

## Appendix A

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

Product Name: Video camera

Trade Mark: N/A

Test Model: X50W

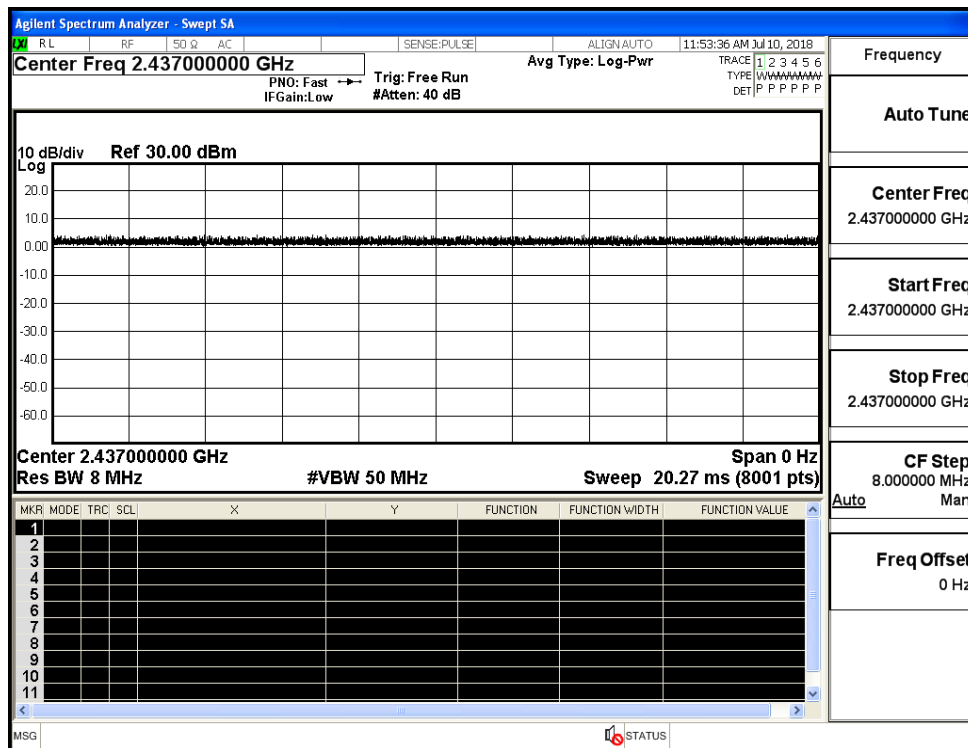
#### Environmental Conditions

|                    |             |
|--------------------|-------------|
| Temperature:       | 23.2 ° C    |
| Relative Humidity: | 52.1%       |
| ATM Pressure:      | 100.0 kPa   |
| Test Engineer:     | Mina.Xu     |
| Supervised by:     | Jayden.Zhuo |

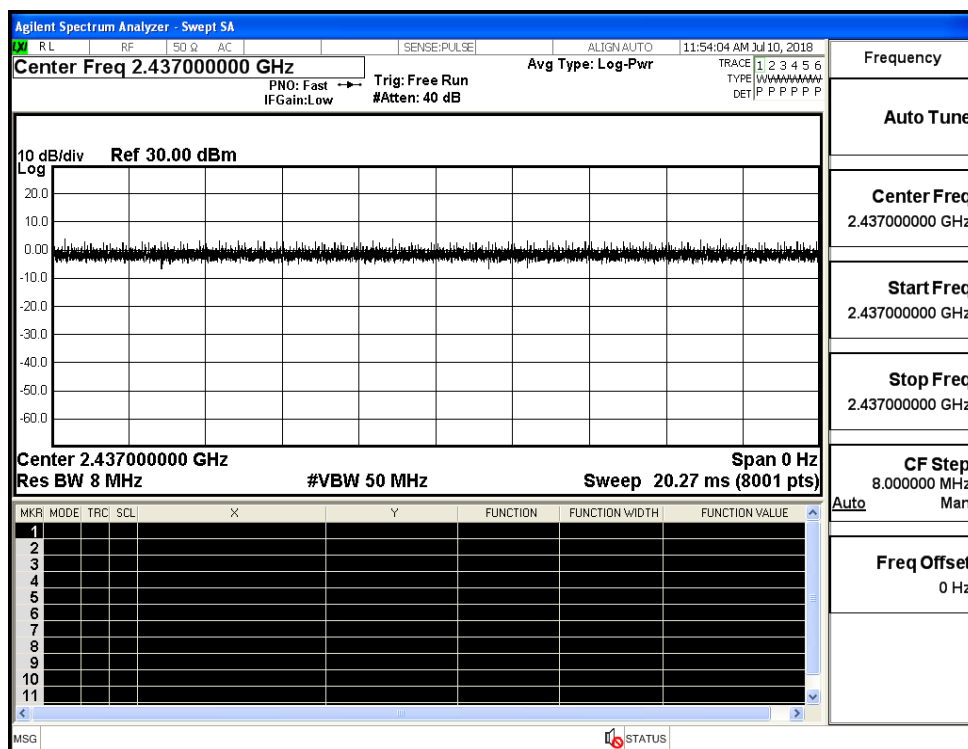
#### A.1 Duty Cycle

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

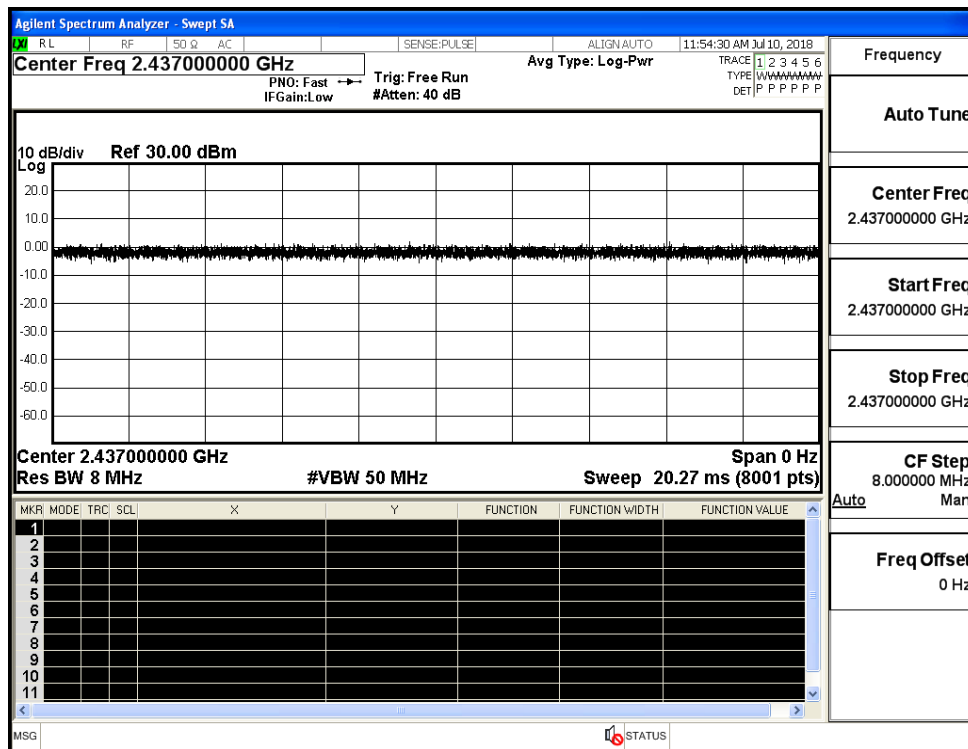
## Duty Cycle\_11B\_2437\_Ant1



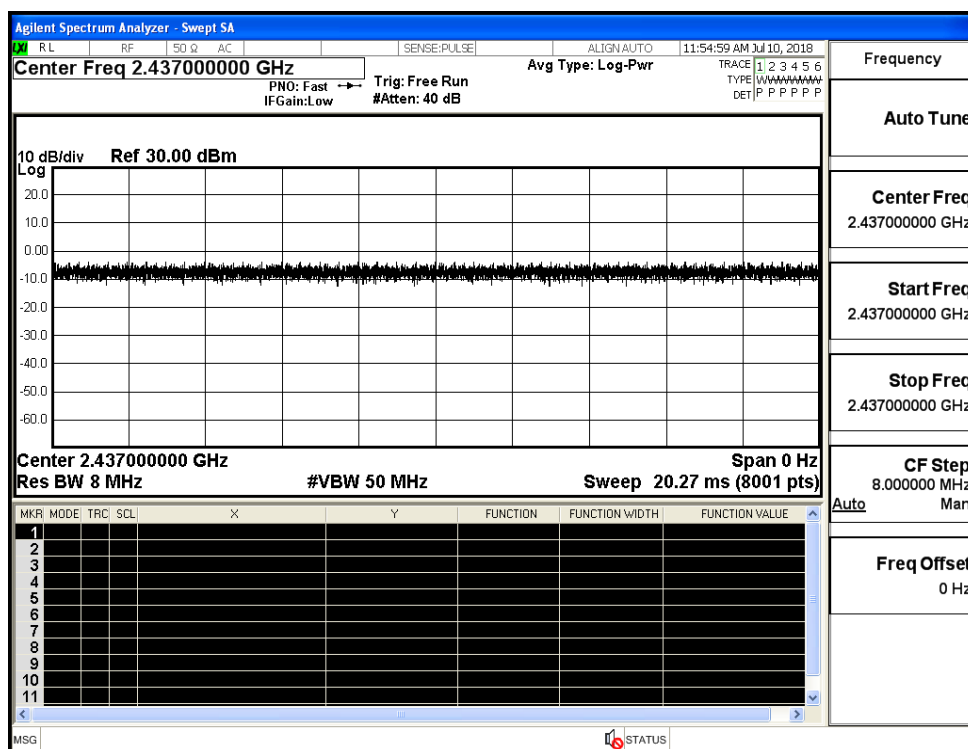
## Duty Cycle\_11G\_2437\_Ant1



## Duty Cycle\_11N20SISO\_2437\_Ant1



## Duty Cycle\_11N40SISO\_2437\_Ant1



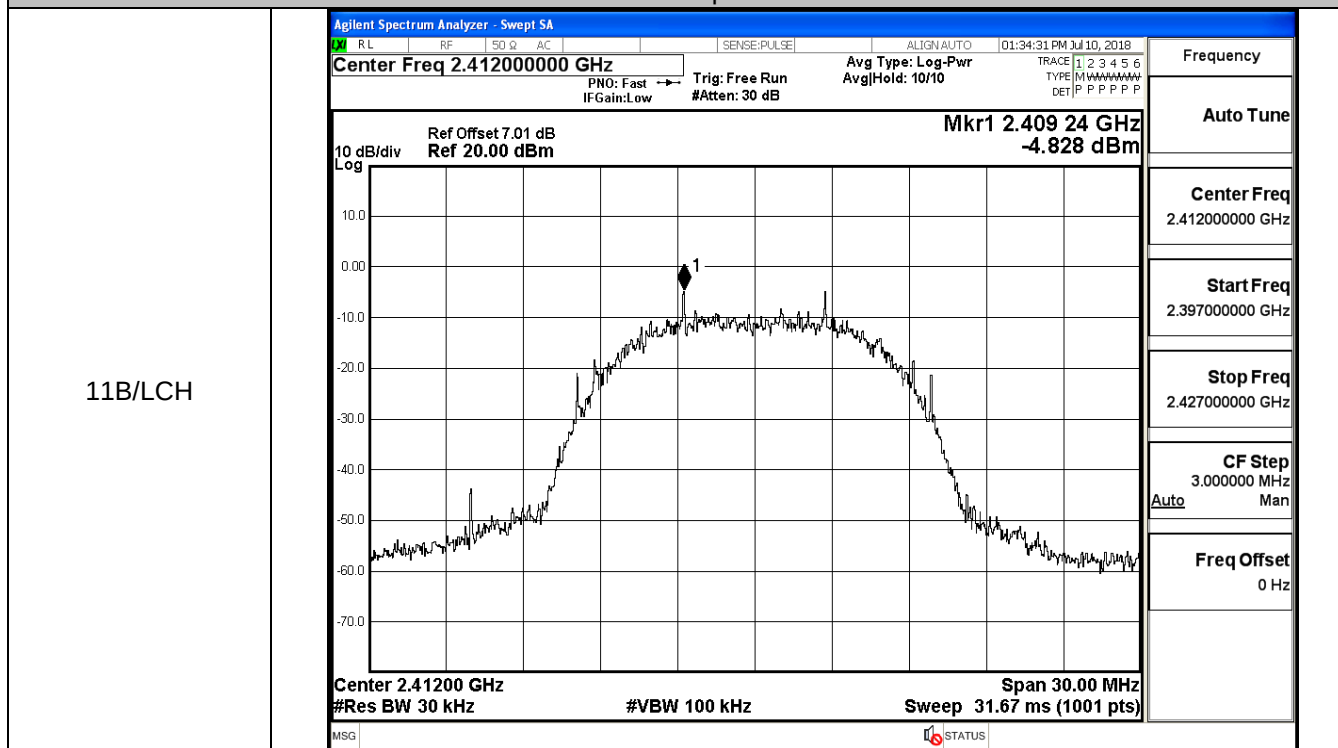
**A.2 Maximum Conducted Output Power**

| Mode      | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B       | LCH     | 11.67            | 30          | PASS    |
|           | MCH     | 11.92            | 30          | PASS    |
|           | HCH     | 12.09            | 30          | PASS    |
| 11G       | LCH     | 13.22            | 30          | PASS    |
|           | MCH     | 12.91            | 30          | PASS    |
|           | HCH     | 13.62            | 30          | PASS    |
| 11N20SISO | LCH     | 13.94            | 30          | PASS    |
|           | MCH     | 13.67            | 30          | PASS    |
|           | HCH     | 13.76            | 30          | PASS    |
| 11N40SISO | LCH     | 16.97            | 30          | PASS    |
|           | MCH     | 16.64            | 30          | PASS    |
|           | HCH     | 16.79            | 30          | PASS    |

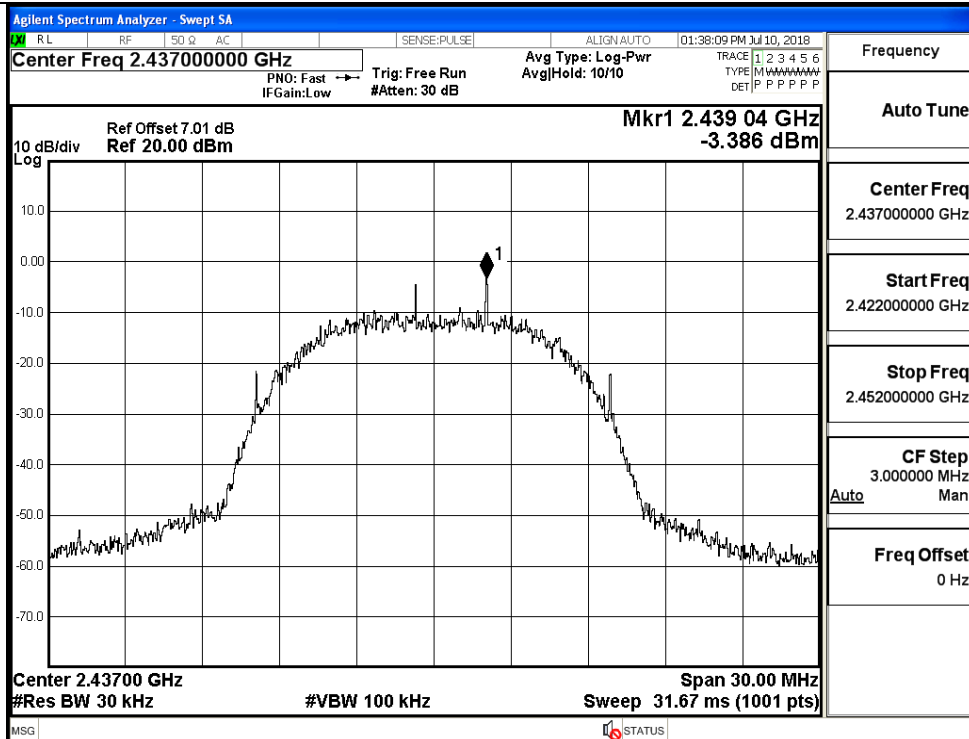
### A.3 Maximum Power Spectral Density

| Mode      | Channel | Meas.Level [dBm/30KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|------------------------|------------------|---------|
| 11B       | LCH     | -4.828                 | 8                | PASS    |
|           | MCH     | -3.386                 | 8                | PASS    |
|           | HCH     | -3.365                 | 8                | PASS    |
| 11G       | LCH     | -12.262                | 8                | PASS    |
|           | MCH     | -13.314                | 8                | PASS    |
|           | HCH     | -13.554                | 8                | PASS    |
| 11N20SISO | LCH     | -12.019                | 8                | PASS    |
|           | MCH     | -12.843                | 8                | PASS    |
|           | HCH     | -13.352                | 8                | PASS    |
| 11N40SISO | LCH     | -15.018                | 8                | PASS    |
|           | MCH     | -11.897                | 8                | PASS    |
|           | HCH     | -16.177                | 8                | PASS    |

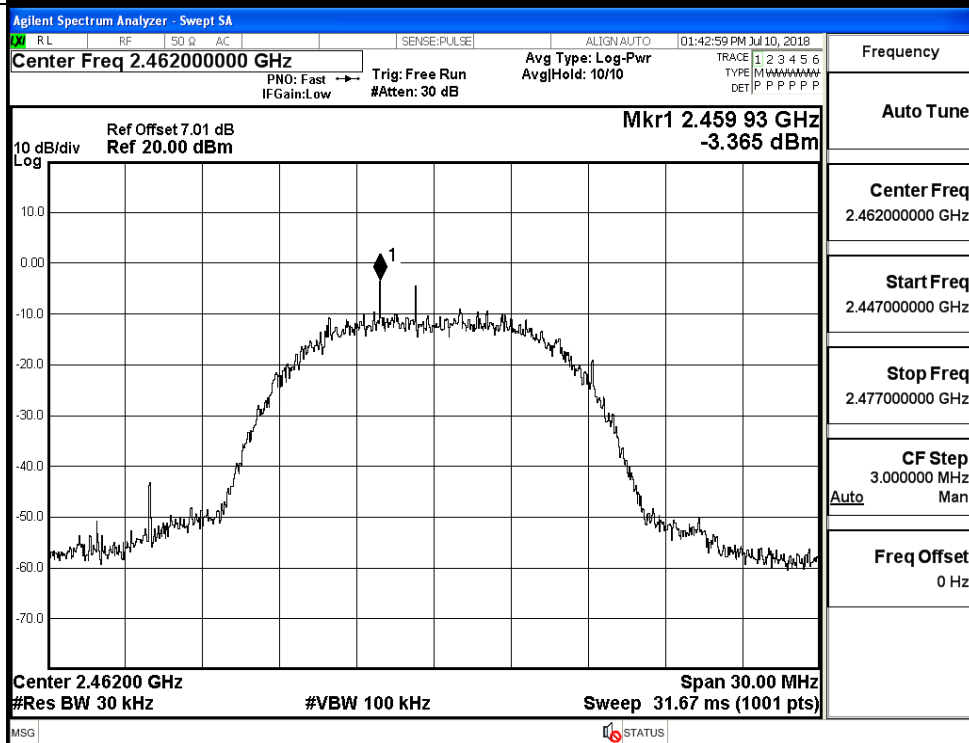
#### Test Graphs



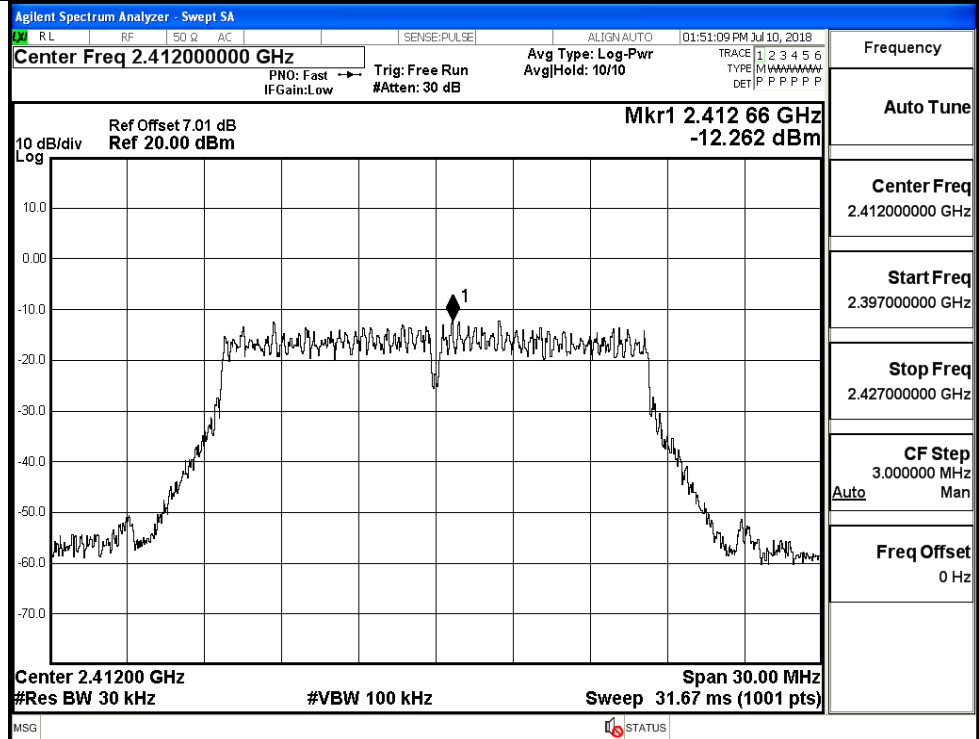
11B/MCH



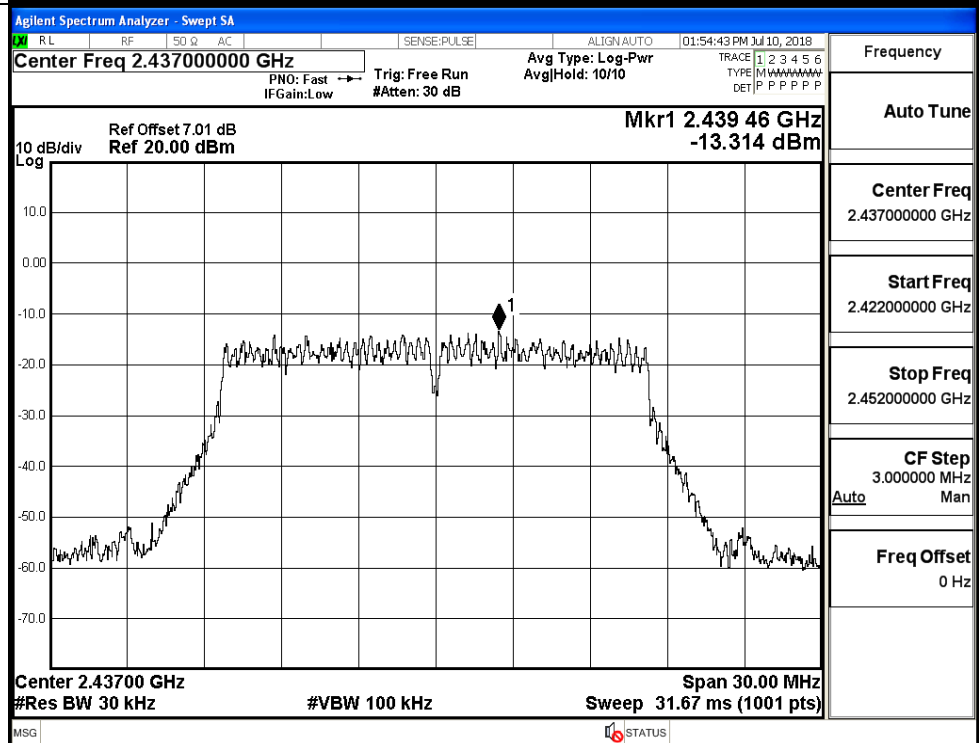
11B/HCH



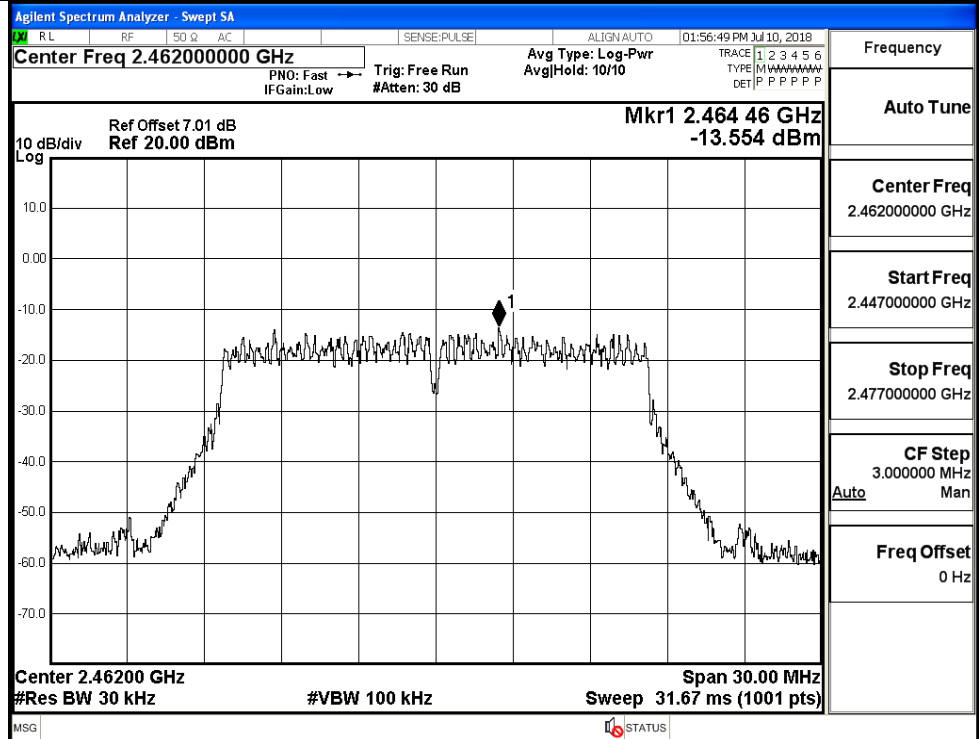
11G/LCH



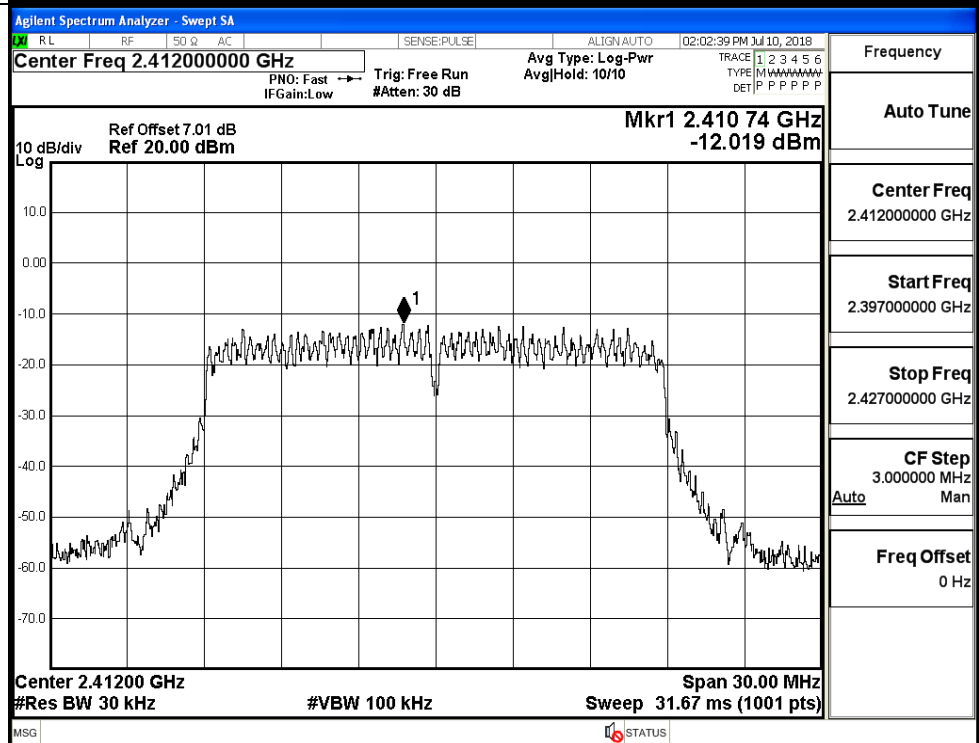
11G/MCH



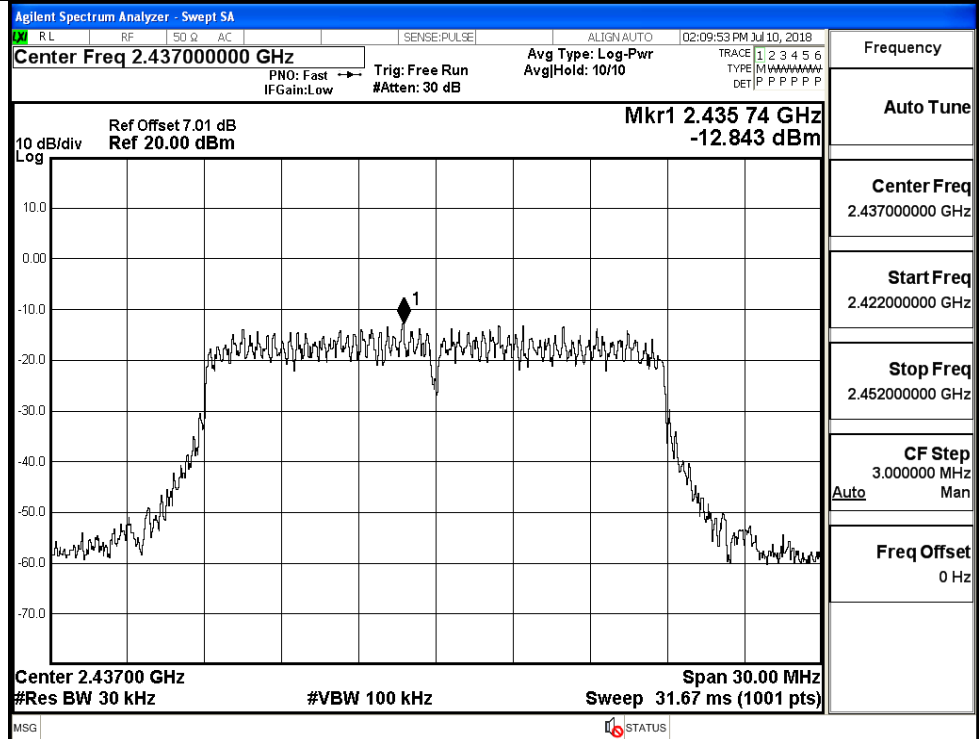
11G/HCH



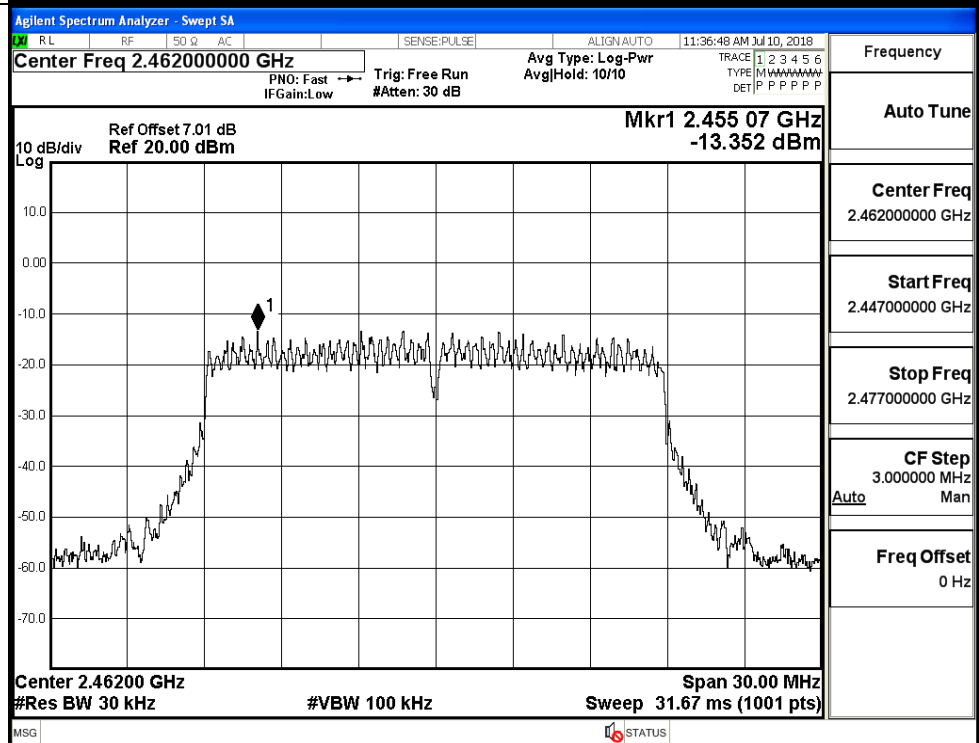
11N20SISO/LCH



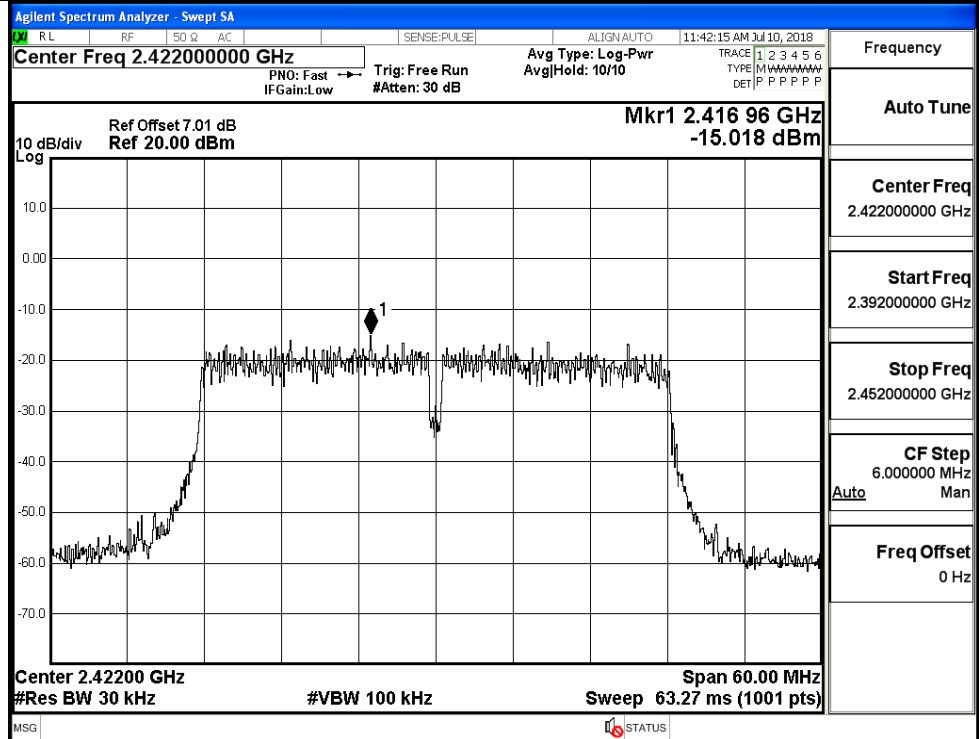
11N20SISO/MCH



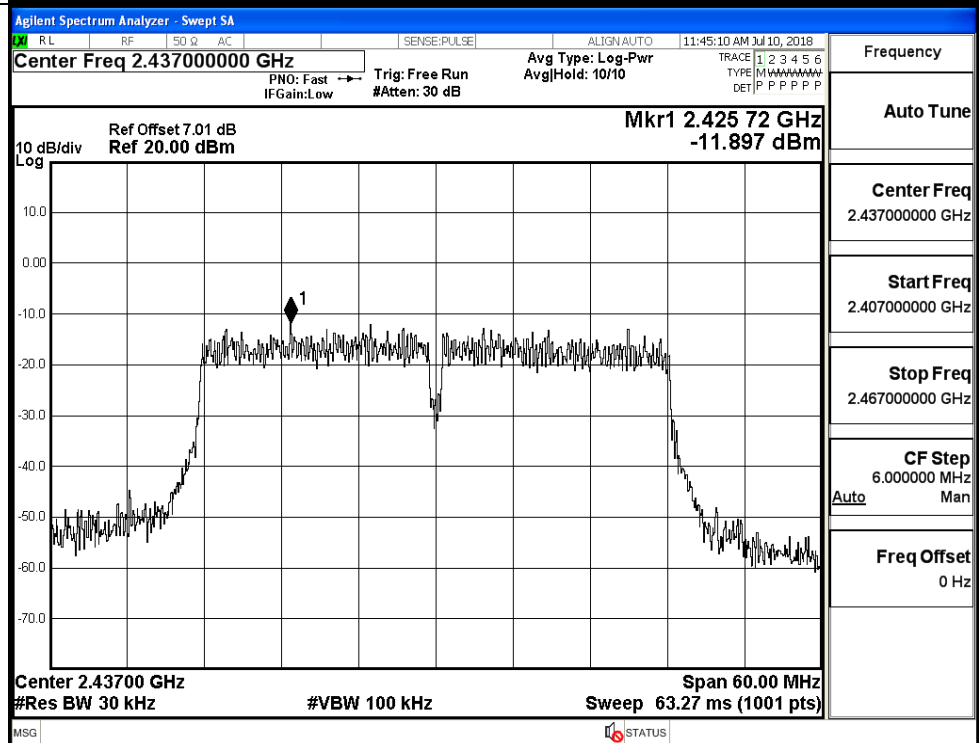
11N20SISO/HCH



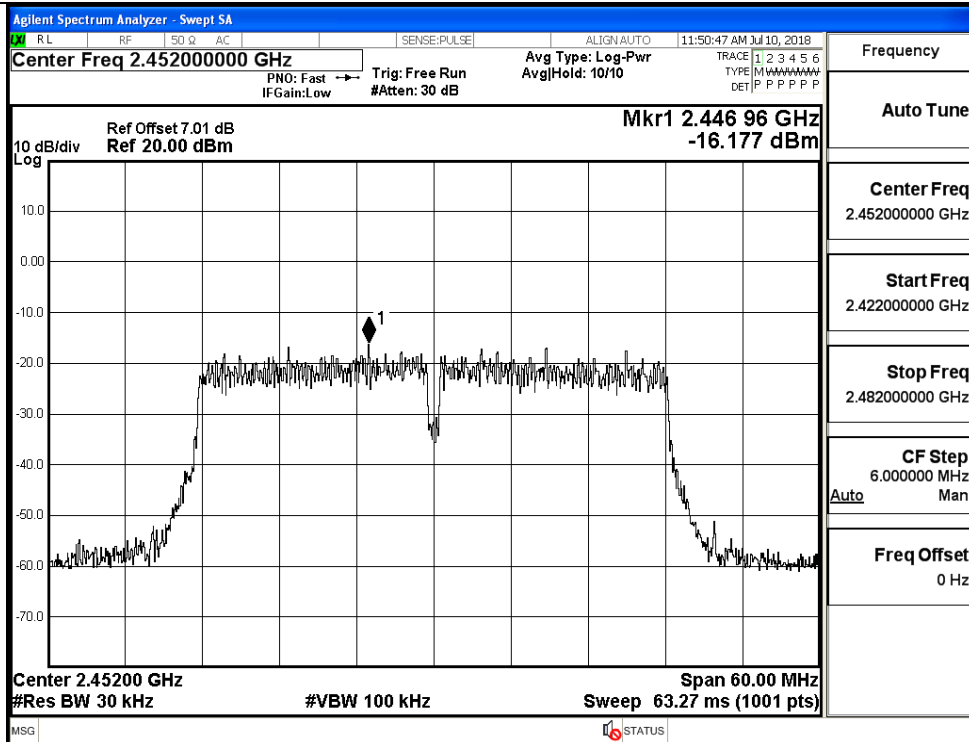
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

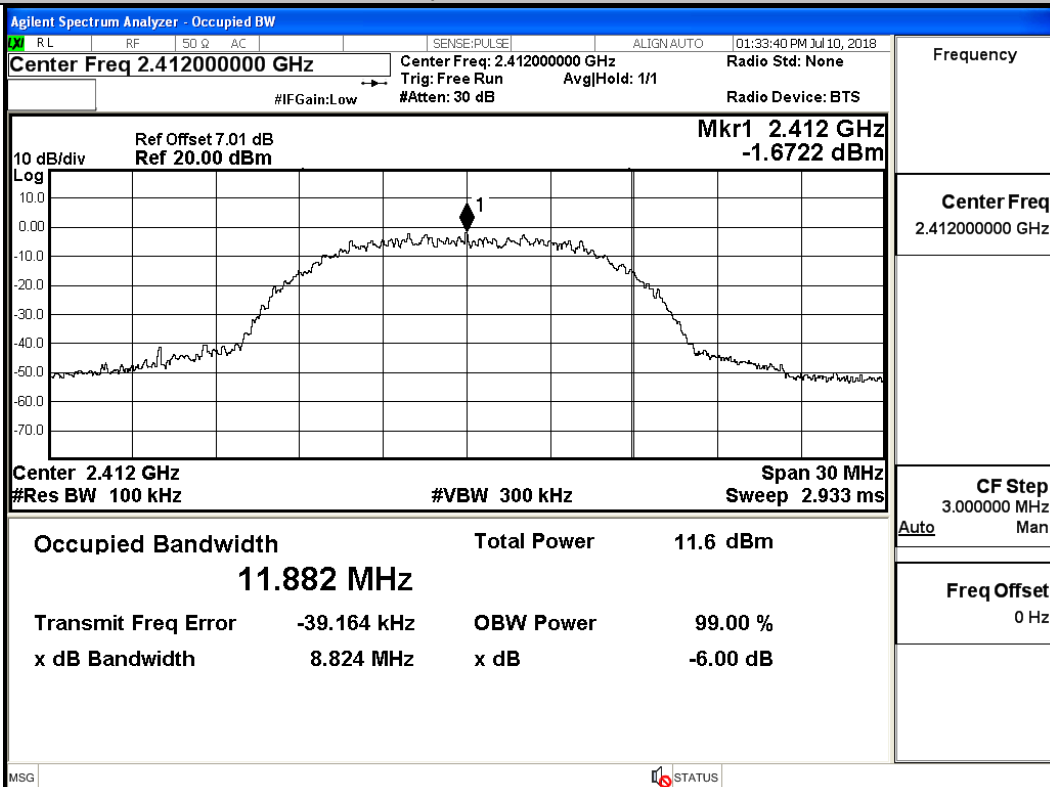


## A.4 6dB Bandwidth

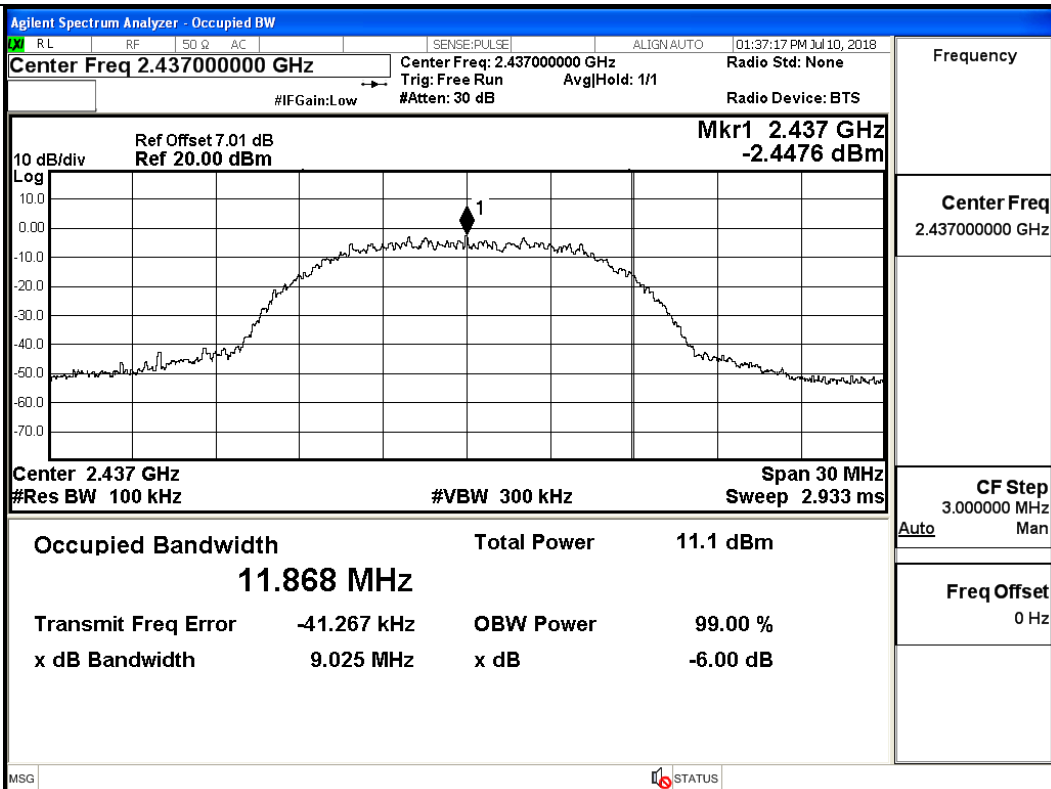
| Mode      | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B       | LCH     | 8.824               | $\geq 0.5$  | PASS    |
|           | MCH     | 9.025               | $\geq 0.5$  | PASS    |
|           | HCH     | 8.724               | $\geq 0.5$  | PASS    |
| 11G       | LCH     | 16.43               | $\geq 0.5$  | PASS    |
|           | MCH     | 16.44               | $\geq 0.5$  | PASS    |
|           | HCH     | 16.43               | $\geq 0.5$  | PASS    |
| 11N20SISO | LCH     | 17.15               | $\geq 0.5$  | PASS    |
|           | MCH     | 17.33               | $\geq 0.5$  | PASS    |
|           | HCH     | 17.16               | $\geq 0.5$  | PASS    |
| 11N40SISO | LCH     | 35.80               | $\geq 0.5$  | PASS    |
|           | MCH     | 35.84               | $\geq 0.5$  | PASS    |
|           | HCH     | 36.09               | $\geq 0.5$  | PASS    |

## Test Graphs

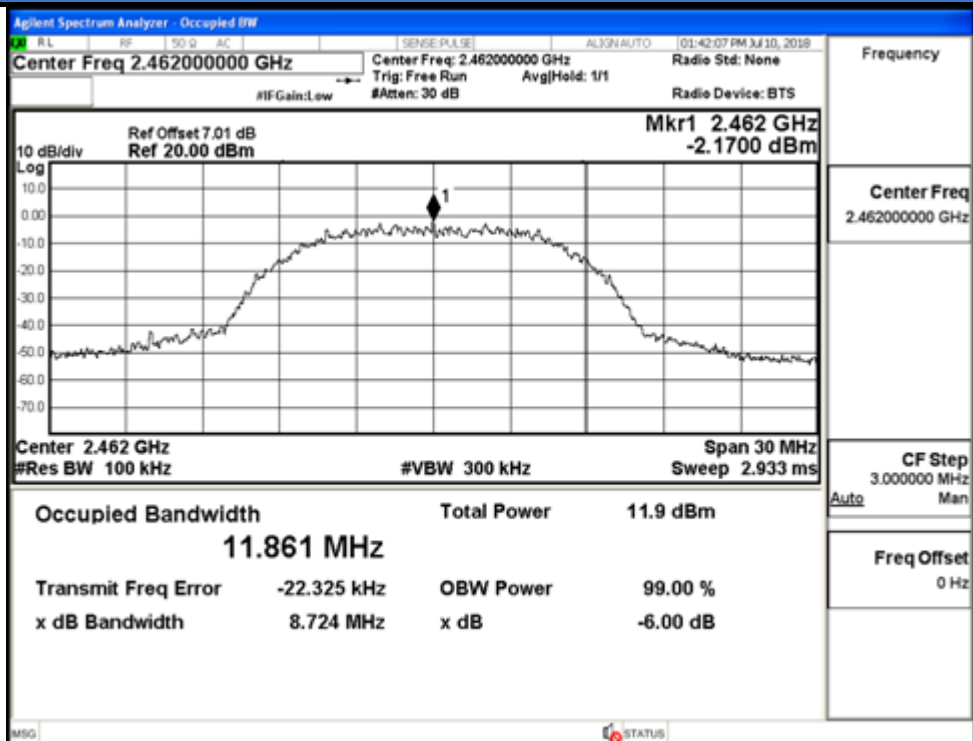
11B/LCH



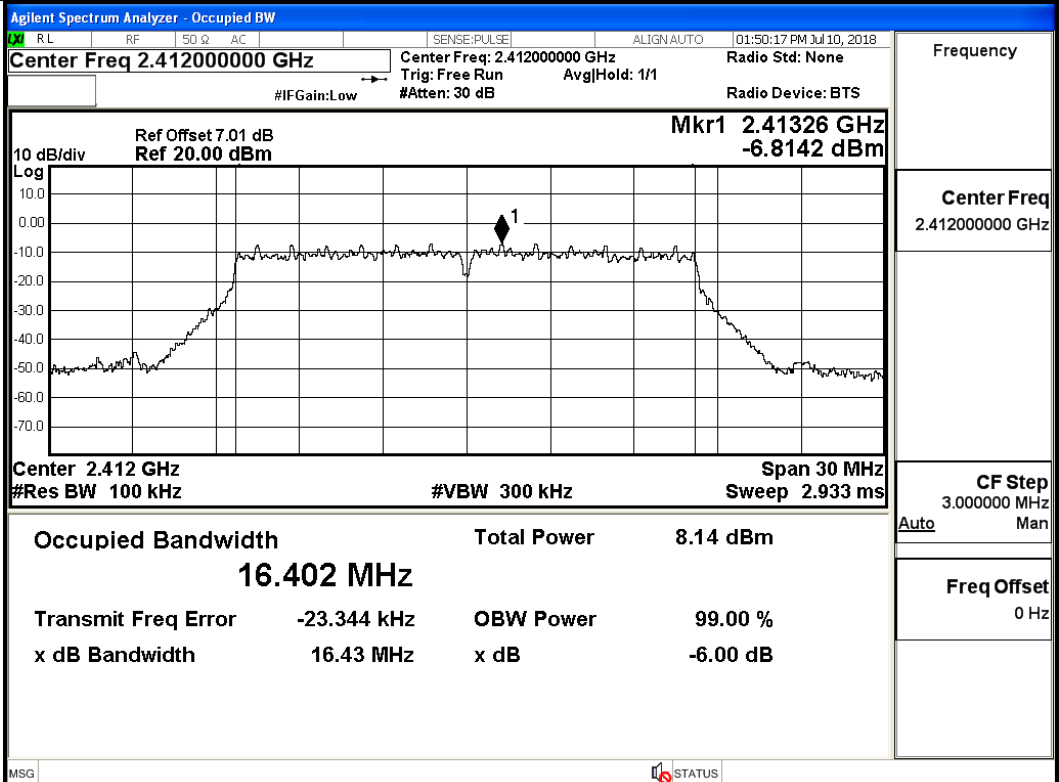
11B/MCH



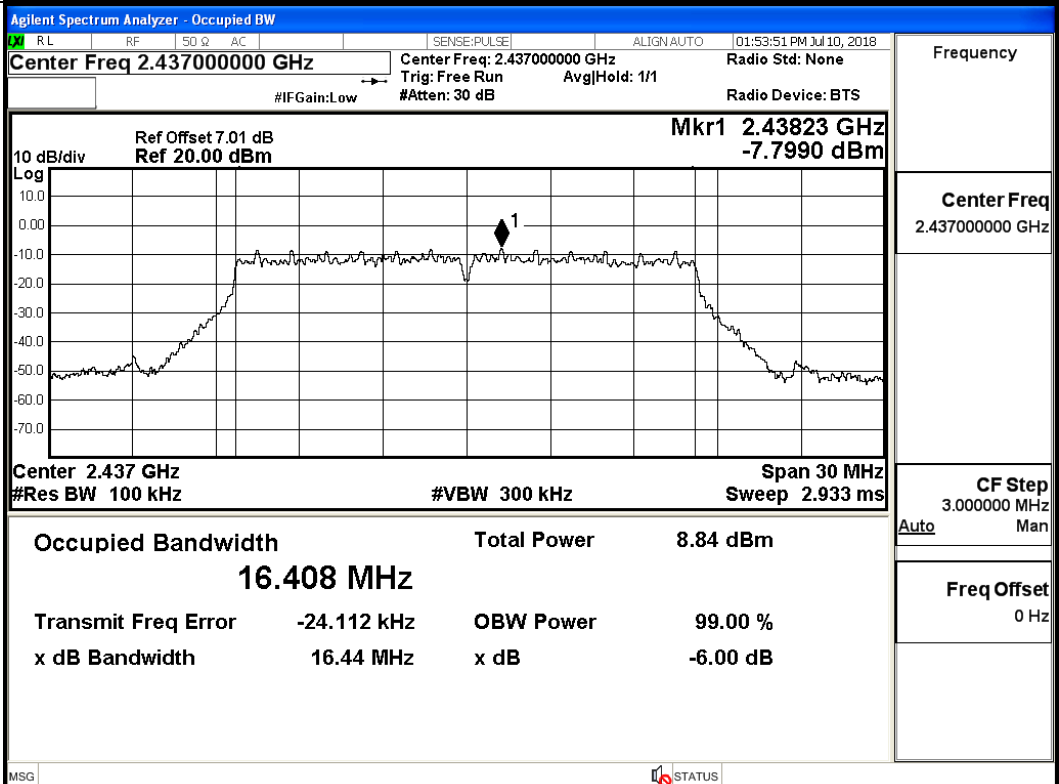
11B/HCH



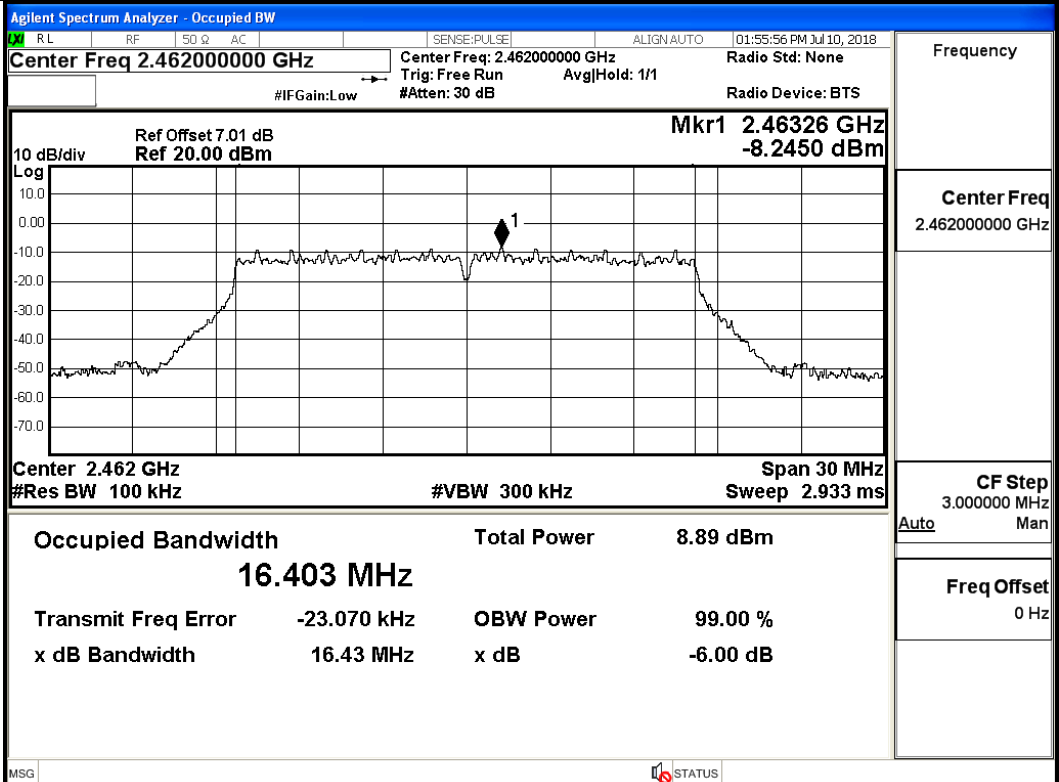
11G/LCH



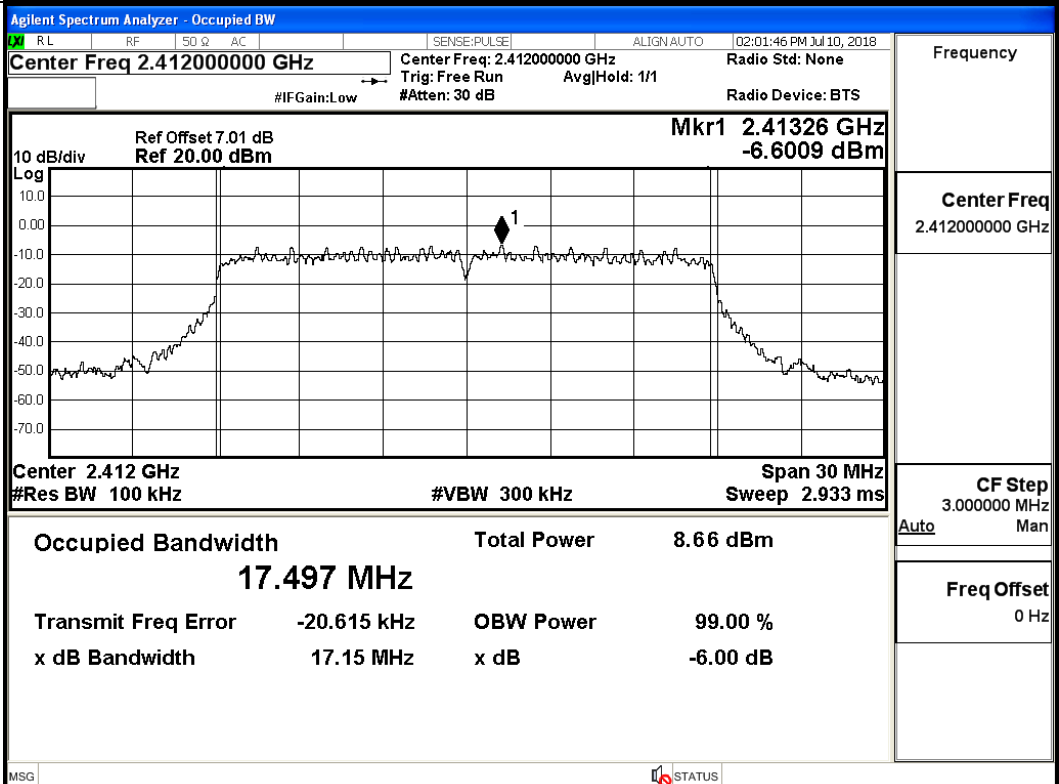
11G/MCH



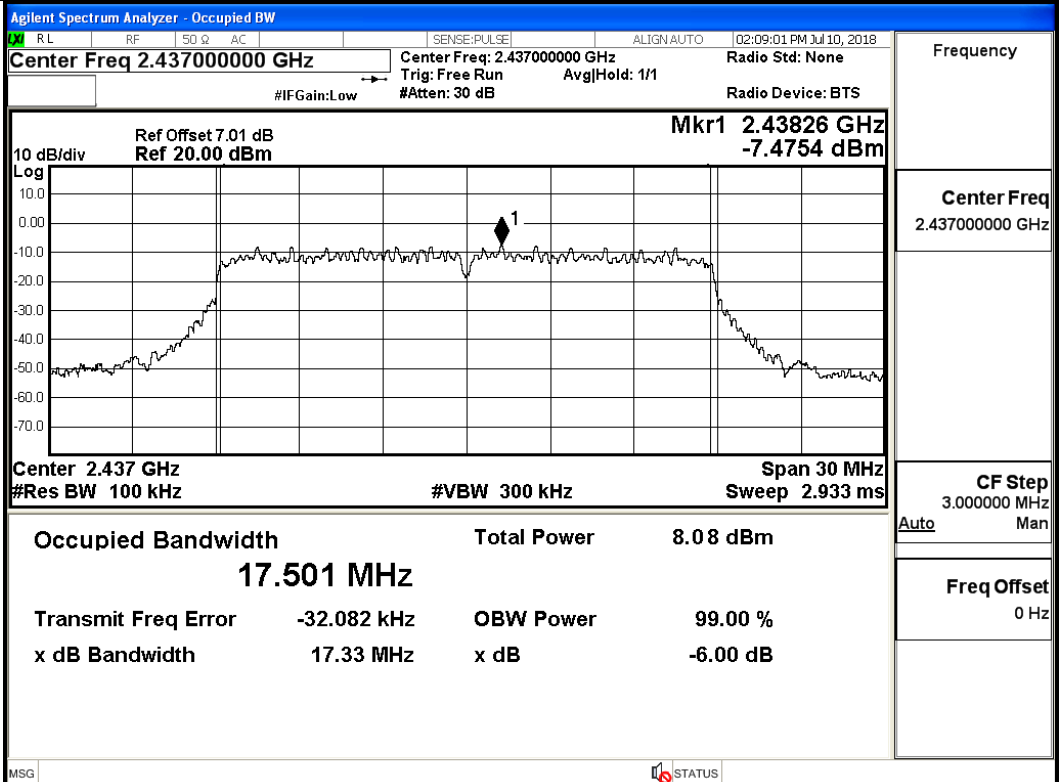
11G/HCH



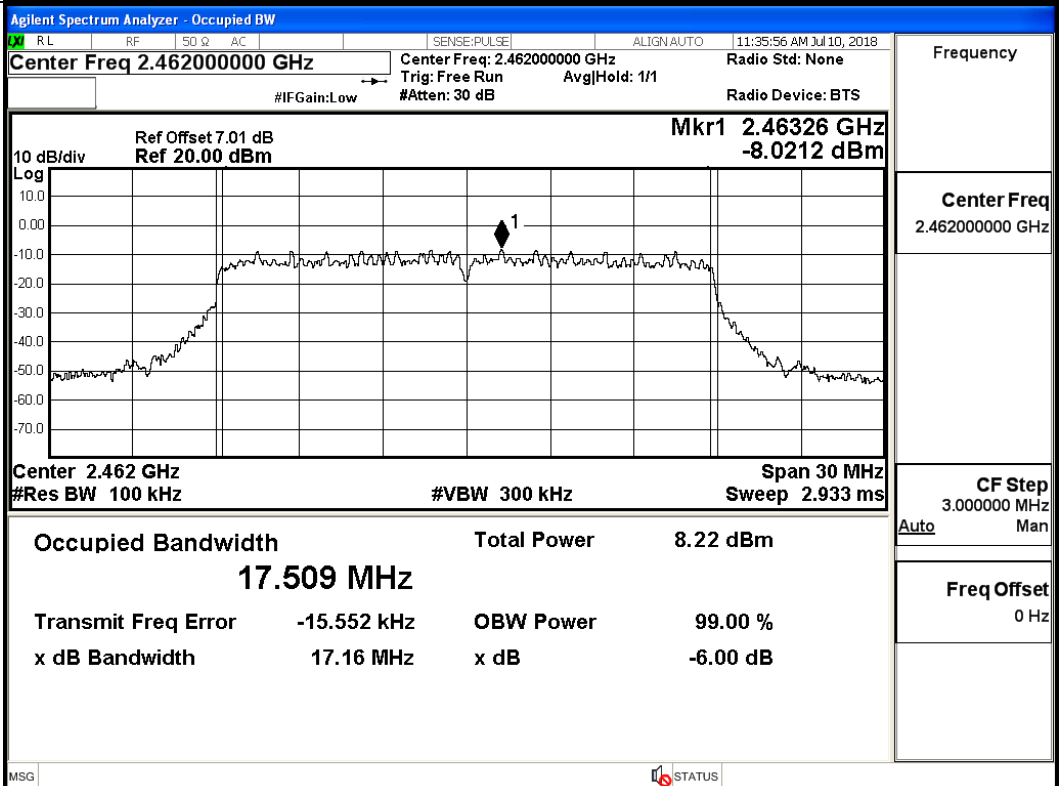
11N20SISO/LCH



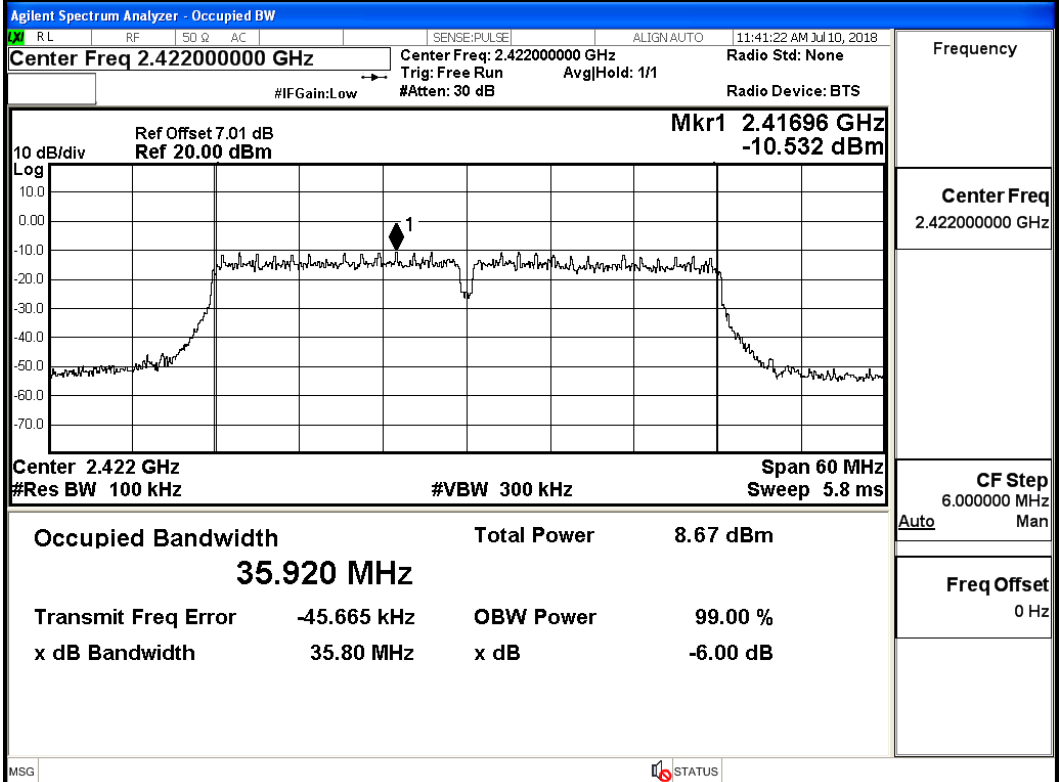
11N20SISO/MCH



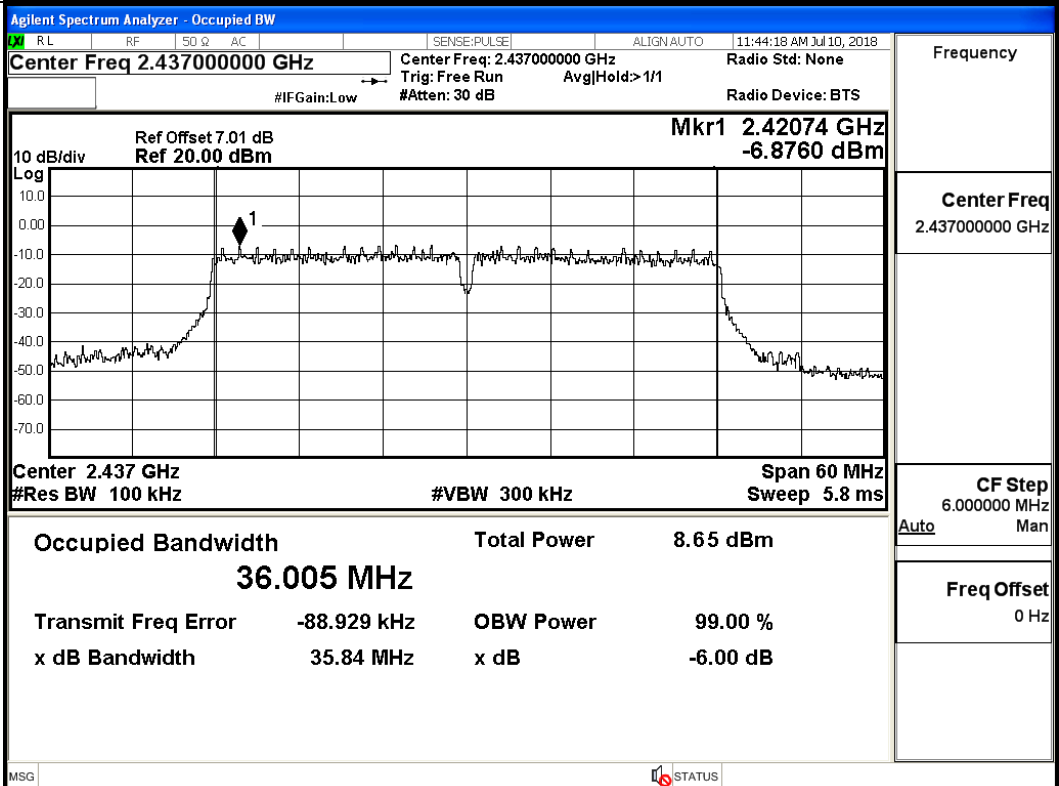
11N20SISO/HCH



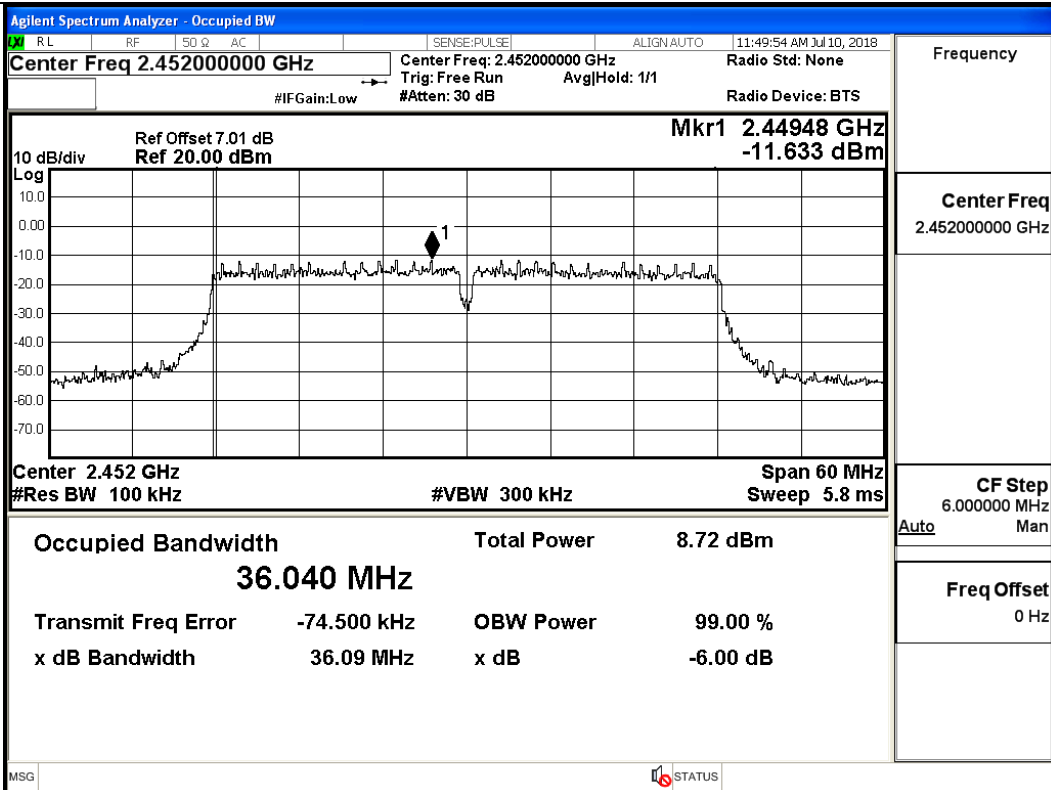
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

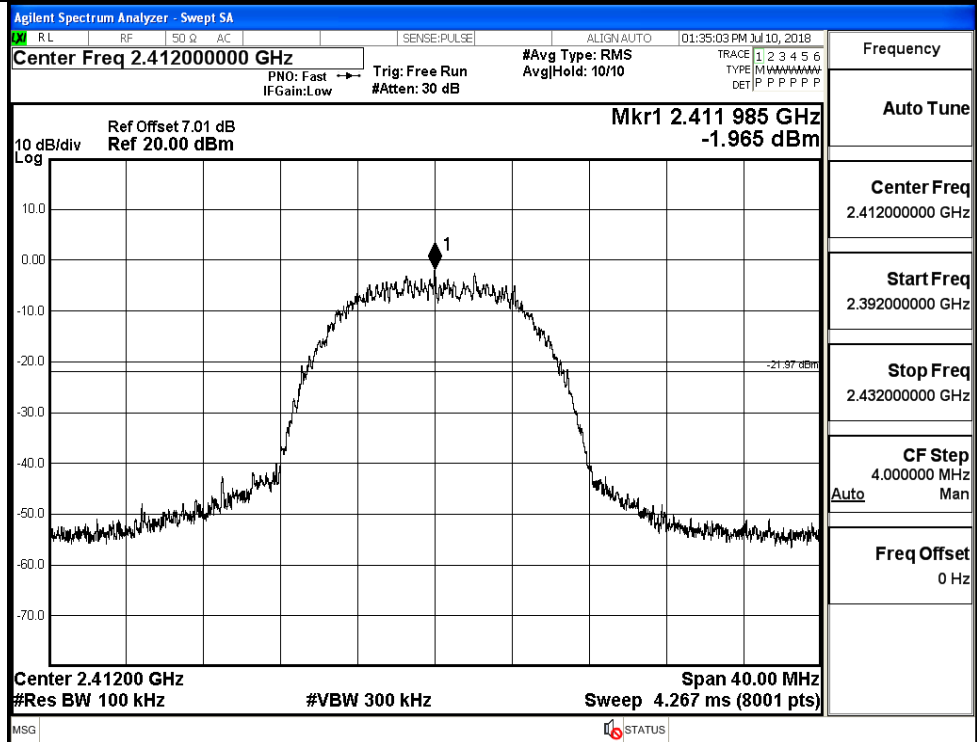


## A.5 RF Conducted Spurious Emissions

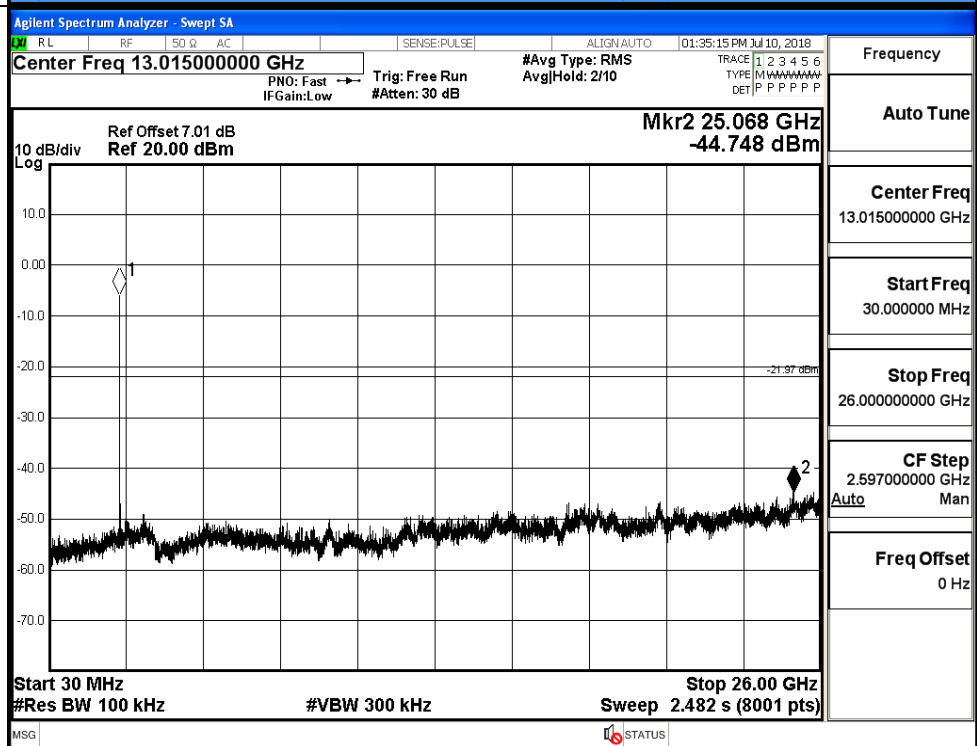
| Mode          | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B           | LCH     | -1.965     | -44.748          | -21.965     | PASS    |
|               | MCH     | -2.725     | -44.774          | -22.725     | PASS    |
|               | HCH     | -2.775     | -44.751          | -22.775     | PASS    |
| 11G           | LCH     | -7.125     | -43.613          | -27.125     | PASS    |
|               | MCH     | -7.956     | -44.496          | -27.956     | PASS    |
|               | HCH     | -8.472     | -44.464          | -28.472     | PASS    |
| 11N20<br>SISO | LCH     | -7.282     | -44.143          | -27.282     | PASS    |
|               | MCH     | -7.764     | -44.036          | -27.764     | PASS    |
|               | HCH     | -8.363     | -43.782          | -28.363     | PASS    |
| 11N40<br>SISO | LCH     | -10.655    | -45.215          | -30.655     | PASS    |
|               | MCH     | -7.000     | -44.396          | -27.000     | PASS    |
|               | HCH     | -11.772    | -45.580          | -31.772     | PASS    |

## 11B LCH Graphs

Pref/11B/LCH

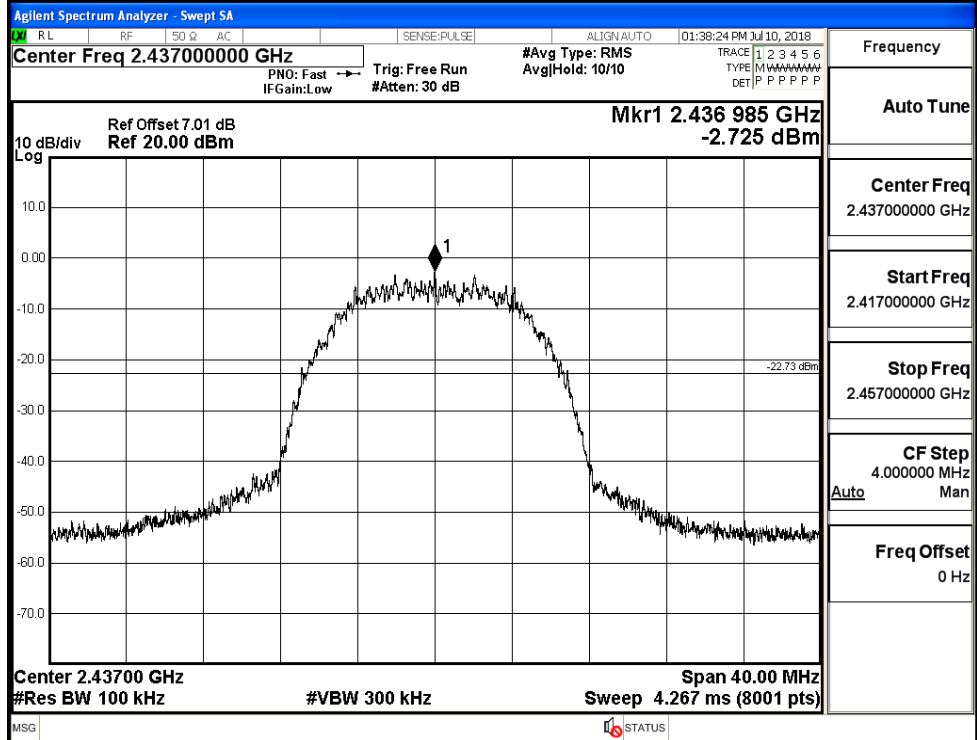


Puw/11B/LCH

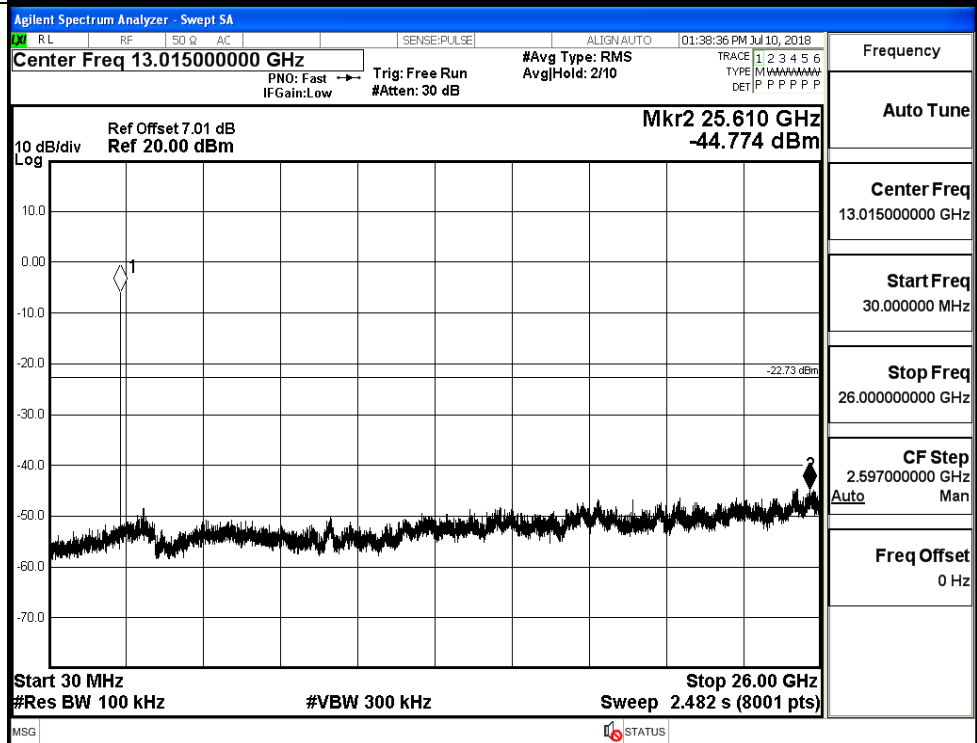


## 11B MCH Graphs

Pref/11B/MCH

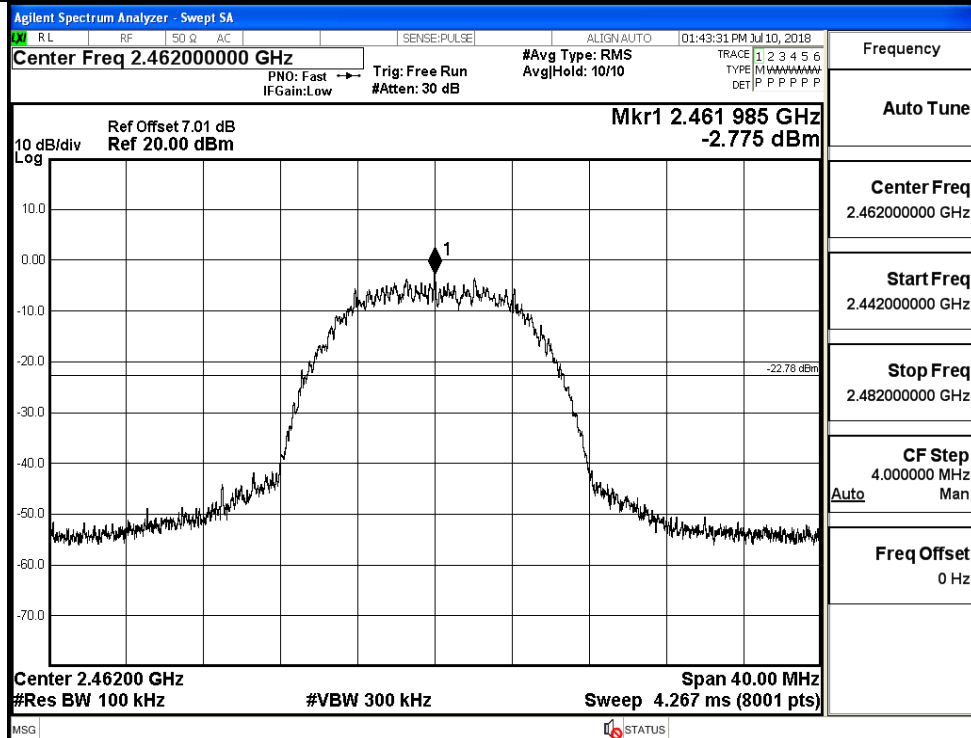


Puw/11B/MCH

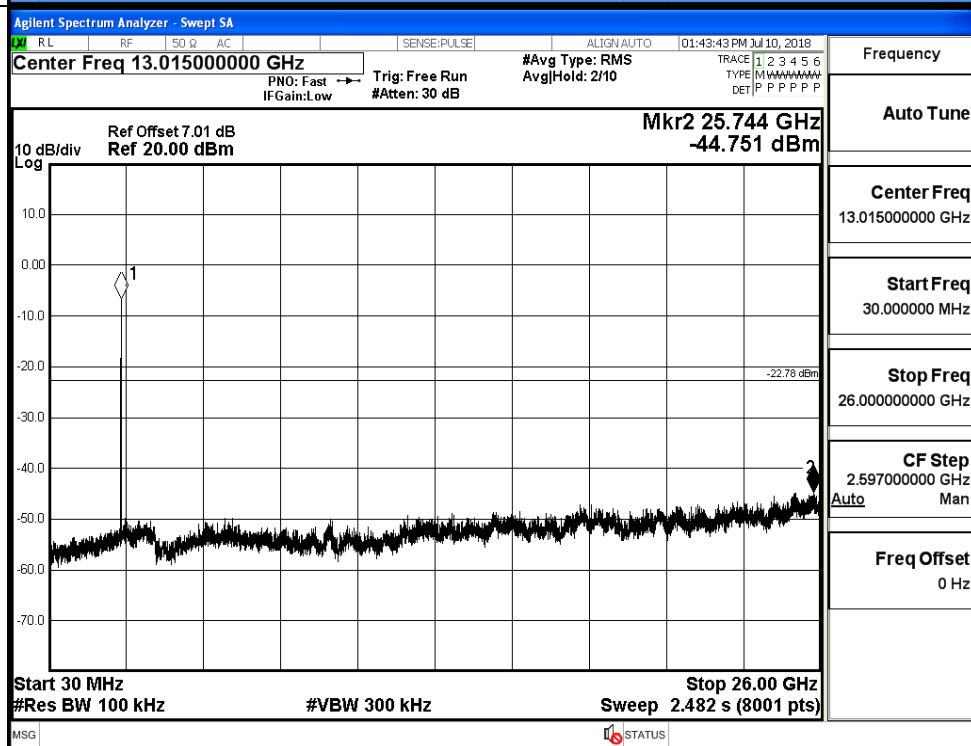


## 11B HCH Graphs

Pref/11B/HCH

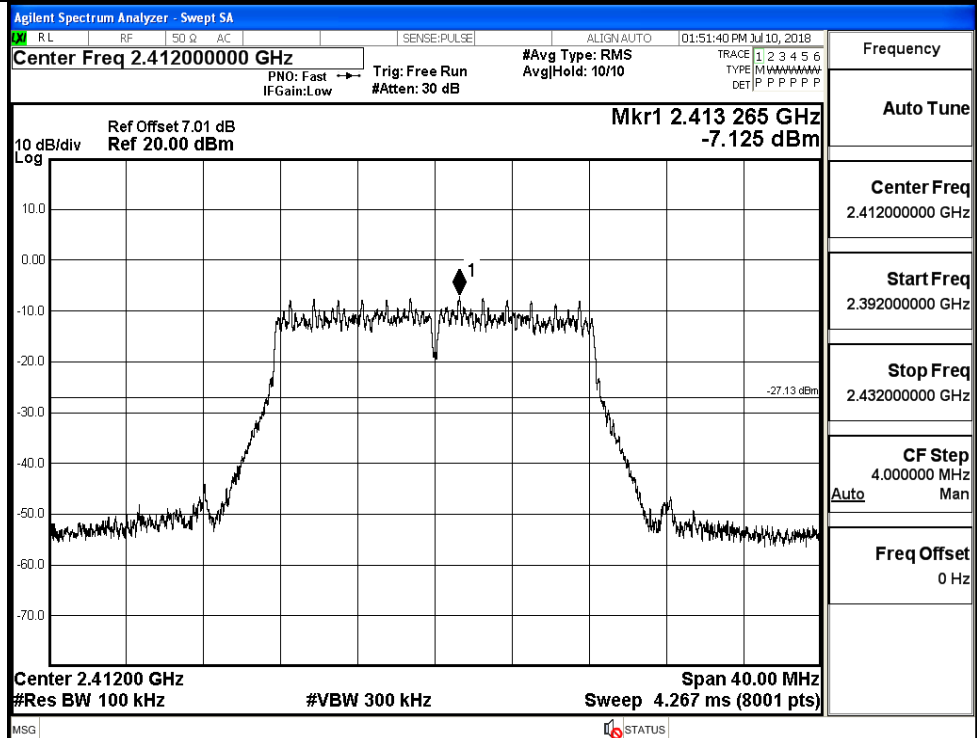


Puw/11B/HCH

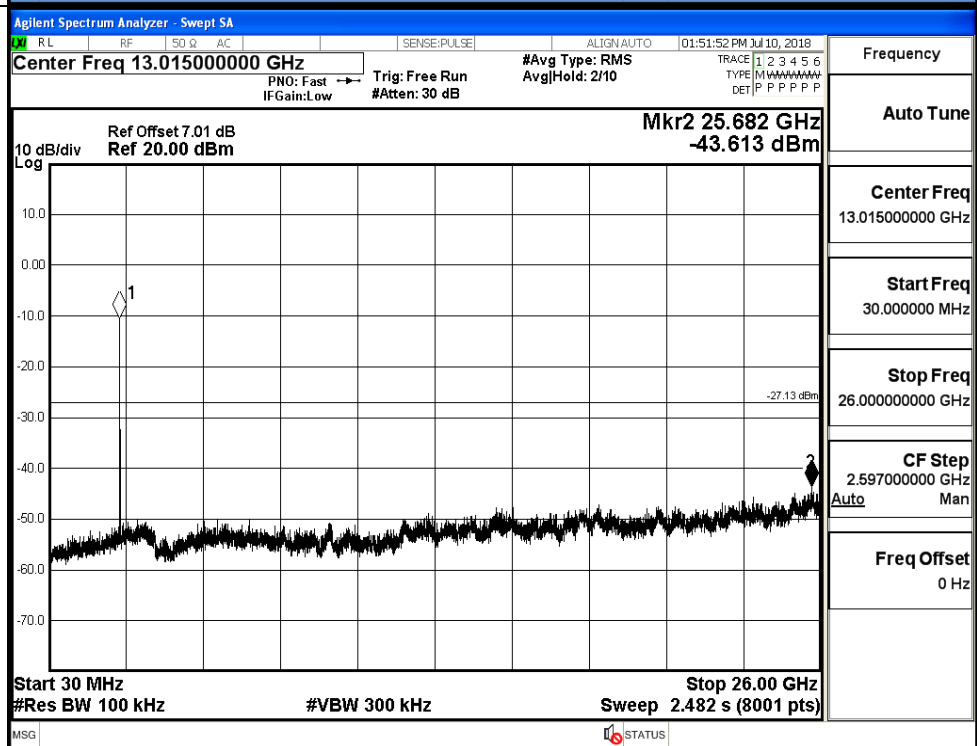


## 11G\_LCH\_Graphs

Pref/11G/LCH

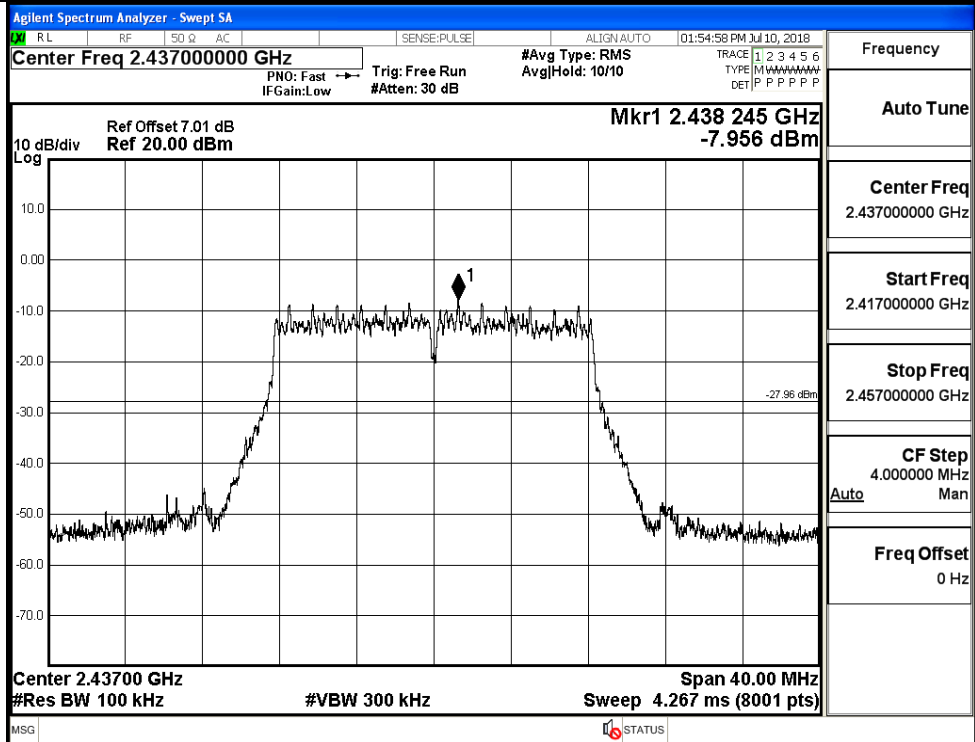


Puw/11G/LCH

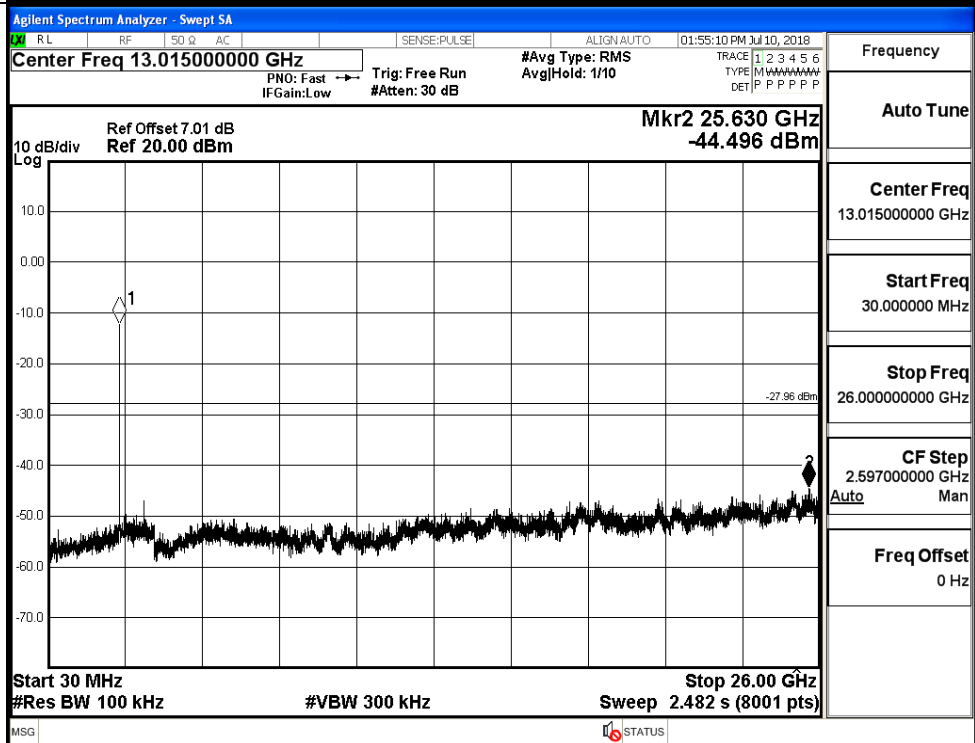


## 11G MCH Graphs

Pref/11G/MCH

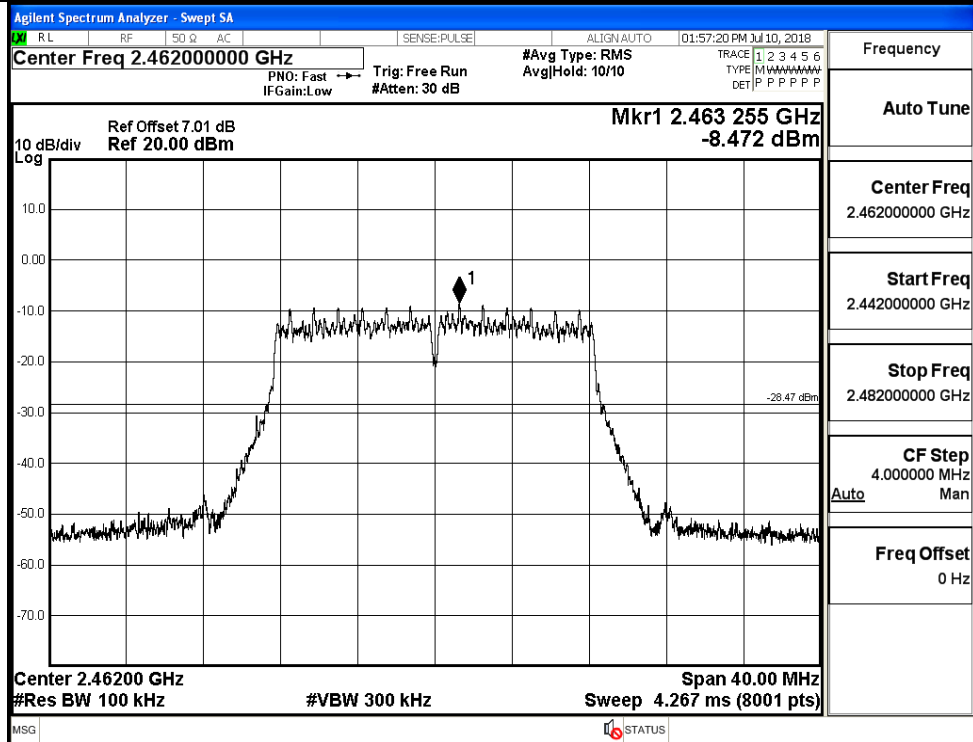


Puw/11G/MCH

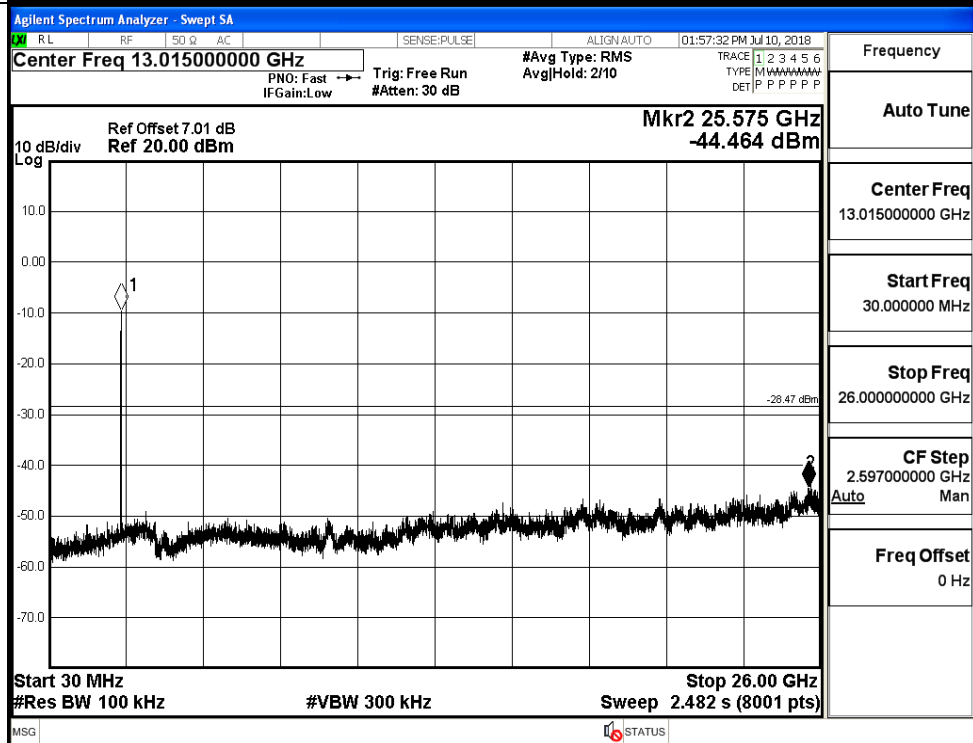


## 11G HCH Graphs

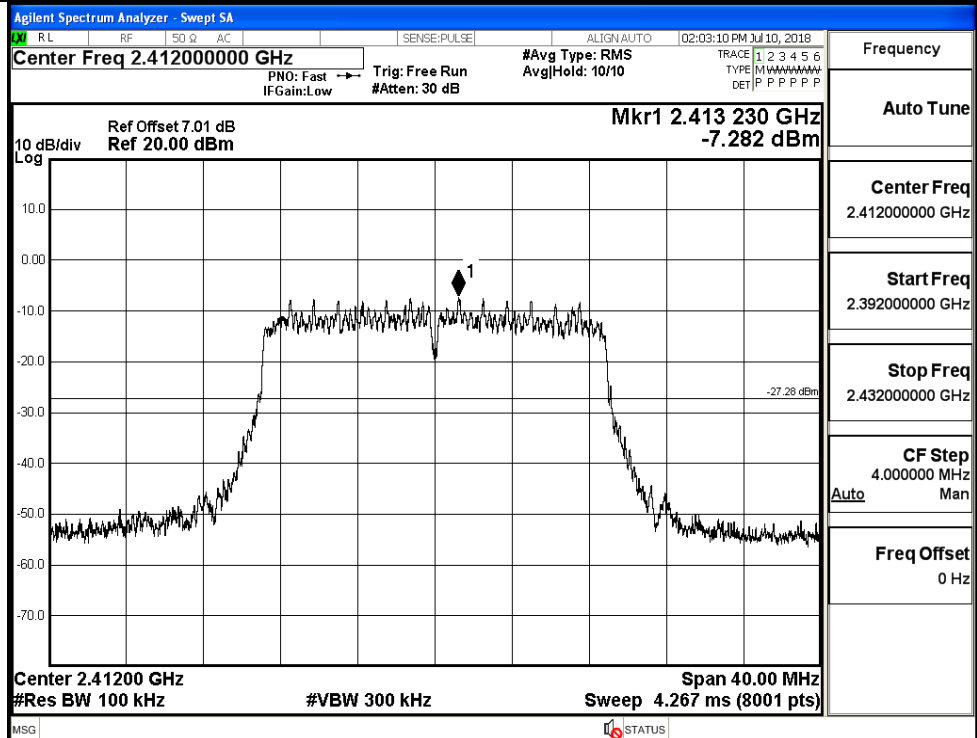
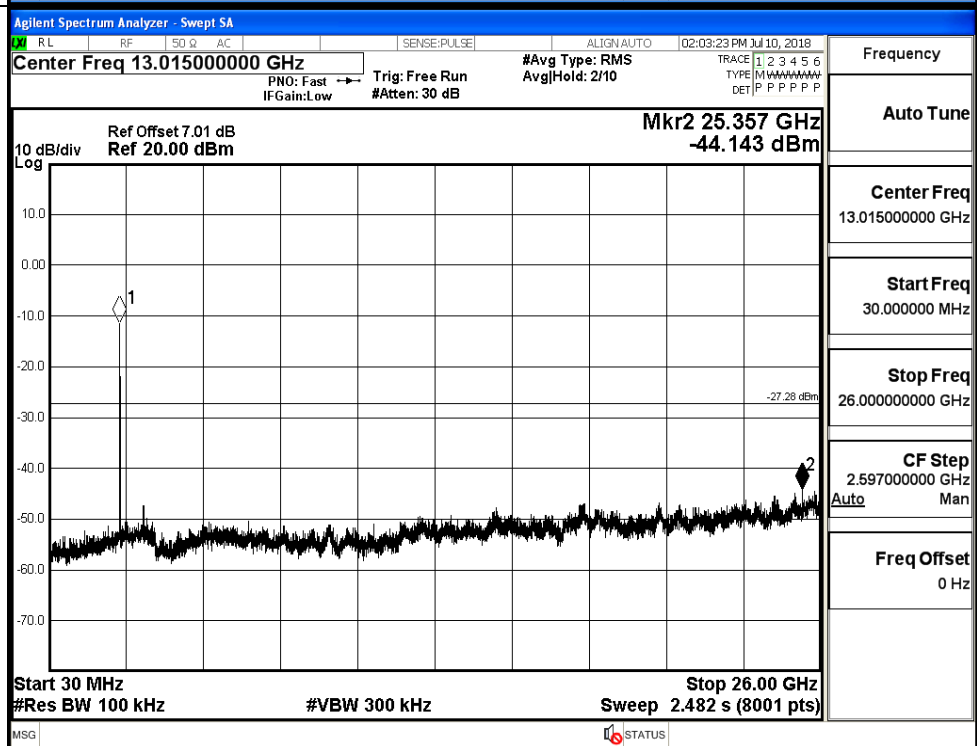
Pref/11G/HCH



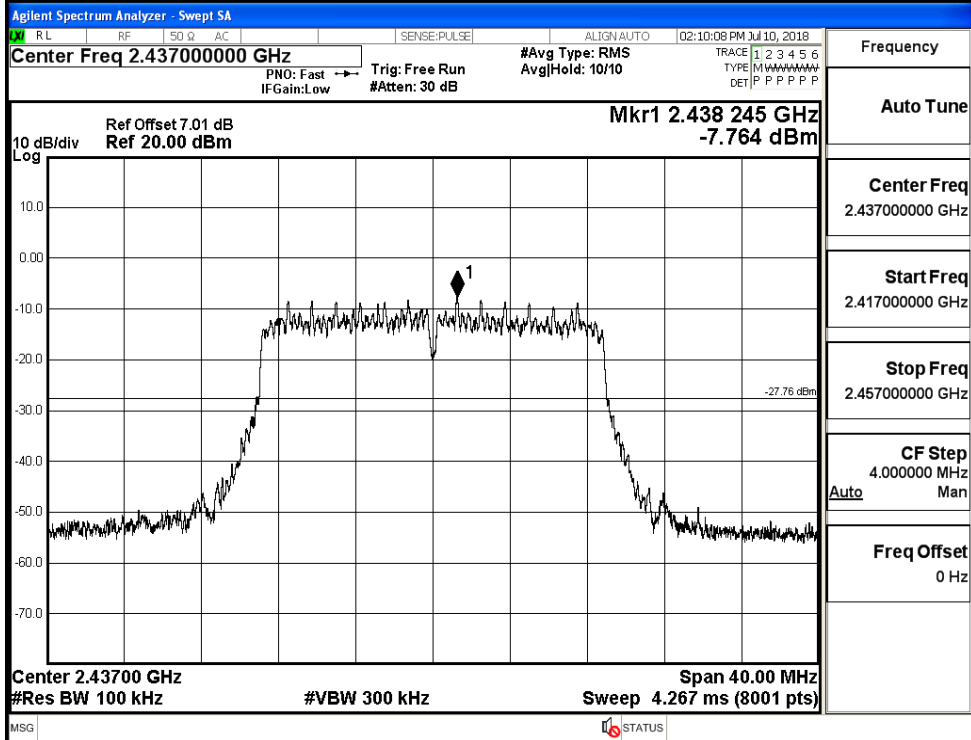
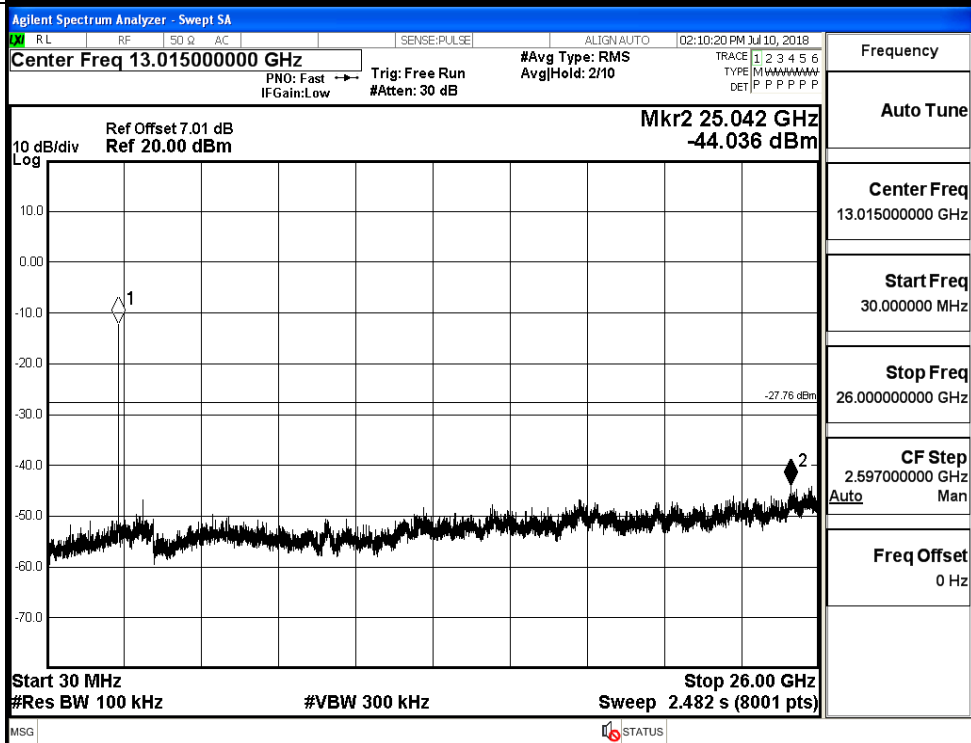
Puw/11G/HCH



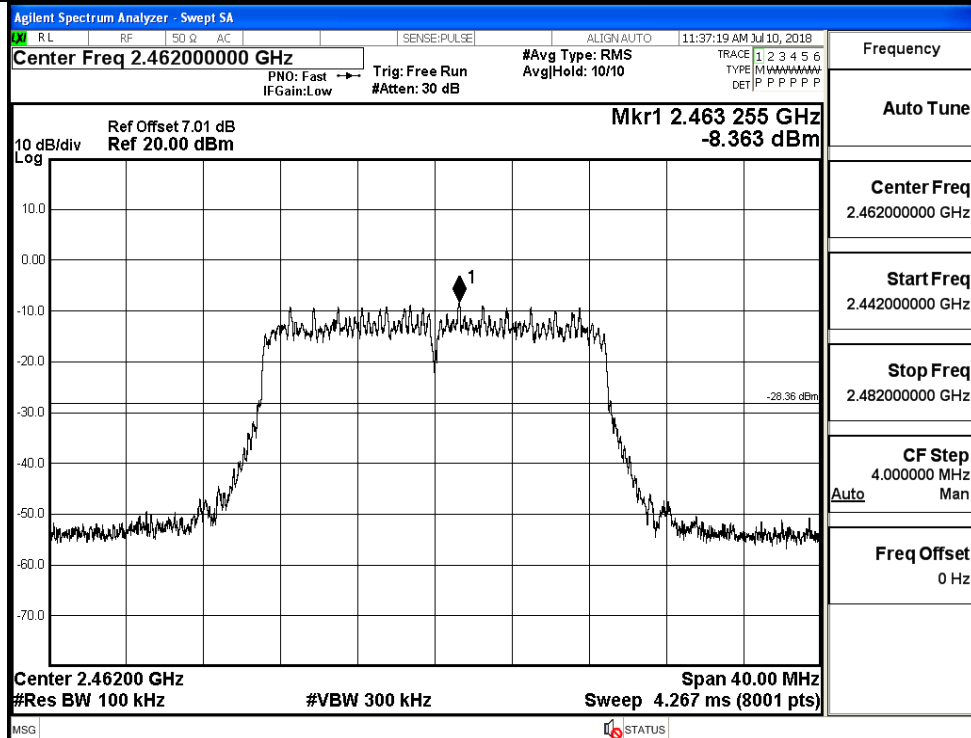
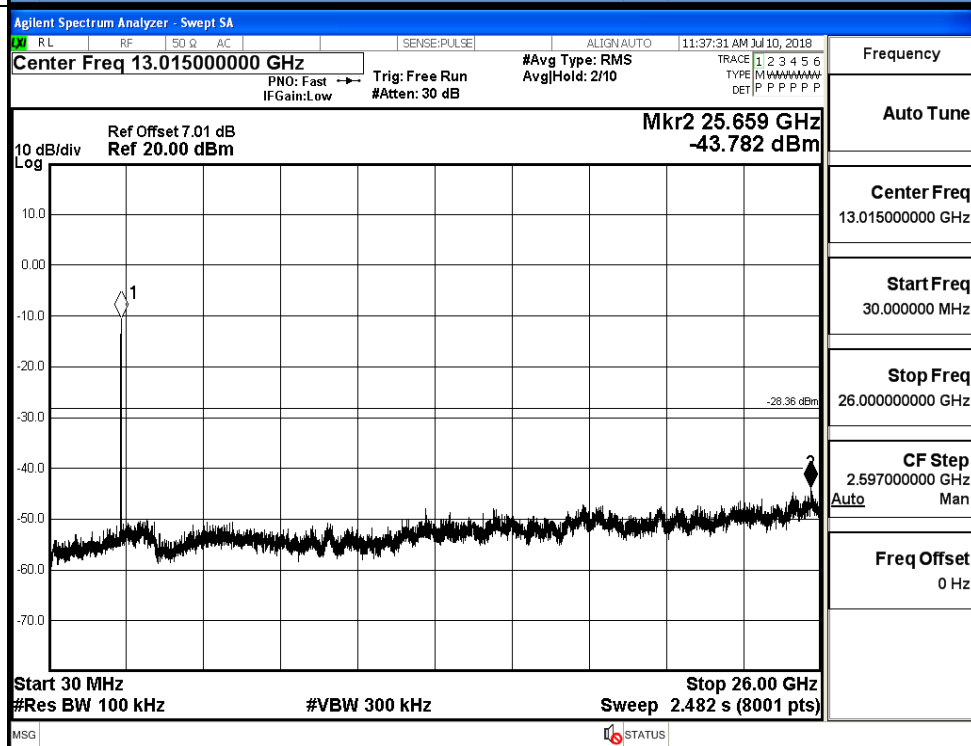
## 11N20SISO LCH Graphs

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

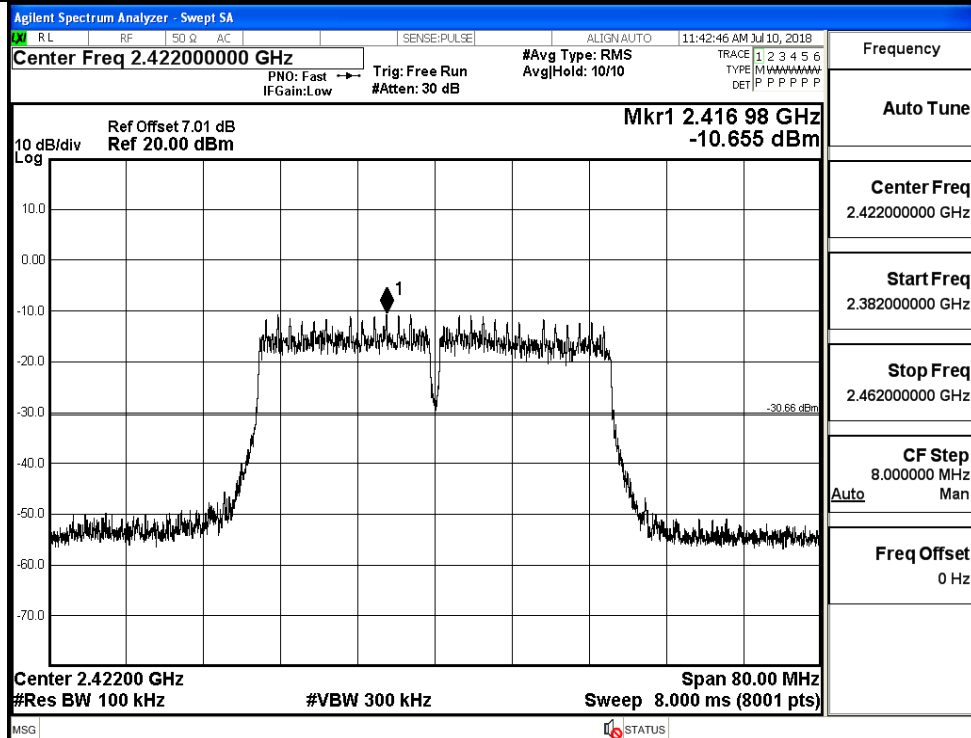
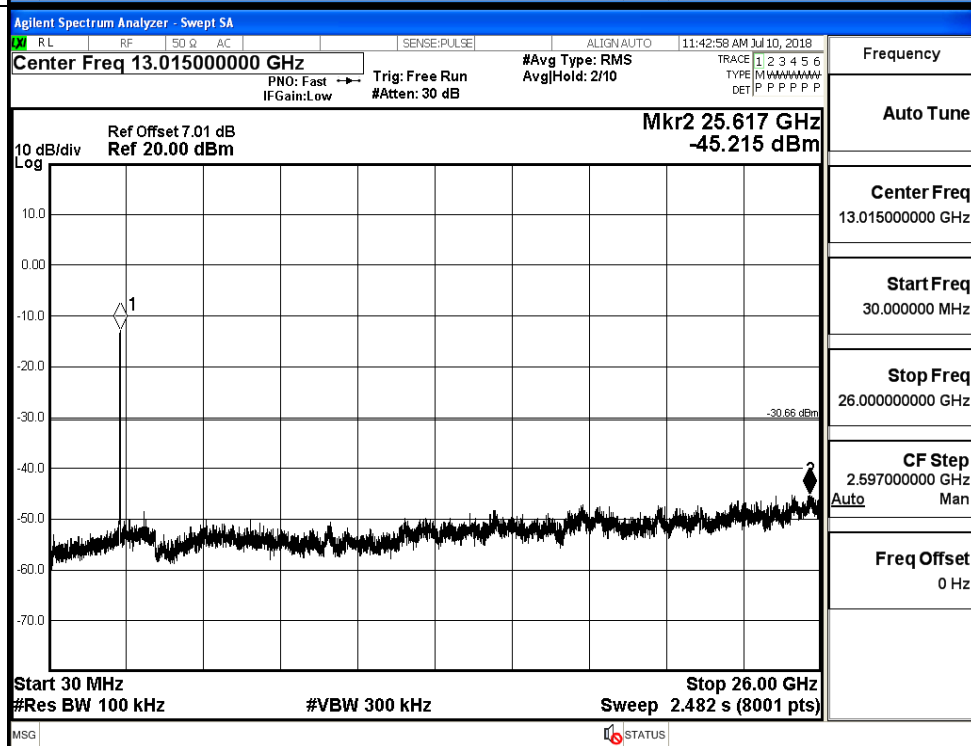
## 11N20SISO\_MCH\_Graphs

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

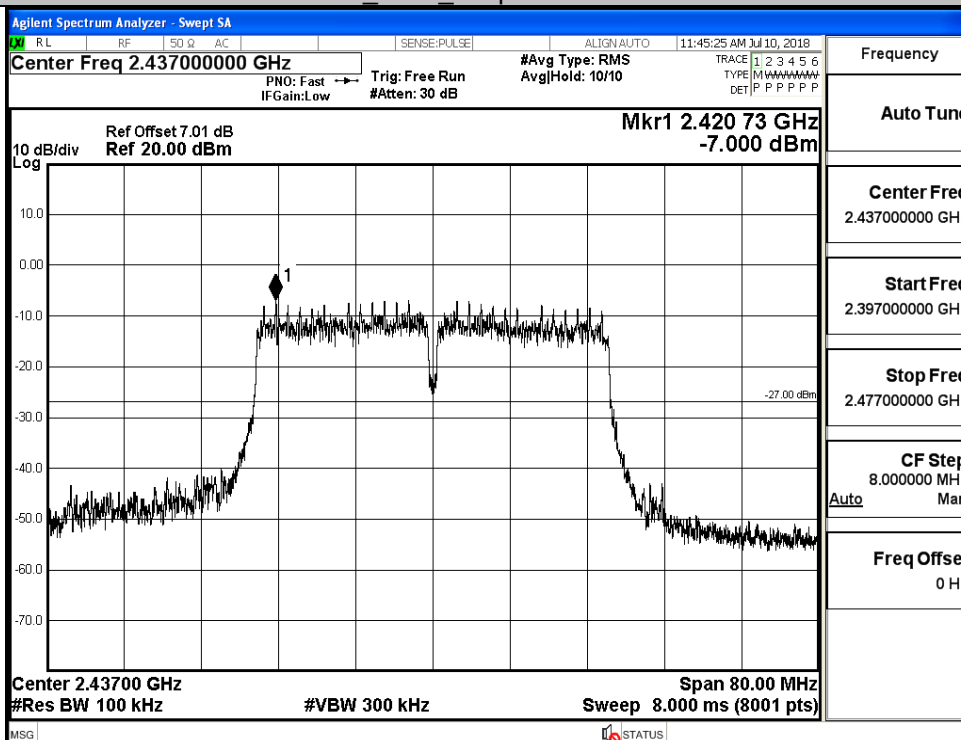
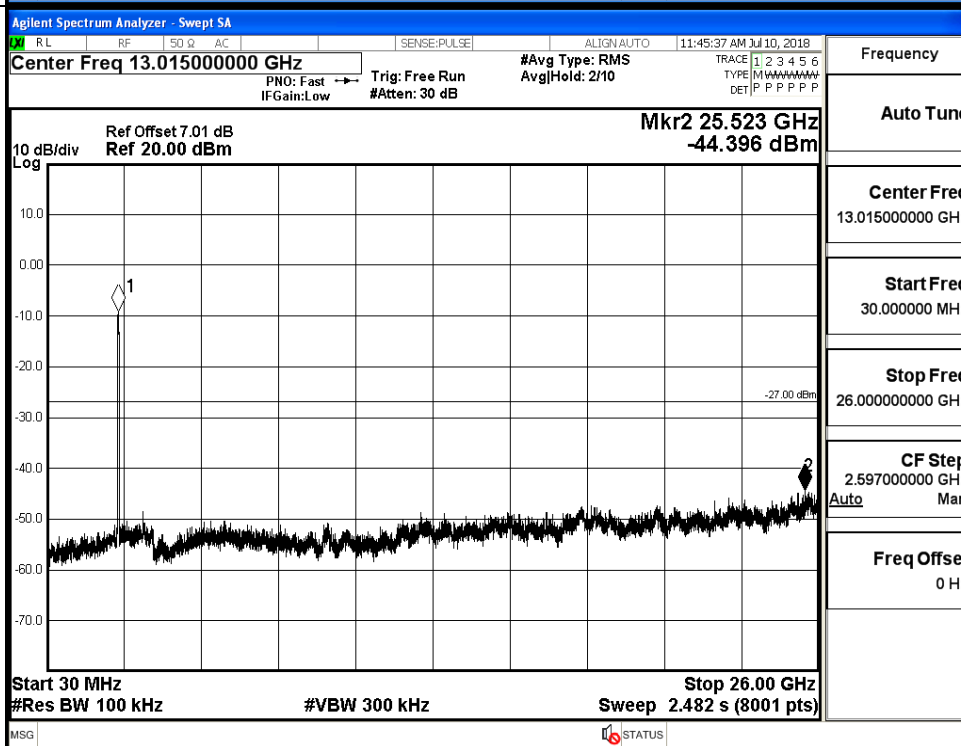
## 11N20SISO HCH Graphs

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

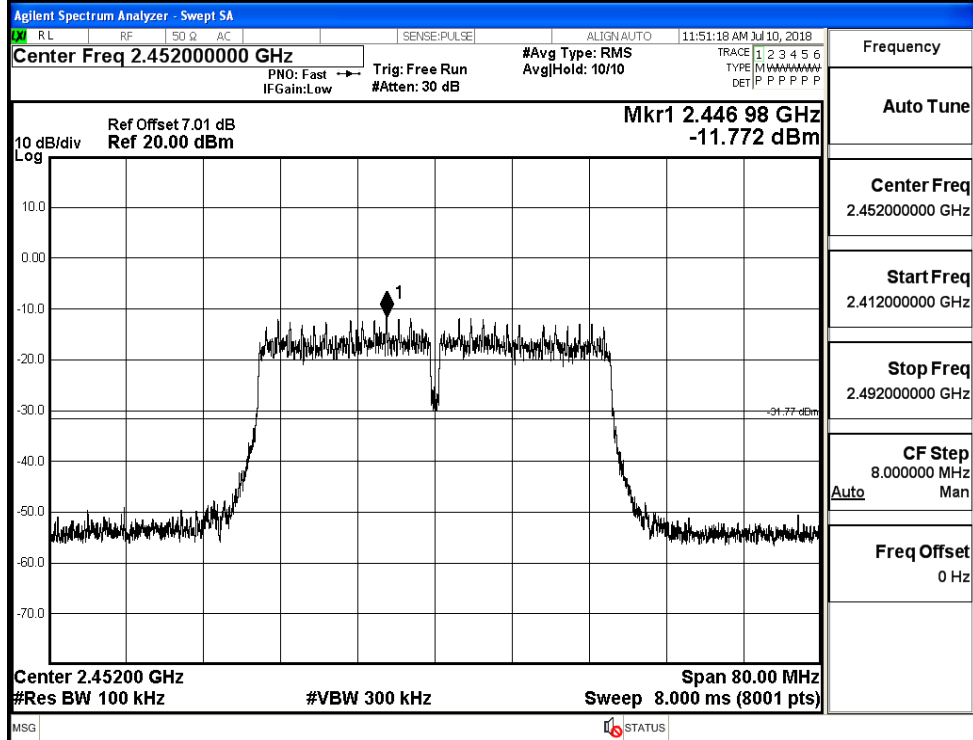
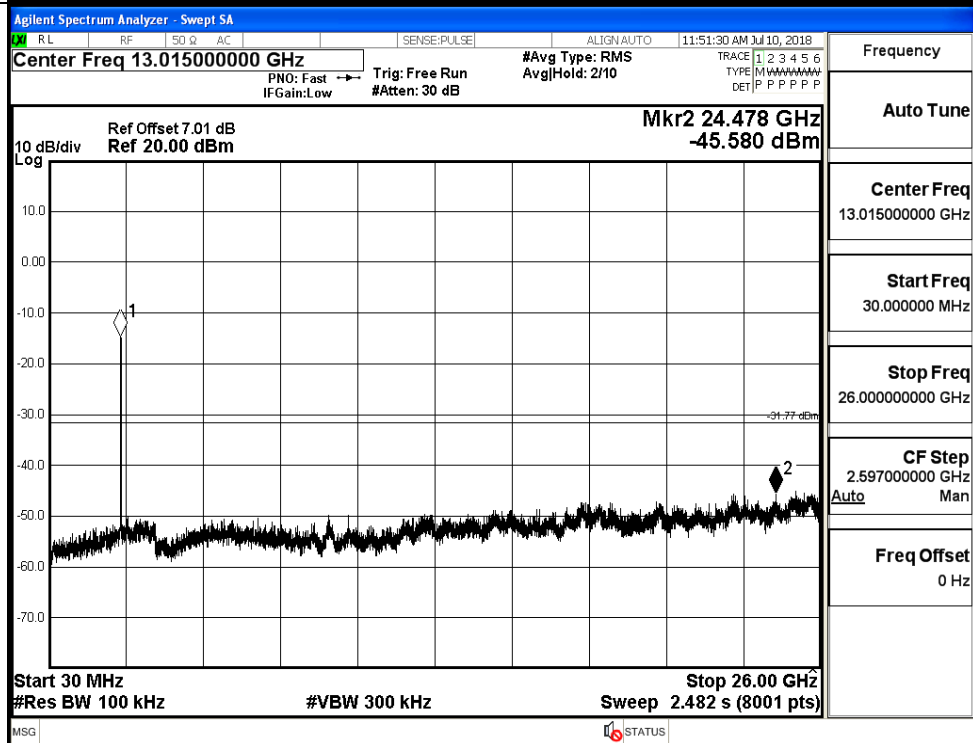
## 11N40SISO LCH Graphs

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

## 11N40SISO\_MCH\_Graphs

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

## 11N40SISO HCH Graphs

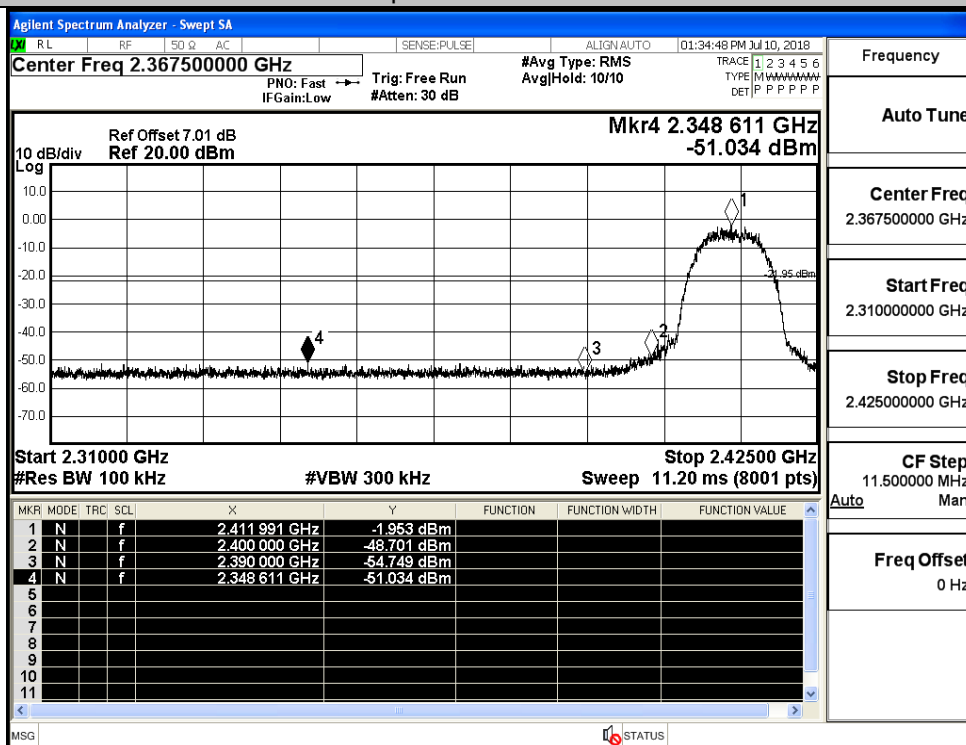
Pref/11N40  
SISO/HCHPuw/11N40  
SISO/HCH

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

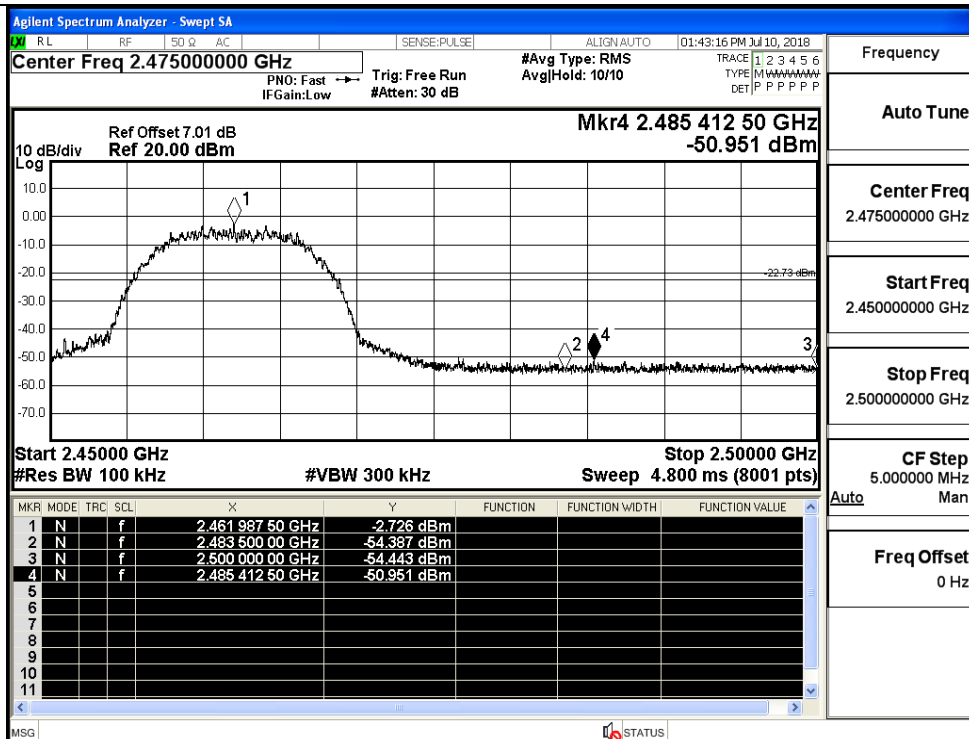
| Mode      | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B       | LCH     | -1.953             | -51.034                  | -21.95      | PASS    |
|           | HCH     | -2.726             | -50.951                  | -22.73      | PASS    |
| 11G       | LCH     | -6.880             | -51.279                  | -26.88      | PASS    |
|           | HCH     | -8.356             | -51.304                  | -28.36      | PASS    |
| 11N20SISO | LCH     | -6.899             | -50.331                  | -26.9       | PASS    |
|           | HCH     | -8.217             | -51.634                  | -28.22      | PASS    |
| 11N40SISO | LCH     | -10.619            | -49.288                  | -30.62      | PASS    |
|           | HCH     | -11.751            | -51.594                  | -31.75      | PASS    |

## Test Graphs

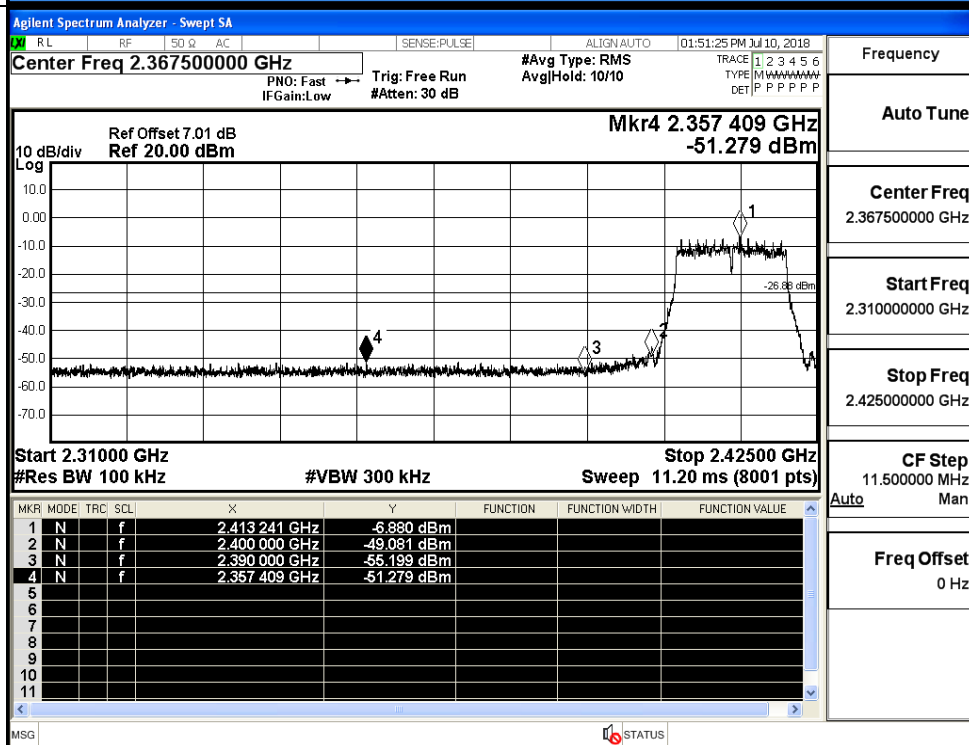
11B/LCH



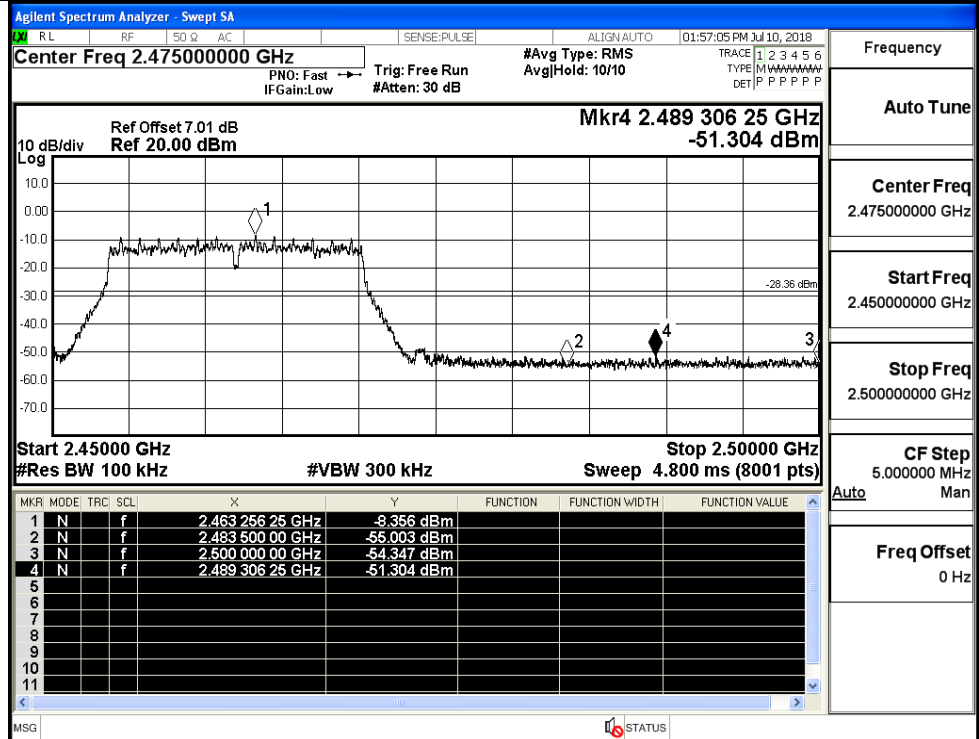
11B/HCH



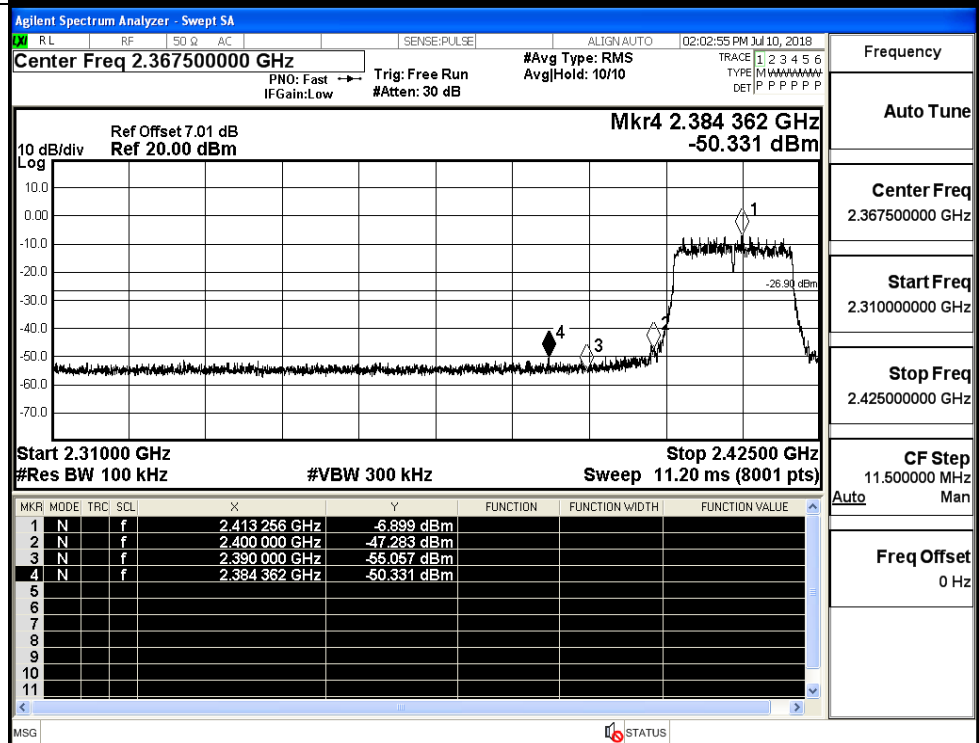
11G/LCH



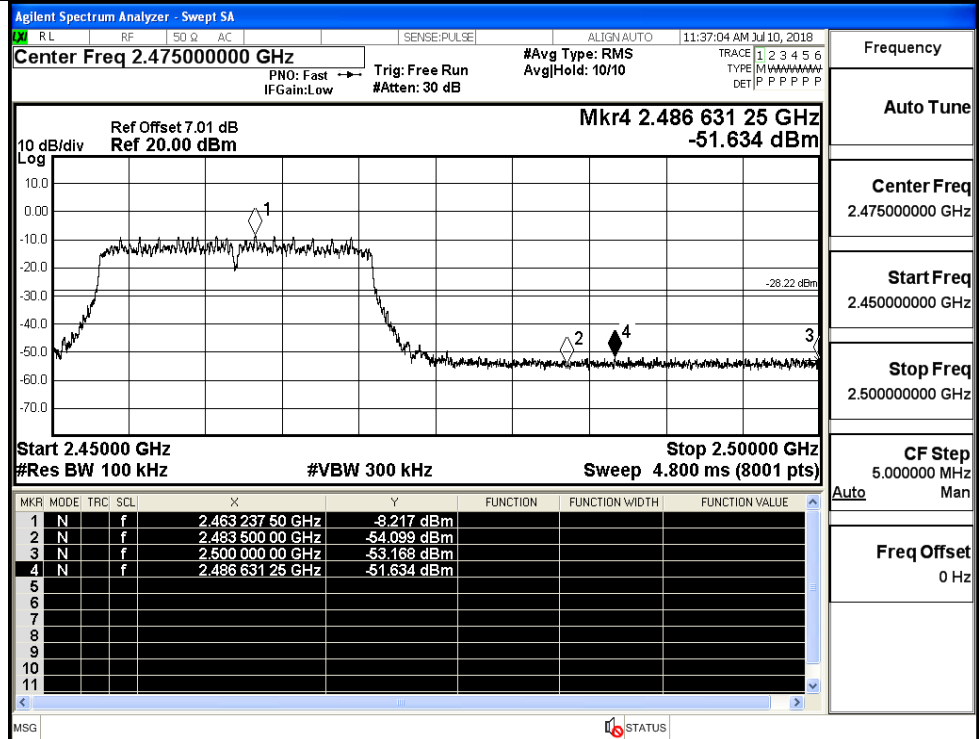
11G/HCH



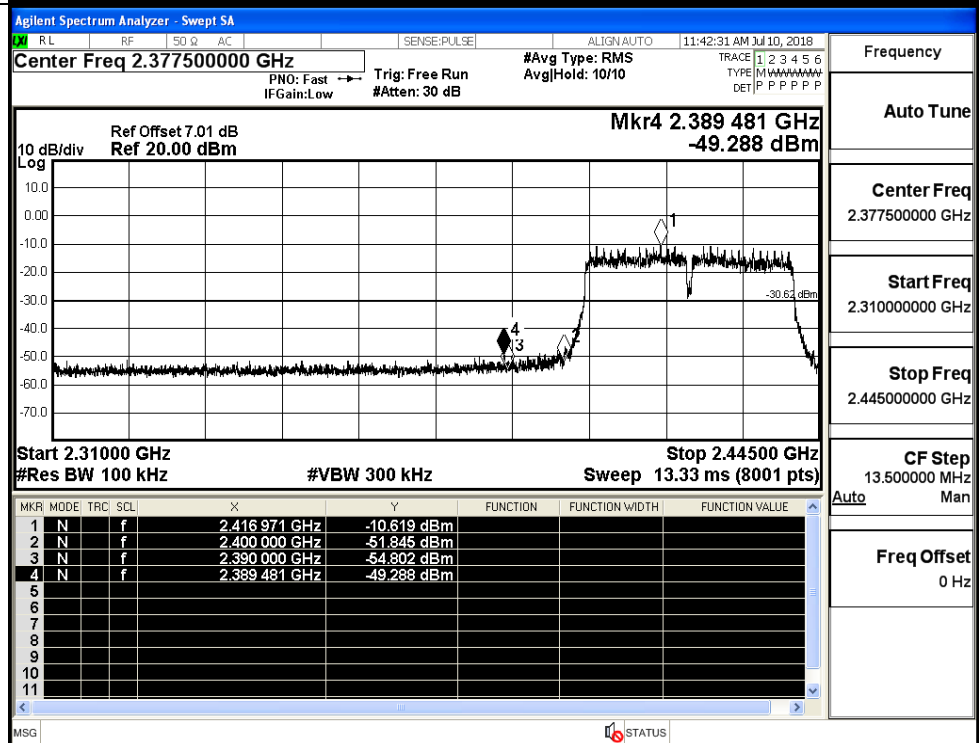
11N20SISO/LCH



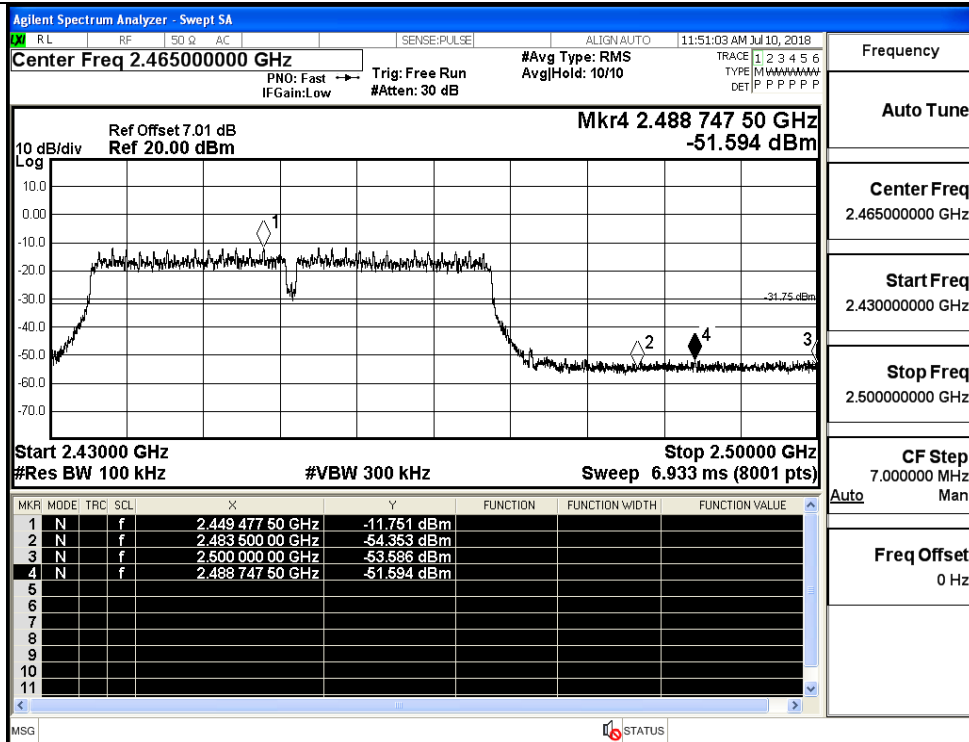
11N20SISO/HCH



11N40SISO/LCH



11N40SISO/HCH

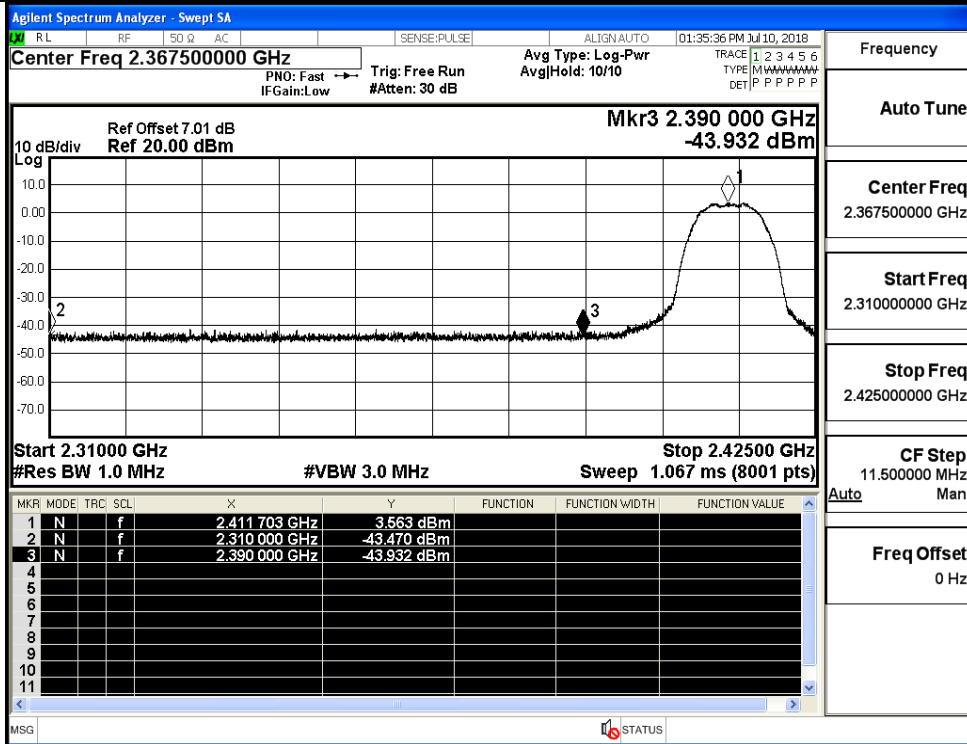


## A.7 Restrict-band band-edge measurements

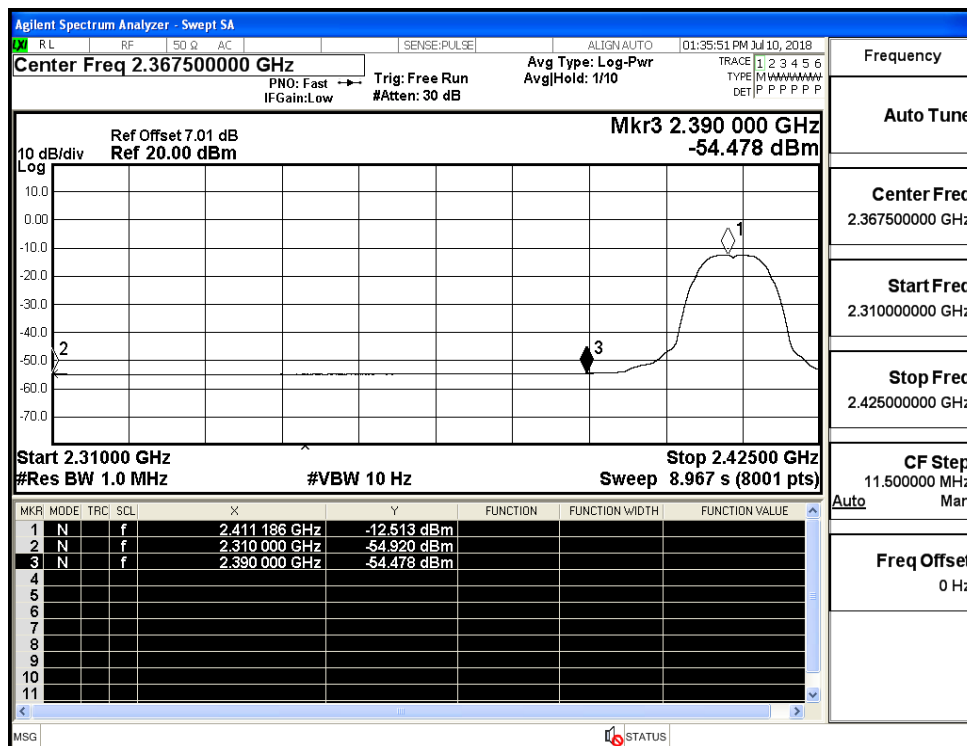
| Test Mode     | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|--------------|------|--------|-------------|------|---------------|------------|----------|----------------|---------|
| 11B           | 2412         | Ant1 | 2310.0 | -43.47      | 2.2  | 0             | 53.93      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -54.92      | 2.2  | 0             | 42.48      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -43.93      | 2.2  | 0             | 53.47      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -54.48      | 2.2  | 0             | 42.92      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -44.10      | 2.2  | 0             | 53.30      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -54.47      | 2.2  | 0             | 42.93      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -43.69      | 2.2  | 0             | 53.71      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -54.32      | 2.2  | 0             | 43.08      | AV       | 54             | PASS    |
| 11G           | 2412         | Ant1 | 2310.0 | -44.08      | 2.2  | 0             | 53.32      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -54.93      | 2.2  | 0             | 42.47      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -43.11      | 2.2  | 0             | 54.29      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -54.45      | 2.2  | 0             | 42.95      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -43.61      | 2.2  | 0             | 53.79      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -54.48      | 2.2  | 0             | 42.92      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -42.41      | 2.2  | 0             | 54.99      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -54.33      | 2.2  | 0             | 43.07      | AV       | 54             | PASS    |
| 11N20<br>SISO | 2412         | Ant1 | 2310.0 | -44.70      | 2.2  | 0             | 52.70      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -54.91      | 2.2  | 0             | 42.49      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -43.48      | 2.2  | 0             | 53.92      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -54.40      | 2.2  | 0             | 43.00      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -45.13      | 2.2  | 0             | 52.27      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -54.48      | 2.2  | 0             | 42.92      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -44.98      | 2.2  | 0             | 52.42      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -54.41      | 2.2  | 0             | 42.99      | AV       | 54             | PASS    |
| 11N40<br>SISO | 2422         | Ant1 | 2310.0 | -44.55      | 2.2  | 0             | 52.85      | PEAK     | 74             | PASS    |
|               | 2422         | Ant1 | 2310.0 | -54.97      | 2.2  | 0             | 42.43      | AV       | 54             | PASS    |

|  |      |      |        |        |     |   |       |      |    |      |
|--|------|------|--------|--------|-----|---|-------|------|----|------|
|  | 2422 | Ant1 | 2390.0 | -43.72 | 2.2 | 0 | 53.68 | PEAK | 74 | PASS |
|  | 2422 | Ant1 | 2390.0 | -54.05 | 2.2 | 0 | 43.35 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2483.5 | -44.48 | 2.2 | 0 | 52.92 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2483.5 | -54.45 | 2.2 | 0 | 42.95 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2500.0 | -44.02 | 2.2 | 0 | 53.38 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2500.0 | -54.37 | 2.2 | 0 | 43.03 | AV   | 54 | PASS |

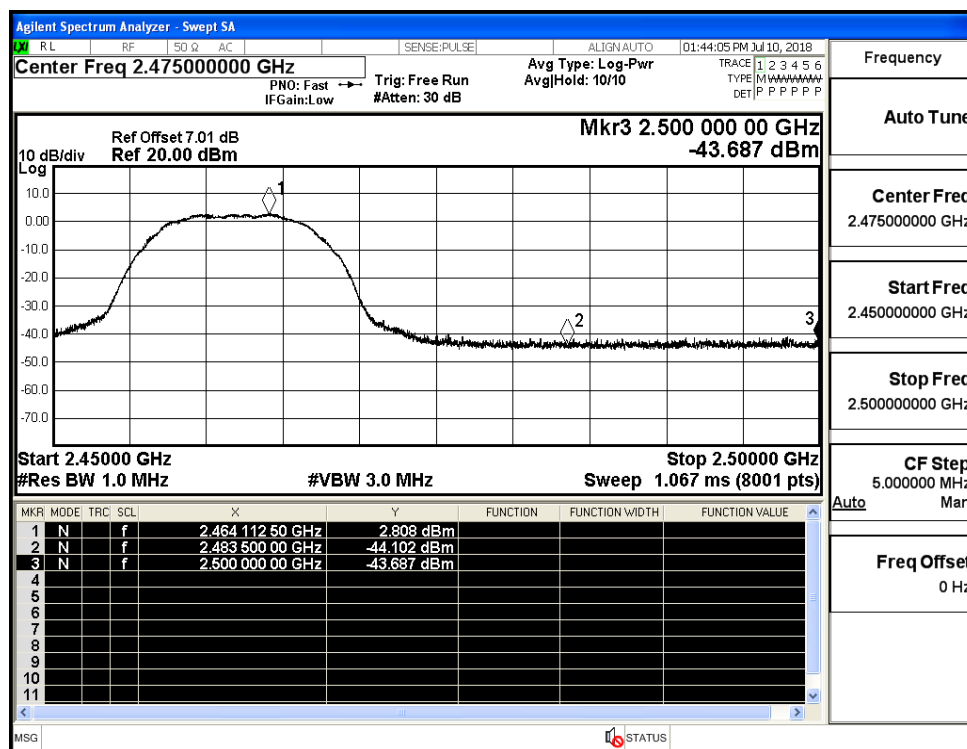
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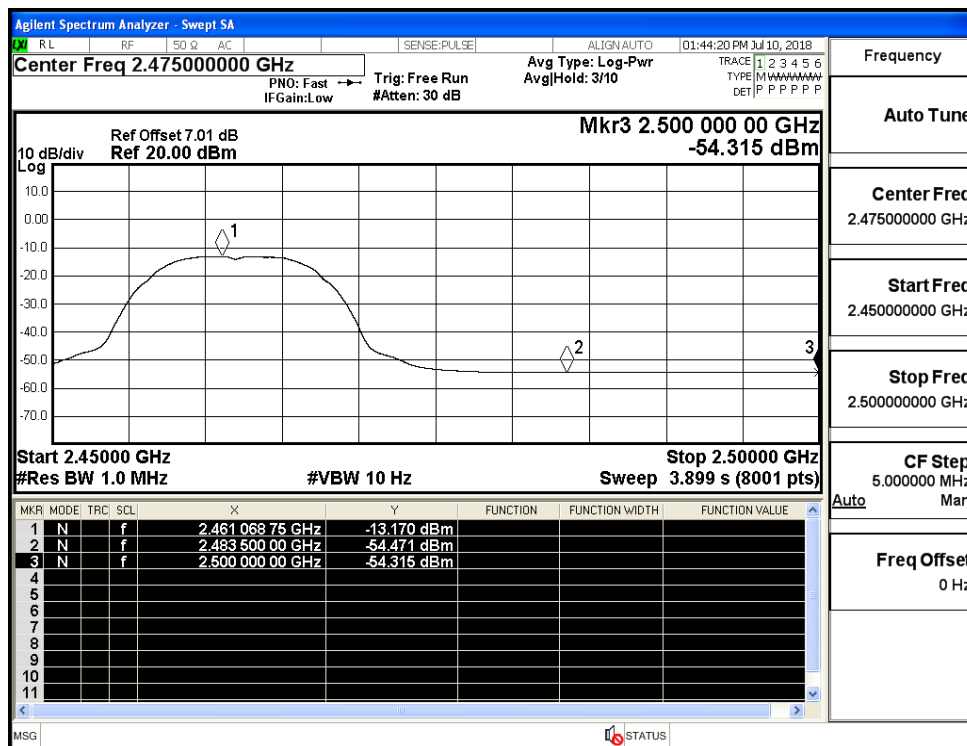
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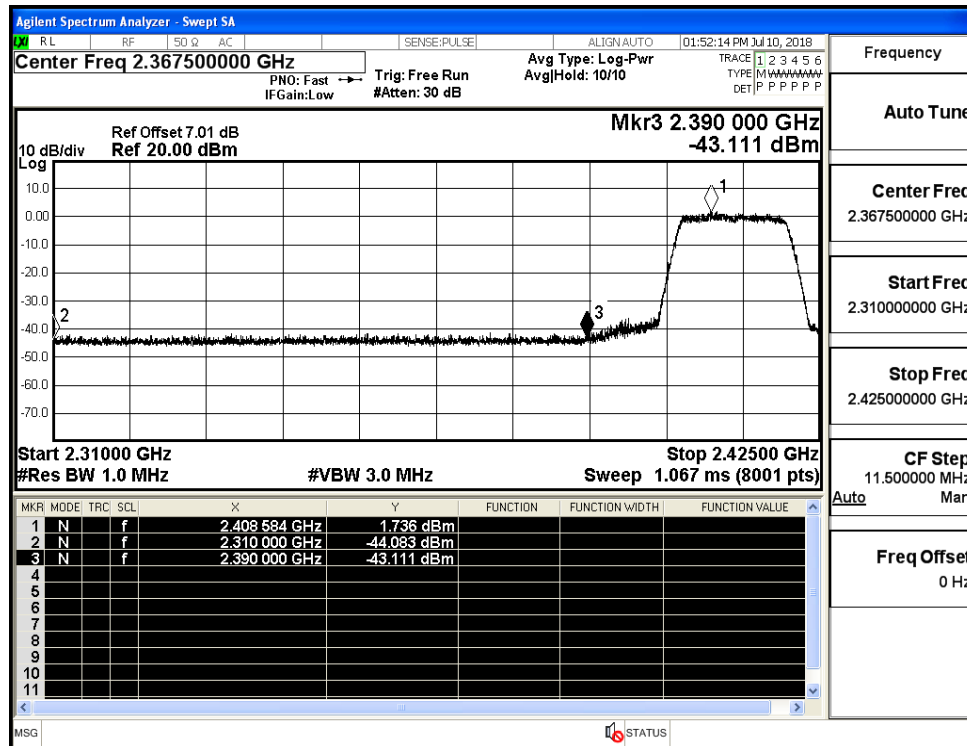
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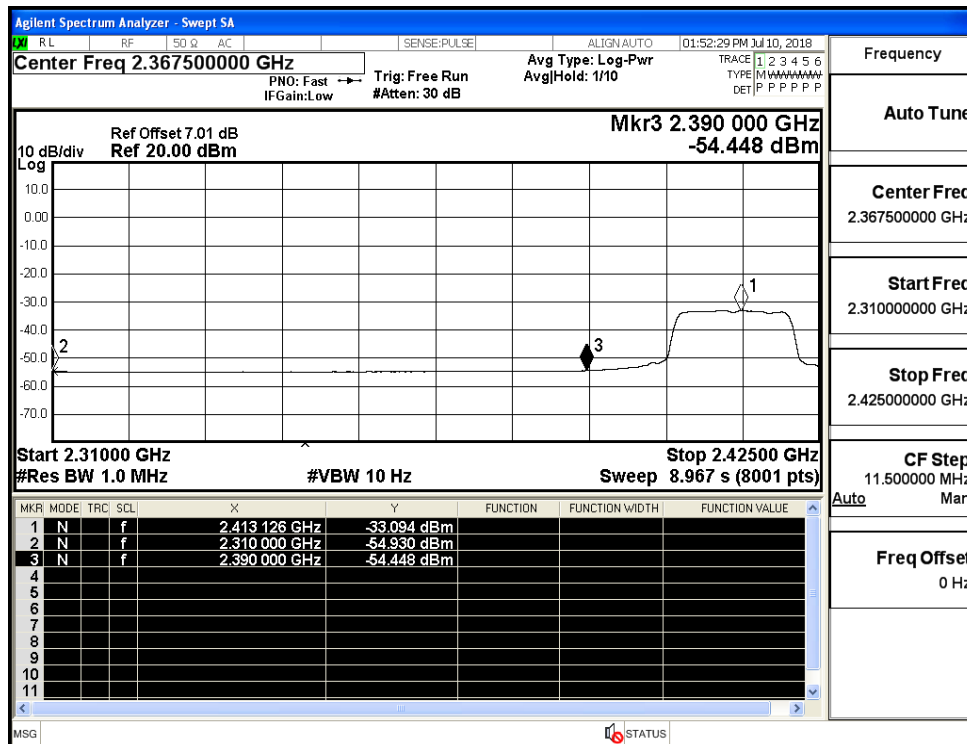
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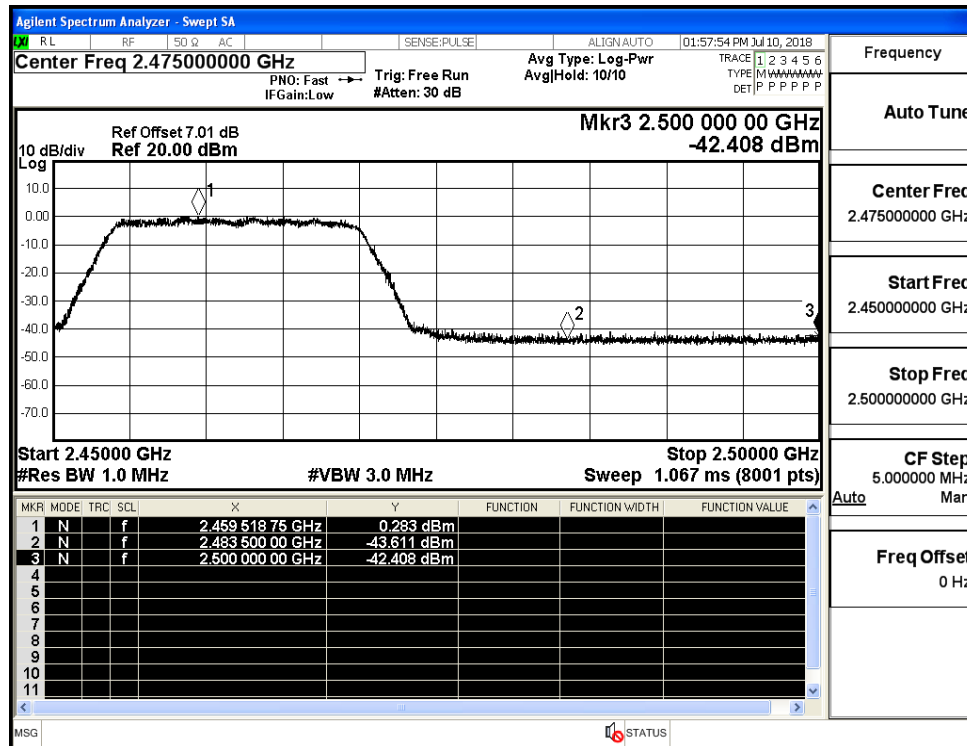
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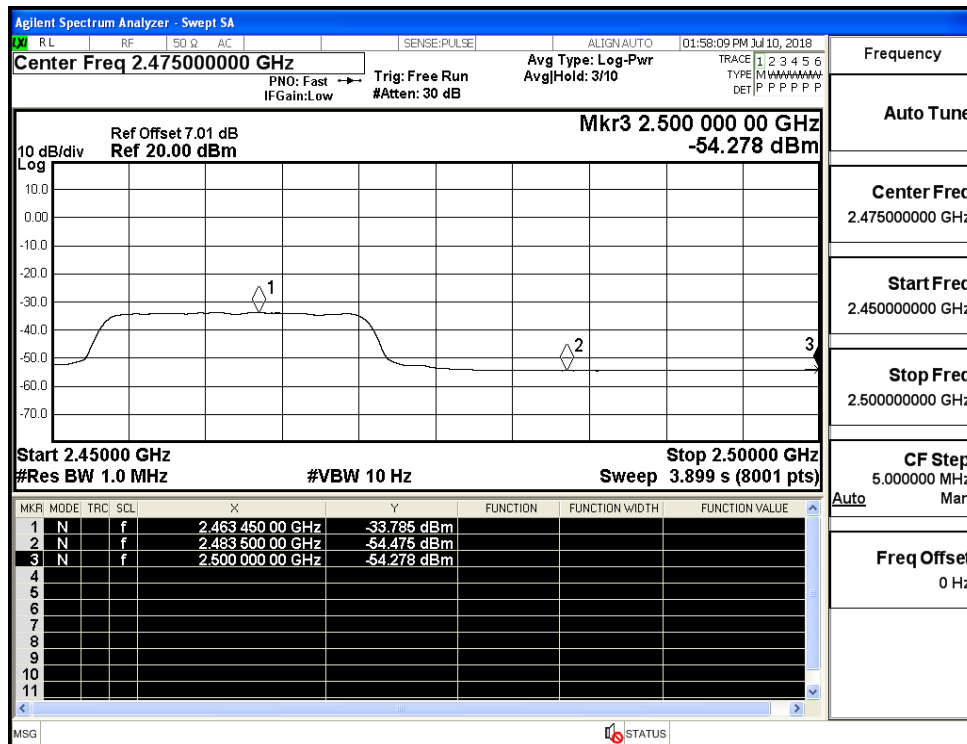
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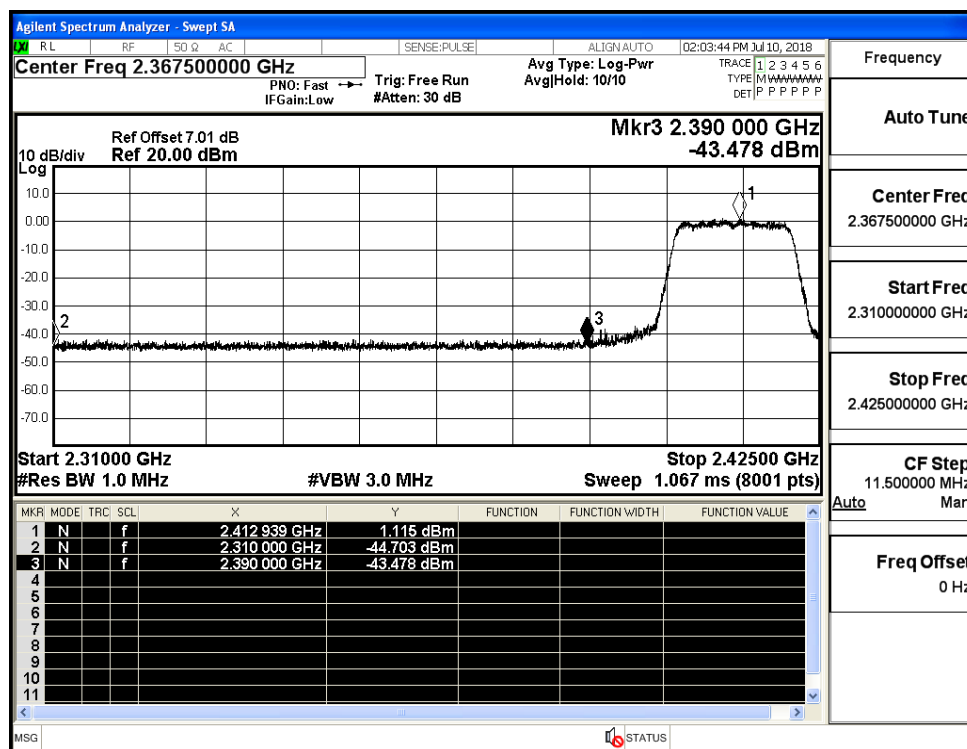
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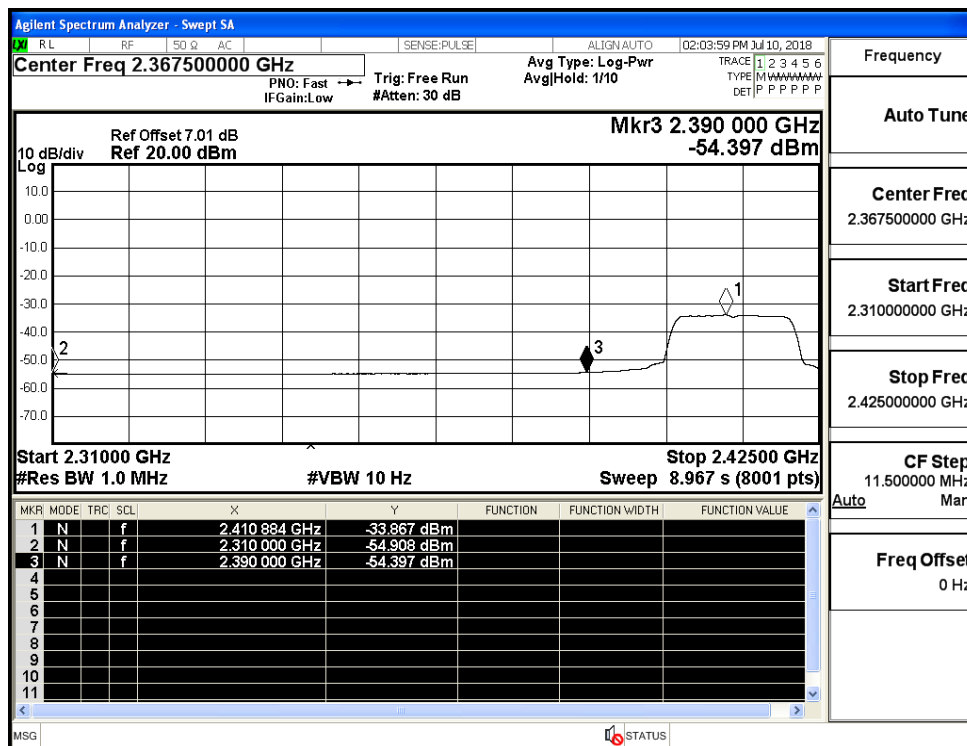
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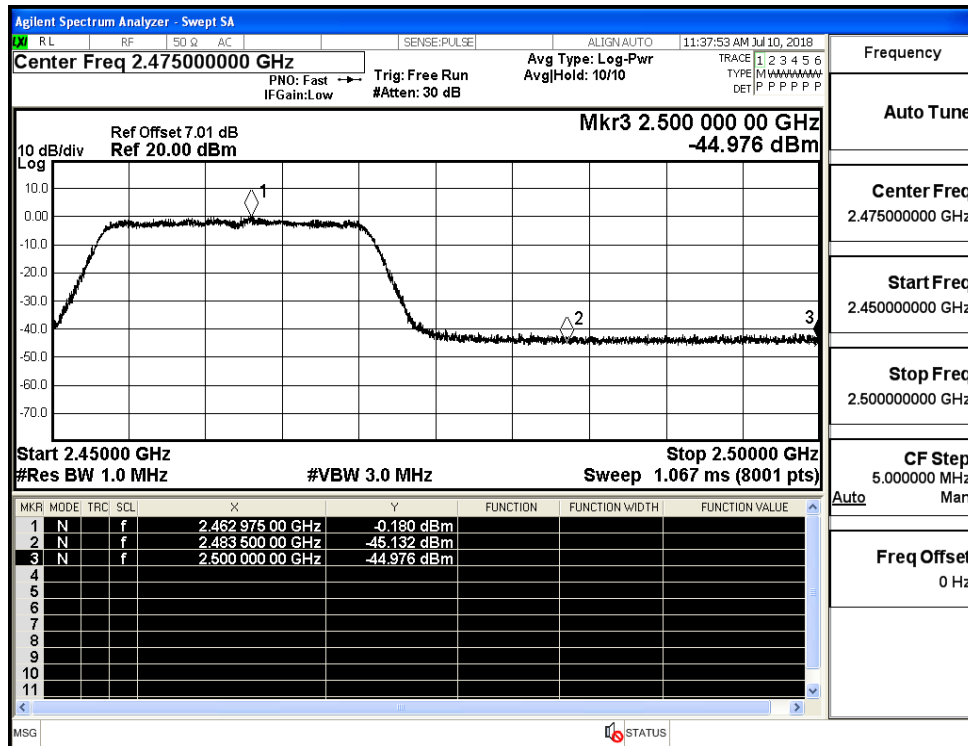
## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_PEAK



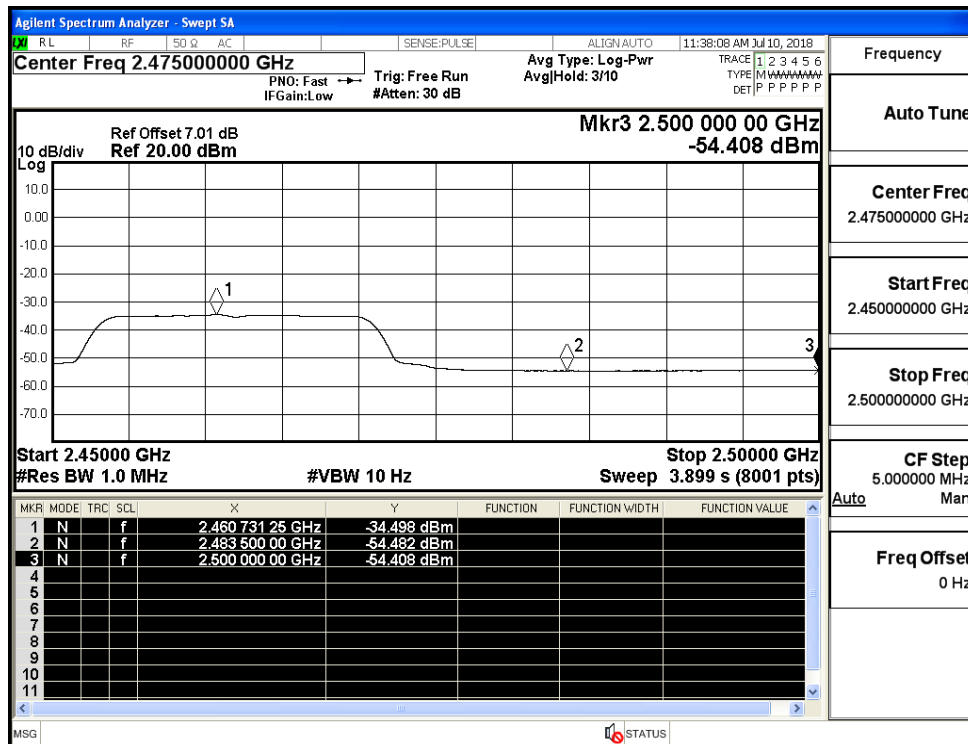
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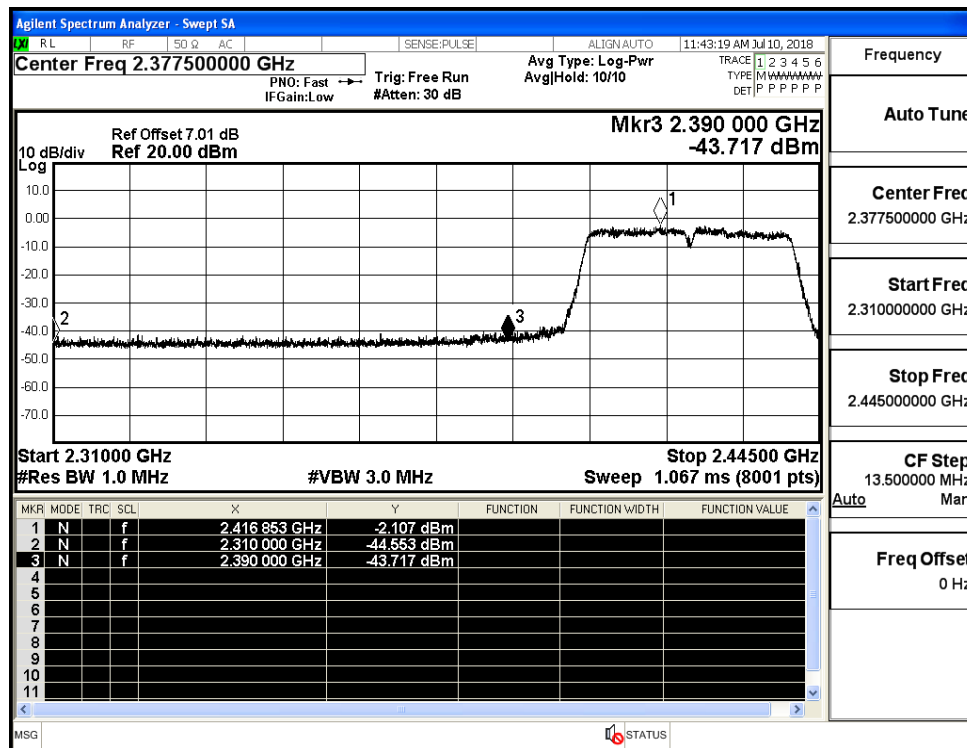
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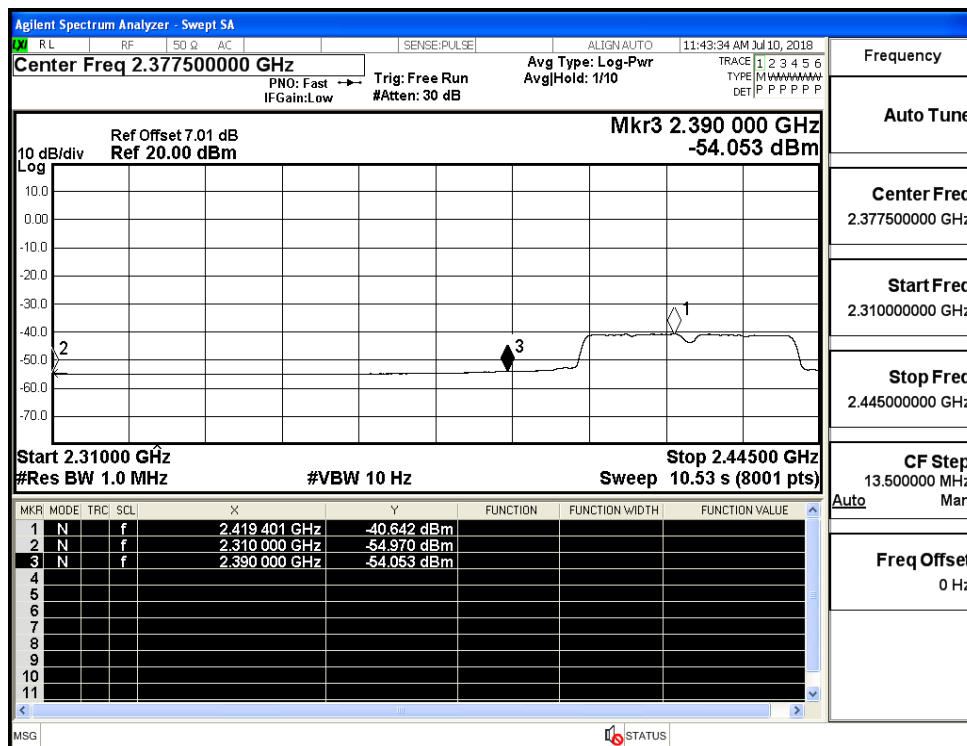
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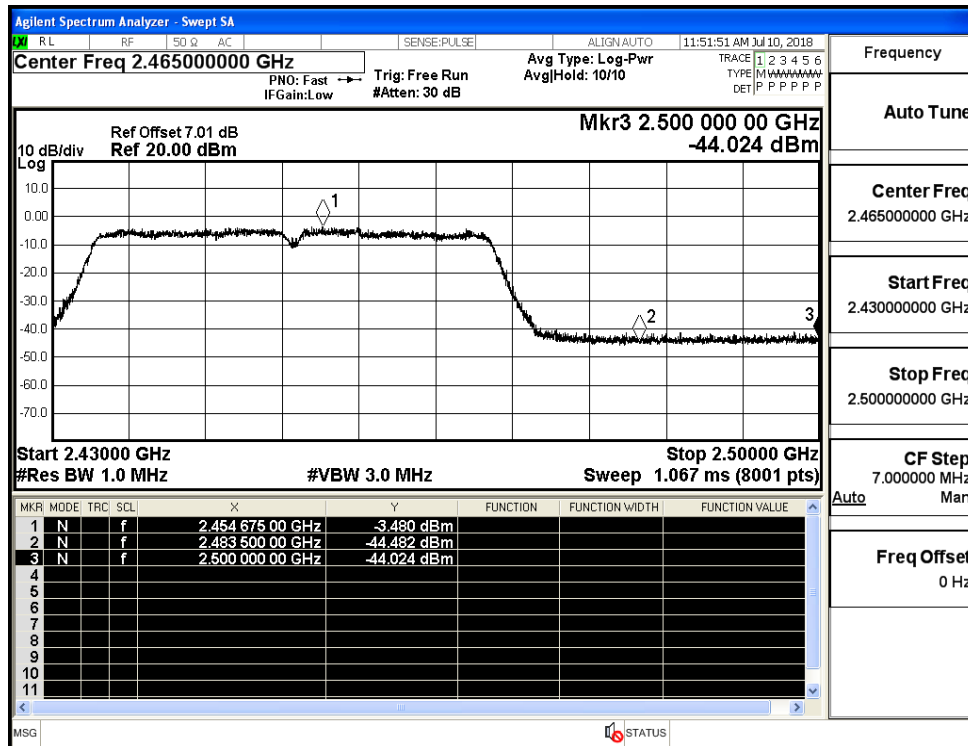
## Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_PEAK



## 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

