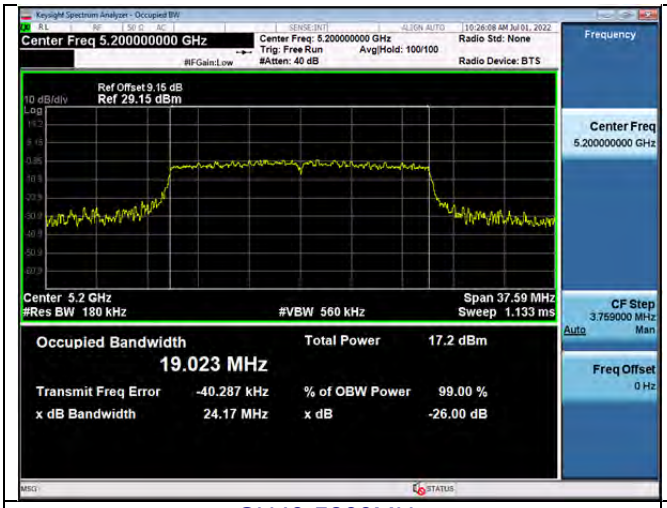
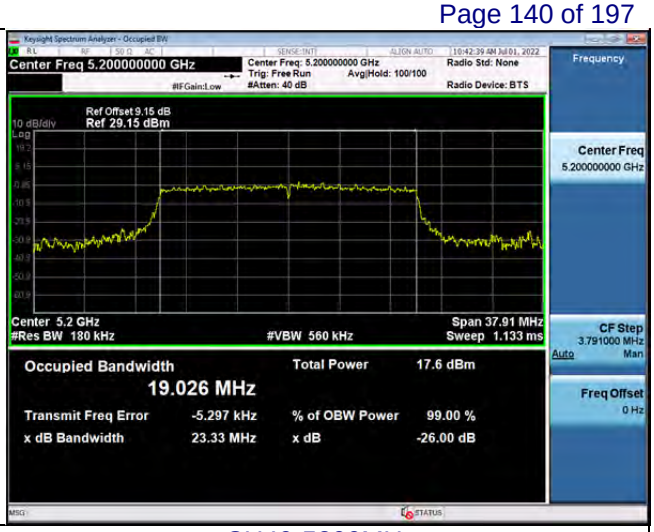
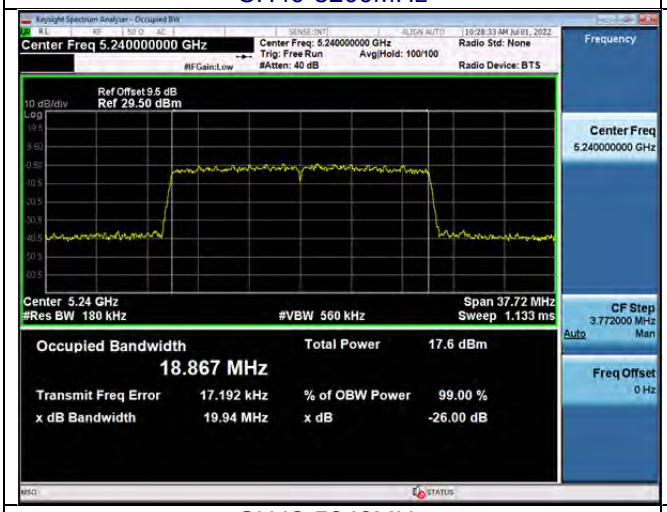



CH40-5200MHz




CH40-5200MHz

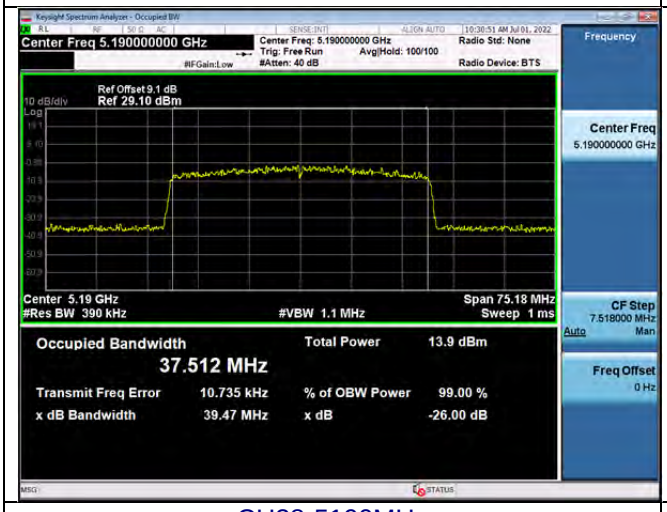



CH48-5240MHz

CH48-5240MHz

U-NII-1 – 802.11ax (40MHz)

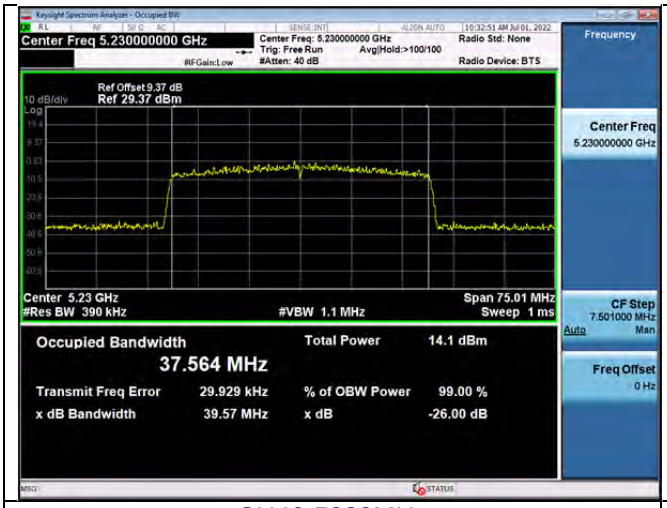
ANT1



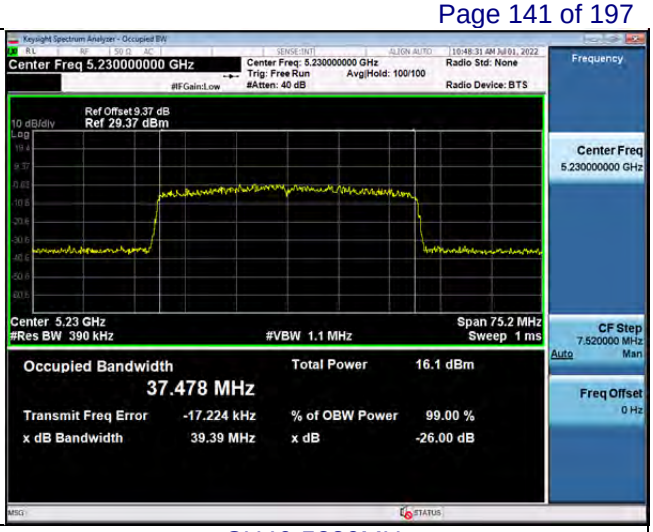

CH38-5190MHz

ANT2

CH38-5190MHz



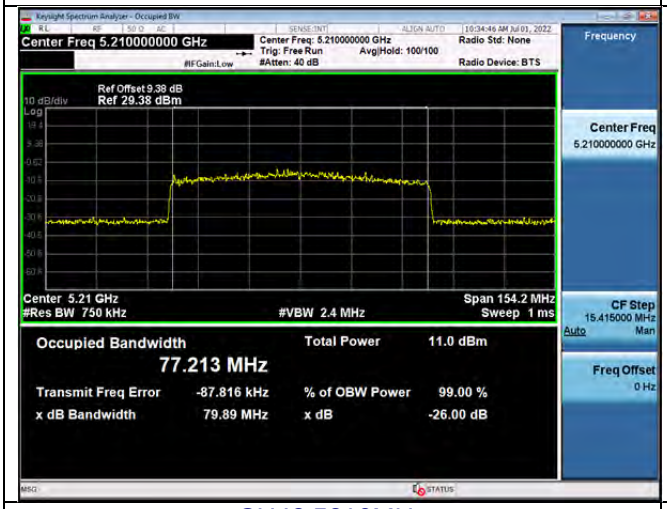

CH46-5230MHz




CH46-5230MHz

U-NII-1 –802.11ax (80MHz)

ANT1



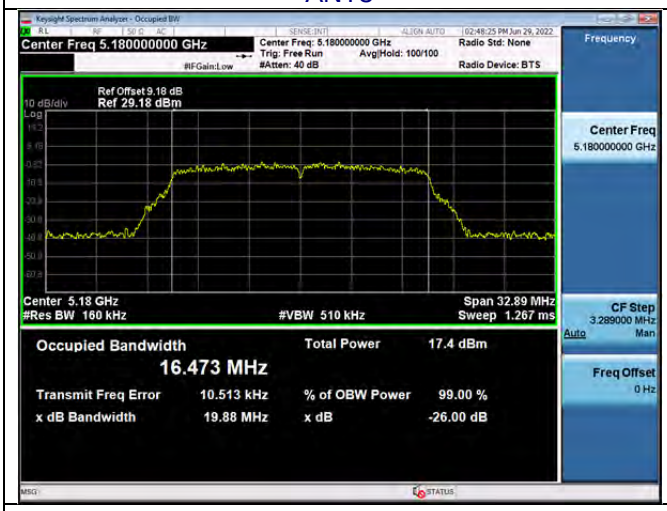

CH42 5210MHz

ANT2

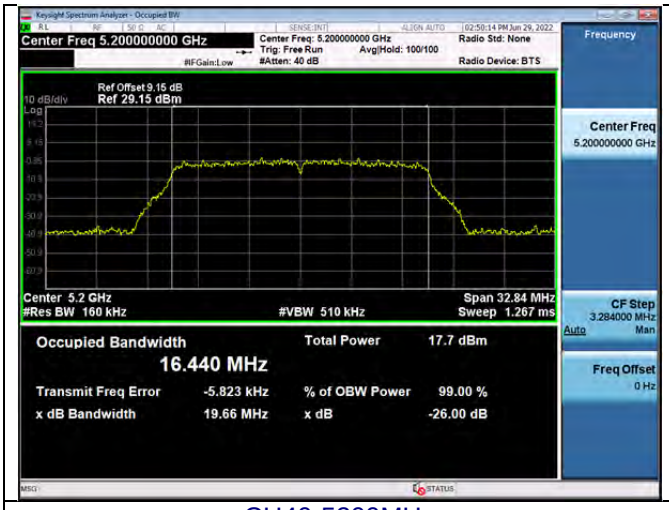
CH42 5210MHz

U-NII-1 – 802.11a

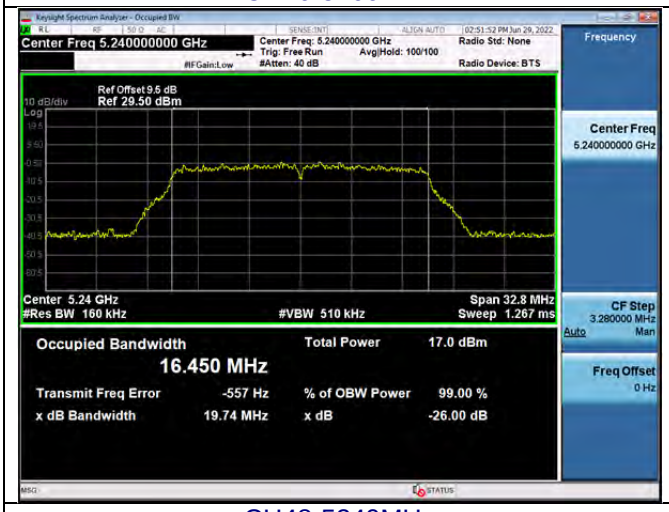
ANT3




CH36-5180MHz



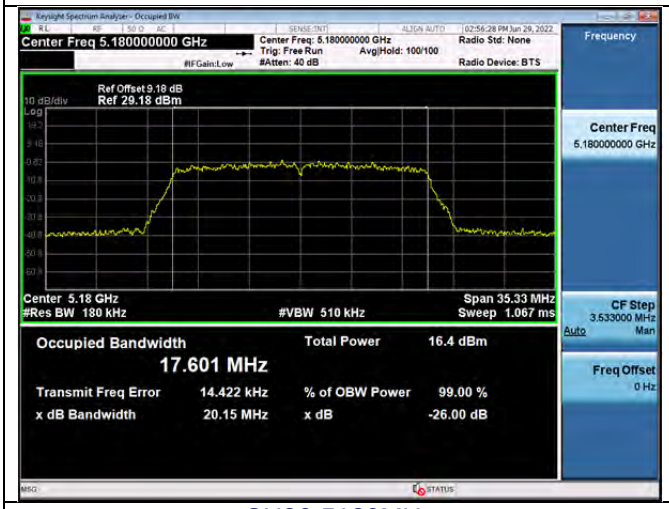

CH40-5200MHz



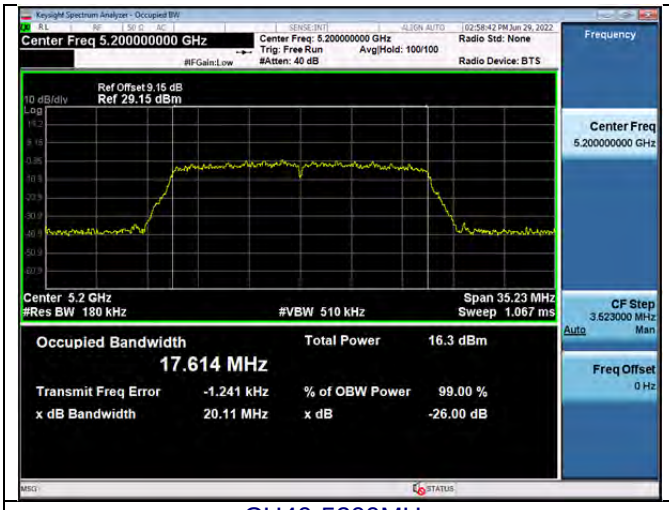

CH48-5240MHz

U-NII-1– 802.11n (20MHz)

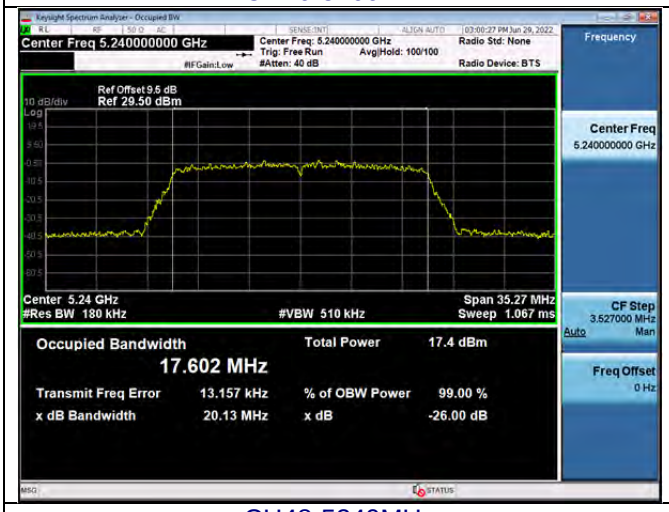
ANT3




CH36-5180MHz



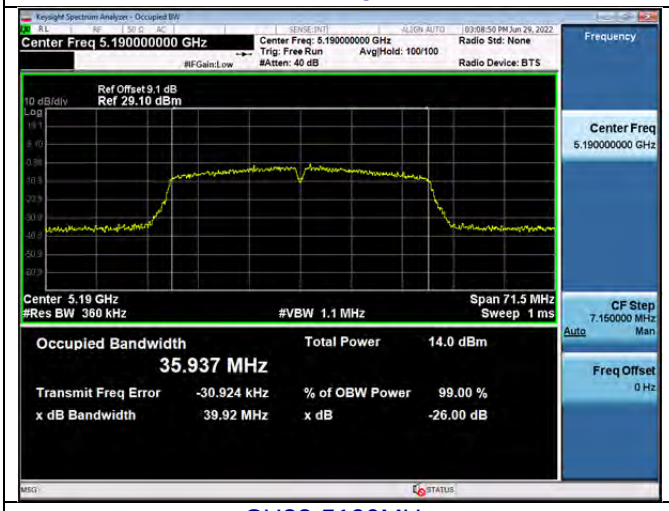

CH40-5200MHz



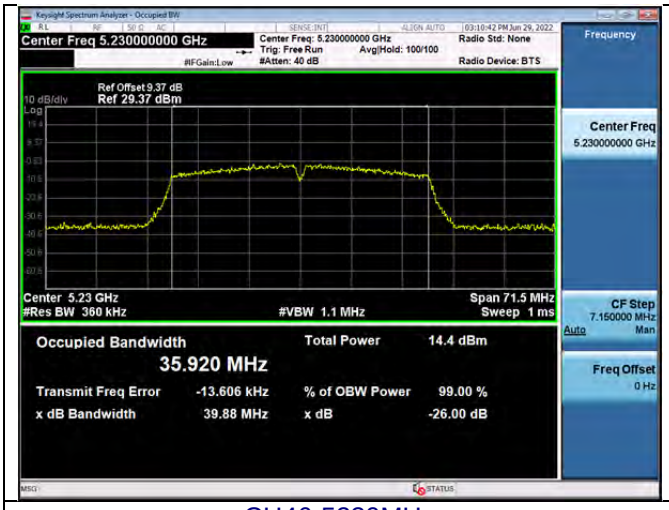

CH48-5240MHz

U-NII-1 – 802.11n (40MHz)

ANT3



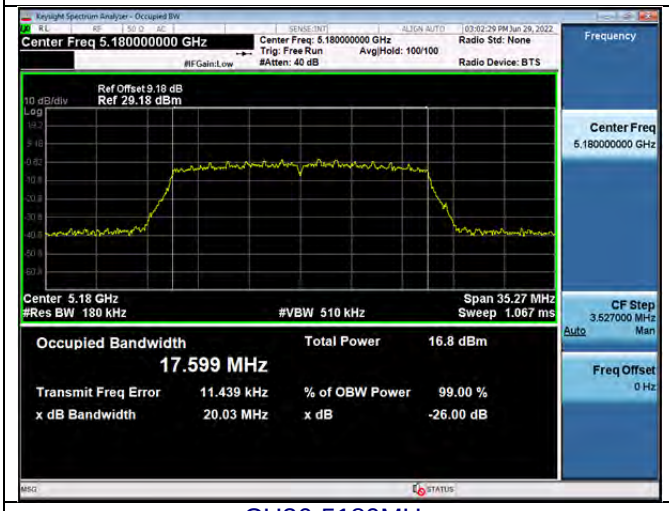

CH38-5190MHz



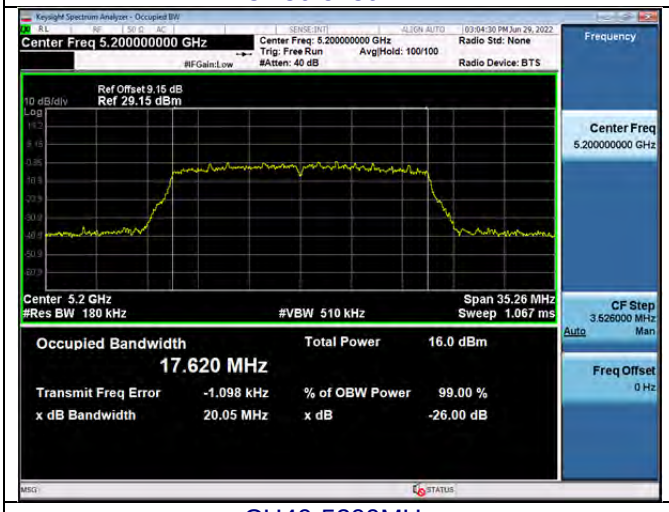

CH46-5230MHz

U-NII-1 – 802.11ac 20MHz)

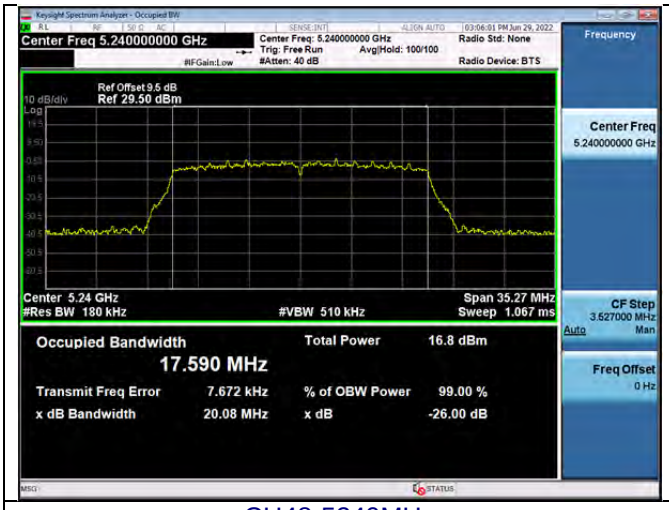
ANT3




CH36-5180MHz



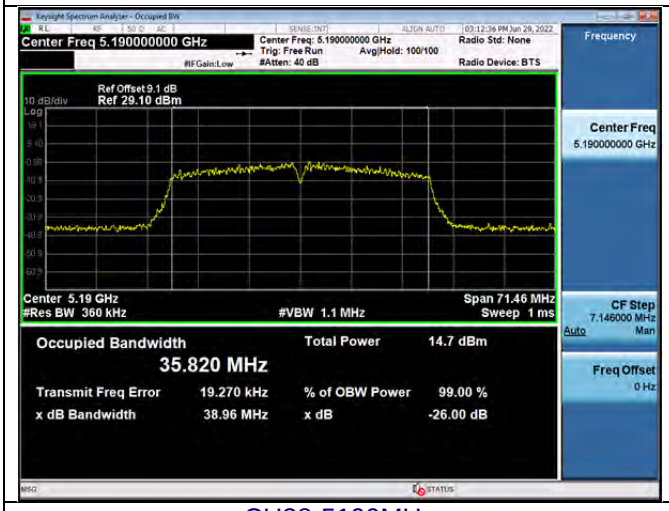

CH40-5200MHz



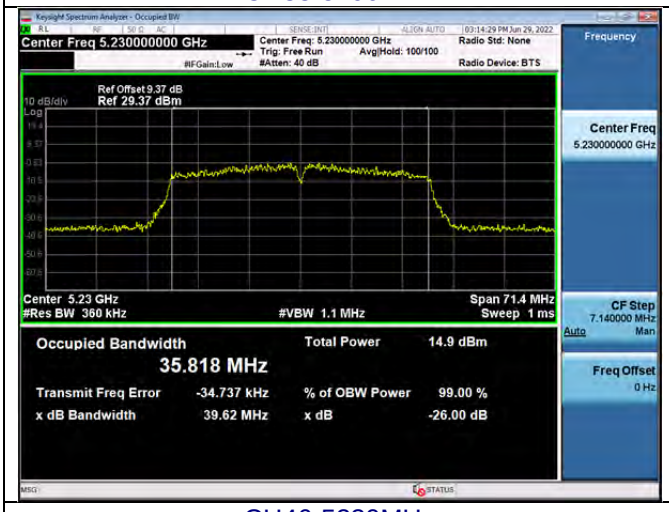

CH48-5240MHz

U-NII-1 – 802.11ac (40MHz)

ANT3



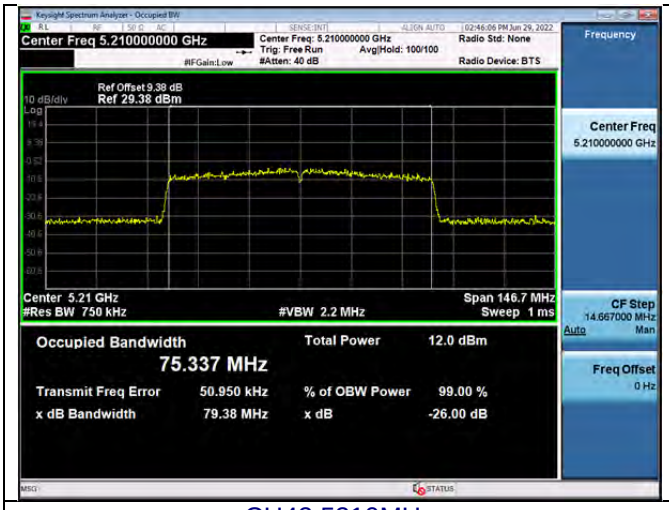

CH38-5190MHz




CH46-5230MHz

U-NII-1 –802.11ac (80MHz)

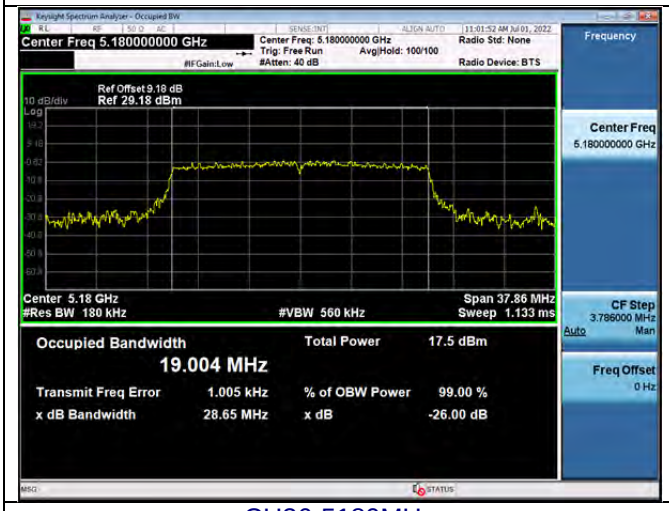
ANT3



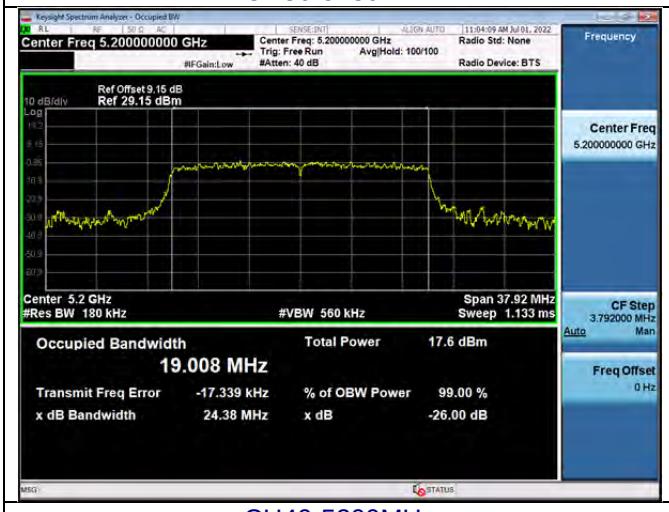

CH42 5210MHz

U-NII-1 – 802.11ax20MHz)

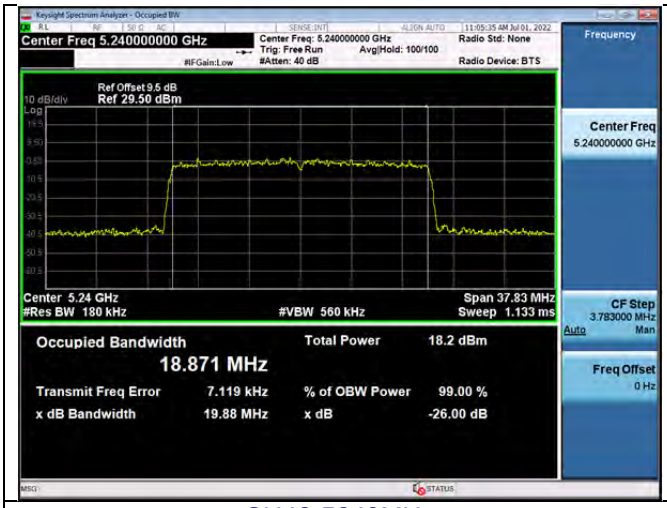
ANT3




CH36-5180MHz



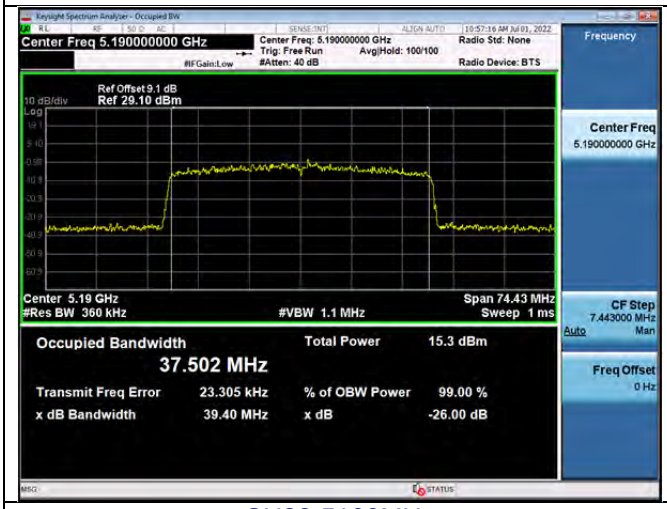

CH40-5200MHz



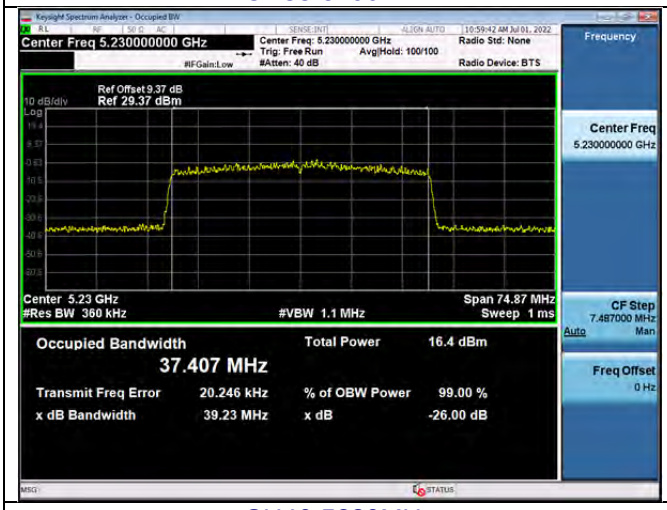

CH48-5240MHz

U-NII-1 – 802.11ax (40MHz)

ANT3



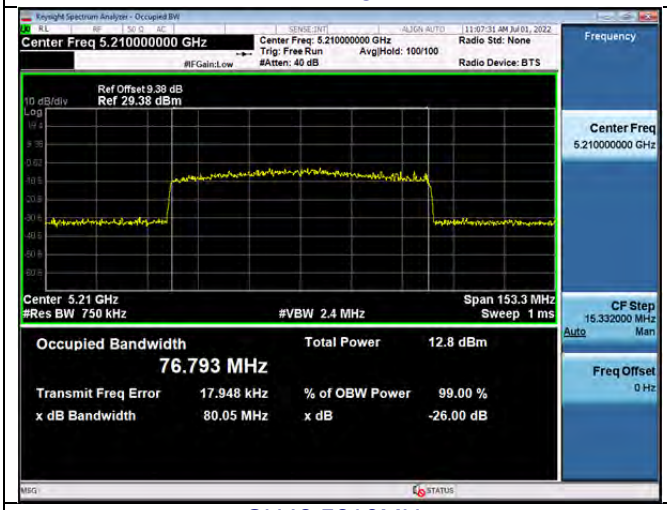

CH38-5190MHz




CH46-5230MHz

U-NII-1 –802.11ax (80MHz)

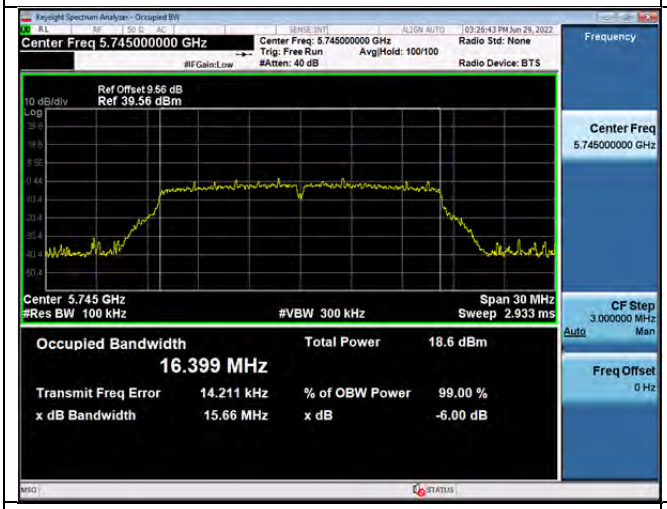
ANT3




CH42 5210MHz

U-NII-3 –802.11a

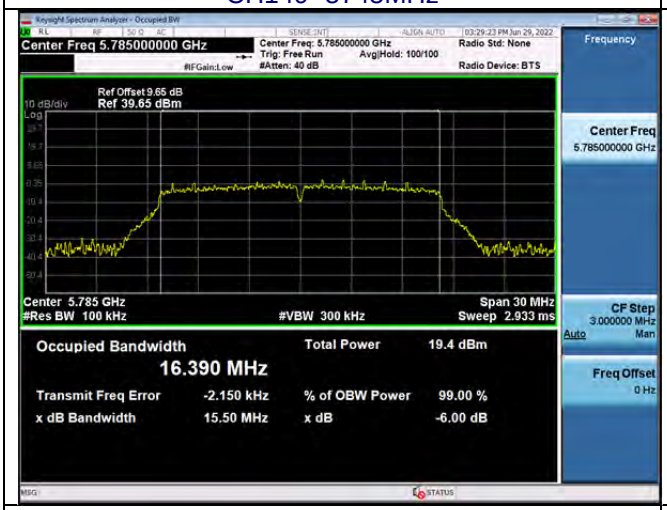
ANT1



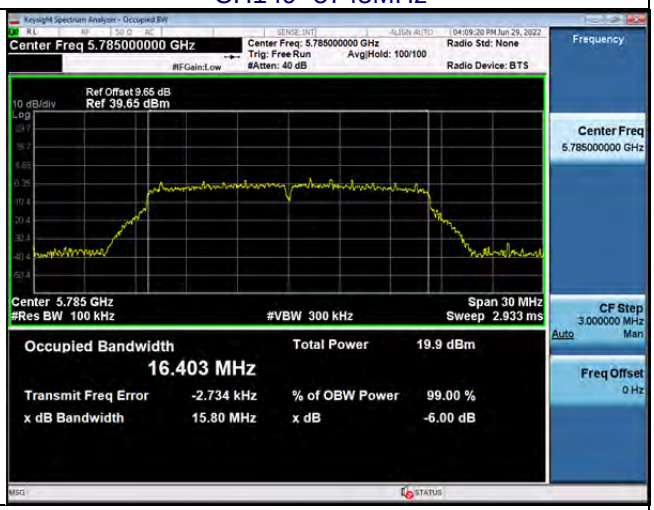

CH149 -5745MHz

ANT2

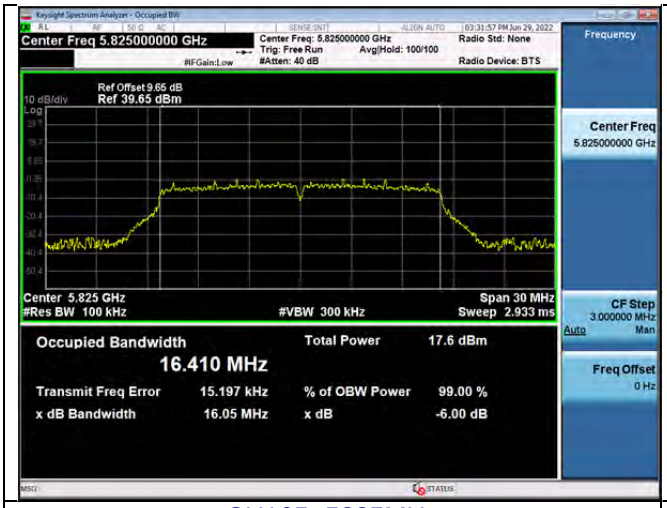
CH149 -5745MHz



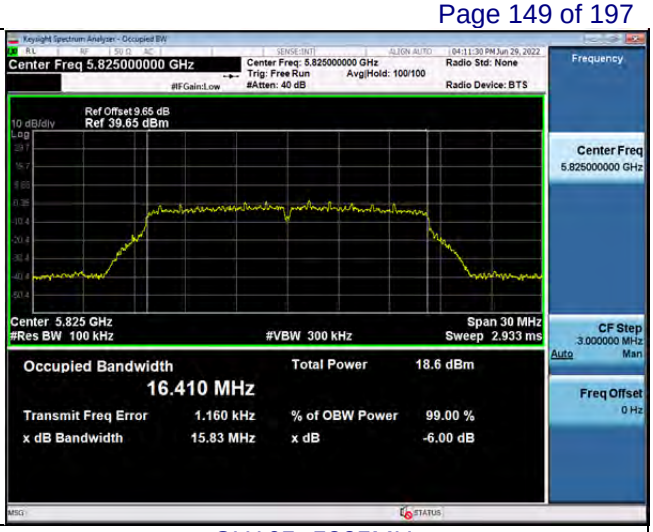

CH157 -5785MHz




CH157 -5785MHz



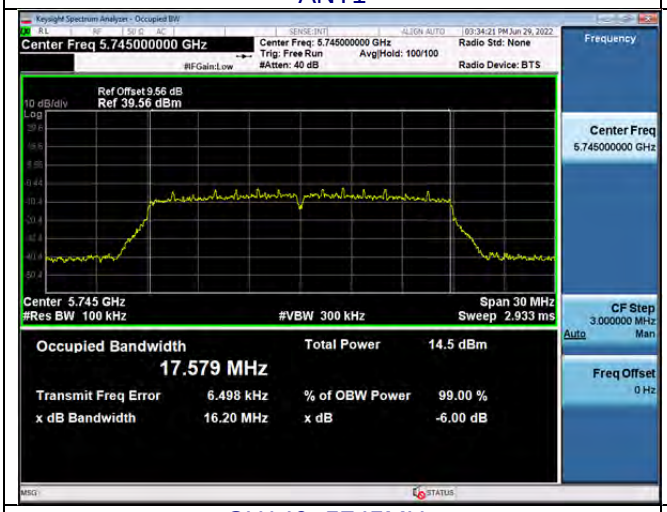

CH165 -5825MHz




CH165 -5825MHz

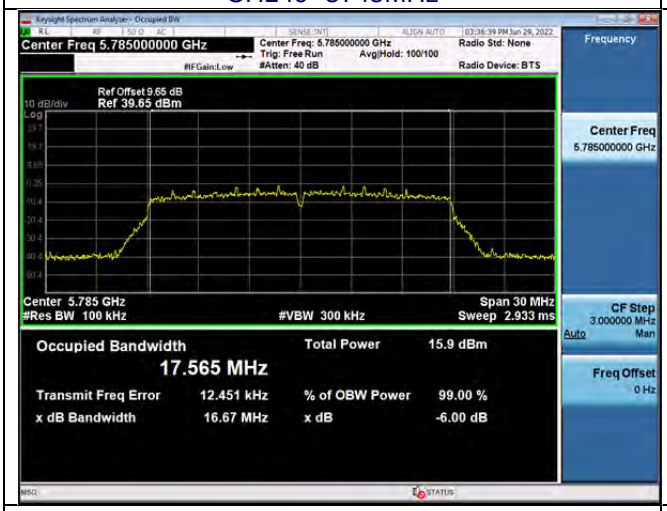
U-NII-3 –802.11n (20MHz)

| ANT1 | ANT2 |
|---|---|

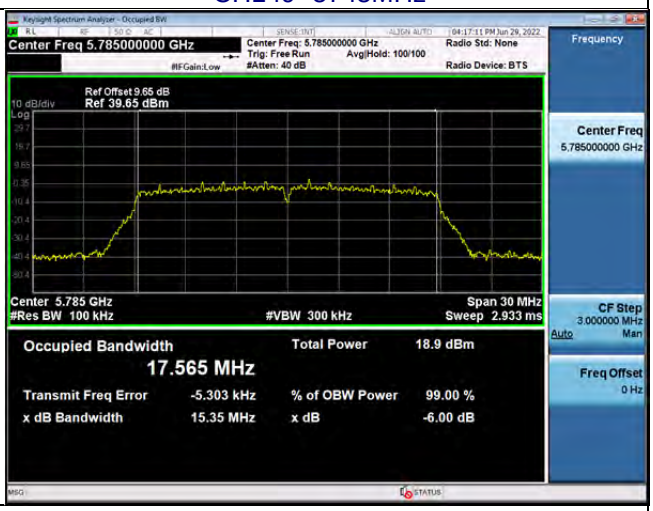



CH149 -5745MHz

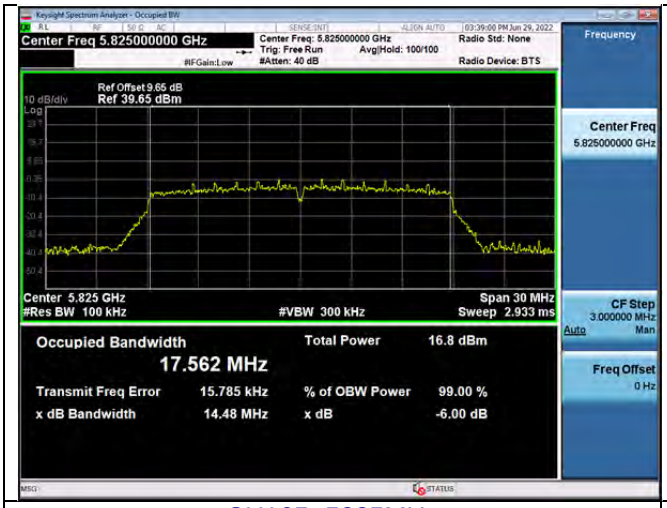
CH149 -5745MHz



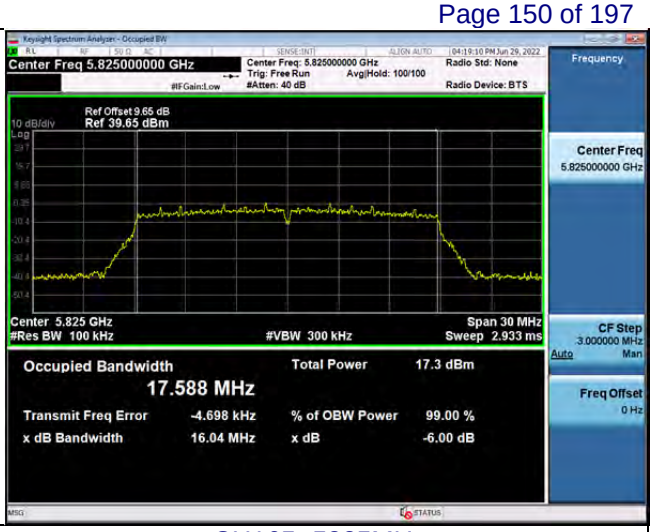

CH157 -5785MHz




CH157 -5785MHz



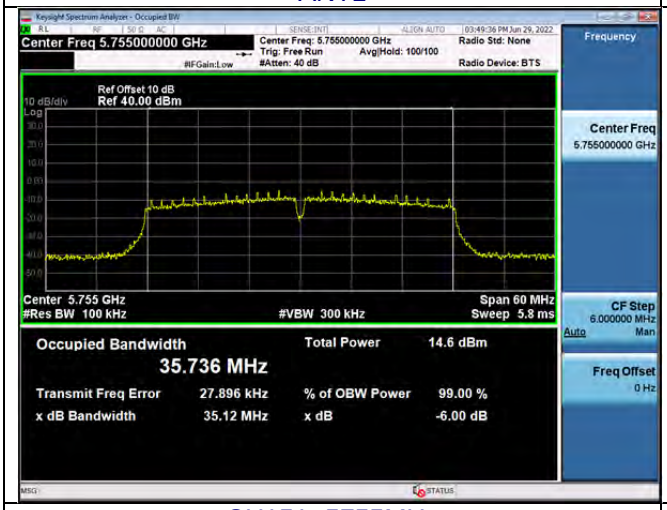

CH165 -5825MHz



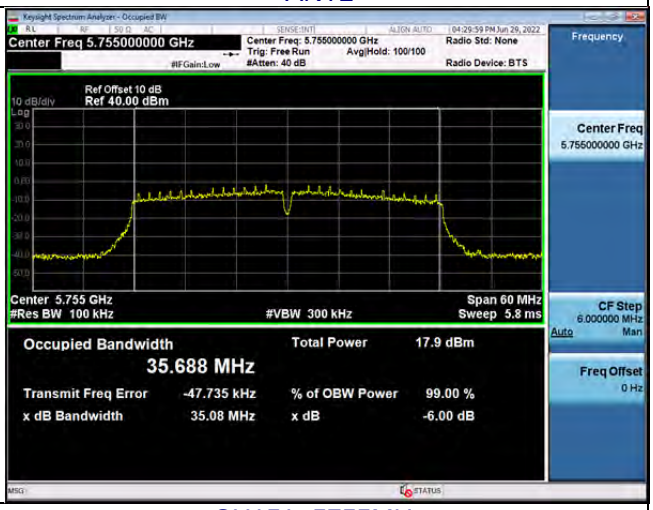

CH165 -5825MHz

U-NII-3– 802.11n (40MHz)

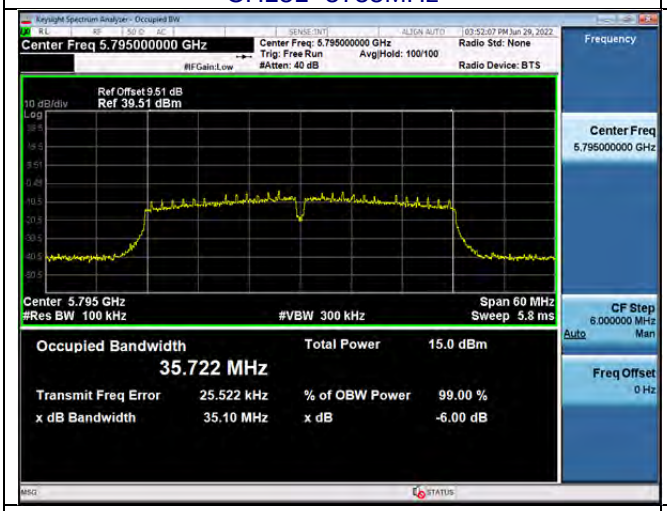
| ANT1 | ANT2 |
|---|---|



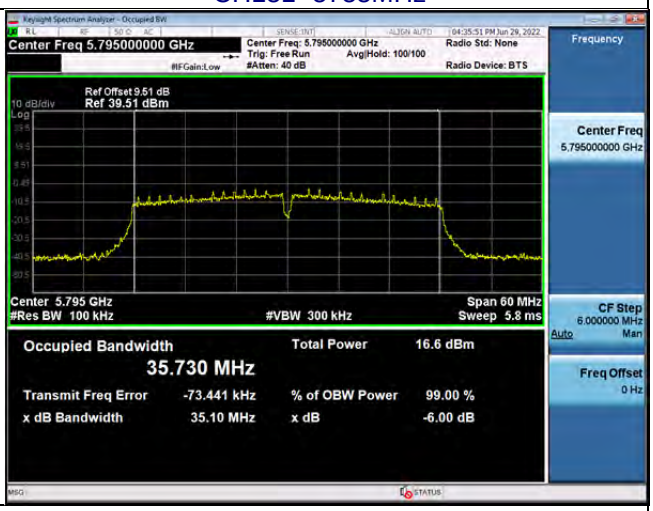

CH151 -5755MHz




CH151 -5755MHz



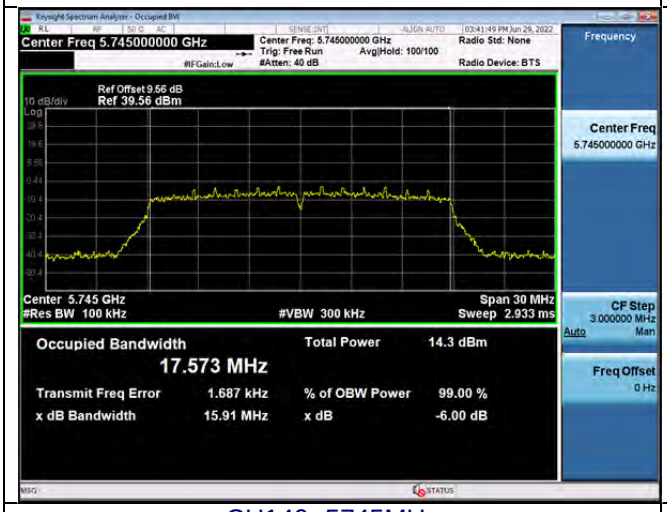

CH159 -5795MHz




CH159 -5795MHz

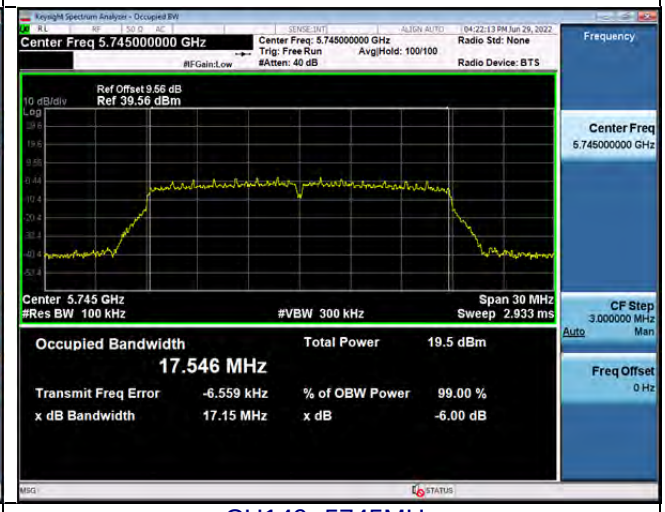
U-NII-3 –802.11ac (20MHz)

ANT1

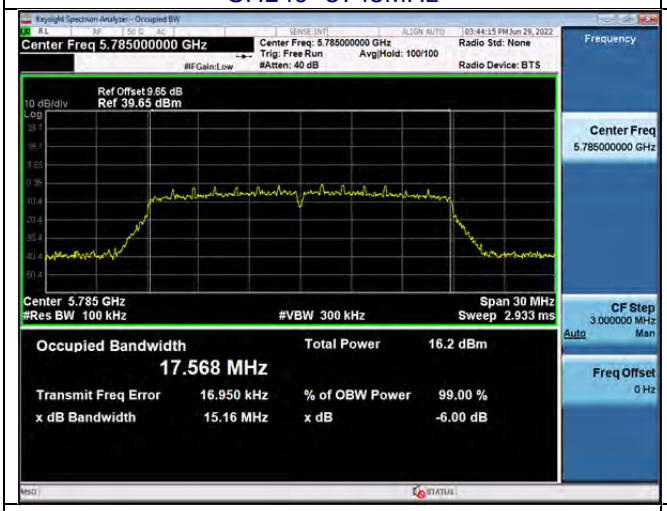



CH149 -5745MHz

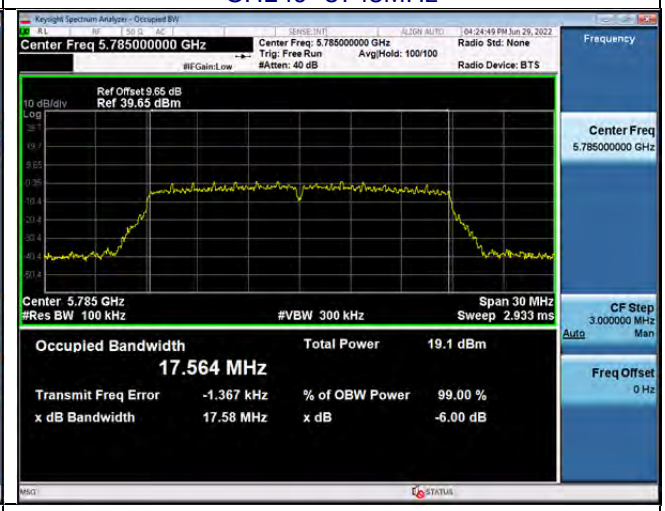
ANT2



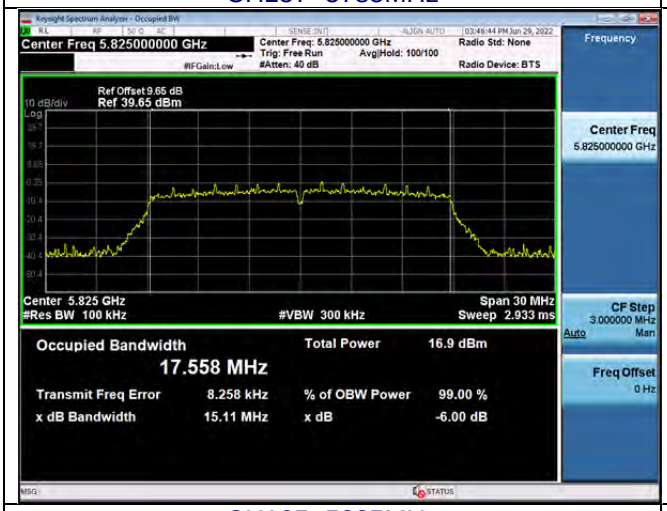

CH149 -5745MHz



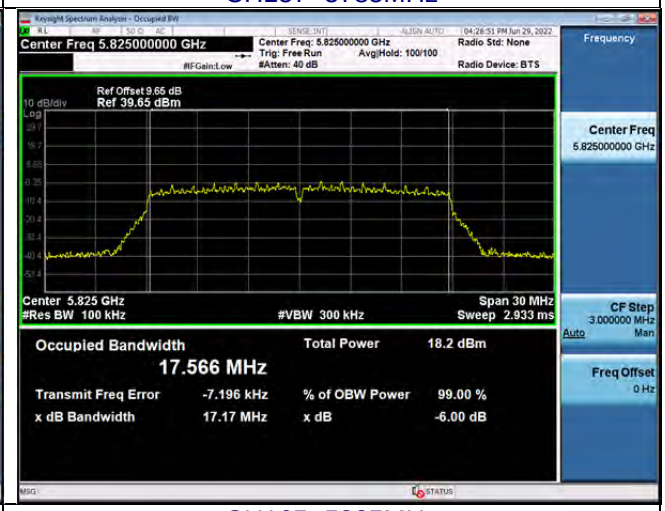

CH157 -5785MHz




CH157 -5785MHz

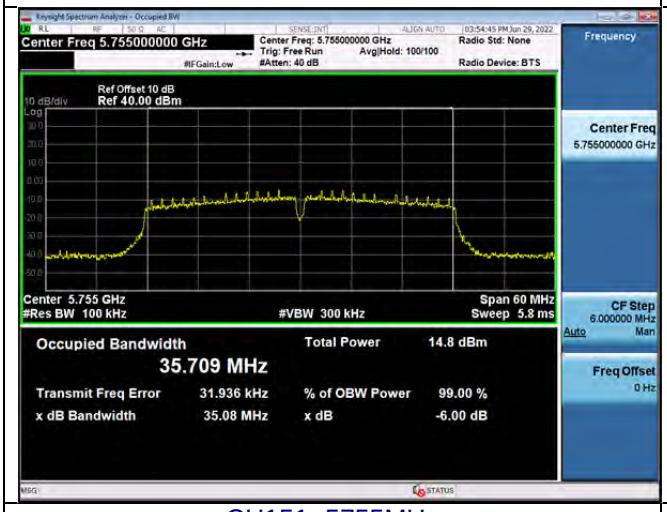
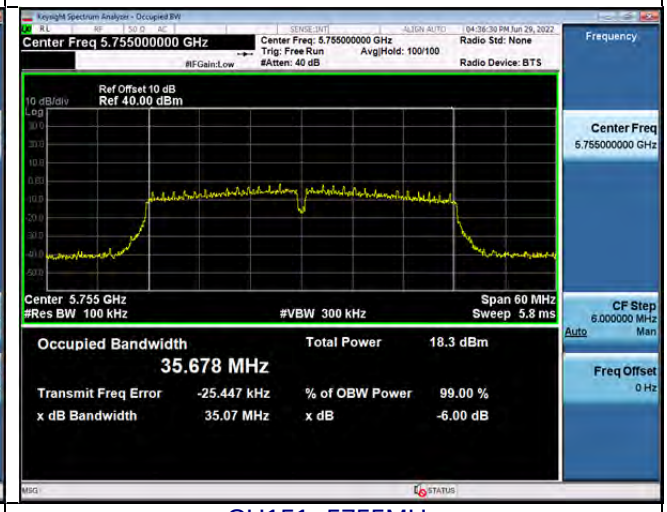
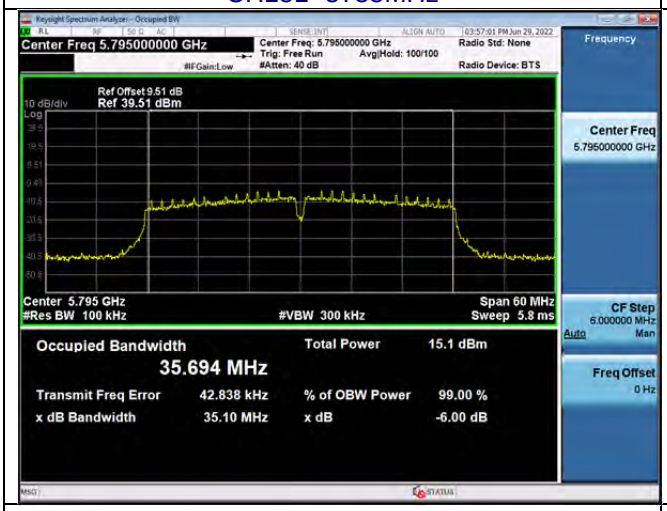
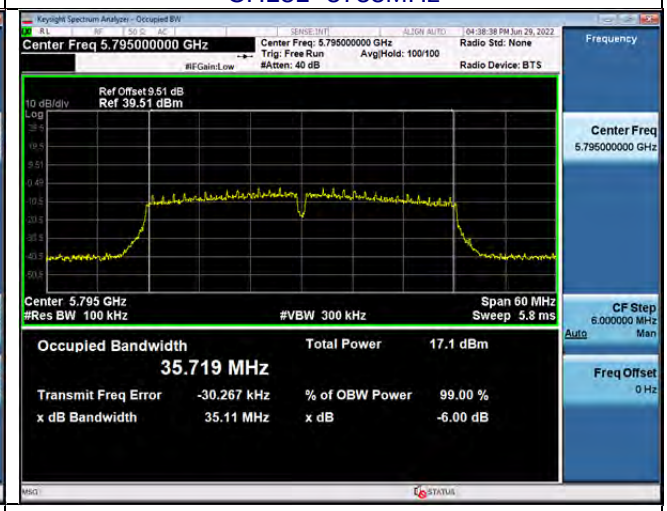



CH165 -5825MHz



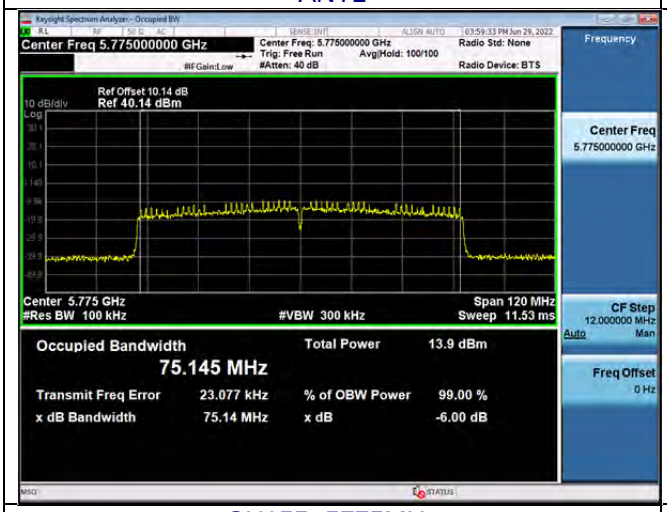
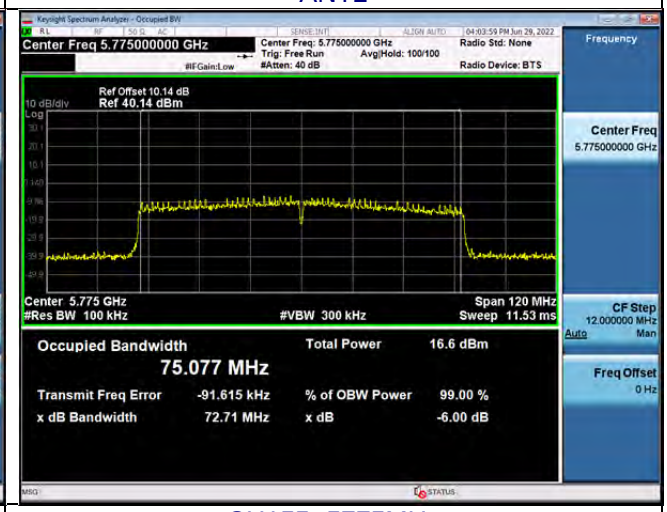

CH165 -5825MHz

## U-NII-3 – 802.11ac (40MHz)

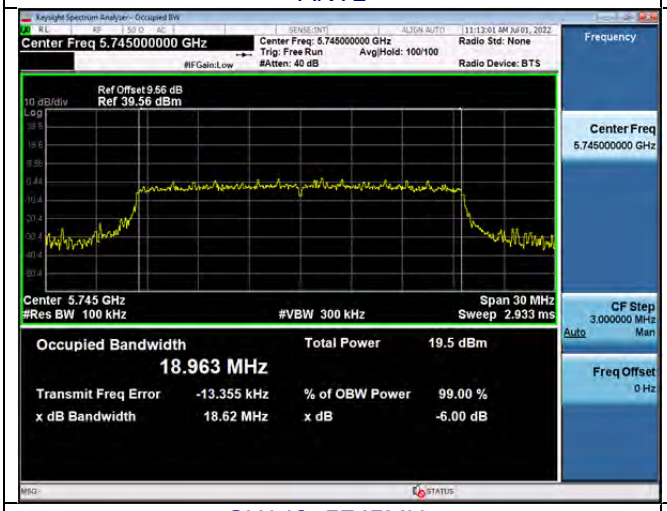
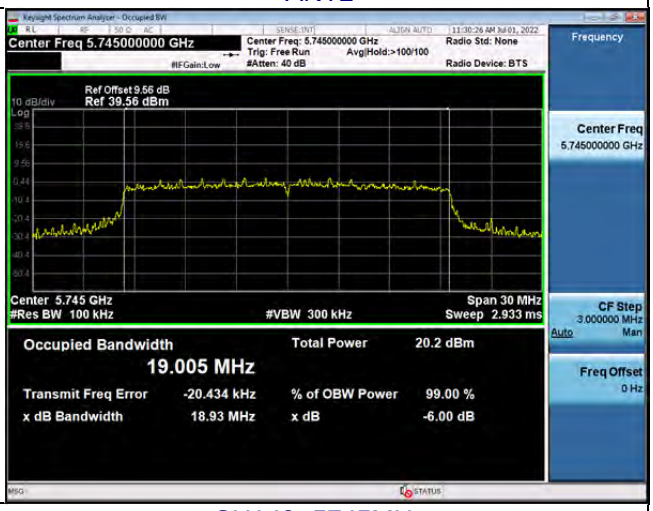
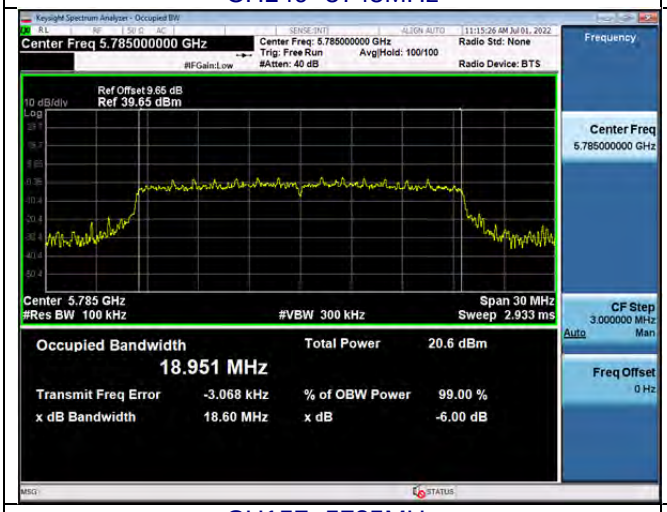
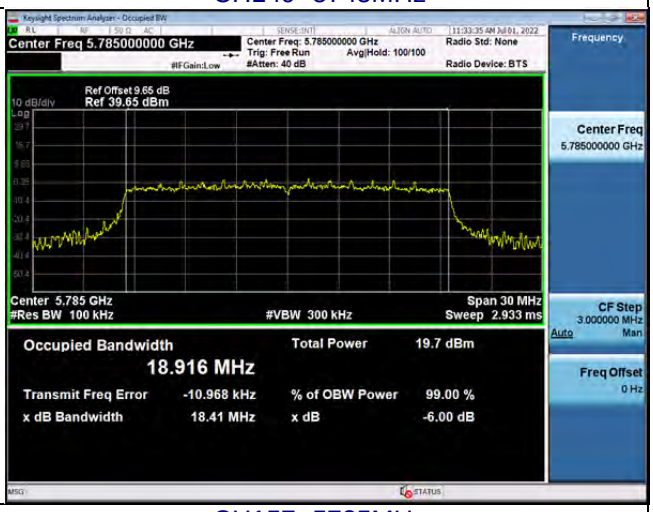
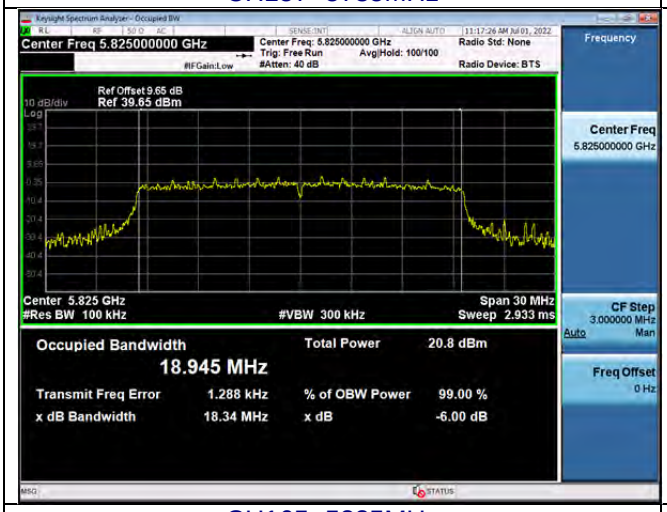
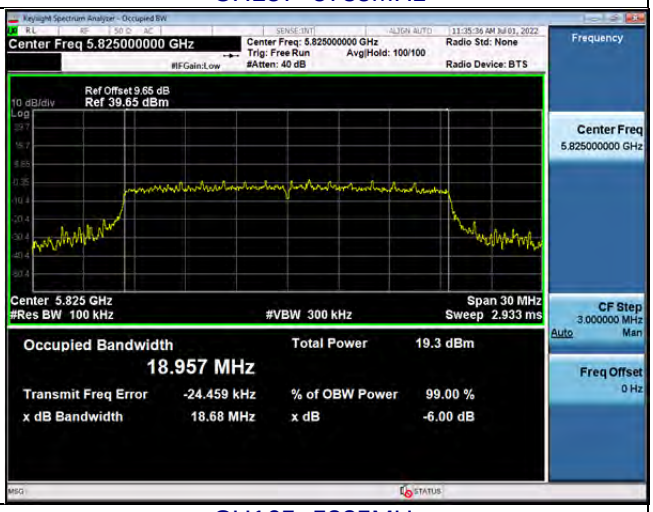
| ANT1 | ANT2 |
|---|---|
|  |  |
| CH151 -5755MHz | CH151 -5755MHz |
|  |  |
| CH159 -5795MHz | CH159 -5795MHz |



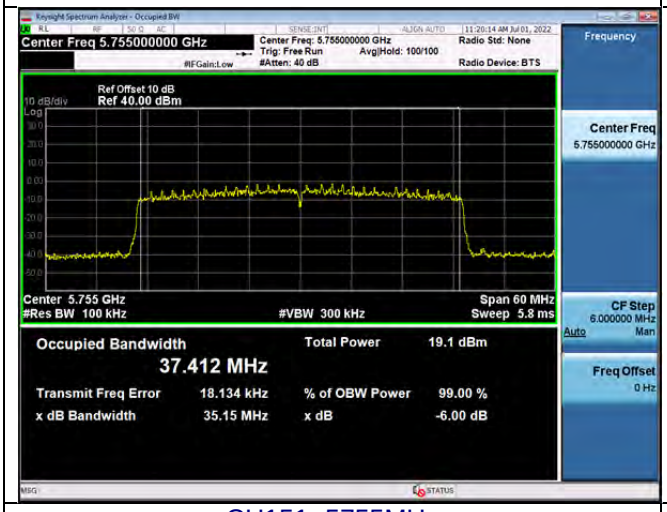
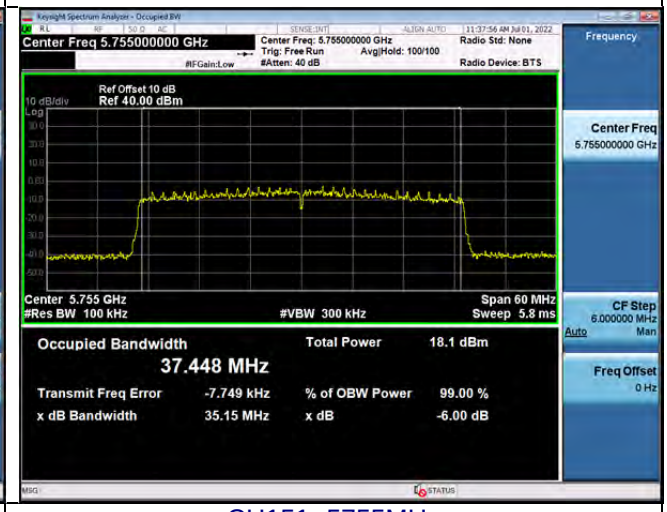
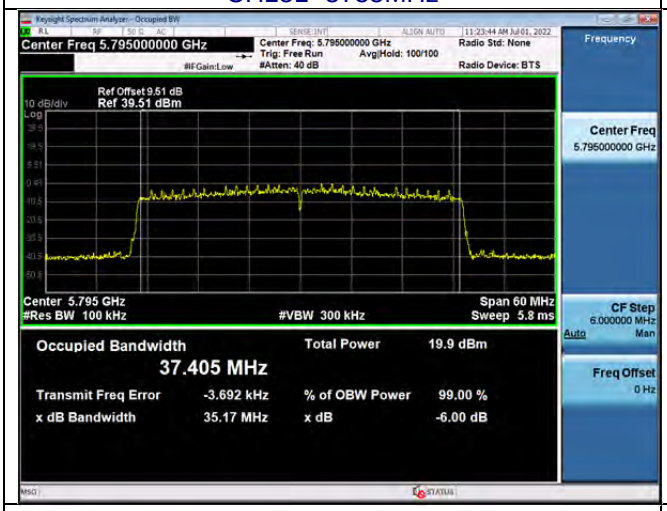
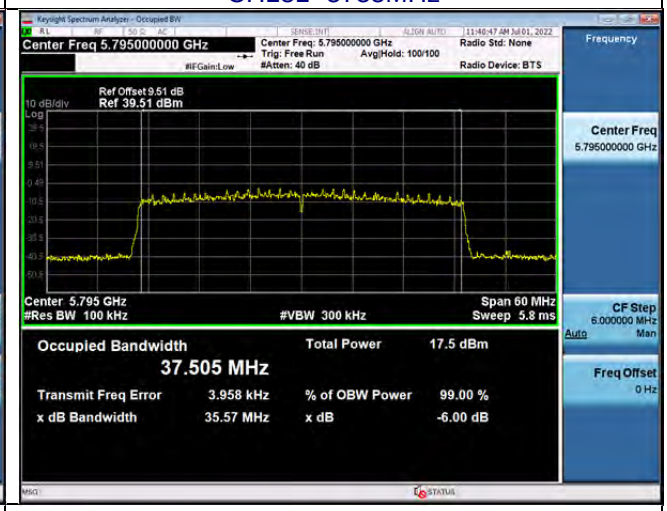
## U-NII-3 – 802.11ac (80MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH155 -5775MHz | CH155 -5775MHz |

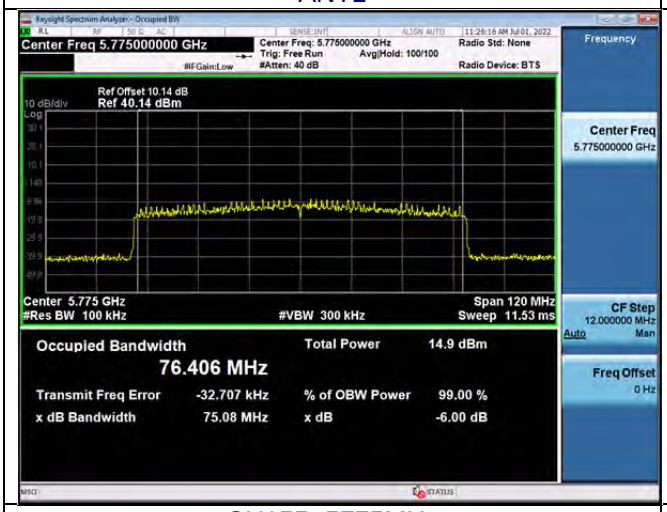
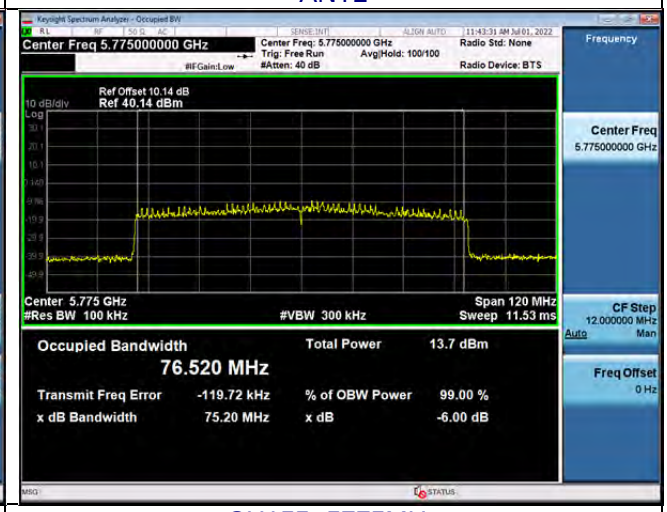
U-NII-3 –802.11ax (20MHz)

| ANT1 | ANT2 |
|---|---|
|  |  |
| CH149 -5745MHz | CH149 -5745MHz |
|  |  |
| CH157 -5785MHz | CH157 -5785MHz |
|  |  |
| CH165 -5825MHz | CH165 -5825MHz |

## U-NII-3 – 802.11ax (40MHz)

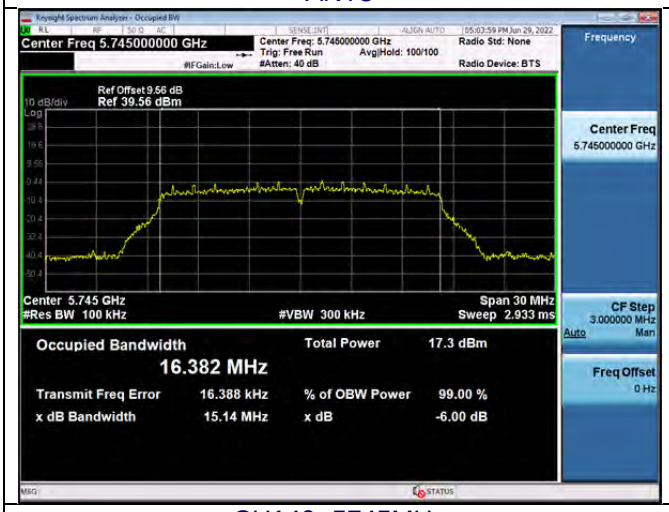
| ANT1 | ANT2 |
|---|---|
|  |  |
| CH151 -5755MHz | CH151 -5755MHz |
|  |  |
| CH159 -5795MHz | CH159 -5795MHz |

## U-NII-3 – 802.11ax (80MHz)

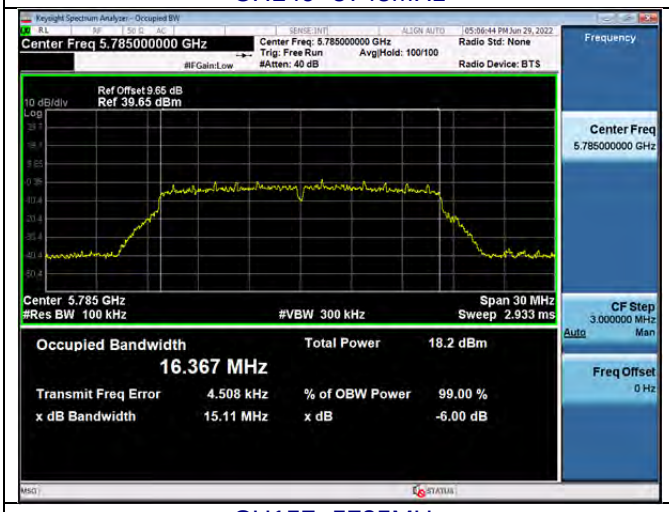
| ANT1 | ANT2 |
|---|---|
|  |  |
| CH155 -5775MHz | CH155 -5775MHz |

U-NII-3 –802.11a

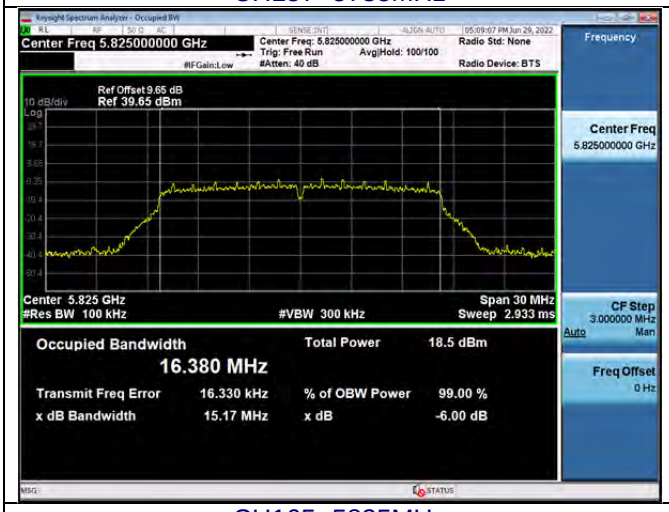
ANT3




CH149 -5745MHz



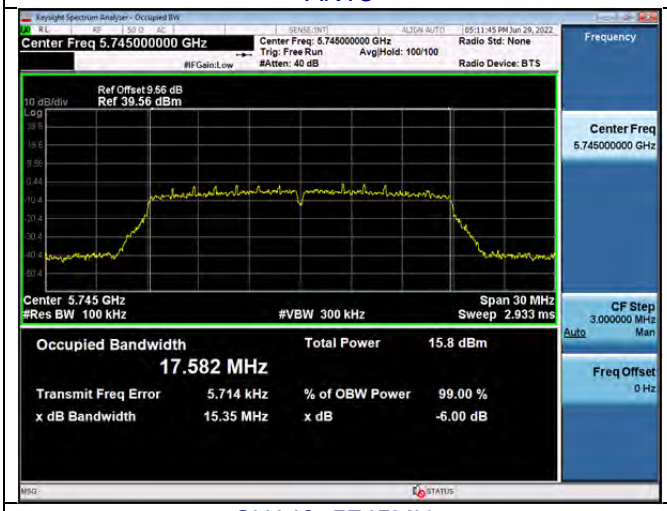

CH157 -5785MHz



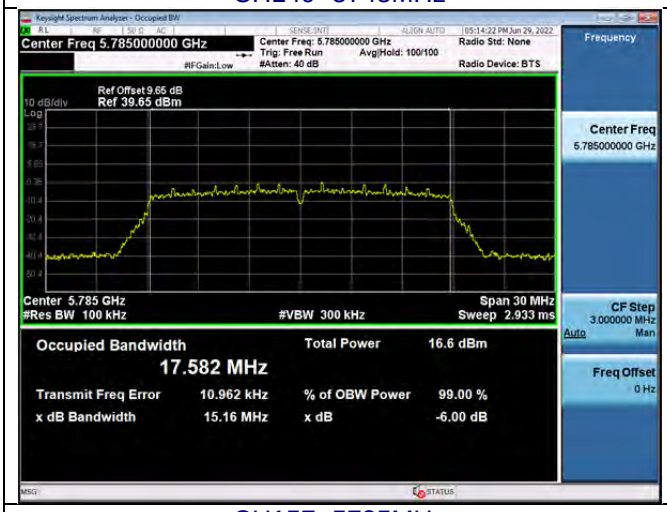

CH165 -5825MHz

U-NII-3 –802.11n (20MHz)

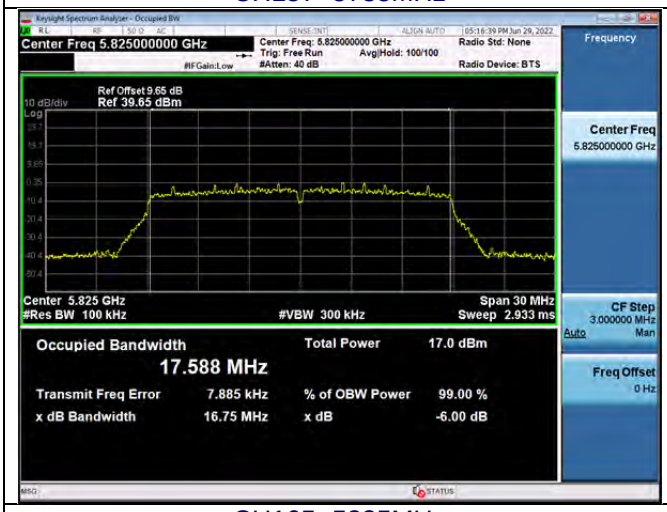
ANT3




CH149 -5745MHz



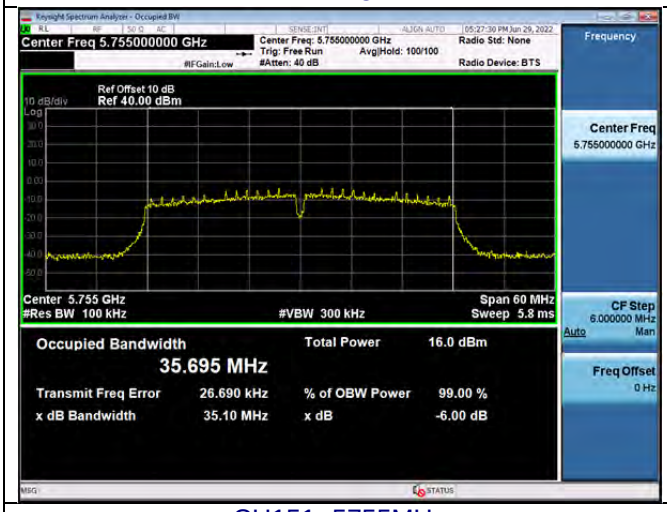

CH157 -5785MHz



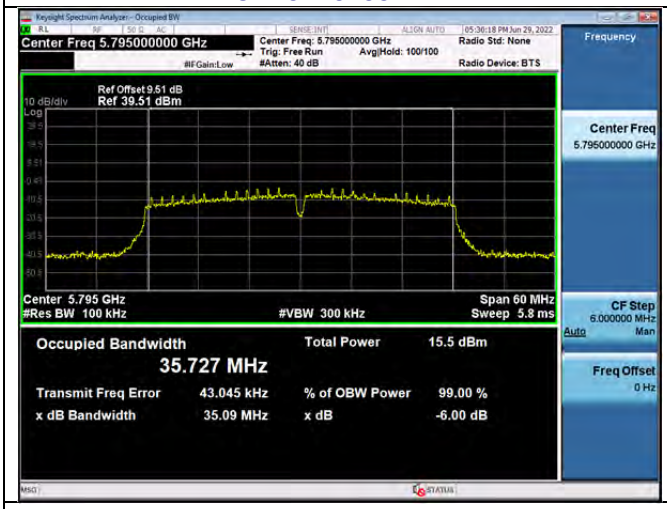

CH165 -5825MHz

U-NII-3 – 802.11n (40MHz)

ANT3



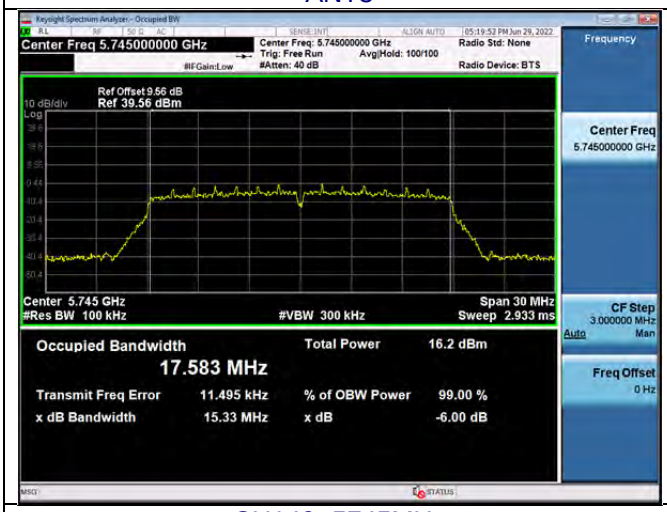

CH151 -5755MHz



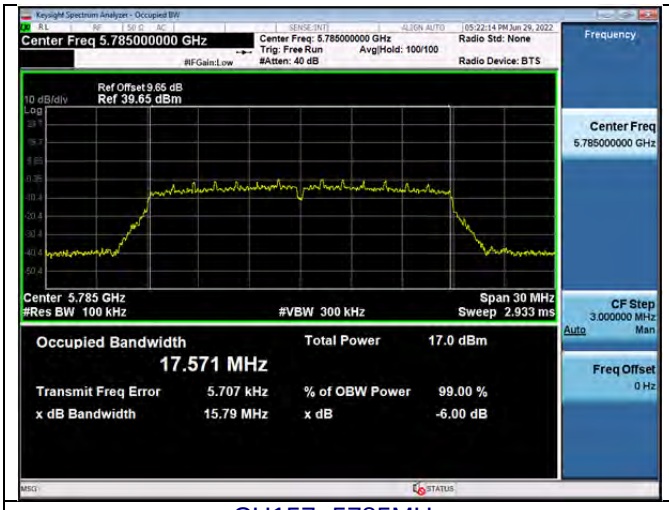

CH159 -5795MHz

U-NII-3–802.11ac (20MHz)

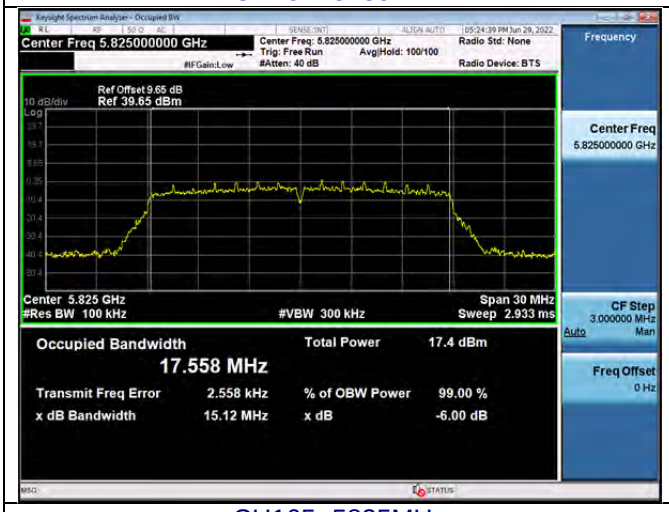
ANT3




CH149 -5745MHz



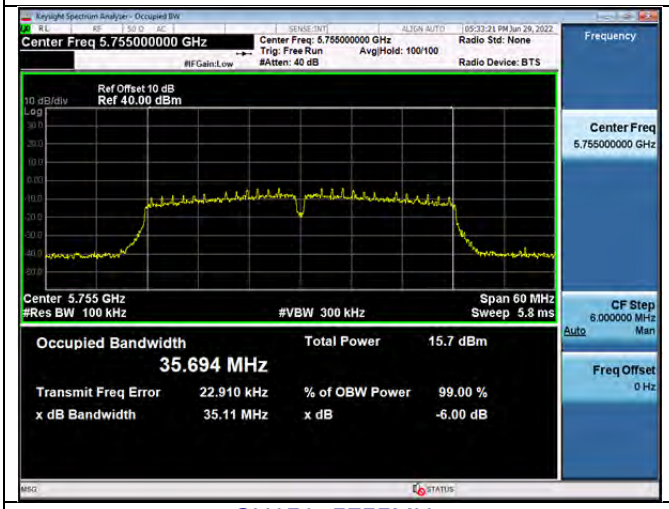

CH157 -5785MHz



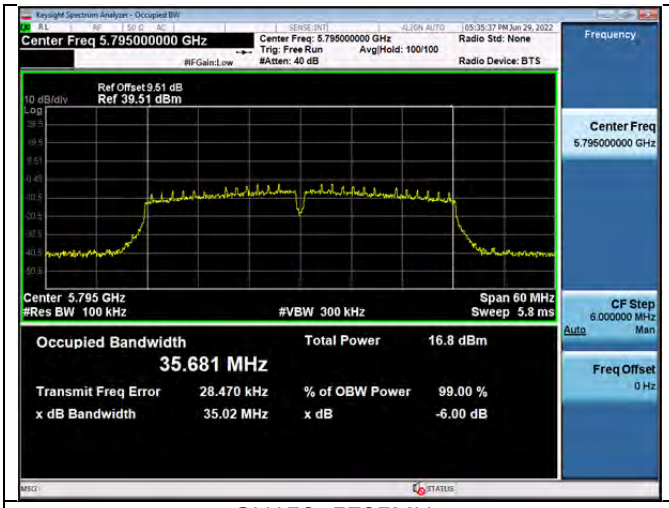

CH165 -5825MHz

U-NII-3 – 802.11ac (40MHz)

ANT3



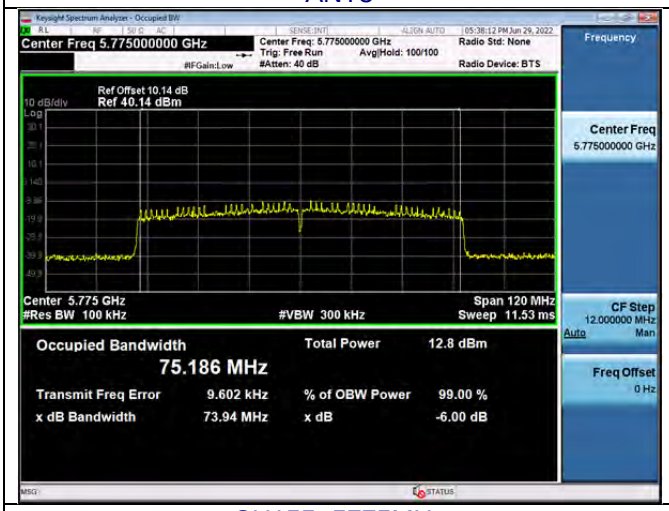

CH151 -5755MHz




CH159 -5795MHz

U-NII-3– 802.11ac (80MHz)

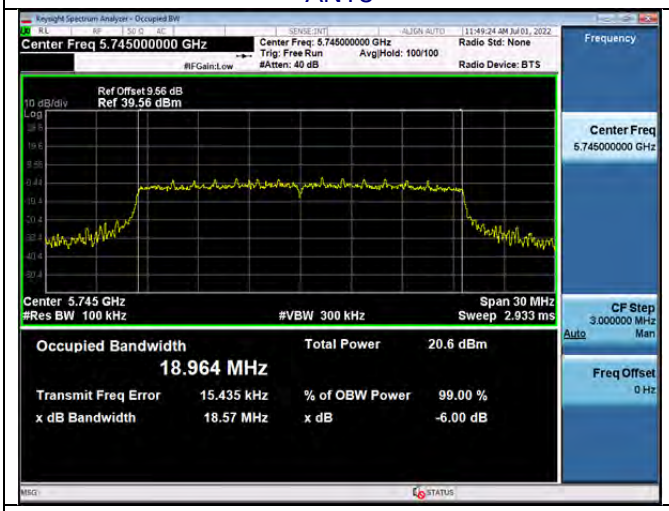
ANT3



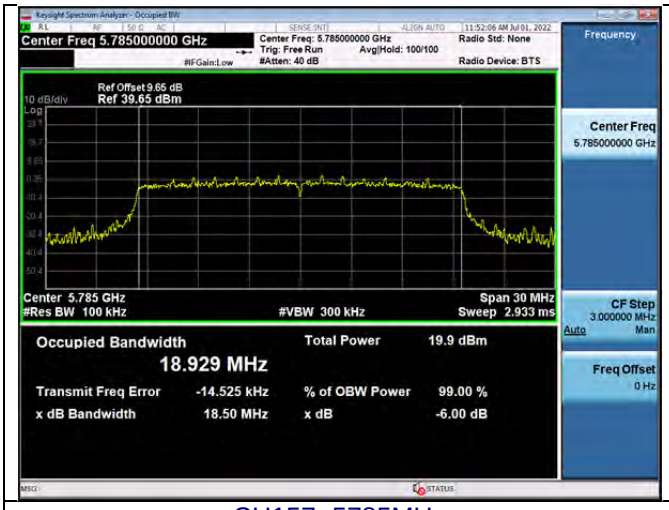

CH155 -5775MHz

U-NII-3 –802.11ax (20MHz)

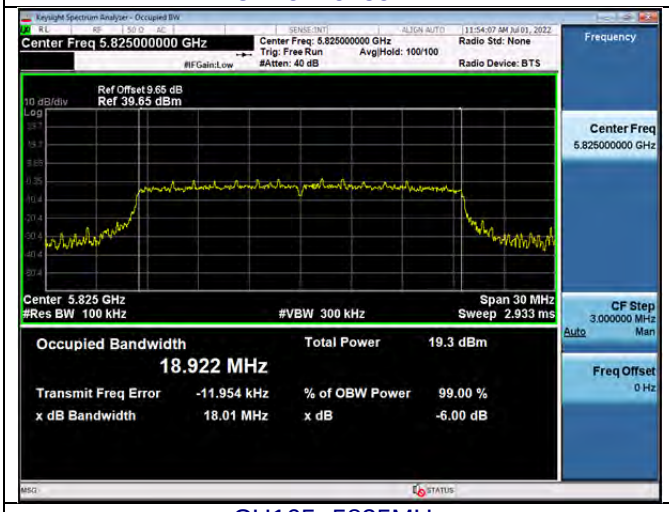
ANT3




CH149 -5745MHz



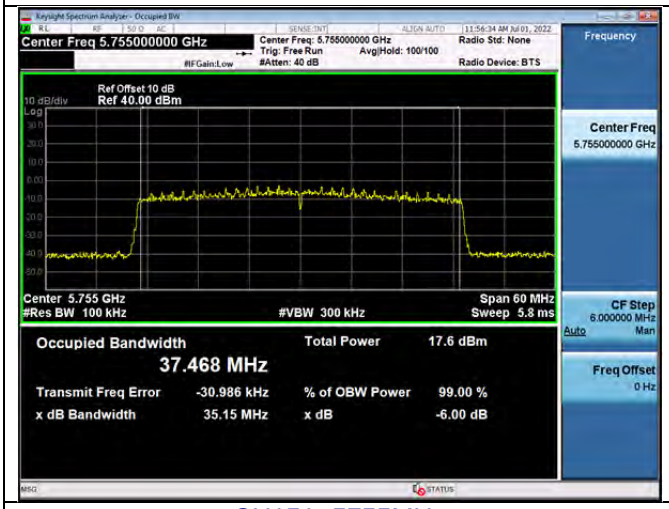

CH157 -5785MHz



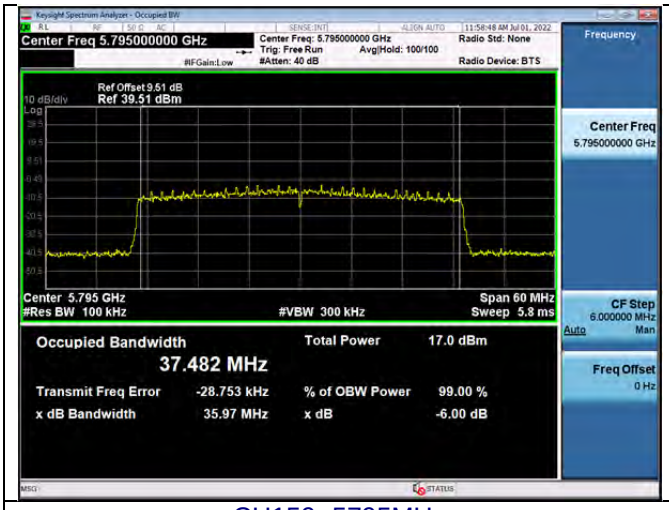

CH165 -5825MHz

U-NII-3 – 802.11ax (40MHz)

ANT3



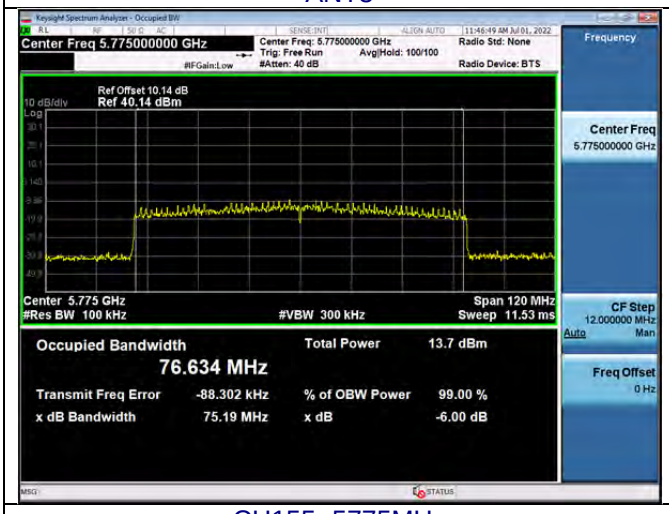

CH151 -5755MHz




CH159 -5795MHz

U-NII-3– 802.11ax (80MHz)

ANT3




CH155 -5775MHz

## 7. OUTPUT POWER TEST

| | |
|---|---|
| Test Requirement: | 15.407 (a)(1)(2)(3) |
| Test Method: | KDB 789033 D02 v02r01 |

### 7.1 APPLIED PROCEDURES/LIMIT

For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi.

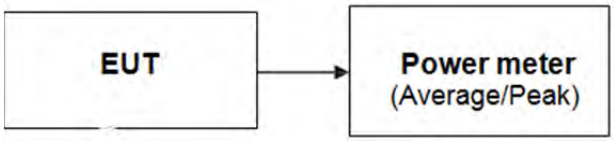
For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

| Test Item | Band | Limit | Result |
|---|---|---|---|
| Max conducted output power | U-NII-1 | 1W / 30dbm | Pass |
| Max conducted output power | U-NII-3 | 1 W / 30dbm | Pass |

### 7.2 DEVIATION FROM STANDARD

No deviation.

### 7.3 TEST SETUP




### 7.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.5 TEST RESULT

| | | | |
|---|---|---|---|
| Temperature： | 26℃ | Relative Humidity： | 54% |
| Pressure： | 101kPa | Test Voltage ： | AC120V |

U-NII-1

| 802.11 Mode | Channel No. | Frequency [MHz] | Conducted Power [dBm] | | | MIMO [dBm] | Limit [dBm] | MIMO Limit |
|---|---|---|---|---|---|---|---|---|
| | | | ANT1 | ANT2 | ANT3 | | | |
| a | 36 | 5180 | 9.95 | 10.18 | 9.97 | / | 30.00 | / |
| | 40 | 5200 | 10.72 | 11.8 | 10.4 | / | 30.00 | / |
| | 48 | 5240 | 10.55 | 9.99 | 9.64 | / | 30.00 | / |
| n(20MHz) | 36 | 5180 | 9.03 | 8.03 | 9.08 | 13.51 | 30.00 | 26.23 |
| | 40 | 5200 | 9.04 | 8.01 | 9.04 | 13.49 | 30.00 | 26.23 |
| | 48 | 5240 | 9.12 | 8.71 | 9.77 | 13.99 | 30.00 | 26.23 |
| n(40MHz) | 38 | 5190 | 5.72 | 6.12 | 6.7 | 10.97 | 30.00 | 26.23 |
| | 46 | 5230 | 5.66 | 6.24 | 6.89 | 11.06 | 30.00 | 26.23 |
| ac(20MHz) | 36 | 5180 | 9.32 | 8.72 | 9.37 | 13.92 | 30.00 | 26.23 |
| | 40 | 5200 | 9.22 | 9.30 | 9.7 | 14.18 | 30.00 | 26.23 |
| | 48 | 5240 | 10.00 | 9.57 | 10.39 | 14.77 | 30.00 | 26.23 |
| ac(40MHz) | 38 | 5190 | 5.82 | 6.39 | 6.64 | 11.07 | 30.00 | 26.23 |
| | 46 | 5230 | 5.81 | 6.37 | 6.92 | 11.16 | 30.00 | 26.23 |
| ac(80MHz) | 42 | 5210 | 2.75 | 2.12 | 3.27 | 7.51 | 30.00 | 26.23 |
| ax(20MHz) | 36 | 5180 | 10.38 | 10.75 | 10.5 | 15.32 | 30.00 | 26.23 |
| | 40 | 5200 | 10.00 | 10.76 | 10.74 | 15.29 | 30.00 | 26.23 |
| | 48 | 5240 | 10.22 | 11.28 | 11.24 | 15.71 | 30.00 | 26.23 |
| ax(40MHz) | 38 | 5190 | 6.55 | 7.14 | 7.09 | 11.71 | 30.00 | 26.23 |
| | 46 | 5230 | 6.78 | 7.9 | 7.91 | 12.33 | 30.00 | 26.23 |
| ax(80MHz) | 42 | 5210 | 3.13 | 3.45 | 3.98 | 8.31 | 30.00 | 26.23 |

NOTE:

1.according to KDB662911D01 the MIMO-Power (Total power) is the sum of the conducted power levels measured at the various output ports.

2. For frequncy U-NII-1,If MIMO Gain >6dBi , Power Limit(MIMO)=30- (MIMO Gain - 6dBi)
If MIMO Gain <6dBi , PSD Limit(MIMO)=Limit =30 dBm, in this report, MIMO Gain>6dBi ,
So Power Limit(MIMO)=Limit =30-(9.77-6)=26.23dBm

U-NII-3

| 802.11 Mode | Channel No. | Frequency [MHz] | Conducted Power [dBm] | | | MIMO [dBm] | Limit [dBm] | MIMO Limit |
|---|---|---|---|---|---|---|---|---|
| | | | ANT1 | ANT2 | ANT3 | | | |
| a | 149 | 5745 | 14.37 | 15.03 | 13.87 | / | 30.00 | / |
| | 157 | 5785 | 12.54 | 15.73 | 13.65 | / | 30.00 | / |
| | 165 | 5825 | 13.31 | 13.88 | 14.28 | / | 30.00 | / |
| n (20MHz) | 149 | 5745 | 11.09 | 12.13 | 11.46 | 16.35 | 30.00 | 26.23 |
| | 157 | 5785 | 12.46 | 13.57 | 12.18 | 17.55 | 30.00 | 26.23 |
| | 165 | 5825 | 12.29 | 13.80 | 12.64 | 17.73 | 30.00 | 26.23 |
| n (40MHz) | 151 | 5755 | 9.86 | 11.63 | 11.71 | 15.92 | 30.00 | 26.23 |
| | 159 | 5795 | 10.52 | 11.26 | 12.52 | 16.28 | 30.00 | 26.23 |
| ac (20MHz) | 149 | 5745 | 12.29 | 14.34 | 12.97 | 18.06 | 30.00 | 26.23 |
| | 157 | 5785 | 10.73 | 12.10 | 11.24 | 16.17 | 30.00 | 26.23 |
| | 165 | 5825 | 10.24 | 11.83 | 10.76 | 15.77 | 30.00 | 26.23 |
| ac(40MHz) | 151 | 5755 | 9.94 | 12.15 | 10.78 | 15.82 | 30.00 | 26.23 |
| | 159 | 5795 | 10.25 | 12.73 | 11.92 | 16.52 | 30.00 | 26.23 |
| ac(80MHz) | 155 | 5775 | 7.74 | 8.93 | 7.74 | 12.95 | 30.00 | 26.23 |
| ax(20MHz) | 149 | 5745 | 16.08 | 16.95 | 17.39 | 21.61 | 30.00 | 26.23 |
| | 157 | 5785 | 16.91 | 16.51 | 16.75 | 21.50 | 30.00 | 26.23 |
| | 165 | 5825 | 16.18 | 16.05 | 16.11 | 20.88 | 30.00 | 26.23 |
| ax(40MHz) | 151 | 5755 | 14.94 | 14.32 | 13.84 | 19.16 | 30.00 | 26.23 |
| | 159 | 5795 | 15.72 | 13.78 | 13.33 | 19.18 | 30.00 | 26.23 |
| ax(80MHz) | 155 | 5775 | 8.62 | 7.59 | 7.43 | 12.68 | 30.00 | 26.23 |

1.according to KDB662911D01 the MIMO-Power (Total power) is the sum of the conducted power levels measured at the various output ports.

2. For frequncy U-NII-3,If MIMO Gain >6dBi , Power Limit(MIMO)=30- (MIMO Gain - 6dBi)
If MIMO Gain <6dBi , PSD Limit(MIMO)=Limit =30 dBm, in this report, MIMO Gain>6dBi ,
So Power Limit(MIMO)=Limit =30-(9.77-6)=26.23dBm

## 8. OUT OF BAND EDGE EMISSION

| | |
|---|---|
| Test Requirement: | 15.407 (b) |
| Test Method: | KDB 789033 D02 v02r01 |

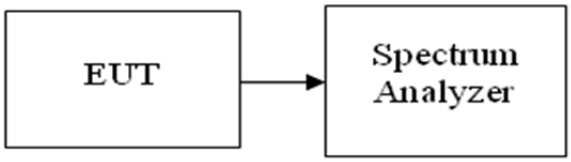
### 8.1 TEST PROCEDURE

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz with a convenient frequency span.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

### 8.2 DEVIATION FROM STANDARD

No deviation.

### 8.3 TEST SETUP



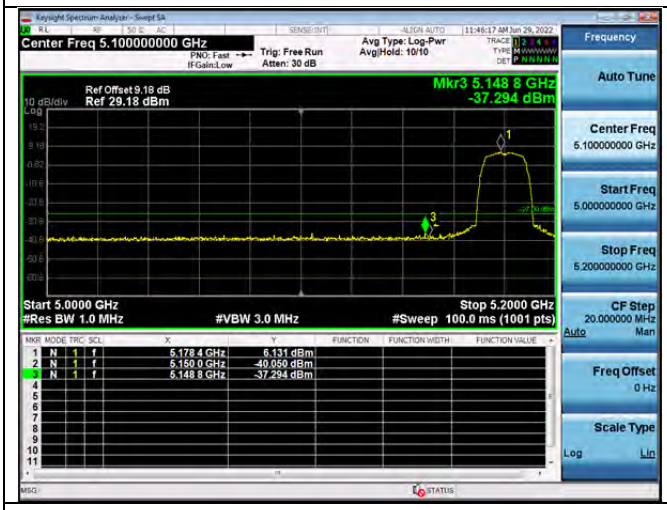
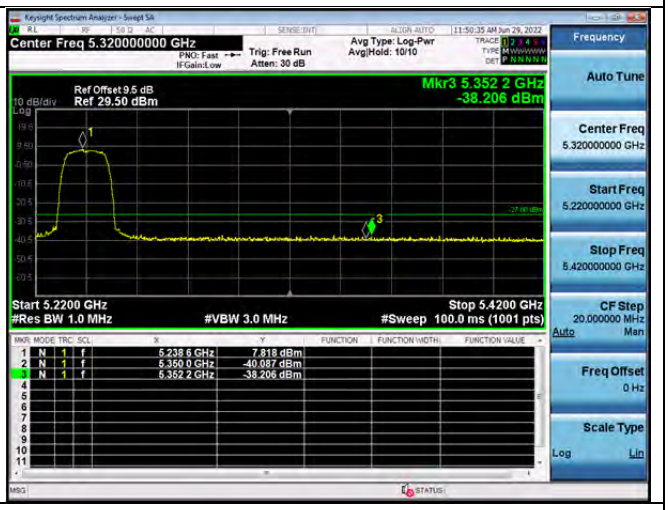

### 8.4 EUT OPERATION CONDITIONS

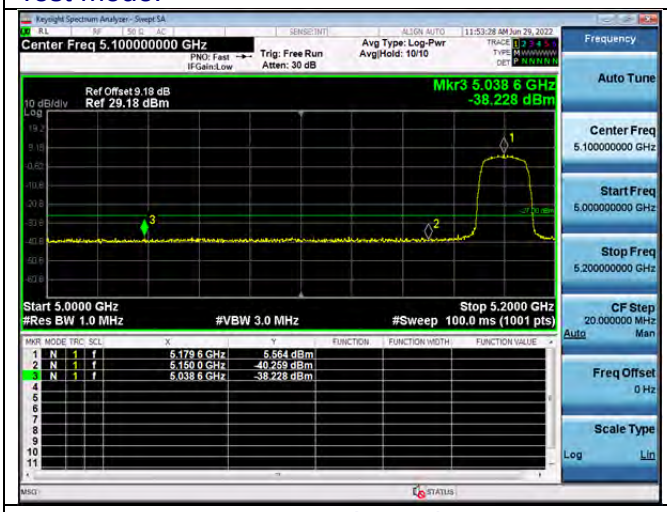
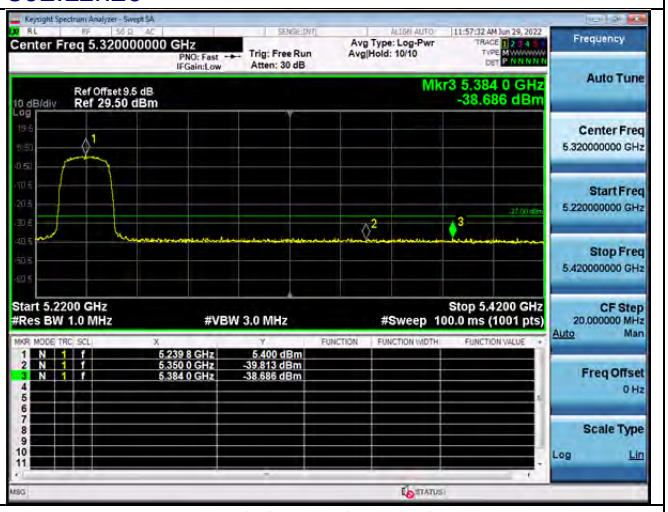
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

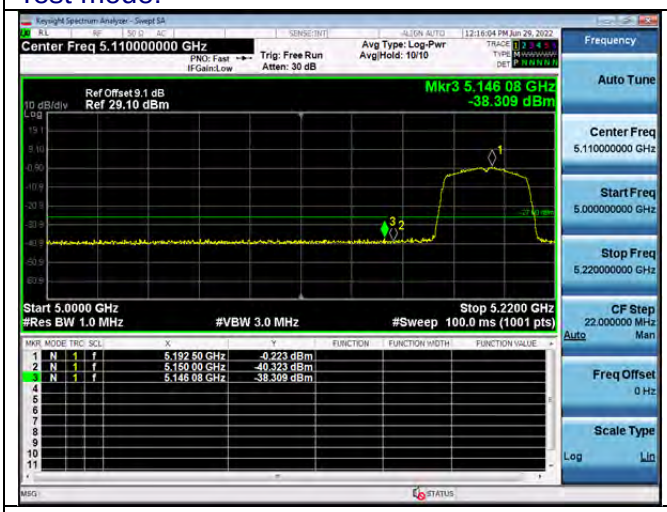
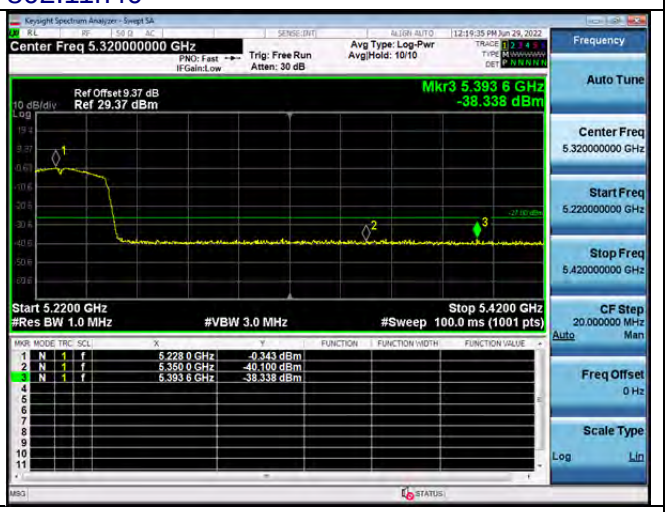
### 8.5 TEST RESULTS

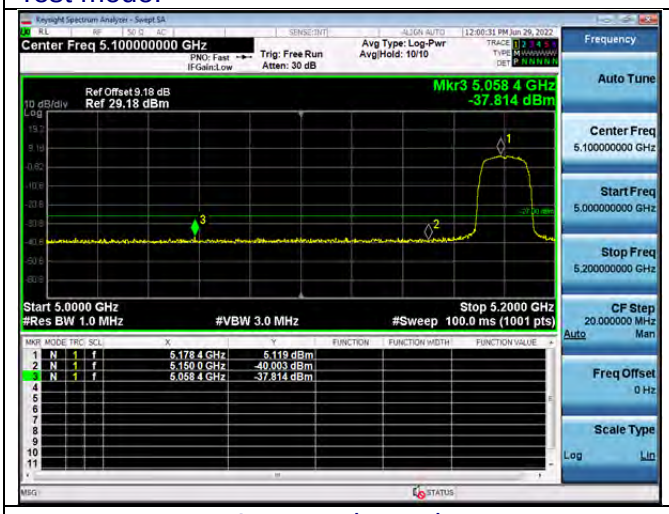
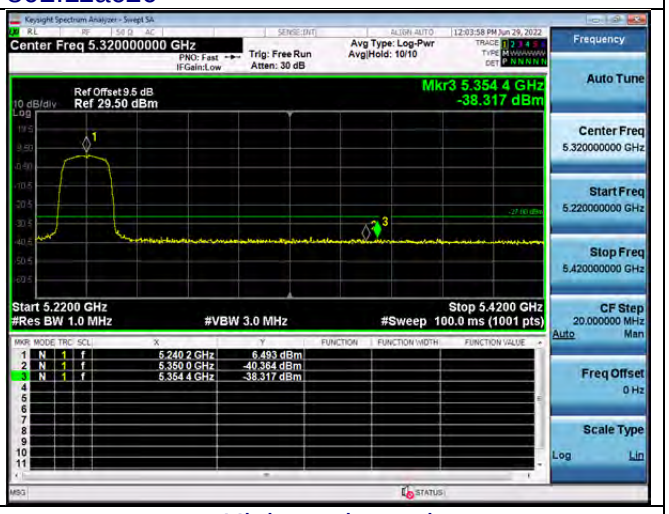
Test plot as follows:

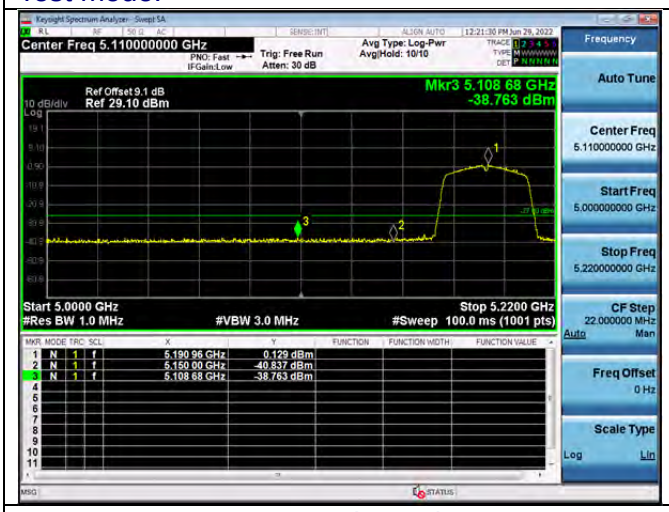
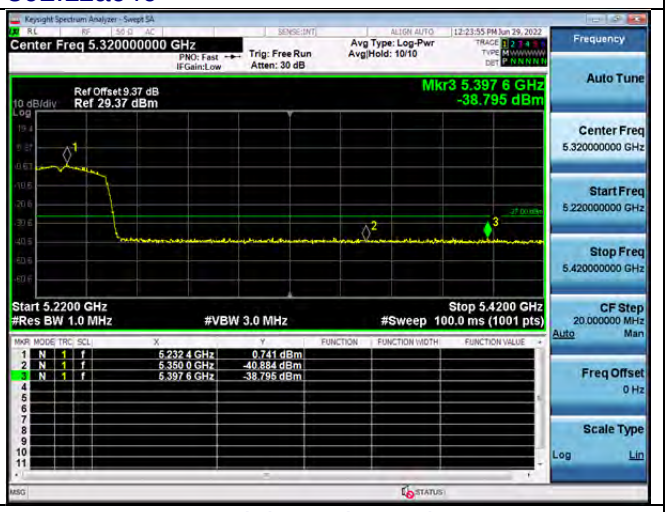
ANT1- U-NII-1

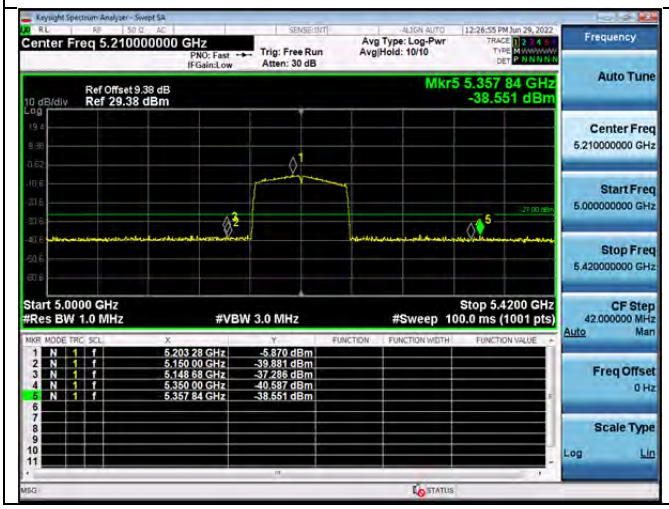
| Test mode: | 802.11a |
|---|---|
|  |  |
| Lowest channel | Highest channel |

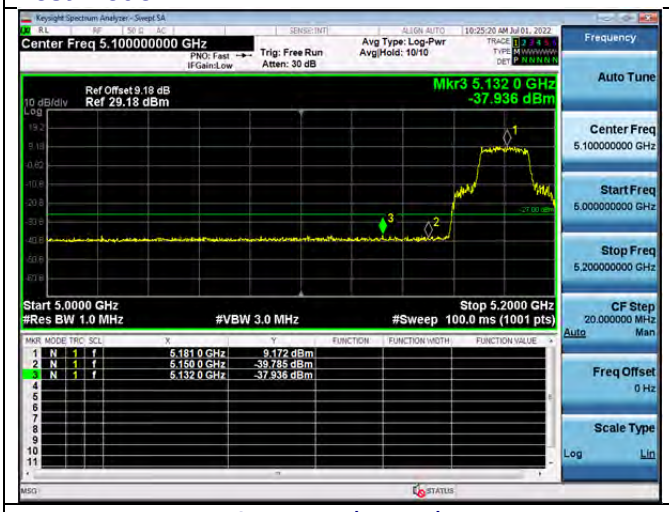
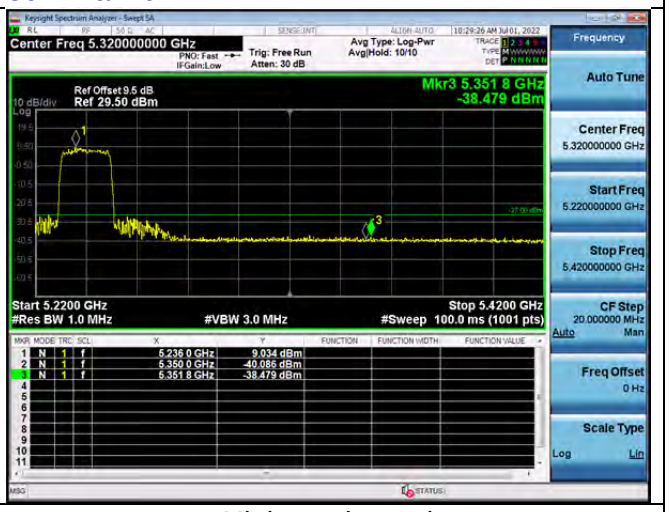
| Test mode: | 802.11n20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

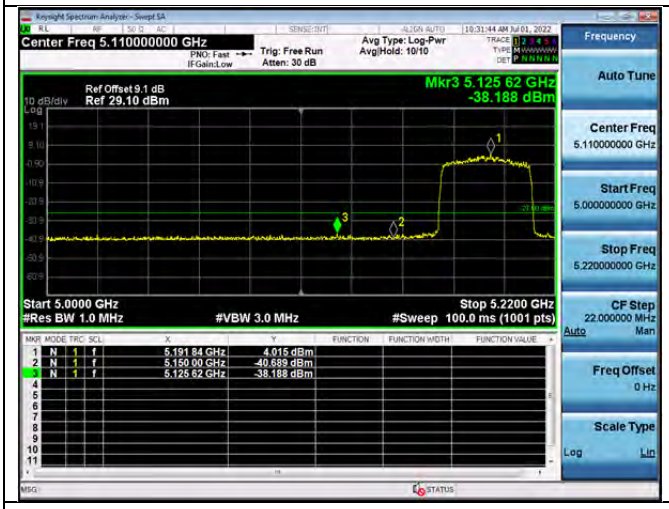
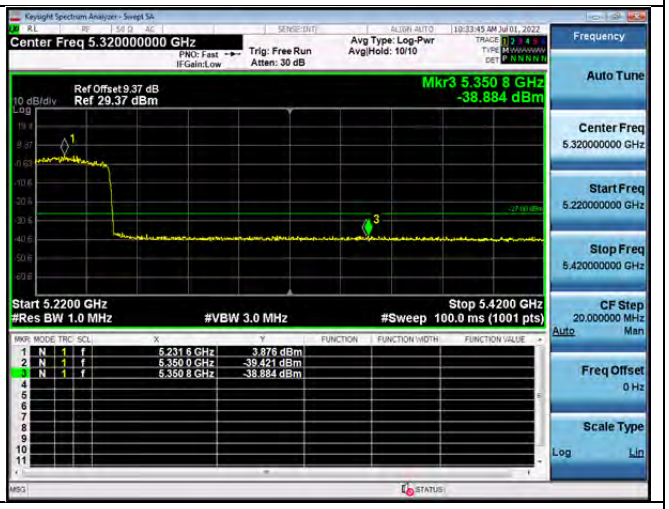
| Test mode: | 802.11n40 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

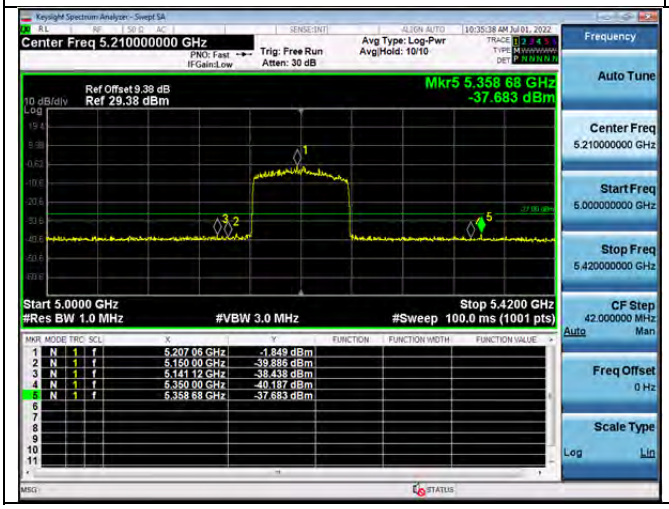
| Test mode: | 802.11ac20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac40 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

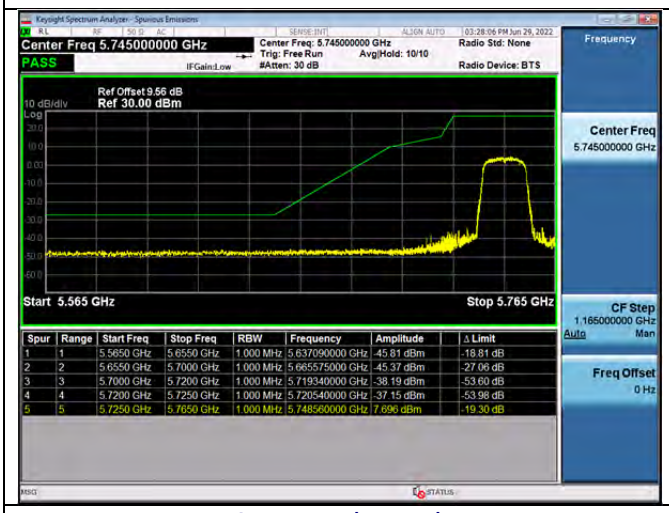
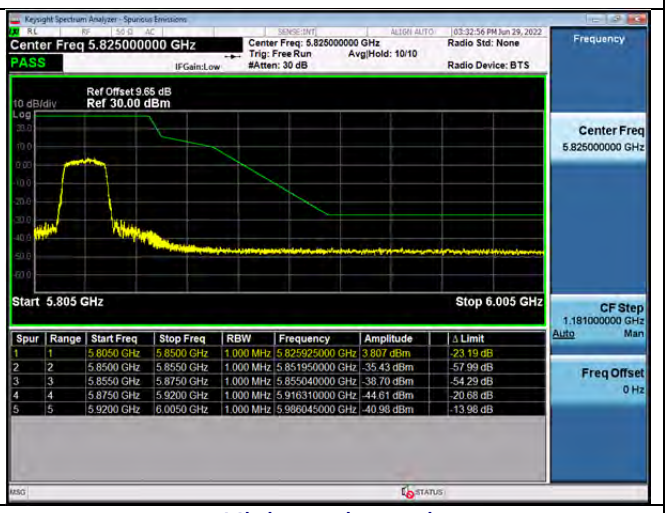
| Test mode: | 802.11ac80 |
|---|---|
|  | |

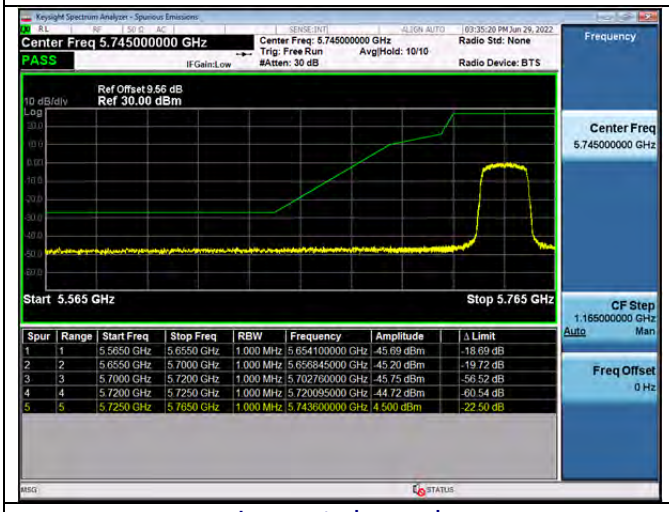
| Test mode: | 802.11ax20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

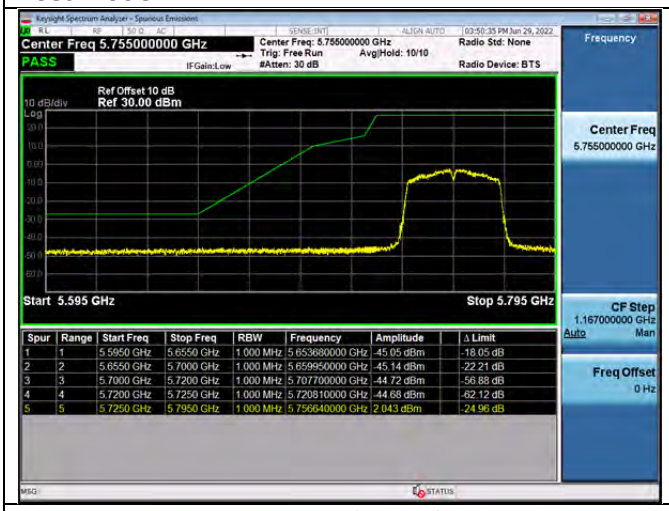
| Test mode: | 802.11ax40 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

| Test mode: | 802.11ax80 |
|---|---|
|  | |

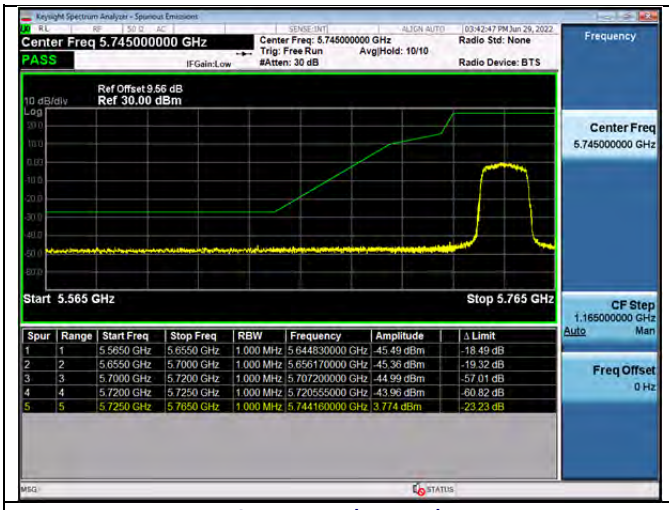
ANT1- U-NII-3

| Test mode: | 802.11a |
|---|---|
|  |  |
| Lowest channel | Highest channel |

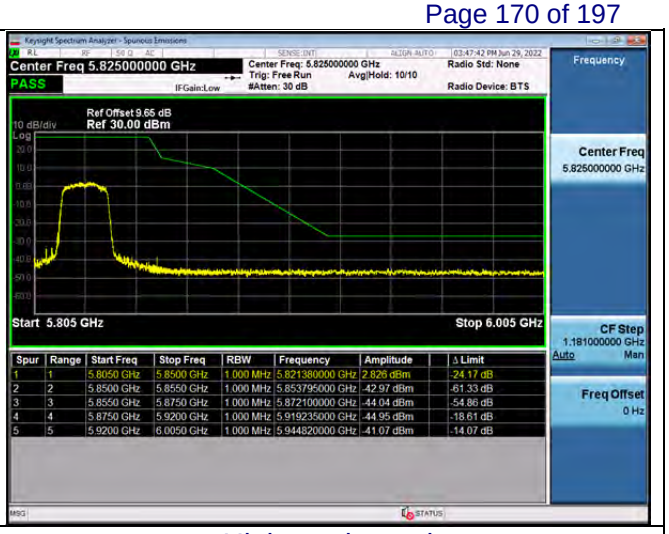
| Test mode: | 802.11n20 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11n40 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac20 |
|---|---|

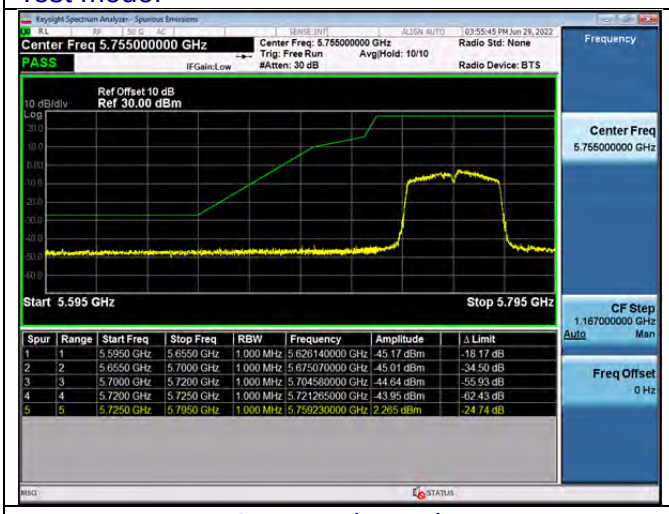



Lowest channel




Highest channel

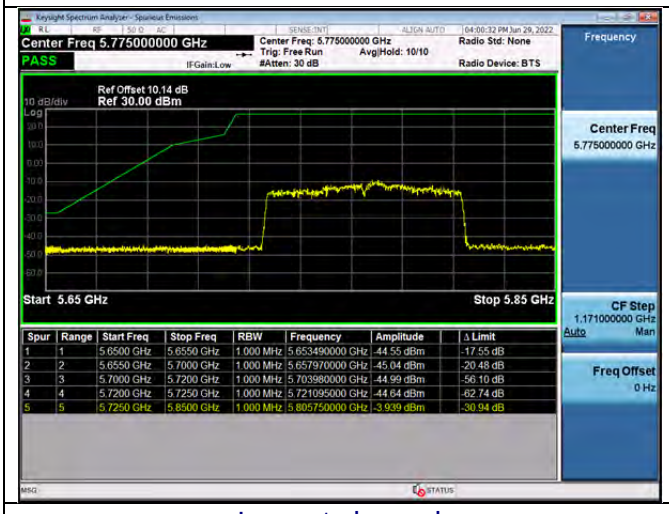
| Test mode: | 802.11ac40 |
|---|---|




Lowest channel

Highest channel

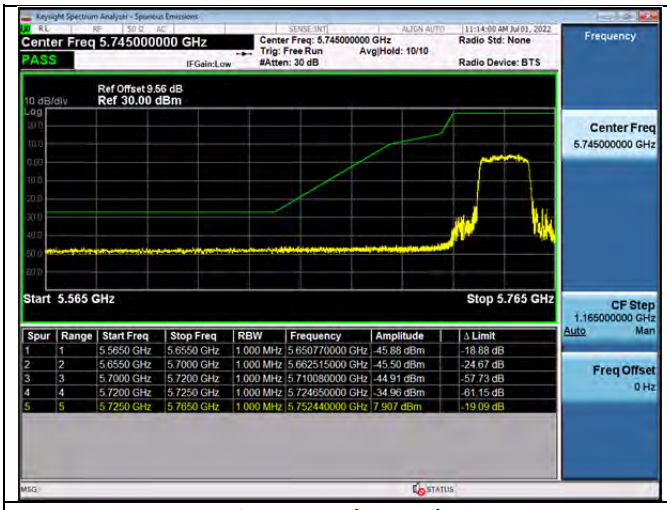
| Test mode: | 802.11ac80 |
|---|---|



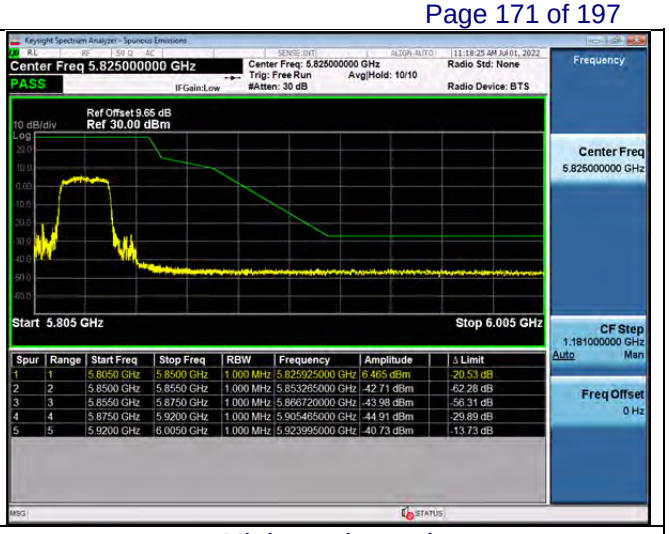

Lowest channel

Highest channel

| Test mode: | 802.11ax20 |
|---|---|

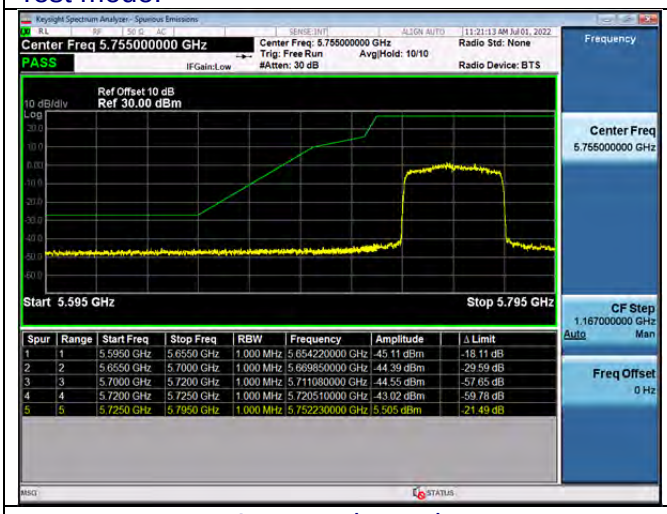



Lowest channel




Highest channel

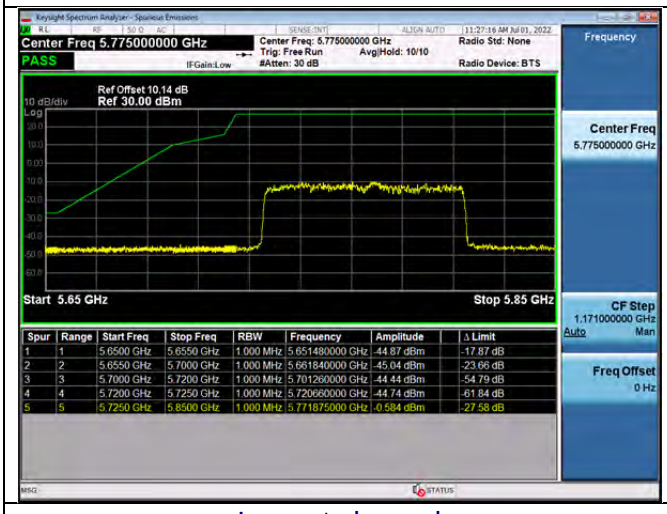
Test mode: 802.11ax40




Lowest channel

Highest channel

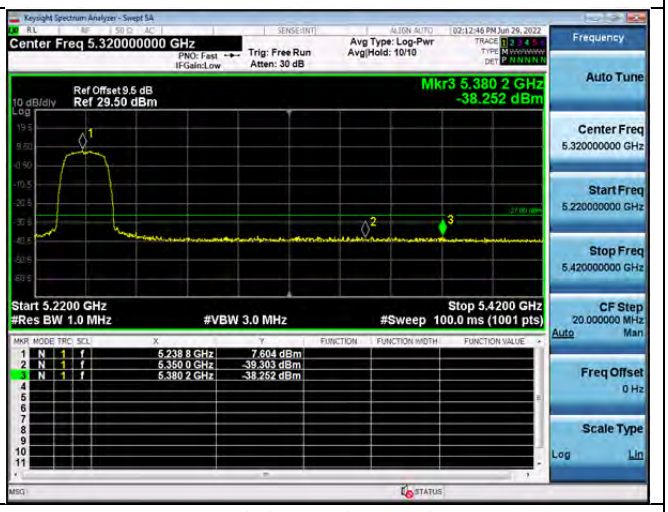
Test mode: 802.11ax80

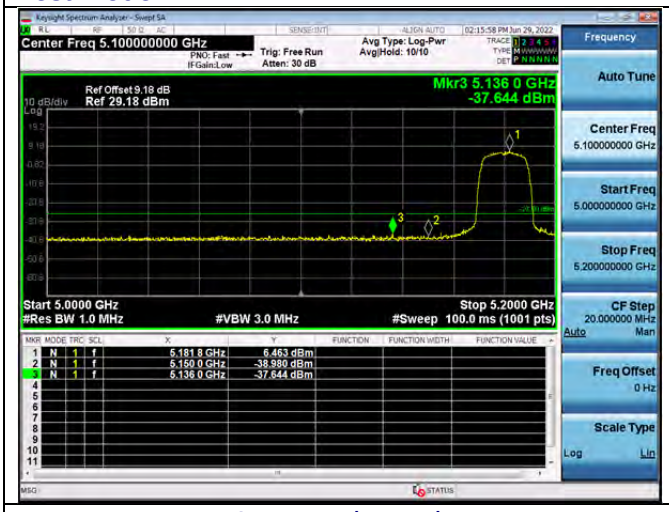
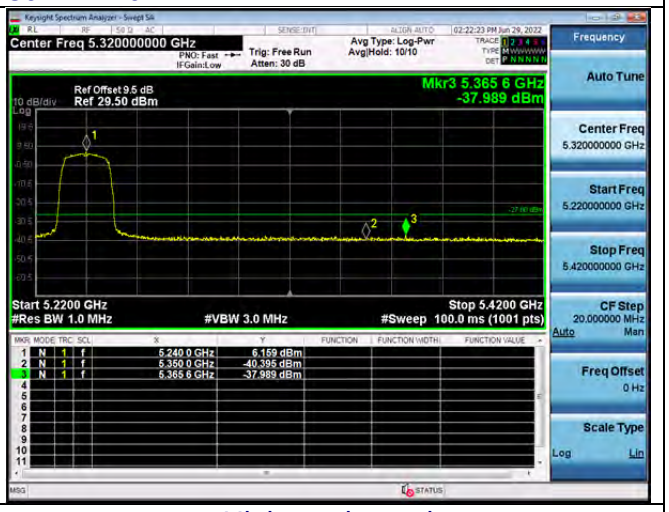


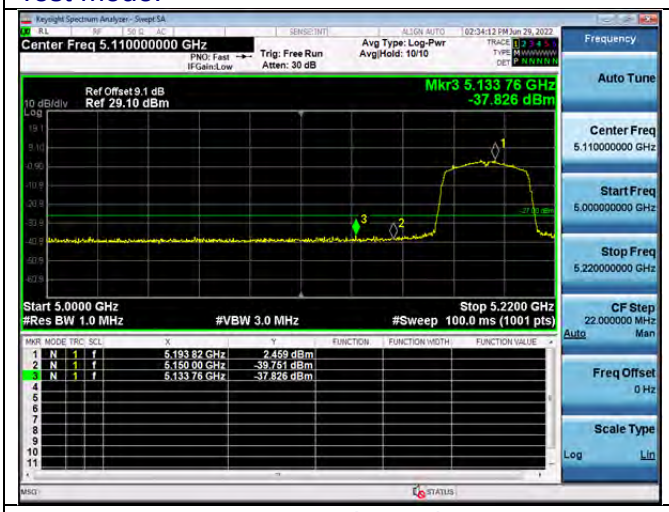

Lowest channel

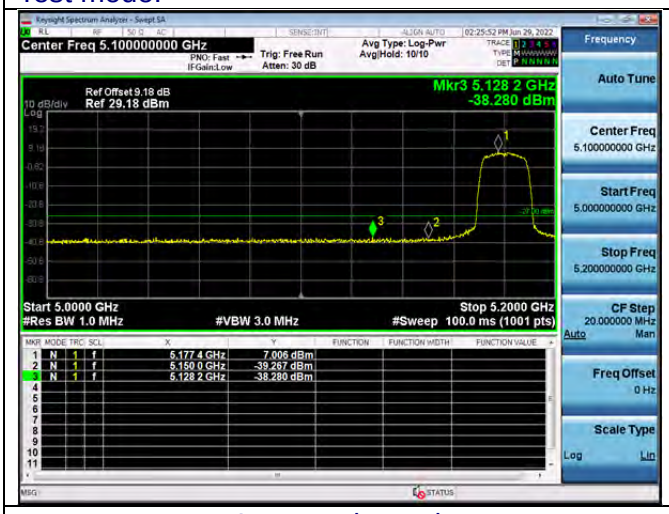
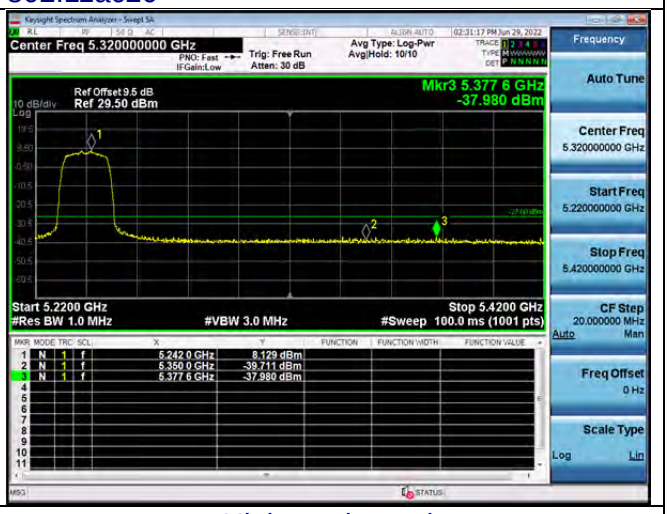
Highest channel

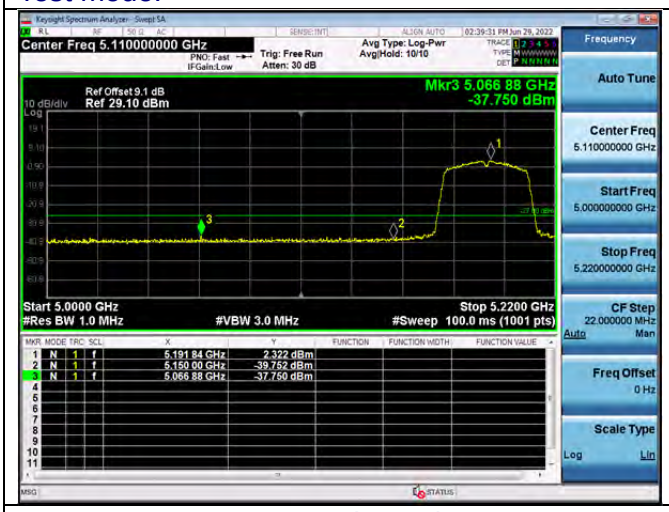
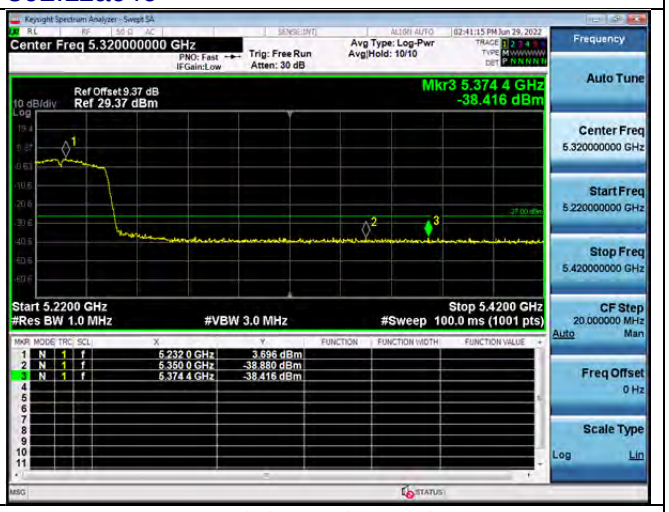
## ANT2- U-NII-1

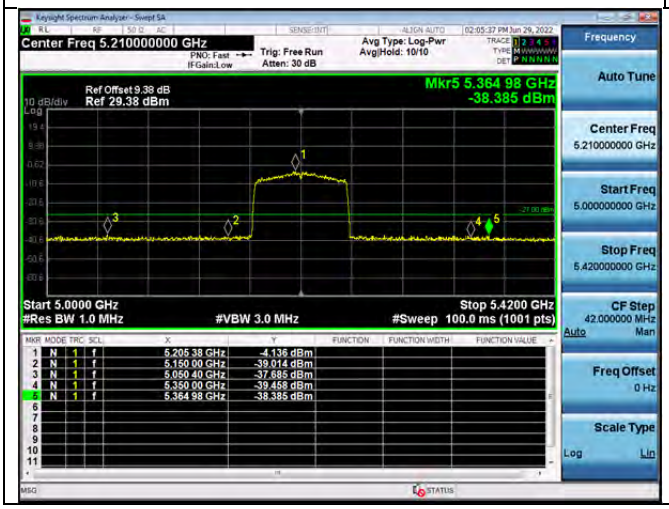
| Test mode: | 802.11a |
|---|---|
| |  |
| Lowest channel | Highest channel |

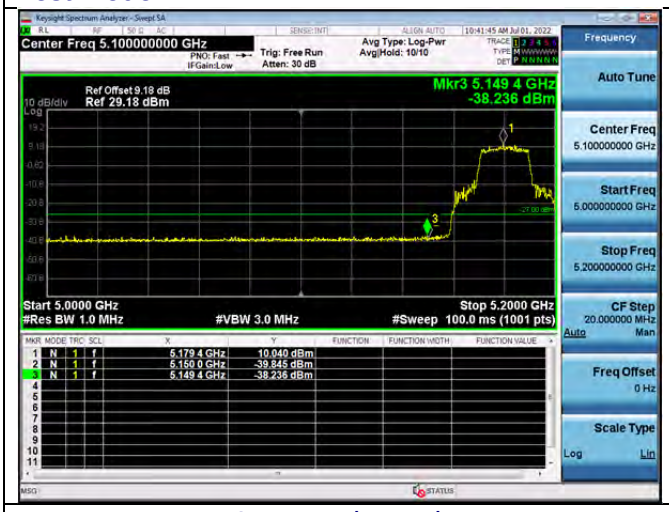
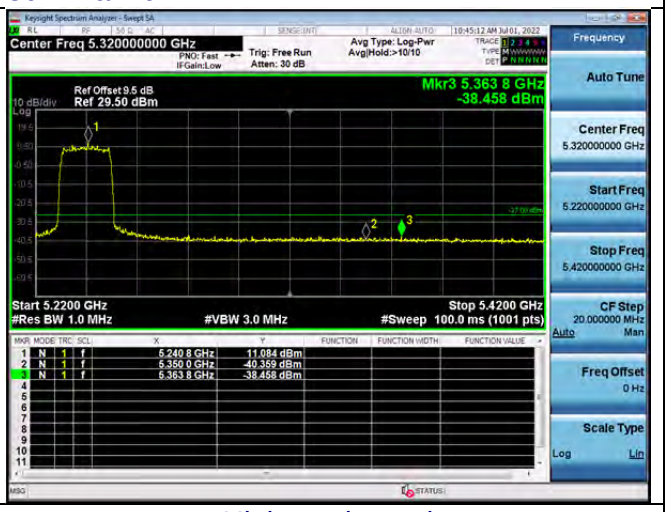
| Test mode: | 802.11n20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

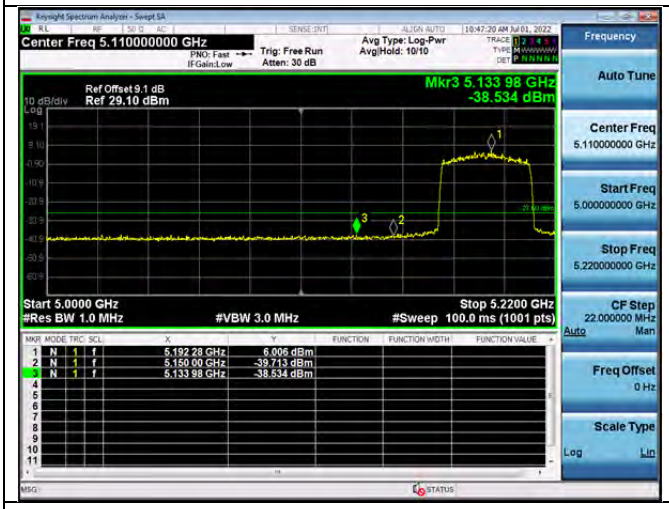
| Test mode: | 802.11n40 |
|---|---|
|  | |
| Lowest channel | Highest channel |

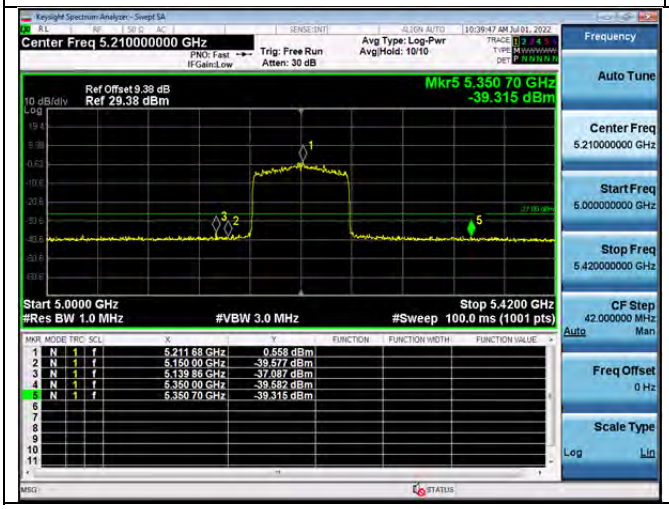
| Test mode: | 802.11ac20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac40 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac80 |
|---|---|
|  | |

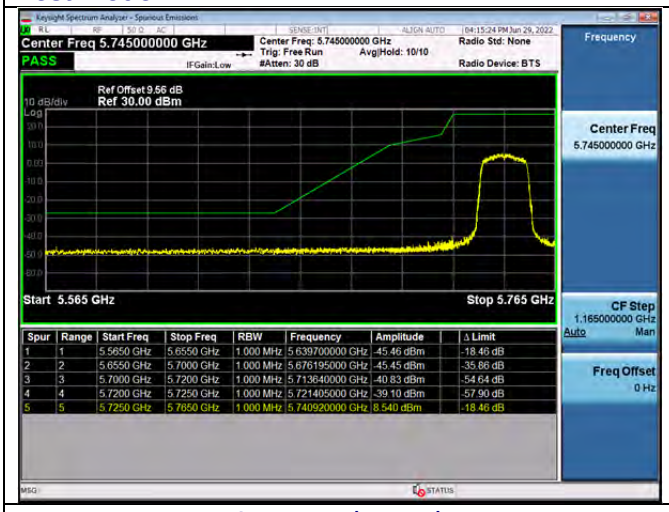
| Test mode: | 802.11ax20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

| Test mode: | 802.11ax40 |
|---|---|
|  | |
| Lowest channel | Highest channel |

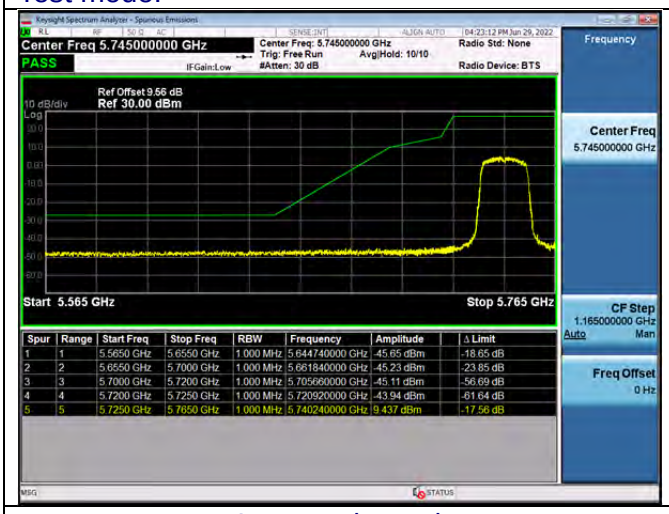
| Test mode: | 802.11ax80 |
|---|---|
|  | |

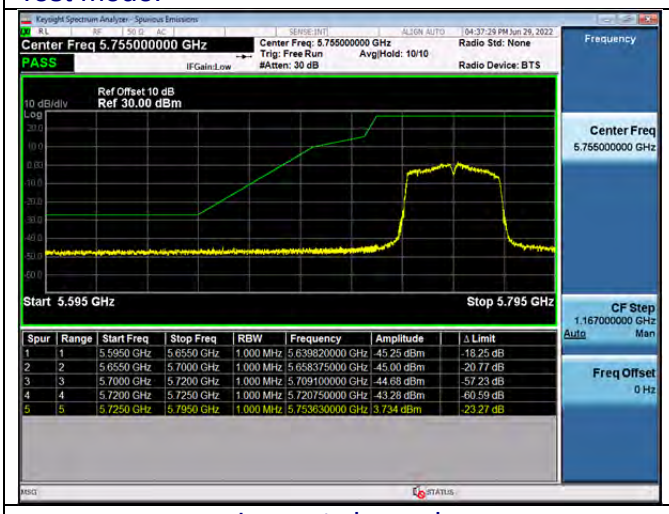
## ANT2- U-NII-3

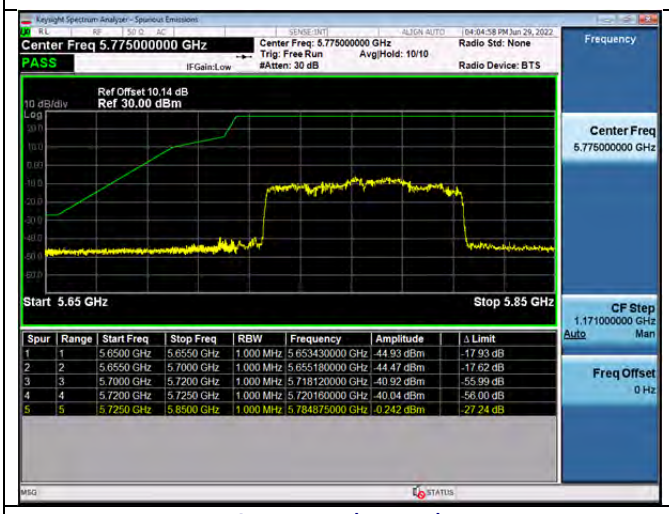
| Test mode: | 802.11a |
|---|---|
| | |
| Lowest channel | Highest channel |

| Test mode: | 802.11n20 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11n40 |
|---|---|
| | |
| Lowest channel | Highest channel |

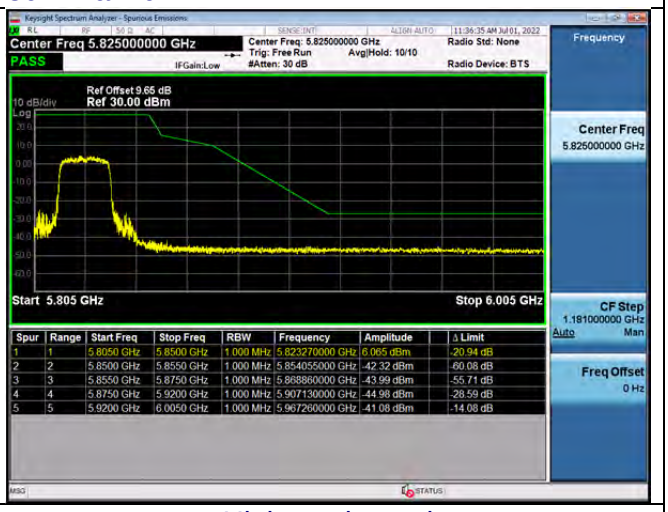
| Test mode: | 802.11ac20 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac40 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac80 |
|---|---|
|  | |
| Lowest channel | Highest channel |

Test mode: 802.11ax20

Lowest channel



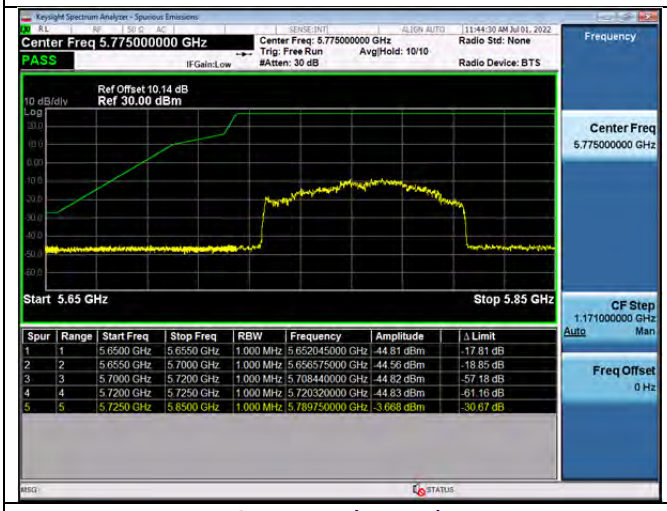

Highest channel

Test mode: 802.11ax40

Lowest channel

Highest channel

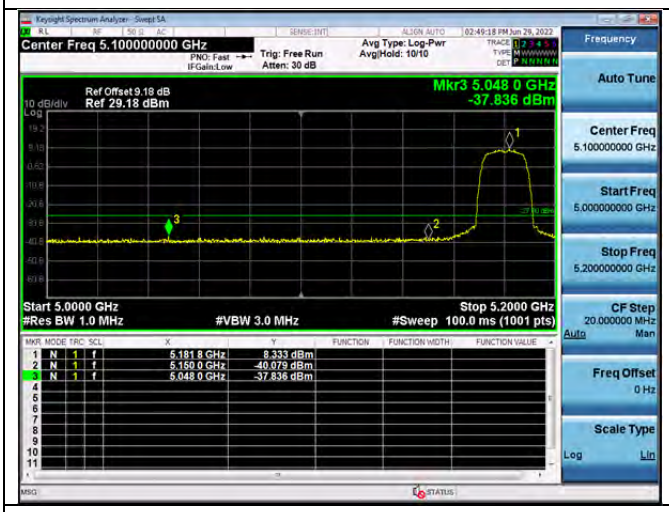
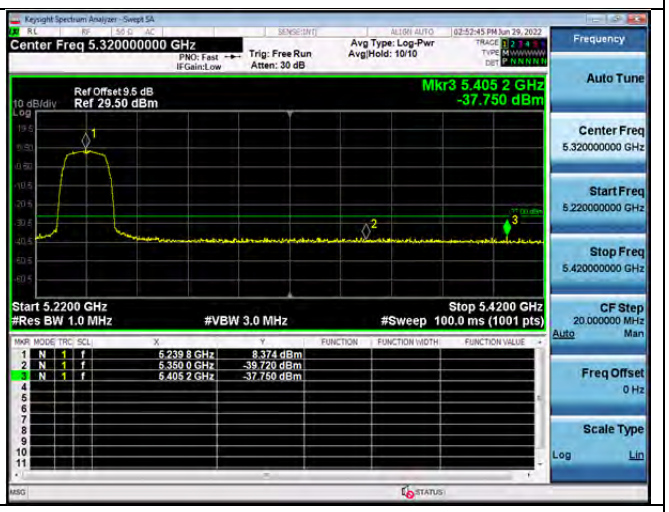
Test mode: 802.11ax80

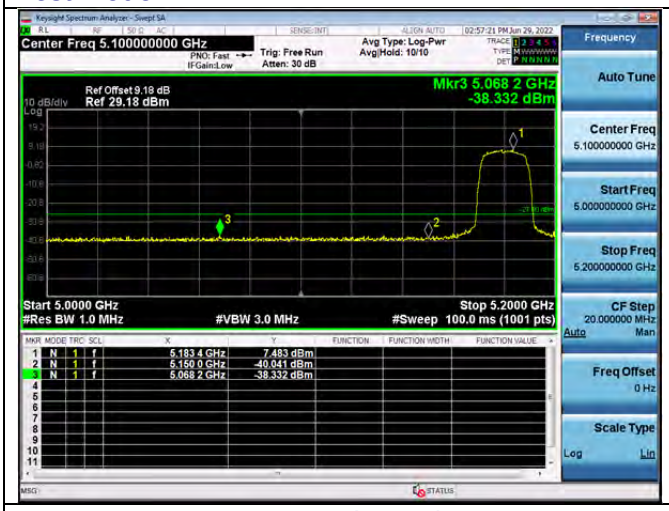
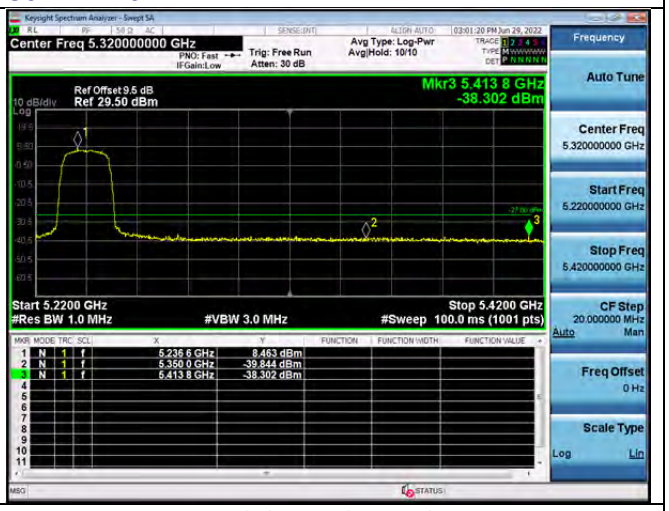


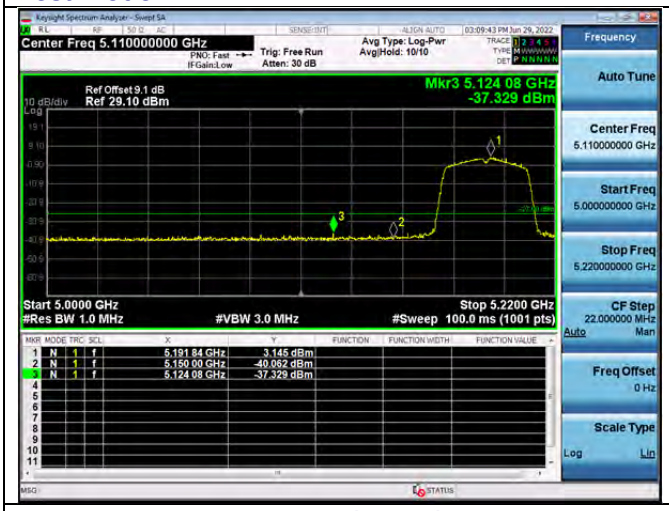
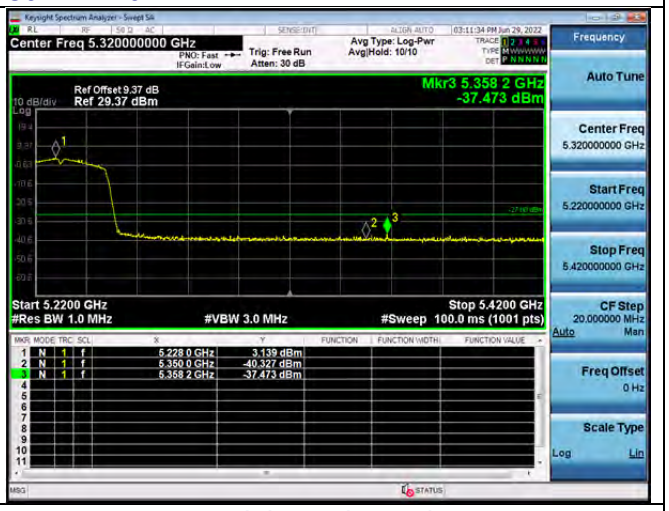

Lowest channel

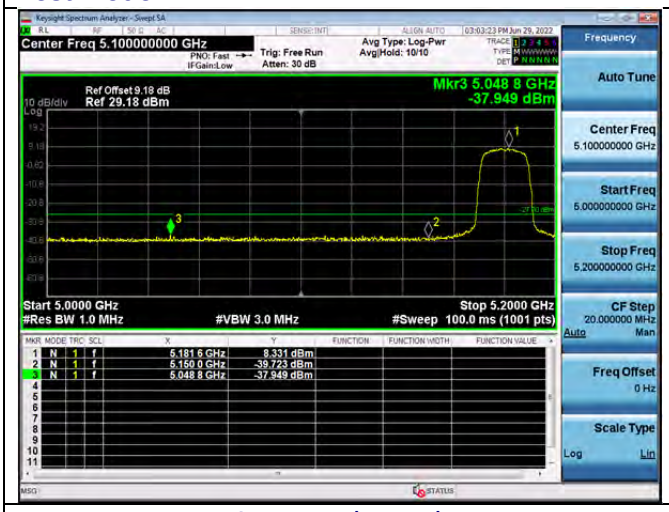
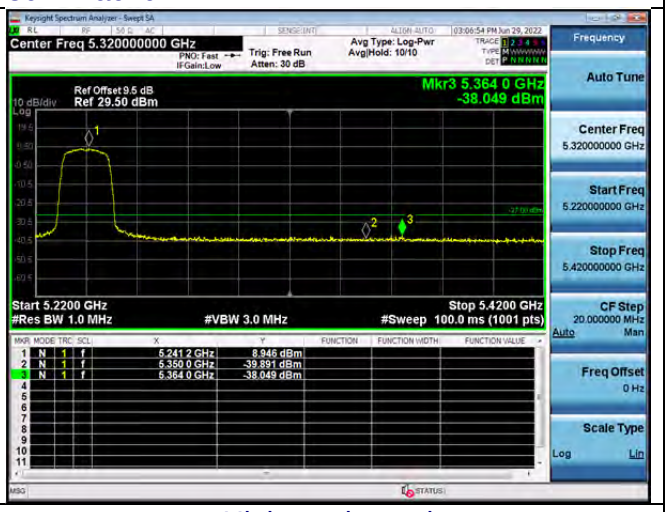
Highest channel

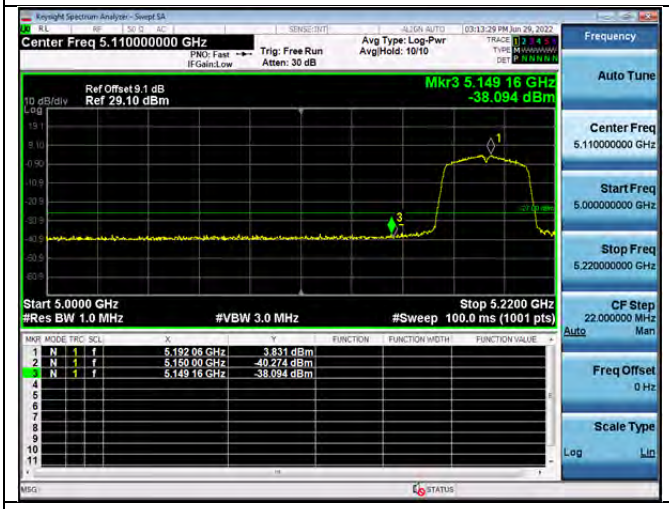
## ANT3- U-NII-1

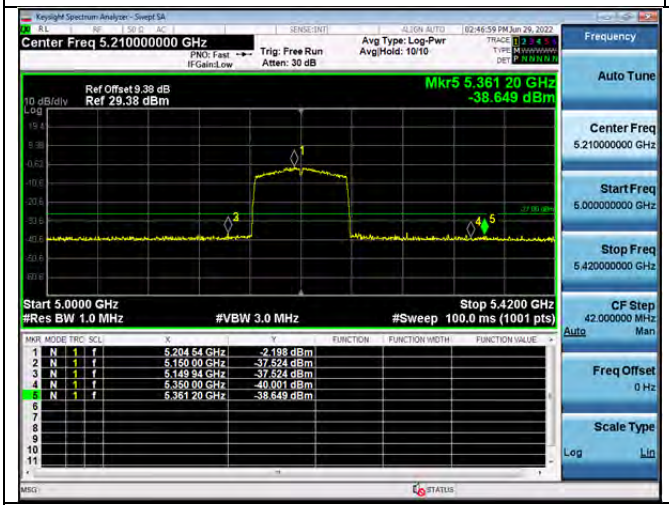
| Test mode: | 802.11a |
|---|---|
|  |  |
| Lowest channel | Highest channel |

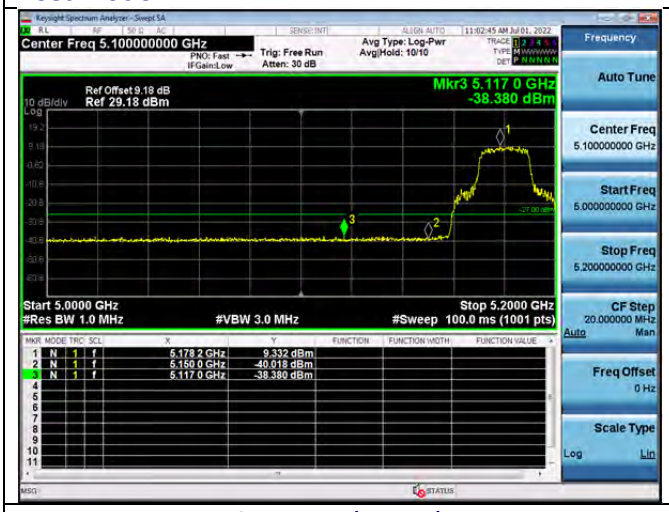
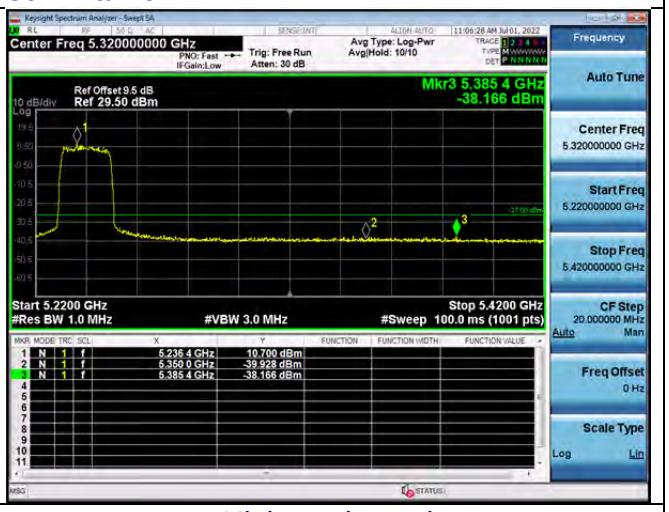
| Test mode: | 802.11n20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

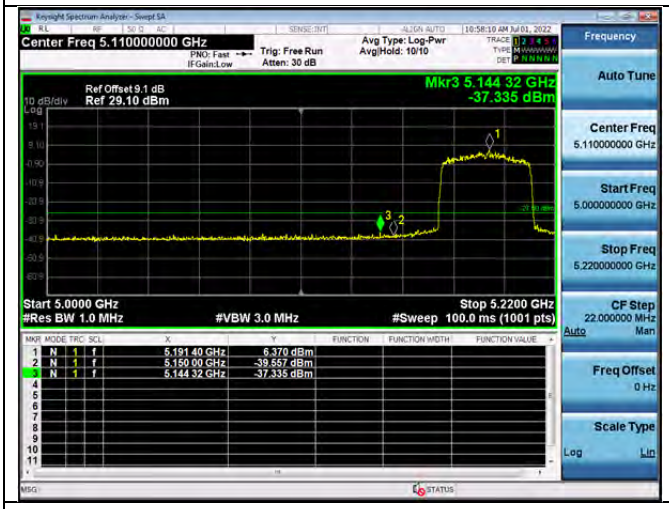
| Test mode: | 802.11n40 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

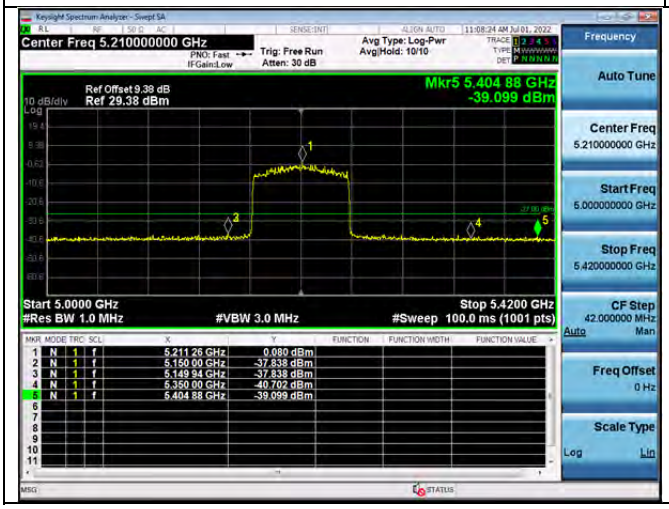
| Test mode: | 802.11ac20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac40 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac80 |
|---|---|
|  | |

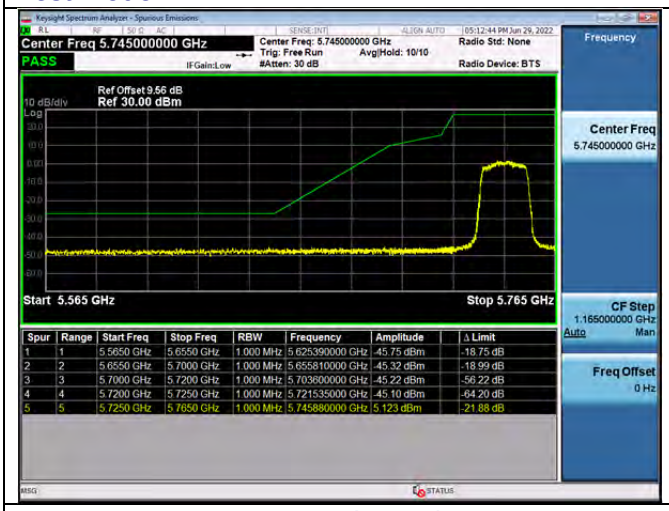
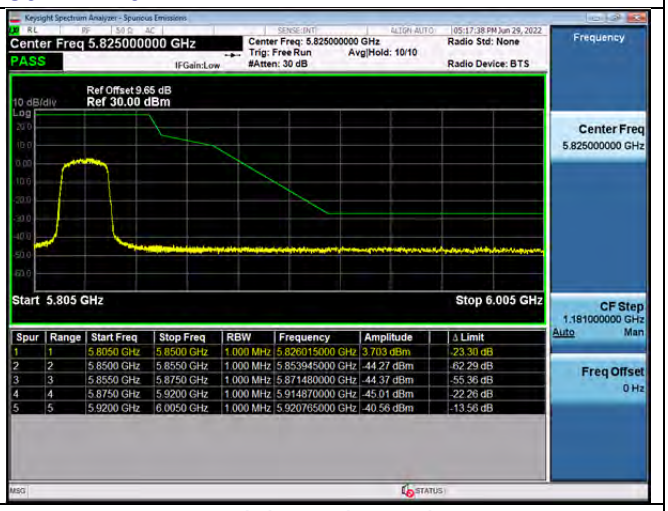
| Test mode: | 802.11ax20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

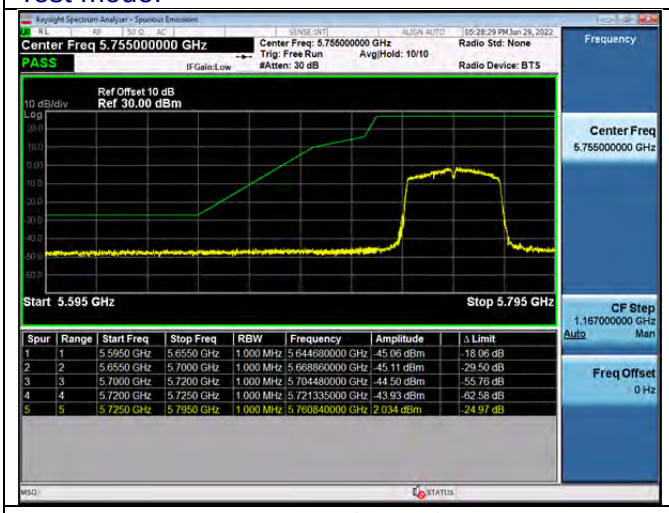
| Test mode: | 802.11ax40 |
|---|---|
|  | |
| Lowest channel | Highest channel |

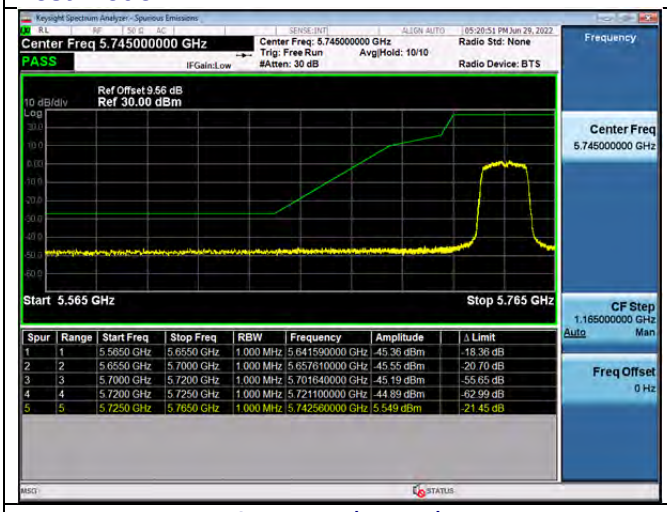
| Test mode: | 802.11ax80 |
|---|---|
|  | |

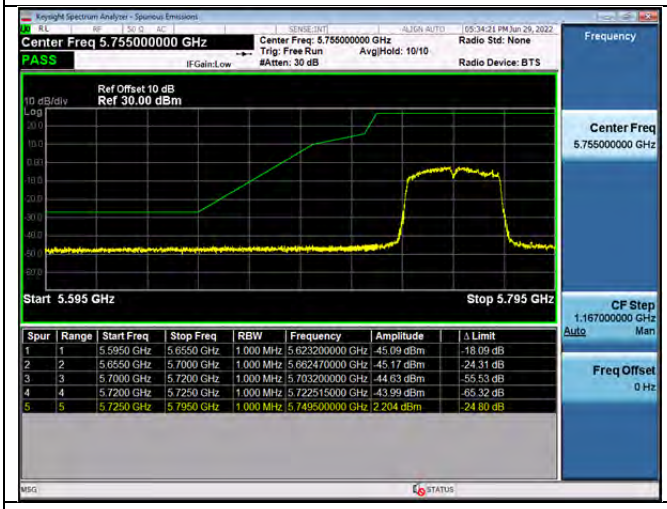
## ANT3- U-NII-3

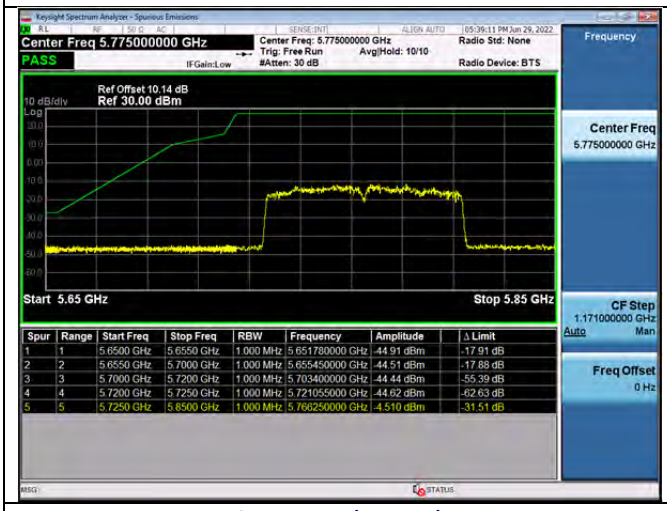
| Test mode: | 802.11a |
|---|---|
| | |
| Lowest channel | Highest channel |

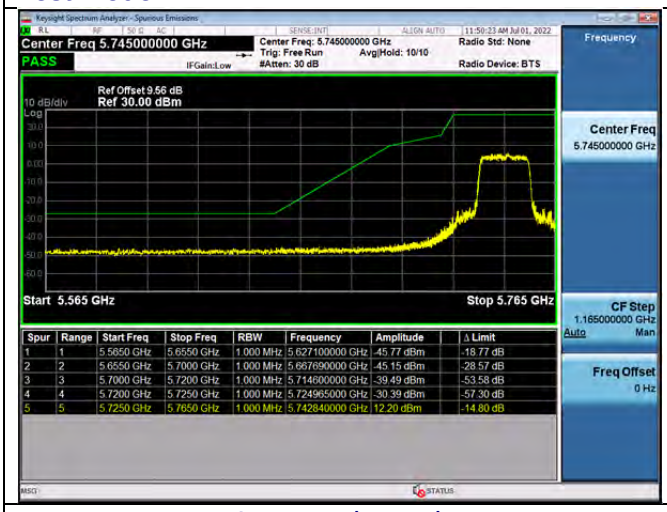
| Test mode: | 802.11n20 |
|---|---|
|  |  |
| Lowest channel | Highest channel |

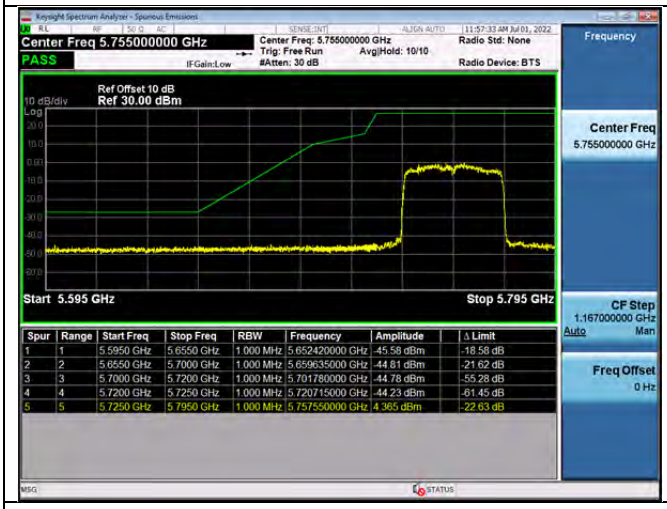
| Test mode: | 802.11n40 |
|---|---|
|  | |
| Lowest channel | Highest channel |

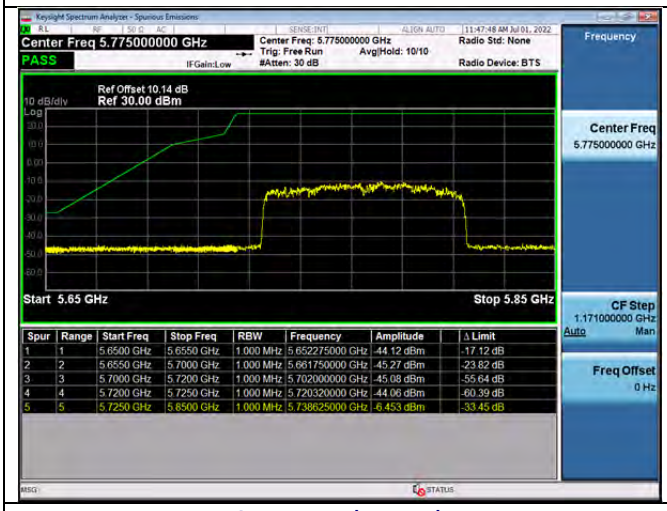
| Test mode: | 802.11ac20 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac40 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11ac80 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11ax20 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11ax40 |
|---|---|
|  | |
| Lowest channel | Highest channel |

| Test mode: | 802.11ax80 |
|---|---|
|  | |
| Lowest channel | Highest channel |

## 9. FREQUENCY STABILITY MEASUREMENT

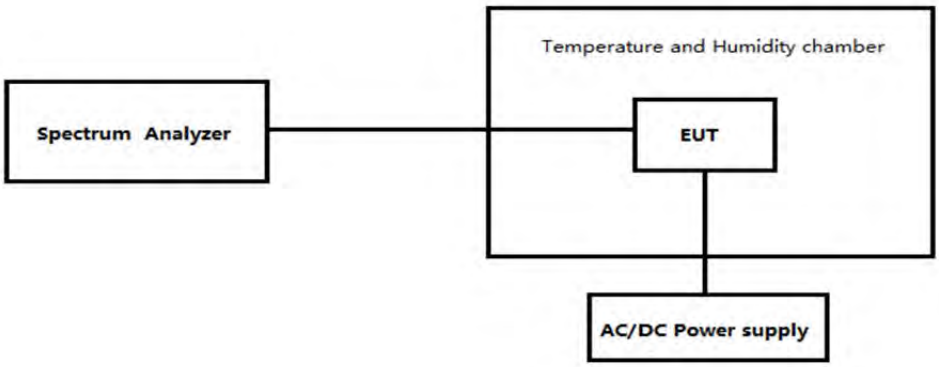
### 9.1 LIMIT

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 user's manual.

### 9.2 TESTPROCEDURE

1. To ensure emission at the band edge is main tainted within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, whichissettomaximumholdfunctionandpeakdetector.Thepeakvalueofthepowerenvelopewas measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

### 9.3 TESTCONFIGURATION




### 9.4 TEST RESULT

| | | | |
|---|---|---|---|
| Temperature： | 26℃ | Relative Humidity： | 54% |
| Pressure： | 101kPa | Test Voltage ： | AC120V |

Note: Only the test results of the worst channel are displayed

ANT1-802.11a- CH36

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.016 | 3.086 |
| 40 | 120 | 0.017 | 3.275 |
| 30 | 120 | 0.014 | 2.623 |
| 20 | 120 | 0.012 | 2.349 |

| | | | |
|---|---|---|---|
| 10 | 120 | 0.009 | 1.800 |
| 0 | 120 | 0.008 | 1.583 |
| -10 | 120 | 0.013 | 2.534 |
| -20 | 120 | 0.003 | 0.501 |
| -30 | 120 | 0.002 | 0.351 |

ANT1-802.11a- CH48

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.010 | 1.880 |
| 40 | 120 | 0.005 | 0.906 |
| 30 | 120 | 0.015 | 2.817 |
| 20 | 120 | 0.000 | 0.069 |
| 10 | 120 | 0.015 | 2.806 |
| 0 | 120 | 0.013 | 2.513 |
| -10 | 120 | 0.012 | 2.366 |
| -20 | 120 | 0.012 | 2.372 |
| -30 | 120 | 0.003 | 0.487 |

ANT1-802.11a- CH149

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.015 | 2.651 |
| 40 | 120 | 0.005 | 0.889 |
| 30 | 120 | 0.011 | 1.924 |
| 20 | 120 | 0.005 | 0.826 |
| 10 | 120 | 0.017 | 2.936 |
| 0 | 120 | 0.017 | 2.917 |
| -10 | 120 | 0.004 | 0.649 |
| -20 | 120 | 0.017 | 2.924 |
| -30 | 120 | 0.009 | 1.533 |

ANT1-802.11a- CH165

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.010 | 1.733 |
| 40 | 120 | 0.015 | 2.660 |
| 30 | 120 | 0.018 | 3.080 |

| | | | |
|---|---|---|---|
| 20 | 120 | 0.003 | 0.577 |
| 10 | 120 | 0.015 | 2.550 |
| 0 | 120 | 0.017 | 2.895 |
| -10 | 120 | 0.009 | 1.604 |
| -20 | 120 | 0.006 | 0.989 |
| -30 | 120 | 0.003 | 0.595 |

ANT1-802.11n20- CH36

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.015 | 2.877 |
| 40 | 120 | 0.011 | 2.135 |
| 30 | 120 | 0.003 | 0.570 |
| 20 | 120 | 0.017 | 3.327 |
| 10 | 120 | 0.013 | 2.504 |
| 0 | 120 | 0.015 | 2.956 |
| -10 | 120 | 0.003 | 0.539 |
| -20 | 120 | 0.005 | 1.017 |
| -30 | 120 | 0.006 | 1.197 |

ANT1-802.11n20- CH48

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.002 | 0.448 |
| 40 | 120 | 0.016 | 3.122 |
| 30 | 120 | 0.016 | 3.133 |
| 20 | 120 | 0.003 | 0.513 |
| 10 | 120 | 0.012 | 2.235 |
| 0 | 120 | 0.003 | 0.629 |
| -10 | 120 | 0.001 | 0.248 |
| -20 | 120 | 0.012 | 2.333 |
| -30 | 120 | 0.017 | 3.225 |

ANT1-802.11n20- CH149

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.005 | 0.871 |
| 40 | 120 | 0.017 | 3.006 |

| | | | |
|---|---|---|---|
| 30 | 120 | 0.011 | 1.981 |
| 20 | 120 | 0.004 | 0.777 |
| 10 | 120 | 0.013 | 2.216 |
| 0 | 120 | 0.017 | 3.006 |
| -10 | 120 | 0.006 | 0.996 |
| -20 | 120 | 0.015 | 2.675 |
| -30 | 120 | 0.006 | 0.973 |

ANT1-802.11n20- CH165

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.007 | 1.124 |
| 40 | 120 | 0.017 | 2.923 |
| 30 | 120 | 0.016 | 2.821 |
| 20 | 120 | 0.011 | 1.852 |
| 10 | 120 | 0.015 | 2.620 |
| 0 | 120 | 0.005 | 0.899 |
| -10 | 120 | 0.014 | 2.475 |
| -20 | 120 | 0.018 | 3.036 |
| -30 | 120 | 0.009 | 1.545 |

ANT1-802.11n40- CH38

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.012 | 2.318 |
| 40 | 120 | 0.008 | 1.608 |
| 30 | 120 | 0.001 | 0.122 |
| 20 | 120 | 0.002 | 0.322 |
| 10 | 120 | 0.014 | 2.775 |
| 0 | 120 | 0.016 | 3.132 |
| -10 | 120 | 0.004 | 0.691 |
| -20 | 120 | 0.018 | 3.435 |
| -30 | 120 | 0.002 | 0.335 |

ANT1-802.11n40- CH46

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.013 | 2.546 |

| | | | |
|---|---|---|---|
| 40 | 120 | 0.010 | 1.896 |
| 30 | 120 | 0.016 | 2.977 |
| 20 | 120 | 0.016 | 2.980 |
| 10 | 120 | 0.001 | 0.125 |
| 0 | 120 | 0.008 | 1.601 |
| -10 | 120 | 0.008 | 1.463 |
| -20 | 120 | 0.010 | 1.899 |
| -30 | 120 | 0.003 | 0.649 |

ANT1-802.11n40- CH151

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.017 | 2.936 |
| 40 | 120 | 0.008 | 1.320 |
| 30 | 120 | 0.014 | 2.416 |
| 20 | 120 | 0.005 | 0.895 |
| 10 | 120 | 0.012 | 2.161 |
| 0 | 120 | 0.005 | 0.811 |
| -10 | 120 | 0.013 | 2.216 |
| -20 | 120 | 0.002 | 0.268 |
| -30 | 120 | 0.016 | 2.860 |

ANT1-802.11n40- CH159

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.006 | 1.084 |
| 40 | 120 | 0.017 | 2.938 |
| 30 | 120 | 0.010 | 1.675 |
| 20 | 120 | 0.011 | 1.866 |
| 10 | 120 | 0.017 | 3.013 |
| 0 | 120 | 0.007 | 1.123 |
| -10 | 120 | 0.001 | 0.107 |
| -20 | 120 | 0.009 | 1.572 |
| -30 | 120 | 0.011 | 1.934 |

ANT1-802.11ac20- CH36

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |

| | | | |
|---|---|---|---|
| 50 | 120 | 0.016 | 3.084 |
| 40 | 120 | 0.005 | 0.879 |
| 30 | 120 | 0.011 | 2.140 |
| 20 | 120 | 0.011 | 2.081 |
| 10 | 120 | 0.007 | 1.267 |
| 0 | 120 | 0.000 | 0.075 |
| -10 | 120 | 0.015 | 2.866 |
| -20 | 120 | 0.016 | 3.031 |
| -30 | 120 | 0.010 | 1.929 |

ANT1-802.11ac20- CH48

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.016 | 3.093 |
| 40 | 120 | 0.016 | 3.012 |
| 30 | 120 | 0.004 | 0.836 |
| 20 | 120 | 0.013 | 2.547 |
| 10 | 120 | 0.002 | 0.333 |
| 0 | 120 | 0.006 | 1.143 |
| -10 | 120 | 0.014 | 2.693 |
| -20 | 120 | 0.007 | 1.422 |
| -30 | 120 | 0.012 | 2.224 |

ANT1-802.11ac20- CH149

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.017 | 2.916 |
| 40 | 120 | 0.017 | 3.032 |
| 30 | 120 | 0.014 | 2.493 |
| 20 | 120 | 0.002 | 0.340 |
| 10 | 120 | 0.016 | 2.860 |
| 0 | 120 | 0.002 | 0.279 |
| -10 | 120 | 0.014 | 2.442 |
| -20 | 120 | 0.016 | 2.840 |
| -30 | 120 | 0.002 | 0.376 |

ANT1-802.11ac20- CH165

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed |
|---|---|---|

| | | MCF | (ppm) |
|---|---|---|---|
| 50 | 120 | 0.003 | 0.529 |
| 40 | 120 | 0.003 | 0.497 |
| 30 | 120 | 0.006 | 1.027 |
| 20 | 120 | 0.017 | 2.876 |
| 10 | 120 | 0.014 | 2.337 |
| 0 | 120 | 0.014 | 2.489 |
| -10 | 120 | 0.007 | 1.141 |
| -20 | 120 | 0.000 | 0.036 |
| -30 | 120 | 0.010 | 1.759 |

ANT1-802.11ac40- CH38

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.002 | 0.299 |
| 40 | 120 | 0.005 | 0.876 |
| 30 | 120 | 0.013 | 2.497 |
| 20 | 120 | 0.011 | 2.180 |
| 10 | 120 | 0.009 | 1.699 |
| 0 | 120 | 0.007 | 1.377 |
| -10 | 120 | 0.016 | 3.178 |
| -20 | 120 | 0.013 | 2.587 |
| -30 | 120 | 0.009 | 1.702 |

ANT1-802.11ac40- CH46

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.006 | 1.142 |
| 40 | 120 | 0.001 | 0.265 |
| 30 | 120 | 0.005 | 1.029 |
| 20 | 120 | 0.008 | 1.555 |
| 10 | 120 | 0.008 | 1.467 |
| 0 | 120 | 0.011 | 2.111 |
| -10 | 120 | 0.006 | 1.207 |
| -20 | 120 | 0.005 | 0.865 |
| -30 | 120 | 0.003 | 0.500 |

ANT1-802.11ac40- CH151

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.017 | 2.873 |
| 40 | 120 | 0.008 | 1.439 |
| 30 | 120 | 0.004 | 0.713 |
| 20 | 120 | 0.018 | 3.111 |
| 10 | 120 | 0.001 | 0.116 |
| 0 | 120 | 0.016 | 2.853 |
| -10 | 120 | 0.013 | 2.173 |
| -20 | 120 | 0.001 | 0.096 |
| -30 | 120 | 0.007 | 1.222 |

ANT1-802.11ac40- CH159

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.003 | 0.512 |
| 40 | 120 | 0.011 | 1.965 |
| 30 | 120 | 0.009 | 1.563 |
| 20 | 120 | 0.010 | 1.667 |
| 10 | 120 | 0.002 | 0.395 |
| 0 | 120 | 0.005 | 0.825 |
| -10 | 120 | 0.006 | 1.116 |
| -20 | 120 | 0.012 | 2.082 |
| -30 | 120 | 0.010 | 1.720 |

ANT1-802.11ac80- CH42

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.005 | 0.946 |
| 40 | 120 | 0.017 | 3.314 |
| 30 | 120 | 0.008 | 1.447 |
| 20 | 120 | 0.001 | 0.190 |
| 10 | 120 | 0.005 | 0.994 |
| 0 | 120 | 0.012 | 2.385 |
| -10 | 120 | 0.002 | 0.354 |
| -20 | 120 | 0.012 | 2.318 |
| -30 | 120 | 0.009 | 1.735 |

ANT1-802.11ac80- CH155

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.013 | 2.190 |
| 40 | 120 | 0.007 | 1.213 |
| 30 | 120 | 0.006 | 1.035 |
| 20 | 120 | 0.015 | 2.612 |
| 10 | 120 | 0.017 | 3.011 |
| 0 | 120 | 0.005 | 0.915 |
| -10 | 120 | 0.004 | 0.756 |
| -20 | 120 | 0.012 | 2.095 |
| -30 | 120 | 0.007 | 1.134 |

ANT1-802.11ax20- CH36

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.008 | 1.525 |
| 40 | 120 | 0.007 | 1.437 |
| 30 | 120 | 0.008 | 1.587 |
| 20 | 120 | 0.015 | 2.820 |
| 10 | 120 | 0.018 | 3.412 |
| 0 | 120 | 0.006 | 1.120 |
| -10 | 120 | 0.017 | 3.240 |
| -20 | 120 | 0.005 | 0.993 |
| -30 | 120 | 0.004 | 0.747 |

ANT1-802.11ax20- CH48

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.010 | 1.866 |
| 40 | 120 | 0.001 | 0.150 |
| 30 | 120 | 0.002 | 0.303 |
| 20 | 120 | 0.002 | 0.406 |
| 10 | 120 | 0.007 | 1.389 |
| 0 | 120 | 0.010 | 1.879 |
| -10 | 120 | 0.002 | 0.428 |
| -20 | 120 | 0.015 | 2.939 |
| -30 | 120 | 0.001 | 0.264 |

ANT1-802.11ax20- CH149

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.005 | 0.818 |
| 40 | 120 | 0.007 | 1.228 |
| 30 | 120 | 0.006 | 0.995 |
| 20 | 120 | 0.008 | 1.400 |
| 10 | 120 | 0.015 | 2.563 |
| 0 | 120 | 0.017 | 3.035 |
| -10 | 120 | 0.004 | 0.701 |
| -20 | 120 | 0.014 | 2.521 |
| -30 | 120 | 0.003 | 0.470 |

ANT1-802.11ax20- CH165

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.010 | 1.755 |
| 40 | 120 | 0.001 | 0.124 |
| 30 | 120 | 0.017 | 2.945 |
| 20 | 120 | 0.013 | 2.297 |
| 10 | 120 | 0.018 | 3.017 |
| 0 | 120 | 0.005 | 0.805 |
| -10 | 120 | 0.012 | 2.139 |
| -20 | 120 | 0.010 | 1.734 |
| -30 | 120 | 0.009 | 1.497 |

ANT1-802.11ax40- CH38

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.012 | 2.299 |
| 40 | 120 | 0.011 | 2.195 |
| 30 | 120 | 0.010 | 1.833 |
| 20 | 120 | 0.011 | 2.085 |
| 10 | 120 | 0.011 | 2.169 |
| 0 | 120 | 0.005 | 1.056 |
| -10 | 120 | 0.002 | 0.343 |
| -20 | 120 | 0.001 | 0.226 |
| -30 | 120 | 0.016 | 3.041 |

ANT1-802.11ax40- CH46

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.016 | 3.060 |
| 40 | 120 | 0.014 | 2.659 |
| 30 | 120 | 0.012 | 2.207 |
| 20 | 120 | 0.006 | 1.115 |
| 10 | 120 | 0.013 | 2.409 |
| 0 | 120 | 0.017 | 3.294 |
| -10 | 120 | 0.008 | 1.589 |
| -20 | 120 | 0.016 | 3.075 |
| -30 | 120 | 0.008 | 1.612 |

ANT1-802.11ax40- CH151

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.011 | 1.973 |
| 40 | 120 | 0.005 | 0.856 |
| 30 | 120 | 0.002 | 0.392 |
| 20 | 120 | 0.009 | 1.502 |
| 10 | 120 | 0.011 | 1.905 |
| 0 | 120 | 0.011 | 1.979 |
| -10 | 120 | 0.001 | 0.219 |
| -20 | 120 | 0.009 | 1.595 |
| -30 | 120 | 0.003 | 0.581 |

ANT1-802.11ax40- CH159

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.002 | 0.398 |
| 40 | 120 | 0.016 | 2.690 |
| 30 | 120 | 0.016 | 2.798 |
| 20 | 120 | 0.004 | 0.749 |
| 10 | 120 | 0.012 | 2.034 |
| 0 | 120 | 0.007 | 1.286 |
| -10 | 120 | 0.003 | 0.474 |
| -20 | 120 | 0.003 | 0.527 |
| -30 | 120 | 0.004 | 0.607 |

ANT1-802.11ax80- CH42

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.004 | 0.717 |
| 40 | 120 | 0.002 | 0.426 |
| 30 | 120 | 0.010 | 1.999 |
| 20 | 120 | 0.002 | 0.361 |
| 10 | 120 | 0.007 | 1.369 |
| 0 | 120 | 0.011 | 2.015 |
| -10 | 120 | 0.014 | 2.676 |
| -20 | 120 | 0.017 | 3.353 |
| -30 | 120 | 0.016 | 3.039 |

ANT1-802.11ax80- CH155

| Temperature (°C) | Voltage (AC:V) | Frequency Measure with time Elapsed | |
|---|---|---|---|
| | | MCF | (ppm) |
| 50 | 120 | 0.015 | 2.655 |
| 40 | 120 | 0.014 | 2.375 |
| 30 | 120 | 0.002 | 0.391 |
| 20 | 120 | 0.014 | 2.483 |
| 10 | 120 | 0.012 | 2.000 |
| 0 | 120 | 0.000 | 0.073 |
| -10 | 120 | 0.007 | 1.269 |
| -20 | 120 | 0.007 | 1.265 |
| -30 | 120 | 0.018 | 3.062 |

## 10.ANTENNA REQUIREMENT

| Standard requirement: | FCC Part15 C Section 15.203 /247(c) |
|---|---|

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

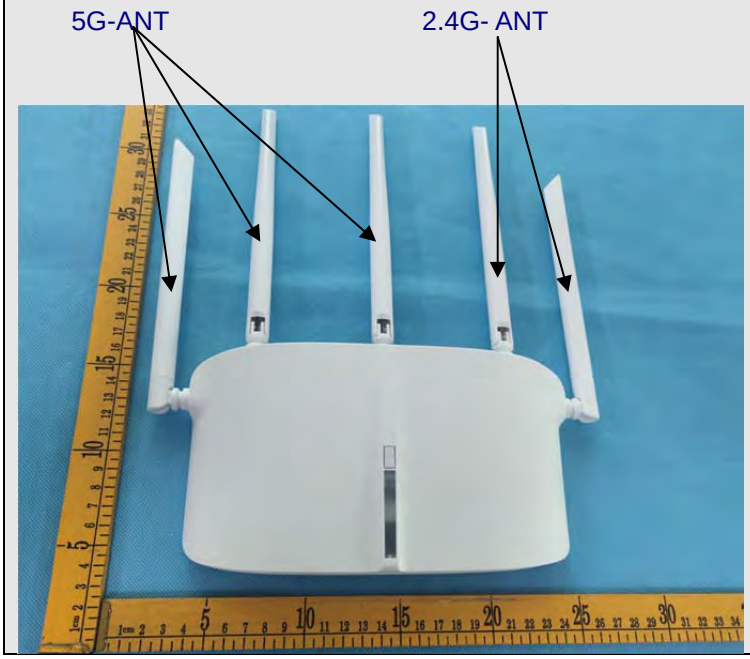
Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

The antenna used in this product is a internal antenna, and the best case gain of the antenna is antenna port 1:5dBi and Antenna port 2:5dBi, Antenna port 3:5dBi,

EUT Antenna:



## 10. TEST SETUP PHOTO

Reference to the test setup file for details.

## 11. EUT CONSTRUCTIONAL DETAILS

Reference to the external photos file and internal photos file for details.

**※※※※※ END OF REPORT ※※※※※**