## 6.4. POWER SPECTRAL DENSITY

**LIMITS**

| CFR 47 FCC Part15, Subpart E<br>ISED RSS-247 | | |
|---|---|---|
| Test Item | Limit | Frequency Range (MHz) |
| Power Spectral Density | For FCC: Other than Mobile and portable:17dBm/MHz<br>Mobile and portable:11dBm/MHz | 5150-5250 |
| | For RSS:10dBm/MHz | |
| | 11dBm/MHz | 5250-5350 |
| | 11dBm/MHz | For FCC:5470-5725<br>For IC:5470-5600<br>5650-5725 |
| | 30dBm/500kHz | 5725-5850 |

Note: If transmitting antennas of directional gain greater than 6 dBi are used, the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

## TEST PROCEDURE

Connect the UUT to the spectrum analyser and use the following settings:

For U-NII-1, U-NII-2A and U-NII-2C band:

| | |
|---|---|
| Center Frequency | The center frequency of the channel under test |
| Detector | RMS |
| RBW | 1MHz |
| VBW | ≥3 × RBW |
| Span | Encompass the entire emissions bandwidth (EBW) of the signal |
| Trace | Max hold |
| Sweep time | Auto |

For U-NII-3:

| | |
|---|---|
| Center Frequency | The center frequency of the channel under test |
| Detector | RMS |
| RBW | 500kHz |
| VBW | ≥3 × RBW |
| Span | Encompass the entire emissions bandwidth (EBW) of the signal |
| Trace | Max hold |
| Sweep time | Auto |

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

## TEST SETUP

## RESULTS

### 6.4.1. UNII-1 BAND

| Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm) | | Limit (dBm) | EIRP (dBm) | EIRP Limit (dBm) |
|---|---|---|---|---|---|---|---|
| | | | Single | Total | | | |
| a | 5180 | 1 | 3.621 | 6.350 | 11 | 6.350 | 10 |
| | | 2 | 3.040 | | | | |
| | 5200 | 1 | 3.279 | 6.023 | 11 | 6.023 | 10 |
| | | 2 | 2.729 | | | | |
| | 5240 | 1 | 3.496 | 6.243 | 11 | 6.243 | 10 |
| | | 2 | 2.952 | | | | |
| ac HT20 | 5180 | 1 | 2.684 | 5.383 | 11 | 5.383 | 10 |
| | | 2 | 2.038 | | | | |
| | 5200 | 1 | 2.181 | 4.793 | 11 | 4.793 | 10 |
| | | 2 | 1.344 | | | | |
| | 5240 | 1 | 2.287 | 4.981 | 11 | 4.981 | 10 |
| | | 2 | 1.629 | | | | |
| ac HT40 | 5190 | 1 | -0.262 | 2.602 | 11 | 2.602 | 10 |
| | | 2 | -0.56 | | | | |
| | 5230 | 1 | -0.77 | 2.083 | 11 | 2.083 | 10 |
| | | 2 | -1.091 | | | | |
| ac HT80 | 5210 | 1 | -3.932 | -4.013 | 11 | -4.013 | 10 |
| | | 2 | -7.116 | | | | |

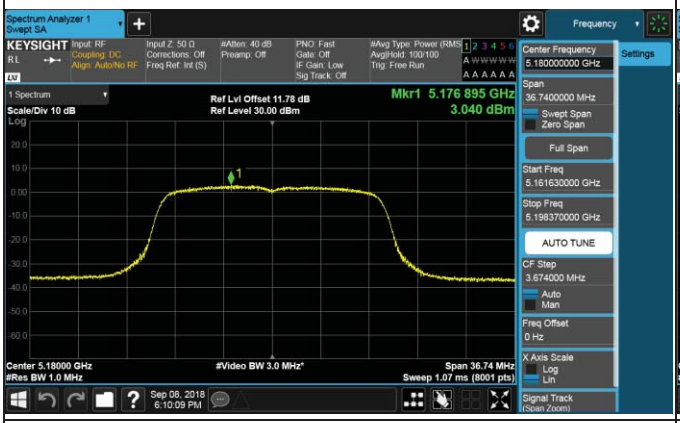
Note: 1.PSD= TEST PLOT Value + 10 log (1/x), where x is the duty cycle.
2.About correction Factor please refer to section 6.1.
3.The EUT only support SISO mode for 802.11a, all the antenna had been tested, but only the worst data recorded in the report.

## TEST PLOT

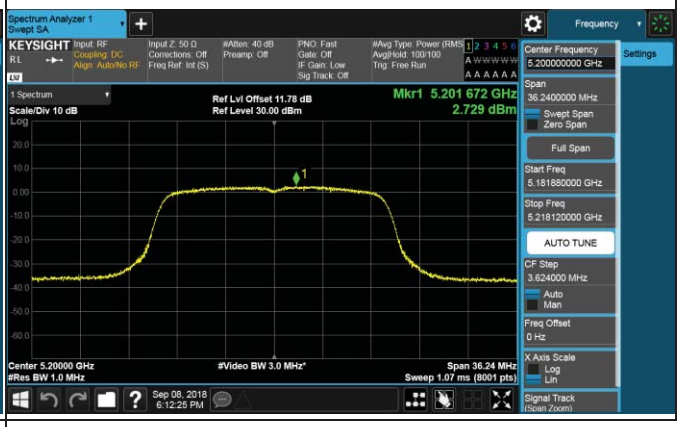
### 802.11a

**ANTENNA 2**

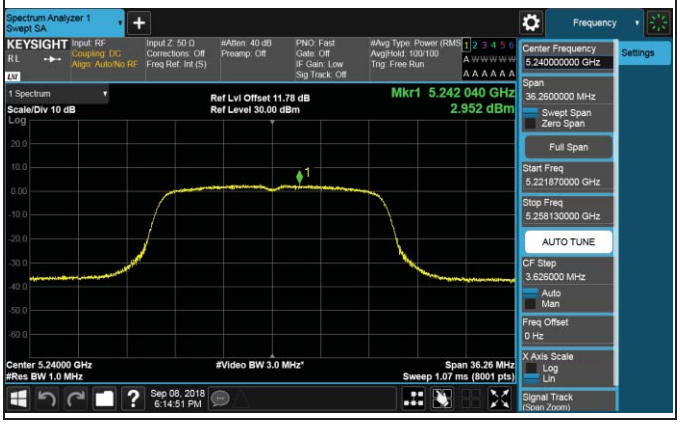
**5180MHz**




**5200MHz**

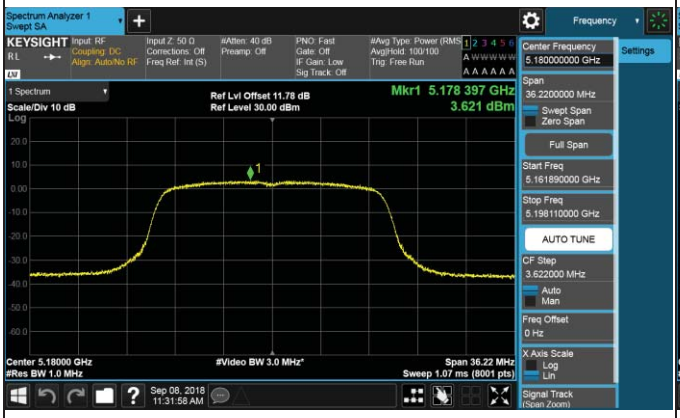



**5240MHz**

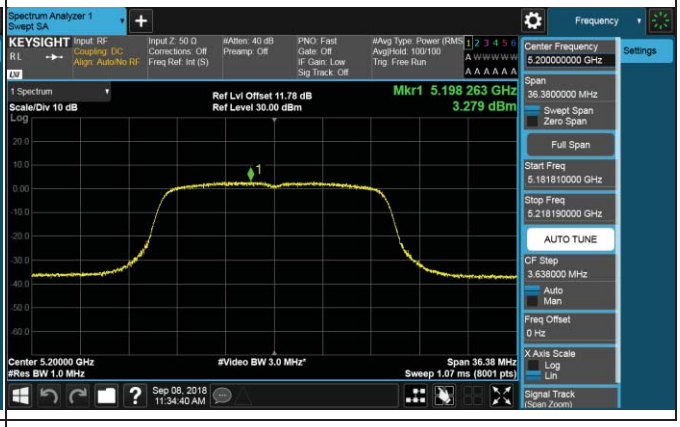


## ANTENNA 1

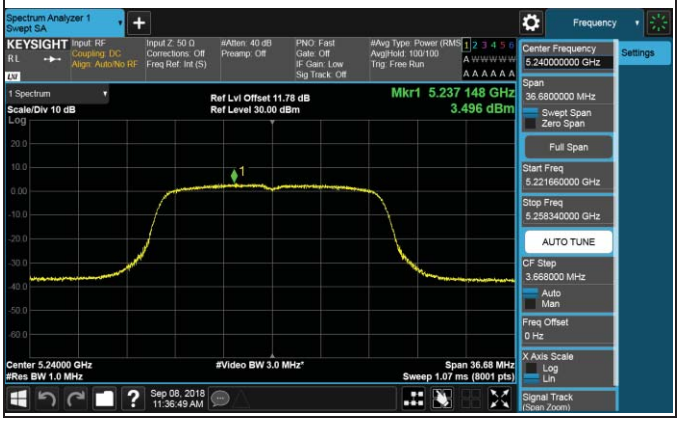
### 5180MHz



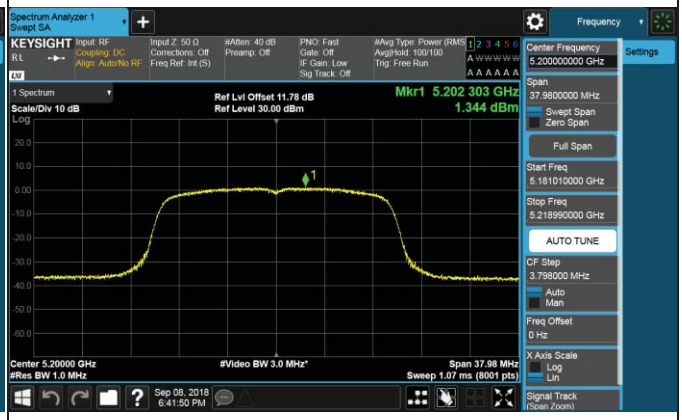
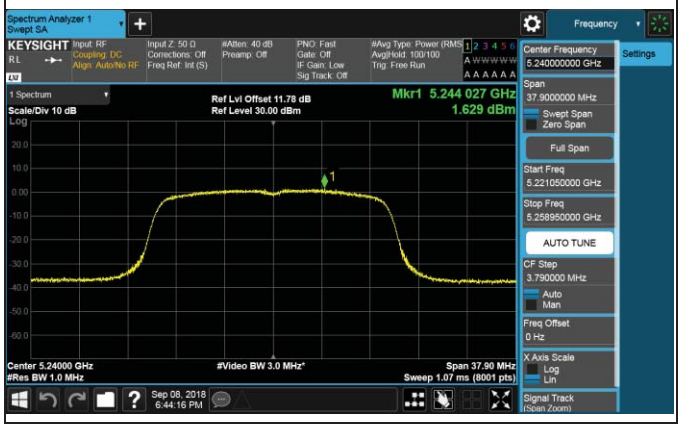

### 5200MHz




### 5240MHz

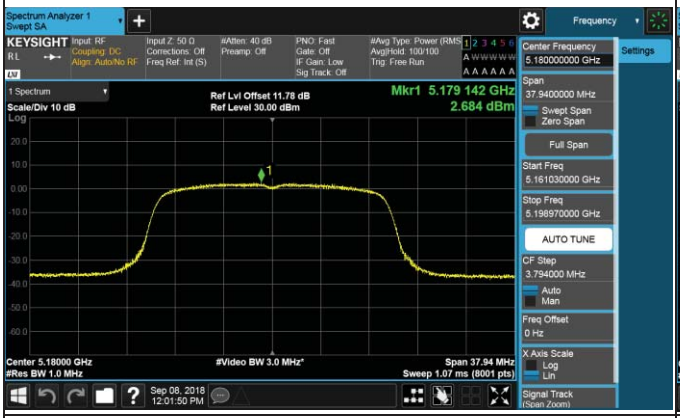


**802.11ac HT20**

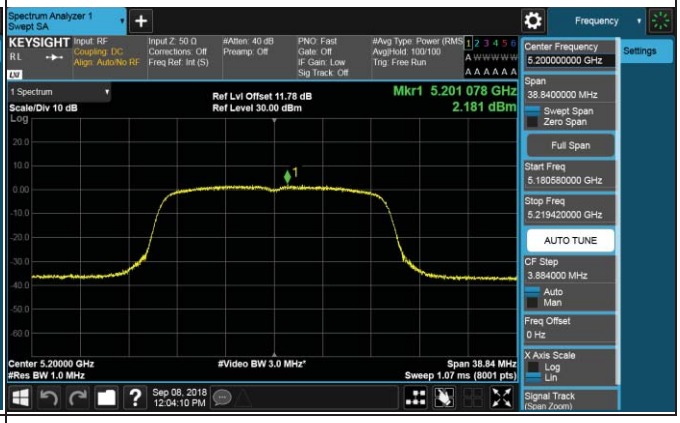
| ANTENNA 2 | |
|---|---|
| **5180MHz** | **5200MHz** |
|  |  |
| **5240MHz** | |
|  | |

## ANTENNA 1

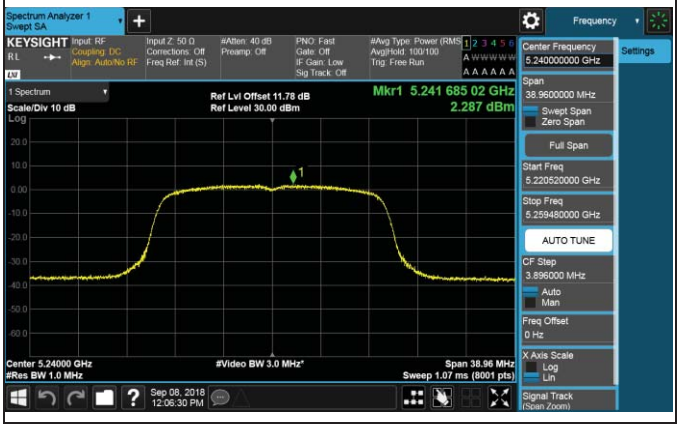
### 5180MHz



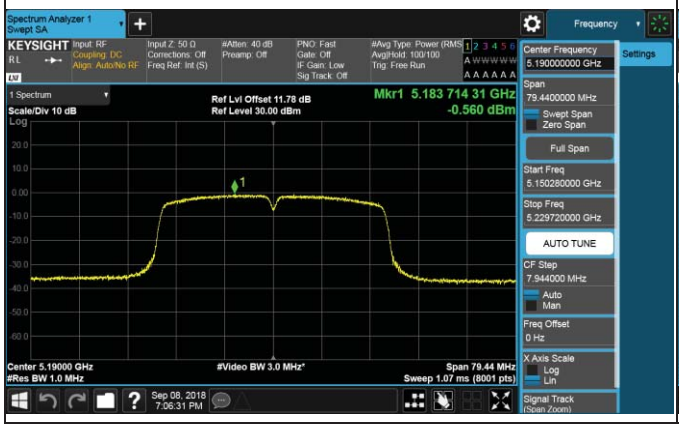
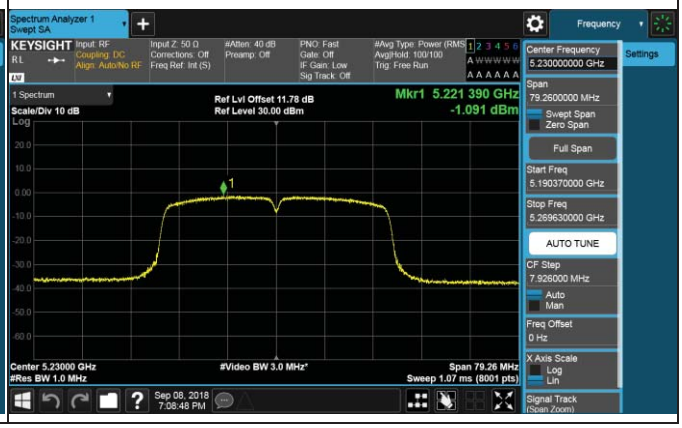

### 5200MHz

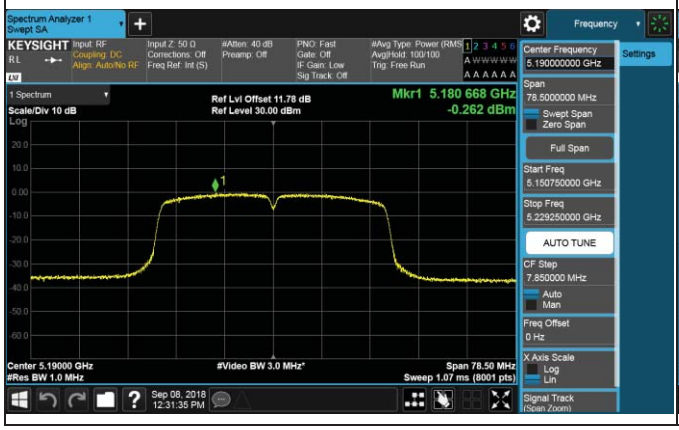
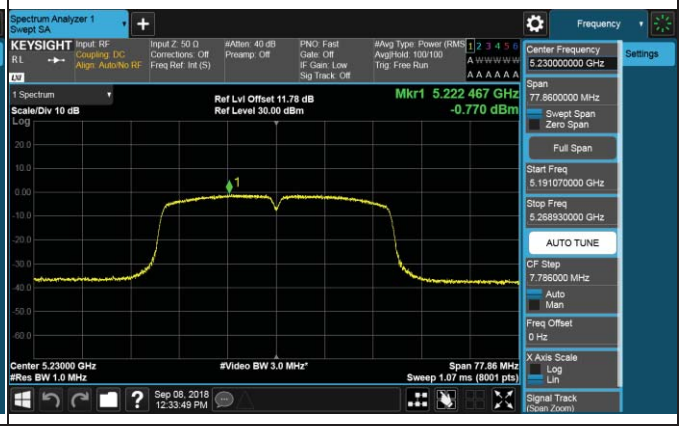



### 5240MHz

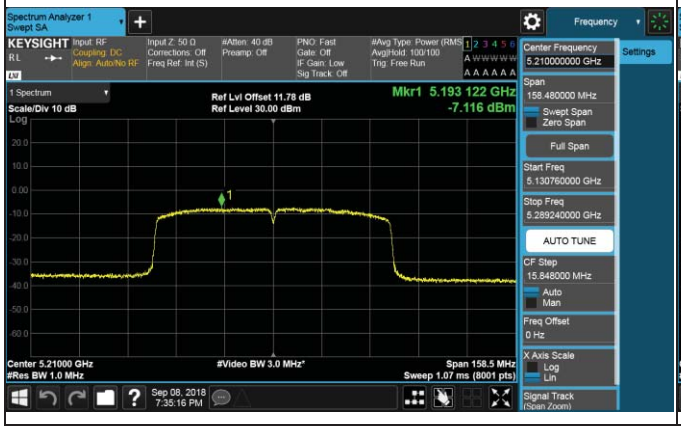
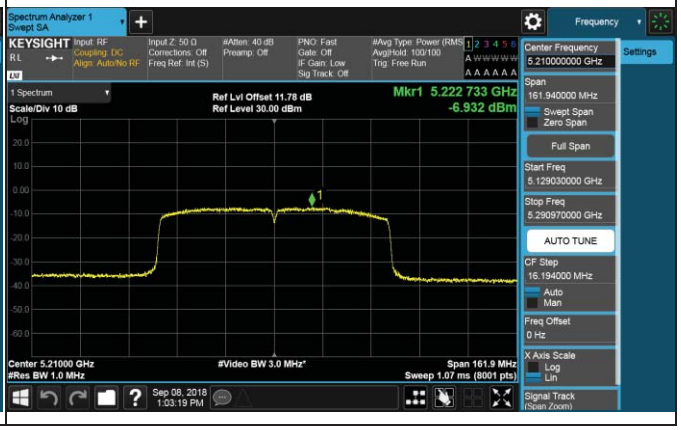


**802.11ac HT40**

| ANTENNA 2 | |
|---|---|
| 5190MHz | 5230MHz |
|  |  |

| ANTENNA 1 | |
|---|---|
| 5190MHz | 5230MHz |
|  |  |

**802.11ac HT80**

| ANTENNA 2 | ANTENNA 1 |
|---|---|
| 5210MHz | 5210MHz |
|  |  |

### 6.4.2. UNII-2A BAND

| Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm) | | Limit (dBm) | EIRP (dBm) | EIRP Limit (dBm) |
|---|---|---|---|---|---|---|---|
| | | | Single | Total | | | |
| a | 5260 | 1 | 3.260 | 6.188 | 11 | 6.188 | 11 |
| | | 2 | 3.093 | | | | |
| | 5280 | 1 | 3.987 | 6.677 | 11 | 6.677 | 11 |
| | | 2 | 3.32 | | | | |
| | 5320 | 1 | 3.743 | 6.630 | 11 | 6.630 | 11 |
| | | 2 | 3.493 | | | | |
| ac HT20 | 5260 | 1 | 2.045 | 4.797 | 11 | 4.797 | 11 |
| | | 2 | 1.513 | | | | |
| | 5280 | 1 | 2.588 | 5.269 | 11 | 5.269 | 11 |
| | | 2 | 1.902 | | | | |
| | 5320 | 1 | 2.902 | 5.754 | 11 | 5.754 | 11 |
| | | 2 | 2.580 | | | | |
| ac HT40 | 5270 | 1 | -0.810 | 1.985 | 11 | 1.985 | 11 |
| | | 2 | -1.252 | | | | |
| | 5310 | 1 | -0.388 | 2.384 | 11 | 2.384 | 11 |
| | | 2 | -0.878 | | | | |
| ac HT80 | 5290 | 1 | -6.031 | -3.055 | 11 | -3.055 | 11 |
| | | 2 | -6.099 | | | | |

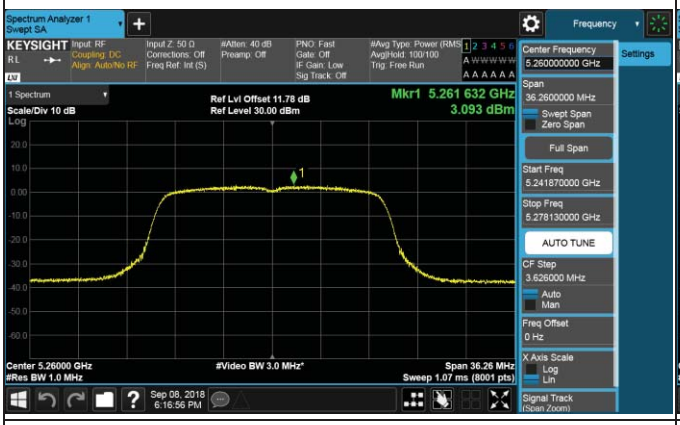
Note: 1.PSD= TEST PLOT Value + 10 log (1/x), where x is the duty cycle.
2.About correction Factor please refer to section 6.1.
3.The EUT only support SISO mode for 802.11a, all the antenna had been tested, but only the worst data recorded in the report.

## TEST PLOT

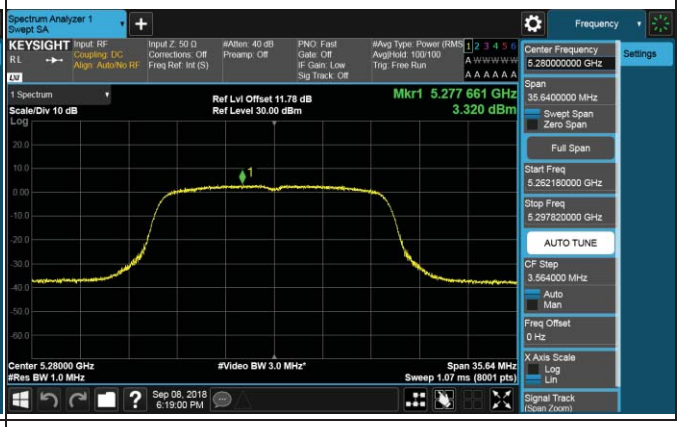
### 802.11a

**ANTENNA 2**

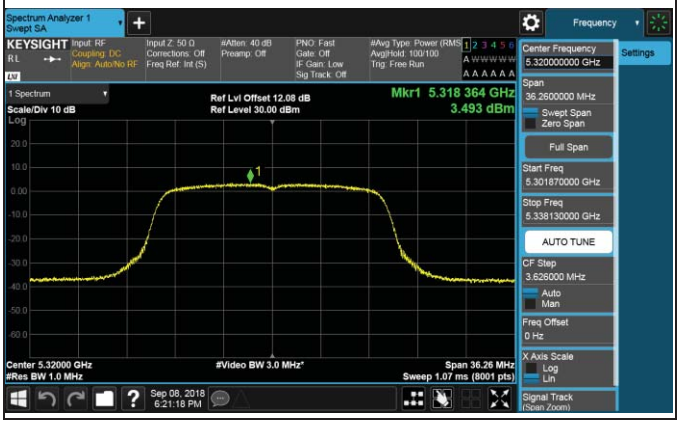
**5260MHz**




**5280MHz**

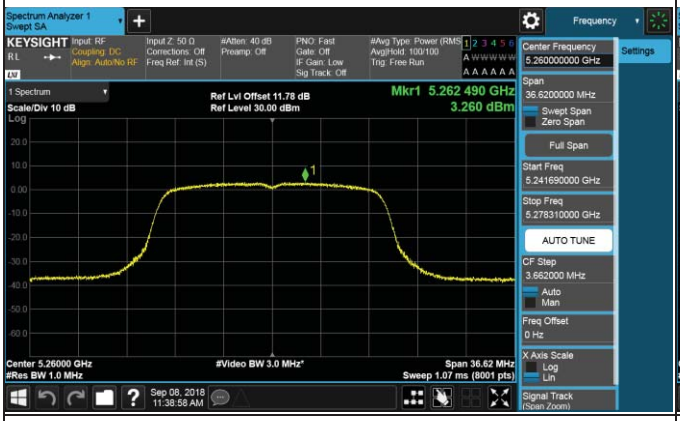



**5320MHz**

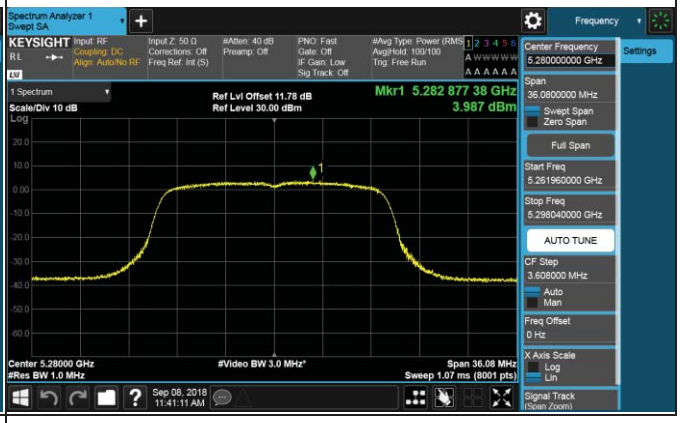


## ANTENNA 1

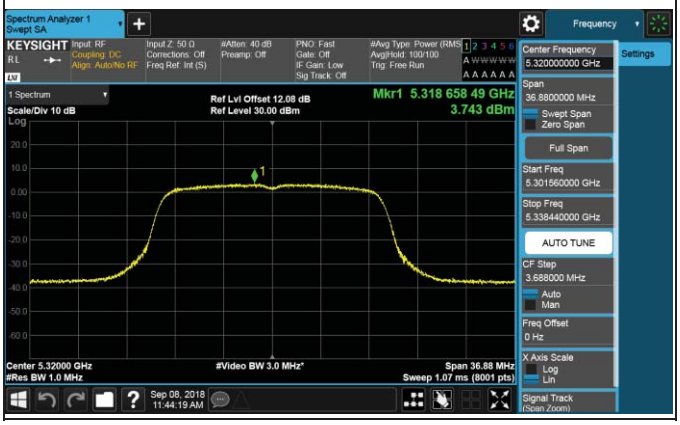
### 5260MHz



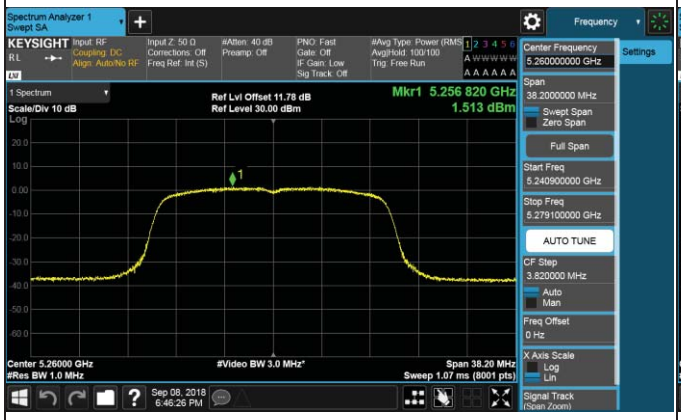
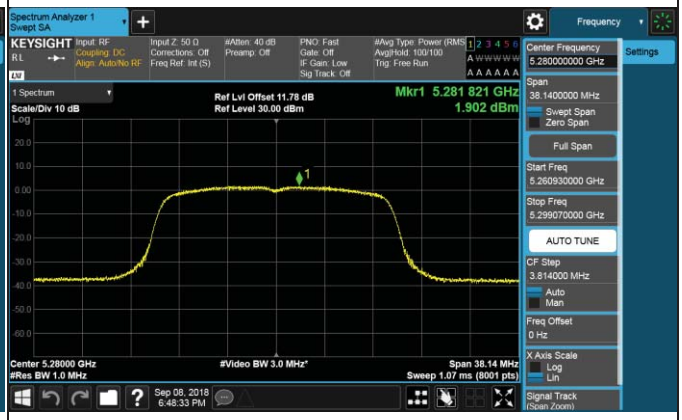
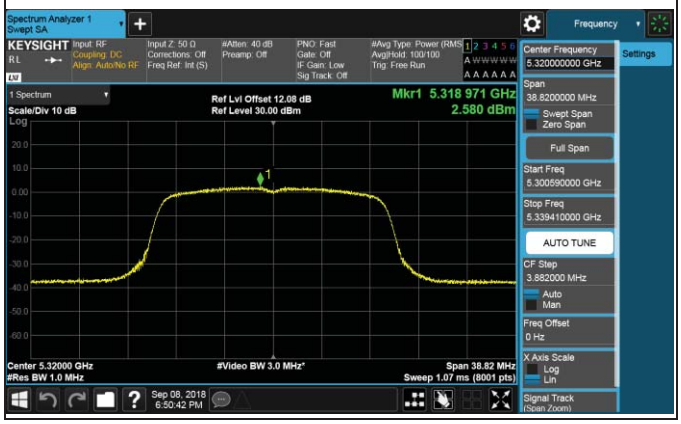

### 5280MHz




### 5320MHz



**802.11ac HT20**

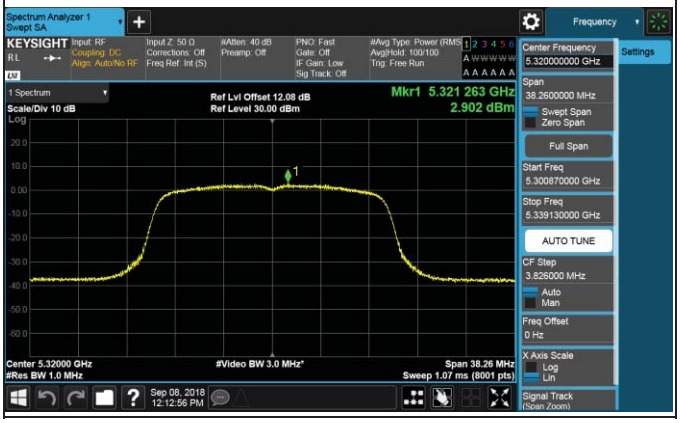
| ANTENNA 2 | |
|---|---|
| 5260MHz | 5280MHz |
|  |  |
| 5320MHz | |
|  | |

## ANTENNA 1

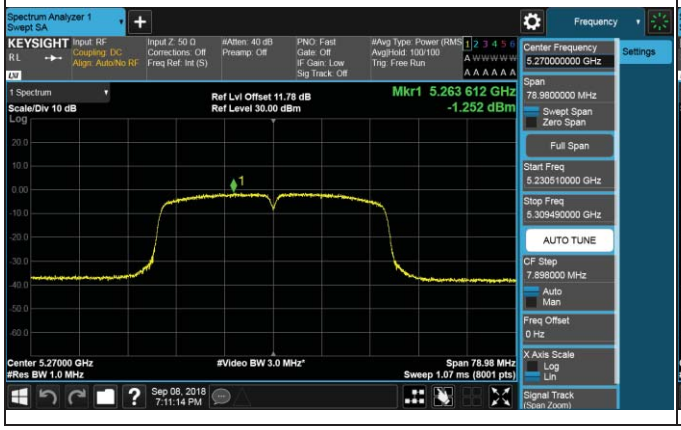
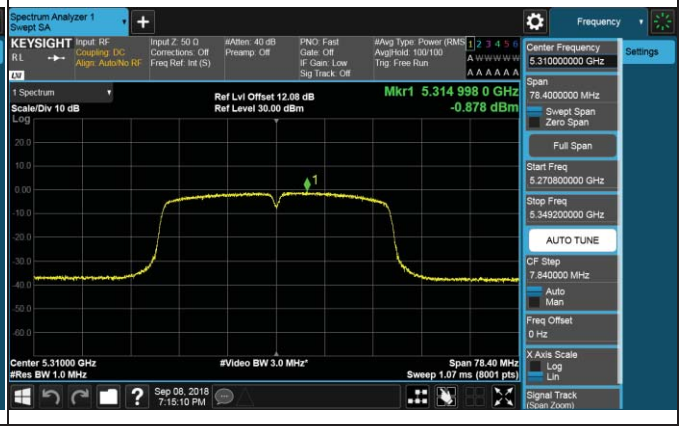
### 5260MHz

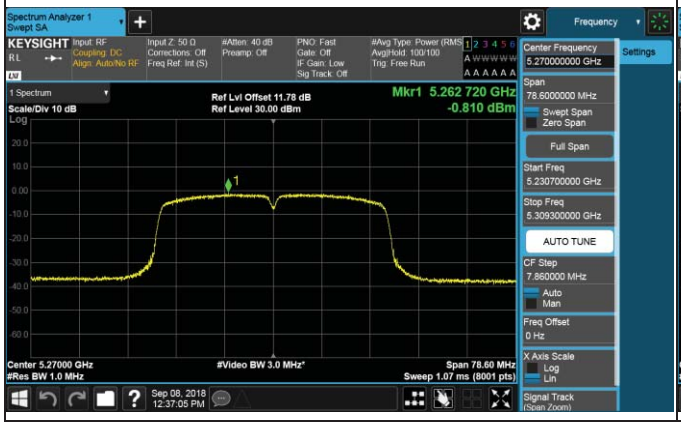
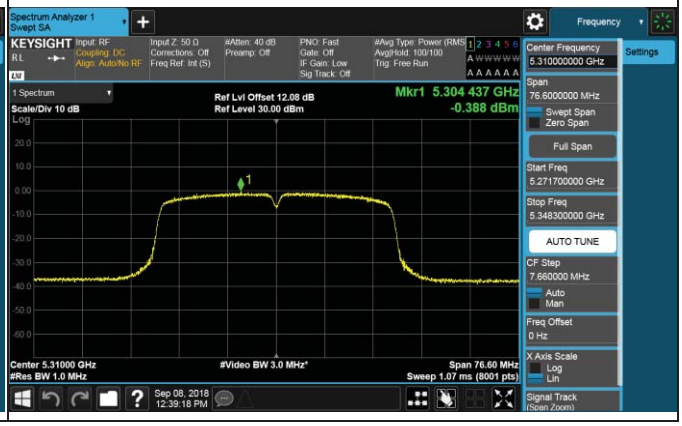

### 5280MHz


### 5320MHz

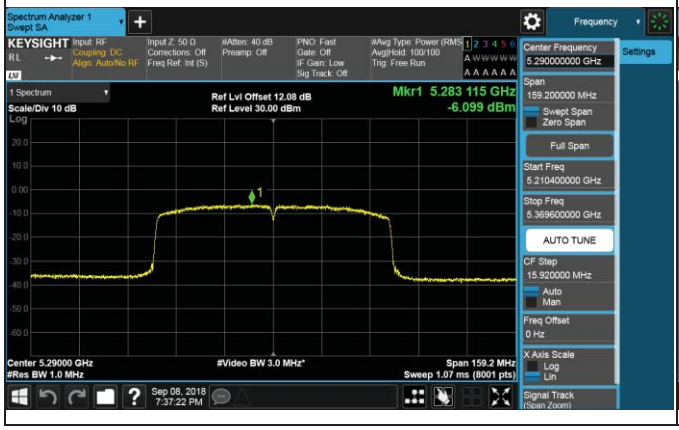
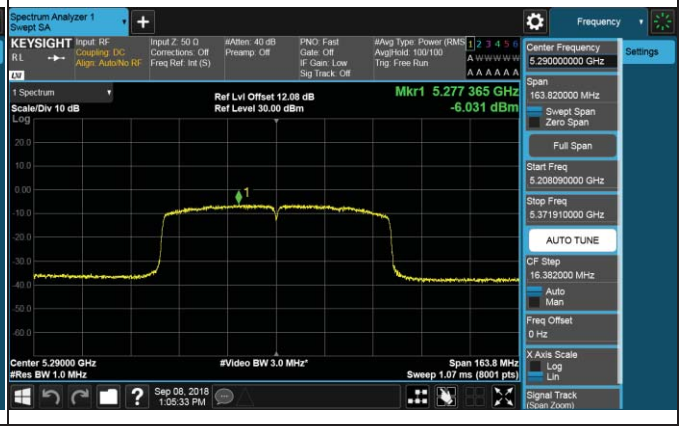


**802.11ac HT40**

| ANTENNA 2 | |
|---|---|
| **5270MHz** | **5310MHz** |
|  |  |

| ANTENNA 1 | |
|---|---|
| **5270MHz** | **5310MHz** |
|  |  |

**802.11ac HT80**

| ANTENNA 2 | ANTENNA 1 |
|---|---|
| 5290MHz | 5290MHz |
|  |  |

### 6.4.3. UNII-2C BAND

| Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm) | | Limit (dBm) | EIRP (dBm) | EIRP Limit (dBm) |
|---|---|---|---|---|---|---|---|
| | | | Single | Total | | | |
| a | 5500 | 1 | 4.411 | 7.152 | 11 | 7.152 | 11 |
| | | 2 | 3.855 | | | | |
| | 5580 | 1 | 5.344 | 8.1419 | 11 | 8.1419 | 11 |
| | | 2 | 4.906 | | | | |
| | 5700 | 1 | 5.483 | 8.216 | 11 | 8.216 | 11 |
| | | 2 | 4.909 | | | | |
| | 5720 | 1 | 5.523 | 8.304 | 11 | 8.304 | 11 |
| | | 2 | 5.052 | | | | |
| ac HT20 | 5500 | 1 | 2.815 | 5.666 | 11 | 5.666 | 11 |
| | | 2 | 2.490 | | | | |
| | 5580 | 1 | 3.912 | 6.788 | 11 | 6.788 | 11 |
| | | 2 | 3.640 | | | | |
| | 5700 | 1 | 4.500 | 7.025 | 11 | 7.025 | 11 |
| | | 2 | 3.468 | | | | |
| | 5720 | 1 | 4.022 | 6.800 | 11 | 6.800 | 11 |
| | | 2 | 3.545 | | | | |
| ac HT40 | 5510 | 1 | 0.179 | 2.885 | 11 | 2.885 | 11 |
| | | 2 | -0.453 | | | | |
| | 5550 | 1 | 0.444 | 3.312 | 11 | 3.312 | 11 |
| | | 2 | 0.155 | | | | |
| | 5670 | 1 | 1.905 | 4.824 | 11 | 4.824 | 11 |
| | | 2 | 1.720 | | | | |
| | 5710 | 1 | 2.407 | 4.988 | 11 | 4.988 | 11 |
| | | 2 | 1.502 | | | | |
| ac HT80 | 5530 | 1 | -4.899 | -2.198 | 11 | -2.198 | 11 |
| | | 2 | -5.541 | | | | |
| | 5610 | 1 | -5.723 | -2.794 | 11 | -2.794 | 11 |
| | | 2 | -5.887 | | | | |
| | 5690 | 1 | -3.378 | -0.758 | 11 | -0.758 | 11 |
| | | 2 | -4.197 | | | | |

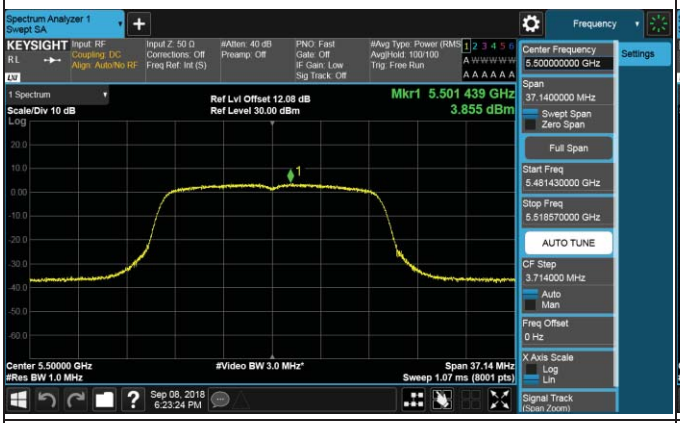
Note: 1.PSD= TEST PLOT Value + 10 log (1/x), where x is the duty cycle.
2.About correction Factor please refer to section 6.1.
3.The EUT only support SISO mode for 802.11a, all the antenna had been tested, but only the worst data recorded in the report.

## TEST PLOT

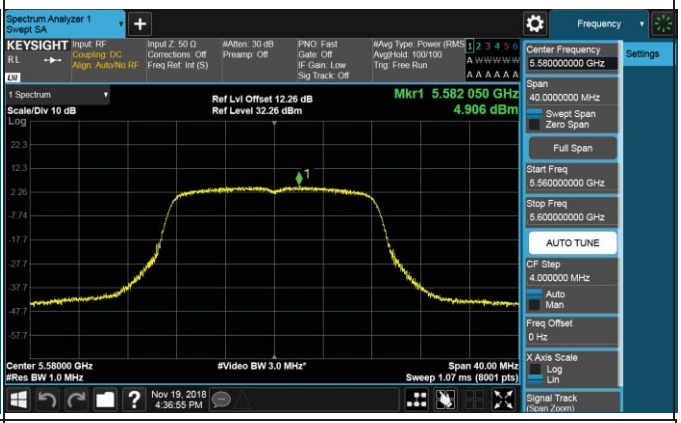
### 802.11a

**ANTENNA 2**

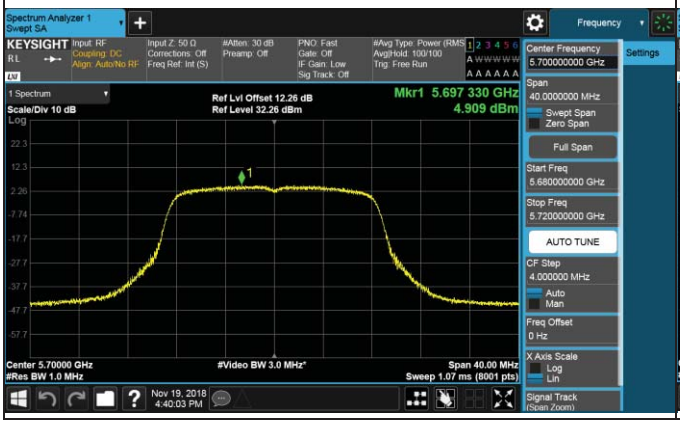
**5500MHz**



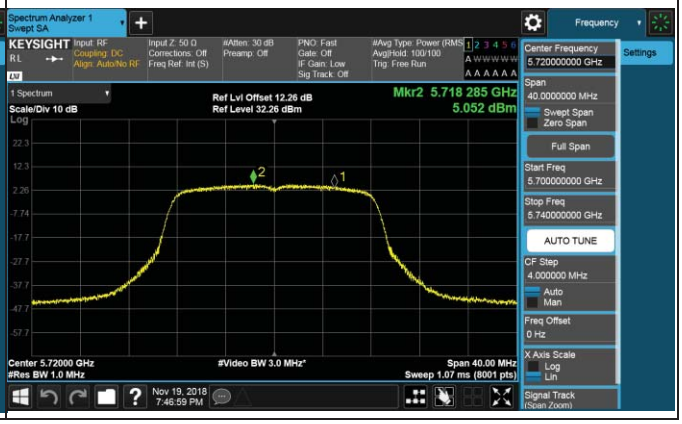

**5580MHz**




**5700MHz**

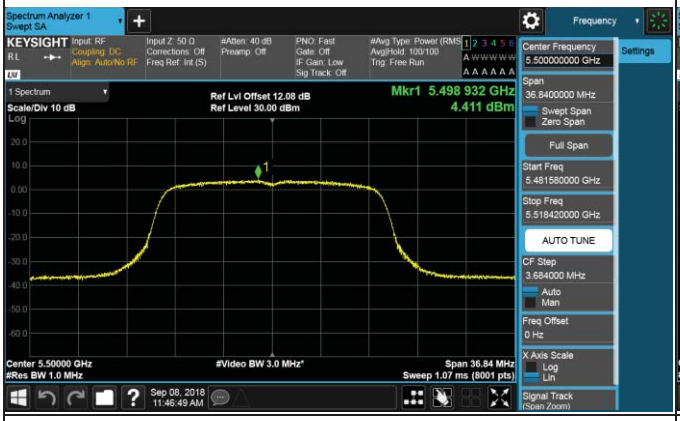



**5720MHz**

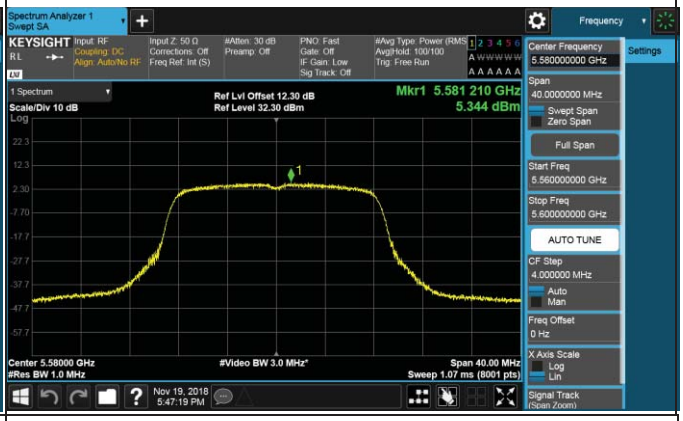


## ANTENNA 1

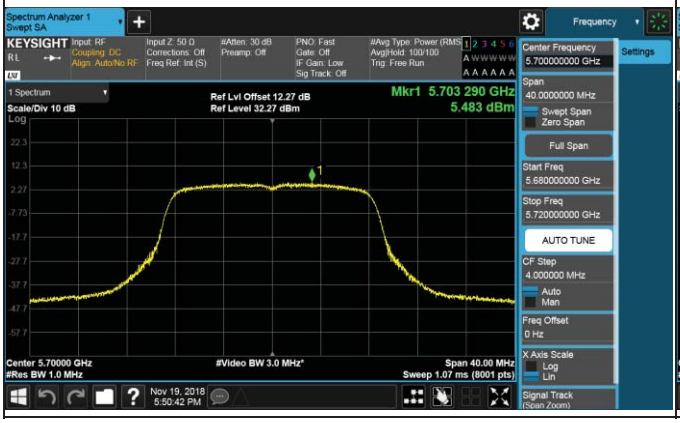
### 5500MHz



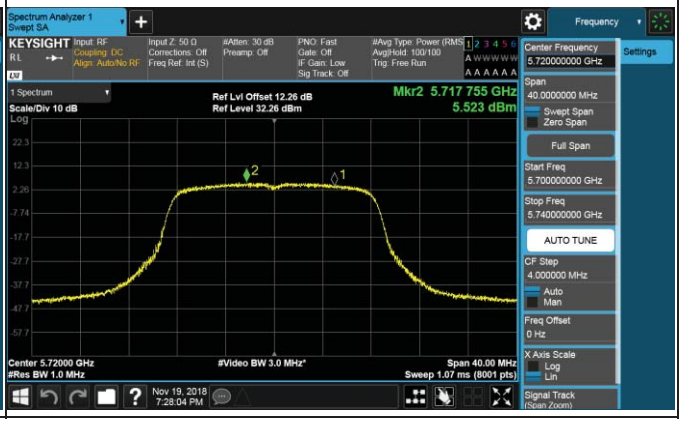

### 5580MHz



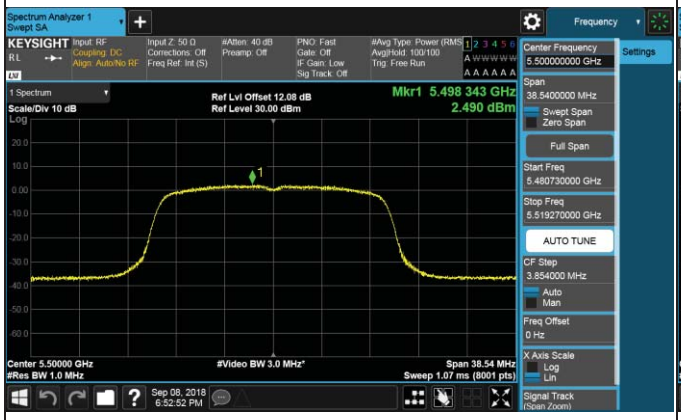
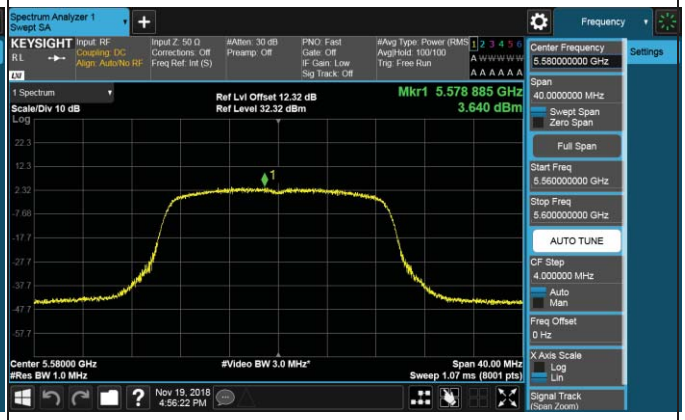
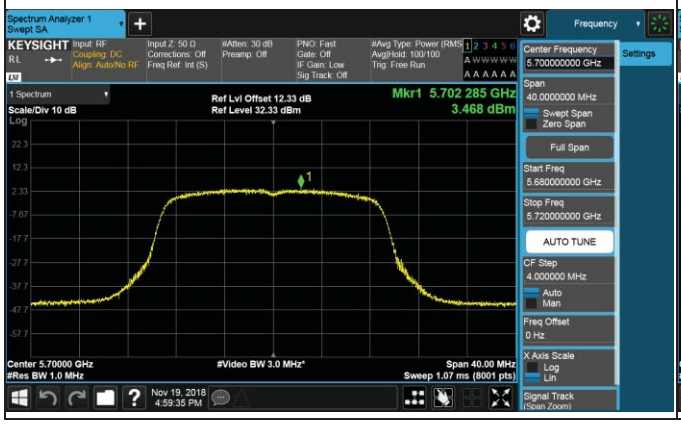
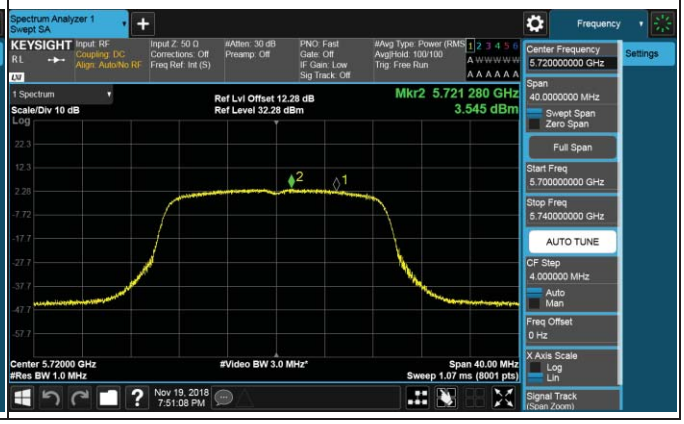

### 5700MHz




### 5720MHz

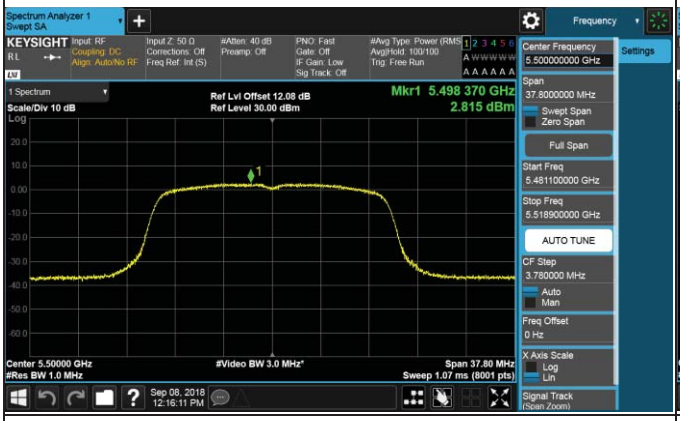


**802.11ac HT20**

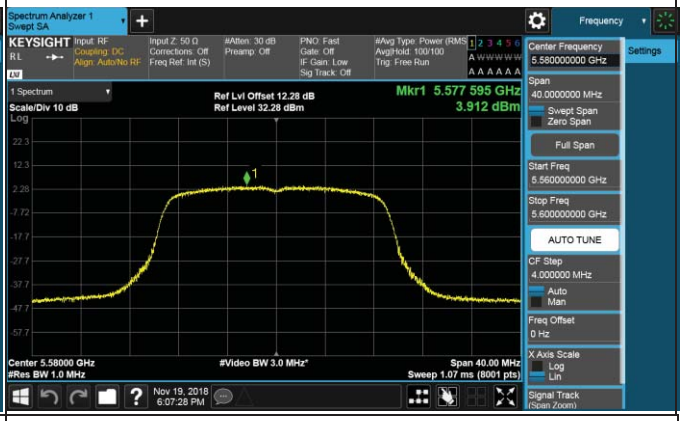
| ANTENNA 2 | |
|---|---|
| 5500MHz | 5580MHz |
|  |  |
| 5700MHz | 5720MHz |
|  |  |

## ANTENNA 1

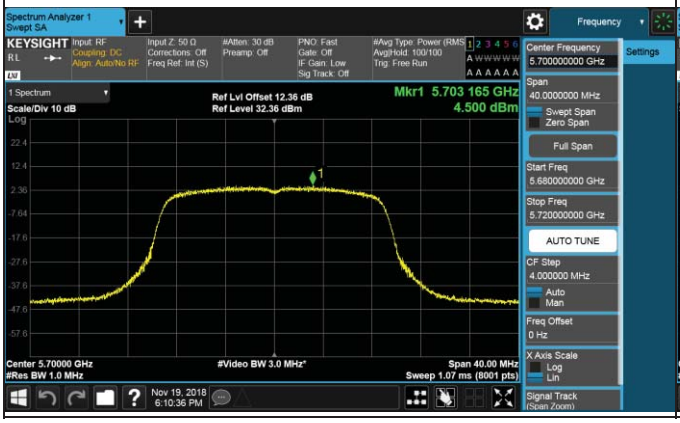
### 5500MHz



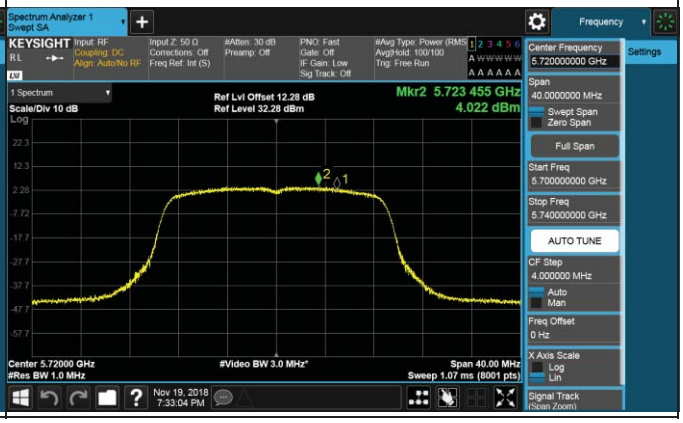

### 5580MHz



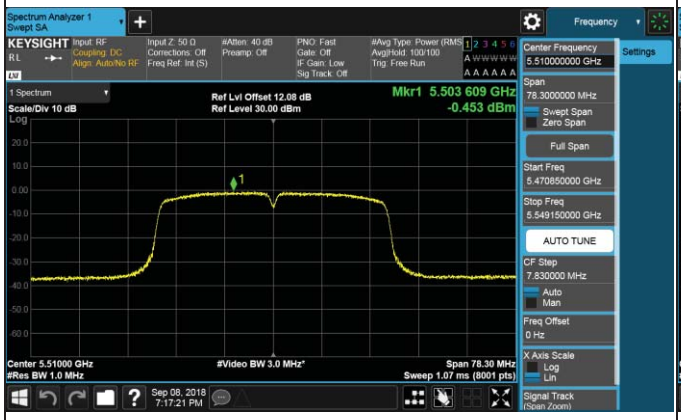
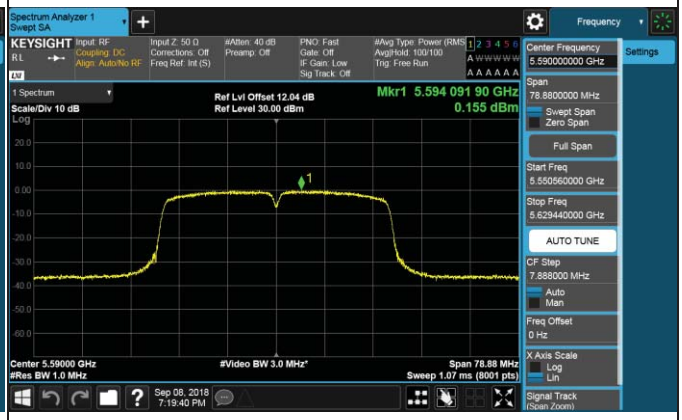
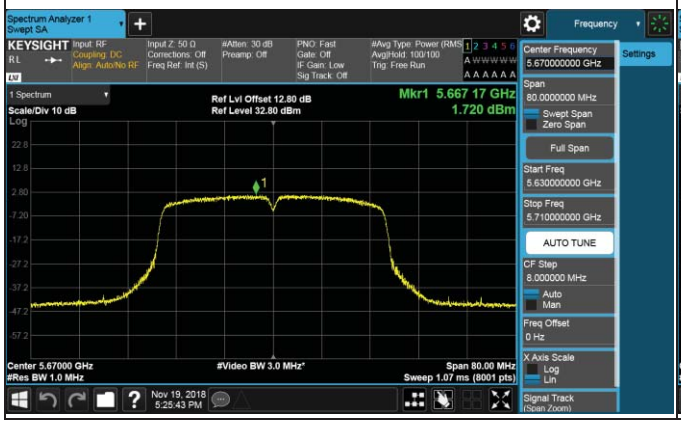

### 5700MHz




### 5720MHz

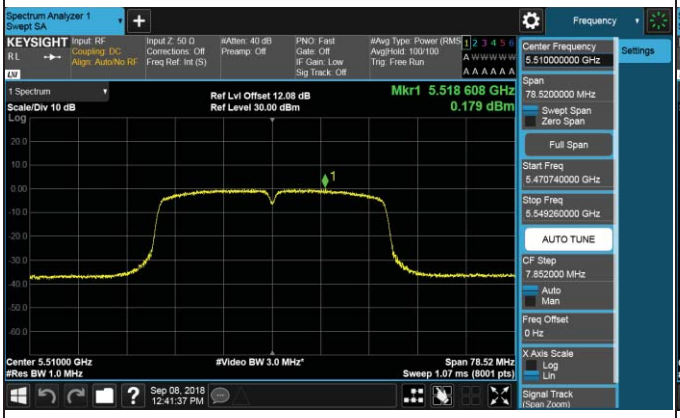


**802.11ac HT40**

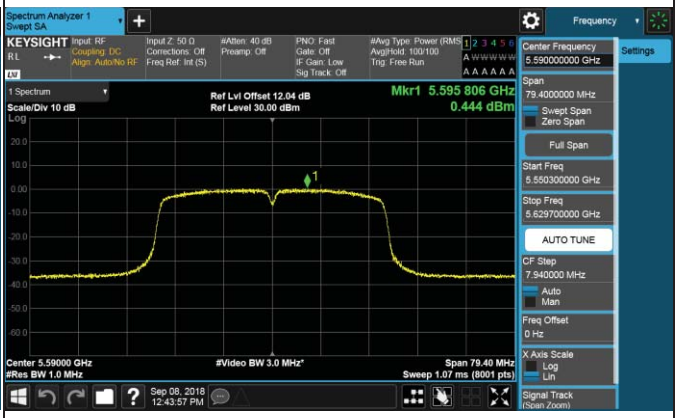
| ANTENNA 2 | |
|---|---|
| 5510MHz | 5550MHz |
|  |  |
| 5670MHz | 5710MHz |
|  |  |

## ANTENNA 1

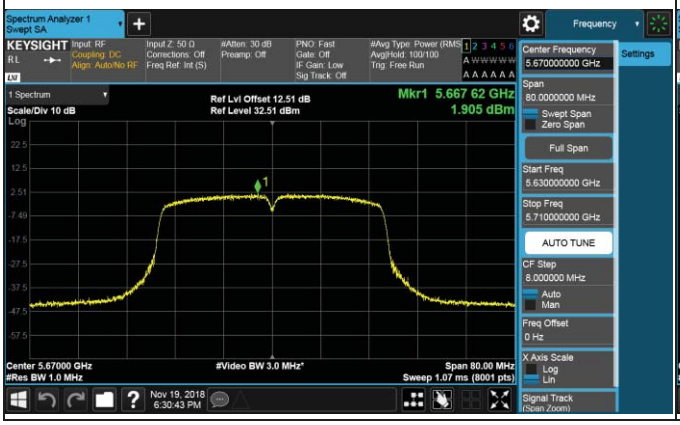
### 5510MHz



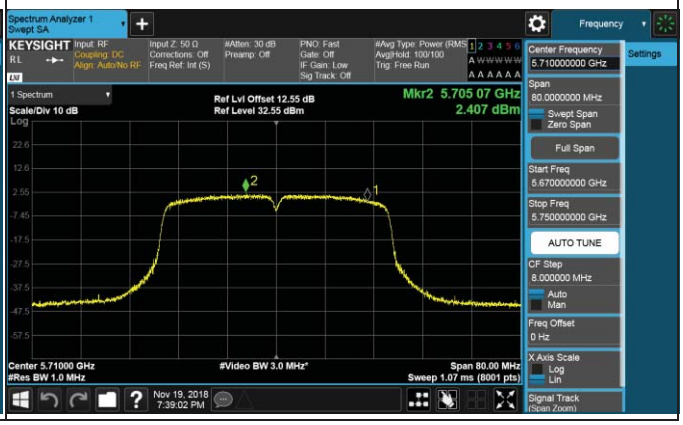

### 5550MHz



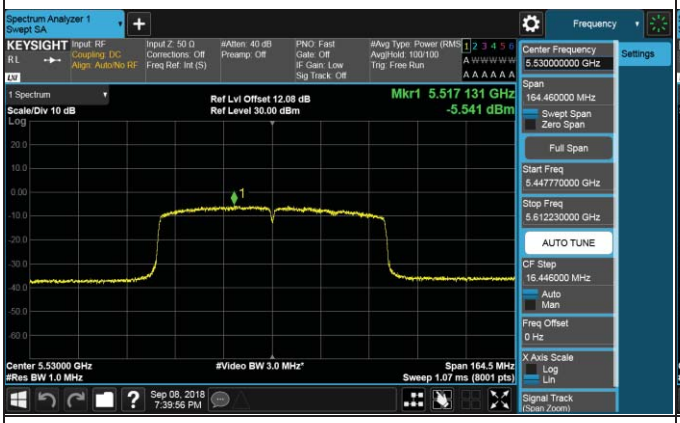
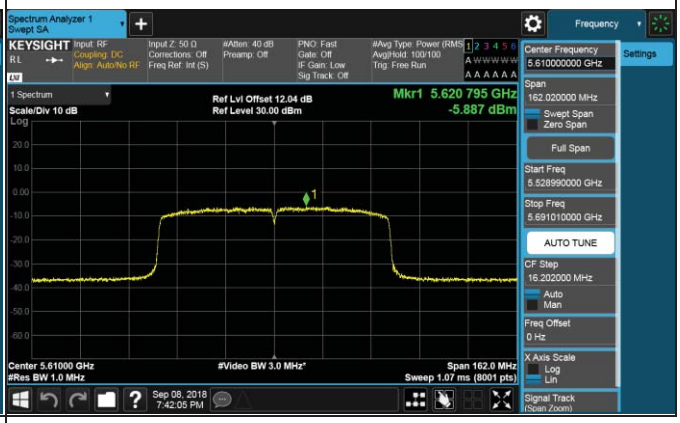
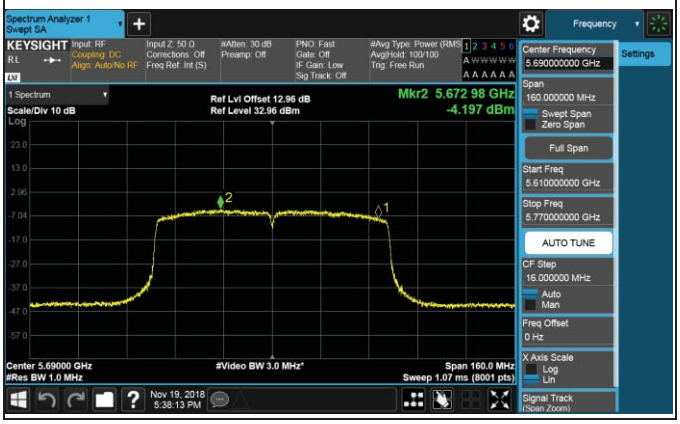

### 5670MHz




### 5710MHz



**802.1ac HT80**

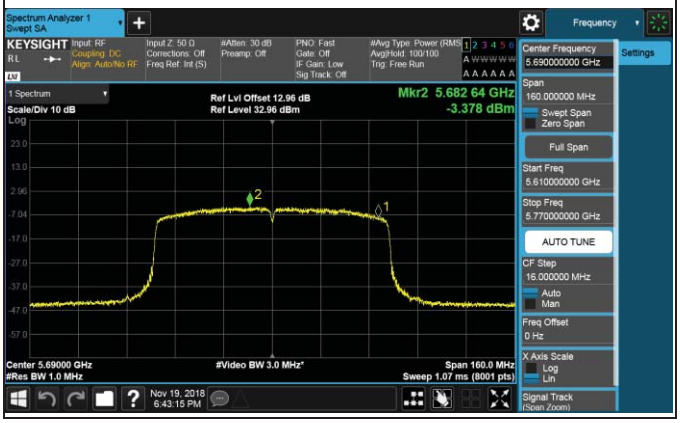
| ANTENNA 2 | |
|---|---|
| 5530MHz | 5610MHz |
|  |  |
| 5690MHz | |
|  | |

## ANTENNA 1

### 5530MHz


### 5610MHz


### 5690MHz



### 6.4.4. UNII-3 BAND

| Mode | Frequency (MHz) | Antenna | Conducted PSD (dBm) | | Limit (dBm) | EIRP (dBm) | EIRP Limit (dBm) |
|---|---|---|---|---|---|---|---|
| | | | Single | Total | | | |
| a | 5745 | 1 | 1586 | 4.443 | 30 | 4.443 | 30 |
| | | 2 | 1.273 | | | | |
| | 5785 | 1 | 1.004 | 4.016 | 30 | 4.016 | 30 |
| | | 2 | 1.007 | | | | |
| | 5825 | 1 | 0.879 | 3.668 | 30 | 3.668 | 30 |
| | | 2 | 0.424 | | | | |
| ac HT20 | 5745 | 1 | -0.284 | 2.851 | 30 | 2.851 | 30 |
| | | 2 | -0.038 | | | | |
| | 5785 | 1 | 0.112 | 2.901 | 30 | 2.901 | 30 |
| | | 2 | -0.343 | | | | |
| | 5825 | 1 | -0.490 | 2.391 | 30 | 2.391 | 30 |
| | | 2 | -0.753 | | | | |
| ac HT40 | 5755 | 1 | -2.592 | 0.342 | 30 | 0.342 | 30 |
| | | 2 | -2.746 | | | | |
| | 5795 | 1 | -2.238 | 0.606 | 30 | 0.606 | 30 |
| | | 2 | -2.577 | | | | |
| ac HT80 | 5775 | 1 | -8.346 | -5.257 | 30 | -5.257 | 30 |
| | | 2 | -8.190 | | | | |

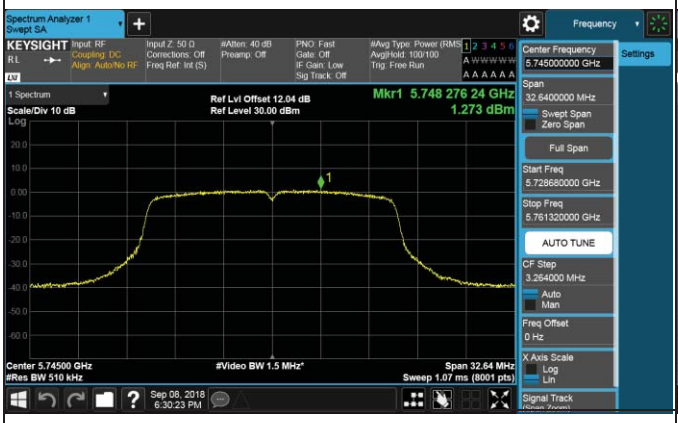
Note: 1.PSD= TEST PLOT Value + 10 log (1/x), where x is the duty cycle.
2.About correction Factor please refer to section 6.1.
3.The EUT only support SISO mode for 802.11a, all the antenna had been tested, but only the worst data recorded in the report.

## TEST PLOT

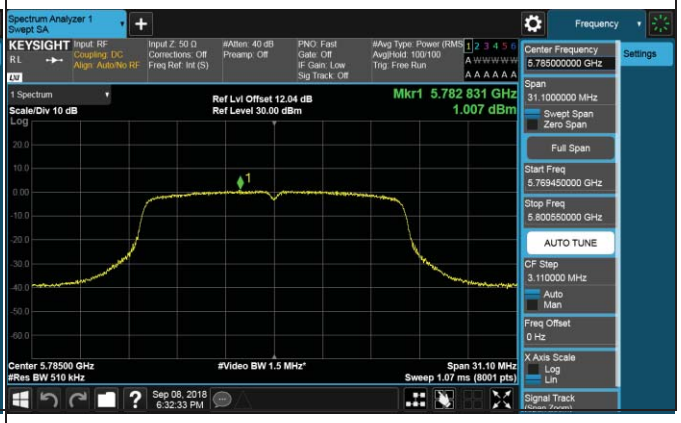
### 802.11a

**ANTENNA 2**

**5745MHz**




**5785MHz**



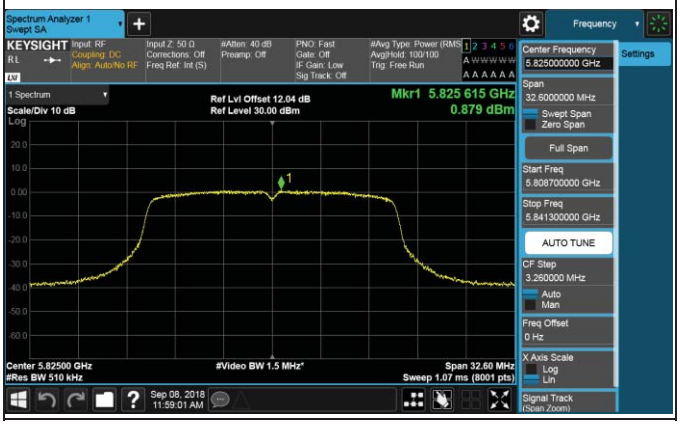

**5825MHz**

## ANTENNA 1

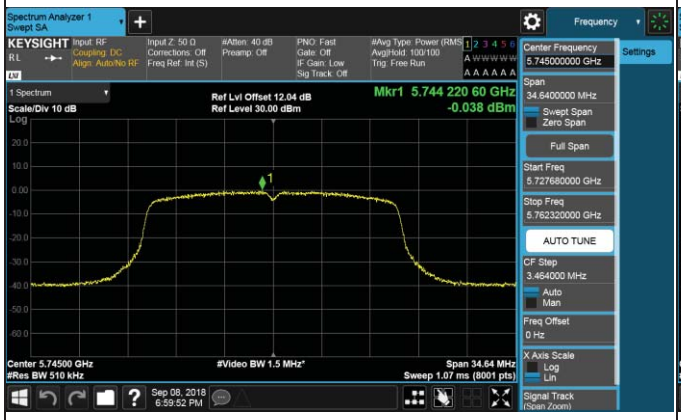
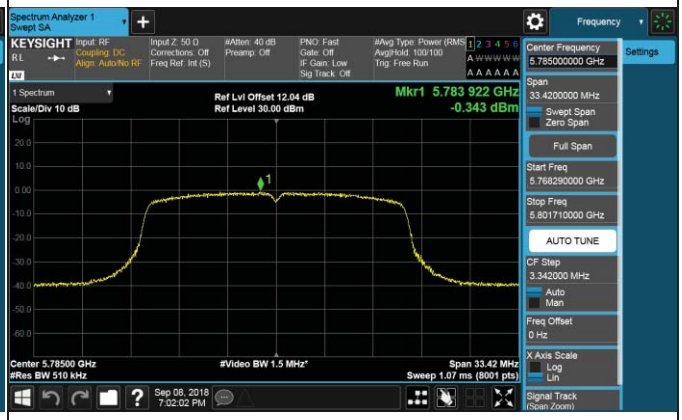
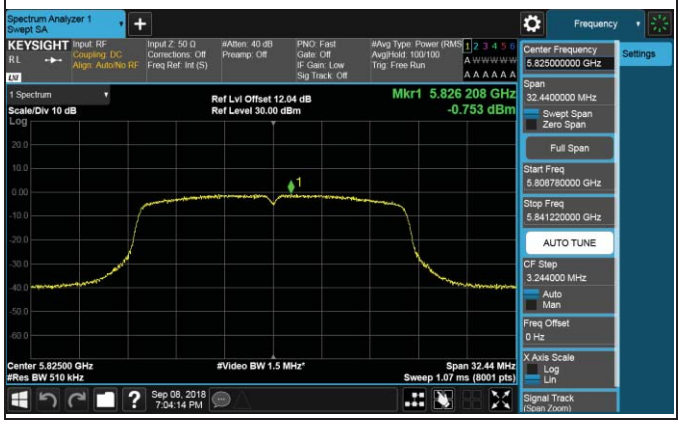
### 5745MHz


### 5785MHz


### 5825MHz



**802.11ac HT20**

| ANTENNA 2 | |
|---|---|
| 5745MHz | 5785MHz |
|  |  |
| 5825MHz | |
|  | |

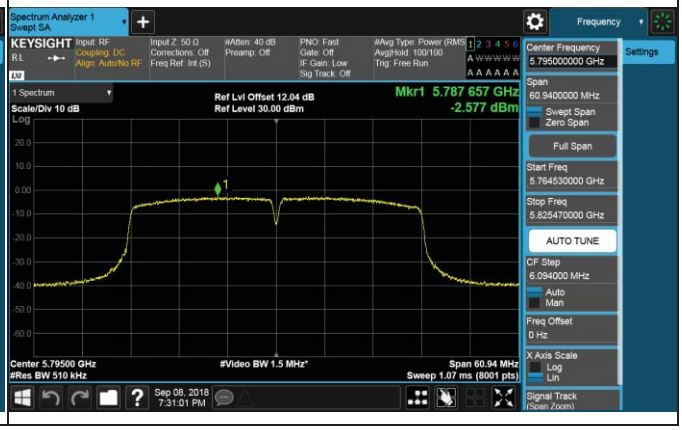
## ANTENNA 1

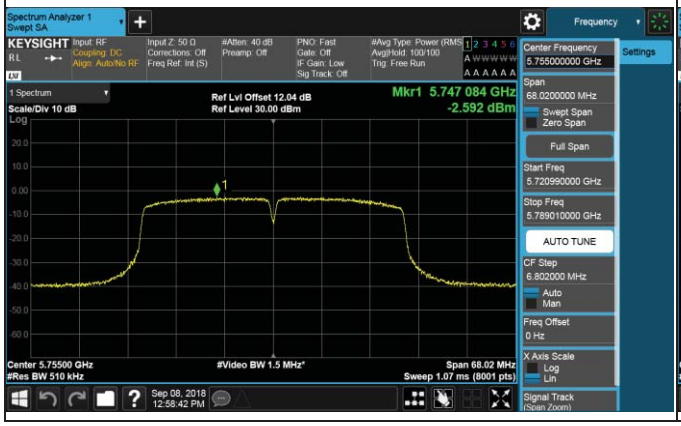
### 5745MHz


### 5785MHz

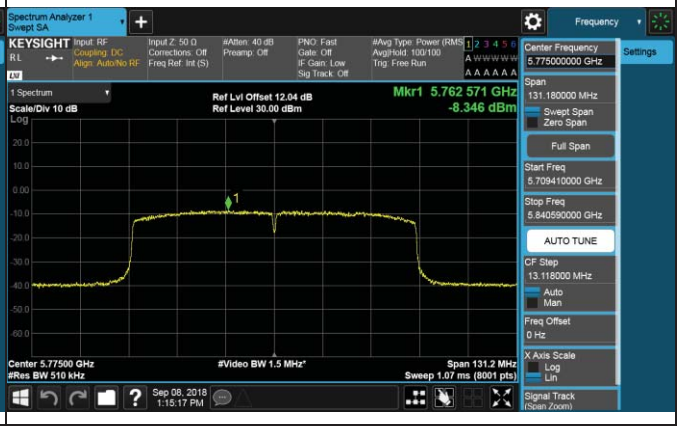

### 5825MHz

**802.11ac HT40**

| ANTENNA 2 | |
|---|---|
| **5755MHz** | **5795MHz** |
|  |  |

| ANTENNA 1 | |
|---|---|
| **5755MHz** | **5795MHz** |
|  |  |

**802.11ac HT80**

| ANTENNA 2 | ANTENNA 1 |
|---|---|
| 5775MHz | 5775MHz |
|  |  |

# 7. RADIATED TEST RESULTS

## LIMITS

Please refer to CFR 47 FCC §15.205, §15.209 and §15.407(b) (4)

Please refer to ISED RSS-GEN Clause 8.9

Radiation Disturbance Test Limit for FCC (Class B)(9kHz-1GHz)

| Frequency (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|---|---|---|
| 0.009~0.490 | 2400/F(kHz) | 300 |
| 0.490~1.705 | 24000/F(kHz) | 30 |
| 1.705~30.0 | 30 | 30 |
| 30~88 | 100 | 3 |
| 88~216 | 150 | 3 |
| 216~960 | 200 | 3 |
| 960~1000 | 500 | 3 |

Note: 1) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.

IC Restricted bands please refer to ISED RSS-GEN Clause 8.10.
FCC Restricted bands please refer to CFR 47 FCC 15.209.

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

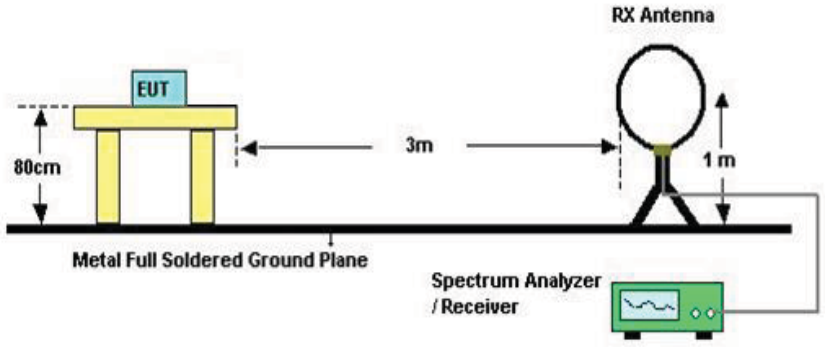
| LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1GHz) | | | |
|---|---|---|---|
| Frequency Range (MHz) | Field Strength Limit (uV/m) at 3 m | Field Strength Limit (dBuV/m) at 3 m | |
| | | Quasi-Peak | |
| 30 - 88 | 100 | 40 | |
| 88 - 216 | 150 | 43.5 | |
| 216 - 960 | 200 | 46 | |
| Above 960 | 500 | 54 | |
| Above 1000 | 500 | Peak | Average |
| | | 74 | 54 |

Limits of unwanted emission out of the restricted bands

| LIMITS OF RADIATED EMISSION MEASUREMENT ( Above 1GHz) | | |
|---|---|---|
| Frequency Range (MHz) 30 - 88 | EIRP Limit | Field Strength Limit (dBuV/m) at 3 m |
| 5150~5250 MHz | PK:-27 (dBm/MHz) | PK:68.2(dBμV/m) |
| 5250~5350 MHz | | |
| 5470~5725 MHz | | |
| 5725~5850 MHz | PK:-27 (dBm/MHz) *1<br>PK:10 (dBm/MHz) *2<br>PK:15.6 (dBm/MHz) *3<br>PK:27 (dBm/MHz) *4 | PK: 68.2(dBμV/m) *1<br>PK:105.2 (dBμV/m) *2<br>PK: 110.8(dBμV/m) *3<br>PK:122.2 (dBμV/m) *4 |
| Note:<br>*1 beyond 75 MHz or more above of the band edge.<br>*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.<br>*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.<br>*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. | | |

## TEST SETUP AND PROCEDURE

Below 30MHz




The setting of the spectrum analyser

| | |
|---|---|
| RBW | 200Hz (From 9kHz to 0.15MHz)/ 9kHz (From 0.15MHz to 30MHz) |
| VBW | 200Hz (From 9kHz to 0.15MHz)/ 9kHz (From 0.15MHz to 30MHz) |
| Sweep | Auto |
| Detector | Peak/QP/ Average |
| Trace | Max hold |

1. The testing follows the guidelines in ANSI C63.10-2013

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the Antenna 1re set to make the measurement.

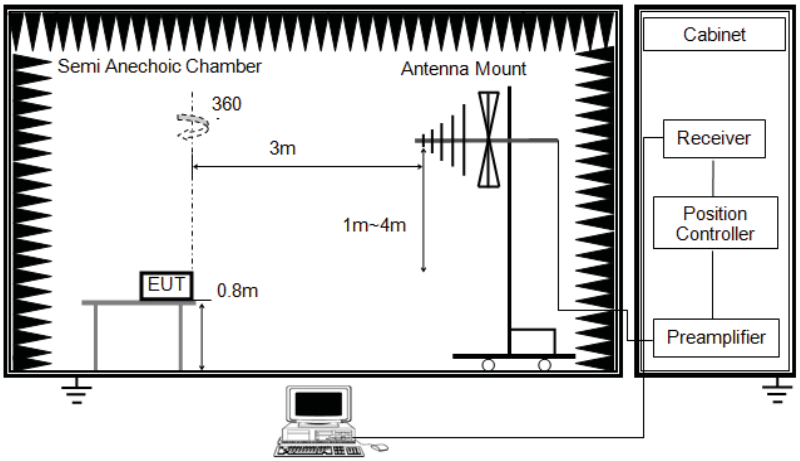
3. The EUT was placed on a turntable with 80cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

6. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open are test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

Below 1G




The setting of the spectrum analyzer

| | |
|---|---|
| RBW | 120kHz |
| VBW | 300kHz |
| Sweep | Auto |
| Detector | Peak/QP |
| Trace | Max hold |

1. The testing follows the guidelines in ANSI C63.10-2013.

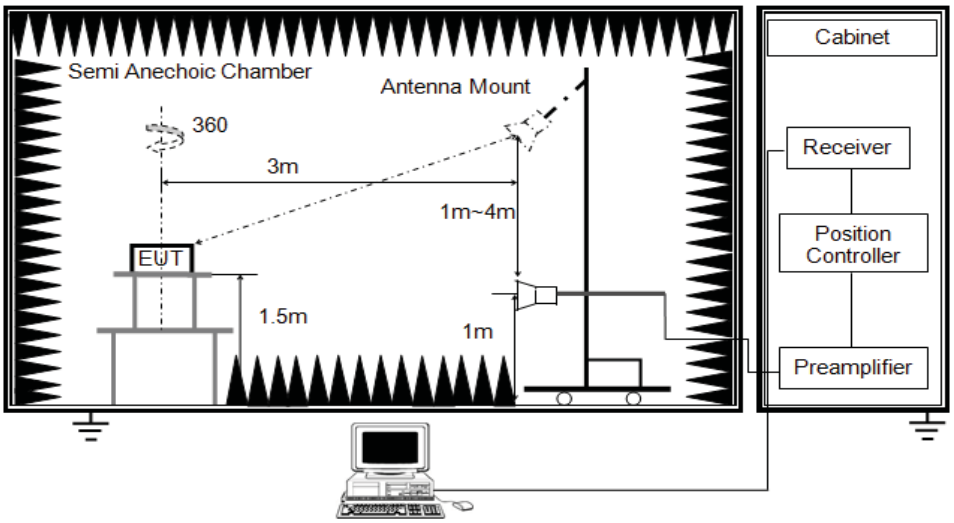
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the Antenna 1re set to make the measurement.

3. The EUT was placed on a turntable with 80cm above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

Above 1G




The setting of the spectrum analyzer

| | |
|---|---|
| RBW | 1MHz |
| VBW | PEAK: 3MHz<br>AVG: see note 6 |
| Sweep | Auto |
| Detector | Peak |
| Trace | Max hold |

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the Antenna 1re set to make the measurement.

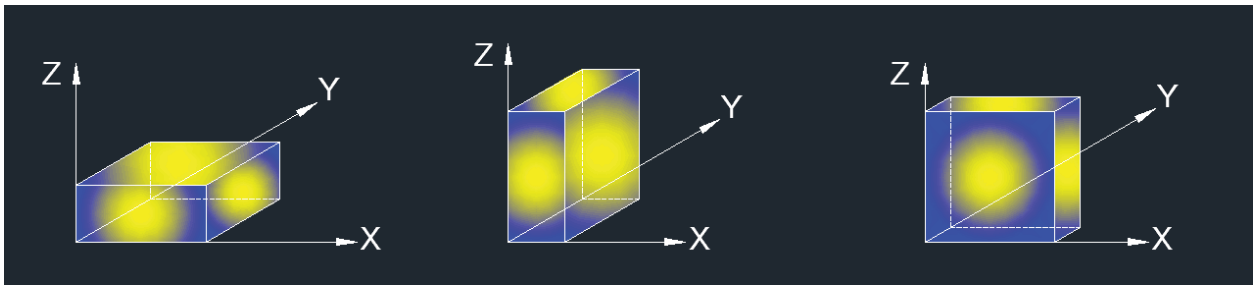
3. The EUT was placed on a turntable with 1.5m above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector. For the Duty Cycle please refer to clause 6.1. ON TIME AND DUTY CYCLE.

X axis, Y axis, Z axis positions:




Note 1: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

Note 2: The EUT was fully exercised with external accessories during the test. In the case of multiple accessory external ports, an external accessory shall be connected to one of each type of port.

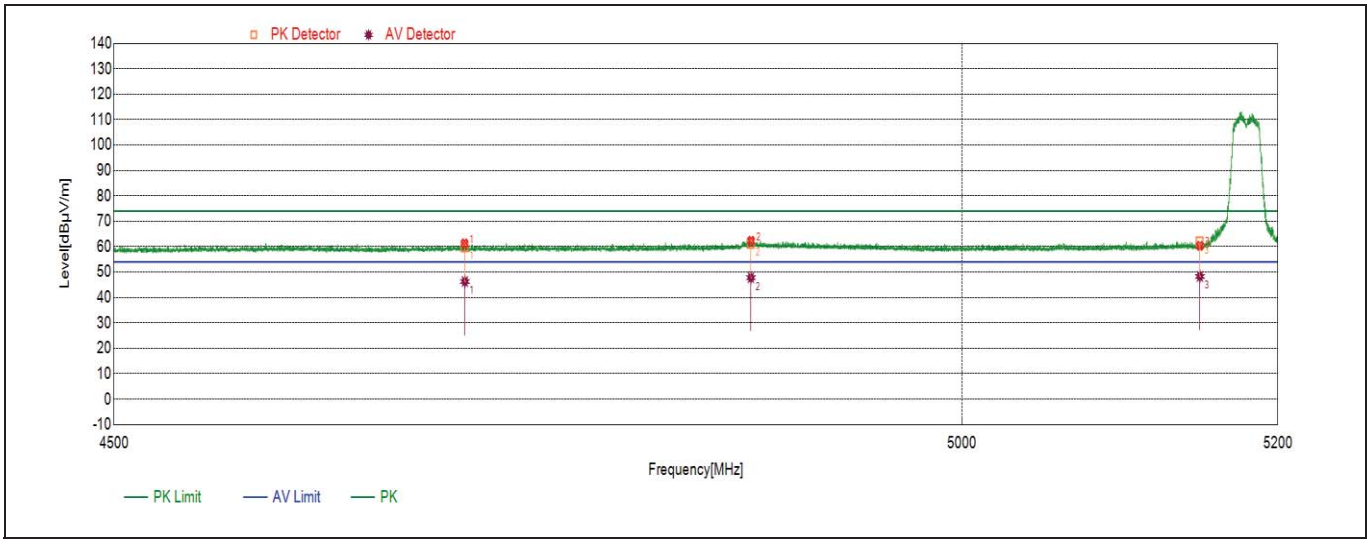
## 7.1. 802.11a MODE

**MIMO MODE (WORST-CASE CONFIGURATION)**

### 7.1.1. UNII-1 BAND

**RESTRICTED BANDEDGE LOW CHANNEL**

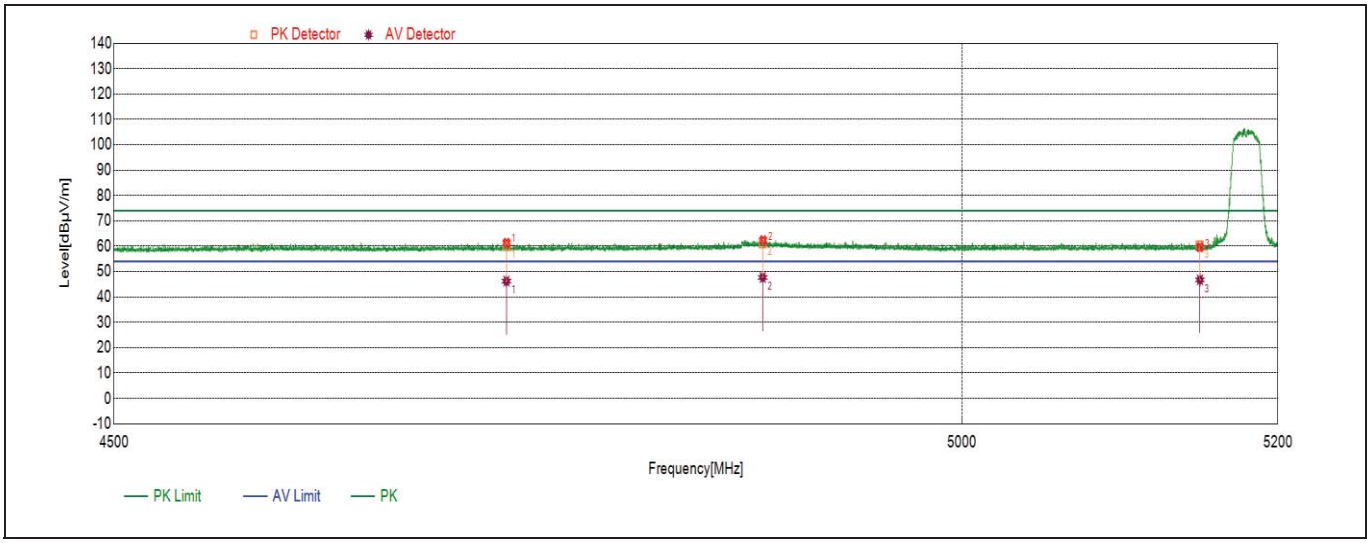
**HORIZONTAL RESULTS**




| No. | Frequency (MHz) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|
| 1 | 4700.5438 | 59.75 | 74.00 | -14.25 | peak |
| | | 46.28 | 54.00 | -7.72 | average |
| 2 | 4870.5786 | 61.30 | 74.00 | -12.70 | peak |
| | | 47.80 | 54.00 | -6.20 | average |
| 3 | 5150.0000 | 61.83 | 74.00 | -12.17 | peak |
| | | 48.29 | 54.00 | -5.71 | average |

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

## VERTICAL RESULTS

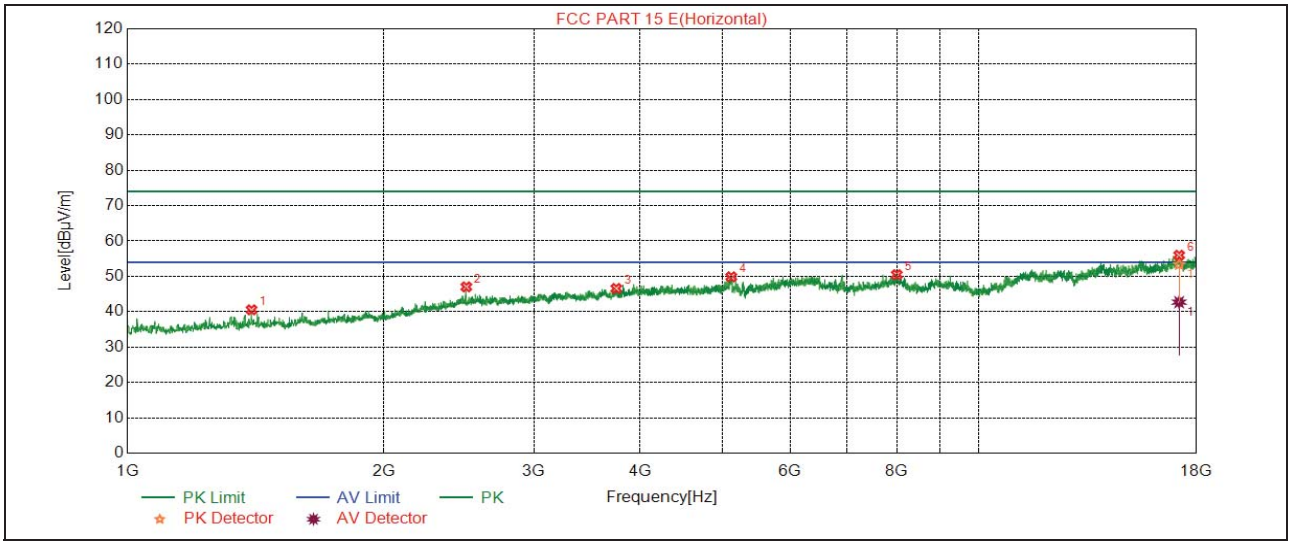



| No. | Frequency (MHz) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|
| 1 | 4724.8645 | 60.11 | 74.00 | -13.89 | peak |
| | | 46.24 | 54.00 | -7.76 | average |
| 2 | 4877.7073 | 61.21 | 74.00 | -12.79 | peak |
| | | 47.68 | 54.00 | -6.32 | average |
| 3 | 5150.0000 | 60.14 | 74.00 | -13.86 | peak |
| | | 46.74 | 54.00 | -7.26 | average |

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.

## HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL

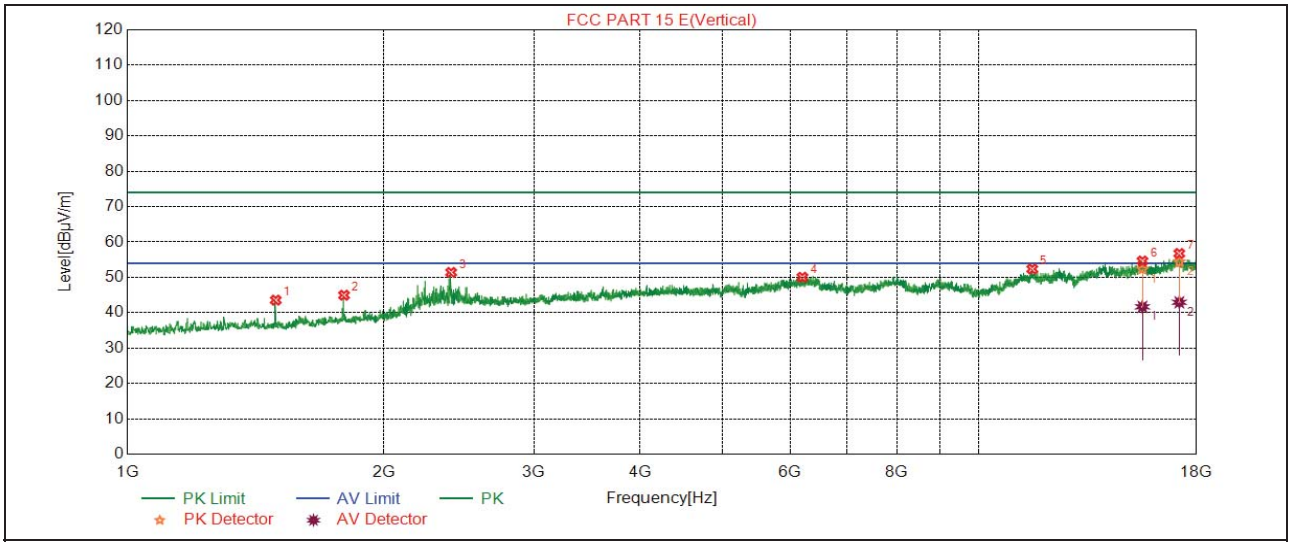
### HORIZONTAL RESULTS
### 1-18GHz




| No. | Frequency | Result | Limit (Peak) | Margin (Peak) | Limit (Ave) | Margin (Ave) | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV/m) | (dB) | |
| 1 | 1398.8165 | 40.53 | 74 | -33.47 | 54 | -13.47 | peak |
| 2 | 2499.9167 | 47.03 | 74 | -26.97 | 54 | -6.97 | peak |
| 3 | 3749.5416 | 46.58 | 74 | -27.42 | 54 | -7.42 | peak |
| 4 | 5116.5194 | 49.87 | 74 | -24.13 | 54 | -4.13 | peak |
| 5 | 8004.8341 | 50.47 | 74 | -23.53 | 54 | -3.53 | peak |
| 6 | 17171.862 | 55.97 | 74 | -18.03 | 54 | 1.97 | peak |
| 7 | 17171.862 | 42.71 | 74 | -31.29 | 54 | -11.29 | average |

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

## VERTICAL RESULTS
## 1-18GHz

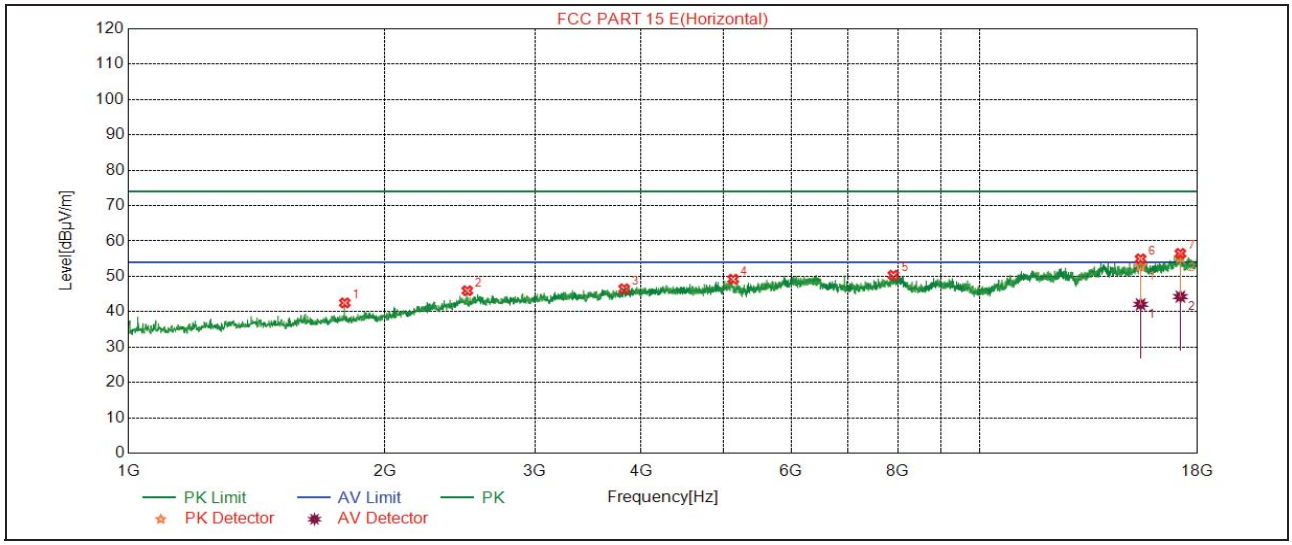



| No. | Frequency | Result | Limit (Peak) | Margin (Peak) | Limit (Ave) | Margin (Ave) | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV/m) | (dB) | |
| 1 | 1493.2489 | 43.56 | 74 | -30.44 | 54 | -10.44 | peak |
| 2 | 1795.7993 | 44.95 | 74 | -29.05 | 54 | -9.05 | peak |
| 3 | 2399.0665 | 51.40 | 74 | -22.60 | 54 | -2.60 | peak |
| 4 | 6201.1169 | 50.03 | 74 | -23.97 | 54 | -3.97 | peak |
| 5 | 11543.5906 | 52.36 | 74 | -21.64 | 54 | -1.64 | peak |
| 6 | 15550.0917 | 54.63 | 74 | -19.37 | 54 | 0.63 | peak |
| 7 | 15550.0917 | 41.68 | 74 | -32.32 | 54 | -12.32 | average |
| 8 | 17179.5299 | 54.36 | 74 | -19.64 | 54 | 0.36 | peak |
| 9 | 17179.5315 | 42.95 | 74 | -31.05 | 54 | -11.05 | average |

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

## HARMONICS AND SPURIOUS EMISSIONS MID CHANNEL

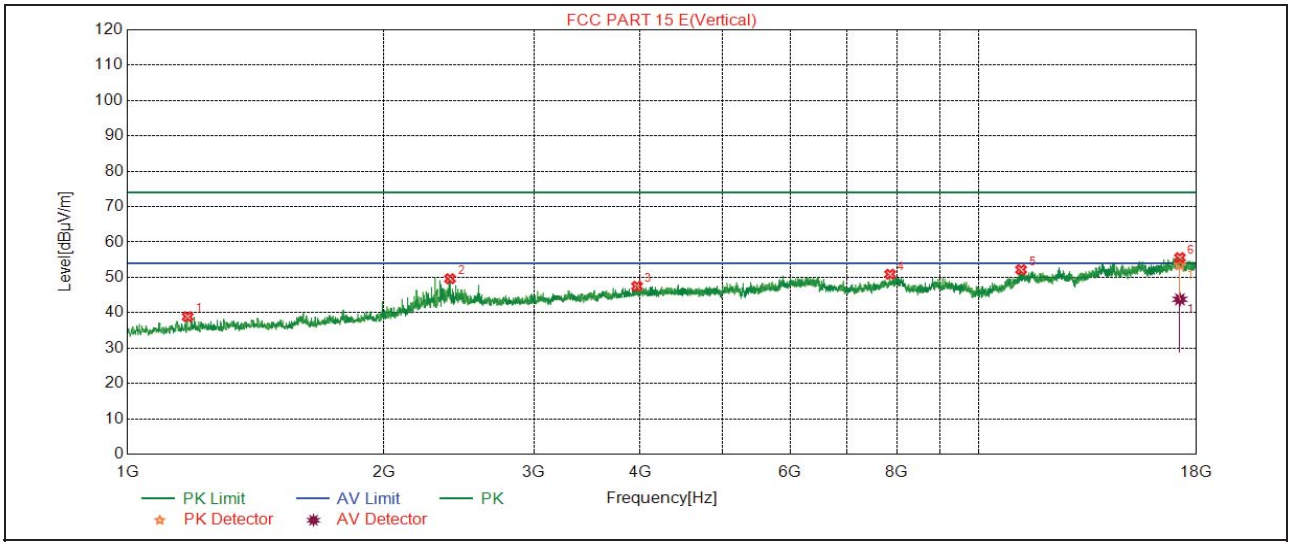
### HORIZONTAL RESULTS
### 1-18GHz




| No. | Frequency | Result | Limit (Peak) | Margin (Peak) | Limit (Ave) | Margin (Ave) | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV/m) | (dB) | |
| 1 | 1794.8825 | 42.49 | 74 | -31.51 | 54 | -11.51 | peak |
| 2 | 2499.9167 | 45.94 | 74 | -28.06 | 54 | -8.06 | peak |
| 3 | 3820.1367 | 46.48 | 74 | -27.52 | 54 | -7.52 | peak |
| 4 | 5129.3549 | 49.20 | 74 | -24.80 | 54 | -4.80 | peak |
| 5 | 7908.9848 | 50.31 | 74 | -23.69 | 54 | -3.69 | peak |
| 6 | 15433.1555 | 54.94 | 74 | -19.06 | 54 | 0.94 | peak |
| 7 | 15433.1555 | 42.09 | 74 | -31.91 | 54 | -11.91 | average |
| 8 | 17183.3639 | 55.23 | 74 | -18.77 | 54 | 1.23 | peak |
| 9 | 17183.3615 | 44.27 | 74 | -29.73 | 54 | -9.73 | average |

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

## VERTICAL RESULTS
## 1-18GHz

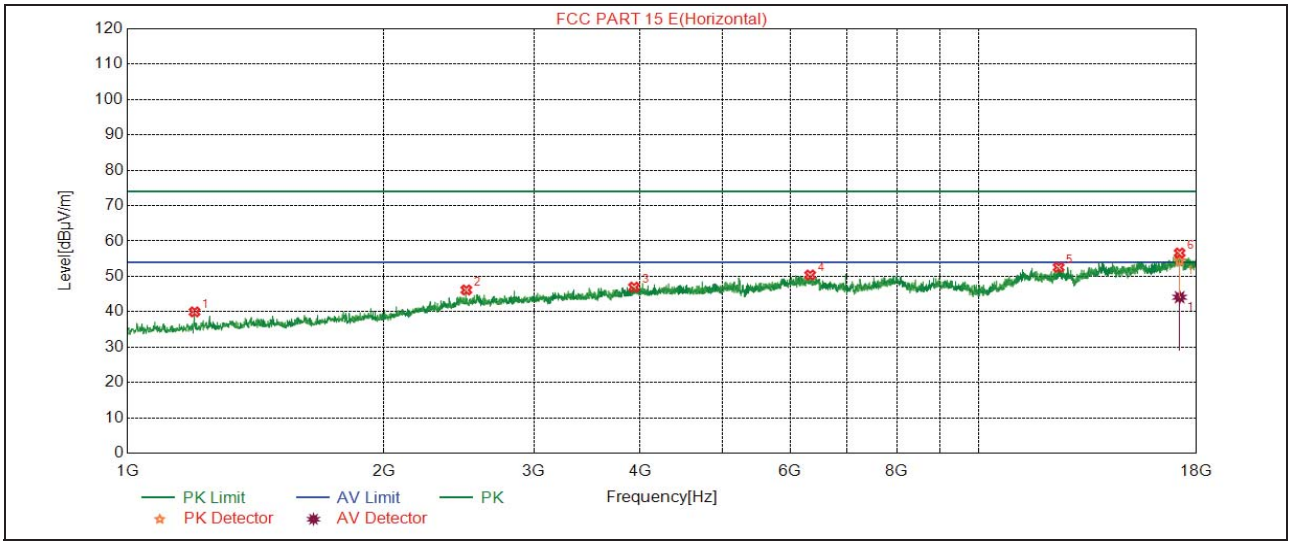



| No. | Frequency | Result | Limit (Peak) | Margin (Peak) | Limit (Ave) | Margin (Ave) | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV/m) | (dB) | |
| 1 | 1176.9462 | 38.88 | 74 | -35.12 | 54 | -15.12 | peak |
| 2 | 2391.732 | 49.62 | 74 | -24.38 | 54 | -4.38 | peak |
| 3 | 3965.911 | 47.50 | 74 | -26.50 | 54 | -6.50 | peak |
| 4 | 7861.0602 | 50.88 | 74 | -23.12 | 54 | -3.12 | peak |
| 5 | 11200.4501 | 52.17 | 74 | -21.83 | 54 | -1.83 | peak |
| 6 | 17206.3677 | 55.57 | 74 | -18.43 | 54 | 1.57 | peak |
| 7 | 17206.3677 | 43.79 | 74 | -30.21 | 54 | -10.21 | average |

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

## HARMONICS AND SPURIOUS EMISSIONS HIGH CHANNEL

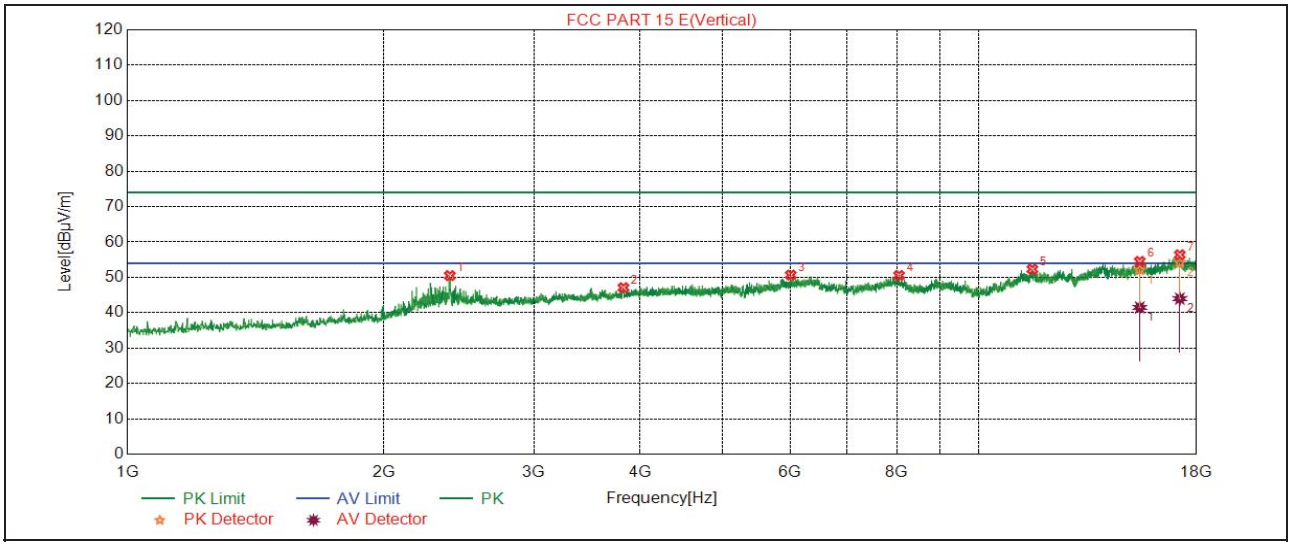
### HORIZONTAL RESULTS
### 1-18GHz




| No. | Frequency | Result | Limit (Peak) | Margin (Peak) | Limit (Ave) | Margin (Ave) | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV/m) | (dB) | |
| 1 | 1198.9498 | 39.95 | 74 | -34.05 | 54 | -14.05 | peak |
| 2 | 2499.9167 | 46.15 | 74 | -27.85 | 54 | -7.85 | peak |
| 3 | 3933.8223 | 46.96 | 74 | -27.04 | 54 | -7.04 | peak |
| 4 | 6332.222 | 50.38 | 74 | -23.62 | 54 | -3.62 | peak |
| 5 | 12396.6494 | 52.53 | 74 | -21.47 | 54 | -1.47 | peak |
| 6 | 17194.8658 | 56.60 | 74 | -17.40 | 54 | 2.60 | peak |
| 7 | 17194.8658 | 44.10 | 74 | -29.90 | 54 | -9.90 | average |

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

## VERTICAL RESULTS
## 1-18GHz



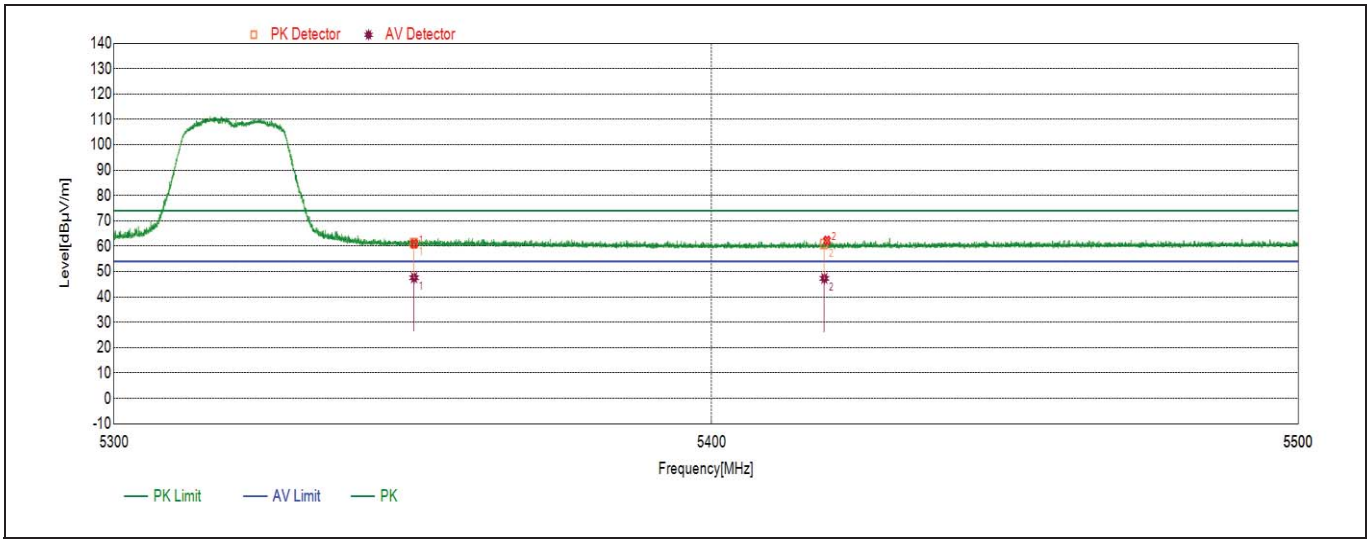

| No. | Frequency | Result | Limit (Peak) | Margin (Peak) | Limit (Ave) | Margin (Ave) | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV/m) | (dBuV/m) | (dB) | (dBuV/m) | (dB) | |
| 1 | 2390.8151 | 50.49 | 74 | -23.51 | 54 | -3.51 | peak |
| 2 | 3822.8871 | 47.08 | 74 | -26.92 | 54 | -6.92 | peak |
| 3 | 6008.5848 | 50.64 | 74 | -23.36 | 54 | -3.36 | peak |
| 4 | 8052.7588 | 50.54 | 74 | -23.46 | 54 | -3.46 | peak |
| 5 | 11547.4246 | 52.3 | 74 | -21.70 | 54 | -1.70 | peak |
| 6 | 15438.9065 | 54.51 | 74 | -19.49 | 54 | 0.51 | peak |
| 7 | 15438.9065 | 41.49 | 74 | -32.51 | 54 | -12.51 | average |
| 8 | 17202.5338 | 54.18 | 74 | -19.82 | 54 | 0.18 | peak |
| 9 | 17202.5338 | 43.98 | 74 | -20.02 | 54 | -10.02 | average |

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.

### 7.1.2. UNII-2A BAND

**RESTRICTED BANDEDGE HIGH CHANNEL**

**HORIZONTAL RESULTS**




| No. | Frequency (MHz) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|
| 1 | 5350.0000 | 61.22 | 74.00 | -12.78 | peak |
| | | 47.59 | 54.00 | -6.41 | average |
| 2 | 5419.0990 | 60.76 | 74.00 | -13.24 | peak |
| | | 47.31 | 54.00 | -6.69 | average |

Note: 1. Measurement = Reading Level + Correct Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Peak: Peak detector.
4. Only the worst case emission will be recorder, if it complies with the limit, the other emissions deemed to comply with the limit.