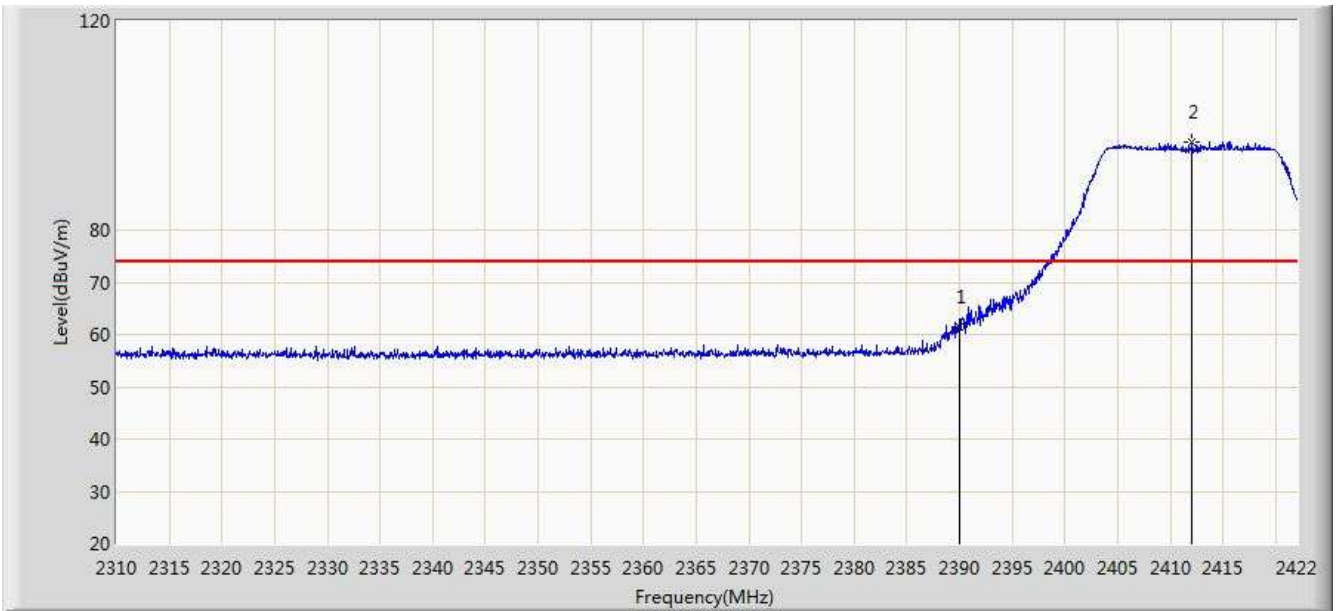
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2466.064	108.505	77.883	N/A	N/A	30.622	PK
2			2483.500	70.150	39.477	-3.850	74.000	30.673	PK
3			2483.704	73.206	42.533	-0.794	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 11:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11g Channel 2462MHz Chain 1	



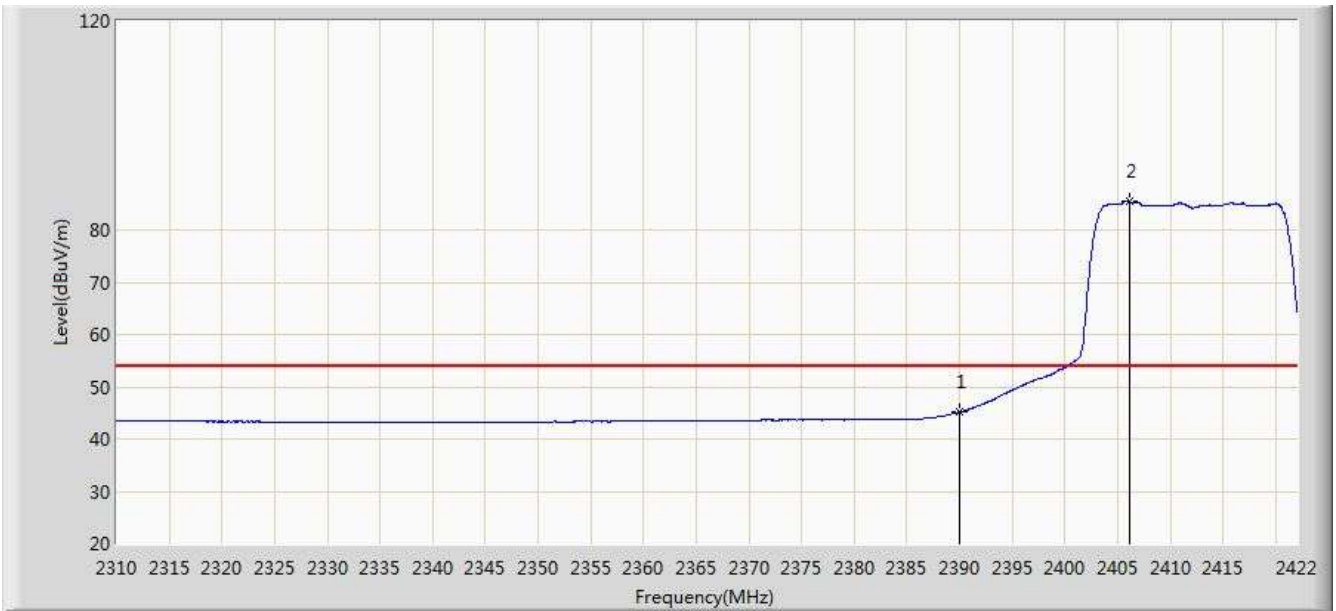
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2468.104	96.593	65.965	N/A	N/A	30.628	AV
2			2483.500	51.014	20.341	-2.986	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 09:20
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 0	



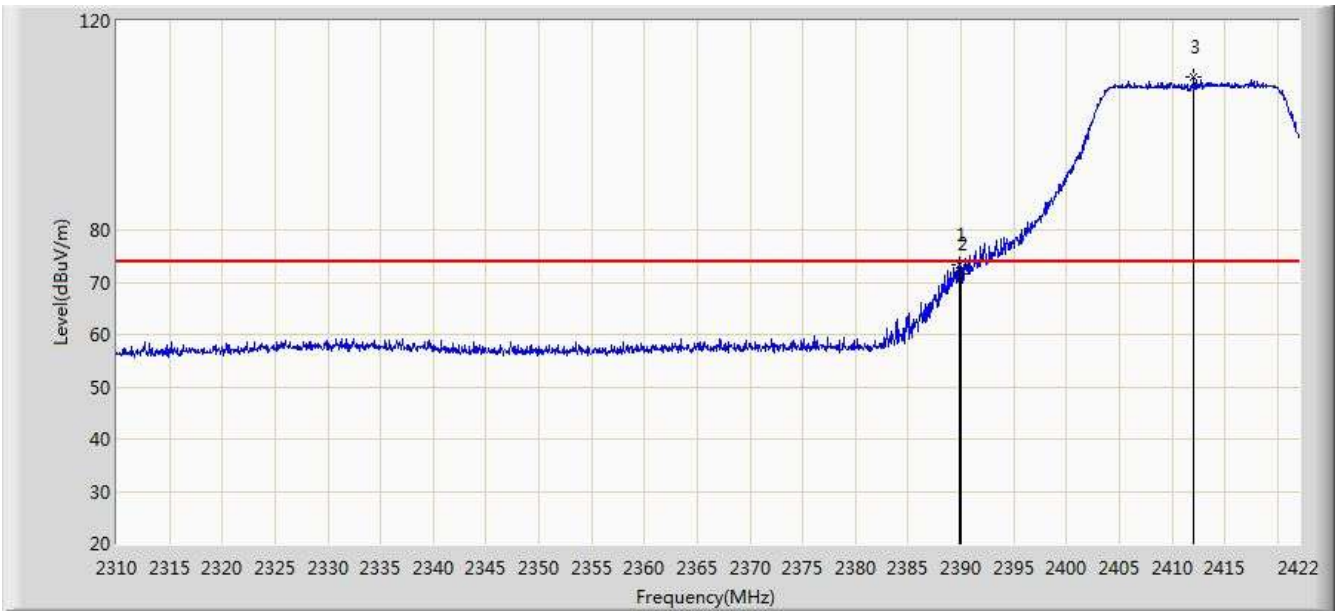
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.573	30.889	-12.427	74.000	30.684	PK
2		*	2412.088	96.869	66.224	N/A	N/A	30.645	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 09:26
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 0	



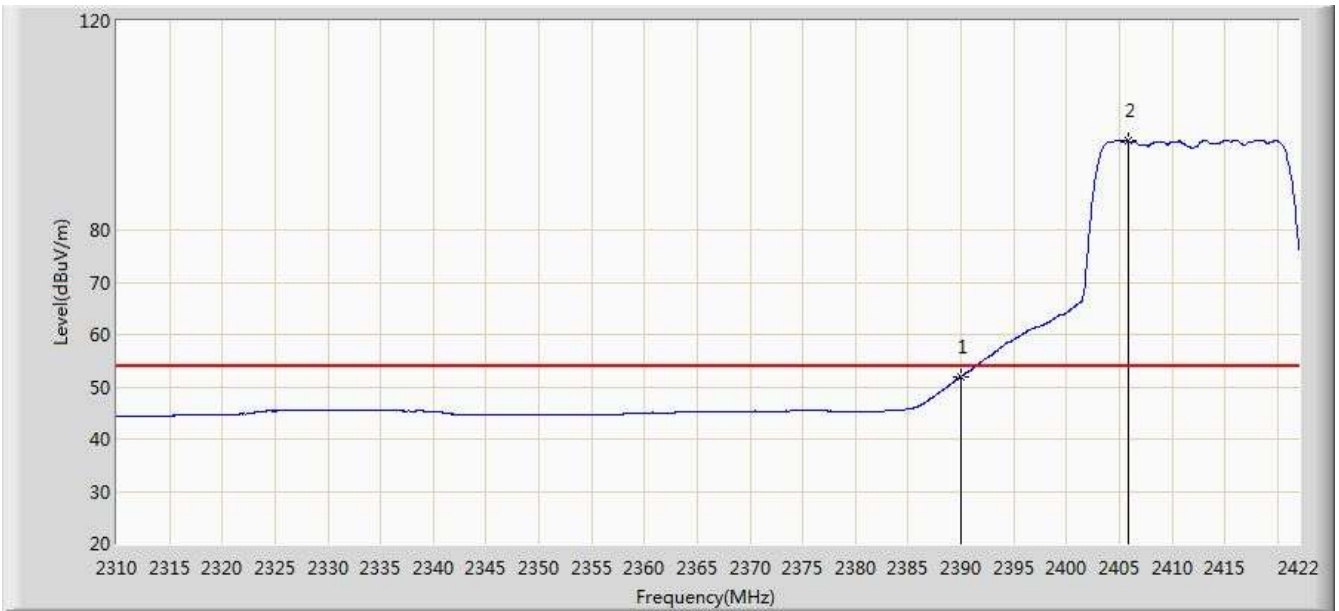
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	45.129	14.445	-8.871	54.000	30.684	AV
2		*	2406.152	85.376	54.722	N/A	N/A	30.654	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 11:23
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 0	



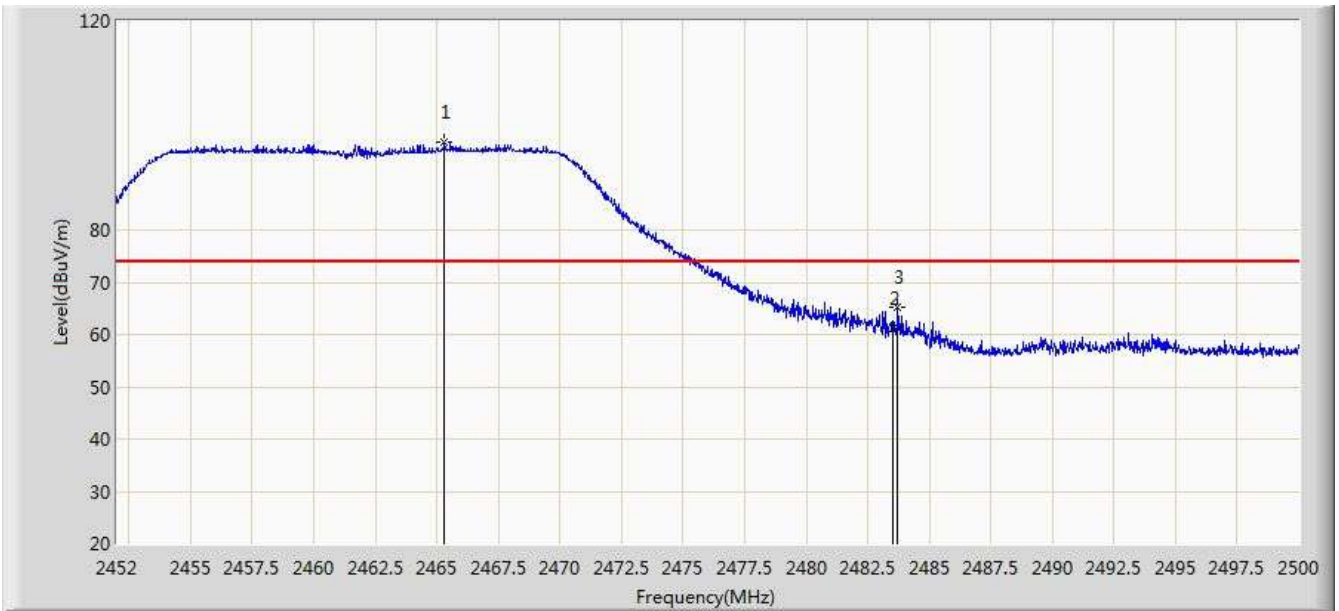
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.800	73.460	42.776	-0.540	74.000	30.684	PK
2			2390.000	71.661	40.977	-2.339	74.000	30.684	PK
3		*	2412.088	109.251	78.606	N/A	N/A	30.645	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 11:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 0	



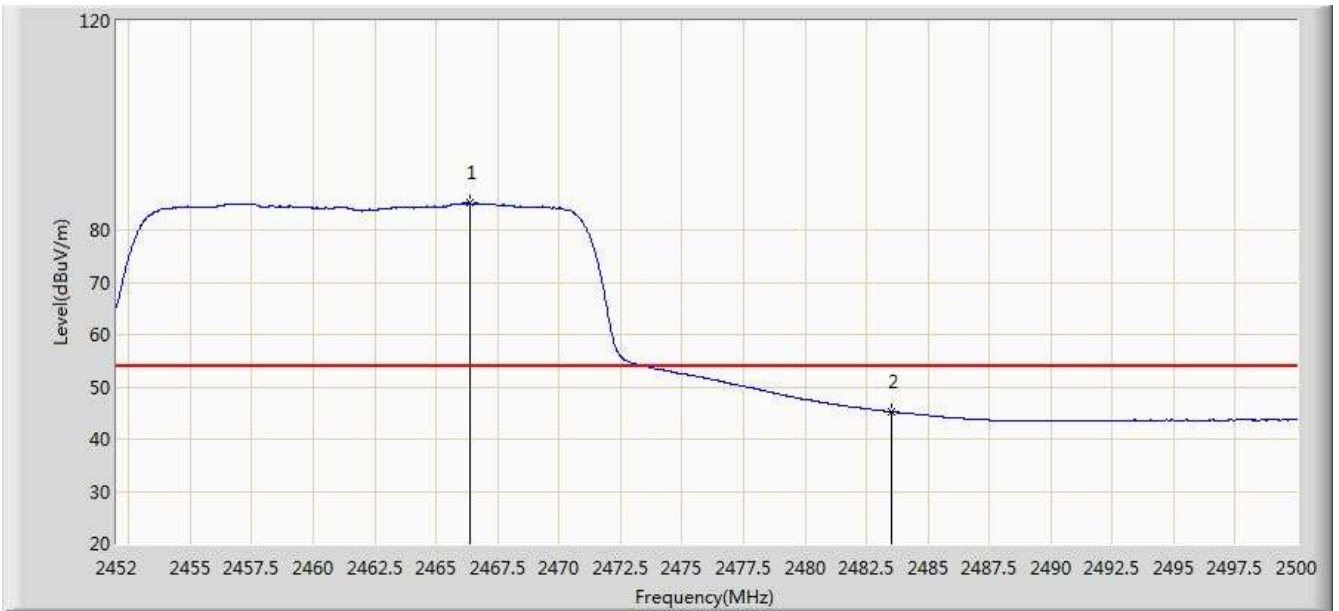
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	51.956	21.272	-2.044	54.000	30.684	AV
2		*	2405.928	96.957	66.302	N/A	N/A	30.655	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 09:47
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 0	



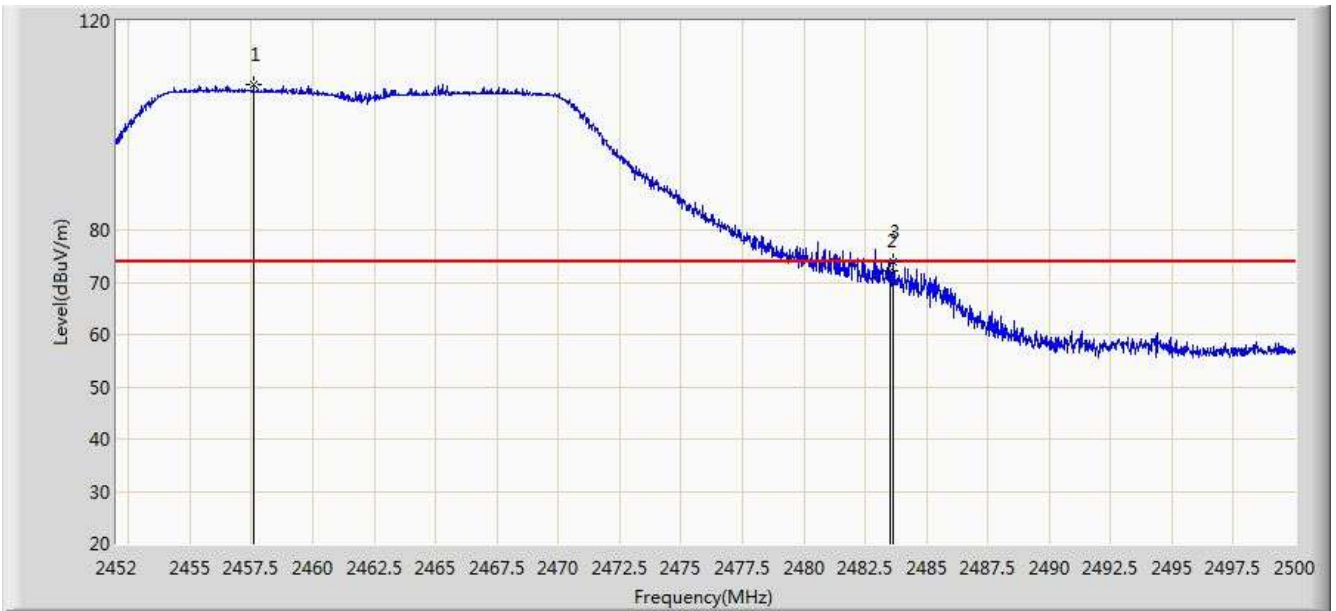
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2465.320	96.684	66.065	N/A	N/A	30.620	PK
2			2483.500	61.264	30.591	-12.736	74.000	30.673	PK
3			2483.728	65.161	34.488	-8.839	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 09:54
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2466.376	85.076	54.453	N/A	N/A	30.623	AV
2			2483.500	45.214	14.541	-8.786	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 11:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 0	



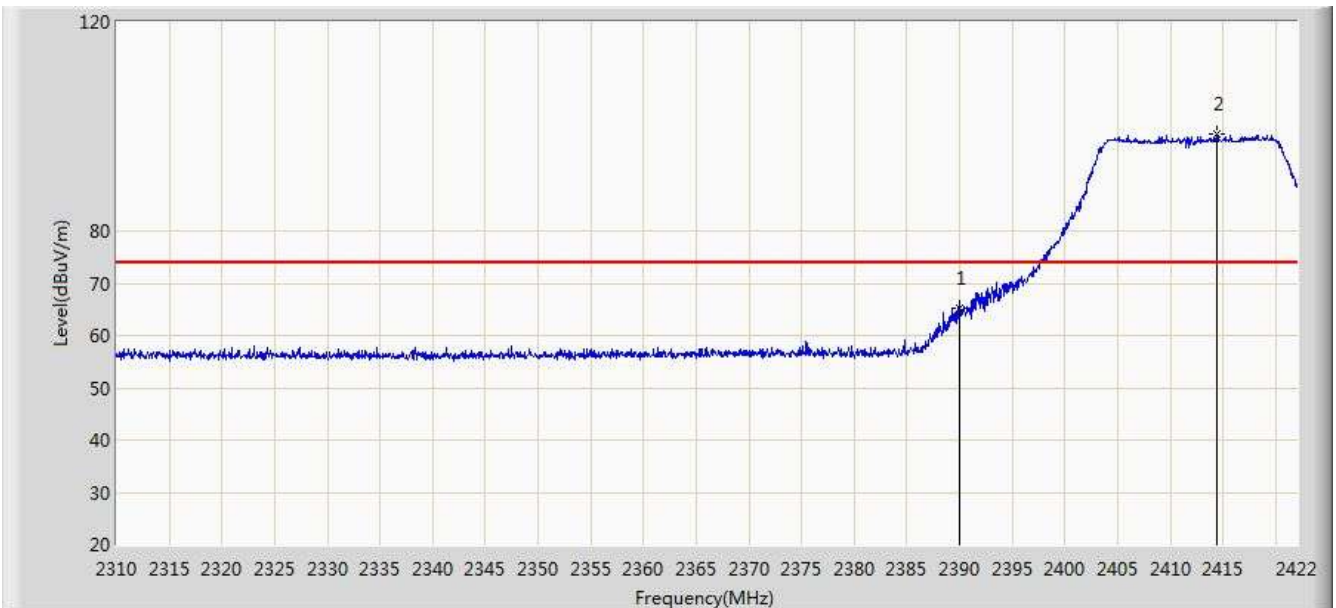
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2457.592	107.891	77.286	N/A	N/A	30.604	PK
2			2483.500	72.120	41.447	-1.880	74.000	30.673	PK
3			2483.632	73.911	43.238	-0.089	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/10 - 11:45
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 0	



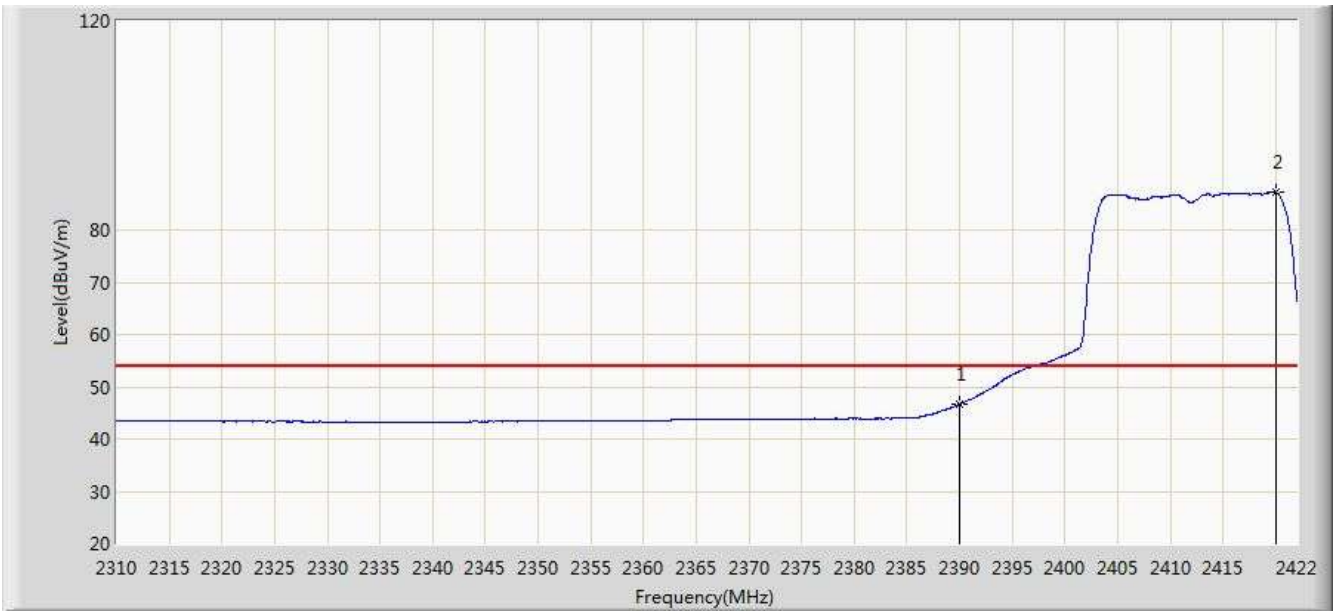
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2455.936	96.180	65.578	N/A	N/A	30.602	AV
2			2483.500	51.896	21.223	-2.104	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 10:09
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 1	



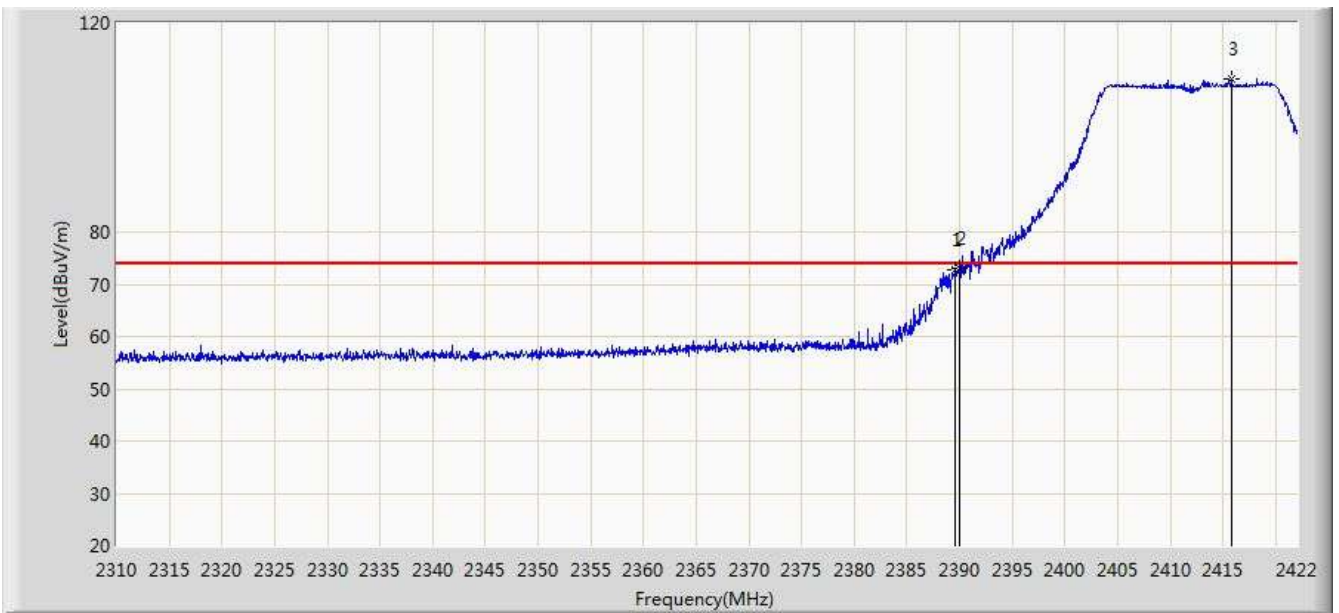
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	65.084	34.400	-8.916	74.000	30.684	PK
2		*	2414.440	98.522	67.881	N/A	N/A	30.641	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 10:12
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 1	



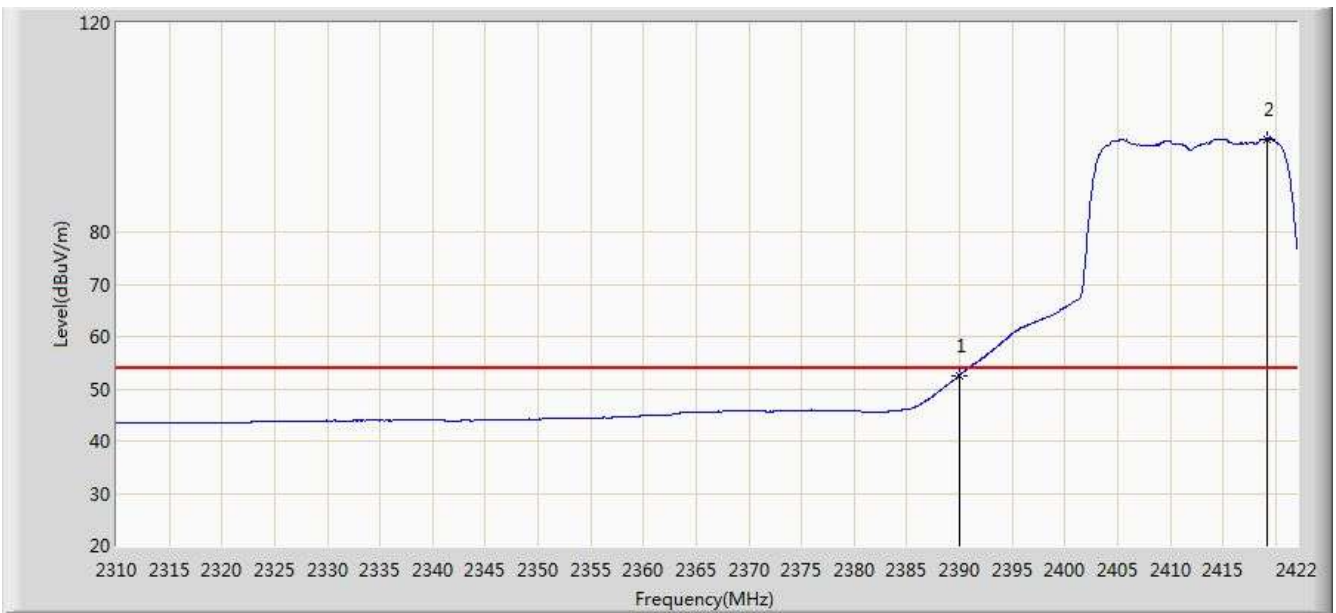
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	46.681	15.997	-7.319	54.000	30.684	AV
2		*	2420.040	87.108	56.476	N/A	N/A	30.632	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 10:37
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 1	



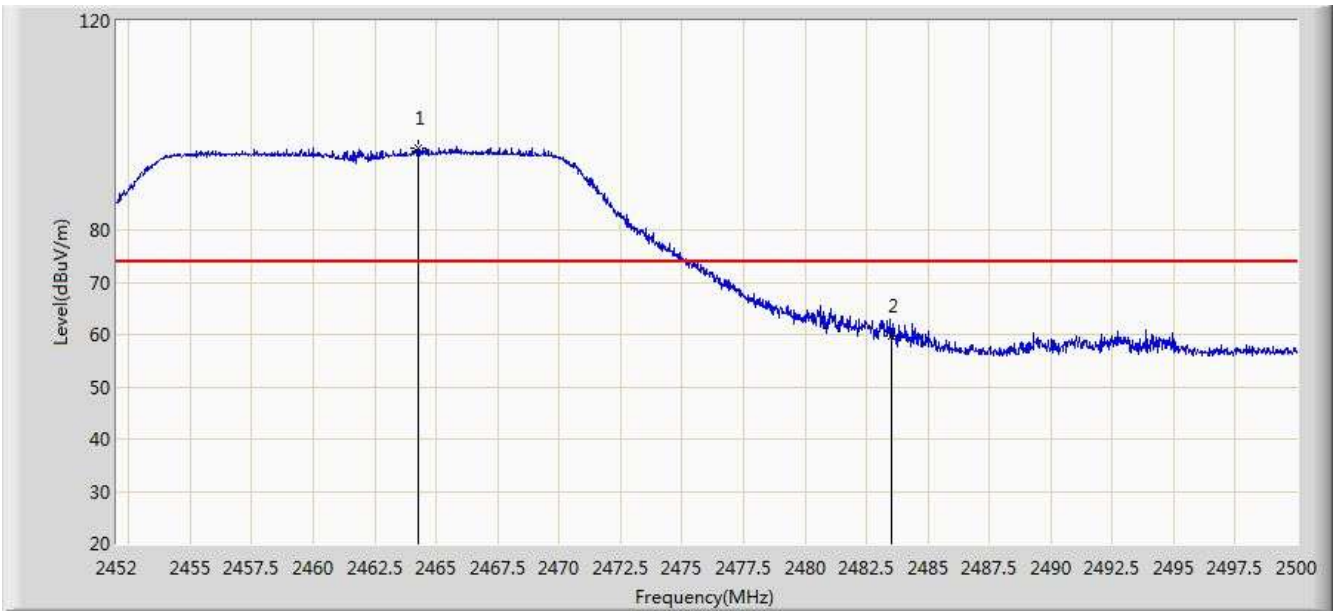
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.576	72.786	42.101	-1.214	74.000	30.685	PK
2			2390.000	73.031	42.347	-0.969	74.000	30.684	PK
3		*	2415.784	109.234	78.595	N/A	N/A	30.639	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 10:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 1	



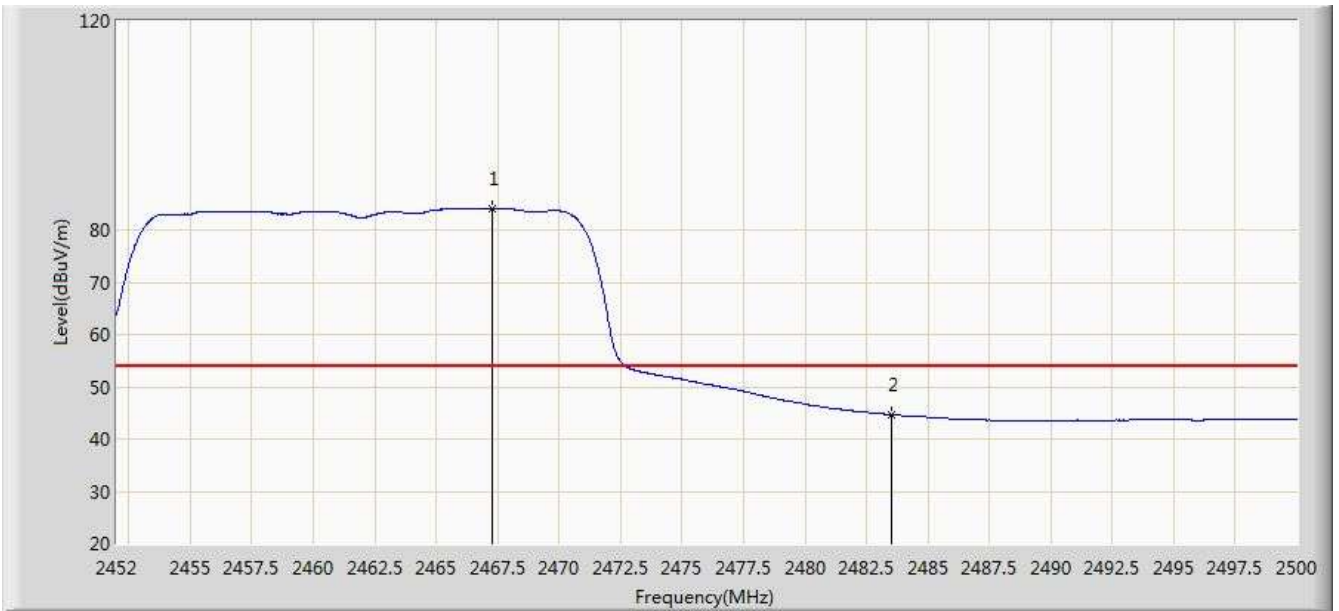
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	52.585	21.901	-1.415	54.000	30.684	AV
2		*	2419.144	97.806	67.172	N/A	N/A	30.634	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 10:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 1	



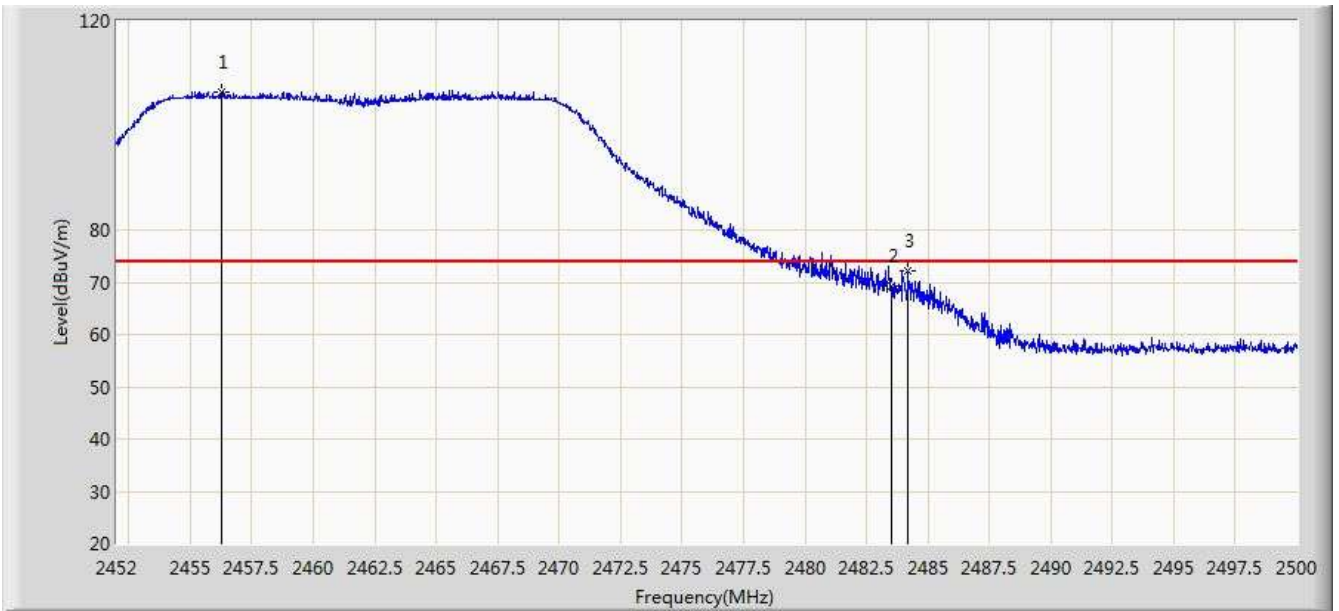
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2464.288	95.677	65.061	N/A	N/A	30.617	PK
2			2483.500	59.799	29.126	-14.201	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 10:51
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2467.288	84.149	53.524	N/A	N/A	30.625	AV
2			2483.500	44.669	13.996	-9.331	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:07
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2456.248	106.499	75.896	N/A	N/A	30.603	PK
2			2483.500	69.134	38.461	-4.866	74.000	30.673	PK
3			2484.208	72.302	41.627	-1.698	74.000	30.675	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:08
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 1	



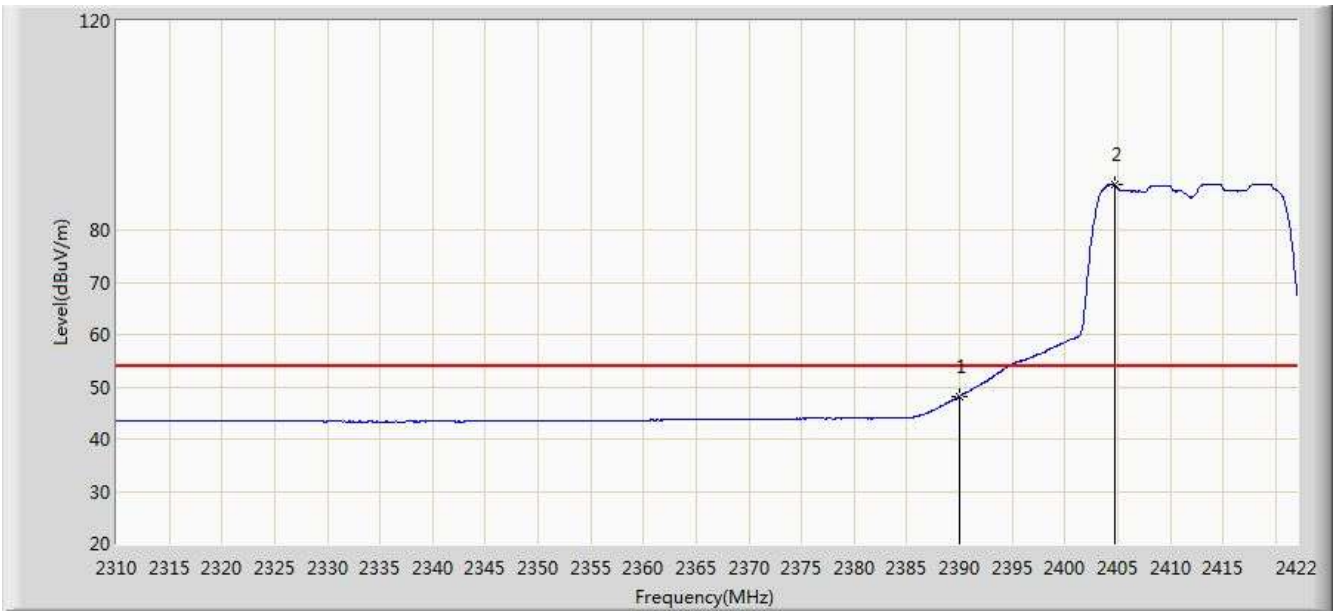
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2455.024	94.961	64.360	N/A	N/A	30.601	AV
2			2483.500	50.280	19.607	-3.720	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 0+1	



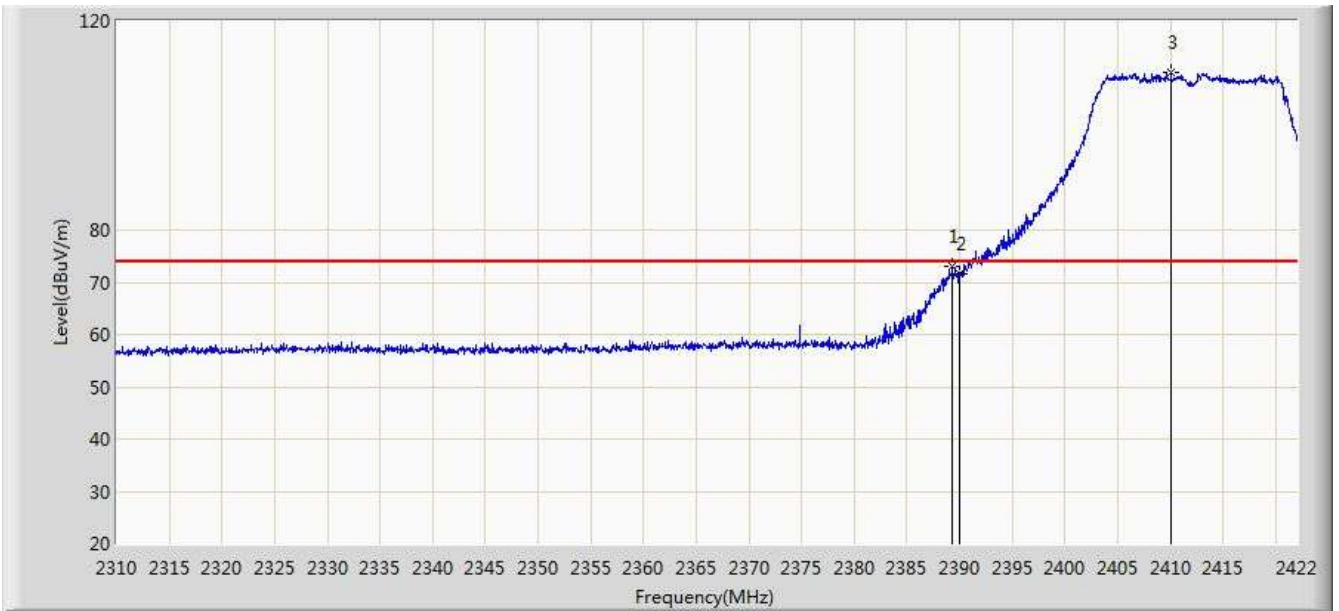
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	64.376	33.692	-9.624	74.000	30.684	PK
2		*	2417.408	102.014	71.378	N/A	N/A	30.636	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:18
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 0+1	



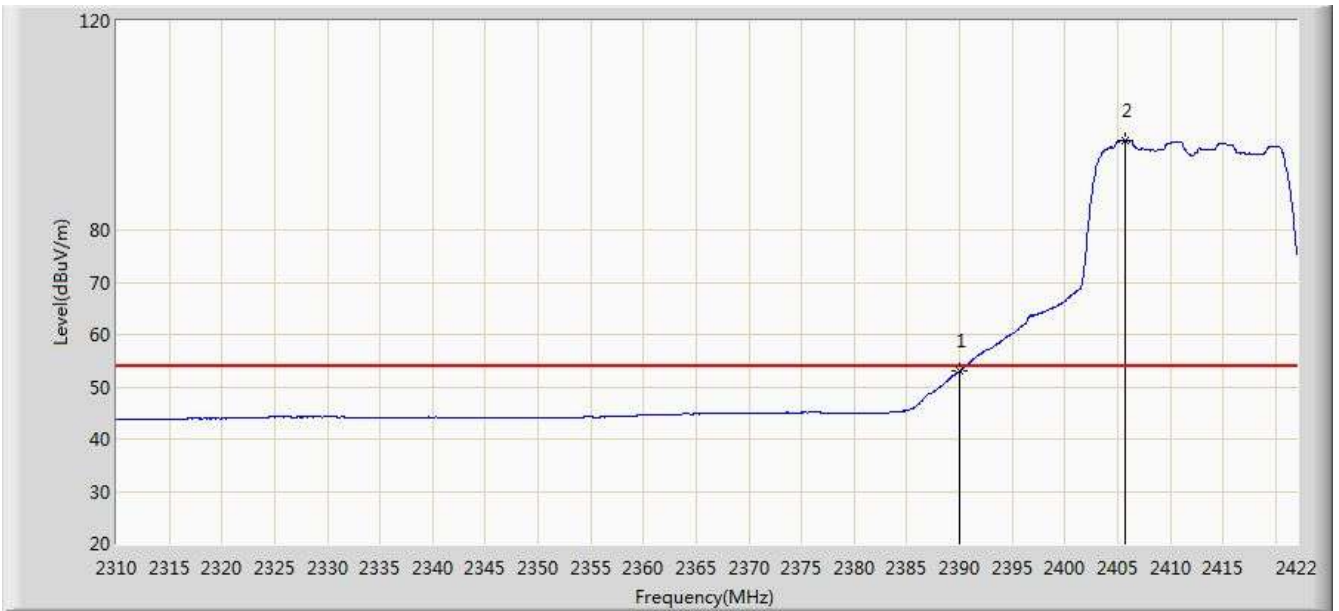
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	48.166	17.482	-5.834	54.000	30.684	AV
2		*	2404.696	88.679	58.022	N/A	N/A	30.657	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:21
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 0+1	



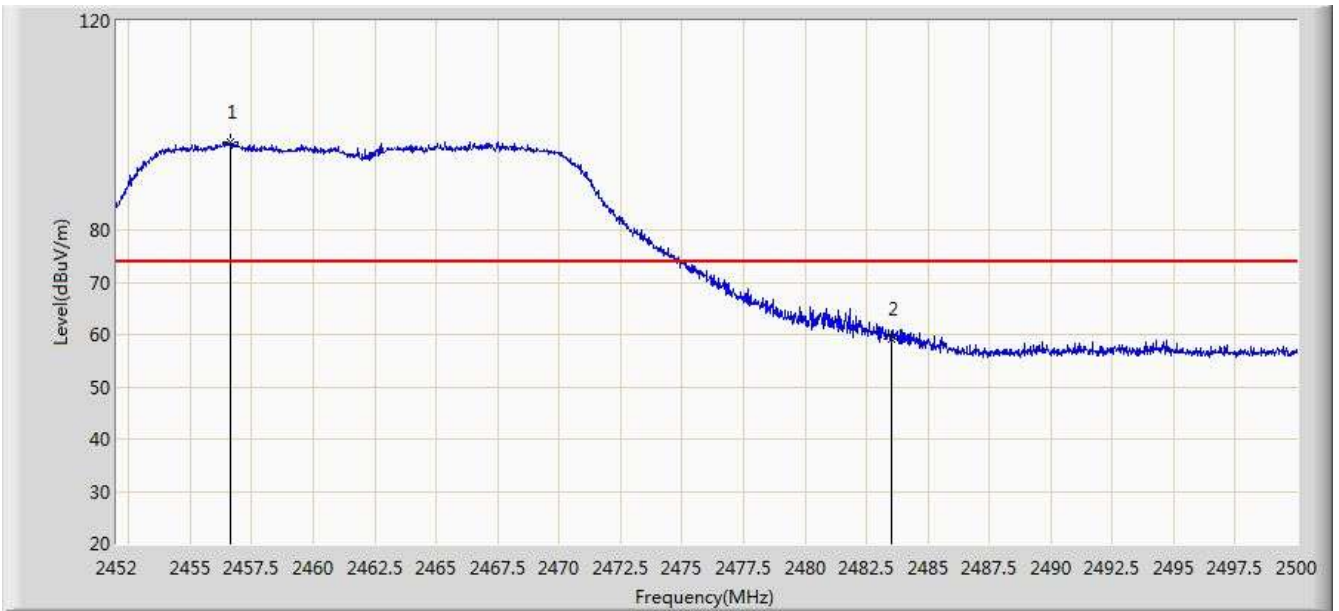
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2389.296	72.919	42.234	-1.081	74.000	30.686	PK
2			2390.000	71.567	40.883	-2.433	74.000	30.684	PK
3		*	2410.072	110.168	79.520	N/A	N/A	30.648	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:25
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT:WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2412MHz Chain 0+1	



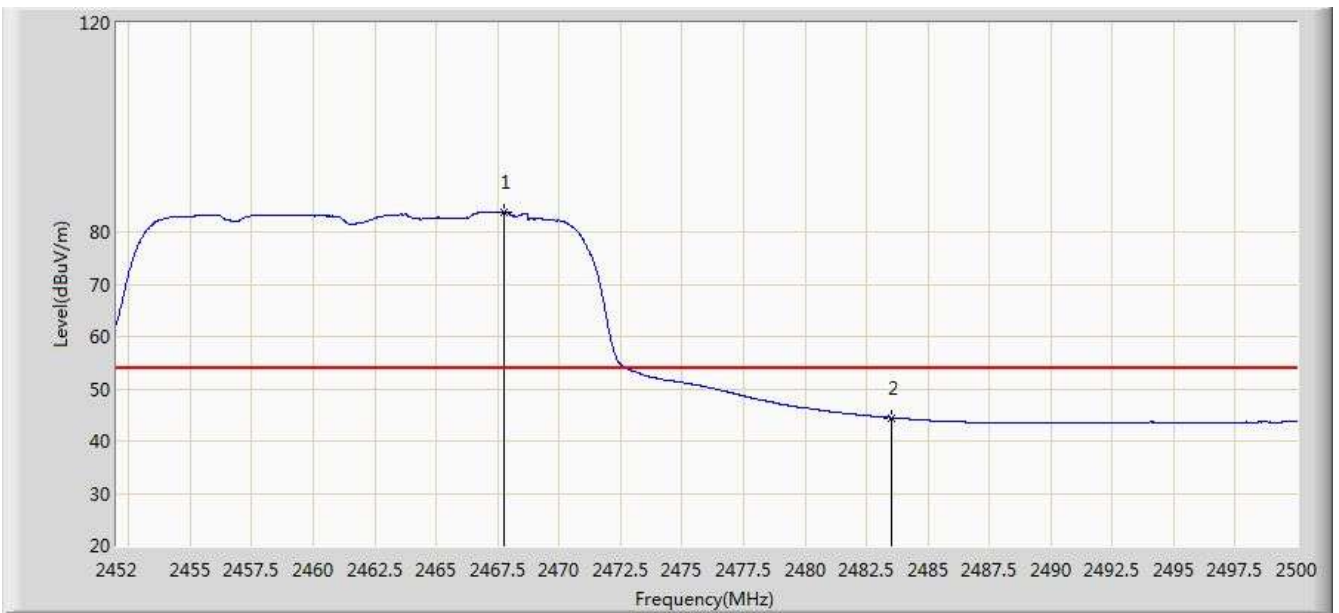
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	53.008	22.324	-0.992	54.000	30.684	AV
2		*	2405.760	97.035	66.380	N/A	N/A	30.655	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:34
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 0+1	



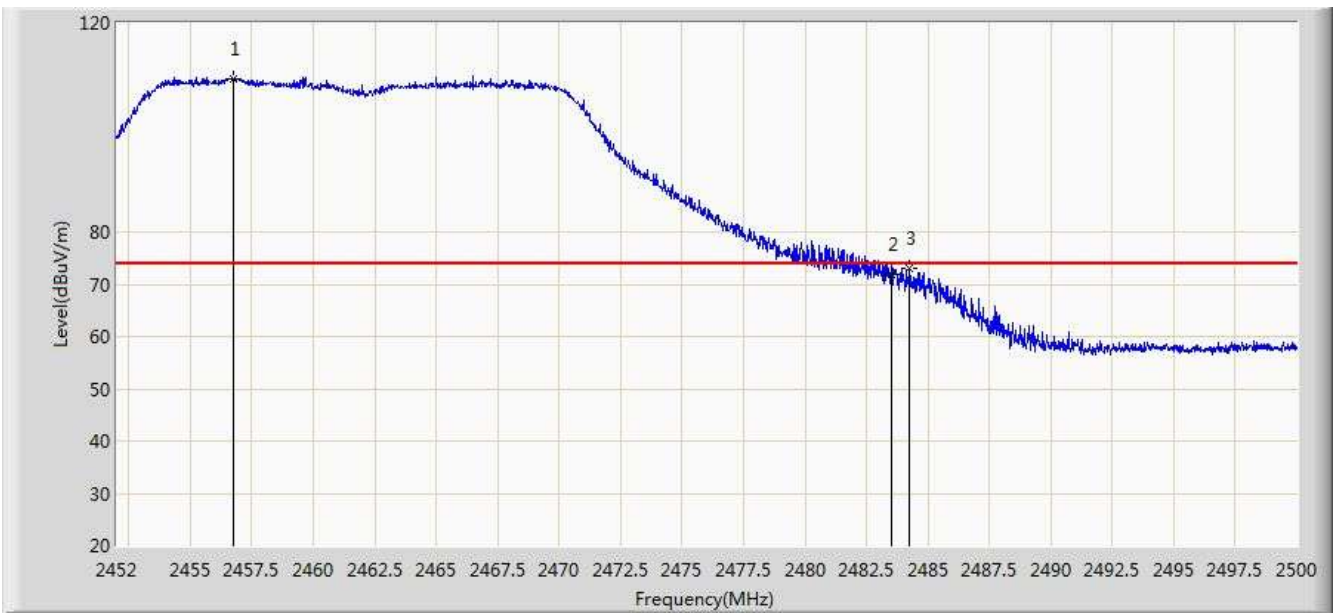
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2456.656	96.744	66.141	N/A	N/A	30.604	PK
2			2483.500	59.229	28.556	-14.771	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:36
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2467.768	83.821	53.194	N/A	N/A	30.626	AV
2			2483.500	44.485	13.812	-9.515	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:42
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 0+1	



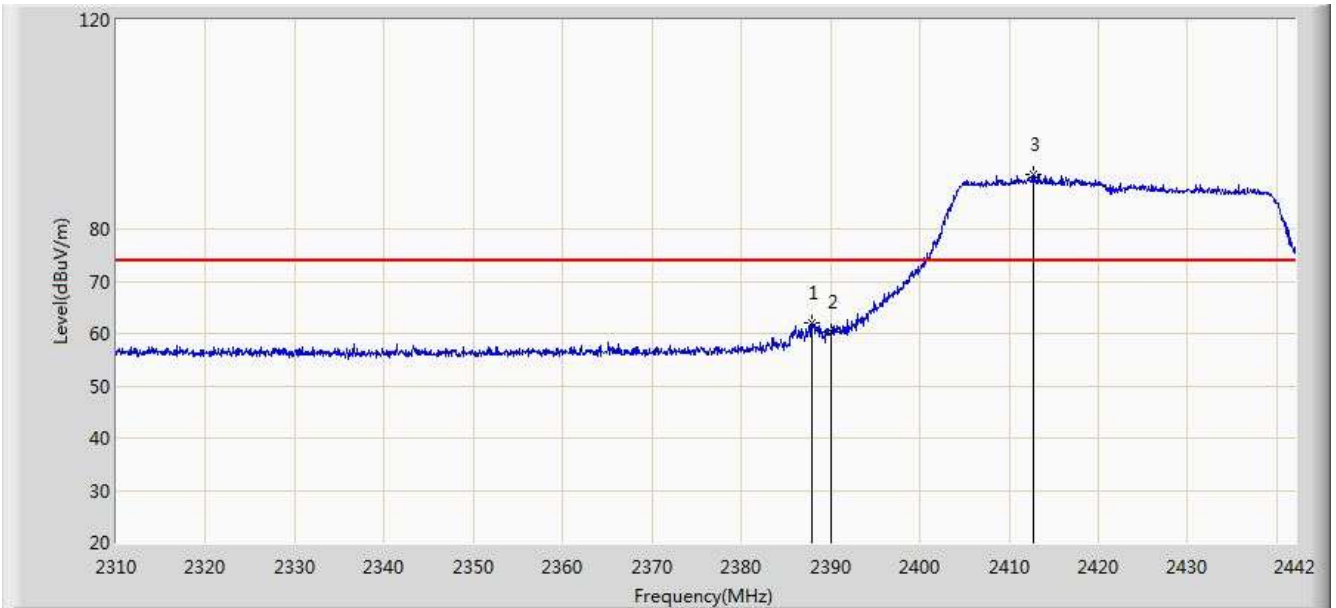
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2456.728	109.359	78.755	N/A	N/A	30.604	PK
2			2483.500	71.965	41.292	-2.035	74.000	30.673	PK
3			2484.256	73.172	42.497	-0.828	74.000	30.675	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 11:44
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT20 Channel 2462MHz Chain 0+1	



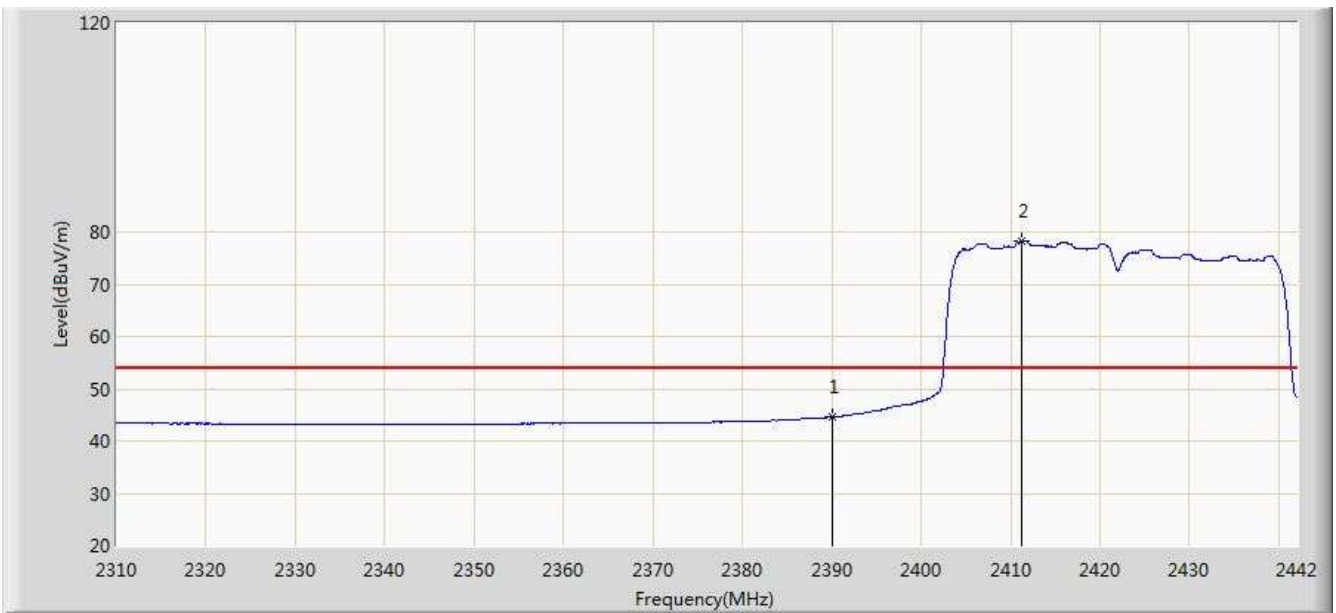
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2455.696	96.611	66.009	N/A	N/A	30.602	AV
2			2483.500	52.445	21.772	-1.555	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 13:27
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 0	



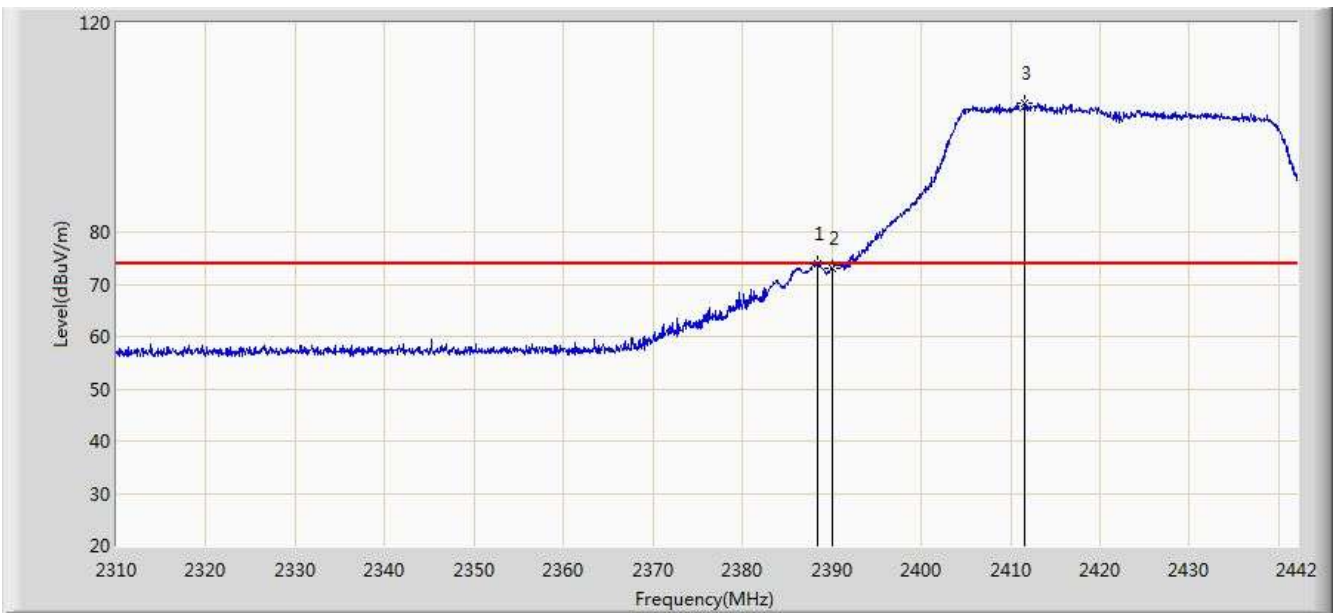
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2387.946	62.122	31.434	-11.878	74.000	30.688	PK
2			2390.000	60.223	29.539	-13.777	74.000	30.684	PK
3		*	2412.762	90.405	59.761	N/A	N/A	30.643	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 13:29
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 0	



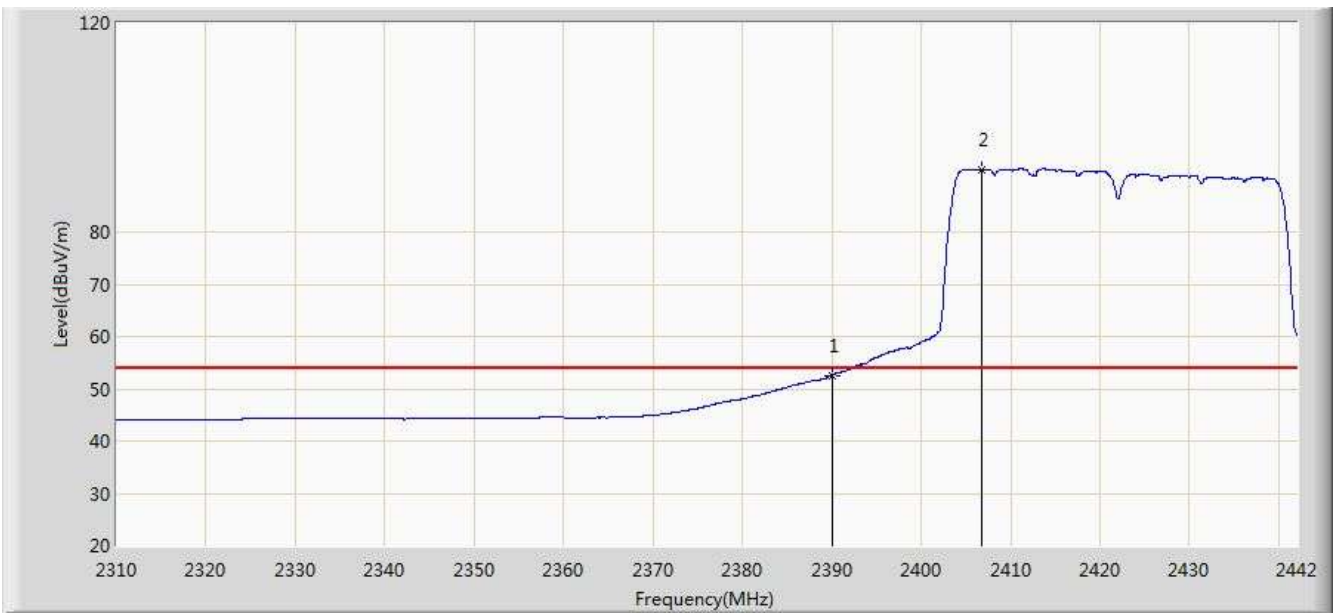
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	44.588	13.904	-9.412	54.000	30.684	AV
2		*	2411.310	78.205	47.559	N/A	N/A	30.646	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 13:38
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 0	



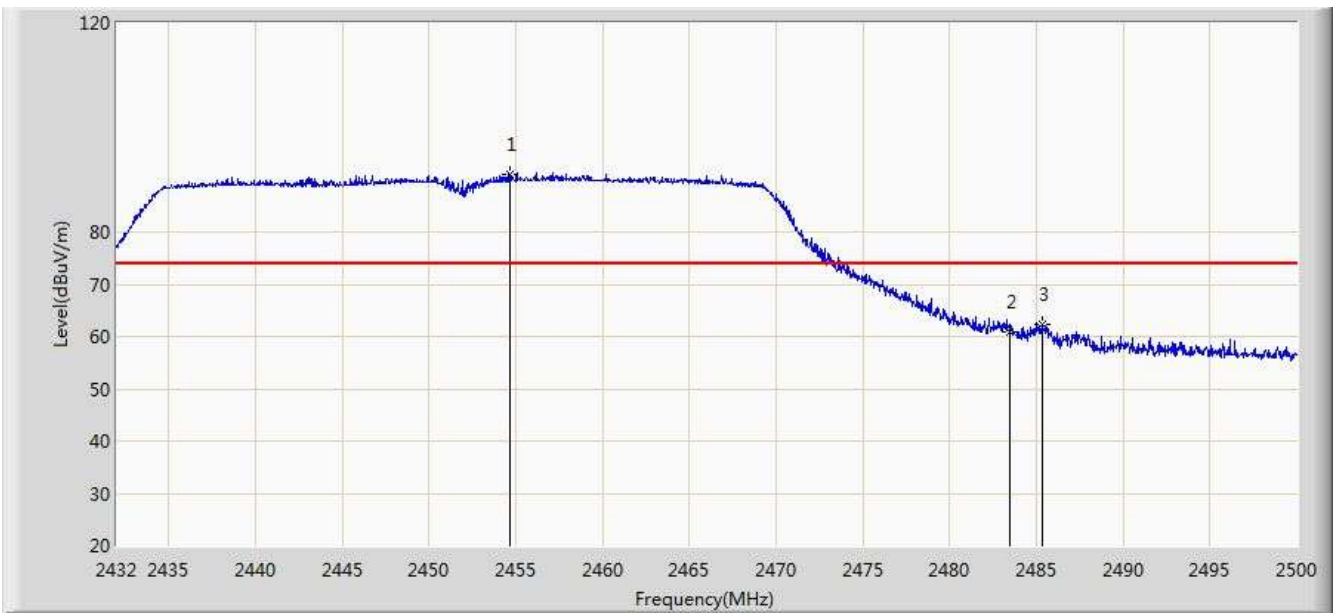
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2388.342	73.980	43.293	-0.020	74.000	30.687	PK
2			2390.000	73.151	42.467	-0.849	74.000	30.684	PK
3		*	2411.574	104.631	73.986	N/A	N/A	30.645	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 13:41
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	52.588	21.904	-1.412	54.000	30.684	AV
2		*	2406.822	91.938	61.285	N/A	N/A	30.654	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 13:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 0	



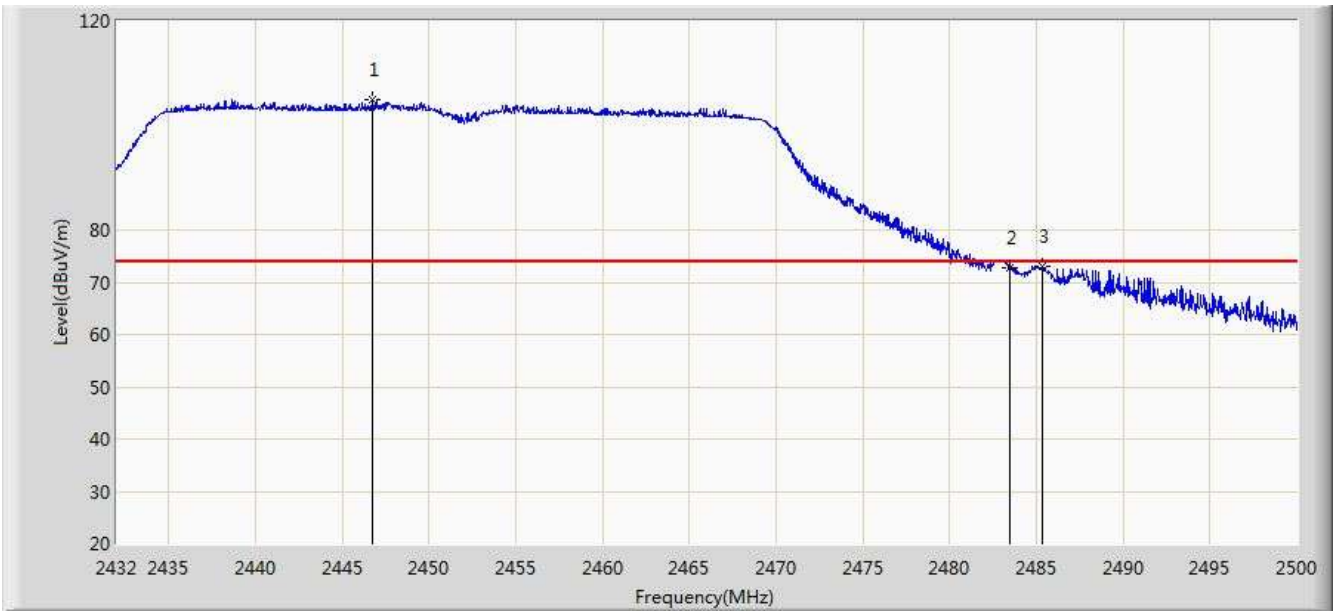
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2454.644	90.975	60.375	N/A	N/A	30.601	PK
2			2483.500	60.743	30.070	-13.257	74.000	30.673	PK
3			2485.312	62.461	31.783	-11.539	74.000	30.678	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 13:56
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2454.168	79.191	48.591	N/A	N/A	30.599	AV
2			2483.500	45.492	14.819	-8.508	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:03
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 0	



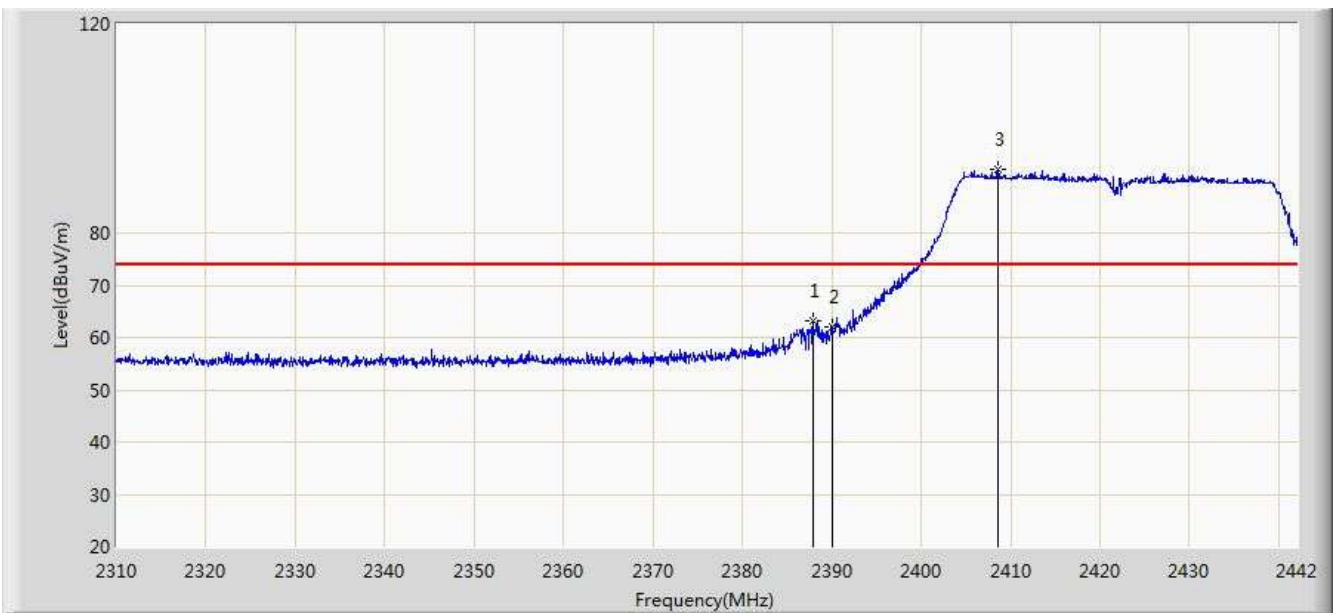
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2446.722	105.018	74.429	N/A	N/A	30.589	PK
2			2483.500	72.834	42.161	-1.166	74.000	30.673	PK
3			2485.346	73.147	42.469	-0.853	74.000	30.678	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:05
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 0	



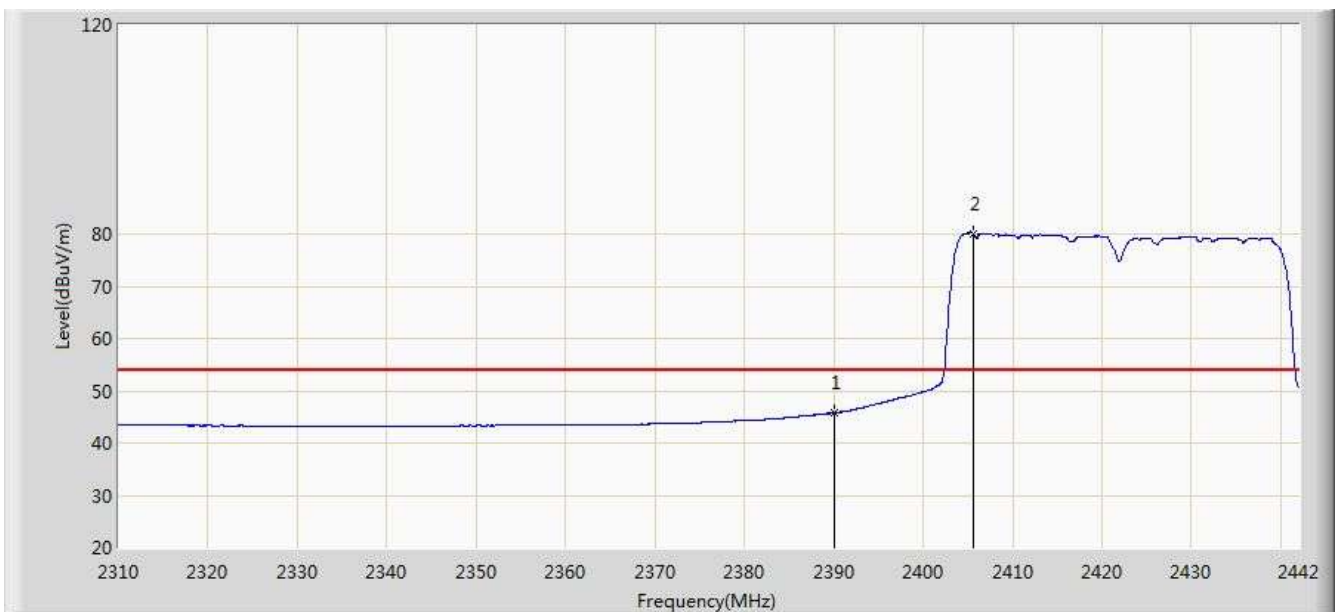
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2447.946	92.293	61.703	N/A	N/A	30.591	AV
2			2483.500	53.844	23.171	-0.156	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 1	



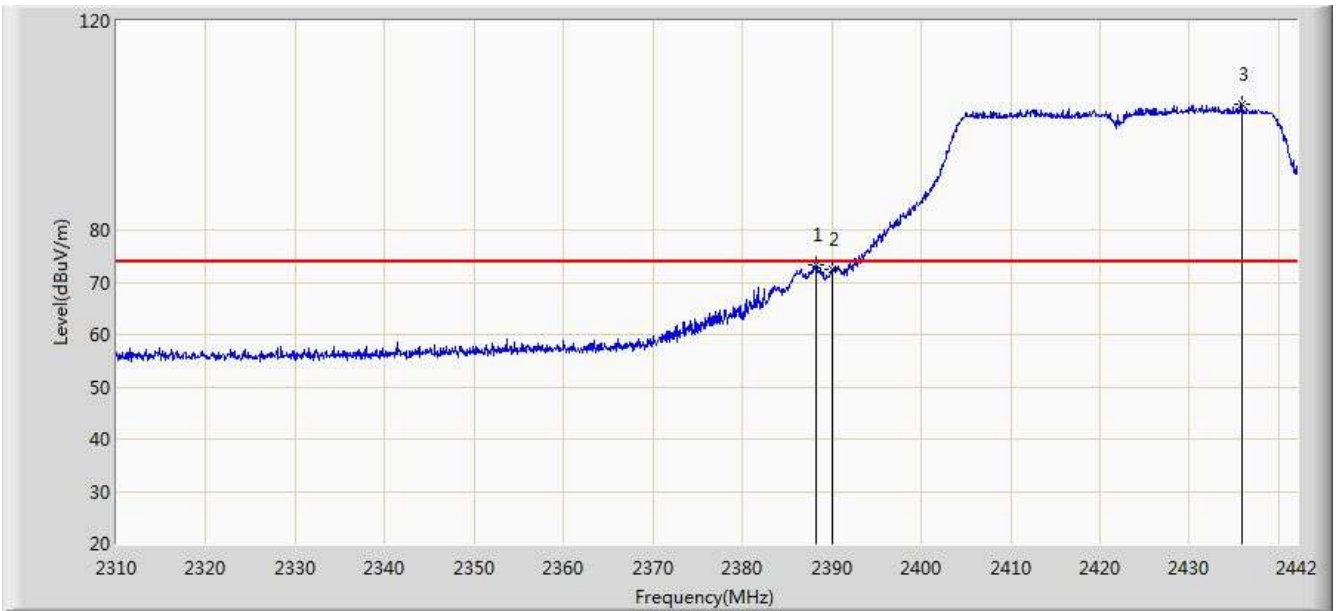
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2387.880	63.159	32.470	-10.841	74.000	30.688	PK
2			2390.000	62.074	31.390	-11.926	74.000	30.684	PK
3		*	2408.538	92.042	61.392	N/A	N/A	30.650	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:17
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 1	



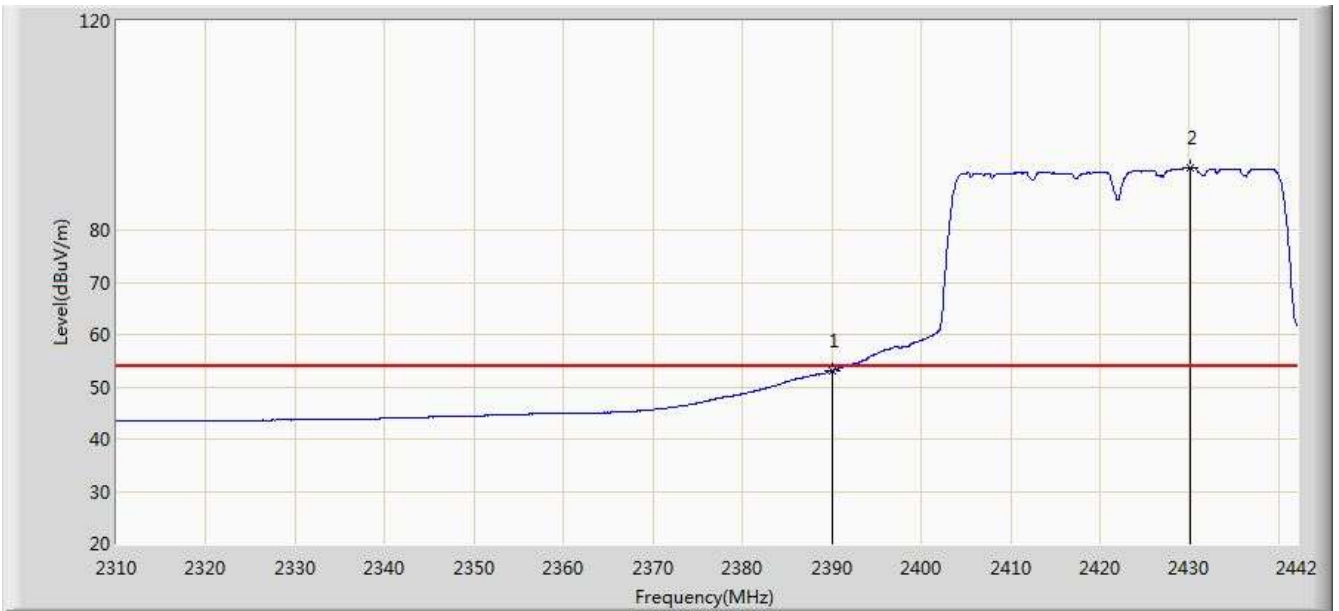
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	45.772	15.088	-8.228	54.000	30.684	AV
2		*	2405.568	80.116	49.461	N/A	N/A	30.656	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:28
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2388.276	73.256	42.568	-0.744	74.000	30.687	PK
2			2390.000	72.473	41.789	-1.527	74.000	30.684	PK
3		*	2435.928	104.038	73.432	N/A	N/A	30.606	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:30
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	53.042	22.358	-0.958	54.000	30.684	AV
2		*	2430.054	91.758	61.142	N/A	N/A	30.616	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 1	



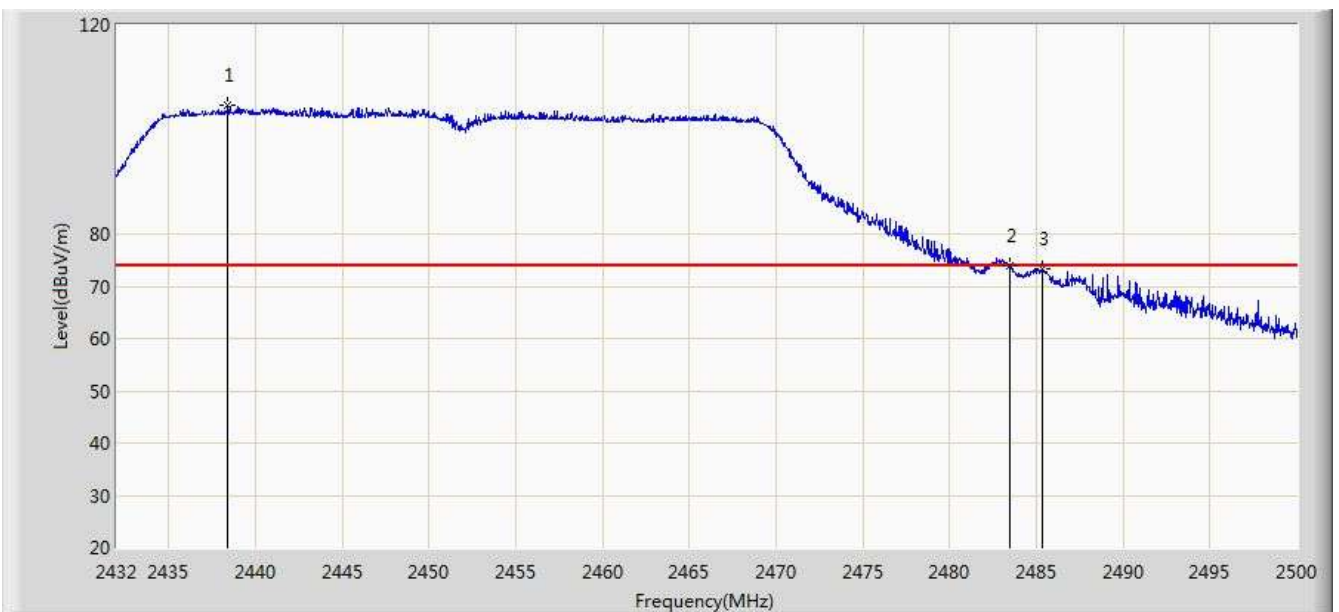
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2446.858	92.569	61.980	N/A	N/A	30.589	PK
2			2483.500	61.240	30.567	-12.760	74.000	30.673	PK
3			2485.074	62.917	32.240	-11.083	74.000	30.677	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 1	



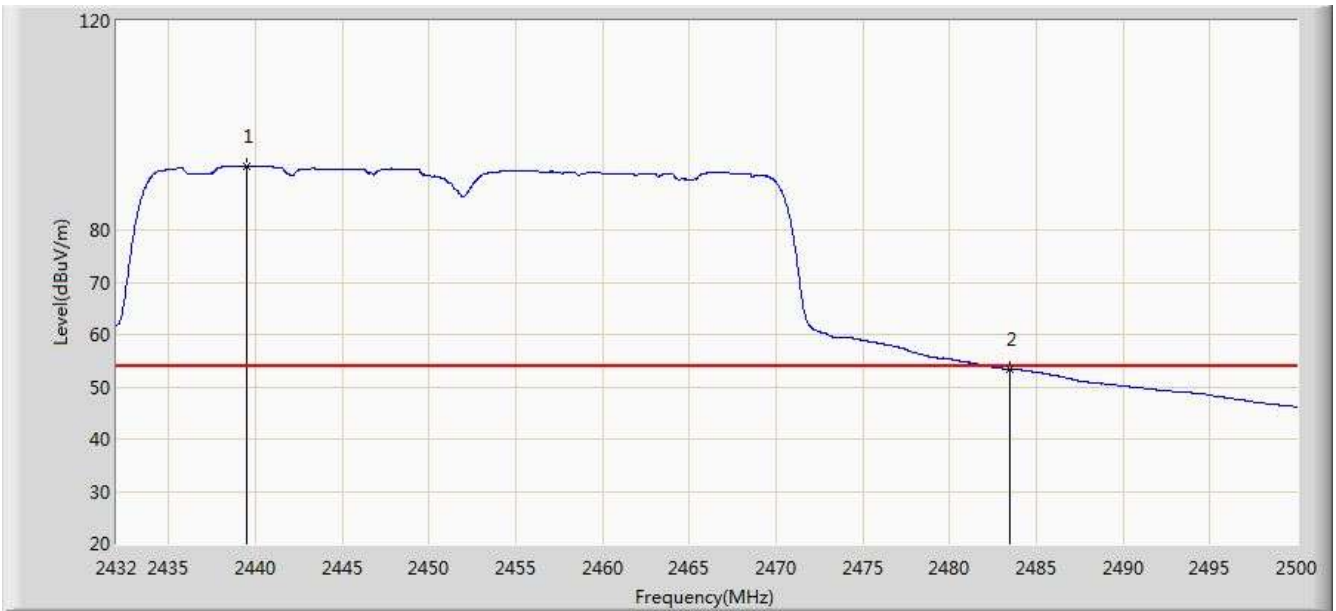
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2448.558	80.347	49.756	N/A	N/A	30.591	AV
2			2483.500	45.581	14.908	-8.419	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:48
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 1	



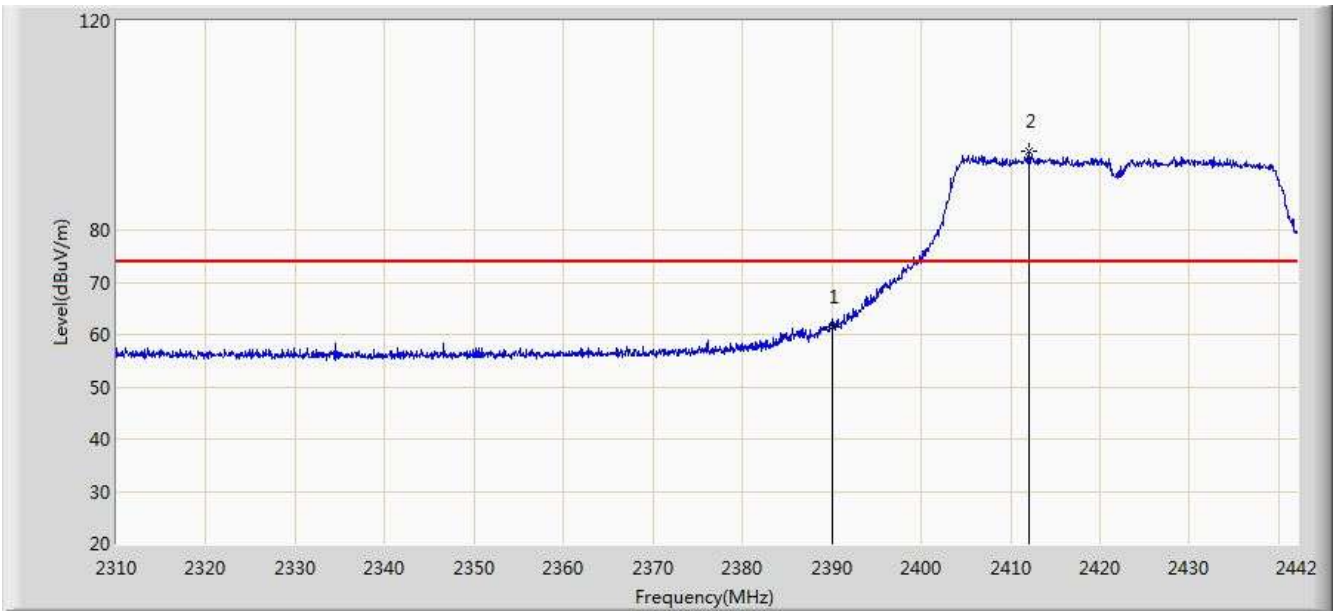
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2438.426	104.656	74.055	N/A	N/A	30.602	PK
2			2483.500	73.793	43.120	-0.207	74.000	30.673	PK
3			2485.312	73.192	42.514	-0.808	74.000	30.678	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:50
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 1	



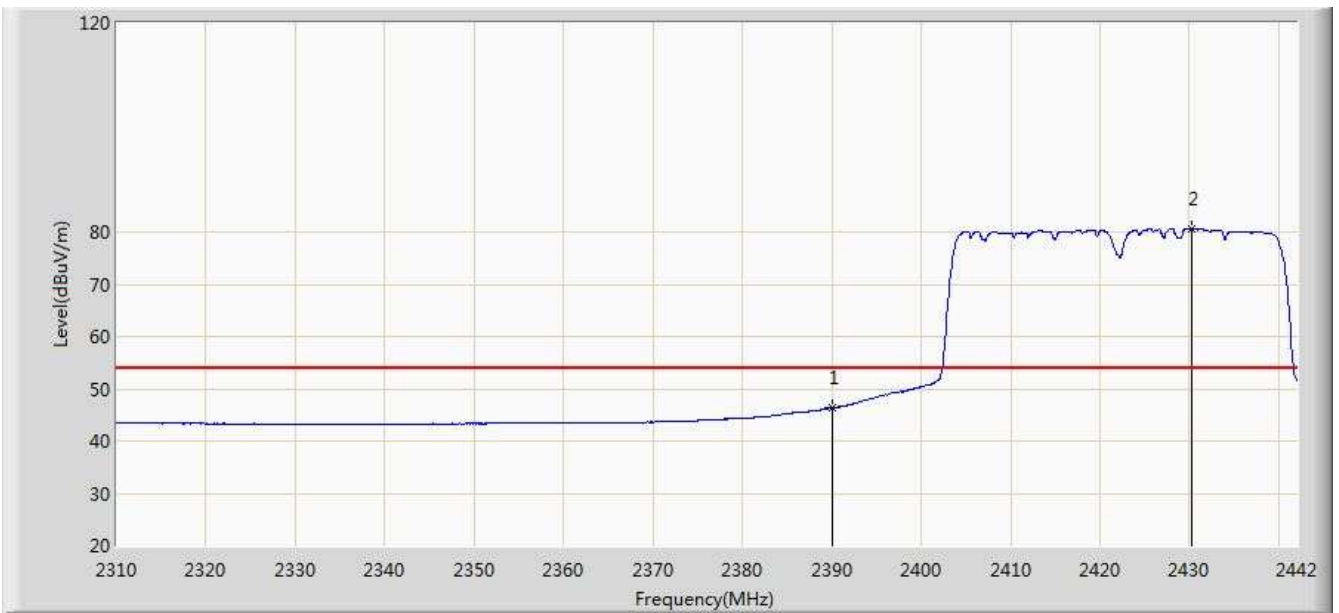
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2439.480	92.221	61.621	N/A	N/A	30.599	AV
2			2483.500	53.285	22.612	-0.715	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:57
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 0+1	



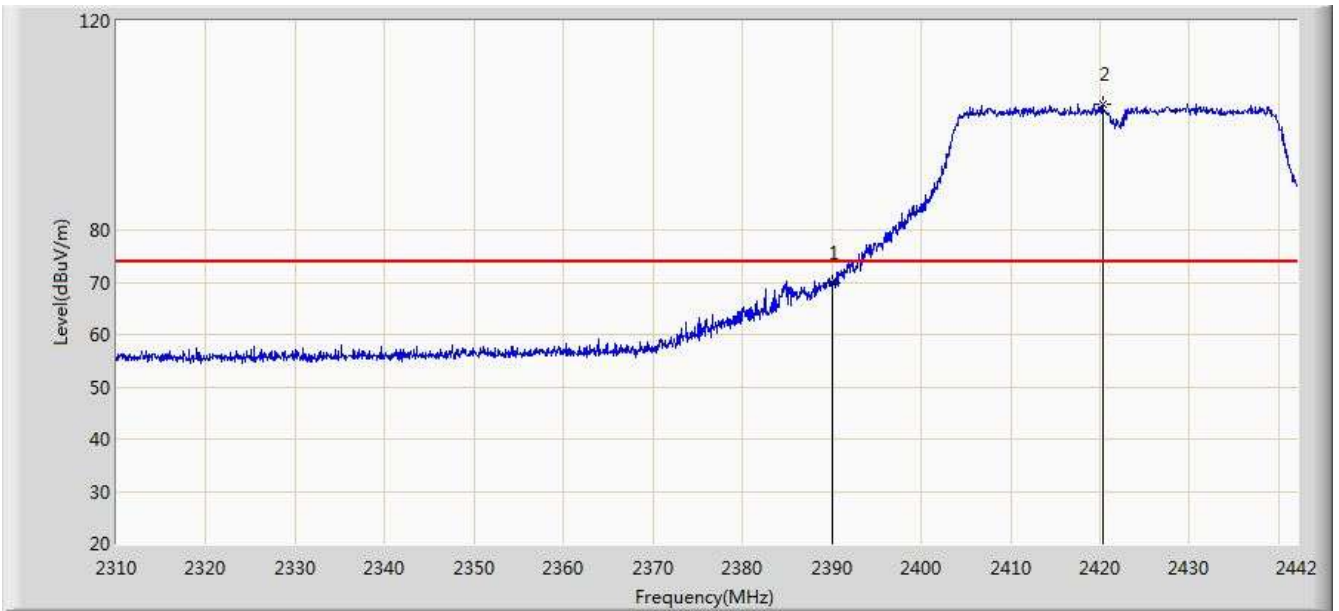
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	61.516	30.832	-12.484	74.000	30.684	PK
2		*	2412.102	95.180	64.535	N/A	N/A	30.645	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 14:58
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 0+1	



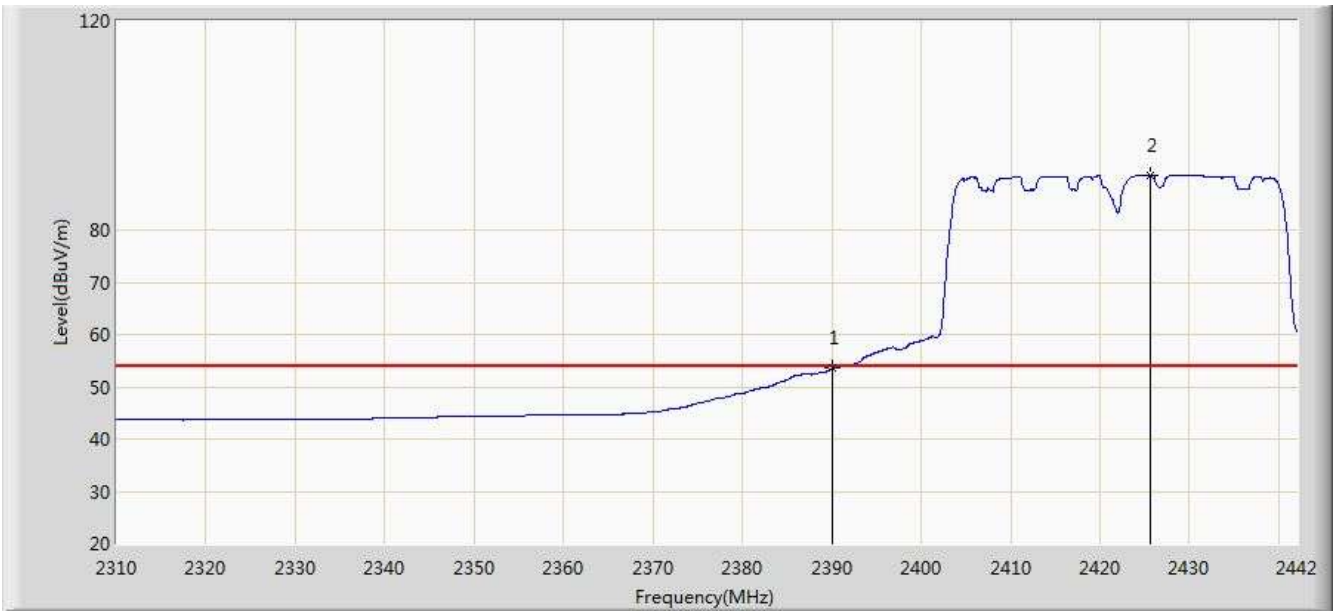
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	46.309	15.625	-7.691	54.000	30.684	AV
2		*	2430.318	80.723	50.107	N/A	N/A	30.615	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 15:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	69.965	39.281	-4.035	74.000	30.684	PK
2		*	2420.286	104.020	73.388	N/A	N/A	30.632	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 15:14
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2422MHz Chain 0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			2390.000	53.508	22.824	-0.492	54.000	30.684	AV
2		*	2425.698	90.362	59.738	N/A	N/A	30.623	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 15:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 0+1	



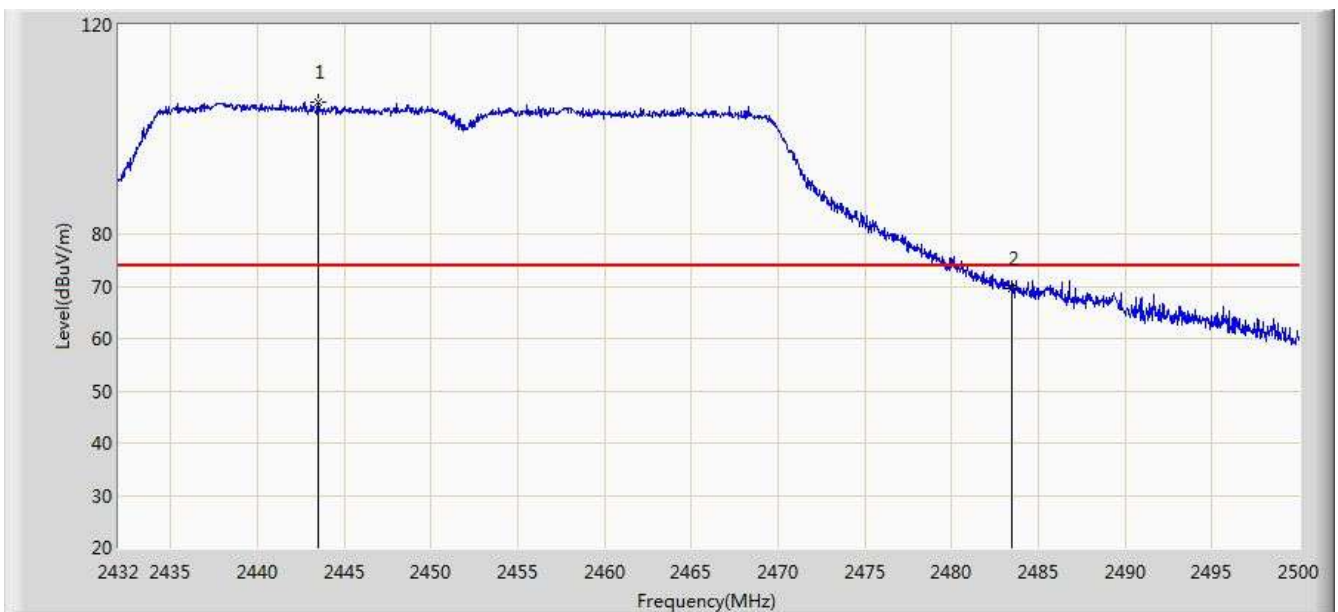
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2444.682	93.526	62.936	N/A	N/A	30.590	PK
2			2483.500	58.850	28.177	-15.150	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 15:24
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2438.528	79.643	49.042	N/A	N/A	30.601	AV
2			2483.500	45.042	14.369	-8.958	54.000	30.673	AV

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 15:39
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2443.526	105.269	74.677	N/A	N/A	30.592	PK
2			2483.500	69.679	39.006	-4.321	74.000	30.673	PK

Engineer: Milo Li	
Site: AC1	Time: 2014/02/08 - 15:40
Limit: FCC_Part15.209_RE(3m)	Margin: 0
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Mode : 802.11n-HT40 Channel 2452MHz Chain 0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2436.624	91.626	61.021	N/A	N/A	30.605	AV
2			2483.500	53.435	22.762	-0.565	54.000	30.673	AV

7.7. AC Conducted Emissions Measurement §15.207; RSS-Gen [7.2.2]

7.7.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dB μ V)	Average (dB μ V)
0.15 - 0.50	66 - 56	56 – 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

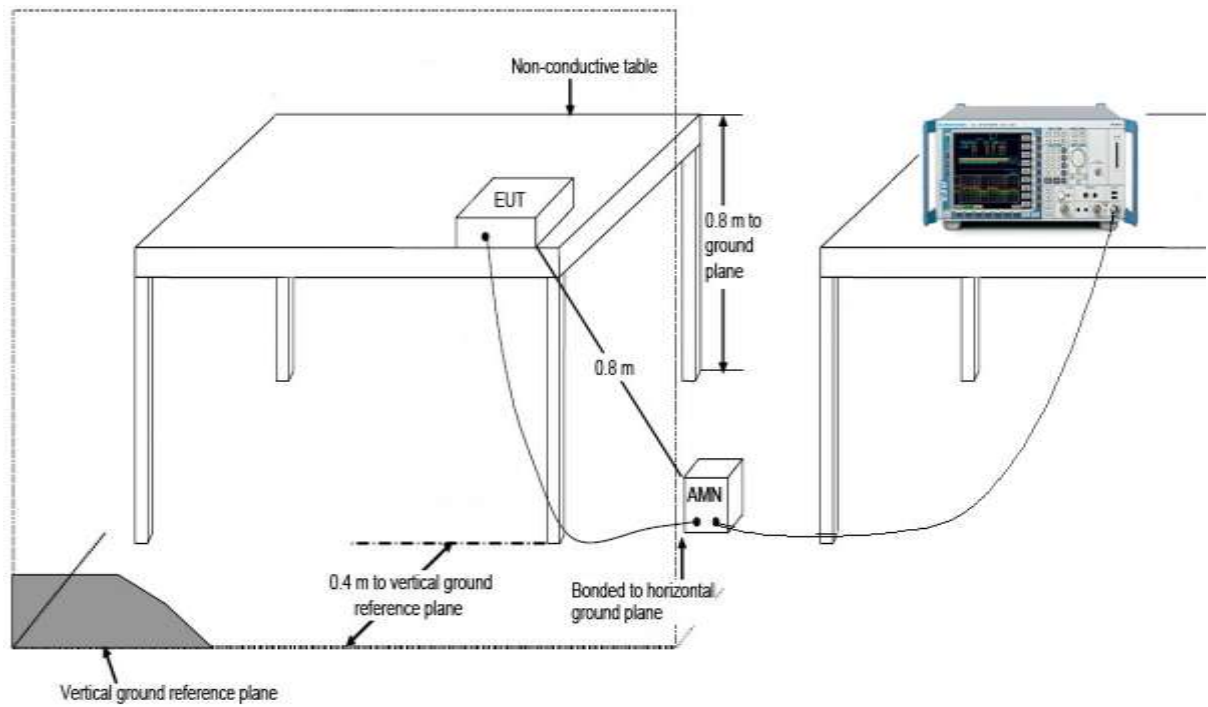
7.7.2. Test Procedure

The EUT was setup according to ANSI C63.4, 2009 and tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.

The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.

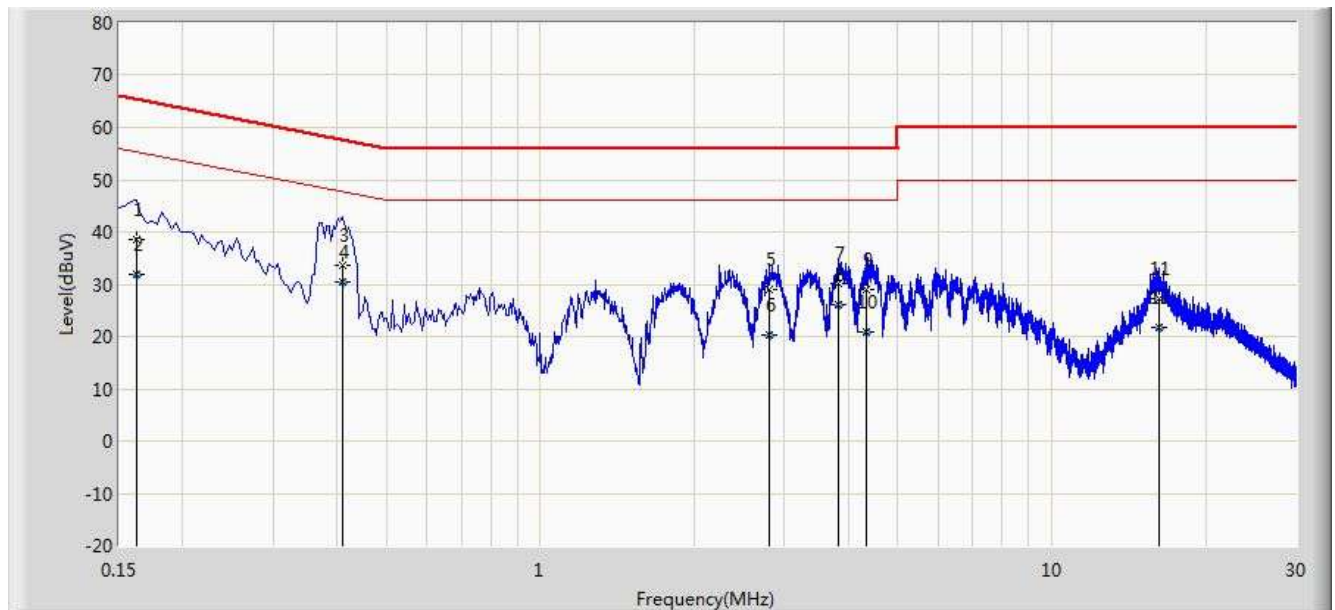
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

7.7.3. Test Setup



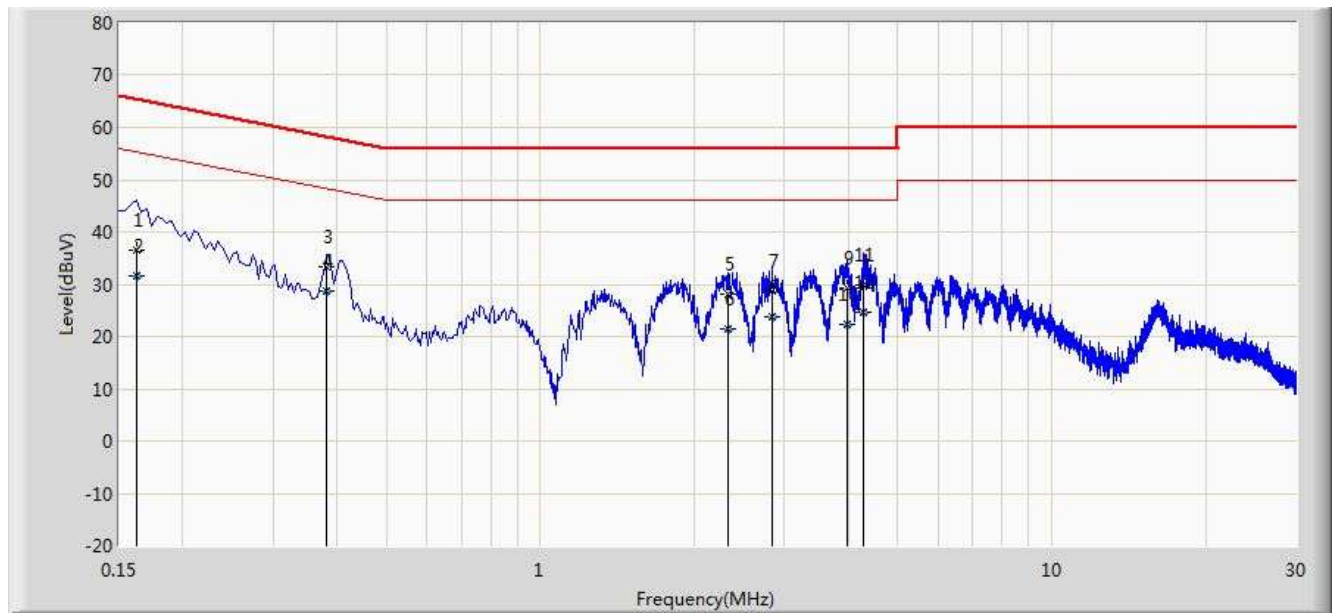
7.7.4. Test Result

Engineer: Roy Cheng	
Site: SR2	Time: 2014/02/17 - 09:24
Limit: FCC_Part15.207	Margin: 0
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Normal Operation	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor	Type
1			0.162	38.524	28.427	-26.837	65.361	10.097	QP
2			0.162	31.963	21.866	-23.398	55.361	10.097	AV
3			0.410	33.689	23.596	-23.959	57.648	10.093	QP
4		*	0.410	30.330	20.237	-17.318	47.648	10.093	AV
5			2.806	28.934	19.086	-27.066	56.000	9.848	QP
6			2.806	20.290	10.442	-25.710	46.000	9.848	AV
7			3.822	30.149	20.191	-25.851	56.000	9.958	QP
8			3.822	26.118	16.160	-19.882	46.000	9.958	AV
9			4.334	28.853	18.873	-27.147	56.000	9.980	QP
10			4.334	20.909	10.929	-25.091	46.000	9.980	AV
11			16.170	27.296	17.221	-32.704	60.000	10.075	QP
12			16.170	21.689	11.614	-28.311	50.000	10.075	AV

Engineer: Roy Cheng	
Site: SR2	Time: 2014/02/17 - 09:29
Limit: FCC_Part15.207	Margin: 0
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER	Power: AC 120V/60Hz
Note: Normal Operation	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor	Type
1			0.162	36.580	26.502	-28.781	65.361	10.078	QP
2			0.162	31.562	21.484	-23.798	55.361	10.078	AV
3			0.382	33.380	23.281	-24.856	58.236	10.099	QP
4		*	0.382	28.808	18.709	-19.428	48.236	10.099	AV
5			2.334	28.048	18.183	-27.952	56.000	9.866	QP
6			2.334	21.329	11.463	-24.671	46.000	9.866	AV
7			2.838	28.551	18.700	-27.449	56.000	9.851	QP
8			2.838	23.702	13.851	-22.298	46.000	9.851	AV
9			3.986	29.250	19.279	-26.750	56.000	9.970	QP
10			3.986	22.416	12.445	-23.584	46.000	9.970	AV
11			4.290	29.786	19.799	-26.214	56.000	9.986	QP
12			4.290	24.603	14.616	-21.397	46.000	9.986	AV

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **WIRELESS-BGN 2X2 NETWORK MINI PCIE ADAPTER IC: 7849A-WLE200N2** is in compliance with RSS-210 of the IC Rules.

The End