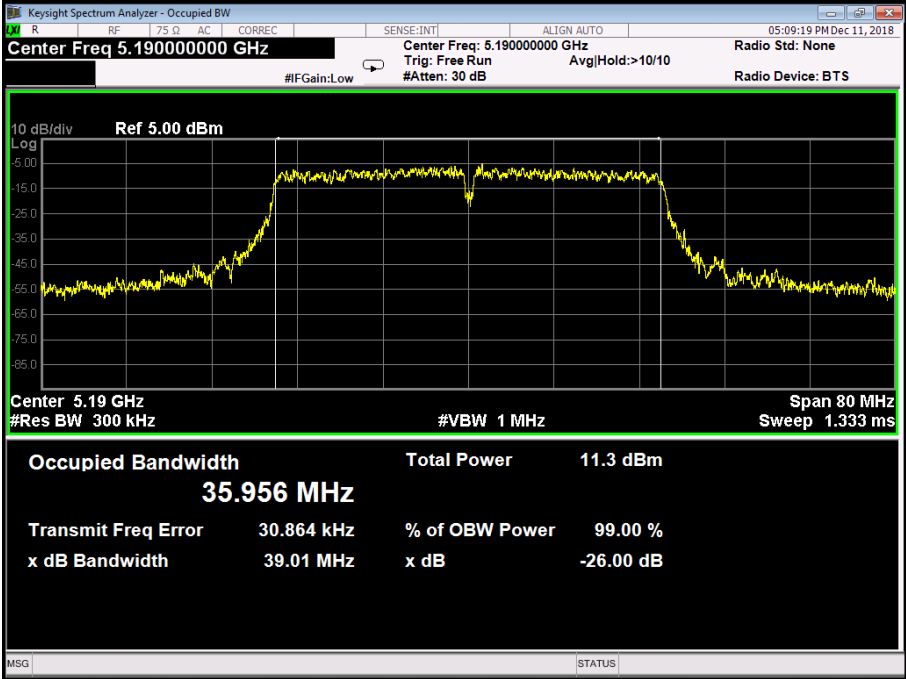
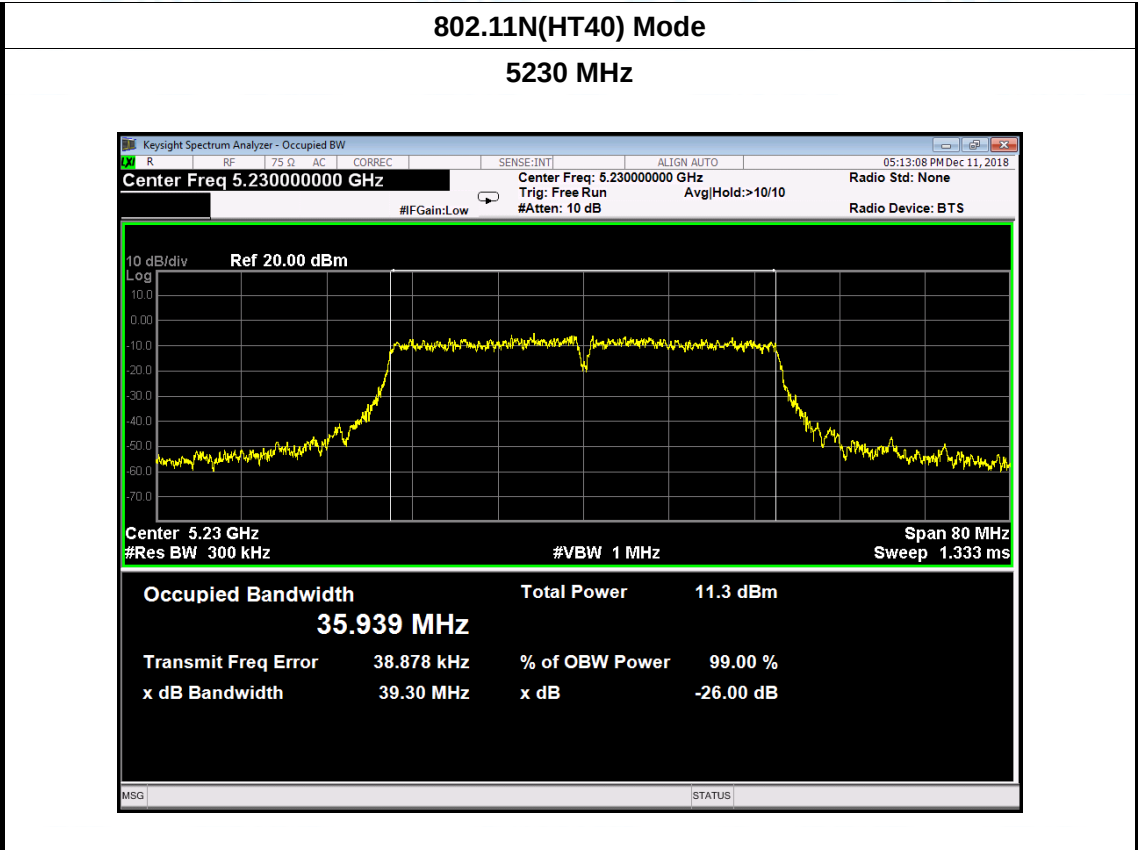
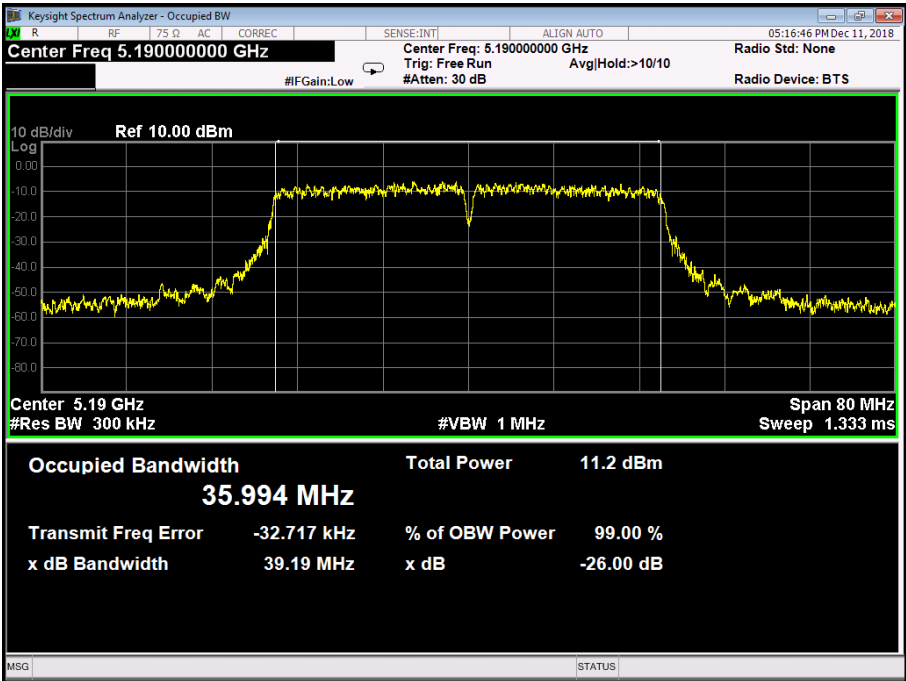


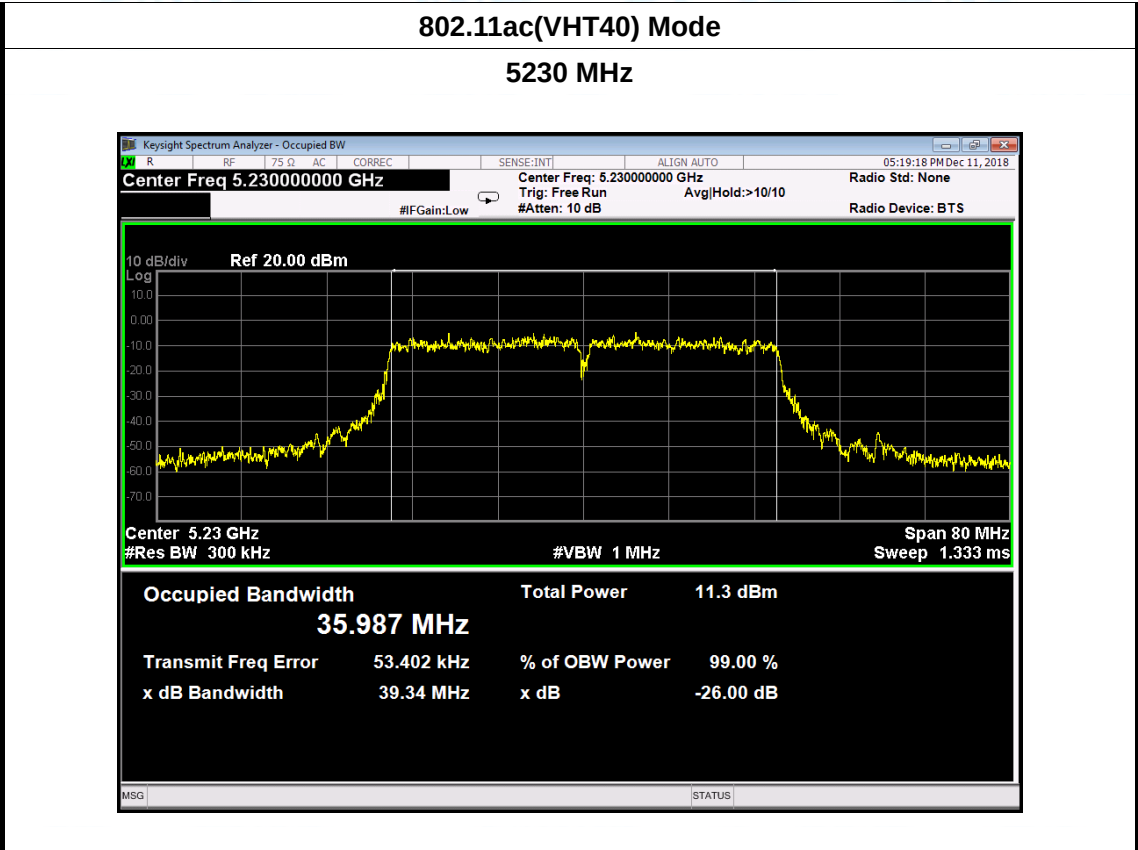
**ANT 0:**

| <b>Temperature:</b>                                                                 | 25 °C                           | <b>Relative Humidity:</b> | 55%                 |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------|---------------------|
| <b>Test Voltage:</b>                                                                | AC 120V/60Hz                    |                           |                     |
| <b>Test Mode:</b>                                                                   | TX 802.11N(HT40) Mode (U-NII-1) |                           |                     |
| Channel                                                                             | Frequency (MHz)                 | 26dB Bandwidth (MHz)      | 99% Bandwidth (MHz) |
| 38                                                                                  | 5190                            | 39.01                     | 35.956              |
| 46                                                                                  | 5230                            | 39.30                     | 35.939              |
| <b>802.11N(HT40) Mode</b>                                                           |                                 |                           |                     |
| <b>5190 MHz</b>                                                                     |                                 |                           |                     |
|  |                                 |                           |                     |

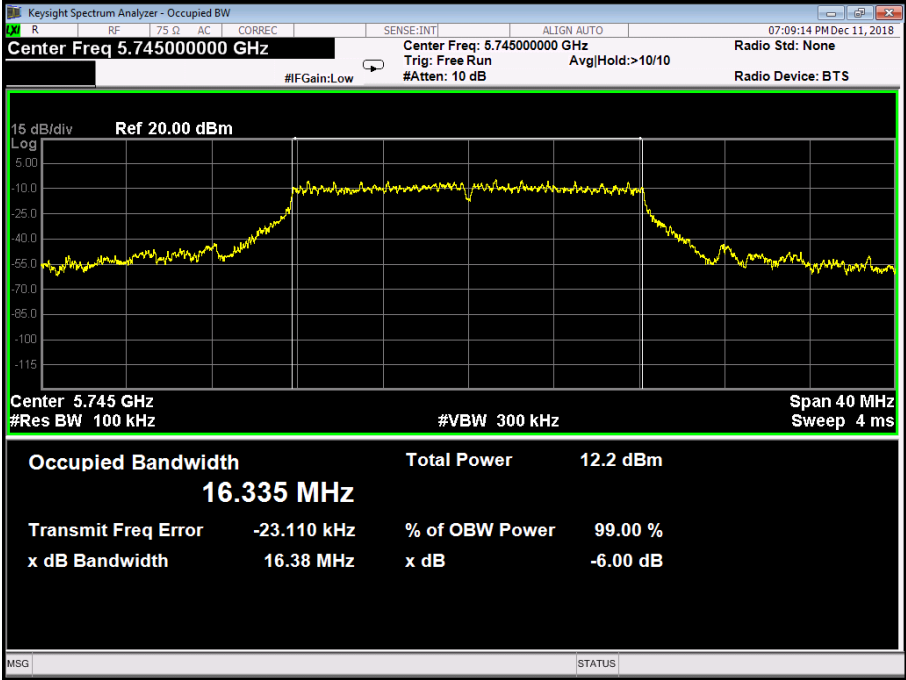


ANT 0:

| Temperature:                                                                        | 25 °C                             | Relative Humidity:   | 55%                 |
|-------------------------------------------------------------------------------------|-----------------------------------|----------------------|---------------------|
| Test Voltage:                                                                       | AC 120V/60Hz                      |                      |                     |
| Test Mode:                                                                          | TX 802.11ac(VHT40) Mode (U-NII-1) |                      |                     |
| Channel                                                                             | Frequency (MHz)                   | 26dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
| 38                                                                                  | 5190                              | 39.19                | 35.994              |
| 46                                                                                  | 5230                              | 39.34                | 35.987              |
| 802.11ac(VHT40) Mode                                                                |                                   |                      |                     |
| 5190 MHz                                                                            |                                   |                      |                     |
|  |                                   |                      |                     |

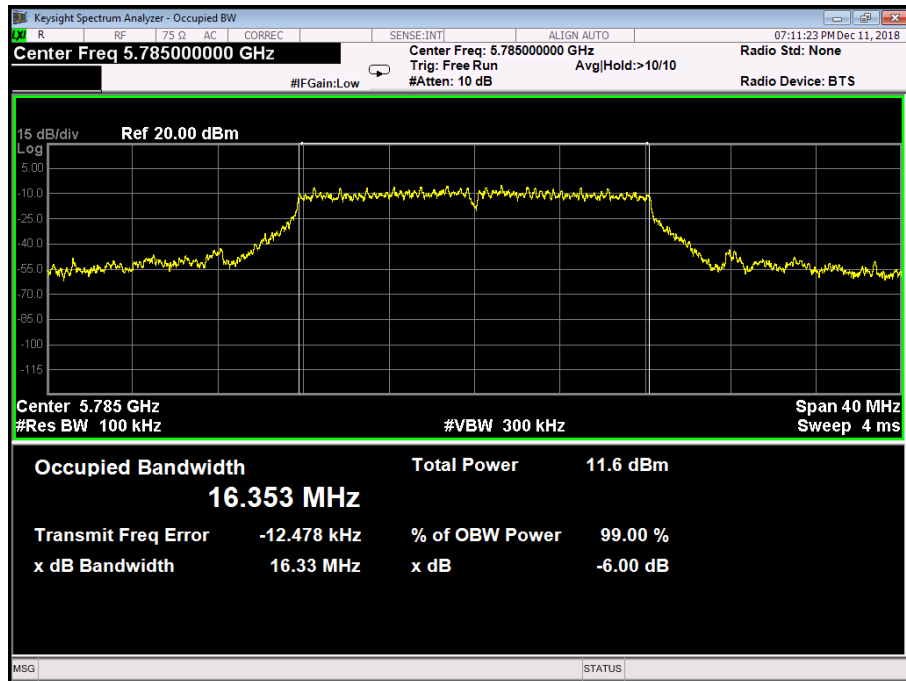


**ANT 0:**

| <b>Temperature:</b>                                                                                                                                                                                                                                                                                                      | 25 °C                     | <b>Relative Humidity:</b> | 55%                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|---------------------|
| <b>Test Voltage:</b>                                                                                                                                                                                                                                                                                                     | AC 120V/60Hz              |                           |                     |
| <b>Test Mode:</b>                                                                                                                                                                                                                                                                                                        | TX 802.11a Mode (U-NII-3) |                           |                     |
| Channel                                                                                                                                                                                                                                                                                                                  | Frequency (MHz)           | 6dB Bandwidth (MHz)       | 99% Bandwidth (MHz) |
| 149                                                                                                                                                                                                                                                                                                                      | 5745                      | 16.38                     | 16.335              |
| 157                                                                                                                                                                                                                                                                                                                      | 5785                      | 16.33                     | 16.353              |
| 165                                                                                                                                                                                                                                                                                                                      | 5825                      | 15.35                     | 16.332              |
| <b>802.11a Mode</b>                                                                                                                                                                                                                                                                                                      |                           |                           |                     |
| <b>5745 MHz</b>                                                                                                                                                                                                                                                                                                          |                           |                           |                     |
|  <p><b>Occupied Bandwidth</b> 16.335 MHz</p> <p><b>Total Power</b> 12.2 dBm</p> <p><b>Transmit Freq Error</b> -23.110 kHz</p> <p><b>% of OBW Power</b> 99.00 %</p> <p><b>x dB Bandwidth</b> 16.38 MHz</p> <p><b>x dB</b> -6.00 dB</p> |                           |                           |                     |

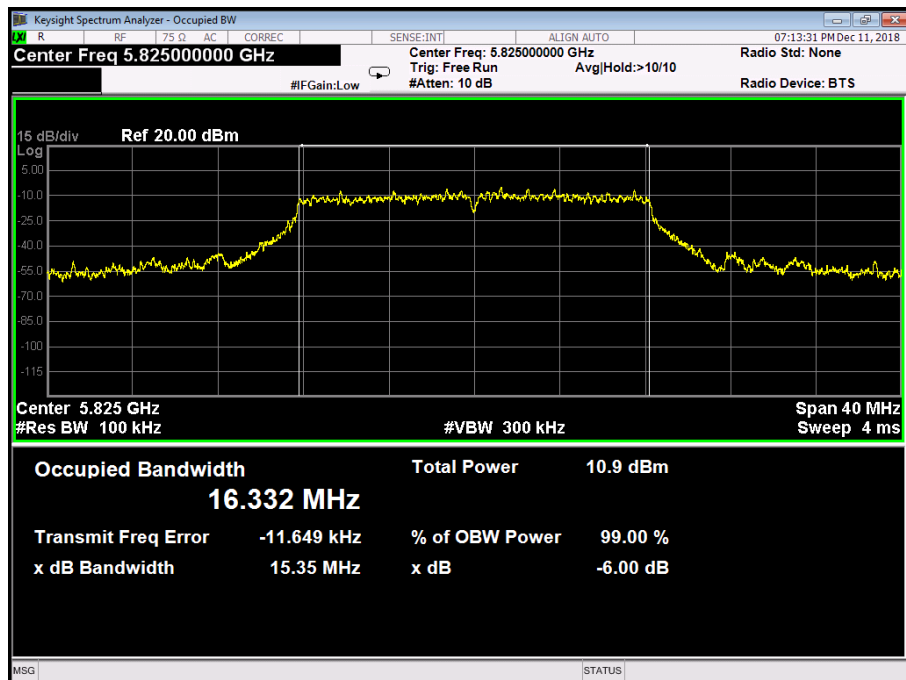
## 802.11a Mode

5785 MHz

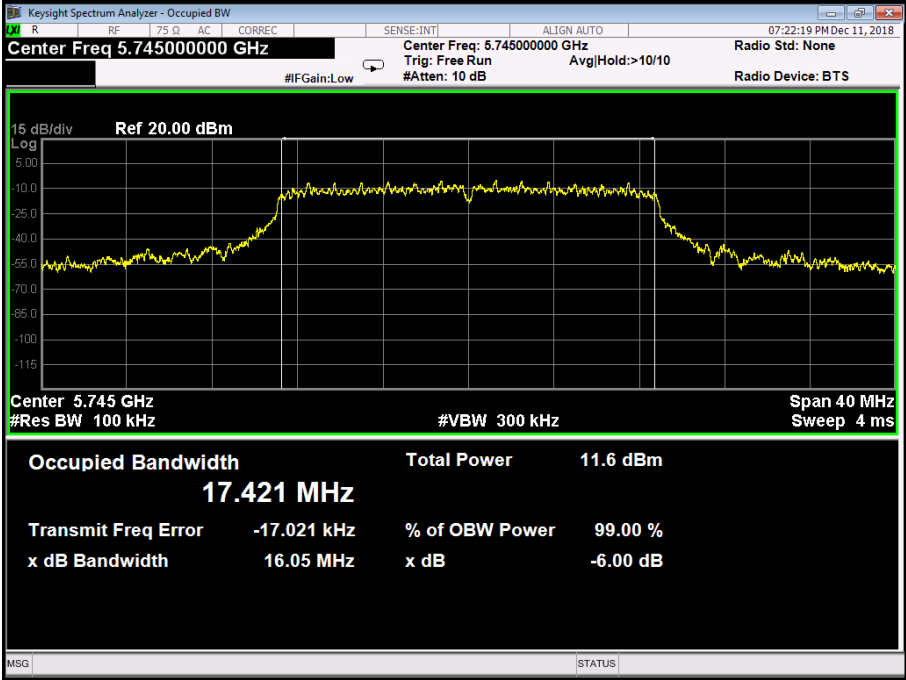


## 802.11a Mode

5825 MHz

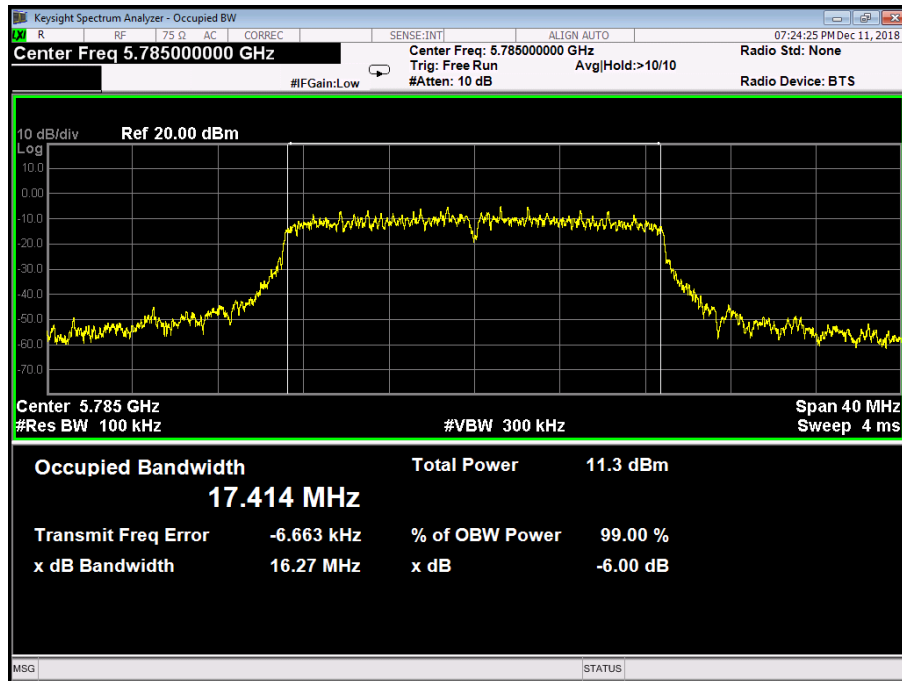


## ANT 0:

| Temperature:                                                                        | 25 °C                         | Relative Humidity:  | 55%                 |
|-------------------------------------------------------------------------------------|-------------------------------|---------------------|---------------------|
| Test Voltage:                                                                       | AC 120V/60Hz                  |                     |                     |
| Test Mode:                                                                          | TX 802.11n(20) Mode (U-NII-3) |                     |                     |
| Channel                                                                             | Frequency (MHz)               | 6dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
| 149                                                                                 | 5745                          | 16.05               | 17.421              |
| 157                                                                                 | 5785                          | 16.27               | 17.414              |
| 165                                                                                 | 5825                          | 16.34               | 17.434              |
| 802.11n(HT20) Mode                                                                  |                               |                     |                     |
| 5745 MHz                                                                            |                               |                     |                     |
|  |                               |                     |                     |

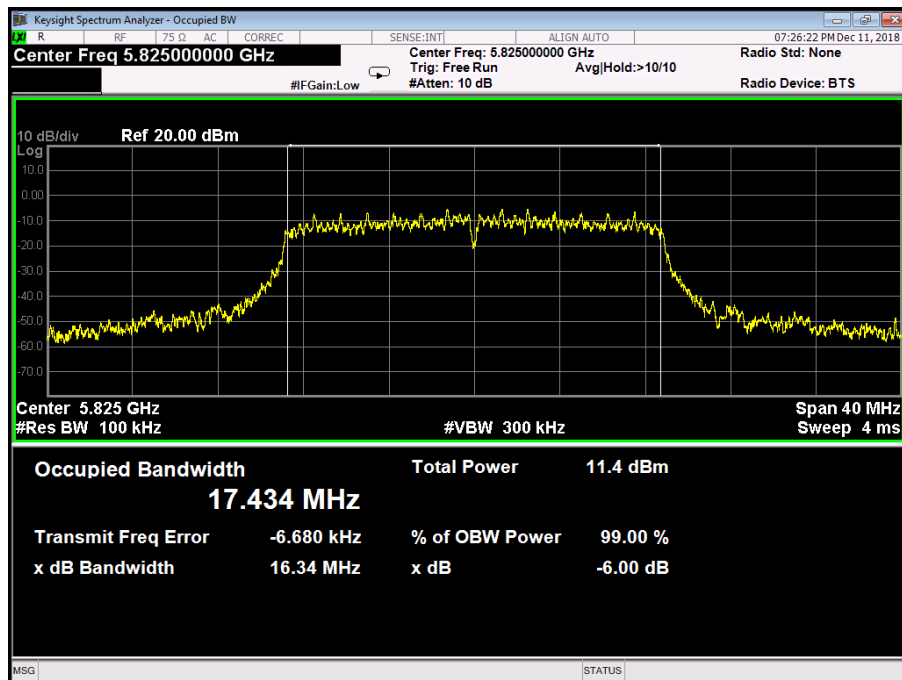
## 802.11n(HT20) Mode

5785 MHz

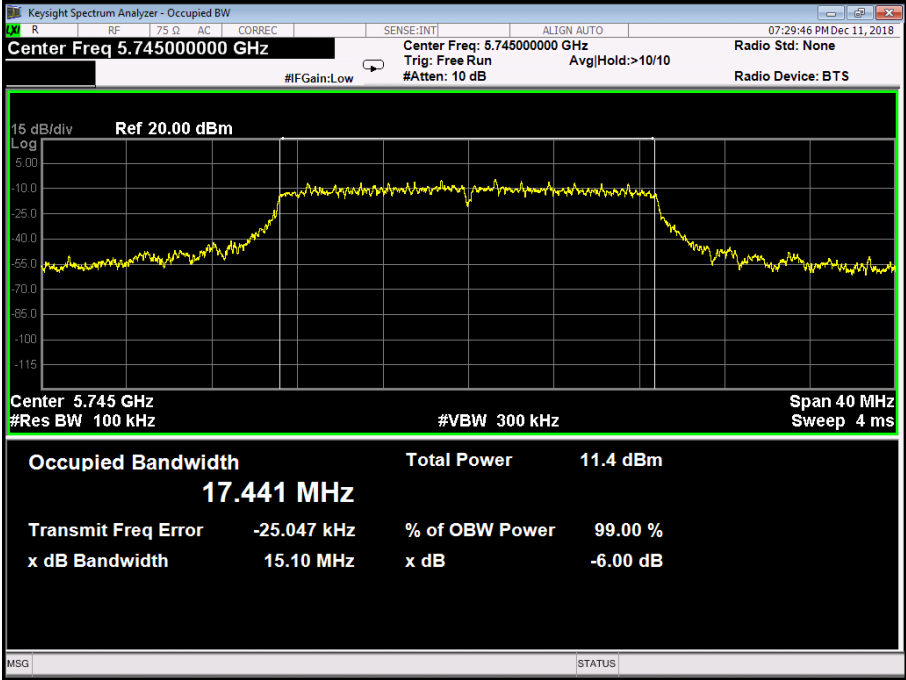


## 802.11n(HT20) Mode

5825 MHz

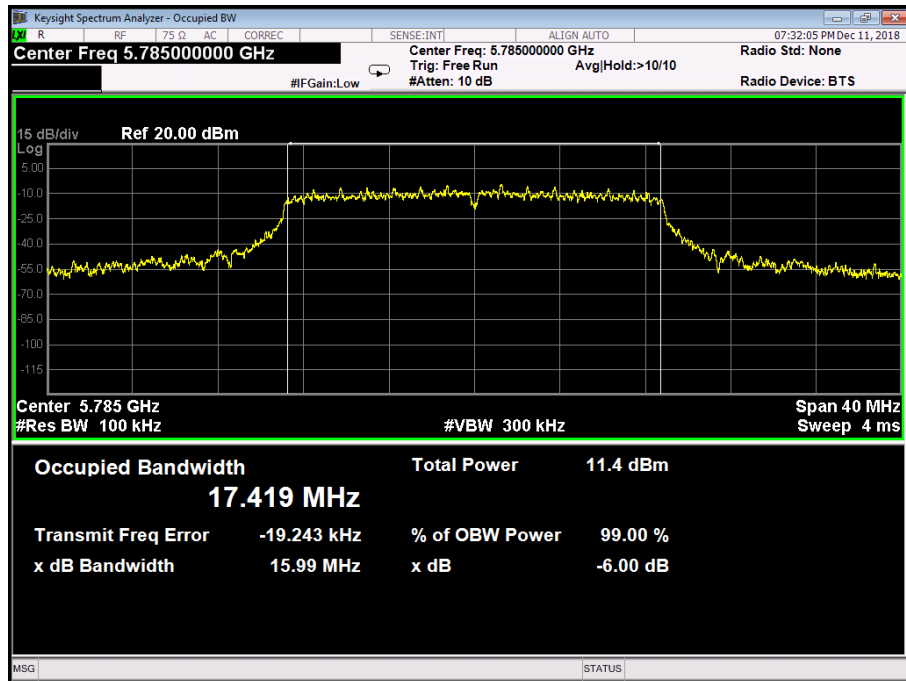


**ANT 0:**

| <b>Temperature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 25 °C                             | <b>Relative Humidity:</b> | 55%                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------------------|---------------------|
| <b>Test Voltage:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | AC 120V/60Hz                      |                           |                     |
| <b>Test Mode:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TX 802.11ac(VHT20) Mode (U-NII-3) |                           |                     |
| Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Frequency (MHz)                   | 6dB Bandwidth (MHz)       | 99% Bandwidth (MHz) |
| 149                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5745                              | 15.10                     | 17.441              |
| 157                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5785                              | 15.99                     | 17.419              |
| 165                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5825                              | 15.59                     | 17.507              |
| <b>802.11ac(VHT20) Mode</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                   |                           |                     |
| <b>5745 MHz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                   |                           |                     |
|  <p>Center Freq 5.745000000 GHz<br/>Center Freq: 5.745000000 GHz<br/>Trig: Free Run<br/>#Gain: Low<br/>#Atten: 10 dB<br/>Avg/Hold: &gt;10/10<br/>Radio Std: None<br/>Radio Device: BTS</p> <p>15 dB/div Ref 20.00 dBm</p> <p>Center 5.745 GHz<br/>#Res BW 100 kHz<br/>#VBW 300 kHz<br/>Span 40 MHz<br/>Sweep 4 ms</p> <p><b>Occupied Bandwidth 17.441 MHz</b></p> <p>Total Power 11.4 dBm</p> <p>Transmit Freq Error -25.047 kHz<br/>% of OBW Power 99.00 %<br/>x dB Bandwidth 15.10 MHz<br/>x dB -6.00 dB</p> |                                   |                           |                     |

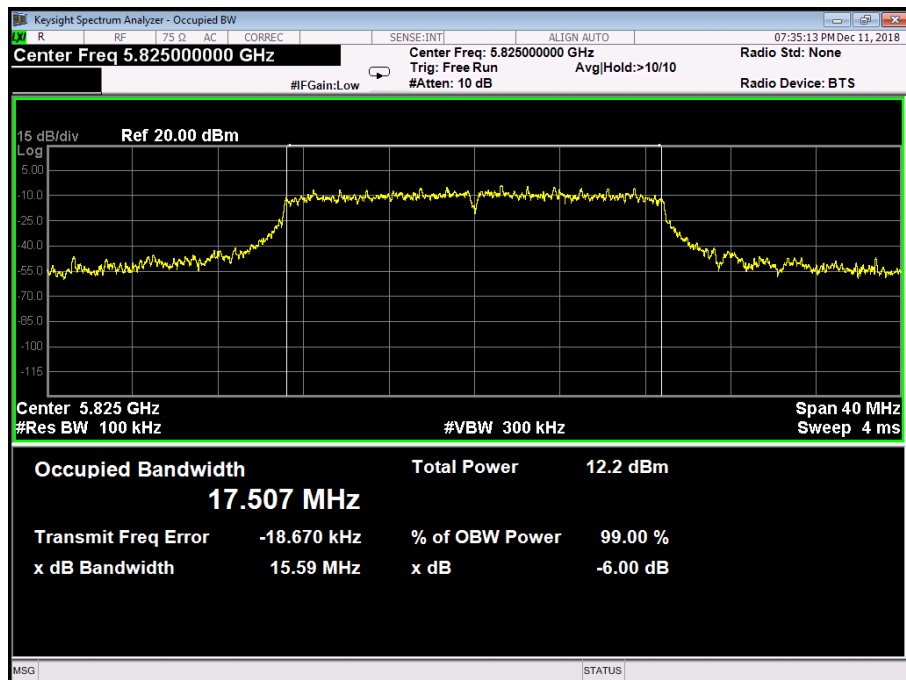
## 802.11ac(VHT20) Mode

5785 MHz



## 802.11ac(VHT20) Mode

5825 MHz

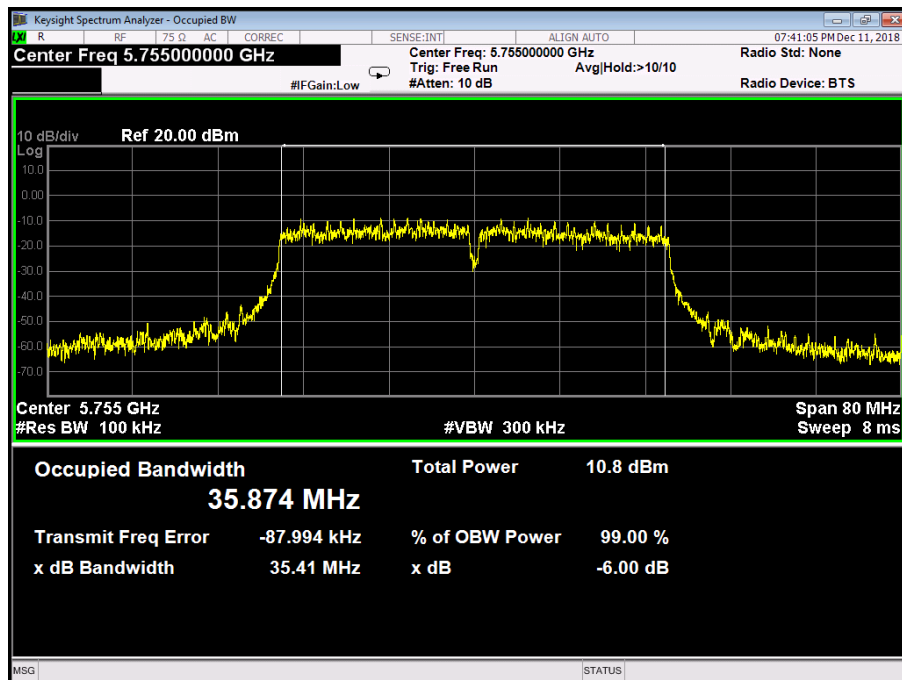


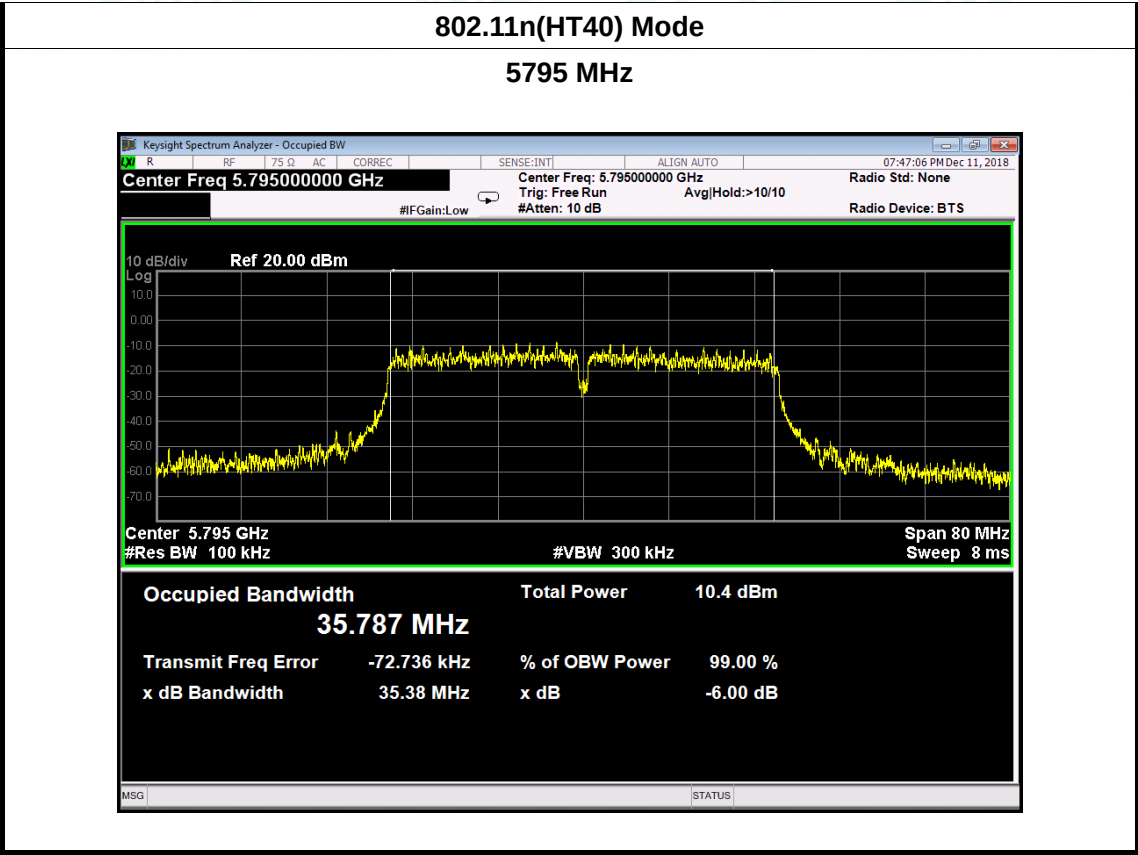
## ANT 0:

| Temperature:  | 25 °C                         | Relative Humidity:  | 55%                 |
|---------------|-------------------------------|---------------------|---------------------|
| Test Voltage: | AC 120V/60Hz                  |                     |                     |
| Test Mode:    | TX 802.11n(40) Mode (U-NII-3) |                     |                     |
| Channel       | Frequency (MHz)               | 6dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
| 151           | 5755                          | 35.41               | 35.874              |
| 159           | 5795                          | 35.38               | 35.787              |

## 802.11n(HT40) Mode

5755 MHz



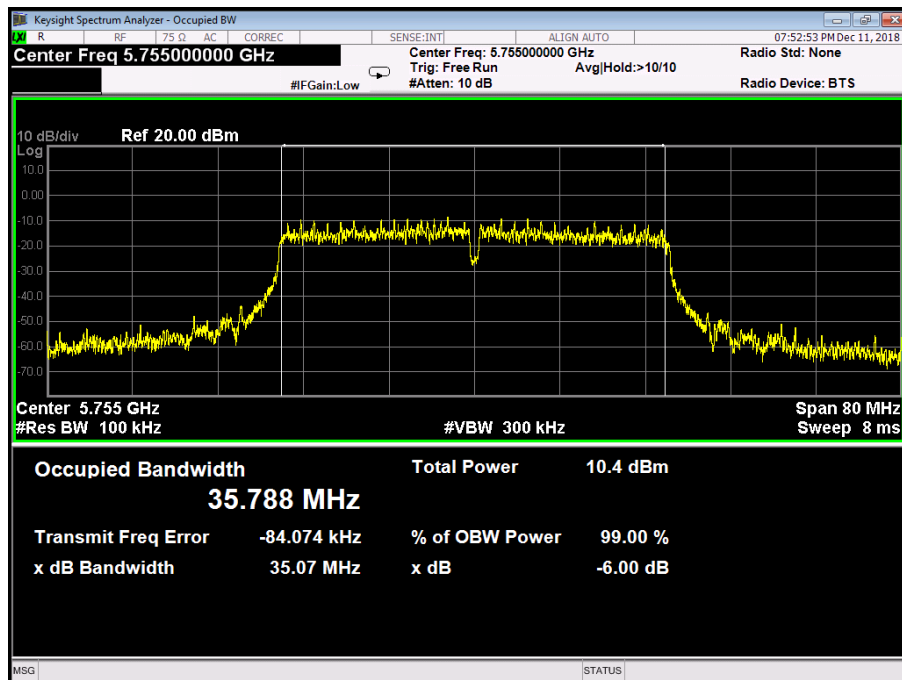


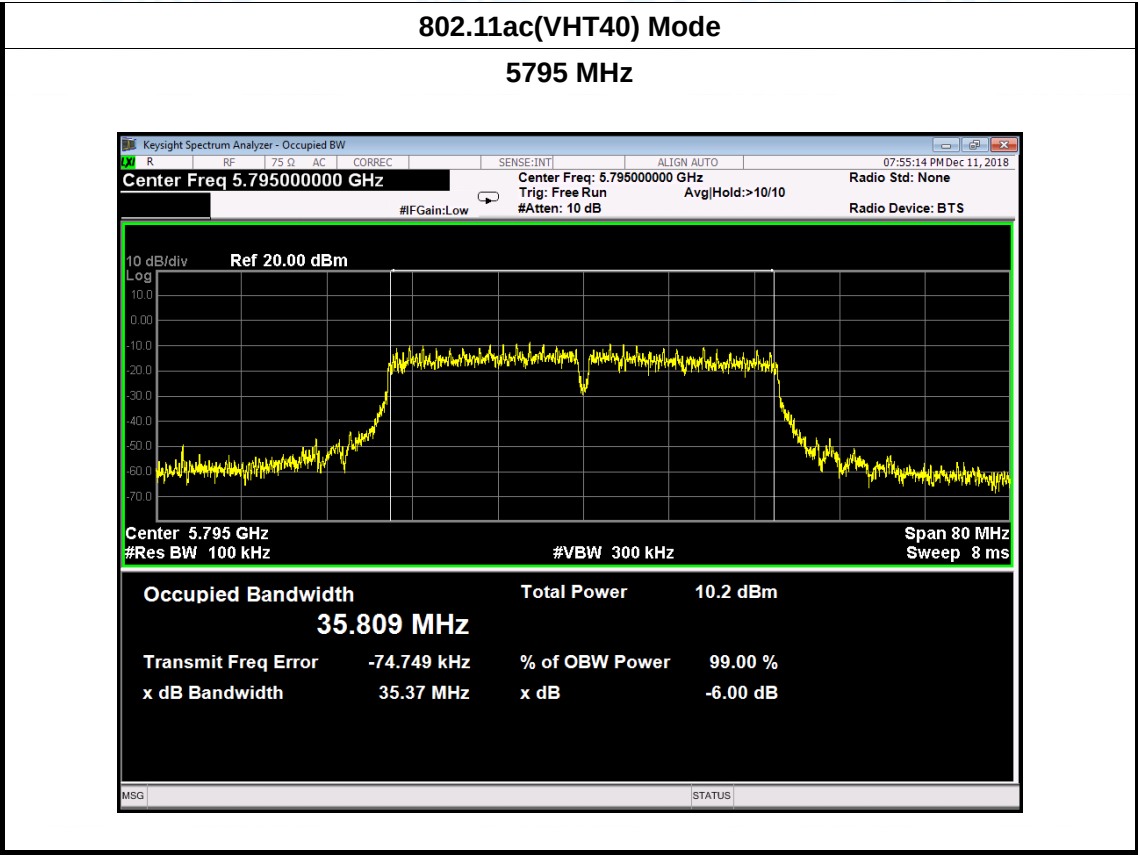
ANT 0:

| Temperature:  | 25 °C                             | Relative Humidity:  | 55%                 |
|---------------|-----------------------------------|---------------------|---------------------|
| Test Voltage: | AC 120V/60Hz                      |                     |                     |
| Test Mode:    | TX 802.11ac(VHT40) Mode (U-NII-3) |                     |                     |
| Channel       | Frequency (MHz)                   | 6dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
| 151           | 5755                              | 35.07               | 35.788              |
| 159           | 5795                              | 35.37               | 35.809              |

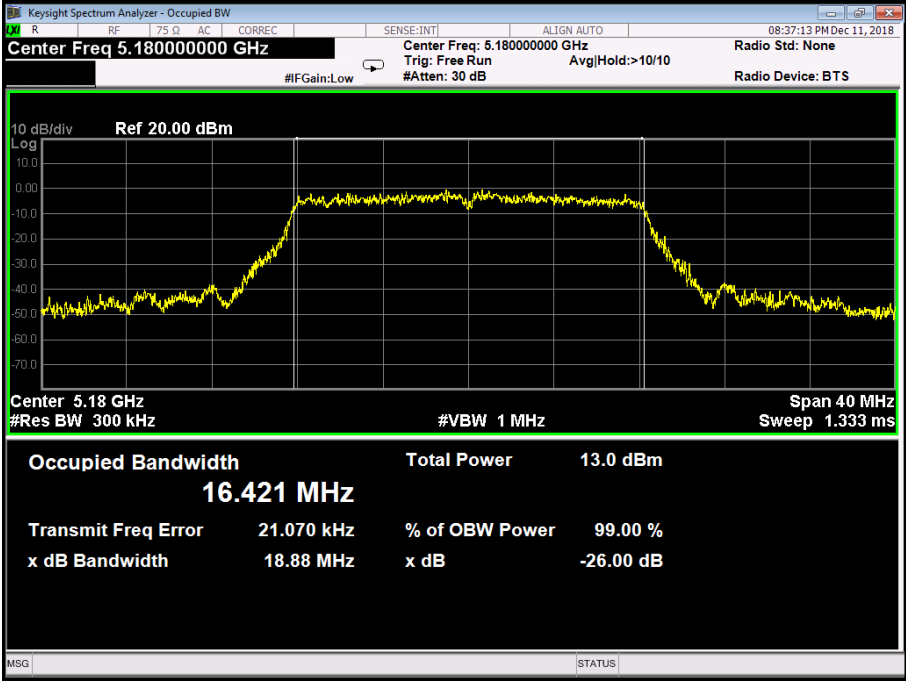
802.11ac(VHT40) Mode

5755 MHz



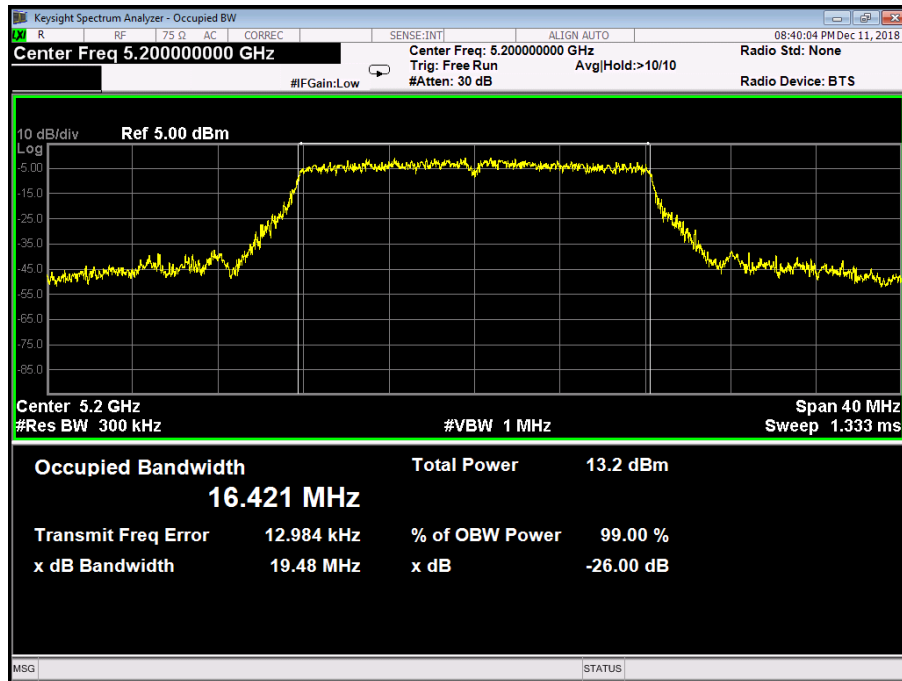


## ANT 1:

| Temperature:                                                                        | 25 °C                     | Relative Humidity:   | 55%                 |
|-------------------------------------------------------------------------------------|---------------------------|----------------------|---------------------|
| Test Voltage:                                                                       | AC 120V/60Hz              |                      |                     |
| Test Mode:                                                                          | TX 802.11a Mode (U-NII-1) |                      |                     |
| Channel                                                                             | Frequency (MHz)           | 26dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
| 36                                                                                  | 5180                      | 18.88                | 16.421              |
| 40                                                                                  | 5200                      | 19.48                | 16.421              |
| 48                                                                                  | 5240                      | 19.37                | 16.379              |
| 802.11a Mode                                                                        |                           |                      |                     |
| 5180 MHz                                                                            |                           |                      |                     |
|  |                           |                      |                     |

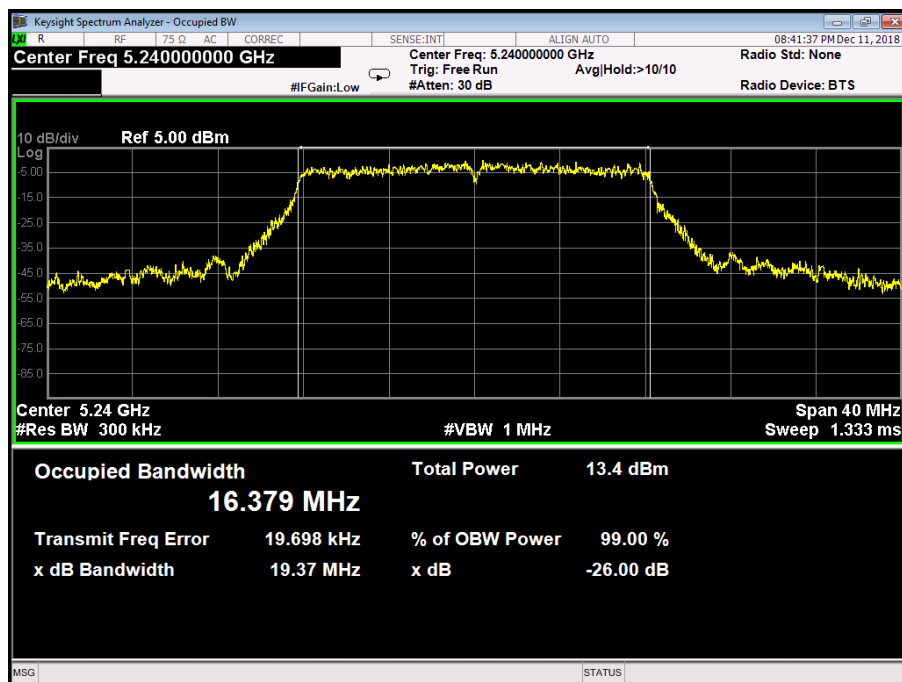
## 802.11a Mode

5200 MHz

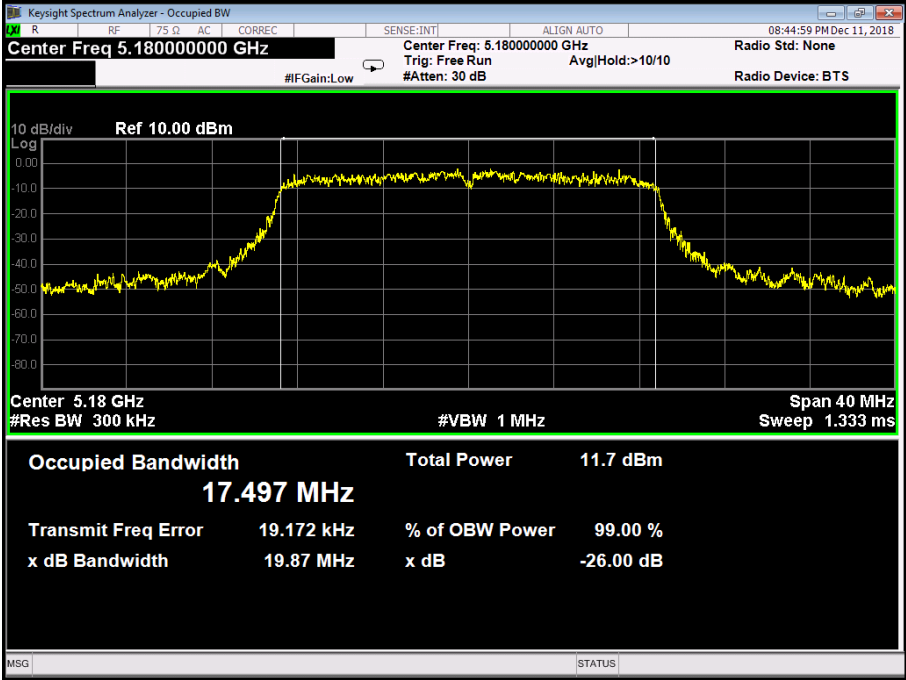


## 802.11a Mode

5240 MHz

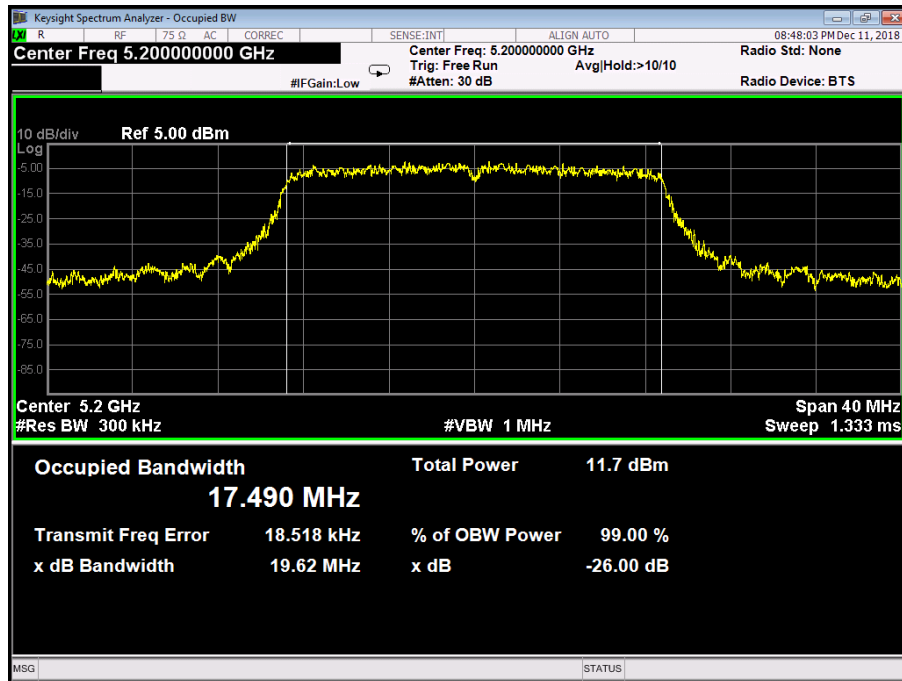


**ANT 1:**

| <b>Temperature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 25 °C                           | <b>Relative Humidity:</b> | 55%                 |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------|---------------------|--------------------|--|-------------|--|-------------------|--|-----------------|--|---------------------|------------|----------------|---------|----------------|-----------|------|-----------|
| <b>Test Voltage:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | AC 120V/60Hz                    |                           |                     |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| <b>Test Mode:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | TX 802.11n(HT20) Mode (U-NII-1) |                           |                     |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Frequency (MHz)                 | 26dB Bandwidth (MHz)      | 99% Bandwidth (MHz) |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| 36                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5180                            | 19.87                     | 17.497              |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| 40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5200                            | 19.62                     | 17.490              |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| 48                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5240                            | 19.84                     | 17.502              |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| <b>802.11n(HT20) Mode</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                 |                           |                     |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| <b>5180 MHz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                 |                           |                     |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
|  <table border="1"> <thead> <tr> <th colspan="2">Occupied Bandwidth</th> <th colspan="2">Total Power</th> </tr> </thead> <tbody> <tr> <td colspan="2"><b>17.497 MHz</b></td> <td colspan="2"><b>11.7 dBm</b></td> </tr> <tr> <td>Transmit Freq Error</td> <td>19.172 kHz</td> <td>% of OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>x dB Bandwidth</td> <td>19.87 MHz</td> <td>x dB</td> <td>-26.00 dB</td> </tr> </tbody> </table> |                                 |                           |                     | Occupied Bandwidth |  | Total Power |  | <b>17.497 MHz</b> |  | <b>11.7 dBm</b> |  | Transmit Freq Error | 19.172 kHz | % of OBW Power | 99.00 % | x dB Bandwidth | 19.87 MHz | x dB | -26.00 dB |
| Occupied Bandwidth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                 | Total Power               |                     |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| <b>17.497 MHz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                 | <b>11.7 dBm</b>           |                     |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| Transmit Freq Error                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 19.172 kHz                      | % of OBW Power            | 99.00 %             |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |
| x dB Bandwidth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 19.87 MHz                       | x dB                      | -26.00 dB           |                    |  |             |  |                   |  |                 |  |                     |            |                |         |                |           |      |           |

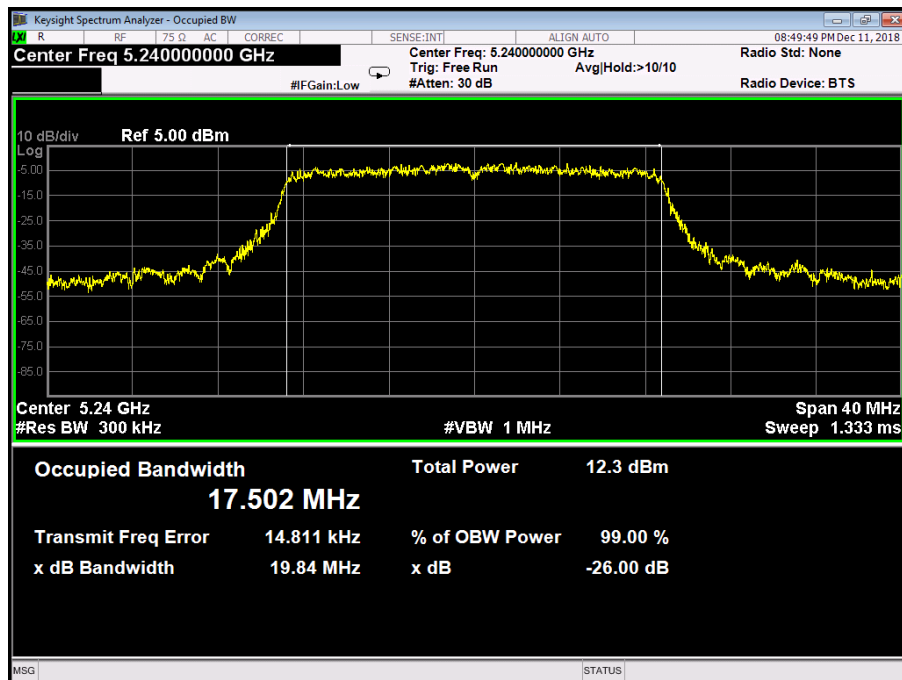
## 802.11n(HT20) Mode

5200 MHz

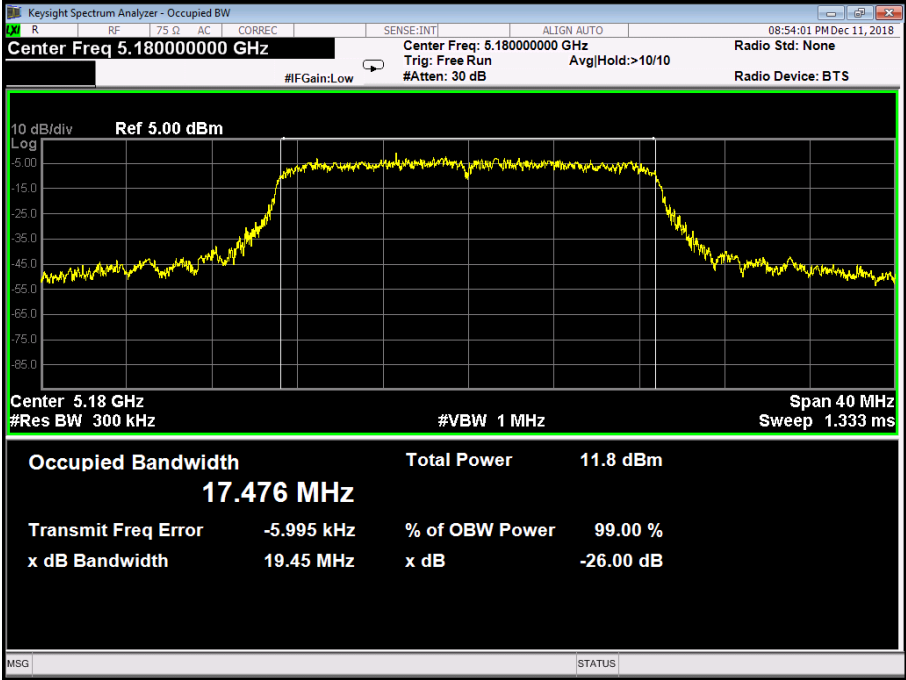


## 802.11n(HT20) Mode

5240 MHz

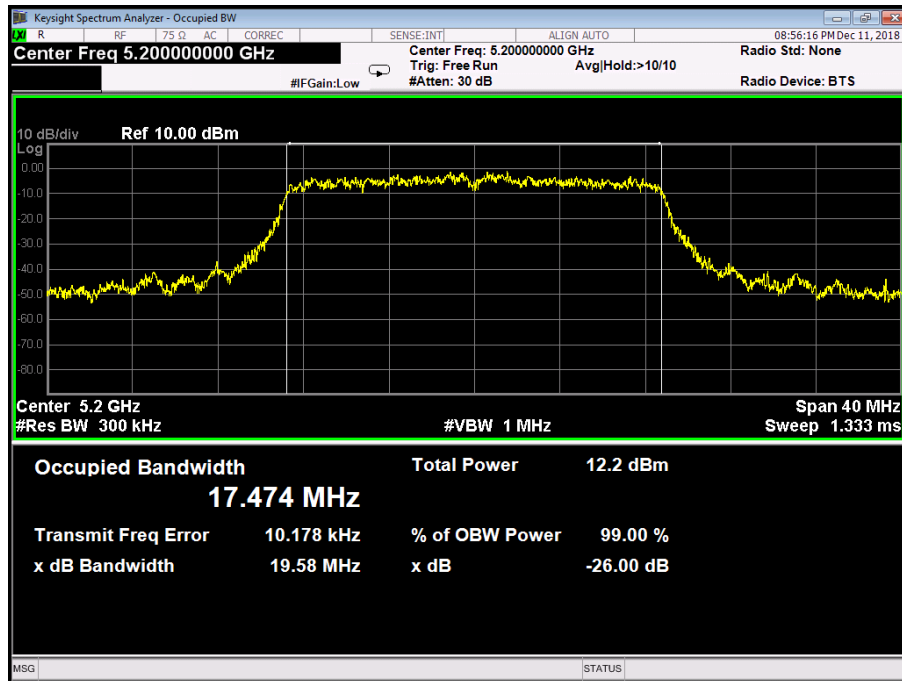


**ANT 1:**

| <b>Temperature:</b>                                                                 | 25 °C                             | <b>Relative Humidity:</b> | 55%                 |
|-------------------------------------------------------------------------------------|-----------------------------------|---------------------------|---------------------|
| <b>Test Voltage:</b>                                                                | AC 120V/60Hz                      |                           |                     |
| <b>Test Mode:</b>                                                                   | TX 802.11ac(VHT20) Mode (U-NII-1) |                           |                     |
| Channel                                                                             | Frequency (MHz)                   | 26dB Bandwidth (MHz)      | 99% Bandwidth (MHz) |
| 36                                                                                  | 5180                              | 19.45                     | 17.476              |
| 40                                                                                  | 5200                              | 19.58                     | 17.474              |
| 48                                                                                  | 5240                              | 19.45                     | 17.463              |
| <b>802.11ac(VHT20) Mode</b>                                                         |                                   |                           |                     |
| <b>5180 MHz</b>                                                                     |                                   |                           |                     |
|  |                                   |                           |                     |

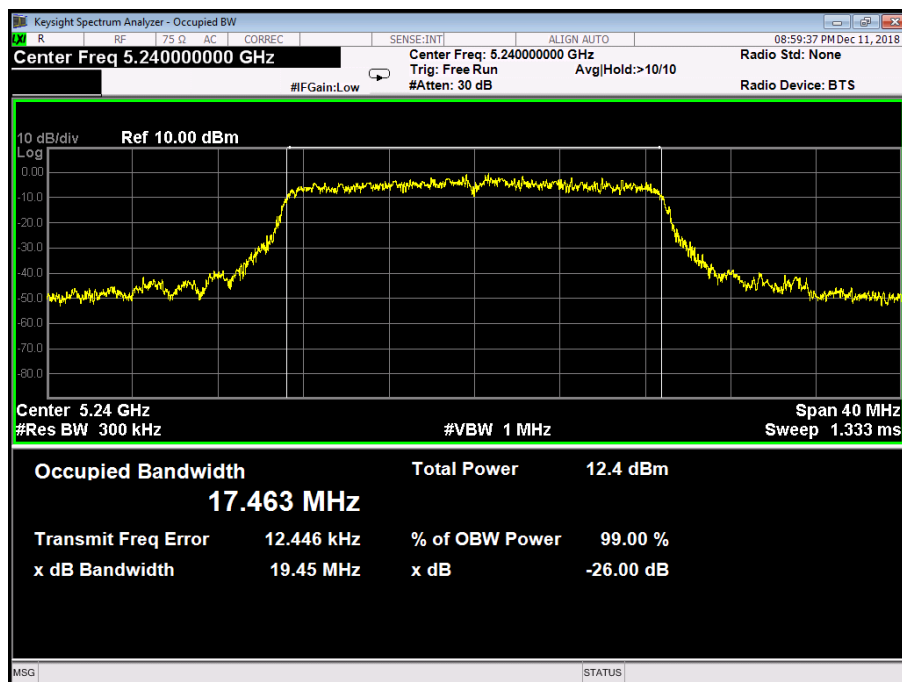
### 802.11ac(VHT20) Mode

5200 MHz

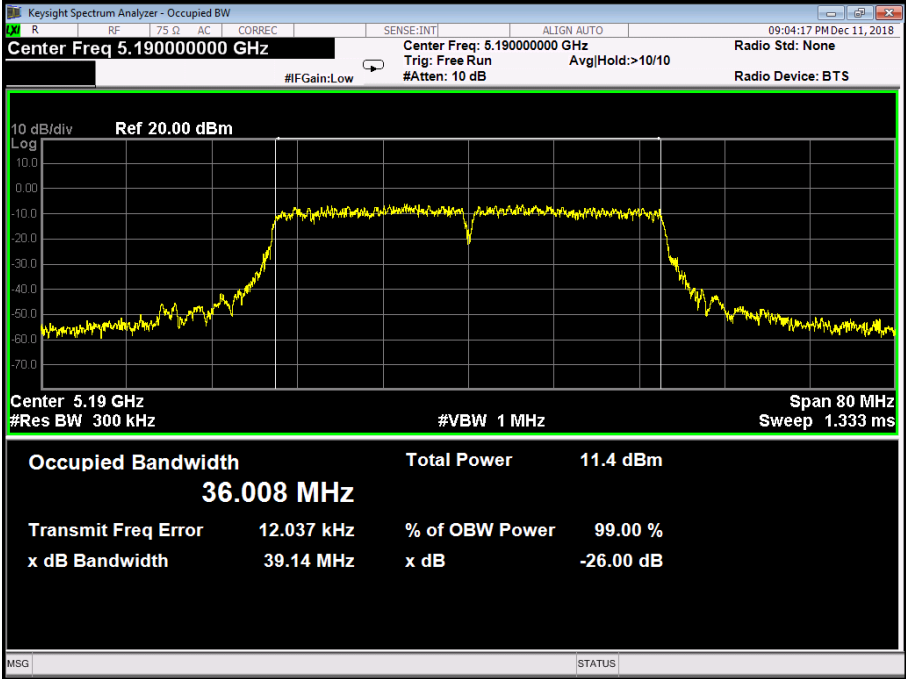


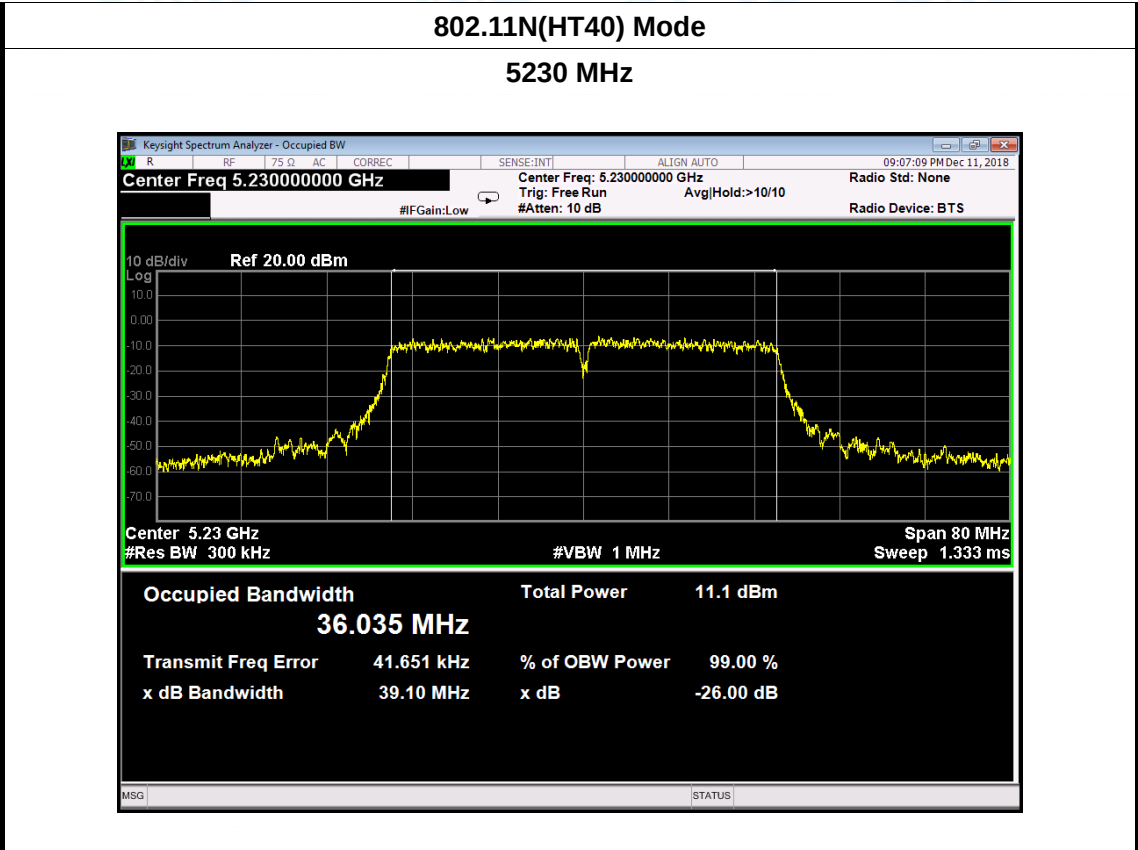
### 802.11ac(VHT20) Mode

5240 MHz



**ANT 1:**

| <b>Temperature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 25 °C                           | <b>Relative Humidity:</b> | 55%                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------|---------------------|
| <b>Test Voltage:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | AC 120V/60Hz                    |                           |                     |
| <b>Test Mode:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TX 802.11N(HT40) Mode (U-NII-1) |                           |                     |
| Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Frequency (MHz)                 | 26dB Bandwidth (MHz)      | 99% Bandwidth (MHz) |
| 38                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5190                            | 39.14                     | 36.008              |
| 46                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5230                            | 39.10                     | 36.035              |
| <b>802.11N(HT40) Mode</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                 |                           |                     |
| <b>5190 MHz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                 |                           |                     |
|  <p>The screenshot shows a Keysight Spectrum Analyzer interface. The main display is a frequency plot with a yellow signal trace. The center frequency is 5.190000000 GHz. The reference level is 20.00 dBm. The plot shows a signal with a bandwidth of 36.008 MHz. The total power is 11.4 dBm. The transmit frequency error is 12.037 kHz. The x dB bandwidth is 39.14 MHz. The x dB is -26.00 dB. The span is 80 MHz. The sweep is 1.333 ms. The resolution bandwidth is 300 kHz. The video bandwidth is 1 MHz. The trigger is Free Run. The attenuation is 10 dB. The radio standard is None. The radio device is BTS. The date and time are 09:04:17 PM Dec 11, 2018.</p> |                                 |                           |                     |

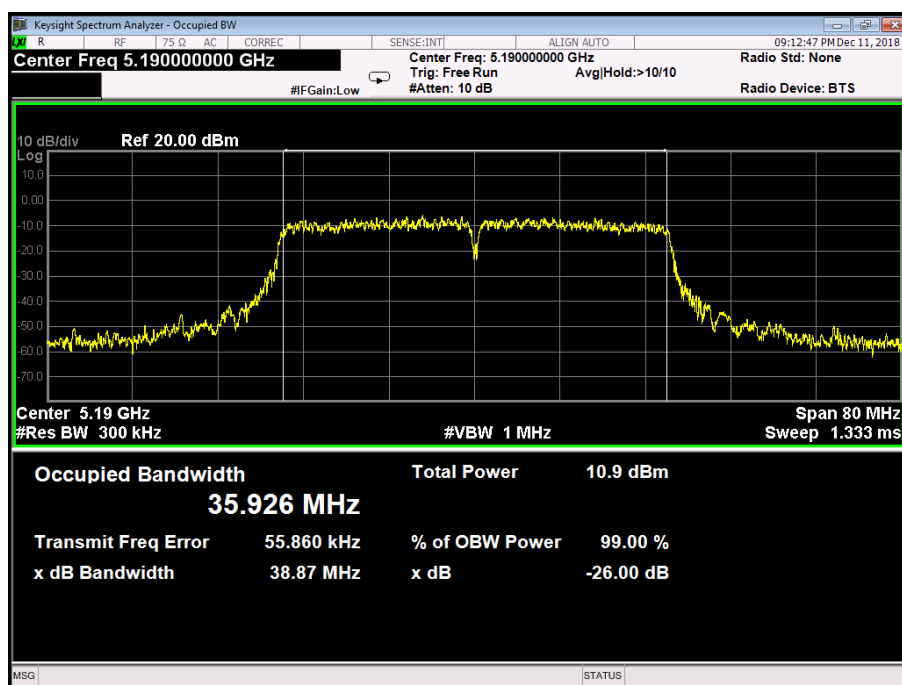


## ANT 1:

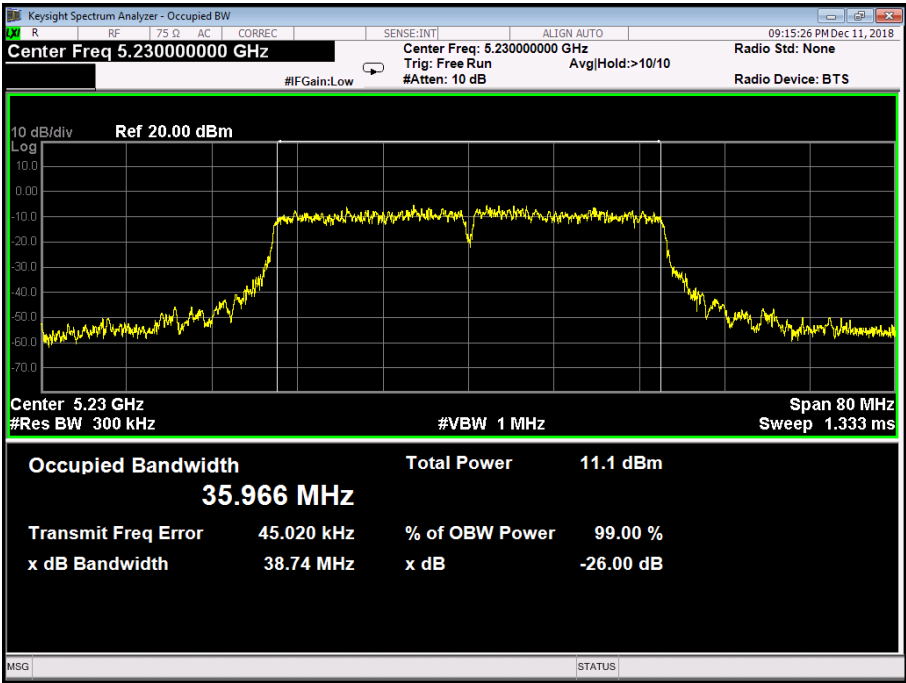
|               |                                   |                      |                     |
|---------------|-----------------------------------|----------------------|---------------------|
| Temperature:  | 25 °C                             | Relative Humidity:   | 55%                 |
| Test Voltage: | AC 120V/60Hz                      |                      |                     |
| Test Mode:    | TX 802.11ac(VHT40) Mode (U-NII-1) |                      |                     |
| Channel       | Frequency (MHz)                   | 26dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
| 38            | 5190                              | 38.87                | 35.926              |
| 46            | 5230                              | 38.74                | 35.966              |

## 802.11ac(VHT40) Mode

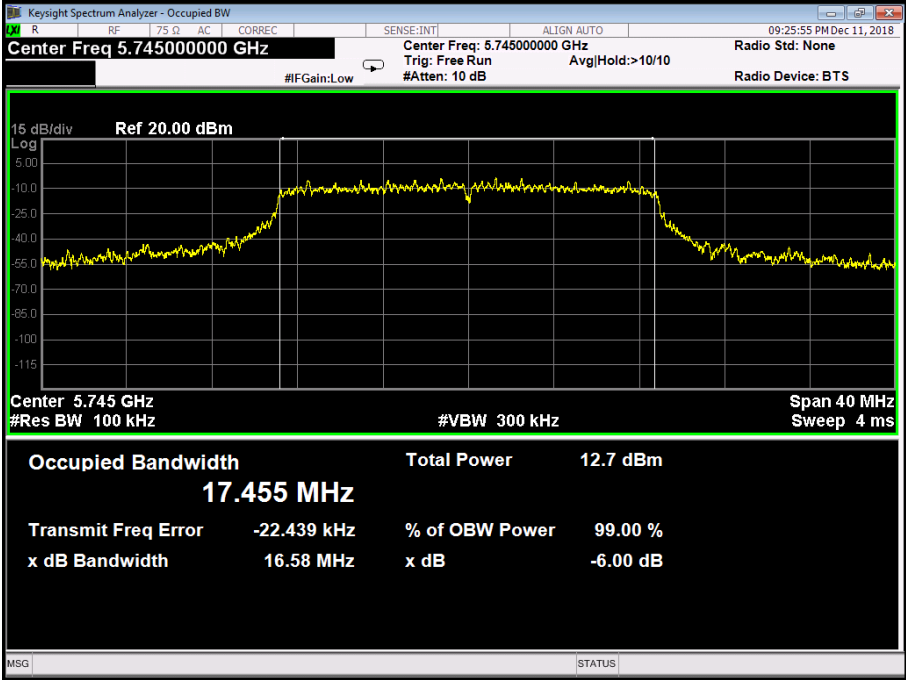
5190 MHz



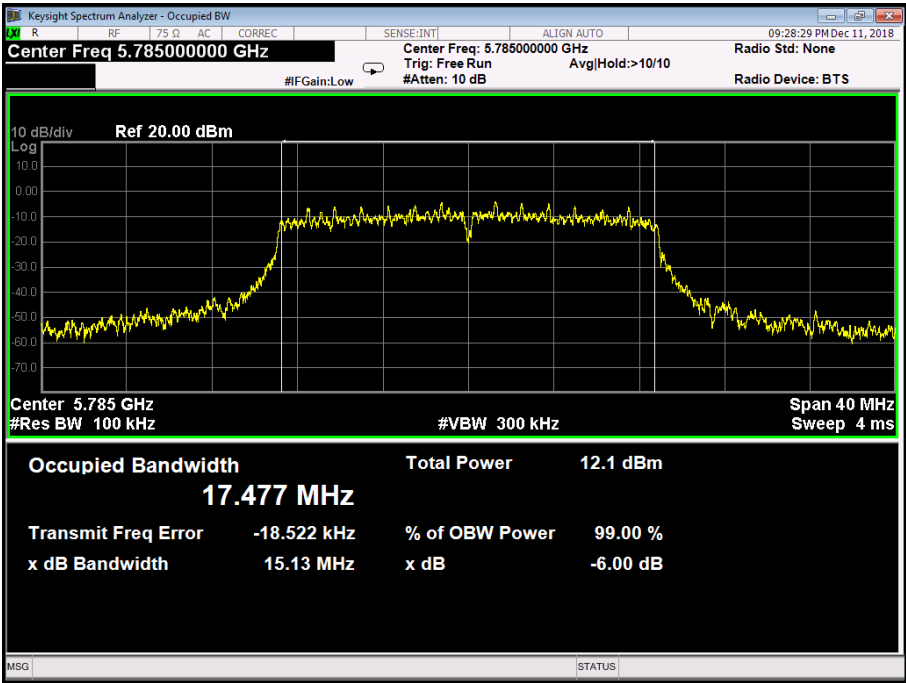
802.11ac(VHT40) Mode  
5230 MHz



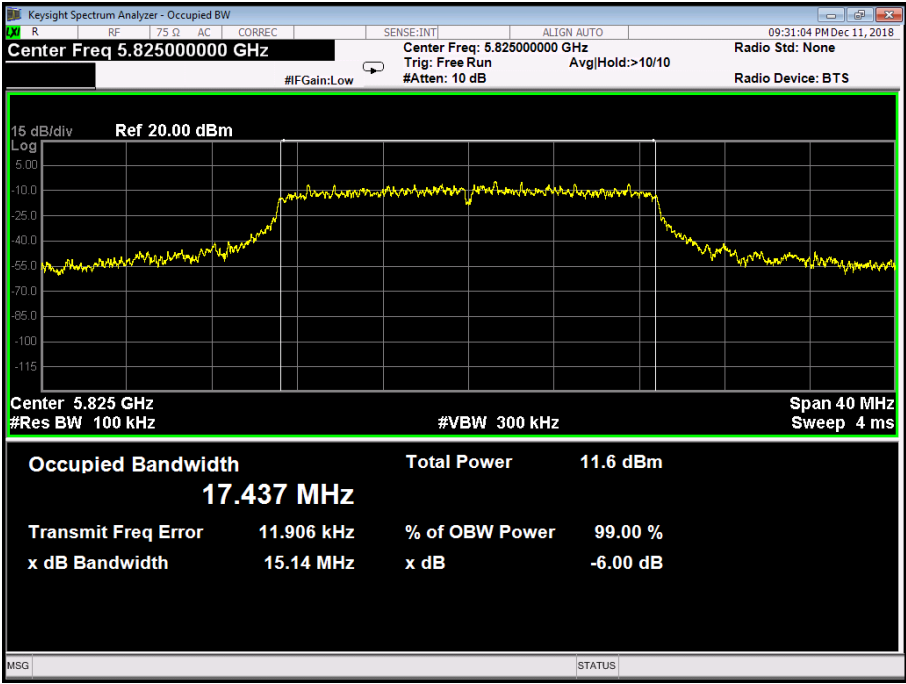
**ANT 1:**

| <b>Temperature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 25 °C                     | <b>Relative Humidity:</b> | 55%                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------|---------------------|
| <b>Test Voltage:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | AC 120V/60Hz              |                           |                     |
| <b>Test Mode:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TX 802.11a Mode (U-NII-3) |                           |                     |
| Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Frequency (MHz)           | 6dB Bandwidth (MHz)       | 99% Bandwidth (MHz) |
| 149                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5745                      | 16.58                     | 17.455              |
| 157                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5785                      | 15.13                     | 17.477              |
| 165                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5825                      | 15.14                     | 17.437              |
| <b>802.11a Mode</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                           |                     |
| <b>5745 MHz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                           |                     |
|  <p>Keysight Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.745000000 GHz</p> <p>Center Freq: 5.745000000 GHz</p> <p>Trig: Free Run</p> <p>#Gain: Low</p> <p>#Atten: 10 dB</p> <p>Avg/Hold: &gt;10/10</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>15 dB/div</p> <p>Ref 20.00 dBm</p> <p>Center 5.745 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 40 MHz</p> <p>Sweep 4 ms</p> <p>Occupied Bandwidth</p> <p>17.455 MHz</p> <p>Total Power</p> <p>12.7 dBm</p> <p>Transmit Freq Error</p> <p>-22.439 kHz</p> <p>% of OBW Power</p> <p>99.00 %</p> <p>x dB Bandwidth</p> <p>16.58 MHz</p> <p>x dB</p> <p>-6.00 dB</p> <p>MSG   STATUS</p> |                           |                           |                     |

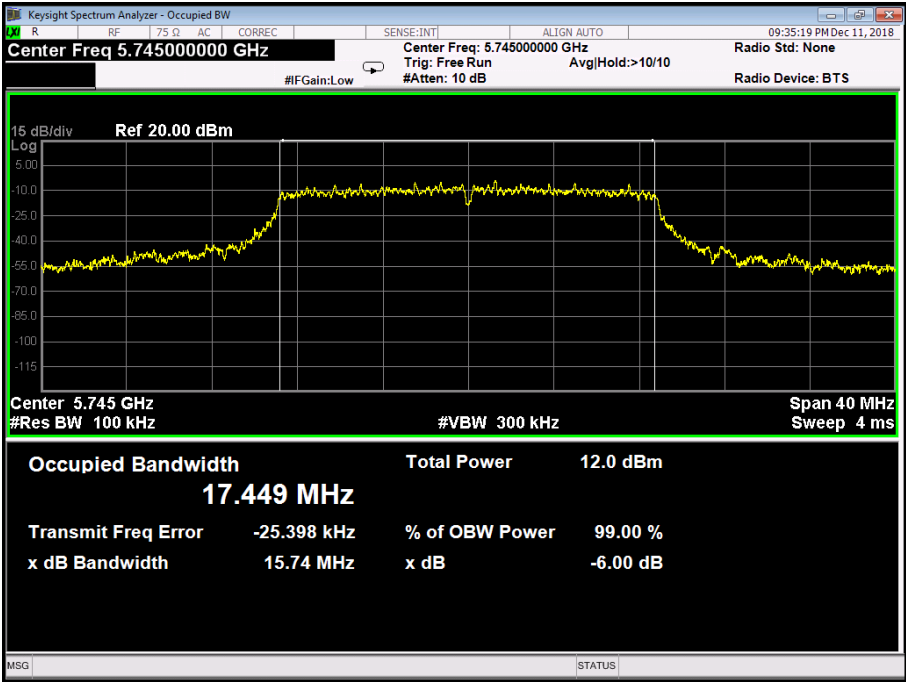
802.11a Mode  
5785 MHz



802.11a Mode  
5825 MHz

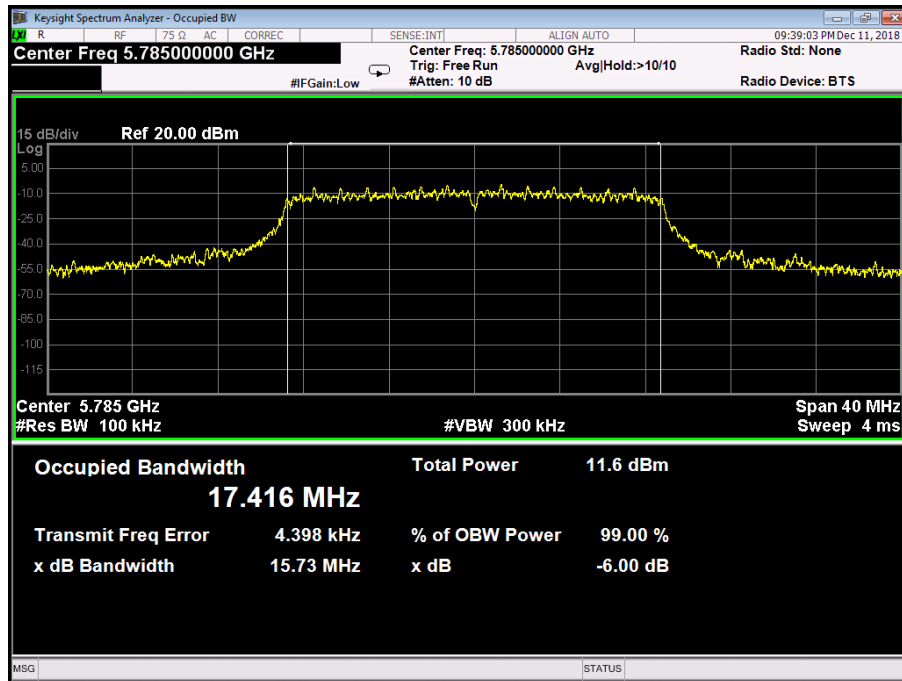


**ANT 1:**

| <b>Temperature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 25 °C                         | <b>Relative Humidity:</b> | 55%                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------|---------------------|
| <b>Test Voltage:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | AC 120V/60Hz                  |                           |                     |
| <b>Test Mode:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | TX 802.11n(20) Mode (U-NII-3) |                           |                     |
| Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Frequency (MHz)               | 6dB Bandwidth (MHz)       | 99% Bandwidth (MHz) |
| 149                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5745                          | 15.74                     | 17.449              |
| 157                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5785                          | 15.73                     | 17.416              |
| 165                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5825                          | 15.30                     | 17.444              |
| <b>802.11n(HT20) Mode</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |                           |                     |
| <b>5745 MHz</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                               |                           |                     |
|  <p>Keysight Spectrum Analyzer - Occupied BW</p> <p>Center Freq 5.745000000 GHz</p> <p>Center Freq: 5.745000000 GHz</p> <p>Trig: Free Run</p> <p>#Gain: Low</p> <p>#Atten: 10 dB</p> <p>Avg/Hold: &gt;10/10</p> <p>Radio Std: None</p> <p>Radio Device: BTS</p> <p>15 dB/div</p> <p>Ref 20.00 dBm</p> <p>Center 5.745 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 40 MHz</p> <p>Sweep 4 ms</p> <p>Occupied Bandwidth 17.449 MHz</p> <p>Total Power 12.0 dBm</p> <p>Transmit Freq Error -25.398 kHz</p> <p>% of OBW Power 99.00 %</p> <p>x dB Bandwidth 15.74 MHz</p> <p>x dB -6.00 dB</p> |                               |                           |                     |

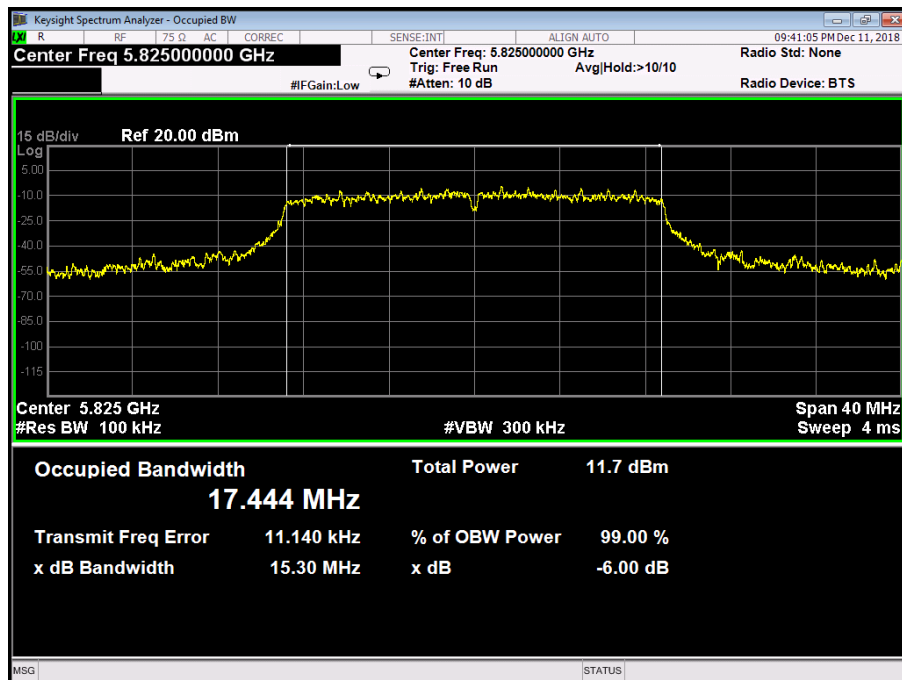
802.11n(HT20) Mode

5785 MHz

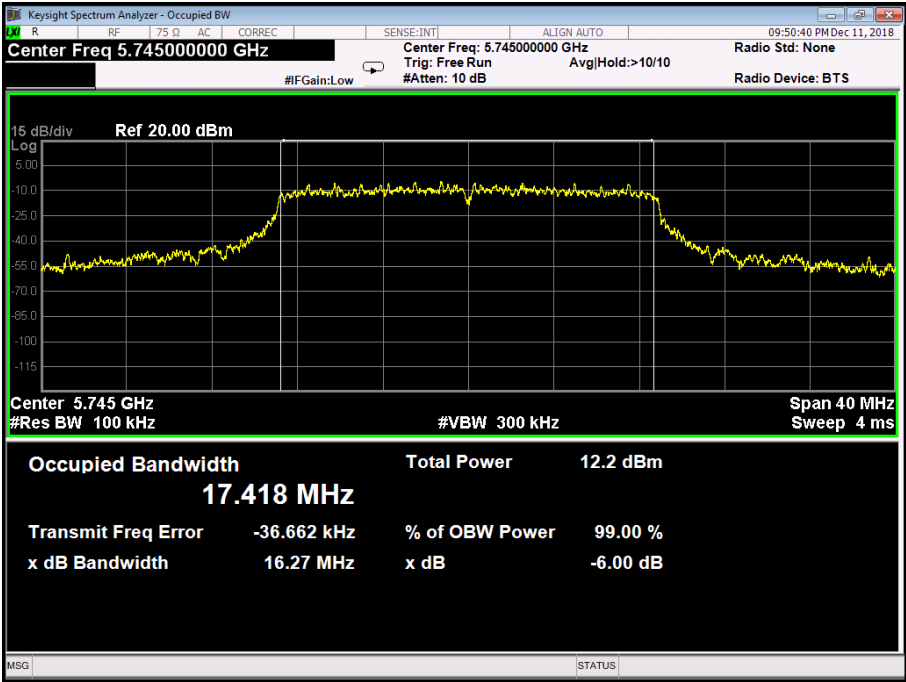


802.11n(HT20) Mode

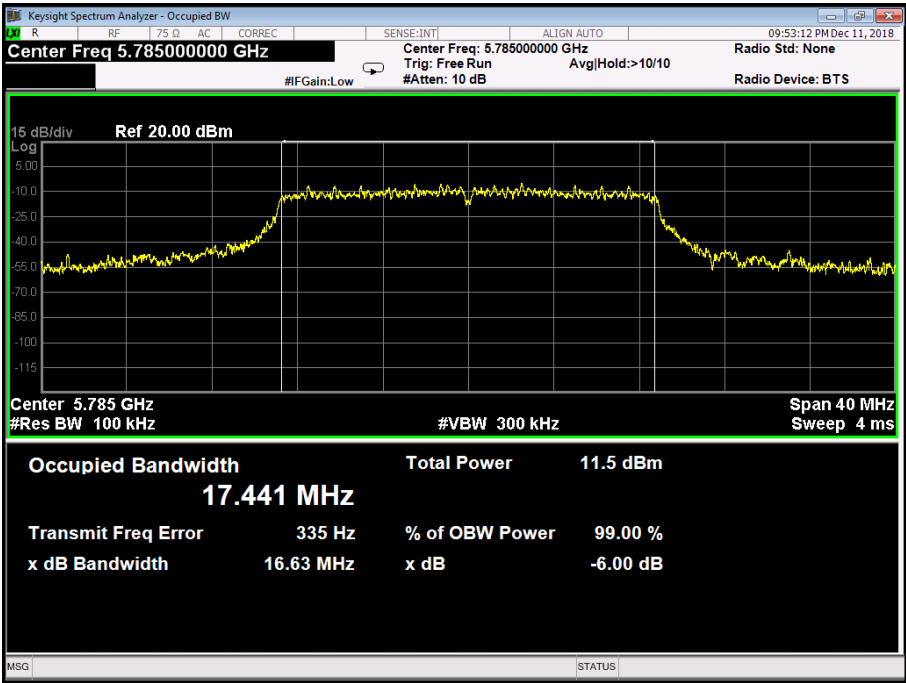
5825 MHz



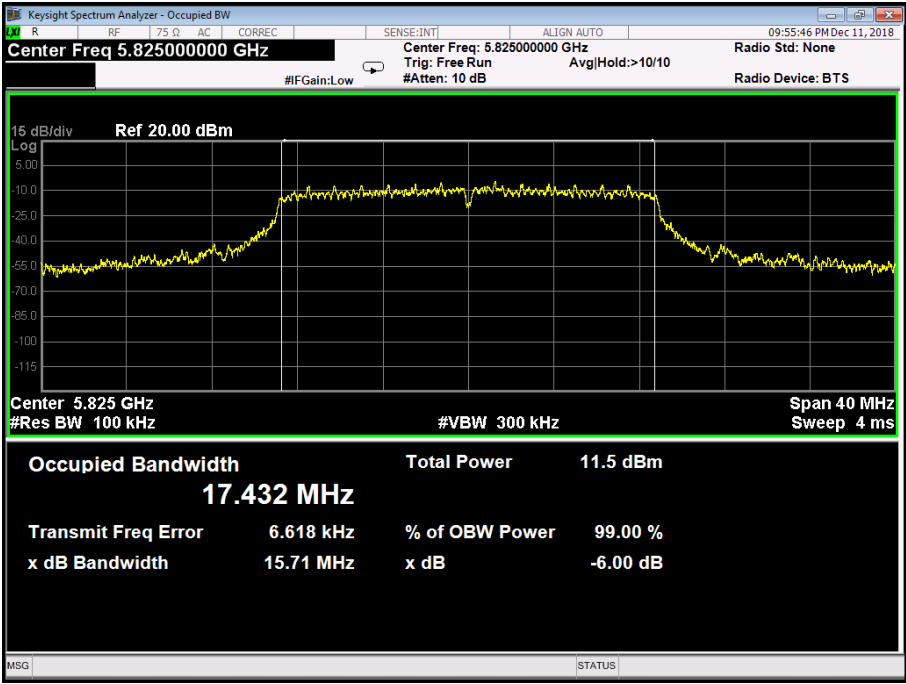
## ANT 1:

| Temperature:                                                                        | 25 °C                             | Relative Humidity:  | 55%                 |
|-------------------------------------------------------------------------------------|-----------------------------------|---------------------|---------------------|
| Test Voltage:                                                                       | AC 120V/60Hz                      |                     |                     |
| Test Mode:                                                                          | TX 802.11ac(VHT20) Mode (U-NII-3) |                     |                     |
| Channel                                                                             | Frequency (MHz)                   | 6dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
| 149                                                                                 | 5745                              | 16.27               | 17.418              |
| 157                                                                                 | 5785                              | 16.63               | 17.441              |
| 165                                                                                 | 5825                              | 15.71               | 17.432              |
| 802.11ac(VHT20) Mode                                                                |                                   |                     |                     |
| 5745 MHz                                                                            |                                   |                     |                     |
|  |                                   |                     |                     |

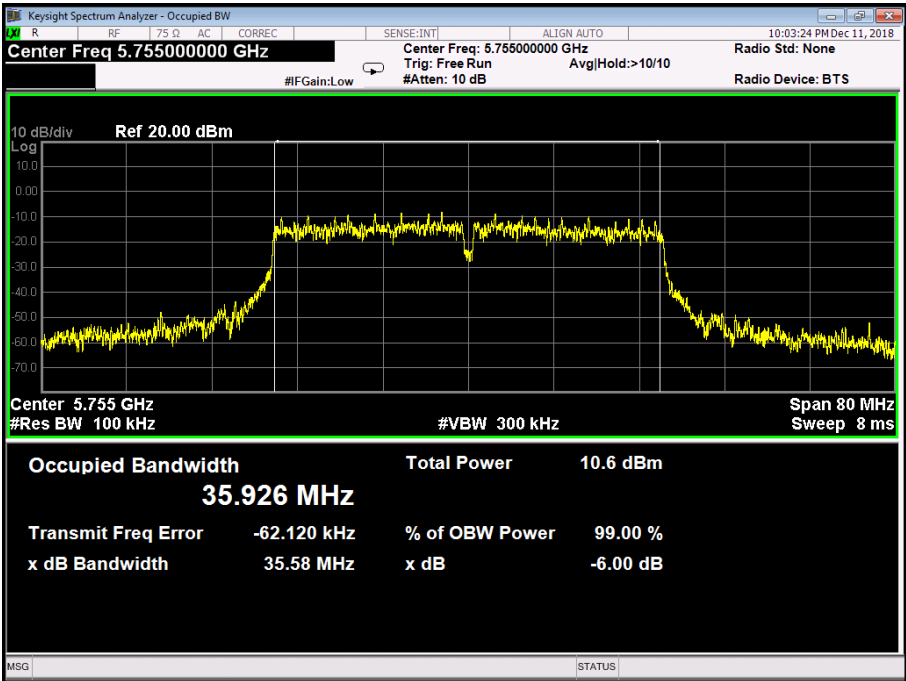
802.11ac(VHT20) Mode  
5785 MHz

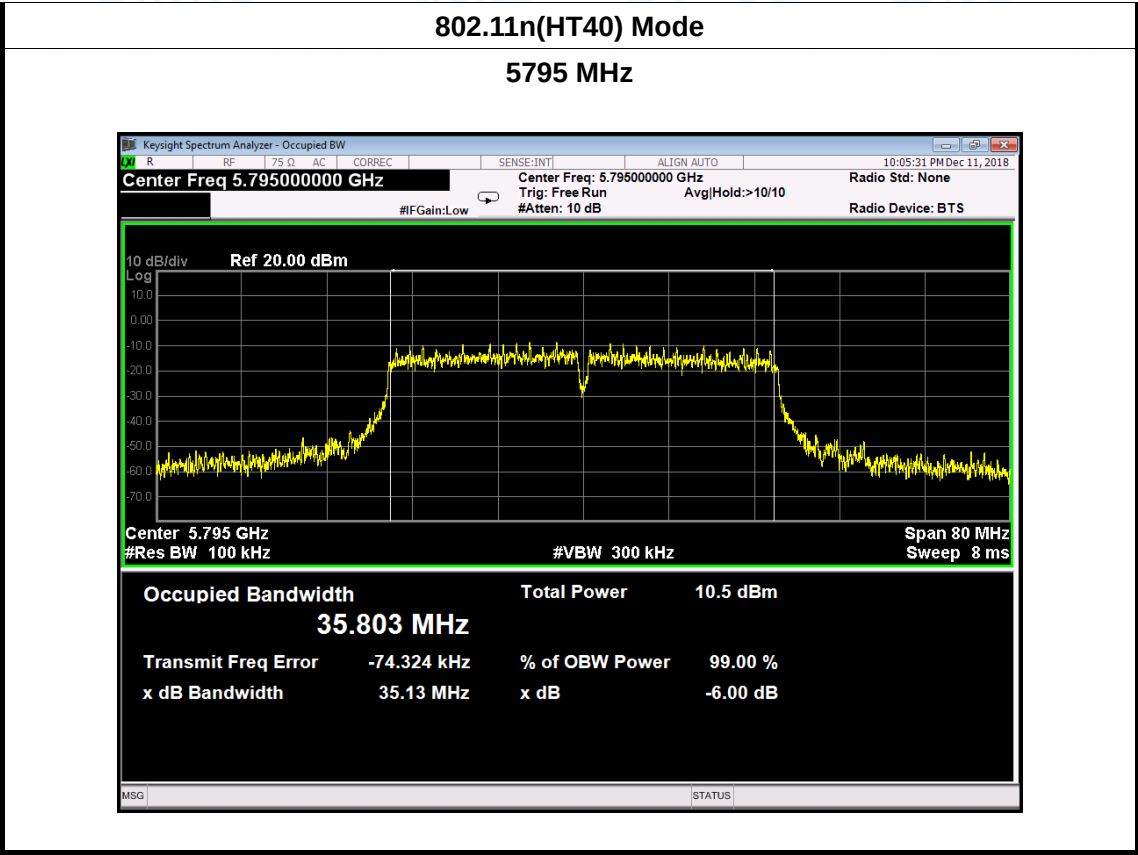


802.11ac(VHT20) Mode  
5825 MHz



ANT 1:

| Temperature:                                                                        | 25 °C                         | Relative Humidity:  | 55%                 |
|-------------------------------------------------------------------------------------|-------------------------------|---------------------|---------------------|
| Test Voltage:                                                                       | AC 120V/60Hz                  |                     |                     |
| Test Mode:                                                                          | TX 802.11n(40) Mode (U-NII-3) |                     |                     |
| Channel                                                                             | Frequency (MHz)               | 6dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
| 151                                                                                 | 5755                          | 35.58               | 35.926              |
| 159                                                                                 | 5795                          | 35.13               | 35.803              |
| 802.11n(HT40) Mode                                                                  |                               |                     |                     |
| 5755 MHz                                                                            |                               |                     |                     |
|  |                               |                     |                     |

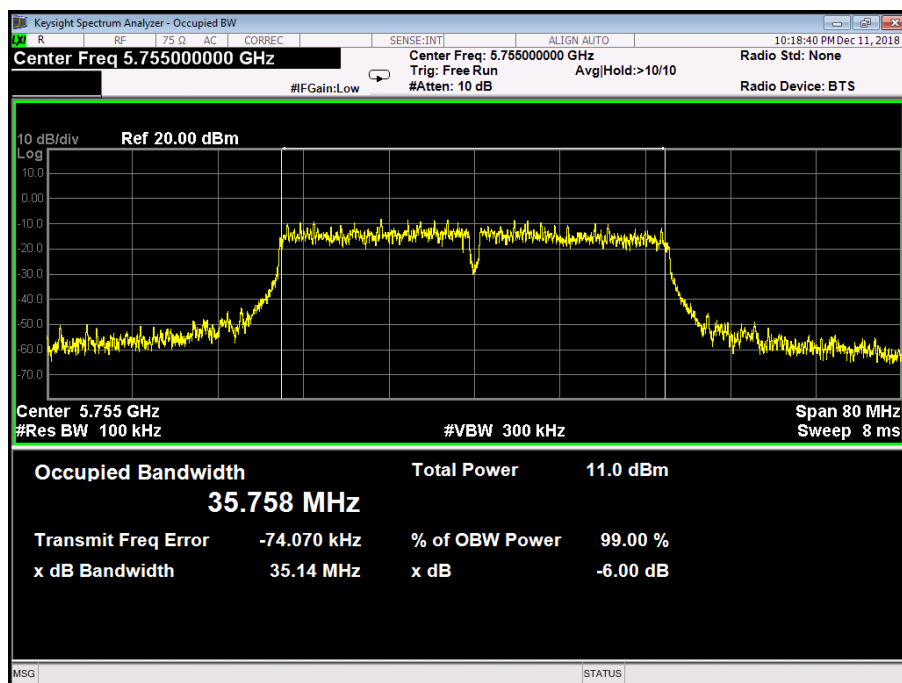


ANT 1:

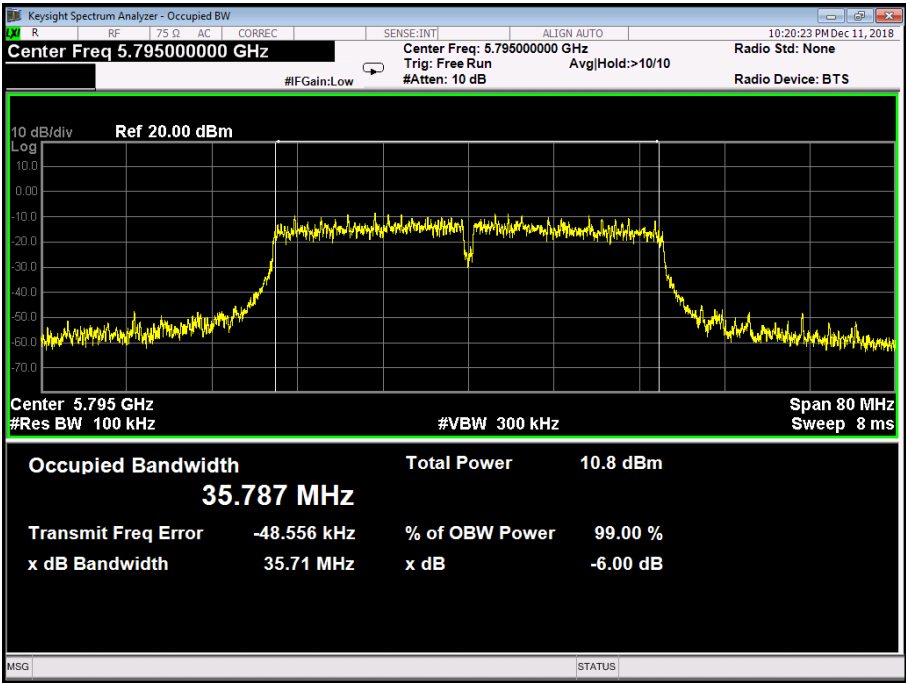
| Temperature:  | 25 °C                             | Relative Humidity:  | 55%                 |
|---------------|-----------------------------------|---------------------|---------------------|
| Test Voltage: | AC 120V/60Hz                      |                     |                     |
| Test Mode:    | TX 802.11ac(VHT40) Mode (U-NII-3) |                     |                     |
| Channel       | Frequency (MHz)                   | 6dB Bandwidth (MHz) | 99% Bandwidth (MHz) |
| 151           | 5755                              | 35.14               | 35.758              |
| 159           | 5795                              | 35.71               | 35.787              |

802.11ac(VHT40) Mode

5755 MHz



802.11ac(VHT40) Mode  
5795 MHz



## Attachment E-- Output Power Test Data

**Note :** GANT =6dBi, Array Gain=10log(NANT/NSS)=3.01dBi, Directional Gain=GANT + Array Gain=8.01dBi, 8.01dBi >6dBi

so limit=24-(8.01-6)=21.99dBm for U-NII 1, 30-(8.01-6)=27.99dBm for U-NII 3

| Type                   | Bands   | Channel | Output power<br>Ant 0<br>(dBm) | Output power<br>Ant 1<br>(dBm) | Output power<br>Total<br>(dBm) | Limit<br>(dBm) | Result |
|------------------------|---------|---------|--------------------------------|--------------------------------|--------------------------------|----------------|--------|
| 802.11a                | U-NII 1 | 36      | 16.11                          | 15.19                          | /                              | 21.99          | Pass   |
|                        |         | 40      | 15.76                          | 15.25                          | /                              |                |        |
|                        |         | 48      | 16.38                          | 15.65                          | /                              |                |        |
|                        | U-NII 3 | 149     | 16.63                          | 16.44                          | /                              | 27.99          |        |
|                        |         | 157     | 16.26                          | 16.25                          | /                              |                |        |
|                        |         | 165     | 16.69                          | 16.67                          | /                              |                |        |
| 802.11n(HT20)<br>MIMO  | U-NII 1 | 36      | 15.28                          | 15.89                          | 18.61                          | 21.99          | Pass   |
|                        |         | 40      | 14.93                          | 15.03                          | 17.99                          |                |        |
|                        |         | 48      | 15.44                          | 14.70                          | 18.10                          |                |        |
|                        | U-NII 3 | 149     | 15.34                          | 15.62                          | 18.49                          | 27.99          |        |
|                        |         | 157     | 15.57                          | 15.40                          | 18.50                          |                |        |
|                        |         | 165     | 15.47                          | 15.89                          | 18.70                          |                |        |
| 802.11n(HT40)<br>MIMO  | U-NII 1 | 38      | 15.83                          | 15.22                          | 18.11                          | 21.99          | Pass   |
|                        |         | 46      | 15.37                          | 14.34                          | 17.90                          |                |        |
|                        | U-NII 3 | 151     | 15.44                          | 14.12                          | 17.84                          | 27.99          |        |
|                        |         | 159     | 15.25                          | 14.23                          | 17.78                          |                |        |
| 802.11ac(HT20)<br>MIMO | U-NII 1 | 36      | 14.65                          | 14.48                          | 17.58                          | 21.99          | Pass   |
|                        |         | 40      | 14.93                          | 14.42                          | 17.69                          |                |        |
|                        |         | 48      | 15.07                          | 14.58                          | 17.84                          |                |        |
|                        | U-NII 3 | 149     | 15.93                          | 15.43                          | 18.70                          | 27.99          |        |
|                        |         | 157     | 15.82                          | 15.42                          | 18.63                          |                |        |
|                        |         | 165     | 16.66                          | 15.12                          | 18.97                          |                |        |
| 802.11ac(HT40)<br>MIMO | U-NII 1 | 38      | 15.51                          | 15.83                          | 18.68                          | 21.99          | Pass   |
|                        |         | 46      | 15.75                          | 15.14                          | 18.47                          |                |        |
|                        | U-NII 3 | 151     | 15.88                          | 15.81                          | 18.86                          | 27.99          |        |
|                        |         | 159     | 15.96                          | 15.51                          | 18.75                          |                |        |

| Test Mode |                 | Duty cycle |
|-----------|-----------------|------------|
| U-NII-1   | 802.11 a        | >98%       |
|           | 802.11 n(HT20)  |            |
|           | 802.11 ac(HT20) |            |
|           | 802.11 n(HT40)  |            |
|           | 802.11 ac(HT40) |            |
| U-NII-3   | 802.11 a        |            |
|           | 802.11 n(HT20)  |            |
|           | 802.11 ac(HT20) |            |
|           | 802.11 n(HT40)  |            |
|           | 802.11 ac(HT40) |            |

## Attachment F-- Power Spectral Density Test Data

**Note :** GANT =6dBi, Array Gain=10log(NANT/NSS)=3.01dBi, Directional Gain=GANT + Array Gain=8.01dBi, 8.01dBi >6dBi so limit=11-(8.01-6)=8.99dBm for U-NII 1

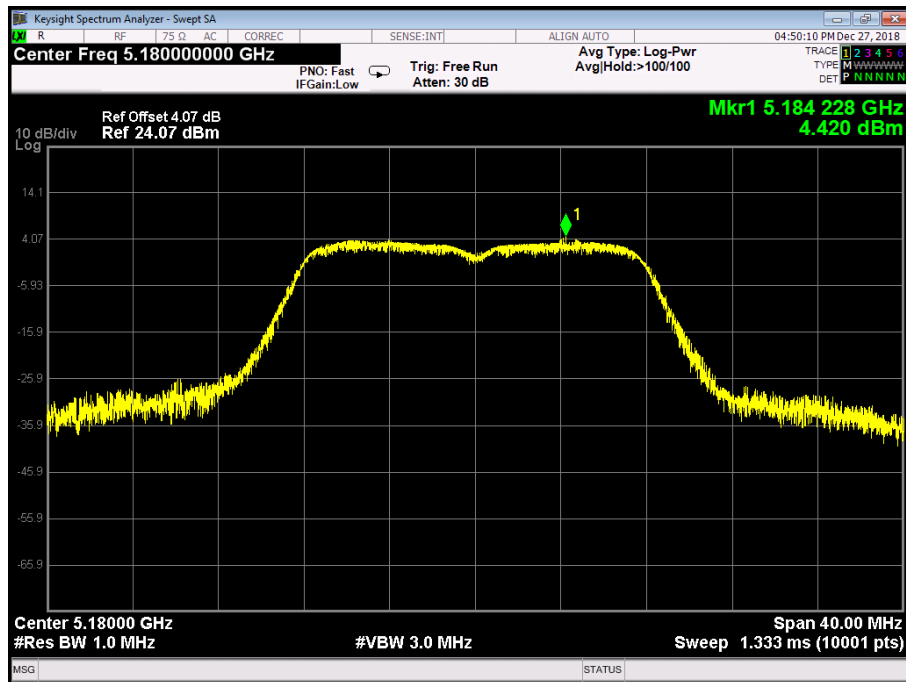
| Type                  | Bands   | Channel | Power Spectral Density Ant 0 (dBm/MHz) | Power Spectral Density Ant 1 (dBm/MHz) | Power Spectral Density Total (dBm/1MHz) | Limit (dBm/MHz) | Result |
|-----------------------|---------|---------|----------------------------------------|----------------------------------------|-----------------------------------------|-----------------|--------|
| 802.11a SISO          | U-NII 1 | 36      | 4.420                                  | 3.718                                  | /                                       | 8.99            | Pass   |
|                       |         | 40      | 3.778                                  | 3.016                                  | /                                       |                 |        |
|                       |         | 48      | 4.181                                  | 3.302                                  | /                                       |                 |        |
| 802.11n (VHT20) MIMO  | U-NII 1 | 36      | 3.966                                  | 3.992                                  | 6.989                                   |                 |        |
|                       |         | 40      | 3.392                                  | 3.345                                  | 6.379                                   |                 |        |
|                       |         | 48      | 3.698                                  | 2.546                                  | 6.170                                   |                 |        |
| 802.11n (VHT40) MIMO  | U-NII 1 | 38      | 3.102                                  | 3.489                                  | 6.310                                   |                 |        |
|                       |         | 46      | 3.039                                  | 3.290                                  | 6.177                                   |                 |        |
| 802.11ac (VHT20) MIMO | U-NII 1 | 36      | 3.949                                  | 3.848                                  | 6.909                                   |                 |        |
|                       |         | 40      | 3.269                                  | 3.085                                  | 6.188                                   |                 |        |
|                       |         | 48      | 3.679                                  | 3.626                                  | 6.663                                   |                 |        |
| 802.11ac (VHT40) MIMO | U-NII 1 | 38      | 3.195                                  | 3.343                                  | 6.280                                   |                 |        |
|                       |         | 46      | 3.132                                  | 3.331                                  | 6.243                                   |                 |        |

| Type                 | Bands   | Channel | Power Spectral Density Ant 0 (dBm/500KHz) | Power Spectral Density Ant 1 (dBm/500KHz) | Power Spectral Density Total (dBm/500KHz) | Limit (dBm/500KHz) | Result |
|----------------------|---------|---------|-------------------------------------------|-------------------------------------------|-------------------------------------------|--------------------|--------|
| 802.11a SISO         | U-NII 3 | 149     | 7.414                                     | 6.724                                     | /                                         | 27.99              | Pass   |
|                      |         | 157     | 6.115                                     | 6.508                                     | /                                         |                    |        |
|                      |         | 165     | 5.713                                     | 5.286                                     | /                                         |                    |        |
| 802.11n (HT20) MIMO  | U-NII 3 | 149     | 4.728                                     | 5.984                                     | 8.412                                     |                    |        |
|                      |         | 157     | 5.704                                     | 5.291                                     | 8.513                                     |                    |        |
|                      |         | 165     | 5.631                                     | 5.583                                     | 8.617                                     |                    |        |
| 802.11n (HT40) MIMO  | U-NII 3 | 151     | 2.394                                     | 1.882                                     | 5.156                                     |                    |        |
|                      |         | 159     | 1.511                                     | 1.838                                     | 4.688                                     |                    |        |
| 802.11ac (HT20) MIMO | U-NII 3 | 149     | 5.195                                     | 6.316                                     | 8.802                                     |                    |        |
|                      |         | 157     | 4.954                                     | 5.180                                     | 8.079                                     |                    |        |
|                      |         | 165     | 6.278                                     | 5.766                                     | 9.040                                     |                    |        |
| 802.11ac (HT40) MIMO | U-NII 3 | 151     | 1.438                                     | 2.176                                     | 4.833                                     |                    |        |
|                      |         | 159     | 2.436                                     | 2.074                                     | 5.269                                     |                    |        |

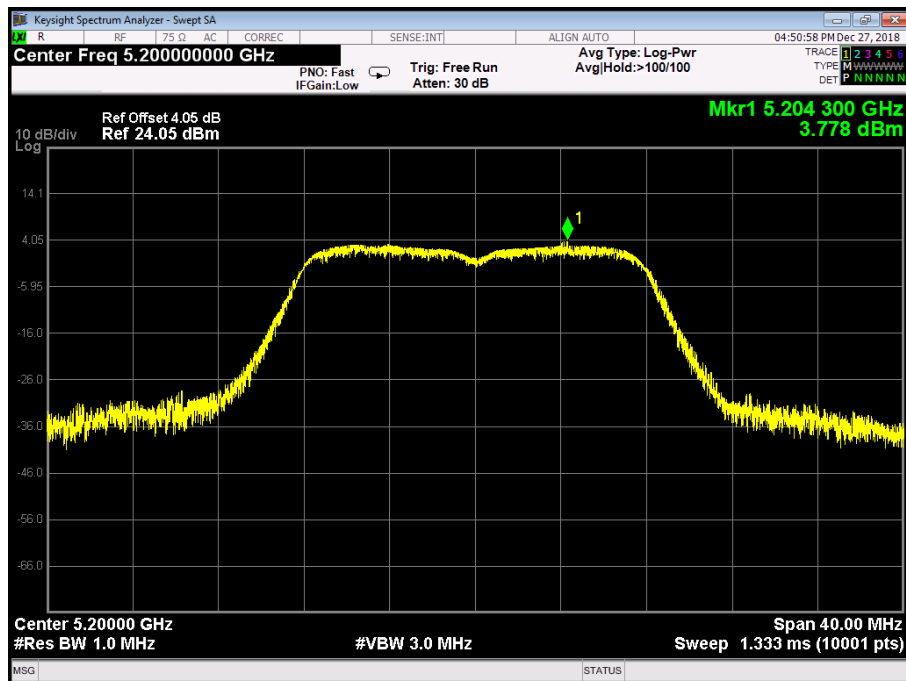
**Note :** GANT =6dBi, Array Gain=10log(NANT/NSS)=3.01dBi, Directional Gain=GANT + Array Gain=8.01dBi, 8.01dBi >6dBi so limit=30-(8.01-6)=27.99dBm for U-NII 3

ANT 0:

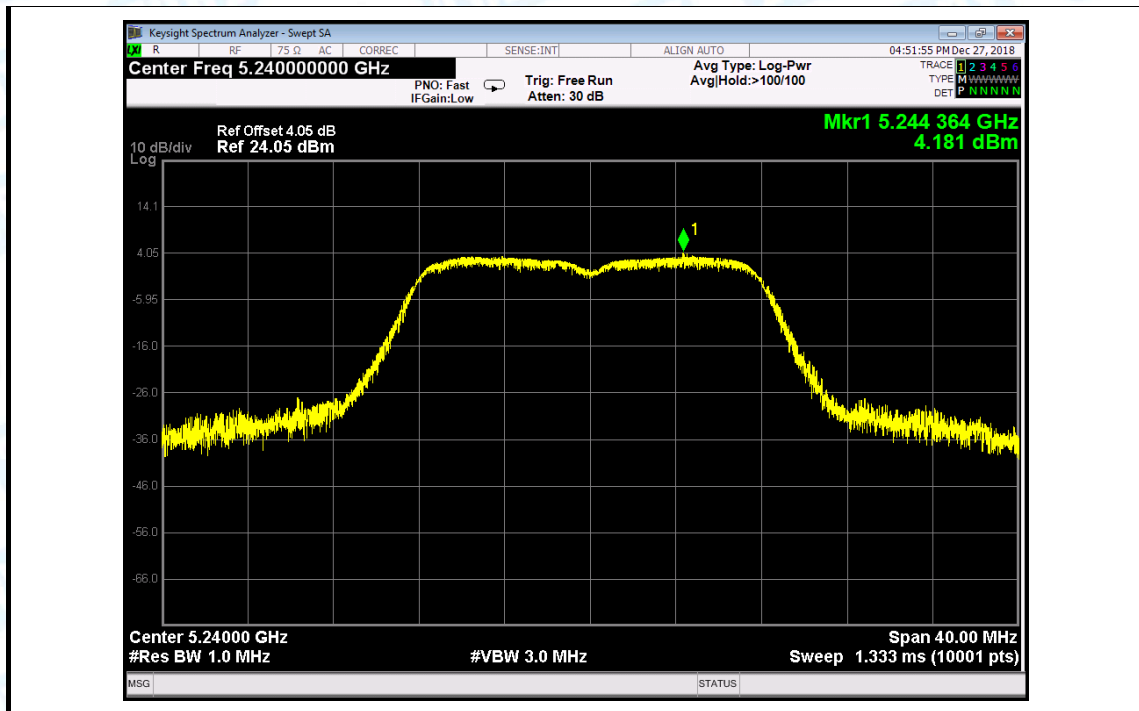
802.11 a 5180 MHz



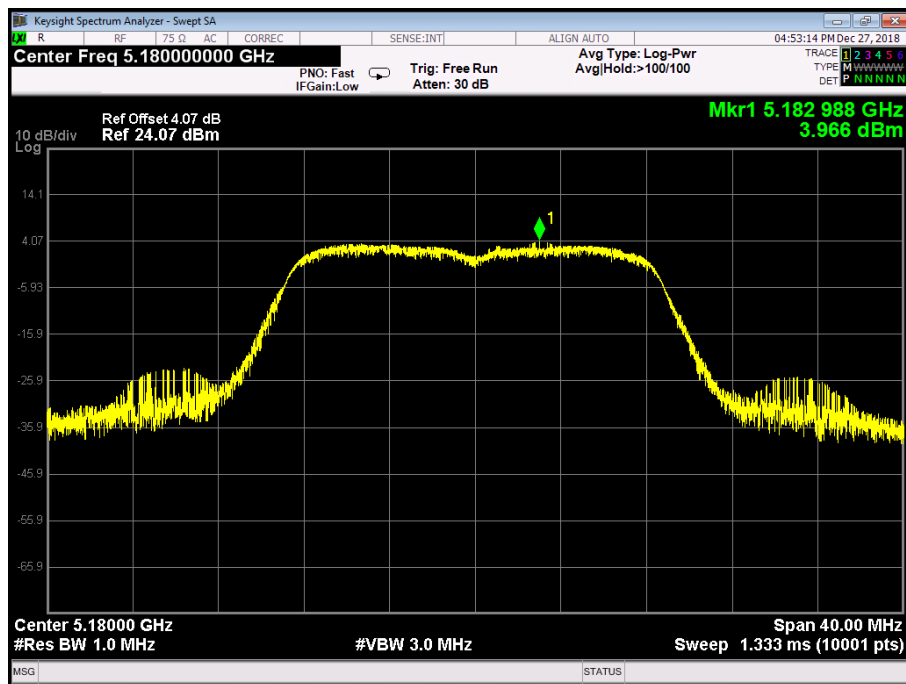
802.11 a 5200 MHz



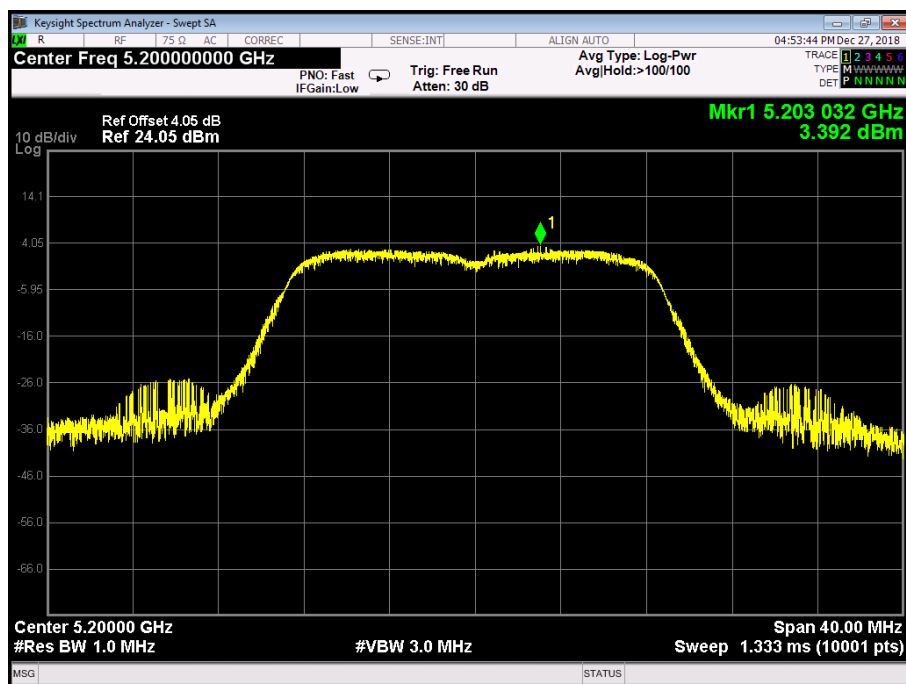
802.11 a 5240 MHz



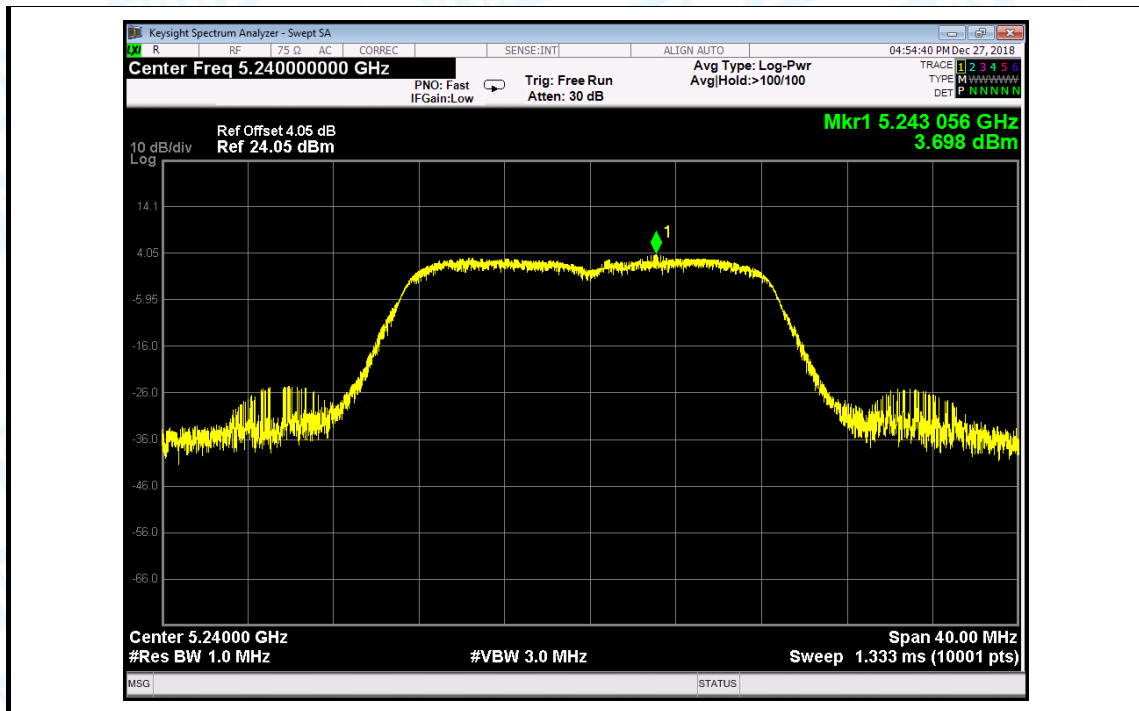
802.11 n(20) 5180 MHz



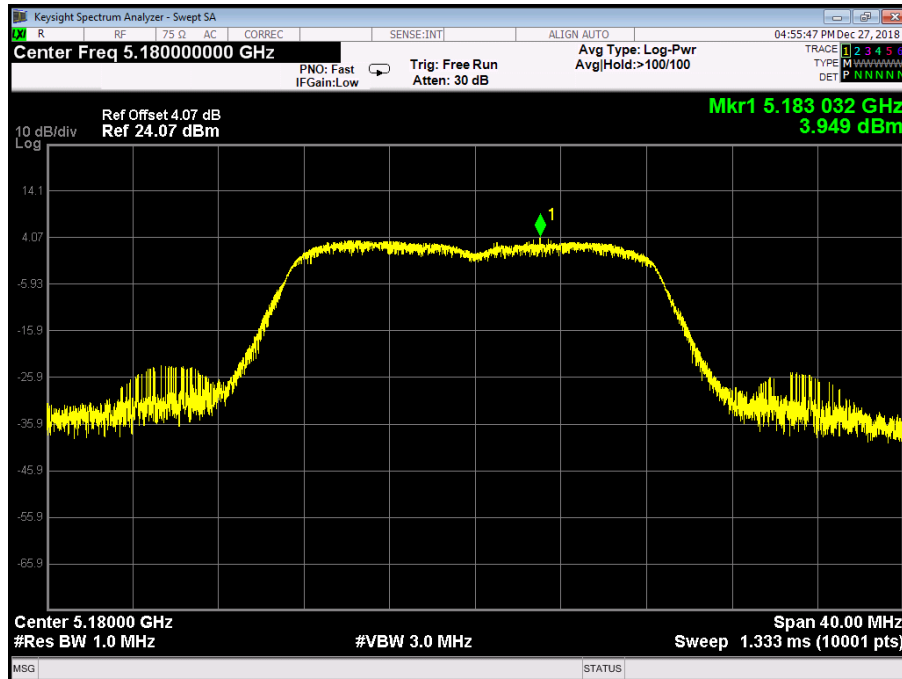
802.11 n(20) 5200 MHz



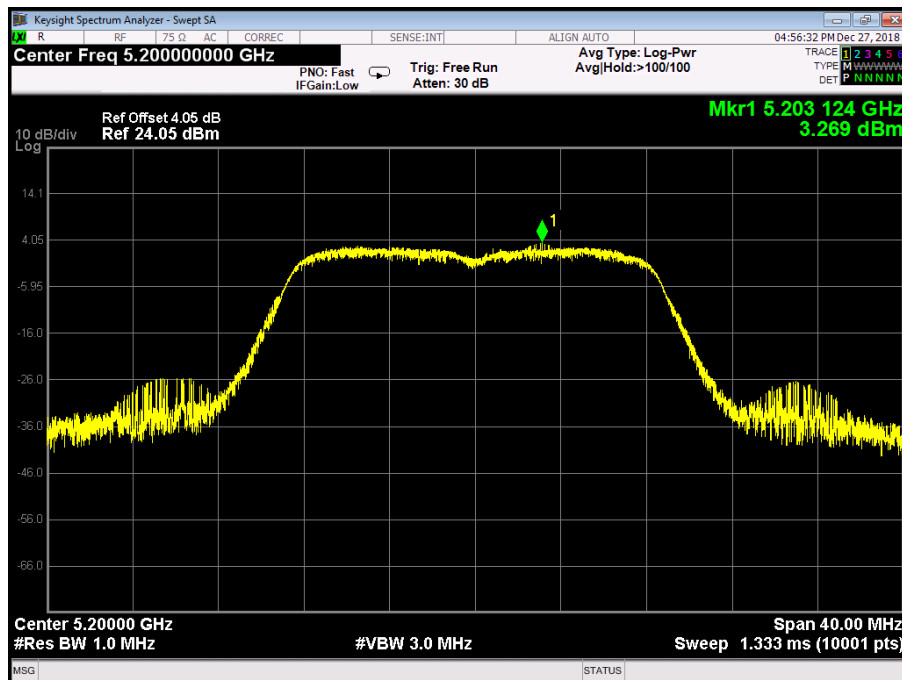
802.11 n(20) 5240 MHz



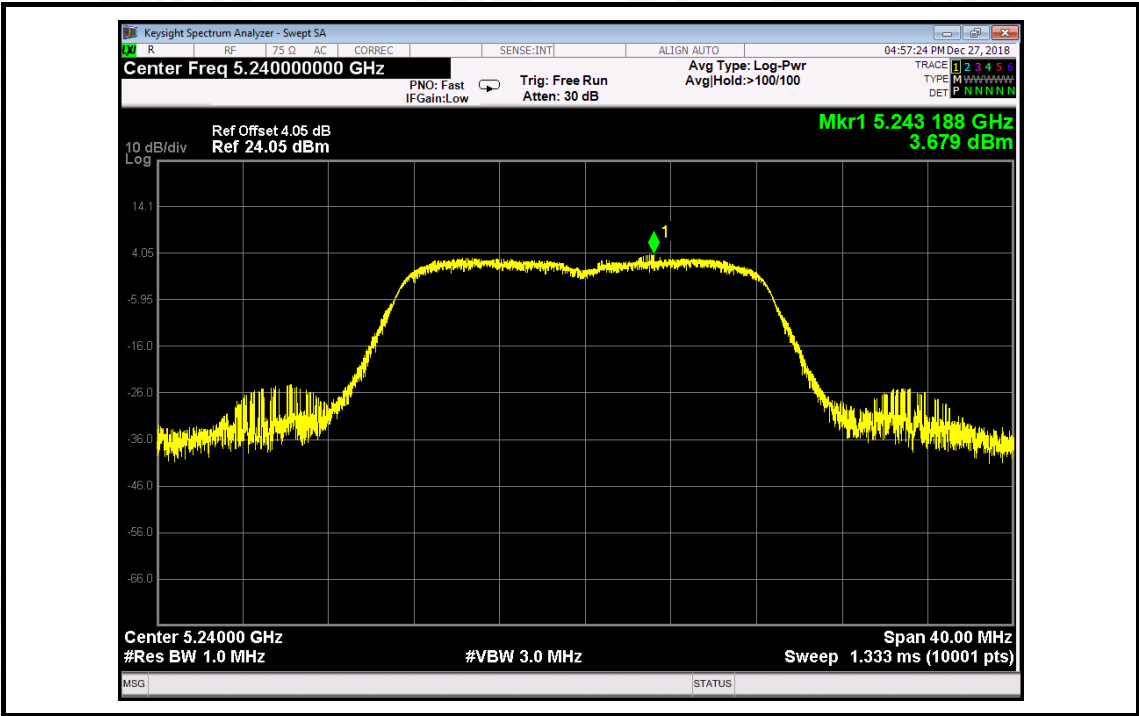
802.11 ac(VHT20) 5180 MHz



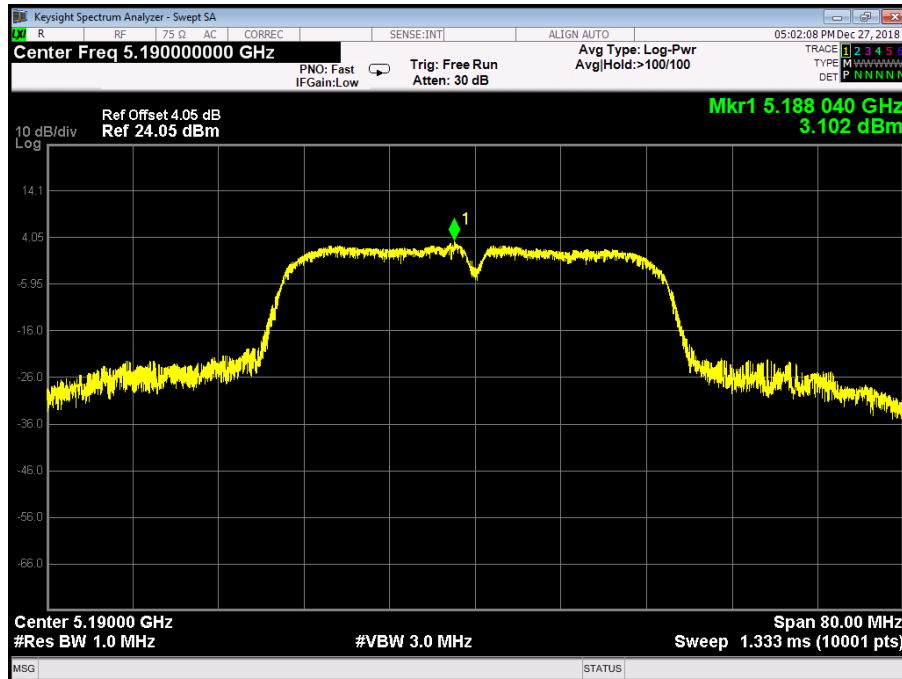
802.11 ac(VHT20) 5200 MHz



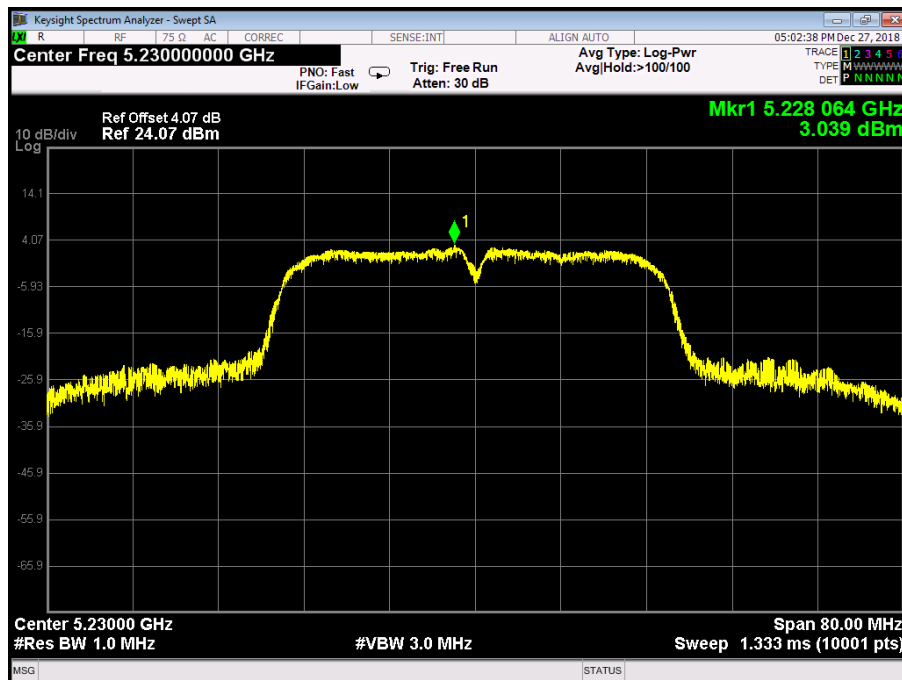
802.11 ac(VHT20) 5240 MHz



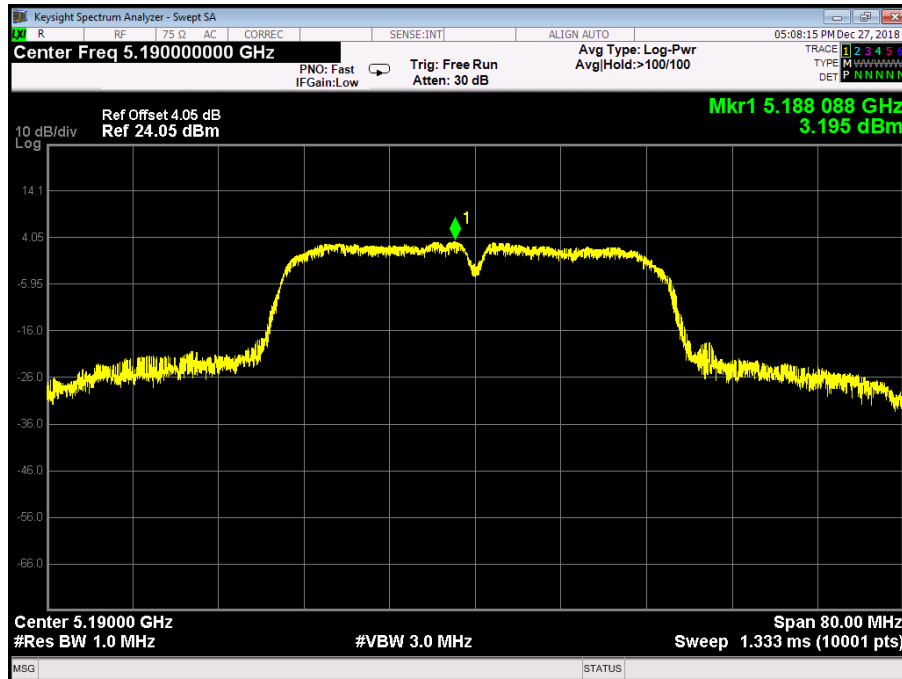
802.11 n(40) 5190 MHz



802.11 n(40) 5230 MHz



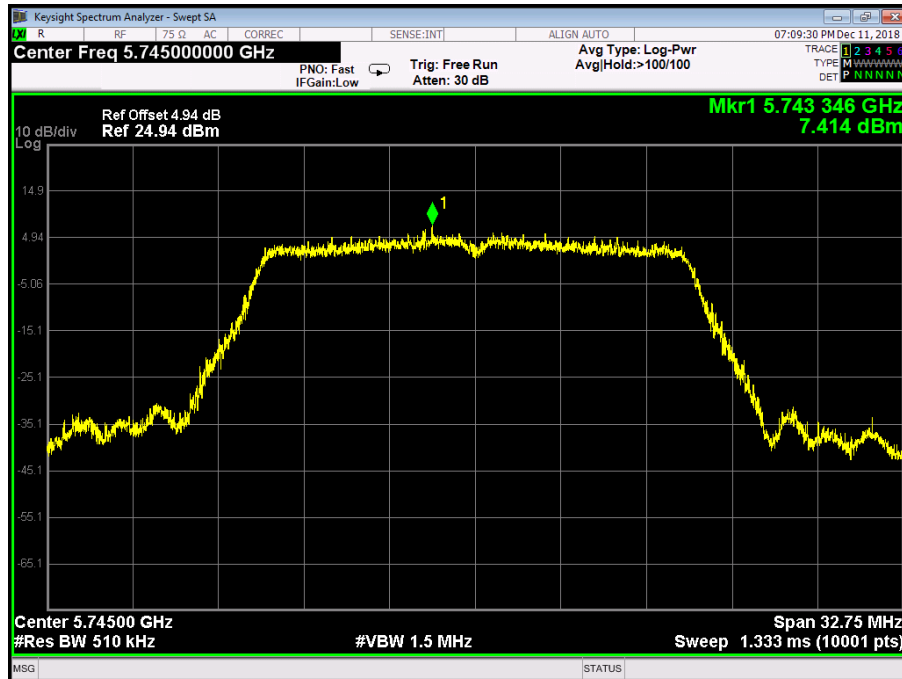
802.11 ac(VHT40) 5190 MHz



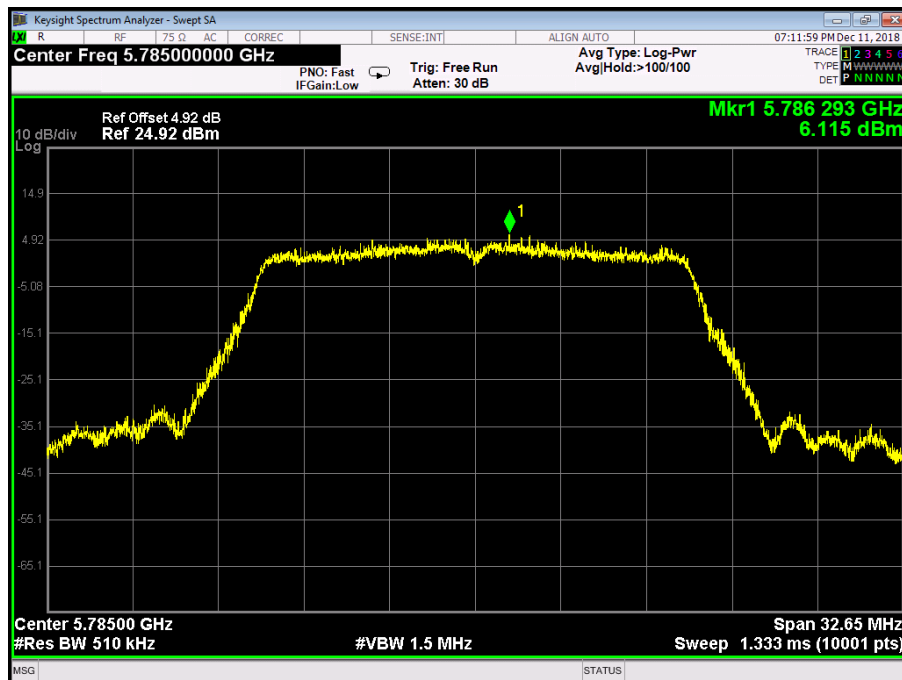
802.11 ac(VHT40) 5230 MHz



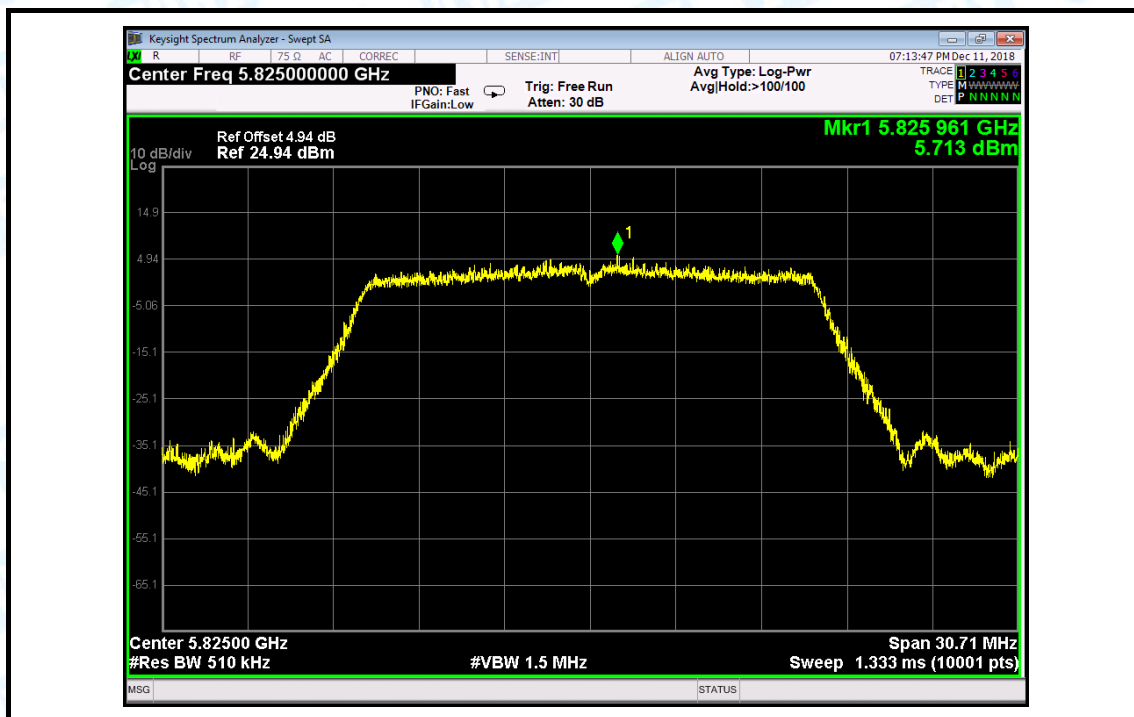
### 802.11 a 5745 MHz



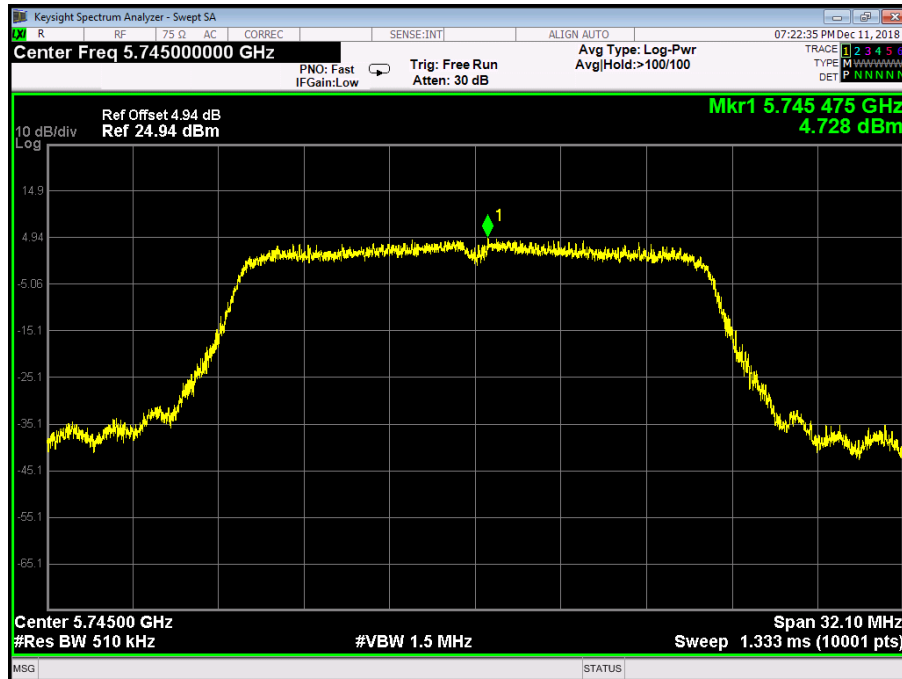
### 802.11 a 5785 MHz



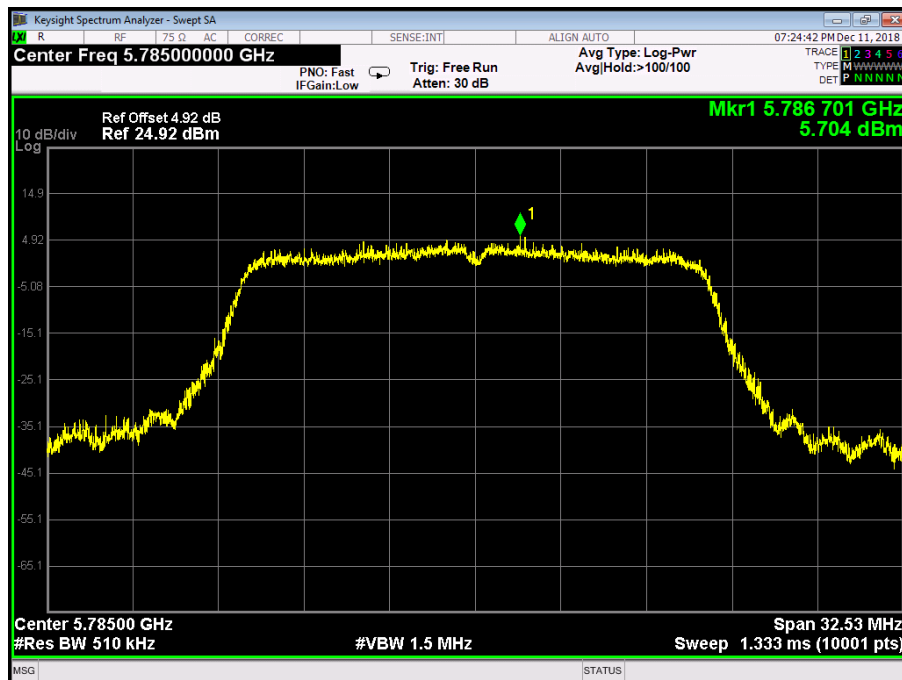
### 802.11 a 5825 MHz



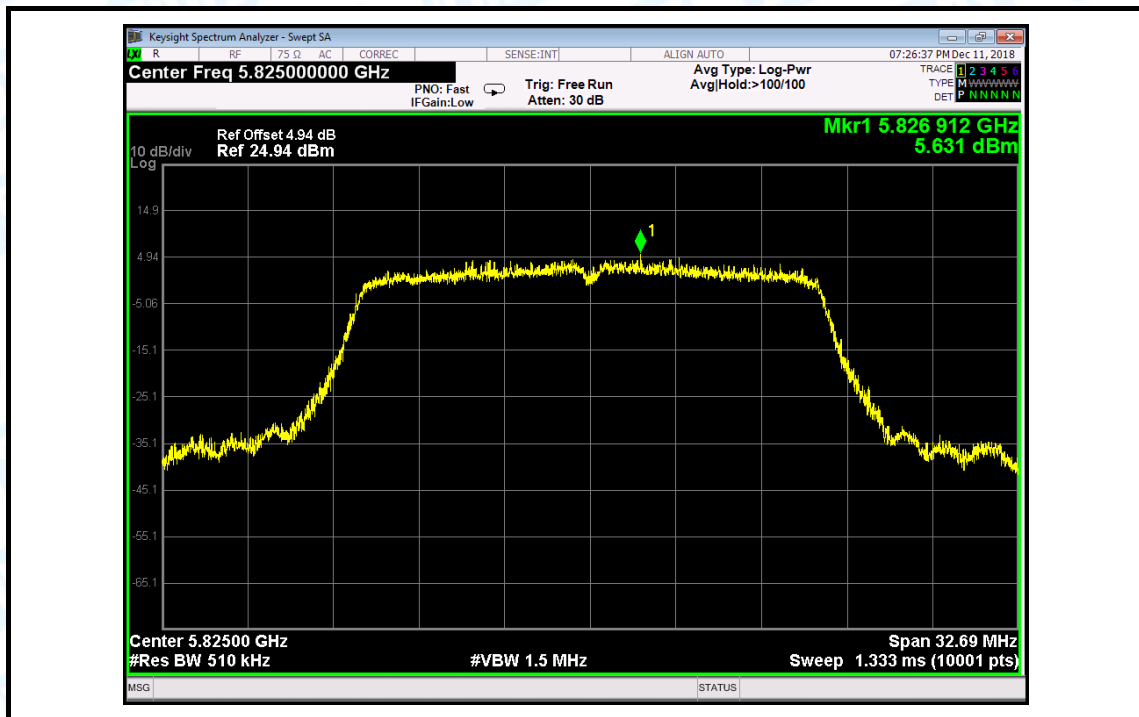
802.11 n(20) 5745 MHz



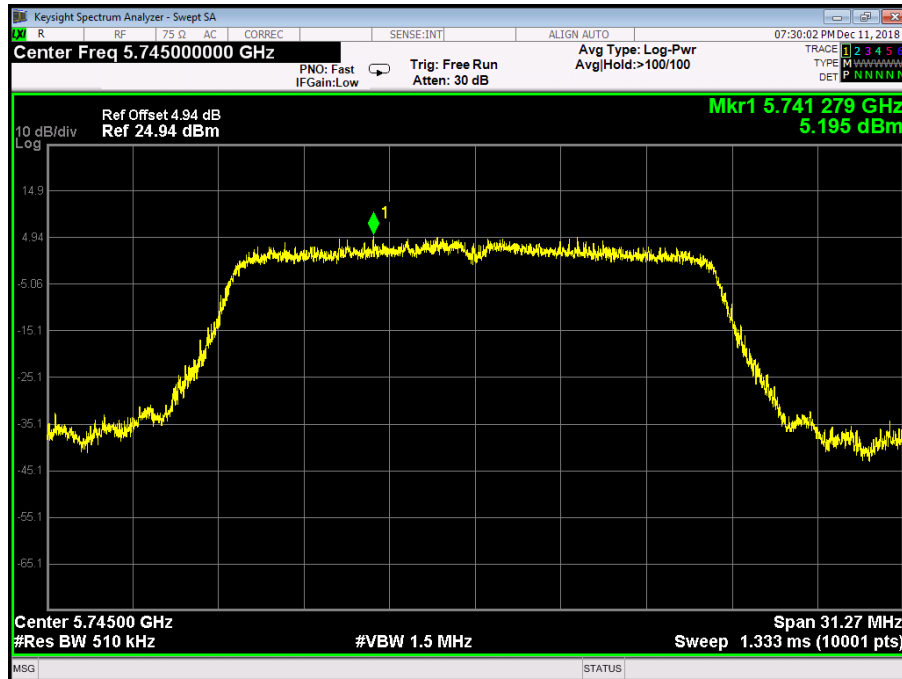
802.11 n(20) 5785 MHz



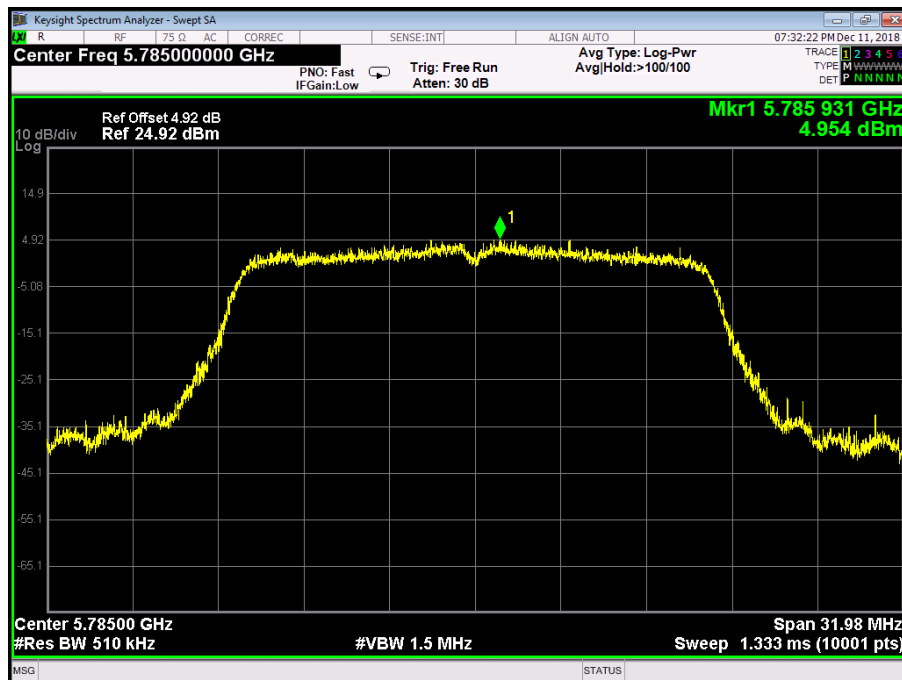
802.11 n(20) 5825 MHz



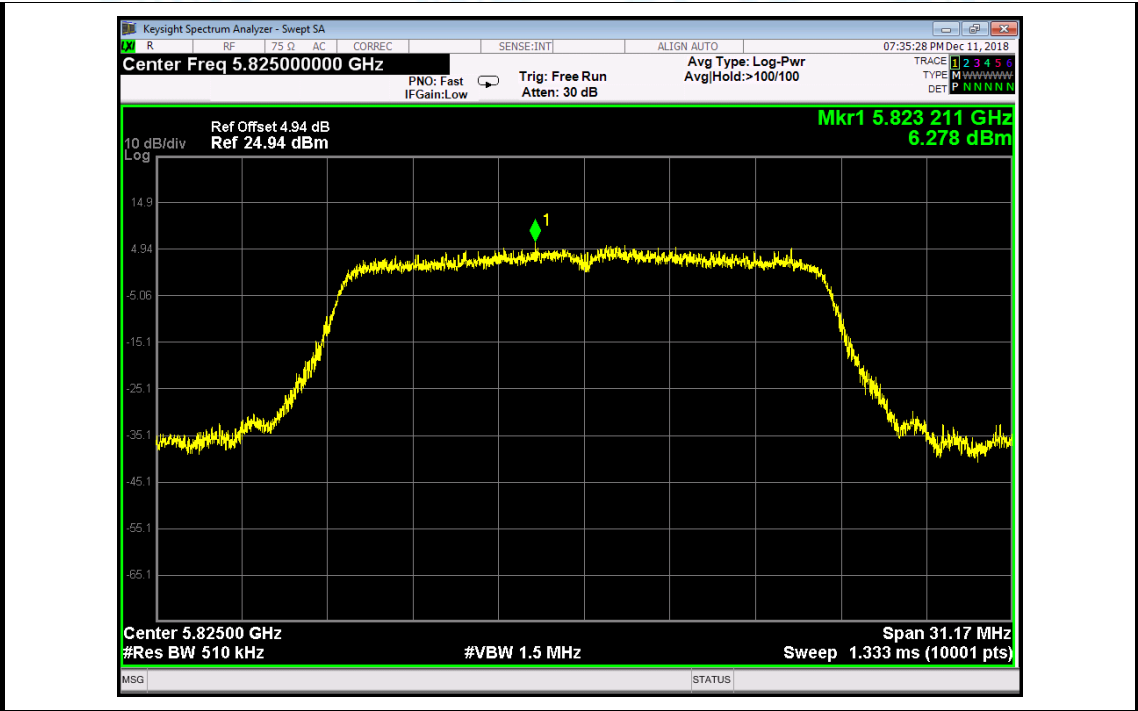
802.11 ac(VHT20) 5745 MHz



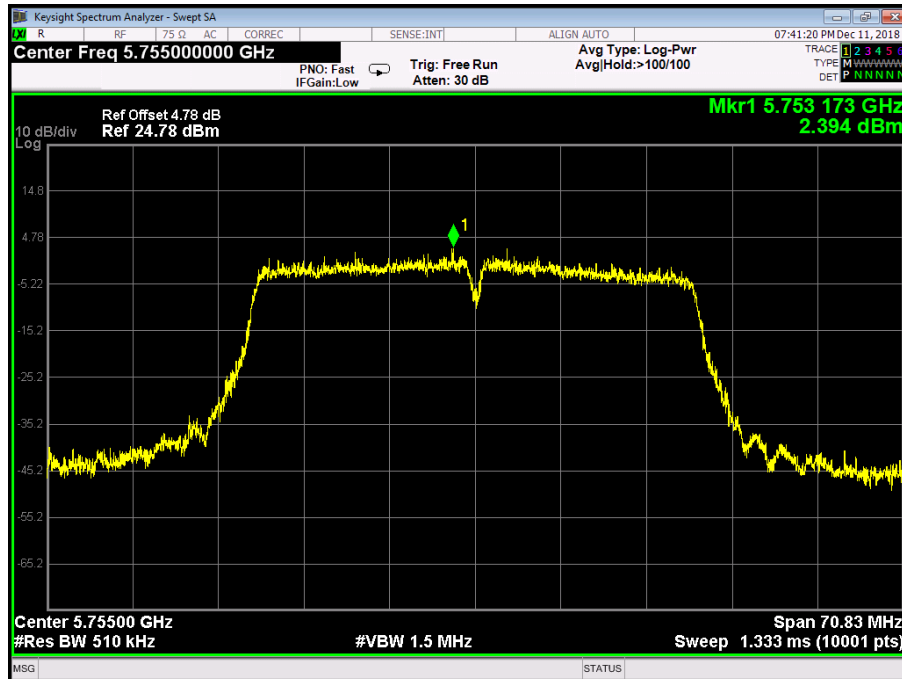
802.11 ac(VHT20) 5785 MHz



802.11 ac(VHT20) 5825 MHz



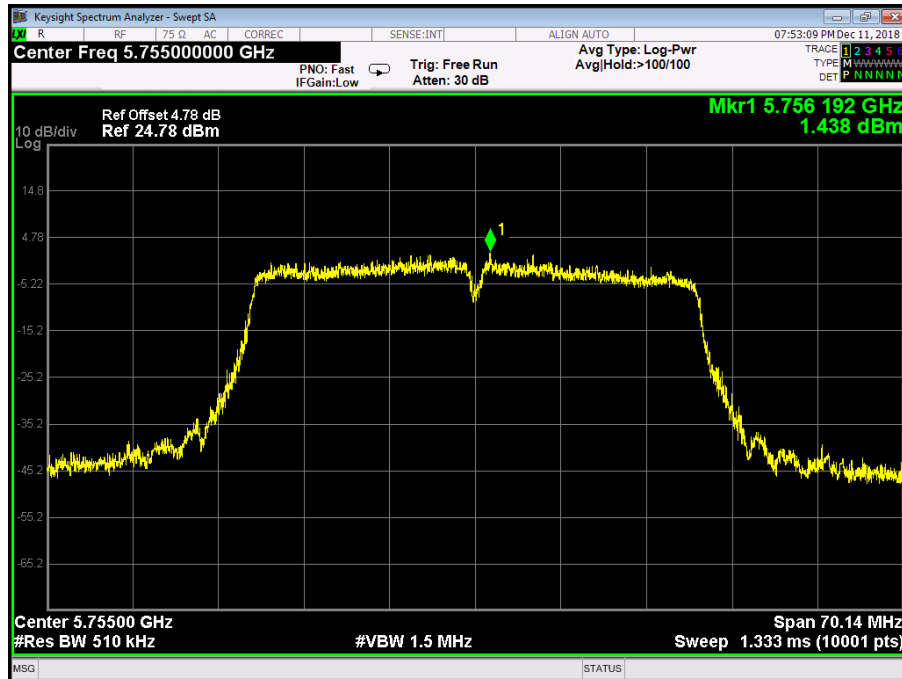
802.11 n(40) 5755 MHz



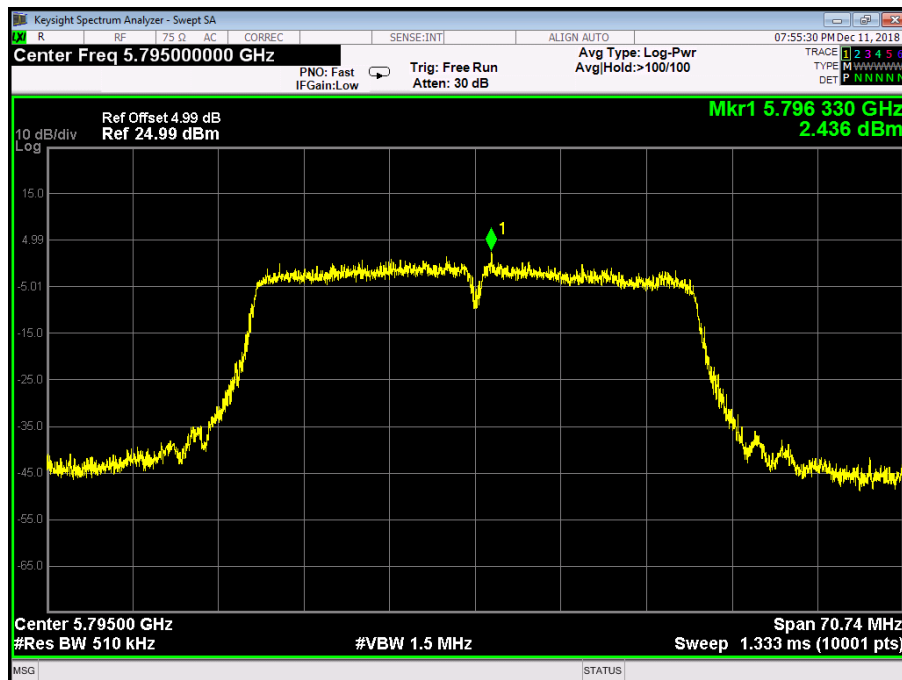
802.11 n(40) 5795 MHz



802.11 ac(VHT40) 5755 MHz

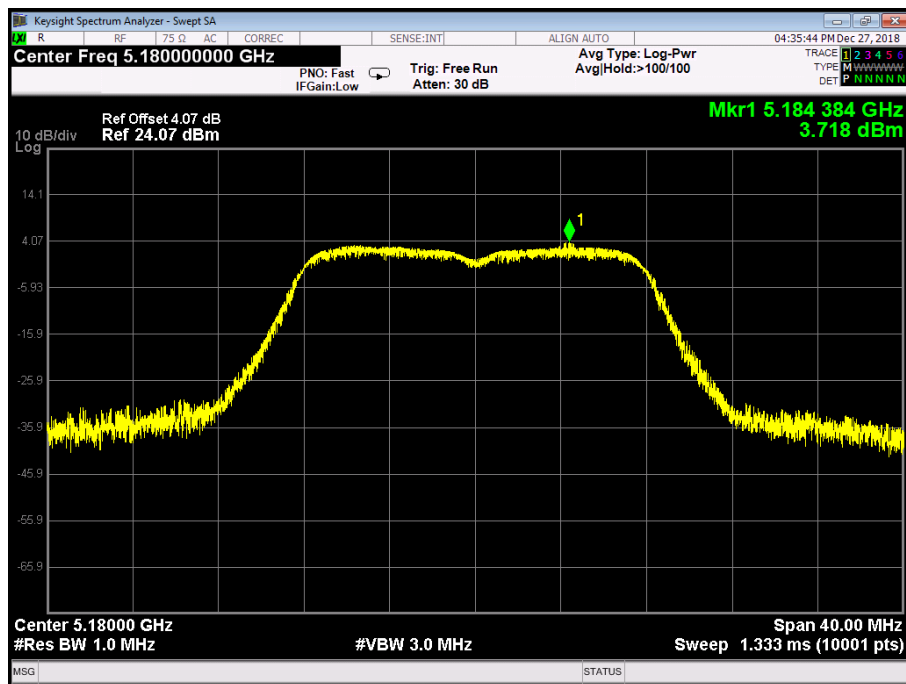


802.11 ac(VHT40) 5795 MHz

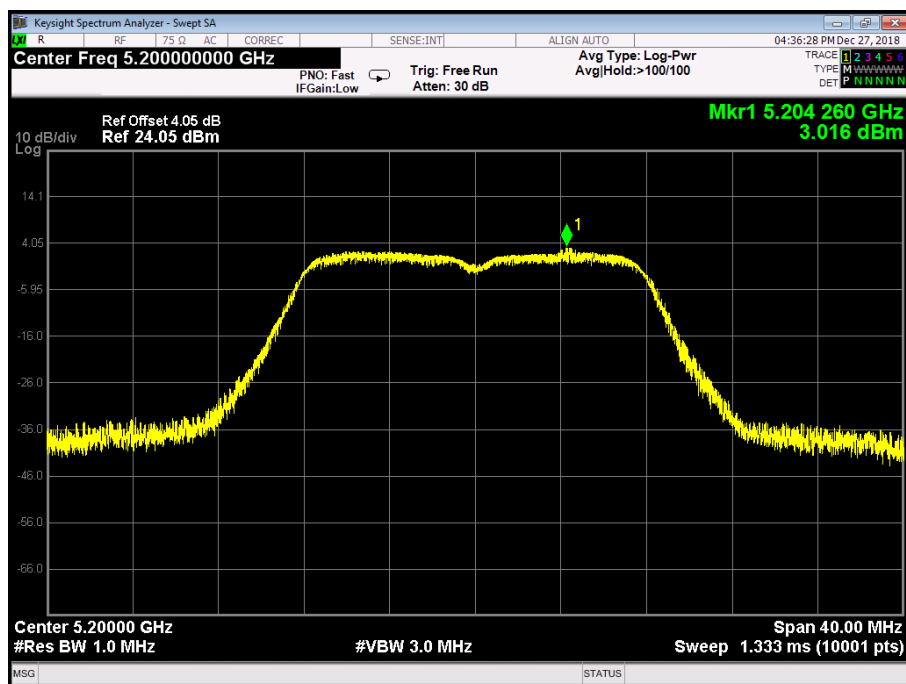


ANT 1:

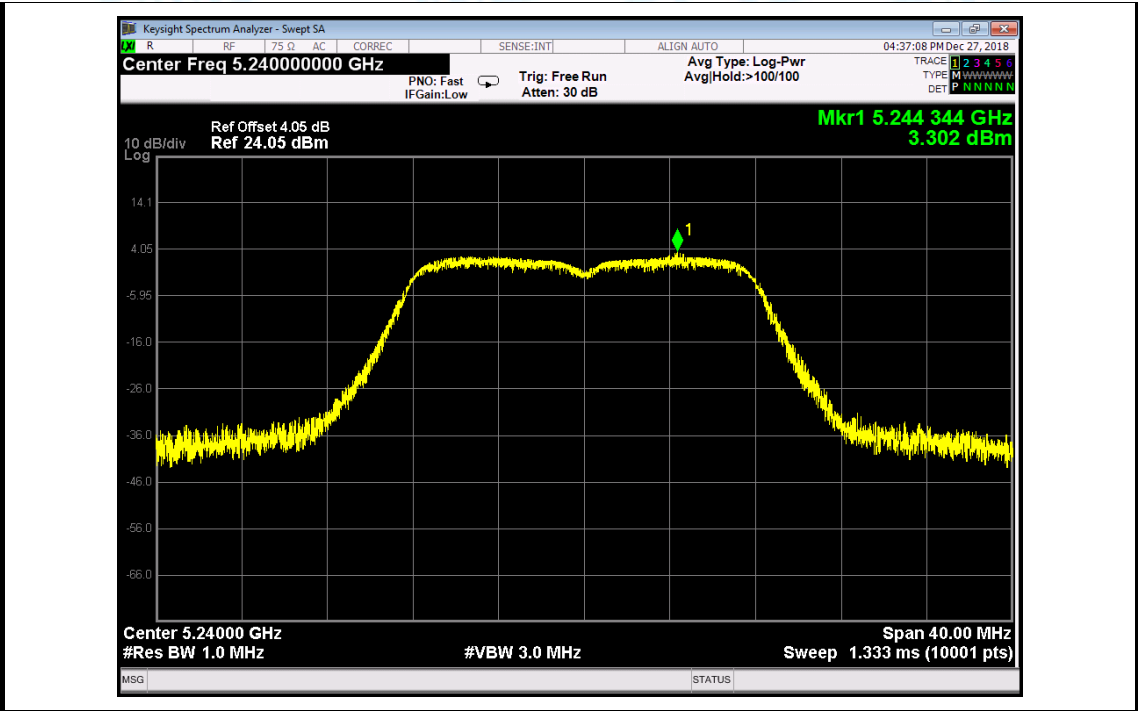
802.11 a 5180 MHz



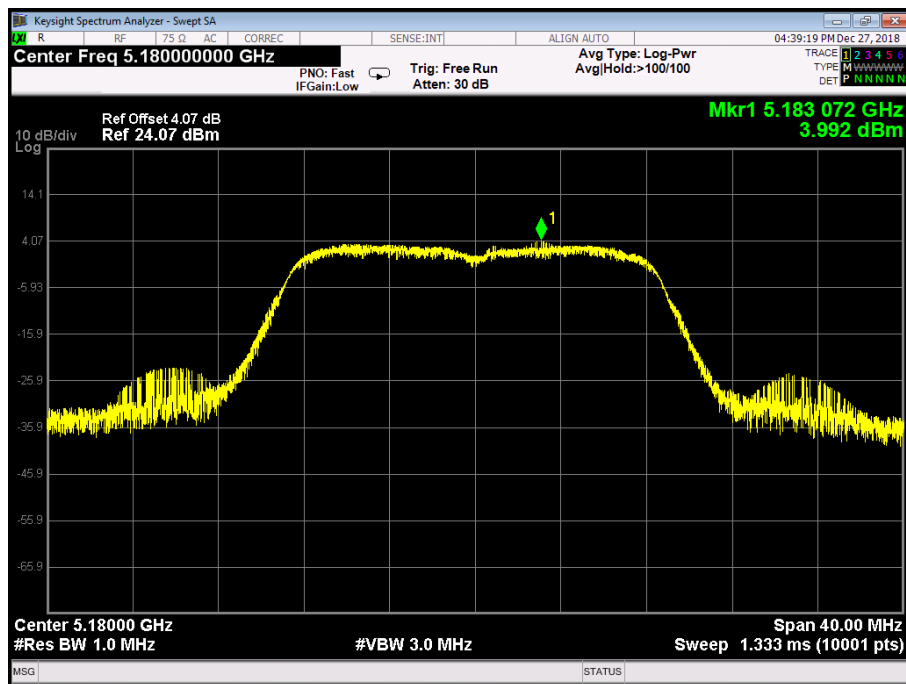
802.11 a 5200 MHz



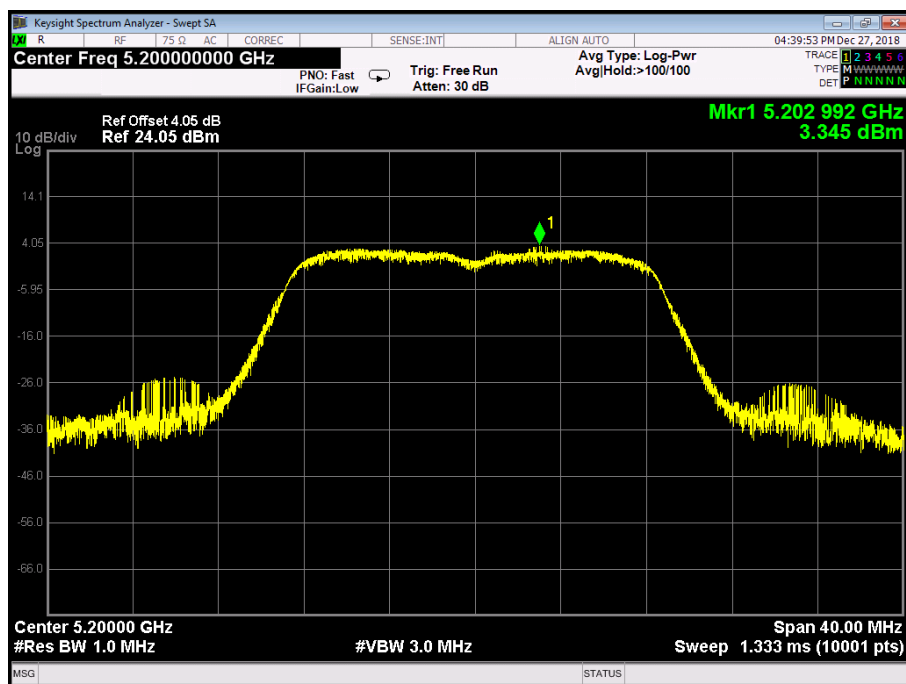
802.11 a 5240 MHz



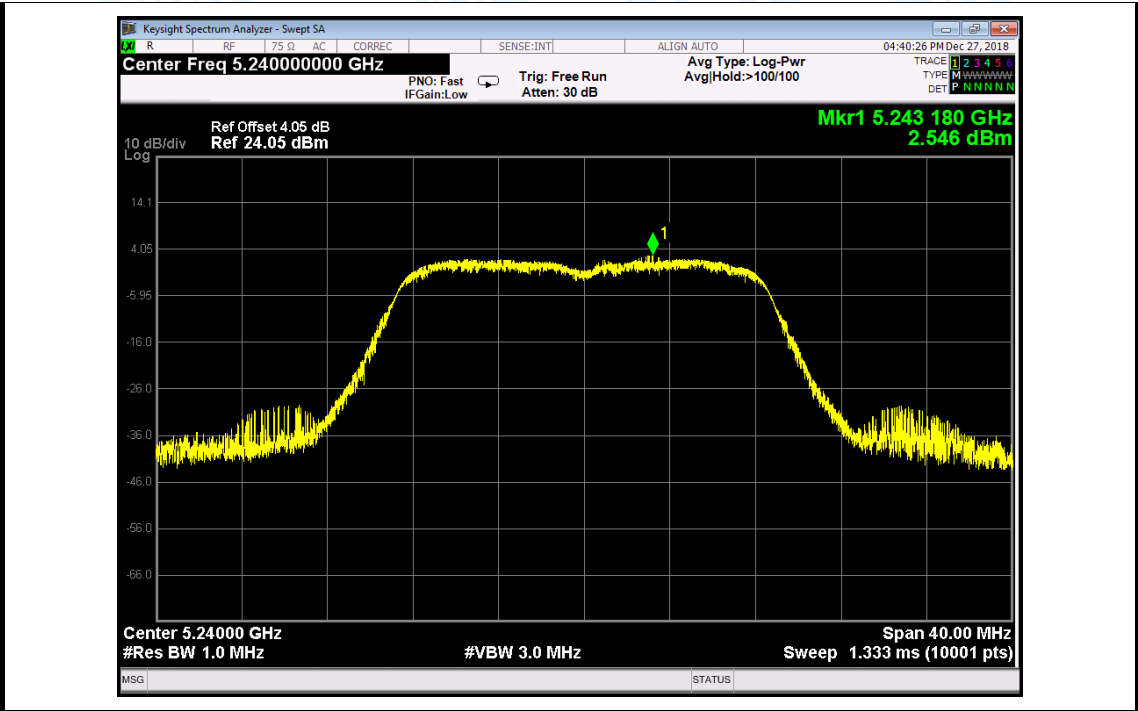
802.11 n(20) 5180 MHz



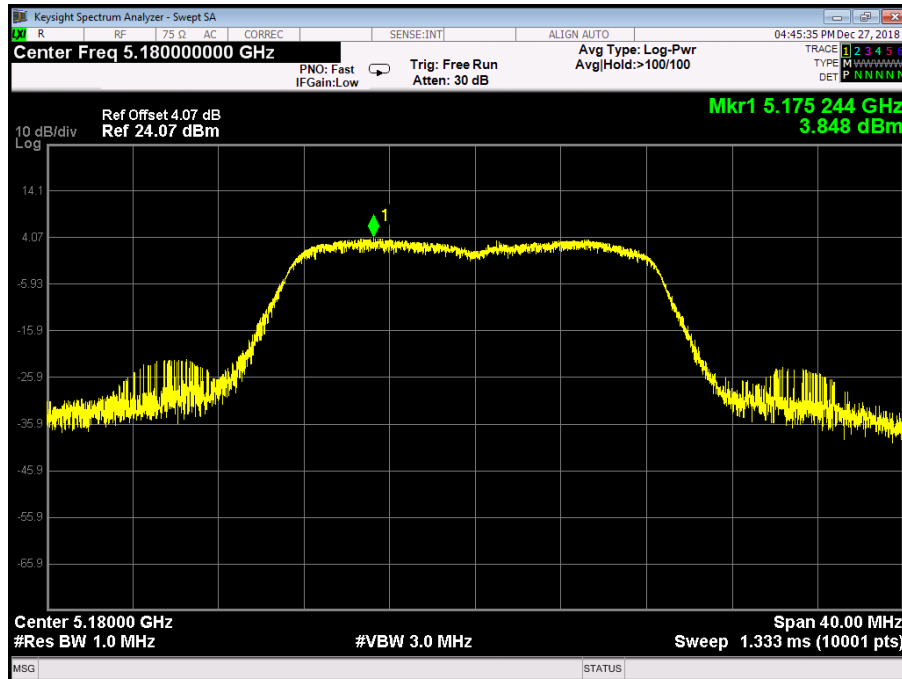
802.11 n(20) 5200 MHz



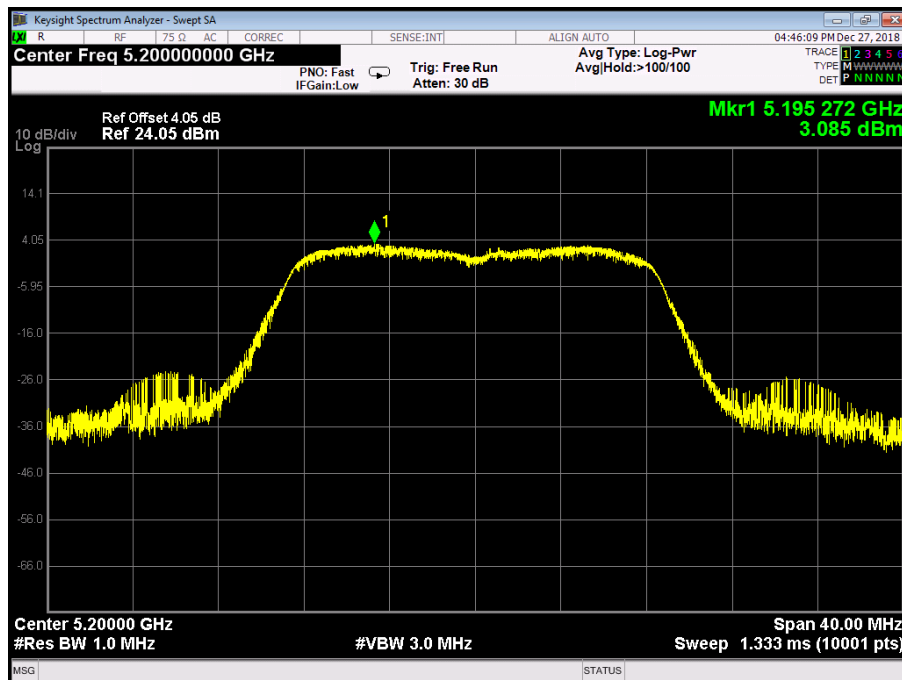
802.11 n(20) 5240 MHz



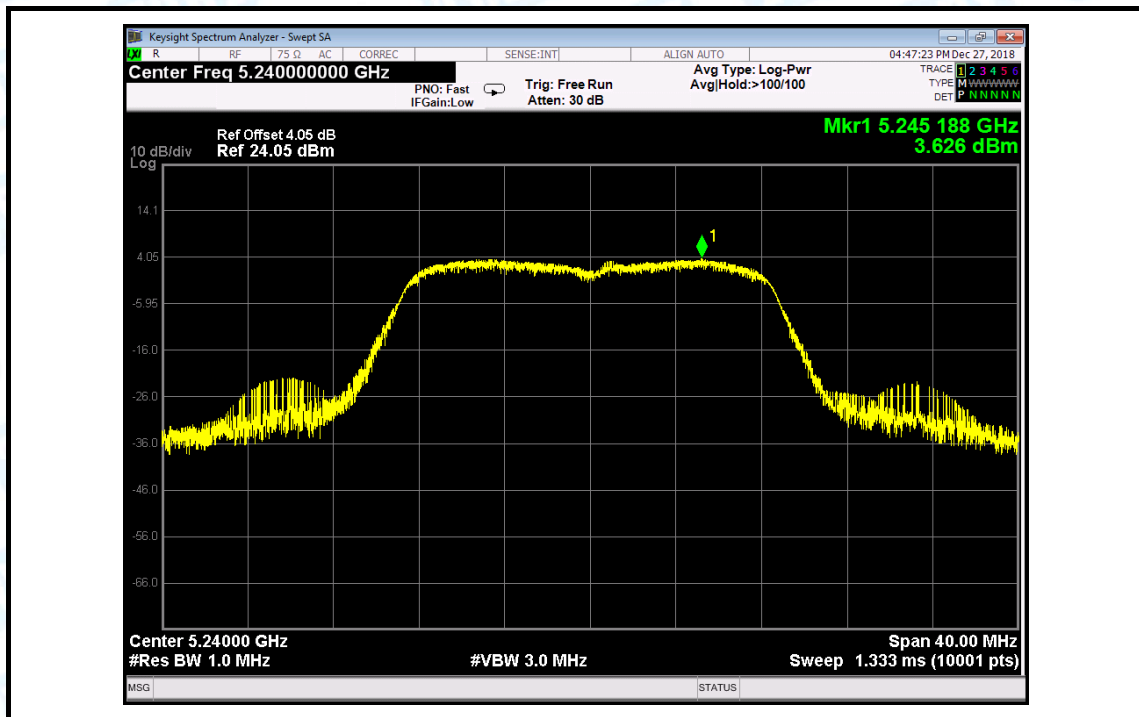
802.11 ac(VHT20) 5180 MHz



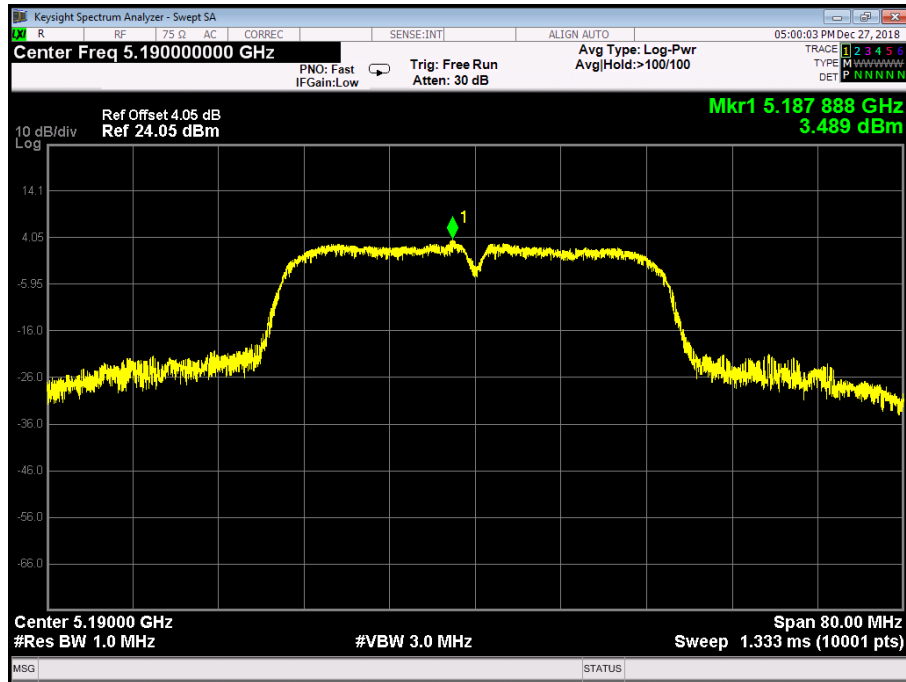
802.11 ac(VHT20) 5200 MHz



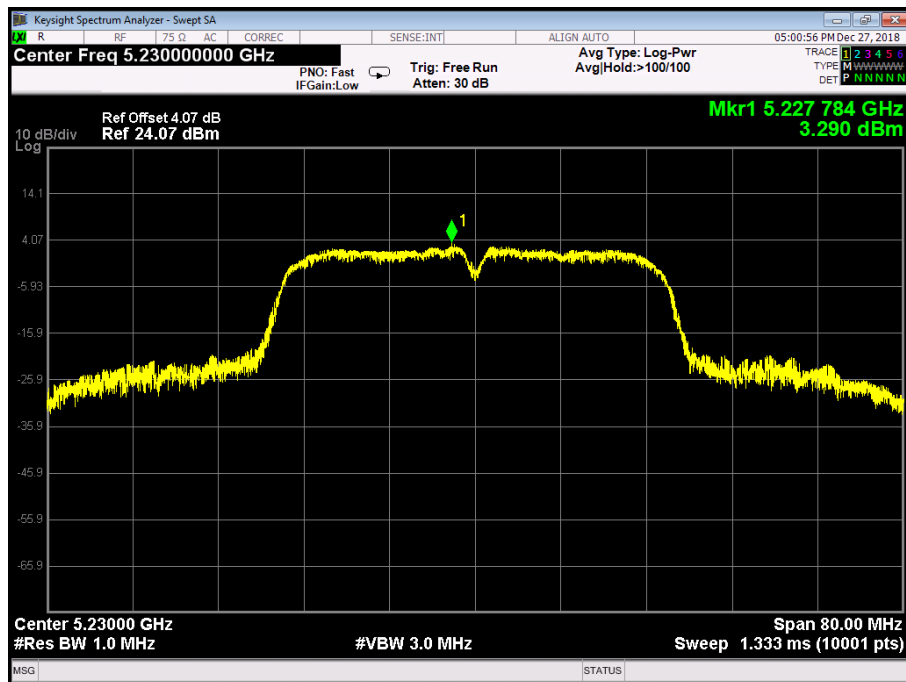
802.11 ac(VHT20) 5240 MHz



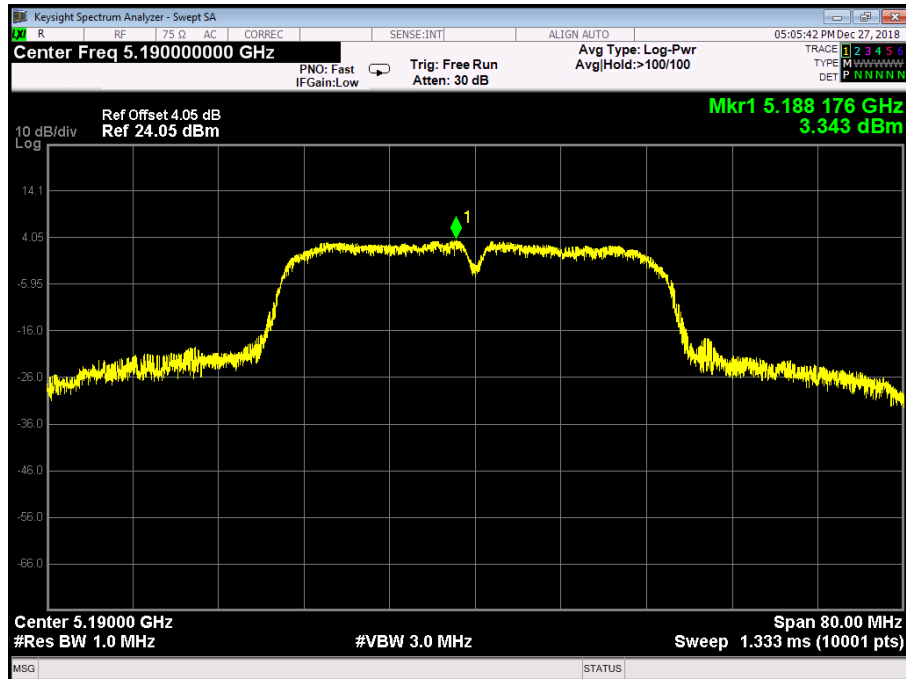
802.11 n(40) 5190 MHz



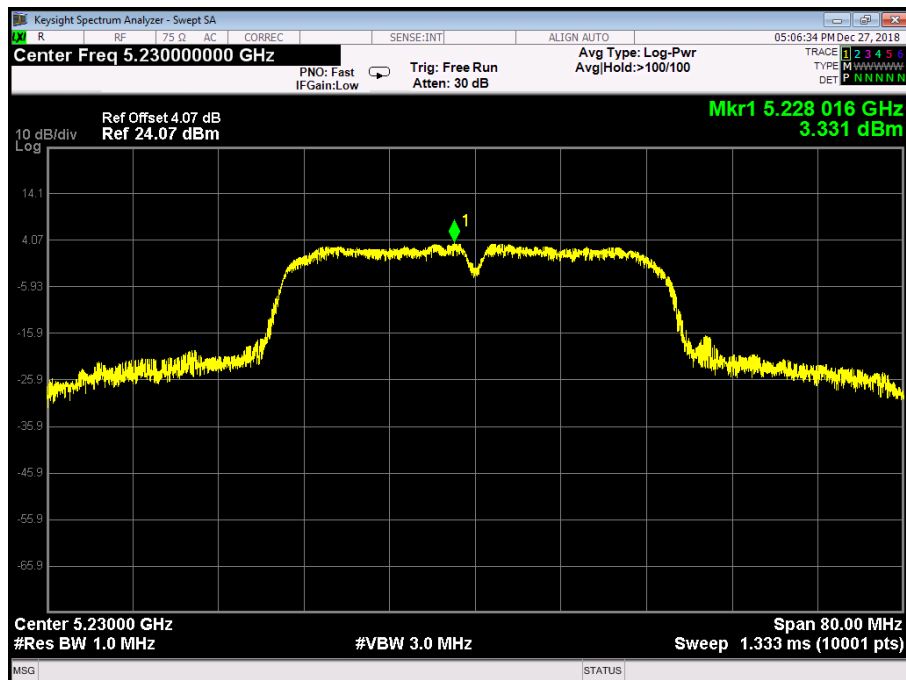
802.11 n(40) 5230 MHz



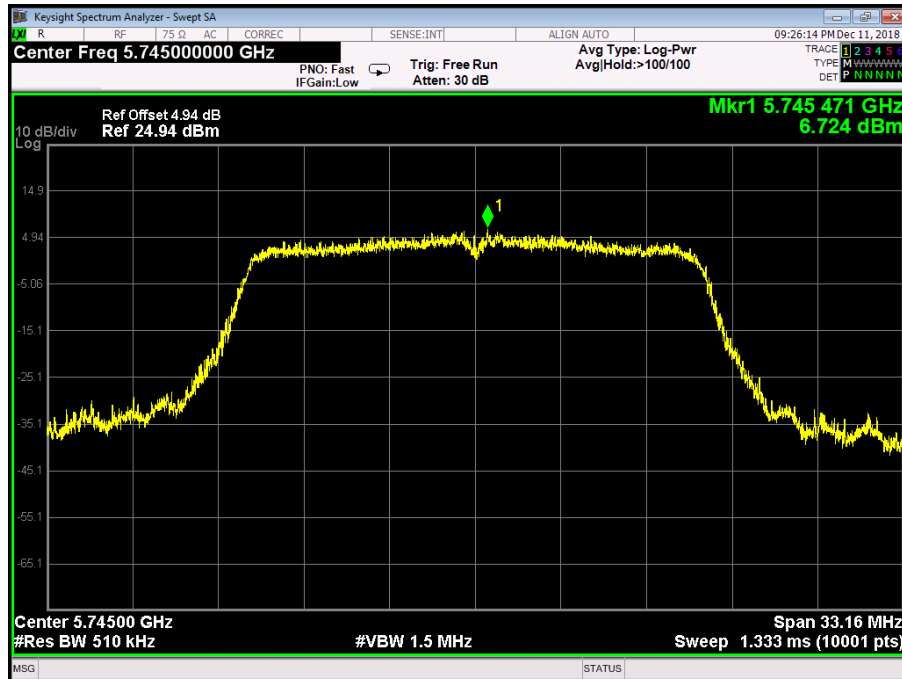
802.11 ac(VHT40) 5190 MHz



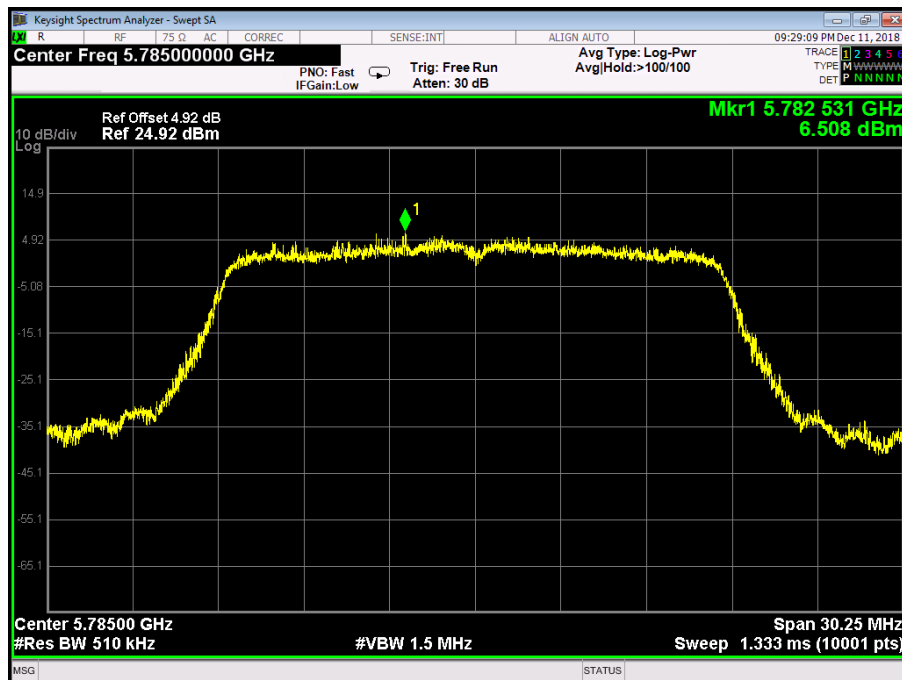
802.11 ac(VHT40) 5230 MHz



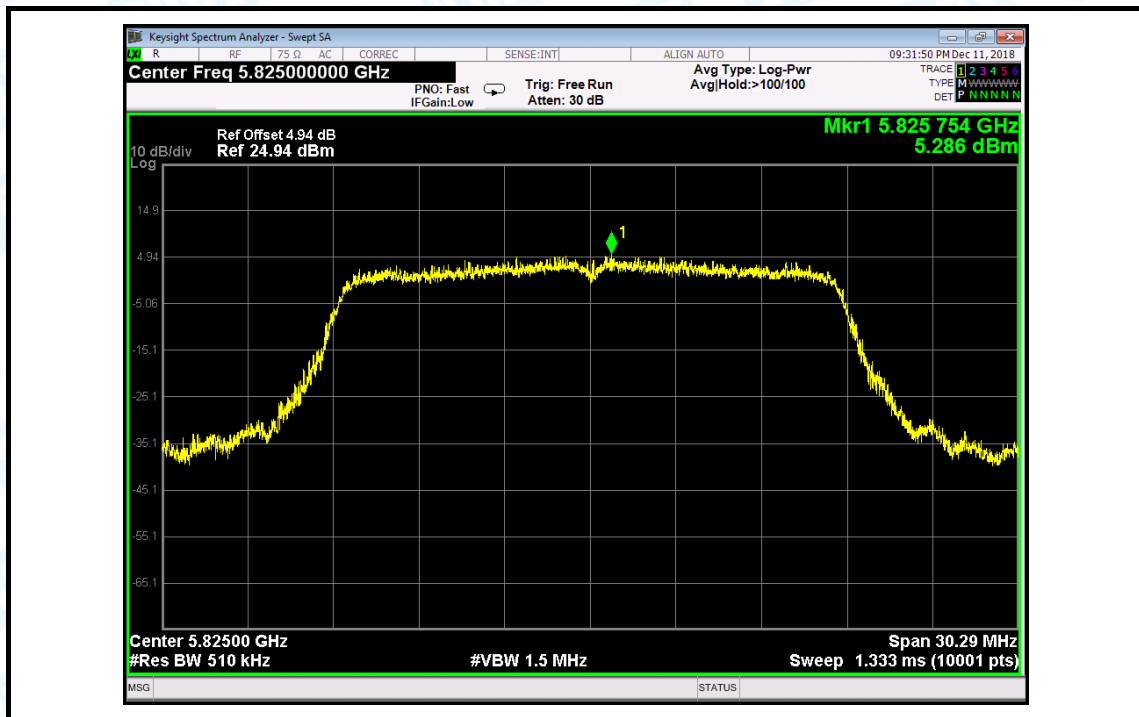
### 802.11 a 5745 MHz



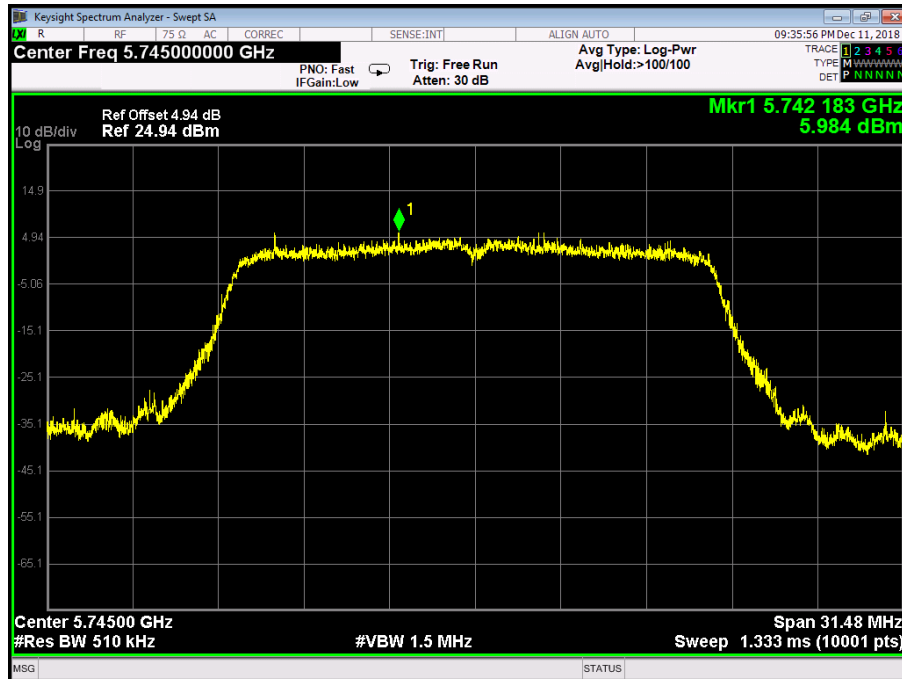
### 802.11 a 5785 MHz



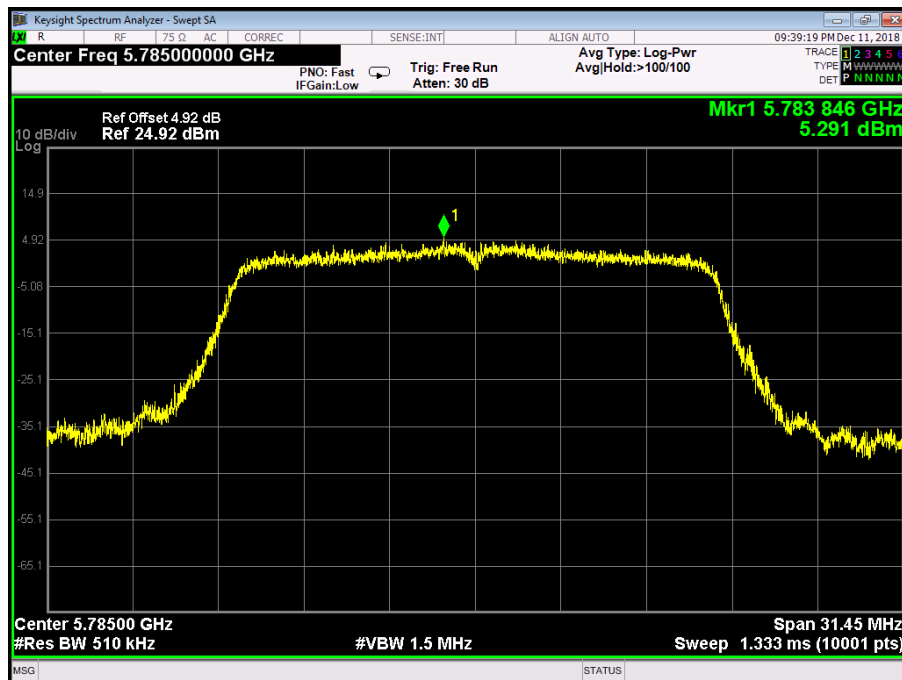
### 802.11 a 5825 MHz



802.11 n(20) 5745 MHz



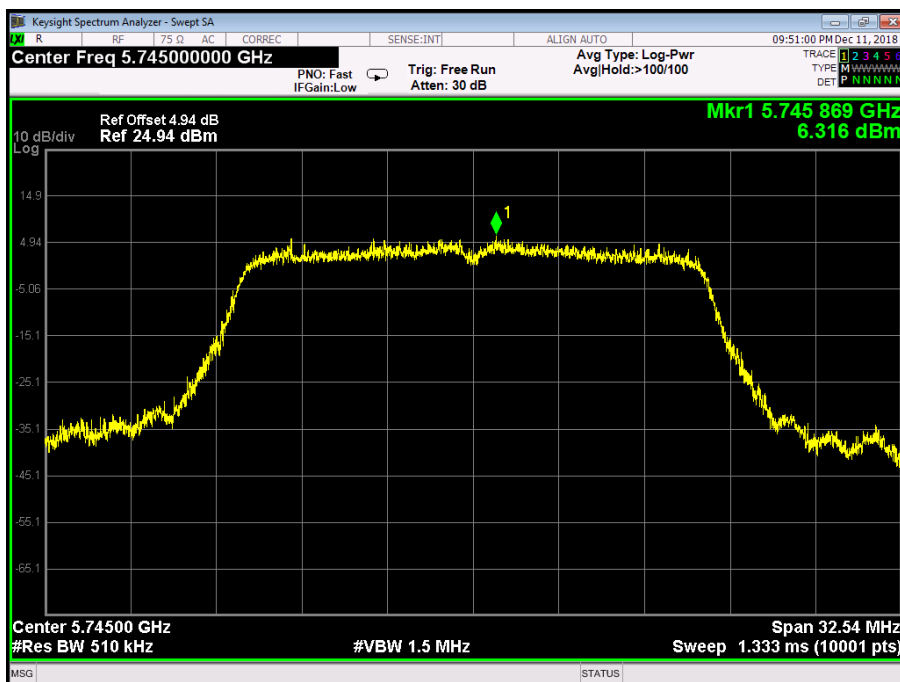
802.11 n(20) 5785 MHz



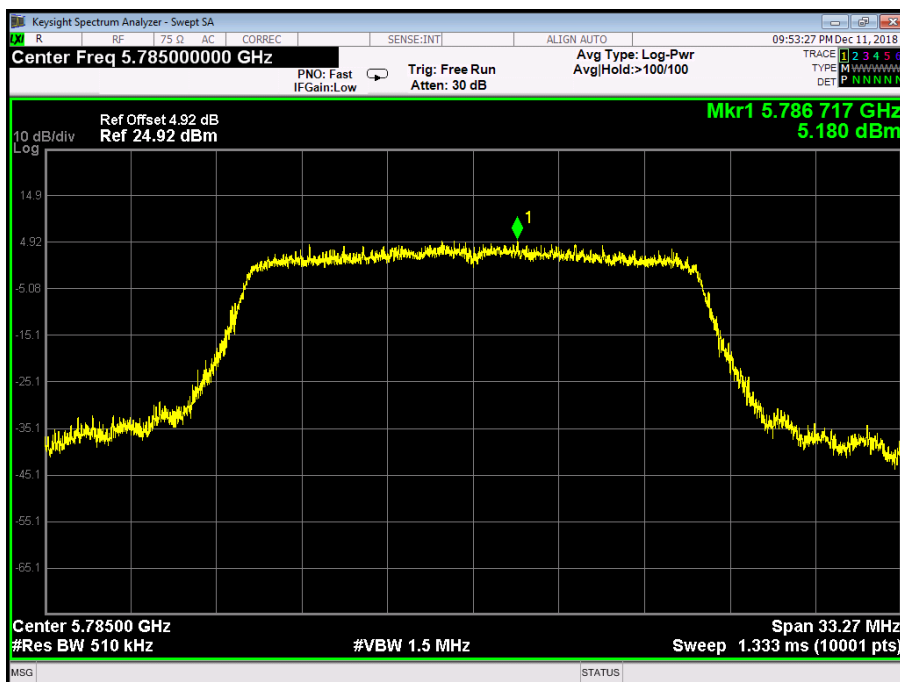
802.11 n(20) 5825 MHz



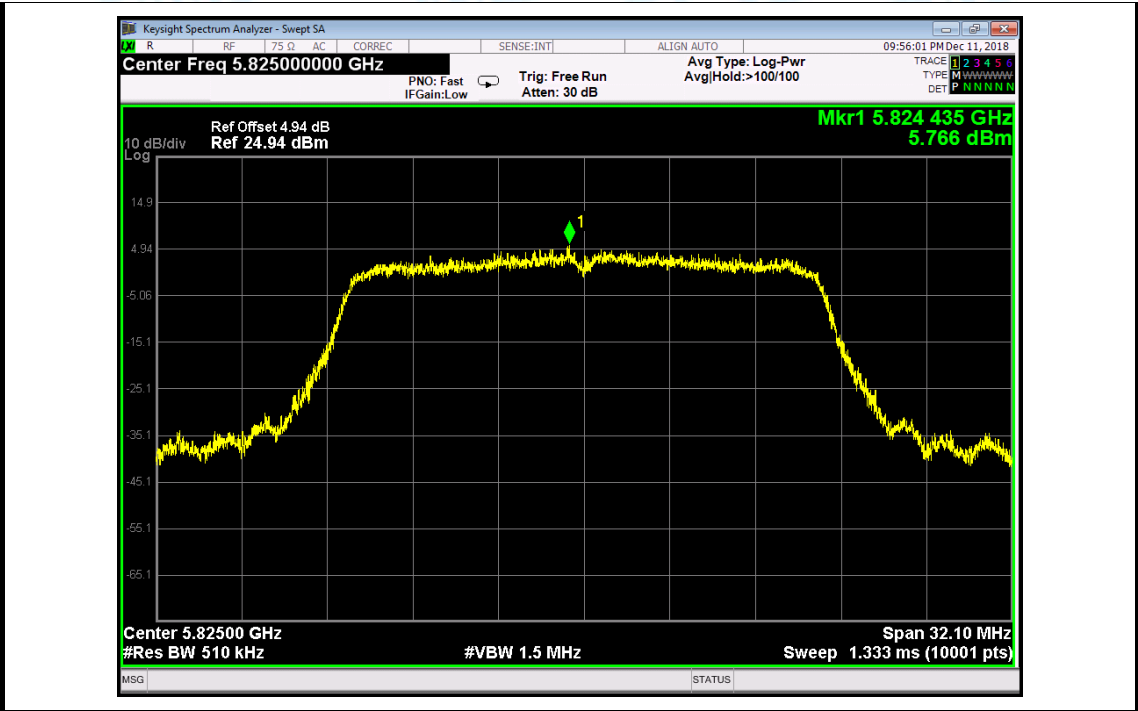
802.11 ac(VHT20) 5745 MHz



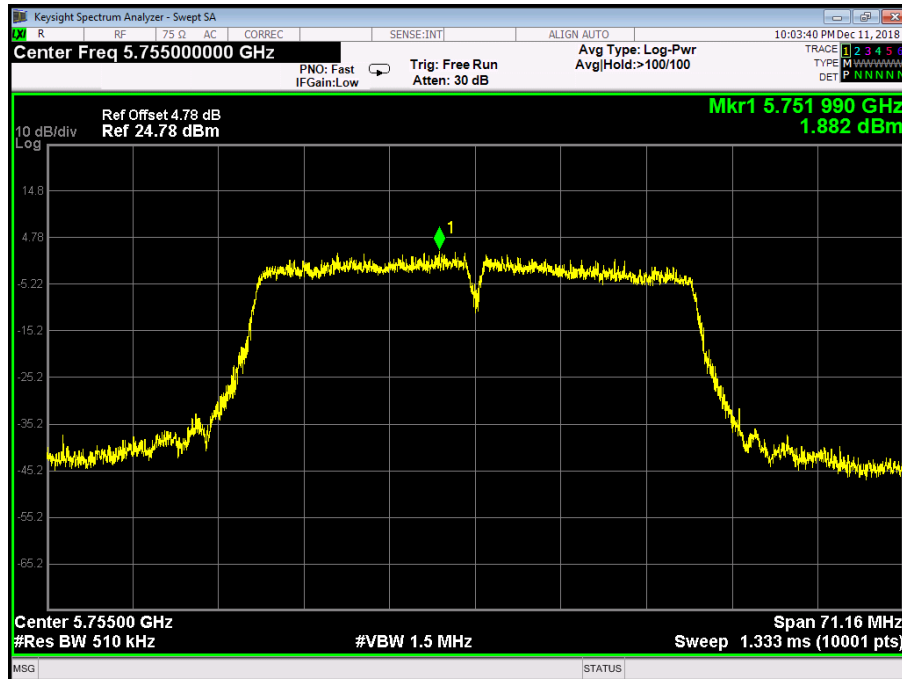
802.11 ac(VHT20) 5785 MHz



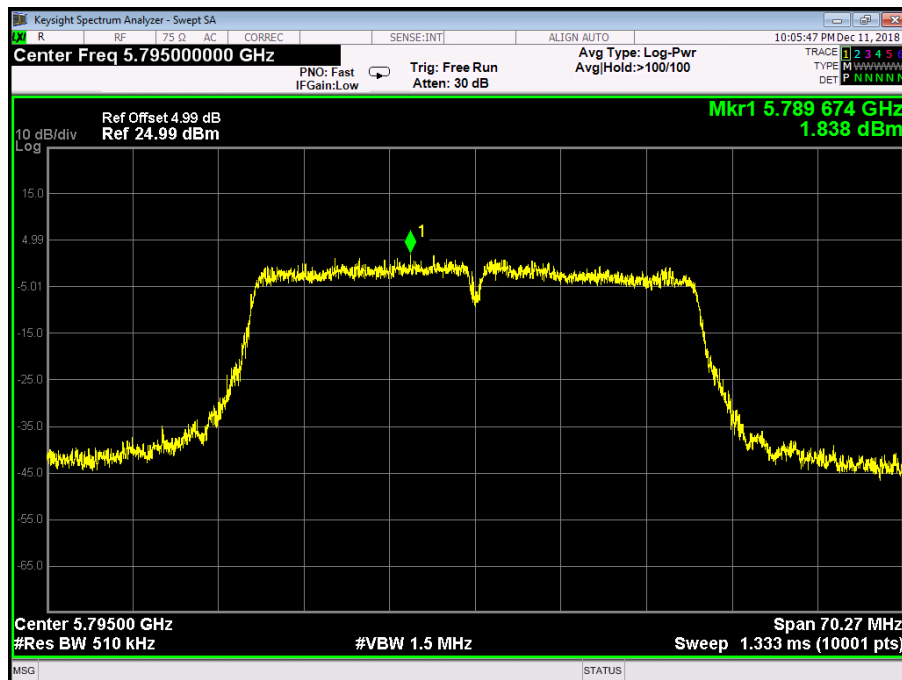
802.11 ac(VHT20) 5825 MHz



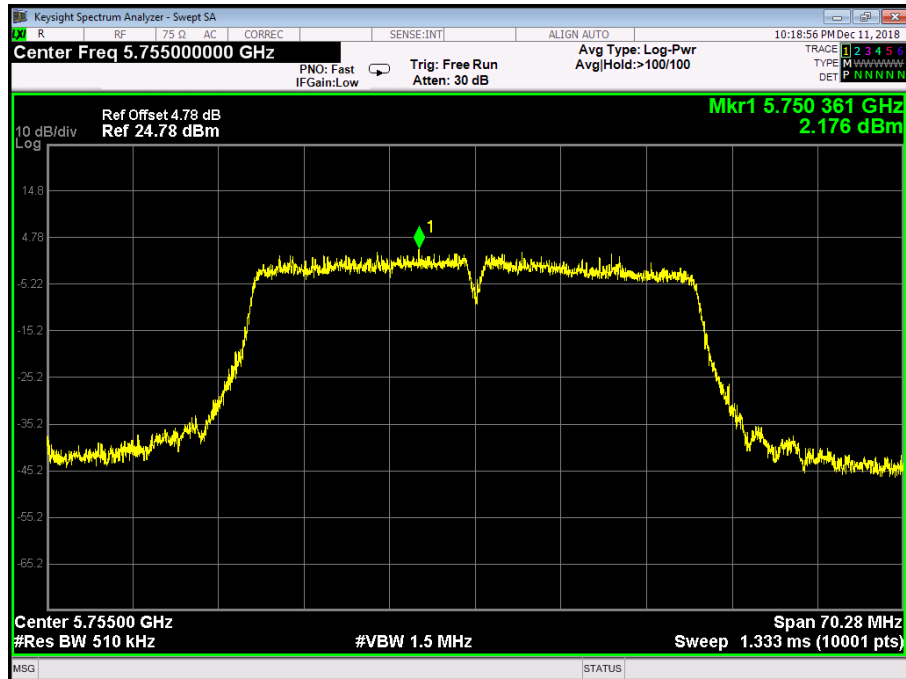
802.11 n(40) 5755 MHz



802.11 n(40) 5795 MHz



## 802.11 ac(VHT40) 5755 MHz



## 802.11 ac(VHT40) 5795 MHz



**Attachment G-- Frequency Stability Measurement Test Data**

ANT 0:

| 801.11a U-NII-1: 5180 MHz           |                             |
|-------------------------------------|-----------------------------|
| Voltage vs. Frequency Stability     |                             |
| Voltage (V)                         | Measurement Frequency (MHz) |
| 240                                 | 5179.9926                   |
| 120                                 | 5179.9954                   |
| 100                                 | 5179.9975                   |
| Max. Deviation (MHz)                | 0.0074                      |
| Max. Deviation (ppm)                | -1.42                       |
| Temperature vs. Frequency Stability |                             |
| Temperature (°C)                    | Measurement Frequency (MHz) |
| 0                                   | 5179.9928                   |
| 10                                  | 5179.9947                   |
| 20                                  | 5179.9966                   |
| 30                                  | 5179.9973                   |
| 40                                  | 5179.9978                   |
| 50                                  | 5179.9988                   |
| Max. Deviation (MHz)                | 0.0072                      |
| Max. Deviation (ppm)                | -1.38                       |
| Limit (ppm)                         | 20                          |
| Result                              | Pass                        |

Remark: Worst case at 802.11a U-NII-1 middle channel

## ANT 1:

| 801.11a U-NII-1: 5180 MHz           |                             |
|-------------------------------------|-----------------------------|
| Voltage vs. Frequency Stability     |                             |
| Voltage (V)                         | Measurement Frequency (MHz) |
| 240                                 | 5179.9936                   |
| 120                                 | 5179.9951                   |
| 100                                 | 5179.9947                   |
| Max. Deviation (MHz)                | 0.0064                      |
| Max. Deviation (ppm)                | -1.24                       |
| Temperature vs. Frequency Stability |                             |
| Temperature (°C)                    | Measurement Frequency (MHz) |
| 0                                   | 5179.9964                   |
| 10                                  | 5179.9946                   |
| 20                                  | 5179.9951                   |
| 30                                  | 5179.9941                   |
| 40                                  | 5179.9974                   |
| 50                                  | 5179.9986                   |
| Max. Deviation (MHz)                | 0.0059                      |
| Max. Deviation (ppm)                | -1.14                       |
| Limit (ppm)                         | 20                          |
| Result                              | Pass                        |

Remark: Worst case at 802.11a U-NII-1 middle channel

**ANT 0 & ANT 1:**

| 801.11a U-NII-3: 5745 MHz           |                             |
|-------------------------------------|-----------------------------|
| Voltage vs. Frequency Stability     |                             |
| Voltage (V)                         | Measurement Frequency (MHz) |
| 240                                 | 5745.0087                   |
| 120                                 | 5745.0096                   |
| 100                                 | 5745.0091                   |
| Max. Deviation (MHz)                | 0.0096                      |
| Max. Deviation (ppm)                | 1.67                        |
| Temperature vs. Frequency Stability |                             |
| Temperature (°C)                    | Measurement Frequency (MHz) |
| 0                                   | 5745.0041                   |
| 10                                  | 5745.0042                   |
| 20                                  | 5745.0019                   |
| 30                                  | 5745.0024                   |
| 40                                  | 5745.0034                   |
| 50                                  | 5745.0061                   |
| Max. Deviation (MHz)                | 0.0061                      |
| Max. Deviation (ppm)                | 1.06                        |
| Limit (ppm)                         | 20                          |
| Result                              | Pass                        |

Remark: Worst case at 802.11a U-NII-3 middle channel

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