MEASUREMENT REPORT

FCC PART 15.247 & IC RSS-247 WLAN 802.11b/g/n

FCC ID:	2ABX8SH-000000012
IC:	12219A-00000000012
APPLICANT:	Zhejiang shenghui lighting Co., Ltd. Shanghai Branch

Application Type:	Certification
Product:	sengled pulse flex
Model No.:	C02-BR30NAE26
Trademark:	sengled
FCC Classification:	Digital Transmission System (DTS)
FCC Rule Part(s):	Part 15.247
IC Rule(s):	RSS-247 Issue 1
Test Procedure(s):	ANSI C63.10-2013, KDB 558074 D01v03r03
Test Date:	December 4 ~ 14, 2015

Reviewed By : Robin Wu
(Robin Wu)

Approved By : Marlinchen
(Marlin Chen)

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

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
1512RSU00501	Rev. 01	Initial report	12-20-2015

Note: This report is based on the original report no. 1509RSU02901. The EUT changes the position of antenna 1, the others are same. We assess the conducted power and radiated emission of Ant 1 on this report.

CONTENTS

Description Page

§2.1033 General Information 5

1. INTRODUCTION 6

1.1. Scope 6
1.2. MRT Test Location 6

2. PRODUCT INFORMATION 7

2.1. Equipment Description 7
2.2. Product Specification Subjective to this Report 7
2.3. Operation Frequency / Channel List 7
2.4. Description of Available Antennas 8
2.5. Test Mode 8
2.6. Test Software 8
2.7. Device Capabilities 9
2.8. Test Configuration 9
2.9. EMI Suppression Device(s)/Modifications 9
2.10. Labeling Requirements 9

3. DESCRIPTION of TEST 10

3.1. Evaluation Procedure 10
3.2. Radiated Emissions 11

4. ANTENNA REQUIREMENTS 12

5. Test Equipment Calibration Date 13

6. MEASUREMENT UNCERTAINTY 14

7. TEST RESULT 15

7.1. Summary 15
7.2. Output Power Measurement 16
7.2.1. Test Limit 16
7.2.2. Test Procedure Used 16
7.2.3. Test Setting 16
7.2.4. Test Setup 16
7.2.5. Test Result of Output Power 17
7.3. Radiated Spurious Emission Measurement 19
7.3.1. Test Limit 19
7.3.2. Test Procedure Used 19
7.3.3. Test Setting 19

7.3.4. Test Setup 21
7.3.5. Test Result..... 23
7.4. Radiated Restricted Band Edge Measurement..... 41
7.4.1. Test Result..... 41

8. CONCLUSION 73

§2.1033 General Information

Applicant:	Zhejiang shenghui lighting Co., Ltd. Shanghai Branch
Applicant Address:	Rm. 801, 1st Xinye Building, 388 Tianlin Rd., Caohejing Development Zone, Shanghai, 200233, China
Manufacturer:	ZHEJIANG SHENGHUI LIGHTING Co., Ltd
Manufacturer Address:	South Jiachuang Rd., Xiuzhou Industrial Park Jiaxing, Zhejiang 314015 P.R. China
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 FCC Registration No.:	809388
MRT IC Registration No.:	11384A
FCC Rule Part(s):	Part 15.247
IC Rule(s):	RSS-247 Issue 1
Model No.:	C02-BR30NAE26
FCC ID:	2ABX8SH-000000012
IC:	12219A-00000000012
Test Device Serial No.:	N/A ☐ Production ☒ Pre-Production ☐ Engineering

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.**

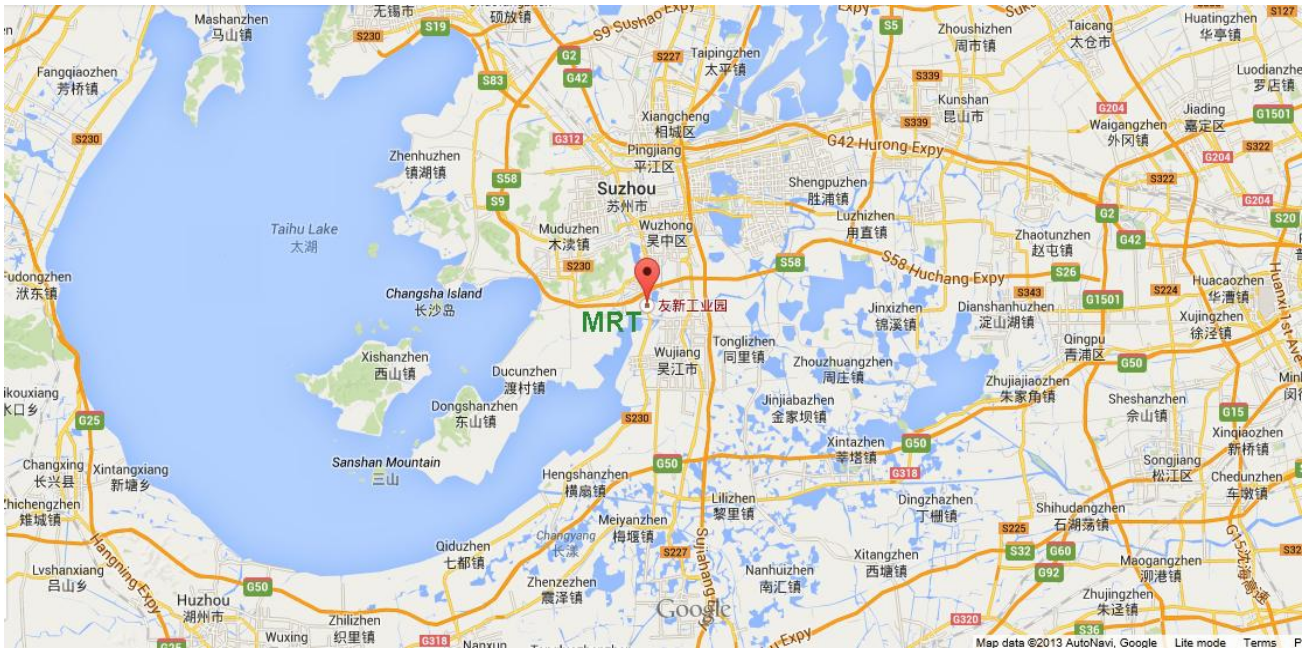
1. INTRODUCTION

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	sengled pulse flex
Model No.	C02-BR30NAE26
Brand Name	sengled
Wi-Fi Specification	802.11a/b/g/n

2.2. Product Specification Subjective to this Report

Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462 MHz 802.11n-HT40: 2422 ~ 2452 MHz
Maximum Peak Output Power	802.11b: 17.42dBm 802.11g: 20.38dBm 802.11n-HT20: 20.18dBm 802.11n-HT40: 19.76dBm
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM

Note: For other features of this EUT, test report will be issued separately.

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	--	--

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	--	--	--	--

2.4. Description of Available Antennas

Antenna No.	Antenna Type	Frequency Band (GHz)	Manufacturer	Max Peak Gain (dBi)
Ant 1	PCB Antenna	2412~2462	Zhejiang shenghui lighting Co., Ltd. Shanghai Branch	4.04
		5180~5240		4.00
		5745~5825		4.53
Ant 2	PCB Antenna	2412~2462		4.43
		5180~5240		3.34
		5745~5825		5.87

2.5. 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

2.6. Test Software

The test utility software used during testing was “SecureCRTPortable.exe”.

2.7. Device Capabilities

This device contains the following capabilities:
2.4GHz WLAN (DTS) & 5GHz WLAN (UNII)

2.8. Test Configuration

The **sengled pulse flex FCC ID: 2ABX8SH-000000012** 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.

2.9. EMI Suppression Device(s)/Modifications

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

2.10. 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 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 **sengled pulse flex FCC ID: 2ABX8SH-000000012.**

Deviation from measurement procedure…….....None

3.2. 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 1-40GHz 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, which 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 **sengled pulse flex** is **permanently attached.**
- There are no provisions for connection to an external antenna.

Conclusion:

The **sengled pulse flex FCC ID: 2ABX8SH-000000012** unit complies with the requirement of §15.203.

5. Test Equipment Calibration Date

Radiated Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	E4447A	MRTSUE06028	1 year	2016/06/23
EMI Test Receiver	R&S	ESR7	MRTSUE06001	1 year	2016/11/03
Preamplifier	Agilent	83017A	MRTSUE06020	1 year	2016/03/29
Preamplifier	Schwarzbeck	BBV9721	MRTSUE06121	1 year	2016/04/15
Loop Antenna	Schwarzbeck	FMZB1519	MRTSUE06025	1 year	2016/12/15
TRILOG Antenna	Schwarzbeck	VULB9162	MRTSUE06022	1 year	2016/11/07
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	MRTSUE06023	1 year	2016/11/07
Broadband Horn Antenna	Schwarzbeck	BBHA9170	MRTSUE06024	1 year	2016/01/05
Temperature/Humidity Meter	Ouleinuo	N/A	MRTSUE06115	1 year	2016/11/20

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Spectrum Analyzer	Agilent	N9020A	MRTSUE06106	1 year	2016/05/08
USB Wideband Power Sensor	Boonton	55006	MRTSUE06109	1 year	2016/05/08
Temperature/Humidity Meter	Ouleinuo	N/A	MRTSUE06112	1 year	2016/11/20

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.

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

7. TEST RESULT

7.1. Summary

Company Name: **Zhejiang shenghui lighting Co., Ltd. Shanghai Branch**

FCC ID: **2ABX8SH-000000012**

IC: **12219A-00000000012**

FCC Classification: **Digital Transmission System (DTS)**

Data Rate(s) Tested: **1Mbps ~ 11Mbps (b); 6Mbps ~ 54Mbps (g);**
6.5/7.2Mbps ~ 65.0/72.2Mbps (n-HT20);
13.5/15Mbps ~ 135.0/150.0Mbps (n-HT40)

FCC Part Section(s)	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
15.247(b)(3)	RSS-247 [5.4(4)]	Output Power	≤ 1Watt & EIRP ≤ 4Watt	Conducted	Pass	Section 7.2
15.205 15.209	RSS-247 [5.5]	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Emissions in restricted bands must meet the radiated limits detailed in 15.209	Radiated	Pass	Section 7.3&7.4

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. Output Power Measurement

7.2.1. Test Limit

For FCC

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

The maximum conducted output power shall be exceed 1 Watt (30dBm) and the E.I.R.P shall not exceed 4 Watt (36dBm).

7.2.2. Test Procedure Used

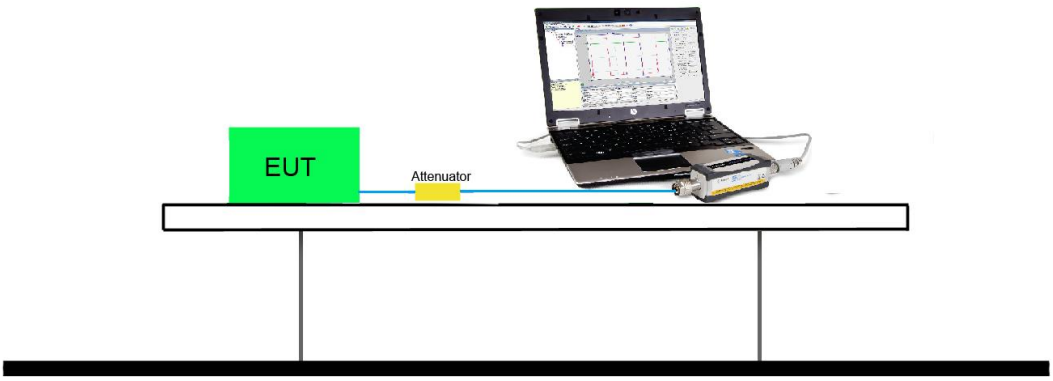
KDB 558074 D01v03r03 - Section 9.1.2 PKPM1 Peak Power Method (for signals with BW ≤ 50MHz)

7.2.3. Test Setting

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

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

7.2.4. Test Setup



7.2.5. Test Result of Output Power

Test Result of Peak Output Power

Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Peak Power (dBm)	Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Result
Ant 1								
11b	1	1	2412	13.36	≤ 30	17.40	≤ 36	Pass
11b	1	6	2437	17.02	≤ 30	21.06	≤ 36	Pass
11b	1	11	2462	17.05	≤ 30	21.09	≤ 36	Pass
11g	6	1	2412	20.29	≤ 30	24.33	≤ 36	Pass
11g	6	6	2437	20.38	≤ 30	24.42	≤ 36	Pass
11g	6	11	2462	19.78	≤ 30	23.82	≤ 36	Pass
11n-HT20	6.5	1	2412	20.01	≤ 30	24.05	≤ 36	Pass
11n-HT20	6.5	6	2437	19.83	≤ 30	23.87	≤ 36	Pass
11n-HT20	6.5	11	2462	19.48	≤ 30	23.52	≤ 36	Pass
11n-HT40	13.5	3	2422	18.76	≤ 30	22.80	≤ 36	Pass
11n-HT40	13.5	6	2437	19.52	≤ 30	23.56	≤ 36	Pass
11n-HT40	13.5	9	2452	17.31	≤ 30	21.35	≤ 36	Pass
Ant 2								
11b	1	1	2412	16.53	≤ 30	20.96	≤ 36	Pass
11b	1	6	2437	17.42	≤ 30	21.85	≤ 36	Pass
11b	1	11	2462	17.38	≤ 30	21.81	≤ 36	Pass
11g	6	1	2412	19.92	≤ 30	24.35	≤ 36	Pass
11g	6	6	2437	20.32	≤ 30	24.75	≤ 36	Pass
11g	6	11	2462	20.25	≤ 30	24.68	≤ 36	Pass
11n-HT20	6.5	1	2412	20.00	≤ 30	24.43	≤ 36	Pass
11n-HT20	6.5	6	2437	20.18	≤ 30	24.61	≤ 36	Pass
11n-HT20	6.5	11	2462	20.02	≤ 30	24.45	≤ 36	Pass
11n-HT40	13.5	3	2422	19.76	≤ 30	24.19	≤ 36	Pass
11n-HT40	13.5	6	2437	19.21	≤ 30	23.64	≤ 36	Pass
11n-HT40	13.5	9	2452	17.78	≤ 30	22.21	≤ 36	Pass

Test Result of Average Output Power for Report Only

Test Mode	Data Rate (Mbps)	Channel No.	Freq. (MHz)	Average Power (dBm)	Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)	Result
Ant 1								
11b	1	1	2412	10.25	≤ 30	14.29	≤ 36	Pass
11b	1	6	2437	14.53	≤ 30	18.57	≤ 36	Pass
11b	1	11	2462	14.32	≤ 30	18.36	≤ 36	Pass
11g	6	1	2412	11.51	≤ 30	15.55	≤ 36	Pass
11g	6	6	2437	12.10	≤ 30	16.14	≤ 36	Pass
11g	6	11	2462	10.79	≤ 30	14.83	≤ 36	Pass
11n-HT20	6.5	1	2412	11.62	≤ 30	15.66	≤ 36	Pass
11n-HT20	6.5	6	2437	12.01	≤ 30	16.05	≤ 36	Pass
11n-HT20	6.5	11	2462	10.82	≤ 30	14.86	≤ 36	Pass
11n-HT40	13.5	3	2422	10.14	≤ 30	14.18	≤ 36	Pass
11n-HT40	13.5	6	2437	11.02	≤ 30	15.06	≤ 36	Pass
11n-HT40	13.5	9	2452	8.21	≤ 30	12.25	≤ 36	Pass
Ant 2								
11b	1	1	2412	14.42	≤ 30	18.85	≤ 36	Pass
11b	1	6	2437	14.96	≤ 30	19.39	≤ 36	Pass
11b	1	11	2462	14.84	≤ 30	19.27	≤ 36	Pass
11g	6	1	2412	11.32	≤ 30	15.75	≤ 36	Pass
11g	6	6	2437	12.81	≤ 30	17.24	≤ 36	Pass
11g	6	11	2462	11.63	≤ 30	16.06	≤ 36	Pass
11n-HT20	6.5	1	2412	11.41	≤ 30	15.84	≤ 36	Pass
11n-HT20	6.5	6	2437	12.11	≤ 30	16.54	≤ 36	Pass
11n-HT20	6.5	11	2462	10.93	≤ 30	15.36	≤ 36	Pass
11n-HT40	13.5	3	2422	10.54	≤ 30	14.97	≤ 36	Pass
11n-HT40	13.5	6	2437	10.24	≤ 30	14.67	≤ 36	Pass
11n-HT40	13.5	9	2452	7.74	≤ 30	12.17	≤ 36	Pass

7.3. Radiated Spurious Emission Measurement

7.3.1. 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

7.3.2. Test Procedure Used

KDB 558074 D01v03r03 - Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v03r03 - Section 12.2.4 (peak power measurements)

KDB 558074 D01v03r03 - Section 12.2.5 (average power measurements)

7.3.3. Test Setting

Peak Field Strength Measurements

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

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest

2. RBW = 1MHz

3. VBW ≥ 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

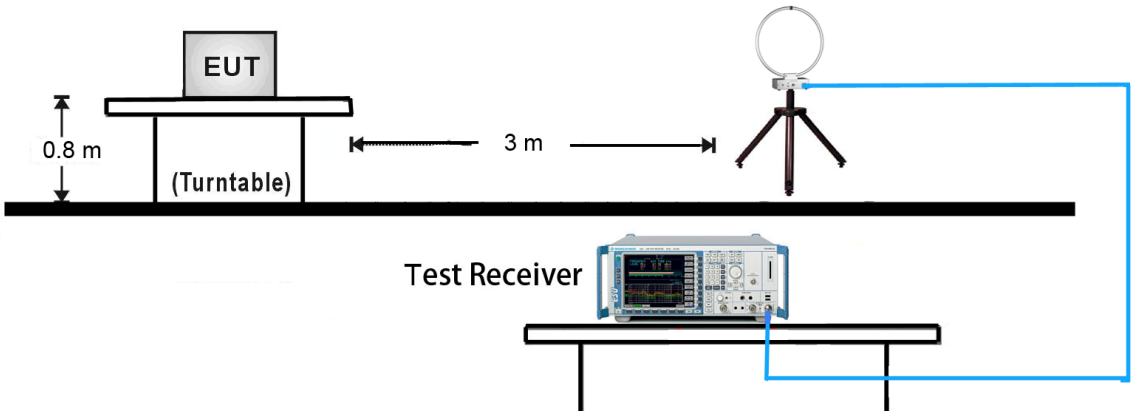
6. Sweep time = auto

7. Trace mode = max hold

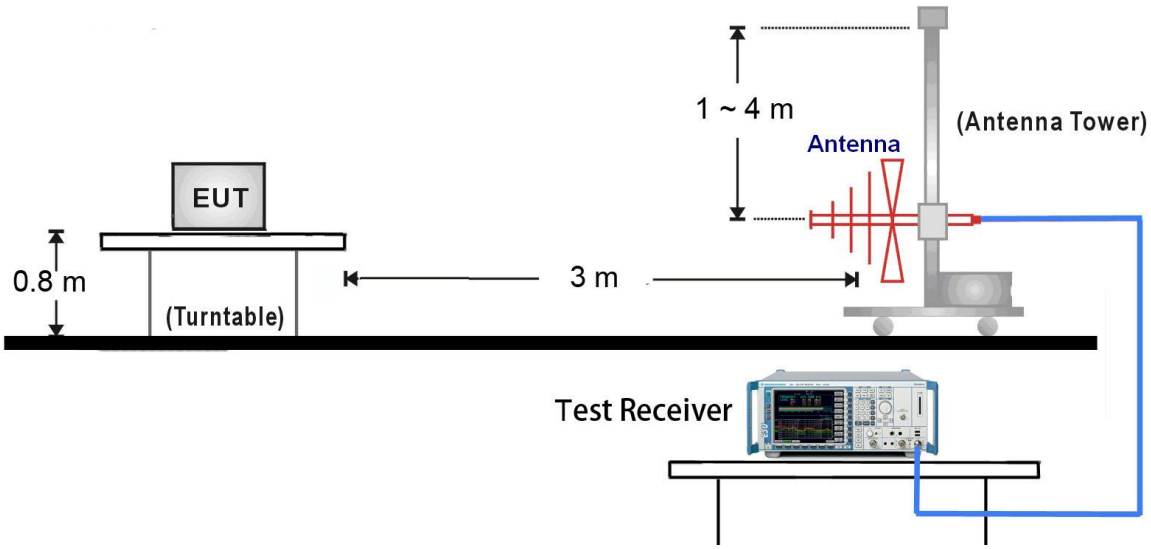
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

7.3.4. Test Setup

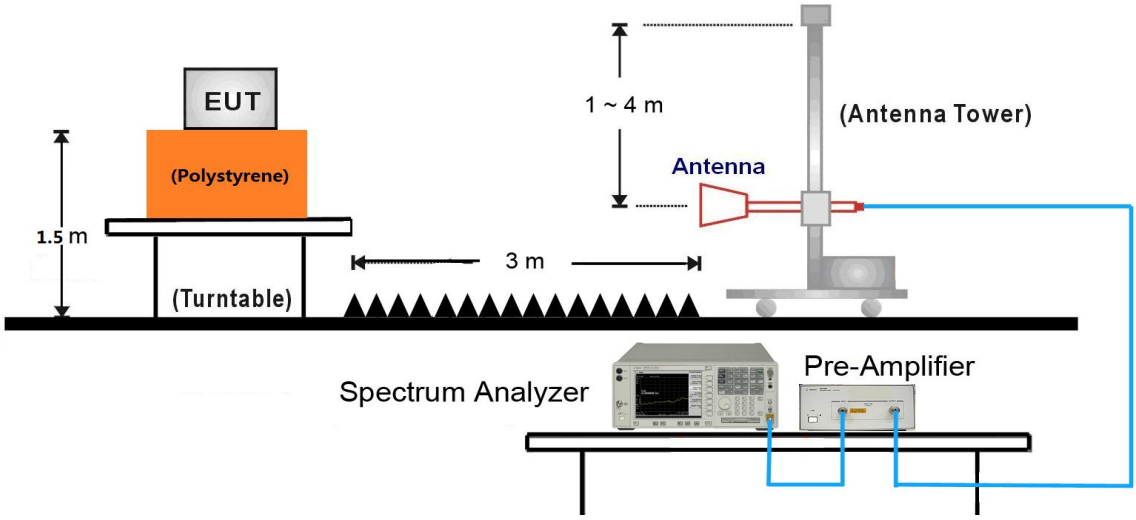
9kHz ~ 30MHz Test Setup:



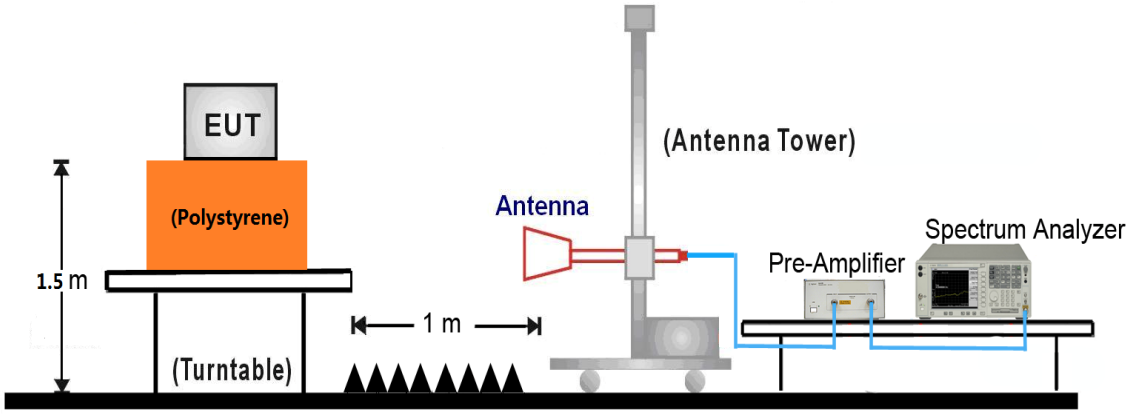
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~25GHz Test Setup:



7.3.5. Test Result

Test Mode:	802.11b – Ant 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Peak Wang
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
	4842.0	37.0	2.7	39.7	74.0	-34.3	Peak	Horizontal
	7417.5	37.2	8.0	45.2	74.0	-28.8	Peak	Horizontal
*	8650.0	35.9	8.8	44.7	78.5	-33.8	Peak	Horizontal
*	9916.5	36.7	11.5	48.2	78.5	-30.3	Peak	Horizontal
	4816.5	36.8	2.7	39.5	74.0	-34.5	Peak	Vertical
	7511.0	37.7	8.3	46.0	74.0	-28.0	Peak	Vertical
*	8811.5	35.3	9.0	44.3	78.5	-34.2	Peak	Vertical
*	9644.5	35.4	11.0	46.4	78.5	-32.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (98.5dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Peak Wang
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
	4876.0	39.6	2.7	42.3	74.0	-31.7	Peak	Horizontal
	7349.5	36.3	8.0	44.3	74.0	-29.7	Peak	Horizontal
*	8624.5	36.3	8.8	45.1	82.3	-37.2	Peak	Horizontal
*	10299.0	35.5	12.0	47.5	82.3	-34.8	Peak	Horizontal
	4876.0	39.1	2.7	41.8	74.0	-32.2	Peak	Vertical
	7417.5	38.0	8.0	46.0	74.0	-28.0	Peak	Vertical
*	8633.0	35.8	8.8	44.6	82.3	-37.7	Peak	Vertical
*	9916.5	34.8	11.5	46.3	82.3	-36.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (102.3dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Peak Wang
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
	4927.0	39.8	2.8	42.6	74.0	-31.4	Peak	Horizontal
	7434.5	37.4	8.0	45.4	74.0	-28.6	Peak	Horizontal
*	8675.5	36.3	8.9	45.2	81.2	-36.0	Peak	Horizontal
*	9967.5	35.1	11.4	46.5	81.2	-34.7	Peak	Horizontal
	4927.0	37.2	2.8	40.0	74.0	-34.0	Peak	Vertical
	7511.0	36.9	8.3	45.2	74.0	-28.8	Peak	Vertical
*	8633.0	36.0	8.8	44.8	81.2	-36.4	Peak	Vertical
*	9874.0	35.0	11.6	46.6	81.2	-34.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (101.2dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Peak Wang
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
	4833.5	36.5	2.7	39.2	74.0	-34.8	Peak	Horizontal
	7383.5	36.7	7.9	44.6	74.0	-29.4	Peak	Horizontal
*	8794.5	35.9	8.9	44.8	84.2	-39.4	Peak	Horizontal
*	10358.5	35.7	12.2	47.9	84.2	-36.3	Peak	Horizontal
	4816.5	36.8	2.7	39.5	74.0	-34.5	Peak	Vertical
	7485.5	36.5	8.2	44.7	74.0	-29.3	Peak	Vertical
*	8701.0	35.8	9.0	44.8	84.2	-39.4	Peak	Vertical
*	9738.0	35.5	11.2	46.7	84.2	-37.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.2dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Peak Wang
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
	4842.0	36.0	2.7	38.7	74.0	-35.3	Peak	Horizontal
	7502.5	36.5	8.3	44.8	74.0	-29.2	Peak	Horizontal
*	8582.0	36.5	8.6	45.1	84.6	-39.5	Peak	Horizontal
*	9738.0	35.8	11.2	47.0	84.6	-37.6	Peak	Horizontal
	4808.0	37.0	2.7	39.7	74.0	-34.3	Peak	Vertical
	7519.5	36.6	8.3	44.9	74.0	-29.1	Peak	Vertical
*	8845.5	35.7	9.1	44.8	84.6	-39.8	Peak	Vertical
*	9780.5	34.9	11.4	46.3	84.6	-38.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.6dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Peak Wang
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
	4748.5	36.6	2.5	39.1	74.0	-34.9	Peak	Horizontal
	7426.0	37.6	8.0	45.6	74.0	-28.4	Peak	Horizontal
*	8752.0	35.5	9.0	44.5	82.0	-37.5	Peak	Horizontal
*	10180.0	34.7	11.7	46.4	82.0	-35.6	Peak	Horizontal
	4961.0	36.2	2.9	39.1	74.0	-34.9	Peak	Vertical
	7579.0	36.2	8.2	44.4	74.0	-29.6	Peak	Vertical
*	8616.0	35.8	8.8	44.6	82.0	-37.4	Peak	Vertical
*	10511.5	35.1	12.4	47.5	82.0	-34.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (102.0dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Peak Wang
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
	4799.5	36.7	2.7	39.4	74.0	-34.6	Peak	Horizontal
	7536.5	36.3	8.3	44.6	74.0	-29.4	Peak	Horizontal
*	8905.0	35.6	9.2	44.8	83.4	-38.6	Peak	Horizontal
*	10341.5	34.9	12.2	47.1	83.4	-36.3	Peak	Horizontal
	4833.5	36.3	2.7	39.0	74.0	-35.0	Peak	Vertical
	7502.5	36.1	8.3	44.4	74.0	-29.6	Peak	Vertical
*	8709.5	35.6	9.0	44.6	83.4	-38.8	Peak	Vertical
*	9857.0	36.0	11.6	47.6	83.4	-35.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (103.4dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Peak Wang
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
	4918.5	36.4	2.8	39.2	74.0	-34.8	Peak	Horizontal
	7307.0	36.4	8.0	44.4	74.0	-29.6	Peak	Horizontal
*	8896.5	35.7	9.2	44.9	84.2	-39.3	Peak	Horizontal
*	10341.5	35.1	12.2	47.3	84.2	-36.9	Peak	Horizontal
	4816.5	36.6	2.7	39.3	74.0	-34.7	Peak	Vertical
	7519.5	36.4	8.3	44.7	74.0	-29.3	Peak	Vertical
*	8582.0	35.9	8.6	44.5	84.2	-39.7	Peak	Vertical
*	9704.0	35.9	11.0	46.9	84.2	-37.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (104.2dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Peak Wang
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
	4918.5	36.9	2.8	39.7	74.0	-34.3	Peak	Horizontal
	7647.0	36.5	8.0	44.5	74.0	-29.5	Peak	Horizontal
*	8582.0	36.6	8.6	45.2	81.3	-36.1	Peak	Horizontal
*	9984.5	34.7	11.4	46.1	81.3	-35.2	Peak	Horizontal
	4825.0	36.2	2.7	38.9	74.0	-35.1	Peak	Vertical
	7307.0	36.0	8.0	44.0	74.0	-30.0	Peak	Vertical
*	8888.0	35.4	9.2	44.6	81.3	-36.7	Peak	Vertical
*	9627.5	34.9	11.0	45.9	81.3	-35.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (101.3dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	03	Test Engineer:	Peak Wang
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
	4833.5	36.3	2.7	39.0	74.0	-35.0	Peak	Horizontal
	7468.5	36.3	8.1	44.4	74.0	-29.6	Peak	Horizontal
*	8769.0	36.2	8.9	45.1	78.2	-33.1	Peak	Horizontal
*	9933.5	34.6	11.5	46.1	78.2	-32.1	Peak	Horizontal
	4833.5	36.7	2.7	39.4	74.0	-34.6	Peak	Vertical
	7511.0	36.0	8.3	44.3	74.0	-29.7	Peak	Vertical
*	8675.5	35.8	8.9	44.7	78.2	-33.5	Peak	Vertical
*	9823.0	34.7	11.6	46.3	78.2	-31.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (98.2dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Peak Wang
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
	4842.0	36.1	2.7	38.8	74.0	-35.2	Peak	Horizontal
	7630.0	36.7	8.0	44.7	74.0	-29.3	Peak	Horizontal
*	8565.0	36.2	8.7	44.9	79.6	-34.7	Peak	Horizontal
*	10537.0	35.5	12.5	48.0	79.6	-31.6	Peak	Horizontal
	4782.5	36.0	2.7	38.7	74.0	-35.3	Peak	Vertical
	7511.0	36.8	8.3	45.1	74.0	-28.9	Peak	Vertical
*	8786.0	35.4	8.9	44.3	79.6	-35.3	Peak	Vertical
*	10027.0	35.7	11.5	47.2	79.6	-32.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (99.6dBμV/m) or FCC 15.209 which is higher.

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 – Ant 1	Test Site:	AC1
Test Channel:	09	Test Engineer:	Peak Wang
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
	4808.0	36.5	2.7	39.2	74.0	-34.8	Peak	Horizontal
	7494.0	37.0	8.2	45.2	74.0	-28.8	Peak	Horizontal
*	8786.0	35.5	8.9	44.4	74.2	-29.8	Peak	Horizontal
*	9763.5	35.4	11.4	46.8	74.2	-27.4	Peak	Horizontal
	4765.5	37.1	2.6	39.7	74.0	-34.3	Peak	Vertical
	7485.5	36.4	8.2	44.6	74.0	-29.4	Peak	Vertical
*	8854.0	34.9	9.1	44.0	74.2	-30.2	Peak	Vertical
*	10103.5	35.6	11.6	47.2	74.2	-27.0	Peak	Vertical

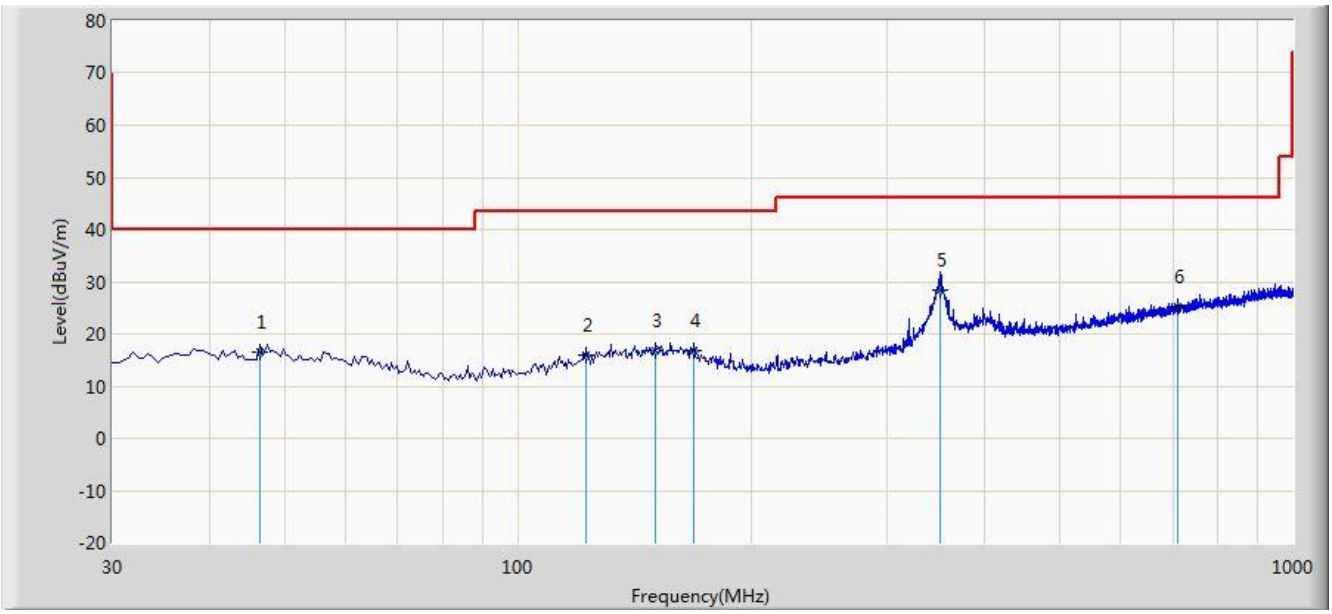
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (94.2dBμV/m) or FCC 15.209 which is higher.

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: AC 1	Time: 2015/12/14 - 16:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Worse Case Mode: Transmit by 802.11g at channel 2412MHz	

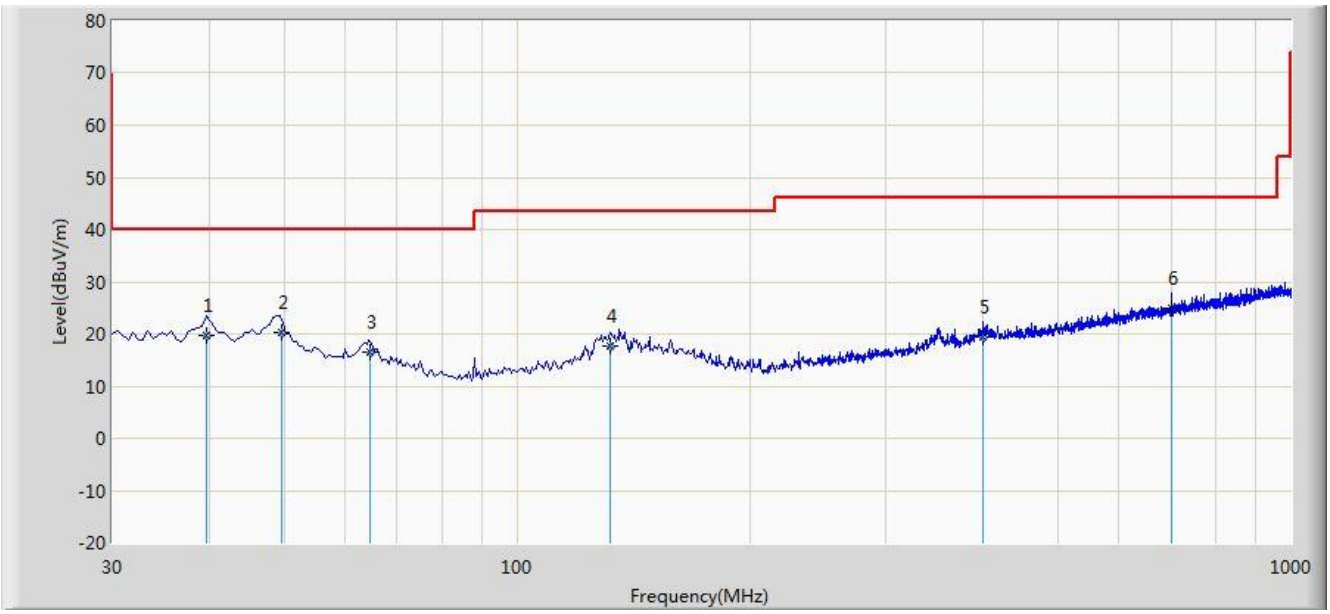


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			46.530	16.638	2.500	-23.362	40.000	14.137	QP
2			122.763	16.061	2.745	-27.439	43.500	13.316	QP
3			150.789	16.714	1.532	-26.786	43.500	15.182	QP
4			168.893	16.800	2.431	-26.700	43.500	14.369	QP
5		*	350.032	28.369	12.897	-17.631	46.000	15.472	QP
6			710.586	25.138	2.986	-20.862	46.000	22.151	QP

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

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

Site: AC 1	Time: 2015/12/14 - 16:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Milo Li
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Worse Case Mode: Transmit by 802.11g at channel 2412MHz	

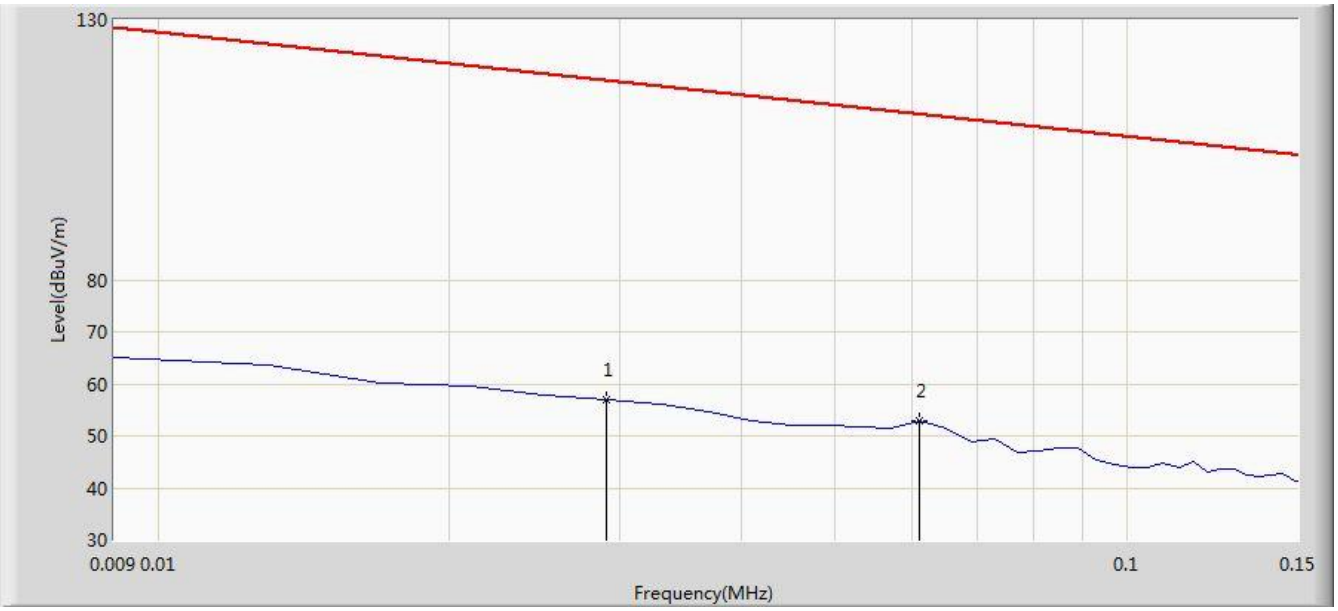


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			39.757	19.829	5.312	-20.171	40.000	14.517	QP
2		*	49.563	20.298	6.214	-19.702	40.000	14.084	QP
3			64.523	16.411	3.879	-23.589	40.000	12.532	QP
4			132.054	17.778	3.890	-25.722	43.500	13.889	QP
5			400.235	19.461	2.963	-26.539	46.000	16.498	QP
6			701.897	25.037	3.012	-20.963	46.000	22.025	QP

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

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

Site: AC1	Time: 2015/12/14 - 09:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: FMZB1519_0.009-30MHz	Polarity: Face on
EUT: sengled pulse flex	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

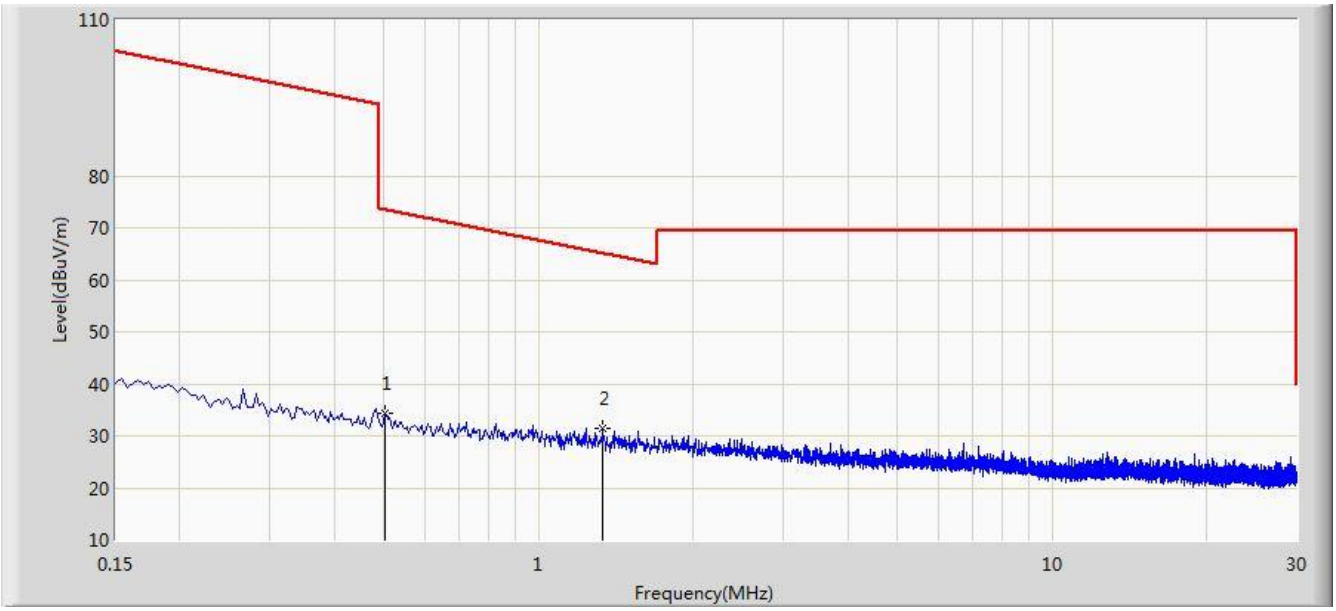


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.029	56.893	35.844	-61.463	118.356	21.049	QP
2		*	0.061	52.853	32.542	-59.045	111.898	20.311	QP

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

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

Site: AC1	Time: 2015/12/14 - 09:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Roy Cheng
Probe: FMZB1519_0.009-30MHz	Polarity: Face on
EUT: sengled pulse flex	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

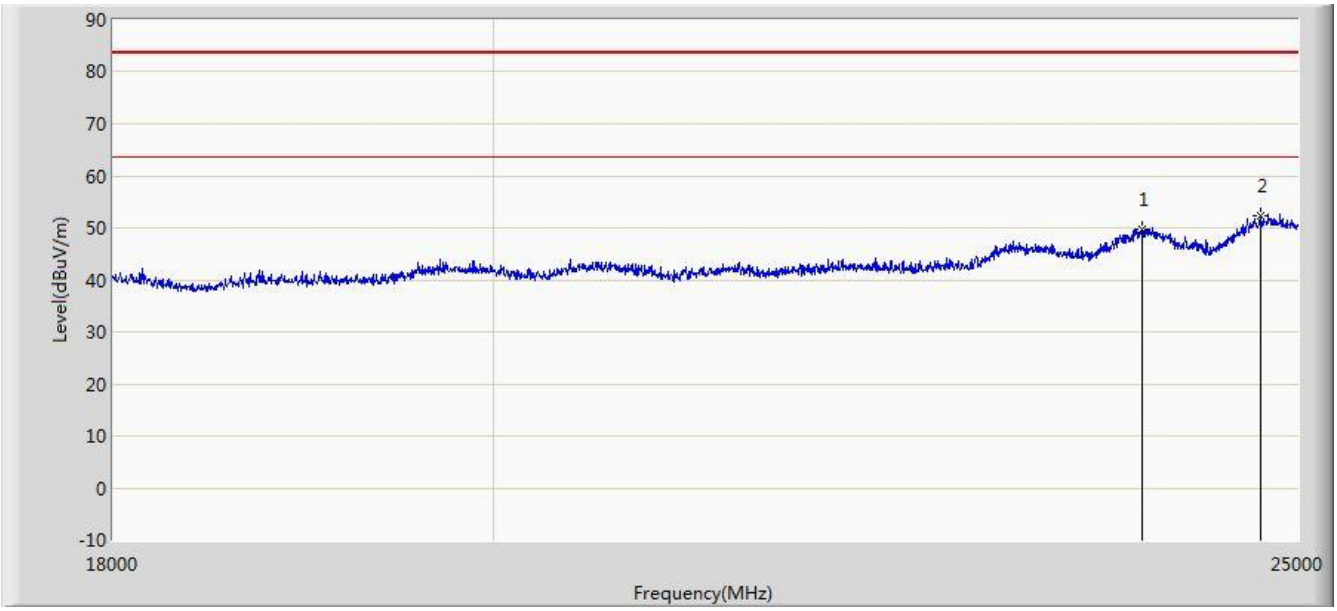


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.502	34.370	13.947	-39.220	73.590	20.423	QP
2		*	1.334	31.595	11.104	-33.530	65.125	20.491	QP

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

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

Site: AC1	Time: 2015/12/14 - 10:21
Limit: FCC_Part15.209_RE(1m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 18GHz~25GHz.	



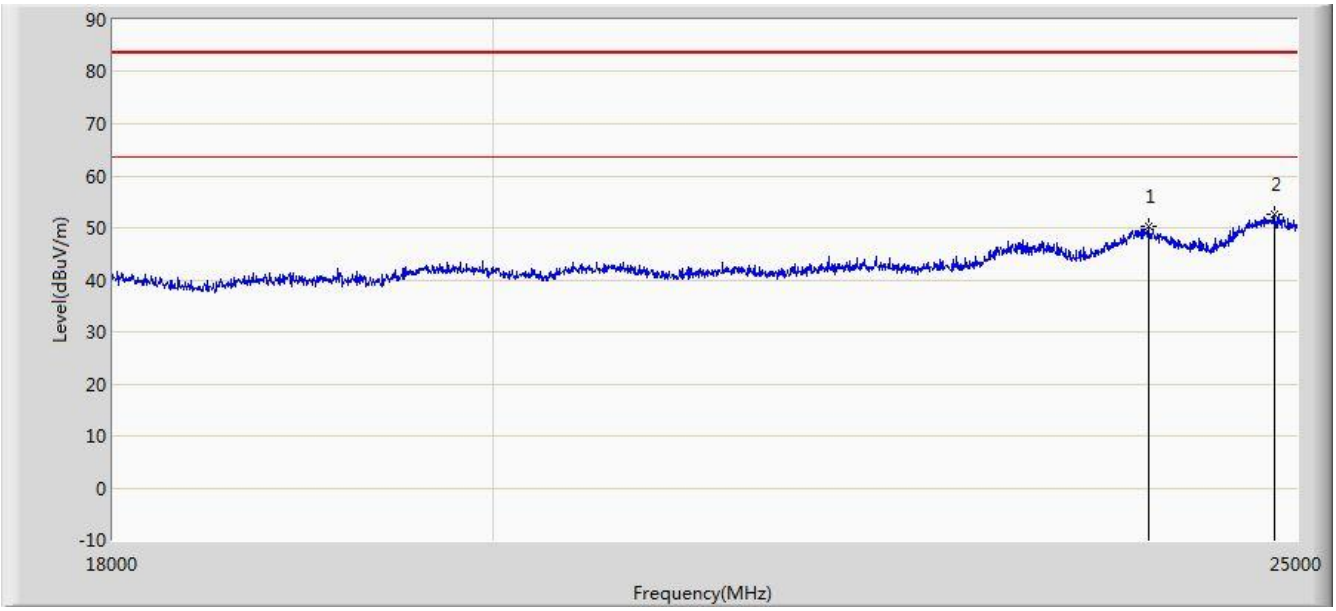
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			23943.000	49.776	35.866	-33.724	83.500	13.910	PK
2		*	24741.000	52.375	37.681	-31.125	83.500	14.694	PK

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

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre-Amplifier Gain (dB)

Limit@1m = 20*Log(500uV/m) + 20*Log(3m/1m) = 63.5dBμv/m (Average detector), and 83.5dBμv/m (Peak detector).

Site: AC1	Time: 2015/12/14 - 10:21
Limit: FCC_Part15.209_RE(1m)	Engineer: Roy Cheng
Probe: BBHA9170_18-40GHz	Polarity: Vertical
EUT: sengled pulse flex	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 (dBμV/m) = Reading Level (dBμV) + Factor (dB)

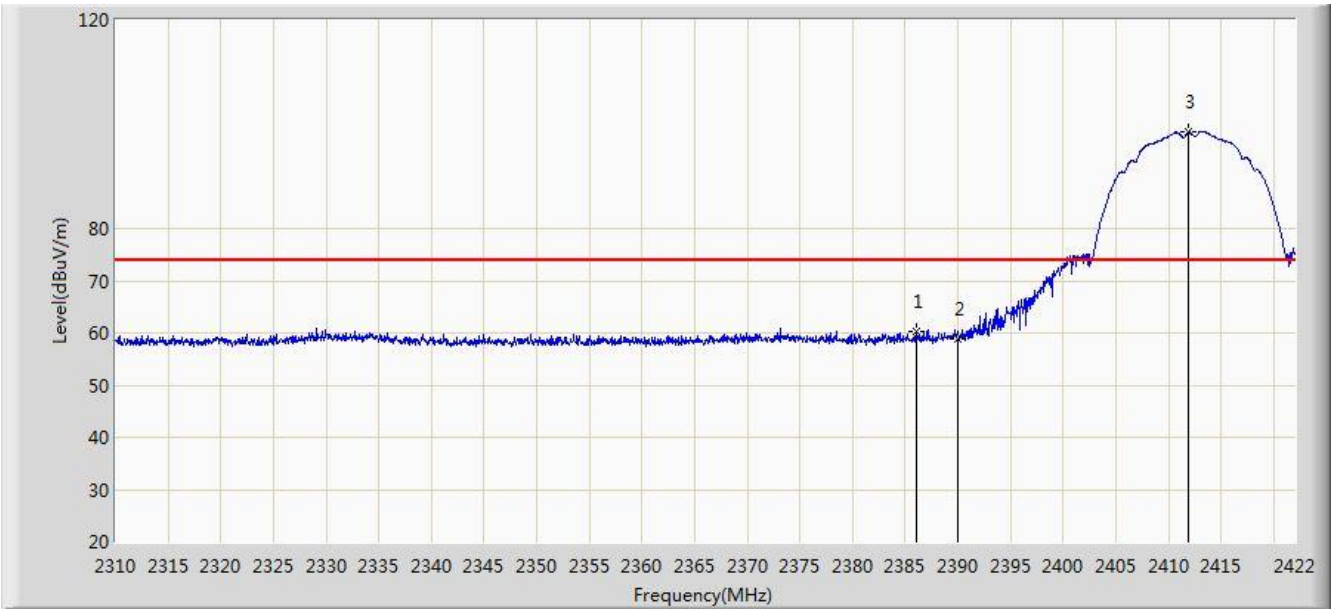
Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) – Pre-Amplifier Gain (dB)

Limit@1m = 20*Log(500uV/m) + 20*Log(3m/1m) = 63.5dBμv/m (Average detector), and 83.5dBμv/m (Peak detector).

7.4. Radiated Restricted Band Edge Measurement

7.4.1. Test Result

Site: AC1	Time: 2015/12/09 - 03:46
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz Ant 1	

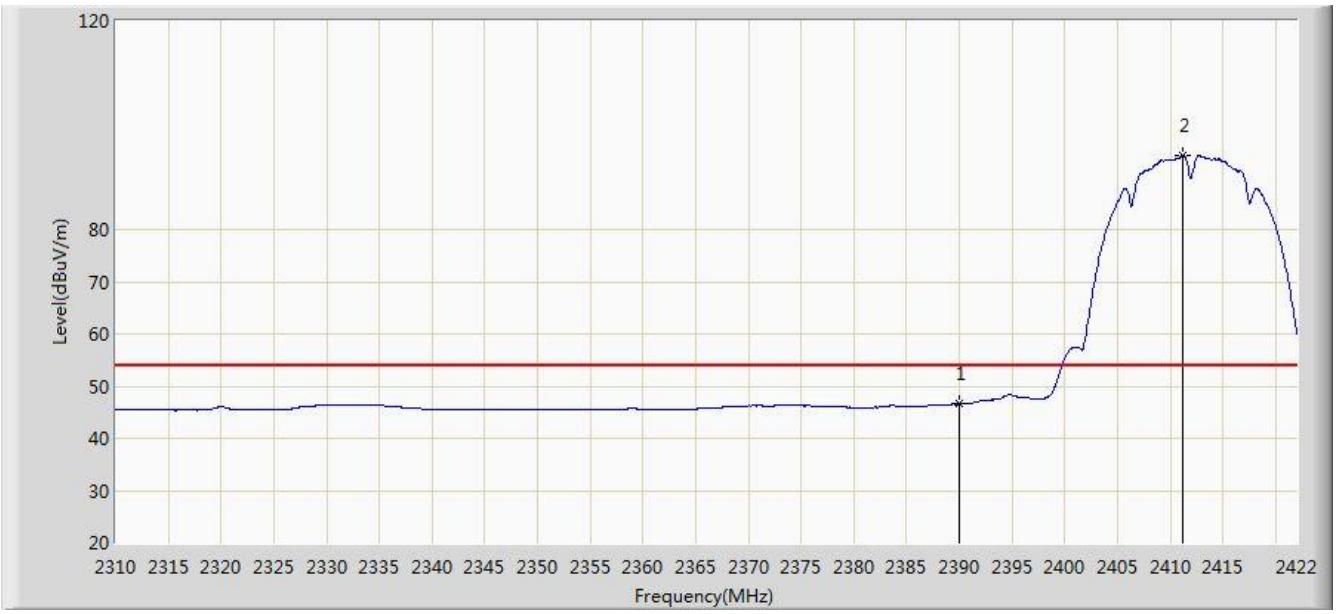


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2386.048	60.328	29.118	-13.672	74.000	31.210	PK
2			2390.000	58.887	27.684	-15.113	74.000	31.203	PK
3		*	2411.864	98.449	67.279	N/A	N/A	31.170	PK

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

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

Site: AC1	Time: 2015/12/09 - 03:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz Ant 1	

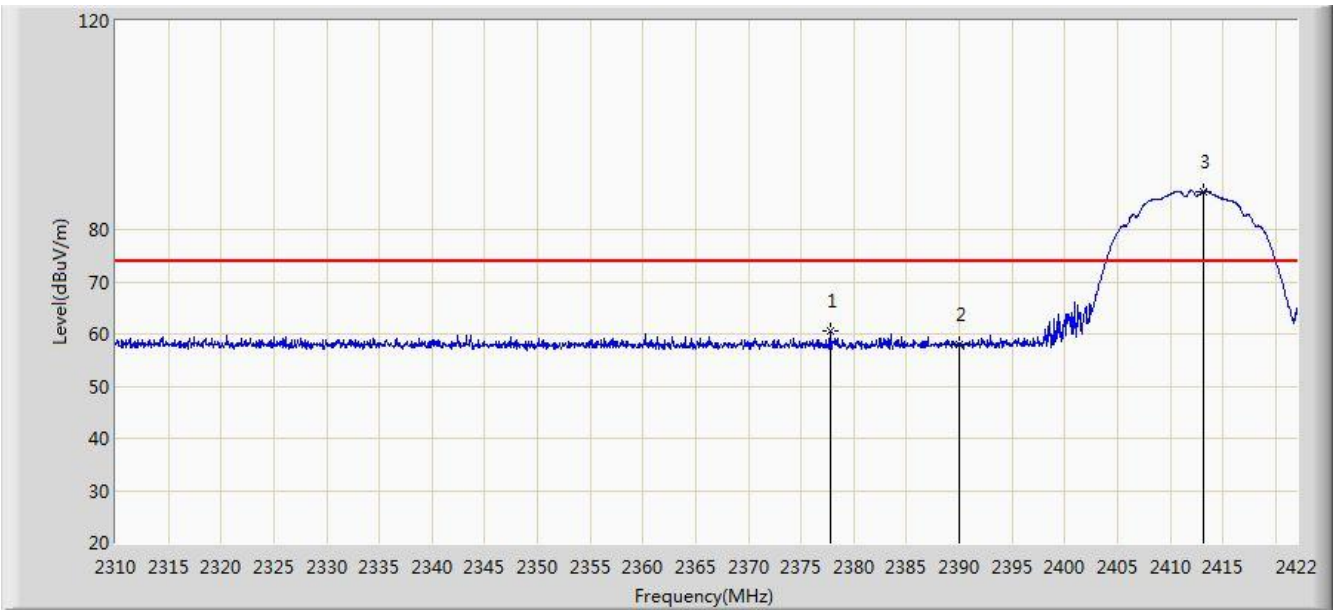


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.580	15.377	-7.420	54.000	31.203	AV
2		*	2411.136	94.335	63.164	N/A	N/A	31.171	AV

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

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

Site: AC1	Time: 2015/12/09 - 03:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz Ant 1	

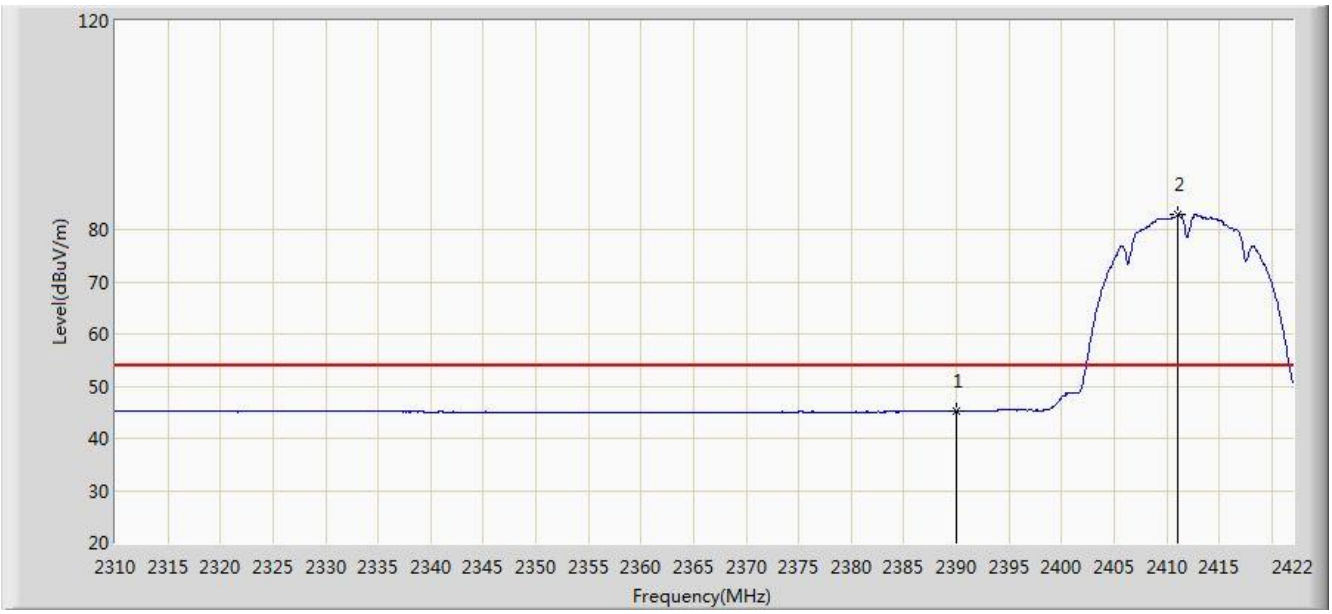


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2377.760	60.595	29.370	-13.405	74.000	31.226	PK
2			2390.000	58.070	26.867	-15.930	74.000	31.203	PK
3		*	2413.152	87.280	56.112	N/A	N/A	31.167	PK

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

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

Site: AC1	Time: 2015/12/09 - 03:53
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz Ant 1	

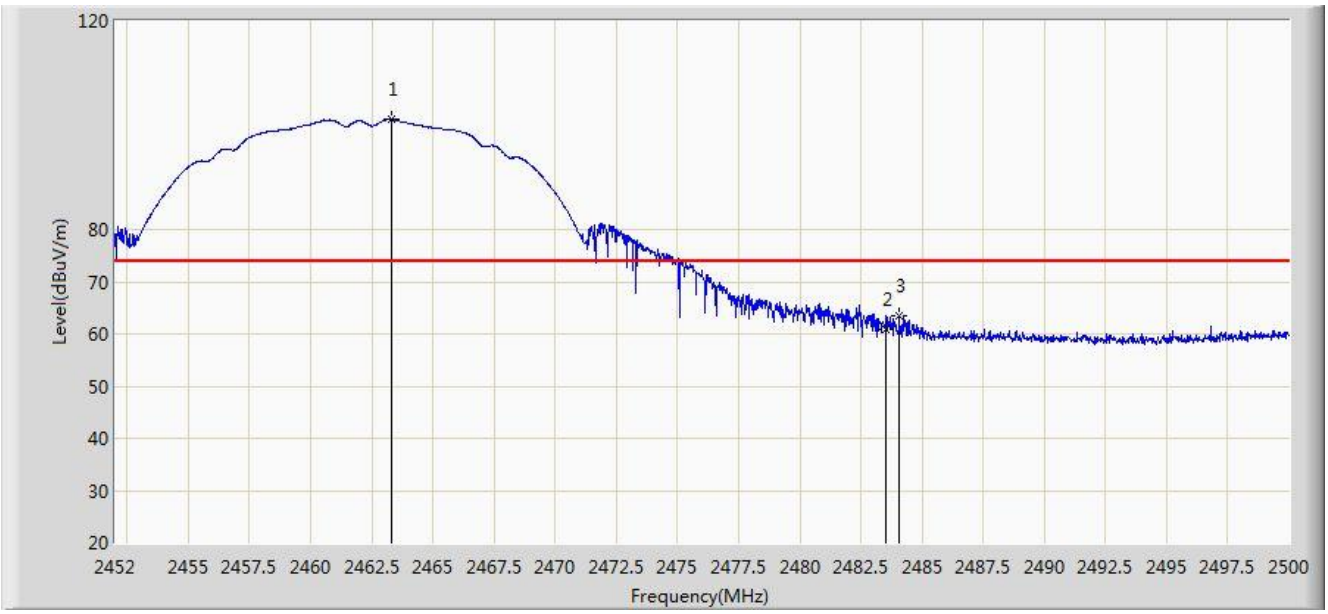


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.196	13.993	-8.804	54.000	31.203	AV
2		*	2411.080	82.952	51.781	N/A	N/A	31.171	AV

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

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

Site: AC1	Time: 2015/12/09 - 03:54
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz Ant 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.304	101.223	70.085	N/A	N/A	31.138	PK
2			2483.500	61.003	29.810	-12.997	74.000	31.194	PK
3			2484.088	63.455	32.260	-10.545	74.000	31.195	PK

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

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

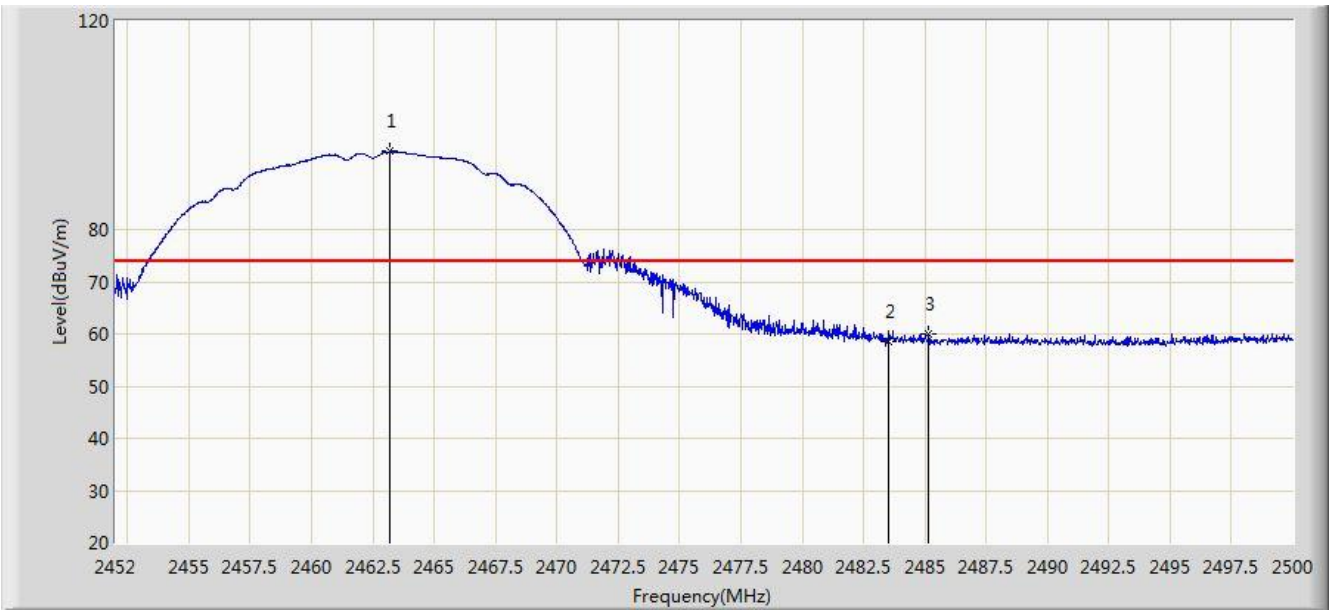
Site: AC1	Time: 2015/12/09 - 03:56
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz Ant 1	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.312	97.039	65.905	N/A	N/A	31.134	AV
2			2483.500	47.399	16.206	-6.601	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: 2015/12/09 - 03:56
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz Ant 1	

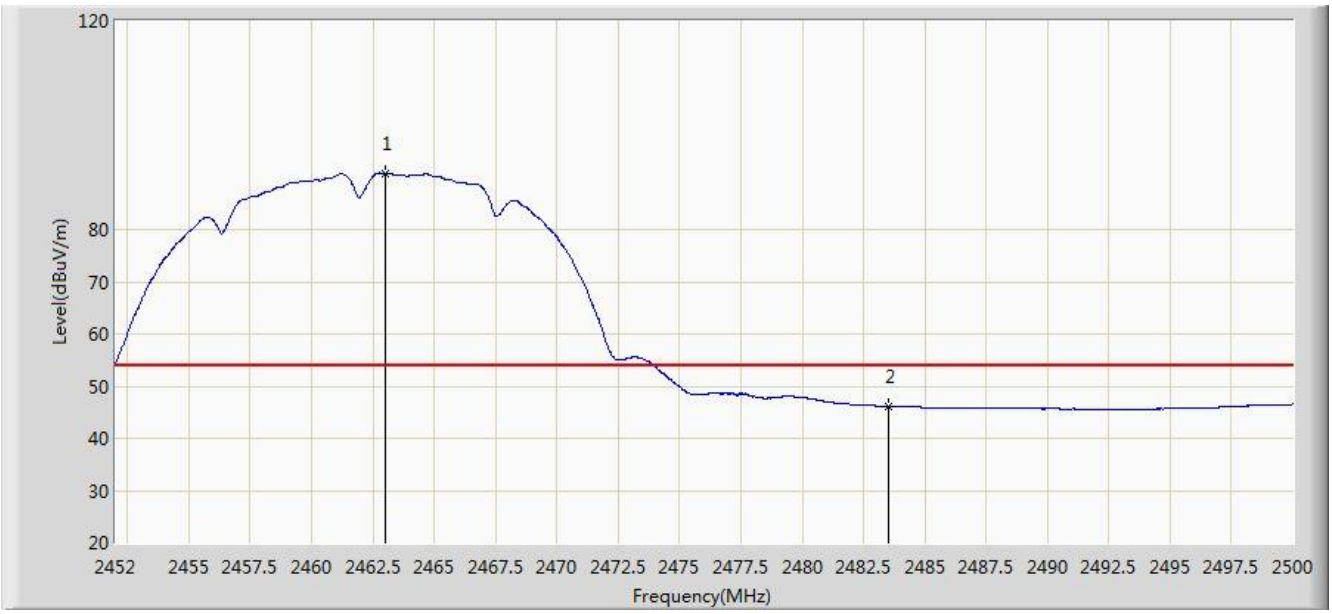


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.208	95.003	63.865	N/A	N/A	31.137	PK
2			2483.500	58.622	27.429	-15.378	74.000	31.194	PK
3			2485.168	59.922	28.724	-14.078	74.000	31.198	PK

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

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

Site: AC1	Time: 2015/12/09 - 03:58
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz Ant 1	

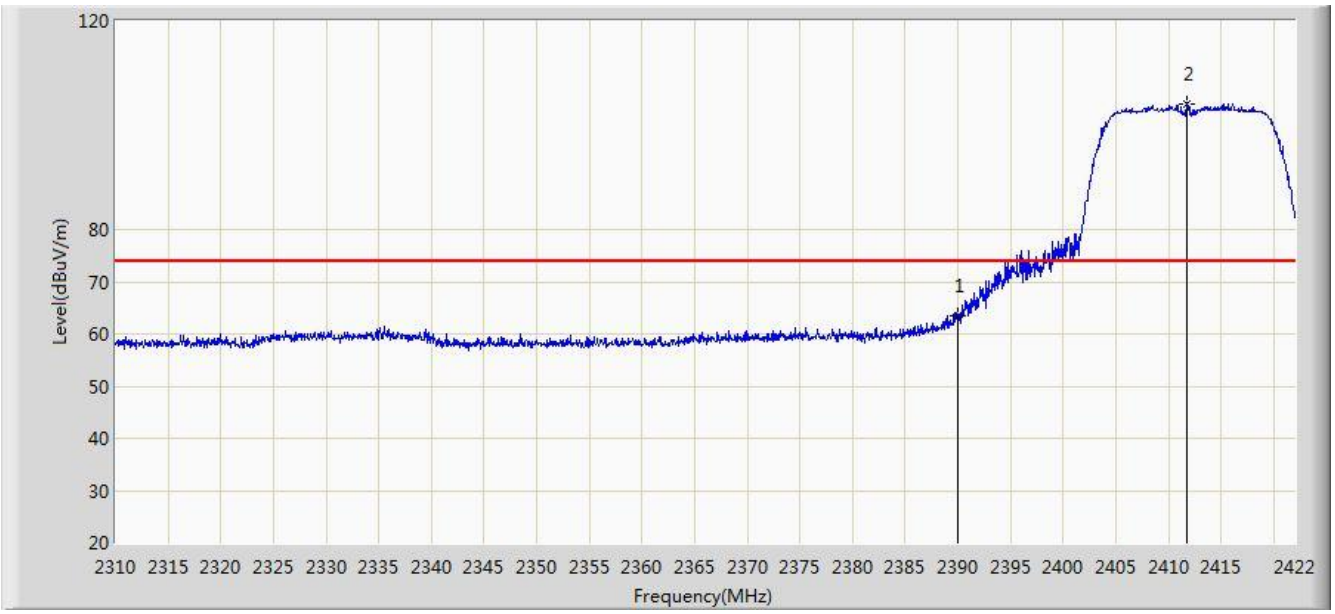


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.016	90.696	59.559	N/A	N/A	31.137	AV
2			2483.500	46.117	14.924	-7.883	54.000	31.194	AV

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

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

Site: AC1	Time: 2015/12/09 - 03:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz Ant 1	

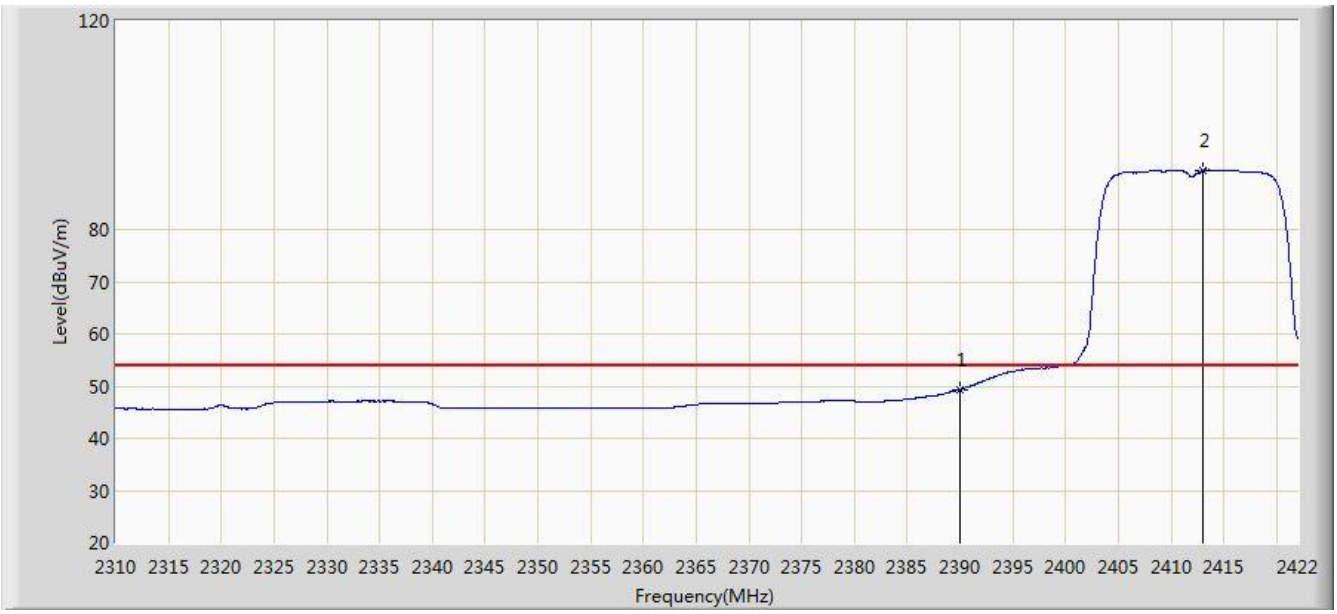


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	63.613	32.410	-10.387	74.000	31.203	PK
2		*	2411.696	104.181	73.011	N/A	N/A	31.170	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:00
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz Ant 1	

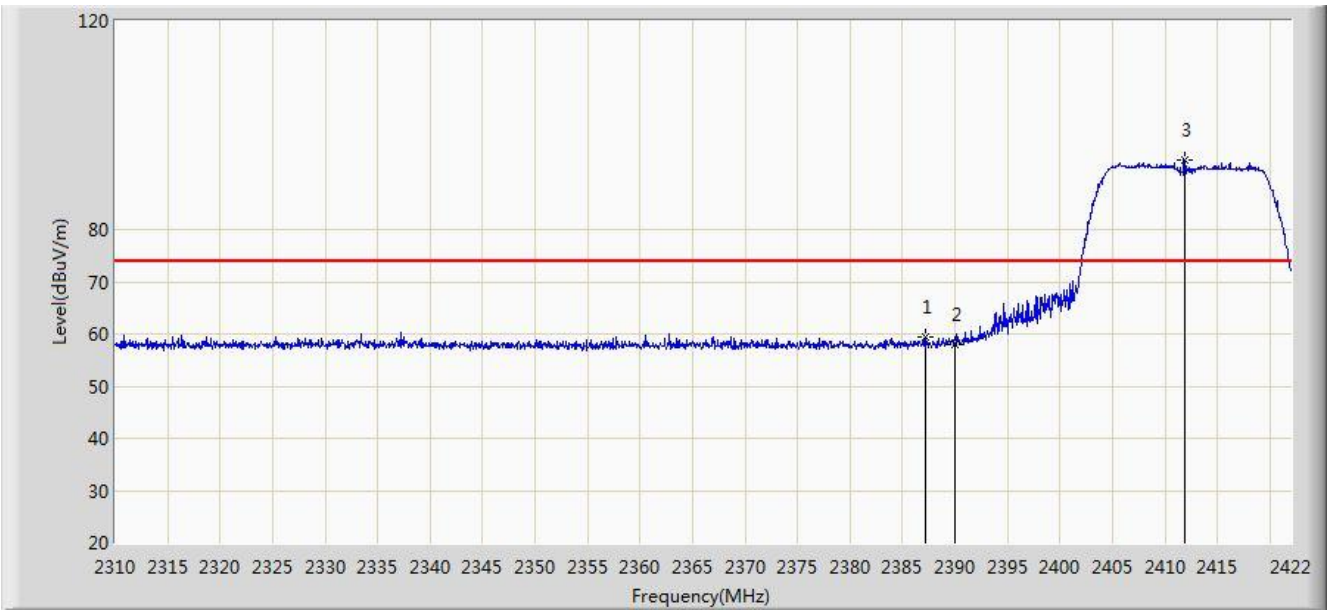


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	49.334	18.131	-4.666	54.000	31.203	AV
2		*	2413.040	91.369	60.201	N/A	N/A	31.167	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:00
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz Ant 1	

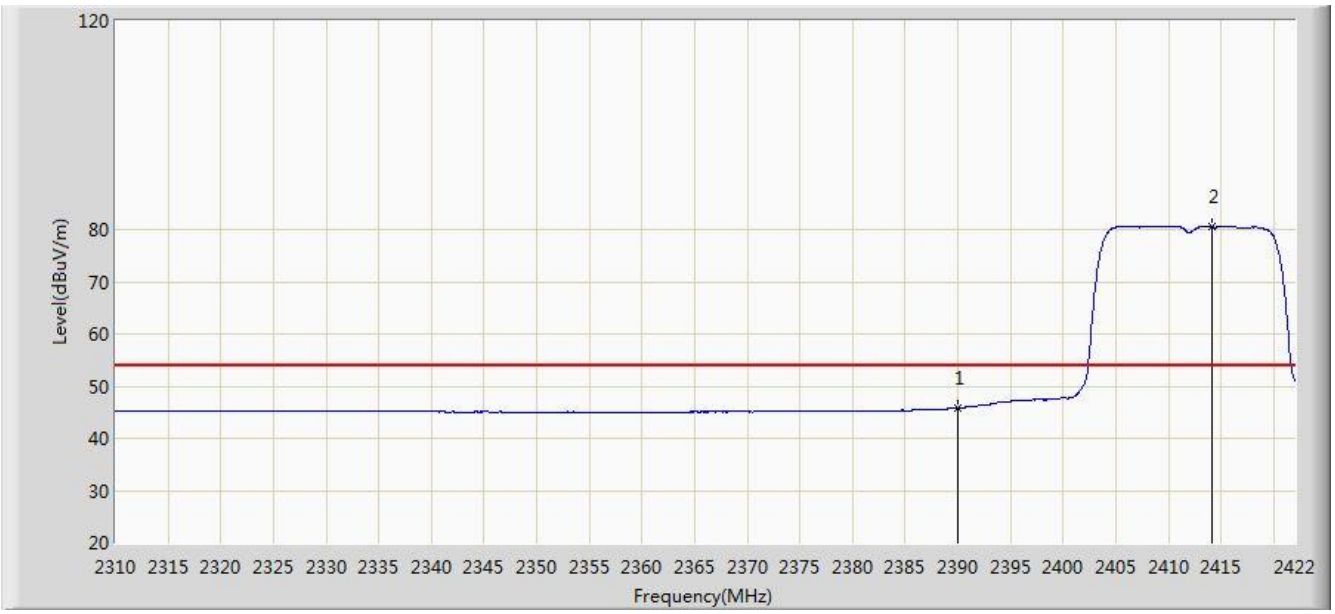


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2387.168	59.466	28.258	-14.534	74.000	31.208	PK
2			2390.000	58.002	26.799	-15.998	74.000	31.203	PK
3		*	2411.864	93.262	62.092	N/A	N/A	31.170	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:01
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz Ant 1	

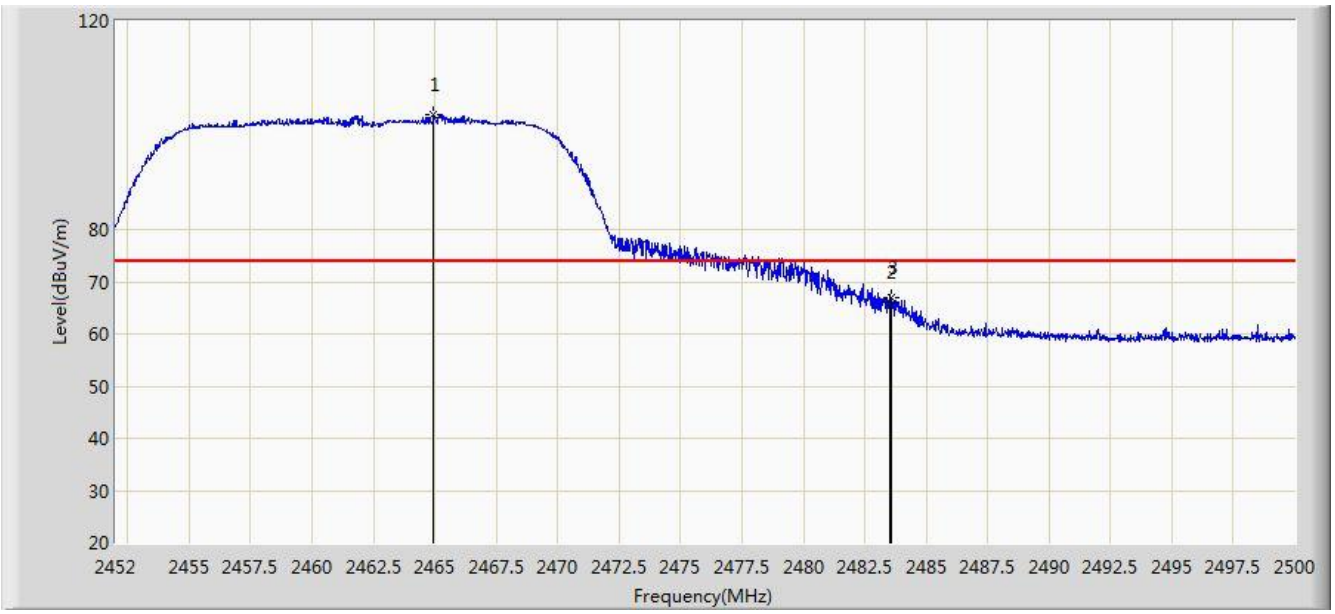


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.790	14.587	-8.210	54.000	31.203	AV
2		*	2414.104	80.439	49.273	N/A	N/A	31.166	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:02
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz Ant 1	

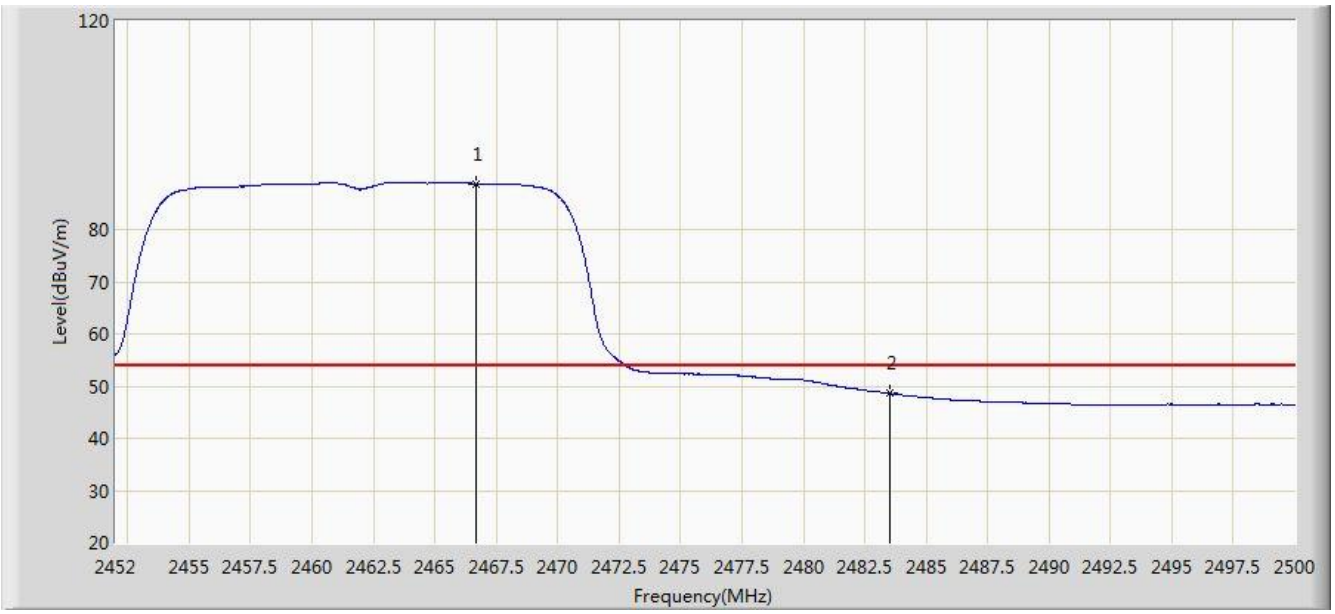


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.960	101.959	70.817	N/A	N/A	31.142	PK
2			2483.500	66.103	34.910	-7.897	74.000	31.194	PK
3			2483.560	66.812	35.619	-7.188	74.000	31.194	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz Ant 1	

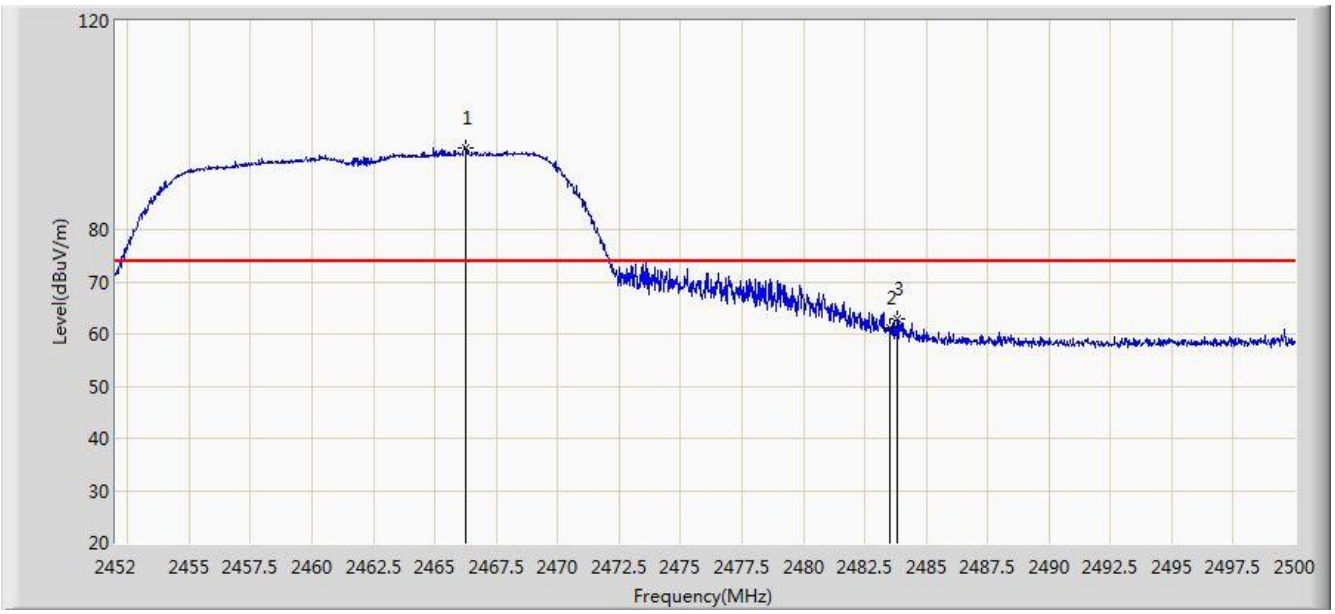


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.688	88.799	57.652	N/A	N/A	31.147	AV
2			2483.500	48.594	17.401	-5.406	54.000	31.194	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz Ant 1	

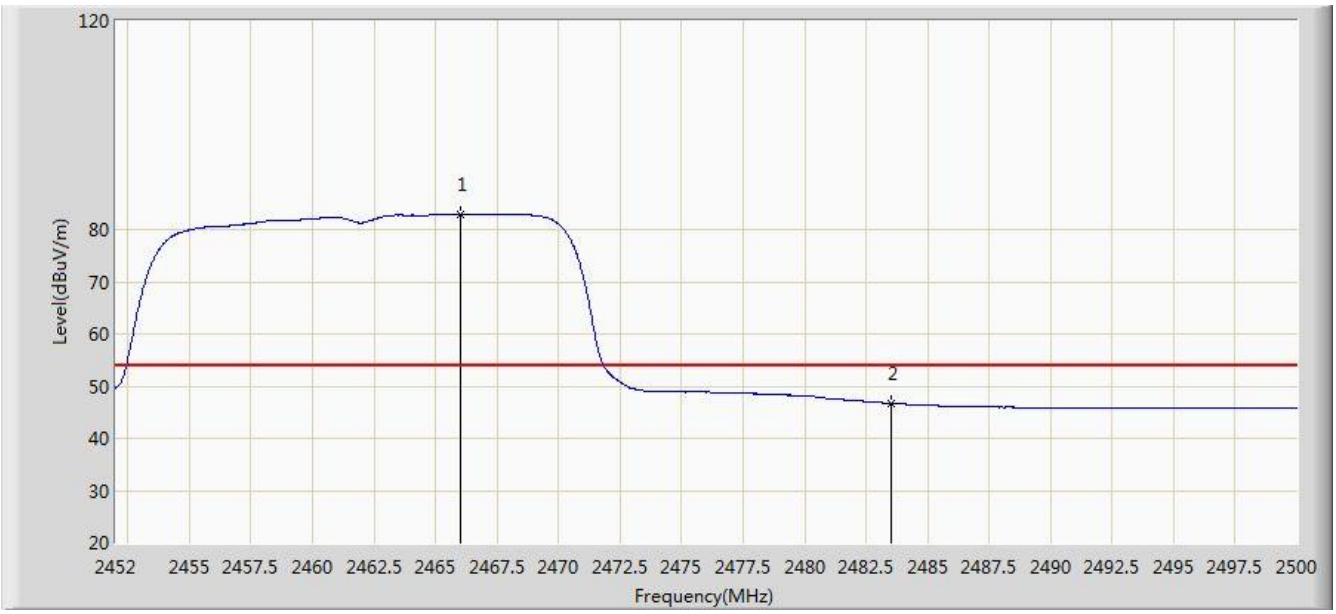


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.280	95.654	64.508	N/A	N/A	31.145	PK
2			2483.500	61.099	29.906	-12.901	74.000	31.194	PK
3			2483.800	62.977	31.783	-11.023	74.000	31.194	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz Ant 1	

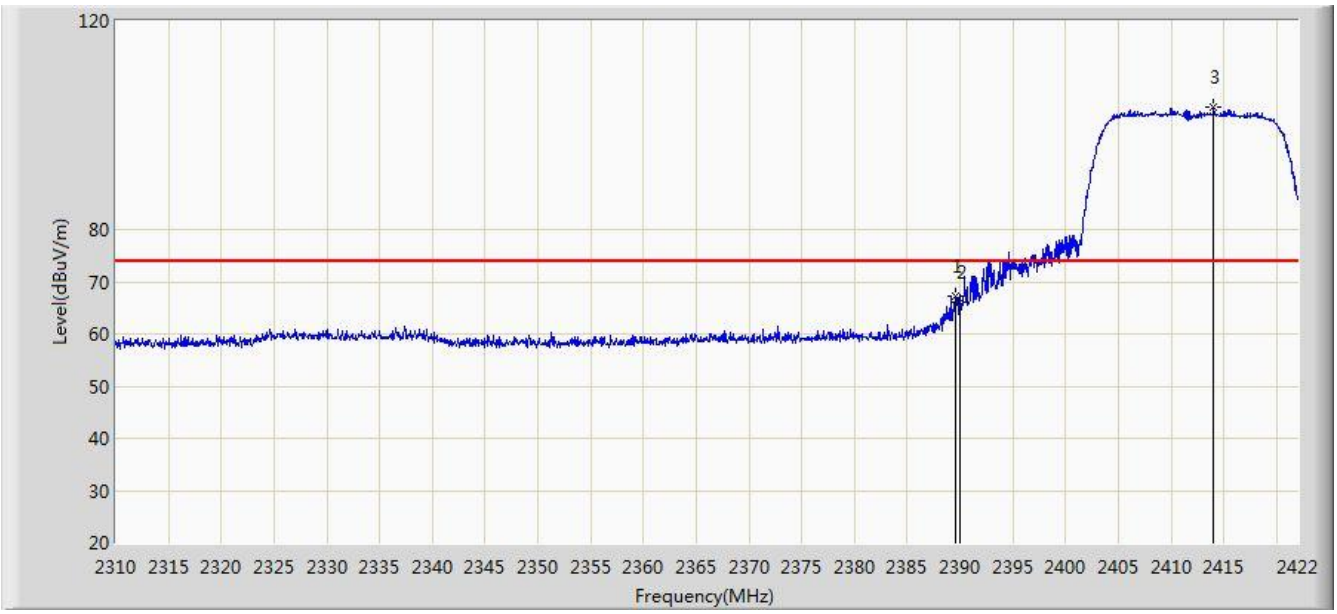


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.016	83.010	51.865	N/A	N/A	31.145	AV
2			2483.500	46.688	15.495	-7.312	54.000	31.194	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz Ant 1	

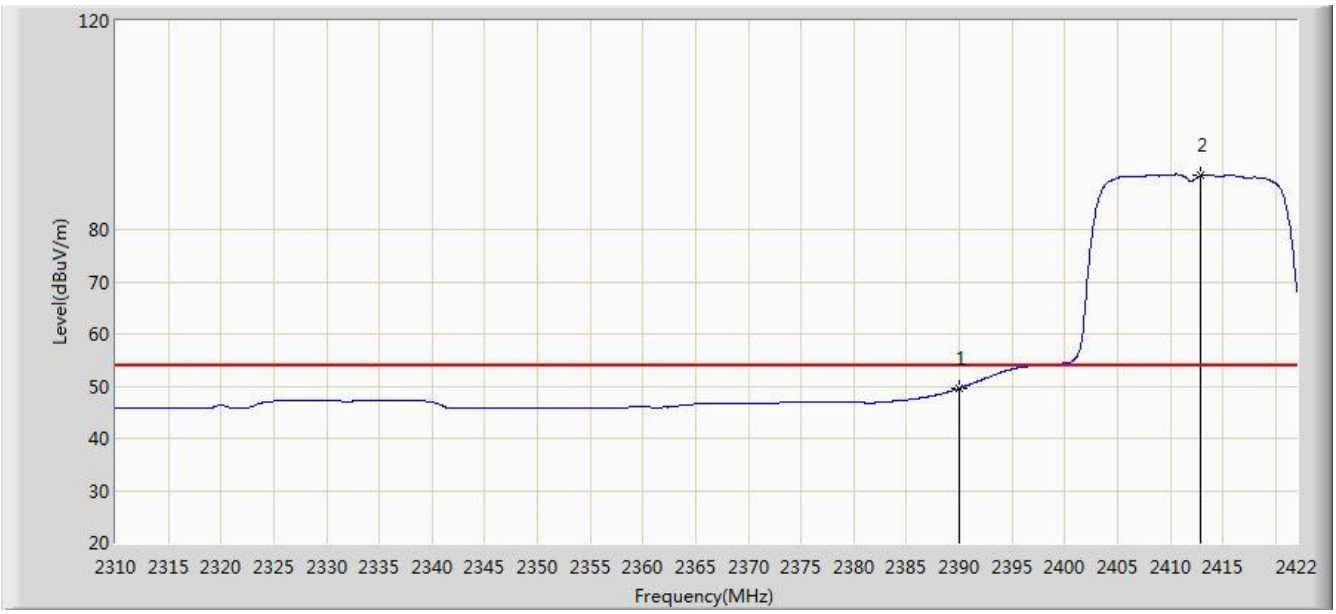


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.520	67.333	36.129	-6.667	74.000	31.204	PK
2			2390.000	65.945	34.742	-8.055	74.000	31.203	PK
3		*	2414.048	103.357	72.191	N/A	N/A	31.166	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz Ant 1	

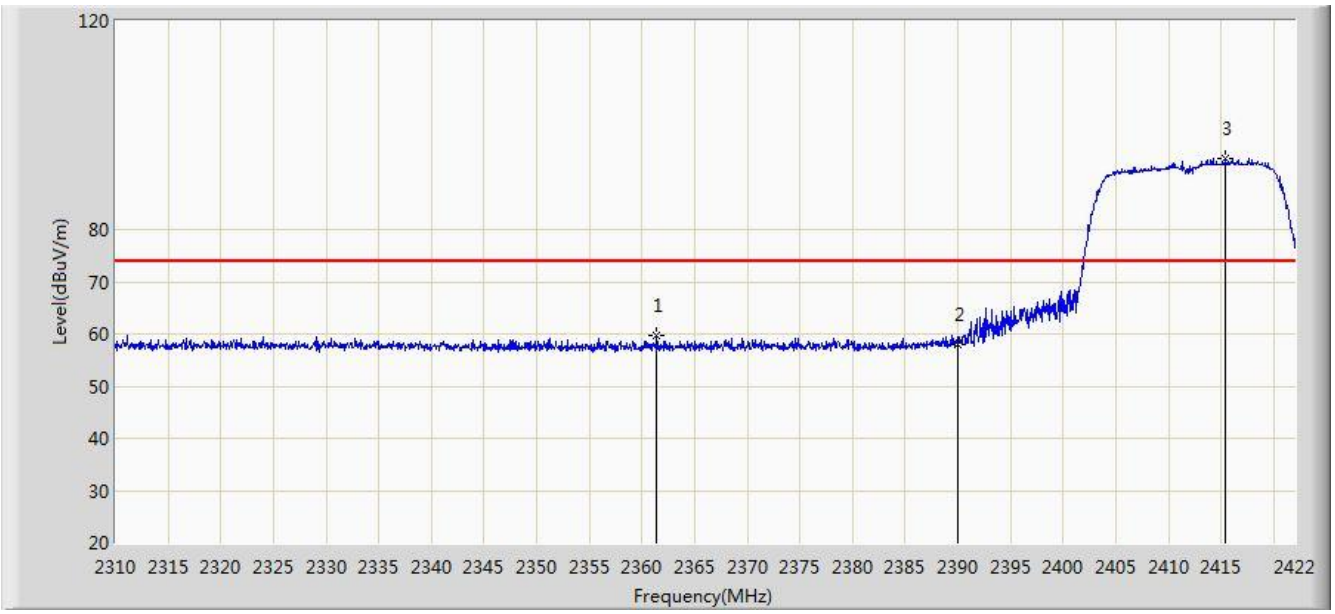


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	49.548	18.345	-4.452	54.000	31.203	AV
2		*	2412.928	90.354	59.186	N/A	N/A	31.168	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:07
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz Ant 1	

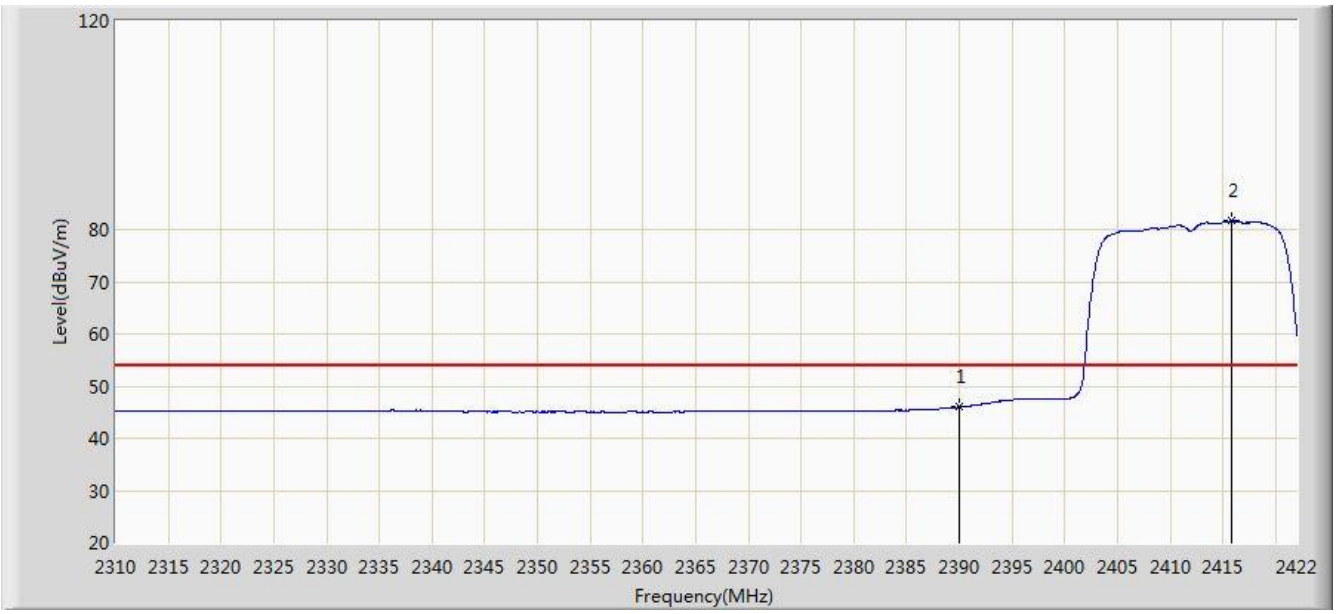


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2361.408	59.710	28.454	-14.290	74.000	31.256	PK
2			2390.000	58.112	26.909	-15.888	74.000	31.203	PK
3		*	2415.392	93.591	62.427	N/A	N/A	31.164	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:08
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz Ant 1	

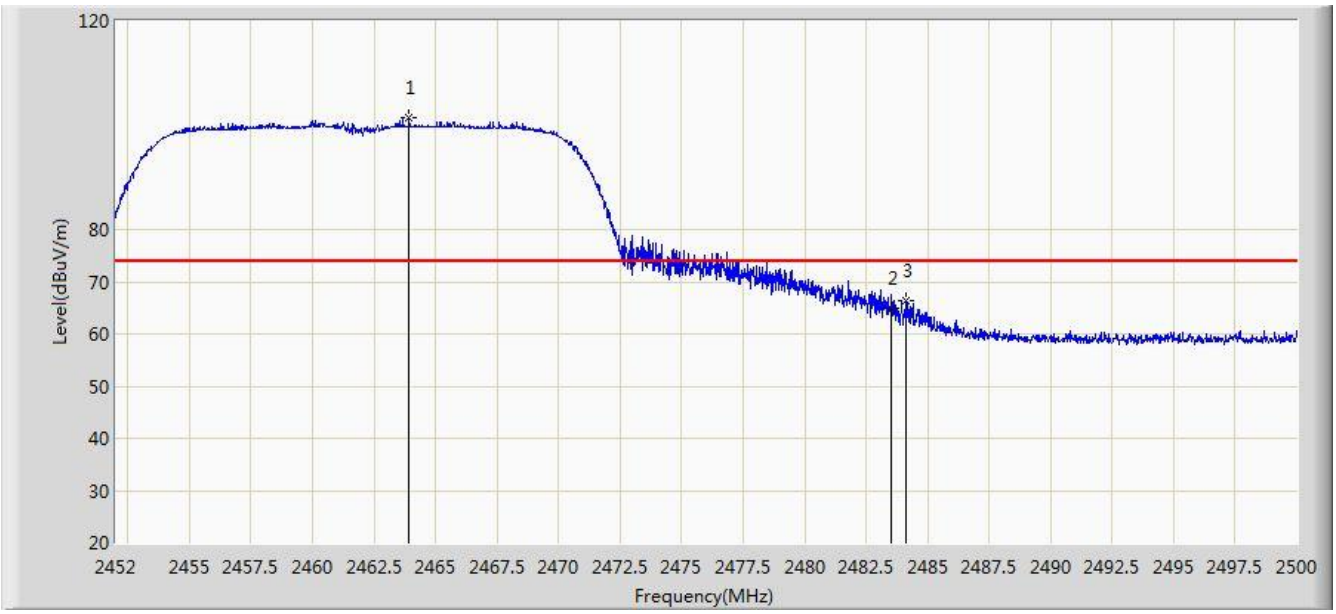


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.974	14.771	-8.026	54.000	31.203	AV
2		*	2415.840	81.605	50.442	N/A	N/A	31.163	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:08
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz Ant 1	

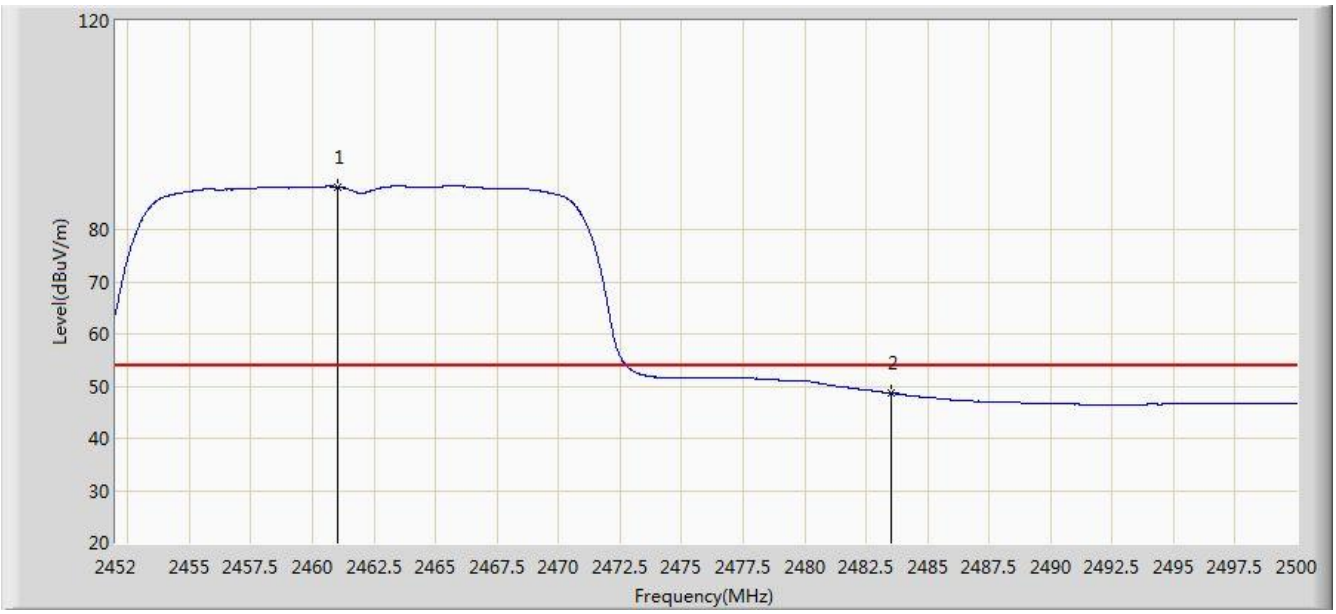


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.928	101.324	70.185	N/A	N/A	31.139	PK
2			2483.500	64.991	33.798	-9.009	74.000	31.194	PK
3			2484.136	66.383	35.188	-7.617	74.000	31.195	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz Ant 1	

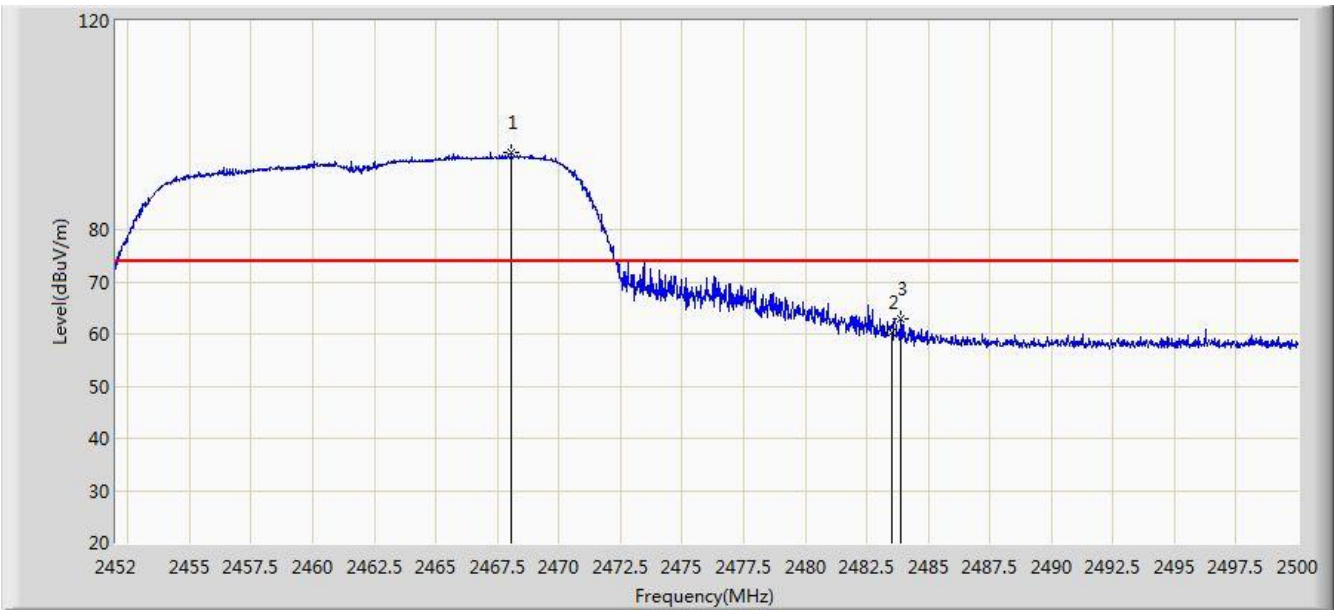


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.000	88.194	57.060	N/A	N/A	31.133	AV
2			2483.500	48.647	17.454	-5.353	54.000	31.194	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz Ant 1	

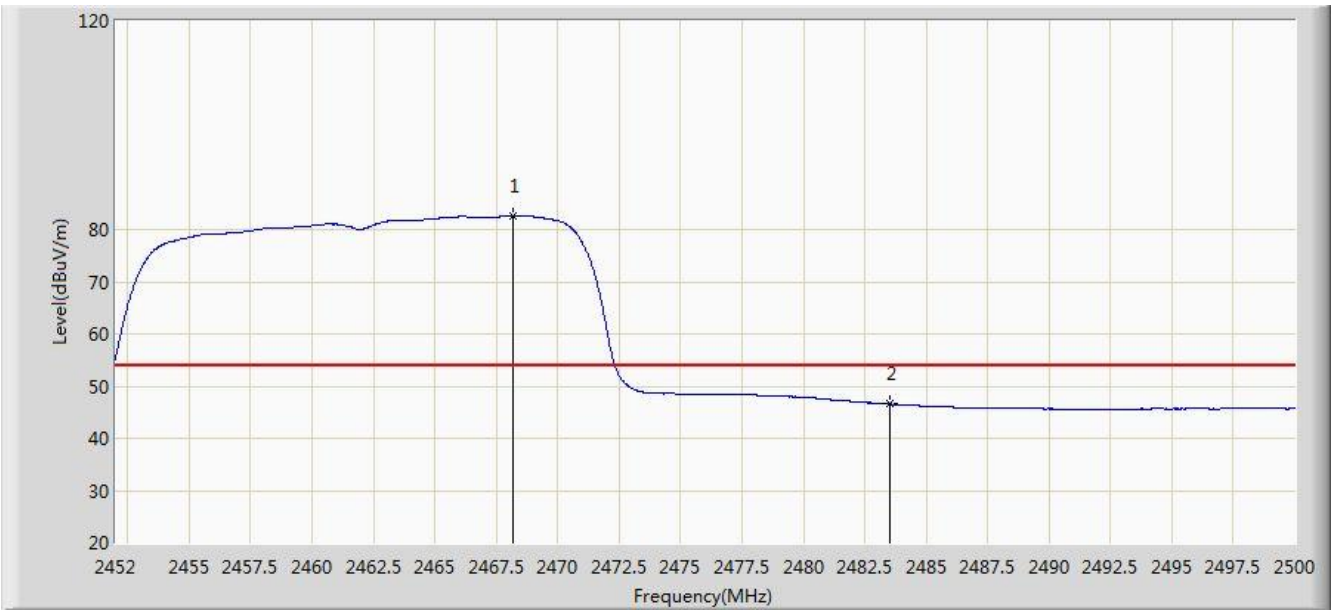


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.056	94.765	63.614	N/A	N/A	31.151	PK
2			2483.500	60.353	29.160	-13.647	74.000	31.194	PK
3			2483.896	62.802	31.608	-11.198	74.000	31.194	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:10
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz Ant 1	

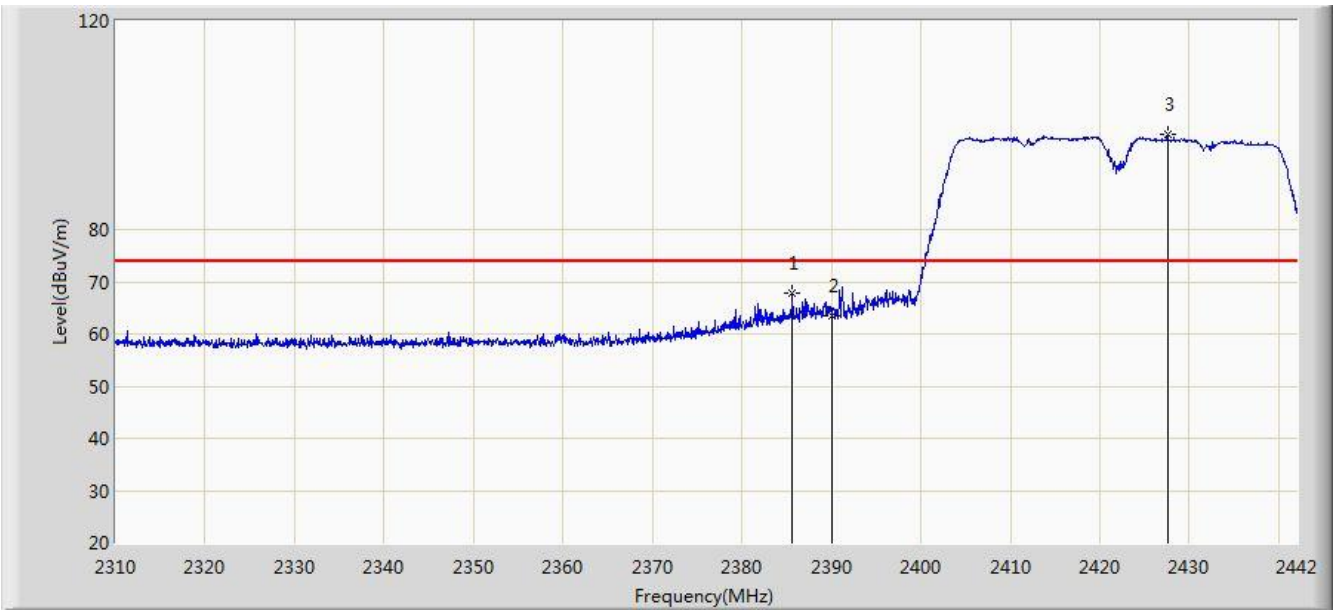


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.176	82.587	51.436	N/A	N/A	31.151	AV
2			2483.500	46.592	15.399	-7.408	54.000	31.194	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz Ant 1	

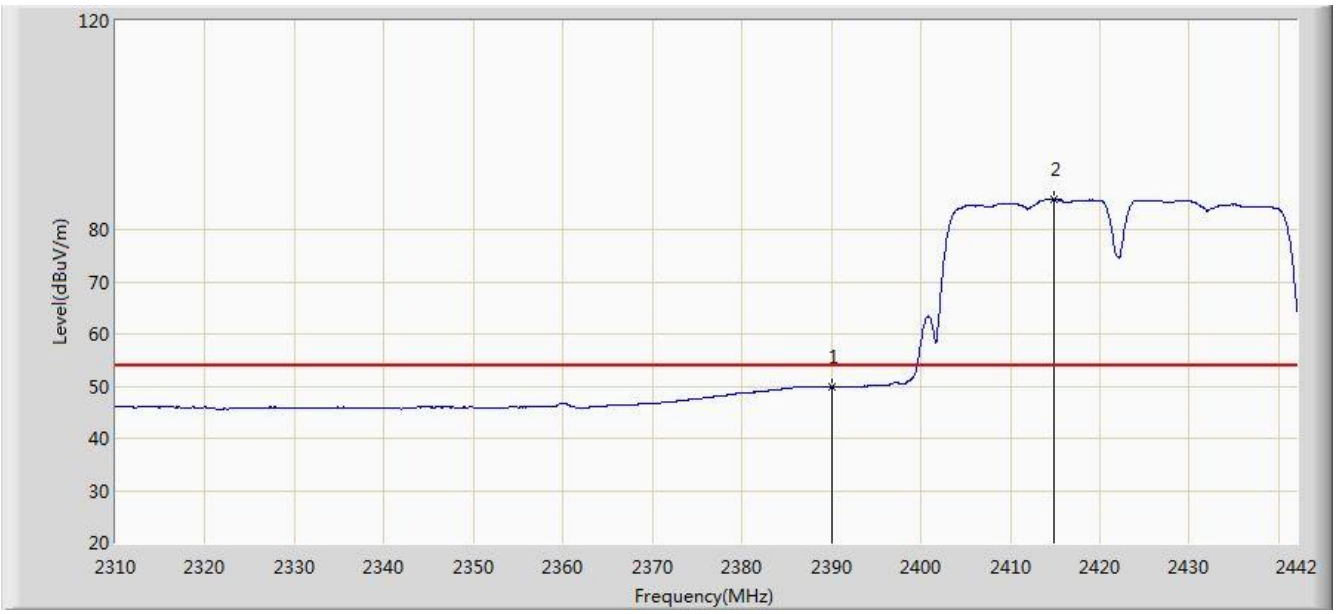


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2385.636	67.779	36.568	-6.221	74.000	31.211	PK
2			2390.000	63.425	32.222	-10.575	74.000	31.203	PK
3		*	2427.546	98.210	67.067	N/A	N/A	31.143	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz Ant 1	

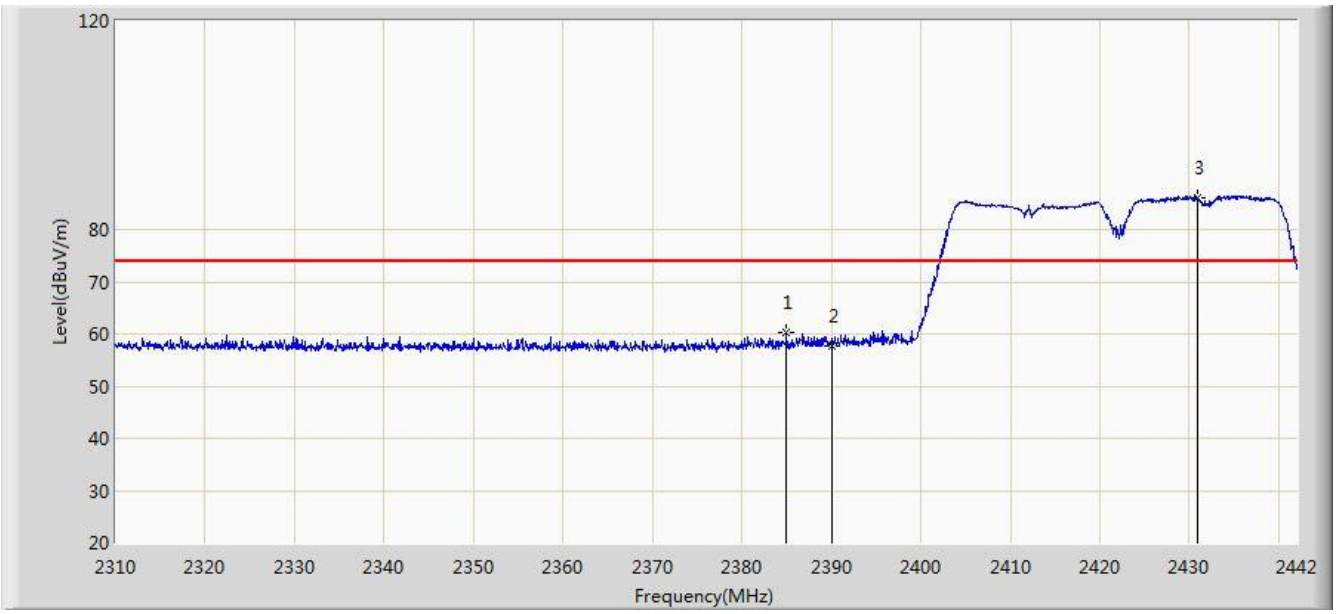


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	49.918	18.715	-4.082	54.000	31.203	AV
2		*	2414.808	85.829	54.664	N/A	N/A	31.164	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz Ant 1	

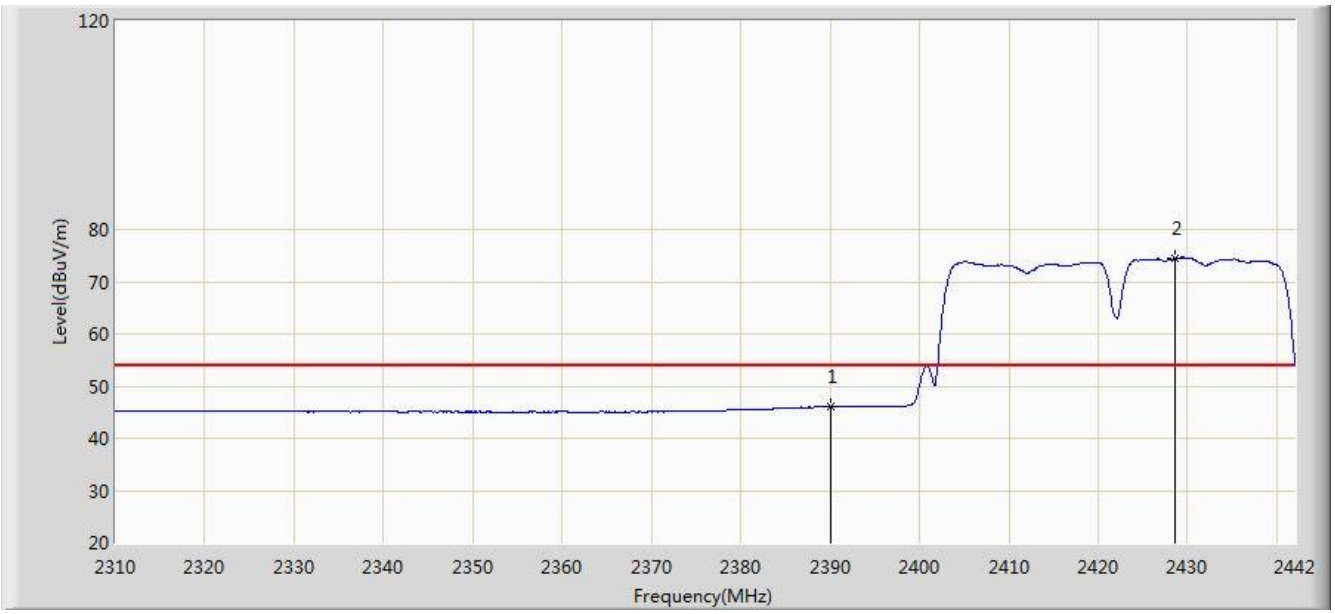


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2384.976	60.150	28.938	-13.850	74.000	31.212	PK
2			2390.000	57.692	26.489	-16.308	74.000	31.203	PK
3		*	2430.846	86.023	54.887	N/A	N/A	31.136	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:13
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz Ant 1	

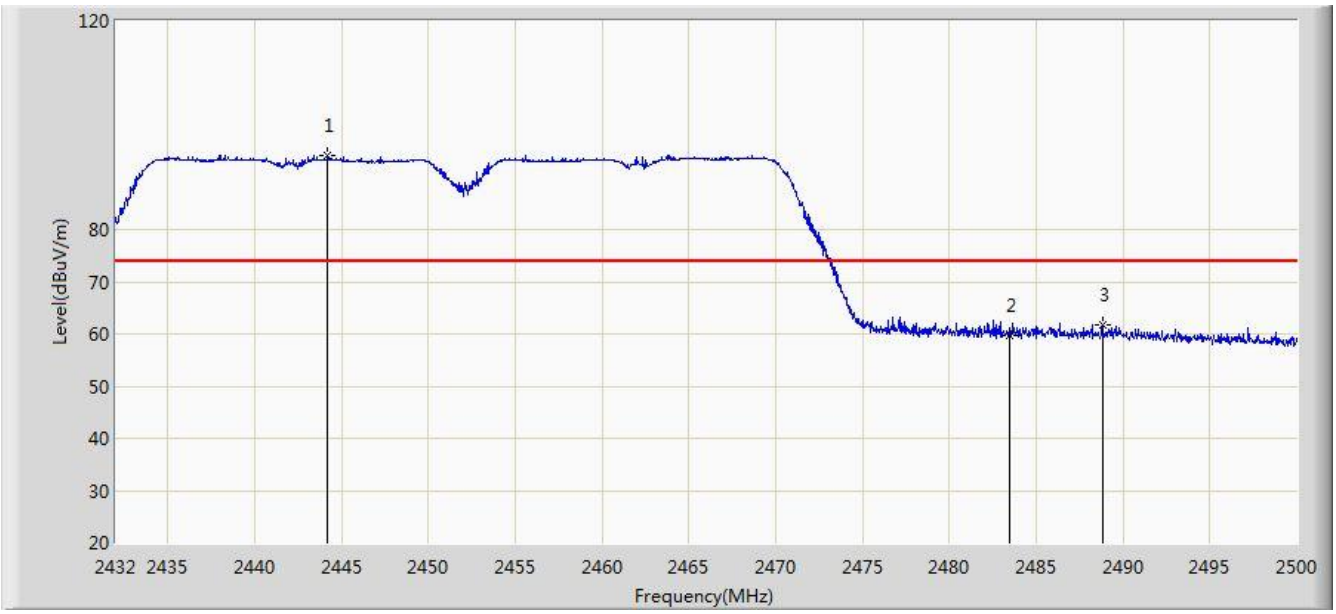


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.023	14.820	-7.977	54.000	31.203	AV
2		*	2428.668	74.512	43.371	N/A	N/A	31.140	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz Ant 1	

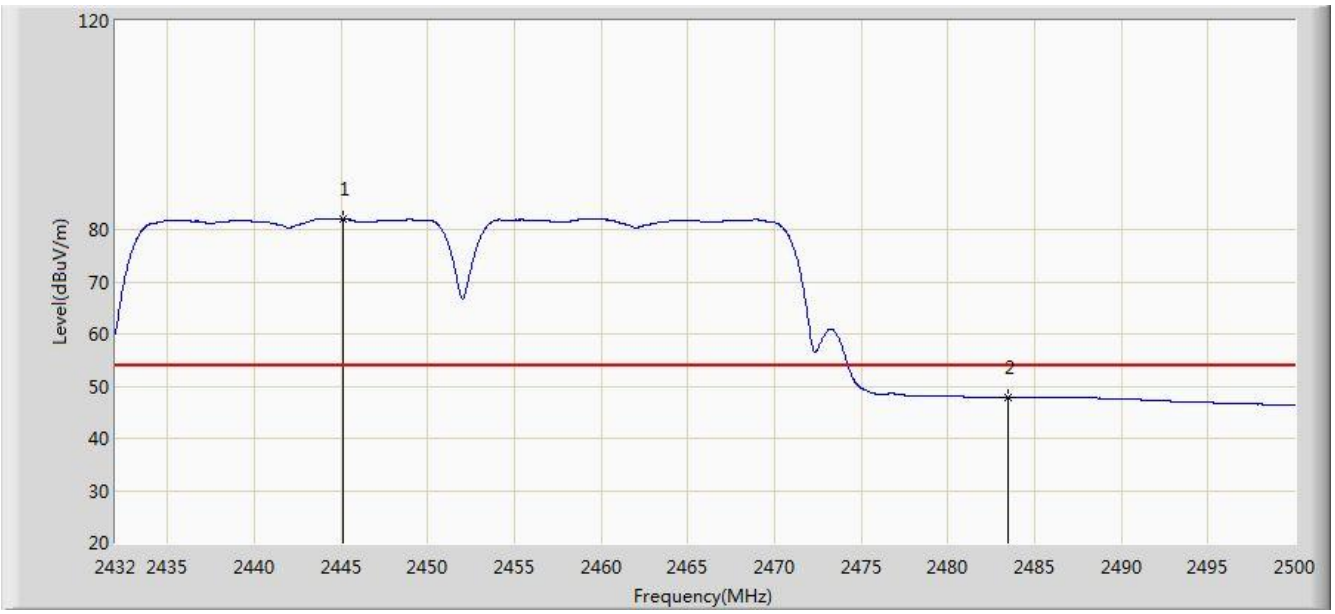


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2444.206	94.217	63.107	N/A	N/A	31.111	PK
2			2483.500	59.820	28.627	-14.180	74.000	31.194	PK
3			2488.814	61.751	30.544	-12.249	74.000	31.207	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz Ant 1	

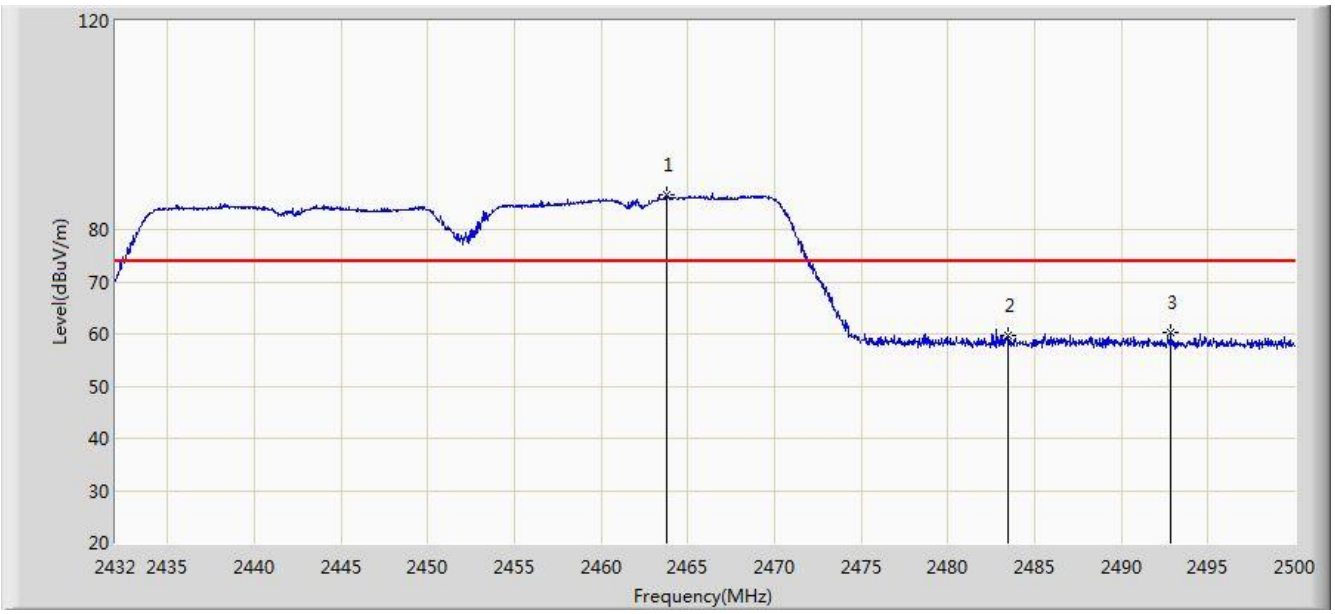


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2445.090	82.022	50.913	N/A	N/A	31.108	AV
2			2483.500	47.881	16.688	-6.119	54.000	31.194	AV

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

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

Site: AC1	Time: 2015/12/09 - 04:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz Ant 1	

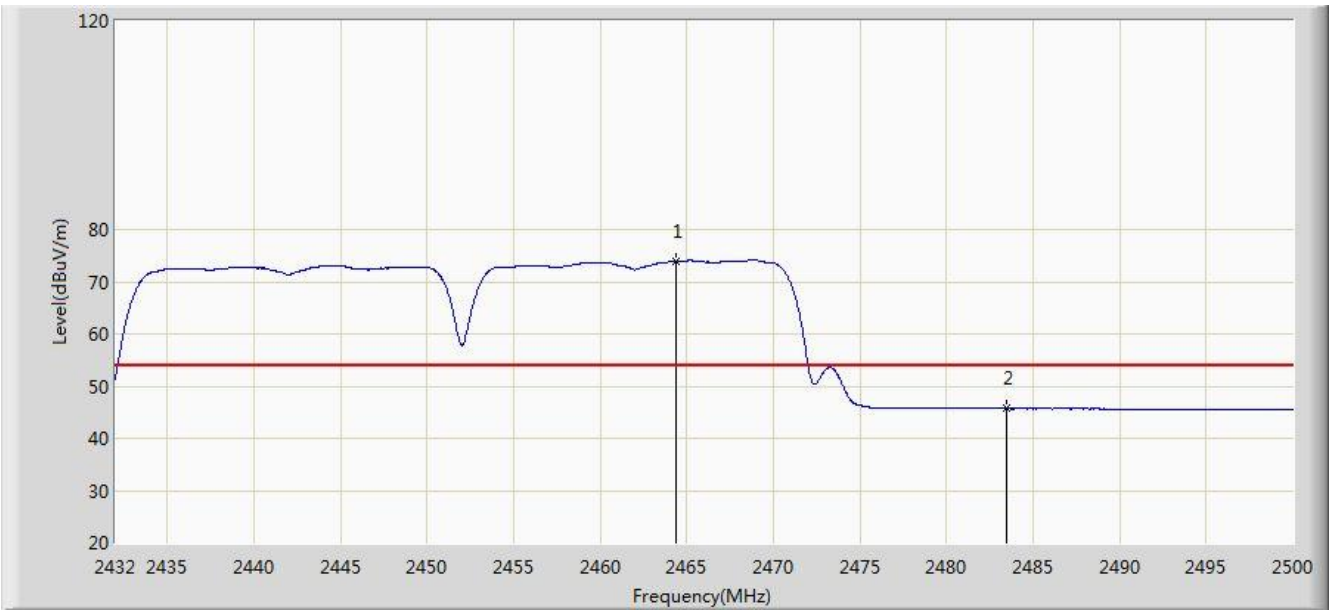


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.756	86.626	55.487	N/A	N/A	31.139	PK
2			2483.500	59.568	28.375	-14.432	74.000	31.194	PK
3			2492.860	60.176	28.958	-13.824	74.000	31.218	PK

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

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

Site: AC1	Time: 2015/12/09 - 04:16
Limit: FCC_Part15.209_RE(3m)	Engineer: Lewis Huang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: sengled pulse flex	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz Ant 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2464.402	73.887	42.747	N/A	N/A	31.140	AV
2			2483.500	45.663	14.470	-8.337	54.000	31.194	AV

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

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

8. CONCLUSION

The data collected relate only the item(s) tested and showed that the **sengled pulse flex FCC ID: 2ABX8SH-000000012** is in compliance with Part 15C of the FCC Rules.

The End