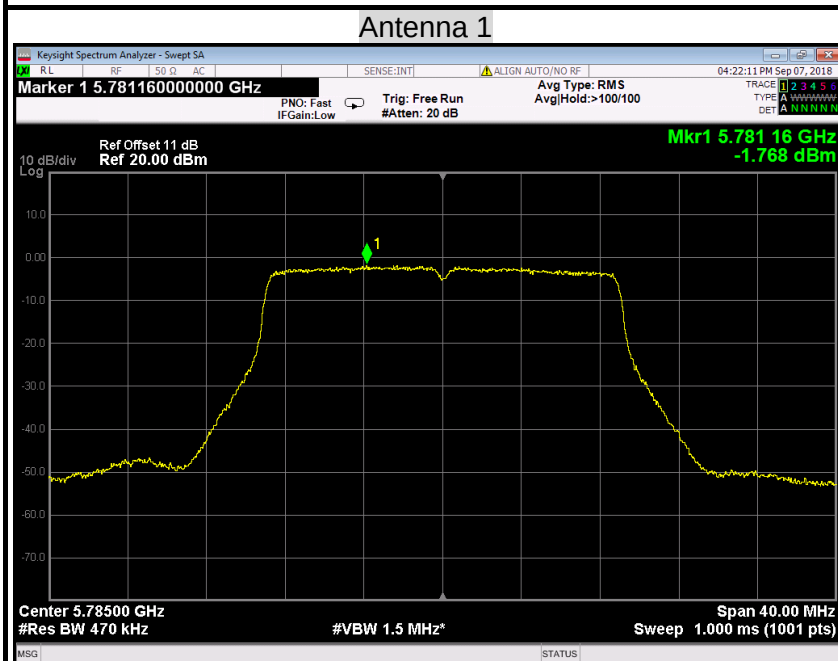
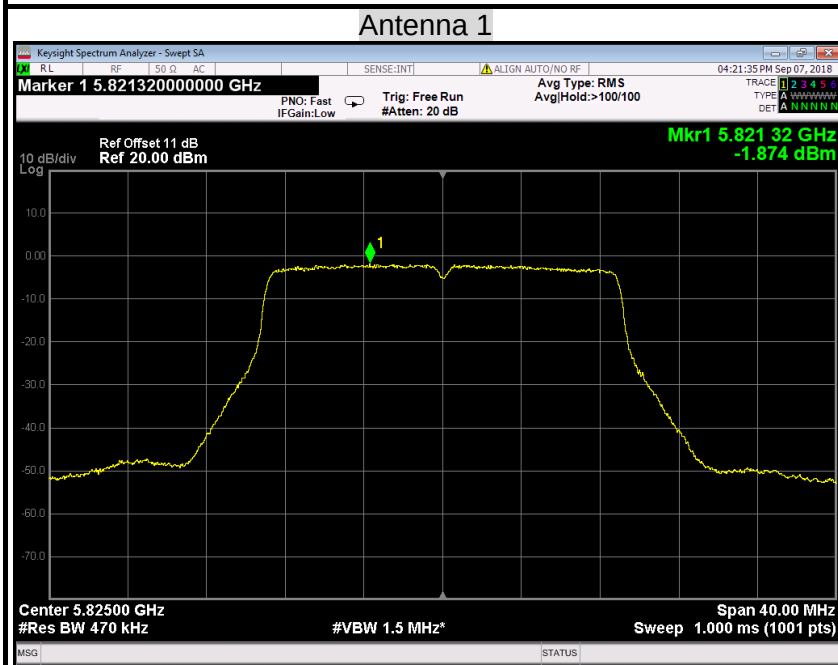




PPSD (CH Mid)



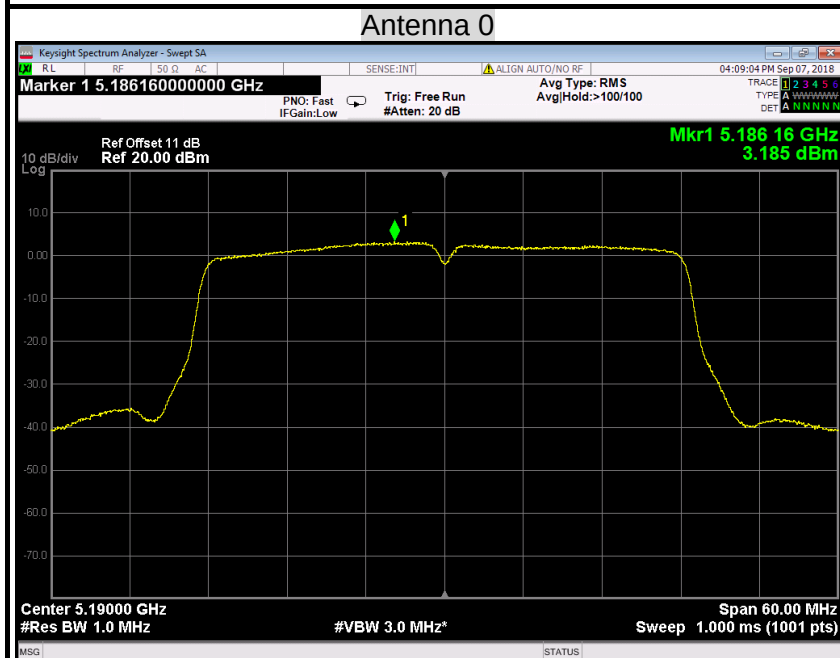
PPSD (CH High)



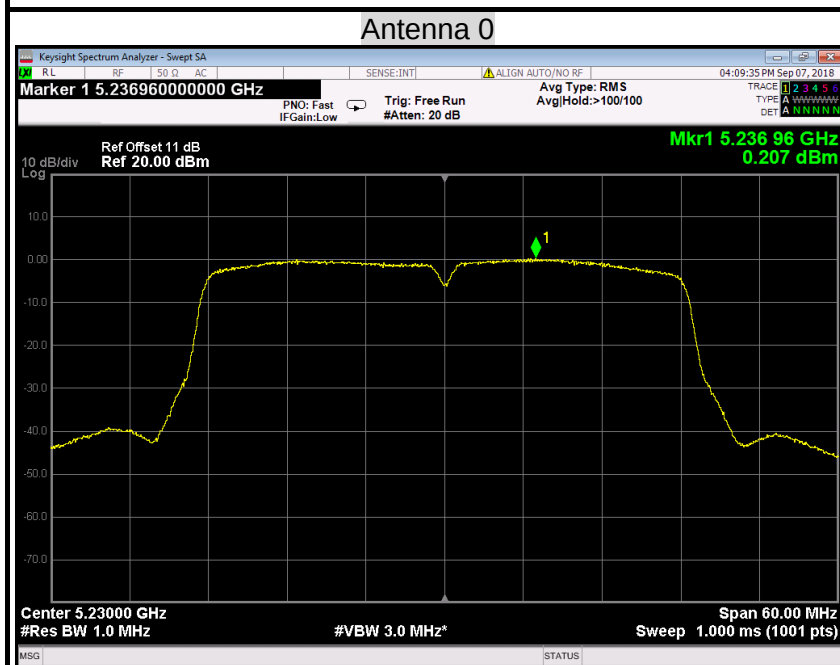


IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz

PPSD (CH Low)



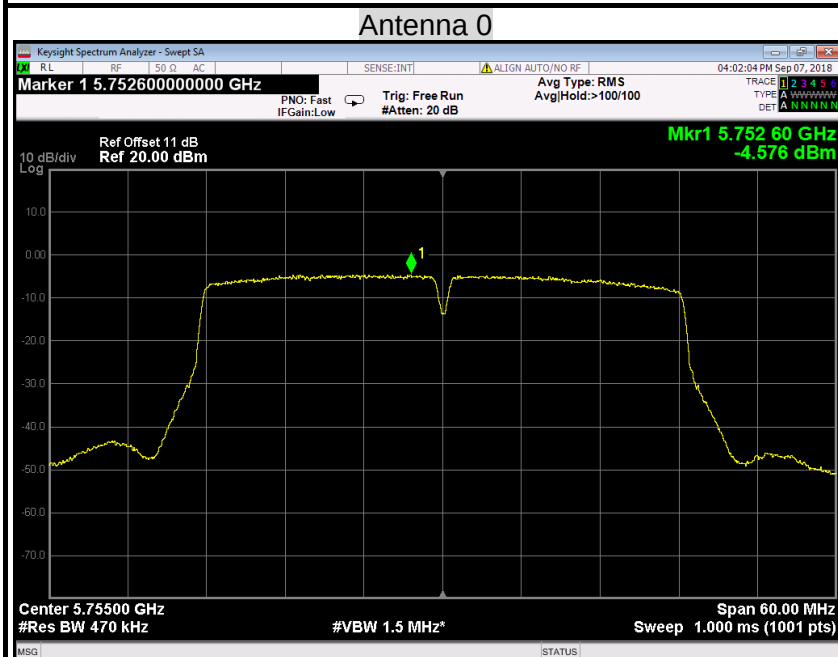
PPSD (CH High)



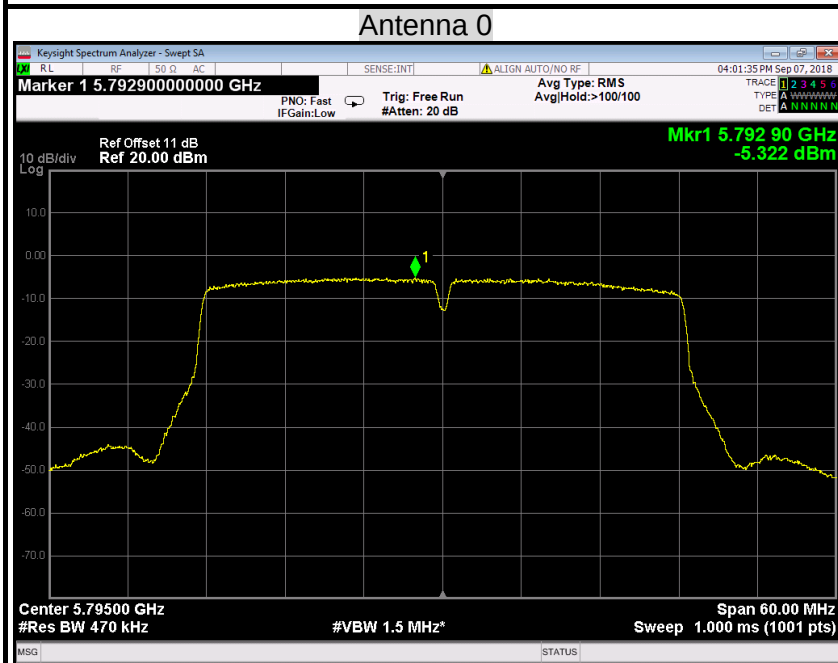


IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

PPSD (CH Low)



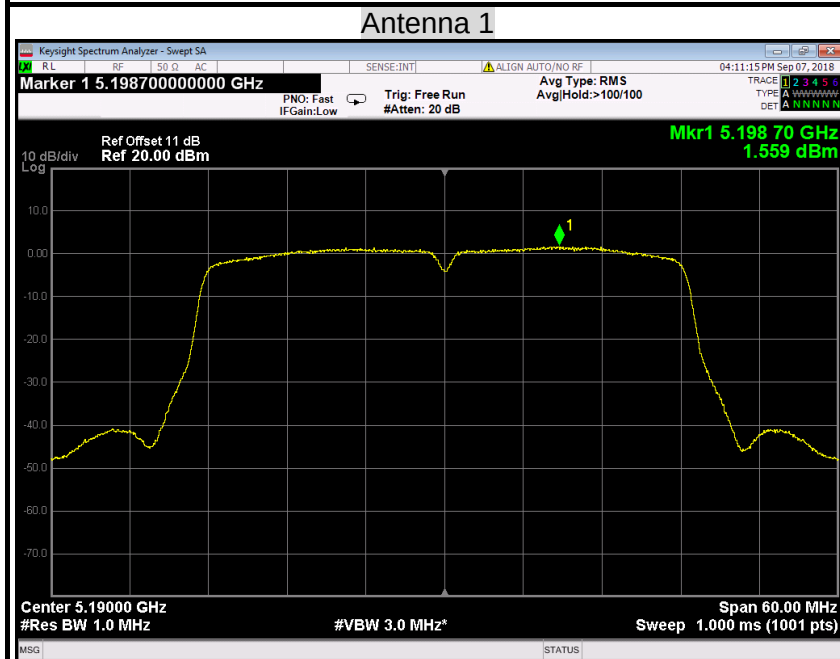
PPSD (CH High)



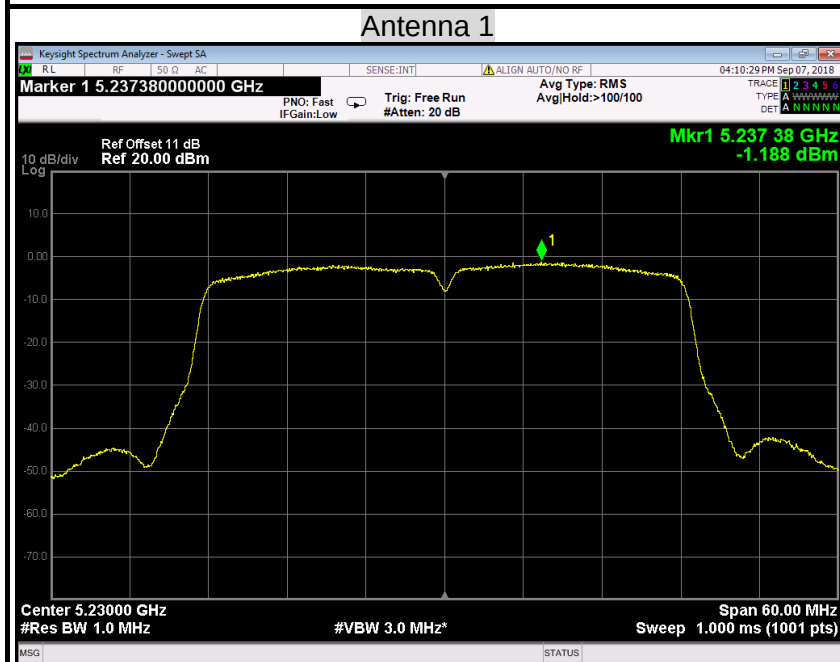


IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz

PPSD (CH Low)



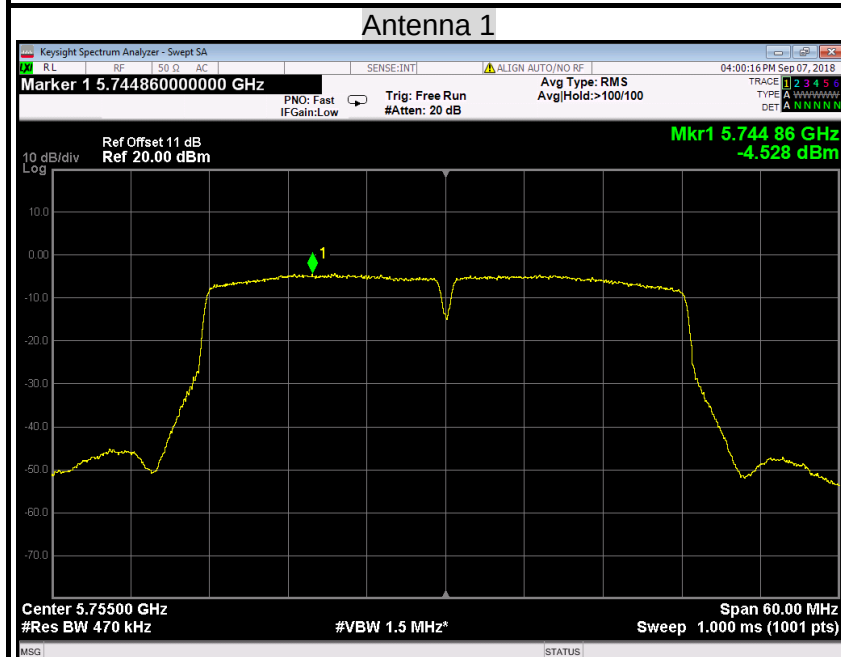
PPSD (CH High)



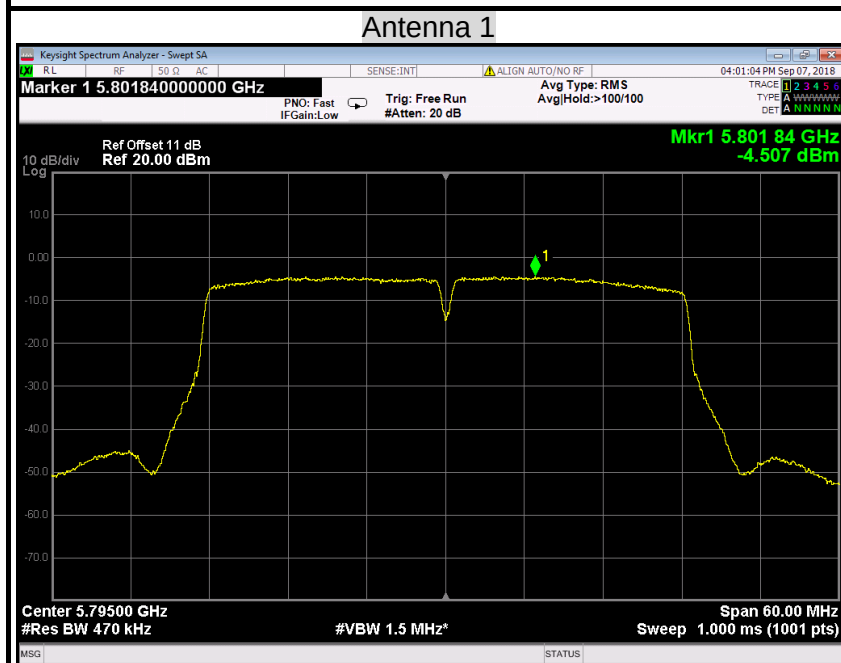


IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

PPSD (CH Low)



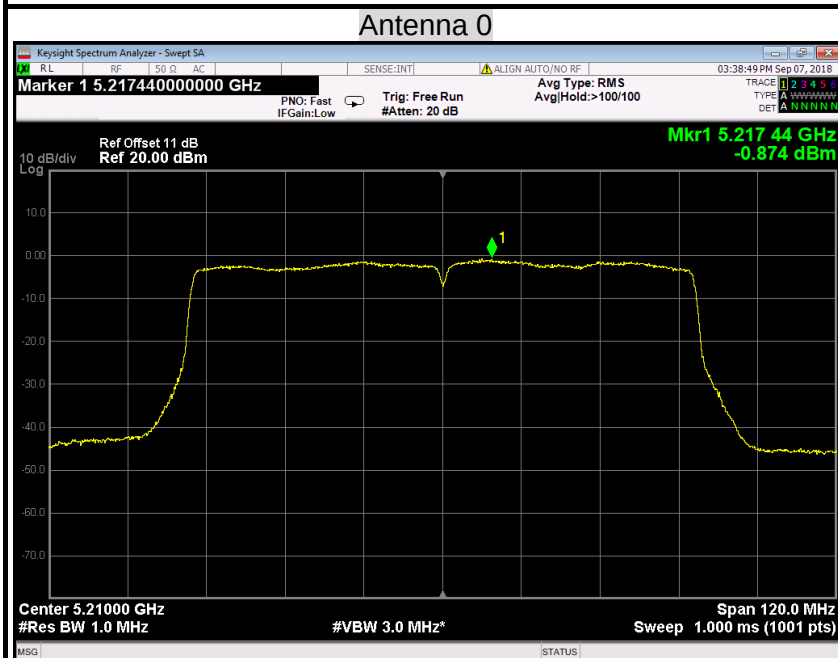
PPSD (CH High)





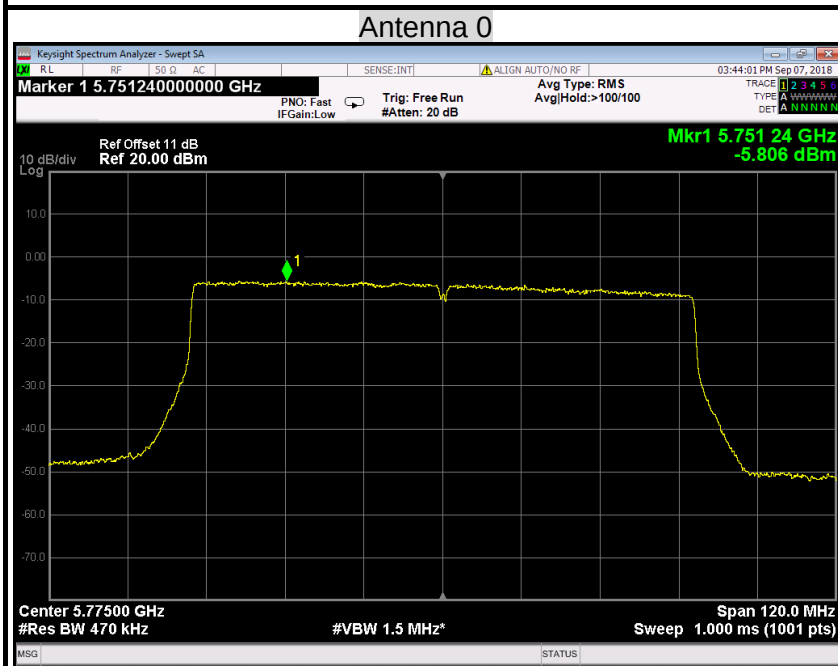
IEEE 802.11ac 80 mode / 5210MHz

PPSD



IEEE 802.11ac 80 mode / 5775MHz

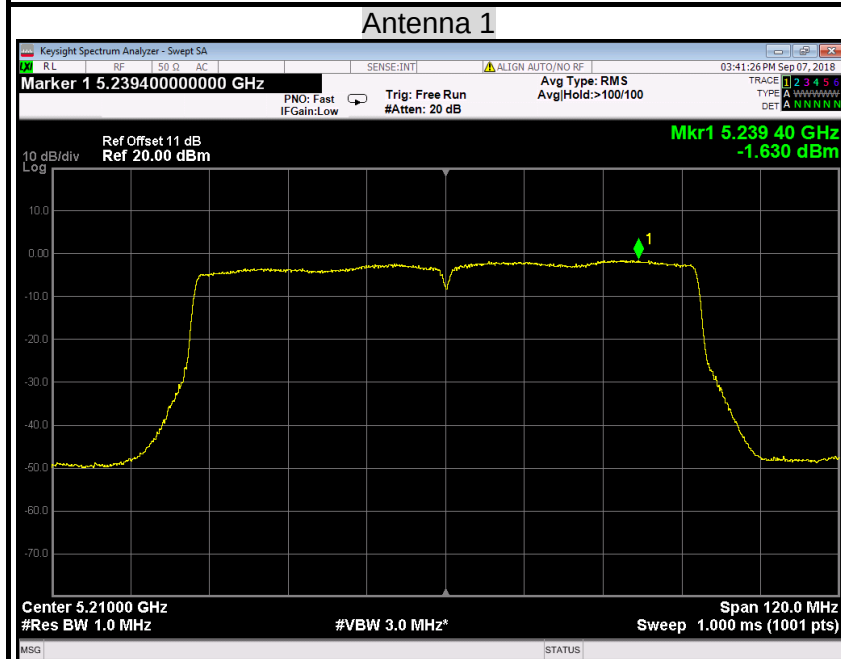
PPSD





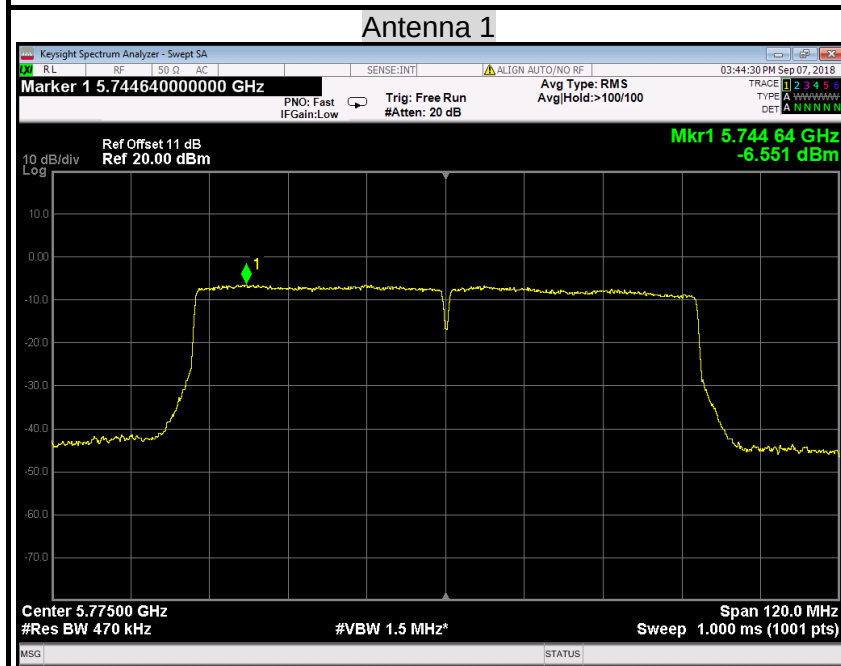
IEEE 802.11ac 80 mode / 5210MHz

PPSD



IEEE 802.11ac 80 mode / 5775MHz

PPSD





## 6.7 RADIATED UNDESIRABLE EMISSION

### 6.7.1 LIMIT

1. According to §15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

| Frequency (MHz) | Field Strength (μV/m) | Measurement Distance (m) |
|-----------------|-----------------------|--------------------------|
| 30-88           | 100*                  | 3                        |
| 88-216          | 150*                  | 3                        |
| 216-960         | 200*                  | 3                        |
| Above 960       | 500                   | 3                        |

**Remark:** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

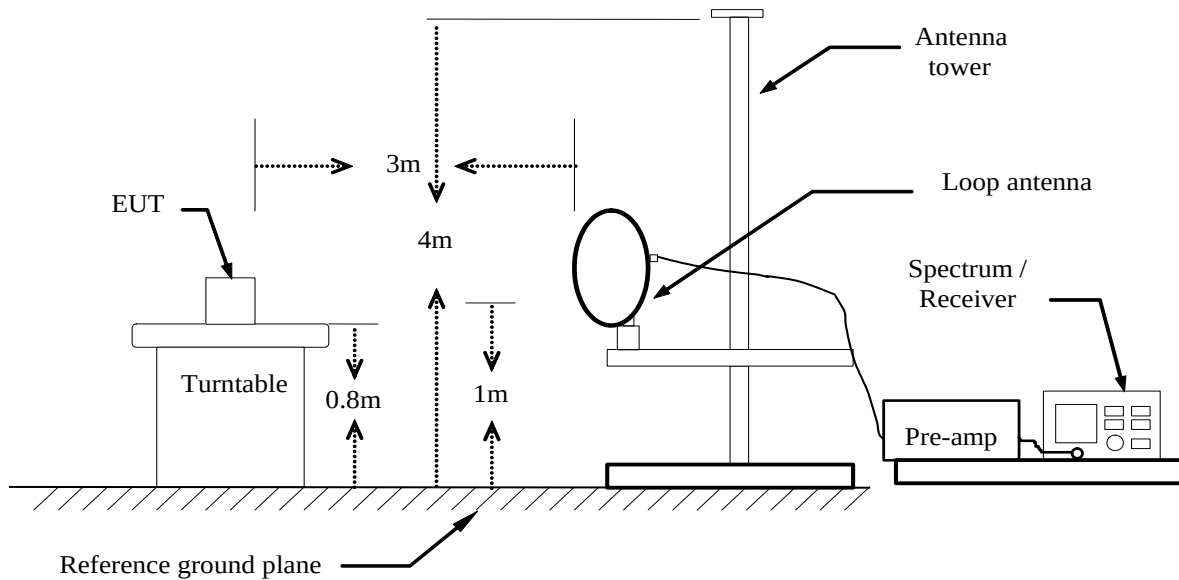
2. In the emission table above, the tighter limit applies at the band edges.

| Frequency (MHz) | Field Strength (μV/m at 3-meter) | Field Strength (dBμV/m at 3-meter) |
|-----------------|----------------------------------|------------------------------------|
| 30-88           | 100                              | 40                                 |
| 88-216          | 150                              | 43.5                               |
| 216-960         | 200                              | 46                                 |
| Above 960       | 500                              | 54                                 |

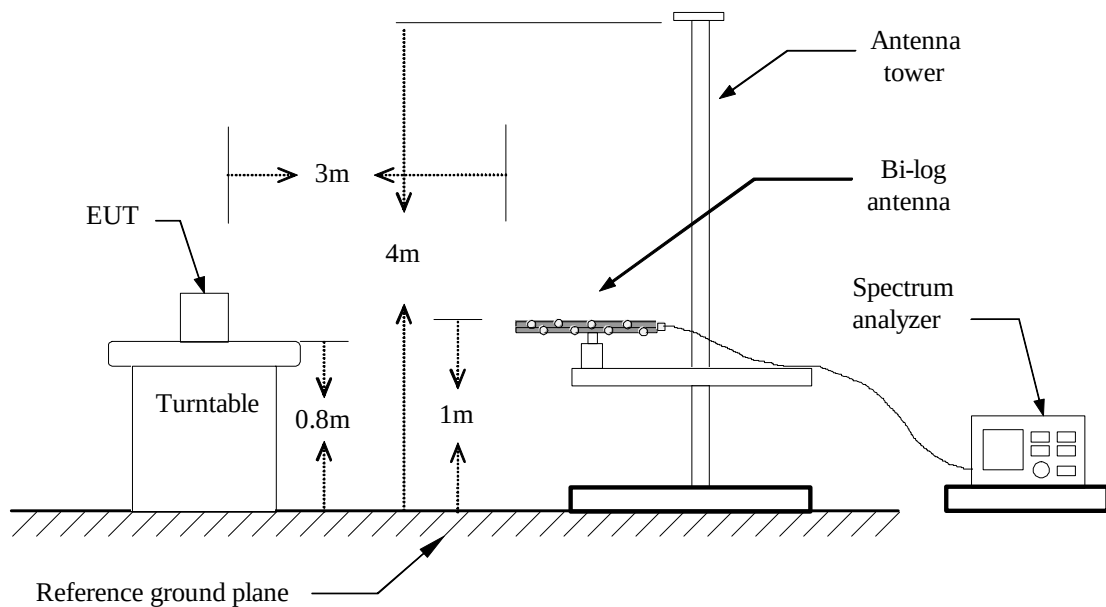


## 6.7.2 TEST CONFIGURATION

### Below 30MHz

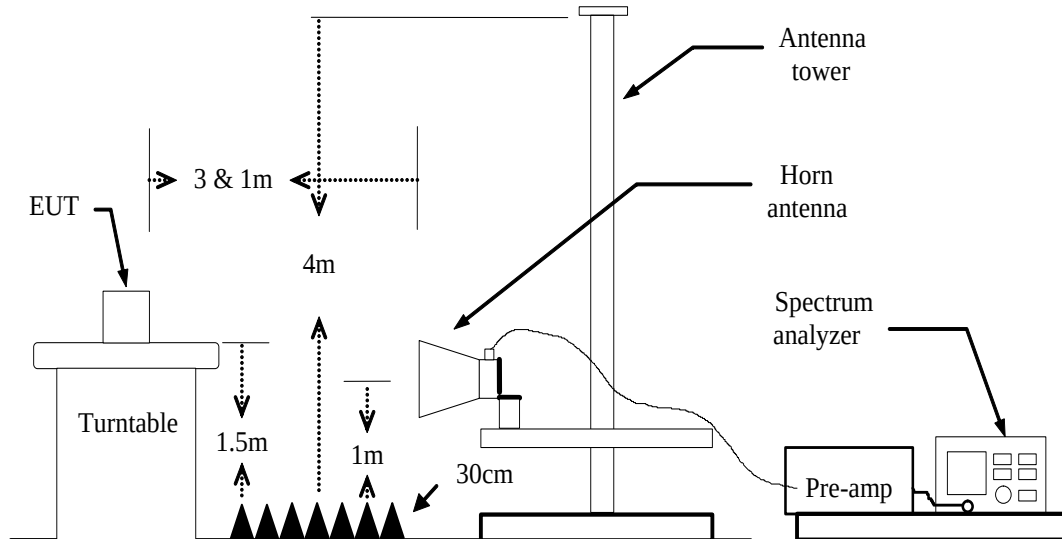


### Below 1 GHz





**Above 1 GHz**



For the actual test configuration, please refer to the related item – Photographs of the TEST CONFIGURATION.



### 6.7.3 MEASURING SETTING

The following table is the setting of spectrum analyzer and receiver.

| Spectrum Parameter                        | Setting                                       |
|-------------------------------------------|-----------------------------------------------|
| Attenuation                               | Auto                                          |
| Start Frequency                           | 1000 MHz                                      |
| Stop Frequency                            | 10th carrier harmonic                         |
| RB / VB (Emission in restricted band)     | 1MHz / 1MHz for Peak, 1 MHz / 1/T for Average |
| RB / VB (Emission in non-restricted band) | 1MHz / 1MHz for Peak, 1 MHz / 1/T for Average |

| Receiver Parameter     | Setting                           |
|------------------------|-----------------------------------|
| Attenuation            | Auto                              |
| Start ~ Stop Frequency | 9kHz~150kHz / RB 200Hz for QP/AVG |
| Start ~ Stop Frequency | 150kHz~30MHz / RB 9kHz for QP/AVG |
| Start ~ Stop Frequency | 30MHz~1000MHz / RB 100kHz for QP  |

### 6.7.4 TEST PROCEDURE

#### 1) Sequence of testing 9 kHz to 30 MHz

##### Setup:

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.
- If the EUT is a floor standing device, it is placed on the ground.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

##### Pre measurement:

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna height is 0.8 meter.



--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

**Final measurement:**

--- Identified emissions during the pre measurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement and the limit will be stored.

**2) Sequence of testing 30 MHz to 1 GHz**

**Setup:**

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

**Pre measurement:**

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 3 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.



**Final measurement:**

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position ( $\pm 45^\circ$ ) and antenna movement between 1 and 4 meter.
- The final measurement will be done with QP detector with an EMI receiver.
- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

**3) Sequence of testing 1 GHz to 18 GHz**

**Setup:**

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 3 meter.
- The EUT was set into operation.

**Pre measurement:**

- The turntable rotates from  $0^\circ$  to  $315^\circ$  using  $45^\circ$  steps.
- The antenna is polarized vertical and horizontal.
- The antenna height scan range is 1 meter to 2.5 meter.
- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.



**Final measurement:**

- The final measurement will be performed with minimum the six highest peaks.
- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position ( $\pm 45^\circ$ ) and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.
- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.
- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the pre measurement with marked maximum final measurements and the limit will be stored.

**4) Sequence of testing above 18 GHz**

**Setup:**

- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.
- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables were positioned to simulate normal operation conditions
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- The measurement distance is 1 meter.
- The EUT was set into operation.

**Pre measurement:**

- The antenna is moved spherical over the EUT in different polarisations of the antenna.

**Final measurement:**

- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.
- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

**6.7.5 DATA SAPLE****Below 1GHz**

| Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|-----------------------|-----------------|----------------|-------------|--------------------|--------|
| XXX.XXXX        | 36.37          | -12.20                | 24.17           | 40.00          | -15.83      | V                  | QP     |

Frequency (MHz)

= Emission frequency in MHz

Reading (dBuV)

= Uncorrected Analyzer / Receiver reading

Correct Factor (dB/m)

= Antenna factor + Cable loss – Amplifier gain

Result (dBuV/m)

= Reading (dBuV) + Corr. Factor (dB/m)

Limit (dBuV/m)

= Limit stated in standard

Margin (dB)

= Result (dBuV/m) – Limit (dBuV/m)

Q.P.

= Quasi-peak Reading

**Above 1GHz**

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| XXXX.XXXX       | 62.09          | -11.42                   | 50.67           | 74.00          | -23.33      | V                  | Peak   |
| XXXX.XXXX       | 49.78          | -11.42                   | 38.36           | 54.00          | -15.64      | V                  | AVG    |

Frequency (MHz)

= Emission frequency in MHz

Reading (dBuV)

= Uncorrected Analyzer / Receiver reading

Correction Factor (dB/m)

= Antenna factor + Cable loss – Amplifier gain

Result (dBuV/m)

= Reading (dBuV) + Corr. Factor (dB/m)

Limit (dBuV/m)

= Limit stated in standard

Margin (dB)

= Result (dBuV/m) – Limit (dBuV/m)

Peak

= Peak Reading

AVG

= Average Reading

**Calculation Formula**

Margin (dB) = Result (dBuV/m) – Limits (dBuV/m)

Result (dBuV/m) = Reading (dBuV) + Correction Factor



## 6.7.6 TEST RESULTS

### Below 1 GHz

Test Mode: TX / IEEE 802.11a / 5180MHz / (CH Low)Tested by: Darry WuAmbient temperature: 24°C Relative humidity: 52% RHDate: August 17, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 35.8200         | 52.47          | -14.91                   | 37.56           | 40.00          | -2.44       | V                  | QP     |
| 62.0100         | 61.14          | -24.32                   | 36.82           | 40.00          | -3.18       | V                  | QP     |
| 92.0800         | 64.23          | -24.52                   | 39.71           | 43.50          | -3.79       | V                  | QP     |
| 162.8900        | 56.16          | -22.65                   | 33.51           | 43.50          | -9.99       | V                  | QP     |
| 390.8400        | 46.14          | -16.40                   | 29.74           | 46.00          | -16.26      | V                  | QP     |
| 875.8400        | 42.22          | -10.11                   | 32.11           | 46.00          | -13.89      | V                  | QP     |
|                 |                |                          |                 |                |             |                    |        |
| 35.8200         | 52.54          | -14.91                   | 37.63           | 40.00          | -2.37       | H                  | QP     |
| 93.0500         | 58.18          | -24.42                   | 33.76           | 43.50          | -9.74       | H                  | QP     |
| 162.8900        | 64.00          | -22.65                   | 41.35           | 43.50          | -2.15       | H                  | QP     |
| 222.0600        | 56.92          | -20.66                   | 36.26           | 46.00          | -9.74       | H                  | QP     |
| 392.7800        | 53.31          | -16.34                   | 36.97           | 46.00          | -9.03       | H                  | QP     |
| 875.8400        | 44.44          | -10.11                   | 34.33           | 46.00          | -11.67      | H                  | QP     |

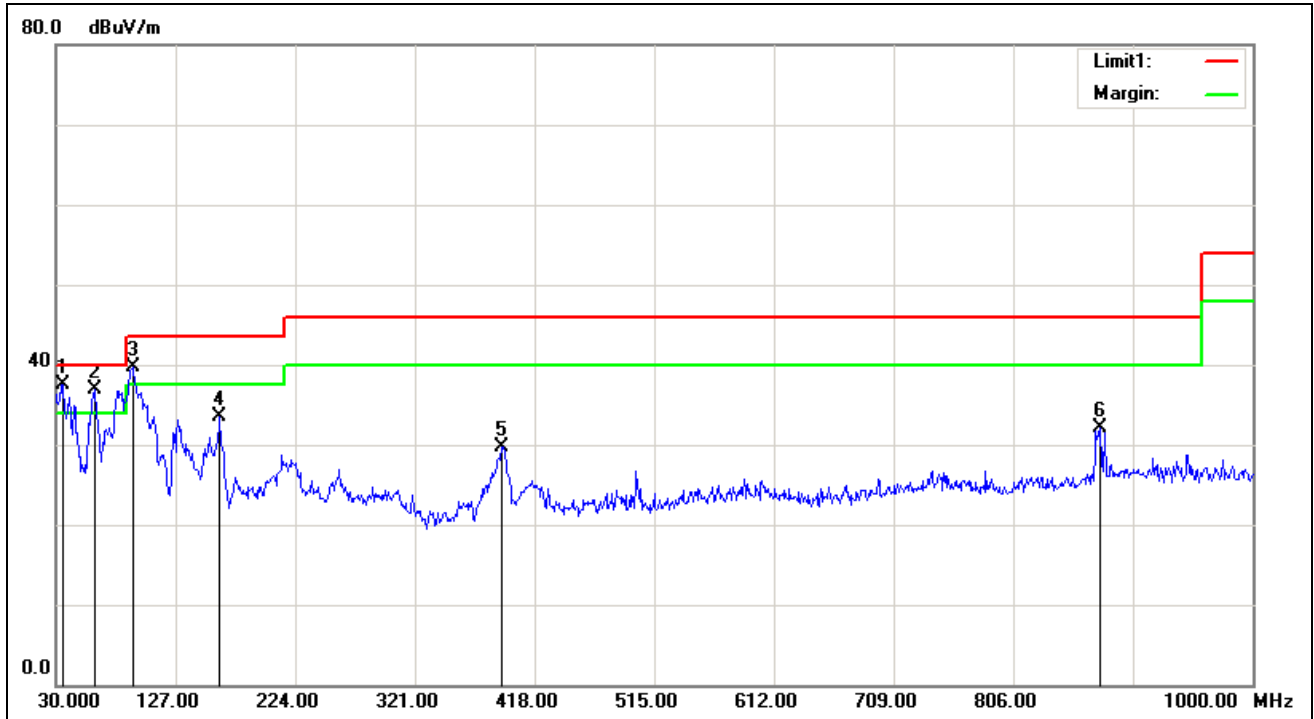
Pre-scan all mode and recorded the worst case results in this report (802.11a (Low Mid)).

**Remark:**

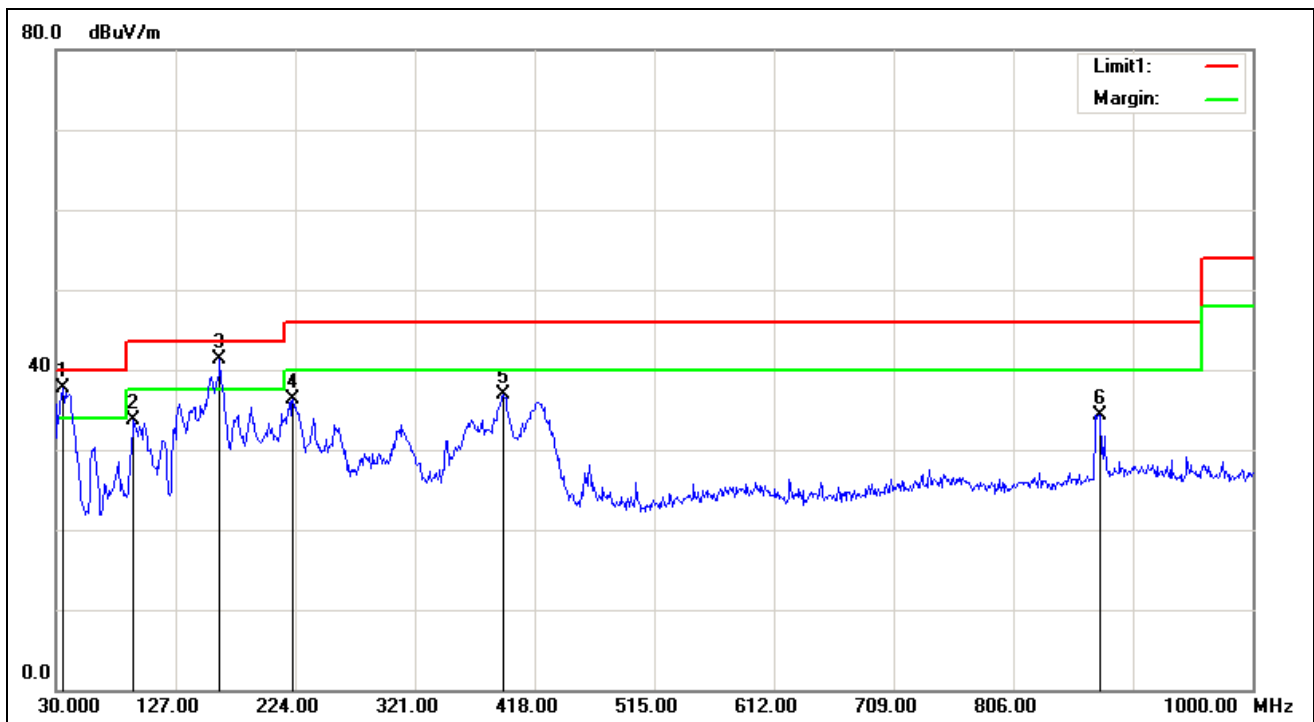
1. No emission found between lowest internal used/generated frequency to 30MHz (9kHz~30MHz)
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using peak/quasi-peak detector mode.
3. Quasi-peak test would be performed if the peak result were greater than the quasi-peak limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Quasi-peak limit (dBuV/m).



## Vertical



## Horizontal



**Above 1 GHz****1GHz~6GHz****Test Mode:** TX / IEEE 802.11a / 5180MHz /(CH Low)**Tested by:** Darry Wu**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** August 28, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 1895.000        | 61.14          | -5.67                    | 55.47           | 74.00          | -18.53      | V                  | peak   |
| 1895.000        | 56.06          | -5.67                    | 50.39           | 54.00          | -3.61       | V                  | AVG    |
| 3840.000        | 43.18          | 0.91                     | 44.09           | 74.00          | -29.91      | V                  | peak   |
| 4865.000        | 53.98          | 4.54                     | 58.52           | 74.00          | -15.48      | V                  | peak   |
| 4865.000        | 45.19          | 4.54                     | 49.73           | 54.00          | -4.27       | V                  | AVG    |
| 5000.000        | 50.51          | 4.98                     | 55.49           | 74.00          | -18.51      | V                  | peak   |
| 5000.000        | 47.69          | 4.98                     | 52.67           | 54.00          | -1.33       | V                  | AVG    |
| 5175.000        | 50.39          | 5.29                     | 55.68           | 74.00          | -18.32      | V                  | peak   |
| 5175.000        | 45.63          | 5.29                     | 50.92           | 54.00          | -3.08       | V                  | AVG    |
| 5505.000        | 59.68          | 5.87                     | 65.55           | 74.00          | -8.45       | V                  | peak   |
| 5505.000        | 46.10          | 5.87                     | 51.97           | 54.00          | -2.03       | V                  | AVG    |
|                 |                |                          |                 |                |             |                    |        |
| 1235.000        | 54.08          | -7.66                    | 46.42           | 74.00          | -27.58      | H                  | peak   |
| 4870.000        | 54.07          | 4.56                     | 58.63           | 74.00          | -15.37      | H                  | peak   |
| 4870.000        | 47.13          | 4.56                     | 51.69           | 54.00          | -2.31       | H                  | AVG    |
| 4935.000        | 47.83          | 4.77                     | 52.60           | 74.00          | -21.40      | H                  | peak   |
| 4935.000        | 44.99          | 4.77                     | 49.76           | 54.00          | -4.24       | H                  | AVG    |
| 5000.000        | 50.65          | 4.98                     | 55.63           | 74.00          | -18.37      | H                  | peak   |
| 5000.000        | 44.79          | 4.98                     | 49.77           | 54.00          | -4.23       | H                  | AVG    |
| 5175.000        | 51.13          | 5.29                     | 56.42           | 74.00          | -17.58      | H                  | peak   |
| 5175.000        | 44.22          | 5.29                     | 49.51           | 54.00          | -4.49       | H                  | AVG    |
| 5495.000        | 55.56          | 5.86                     | 61.42           | 74.00          | -12.58      | H                  | peak   |
| 5495.000        | 45.38          | 5.86                     | 51.24           | 54.00          | -2.76       | H                  | AVG    |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Above 6GHz****Antenna 0****Test Mode:** TX / IEEE 802.11a / 5180MHz /(CH Low)**Tested by:** Darry Wu**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6912.000        | 36.26          | 7.56                     | 43.82           | 74.00          | -30.18      | V                  | peak   |
| 7572.000        | 31.89          | 8.82                     | 40.71           | 74.00          | -33.29      | V                  | peak   |
| 8448.000        | 31.97          | 9.40                     | 41.37           | 74.00          | -32.63      | V                  | peak   |
| 9336.000        | 31.09          | 10.07                    | 41.16           | 74.00          | -32.84      | V                  | peak   |
| 9912.000        | 30.86          | 11.73                    | 42.59           | 74.00          | -31.41      | V                  | peak   |
| 10356.000       | 38.99          | 13.08                    | 52.07           | 74.00          | -21.93      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6912.000        | 33.16          | 7.56                     | 40.72           | 74.00          | -33.28      | H                  | Peak   |
| 7968.000        | 31.63          | 9.59                     | 41.22           | 74.00          | -32.78      | H                  | Peak   |
| 8964.000        | 31.76          | 9.12                     | 40.88           | 74.00          | -33.12      | H                  | Peak   |
| 9348.000        | 32.15          | 10.10                    | 42.25           | 74.00          | -31.75      | H                  | peak   |
| 10056.000       | 30.99          | 12.15                    | 43.14           | 74.00          | -30.86      | H                  | peak   |
| 10356.000       | 32.09          | 13.08                    | 45.17           | 74.00          | -28.83      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11a / 5200MHz /(CH Mid)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6936.000        | 39.88          | 7.60                     | 47.48           | 74.00          | -26.52      | V                  | peak   |
| 7704.000        | 31.78          | 9.07                     | 40.85           | 74.00          | -33.15      | V                  | peak   |
| 8520.000        | 31.77          | 9.36                     | 41.13           | 74.00          | -32.87      | V                  | peak   |
| 9396.000        | 31.02          | 10.24                    | 41.26           | 74.00          | -32.74      | V                  | peak   |
| 9864.000        | 31.10          | 11.59                    | 42.69           | 74.00          | -31.31      | V                  | peak   |
| 10404.000       | 38.55          | 13.23                    | 51.78           | 74.00          | -22.22      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6996.000        | 31.58          | 7.69                     | 39.27           | 74.00          | -34.73      | H                  | Peak   |
| 7980.000        | 31.45          | 9.61                     | 41.06           | 74.00          | -32.94      | H                  | Peak   |
| 8688.000        | 31.12          | 9.27                     | 40.39           | 74.00          | -33.61      | H                  | Peak   |
| 9396.000        | 30.62          | 10.24                    | 40.86           | 74.00          | -33.14      | H                  | peak   |
| 10404.000       | 31.83          | 13.23                    | 45.06           | 74.00          | -28.94      | H                  | peak   |
| 11136.000       | 31.41          | 15.02                    | 46.43           | 74.00          | -27.57      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6.  $\text{Margin (dB)} = \text{Remark result (dBuV/m)} - \text{Average limit (dBuV/m)}$ .



Test Mode: TX / IEEE 802.11a / 5240MHz /(CH High)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6564.000        | 32.53          | 6.99                     | 39.52           | 74.00          | -34.48      | V                  | peak   |
| 6984.000        | 39.86          | 7.67                     | 47.53           | 74.00          | -26.47      | V                  | peak   |
| 7776.000        | 32.20          | 9.21                     | 41.41           | 74.00          | -32.59      | V                  | peak   |
| 8124.000        | 32.10          | 9.58                     | 41.68           | 74.00          | -32.32      | V                  | peak   |
| 9696.000        | 30.80          | 11.10                    | 41.90           | 74.00          | -32.10      | V                  | peak   |
| 10476.000       | 38.92          | 13.46                    | 52.38           | 74.00          | -21.62      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6588.000        | 32.63          | 7.03                     | 39.66           | 74.00          | -34.34      | H                  | Peak   |
| 6984.000        | 33.86          | 7.67                     | 41.53           | 74.00          | -32.47      | H                  | Peak   |
| 7680.000        | 32.08          | 9.03                     | 41.11           | 74.00          | -32.89      | H                  | Peak   |
| 8328.000        | 32.41          | 9.47                     | 41.88           | 74.00          | -32.12      | H                  | peak   |
| 9624.000        | 30.91          | 10.90                    | 41.81           | 74.00          | -32.19      | H                  | peak   |
| 10476.000       | 32.19          | 13.46                    | 45.65           | 74.00          | -28.35      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11a / 5745MHz /(CH Low)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7212.000        | 32.09          | 8.11                     | 40.20           | 74.00          | -33.80      | V                  | peak   |
| 7656.000        | 32.67          | 8.98                     | 41.65           | 74.00          | -32.35      | V                  | peak   |
| 8124.000        | 31.88          | 9.58                     | 41.46           | 74.00          | -32.54      | V                  | peak   |
| 9048.000        | 31.61          | 9.24                     | 40.85           | 74.00          | -33.15      | V                  | peak   |
| 10716.000       | 30.79          | 14.20                    | 44.99           | 74.00          | -29.01      | V                  | peak   |
| 11496.000       | 37.44          | 14.86                    | 52.30           | 74.00          | -21.70      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 7224.000        | 31.78          | 8.14                     | 39.92           | 74.00          | -34.08      | H                  | Peak   |
| 7500.000        | 31.80          | 8.68                     | 40.48           | 74.00          | -33.52      | H                  | Peak   |
| 8028.000        | 31.70          | 9.63                     | 41.33           | 74.00          | -32.67      | H                  | Peak   |
| 8928.000        | 31.51          | 9.14                     | 40.65           | 74.00          | -33.35      | H                  | peak   |
| 10560.000       | 30.75          | 13.72                    | 44.47           | 74.00          | -29.53      | H                  | peak   |
| 11496.000       | 36.31          | 14.86                    | 51.17           | 74.00          | -22.83      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11a / 5785MHz /(CH Mid)**Tested by:** Darry Wu**Ambient temperature:** 24°C**Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7380.000        | 31.67          | 8.44                     | 40.11           | 74.00          | -33.89      | V                  | peak   |
| 7716.000        | 32.68          | 9.10                     | 41.78           | 74.00          | -32.22      | V                  | peak   |
| 8328.000        | 31.77          | 9.47                     | 41.24           | 74.00          | -32.76      | V                  | peak   |
| 9456.000        | 31.16          | 10.41                    | 41.57           | 74.00          | -32.43      | V                  | peak   |
| 10248.000       | 30.83          | 12.75                    | 43.58           | 74.00          | -30.42      | V                  | peak   |
| 11568.000       | 36.85          | 14.83                    | 51.68           | 74.00          | -22.32      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6804.000        | 32.39          | 7.38                     | 39.77           | 74.00          | -34.23      | H                  | Peak   |
| 7284.000        | 31.94          | 8.25                     | 40.19           | 74.00          | -33.81      | H                  | Peak   |
| 7992.000        | 31.63          | 9.63                     | 41.26           | 74.00          | -32.74      | H                  | Peak   |
| 8076.000        | 32.61          | 9.61                     | 42.22           | 74.00          | -31.78      | H                  | peak   |
| 8496.000        | 31.57          | 9.38                     | 40.95           | 74.00          | -33.05      | H                  | peak   |
| 9840.000        | 30.97          | 11.52                    | 42.49           | 74.00          | -31.51      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11a / 5825MHz /(CH High)**Tested by:** Darry Wu**Ambient temperature:** 24°C**Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6204.000        | 33.36          | 6.41                     | 39.77           | 74.00          | -34.23      | V                  | peak   |
| 7284.000        | 32.02          | 8.25                     | 40.27           | 74.00          | -33.73      | V                  | peak   |
| 7764.000        | 32.75          | 9.19                     | 41.94           | 74.00          | -32.06      | V                  | peak   |
| 10152.000       | 30.74          | 12.45                    | 43.19           | 74.00          | -30.81      | V                  | peak   |
| 11148.000       | 31.61          | 15.01                    | 46.62           | 74.00          | -27.38      | V                  | peak   |
| 11652.000       | 35.59          | 14.79                    | 50.38           | 74.00          | -23.62      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6372.000        | 32.54          | 6.68                     | 39.22           | 74.00          | -34.78      | H                  | Peak   |
| 7344.000        | 31.89          | 8.37                     | 40.26           | 74.00          | -33.74      | H                  | Peak   |
| 8124.000        | 31.51          | 9.58                     | 41.09           | 74.00          | -32.91      | H                  | Peak   |
| 8844.000        | 31.51          | 9.19                     | 40.70           | 74.00          | -33.30      | H                  | peak   |
| 10008.000       | 30.13          | 12.00                    | 42.13           | 74.00          | -31.87      | H                  | peak   |
| 11148.000       | 30.62          | 15.01                    | 45.63           | 74.00          | -28.37      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Antenna 1****Test Mode:** TX / IEEE 802.11a / 5180MHz /(CH Low)**Tested by:** Darry Wu**Ambient temperature:** 24°C **Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6912.000        | 34.68          | 7.56                     | 42.24           | 74.00          | -31.76      | V                  | peak   |
| 7296.000        | 32.13          | 8.28                     | 40.41           | 74.00          | -33.59      | V                  | peak   |
| 8100.000        | 31.88          | 9.60                     | 41.48           | 74.00          | -32.52      | V                  | peak   |
| 9012.000        | 31.62          | 9.13                     | 40.75           | 74.00          | -33.25      | V                  | peak   |
| 9672.000        | 30.73          | 11.04                    | 41.77           | 74.00          | -32.23      | V                  | peak   |
| 10356.000       | 35.99          | 13.08                    | 49.07           | 74.00          | -24.93      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6696.000        | 31.47          | 7.21                     | 38.68           | 74.00          | -35.32      | H                  | Peak   |
| 6900.000        | 31.42          | 7.54                     | 38.96           | 74.00          | -35.04      | H                  | Peak   |
| 7464.000        | 31.49          | 8.60                     | 40.09           | 74.00          | -33.91      | H                  | Peak   |
| 7800.000        | 31.44          | 9.26                     | 40.70           | 74.00          | -33.30      | H                  | peak   |
| 8352.000        | 31.52          | 9.46                     | 40.98           | 74.00          | -33.02      | H                  | peak   |
| 8988.000        | 31.09          | 9.11                     | 40.20           | 74.00          | -33.80      | H                  | peak   |

**Remark:**

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit.
10. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
11. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11a / 5200MHz /(CH Mid)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6300.000        | 33.14          | 6.57                     | 39.71           | 74.00          | -34.29      | V                  | peak   |
| 6936.000        | 35.42          | 7.60                     | 43.02           | 74.00          | -30.98      | V                  | peak   |
| 7632.000        | 31.68          | 8.93                     | 40.61           | 74.00          | -33.39      | V                  | peak   |
| 8136.000        | 31.78          | 9.58                     | 41.36           | 74.00          | -32.64      | V                  | peak   |
| 9492.000        | 31.76          | 10.52                    | 42.28           | 74.00          | -31.72      | V                  | peak   |
| 10404.000       | 38.28          | 13.23                    | 51.51           | 74.00          | -22.49      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6576.000        | 31.84          | 7.01                     | 38.85           | 74.00          | -35.15      | H                  | Peak   |
| 7284.000        | 31.53          | 8.25                     | 39.78           | 74.00          | -34.22      | H                  | Peak   |
| 7644.000        | 31.08          | 8.96                     | 40.04           | 74.00          | -33.96      | H                  | Peak   |
| 8124.000        | 31.81          | 9.58                     | 41.39           | 74.00          | -32.61      | H                  | peak   |
| 8472.000        | 30.50          | 9.39                     | 39.89           | 74.00          | -34.11      | H                  | peak   |
| 8988.000        | 31.44          | 9.11                     | 40.55           | 74.00          | -33.45      | H                  | peak   |

**Remark:**

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit.
10. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
11. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11a / 5240MHz /(CH High)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6984.000        | 36.60          | 7.67                     | 44.27           | 74.00          | -29.73      | V                  | peak   |
| 8052.000        | 31.86          | 9.62                     | 41.48           | 74.00          | -32.52      | V                  | peak   |
| 9084.000        | 31.83          | 9.34                     | 41.17           | 74.00          | -32.83      | V                  | peak   |
| 10104.000       | 31.46          | 12.30                    | 43.76           | 74.00          | -30.24      | V                  | peak   |
| 10476.000       | 34.39          | 13.46                    | 47.85           | 74.00          | -26.15      | V                  | peak   |
| 11280.000       | 31.84          | 14.96                    | 46.80           | 74.00          | -27.20      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6900.000        | 31.60          | 7.54                     | 39.14           | 74.00          | -34.86      | H                  | Peak   |
| 7560.000        | 31.35          | 8.79                     | 40.14           | 74.00          | -33.86      | H                  | Peak   |
| 8004.000        | 31.81          | 9.65                     | 41.46           | 74.00          | -32.54      | H                  | Peak   |
| 8424.000        | 31.32          | 9.42                     | 40.74           | 74.00          | -33.26      | H                  | peak   |
| 9024.000        | 31.19          | 9.17                     | 40.36           | 74.00          | -33.64      | H                  | peak   |
| 10044.000       | 30.77          | 12.12                    | 42.89           | 74.00          | -31.11      | H                  | peak   |

**Remark:**

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit.
10. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
11. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11a / 5745MHz /(CH Low)**Tested by:** Darry Wu**Ambient temperature:** 24°C**Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6924.000        | 31.93          | 7.58                     | 39.51           | 74.00          | -34.49      | V                  | peak   |
| 7500.000        | 32.10          | 8.68                     | 40.78           | 74.00          | -33.22      | V                  | peak   |
| 8796.000        | 31.54          | 9.21                     | 40.75           | 74.00          | -33.25      | V                  | peak   |
| 9480.000        | 31.15          | 10.48                    | 41.63           | 74.00          | -32.37      | V                  | peak   |
| 10176.000       | 30.74          | 12.53                    | 43.27           | 74.00          | -30.73      | V                  | peak   |
| 11496.000       | 36.00          | 14.86                    | 50.86           | 74.00          | -23.14      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6156.000        | 31.54          | 6.33                     | 37.87           | 74.00          | -36.13      | H                  | Peak   |
| 7260.000        | 30.98          | 8.21                     | 39.19           | 74.00          | -34.81      | H                  | Peak   |
| 7656.000        | 31.36          | 8.98                     | 40.34           | 74.00          | -33.66      | H                  | Peak   |
| 8580.000        | 30.79          | 9.33                     | 40.12           | 74.00          | -33.88      | H                  | peak   |
| 8988.000        | 31.52          | 9.11                     | 40.63           | 74.00          | -33.37      | H                  | peak   |
| 10044.000       | 30.63          | 12.12                    | 42.75           | 74.00          | -31.25      | H                  | peak   |

**Remark:**

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- Average test would be performed if the peak result were greater than the average limit.
- Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11a / 5785MHz /(CH Mid)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6600.000        | 32.30          | 7.05                     | 39.35           | 74.00          | -34.65      | V                  | peak   |
| 7344.000        | 31.87          | 8.37                     | 40.24           | 74.00          | -33.76      | V                  | peak   |
| 8112.000        | 32.38          | 9.59                     | 41.97           | 74.00          | -32.03      | V                  | peak   |
| 8988.000        | 31.86          | 9.11                     | 40.97           | 74.00          | -33.03      | V                  | peak   |
| 10644.000       | 30.85          | 13.98                    | 44.83           | 74.00          | -29.17      | V                  | peak   |
| 11568.000       | 37.41          | 14.83                    | 52.24           | 74.00          | -21.76      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6792.000        | 31.90          | 7.36                     | 39.26           | 74.00          | -34.74      | H                  | Peak   |
| 7524.000        | 31.01          | 8.72                     | 39.73           | 74.00          | -34.27      | H                  | Peak   |
| 8052.000        | 31.36          | 9.62                     | 40.98           | 74.00          | -33.02      | H                  | Peak   |
| 8508.000        | 31.09          | 9.37                     | 40.46           | 74.00          | -33.54      | H                  | peak   |
| 9444.000        | 31.22          | 10.38                    | 41.60           | 74.00          | -32.40      | H                  | peak   |
| 10116.000       | 30.74          | 12.34                    | 43.08           | 74.00          | -30.92      | H                  | peak   |

**Remark:**

7. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
8. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
9. Average test would be performed if the peak result were greater than the average limit.
10. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
11. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
12. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11a / 5825MHz /(CH High)**Tested by:** Darry Wu**Ambient temperature:** 24°C**Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6144.000        | 33.83          | 6.31                     | 40.14           | 74.00          | -33.86      | V                  | peak   |
| 7764.000        | 32.89          | 9.19                     | 42.08           | 74.00          | -31.92      | V                  | peak   |
| 10416.000       | 31.15          | 13.27                    | 44.42           | 74.00          | -29.58      | V                  | peak   |
| 11232.000       | 31.92          | 14.98                    | 46.90           | 74.00          | -27.10      | V                  | peak   |
| 11652.000       | 37.49          | 14.79                    | 52.28           | 74.00          | -21.72      | V                  | peak   |
| 11652.000       | 36.60          | 14.79                    | 51.39           | 54.00          | -2.61       | V                  | AVG    |
| 12600.000       | 30.59          | 16.63                    | 47.22           | 74.00          | -26.78      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6912.000        | 31.27          | 7.56                     | 38.83           | 74.00          | -35.17      | H                  | Peak   |
| 7200.000        | 31.37          | 8.09                     | 39.46           | 74.00          | -34.54      | H                  | Peak   |
| 7788.000        | 31.00          | 9.24                     | 40.24           | 74.00          | -33.76      | H                  | Peak   |
| 8124.000        | 31.39          | 9.58                     | 40.97           | 74.00          | -33.03      | H                  | peak   |
| 9012.000        | 31.69          | 9.13                     | 40.82           | 74.00          | -33.18      | H                  | peak   |
| 9564.000        | 30.38          | 10.72                    | 41.10           | 74.00          | -32.90      | H                  | peak   |

**Remark:**

- Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
- Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
- Average test would be performed if the peak result were greater than the average limit.
- Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
- Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Combine with antenna 0 and antenna 1****Test Mode:** TX / IEEE 802.11n HT 20 MHz / 5180MHz /(CH Low)**Tested by:** Darry Wu**Ambient temperature:** 24°C**Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6660.000        | 32.07          | 7.15                     | 39.22           | 74.00          | -34.78      | V                  | peak   |
| 6912.000        | 38.81          | 7.56                     | 46.37           | 74.00          | -27.63      | V                  | peak   |
| 7644.000        | 31.80          | 8.96                     | 40.76           | 74.00          | -33.24      | V                  | peak   |
| 8028.000        | 31.82          | 9.63                     | 41.45           | 74.00          | -32.55      | V                  | peak   |
| 9444.000        | 31.81          | 10.38                    | 42.19           | 74.00          | -31.81      | V                  | peak   |
| 10368.000       | 38.27          | 13.12                    | 51.39           | 74.00          | -22.61      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6912.000        | 34.50          | 7.56                     | 42.06           | 74.00          | -31.94      | H                  | Peak   |
| 7752.000        | 32.10          | 9.17                     | 41.27           | 74.00          | -32.73      | H                  | Peak   |
| 8052.000        | 32.62          | 9.62                     | 42.24           | 74.00          | -31.76      | H                  | Peak   |
| 8376.000        | 31.77          | 9.44                     | 41.21           | 74.00          | -32.79      | H                  | peak   |
| 8976.000        | 31.55          | 9.11                     | 40.66           | 74.00          | -33.34      | H                  | peak   |
| 9408.000        | 30.92          | 10.28                    | 41.20           | 74.00          | -32.80      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range s
5. hown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
6. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
7. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11n HT 20 MHz / 5200MHz /(CH Mid)**Tested by:** Darry Wu**Ambient temperature:** 24°C**Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6936.000        | 39.36          | 7.60                     | 46.96           | 74.00          | -27.04      | V                  | peak   |
| 7584.000        | 31.72          | 8.84                     | 40.56           | 74.00          | -33.44      | V                  | peak   |
| 8580.000        | 31.37          | 9.33                     | 40.70           | 74.00          | -33.30      | V                  | peak   |
| 9096.000        | 31.32          | 9.38                     | 40.70           | 74.00          | -33.30      | V                  | peak   |
| 9432.000        | 31.46          | 10.34                    | 41.80           | 74.00          | -32.20      | V                  | peak   |
| 10404.000       | 37.59          | 13.23                    | 50.82           | 74.00          | -23.18      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6612.000        | 31.34          | 7.07                     | 38.41           | 74.00          | -35.59      | H                  | Peak   |
| 6852.000        | 31.63          | 7.46                     | 39.09           | 74.00          | -34.91      | H                  | Peak   |
| 7332.000        | 31.52          | 8.35                     | 39.87           | 74.00          | -34.13      | H                  | Peak   |
| 7740.000        | 31.19          | 9.14                     | 40.33           | 74.00          | -33.67      | H                  | peak   |
| 8352.000        | 30.82          | 9.46                     | 40.28           | 74.00          | -33.72      | H                  | peak   |
| 8976.000        | 31.51          | 9.11                     | 40.62           | 74.00          | -33.38      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11n HT 20 MHz / 5240MHz /(CH High)**Tested by:** Darry Wu**Ambient temperature:** 24°C**Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6984.000        | 38.10          | 7.67                     | 45.77           | 74.00          | -28.23      | V                  | peak   |
| 7500.000        | 31.58          | 8.68                     | 40.26           | 74.00          | -33.74      | V                  | peak   |
| 7740.000        | 31.94          | 9.14                     | 41.08           | 74.00          | -32.92      | V                  | peak   |
| 8664.000        | 31.42          | 9.28                     | 40.70           | 74.00          | -33.30      | V                  | peak   |
| 9324.000        | 30.79          | 10.03                    | 40.82           | 74.00          | -33.18      | V                  | peak   |
| 10488.000       | 38.28          | 13.49                    | 51.77           | 74.00          | -22.23      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6840.000        | 31.62          | 7.44                     | 39.06           | 74.00          | -34.94      | H                  | Peak   |
| 7476.000        | 31.27          | 8.63                     | 39.90           | 74.00          | -34.10      | H                  | Peak   |
| 8088.000        | 31.78          | 9.60                     | 41.38           | 74.00          | -32.62      | H                  | Peak   |
| 8340.000        | 31.56          | 9.46                     | 41.02           | 74.00          | -32.98      | H                  | peak   |
| 9444.000        | 30.15          | 10.38                    | 40.53           | 74.00          | -33.47      | H                  | peak   |
| 10680.000       | 30.11          | 14.09                    | 44.20           | 74.00          | -29.80      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m)



Test Mode: TX / IEEE 802.11n HT 20 MHz / 5745MHz /(CH Low)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6816.000        | 31.82          | 7.40                     | 39.22           | 74.00          | -34.78      | V                  | peak   |
| 7656.000        | 32.47          | 8.98                     | 41.45           | 74.00          | -32.55      | V                  | peak   |
| 8100.000        | 32.30          | 9.60                     | 41.90           | 74.00          | -32.10      | V                  | peak   |
| 8544.000        | 31.85          | 9.35                     | 41.20           | 74.00          | -32.80      | V                  | peak   |
| 9396.000        | 31.64          | 10.24                    | 41.88           | 74.00          | -32.12      | V                  | peak   |
| 11496.000       | 34.40          | 14.86                    | 49.26           | 74.00          | -24.74      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6504.000        | 32.06          | 6.90                     | 38.96           | 74.00          | -35.04      | H                  | Peak   |
| 6984.000        | 31.43          | 7.67                     | 39.10           | 74.00          | -34.90      | H                  | Peak   |
| 7620.000        | 31.59          | 8.91                     | 40.50           | 74.00          | -33.50      | H                  | Peak   |
| 8088.000        | 31.78          | 9.60                     | 41.38           | 74.00          | -32.62      | H                  | peak   |
| 8508.000        | 30.67          | 9.37                     | 40.04           | 74.00          | -33.96      | H                  | peak   |
| 9312.000        | 30.46          | 10.00                    | 40.46           | 74.00          | -33.54      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 20 MHz / 5785MHz /(CH Mid)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7188.000        | 31.68          | 8.07                     | 39.75           | 74.00          | -34.25      | V                  | peak   |
| 7656.000        | 31.84          | 8.98                     | 40.82           | 74.00          | -33.18      | V                  | peak   |
| 8400.000        | 31.99          | 9.43                     | 41.42           | 74.00          | -32.58      | V                  | peak   |
| 9432.000        | 30.86          | 10.34                    | 41.20           | 74.00          | -32.80      | V                  | peak   |
| 11016.000       | 30.17          | 15.07                    | 45.24           | 74.00          | -28.76      | V                  | peak   |
| 11568.000       | 35.95          | 14.83                    | 50.78           | 74.00          | -23.22      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6732.000        | 31.82          | 7.27                     | 39.09           | 74.00          | -34.91      | H                  | Peak   |
| 7248.000        | 32.09          | 8.18                     | 40.27           | 74.00          | -33.73      | H                  | Peak   |
| 7656.000        | 31.72          | 8.98                     | 40.70           | 74.00          | -33.30      | H                  | Peak   |
| 8412.000        | 31.75          | 9.42                     | 41.17           | 74.00          | -32.83      | H                  | peak   |
| 9360.000        | 31.23          | 10.14                    | 41.37           | 74.00          | -32.63      | H                  | peak   |
| 10056.000       | 31.22          | 12.15                    | 43.37           | 74.00          | -30.63      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 20 MHz / 5825MHz /(CH High)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7068.000        | 32.01          | 7.83                     | 39.84           | 74.00          | -34.16      | V                  | peak   |
| 7716.000        | 32.48          | 9.10                     | 41.58           | 74.00          | -32.42      | V                  | peak   |
| 8196.000        | 31.68          | 9.54                     | 41.22           | 74.00          | -32.78      | V                  | peak   |
| 9420.000        | 31.73          | 10.31                    | 42.04           | 74.00          | -31.96      | V                  | peak   |
| 10764.000       | 30.63          | 14.35                    | 44.98           | 74.00          | -29.02      | V                  | peak   |
| 11568.000       | 35.82          | 14.83                    | 50.65           | 74.00          | -23.35      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 7152.000        | 31.24          | 8.00                     | 39.24           | 74.00          | -34.76      | H                  | Peak   |
| 7656.000        | 31.35          | 8.98                     | 40.33           | 74.00          | -33.67      | H                  | Peak   |
| 8004.000        | 31.52          | 9.65                     | 41.17           | 74.00          | -32.83      | H                  | Peak   |
| 8400.000        | 31.63          | 9.43                     | 41.06           | 74.00          | -32.94      | H                  | peak   |
| 8964.000        | 31.01          | 9.12                     | 40.13           | 74.00          | -33.87      | H                  | peak   |
| 10512.000       | 29.91          | 13.57                    | 43.48           | 74.00          | -30.52      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 40 MHz / 5190MHz /(CH Low)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6924.000        | 39.23          | 7.58                     | 46.81           | 74.00          | -27.19      | V                  | peak   |
| 8124.000        | 32.29          | 9.58                     | 41.87           | 74.00          | -32.13      | V                  | peak   |
| 9000.000        | 31.53          | 9.10                     | 40.63           | 74.00          | -33.37      | V                  | peak   |
| 9360.000        | 31.17          | 10.14                    | 41.31           | 74.00          | -32.69      | V                  | peak   |
| 10032.000       | 31.02          | 12.08                    | 43.10           | 74.00          | -30.90      | V                  | peak   |
| 10380.000       | 33.75          | 13.16                    | 46.91           | 74.00          | -27.09      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6552.000        | 31.35          | 6.97                     | 38.32           | 74.00          | -35.68      | H                  | Peak   |
| 6972.000        | 35.80          | 7.65                     | 43.45           | 74.00          | -30.55      | H                  | Peak   |
| 7608.000        | 31.39          | 8.89                     | 40.28           | 74.00          | -33.72      | H                  | Peak   |
| 7920.000        | 30.96          | 9.49                     | 40.45           | 74.00          | -33.55      | H                  | peak   |
| 8280.000        | 31.02          | 9.50                     | 40.52           | 74.00          | -33.48      | H                  | peak   |
| 9396.000        | 30.53          | 10.24                    | 40.77           | 74.00          | -33.23      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 40 MHz / 5230MHz /(CH High)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6828.000        | 31.99          | 7.42                     | 39.41           | 74.00          | -34.59      | V                  | peak   |
| 6972.000        | 38.20          | 7.65                     | 45.85           | 74.00          | -28.15      | V                  | peak   |
| 7692.000        | 31.97          | 9.05                     | 41.02           | 74.00          | -32.98      | V                  | peak   |
| 8400.000        | 31.76          | 9.43                     | 41.19           | 74.00          | -32.81      | V                  | peak   |
| 8952.000        | 31.75          | 9.13                     | 40.88           | 74.00          | -33.12      | V                  | peak   |
| 9420.000        | 31.07          | 10.31                    | 41.38           | 74.00          | -32.62      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6552.000        | 32.02          | 6.97                     | 38.99           | 74.00          | -35.01      | H                  | Peak   |
| 6972.000        | 32.97          | 7.65                     | 40.62           | 74.00          | -33.38      | H                  | Peak   |
| 7560.000        | 31.56          | 8.79                     | 40.35           | 74.00          | -33.65      | H                  | Peak   |
| 8424.000        | 31.58          | 9.42                     | 41.00           | 74.00          | -33.00      | H                  | peak   |
| 8988.000        | 31.69          | 9.11                     | 40.80           | 74.00          | -33.20      | H                  | peak   |
| 9396.000        | 31.03          | 10.24                    | 41.27           | 74.00          | -32.73      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown "---" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802.11n HT 40 MHz / 5755MHz /(CH Low)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7296.000        | 32.02          | 8.28                     | 40.30           | 74.00          | -33.70      | V                  | peak   |
| 7668.000        | 32.58          | 9.00                     | 41.58           | 74.00          | -32.42      | V                  | peak   |
| 8508.000        | 31.16          | 9.37                     | 40.53           | 74.00          | -33.47      | V                  | peak   |
| 9432.000        | 31.01          | 10.34                    | 41.35           | 74.00          | -32.65      | V                  | peak   |
| 10344.000       | 30.14          | 13.05                    | 43.19           | 74.00          | -30.81      | V                  | peak   |
| 11496.000       | 36.23          | 14.86                    | 51.09           | 74.00          | -22.91      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6876.000        | 30.93          | 7.50                     | 38.43           | 74.00          | -35.57      | H                  | Peak   |
| 7392.000        | 31.35          | 8.46                     | 39.81           | 74.00          | -34.19      | H                  | Peak   |
| 7728.000        | 31.19          | 9.12                     | 40.31           | 74.00          | -33.69      | H                  | Peak   |
| 8172.000        | 31.66          | 9.56                     | 41.22           | 74.00          | -32.78      | H                  | peak   |
| 9372.000        | 30.76          | 10.17                    | 40.93           | 74.00          | -33.07      | H                  | peak   |
| 10152.000       | 30.05          | 12.45                    | 42.50           | 74.00          | -31.50      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11n HT 40 MHz / 5795MHz /(CH High)**Tested by:** Darry Wu**Ambient temperature:** 24°C**Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 7104.000        | 31.67          | 7.90                     | 39.57           | 74.00          | -34.43      | V                  | peak   |
| 7680.000        | 31.76          | 9.03                     | 40.79           | 74.00          | -33.21      | V                  | peak   |
| 8412.000        | 31.76          | 9.42                     | 41.18           | 74.00          | -32.82      | V                  | peak   |
| 9444.000        | 31.01          | 10.38                    | 41.39           | 74.00          | -32.61      | V                  | peak   |
| 10404.000       | 30.17          | 13.23                    | 43.40           | 74.00          | -30.60      | V                  | peak   |
| 11580.000       | 36.17          | 14.82                    | 50.99           | 74.00          | -23.01      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6372.000        | 31.62          | 6.68                     | 38.30           | 74.00          | -35.70      | H                  | Peak   |
| 7236.000        | 31.34          | 8.16                     | 39.50           | 74.00          | -34.50      | H                  | Peak   |
| 7968.000        | 31.10          | 9.59                     | 40.69           | 74.00          | -33.31      | H                  | Peak   |
| 8604.000        | 31.40          | 9.32                     | 40.72           | 74.00          | -33.28      | H                  | peak   |
| 9144.000        | 30.30          | 9.51                     | 39.81           | 74.00          | -34.19      | H                  | peak   |
| 9924.000        | 30.30          | 11.76                    | 42.06           | 74.00          | -31.94      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



Test Mode: TX / IEEE 802. 11ac 80 / 5210MHz /(CH Low)

Tested by: Darry Wu

Ambient temperature: 24°C

Relative humidity: 52% RH

Date: August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6948.000        | 39.15          | 7.62                     | 46.77           | 74.00          | -27.23      | V                  | peak   |
| 8016.000        | 31.84          | 9.64                     | 41.48           | 74.00          | -32.52      | V                  | peak   |
| 8136.000        | 31.89          | 9.58                     | 41.47           | 74.00          | -32.53      | V                  | peak   |
| 8508.000        | 31.25          | 9.37                     | 40.62           | 74.00          | -33.38      | V                  | peak   |
| 9012.000        | 32.01          | 9.13                     | 41.14           | 74.00          | -32.86      | V                  | peak   |
| 10428.000       | 34.72          | 13.31                    | 48.03           | 74.00          | -25.97      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6816.000        | 31.33          | 7.40                     | 38.73           | 74.00          | -35.27      | H                  | Peak   |
| 7392.000        | 31.25          | 8.46                     | 39.71           | 74.00          | -34.29      | H                  | Peak   |
| 8124.000        | 31.53          | 9.58                     | 41.11           | 74.00          | -32.89      | H                  | Peak   |
| 8976.000        | 31.28          | 9.11                     | 40.39           | 74.00          | -33.61      | H                  | peak   |
| 9828.000        | 30.67          | 11.48                    | 42.15           | 74.00          | -31.85      | H                  | peak   |
| 10572.000       | 30.40          | 13.75                    | 44.15           | 74.00          | -29.85      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).

**Test Mode:** TX / IEEE 802.11ac 80 / 5775MHz**Tested by:** Darry Wu**Ambient temperature:** 24°C**Relative humidity:** 52% RH**Date:** August 6, 2018

| Frequency (MHz) | Reading (dBuV) | Correction Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Antenna Pole (V/H) | Remark |
|-----------------|----------------|--------------------------|-----------------|----------------|-------------|--------------------|--------|
| 6792.000        | 32.27          | 7.36                     | 39.63           | 74.00          | -34.37      | V                  | peak   |
| 7704.000        | 32.50          | 9.07                     | 41.57           | 74.00          | -32.43      | V                  | peak   |
| 8268.000        | 31.73          | 9.50                     | 41.23           | 74.00          | -32.77      | V                  | peak   |
| 9672.000        | 30.31          | 11.04                    | 41.35           | 74.00          | -32.65      | V                  | peak   |
| 11136.000       | 31.83          | 15.02                    | 46.85           | 74.00          | -27.15      | V                  | peak   |
| 11556.000       | 36.72          | 14.84                    | 51.56           | 74.00          | -22.44      | V                  | peak   |
|                 |                |                          |                 |                |             |                    |        |
| 6552.000        | 31.80          | 6.97                     | 38.77           | 74.00          | -35.23      | H                  | Peak   |
| 7044.000        | 31.96          | 7.79                     | 39.75           | 74.00          | -34.25      | H                  | Peak   |
| 7488.000        | 31.69          | 8.65                     | 40.34           | 74.00          | -33.66      | H                  | Peak   |
| 7968.000        | 31.62          | 9.59                     | 41.21           | 74.00          | -32.79      | H                  | peak   |
| 8940.000        | 31.34          | 9.13                     | 40.47           | 74.00          | -33.53      | H                  | peak   |
| 9336.000        | 31.08          | 10.07                    | 41.15           | 74.00          | -32.85      | H                  | peak   |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Radiated emissions measured in frequency above 1000MHz were made with an instrument using peak/average detector mode.
3. Average test would be performed if the peak result were greater than the average limit.
4. Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
5. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.
6. Margin (dB) = Remark result (dBuV/m) – Average limit (dBuV/m).



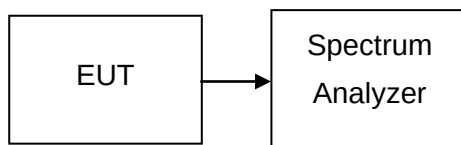
## 6.8 CONDUCTED UNDESIRABLE EMISSION

### 6.8.1 LIMIT

According to 15.407(b),

- (1) For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.
- (2) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- (3) The provisions of §15.205 apply to intentional radiators operating under this section.

### 6.8.2 TEST CONFIGURATION



### 6.8.3 TEST PROCEDURE

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1MHz. The video bandwidth is set to 3MHz. Peak detection measurements are compared to the average EIRP limit, adjusted for the maximum antenna gain. If necessary, additional average detection measurements are made.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

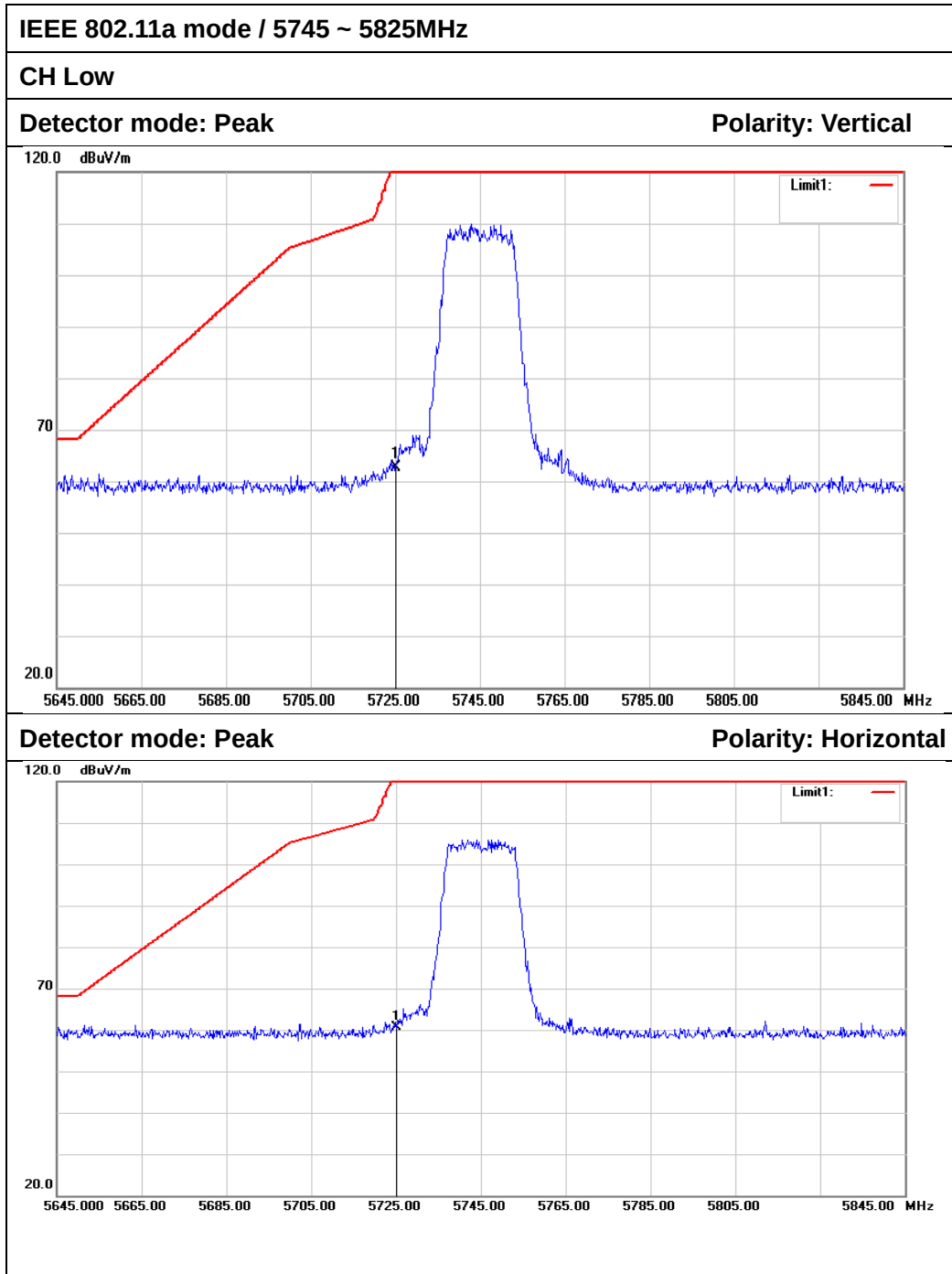


## 6.8.4 TEST RESULTS

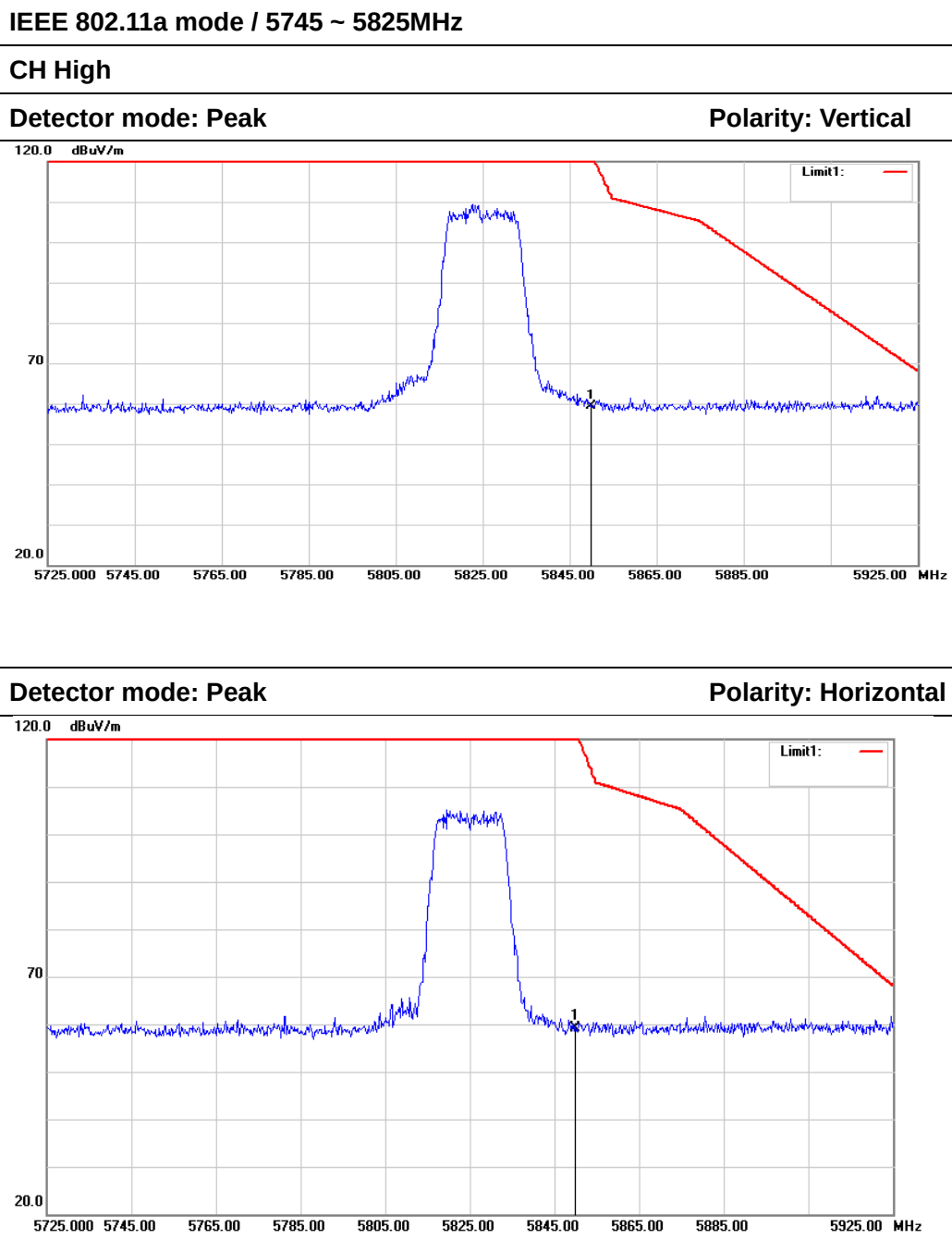
No non-compliance noted

### Test Plot

#### Antenna 0



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Antenna Polar |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|--------|---------------|
| 1   | 5725.000        | 56.74          | 5.96          | 62.70           | 122.20         | -59.50      | Peak   | Vertical      |
| 2   | 5725.000        | 54.69          | 5.96          | 60.65           | 122.20         | -61.55      | Peak   | Horizontal    |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Antenna Polar |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|--------|---------------|
| 1   | 5850.000        | 53.45          | 6.02          | 59.47           | 122.20         | -62.73      | Peak   | Vertical      |
| 2   | 5850.000        | 53.19          | 6.02          | 59.21           | 122.20         | -62.99      | Peak   | Horizontal    |



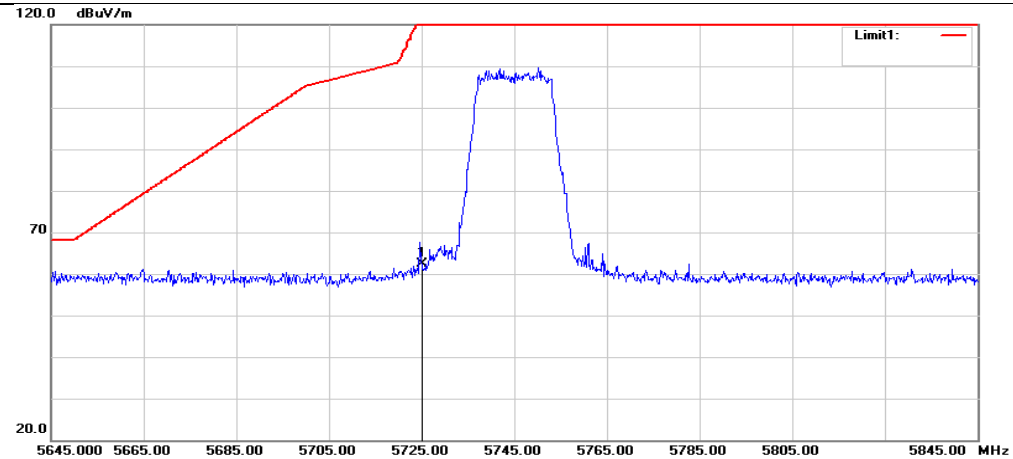
### Antenna 1

IEEE 802.11a mode / 5745 ~ 5825MHz

CH Low

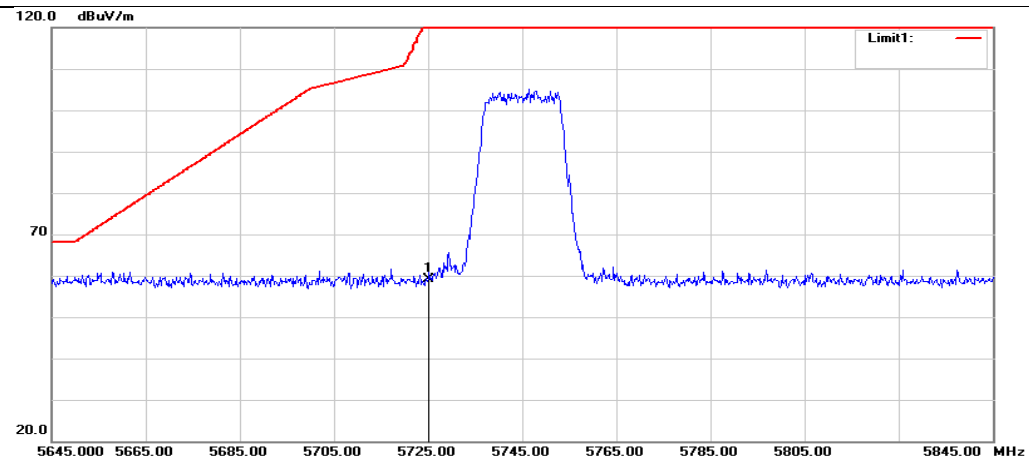
Detector mode: Peak

Polarity: Vertical



Detector mode: Peak

Polarity: Horizontal



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Antenna Polar |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|--------|---------------|
| 1   | 5725.000        | 56.44          | 5.96          | 62.40           | 122.20         | -59.80      | Peak   | Vertical      |
| 2   | 5725.000        | 53.09          | 5.96          | 59.05           | 122.20         | -63.15      | Peak   | Horizontal    |

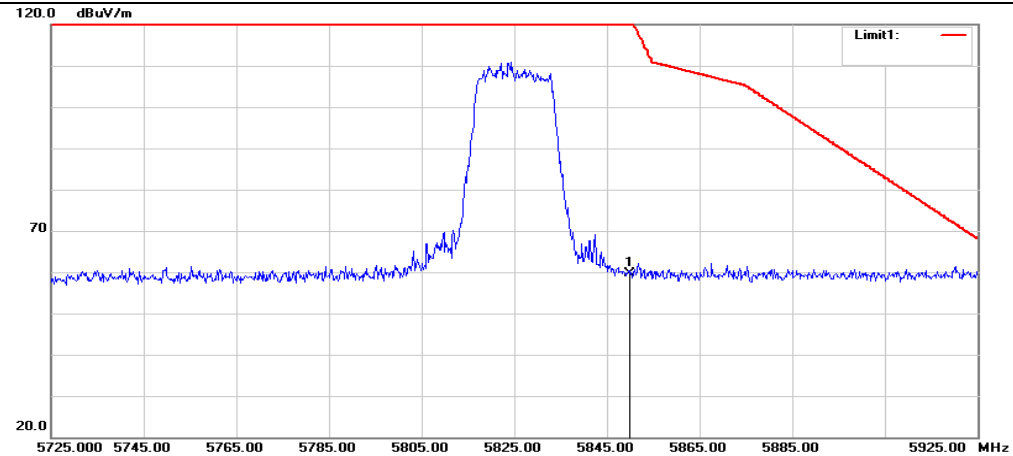


IEEE 802.11a mode / 5745 ~ 5825MHz

CH High

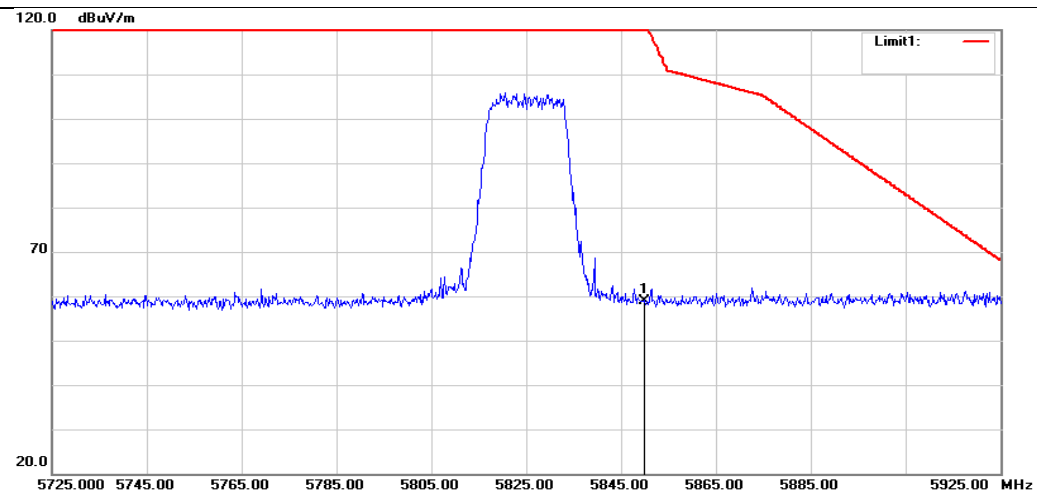
Detector mode: Peak

Polarity: Vertical



Detector mode: Peak

Polarity: Horizontal



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Antenna Polar |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|--------|---------------|
| 1   | 5850.000        | 53.70          | 6.02          | 59.72           | 122.20         | -62.48      | Peak   | Vertical      |
| 2   | 5850.000        | 52.92          | 6.02          | 58.94           | 122.20         | -63.26      | Peak   | Horizontal    |



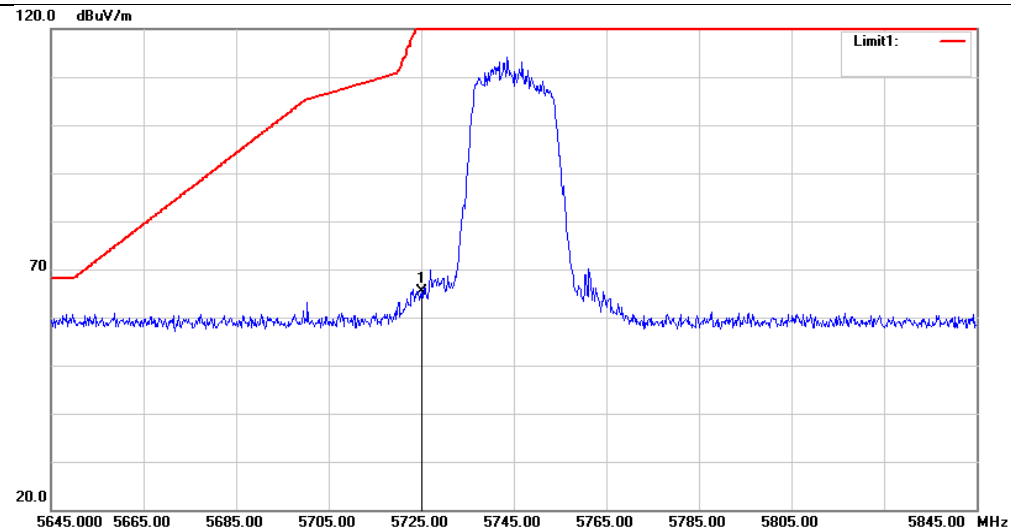
**Combine with antenna 0 and antenna 1**

IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz

CH Low

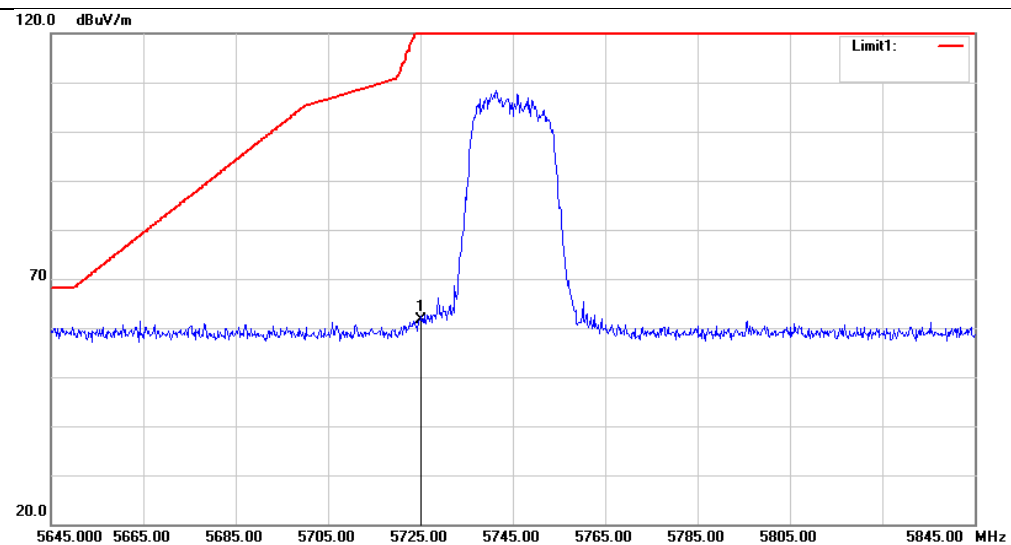
Detector mode: Peak

Polarity: Vertical

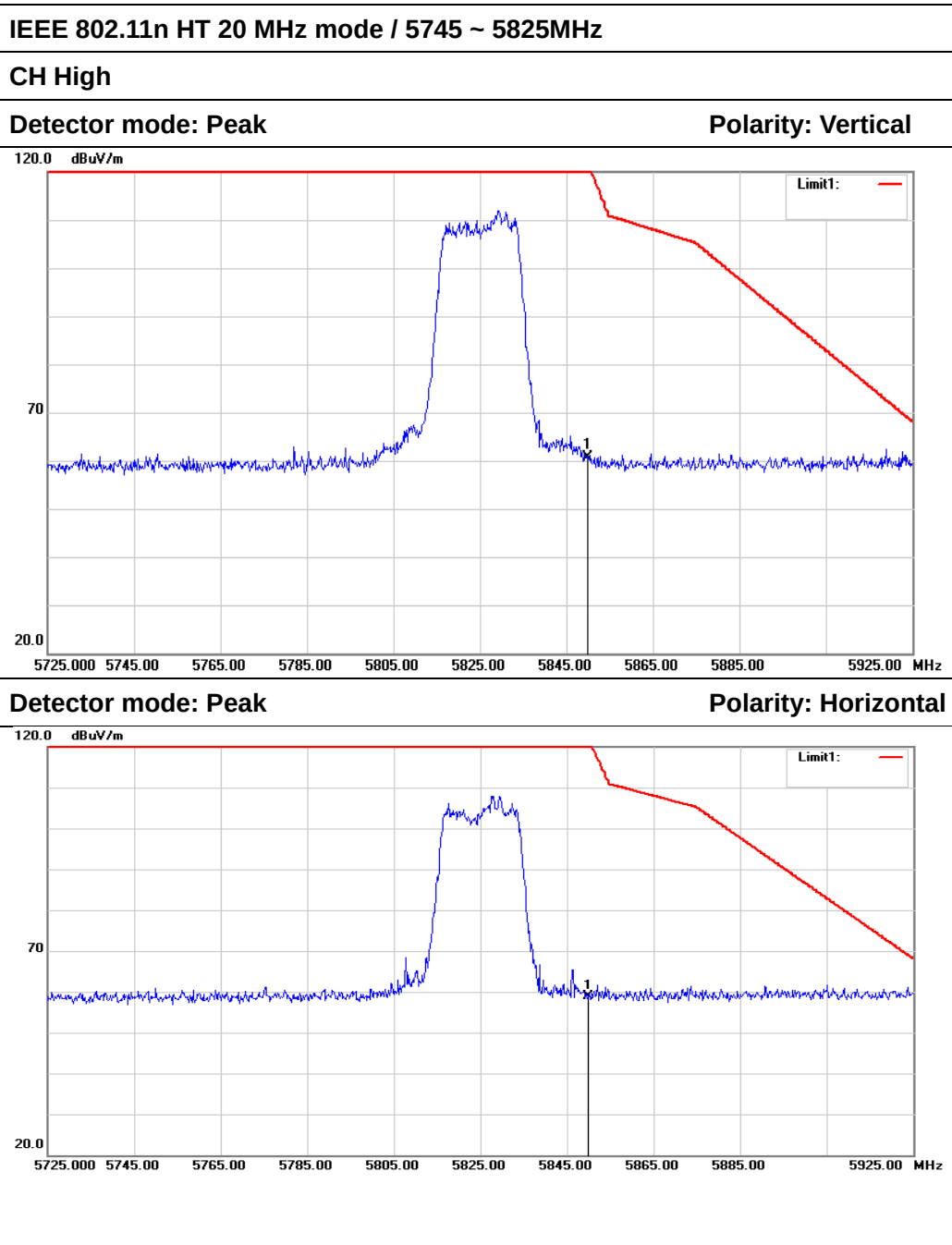


Detector mode: Peak

Polarity: Horizontal



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Antenna Polar |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|--------|---------------|
| 1   | 5725.000        | 59.53          | 5.96          | 65.49           | 122.20         | -56.71      | Peak   | Vertical      |
| 2   | 5725.000        | 55.69          | 5.96          | 61.65           | 122.20         | -60.55      | Peak   | Horizontal    |



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Antenna Polar |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|--------|---------------|
| 1   | 5850.000        | 54.68          | 6.02          | 60.70           | 122.20         | -61.50      | Peak   | Vertical      |
| 2   | 5850.000        | 52.95          | 6.02          | 58.97           | 122.20         | -63.23      | Peak   | Horizontal    |

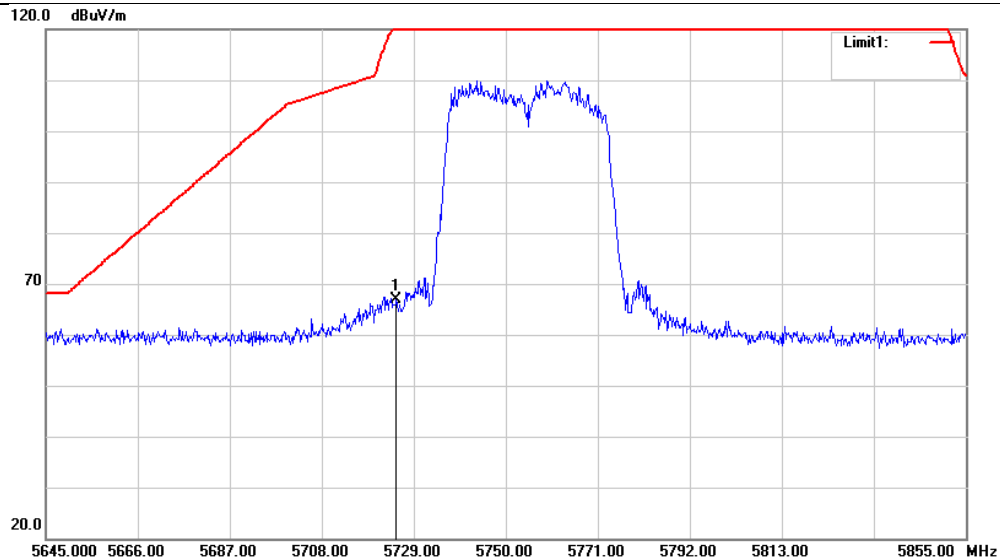


IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz

CH Low

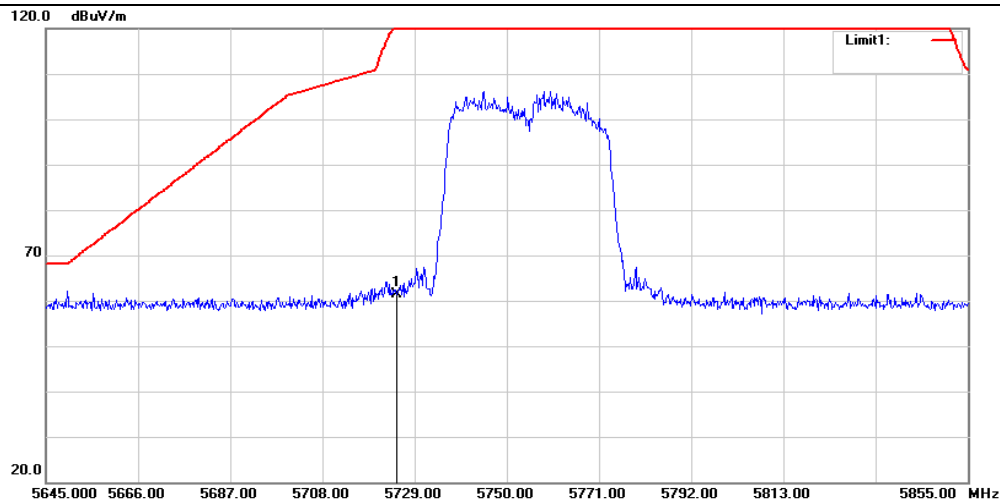
Detector mode: Peak

Polarity: Vertical

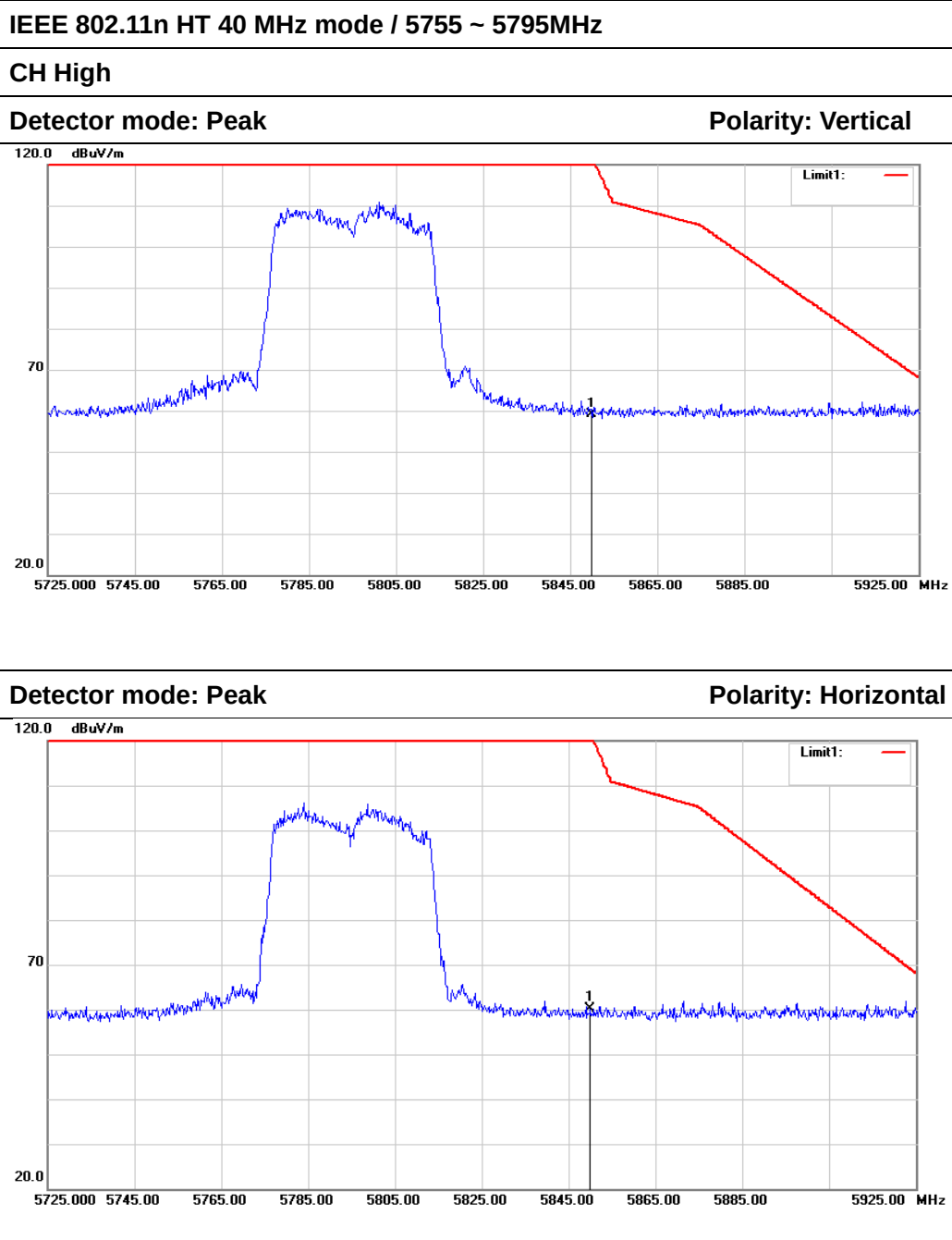


Detector mode: Peak

Polarity: Horizontal



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Antenna Polar |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|--------|---------------|
| 1   | 5725.000        | 60.95          | 5.96          | 66.91           | 122.20         | -55.29      | Peak   | Vertical      |
| 2   | 5725.000        | 55.53          | 5.96          | 61.49           | 122.20         | -60.71      | Peak   | Horizontal    |



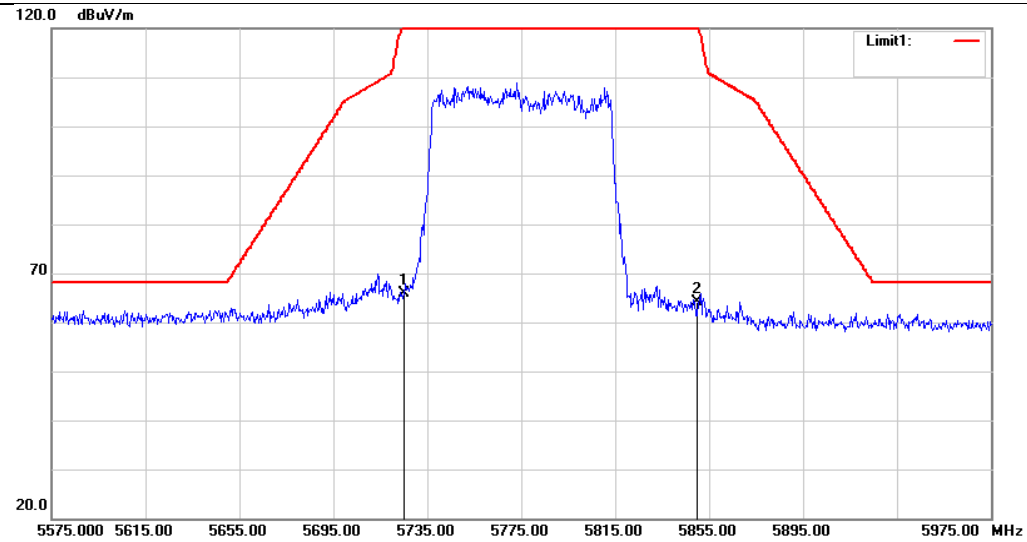
| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Antenna Polar |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|--------|---------------|
| 1   | 5850.000        | 53.05          | 6.02          | 59.07           | 122.20         | -63.13      | Peak   | Vertical      |
| 2   | 5850.000        | 54.21          | 6.02          | 60.23           | 122.20         | -61.97      | Peak   | Horizontal    |



IEEE 802.11ac 80 mode / 5775MHz

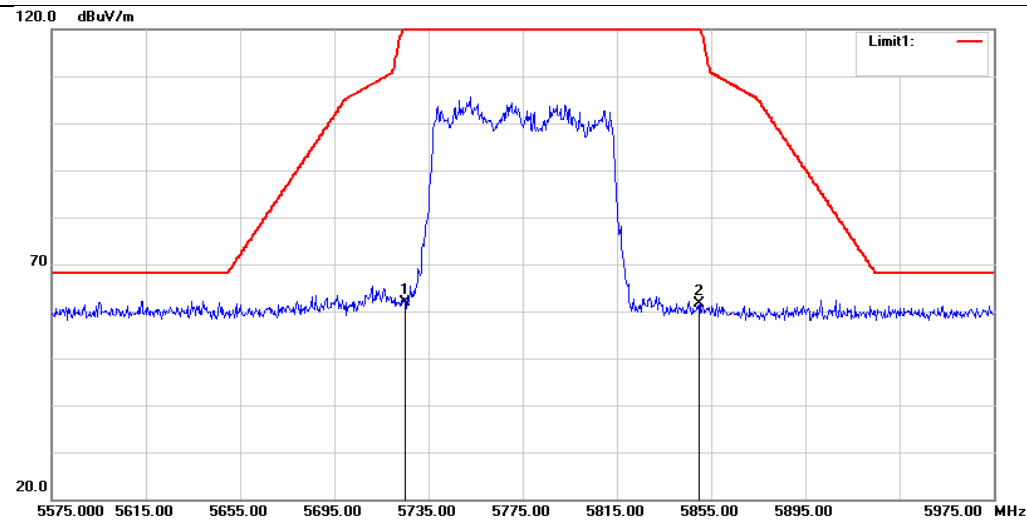
Detector mode: Peak

Polarity: Vertical



Detector mode: Peak

Polarity: Horizontal



| No. | Frequency (MHz) | Reading (dBuV) | Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark | Antenna Polar |
|-----|-----------------|----------------|---------------|-----------------|----------------|-------------|--------|---------------|
| 1   | 5725.000        | 59.93          | 5.96          | 65.89           | 122.20         | -56.31      | Peak   | Vertical      |
| 2   | 5850.000        | 58.11          | 6.02          | 64.13           | 122.20         | -58.07      | Peak   | Vertical      |
| 1   | 5725.000        | 56.00          | 5.96          | 61.96           | 122.20         | -60.24      | Peak   | Horizontal    |
| 2   | 5850.000        | 55.54          | 6.02          | 61.56           | 122.20         | -60.64      | Peak   | Horizontal    |



## 6.9 POWERLINE CONDUCTED EMISSIONS

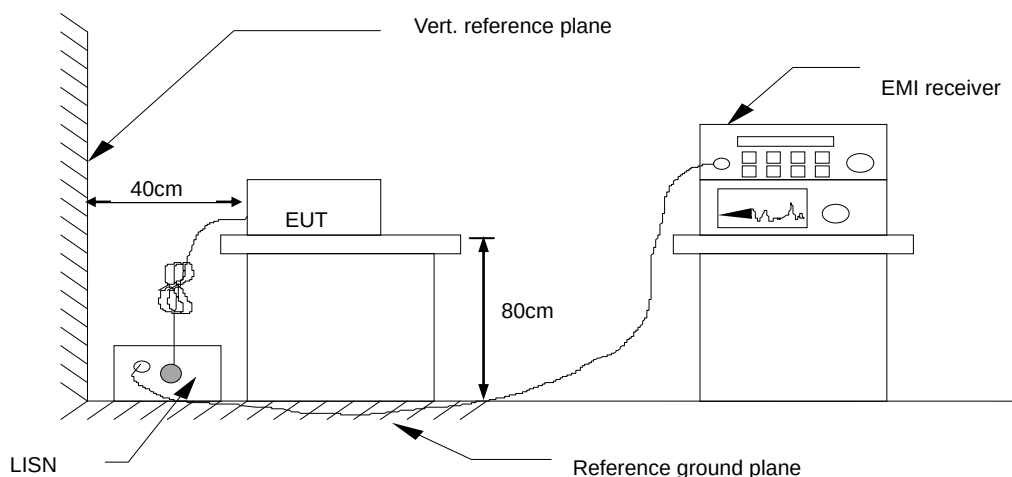
### 6.9.1 LIMIT

According to §15.207(a), except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50  $\mu$ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

| Frequency Range<br>(MHz) | Limits<br>(dB $\mu$ V) |           |
|--------------------------|------------------------|-----------|
|                          | Quasi-peak             | Average   |
| 0.15 to 0.50             | 66 to 56*              | 56 to 46* |
| 0.50 to 5                | 56                     | 46        |
| 5 to 30                  | 60                     | 50        |

\* Decreases with the logarithm of the frequency.

### 6.9.2 TEST CONFIGURATION



**6.9.3 TEST PROCEDURE**

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

**6.9.4 DATA SAMPLE**

| Frequency<br>(MHz) | QuasiPeak<br>Reading<br>(dBuV) | Average<br>Reading<br>(dBuV) | Correction<br>Factor<br>(dB) | QuasiPeak<br>Result<br>(dBuV) | Average<br>Result<br>(dBuV) | QuasiPeak<br>Limit<br>(dBuV) | Average<br>Limit<br>(dBuV) | QuasiPeak<br>Margin<br>(dB) | Average<br>Margin<br>(dB) | Remark<br>(Pass/Fail) |
|--------------------|--------------------------------|------------------------------|------------------------------|-------------------------------|-----------------------------|------------------------------|----------------------------|-----------------------------|---------------------------|-----------------------|
| X.XXXX             | 32.69                          | 25.65                        | 11.52                        | 44.21                         | 37.17                       | 65.78                        | 55.79                      | -21.57                      | -18.62                    | Pass                  |

Factor = Insertion loss of LISN + Cable Loss

Result = Quasi-peak Reading/ Average Reading + Factor

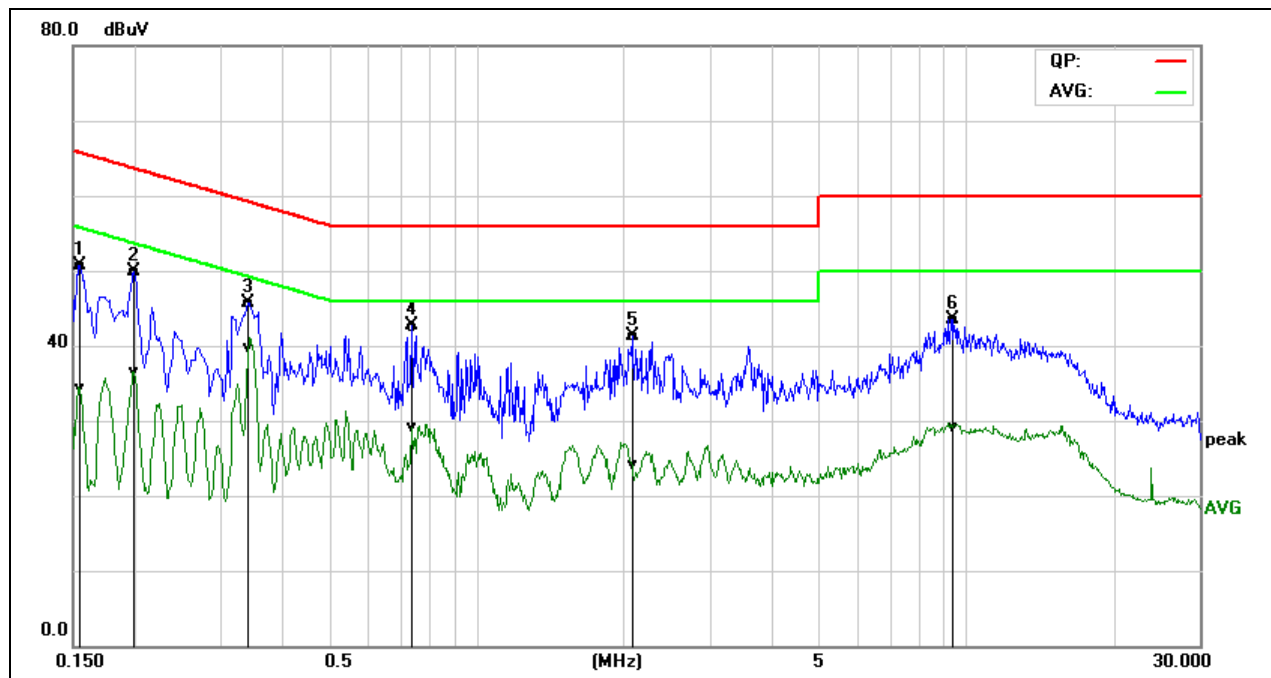
Limit = Limit stated in standard

Margin = Result (dBuV) – Limit (dBuV)



## 6.9.5 TEST RESULTS

|                          |                    |              |              |
|--------------------------|--------------------|--------------|--------------|
| Model No.                | QN-I-220           | RBW,VBW      | 9 kHz        |
| Environmental Conditions | 22°C, 45% RH       | Test Mode    | Mode 1       |
| Tested by                | Darry Wu           | Line         | L            |
| Test Date                | September 11, 2018 | Test Voltage | AC 120V/60Hz |

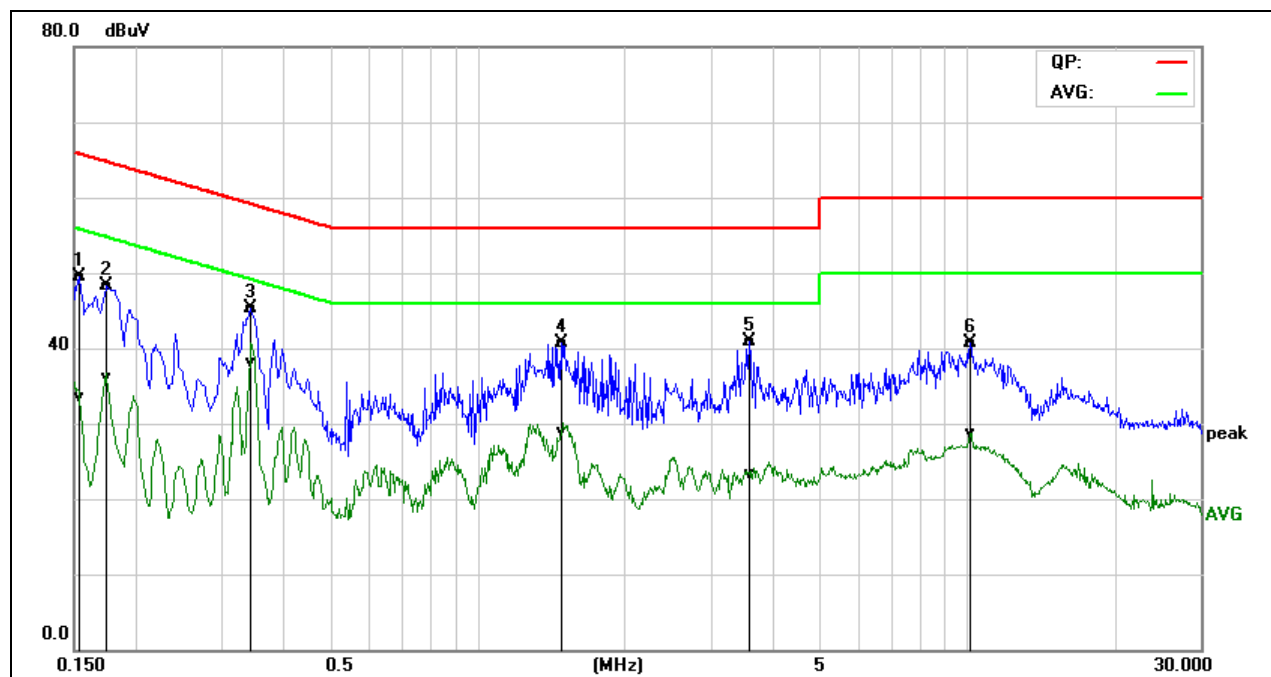


| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|-----------------|--------------------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|----------------------|-----------------------|---------------------|--------------------|
| 0.1547          | 31.13                    | 14.66                  | 19.62                  | 50.75                   | 34.28                 | 65.74                  | 55.74                | -14.99                | -21.46              | Pass               |
| 0.1995          | 30.22                    | 16.91                  | 19.64                  | 49.86                   | 36.55                 | 63.63                  | 53.63                | -13.77                | -17.08              | Pass               |
| 0.3420          | 26.13                    | 20.16                  | 19.58                  | 45.71                   | 39.74                 | 59.15                  | 49.15                | -13.44                | -9.41               | Pass               |
| 0.7380          | 23.00                    | 9.57                   | 19.60                  | 42.60                   | 29.17                 | 56.00                  | 46.00                | -13.40                | -16.83              | Pass               |
| 2.0780          | 21.55                    | 4.39                   | 19.72                  | 41.27                   | 24.11                 | 56.00                  | 46.00                | -14.73                | -21.89              | Pass               |
| 9.3860          | 23.46                    | 9.05                   | 20.08                  | 43.54                   | 29.13                 | 60.00                  | 50.00                | -16.46                | -20.87              | Pass               |

REMARKS: L1 = Line One (Live Line)



|                          |                    |              |              |
|--------------------------|--------------------|--------------|--------------|
| Model No.                | QN-I-220           | RBW,VBW      | 9 kHz        |
| Environmental Conditions | 22°C, 45% RH       | Test Mode    | Mode 1       |
| Tested by                | Darry Wu           | Line         | N            |
| Test Date                | September 11, 2018 | Test Voltage | AC 120V/60Hz |

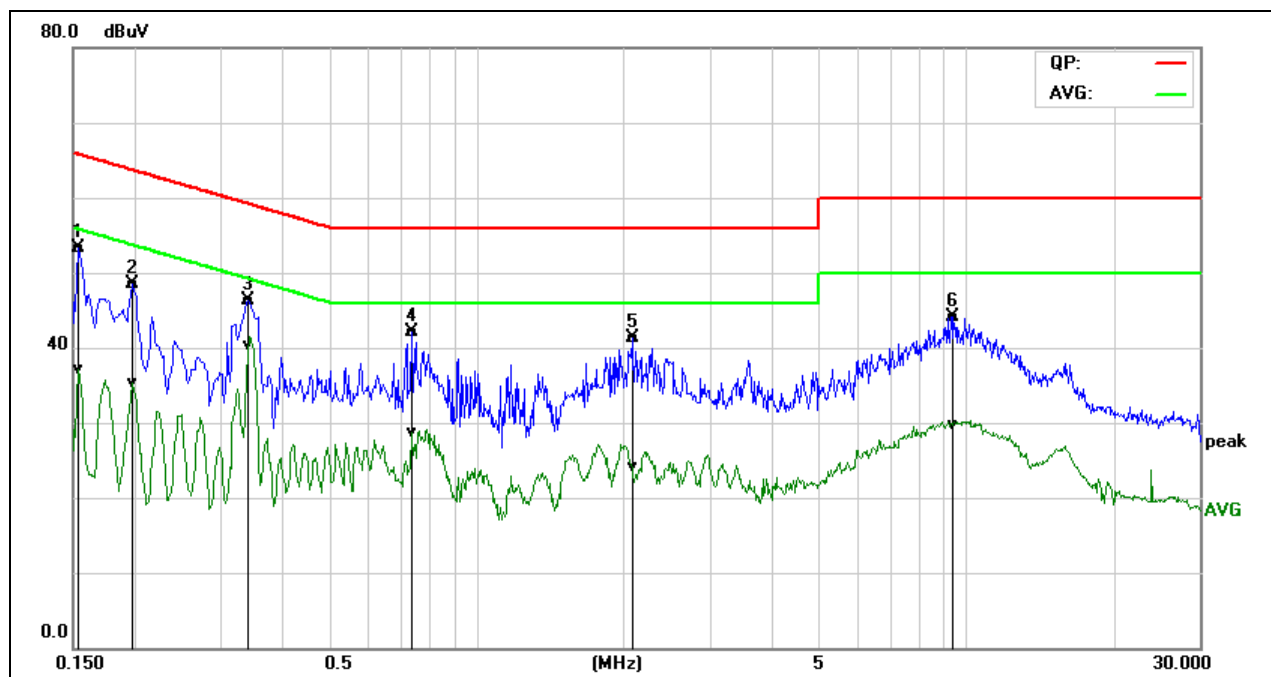


| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|-----------------|--------------------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|----------------------|-----------------------|---------------------|--------------------|
| 0.1539          | 30.03                    | 14.05                  | 19.52                  | 49.55                   | 33.57                 | 65.78                  | 55.79                | -16.23                | -22.22              | Pass               |
| 0.1748          | 28.70                    | 16.53                  | 19.53                  | 48.23                   | 36.06                 | 64.72                  | 54.73                | -16.49                | -18.67              | Pass               |
| 0.3427          | 25.82                    | 18.59                  | 19.53                  | 45.35                   | 38.12                 | 59.14                  | 49.14                | -13.79                | -11.02              | Pass               |
| 1.4860          | 21.10                    | 9.34                   | 19.63                  | 40.73                   | 28.97                 | 56.00                  | 46.00                | -15.27                | -17.03              | Pass               |
| 3.5980          | 21.10                    | 3.50                   | 19.78                  | 40.88                   | 23.28                 | 56.00                  | 46.00                | -15.12                | -22.72              | Pass               |
| 10.1660         | 20.54                    | 8.59                   | 20.14                  | 40.68                   | 28.73                 | 60.00                  | 50.00                | -19.32                | -21.27              | Pass               |

REMARKS: N = Line Two (Neutral Line)



|                          |                    |              |              |
|--------------------------|--------------------|--------------|--------------|
| Model No.                | QN-I-220           | RBW,VBW      | 9 kHz        |
| Environmental Conditions | 22°C, 45% RH       | Test Mode    | Mode 2       |
| Tested by                | Darry Wu           | Line         | L            |
| Test Date                | September 11, 2018 | Test Voltage | AC 240V/50Hz |

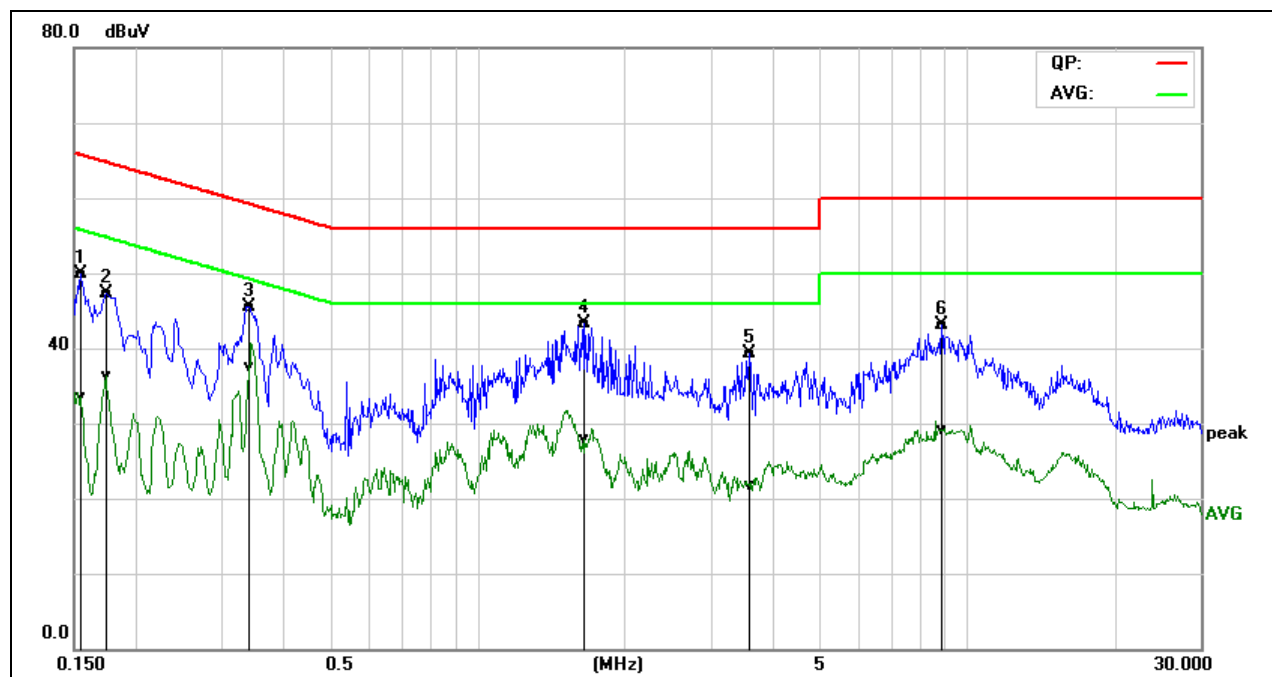


| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|-----------------|--------------------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|----------------------|-----------------------|---------------------|--------------------|
| 0.1532          | 33.59                    | 17.42                  | 19.62                  | 53.21                   | 37.04                 | 65.82                  | 55.82                | -12.61                | -18.78              | Pass               |
| 0.1980          | 28.77                    | 15.72                  | 19.64                  | 48.41                   | 35.36                 | 63.69                  | 53.69                | -15.28                | -18.33              | Pass               |
| 0.3420          | 26.63                    | 20.66                  | 19.58                  | 46.21                   | 40.24                 | 59.15                  | 49.15                | -12.94                | -8.91               | Pass               |
| 0.7380          | 22.50                    | 9.07                   | 19.60                  | 42.10                   | 28.67                 | 56.00                  | 46.00                | -13.90                | -17.33              | Pass               |
| 2.0780          | 21.55                    | 4.39                   | 19.72                  | 41.27                   | 24.11                 | 56.00                  | 46.00                | -14.73                | -21.89              | Pass               |
| 9.3860          | 23.96                    | 9.55                   | 20.08                  | 44.04                   | 29.63                 | 60.00                  | 50.00                | -15.96                | -20.37              | Pass               |

REMARKS: L = Line One (Live Line)



|                          |                    |              |              |
|--------------------------|--------------------|--------------|--------------|
| Model No.                | QN-I-220           | RBW,VBW      | 9 kHz        |
| Environmental Conditions | 22°C, 45% RH       | Test Mode    | Mode 2       |
| Tested by                | Darry Wu           | Line         | N            |
| Test Date                | September 11, 2018 | Test Voltage | AC 240V/50Hz |



| Frequency (MHz) | QuasiPeak Reading (dBuV) | Average Reading (dBuV) | Correction Factor (dB) | QuasiPeak Result (dBuV) | Average Result (dBuV) | QuasiPeak Limit (dBuV) | Average Limit (dBuV) | QuasiPeak Margin (dB) | Average Margin (dB) | Remark (Pass/Fail) |
|-----------------|--------------------------|------------------------|------------------------|-------------------------|-----------------------|------------------------|----------------------|-----------------------|---------------------|--------------------|
| 0.1547          | 30.45                    | 13.90                  | 19.52                  | 49.97                   | 33.42                 | 65.74                  | 55.74                | -15.77                | -22.32              | Pass               |
| 0.1740          | 27.86                    | 16.75                  | 19.53                  | 47.39                   | 36.28                 | 64.76                  | 54.77                | -17.37                | -18.49              | Pass               |
| 0.3420          | 26.07                    | 17.97                  | 19.53                  | 45.60                   | 37.50                 | 59.15                  | 49.15                | -13.55                | -11.65              | Pass               |
| 1.6620          | 23.71                    | 8.32                   | 19.67                  | 43.38                   | 27.99                 | 56.00                  | 46.00                | -12.62                | -18.01              | Pass               |
| 3.5980          | 19.60                    | 2.00                   | 19.78                  | 39.38                   | 21.78                 | 56.00                  | 46.00                | -16.62                | -24.22              | Pass               |
| 8.9100          | 23.01                    | 9.09                   | 20.03                  | 43.04                   | 29.12                 | 60.00                  | 50.00                | -16.96                | -20.88              | Pass               |

REMARKS: N = Line Two (Neutral Line)

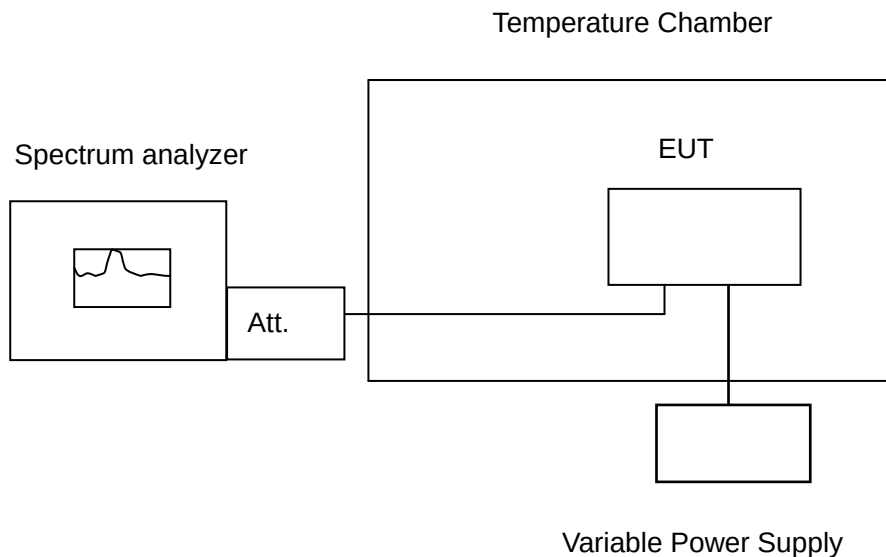


## 6.10 FREQUENCY STABILITY

### 6.10.1 LIMIT

According to §15.407(g), manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the operational description.

### 6.10.2 TEST CONFIGURATION



**Remark:** Measurement setup for testing on Antenna connector

### 6.10.3 TEST PROCEDURE

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -20°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

### 6.10.4 TEST RESULTS

*No non-compliance noted.*

**Test Data****Antenna 0****IEEE 802.11a MHz mode / 5180 ~ 5240MHz (Low)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5179.964882              | 5150-5250   | PASS        |
| 40                           | 120        | 5179.986392              | 5150-5250   | PASS        |
| 30                           | 120        | 5179.991981              | 5150-5250   | PASS        |
| 20                           | 120        | 5179.984600              | 5150-5250   | PASS        |
| 10                           | 120        | 5179.983919              | 5150-5250   | PASS        |
| 0                            | 120        | 5179.970177              | 5150-5250   | PASS        |
| -10                          | 120        | 5179.953366              | 5150-5250   | PASS        |
| -20                          | 120        | 5179.967703              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5179.959334              | 5150-5250   | PASS        |
|                              | 120        | 5179.978200              | 5150-5250   | PASS        |
|                              | 132        | 5179.971534              | 5150-5250   | PASS        |

**IEEE 802.11a mode / 5180 ~ 5240MHz (High)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5239.951061              | 5150-5250   | PASS        |
| 40                           | 120        | 5239.965387              | 5150-5250   | PASS        |
| 30                           | 120        | 5239.965817              | 5150-5250   | PASS        |
| 20                           | 120        | 5239.983400              | 5150-5250   | PASS        |
| 10                           | 120        | 5239.956376              | 5150-5250   | PASS        |
| 0                            | 120        | 5239.978511              | 5150-5250   | PASS        |
| -10                          | 120        | 5239.990861              | 5150-5250   | PASS        |
| -20                          | 120        | 5239.971274              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5239.981059              | 5150-5250   | PASS        |
|                              | 120        | 5239.976500              | 5150-5250   | PASS        |
|                              | 132        | 5239.996921              | 5150-5250   | PASS        |

**IEEE 802.11a mode / 5745 ~ 5825MHz (Low)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5744.957947              | 5725-5850   | PASS        |
| 40                             | 120        | 5744.984427              | 5725-5850   | PASS        |
| 30                             | 120        | 5744.985912              | 5725-5850   | PASS        |
| 20                             | 120        | 5744.981800              | 5725-5850   | PASS        |
| 10                             | 120        | 5744.958763              | 5725-5850   | PASS        |
| 0                              | 120        | 5744.954127              | 5725-5850   | PASS        |
| -10                            | 120        | 5744.999294              | 5725-5850   | PASS        |
| -20                            | 120        | 5744.996319              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5744.984998              | 5725-5850   | PASS        |
|                                | 120        | 5744.965900              | 5725-5850   | PASS        |
|                                | 132        | 5744.969611              | 5725-5850   | PASS        |

**IEEE 802.11a MHz mode / 5745 ~ 5825MHz (High)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5824.949294              | 5725-5850   | PASS        |
| 40                             | 120        | 5824.970202              | 5725-5850   | PASS        |
| 30                             | 120        | 5824.993423              | 5725-5850   | PASS        |
| 20                             | 120        | 5824.981500              | 5725-5850   | PASS        |
| 10                             | 120        | 5824.983848              | 5725-5850   | PASS        |
| 0                              | 120        | 5824.998466              | 5725-5850   | PASS        |
| -10                            | 120        | 5824.984375              | 5725-5850   | PASS        |
| -20                            | 120        | 5824.983981              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5824.956579              | 5725-5850   | PASS        |
|                                | 120        | 5824.968100              | 5725-5850   | PASS        |
|                                | 132        | 5824.965792              | 5725-5850   | PASS        |

**Antenna 1****IEEE 802.11a MHz mode / 5180 ~ 5240MHz (Low)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5179.980920              | 5150-5250   | PASS        |
| 40                             | 120        | 5179.974496              | 5150-5250   | PASS        |
| 30                             | 120        | 5179.985337              | 5150-5250   | PASS        |
| 20                             | 120        | 5179.982800              | 5150-5250   | PASS        |
| 10                             | 120        | 5179.979954              | 5150-5250   | PASS        |
| 0                              | 120        | 5179.951640              | 5150-5250   | PASS        |
| -10                            | 120        | 5179.956999              | 5150-5250   | PASS        |
| -20                            | 120        | 5179.957019              | 5150-5250   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5179.966262              | 5150-5250   | PASS        |
|                                | 120        | 5179.973300              | 5150-5250   | PASS        |
|                                | 132        | 5179.965567              | 5150-5250   | PASS        |

**IEEE 802.11a mode / 5180 ~ 5240MHz (High)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5239.999484              | 5150-5250   | PASS        |
| 40                             | 120        | 5239.963683              | 5150-5250   | PASS        |
| 30                             | 120        | 5239.956209              | 5150-5250   | PASS        |
| 20                             | 120        | 5239.982400              | 5150-5250   | PASS        |
| 10                             | 120        | 5239.958600              | 5150-5250   | PASS        |
| 0                              | 120        | 5239.950611              | 5150-5250   | PASS        |
| -10                            | 120        | 5239.992213              | 5150-5250   | PASS        |
| -20                            | 120        | 5239.989100              | 5150-5250   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5239.967822              | 5150-5250   | PASS        |
|                                | 120        | 5239.965100              | 5150-5250   | PASS        |
|                                | 132        | 5239.976100              | 5150-5250   | PASS        |

**IEEE 802.11a mode / 5745 ~ 5825MHz (Low)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5744.978979              | 5725-5850   | PASS        |
| 40                             | 120        | 5744.979830              | 5725-5850   | PASS        |
| 30                             | 120        | 5744.969636              | 5725-5850   | PASS        |
| 20                             | 120        | 5744.980700              | 5725-5850   | PASS        |
| 10                             | 120        | 5744.960482              | 5725-5850   | PASS        |
| 0                              | 120        | 5744.951545              | 5725-5850   | PASS        |
| -10                            | 120        | 5744.993349              | 5725-5850   | PASS        |
| -20                            | 120        | 5744.968665              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5744.964867              | 5725-5850   | PASS        |
|                                | 120        | 5744.961800              | 5725-5850   | PASS        |
|                                | 132        | 5744.985301              | 5725-5850   | PASS        |

**IEEE 802.11a MHz mode / 5745 ~ 5825MHz (High)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5824.950428              | 5725-5850   | PASS        |
| 40                             | 120        | 5824.967661              | 5725-5850   | PASS        |
| 30                             | 120        | 5824.954911              | 5725-5850   | PASS        |
| 20                             | 120        | 5824.979700              | 5725-5850   | PASS        |
| 10                             | 120        | 5824.998383              | 5725-5850   | PASS        |
| 0                              | 120        | 5824.994701              | 5725-5850   | PASS        |
| -10                            | 120        | 5824.974892              | 5725-5850   | PASS        |
| -20                            | 120        | 5824.958208              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5824.970146              | 5725-5850   | PASS        |
|                                | 120        | 5824.963200              | 5725-5850   | PASS        |
|                                | 132        | 5824.978234              | 5725-5850   | PASS        |

**Antenna 0****IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz (Low)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5179.967670              | 5150-5250   | PASS        |
| 40                           | 120        | 5179.985420              | 5150-5250   | PASS        |
| 30                           | 120        | 5179.962523              | 5150-5250   | PASS        |
| 20                           | 120        | 5179.980300              | 5150-5250   | PASS        |
| 10                           | 120        | 5179.998134              | 5150-5250   | PASS        |
| 0                            | 120        | 5179.952291              | 5150-5250   | PASS        |
| -10                          | 120        | 5179.972166              | 5150-5250   | PASS        |
| -20                          | 120        | 5179.999069              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5179.993829              | 5150-5250   | PASS        |
|                              | 120        | 5179.976200              | 5150-5250   | PASS        |
|                              | 132        | 5179.999712              | 5150-5250   | PASS        |

**IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz (High)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5239.969954              | 5150-5250   | PASS        |
| 40                           | 120        | 5239.973215              | 5150-5250   | PASS        |
| 30                           | 120        | 5239.988119              | 5150-5250   | PASS        |
| 20                           | 120        | 5239.980800              | 5150-5250   | PASS        |
| 10                           | 120        | 5239.994014              | 5150-5250   | PASS        |
| 0                            | 120        | 5239.952630              | 5150-5250   | PASS        |
| -10                          | 120        | 5239.972185              | 5150-5250   | PASS        |
| -20                          | 120        | 5239.964303              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5239.973374              | 5150-5250   | PASS        |
|                              | 120        | 5239.972500              | 5150-5250   | PASS        |
|                              | 132        | 5239.973109              | 5150-5250   | PASS        |

**IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz (Low)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5744.966117              | 5725-5850   | PASS        |
| 40                             | 120        | 5744.989160              | 5725-5850   | PASS        |
| 30                             | 120        | 5744.955630              | 5725-5850   | PASS        |
| 20                             | 120        | 5744.977900              | 5725-5850   | PASS        |
| 10                             | 120        | 5744.952017              | 5725-5850   | PASS        |
| 0                              | 120        | 5744.988001              | 5725-5850   | PASS        |
| -10                            | 120        | 5744.978806              | 5725-5850   | PASS        |
| -20                            | 120        | 5744.964768              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5744.997113              | 5725-5850   | PASS        |
|                                | 120        | 5744.975300              | 5725-5850   | PASS        |
|                                | 132        | 5744.960525              | 5725-5850   | PASS        |

**IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz (High)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5824.961168              | 5725-5850   | PASS        |
| 40                             | 120        | 5824.988967              | 5725-5850   | PASS        |
| 30                             | 120        | 5824.951102              | 5725-5850   | PASS        |
| 20                             | 120        | 5824.976500              | 5725-5850   | PASS        |
| 10                             | 120        | 5824.975262              | 5725-5850   | PASS        |
| 0                              | 120        | 5824.986180              | 5725-5850   | PASS        |
| -10                            | 120        | 5824.975531              | 5725-5850   | PASS        |
| -20                            | 120        | 5824.984371              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5824.993495              | 5725-5850   | PASS        |
|                                | 120        | 5824.968300              | 5725-5850   | PASS        |
|                                | 132        | 5824.982829              | 5725-5850   | PASS        |

**Antenna 1****IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz (Low)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5179.989603              | 5150-5250   | PASS        |
| 40                           | 120        | 5179.962816              | 5150-5250   | PASS        |
| 30                           | 120        | 5179.949885              | 5150-5250   | PASS        |
| 20                           | 120        | 5179.982800              | 5150-5250   | PASS        |
| 10                           | 120        | 5179.967661              | 5150-5250   | PASS        |
| 0                            | 120        | 5179.995252              | 5150-5250   | PASS        |
| -10                          | 120        | 5179.997191              | 5150-5250   | PASS        |
| -20                          | 120        | 5179.999084              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5179.981716              | 5150-5250   | PASS        |
|                              | 120        | 5179.983100              | 5150-5250   | PASS        |
|                              | 132        | 5179.977927              | 5150-5250   | PASS        |

**IEEE 802.11n HT 20 MHz mode / 5180 ~ 5240MHz (High)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5239.955997              | 5150-5250   | PASS        |
| 40                           | 120        | 5239.951131              | 5150-5250   | PASS        |
| 30                           | 120        | 5239.956885              | 5150-5250   | PASS        |
| 20                           | 120        | 5239.982800              | 5150-5250   | PASS        |
| 10                           | 120        | 5239.964767              | 5150-5250   | PASS        |
| 0                            | 120        | 5239.960205              | 5150-5250   | PASS        |
| -10                          | 120        | 5239.975860              | 5150-5250   | PASS        |
| -20                          | 120        | 5239.959161              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5239.978383              | 5150-5250   | PASS        |
|                              | 120        | 5239.976200              | 5150-5250   | PASS        |
|                              | 132        | 5239.972127              | 5150-5250   | PASS        |

**IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz (Low)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5744.984312              | 5725-5850   | PASS        |
| 40                             | 120        | 5744.955900              | 5725-5850   | PASS        |
| 30                             | 120        | 5744.971044              | 5725-5850   | PASS        |
| 20                             | 120        | 5744.977200              | 5725-5850   | PASS        |
| 10                             | 120        | 5744.958622              | 5725-5850   | PASS        |
| 0                              | 120        | 5744.983060              | 5725-5850   | PASS        |
| -10                            | 120        | 5744.971827              | 5725-5850   | PASS        |
| -20                            | 120        | 5744.951853              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5744.959104              | 5725-5850   | PASS        |
|                                | 120        | 5744.975300              | 5725-5850   | PASS        |
|                                | 132        | 5744.988126              | 5725-5850   | PASS        |

**IEEE 802.11n HT 20 MHz mode / 5745 ~ 5825MHz (High)**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5824.971301              | 5725-5850   | PASS        |
| 40                             | 120        | 5824.976458              | 5725-5850   | PASS        |
| 30                             | 120        | 5824.963506              | 5725-5850   | PASS        |
| 20                             | 120        | 5824.976900              | 5725-5850   | PASS        |
| 10                             | 120        | 5824.984613              | 5725-5850   | PASS        |
| 0                              | 120        | 5824.950237              | 5725-5850   | PASS        |
| -10                            | 120        | 5824.955290              | 5725-5850   | PASS        |
| -20                            | 120        | 5824.955631              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5824.974942              | 5725-5850   | PASS        |
|                                | 120        | 5824.971400              | 5725-5850   | PASS        |
|                                | 132        | 5824.960380              | 5725-5850   | PASS        |

**Antenna 0****IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (Low)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5189.955059              | 5150-5250   | PASS        |
| 40                           | 120        | 5189.971810              | 5150-5250   | PASS        |
| 30                           | 120        | 5189.989671              | 5150-5250   | PASS        |
| 20                           | 120        | 5189.979500              | 5150-5250   | PASS        |
| 10                           | 120        | 5189.976894              | 5150-5250   | PASS        |
| 0                            | 120        | 5189.980391              | 5150-5250   | PASS        |
| -10                          | 120        | 5189.993410              | 5150-5250   | PASS        |
| -20                          | 120        | 5189.963534              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5189.964309              | 5150-5250   | PASS        |
|                              | 120        | 5189.972900              | 5150-5250   | PASS        |
|                              | 132        | 5189.991803              | 5150-5250   | PASS        |

**IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (High)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5229.986529              | 5150-5250   | PASS        |
| 40                           | 120        | 5229.954581              | 5150-5250   | PASS        |
| 30                           | 120        | 5229.964518              | 5150-5250   | PASS        |
| 20                           | 120        | 5229.979100              | 5150-5250   | PASS        |
| 10                           | 120        | 5229.996913              | 5150-5250   | PASS        |
| 0                            | 120        | 5229.977573              | 5150-5250   | PASS        |
| -10                          | 120        | 5229.992395              | 5150-5250   | PASS        |
| -20                          | 120        | 5229.972750              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5229.951804              | 5150-5250   | PASS        |
|                              | 120        | 5229.971800              | 5150-5250   | PASS        |
|                              | 132        | 5229.952733              | 5150-5250   | PASS        |

**IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (Low)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5754.961326              | 5725-5850   | PASS        |
| 40                           | 120        | 5754.962336              | 5725-5850   | PASS        |
| 30                           | 120        | 5754.982445              | 5725-5850   | PASS        |
| 20                           | 120        | 5754.977000              | 5725-5850   | PASS        |
| 10                           | 120        | 5754.950705              | 5725-5850   | PASS        |
| 0                            | 120        | 5754.993887              | 5725-5850   | PASS        |
| -10                          | 120        | 5754.969066              | 5725-5850   | PASS        |
| -20                          | 120        | 5754.959342              | 5725-5850   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5754.974190              | 5725-5850   | PASS        |
|                              | 120        | 5754.976100              | 5725-5850   | PASS        |
|                              | 132        | 5754.983087              | 5725-5850   | PASS        |

**IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (High)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5794.993226              | 5725-5850   | PASS        |
| 40                           | 120        | 5794.967053              | 5725-5850   | PASS        |
| 30                           | 120        | 5794.957814              | 5725-5850   | PASS        |
| 20                           | 120        | 5794.976400              | 5725-5850   | PASS        |
| 10                           | 120        | 5794.997898              | 5725-5850   | PASS        |
| 0                            | 120        | 5794.961801              | 5725-5850   | PASS        |
| -10                          | 120        | 5794.979316              | 5725-5850   | PASS        |
| -20                          | 120        | 5794.984629              | 5725-5850   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5794.949600              | 5725-5850   | PASS        |
|                              | 120        | 5794.962900              | 5725-5850   | PASS        |
|                              | 132        | 5794.984409              | 5725-5850   | PASS        |

**Antenna 1****IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (Low)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5189.987864              | 5150-5250   | PASS        |
| 40                           | 120        | 5189.999219              | 5150-5250   | PASS        |
| 30                           | 120        | 5189.950947              | 5150-5250   | PASS        |
| 20                           | 120        | 5189.979100              | 5150-5250   | PASS        |
| 10                           | 120        | 5189.990760              | 5150-5250   | PASS        |
| 0                            | 120        | 5189.949069              | 5150-5250   | PASS        |
| -10                          | 120        | 5189.996672              | 5150-5250   | PASS        |
| -20                          | 120        | 5189.975521              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5189.988534              | 5150-5250   | PASS        |
|                              | 120        | 5189.982800              | 5150-5250   | PASS        |
|                              | 132        | 5189.983256              | 5150-5250   | PASS        |

**IEEE 802.11n HT 40 MHz mode / 5190 ~ 5230MHz (High)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5229.994092              | 5150-5250   | PASS        |
| 40                           | 120        | 5229.985019              | 5150-5250   | PASS        |
| 30                           | 120        | 5229.971401              | 5150-5250   | PASS        |
| 20                           | 120        | 5229.978700              | 5150-5250   | PASS        |
| 10                           | 120        | 5229.994073              | 5150-5250   | PASS        |
| 0                            | 120        | 5229.979134              | 5150-5250   | PASS        |
| -10                          | 120        | 5229.997136              | 5150-5250   | PASS        |
| -20                          | 120        | 5229.952325              | 5150-5250   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5229.953273              | 5150-5250   | PASS        |
|                              | 120        | 5229.962500              | 5150-5250   | PASS        |
|                              | 132        | 5229.983916              | 5150-5250   | PASS        |

**IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (Low)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5754.995777              | 5725-5850   | PASS        |
| 40                           | 120        | 5754.976259              | 5725-5850   | PASS        |
| 30                           | 120        | 5754.962157              | 5725-5850   | PASS        |
| 20                           | 120        | 5754.976700              | 5725-5850   | PASS        |
| 10                           | 120        | 5754.966774              | 5725-5850   | PASS        |
| 0                            | 120        | 5754.973451              | 5725-5850   | PASS        |
| -10                          | 120        | 5754.995441              | 5725-5850   | PASS        |
| -20                          | 120        | 5754.965654              | 5725-5850   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5754.978870              | 5725-5850   | PASS        |
|                              | 120        | 5754.962800              | 5725-5850   | PASS        |
|                              | 132        | 5754.975540              | 5725-5850   | PASS        |

**IEEE 802.11n HT 40 MHz mode / 5755 ~ 5795MHz (High)**

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 50                           | 120        | 5794.949243              | 5725-5850   | PASS        |
| 40                           | 120        | 5794.988512              | 5725-5850   | PASS        |
| 30                           | 120        | 5794.972144              | 5725-5850   | PASS        |
| 20                           | 120        | 5794.976600              | 5725-5850   | PASS        |
| 10                           | 120        | 5794.978709              | 5725-5850   | PASS        |
| 0                            | 120        | 5794.982628              | 5725-5850   | PASS        |
| -10                          | 120        | 5794.957673              | 5725-5850   | PASS        |
| -20                          | 120        | 5794.965724              | 5725-5850   | PASS        |

| Environment Temperature (°C) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|------------------------------|------------|--------------------------|-------------|-------------|
| 20                           | 108        | 5794.994346              | 5725-5850   | PASS        |
|                              | 120        | 5794.974300              | 5725-5850   | PASS        |
|                              | 132        | 5794.950324              | 5725-5850   | PASS        |

**Antenna 0****IEEE 802.11ac 80 mode / 5210MHz**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5209.963751              | 5150-5250   | PASS        |
| 40                             | 120        | 5209.964441              | 5150-5250   | PASS        |
| 30                             | 120        | 5209.969045              | 5150-5250   | PASS        |
| 20                             | 120        | 5209.978600              | 5150-5250   | PASS        |
| 10                             | 120        | 5209.960179              | 5150-5250   | PASS        |
| 0                              | 120        | 5209.995018              | 5150-5250   | PASS        |
| -10                            | 120        | 5209.973973              | 5150-5250   | PASS        |
| -20                            | 120        | 5209.955965              | 5150-5250   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5209.994187              | 5150-5250   | PASS        |
|                                | 120        | 5209.963800              | 5150-5250   | PASS        |
|                                | 132        | 5209.964817              | 5150-5250   | PASS        |

**IEEE 802.11ac 80 mode / 5775MHz**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5774.982961              | 5725-5850   | PASS        |
| 40                             | 120        | 5774.999844              | 5725-5850   | PASS        |
| 30                             | 120        | 5774.988877              | 5725-5850   | PASS        |
| 20                             | 120        | 5774.976800              | 5725-5850   | PASS        |
| 10                             | 120        | 5774.983696              | 5725-5850   | PASS        |
| 0                              | 120        | 5774.980543              | 5725-5850   | PASS        |
| -10                            | 120        | 5774.989283              | 5725-5850   | PASS        |
| -20                            | 120        | 5774.993399              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5774.975105              | 5725-5850   | PASS        |
|                                | 120        | 5774.973900              | 5725-5850   | PASS        |
|                                | 132        | 5774.969789              | 5725-5850   | PASS        |

**Antenna 1****IEEE 802.11ac 80 mode / 5210MHz**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5209.993706              | 5150-5250   | PASS        |
| 40                             | 120        | 5209.950600              | 5150-5250   | PASS        |
| 30                             | 120        | 5209.997286              | 5150-5250   | PASS        |
| 20                             | 120        | 5209.979200              | 5150-5250   | PASS        |
| 10                             | 120        | 5209.979740              | 5150-5250   | PASS        |
| 0                              | 120        | 5209.996107              | 5150-5250   | PASS        |
| -10                            | 120        | 5209.971120              | 5150-5250   | PASS        |
| -20                            | 120        | 5209.991051              | 5150-5250   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5209.950320              | 5150-5250   | PASS        |
|                                | 120        | 5209.982100              | 5150-5250   | PASS        |
|                                | 132        | 5209.953099              | 5150-5250   | PASS        |

**IEEE 802.11ac 80 mode / 5775MHz**

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 50                             | 120        | 5774.951729              | 5725-5850   | PASS        |
| 40                             | 120        | 5774.973325              | 5725-5850   | PASS        |
| 30                             | 120        | 5774.996439              | 5725-5850   | PASS        |
| 20                             | 120        | 5774.976200              | 5725-5850   | PASS        |
| 10                             | 120        | 5774.976411              | 5725-5850   | PASS        |
| 0                              | 120        | 5774.959693              | 5725-5850   | PASS        |
| -10                            | 120        | 5774.949330              | 5725-5850   | PASS        |
| -20                            | 120        | 5774.980001              | 5725-5850   | PASS        |

| Environment Temperature ( °C ) | Volage (V) | Measured Frequency (MHz) | limit Range | Test Result |
|--------------------------------|------------|--------------------------|-------------|-------------|
| 20                             | 108        | 5774.973970              | 5725-5850   | PASS        |
|                                | 120        | 5774.967300              | 5725-5850   | PASS        |
|                                | 132        | 5774.968985              | 5725-5850   | PASS        |