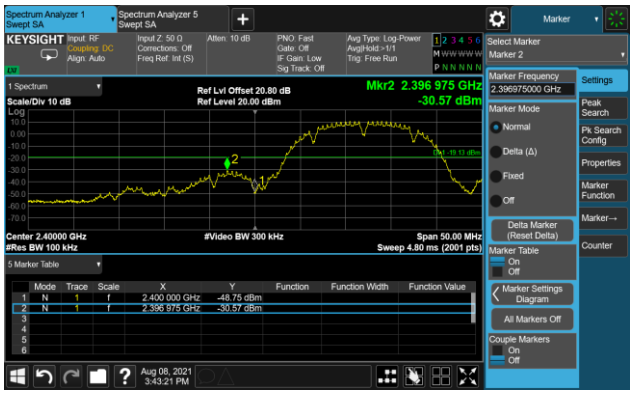
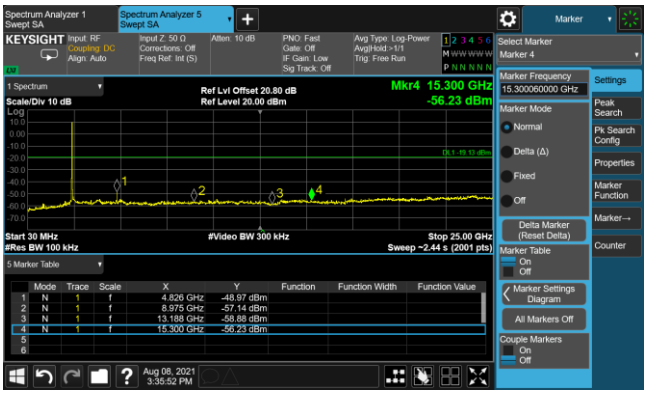
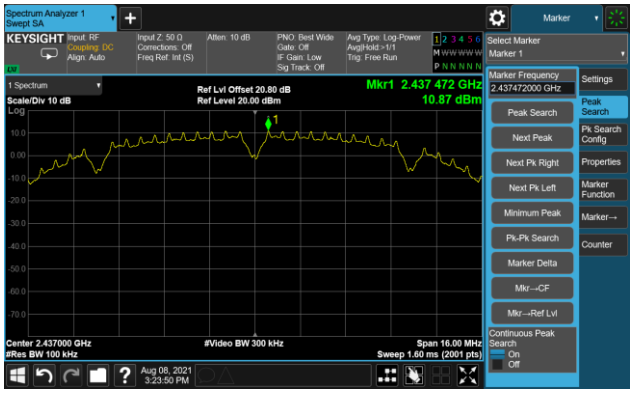
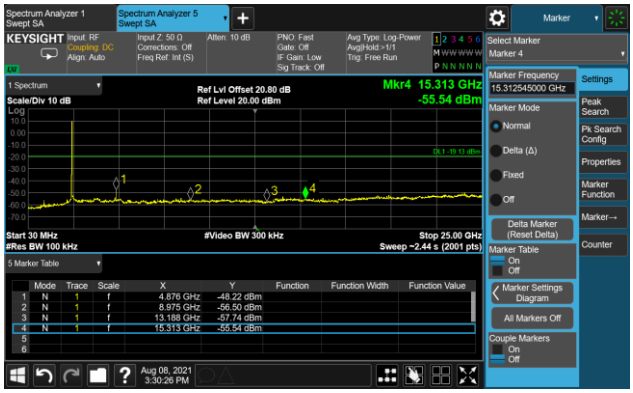
802.11b Out-of-Band Emissions – SISO Mode / Ant 1

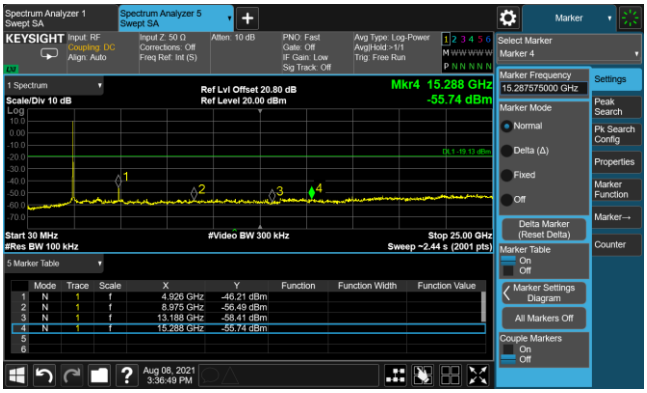
Channel 01 (2412MHz)

Low Band Edge	Spurious Emission
	

Channel 06 (2437MHz)

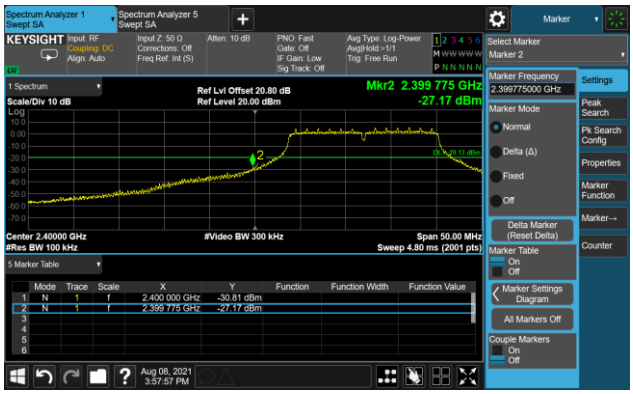
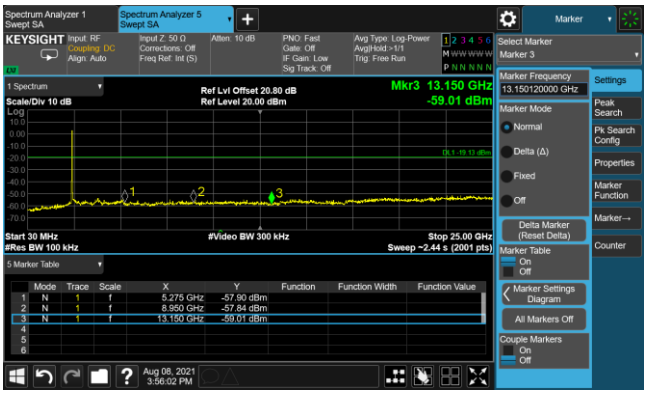
Reference Level	Spurious Emission
	

Channel 11 (2462MHz)

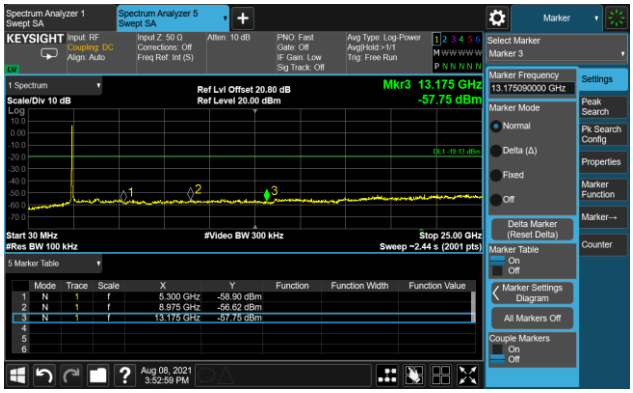
High Band Edge	Spurious Emission
	

802.11g Out-of-Band Emissions – SISO Mode / Ant 1

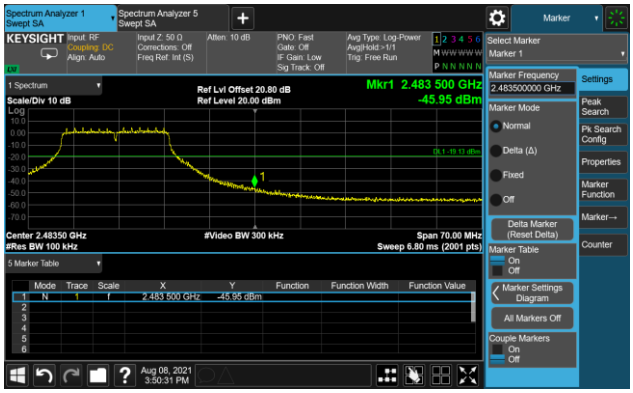
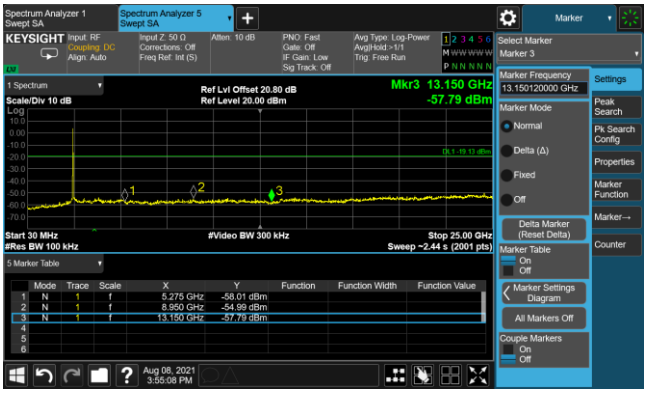
Channel 01 (2412MHz)

Low Band Edge	Spurious Emission
	

Channel 06 (2437MHz)

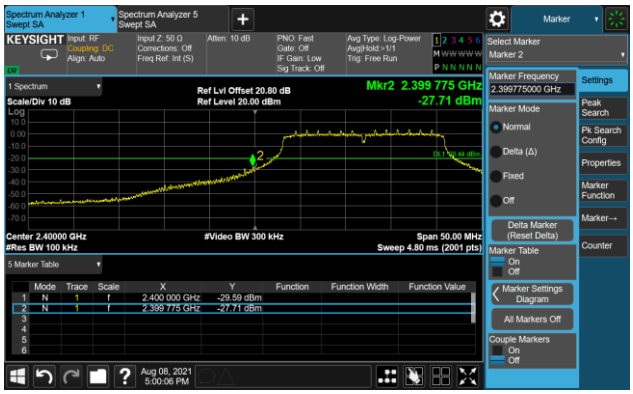
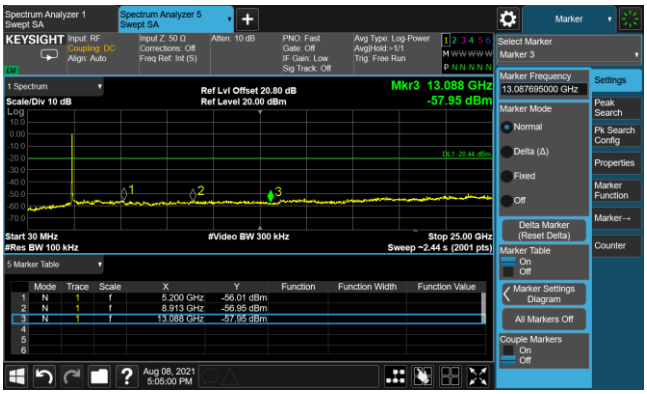
Spurious Emission	
	

Channel 11 (2462MHz)

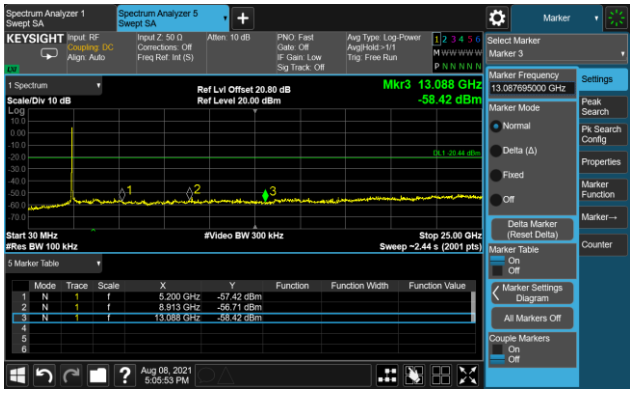
High Band Edge	Spurious Emission
	

802.11n-HT20 Out-of-Band Emissions – MIMO Mode / Ant 0

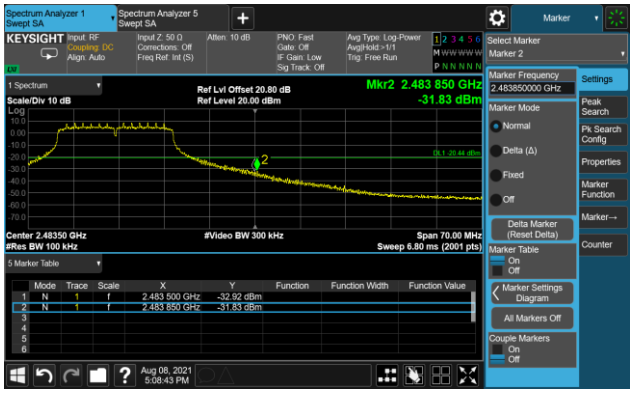
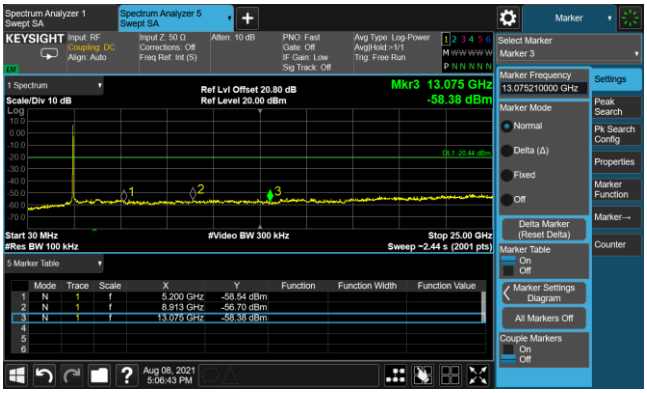
Channel 01 (2412MHz)

Low Band Edge	Spurious Emission
	

Channel 06 (2437MHz)

Spurious Emission	
	

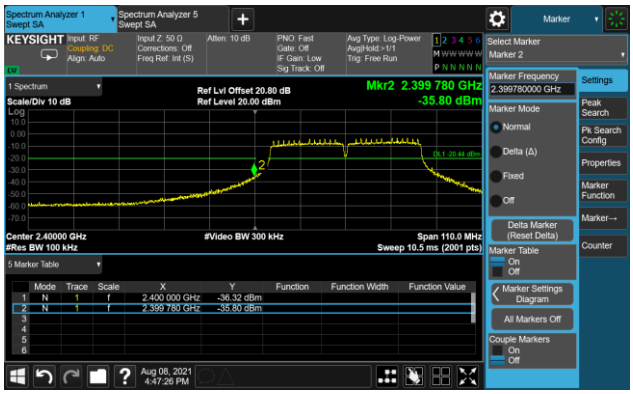
Channel 11 (2462MHz)

High Band Edge	Spurious Emission
	

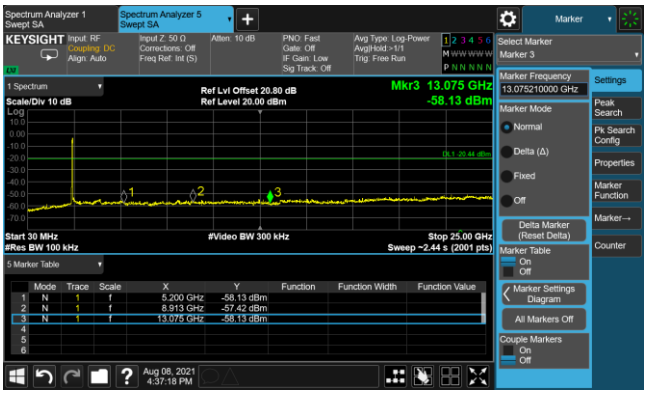
802.11n-HT40 Out-of-Band Emissions – MIMO Mode / Ant 0

Channel 03 (2422MHz)

Low Band Edge

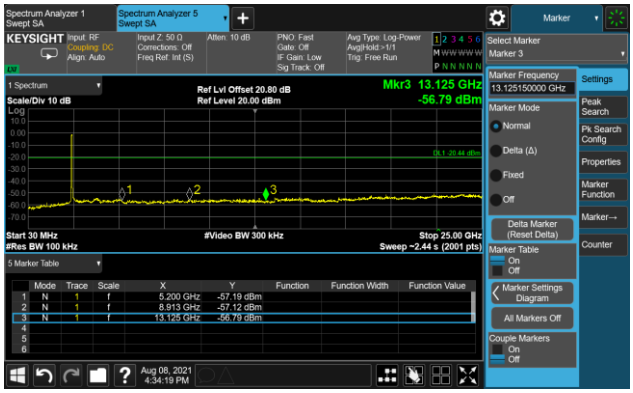


Spurious Emission



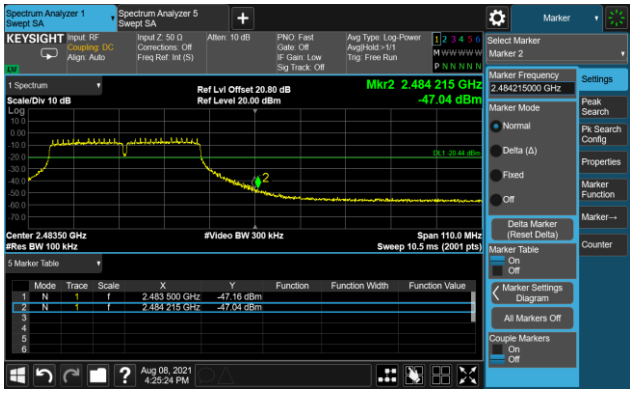
Channel 06 (2437MHz)

Spurious Emission

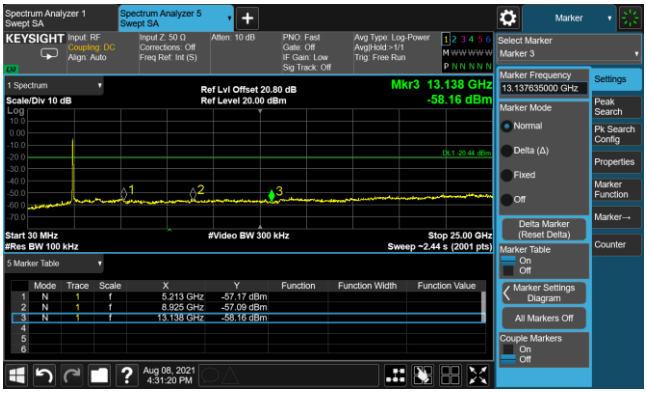


Channel 09 (2452MHz)

High Band Edge

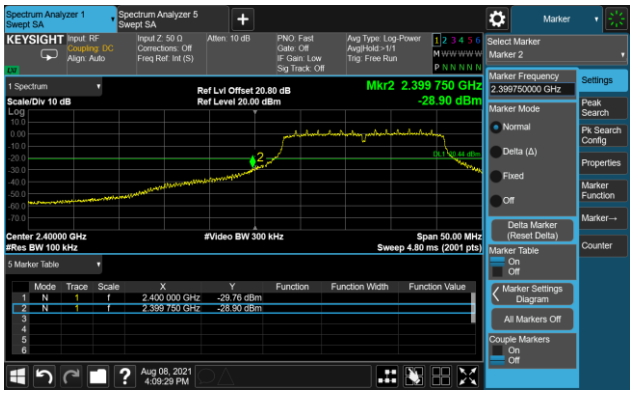
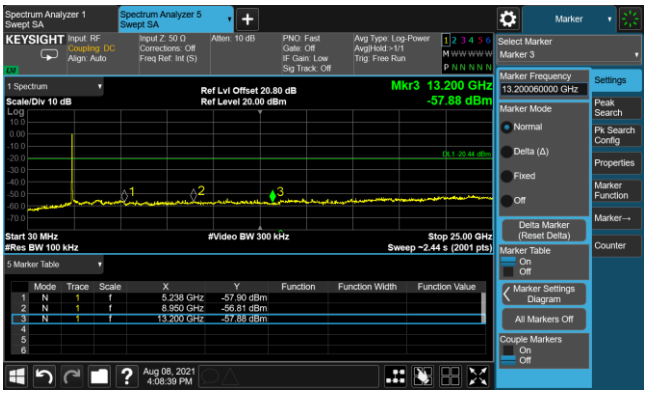


Spurious Emission

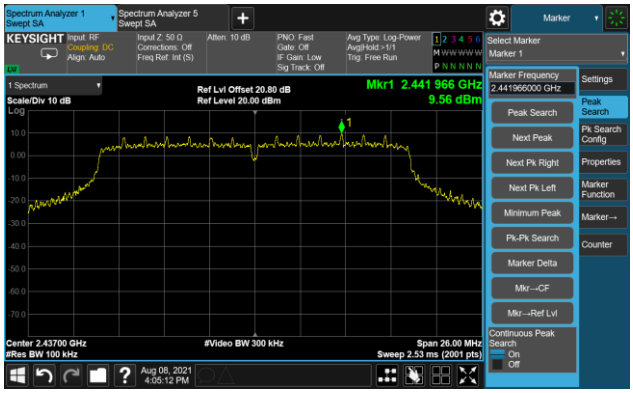
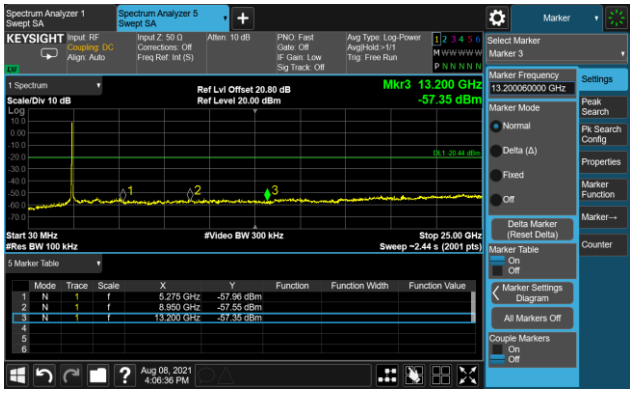


802.11n-HT20 Out-of-Band Emissions – MIMO Mode / Ant 1

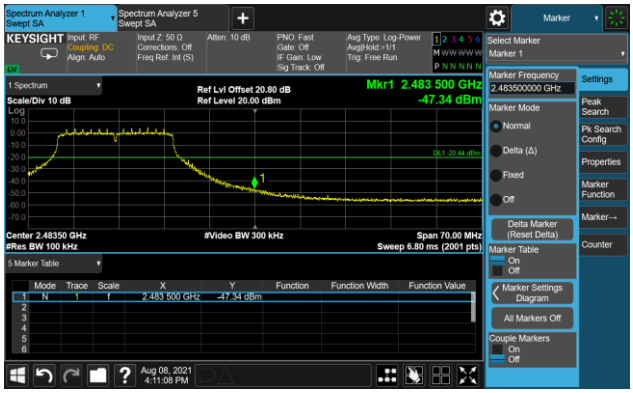
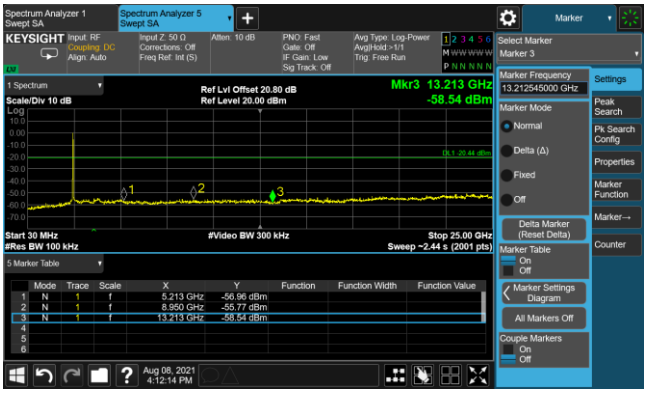
Channel 01 (2412MHz)

Low Band Edge	Spurious Emission
	

Channel 06 (2437MHz)

Reference Level	Spurious Emission
	

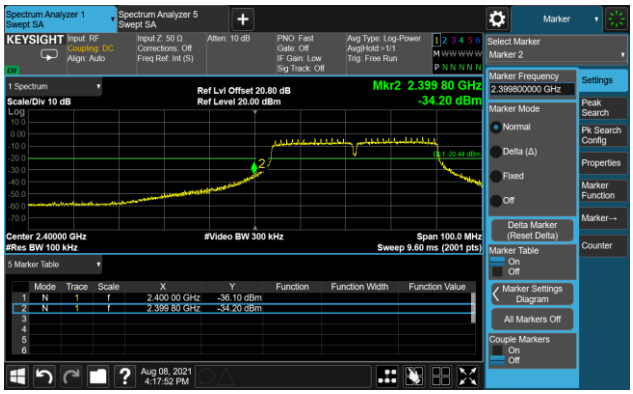
Channel 11 (2462MHz)

High Band Edge	Spurious Emission
	

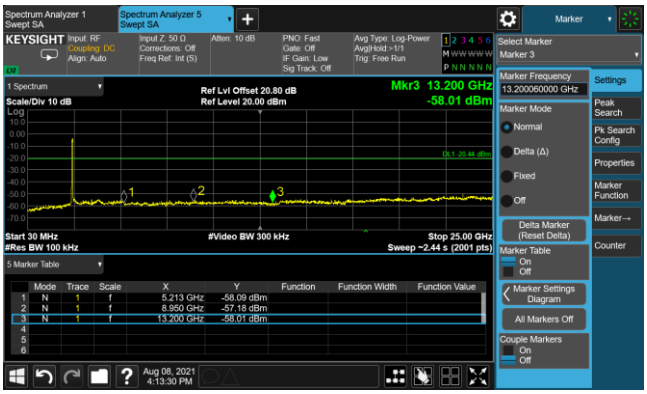
802.11n-HT40 Out-of-Band Emissions – MIMO Mode / Ant 1

Channel 03 (2422MHz)

Low Band Edge

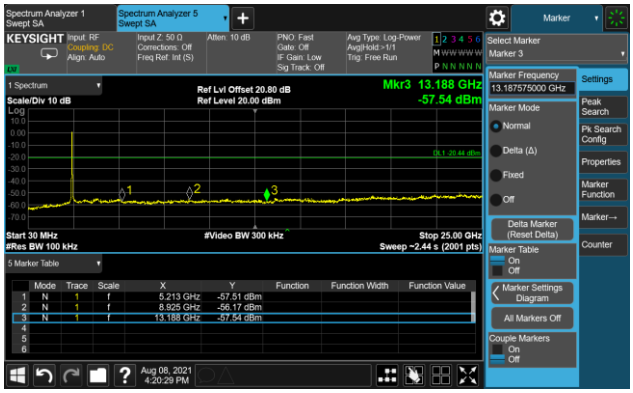


Spurious Emission



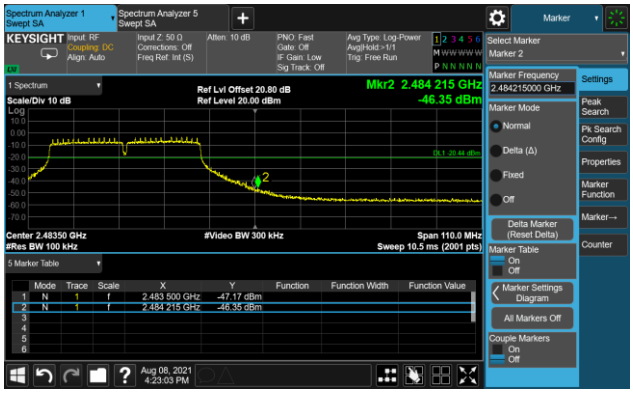
Channel 06 (2437MHz)

Spurious Emission

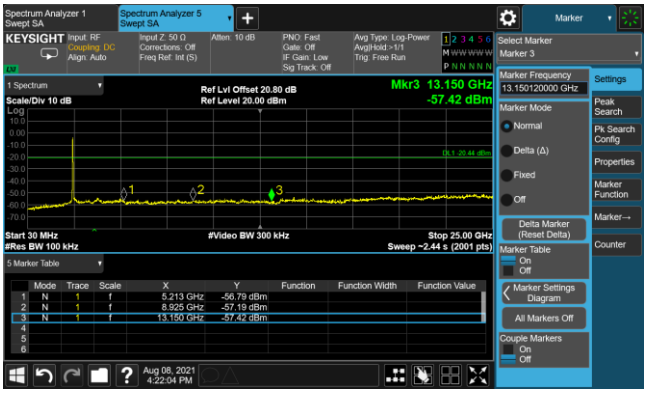


Channel 09 (2452MHz)

High Band Edge



Spurious Emission



5.6. Radiated Spurious Emission Measurement

5.6.1.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 15.209 Limit		
Frequency [MHz]	Field Strength [μV/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

5.6.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.4 (Standard test method below 30MHz)

ANSI C63.10 Section 6.5 (Standard test method above 30MHzto 1GHz)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

5.6.3.Test Setting

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

Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as specified in Table 1
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

Peak Measurements above 1GHz

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

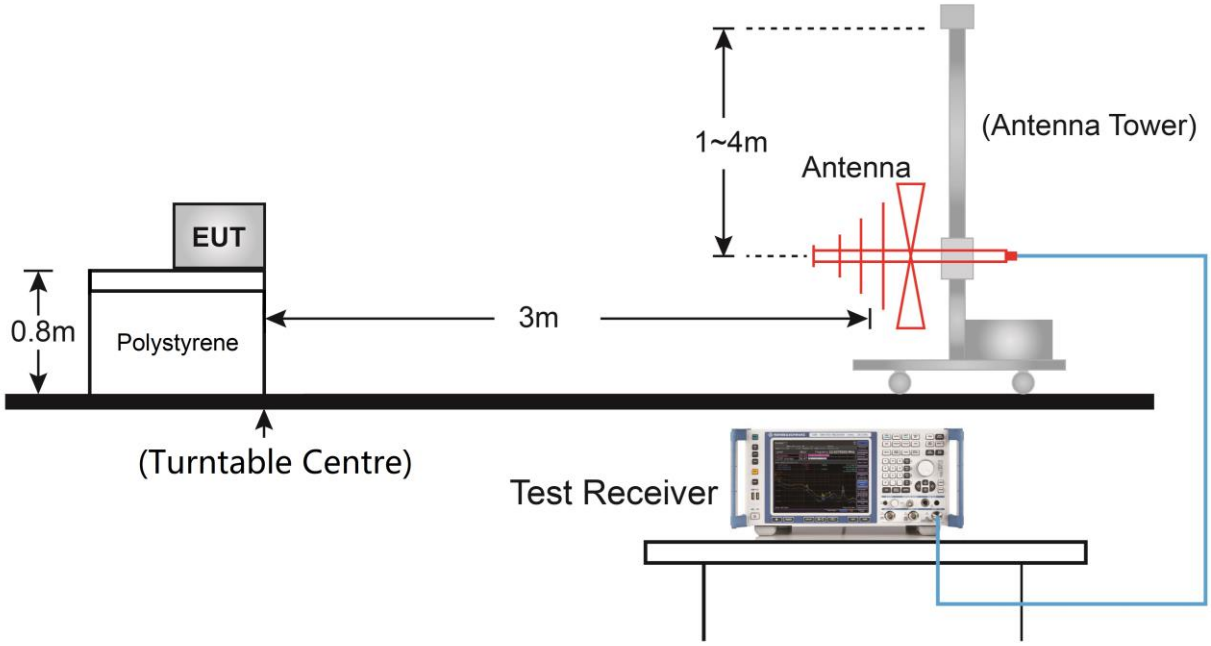
Average Measurements above 1GHz (Method VB)

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW; If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.

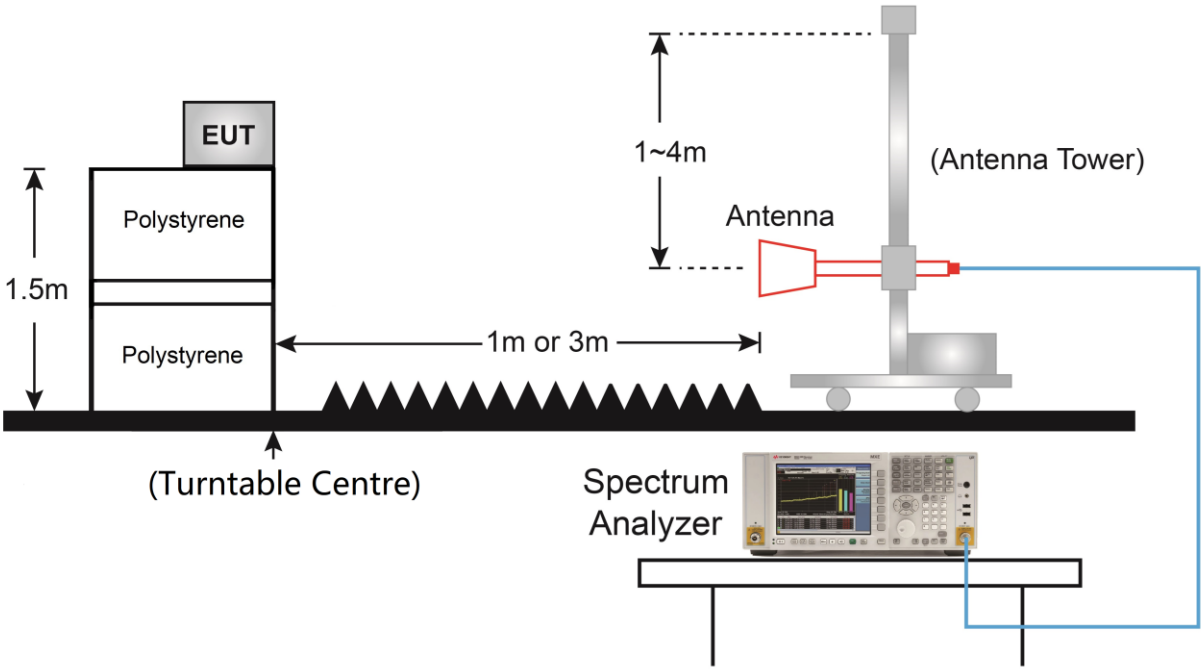
   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

5.6.4.Test Setup

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.6.5.Test Result

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11b – SISO Ant 1	Test Date	2021/08/06
Test Channel	01		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
4009.0	38.7	1.1	39.8	74.0	-34.2	Peak	Horizontal
4825.0	42.0	3.4	45.4	74.0	-28.6	Peak	Horizontal
7502.5	39.9	8.7	48.6	74.0	-25.4	Peak	Horizontal
3983.5	38.7	1.0	39.7	74.0	-34.3	Peak	Vertical
4825.0	48.9	3.4	52.3	74.0	-21.7	Peak	Vertical
7511.0	36.6	8.6	45.2	74.0	-28.8	Peak	Vertical
Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB) Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)							

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11b – SISO Ant 1	Test Date	2021/08/06
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
4051.5	38.2	1.4	39.6	74.0	-34.4	Peak	Horizontal
4876.0	41.7	3.5	45.2	74.0	-28.8	Peak	Horizontal
7315.5	39.5	8.6	48.1	74.0	-25.9	Peak	Horizontal
3754.0	40.5	0.5	41.0	74.0	-33.0	Peak	Vertical
4876.0	49.1	3.5	52.6	74.0	-21.4	Peak	Vertical
7315.5	41.4	8.6	50.0	74.0	-24.0	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11b – SISO Ant 1	Test Date	2021/08/06
Test Channel	11		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3958.0	38.5	1.2	39.7	74.0	-34.3	Peak	Horizontal
4927.0	41.4	3.6	45.0	74.0	-29.0	Peak	Horizontal
7502.5	38.1	8.7	46.8	74.0	-27.2	Peak	Horizontal
4927.0	48.4	3.6	52.0	74.0	-22.0	Peak	Vertical
7383.5	39.1	8.5	47.6	74.0	-26.4	Peak	Vertical
11769.5	39.7	12.5	52.2	74.0	-21.8	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11g – SISO Ant 1	Test Date	2021/08/06
Test Channel	01		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
4230.0	39.3	1.7	41.0	74.0	-33.0	Peak	Horizontal
5003.5	38.8	3.8	42.6	74.0	-31.4	Peak	Horizontal
7502.5	37.4	8.7	46.1	74.0	-27.9	Peak	Horizontal
4060.0	38.6	1.4	40.0	74.0	-34.0	Peak	Vertical
4825.0	42.2	3.4	45.6	74.0	-28.4	Peak	Vertical
7502.5	38.5	8.7	47.2	74.0	-26.8	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11g – SISO Ant 1	Test Date	2021/08/06
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
4051.5	38.3	1.4	39.7	74.0	-34.3	Peak	Horizontal
5003.5	38.9	3.8	42.7	74.0	-31.3	Peak	Horizontal
7315.5	39.3	8.6	47.9	74.0	-26.1	Peak	Horizontal
3754.0	40.7	0.5	41.2	74.0	-32.8	Peak	Vertical
4867.5	41.8	3.6	45.4	74.0	-28.6	Peak	Vertical
7307.0	40.8	8.5	49.3	74.0	-24.7	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11g – SISO Ant 1	Test Date	2021/08/06
Test Channel	11		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
4094.0	38.3	1.4	39.7	74.0	-34.3	Peak	Horizontal
4842.0	38.2	3.4	41.6	74.0	-32.4	Peak	Horizontal
7545.0	37.3	8.4	45.7	74.0	-28.3	Peak	Horizontal
3975.0	38.4	1.1	39.5	74.0	-34.5	Peak	Vertical
4927.0	40.6	3.6	44.2	74.0	-29.8	Peak	Vertical
7400.5	38.4	8.7	47.1	74.0	-26.9	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT20 – SISO Ant 1	Test Date	2021/08/07
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
4026.0	39.2	1.2	40.4	74.0	-33.6	Peak	Horizontal
4791.0	37.9	3.5	41.4	74.0	-32.6	Peak	Horizontal
7298.5	41.0	8.5	49.5	74.0	-24.5	Peak	Horizontal
3975.0	39.2	1.1	40.3	74.0	-33.7	Peak	Vertical
4867.5	42.6	3.6	46.2	74.0	-27.8	Peak	Vertical
7315.5	40.7	8.6	49.3	74.0	-24.7	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT40 – SISO Ant 1	Test Date	2021/08/07
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3949.5	39.4	1.1	40.5	74.0	-33.5	Peak	Horizontal
4961.0	38.1	3.7	41.8	74.0	-32.2	Peak	Horizontal
7417.5	38.2	8.6	46.8	74.0	-27.2	Peak	Horizontal
4060.0	38.8	1.4	40.2	74.0	-33.8	Peak	Vertical
4859.0	40.7	3.6	44.3	74.0	-29.7	Peak	Vertical
7502.5	39.0	8.7	47.7	74.0	-26.3	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11b – SISO Ant 0	Test Date	2021/08/06
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3983.5	38.3	1.0	39.3	74.0	-34.7	Peak	Horizontal
4876.0	44.7	3.5	48.2	74.0	-25.8	Peak	Horizontal
7307.0	41.9	8.5	50.4	74.0	-23.6	Peak	Horizontal
4034.5	38.1	1.2	39.3	74.0	-34.7	Peak	Vertical
4876.0	50.1	3.5	53.6	74.0	-20.4	Peak	Vertical
4876.0	50.1	3.5	53.6	54.0	-0.4	Average	Vertical
7307.0	45.2	8.5	53.7	74.0	-20.3	Peak	Vertical
7307.0	41.9	8.5	50.4	54.0	-3.6	Average	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11g – SISO Ant 0	Test Date	2021/08/06
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
4060.0	39.5	1.4	40.9	74.0	-33.1	Peak	Horizontal
4876.0	39.8	3.5	43.3	74.0	-30.7	Peak	Horizontal
7315.5	45.4	8.6	54.0	74.0	-20.0	Peak	Horizontal
7315.5	36.9	8.6	45.5	54.0	-8.5	Average	Horizontal
3907.0	39.7	0.9	40.6	74.0	-33.4	Peak	Vertical
4867.5	46.4	3.6	50.0	74.0	-24.0	Peak	Vertical
7298.5	48.1	8.5	56.6	74.0	-17.4	Peak	Vertical
7298.5	39.9	8.5	48.4	54.0	-5.6	Average	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT20 - SISO Ant 0	Test Date	2021/08/06
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3958.0	38.7	1.2	39.9	74.0	-34.1	Peak	Horizontal
4876.0	39.6	3.5	43.1	74.0	-30.9	Peak	Horizontal
7307.0	45.0	8.5	53.5	74.0	-20.5	Peak	Horizontal
7307.0	36.5	8.5	45.0	54.0	-9.0	Average	Horizontal
4060.0	40.1	1.4	41.5	74.0	-32.5	Peak	Vertical
4876.0	45.1	3.5	48.6	74.0	-25.4	Peak	Vertical
7307.0	48.7	8.5	57.2	74.0	-16.8	Peak	Vertical
7307.0	39.7	8.5	48.2	54.0	-5.8	Average	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT40 - SISO Ant 0	Test Date	2021/08/06
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3983.5	39.4	1.0	40.4	74.0	-33.6	Peak	Horizontal
4867.5	38.6	3.6	42.2	74.0	-31.8	Peak	Horizontal
7298.5	40.1	8.5	48.6	74.0	-25.4	Peak	Horizontal
3754.0	41.0	0.5	41.5	74.0	-32.5	Peak	Vertical
4876.0	42.6	3.5	46.1	74.0	-27.9	Peak	Vertical
7324.0	43.2	8.6	51.8	74.0	-22.2	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT20 – MIMO Ant 0 + 1	Test Date	2021/08/06
Test Channel	01		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3754.0	40.8	0.5	41.3	74.0	-32.7	Peak	Horizontal
4825.0	39.3	3.4	42.7	74.0	-31.3	Peak	Horizontal
7570.5	36.7	8.5	45.2	74.0	-28.8	Peak	Horizontal
4009.0	38.8	1.1	39.9	74.0	-34.1	Peak	Vertical
4816.5	42.1	3.5	45.6	74.0	-28.4	Peak	Vertical
7502.5	37.5	8.7	46.2	74.0	-27.8	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT20 – MIMO Ant 0 + 1	Test Date	2021/08/06
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3941.0	38.8	1.0	39.8	74.0	-34.2	Peak	Horizontal
4876.0	41.1	3.5	44.6	74.0	-29.4	Peak	Horizontal
7315.5	47.7	8.6	56.3	74.0	-17.7	Peak	Horizontal
7315.5	40.1	8.6	48.7	54.0	-5.3	Average	Horizontal
3949.5	37.9	1.1	39.0	74.0	-35.0	Peak	Vertical
4867.5	46.2	3.6	49.8	74.0	-24.2	Peak	Vertical
7315.5	48.7	8.6	57.3	74.0	-16.7	Peak	Vertical
7315.5	41.7	8.6	50.3	54.0	-3.7	Average	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT20 – MIMO Ant 0 + 1	Test Date	2021/08/06
Test Channel	11		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3975.0	38.9	1.1	40.0	74.0	-34.0	Peak	Horizontal
4918.5	40.2	3.6	43.8	74.0	-30.2	Peak	Horizontal
7383.5	38.0	8.5	46.5	74.0	-27.5	Peak	Horizontal
3949.5	39.1	1.1	40.2	74.0	-33.8	Peak	Vertical
4927.0	44.2	3.6	47.8	74.0	-26.2	Peak	Vertical
7545.0	38.0	8.4	46.4	74.0	-27.6	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT40 – MIMO Ant 0 + 1	Test Date	2021/08/06
Test Channel	03		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
4034.5	38.4	1.2	39.6	74.0	-34.4	Peak	Horizontal
4825.0	38.6	3.4	42.0	74.0	-32.0	Peak	Horizontal
7400.5	38.6	8.7	47.3	74.0	-26.7	Peak	Horizontal
4060.0	38.4	1.4	39.8	74.0	-34.2	Peak	Vertical
5003.5	39.9	3.8	43.7	74.0	-30.3	Peak	Vertical
7655.5	38.8	8.4	47.2	74.0	-26.8	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT40 – MIMO Ant 0 + 1	Test Date	2021/08/06
Test Channel	06		
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.		

Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
4000.5	38.8	1.1	39.9	74.0	-34.1	Peak	Horizontal
4697.5	38.7	3.2	41.9	74.0	-32.1	Peak	Horizontal
7485.5	36.5	8.6	45.1	74.0	-28.9	Peak	Horizontal
3983.5	38.3	1.0	39.3	74.0	-34.7	Peak	Vertical
4876.0	42.6	3.5	46.1	74.0	-27.9	Peak	Vertical
7468.5	35.6	8.5	44.1	74.0	-29.9	Peak	Vertical

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

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

Test Site	WZ-AC1	Test Engineer	Hyde Yu
Test Mode	802.11n-HT40 – MIMO Ant 0 + 1	Test Date	2021/08/06
Test Channel	09		
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.		

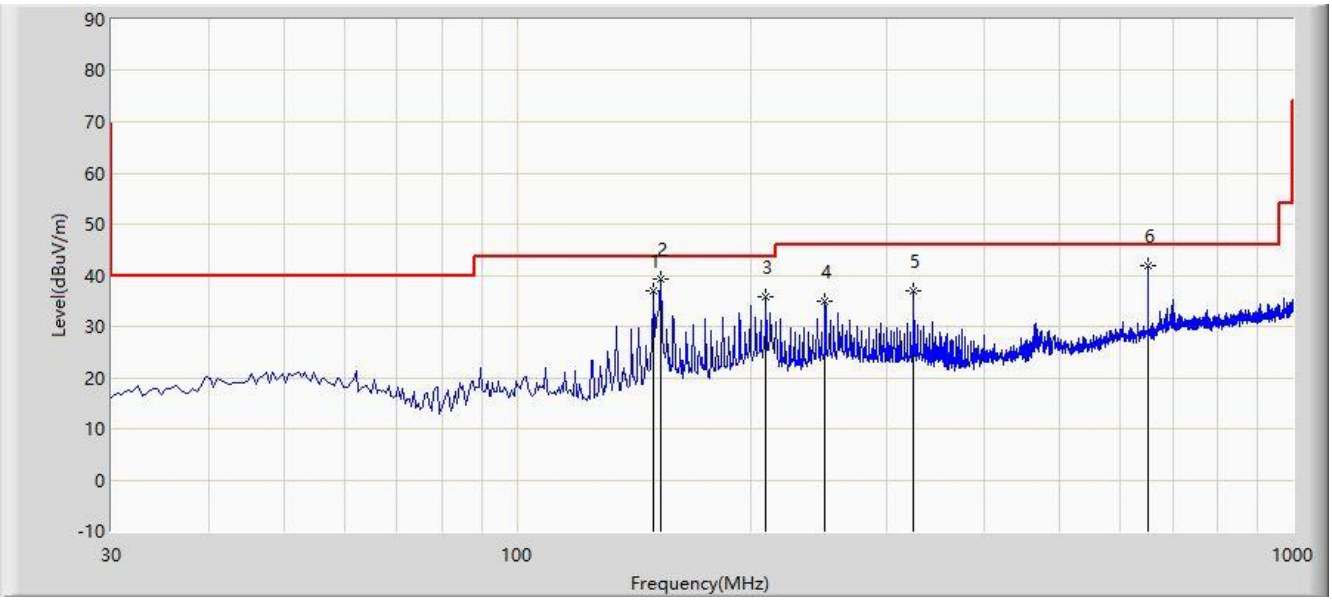
Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
3975.0	38.6	1.1	39.7	74.0	-34.3	Peak	Horizontal
5037.5	38.3	4.0	42.3	74.0	-31.7	Peak	Horizontal
7502.5	37.8	8.7	46.5	74.0	-27.5	Peak	Horizontal
4102.5	39.0	1.5	40.5	74.0	-33.5	Peak	Vertical
4876.0	37.1	3.5	40.6	74.0	-33.4	Peak	Vertical
7443.0	35.5	8.5	44.0	74.0	-30.0	Peak	Vertical

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

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

The Result of Radiated Emission below 1GHz:

Site: WZ-AC2	Time: 2021/08/11 - 22:03
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_VULB9162_0.03-7GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2412MHz Ant 0	



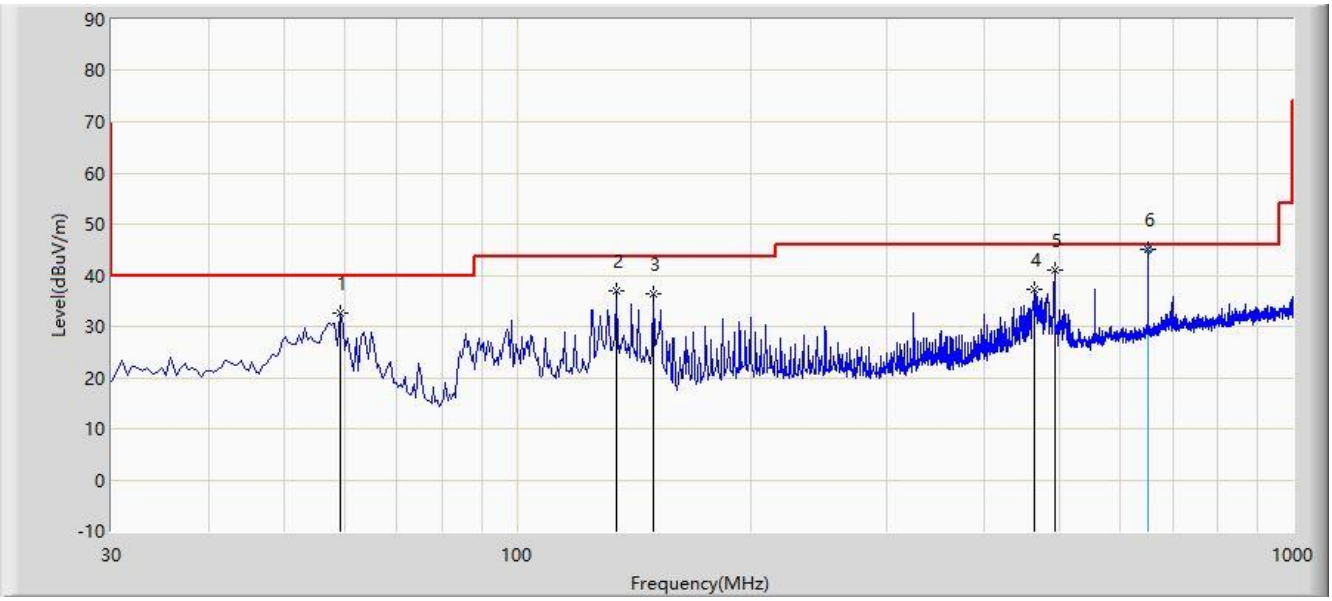
No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			149.795	36.868	21.743	-6.632	43.500	15.125	PK
2			153.190	39.328	24.035	-4.172	43.500	15.293	PK
3			209.450	35.746	17.487	-7.754	43.500	18.259	PK
4			249.705	34.847	14.986	-11.153	46.000	19.861	PK
5			324.880	36.953	15.344	-9.047	46.000	21.609	PK
6		*	650.315	42.027	14.256	-3.973	46.000	27.771	PK

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

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

Note 2: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

Site: WZ-AC2	Time: 2021/08/11 - 22:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Lucas Wang
Probe: WZ-AC2_VULB9162_0.03-7GHz	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)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			59.100	32.550	13.083	-7.450	40.000	19.467	PK
2			134.275	36.824	21.571	-6.676	43.500	15.252	PK
3			149.795	36.317	21.192	-7.183	43.500	15.125	PK
4			464.075	37.374	13.177	-8.626	46.000	24.196	PK
5			492.690	41.087	16.015	-4.913	46.000	25.072	PK
6		*	650.013	44.964	17.200	-1.036	46.000	27.764	QP

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

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

Note 2: The amplitude of radiated emissions (frequency range from 9kHz to 30MHz and 18GHz to 25GHz) is that proximity to ambient noise, which also are attenuated more than 20 dB below the permissible value. Therefore, the data is not presented in the report.

5.7. Radiated Restricted Band Edge Measurement

5.7.1.Test Limit

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	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	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 47CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15.209 Limit		
Frequency [MHz]	Field Strength [μV/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

5.7.2.Test Procedure Used

ANSI C63.10 Section 6.3 (General Requirements)

ANSI C63.10 Section 6.6 (Standard test method above 1GHz)

5.7.3.Test Setting

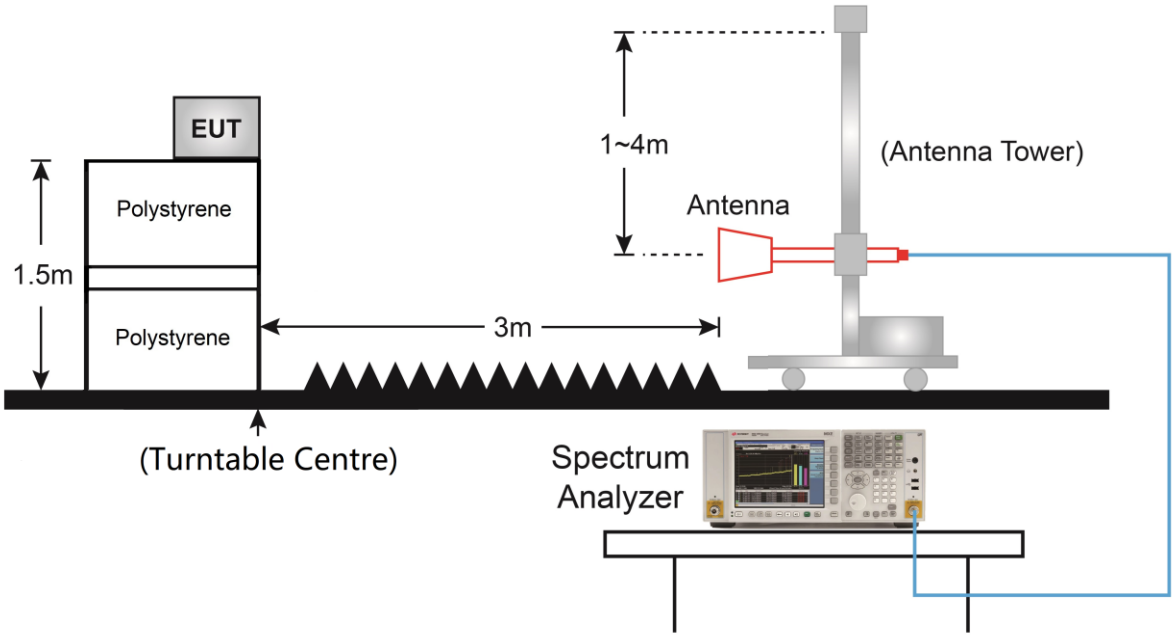
Peak Field Strength Measurements

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

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW ≥ 1/T
4. 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

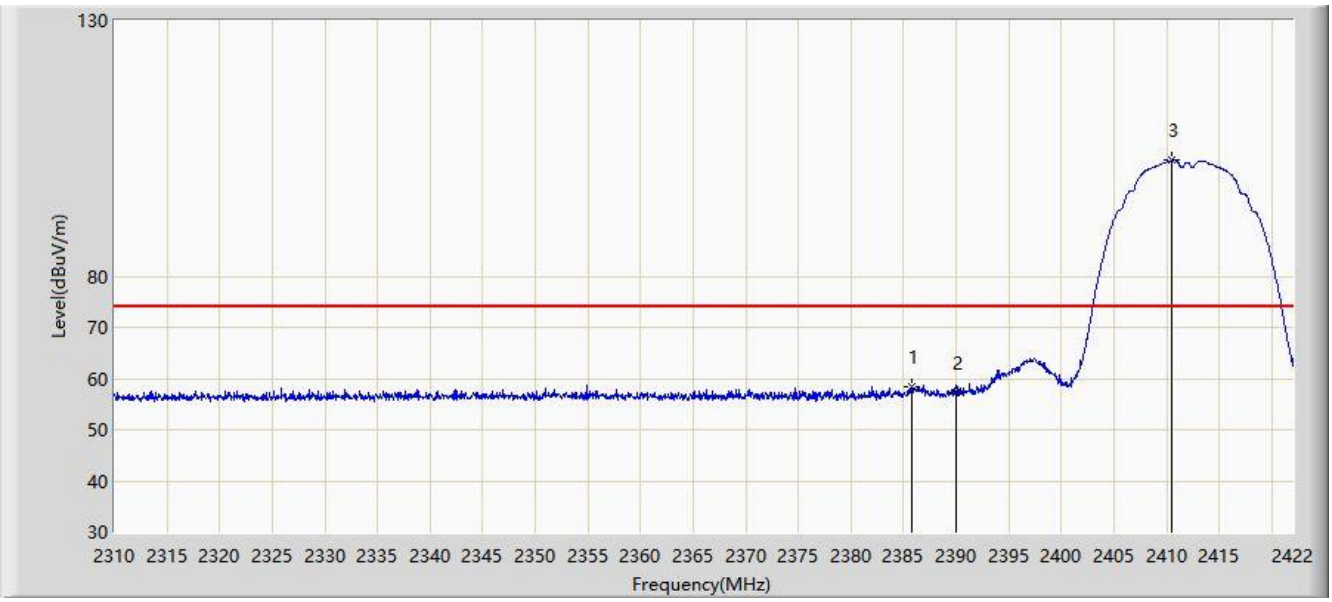
5.7.4.Test Setup



5.7.5.Test Result

SISO Mode:

Site: WZ-AC1	Time: 2021/08/05 - 10:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

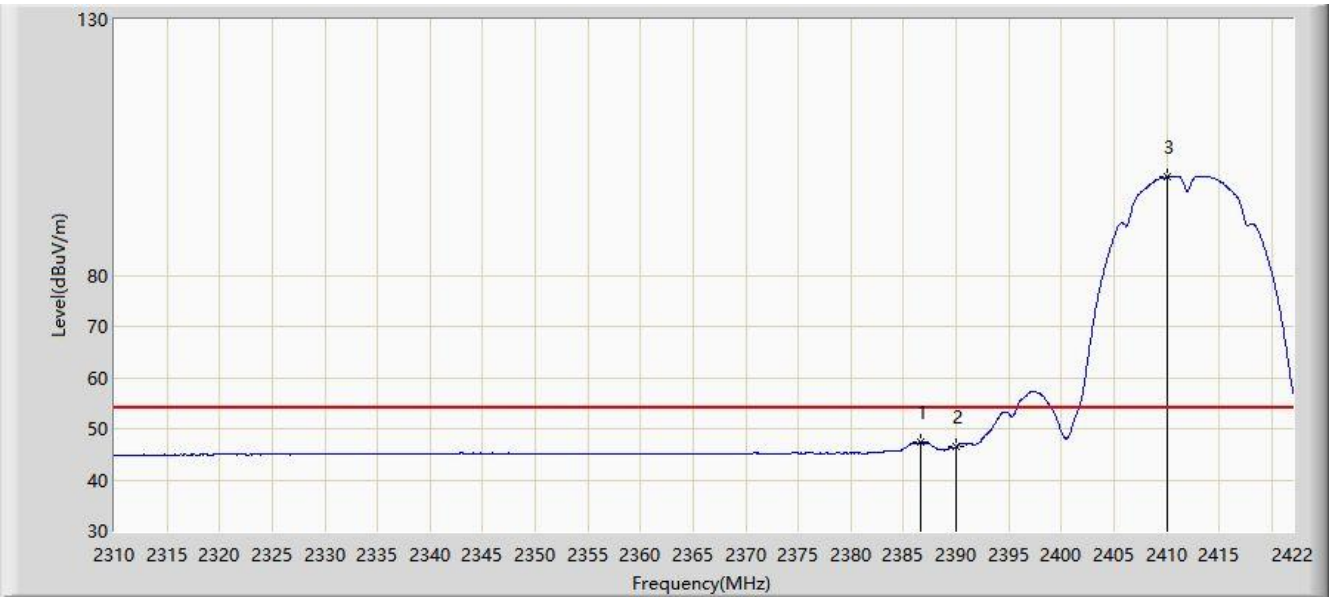


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2385.824	58.517	27.480	-15.483	74.000	31.037	PK
2			2390.000	57.213	26.179	-16.787	74.000	31.034	PK
3		*	2410.520	102.620	71.659	N/A	N/A	30.961	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

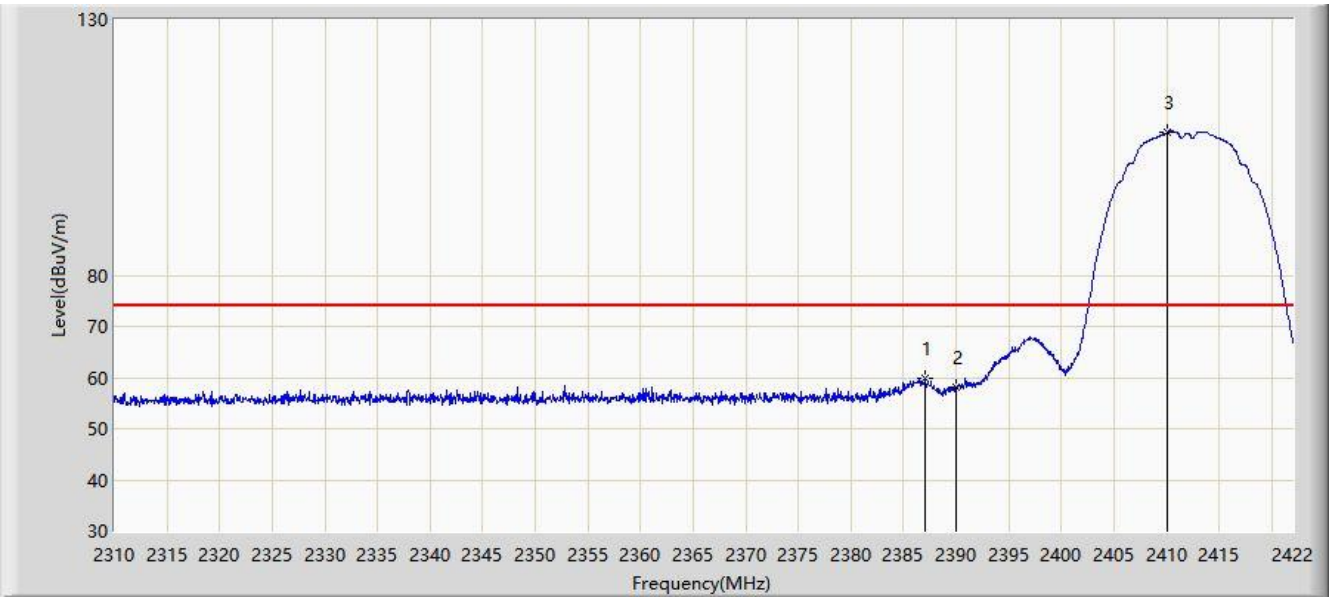


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2386.608	47.318	16.282	-6.682	54.000	31.037	AV
2			2390.000	46.399	15.366	-7.601	54.000	31.034	AV
3		*	2410.128	99.214	68.251	N/A	N/A	30.963	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

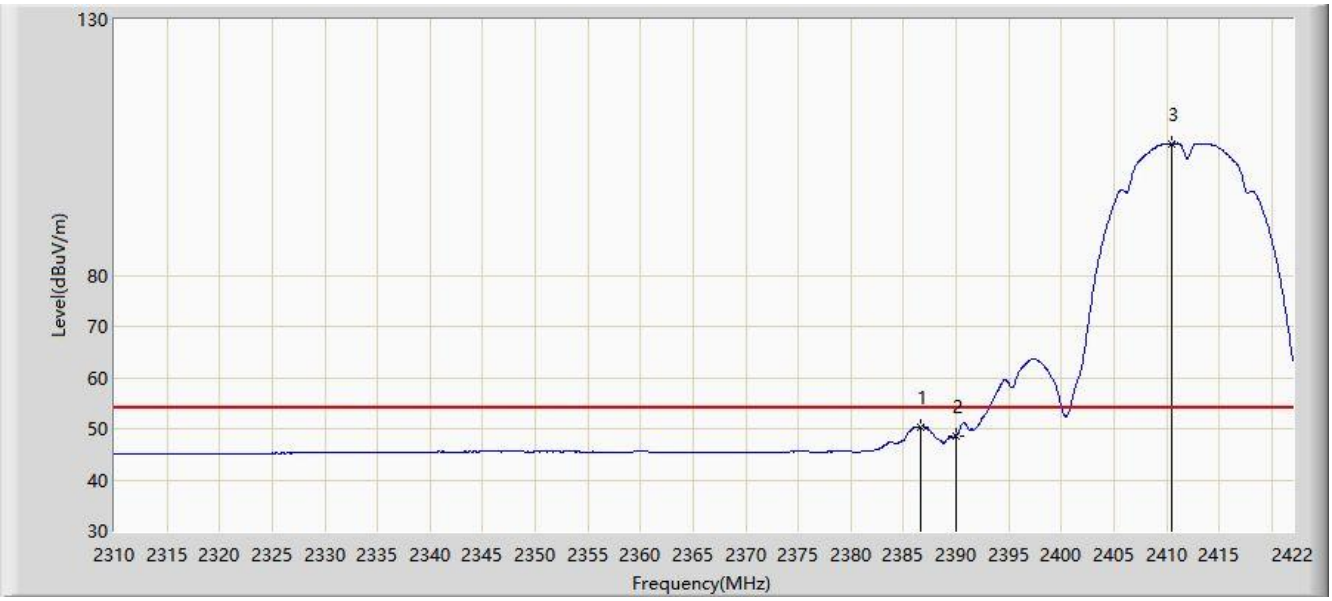


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2387.056	59.739	28.704	-14.261	74.000	31.036	PK
2			2390.000	58.098	27.065	-15.902	74.000	31.034	PK
3		*	2410.072	107.909	76.946	N/A	N/A	30.963	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

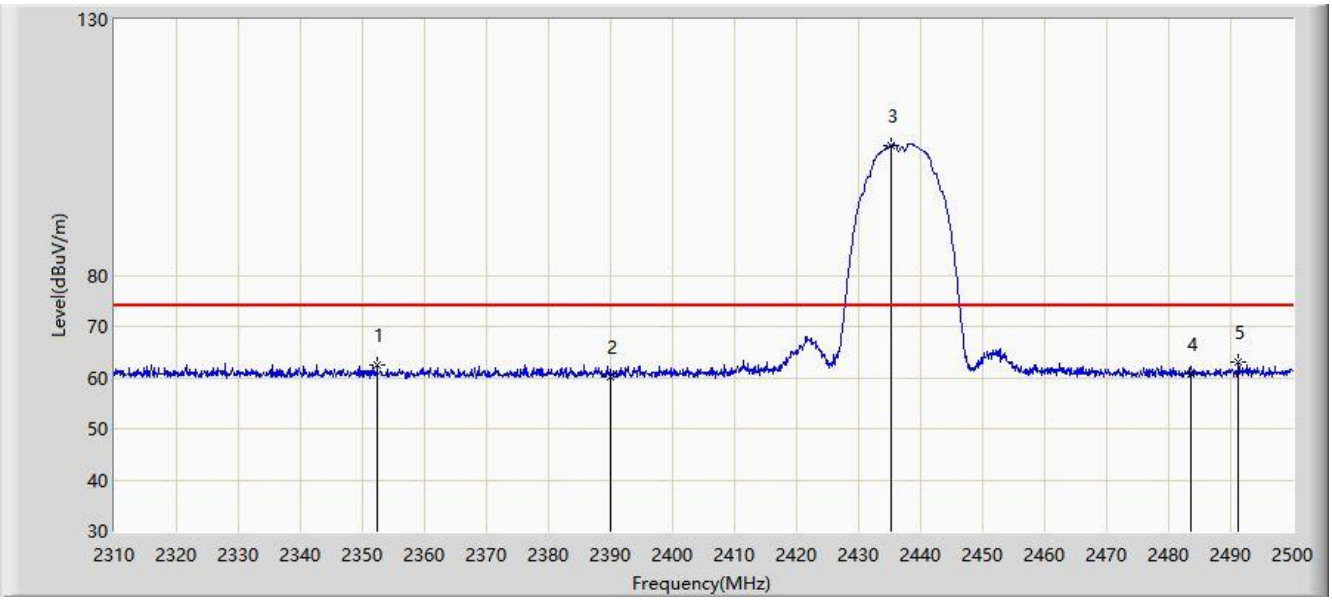


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2386.608	50.323	19.286	-3.677	54.000	31.037	AV
2			2390.000	48.677	17.644	-5.323	54.000	31.034	AV
3		*	2410.520	105.752	74.792	N/A	N/A	30.961	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2437MHz Ant 1	

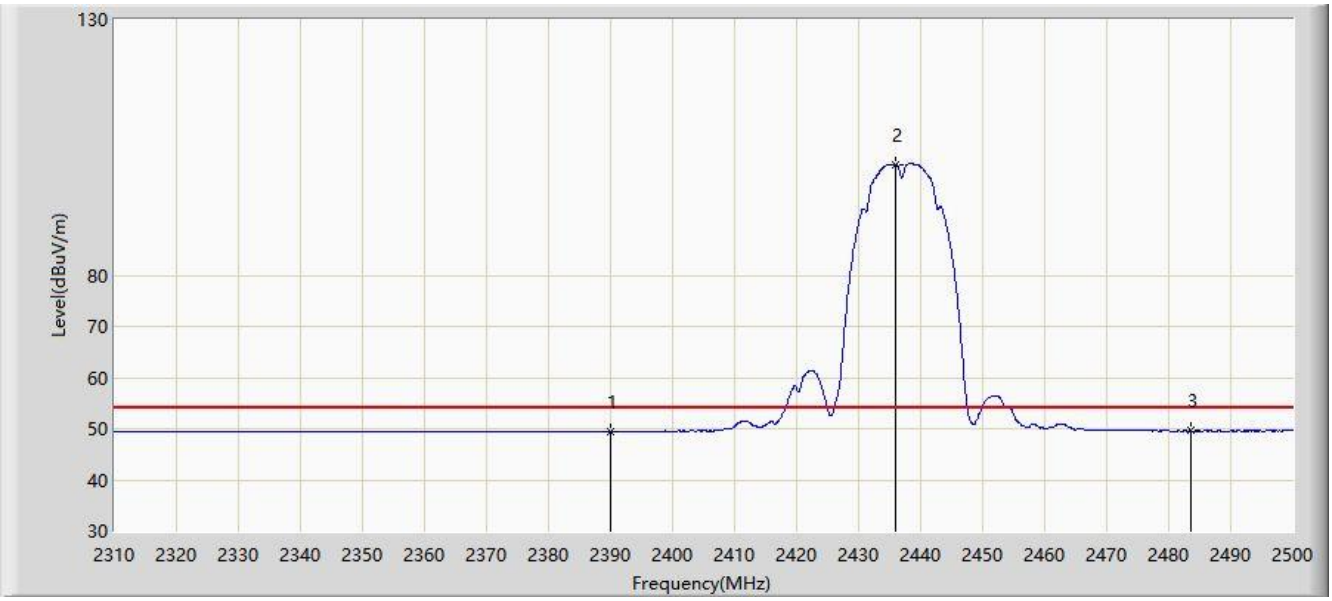


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2352.370	62.579	31.429	-11.421	74.000	31.153	PK
2			2390.000	60.125	29.092	-13.875	74.000	31.034	PK
3		*	2435.305	105.486	74.581	N/A	N/A	30.905	PK
4			2483.500	60.600	29.712	-13.400	74.000	30.888	PK
5			2491.260	62.936	32.024	-11.064	74.000	30.913	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2437MHz Ant 1	

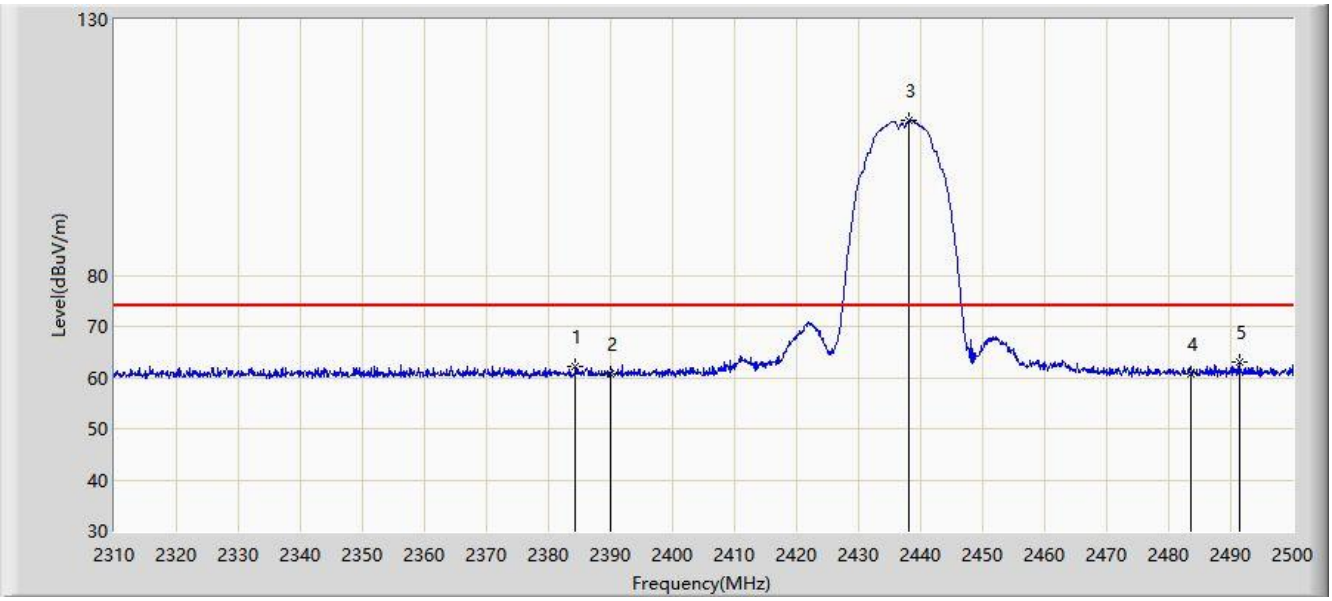


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	49.487	18.453	-4.513	54.000	31.034	AV
2		*	2435.970	101.710	70.804	N/A	N/A	30.906	AV
3			2483.500	49.573	18.685	-4.427	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2437MHz Ant 1	

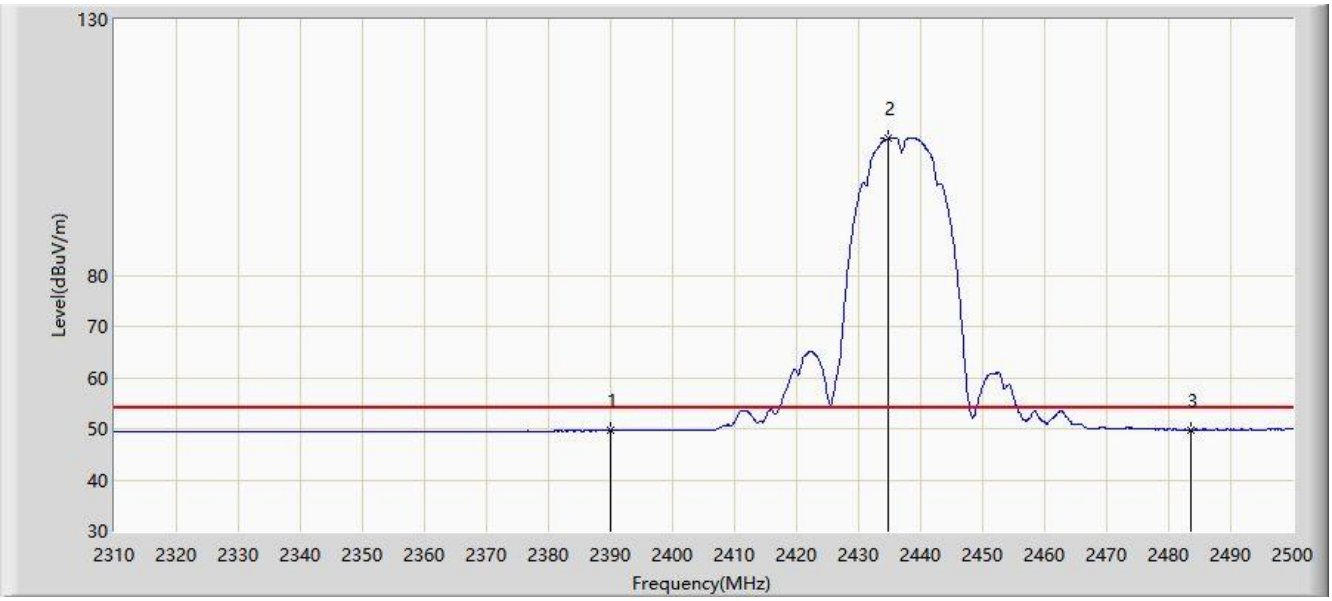


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2384.385	62.036	30.997	-11.964	74.000	31.039	PK
2			2390.000	60.818	29.785	-13.182	74.000	31.034	PK
3		*	2438.060	110.147	79.238	N/A	N/A	30.909	PK
4			2483.500	60.705	29.817	-13.295	74.000	30.888	PK
5			2491.355	63.013	32.100	-10.987	74.000	30.913	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11b at Channel 2437MHz Ant 1	

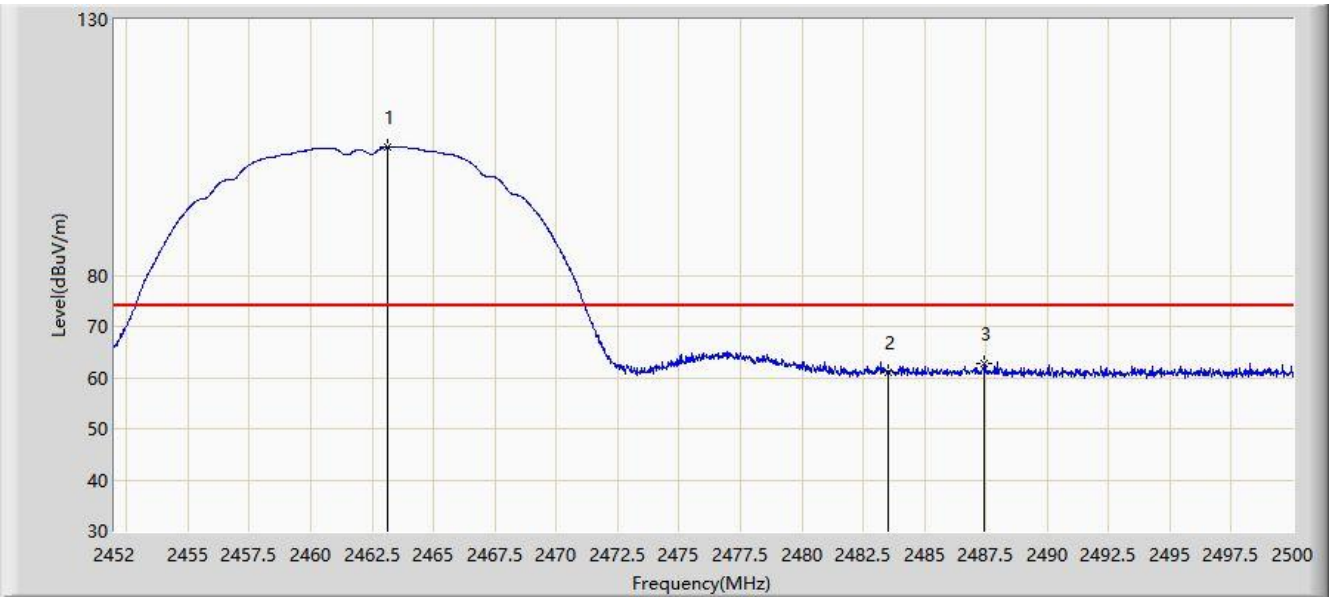


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	49.586	18.552	-4.414	54.000	31.034	AV
2		*	2434.735	106.679	75.775	N/A	N/A	30.903	AV
3			2483.500	49.816	18.928	-4.184	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

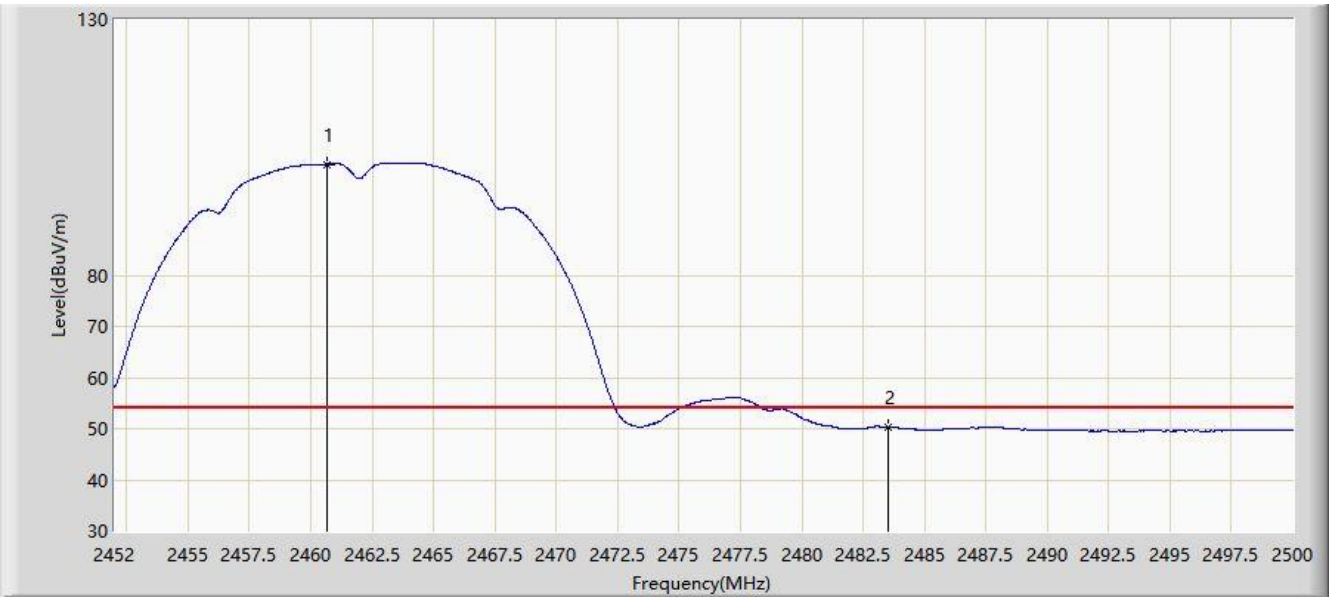


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2463.136	105.139	74.261	N/A	N/A	30.878	PK
2			2483.500	61.021	30.133	-12.979	74.000	30.888	PK
3			2487.424	62.772	31.877	-11.228	74.000	30.901	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

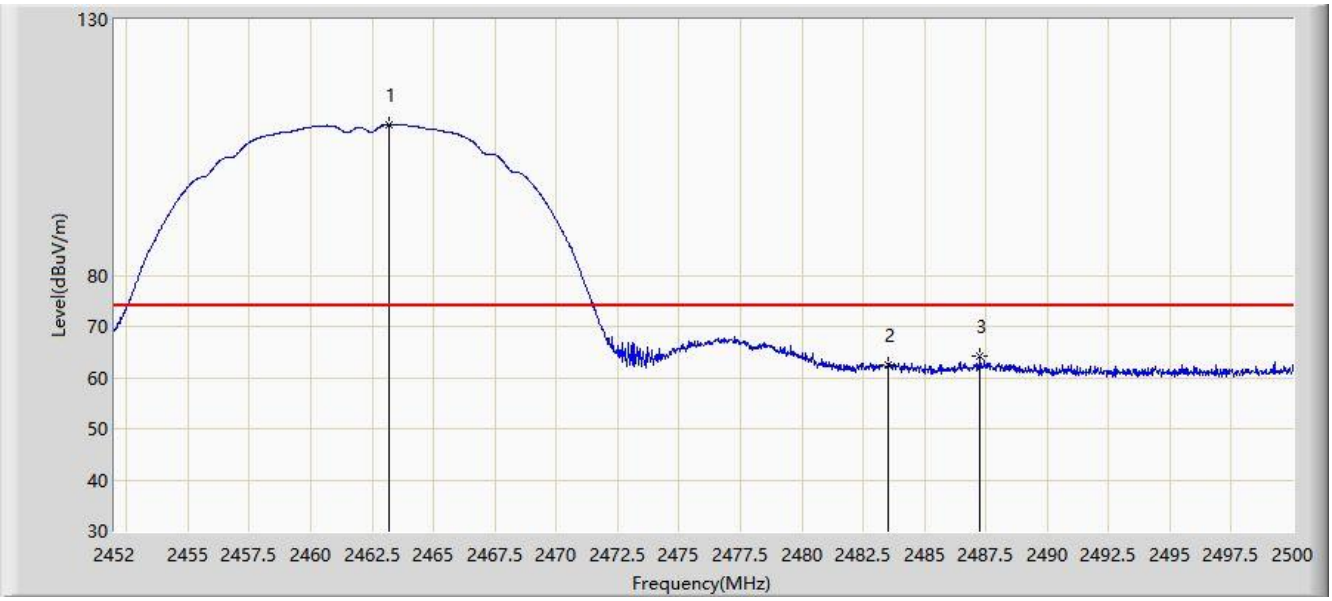


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2460.664	101.732	70.849	N/A	N/A	30.883	AV
2			2483.500	50.394	19.506	-3.606	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

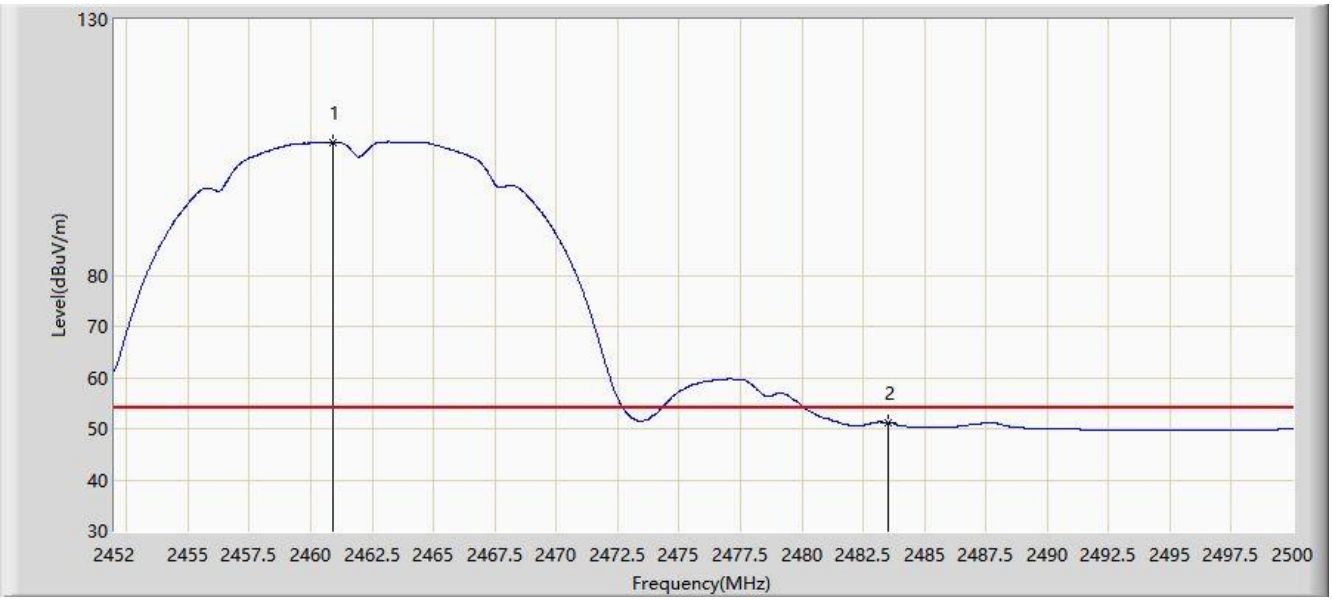


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2463.208	109.489	78.611	N/A	N/A	30.878	PK
2			2483.500	62.401	31.513	-11.599	74.000	30.888	PK
3			2487.256	64.097	33.205	-9.903	74.000	30.900	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

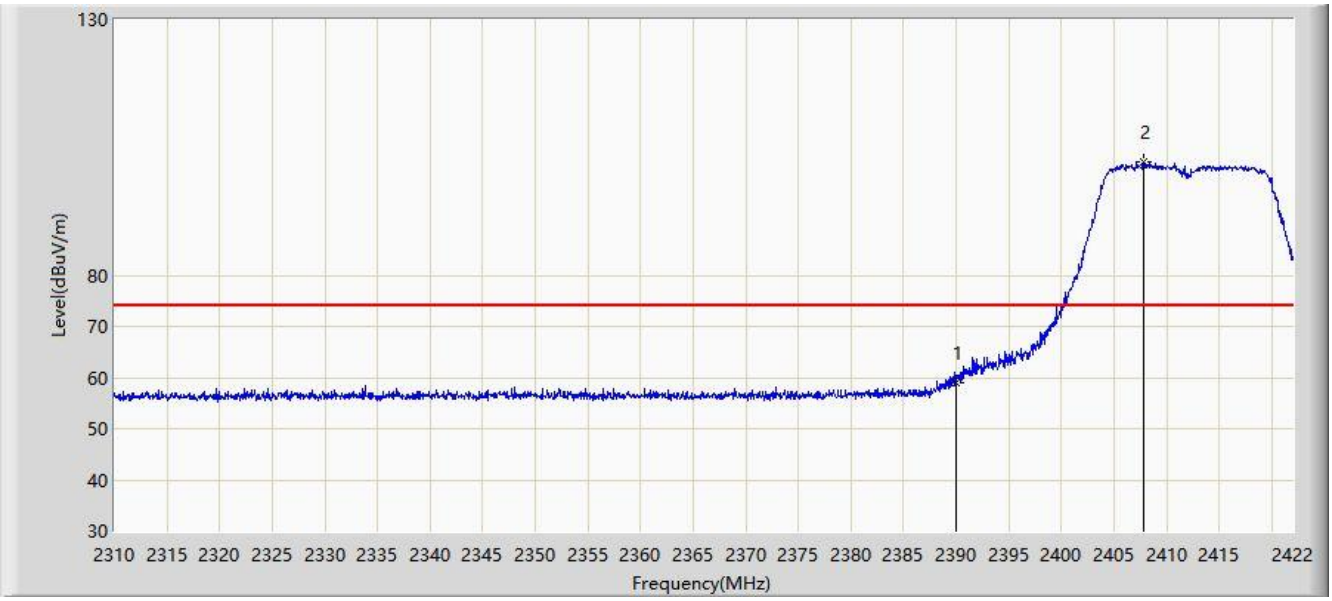


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2460.928	106.069	75.187	N/A	N/A	30.882	AV
2			2483.500	51.254	20.366	-2.746	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

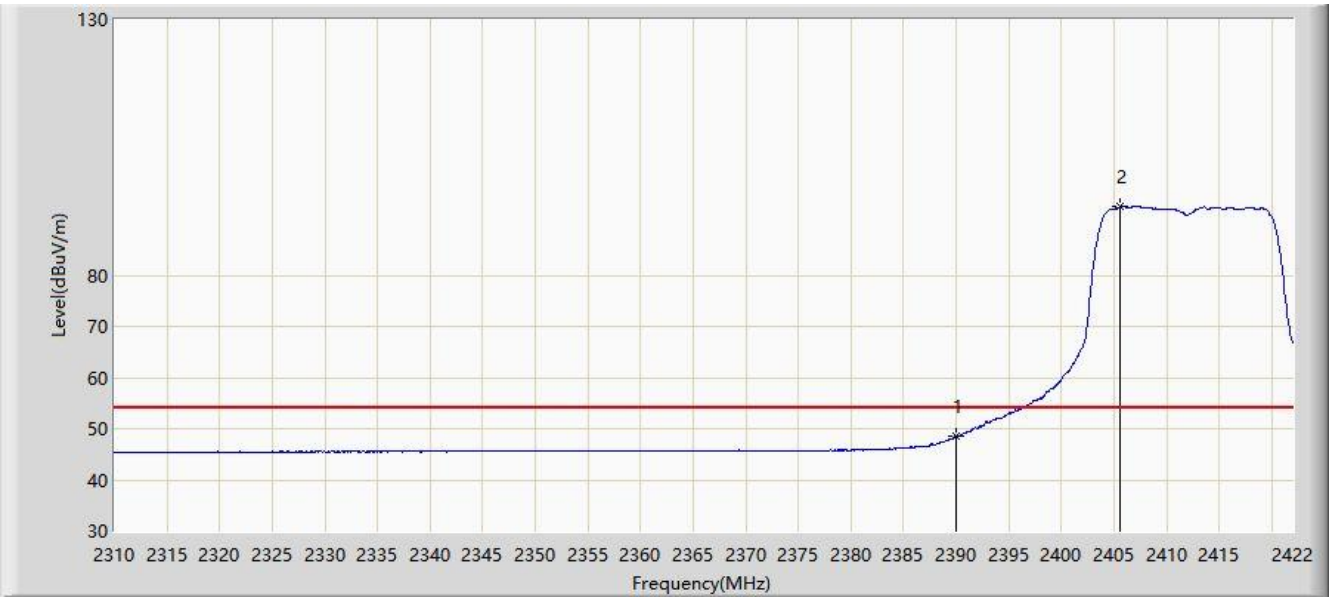


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	59.068	28.035	-14.932	74.000	31.034	PK
2		*	2407.776	102.198	71.225	N/A	N/A	30.976	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

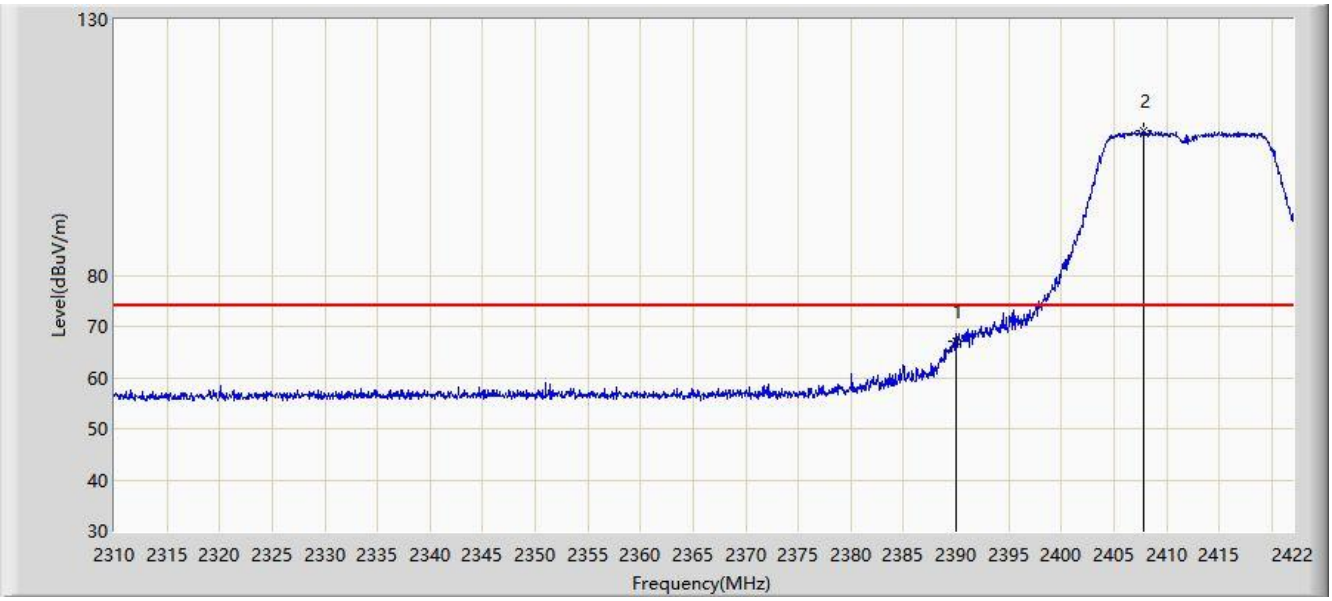


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	48.444	17.411	-5.556	54.000	31.034	AV
2		*	2405.592	93.337	62.349	N/A	N/A	30.988	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

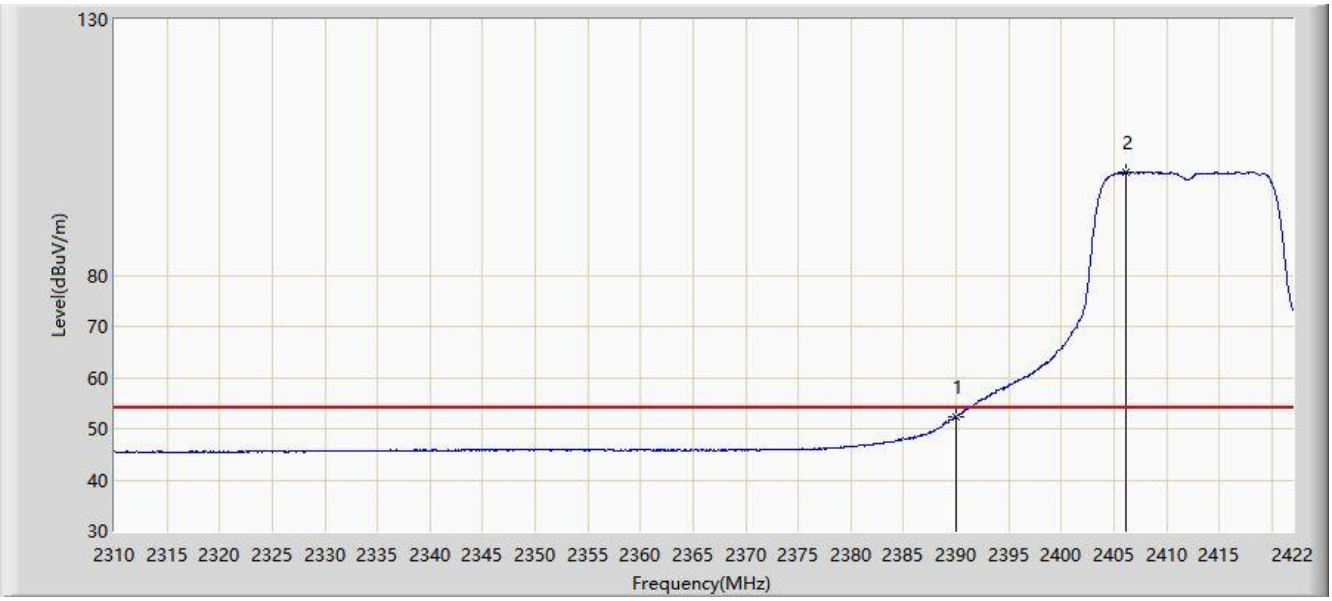


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	67.204	36.171	-6.796	74.000	31.034	PK
2		*	2407.888	108.251	77.276	N/A	N/A	30.975	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

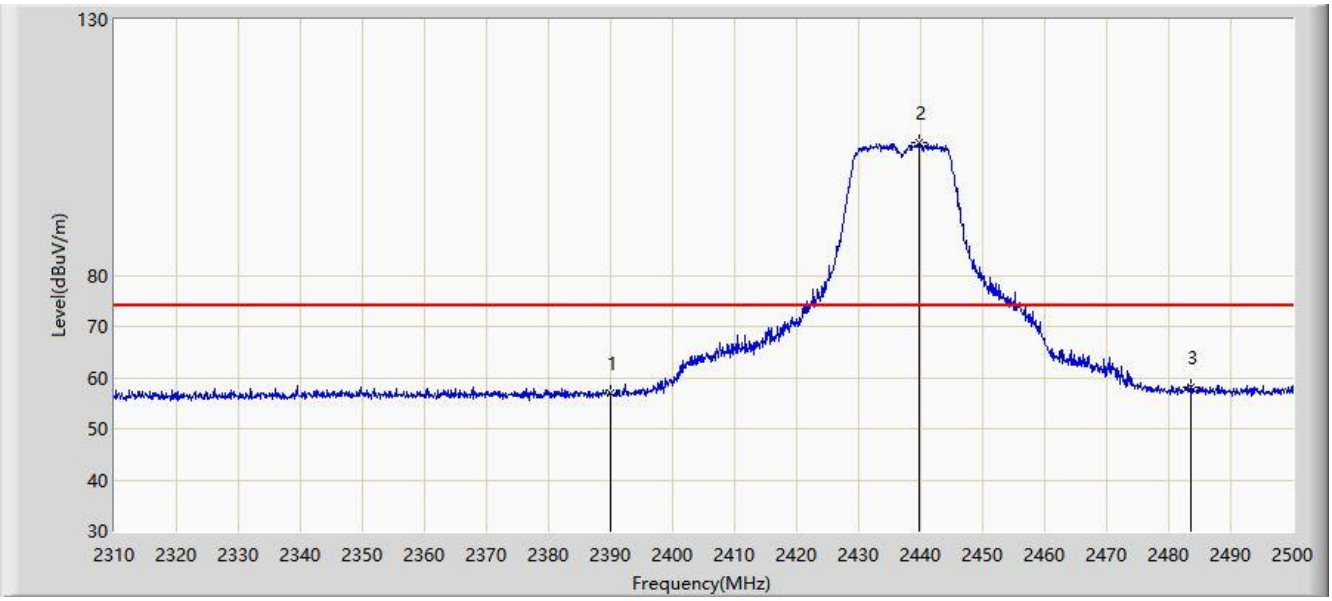


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	52.429	21.395	-1.571	54.000	31.034	AV
2		*	2406.152	100.167	69.182	N/A	N/A	30.985	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:22
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2437MHz Ant 1	

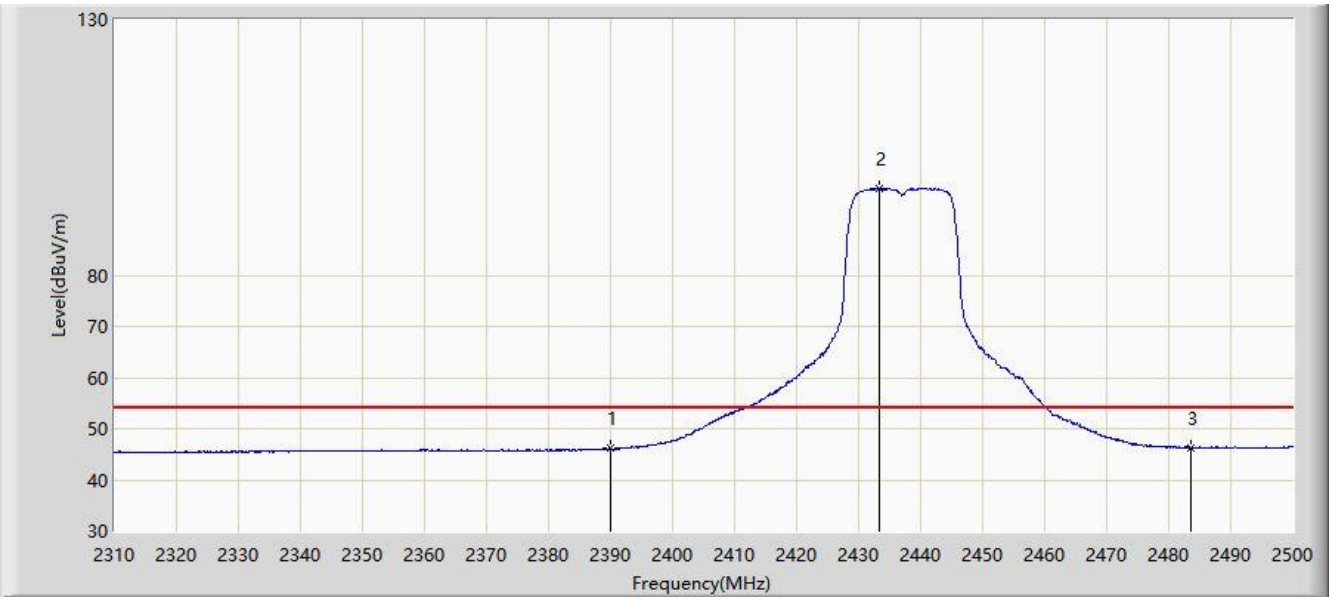


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	56.868	25.834	-17.132	74.000	31.034	PK
2		*	2439.865	105.866	74.956	N/A	N/A	30.910	PK
3			2483.500	58.016	27.128	-15.984	74.000	30.888	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2437MHz Ant 1	

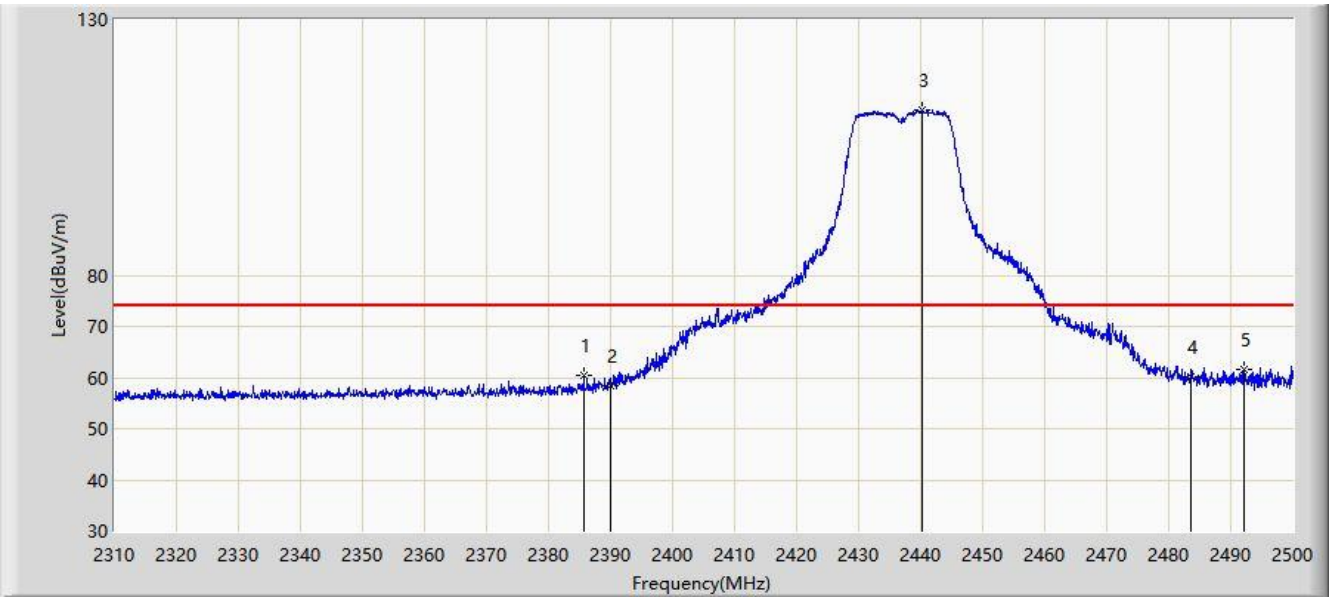


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	46.095	15.062	-7.905	54.000	31.034	AV
2		*	2433.405	97.070	66.168	N/A	N/A	30.902	AV
3			2483.500	46.225	15.337	-7.775	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2437MHz Ant 1	

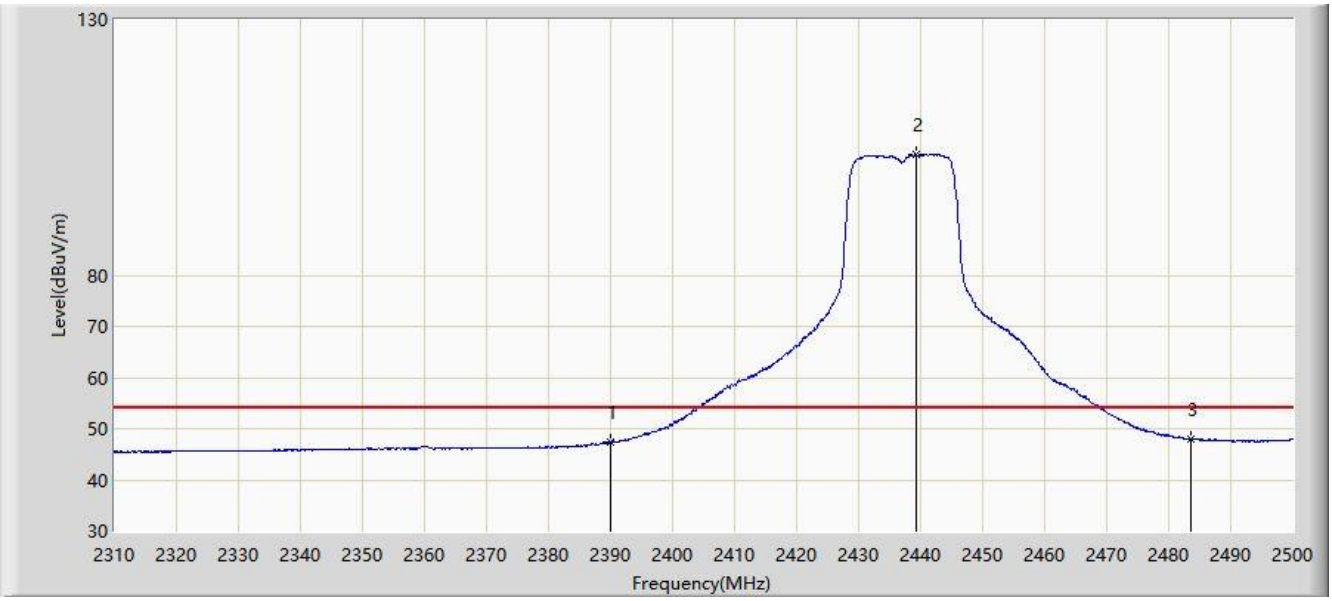


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2385.715	60.513	29.479	-13.487	74.000	31.037	PK
2			2390.000	58.489	27.455	-15.511	74.000	31.034	PK
3		*	2440.245	112.391	81.482	N/A	N/A	30.910	PK
4			2483.500	60.225	29.337	-13.775	74.000	30.888	PK
5			2492.210	61.737	30.823	-12.263	74.000	30.915	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_BBHA9120D_1-18GHz	Polarity: Vertical
EUT: 802.11ac Dual Band Module	Power: AC 120V/60Hz
Test Mode: Transmit by 802.11g at Channel 2437MHz Ant 1	

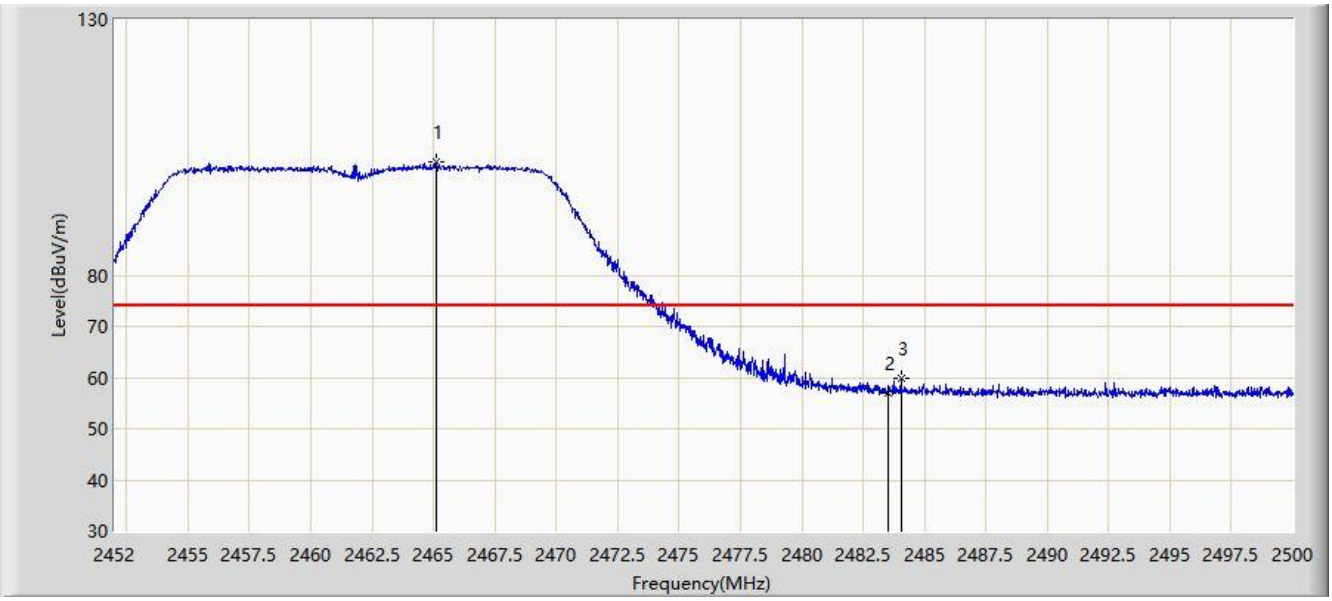


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	47.248	16.215	-6.752	54.000	31.034	AV
2		*	2439.200	103.596	72.687	N/A	N/A	30.909	AV
3			2483.500	47.868	16.980	-6.132	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

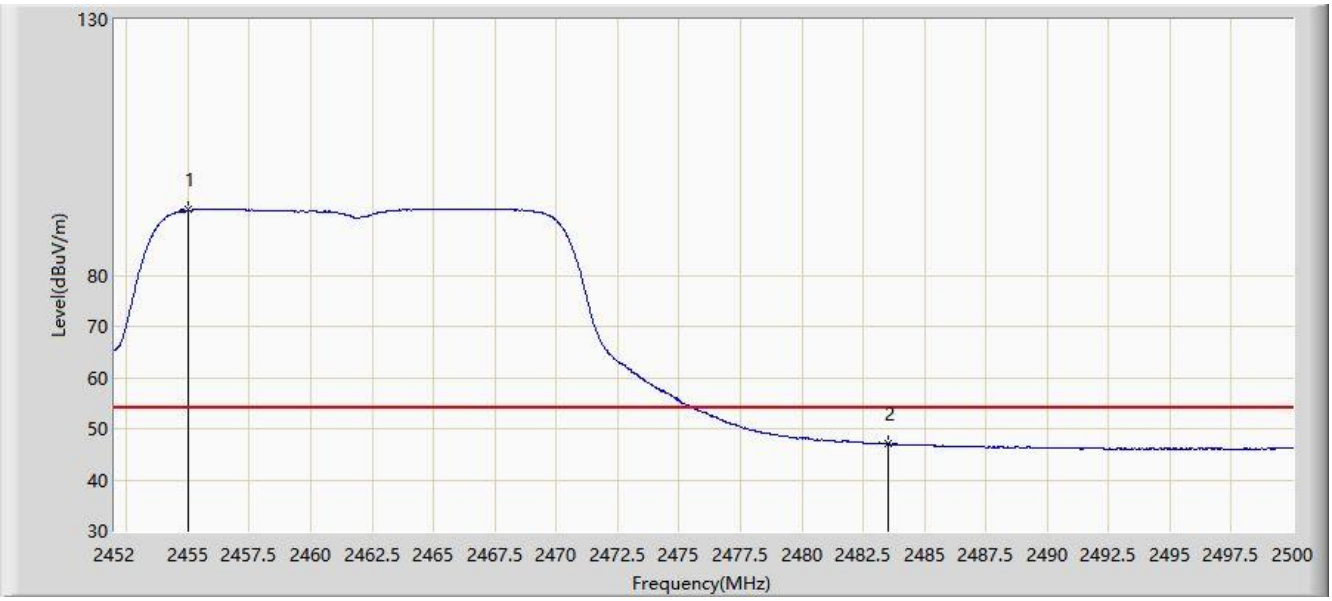


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2465.104	102.051	71.175	N/A	N/A	30.876	PK
2			2483.500	56.945	26.058	-17.055	74.000	30.888	PK
3			2484.040	59.966	29.081	-14.034	74.000	30.890	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

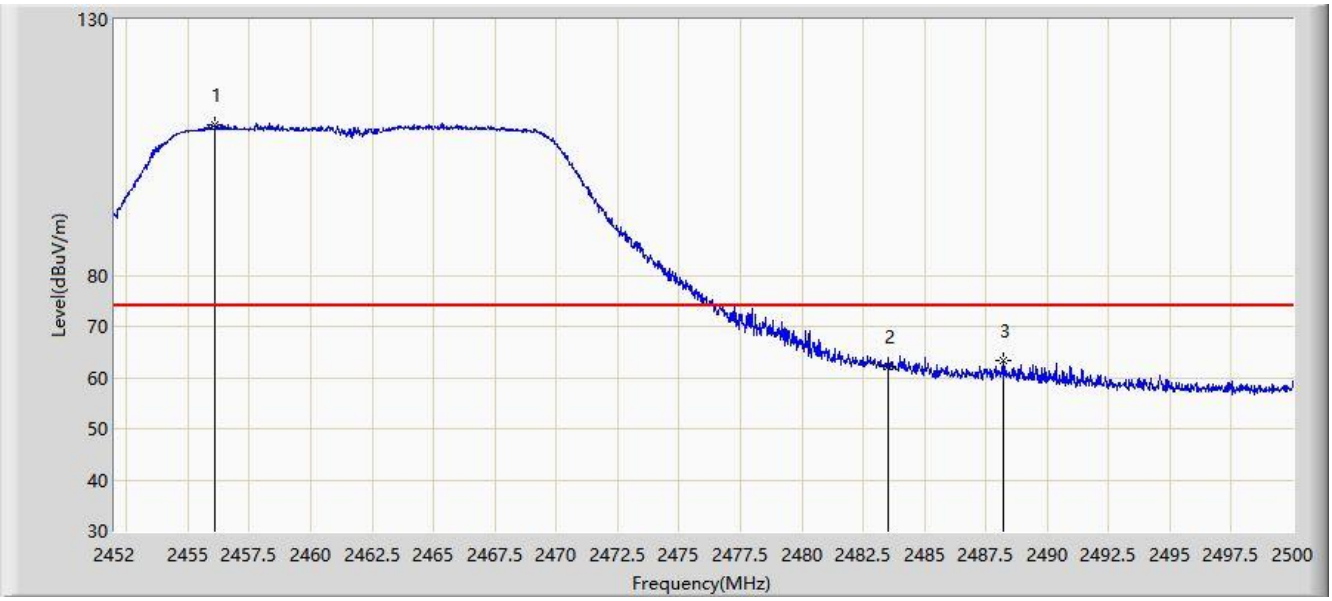


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2455.000	92.760	61.862	N/A	N/A	30.897	AV
2			2483.500	47.035	16.147	-6.965	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

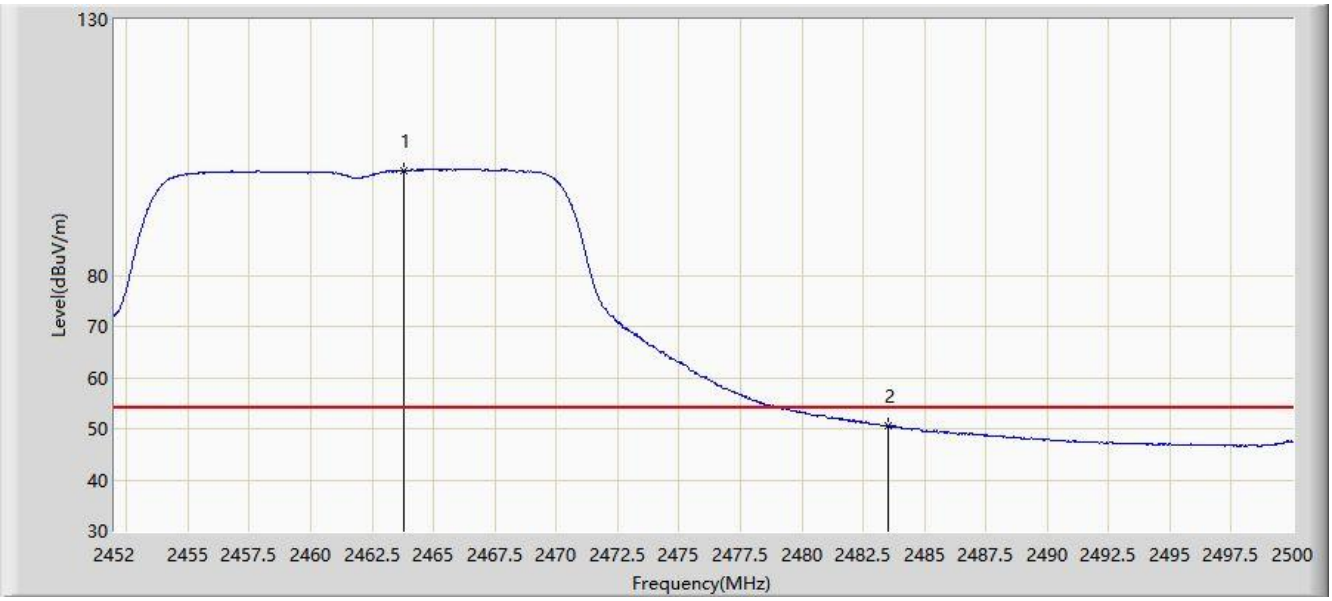


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2456.104	109.500	78.605	N/A	N/A	30.896	PK
2			2483.500	62.033	31.145	-11.967	74.000	30.888	PK
3			2488.192	63.257	32.370	-10.743	74.000	30.903	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 10:24
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

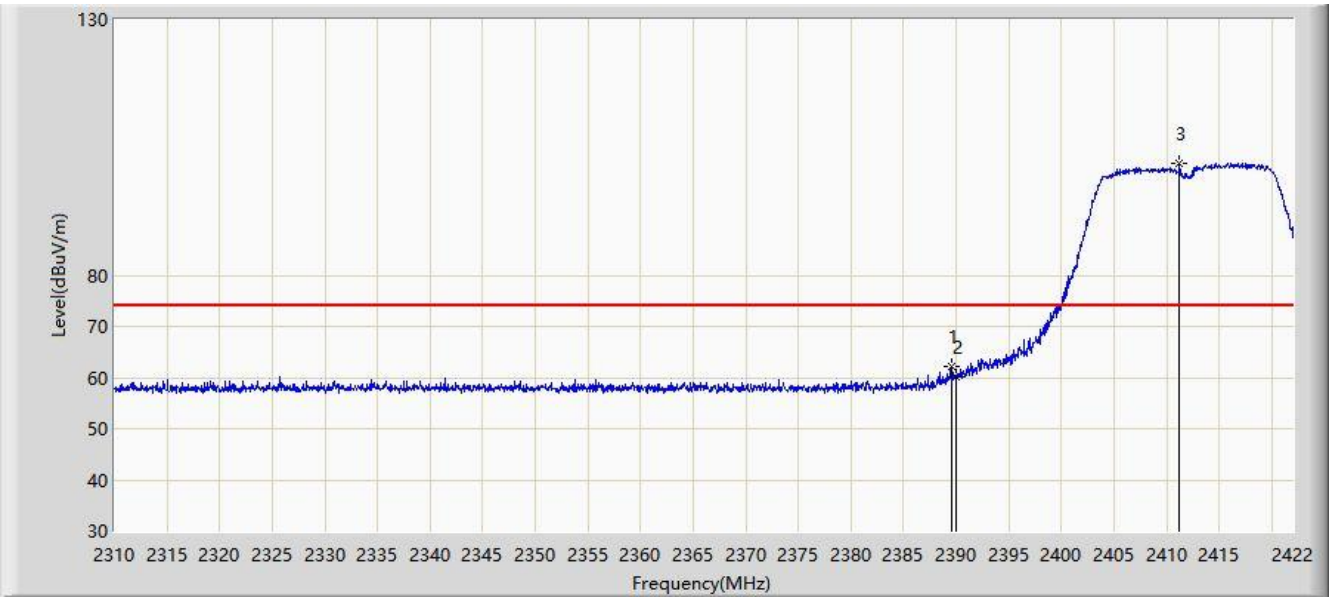


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2463.784	100.488	69.610	N/A	N/A	30.877	AV
2			2483.500	50.525	19.637	-3.475	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:43
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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 1	

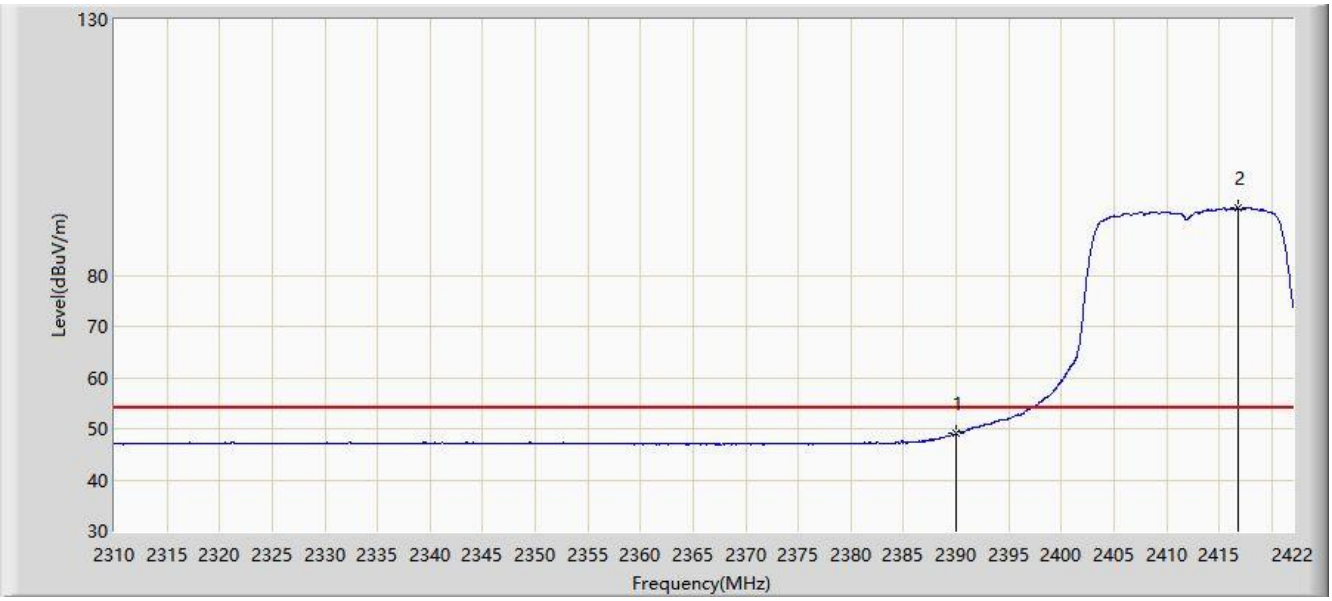


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2389.520	62.080	31.046	-11.920	74.000	31.034	PK
2			2390.000	60.207	29.174	-13.793	74.000	31.034	PK
3		*	2411.248	101.801	70.844	N/A	N/A	30.957	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:44
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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 1	

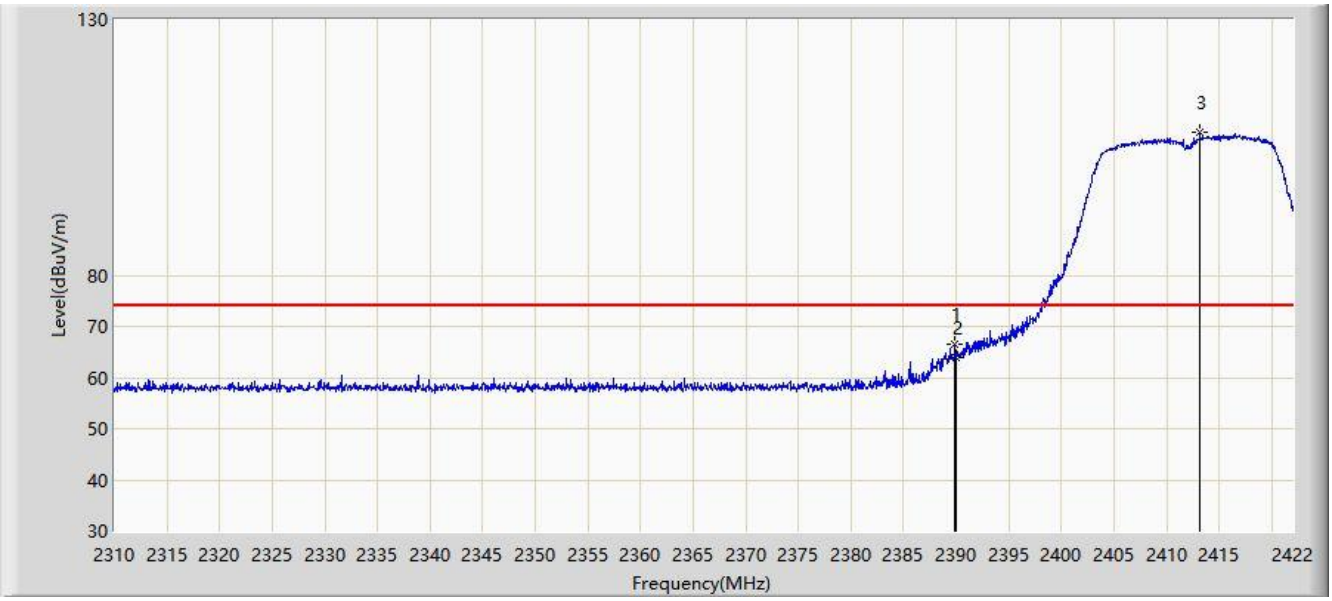


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	49.071	18.038	-4.929	54.000	31.034	AV
2		*	2416.792	93.217	62.289	N/A	N/A	30.928	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:41
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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 1	

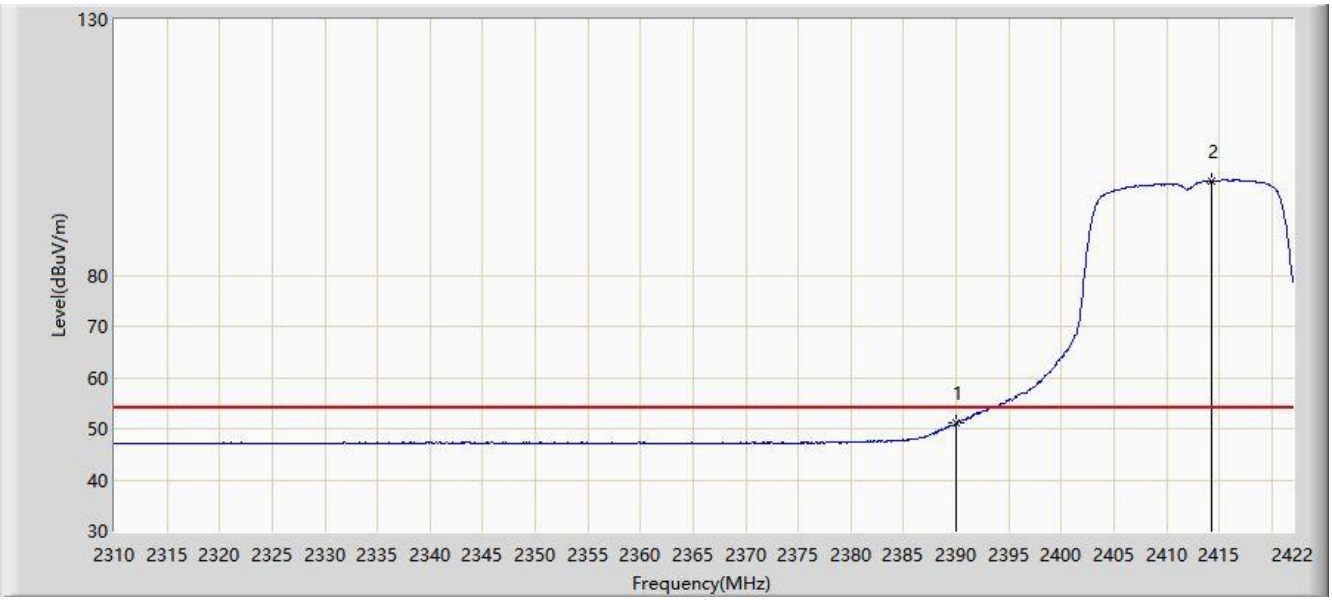


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2389.912	66.584	35.551	-7.416	74.000	31.033	PK
2			2390.000	63.854	32.821	-10.146	74.000	31.034	PK
3		*	2413.152	108.101	77.154	N/A	N/A	30.947	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:39
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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 1	

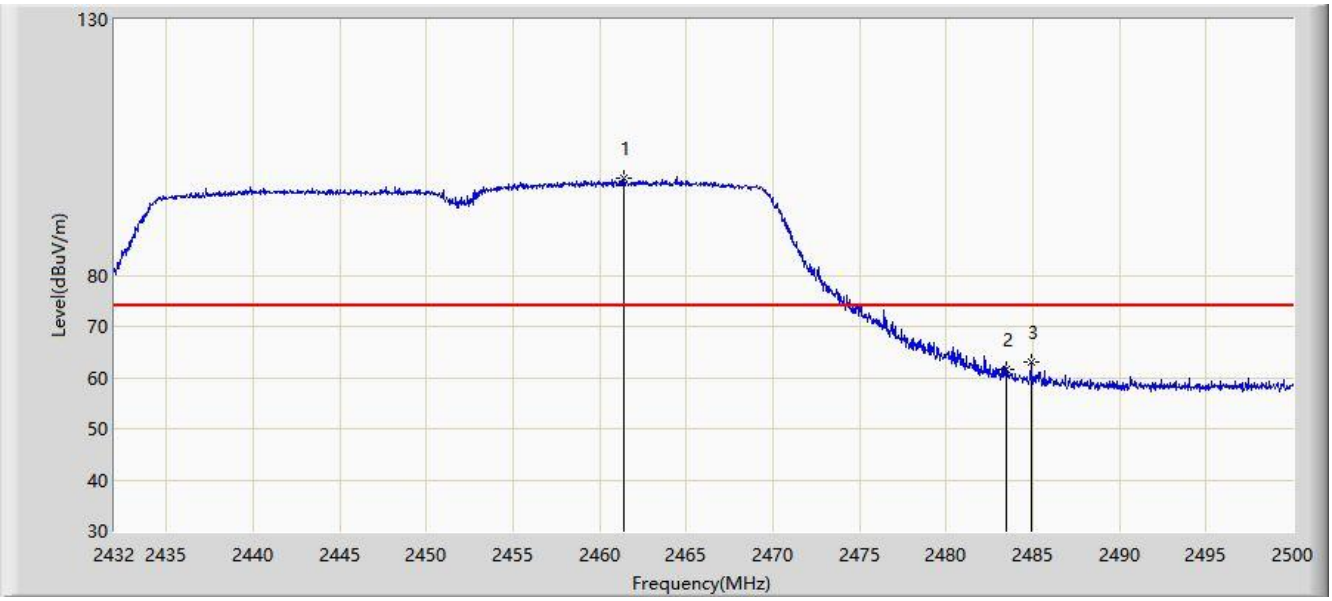


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	51.053	20.020	-2.947	54.000	31.034	AV
2		*	2414.216	98.501	67.560	N/A	N/A	30.941	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:53
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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 1	

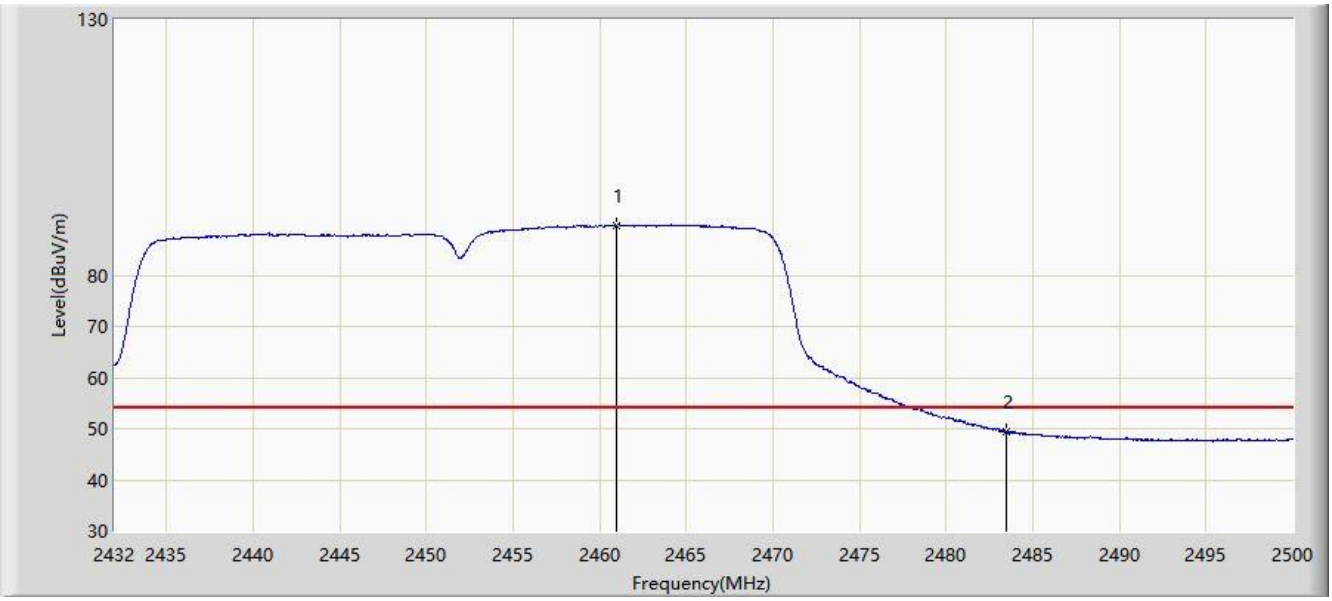


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2461.376	99.121	68.240	N/A	N/A	30.881	PK
2			2483.500	61.532	30.644	-12.468	74.000	30.888	PK
3			2484.904	63.140	32.248	-10.860	74.000	30.893	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:54
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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 1	

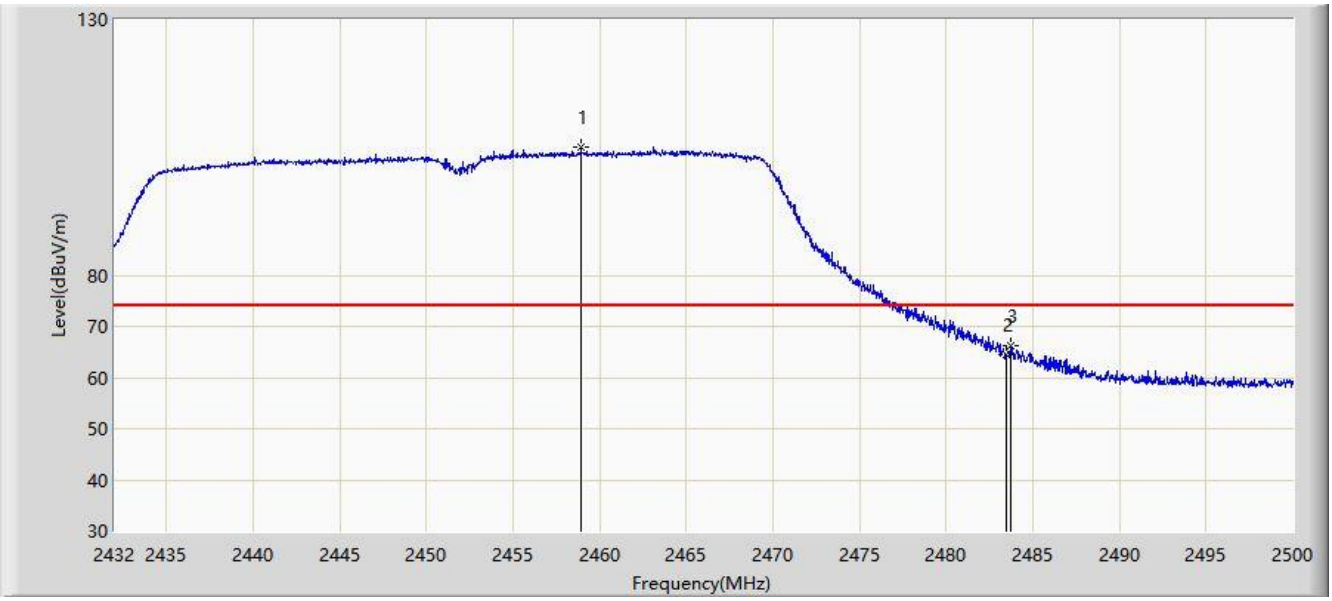


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2460.934	89.810	58.928	N/A	N/A	30.882	AV
2			2483.500	49.420	18.532	-4.580	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:51
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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 1	

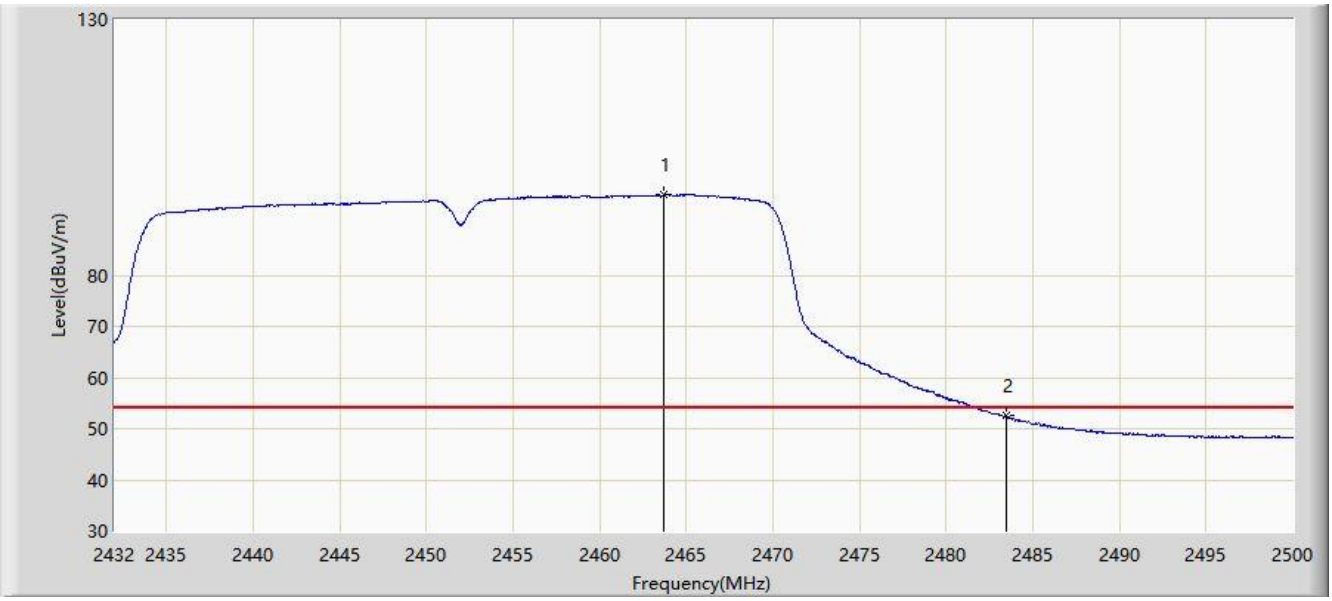


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2458.928	105.166	74.278	N/A	N/A	30.888	PK
2			2483.500	64.389	33.501	-9.611	74.000	30.888	PK
3			2483.748	66.331	35.442	-7.669	74.000	30.889	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:48
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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 1	

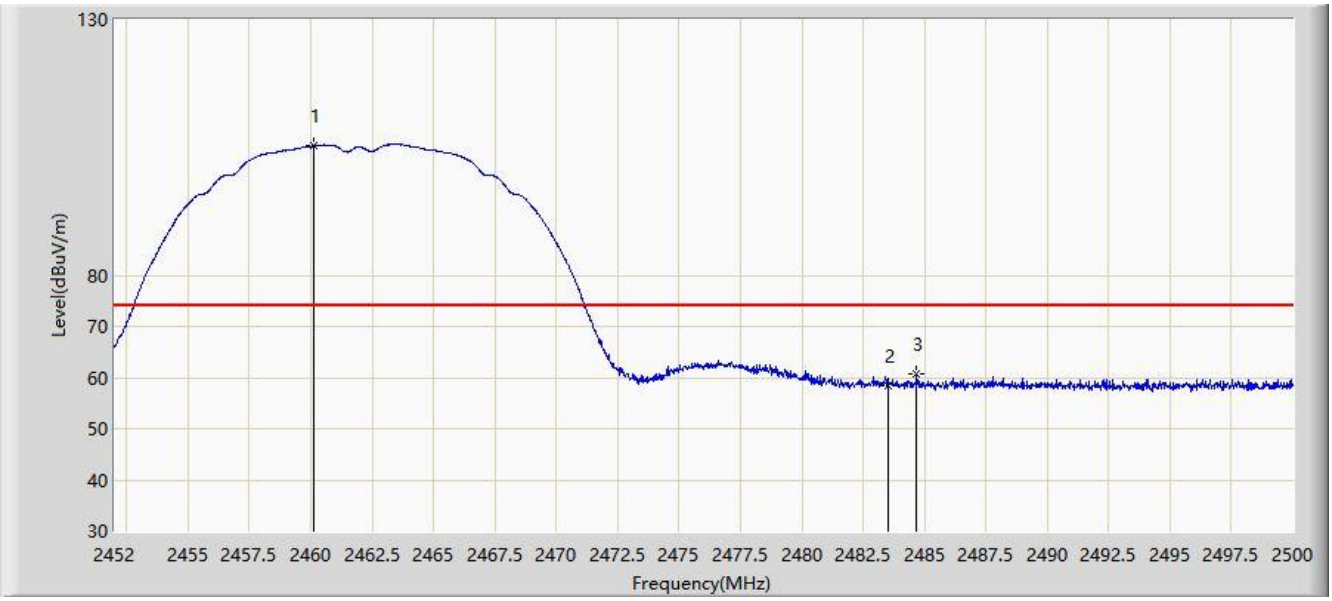


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2463.722	95.745	64.868	N/A	N/A	30.877	AV
2			2483.500	52.527	21.639	-1.473	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

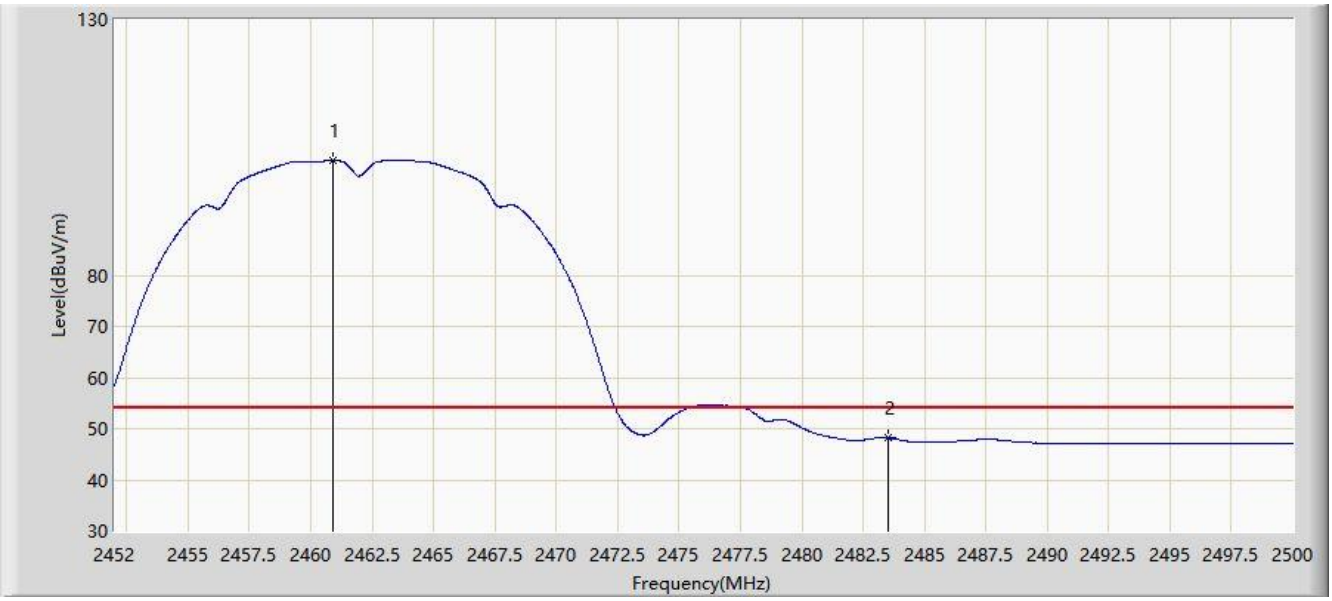


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2460.136	105.319	74.435	N/A	N/A	30.884	PK
2			2483.500	58.414	27.526	-15.586	74.000	30.888	PK
3			2484.688	60.790	29.898	-13.210	74.000	30.891	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:21
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

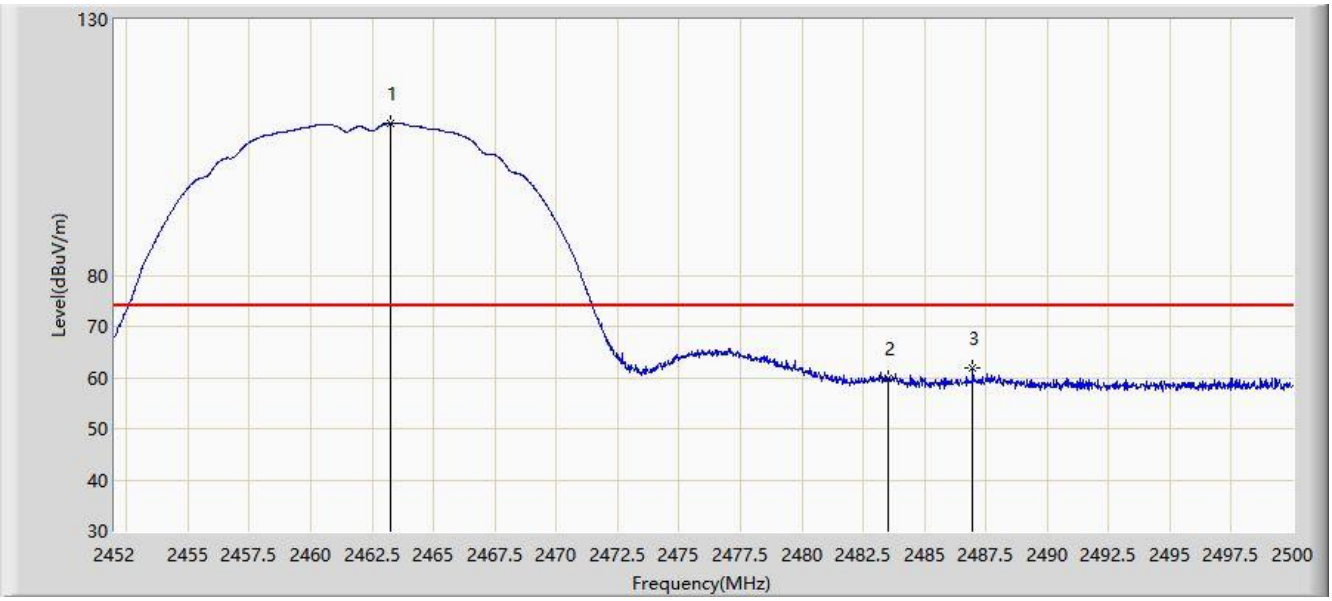


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2460.928	102.405	71.523	N/A	N/A	30.882	AV
2			2483.500	48.215	17.327	-5.785	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

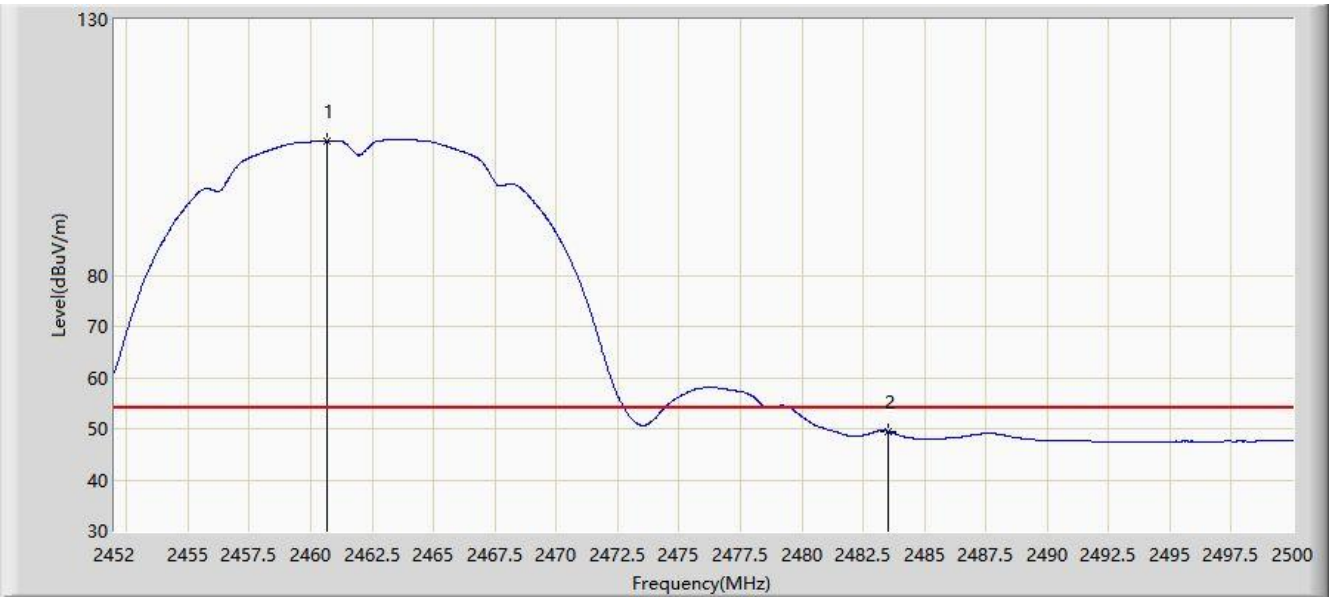


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2463.232	109.669	78.791	N/A	N/A	30.878	PK
2			2483.500	59.783	28.895	-14.217	74.000	30.888	PK
3			2486.944	61.756	30.857	-12.244	74.000	30.899	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

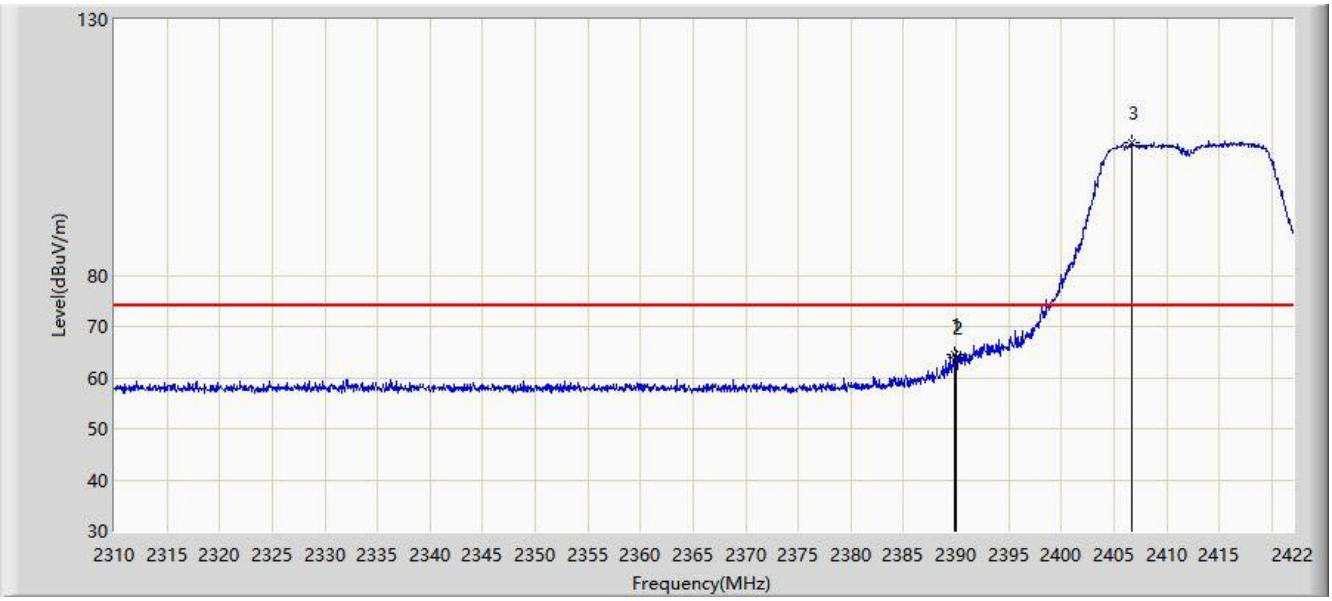


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1		*	2460.640	106.246	75.363	N/A	N/A	30.883	AV
2			2483.500	49.499	18.611	-4.501	54.000	30.888	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:33
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

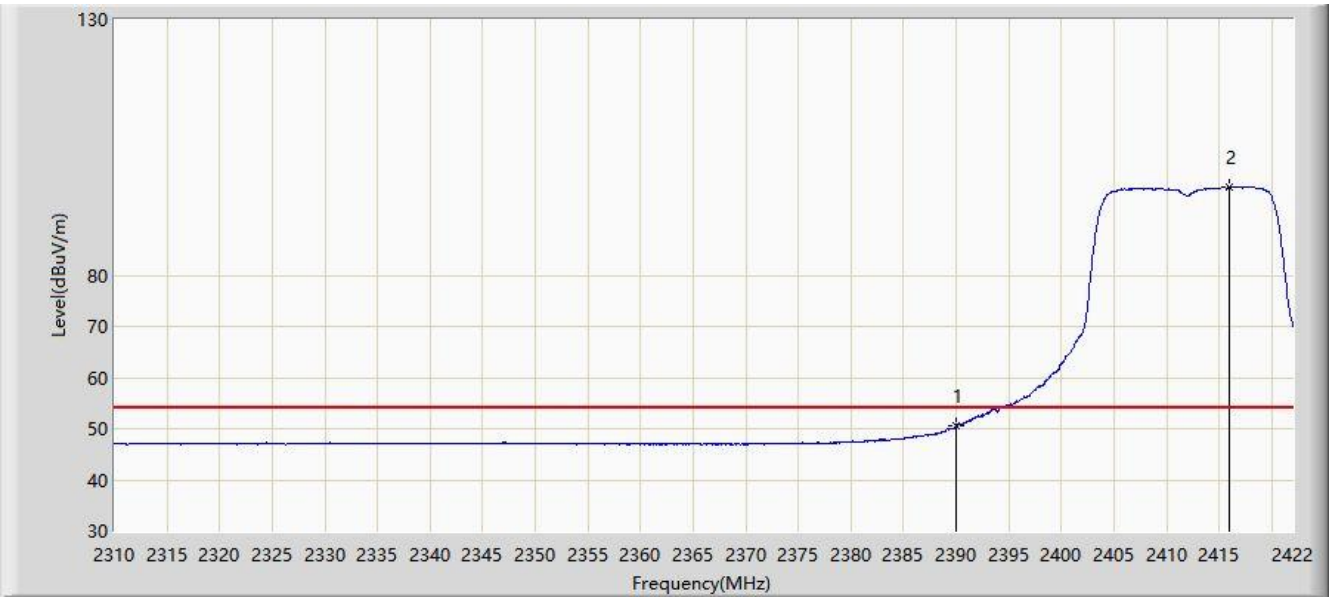


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2389.800	64.500	33.466	-9.500	74.000	31.033	PK
2			2390.000	63.797	32.764	-10.203	74.000	31.034	PK
3		*	2406.768	105.934	74.952	N/A	N/A	30.982	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:35
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

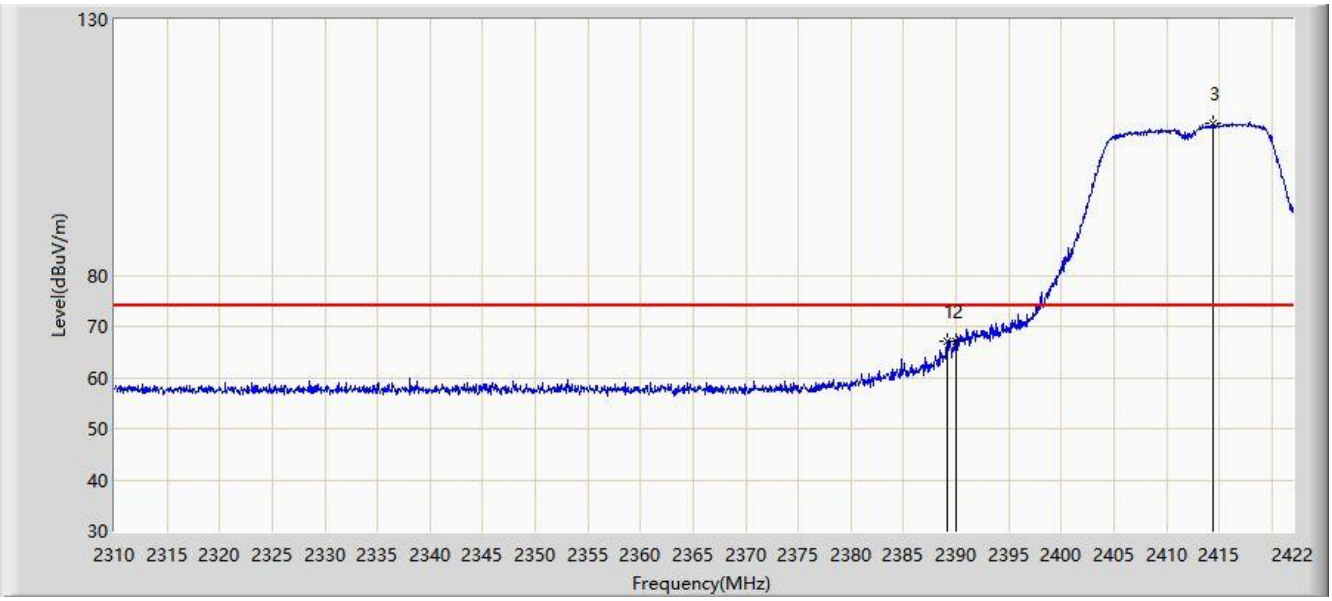


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	50.615	19.582	-3.385	54.000	31.034	AV
2		*	2416.008	97.260	66.328	N/A	N/A	30.931	AV

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:32
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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	

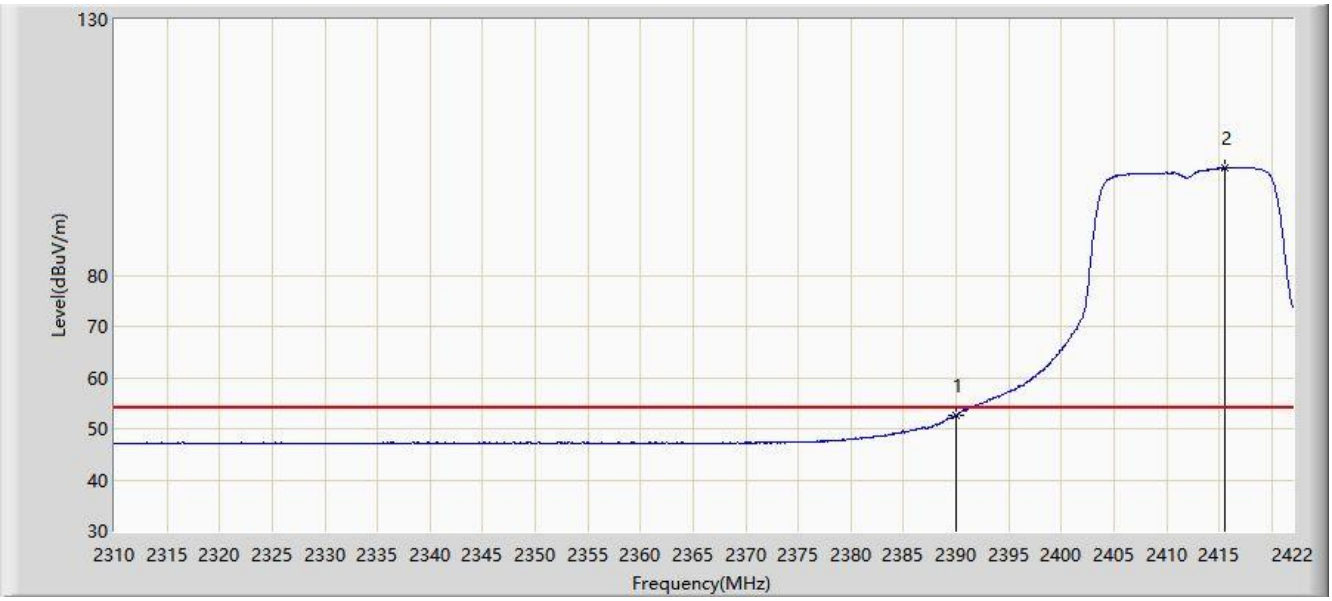


No	Flag	Mark	Frequency (MHz)	Measure Level (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2389.184	66.964	35.930	-7.036	74.000	31.034	PK
2			2390.000	67.136	36.103	-6.864	74.000	31.034	PK
3		*	2414.384	109.806	78.866	N/A	N/A	30.940	PK

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

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

Site: WZ-AC1	Time: 2021/08/05 - 21:29
Limit: FCC_Part15.209_RE(3m)	Engineer: Hyde Yu
Probe: WZ-AC1_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 (dBμV/m)	Reading Level (dBμV)	Margin (dB)	Limit (dBμV/m)	Factor (dB)	Type
1			2390.000	52.510	21.477	-1.490	54.000	31.034	AV
2		*	2415.504	101.019	70.085	N/A	N/A	30.934	AV

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

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