

**Appendix C**  
**RF Test Data for 2.4G WIFI (Conducted Measurement)**  
**Product Name: Streaming box**  
**Trade Mark: N/A**  
**Test Model: HA2810**

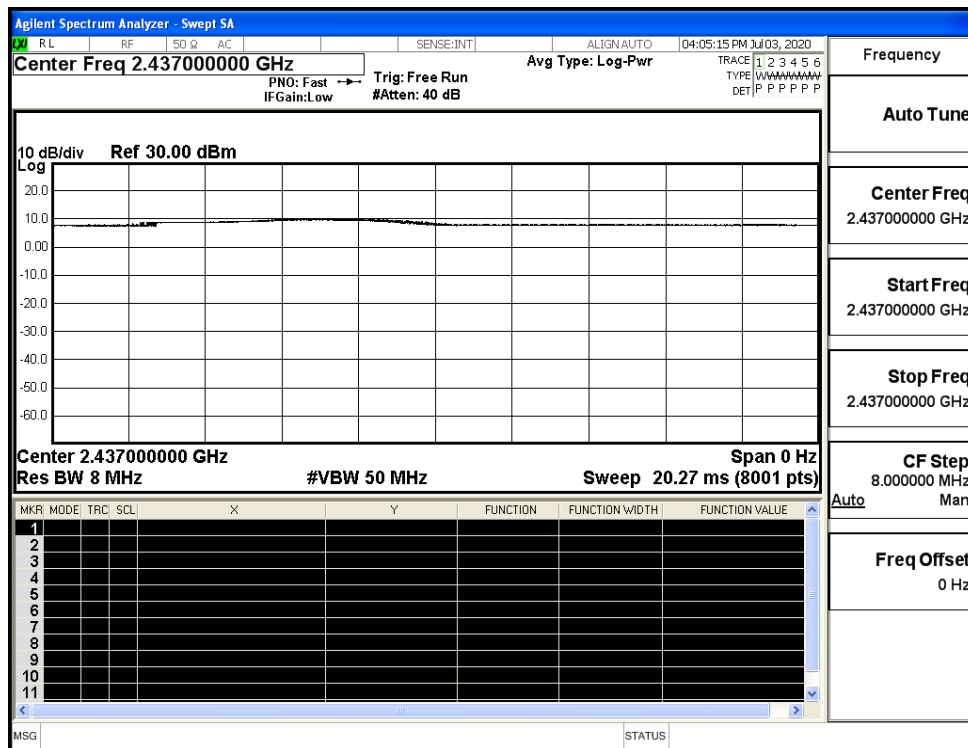
**Environmental Conditions**

|                    |           |
|--------------------|-----------|
| Temperature:       | 24.3° C   |
| Relative Humidity: | 54.3%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Li    |
| Supervised by:     | Li Huan   |

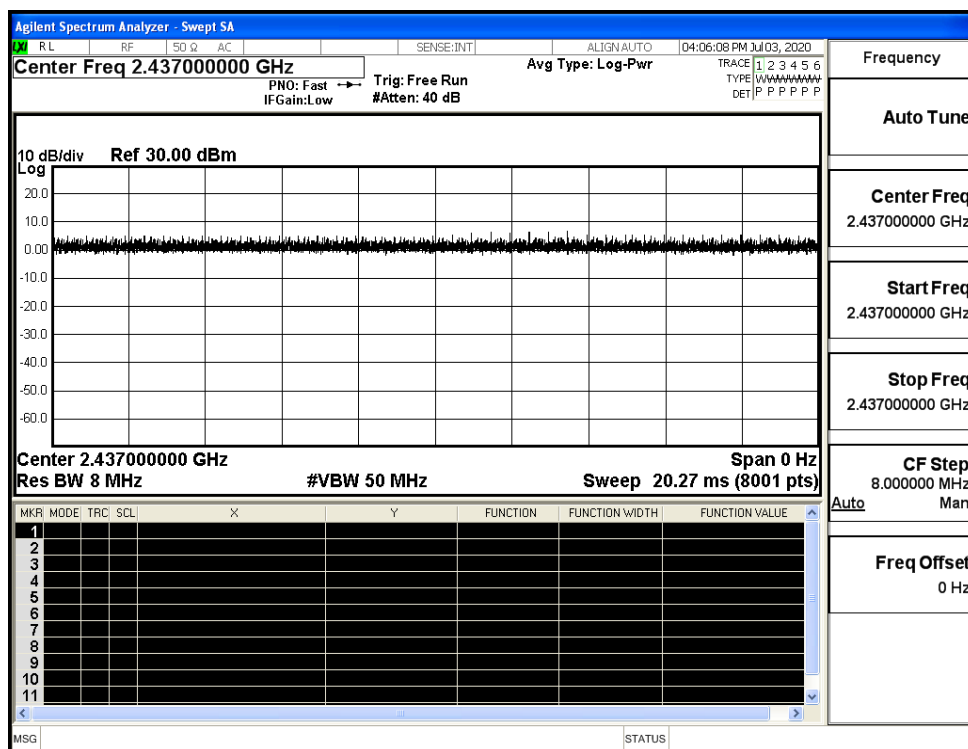
**C.1 Duty Cycle**

| Test Mode | Test Channel | Ant  | Duty Cycle[%] | Verdict |
|-----------|--------------|------|---------------|---------|
| 11B       | 2437         | Ant1 | 100           | PASS    |
| 11G       | 2437         | Ant1 | 100           | PASS    |
| 11N20SISO | 2437         | Ant1 | 100           | PASS    |
| 11N40SISO | 2437         | Ant1 | 100           | PASS    |

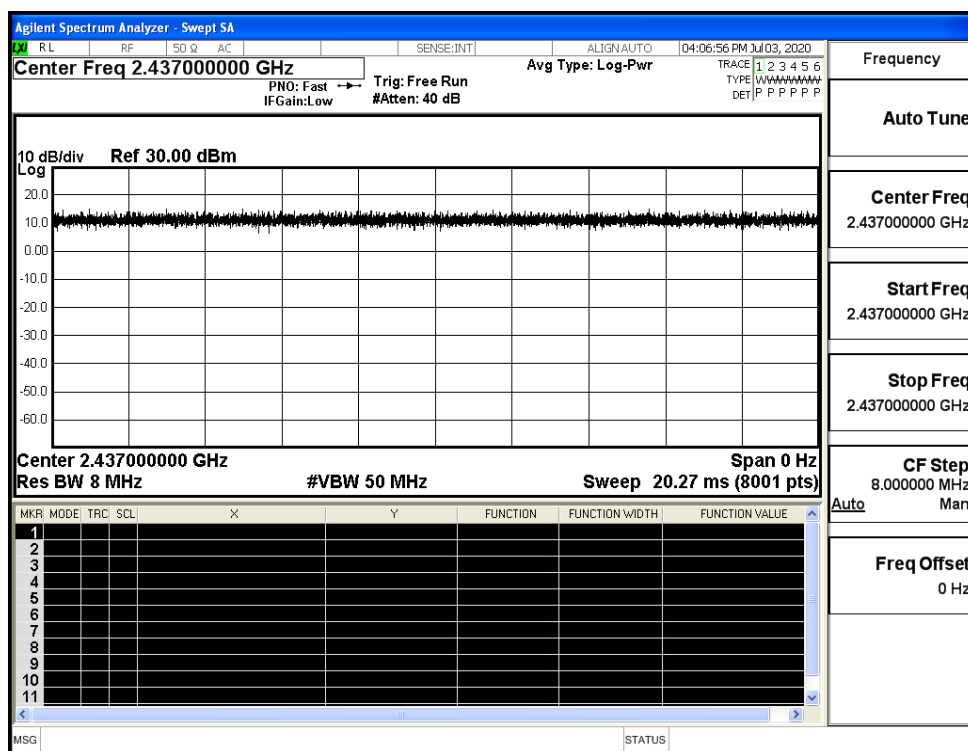
## Duty Cycle\_11B\_2437\_Ant1



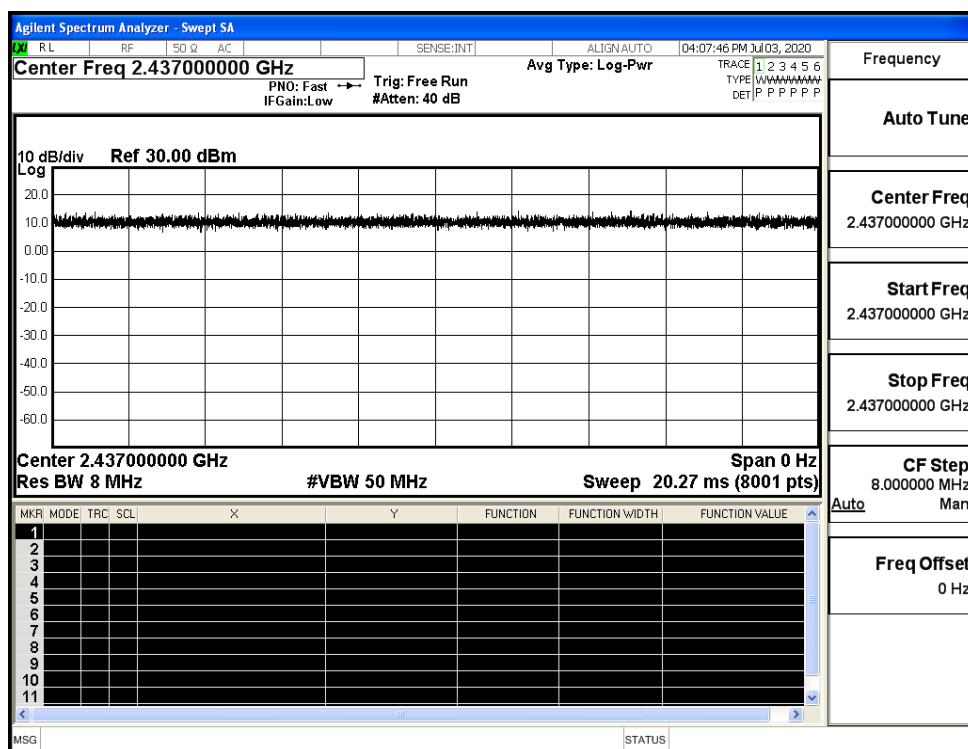
## Duty Cycle\_11G\_2437\_Ant1



## Duty Cycle\_11N20SISO\_2437\_Ant1



## Duty Cycle\_11N40SISO\_2437\_Ant1



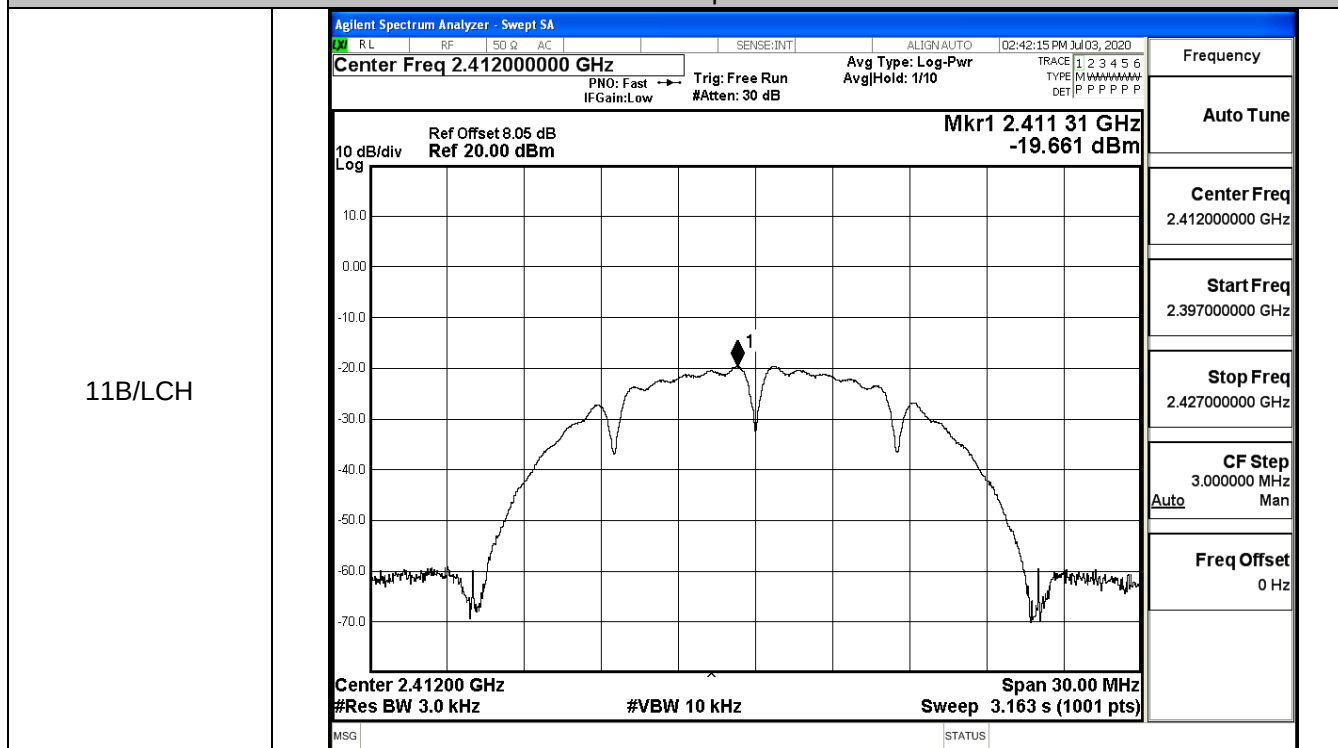
**C.2 Maximum Conducted Output Power**

| Mode      | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B       | LCH     | 13.24            | 30          | PASS    |
|           | MCH     | 13.74            | 30          | PASS    |
|           | HCH     | 13.4             | 30          | PASS    |
| 11G       | LCH     | 13.89            | 30          | PASS    |
|           | MCH     | 14.52            | 30          | PASS    |
|           | HCH     | 13.99            | 30          | PASS    |
| 11N20SISO | LCH     | 13.14            | 30          | PASS    |
|           | MCH     | 13.8             | 30          | PASS    |
|           | HCH     | 14.19            | 30          | PASS    |
| 11N40SISO | LCH     | 12               | 30          | PASS    |
|           | MCH     | 12.95            | 30          | PASS    |
|           | HCH     | 13.54            | 30          | PASS    |

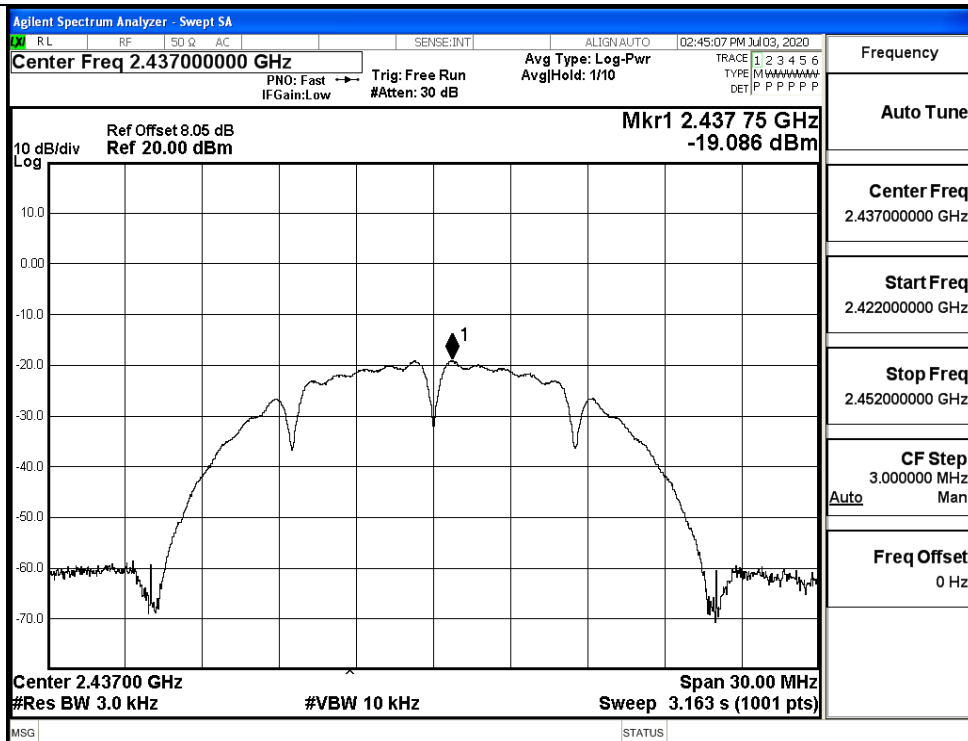
### C.3 Maximum Power Spectral Density

| Mode      | Channel | Meas.Level [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|-----------------------|------------------|---------|
| 11B       | LCH     | -19.661               | 8                | PASS    |
|           | MCH     | -19.086               | 8                | PASS    |
|           | HCH     | -19.454               | 8                | PASS    |
| 11G       | LCH     | -20.327               | 8                | PASS    |
|           | MCH     | -21.776               | 8                | PASS    |
|           | HCH     | -22.347               | 8                | PASS    |
| 11N20SISO | LCH     | -23.198               | 8                | PASS    |
|           | MCH     | -21.874               | 8                | PASS    |
|           | HCH     | -21.174               | 8                | PASS    |
| 11N40SISO | LCH     | -26.102               | 8                | PASS    |
|           | MCH     | -25.518               | 8                | PASS    |
|           | HCH     | -25.383               | 8                | PASS    |

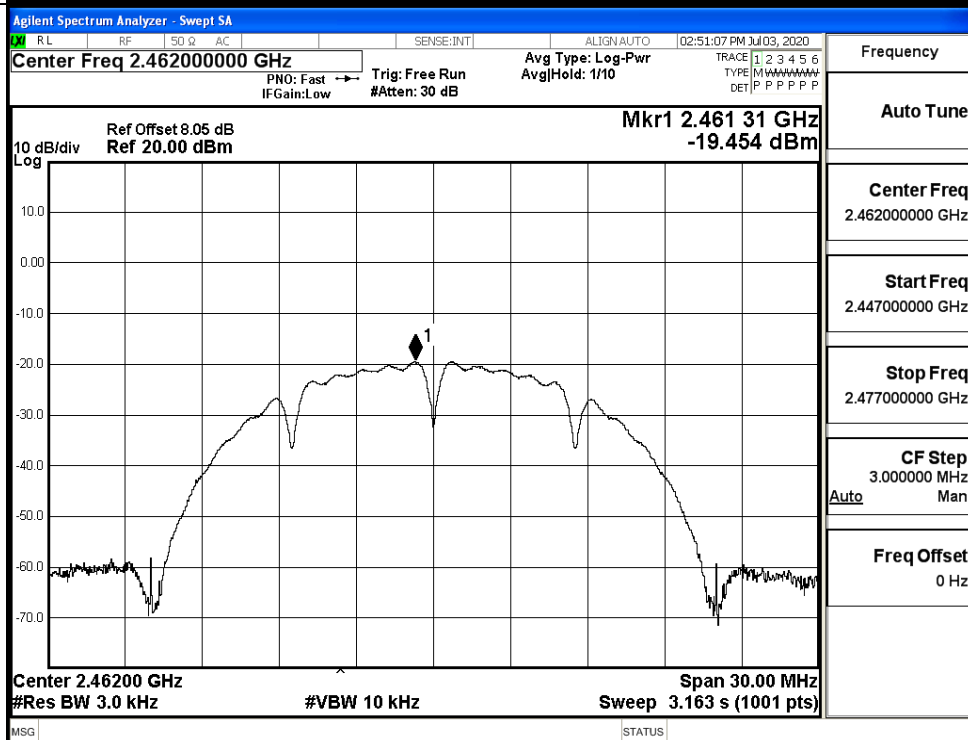
Test Graphs



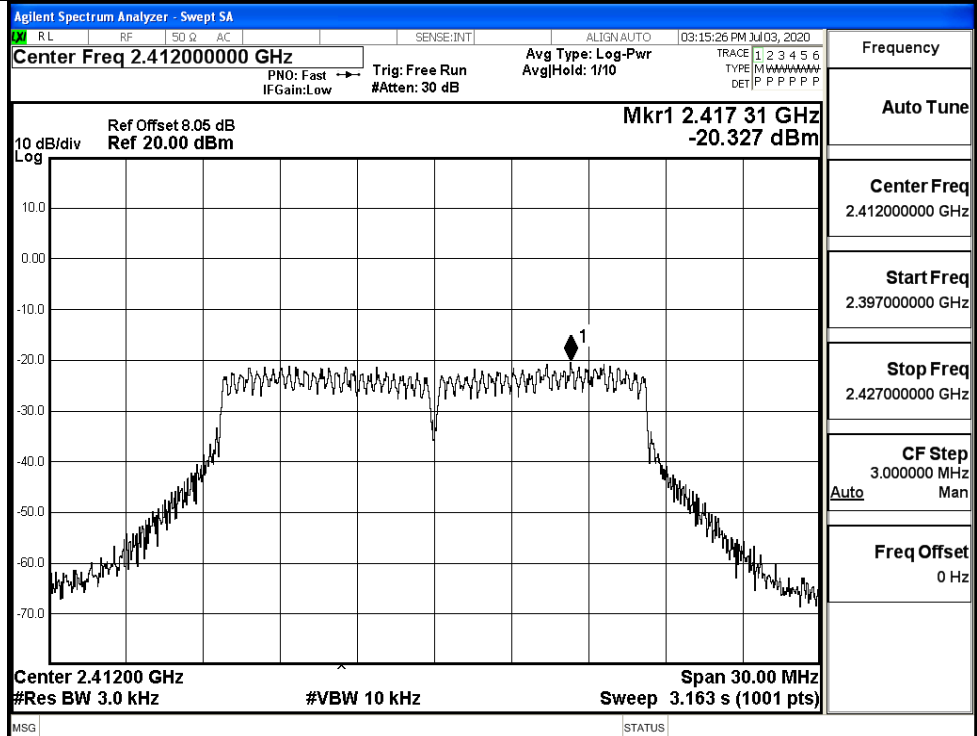
11B/MCH



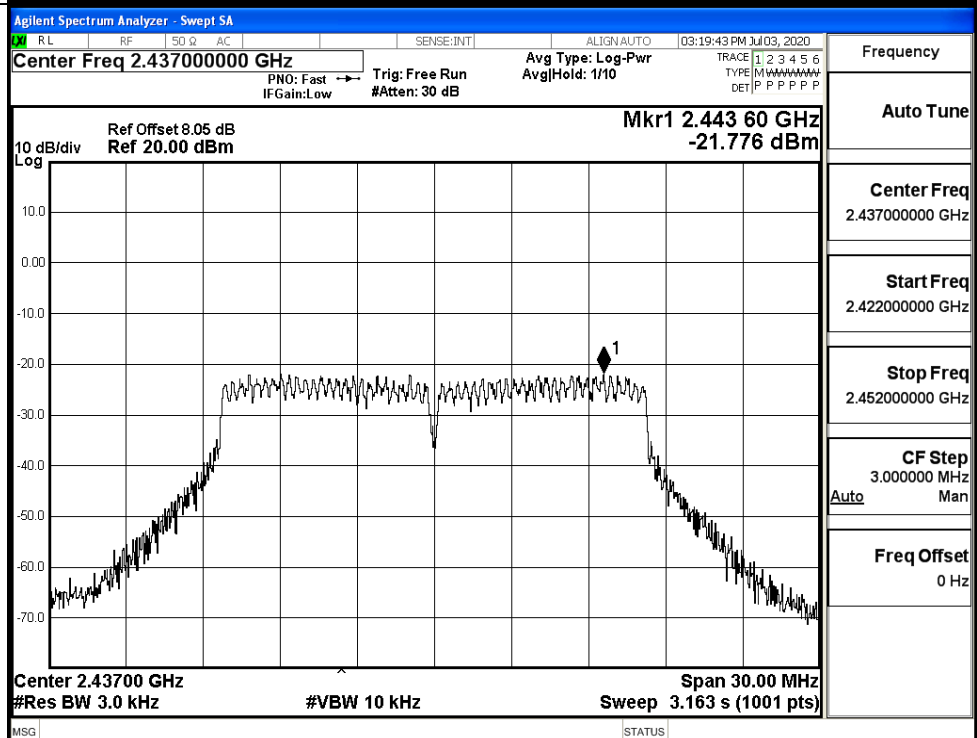
11B/HCH



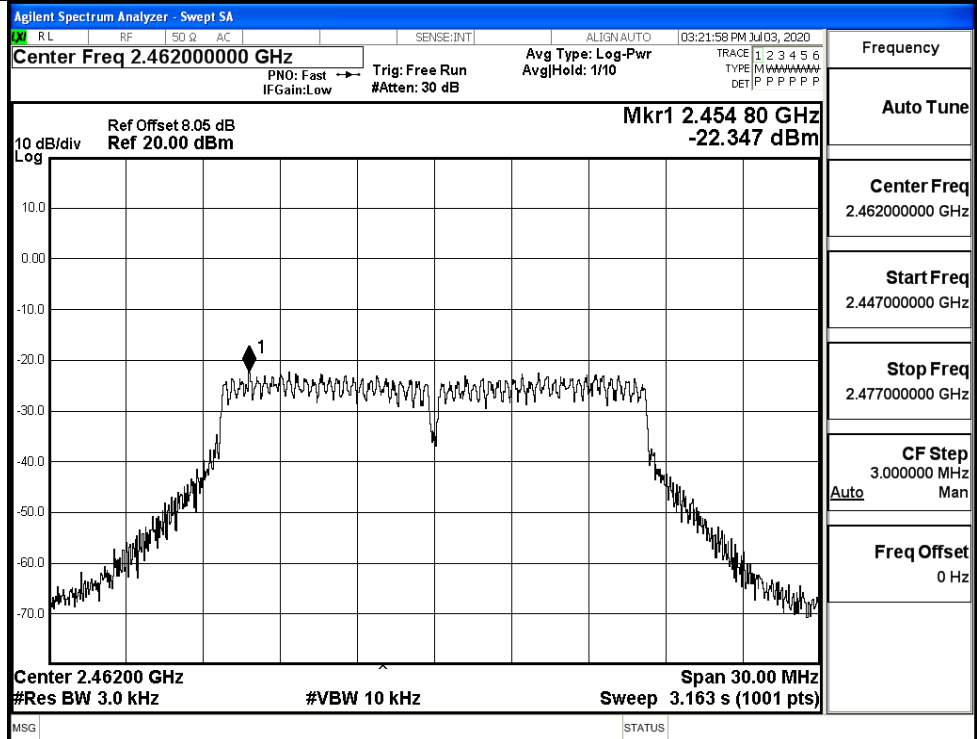
11G/LCH



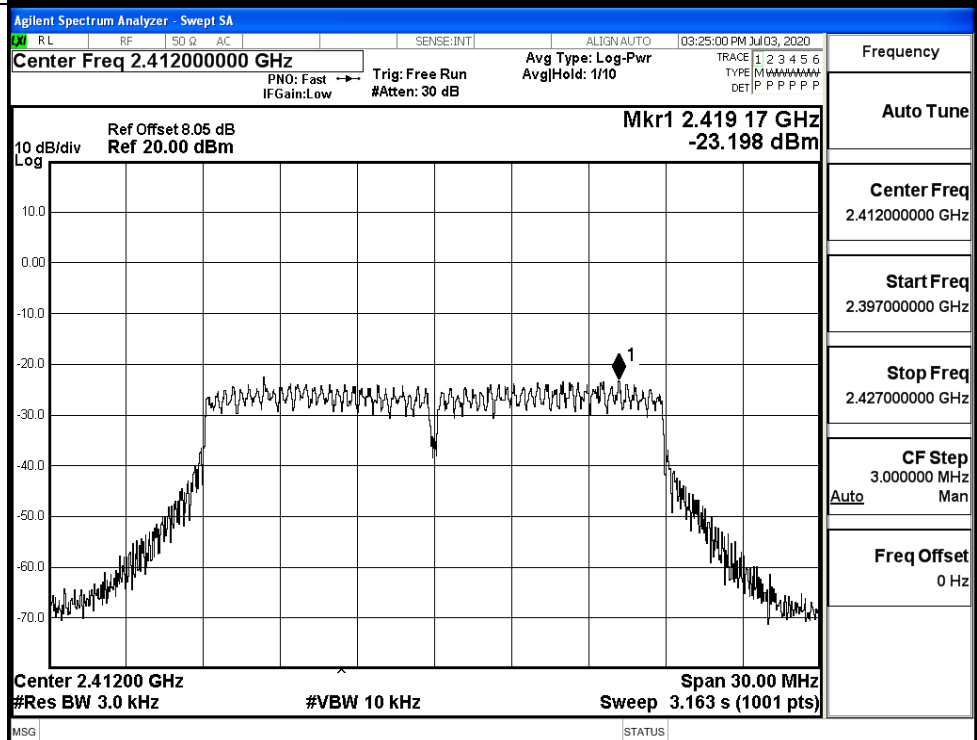
11G/MCH



11G/HCH

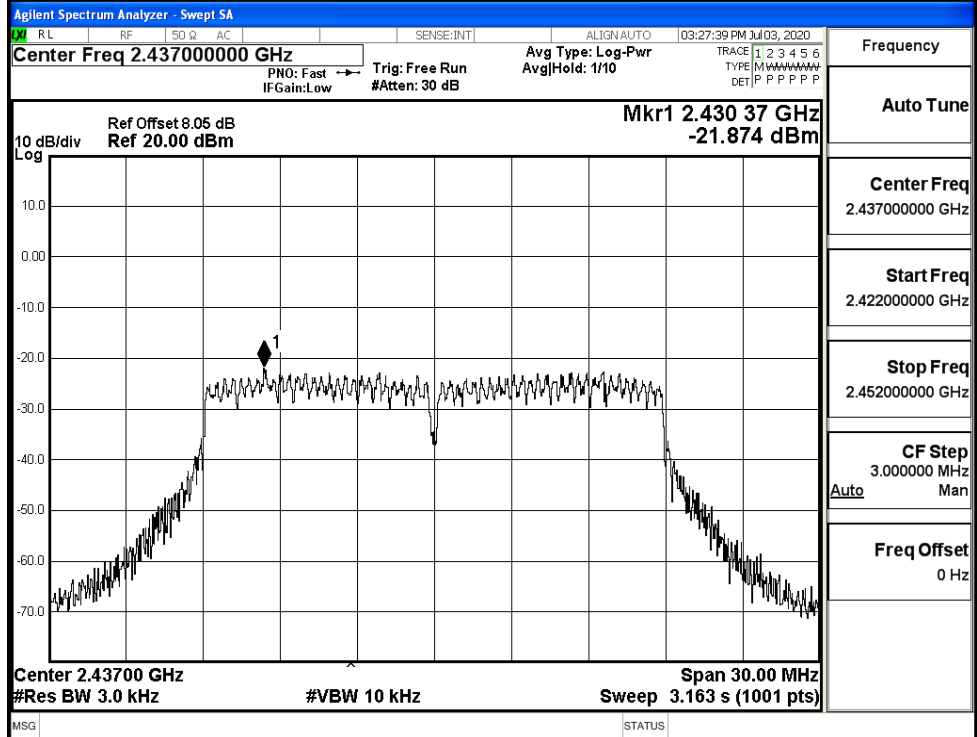


11N20SISO/LCH

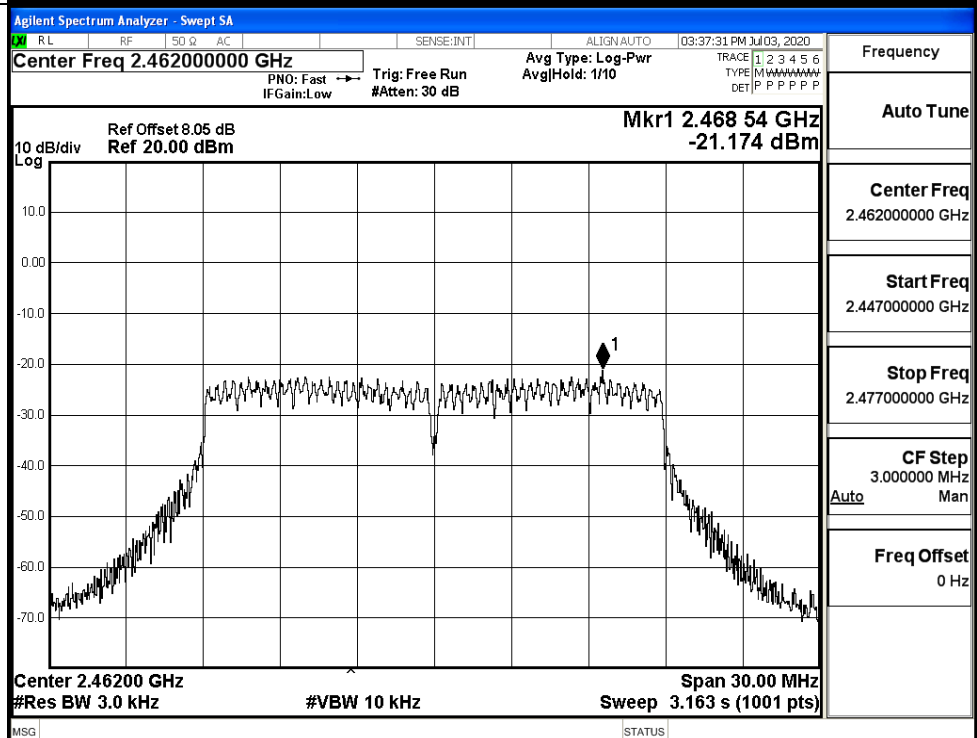




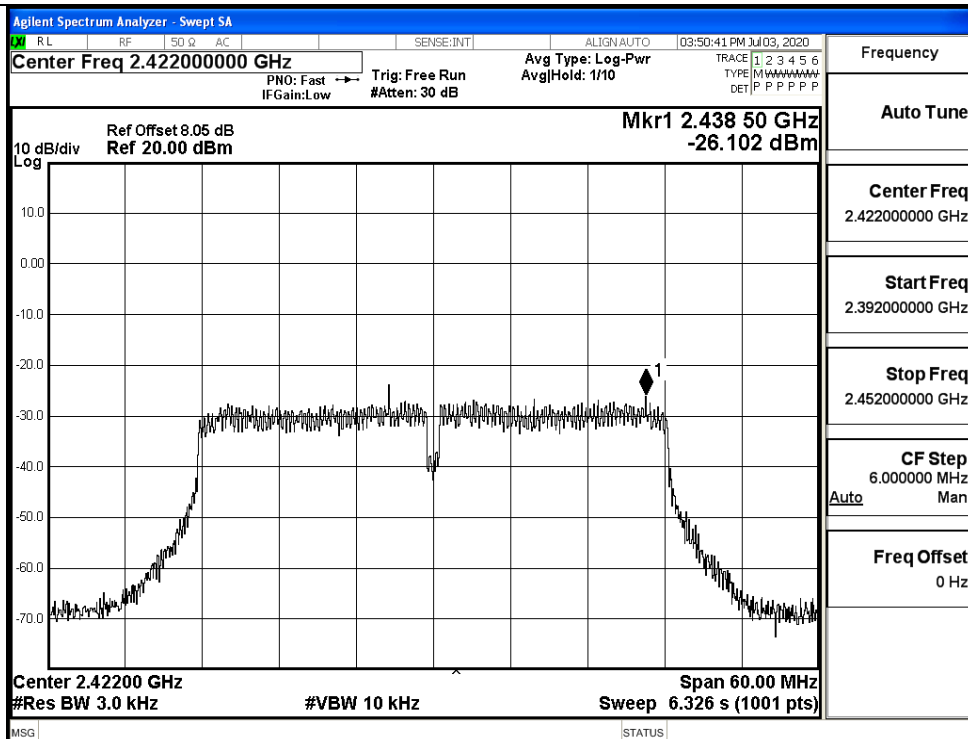
11N20SISO/MCH



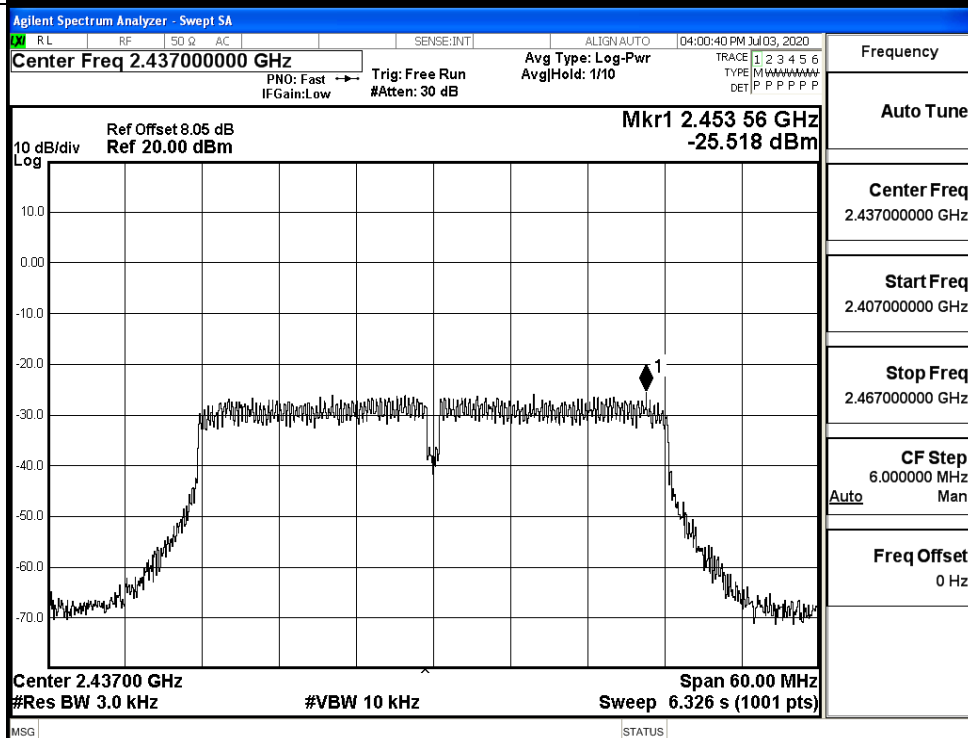
11N20SISO/HCH



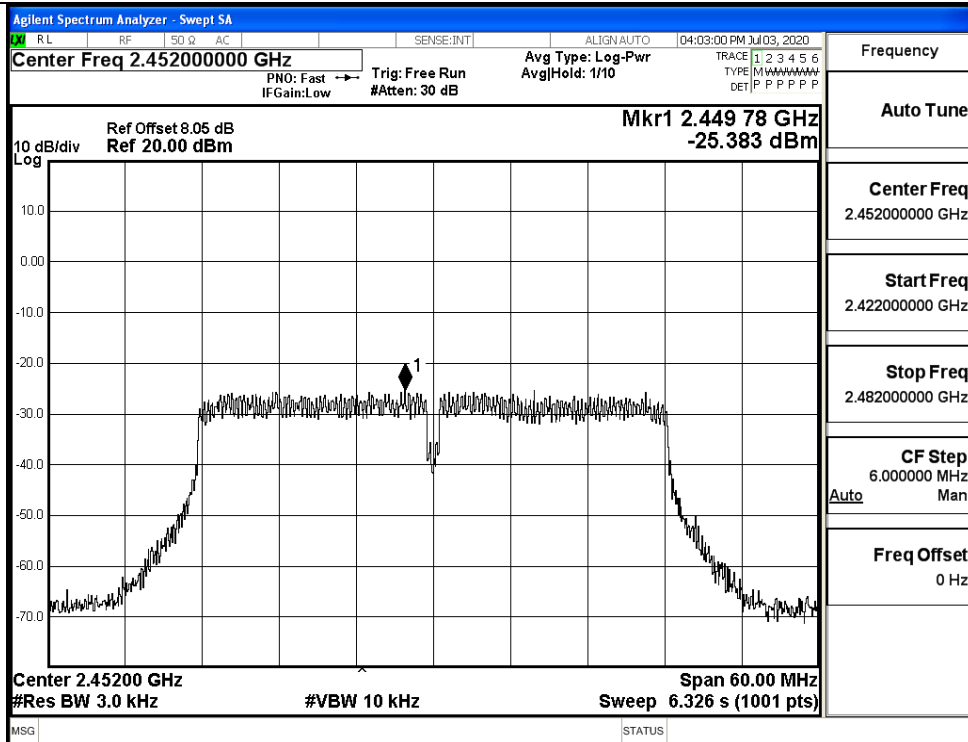
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

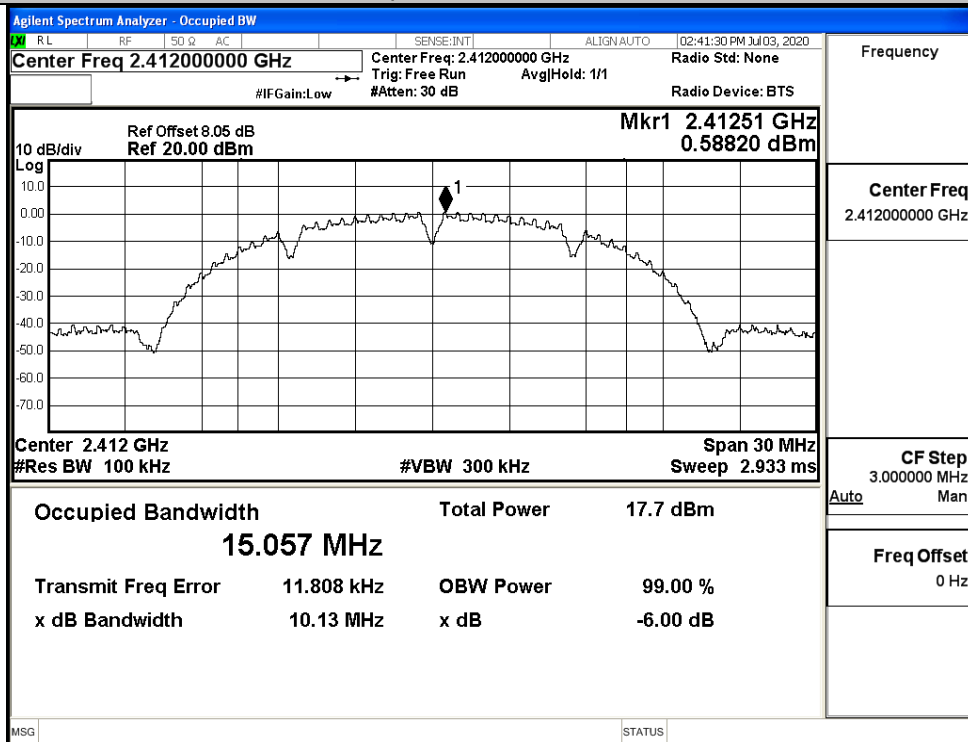


## C.4 6dB Bandwidth

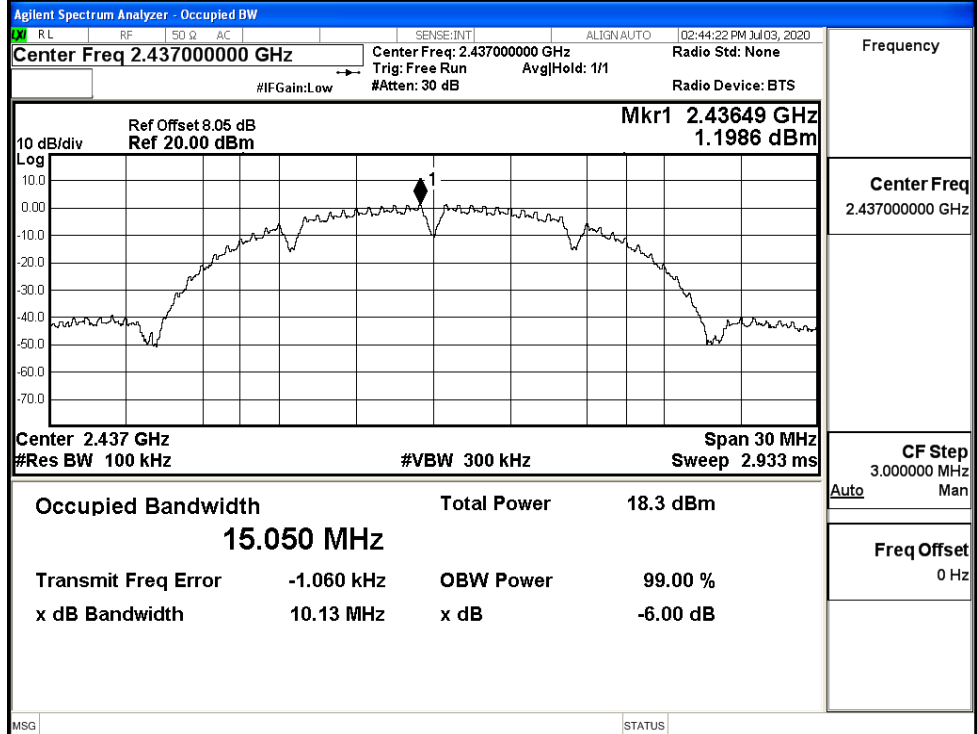
| Mode      | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B       | LCH     | 10.13               | $\geq 0.5$  | PASS    |
|           | MCH     | 10.13               | $\geq 0.5$  | PASS    |
|           | HCH     | 10.14               | $\geq 0.5$  | PASS    |
| 11G       | LCH     | 16.55               | $\geq 0.5$  | PASS    |
|           | MCH     | 16.56               | $\geq 0.5$  | PASS    |
|           | HCH     | 16.56               | $\geq 0.5$  | PASS    |
| 11N20SISO | LCH     | 17.70               | $\geq 0.5$  | PASS    |
|           | MCH     | 17.70               | $\geq 0.5$  | PASS    |
|           | HCH     | 17.69               | $\geq 0.5$  | PASS    |
| 11N40SISO | LCH     | 36.51               | $\geq 0.5$  | PASS    |
|           | MCH     | 36.47               | $\geq 0.5$  | PASS    |
|           | HCH     | 36.52               | $\geq 0.5$  | PASS    |

## Test Graphs

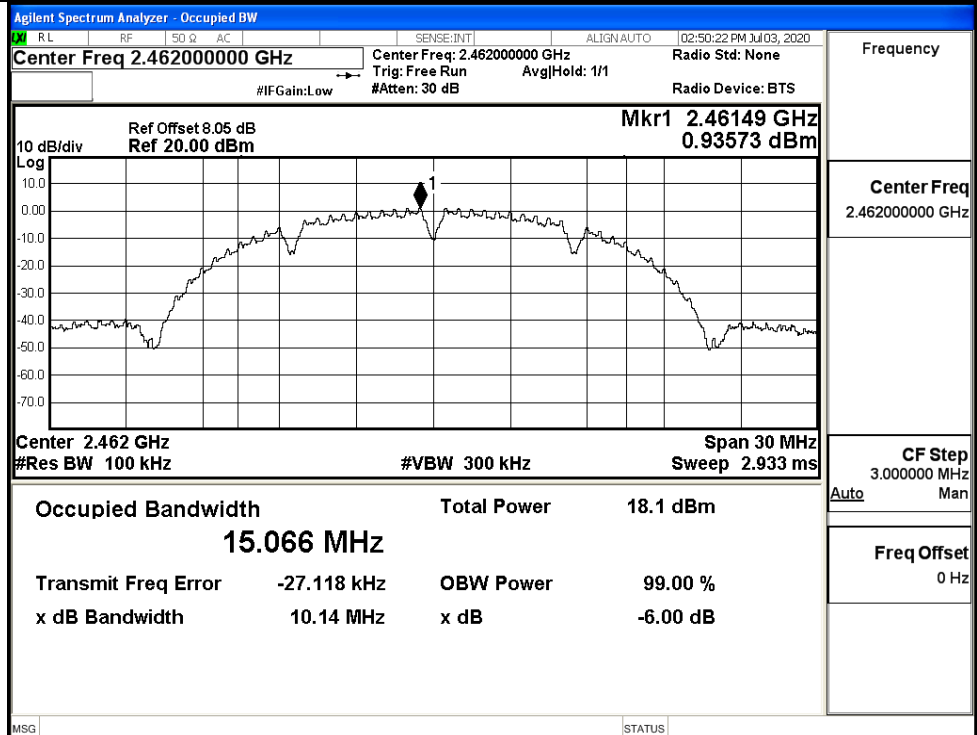
11B/LCH



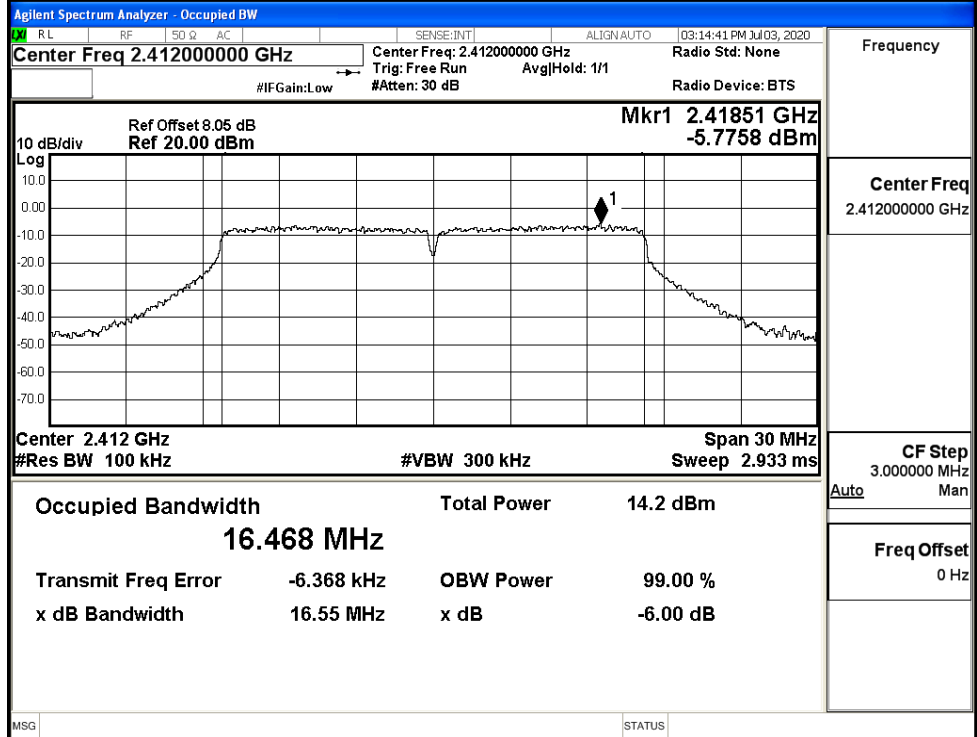
11B/MCH



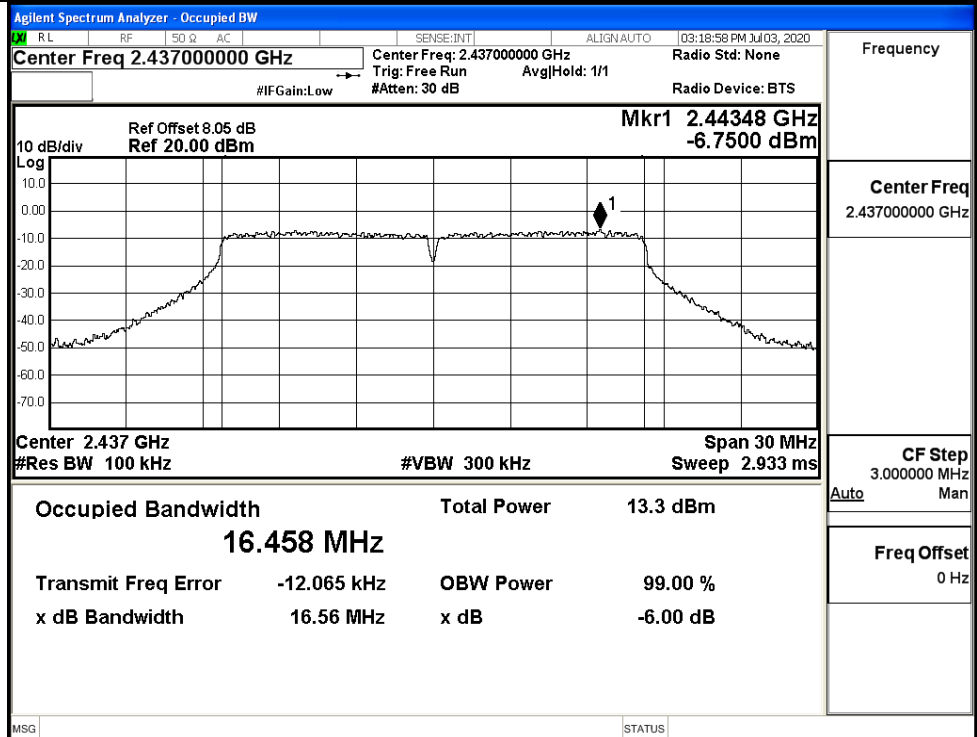
11B/HCH



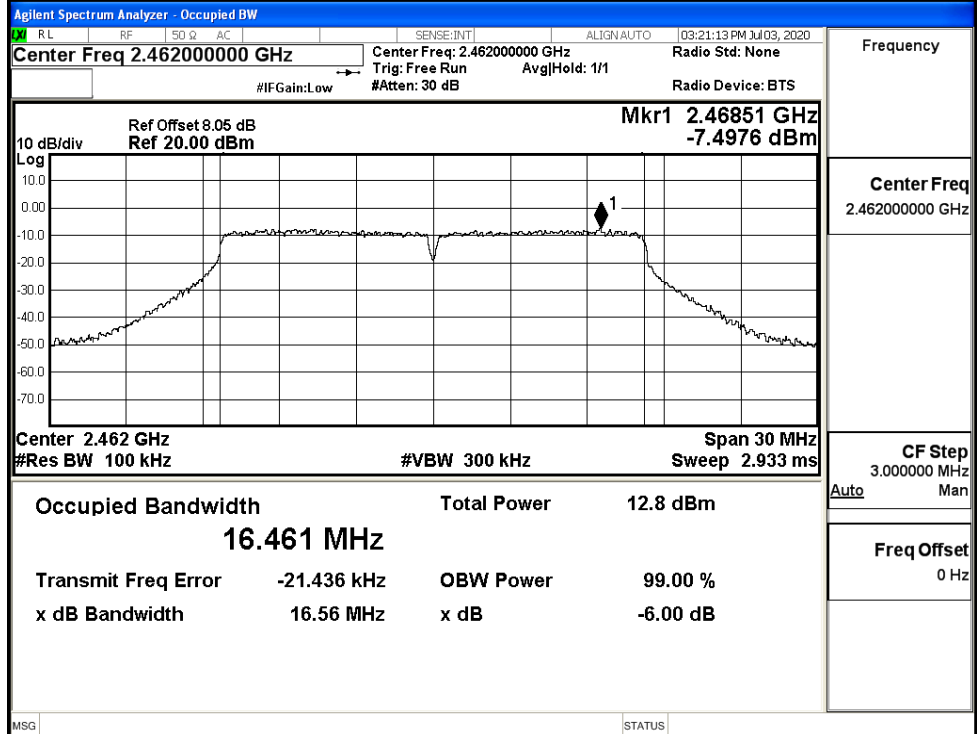
11G/LCH



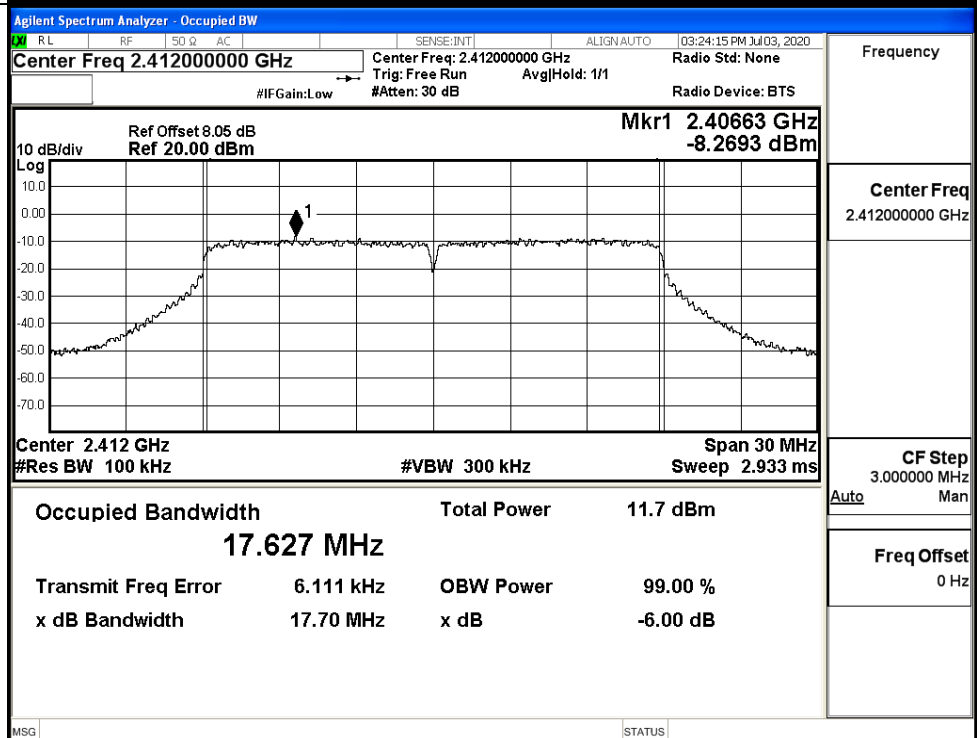
11G/MCH



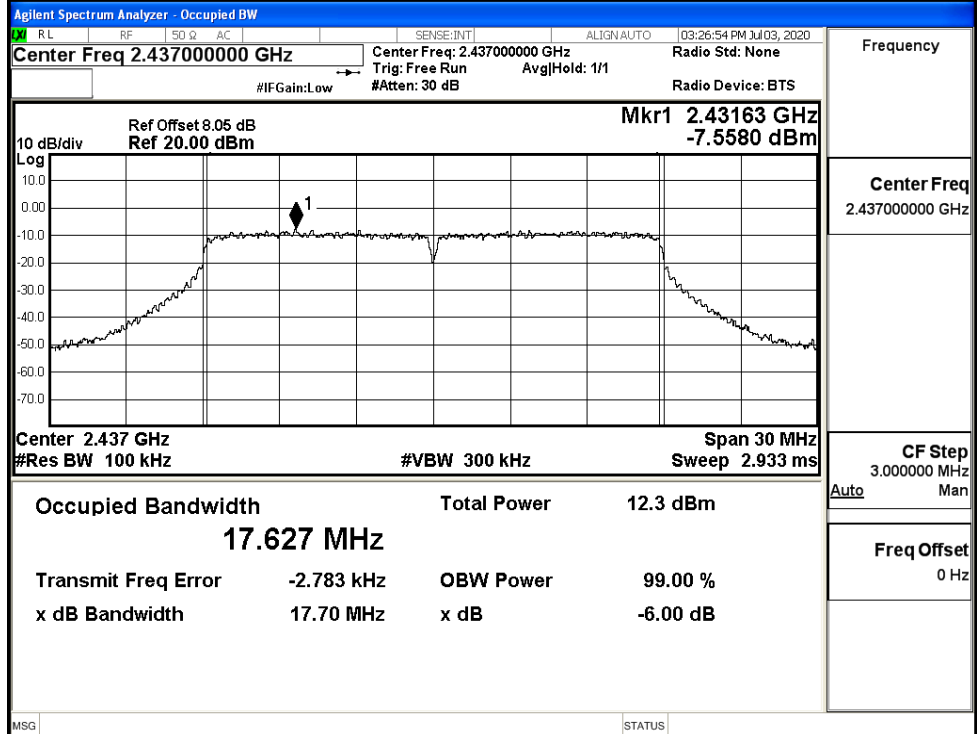
11G/HCH



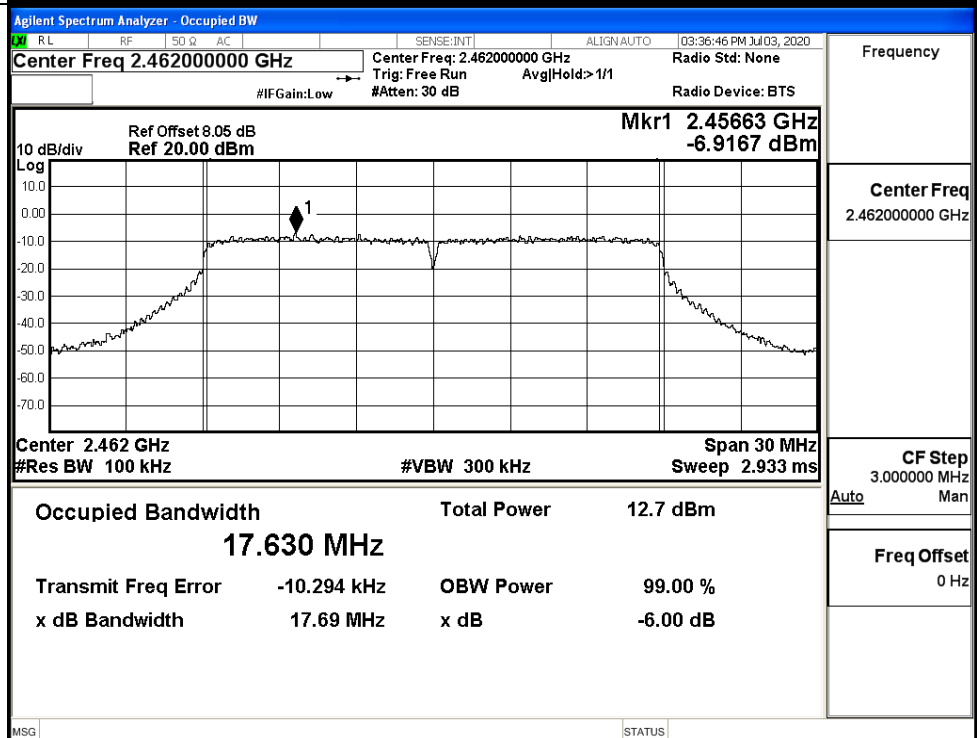
11N20SISO/LCH



11N20SISO/MCH

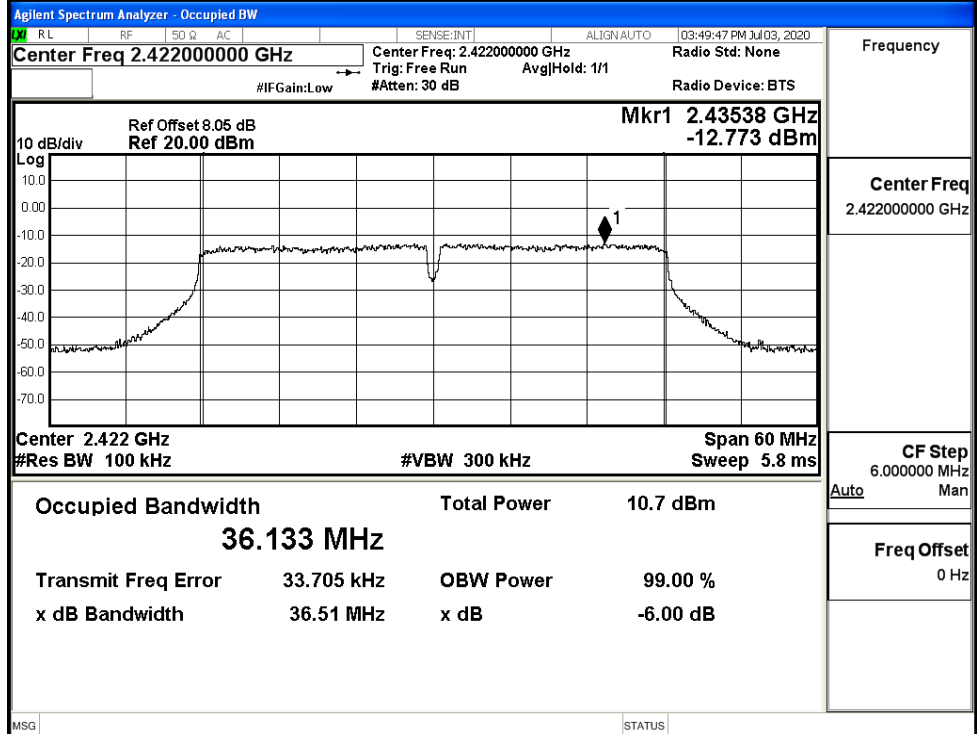


11N20SISO/HCH

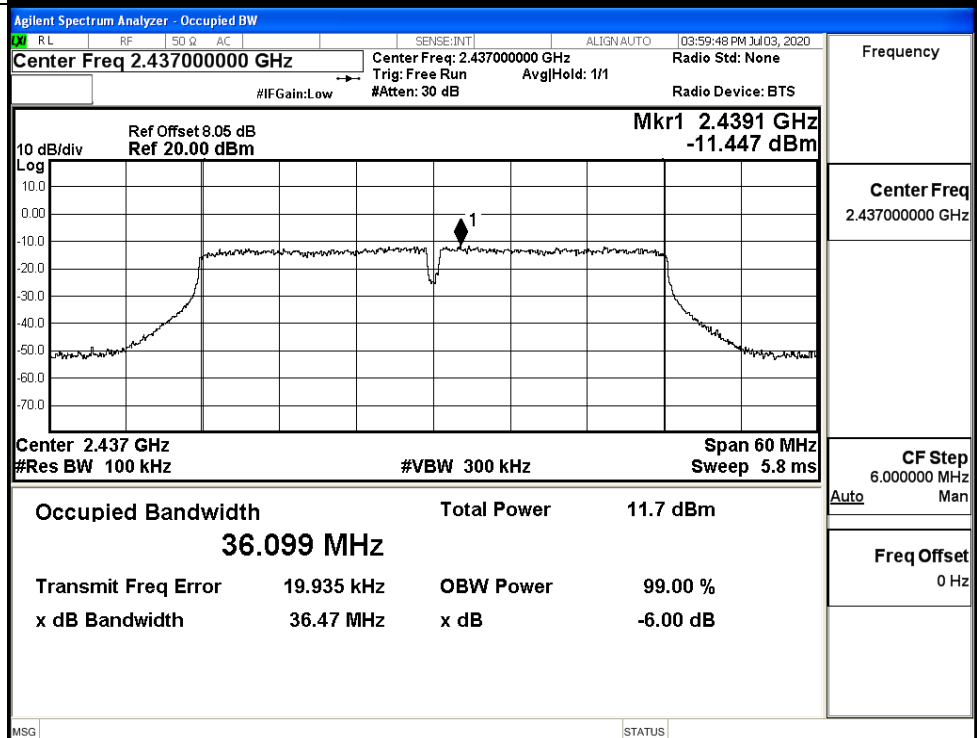




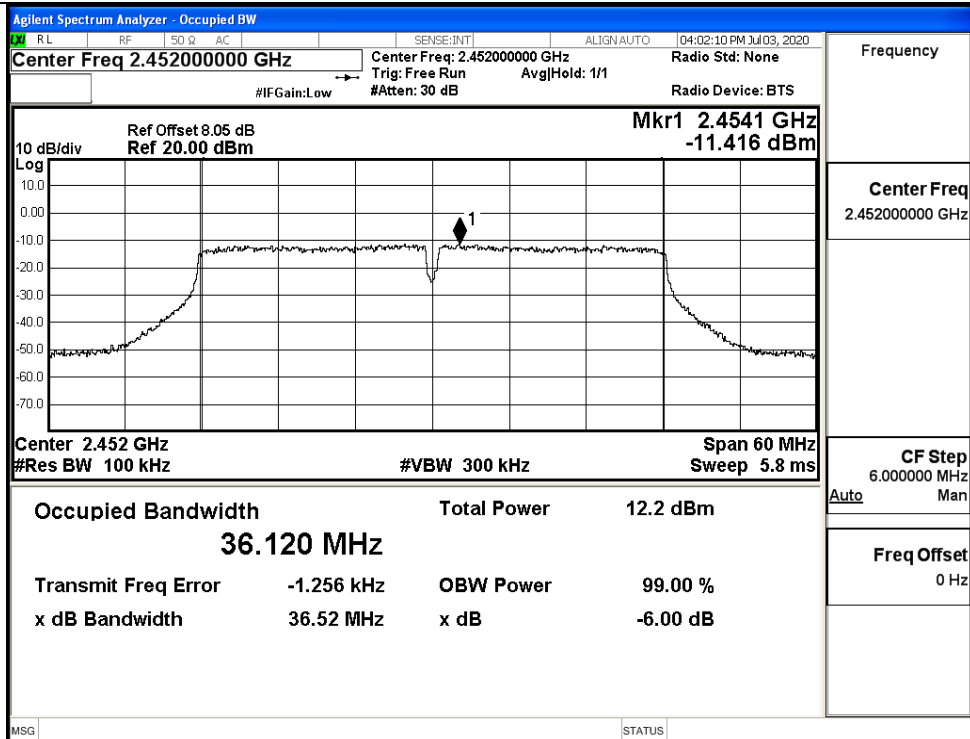
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

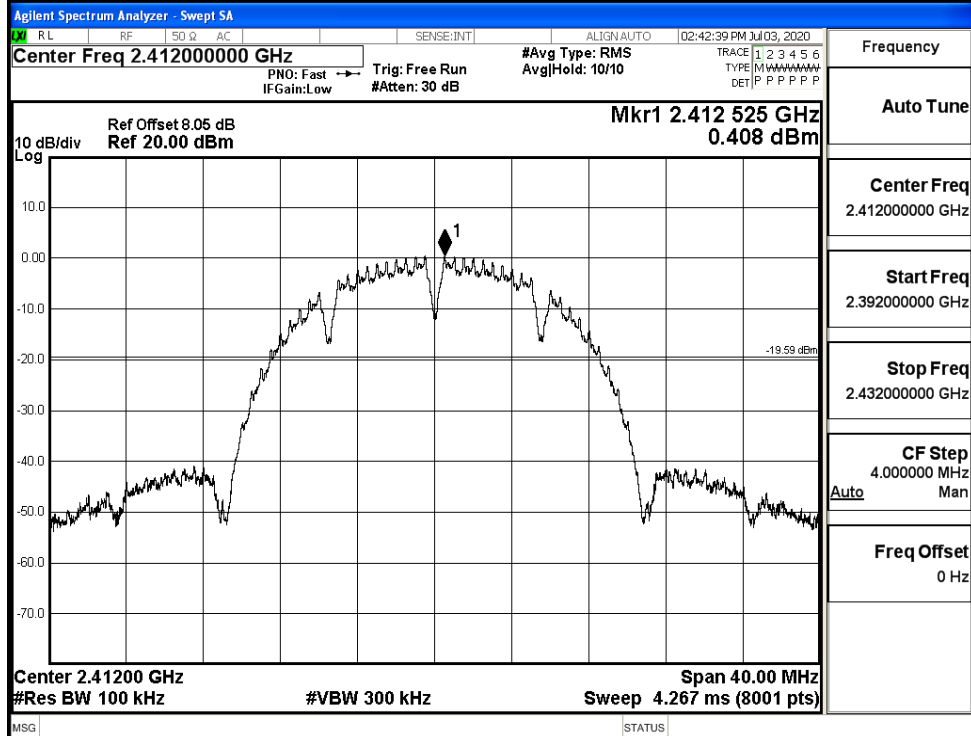


**C.5 RF Conducted Spurious Emissions**

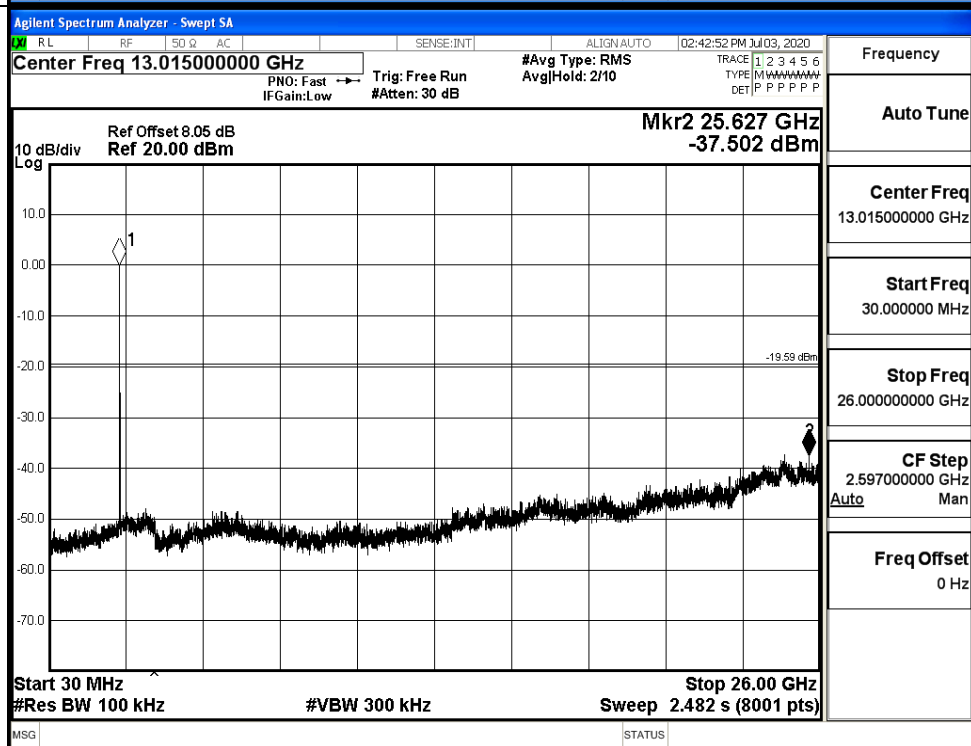
| Mode          | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B           | LCH     | 0.408      | -37.502          | -19.592     | PASS    |
|               | MCH     | 0.843      | -38.443          | -19.157     | PASS    |
|               | HCH     | 0.518      | -38.298          | -19.482     | PASS    |
| 11G           | LCH     | -5.998     | -38.035          | -25.998     | PASS    |
|               | MCH     | -6.941     | -38.187          | -26.941     | PASS    |
|               | HCH     | -7.645     | -38.726          | -27.645     | PASS    |
| 11N20<br>SISO | LCH     | -8.459     | -37.044          | -28.459     | PASS    |
|               | MCH     | -7.665     | -37.954          | -27.665     | PASS    |
|               | HCH     | -7.498     | -38.422          | -27.498     | PASS    |
| 11N40<br>SISO | LCH     | -12.913    | -37.971          | -32.913     | PASS    |
|               | MCH     | -11.631    | -38.301          | -31.631     | PASS    |
|               | HCH     | -11.302    | -38.025          | -31.302     | PASS    |

## 11B LCH Graphs

Pref/11B/LCH

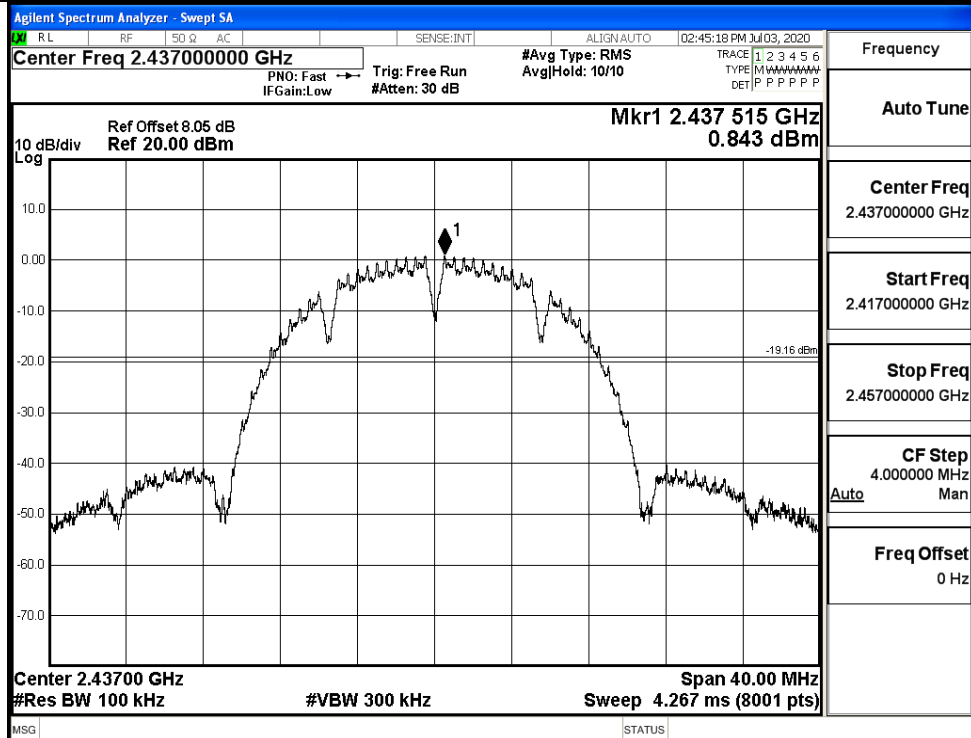


Puw/11B/LCH

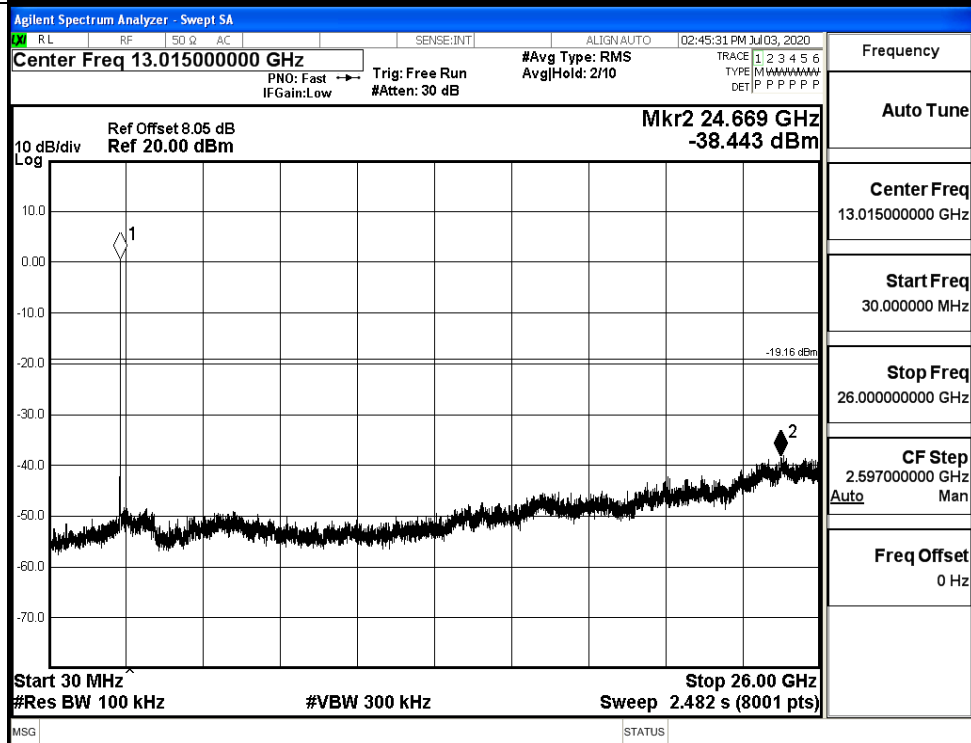


## 11B MCH Graphs

Pref/11B/MCH

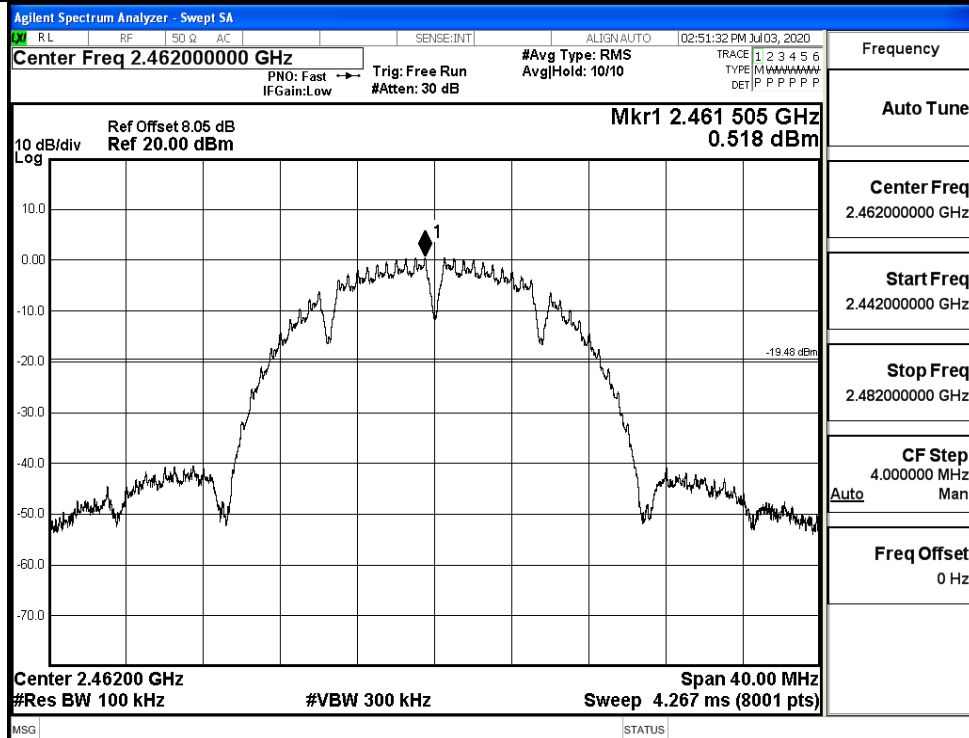


Puw/11B/MCH

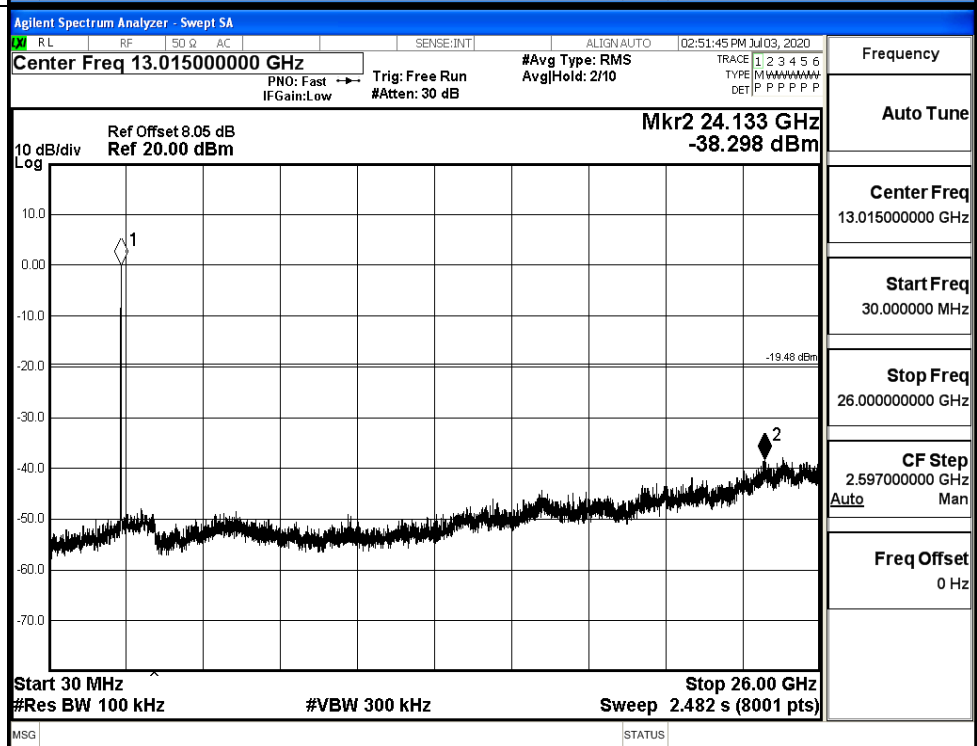


## 11B HCH Graphs

Pref/11B/HCH

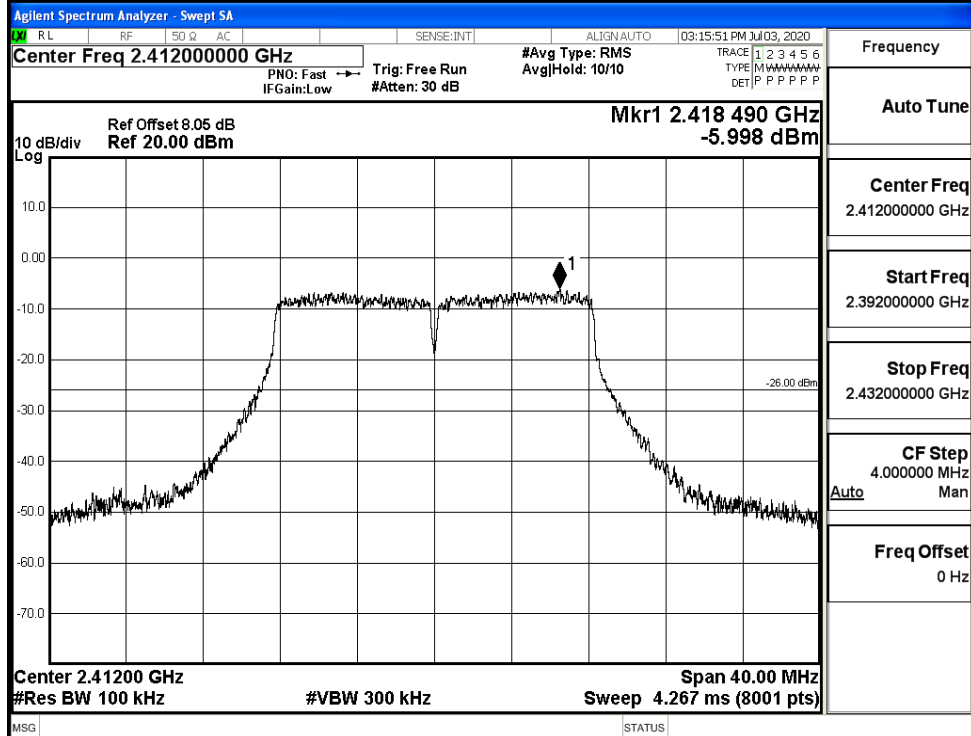


Puw/11B/HCH

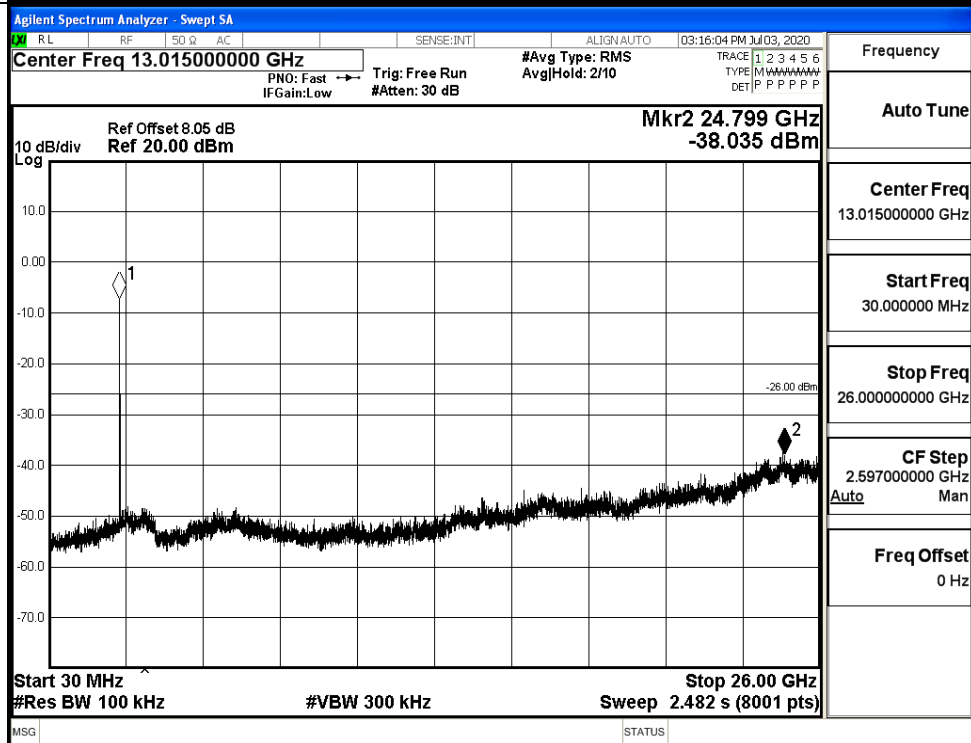


## 11G LCH Graphs

Pref/11G/LCH

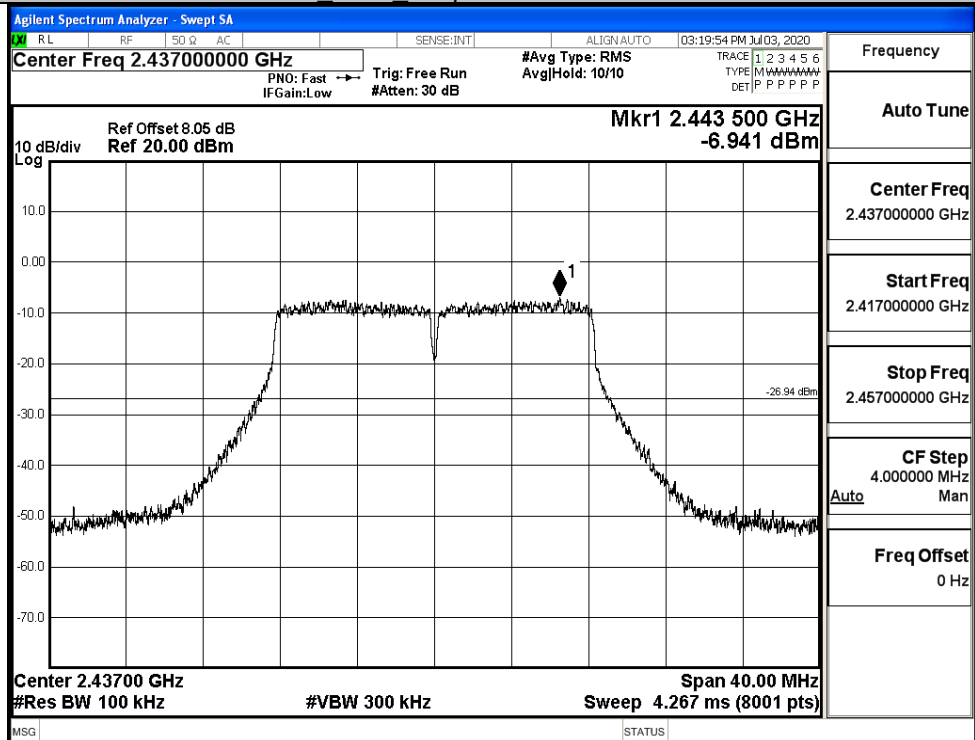


Puw/11G/LCH

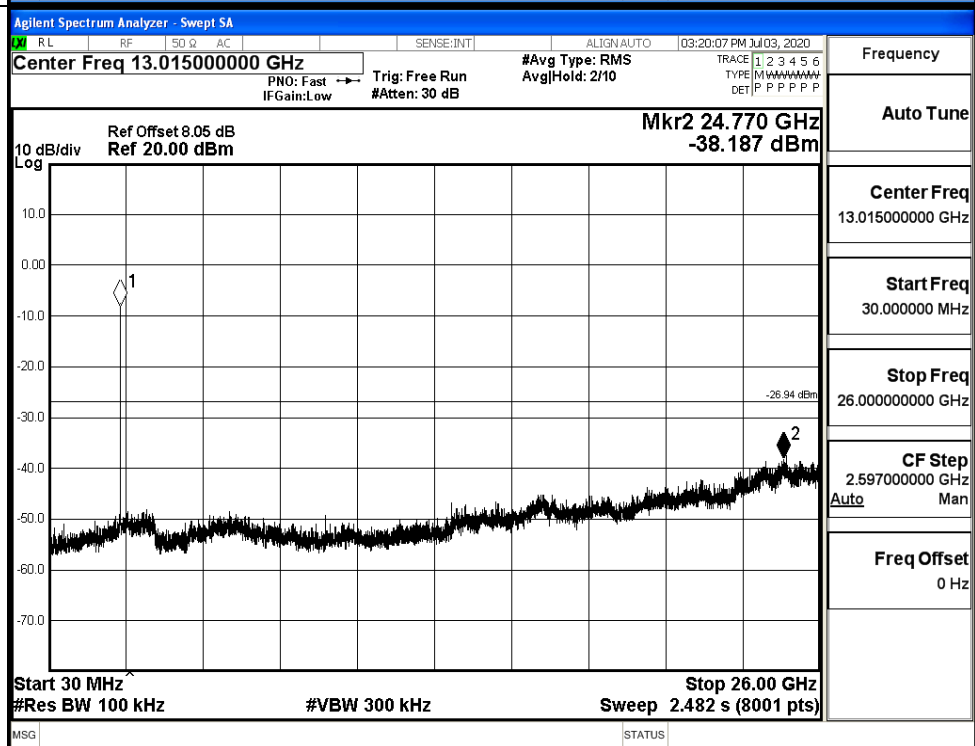


## 11G MCH Graphs

Pref/11G/MCH



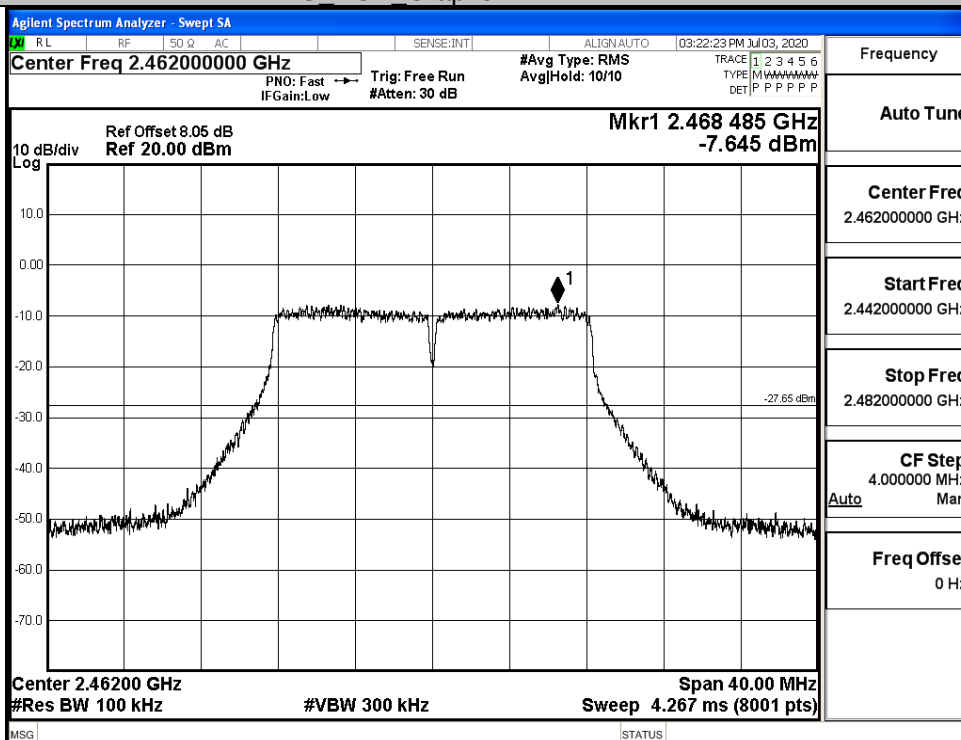
Puw/11G/MCH



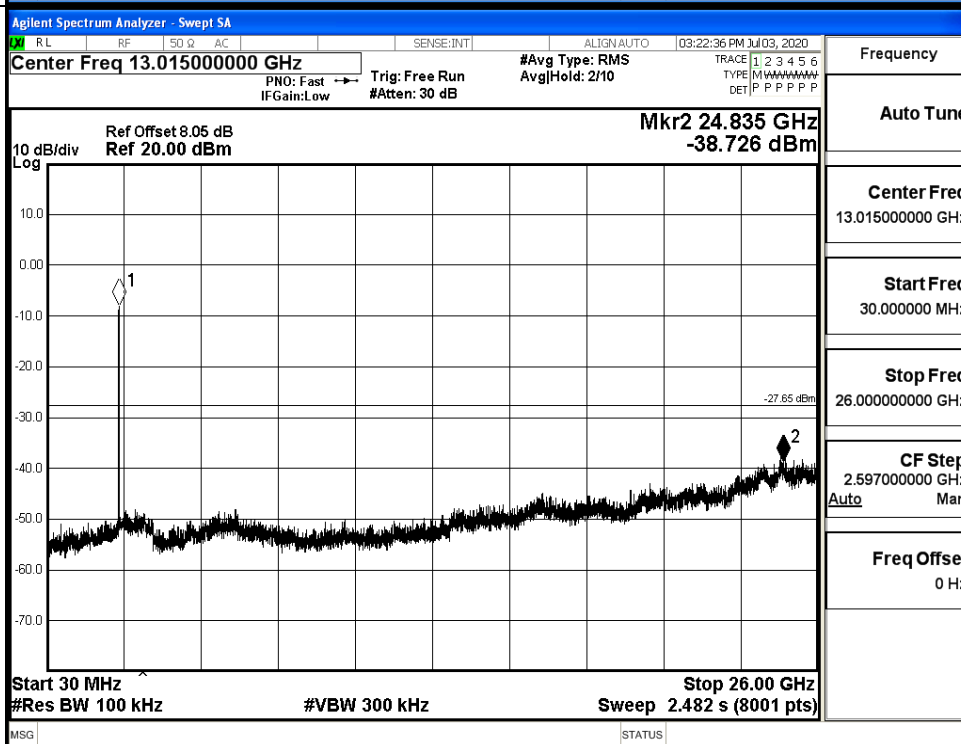


## 11G HCH Graphs

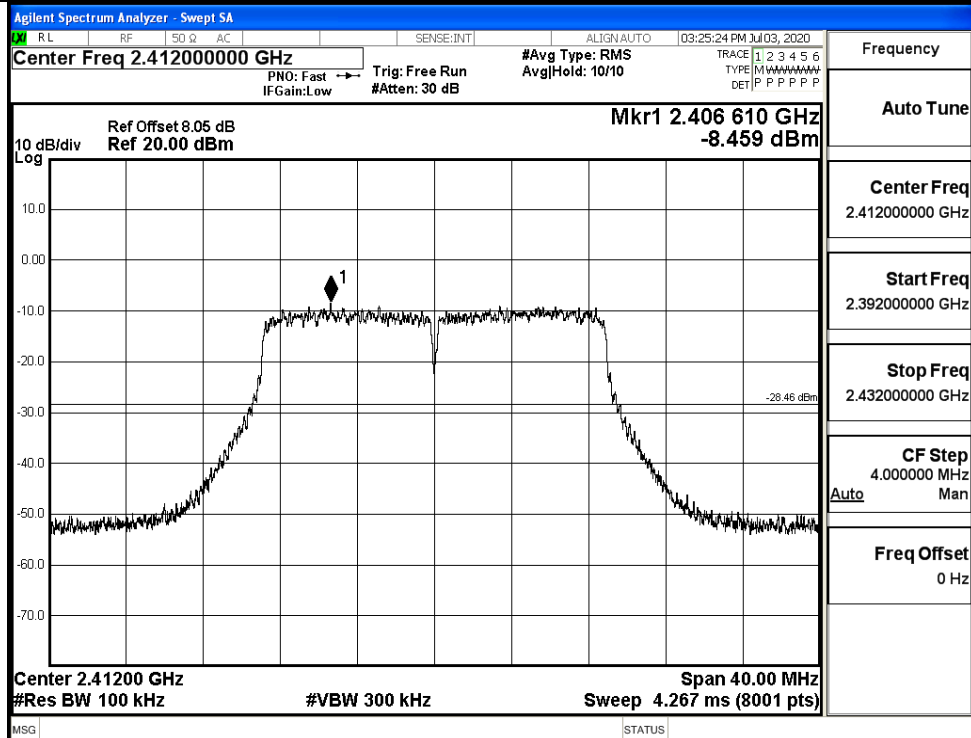
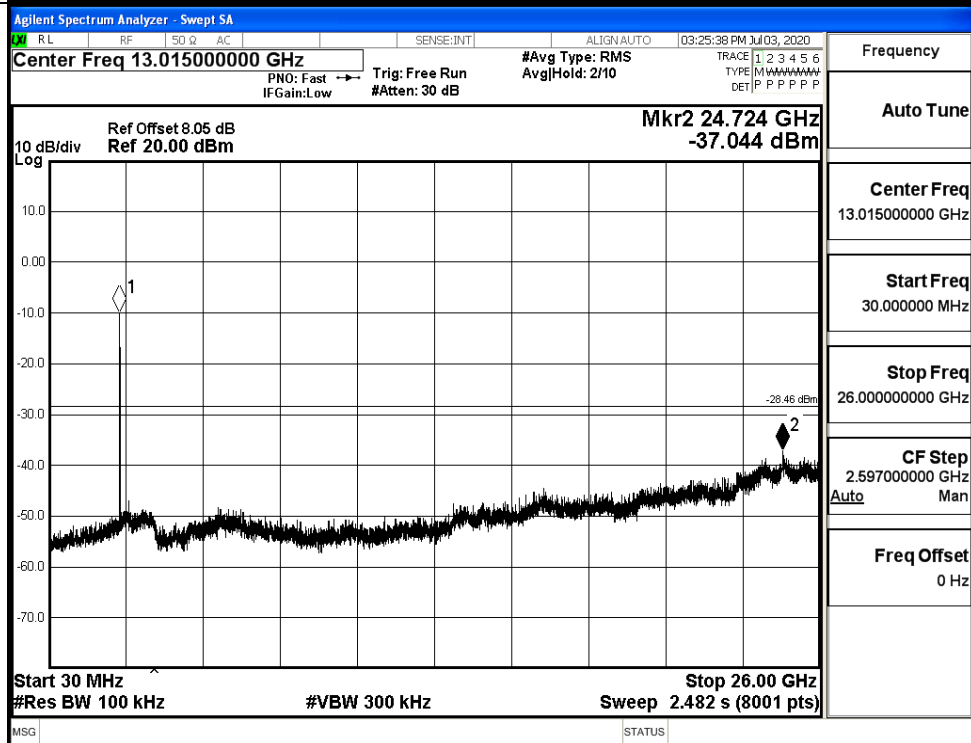
Pref/11G/HCH



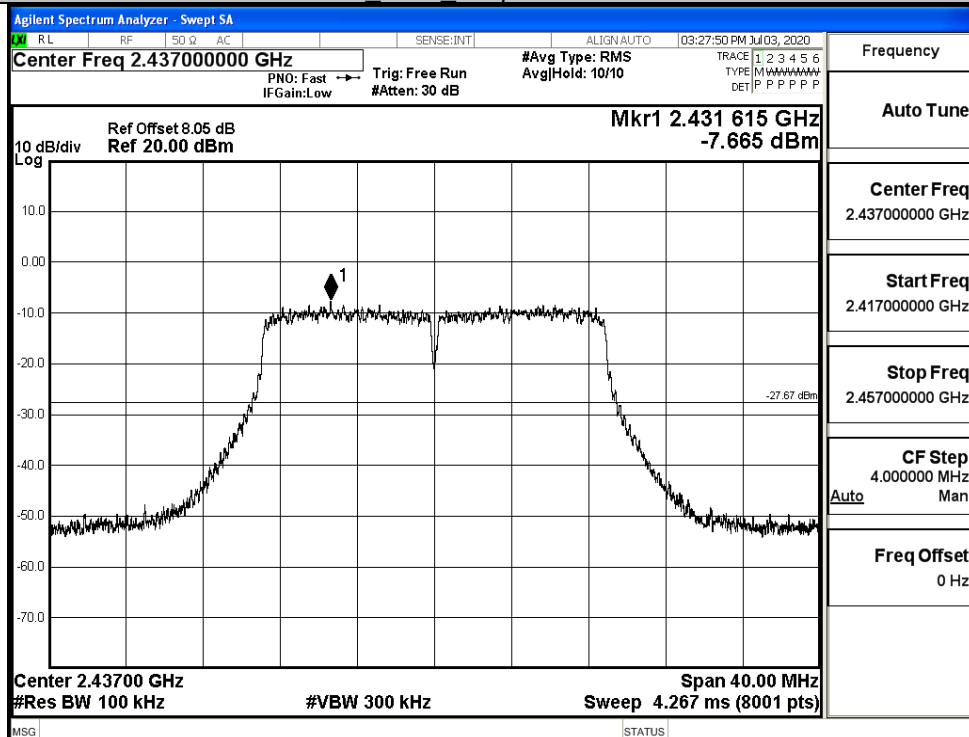
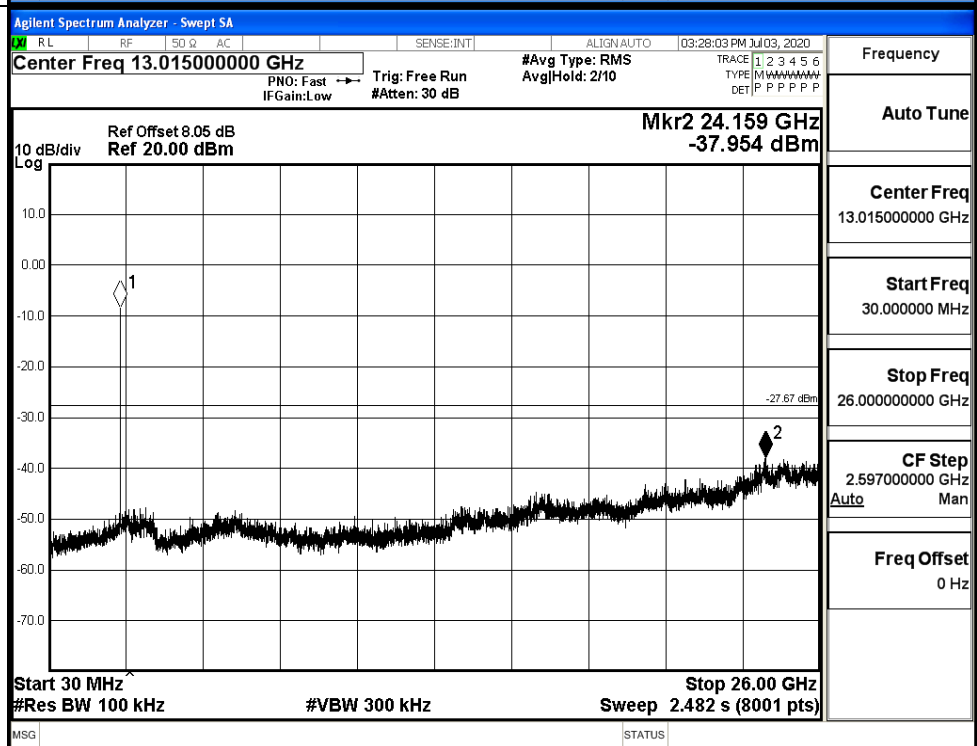
Puw/11G/HCH



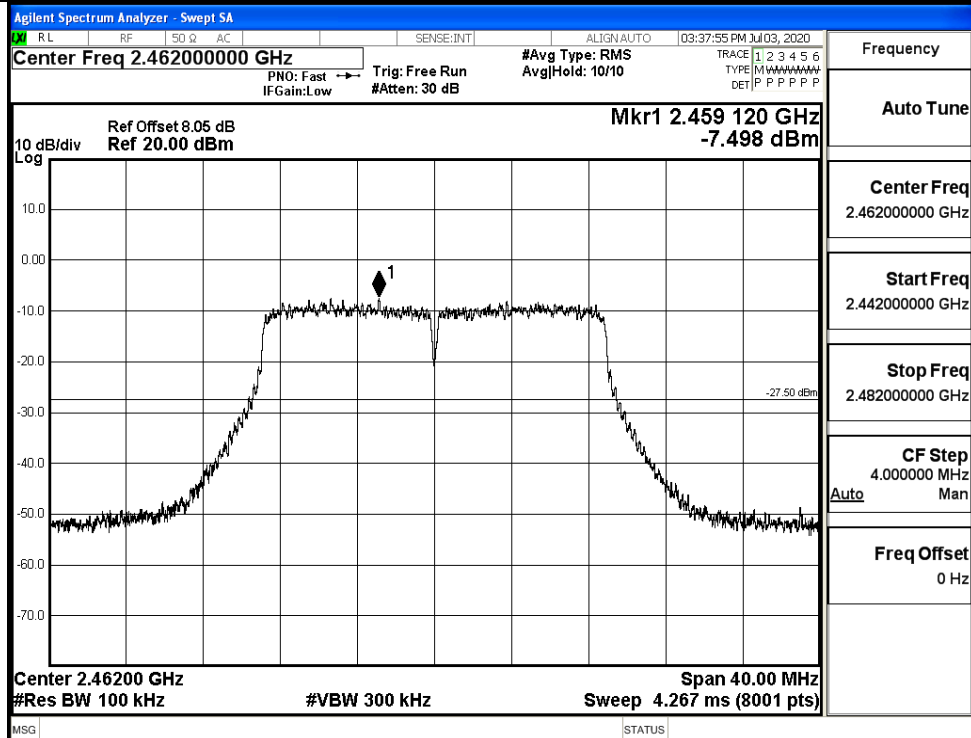
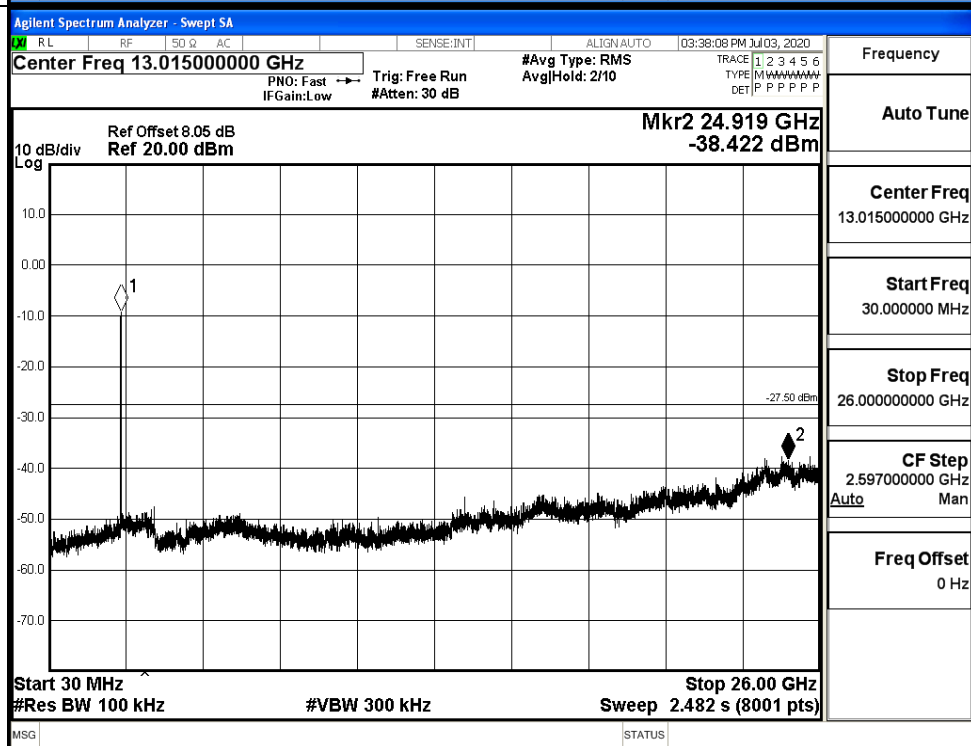
## 11N20SISO LCH Graphs

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

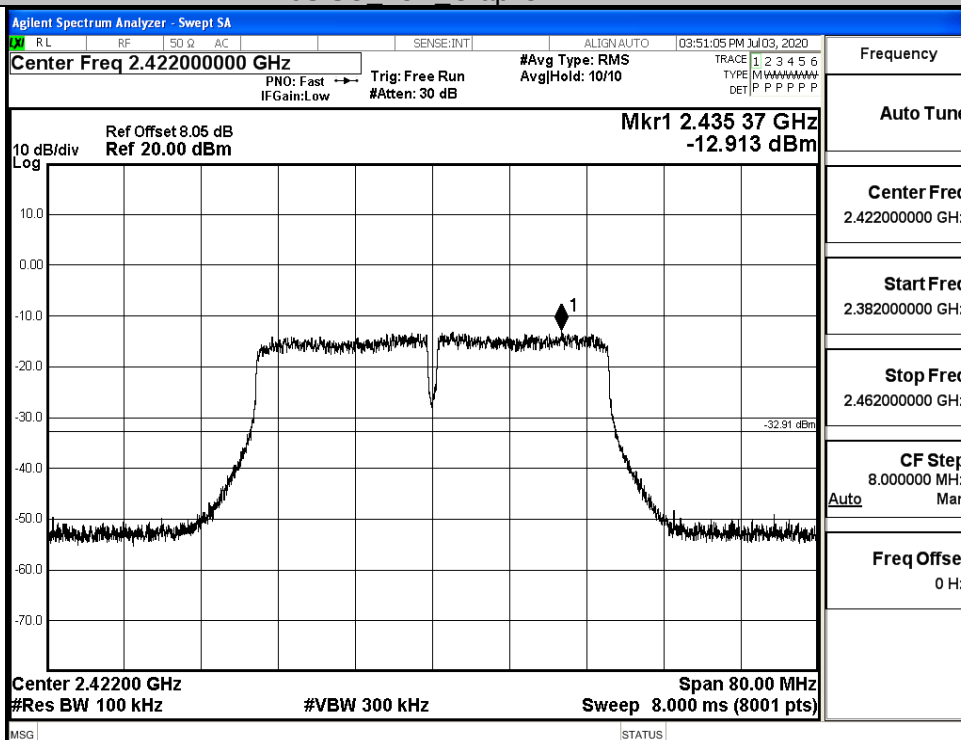
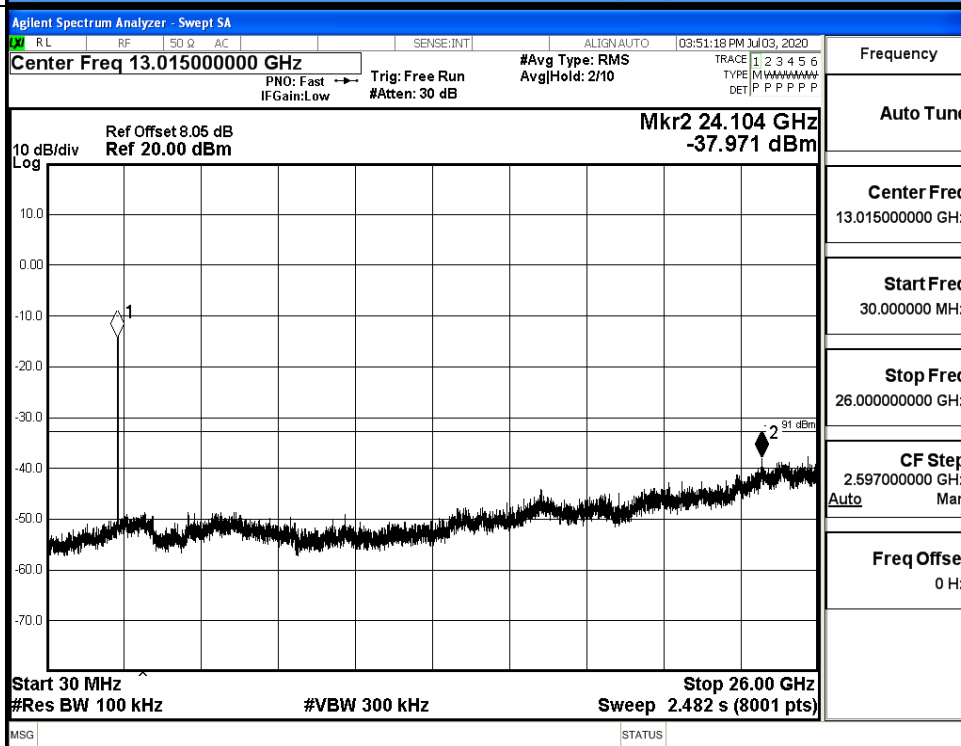
## 11N20SISO MCH Graphs

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

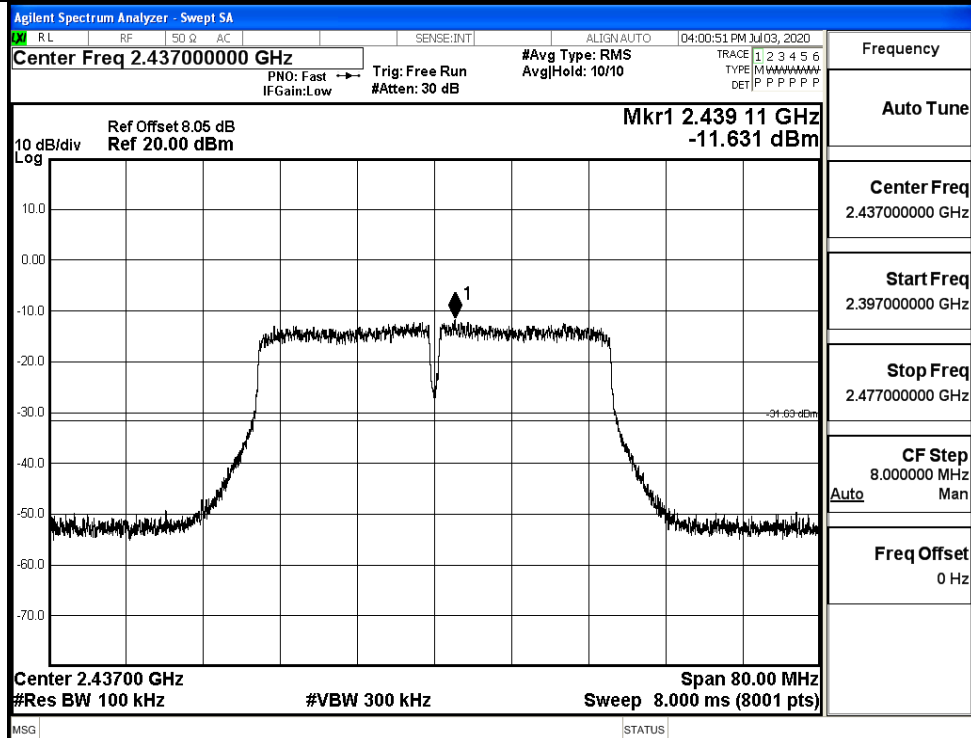
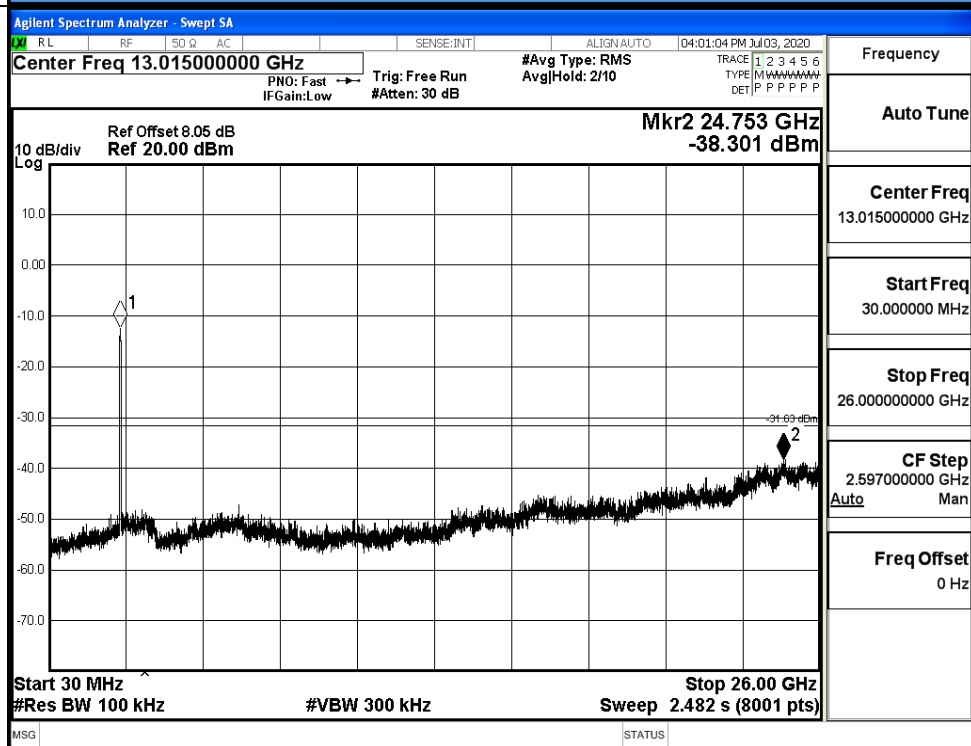
## 11N20SISO HCH Graphs

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

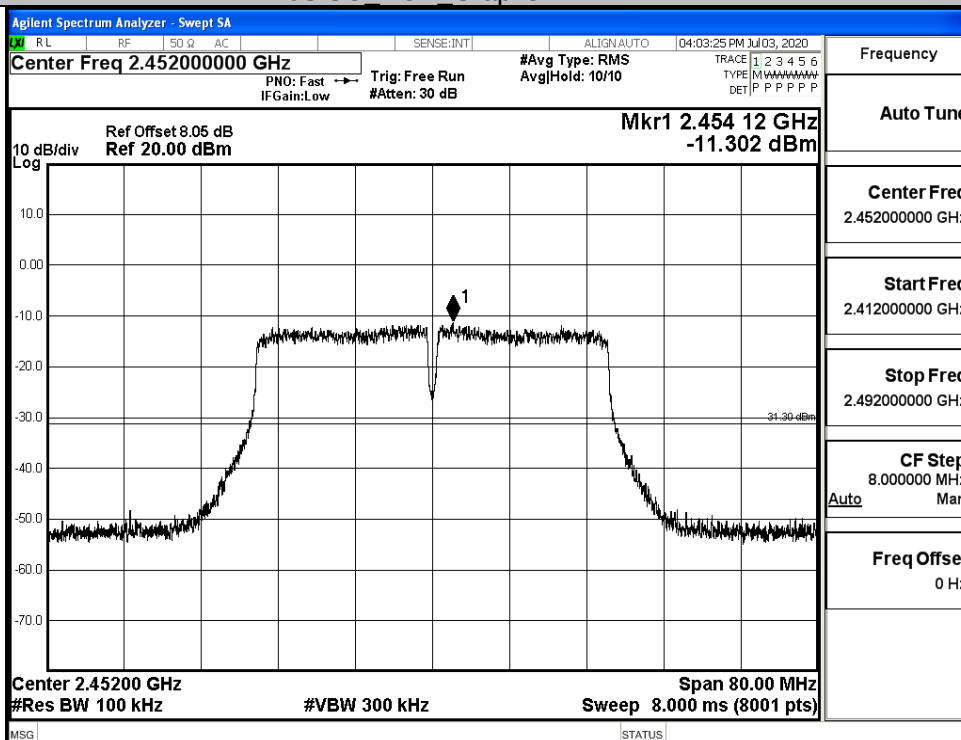
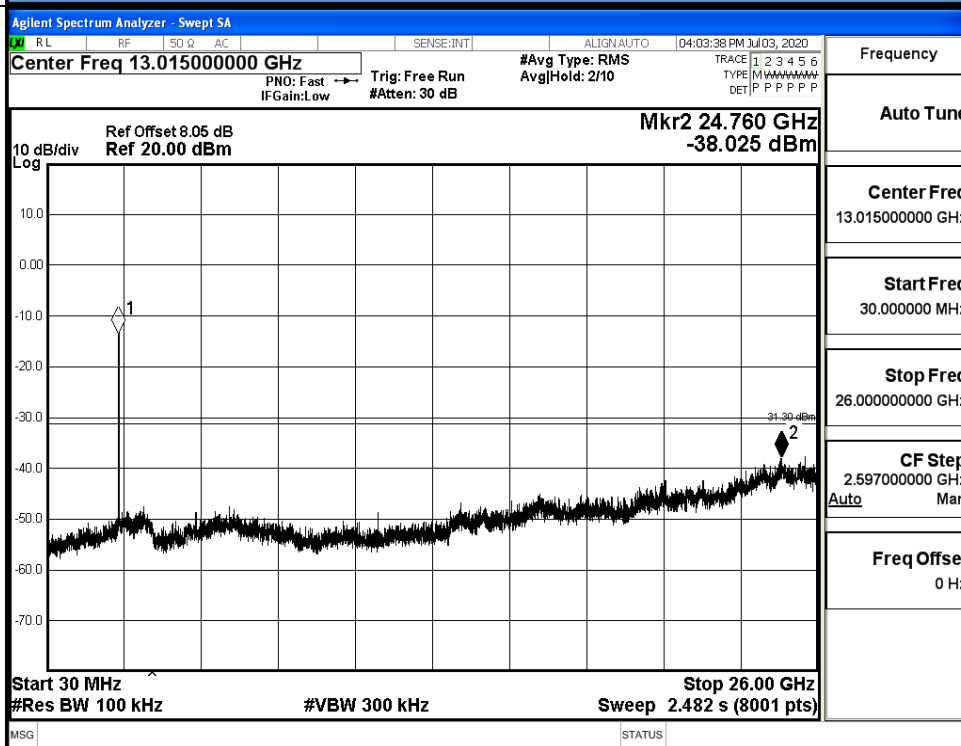
## 11N40SISO LCH Graphs

Pref/11N40  
SISO/LCHPuw/11N40  
SISO/LCH

## 11N40SISO MCH Graphs

Pref/11N40  
SISO/MCHPuw/11N40  
SISO/MCH

## 11N40SISO HCH Graphs

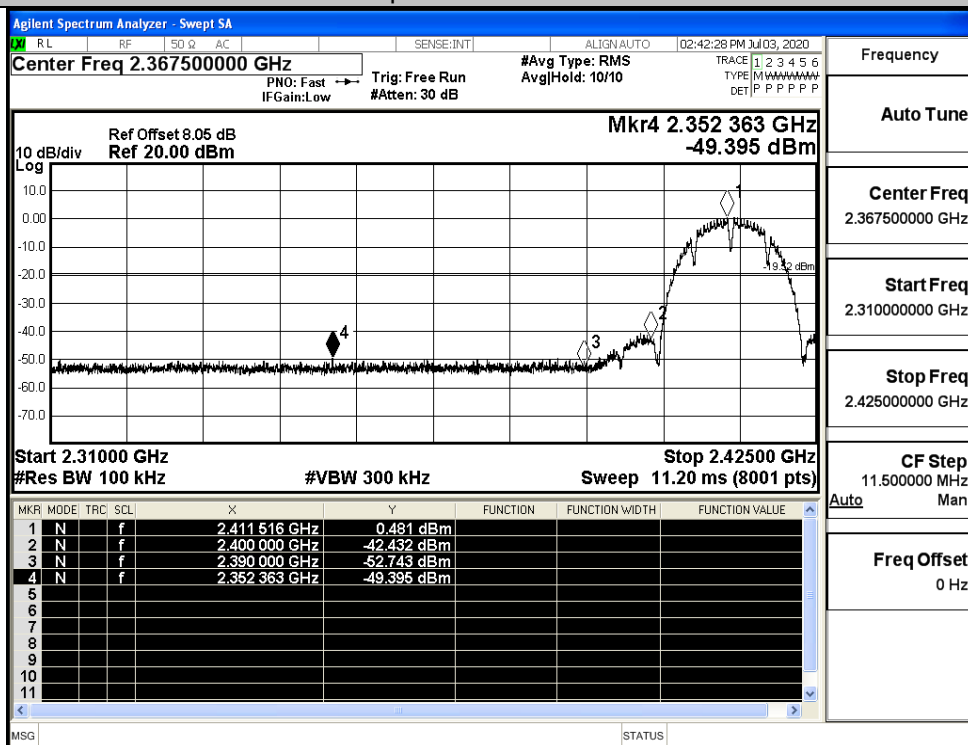
Pref/11N40  
SISO/HCHPuw/11N40  
SISO/HCH

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

| Mode      | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B       | LCH     | 0.481              | -49.395                  | -19.52      | PASS    |
|           | HCH     | 0.597              | -48.867                  | -19.4       | PASS    |
| 11G       | LCH     | -5.962             | -49.657                  | -25.96      | PASS    |
|           | HCH     | -7.583             | -49.509                  | -27.58      | PASS    |
| 11N20SISO | LCH     | -8.838             | -49.534                  | -28.84      | PASS    |
|           | HCH     | -7.156             | -49.156                  | -27.16      | PASS    |
| 11N40SISO | LCH     | -12.675            | -50.256                  | -32.68      | PASS    |
|           | HCH     | -11.215            | -49.151                  | -31.22      | PASS    |

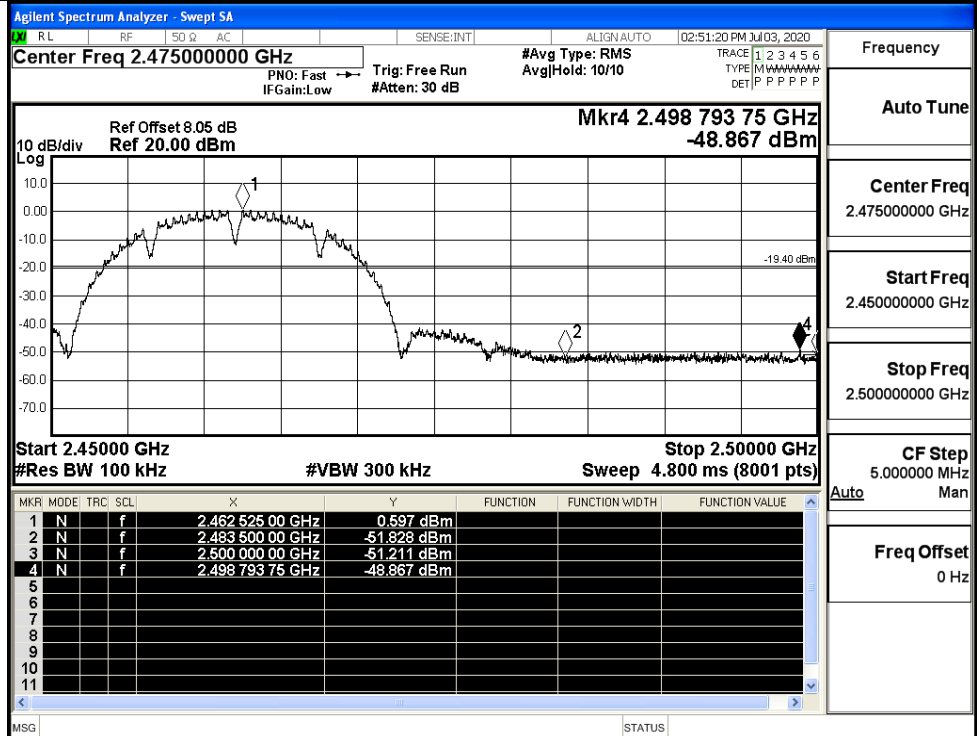
## Test Graphs

11B/LCH

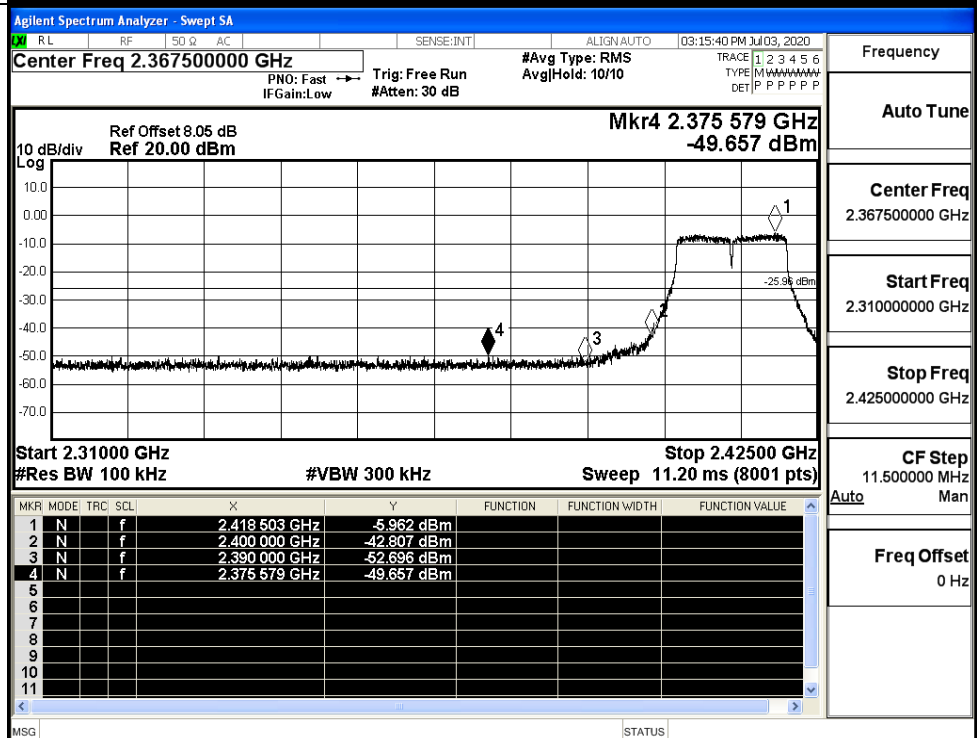




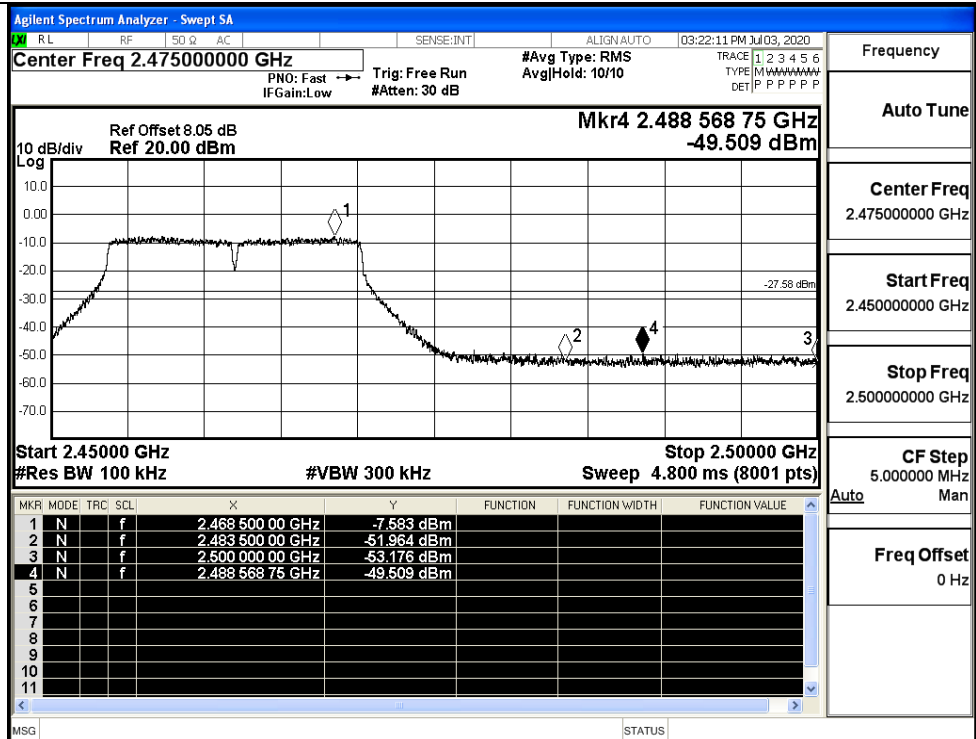
11B/HCH



11G/LCH



11G/HCH



Frequency

Auto Tune

Center Freq  
2.475000000 GHz

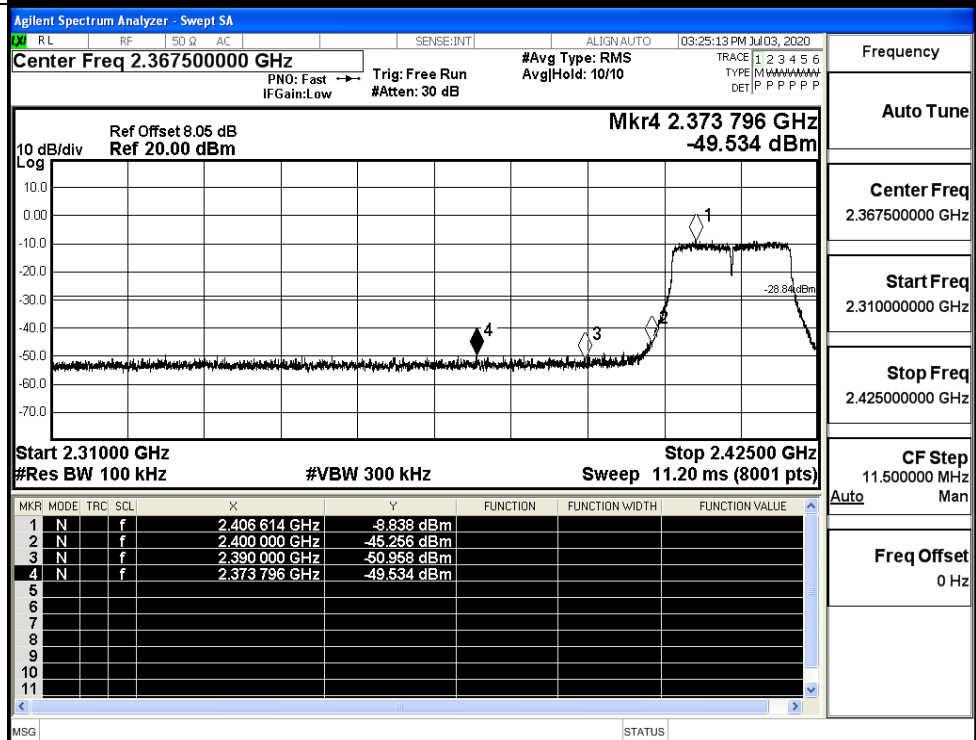
Start Freq  
2.450000000 GHz

Stop Freq  
2.500000000 GHz

CF Step  
5.000000 MHz

Freq Offset  
0 Hz

11N20SISO/LCH



Frequency

Auto Tune

Center Freq  
2.367500000 GHz

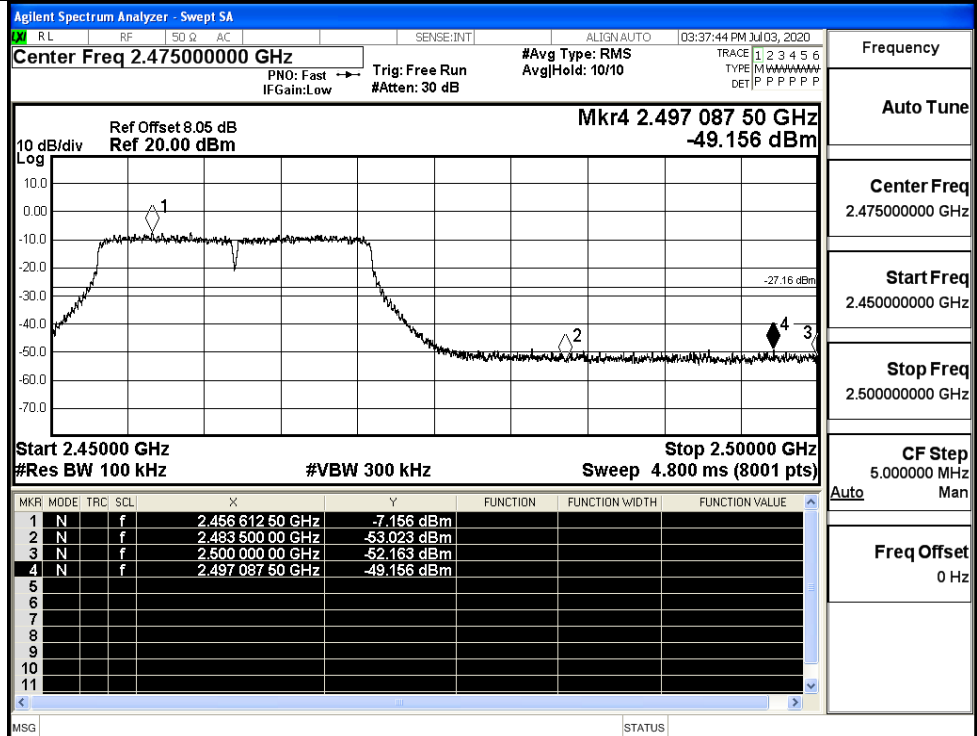
Start Freq  
2.310000000 GHz

Stop Freq  
2.425000000 GHz

CF Step  
11.500000 MHz

Freq Offset  
0 Hz

11N20SISO/HCH



Frequency

Auto Tune

Center Freq

2.475000000 GHz

Start Freq

2.450000000 GHz

Stop Freq

2.500000000 GHz

CF Step

5.000000 MHz

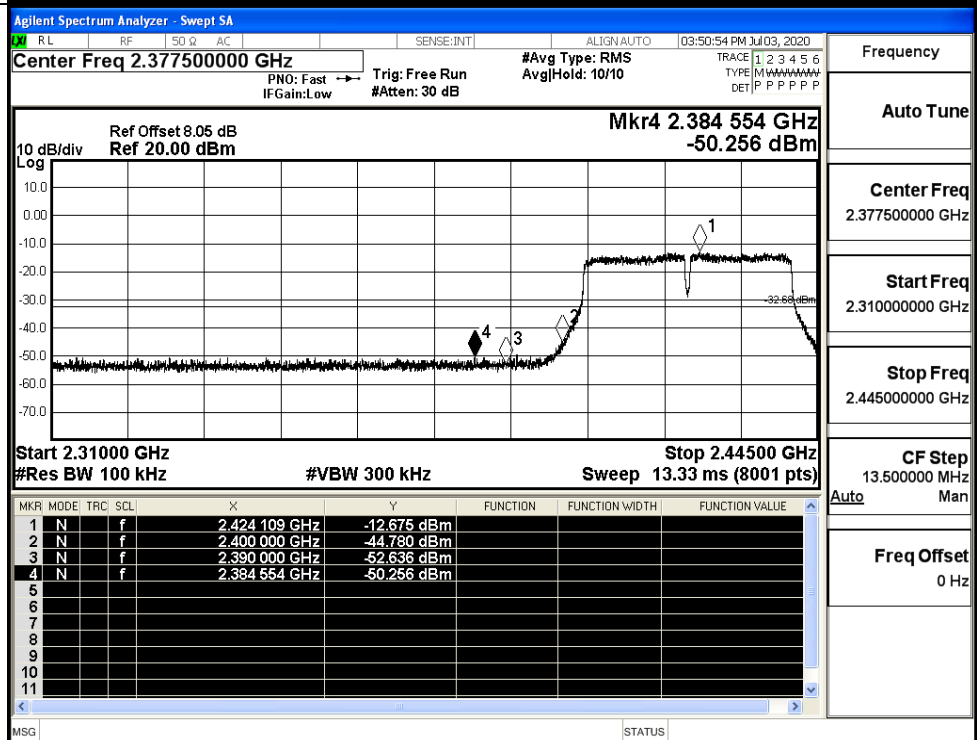
Auto

Man

Freq Offset

0 Hz

11N40SISO/LCH



Frequency

Auto Tune

Center Freq

2.377500000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.445000000 GHz

CF Step

13.500000 MHz

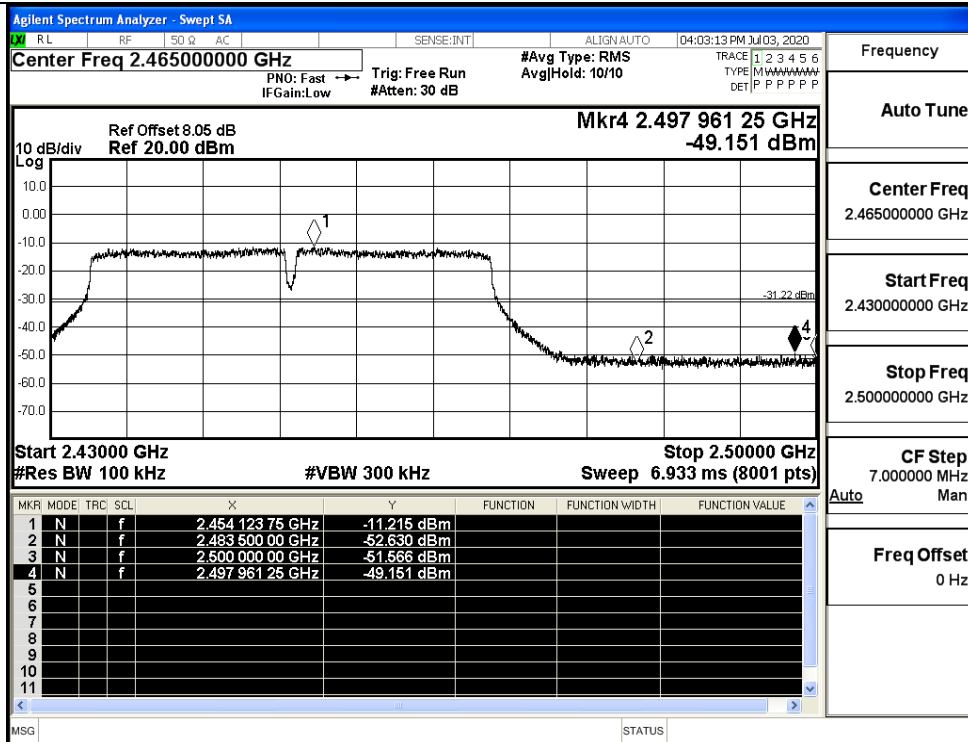
Auto

Man

Freq Offset

0 Hz

11N40SISO/HCH

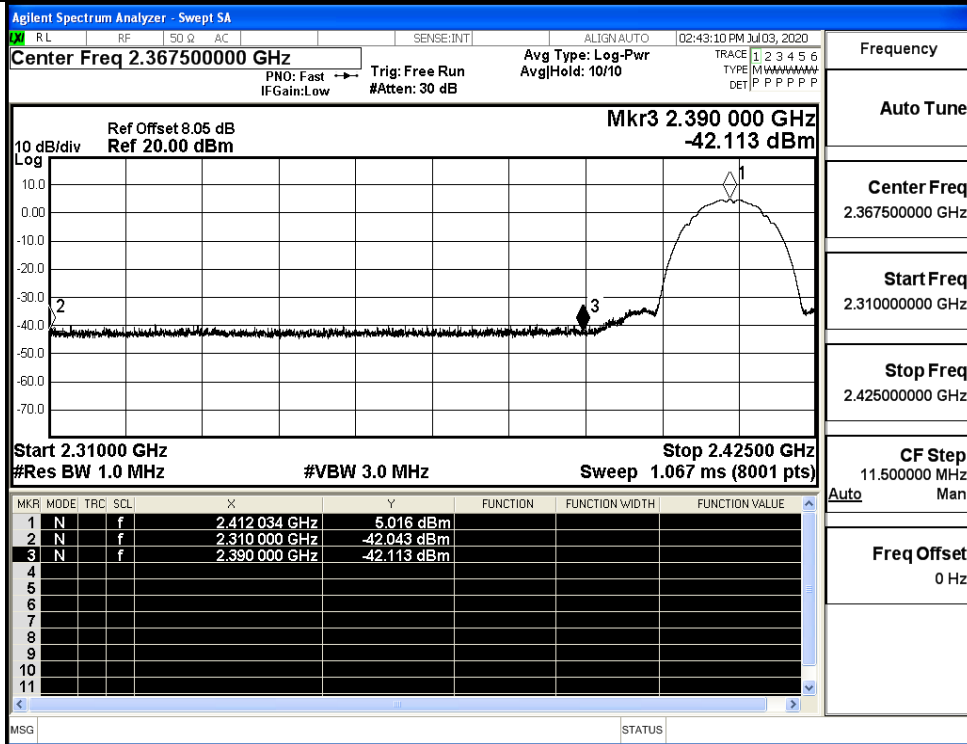


## C.7 Restrict-band band-edge measurements

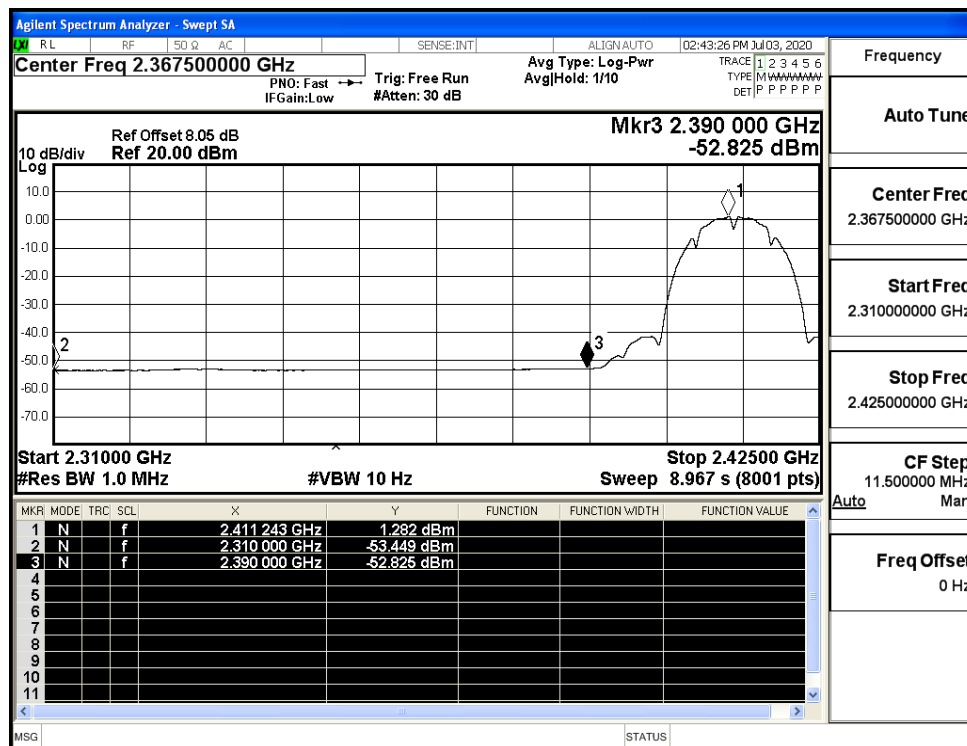
| Test Mode     | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|--------------|------|--------|-------------|------|---------------|------------|----------|----------------|---------|
| 11B           | 2412         | Ant1 | 2310.0 | -42.04      | 2.0  | 0             | 55.19      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -53.45      | 2.0  | 0             | 43.78      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -42.11      | 2.0  | 0             | 55.12      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -52.83      | 2.0  | 0             | 44.40      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -41.41      | 2.0  | 0             | 55.82      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -52.40      | 2.0  | 0             | 44.83      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -42.18      | 2.0  | 0             | 55.05      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -52.46      | 2.0  | 0             | 44.77      | AV       | 54             | PASS    |
| 11G           | 2412         | Ant1 | 2310.0 | -43.14      | 2.0  | 0             | 54.09      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -53.49      | 2.0  | 0             | 43.74      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -41.27      | 2.0  | 0             | 55.96      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -52.49      | 2.0  | 0             | 44.74      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -42.52      | 2.0  | 0             | 54.71      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -52.49      | 2.0  | 0             | 44.74      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -41.19      | 2.0  | 0             | 56.04      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -52.51      | 2.0  | 0             | 44.72      | AV       | 54             | PASS    |
| 11N20<br>SISO | 2412         | Ant1 | 2310.0 | -43.47      | 2.0  | 0             | 53.76      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -53.55      | 2.0  | 0             | 43.68      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -43.43      | 2.0  | 0             | 53.80      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -52.86      | 2.0  | 0             | 44.37      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -42.82      | 2.0  | 0             | 54.41      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -52.42      | 2.0  | 0             | 44.81      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -42.35      | 2.0  | 0             | 54.88      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -52.50      | 2.0  | 0             | 44.73      | AV       | 54             | PASS    |
| 11N40<br>SISO | 2422         | Ant1 | 2310.0 | -42.37      | 2.0  | 0             | 54.86      | PEAK     | 74             | PASS    |
|               | 2422         | Ant1 | 2310.0 | -53.63      | 2.0  | 0             | 43.60      | AV       | 54             | PASS    |

|  |      |      |        |        |     |   |       |      |    |      |
|--|------|------|--------|--------|-----|---|-------|------|----|------|
|  | 2422 | Ant1 | 2390.0 | -42.07 | 2.0 | 0 | 55.16 | PEAK | 74 | PASS |
|  | 2422 | Ant1 | 2390.0 | -52.96 | 2.0 | 0 | 44.27 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2483.5 | -42.57 | 2.0 | 0 | 54.66 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2483.5 | -52.47 | 2.0 | 0 | 44.76 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2500.0 | -42.49 | 2.0 | 0 | 54.74 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2500.0 | -52.56 | 2.0 | 0 | 44.67 | AV   | 54 | PASS |

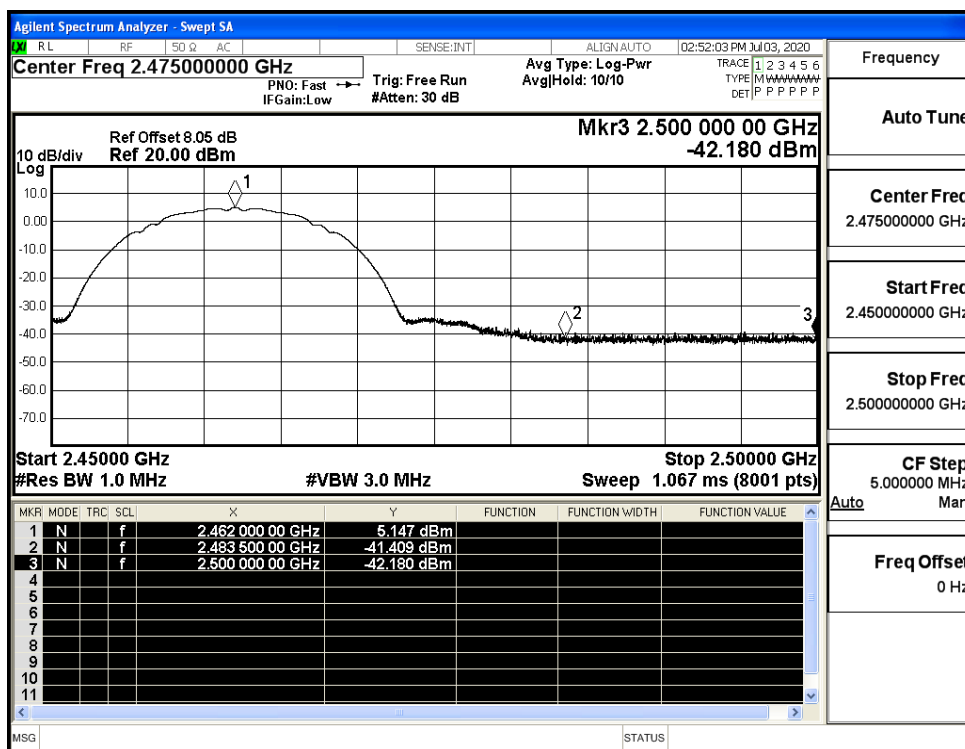
## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_PEAK



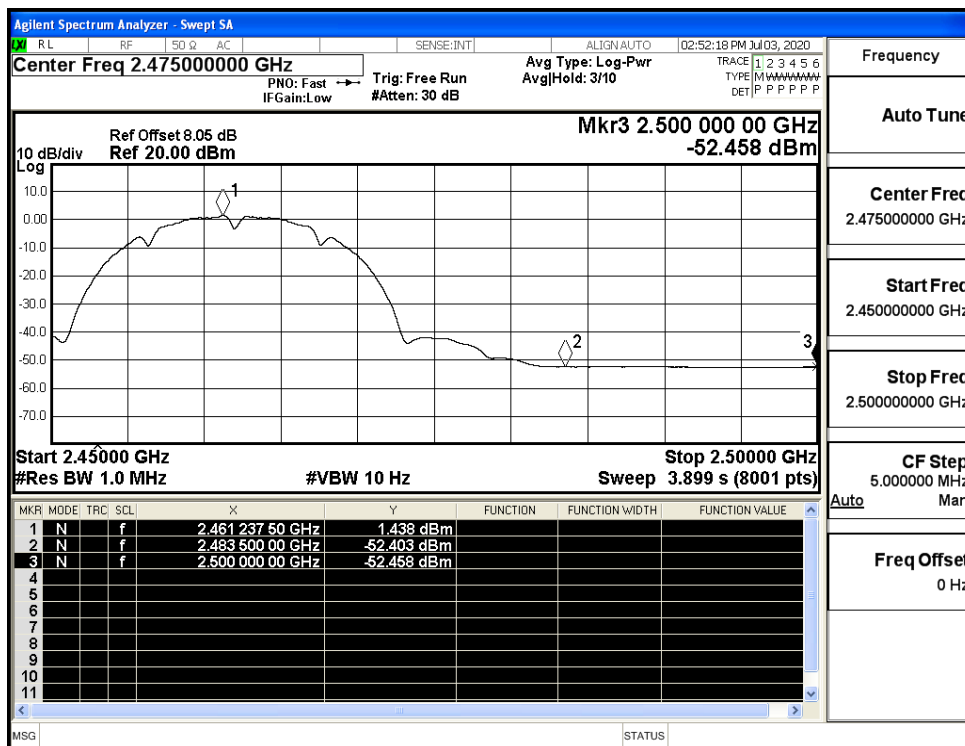
## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_AV



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

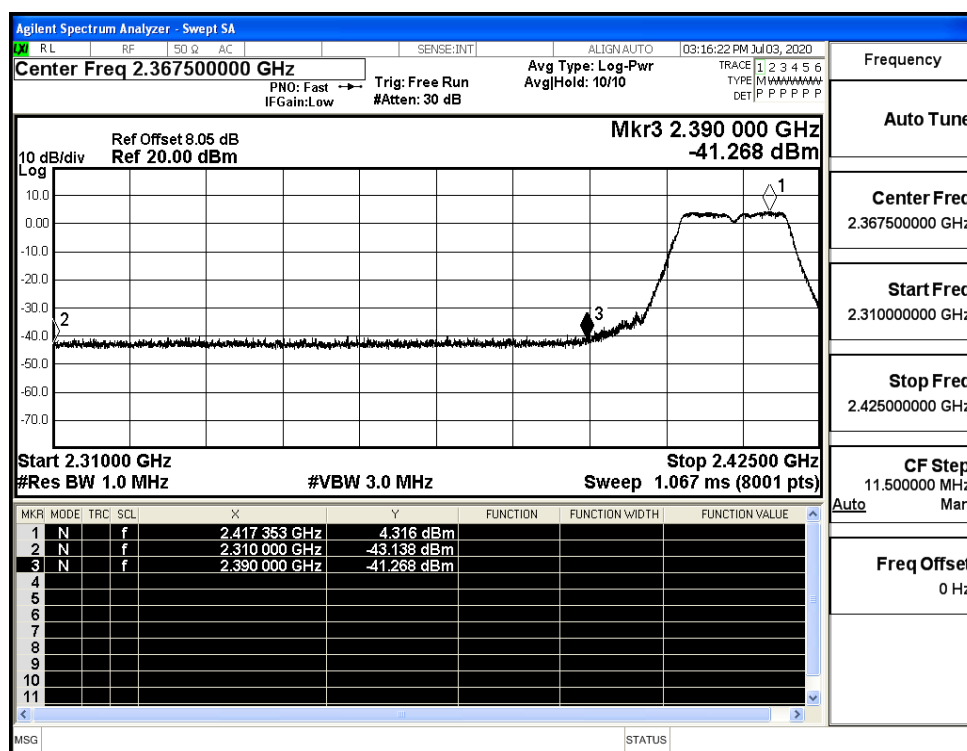


## Restrict-band band-edge measurements\_11B\_2462\_Ant1\_AV

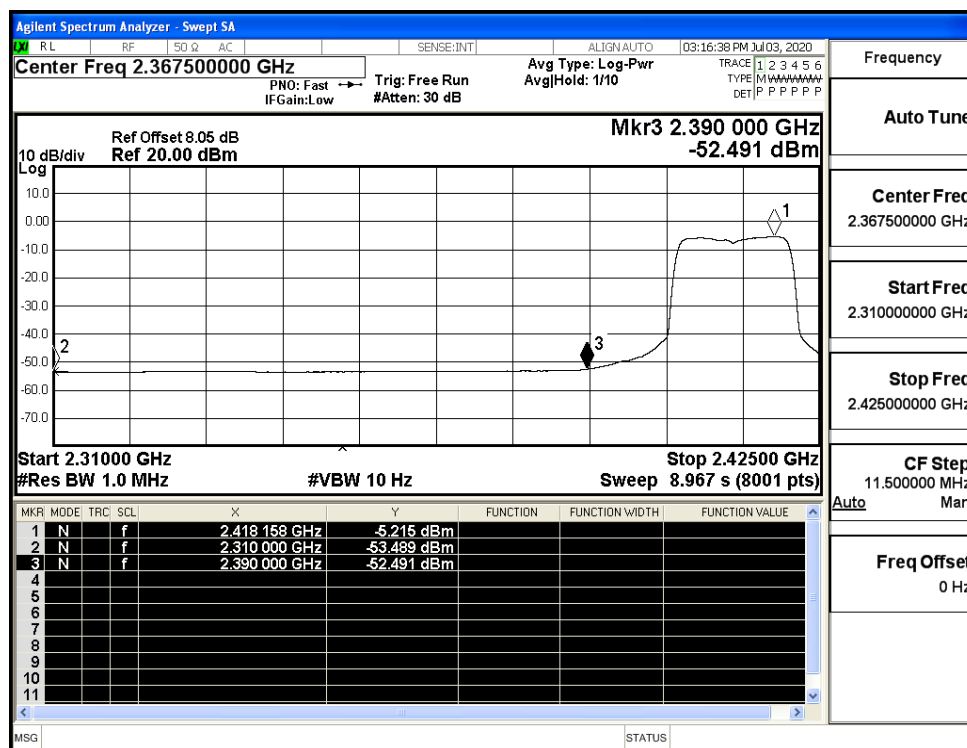




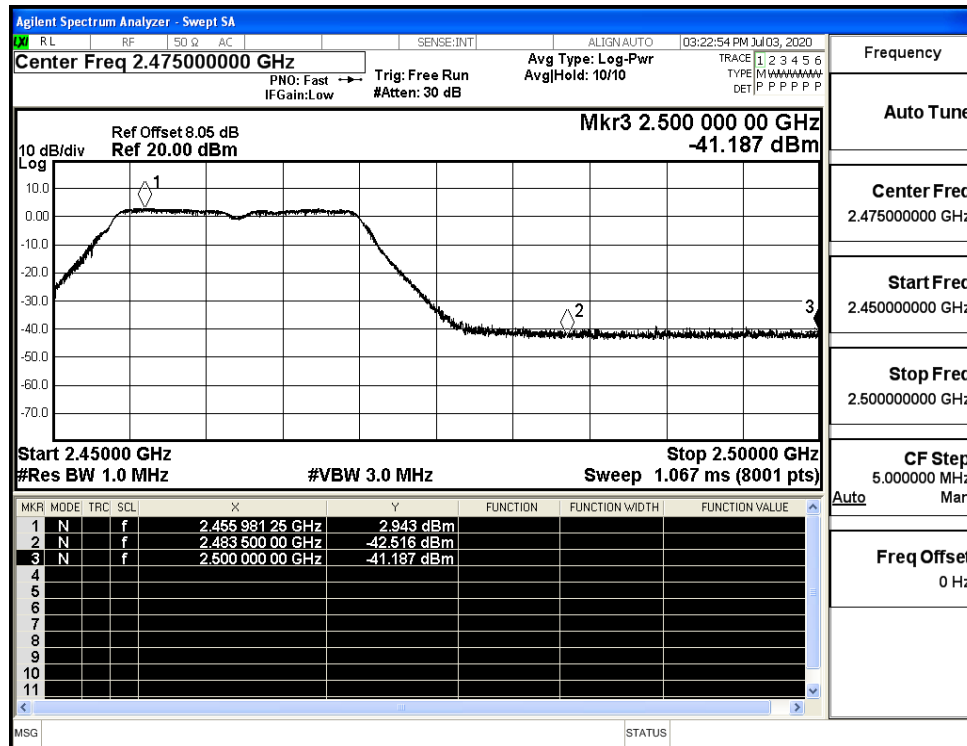
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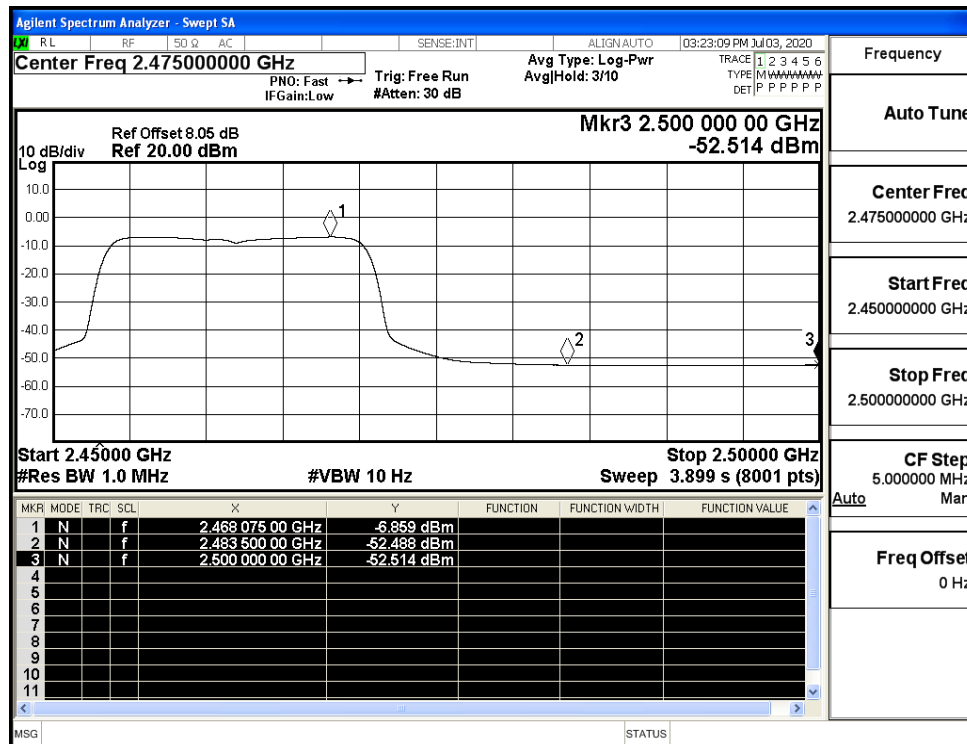
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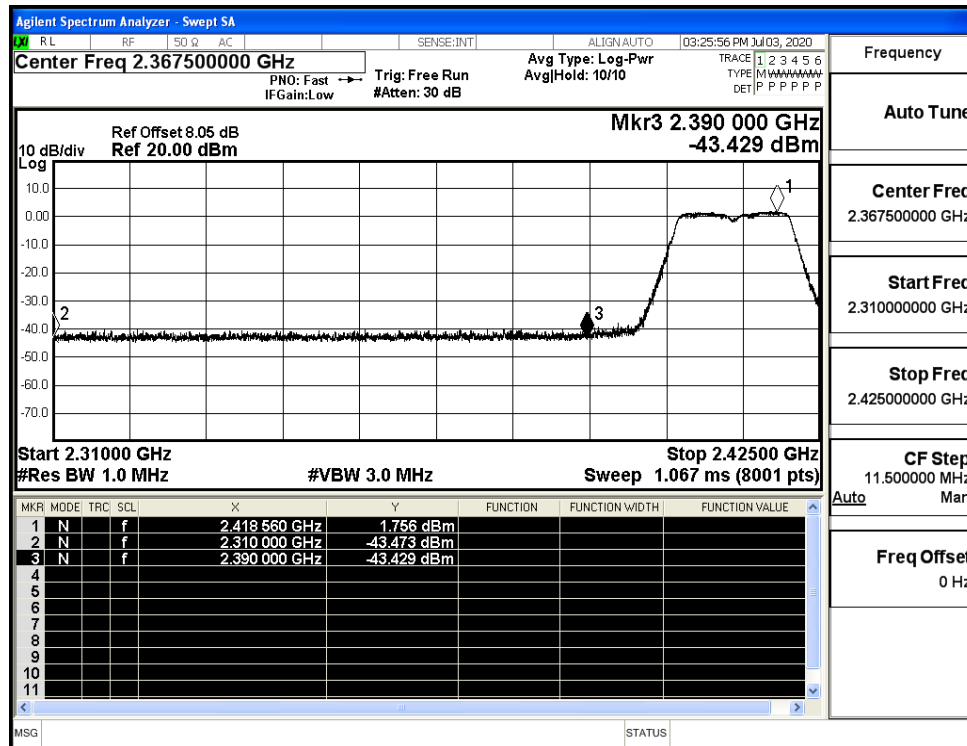
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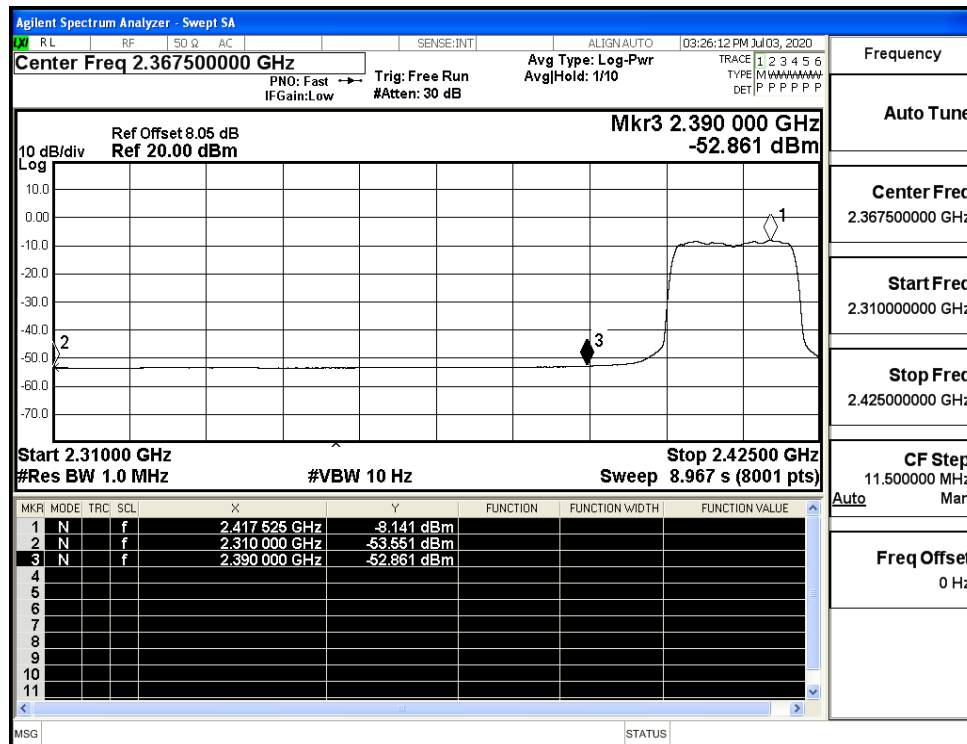
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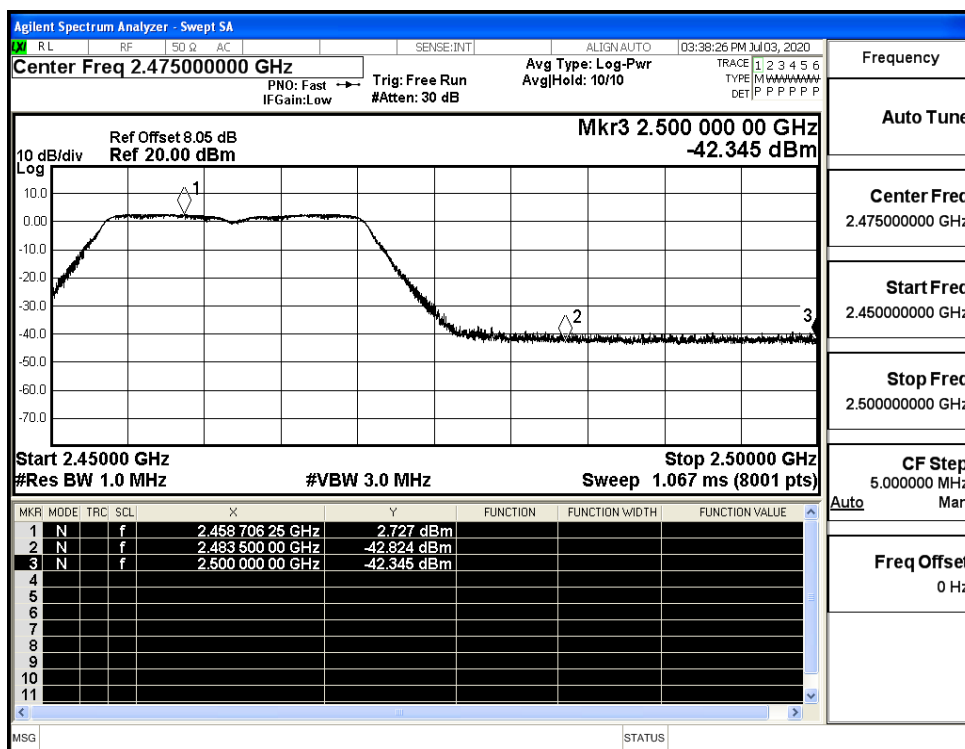
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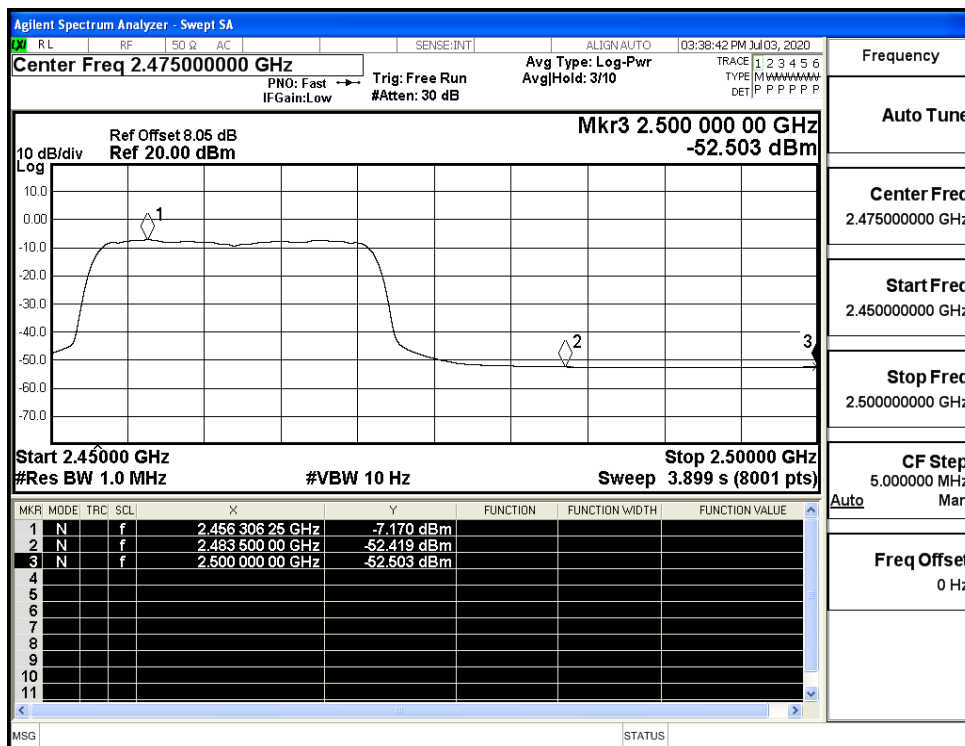
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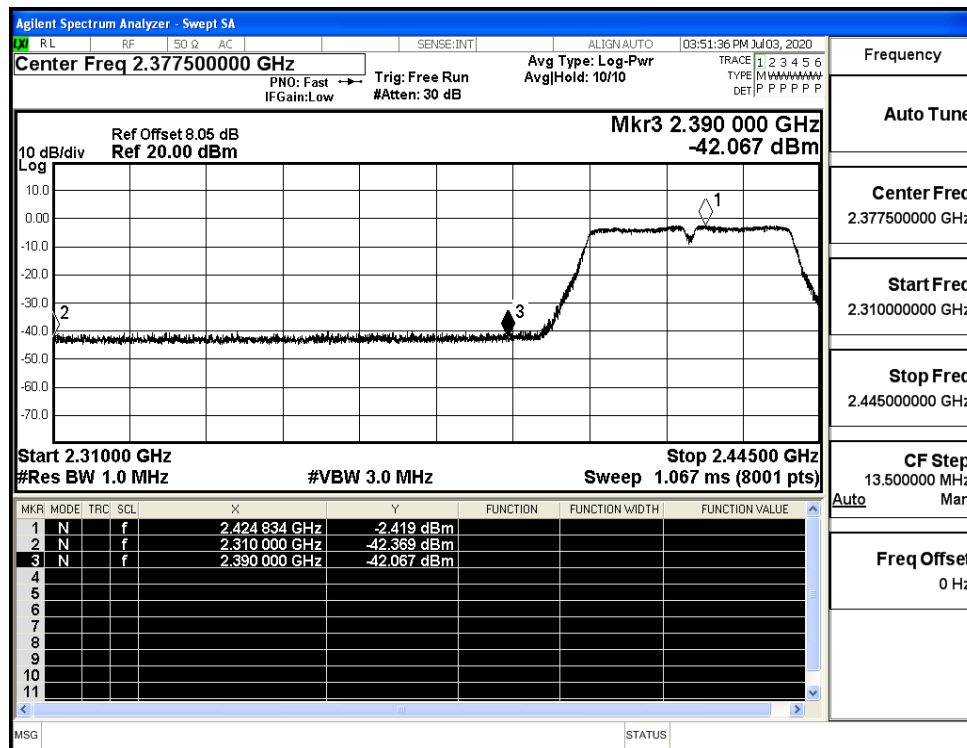
## Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_PEAK



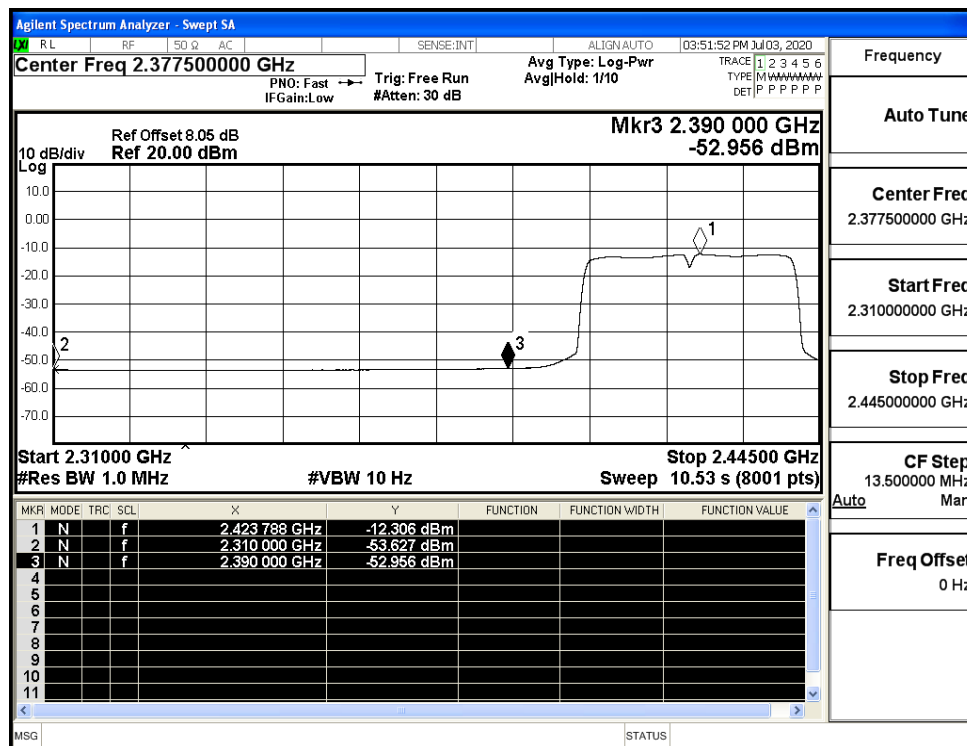
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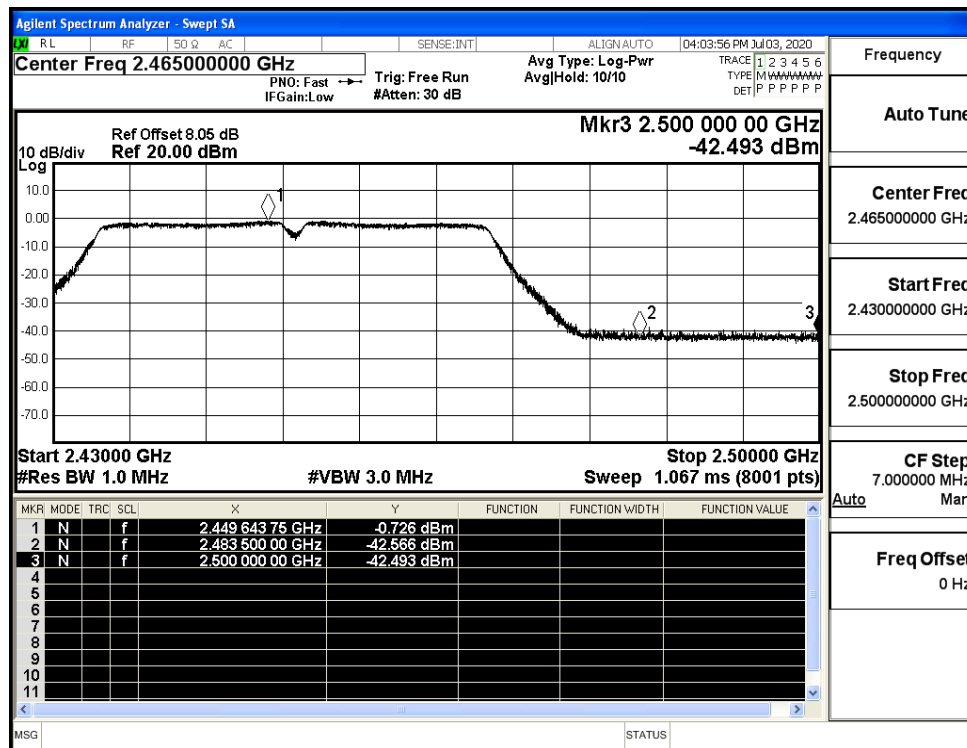
## Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_PEAK



## Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_AV



## Restrict-band band-edge measurements\_11N40SISO\_2452\_Ant1\_PEAK



## Restrict-band band-edge measurements\_11N40SISO\_2452\_Ant1\_AV

