

## Appendix F

### RF Test Data for 5.8G WLAN (Conducted Measurement)

Product Name: Smart Lock

Trade Mark: REVOLO

Test Model: WFP01

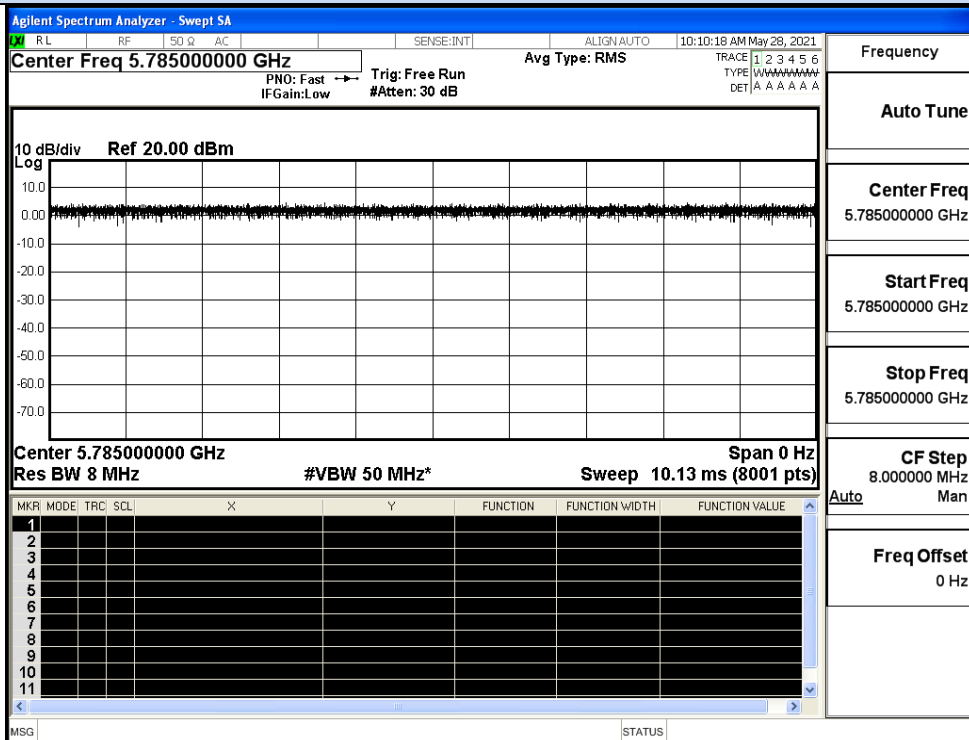
#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 23.7° C   |
| Relative Humidity: | 51.6%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Li    |
| Supervised by:     | Li Huan   |

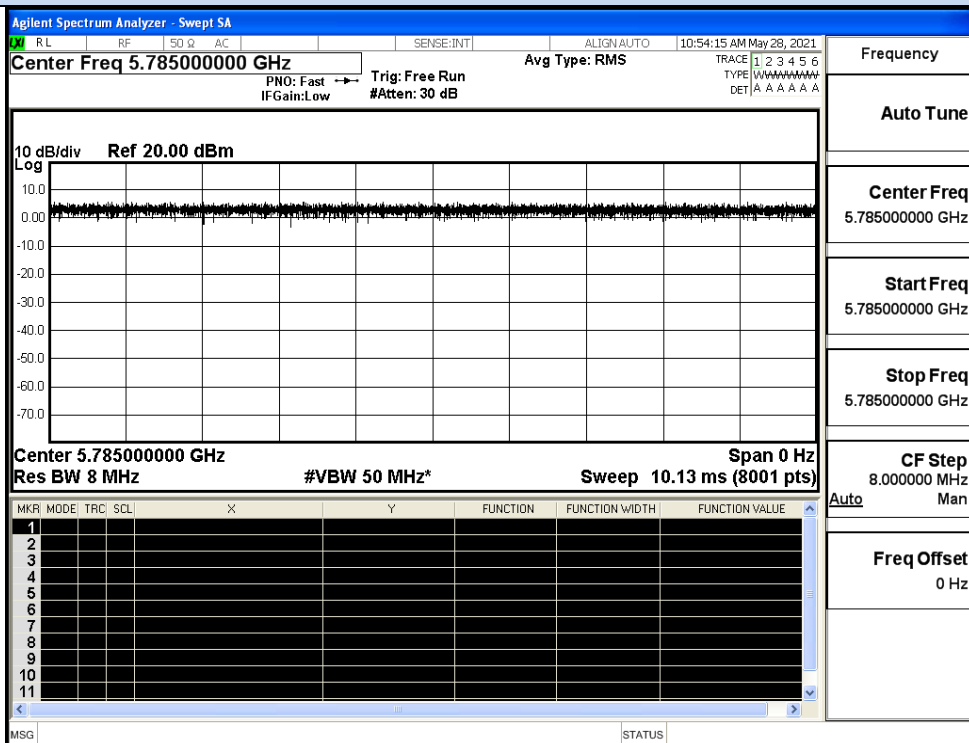
#### F.1 Duty Cycle

| Test Mode   | Test Frequency (MHz) | Duty Cycle (%) | 10log(1/x) Factor (dB) | 1/B Minimum VBW(KHz) |
|-------------|----------------------|----------------|------------------------|----------------------|
| 11A         | 5785                 | 100            | 0.00                   | 0.01                 |
| 11N20 SISO  | 5785                 | 100            | 0.00                   | 0.01                 |
| 11AC20 SISO | 5785                 | 100            | 0.00                   | 0.01                 |

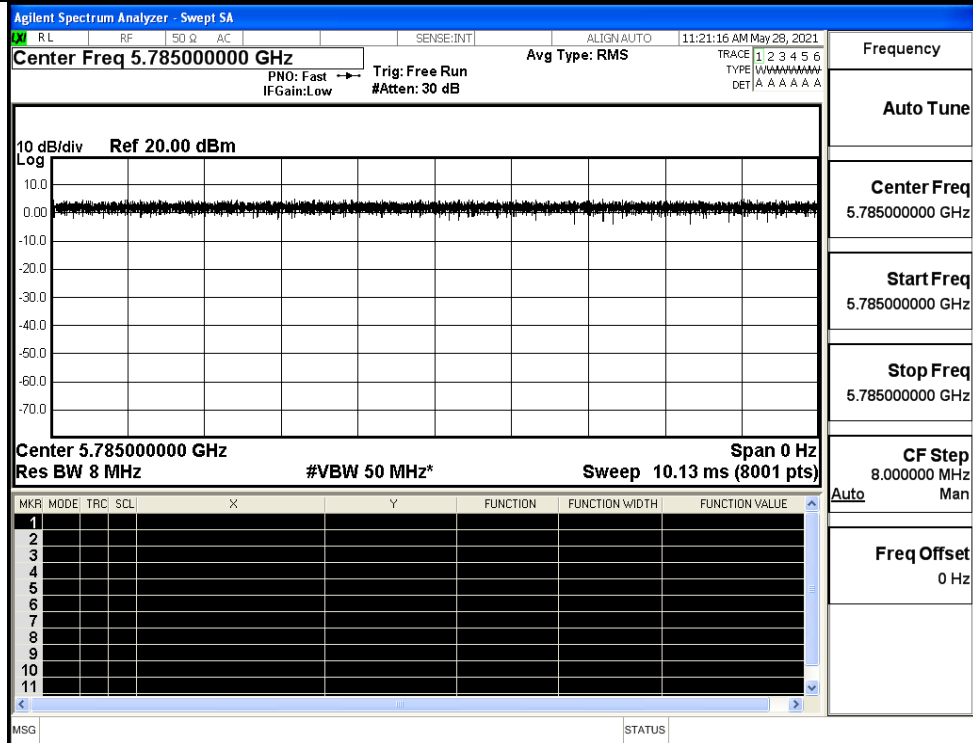
## On Time and Duty Cycle



## IEEE 802.11a



## IEEE 802.11n HT20



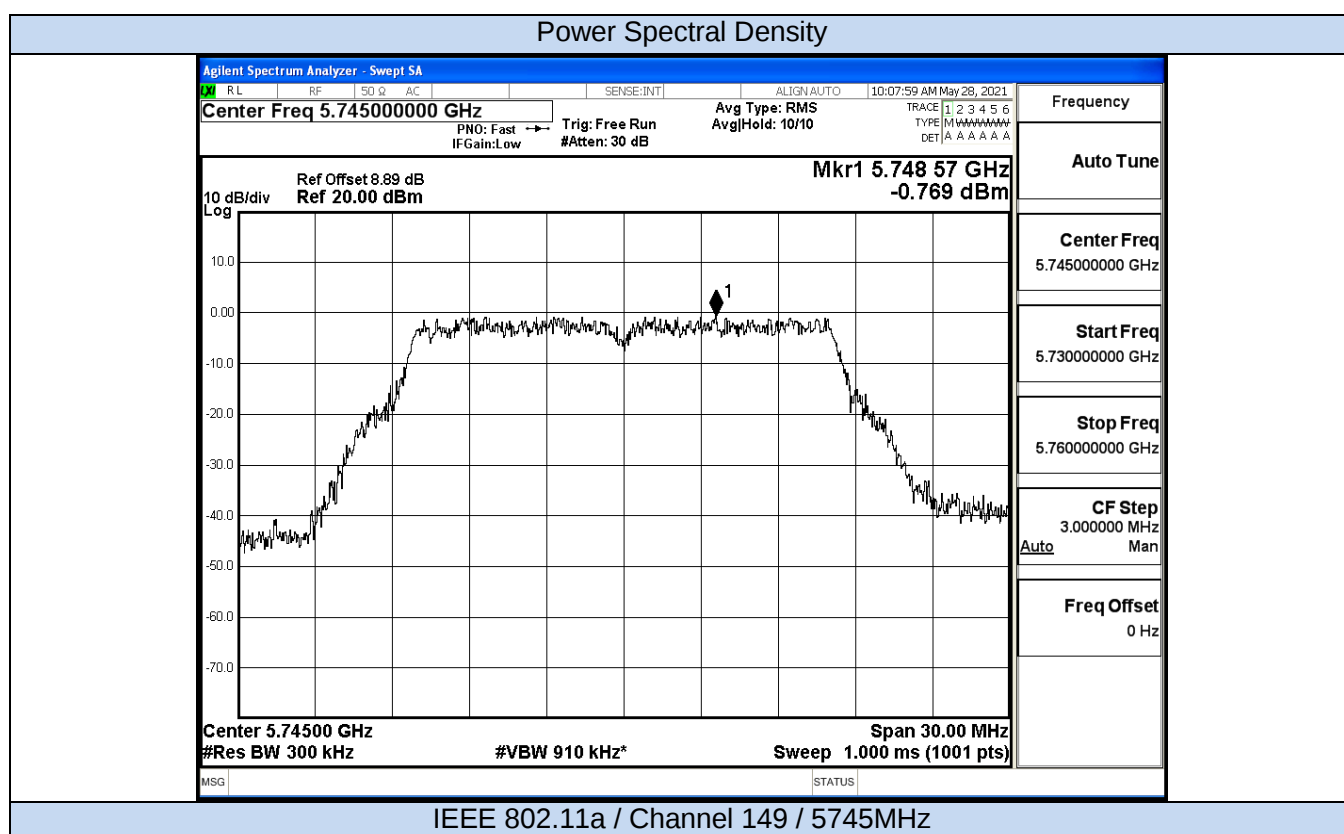
IEEE 802.11AC20

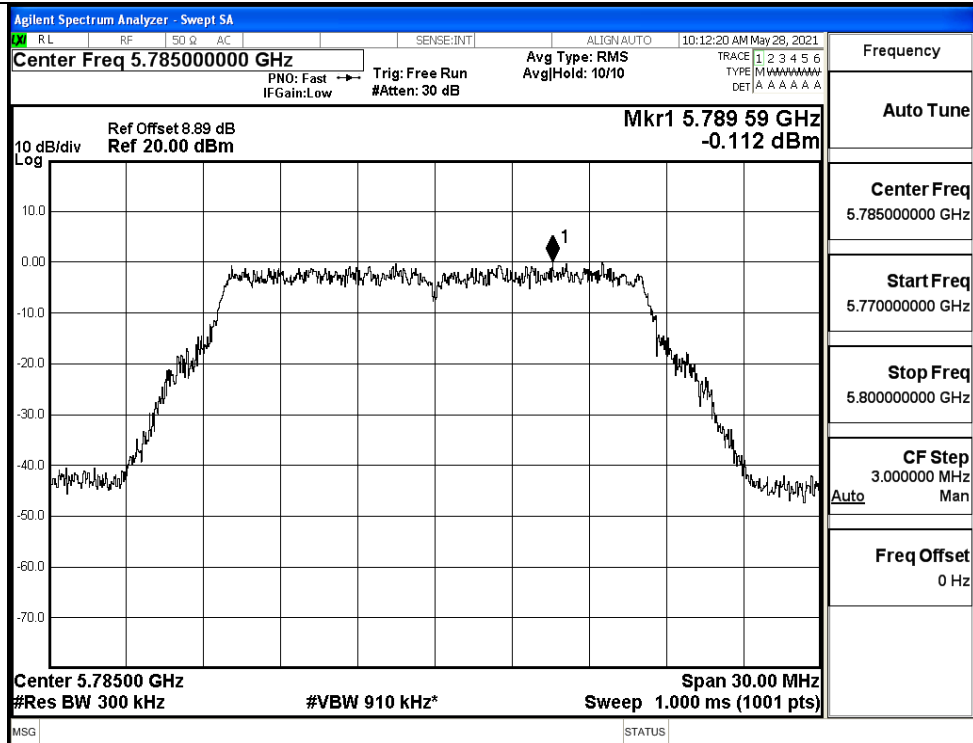
**F.2 Maximum Conduct Output Power**

| Test Mode   | Channel | Frequency (MHz) | AVG Conducted Power (dBm) | Duty Cycle Factor(dB) | Report Conducted Power(dBm) | Limit (dBm) | Verdict |
|-------------|---------|-----------------|---------------------------|-----------------------|-----------------------------|-------------|---------|
| 11A         | 149     | 5745            | 14.29                     | 0                     | 14.29                       | 30          | Pass    |
|             | 157     | 5785            | 14.49                     | 0                     | 14.49                       |             | Pass    |
|             | 165     | 5825            | 14.29                     | 0                     | 14.29                       |             | Pass    |
| 11N20 SISO  | 149     | 5745            | 14.08                     | 0                     | 14.08                       | 30          | Pass    |
|             | 157     | 5785            | 14.07                     | 0                     | 14.07                       |             | Pass    |
|             | 165     | 5825            | 14.33                     | 0                     | 14.33                       |             | Pass    |
| 11AC20 SISO | 149     | 5745            | 15.48                     | 0                     | 15.48                       | 30          | Pass    |
|             | 157     | 5785            | 15.27                     | 0                     | 15.27                       |             | Pass    |
|             | 165     | 5825            | 15.48                     | 0                     | 15.48                       |             | Pass    |

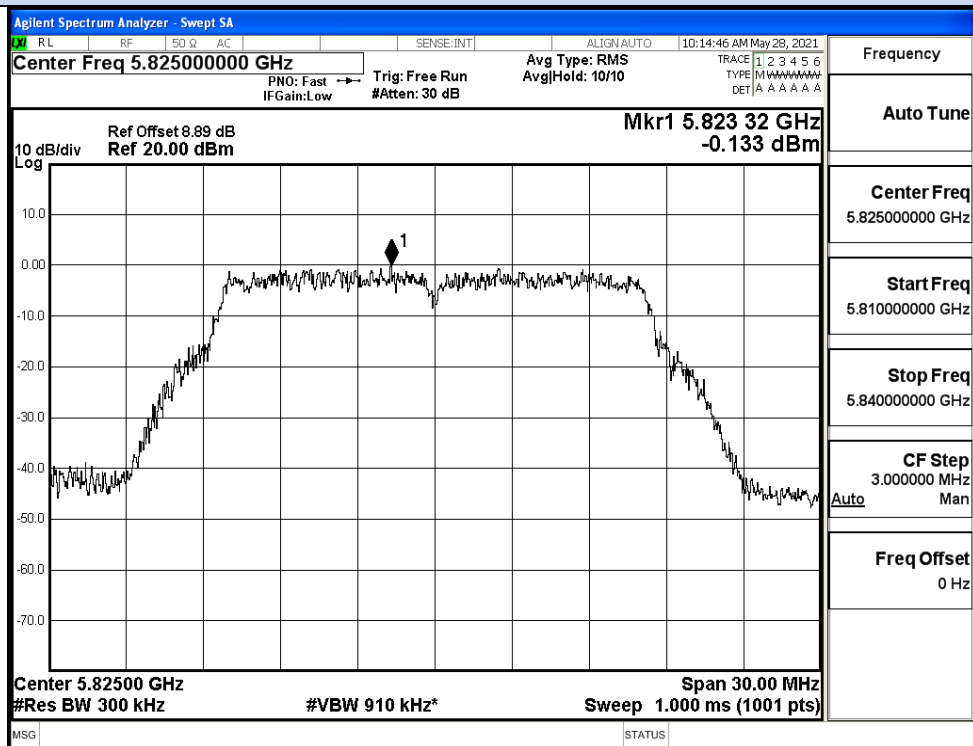
## F.3 Power Spectral Density

| Test Mode   | Channel | Frequency (MHz) | Power Density (dBm/300KHz) | Duty Cycle Factor (dB) | RBW Factor (dB) | Report Power Density (dBm/500KHz) | Limit (dBm/500KHz) | Verdict |
|-------------|---------|-----------------|----------------------------|------------------------|-----------------|-----------------------------------|--------------------|---------|
| 11A         | 149     | 5745            | -0.77                      | 0                      | 2.218           | 1.45                              | 30                 | Pass    |
|             | 157     | 5785            | -0.11                      | 0                      | 2.218           | 2.11                              |                    | Pass    |
|             | 165     | 5825            | -0.13                      | 0                      | 2.218           | 2.09                              |                    | Pass    |
| 11N20 SISO  | 149     | 5745            | 0.14                       | 0                      | 2.218           | 2.35                              | 30                 | Pass    |
|             | 157     | 5785            | 0.18                       | 0                      | 2.218           | 2.40                              |                    | Pass    |
|             | 165     | 5825            | 0.28                       | 0                      | 2.218           | 2.50                              |                    | Pass    |
| 11AC20 SISO | 149     | 5745            | 0.90                       | 0                      | 2.218           | 3.12                              | 30                 | Pass    |
|             | 157     | 5785            | 0.31                       | 0                      | 2.218           | 2.53                              |                    | Pass    |
|             | 165     | 5825            | 2.14                       | 0                      | 2.218           | 4.36                              |                    | Pass    |



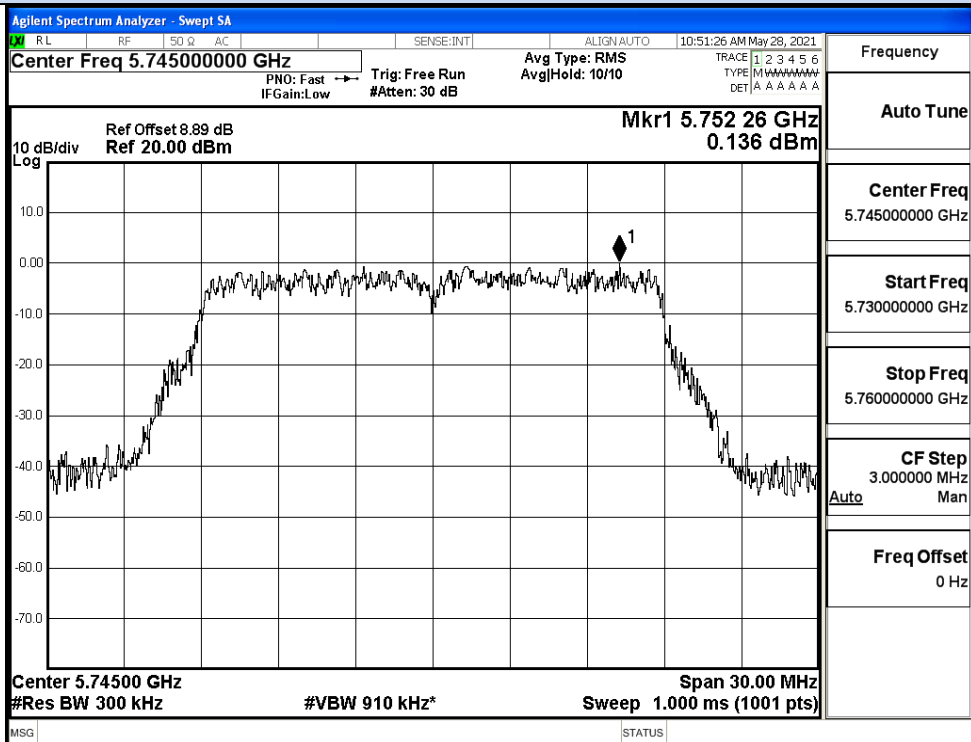


IEEE 802.11na / Channel 157 / 5785MHz

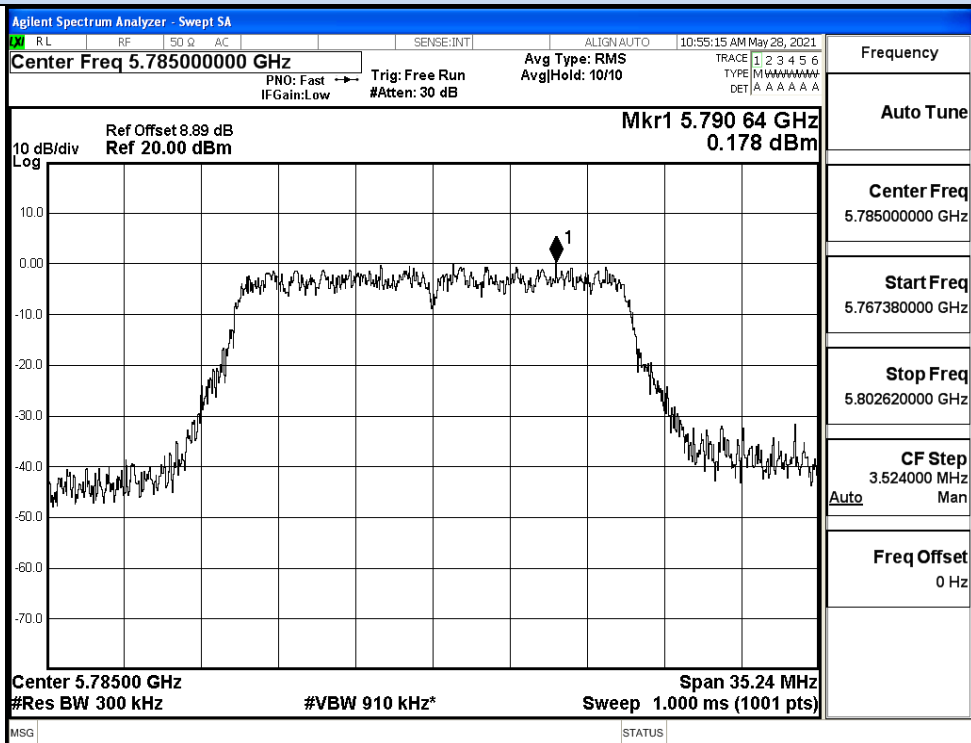


IEEE 802.11na / Channel 165 / 5825MHz

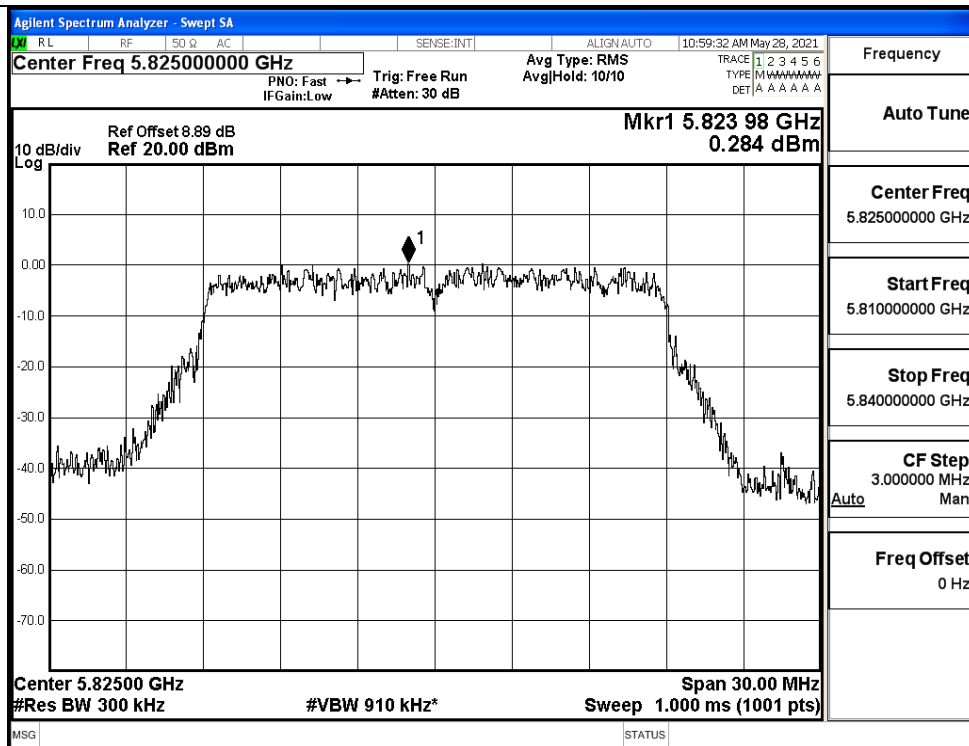
## Power Spectral Density



## IEEE 802.11n20 / Channel 149 / 5745MHz

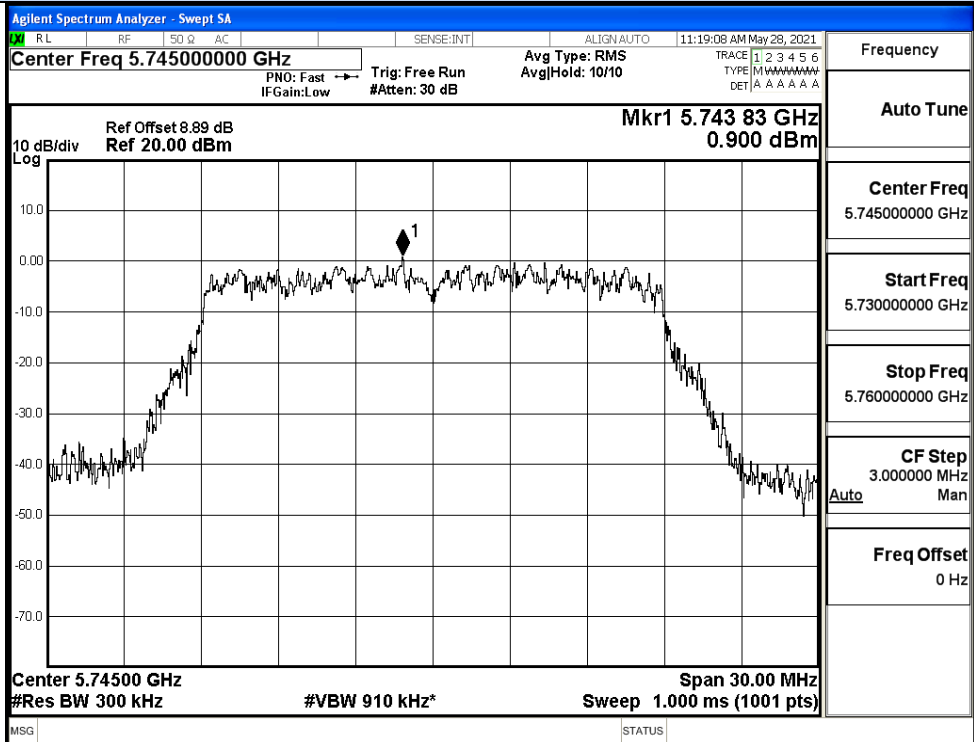


## IEEE 802.11n20 / Channel 157 / 5785MHz

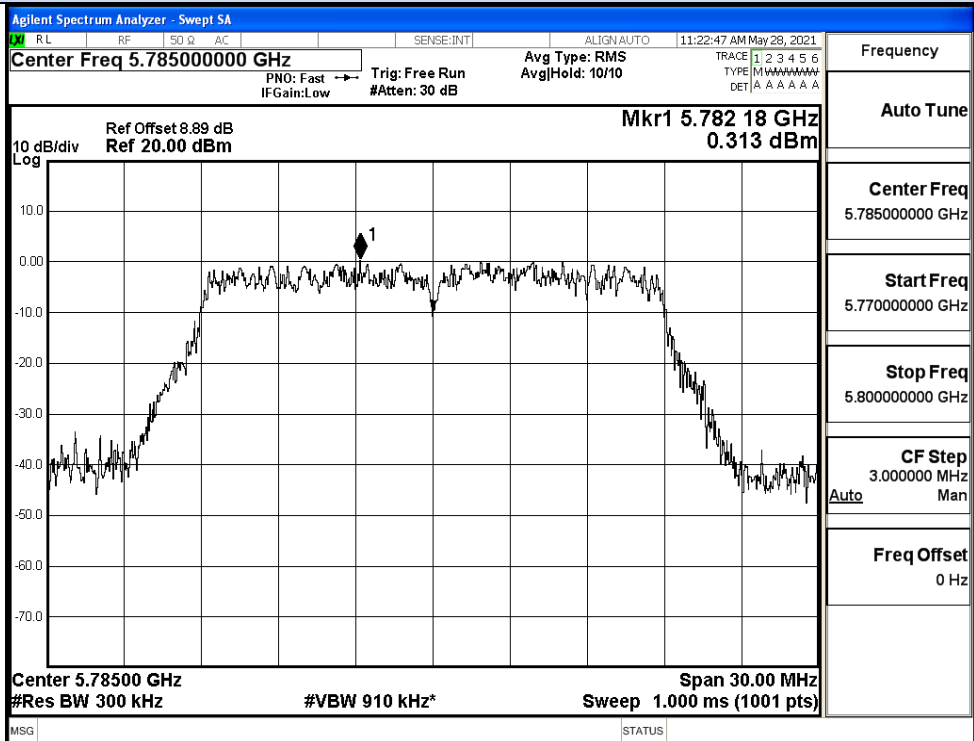


IEEE 802.11n20 / Channel 165 / 5825MHz

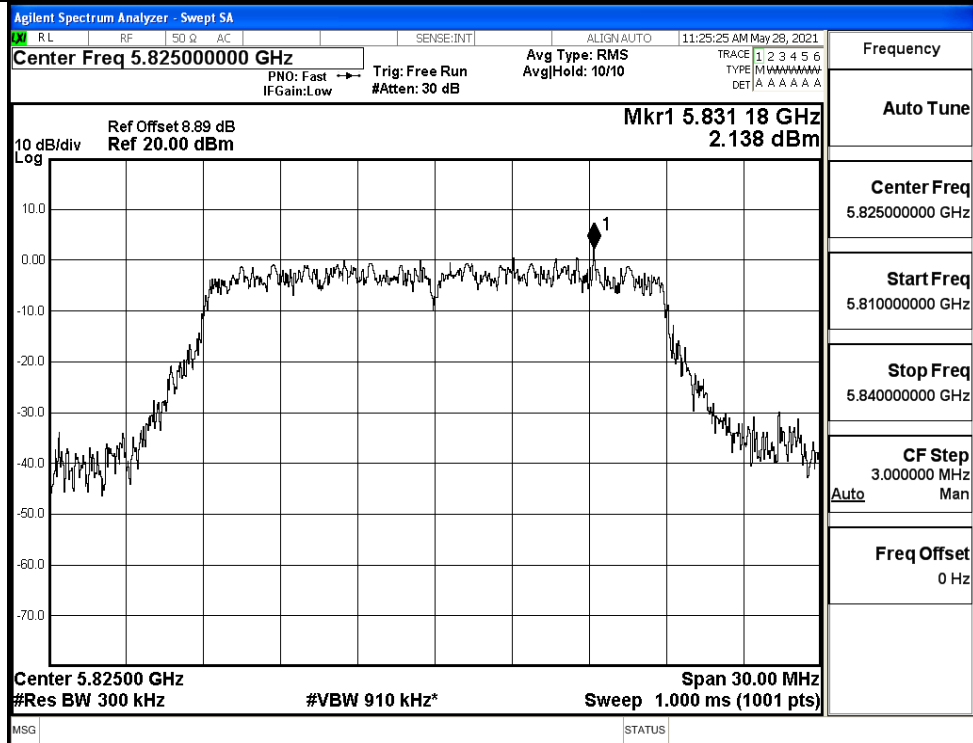
## Power Spectral Density



IEEE 802.11ac20 / Channel 149 / 5745MHz



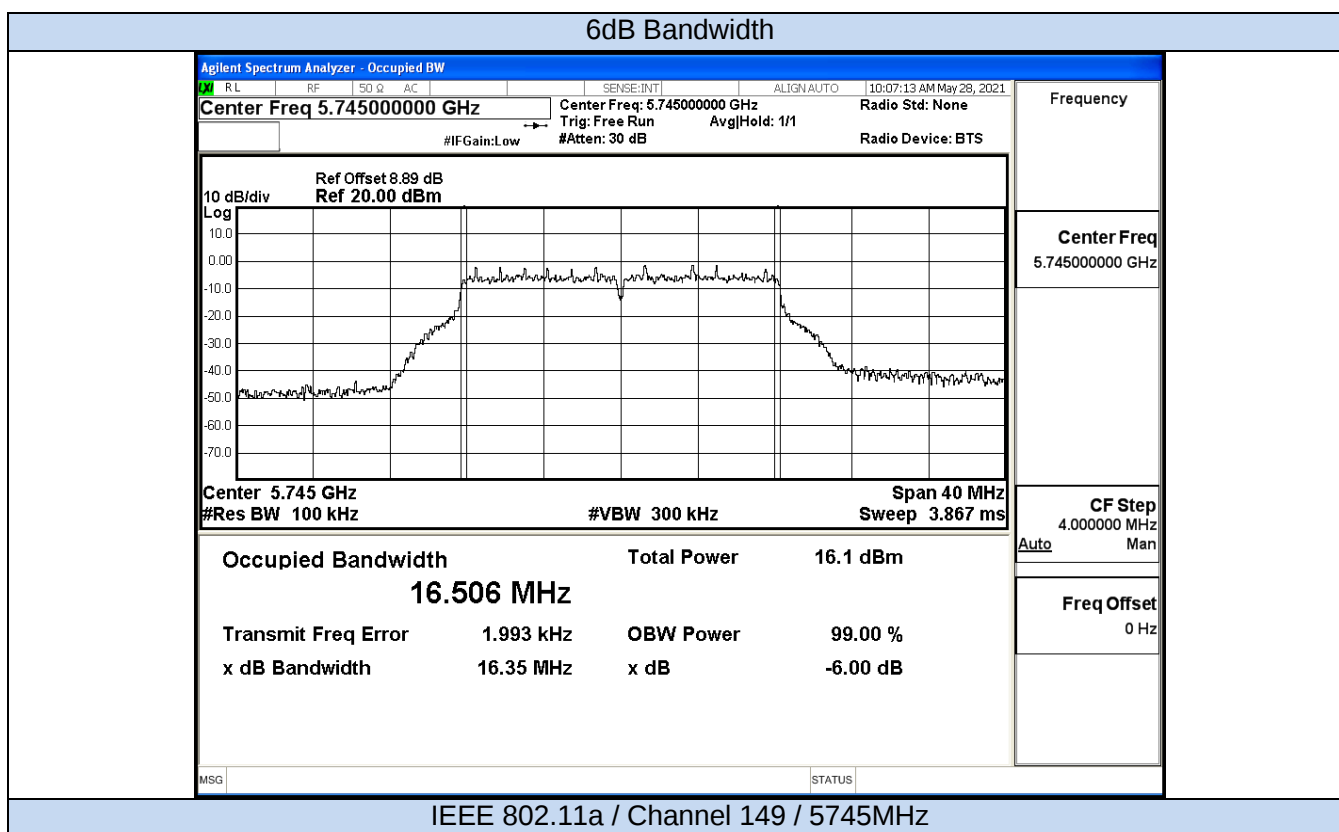
IEEE 802.11ac20 / Channel 157 / 5785MHz

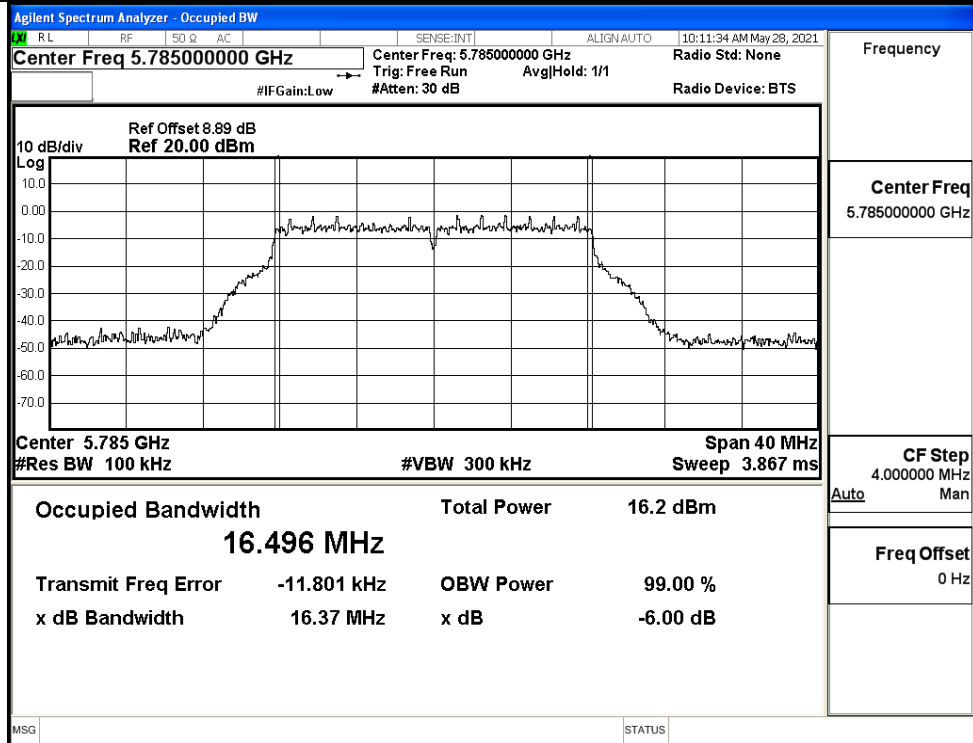


IEEE 802.11ac20 / Channel 165 / 5825MHz

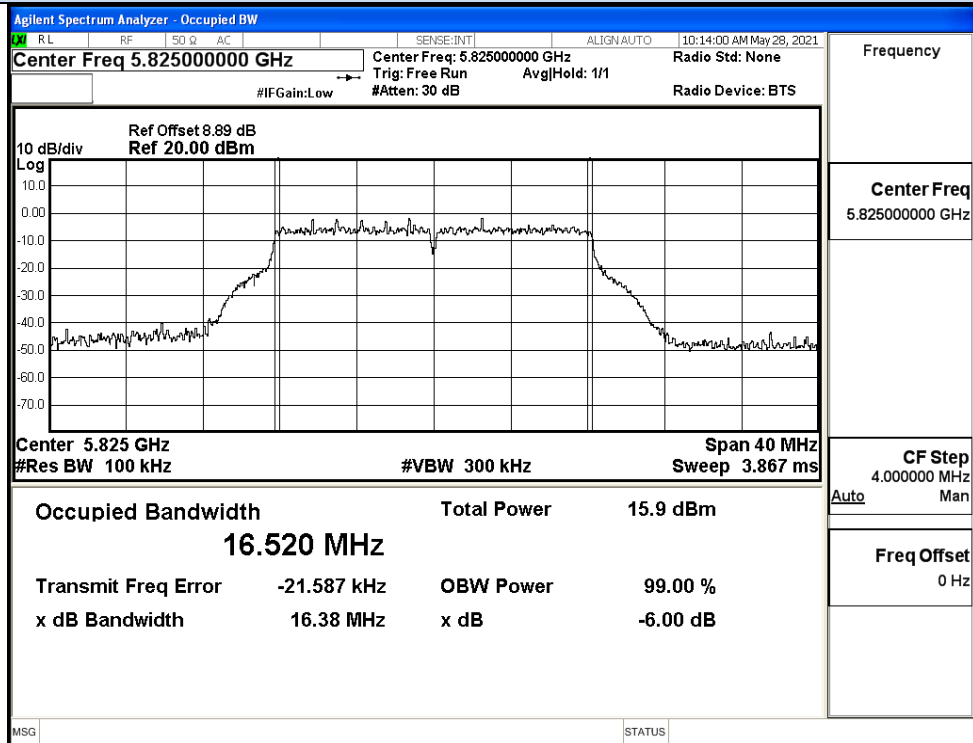
## F.4 Emission Bandwidth

| Test Mode  | Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | Limit (MHz) | Verdict |
|------------|---------|-----------------|---------------------|-------------|---------|
| 11A        | 149     | 5745            | 16.35               | >=0.5       | Pass    |
|            | 157     | 5785            | 16.37               |             | Pass    |
|            | 165     | 5825            | 16.38               |             | Pass    |
| 11N20 SISO | 149     | 5745            | 17.73               | >=0.5       | Pass    |
|            | 157     | 5785            | 17.62               |             | Pass    |
|            | 165     | 5825            | 17.61               |             | Pass    |
| 11AC20SISO | 149     | 5745            | 17.61               | >=0.5       | Pass    |
|            | 157     | 5785            | 17.61               |             | Pass    |
|            | 165     | 5825            | 17.69               |             | Pass    |



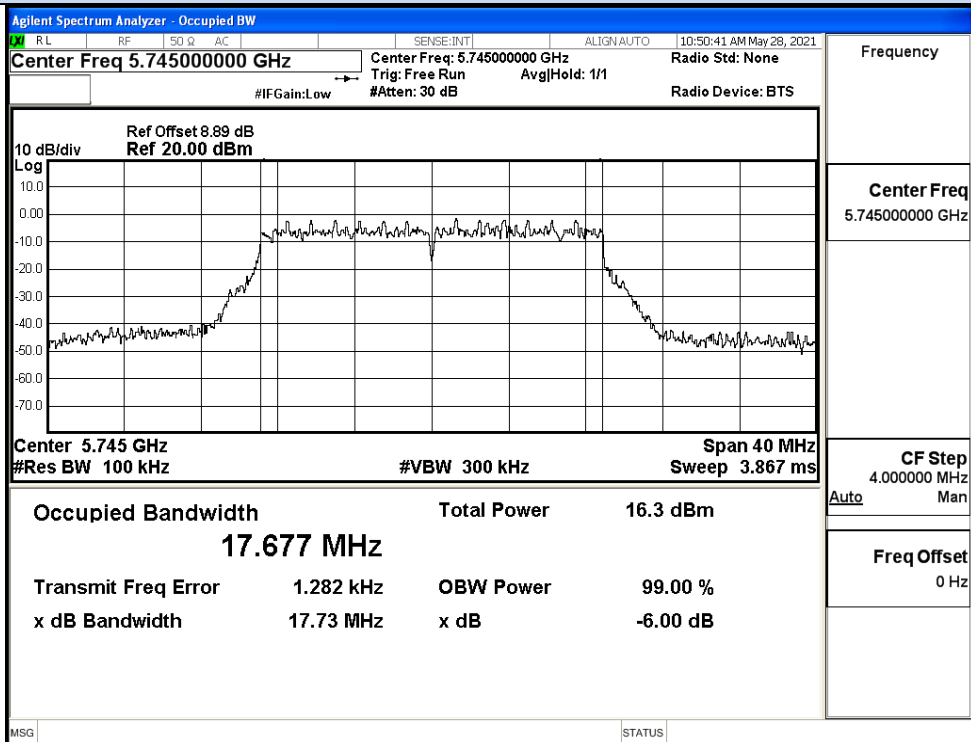


IEEE 802.11a / Channel 157 / 5785MHz

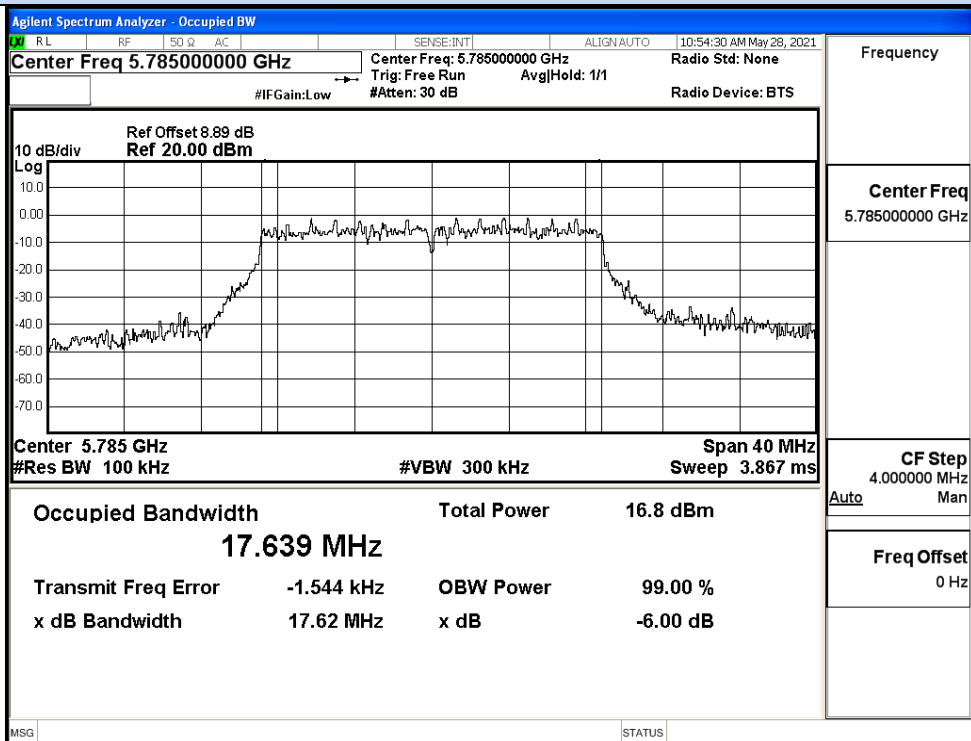


IEEE 802.11a / Channel 165 / 5825MHz

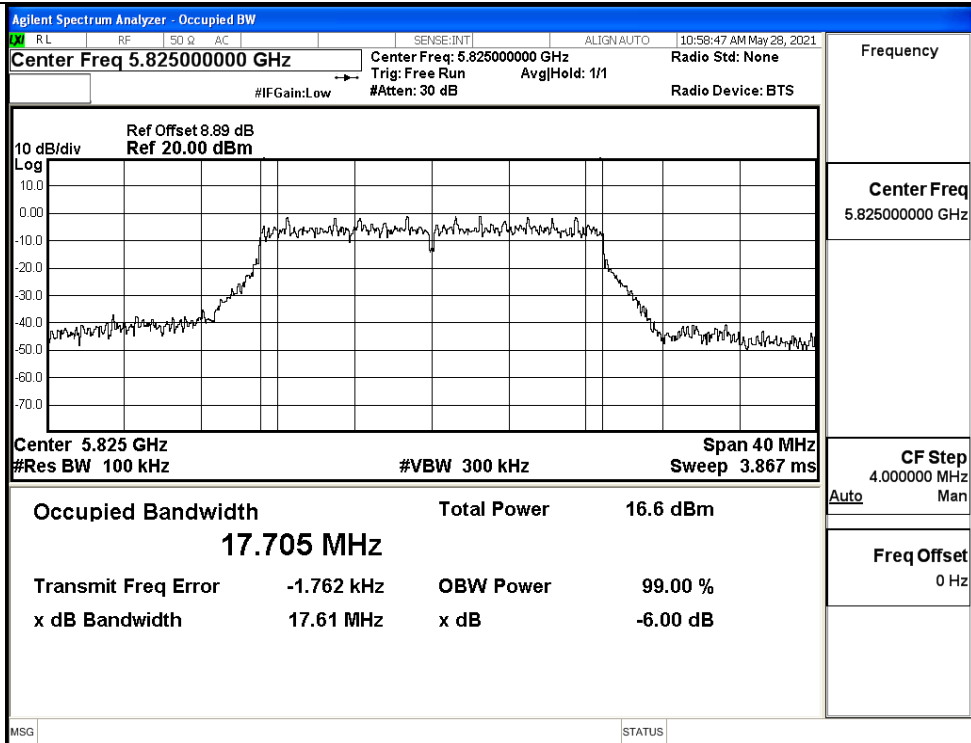
## 6dB Bandwidth



## IEEE 802.11n20 / Channel 149 / 5745MHz

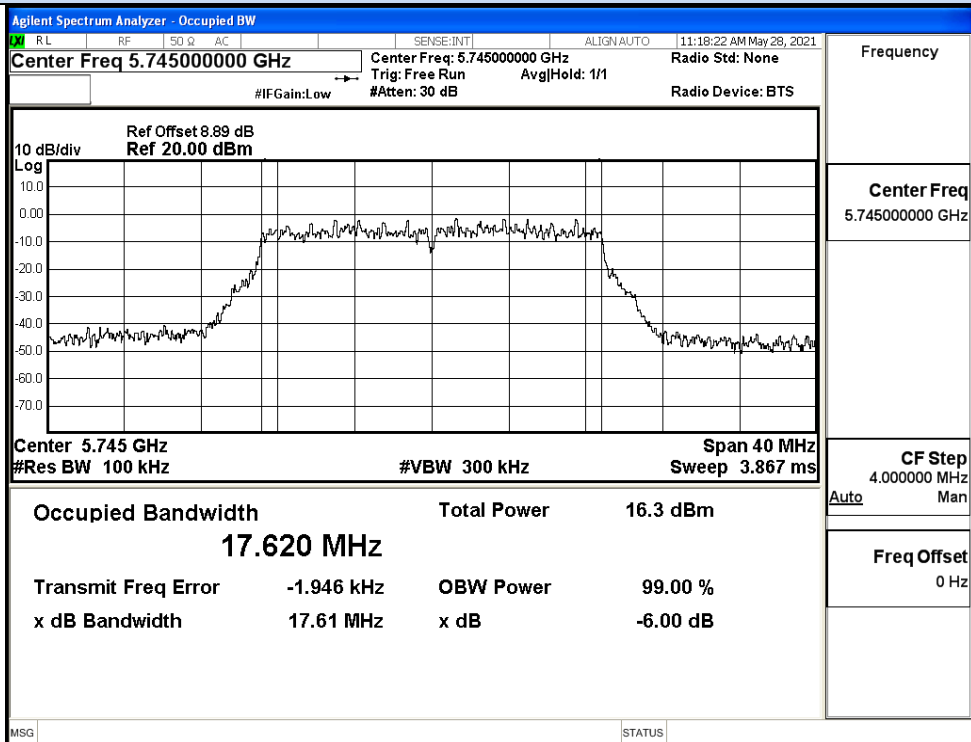


## IEEE 802.11n20 / Channel 157 / 5785MHz

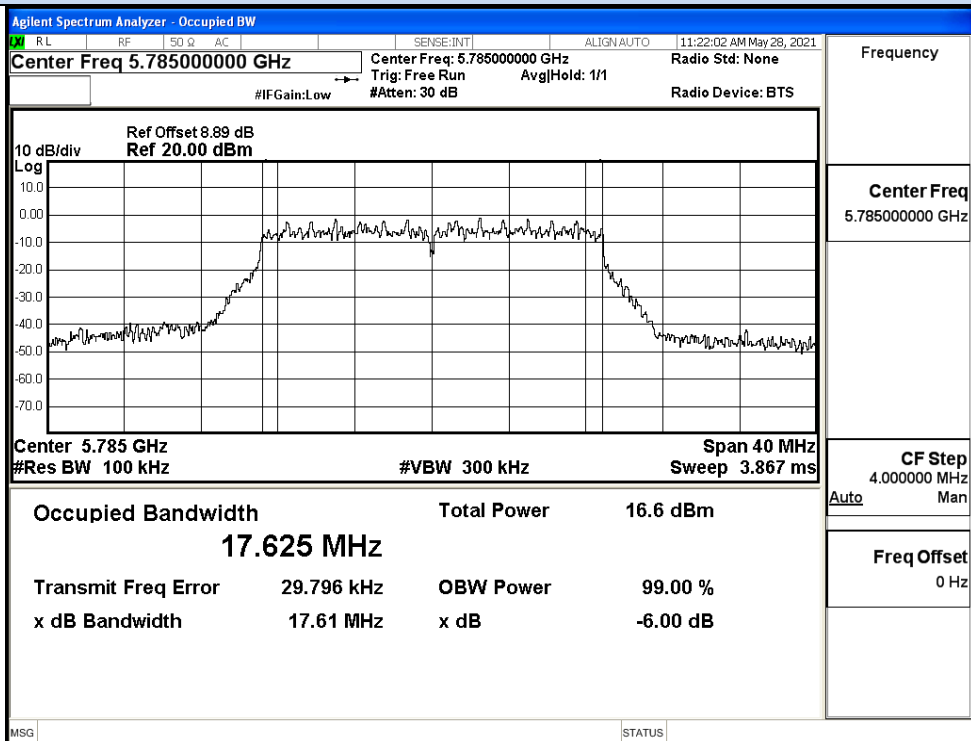


IEEE 802.11n20 / Channel 165 / 5825MHz

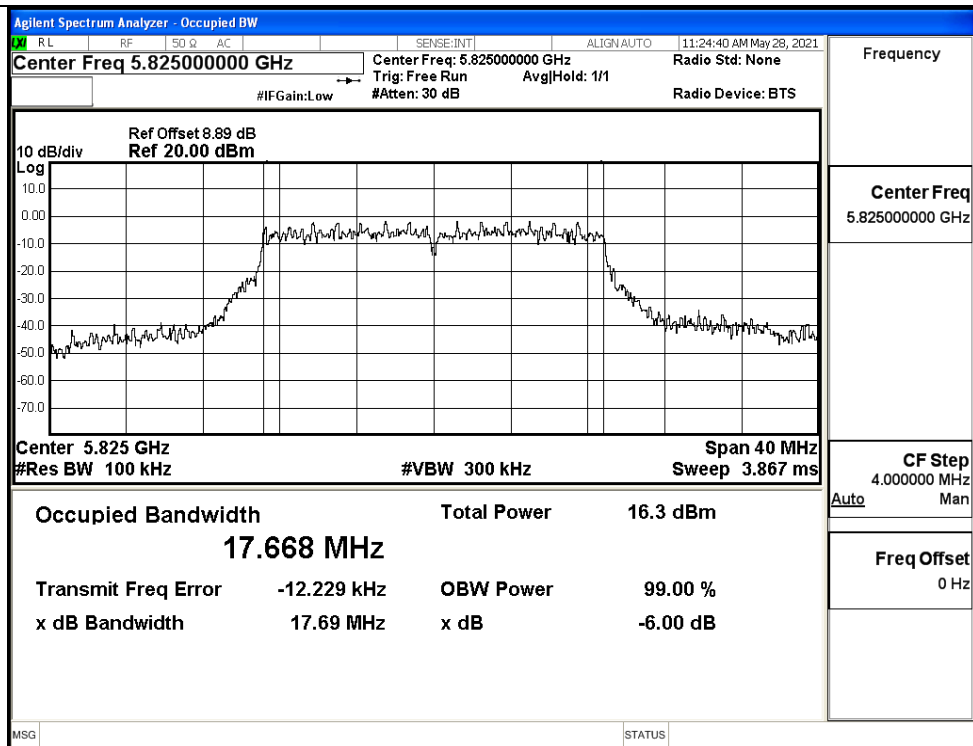
## 26dB Bandwidth



## IEEE 802.11ac20 / Channel 149 / 5745MHz



## IEEE 802.11ac20 / Channel 157/ 5785MHz



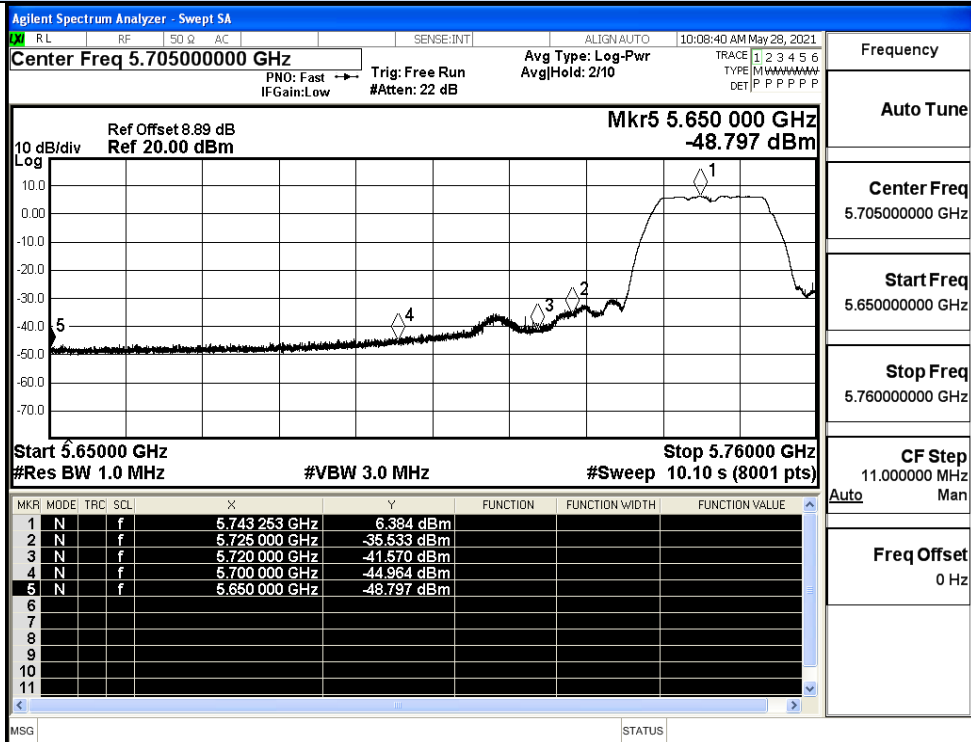
IEEE 802.11ac20 / Channel 165 / 5825MHz

## F.5 Undesirable Emissions Measurement

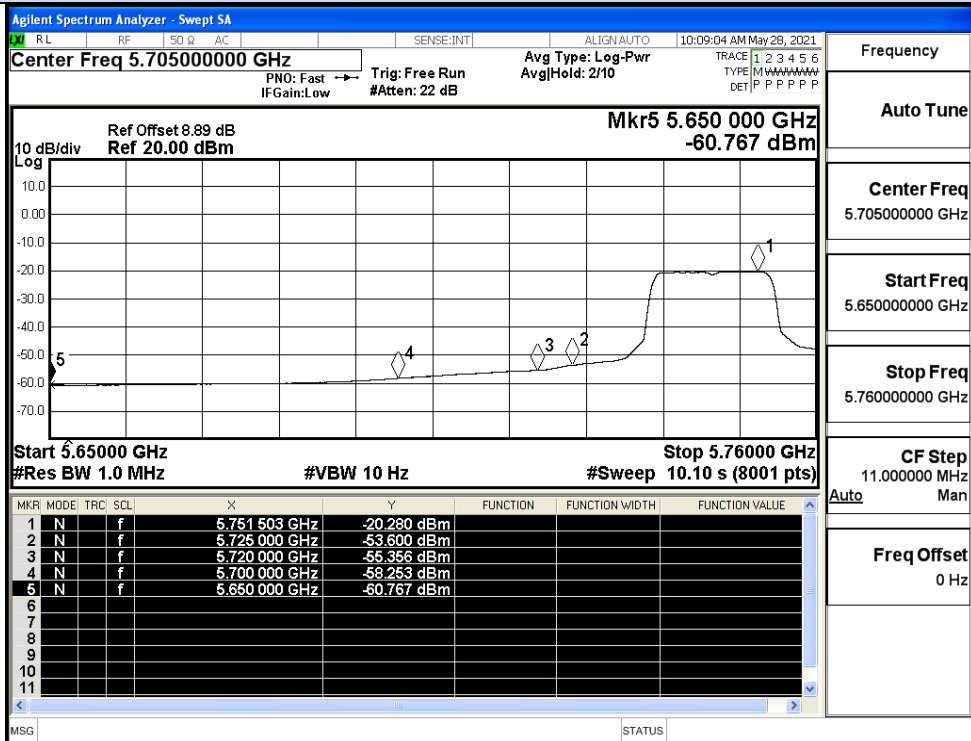
| Test Mode  | Channel | Frequency (MHz) | Conducted Power (dBm) | Antenna Gain (dBi) | EIRP (dBm/MHz) | Detector | Limit (dBm/MHz) | Verdict |
|------------|---------|-----------------|-----------------------|--------------------|----------------|----------|-----------------|---------|
| 11A        | 149     | 5650.0          | -48.80                | 2.00               | -46.8          | Peak     | -27.0           | Pass    |
|            |         | 5650.0          | -60.77                | 2.00               | -58.77         | Average  | -27.0           | Pass    |
|            |         | 5700.0          | -44.96                | 2.00               | -42.96         | Peak     | 10              | Pass    |
|            |         | 5700.0          | -58.25                | 2.00               | -56.25         | Average  | 10              | Pass    |
|            |         | 5720.0          | -41.57                | 2.00               | -39.57         | Peak     | 15.6            | Pass    |
|            |         | 5720.0          | -55.36                | 2.00               | -53.36         | Average  | 15.6            | Pass    |
|            |         | 5725.0          | -35.53                | 2.00               | -33.53         | Peak     | 27.0            | Pass    |
|            |         | 5725.0          | -53.60                | 2.00               | -51.6          | Average  | 27.0            | Pass    |
|            | 165     | 5850.0          | -41.02                | 2.00               | -39.02         | Peak     | 27.0            | Pass    |
|            |         | 5850.0          | -54.51                | 2.00               | -52.51         | Average  | 27.0            | Pass    |
|            |         | 5855.0          | -41.71                | 2.00               | -39.71         | Peak     | 15.6            | Pass    |
|            |         | 5855.0          | -55.23                | 2.00               | -53.23         | Average  | 15.6            | Pass    |
|            |         | 5875.0          | -44.14                | 2.00               | -42.14         | Peak     | 10              | Pass    |
|            |         | 5875.0          | -58.43                | 2.00               | -56.43         | Average  | 10              | Pass    |
|            |         | 5925.0          | -48.55                | 2.00               | -46.55         | Peak     | -27.0           | Pass    |
|            |         | 5925.0          | -60.46                | 2.00               | -58.46         | Average  | -27.0           | Pass    |
| 11N20 SISO | 149     | 5650.0          | -48.13                | 2.00               | -46.13         | Peak     | -27.0           | Pass    |
|            |         | 5650.0          | -60.97                | 2.00               | -58.97         | Average  | -27.0           | Pass    |
|            |         | 5700.0          | -44.24                | 2.00               | -42.24         | Peak     | 10              | Pass    |
|            |         | 5700.0          | -58.07                | 2.00               | -56.07         | Average  | 10              | Pass    |
|            |         | 5720.0          | -37.86                | 2.00               | -35.86         | Peak     | 15.6            | Pass    |
|            |         | 5720.0          | -59.58                | 2.00               | -57.58         | Average  | 15.6            | Pass    |
|            |         | 5725.0          | -30.71                | 2.00               | -28.71         | Peak     | 27.0            | Pass    |
|            |         | 5725.0          | -57.08                | 2.00               | -55.08         | Average  | 27.0            | Pass    |
|            | 165     | 5850.0          | -38.68                | 2.00               | -36.68         | Peak     | 27.0            | Pass    |
|            |         | 5850.0          | -58.12                | 2.00               | -56.12         | Average  | 27.0            | Pass    |
|            |         | 5855.0          | -41.66                | 2.00               | -39.66         | Peak     | 15.6            | Pass    |
|            |         | 5855.0          | -58.43                | 2.00               | -56.43         | Average  | 15.6            | Pass    |
|            |         | 5875.0          | -46.60                | 2.00               | -44.6          | Peak     | 10              | Pass    |
|            |         | 5875.0          | -59.64                | 2.00               | -57.64         | Average  | 10              | Pass    |
|            |         | 5925.0          | -48.69                | 2.00               | -46.69         | Peak     | -27.0           | Pass    |
|            |         | 5925.0          | -60.64                | 2.00               | -58.64         | Average  | -27.0           | Pass    |

| Test Mode   | Channel | Frequency (MHz) | Conducted Power (dBm) | Antenna Gain (dBi) | EIRP (dBm/MHz) | Detector | Limit (dBm/MHz) | Verdict |
|-------------|---------|-----------------|-----------------------|--------------------|----------------|----------|-----------------|---------|
| 11AC20 SISO | 149     | 5650.0          | -48.12                | 2.00               | -46.12         | Peak     | -27.0           | Pass    |
|             |         | 5650.0          | -60.99                | 2.00               | -58.99         | Average  | -27.0           | Pass    |
|             |         | 5700.0          | -45.50                | 2.00               | -43.5          | Peak     | 10              | Pass    |
|             |         | 5700.0          | -58.58                | 2.00               | -56.58         | Average  | 10              | Pass    |
|             |         | 5720.0          | -39.20                | 2.00               | -37.2          | Peak     | 15.6            | Pass    |
|             |         | 5720.0          | -59.85                | 2.00               | -57.85         | Average  | 15.6            | Pass    |
|             |         | 5725.0          | -32.59                | 2.00               | -30.59         | Peak     | 27.0            | Pass    |
|             |         | 5725.0          | -57.69                | 2.00               | -55.69         | Average  | 27.0            | Pass    |
|             | 165     | 5850.0          | -34.93                | 2.00               | -32.93         | Peak     | 27.0            | Pass    |
|             |         | 5850.0          | -58.33                | 2.00               | -56.33         | Average  | 27.0            | Pass    |
|             |         | 5855.0          | -42.63                | 2.00               | -40.63         | Peak     | 15.6            | Pass    |
|             |         | 5855.0          | -58.68                | 2.00               | -56.68         | Average  | 15.6            | Pass    |
|             |         | 5875.0          | -46.92                | 2.00               | -44.92         | Peak     | 10              | Pass    |
|             |         | 5875.0          | -59.77                | 2.00               | -57.77         | Average  | 10              | Pass    |
|             |         | 5925.0          | -48.74                | 2.00               | -46.74         | Peak     | -27.0           | Pass    |
|             |         | 5925.0          | -60.67                | 2.00               | -58.67         | Average  | -27.0           | Pass    |

## Undesirable Emissions Measurement

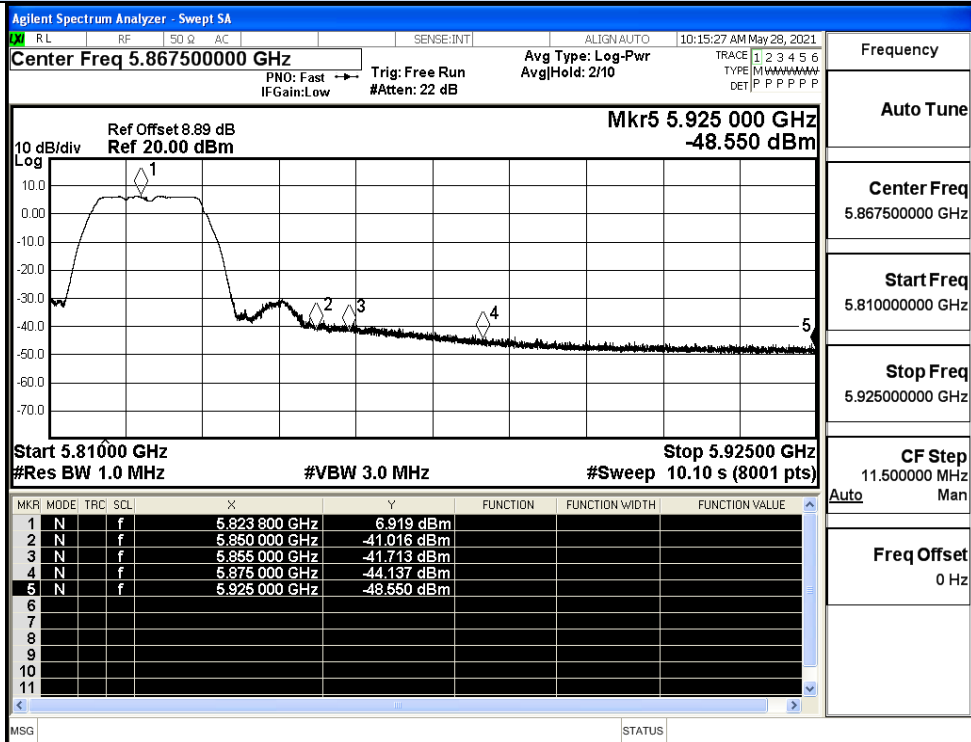


## IEEE 802.11a / Channel 149 / 5745MHz / Peak

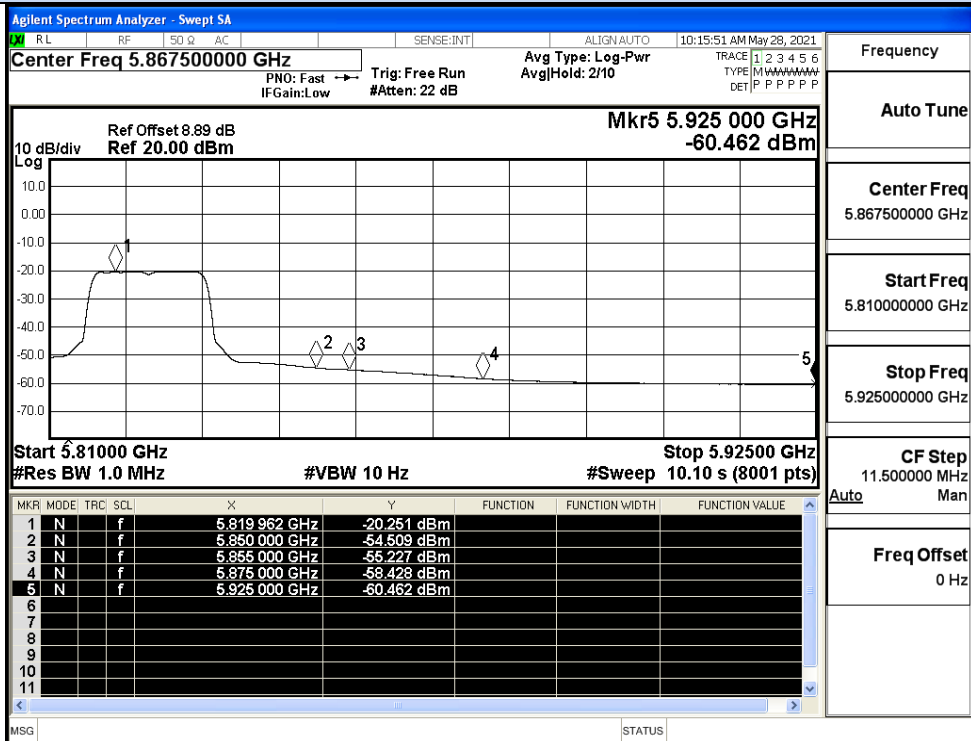


## IEEE 802.11a / Channel 148 / 5745MHz / Average

## Undesirable Emissions Measurement

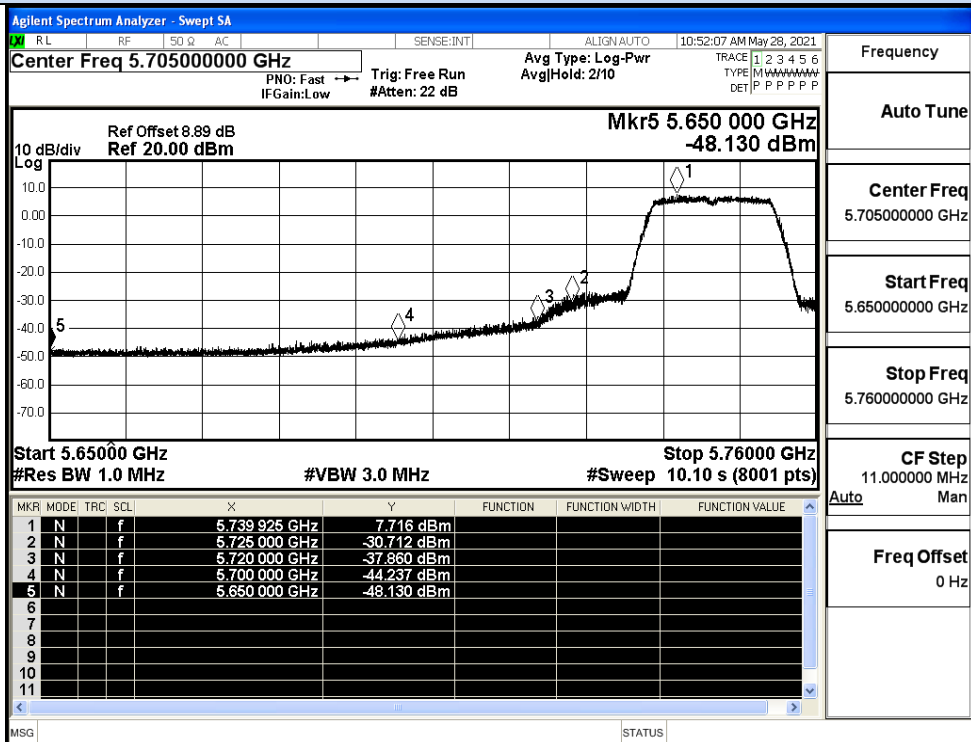


## IEEE 802.11a / Channel 165 / 5825MHz / Peak

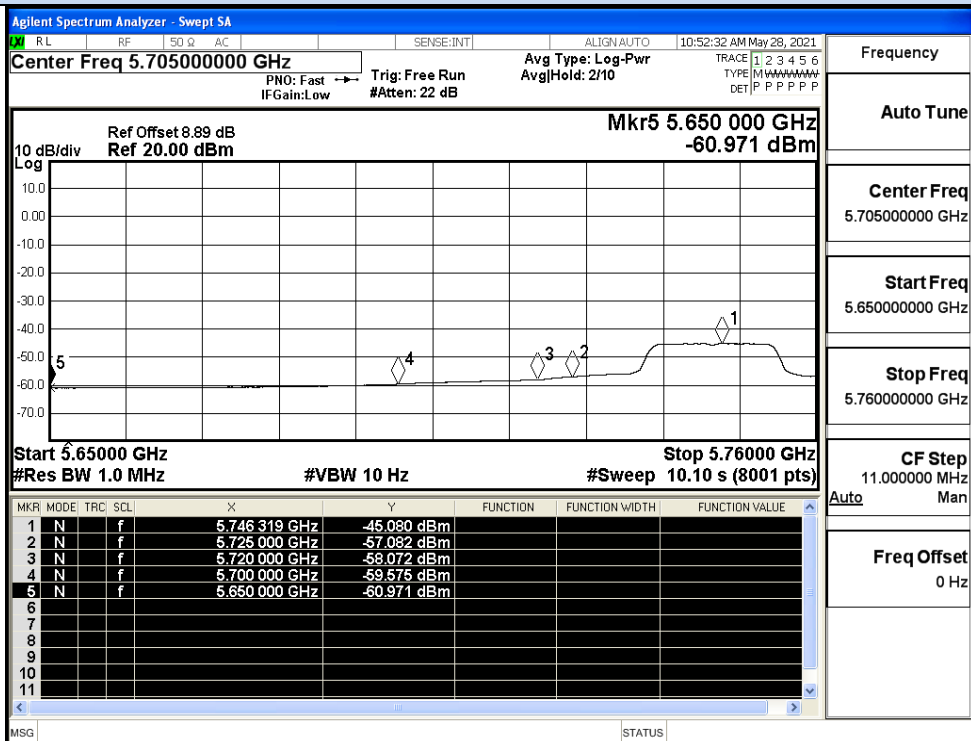


## IEEE 802.11a / Channel 165 / 5825MHz / Average

## Undesirable Emissions Measurement

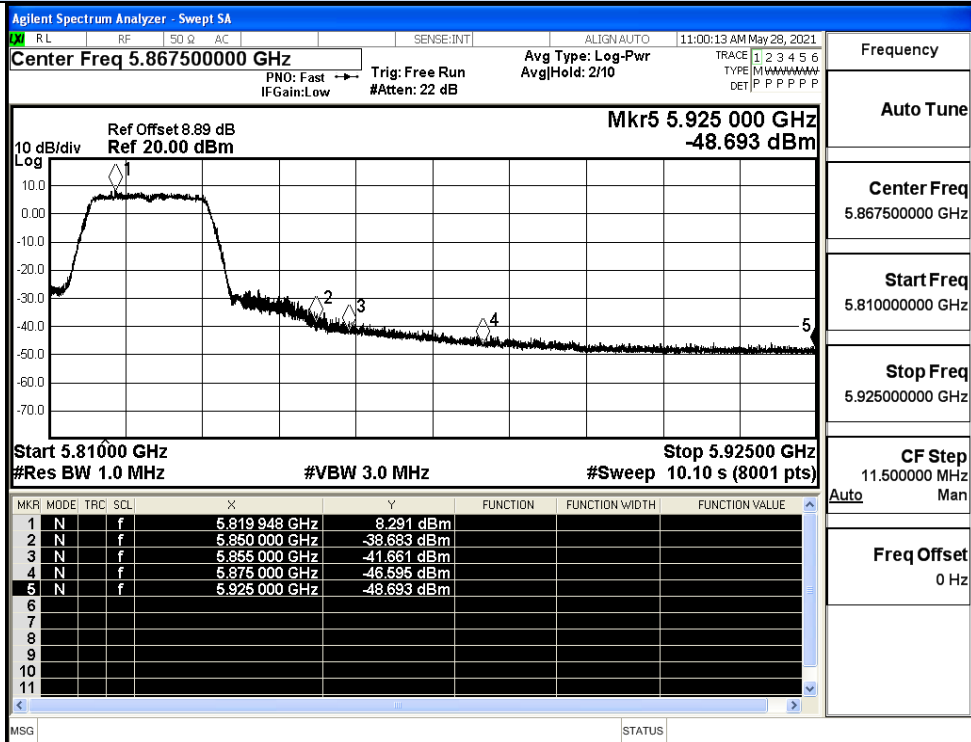


## IEEE 802.11n20 / Channel 149 / 5745MHz / Peak

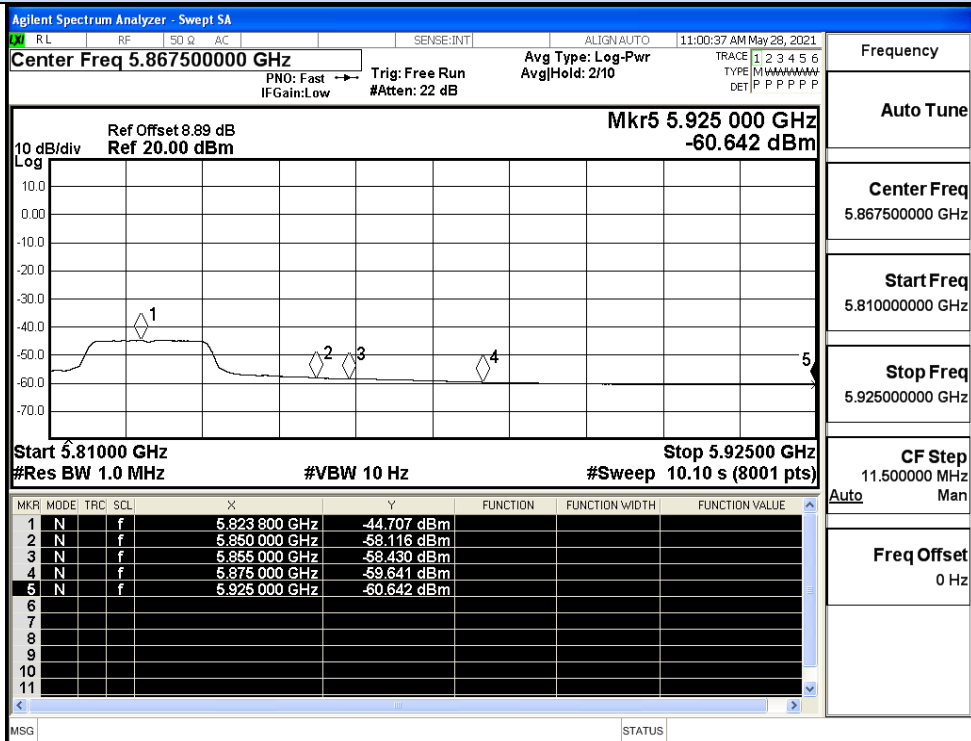


## IEEE 802.11n20 / Channel 149 / 5745MHz / Average

## Undesirable Emissions Measurement

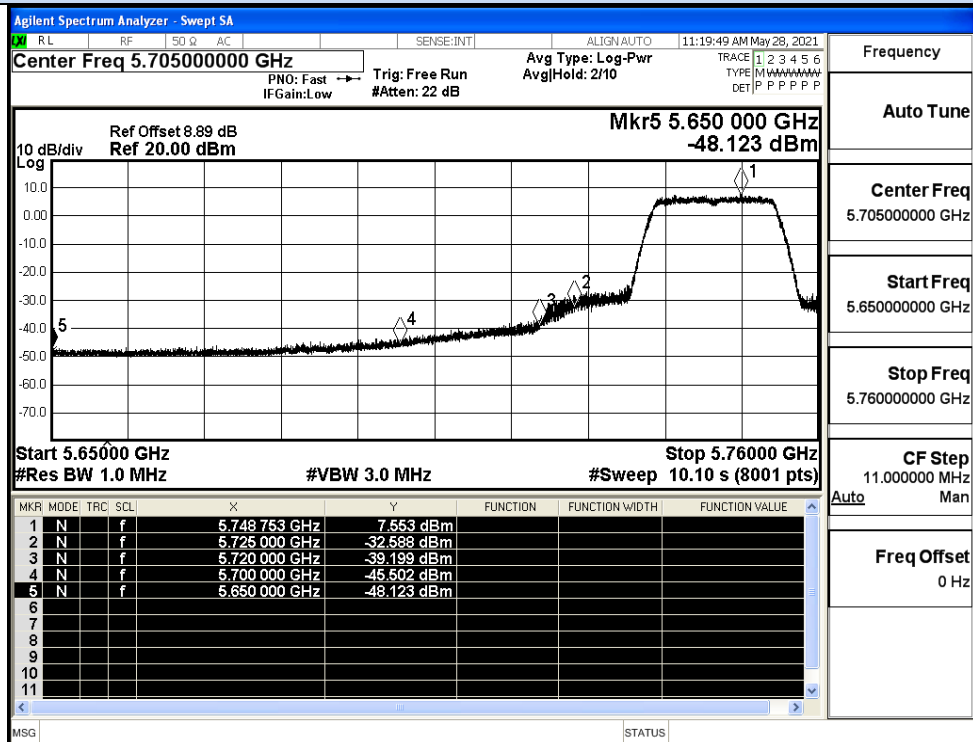


## IEEE 802.11n20 / Channel 165 / 5825MHz / Peak

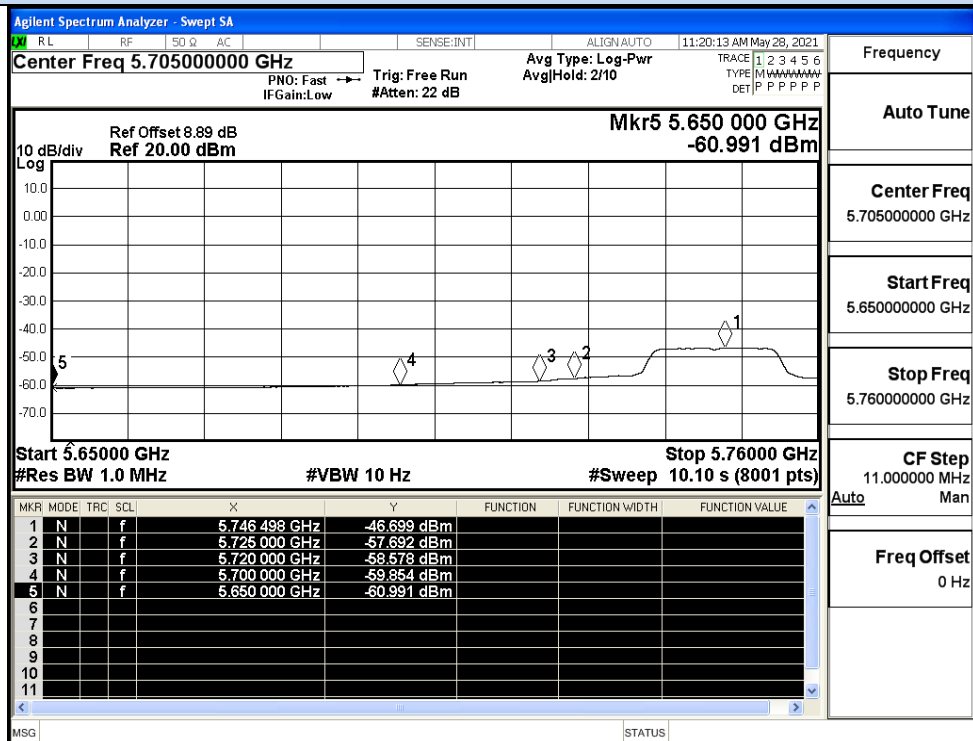


## IEEE 802.11n20 / Channel 165 / 5825MHz / Average

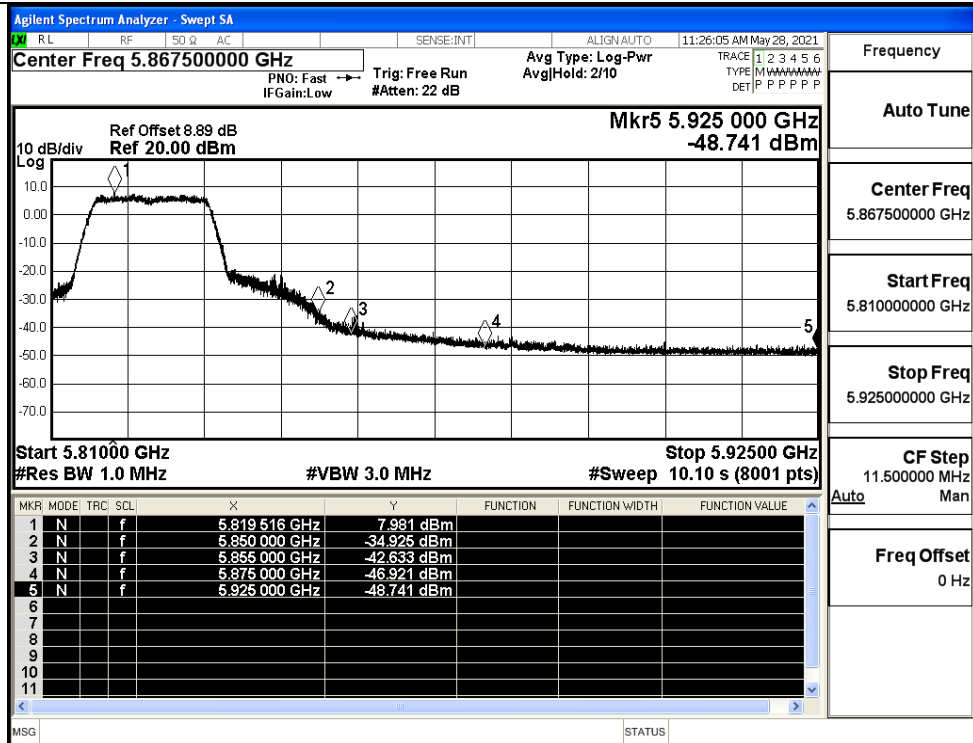
## Undesirable Emissions Measurement



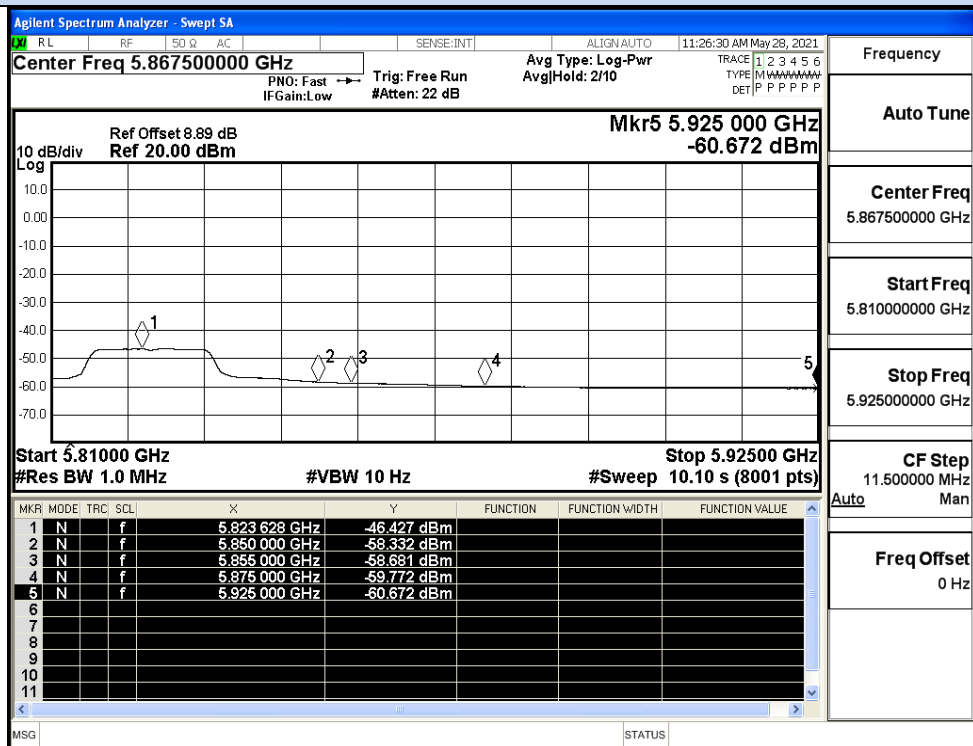
## IEEE 802.11ac20 / Channel 149 / 5745MHz / Peak



## IEEE 802.11ac20 / Channel 149 / 5745MHz / Average



IEEE 802.11ac20 / Channel 165 / 5825MHz / Peak



IEEE 802.11ac20 / Channel 165 / 5825MHz / Average