



MEASUREMENT REPORT

FCC PART 15.247 WLAN 802.11b/g/n

FCC ID: TK4WLE600VX

APPLICANT: Compex Systems Pte Ltd

Application Type: Certification

Product: 802.11ac Dual Band Module

Model No.: WLE600VX

Trademark: COMPEX

FCC Classification: Digital Transmission System (DTS)

FCC Rule Part(s): Part 15.247

Test Procedure(s): ANSI C63.10-2013, KDB 558074 D01v03r03,
KDB 662911 D01v02r01

Test Date: Mar. 16 ~ Jun. 17, 2015

Reviewed By : Robin Wu
(Robin Wu)

Approved By : Marlin Chen
(Marlin Chen)



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 D01v03r03. 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.

Revision History

Report No.	Version	Description	Issue Date
1503RSU02901	Rev. 01	Initial report	06-17-2015

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§2.1033 General Information

Applicant:	Compex Systems Pte Ltd
Applicant Address:	135, Joo Seng Road, #08-01 Singapore 368363
Manufacturer:	Compex Systems Pte Ltd
Manufacturer Address:	135, Joo Seng Road, #08-01 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 Registration No.:	809388
FCC Rule Part(s):	Part 15.247
Model No.:	WLE600VX
FCC ID:	TK4WLE600VX
Test Device Serial No.:	N/A <input type="checkbox"/> Production <input checked="" type="checkbox"/> Pre-Production <input type="checkbox"/> Engineering
FCC Classification:	Digital Transmission System (DTS)

Test Facility / Accreditations

Measurements were performed at MRT Laboratory located in Tian'edang Rd., Suzhou, China.

- MRT facility is a FCC registered (MRT Reg. No. 809388) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules.
- MRT facility is an IC registered (MRT Reg. No. 11384A-1) test laboratory with the site description on file at Industry Canada.
- MRT facility is a VCCI registered (R-4179, G-814, C-4664, T-2206) test laboratory with the site description on file at VCCI Council.
- MRT Lab is accredited to ISO 17025 by the American Association for Laboratory Accreditation (A2LA) under the American Association for Laboratory Accreditation Program (A2LA Cert. No. 3628.01) in EMC, Telecommunications and Radio testing for FCC, Industry Canada, EU and TELEC Rules.



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	802.11ac Dual Band Module
Model No.	WLE600VX
Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462 MHz 802.11n-HT40: 2422 ~ 2452 MHz
Maximum Output Power	802.11b: 22.42dBm 802.11g: 21.56dBm 802.11n-HT20: 24.22dBm 802.11n-HT40: 23.54dBm
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM

2.2. Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r03
- ANSI C63.10-2013

Note:

1. All the test items were verified and recorded according to the standards and without any deviation during the test.
2. FCC permits the use of the 1.5 meter table as an alternative in ANSI C63.10-2013 through inquiry tracking number 198796.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B recorded in a separate report.

2.3. Operation Frequency / Channel List

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

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. Description of Available Antennas


Antenna Type	Manufacturer	Tx Paths	Max Directional Gain (dBi)
Panel Antenna 1#	Compex Systems Pte Ltd	2	2.4GHz: 11.0
Panel Antenna 2#	Kenbotong Communication LTD	2	2.4GHz: 10.0 5GHz: 10.0
Panel Antenna 3#	Smart Ant Inc	2	2.4GHz: 7.0 5GHz: 7.0
Panel Antenna 4#	TAOGLAS Inc	2	2.4GHz: 4.5 5GHz: 6.7
Panel Antenna 5#	Compex Systems Pte Ltd	2	2.4GHz: 5.0 5GHz: 5.0
Panel Antenna 6#	Compex Systems Pte Ltd	2	2.4GHz: 5.0 5GHz: 5.0
Dipole Antenna 1#	Kunshan Wavelink Electronic Co., Ltd.	2	2.4GHz: 2.0 5GHz: 2.0

Note 1: The device didn't support transmit beam-forming mode and Cyclic Delay Diversity (CDD) mode, and the transmit signals are uncorrected, so no add array gain to the band power and band PSD.

Note 2: We selected the panel antenna 1# and dipole antenna 1# for all radiated emission testing.

2.5. Description of Antenna RF Port

--	2.4/5GHz Antenna RF Port	
	2.4/5GHz	2.4/5GHz
Software Control Port	Ant 0	Ant 1

Antenna RF Port Plot


2.6. Test Mode

Test Mode	Mode 1: Transmit by 802.11b
	Mode 2: Transmit by 802.11g
	Mode 3: Transmit by 802.11n-HT20
	Mode 4: Transmit by 802.11n-HT40

2.7. Test Software

The test utility software used during testing was “ART2-GUI Version: 2.3”.

Final Power Parameter Value of the test software.

Test Mode	Test Frequency (MHz)	Power Parameter Value		
		Ant 0	Ant 1	Ant 0 + 1
Dipole Antenna 1#				
802.11b	2412	20.0	20.0	Not Support
	2437	20.0	20.0	
	2462	20.0	20.0	
802.11g	2412	17.0	16.5	Not Support
	2437	20.0	20.0	
	2462	17.5	17.0	
802.11n-HT20	2412	17.0	17.0	15.0
	2437	20.0	20.0	20.0
	2462	17.5	17.0	15.5
802.11n-HT40	2422	17.0	17.0	14.0
	2437	20.0	20.0	20.0
	2452	16.5	15.5	14.5

Test Mode	Test Frequency (MHz)	Power Parameter Value		
		Ant 0	Ant 1	Ant 0 + 1
Panel Antenna 1#				
802.11b	2412	19.0	18.0	Not Support
	2437	20.0	20.0	
	2462	20.0	20.0	
802.11g	2412	13.5	14.0	Not Support
	2437	18.0	18.0	
	2462	16.0	15.0	
802.11n-HT20	2412	13.5	13.0	11.5
	2437	18.0	18.0	17.0
	2462	15.5	14.0	13.5
802.11n-HT40	2422	10.5	9.5	10.0
	2437	16.0	16.0	15.0
	2452	11.0	11.0	10.0

Note: We use the max power parameter value to test during the process of the Occupied Bandwidth & Output Power & Power Density testing.

2.8. Device Capabilities

This device contains the following capabilities:

2.4GHz WLAN (DTS) and 5GHz WLAN (UNII)

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 = Average per the guidance of Section 6.0 b) of KDB 558074 D01v03r03. 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:

Test Mode	Duty Cycle
802.11b	99.0%
802.11g	96.9%
802.11n-HT20	96.9%
802.11n-HT40	95.6%
802.11 b – Duty Cycle	802.11 g – Duty Cycle
802.11 n-HT20 – Duty Cycle	802.11 n-HT40 – Duty Cycle

2.9. Test Configuration

The **802.11ac Dual Band Module FCC ID: TK4WLE600VX** was tested per the guidance of KDB 558074 D01v03r03. ANSI C63.10-2013 was used to reference the appropriate EUT setup for radiated spurious emissions testing and AC line conducted testing.

2.10. EMI Suppression Device(s)/Modifications

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

2.11. 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 C63.10-2013), and the guidance provided in KDB 558074 D01v03r03 were used in the measurement of the **802.11ac Dual Band Module FCC ID: TK4WLE600VX**.

Deviation from measurement procedure.....None

3.2. AC Line Conducted Emissions

The line-conducted facility is located inside an 8'x4'x4' shielded enclosure. 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, 50Ω/50uH 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. 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 data exchange speed, 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 are used for final measurements on the same test site. The analyzer is set to CISPR quasi-peak and average detectors with a 9kHz resolution bandwidth for final measurements.

An extension cord was used to connect to a single LISN which powered by EUT. The extension cord was calibrated with LISN, the impedance and insertion loss are compliance with the requirements as stated in ANSI C63.10-2013.

Line conducted emissions test results are shown in Section 7.8.

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. A 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 for frequencies below 1GHz was placed on top of the 0.8 meter high, 1 x 1.5 meter table; and test set-up for frequencies 1-25GHz was placed on top of the 1.5 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 Beam-Width 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 **802.11ac Dual Band Module** uses a unique connector.

Antenna Type	Antenna Connector Type
Panel Antenna 1#	IPEX connector
Panel Antenna 2#	Inverted connector
Panel Antenna 3#	Inverted connector
Panel Antenna 4#	IPEX connector
Panel Antenna 5#	IPEX connector
Panel Antenna 6#	IPEX connector
Dipole Antenna 1#	IPEX connector

Conclusion:

The **802.11ac Dual Band Module FCC ID: TK4WLE600VX** unit complies with the requirement of §15.203.

5. TEST EQUIPMENT CALIBRATION DATE

Conducted Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2015/11/07
Two-Line V-Network	R&S	ENV216	MRTSUE06002	1 year	2015/11/07
Two-Line V-Network	R&S	ENV216	MRTSUE06003	1 year	2015/11/07
Temperature/ Meter Humidity	Anymetre	TH101B	MRTSUE06045	1 year	2015/11/14

Radiated Emission

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	E4447A	MRTSUE06028	1 year	2015/10/09
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2015/11/07
Preamplifier	Schwarzbeck	AP18G40	MRTSUE06121	1 year	2016/04/15
Preamplifier	Agilent	83017A	MRTSUE06019	1 year	2015/12/13
Loop Antenna	Schwarzbeck	FMZB1519	MRTSUE06025	1 year	2015/11/08
TRILOG Antenna	Schwarzbeck	VULB9162	MRTSUE06022	1 year	2015/11/08
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2015/11/08
Broadband Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06024	1 year	2016/01/05
Temperature/Humidity Meter	Anymetre	TH101B	MRTSUE06048	1 year	2015/11/14

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2016/04/23
USB Wideband Power Sensor	Boonton	55006	MRTSUE06109	1 year	2015/10/15
Temperature/Humidity Meter	Anymetre	TH101B	MRTSUE06046	1 year	2015/11/14

Software	Version	Function
e3	V8.3.5	EMI Test Software

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: 3.46dB
Radiated Emission Measurement
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 9kHz ~ 1GHz: 4.18dB 1GHz ~ 25GHz: 4.76dB

7. TEST RESULT

7.1. Summary

Company Name: Compex Systems Pte Ltd
FCC ID: TK4WLE600VX
FCC Classification: Digital Transmission System (DTS)
Data Rate(s) Tested: 1Mbps ~ 11Mbps (b);
6Mbps ~ 54Mbps (g);
6.5/7.2Mbps ~ 195/216.7Mbps (n-HT20);
13.5/15Mbps ~ 405/450Mbps (n-HT40)

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.247(a)(2)	6dB Bandwidth	$\geq 500\text{kHz}$	Conducted	Pass	Section 7.2
15.247(b)(3)	Output Power	$\leq 30\text{dBm}$		Pass	Section 7.3
15.247(e)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$		Pass	Section 7.4
15.247(d)	Band Edge / Out-of-Band Emissions	$\geq 30\text{dBc(Average)}$		Pass	Section 7.5
15.205 15.209	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 & 7.7
15.207	AC Conducted Emissions 150kHz - 30MHz	< FCC 15.207 limits	Line Conducted	Pass	Section 7.8

Notes:

- 1) All modes of operation and data rates were investigated. For radiated emission test, every axis (X, Y, Z) was also verified. 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

7.2.1. Test Limit

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

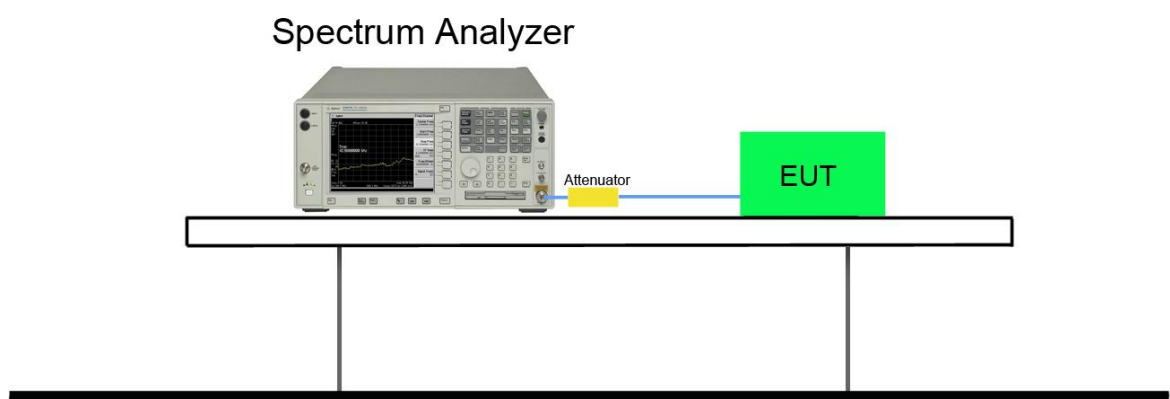
7.2.2. Test Procedure used

KDB 558074 D01v03r02 – 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

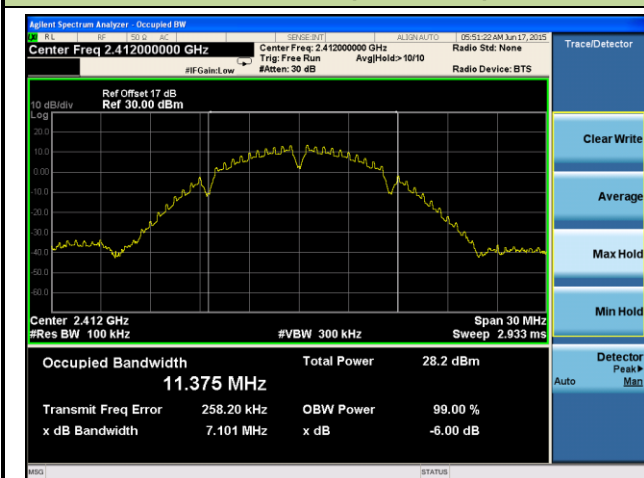


7.2.5. Test Result

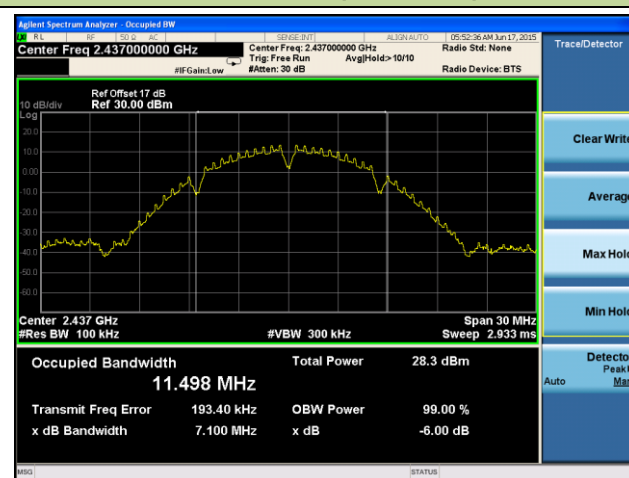
Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	1	01	2412	7.10	≥ 0.5	Pass
802.11b	1	06	2437	7.10	≥ 0.5	Pass
802.11b	1	11	2462	7.10	≥ 0.5	Pass
802.11g	6	01	2412	16.34	≥ 0.5	Pass
802.11g	6	06	2437	16.36	≥ 0.5	Pass
802.11g	6	11	2462	16.34	≥ 0.5	Pass
802.11n-HT20	6.5	01	2412	17.34	≥ 0.5	Pass
802.11n-HT20	6.5	06	2437	17.29	≥ 0.5	Pass
802.11n-HT20	6.5	11	2462	17.58	≥ 0.5	Pass
802.11n-HT40	13.5	03	2422	35.72	≥ 0.5	Pass
802.11n-HT40	13.5	06	2437	35.50	≥ 0.5	Pass
802.11n-HT40	13.5	09	2452	35.75	≥ 0.5	Pass

802.11b 6dB Bandwidth

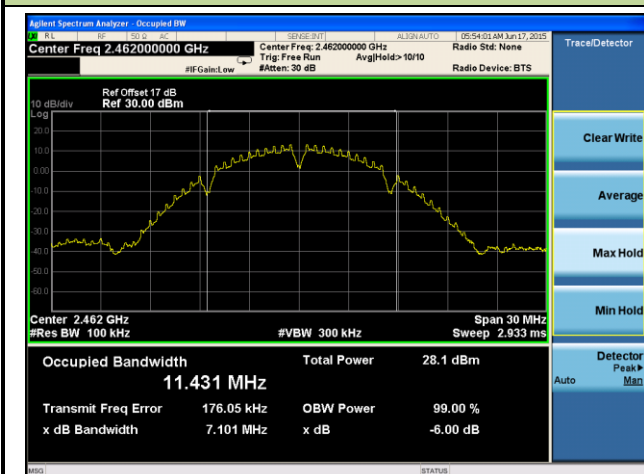
Channel 01 (2412MHz)



Channel 06 (2437MHz)

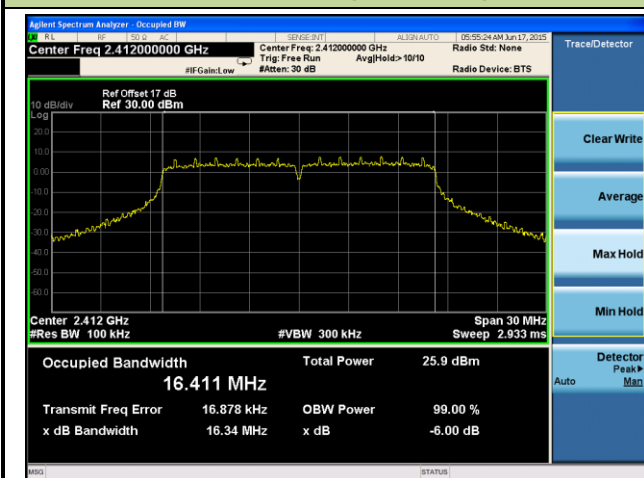


Channel 11 (2462MHz)

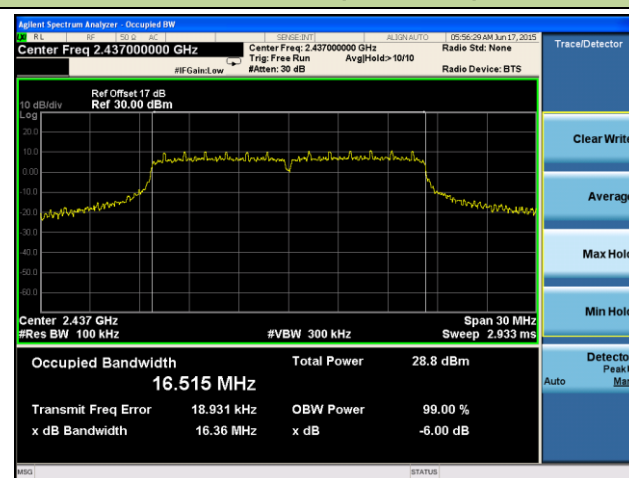


802.11g 6dB Bandwidth

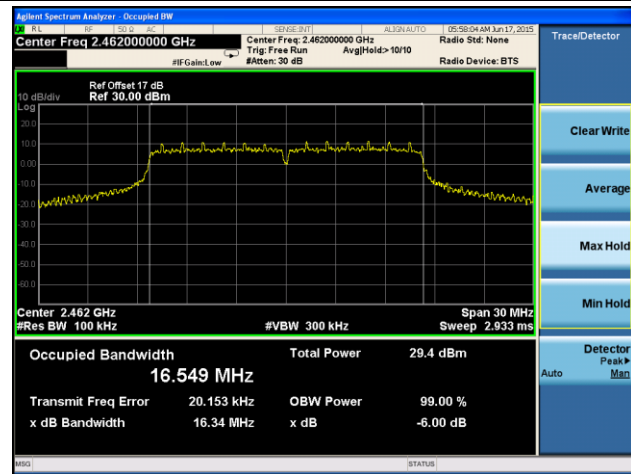
Channel 01 (2412MHz)



Channel 06 (2437MHz)

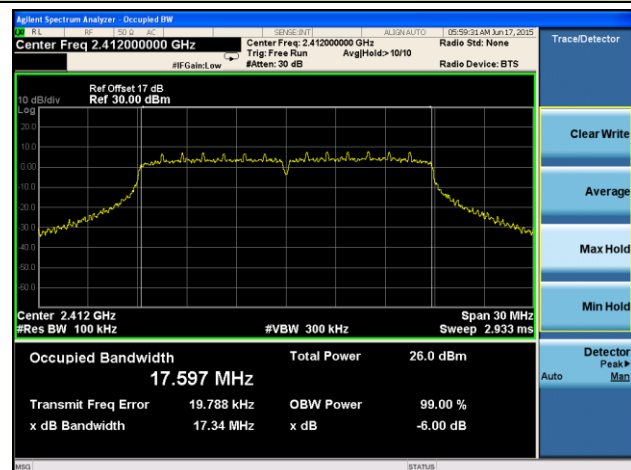


Channel 11 (2462MHz)

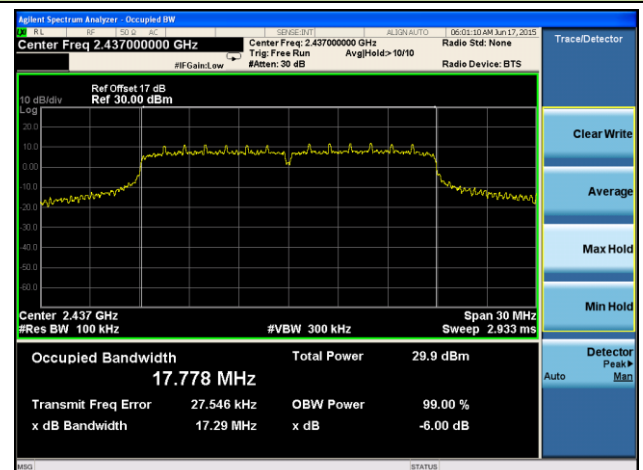


802.11n-HT20 6dB Bandwidth

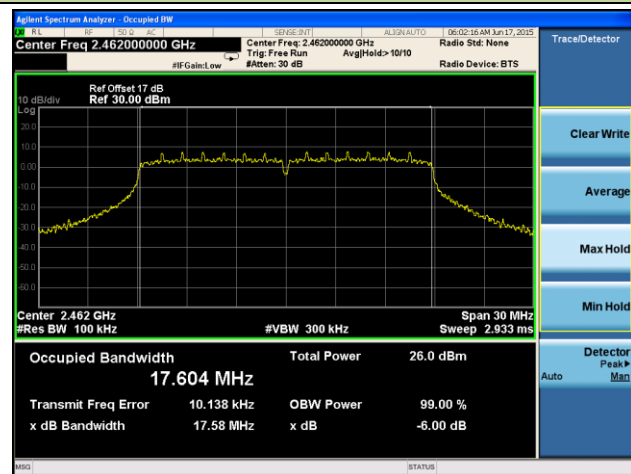
Channel 01 (2412MHz)



Channel 06 (2437MHz)

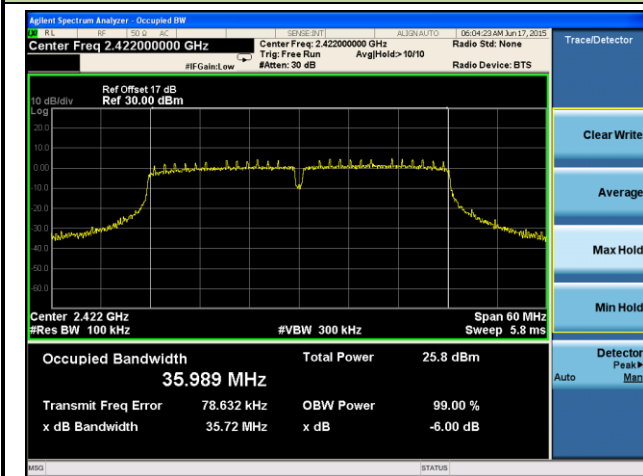


Channel 11 (2462MHz)

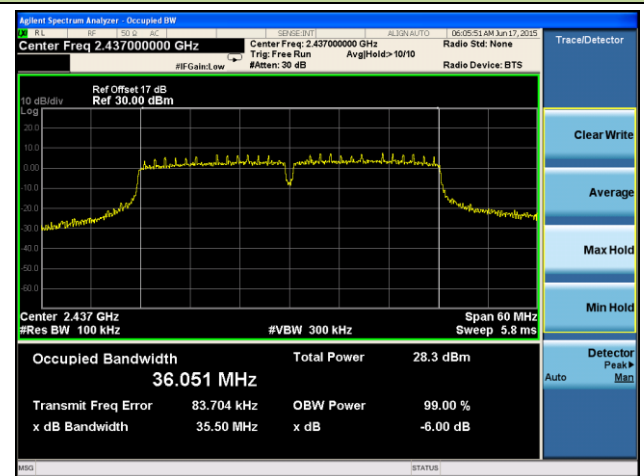


802.11n-HT40 6dB Bandwidth

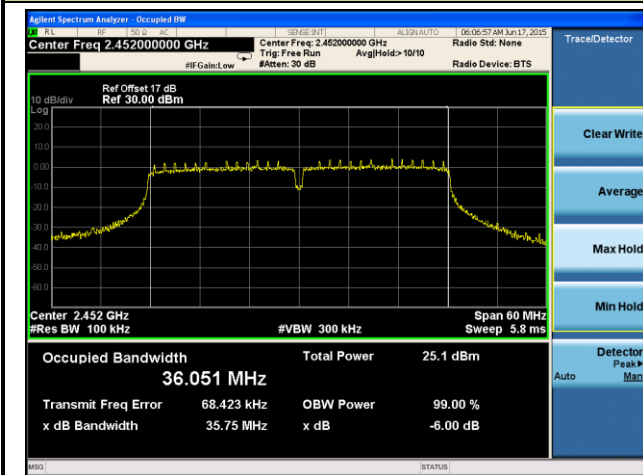
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



7.3. Output Power Measurement

7.3.1. Test Limit

The maximum output power shall be less 1 Watt (30dBm).

The conducted output power limit is based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For fixed point-to-point operation, systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Dipole Antenna 1#: Power Limit = 30dBm;

Panel Antenna 1#: Power Limit = $30\text{dBm} - (11\text{dBi} - 6\text{dBi})/3 = 28.33\text{dBm}$;

7.3.2. Test Procedure Used

KDB 558074 D01v03r02 - Section 9.2.3.2 AVGPM-G Average Power Method

7.3.3. Test Setting

Average Power Measurement

Average 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 power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter. The trace was averaged over 100 traces to obtain the final measured average power.

7.3.4. Test Setup



7.3.5. Test Result of Output Power

Output power at various data rates for Ant 0 / Ant 0 + 1:

Test Mode	Bandwidth (MHz)	Channel No.	Frequency (MHz)	Data Rate (Mbps)	Average Power (dBm)
802.11b	20	6	2437	1	22.20
				5.5	21.74
				11	21.28
802.11g	20	6	2437	6	21.42
				24	21.11
				54	20.66
802.11n	20	6	2437	13	21.39
				14.4	21.13
				19.5	20.82
				52	20.69
				57.8	20.51
				156	20.33
				130	20.14
				144	19.85
				195	19.71
802.11n	40	6	2437	27	20.25
				30	20.06
				40.5	19.72
				108	19.52
				120	19.43
				324	19.20
				270	19.05
				300	18.85
				405	18.61

Test Result of Average Output Power

1Tx

Test Mode	N _{Tx}	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Limit (dBm)	Result
11b	1	1	1	2412	22.42	22.26	≤ 28.33	Pass
11b	1	1	6	2437	22.20	22.04	≤ 28.33	Pass
11b	1	1	11	2462	21.81	21.69	≤ 28.33	Pass
11g	1	6	1	2412	19.26	18.75	≤ 28.33	Pass
11g	1	6	6	2437	21.42	21.56	≤ 28.33	Pass
11g	1	6	11	2462	18.51	18.41	≤ 28.33	Pass
11n-HT20	1	6.5	1	2412	19.03	18.89	≤ 28.33	Pass
11n-HT20	1	6.5	6	2437	21.39	21.30	≤ 28.33	Pass
11n-HT20	1	6.5	11	2462	18.34	18.29	≤ 28.33	Pass
11n-HT40	1	13.5	3	2422	17.71	17.52	≤ 28.33	Pass
11n-HT40	1	13.5	6	2437	20.25	20.13	≤ 28.33	Pass
11n-HT40	1	13.5	9	2452	16.78	16.31	≤ 28.33	Pass

2Tx

Test Mode	N _{Tx}	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Limit (dBm)	Result
11n-HT20	2	13	1	2412	16.92	16.78	19.86	≤ 28.33	Pass
11n-HT20	2	13	6	2437	21.29	21.12	24.22	≤ 28.33	Pass
11n-HT20	2	13	11	2462	16.78	16.56	19.68	≤ 28.33	Pass
11n-HT40	2	27	3	2422	15.30	15.13	18.23	≤ 28.33	Pass
11n-HT40	2	27	6	2437	20.58	20.47	23.54	≤ 28.33	Pass
11n-HT40	2	27	9	2452	15.71	15.85	18.79	≤ 28.33	Pass

Note: Total Average Power (dBm) = $10 \cdot \log\{10^{(\text{Ant 0 Average Power}/10)} + 10^{(\text{Ant 1 Average Power}/10)}\}$ (dBm).

7.4. Power Spectral Density Measurement

7.4.1. Test Limit

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

For 2.412~2.462GHz Band:

Dipole Antenna 1#: Limit (dBm) = 8dBm/3kHz;

Panel Antenna 1#: Limit (dBm) = 8dBm/3kHz – (11dBi – 6dBi)/3 = 6.33dBm/3kHz;

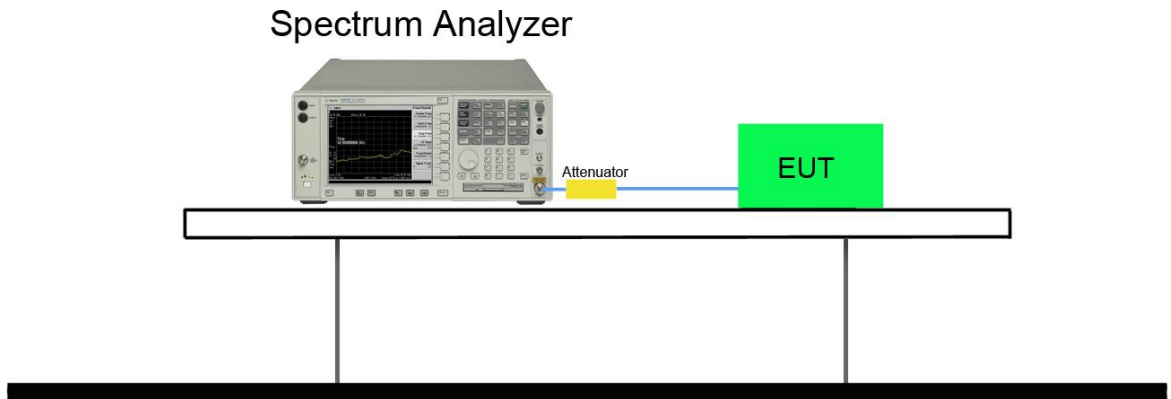
7.4.2. Test Procedure Used

KDB 558074 D01v03r02 - Section 10.5 Method PSD

7.4.3. Test Setting

1. Measure the duty cycle (x) of the transmitter output signal
2. Set instrument center frequency to DTS channel center frequency.
3. Set span to at least 1.5 times the OBW.
4. RBW = 10kHz
5. VBW = 30kHz
6. Detector = RMS
7. Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span/RBW}$.
8. Sweep time = auto couple
9. Don't use sweep triggering. Allow sweep to "free run".
10. Employ trace averaging (RMS) mode over a minimum of 100 traces.
11. Use the peak marker function to determine the maximum amplitude level.
12. Add $10 \log (1/x)$, where x is the duty cycle measured in step (a, to the measured PSD to compute the average PSD during the actual transmission time.
13. Add Constant Factor = $10 \cdot \log(3\text{kHz} / 10\text{kHz}) = -5.23$

7.4.4. Test Setup



7.4.5. Test Result

1Tx

Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm / 10kHz)	Ant 1 PSD (dBm / 10kHz)	Duty Cycle (%)	Constant Factor	Max PSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
11b	1	1	2412	-4.00	-4.31	99.0	-5.23	-9.23	≤ 6.33	Pass
11b	1	6	2437	-4.03	-3.95	99.0	-5.23	-9.18	≤ 6.33	Pass
11b	1	11	2462	-3.93	-3.94	99.0	-5.23	-9.16	≤ 6.33	Pass
11g	6	1	2412	-10.90	-12.01	96.9	-5.23	-15.99	≤ 6.33	Pass
11g	6	6	2437	-8.27	-7.58	96.9	-5.23	-12.67	≤ 6.33	Pass
11g	6	11	2462	-10.77	-11.19	96.9	-5.23	-15.86	≤ 6.33	Pass
11n-HT20	6.5	1	2412	-11.21	-11.46	96.9	-5.23	-16.30	≤ 6.33	Pass
11n-HT20	6.5	6	2437	-8.55	-8.23	96.9	-5.23	-13.32	≤ 6.33	Pass
11n-HT20	6.5	11	2462	-11.33	-11.81	96.9	-5.23	-16.42	≤ 6.33	Pass
11n-HT40	13.5	3	2422	-14.27	-14.40	95.6	-5.23	-19.30	≤ 6.33	Pass
11n-HT40	13.5	6	2437	-11.91	-11.81	95.6	-5.23	-16.84	≤ 6.33	Pass
11n-HT40	13.5	9	2452	-15.11	-15.75	95.6	-5.23	-20.14	≤ 6.33	Pass

Note: When EUT duty cycle < 98%, the max PSD = the PSD + 10*log(1/duty cycle) + Constant Factor.

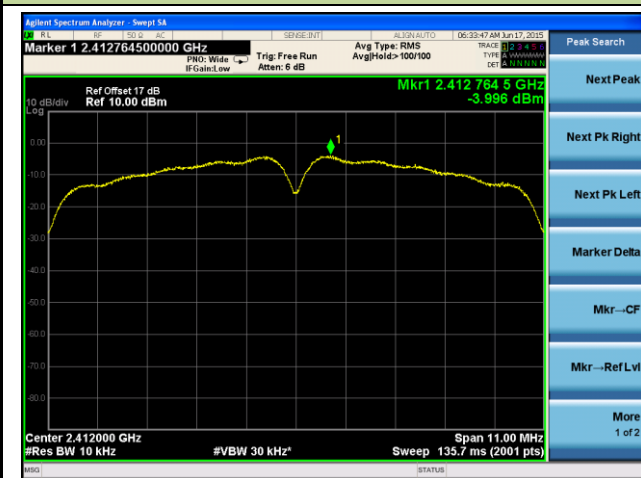
2Tx

Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm / 10kHz)	Ant 1 PSD (dBm / 10kHz)	Duty Cycle (%)	Constant Factor	Total PSD (dBm / 3kHz)	Limit (dBm / 3kHz)	Result
11n-HT20	13	1	2412	-12.13	-12.17	96.9	-5.23	-14.23	≤ 6.33	Pass
11n-HT20	13	6	2437	-8.12	-7.97	96.9	-5.23	-10.13	≤ 6.33	Pass
11n-HT20	13	11	2462	-10.64	-12.07	96.9	-5.23	-13.38	≤ 6.33	Pass
11n-HT40	27	3	2422	-16.28	-16.03	95.6	-5.23	-18.18	≤ 6.33	Pass
11n-HT40	27	6	2437	-11.63	-11.54	95.6	-5.23	-13.61	≤ 6.33	Pass
11n-HT40	27	9	2452	-16.64	-15.82	95.6	-5.23	-18.23	≤ 6.33	Pass

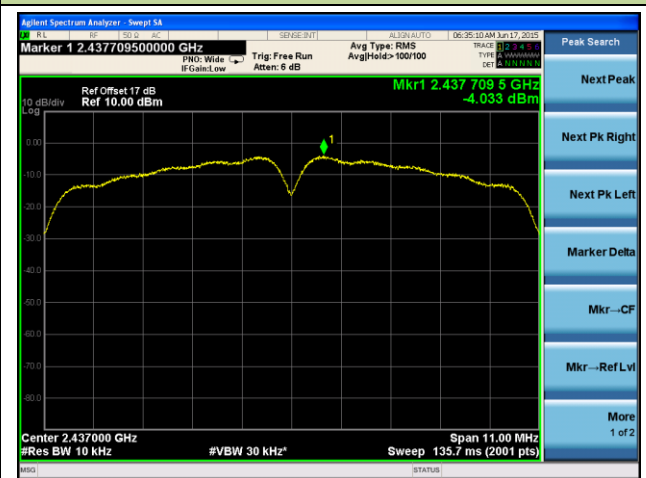
Note: When EUT duty cycle < 98%, the total PSD = $10 \cdot \log\{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)}\} + 10 \cdot \log(1/\text{duty cycle}) + \text{Constant Factor}$.

802.11b PSD - Ant 0

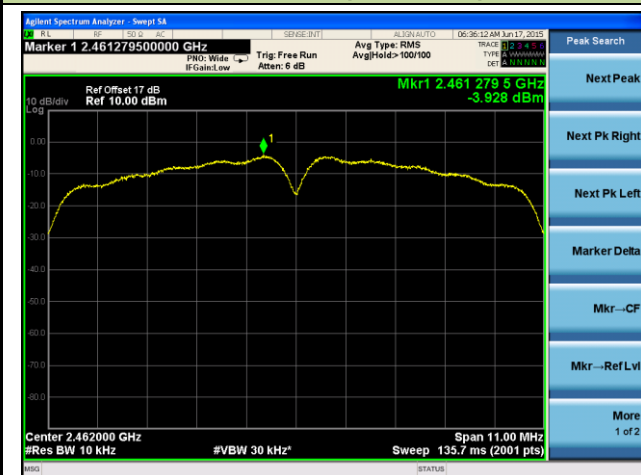
Channel 01 (2412MHz)



Channel 06 (2437MHz)

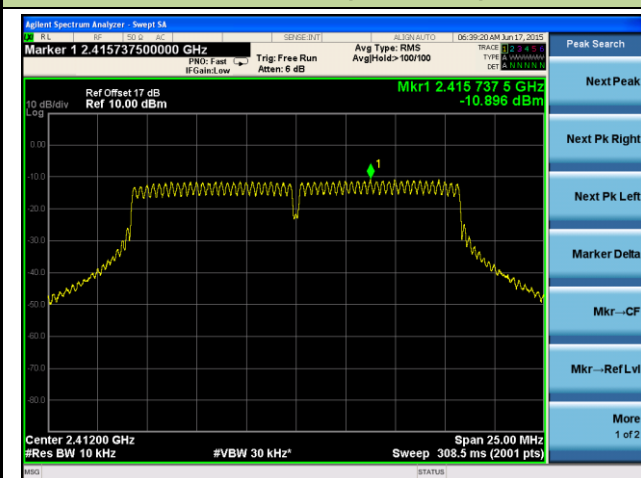


Channel 11 (2462MHz)

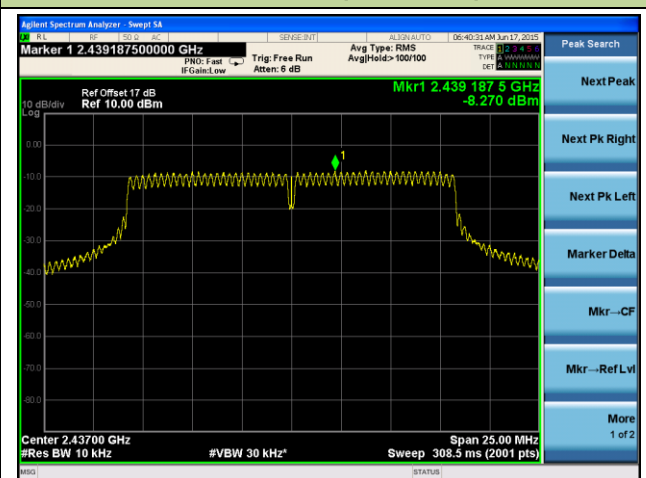


802.11g PSD - Ant 0

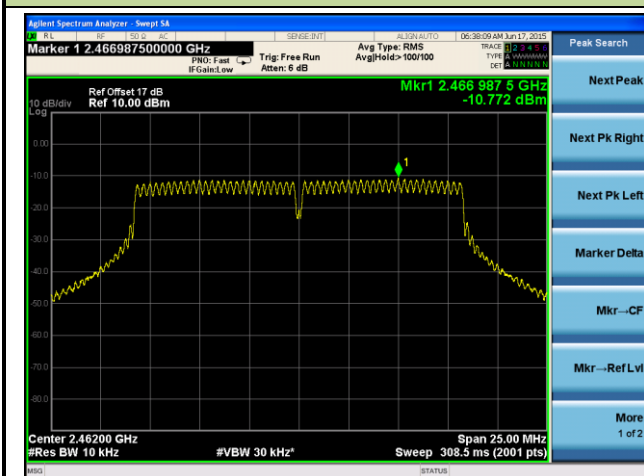
Channel 01 (2412MHz)



Channel 06 (2437MHz)

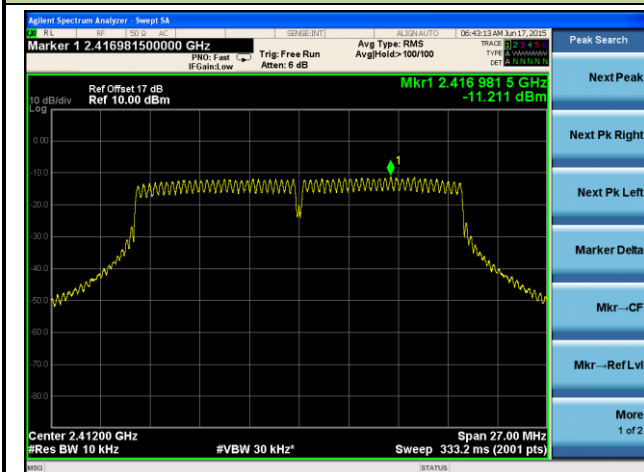


Channel 11 (2462MHz)

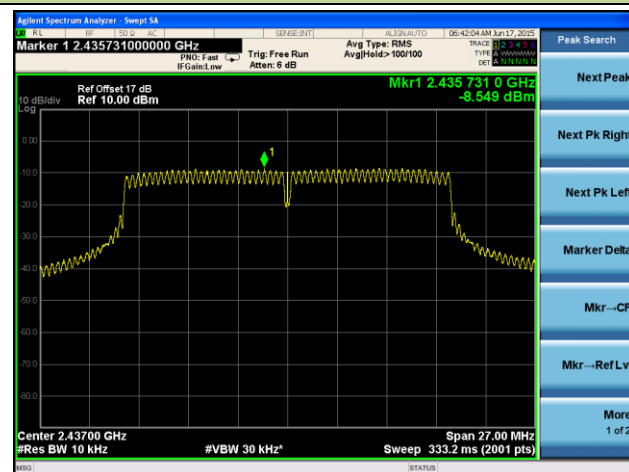


802.11n-HT20 PSD - Ant 0

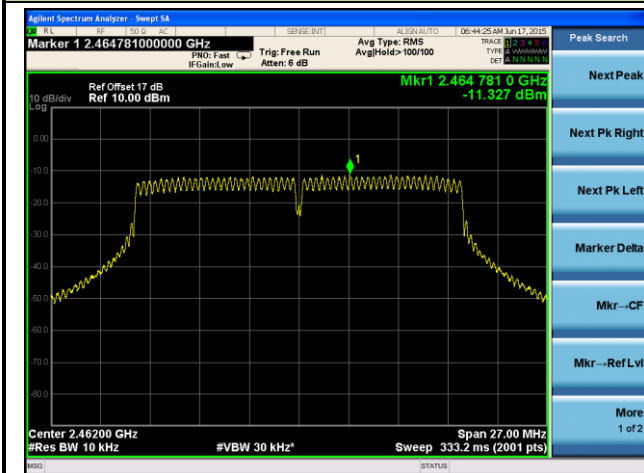
Channel 01 (2412MHz)



Channel 06 (2437MHz)

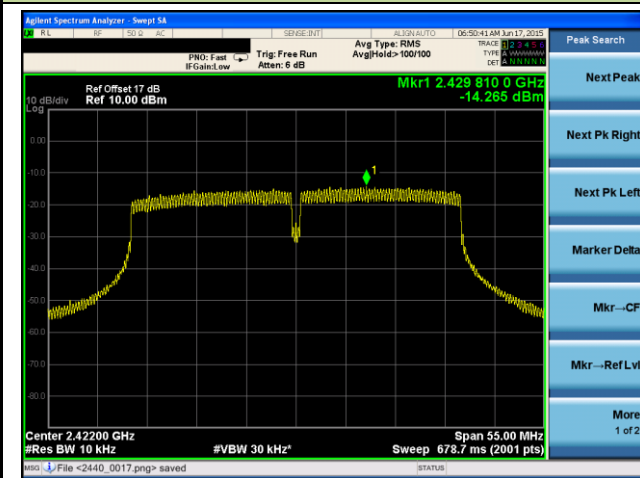


Channel 11 (2462MHz)

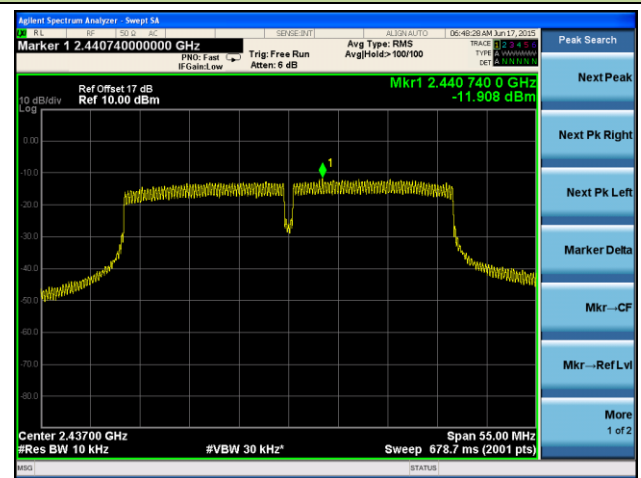


802.11n-HT40 PSD - Ant 0

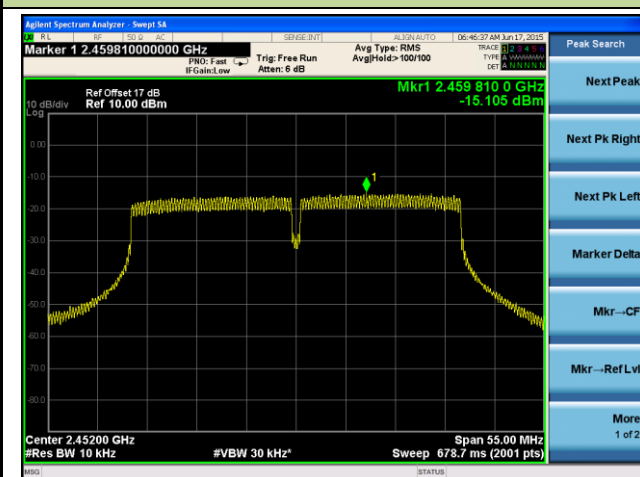
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)

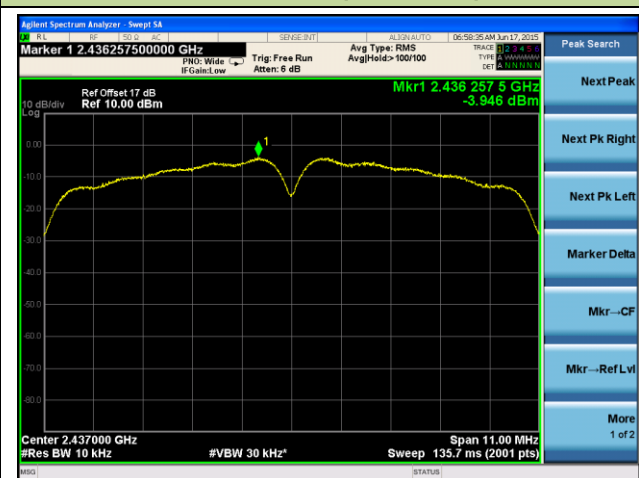


802.11b PSD - Ant 1

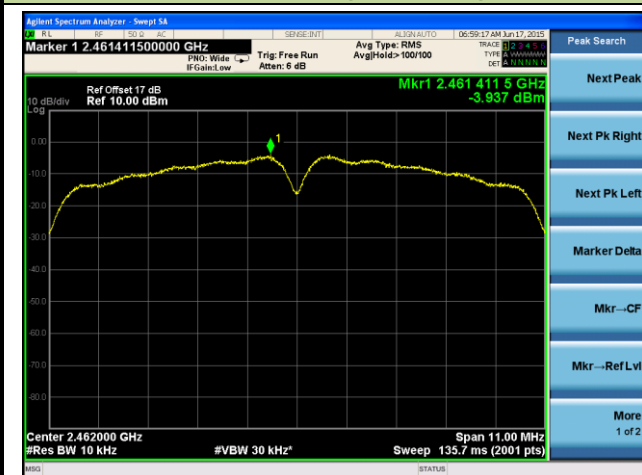
Channel 01 (2412MHz)



Channel 06 (2437MHz)

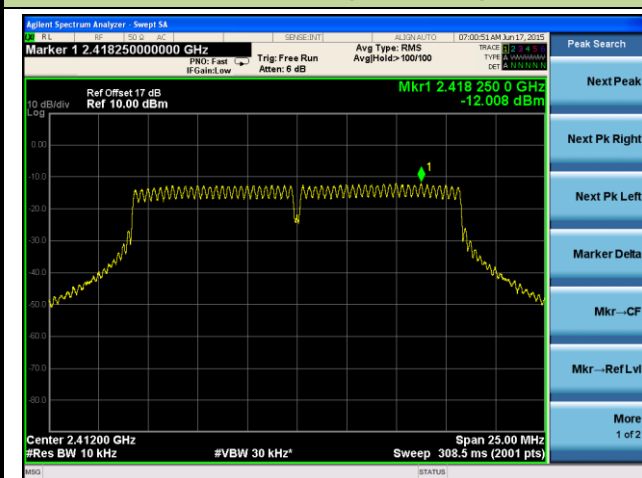


Channel 11 (2462MHz)

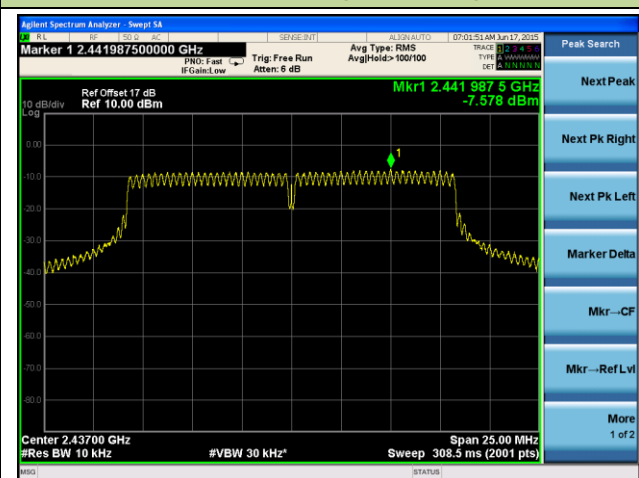


802.11g PSD - Ant 1

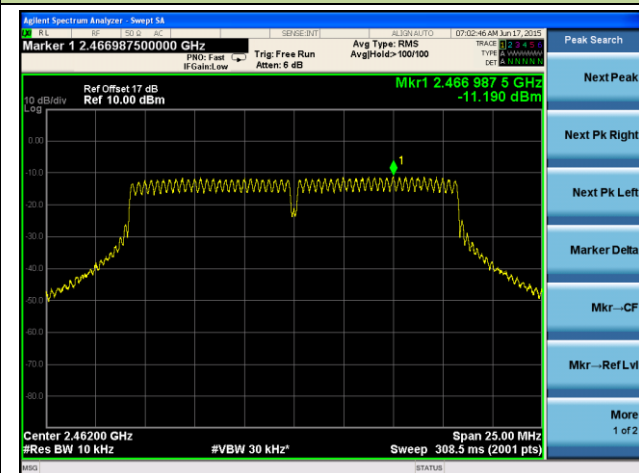
Channel 01 (2412MHz)



Channel 06 (2437MHz)

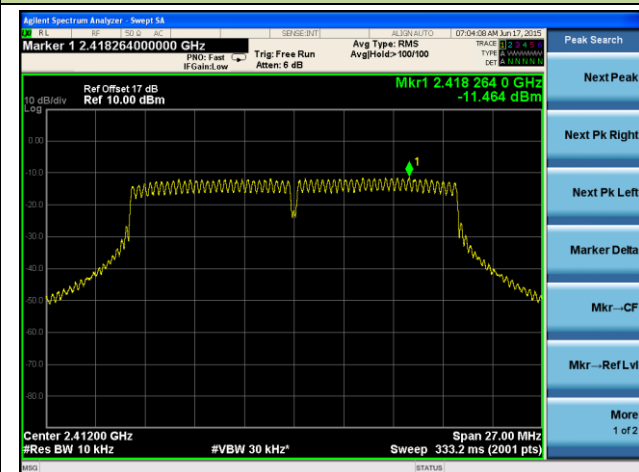


Channel 11 (2462MHz)

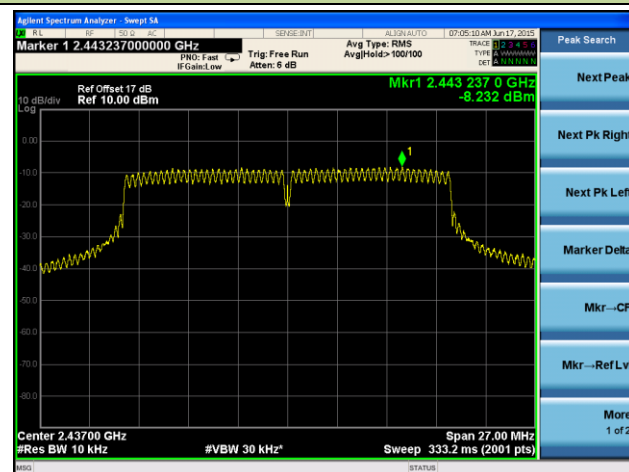


802.11n-HT20 PSD - Ant 1

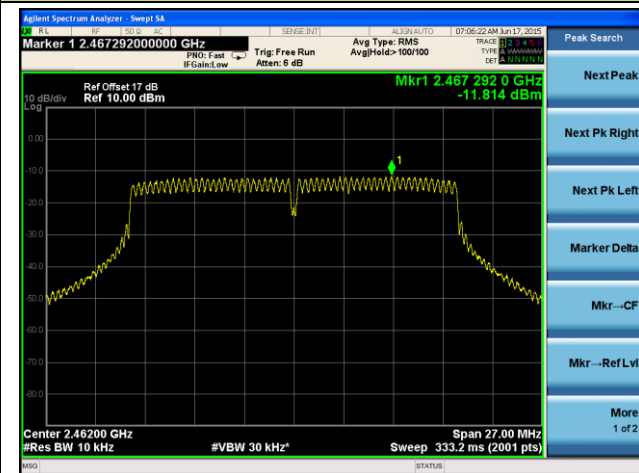
Channel 01 (2412MHz)



Channel 06 (2437MHz)

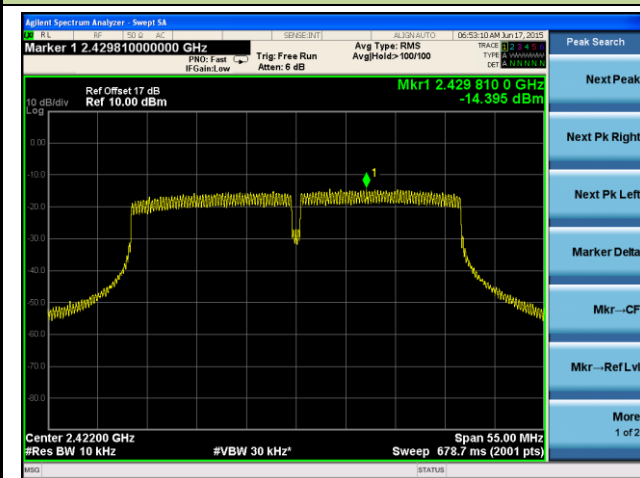


Channel 11 (2462MHz)

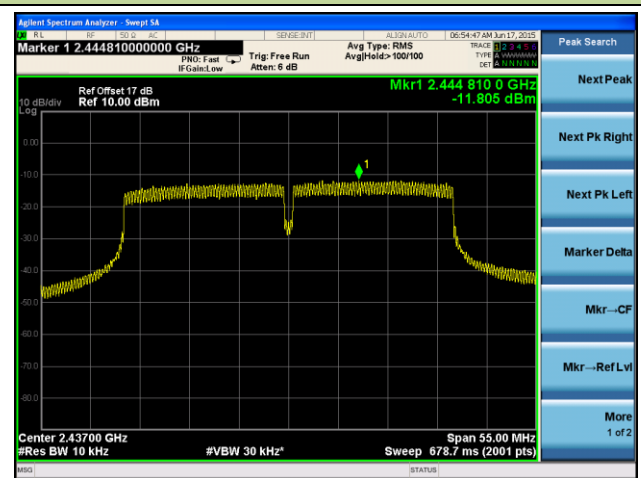


802.11n-HT40 PSD - Ant 1

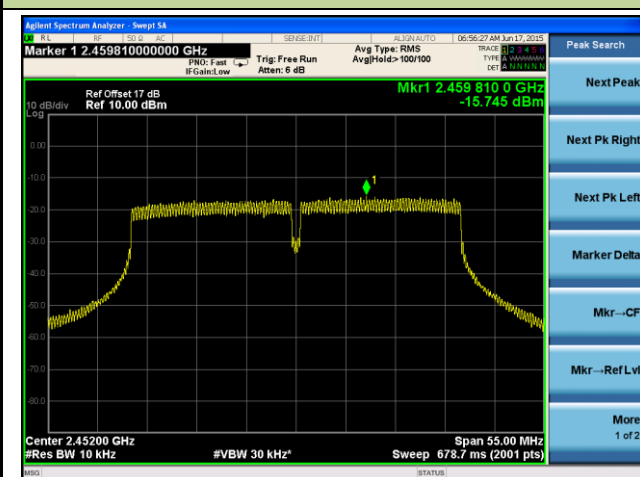
Channel 03 (2422MHz)



Channel 06 (2437MHz)

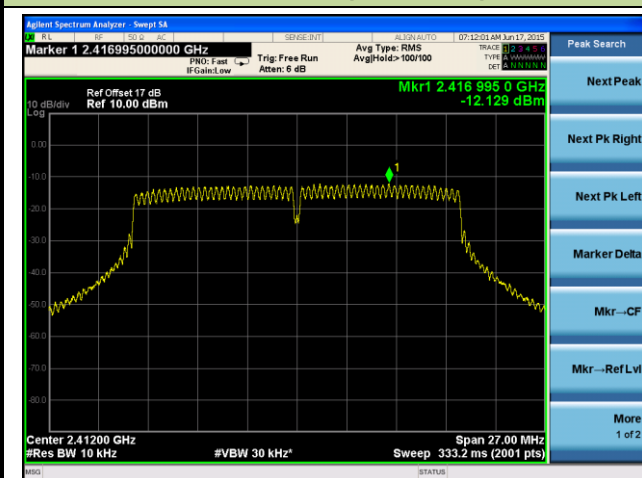


Channel 09 (2452MHz)

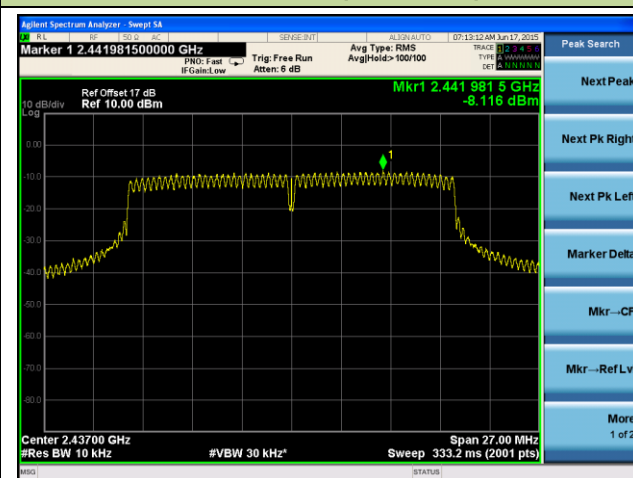


802.11n-HT20 PSD - Ant 0 / Ant 0 + 1

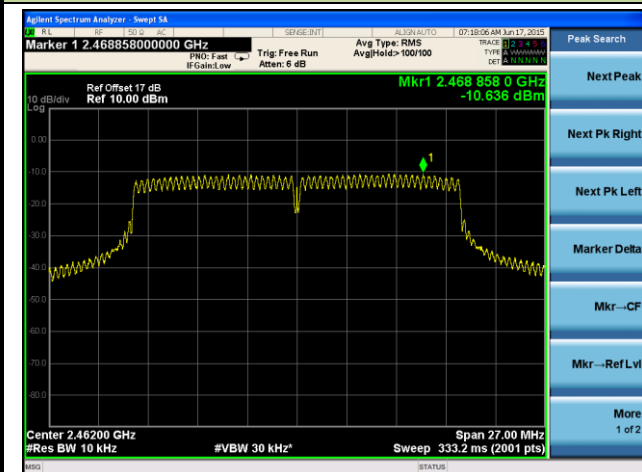
Channel 01 (2412MHz)



Channel 06 (2437MHz)

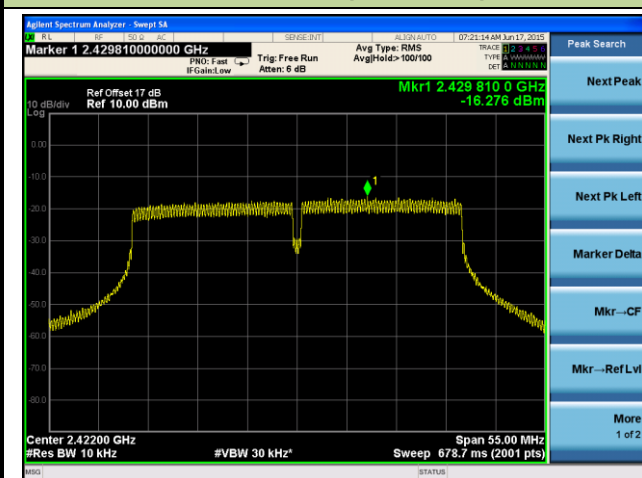


Channel 11 (2462MHz)

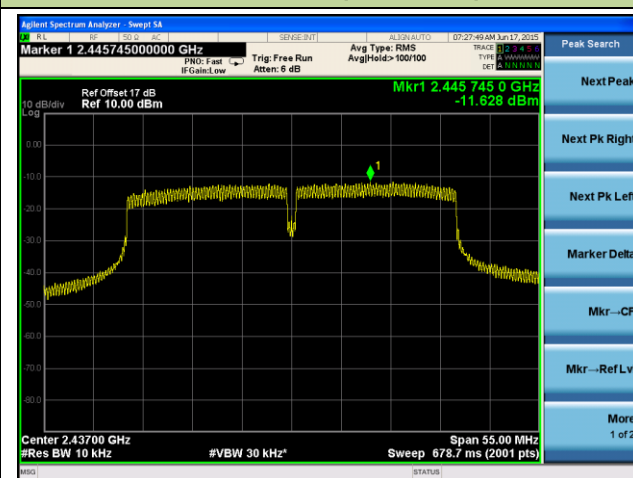


802.11n-HT40 PSD - Ant 0 / Ant 0 + 1

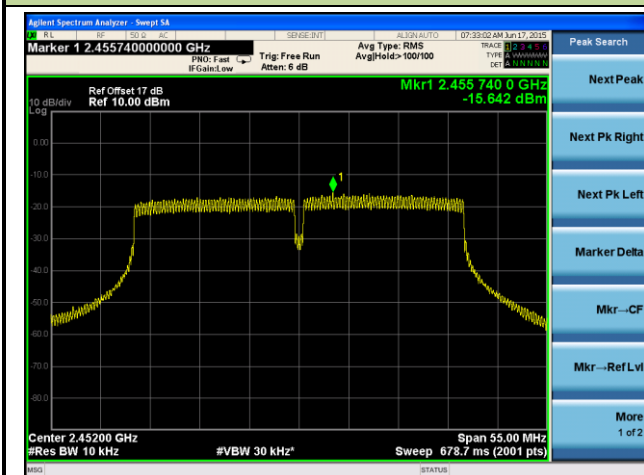
Channel 03 (2422MHz)



Channel 06 (2437MHz)

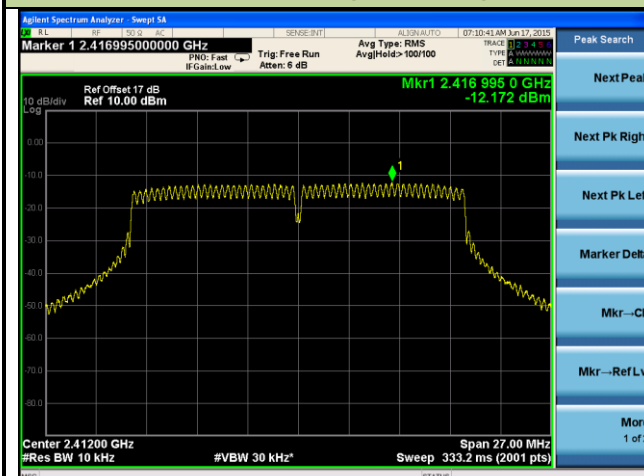


Channel 09 (2452MHz)

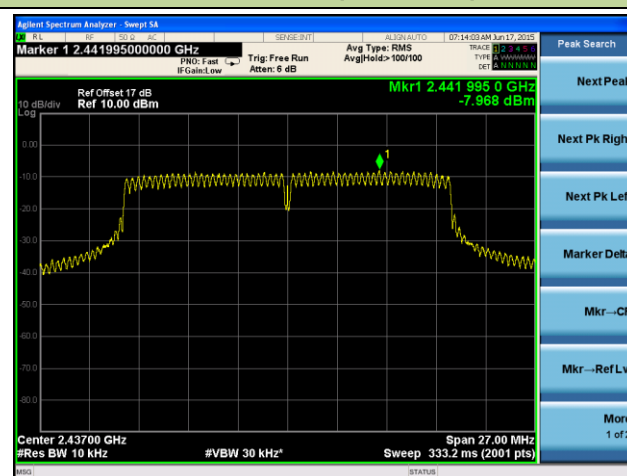


802.11n-HT20 PSD - Ant 1 / Ant 0 + 1

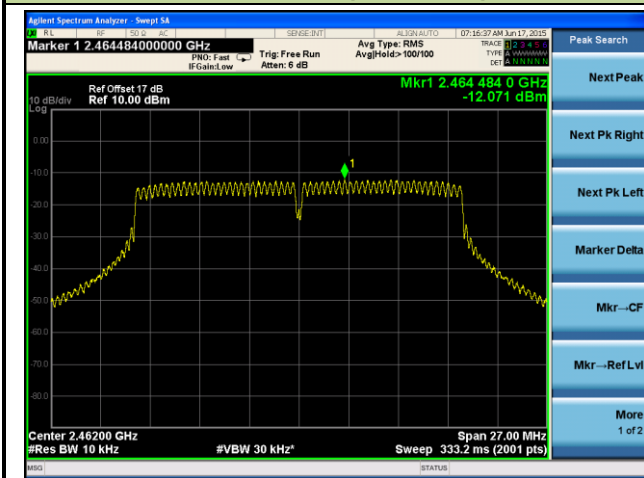
Channel 01 (2412MHz)



Channel 06 (2437MHz)

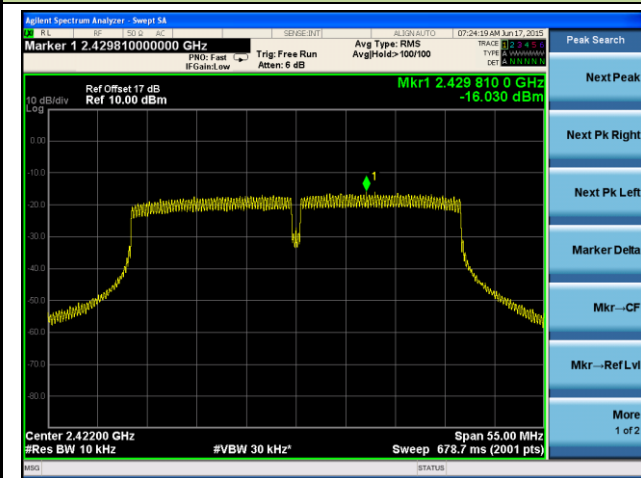


Channel 11 (2462MHz)

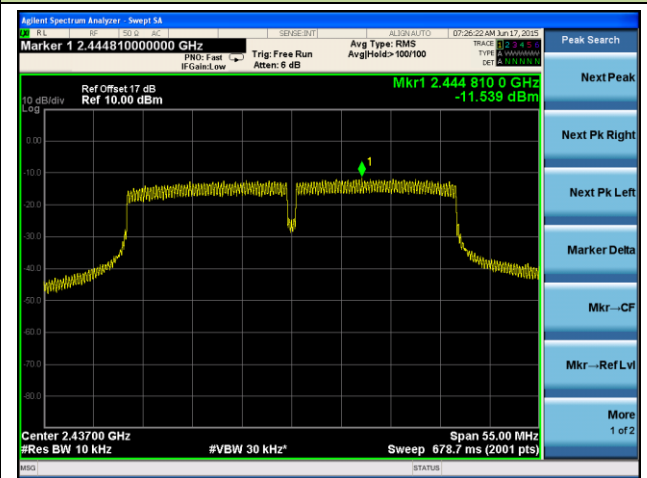


802.11n-HT40 PSD - Ant 1 / Ant 0 + 1

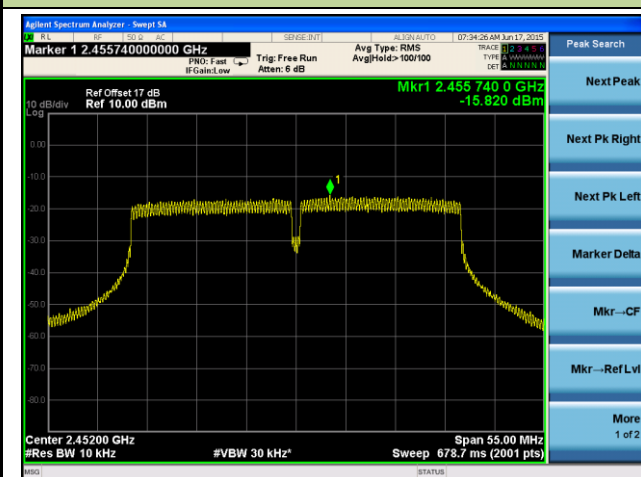
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



7.5. Conducted Band Edge and Out-of-Band Emissions

7.5.1. Test Limit

The limit for out-of-band spurious emissions at the band edge is 20dB below the fundamental emission level, as determined from the in-band power measurement of the DTS channel performed in a 100 kHz bandwidth per the PSD procedure.

If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

7.5.2. Test Procedure Used

KDB 558074 D01v03r02 - Section 11.2 & Section 11.3

7.5.3. Test Settling

1. Reference level measurement

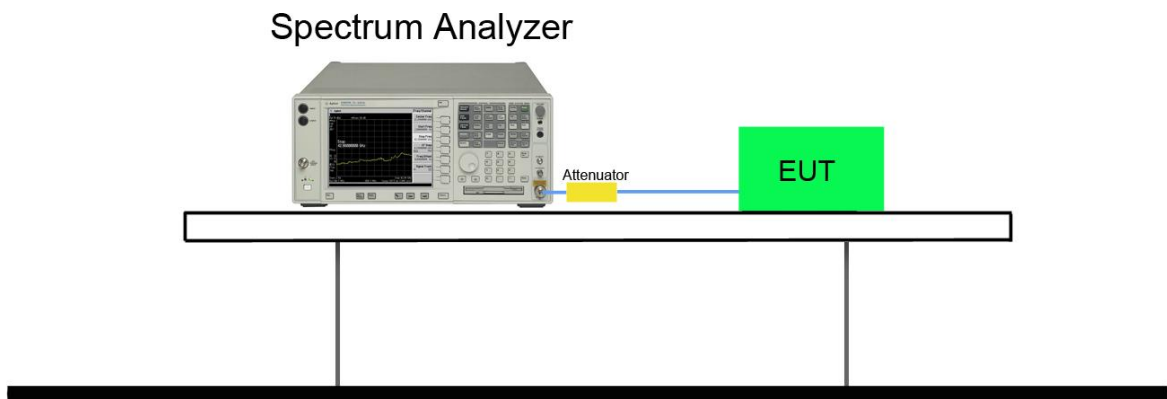
- (a) Set instrument center frequency to DTS channel center frequency
- (b) Set the span to ≥ 1.5 times the DTS bandwidth
- (c) Set the RBW = 100 kHz
- (d) Set the VBW $\geq 3 \times$ RBW
- (e) Detector = peak
- (f) Sweep time = auto couple
- (g) Trace mode = max hold
- (h) Allow trace to fully stabilize

2. Emission level measurement

- (a) Set the center frequency and span to encompass frequency range to be measured
- (b) RBW = 100kHz
- (c) VBW = 300kHz
- (d) Detector = Peak
- (e) Trace mode = max hold

- (f) Sweep time = auto couple
- (g) The trace was allowed to stabilize

7.5.4. Test Setup

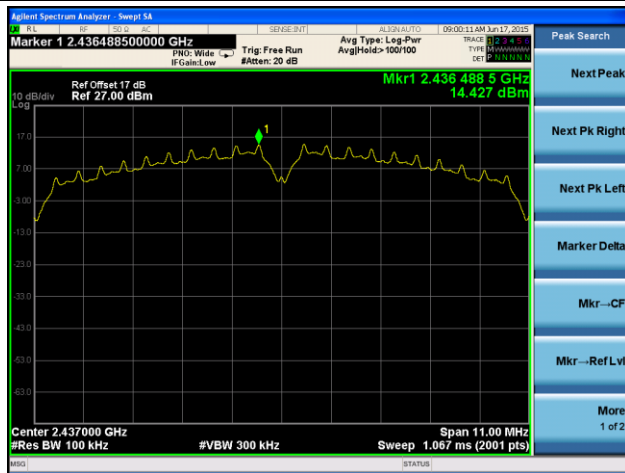


7.5.5. Test Result

Test Mode	Data Rate (Mbps)	Channel No.	Frequency (MHz)	Limit	Result
802.11b	1	01	2412	30dBc	Pass
802.11b	1	06	2437	30dBc	Pass
802.11b	1	11	2462	30dBc	Pass
802.11g	6	01	2412	30dBc	Pass
802.11g	6	06	2437	30dBc	Pass
802.11g	6	11	2462	30dBc	Pass
802.11n-HT20	13	01	2412	30dBc	Pass
802.11n-HT20	13	06	2437	30dBc	Pass
802.11n-HT20	13	11	2462	30dBc	Pass
802.11n-HT40	27	03	2422	30dBc	Pass
802.11n-HT40	27	06	2437	30dBc	Pass
802.11n-HT40	27	09	2452	30dBc	Pass

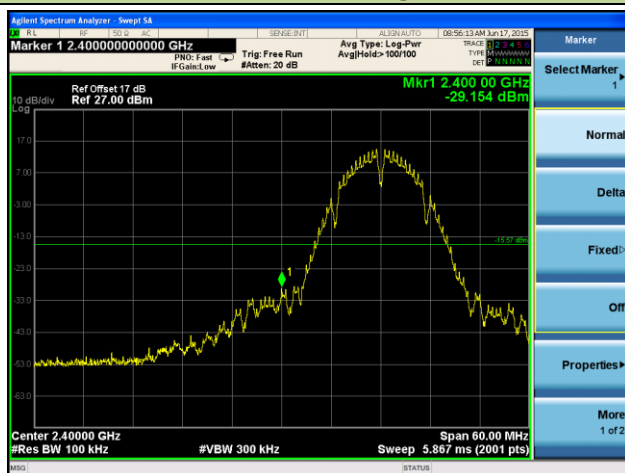
802.11b Out-of-Band Emissions

100kHz PSD reference Level

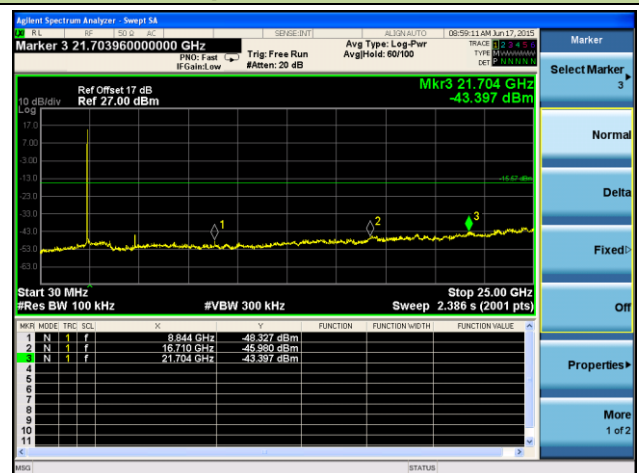


Channel 01 (2412MHz)

Low Band Edge

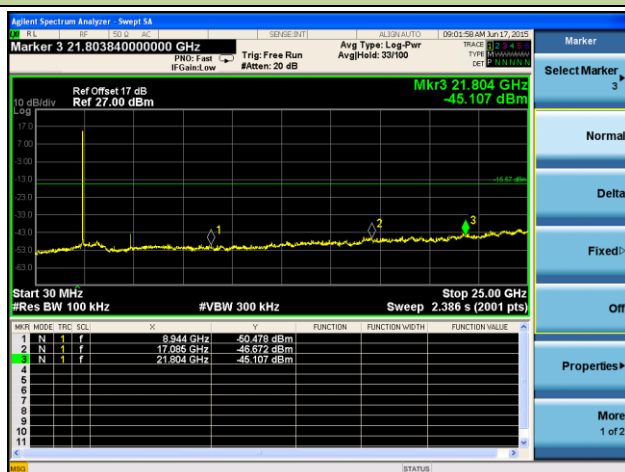


Spurious Emission



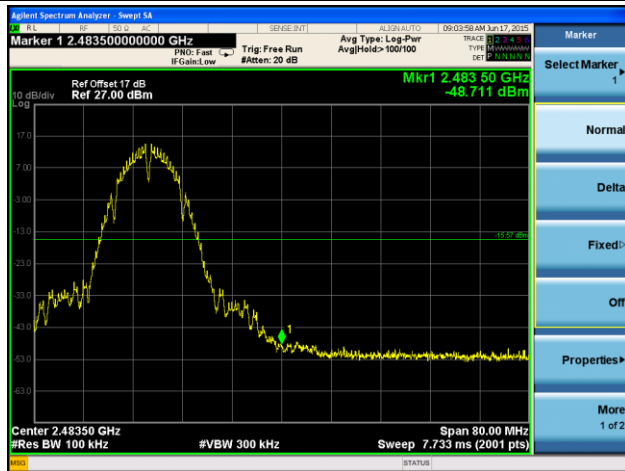
Channel 06 (2437MHz)

Spurious Emission

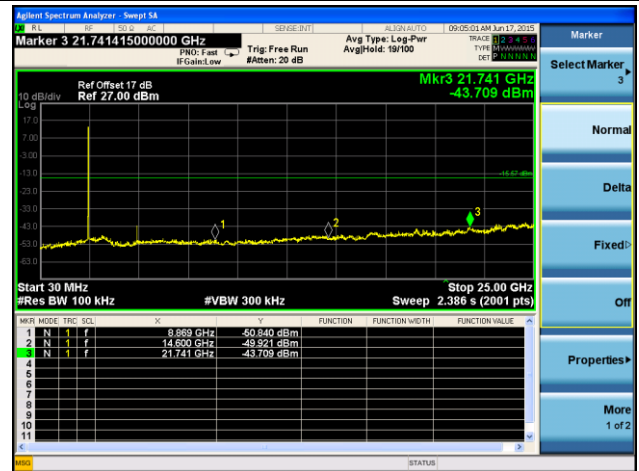


Channel 11 (2462MHz)

High Band Edge

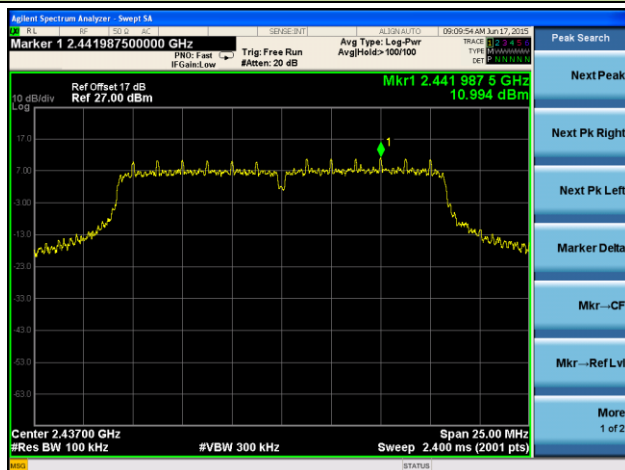


Spurious Emission



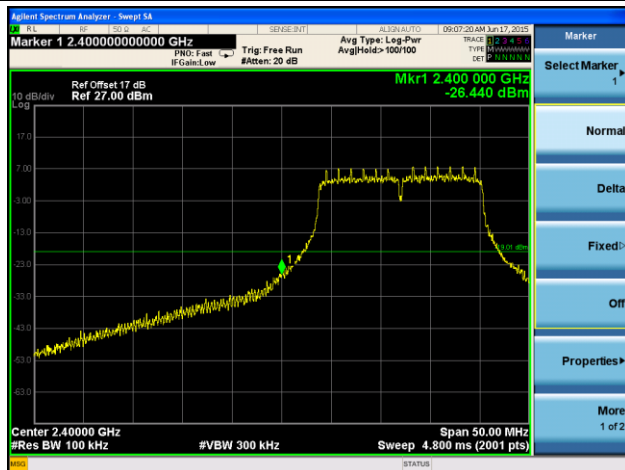
802.11g Out-of-Band Emissions

100kHz PSD reference Level

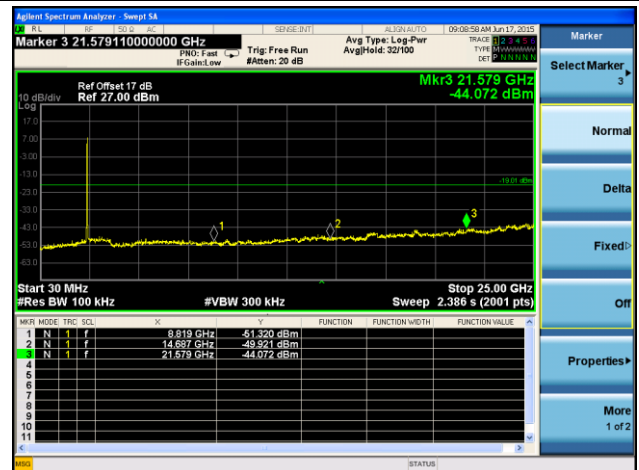


Channel 01 (2412MHz)

Low Band Edge

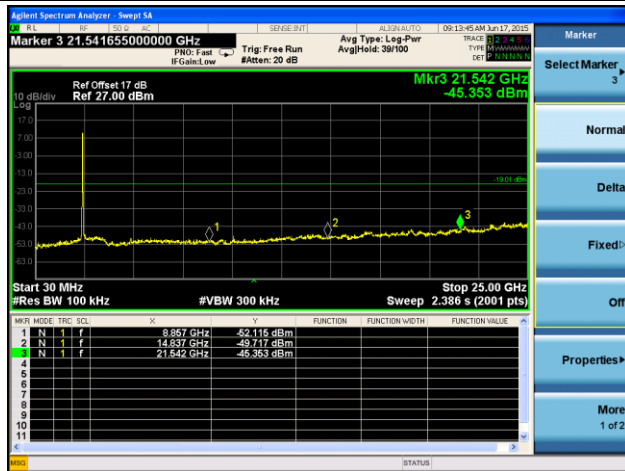


Spurious Emission



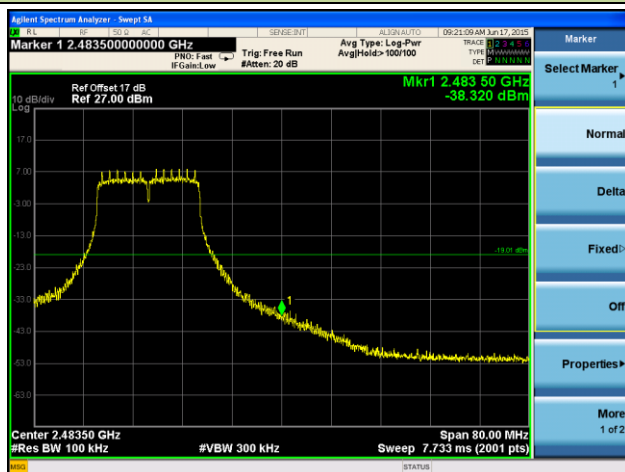
Channel 06 (2437MHz)

Spurious Emission

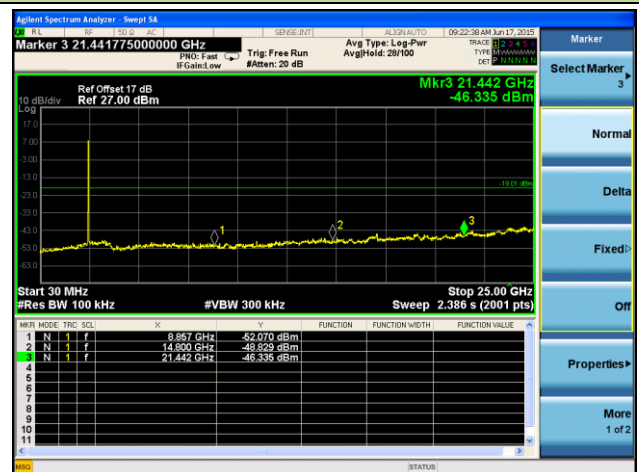


Channel 11 (2462MHz)

High Band Edge

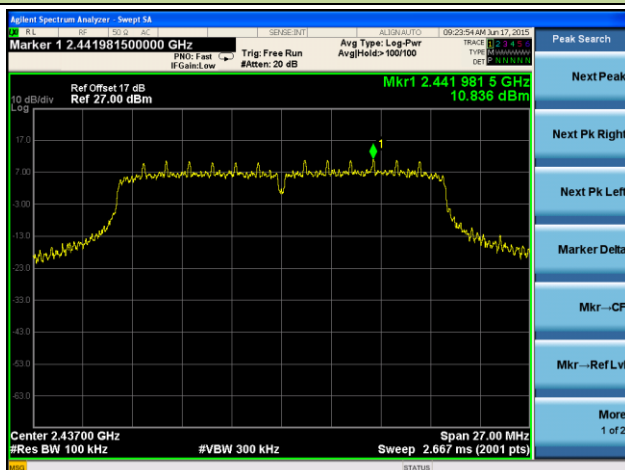


Spurious Emission



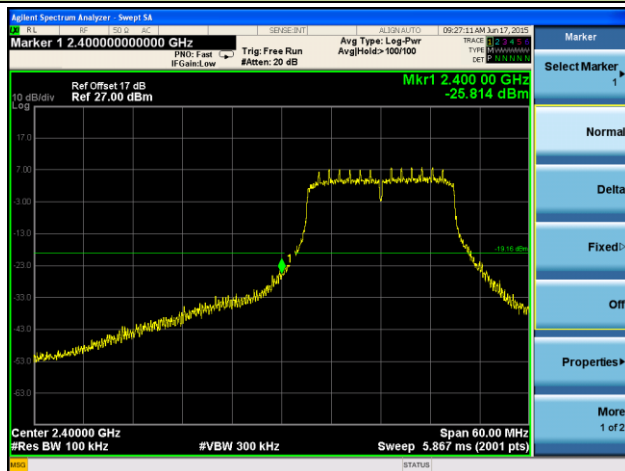
802.11n-HT20 Out-of-Band Emissions

100kHz PSD reference Level

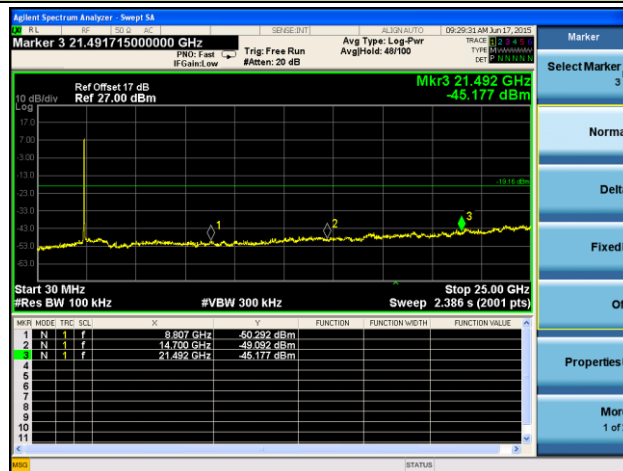


Channel 01 (2412MHz)

Low Band Edge

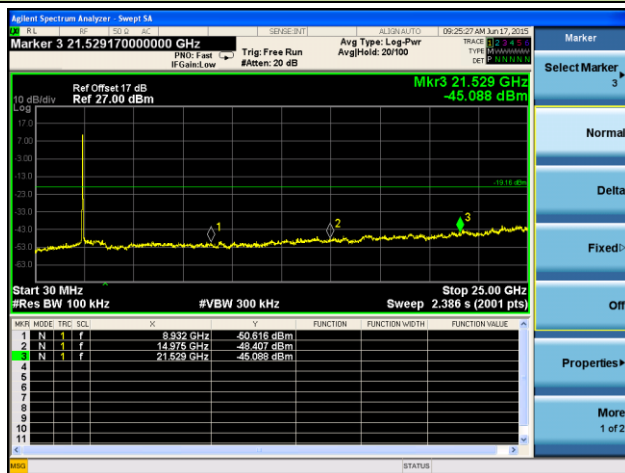


Spurious Emission



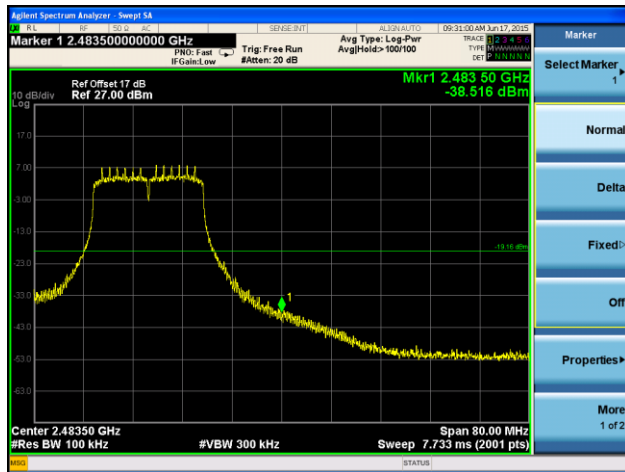
Channel 06 (2437MHz)

Spurious Emission

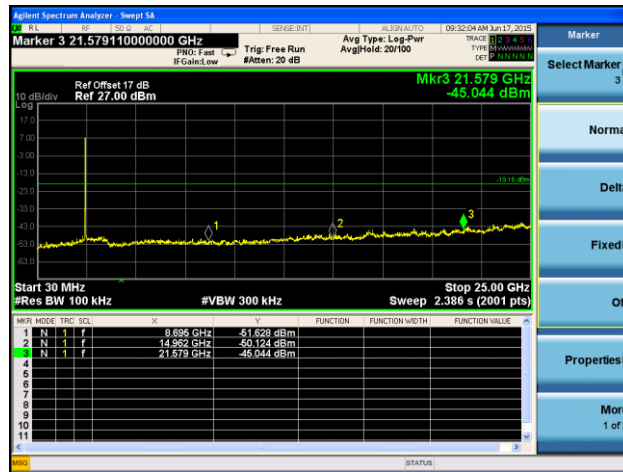


Channel 11 (2462MHz)

High Band Edge

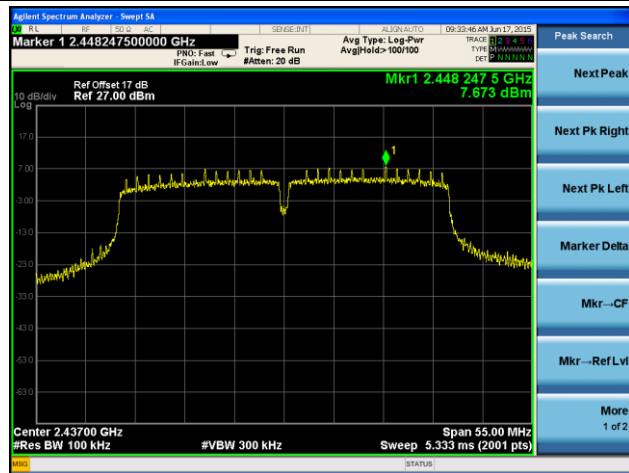


Spurious Emission



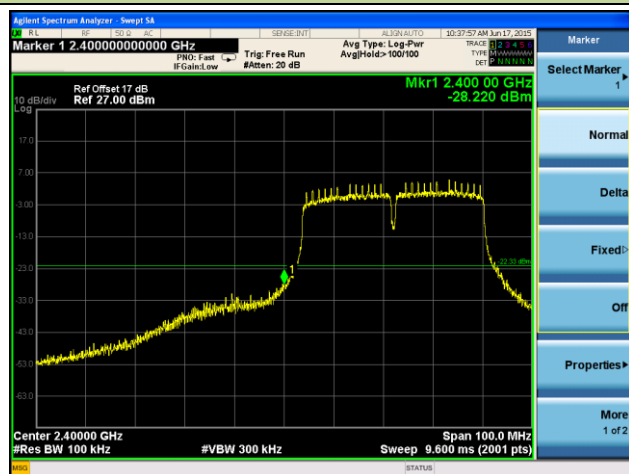
802.11n-HT40 Out-of-Band Emissions

100kHz PSD reference Level

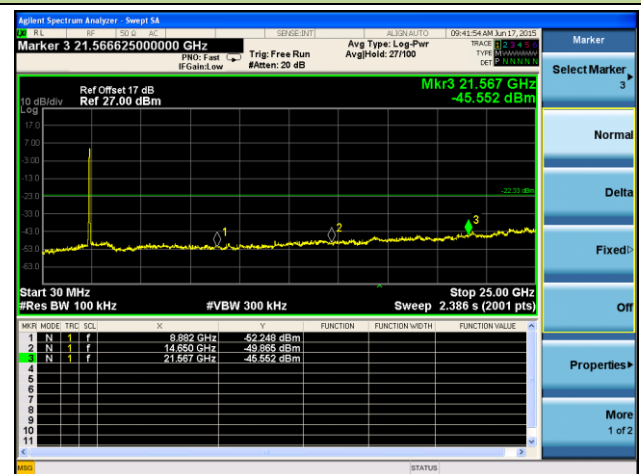


Channel 03 (2422MHz)

Low Band Edge

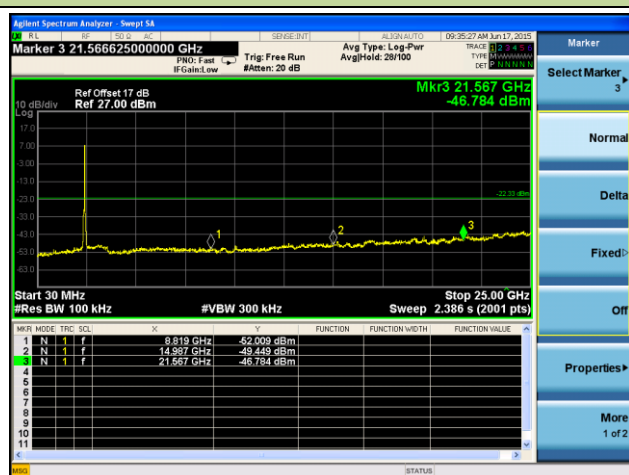


Spurious Emission



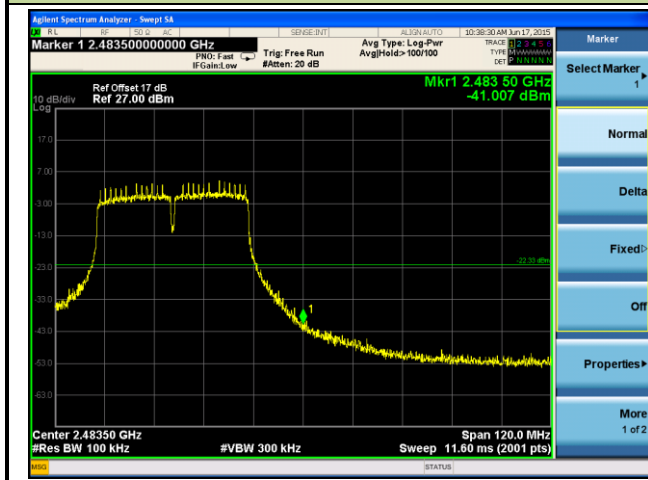
Channel 06 (2437MHz)

Spurious Emission

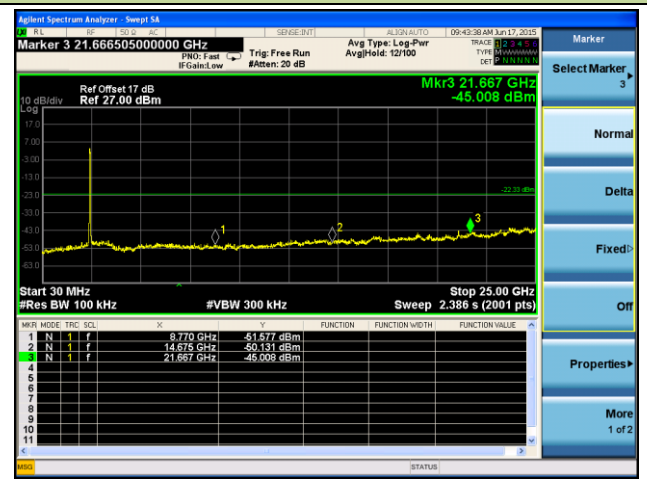


Channel 09 (2452MHz)

High Band Edge



Spurious Emission



7.6. Radiated Spurious Emission Measurement

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 D01v03r02 – Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v03r02 – Section 12.2.4 (peak power measurements)

KDB 558074 D01v03r02 – Section 12.2.5 (average power measurements)

7.6.3. Test Setting

Peak Field Strength Measurements per Section 12.2.4 of KDB 558074 D01v03r02

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple

6. Trace mode = max hold
7. Trace was allowed to stabilize

Table 1—RBW as a function of frequency

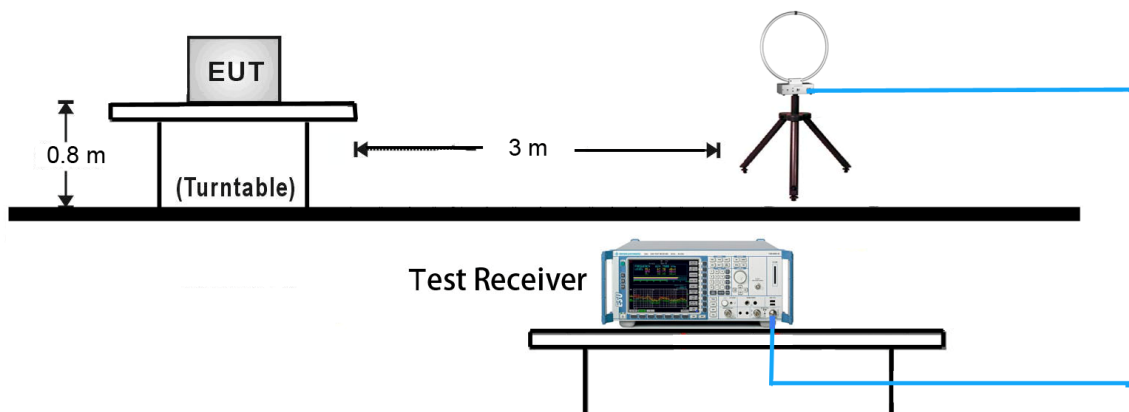
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements per Section 12.2.5.3 of KDB 558074 D01v03r02

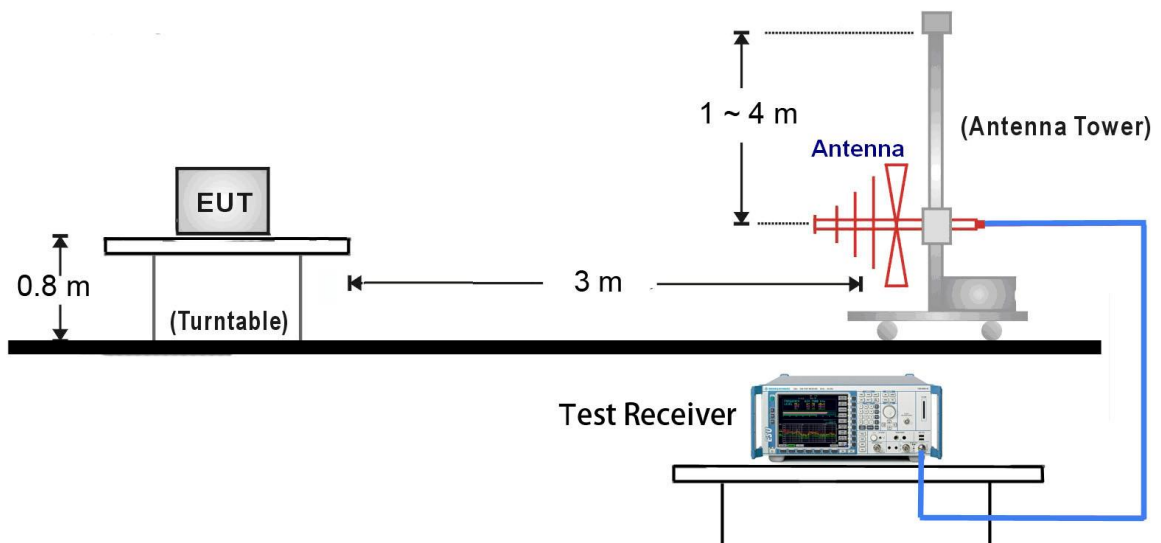
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to “Voltage” regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

7.6.4. Test Setup

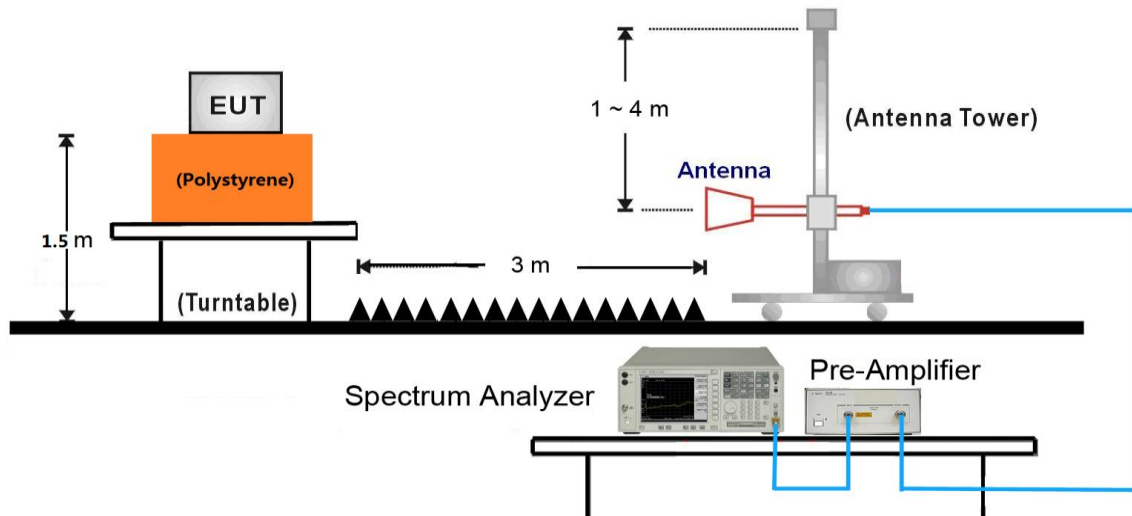
9kHz ~ 30MHz Test Setup:



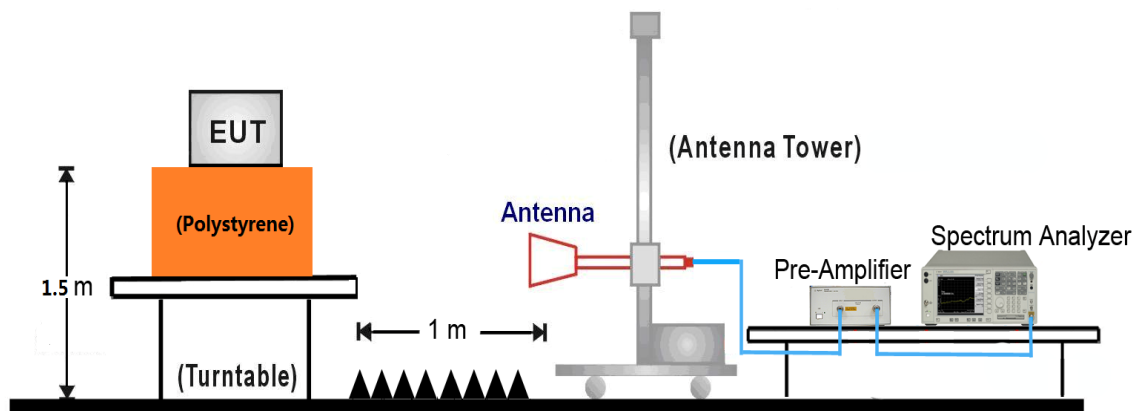
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~25GHz Test Setup:



7.6.5. Test Result

Dipole Antenna 1#

Test Mode:	802.11b - 1Tx	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4824.3	50.2	2.7	52.9	54.0	-1.1	Average	Horizontal
	4824.8	62.9	2.7	65.6	74.0	-8.4	Peak	Horizontal
*	6025.7	37.7	4.2	41.9	80.5	-38.6	Peak	Horizontal
	8457.4	38.4	8.2	46.6	74.0	-27.4	Peak	Horizontal
*	9675.9	36.2	10.9	47.1	80.5	-33.4	Peak	Horizontal
	4824.8	49.9	2.7	52.6	74.0	-21.4	Peak	Vertical
*	6473.1	38.4	5.8	44.2	80.5	-36.3	Peak	Vertical
	8258.9	38.3	8.1	46.4	74.0	-27.6	Peak	Vertical
*	9647.5	36.0	11.0	47.0	80.5	-33.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.5dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11b - 1Tx	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4874.0	50.2	2.7	52.9	54.0	-1.1	Average	Horizontal
	4876.6	59.9	2.7	62.6	74.0	-11.4	Peak	Horizontal
*	6482.8	37.8	5.9	43.7	89.2	-45.5	Peak	Horizontal
	8269.1	37.4	8.1	45.5	74.0	-28.5	Peak	Horizontal
*	9642.6	36.0	11.0	47.0	89.2	-42.2	Peak	Horizontal
	4876.2	51.8	2.7	54.5	74.0	-19.5	Peak	Vertical
*	5674.8	38.2	3.7	41.9	89.2	-47.3	Peak	Vertical
	7307.7	43.3	8.0	51.3	74.0	-22.7	Peak	Vertical
*	9746.4	38.7	11.3	50.0	89.2	-39.2	Peak	Vertical
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.2dBμV/m). Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)								

Test Mode:	802.11b - 1Tx	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4924.5	49.9	2.8	52.7	54.0	-1.3	Average	Horizontal
	4926.7	58.6	2.8	61.4	74.0	-12.6	Peak	Horizontal
*	6241.9	37.4	4.7	42.1	80.8	-38.7	Peak	Horizontal
	8163.4	36.9	8.4	45.3	74.0	-28.7	Peak	Horizontal
*	9614.5	35.4	10.9	46.3	80.8	-34.5	Peak	Horizontal
	4927.7	51.9	2.8	54.7	74.0	-19.3	Peak	Vertical
*	6352.6	37.2	5.2	42.4	80.8	-38.4	Peak	Vertical
	7384.1	40.7	7.9	48.6	74.0	-25.4	Peak	Vertical
*	9257.2	37.1	10.3	47.4	80.8	-33.4	Peak	Vertical
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.8dBμV/m). Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)								

Test Mode:	802.11g - 1Tx	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4825.4	45.8	2.7	48.5	54.0	-5.5	Average	Horizontal
	4834.0	59.6	2.7	62.3	74.0	-11.7	Peak	Horizontal
*	6242.1	37.1	4.7	41.8	79.6	-37.8	Peak	Horizontal
	8247.5	37.5	8.1	45.6	74.0	-28.4	Peak	Horizontal
*	9653.9	36.0	11.0	47.0	79.6	-32.6	Peak	Horizontal
	4825.0	40.0	2.7	42.7	54.0	-11.3	Average	Vertical
	4833.7	53.8	2.7	56.5	74.0	-17.5	Peak	Vertical
*	7247.5	44.3	7.9	52.2	79.6	-27.4	Peak	Vertical
	9153.9	36.2	9.8	46.0	74.0	-28.0	Peak	Vertical
*	9661.4	39.3	11.0	50.3	79.6	-29.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (109.6dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11g - 1Tx	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4867.5	45.2	2.7	47.9	74.0	-26.1	Peak	Horizontal
*	6024.9	38.0	4.2	42.2	87.4	-45.2	Peak	Horizontal
	8163.6	37.1	8.4	45.5	74.0	-28.5	Peak	Horizontal
*	9654.3	36.3	11.0	47.3	87.4	-40.1	Peak	Horizontal
	4876.4	46.0	2.7	48.7	74.0	-25.3	Peak	Vertical
*	5524.5	38.4	3.5	41.9	87.4	-45.5	Peak	Vertical
	7324.2	47.2	8.0	55.2	74.0	-18.8	Peak	Vertical
*	9764.0	44.4	11.4	55.8	87.4	-31.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.4dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11g - 1Tx	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4919.1	52.3	2.8	55.1	74.0	-18.9	Peak	Horizontal
*	6042.6	37.4	4.1	41.5	79.8	-38.3	Peak	Horizontal
	8153.8	37.2	8.4	45.6	74.0	-28.4	Peak	Horizontal
*	9642.6	36.2	11.0	47.2	79.8	-32.6	Peak	Horizontal
	4926.9	49.9	2.8	52.7	74.0	-21.3	Peak	Vertical
*	6055.4	36.6	4.1	40.7	79.8	-39.1	Peak	Vertical
	8263.9	37.6	8.1	45.7	74.0	-28.3	Peak	Vertical
*	9658.8	35.8	11.0	46.8	79.8	-33.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (109.8dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 – 2Tx	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4833.7	40.8	2.7	43.5	74.0	-30.5	Peak	Horizontal
*	5682.4	37.7	3.7	41.4	80.6	-39.2	Peak	Horizontal
	8143.0	38.0	8.5	46.5	74.0	-27.5	Peak	Horizontal
*	9657.9	36.5	11.0	47.5	80.6	-33.1	Peak	Horizontal
	4833.7	50.3	2.7	53.0	74.0	-21.0	Peak	Vertical
*	6025.2	36.8	4.2	41.0	80.6	-39.6	Peak	Vertical
	8145.8	38.1	8.5	46.6	74.0	-27.4	Peak	Vertical
*	9647.6	36.3	11.0	47.3	80.6	-33.3	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (110.6dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 – 2Tx	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4867.9	50.7	2.7	53.4	74.0	-20.6	Peak	Horizontal
*	5684.7	37.6	3.7	41.3	89.6	-48.3	Peak	Horizontal
	8146.0	37.9	8.5	46.4	74.0	-27.6	Peak	Horizontal
*	9653.6	36.4	11.0	47.4	89.6	-42.2	Peak	Horizontal
	4875.1	49.7	2.7	52.4	54.0	-1.6	Average	Vertical
	4875.8	63.3	2.7	66.0	74.0	-8.0	Peak	Vertical
*	6025.4	37.6	4.2	41.8	89.6	-47.8	Peak	Vertical
	7289.9	41.2	8.0	49.2	74.0	-24.8	Peak	Vertical
*	9738.7	40.2	11.2	51.4	89.6	-38.2	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (119.6dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 – 2Tx	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4953.4	38.1	2.9	41.0	74.0	-33.0	Peak	Horizontal
*	6054.5	37.2	4.1	41.3	81.3	-40.0	Peak	Horizontal
	8148.9	38.6	8.5	47.1	74.0	-26.9	Peak	Horizontal
*	9626.3	36.5	10.9	47.4	81.3	-33.9	Peak	Horizontal
	4927.1	45.5	2.8	48.3	74.0	-25.7	Peak	Vertical
*	6025.6	37.3	4.2	41.5	81.3	-39.8	Peak	Vertical
	8147.2	37.5	8.5	46.0	74.0	-28.0	Peak	Vertical
*	9653.4	35.3	11.0	46.3	81.3	-35.0	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (111.3dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 – 2Tx	Test Site:	AC1
Test Channel:	03	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4842.8	39.8	2.7	42.5	74.0	-31.5	Peak	Horizontal
*	6025.4	37.2	4.2	41.4	75.3	-33.9	Peak	Horizontal
	8154.3	38.1	8.4	46.5	74.0	-27.5	Peak	Horizontal
*	9647.4	36.4	11.0	47.4	75.3	-27.9	Peak	Horizontal
	4842.2	49.7	2.7	52.4	74.0	-21.6	Peak	Vertical
*	6015.1	37.2	4.2	41.4	75.3	-33.9	Peak	Vertical
	8147.7	38.2	8.5	46.7	74.0	-27.3	Peak	Vertical
*	9655.6	36.6	11.0	47.6	75.3	-27.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (105.3dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 – 2Tx	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4876.4	48.3	2.7	51.0	74.0	-23.0	Peak	Horizontal
*	6049.0	38.0	4.1	42.1	83.7	-41.6	Peak	Horizontal
	8248.6	37.8	8.1	45.9	74.0	-28.1	Peak	Horizontal
*	9654.0	35.7	11.0	46.7	83.7	-37.0	Peak	Horizontal
	4875.9	47.2	2.7	49.9	54.0	-4.1	Average	Vertical
	4875.8	61.9	2.7	64.6	74.0	-9.4	Peak	Vertical
*	6043.7	37.6	4.1	41.7	83.7	-42.0	Peak	Vertical
	8247.7	36.9	8.1	45.0	74.0	-29.0	Peak	Vertical
*	9654.1	36.0	11.0	47.0	83.7	-36.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (113.7dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 – 2Tx	Test Site:	AC1
Test Channel:	09	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4876.7	50.1	2.5	52.6	74.0	-21.4	Peak	Horizontal
*	6049.3	39.6	4.2	43.8	78.1	-34.3	Peak	Horizontal
	8248.9	40.1	8.1	48.2	74.0	-25.8	Peak	Horizontal
*	9654.3	37.9	10.9	48.8	78.1	-29.3	Peak	Horizontal
	4876.2	48.8	2.7	51.5	74.0	-22.5	Peak	Vertical
*	4876.1	63.6	4.7	68.3	78.1	-9.8	Peak	Vertical
	6044.0	39.7	8.2	47.9	74.0	-26.1	Peak	Vertical
*	8248.0	39.1	11.0	50.1	78.1	-28.0	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (108.1dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Panel Antenna 1# and 2#

Test Mode:	802.11b – 1Tx	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4824.3	49.8	2.7	52.5	54.0	-1.5	Average	Horizontal
	4825.3	58.0	2.7	60.7	74.0	-13.3	Peak	Horizontal
*	6142.7	37.5	4.5	42.0	92.8	-50.8	Peak	Horizontal
	8263.9	37.8	8.1	45.9	74.0	-28.1	Peak	Horizontal
*	9648.6	36.1	11.0	47.1	92.8	-45.7	Peak	Horizontal
	4824.2	50.1	2.7	52.8	54.0	-1.2	Average	Vertical
	4825.3	54.2	2.7	56.9	74.0	-17.1	Peak	Vertical
*	6142.9	36.3	4.5	40.8	92.8	-52.0	Peak	Vertical
	8263.9	36.9	8.1	45.0	74.0	-29.0	Peak	Vertical
*	9654.6	34.2	11.0	45.2	92.8	-47.6	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (122.8dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11b – 1Tx	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4874.3	50.1	2.7	52.8	54.0	-1.2	Average	Horizontal
	4876.3	54.5	2.7	57.2	74.0	-16.8	Peak	Horizontal
*	6143.0	36.0	4.5	40.5	94.3	-53.8	Peak	Horizontal
	8246.9	35.8	8.1	43.9	74.0	-30.1	Peak	Horizontal
*	9653.0	35.5	11.0	46.5	94.3	-47.8	Peak	Horizontal
	4874.2	50.3	2.7	53.0	54.0	-1.0	Average	Vertical
	4876.3	56.2	2.7	58.9	74.0	-15.1	Peak	Vertical
*	6425.7	34.6	5.6	40.2	94.3	-54.1	Peak	Vertical
	8248.2	35.3	8.1	43.4	74.0	-30.6	Peak	Vertical
*	9648.6	35.1	11.0	46.1	94.3	-48.2	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (124.3dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11b – 1Tx	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4924.3	48.6	2.8	51.4	54.0	-2.6	Average	Horizontal
	4927.3	55.4	2.8	58.2	74.0	-15.8	Peak	Horizontal
*	6241.4	35.3	4.7	40.0	91.5	-51.5	Peak	Horizontal
	8253.7	36.4	8.1	44.5	74.0	-29.5	Peak	Horizontal
*	9686.8	35.0	10.9	45.9	91.5	-45.6	Peak	Horizontal
	4924.2	49.2	2.8	52.0	54.0	-2.0	Average	Vertical
	4927.3	57.9	2.8	60.7	74.0	-13.3	Peak	Vertical
*	6215.7	35.9	4.7	40.6	91.5	-50.9	Peak	Vertical
	8249.0	35.9	8.1	44.0	74.0	-30.0	Peak	Vertical
*	9653.6	34.0	11.0	45.0	91.5	-46.5	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (121.5dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11g – 1Tx	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4825.3	49.6	2.7	52.3	74.0	-21.7	Peak	Horizontal
*	6235.7	37.2	4.7	41.9	86.7	-44.8	Peak	Horizontal
	8246.7	37.8	8.1	45.9	74.0	-28.1	Peak	Horizontal
*	9658.9	36.1	11.0	47.1	86.7	-39.6	Peak	Horizontal
	4833.8	46.5	2.7	49.2	74.0	-24.8	Peak	Vertical
*	6145.6	36.1	4.5	40.6	86.7	-46.1	Peak	Vertical
	8246.8	36.6	8.1	44.7	74.0	-29.3	Peak	Vertical
*	9659.3	35.2	11.0	46.2	86.7	-40.5	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (116.7dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11g – 1Tx	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4874.7	45.7	2.7	48.4	54.0	-5.6	Average	Horizontal
	4876.3	59.1	2.7	61.8	74.0	-12.2	Peak	Horizontal
*	6142.8	35.8	4.5	40.3	94.5	-54.2	Peak	Horizontal
	8264.3	36.1	8.1	44.2	74.0	-29.8	Peak	Horizontal
*	9653.5	34.4	11.0	45.4	94.5	-49.1	Peak	Horizontal
	4867.8	63.4	2.7	66.1	74.0	-7.9	Peak	Vertical
	4874.1	49.8	2.7	52.5	54.0	-1.5	Average	Vertical
*	6143.2	36.1	4.5	40.6	94.5	-53.9	Peak	Vertical
	8243.9	35.3	8.1	43.4	74.0	-30.6	Peak	Vertical
*	9642.8	34.4	11.0	45.4	94.5	-49.1	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (124.5dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11g – 1Tx	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4918.8	43.7	2.8	46.5	74.0	-27.5	Peak	Horizontal
*	6025.8	35.8	4.2	40.0	88.6	-48.6	Peak	Horizontal
	8152.7	36.1	8.4	44.5	74.0	-29.5	Peak	Horizontal
*	9654.2	35.0	11.0	46.0	88.6	-42.6	Peak	Horizontal
	4927.3	47.8	2.8	50.6	74.0	-23.4	Peak	Vertical
*	6243.9	36.2	4.7	40.9	88.6	-47.7	Peak	Vertical
	8241.8	35.4	8.1	43.5	74.0	-30.5	Peak	Vertical
*	9648.6	35.9	11.0	46.9	88.6	-41.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (118.6dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 – 2Tx	Test Site:	AC1
Test Channel:	01	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4825.4	48.1	2.7	50.8	74.0	-23.2	Peak	Horizontal
*	6024.8	38.1	4.2	42.3	85.7	-43.4	Peak	Horizontal
	8142.8	38.2	8.5	46.7	74.0	-27.3	Peak	Horizontal
*	9635.6	37.2	11.0	48.2	85.7	-37.5	Peak	Horizontal
	4824.3	49.8	2.7	52.5	54.0	-1.5	Average	Vertical
	4825.4	62.1	2.7	64.8	74.0	-9.2	Peak	Vertical
*	6045.7	38.5	4.1	42.6	86.7	-44.1	Peak	Vertical
	7715.4	40.9	8.0	48.9	74.0	-25.1	Peak	Vertical
*	9628.7	36.2	11.0	47.2	85.7	-38.5	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (115.7dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 – 2Tx	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4876.4	44.9	2.7	47.6	74.0	-26.4	Peak	Horizontal
*	6042.8	37.9	4.1	42.0	94.2	-52.2	Peak	Horizontal
	8246.8	37.9	8.1	46.0	74.0	-28.0	Peak	Horizontal
*	9643.7	37.0	11.0	48.0	94.2	-46.2	Peak	Horizontal
	4874.5	50.1	2.7	52.8	54.0	-1.2	Average	Vertical
	4876.4	58.5	2.7	61.2	74.0	-12.8	Peak	Vertical
*	6025.8	37.2	4.2	41.4	94.2	-52.8	Peak	Vertical
	8154.1	37.5	8.4	45.9	74.0	-28.1	Peak	Vertical
*	9653.7	35.4	11.0	46.4	94.2	-47.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (124.2dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT20 – 2Tx	Test Site:	AC1
Test Channel:	11	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4927.4	48.1	2.8	50.9	74.0	-23.1	Peak	Horizontal
*	6125.8	37.0	4.4	41.4	86.2	-44.8	Peak	Horizontal
	8153.8	36.7	8.4	45.1	74.0	-28.9	Peak	Horizontal
*	9625.8	36.3	10.9	47.2	86.2	-39.0	Peak	Horizontal
	4924.3	49.7	2.8	52.5	54.0	-1.5	Average	Vertical
	4927.4	60.3	2.8	63.1	74.0	-10.9	Peak	Vertical
*	6025.8	37.3	4.2	41.5	86.2	-44.7	Peak	Vertical
	8153.9	38.3	8.4	46.7	74.0	-27.3	Peak	Vertical
*	9654.1	36.5	11.0	47.5	86.2	-38.7	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (116.2dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 – 2Tx	Test Site:	AC1
Test Channel:	03	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4927.4	47.1	2.8	49.9	74.0	-24.1	Peak	Horizontal
*	6235.6	37.4	4.1	41.5	79.3	-37.8	Peak	Horizontal
	8406.8	36.0	8.5	44.5	74.0	-29.5	Peak	Horizontal
*	9652.8	35.2	11.0	46.2	79.3	-33.1	Peak	Horizontal
	4918.9	40.1	2.8	42.9	74.0	-31.1	Peak	Vertical
*	6025.8	36.6	4.1	40.7	79.3	-38.6	Peak	Vertical
	8263.9	36.3	8.1	44.4	74.0	-29.6	Peak	Vertical
*	9675.5	34.7	11.3	46.0	79.3	-33.3	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (109.2dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 – 2Tx	Test Site:	AC1
Test Channel:	06	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4867.5	52.5	2.7	55.2	74.0	-18.8	Peak	Horizontal
	4873.7	39.3	2.7	42.0	54.0	-12.0	Average	Horizontal
*	6042.4	36.0	4.1	40.1	88.3	-48.2	Peak	Horizontal
	8173.4	36.3	8.4	44.7	74.0	-29.3	Peak	Horizontal
*	9247.9	36.3	10.2	46.5	88.3	-41.8	Peak	Horizontal
	4875.5	49.9	2.7	52.6	54.0	-1.4	Average	Vertical
	4876.0	63.6	2.7	66.3	74.0	-7.7	Peak	Vertical
*	6045.4	35.5	4.1	39.6	88.3	-48.7	Peak	Vertical
	8147.6	36.9	8.5	45.4	74.0	-28.6	Peak	Vertical
*	9653.6	34.0	11.0	45.0	88.3	-43.3	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (118.3dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Test Mode:	802.11n-HT40 – 2Tx	Test Site:	AC1
Test Channel:	09	Test Engineer:	Roy Cheng
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4731.5	38.5	3.0	41.5	74.0	-32.5	Peak	Horizontal
*	6024.4	35.2	4.1	39.3	79.1	-39.8	Peak	Horizontal
	8247.6	36.1	8.1	44.2	74.0	-29.8	Peak	Horizontal
*	9623.7	34.3	11.0	45.3	79.1	-33.8	Peak	Horizontal
	4910.0	40.6	2.8	43.4	74.0	-30.6	Peak	Vertical
*	6215.5	35.5	4.6	40.1	79.1	-39.0	Peak	Vertical
	8235.5	35.7	8.5	44.2	74.0	-29.8	Peak	Vertical
*	9653.2	34.5	11.0	45.5	79.1	-33.6	Peak	Vertical

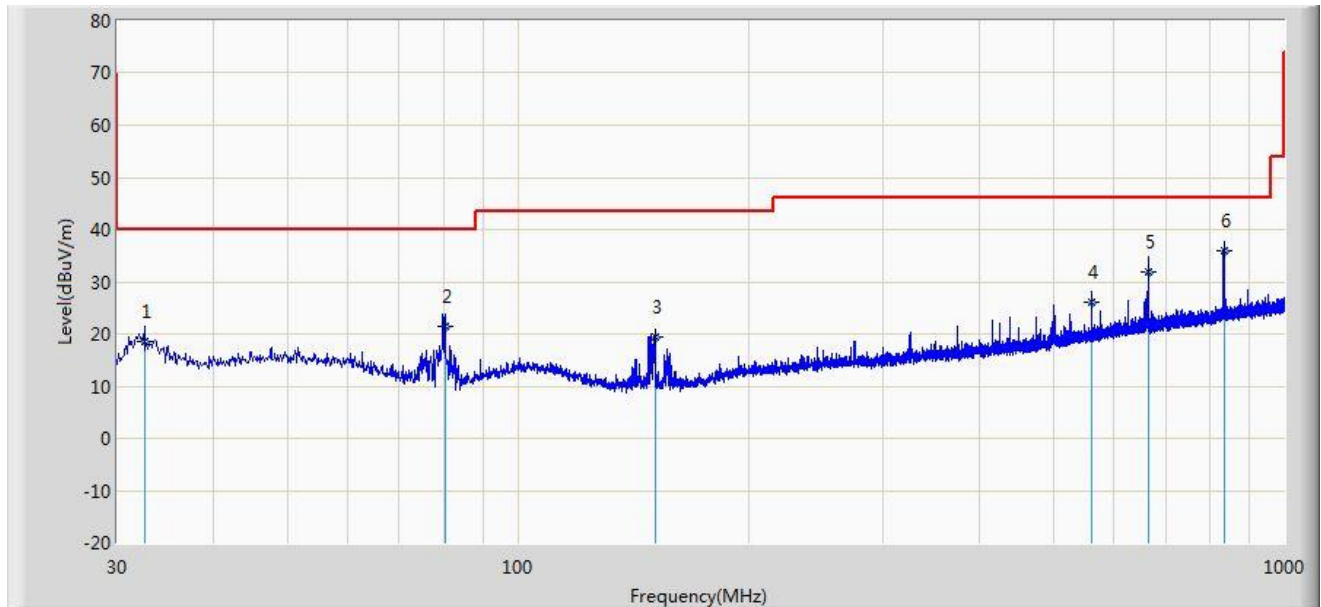
Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (109.1dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

The worst case of Radiated Emission below 1GHz:

Site: AC1	Time: 2015/05/10 - 15:41
Limit: FCC_Part15.209_RE(3m)	Engineer: Jame Yuan
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Worse Case Mode: Transmit by 802.11g at channel 2412MHz	

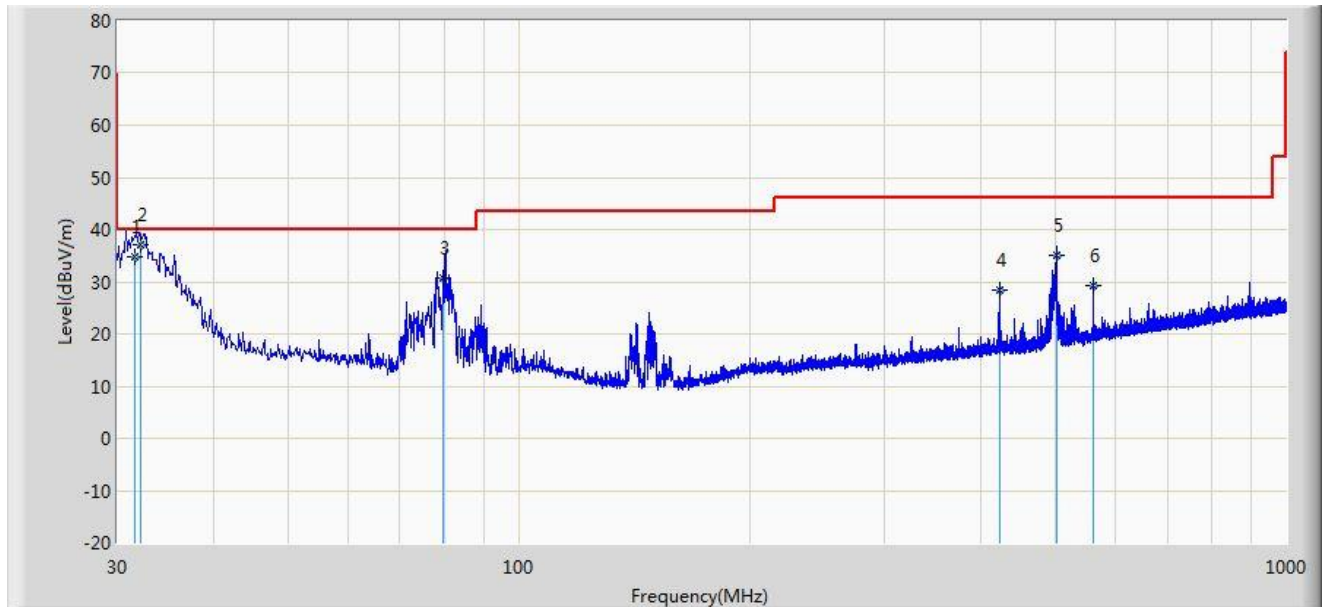


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			32.562	18.411	5.931	-21.589	40.000	12.480	QP
2			80.400	21.477	12.060	-18.523	40.000	9.417	QP
3			151.120	19.352	9.870	-24.148	43.500	9.481	QP
4			560.020	26.056	6.807	-19.944	46.000	19.248	QP
5			664.200	31.889	11.060	-14.111	46.000	20.829	QP
6		*	834.080	35.816	12.580	-10.184	46.000	23.236	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2015/05/10 - 15:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Jame Yuan
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Worse Case Mode: Transmit by 802.11g at channel 2412MHz	

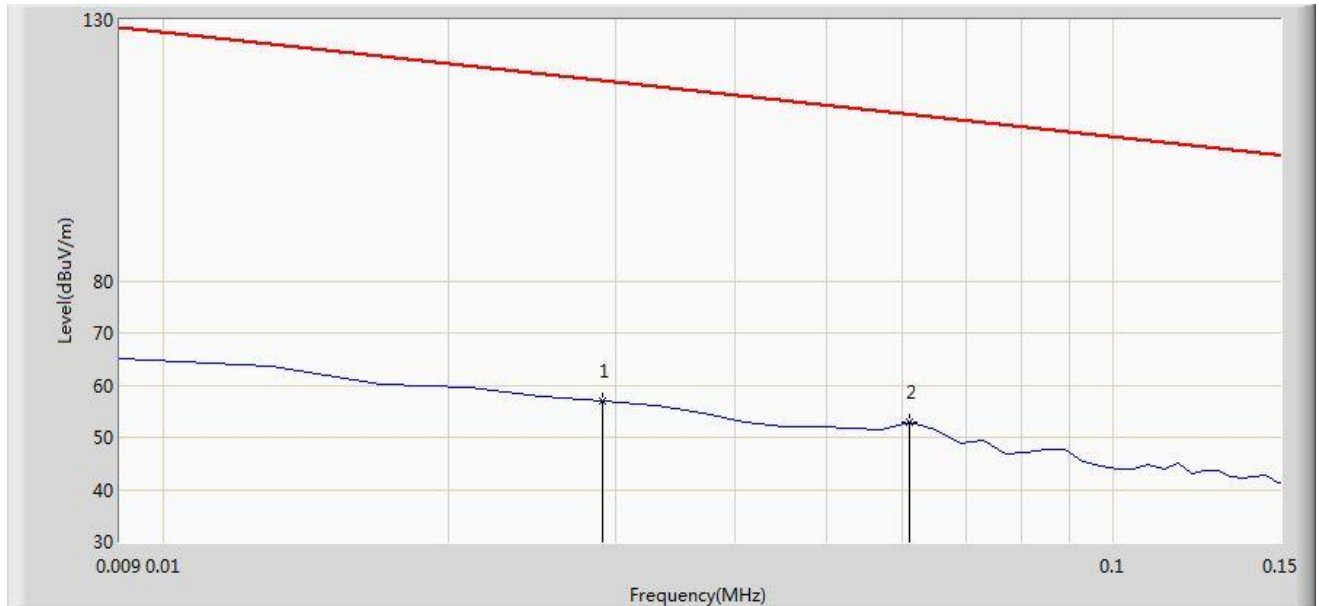


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			31.586	34.902	22.597	-5.098	40.000	12.305	QP
2		*	32.200	37.015	24.600	-2.985	40.000	12.415	QP
3			79.820	30.736	21.400	-9.264	40.000	9.336	QP
4			422.806	28.298	11.320	-17.702	46.000	16.978	QP
5			501.508	35.169	16.921	-10.831	46.000	18.248	QP
6			559.994	29.298	10.050	-16.702	46.000	19.248	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2015/05/10 - 15:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: FMZB1519_0.009-30MHz	Polarity: Face on
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

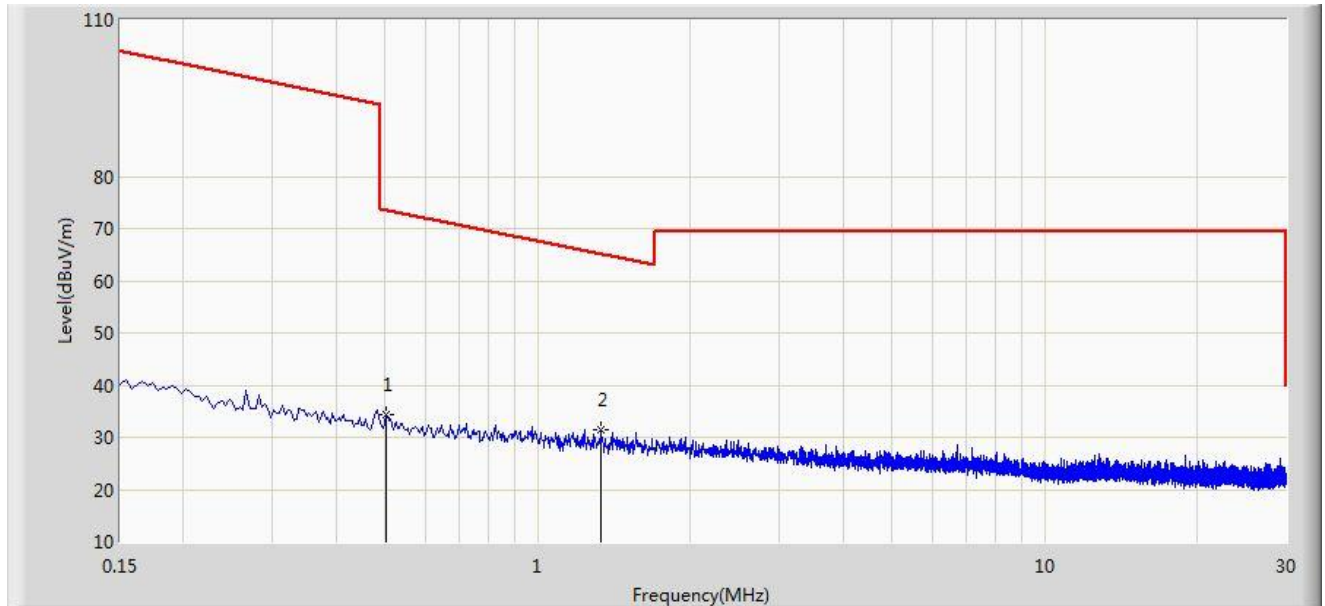


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.029	56.893	35.844	-61.449	118.342	21.049	QP
2		*	0.061	52.853	32.542	-59.034	111.887	20.311	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2015/05/10 - 15:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: FMZB1519_0.009-30MHz	Polarity: Face on
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

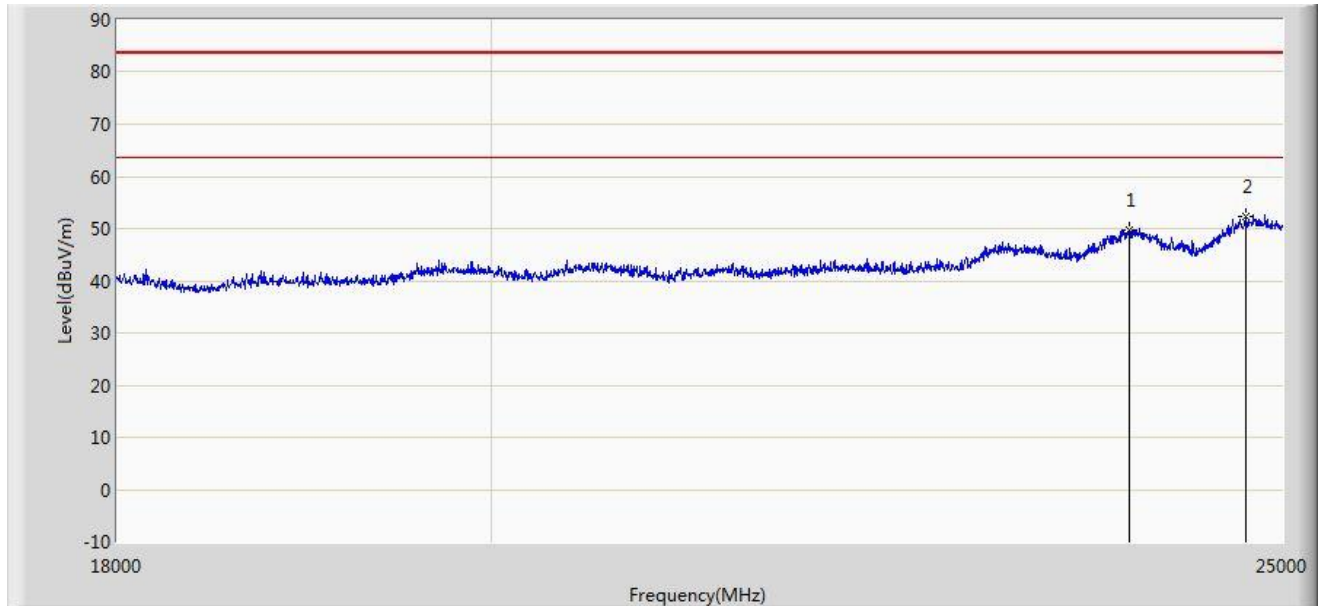


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.502	34.370	13.947	-39.220	73.590	20.423	QP
2		*	1.334	31.595	11.104	-33.530	65.125	20.491	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2015/05/10 - 20:21
Limit: FCC_Part15.209_RE(1m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 18GHz~25GHz.	

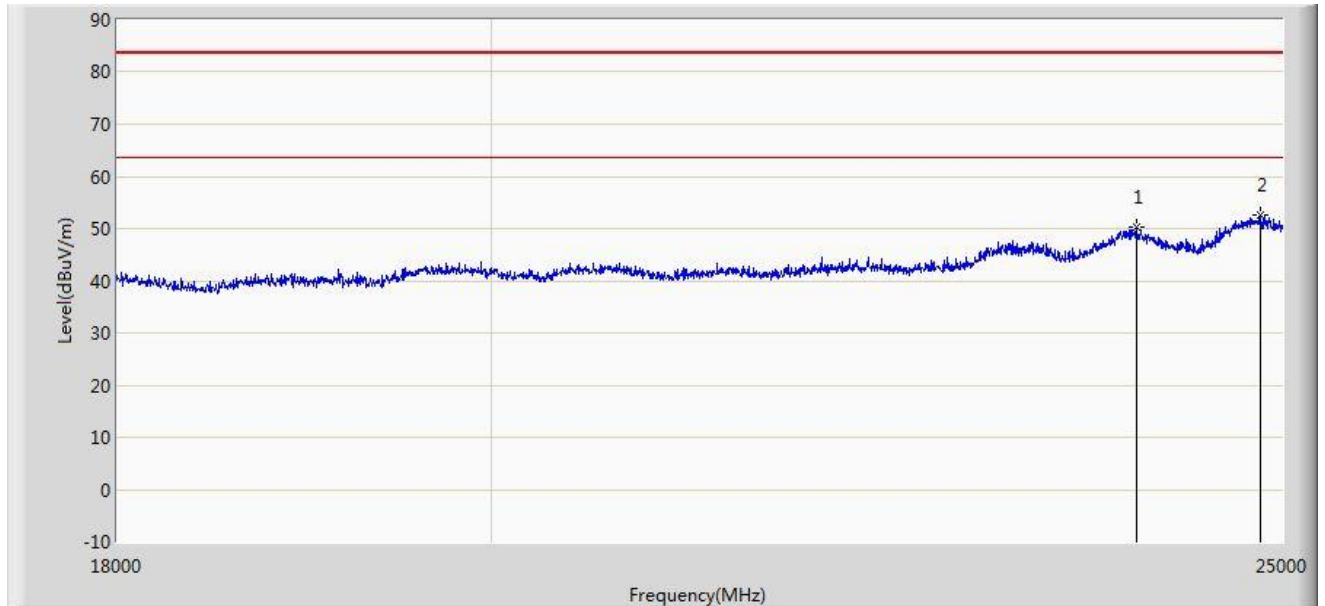


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			23943.000	49.776	35.866	-33.724	83.500	13.910	PK
2		*	24741.000	52.375	37.681	-31.125	83.500	14.694	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

Site: AC1	Time: 2015/05/10 - 20:27
Limit: FCC_Part15.209_RE(1m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 18GHz~25GHz.	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			23999.000	50.379	36.435	-33.121	83.500	13.944	PK
2		*	24846.000	52.503	37.735	-30.997	83.500	14.768	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

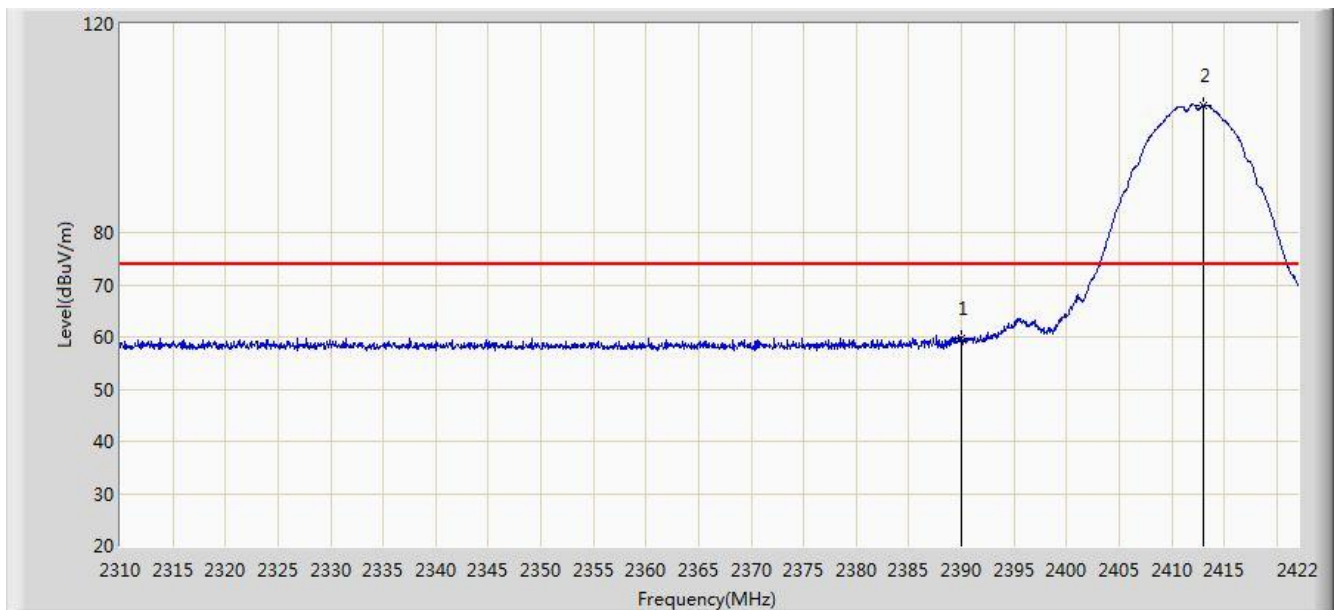
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre_Amplifier Gain (dB)

7.7. Radiated Restricted Band Edge Measurement

7.7.1. Test Result

Dipole Antenna 1#

Site: AC1	Time: 2015/04/22 - 22:20
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11b 1Tx	

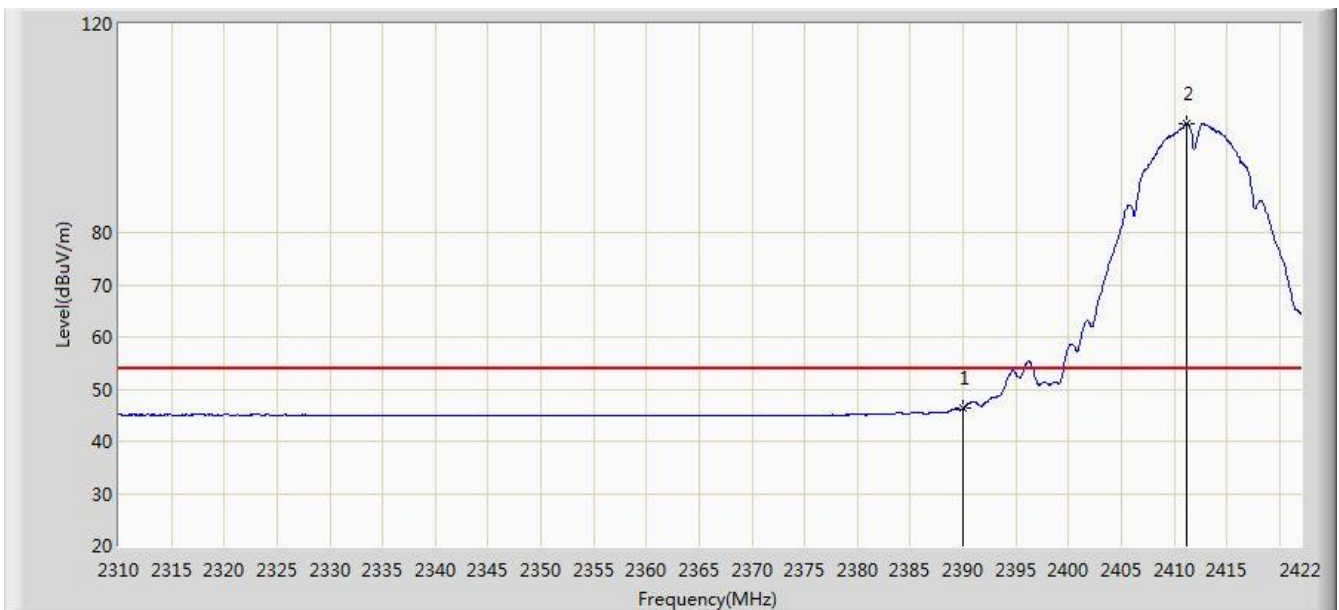


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	59.736	28.533	-14.264	74.000	31.203	PK
2		*	2413.040	104.480	73.312	N/A	N/A	31.167	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 22:26
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11b 1Tx	

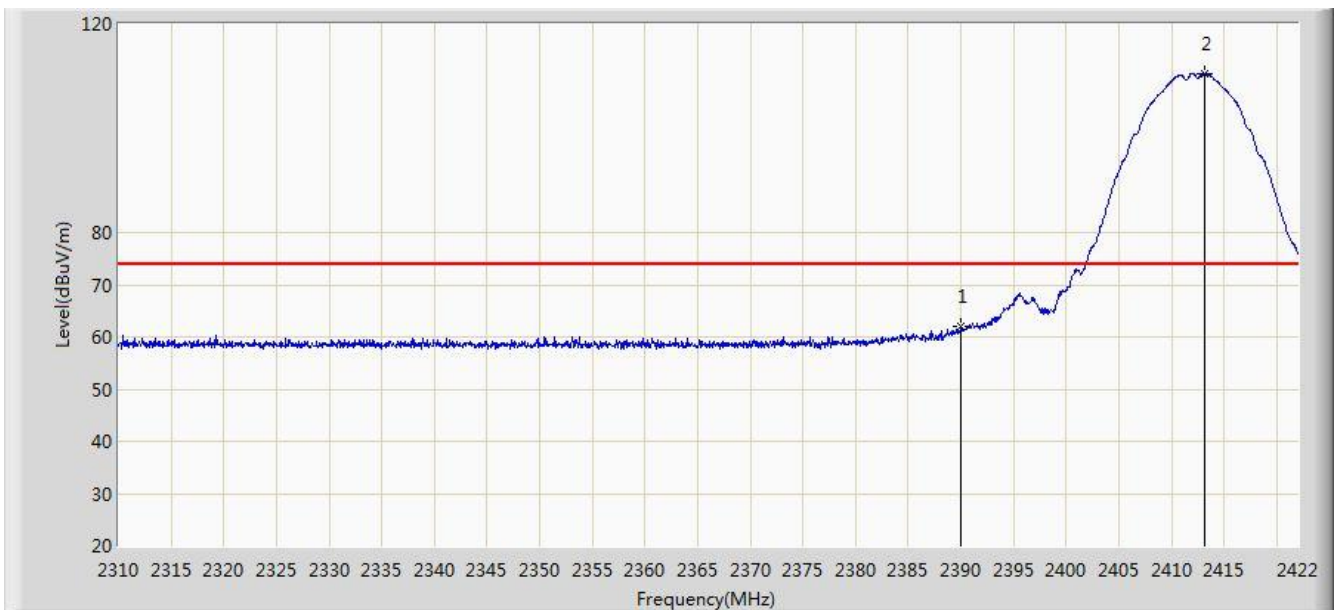


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.296	15.093	-7.704	54.000	31.203	AV
2		*	2411.136	100.901	69.730	N/A	N/A	31.171	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 22:26
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11b 1Tx	

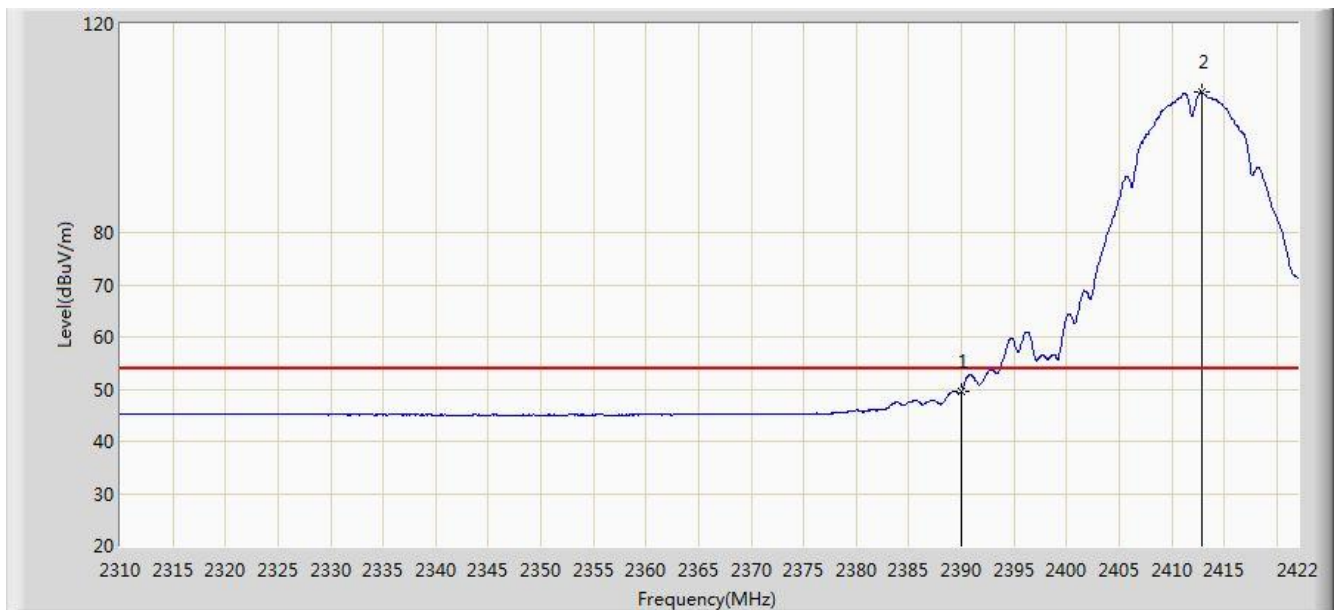


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	61.926	30.723	-12.074	74.000	31.203	PK
2		*	2413.096	110.530	79.362	N/A	N/A	31.167	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 22:26
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11b 1Tx	

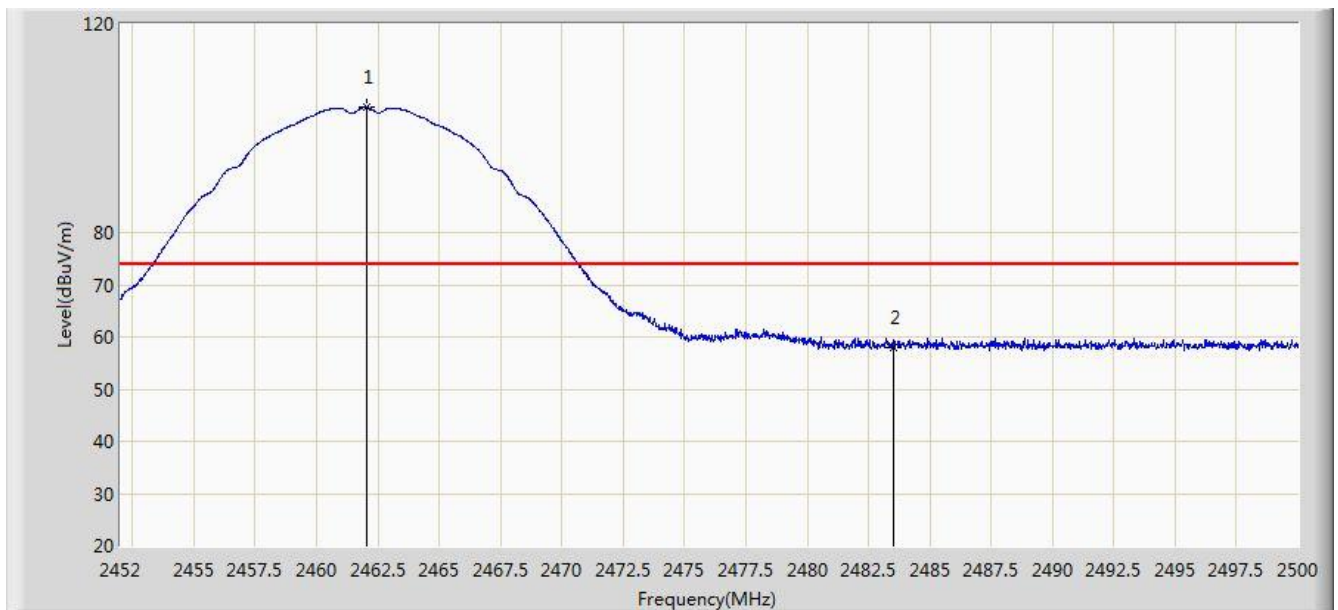


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	49.546	18.343	-4.454	54.000	31.203	AV
2		*	2412.872	106.836	75.668	N/A	N/A	31.168	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 22:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11b 1Tx	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.056	104.030	72.895	N/A	N/A	31.135	PK
2			2483.500	57.906	26.713	-16.094	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 22:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11b 1Tx	

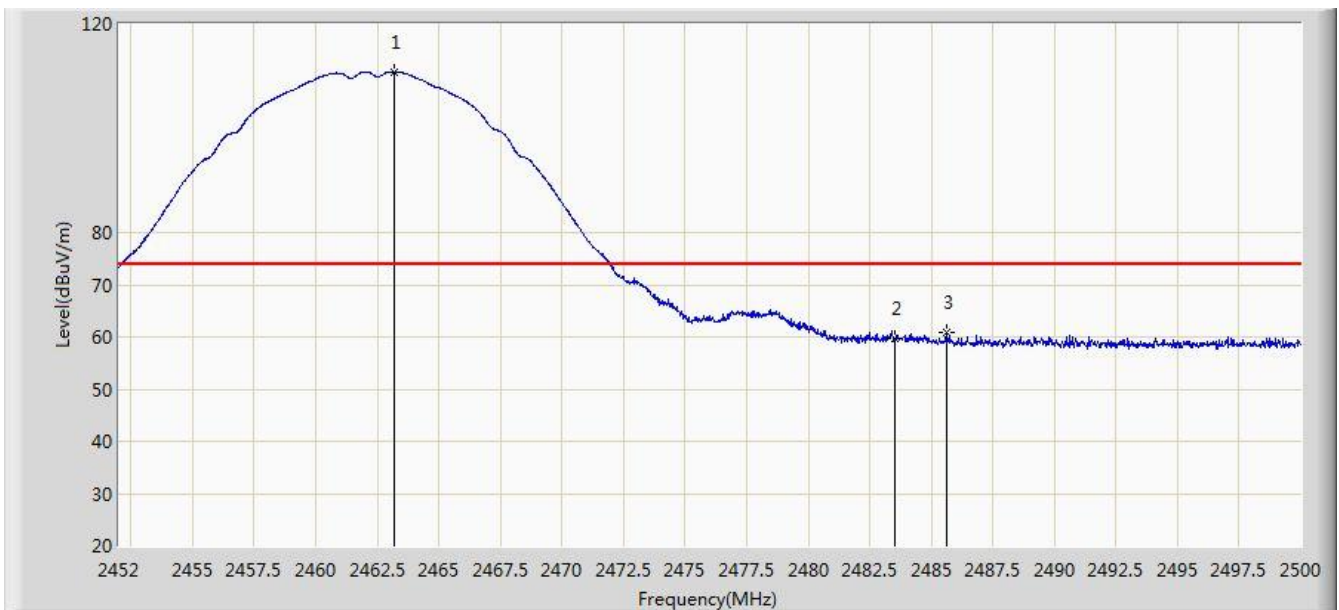


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.312	100.328	69.194	N/A	N/A	31.134	AV
2			2483.500	45.685	14.492	-8.315	54.000	31.194	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 22:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11b 1Tx	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.208	110.844	79.706	N/A	N/A	31.137	PK
2			2483.500	59.729	28.536	-14.271	74.000	31.194	PK
3			2485.600	60.898	29.699	-13.102	74.000	31.198	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 22:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11b 1Tx	

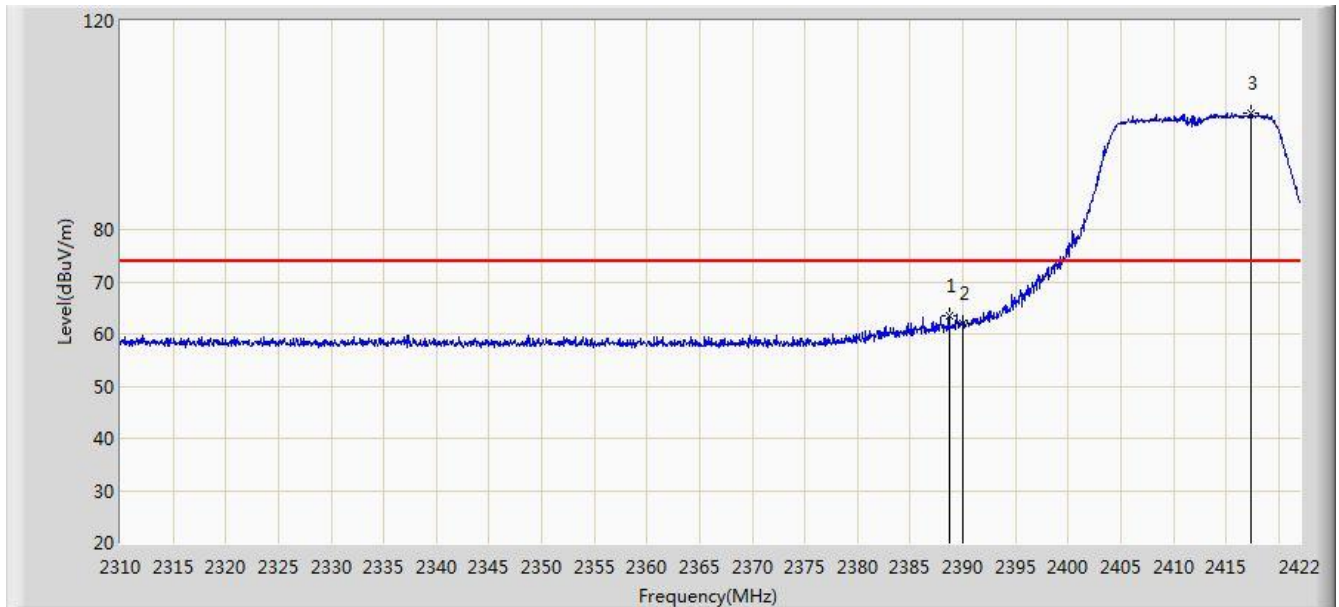


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.240	107.229	76.095	N/A	N/A	31.134	AV
2			2483.500	47.346	16.153	-6.654	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 22:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11g 1Tx	

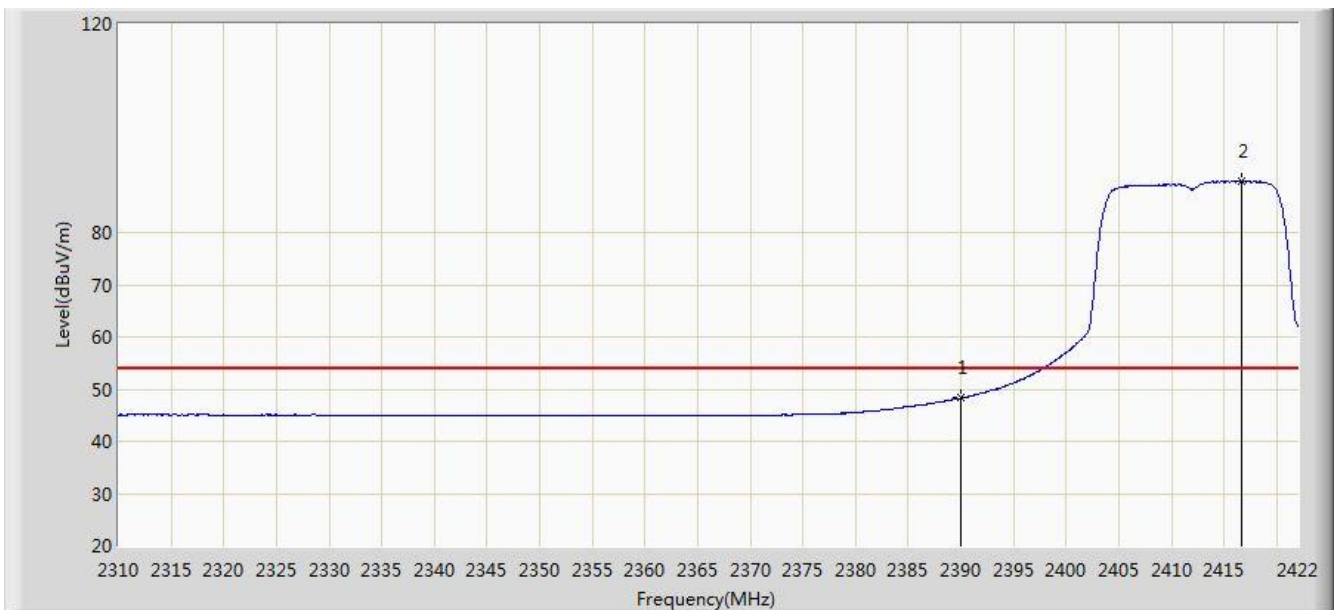


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.680	63.463	32.258	-10.537	74.000	31.205	PK
2			2390.000	62.048	30.845	-11.952	74.000	31.203	PK
3		*	2417.352	102.259	71.099	N/A	N/A	31.160	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 22:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11g 1Tx	

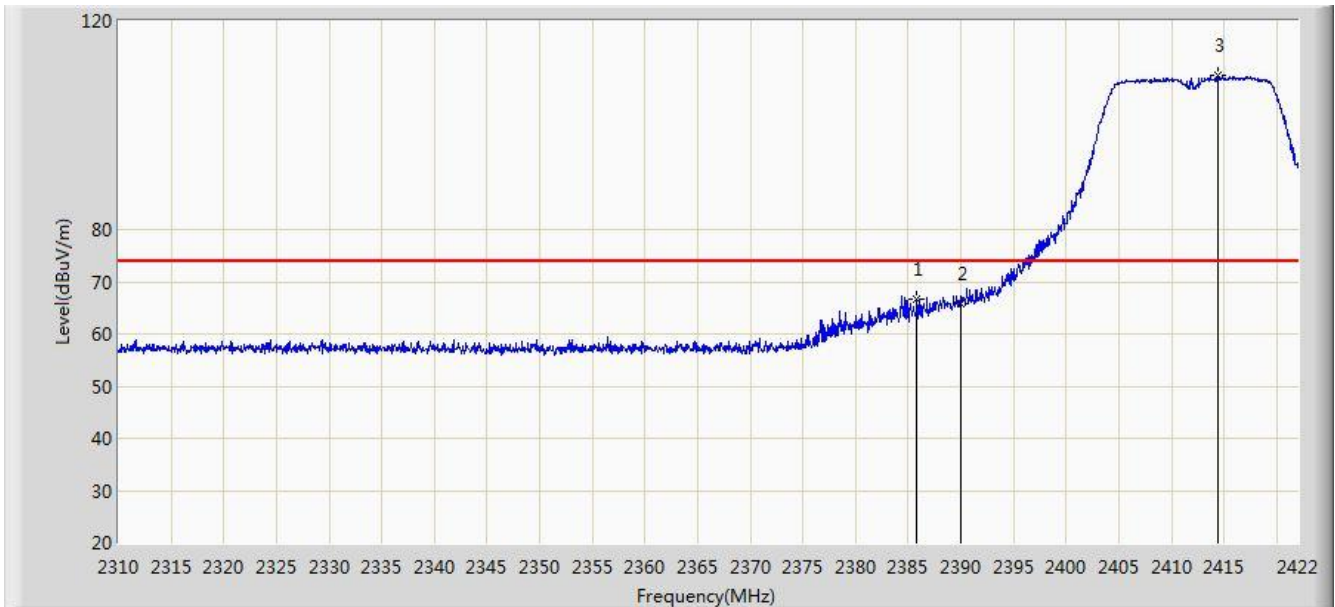


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	48.296	17.093	-5.704	54.000	31.203	AV
2		*	2416.736	89.840	58.679	N/A	N/A	31.162	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11g 1Tx	

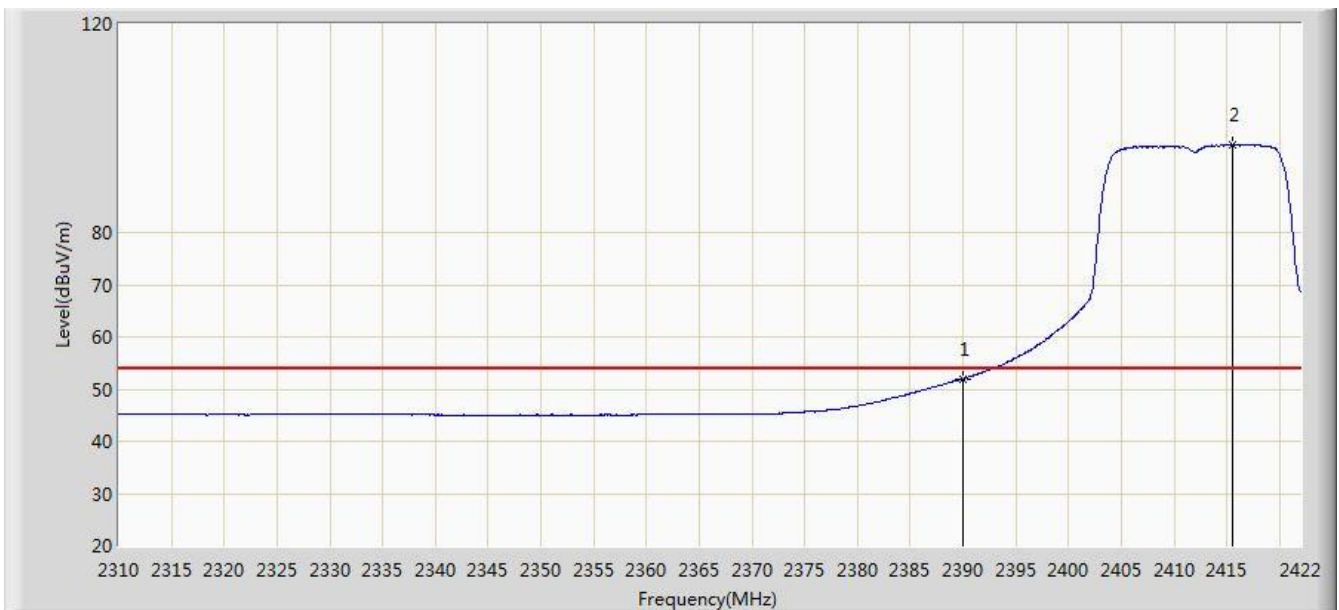


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2385.824	66.763	35.553	-7.237	74.000	31.211	PK
2			2390.000	65.942	34.739	-8.058	74.000	31.203	PK
3		*	2414.440	109.646	78.481	N/A	N/A	31.165	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11g 1Tx	

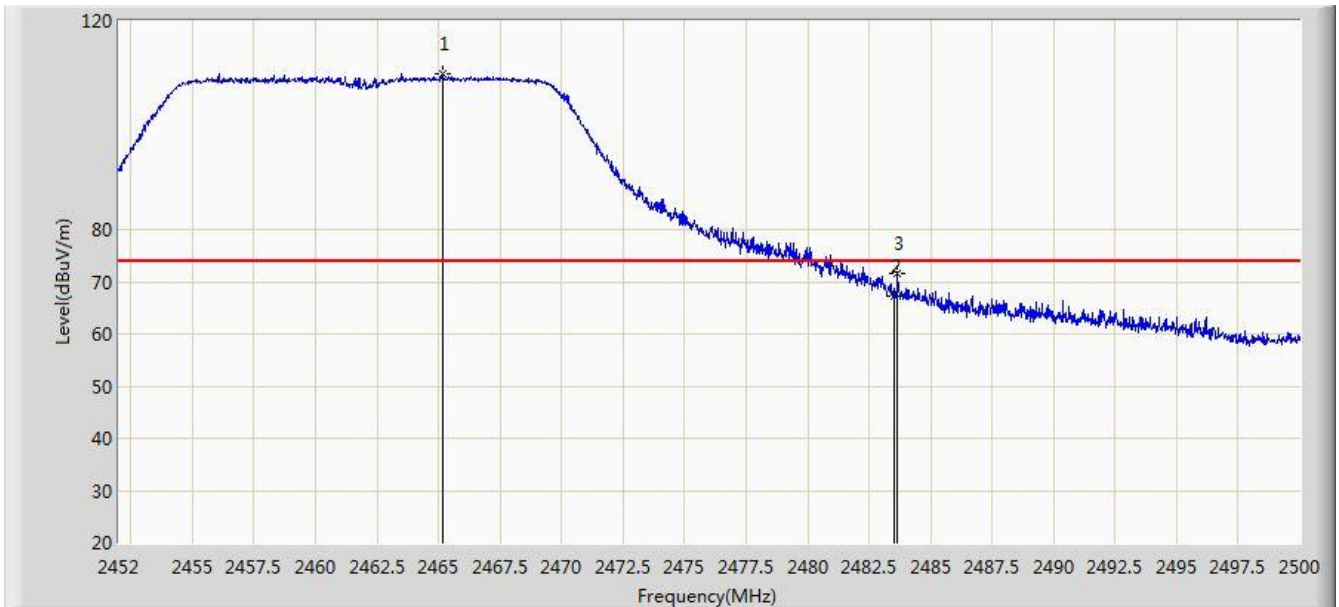


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	51.946	20.743	-2.054	54.000	31.203	AV
2		*	2415.504	96.873	65.709	N/A	N/A	31.164	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:30
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11g 1Tx	

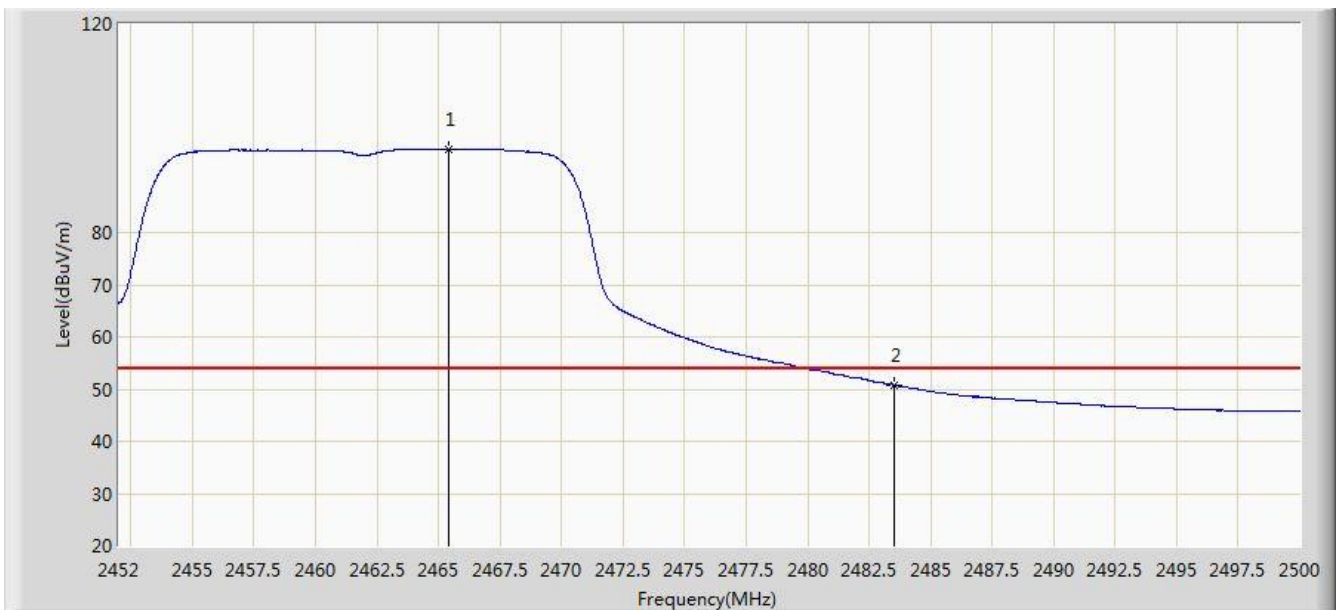


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.152	109.767	78.624	N/A	N/A	31.142	PK
2			2483.500	67.382	36.189	-6.618	74.000	31.194	PK
3			2483.656	71.726	40.532	-2.274	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11g 1Tx	

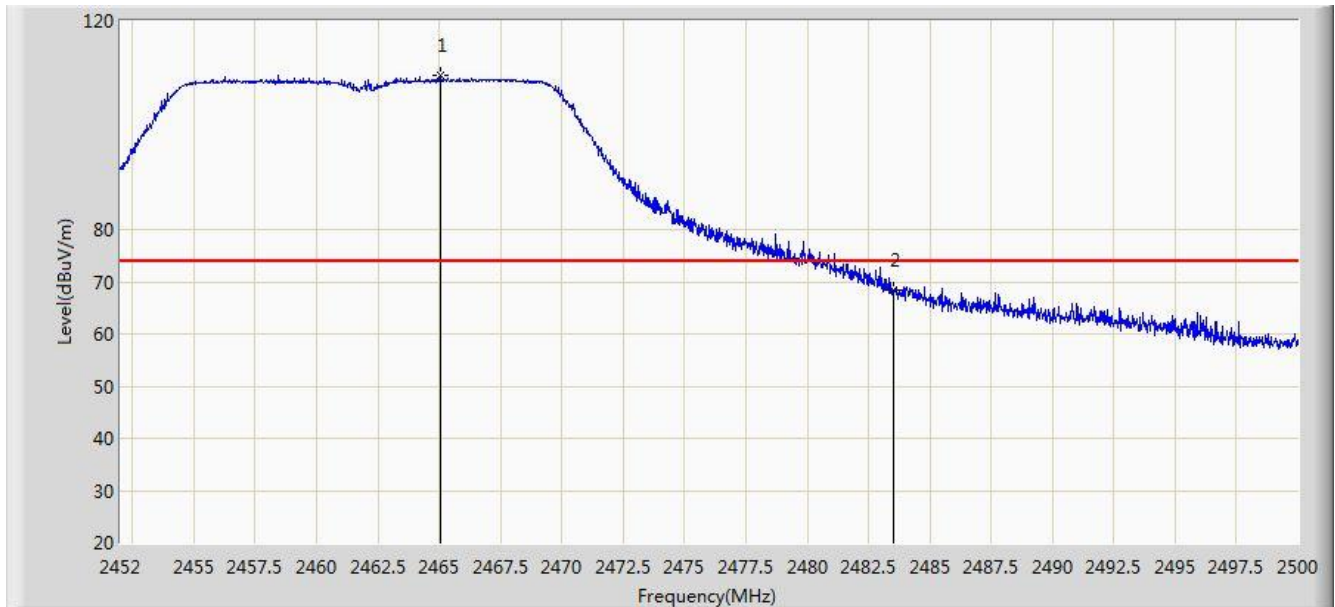


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.416	96.007	64.864	N/A	N/A	31.143	AV
2			2483.500	50.783	19.590	-3.217	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11g 1Tx	

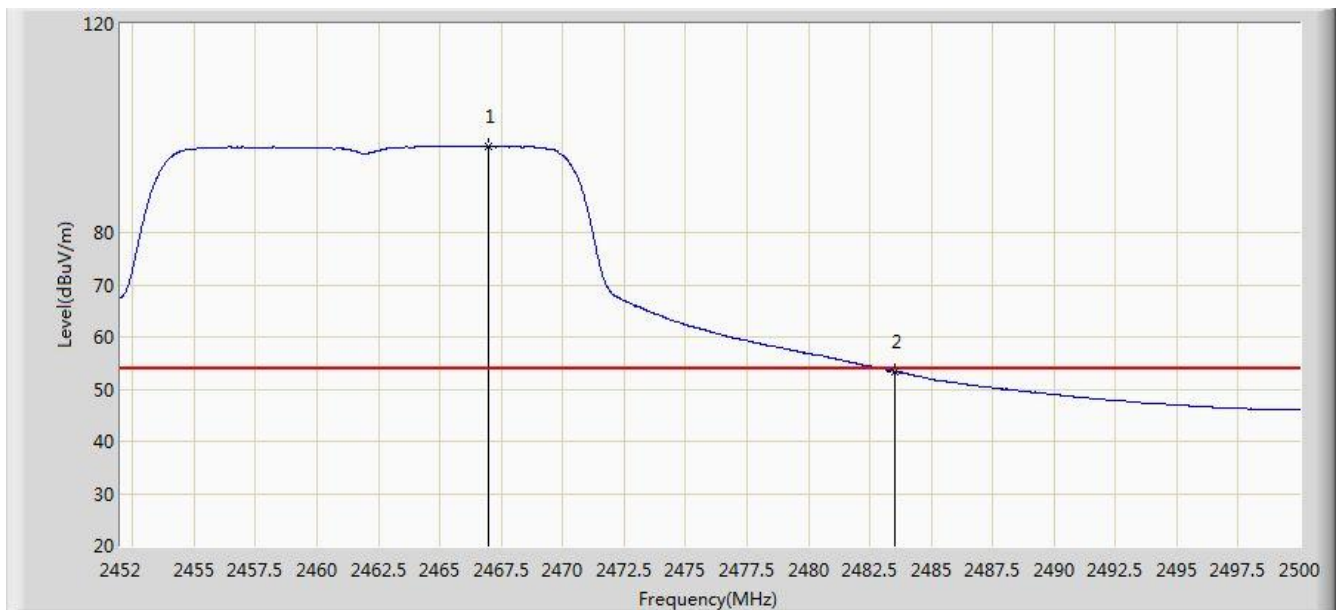


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.080	109.450	78.308	N/A	N/A	31.142	PK
2			2483.500	68.413	37.220	-5.587	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11g 1Tx	

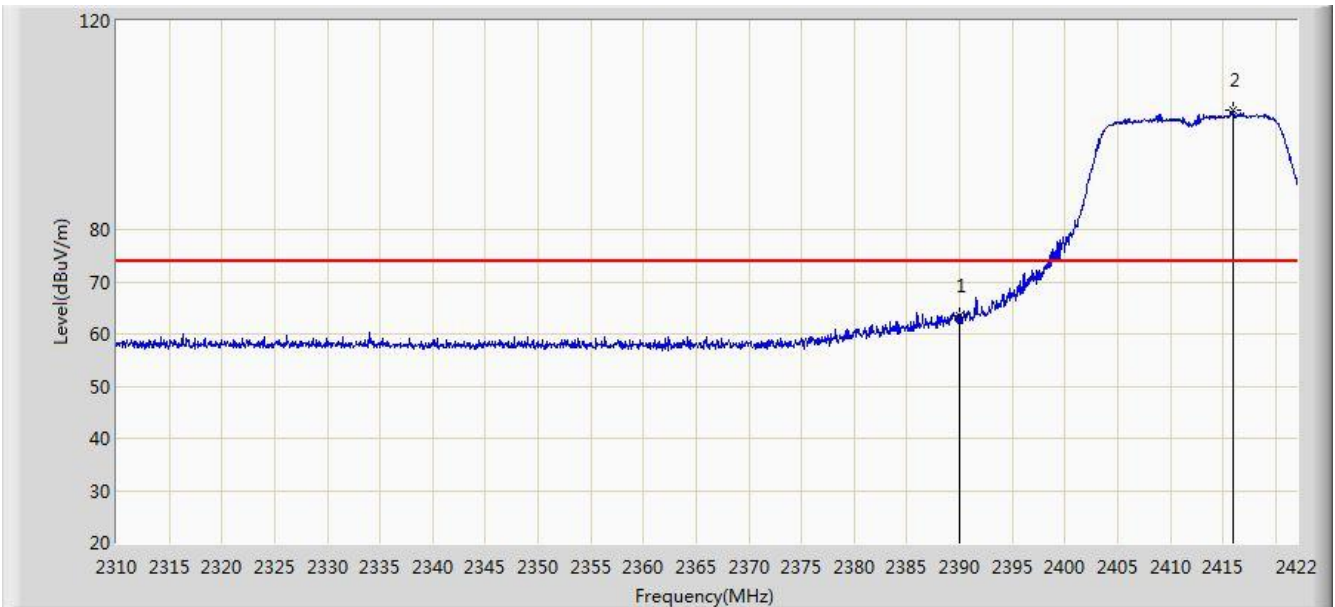


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.976	96.619	65.471	N/A	N/A	31.148	AV
2			2483.500	53.437	22.244	-0.563	54.000	31.194	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 1Tx	

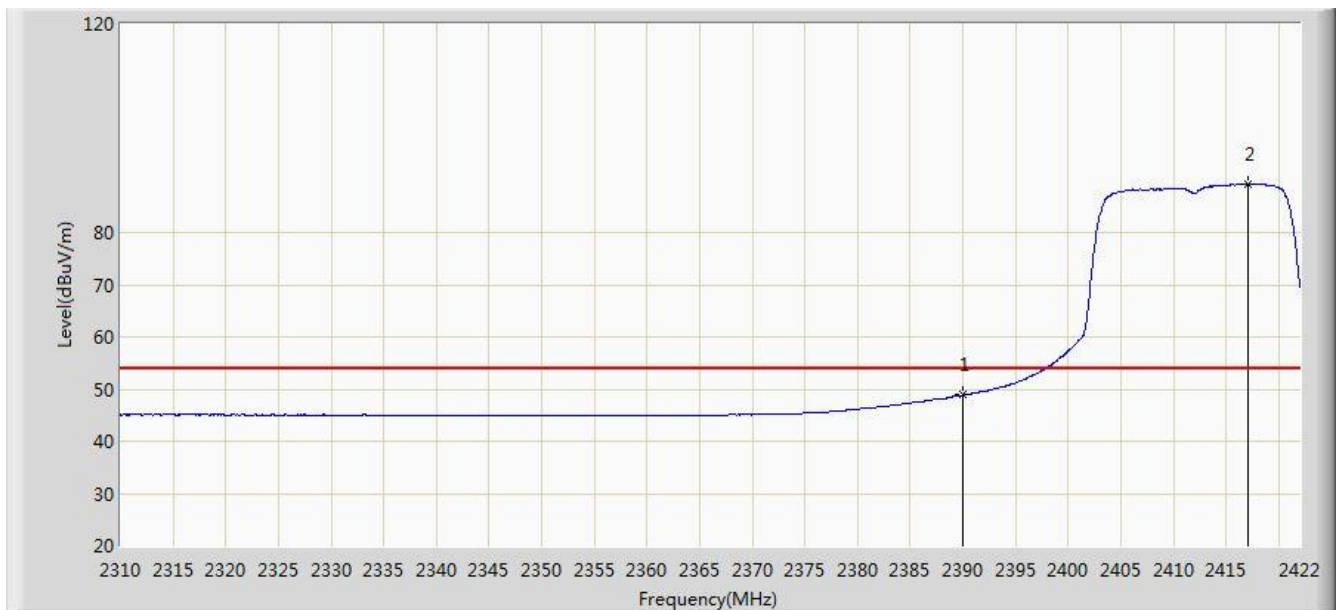


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	63.466	32.263	-10.534	74.000	31.203	PK
2		*	2415.896	102.906	71.743	N/A	N/A	31.163	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 1Tx	

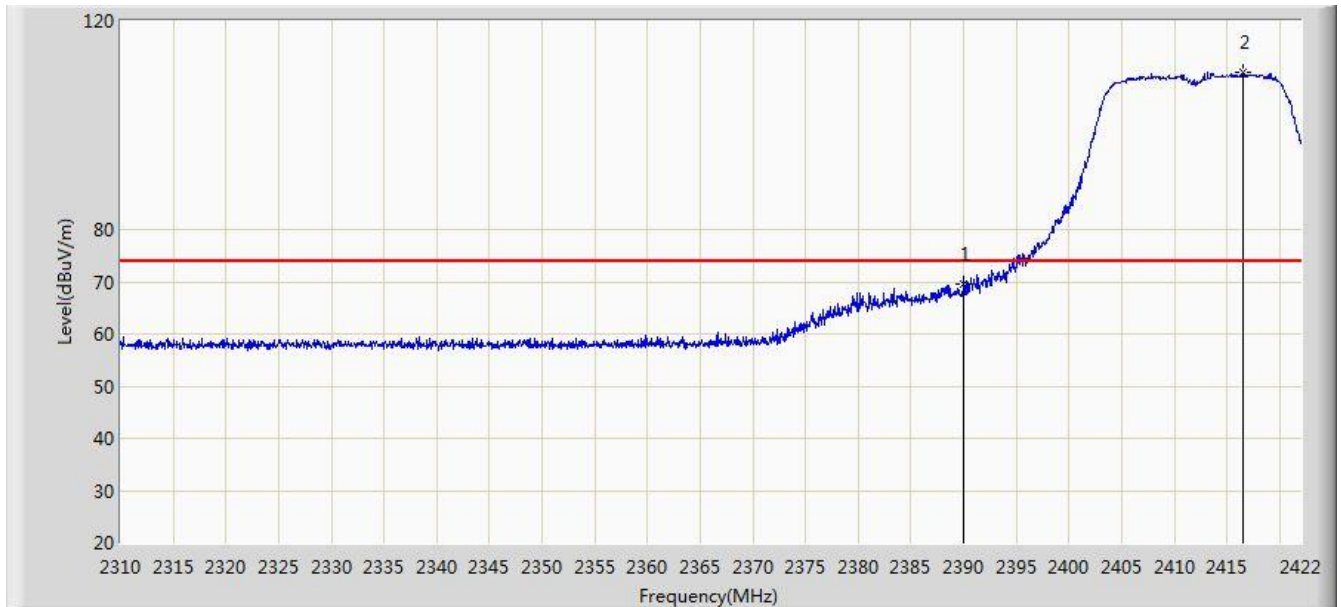


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	48.871	17.668	-5.129	54.000	31.203	AV
2		*	2417.072	89.280	58.119	N/A	N/A	31.161	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 1Tx	

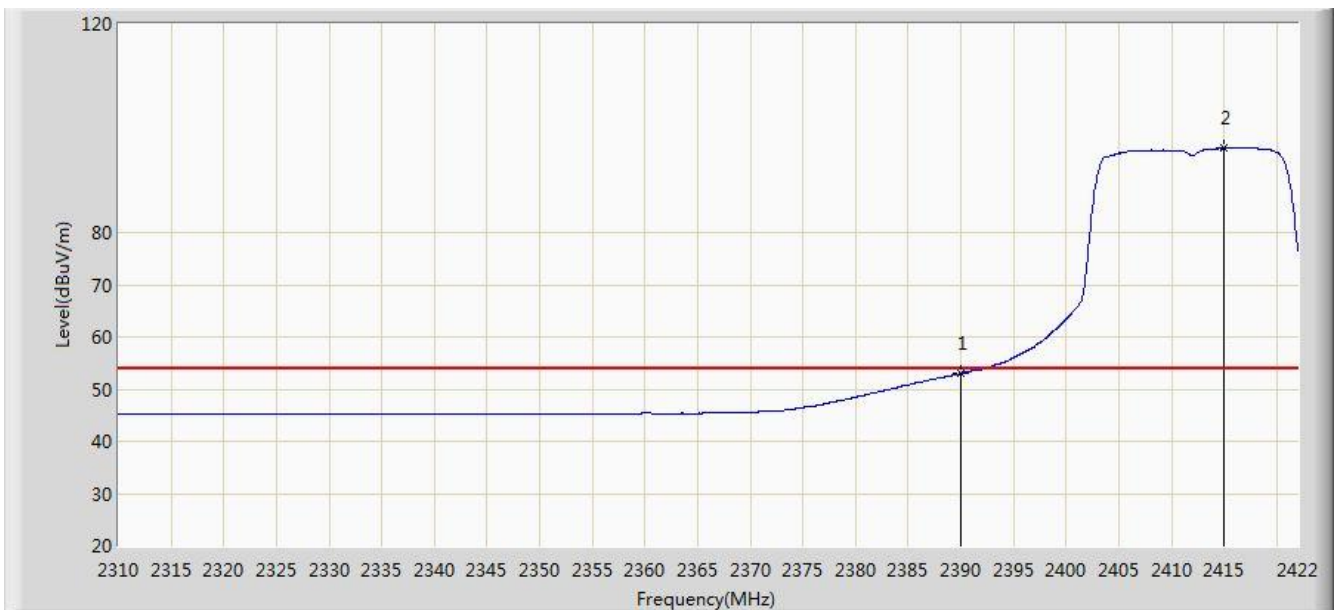


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	69.499	38.296	-4.501	74.000	31.203	PK
2		*	2416.568	110.218	79.056	N/A	N/A	31.162	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 1Tx	

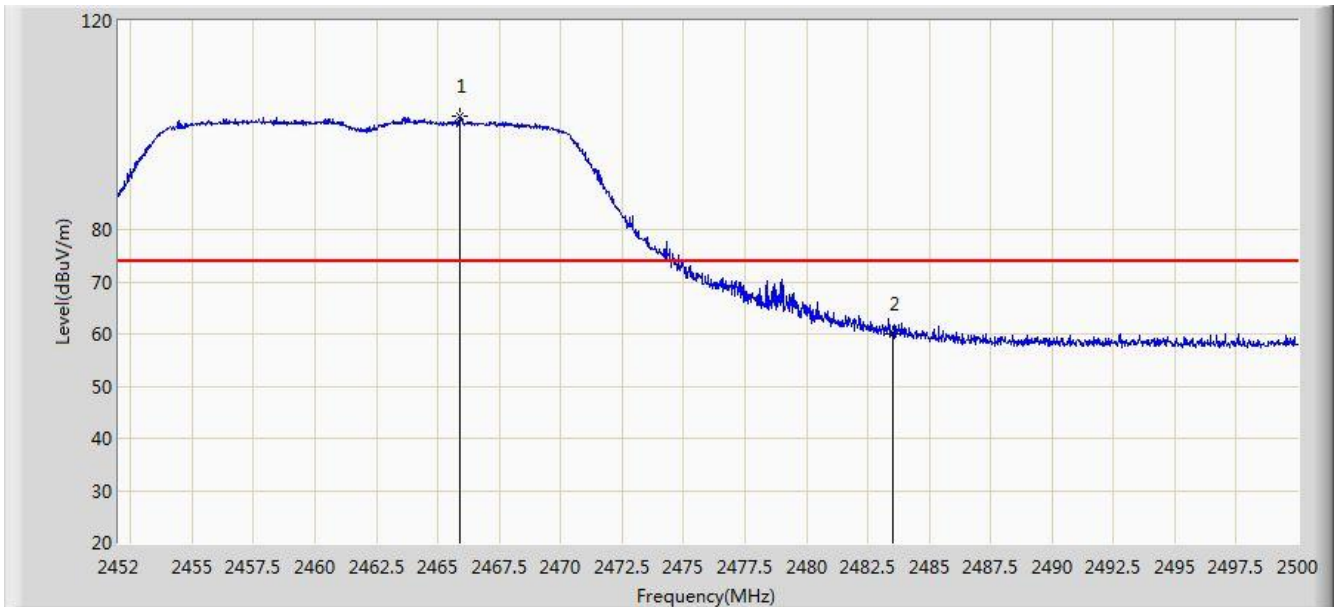


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	52.959	21.756	-1.041	54.000	31.203	AV
2		*	2415.000	96.343	65.179	N/A	N/A	31.165	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 1Tx	

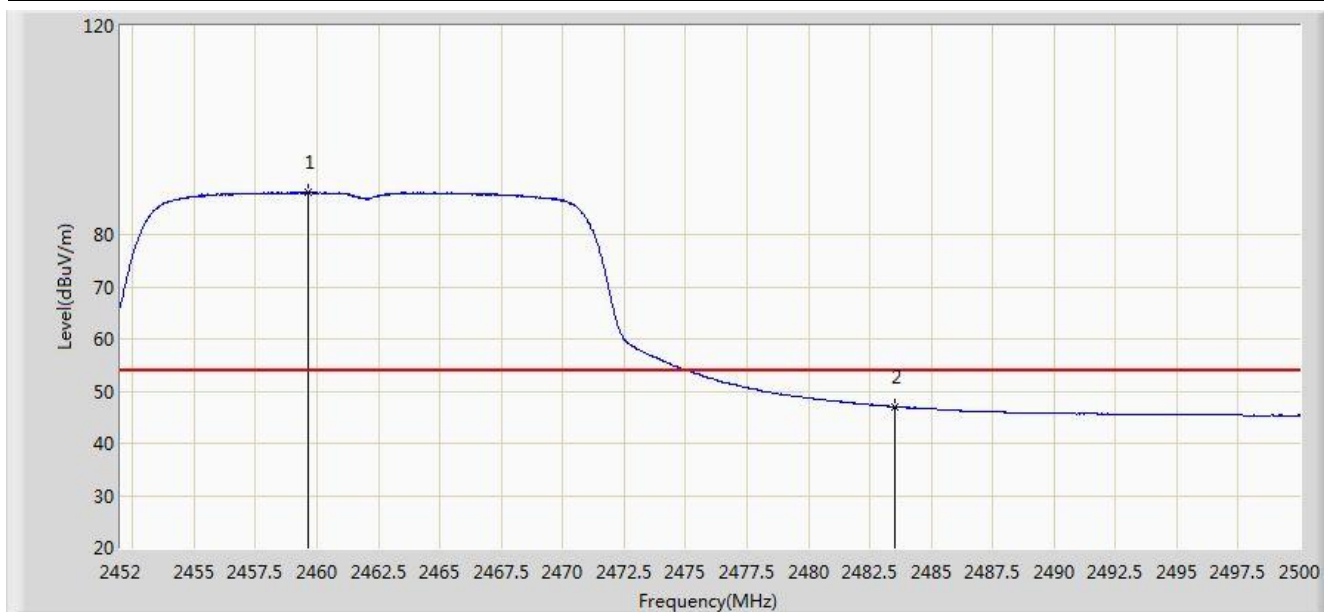


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.872	101.695	70.550	N/A	N/A	31.145	PK
2			2483.500	59.987	28.794	-14.013	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 1Tx	

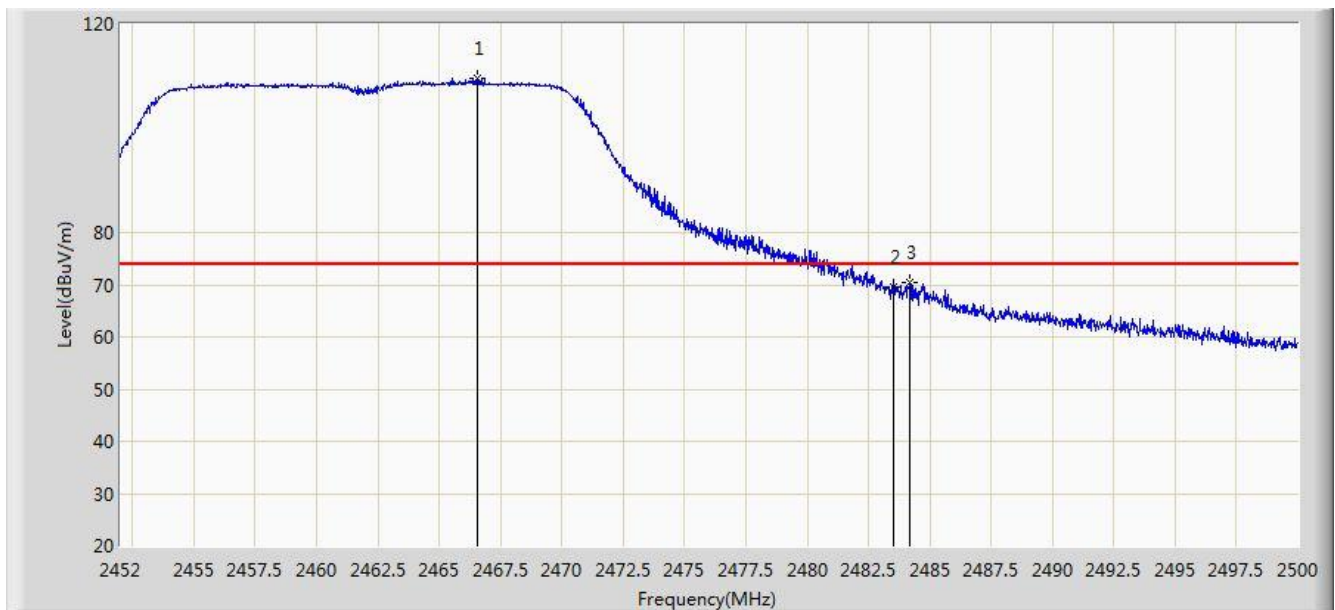


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2459.656	87.999	56.868	N/A	N/A	31.131	AV
2			2483.500	47.016	15.823	-6.984	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:46
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 1Tx	

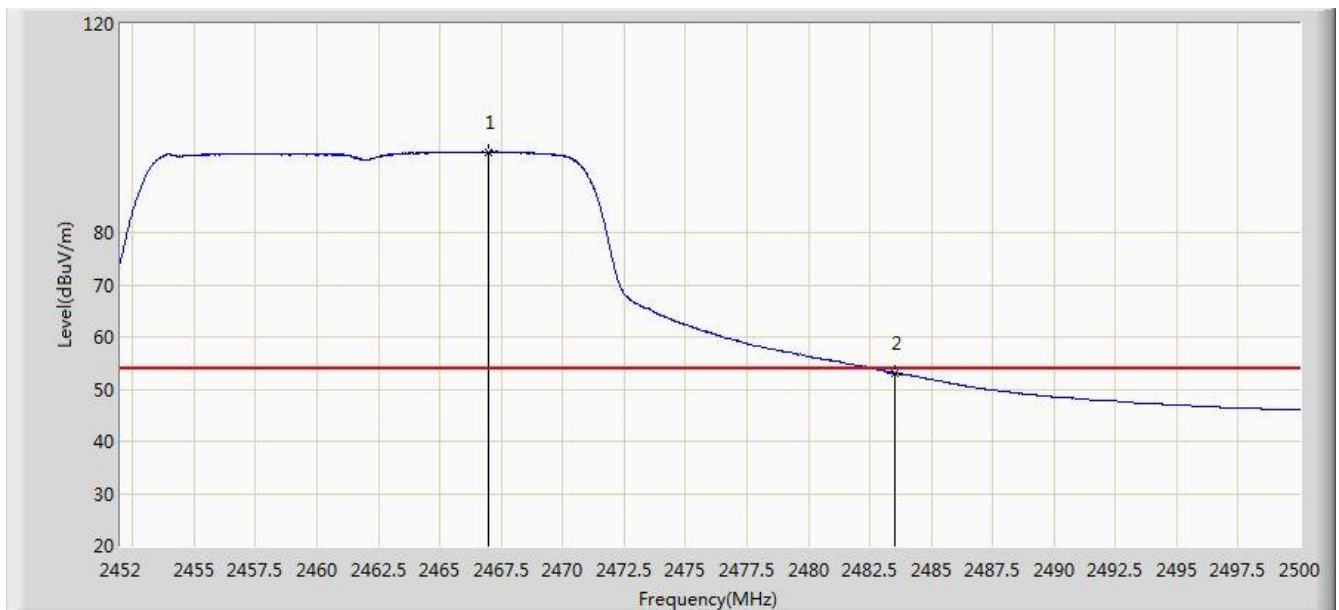


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.568	109.547	78.400	N/A	N/A	31.147	PK
2			2483.500	69.570	38.377	-4.430	74.000	31.194	PK
3			2484.208	70.472	39.277	-3.528	74.000	31.195	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 1Tx	

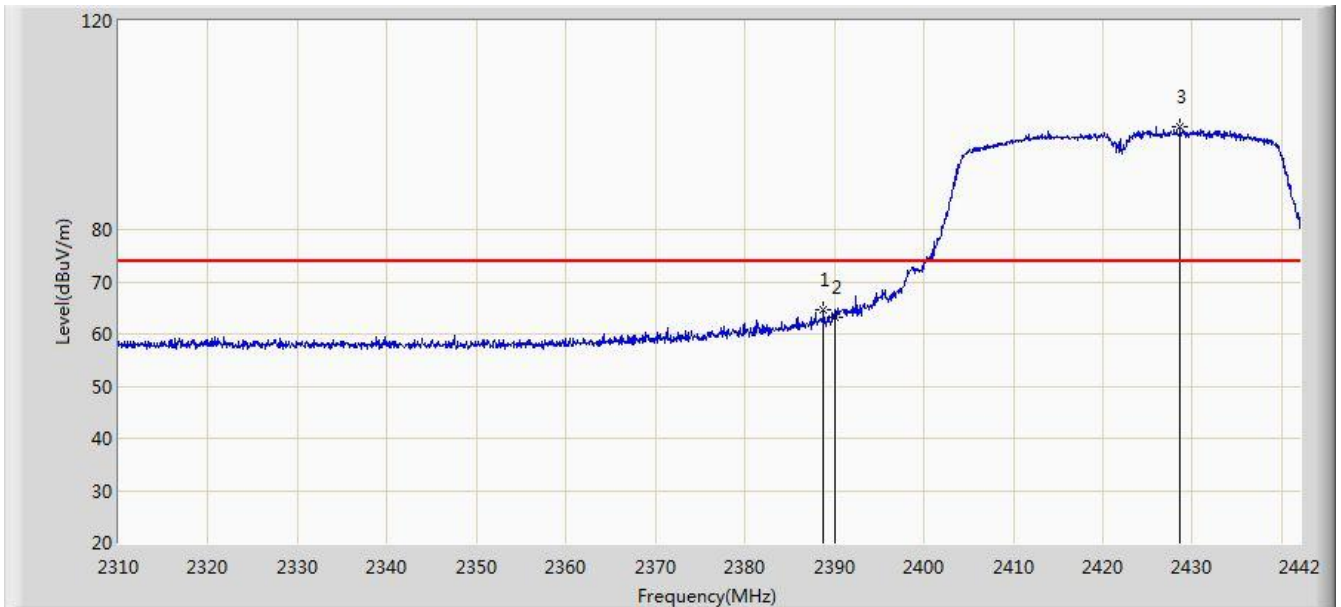


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.976	95.489	64.341	N/A	N/A	31.148	AV
2			2483.500	53.148	21.955	-0.852	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 1Tx	

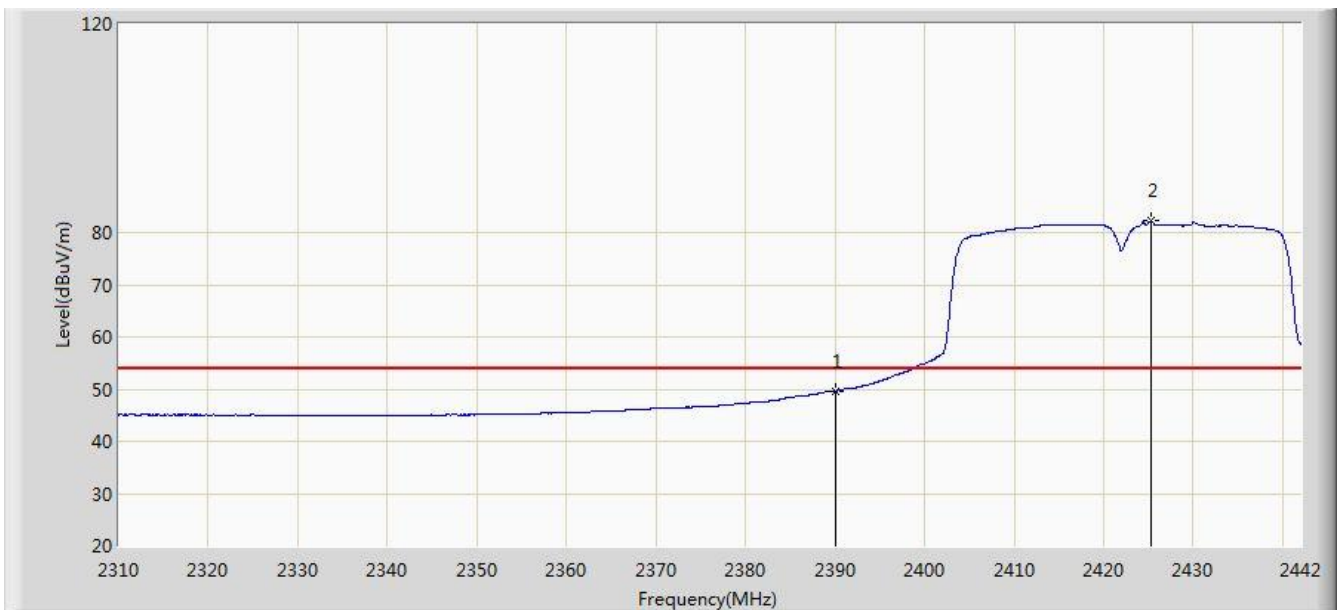


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.804	64.517	33.312	-9.483	74.000	31.205	PK
2			2390.000	63.307	32.104	-10.693	74.000	31.203	PK
3		*	2428.668	99.819	68.678	N/A	N/A	31.140	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 1Tx	

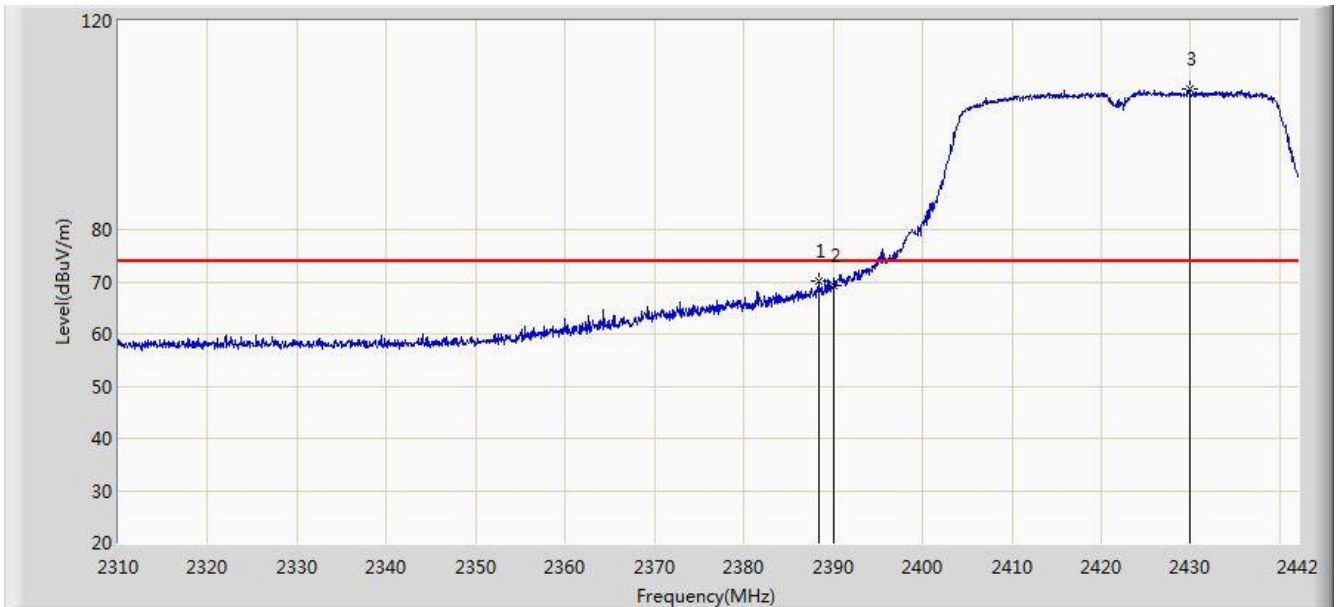


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	49.633	18.430	-4.367	54.000	31.203	AV
2		*	2425.302	82.302	51.155	N/A	N/A	31.146	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:53
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 1Tx	

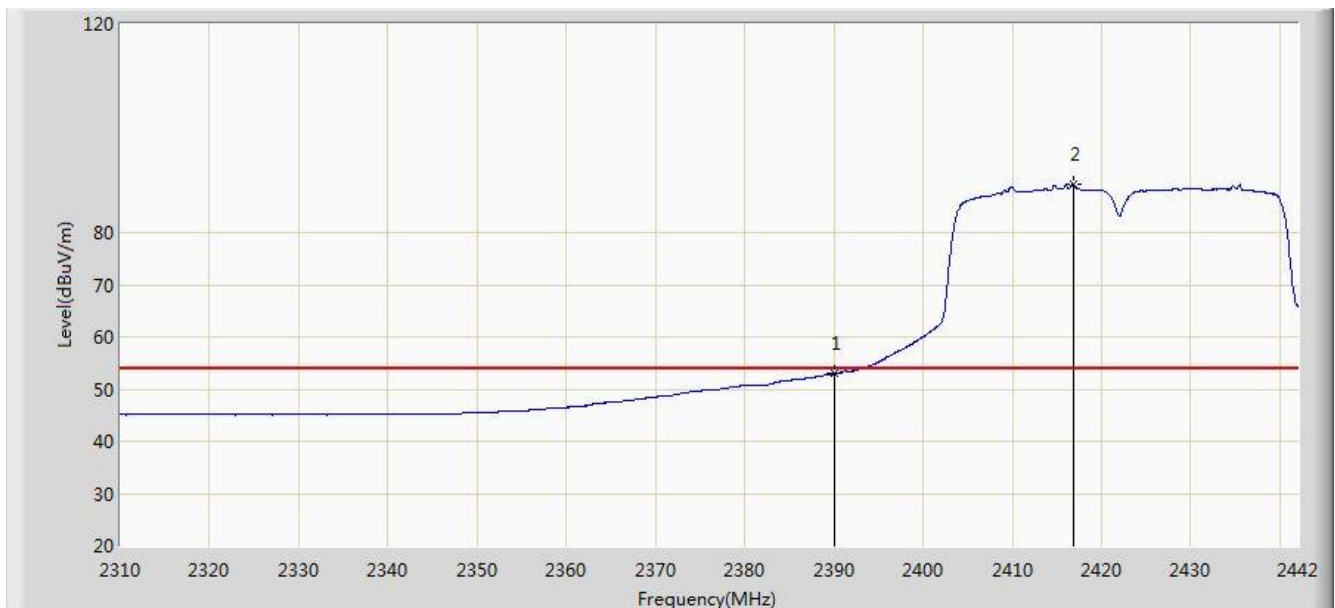


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.342	70.275	39.069	-3.725	74.000	31.206	PK
2			2390.000	69.151	37.948	-4.849	74.000	31.203	PK
3		*	2429.922	107.042	75.904	N/A	N/A	31.138	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:53
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 1Tx	

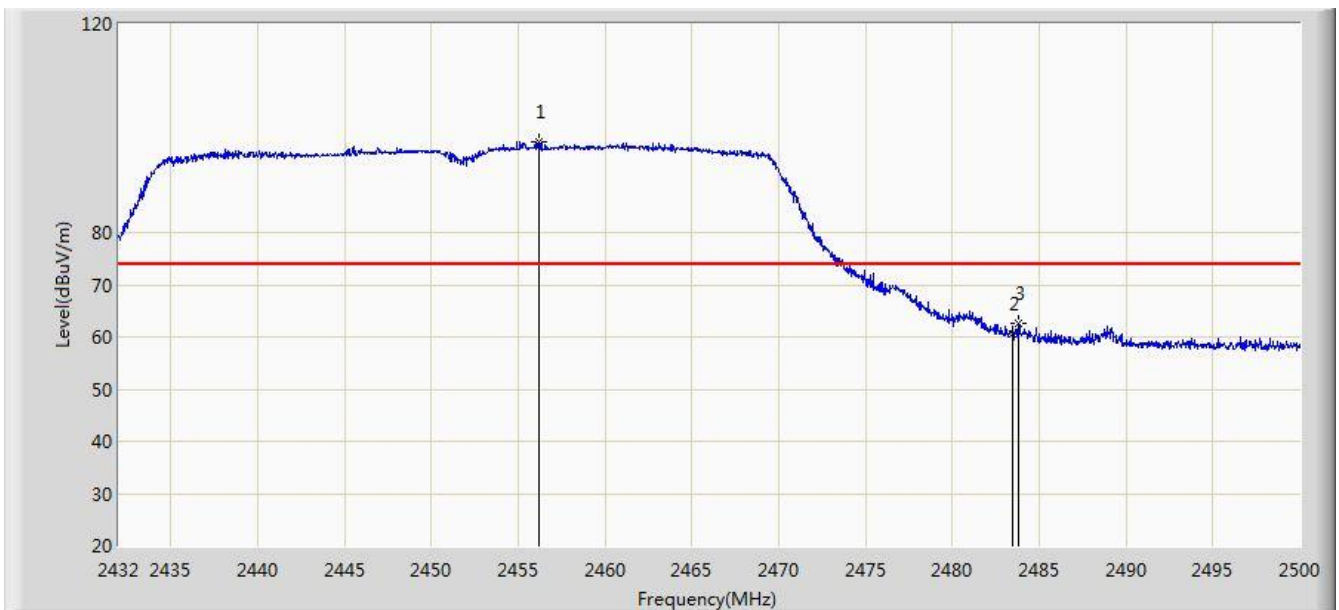


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	52.926	21.723	-1.074	54.000	31.203	AV
2		*	2416.854	89.217	58.056	N/A	N/A	31.161	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:58
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 1Tx	

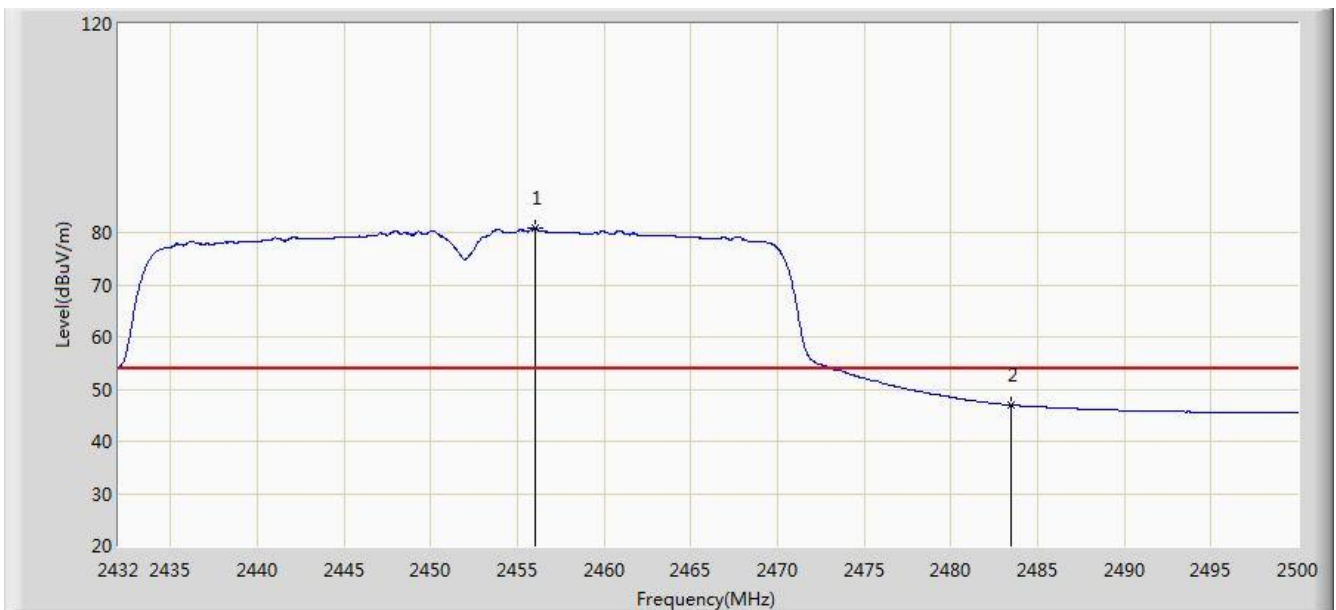


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.174	97.502	66.377	N/A	N/A	31.125	PK
2			2483.500	60.561	29.368	-13.439	74.000	31.194	PK
3			2483.850	62.609	31.415	-11.391	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/22 - 23:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 1Tx	

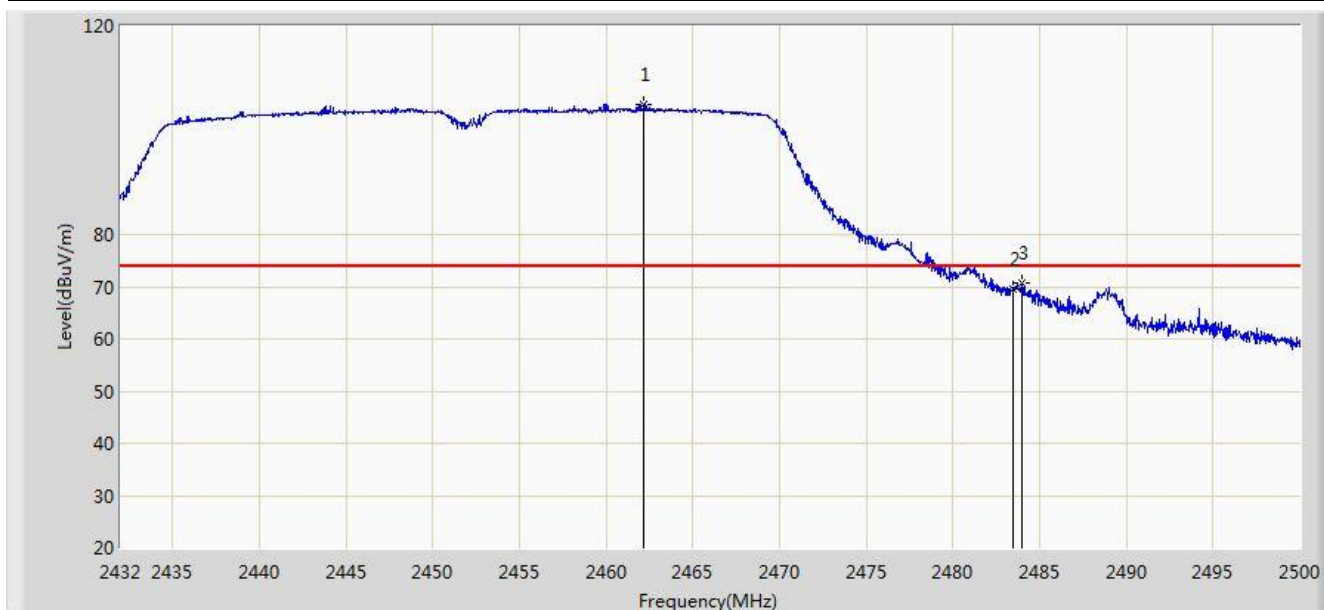


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.072	80.819	49.694	N/A	N/A	31.125	AV
2			2483.500	46.953	15.760	-7.047	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:02
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 1Tx	

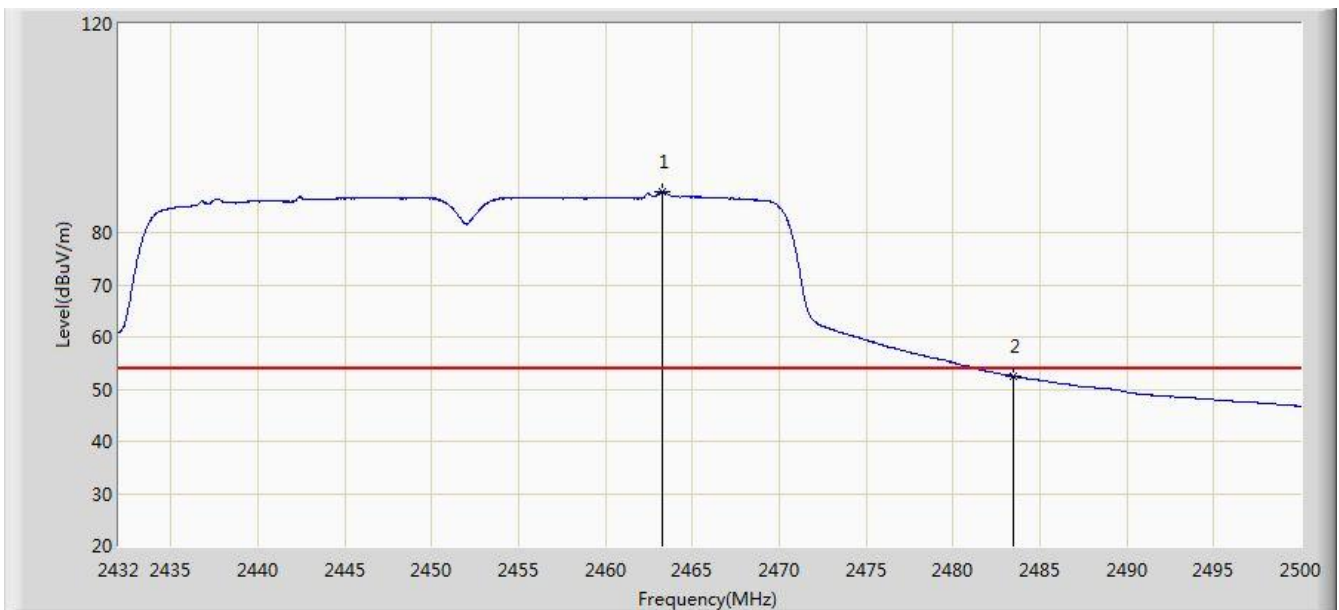


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.192	104.964	73.828	N/A	N/A	31.136	PK
2			2483.500	69.425	38.232	-4.575	74.000	31.194	PK
3			2484.020	70.642	39.447	-3.358	74.000	31.195	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:01
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 1Tx	

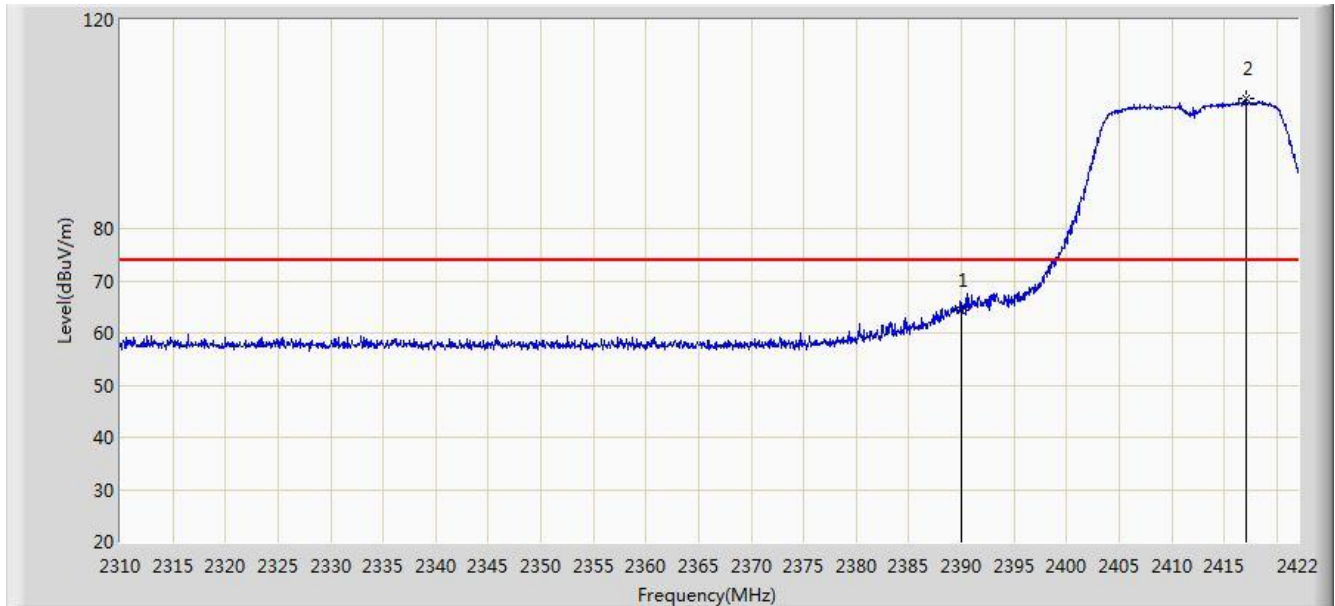


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.280	87.872	56.734	N/A	N/A	31.138	AV
2			2483.500	52.447	21.254	-1.553	54.000	31.194	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:30
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 2Tx	

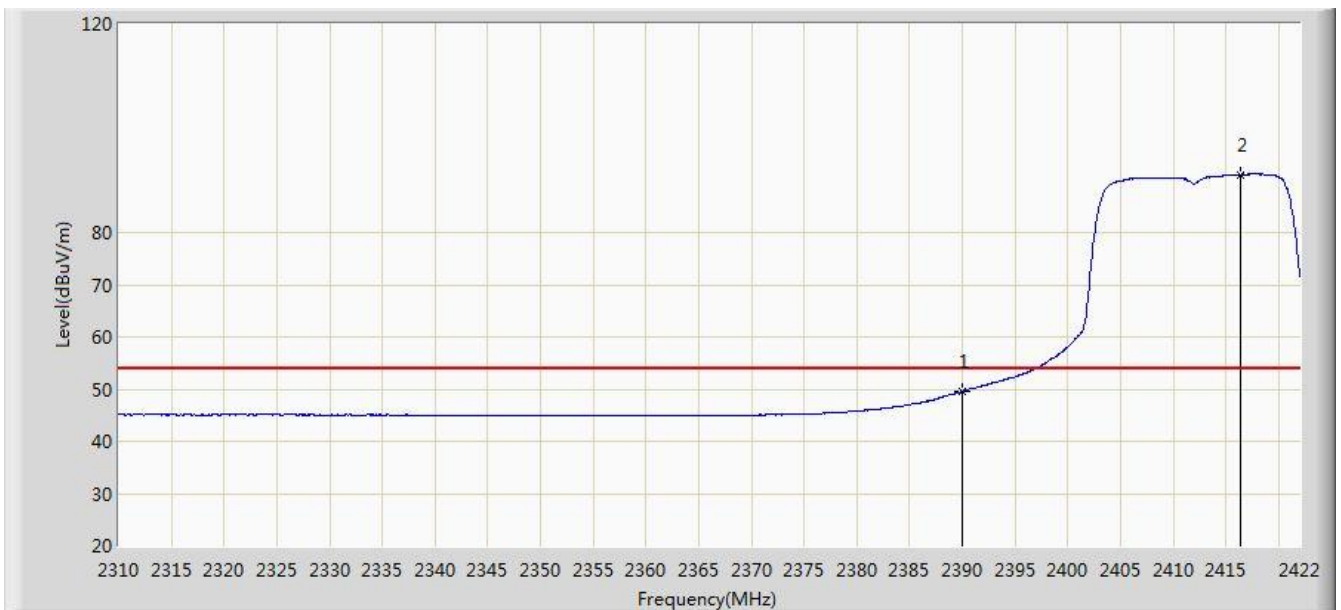


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	64.398	33.195	-9.602	74.000	31.203	PK
2		*	2417.072	105.023	73.862	N/A	N/A	31.161	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:30
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 2Tx	

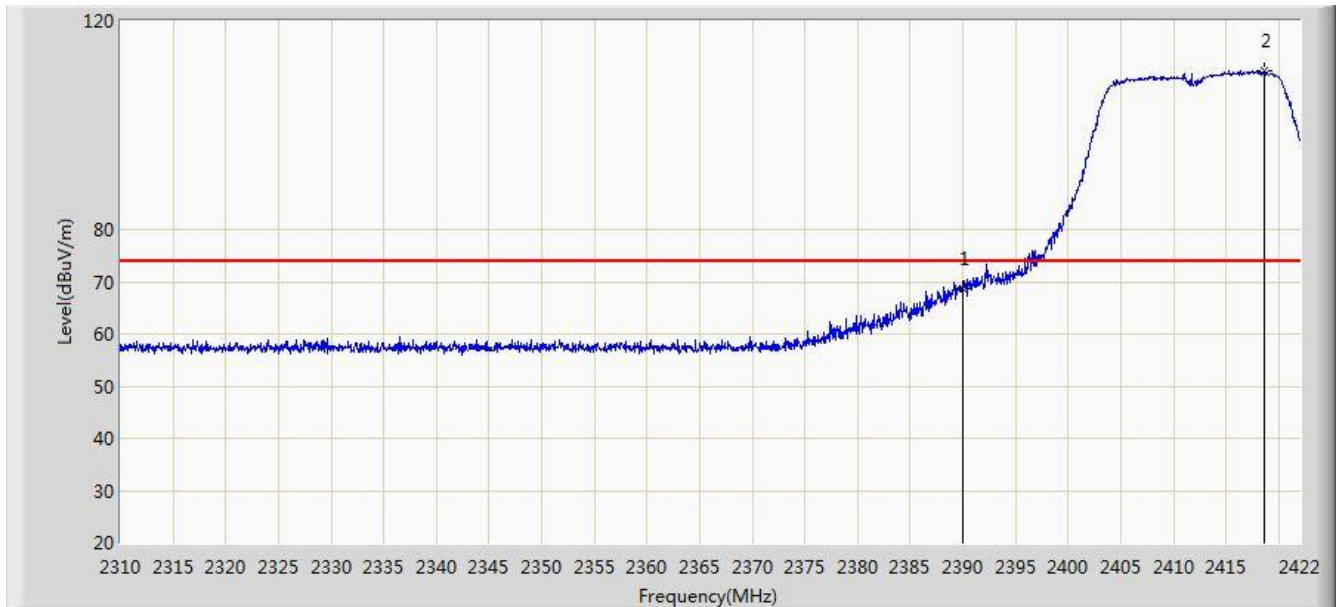


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	49.562	18.359	-4.438	54.000	31.203	AV
2		*	2416.344	91.147	59.985	N/A	N/A	31.162	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 2Tx	

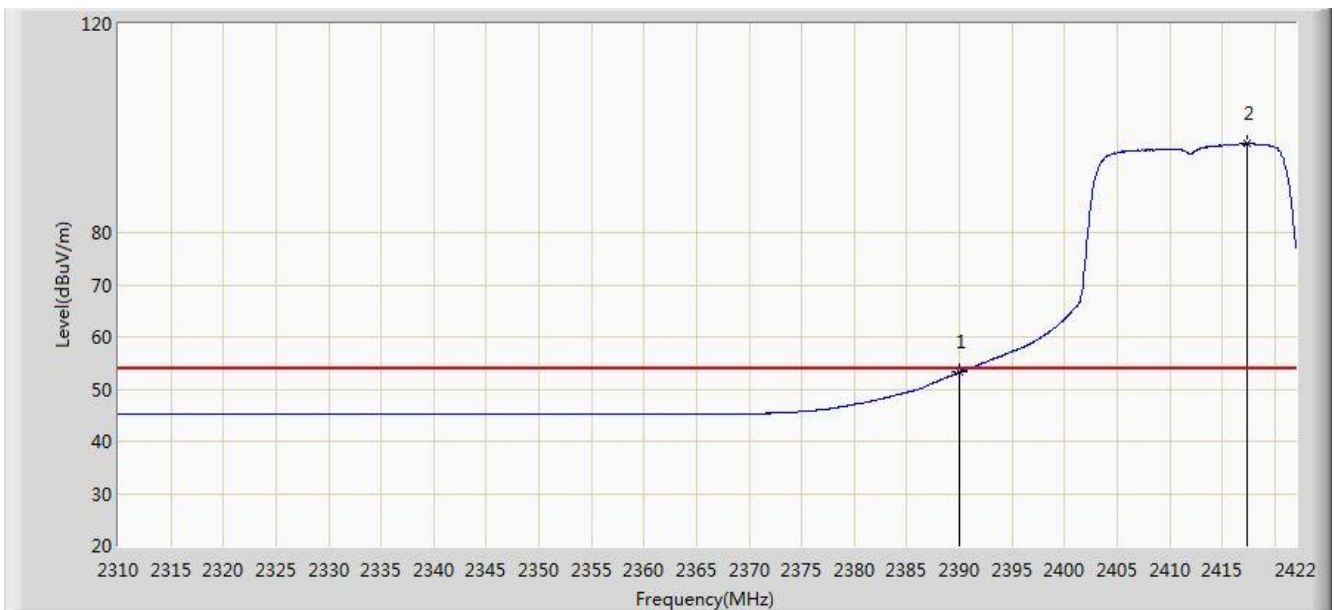


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	68.824	37.621	-5.176	74.000	31.203	PK
2		*	2418.584	110.558	79.400	N/A	N/A	31.158	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 2Tx	

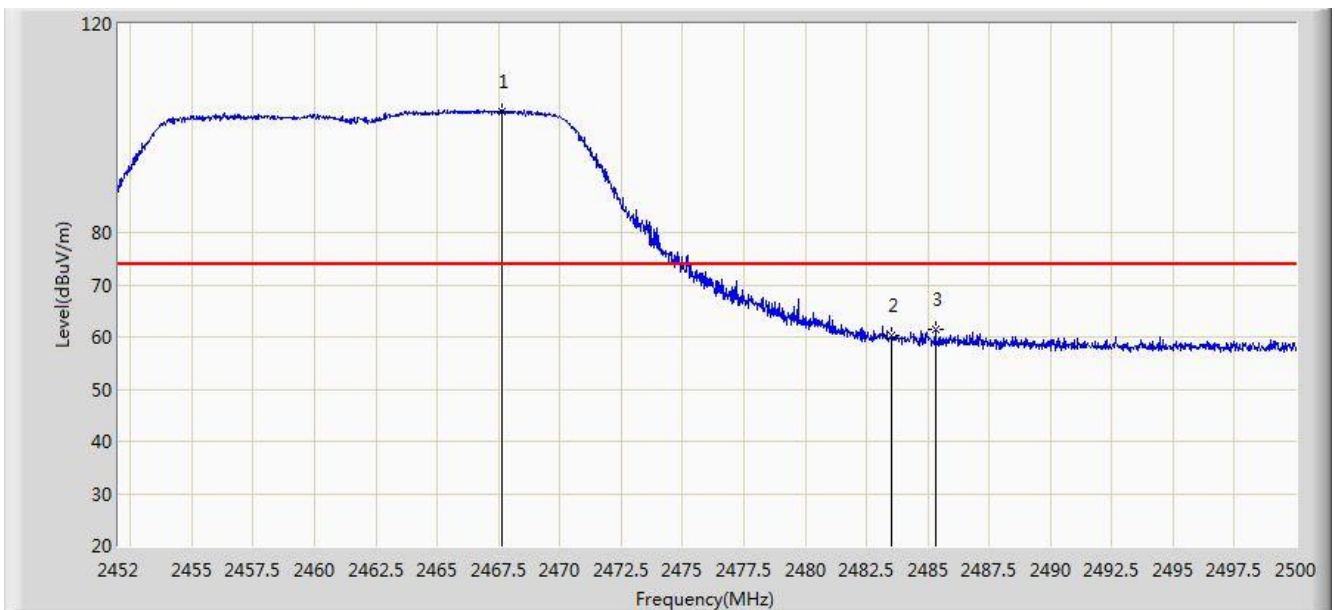


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.289	22.086	-0.711	54.000	31.203	AV
2		*	2417.408	97.002	65.842	N/A	N/A	31.160	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 2Tx	

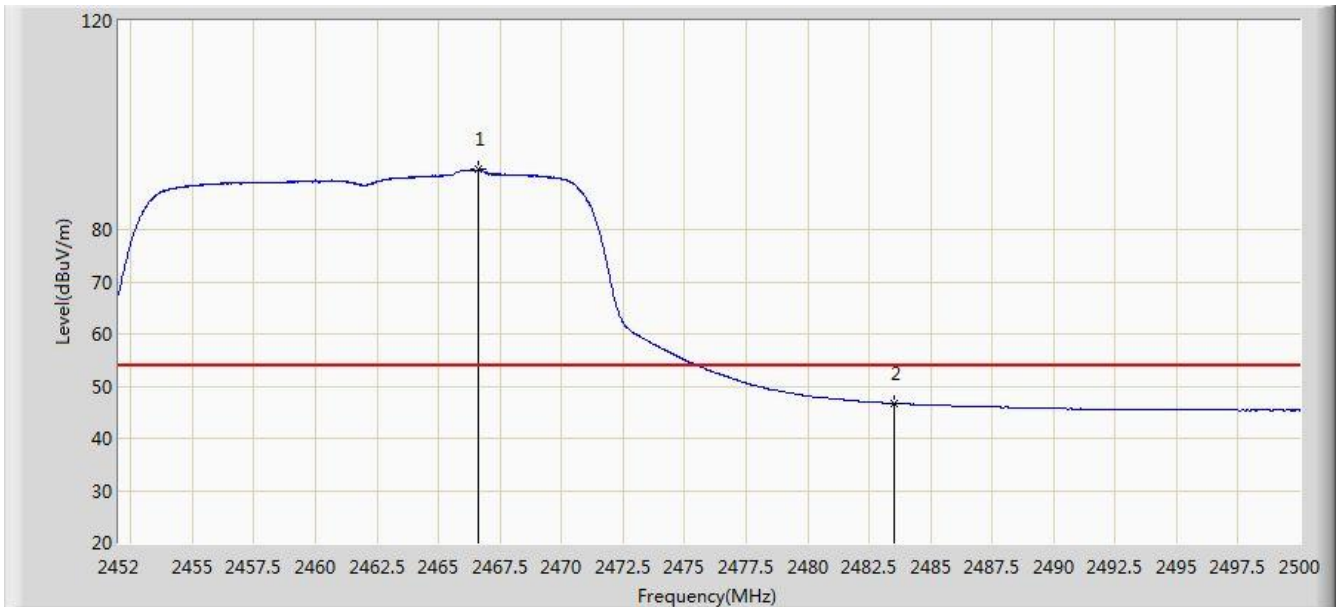


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.648	103.127	71.977	N/A	N/A	31.150	PK
2			2483.500	60.185	28.992	-13.815	74.000	31.194	PK
3			2485.312	61.392	30.194	-12.608	74.000	31.198	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:41
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 2Tx	

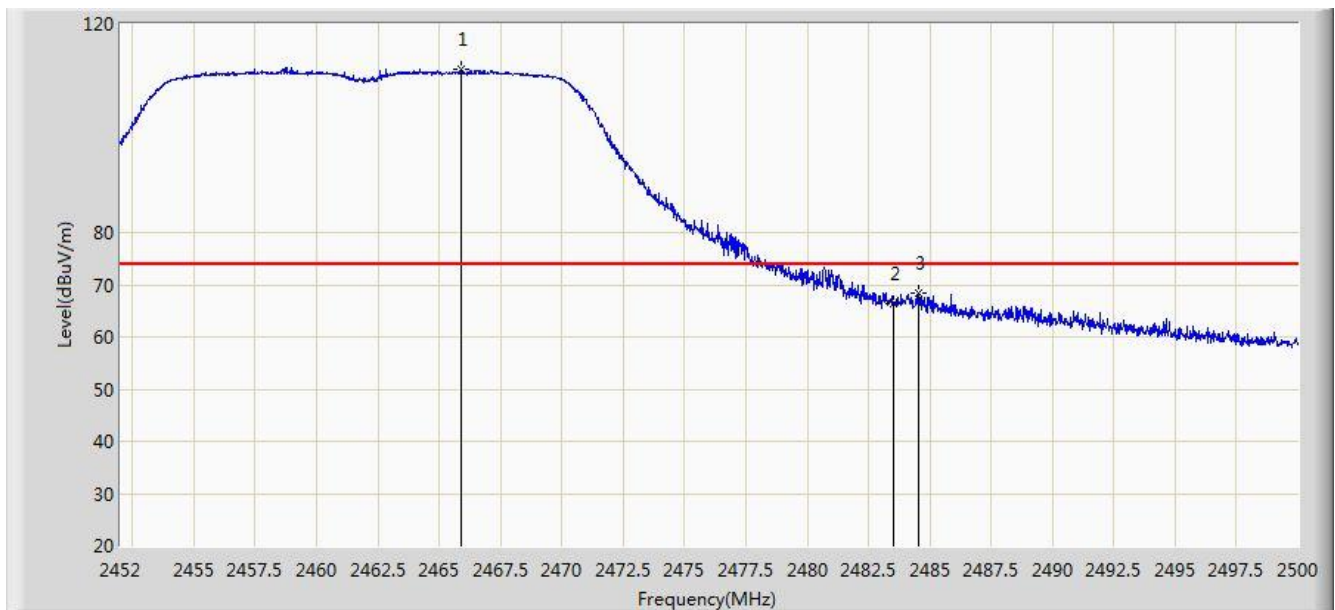


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.616	91.481	60.334	N/A	N/A	31.147	AV
2			2483.500	46.666	15.473	-7.334	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:40
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 2Tx	

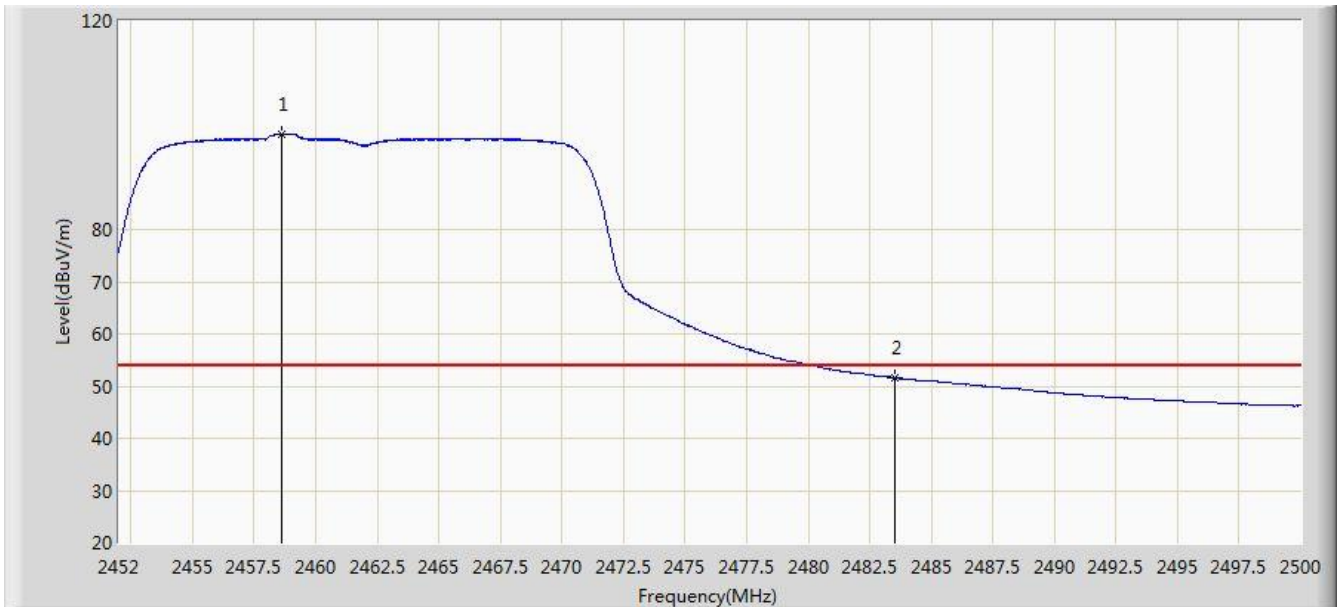


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.872	111.338	80.193	N/A	N/A	31.145	PK
2			2483.500	66.335	35.142	-7.665	74.000	31.194	PK
3			2484.568	68.541	37.345	-5.459	74.000	31.197	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 2Tx	

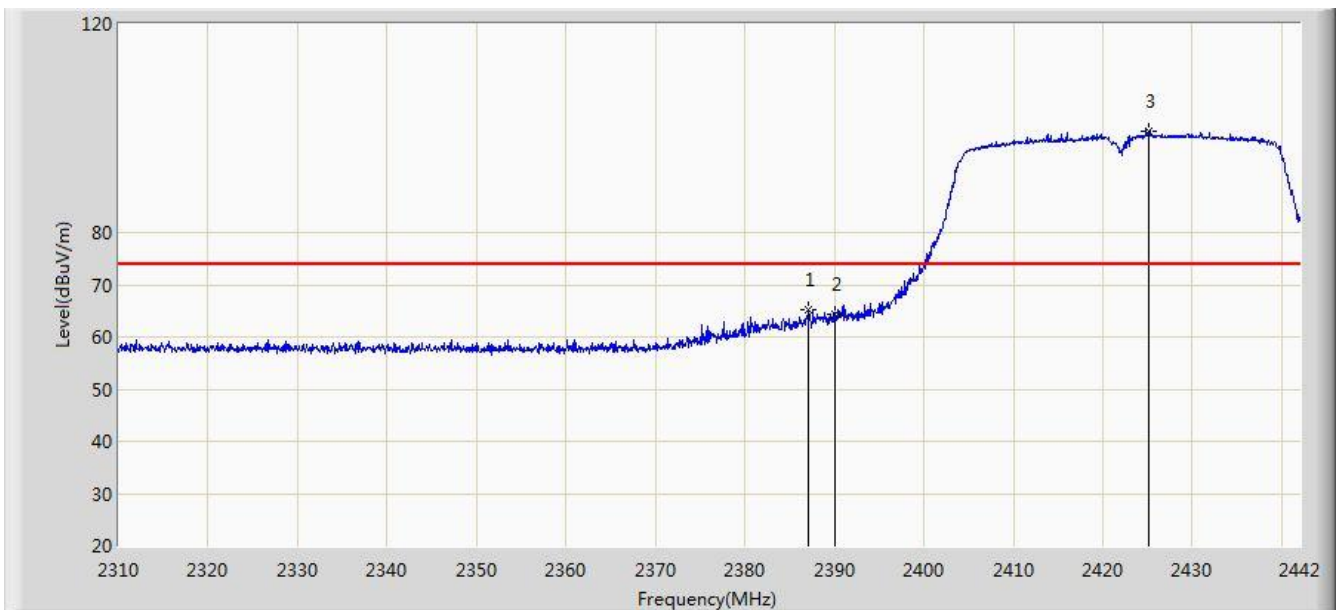


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2458.624	98.333	67.204	N/A	N/A	31.129	AV
2			2483.500	51.550	20.357	-2.450	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:42
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 2Tx	

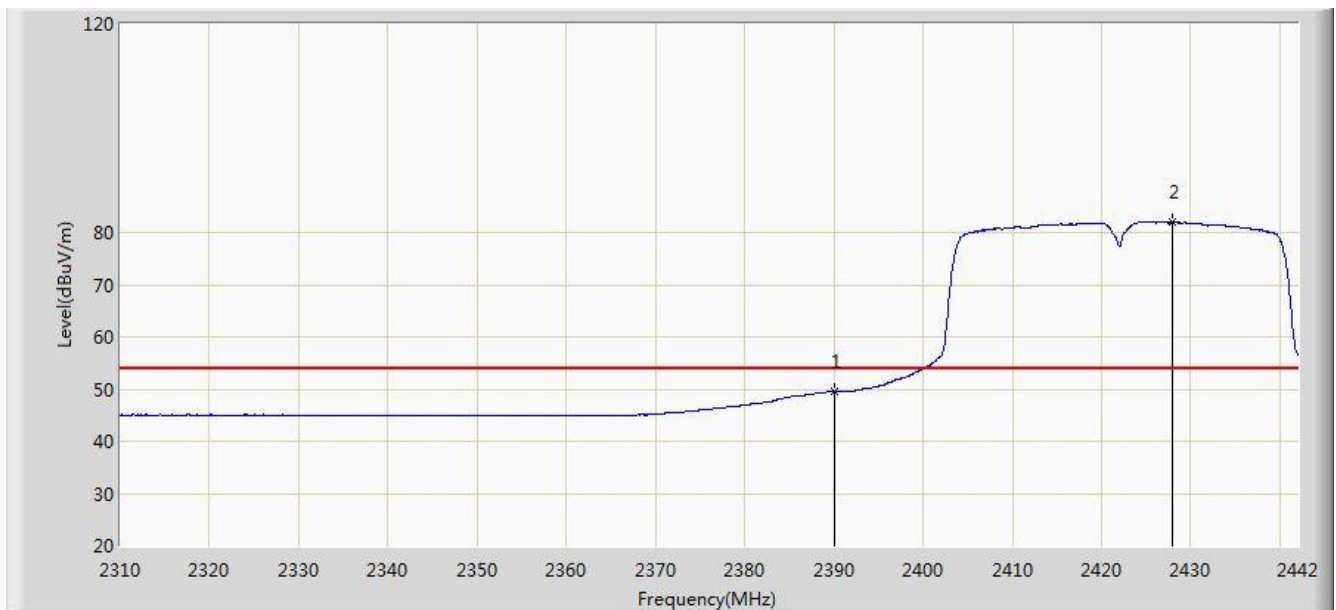


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2387.154	65.158	33.950	-8.842	74.000	31.208	PK
2			2390.000	64.476	33.273	-9.524	74.000	31.203	PK
3		*	2425.170	99.511	68.364	N/A	N/A	31.147	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:42
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 2Tx	

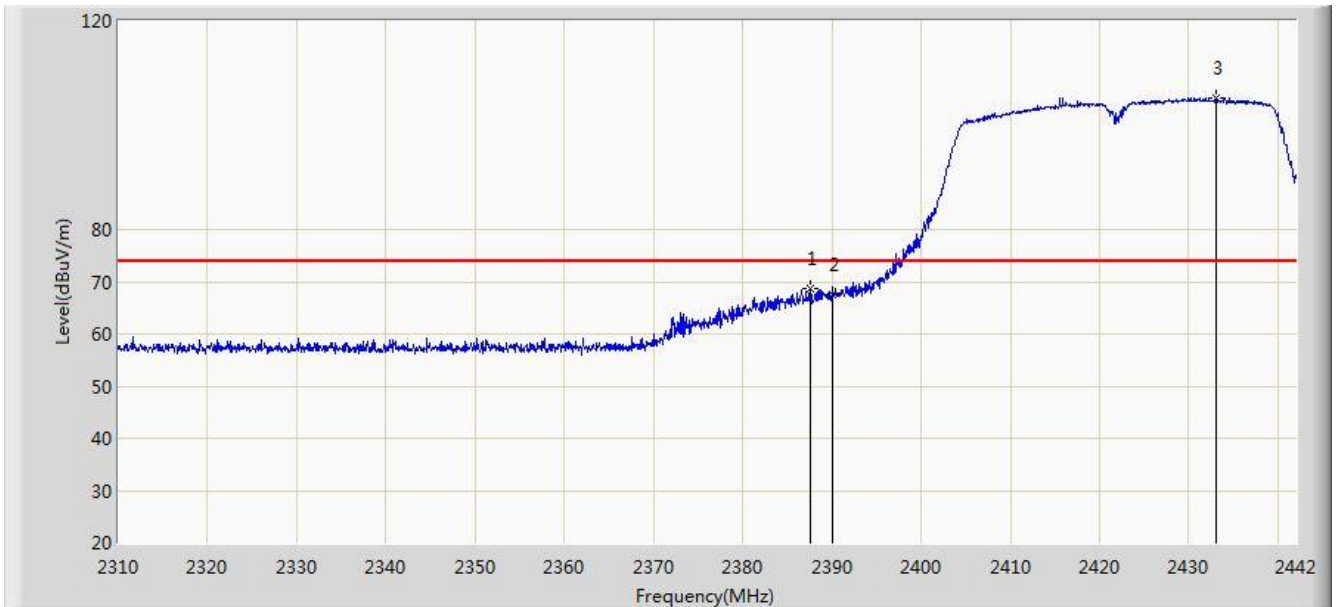


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	49.507	18.304	-4.493	54.000	31.203	AV
2		*	2427.942	82.016	50.874	N/A	N/A	31.142	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 2Tx	

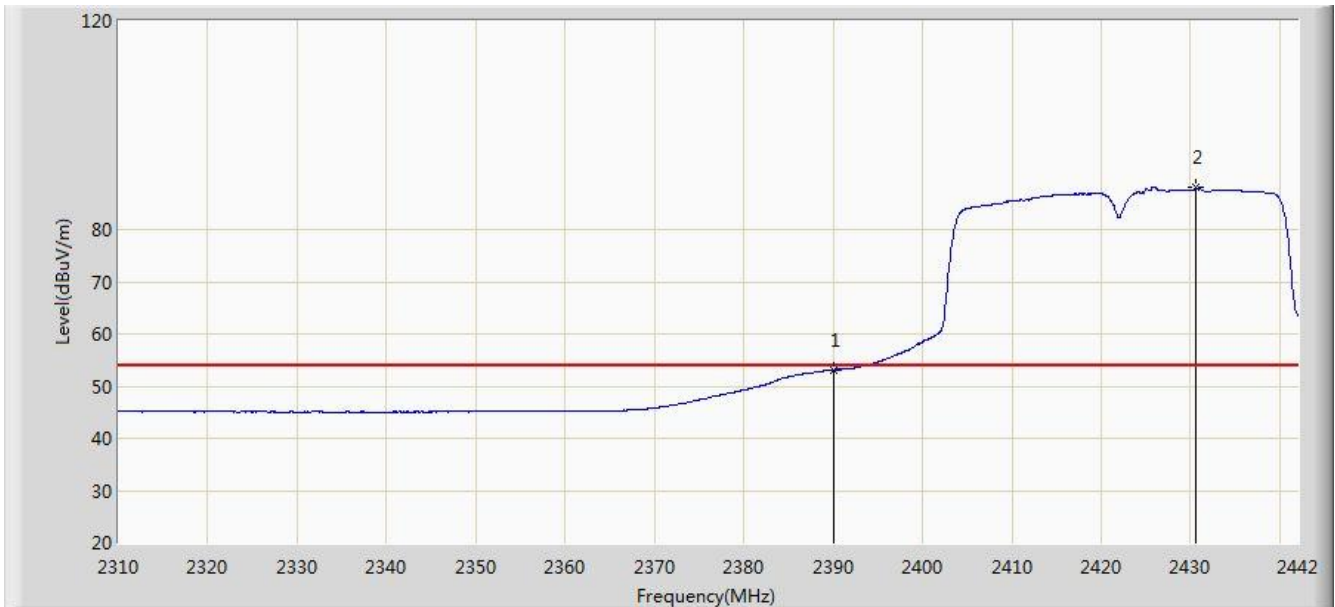


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2387.616	68.783	37.576	-5.217	74.000	31.207	PK
2			2390.000	67.453	36.250	-6.547	74.000	31.203	PK
3		*	2433.090	105.263	74.131	N/A	N/A	31.132	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 2Tx	

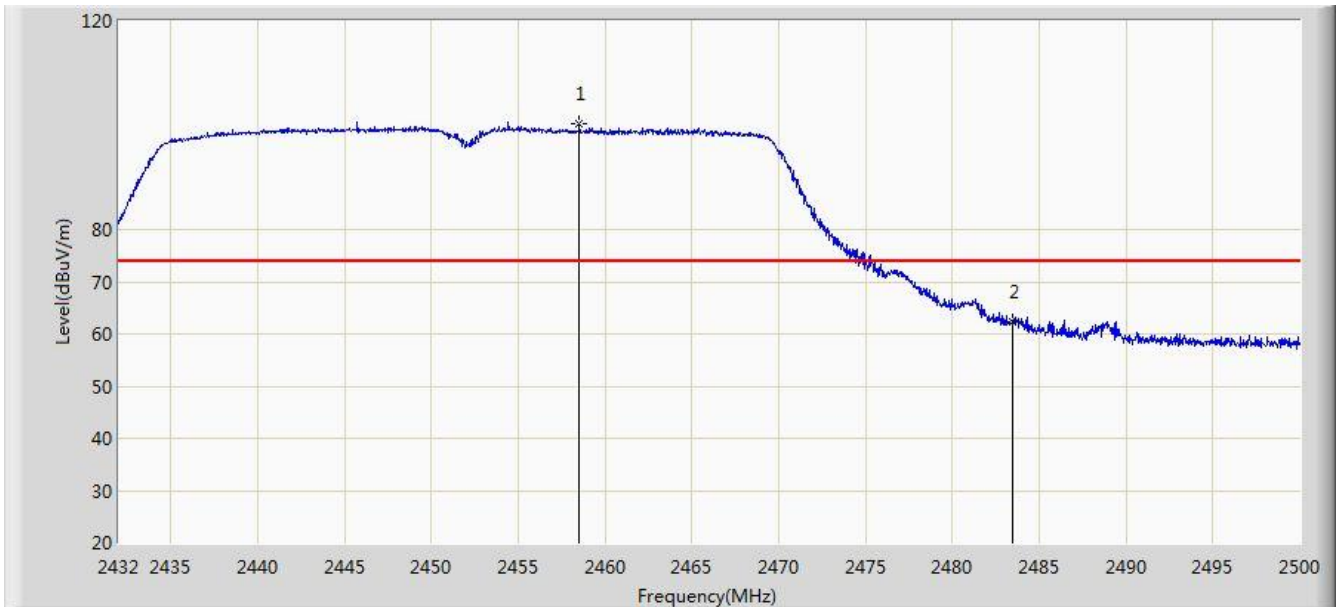


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.154	21.951	-0.846	54.000	31.203	AV
2		*	2430.648	88.253	57.116	N/A	N/A	31.137	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:53
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 2Tx	

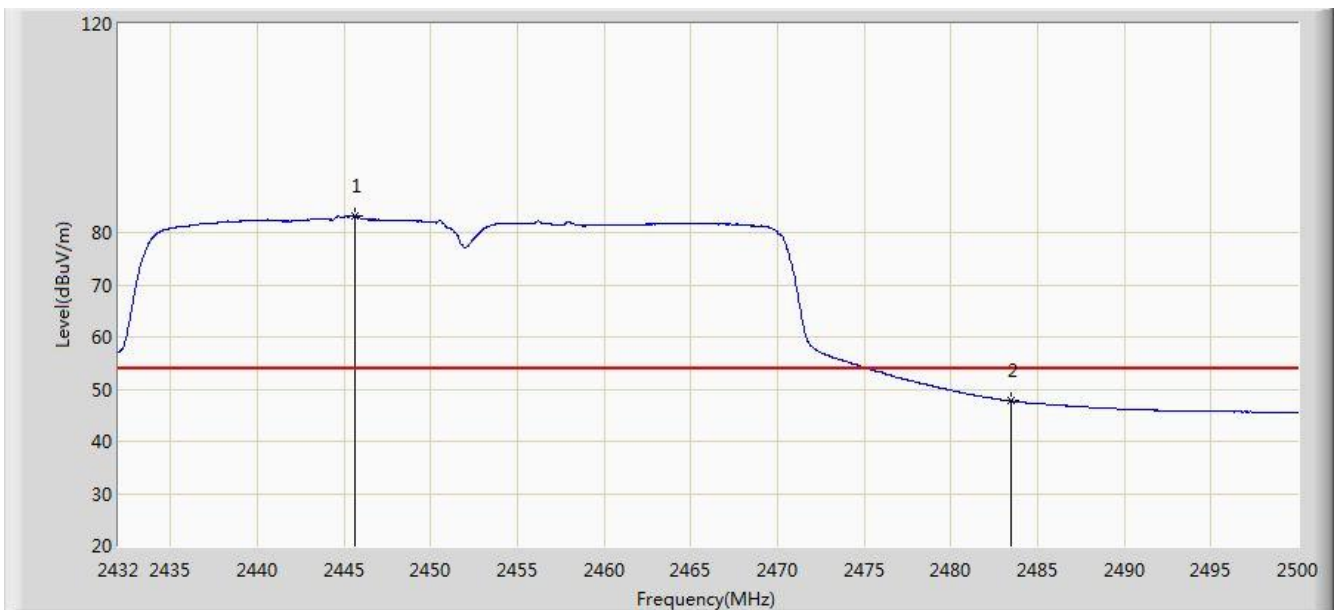


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2458.520	100.367	69.238	N/A	N/A	31.129	PK
2			2483.500	62.176	30.983	-11.824	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:54
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 2Tx	

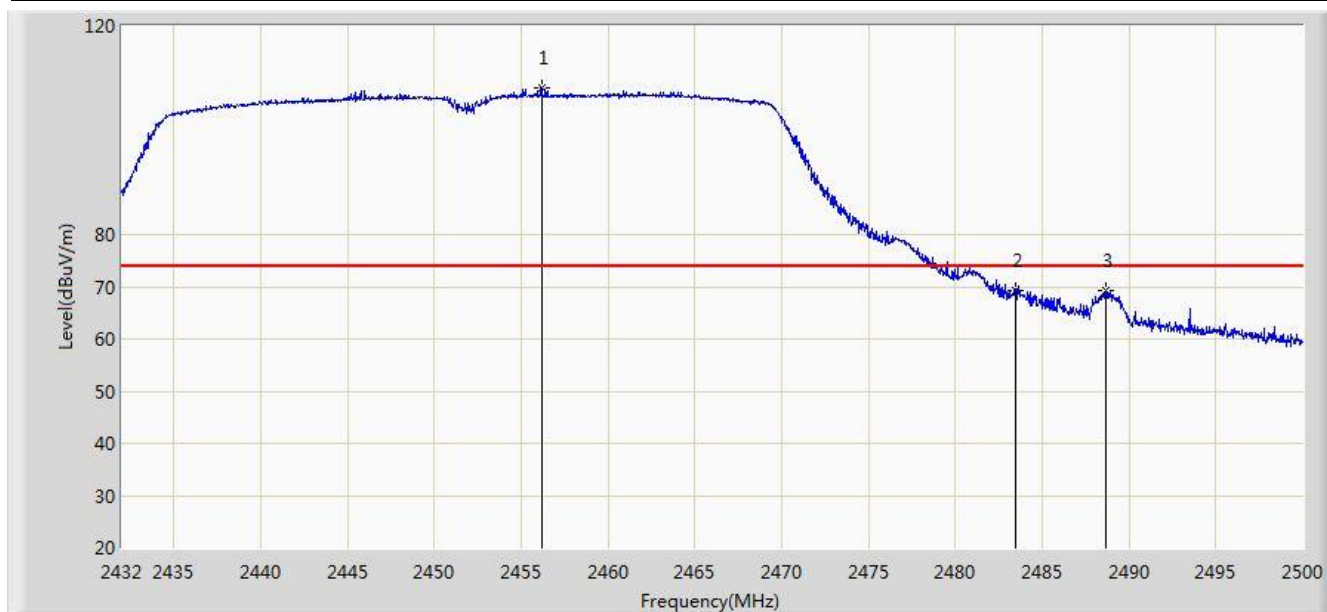


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2445.600	83.317	52.209	N/A	N/A	31.108	AV
2			2483.500	47.733	16.540	-6.267	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:57
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 2Tx	

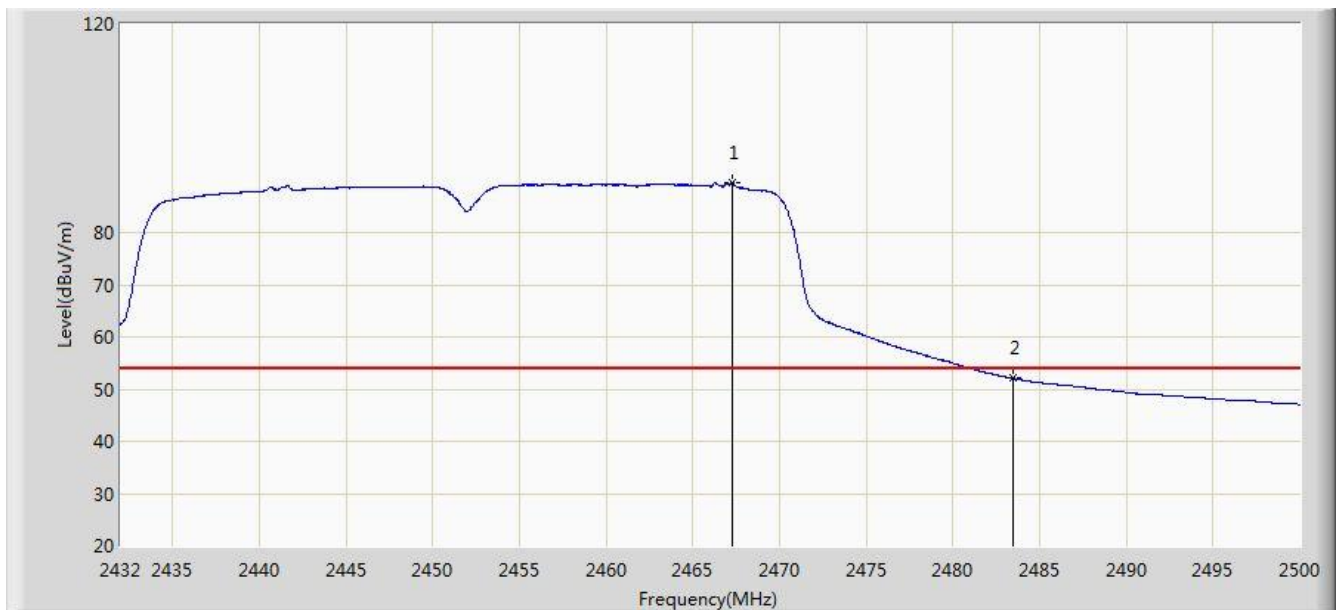


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.174	108.097	76.972	N/A	N/A	31.125	PK
2			2483.500	69.141	37.948	-4.859	74.000	31.194	PK
3			2488.678	69.214	38.007	-4.786	74.000	31.207	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/04/23 - 00:57
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 2Tx	



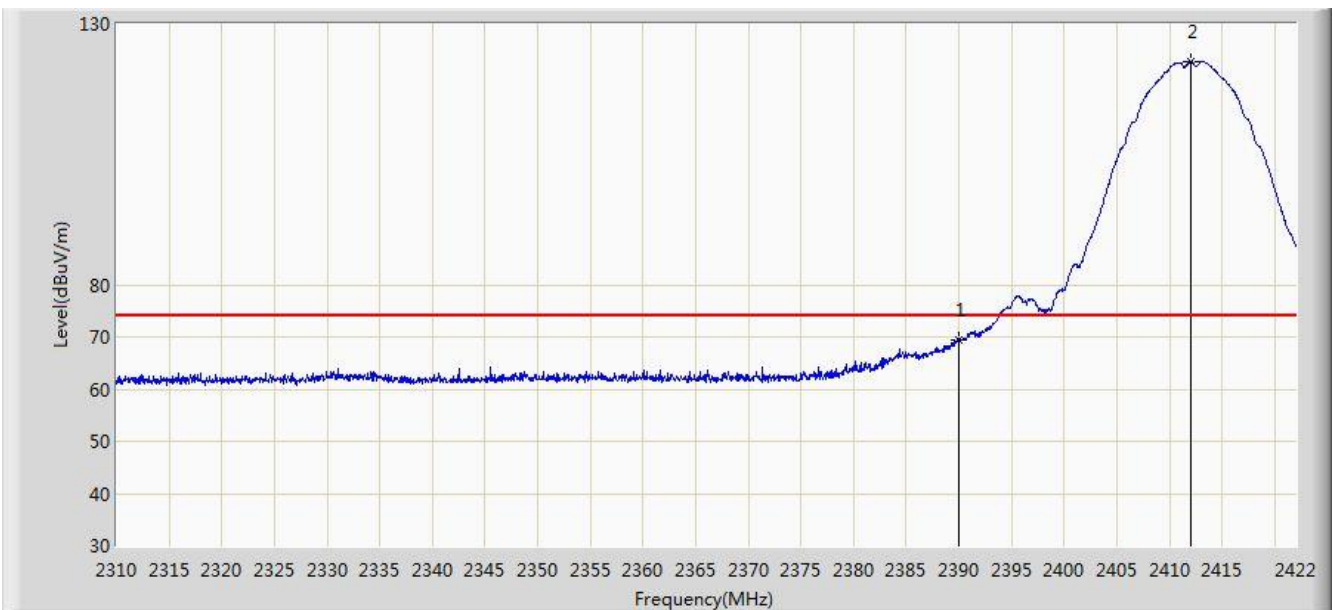
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.292	89.512	58.363	N/A	N/A	31.148	AV
2			2483.500	52.070	20.877	-1.930	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Panel Antenna 1#

Site: AC1	Time: 2015/05/08 - 11:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11b 1TX	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	69.479	38.276	-4.521	74.000	31.203	PK
2		*	2412.032	122.841	91.671	N/A	N/A	31.170	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 20:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11b 1TX	

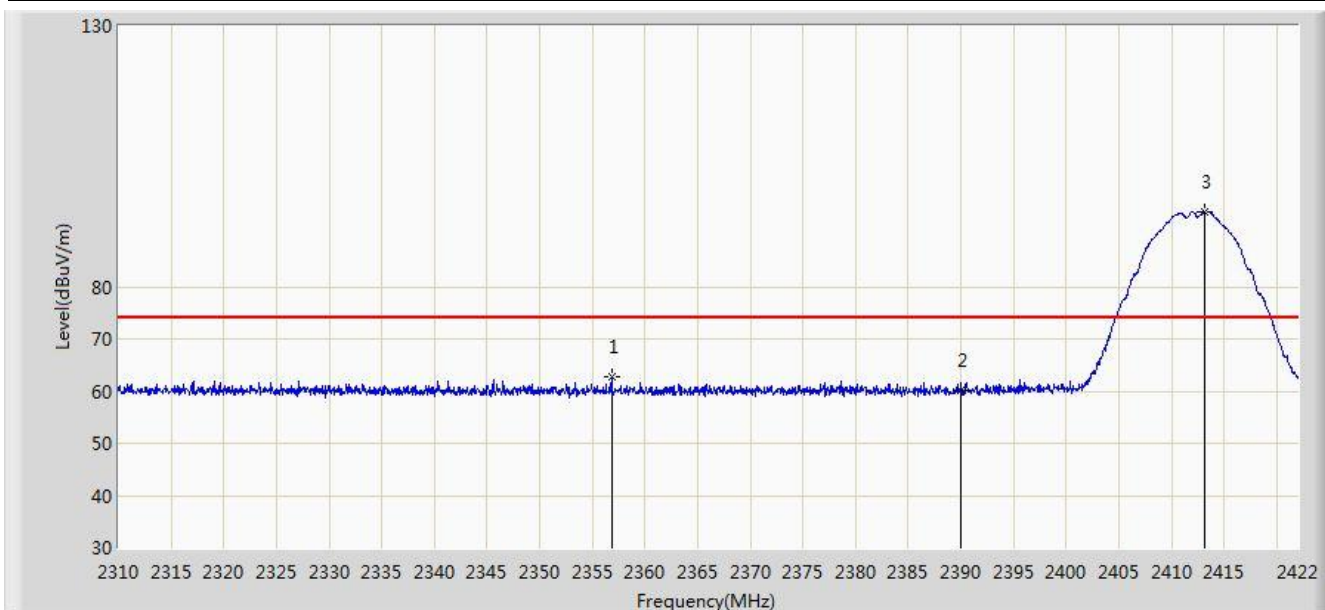


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	52.430	21.227	-1.570	54.000	31.203	AV
2	X	*	2412.816	117.139	85.971	N/A	N/A	31.168	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 20:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11b 1TX	

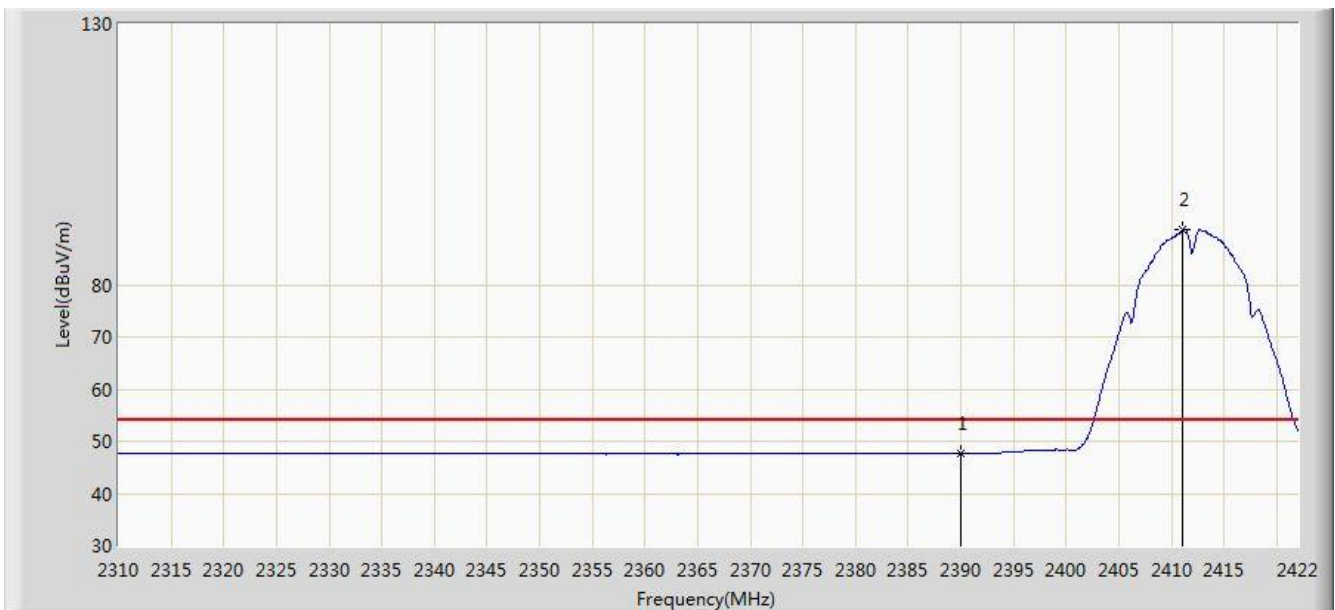


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2356.816	62.690	31.423	-11.310	74.000	31.267	PK
2			2390.000	60.132	28.929	-13.868	74.000	31.203	PK
3		*	2413.208	94.462	63.295	N/A	N/A	31.167	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:00
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11b 1TX	

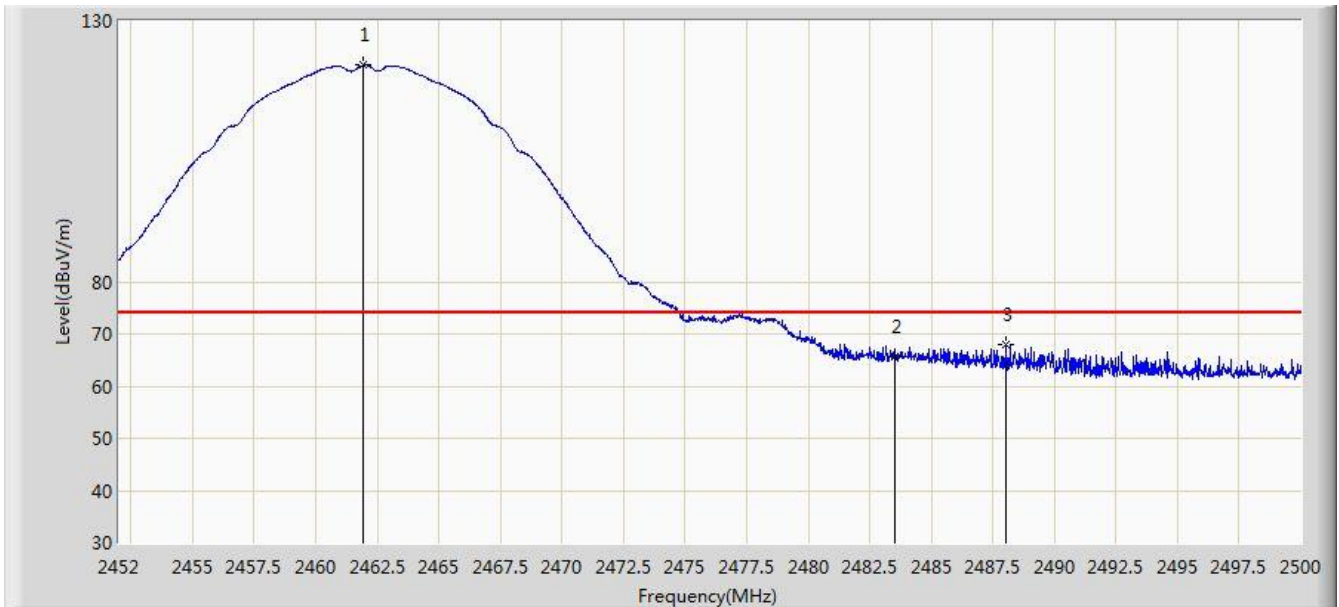


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.685	16.482	-6.315	54.000	31.203	AV
2		*	2411.024	90.454	59.283	N/A	N/A	31.171	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:01
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11b 1TX	

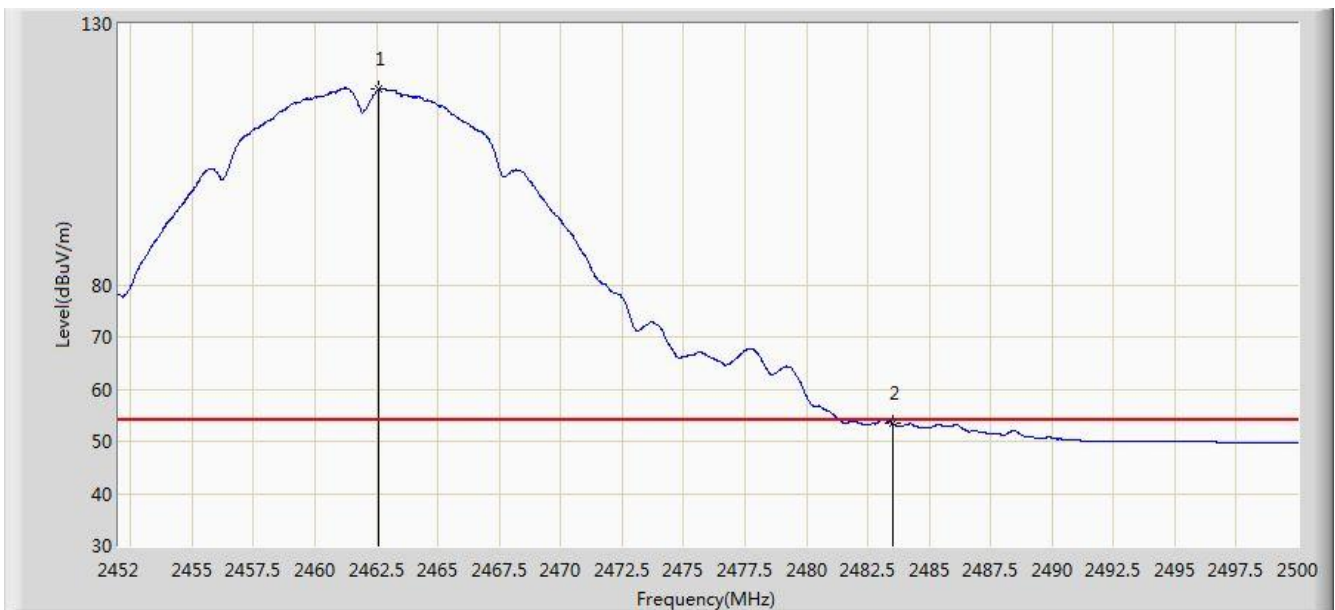


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.912	121.466	90.331	N/A	N/A	31.135	PK
2			2483.500	65.715	34.522	-8.285	74.000	31.194	PK
3			2488.024	67.881	36.676	-6.119	74.000	31.205	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11b 1TX	

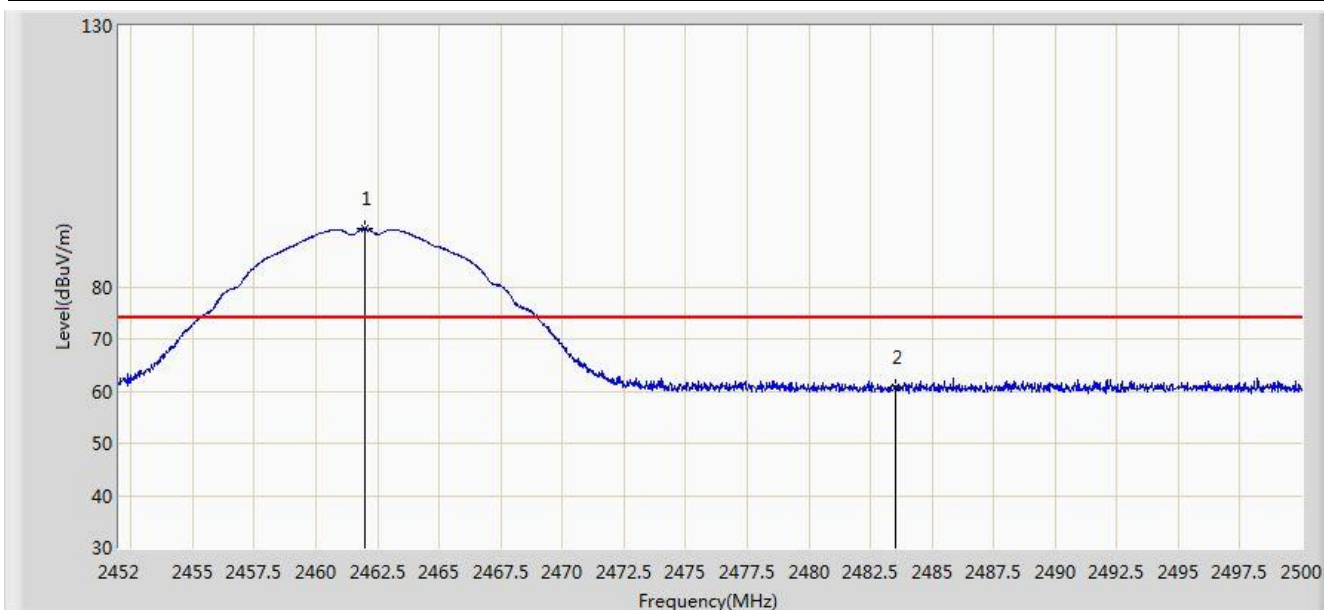


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1	X	*	2462.608	117.433	86.296	N/A	N/A	31.137	AV
2			2483.500	53.383	22.190	-0.617	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11b 1TX	

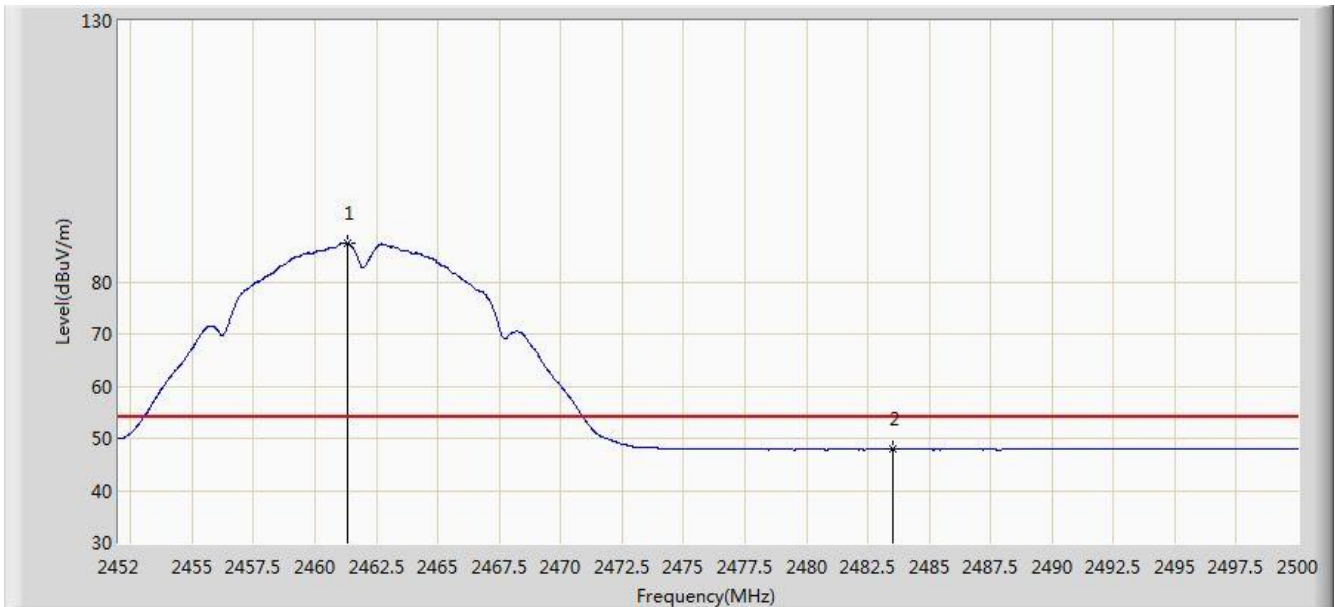


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.984	91.098	59.963	N/A	N/A	31.135	PK
2			2483.500	60.694	29.501	-13.306	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11b 1TX	

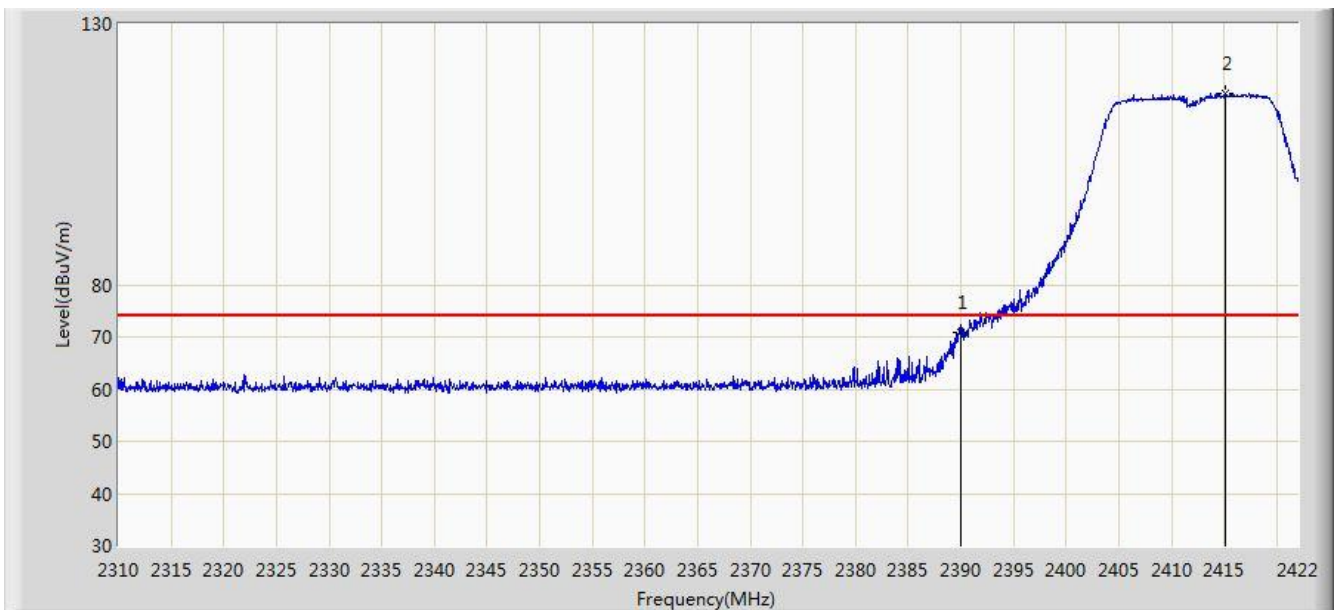


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.312	87.329	56.195	N/A	N/A	31.134	AV
2			2483.500	47.871	16.678	-6.129	54.000	31.194	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11g 1TX	

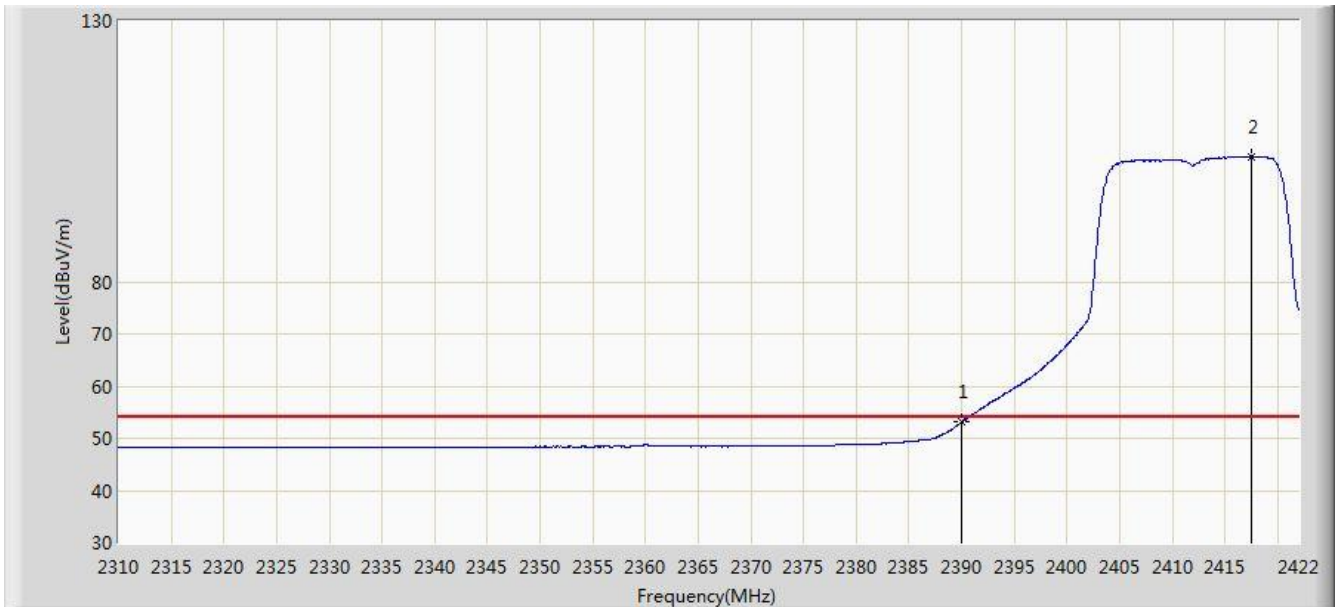


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	70.951	39.748	-3.049	74.000	31.203	PK
2		*	2415.112	116.746	85.582	N/A	N/A	31.165	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:10
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11g 1TX	

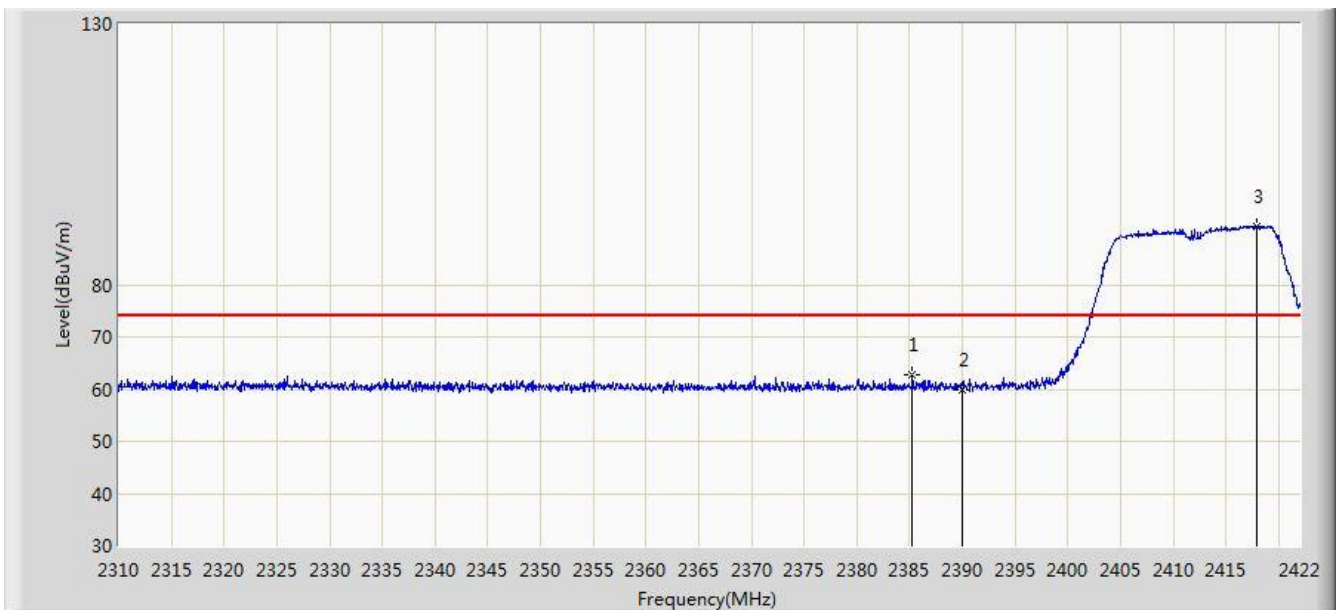


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.100	21.897	-0.900	54.000	31.203	AV
2		*	2417.576	103.877	72.717	N/A	N/A	31.160	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11g 1TX	

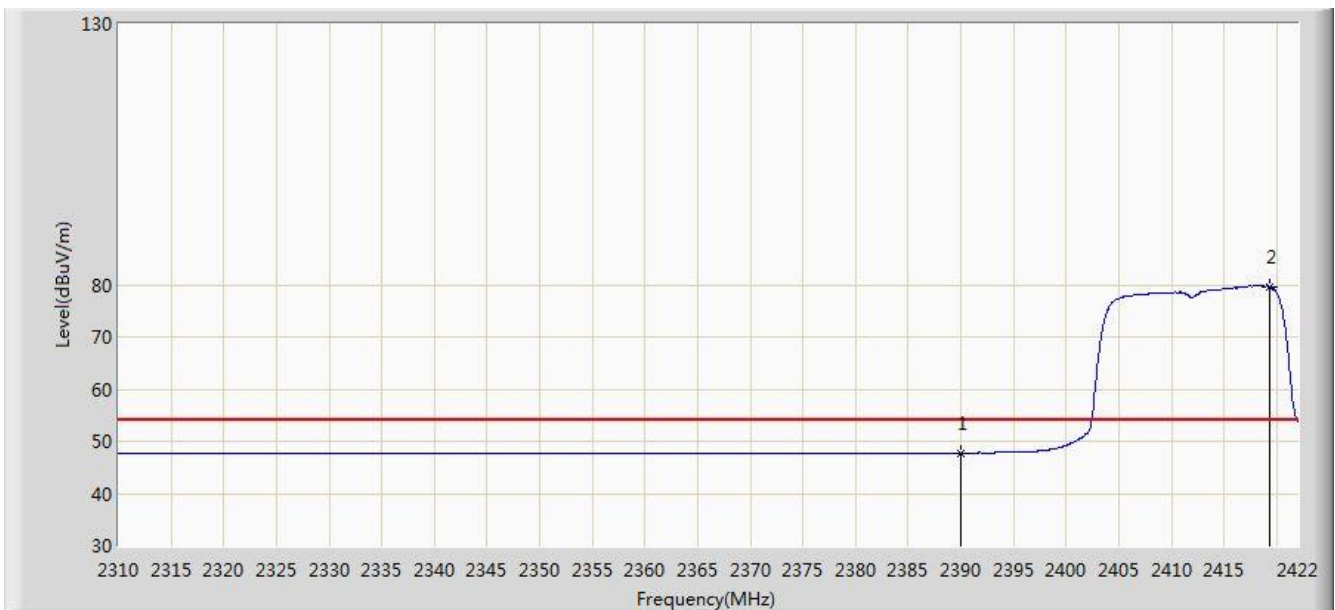


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2385.264	62.865	31.654	-11.135	74.000	31.211	PK
2			2390.000	59.795	28.592	-14.205	74.000	31.203	PK
3		*	2417.912	91.120	59.961	N/A	N/A	31.159	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11g 1TX	

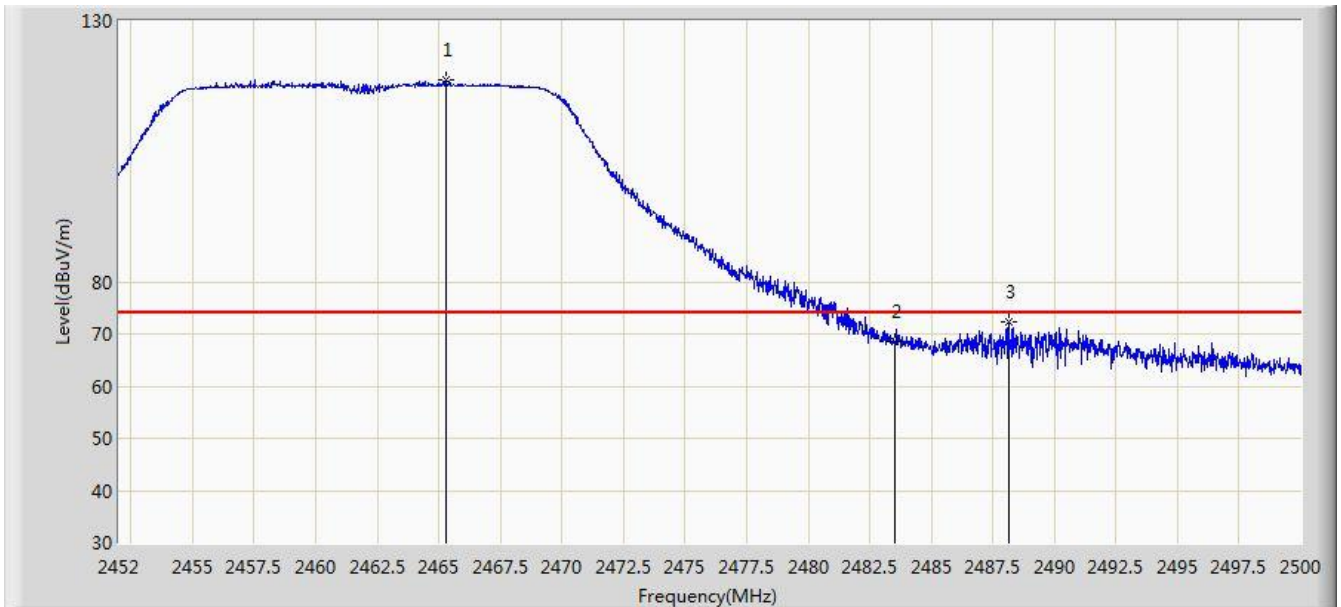


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.763	16.560	-6.237	54.000	31.203	AV
2		*	2419.312	79.617	48.460	N/A	N/A	31.157	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11g 1TX	

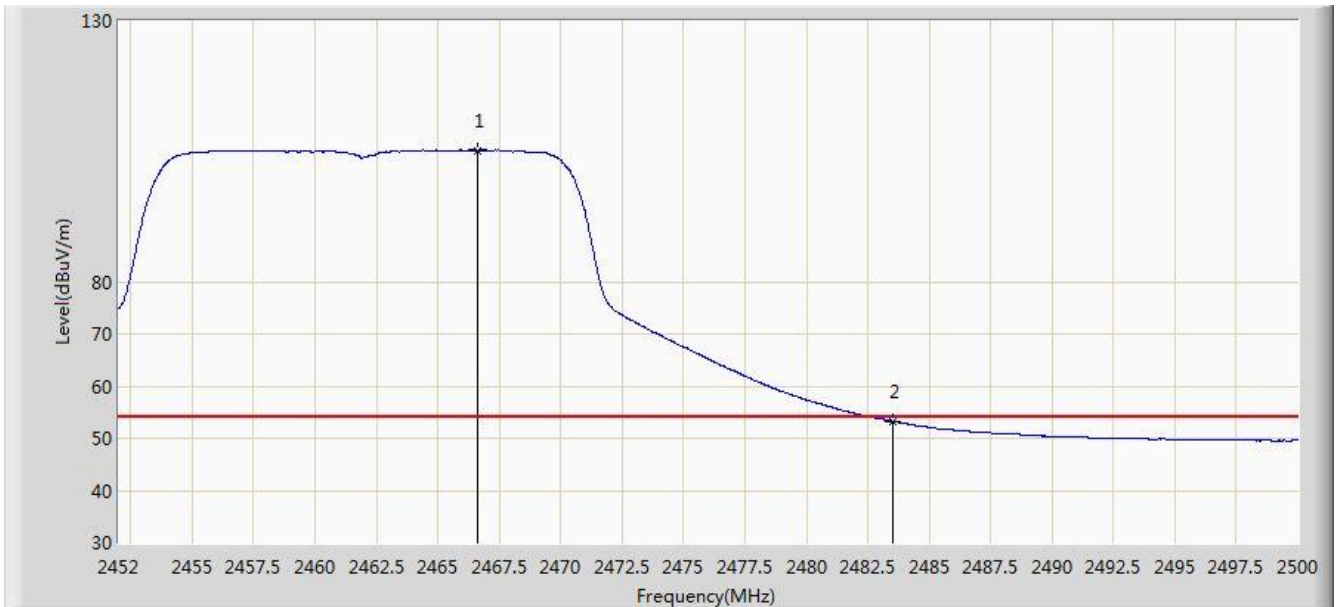


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.272	118.625	87.482	N/A	N/A	31.143	PK
2			2483.500	68.648	37.455	-5.352	74.000	31.194	PK
3			2488.144	72.298	41.092	-1.702	74.000	31.206	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11g 1TX	

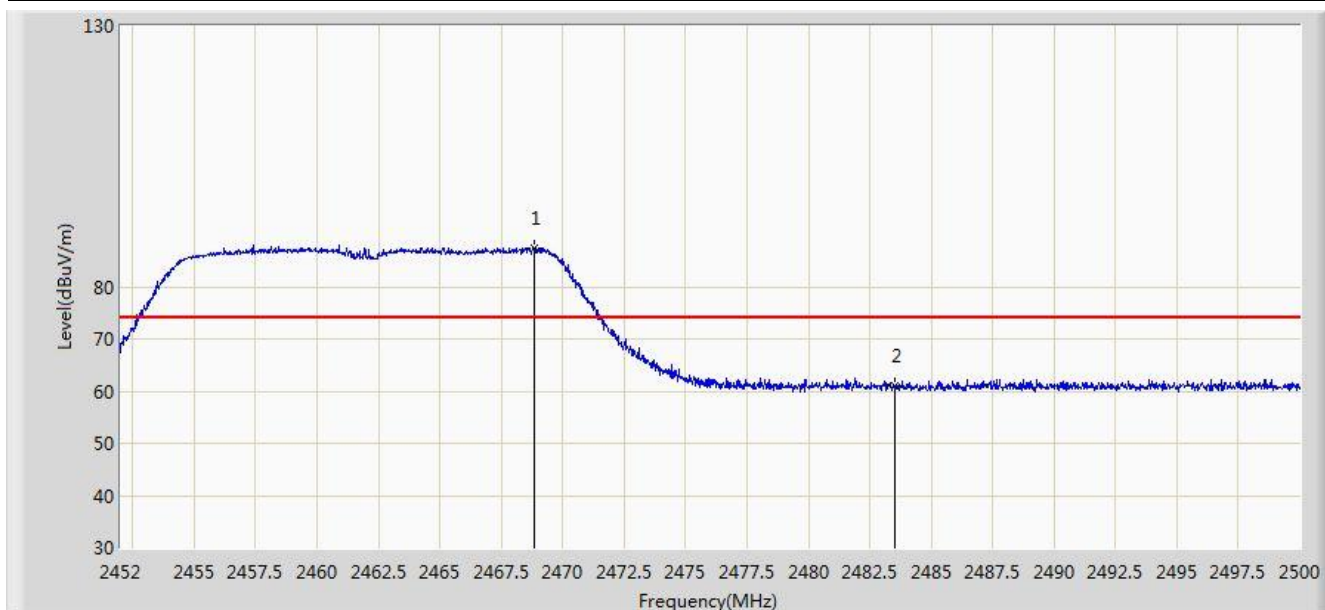


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.616	105.121	73.974	N/A	N/A	31.147	AV
2			2483.500	53.272	22.079	-0.728	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11g 1TX	

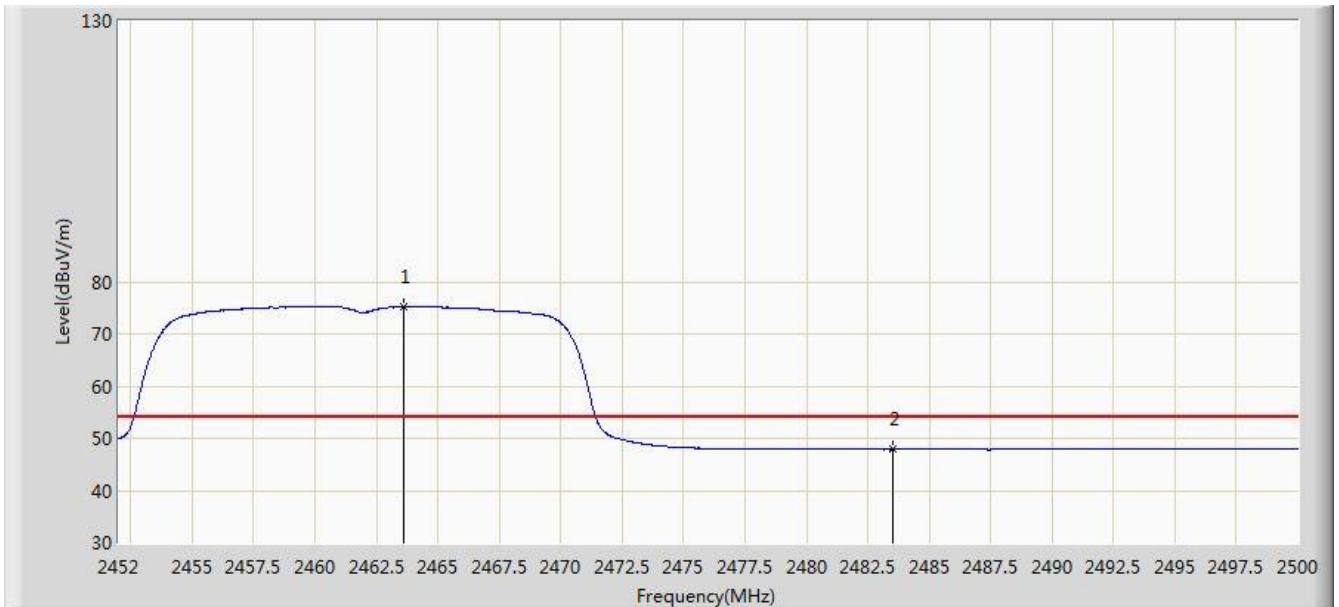


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.872	87.467	56.314	N/A	N/A	31.153	PK
2			2483.500	60.992	29.799	-13.008	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11g 1TX	

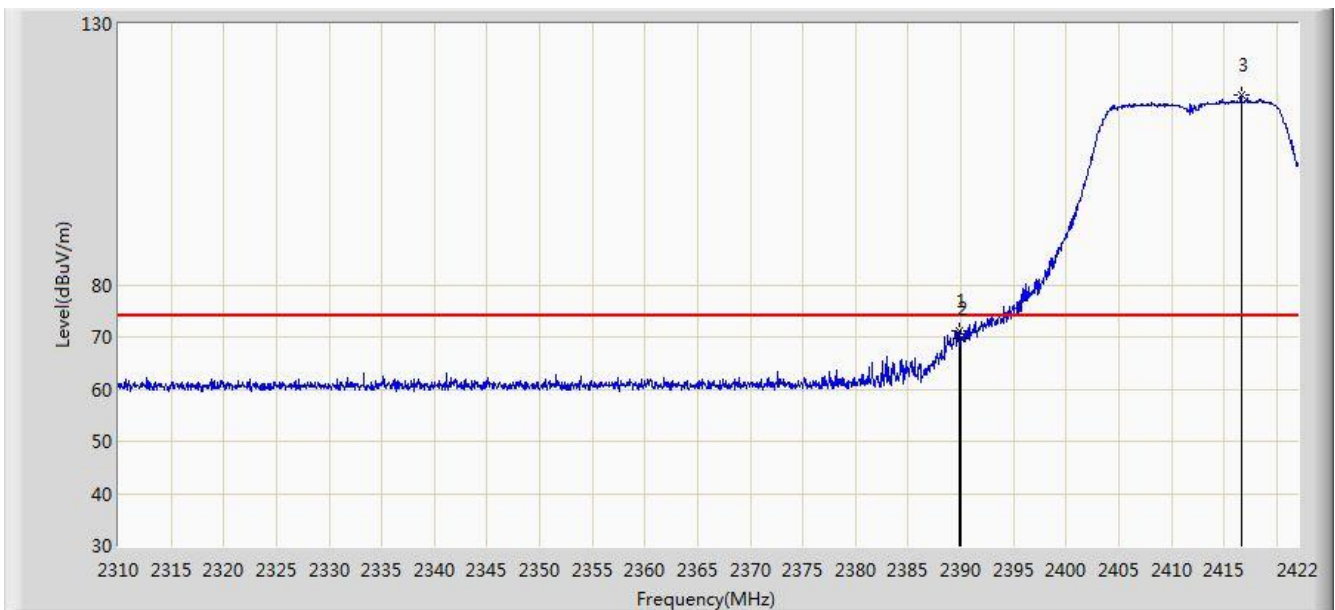


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.616	75.201	44.063	N/A	N/A	31.139	AV
2			2483.500	47.847	16.654	-6.153	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 1TX	

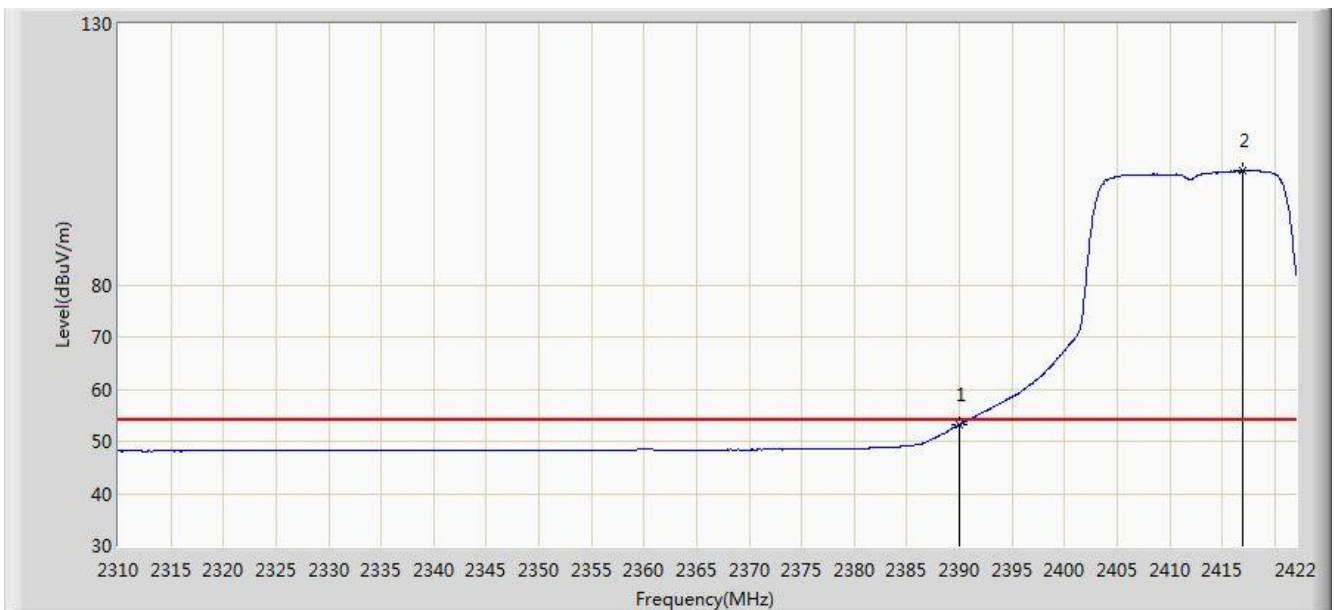


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.856	71.187	39.984	-2.813	74.000	31.203	PK
2			2390.000	69.719	38.516	-4.281	74.000	31.203	PK
3		*	2416.624	116.427	85.265	N/A	N/A	31.162	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 1TX	

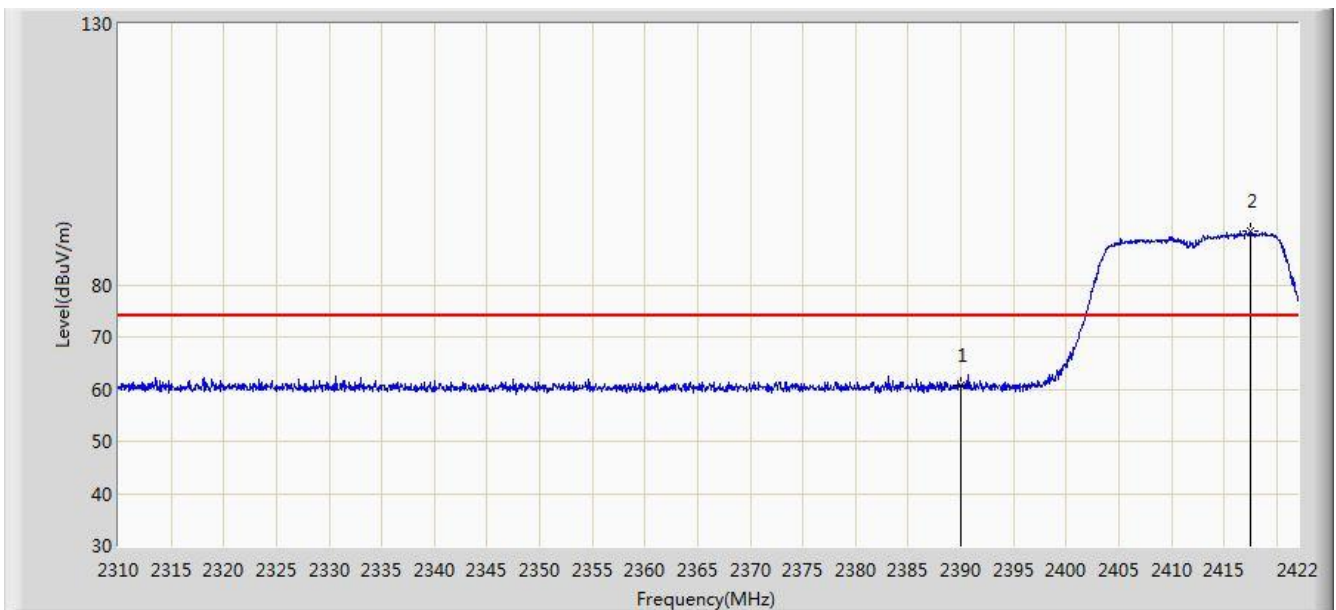


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.134	21.931	-0.866	54.000	31.203	AV
2		*	2416.904	101.795	70.634	N/A	N/A	31.161	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:24
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 1TX	

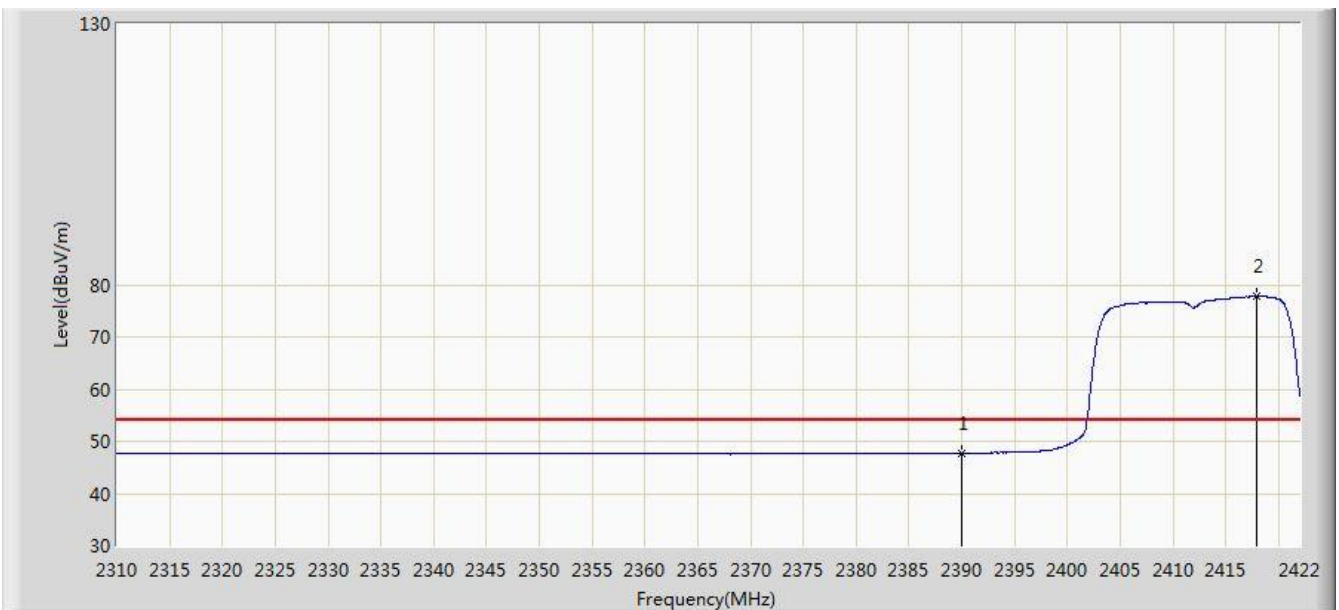


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	60.645	29.442	-13.355	74.000	31.203	PK
2		*	2417.520	90.297	59.137	N/A	N/A	31.160	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 1TX	

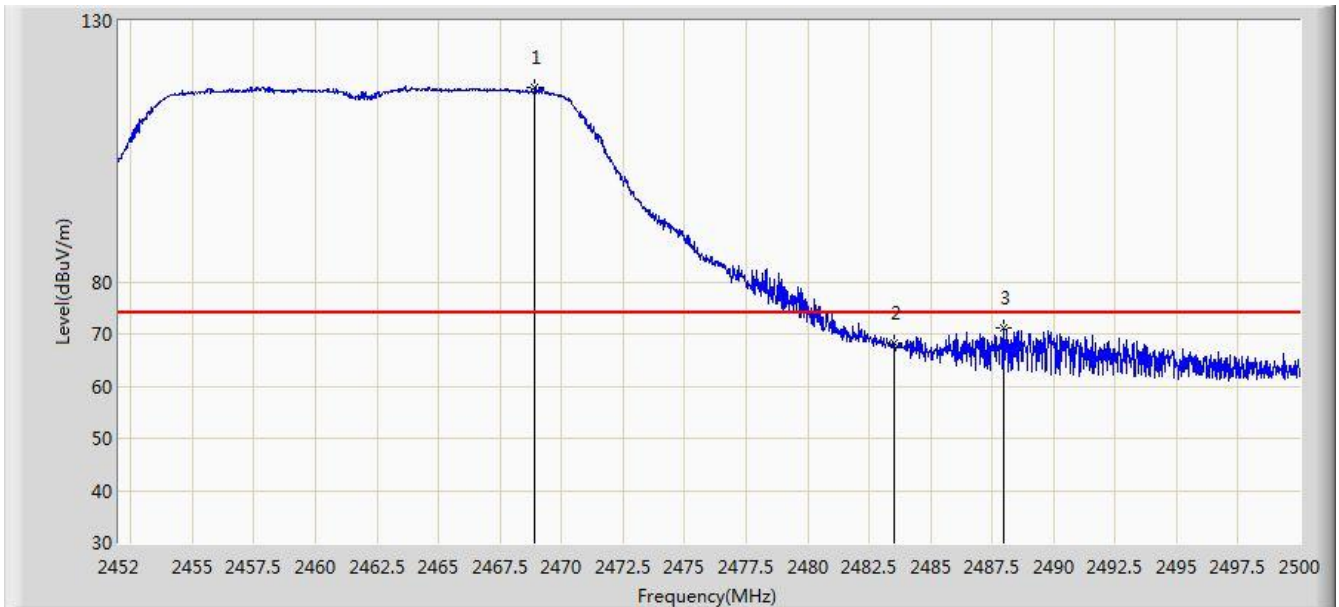


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.743	16.540	-6.257	54.000	31.203	AV
2		*	2417.912	77.759	46.600	N/A	N/A	31.159	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 1TX	

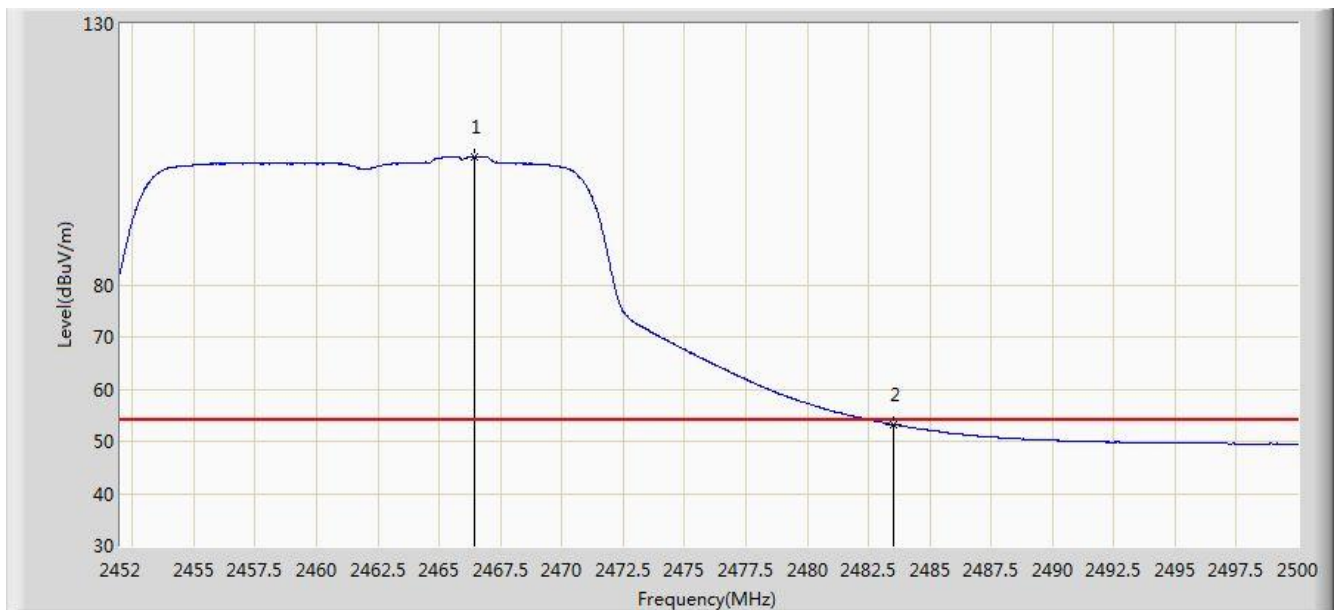


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.920	117.124	85.971	N/A	N/A	31.153	PK
2			2483.500	68.209	37.016	-5.791	74.000	31.194	PK
3			2487.952	71.081	39.876	-2.919	74.000	31.205	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 1TX	

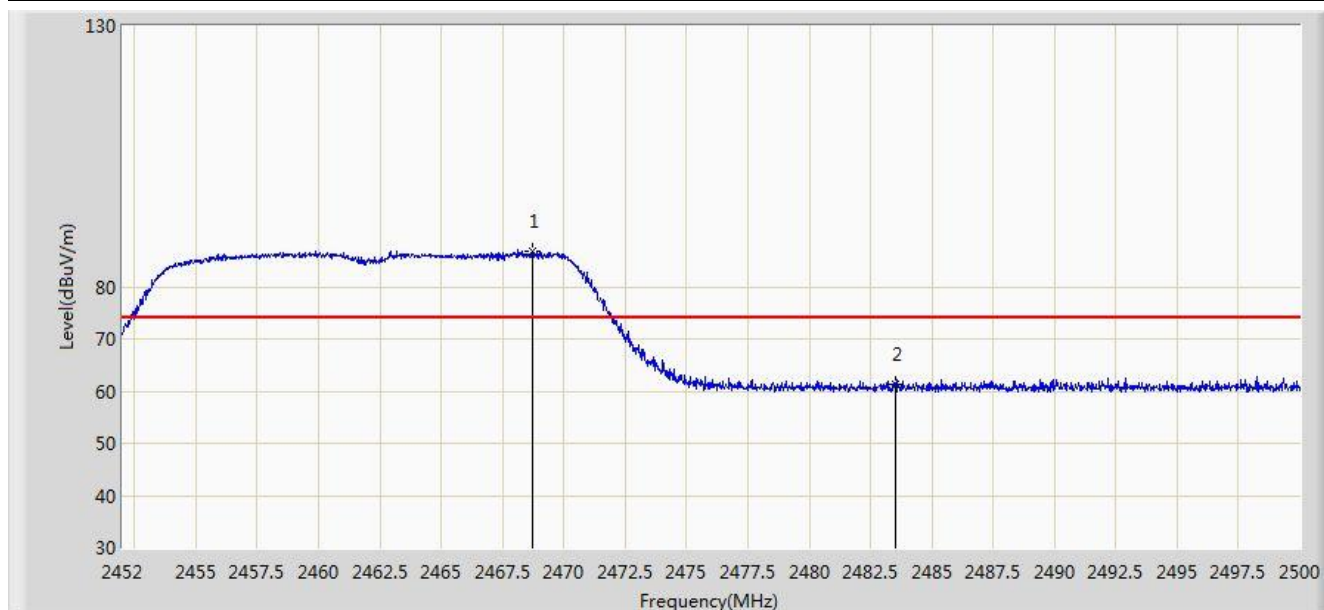


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.448	104.463	73.317	N/A	N/A	31.146	AV
2			2483.500	53.233	22.040	-0.767	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 1TX	

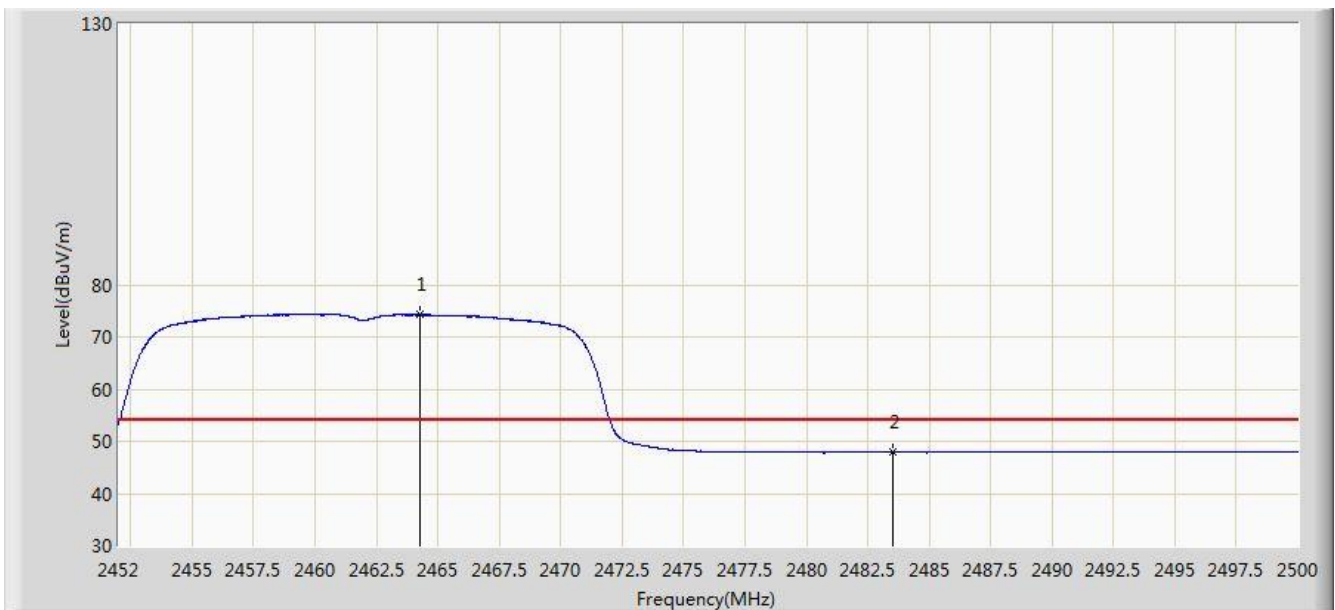


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.728	86.730	55.577	N/A	N/A	31.153	PK
2			2483.500	61.274	30.081	-12.726	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:30
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 1TX	

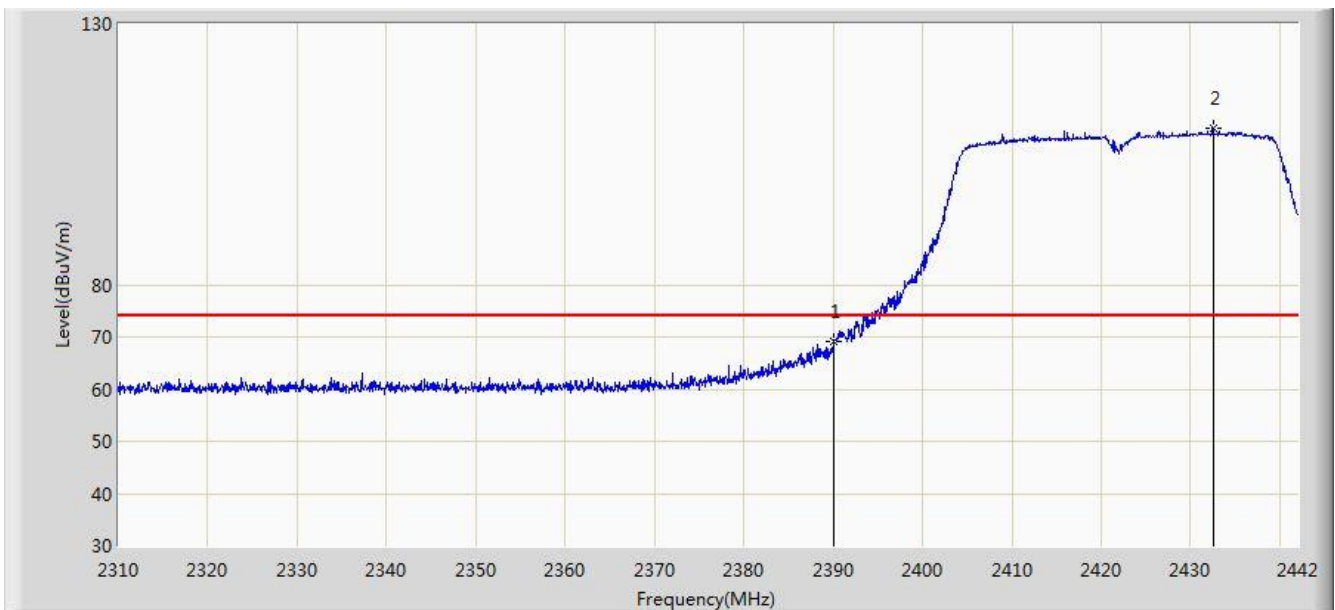


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.288	74.272	43.132	N/A	N/A	31.140	AV
2			2483.500	47.902	16.709	-6.098	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 1TX	

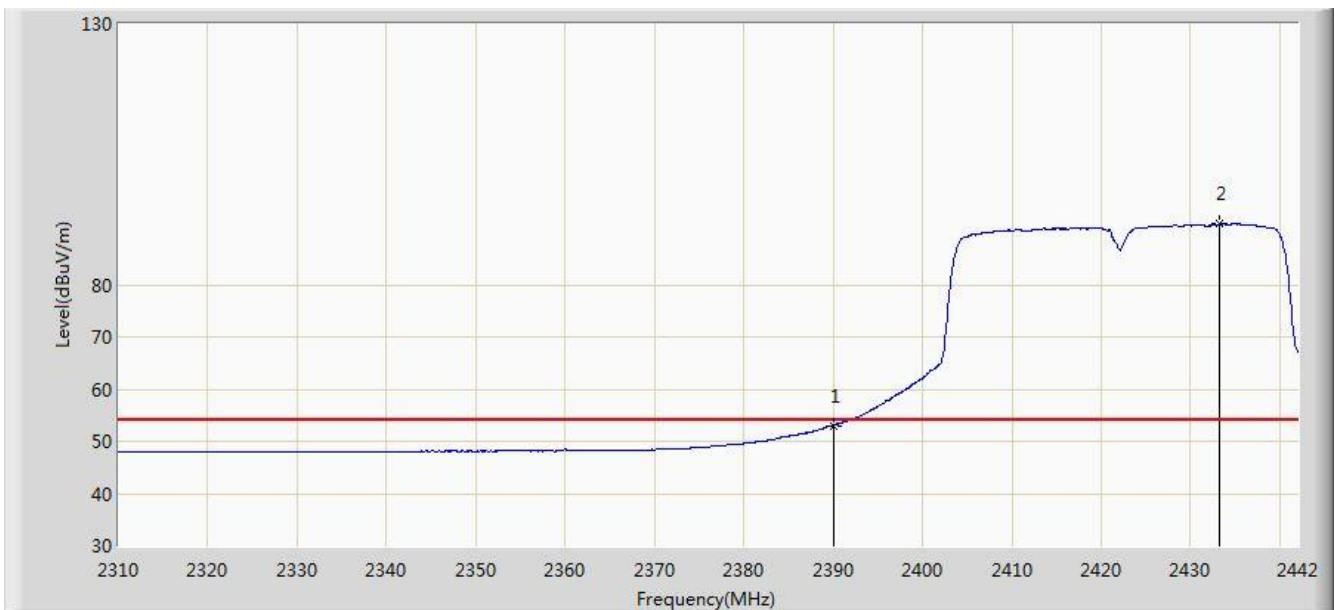


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	69.161	37.958	-4.839	74.000	31.203	PK
2		*	2432.496	109.973	78.840	N/A	N/A	31.133	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 1TX	

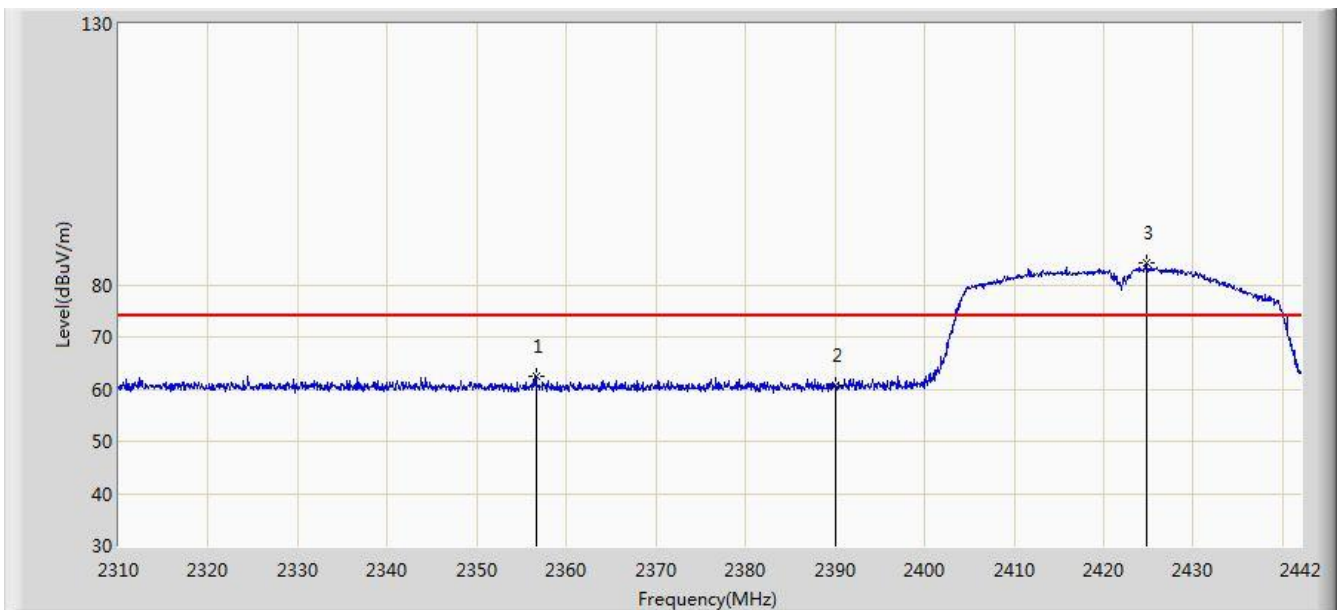


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.042	21.839	-0.958	54.000	31.203	AV
2		*	2433.288	91.648	60.516	N/A	N/A	31.131	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:37
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 1TX	

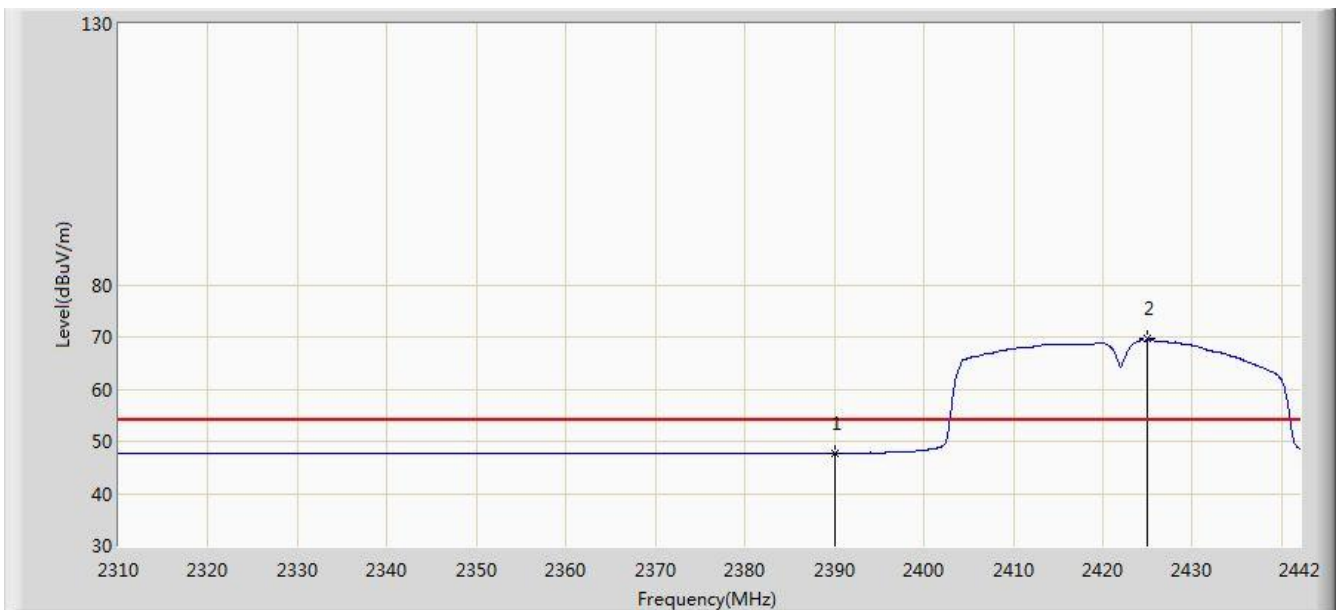


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2356.596	62.533	31.265	-11.467	74.000	31.267	PK
2			2390.000	60.583	29.380	-13.417	74.000	31.203	PK
3		*	2424.774	84.220	53.072	N/A	N/A	31.148	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 1TX	

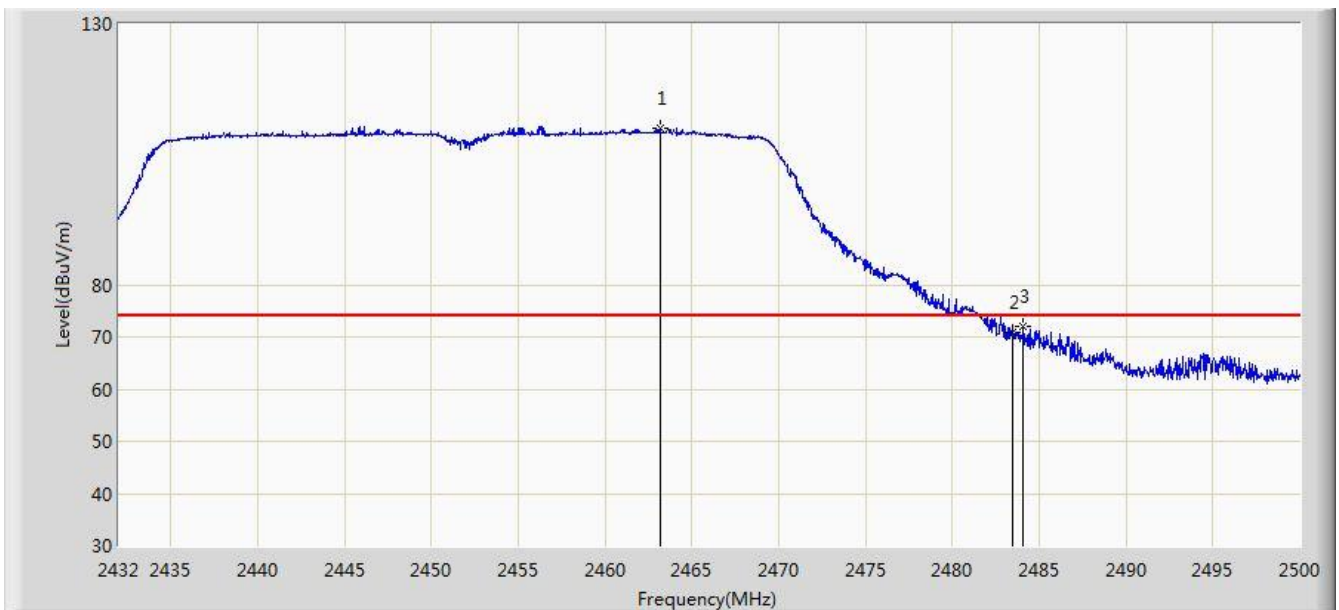


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.724	16.521	-6.276	54.000	31.203	AV
2		*	2425.038	69.625	38.478	N/A	N/A	31.147	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:42
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 1TX	

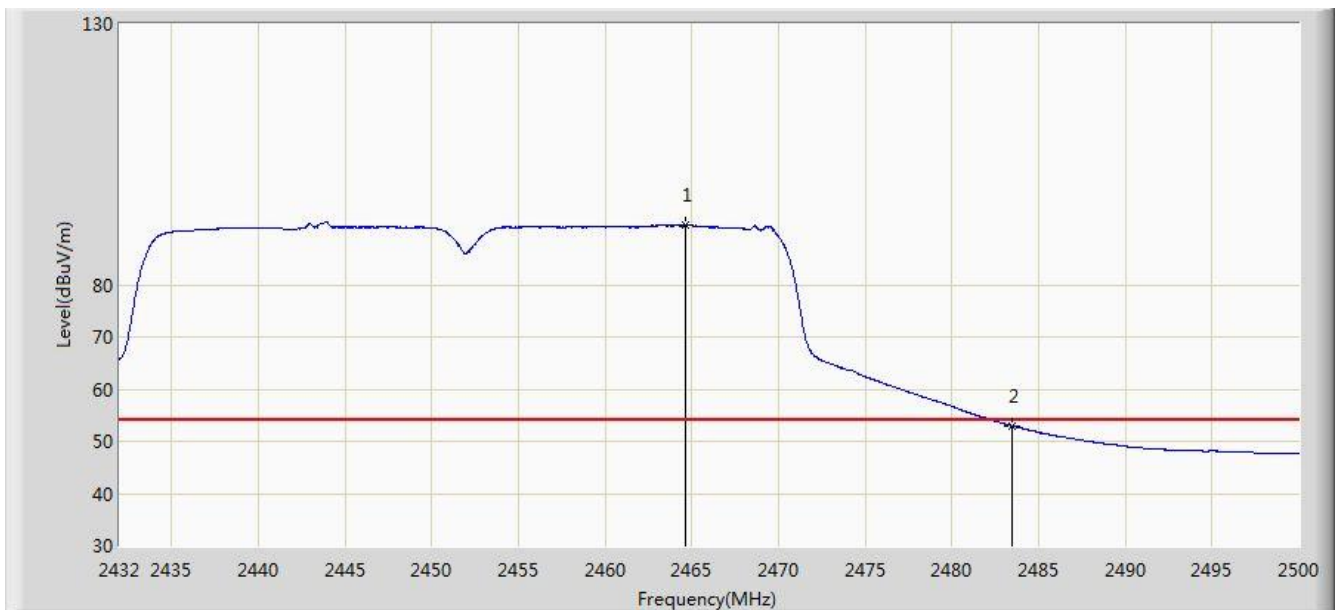


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.178	110.034	78.896	N/A	N/A	31.137	PK
2			2483.500	70.748	39.555	-3.252	74.000	31.194	PK
3			2484.088	72.116	40.921	-1.884	74.000	31.195	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:41
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 1TX	

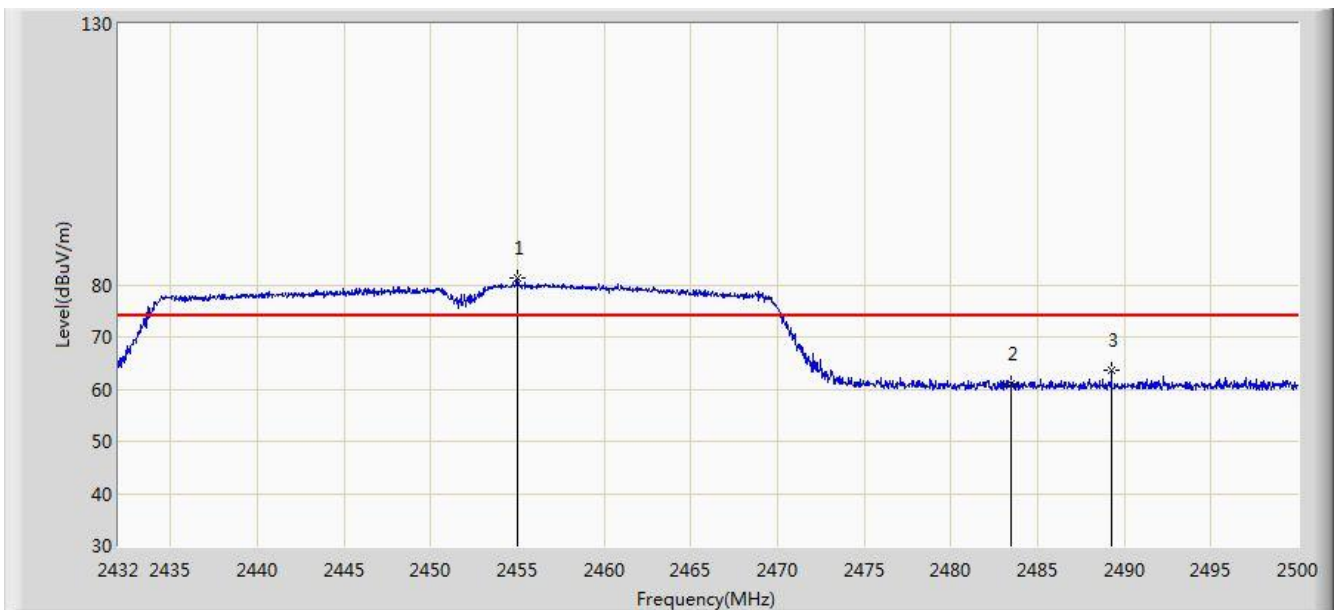


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.640	91.350	60.209	N/A	N/A	31.142	AV
2			2483.500	52.914	21.721	-1.086	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 1TX	

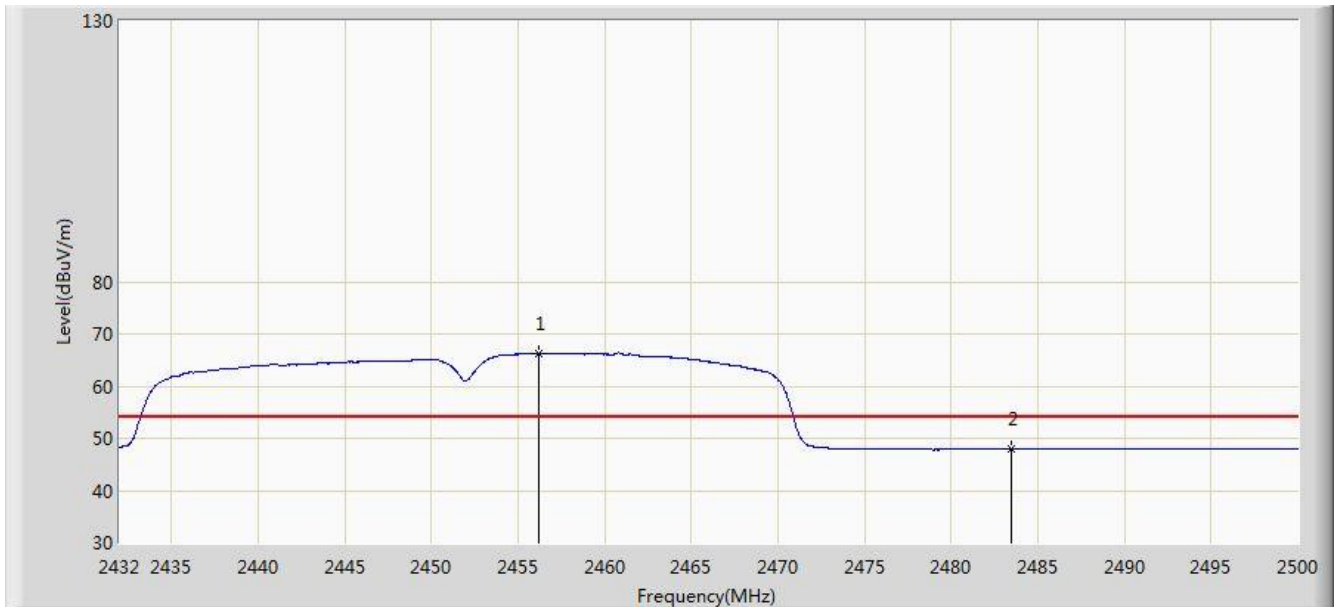


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2455.018	81.353	50.230	N/A	N/A	31.123	PK
2			2483.500	61.120	29.927	-12.880	74.000	31.194	PK
3			2489.256	63.504	32.296	-10.496	74.000	31.208	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 21:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 1TX	

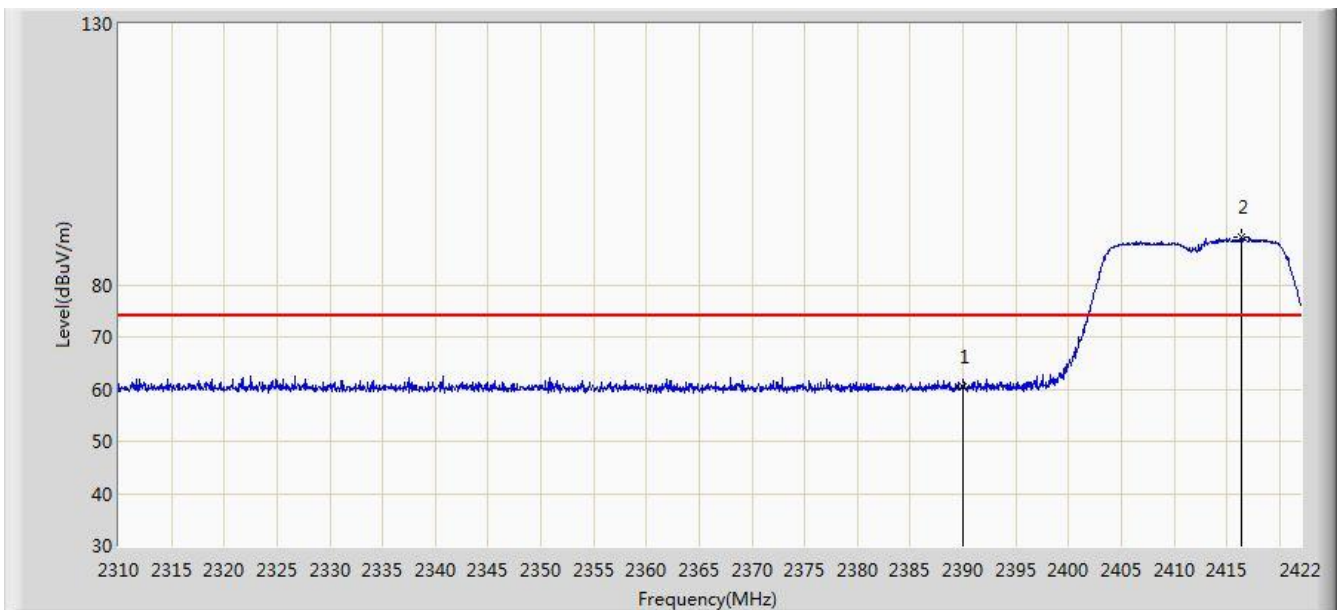


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.174	66.265	35.140	N/A	N/A	31.125	AV
2			2483.500	47.904	16.711	-6.096	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 2TX	

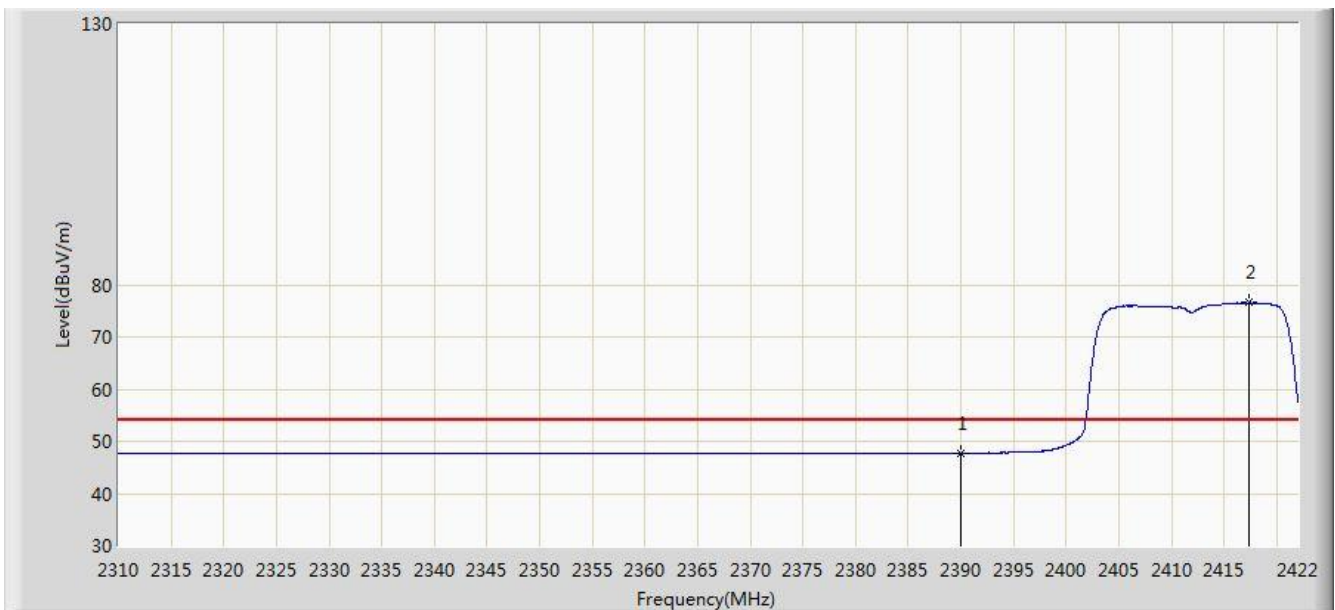


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	60.550	29.347	-13.450	74.000	31.203	PK
2		*	2416.456	89.176	58.014	N/A	N/A	31.162	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 2TX	

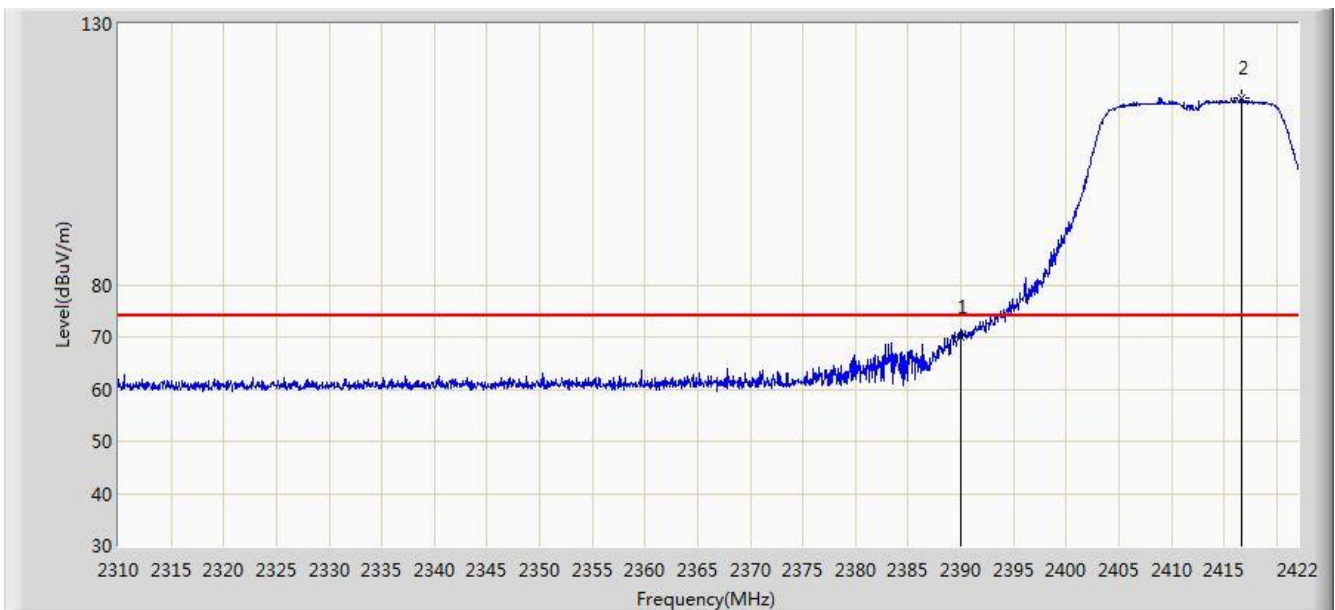


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.723	16.520	-6.277	54.000	31.203	AV
2		*	2417.408	76.523	45.363	N/A	N/A	31.160	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:10
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 2TX	

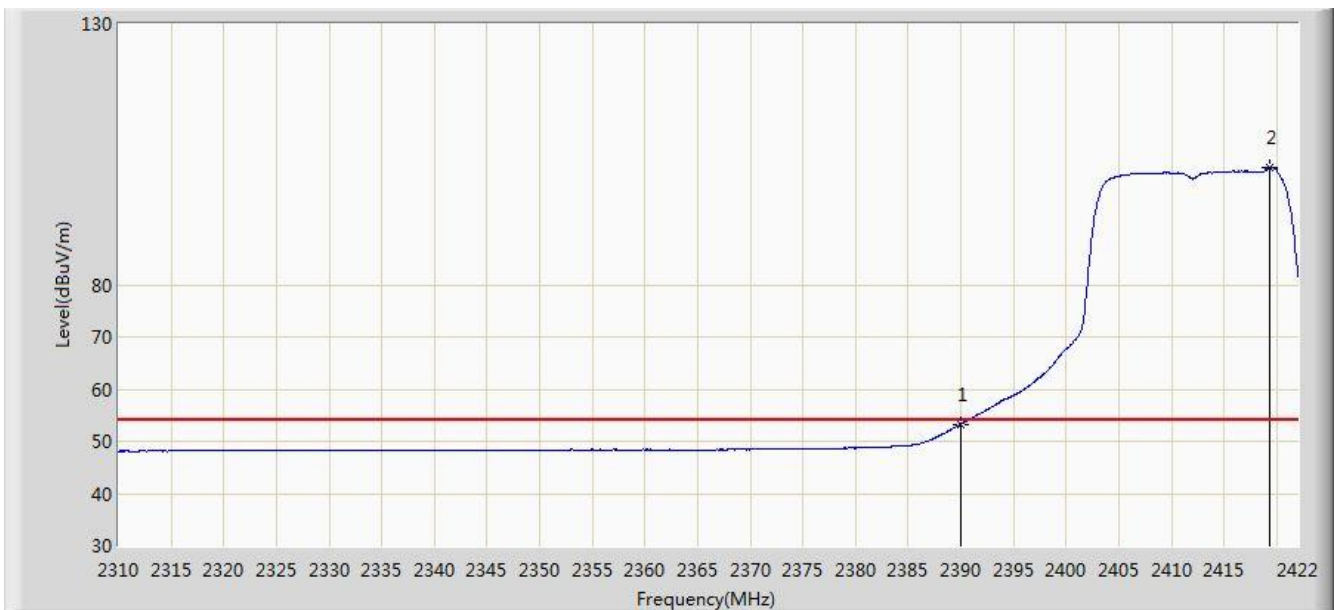


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	70.095	38.892	-3.905	74.000	31.203	PK
2		*	2416.736	115.683	84.522	N/A	N/A	31.162	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:10
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2412MHz by 802.11n-HT20 2TX	

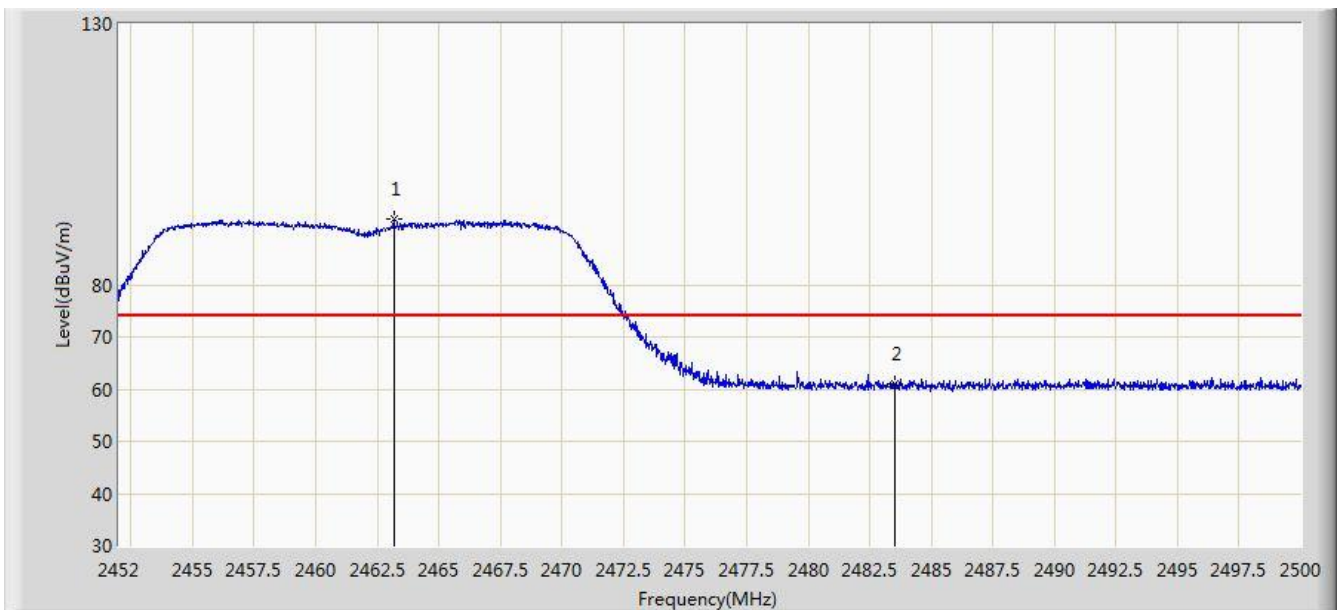


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.323	22.120	-0.677	54.000	31.203	AV
2		*	2419.312	102.446	71.289	N/A	N/A	31.157	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 2TX	

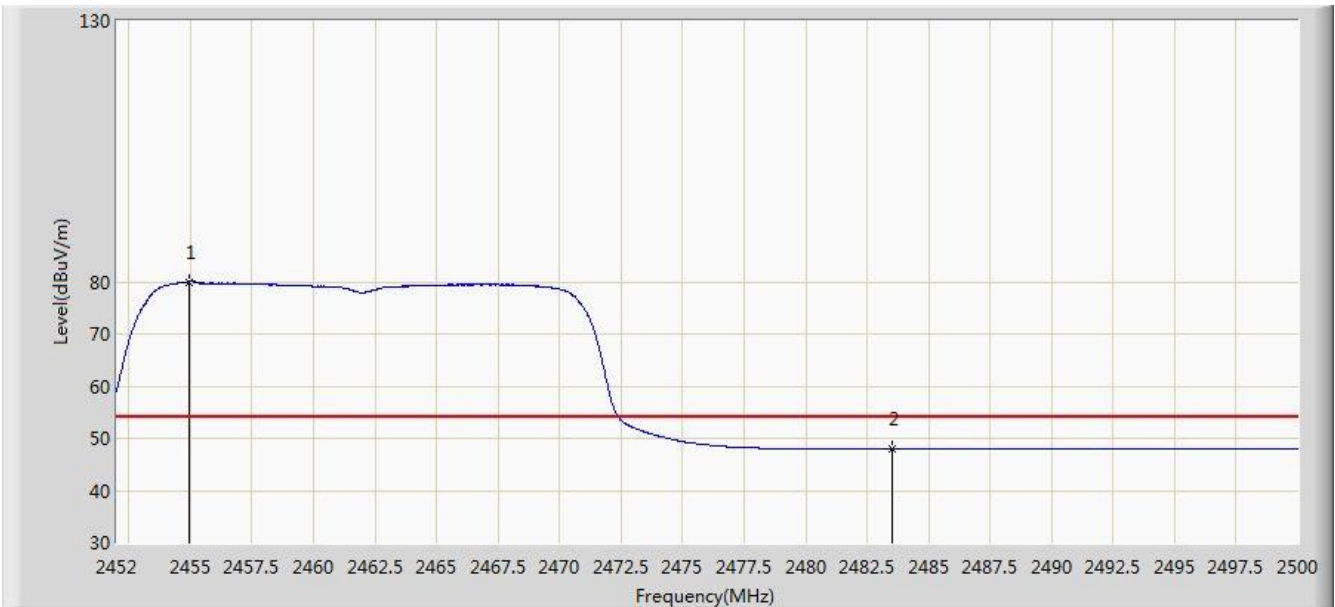


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.160	92.752	61.614	N/A	N/A	31.137	PK
2			2483.500	60.987	29.794	-13.013	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 2TX	

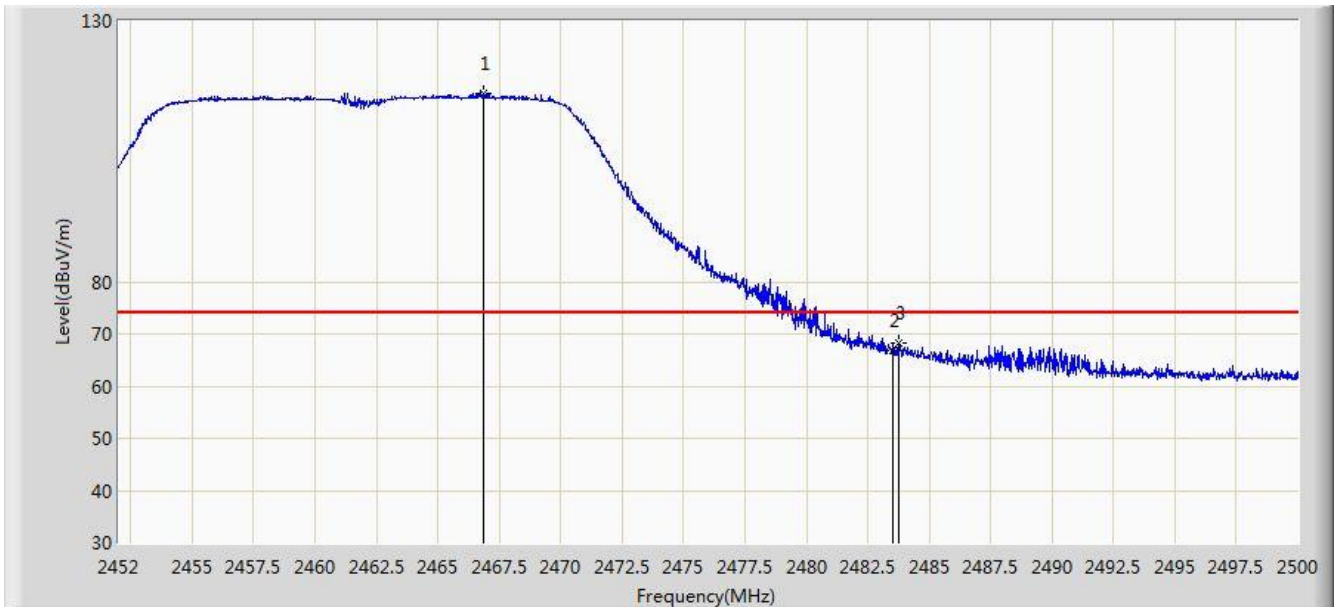


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2454.952	79.994	48.871	N/A	N/A	31.123	AV
2			2483.500	47.904	16.711	-6.096	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 2TX	

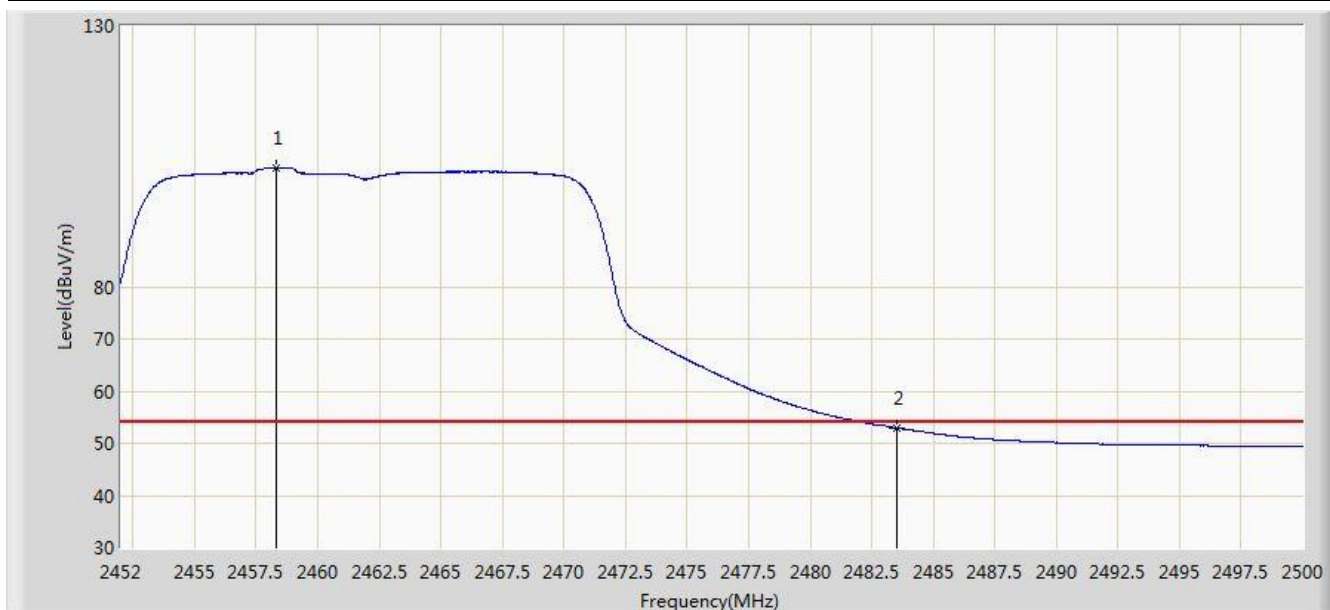


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.832	116.187	85.040	N/A	N/A	31.147	PK
2			2483.500	66.770	35.577	-7.230	74.000	31.194	PK
3			2483.776	68.198	37.004	-5.802	74.000	31.194	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:17
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2462MHz by 802.11n-HT20 2TX	

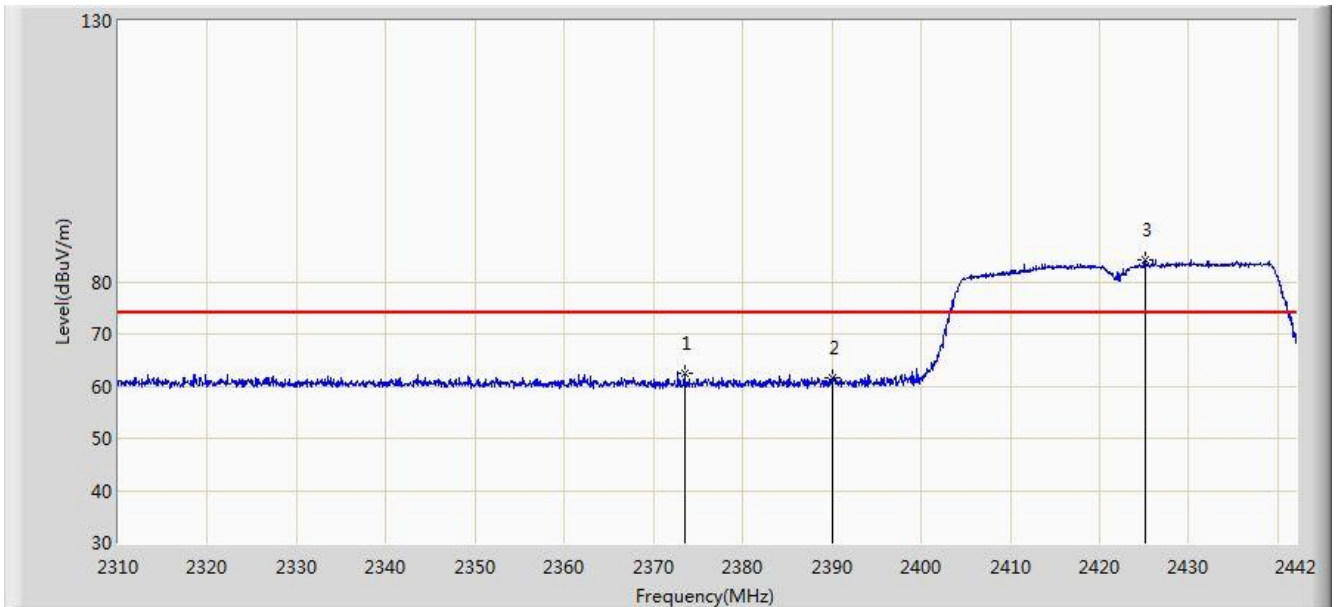


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2458.312	102.680	71.551	N/A	N/A	31.129	AV
2			2483.500	52.952	21.759	-1.048	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 2TX	

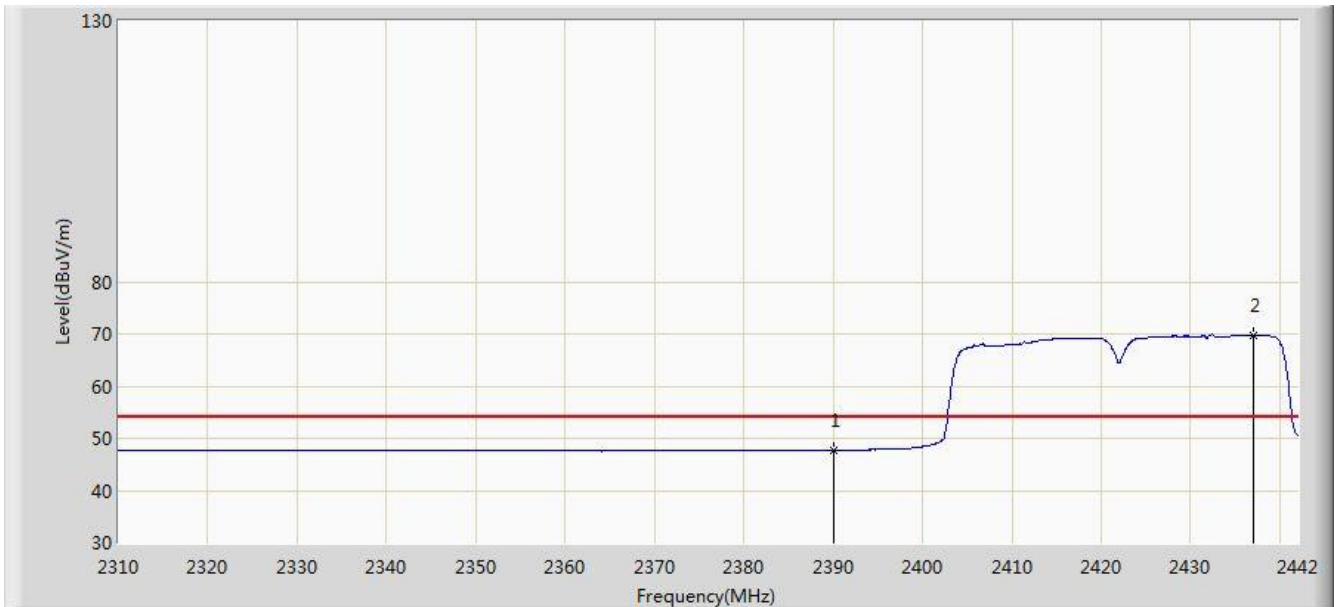


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2373.492	62.503	31.270	-11.497	74.000	31.234	PK
2			2390.000	61.469	30.266	-12.531	74.000	31.203	PK
3		*	2425.104	84.227	53.080	N/A	N/A	31.147	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 2TX	

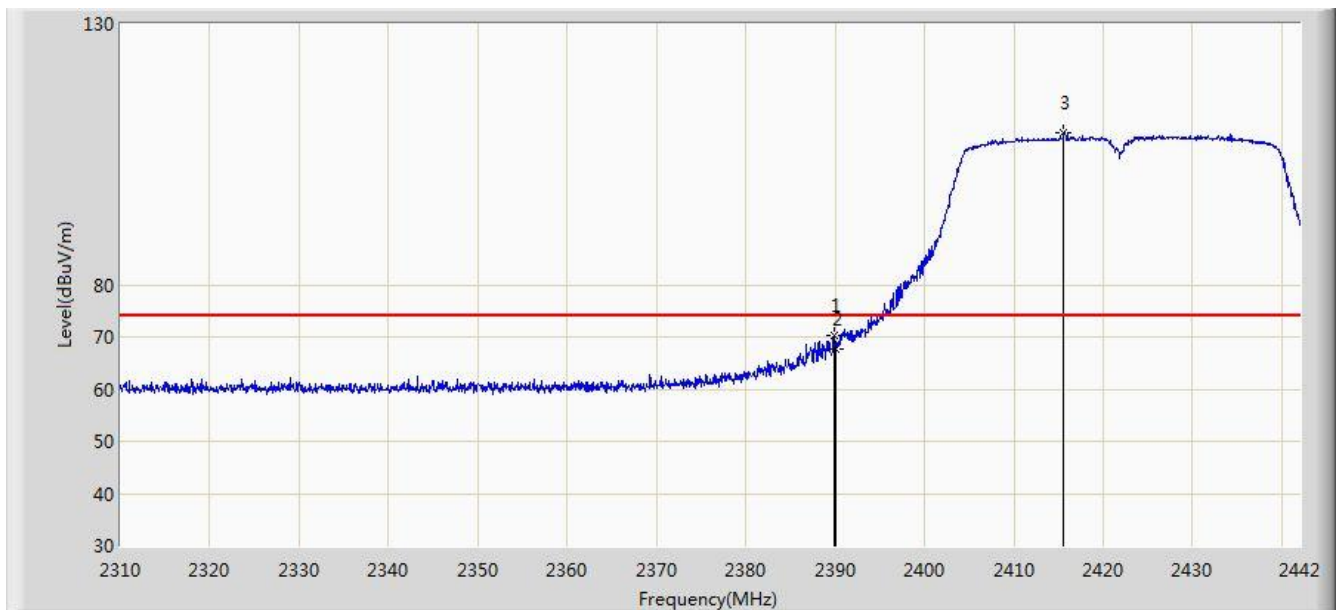


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.721	16.518	-6.279	54.000	31.203	AV
2		*	2436.984	69.665	38.541	N/A	N/A	31.124	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 2TX	

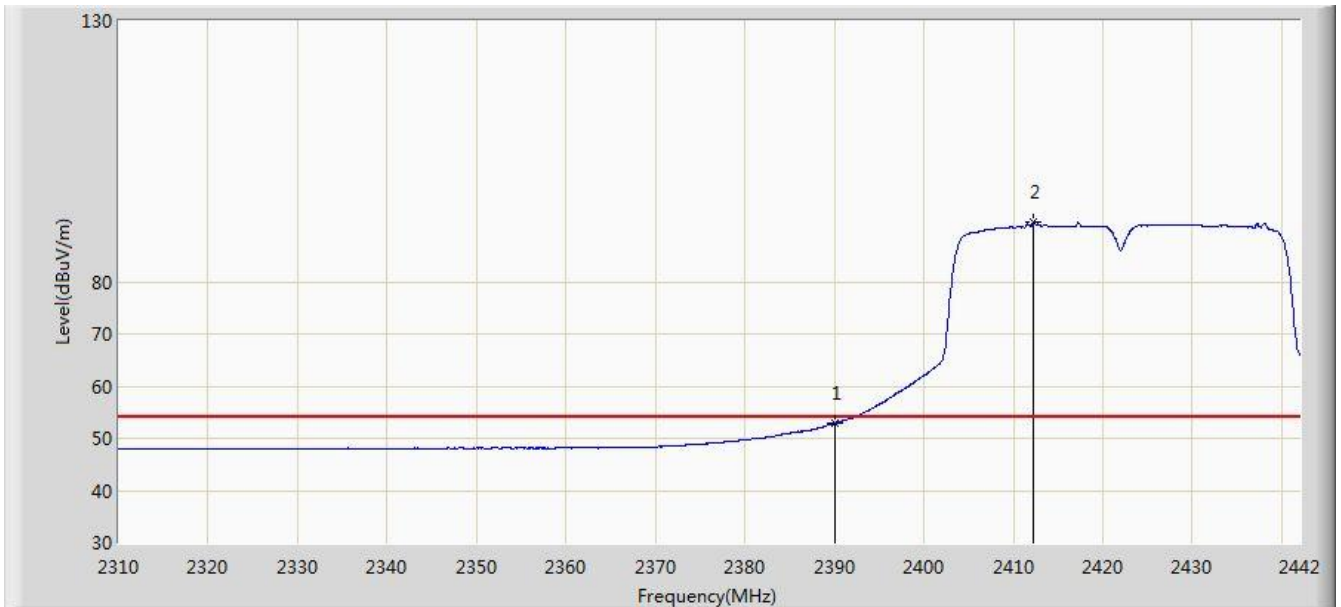


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.926	70.314	39.111	-3.686	74.000	31.203	PK
2			2390.000	67.726	36.523	-6.274	74.000	31.203	PK
3		*	2415.600	109.228	78.065	N/A	N/A	31.163	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2422MHz by 802.11n-HT40 2TX	

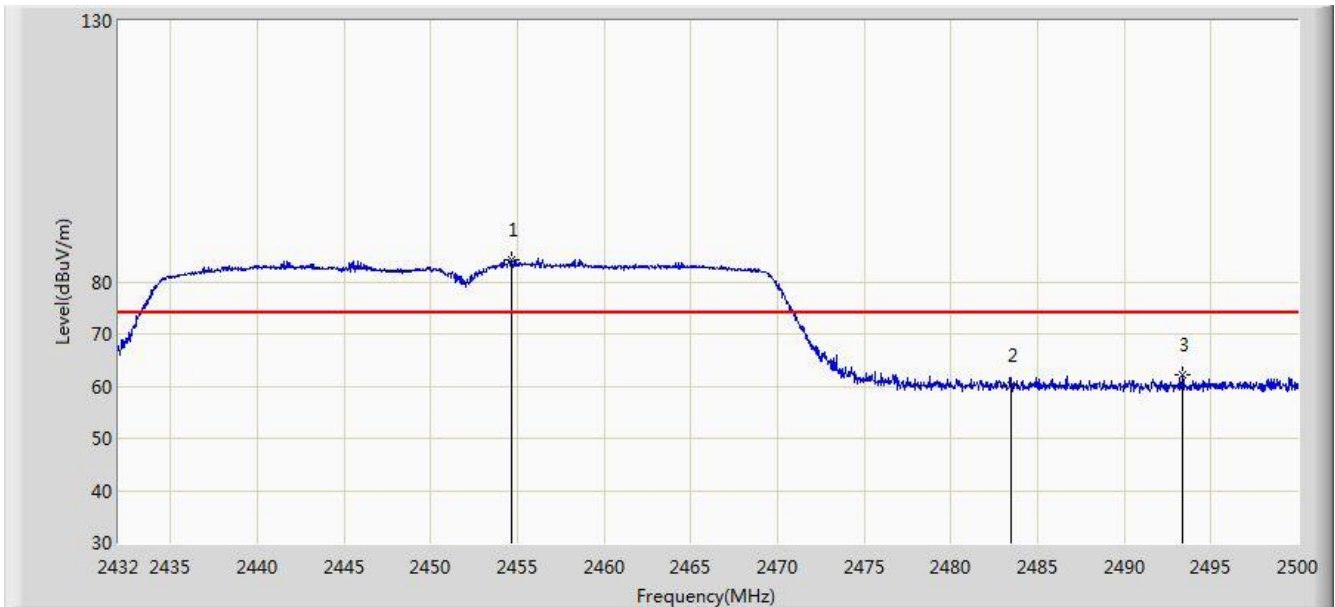


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	52.841	21.638	-1.159	54.000	31.203	AV
2		*	2412.300	91.338	60.169	N/A	N/A	31.169	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 2TX	

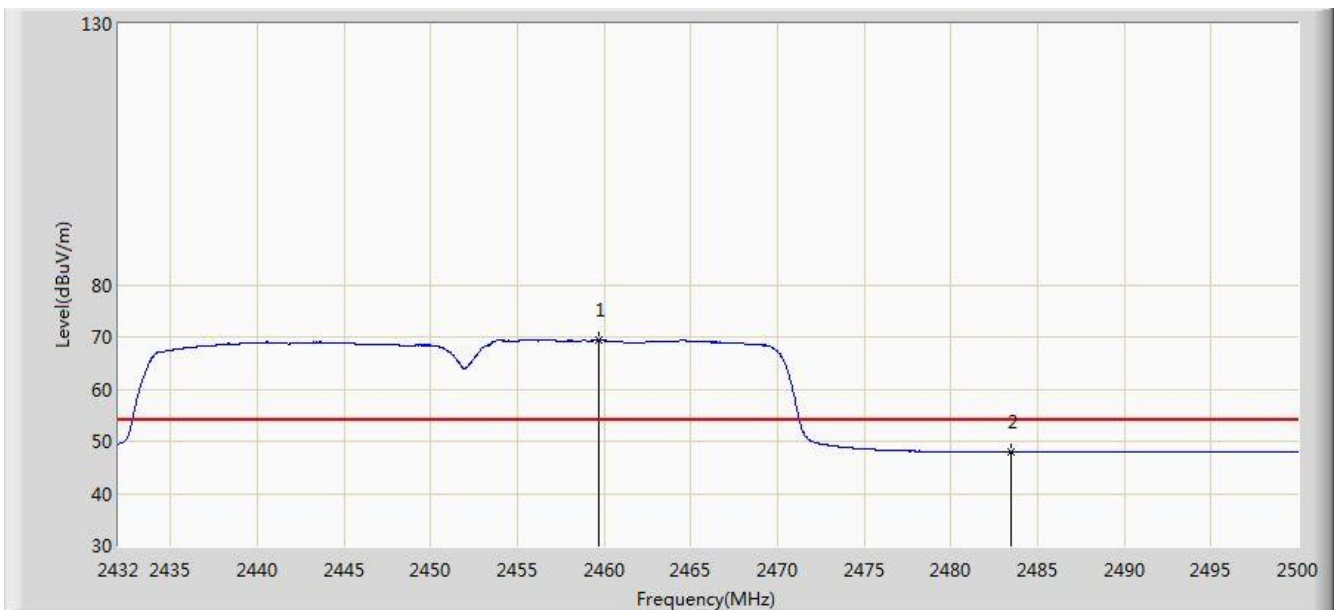


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2454.644	84.341	53.219	N/A	N/A	31.123	PK
2			2483.500	60.007	28.814	-13.993	74.000	31.194	PK
3			2493.370	62.179	30.960	-11.821	74.000	31.219	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 2TX	

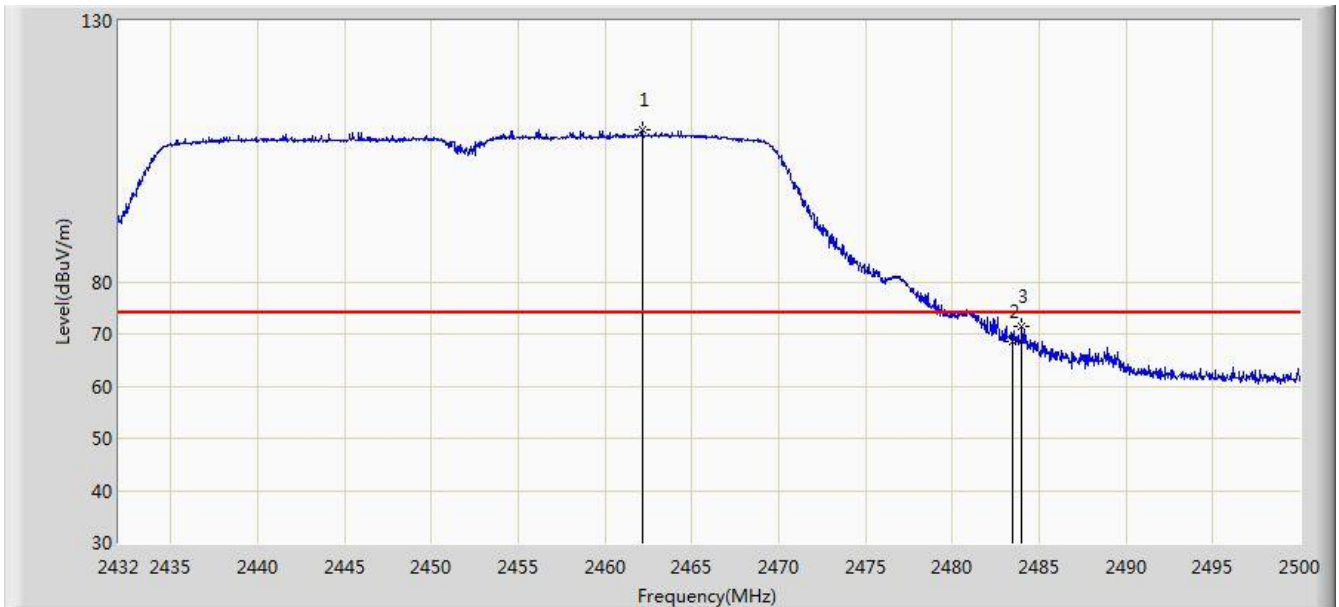


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2459.676	69.506	38.375	N/A	N/A	31.131	AV
2			2483.500	47.897	16.704	-6.103	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 2TX	

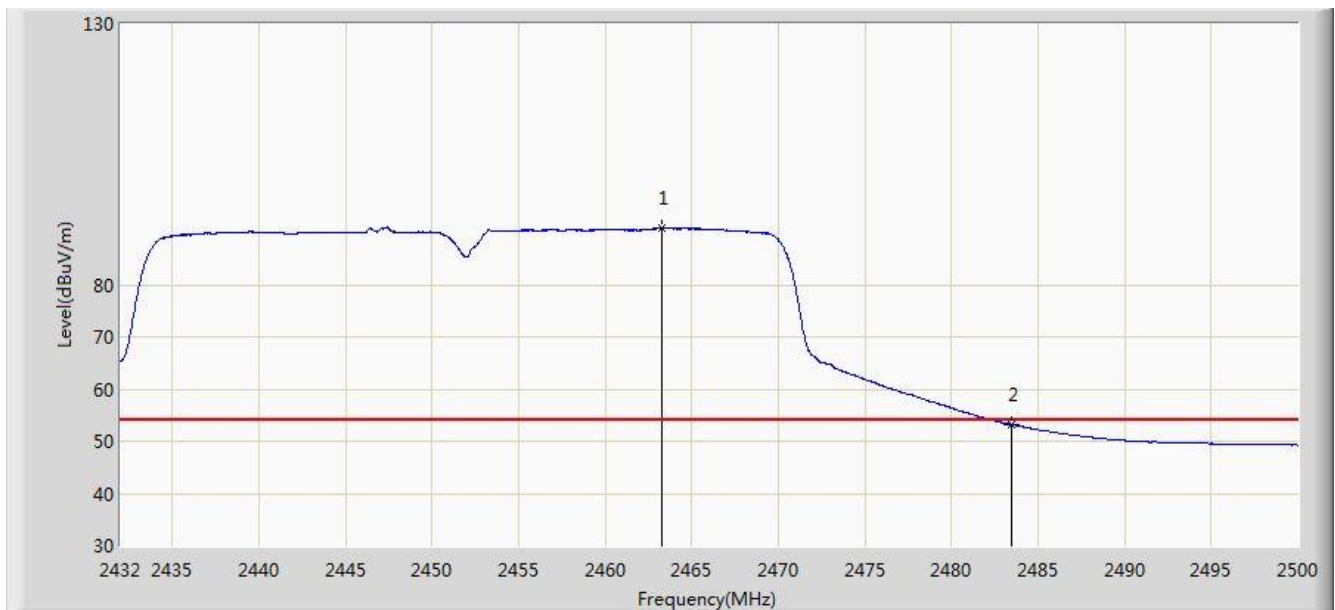


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.124	109.067	77.931	N/A	N/A	31.135	PK
2			2483.500	68.452	37.259	-5.548	74.000	31.194	PK
3			2484.020	71.445	40.250	-2.555	74.000	31.195	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

Site: AC1	Time: 2015/05/08 - 22:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit at channel 2452MHz by 802.11n-HT40 2TX	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.280	90.815	59.677	N/A	N/A	31.138	AV
2			2483.500	53.193	22.000	-0.807	54.000	31.194	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m).

7.8. AC Conducted Emissions Measurement

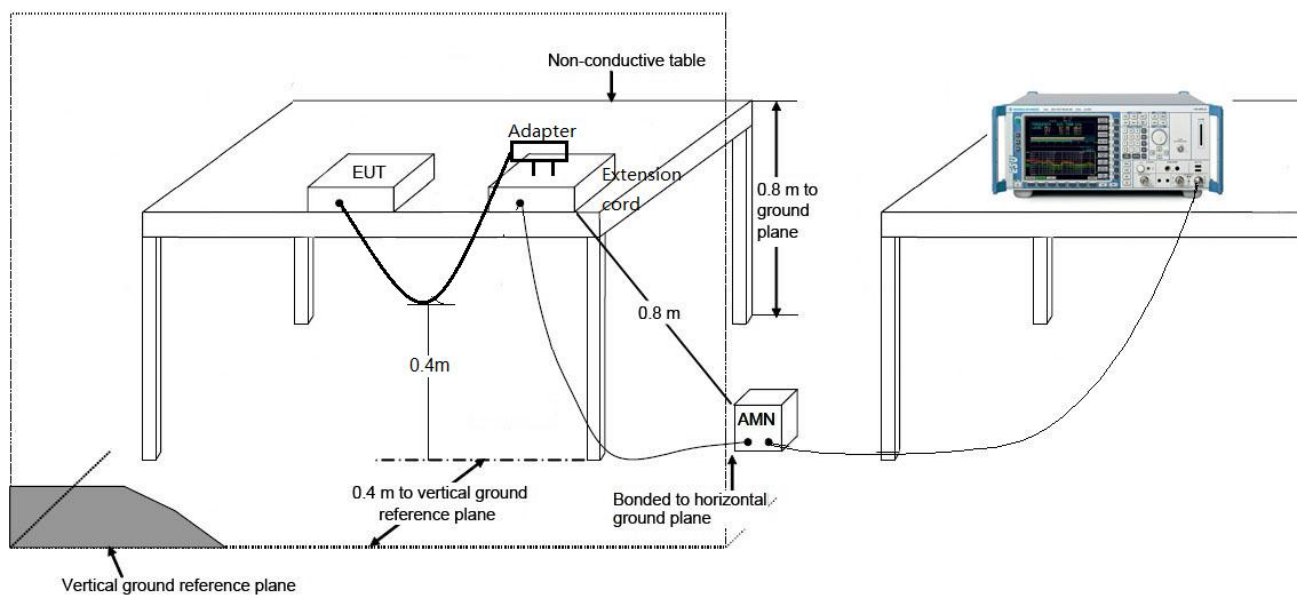
7.8.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
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.

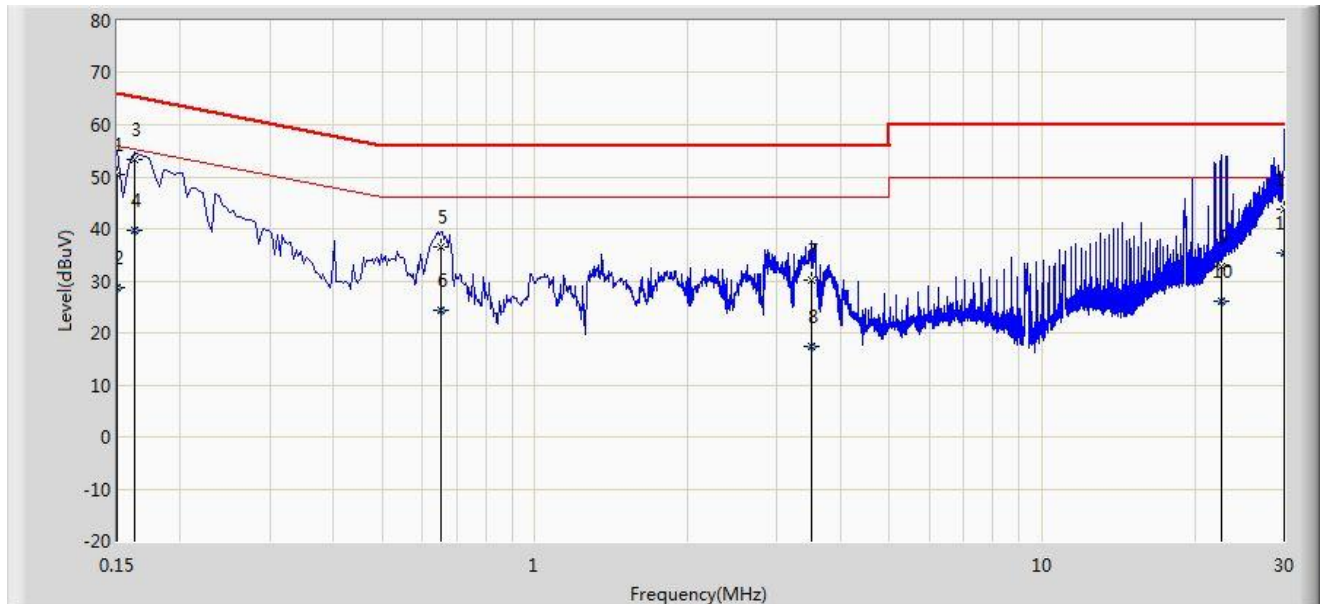
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.8.2. Test Setup



7.8.3. Test Result

Site: SR2	Time: 2015/05/14 - 15:32
Limit: FCC_Part15.207_CE_AC Power	Engineer: Milo Li
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Note: Mode 1	

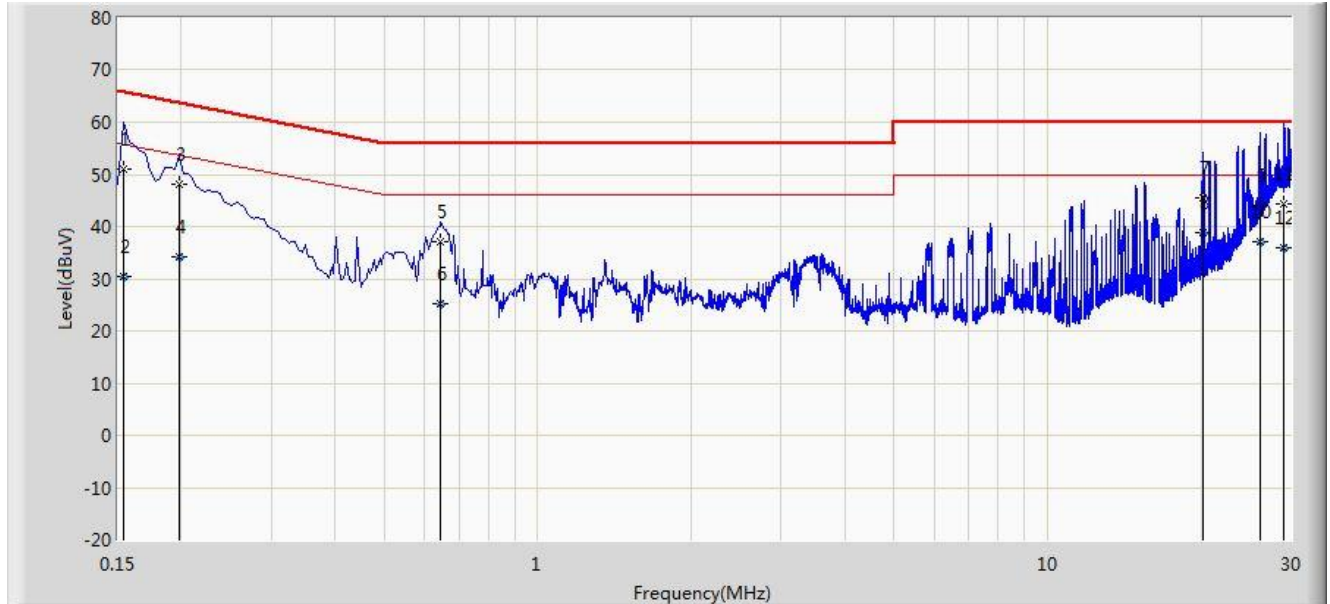


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	50.345	39.177	-15.655	66.000	11.168	QP
2			0.150	28.792	17.624	-27.208	56.000	11.168	AV
3		*	0.162	53.440	43.343	-11.921	65.361	10.097	QP
4			0.162	39.821	29.724	-15.540	55.361	10.097	AV
5			0.654	36.382	26.295	-19.618	56.000	10.087	QP
6			0.654	24.346	14.259	-21.654	46.000	10.087	AV
7			3.498	30.251	20.343	-25.749	56.000	9.908	QP
8			3.498	17.453	7.545	-28.547	46.000	9.908	AV
9			22.566	32.642	22.468	-27.358	60.000	10.174	QP
10			22.566	25.943	15.769	-24.057	50.000	10.174	AV
11			29.938	43.913	33.643	-16.087	60.000	10.270	QP
12			29.938	35.492	25.222	-14.508	50.000	10.270	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2015/05/14 - 15:37
Limit: FCC_Part15.207_CE_AC Power	Engineer: Milo Li
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Note: Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor	Type
1			0.154	51.050	40.334	-14.731	65.781	10.716	QP
2			0.154	30.367	19.651	-25.414	55.781	10.716	AV
3			0.198	48.175	38.161	-15.519	63.694	10.015	QP
4			0.198	34.247	24.233	-19.447	53.694	10.015	AV
5			0.646	37.085	26.980	-18.915	56.000	10.105	QP
6			0.646	25.166	15.060	-20.834	46.000	10.105	AV
7			20.186	45.447	35.275	-14.553	60.000	10.172	QP
8		*	20.186	38.936	28.764	-11.064	50.000	10.172	AV
9			26.074	44.088	33.751	-15.912	60.000	10.337	QP
10			26.074	37.131	26.794	-12.869	50.000	10.337	AV
11			28.982	44.284	33.851	-15.716	60.000	10.433	QP
12			28.982	36.037	25.604	-13.963	50.000	10.433	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **802.11ac Dual Band Module**
FCC ID: TK4WLE600VX is in compliance with Part 15C of the FCC Rules.

The End