

## Appendix A

### RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 433MHz RF Bridge

Trade Mark: 

Test Model: RF Bridge

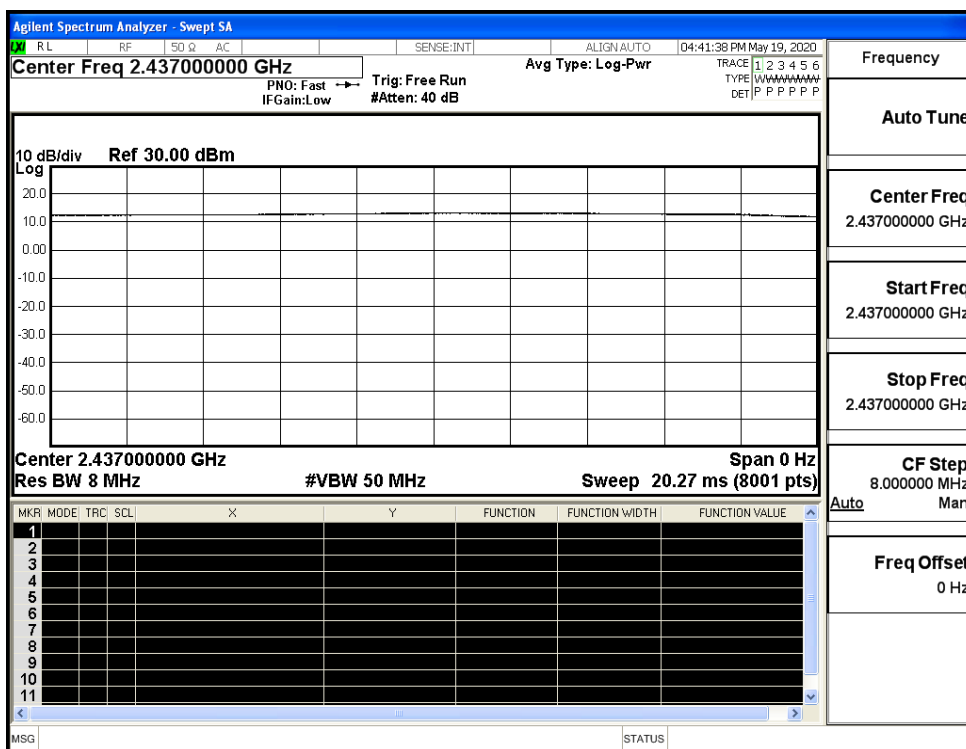
#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 25.1°C    |
| Relative Humidity: | 53.8%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | David Luo |
| Supervised by:     | Li Huan   |

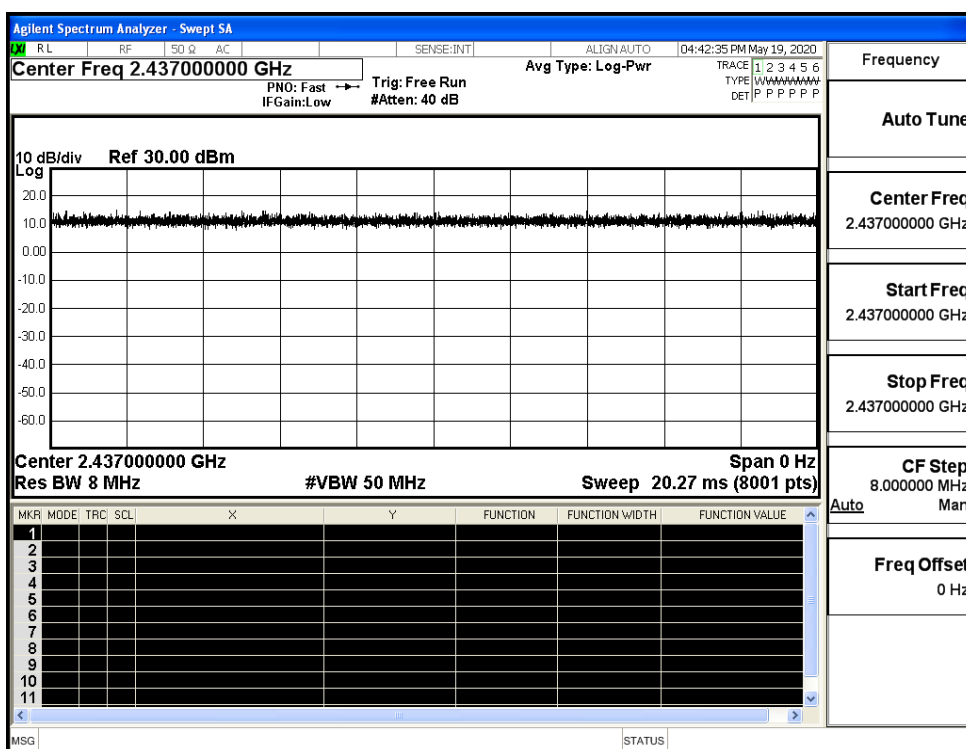
#### A.1 Duty Cycle

| Test Mode | Test Channel | Ant  | Duty Cycle[%] | Verdict |
|-----------|--------------|------|---------------|---------|
| 11B       | 2437         | Ant1 | 100           | PASS    |
| 11G       | 2437         | Ant1 | 100           | PASS    |
| 11N20SISO | 2437         | Ant1 | 100           | PASS    |

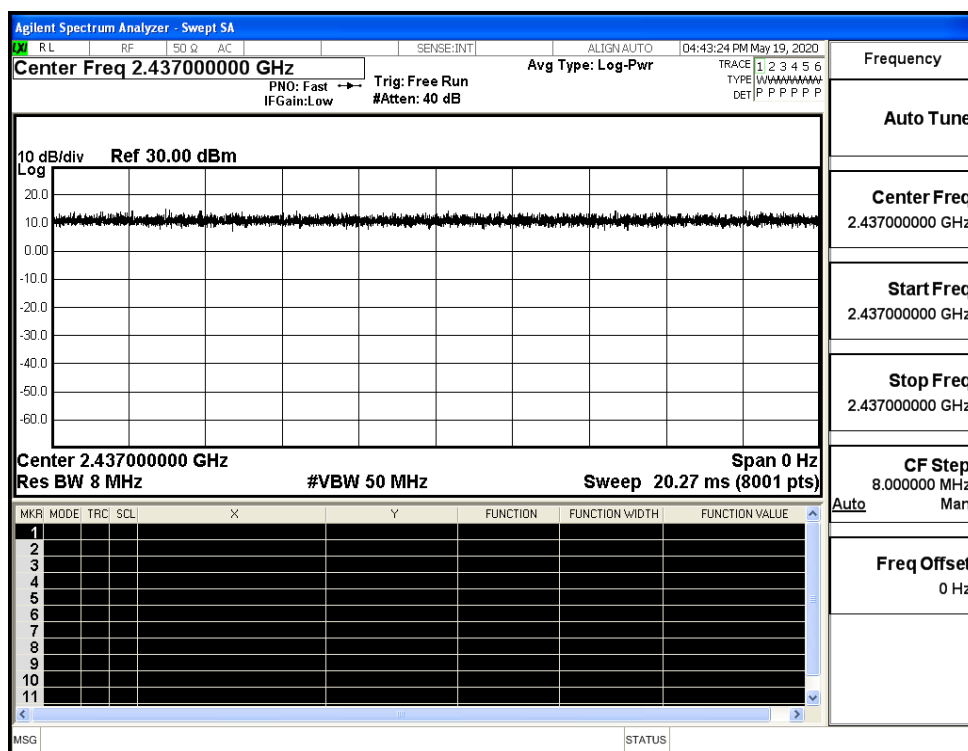
## Duty Cycle\_11B\_2437\_Ant1



## Duty Cycle\_11G\_2437\_Ant1



## Duty Cycle\_11N20SISO\_2437\_Ant1



**A.2 Maximum Conducted Output Power**

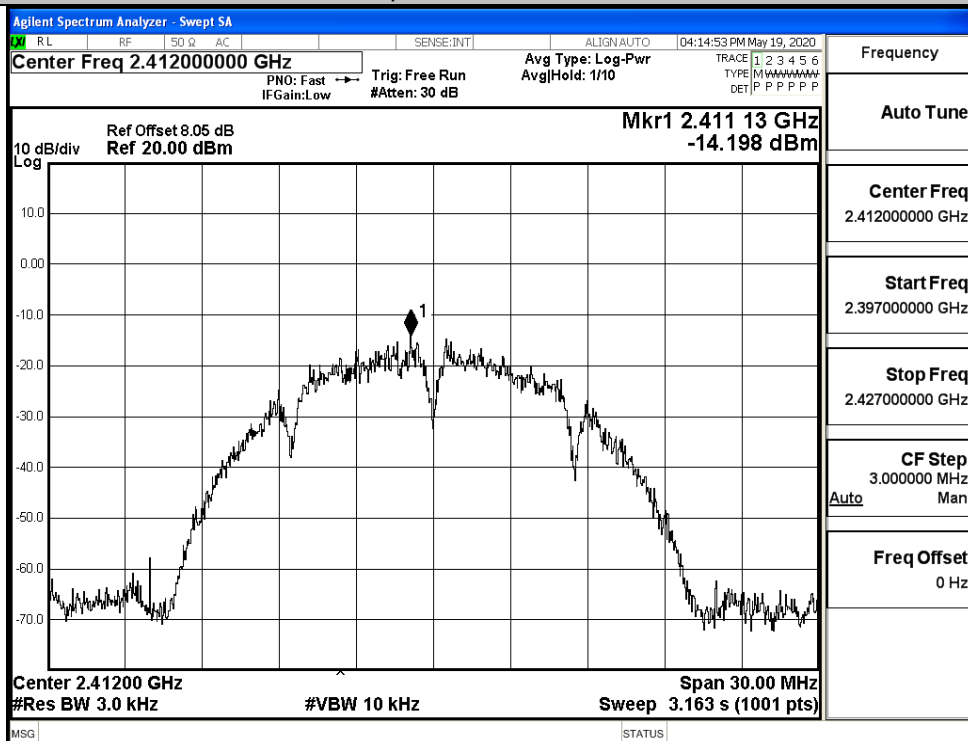
| Mode      | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B       | LCH     | 10.98            | 30          | PASS    |
|           | MCH     | 11.12            | 30          | PASS    |
|           | HCH     | 11.15            | 30          | PASS    |
| 11G       | LCH     | 11.01            | 30          | PASS    |
|           | MCH     | 11.24            | 30          | PASS    |
|           | HCH     | 11.23            | 30          | PASS    |
| 11N20SISO | LCH     | 10.88            | 30          | PASS    |
|           | MCH     | 10.79            | 30          | PASS    |
|           | HCH     | 11.06            | 30          | PASS    |

### A.3 Maximum Power Spectral Density

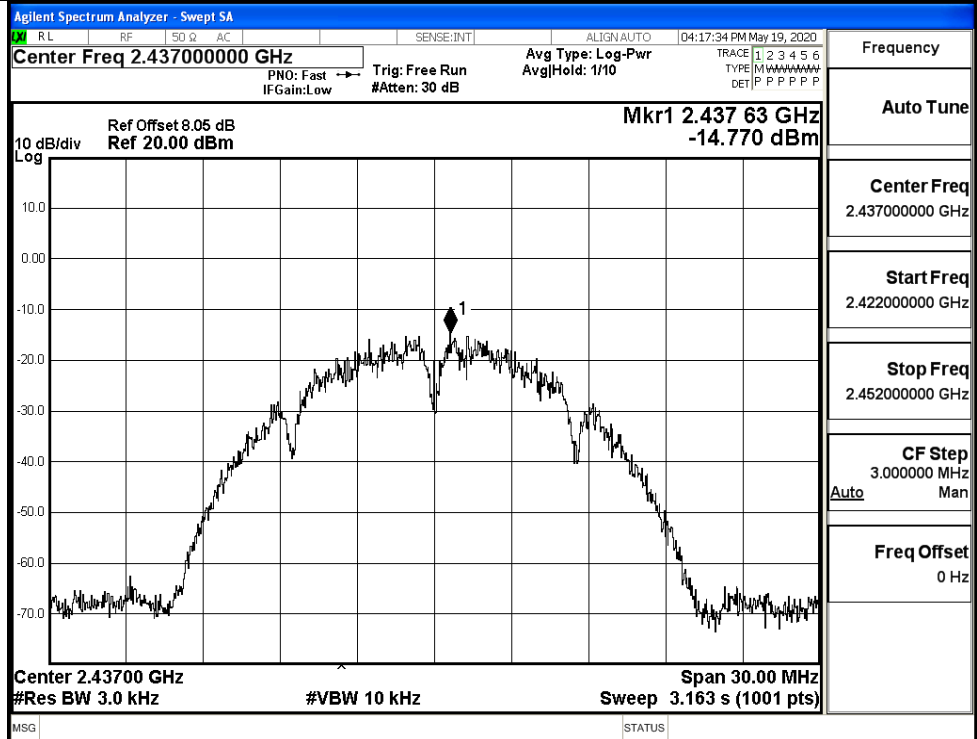
| Mode      | Channel | Meas.Level [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|-----------------------|------------------|---------|
| 11B       | LCH     | -14.198               | 8                | PASS    |
|           | MCH     | -14.770               | 8                | PASS    |
|           | HCH     | -15.489               | 8                | PASS    |
| 11G       | LCH     | -22.476               | 8                | PASS    |
|           | MCH     | -16.118               | 8                | PASS    |
|           | HCH     | -22.504               | 8                | PASS    |
| 11N20SISO | LCH     | -23.308               | 8                | PASS    |
|           | MCH     | -16.235               | 8                | PASS    |
|           | HCH     | -22.106               | 8                | PASS    |

#### Test Graphs

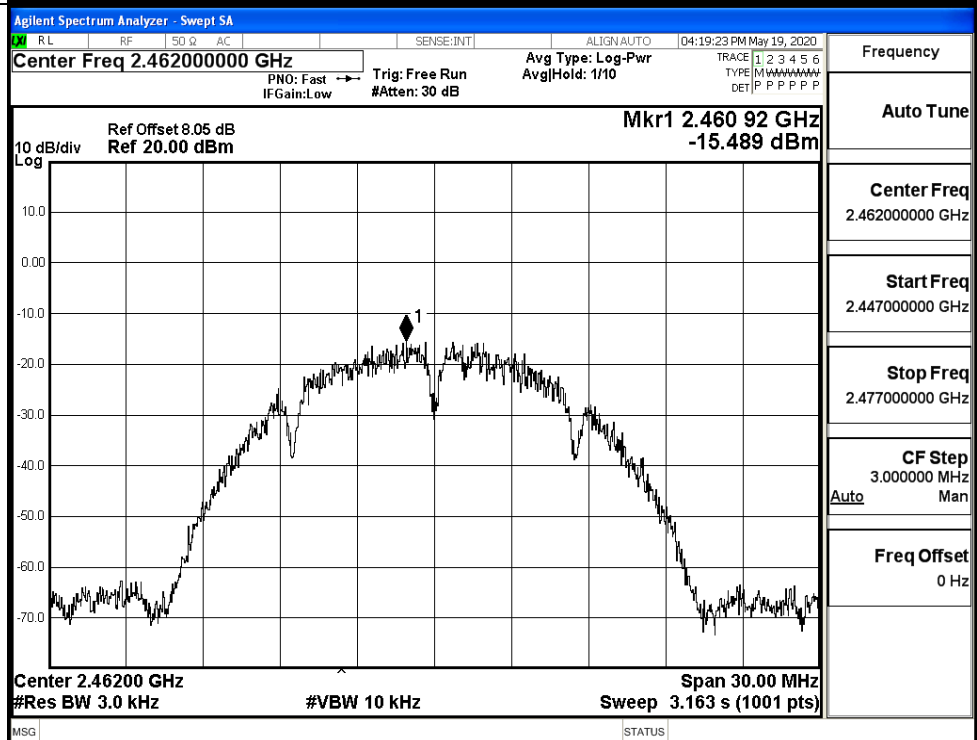
11B/LCH



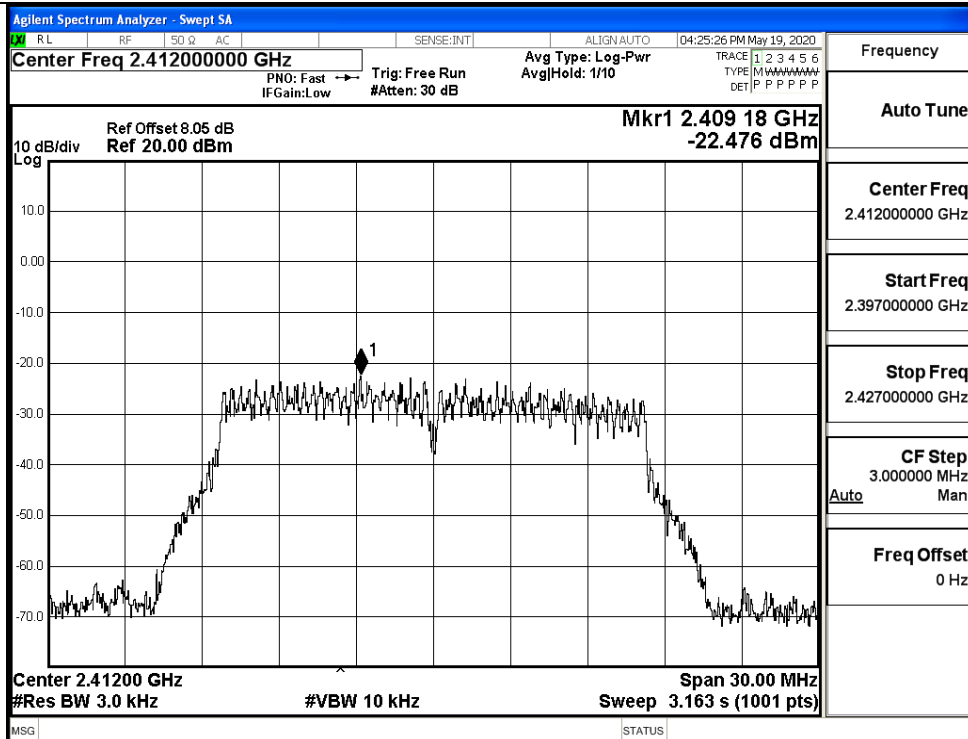
11B/MCH



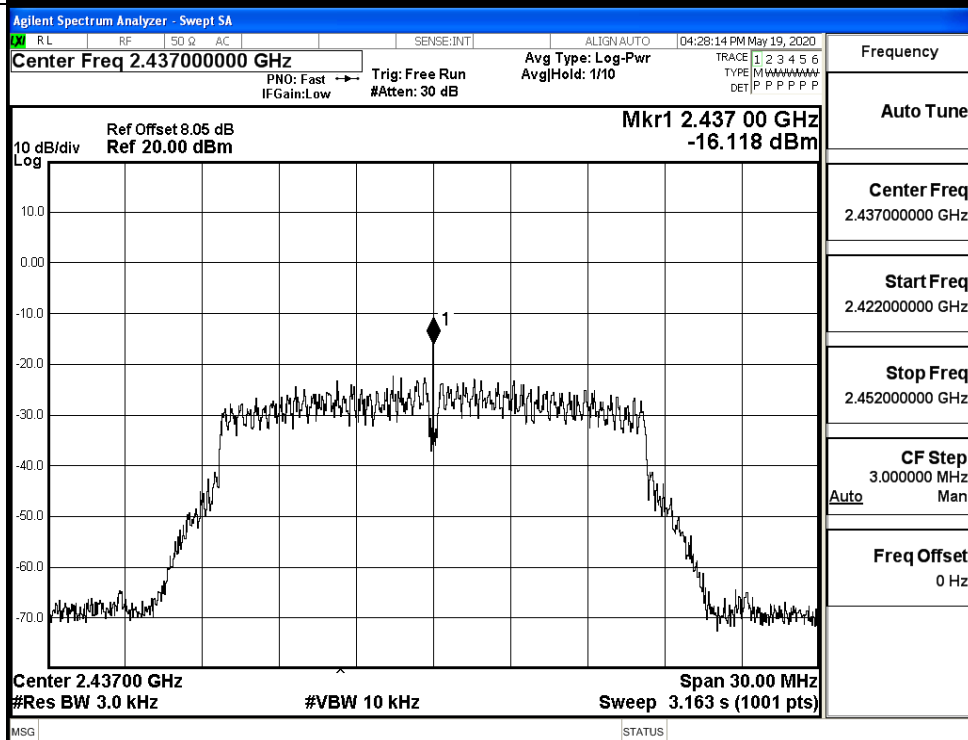
11B/HCH



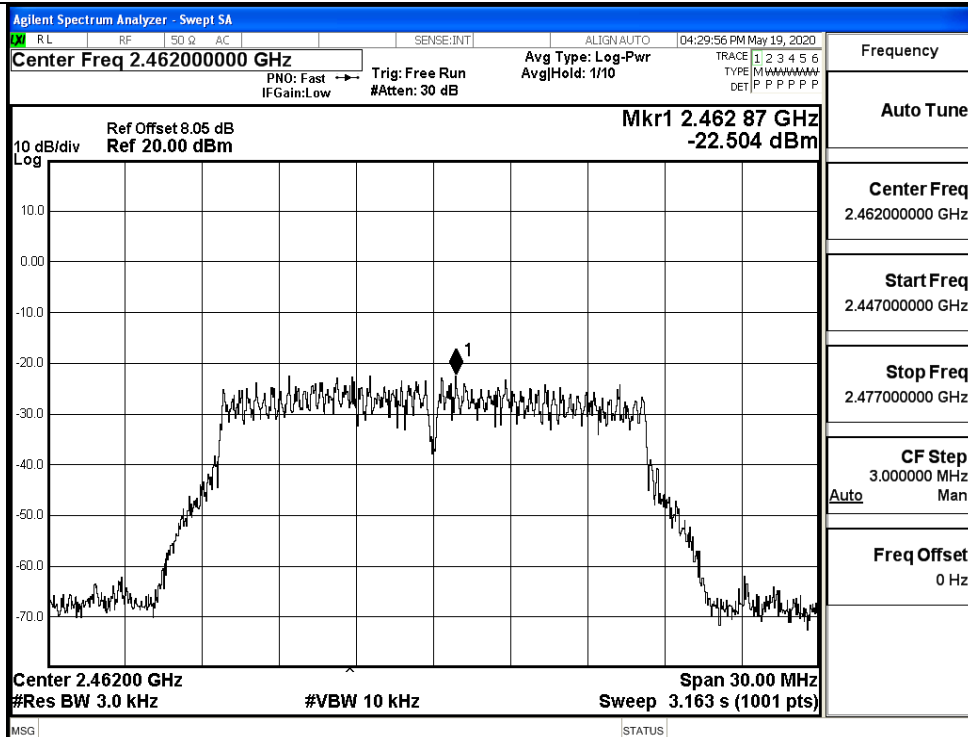
11G/LCH



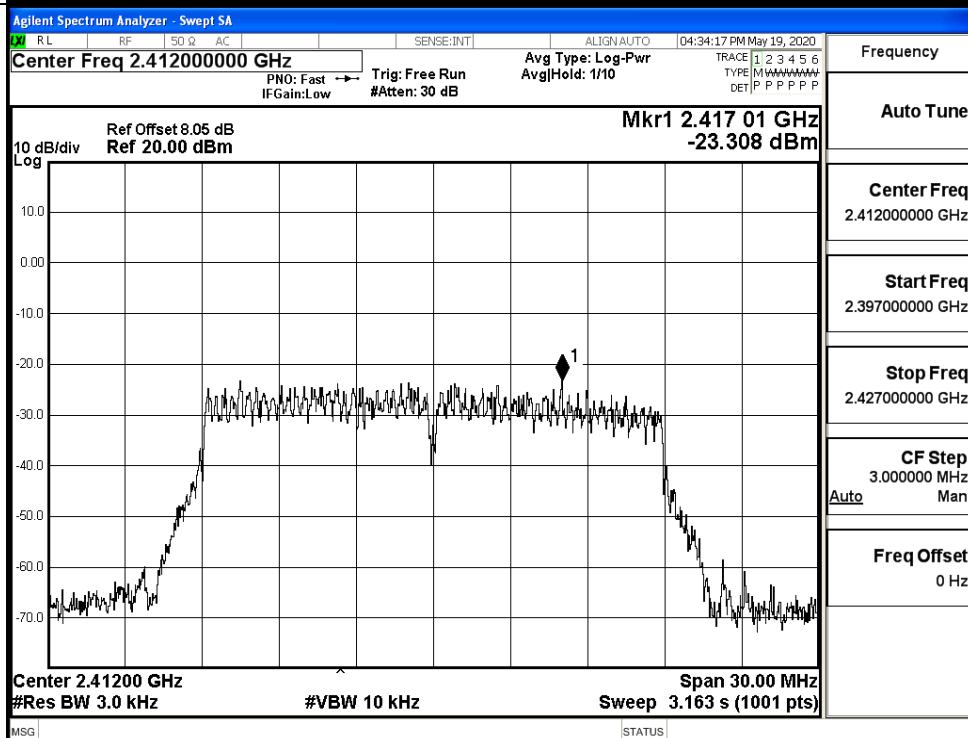
11G/MCH



11G/HCH

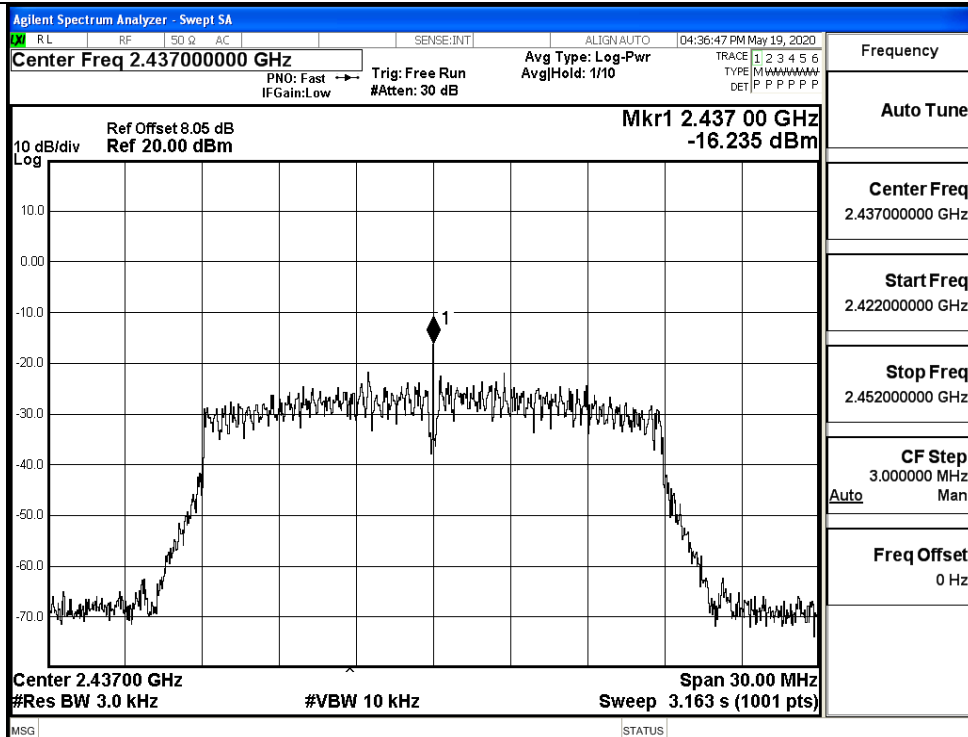


11N20SISO/LCH

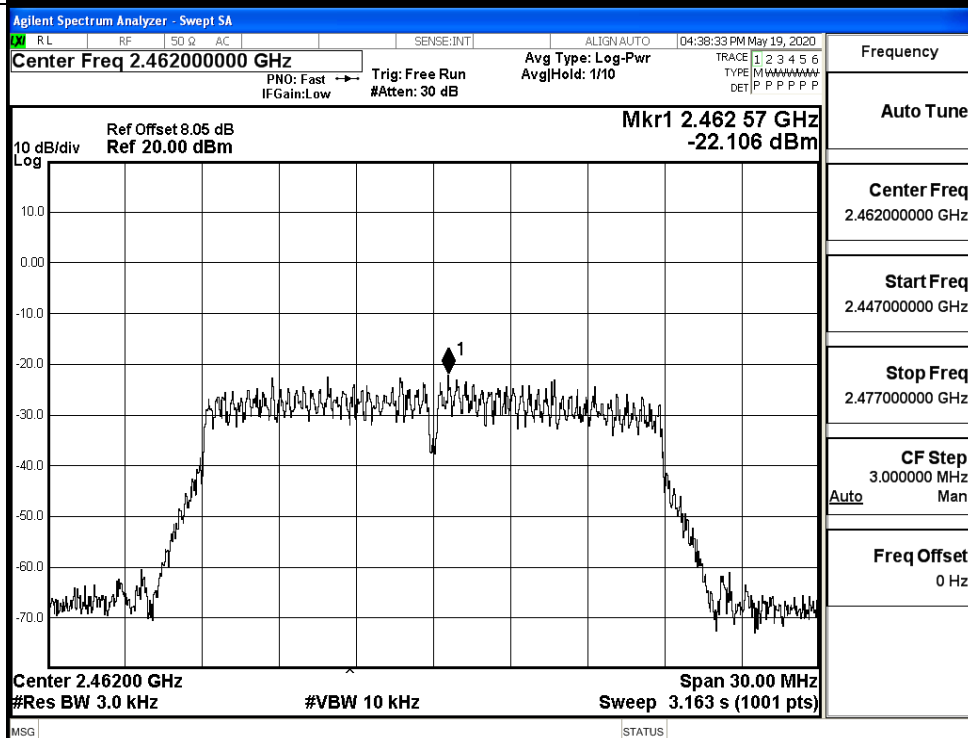




11N20SISO/MCH



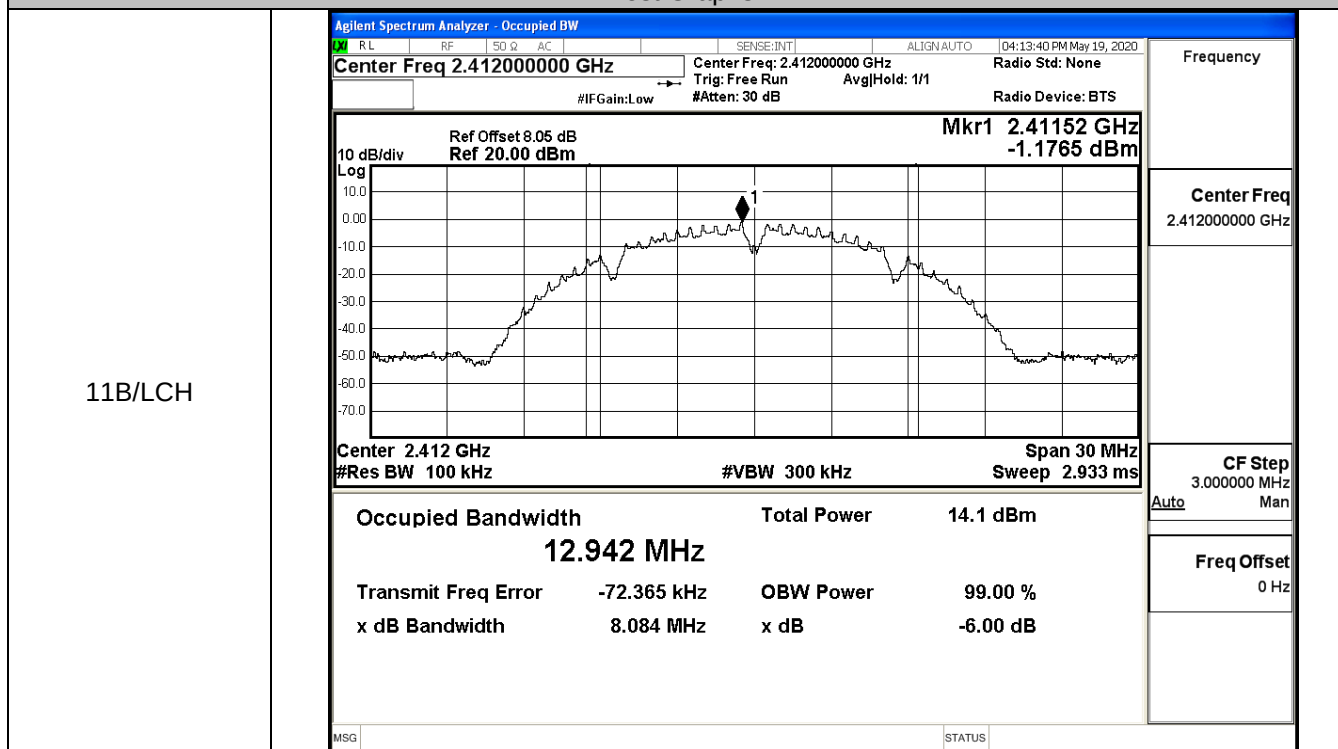
11N20SISO/HCH



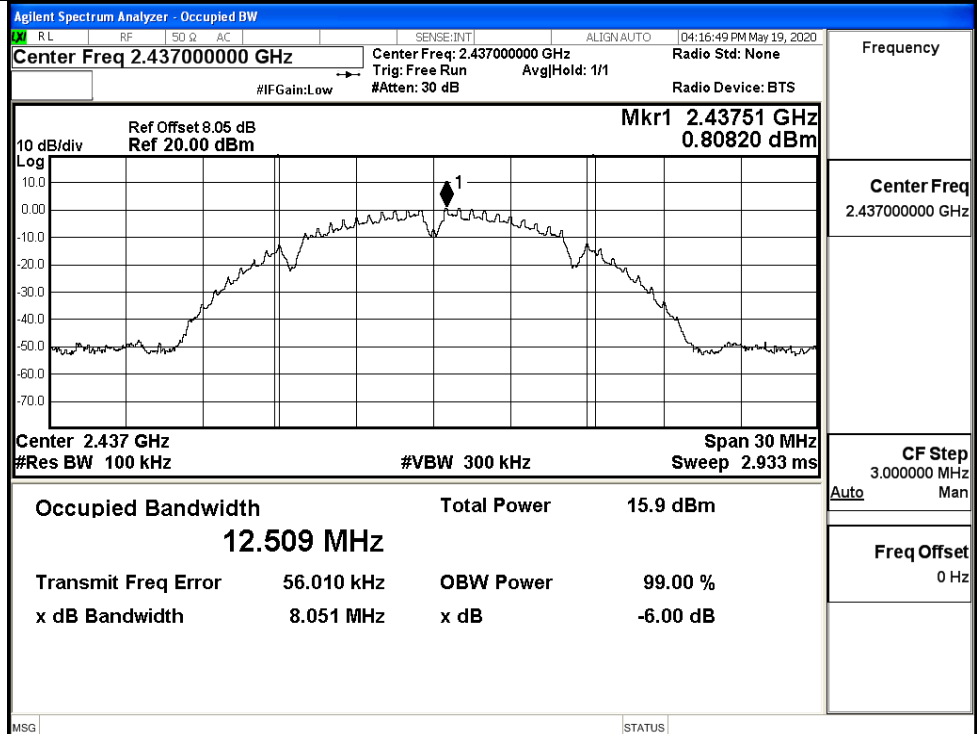
## A.4 6dB Bandwidth

| Mode      | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B       | LCH     | 8.084               | $\geq 0.5$  | PASS    |
|           | MCH     | 8.051               | $\geq 0.5$  | PASS    |
|           | HCH     | 8.080               | $\geq 0.5$  | PASS    |
| 11G       | LCH     | 15.95               | $\geq 0.5$  | PASS    |
|           | MCH     | 15.09               | $\geq 0.5$  | PASS    |
|           | HCH     | 15.49               | $\geq 0.5$  | PASS    |
| 11N20SISO | LCH     | 16.35               | $\geq 0.5$  | PASS    |
|           | MCH     | 13.90               | $\geq 0.5$  | PASS    |
|           | HCH     | 16.10               | $\geq 0.5$  | PASS    |

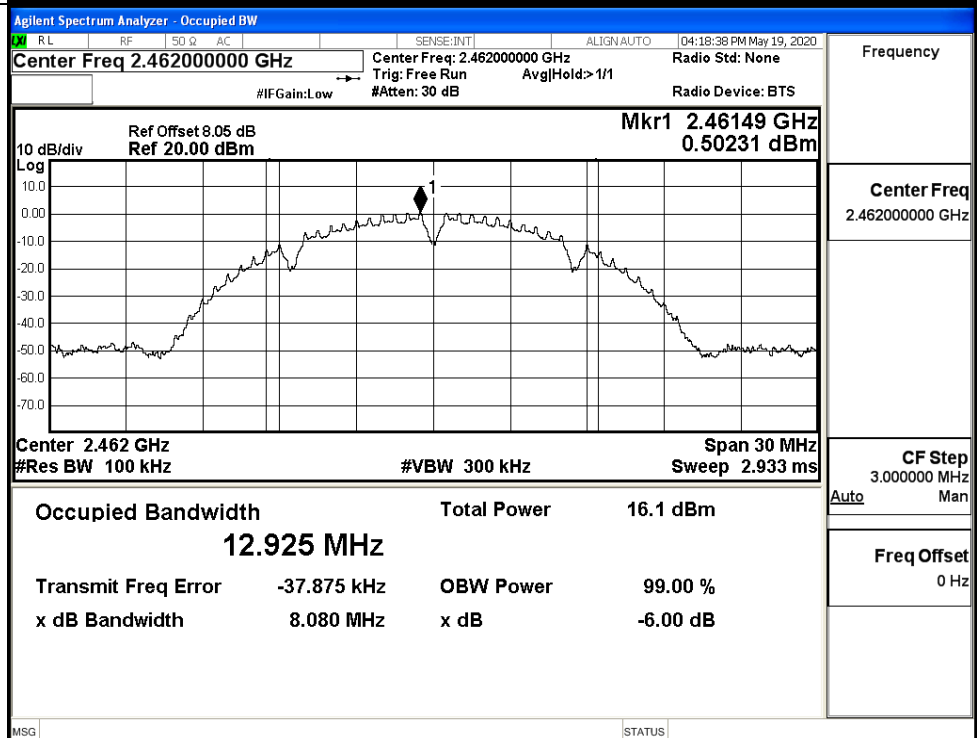
## Test Graphs



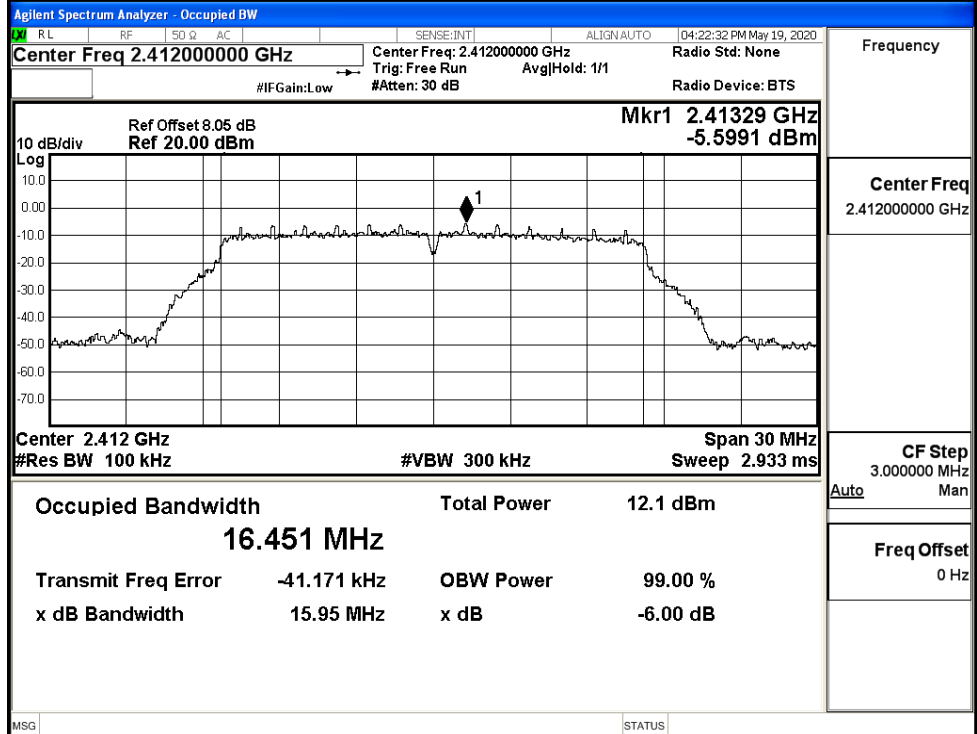
11B/MCH



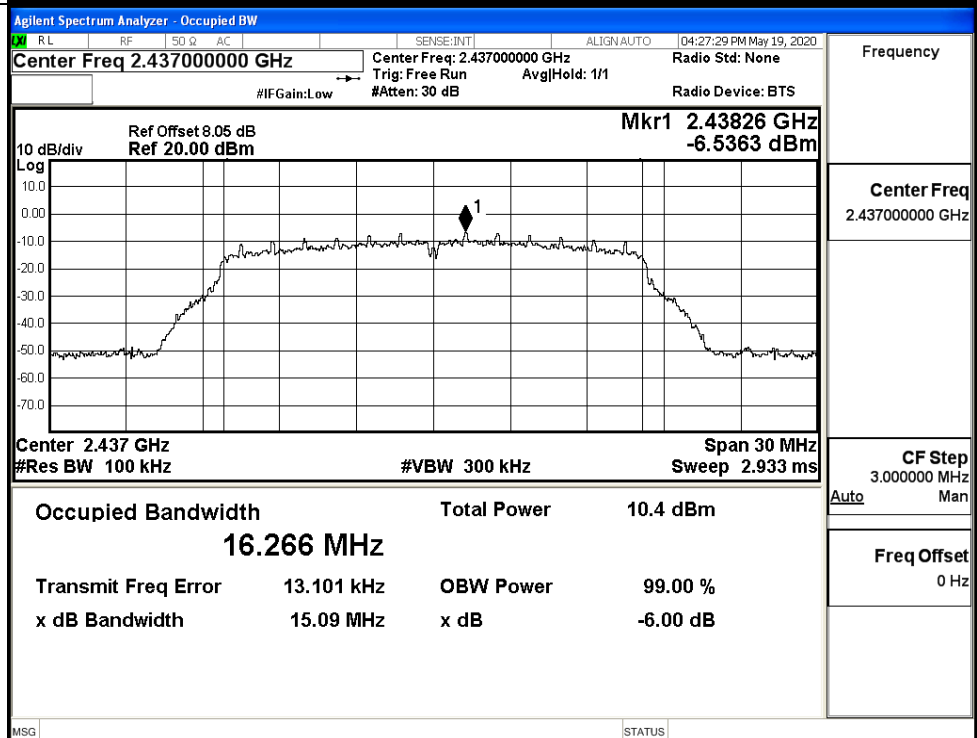
11B/HCH



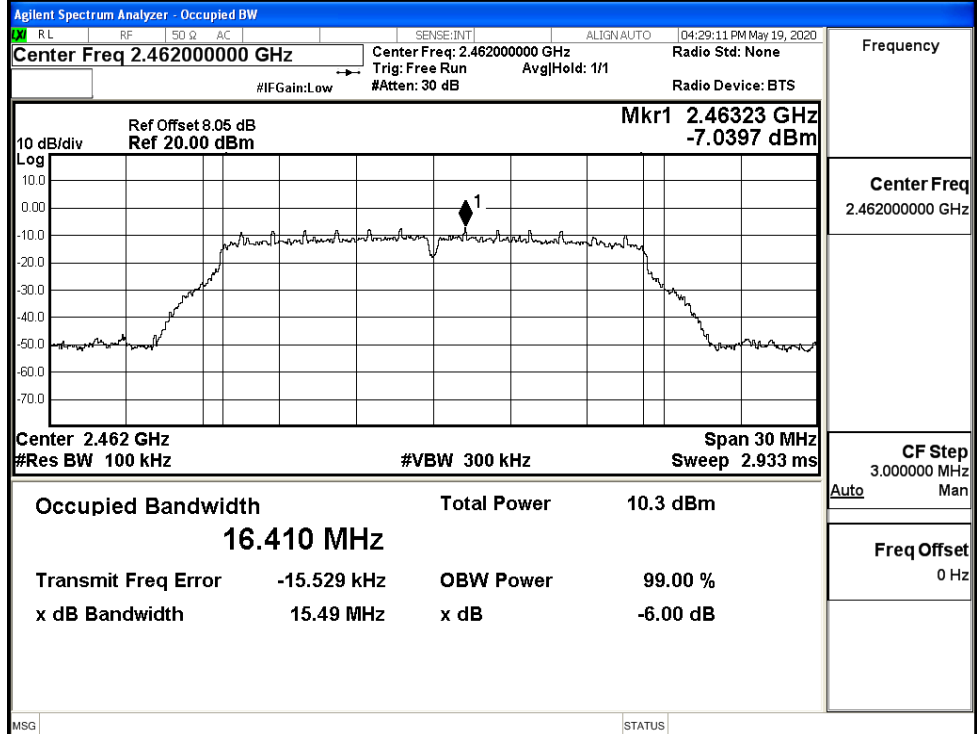
11G/LCH



11G/MCH



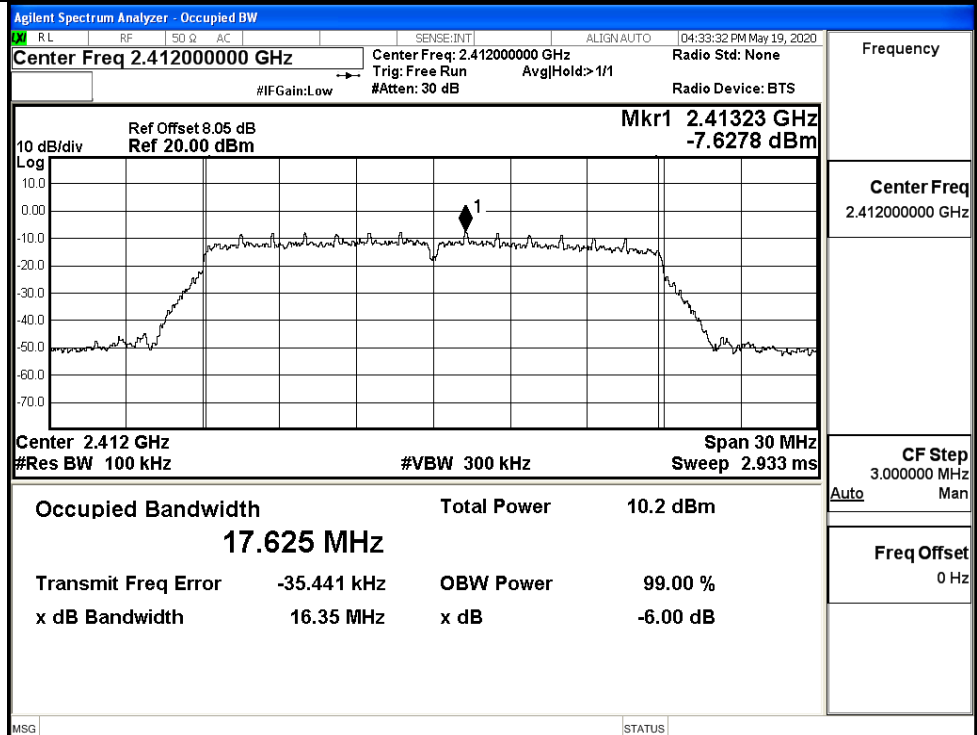
11G/HCH



Frequency

Center Freq  
2.46200000 GHzCF Step  
3.000000 MHz  
Auto ManFreq Offset  
0 Hz

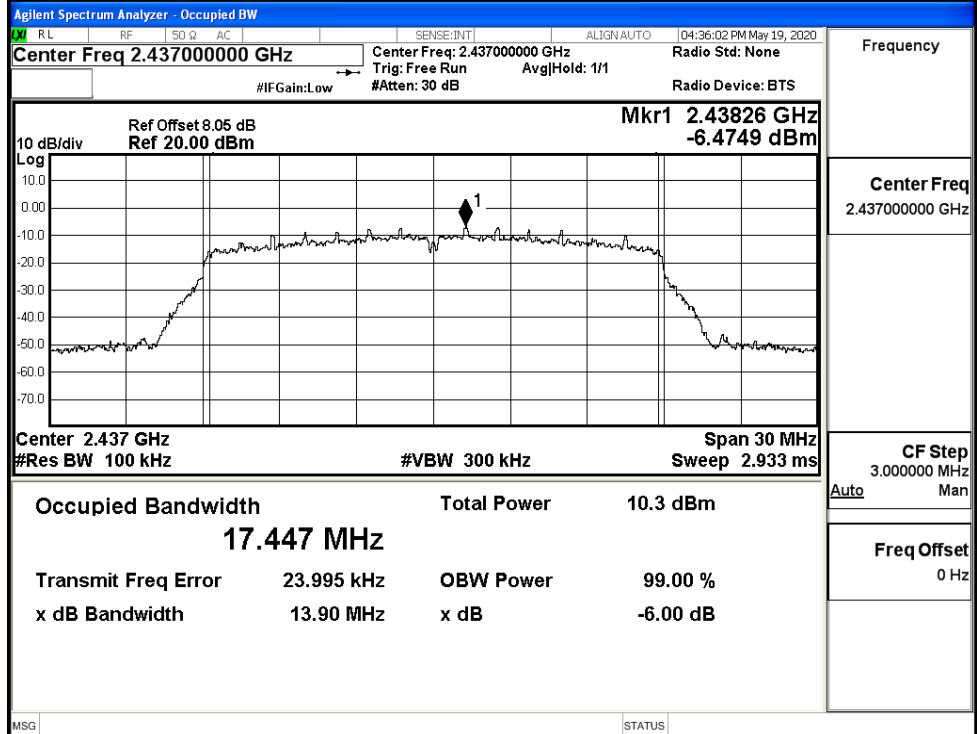
11N20SISO/LCH



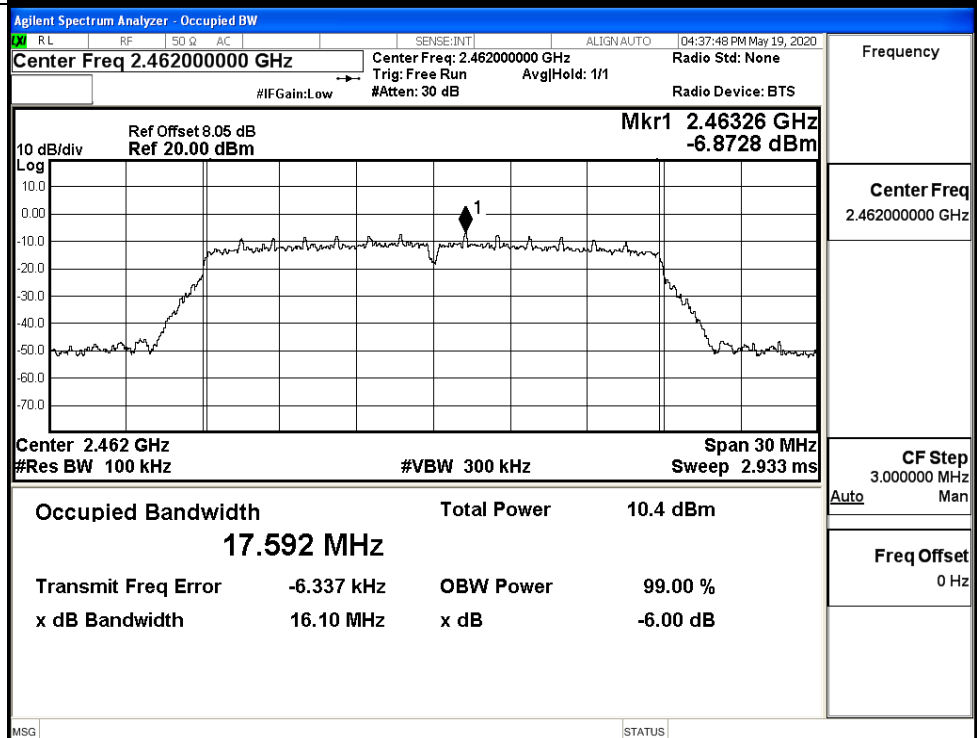
Frequency

Center Freq  
2.41200000 GHzCF Step  
3.000000 MHz  
Auto ManFreq Offset  
0 Hz

11N20SISO/MCH



11N20SISO/HCH

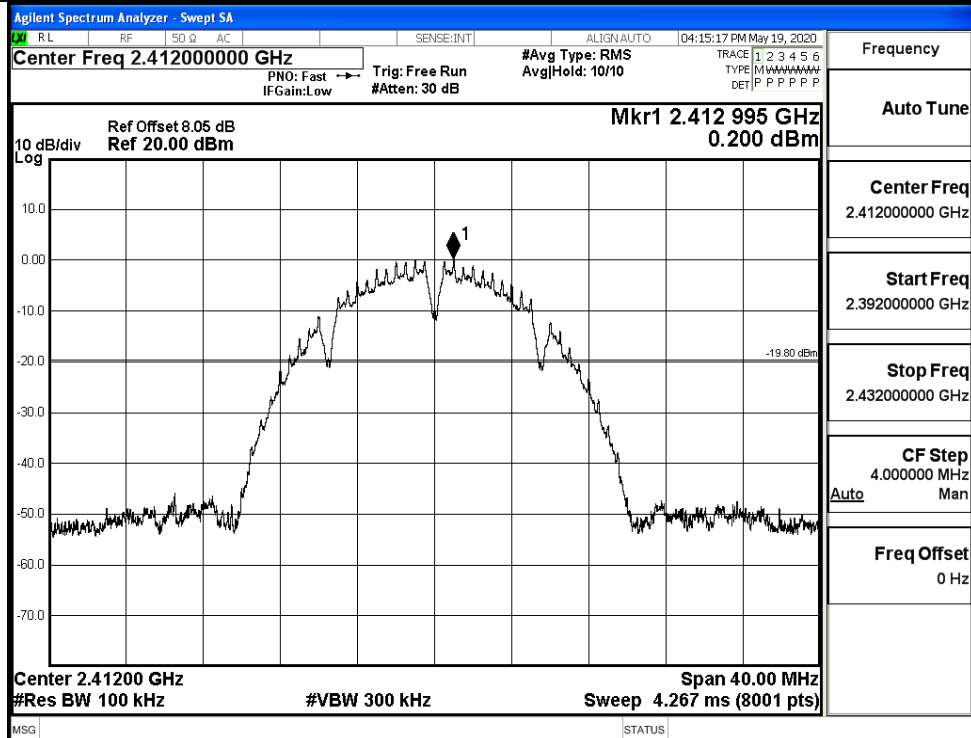


**A.5 RF Conducted Spurious Emissions**

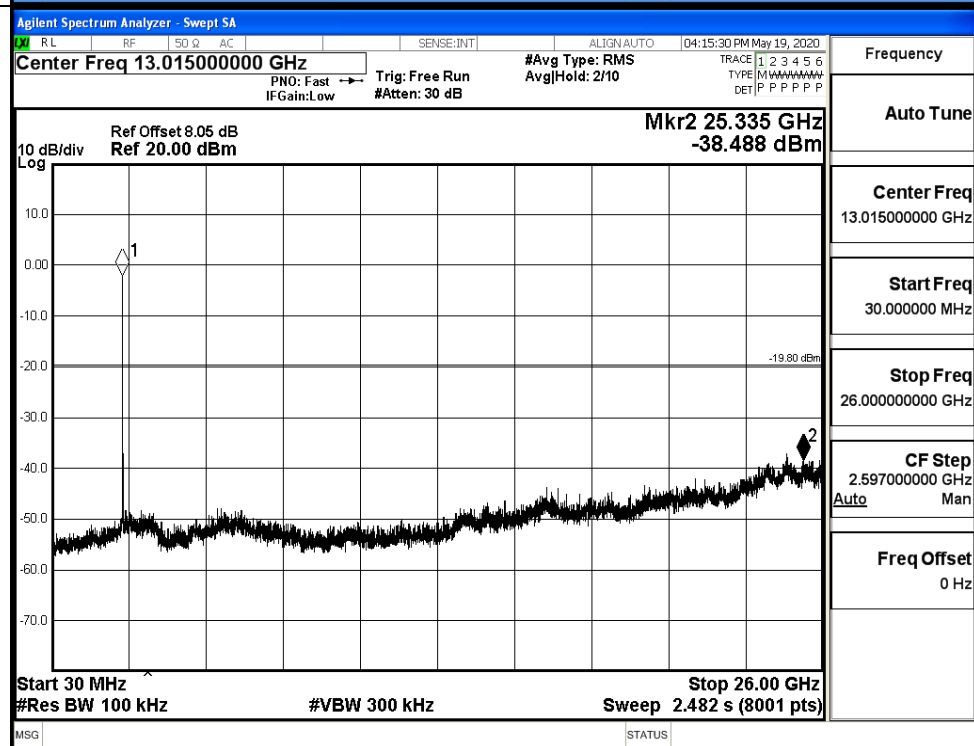
| Mode          | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B           | LCH     | 0.2        | -38.488          | -19.800     | PASS    |
|               | MCH     | 0.464      | -37.746          | -19.536     | PASS    |
|               | HCH     | 0.54       | -37.702          | -19.460     | PASS    |
| 11G           | LCH     | -7.49      | -38.325          | -27.490     | PASS    |
|               | MCH     | -6.717     | -38.287          | -26.717     | PASS    |
|               | HCH     | -7.098     | -37.580          | -27.098     | PASS    |
| 11N20<br>SISO | LCH     | -7.545     | -38.288          | -27.545     | PASS    |
|               | MCH     | -6.304     | -38.130          | -26.304     | PASS    |
|               | HCH     | -7.251     | -37.839          | -27.251     | PASS    |

## 11B LCH Graphs

Pref/11B/LCH



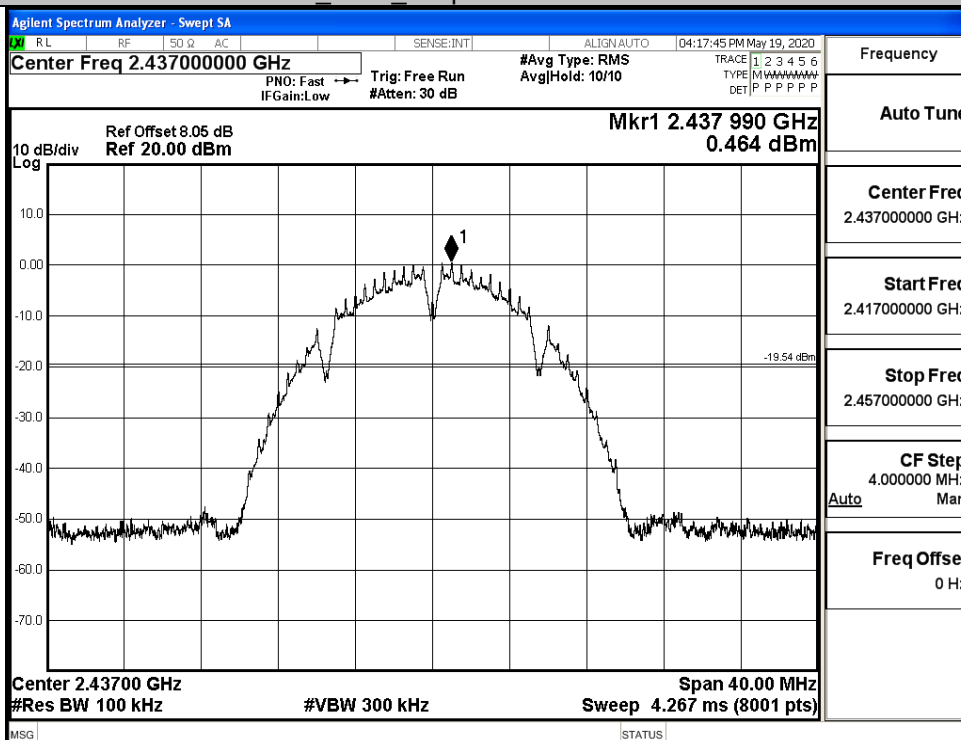
Puw/11B/LCH



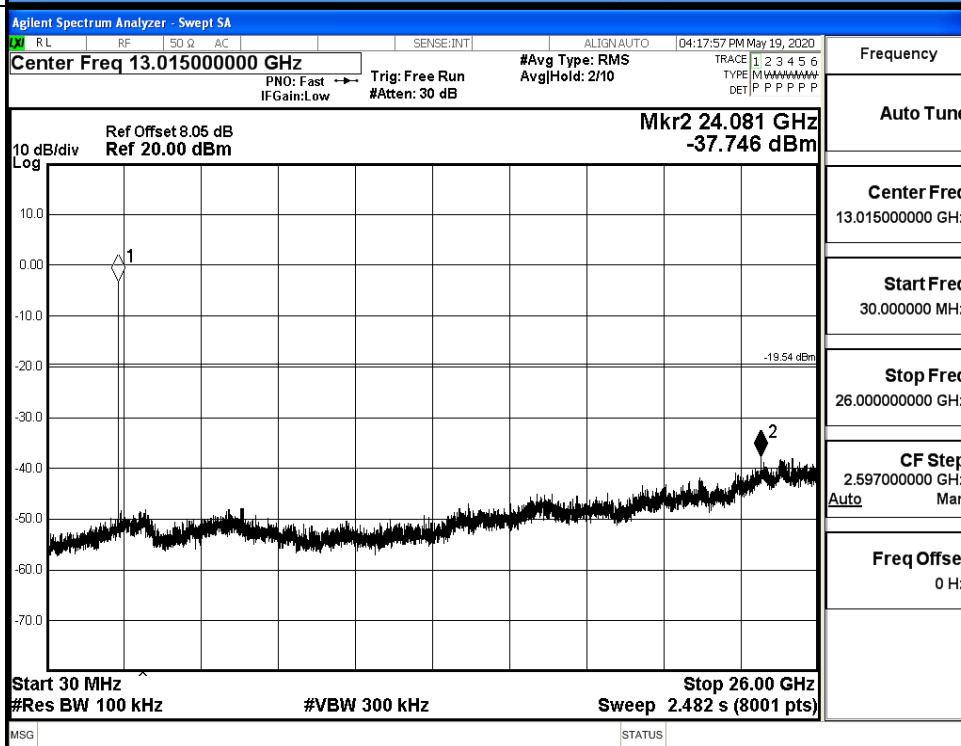


## 11B MCH Graphs

Pref/11B/MCH

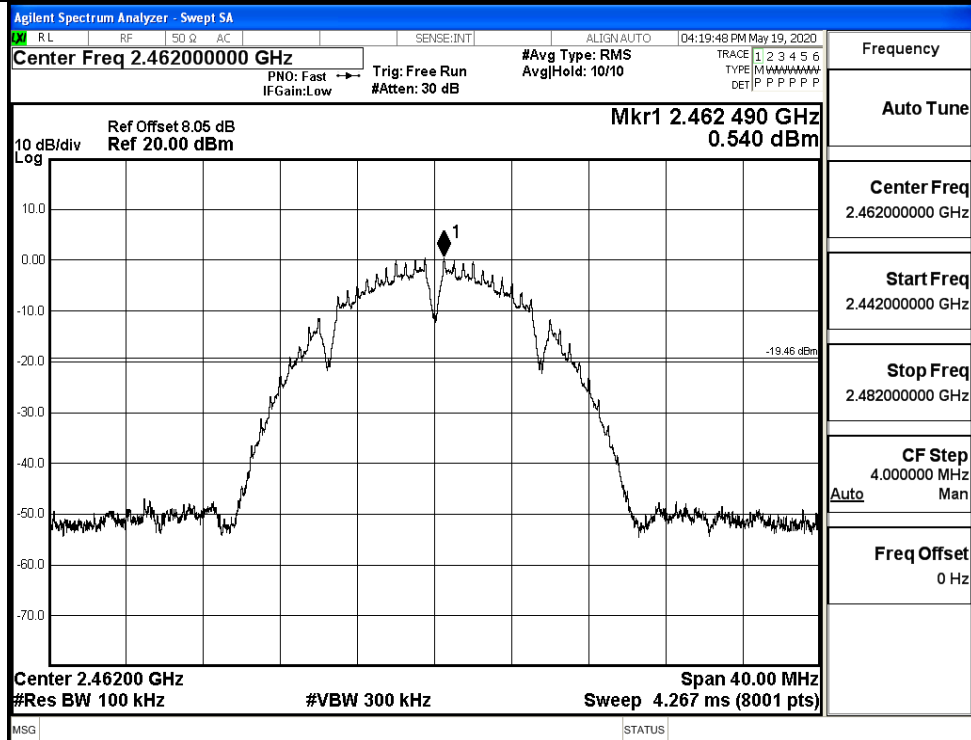


Puw/11B/MCH

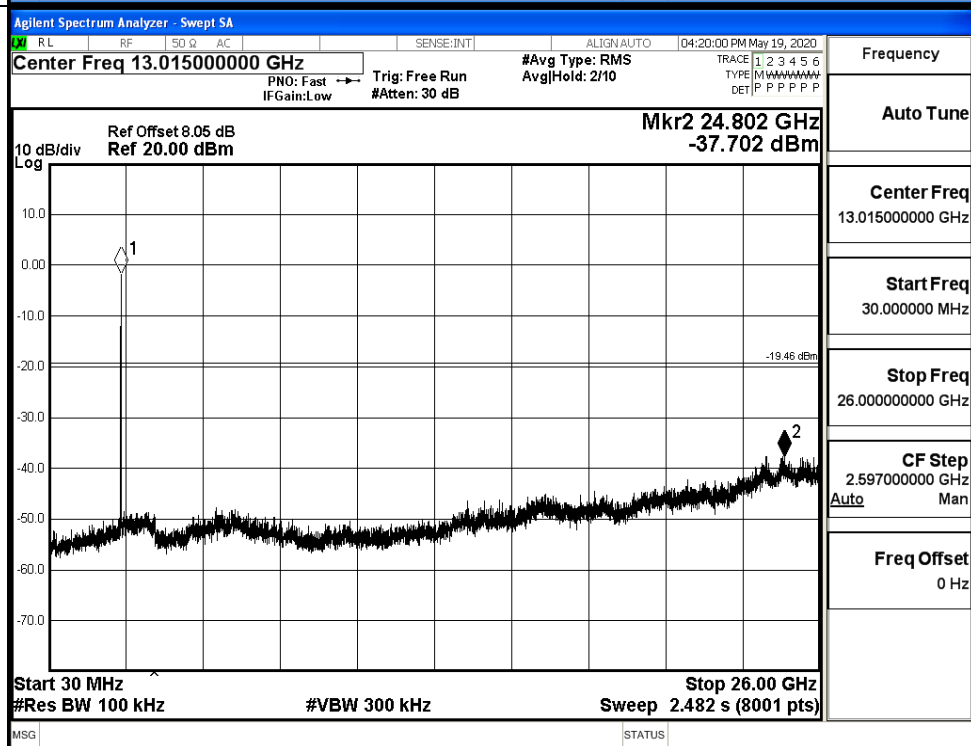


## 11B HCH Graphs

Pref/11B/HCH

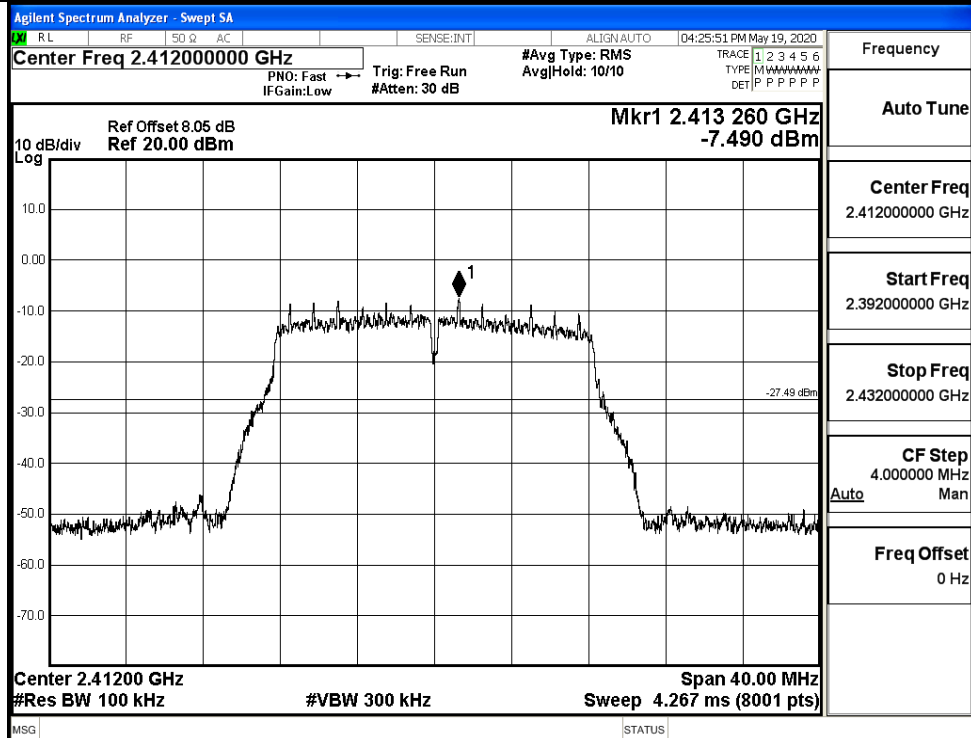


Puw/11B/HCH

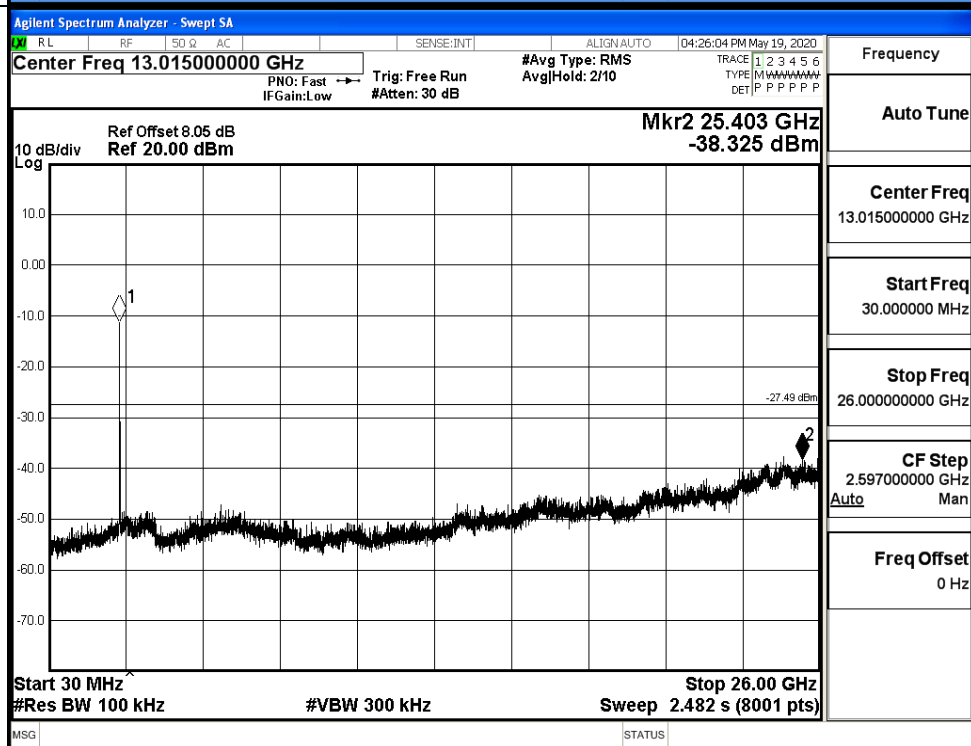


## 11G\_LCH\_Graphs

Pref/11G/LCH

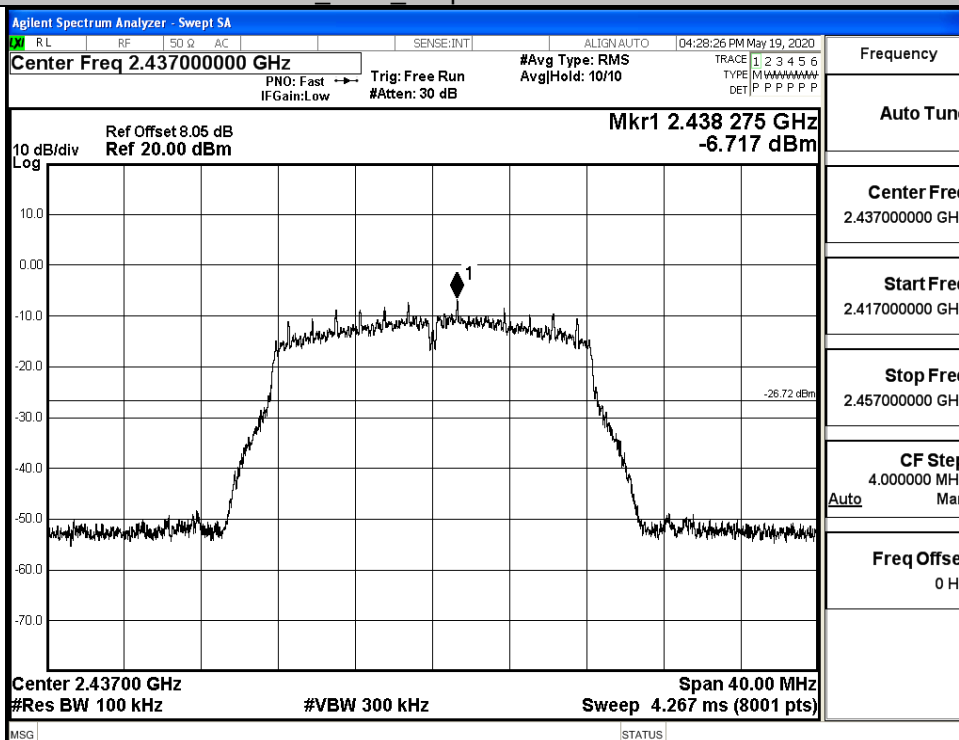


Puw/11G/LCH

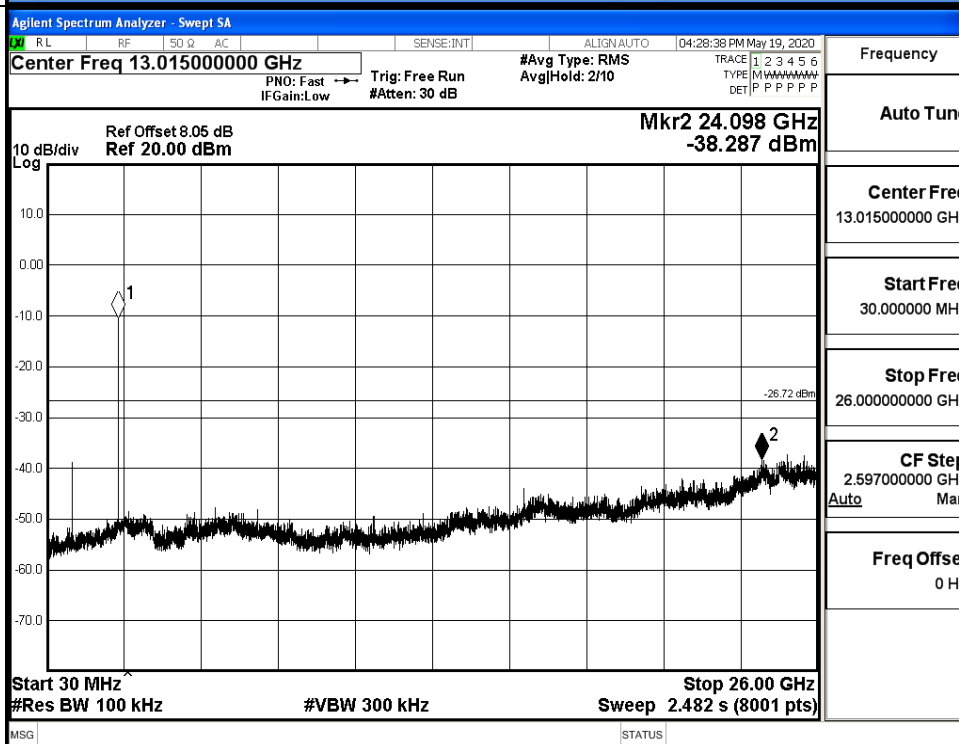


## 11G MCH Graphs

Pref/11G/MCH

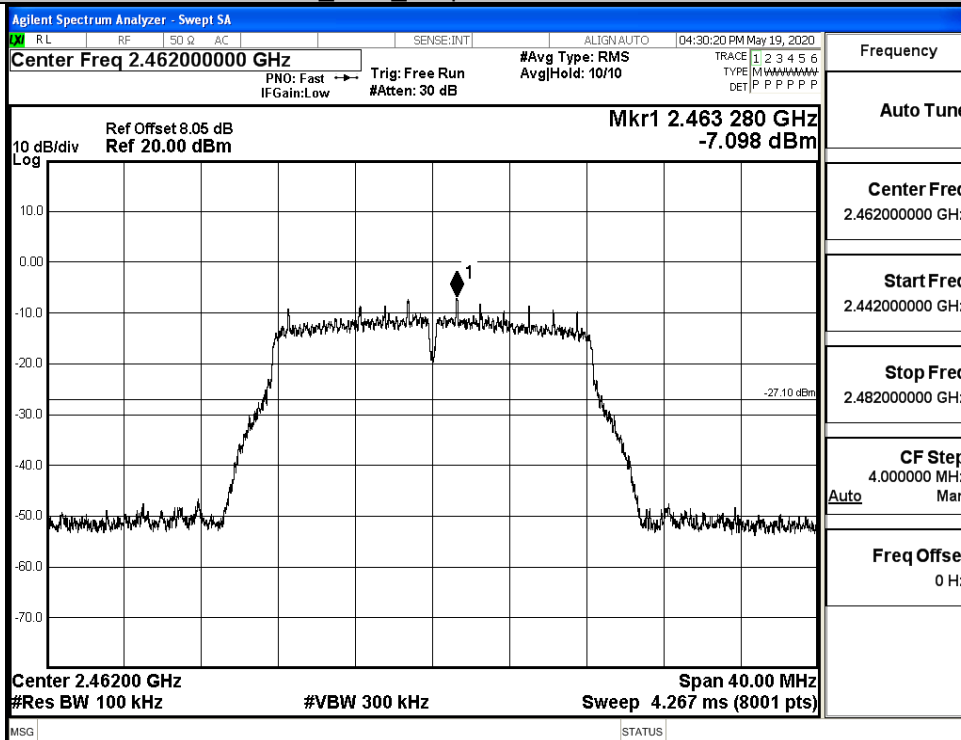


Puw/11G/MCH

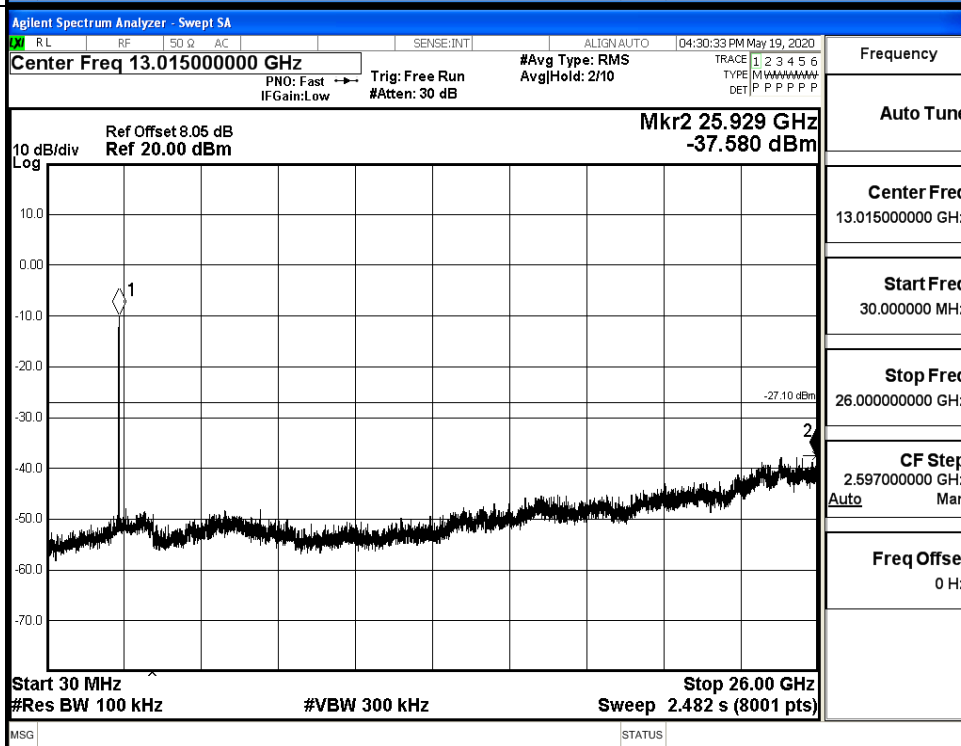


## 11G HCH Graphs

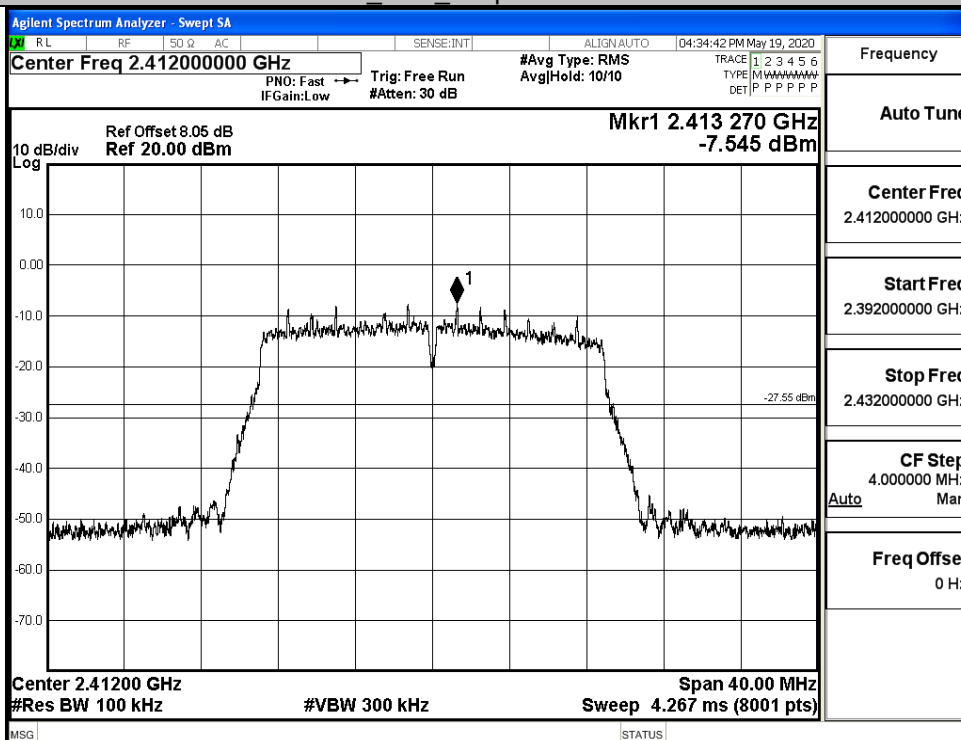
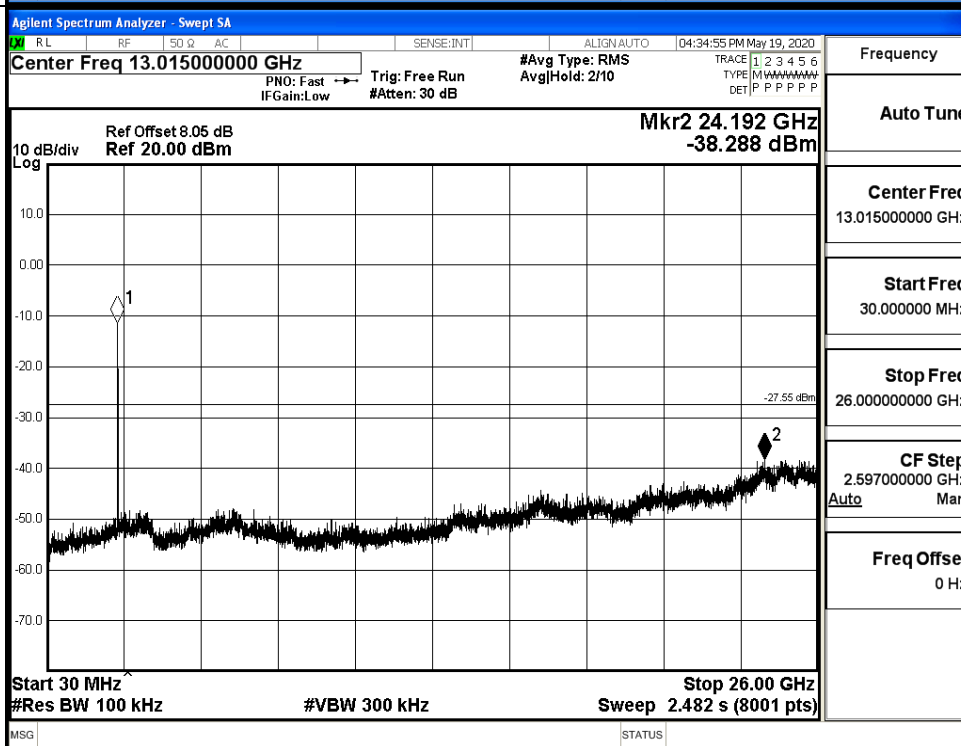
Pref/11G/HCH



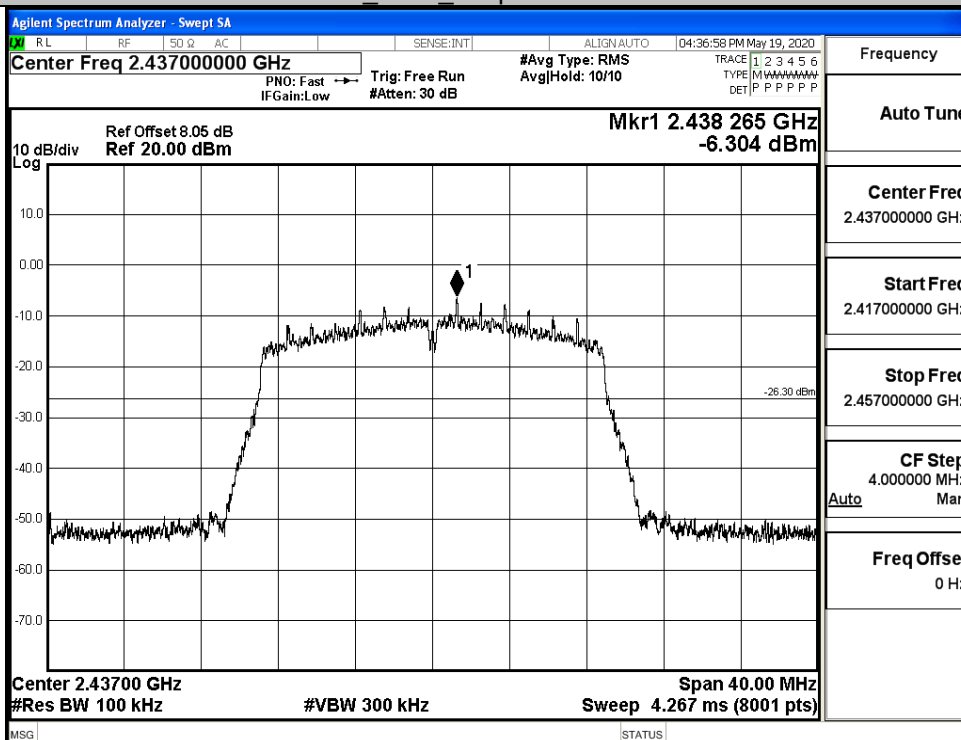
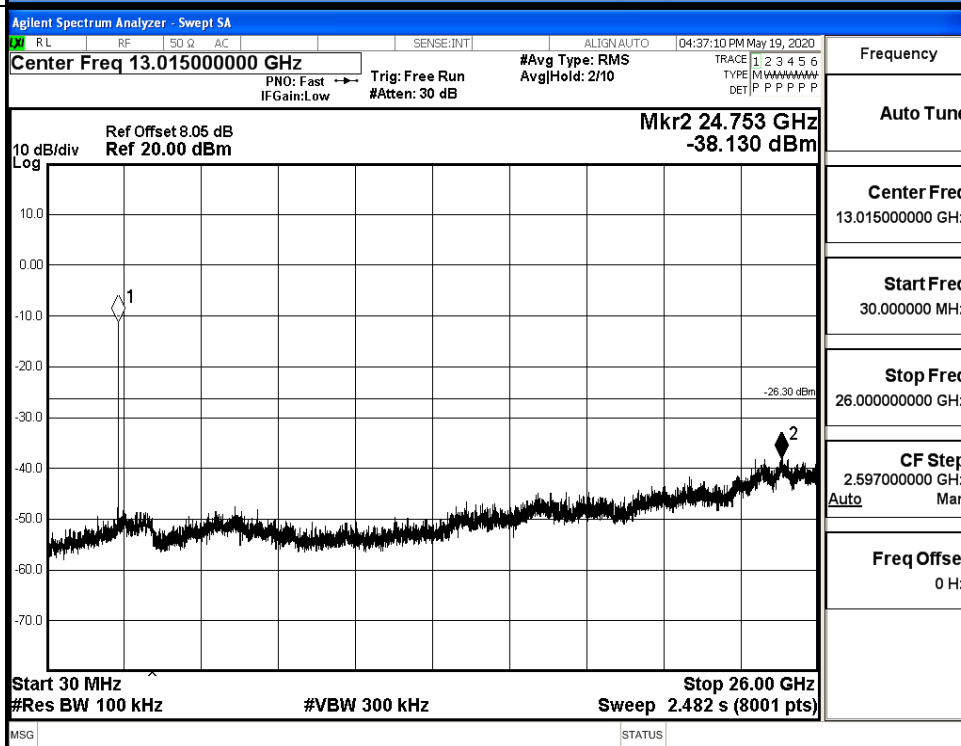
Puw/11G/HCH



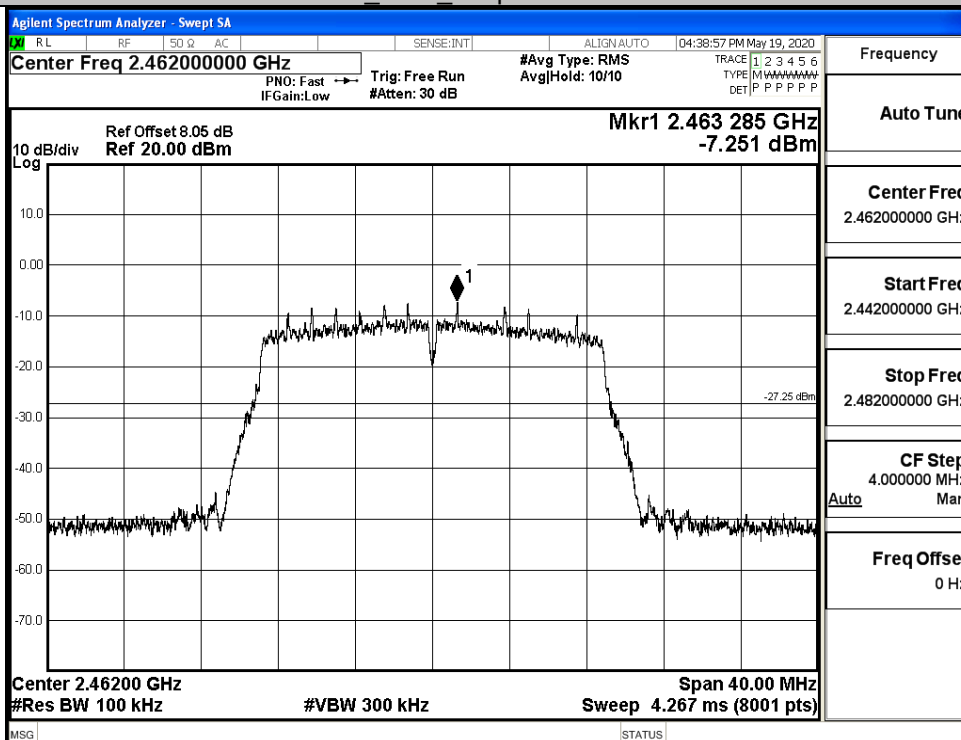
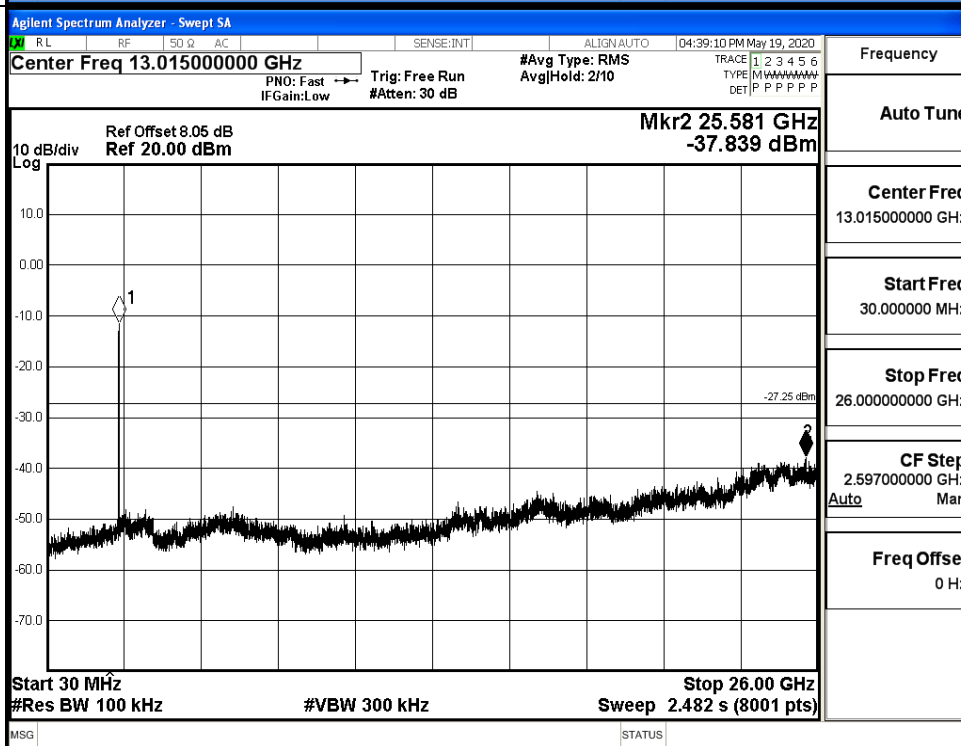
## 11N20SISO LCH Graphs

Pref/11N20SIS  
O/LCHPuw/11N20  
SISO/LCH

## 11N20SISO\_MCH\_Graphs

Pref/11N20  
SISO/MCHPuw/11N20  
SISO/MCH

## 11N20SISO HCH Graphs

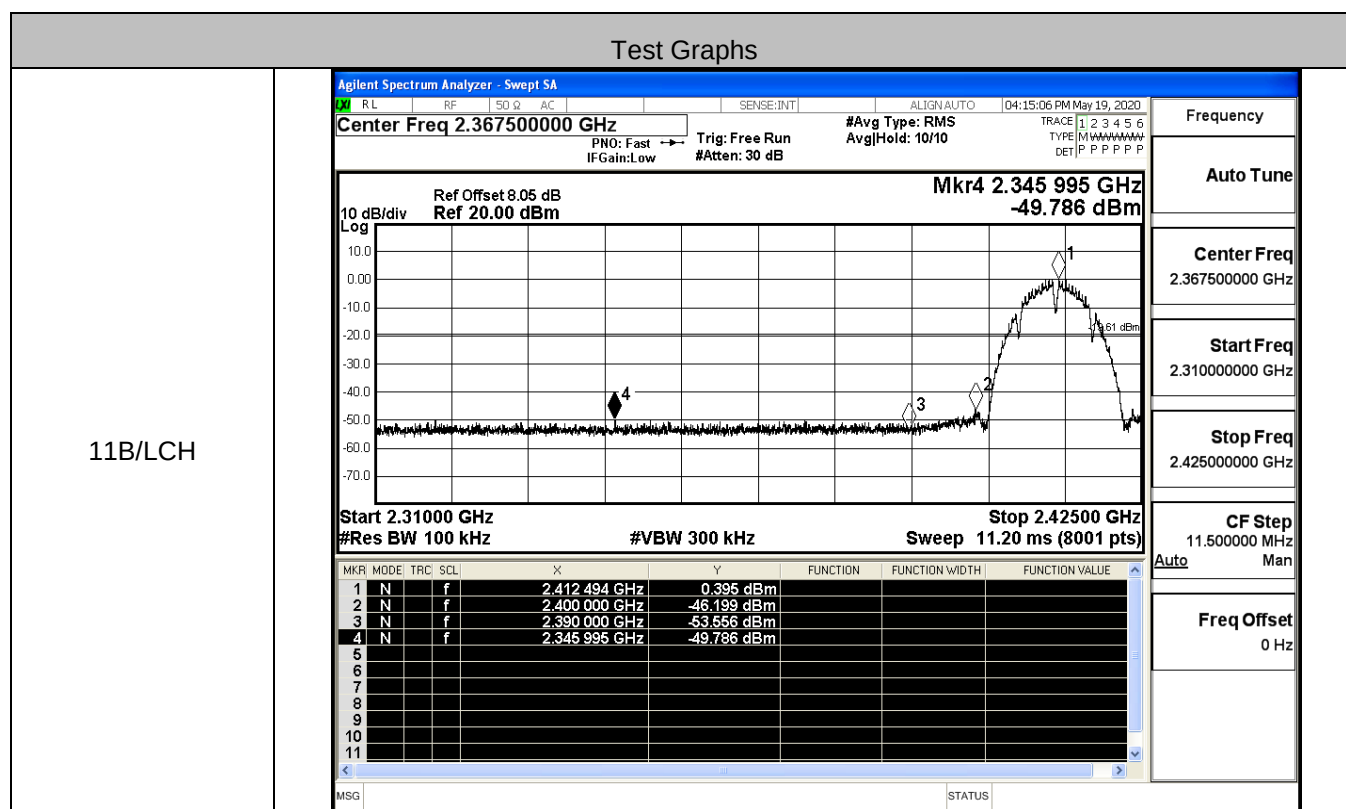
Pref/11N20  
SISO/HCHPuw/11N20  
SISO/HCH



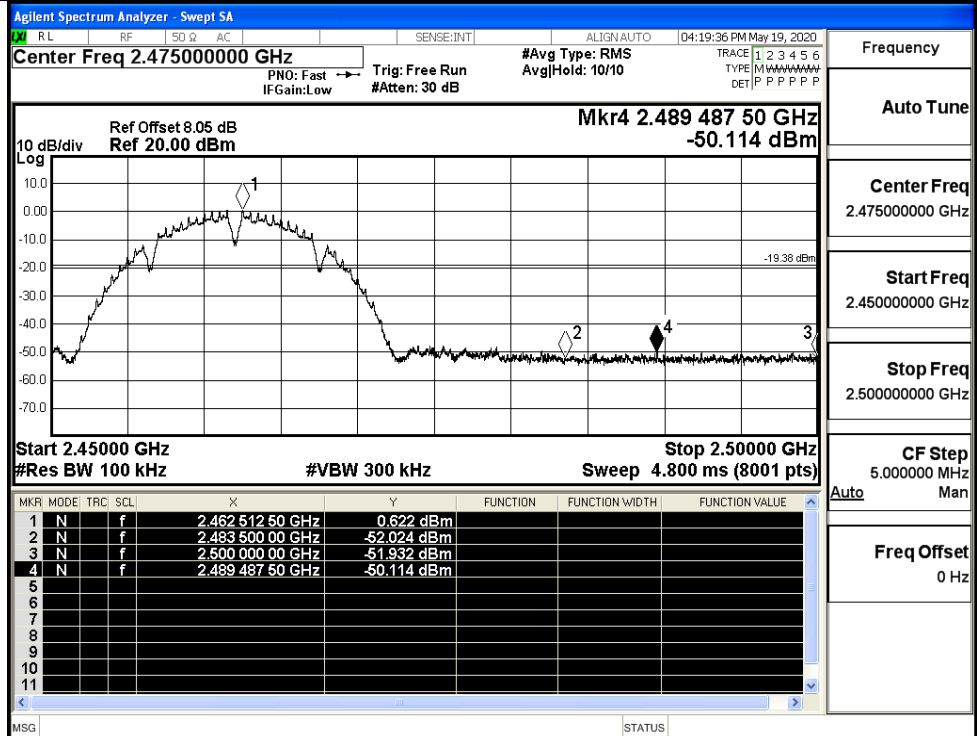
## A.6 Band-edge for RF Conducted Emissions

| Mode      | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B       | LCH     | 0.395              | -49.786                  | -19.61      | PASS    |
|           | HCH     | 0.622              | -50.114                  | -19.38      | PASS    |
| 11G       | LCH     | -7.842             | -49.241                  | -27.84      | PASS    |
|           | HCH     | -6.862             | -49.042                  | -26.86      | PASS    |
| 11N20SISO | LCH     | -7.782             | -49.631                  | -27.78      | PASS    |
|           | HCH     | -6.978             | -48.528                  | -26.98      | PASS    |

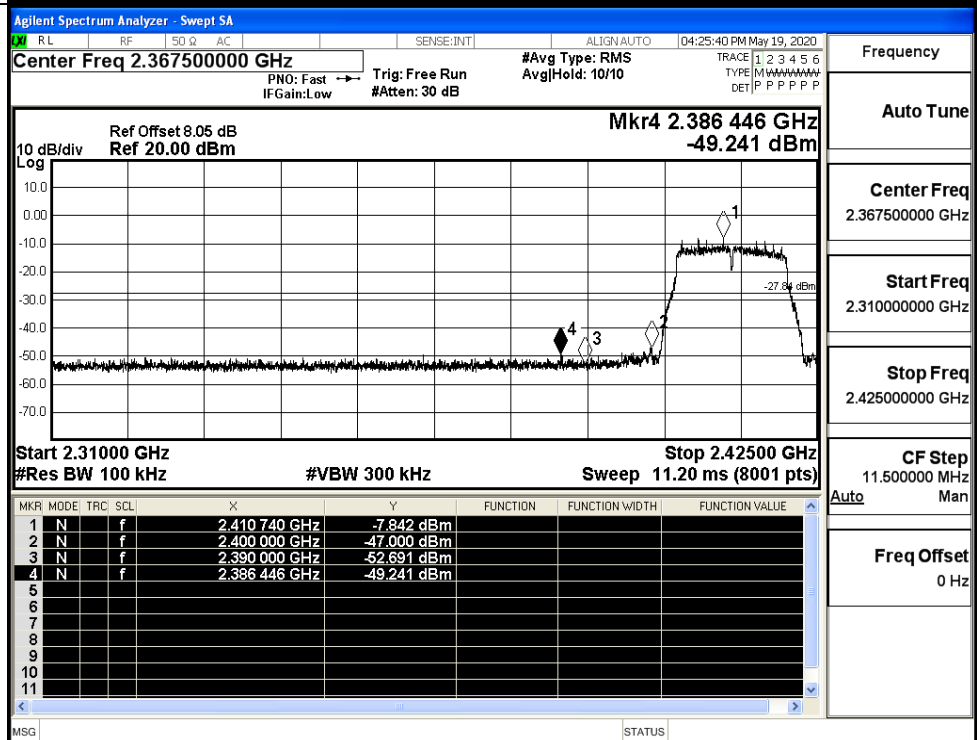
Test Graphs



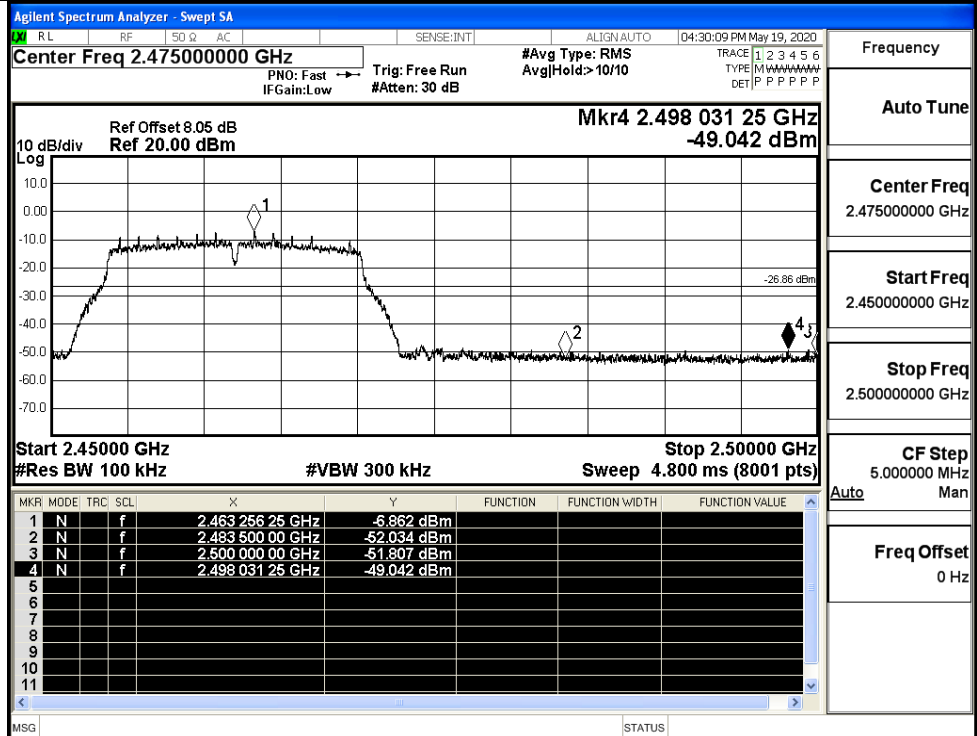
11B/HCH



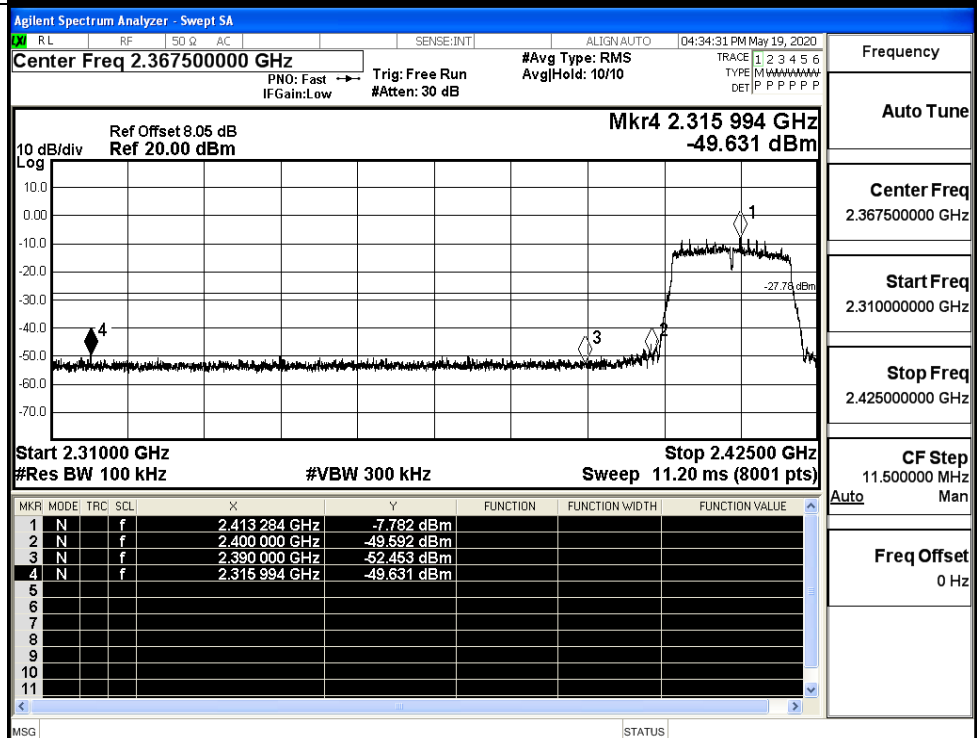
11G/LCH



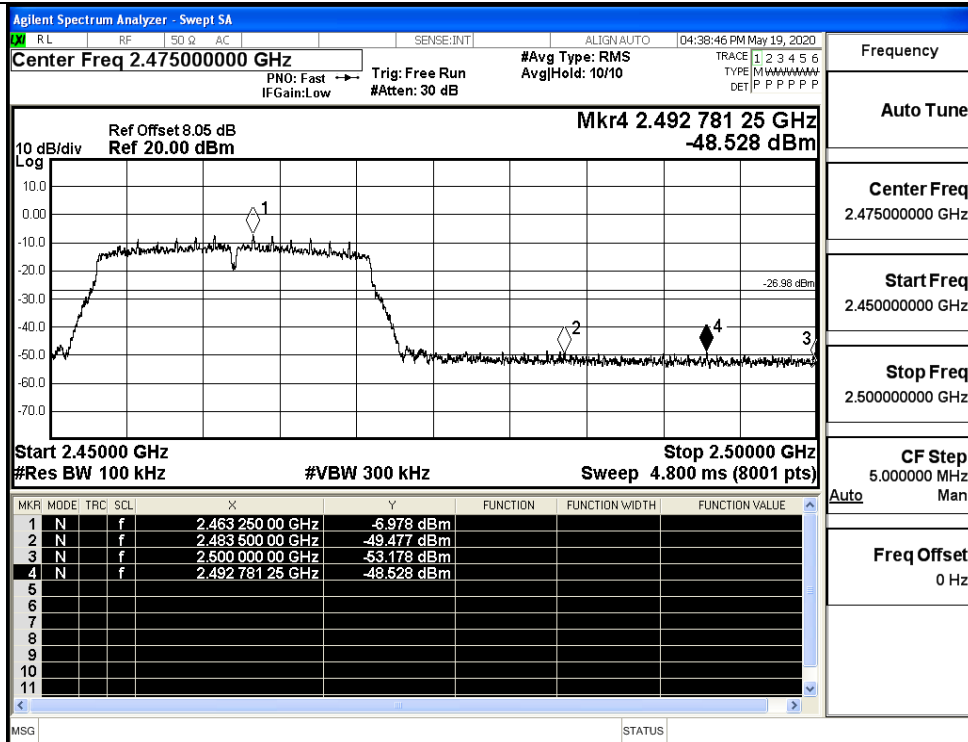
11G/HCH



11N20SISO/LCH



11N20SISO/HCH



Frequency

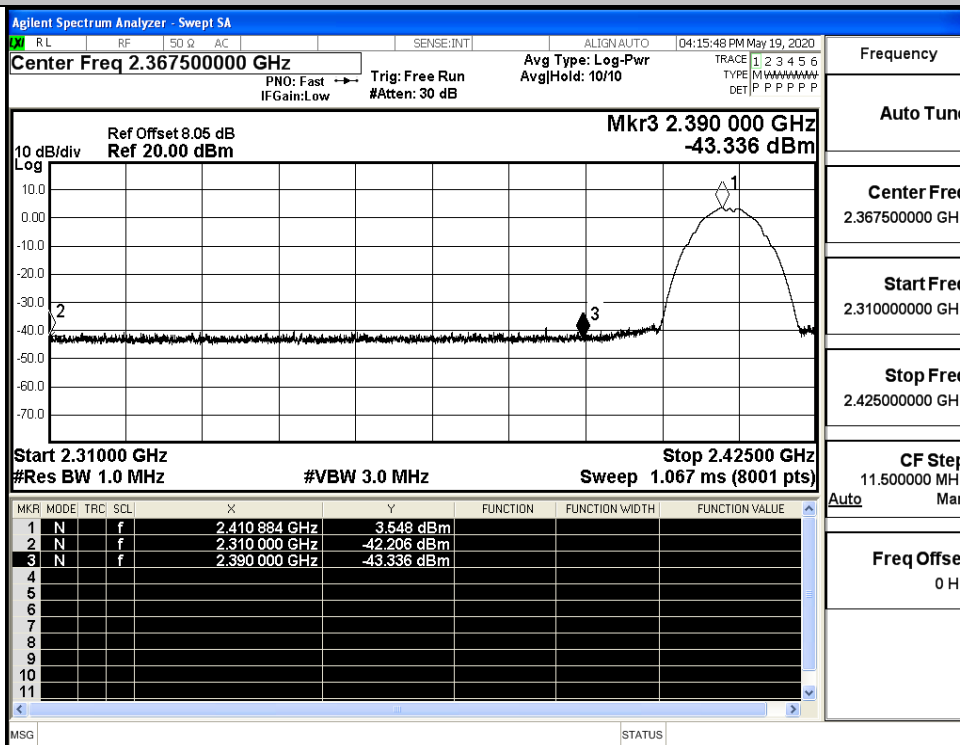
Auto Tune

Center Freq  
2.475000000 GHzStart Freq  
2.450000000 GHzStop Freq  
2.500000000 GHzCF Step  
5.000000 MHz  
Auto ManFreq Offset  
0 Hz

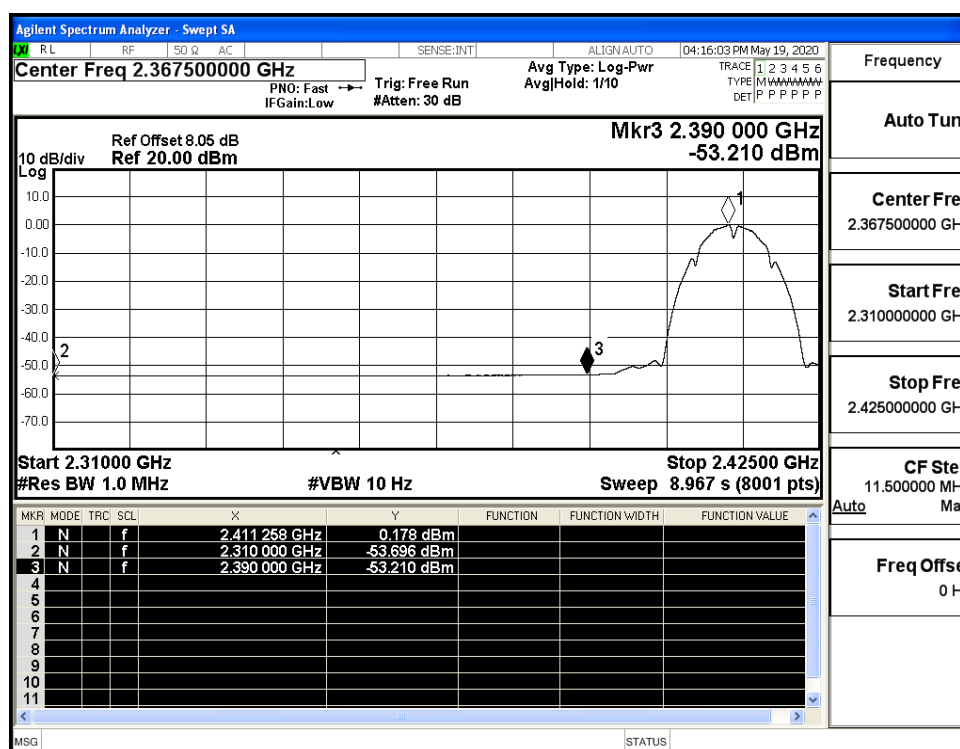
## A.7 Restrict-band band-edge measurements

| Test Mode     | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|--------------|------|--------|-------------|------|---------------|------------|----------|----------------|---------|
| 11B           | 2412         | Ant1 | 2310.0 | -42.21      | 2.0  | 0             | 55.02      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -53.70      | 2.0  | 0             | 43.53      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -43.34      | 2.0  | 0             | 53.89      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -53.21      | 2.0  | 0             | 44.02      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -41.88      | 2.0  | 0             | 55.35      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -52.59      | 2.0  | 0             | 44.64      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -41.69      | 2.0  | 0             | 55.54      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -52.69      | 2.0  | 0             | 44.54      | AV       | 54             | PASS    |
| 11G           | 2412         | Ant1 | 2310.0 | -43.54      | 2.0  | 0             | 53.69      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -53.68      | 2.0  | 0             | 43.55      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -43.38      | 2.0  | 0             | 53.85      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -53.20      | 2.0  | 0             | 44.03      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -41.95      | 2.0  | 0             | 55.28      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -52.25      | 2.0  | 0             | 44.98      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -41.71      | 2.0  | 0             | 55.52      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -52.68      | 2.0  | 0             | 44.55      | AV       | 54             | PASS    |
| 11N20<br>SISO | 2412         | Ant1 | 2310.0 | -43.25      | 2.0  | 0             | 53.98      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -53.69      | 2.0  | 0             | 43.54      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -42.25      | 2.0  | 0             | 54.98      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -53.20      | 2.0  | 0             | 44.03      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -41.19      | 2.0  | 0             | 56.04      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -52.33      | 2.0  | 0             | 44.90      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -42.19      | 2.0  | 0             | 55.04      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -52.70      | 2.0  | 0             | 44.53      | AV       | 54             | PASS    |

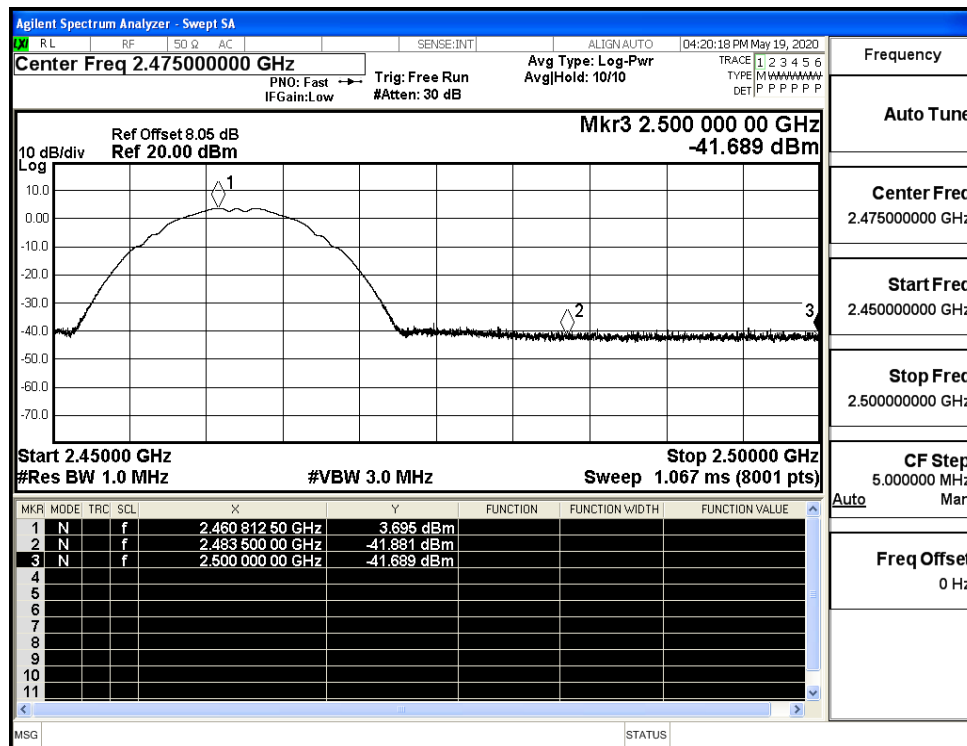
## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_PEAK



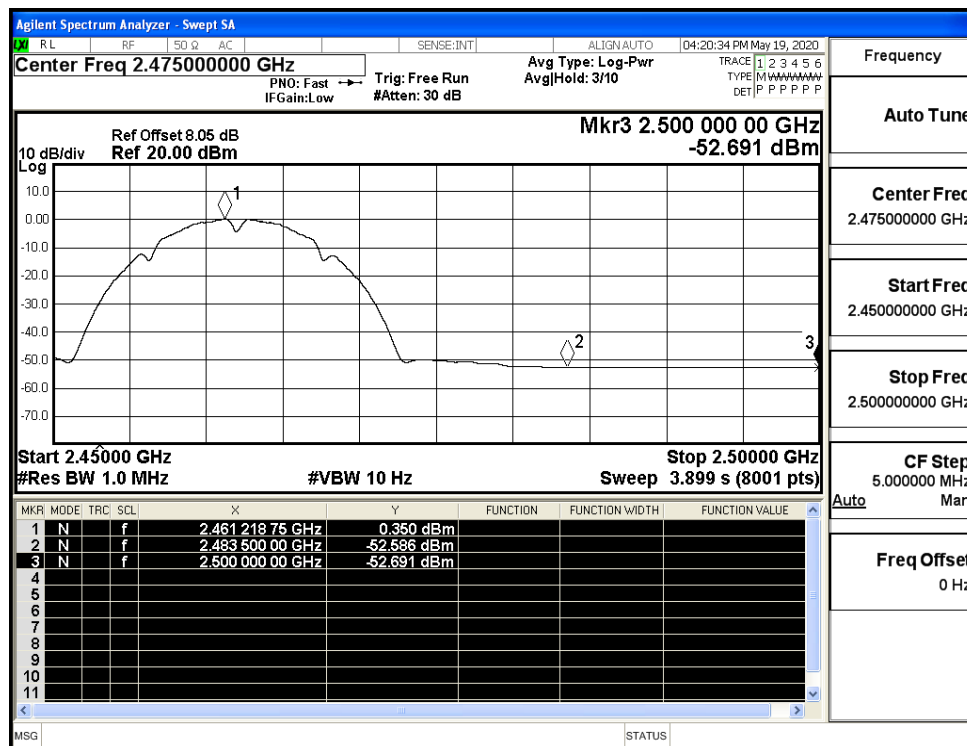
## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_AV



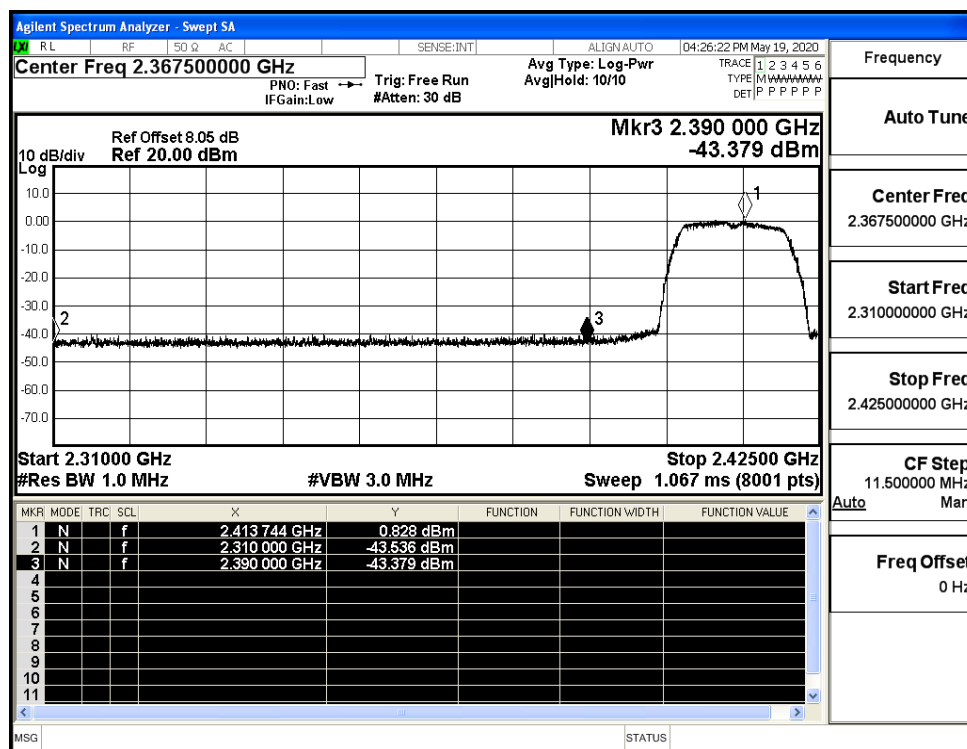
## Restrict-band band-edge measurements\_11B\_2462\_Ant1\_PEAK



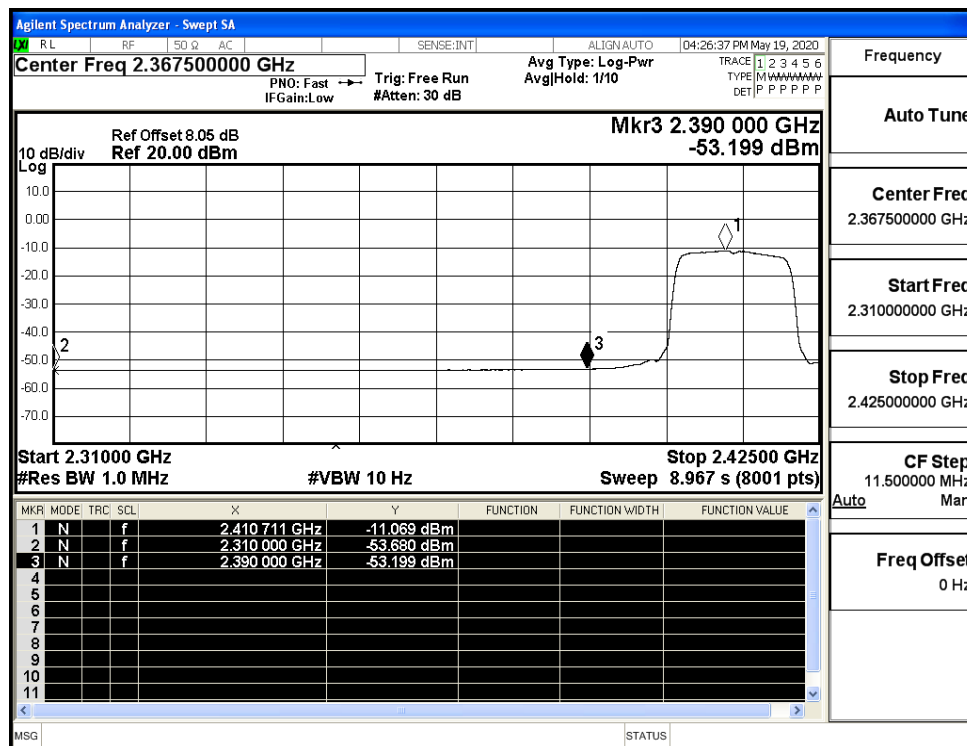
## Restrict-band band-edge measurements\_11B\_2462\_Ant1\_AV



## Restrict-band band-edge measurements\_11G\_2412\_Ant1\_PEAK

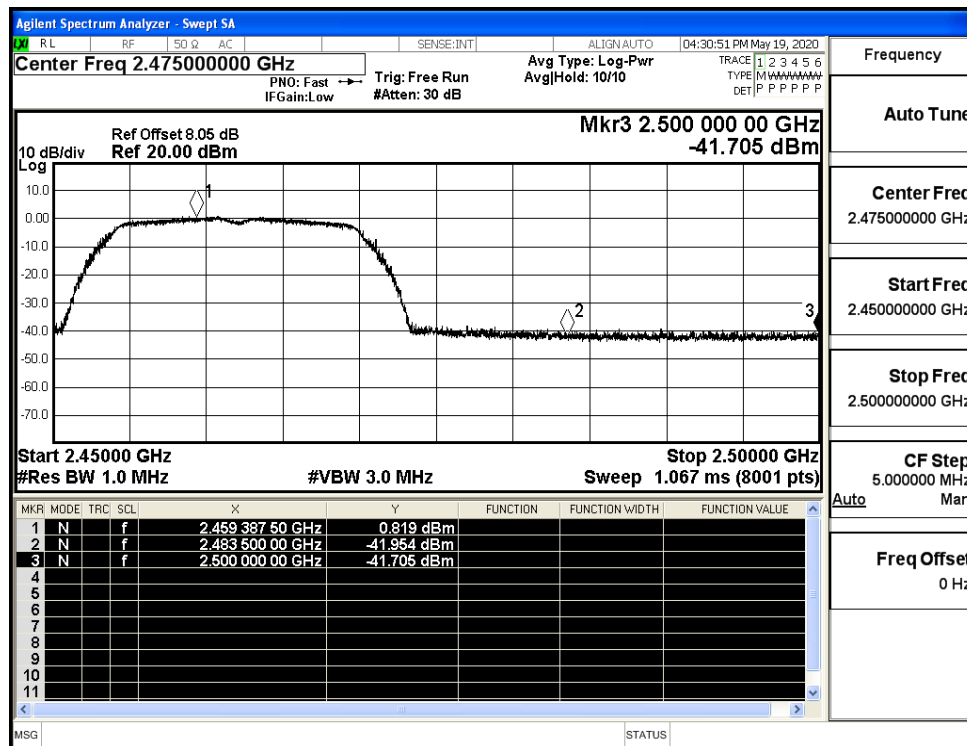


## Restrict-band band-edge measurements\_11G\_2412\_Ant1\_AV

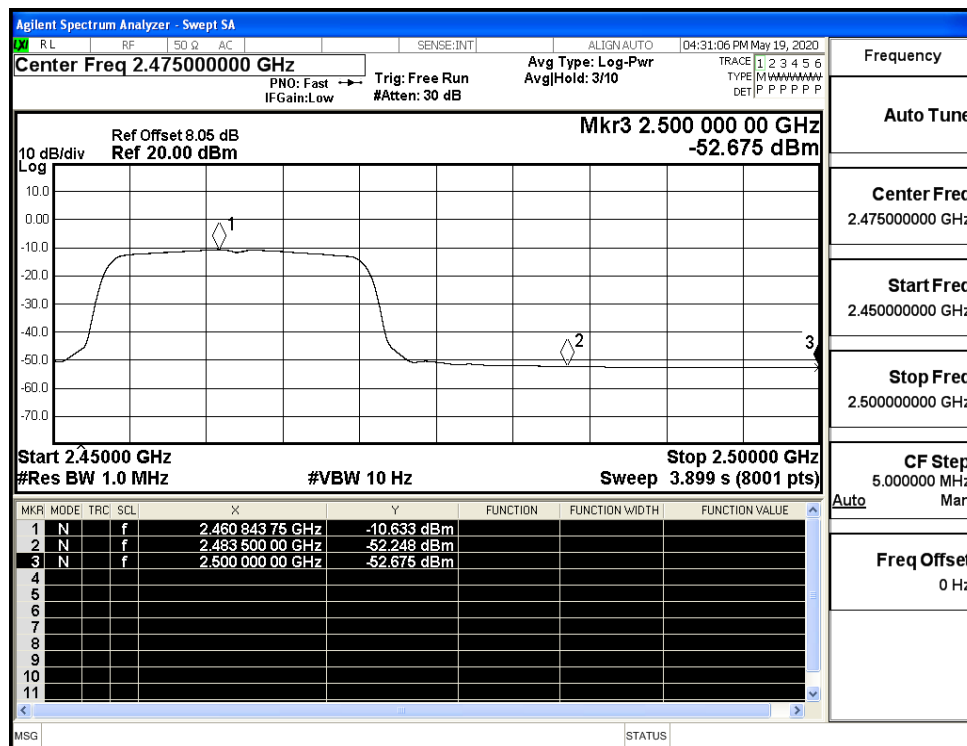




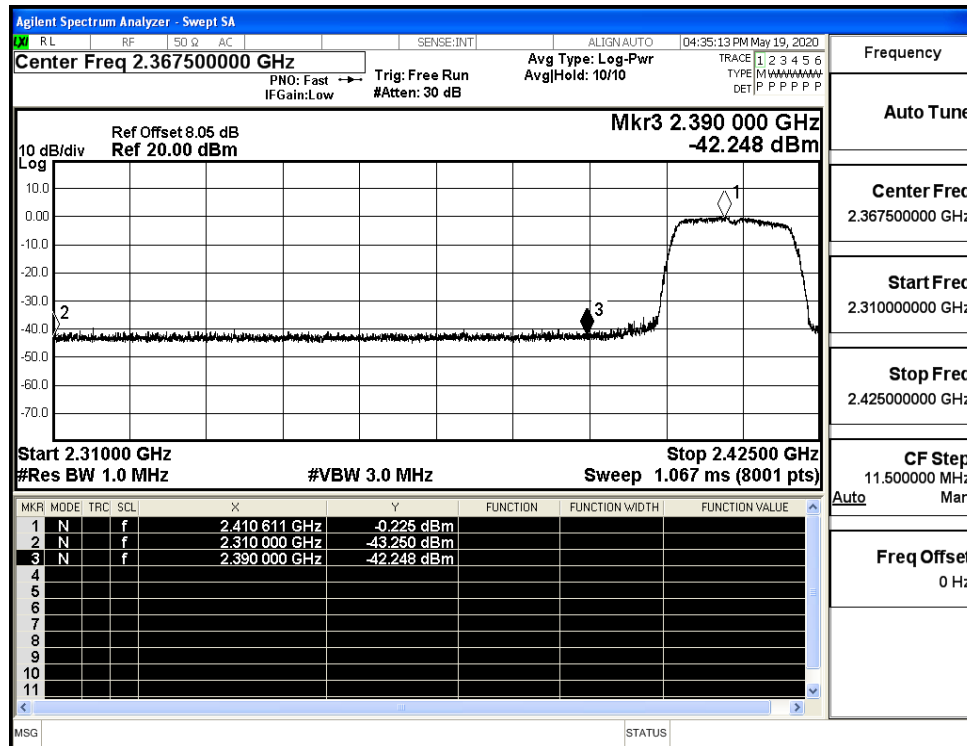
## Restrict-band band-edge measurements\_11G\_2462\_Ant1\_PEAK



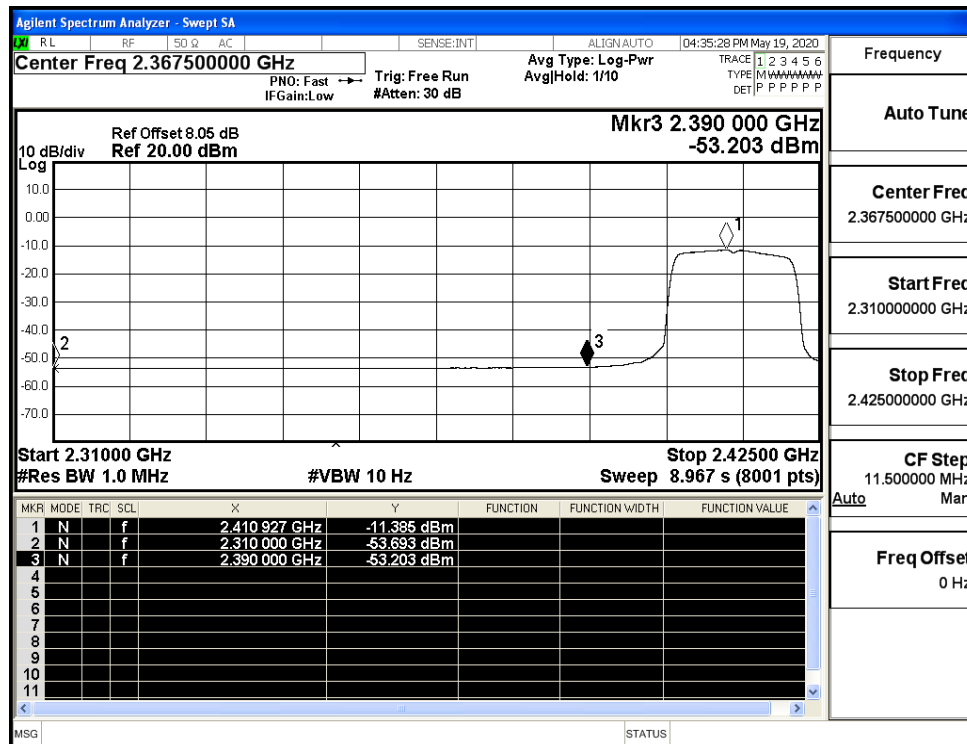
## Restrict-band band-edge measurements\_11G\_2462\_Ant1\_AV



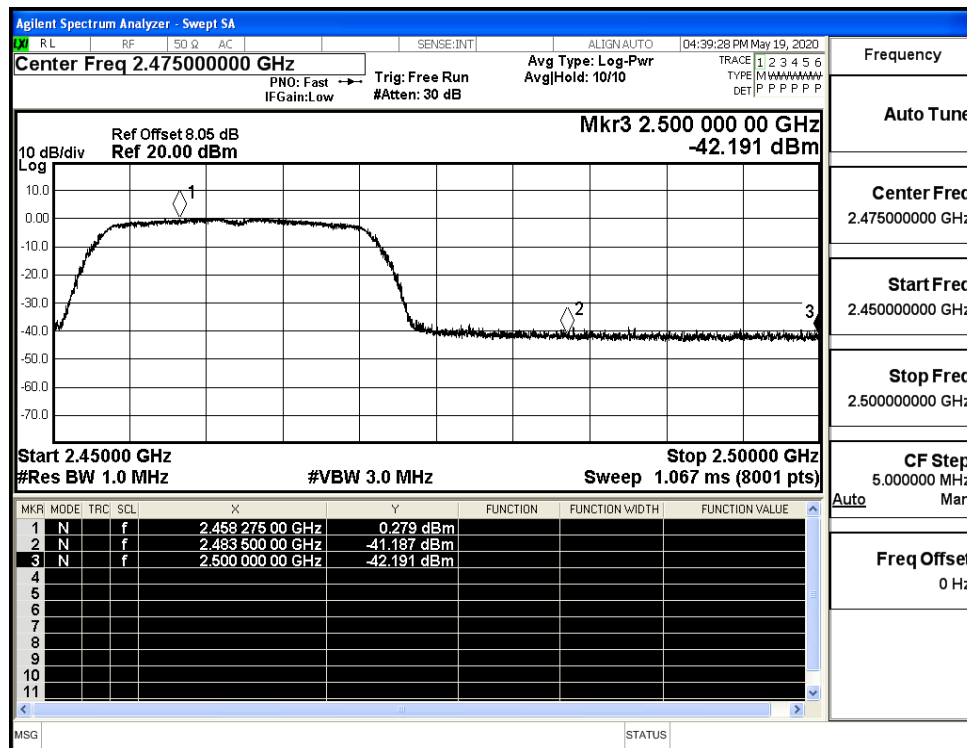
## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_PEAK



## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_AV



## Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_PEAK



## Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_AV

