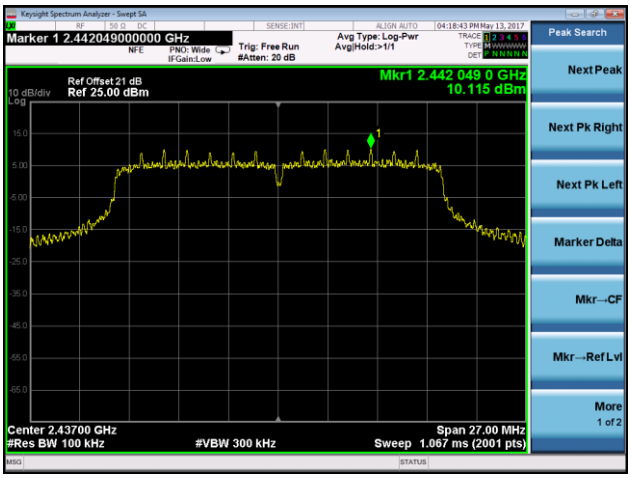
802.11n-HT20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

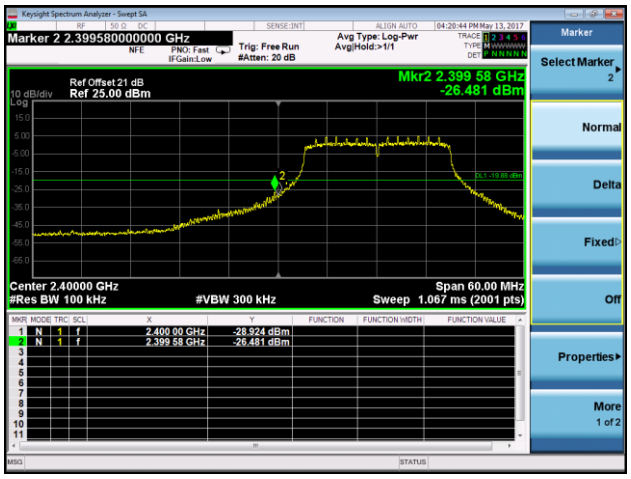
100kHz PSD Reference Level

Channel 06 (2437MHz)

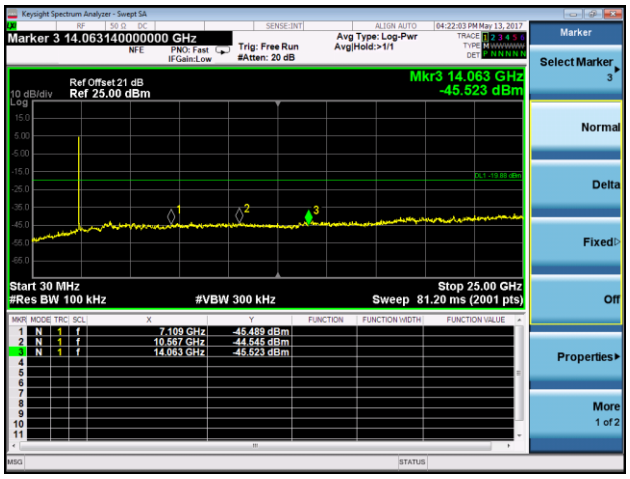


Channel 01 (2412MHz)

Low Band Edge

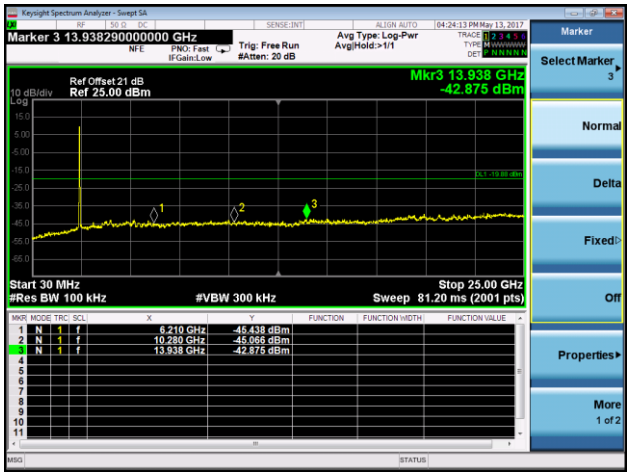


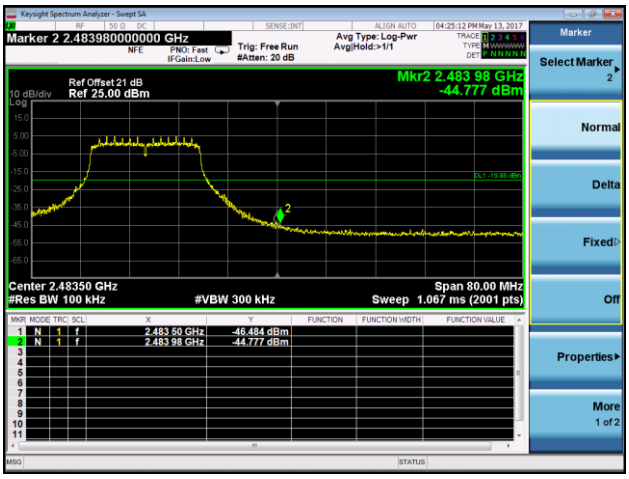
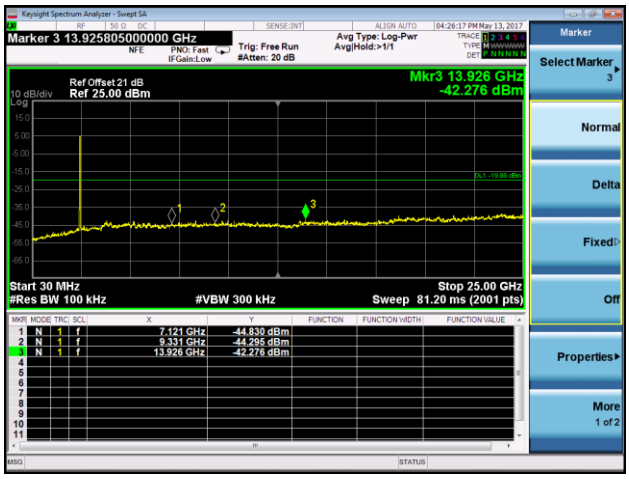
Spurious Emission



Channel 06 (2437MHz)

Spurious Emission

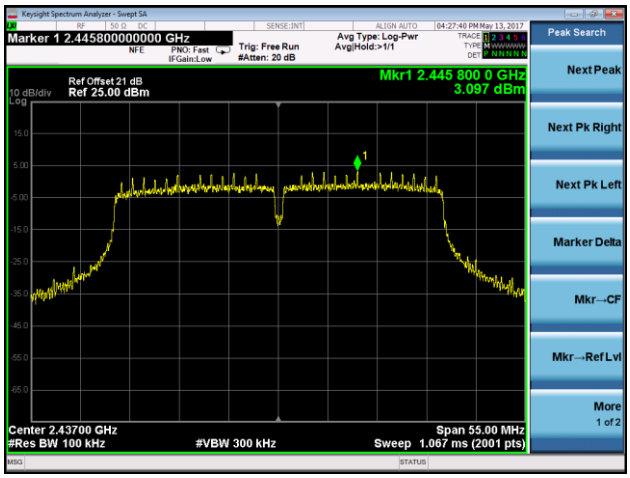


802.11n-HT20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1	
Channel 11 (2462MHz)	
High Band Edge	Spurious Emission
	

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

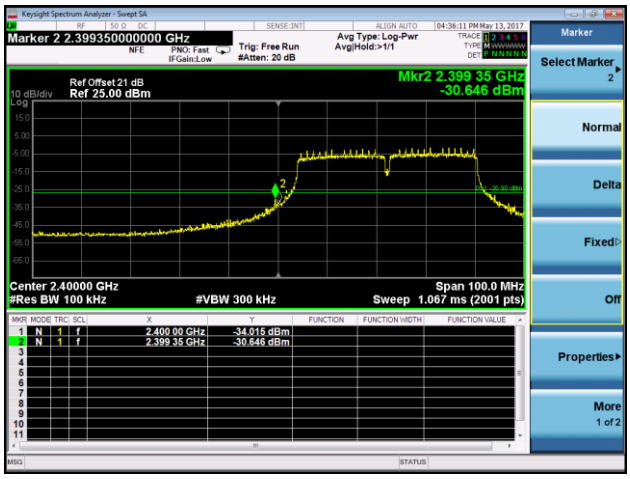
100kHz PSD Reference Level

Channel 06 (2437MHz)

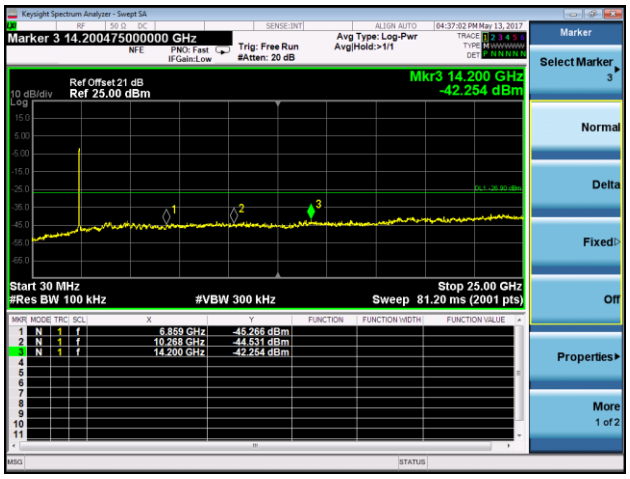


Channel 03 (2422MHz)

Low Band Edge

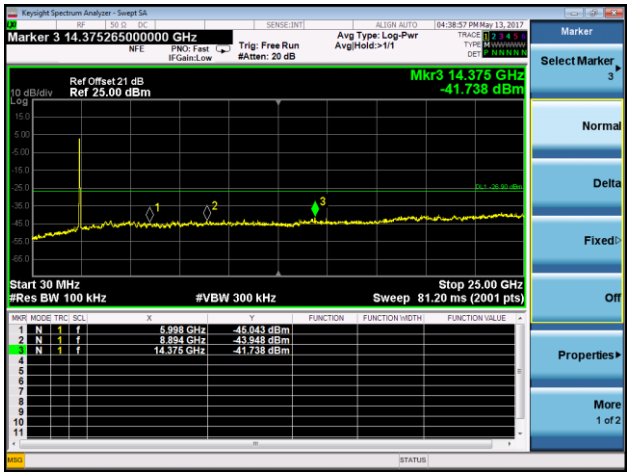


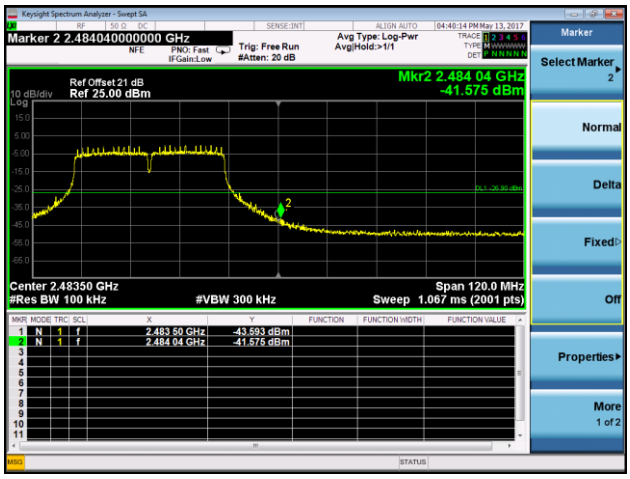
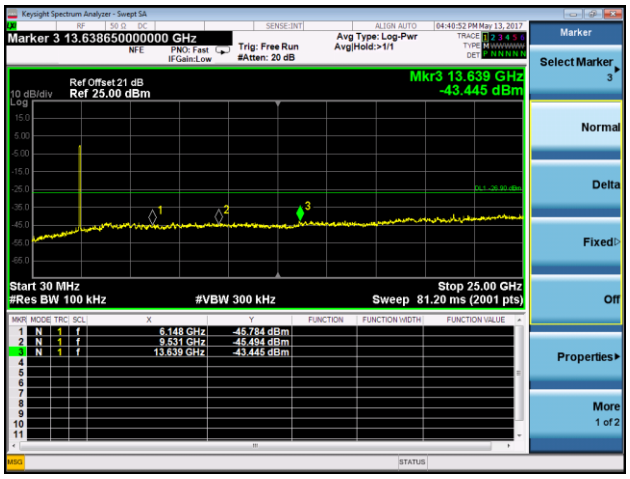
Spurious Emission



Channel 06 (2437MHz)

Spurious Emission



802.11n-HT40 Out-of-Band Emissions - Ant 0 / Ant 0 + 1	
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 [uV/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 D01v04 - Section 12.2.3 (quasi-peak measurements)

KDB 558074 D01v04 - Section 12.2.4 (peak power measurements)

KDB 558074 D01v04 - Section 12.2.5 (average power measurements)

7.6.3. 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

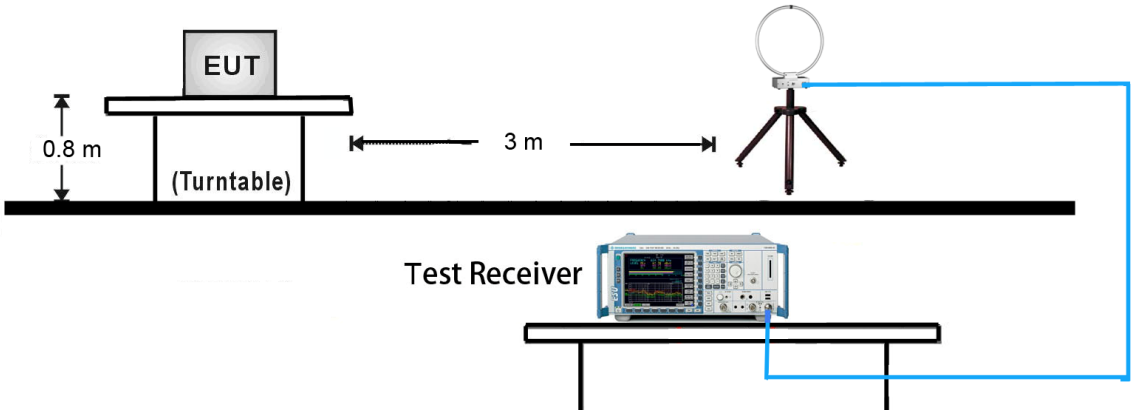
6. Sweep time = auto

7. Trace mode = max hold

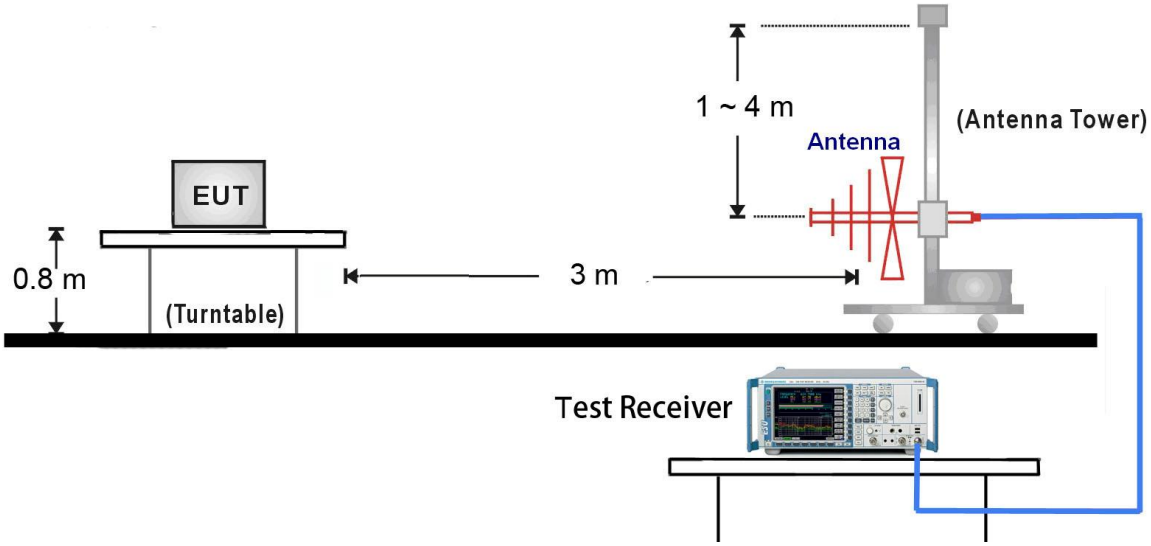
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

7.6.4. Test Setup

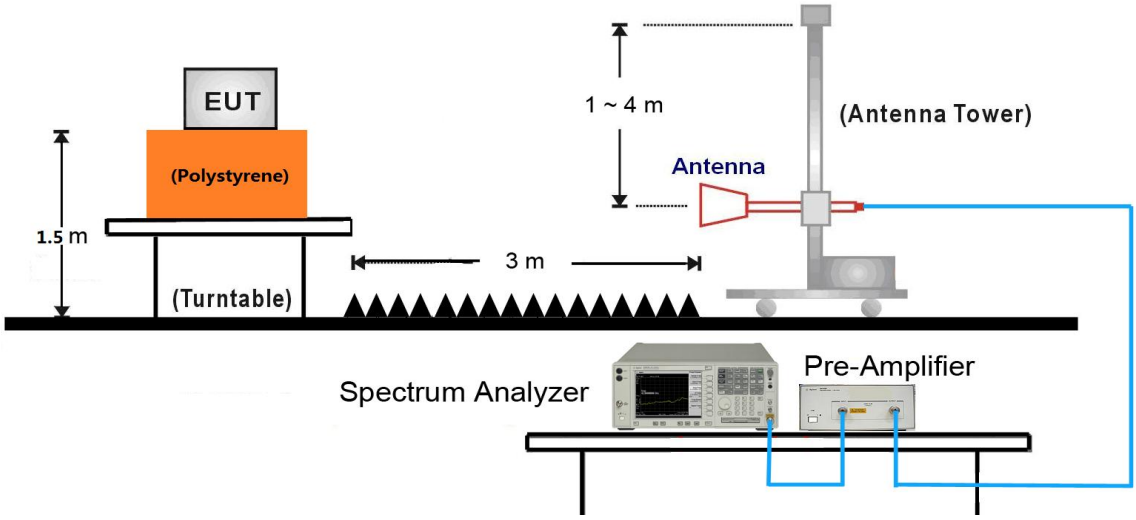
9kHz ~ 30MHz Test Setup:



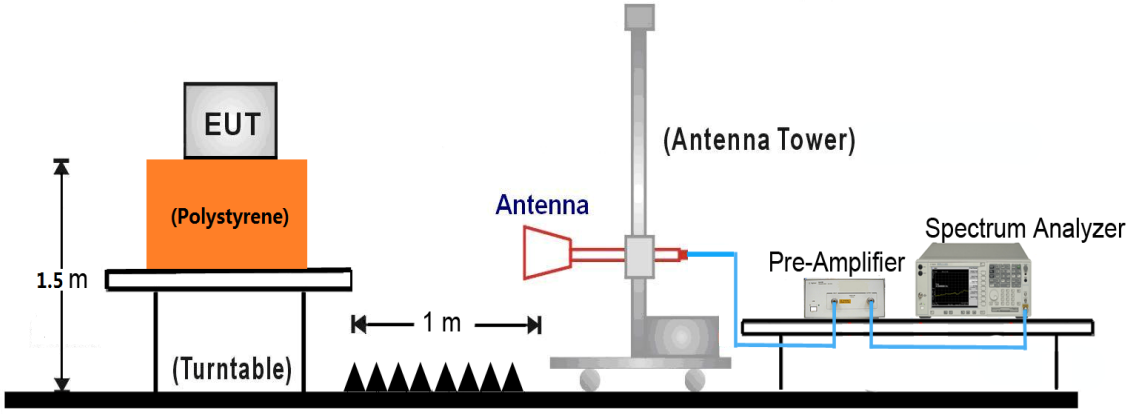
30MHz ~ 1GHz Test Setup:



1GHz ~ 18GHz Test Setup:



18GHz ~25GHz Test Setup:



7.6.5. Test Result

Test Mode:	802.11b - Ant 0	Test Site:	AC1
Test Channel:	01	Test Engineer:	Flag Yang
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
	4825.0	38.7	2.7	41.4	74.0	-32.6	Peak	Horizontal
*	7239.0	35.9	10.6	46.5	82.2	-35.7	Peak	Horizontal
	8242.0	31.9	10.3	42.2	74.0	-31.8	Peak	Horizontal
*	9695.5	33.0	12.4	45.4	82.2	-36.8	Peak	Horizontal
	4825.0	49.6	2.7	52.3	74.0	-21.7	Peak	Vertical
*	7239.0	44.4	10.6	55.0	82.2	-27.2	Peak	Vertical
	8480.0	32.4	10.9	43.3	74.0	-30.7	Peak	Vertical
*	10239.5	32.8	14.4	47.2	82.2	-35.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.2dBμV/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:	802.11b - Ant 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Flag Yang
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	38.3	2.6	40.9	74.0	-33.1	Peak	Horizontal
*	6414.5	35.1	6.7	41.8	83.0	-41.2	Peak	Horizontal
	7315.5	38.0	10.7	48.7	74.0	-25.3	Peak	Horizontal
*	9908.0	32.5	13.5	46.0	83.0	-37.0	Peak	Horizontal
	4874.0	50.1	2.6	52.7	54.0	-1.3	Average	Vertical
	4876.0	50.7	2.6	53.3	74.0	-20.7	Peak	Vertical
*	5862.0	34.7	5.0	39.7	83.0	-43.3	Peak	Vertical
	7307.0	41.9	10.7	52.6	74.0	-21.4	Peak	Vertical
	7311.8	37.5	10.7	48.2	54.0	-5.8	Average	Vertical
*	10120.5	32.3	13.5	45.8	83.0	-37.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.0dBμV/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:	802.11b - Ant 0	Test Site:	AC1
Test Channel:	11	Test Engineer:	Flag Yang
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	36.9	2.6	39.5	74.0	-34.5	Peak	Horizontal
*	6312.5	34.1	6.4	40.5	83.5	-43.0	Peak	Horizontal
	7383.5	36.0	10.7	46.7	74.0	-27.3	Peak	Horizontal
*	9908.0	32.4	13.5	45.9	83.5	-37.6	Peak	Horizontal
	4927.0	49.8	2.6	52.4	74.0	-21.6	Peak	Vertical
*	5896.0	34.9	5.1	40.0	83.5	-43.5	Peak	Vertical
	7383.5	39.8	10.7	50.5	74.0	-23.5	Peak	Vertical
*	9848.5	32.8	13.3	46.1	83.5	-37.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.5dBμV/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:	802.11g - Ant 0	Test Site:	AC1
Test Channel:	01	Test Engineer:	Flag Yang
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
	4825.0	35.2	2.7	37.9	74.0	-36.1	Peak	Horizontal
*	6508.0	33.6	7.3	40.9	81.2	-40.3	Peak	Horizontal
	7647.0	33.1	10.6	43.7	74.0	-30.3	Peak	Horizontal
*	9942.0	32.9	13.3	46.2	81.2	-35.0	Peak	Horizontal
	4833.5	46.7	2.8	49.5	74.0	-24.5	Peak	Vertical
*	7247.5	38.6	10.7	49.3	81.2	-31.9	Peak	Vertical
	8429.0	32.0	10.6	42.6	74.0	-31.4	Peak	Vertical
*	10256.5	31.7	14.3	46.0	81.2	-35.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.2dBμV/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 0	Test Site:	AC1
Test Channel:	06	Test Engineer:	Flag Yang
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	35.8	2.6	38.4	74.0	-35.6	Peak	Horizontal
*	6049.0	34.8	5.3	40.1	82.0	-41.9	Peak	Horizontal
	7315.5	37.5	10.7	48.2	74.0	-25.8	Peak	Horizontal
*	9636.0	31.8	12.9	44.7	82.0	-37.3	Peak	Horizontal
	4867.5	46.8	2.6	49.4	74.0	-24.6	Peak	Vertical
*	6074.5	33.9	5.5	39.4	82.0	-42.6	Peak	Vertical
	7324.0	41.1	10.6	51.7	74.0	-22.3	Peak	Vertical
*	9644.5	33.9	12.7	46.6	82.0	-35.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.0dBμV/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:	802.11g - Ant 0	Test Site:	AC1
Test Channel:	11	Test Engineer:	Flag Yang
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
	5114.0	35.6	3.2	38.8	74.0	-35.2	Peak	Horizontal
*	6057.5	33.6	5.4	39.0	82.3	-43.3	Peak	Horizontal
	8310.0	31.0	10.2	41.2	74.0	-32.8	Peak	Horizontal
*	12891.5	30.3	17.2	47.5	82.3	-34.8	Peak	Horizontal
	4935.5	45.1	2.7	47.8	74.0	-26.2	Peak	Vertical
*	5930.0	34.6	5.2	39.8	82.3	-42.5	Peak	Vertical
	7375.0	33.9	10.8	44.7	74.0	-29.3	Peak	Vertical
*	9619.0	33.2	12.4	45.6	82.3	-36.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.3dBμV/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:	01	Test Engineer:	Flag Yang
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
	4646.5	36.7	2.5	39.2	74.0	-34.8	Peak	Horizontal
*	7239.0	36.0	10.6	46.6	83.2	-36.6	Peak	Horizontal
	9432.0	31.6	12.4	44.0	74.0	-30.0	Peak	Horizontal
*	12806.5	31.3	16.6	47.9	83.2	-35.3	Peak	Horizontal
	4825.0	42.7	2.7	45.4	74.0	-28.6	Peak	Vertical
*	7239.0	46.1	10.6	56.7	83.2	-26.5	Peak	Vertical
	8157.0	32.8	10.4	43.2	74.0	-30.8	Peak	Vertical
*	9644.5	38.1	12.7	50.8	83.2	-32.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.2dBμV/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:	802.11b - Ant 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Flag Yang
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
	4578.5	35.5	2.0	37.5	74.0	-36.5	Peak	Horizontal
*	5972.5	32.6	5.2	37.8	83.8	-46.0	Peak	Horizontal
	7315.5	36.6	10.7	47.3	74.0	-26.7	Peak	Horizontal
*	9746.5	34.0	12.7	46.7	83.8	-37.1	Peak	Horizontal
	4876.0	44.0	2.6	46.6	74.0	-27.4	Peak	Vertical
*	6006.5	34.3	5.3	39.6	83.8	-44.2	Peak	Vertical
	7307.0	42.6	10.7	53.3	74.0	-20.7	Peak	Vertical
*	9746.5	39.4	12.7	52.1	83.8	-31.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.8dBμV/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:	Flag Yang
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
	4910.0	36.3	2.5	38.8	74.0	-35.2	Peak	Horizontal
*	6091.5	35.0	5.6	40.6	84.2	-43.6	Peak	Horizontal
	7383.5	34.0	10.7	44.7	74.0	-29.3	Peak	Horizontal
*	10120.5	31.7	13.5	45.2	84.2	-39.0	Peak	Horizontal
	4927.0	44.8	2.6	47.4	74.0	-26.6	Peak	Vertical
*	5938.5	34.2	5.2	39.4	84.2	-44.8	Peak	Vertical
	7383.5	40.0	10.7	50.7	74.0	-23.3	Peak	Vertical
*	9848.5	38.2	13.3	51.5	84.2	-32.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.2dBμV/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:	Flag Yang
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
	4578.5	36.5	2.0	38.5	74.0	-35.5	Peak	Horizontal
*	6142.5	33.6	5.7	39.3	82.8	-43.5	Peak	Horizontal
	7290.0	33.7	10.7	44.4	74.0	-29.6	Peak	Horizontal
*	9695.5	31.7	12.4	44.1	82.8	-38.7	Peak	Horizontal
	4825.0	41.4	2.7	44.1	74.0	-29.9	Peak	Vertical
*	7247.5	40.3	10.7	51.0	82.8	-31.8	Peak	Vertical
	8369.5	32.2	10.2	42.4	74.0	-31.6	Peak	Vertical
*	10358.5	32.8	14.9	47.7	82.8	-35.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.8dBμV/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:	Flag Yang
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	34.7	2.9	37.6	74.0	-36.4	Peak	Horizontal
*	6219.0	34.5	6.1	40.6	82.6	-42.0	Peak	Horizontal
	7315.5	36.5	10.7	47.2	74.0	-26.8	Peak	Horizontal
*	10120.5	31.6	13.5	45.1	82.6	-37.5	Peak	Horizontal
	4876.0	47.1	2.6	49.7	74.0	-24.3	Peak	Vertical
*	6193.5	35.2	5.9	41.1	82.6	-41.5	Peak	Vertical
	7307.0	40.7	10.7	51.4	74.0	-22.6	Peak	Vertical
*	9738.0	36.2	12.5	48.7	82.6	-33.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.6dBμV/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:	Flag Yang
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
	4646.5	36.9	2.5	39.4	74.0	-34.6	Peak	Horizontal
*	6542.0	34.4	7.4	41.8	82.2	-40.4	Peak	Horizontal
	9083.5	33.9	11.9	45.8	74.0	-28.2	Peak	Horizontal
*	13129.5	30.6	17.7	48.3	82.2	-33.9	Peak	Horizontal
	4927.0	45.3	2.6	47.9	74.0	-26.1	Peak	Vertical
*	6559.0	34.2	7.5	41.7	82.2	-40.5	Peak	Vertical
	11506.0	31.7	17.5	49.2	74.0	-24.8	Peak	Vertical
*	13852.0	30.9	20.0	50.9	82.2	-31.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.2dBμV/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 0 + 1	Test Site:	AC1
Test Channel:	01	Test Engineer:	Flag Yang
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
	4646.5	36.0	2.5	38.5	74.0	-35.5	Peak	Horizontal
*	6142.5	34.7	5.7	40.4	82.9	-42.5	Peak	Horizontal
	8480.0	33.2	10.9	44.1	74.0	-29.9	Peak	Horizontal
*	9967.5	32.6	13.2	45.8	82.9	-37.1	Peak	Horizontal
	4825.0	42.7	2.7	45.4	74.0	-28.6	Peak	Vertical
*	7239.0	34.6	10.6	45.2	82.9	-37.7	Peak	Vertical
	9185.5	31.7	12.5	44.2	74.0	-29.8	Peak	Vertical
*	10358.5	30.6	14.9	45.5	82.9	-37.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.9dBμV/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 0 + 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Flag Yang
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	36.9	2.6	39.5	74.0	-34.5	Peak	Horizontal
*	6635.5	34.3	7.6	41.9	83.2	-41.3	Peak	Horizontal
	7315.5	36.8	10.7	47.5	74.0	-26.5	Peak	Horizontal
*	9967.5	32.6	13.2	45.8	83.2	-37.4	Peak	Horizontal
	7307.0	42.9	10.7	53.6	74.0	-20.4	Peak	Vertical
*	9746.5	36.3	12.7	49.0	74.0	-25.0	Peak	Vertical
	12193.7	23.9	16.5	40.4	54.0	-13.6	Average	Vertical
*	12194.5	38.2	16.5	54.7	74.0	-19.3	Peak	Vertical
	12908.5	30.8	17.2	48.0	83.2	-35.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.2dBμV/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 0 + 1	Test Site:	AC1
Test Channel:	11	Test Engineer:	Flag Yang
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
	4825.0	35.2	2.7	37.9	74.0	-36.1	Peak	Horizontal
*	6729.0	33.9	7.5	41.4	83.7	-42.3	Peak	Horizontal
	8463.0	31.8	10.4	42.2	74.0	-31.8	Peak	Horizontal
*	10486.0	30.3	14.7	45.0	83.7	-38.7	Peak	Horizontal
	4918.5	47.2	2.6	49.8	74.0	-24.2	Peak	Vertical
*	6593.0	34.2	7.5	41.7	83.7	-42.0	Peak	Vertical
	9372.5	32.8	12.7	45.5	74.0	-28.5	Peak	Vertical
*	13027.5	32.0	17.5	49.5	83.7	-34.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.7dBμV/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 0 + 1	Test Site:	AC1
Test Channel:	03	Test Engineer:	Flag Yang
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	34.3	2.9	37.2	74.0	-36.8	Peak	Horizontal
*	6737.5	32.0	7.5	39.5	78.5	-39.0	Peak	Horizontal
	8352.5	32.3	10.1	42.4	74.0	-31.6	Peak	Horizontal
*	10265.0	31.3	14.2	45.5	78.5	-33.0	Peak	Horizontal
	4842.0	38.8	2.9	41.7	74.0	-32.3	Peak	Vertical
*	6559.0	33.8	7.5	41.3	78.5	-37.2	Peak	Vertical
	10928.0	31.6	16.4	48.0	74.0	-26.0	Peak	Vertical
*	12891.5	31.0	17.2	48.2	78.5	-30.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.5dBμV/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:	802.11n-HT40 - Ant 0 + 1	Test Site:	AC1
Test Channel:	06	Test Engineer:	Flag Yang
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
	4969.5	35.8	2.7	38.5	74.0	-35.5	Peak	Horizontal
*	6508.0	32.7	7.3	40.0	78.3	-38.3	Peak	Horizontal
	9041.0	31.4	11.8	43.2	74.0	-30.8	Peak	Horizontal
*	12840.5	31.2	16.9	48.1	78.3	-30.2	Peak	Horizontal
	4876.0	43.9	2.6	46.5	74.0	-27.5	Peak	Vertical
*	6644.0	33.7	7.7	41.4	78.3	-36.9	Peak	Vertical
	9007.0	31.4	11.7	43.1	74.0	-30.9	Peak	Vertical
*	12993.5	31.7	17.2	48.9	78.3	-29.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.3dBμV/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 0 + 1	Test Site:	AC1
Test Channel:	09	Test Engineer:	Flag Yang
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
	4859.0	34.8	2.5	37.3	74.0	-36.7	Peak	Horizontal
*	6491.0	33.6	7.3	40.9	78.1	-37.2	Peak	Horizontal
	8480.0	32.1	10.9	43.0	74.0	-31.0	Peak	Horizontal
*	13104.0	31.4	18.0	49.4	78.1	-28.7	Peak	Horizontal
	4901.5	42.4	2.6	45.0	74.0	-29.0	Peak	Vertical
*	6516.5	33.6	7.4	41.0	78.1	-37.1	Peak	Vertical
	11633.5	31.4	17.4	48.8	74.0	-25.2	Peak	Vertical
*	13146.5	31.1	17.9	49.0	78.1	-29.1	Peak	Vertical

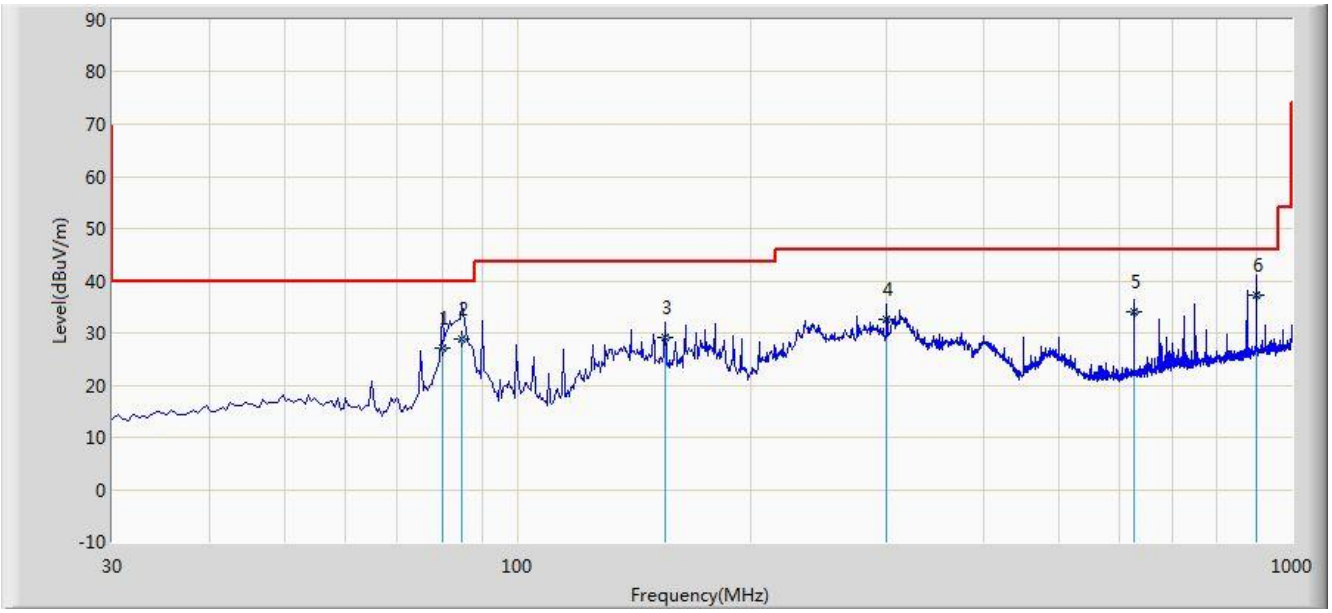
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.1dBμV/m) or FCC 15.209 which is higher.

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:

Site: AC1	Time: 2017/05/02 - 16:20
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Worst Mode: Transmit by 802.11b at channel 2437MHz Ant 0	



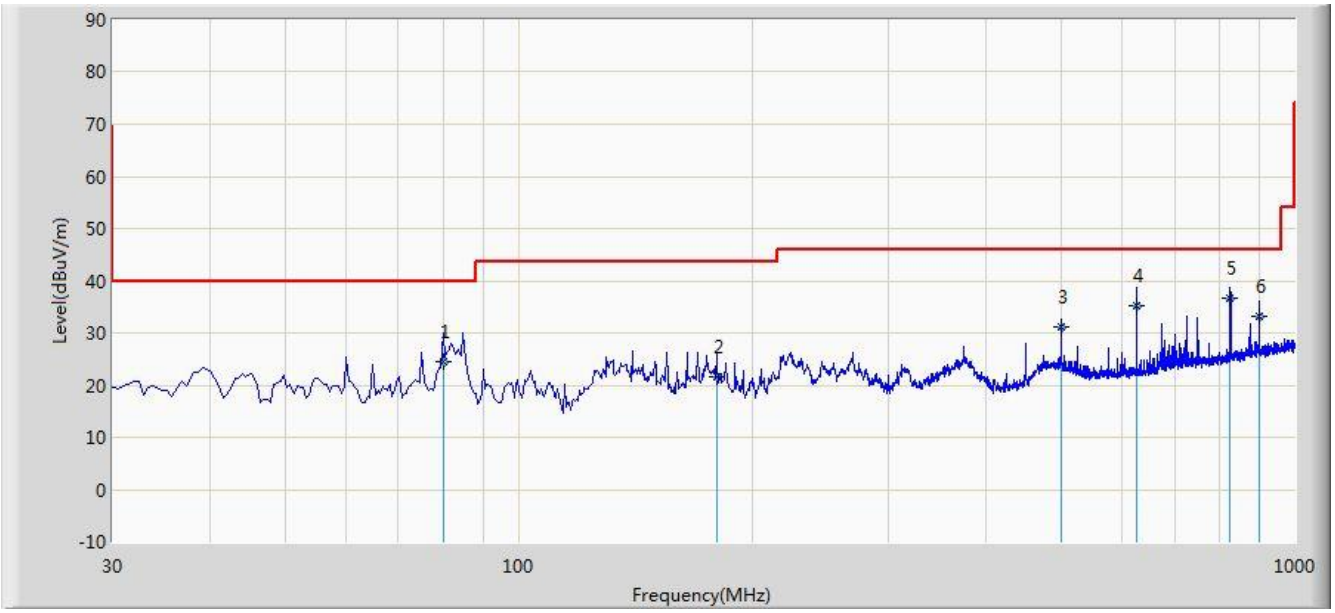
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			80.000	27.150	18.540	-12.850	40.000	8.610	QP
2			84.950	28.848	19.570	-11.152	40.000	9.278	QP
3			155.060	29.119	20.540	-14.381	43.500	8.579	QP
4			300.150	32.735	19.670	-13.265	46.000	13.065	QP
5			625.190	34.151	15.980	-11.849	46.000	18.171	QP
6		*	900.000	37.239	15.780	-8.761	46.000	21.459	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

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

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Site: AC1	Time: 2017/05/02 - 16:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Snake Ni
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Worst Mode: Transmit by 802.11b at channel 2437MHz Ant 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			80.040	24.445	15.830	-15.555	40.000	8.615	QP
2			180.010	21.558	11.790	-21.942	43.500	9.768	QP
3			500.000	31.080	14.720	-14.920	46.000	16.360	QP
4			625.110	35.261	17.090	-10.739	46.000	18.171	QP
5		*	825.500	36.789	16.080	-9.211	46.000	20.709	QP
6			900.000	33.239	11.780	-12.761	46.000	21.459	QP

Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

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

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

7.7. Radiated Restricted Band Edge Measurement

7.7.1. Test Limit

For 15.205 requirement:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a).

Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1] 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.25 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 – 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])
13.36 - 13.41	--	--	--

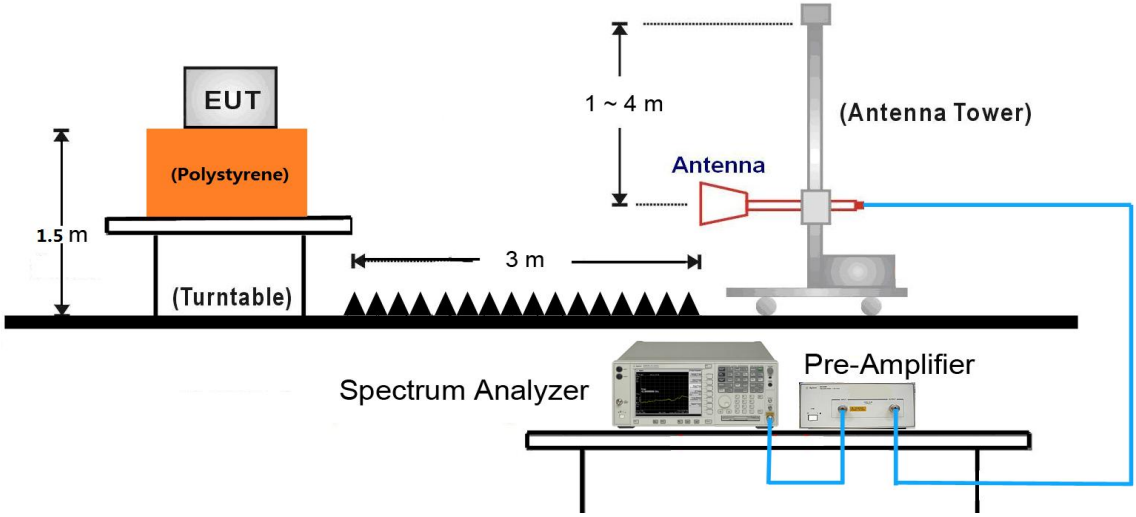
All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits per Section FCC 15.209.

7.7.2. Test Procedure Used

KDB 558074 D01v04 - Section 12.2.4 (peak power measurements)

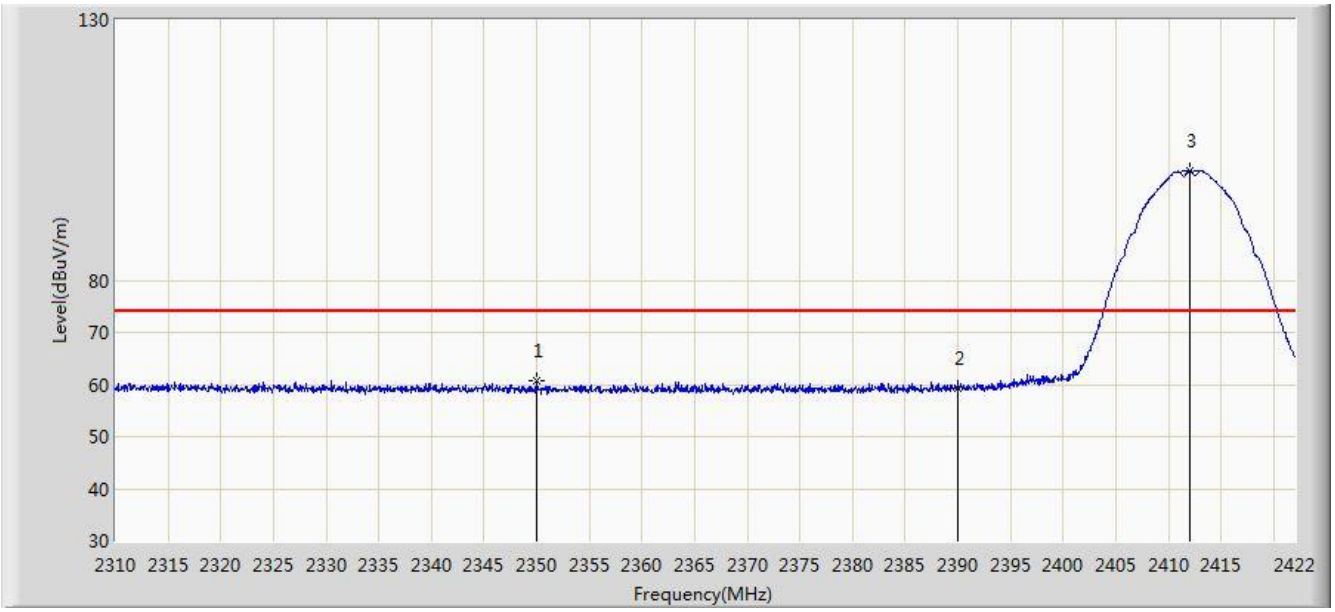
KDB 558074 D01v04 - Section 12.2.5 (average power measurements)

7.7.3. Test Setup



7.7.4. Test Result

Site: AC1	Time: 2017/05/12 - 23:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz, Ant 0	

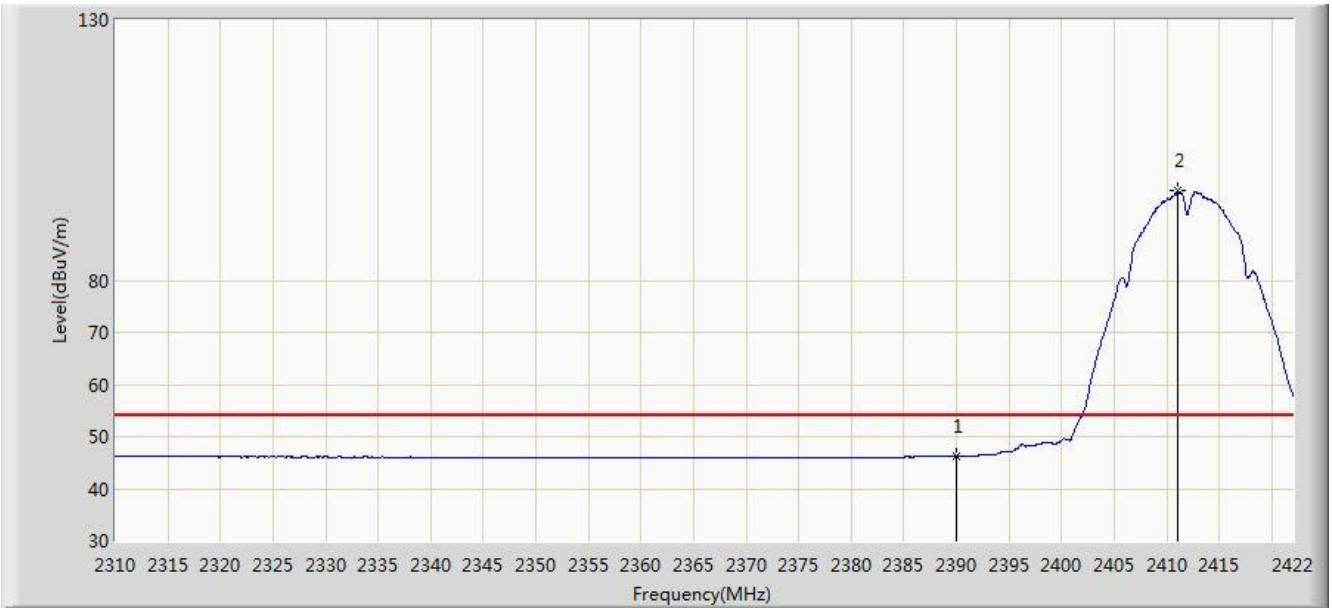


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2350.040	60.691	28.412	-13.309	74.000	32.279	PK
2			2390.000	59.353	27.075	-14.647	74.000	32.278	PK
3		*	2411.976	101.070	68.830	N/A	N/A	32.240	PK

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

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

Site: AC1	Time: 2017/05/12 - 23:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz, Ant 0	

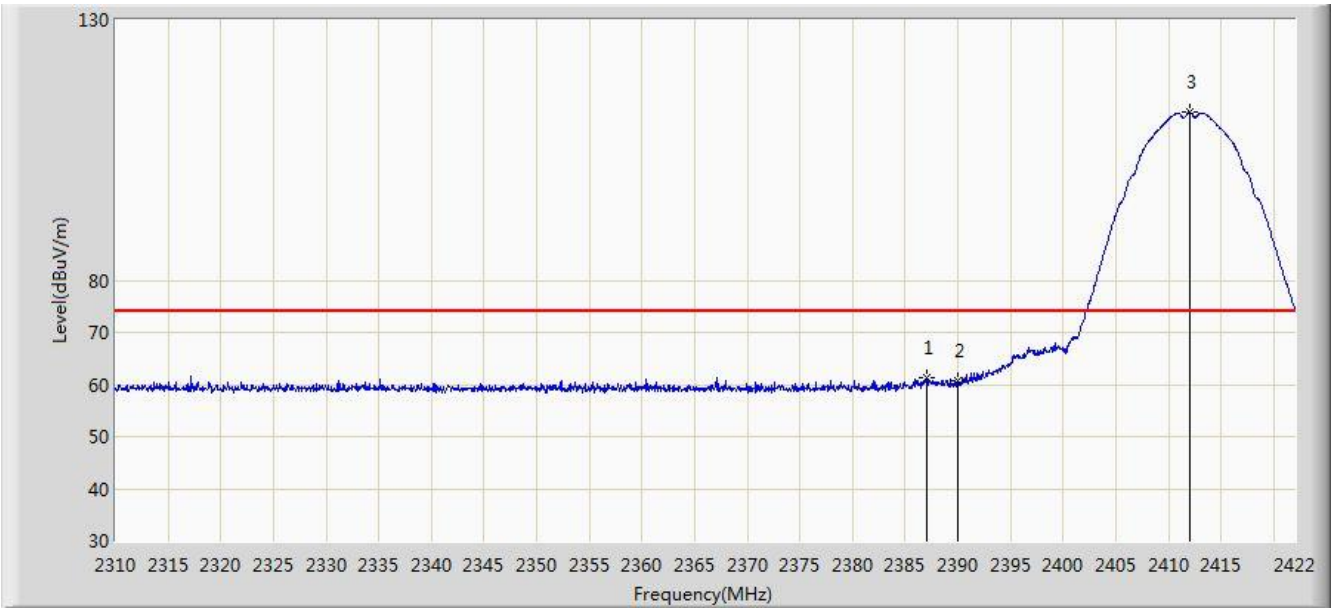


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.193	13.915	-7.807	54.000	32.278	AV
2		*	2411.080	97.102	64.858	N/A	N/A	32.243	AV

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

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

Site: AC1	Time: 2017/05/12 - 23:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz, Ant 0	

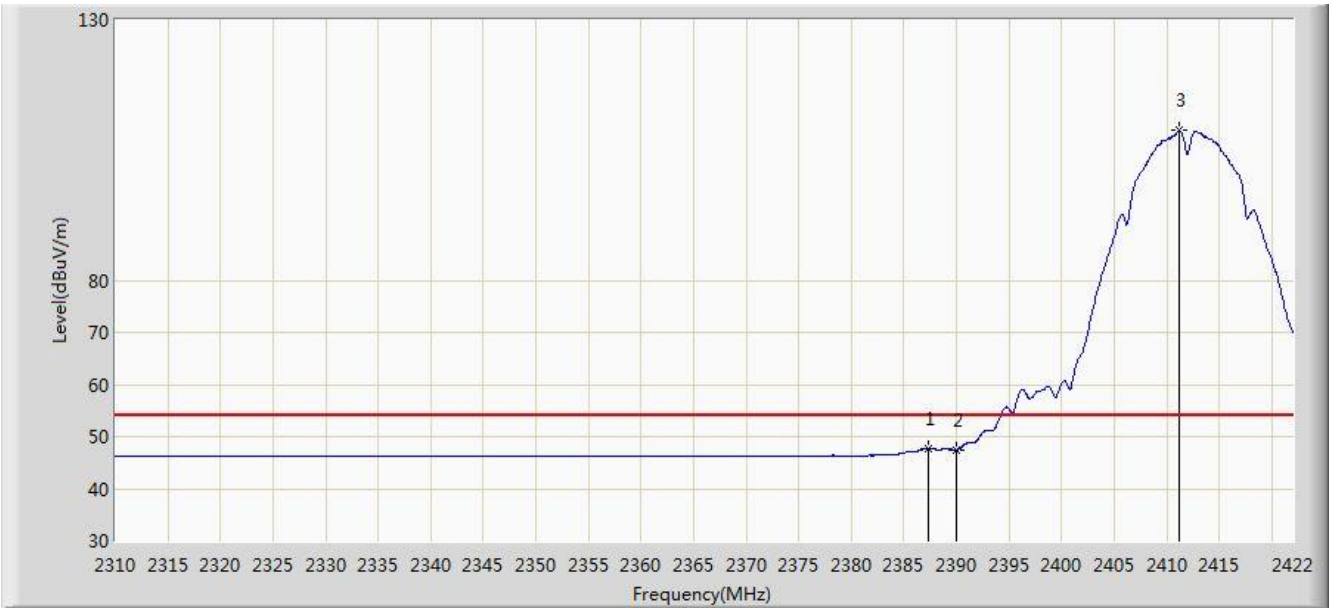


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2387.056	61.224	28.962	-12.776	74.000	32.261	PK
2			2390.000	60.598	28.320	-13.402	74.000	32.278	PK
3		*	2412.032	112.244	80.004	N/A	N/A	32.240	PK

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

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

Site: AC1	Time: 2017/05/12 - 23:42
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz, Ant 0	

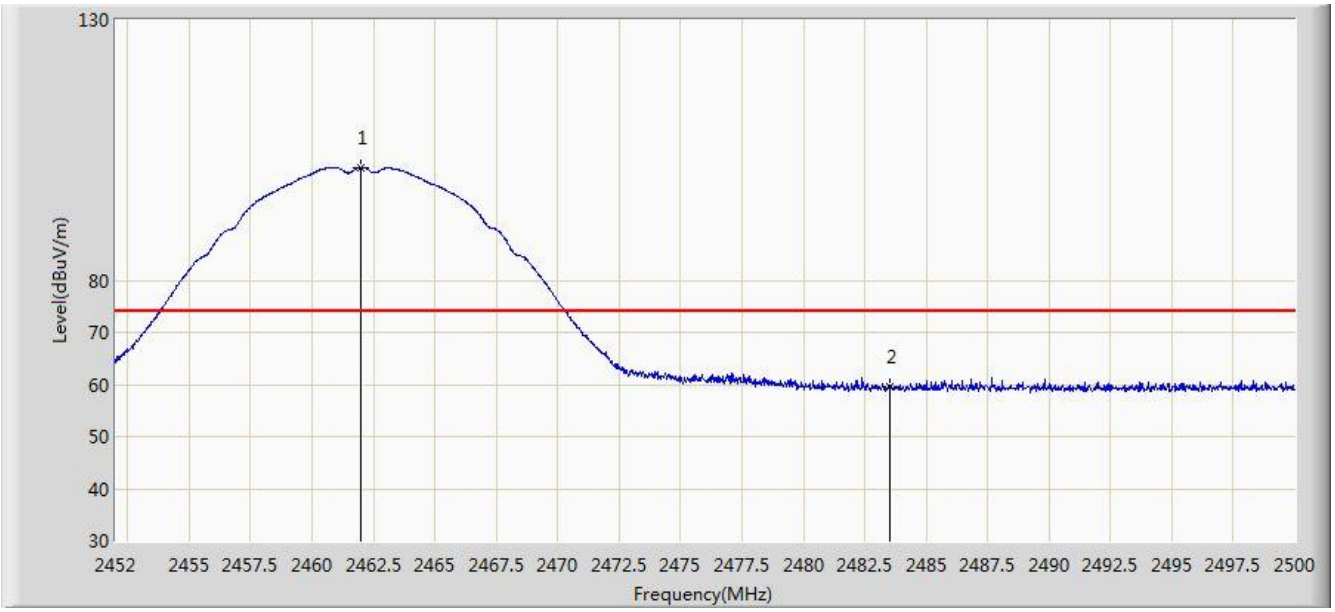


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2387.280	47.699	15.436	-6.301	54.000	32.263	AV
2			2390.000	47.393	15.115	-6.607	54.000	32.278	AV
3		*	2411.192	108.772	76.529	N/A	N/A	32.243	AV

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

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

Site: AC1	Time: 2017/05/12 - 23:46
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz, Ant 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.984	101.720	69.482	N/A	N/A	32.238	PK
2			2483.500	59.665	27.384	-14.335	74.000	32.282	PK

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

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

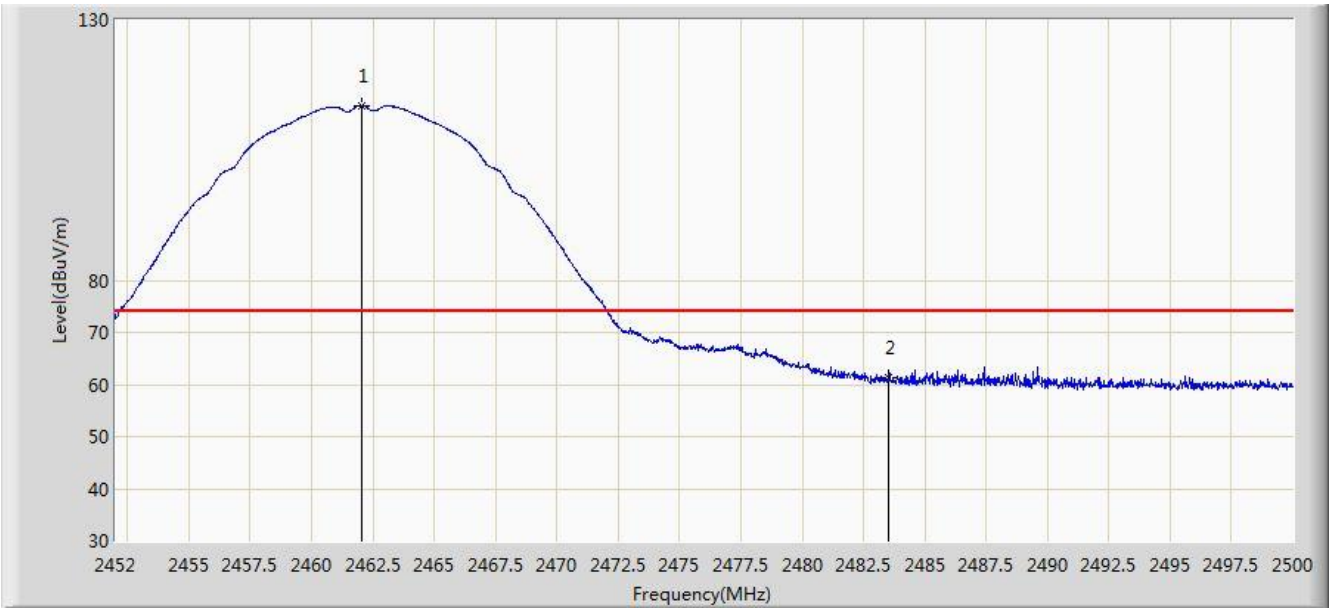
Site: AC1	Time: 2017/05/12 - 23:49
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz, Ant 0	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.288	98.100	65.865	N/A	N/A	32.235	AV
2			2483.500	46.305	14.024	-7.695	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/12 - 23:50
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz, Ant 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.032	113.522	81.284	N/A	N/A	32.238	PK
2			2483.500	61.198	28.917	-12.802	74.000	32.282	PK

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

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

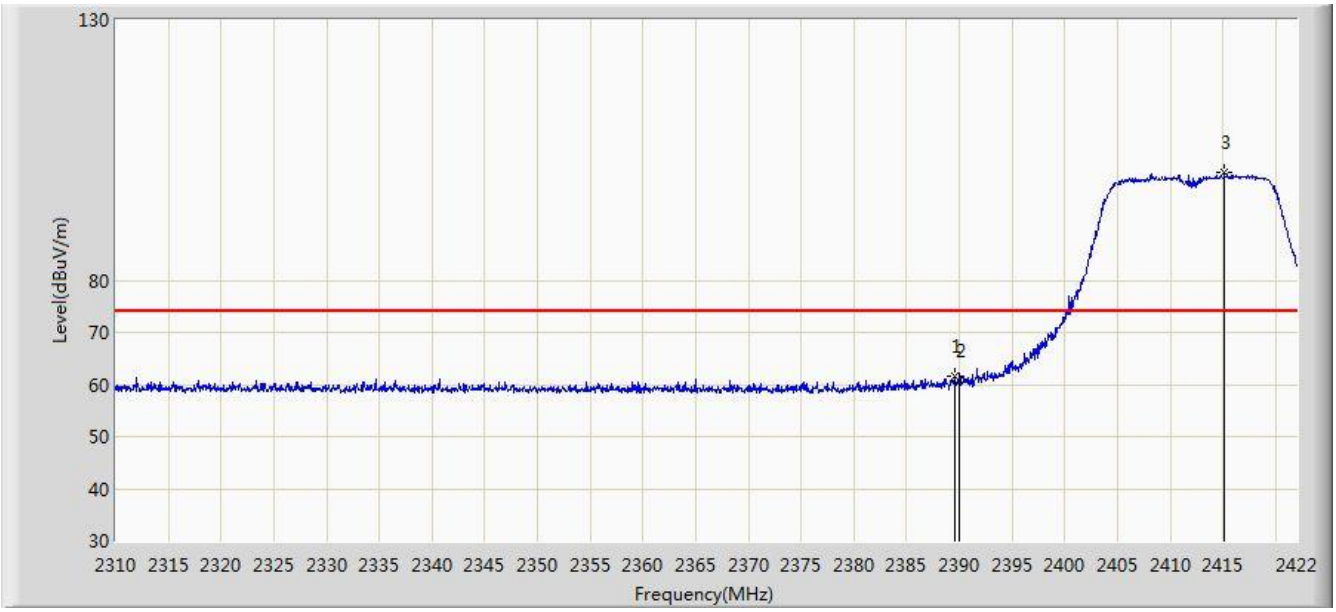
Site: AC1	Time: 2017/05/12 - 23:52
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz, Ant 0	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.168	109.813	77.578	N/A	N/A	32.235	AV
2			2483.500	48.104	15.823	-5.896	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz, Ant 0	

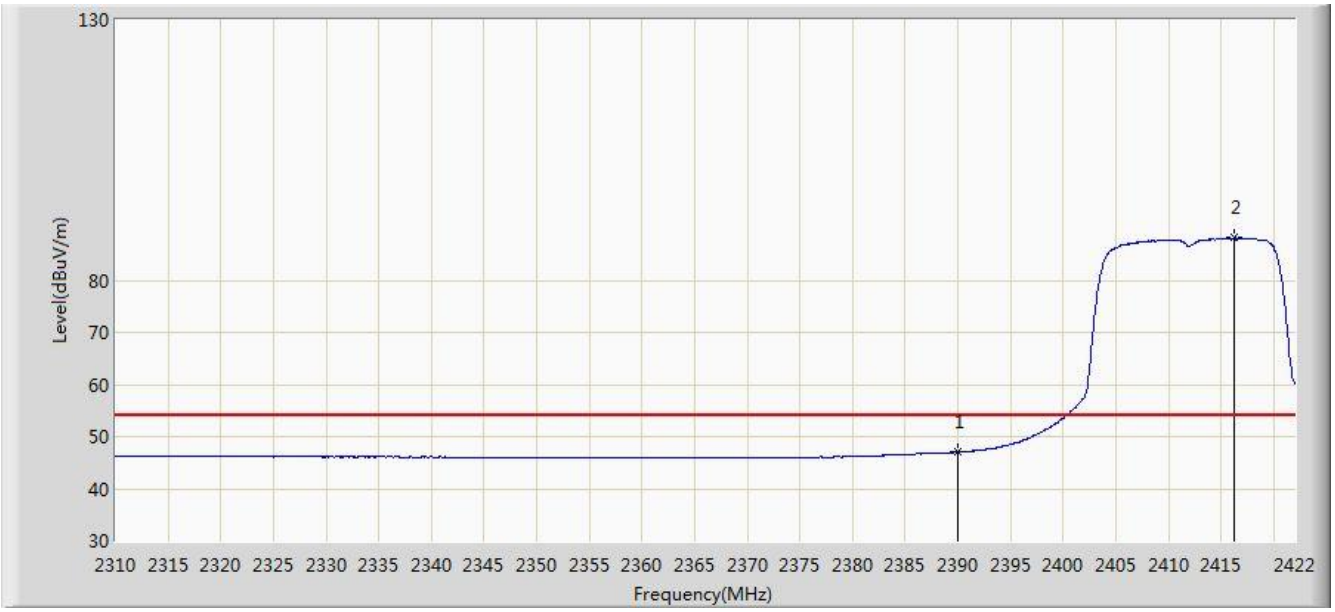


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.632	61.497	29.221	-12.503	74.000	32.276	PK
2			2390.000	60.695	28.417	-13.305	74.000	32.278	PK
3		*	2415.112	100.714	68.487	N/A	N/A	32.227	PK

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

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

Site: AC1	Time: 2017/05/13 - 00:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz, Ant 0	

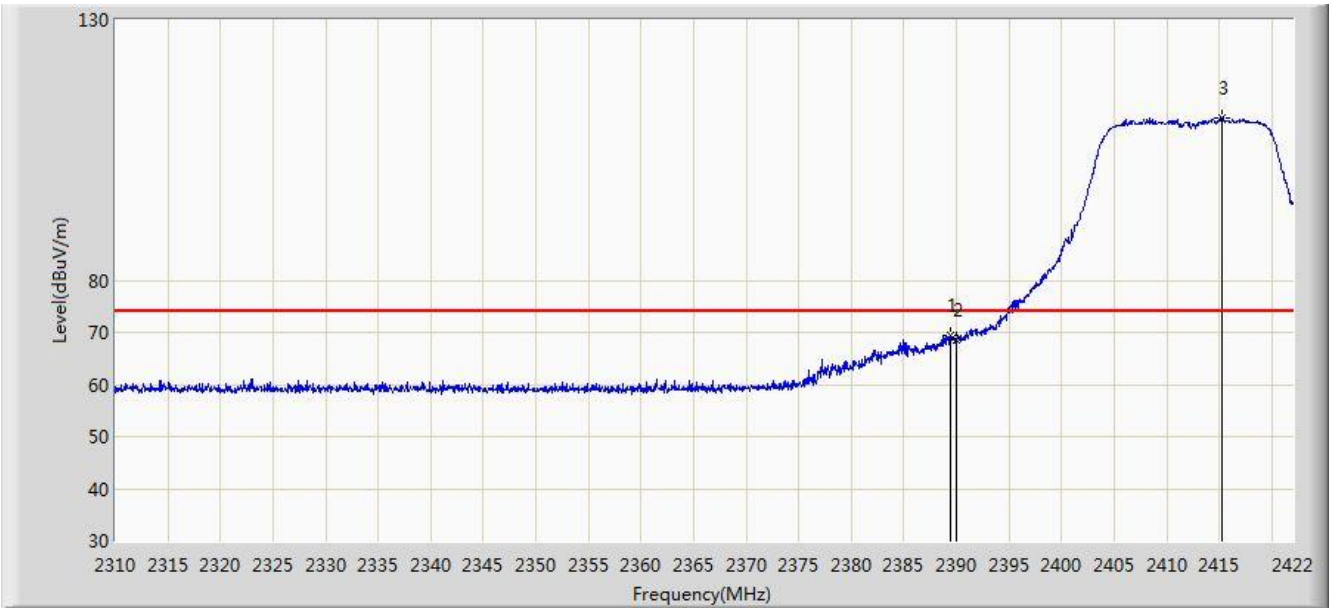


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.980	14.702	-7.020	54.000	32.278	AV
2		*	2416.288	88.133	55.911	N/A	N/A	32.222	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz, Ant 0.5	

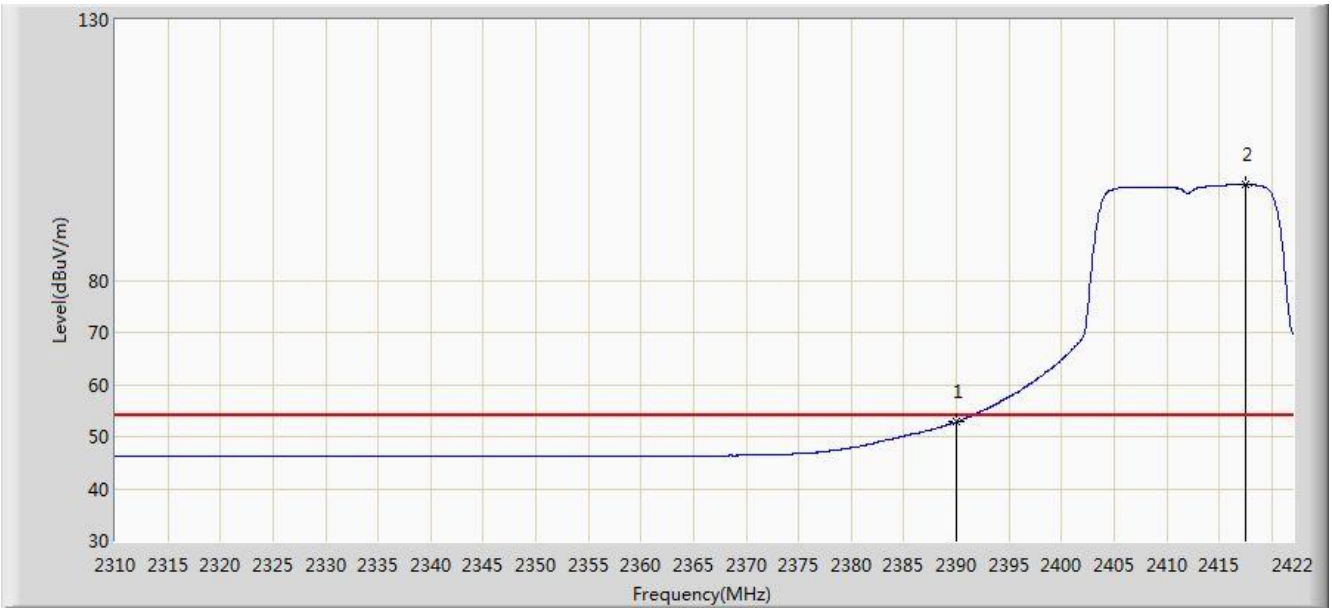


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.464	69.312	37.037	-4.688	74.000	32.275	PK
2			2390.000	68.517	36.239	-5.483	74.000	32.278	PK
3		*	2415.280	111.218	78.992	N/A	N/A	32.226	PK

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

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

Site: AC1	Time: 2017/05/13 - 00:04
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz, Ant 0	

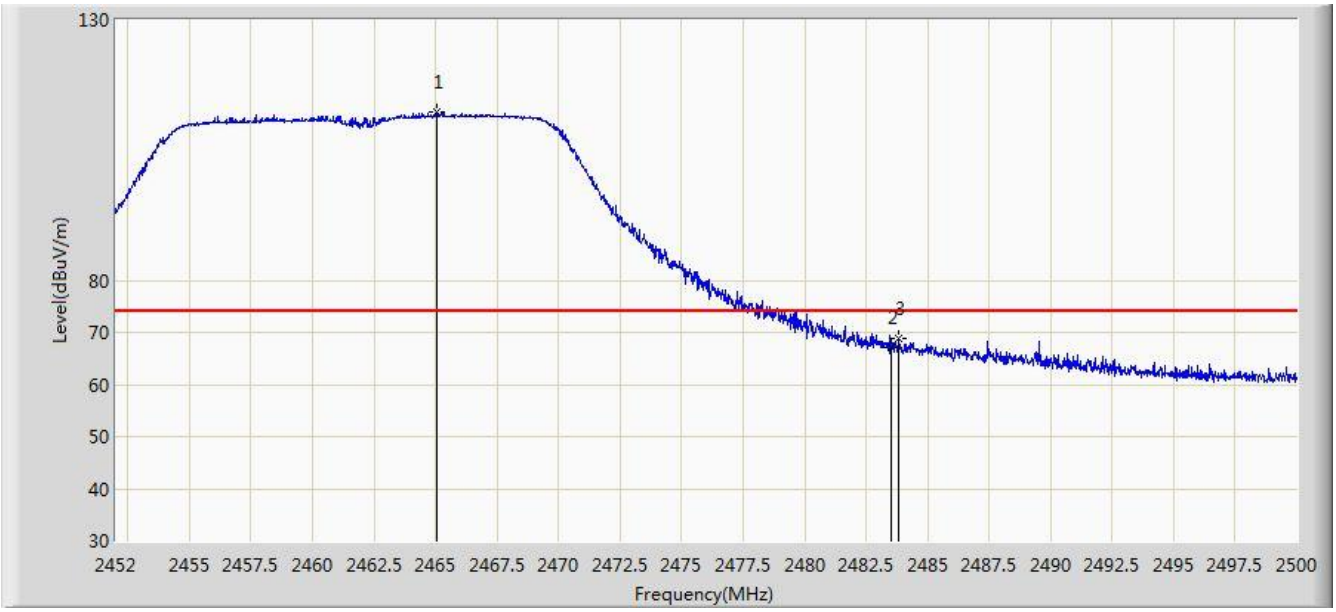


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	52.806	20.528	-1.194	54.000	32.278	AV
2		*	2417.576	98.416	66.199	N/A	N/A	32.217	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz, Ant 0	

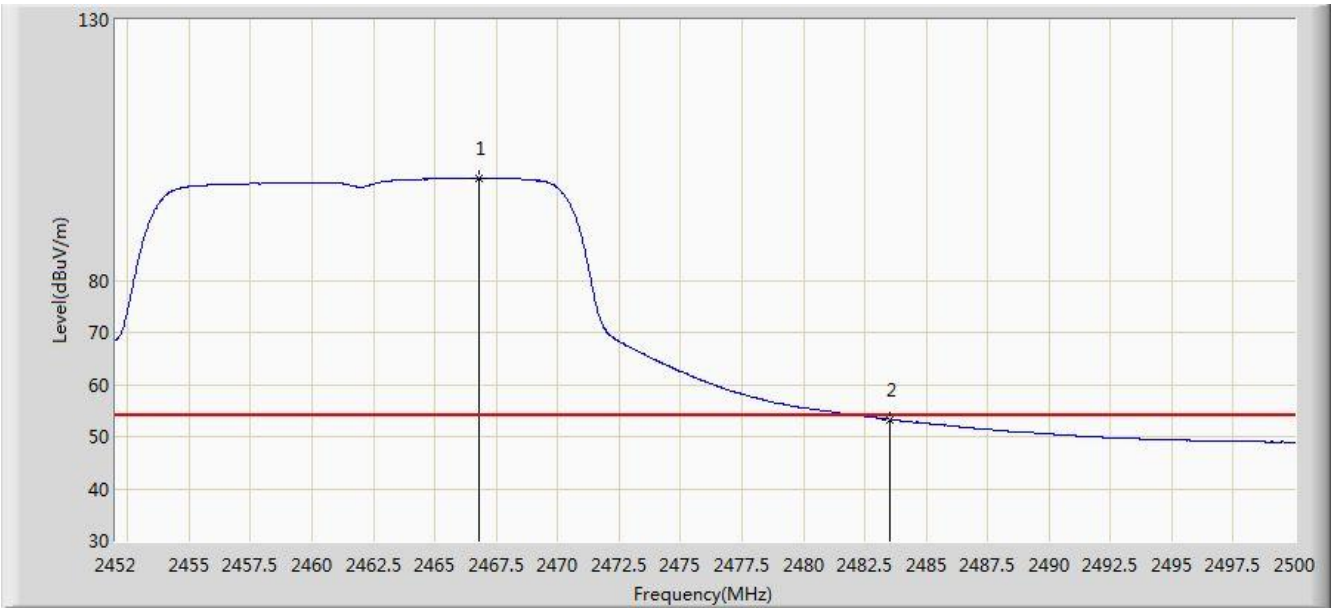


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.032	112.315	80.073	N/A	N/A	32.242	PK
2			2483.500	67.077	34.796	-6.923	74.000	32.282	PK
3			2483.800	68.758	36.476	-5.242	74.000	32.282	PK

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

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

Site: AC1	Time: 2017/05/13 - 00:18
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz, Ant 0	

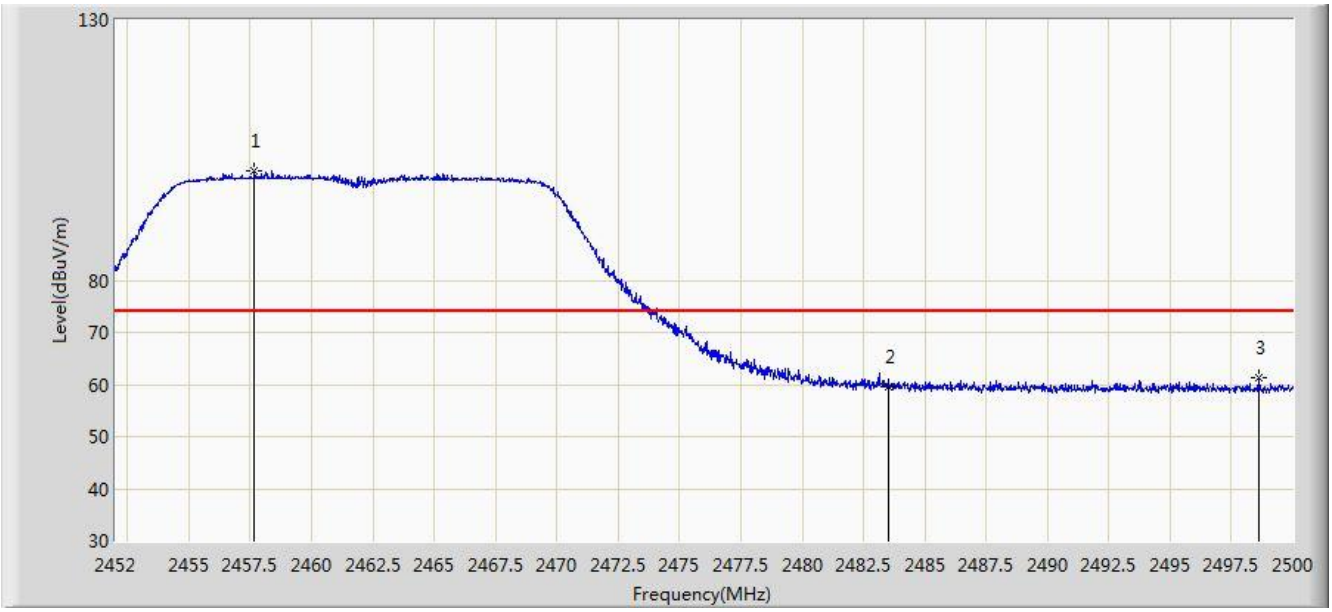


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.808	99.629	67.384	N/A	N/A	32.244	AV
2			2483.500	53.328	21.047	-0.672	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz, Ant 0	

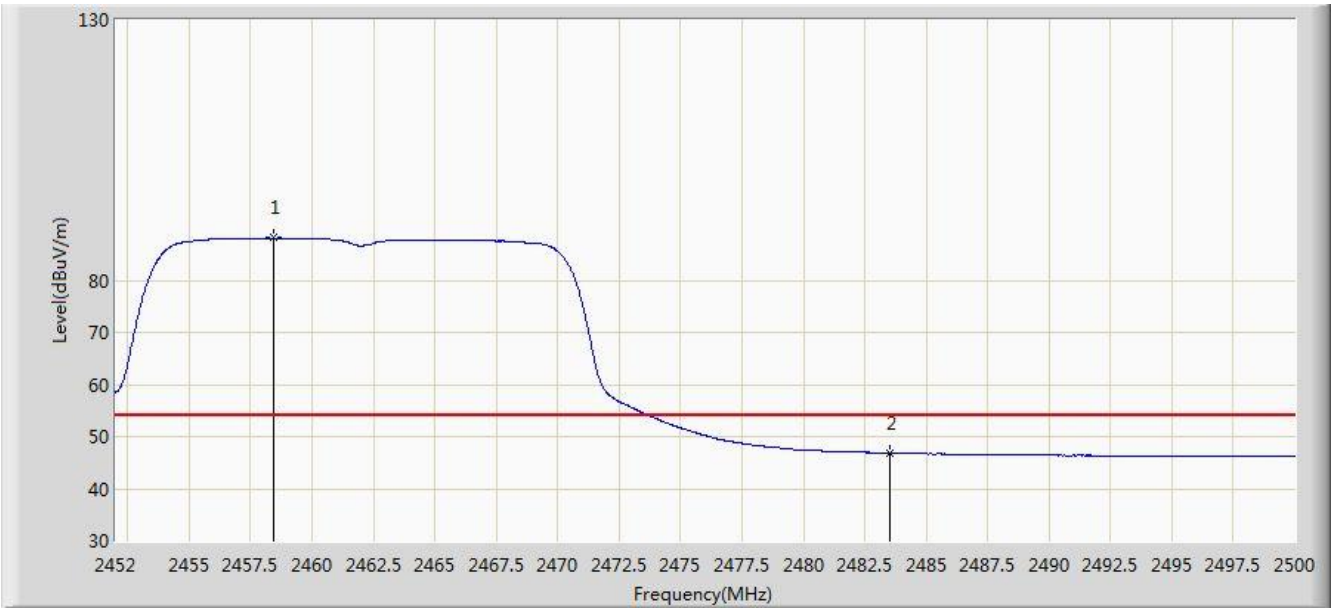


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2457.664	100.981	68.761	N/A	N/A	32.219	PK
2			2483.500	59.654	27.373	-14.346	74.000	32.282	PK
3			2498.632	61.263	28.947	-12.737	74.000	32.316	PK

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

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

Site: AC1	Time: 2017/05/13 - 00:26
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz, Ant 0	

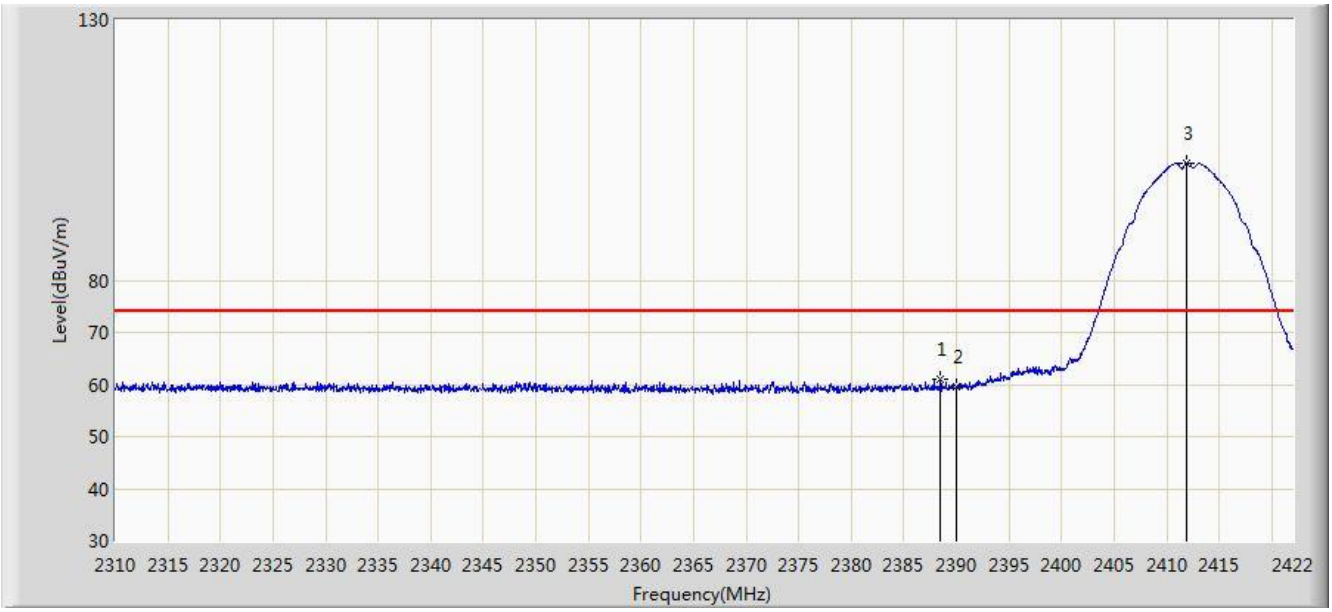


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2458.408	88.139	55.916	N/A	N/A	32.223	AV
2			2483.500	46.842	14.561	-7.158	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz, Ant 1	

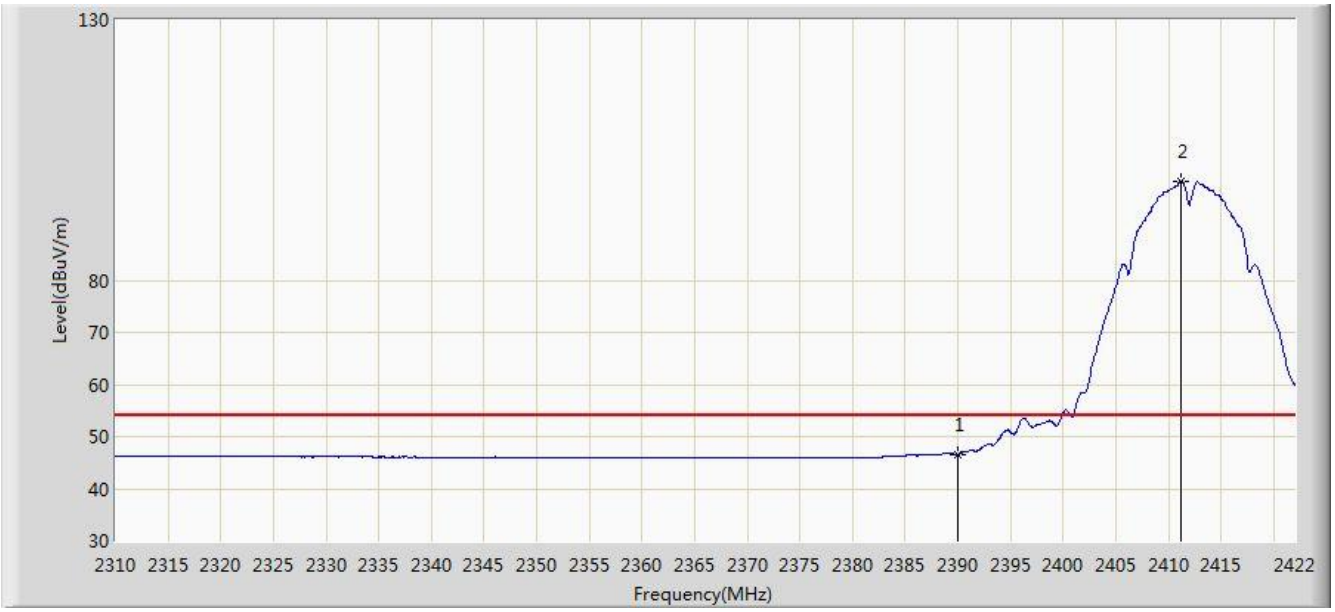


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.456	61.018	28.749	-12.982	74.000	32.270	PK
2			2390.000	59.443	27.165	-14.557	74.000	32.278	PK
3		*	2411.920	102.585	70.345	N/A	N/A	32.240	PK

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

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

Site: AC1	Time: 2017/05/13 - 00:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz, Ant 1	

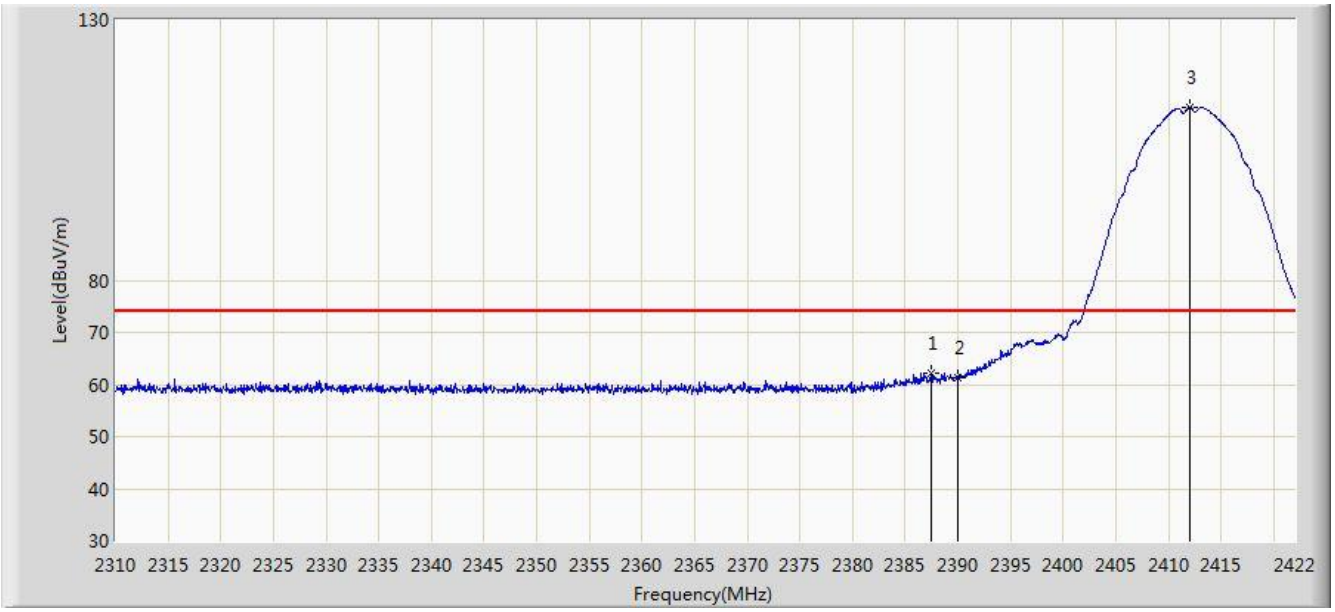


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.607	14.329	-7.393	54.000	32.278	AV
2		*	2411.192	98.997	66.754	N/A	N/A	32.243	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:32
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz, Ant 1	

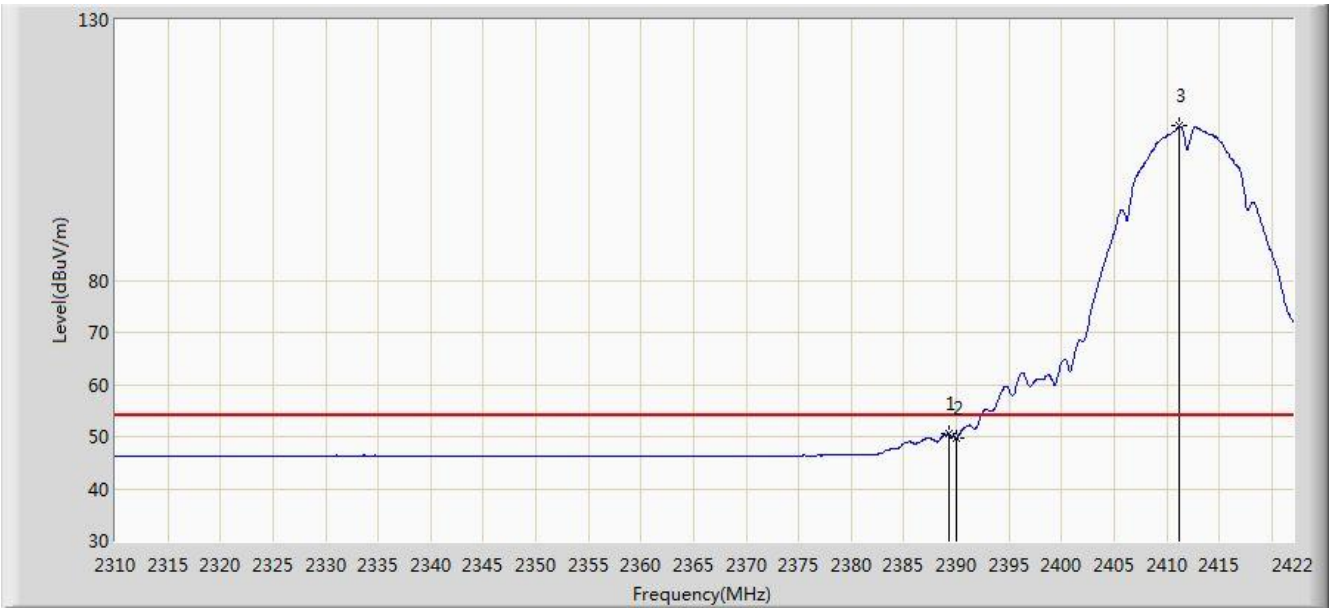


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2387.504	62.197	29.933	-11.803	74.000	32.264	PK
2			2390.000	61.322	29.044	-12.678	74.000	32.278	PK
3		*	2412.032	113.232	80.992	N/A	N/A	32.240	PK

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

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

Site: AC1	Time: 2017/05/13 - 00:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz, Ant 1	

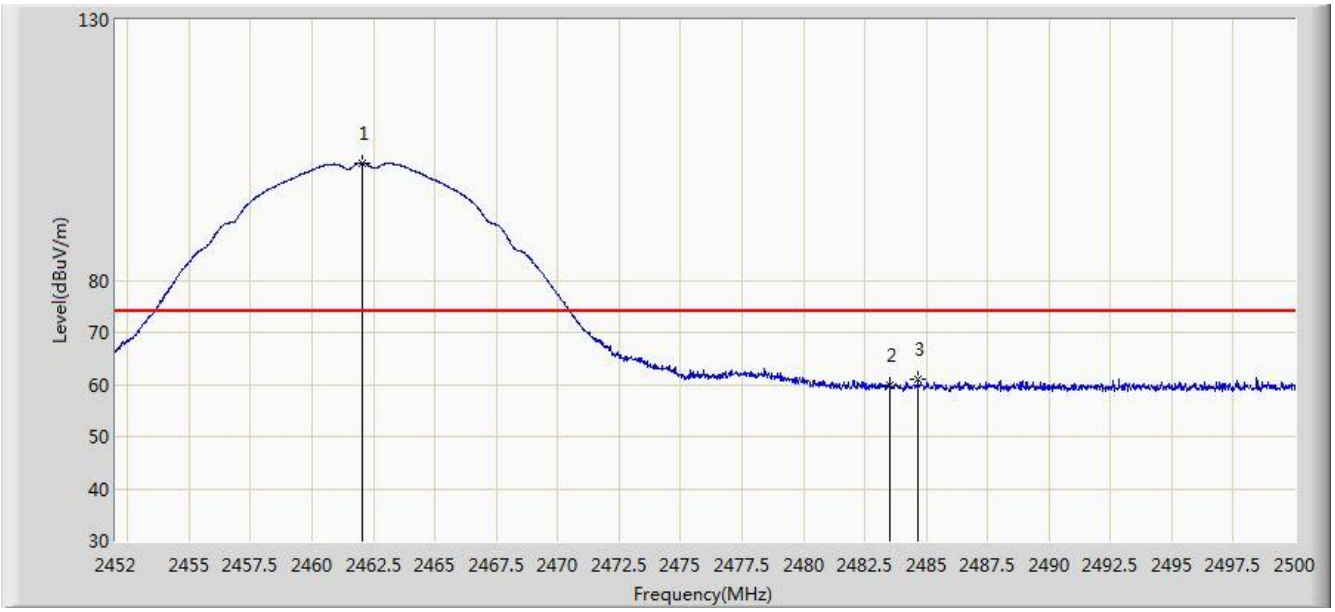


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.240	50.637	18.363	-3.363	54.000	32.274	AV
2			2390.000	49.786	17.508	-4.214	54.000	32.278	AV
3		*	2411.248	109.611	77.368	N/A	N/A	32.243	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	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		*	2462.056	102.574	70.336	N/A	N/A	32.238	PK
2			2483.500	59.998	27.717	-14.002	74.000	32.282	PK
3			2484.664	61.000	28.715	-13.000	74.000	32.286	PK

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

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

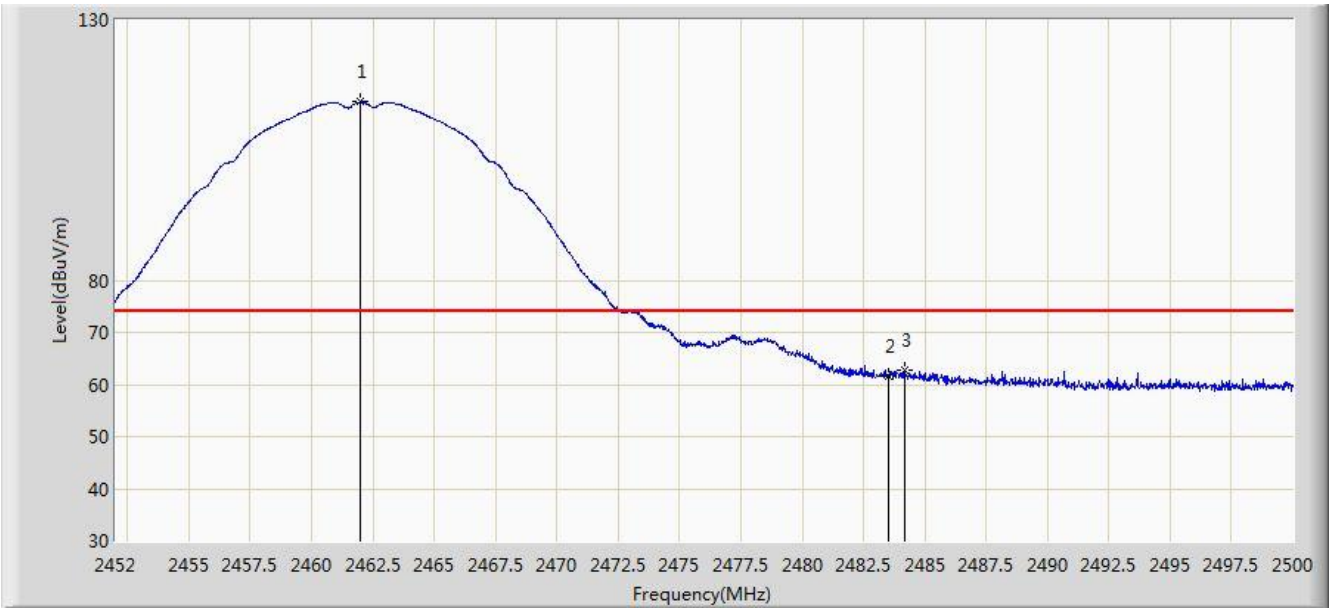
Site: AC1	Time: 2017/05/13 - 00:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz, Ant 1	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.192	99.036	66.801	N/A	N/A	32.235	AV
2			2483.500	46.665	14.384	-7.335	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	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		*	2461.984	114.230	81.992	N/A	N/A	32.238	PK
2			2483.500	61.732	29.451	-12.268	74.000	32.282	PK
3			2484.208	62.693	30.409	-11.307	74.000	32.284	PK

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

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

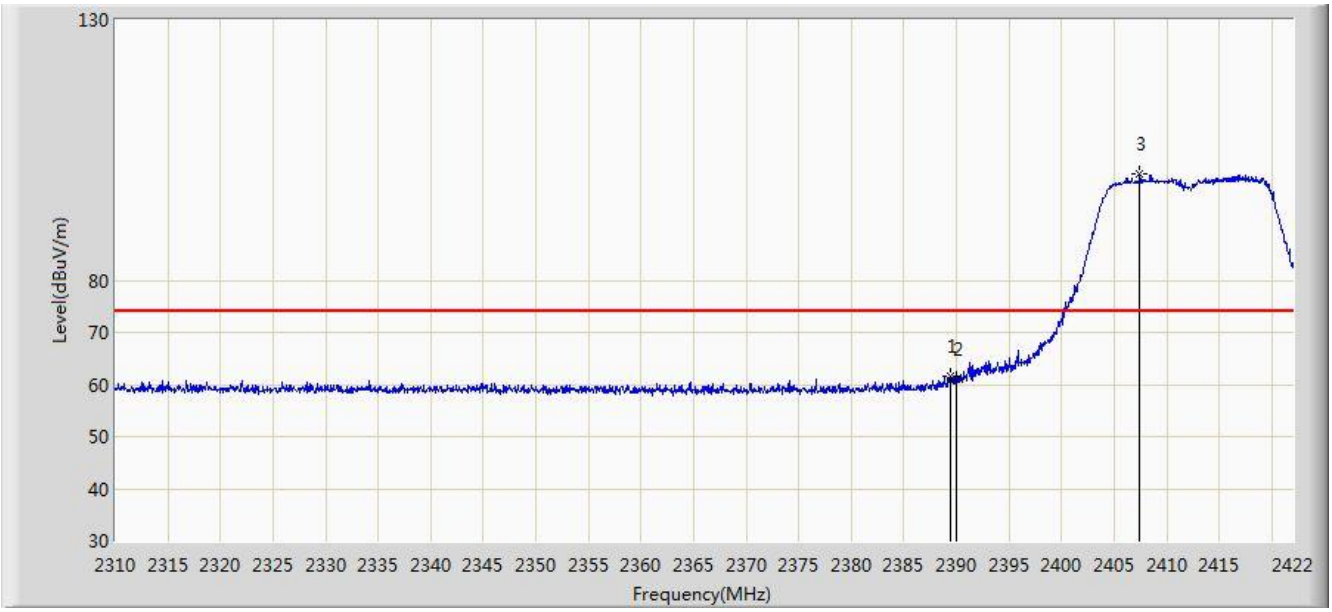
Site: AC1	Time: 2017/05/13 - 00:47
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2462MHz, Ant 1	

No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.192	110.825	78.590	N/A	N/A	32.235	AV
2			2483.500	50.935	18.654	-3.065	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:58
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz, Ant 1	

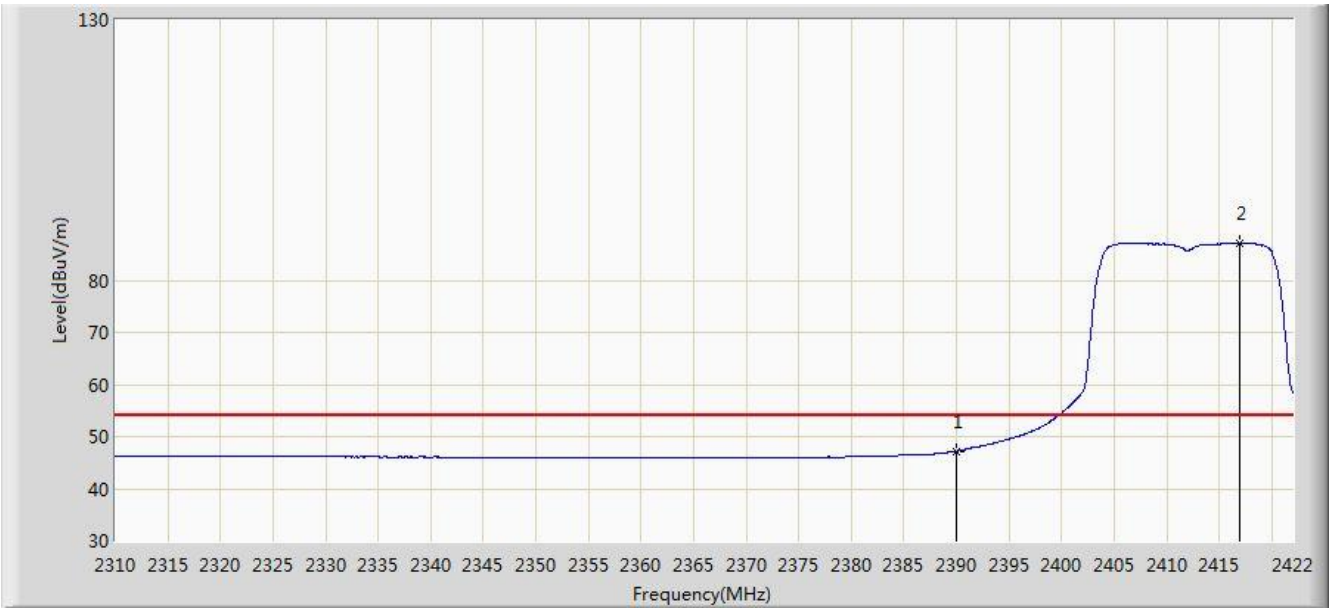


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.464	61.609	29.334	-12.391	74.000	32.275	PK
2			2390.000	60.917	28.639	-13.083	74.000	32.278	PK
3		*	2407.440	100.376	68.120	N/A	N/A	32.256	PK

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

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

Site: AC1	Time: 2017/05/13 - 01:01
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz, Ant 1	

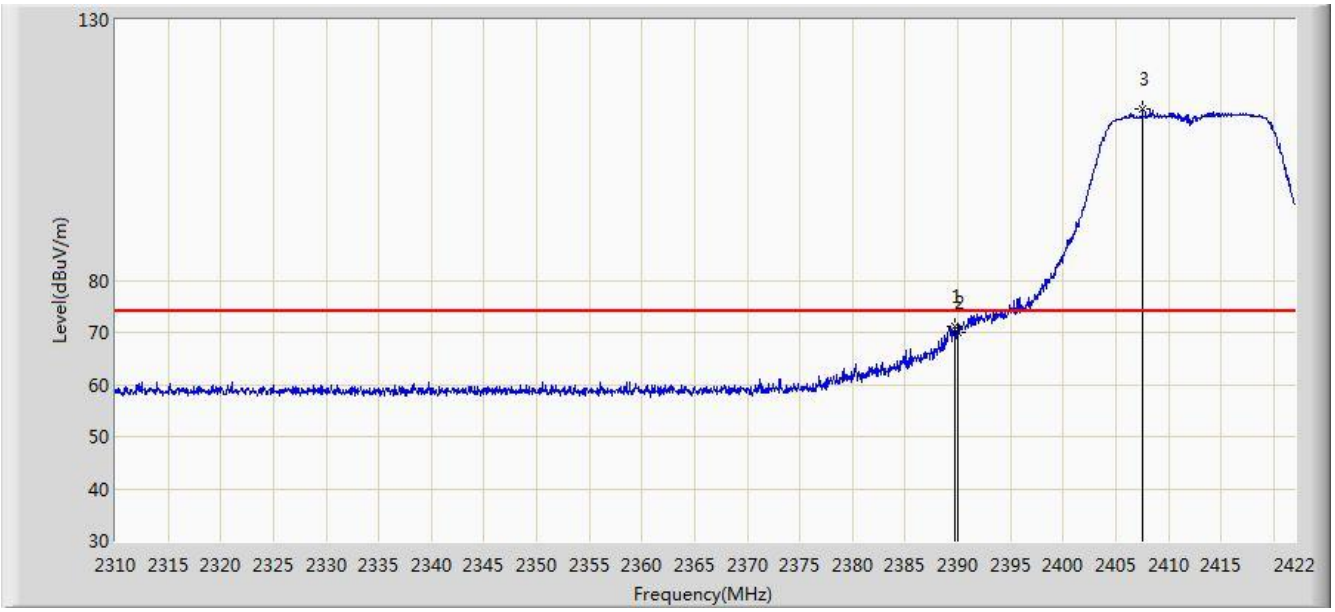


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.207	14.929	-6.793	54.000	32.278	AV
2		*	2416.904	87.195	54.976	N/A	N/A	32.219	AV

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

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

Site: AC1	Time: 2017/05/13 - 00:55
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz, Ant 1	

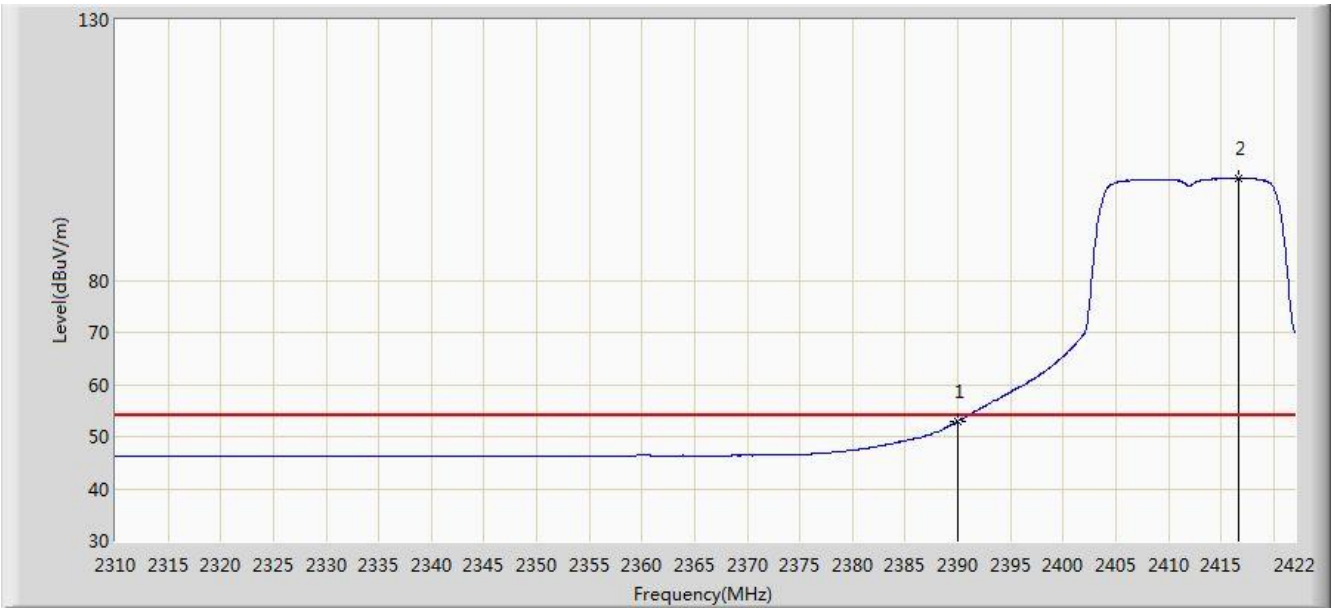


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.688	71.073	38.797	-2.927	74.000	32.277	PK
2			2390.000	69.872	37.594	-4.128	74.000	32.278	PK
3		*	2407.552	112.830	80.575	N/A	N/A	32.256	PK

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

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

Site: AC1	Time: 2017/05/13 - 00:54
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2412MHz, Ant 1	

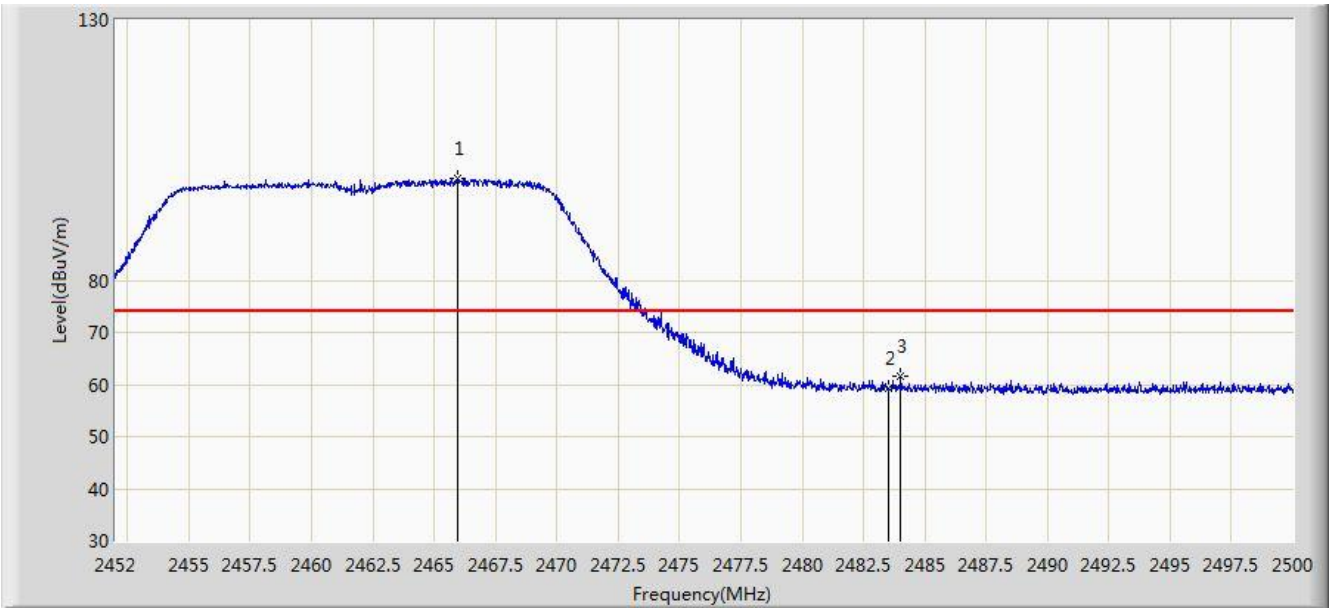


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.021	20.743	-0.979	54.000	32.278	AV
2		*	2416.736	99.649	67.429	N/A	N/A	32.220	AV

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

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

Site: AC1	Time: 2017/05/13 - 01:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz, Ant 1	

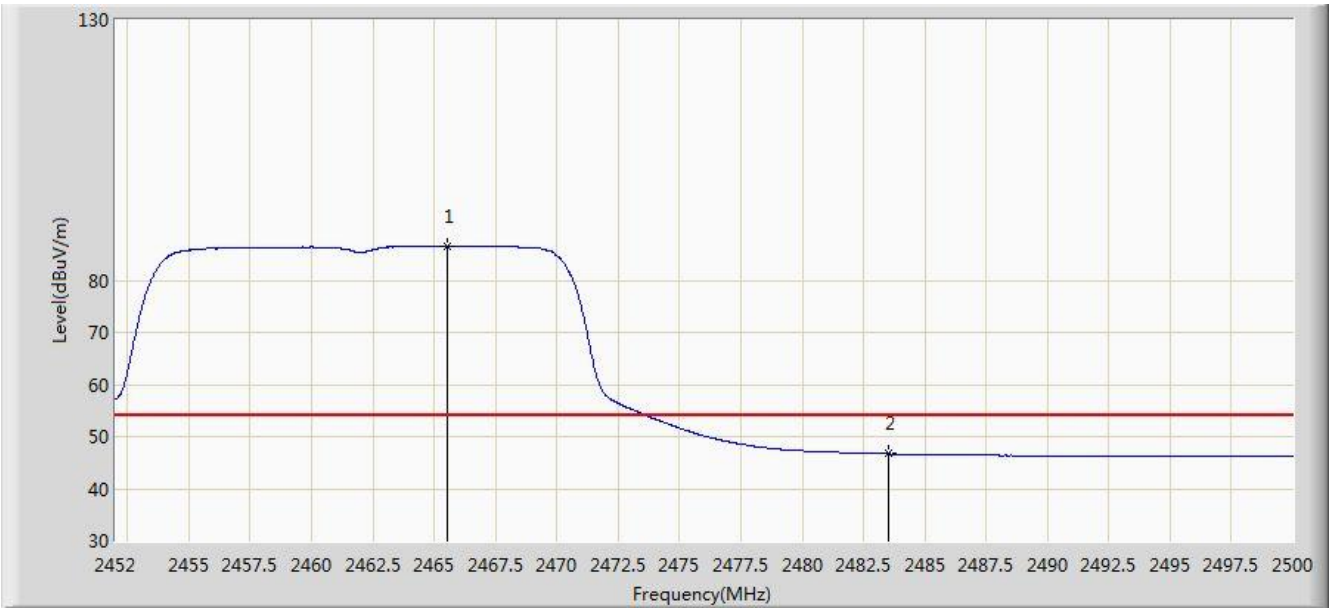


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.968	99.503	67.260	N/A	N/A	32.243	PK
2			2483.500	59.347	27.066	-14.653	74.000	32.282	PK
3			2484.016	61.474	29.191	-12.526	74.000	32.283	PK

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

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

Site: AC1	Time: 2017/05/13 - 01:14
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz, Ant 1	

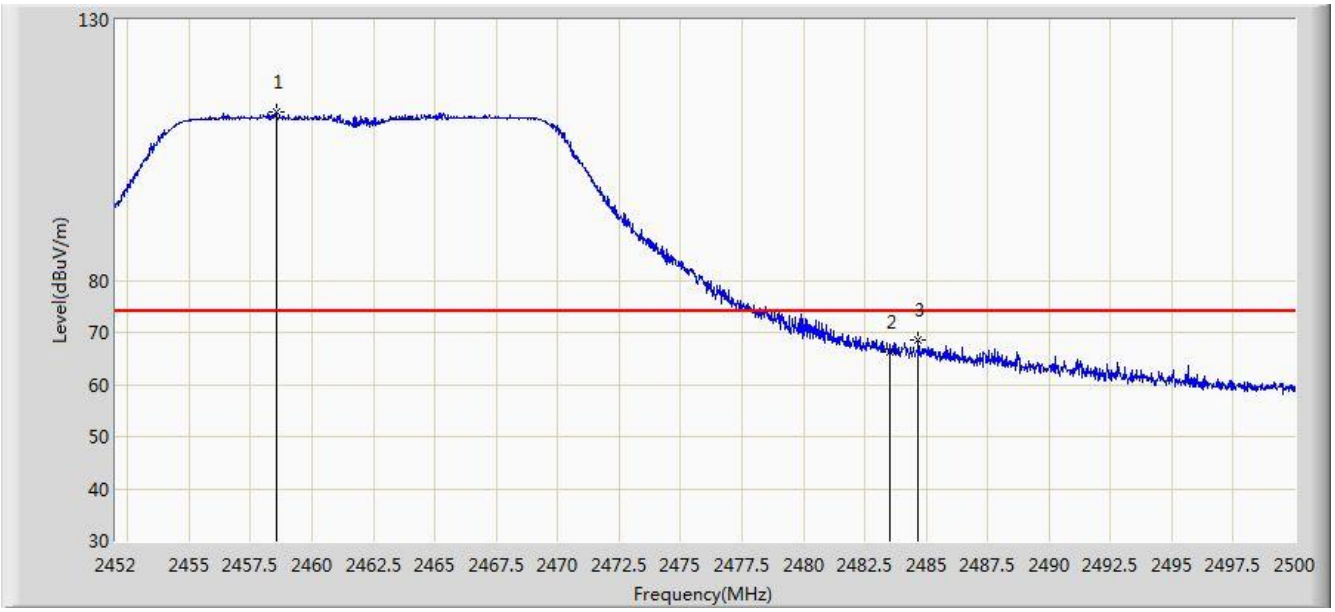


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2465.536	86.657	54.414	N/A	N/A	32.242	AV
2			2483.500	46.706	14.425	-7.294	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 01:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz, Ant 1	

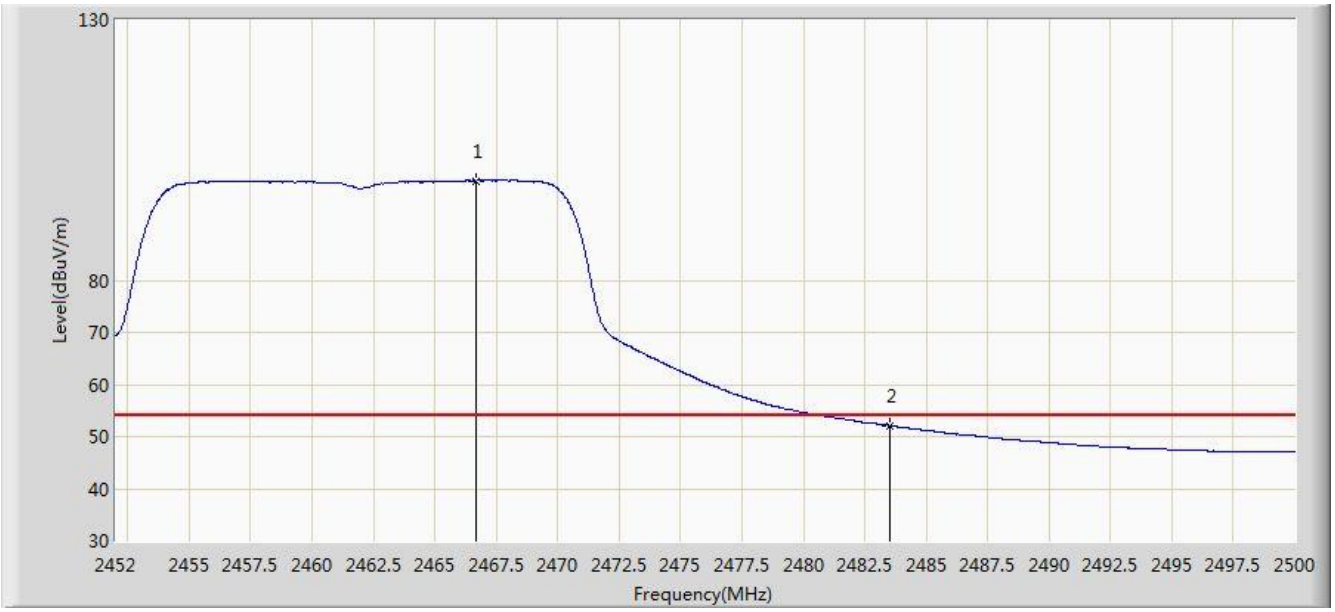


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2458.528	112.226	80.003	N/A	N/A	32.223	PK
2			2483.500	66.286	34.005	-7.714	74.000	32.282	PK
3			2484.688	68.608	36.323	-5.392	74.000	32.286	PK

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

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

Site: AC1	Time: 2017/05/13 - 01:11
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2462MHz, Ant 1	

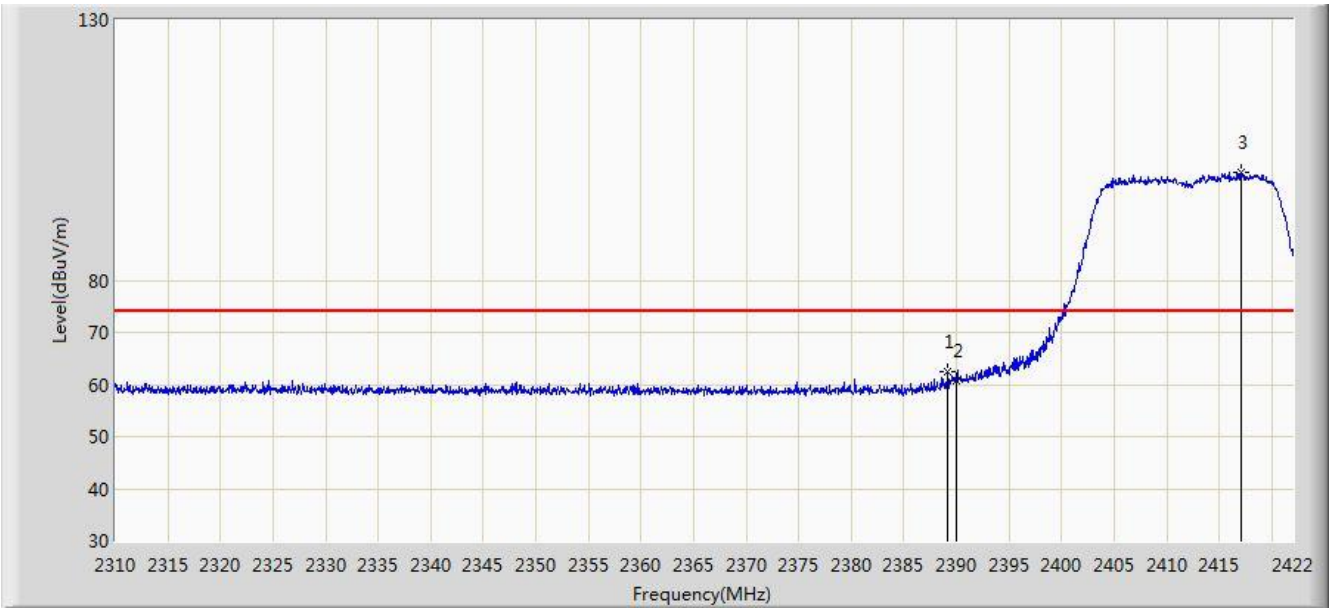


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2466.688	99.125	66.880	N/A	N/A	32.244	AV
2			2483.500	52.156	19.875	-1.844	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 01:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz, Ant 0 + 1	

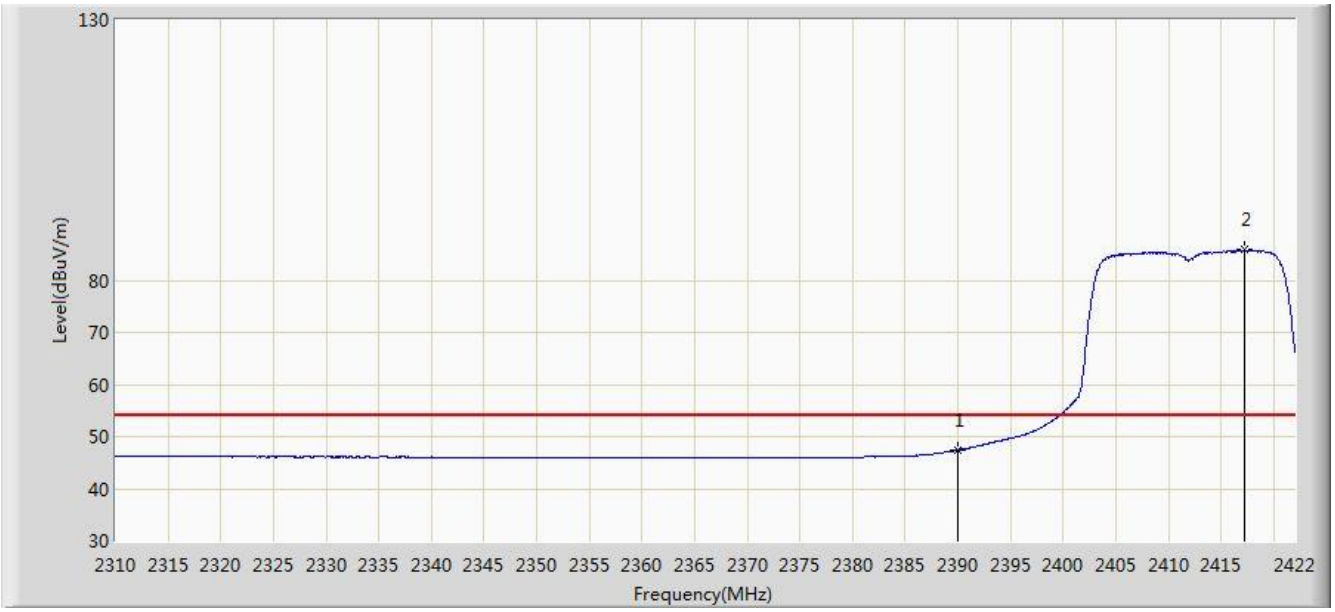


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.184	62.343	30.069	-11.657	74.000	32.274	PK
2			2390.000	60.849	28.571	-13.151	74.000	32.278	PK
3		*	2417.128	100.580	68.362	N/A	N/A	32.219	PK

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

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

Site: AC1	Time: 2017/05/13 - 01:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz, Ant 0 + 1	

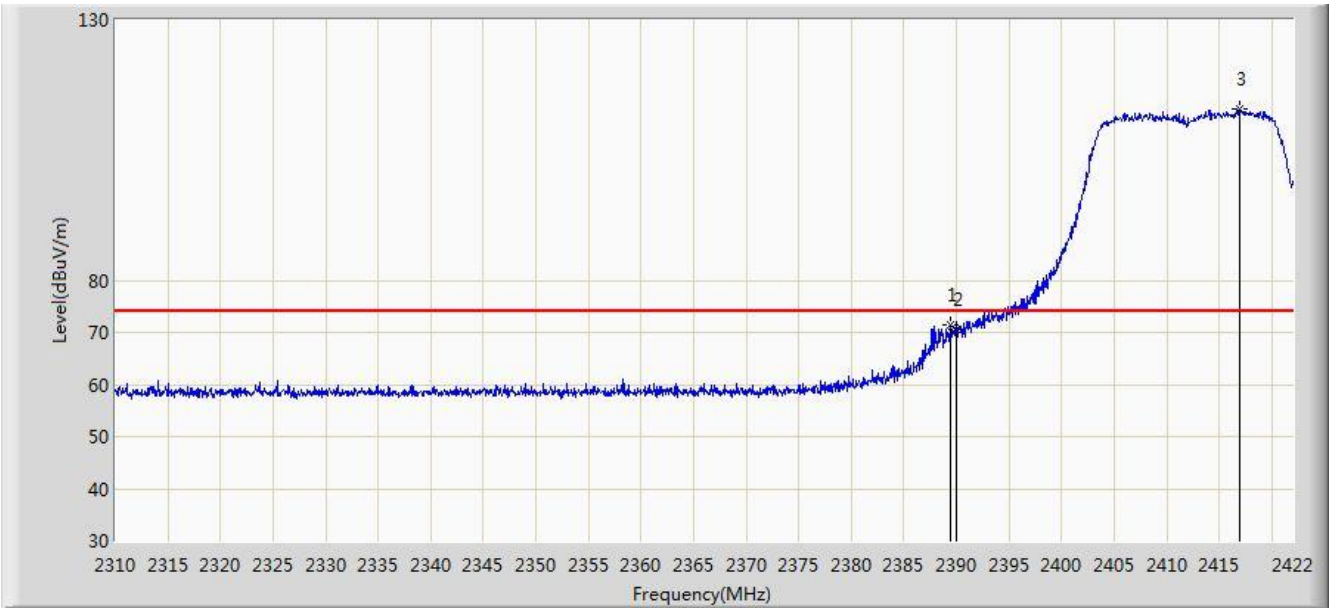


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.429	15.151	-6.571	54.000	32.278	AV
2		*	2417.240	85.812	53.594	N/A	N/A	32.217	AV

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

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

Site: AC1	Time: 2017/05/13 - 01:24
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz, Ant 0 + 1	

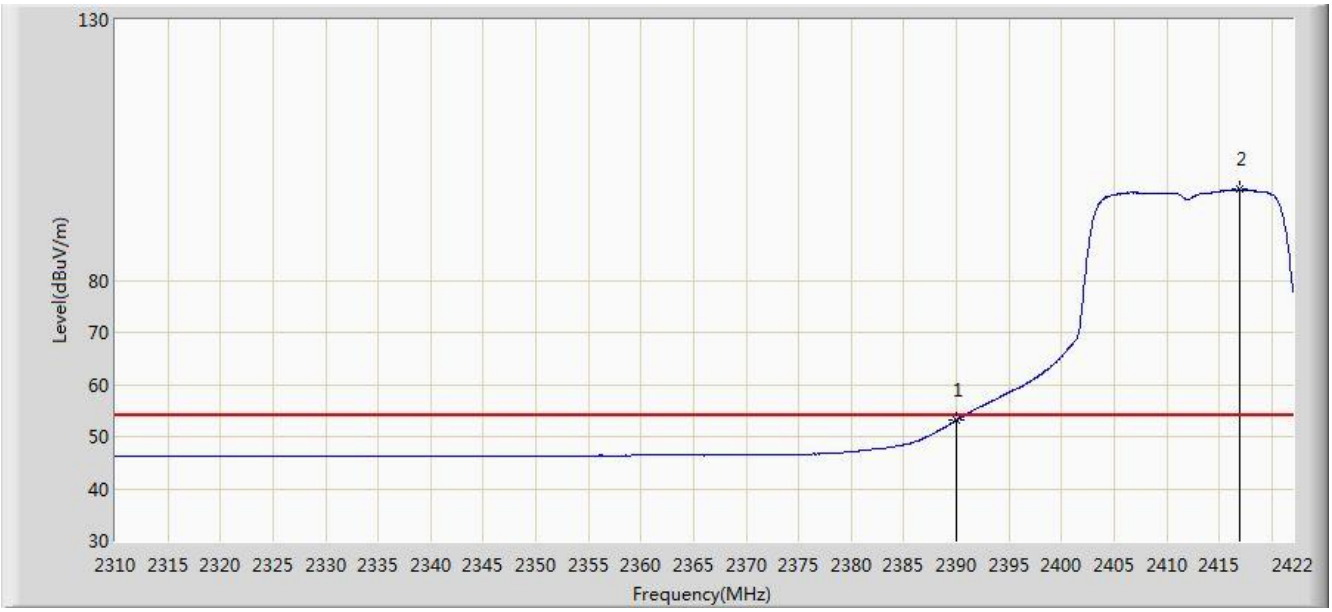


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.408	71.492	39.217	-2.508	74.000	32.274	PK
2			2390.000	70.531	38.253	-3.469	74.000	32.278	PK
3		*	2416.904	112.873	80.654	N/A	N/A	32.219	PK

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

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

Site: AC1	Time: 2017/05/13 - 01:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz, Ant 0 + 1	

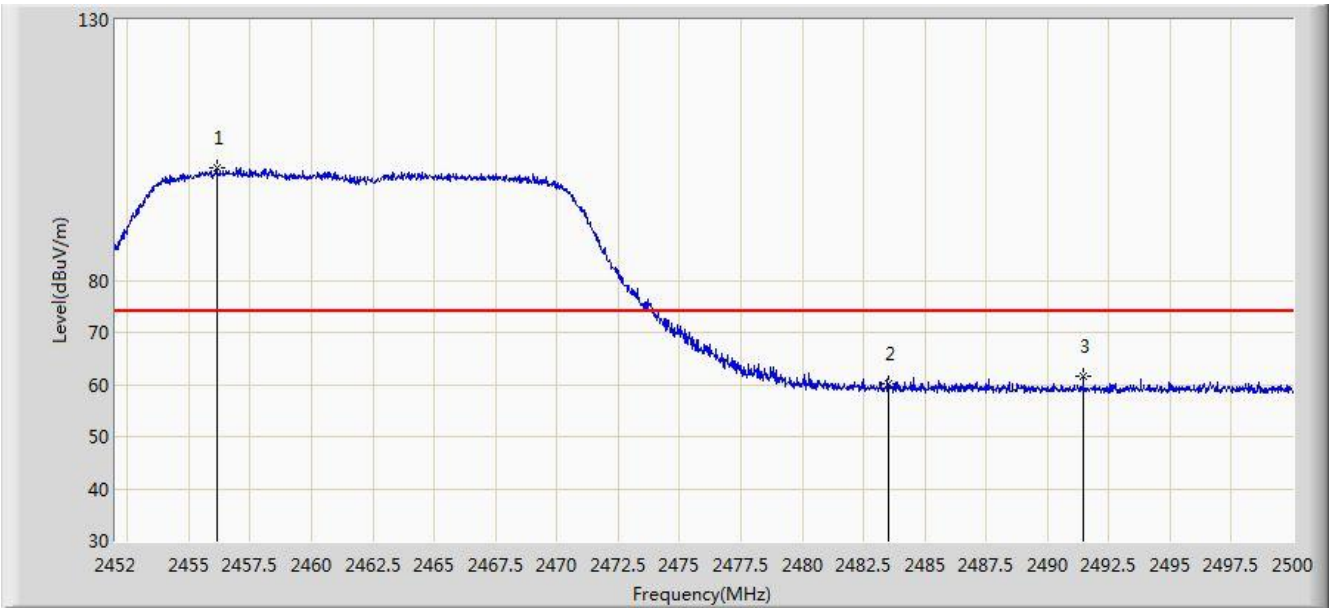


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.155	20.877	-0.845	54.000	32.278	AV
2		*	2417.016	97.465	65.246	N/A	N/A	32.219	AV

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

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

Site: AC1	Time: 2017/05/13 - 01:36
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz, Ant 0 + 1	

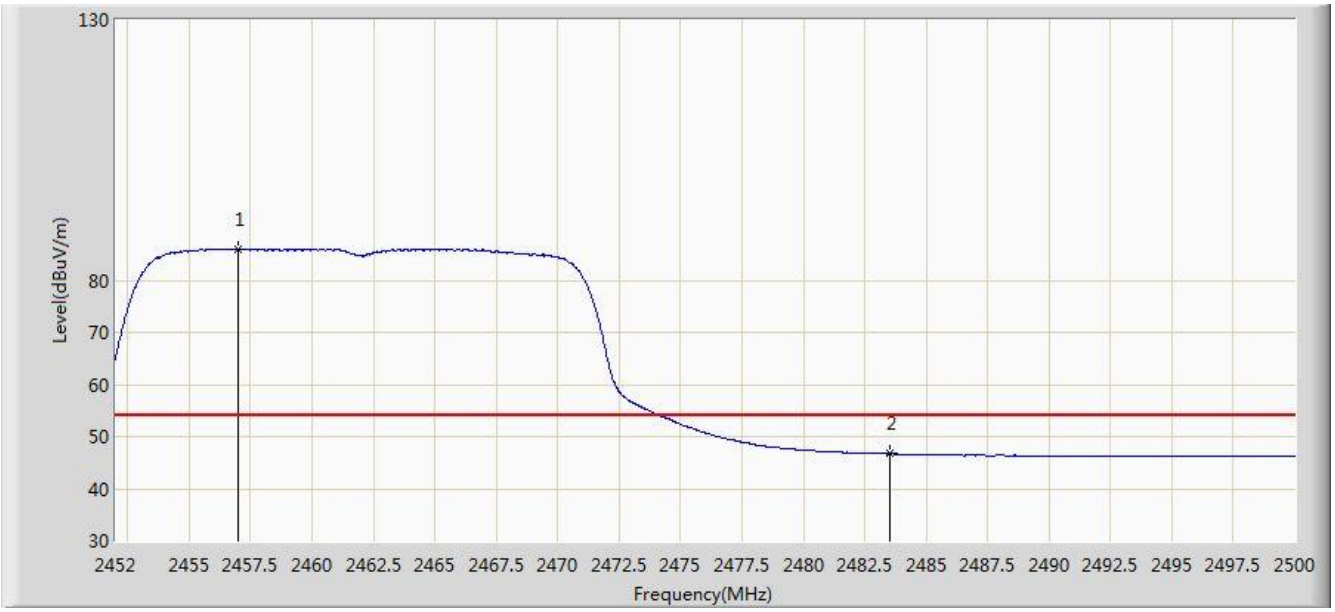


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.128	101.532	69.319	N/A	N/A	32.213	PK
2			2483.500	60.093	27.812	-13.907	74.000	32.282	PK
3			2491.456	61.674	29.365	-12.326	74.000	32.309	PK

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

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

Site: AC1	Time: 2017/05/13 - 01:38
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz, Ant 0 + 1	

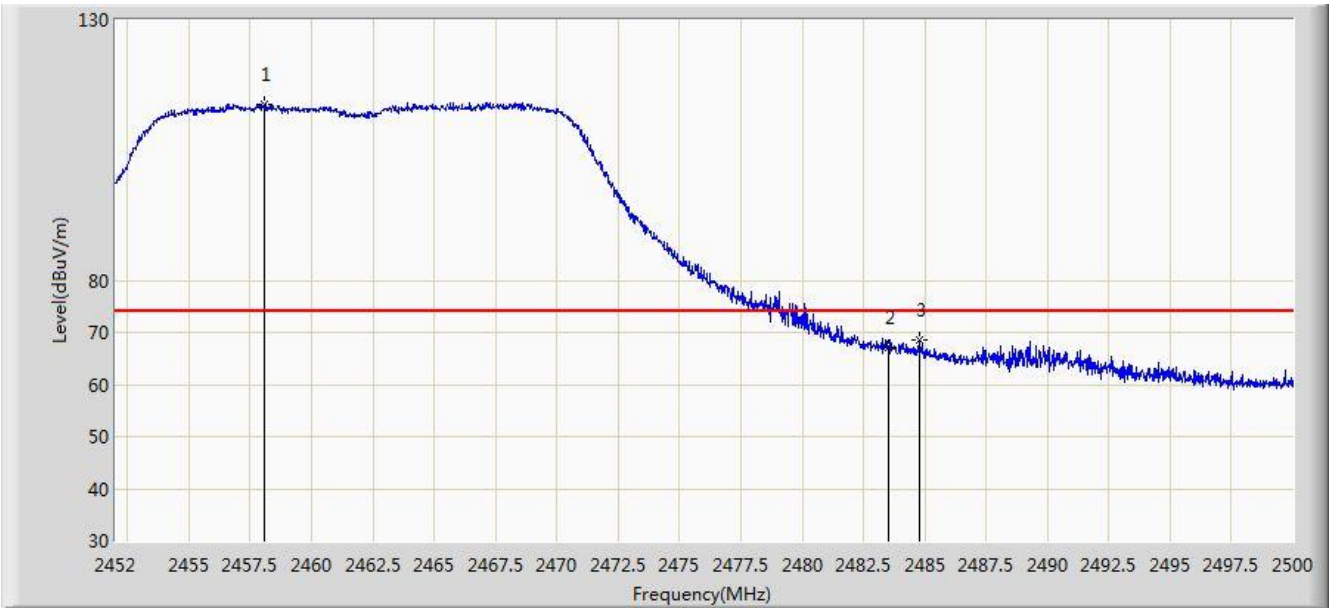


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.968	86.018	53.801	N/A	N/A	32.217	AV
2			2483.500	46.676	14.395	-7.324	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 01:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz, Ant 0 + 1	

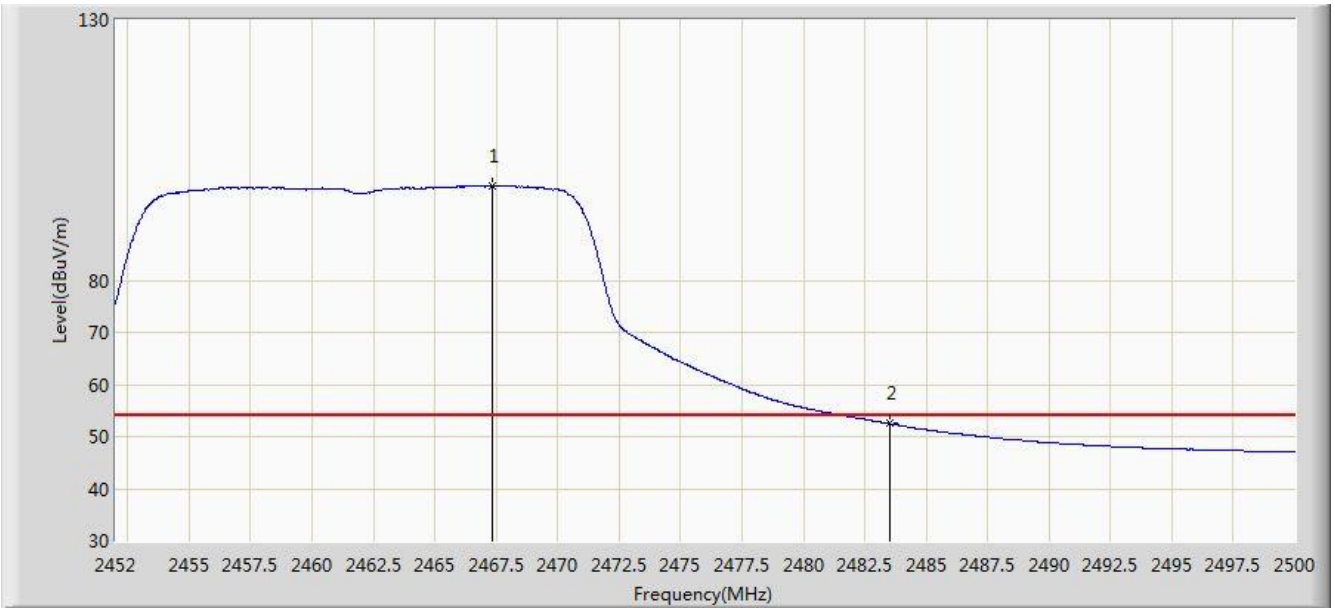


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2458.072	113.717	81.496	N/A	N/A	32.222	PK
2			2483.500	67.193	34.912	-6.807	74.000	32.282	PK
3			2484.760	68.679	36.393	-5.321	74.000	32.286	PK

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

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

Site: AC1	Time: 2017/05/13 - 01:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz, Ant 0 + 1	

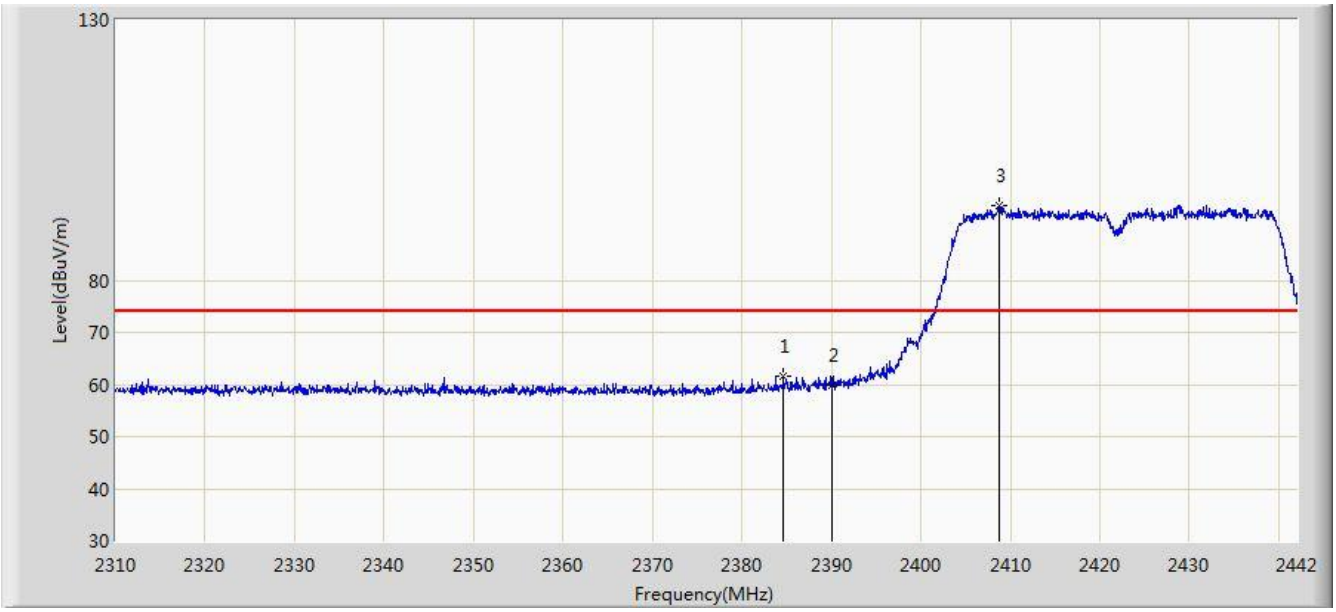


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2467.336	98.251	66.005	N/A	N/A	32.245	AV
2			2483.500	52.487	20.206	-1.513	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 01:55
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz, Ant 0 + 1	

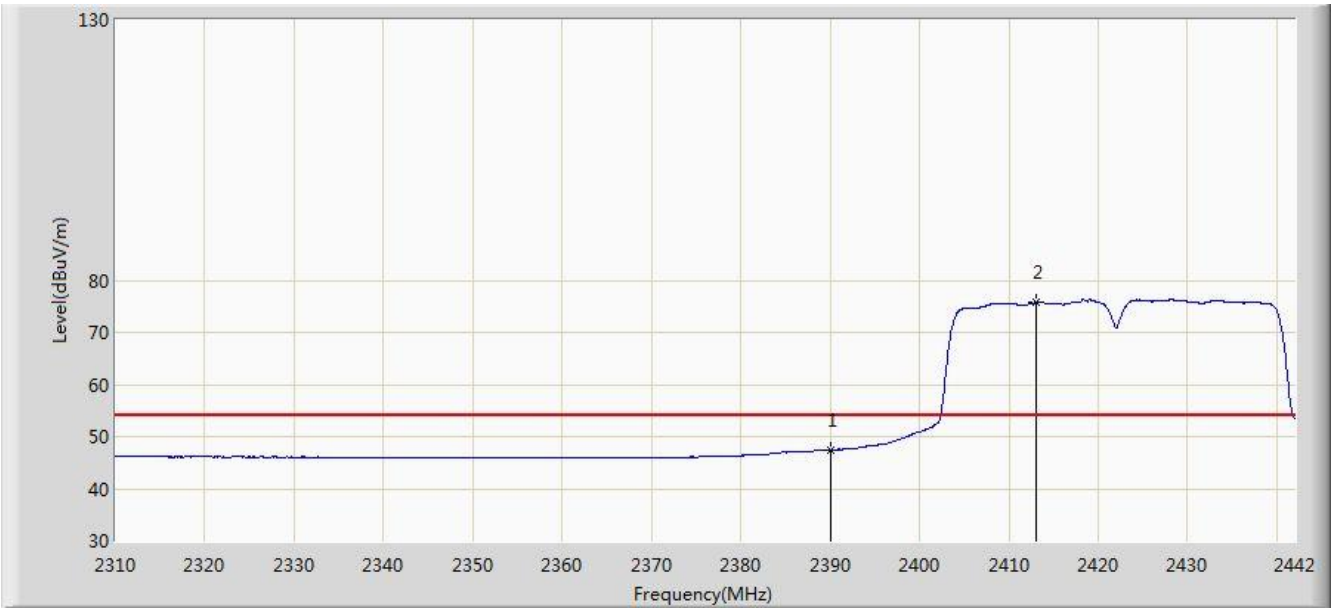


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2384.646	61.503	29.255	-12.497	74.000	32.249	PK
2			2390.000	59.979	27.701	-14.021	74.000	32.278	PK
3		*	2408.802	94.422	62.171	N/A	N/A	32.251	PK

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

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

Site: AC1	Time: 2017/05/13 - 01:56
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz, Ant 0 + 1	

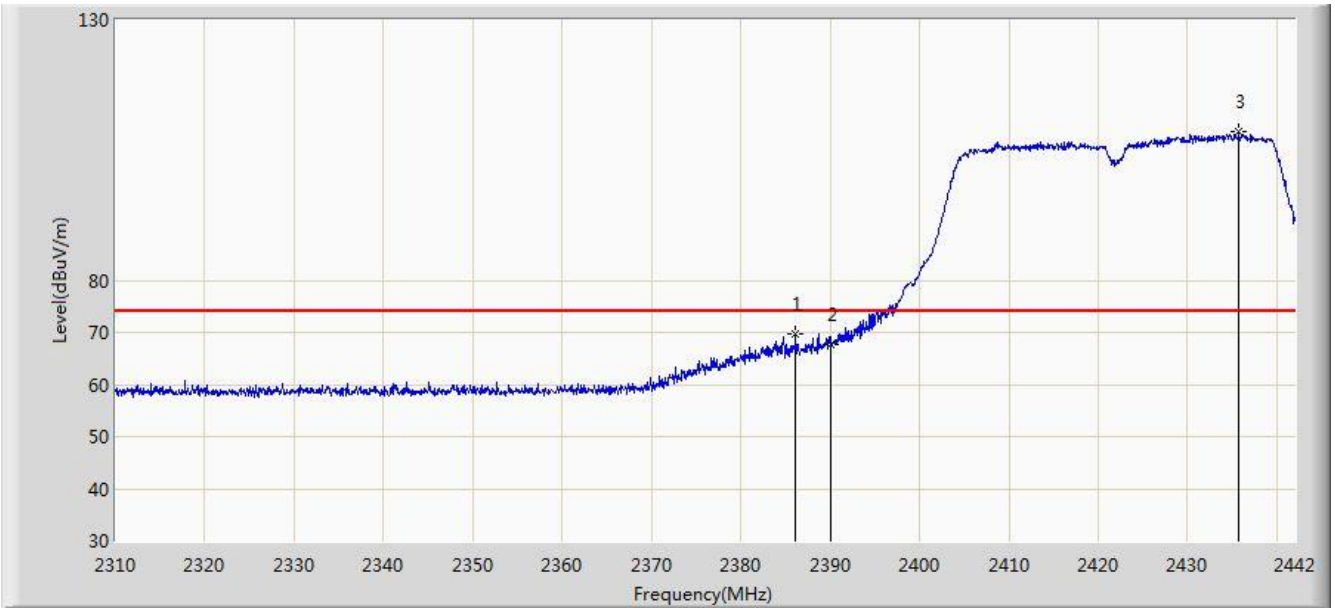


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.449	15.171	-6.551	54.000	32.278	AV
2		*	2413.092	75.713	43.478	N/A	N/A	32.235	AV

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

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

Site: AC1	Time: 2017/05/13 - 01:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz, Ant 0 + 1	

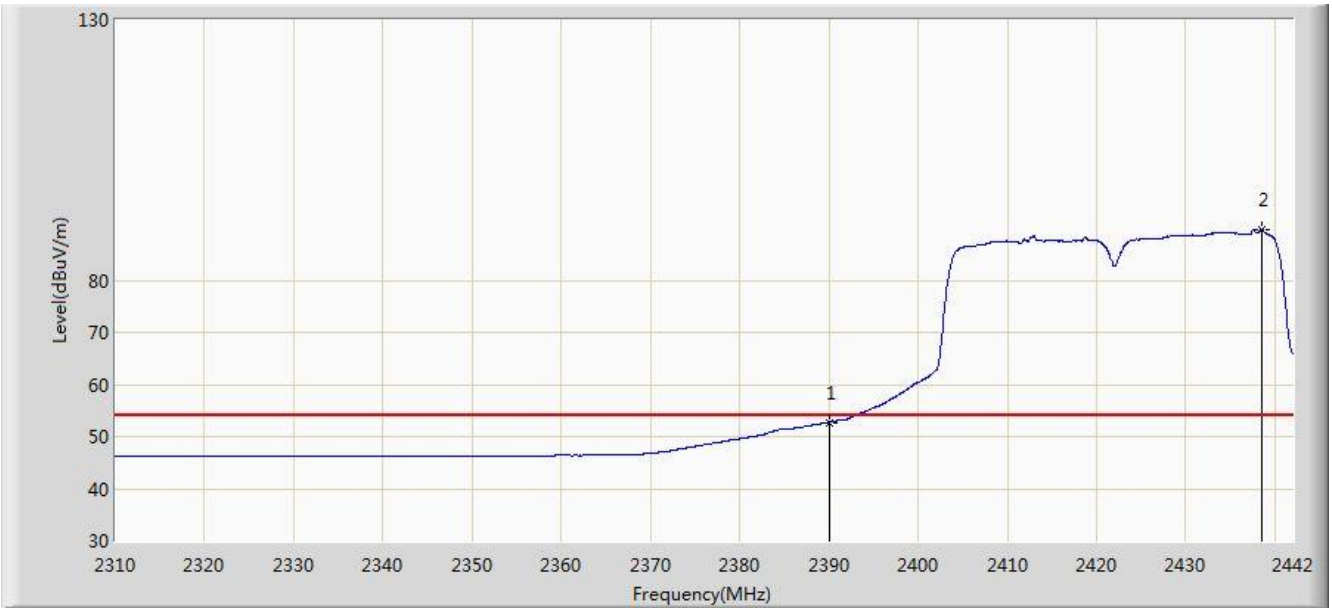


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2386.164	69.622	37.365	-4.378	74.000	32.257	PK
2			2390.000	67.668	35.390	-6.332	74.000	32.278	PK
3		*	2435.730	108.498	76.327	N/A	N/A	32.171	PK

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

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

Site: AC1	Time: 2017/05/13 - 01:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz, Ant 0 + 1	

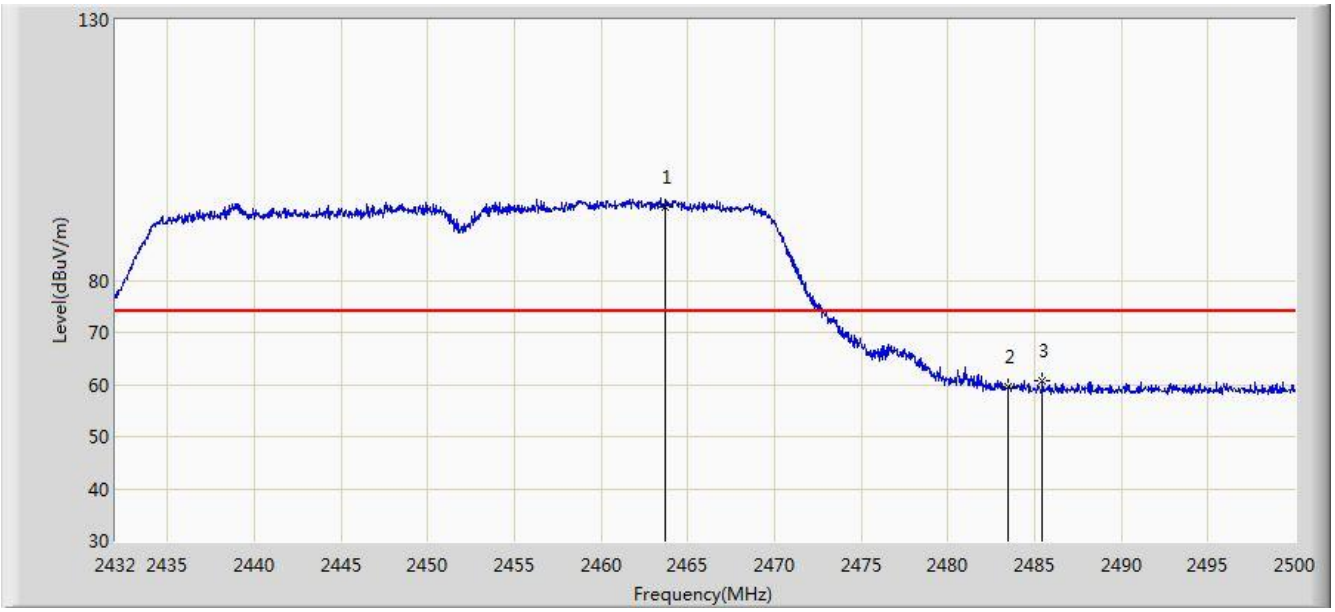


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	52.709	20.431	-1.291	54.000	32.278	AV
2		*	2438.568	89.855	57.684	N/A	N/A	32.170	AV

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

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

Site: AC1	Time: 2017/05/13 - 02:07
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz, Ant 0 + 1	

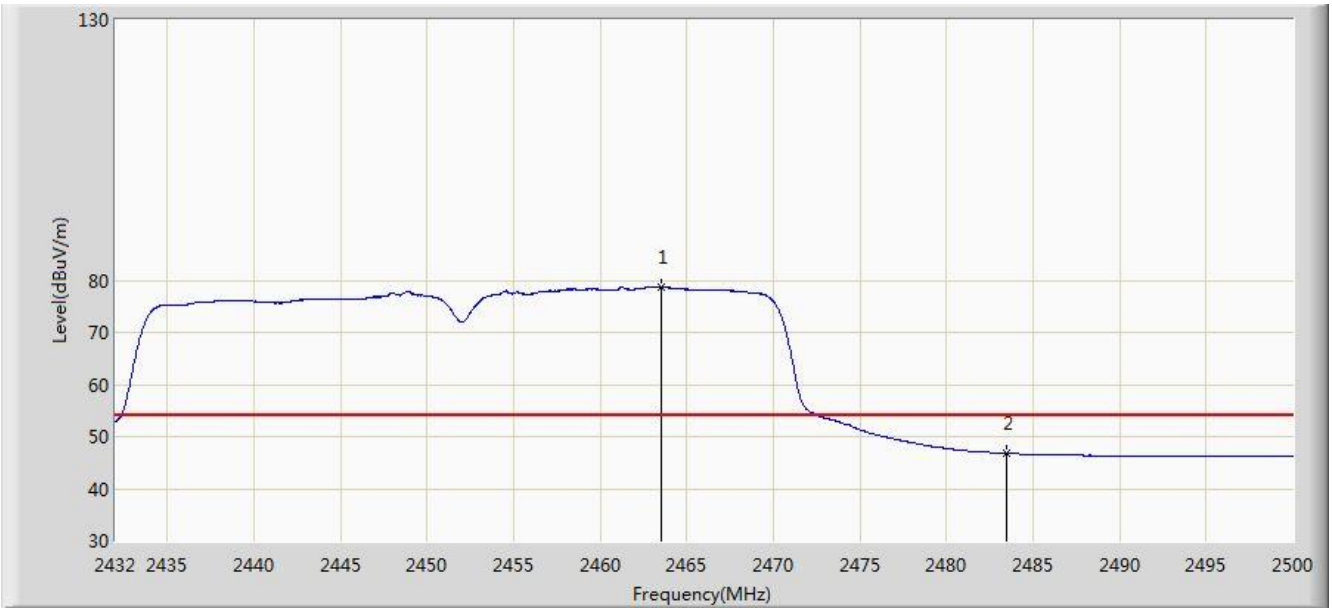


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.688	94.148	61.908	N/A	N/A	32.240	PK
2			2483.500	59.453	27.172	-14.547	74.000	32.282	PK
3			2485.448	60.678	28.390	-13.322	74.000	32.288	PK

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

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

Site: AC1	Time: 2017/05/13 - 02:09
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz, Ant 0 + 1	

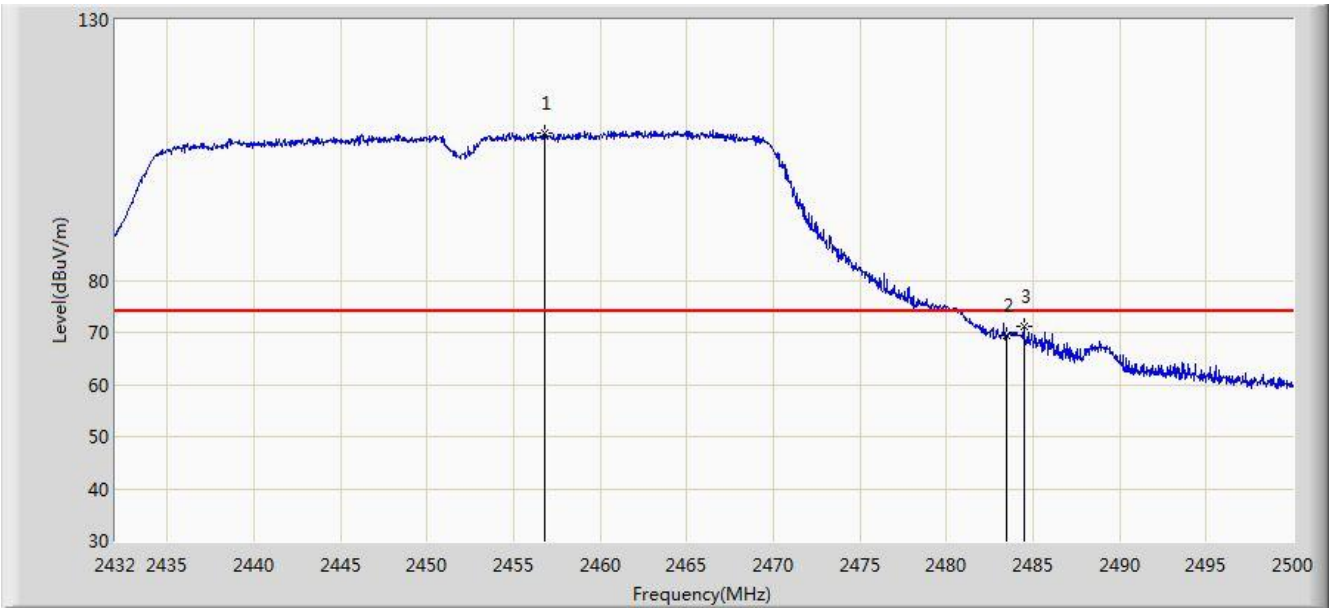


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.518	78.764	46.525	N/A	N/A	32.240	AV
2			2483.500	46.762	14.481	-7.238	54.000	32.282	AV

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

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

Site: AC1	Time: 2017/05/13 - 02:06
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz, Ant 0 + 1	

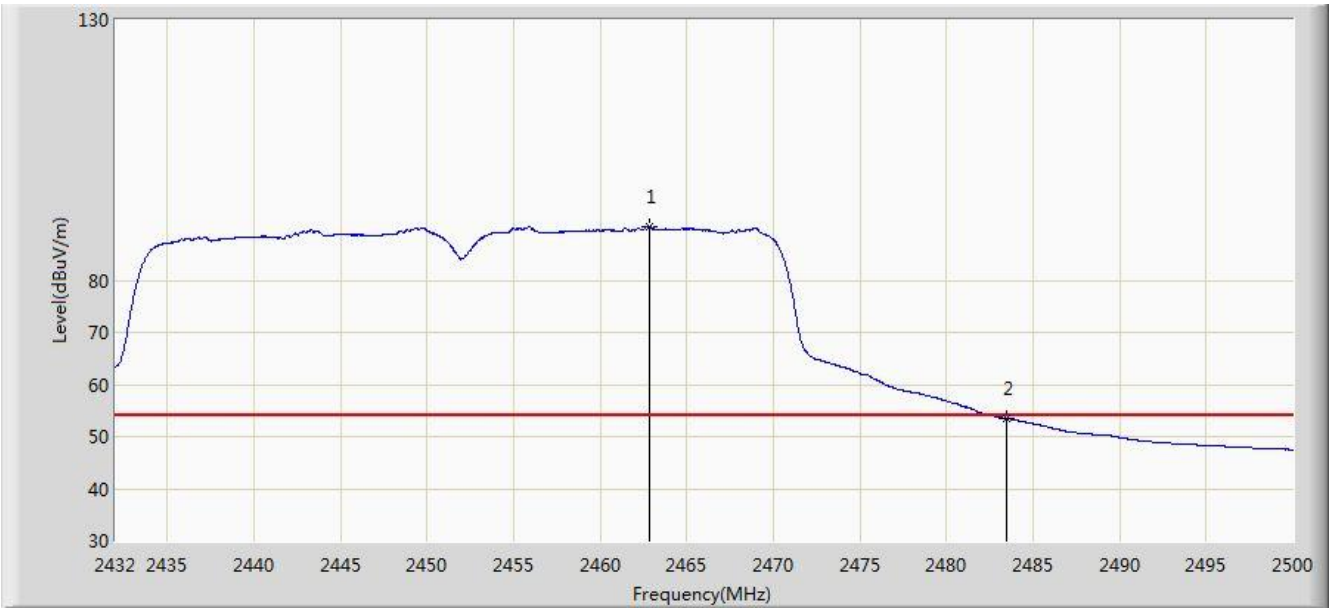


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.820	108.124	75.908	N/A	N/A	32.216	PK
2			2483.500	69.375	37.094	-4.625	74.000	32.282	PK
3			2484.462	71.179	38.894	-2.821	74.000	32.284	PK

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

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

Site: AC1	Time: 2017/05/13 - 02:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Bruce Wang
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz, Ant 0 + 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.872	90.393	58.154	N/A	N/A	32.239	AV
2			2483.500	53.479	21.198	-0.521	54.000	32.282	AV

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

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

7.8. AC Conducted Emissions Measurement

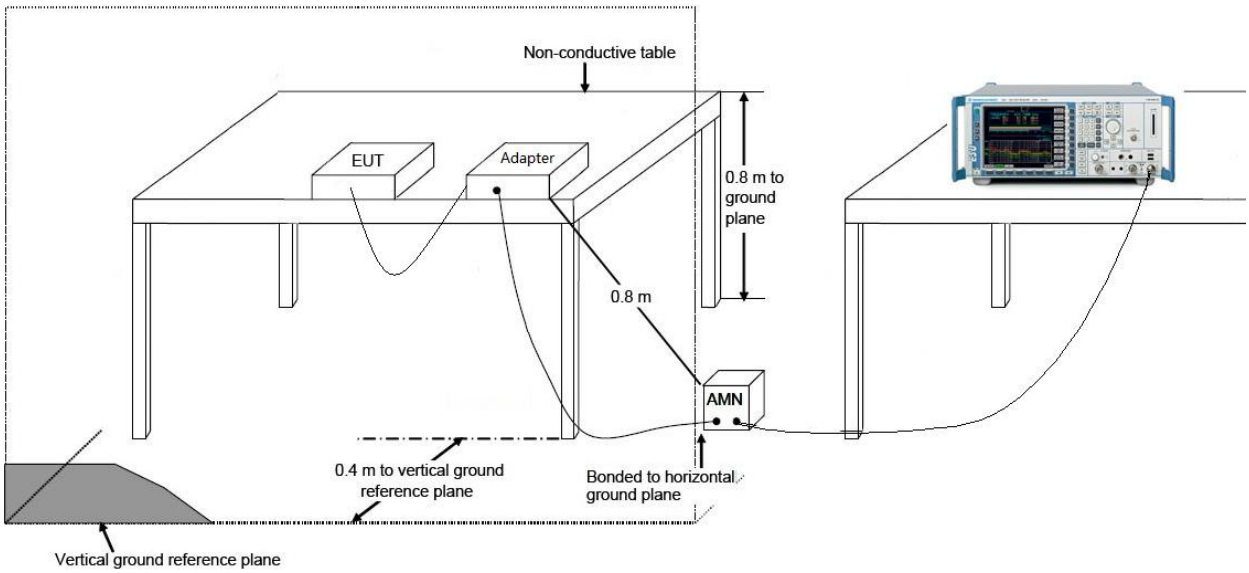
7.8.1. Test Limit

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.

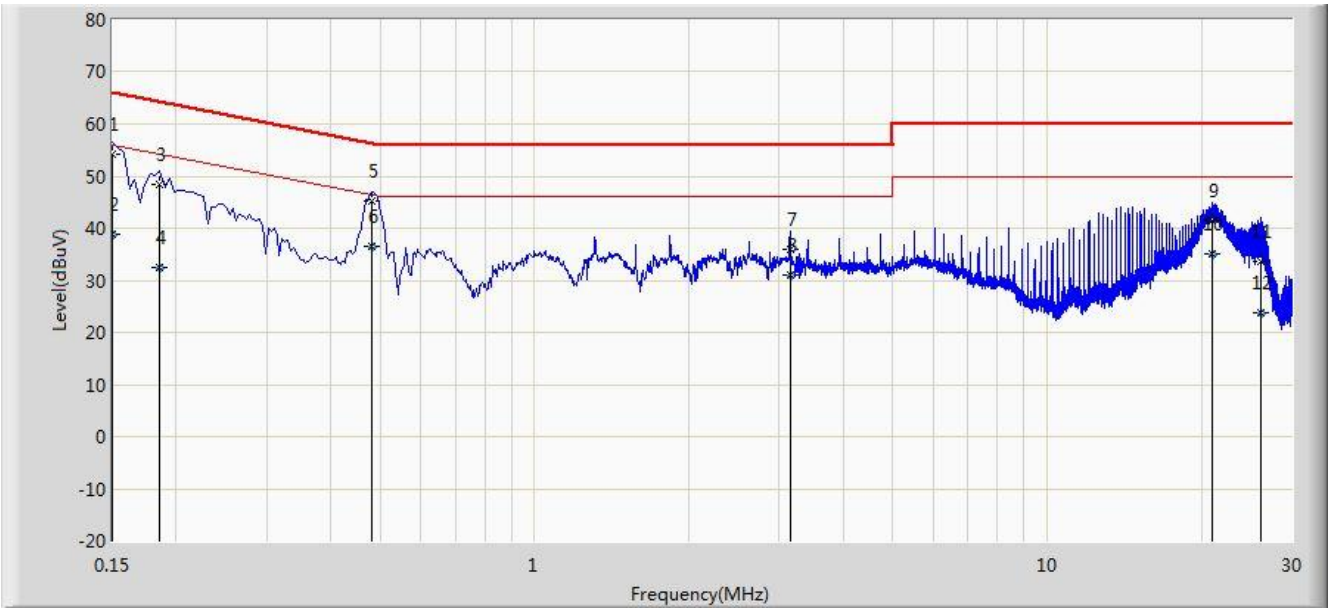
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.8.2. Test Setup



7.8.3. Test Result

Site: SR2	Time: 2017/05/15 - 17:38
Limit: FCC_Part15.207_CE_AC Power_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Mode 1	

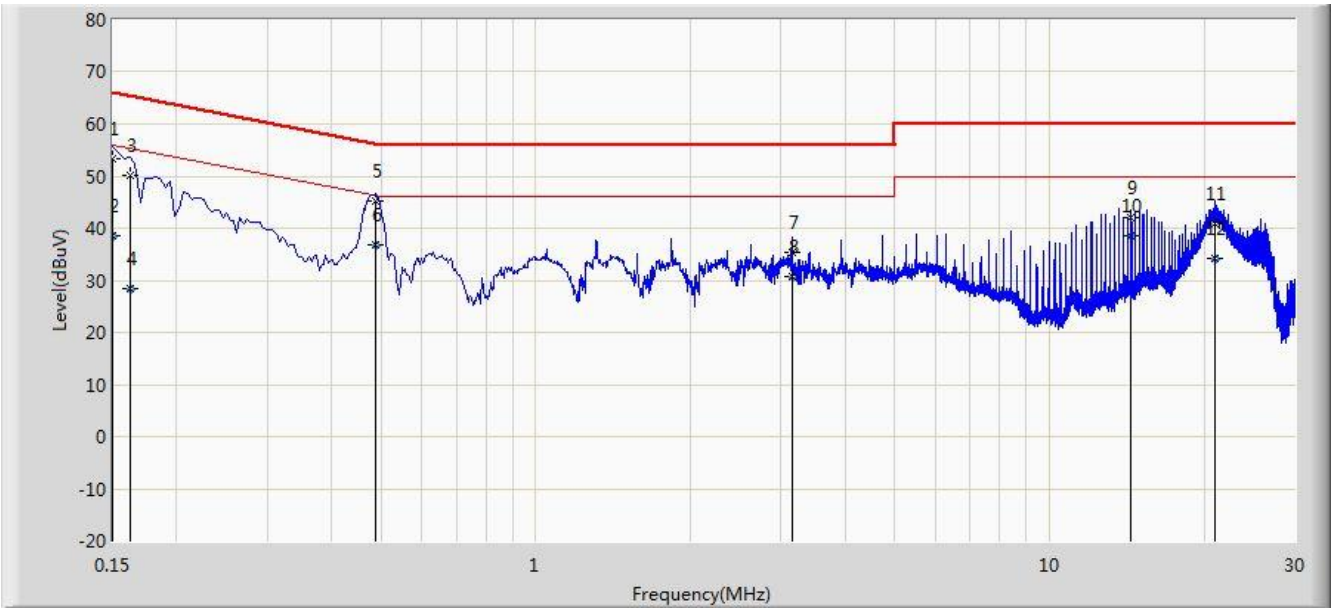


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	54.084	42.915	-11.916	66.000	11.168	QP
2			0.150	38.872	27.704	-17.128	56.000	11.168	AV
3			0.186	48.307	38.269	-15.906	64.213	10.039	QP
4			0.186	32.494	22.456	-21.719	54.213	10.039	AV
5			0.482	45.247	35.095	-11.058	56.305	10.152	QP
6		*	0.482	36.661	26.509	-9.644	46.305	10.152	AV
7			3.146	35.967	26.110	-20.033	56.000	9.857	QP
8			3.146	30.965	21.109	-15.035	46.000	9.857	AV
9			20.986	41.424	31.279	-18.576	60.000	10.145	QP
10			20.986	34.955	24.810	-15.045	50.000	10.145	AV
11			26.078	33.713	23.483	-26.287	60.000	10.230	QP
12			26.078	23.680	13.450	-26.320	50.000	10.230	AV

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

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

Site: SR2	Time: 2017/05/15 - 17:43
Limit: FCC_Part15.207_CE_AC Power_Class B	Engineer: Bacon Dong
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	53.455	42.313	-12.545	66.000	11.142	QP
2			0.150	38.421	27.279	-17.579	56.000	11.142	AV
3			0.162	50.146	40.068	-15.215	65.361	10.078	QP
4			0.162	28.465	18.387	-26.895	55.361	10.078	AV
5			0.486	45.311	35.134	-10.925	56.236	10.176	QP
6		*	0.486	36.700	26.524	-9.536	46.236	10.176	AV
7			3.150	35.364	25.502	-20.636	56.000	9.862	QP
8			3.150	30.666	20.804	-15.334	46.000	9.862	AV
9			14.430	42.049	31.958	-17.951	60.000	10.091	QP
10			14.430	38.671	28.580	-11.329	50.000	10.091	AV
11			20.990	40.752	30.565	-19.248	60.000	10.187	QP
12			20.990	34.101	23.914	-15.899	50.000	10.187	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