

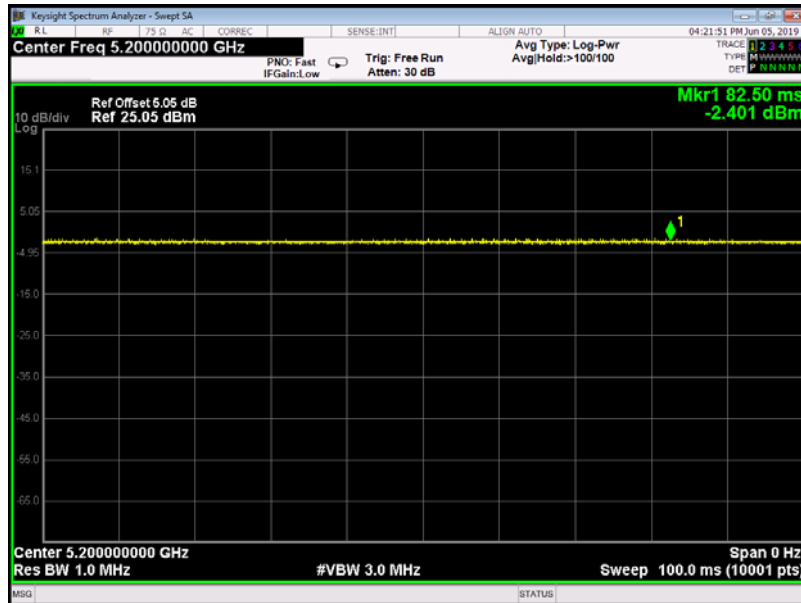
## Attachment E-- Peak Output Power Test Data

|                                                                                                                                                                                                                                                                              |                    |                          |          |                     |                      |                |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------|----------|---------------------|----------------------|----------------|--|--|
| Temperature:                                                                                                                                                                                                                                                                 |                    | 25 °C                    |          | Relative Humidity:  |                      | 55%            |  |  |
| Test Voltage:                                                                                                                                                                                                                                                                |                    | AC 120V/60Hz             |          |                     |                      |                |  |  |
| U-NII-1                                                                                                                                                                                                                                                                      |                    |                          |          |                     |                      |                |  |  |
| Test Mode                                                                                                                                                                                                                                                                    | Frequency<br>(MHz) | Test Data                |          |                     |                      | Limit<br>(dBm) |  |  |
|                                                                                                                                                                                                                                                                              |                    | Conducted Power<br>(dBm) |          | Duty Factor<br>(dB) | Total Power<br>(dBm) |                |  |  |
|                                                                                                                                                                                                                                                                              |                    | Ant. main                | Ant. aux |                     |                      |                |  |  |
| 802.11a                                                                                                                                                                                                                                                                      | 5180               | 6.98                     | 6.86     | 0                   | ---                  | 24             |  |  |
|                                                                                                                                                                                                                                                                              | 5200               | 6.95                     | 6.49     | 0                   | ---                  |                |  |  |
|                                                                                                                                                                                                                                                                              | 5240               | 6.96                     | 6.78     | 0                   | ---                  |                |  |  |
| 802.11n<br>(HT20)                                                                                                                                                                                                                                                            | 5180               | 3.96                     | 3.76     | 0                   | 6.87                 |                |  |  |
|                                                                                                                                                                                                                                                                              | 5200               | 3.98                     | 3.68     | 0                   | 6.84                 |                |  |  |
|                                                                                                                                                                                                                                                                              | 5240               | 3.94                     | 3.72     | 0                   | 6.84                 |                |  |  |
| 802.11ac<br>(VHT20)                                                                                                                                                                                                                                                          | 5180               | 3.92                     | 3.68     | 0                   | 6.81                 |                |  |  |
|                                                                                                                                                                                                                                                                              | 5200               | 3.89                     | 3.65     | 0                   | 6.78                 |                |  |  |
|                                                                                                                                                                                                                                                                              | 5240               | 3.87                     | 3.74     | 0                   | 6.82                 |                |  |  |
| 802.11n<br>(HT40)                                                                                                                                                                                                                                                            | 5190               | 3.85                     | 3.82     | 0                   | 6.85                 |                |  |  |
|                                                                                                                                                                                                                                                                              | 5230               | 3.86                     | 3.84     | 0                   | 6.86                 |                |  |  |
| 802.11<br>ac(VHT40)                                                                                                                                                                                                                                                          | 5190               | 3.89                     | 3.85     | 0                   | 6.88                 |                |  |  |
|                                                                                                                                                                                                                                                                              | 5230               | 3.92                     | 3.74     | 0                   | 6.84                 |                |  |  |
| 802.11<br>ac(VHT80)                                                                                                                                                                                                                                                          | 5210               | 3.91                     | 3.47     | 0                   | 6.71                 |                |  |  |
| Result: PASS                                                                                                                                                                                                                                                                 |                    |                          |          |                     |                      |                |  |  |
| Remark: The EUT incorporates a MIMO function. Physically, the EUT provides two antennas for transmitting and receiving.<br>When Main ANT. and Aux ANT. transmitting simultaneously, the total Antenna Gain=Main Gain + Aux Gani =5.01 dBi<6 dBi.<br>So $P_{out} = P_{limit}$ |                    |                          |          |                     |                      |                |  |  |

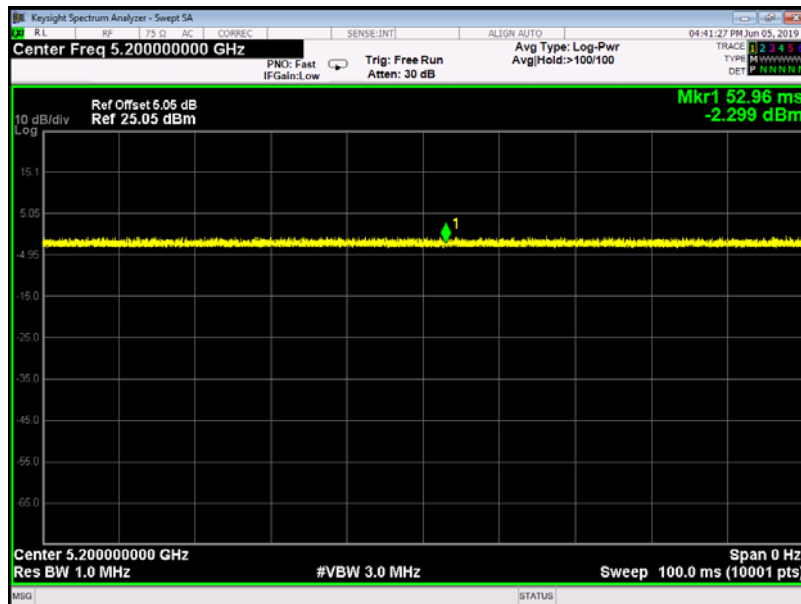
|                                                                                                                         |                 |                       |          |                  |                   |             |  |
|-------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|----------|------------------|-------------------|-------------|--|
| Temperature:                                                                                                            | 25 °C           | Relative Humidity:    |          | 55%              |                   |             |  |
| Test Voltage:                                                                                                           | AC 120V/60Hz    |                       |          |                  |                   |             |  |
| U-NII-3                                                                                                                 |                 |                       |          |                  |                   |             |  |
| Test Mode                                                                                                               | Frequency (MHz) | Test Data             |          |                  |                   | Limit (dBm) |  |
|                                                                                                                         |                 | Conducted Power (dBm) |          | Duty Factor (dB) | Total Power (dBm) |             |  |
|                                                                                                                         |                 | Ant. main             | Ant. aux |                  |                   |             |  |
| 802.11a                                                                                                                 | 5745            | 6.92                  | 6.88     | 0                | ---               | 30          |  |
|                                                                                                                         | 5785            | 6.89                  | 6.90     | 0                | ---               |             |  |
|                                                                                                                         | 5825            | 6.95                  | 6.87     | 0                | ---               |             |  |
| 802.11n (HT20)                                                                                                          | 5745            | 3.94                  | 3.83     | 0                | 6.90              |             |  |
|                                                                                                                         | 5785            | 3.99                  | 3.74     | 0                | 6.88              |             |  |
|                                                                                                                         | 5825            | 3.97                  | 3.65     | 0                | 6.82              |             |  |
| 802.11ac (VHT20)                                                                                                        | 5745            | 3.91                  | 3.57     | 0                | 6.75              |             |  |
|                                                                                                                         | 5785            | 3.87                  | 3.65     | 0                | 6.77              |             |  |
|                                                                                                                         | 5825            | 3.79                  | 3.78     | 0                | 6.80              |             |  |
| 802.11n (HT40)                                                                                                          | 5755            | 3.92                  | 3.68     | 0                | 6.81              |             |  |
|                                                                                                                         | 5795            | 3.79                  | 3.75     | 0                | 6.78              |             |  |
| 802.11 ac(VHT40)                                                                                                        | 5755            | 3.86                  | 3.84     | 0                | 6.86              |             |  |
|                                                                                                                         | 5795            | 3.88                  | 3.74     | 0                | 6.82              |             |  |
| 802.11 ac(VHT80)                                                                                                        | 5775            | 3.83                  | 3.8      | 0                | 6.83              |             |  |
| Result: PASS                                                                                                            |                 |                       |          |                  |                   |             |  |
| Remark: The EUT incorporates a MIMO function. Physically, the EUT provides two antennas for transmitting and receiving. |                 |                       |          |                  |                   |             |  |
| When Main ANT. and Aux ANT. transmitting simultaneously, the total Antenna Gain=Main Gain + Aux Gani =5.01 dBi<6 dBi.   |                 |                       |          |                  |                   |             |  |
| So $P_{out} = P_{limit}$                                                                                                |                 |                       |          |                  |                   |             |  |

| Test Mode                  |                  | Duty cycle |
|----------------------------|------------------|------------|
| U-NII-1                    | 802.11 a         | >98%       |
|                            | 802.11 n(HT20)   |            |
|                            | 802.11 ac(VHT20) |            |
|                            | 802.11 n(HT40)   |            |
|                            | 802.11 ac(HT40)  |            |
|                            | 802.11 ac(VHT80) |            |
| U-NII-3                    | 802.11 a         |            |
|                            | 802.11 n(HT20)   |            |
|                            | 802.11 ac(VHT20) |            |
|                            | 802.11 n(HT40)   |            |
|                            | 802.11 ac(VHT40) |            |
|                            | 802.11 ac(VHT80) |            |
| Please see the next plots. |                  |            |

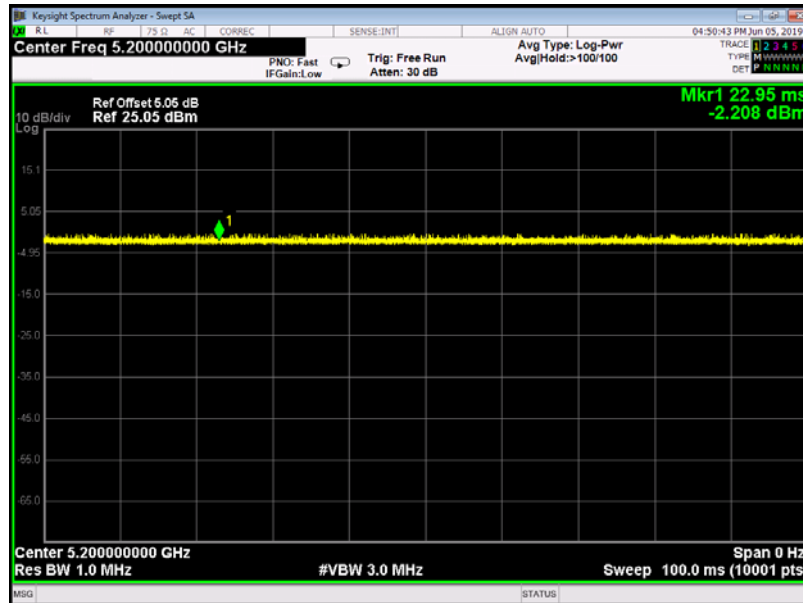
**802.11 a 5200MHz U-NII-1**



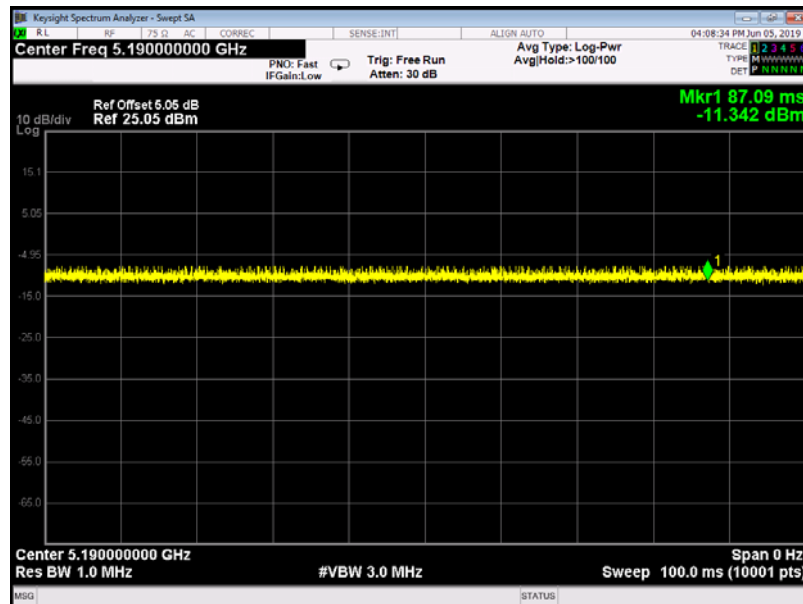
**802.11 n(HT20) 5200MHz U-NII-1**



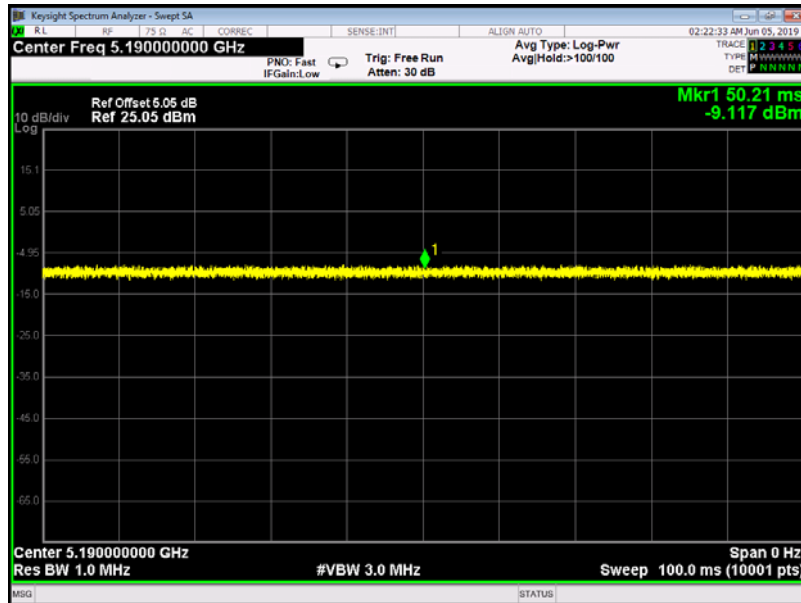
**802.11 ac(VHT20) 5200MHz U-NII-1**



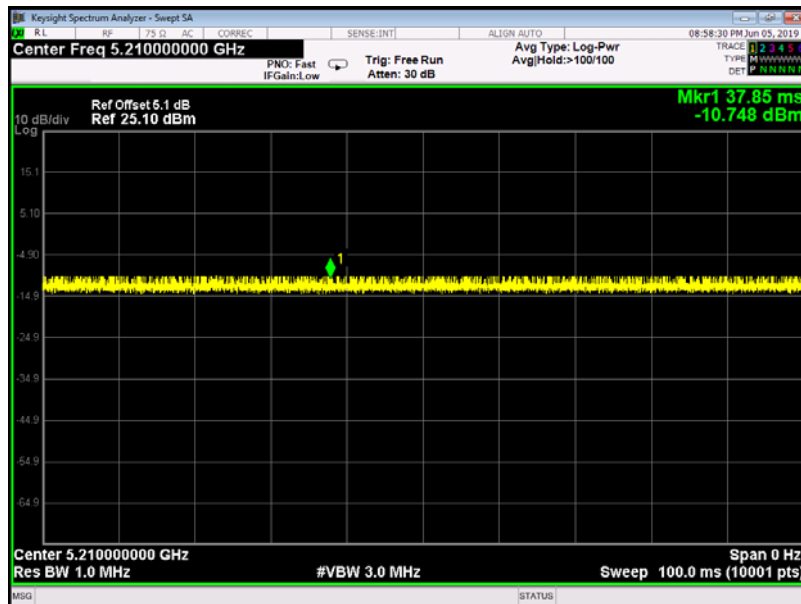
**802.11 n(HT40) 5190MHz U-NII-1**



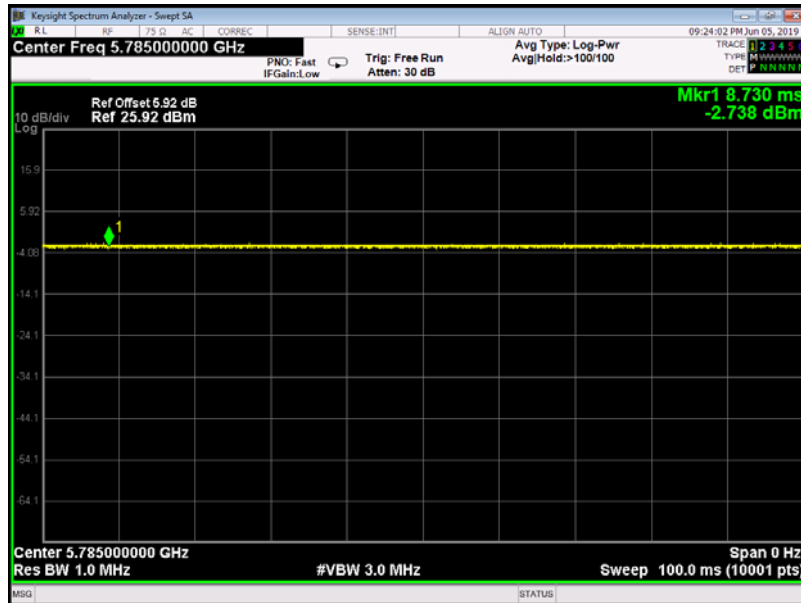
**802.11 ac(VHT40) 5190MHz U-NII-1**



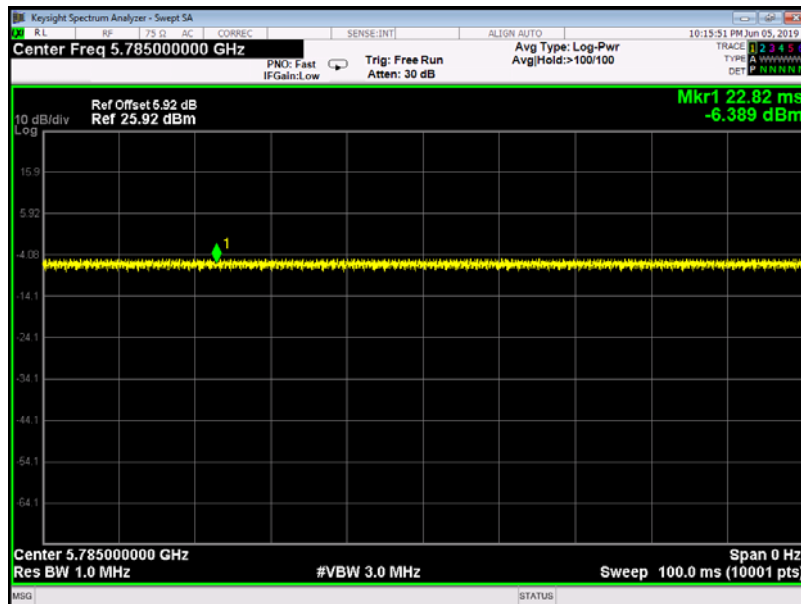
**802.11 ac(VHT80) 5210MHz U-NII-1**



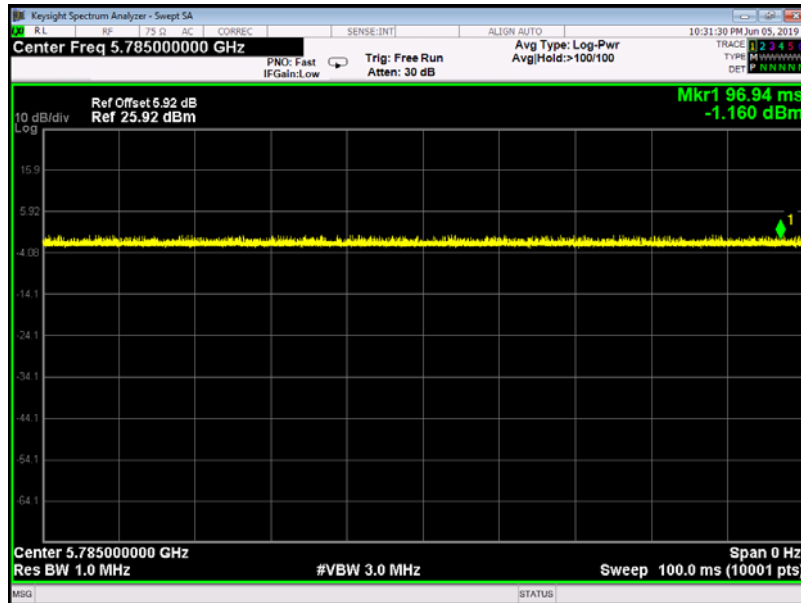
**802.11 a 5785MHz U-NII-3**



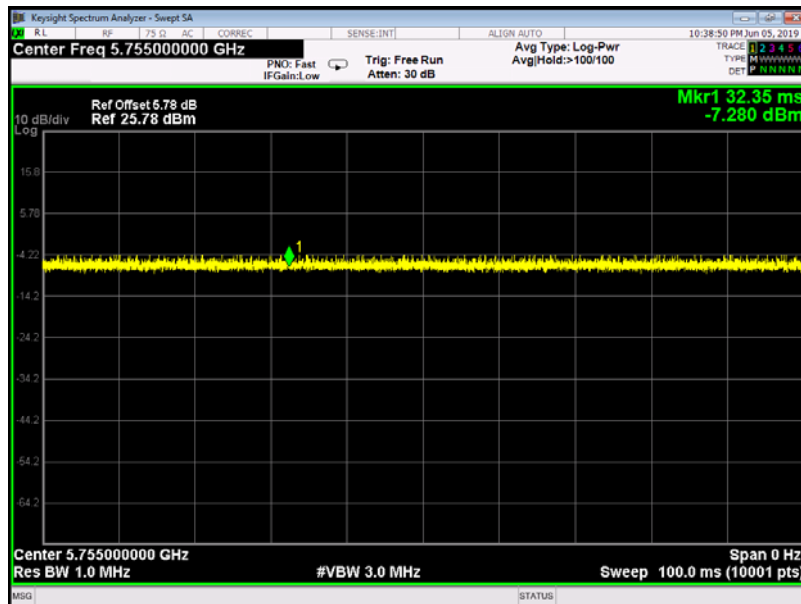
**802.11 n(HT20) 5785MHz U-NII-3**



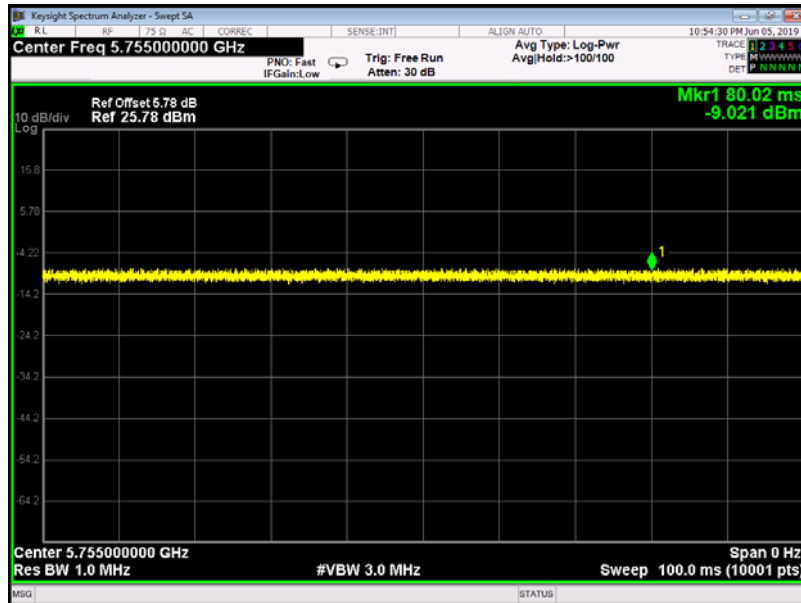
**802.11 ac(VHT20) 5785MHz U-NII-3**



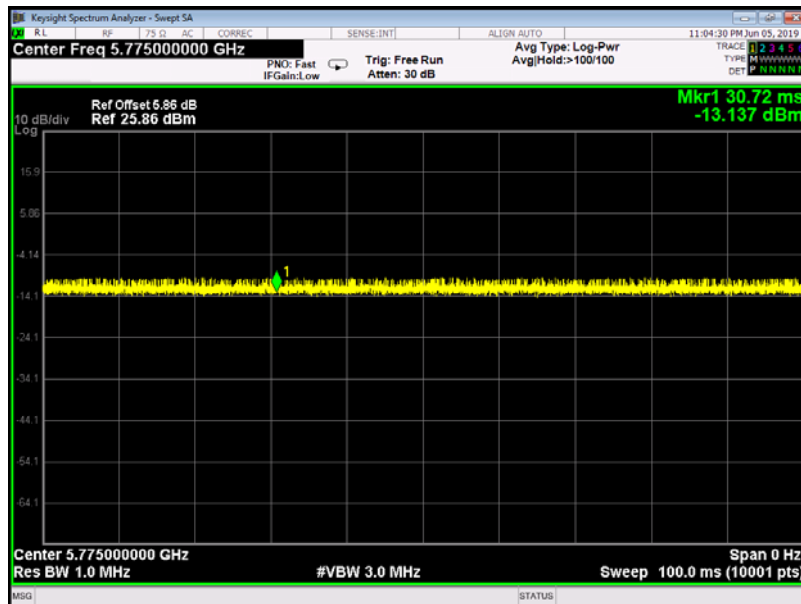
**802.11 n(HT40) 5755MHz U-NII-3**



**802.11 ac(VHT40) 5755MHz U-NII-3**



**802.11 ac(VHT80) 5775MHz U-NII-3**

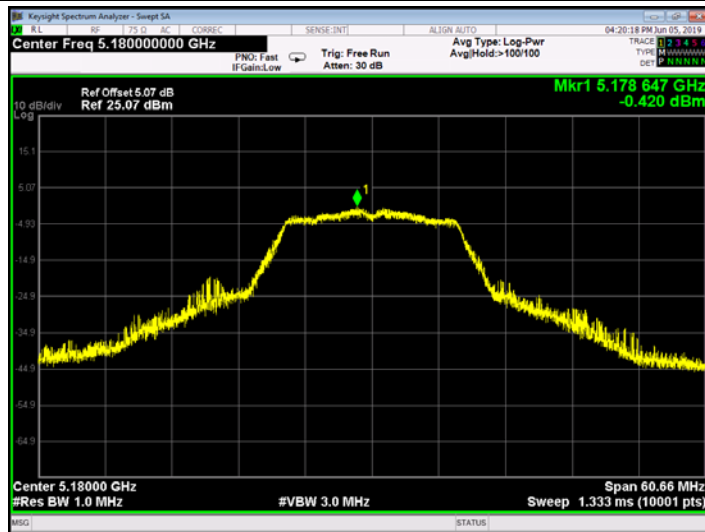


## Attachment F-- Power Spectral Density Test Data

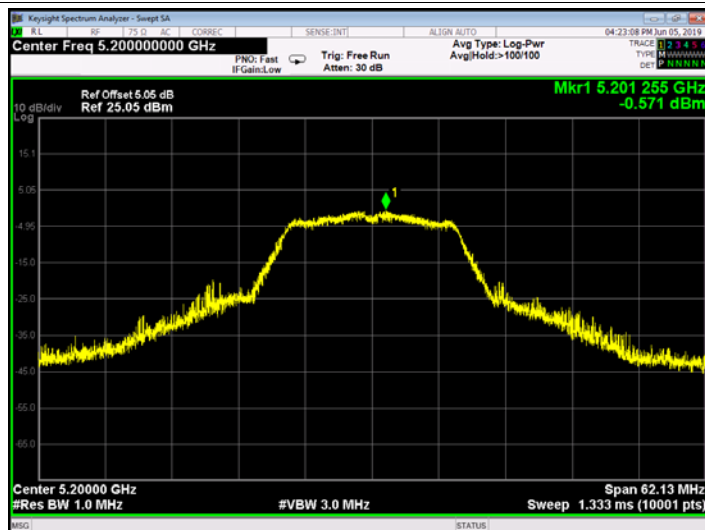
| Temperature:                                                                                                                                                                                                                                                                                | 25 °C           | Relative Humidity:  |                    | 55%              |                       |                 |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------------|--------------------|------------------|-----------------------|-----------------|--|
| Test Voltage:                                                                                                                                                                                                                                                                               | AC 120V/60Hz    |                     |                    |                  |                       |                 |  |
| U-NII-1                                                                                                                                                                                                                                                                                     |                 |                     |                    |                  |                       |                 |  |
| Test Mode                                                                                                                                                                                                                                                                                   | Frequency (MHz) | Test Data           |                    |                  |                       | Limit (dBm/MHz) |  |
|                                                                                                                                                                                                                                                                                             |                 | Main ANT. (dBm/MHz) | AUX ANT. (dBm/MHz) | Duty Factor (dB) | Total Power (dBm/MHz) |                 |  |
| 802.11a                                                                                                                                                                                                                                                                                     | 5180            | -0.420              | -0.425             | 0                |                       | 11              |  |
|                                                                                                                                                                                                                                                                                             | 5200            | -0.571              | -0.525             | 0                | ---                   |                 |  |
|                                                                                                                                                                                                                                                                                             | 5240            | -0.019              | 0.091              | 0                | ---                   |                 |  |
| 802.11n (HT20)                                                                                                                                                                                                                                                                              | 5180            | -1.071              | -1.008             | 0                | 1.971                 |                 |  |
|                                                                                                                                                                                                                                                                                             | 5200            | -0.805              | -0.612             | 0                | 2.303                 |                 |  |
|                                                                                                                                                                                                                                                                                             | 5240            | -0.340              | -0.405             | 0                | 2.638                 |                 |  |
| 802.11ac (VHT20)                                                                                                                                                                                                                                                                            | 5180            | -0.995              | -1.058             | 0                | 1.984                 |                 |  |
|                                                                                                                                                                                                                                                                                             | 5200            | -0.921              | -1.321             | 0                | 1.894                 |                 |  |
|                                                                                                                                                                                                                                                                                             | 5240            | -0.421              | -0.283             | 0                | 2.659                 |                 |  |
| 802.11n (HT40)                                                                                                                                                                                                                                                                              | 5190            | -6.630              | -6.363             | 0                | -3.484                |                 |  |
|                                                                                                                                                                                                                                                                                             | 5230            | -6.340              | -5.778             | 0                | -3.040                |                 |  |
| 802.11 ac(VHT40)                                                                                                                                                                                                                                                                            | 5190            | -6.156              | -6.228             | 0                | -3.182                |                 |  |
|                                                                                                                                                                                                                                                                                             | 5230            | -5.668              | -5.932             | 0                | -2.788                |                 |  |
| 802.11 ac(VHT80)                                                                                                                                                                                                                                                                            | 5210            | -8.387              | -9.573             | 0                | -5.929                |                 |  |
| Result: PASS                                                                                                                                                                                                                                                                                |                 |                     |                    |                  |                       |                 |  |
| Remark: The EUT incorporates a MIMO function. Physically, the EUT provides two antennas for transmitting and receiving.<br>When Main ANT. and Aux ANT. transmitting simultaneously, the total Antenna Gain=Main Gain + Aux Gani =5.01 dBi<6 dBi.<br>So P <sub>out</sub> =P <sub>limit</sub> |                 |                     |                    |                  |                       |                 |  |

**Main Antenna**

**802.11 a 5180 MHz**



**802.11 a 5200 MHz**

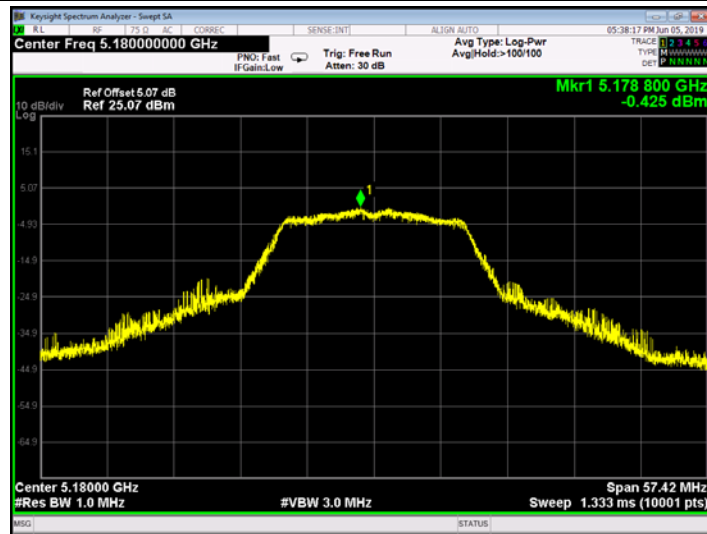


**802.11 a 5240 MHz**



**AUX Antenna**

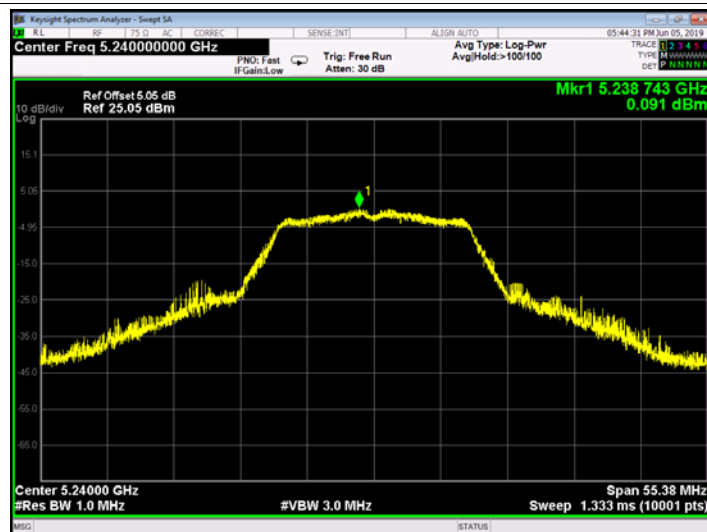
**802.11 a 5180 MHz**



**802.11 a 5200 MHz**

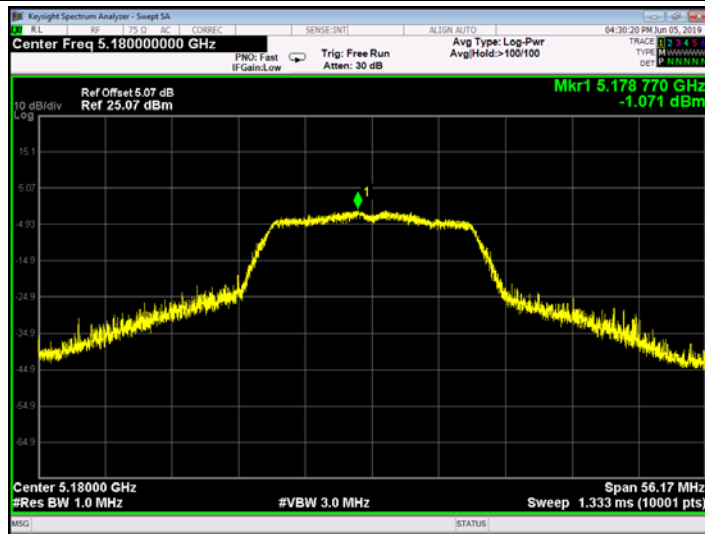


**802.11 a 5240 MHz**

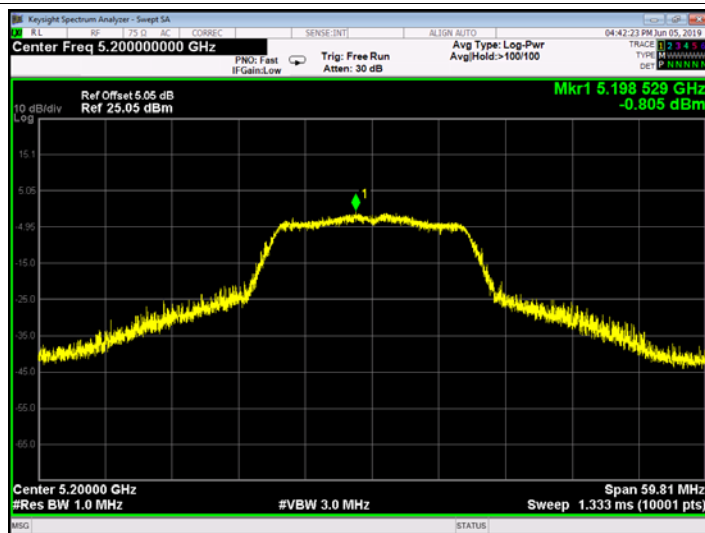


### Main Antenna

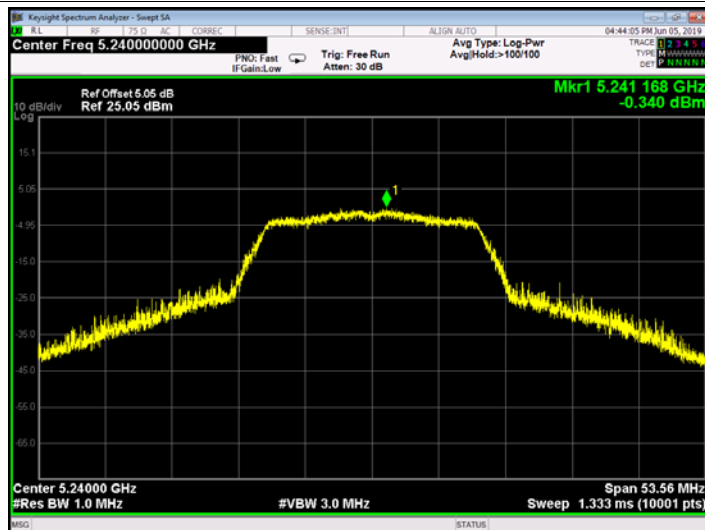
#### 802.11 n(HT20) 5180 MHz



#### 802.11 n(HT20) 5200 MHz

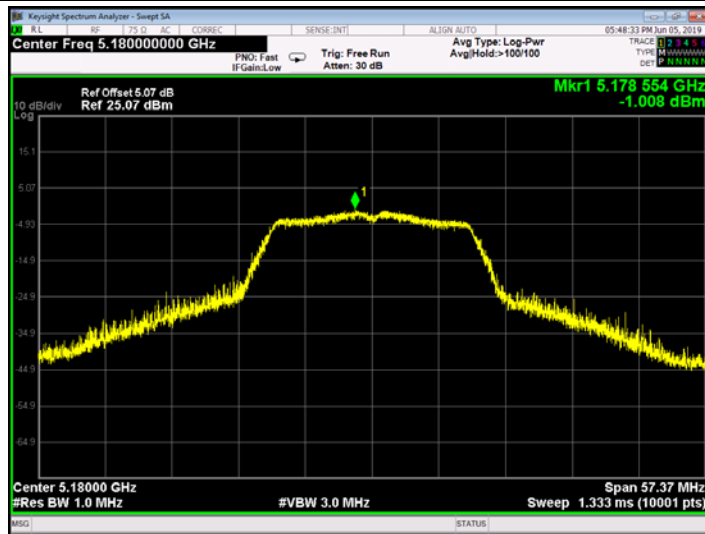


#### 802.11 n(HT20) 5240 MHz



**AUX Antenna**

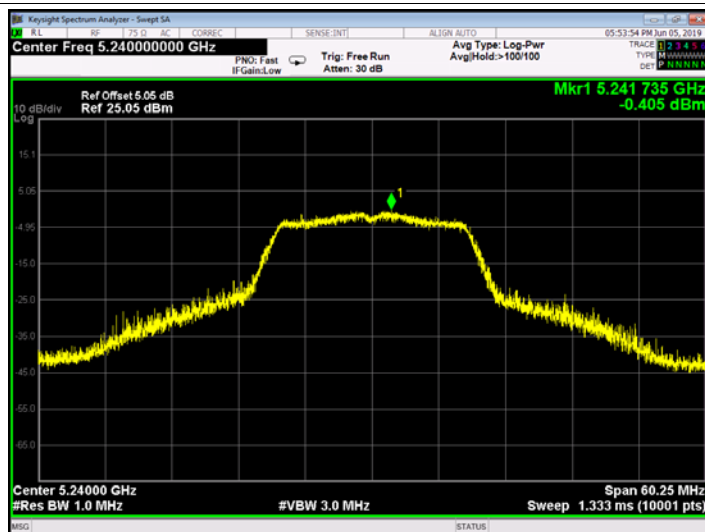
**802.11 n(HT20) 5180 MHz**



**802.11 n(HT20) 5200 MHz**

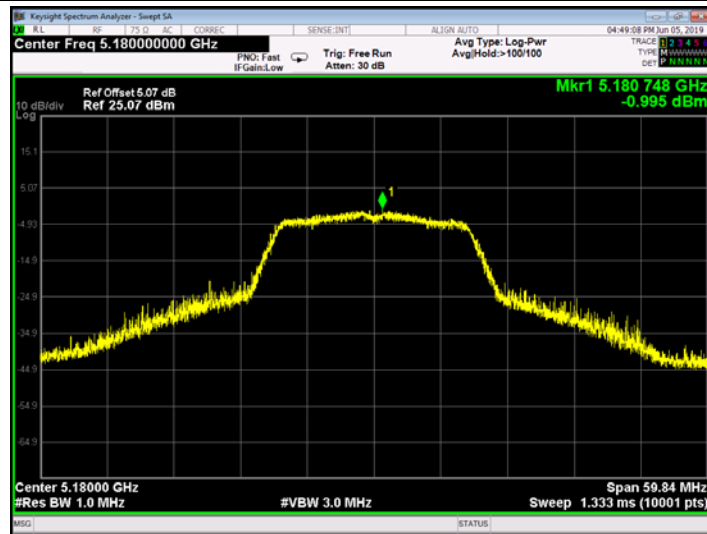


**802.11 n(HT20) 5240 MHz**

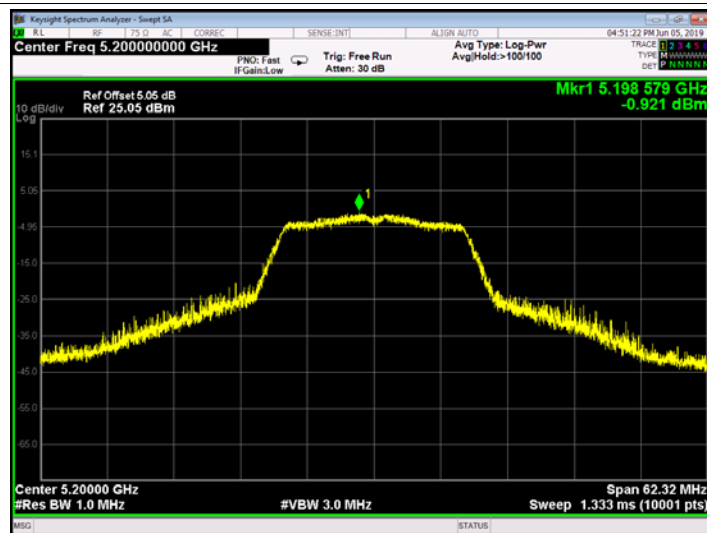


**Main Antenna**

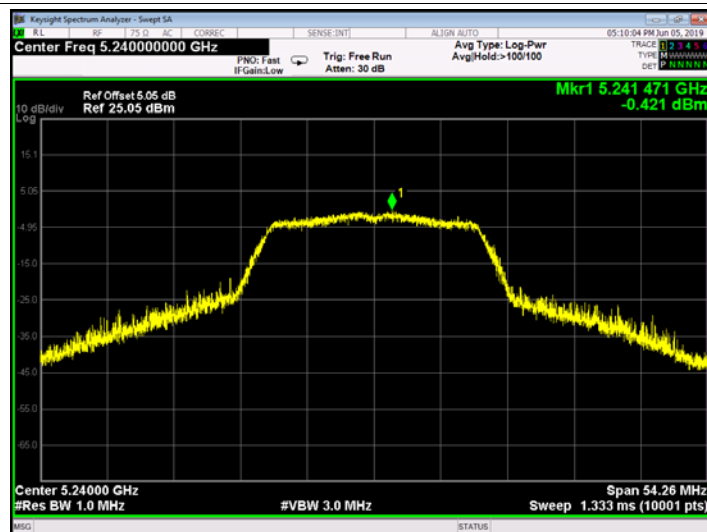
**802.11 ac(VHT20) 5180 MHz**



**802.11 ac(VHT20) 5200 MHz**

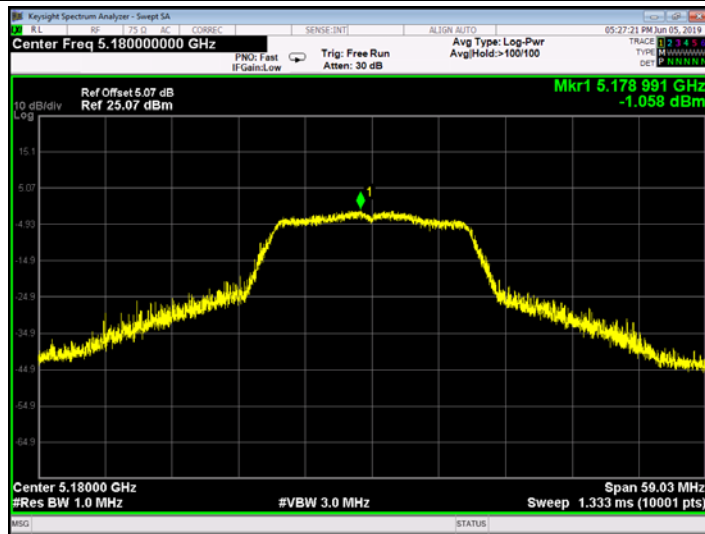


**802.11 ac(VHT20) 5240 MHz**

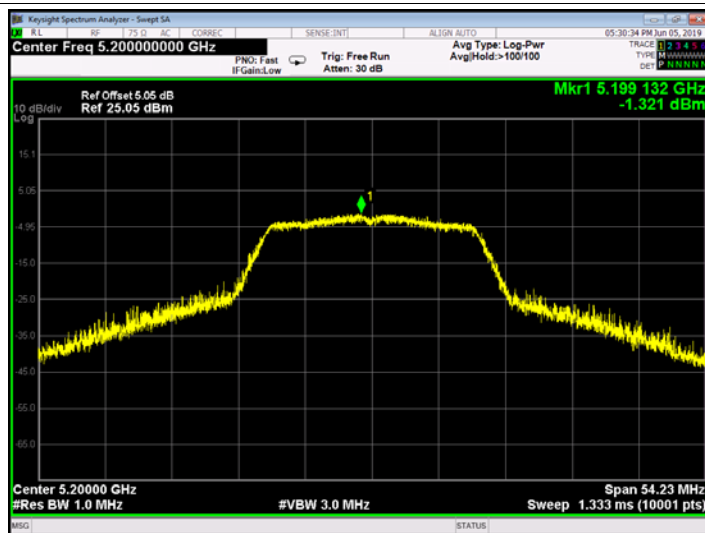


**AUX Antenna**

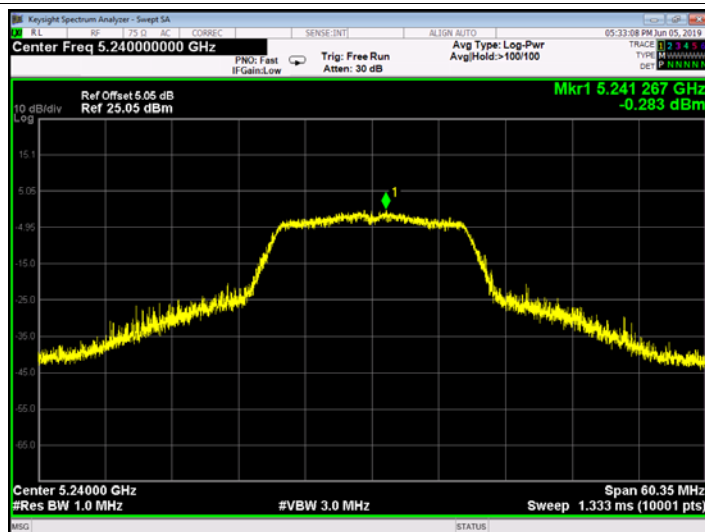
**802.11 ac(VHT20) 5180 MHz**



**802.11 ac(VHT20) 5200 MHz**

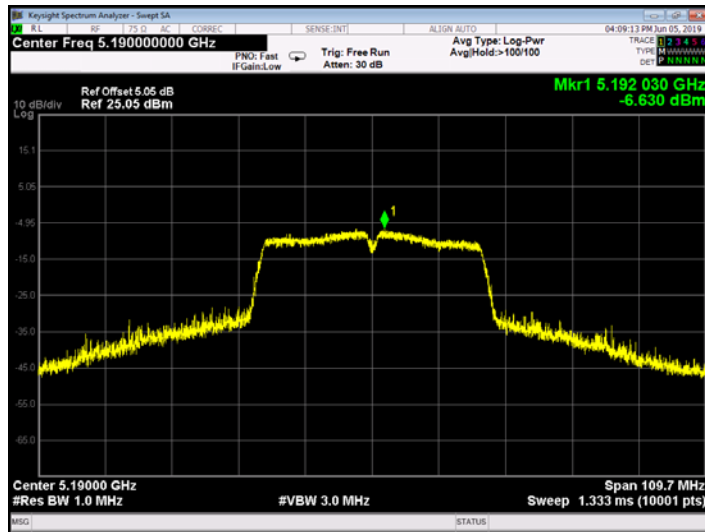


**802.11 ac(VHT20) 5240 MHz**

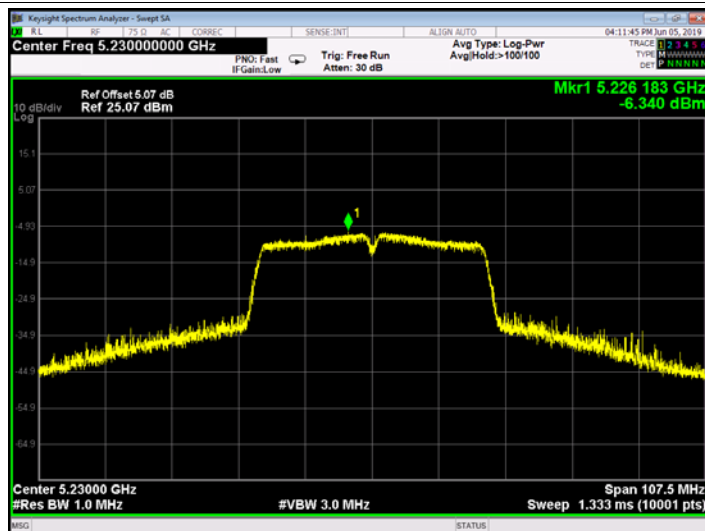


**Main Antenna**

**802.11 n(HT40) 5190 MHz**

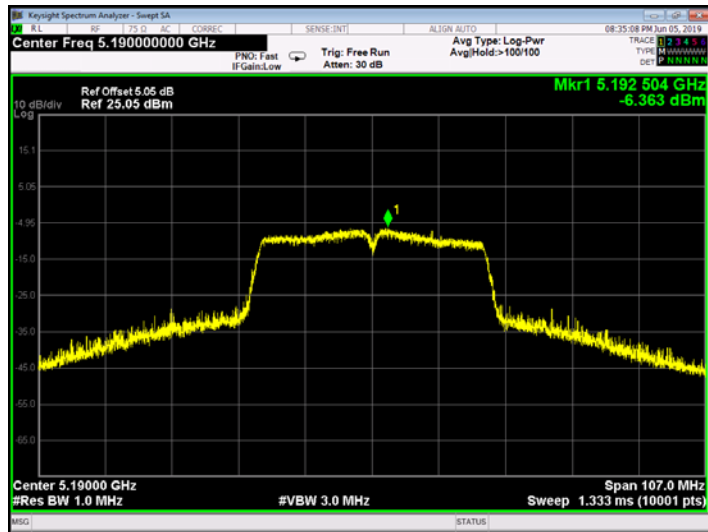


**802.11 n(HT40) 5230 MHz**

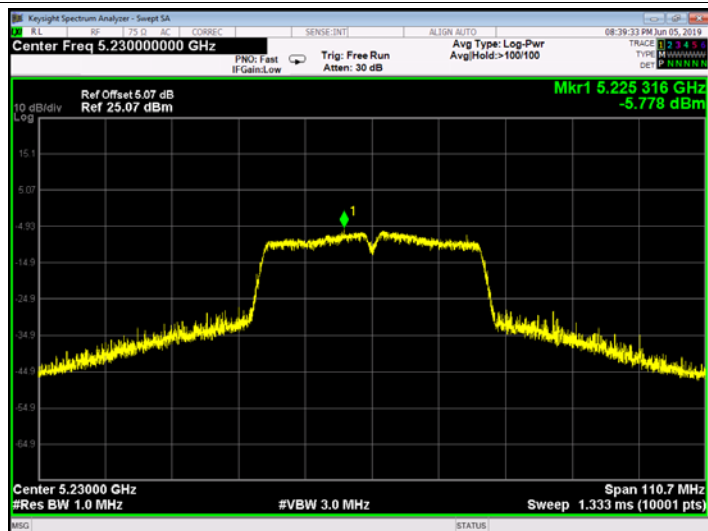


**AUX Antenna**

**802.11 n(HT40) 5190 MHz**

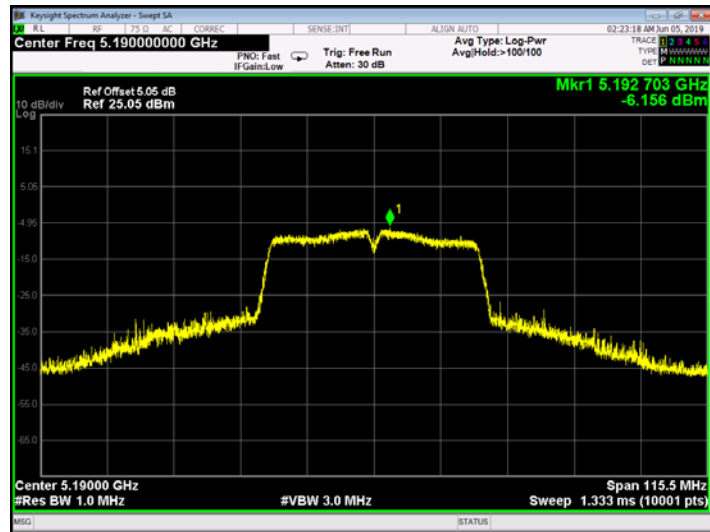


**802.11 n(HT40) 5230 MHz**

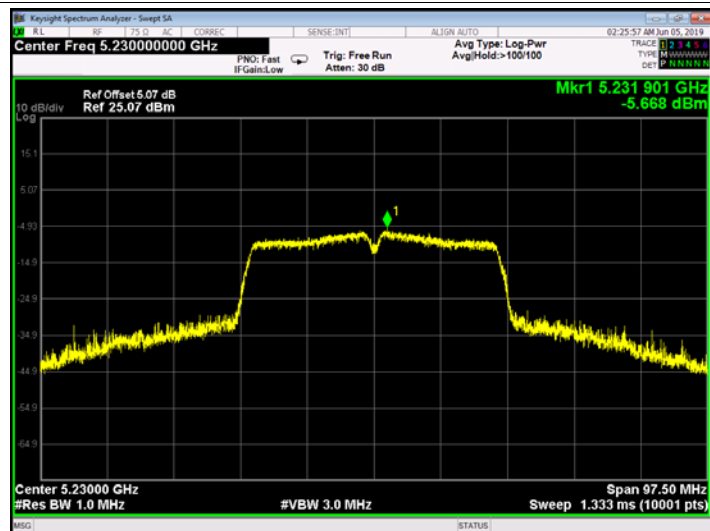


### Main Antenna

#### 802.11 ac(VHT40) 5190 MHz

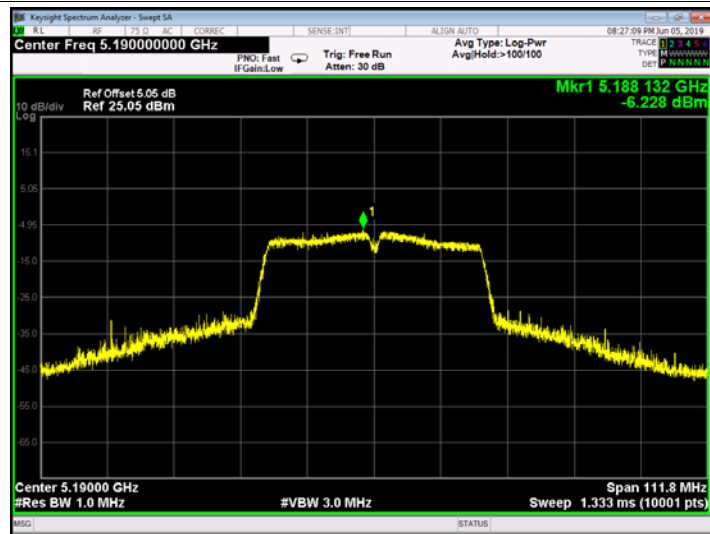


#### 802.11 ac(VHT40) 5230 MHz

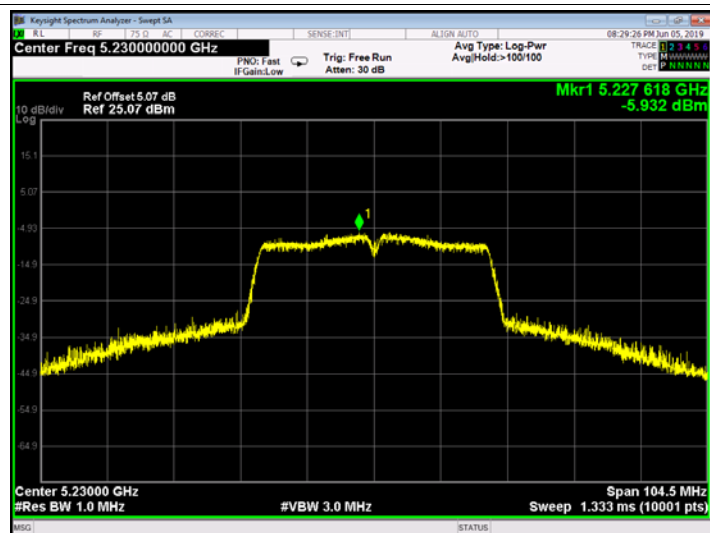


**AUX Antenna**

**802.11 ac(VHT40) 5190 MHz**

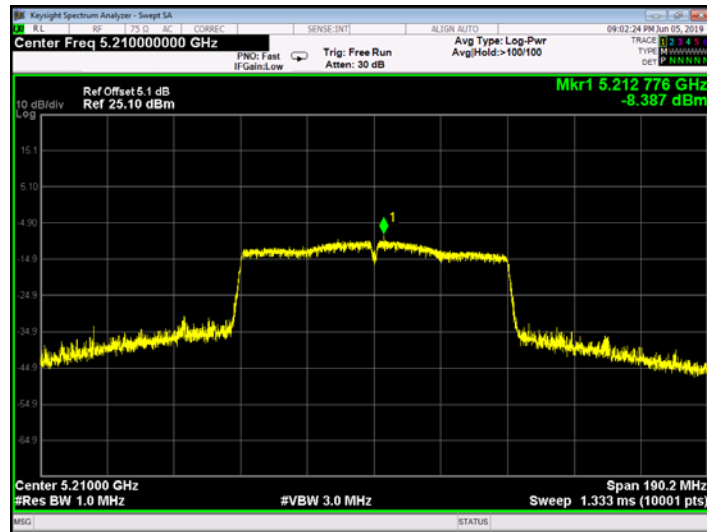


**802.11 ac(VHT40) 5230 MHz**



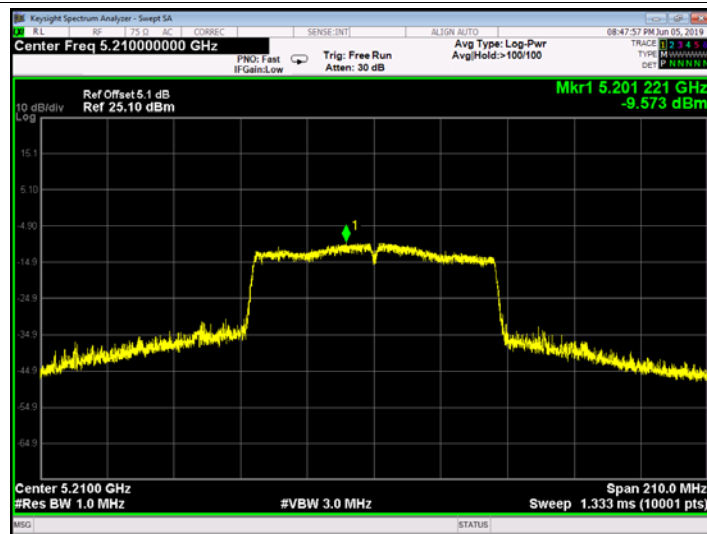
**Main Antenna**

**802.11 ac(VHT80) 5210 MHz**



**AUX Antenna**

**802.11 ac(VHT80) 5210 MHz**



| Temperature:                                                                                                                                                                                                                                                                                | 25 °C           | Relative Humidity:     |                       | 55%              |                          |                    |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|-----------------------|------------------|--------------------------|--------------------|--|
| Test Voltage:                                                                                                                                                                                                                                                                               | AC 120V/60Hz    |                        |                       |                  |                          |                    |  |
| U-NII-3                                                                                                                                                                                                                                                                                     |                 |                        |                       |                  |                          |                    |  |
| Test Mode                                                                                                                                                                                                                                                                                   | Frequency (MHz) | Test Data              |                       |                  |                          | Limit (dBm/500KHz) |  |
|                                                                                                                                                                                                                                                                                             |                 | Main ANT. (dBm/500KHz) | AUX ANT. (dBm/500KHz) | Duty Factor (dB) | Total Power (dBm/500KHz) |                    |  |
| 802.11a                                                                                                                                                                                                                                                                                     | 5745            | -3.528                 | -3.483                | 0                | ---                      | 30                 |  |
|                                                                                                                                                                                                                                                                                             | 5785            | -3.654                 | -3.528                | 0                | ---                      |                    |  |
|                                                                                                                                                                                                                                                                                             | 5825            | -4.551                 | -4.037                | 0                | ---                      |                    |  |
| 802.11n (HT20)                                                                                                                                                                                                                                                                              | 5745            | -3.739                 | -3.135                | 0                | -0.416                   |                    |  |
|                                                                                                                                                                                                                                                                                             | 5785            | -4.141                 | -4.212                | 0                | -1.166                   |                    |  |
|                                                                                                                                                                                                                                                                                             | 5825            | -4.825                 | -4.037                | 0                | -1.403                   |                    |  |
| 802.11ac (VHT20)                                                                                                                                                                                                                                                                            | 5745            | -2.988                 | -3.731                | 0                | -0.333                   |                    |  |
|                                                                                                                                                                                                                                                                                             | 5785            | -3.836                 | -3.667                | 0                | -0.740                   |                    |  |
|                                                                                                                                                                                                                                                                                             | 5825            | -4.668                 | -3.444                | 0                | -1.003                   |                    |  |
| 802.11n (HT40)                                                                                                                                                                                                                                                                              | 5755            | -9.297                 | -9.402                | 0                | -6.339                   |                    |  |
|                                                                                                                                                                                                                                                                                             | 5795            | -10.644                | -9.109                | 0                | -6.799                   |                    |  |
| 802.11 ac(VHT40)                                                                                                                                                                                                                                                                            | 5755            | -9.378                 | -9.474                | 0                | -6.415                   |                    |  |
|                                                                                                                                                                                                                                                                                             | 5795            | -9.029                 | -10.007               | 0                | -6.480                   |                    |  |
| 802.11 ac(VHT80)                                                                                                                                                                                                                                                                            | 5775            | -12.223                | -12.599               | 0                | -9.397                   |                    |  |
| Result: PASS                                                                                                                                                                                                                                                                                |                 |                        |                       |                  |                          |                    |  |
| Remark: The EUT incorporates a MIMO function. Physically, the EUT provides two antennas for transmitting and receiving.<br>When Main ANT. and Aux ANT. transmitting simultaneously, the total Antenna Gain=Main Gain + Aux Gani =5.01 dBi<6 dBi.<br>So P <sub>out</sub> =P <sub>limit</sub> |                 |                        |                       |                  |                          |                    |  |

## Main Antenna

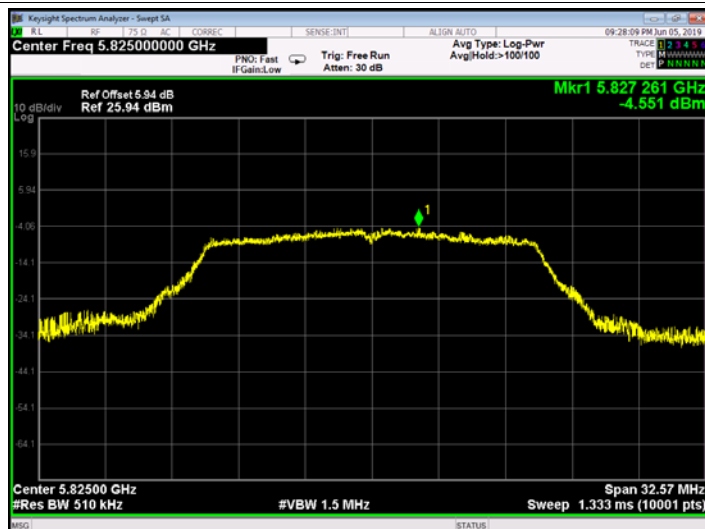
### 802.11 a 5745 MHz



### 802.11 a 5785 MHz



### 802.11 a 5825 MHz

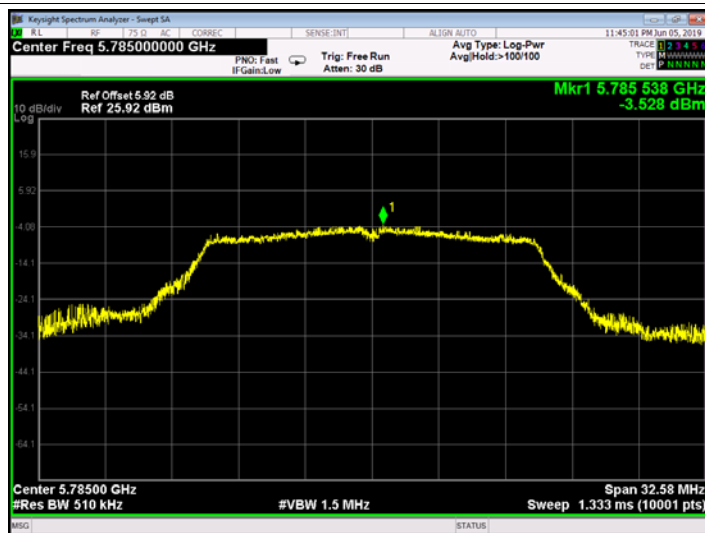


**AUX Antenna**

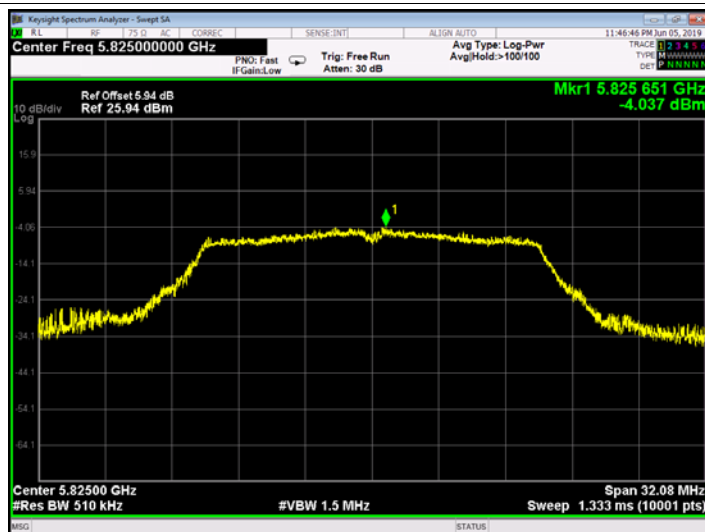
**802.11 a 5745 MHz**



**802.11 a 5785 MHz**

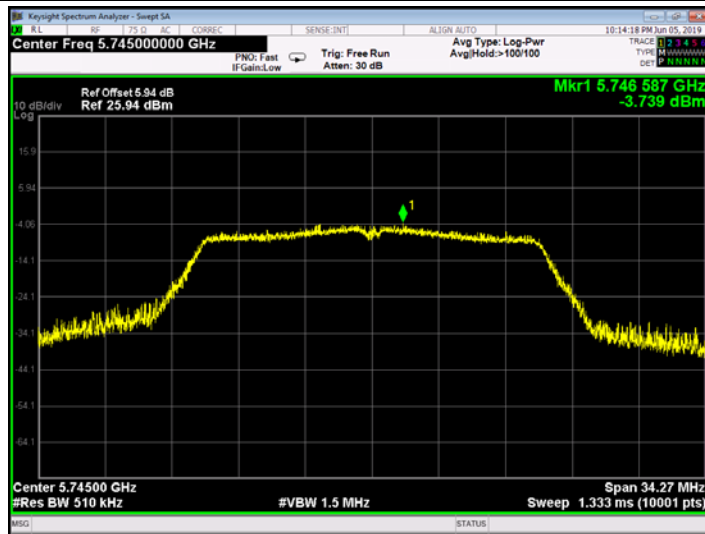


**802.11 a 5825 MHz**

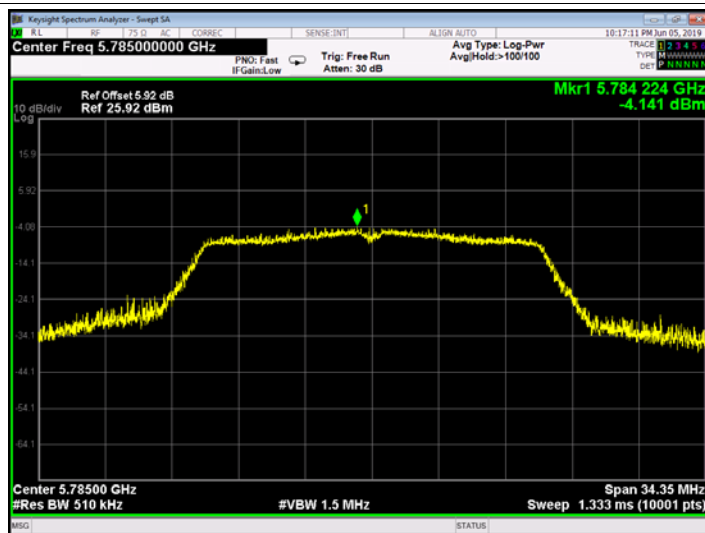


**Main Antenna**

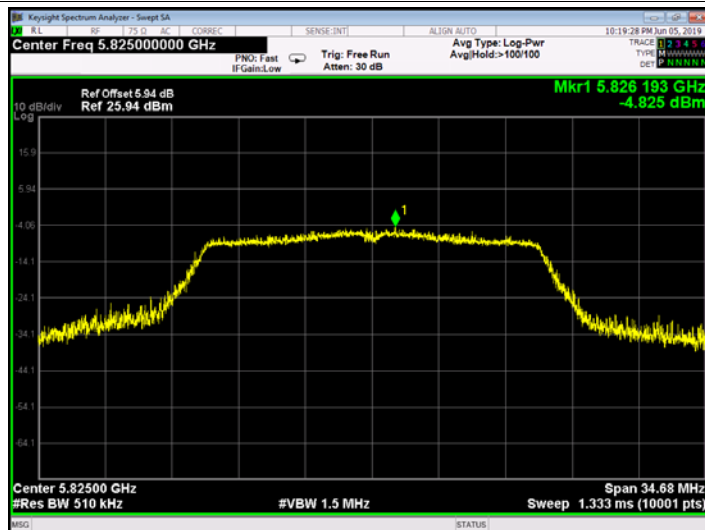
**802.11 n(HT20) 5745 MHz**



**802.11 n(HT20) 5785 MHz**



**802.11 n(HT20) 5825 MHz**

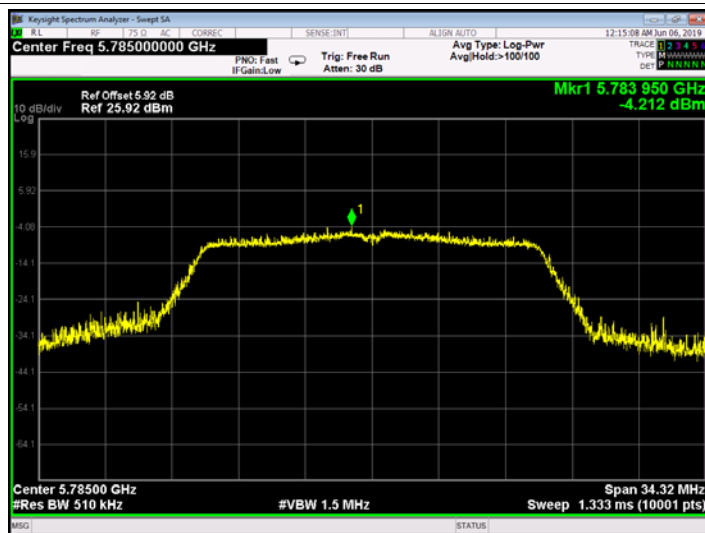


**AUX Antenna**

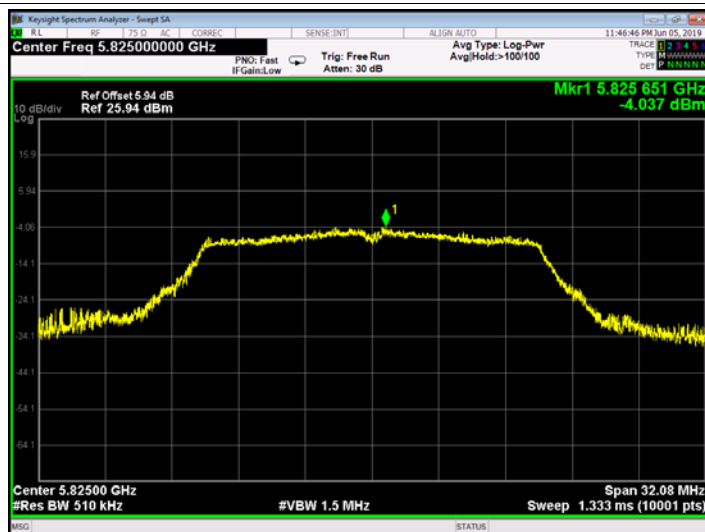
**802.11 n(HT20) 5745 MHz**



**802.11 n(HT20) 5785 MHz**



**802.11 n(HT20) 5825 MHz**

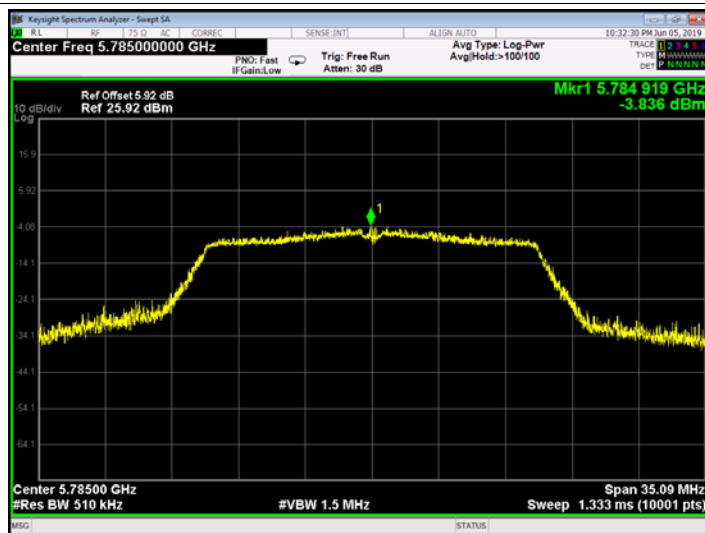


**Main Antenna**

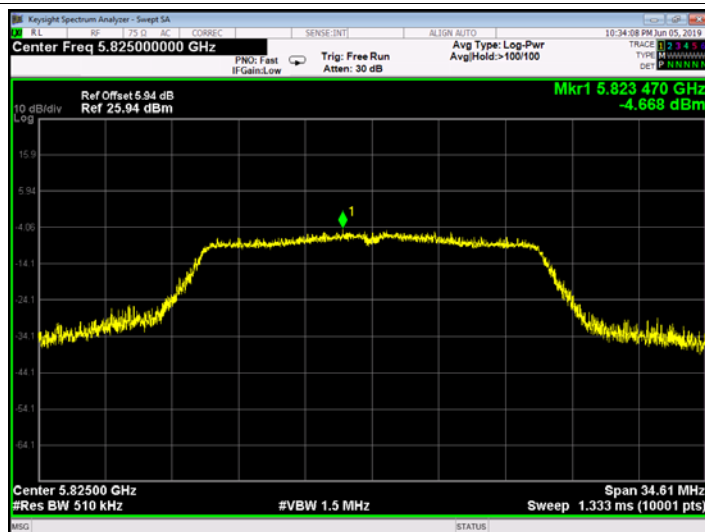
**802.11 ac(VHT20) 5745 MHz**



**802.11 ac(VHT20) 55785 MHz**

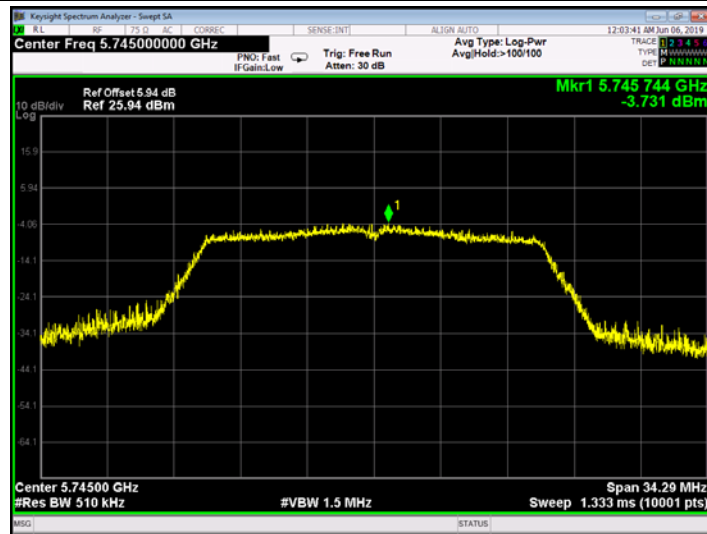


**802.11 ac(VHT20) 5825 MHz**

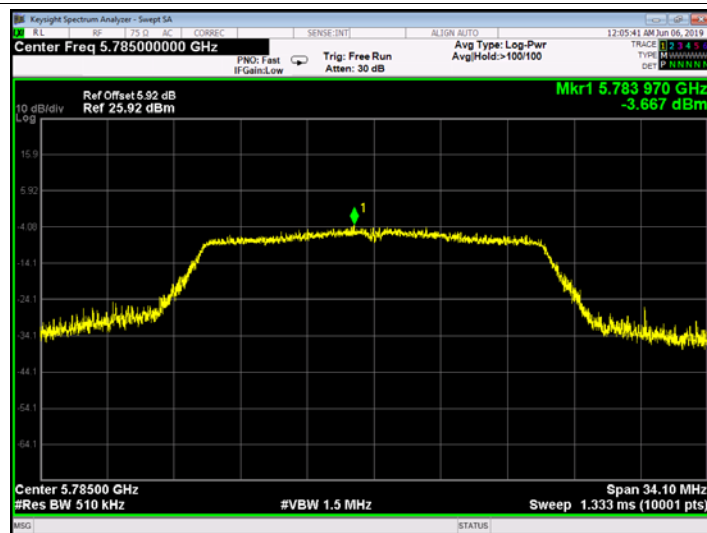


### AUX Antenna

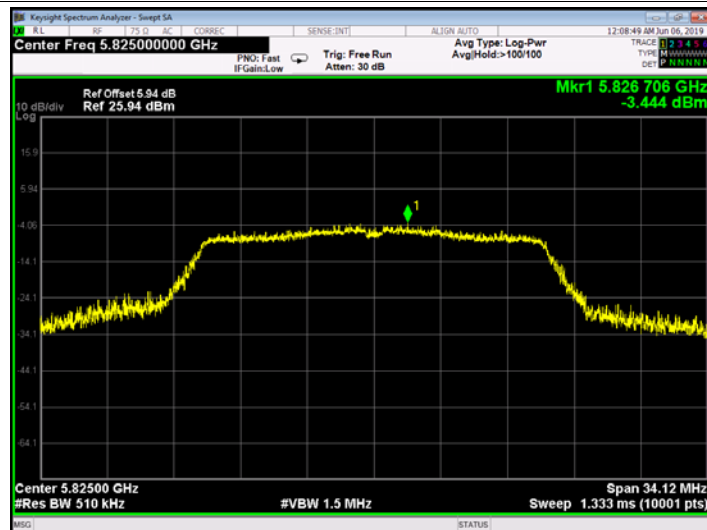
#### 802.11 ac(VHT20) 5745 MHz



#### 802.11 ac(VHT20) 5785 MHz



#### 802.11 ac(VHT20) 5825 MHz

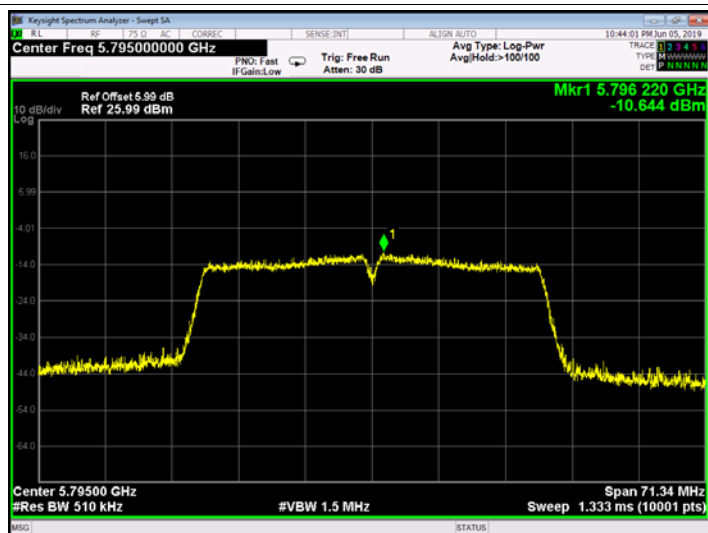


**Main Antenna**

**802.11 n(HT40) 5755 MHz**

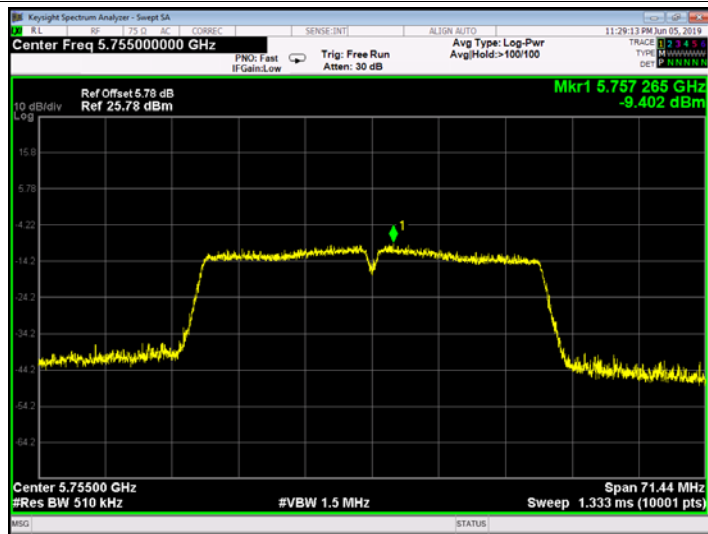


**802.11 n(HT40) 5795 MHz**

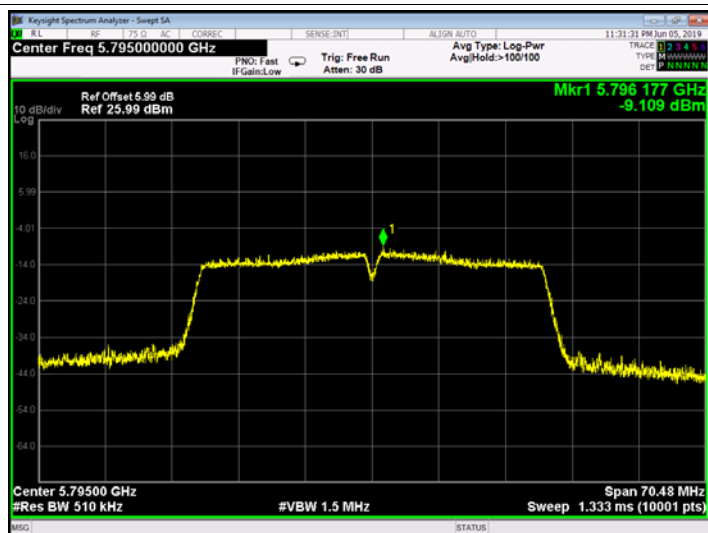


**AUX Antenna**

**802.11 n(HT40) 5755 MHz**

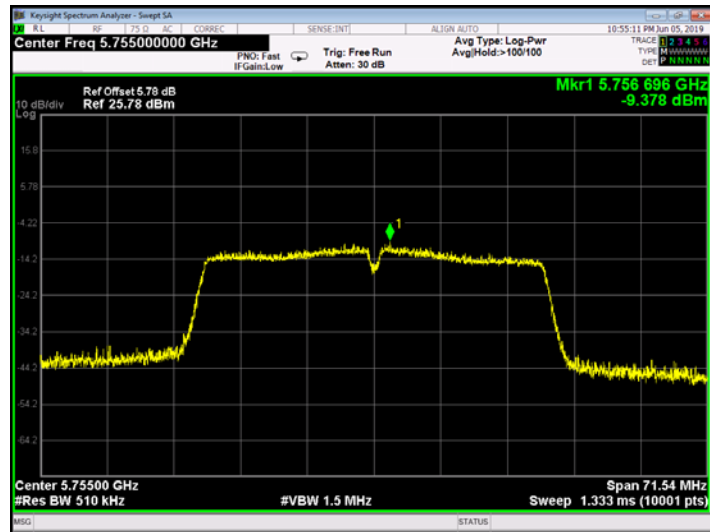


**802.11 n(HT40) 5795 MHz**

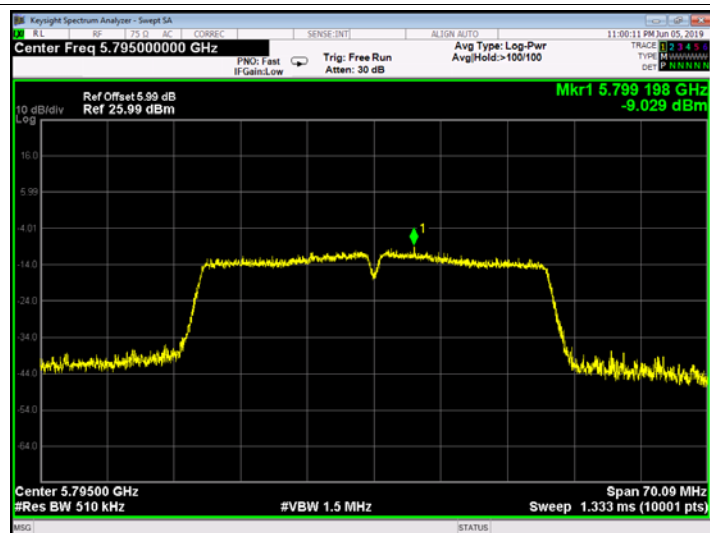


**Main Antenna**

**802.11 ac(VHT40) 5755 MHz**

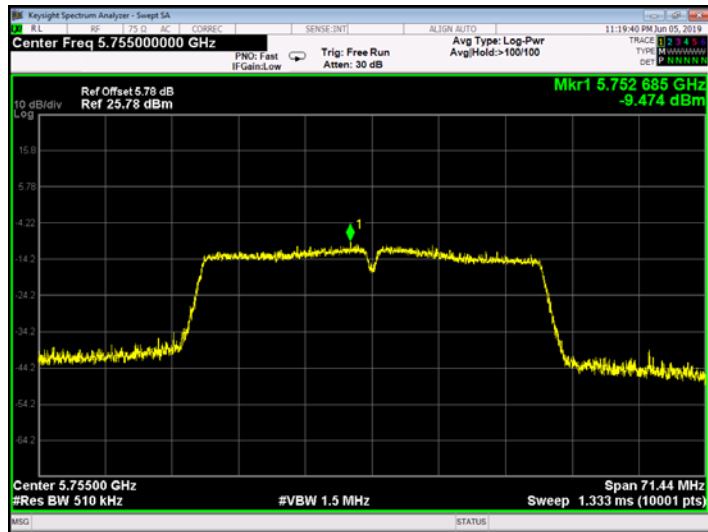


**802.11 ac(VHT40) 5795 MHz**

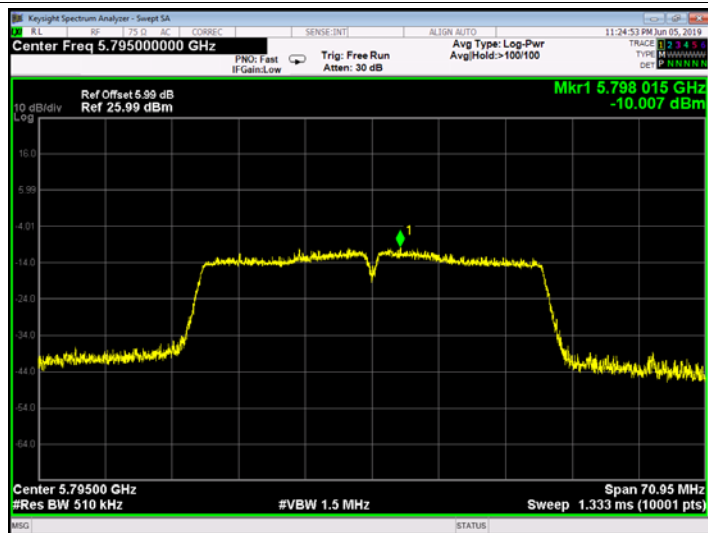


**AUX Antenna**

**802.11 ac(VHT40) 5755 MHz**

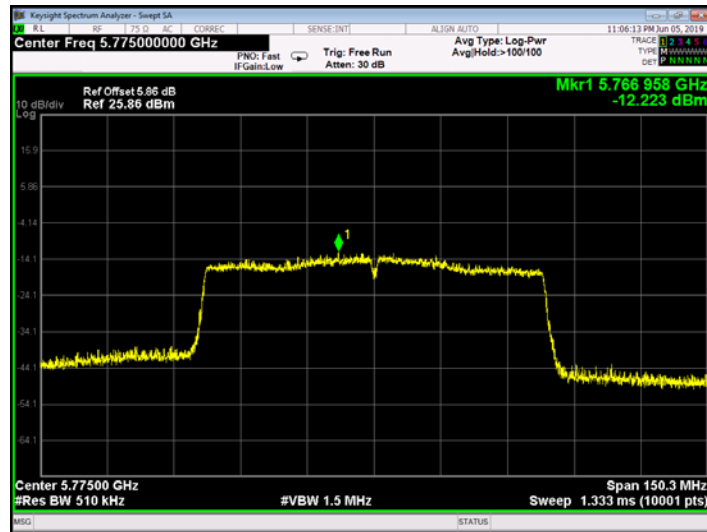


**802.11 ac(VHT40) 5795 MHz**



**Main Antenna**

**802.11 ac(VHT80) 5775 MHz**



**AUX Antenna**

**802.11 ac(VHT80) 5775 MHz**



## Attachment G----Frequency Stability Measurement Data

| 801.11a U-NII-1: 5180 MHz           |                             |
|-------------------------------------|-----------------------------|
| Voltage vs. Frequency Stability     |                             |
| Voltage (V)                         | Measurement Frequency (MHz) |
| 132                                 | 5179.9536                   |
| 120                                 | 5179.9554                   |
| 118                                 | 5179.9562                   |
| Max. Deviation (MHz)                | 0.0464                      |
| Max. Deviation (ppm)                | 8.96                        |
| Temperature vs. Frequency Stability |                             |
| Temperature (°C)                    | Measurement Frequency (MHz) |
| 0                                   | 5179.9557                   |
| 10                                  | 5179.9585                   |
| 20                                  | 5179.9593                   |
| 30                                  | 5179.9573                   |
| 40                                  | 5179.9596                   |
| 50                                  | 5179.9596                   |
| Max. Deviation (MHz)                | 0.0443                      |
| Max. Deviation (ppm)                | 8.55                        |
| Limit (ppm)                         | 20                          |
| Result                              | Pass                        |

| 801.11a U-NII-3: 5745 MHz           |                             |
|-------------------------------------|-----------------------------|
| Voltage vs. Frequency Stability     |                             |
| Voltage (V)                         | Measurement Frequency (MHz) |
| 132                                 | 5744.9586                   |
| 120                                 | 5744.9562                   |
| 118                                 | 5744.9558                   |
| Max. Deviation (MHz)                | 0.0442                      |
| Max. Deviation (ppm)                | 7.69                        |
| Temperature vs. Frequency Stability |                             |
| Temperature (°C)                    | Measurement Frequency (MHz) |
| 0                                   | 5744.9523                   |
| 10                                  | 5744.9516                   |
| 20                                  | 5744.9518                   |
| 30                                  | 5744.9526                   |
| 40                                  | 5744.9533                   |
| 50                                  | 5744.9568                   |
| Max. Deviation (MHz)                | 0.0484                      |
| Max. Deviation (ppm)                | 8.42                        |
| Limit (ppm)                         | 20                          |
| Result                              | Pass                        |

-----END OF REPORT-----