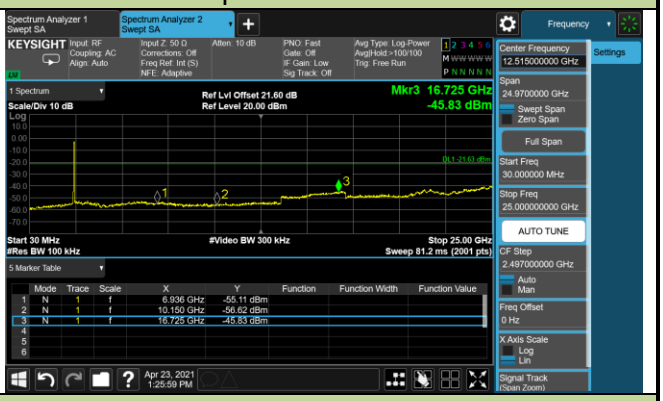
## 802.11n-HT40 Out-of-Band Emissions - Ant 3

### Channel 03 (2422MHz)

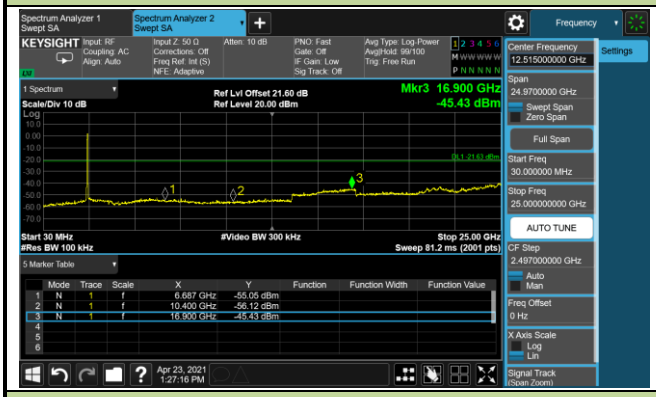
#### Low Band Edge

#### Spurious Emission



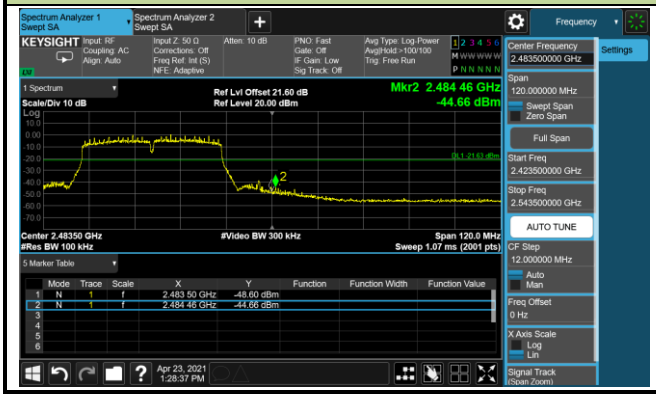

### Channel 06 (2437MHz)

#### Spurious Emission

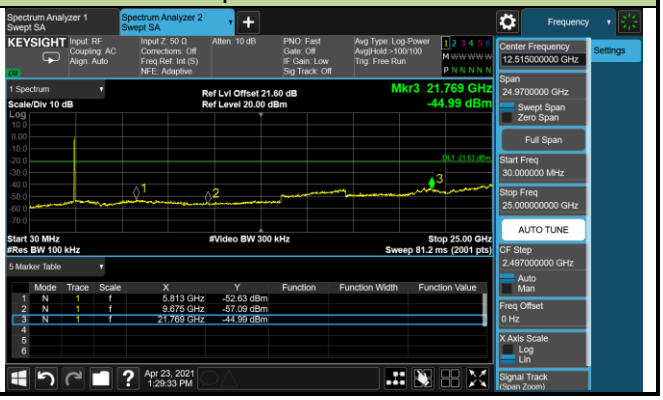



### Channel 09 (2452MHz)

#### 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

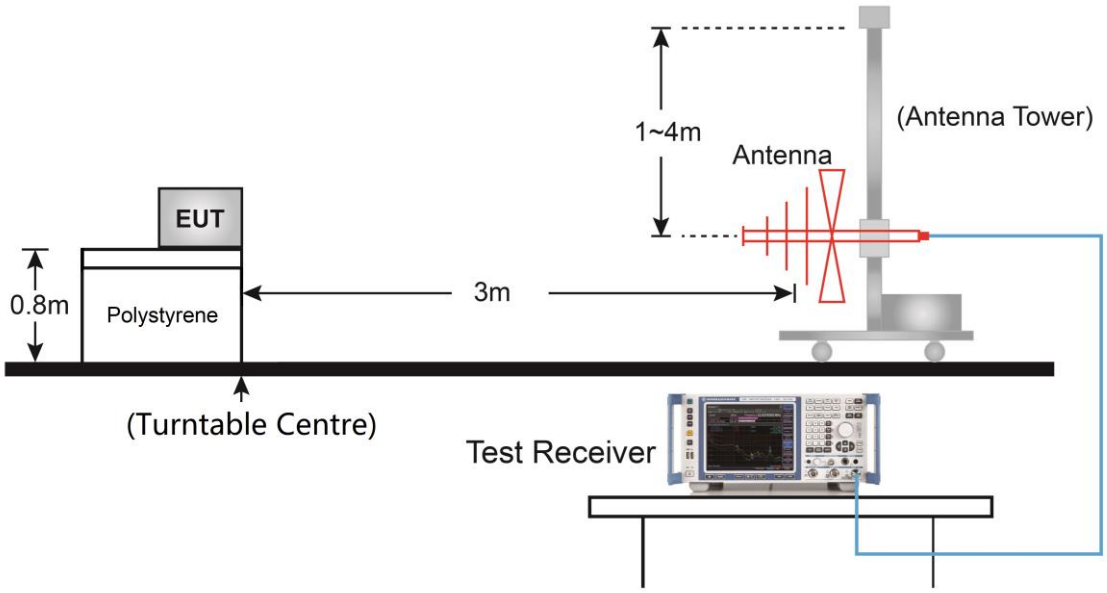
**Average Measurements above 1GHz (Method VB)**

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.

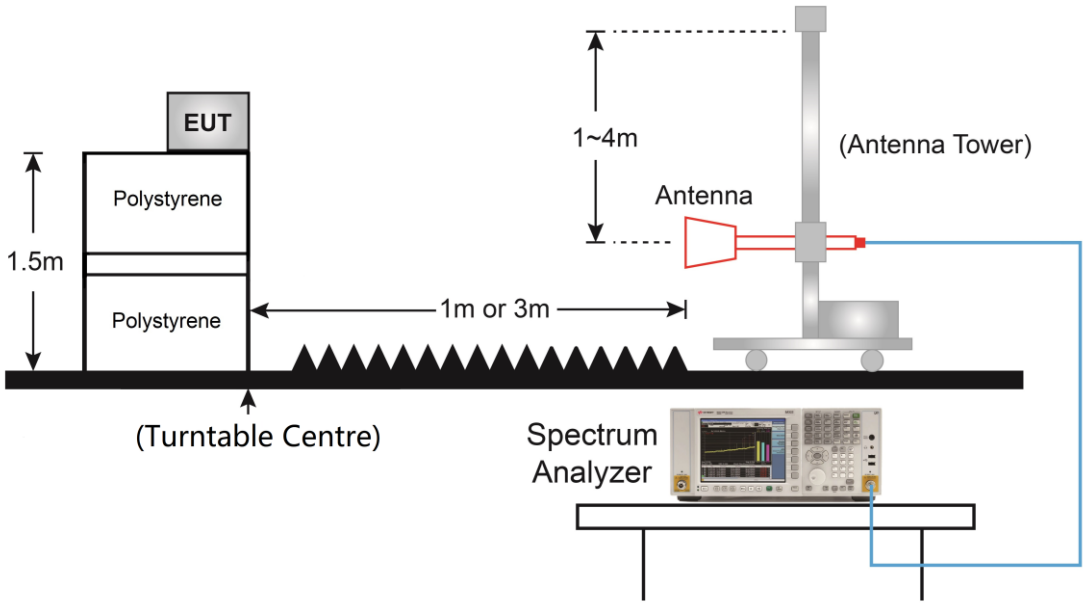
   If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Trace was allowed to stabilize

### 5.6.4.Test Setup

Below 1GHz Test Setup:




Above 1GHz Test Setup:



### 5.6.5.Test Result

| | | | |
|---|---|---|---|
| Test Site | WZ-AC1 | Test Engineer | Jason Gao |
| Test Date | 2021/04/16 | | |
| Test Mode | 802.11b - Ant 0 + 1 + 2 + 3 | | |
| Remark | 1. Average measurement was not performed if peak level lower than average limit.<br>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. | | |

| Test Channel | Frequency (MHz) | Reading Level (dBμV) | Factor (dB/m) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Detector | Polarization |
|---|---|---|---|---|---|---|---|---|
| 01 | 3975.0 | 41.6 | 2.7 | 44.3 | 74.0 | -29.7 | Peak | Horizontal |
| | 4825.0 | 45.4 | 4.8 | 50.2 | 74.0 | -23.8 | Peak | Horizontal |
| | 7400.5 | 38.0 | 9.6 | 47.6 | 74.0 | -26.4 | Peak | Horizontal |
| | 3754.0 | 42.2 | 2.0 | 44.3 | 74.0 | -29.7 | Peak | Vertical |
| | 4824.1 | 49.0 | 4.8 | 53.8 | 54.0 | -0.2 | Average | Vertical |
| | 4825.0 | 50.8 | 4.8 | 55.6 | 74.0 | -18.4 | Peak | Vertical |
| | 5003.5 | 41.0 | 5.3 | 46.3 | 74.0 | -27.7 | Peak | Vertical |
| 06 | 4876.0 | 44.3 | 4.9 | 49.2 | 74.0 | -24.8 | Peak | Horizontal |
| | 7400.5 | 38.8 | 9.6 | 48.4 | 74.0 | -25.6 | Peak | Horizontal |
| | 8386.5 | 38.0 | 10.0 | 48.0 | 74.0 | -26.0 | Peak | Horizontal |
| | 4298.0 | 40.8 | 3.4 | 44.2 | 74.0 | -29.8 | Peak | Vertical |
| | 4874.0 | 48.8 | 4.9 | 53.7 | 54.0 | -0.3 | Average | Vertical |
| | 4876.0 | 51.2 | 4.9 | 56.1 | 74.0 | -17.9 | Peak | Vertical |
| | 7400.5 | 39.0 | 9.6 | 48.6 | 74.0 | -25.4 | Peak | Vertical |
| 11 | 4026.0 | 39.6 | 2.9 | 42.5 | 74.0 | -31.5 | Peak | Horizontal |
| | 4927.0 | 43.8 | 5.4 | 49.2 | 74.0 | -24.8 | Peak | Horizontal |
| | 7579.0 | 36.4 | 9.6 | 46.0 | 74.0 | -28.0 | Peak | Horizontal |
| | 4221.5 | 40.0 | 3.3 | 43.3 | 74.0 | -30.7 | Peak | Vertical |
| | 4924.0 | 48.4 | 5.3 | 53.7 | 54.0 | -0.3 | Average | Vertical |
| | 4927.0 | 50.3 | 5.4 | 55.7 | 74.0 | -18.3 | Peak | Vertical |
| | 7383.5 | 40.1 | 9.5 | 49.6 | 74.0 | -24.4 | Peak | Vertical |

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

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

| | | | |
|---|---|---|---|
| Test Site | WZ-AC1 | Test Engineer | Jason Gao |
| Test Date | 2021/04/16 | | |
| Test Mode | 802.11g - Ant 0 + 1 + 2 + 3 | | |
| Remark | 1. Average measurement was not performed if peak level lower than average limit.<br>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. | | |

| Test Channel | Frequency (MHz) | Reading Level (dBμV) | Factor (dB/m) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Detector | Polarization |
|---|---|---|---|---|---|---|---|---|
| 01 | 4043.0 | 40.1 | 2.9 | 43.0 | 74.0 | -31.0 | Peak | Horizontal |
| | 4825.0 | 43.2 | 4.8 | 48.0 | 74.0 | -26.0 | Peak | Horizontal |
| | 7460.0 | 38.1 | 9.6 | 47.7 | 74.0 | -26.3 | Peak | Horizontal |
| | 4034.5 | 40.3 | 3.0 | 43.3 | 74.0 | -30.7 | Peak | Vertical |
| | 4825.0 | 48.0 | 4.8 | 52.8 | 74.0 | -21.2 | Peak | Vertical |
| | 7468.5 | 36.8 | 9.7 | 46.5 | 74.0 | -27.5 | Peak | Vertical |
| 06 | 3975.0 | 40.0 | 2.7 | 42.7 | 74.0 | -31.3 | Peak | Horizontal |
| | 4876.0 | 43.4 | 4.9 | 48.3 | 74.0 | -25.7 | Peak | Horizontal |
| | 7307.0 | 41.7 | 9.4 | 51.1 | 74.0 | -22.9 | Peak | Horizontal |
| | 4876.0 | 47.8 | 4.9 | 52.7 | 74.0 | -21.3 | Peak | Vertical |
| | 7307.0 | 49.1 | 9.4 | 58.5 | 74.0 | -15.5 | Peak | Vertical |
| | 7307.5 | 38.6 | 9.4 | 48.0 | 54.0 | -6.0 | Average | Vertical |
| | 8259.0 | 38.9 | 10.3 | 49.2 | 74.0 | -24.8 | Peak | Vertical |
| 11 | 4026.0 | 39.9 | 2.9 | 42.8 | 74.0 | -31.2 | Peak | Horizontal |
| | 4927.0 | 40.5 | 5.4 | 45.9 | 74.0 | -28.1 | Peak | Horizontal |
| | 7723.5 | 38.9 | 9.6 | 48.5 | 74.0 | -25.5 | Peak | Horizontal |
| | 4315.0 | 40.3 | 3.6 | 43.9 | 74.0 | -30.1 | Peak | Vertical |
| | 4927.0 | 43.9 | 5.4 | 49.3 | 74.0 | -24.7 | Peak | Vertical |
| | 7434.5 | 45.4 | 2.3 | 47.7 | 74.0 | -26.3 | Peak | Vertical |

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

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

| | | | |
|---|---|---|---|
| Test Site | WZ-AC1 | Test Engineer | Jason Gao |
| Test Date | 2021/04/16 | | |
| Test Mode | 802.11n-HT20 - Ant 0 + 1 + 2 + 3 | | |
| Remark | 1. Average measurement was not performed if peak level lower than average limit.<br>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. | | |

| Test Channel | Frequency (MHz) | Reading Level (dBμV) | Factor (dB/m) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Detector | Polarization |
|---|---|---|---|---|---|---|---|---|
| 01 | 4034.5 | 39.7 | 3.0 | 42.7 | 74.0 | -31.3 | Peak | Horizontal |
| | 4825.0 | 43.0 | 4.8 | 47.8 | 74.0 | -26.2 | Peak | Horizontal |
| | 7417.5 | 37.8 | 9.6 | 47.4 | 74.0 | -26.6 | Peak | Horizontal |
| | 4034.5 | 40.4 | 3.0 | 43.4 | 74.0 | -30.6 | Peak | Vertical |
| | 4816.5 | 45.3 | 5.0 | 50.3 | 74.0 | -23.7 | Peak | Vertical |
| | 7434.5 | 37.5 | 9.5 | 47.0 | 74.0 | -27.0 | Peak | Vertical |
| 06 | 3992.0 | 40.7 | 2.5 | 43.2 | 74.0 | -30.8 | Peak | Horizontal |
| | 4876.0 | 44.0 | 4.9 | 48.9 | 74.0 | -25.1 | Peak | Horizontal |
| | 7307.0 | 43.5 | 9.4 | 52.9 | 74.0 | -21.1 | Peak | Horizontal |
| | 3966.5 | 40.3 | 2.7 | 43.0 | 74.0 | -31.0 | Peak | Vertical |
| | 4876.0 | 47.5 | 4.9 | 52.4 | 74.0 | -21.6 | Peak | Vertical |
| | 7307.0 | 48.3 | 9.4 | 57.7 | 74.0 | -16.3 | Peak | Vertical |
| | 7307.2 | 37.3 | 9.4 | 46.7 | 54.0 | -7.3 | Average | Vertical |
| 11 | 4000.5 | 39.9 | 2.5 | 42.4 | 74.0 | -31.6 | Peak | Horizontal |
| | 4927.0 | 43.6 | 5.4 | 49.0 | 74.0 | -25.0 | Peak | Horizontal |
| | 7655.5 | 36.0 | 9.5 | 45.5 | 74.0 | -28.5 | Peak | Horizontal |
| | 4918.5 | 44.7 | 5.1 | 49.8 | 74.0 | -24.2 | Peak | Vertical |
| | 7400.5 | 38.4 | 9.6 | 48.0 | 74.0 | -26.0 | Peak | Vertical |
| | 8284.5 | 37.8 | 10.1 | 47.9 | 74.0 | -26.1 | Peak | Vertical |

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

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

| | | | |
|---|---|---|---|
| Test Site | WZ-AC1 | Test Engineer | Jason Gao |
| Test Date | 2021/04/16 | | |
| Test Mode | 802.11n-HT40 - Ant 0 + 1 + 2 + 3 | | |
| Remark | 1. Average measurement was not performed if peak level lower than average limit.<br>2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report. | | |

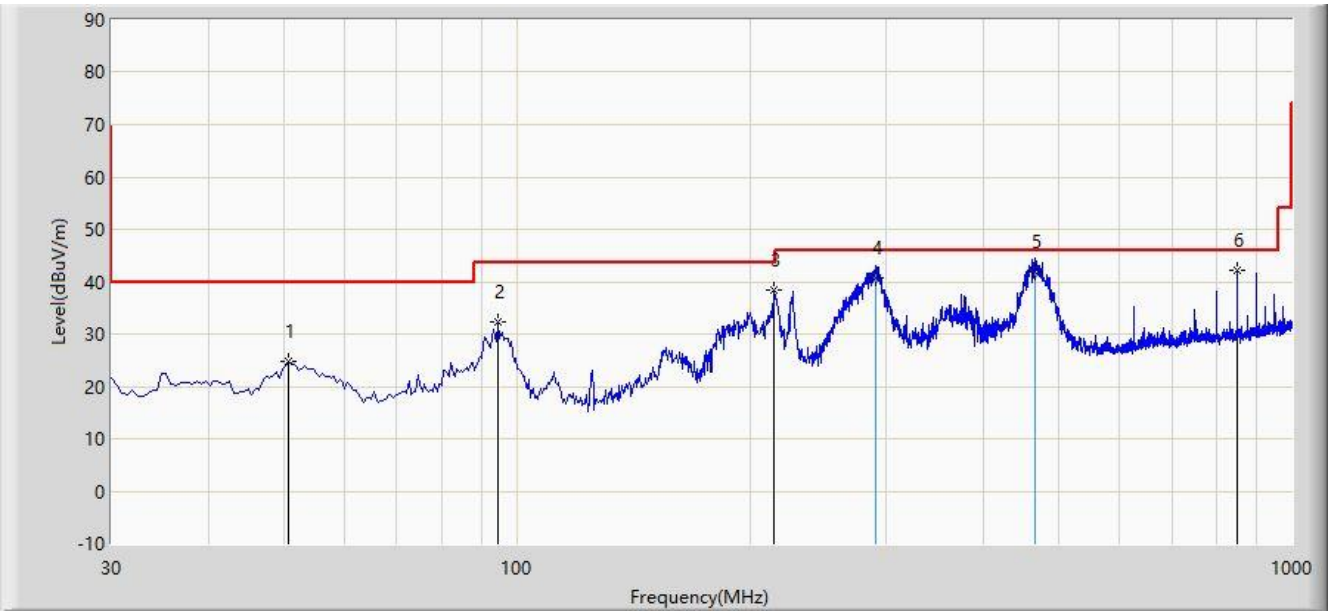
| Test Channel | Frequency (MHz) | Reading Level (dBμV) | Factor (dB/m) | Measure Level (dBμV/m) | Limit (dBμV/m) | Margin (dB) | Detector | Polarization |
|---|---|---|---|---|---|---|---|---|
| 03 | 4034.5 | 40.0 | 3.0 | 43.0 | 74.0 | -31.0 | Peak | Horizontal |
| | 5003.5 | 41.9 | 5.3 | 47.2 | 74.0 | -26.8 | Peak | Horizontal |
| | 7358.0 | 39.0 | 9.4 | 48.4 | 74.0 | -25.6 | Peak | Horizontal |
| | 3949.5 | 40.8 | 2.5 | 43.3 | 74.0 | -30.7 | Peak | Vertical |
| | 4842.0 | 40.1 | 5.1 | 45.2 | 74.0 | -28.8 | Peak | Vertical |
| | 7375.0 | 38.7 | 9.4 | 48.1 | 74.0 | -25.9 | Peak | Vertical |
| 06 | 4187.5 | 39.8 | 3.0 | 42.8 | 74.0 | -31.2 | Peak | Horizontal |
| | 4774.0 | 39.3 | 5.0 | 44.3 | 74.0 | -29.7 | Peak | Horizontal |
| | 7451.5 | 37.6 | 9.6 | 47.2 | 74.0 | -26.8 | Peak | Horizontal |
| | 4009.0 | 40.3 | 2.6 | 42.9 | 74.0 | -31.1 | Peak | Vertical |
| | 4876.0 | 43.2 | 4.9 | 48.1 | 74.0 | -25.9 | Peak | Vertical |
| | 7324.0 | 39.0 | 9.7 | 48.7 | 74.0 | -25.3 | Peak | Vertical |
| 09 | 3992.0 | 40.4 | 2.5 | 42.9 | 74.0 | -31.1 | Peak | Horizontal |
| | 5003.5 | 40.6 | 5.3 | 45.9 | 74.0 | -28.1 | Peak | Horizontal |
| | 7681.0 | 37.4 | 9.6 | 47.0 | 74.0 | -27.0 | Peak | Horizontal |
| | 4034.5 | 40.6 | 3.0 | 43.6 | 74.0 | -30.4 | Peak | Vertical |
| | 5003.5 | 40.2 | 5.3 | 45.5 | 74.0 | -28.5 | Peak | Vertical |
| | 7349.5 | 38.2 | 9.5 | 47.7 | 74.0 | -26.3 | Peak | Vertical |

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

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

**The Result of Radiated Emission below 1GHz:**

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/07/07 - 20:37 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Tommy Tang |
| Probe: WZ-AC1_VULB 9168_30-1000MHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2437MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 50.855 | 24.837 | 6.859 | -15.163 | 40.000 | 17.978 | PK |
| 2 | | | 94.505 | 32.312 | 19.861 | -11.188 | 43.500 | 12.452 | PK |
| 3 | | | 214.785 | 38.417 | 23.970 | -5.083 | 43.500 | 14.447 | PK |
| 4 | | | 290.930 | 40.817 | 22.700 | -5.183 | 46.000 | 18.117 | QP |
| 5 | | | 466.500 | 41.782 | 19.200 | -4.218 | 46.000 | 22.582 | QP |
| 6 | | * | 850.620 | 42.247 | 13.445 | -3.753 | 46.000 | 28.802 | PK |

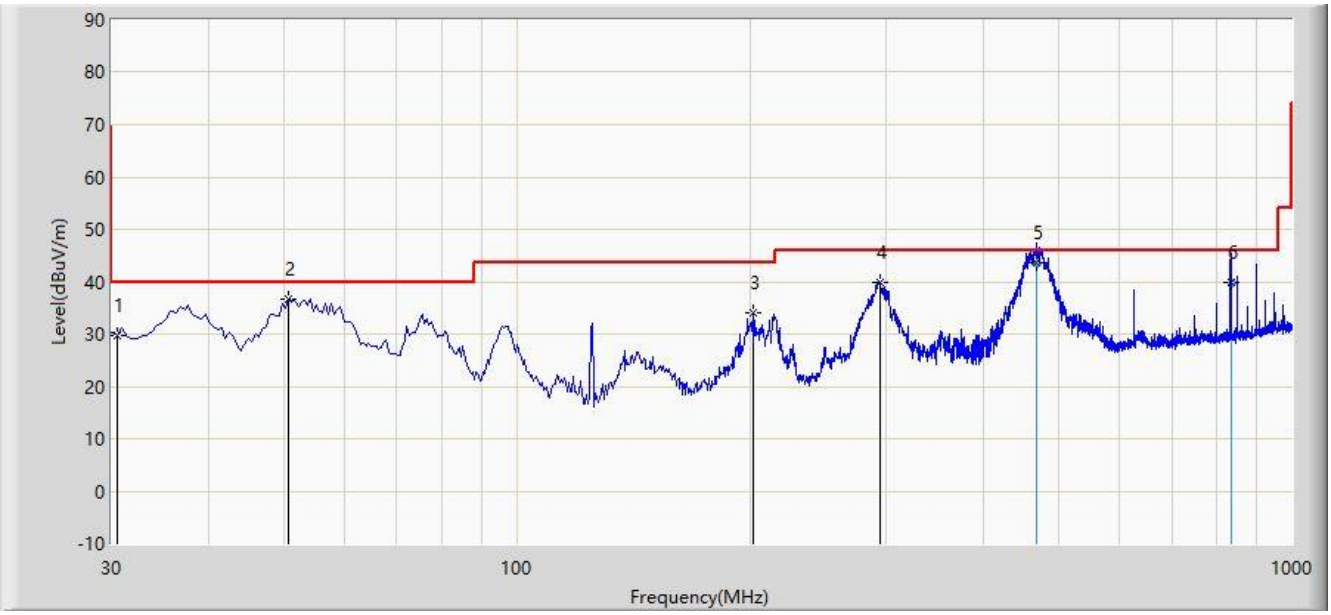
Note 1: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB/m)

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

Note 2: QP measurement was not performed when peak measure level was lower than the QP limit.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz ~ 30MHz, 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-AC1 | Time: 2021/07/07 - 20:40 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Tommy Tang |
| Probe: WZ-AC1_VULB 9168 _30-1000MHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2437MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 30.485 | 29.731 | 13.058 | -10.269 | 40.000 | 16.674 | PK |
| 2 | | | 50.855 | 36.677 | 18.699 | -3.323 | 40.000 | 17.978 | PK |
| 3 | | | 202.175 | 33.958 | 19.375 | -9.542 | 43.500 | 14.583 | PK |
| 4 | | | 293.840 | 39.939 | 21.769 | -6.061 | 46.000 | 18.170 | PK |
| 5 | | * | 468.440 | 43.614 | 21.000 | -2.386 | 46.000 | 22.614 | QP |
| 6 | | | 834.130 | 39.926 | 11.200 | -6.074 | 46.000 | 28.726 | QP |

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

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

Note 2: QP measurement was not performed when peak measure level was lower than the QP limit.

Note 3: The amplitude of radiated emissions (frequency range from 9kHz ~ 30MHz, 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

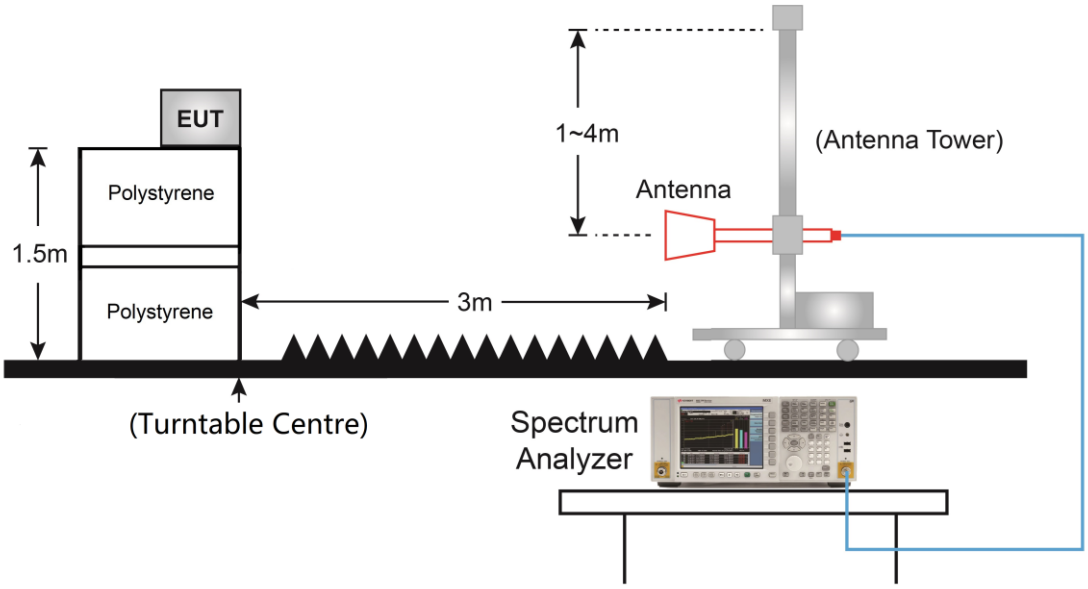
**Peak Field Strength Measurements**

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**

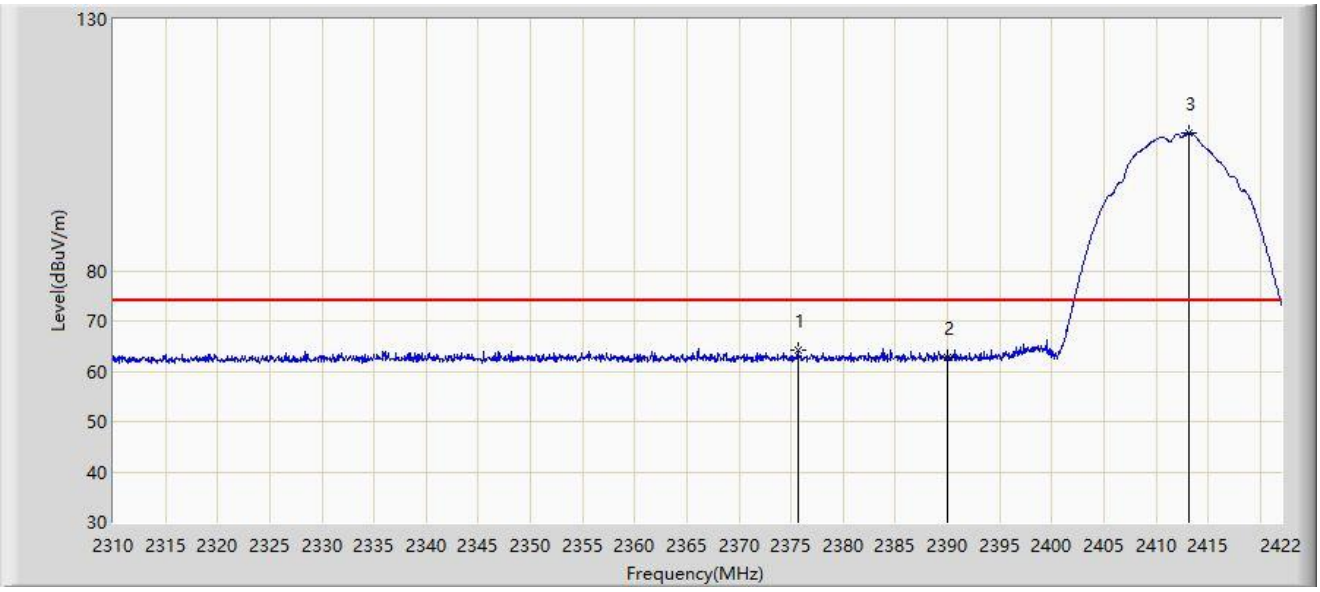
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW ≥ 1/T
4. As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). 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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:02 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2412MHz | |

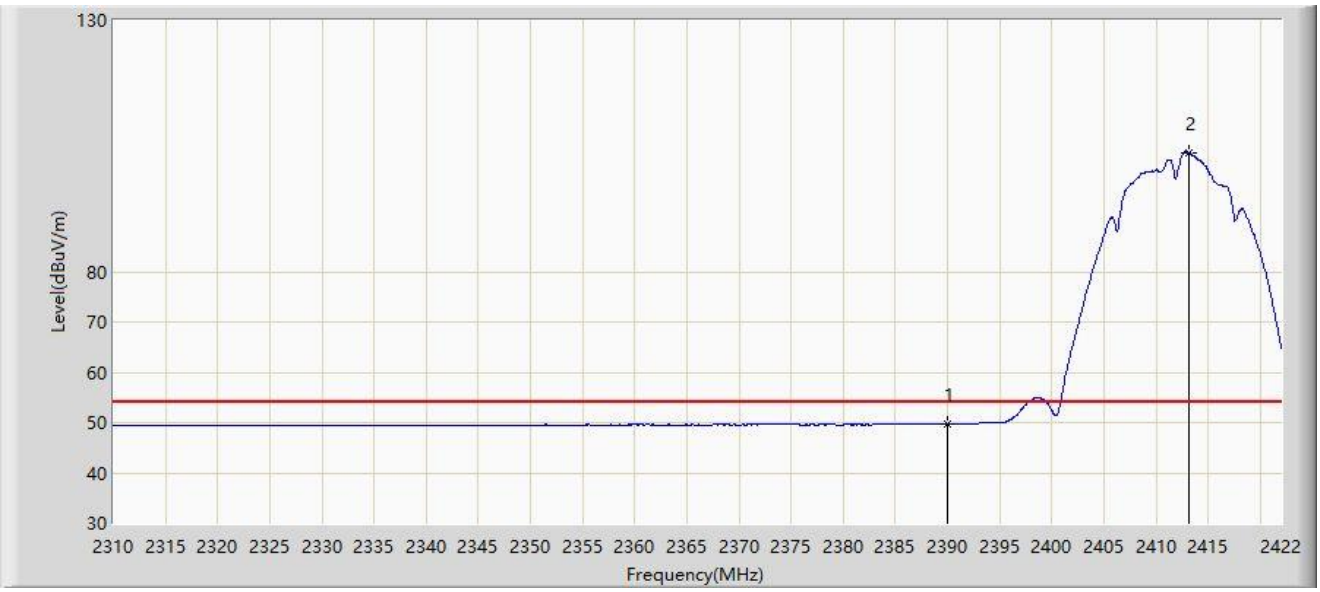



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2375.632 | 64.139 | 31.628 | -9.861 | 74.000 | 32.513 | PK |
| 2 | | | 2390.000 | 62.789 | 30.257 | -11.211 | 74.000 | 32.533 | PK |
| 3 | | * | 2413.208 | 107.447 | 74.953 | N/A | N/A | 32.493 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:04 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2412MHz | |

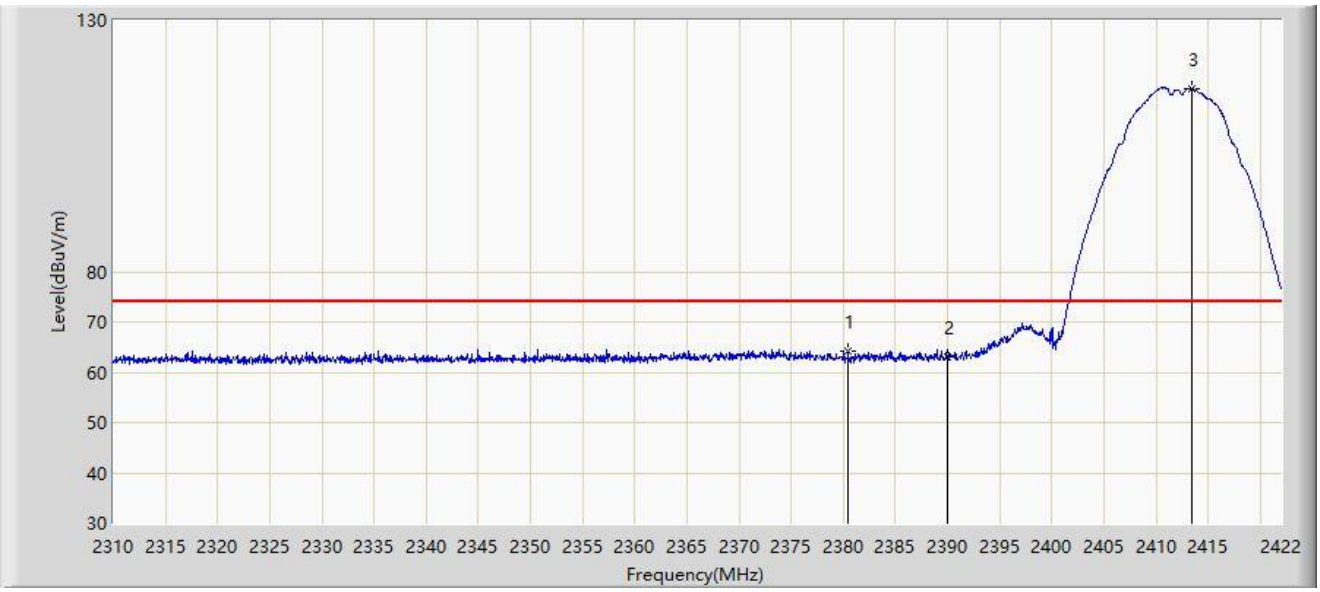



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 49.652 | 17.120 | -4.348 | 54.000 | 32.533 | AV |
| 2 | | * | 2413.208 | 103.675 | 71.182 | N/A | N/A | 32.493 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:07 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2412MHz | |

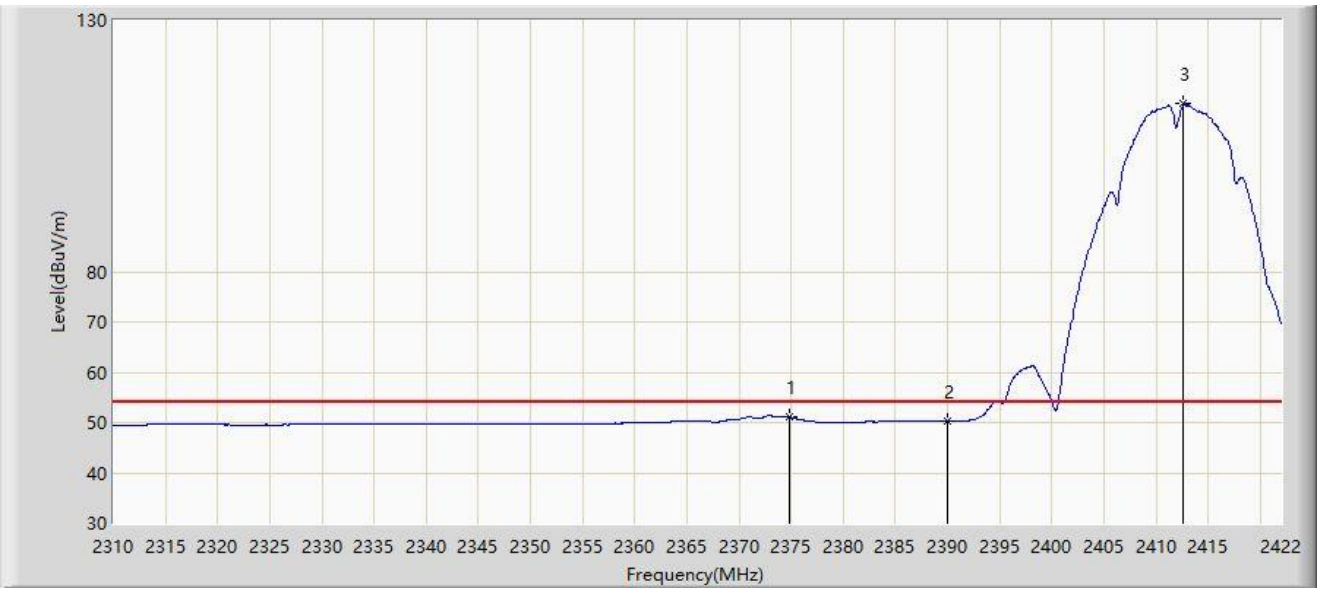



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2380.448 | 64.221 | 31.729 | -9.779 | 74.000 | 32.493 | PK |
| 2 | | | 2390.000 | 62.913 | 30.380 | -11.087 | 74.000 | 32.533 | PK |
| 3 | | * | 2413.376 | 116.360 | 83.867 | N/A | N/A | 32.492 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:09 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2412MHz | |

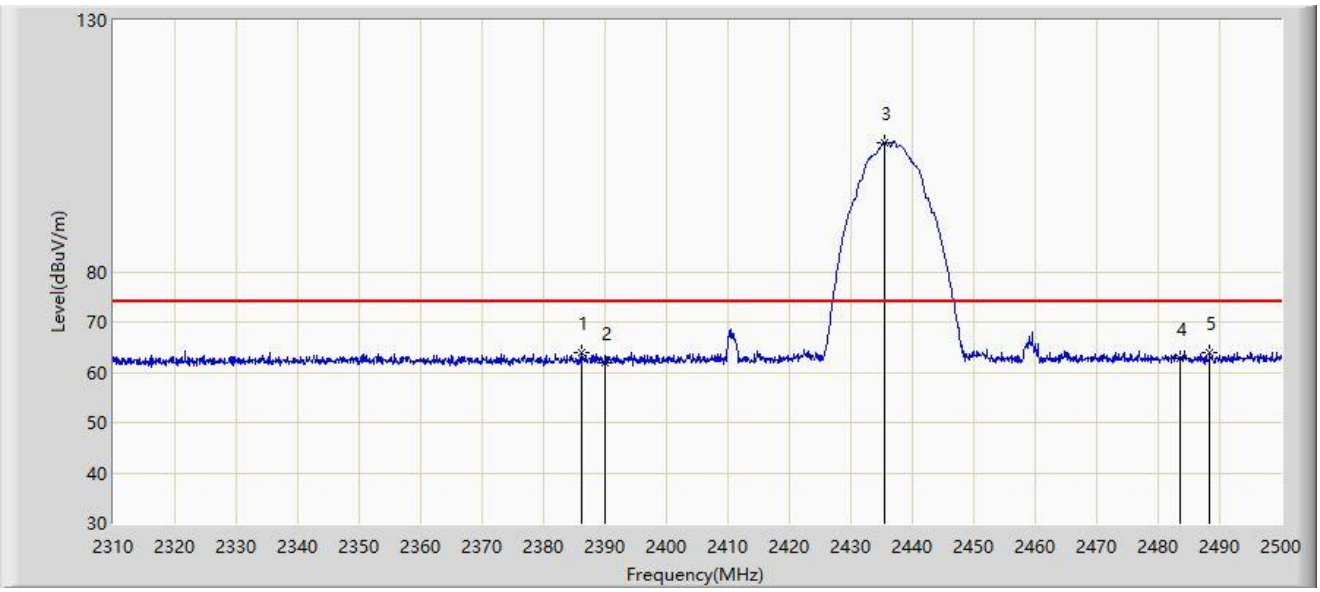



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2374.792 | 51.189 | 18.671 | -2.811 | 54.000 | 32.519 | AV |
| 2 | | | 2390.000 | 50.316 | 17.783 | -3.684 | 54.000 | 32.533 | AV |
| 3 | X | * | 2412.648 | 113.352 | 80.856 | N/A | N/A | 32.495 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:11 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2437MHz | |

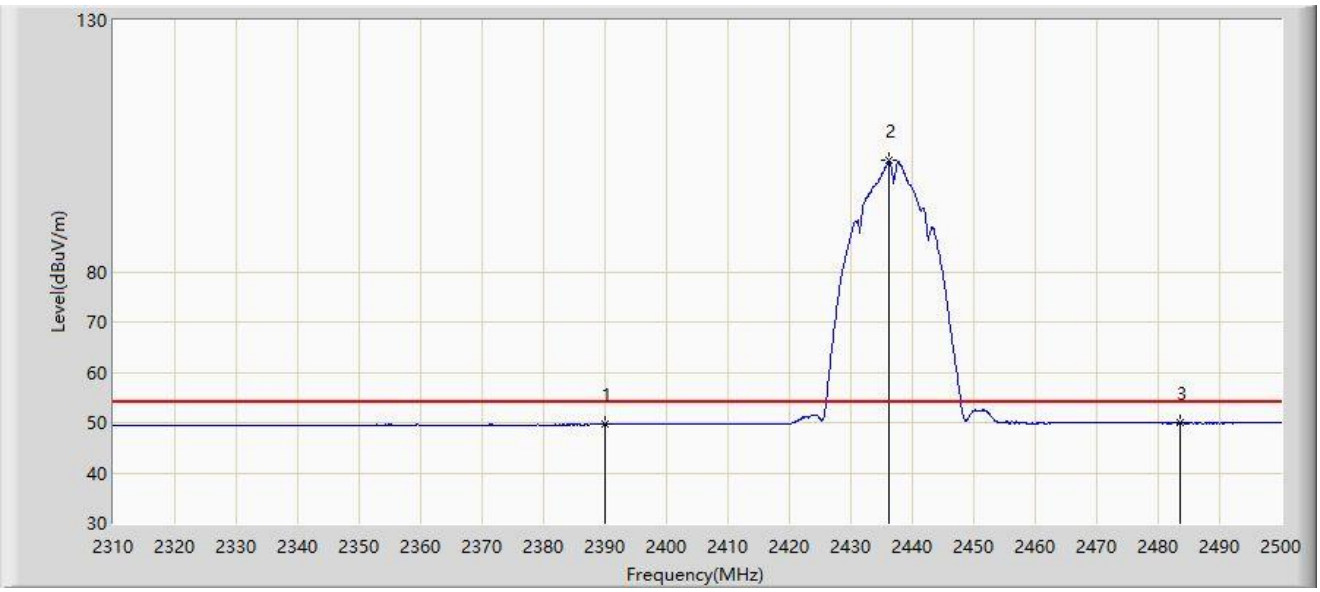



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2386.095 | 63.875 | 31.359 | -10.125 | 74.000 | 32.516 | PK |
| 2 | | | 2390.000 | 61.983 | 29.451 | -12.017 | 74.000 | 32.533 | PK |
| 3 | | * | 2435.590 | 105.781 | 73.299 | N/A | N/A | 32.482 | PK |
| 4 | | | 2483.500 | 62.849 | 30.421 | -11.151 | 74.000 | 32.429 | PK |
| 5 | | | 2488.410 | 63.940 | 31.534 | -10.060 | 74.000 | 32.407 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:15 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2437MHz | |

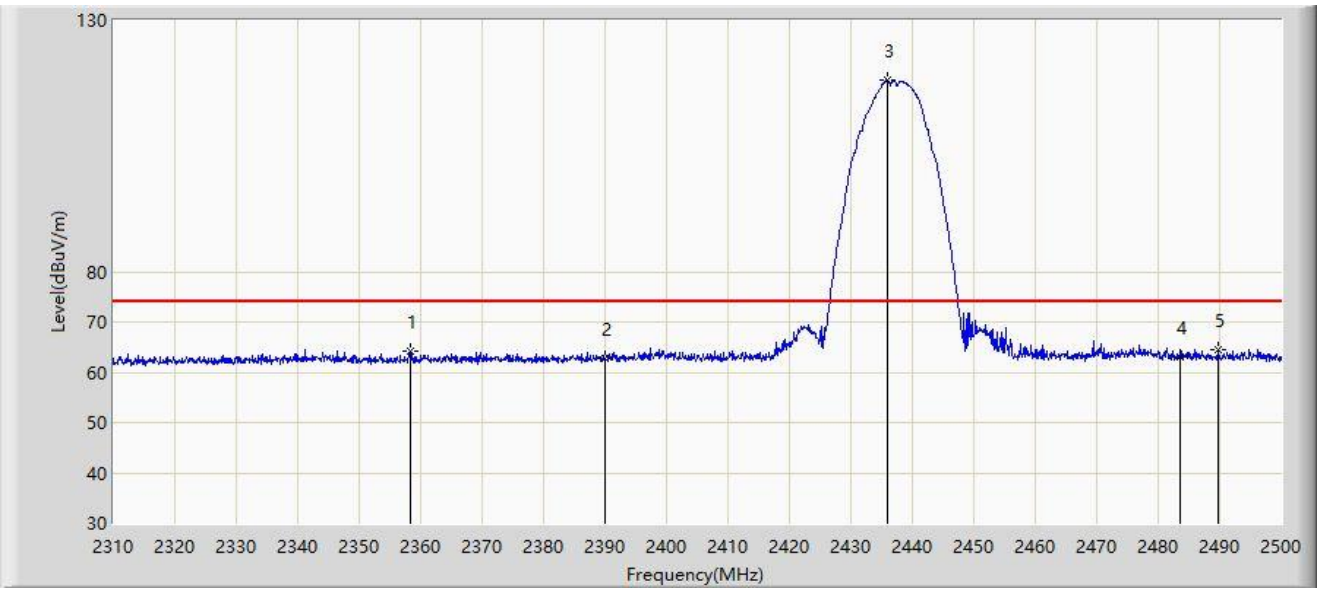



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 49.588 | 17.056 | -4.412 | 54.000 | 32.533 | AV |
| 2 | | * | 2436.255 | 102.077 | 69.596 | N/A | N/A | 32.482 | AV |
| 3 | | | 2483.500 | 49.882 | 17.454 | -4.118 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:17 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2437MHz | |

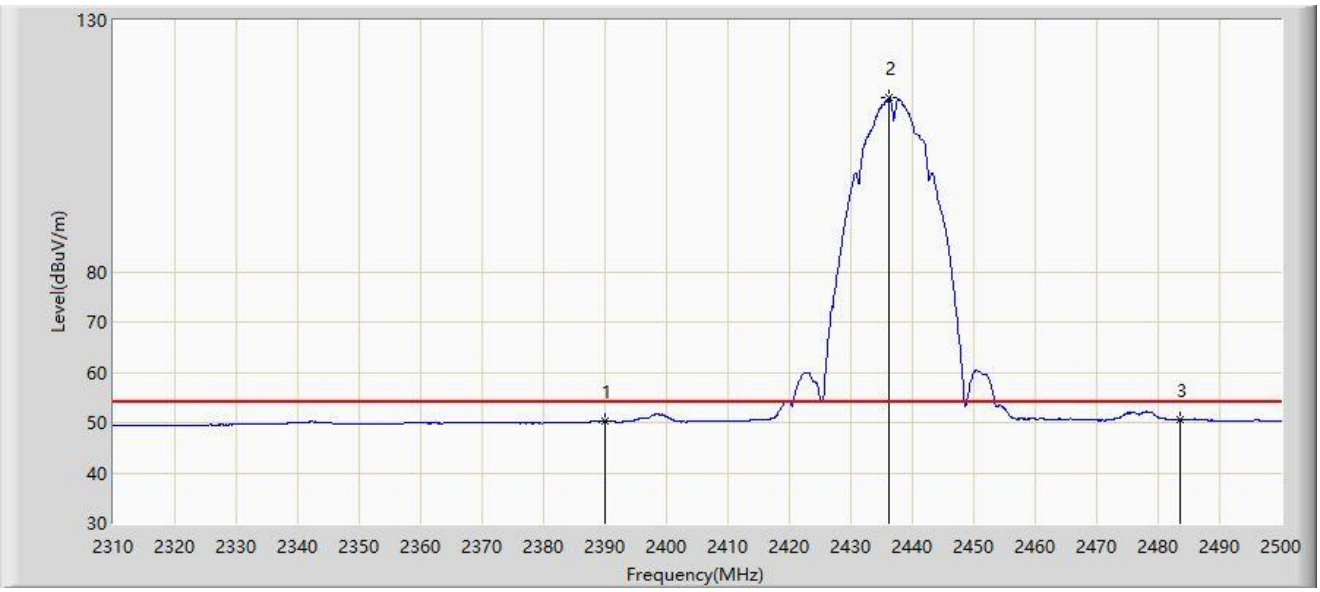



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2358.355 | 64.299 | 31.686 | -9.701 | 74.000 | 32.614 | PK |
| 2 | | | 2390.000 | 62.630 | 30.097 | -11.370 | 74.000 | 32.533 | PK |
| 3 | | * | 2435.875 | 118.126 | 85.645 | N/A | N/A | 32.482 | PK |
| 4 | | | 2483.500 | 63.103 | 30.674 | -10.897 | 74.000 | 32.429 | PK |
| 5 | | | 2489.835 | 64.378 | 31.967 | -9.622 | 74.000 | 32.411 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:19 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2437MHz | |

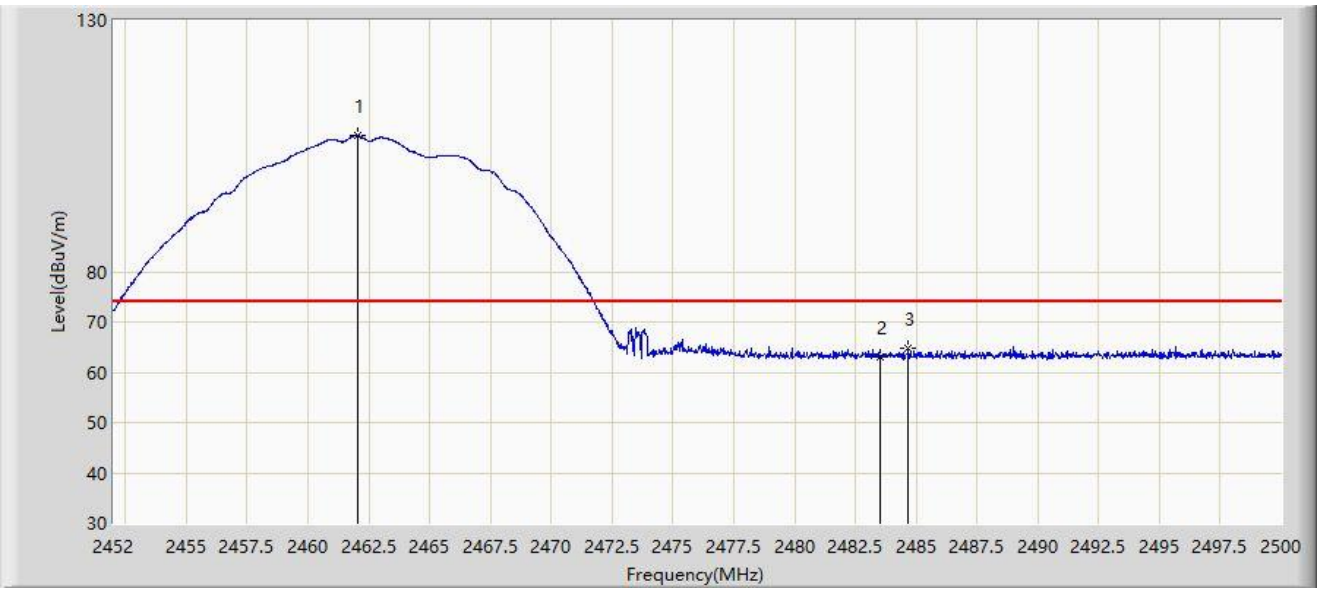



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 50.272 | 17.739 | -3.728 | 54.000 | 32.533 | AV |
| 2 | | * | 2436.160 | 114.603 | 82.121 | N/A | N/A | 32.482 | AV |
| 3 | | | 2483.500 | 50.592 | 18.164 | -3.408 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:23 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2462MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2462.056 | 107.038 | 74.548 | N/A | N/A | 32.490 | PK |
| 2 | | | 2483.500 | 62.971 | 30.542 | -11.029 | 74.000 | 32.429 | PK |
| 3 | | | 2484.664 | 64.739 | 32.321 | -9.261 | 74.000 | 32.421 | PK |

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

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

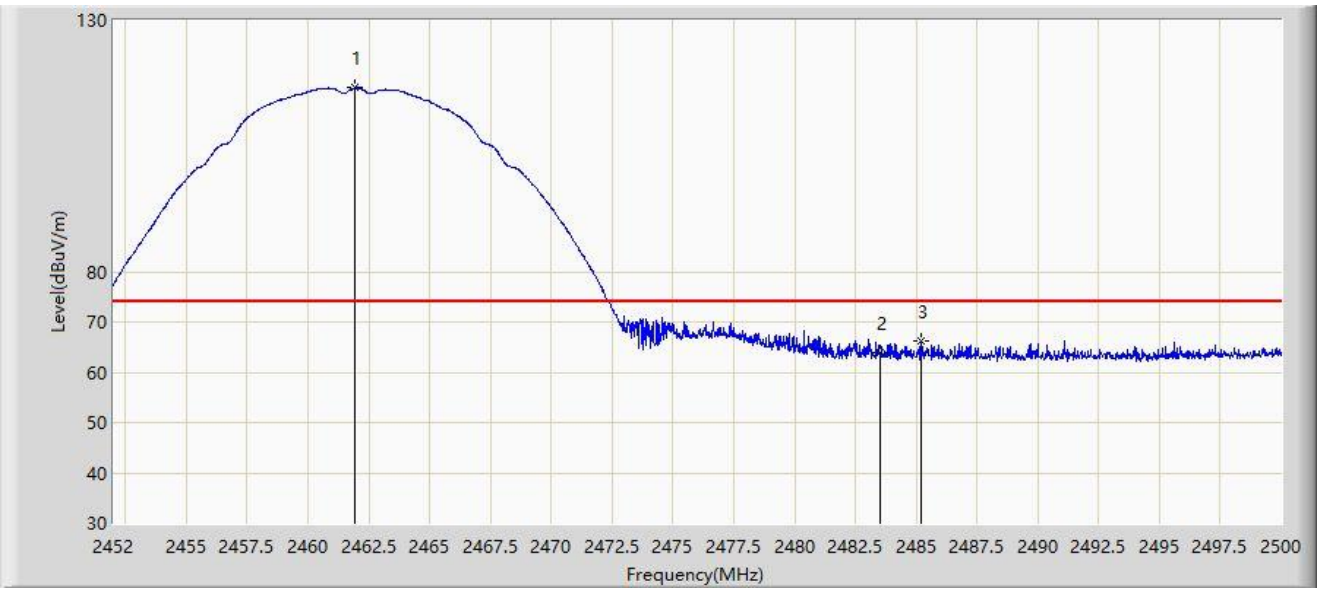
| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:38 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2462MHz | |

| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2462.728 | 103.120 | 70.627 | N/A | N/A | 32.494 | AV |
| 2 | | | 2483.500 | 49.750 | 17.322 | -4.250 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:44 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2462MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2461.936 | 116.703 | 84.214 | N/A | N/A | 32.489 | PK |
| 2 | | | 2483.500 | 63.833 | 31.405 | -10.167 | 74.000 | 32.429 | PK |
| 3 | | | 2485.192 | 66.176 | 33.769 | -7.824 | 74.000 | 32.418 | PK |

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

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

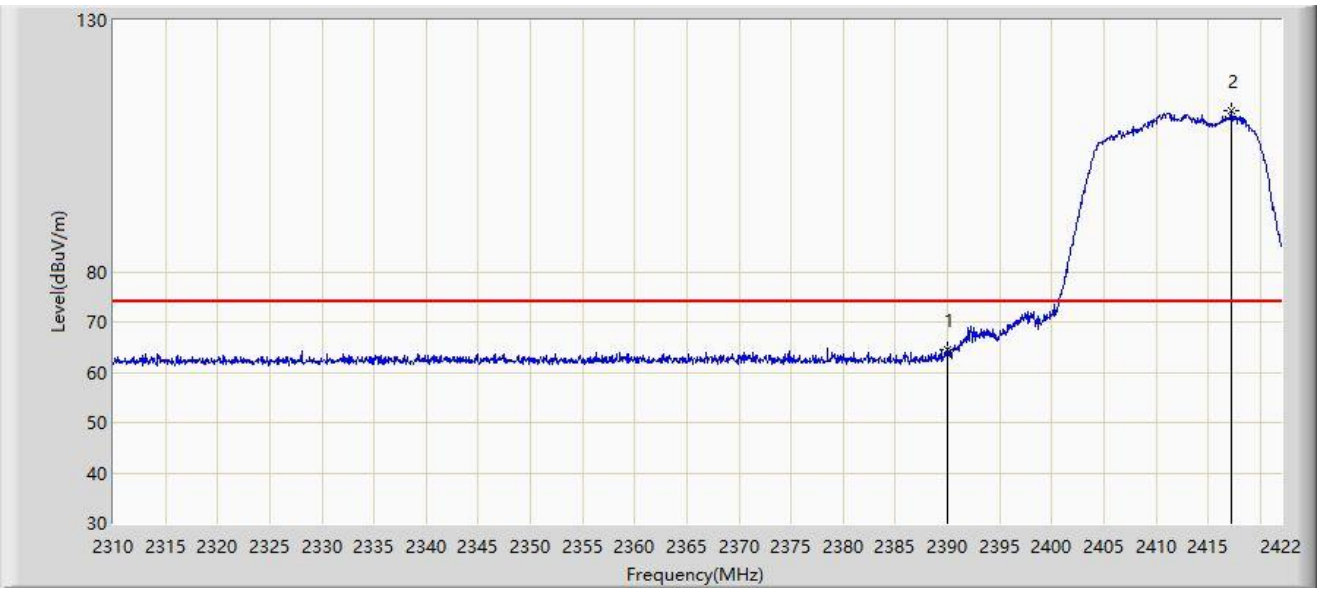
| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/16 - 23:46 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11b at Channel 2462MHz | |

| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2461.240 | 112.983 | 80.496 | N/A | N/A | 32.487 | AV |
| 2 | | | 2483.500 | 50.466 | 18.037 | -3.534 | 54.000 | 32.429 | AV |
| 3 | | | 2499.856 | 51.383 | 18.946 | -2.617 | 54.000 | 32.438 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/14 - 01:10 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2412MHz | |

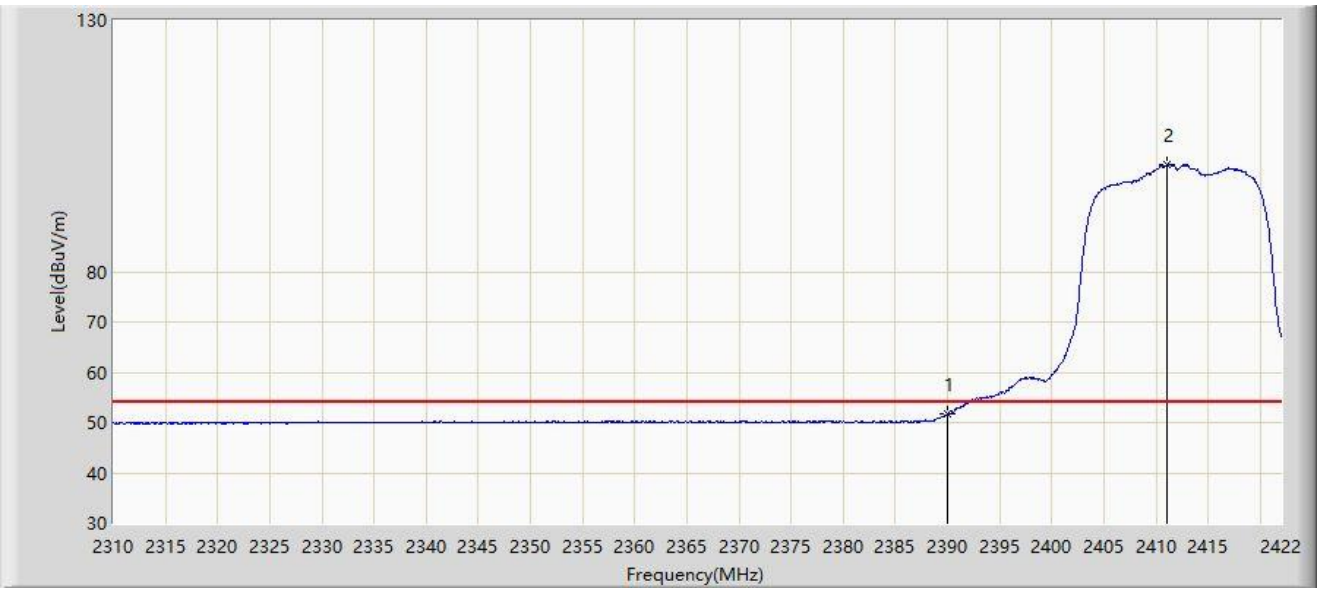



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 64.542 | 32.010 | -9.458 | 74.000 | 32.533 | PK |
| 2 | | * | 2417.184 | 112.012 | 79.532 | N/A | N/A | 32.483 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/14 - 01:11 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2412MHz | |

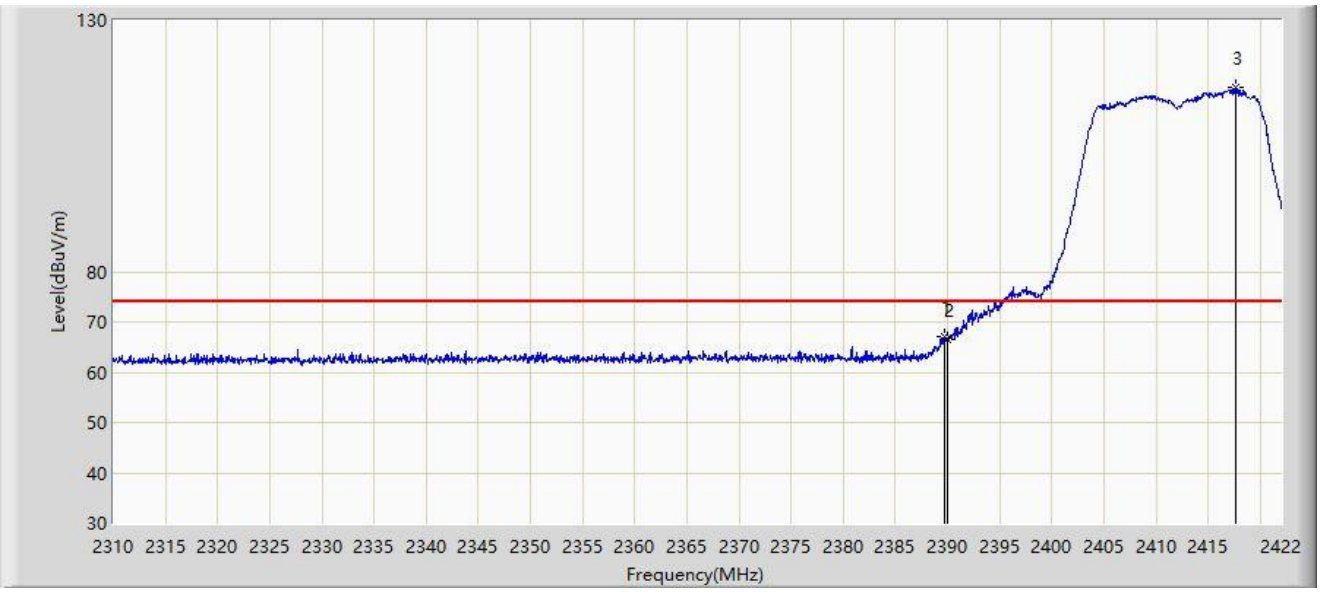



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 51.602 | 19.070 | -2.398 | 54.000 | 32.533 | AV |
| 2 | | * | 2411.024 | 101.326 | 68.824 | N/A | N/A | 32.502 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/14 - 01:07 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2412MHz | |

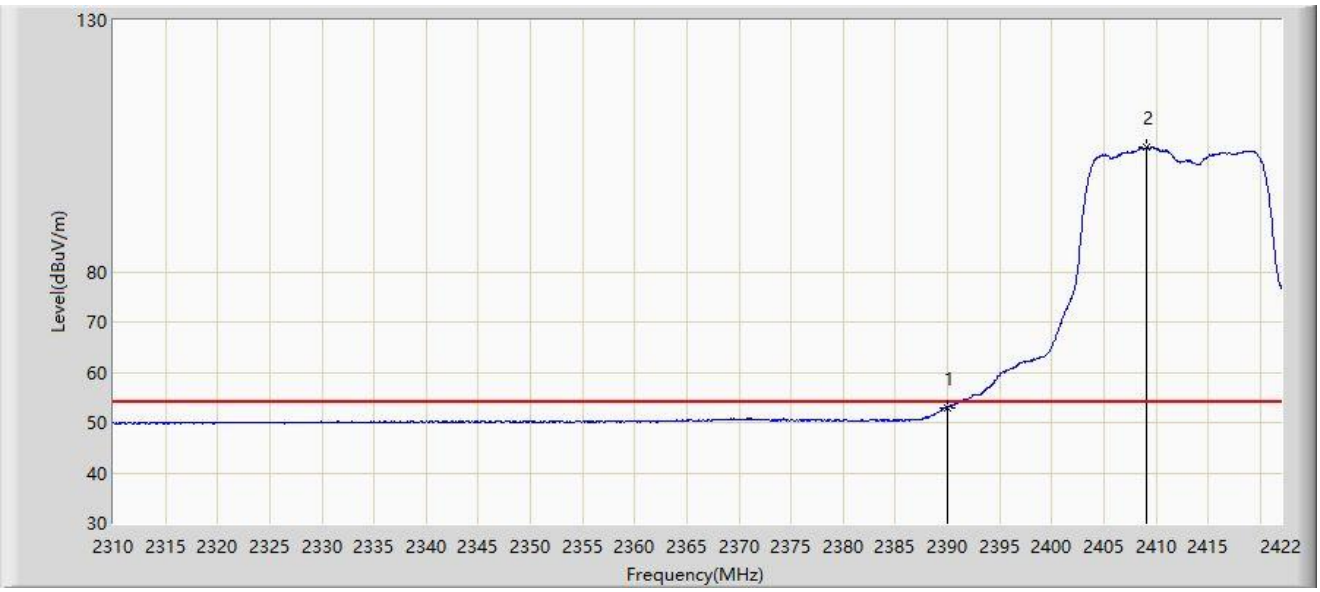



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2389.688 | 67.081 | 34.549 | -6.919 | 74.000 | 32.532 | PK |
| 2 | | | 2390.000 | 66.593 | 34.060 | -7.407 | 74.000 | 32.533 | PK |
| 3 | | * | 2417.688 | 116.687 | 84.206 | N/A | N/A | 32.481 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/14 - 01:09 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2412MHz | |

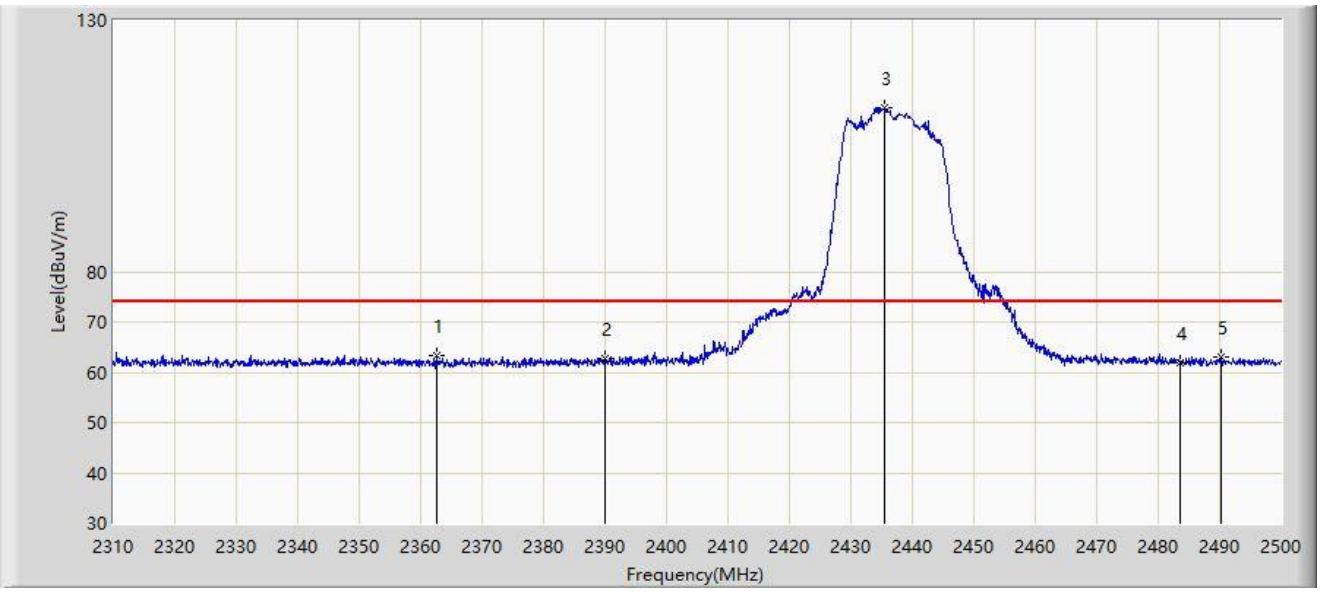



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 53.004 | 20.472 | -0.996 | 54.000 | 32.533 | AV |
| 2 | | * | 2409.120 | 104.739 | 72.229 | N/A | N/A | 32.510 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 21:02 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2437MHz | |

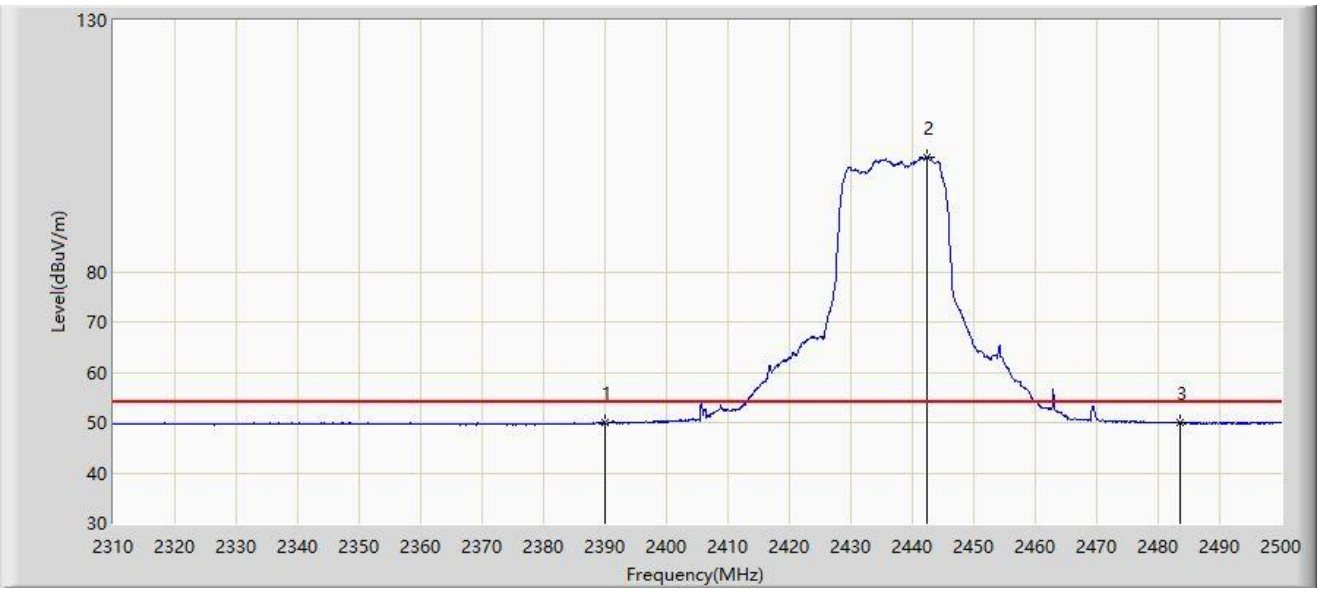



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2362.725 | 63.253 | 30.662 | -10.747 | 74.000 | 32.592 | PK |
| 2 | | | 2390.000 | 62.724 | 30.191 | -11.276 | 74.000 | 32.533 | PK |
| 3 | | * | 2435.400 | 112.479 | 79.997 | N/A | N/A | 32.482 | PK |
| 4 | | | 2483.500 | 61.979 | 29.551 | -12.021 | 74.000 | 32.429 | PK |
| 5 | | | 2490.215 | 63.073 | 30.662 | -10.927 | 74.000 | 32.413 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/14 - 01:17 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2437MHz | |

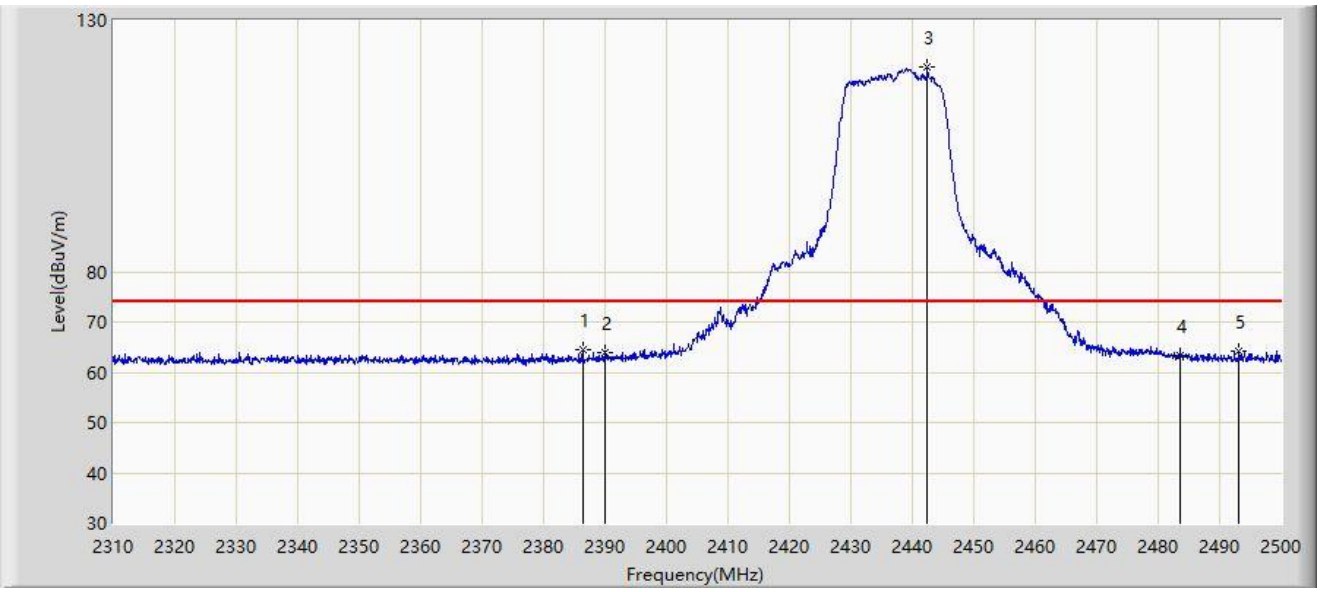



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 50.005 | 17.472 | -3.995 | 54.000 | 32.533 | AV |
| 2 | | * | 2442.430 | 102.699 | 70.224 | N/A | N/A | 32.475 | AV |
| 3 | | | 2483.500 | 49.903 | 17.475 | -4.097 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 21:11 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2437MHz | |

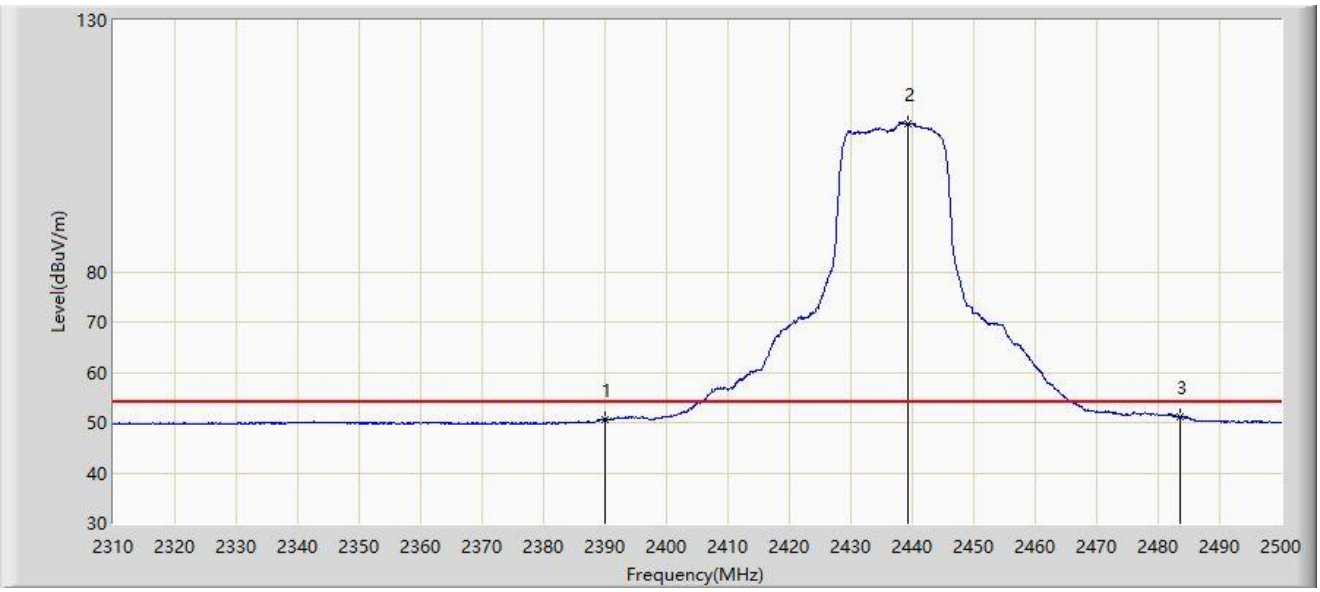



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2386.380 | 64.495 | 31.979 | -9.505 | 74.000 | 32.518 | PK |
| 2 | | | 2390.000 | 64.048 | 31.515 | -9.952 | 74.000 | 32.533 | PK |
| 3 | | * | 2442.430 | 120.601 | 88.127 | N/A | N/A | 32.475 | PK |
| 4 | | | 2483.500 | 63.402 | 30.973 | -10.598 | 74.000 | 32.429 | PK |
| 5 | | | 2493.160 | 64.226 | 31.806 | -9.774 | 74.000 | 32.421 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 21:14 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2437MHz | |

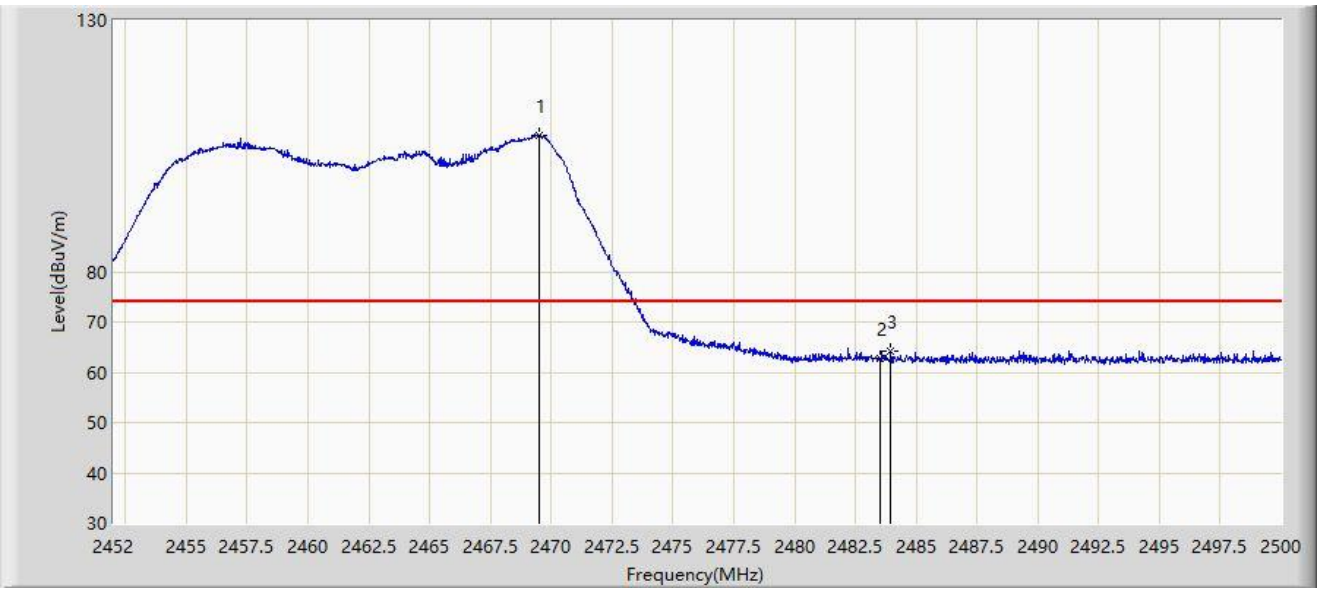



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 50.504 | 17.971 | -3.496 | 54.000 | 32.533 | AV |
| 2 | | * | 2439.295 | 109.530 | 77.052 | N/A | N/A | 32.478 | AV |
| 3 | | | 2483.500 | 51.121 | 18.693 | -2.879 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 21:45 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2462MHz | |

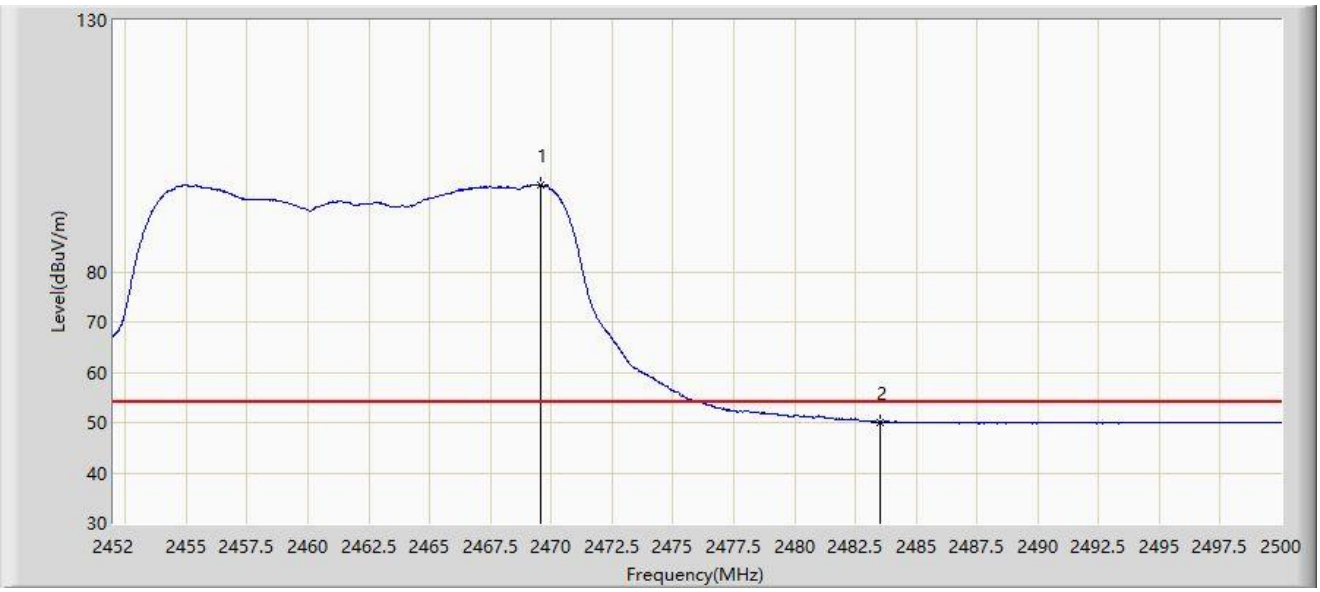



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2469.520 | 107.124 | 74.596 | N/A | N/A | 32.528 | PK |
| 2 | | | 2483.500 | 62.684 | 30.256 | -11.316 | 74.000 | 32.429 | PK |
| 3 | | | 2483.944 | 64.342 | 31.922 | -9.658 | 74.000 | 32.425 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 21:42 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2462MHz | |

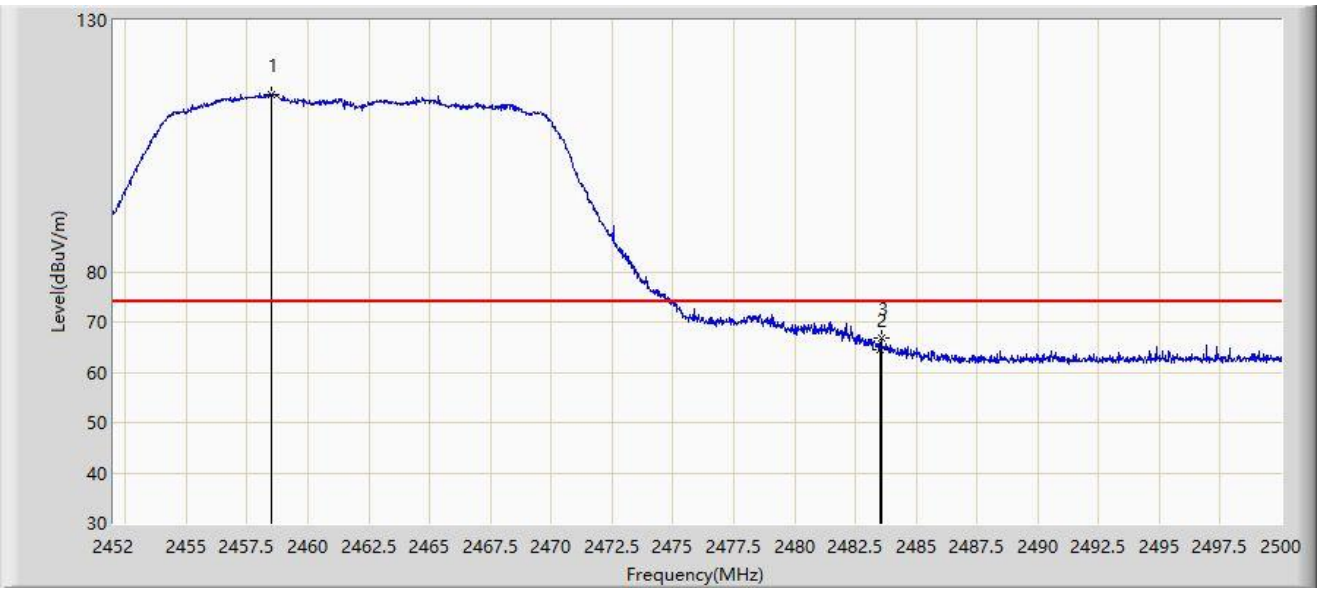



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2469.568 | 97.155 | 64.627 | N/A | N/A | 32.528 | AV |
| 2 | | | 2483.500 | 50.127 | 17.698 | -3.873 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 21:38 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2462MHz | |

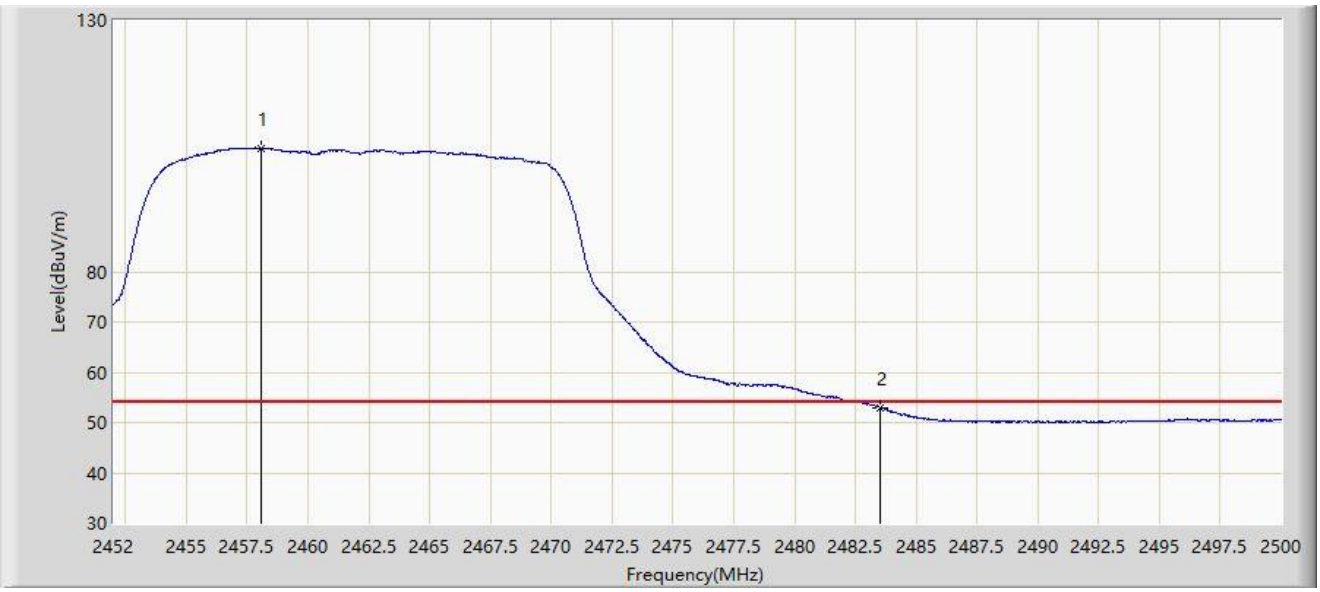



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2458.480 | 115.228 | 82.750 | N/A | N/A | 32.478 | PK |
| 2 | | | 2483.500 | 64.474 | 32.045 | -9.526 | 74.000 | 32.429 | PK |
| 3 | | | 2483.560 | 66.675 | 34.251 | -7.325 | 74.000 | 32.428 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 21:39 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2462MHz | |

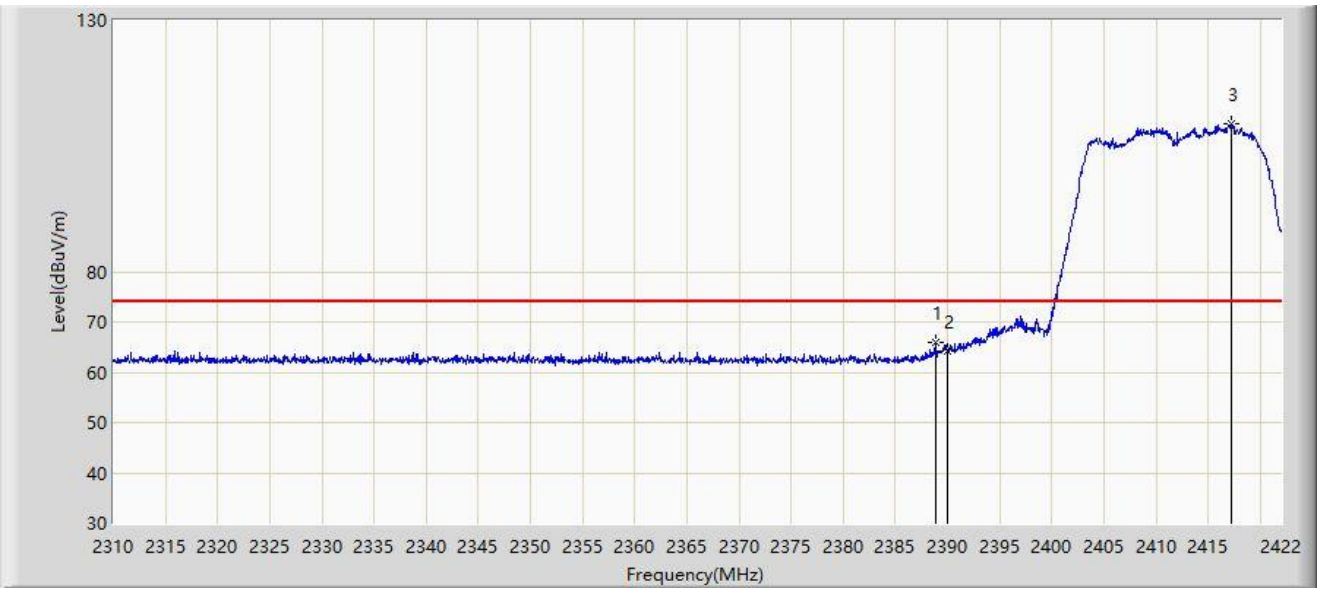



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2458.048 | 104.573 | 72.097 | N/A | N/A | 32.477 | AV |
| 2 | | | 2483.500 | 53.013 | 20.584 | -0.987 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:01 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz | |

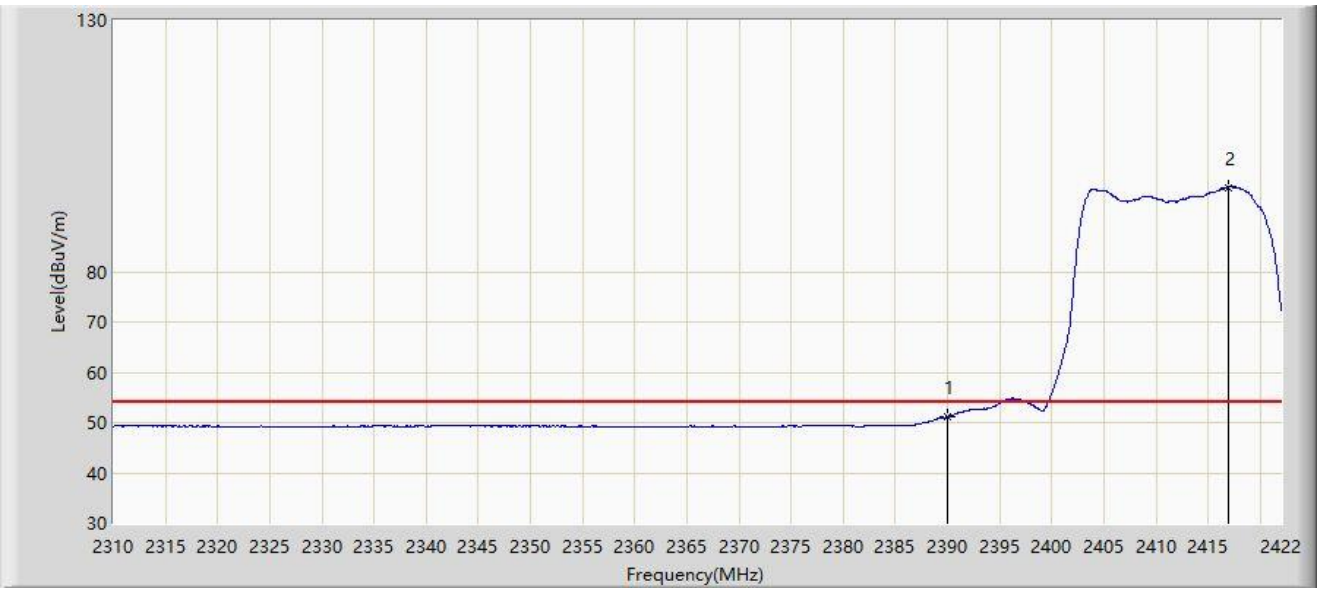



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2388.848 | 65.806 | 33.283 | -8.194 | 74.000 | 32.528 | PK |
| 2 | | | 2390.000 | 64.201 | 31.668 | -9.799 | 74.000 | 32.533 | PK |
| 3 | | * | 2417.184 | 109.434 | 76.952 | N/A | N/A | 32.483 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:04 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz | |

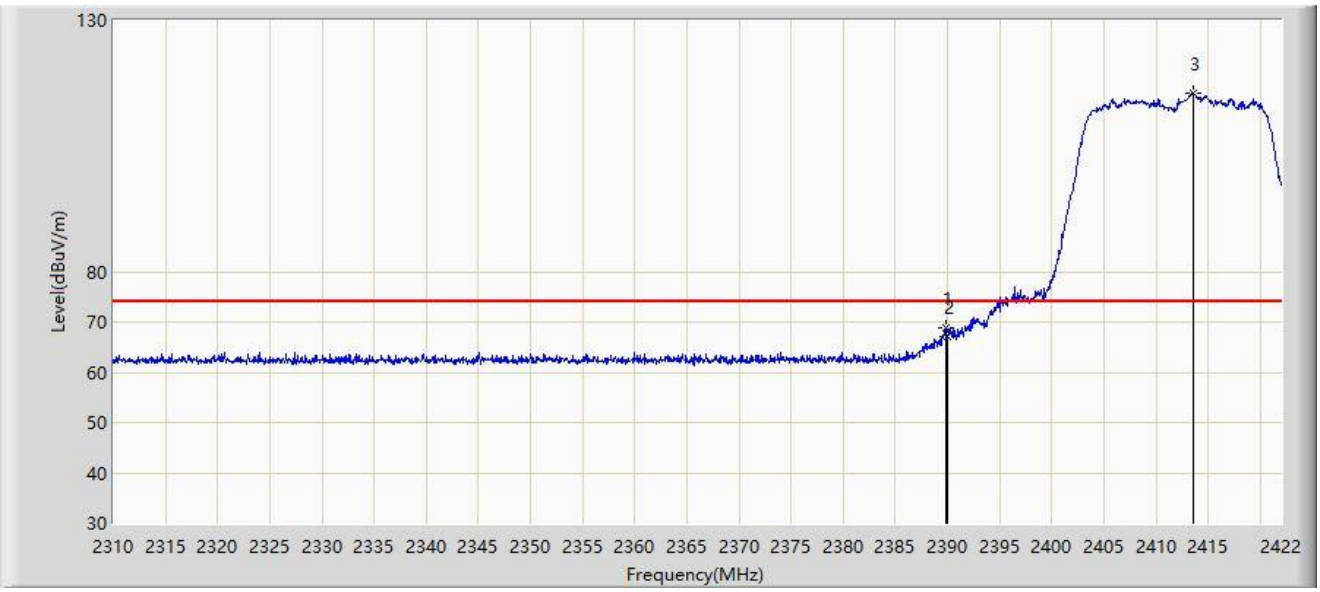



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 51.113 | 18.580 | -2.887 | 54.000 | 32.533 | AV |
| 2 | | * | 2416.960 | 96.808 | 64.326 | N/A | N/A | 32.482 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 21:58 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz | |

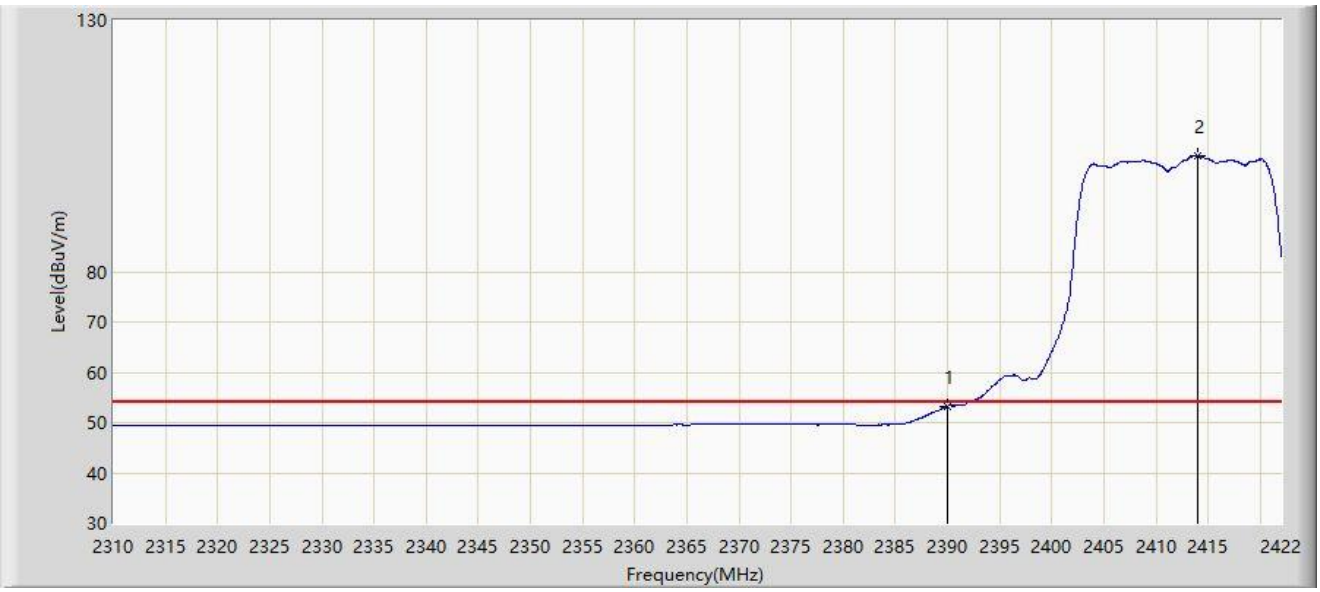



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2389.856 | 68.771 | 36.240 | -5.229 | 74.000 | 32.532 | PK |
| 2 | | | 2390.000 | 67.007 | 34.474 | -6.993 | 74.000 | 32.533 | PK |
| 3 | | * | 2413.544 | 115.423 | 82.931 | N/A | N/A | 32.493 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 21:55 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2412MHz | |

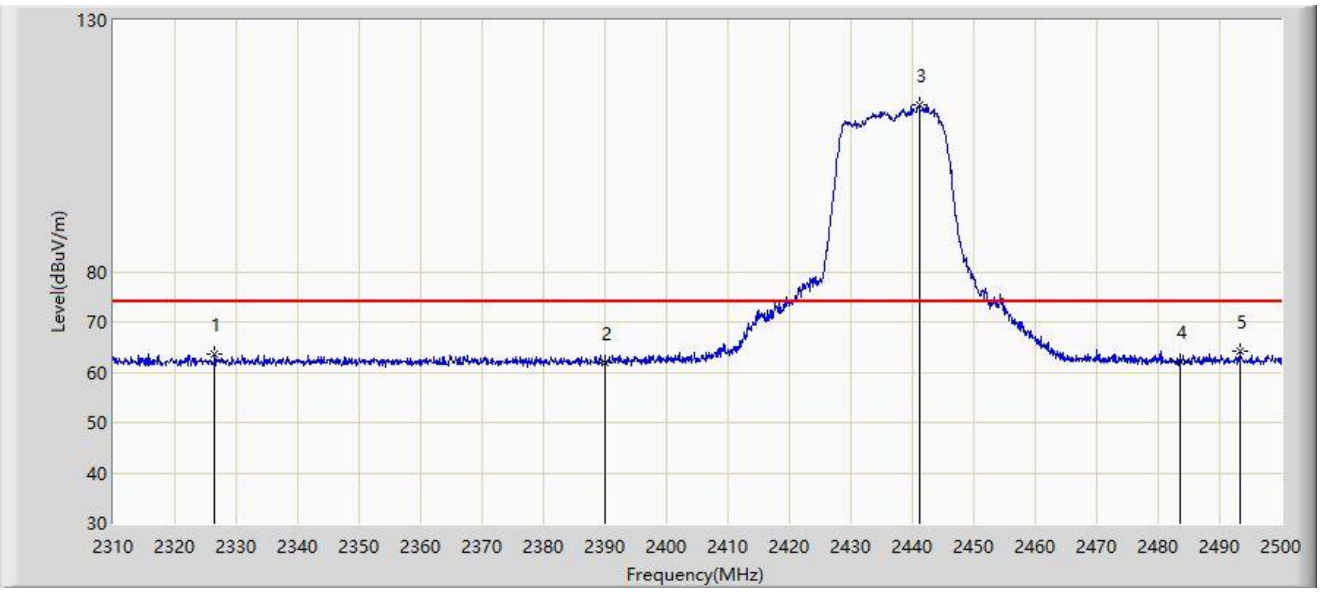



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 53.315 | 20.783 | -0.685 | 54.000 | 32.533 | AV |
| 2 | | * | 2413.936 | 102.989 | 70.499 | N/A | N/A | 32.491 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:21 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2437MHz | |

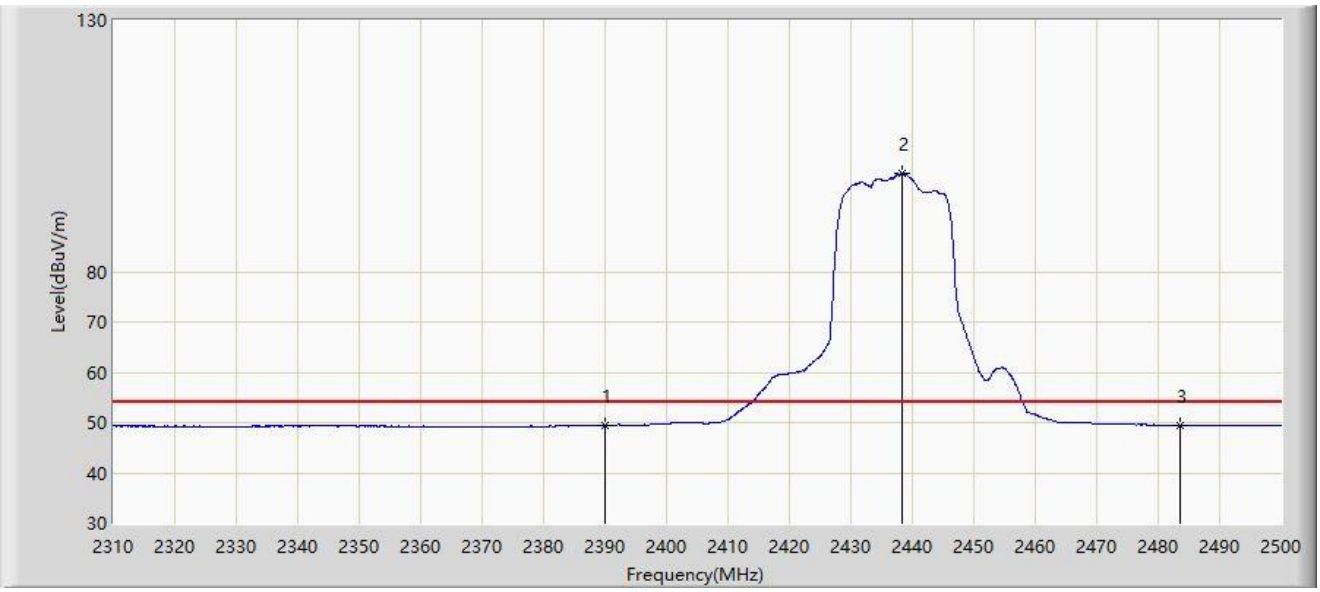



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2326.435 | 63.611 | 30.956 | -10.389 | 74.000 | 32.655 | PK |
| 2 | | | 2390.000 | 61.980 | 29.448 | -12.020 | 74.000 | 32.533 | PK |
| 3 | | * | 2441.195 | 113.303 | 80.827 | N/A | N/A | 32.476 | PK |
| 4 | | | 2483.500 | 62.106 | 29.677 | -11.894 | 74.000 | 32.429 | PK |
| 5 | | | 2493.255 | 64.301 | 31.882 | -9.699 | 74.000 | 32.421 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:23 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2437MHz | |

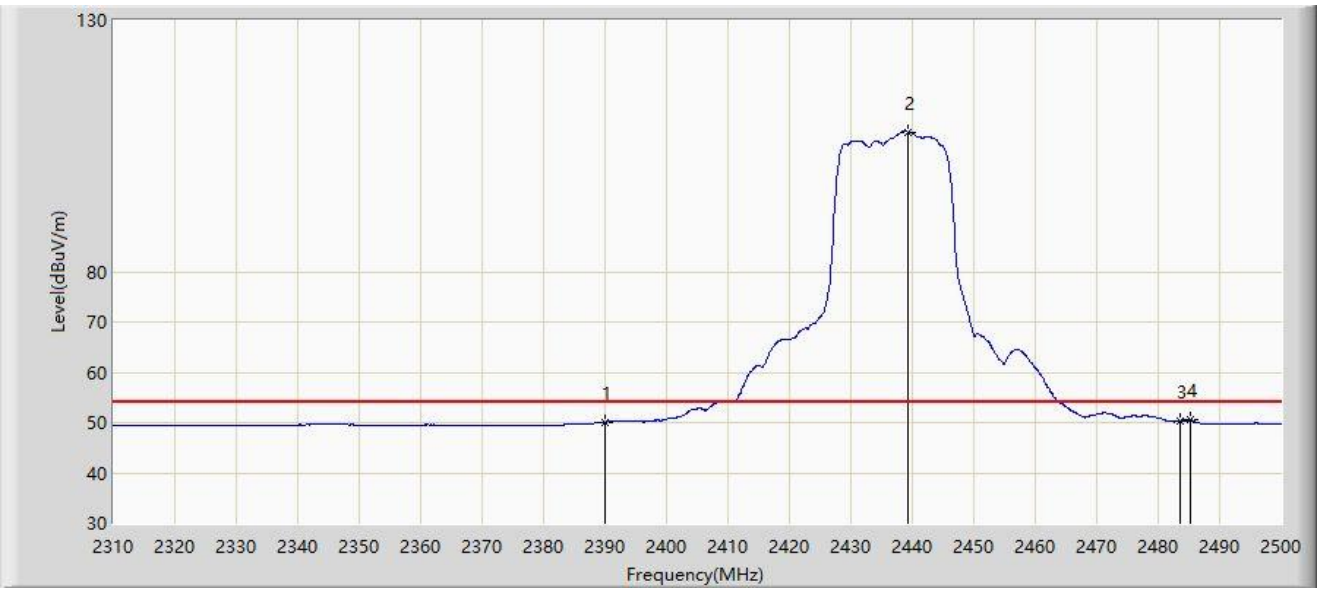



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 49.464 | 16.931 | -4.536 | 54.000 | 32.533 | AV |
| 2 | | * | 2438.250 | 99.575 | 67.095 | N/A | N/A | 32.480 | AV |
| 3 | | | 2483.500 | 49.406 | 16.978 | -4.594 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:15 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2437MHz | |

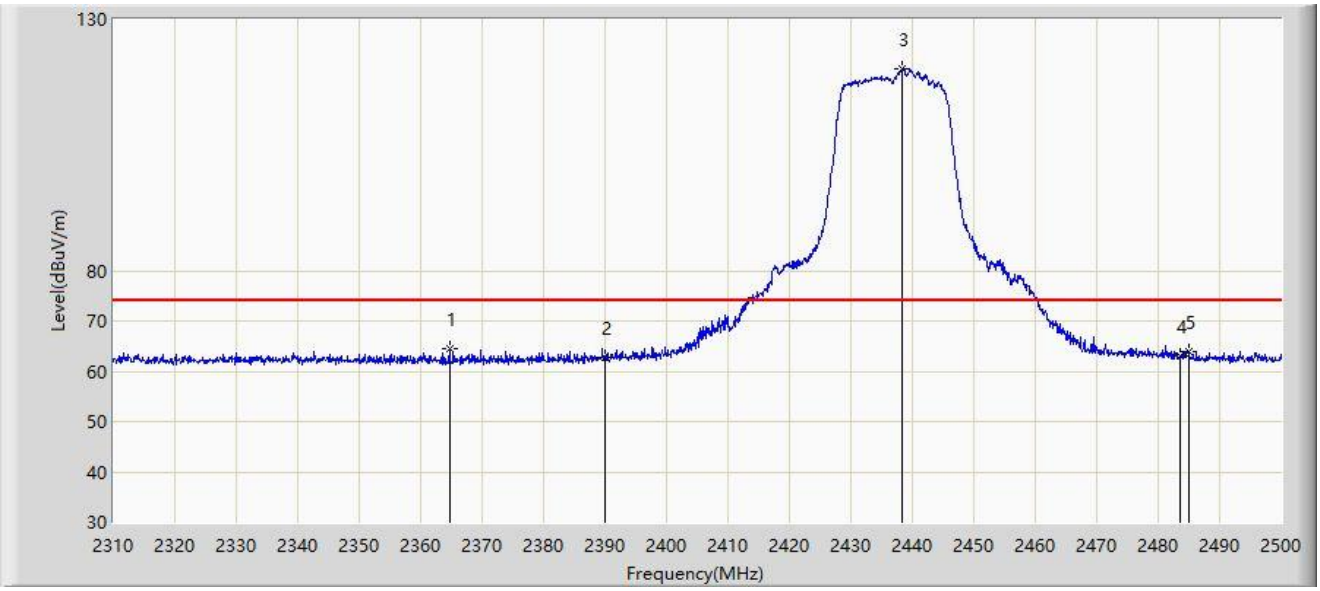



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 50.091 | 17.559 | -3.909 | 54.000 | 32.533 | AV |
| 2 | | * | 2439.200 | 107.821 | 75.343 | N/A | N/A | 32.478 | AV |
| 3 | | | 2483.500 | 50.312 | 17.884 | -3.688 | 54.000 | 32.429 | AV |
| 4 | | | 2485.275 | 50.574 | 18.156 | -3.426 | 54.000 | 32.418 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:19 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2437MHz | |

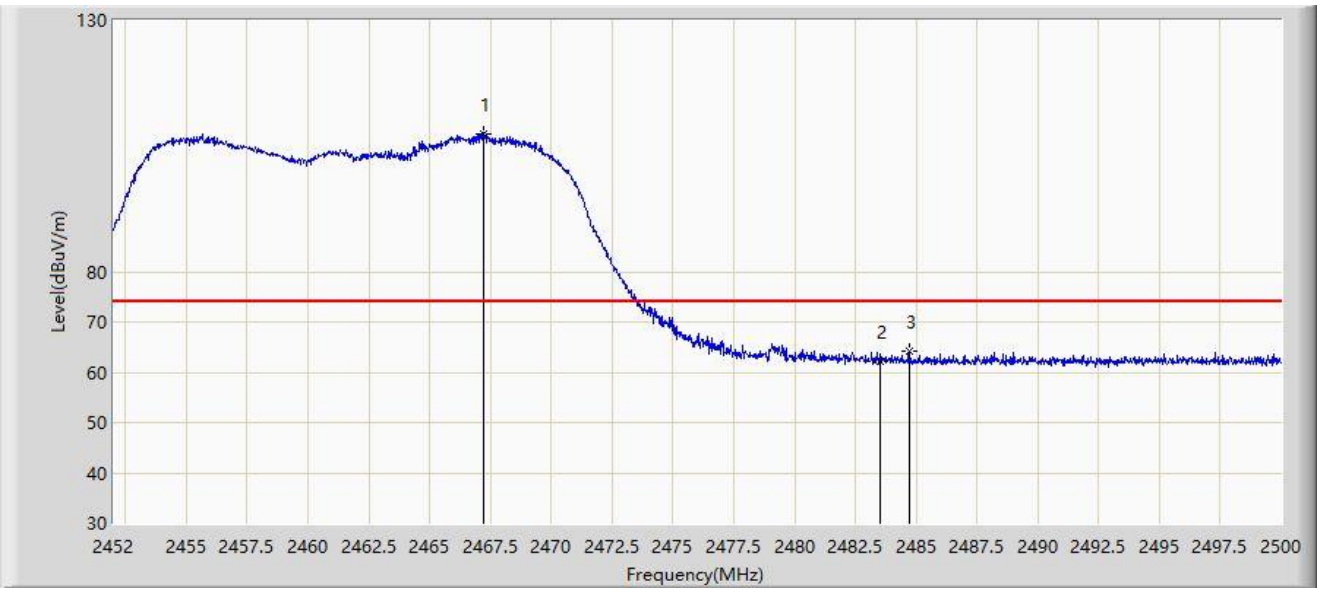



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2364.720 | 64.431 | 31.852 | -9.569 | 74.000 | 32.580 | PK |
| 2 | | | 2390.000 | 62.896 | 30.364 | -11.104 | 74.000 | 32.533 | PK |
| 3 | | * | 2438.345 | 120.089 | 87.609 | N/A | N/A | 32.480 | PK |
| 4 | | | 2483.500 | 63.116 | 30.688 | -10.884 | 74.000 | 32.429 | PK |
| 5 | | | 2484.895 | 63.946 | 31.526 | -10.054 | 74.000 | 32.421 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:35 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz | |

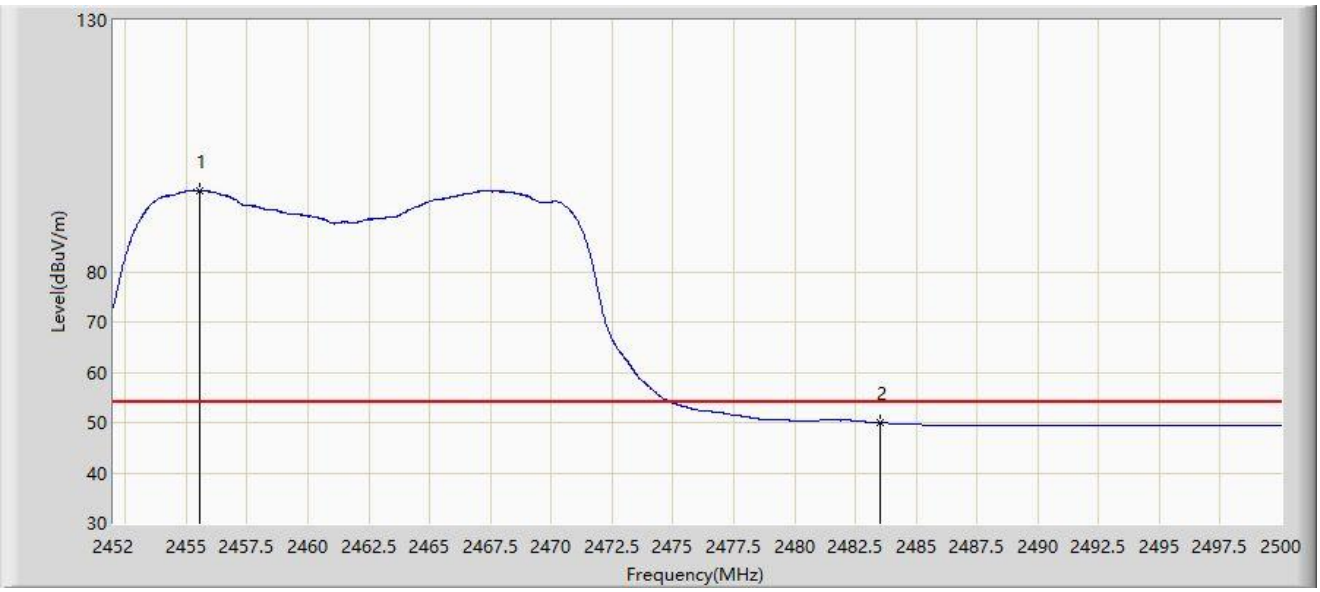



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2467.240 | 107.490 | 74.974 | N/A | N/A | 32.517 | PK |
| 2 | | | 2483.500 | 62.104 | 29.675 | -11.896 | 74.000 | 32.429 | PK |
| 3 | | | 2484.712 | 64.159 | 31.746 | -9.841 | 74.000 | 32.421 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:37 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz | |

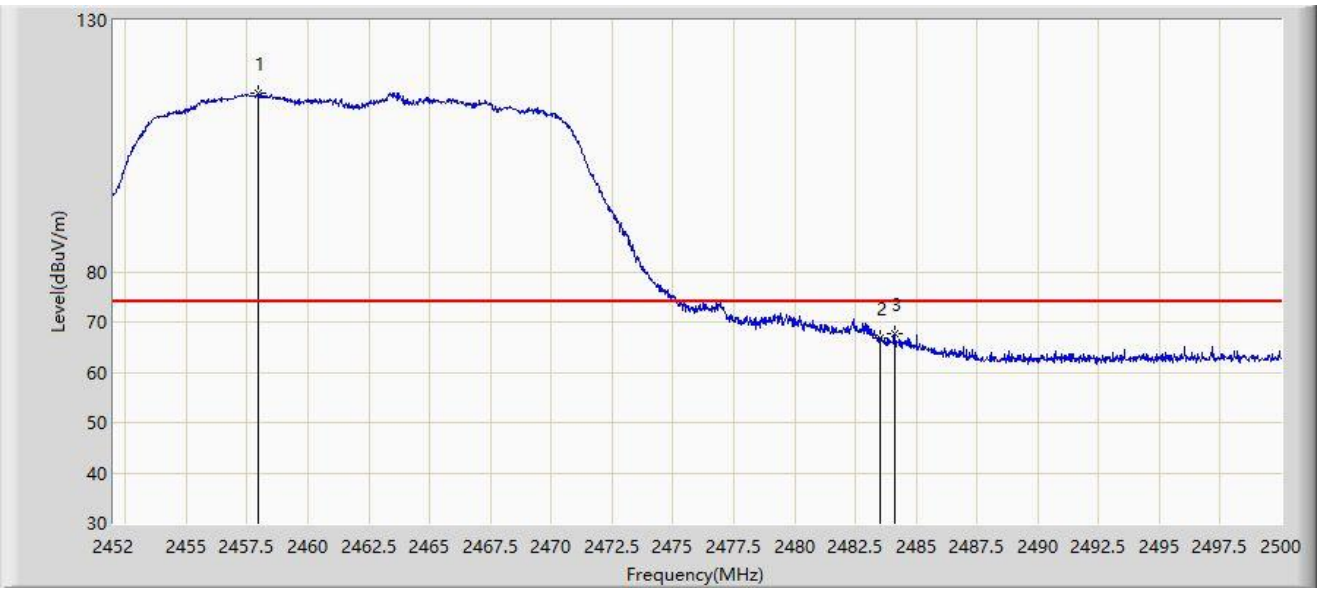



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2455.552 | 96.203 | 63.735 | N/A | N/A | 32.468 | AV |
| 2 | | | 2483.500 | 49.909 | 17.480 | -4.091 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:33 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz | |

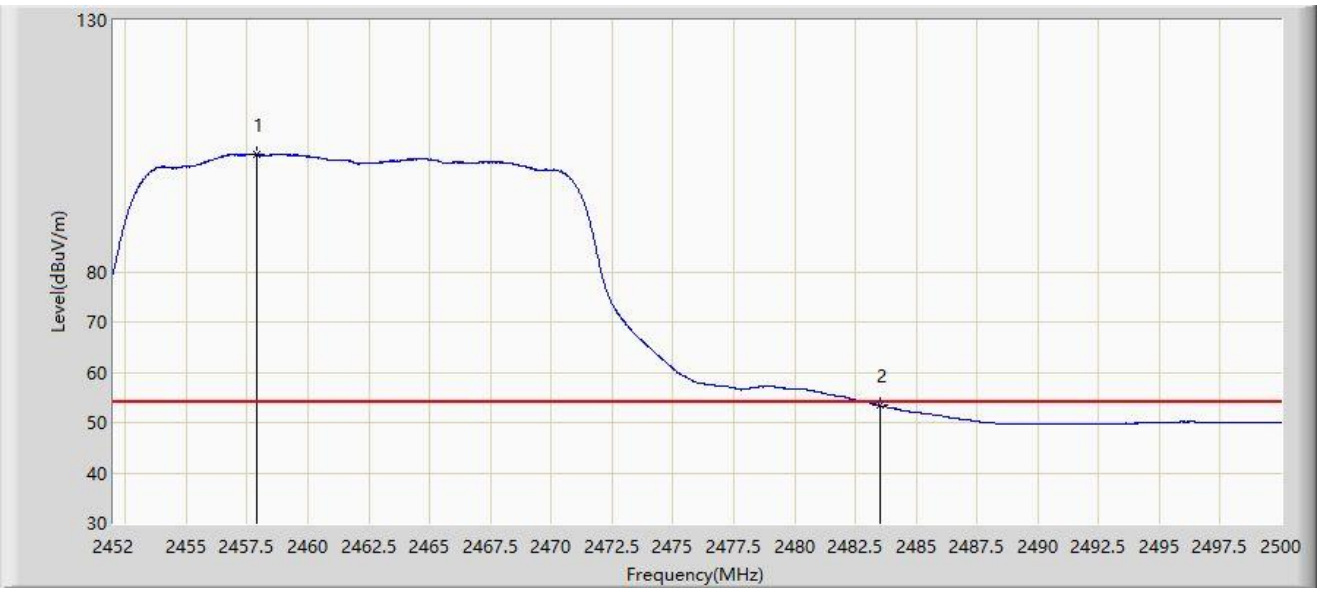



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2457.976 | 115.429 | 82.956 | N/A | N/A | 32.476 | PK |
| 2 | | | 2483.500 | 66.952 | 34.523 | -7.048 | 74.000 | 32.429 | PK |
| 3 | | | 2484.112 | 67.767 | 35.343 | -6.233 | 74.000 | 32.425 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 22:31 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT20 at Channel 2462MHz | |

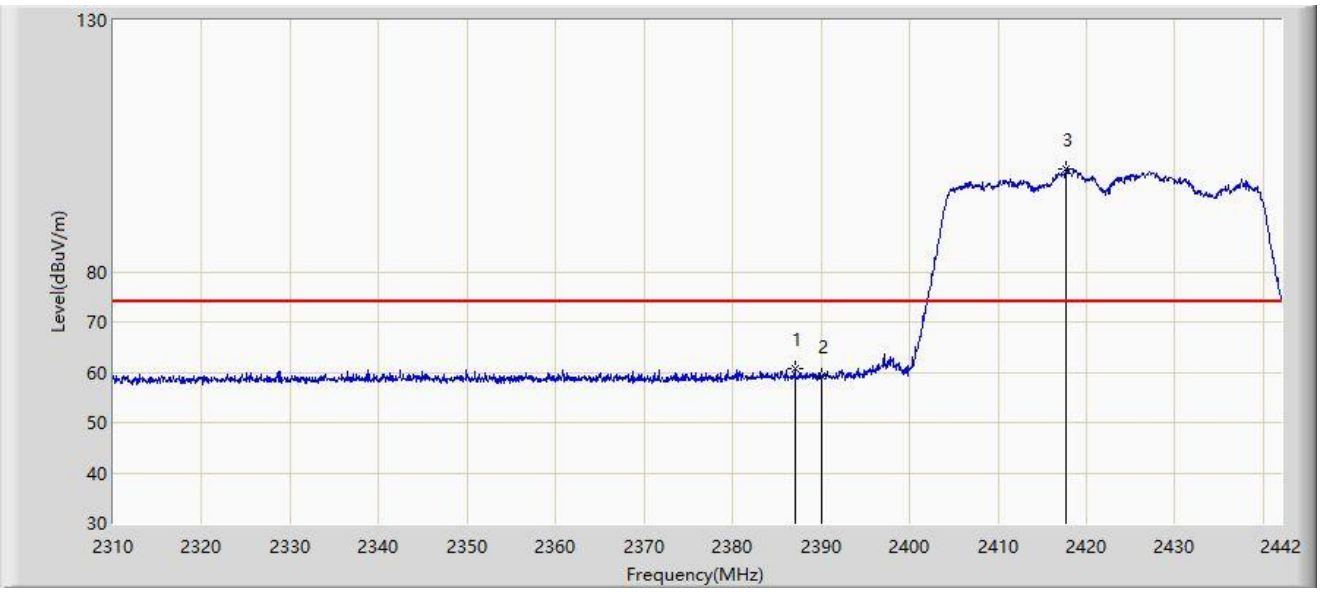



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2457.904 | 103.295 | 70.819 | N/A | N/A | 32.476 | AV |
| 2 | | | 2483.500 | 53.413 | 20.985 | -0.587 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/24 - 11:28 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Buter Shi |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz | |

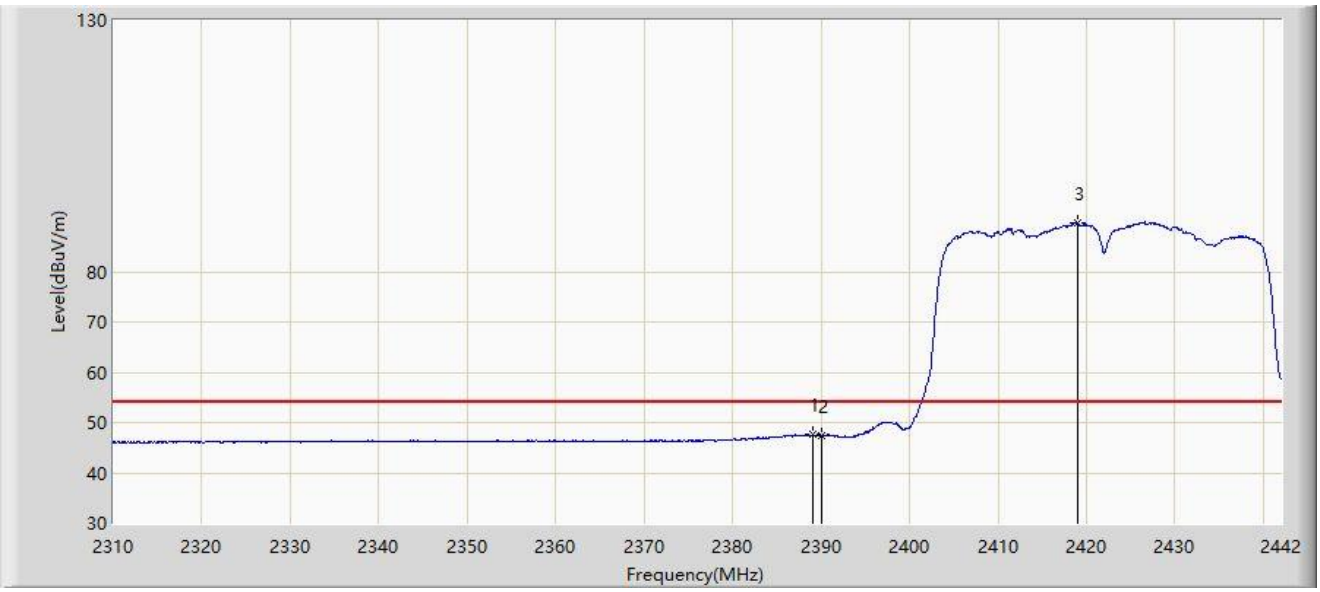



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2387.022 | 60.732 | 30.066 | -13.268 | 74.000 | 30.666 | PK |
| 2 | | | 2390.000 | 59.151 | 28.487 | -14.849 | 74.000 | 30.664 | PK |
| 3 | | * | 2417.712 | 100.567 | 70.014 | N/A | N/A | 30.553 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/24 - 11:26 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Buter Shi |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz | |

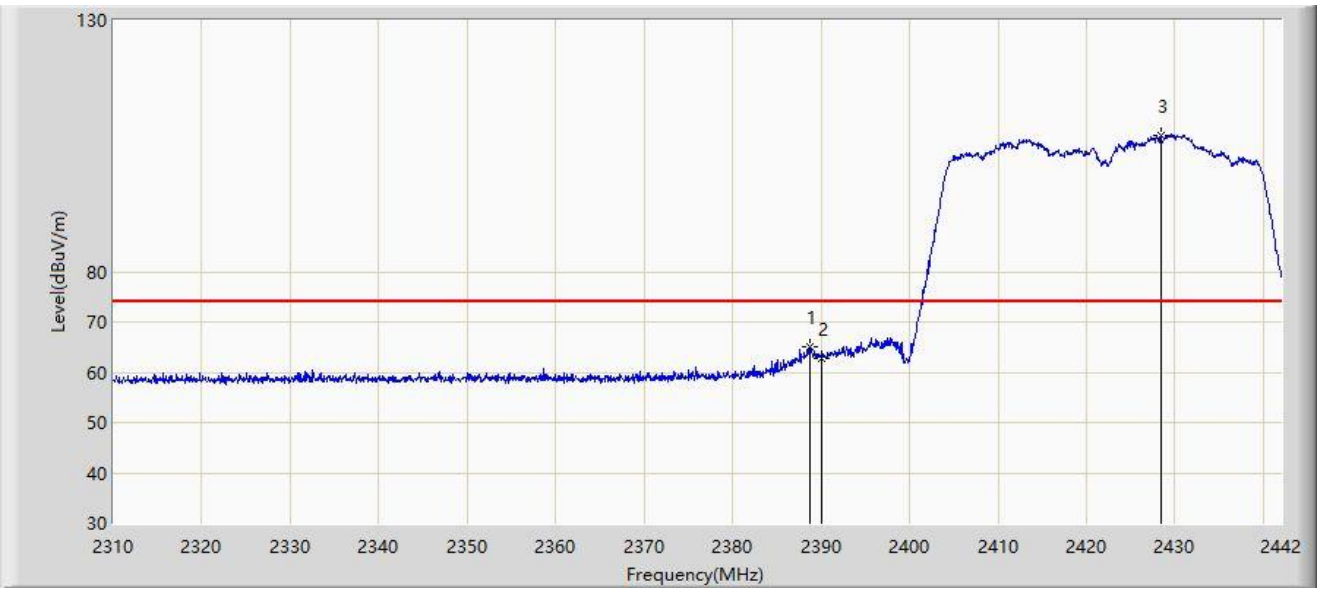



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2389.002 | 47.647 | 16.983 | -6.353 | 54.000 | 30.665 | AV |
| 2 | | | 2390.000 | 47.331 | 16.667 | -6.669 | 54.000 | 30.664 | AV |
| 3 | | * | 2418.966 | 89.791 | 59.244 | N/A | N/A | 30.546 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/24 - 11:30 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Buter Shi |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz | |

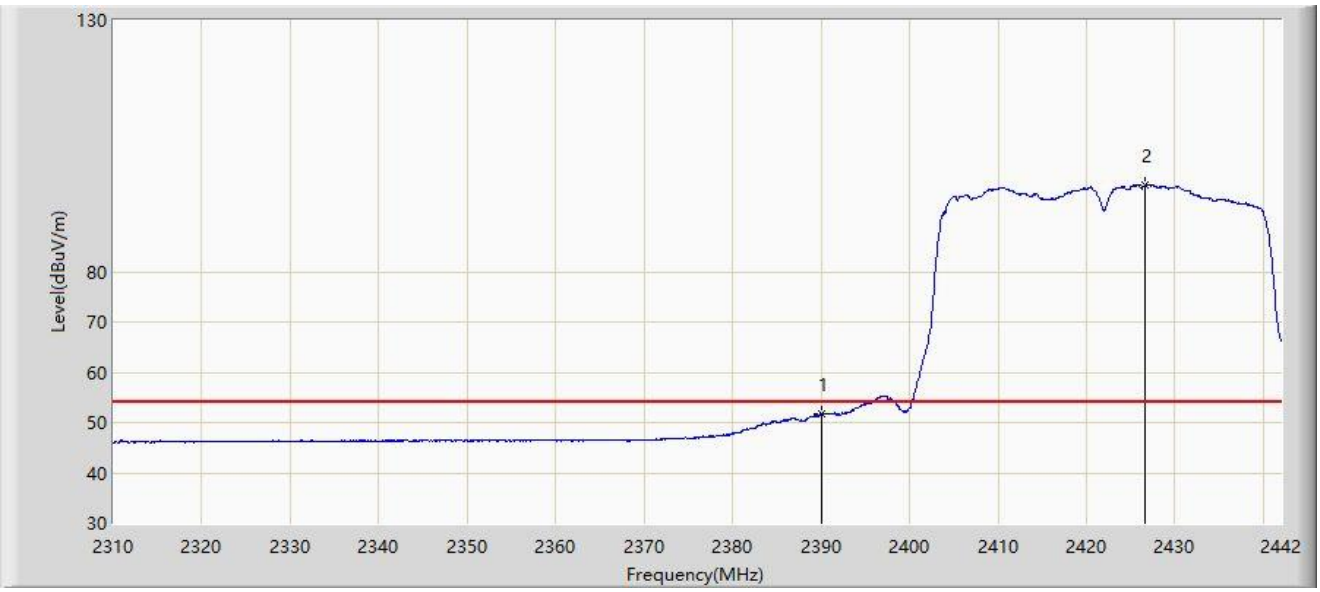



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2388.672 | 65.171 | 34.506 | -8.829 | 74.000 | 30.664 | PK |
| 2 | | | 2390.000 | 62.755 | 32.091 | -11.245 | 74.000 | 30.664 | PK |
| 3 | | * | 2428.404 | 107.182 | 76.657 | N/A | N/A | 30.525 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/24 - 11:17 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Buter Shi |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2422MHz | |

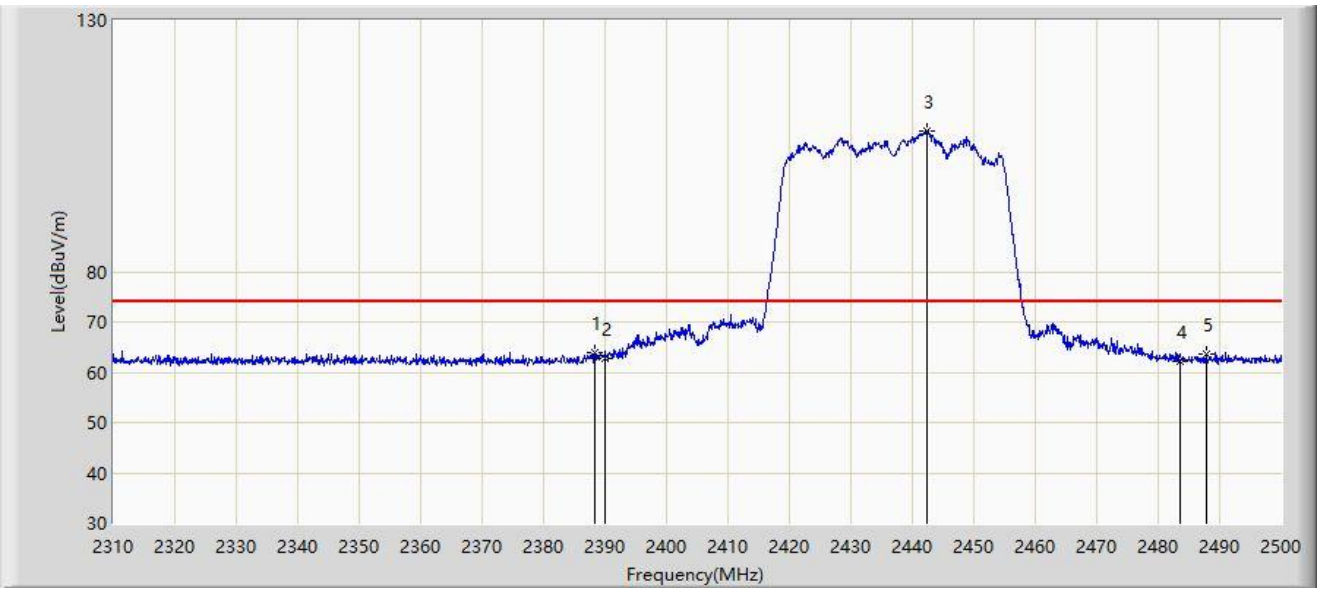



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 51.681 | 21.017 | -2.319 | 54.000 | 30.664 | AV |
| 2 | | * | 2426.688 | 97.246 | 66.719 | N/A | N/A | 30.526 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 23:08 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2437MHz | |

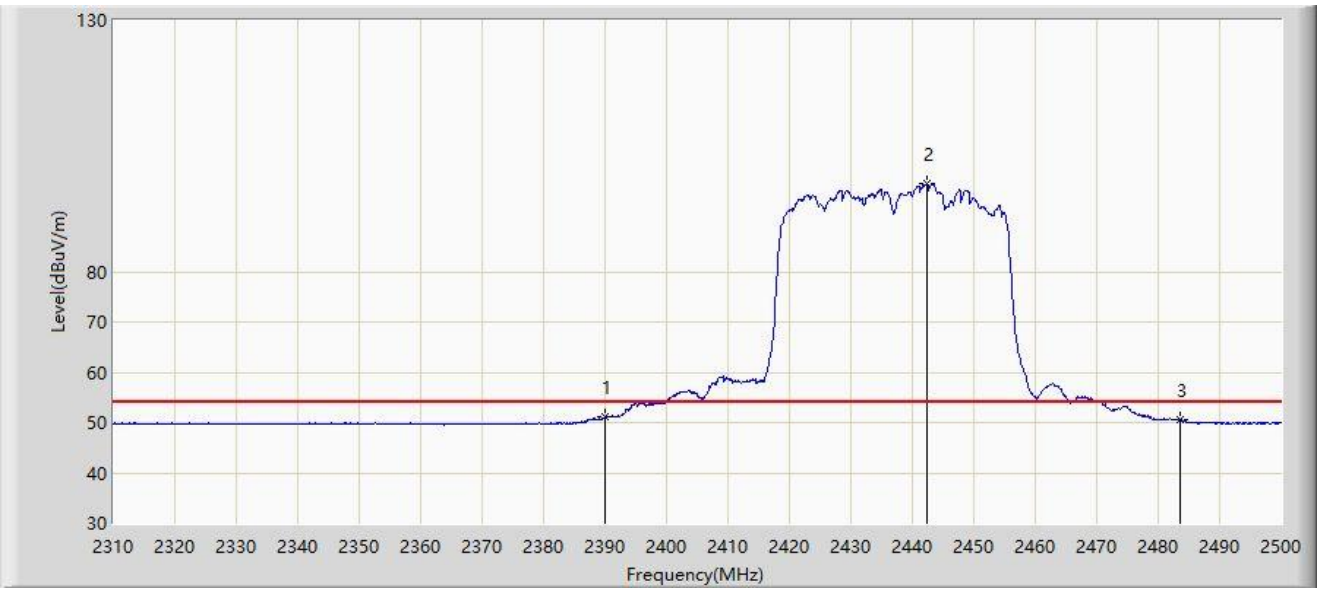



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2388.280 | 63.892 | 31.367 | -10.108 | 74.000 | 32.525 | PK |
| 2 | | | 2390.000 | 62.896 | 30.363 | -11.104 | 74.000 | 32.533 | PK |
| 3 | | * | 2442.335 | 108.112 | 75.637 | N/A | N/A | 32.475 | PK |
| 4 | | | 2483.500 | 62.234 | 29.805 | -11.766 | 74.000 | 32.429 | PK |
| 5 | | | 2487.840 | 63.547 | 31.143 | -10.453 | 74.000 | 32.404 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 23:12 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2437MHz | |

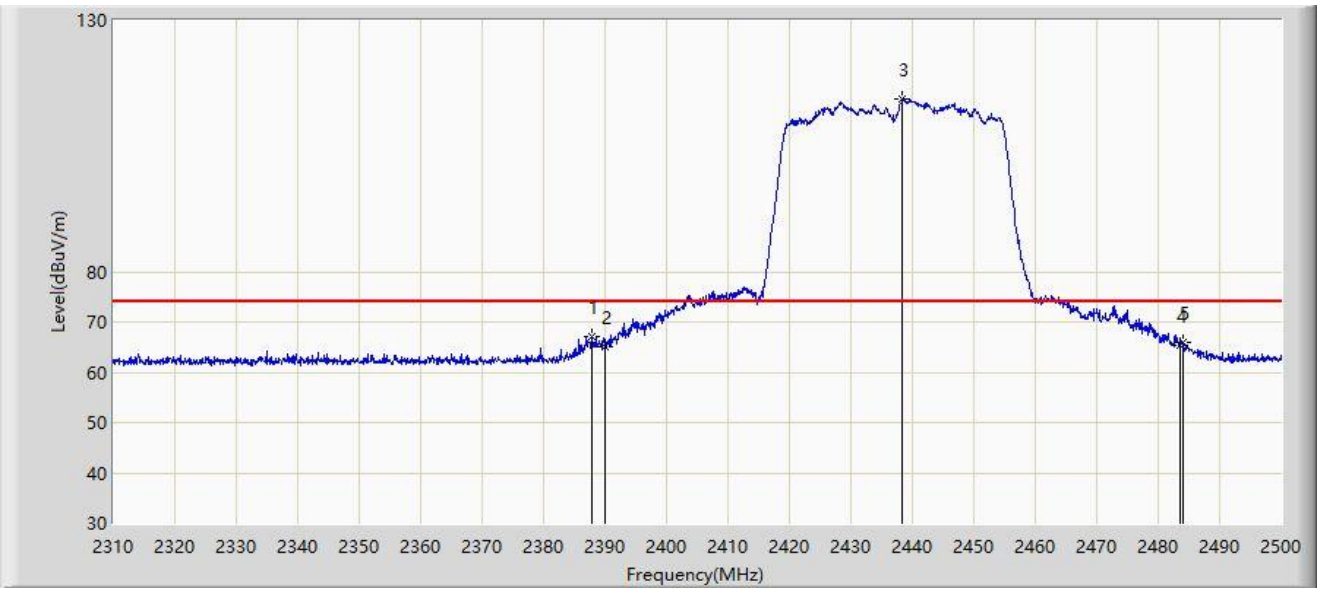



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 51.037 | 18.504 | -2.963 | 54.000 | 32.533 | AV |
| 2 | | * | 2442.335 | 97.404 | 64.929 | N/A | N/A | 32.475 | AV |
| 3 | | | 2483.500 | 50.502 | 18.073 | -3.498 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 23:06 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2437MHz | |

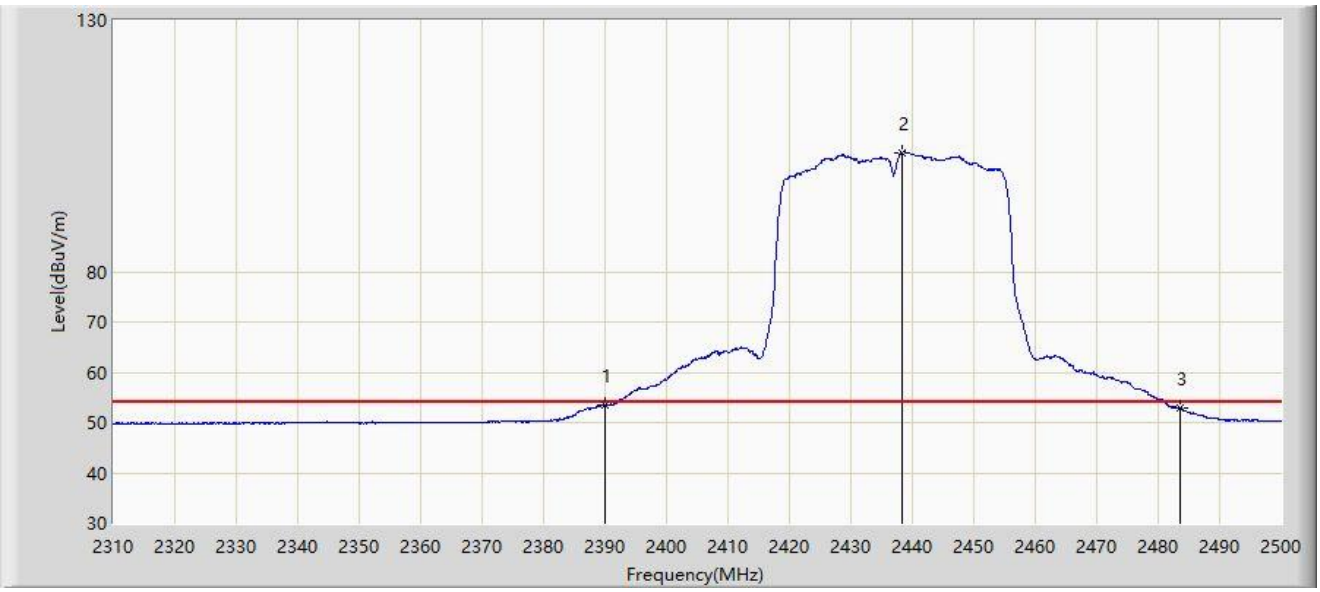



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2387.805 | 67.078 | 34.554 | -6.922 | 74.000 | 32.524 | PK |
| 2 | | | 2390.000 | 65.077 | 32.544 | -8.923 | 74.000 | 32.533 | PK |
| 3 | | * | 2438.440 | 114.320 | 81.807 | N/A | N/A | 32.479 | PK |
| 4 | | | 2483.500 | 65.224 | 32.795 | -8.776 | 74.000 | 32.429 | PK |
| 5 | | | 2484.040 | 65.992 | 33.567 | -8.008 | 74.000 | 32.426 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 23:02 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2437MHz | |

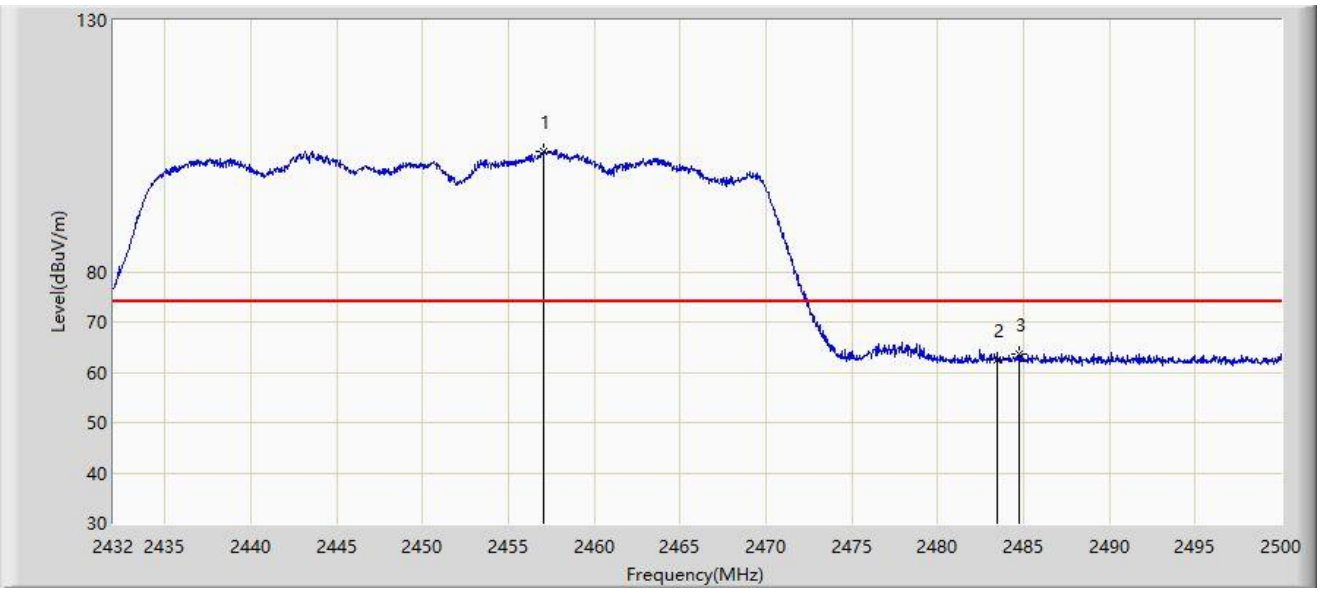



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 2390.000 | 53.572 | 21.039 | -0.428 | 54.000 | 32.533 | AV |
| 2 | | * | 2438.250 | 103.678 | 71.198 | N/A | N/A | 32.480 | AV |
| 3 | | | 2483.500 | 52.809 | 20.380 | -1.191 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 23:34 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz | |

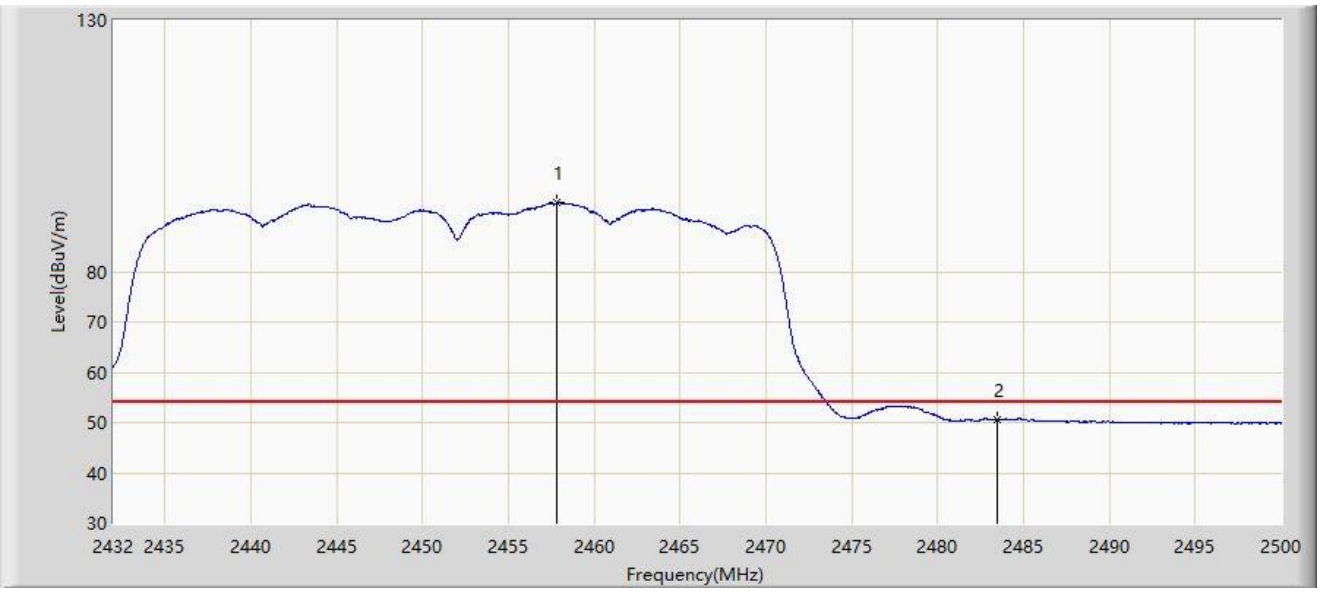



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2457.092 | 104.031 | 71.559 | N/A | N/A | 32.473 | PK |
| 2 | | | 2483.500 | 62.561 | 30.132 | -11.439 | 74.000 | 32.429 | PK |
| 3 | | | 2484.734 | 63.643 | 31.225 | -10.357 | 74.000 | 32.421 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 23:35 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Horizontal |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz | |

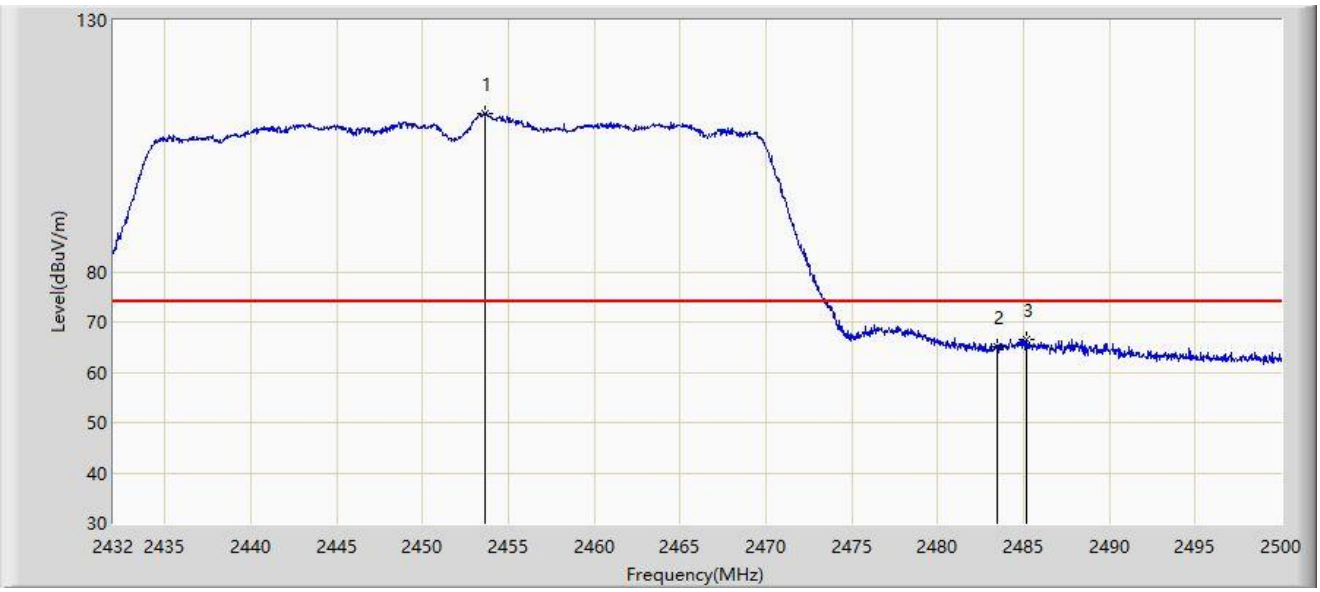



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2457.840 | 93.703 | 61.228 | N/A | N/A | 32.476 | AV |
| 2 | | | 2483.500 | 50.657 | 18.228 | -3.343 | 54.000 | 32.429 | AV |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 23:32 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz | |

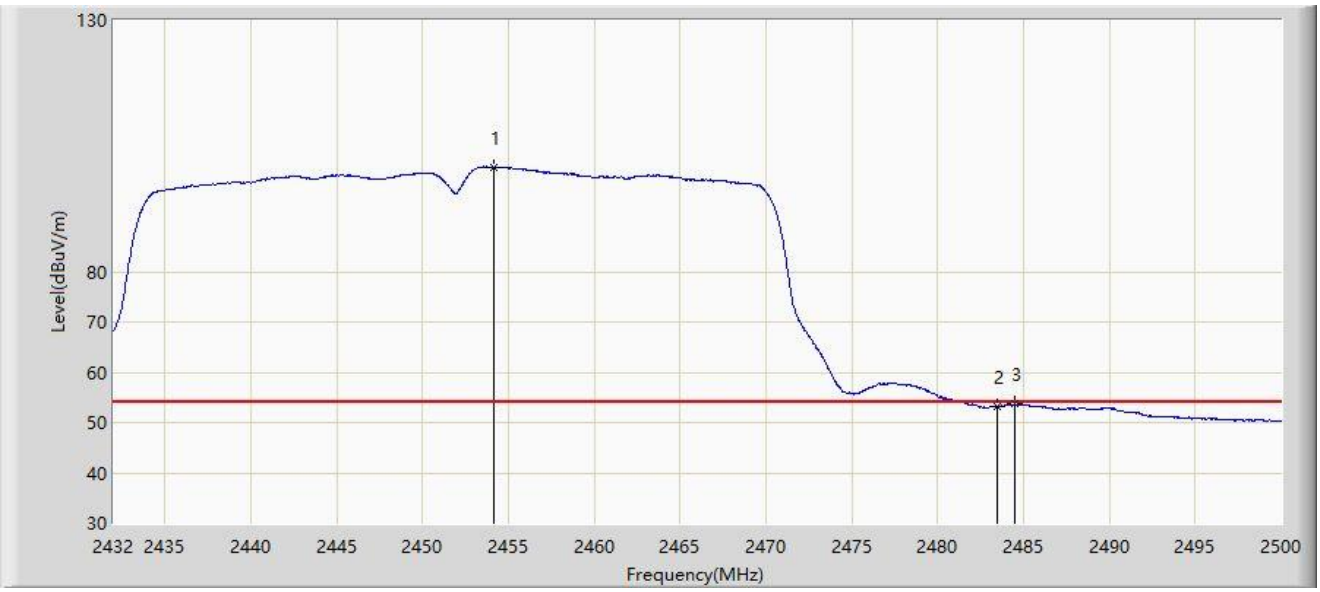



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2453.658 | 111.429 | 78.968 | N/A | N/A | 32.461 | PK |
| 2 | | | 2483.500 | 65.122 | 32.693 | -8.878 | 74.000 | 32.429 | PK |
| 3 | | | 2485.142 | 66.637 | 34.220 | -7.363 | 74.000 | 32.419 | PK |

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

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

| | |
|---|---|
| Site: WZ-AC1 | Time: 2021/04/15 - 23:29 |
| Limit: FCC_Part15.209_RE(3m) | Engineer: Jason Gao |
| Probe: WZ-AC1_BBHA9120D_1-18GHz | Polarity: Vertical |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11n-HT40 at Channel 2452MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV/m) | Factor (dB/m) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 2454.168 | 100.796 | 68.333 | N/A | N/A | 32.463 | AV |
| 2 | | | 2483.500 | 53.213 | 20.785 | -0.787 | 54.000 | 32.429 | AV |
| 3 | | | 2484.496 | 53.699 | 21.277 | -0.301 | 54.000 | 32.422 | AV |

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

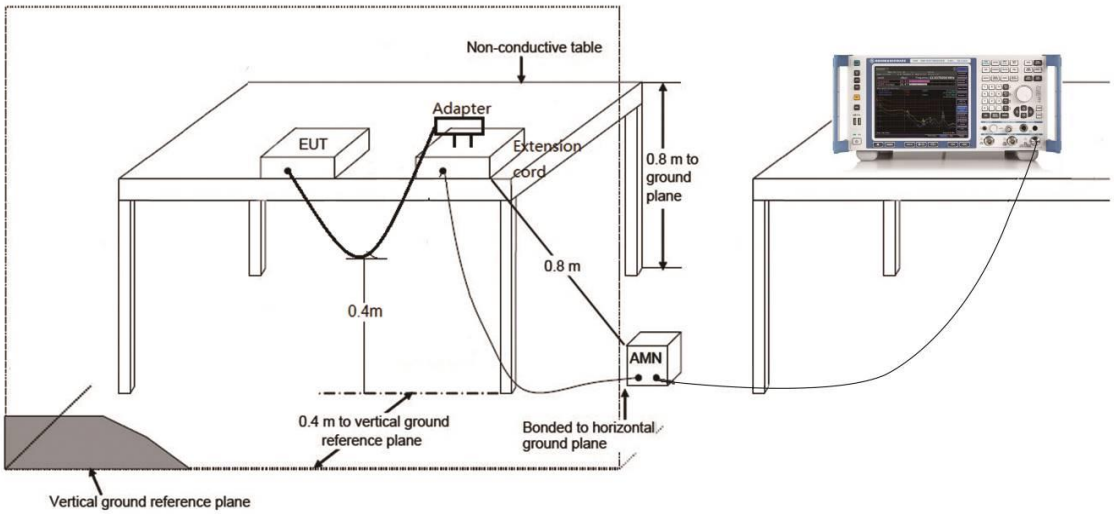
Factor (dB/m) = Cable Loss (dB) + Antenna Factor (dB/m).

## 5.8. AC Conducted Emissions Measurement

### 5.8.1.Test Limit

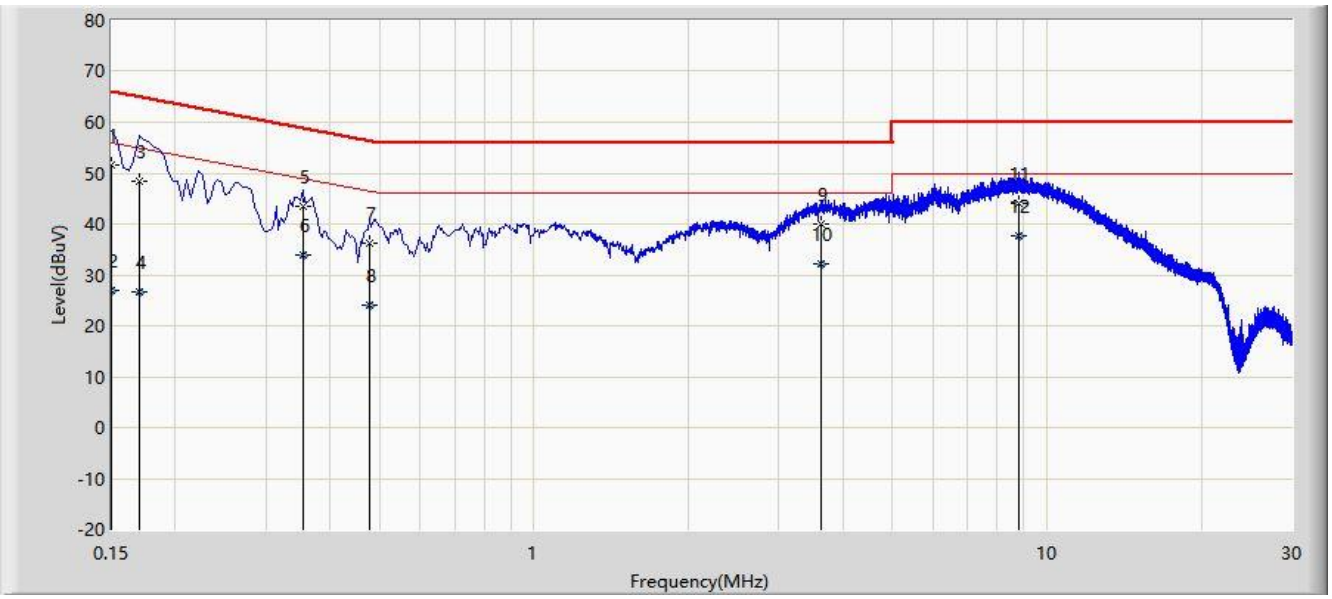
| FCC Part 15.207 Limit | | |
|---|---|---|
| Frequency (MHz) | QP (dBμV) | AV (dBμV) |
| 0.15 ~ 0.50 | 66 ~ 56 | 56 ~ 46 |
| 0.50 ~ 5.0 | 56 | 46 |
| 5.0 ~ 30 | 60 | 50 |
| Note 1: The lower limit shall apply at the transition frequencies.<br>Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz. | | |

### 5.8.2.Test Setup



### 5.8.3.Test Result

| | |
|---|---|
| Site: WZ-SR2 | Time: 2021/05/25 - 11:38 |
| Limit: FCC_Part15.207_CE_AC Power | Engineer: Linda Wei |
| Probe: ENV216_101683_Filter Off_Without Adapter | Polarity: Neutral |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2437MHz | |

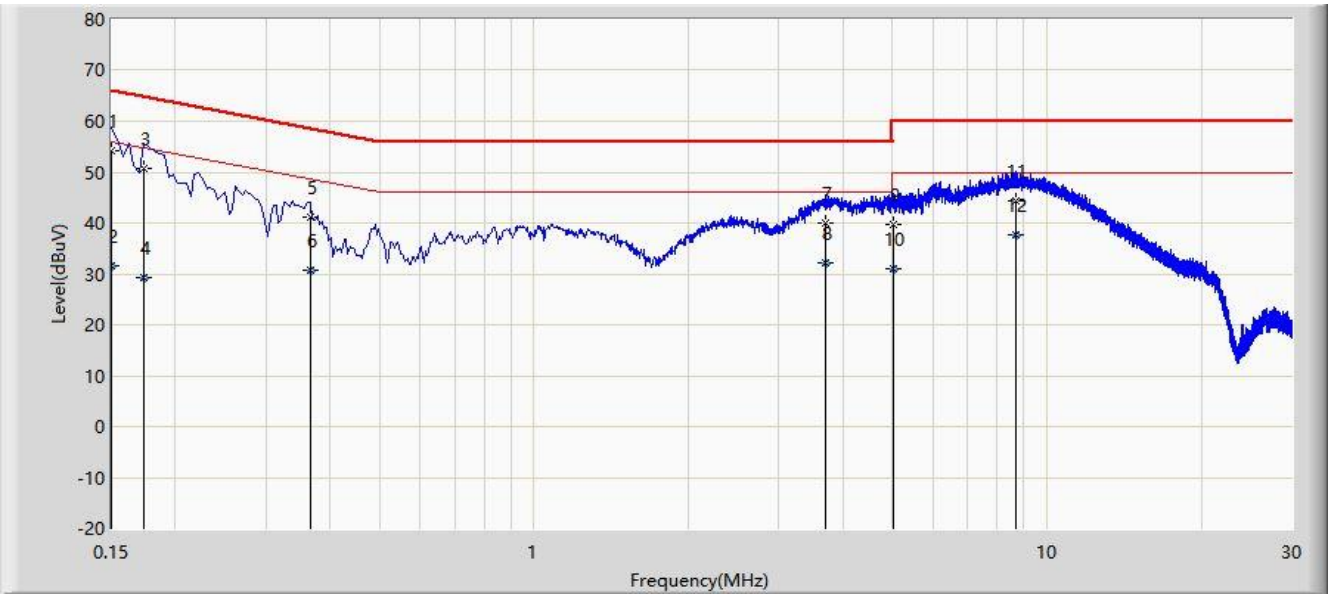



| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 0.150 | 51.624 | 41.836 | -14.376 | 66.000 | 9.788 | QP |
| 2 | | | 0.150 | 26.887 | 17.099 | -29.113 | 56.000 | 9.788 | AV |
| 3 | | | 0.170 | 48.365 | 38.567 | -16.595 | 64.960 | 9.798 | QP |
| 4 | | | 0.170 | 26.664 | 16.866 | -28.296 | 54.960 | 9.798 | AV |
| 5 | | | 0.354 | 43.447 | 33.612 | -15.421 | 58.868 | 9.836 | QP |
| 6 | | | 0.354 | 33.843 | 24.007 | -15.025 | 48.868 | 9.836 | AV |
| 7 | | | 0.478 | 36.132 | 26.276 | -20.241 | 56.374 | 9.856 | QP |
| 8 | | | 0.478 | 24.036 | 14.180 | -22.337 | 46.374 | 9.856 | AV |
| 9 | | | 3.622 | 39.928 | 29.752 | -16.072 | 56.000 | 10.175 | QP |
| 10 | | | 3.622 | 32.031 | 21.855 | -13.969 | 46.000 | 10.175 | AV |
| 11 | | | 8.810 | 44.158 | 33.590 | -15.842 | 60.000 | 10.567 | QP |
| 12 | | * | 8.810 | 37.730 | 27.163 | -12.270 | 50.000 | 10.567 | AV |

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

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

| | |
|---|---|
| Site: WZ-SR2 | Time: 2021/05/25 - 11:48 |
| Limit: FCC_Part15.207_CE_AC Power | Engineer: Linda Wei |
| Probe: ENV216_101683_Filter Off_Without Adapter | Polarity: Line |
| EUT: Dual Band 4x4 802.11ac Wave 2 Mini PCIe WiFi Module | Power: AC 120V/60Hz |
| Test Mode: Transmit by 802.11g at Channel 2437MHz | |




| No | Flag | Mark | Frequency (MHz) | Measure Level (dBμV) | Reading Level (dBμV) | Margin (dB) | Limit (dBμV) | Factor (dB) | Type |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | * | 0.150 | 54.289 | 44.491 | -11.711 | 66.000 | 9.798 | QP |
| 2 | | | 0.150 | 31.525 | 21.728 | -24.475 | 56.000 | 9.798 | AV |
| 3 | | | 0.174 | 50.733 | 40.923 | -14.034 | 64.767 | 9.810 | QP |
| 4 | | | 0.174 | 29.292 | 19.482 | -25.475 | 54.767 | 9.810 | AV |
| 5 | | | 0.366 | 41.244 | 31.397 | -17.347 | 58.591 | 9.848 | QP |
| 6 | | | 0.366 | 30.814 | 20.966 | -17.778 | 48.591 | 9.848 | AV |
| 7 | | | 3.710 | 40.111 | 29.915 | -15.889 | 56.000 | 10.197 | QP |
| 8 | | | 3.710 | 32.136 | 21.940 | -13.864 | 46.000 | 10.197 | AV |
| 9 | | | 5.026 | 39.773 | 29.351 | -20.227 | 60.000 | 10.421 | QP |
| 10 | | | 5.026 | 31.120 | 20.698 | -18.880 | 50.000 | 10.421 | AV |
| 11 | | | 8.686 | 44.372 | 33.805 | -15.628 | 60.000 | 10.567 | QP |
| 12 | | | 8.686 | 37.594 | 27.027 | -12.406 | 50.000 | 10.567 | AV |

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

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

# 6. CONCLUSION

The data collected relate only the item(s) tested and show that the device is in compliance with Part 15C of the FCC Rules.

The End

# Appendix A - Test Setup Photograph

Refer to “2103RSU077-UT” file.

# Appendix B - EUT Photograph

Refer to “ 2103RSU077-UE” file.