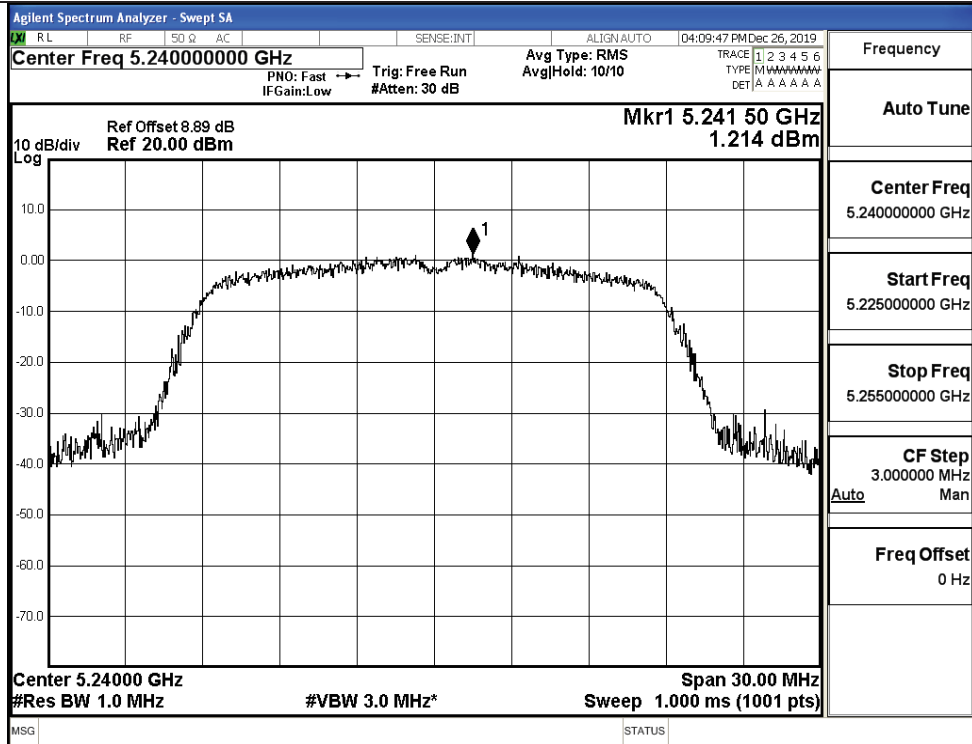
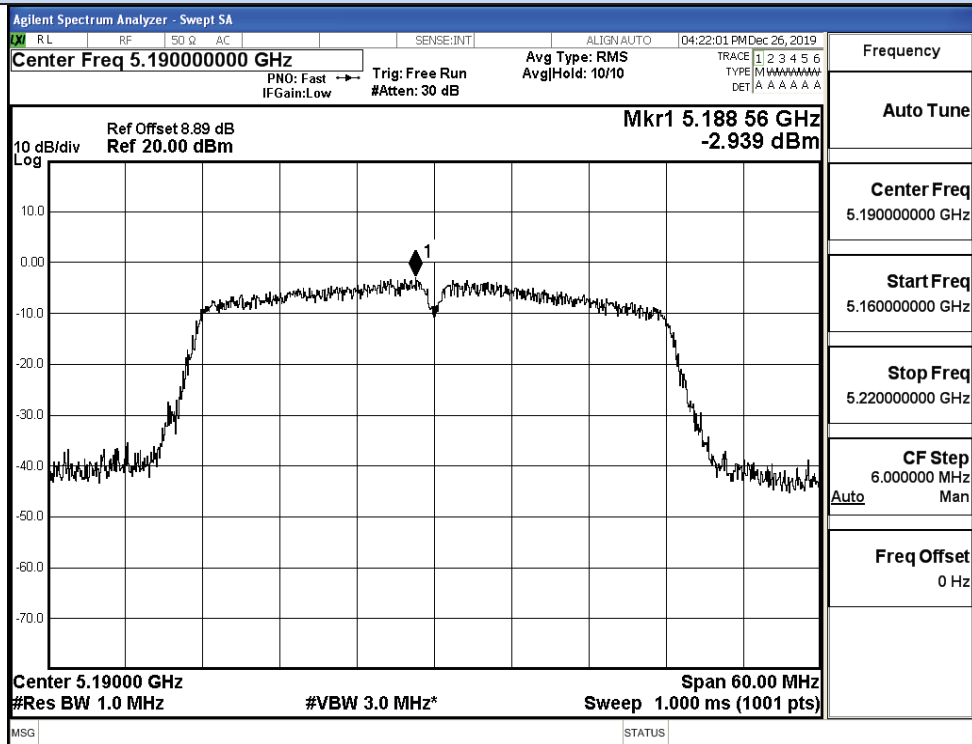
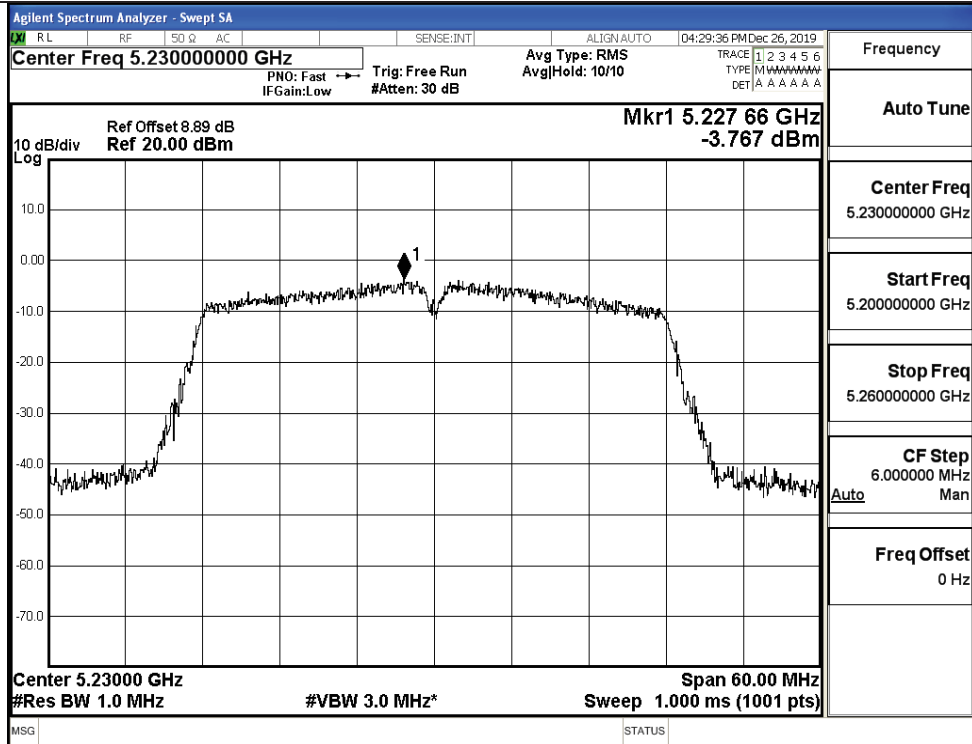




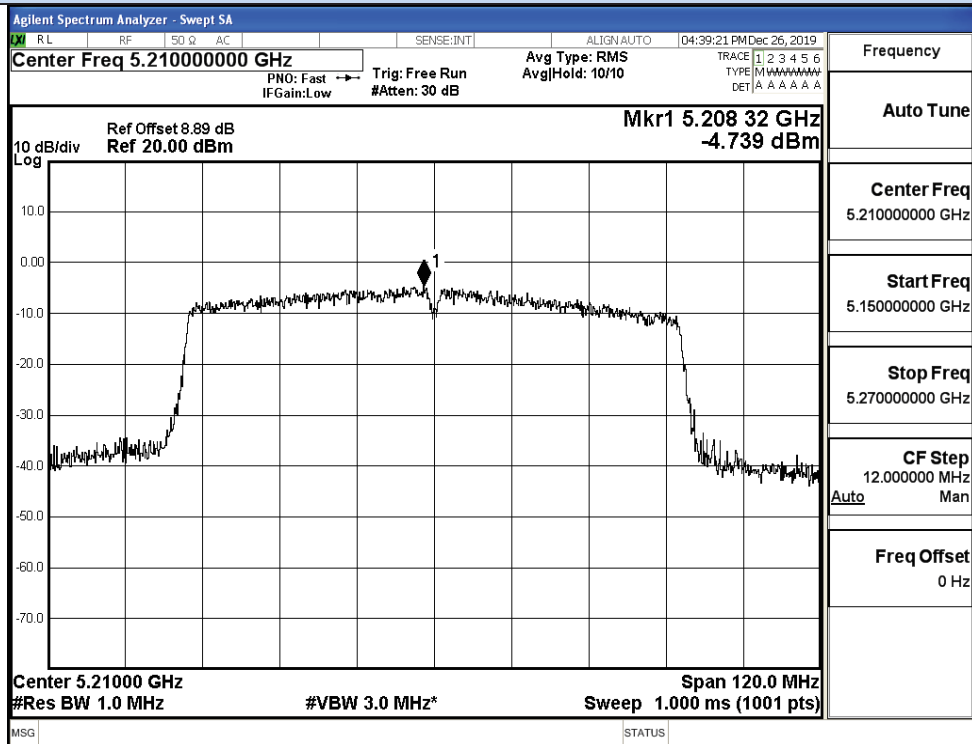
IEEE 802.11ac20 / Channel 48 / 5240MHz



IEEE 802.11ac40 / Channel 38 / 5190MHz



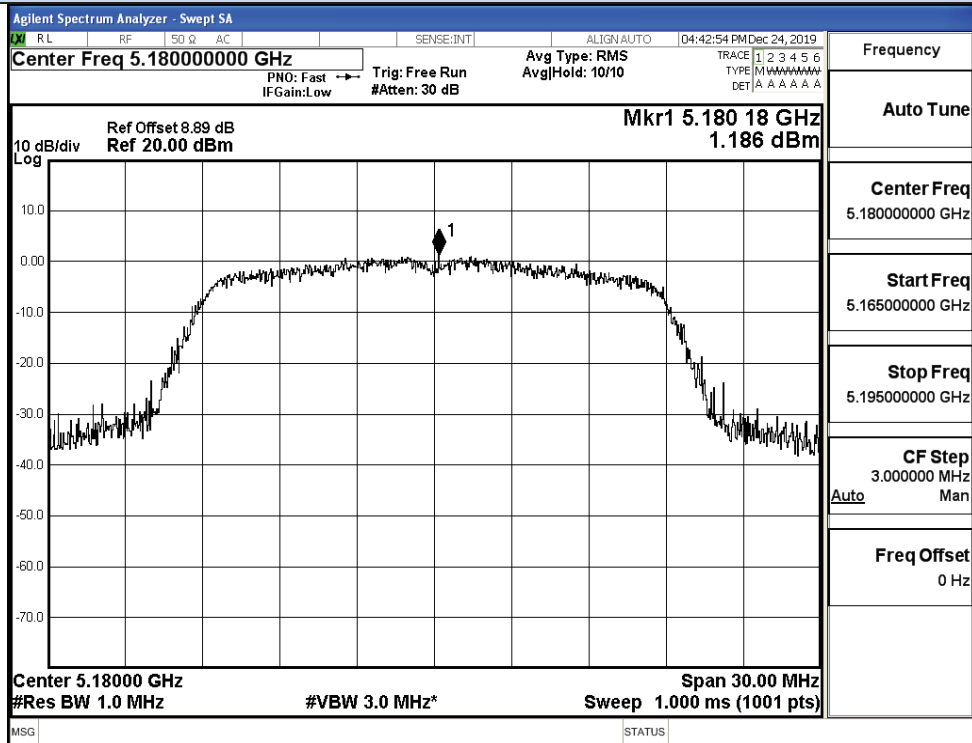
IEEE 802.11ac40 / Channel 46 / 5230MHz



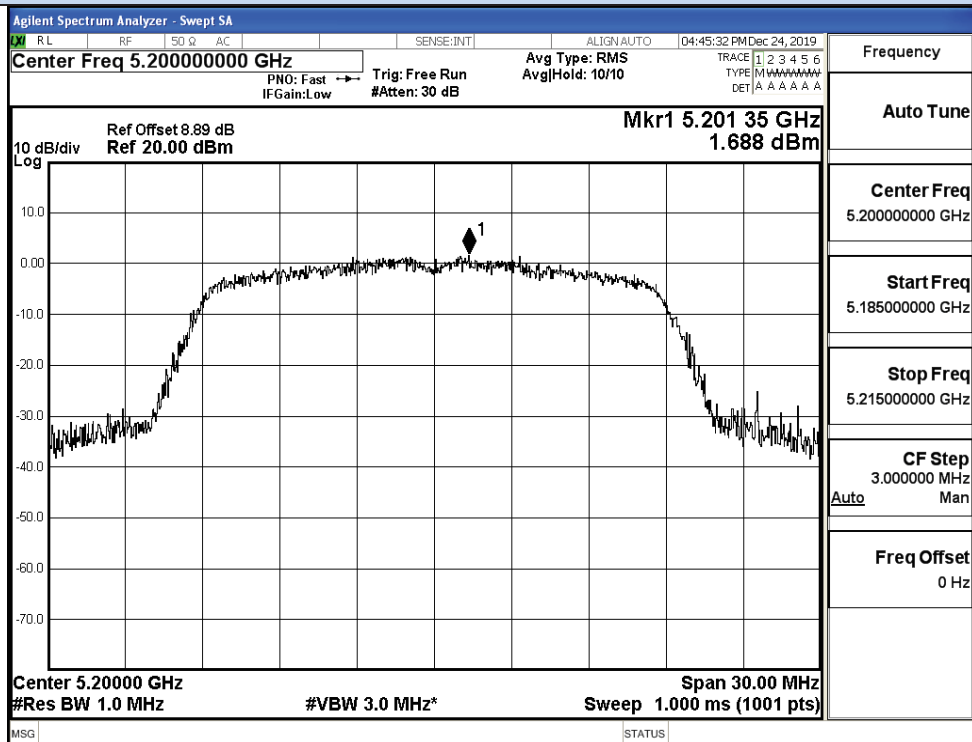
IEEE 802.11ac80 / Channel 42 / 5210MHz

## ANT 1

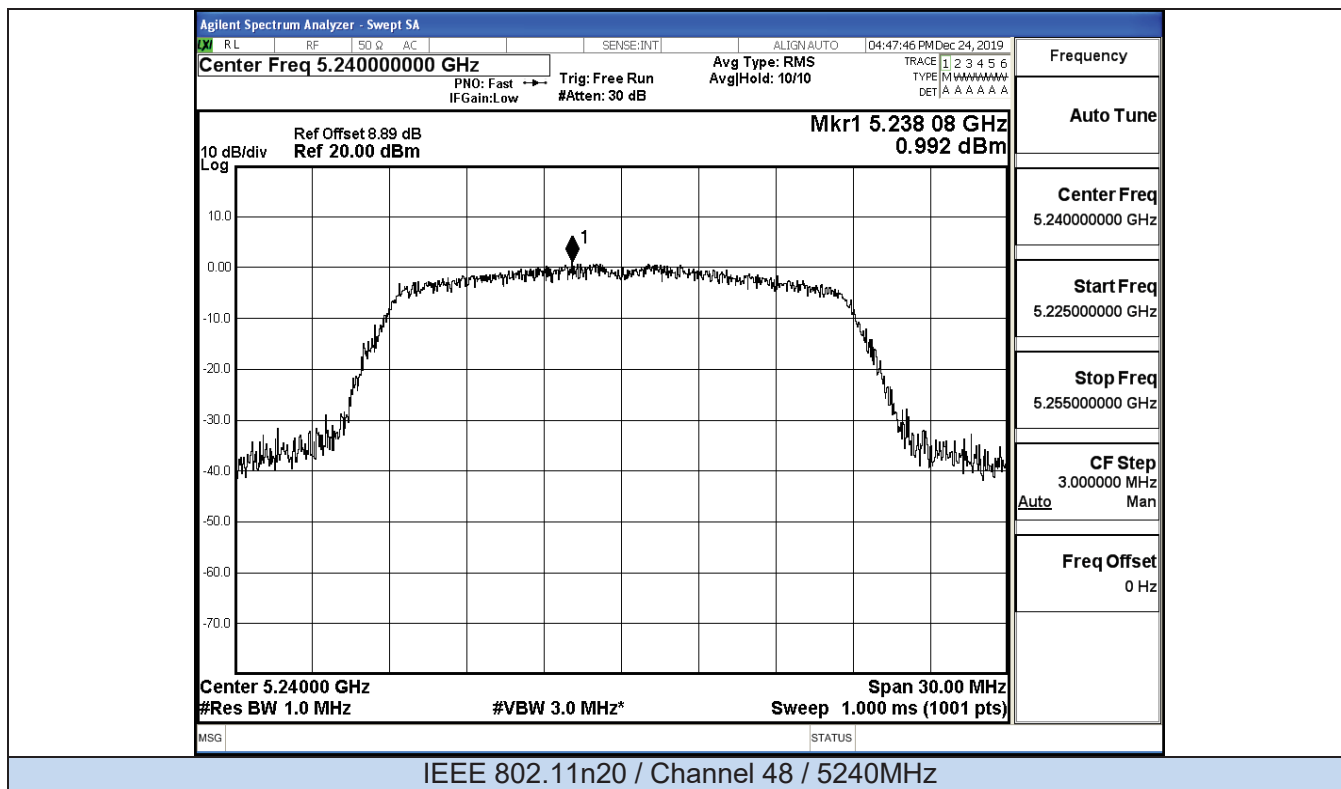
## Power Spectral Density



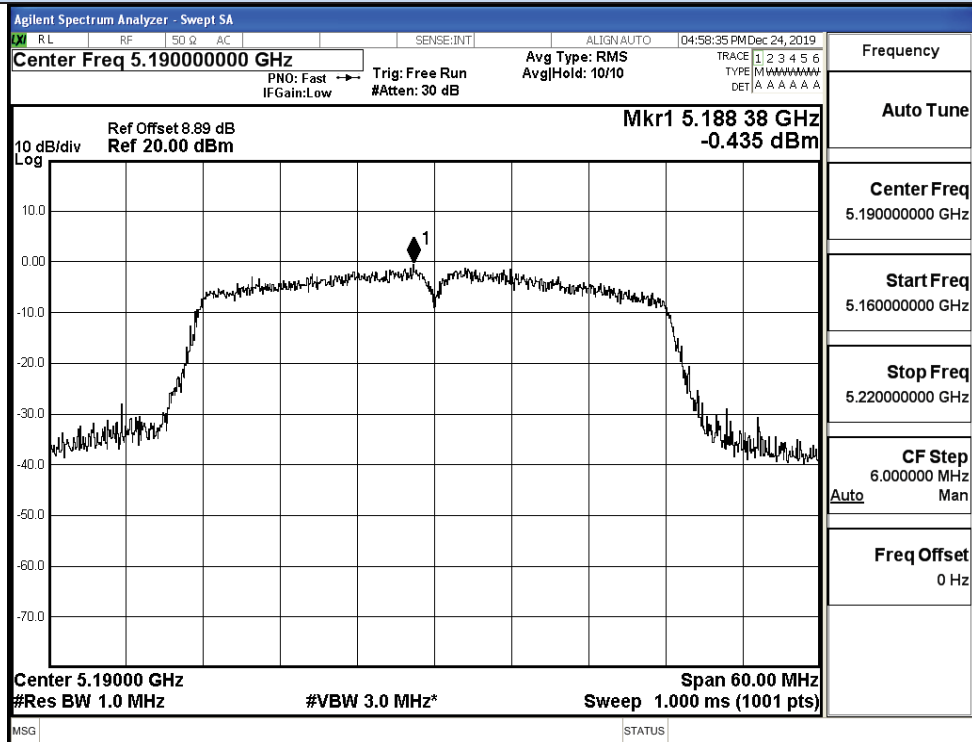
## IEEE 802.11n20 / Channel 36 / 5180MHz



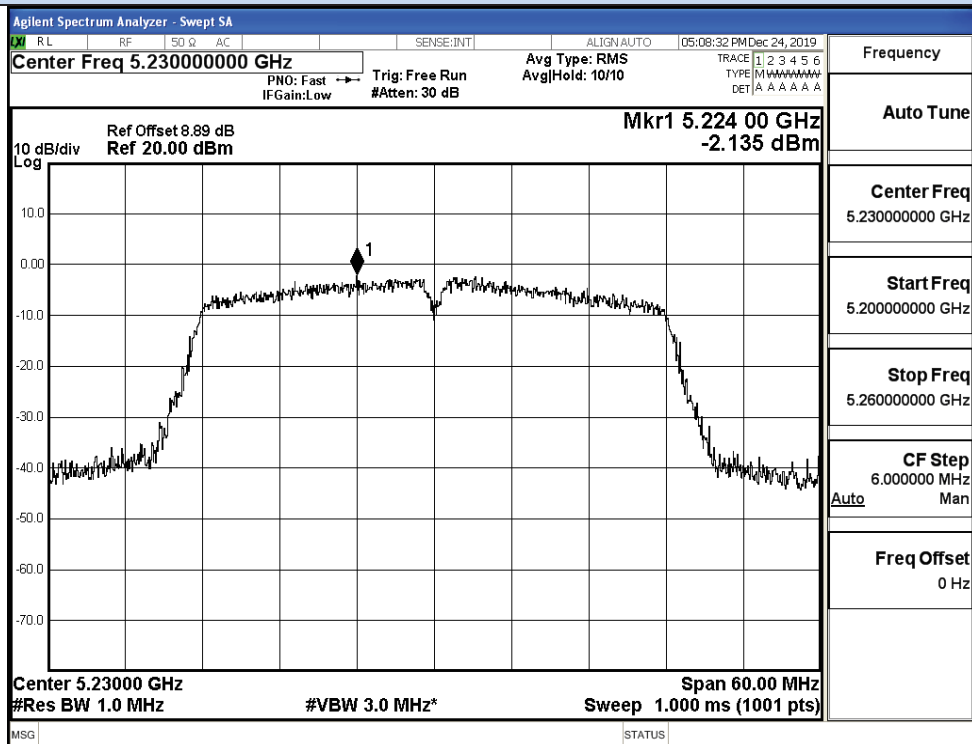
## IEEE 802.11n20 / Channel 40 / 5200MHz



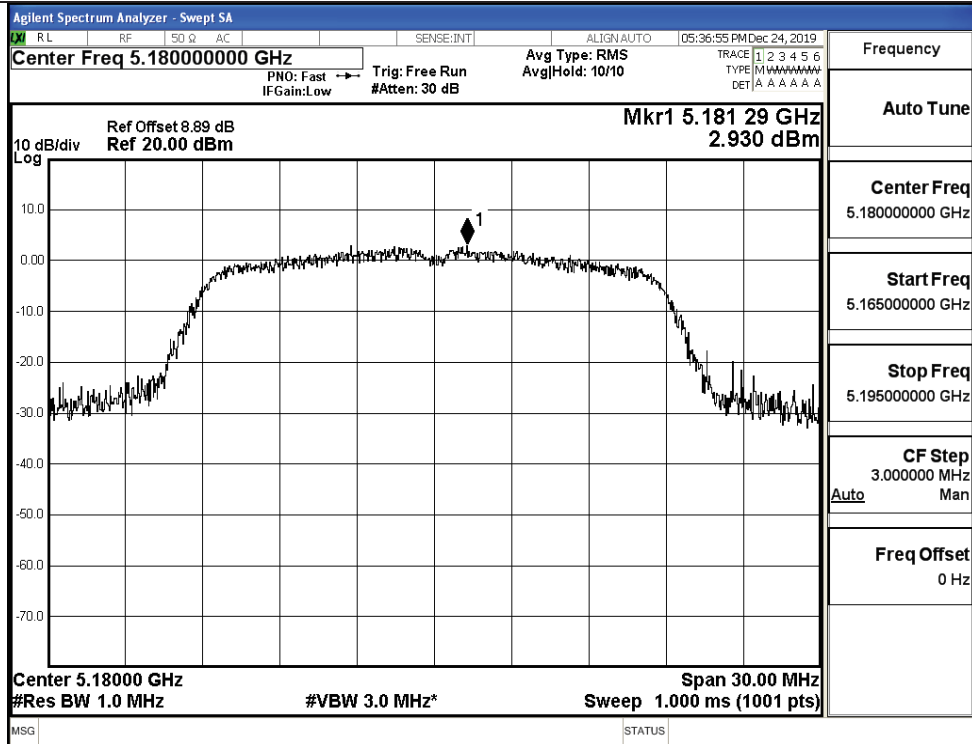
## Power Spectral Density



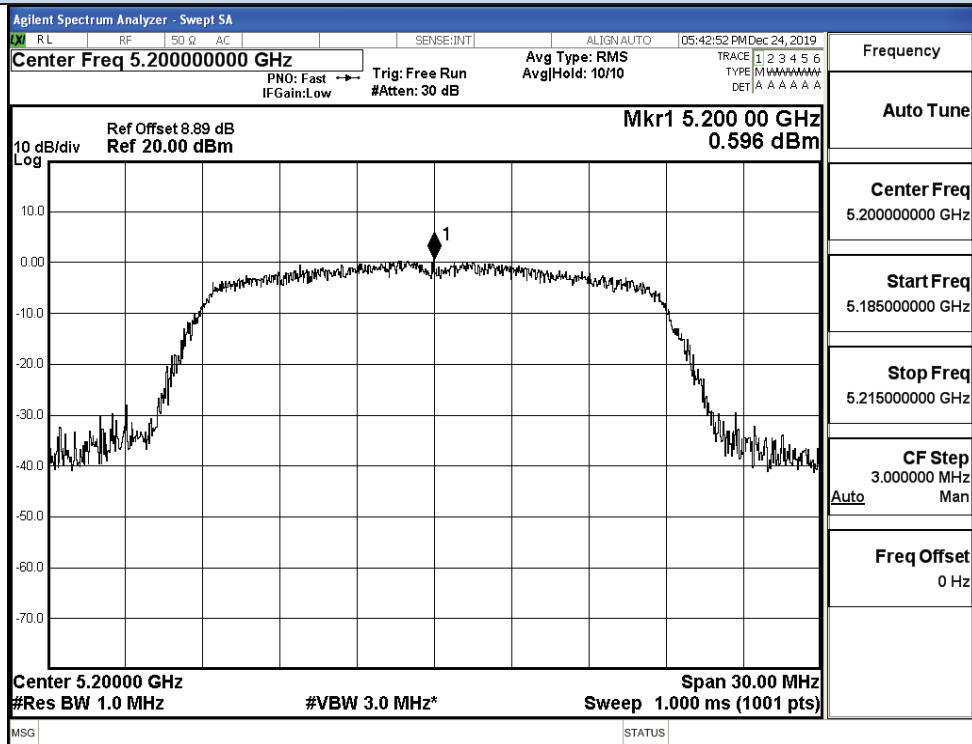
## IEEE 802.11n40 / Channel 38 / 5190MHz



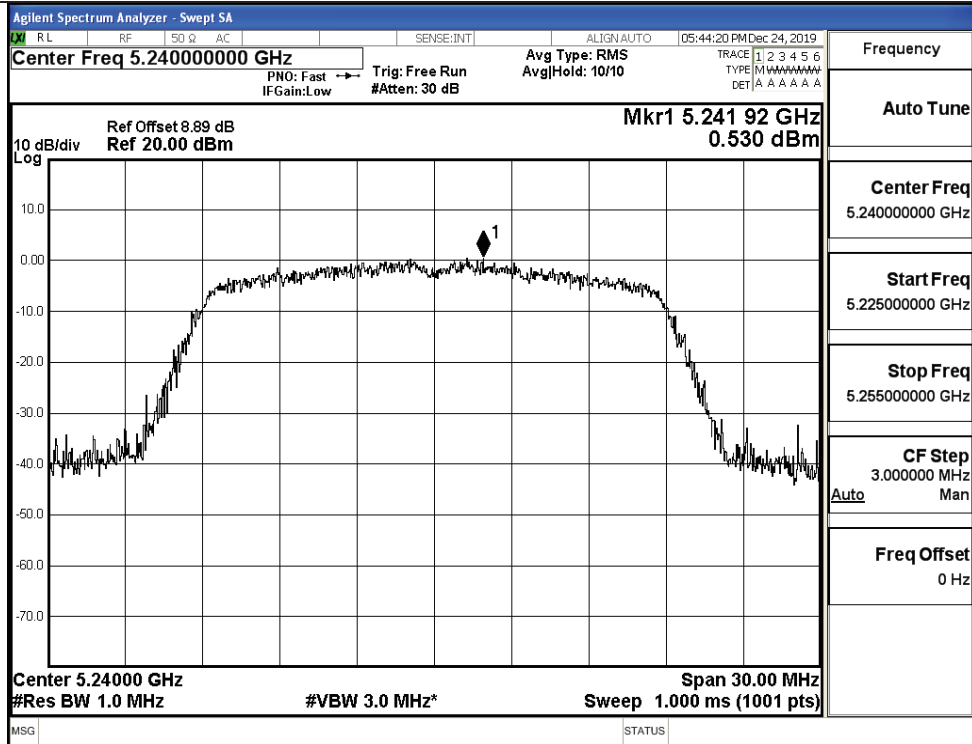
## IEEE 802.11n40 / Channel 46 / 5230MHz



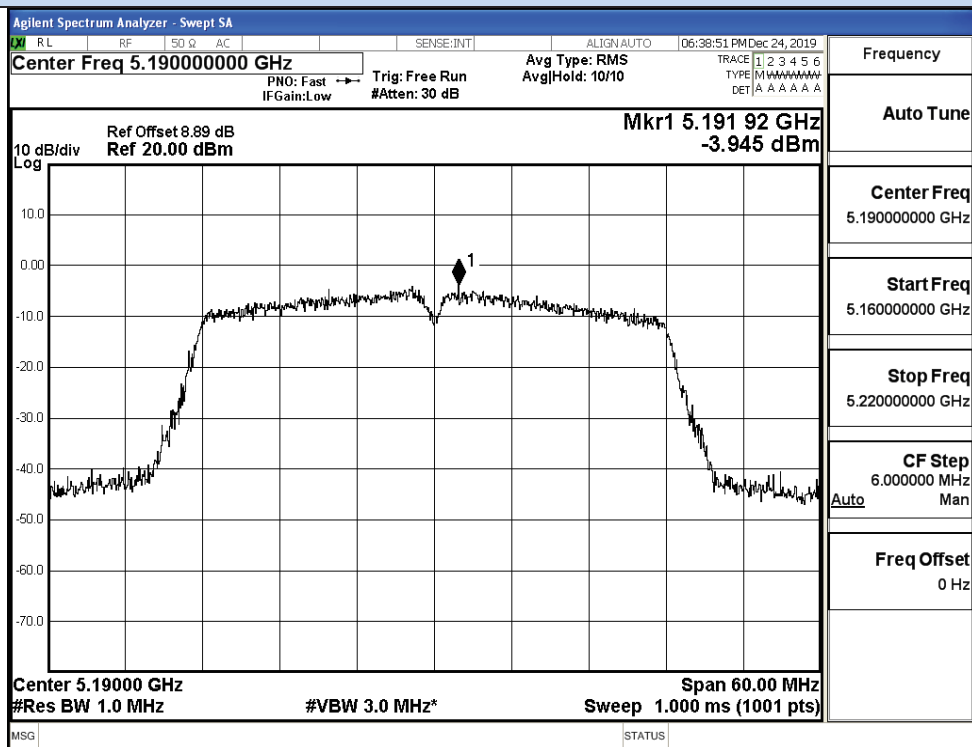
IEEE 802.11ac20 / Channel 36 / 5180MHz



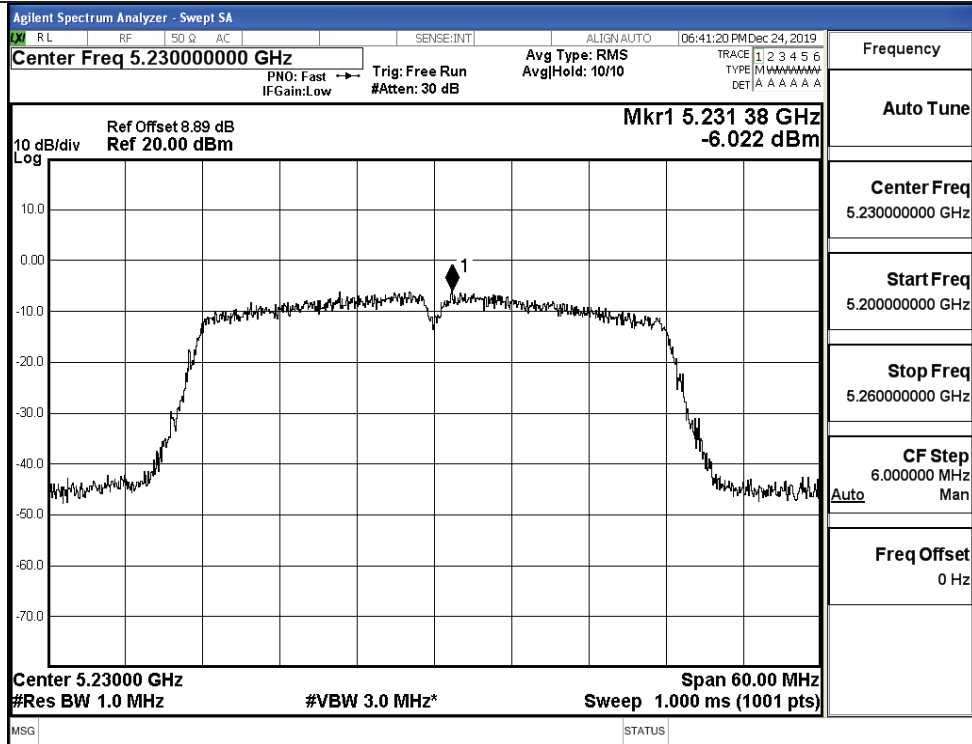
IEEE 802.11ac20 / Channel 40 / 5200MHz



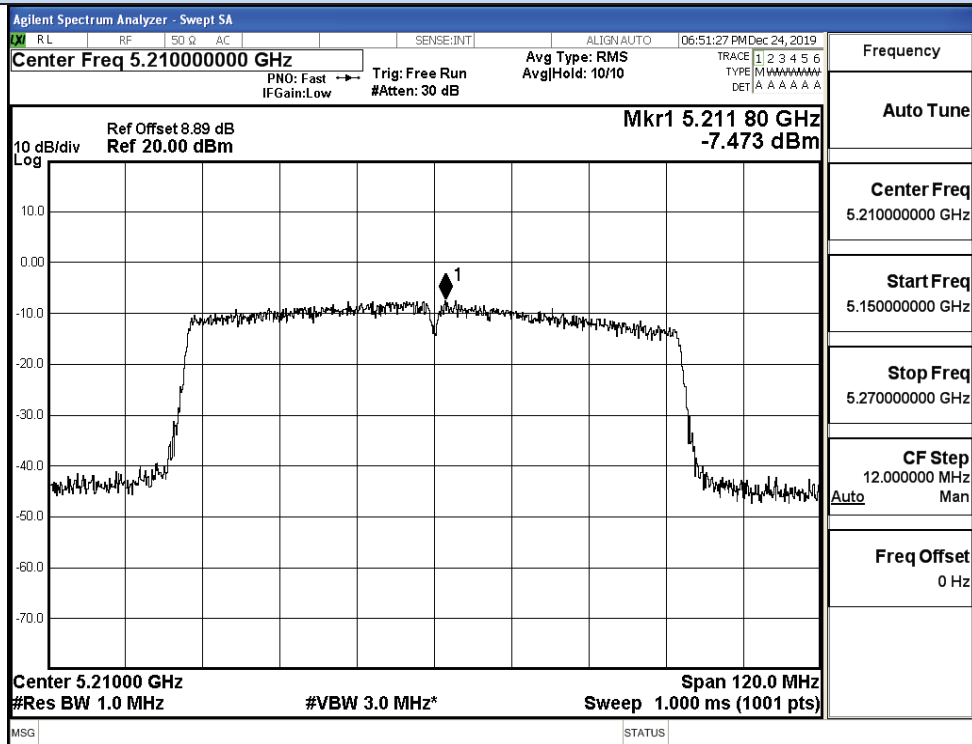
IEEE 802.11ac20 / Channel 48 / 5240MHz



IEEE 802.11ac40 / Channel 38 / 5190MHz



IEEE 802.11ac40 / Channel 46 / 5230MHz



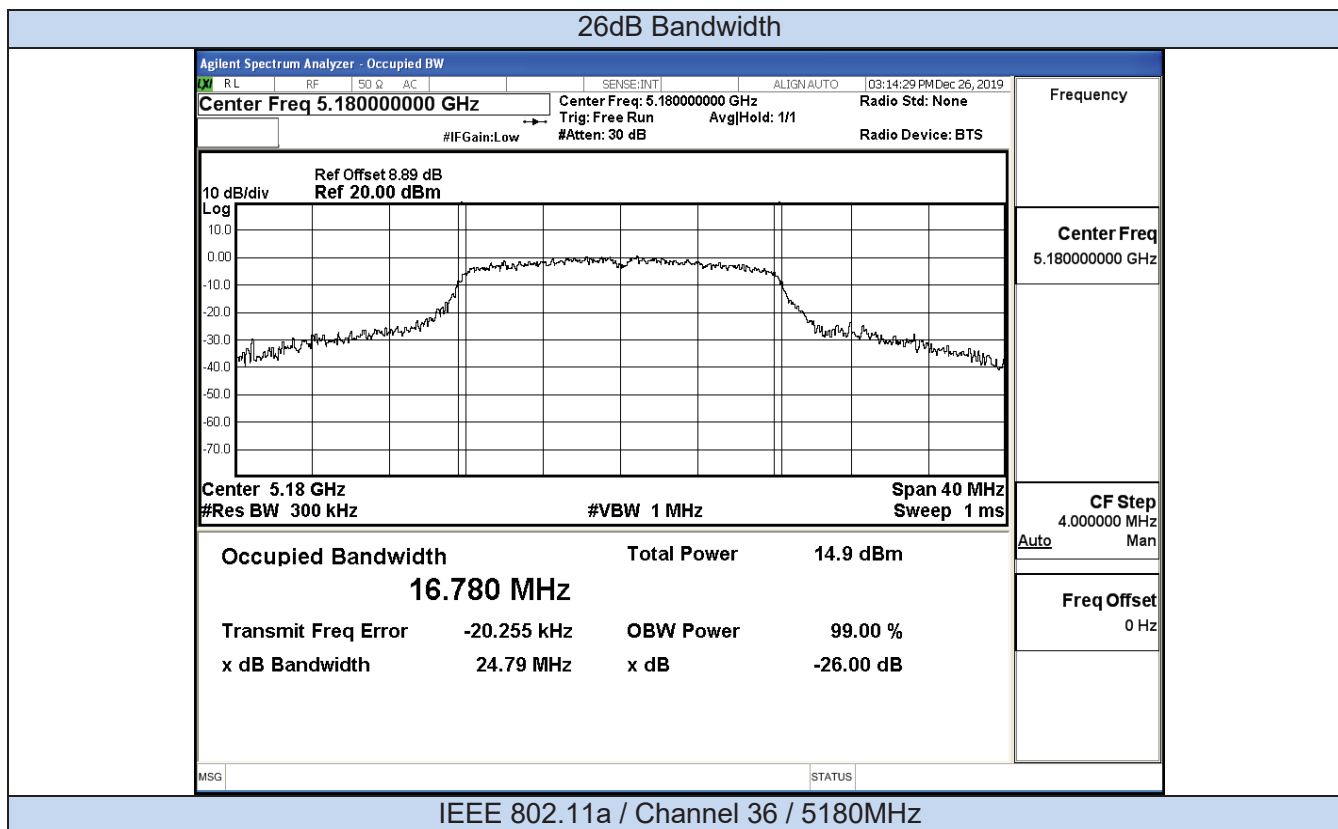
IEEE 802.11ac80 / Channel 42 / 5210MHz

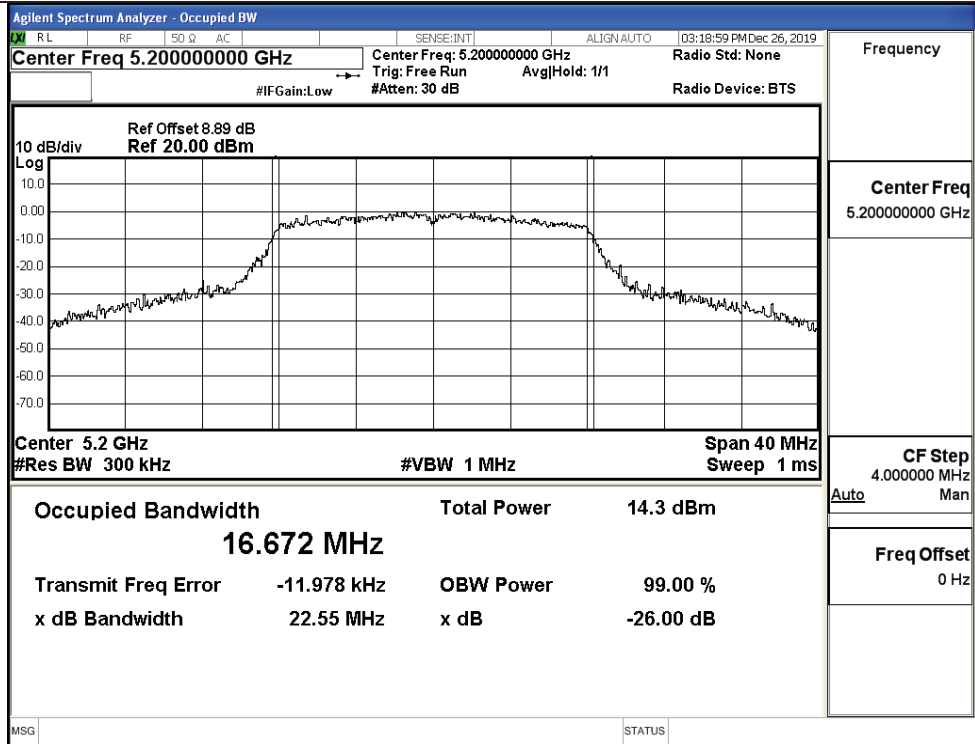
## D.4 Emission Bandwidth

Ant0

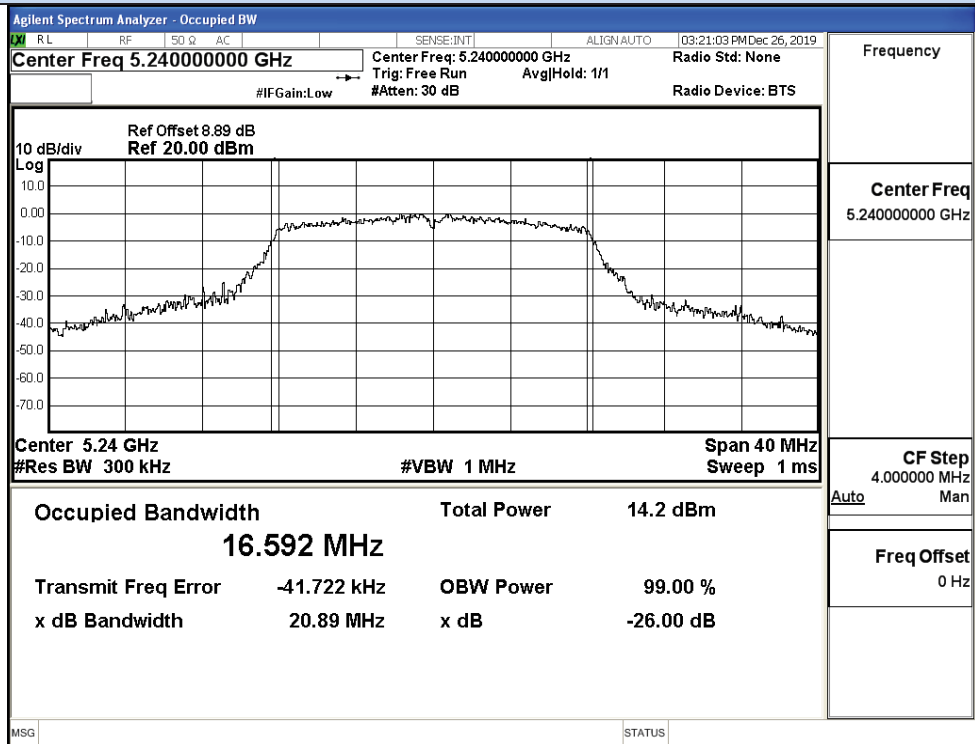
| Test Mode   | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) | 99% Bandwidth (MHz) | Limit (MHz) | Verdict |
|-------------|---------|-----------------|----------------------|---------------------|-------------|---------|
| 11A         | 36      | 5180            | 24.79                | 16.780              | No Limit    | Pass    |
|             | 40      | 5200            | 22.55                | 16.672              |             | Pass    |
|             | 48      | 5240            | 20.89                | 16.592              |             | Pass    |
| 11N20 SISO  | 36      | 5180            | 20.54                | 17.628              | No Limit    | Pass    |
|             | 40      | 5200            | 20.27                | 17.641              |             | Pass    |
|             | 48      | 5240            | 20.22                | 17.619              |             | Pass    |
| 11N40 SISO  | 38      | 5190            | 40.37                | 36.090              | No Limit    | Pass    |
|             | 46      | 5230            | 40.58                | 36.024              |             | Pass    |
| 11AC20 SISO | 36      | 5180            | 20.31                | 17.664              | No Limi     | Pass    |
|             | 40      | 5200            | 20.37                | 17.658              |             | Pass    |
|             | 48      | 5240            | 20.40                | 17.610              |             | Pass    |
| 11AC40 SISO | 38      | 5190            | 40.79                | 36.090              | No Limi     | Pass    |
|             | 46      | 5230            | 40.15                | 35.913              |             | Pass    |
| 11AC80 SISO | 42      | 5210            | 80.76                | 75.155              | No Limi     | Pass    |

### 26dB Bandwidth



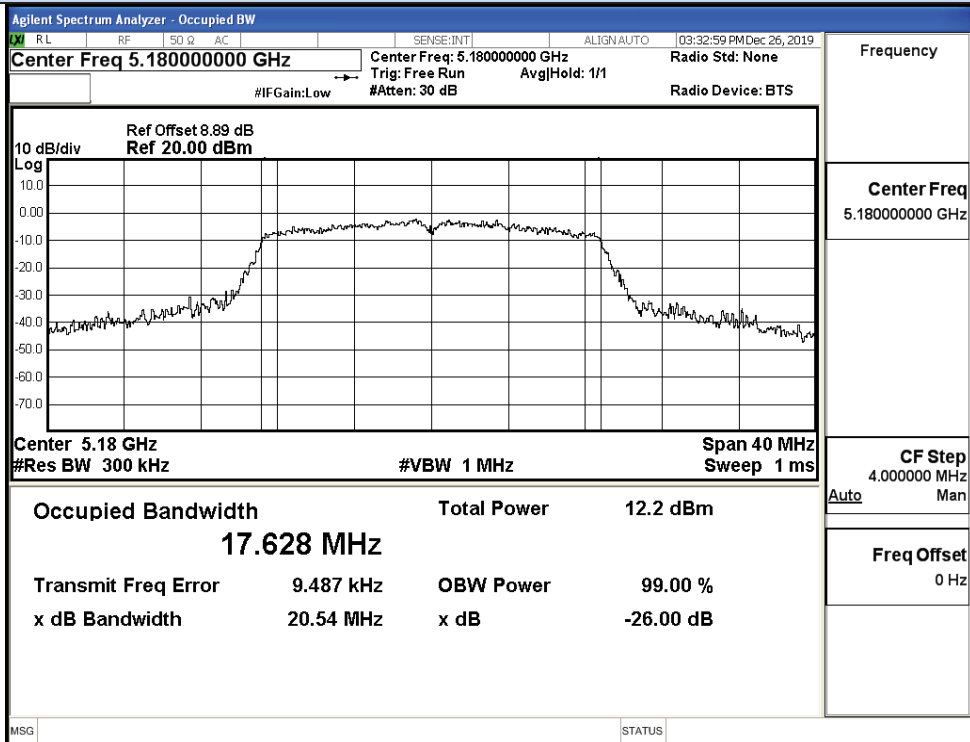


IEEE 802.11a / Channel 40 / 5200MHz

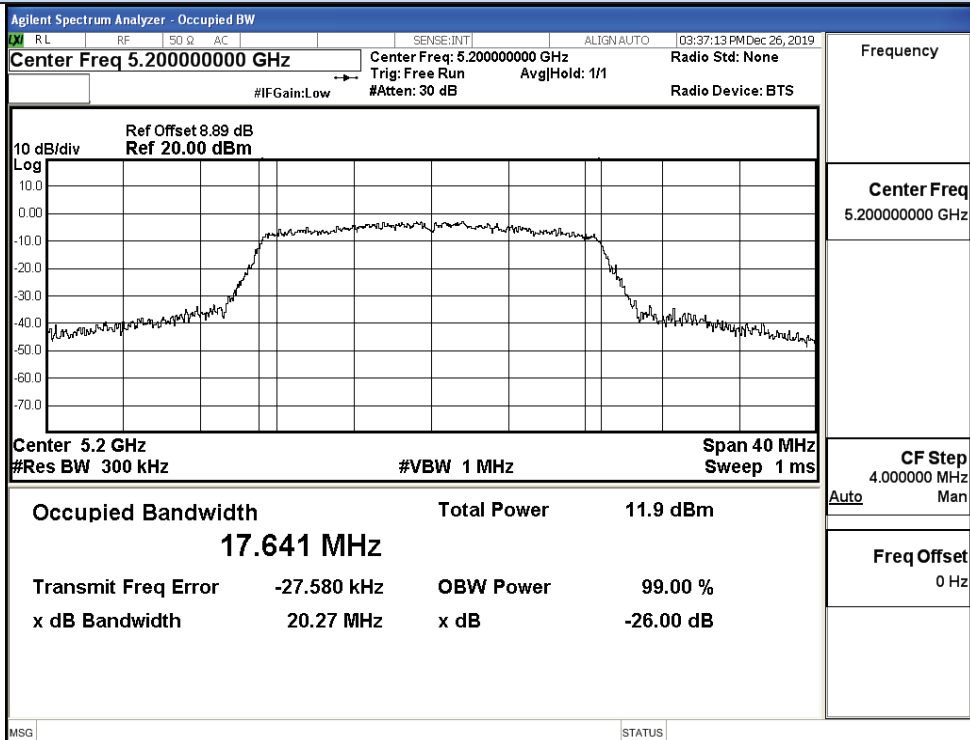


IEEE 802.11a / Channel 48 / 5240MHz

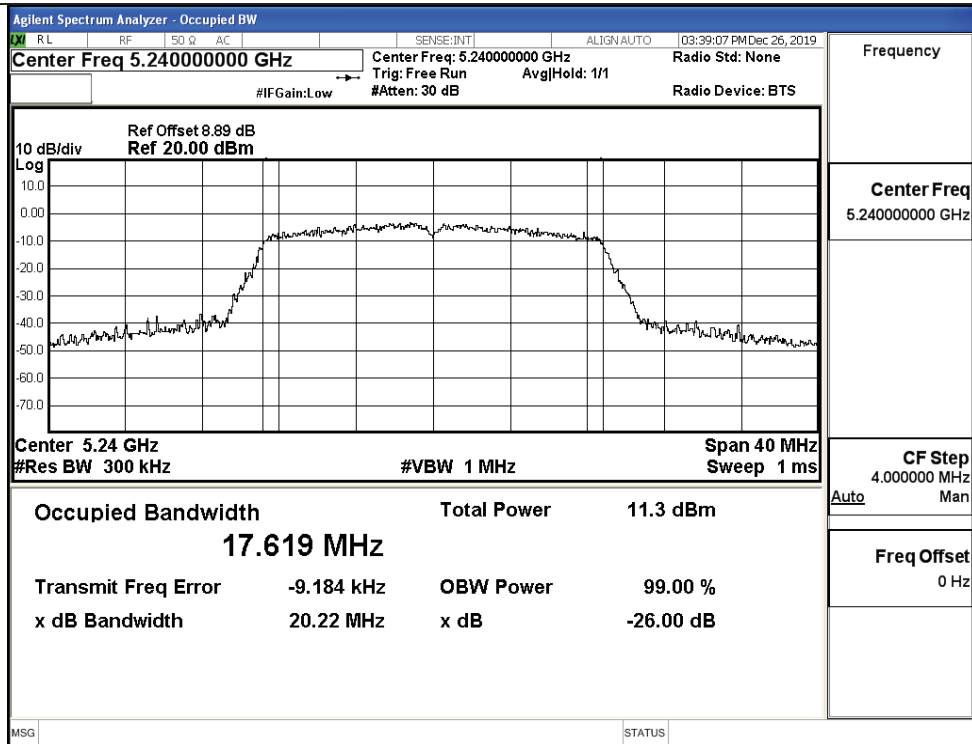
## 26dB Bandwidth



## IEEE 802.11n20 / Channel 36 / 5180MHz

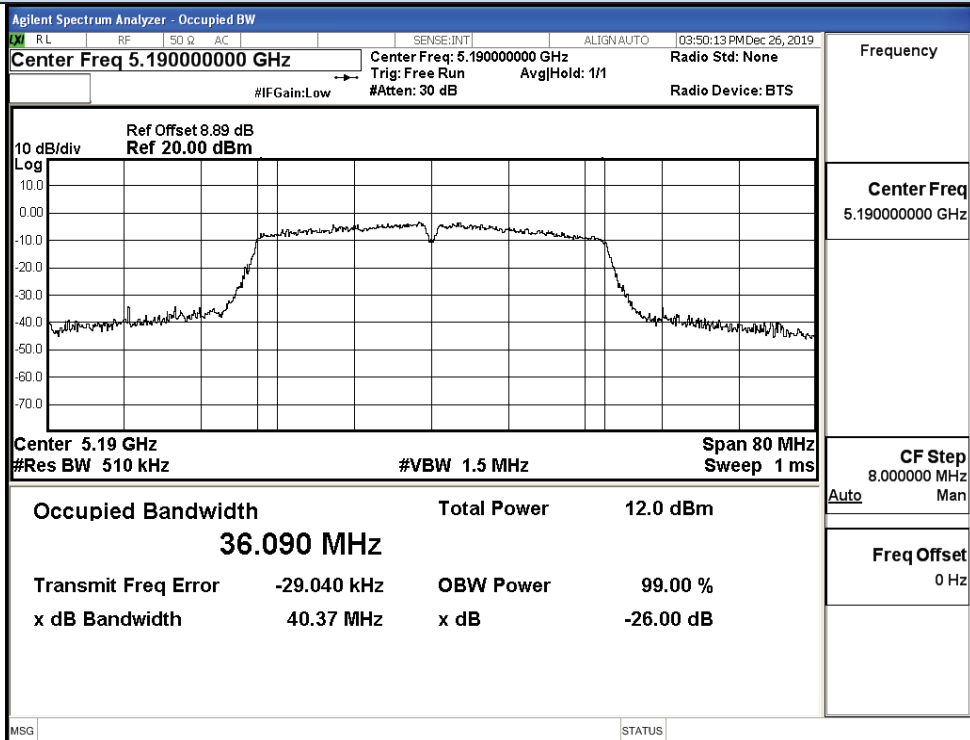


## IEEE 802.11n20 / Channel 40 / 5200MHz

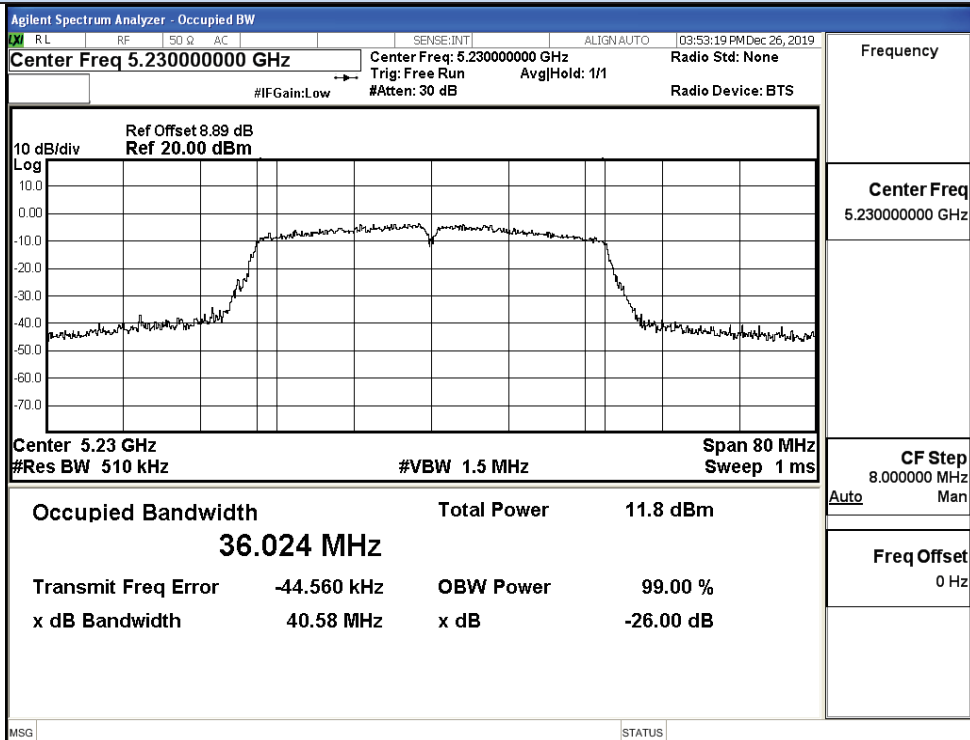


IEEE 802.11n20 / Channel 48 / 5240MHz

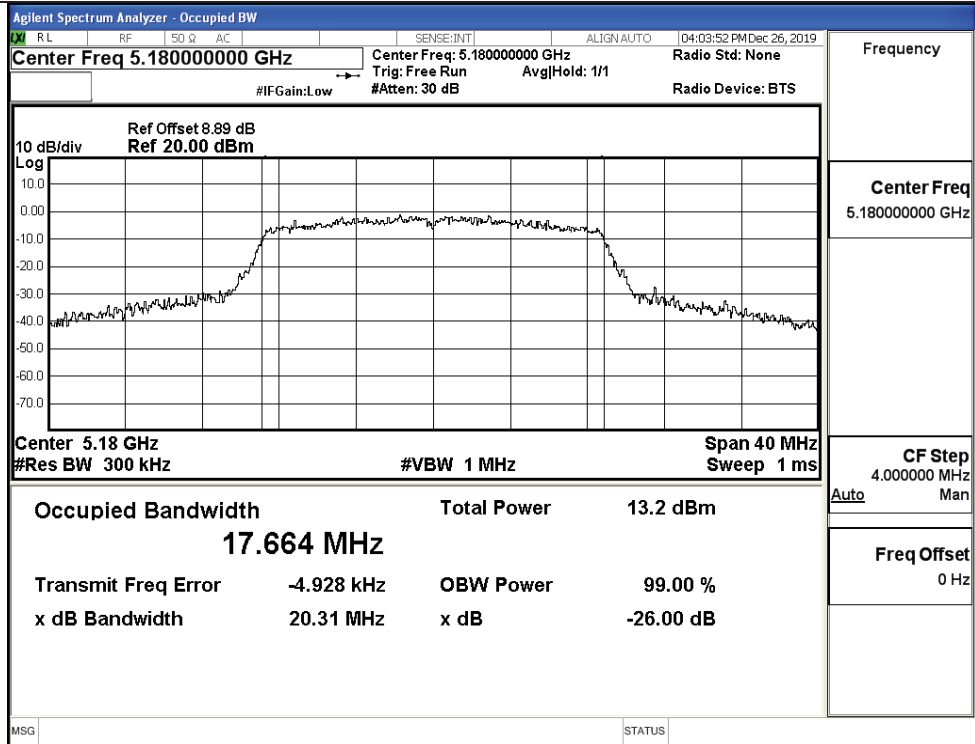
## 26dB Bandwidth



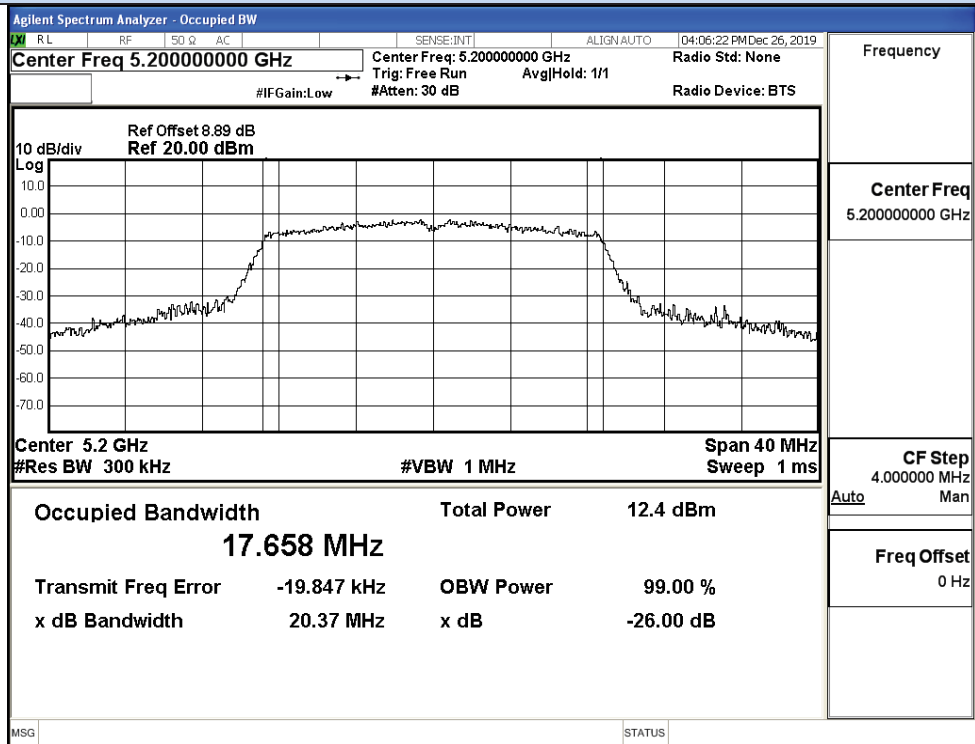
## IEEE 802.11n40 / Channel 38 / 5190MHz



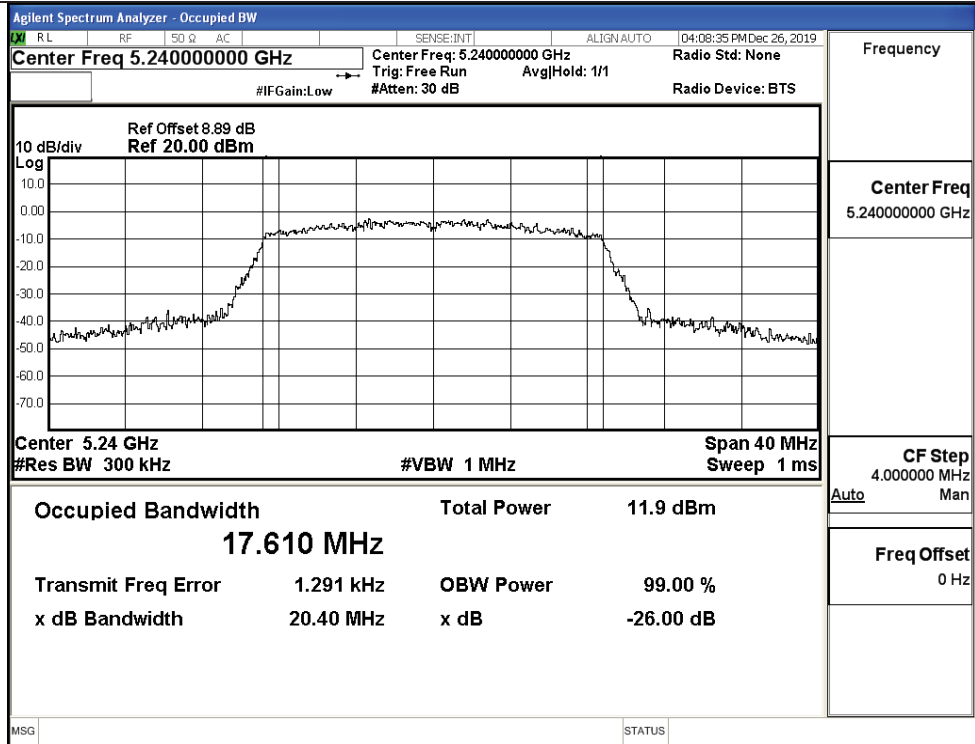
## IEEE 802.11n40 / Channel 46 / 5230MHz



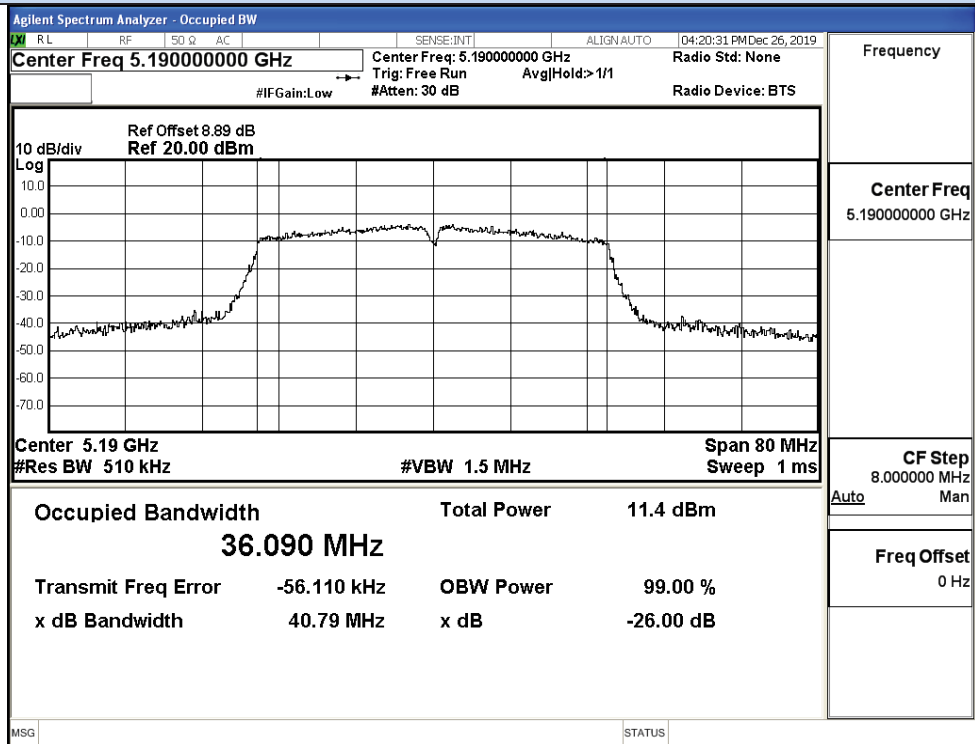
IEEE 802.11ac20 / Channel 36 / 5180MHz



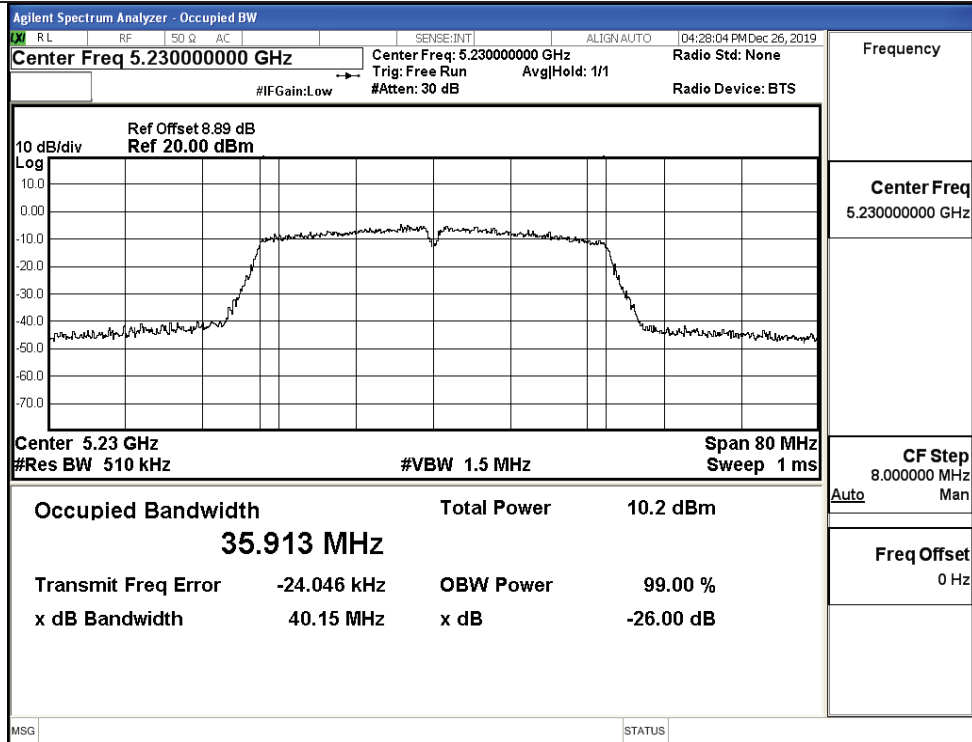
IEEE 802.11ac20 / Channel 40 / 5200MHz



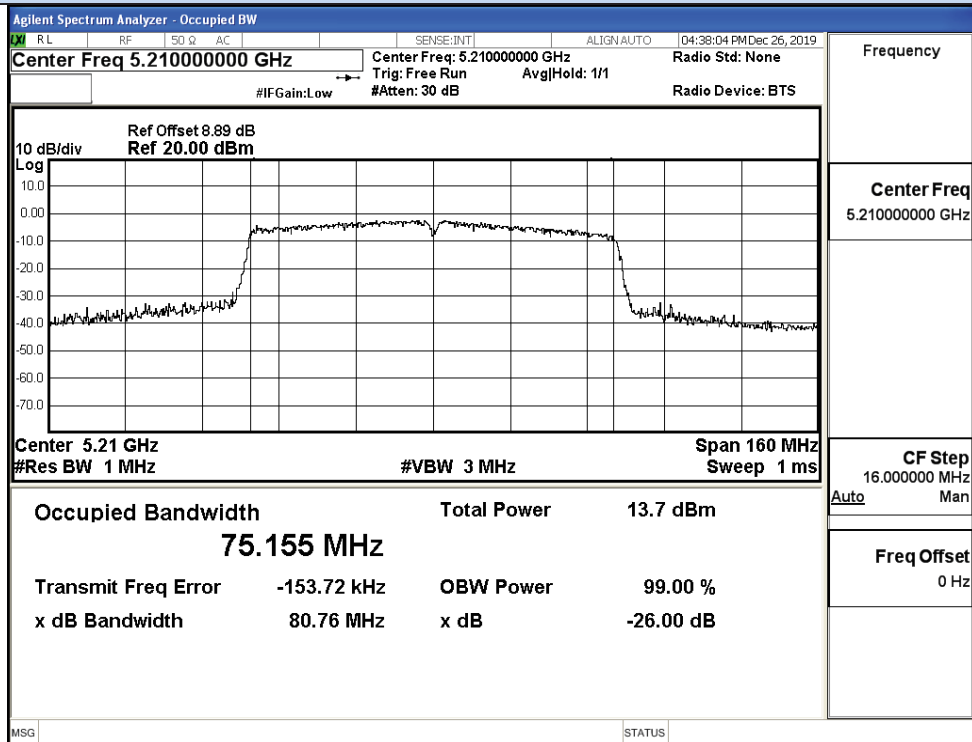
IEEE 802.11ac20 / Channel 48 / 5240MHz



IEEE 802.11ac40 / Channel 38 / 5190MHz



IEEE 802.11ac40 / Channel 46 / 5230MHz

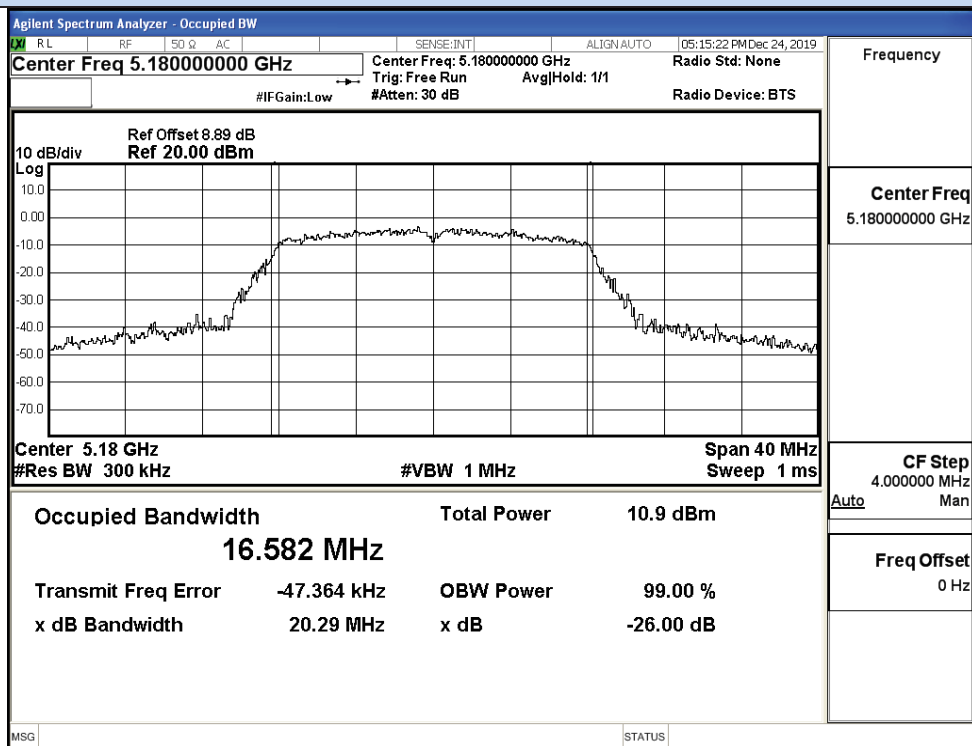


IEEE 802.11ac80 / Channel 42 / 5210MHz

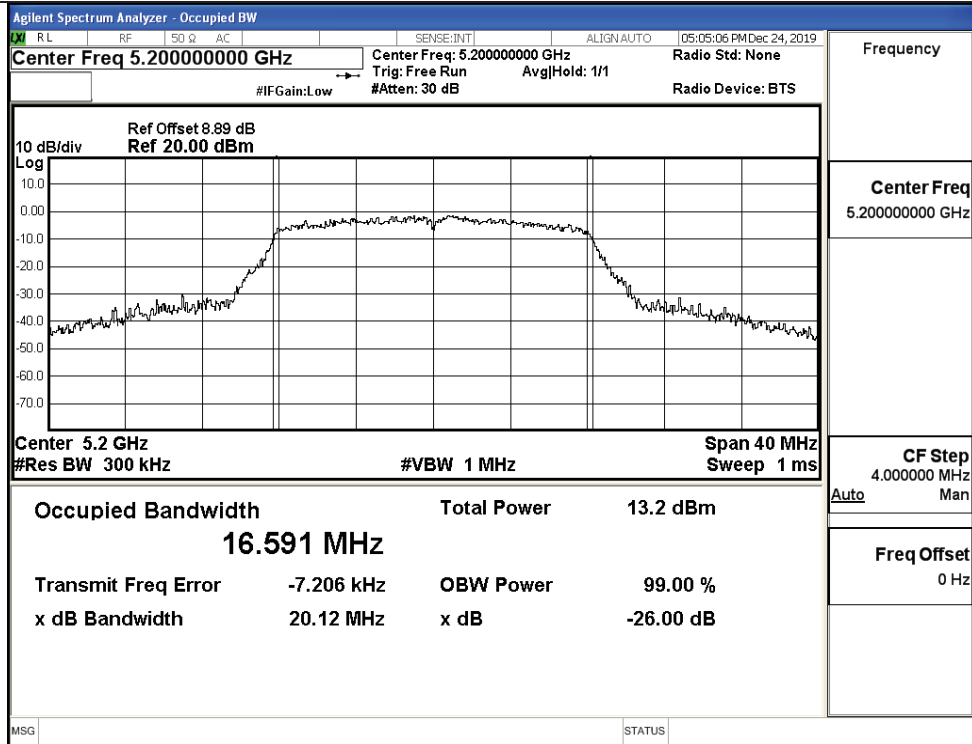
## Ant1

| Test Mode   | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) | 99% Bandwidth (MHz) | Limit (MHz) | Verdict |
|-------------|---------|-----------------|----------------------|---------------------|-------------|---------|
| 11A         | 36      | 5180            | 20.29                | 16.582              | No Limit    | Pass    |
|             | 40      | 5200            | 20.12                | 16.591              |             | Pass    |
|             | 48      | 5240            | 19.90                | 16.570              |             | Pass    |
| 11N20 SISO  | 36      | 5180            | 20.42                | 17.673              | No Limit    | Pass    |
|             | 40      | 5200            | 20.48                | 17.642              |             | Pass    |
|             | 48      | 5240            | 20.03                | 17.585              |             | Pass    |
| 11N40 SISO  | 38      | 5190            | 40.77                | 36.075              | No Limit    | Pass    |
|             | 46      | 5230            | 40.92                | 36.028              |             | Pass    |
| 11AC20 SISO | 36      | 5180            | 25.43                | 17.725              | No Limi     | Pass    |
|             | 40      | 5200            | 20.32                | 17.607              |             | Pass    |
|             | 48      | 5240            | 20.11                | 17.605              |             | Pass    |
| 11AC40 SISO | 38      | 5190            | 40.46                | 36.001              | No Limi     | Pass    |
|             | 46      | 5230            | 40.37                | 35.993              |             | Pass    |
| 11AC80 SISO | 42      | 5210            | 81.00                | 75.180              | No Limi     | Pass    |

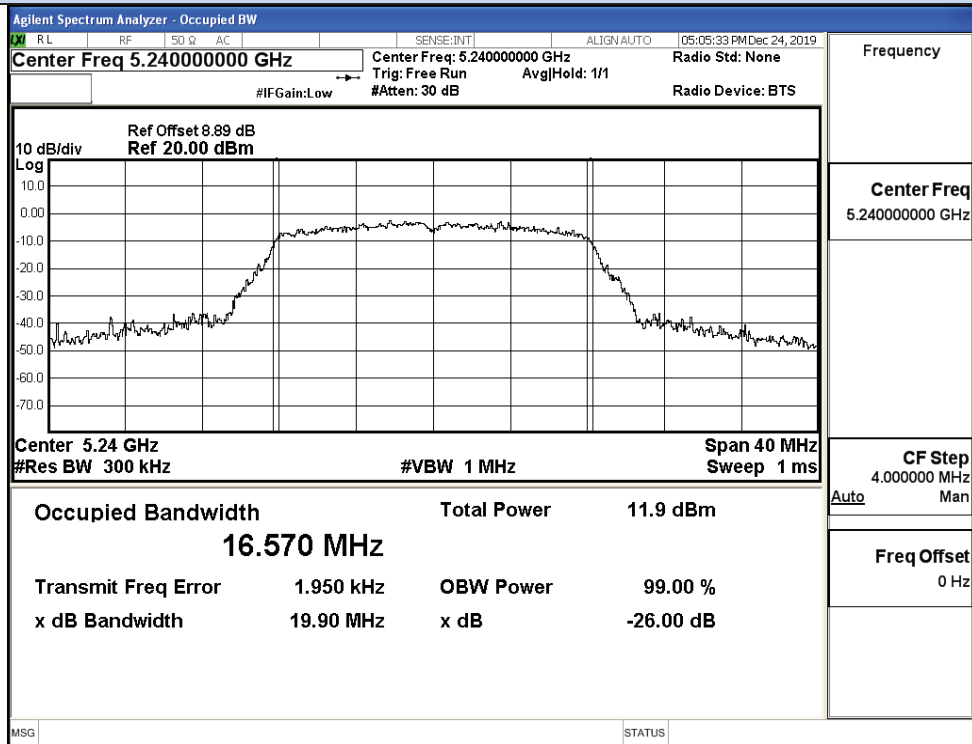
## 26dB Bandwidth



IEEE 802.11a / Channel 36 / 5180MHz

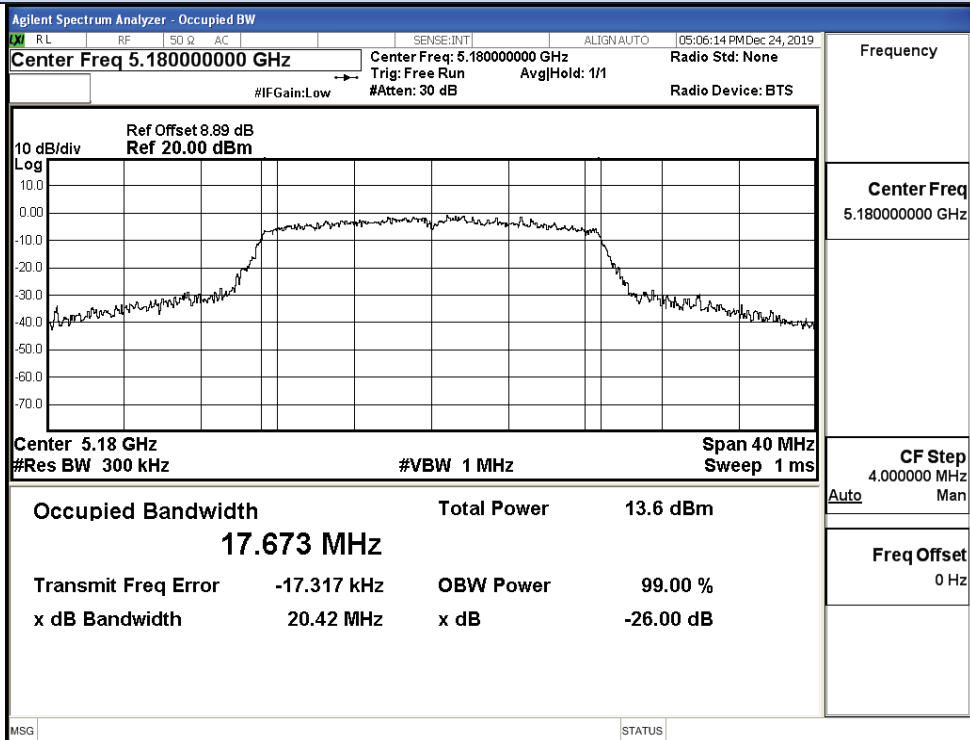


IEEE 802.11a / Channel 40 / 5200MHz

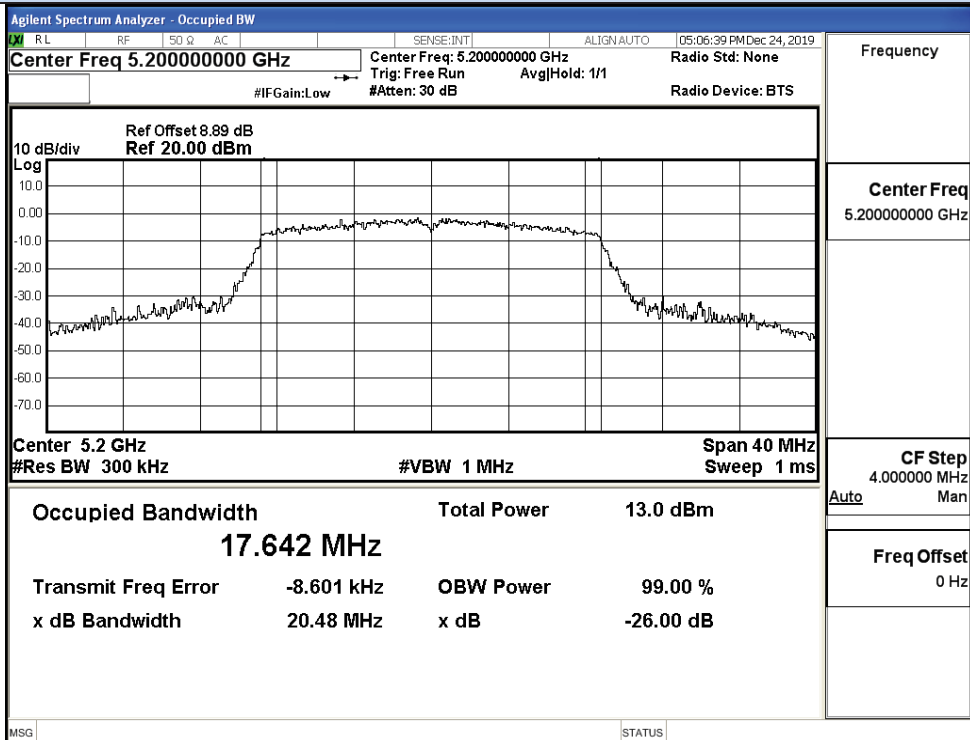


IEEE 802.11a / Channel 48 / 5240MHz

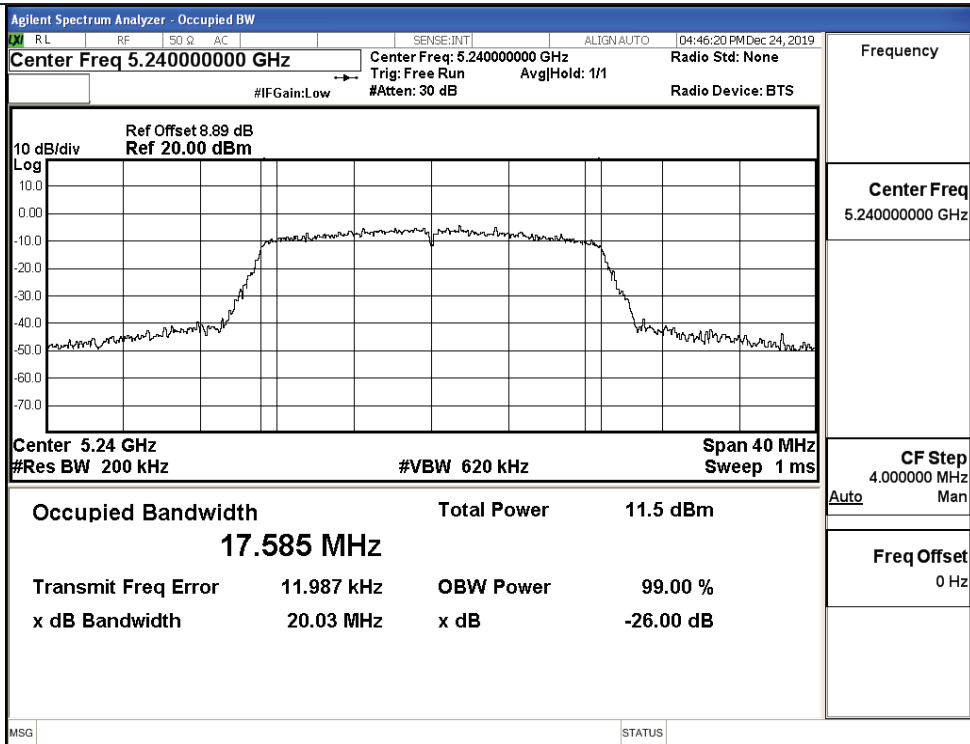
## 26dB Bandwidth



## IEEE 802.11n20 / Channel 36 / 5180MHz

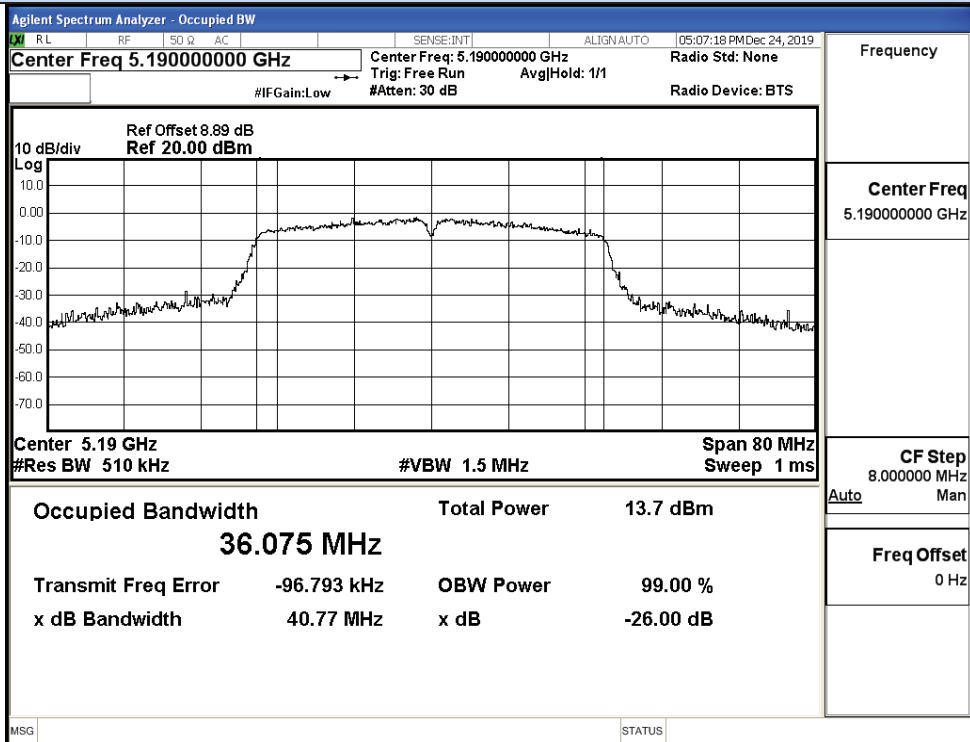


## IEEE 802.11n20 / Channel 40 / 5200MHz

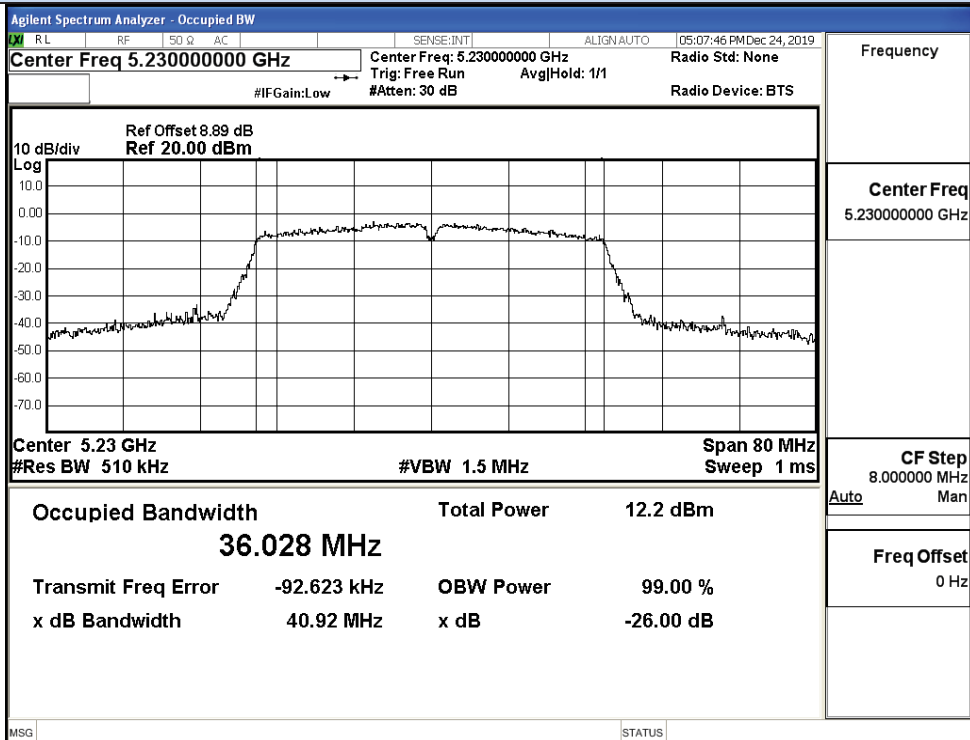


IEEE 802.11n20 / Channel 48 / 5240MHz

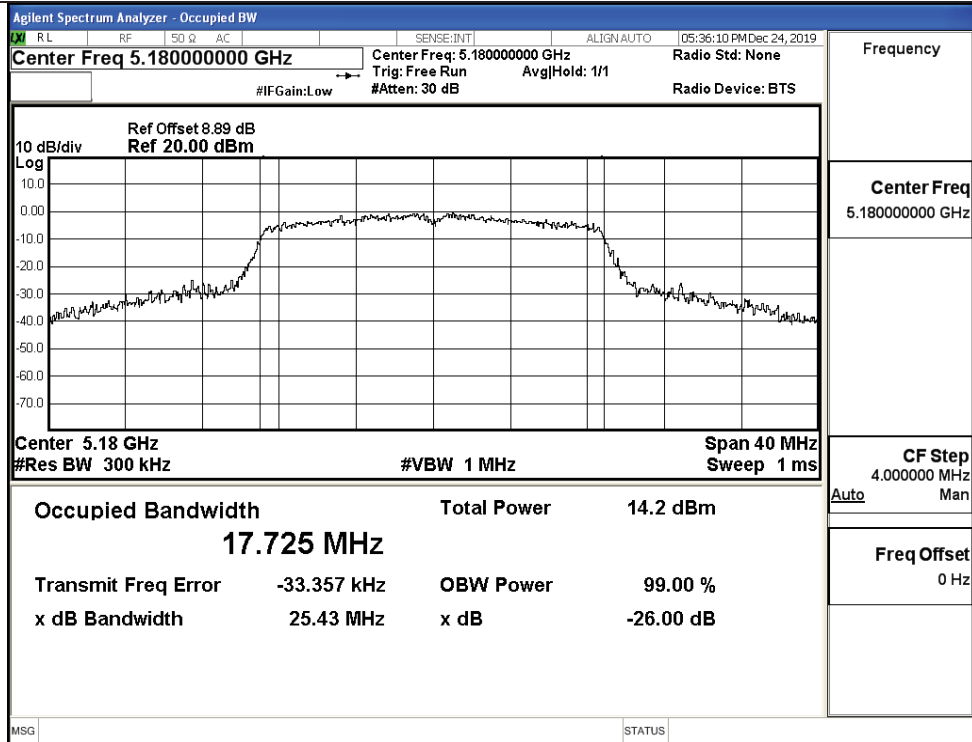
## 26dB Bandwidth



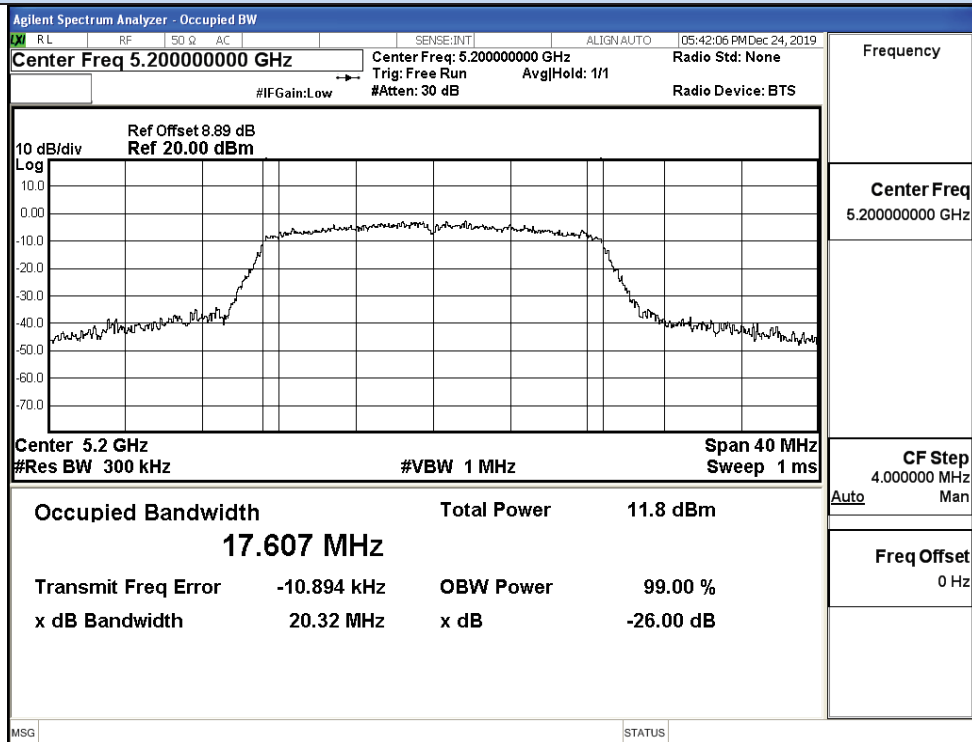
## IEEE 802.11n40 / Channel 38 / 5190MHz



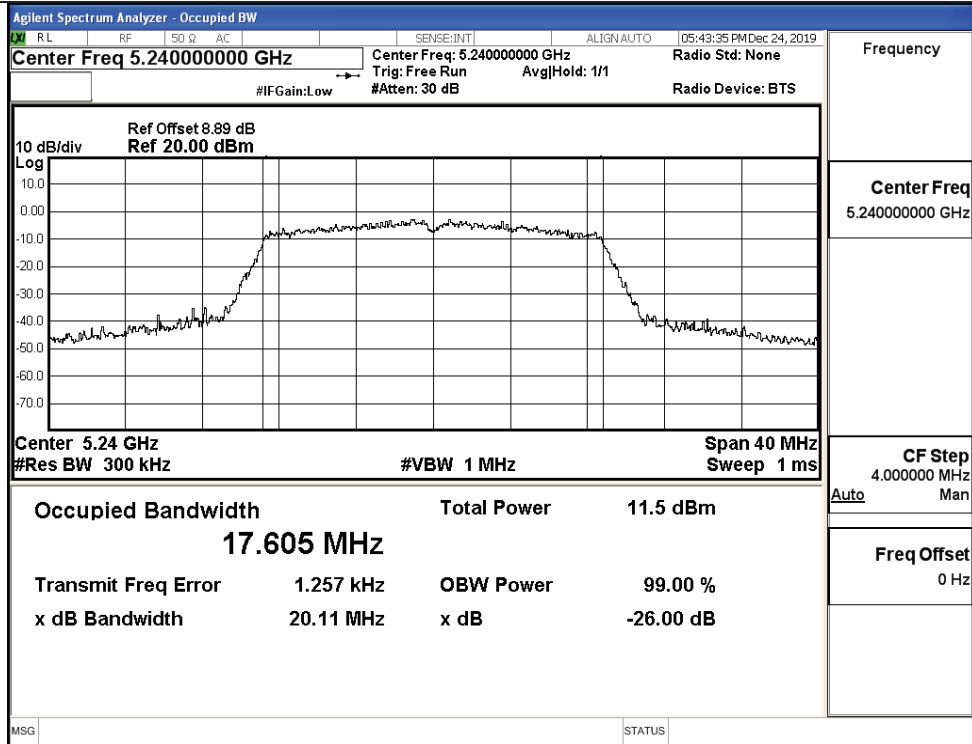
## IEEE 802.11n40 / Channel 46 / 5230MHz



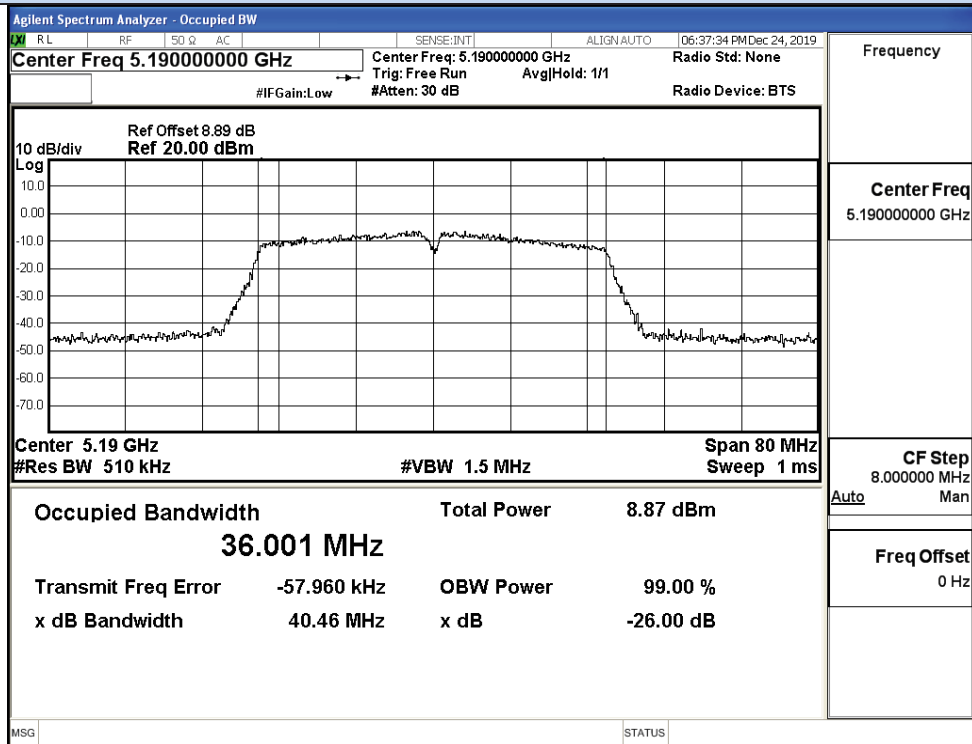
IEEE 802.11ac20 / Channel 36 / 5180MHz



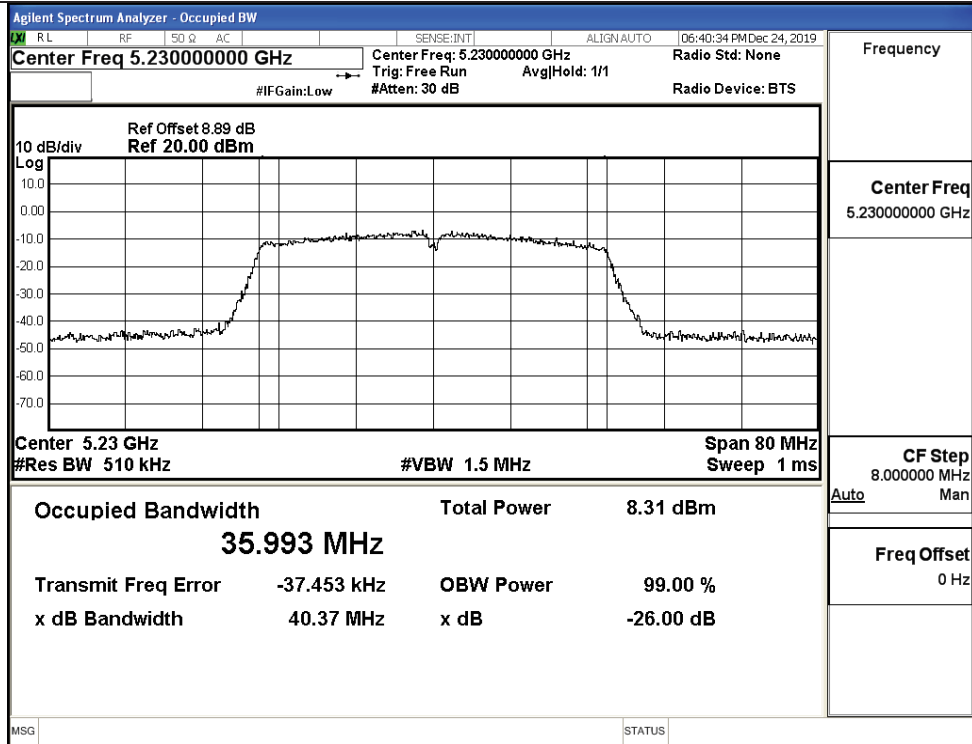
IEEE 802.11ac20 / Channel 40 / 5200MHz



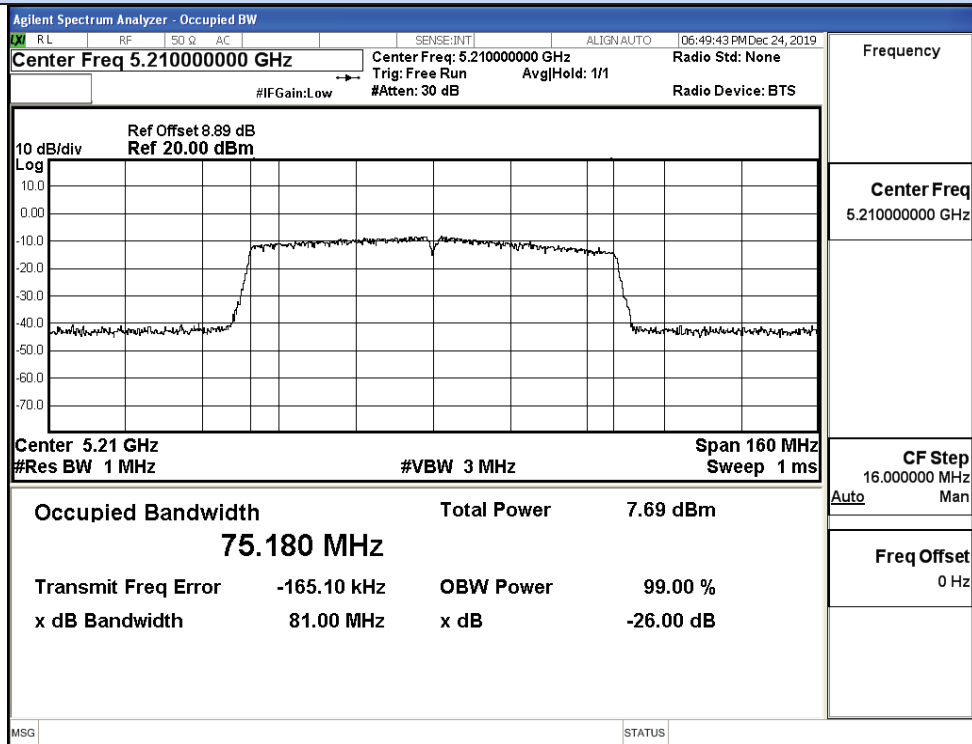
IEEE 802.11ac20 / Channel 48 / 5240MHz



IEEE 802.11ac40 / Channel 38 / 5190MHz



IEEE 802.11ac40 / Channel 46 / 5230MHz

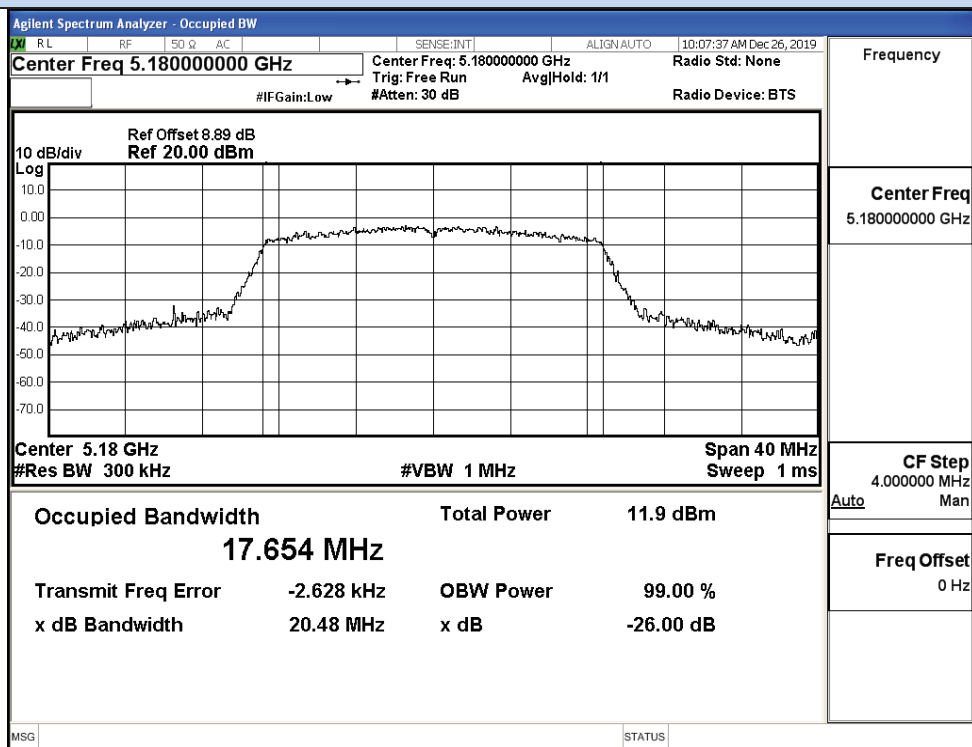


IEEE 802.11ac80 / Channel 42 / 5210MHz

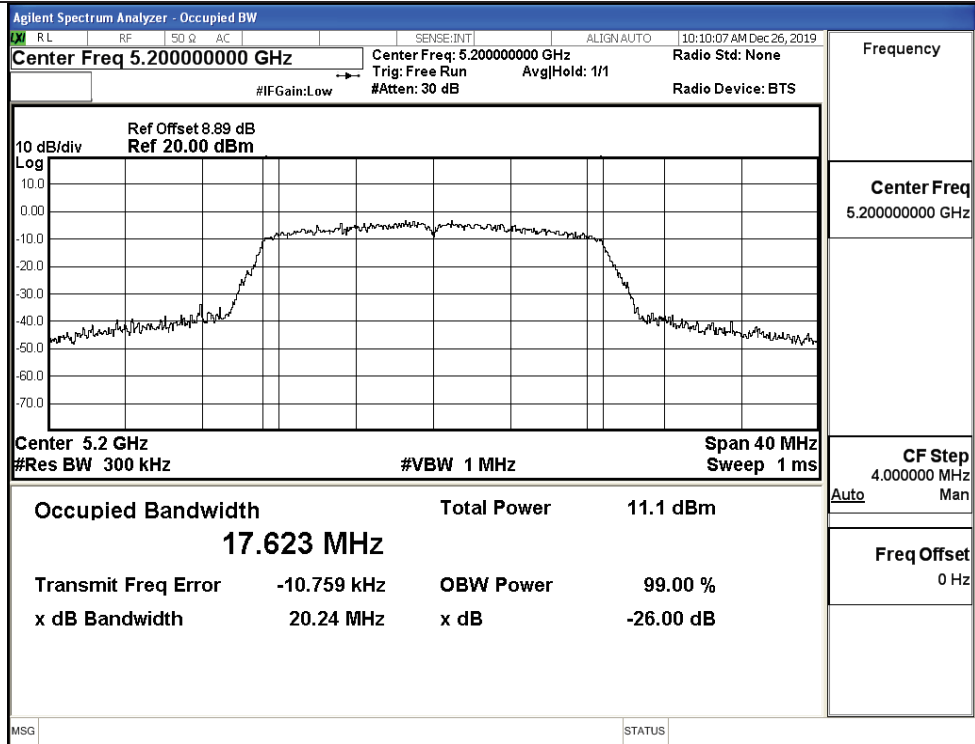
## Ant0+1

| Test Mode   | Channel | Frequency (MHz) | 26dB Bandwidth (MHz) | 99% Bandwidth (MHz) | Limit (MHz) | Verdict |
|-------------|---------|-----------------|----------------------|---------------------|-------------|---------|
| 11N20 SISO  | 36      | 5180            | 20.48                | 17.654              | No Limit    | Pass    |
|             | 40      | 5200            | 20.24                | 17.623              |             | Pass    |
|             | 48      | 5240            | 20.18                | 17.601              |             | Pass    |
| 11N40 SISO  | 38      | 5190            | 40.06                | 36.006              | No Limit    | Pass    |
|             | 46      | 5230            | 40.53                | 35.980              |             | Pass    |
| 11AC20 SISO | 36      | 5180            | 20.46                | 17.602              | No Limi     | Pass    |
|             | 40      | 5200            | 20.30                | 17.607              |             | Pass    |
|             | 48      | 5240            | 20.45                | 17.622              |             | Pass    |
| 11AC40 SISO | 38      | 5190            | 40.25                | 36.029              | No Limi     | Pass    |
|             | 46      | 5230            | 40.71                | 36.035              |             | Pass    |
| 11AC80 SISO | 42      | 5210            | 80.91                | 75.195              | No Limi     | Pass    |

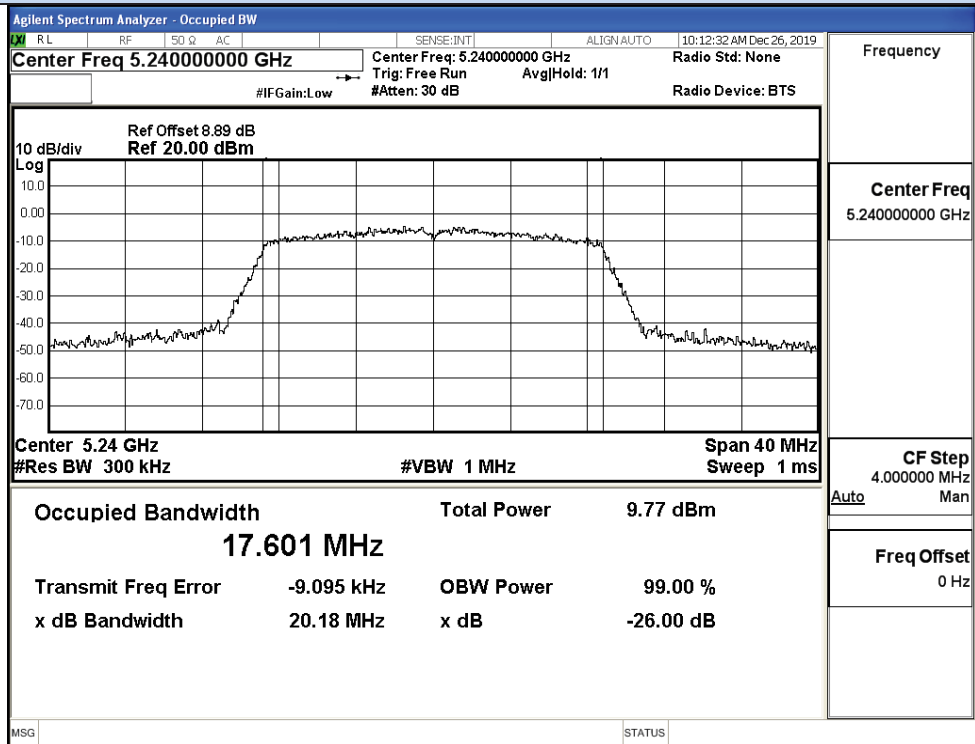
## 26dB Bandwidth



IEEE 802.11n20 / Channel 36 / 5180MHz

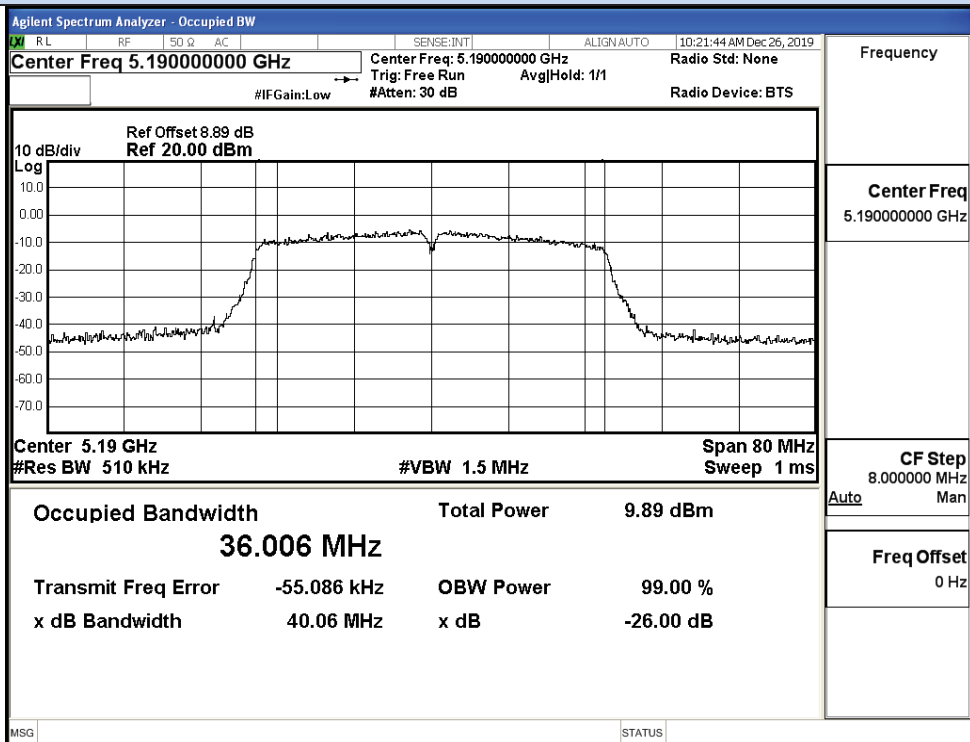


IEEE 802.11n20 / Channel 40 / 5200MHz

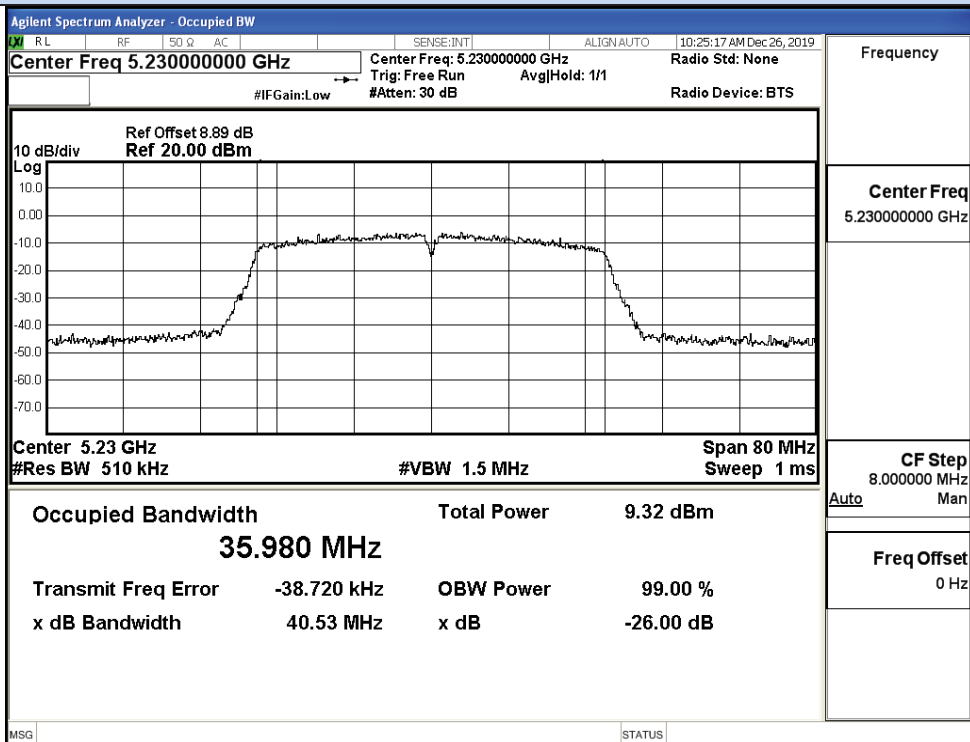


IEEE 802.11n20 / Channel 48 / 5240MHz

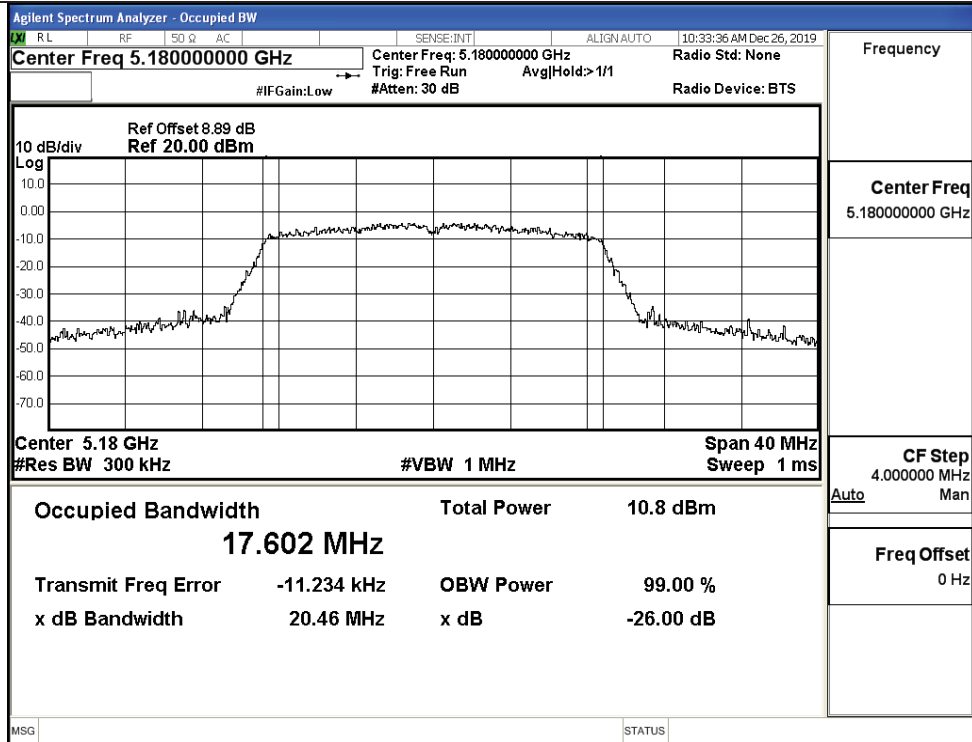
## 26dB Bandwidth



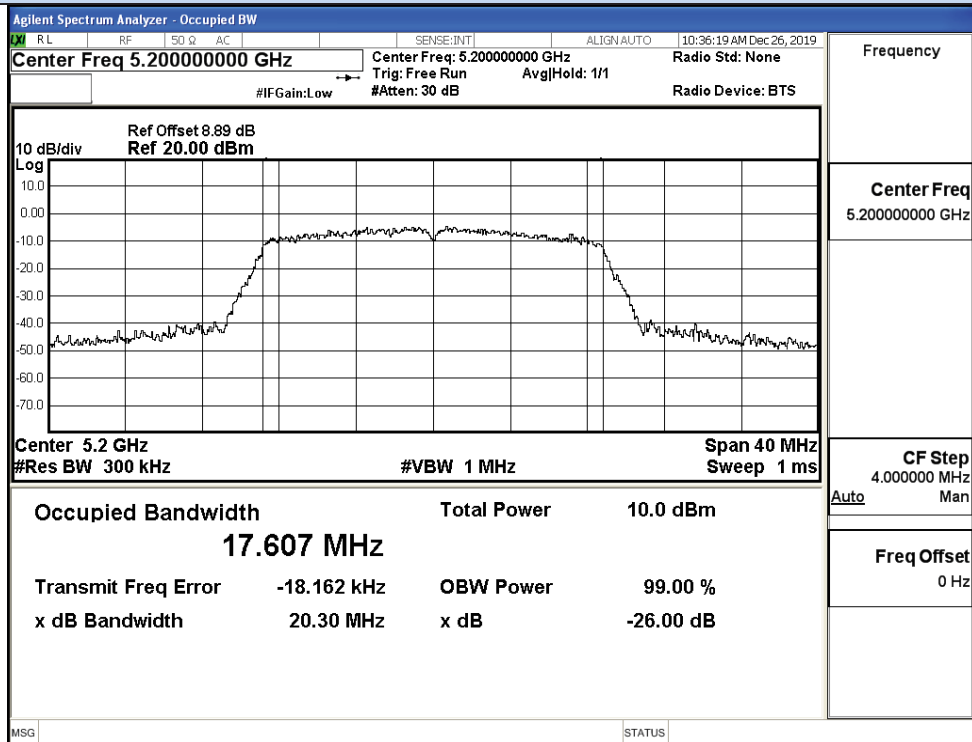
## IEEE 802.11n40 / Channel 38 / 5190MHz



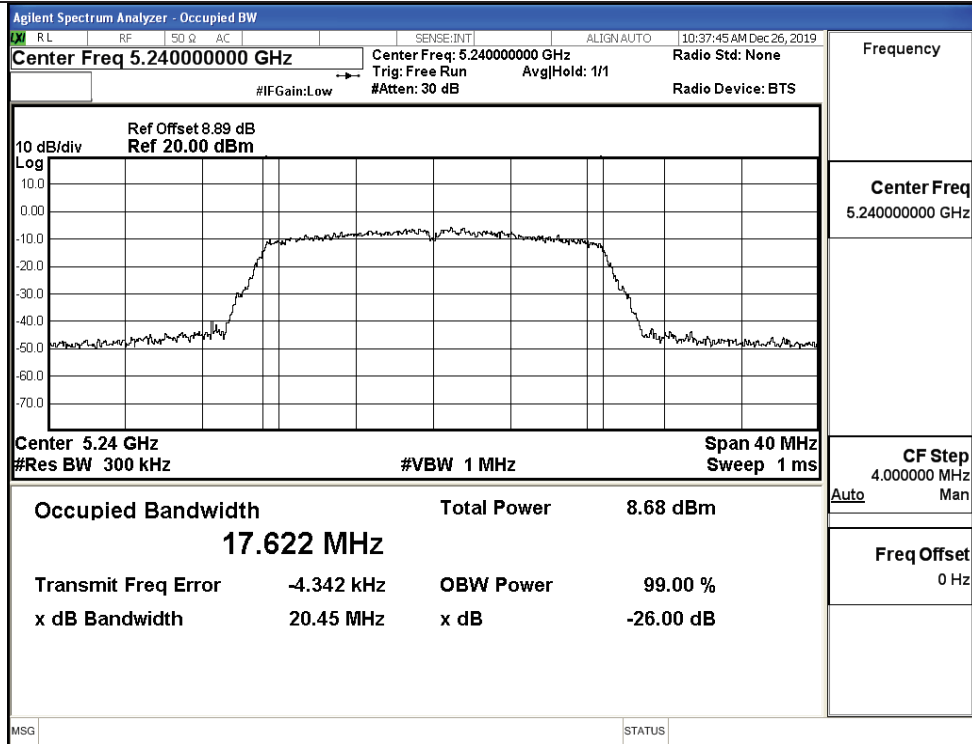
## IEEE 802.11n40 / Channel 46 / 5230MHz



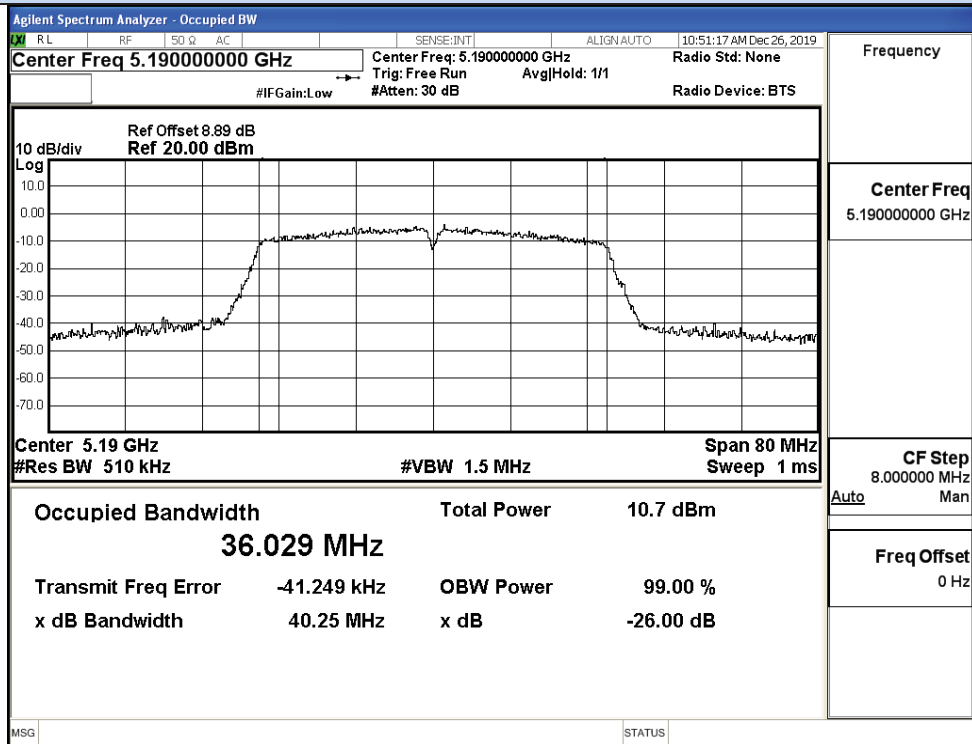
IEEE 802.11ac20 / Channel 36 / 5180MHz



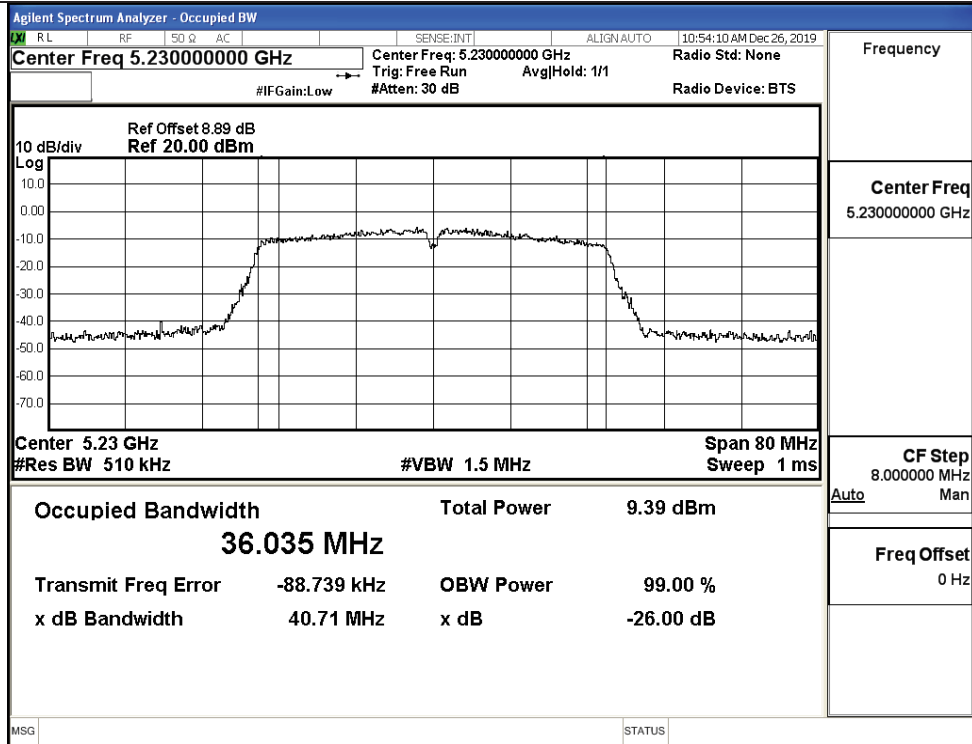
IEEE 802.11ac20 / Channel 40 / 5200MHz



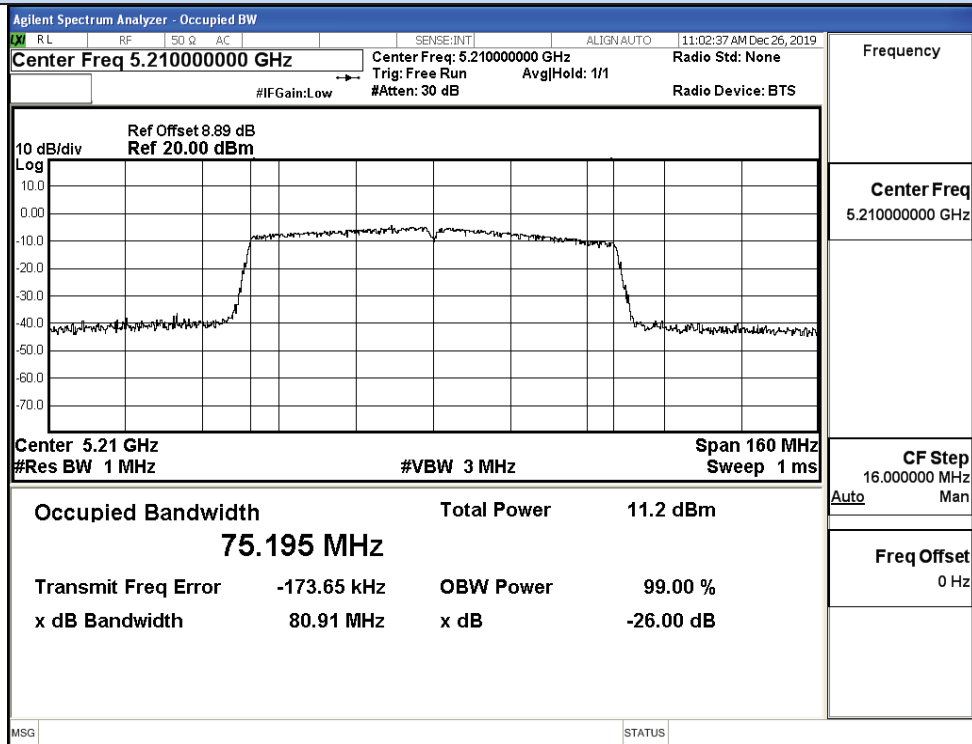
IEEE 802.11ac20 / Channel 48 / 5240MHz



IEEE 802.11ac40 / Channel 38 / 5190MHz



IEEE 802.11ac40 / Channel 46 / 5230MHz



IEEE 802.11ac80 / Channel 42 / 5210MHz

**D.5 Undesirable Emissions Measurement**

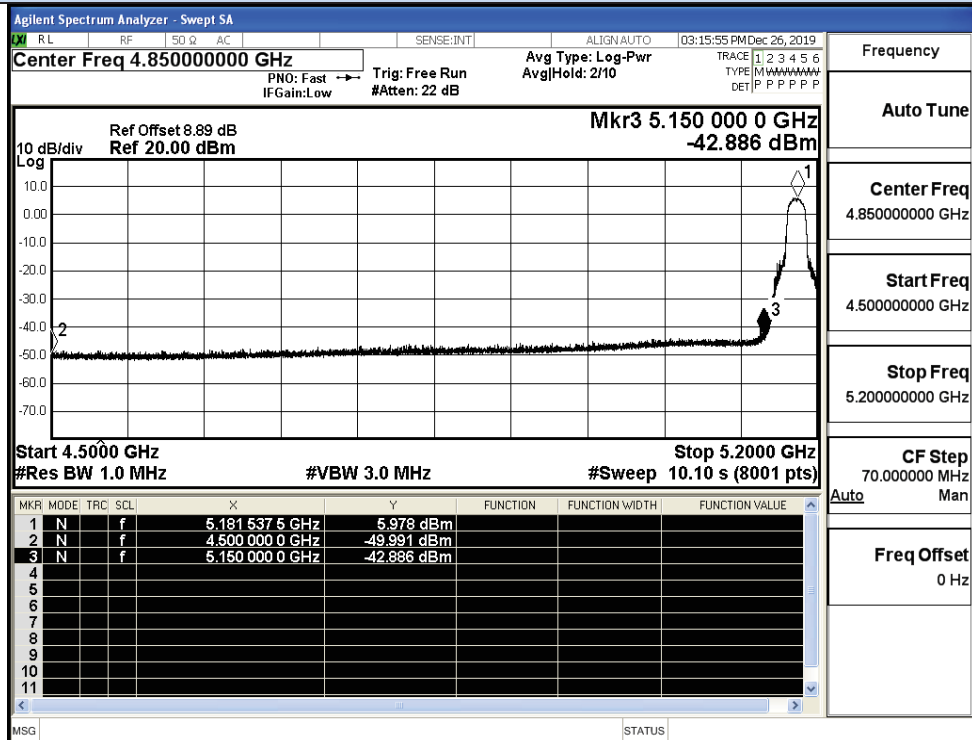
Ant0

| Test Mode              | Channel | Frequency (MHz) | Conducted Power (dBm) | Antenna Gain (dBi) | Ground Reflection Factor (dB) | Covert Radiated E Level At 3m (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|------------------------|---------|-----------------|-----------------------|--------------------|-------------------------------|----------------------------------------|----------|----------------|---------|
| 11A                    | 36      | 4500.0          | -49.99                | -3.38              | 0                             | 47.24                                  | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.31                | -3.38              | 0                             | 36.92                                  | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -42.89                | -3.38              | 0                             | 54.34                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -54.59                | -3.38              | 0                             | 42.64                                  | Average  | 54.00          | Pass    |
|                        | 48      | 5350.0          | -47.96                | -3.38              | 0                             | 49.27                                  | Peak     | 68.20          | Pass    |
|                        |         | 5350.0          | -58.82                | -3.38              | 0                             | 38.41                                  | Average  | 54.00          | Pass    |
|                        |         | 5460.0          | -49.04                | -3.38              | 0                             | 48.19                                  | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -59.13                | -3.38              | 0                             | 38.10                                  | Average  | 54.00          | Pass    |
| 11N2<br>0<br>SISO      | 36      | 4500.0          | -50.70                | -3.38              | 0                             | 46.53                                  | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.37                | -3.38              | 0                             | 36.86                                  | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -44.98                | -3.38              | 0                             | 52.24                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -55.68                | -3.38              | 0                             | 41.54                                  | Average  | 54.00          | Pass    |
|                        | 48      | 5350.0          | -47.32                | -3.38              | 0                             | 49.91                                  | Peak     | 68.20          | Pass    |
|                        |         | 5350.0          | -58.72                | -3.38              | 0                             | 38.51                                  | Average  | 54.00          | Pass    |
|                        |         | 5460.0          | -48.12                | -3.38              | 0                             | 49.11                                  | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -59.20                | -3.38              | 0                             | 38.03                                  | Average  | 54.00          | Pass    |
| 11N4<br>0<br>SISO      | 38      | 4500.0          | -50.40                | -3.38              | 0                             | 46.83                                  | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.38                | -3.38              | 0                             | 36.85                                  | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -36.25                | -3.38              | 0                             | 60.98                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -51.09                | -3.38              | 0                             | 46.14                                  | Average  | 54.00          | Pass    |
|                        | 46      | 5350.0          | -48.00                | -3.38              | 0                             | 49.23                                  | Peak     | 68.20          | Pass    |
|                        |         | 5350.0          | -58.49                | -3.38              | 0                             | 38.74                                  | Average  | 54.00          | Pass    |
|                        |         | 5460.0          | -48.51                | -3.38              | 0                             | 48.72                                  | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -58.95                | -3.38              | 0                             | 38.28                                  | Average  | 54.00          | Pass    |
| 11A<br>C20<br>SIS<br>O | 36      | 4500.0          | -50.18                | -3.38              | 0                             | 47.05                                  | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.33                | -3.38              | 0                             | 36.90                                  | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -44.65                | -3.38              | 0                             | 52.58                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -55.55                | -3.38              | 0                             | 41.67                                  | Average  | 54.00          | Pass    |
|                        | 48      | 4500.0          | -50.18                | -3.38              | 0                             | 47.05                                  | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.33                | -3.38              | 0                             | 36.90                                  | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -44.65                | -3.38              | 0                             | 52.58                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -55.55                | -3.38              | 0                             | 41.67                                  | Average  | 54.00          | Pass    |
| 11A<br>C40<br>SIS<br>O | 38      | 4500.0          | -50.83                | -3.38              | 0                             | 46.40                                  | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.37                | -3.38              | 0                             | 36.86                                  | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -41.99                | -3.38              | 0                             | 55.24                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -53.92                | -3.38              | 0                             | 43.31                                  | Average  | 54.00          | Pass    |
|                        | 46      | 5350.0          | -48.94                | -3.38              | 0                             | 48.29                                  | Peak     | 68.20          | Pass    |
|                        |         | 5350.0          | -58.58                | -3.38              | 0                             | 38.65                                  | Average  | 54.00          | Pass    |
|                        |         | 5460.0          | -47.90                | -3.38              | 0                             | 49.33                                  | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -58.97                | -3.38              | 0                             | 38.26                                  | Average  | 54.00          | Pass    |
| 11A<br>C80<br>SIS<br>O | 42      | 4500.0          | -49.11                | -3.38              | 0                             | 48.12                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -58.07                | -3.38              | 0                             | 39.16                                  | Average  | 54.00          | Pass    |
|                        |         | 4500.0          | -48.06                | -3.38              | 0                             | 49.17                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -58.48                | -3.38              | 0                             | 38.75                                  | Average  | 54.00          | Pass    |
|                        |         | 5350.0          | -49.11                | -3.38              | 0                             | 48.12                                  | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -58.07                | -3.38              | 0                             | 39.16                                  | Average  | 54.00          | Pass    |
|                        |         | 5350.0          | -48.06                | -3.38              | 0                             | 49.17                                  | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -58.48                | -3.38              | 0                             | 38.75                                  | Average  | 54.00          | Pass    |

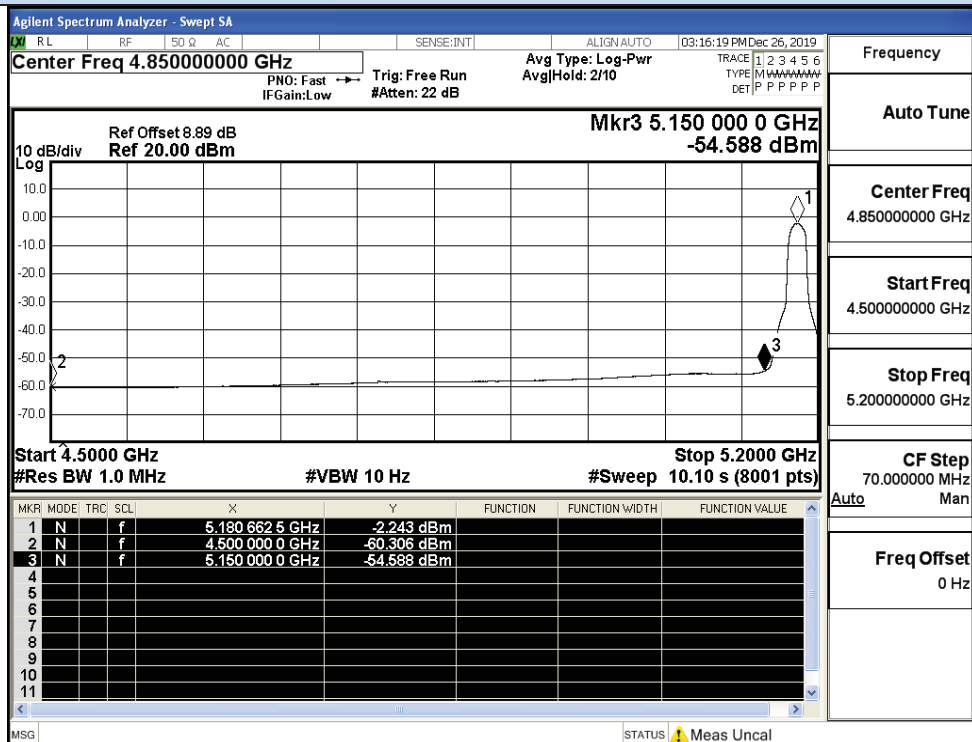
E [dBuV/m]= Power [dBm] + Gain + Ground Factor + 95.26

The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater

## Undesirable Emissions Measurement

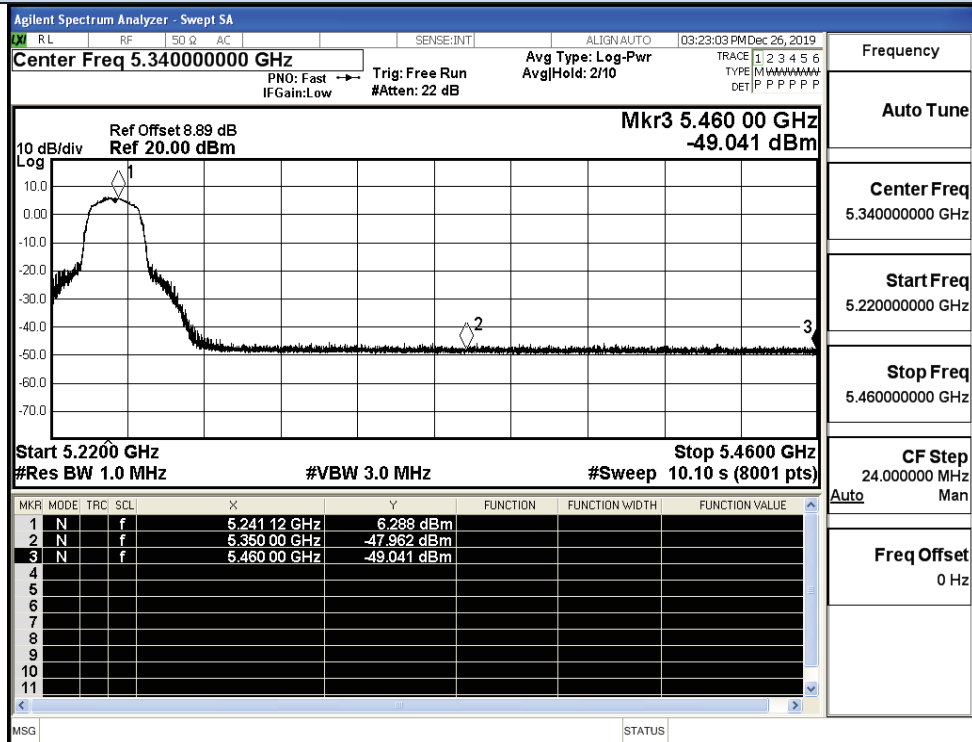


## IEEE 802.11a / Channel 36 / 5180MHz / Peak

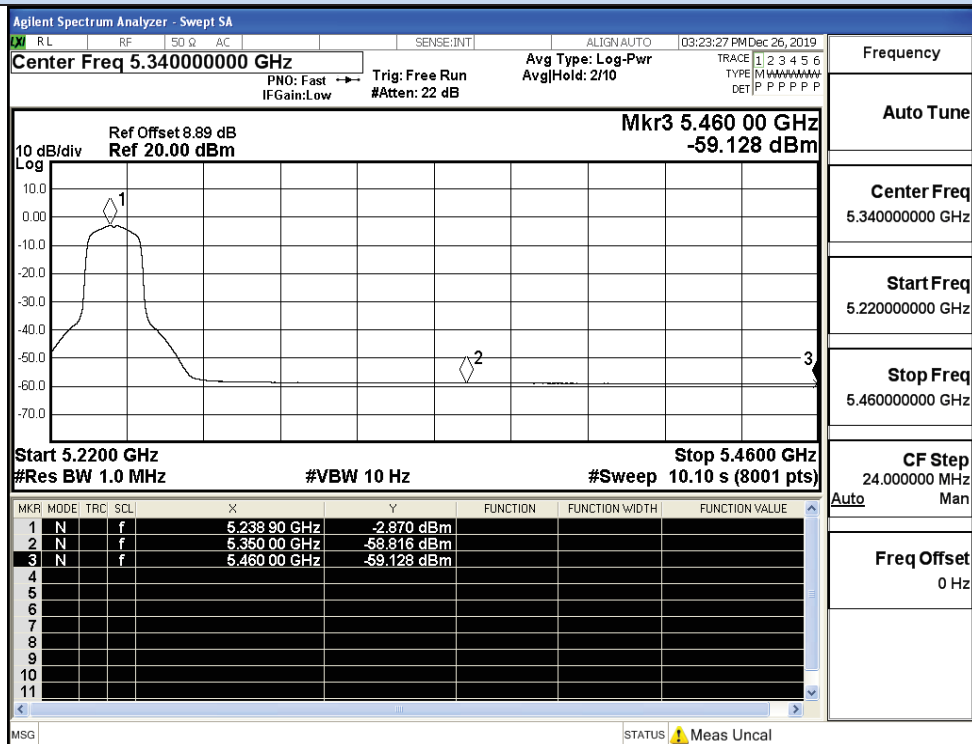


## IEEE 802.11a / Channel 36 / 5180MHz / Average

## Undesirable Emissions Measurement

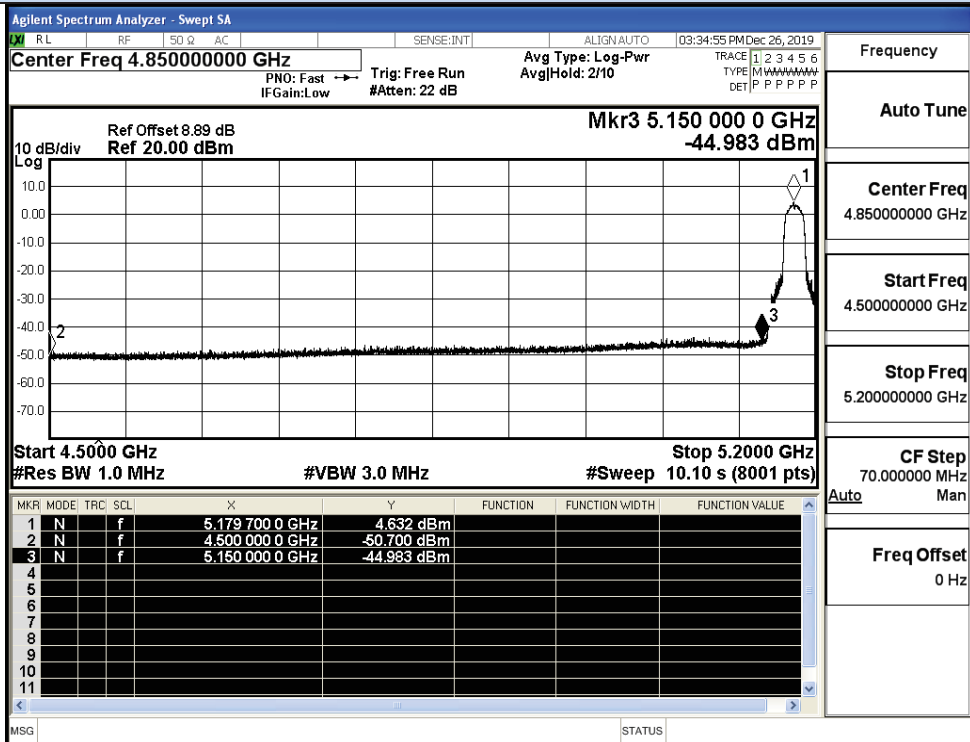


## IEEE 802.11a / Channel 48 / 5240MHz / Peak

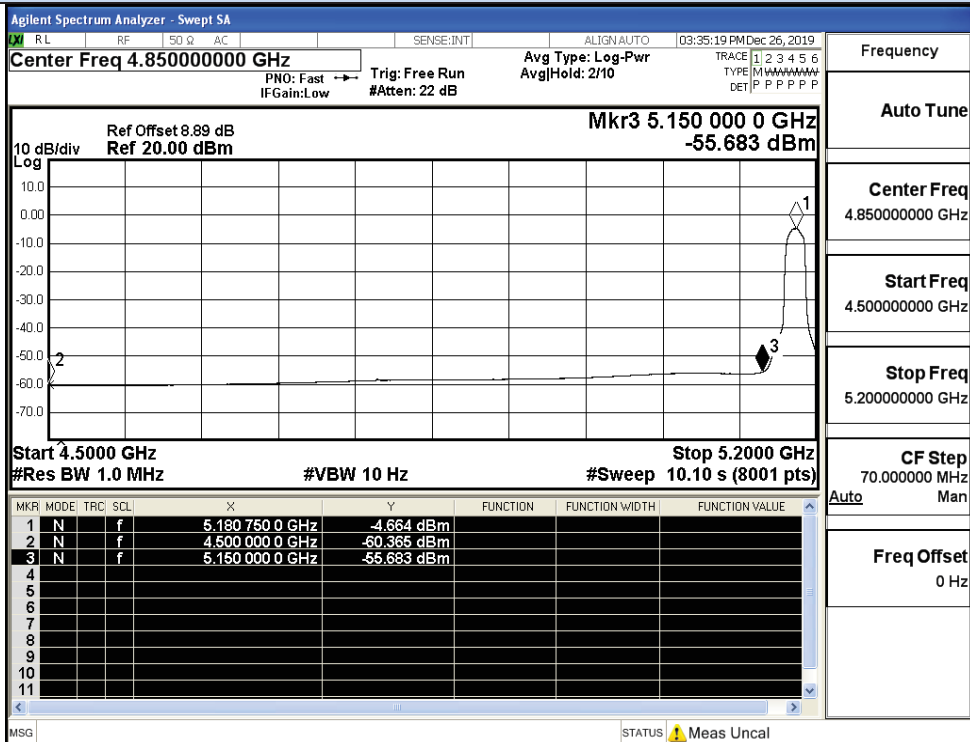


## IEEE 802.11a / Channel 48 / 5240MHz / Average

## Undesirable Emissions Measurement

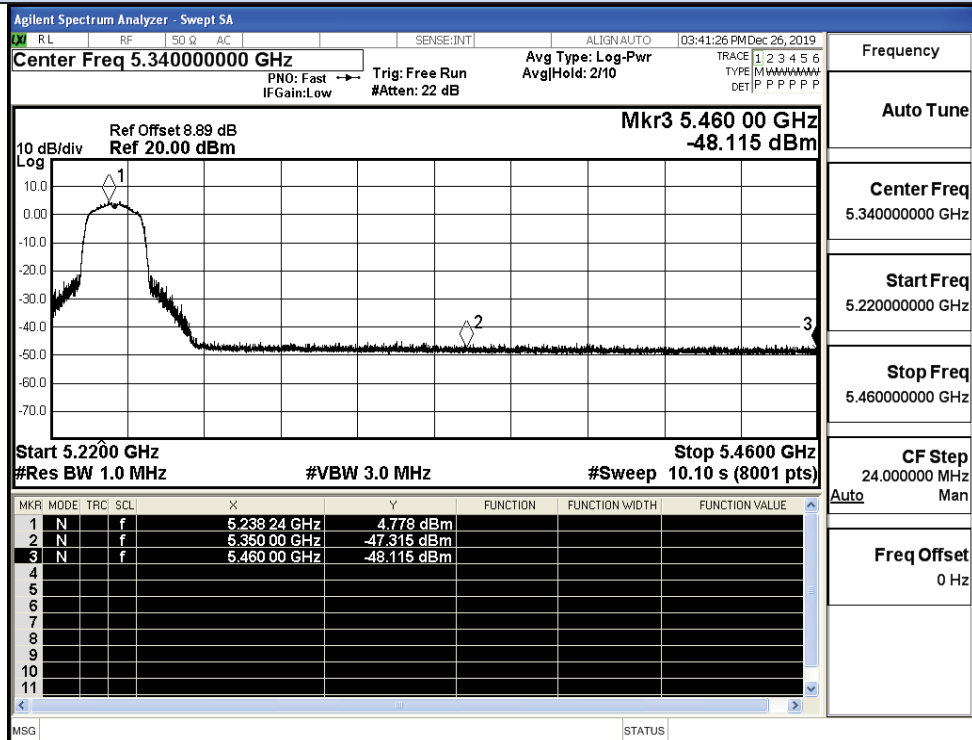


## IEEE 802.11n20 / Channel 36 / 5180MHz / Peak

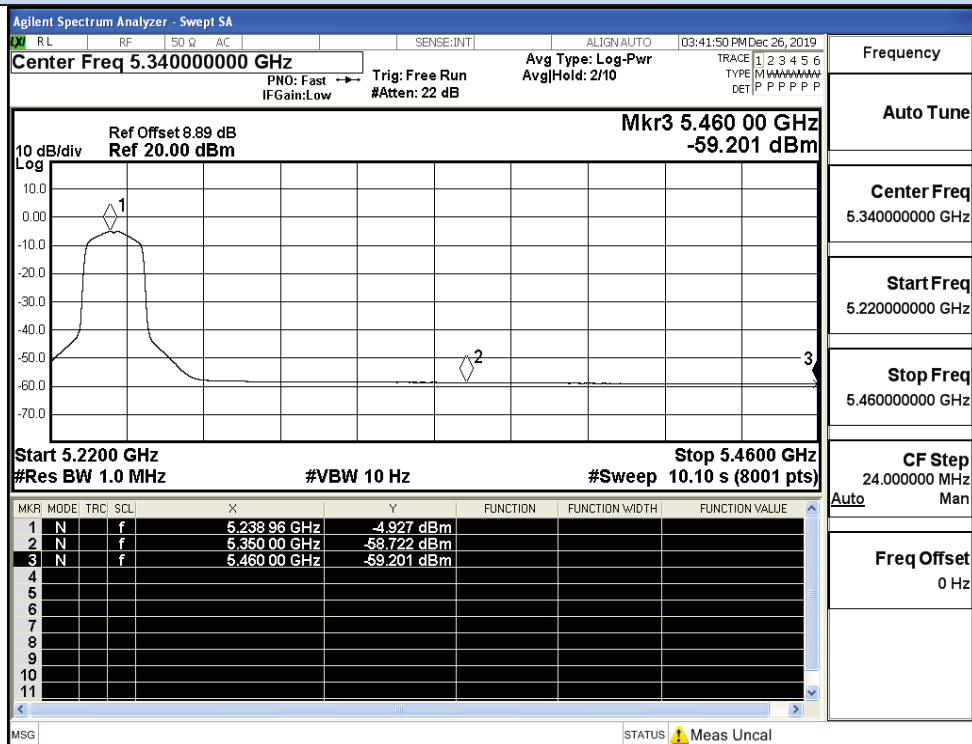


## IEEE 802.11n20 / Channel 36 / 5180MHz / Average

## Undesirable Emissions Measurement

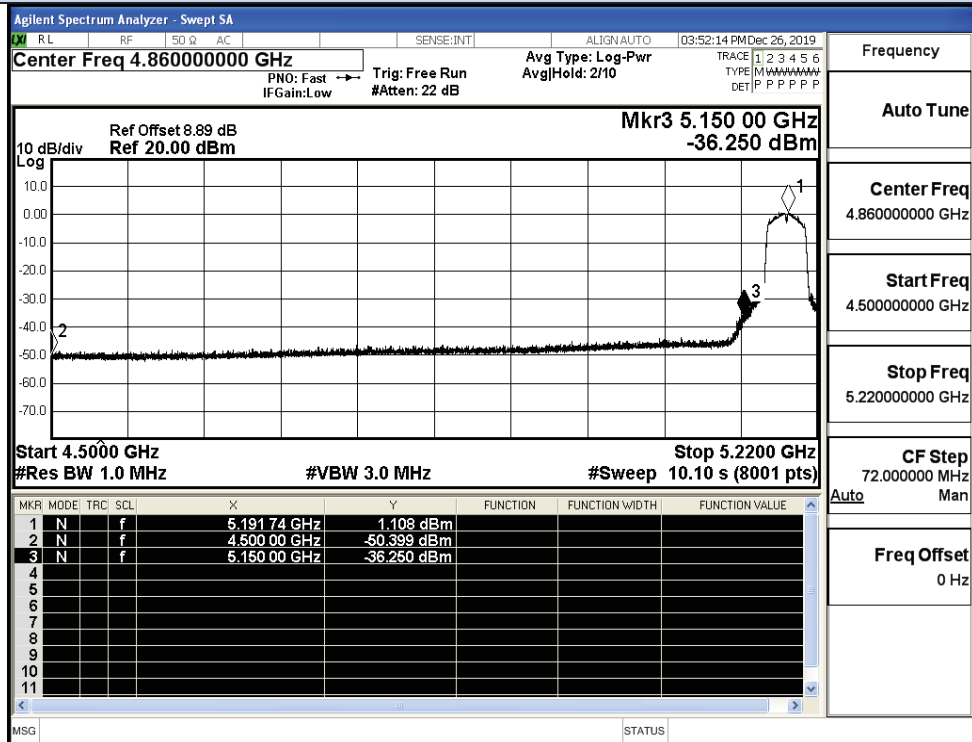


## IEEE 802.11n20 / Channel 48 / 5240MHz / Peak

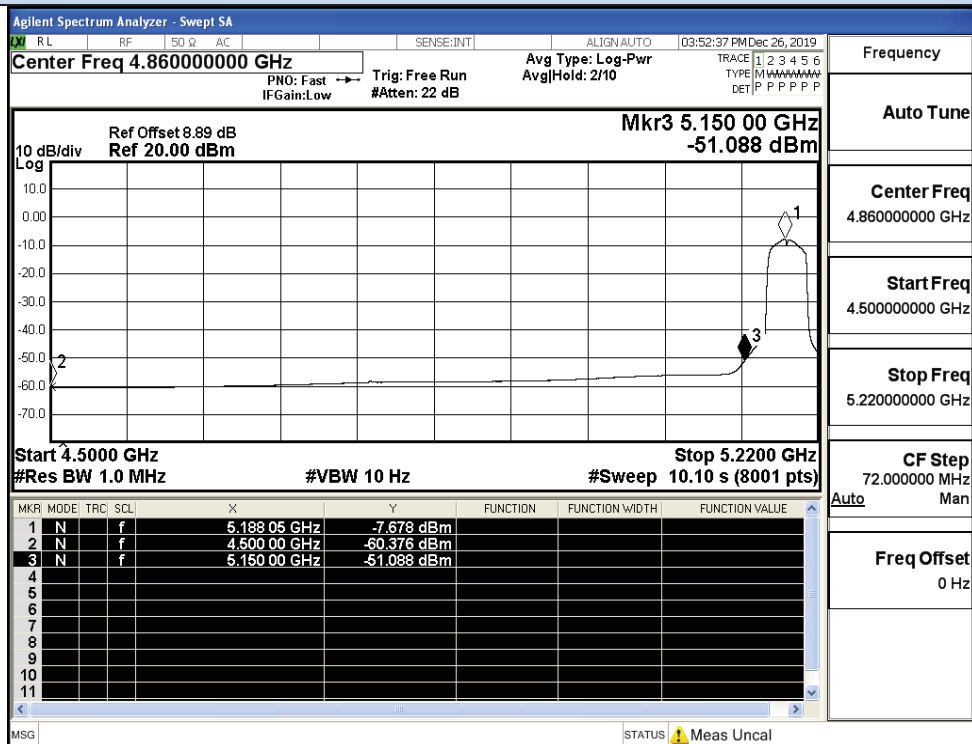


## IEEE 802.11n20 / Channel 48 / 5240MHz / Average

## Undesirable Emissions Measurement

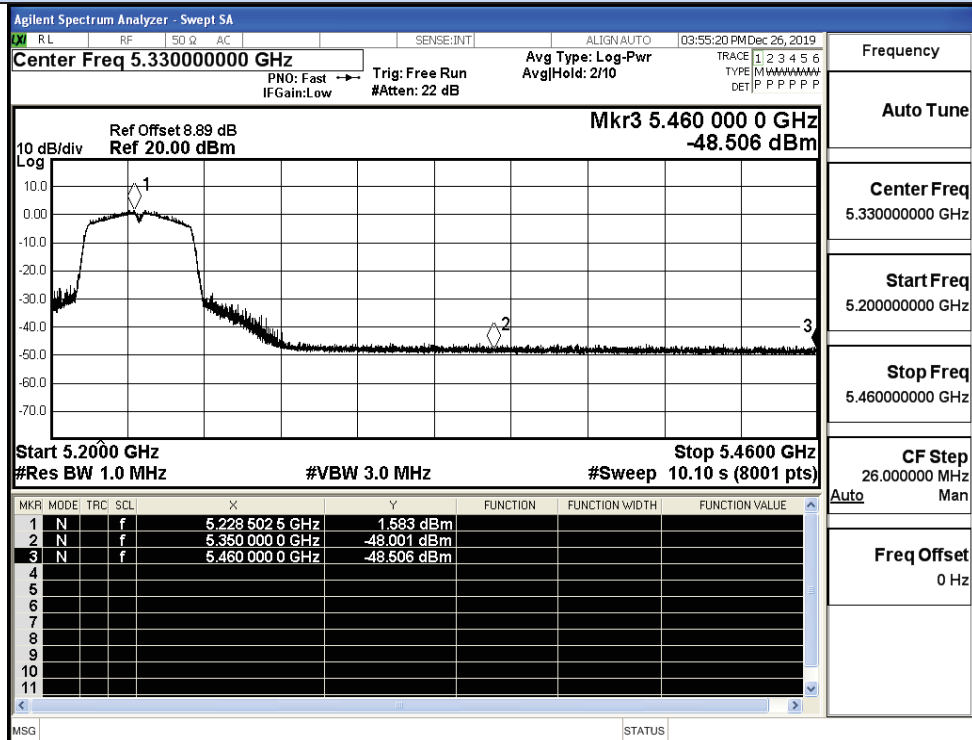


## IEEE 802.11n40 / Channel 38 / 5190MHz / Peak

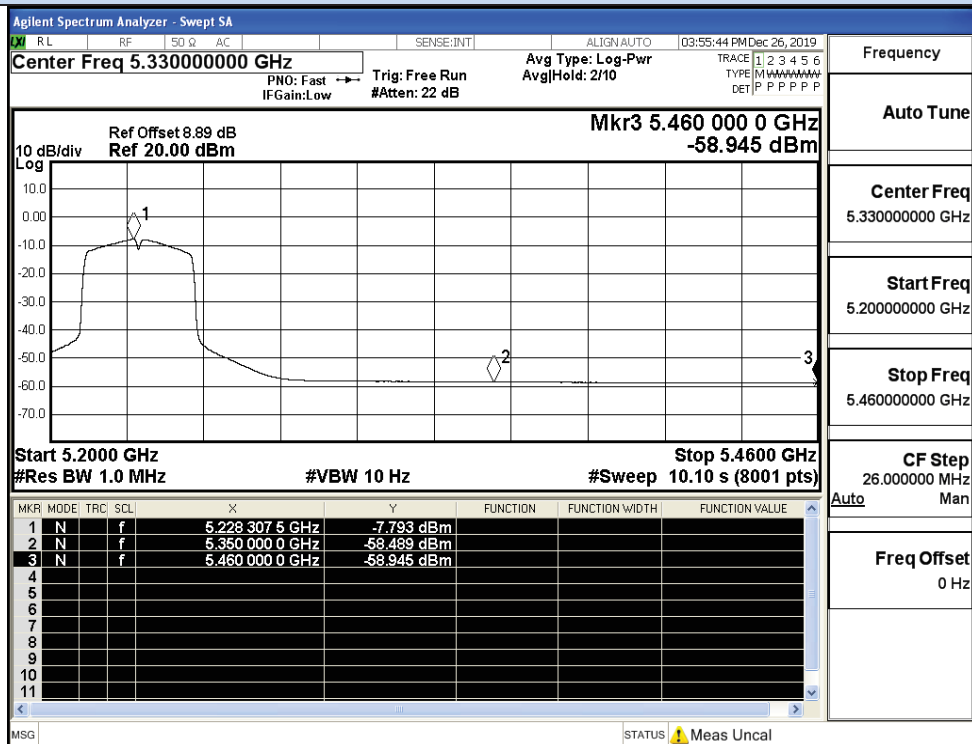


## IEEE 802.11n40 / Channel 38 / 5190MHz / Average

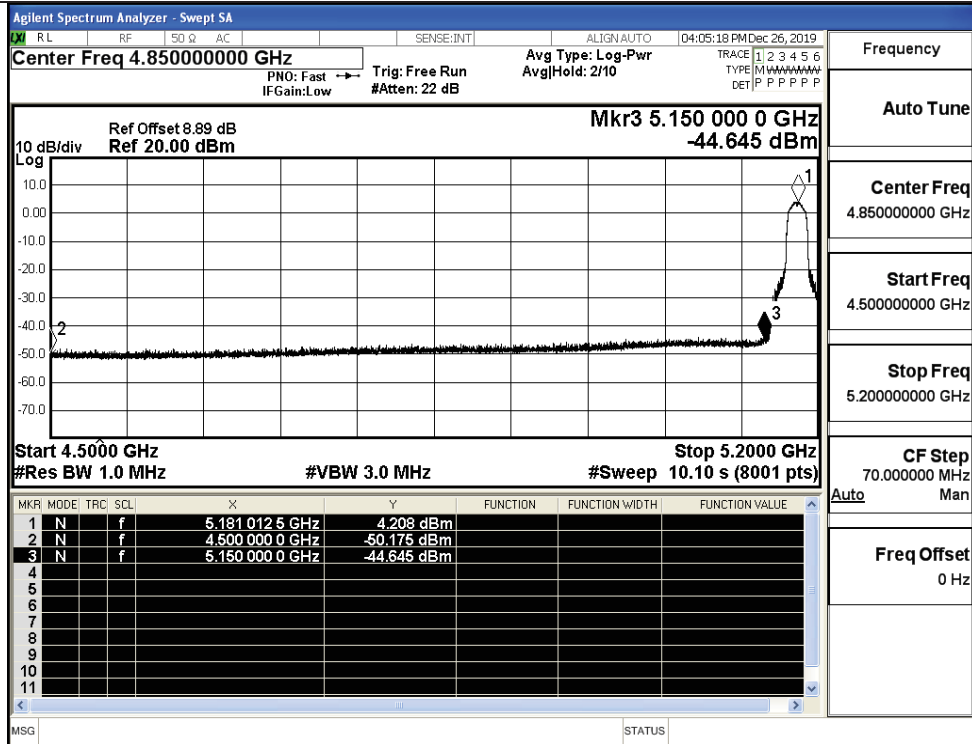
## Undesirable Emissions Measurement



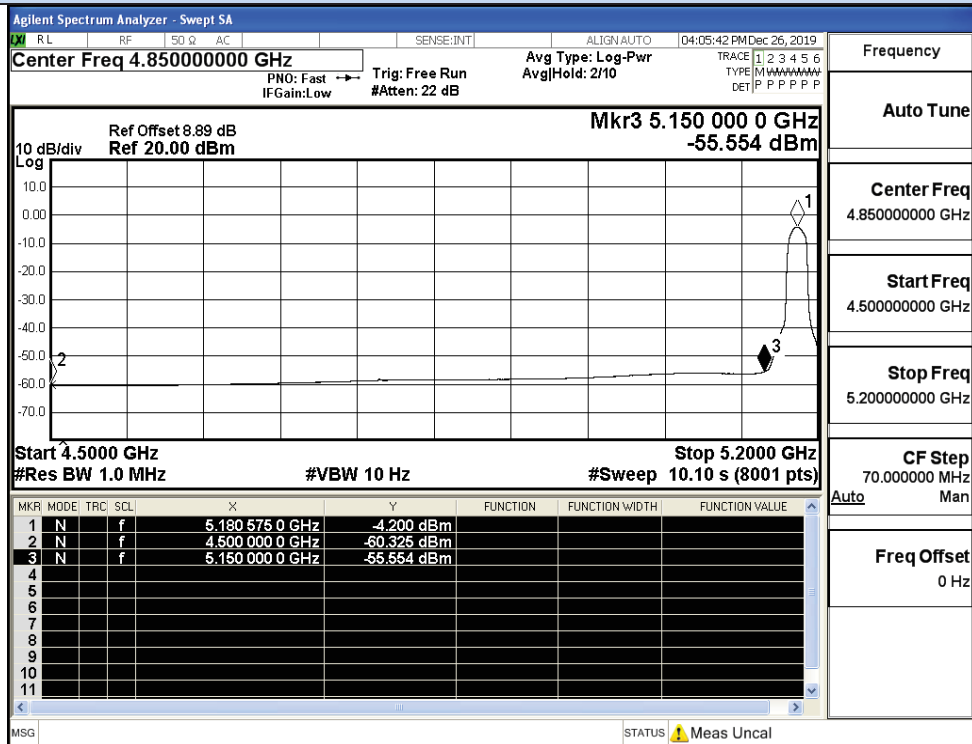
## IEEE 802.11n40 / Channel 46 / 5230MHz / Peak



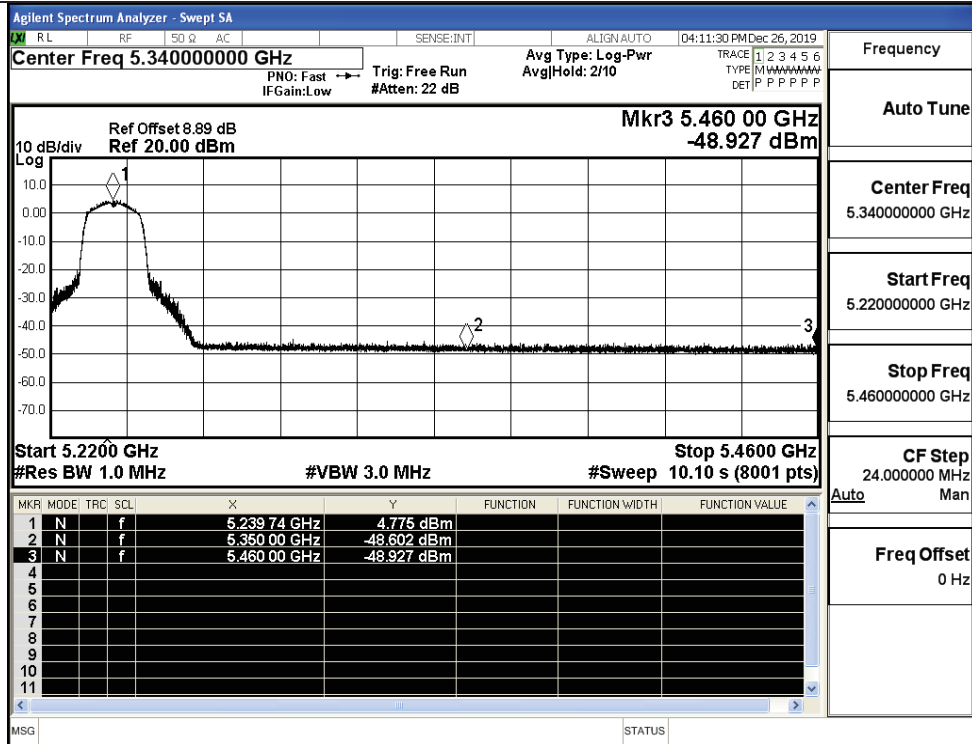
## IEEE 802.11n40 / Channel 46 / 5230MHz / Average



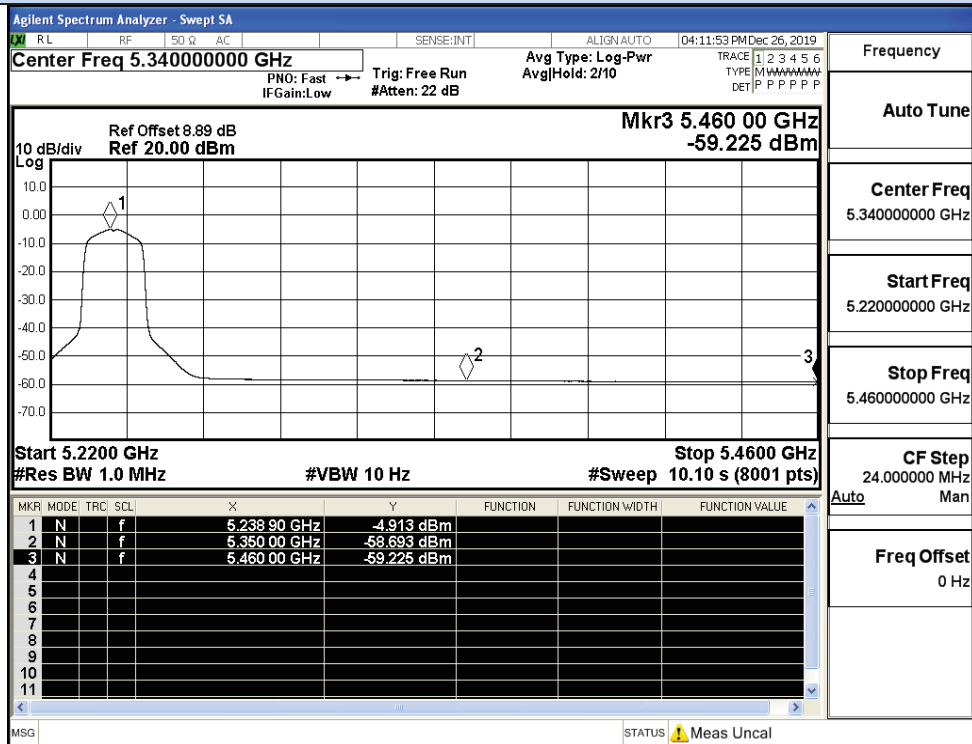
IEEE 802.11ac20 / Channel 36 / 5180MHz / Peak



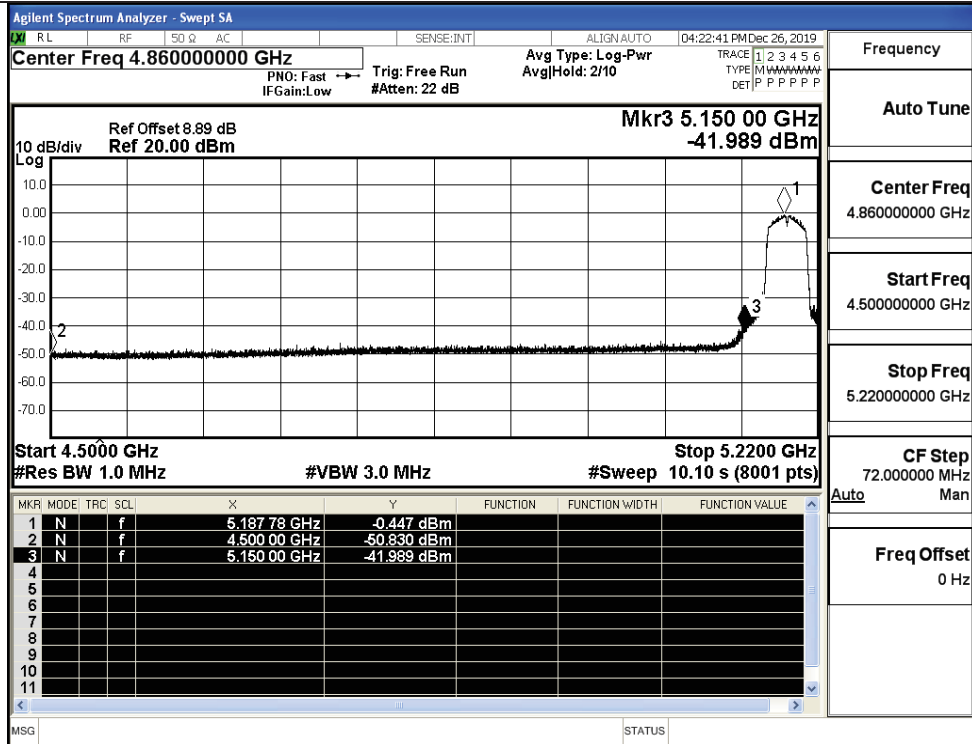
IEEE 802.11ac20 / Channel 36 / 5180MHz / Average



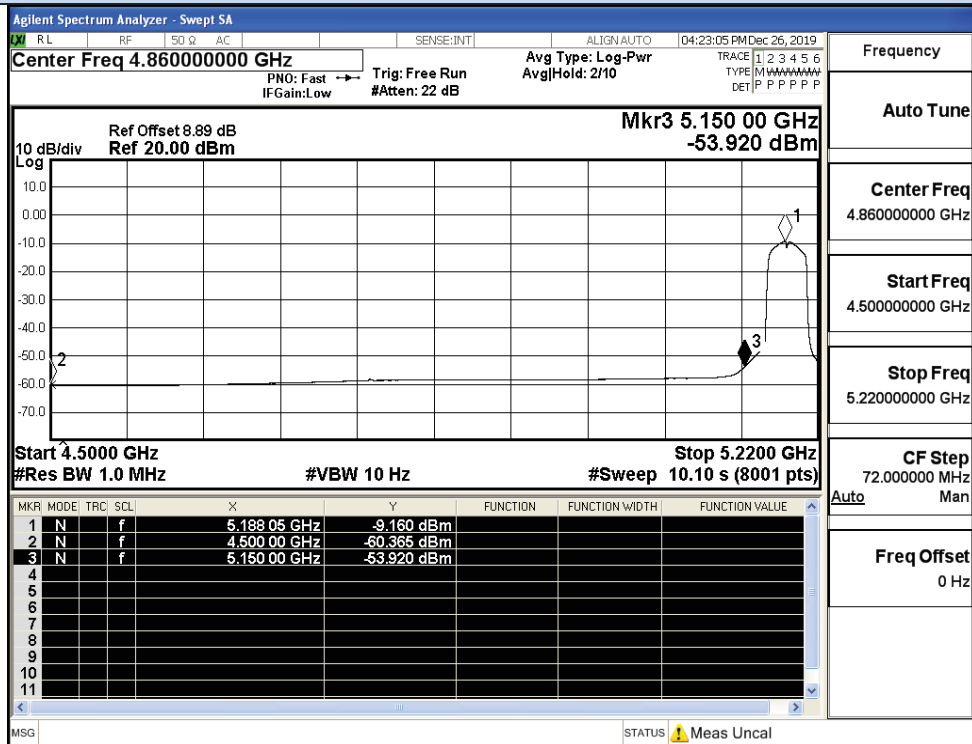
IEEE 802.11ac20 / Channel 48 / 5240MHz / Peak



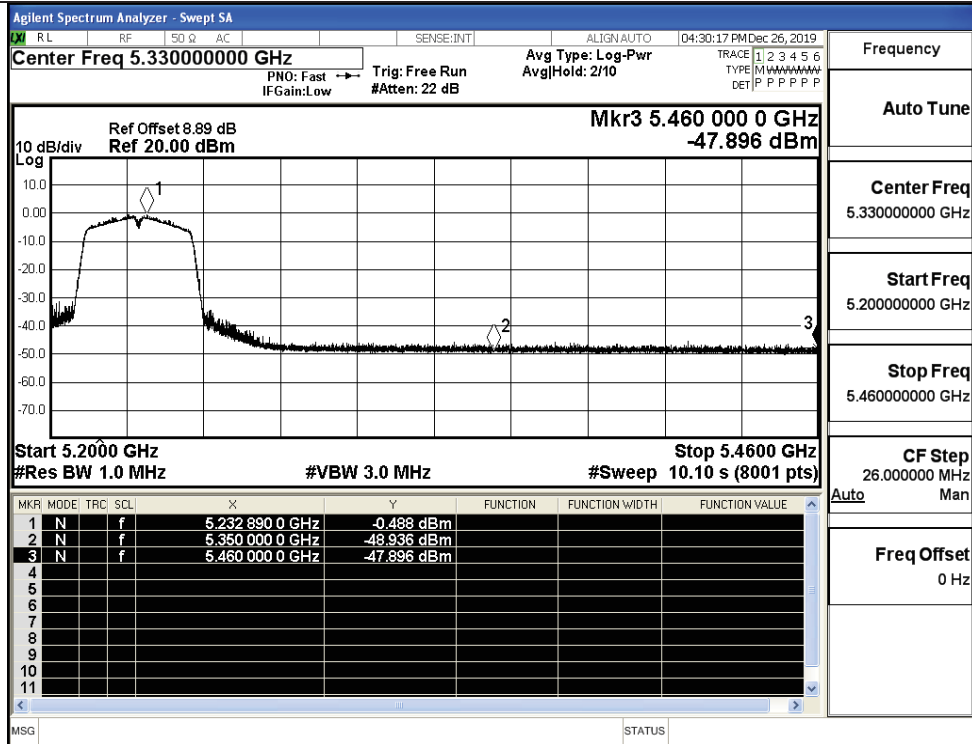
IEEE 802.11ac20 / Channel 48 / 5240MHz / Average



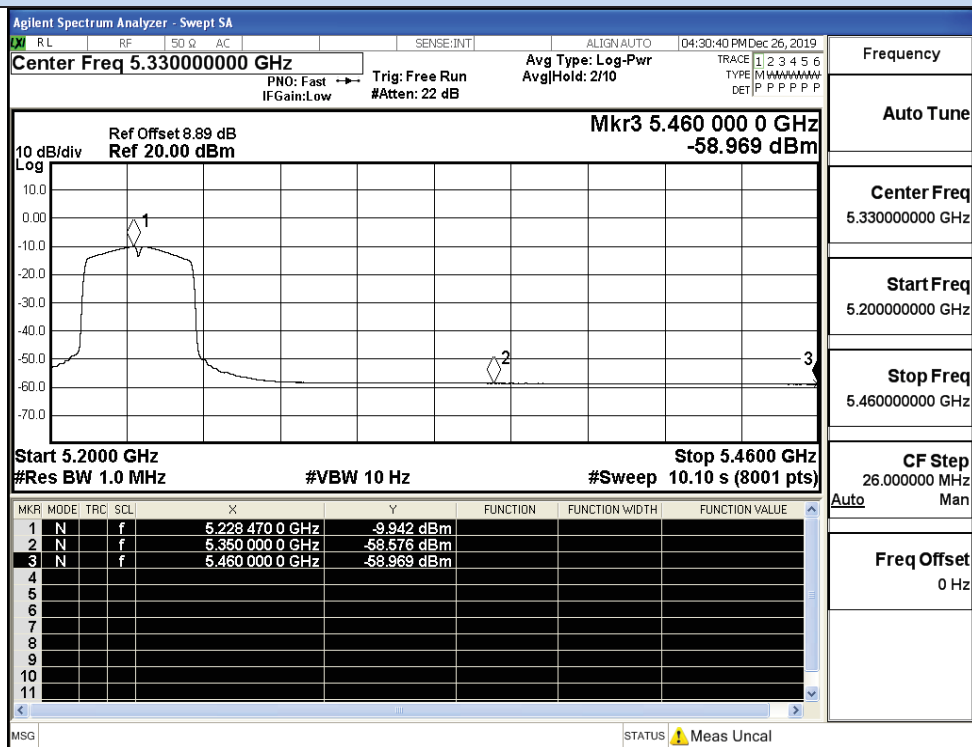
IEEE 802.11ac40 / Channel 38 / 5190MHz / Peak



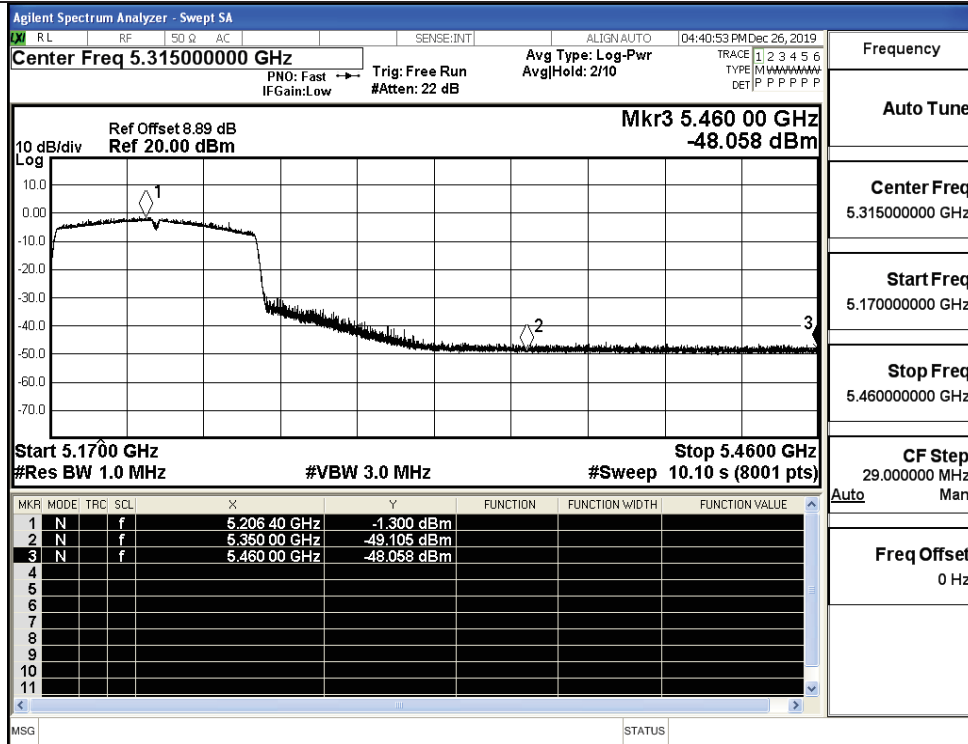
IEEE 802.11ac40 / Channel 38 / 5190MHz / Average



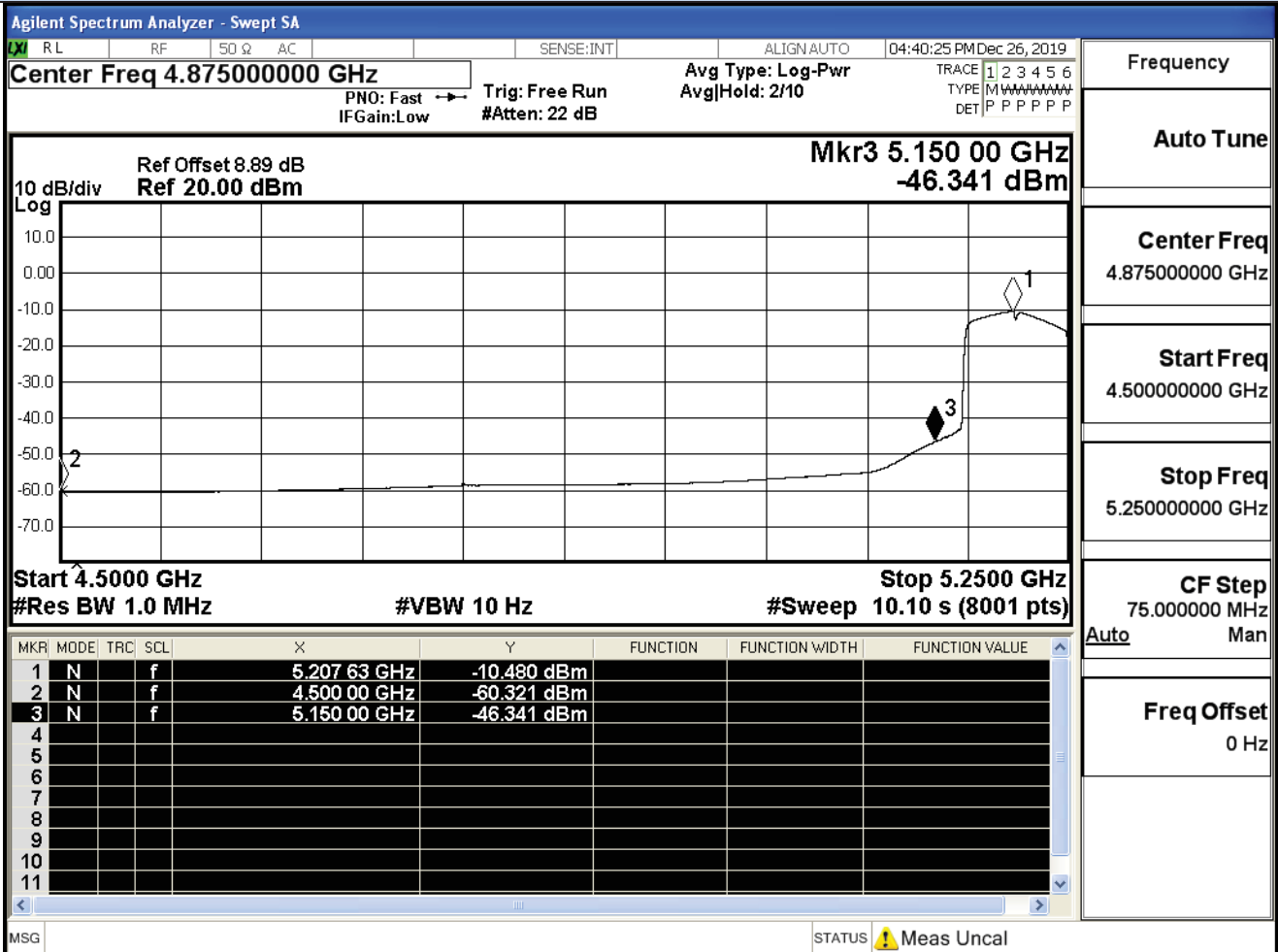
IEEE 802.11ac40 / Channel 46 / 5230MHz / Peak



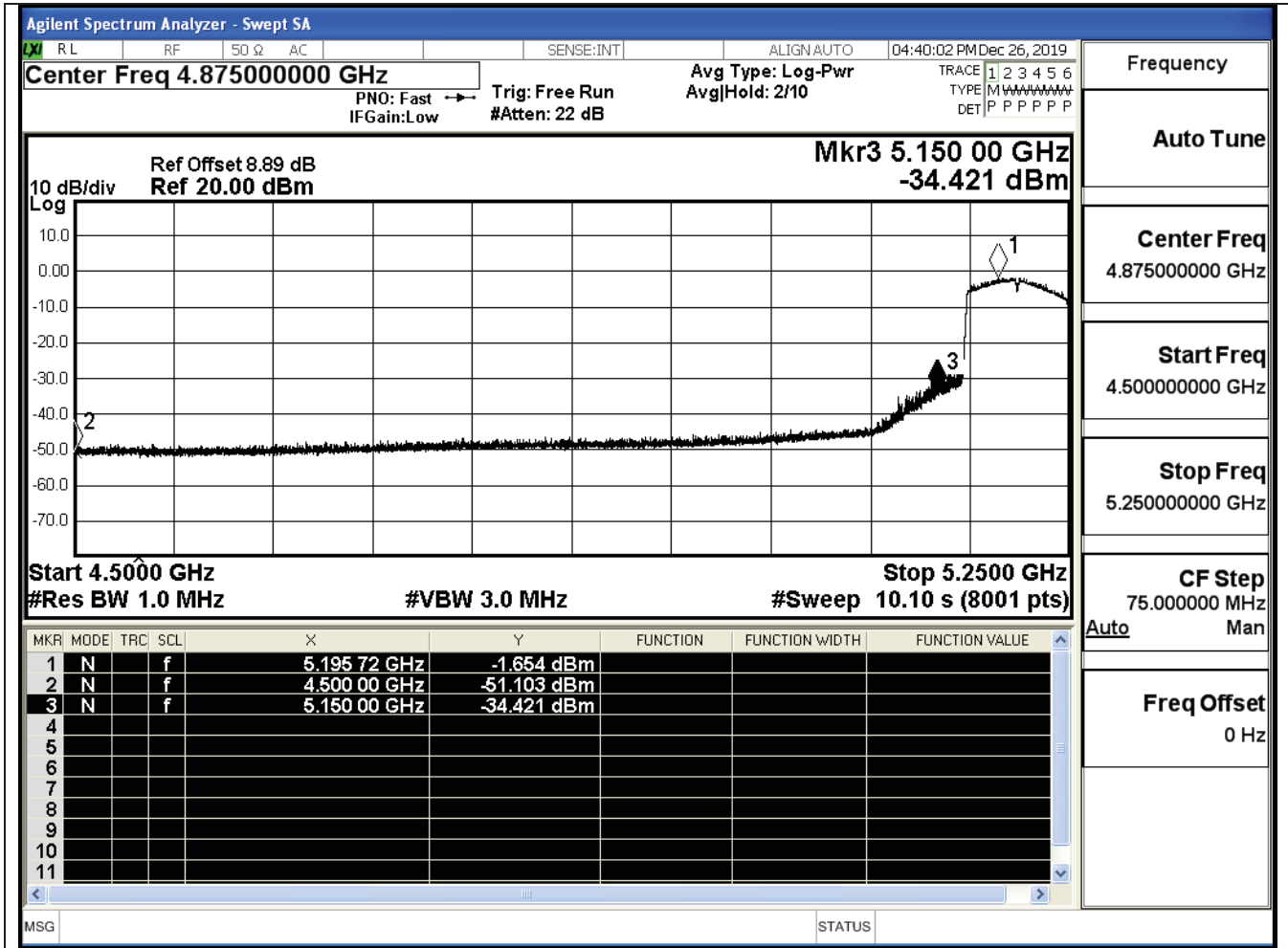
IEEE 802.11ac40 / Channel 46 / 5230MHz / Average



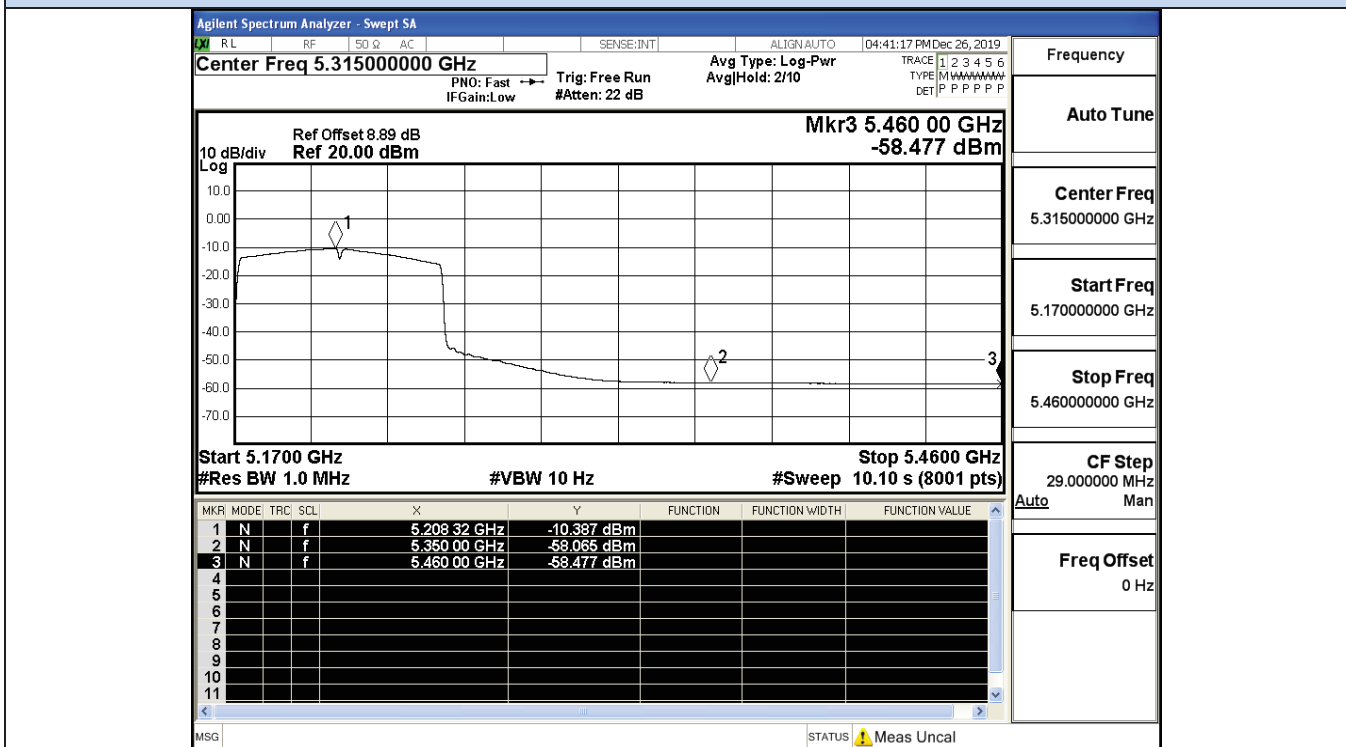
IEEE 802.11ac80 / Channel 42 / 5210MHz / Peak



IEEE 802.11ac80 / Channel 42 / 5210MHz / Average



IEEE 802.11ac80 / Channel 42/ 5210MHz / Peak



IEEE 802.11ac80 / Channel 42 / 5210MHz / Average

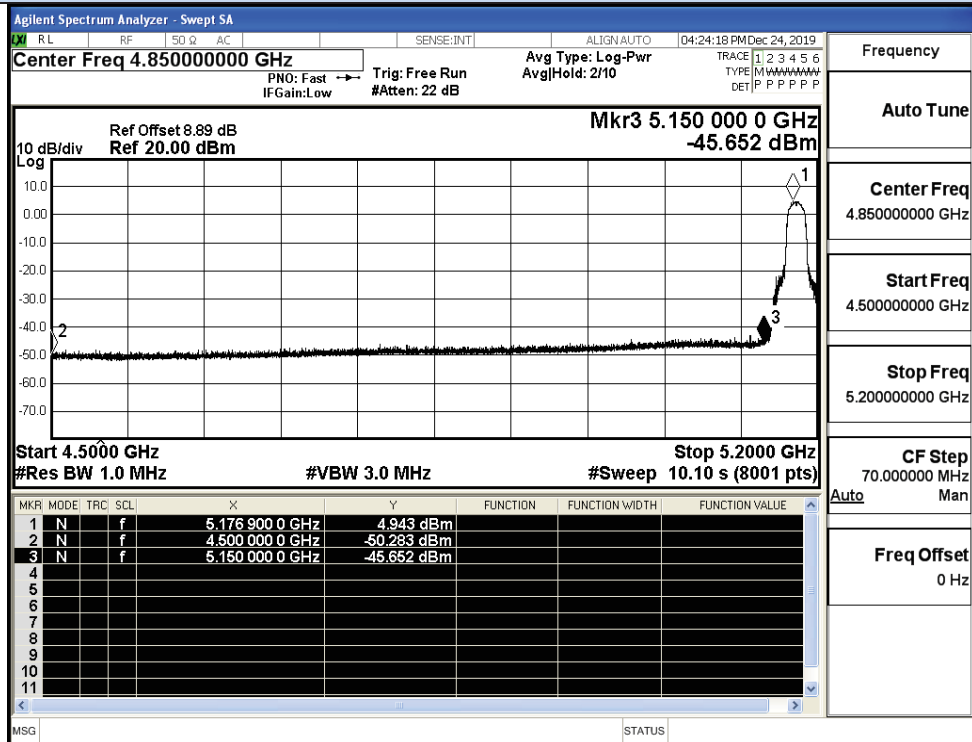
## Ant1

| Test Mode              | Channel | Frequency (MHz) | Conducted Power (dBm) | Antenna Gain (dBi) | Ground Reflection Factor (dB) | Covert Radiated E Level At 3m (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|------------------------|---------|-----------------|-----------------------|--------------------|-------------------------------|----------------------------------------|----------|----------------|---------|
| 11A                    | 36      | 4500.0          | -50.28                | -3.38              | 0                             | 46.98                                  | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.34                | -3.38              | 0                             | 36.92                                  | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -45.65                | -3.38              | 0                             | 51.61                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -55.55                | -3.38              | 0                             | 41.71                                  | Average  | 54.00          | Pass    |
|                        | 48      | 5350.0          | -48.80                | -3.38              | 0                             | 48.46                                  | Peak     | 68.20          | Pass    |
|                        |         | 5350.0          | -58.75                | -3.38              | 0                             | 38.51                                  | Average  | 54.00          | Pass    |
|                        |         | 5460.0          | -48.80                | -3.38              | 0                             | 48.46                                  | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -59.23                | -3.38              | 0                             | 38.03                                  | Average  | 54.00          | Pass    |
| 11N2<br>O<br>SISO      | 36      | 4500.0          | -50.12                | -3.38              | 0                             | 47.14                                  | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.35                | -3.38              | 0                             | 36.91                                  | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -45.24                | -3.38              | 0                             | 52.02                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -55.67                | -3.38              | 0                             | 41.59                                  | Average  | 54.00          | Pass    |
|                        | 48      | 5350.0          | -48.23                | -3.38              | 0                             | 49.03                                  | Peak     | 68.20          | Pass    |
|                        |         | 5350.0          | -58.76                | -3.38              | 0                             | 38.50                                  | Average  | 54.00          | Pass    |
|                        |         | 5460.0          | -47.85                | -3.38              | 0                             | 49.41                                  | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -59.24                | -3.38              | 0                             | 38.02                                  | Average  | 54.00          | Pass    |
| 11N4<br>O<br>SISO      | 38      | 4500.0          | -50.72                | -3.38              | 0                             | 46.54                                  | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.32                | -3.38              | 0                             | 36.94                                  | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -35.88                | -3.38              | 0                             | 61.38                                  | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -49.85                | -3.38              | 0                             | 47.41                                  | Average  | 54.00          | Pass    |
|                        | 46      | 5350.0          | -48.47                | -3.38              | 0                             | 48.79                                  | Peak     | 68.20          | Pass    |
|                        |         | 5350.0          | -58.61                | -3.38              | 0                             | 38.65                                  | Average  | 54.00          | Pass    |
|                        |         | 5460.0          | -48.17                | -3.38              | 0                             | 49.09                                  | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -58.96                | -3.38              | 0                             | 38.30                                  | Average  | 54.00          | Pass    |
| 11A<br>C20<br>SIS<br>O | 36      | 4500.0          | -50.80                | -3.38              | 0                             | -48.80                                 | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.35                | -3.38              | 0                             | -58.35                                 | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -44.22                | -3.38              | 0                             | -42.22                                 | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -54.61                | -3.38              | 0                             | -52.61                                 | Average  | 54.00          | Pass    |
|                        | 48      | 4500.0          | -50.80                | -3.38              | 0                             | -48.80                                 | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.35                | -3.38              | 0                             | -58.35                                 | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -44.22                | -3.38              | 0                             | -42.22                                 | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -54.61                | -3.38              | 0                             | -52.61                                 | Average  | 54.00          | Pass    |
| 11A<br>C40<br>SIS<br>O | 38      | 4500.0          | -49.03                | -3.38              | 0                             | -47.03                                 | Peak     | 68.20          | Pass    |
|                        |         | 4500.0          | -60.37                | -3.38              | 0                             | -58.37                                 | Average  | 54.00          | Pass    |
|                        |         | 5150.0          | -43.51                | -3.38              | 0                             | -41.51                                 | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -55.53                | -3.38              | 0                             | -53.53                                 | Average  | 54.00          | Pass    |
|                        | 46      | 5350.0          | -48.08                | -3.38              | 0                             | -46.08                                 | Peak     | 68.20          | Pass    |
|                        |         | 5350.0          | -59.01                | -3.38              | 0                             | -57.01                                 | Average  | 54.00          | Pass    |
|                        |         | 5460.0          | -48.77                | -3.38              | 0                             | -46.77                                 | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -59.13                | -3.38              | 0                             | -57.13                                 | Average  | 54.00          | Pass    |
| 11A<br>C80<br>SIS<br>O | 42      | 4500.0          | -48.60                | -3.38              | 0                             | -46.60                                 | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -58.54                | -3.38              | 0                             | -56.54                                 | Average  | 54.00          | Pass    |
|                        |         | 4500.0          | -49.82                | -3.38              | 0                             | -47.82                                 | Peak     | 68.20          | Pass    |
|                        |         | 5150.0          | -58.65                | -3.38              | 0                             | -56.65                                 | Average  | 54.00          | Pass    |
|                        |         | 5350.0          | -48.60                | -3.38              | 0                             | -46.60                                 | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -58.54                | -3.38              | 0                             | -56.54                                 | Average  | 54.00          | Pass    |
|                        |         | 5350.0          | -49.82                | -3.38              | 0                             | -47.82                                 | Peak     | 68.20          | Pass    |
|                        |         | 5460.0          | -58.65                | -3.38              | 0                             | -56.65                                 | Average  | 54.00          | Pass    |
|                        |         | 5460.0          | -58.65                | -3.38              | 0                             | -56.65                                 | Average  | 54.00          | Pass    |

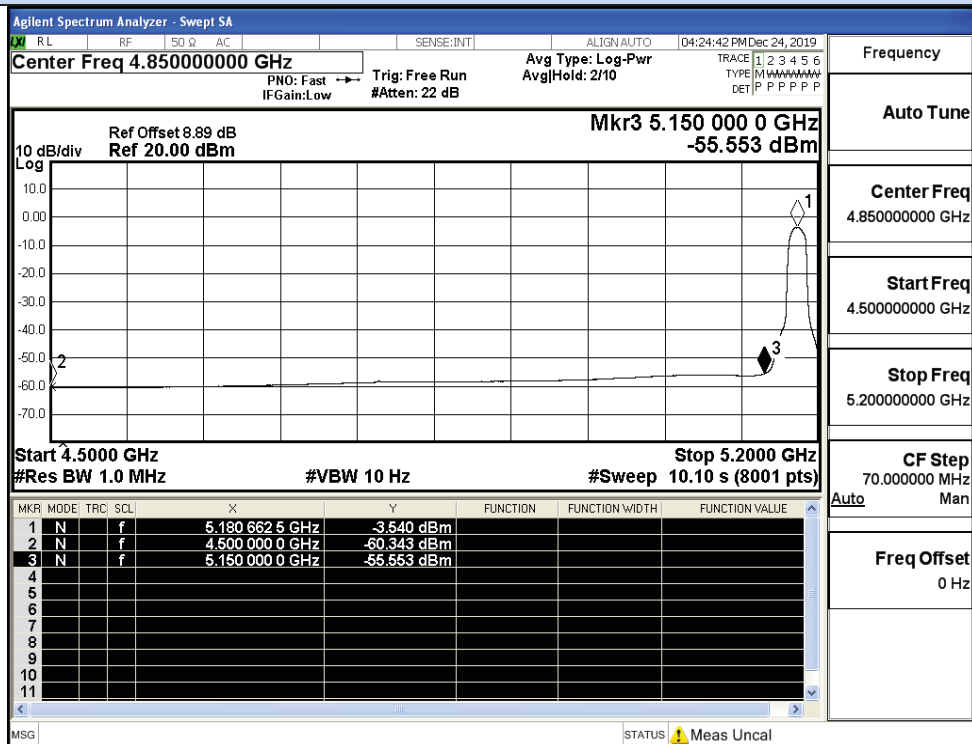
E [dBuV/m]= Power [dBm] + Gain + Ground Factor + 95.26

The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater

## Undesirable Emissions Measurement

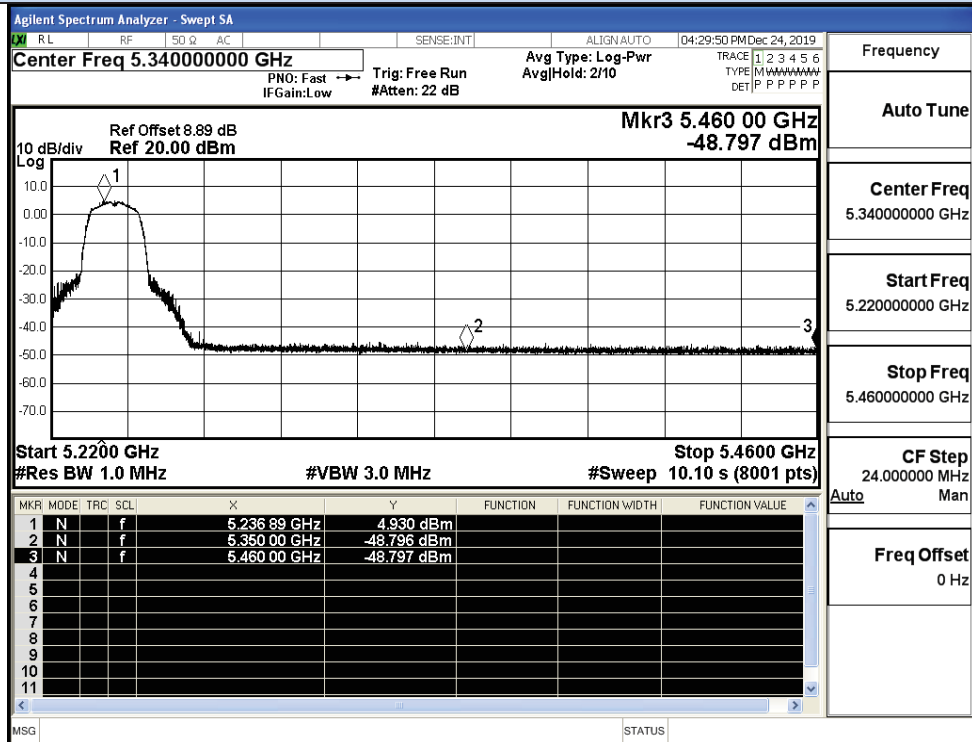


## IEEE 802.11a / Channel 36 / 5180MHz / Peak

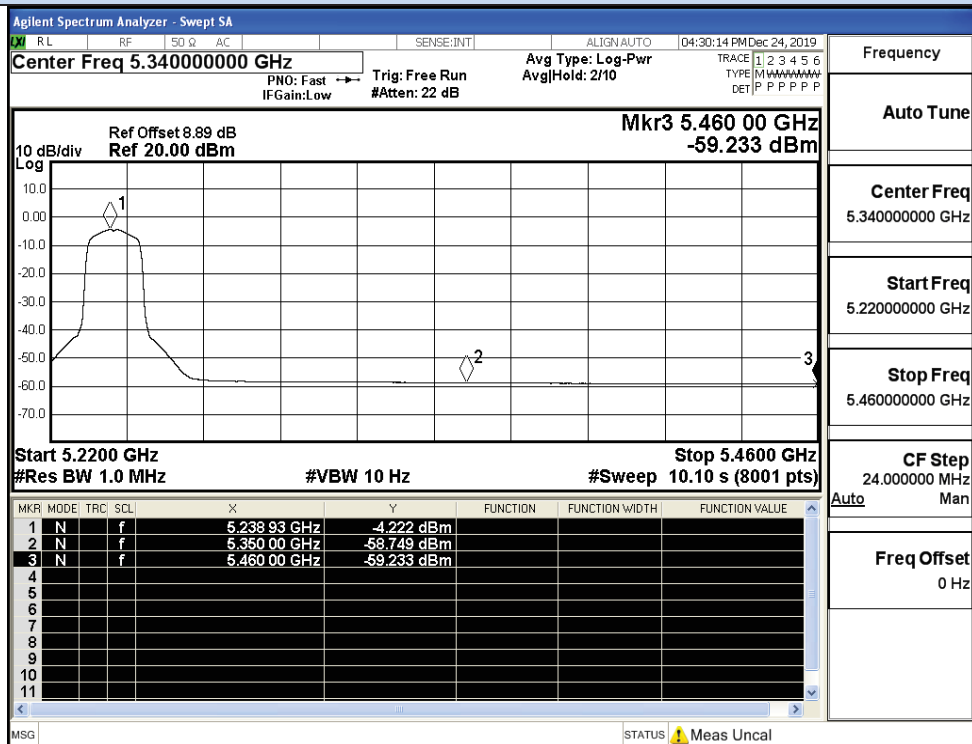


## IEEE 802.11a / Channel 36 / 5180MHz / Average

## Undesirable Emissions Measurement

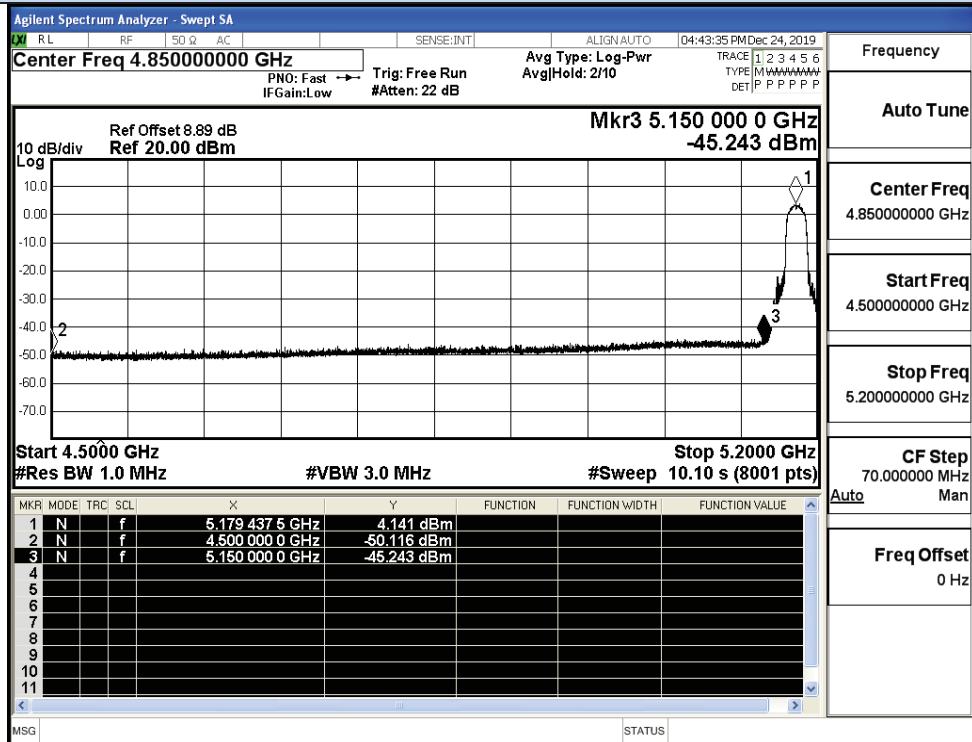


## IEEE 802.11a / Channel 48 / 5240MHz / Peak

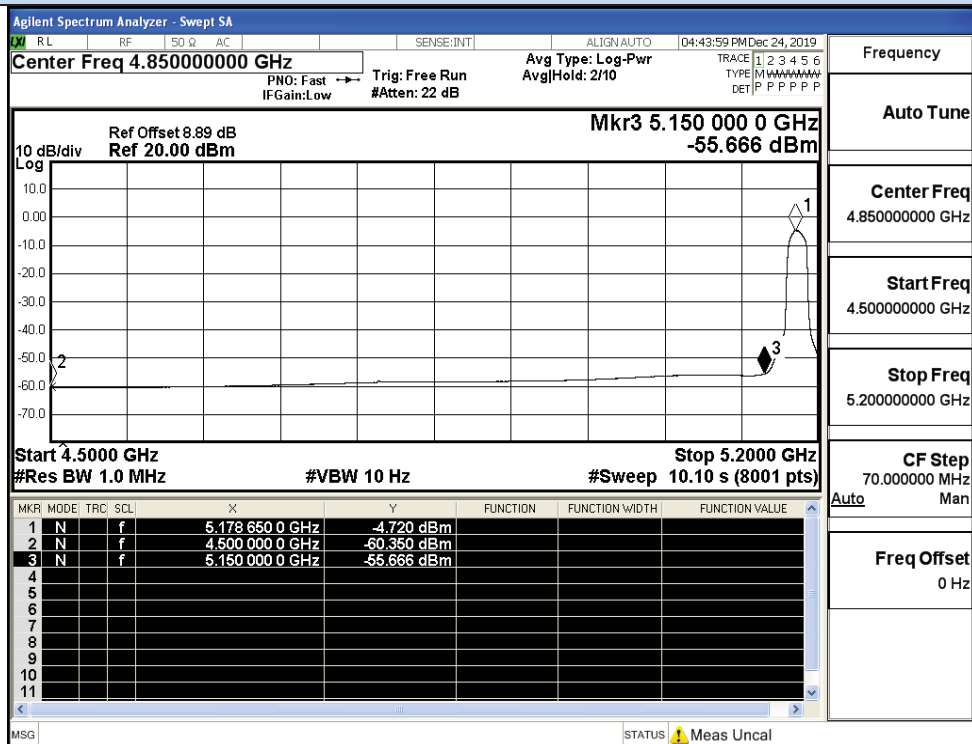


## IEEE 802.11a / Channel 48 / 5240MHz / Average

## Undesirable Emissions Measurement

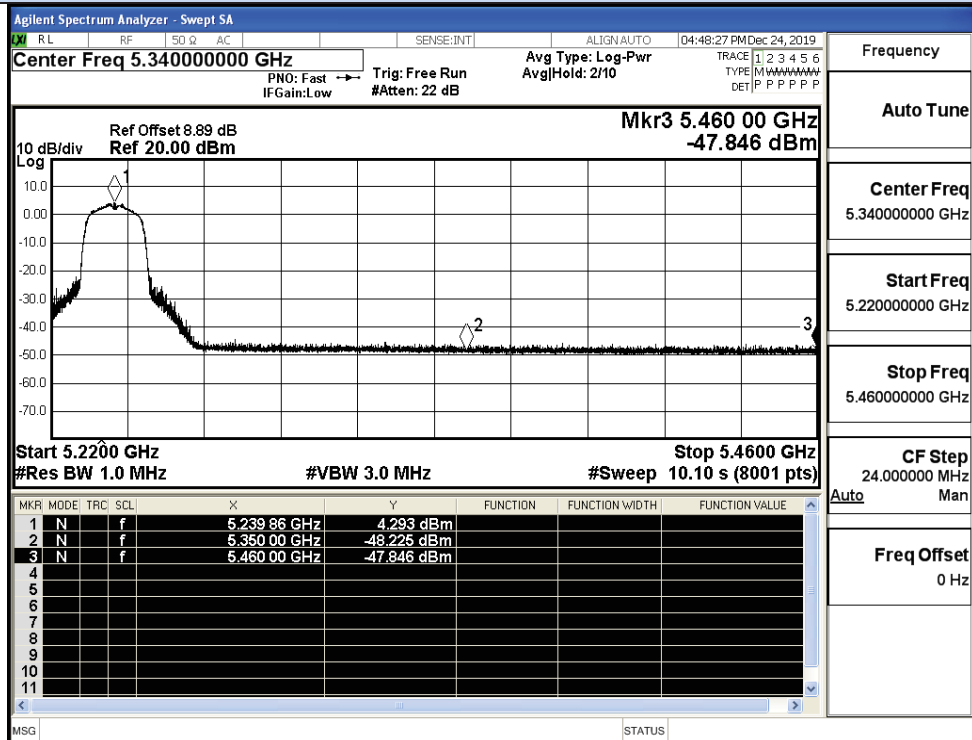


## IEEE 802.11n20 / Channel 36 / 5180MHz / Peak

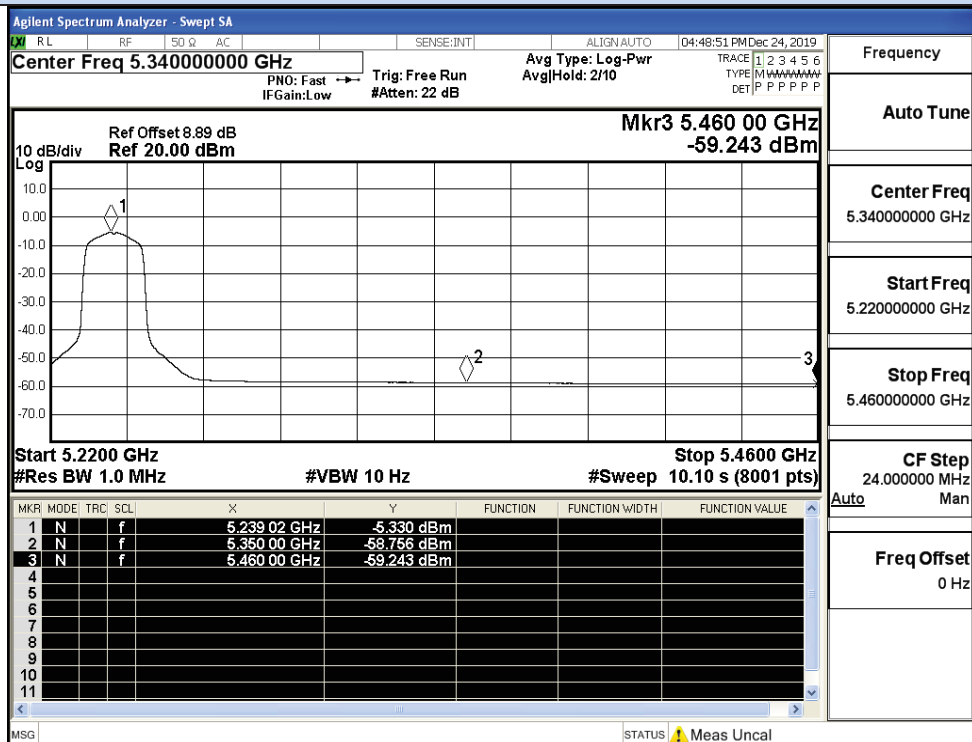


## IEEE 802.11n20 / Channel 36 / 5180MHz / Average

## Undesirable Emissions Measurement

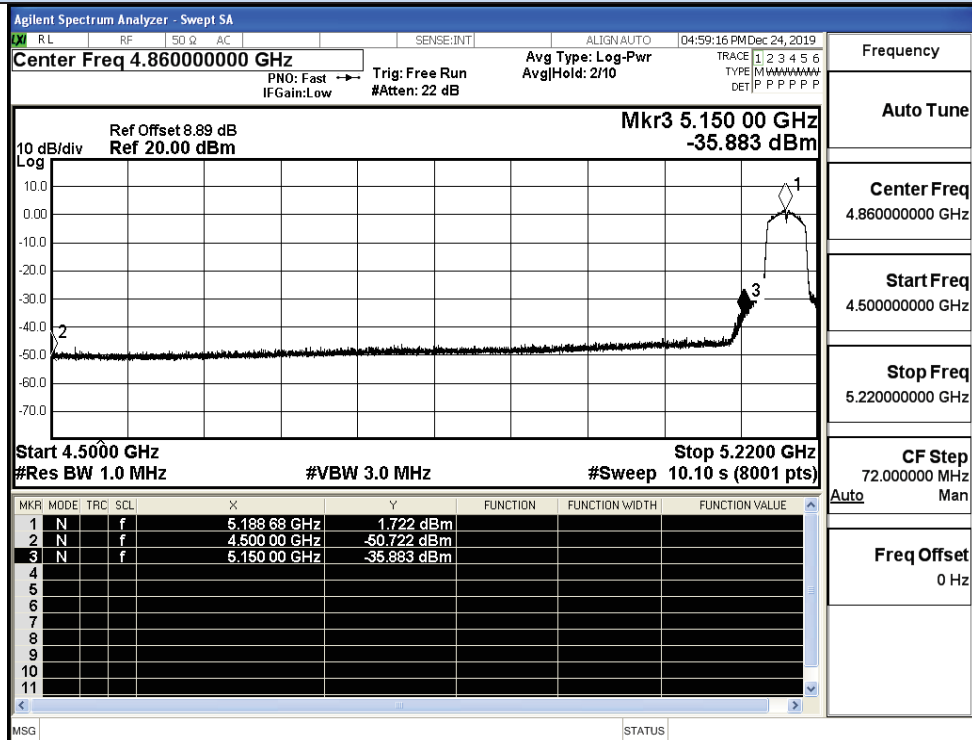


## IEEE 802.11n20 / Channel 48 / 5240MHz / Peak

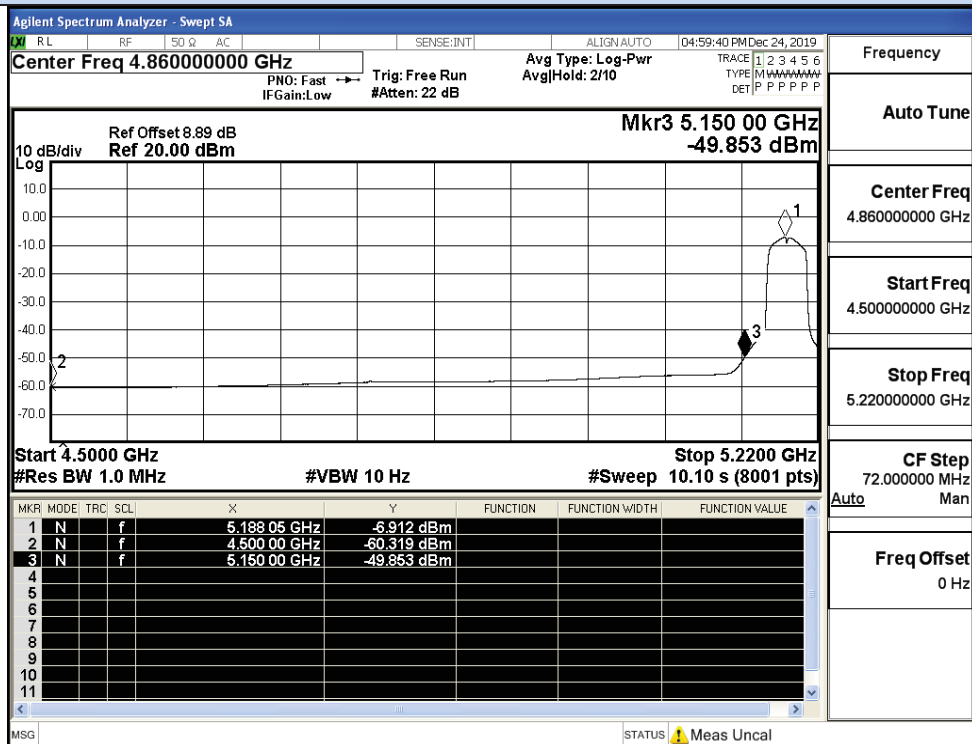


## IEEE 802.11n20 / Channel 48 / 5240MHz / Average

## Undesirable Emissions Measurement

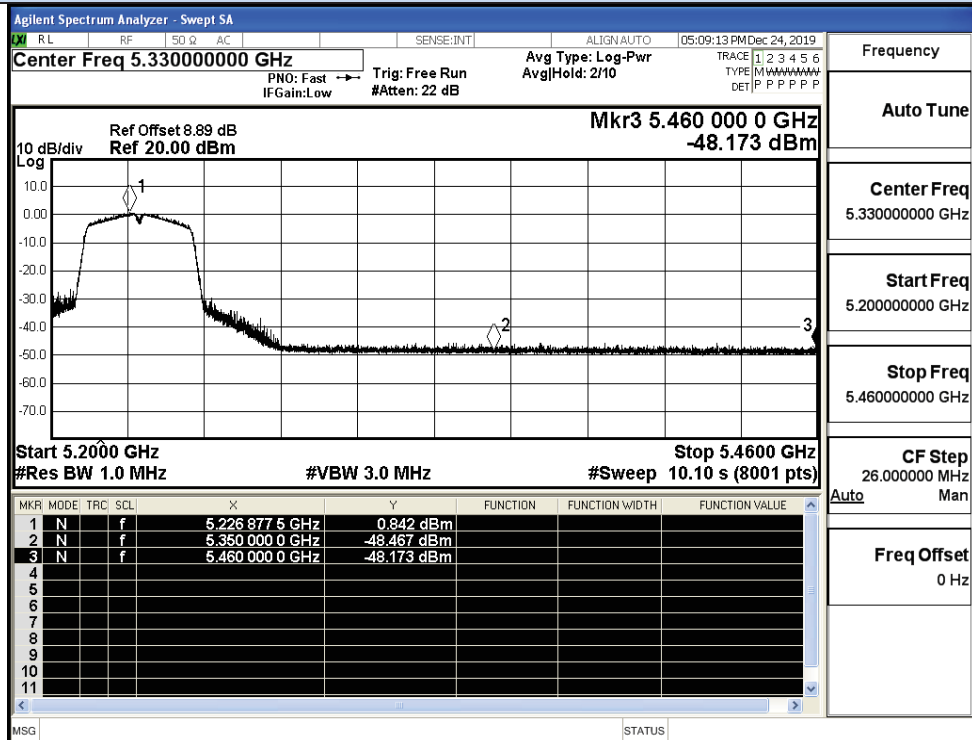


## IEEE 802.11n40 / Channel 38 / 5190MHz / Peak

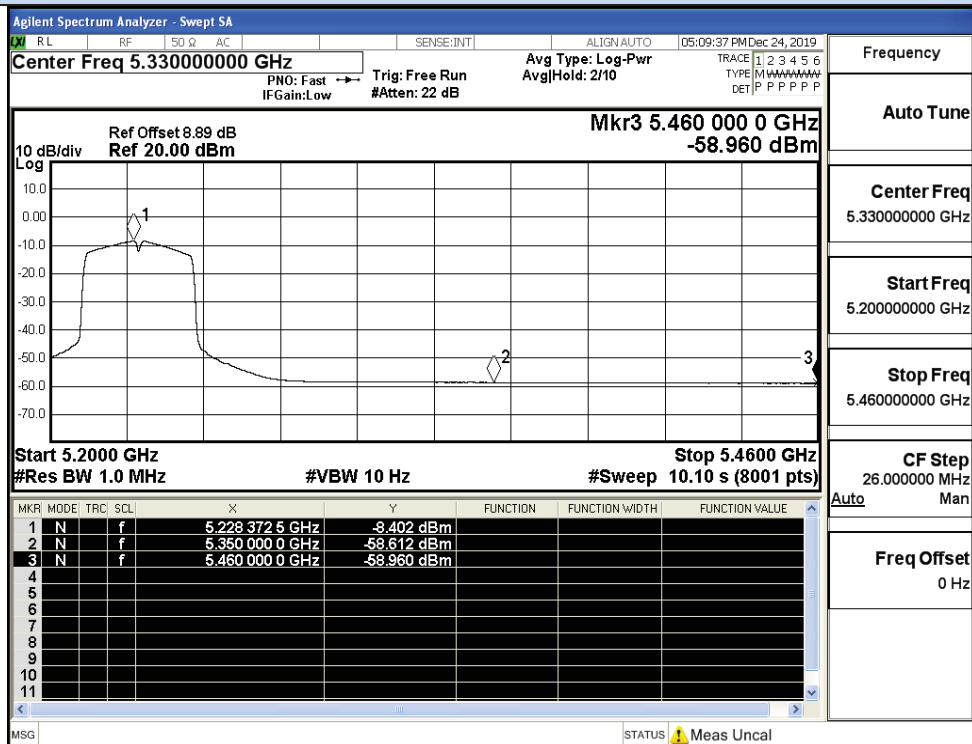


## IEEE 802.11n40 / Channel 38 / 5190MHz / Average

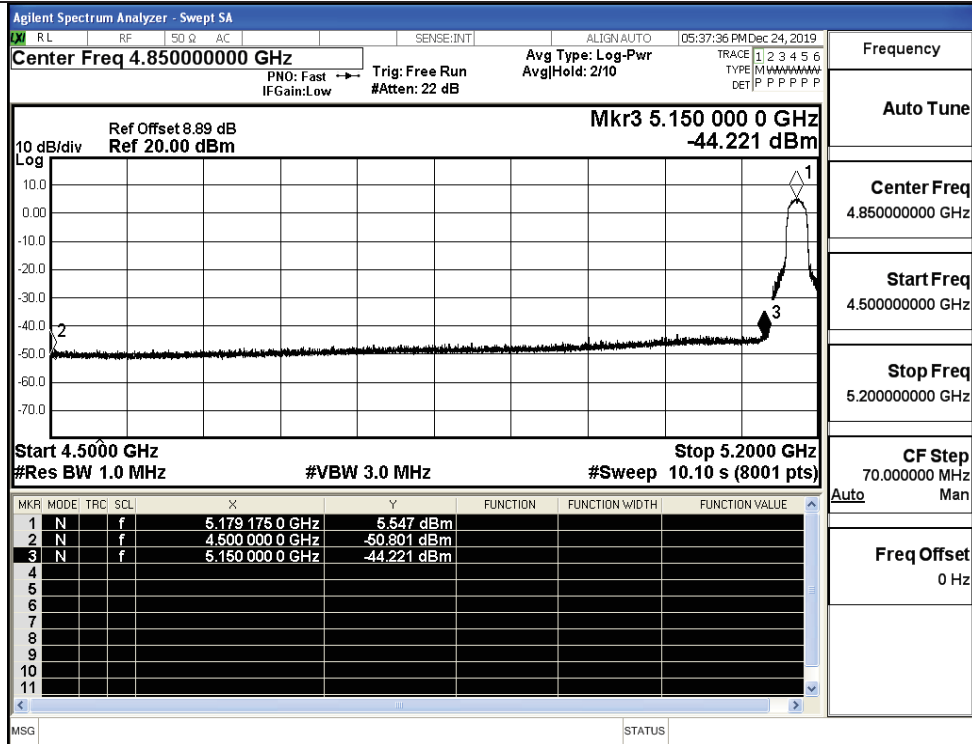
## Undesirable Emissions Measurement



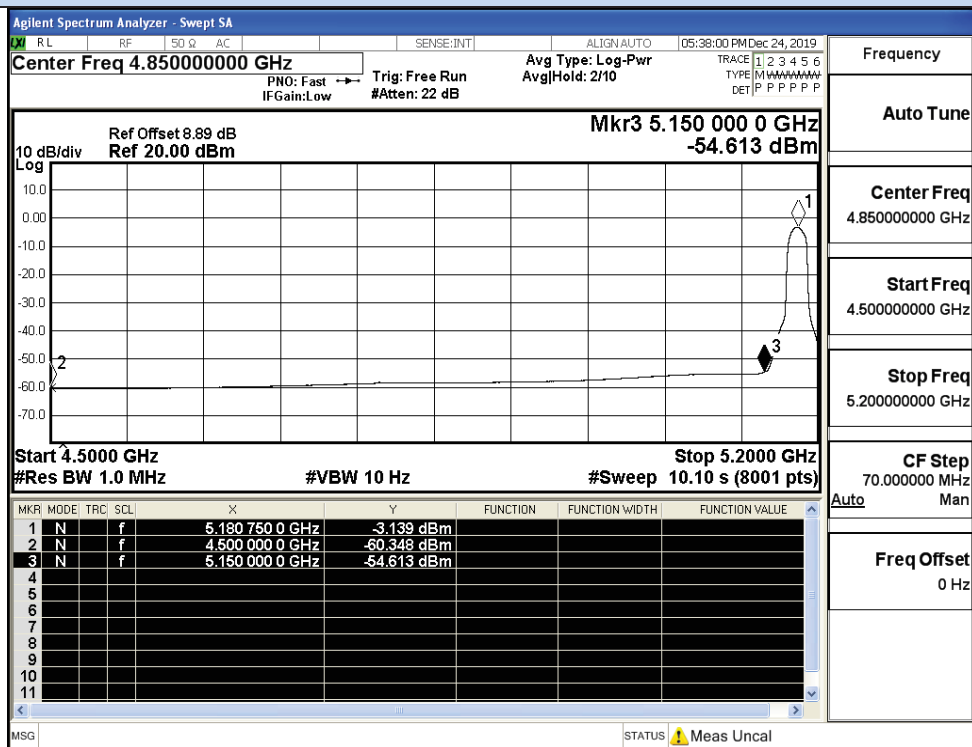
## IEEE 802.11n40 / Channel 46 / 5230MHz / Peak



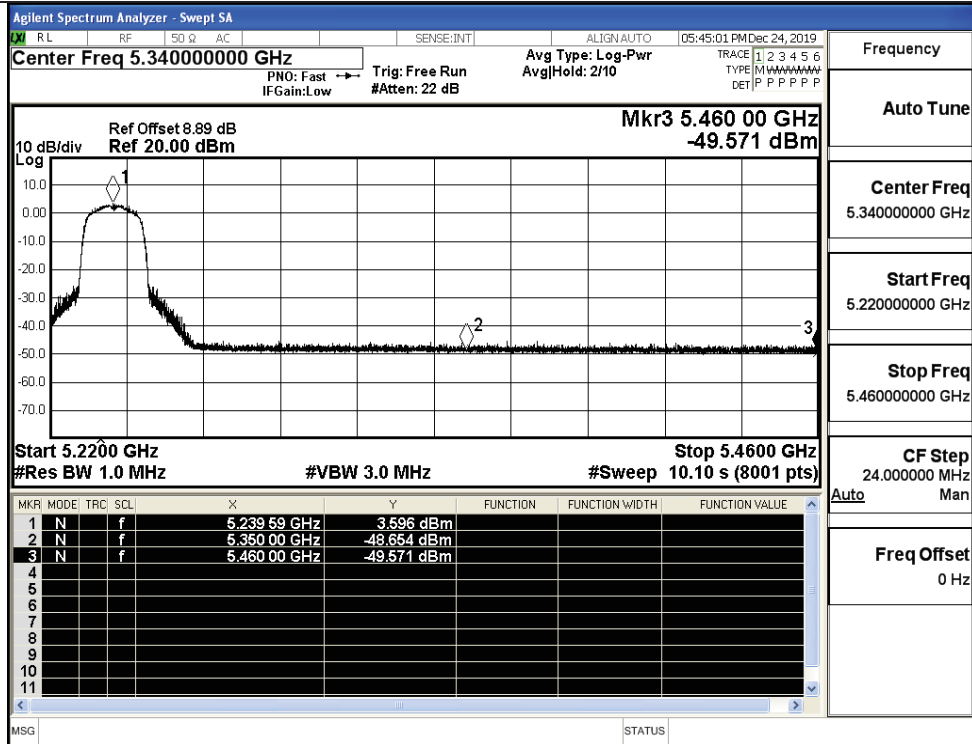
## IEEE 802.11n40 / Channel 46 / 5230MHz / Average



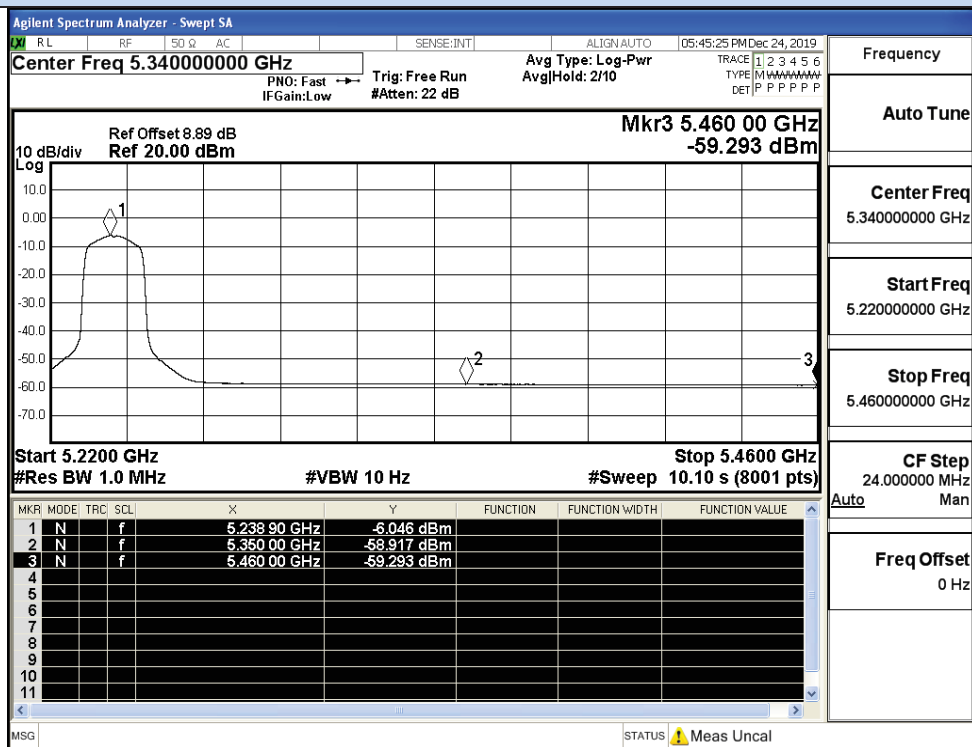
IEEE 802.11ac20 / Channel 36 / 5180MHz / Peak



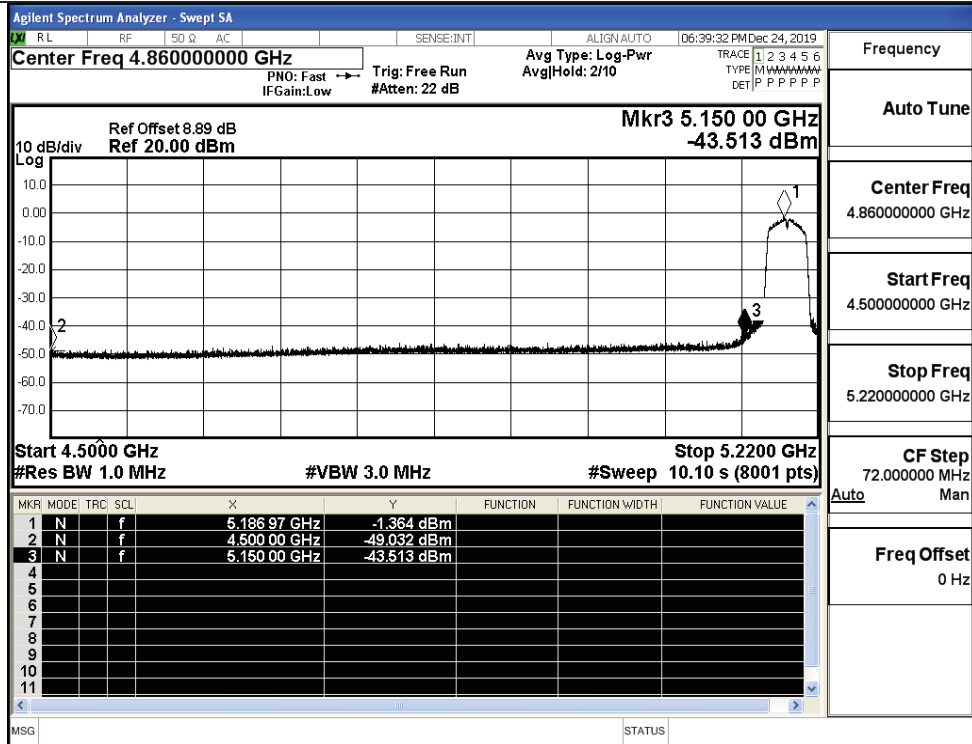
IEEE 802.11ac20 / Channel 36 / 5180MHz / Average



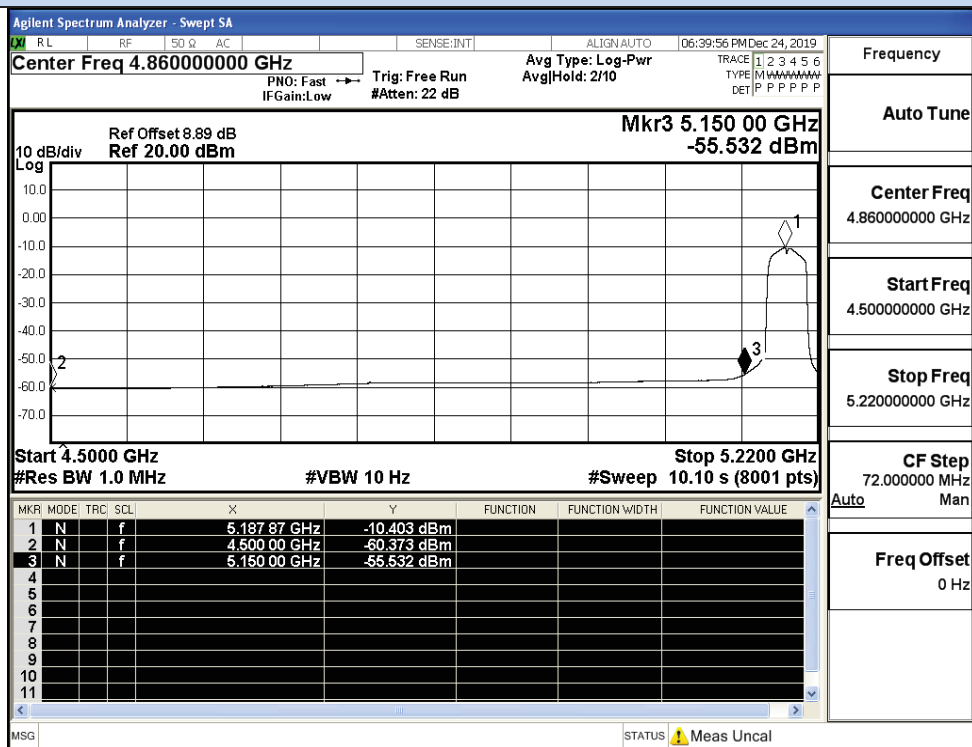
IEEE 802.11ac20 / Channel 48 / 5240MHz / Peak



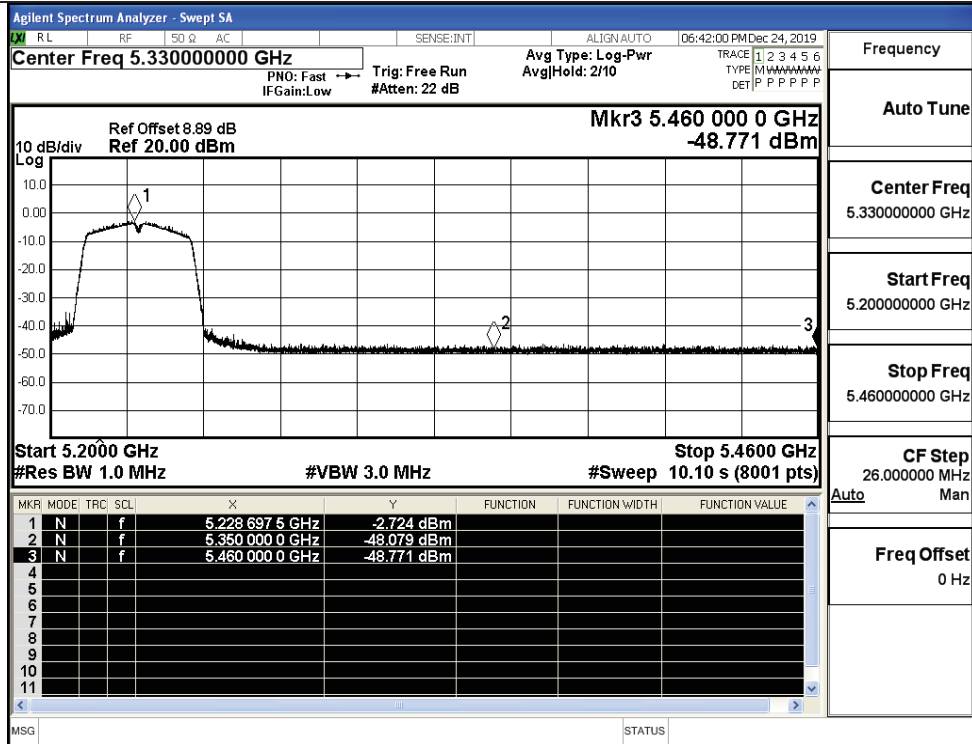
IEEE 802.11ac20 / Channel 48 / 5240MHz / Average



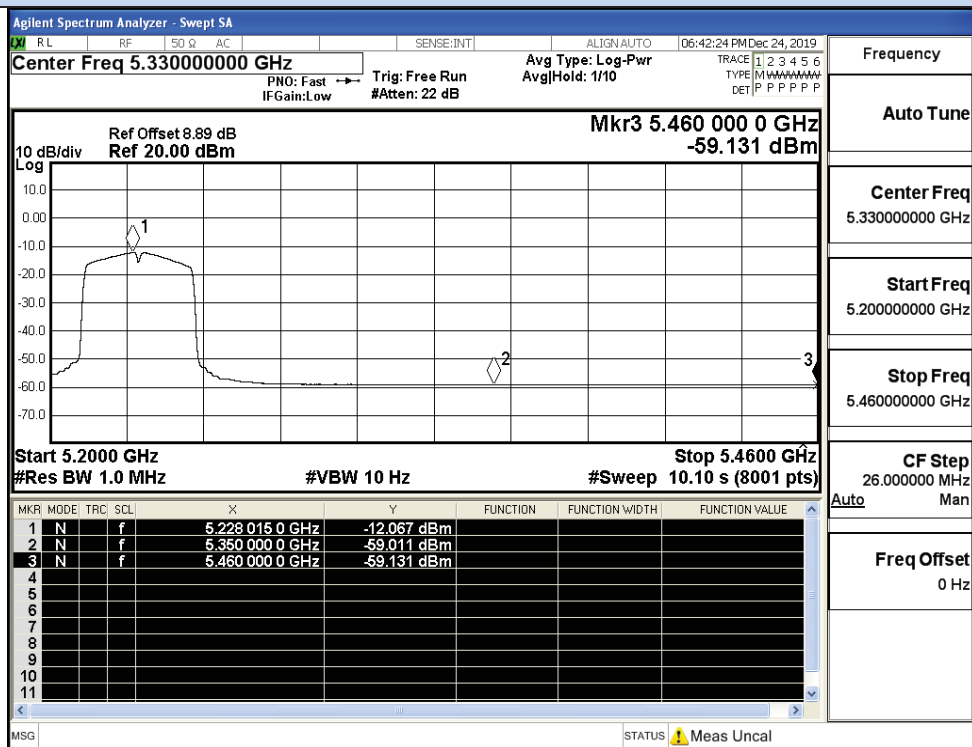
IEEE 802.11ac40 / Channel 38 / 5190MHz / Peak



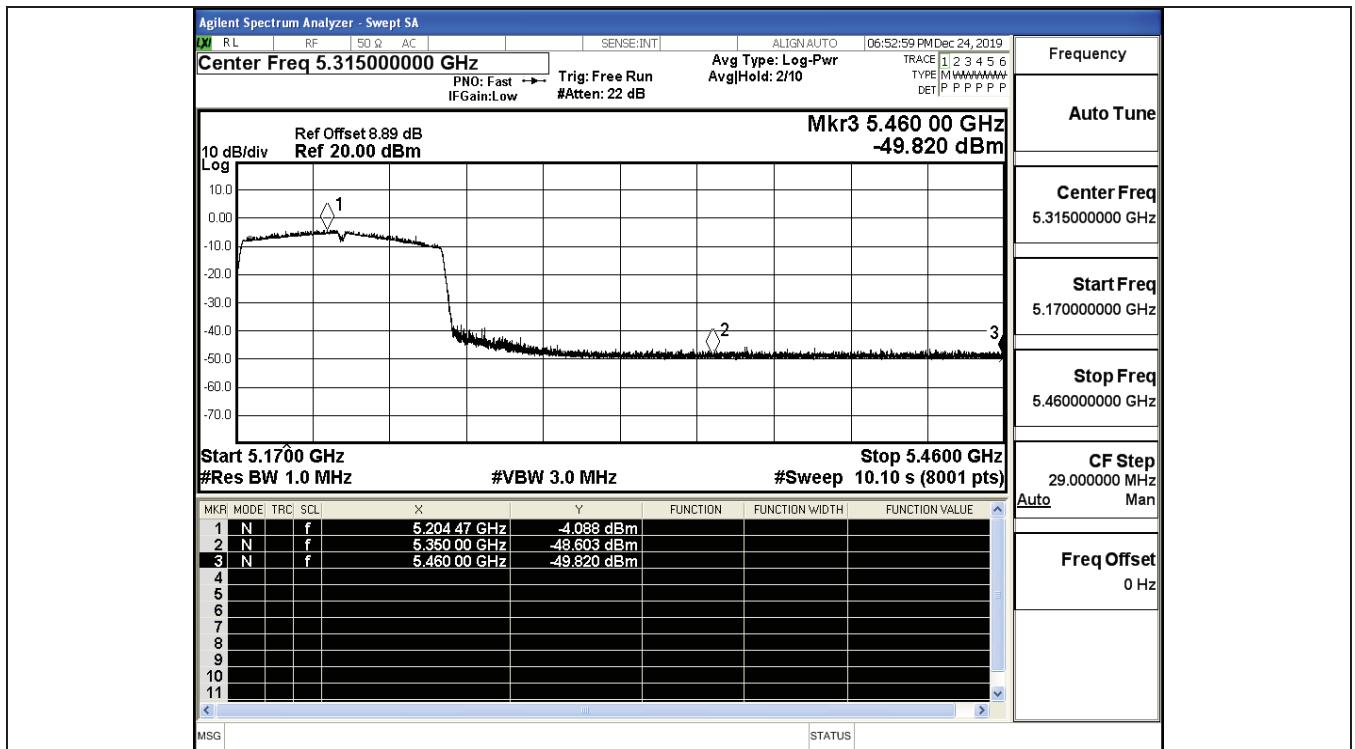
IEEE 802.11ac40 / Channel 38 / 5190MHz / Average



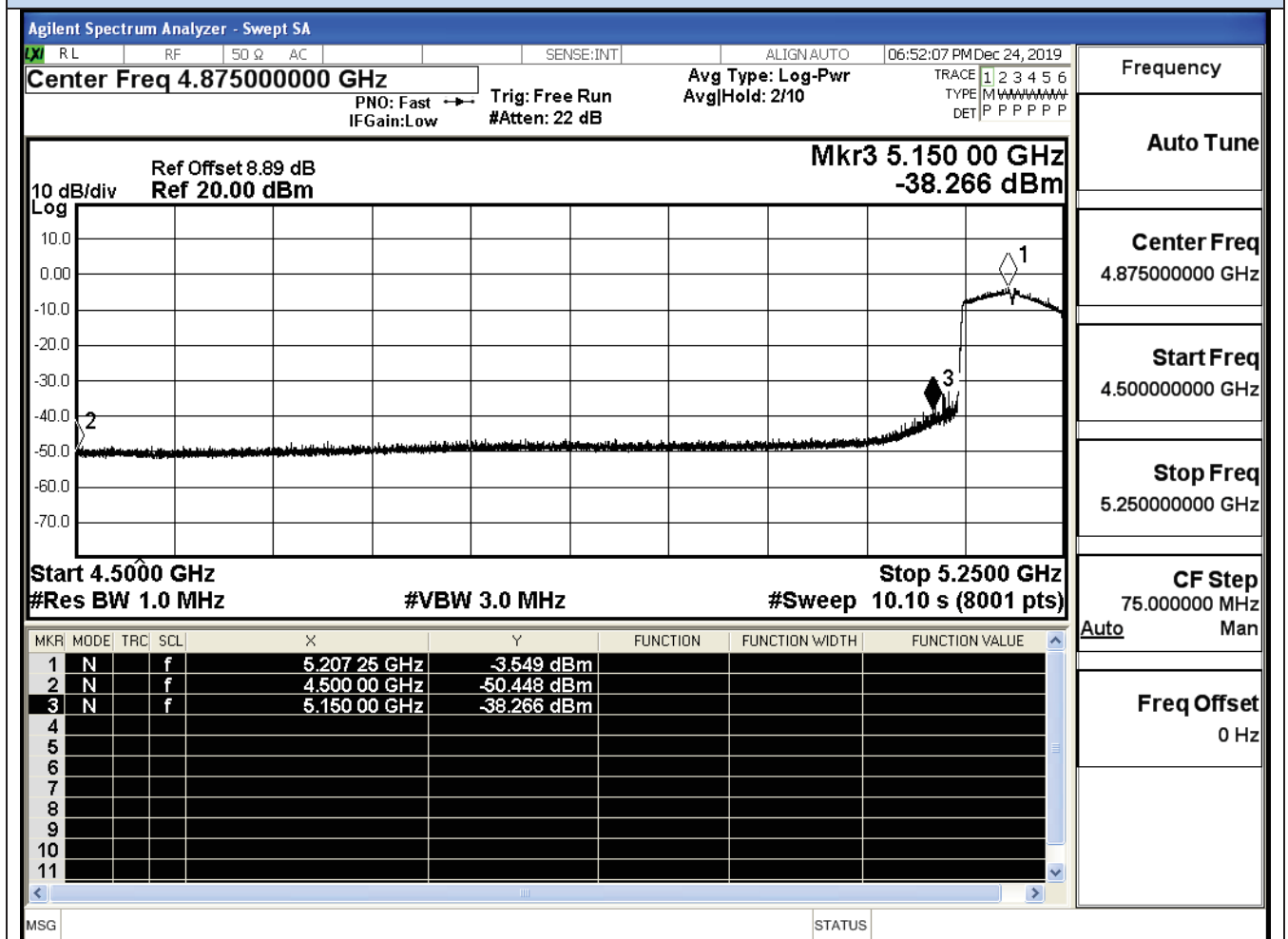
IEEE 802.11ac40 / Channel 46 / 5230MHz / Peak



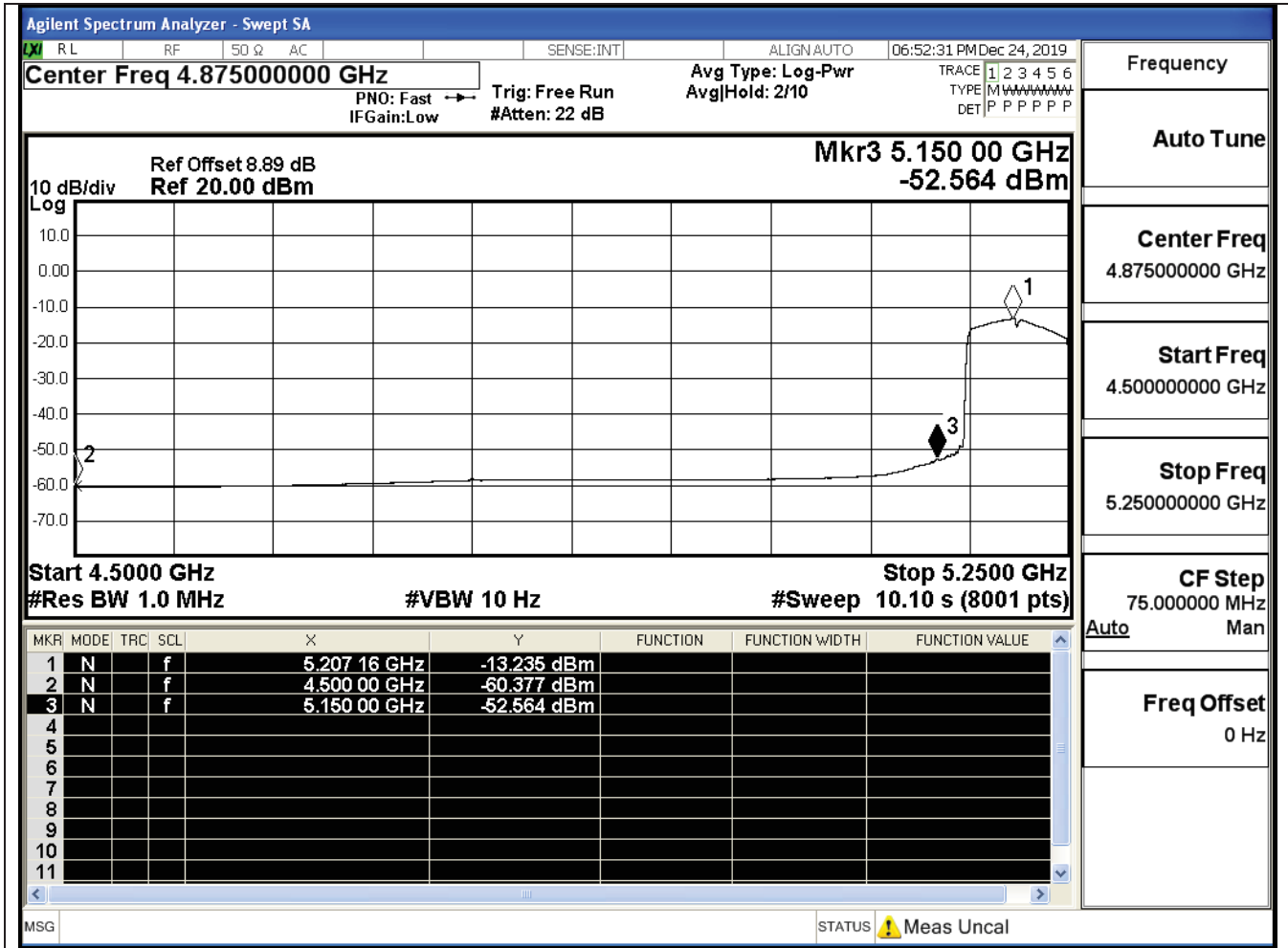
IEEE 802.11ac40 / Channel 46 / 5230MHz / Average



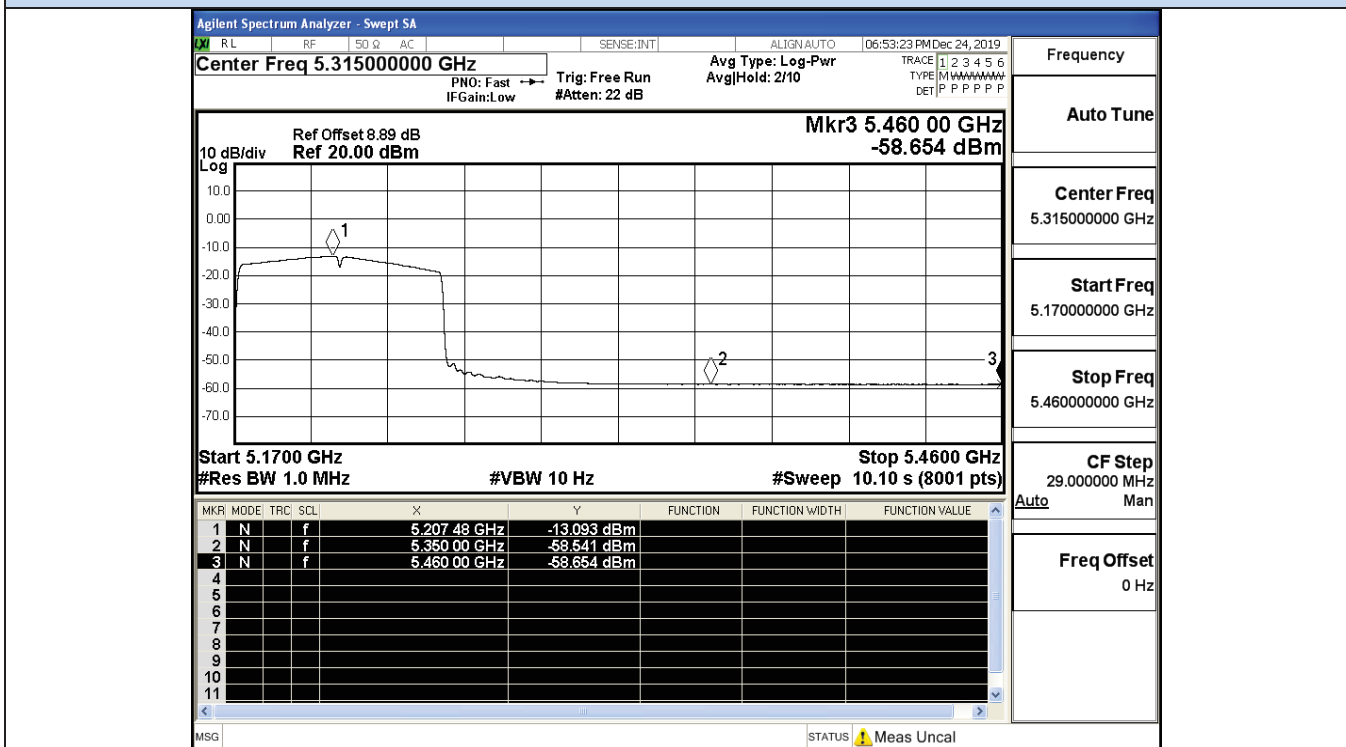
IEEE 802.11ac80 / Channel 42 / 5210MHz / Peak



IEEE 802.11ac80 / Channel 42 / 5210MHz / Average



IEEE 802.11ac80 / Channel 42 / 5210MHz / Peak



IEEE 802.11ac80 / Channel 42 / 5210MHz / Average

## Ant0+1

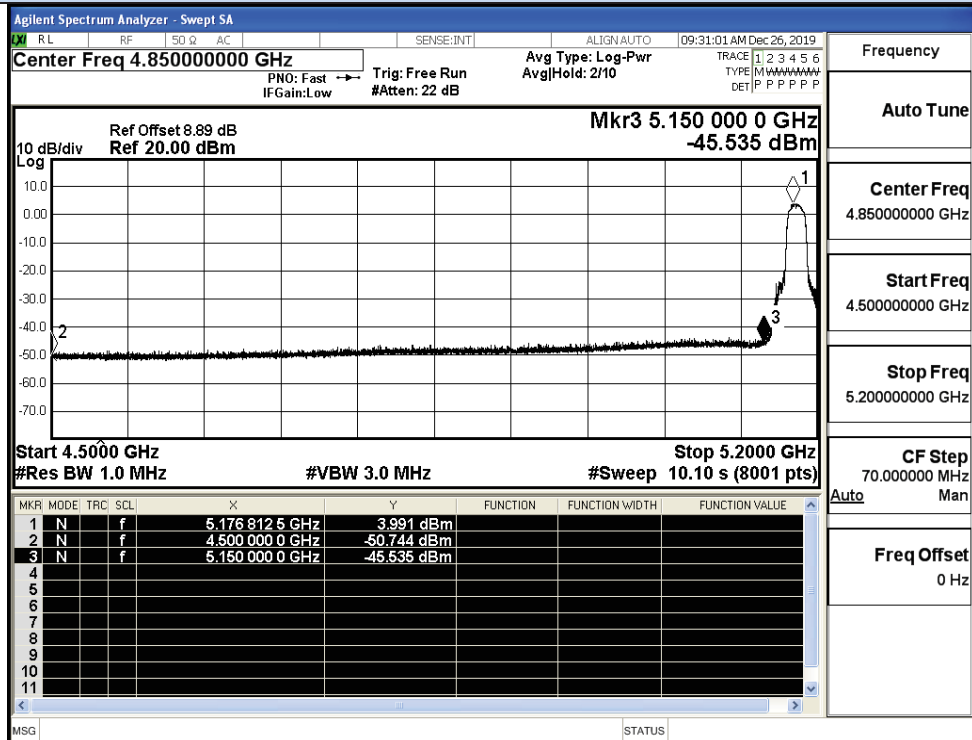
| Test Mode          | Channel | Frequency (MHz) | Conducted Power (dBm) | Antenna Gain (dBi) | Ground Reflection Factor (dB) | Covert Radiated E Level At 3m (dBuV/m) | Detector | Limit (dBuV/m) | Verdict |
|--------------------|---------|-----------------|-----------------------|--------------------|-------------------------------|----------------------------------------|----------|----------------|---------|
| 11N2<br>0<br>SISO  | 36      | 4500.0          | -50.97                | -0.37              | 0                             | 46.29                                  | Peak     | 68.20          | Pass    |
|                    |         | 4500.0          | -60.40                | -0.37              | 0                             | 36.86                                  | Average  | 54.00          | Pass    |
|                    |         | 5150.0          | -46.77                | -0.37              | 0                             | 50.49                                  | Peak     | 68.20          | Pass    |
|                    |         | 5150.0          | -56.86                | -0.37              | 0                             | 40.40                                  | Average  | 54.00          | Pass    |
|                    | 48      | 5350.0          | -49.48                | -0.37              | 0                             | 47.78                                  | Peak     | 68.20          | Pass    |
|                    |         | 5350.0          | -59.44                | -0.37              | 0                             | 37.82                                  | Average  | 54.00          | Pass    |
|                    |         | 5460.0          | -49.45                | -0.37              | 0                             | 47.81                                  | Peak     | 68.20          | Pass    |
|                    |         | 5460.0          | -59.51                | -0.37              | 0                             | 37.75                                  | Average  | 54.00          | Pass    |
| 11N4<br>0<br>SISO  | 38      | 4500.0          | -49.24                | -0.37              | 0                             | 48.02                                  | Peak     | 68.20          | Pass    |
|                    |         | 4500.0          | -60.45                | -0.37              | 0                             | 36.81                                  | Average  | 54.00          | Pass    |
|                    |         | 5150.0          | -42.41                | -0.37              | 0                             | 54.85                                  | Peak     | 68.20          | Pass    |
|                    |         | 5150.0          | -54.46                | -0.37              | 0                             | 42.80                                  | Average  | 54.00          | Pass    |
|                    | 46      | 5350.0          | -48.71                | -0.37              | 0                             | 48.55                                  | Peak     | 68.20          | Pass    |
|                    |         | 5350.0          | -59.16                | -0.37              | 0                             | 38.10                                  | Average  | 54.00          | Pass    |
|                    |         | 5460.0          | -48.45                | -0.37              | 0                             | 48.81                                  | Peak     | 68.20          | Pass    |
|                    |         | 5460.0          | -59.23                | -0.37              | 0                             | 38.03                                  | Average  | 54.00          | Pass    |
| 11A<br>C20<br>SISO | 36      | 4500.0          | -49.52                | -0.37              | 0                             | 47.74                                  | Peak     | 68.20          | Pass    |
|                    |         | 4500.0          | -60.44                | -0.37              | 0                             | 36.82                                  | Average  | 54.00          | Pass    |
|                    |         | 5150.0          | -47.73                | -0.37              | 0                             | 49.53                                  | Peak     | 68.20          | Pass    |
|                    |         | 5150.0          | -57.14                | -0.37              | 0                             | 40.12                                  | Average  | 54.00          | Pass    |
|                    | 48      | 4500.0          | -49.52                | -0.37              | 0                             | 47.74                                  | Peak     | 68.20          | Pass    |
|                    |         | 4500.0          | -60.44                | -0.37              | 0                             | 36.82                                  | Average  | 54.00          | Pass    |
|                    |         | 5150.0          | -47.73                | -0.37              | 0                             | 49.53                                  | Peak     | 68.20          | Pass    |
|                    |         | 5150.0          | -57.14                | -0.37              | 0                             | 40.12                                  | Average  | 54.00          | Pass    |
| 11A<br>C40<br>SISO | 38      | 4500.0          | -50.28                | -0.37              | 0                             | -48.28                                 | Peak     | 68.20          | Pass    |
|                    |         | 4500.0          | -60.35                | -0.37              | 0                             | -58.35                                 | Average  | 54.00          | Pass    |
|                    |         | 5150.0          | -42.65                | -0.37              | 0                             | -40.65                                 | Peak     | 68.20          | Pass    |
|                    |         | 5150.0          | -54.49                | -0.37              | 0                             | -52.49                                 | Average  | 54.00          | Pass    |
|                    | 46      | 5350.0          | -49.88                | -0.37              | 0                             | -47.88                                 | Peak     | 68.20          | Pass    |
|                    |         | 5350.0          | -59.08                | -0.37              | 0                             | -57.08                                 | Average  | 54.00          | Pass    |
|                    |         | 5460.0          | -48.85                | -0.37              | 0                             | -46.85                                 | Peak     | 68.20          | Pass    |
|                    |         | 5460.0          | -59.13                | -0.37              | 0                             | -57.13                                 | Average  | 54.00          | Pass    |
| 11A<br>C80<br>SISO | 42      | 4500.0          | -49.67                | -0.37              | 0                             | -47.67                                 | Peak     | 68.20          | Pass    |
|                    |         | 5150.0          | -58.59                | -0.37              | 0                             | -56.59                                 | Average  | 54.00          | Pass    |
|                    |         | 4500.0          | -49.19                | -0.37              | 0                             | -47.19                                 | Peak     | 68.20          | Pass    |
|                    |         | 5150.0          | -58.70                | -0.37              | 0                             | -56.70                                 | Average  | 54.00          | Pass    |
|                    |         | 5350.0          | -49.67                | -0.37              | 0                             | -47.67                                 | Peak     | 68.20          | Pass    |

|  |  |        |        |       |   |        |         |       |      |
|--|--|--------|--------|-------|---|--------|---------|-------|------|
|  |  | 5460.0 | -58.59 | -0.37 | 0 | -56.59 | Average | 54.00 | Pass |
|  |  | 5350.0 | -49.19 | -0.37 | 0 | -47.19 | Peak    | 68.20 | Pass |
|  |  | 5460.0 | -58.70 | -0.37 | 0 | -56.70 | Average | 54.00 | Pass |

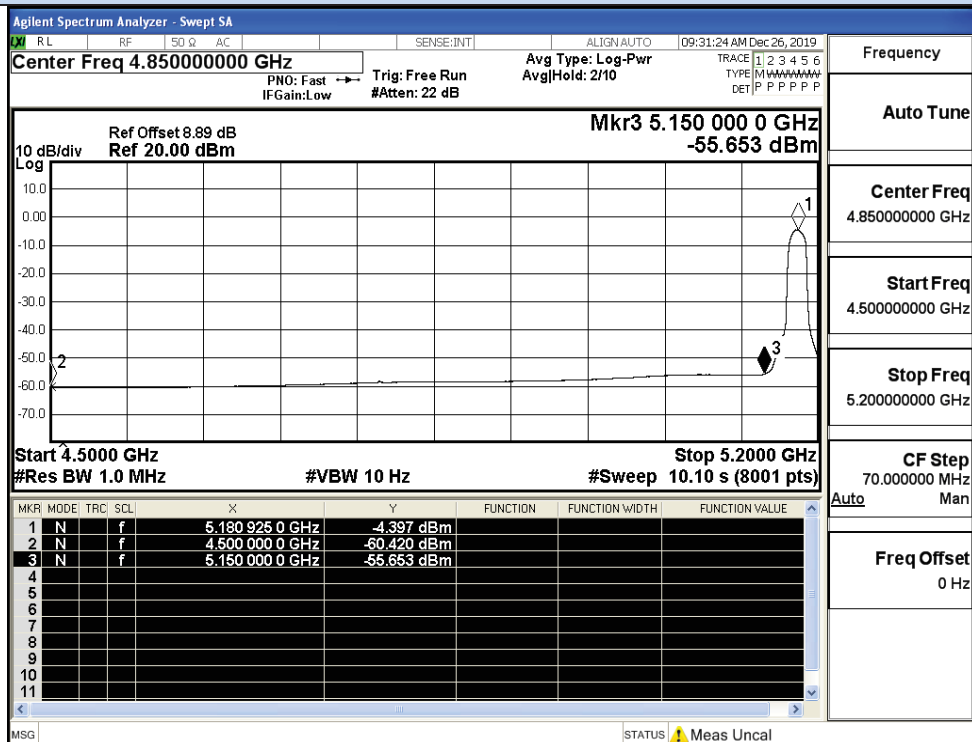
$E \text{ [dBuV/m]} = \text{Power [dBm]} + \text{Gain} + \text{Ground Factor} + 95.26$

The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater

## Undesirable Emissions Measurement

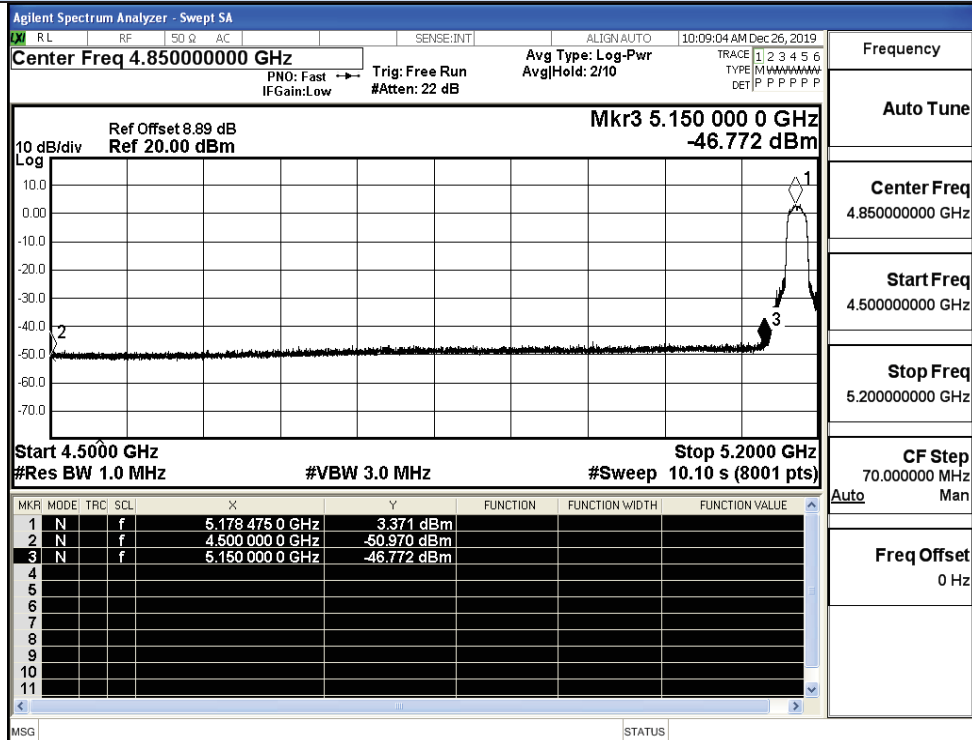


## IEEE 802.11a / Channel 36 / 5180MHz / Peak

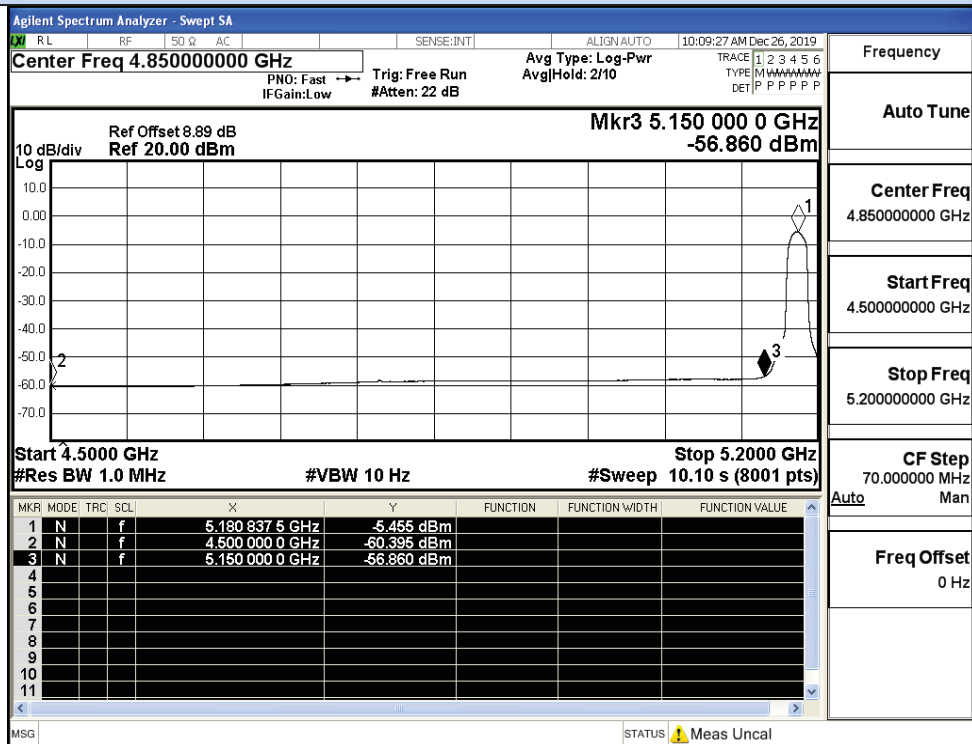


## IEEE 802.11a / Channel 36 / 5180MHz / Average

## Undesirable Emissions Measurement

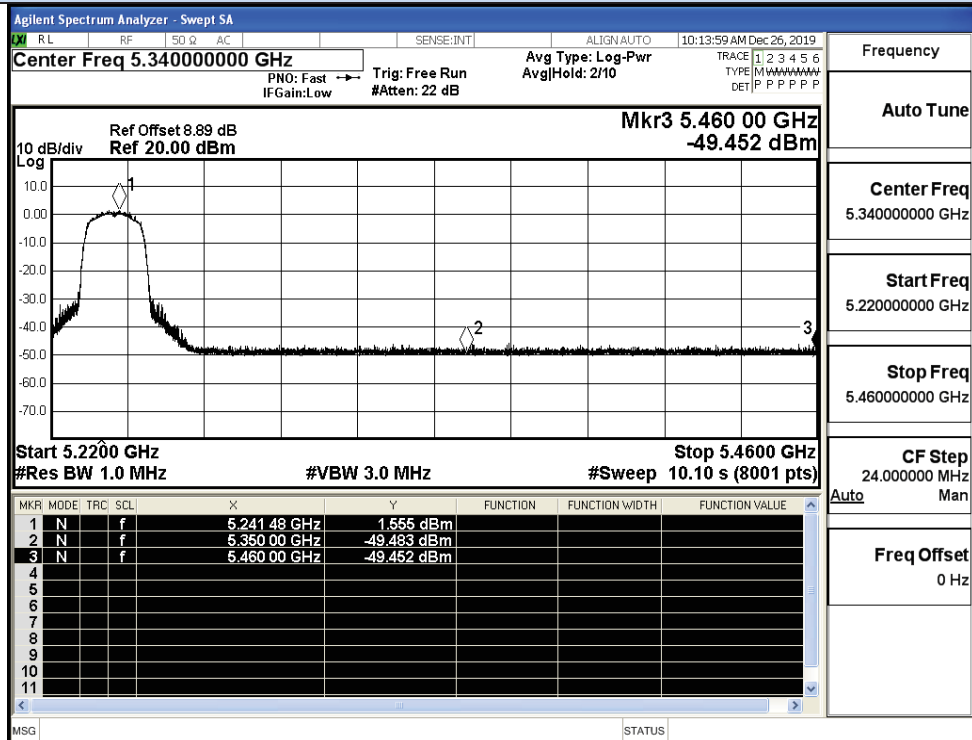


## IEEE 802.11n20 / Channel 36 / 5180MHz / Peak

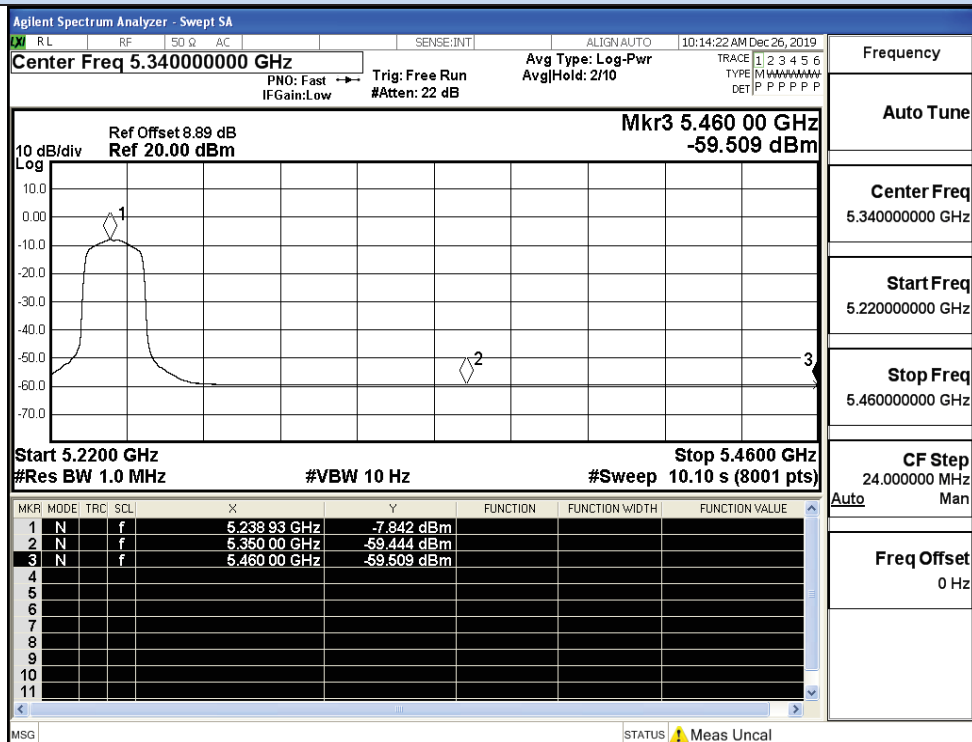


## IEEE 802.11n20 / Channel 36 / 5180MHz / Average

## Undesirable Emissions Measurement

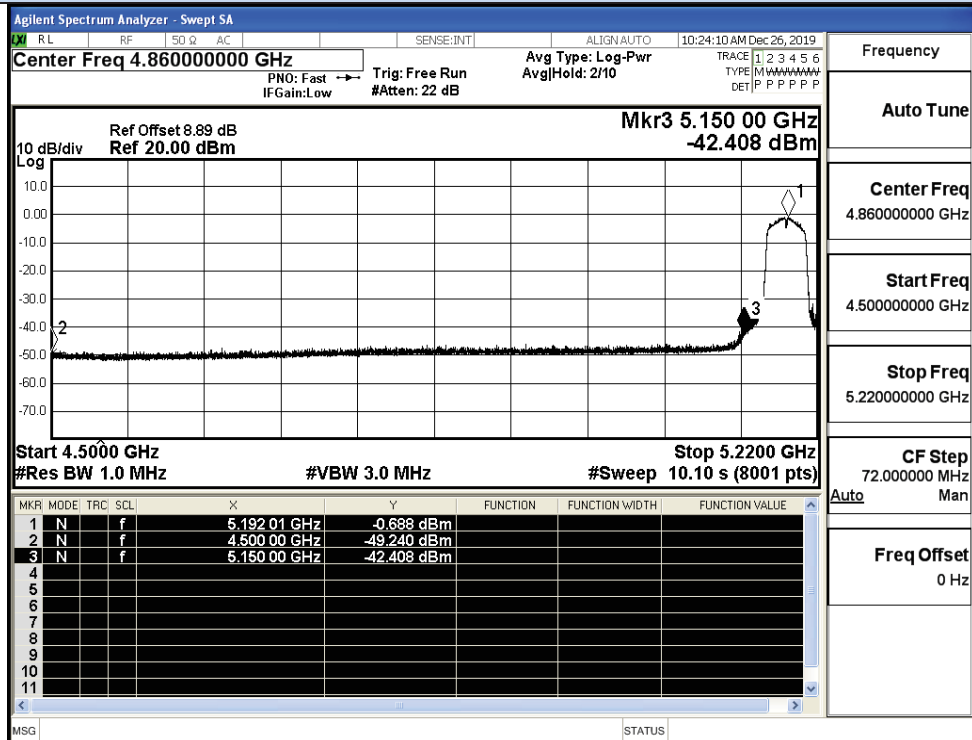


## IEEE 802.11n20 / Channel 48 / 5240MHz / Peak

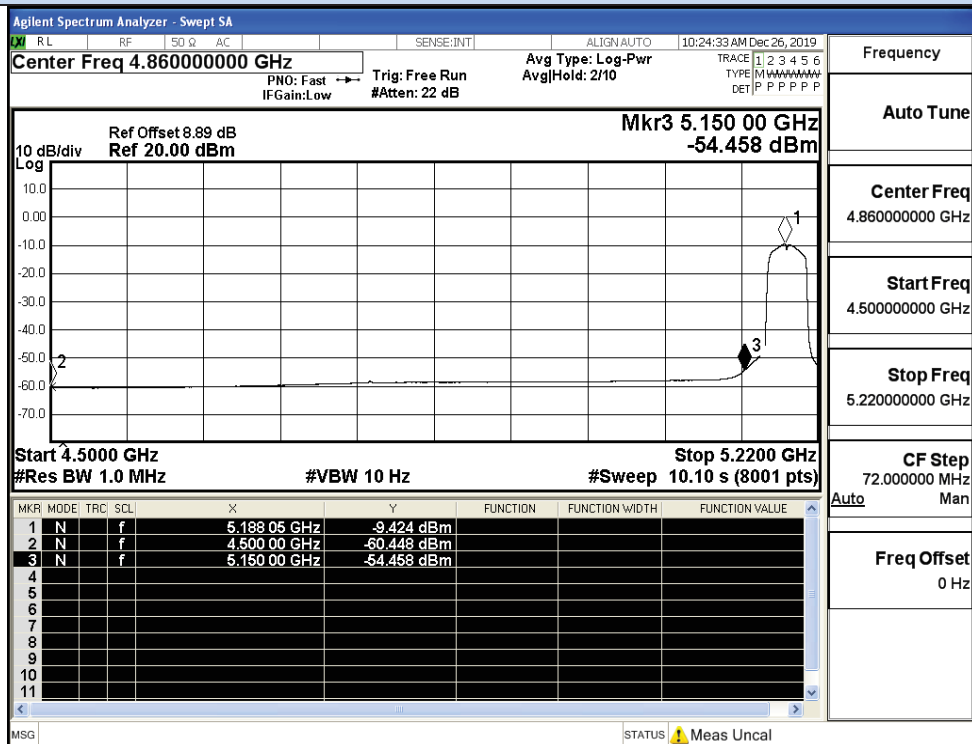


## IEEE 802.11n20 / Channel 48 / 5240MHz / Average

## Undesirable Emissions Measurement

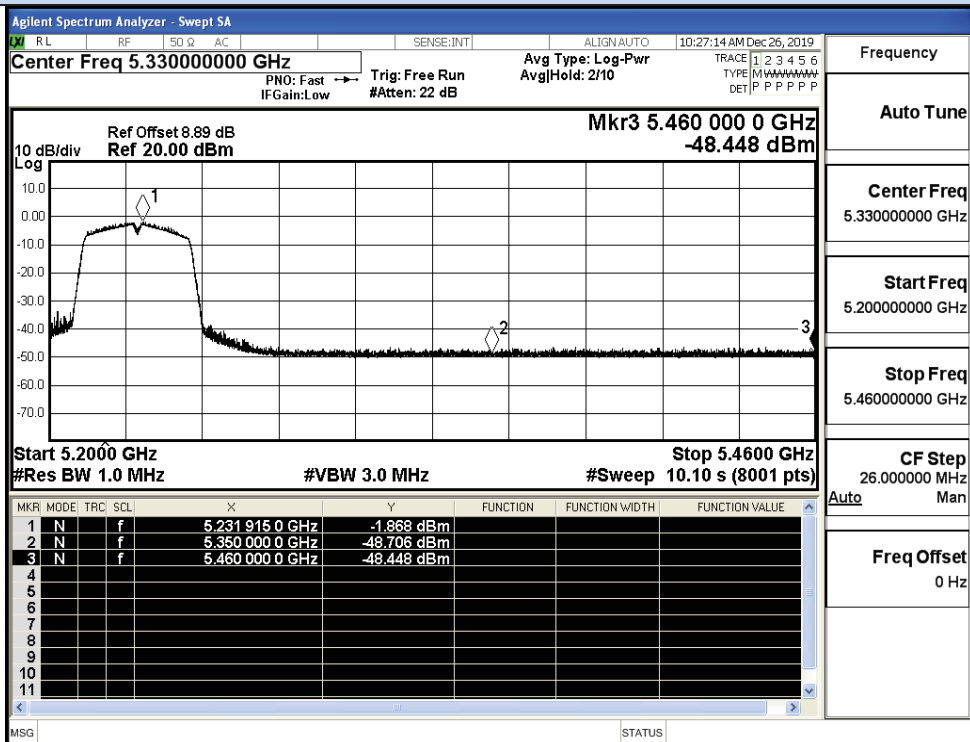


## IEEE 802.11n40 / Channel 38 / 5190MHz / Peak

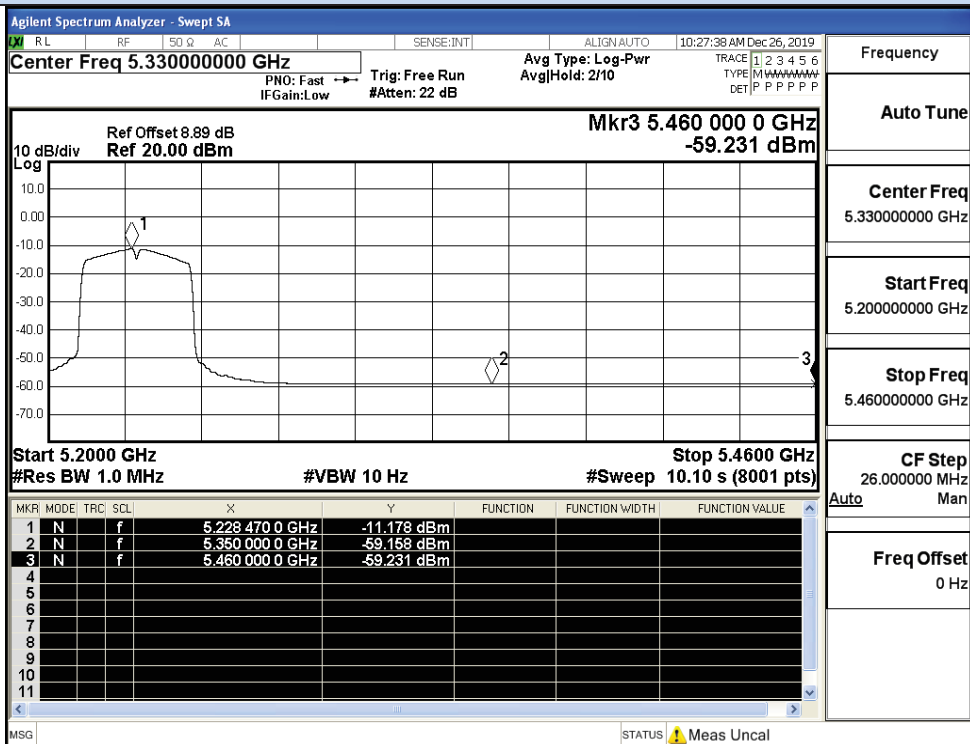


## IEEE 802.11n40 / Channel 38 / 5190MHz / Average

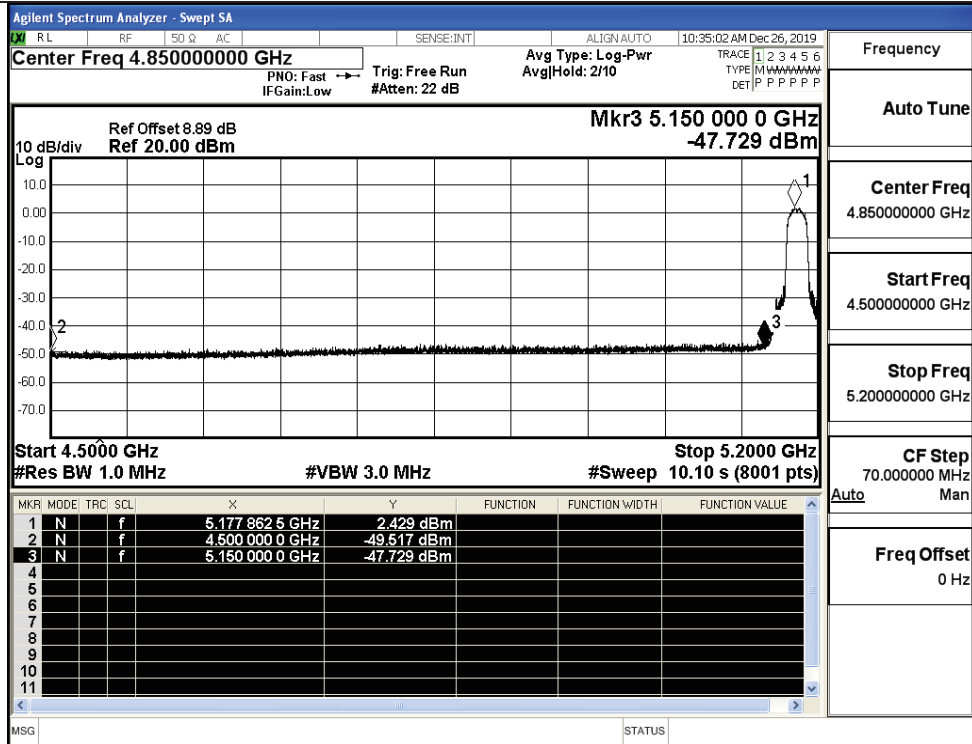
## Undesirable Emissions Measurement



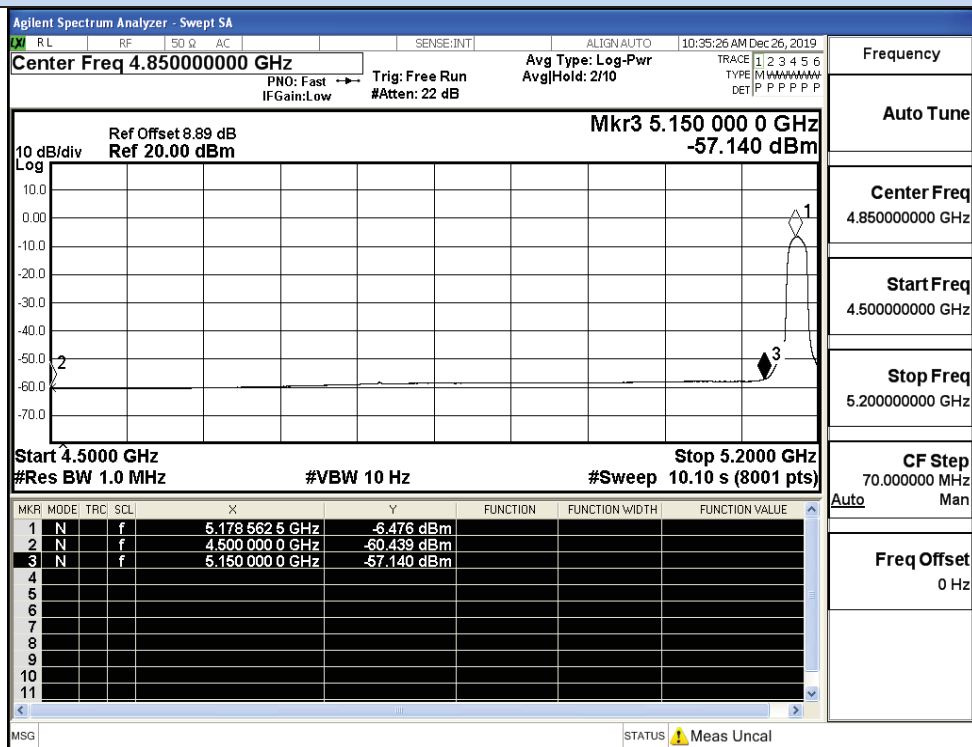
## IEEE 802.11n40 / Channel 46 / 5230MHz / Peak



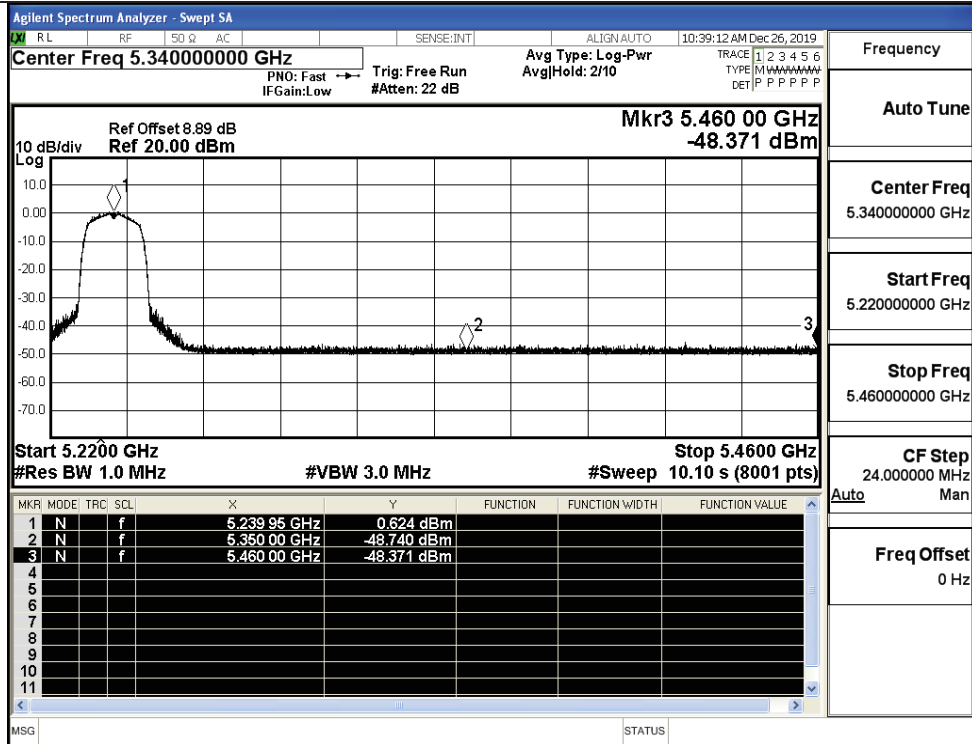
## IEEE 802.11n40 / Channel 46 / 5230MHz / Average



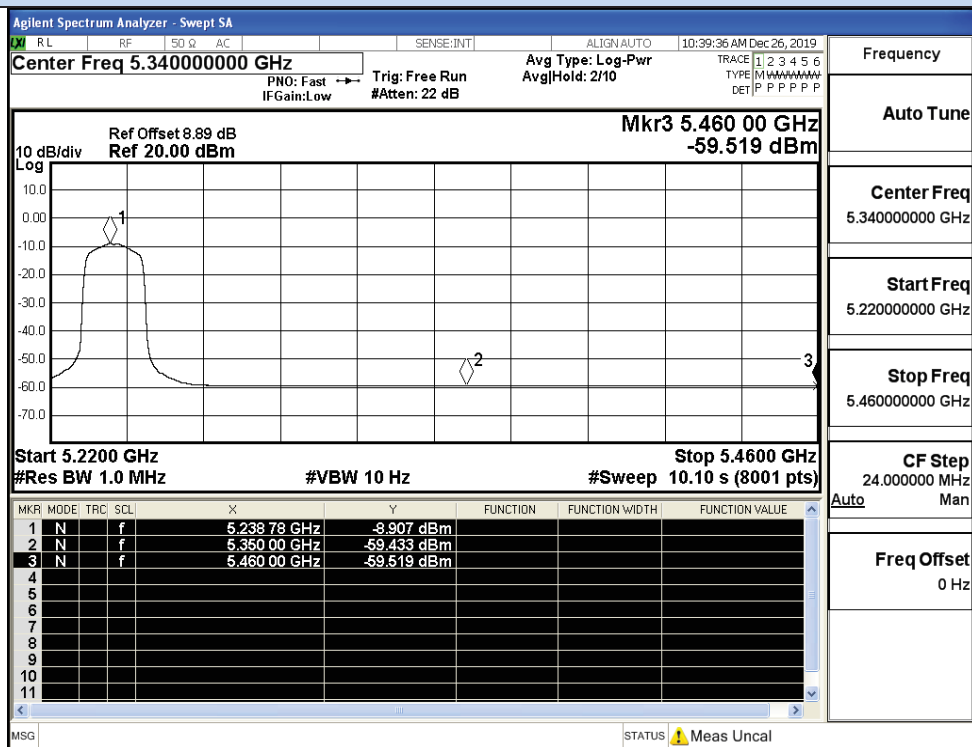
IEEE 802.11ac20 / Channel 36 / 5180MHz / Peak



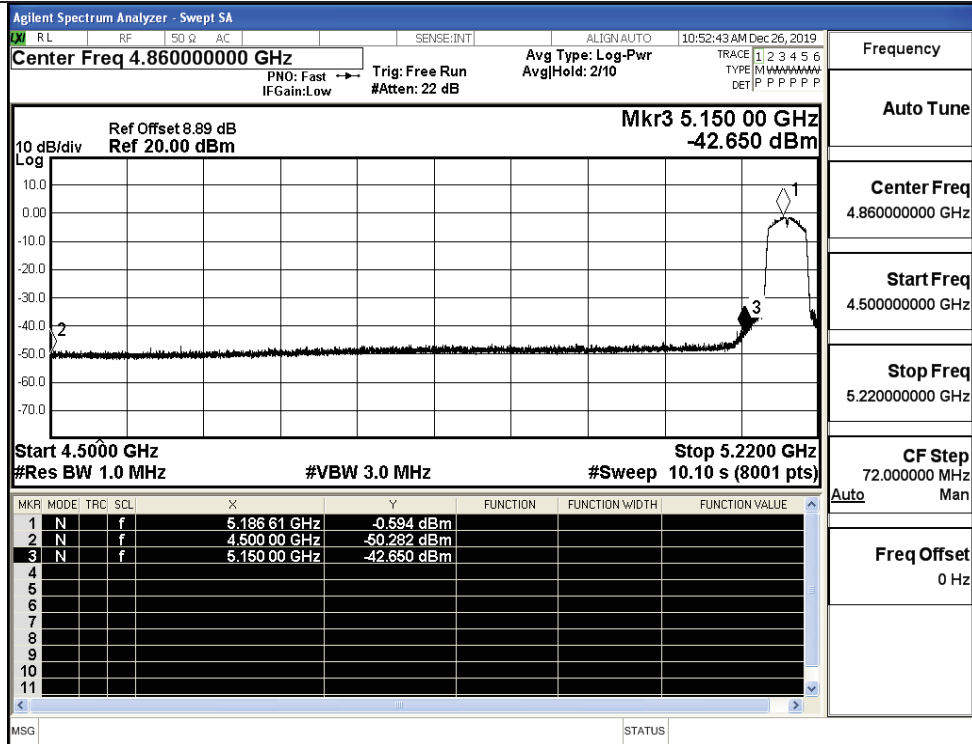
IEEE 802.11ac20 / Channel 36 / 5180MHz / Average



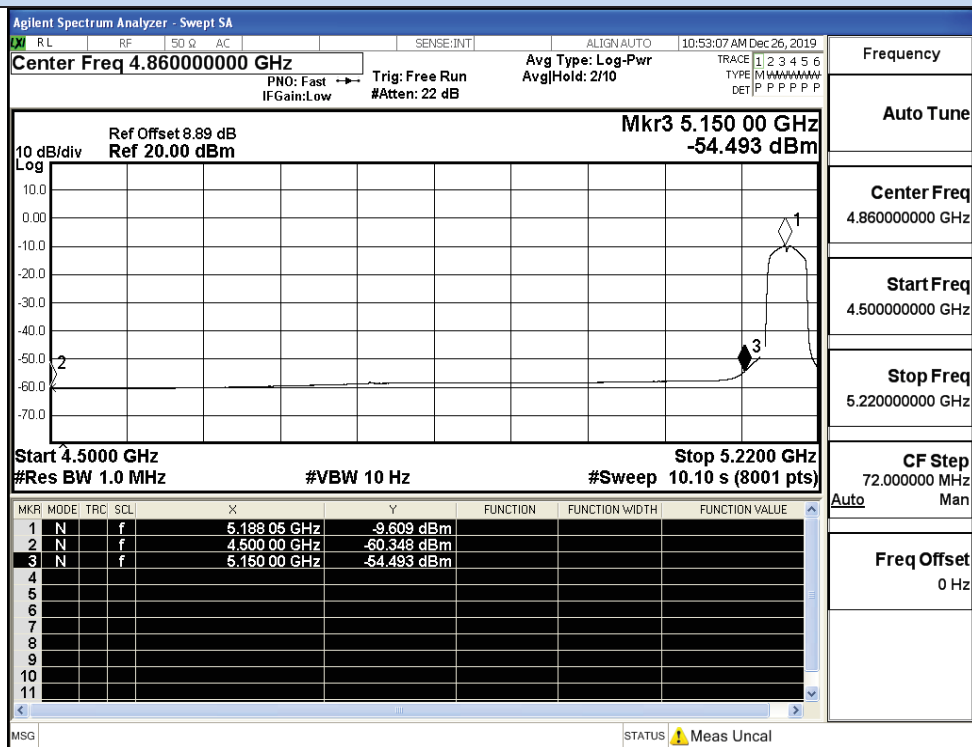
IEEE 802.11ac20 / Channel 48 / 5240MHz / Peak



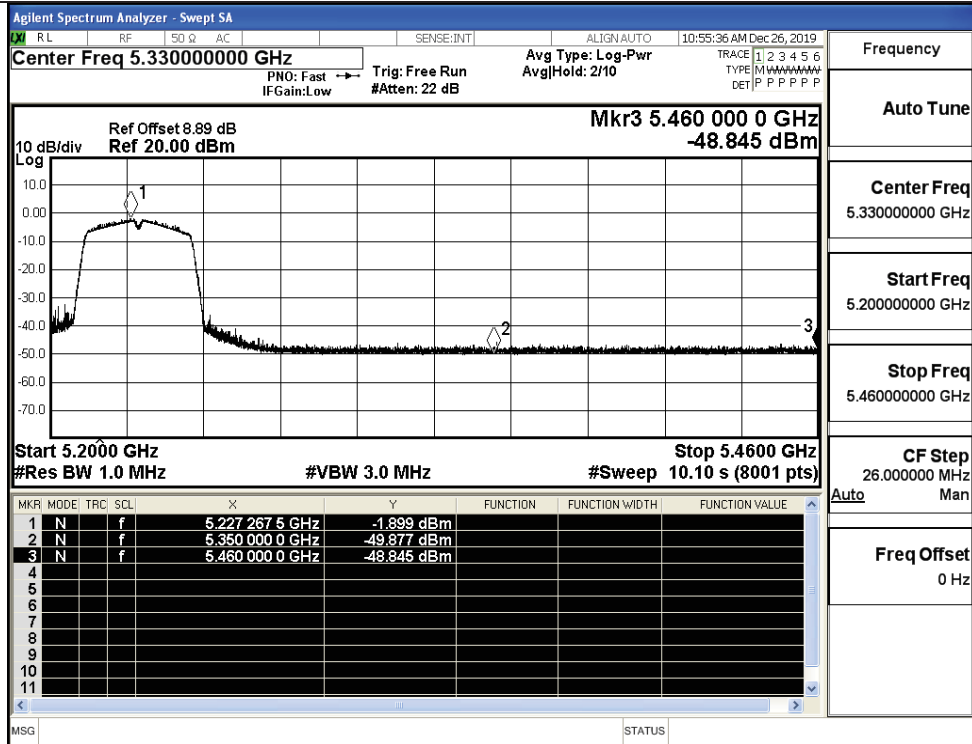
IEEE 802.11ac20 / Channel 48 / 5240MHz / Average



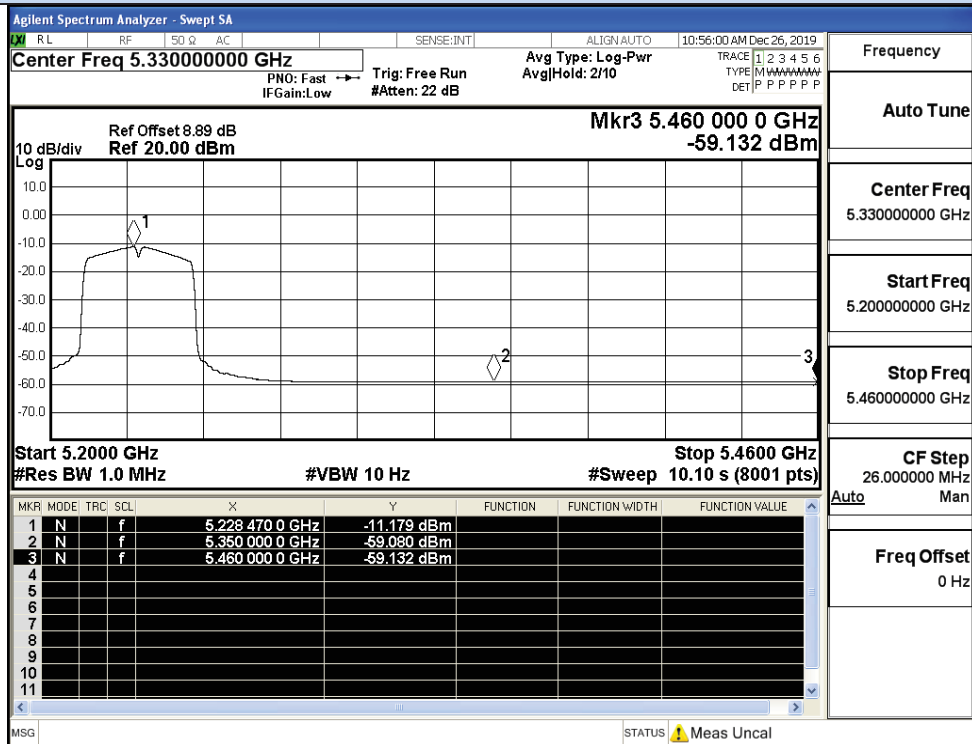
IEEE 802.11ac40 / Channel 38 / 5190MHz / Peak



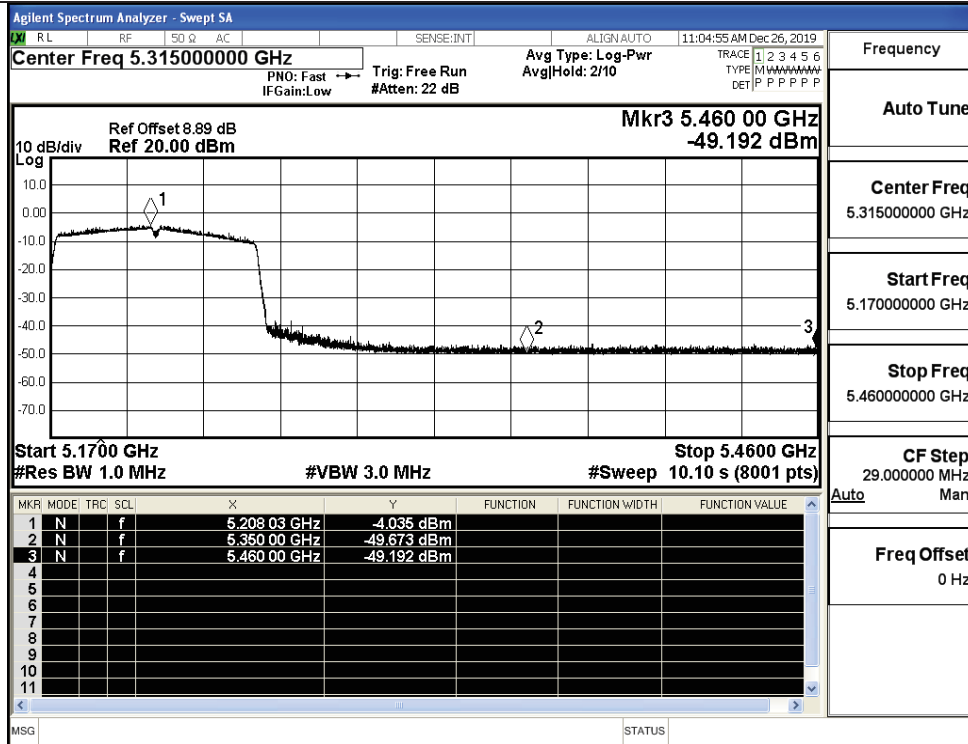
IEEE 802.11ac40 / Channel 38 / 5190MHz / Average



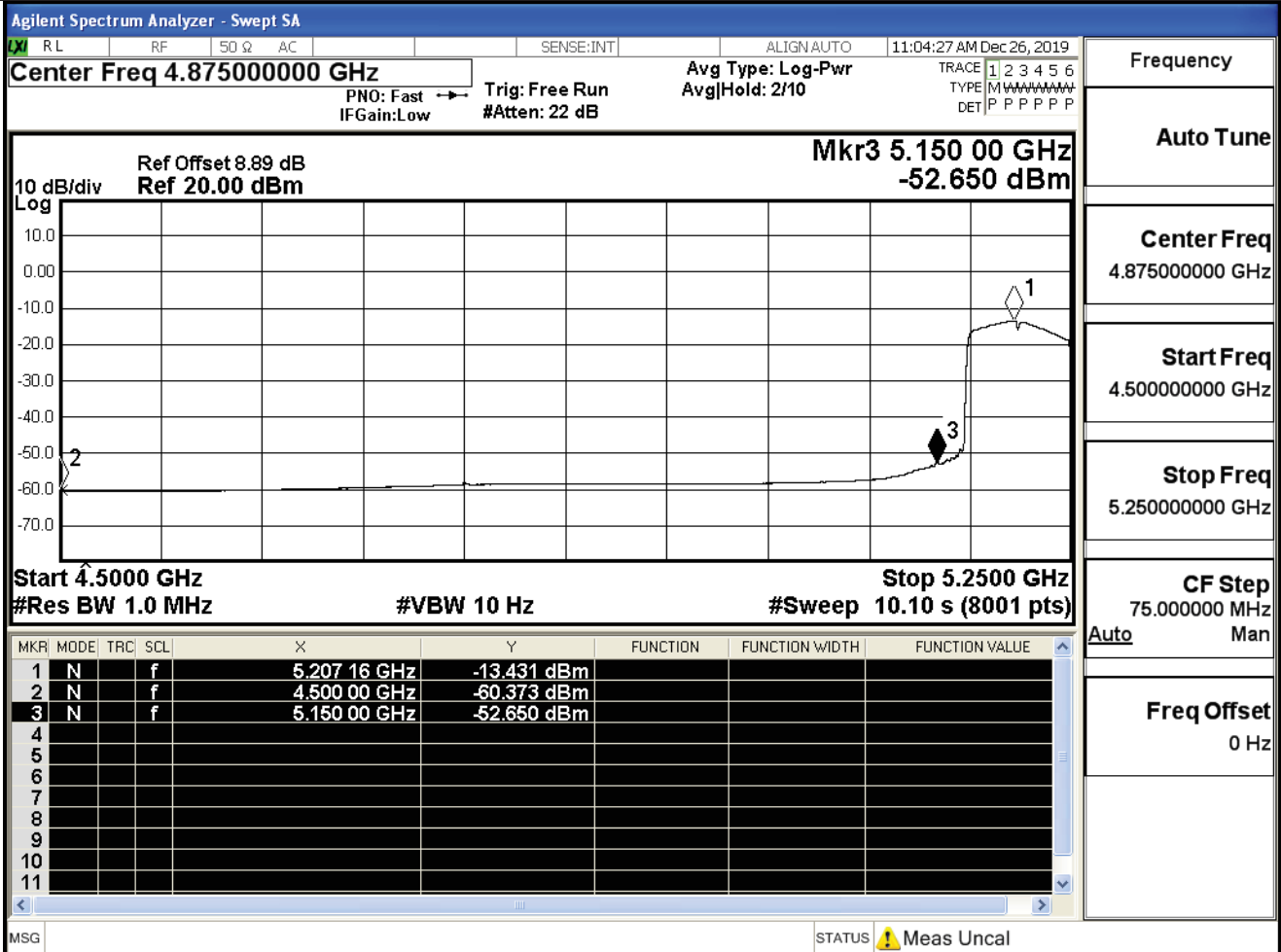
IEEE 802.11ac40 / Channel 46 / 5230MHz / Peak



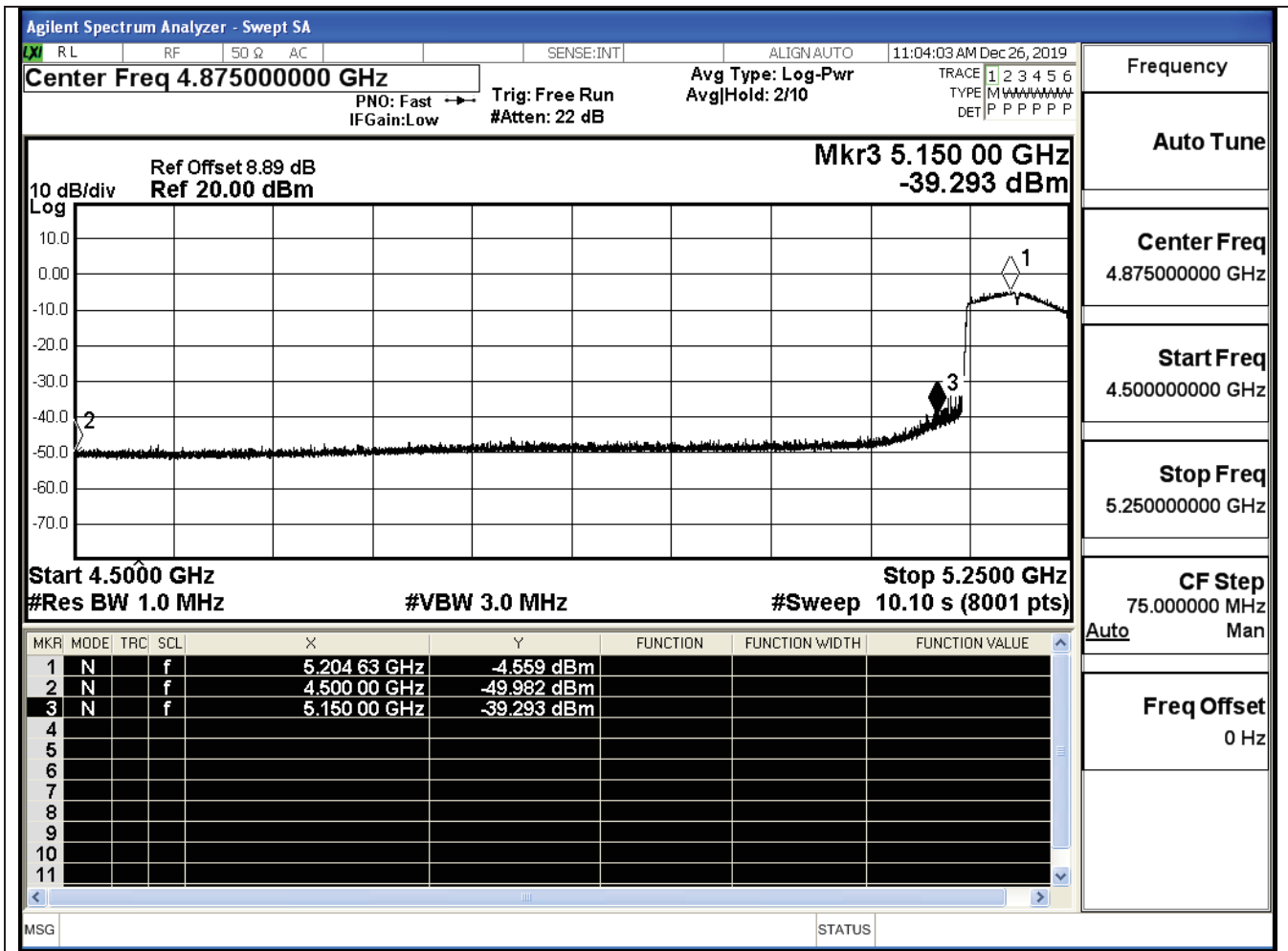
IEEE 802.11ac40 / Channel 46 / 5230MHz / Average



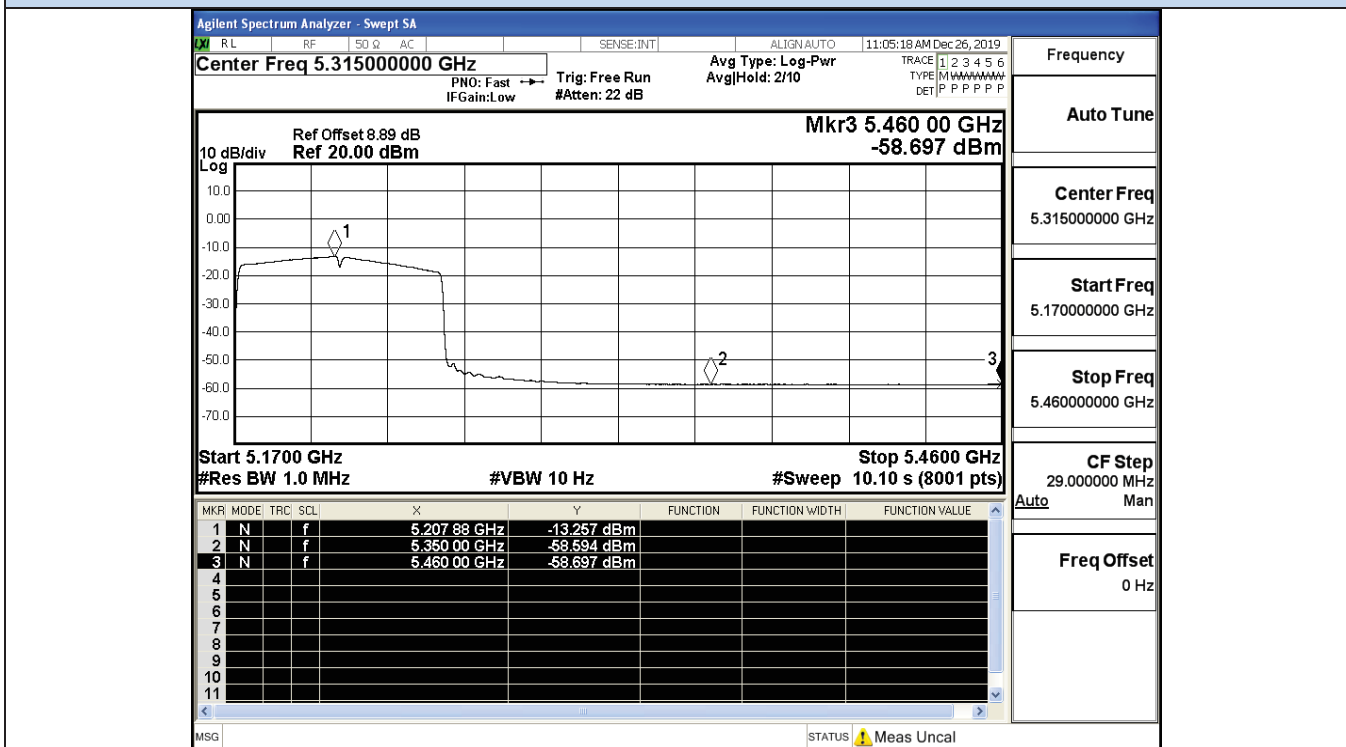
IEEE 802.11ac80 / Channel 42 / 5210MHz / Peak



IEEE 802.11ac80 / Channel 42 / 5210MHz / Average



## IEEE 802.11ac80 / Channel 42/ 5210MHz / Peak



## IEEE 802.11ac80 / Channel 42 / 5210MHz / Average