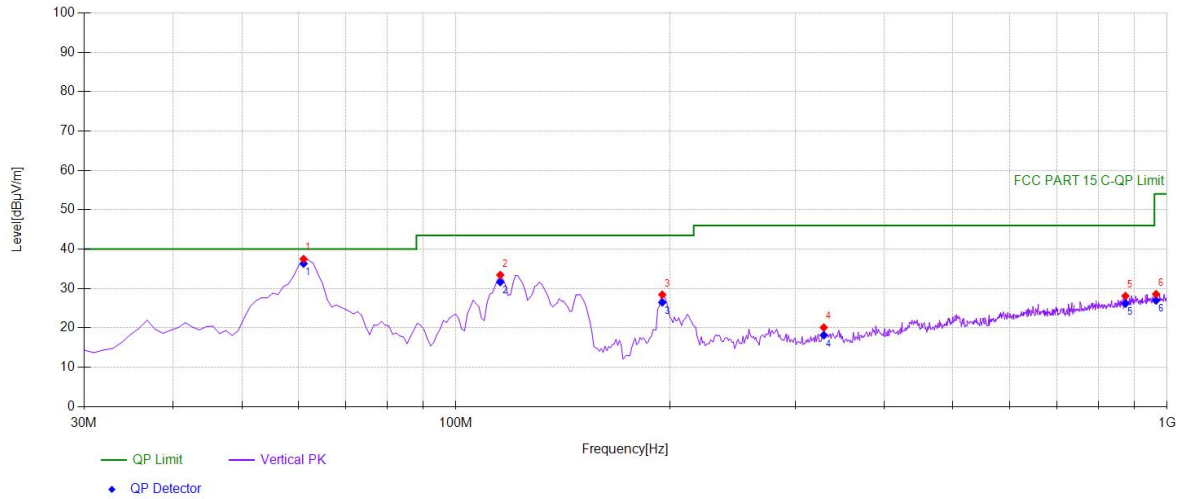
■ Spurious Emission below 1GHz (30MHz to 1GHz)

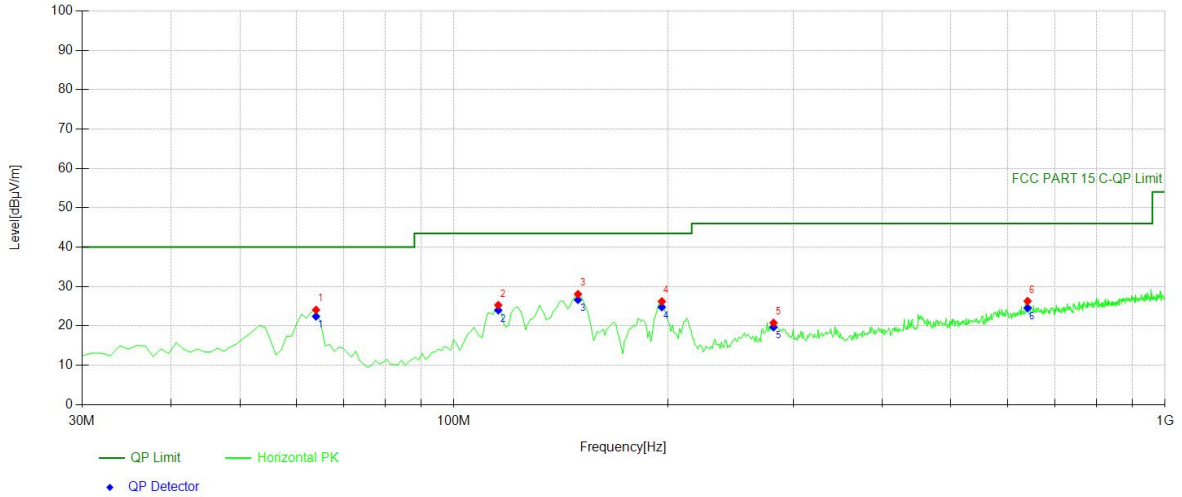
All modes 2.4G 802.11b/g/n have been tested, and the worst result 802.11b recorded was report as below:

| Mode: | 2412 |
|---|---|



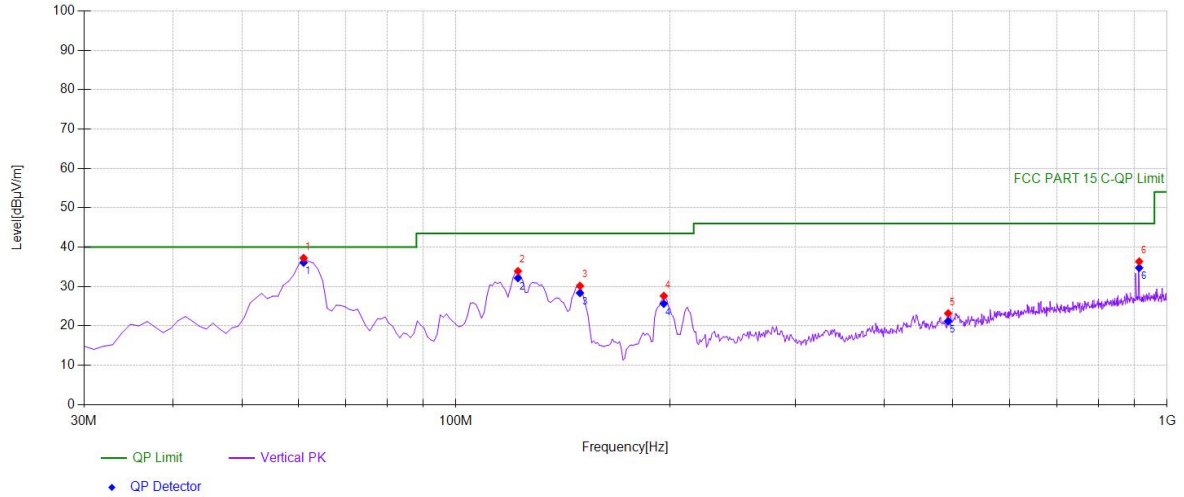

| Suspected Data List | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Reading [dBμV] | Factor [dB/m] | Level [dBμV/m] | Detector | Limit [dBμV/m] | Margin [dB] | Polarity |
| 1 | 61.0711 | 56.17 | -18.70 | 37.47 | PK | 40.00 | 2.53 | Vertical |
| 2 | 115.445 | 51.08 | -17.65 | 33.43 | PK | 43.50 | 10.07 | Vertical |
| 3 | 195.065 | 45.85 | -17.43 | 28.42 | PK | 43.50 | 15.08 | Vertical |
| 4 | 329.059 | 33.87 | -13.80 | 20.07 | PK | 46.00 | 25.93 | Vertical |
| 5 | 873.773 | 31.38 | -3.29 | 28.09 | PK | 46.00 | 17.91 | Vertical |
| 6 | 965.045 | 30.70 | -2.15 | 28.55 | PK | 54.00 | 25.45 | Vertical |

| Mode: | 2412 |
|---|---|



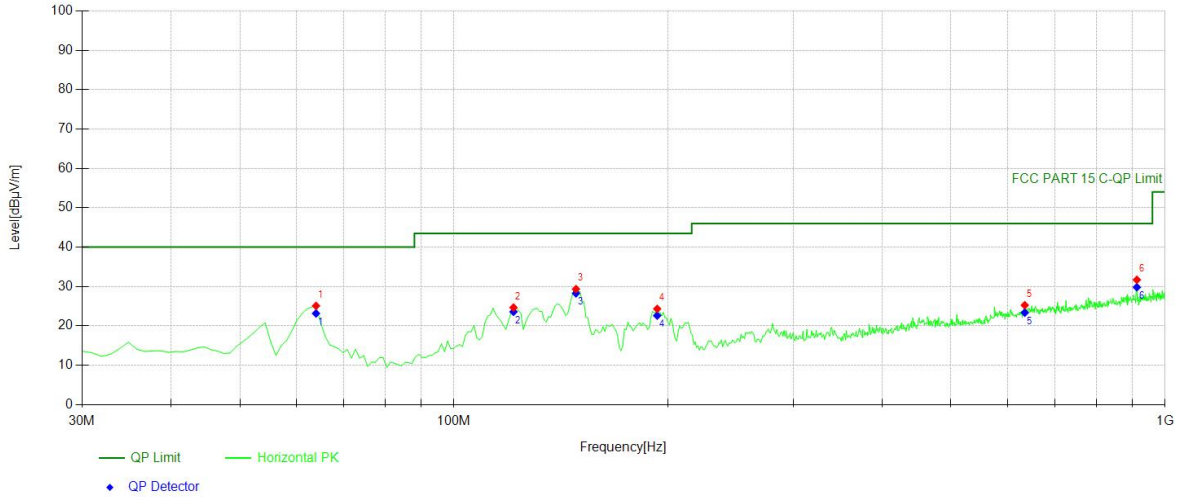

| Suspected Data List | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Reading [dBμV] | Factor [dB/m] | Level [dBμV/m] | Detector | Limit [dBμV/m] | Margin [dB] | Polarity |
| 1 | 63.984 | 43.15 | -19.11 | 24.04 | PK | 40.00 | 15.96 | Horizontal |
| 2 | 115.445 | 42.90 | -17.65 | 25.25 | PK | 43.50 | 18.25 | Horizontal |
| 3 | 149.429 | 47.83 | -19.78 | 28.05 | PK | 43.50 | 15.45 | Horizontal |
| 4 | 196.036 | 43.58 | -17.38 | 26.20 | PK | 43.50 | 17.30 | Horizontal |
| 5 | 281.481 | 34.92 | -14.18 | 20.74 | PK | 46.00 | 25.26 | Horizontal |
| 6 | 640.740 | 32.52 | -6.25 | 26.27 | PK | 46.00 | 19.73 | Horizontal |

| Mode: | 2437 |
|---|---|



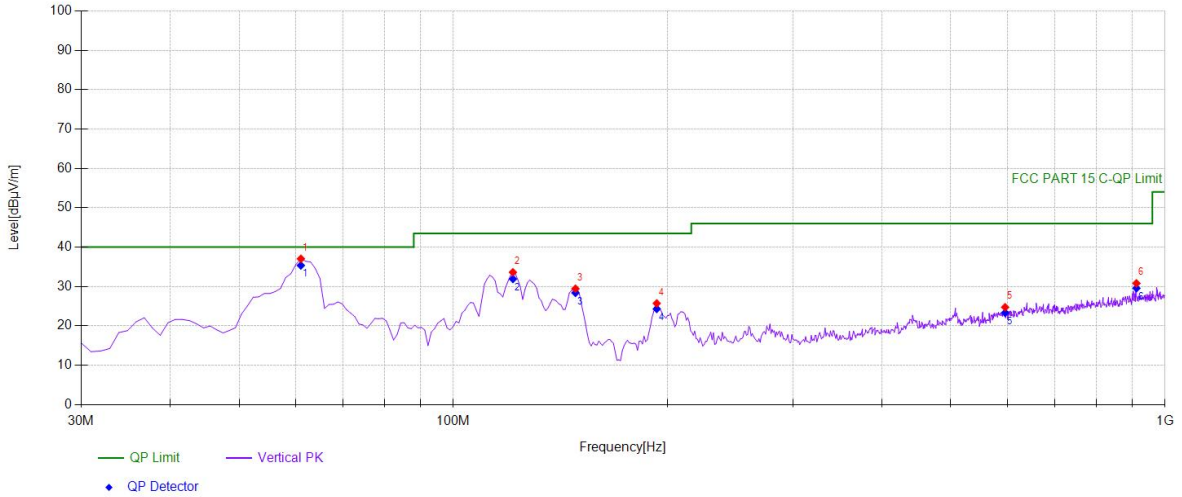

| Suspected Data List | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Reading [dBμV] | Factor [dB/m] | Level [dBμV/m] | Detector | Limit [dBμV/m] | Margin [dB] | Polarity |
| 1 | 61.0711 | 55.92 | -18.70 | 37.22 | PK | 40.00 | 2.78 | Vertical |
| 2 | 122.242 | 52.07 | -18.16 | 33.91 | PK | 43.50 | 9.59 | Vertical |
| 3 | 149.429 | 49.92 | -19.78 | 30.14 | PK | 43.50 | 13.36 | Vertical |
| 4 | 196.036 | 44.97 | -17.38 | 27.59 | PK | 43.50 | 15.91 | Vertical |
| 5 | 492.182 | 32.94 | -9.79 | 23.15 | PK | 46.00 | 22.85 | Vertical |
| 6 | 913.583 | 39.18 | -2.85 | 36.33 | PK | 46.00 | 9.67 | Vertical |

| Mode: | 2437 |
|---|---|



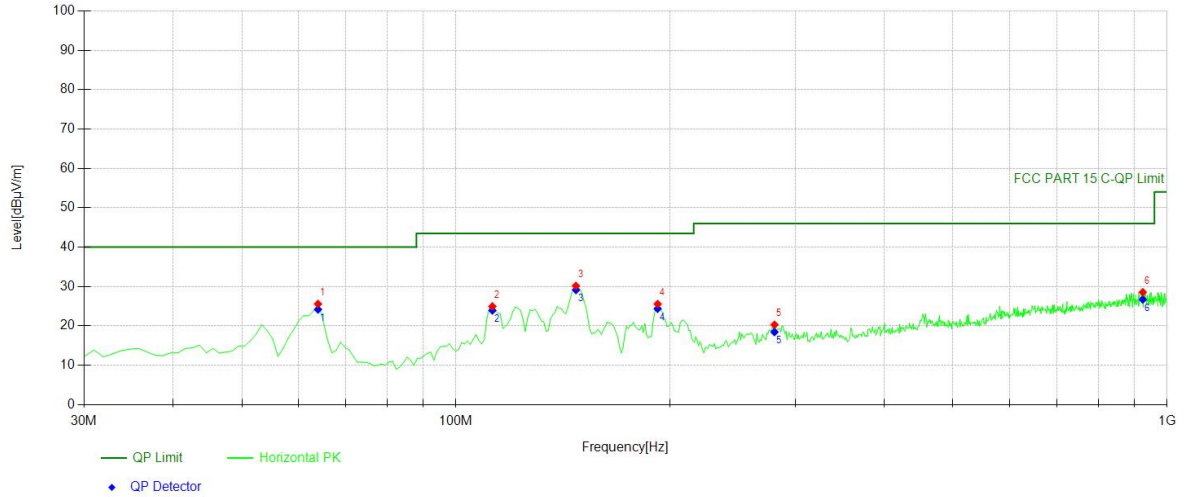

| Suspected Data List | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Reading [dBμV] | Factor [dB/m] | Level [dBμV/m] | Detector | Limit [dBμV/m] | Margin [dB] | Polarity |
| 1 | 63.984 | 44.17 | -19.11 | 25.06 | PK | 40.00 | 14.94 | Horizontal |
| 2 | 121.271 | 42.70 | -18.06 | 24.64 | PK | 43.50 | 18.86 | Horizontal |
| 3 | 148.458 | 49.13 | -19.80 | 29.33 | PK | 43.50 | 14.17 | Horizontal |
| 4 | 193.123 | 41.87 | -17.56 | 24.31 | PK | 43.50 | 19.19 | Horizontal |
| 5 | 634.914 | 31.72 | -6.49 | 25.23 | PK | 46.00 | 20.77 | Horizontal |
| 6 | 912.612 | 34.54 | -2.85 | 31.69 | PK | 46.00 | 14.31 | Horizontal |

| Mode: | 2462 |
|---|---|




| Suspected Data List | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Reading [dBμV] | Factor [dB/m] | Level [dBμV/m] | Detector | Limit [dBμV/m] | Margin [dB] | Polarity |
| 1 | 61.0711 | 55.73 | -18.70 | 37.03 | PK | 40.00 | 2.97 | Vertical |
| 2 | 121.271 | 51.66 | -18.06 | 33.60 | PK | 43.50 | 9.90 | Vertical |
| 3 | 148.458 | 49.22 | -19.80 | 29.42 | PK | 43.50 | 14.08 | Vertical |
| 4 | 193.123 | 43.26 | -17.56 | 25.70 | PK | 43.50 | 17.80 | Vertical |
| 5 | 596.076 | 31.86 | -7.14 | 24.72 | PK | 46.00 | 21.28 | Vertical |
| 6 | 911.641 | 33.64 | -2.84 | 30.80 | PK | 46.00 | 15.20 | Vertical |

| Mode: | 2462 |
|---|---|




| Suspected Data List | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| NO. | Freq. [MHz] | Reading [dBμV] | Factor [dB/m] | Level [dBμV/m] | Detector | Limit [dBμV/m] | Margin [dB] | Polarity |
| 1 | 63.984 | 44.66 | -19.11 | 25.55 | PK | 40.00 | 14.45 | Horizontal |
| 2 | 112.532 | 42.40 | -17.47 | 24.93 | PK | 43.50 | 18.57 | Horizontal |
| 3 | 147.487 | 49.98 | -19.83 | 30.15 | PK | 43.50 | 13.35 | Horizontal |
| 4 | 192.152 | 43.14 | -17.61 | 25.53 | PK | 43.50 | 17.97 | Horizontal |
| 5 | 280.510 | 34.44 | -14.18 | 20.26 | PK | 46.00 | 25.74 | Horizontal |
| 6 | 924.264 | 31.29 | -2.76 | 28.53 | PK | 46.00 | 17.47 | Horizontal |

## 8.6 CONDUCTED EMISSIONS TEST

### 8.6.1 Applicable Standard

According to FCC Part 15.207(a)

### 8.6.2 Conformance Limit

Conducted Emission Limit

| Frequency(MHz) | Quasi-peak | Average |
|---|---|---|
| 0.15-0.5 | 66-56 | 56-46 |
| 0.5-5.0 | 56 | 46 |
| 5.0-30.0 | 60 | 50 |

Note: 1. The lower limit shall apply at the transition frequencies
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### 8.6.3 Test Configuration

Test according to clause 7.3conducted emission test setup

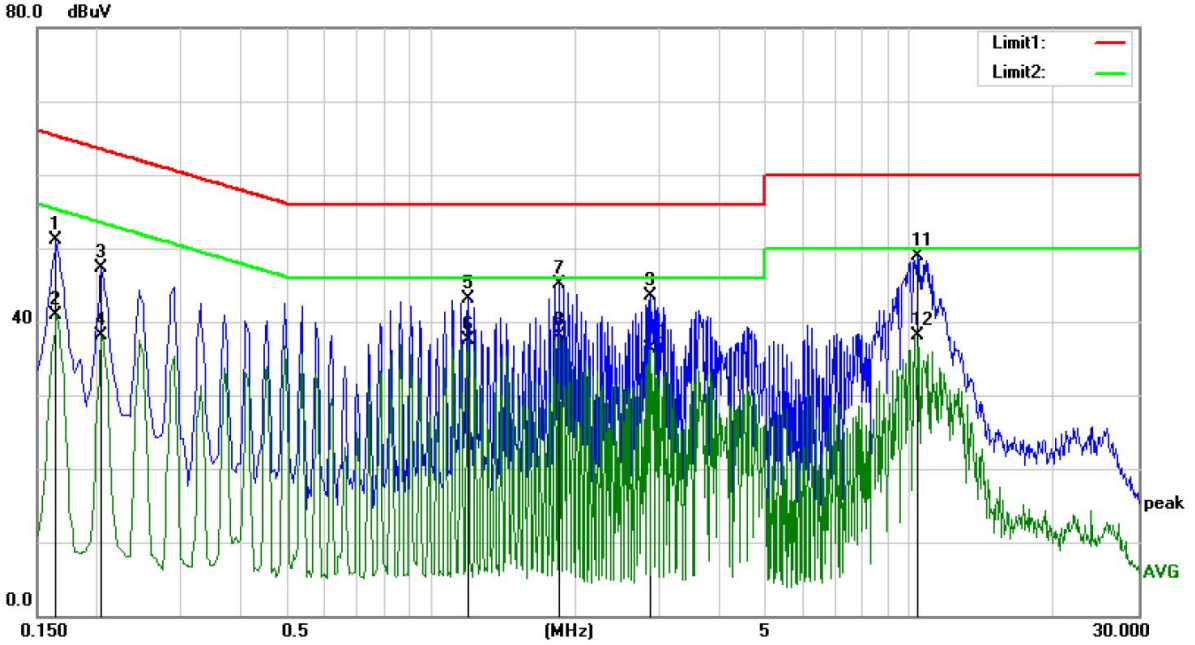
### 8.6.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Repeat above procedures until all frequency measured were complete.

### 8.6.5 Test Results

Pass

The 120V &240V voltagehave been tested, and the worst result recorded was report as below:



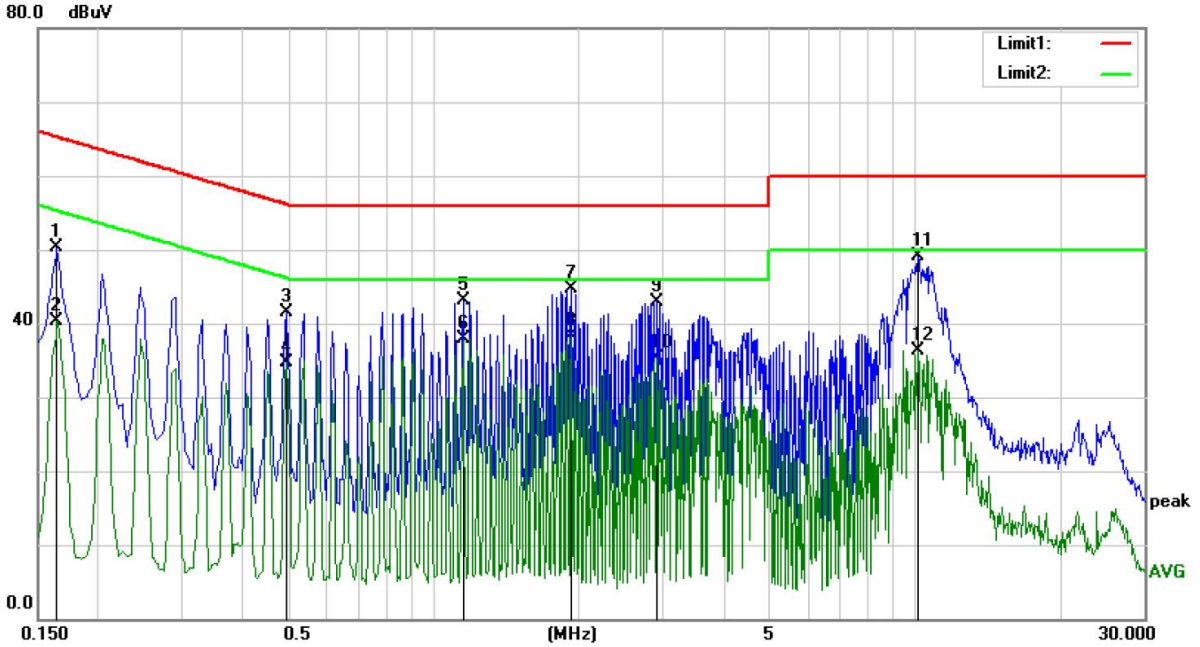

Site Conduction #1 Phase: N Temperature: 21.9

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 58 %

Mode: wifi 2.4G

Note:

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.1650 | 41.58 | 9.53 | 51.11 | 65.21 | -14.10 | QP | |
| 2 | | 0.1650 | 31.38 | 9.53 | 40.91 | 55.21 | -14.30 | AVG | |
| 3 | | 0.2050 | 37.71 | 9.53 | 47.24 | 63.41 | -16.17 | QP | |
| 4 | | 0.2050 | 28.51 | 9.53 | 38.04 | 53.41 | -15.37 | AVG | |
| 5 | | 1.1950 | 33.65 | 9.55 | 43.20 | 56.00 | -12.80 | QP | |
| 6 | | 1.1950 | 28.05 | 9.55 | 37.60 | 46.00 | -8.40 | AVG | |
| 7 | | 1.8500 | 35.59 | 9.55 | 45.14 | 56.00 | -10.86 | QP | |
| 8 | * | 1.8500 | 28.52 | 9.55 | 38.07 | 46.00 | -7.93 | AVG | |
| 9 | | 2.8800 | 33.90 | 9.56 | 43.46 | 56.00 | -12.54 | QP | |
| 10 | | 2.8800 | 26.74 | 9.56 | 36.30 | 46.00 | -9.70 | AVG | |
| 11 | | 10.3800 | 39.26 | 9.70 | 48.96 | 60.00 | -11.04 | QP | |
| 12 | | 10.3800 | 28.50 | 9.70 | 38.20 | 50.00 | -11.80 | AVG | |




Site Conduction #1 Phase: *L1* Temperature: 21.9

Limit: (CE)FCC PART 15 class B_QP Power: AC 120V/60Hz Humidity: 58 %

Mode: wifi 2.4G

Note:

| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure-ment | Limit | Over | | |
|---|---|---|---|---|---|---|---|---|---|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.1650 | 40.86 | 9.53 | 50.39 | 65.21 | -14.82 | QP | |
| 2 | | 0.1650 | 30.77 | 9.53 | 40.30 | 55.21 | -14.91 | AVG | |
| 3 | | 0.4950 | 31.94 | 9.53 | 41.47 | 56.08 | -14.61 | QP | |
| 4 | | 0.4950 | 25.08 | 9.53 | 34.61 | 46.08 | -11.47 | AVG | |
| 5 | | 1.1500 | 33.61 | 9.55 | 43.16 | 56.00 | -12.84 | QP | |
| 6 | | 1.1500 | 28.35 | 9.55 | 37.90 | 46.00 | -8.10 | AVG | |
| 7 | | 1.9300 | 35.25 | 9.55 | 44.80 | 56.00 | -11.20 | QP | |
| 8 | * | 1.9300 | 28.70 | 9.55 | 38.25 | 46.00 | -7.75 | AVG | |
| 9 | | 2.9150 | 33.36 | 9.56 | 42.92 | 56.00 | -13.08 | QP | |
| 10 | | 2.9150 | 25.78 | 9.56 | 35.34 | 46.00 | -10.66 | AVG | |
| 11 | | 10.1550 | 39.42 | 9.70 | 49.12 | 60.00 | -10.88 | QP | |
| 12 | | 10.1550 | 26.66 | 9.70 | 36.36 | 50.00 | -13.64 | AVG | |

## 8.7 ANTENNA APPLICATION

### 8.7.1 Antenna Requirement

| Standard | Requirement |
|---|---|
| FCC CRF Part15.203 | An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. |
| FCC 47 CFR Part 15.247 (b) | If transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. |
| RSS-Gen Section 6.8 | The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list. |
| RSS-247 Section 5.4 | If the transmitter employs an antenna system that emits multiple directional beams, but does not emit multiple directional beams simultaneously, the total output power conducted to the array or arrays that comprise the device (i.e. the sum of the power supplied to all antennas, antenna elements, staves, etc., and summed across all carriers or frequency channels) shall not exceed the applicable output power limit. However, the total conducted output power shall be reduced by 1 dB below the specified limits for each 3 dB that the directional gain of the antenna/antenna array exceeds 6 dBi. The directional antenna gain shall be computed as the sum of 10 log (number of array elements or staves) plus the directional gain of the element or stave having the highest gain. |

### 8.7.2 Result

PASS.

Note: ☑ Antenna use a permanently attached antenna which is not replaceable.
☐ Not using a standard antenna jack or electrical connector for antenna replacement
☐ The antenna has to be professionally installed (please provide method of installation)

Please refer to the attached documentInternal Photos to show the antenna connector.

*** End of Report ***