

## Appendix A

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

Product Name: Petcube Bites 2 Lite

Trade Mark: Petcube

Test Model: BL10US

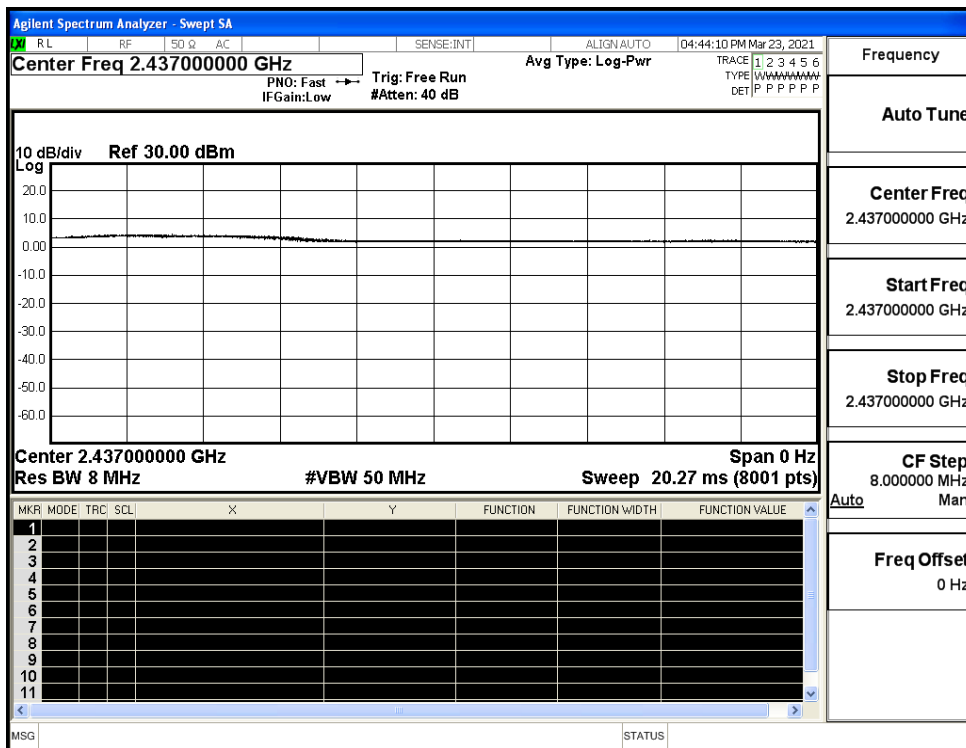
#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 25.7 ° C  |
| Relative Humidity: | 57.1%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Li    |
| Supervised by:     | Li Huan   |

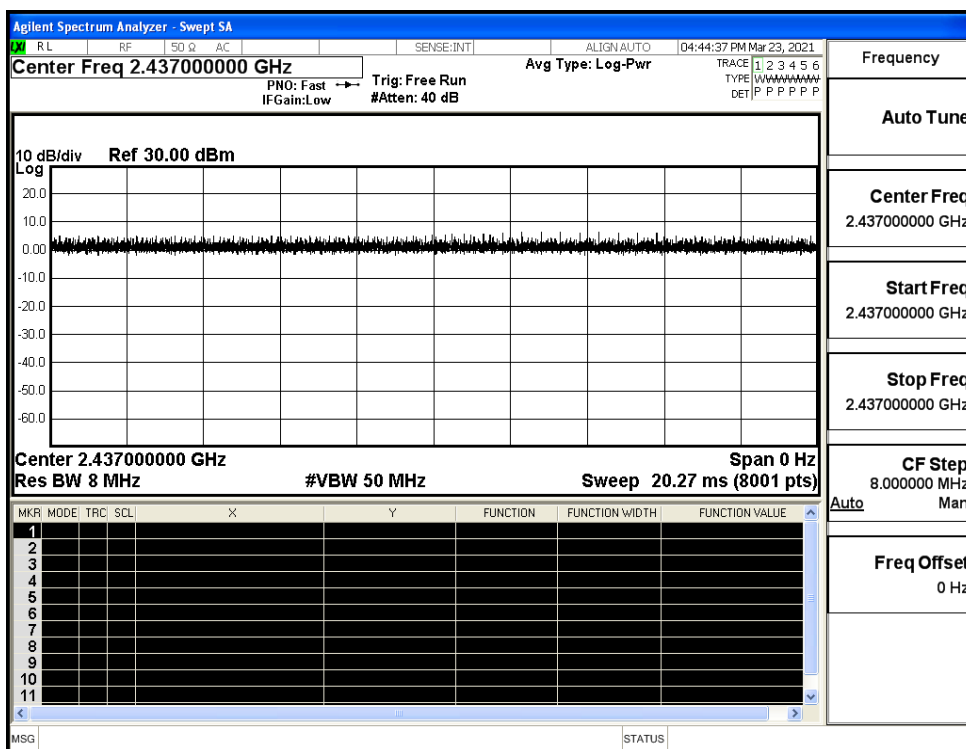
#### A.1 Duty Cycle

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

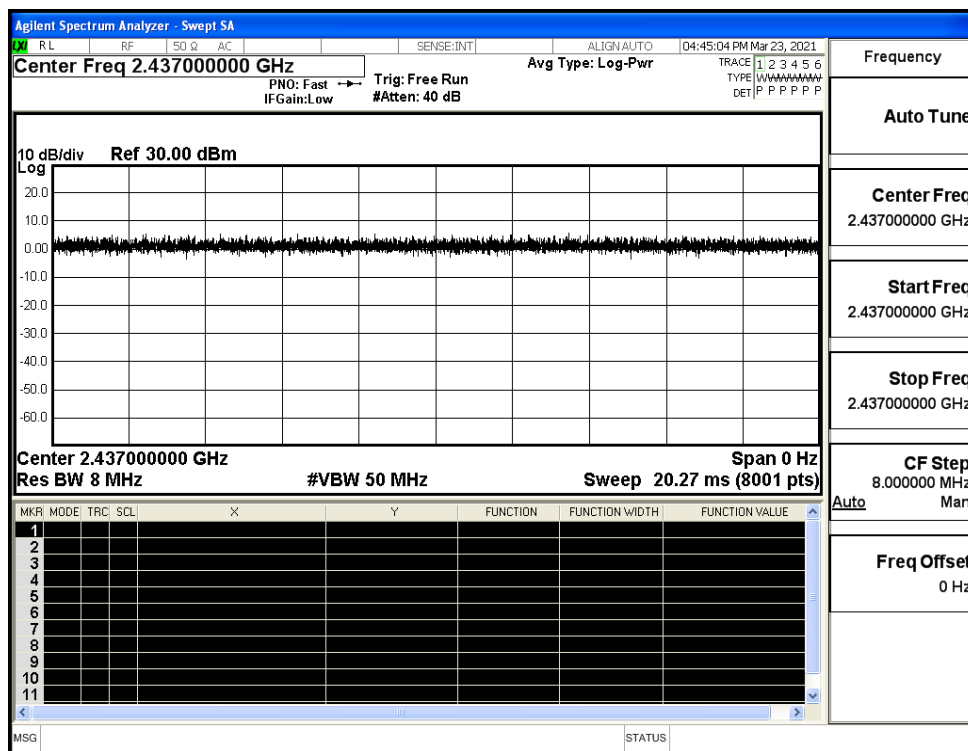
## Duty Cycle\_11B\_2437\_Ant1



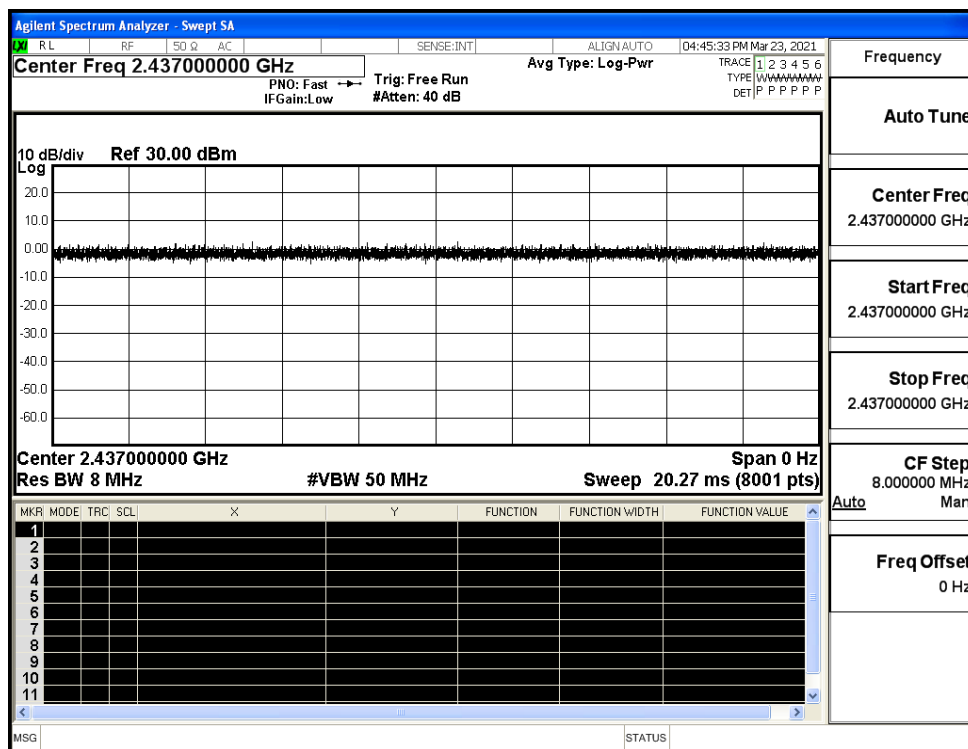
## Duty Cycle\_11G\_2437\_Ant1



## Duty Cycle\_11N20SISO\_2437\_Ant1



## Duty Cycle\_11N40SISO\_2437\_Ant1



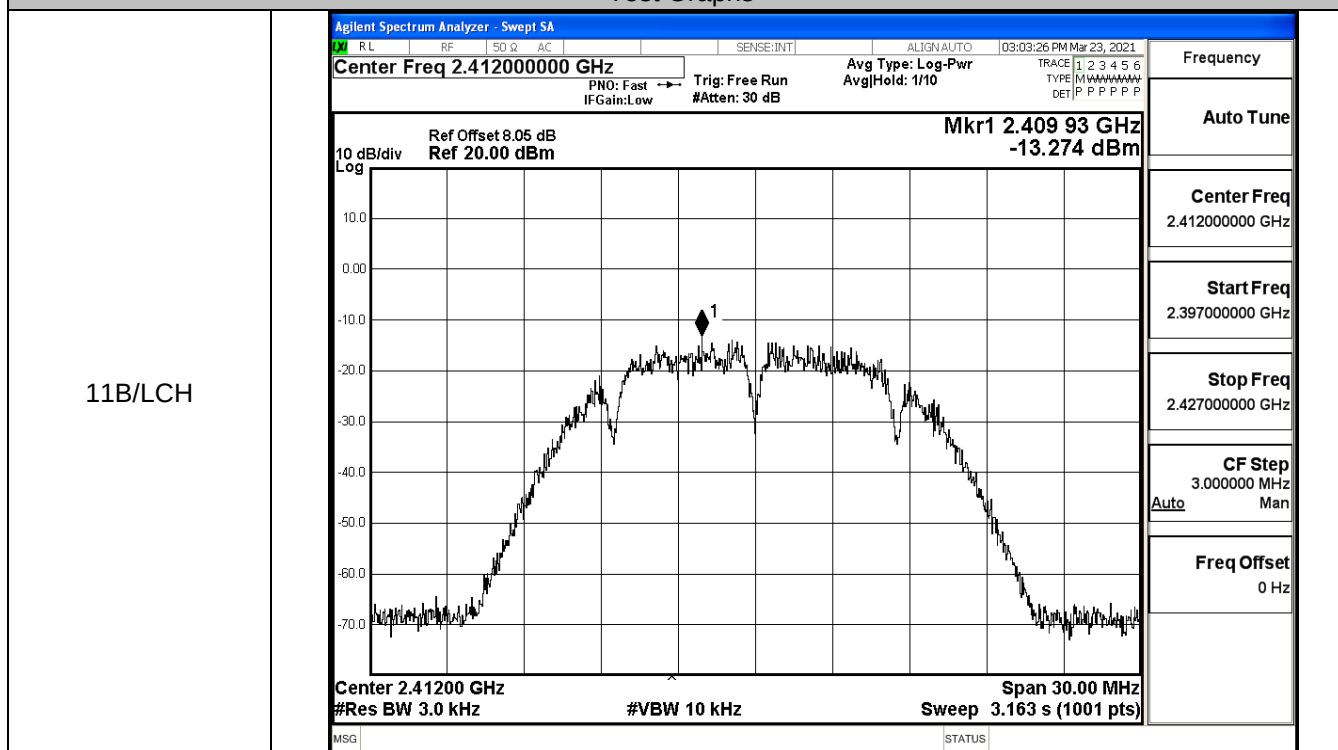
**A.2 Maximum Conducted Output Power**

| Mode      | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B       | LCH     | 13.60            | 30          | PASS    |
|           | MCH     | 13.91            | 30          | PASS    |
|           | HCH     | 13.52            | 30          | PASS    |
| 11G       | LCH     | 13.17            | 30          | PASS    |
|           | MCH     | 13.62            | 30          | PASS    |
|           | HCH     | 13.07            | 30          | PASS    |
| 11N20SISO | LCH     | 12.87            | 30          | PASS    |
|           | MCH     | 13.18            | 30          | PASS    |
|           | HCH     | 12.92            | 30          | PASS    |
| 11N40SISO | LCH     | 12.24            | 30          | PASS    |
|           | MCH     | 12.41            | 30          | PASS    |
|           | HCH     | 12.23            | 30          | PASS    |

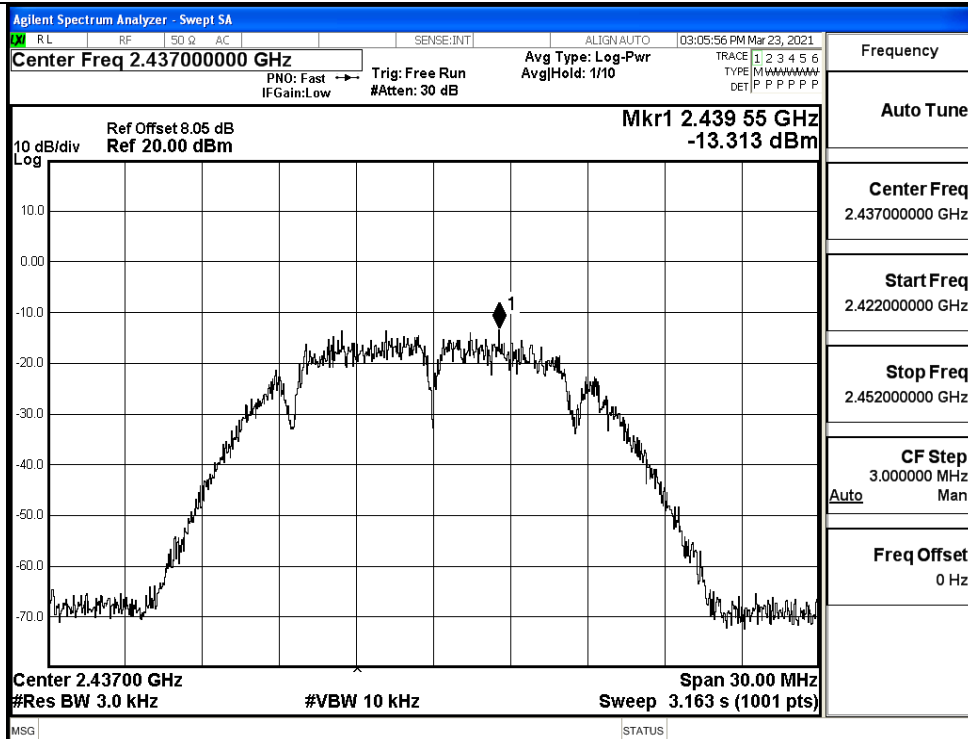
### A.3 Maximum Power Spectral Density

| Mode      | Channel | Meas.Level [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|-----------------------|------------------|---------|
| 11B       | LCH     | -13.274               | 8                | PASS    |
|           | MCH     | -13.313               | 8                | PASS    |
|           | HCH     | -13.410               | 8                | PASS    |
| 11G       | LCH     | -19.505               | 8                | PASS    |
|           | MCH     | -19.615               | 8                | PASS    |
|           | HCH     | -19.112               | 8                | PASS    |
| 11N20SISO | LCH     | -19.979               | 8                | PASS    |
|           | MCH     | -19.021               | 8                | PASS    |
|           | HCH     | -19.194               | 8                | PASS    |
| 11N40SISO | LCH     | -21.446               | 8                | PASS    |
|           | MCH     | -21.348               | 8                | PASS    |
|           | HCH     | -21.843               | 8                | PASS    |

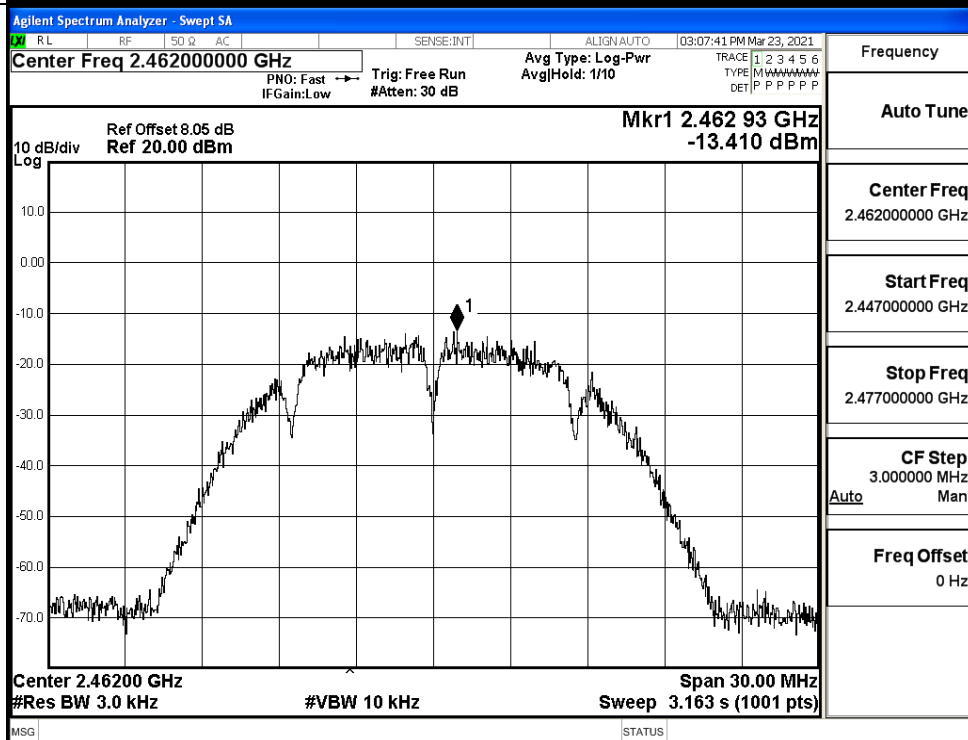
#### Test Graphs



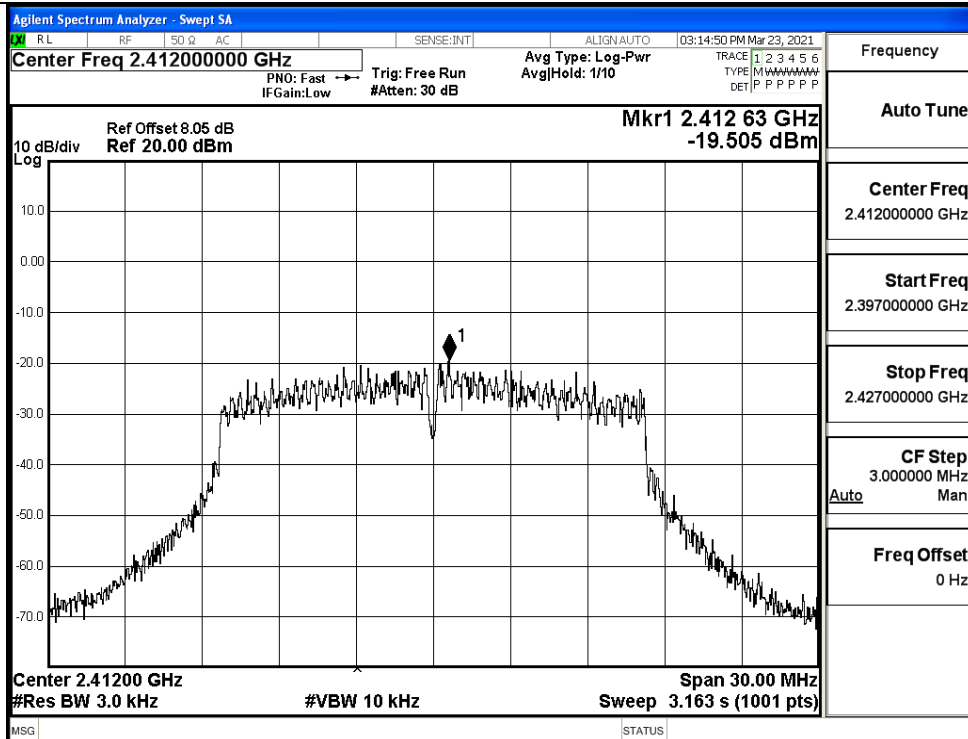
11B/MCH



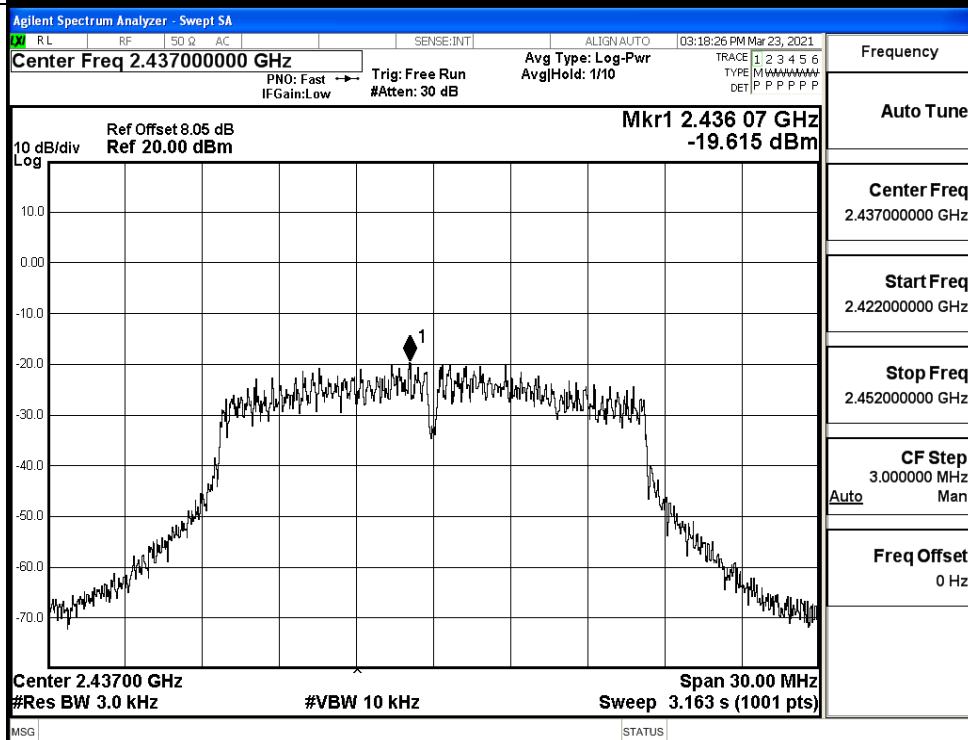
11B/HCH



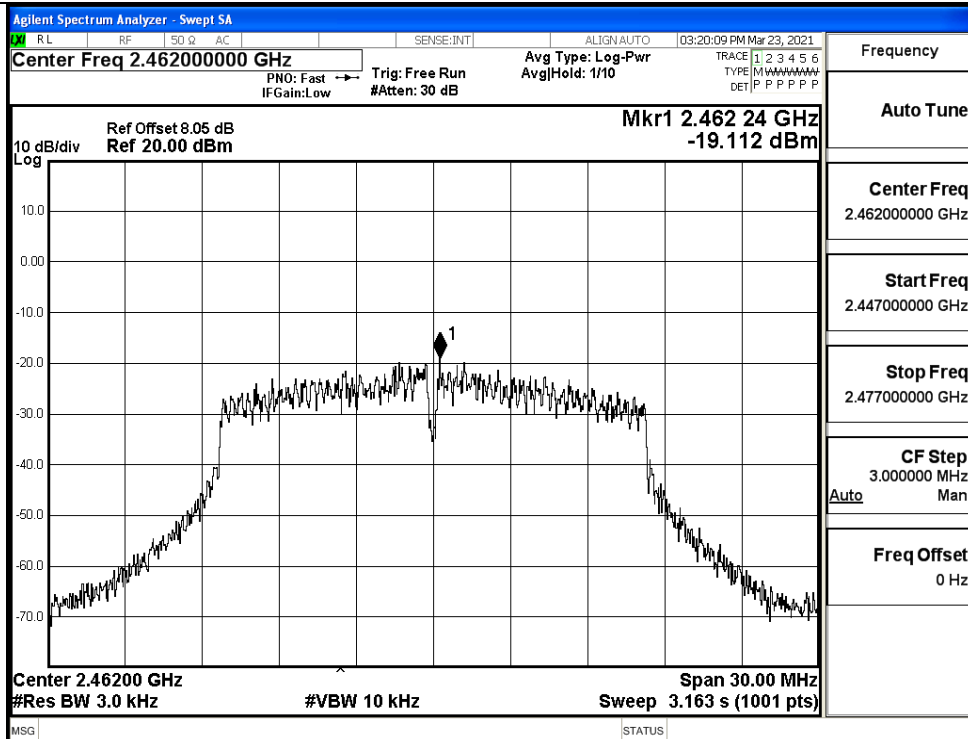
11G/LCH



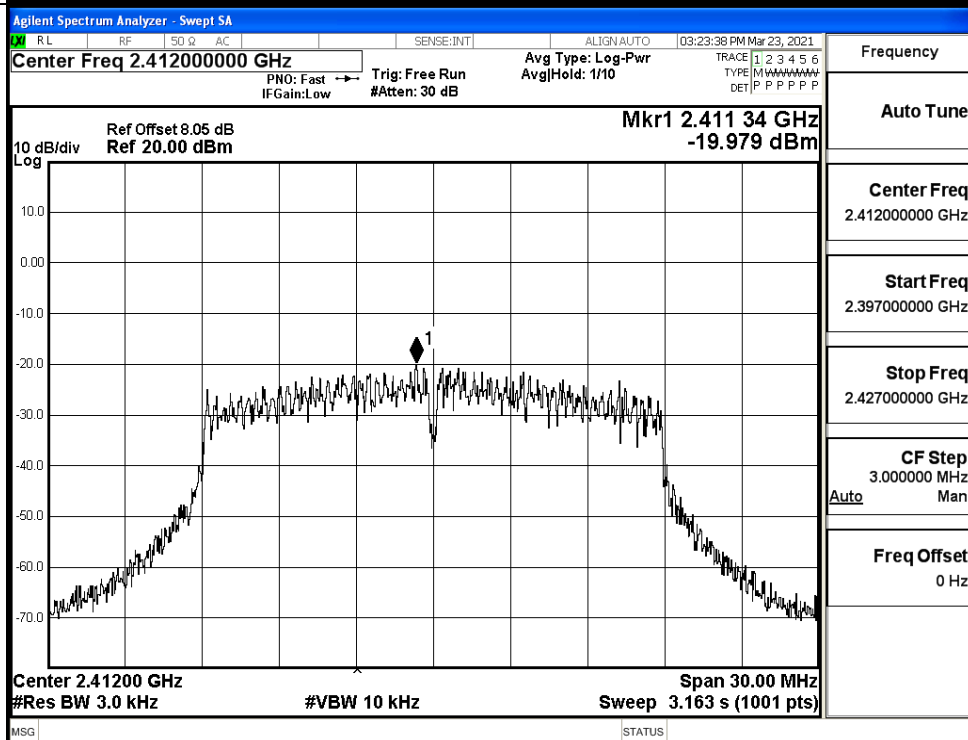
11G/MCH



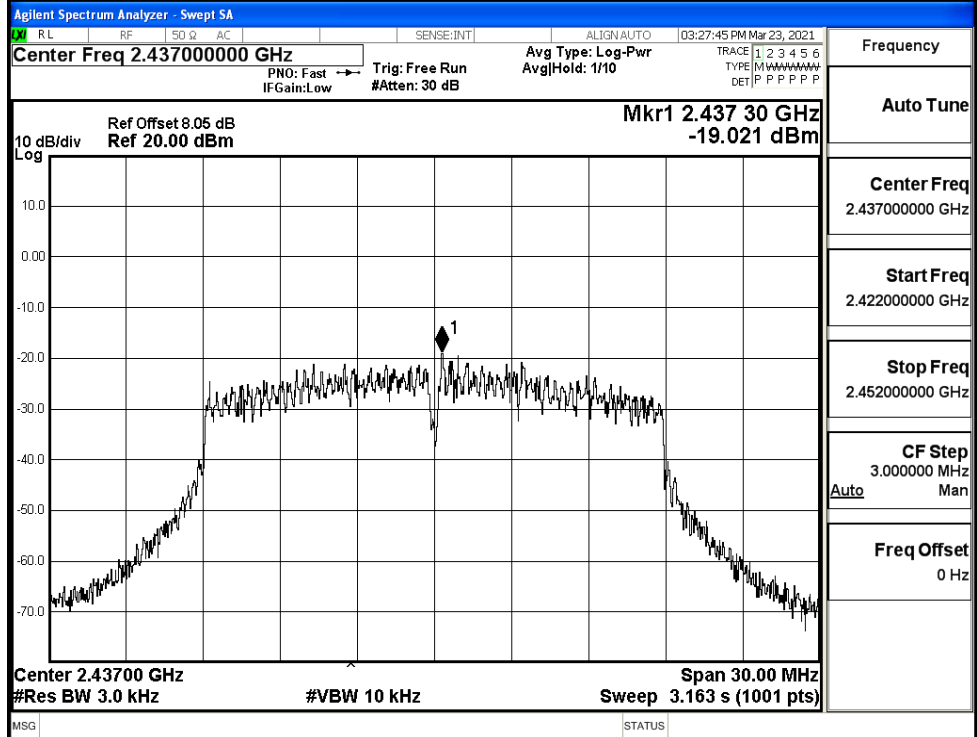
11G/HCH



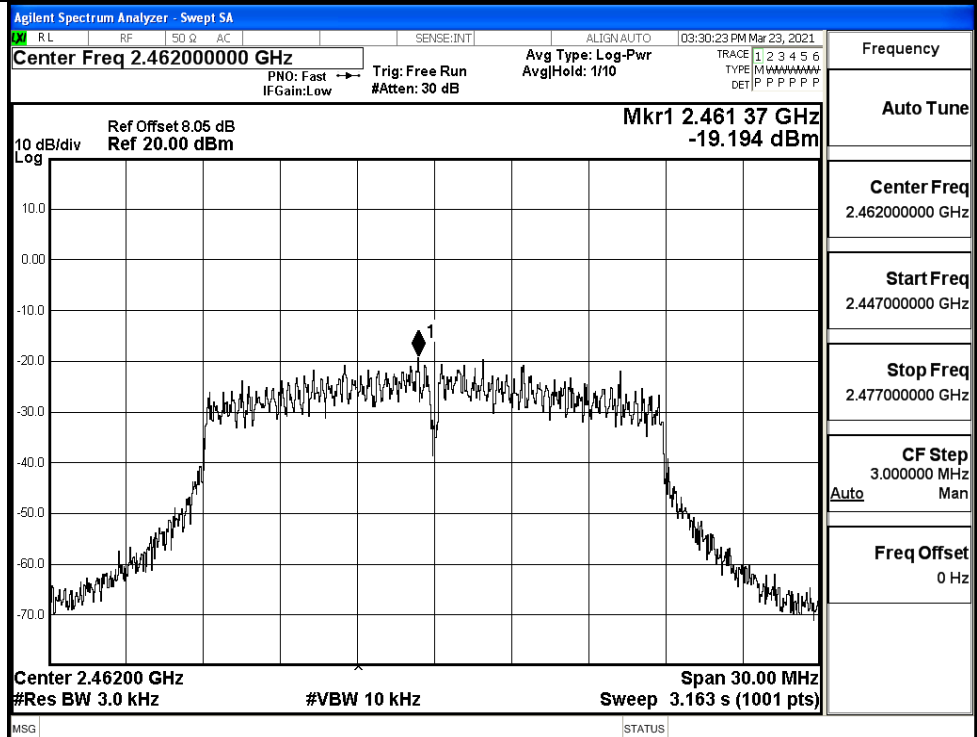
11N20SISO/LCH



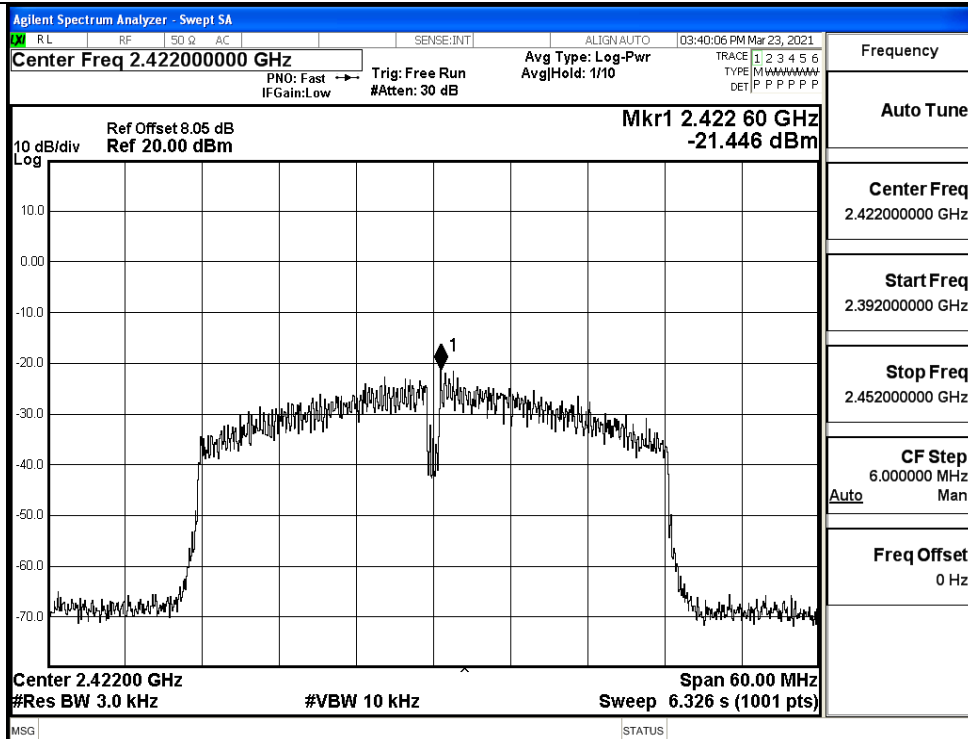
11N20SISO/MCH



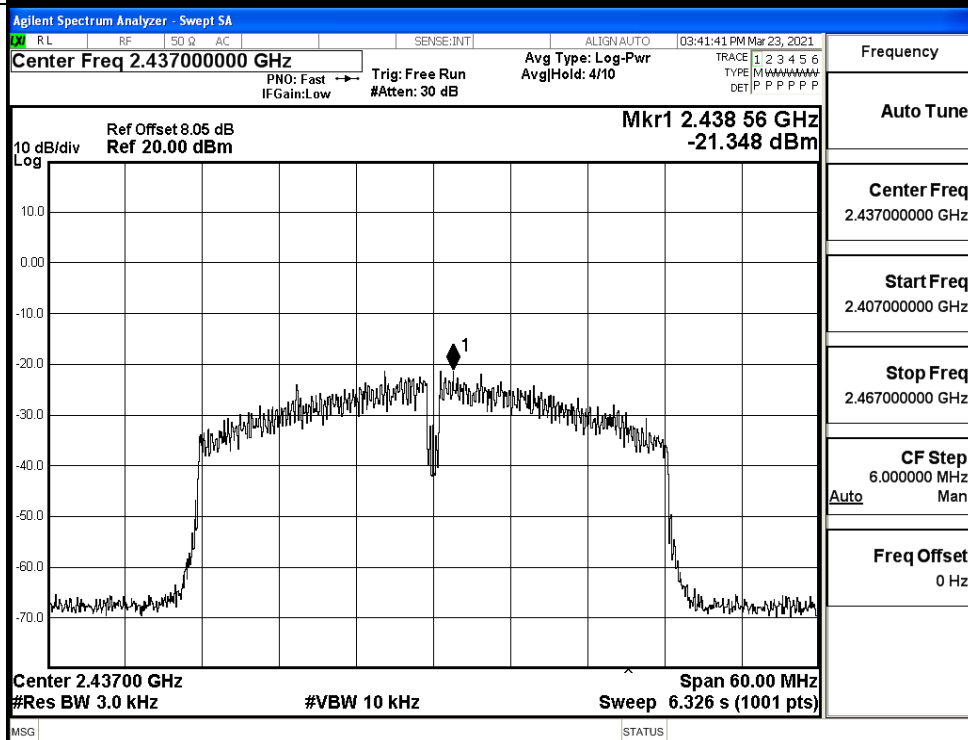
11N20SISO/HCH



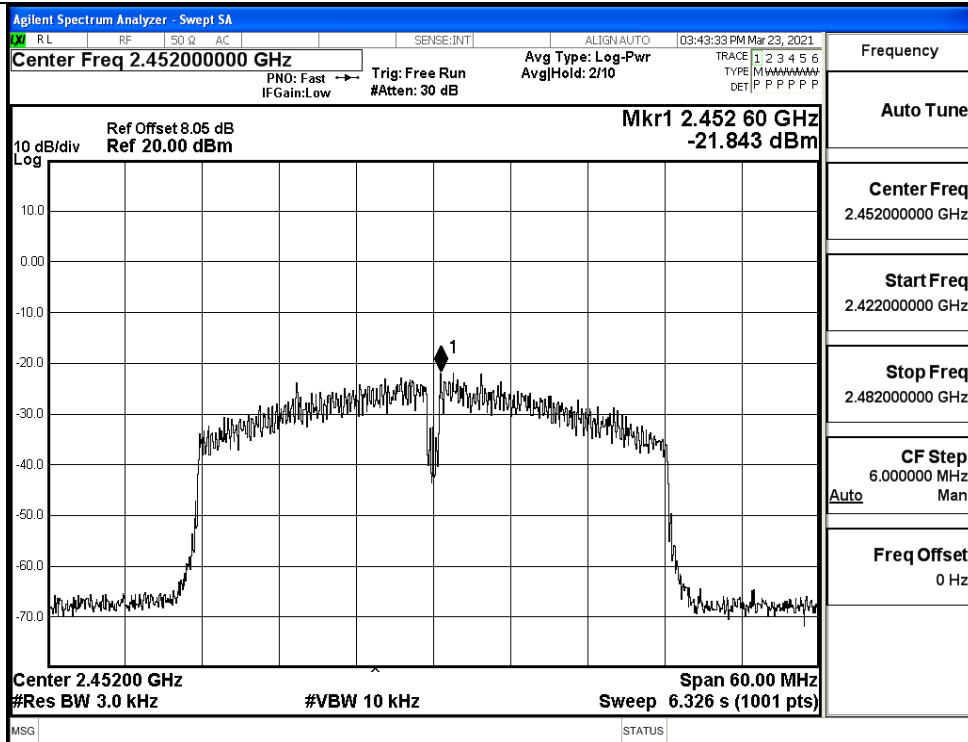
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

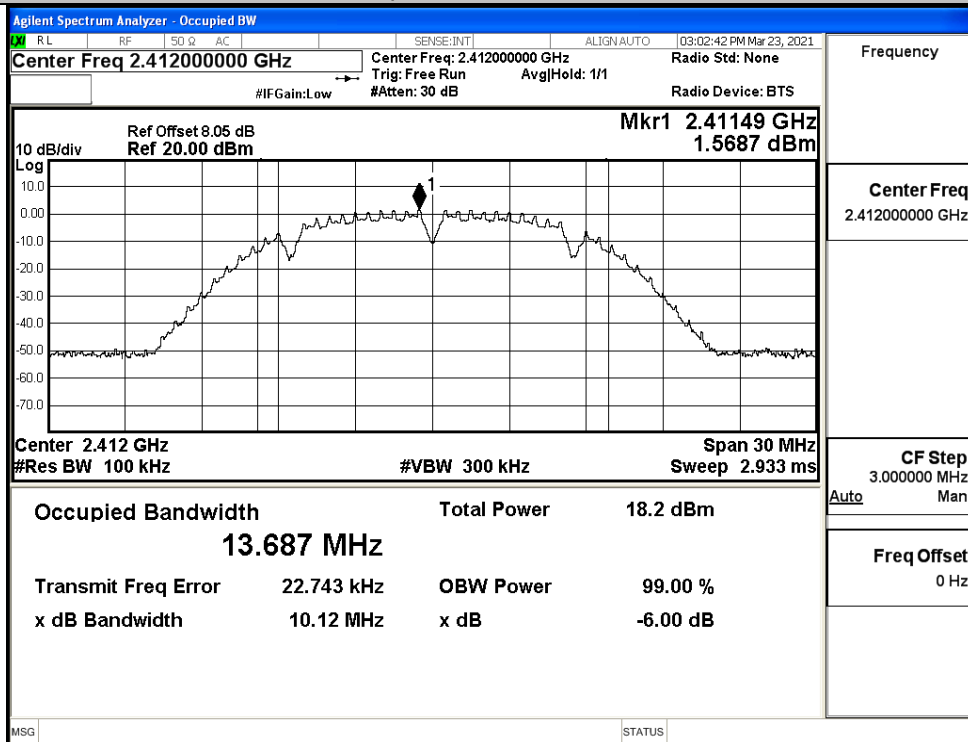


## A.4 6dB Bandwidth

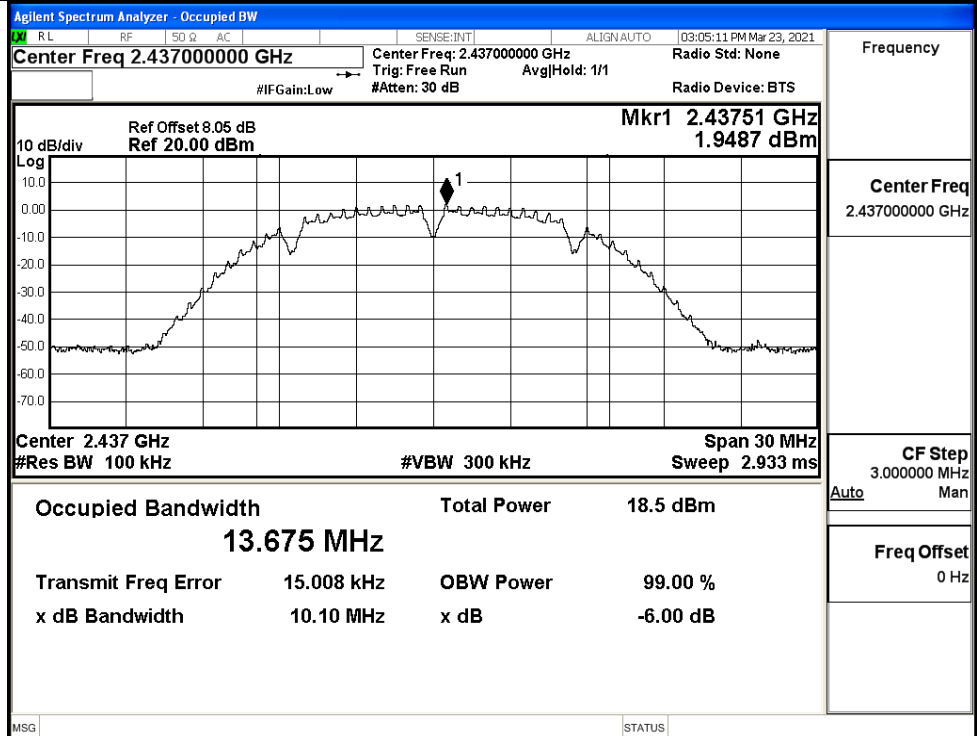
| Mode      | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B       | LCH     | 10.12               | $\geq 0.5$  | PASS    |
|           | MCH     | 10.10               | $\geq 0.5$  | PASS    |
|           | HCH     | 10.11               | $\geq 0.5$  | PASS    |
| 11G       | LCH     | 15.08               | $\geq 0.5$  | PASS    |
|           | MCH     | 15.08               | $\geq 0.5$  | PASS    |
|           | HCH     | 13.84               | $\geq 0.5$  | PASS    |
| 11N20SISO | LCH     | 15.08               | $\geq 0.5$  | PASS    |
|           | MCH     | 15.09               | $\geq 0.5$  | PASS    |
|           | HCH     | 15.11               | $\geq 0.5$  | PASS    |
| 11N40SISO | LCH     | 23.84               | $\geq 0.5$  | PASS    |
|           | MCH     | 23.85               | $\geq 0.5$  | PASS    |
|           | HCH     | 25.04               | $\geq 0.5$  | PASS    |

## Test Graphs

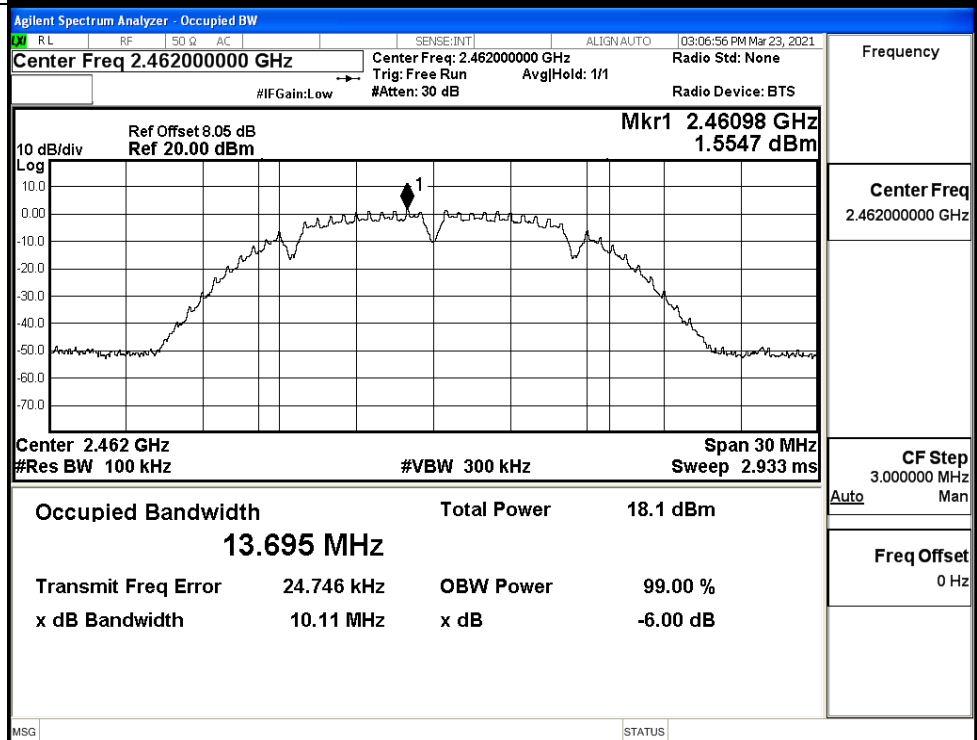
11B/LCH



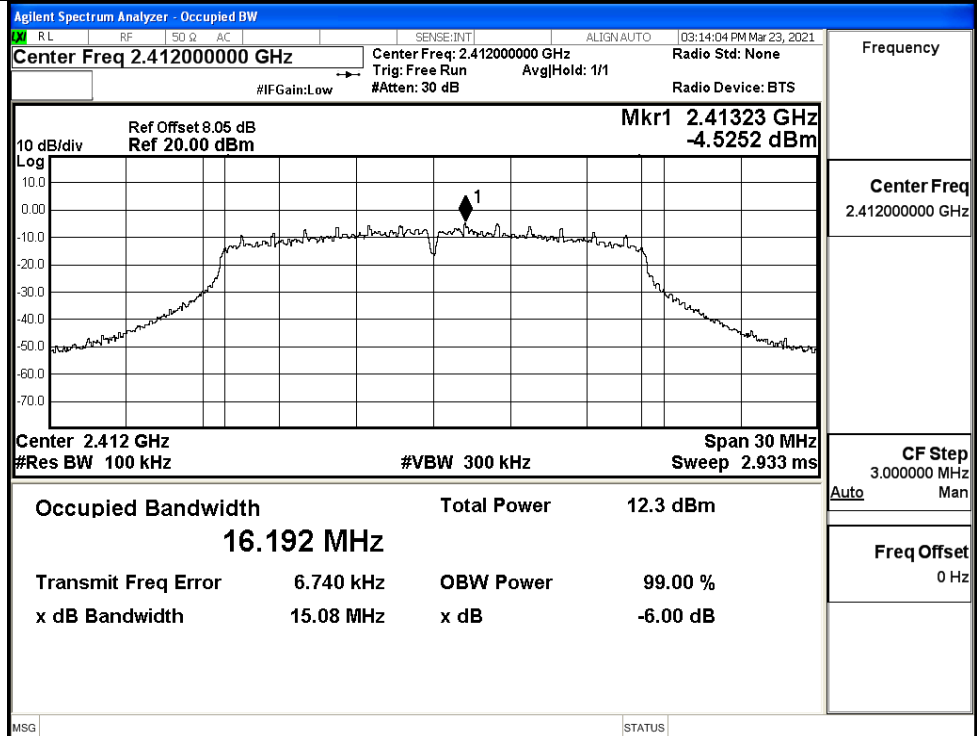
11B/MCH



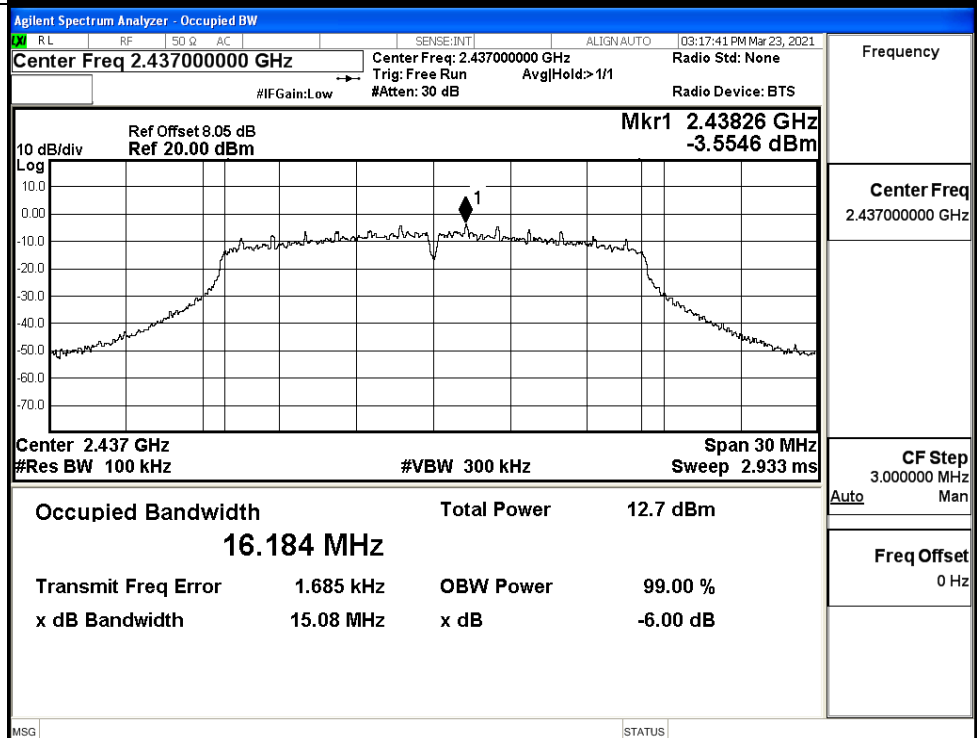
11B/HCH



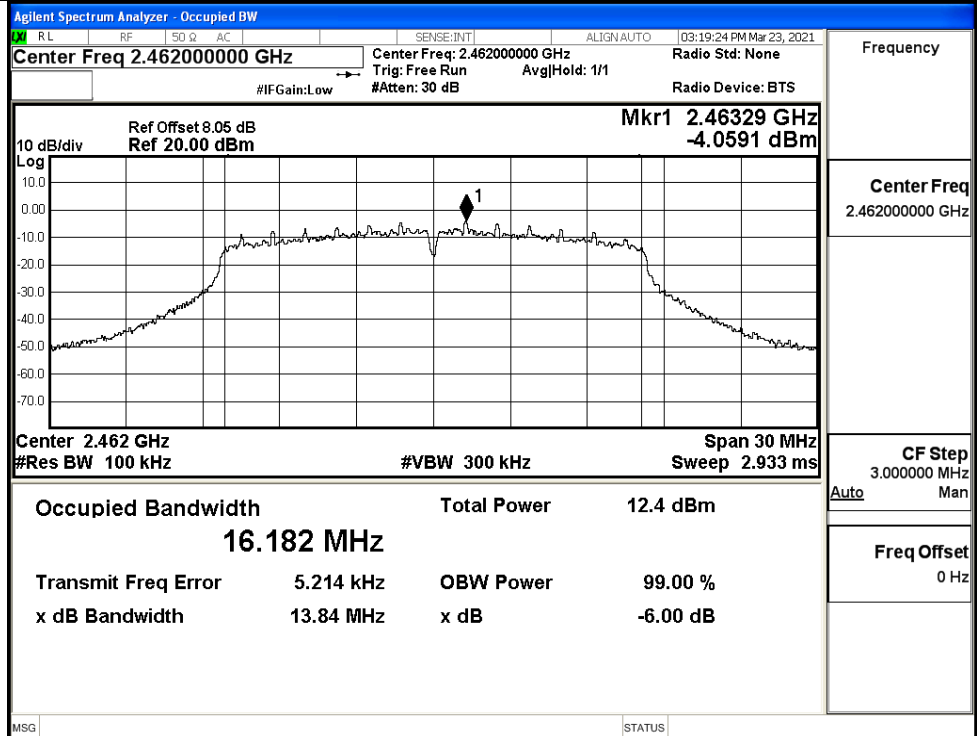
11G/LCH



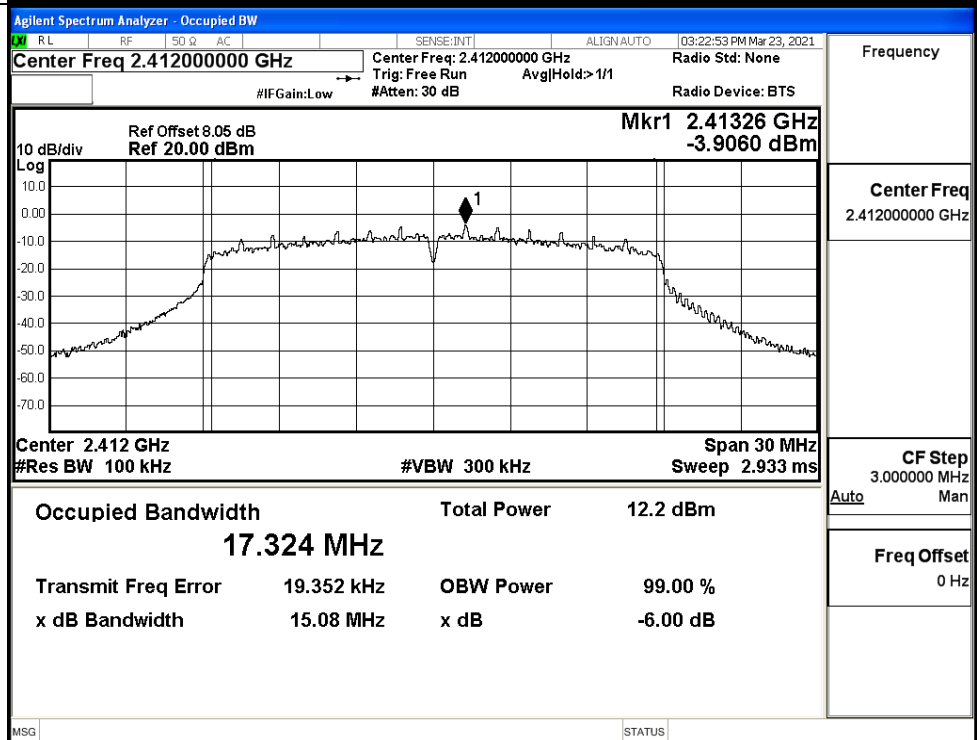
11G/MCH



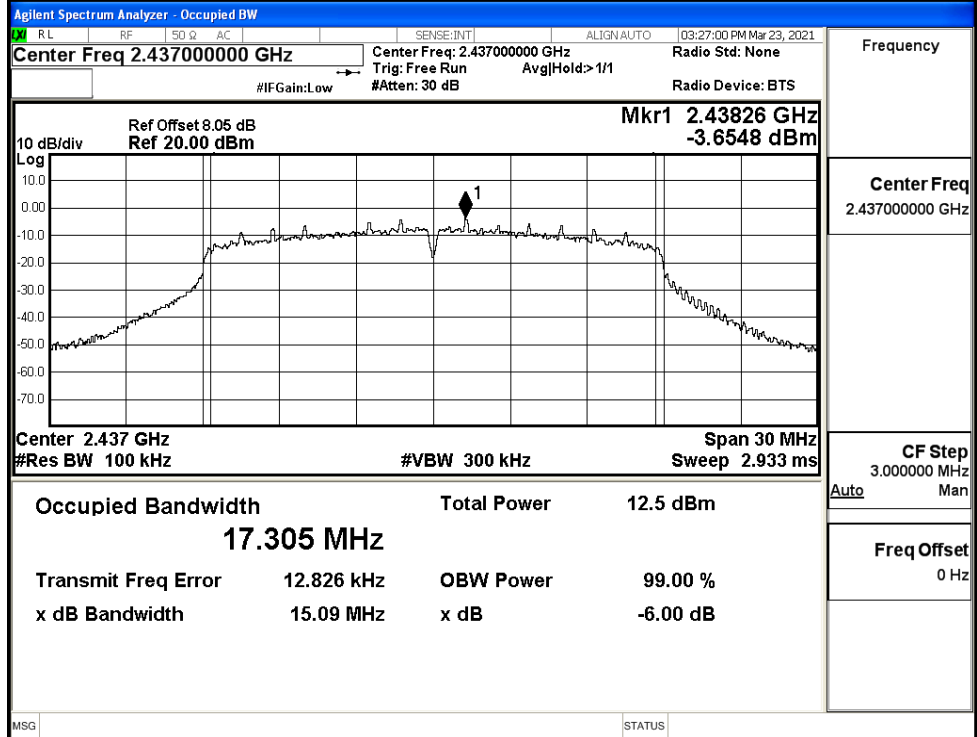
11G/HCH



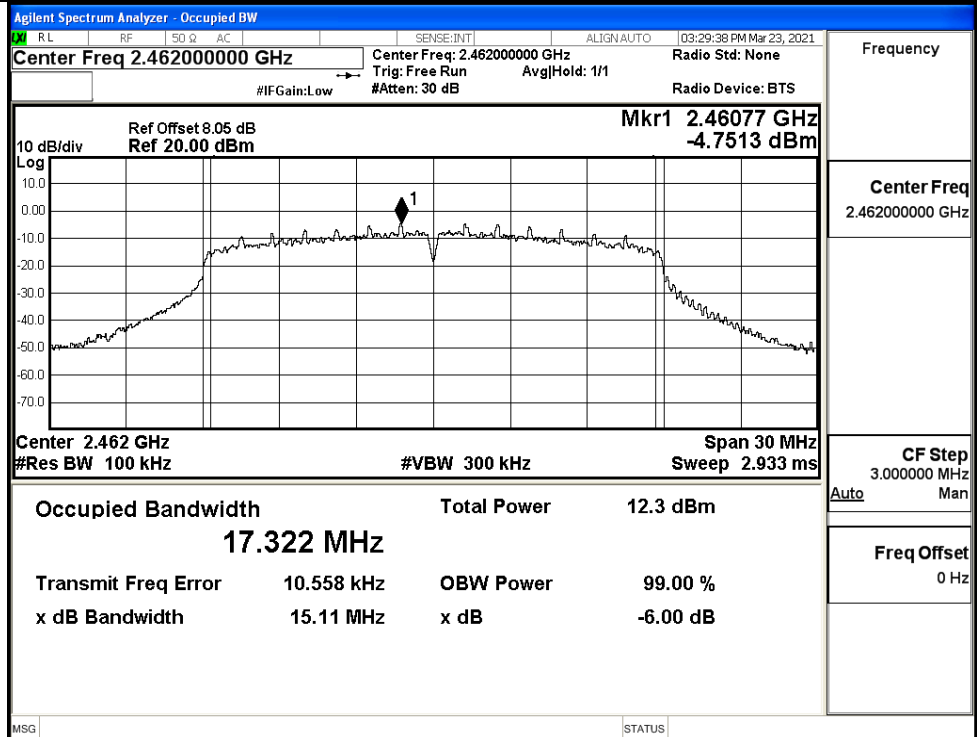
11N20SISO/LCH



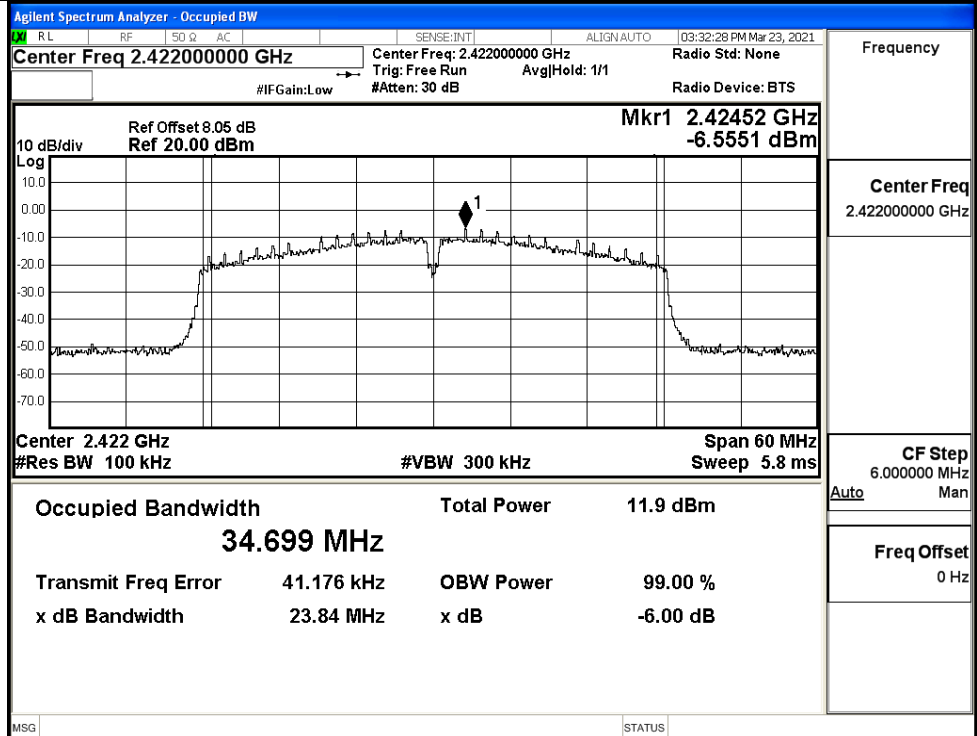
11N20SISO/MCH



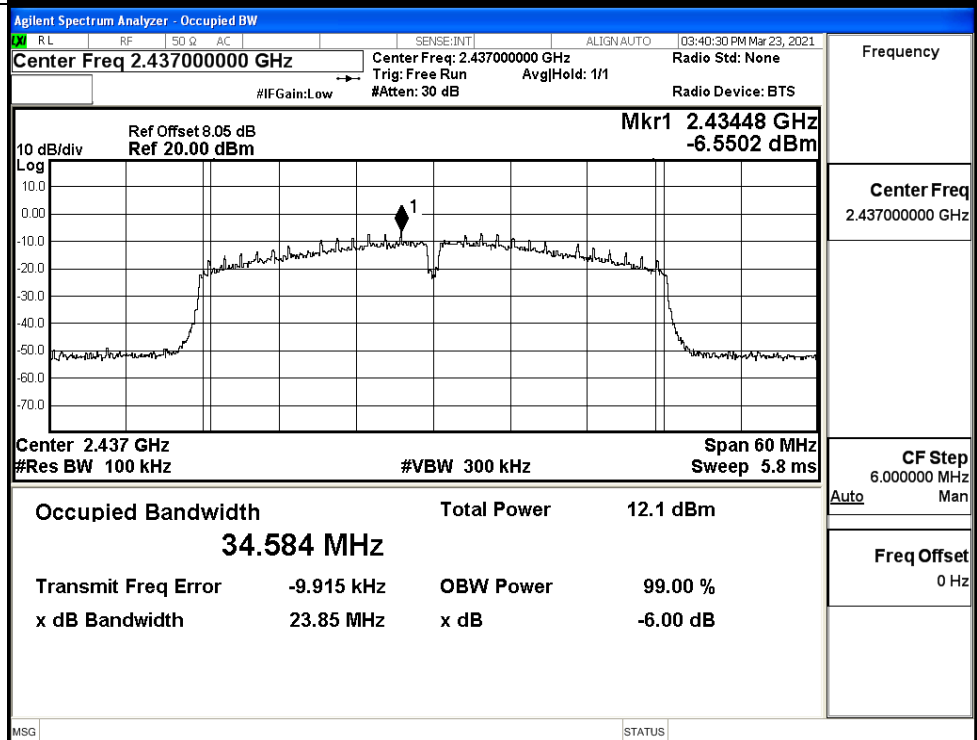
11N20SISO/HCH



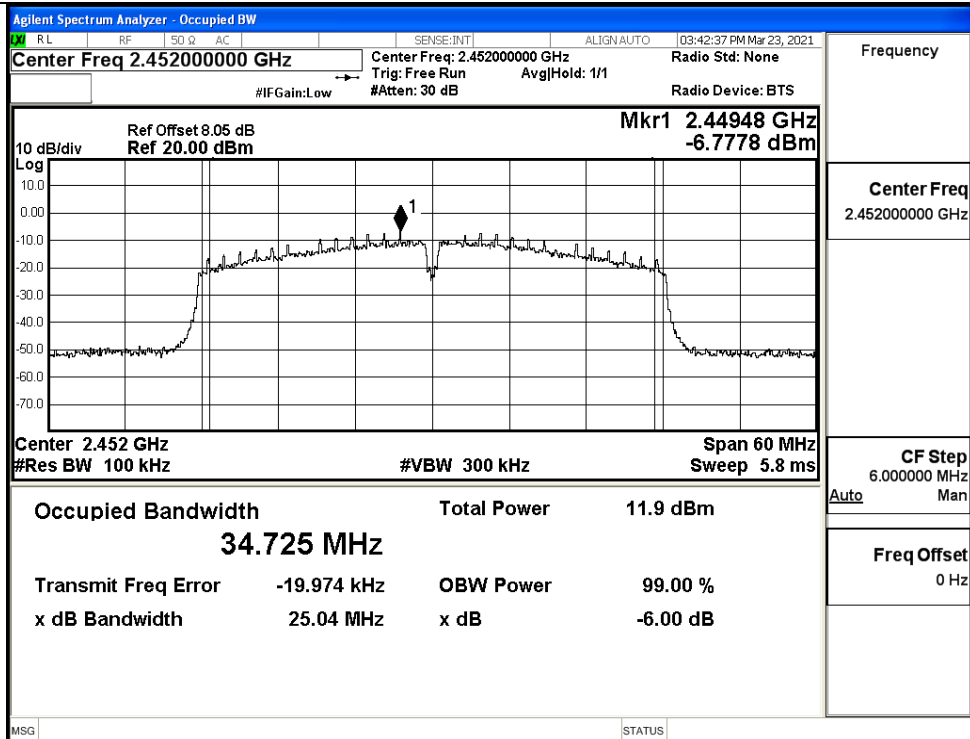
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

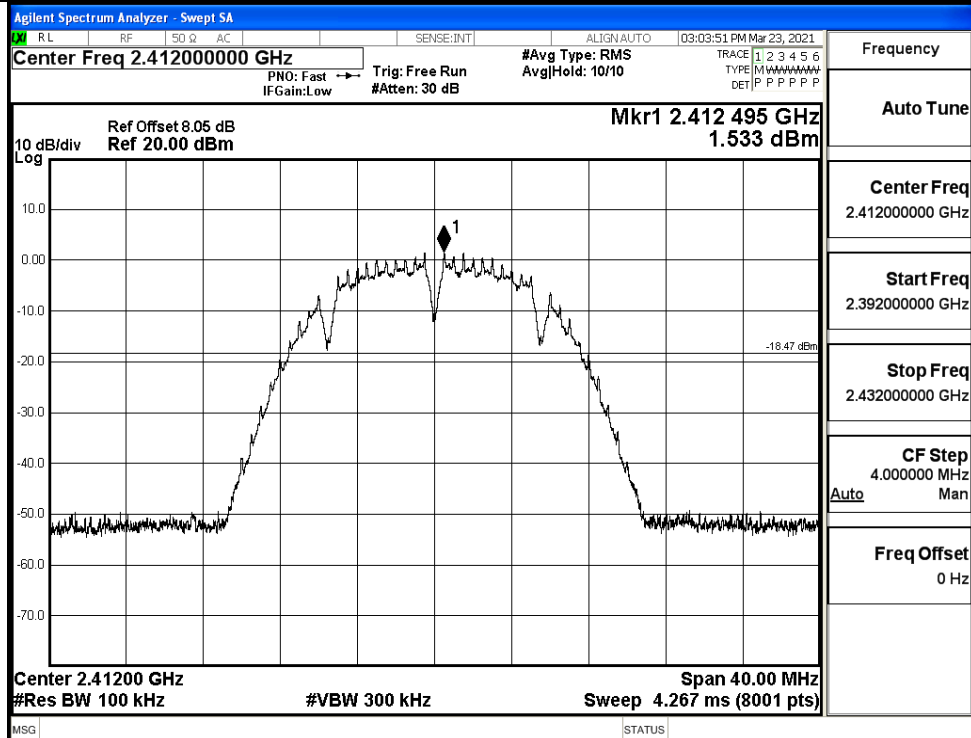


## A.5 RF Conducted Spurious Emissions

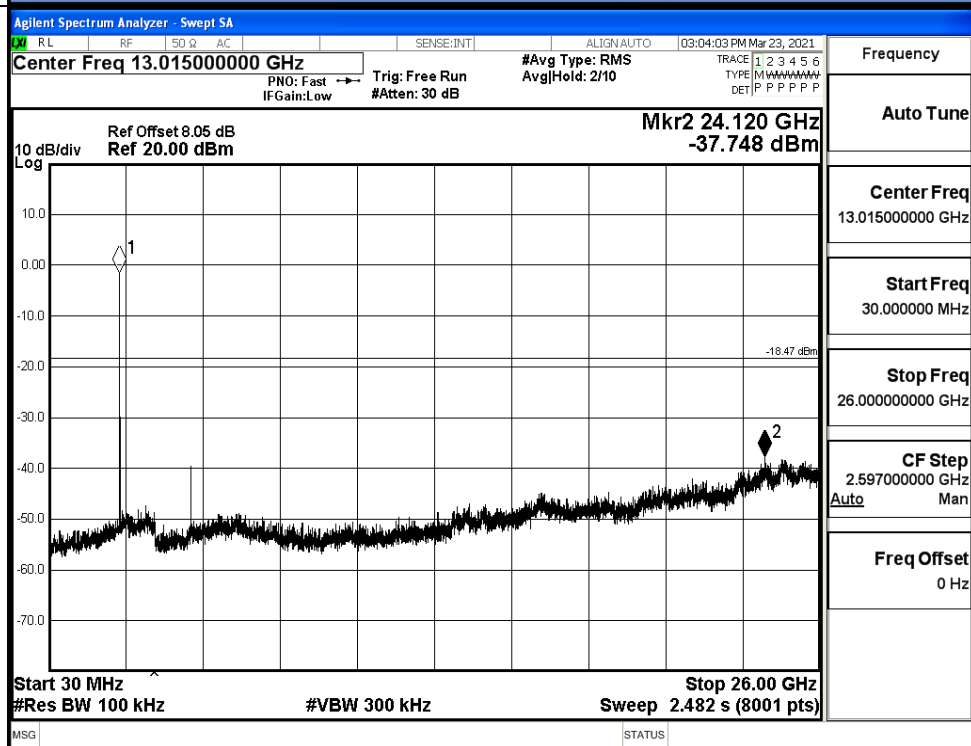
| Mode          | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B           | LCH     | 1.533      | -37.748          | -18.467     | PASS    |
|               | MCH     | 1.547      | -37.905          | -18.453     | PASS    |
|               | HCH     | 1.539      | -37.889          | -18.461     | PASS    |
| 11G           | LCH     | -4.685     | -37.735          | -24.685     | PASS    |
|               | MCH     | -3.7       | -38.067          | -23.700     | PASS    |
|               | HCH     | -4.484     | -38.007          | -24.484     | PASS    |
| 11N20<br>SISO | LCH     | -4.671     | -38.108          | -24.671     | PASS    |
|               | MCH     | -4.173     | -37.393          | -24.173     | PASS    |
|               | HCH     | -4.164     | -38.133          | -24.164     | PASS    |
| 11N40<br>SISO | LCH     | -6.797     | -36.761          | -26.797     | PASS    |
|               | MCH     | -6.552     | -37.664          | -26.552     | PASS    |
|               | HCH     | -7.998     | -37.620          | -27.998     | PASS    |

## 11B LCH Graphs

Pref/11B/LCH

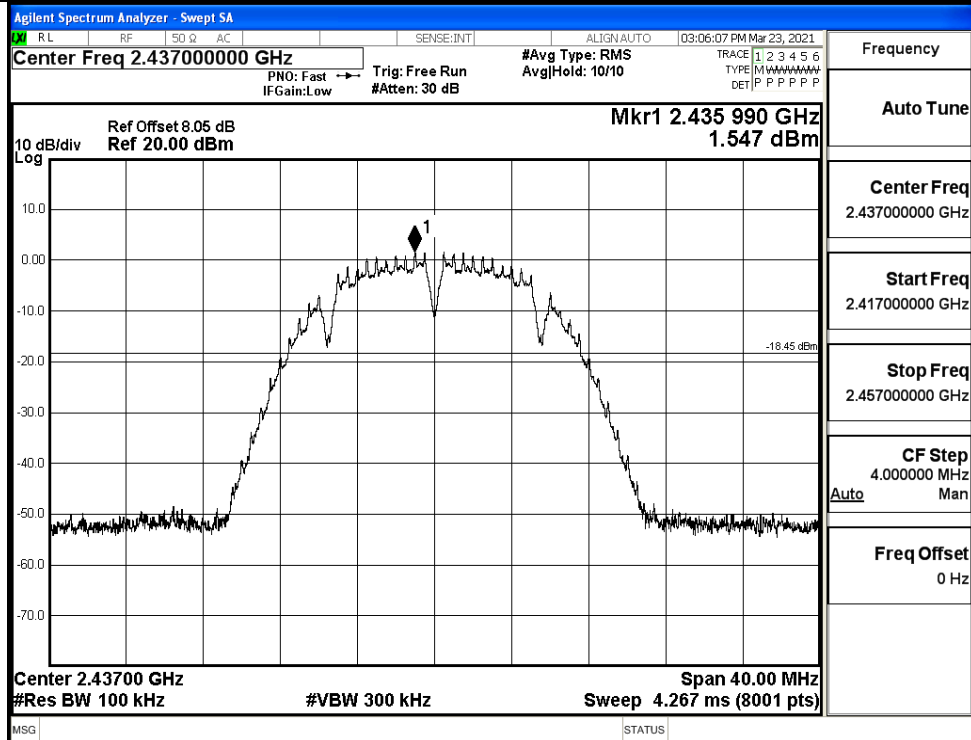


Puw/11B/LCH

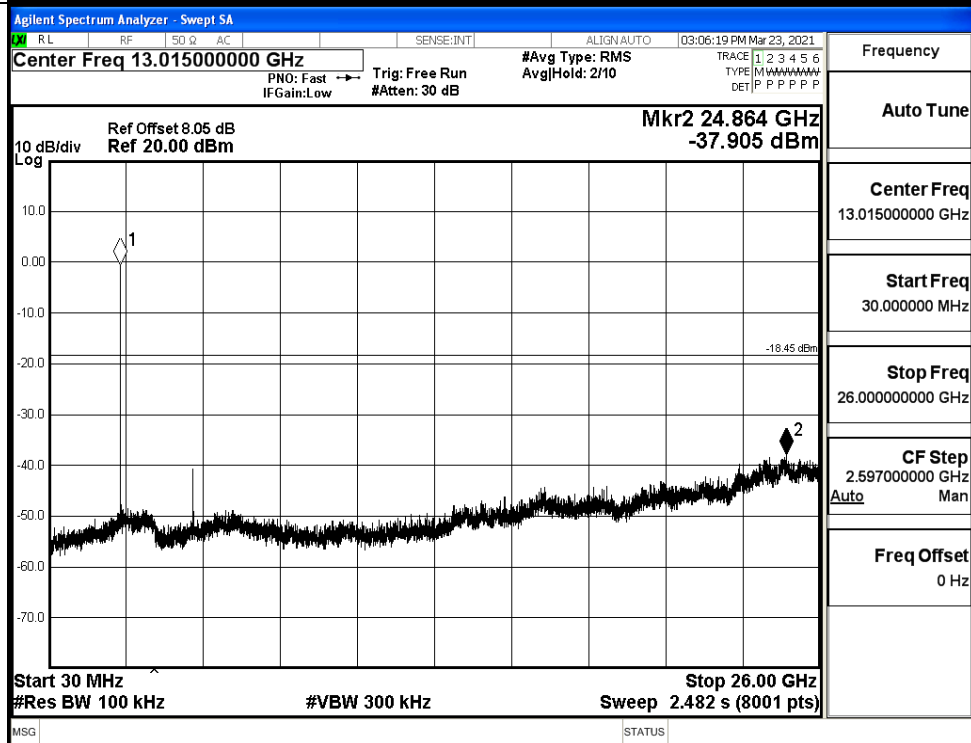


## 11B MCH Graphs

Pref/11B/MCH

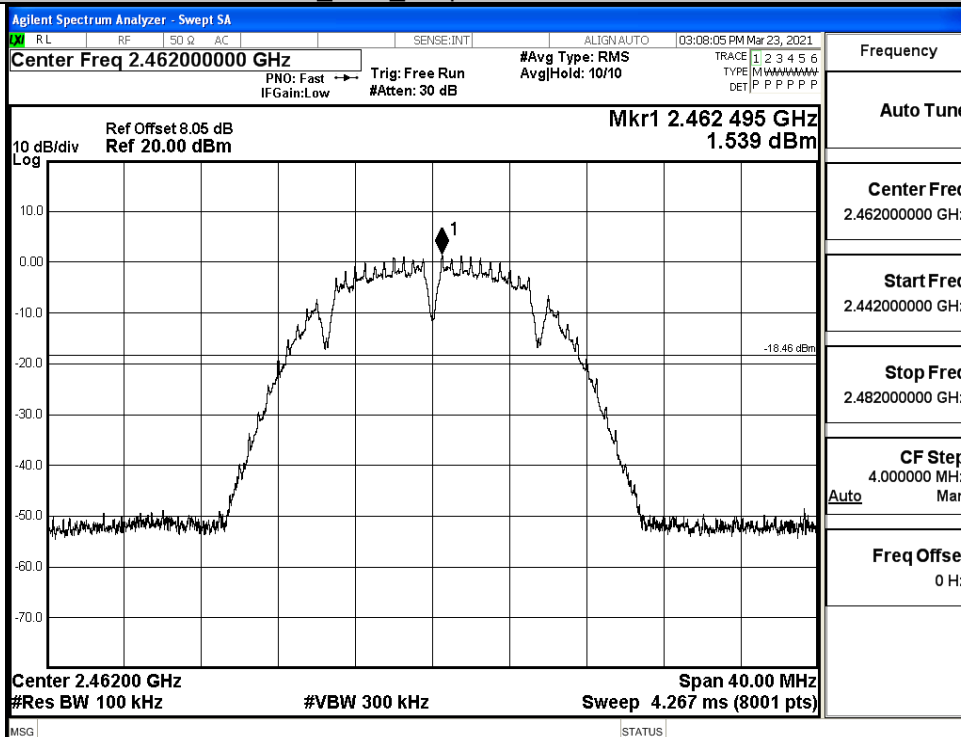


Puw/11B/MCH

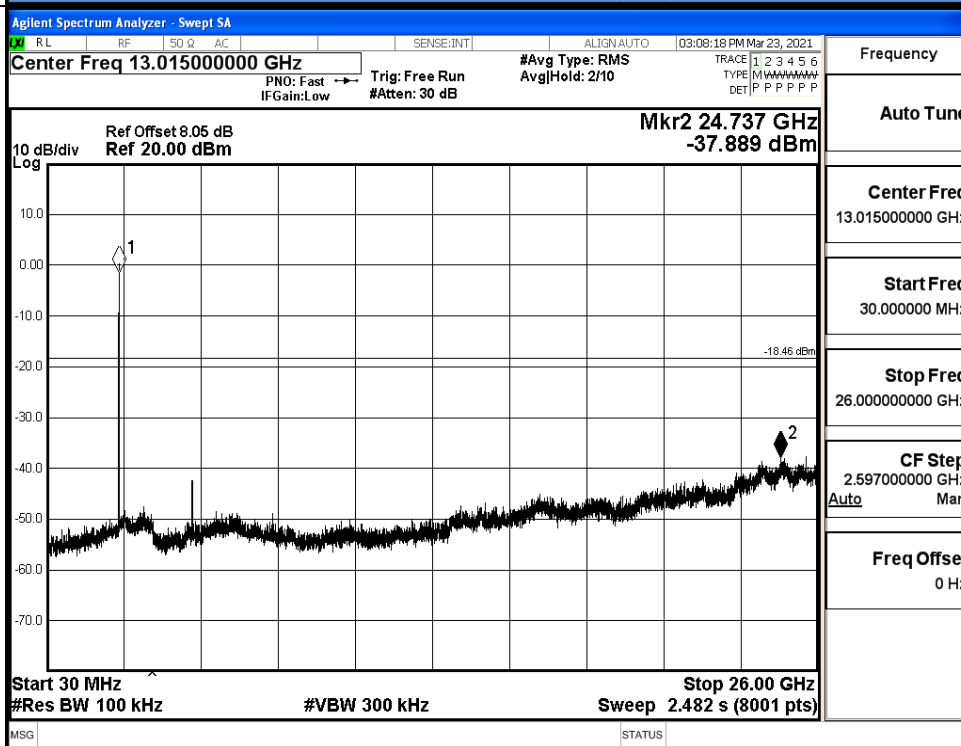


## 11B HCH Graphs

Pref/11B/HCH

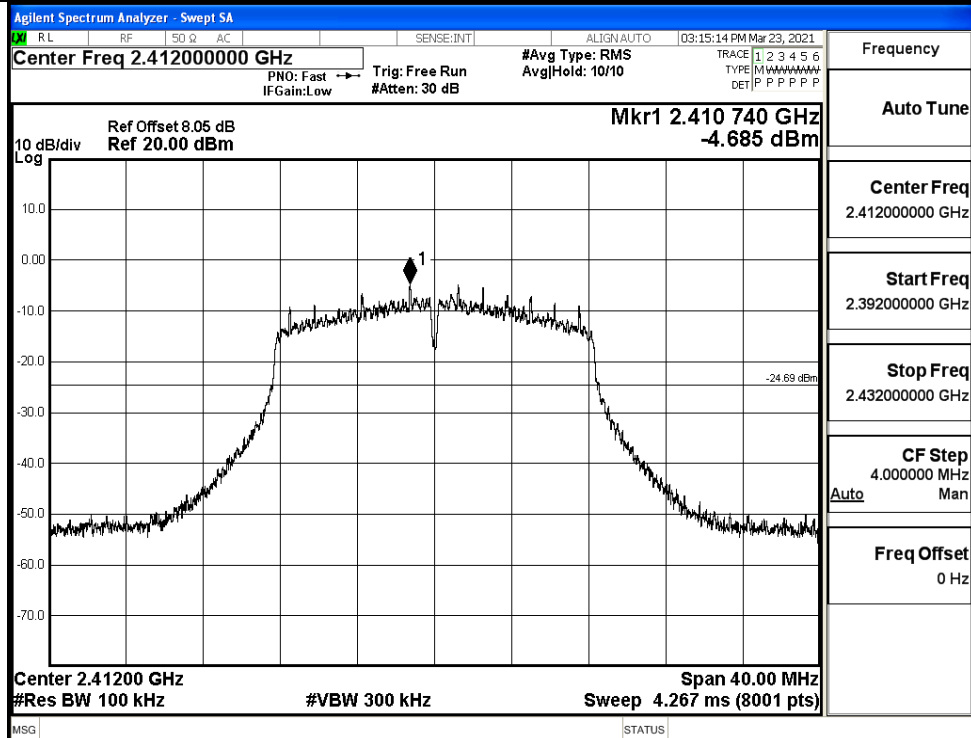


Puw/11B/HCH

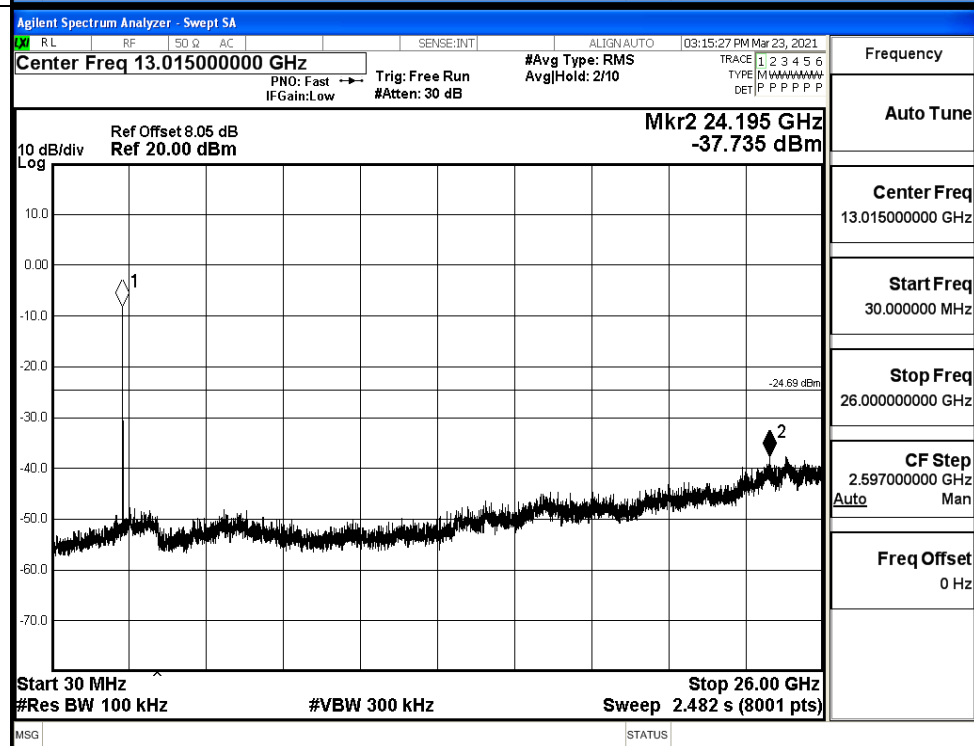


## 11G LCH Graphs

Pref/11G/LCH

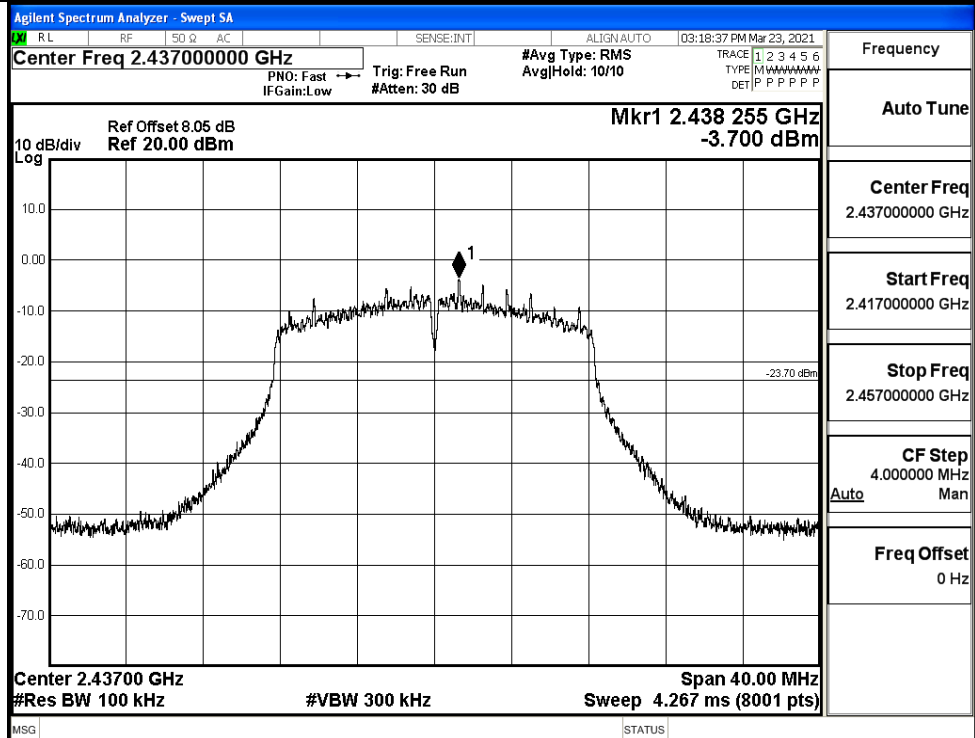


Puw/11G/LCH

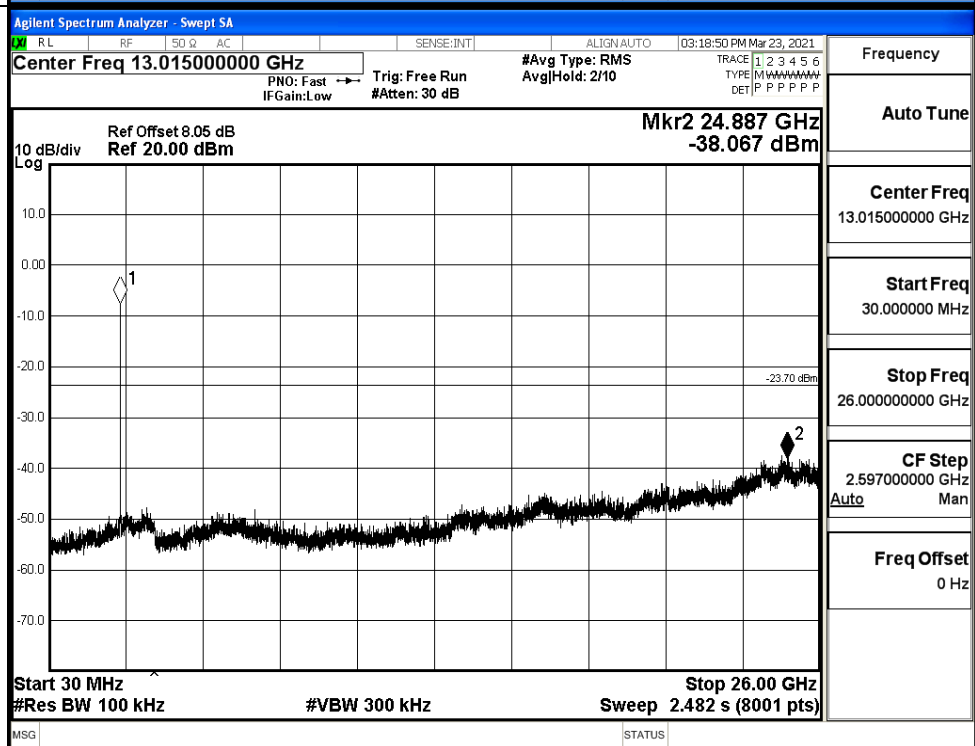


## 11G MCH Graphs

Pref/11G/MCH

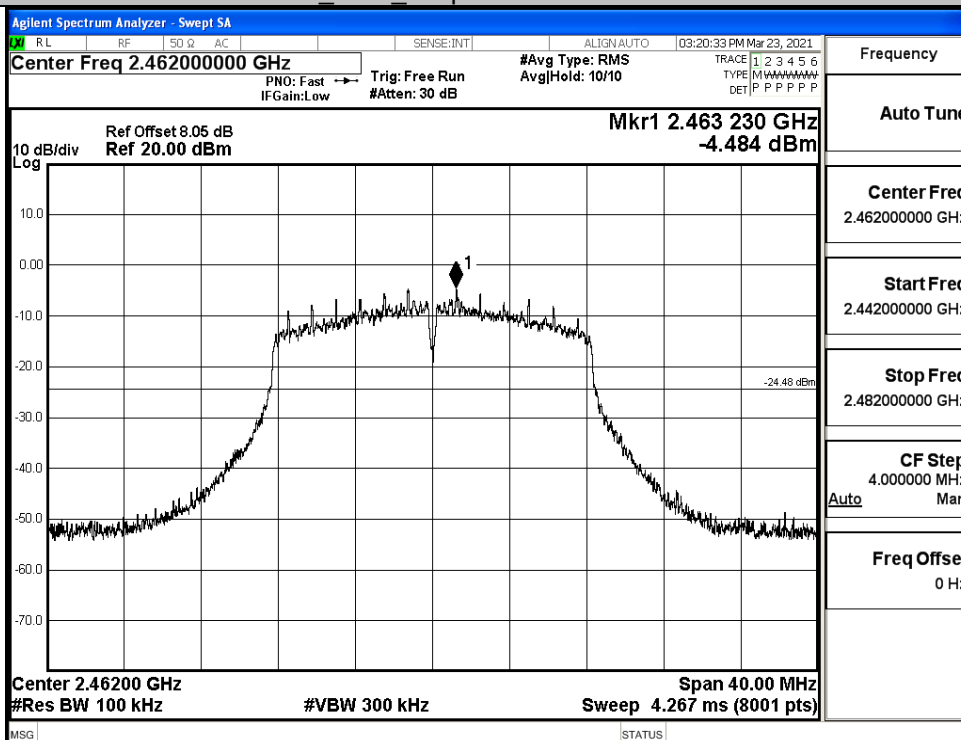


Puw/11G/MCH

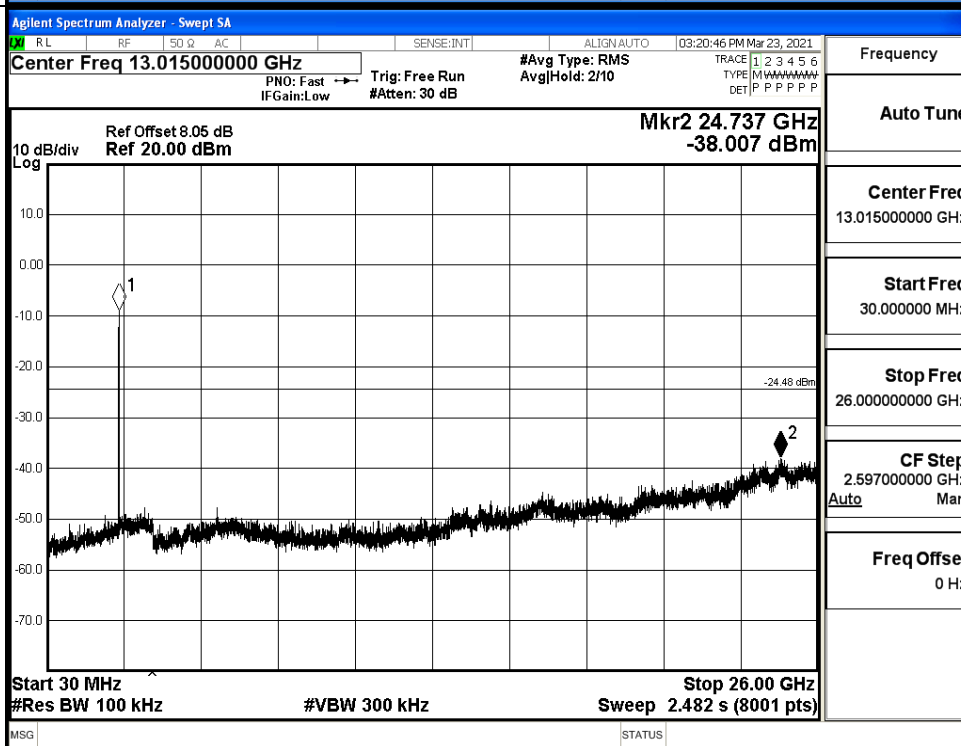


## 11G HCH Graphs

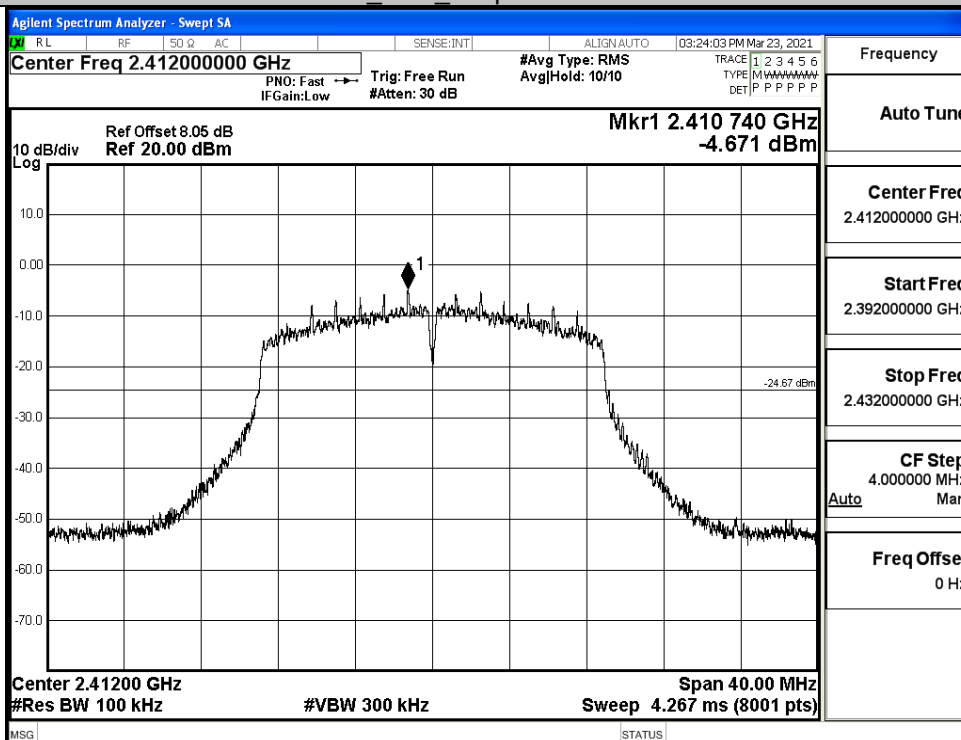
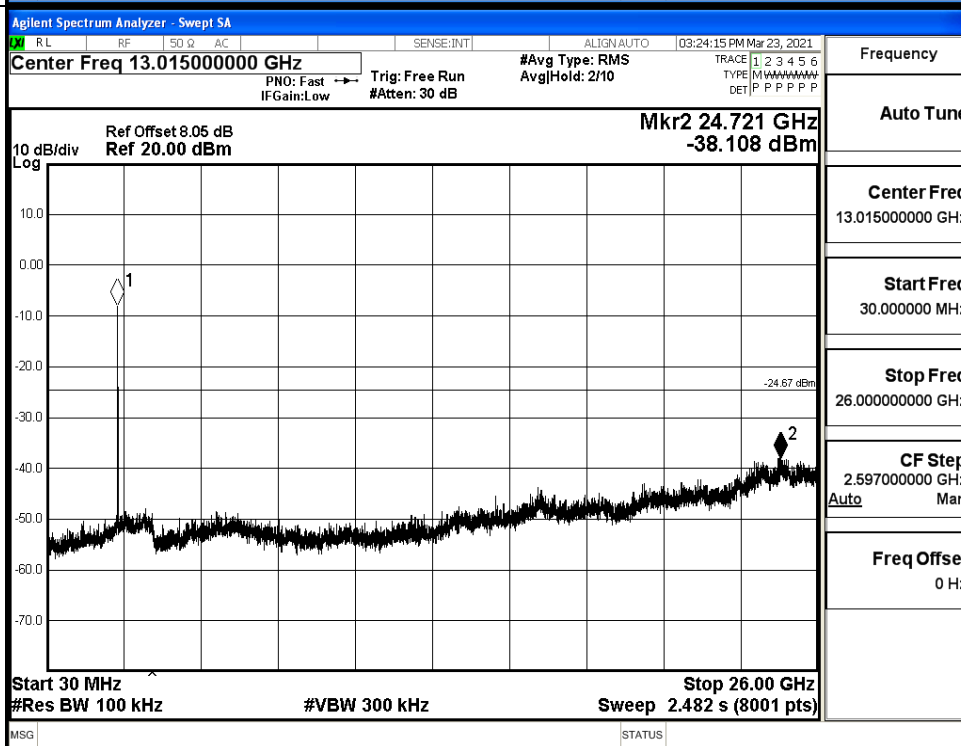
Pref/11G/HCH



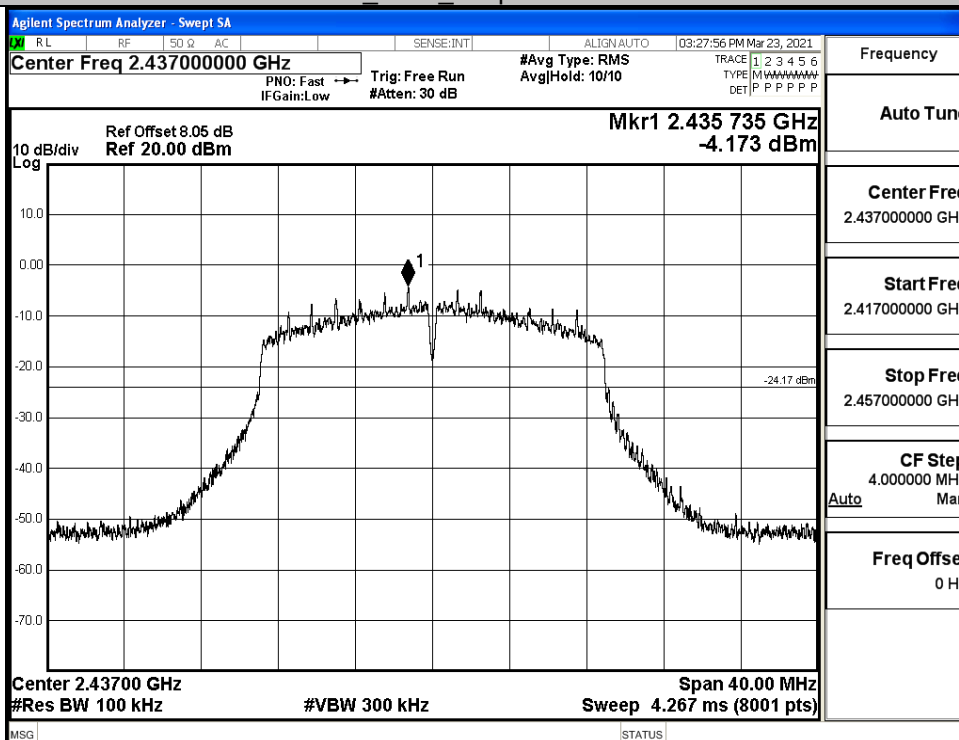
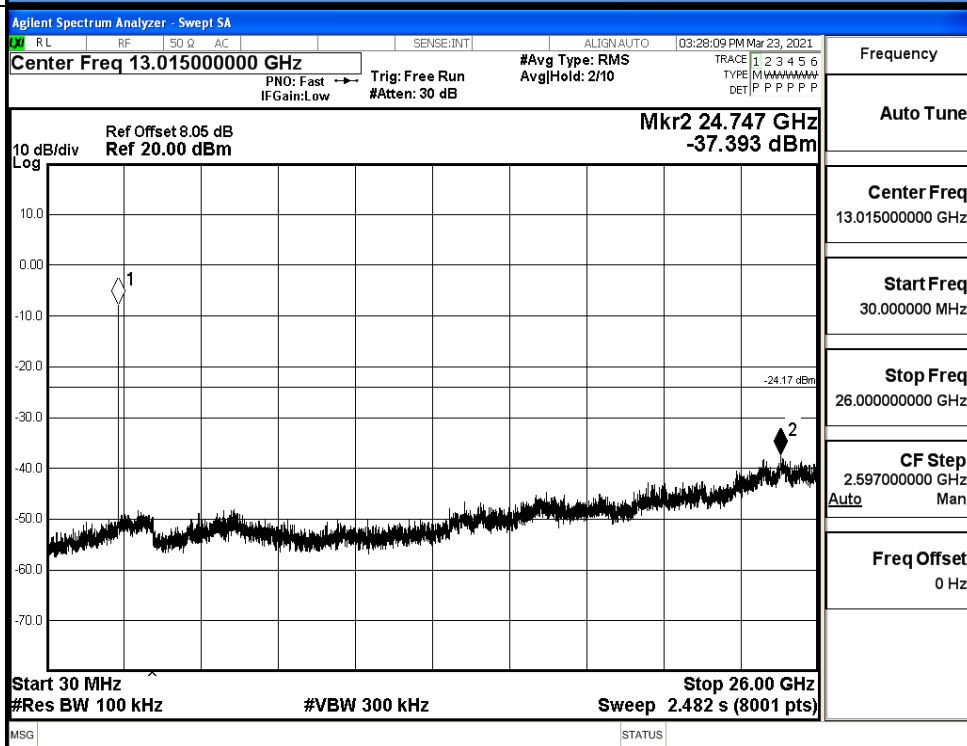
Puw/11G/HCH



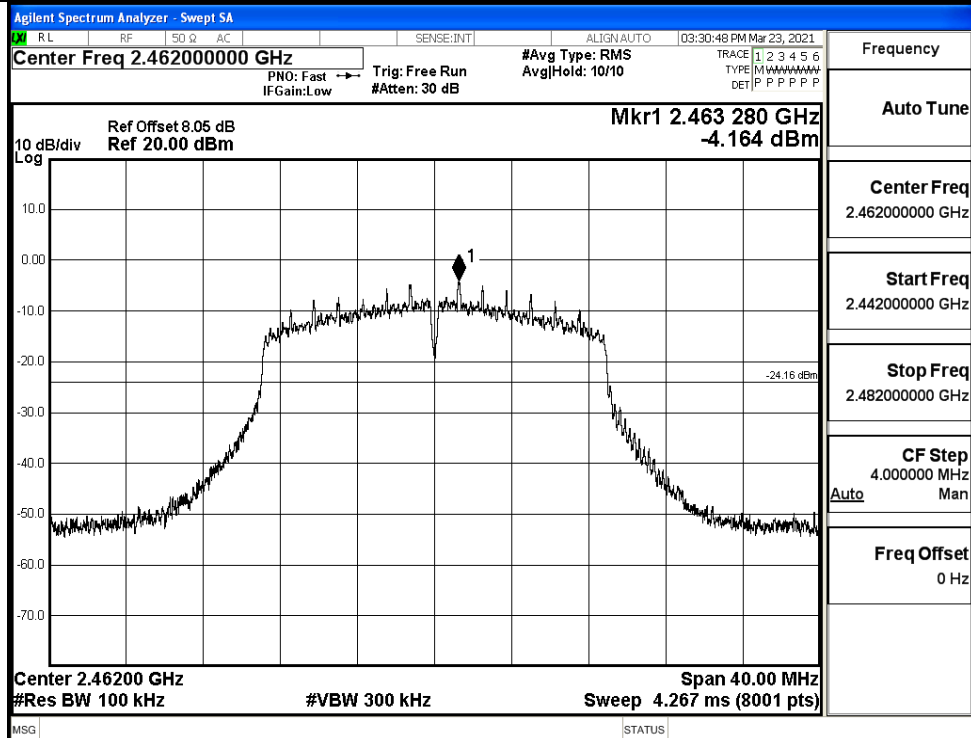
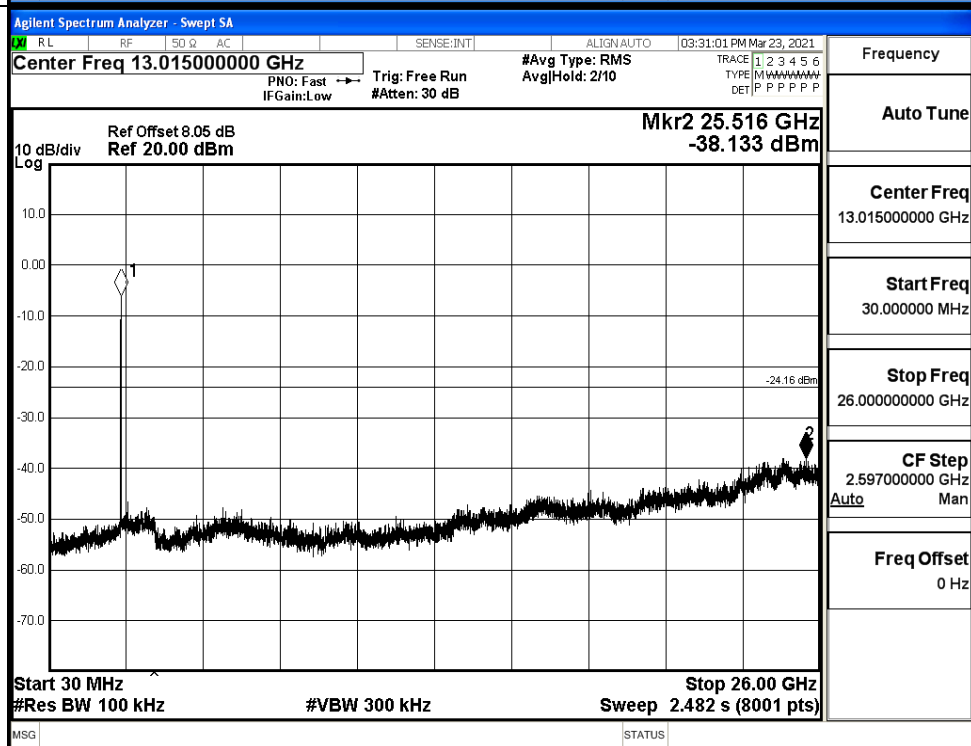
## 11N20SISO LCH Graphs

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

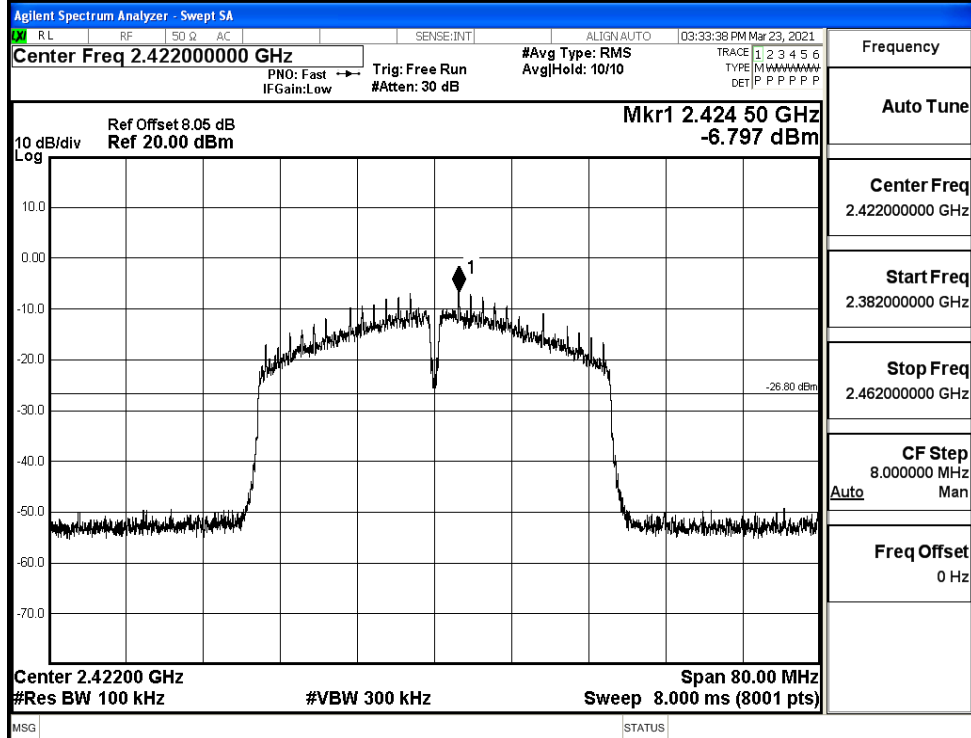
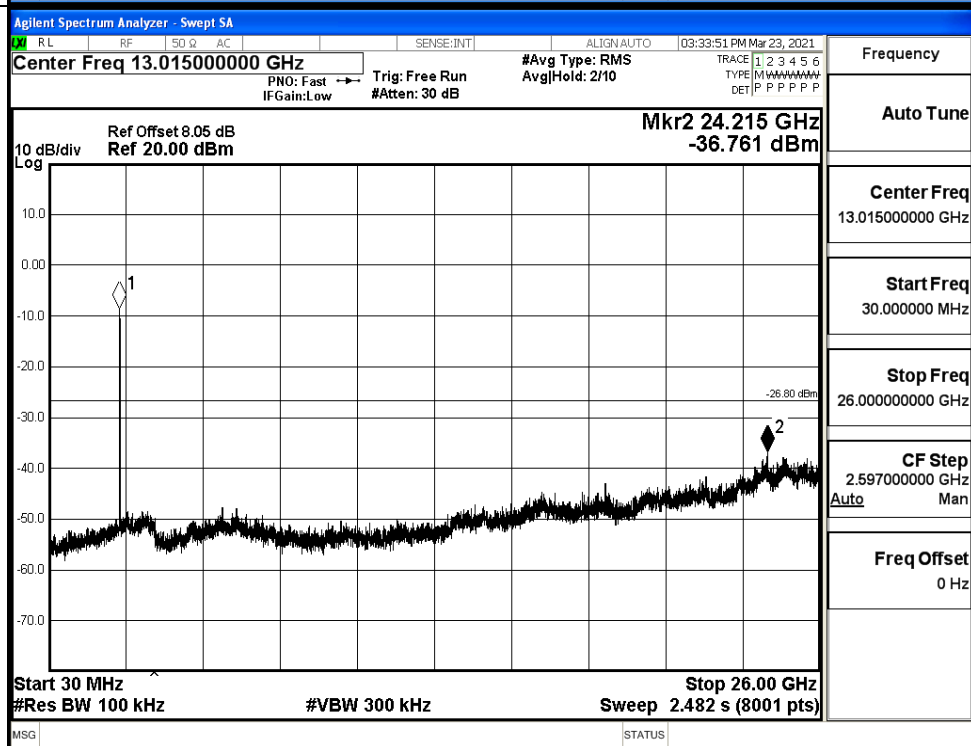
## 11N20SISO\_MCH\_Graphs

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

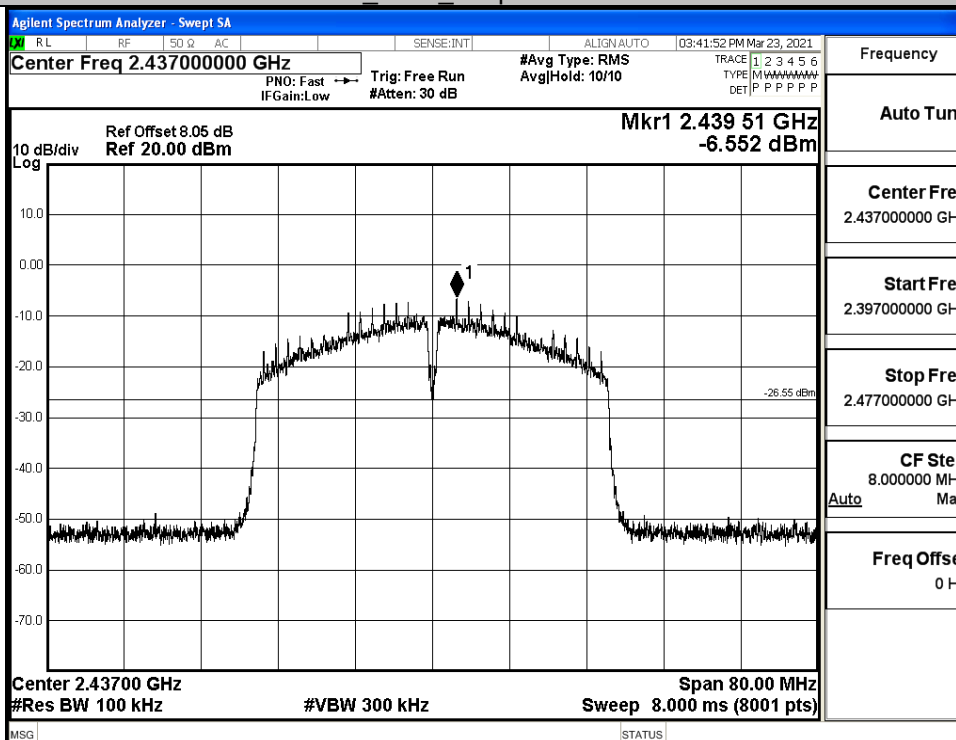
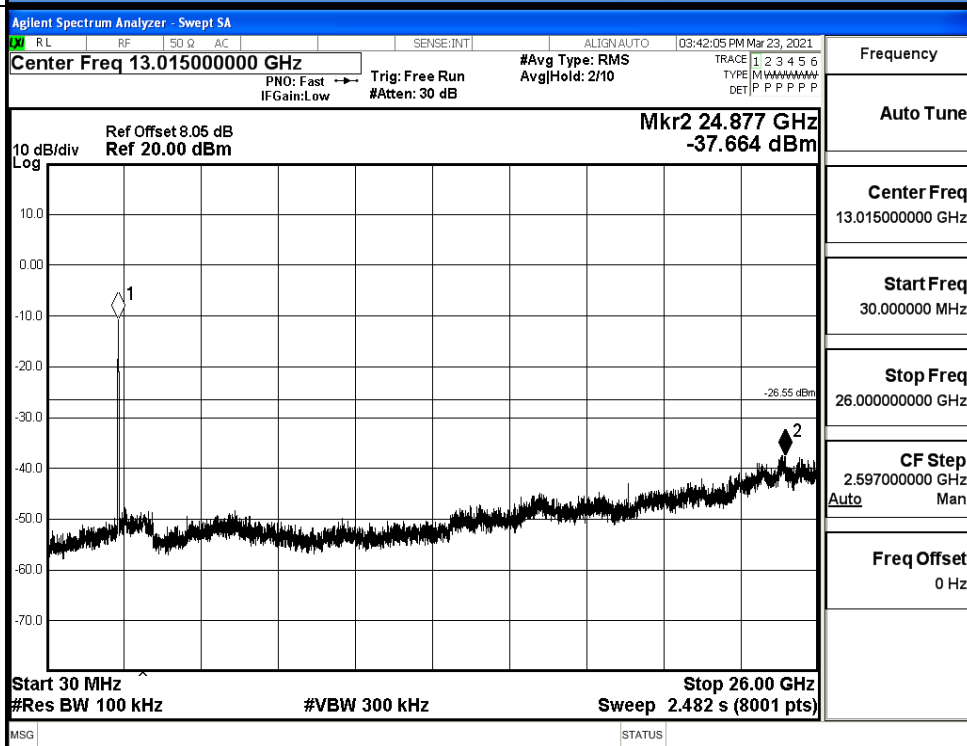
## 11N20SISO HCH Graphs

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

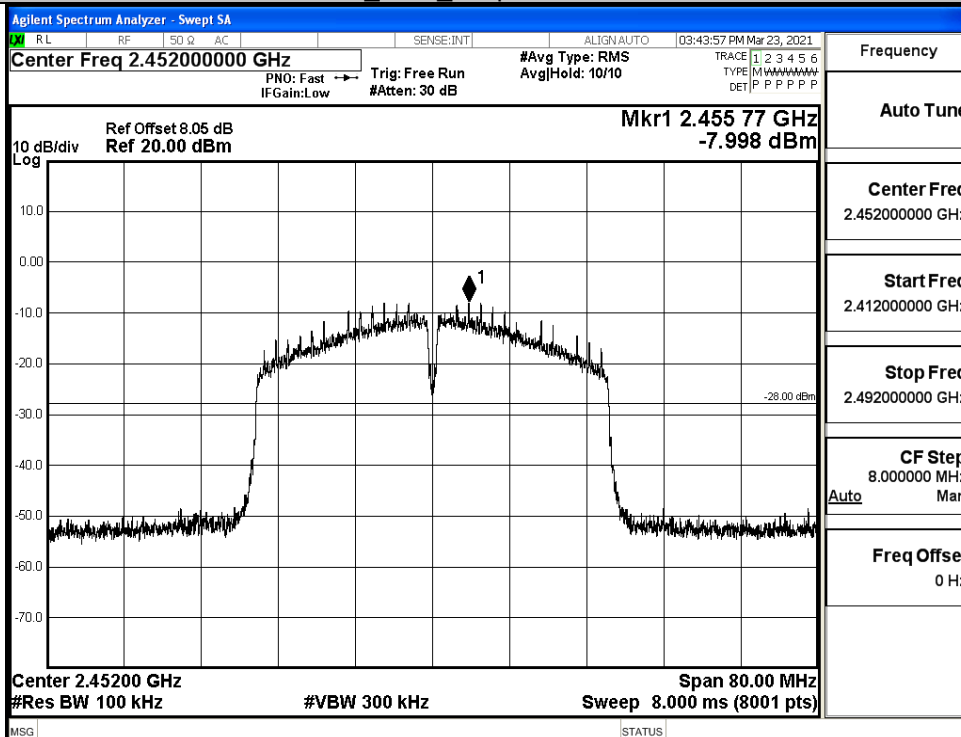
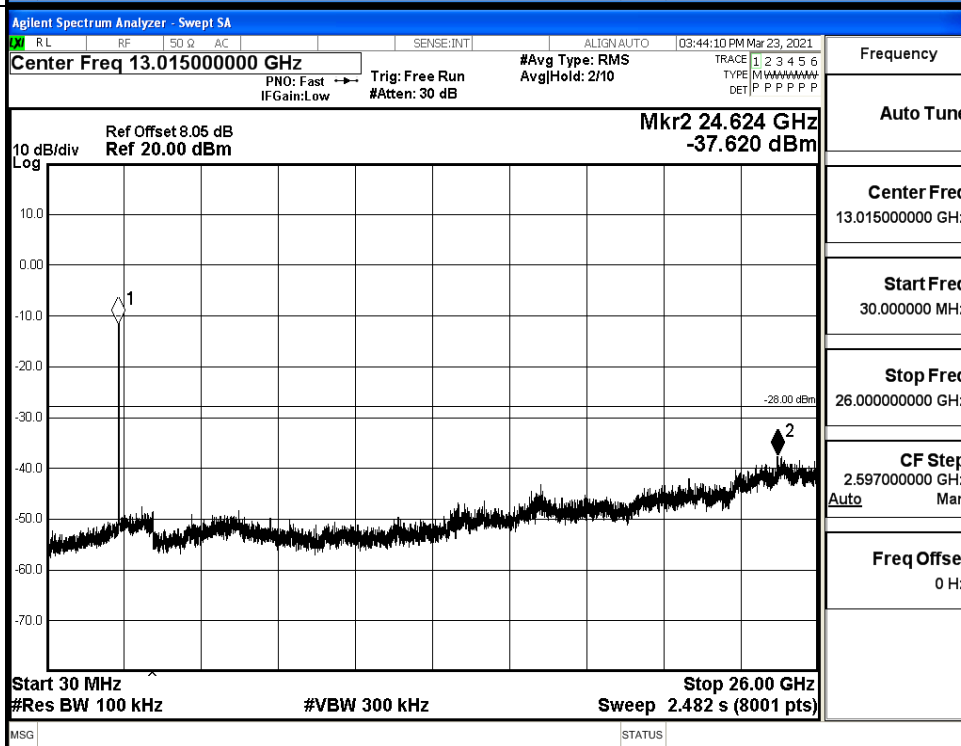
## 11N40SISO LCH Graphs

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

## 11N40SISO\_MCH\_Graphs

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

## 11N40SISO HCH Graphs

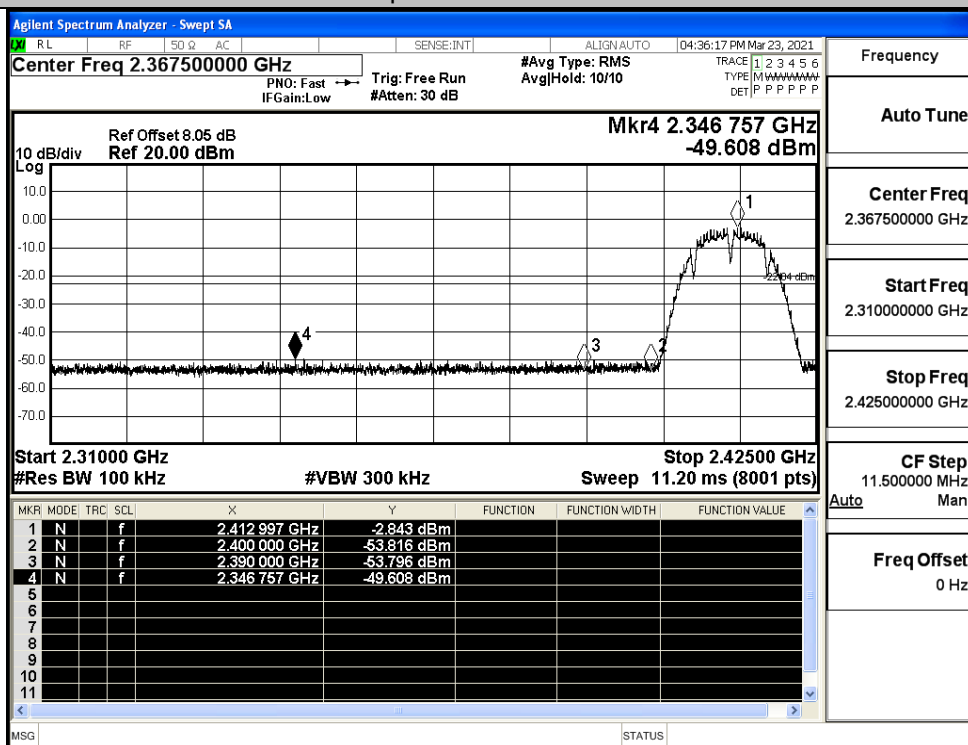
Pref/11N40  
SISO/HCHPuw/11N40  
SISO/HCH

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

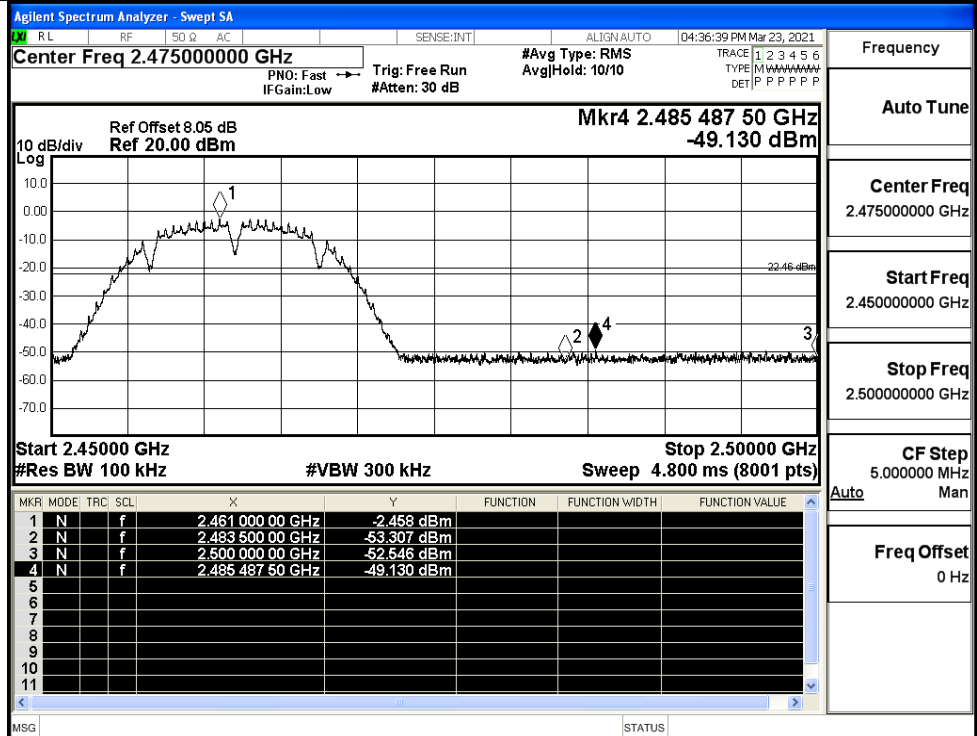
| Mode      | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B       | LCH     | -2.843             | -49.608                  | -22.84      | PASS    |
|           | HCH     | -2.458             | -49.130                  | -22.46      | PASS    |
| 11G       | LCH     | -4.277             | -49.924                  | -24.28      | PASS    |
|           | HCH     | -3.765             | -48.315                  | -23.77      | PASS    |
| 11N20SISO | LCH     | -5.204             | -49.704                  | -25.2       | PASS    |
|           | HCH     | -4.563             | -49.928                  | -24.56      | PASS    |
| 11N40SISO | LCH     | -7.108             | -49.438                  | -27.11      | PASS    |
|           | HCH     | -6.702             | -47.846                  | -26.7       | PASS    |

## Test Graphs

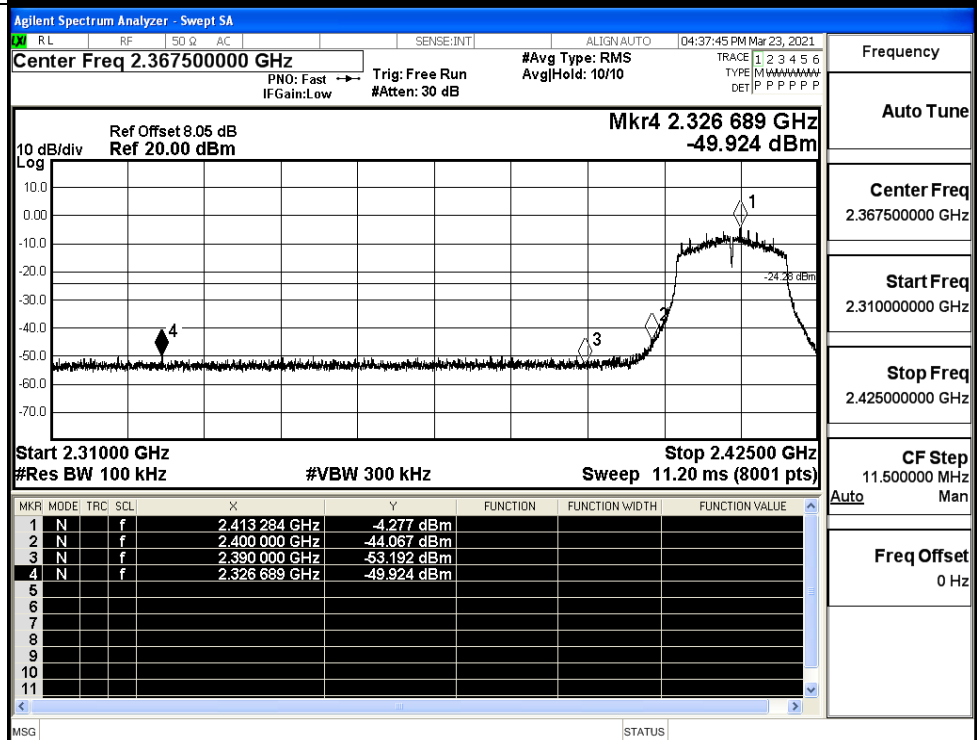
11B/LCH



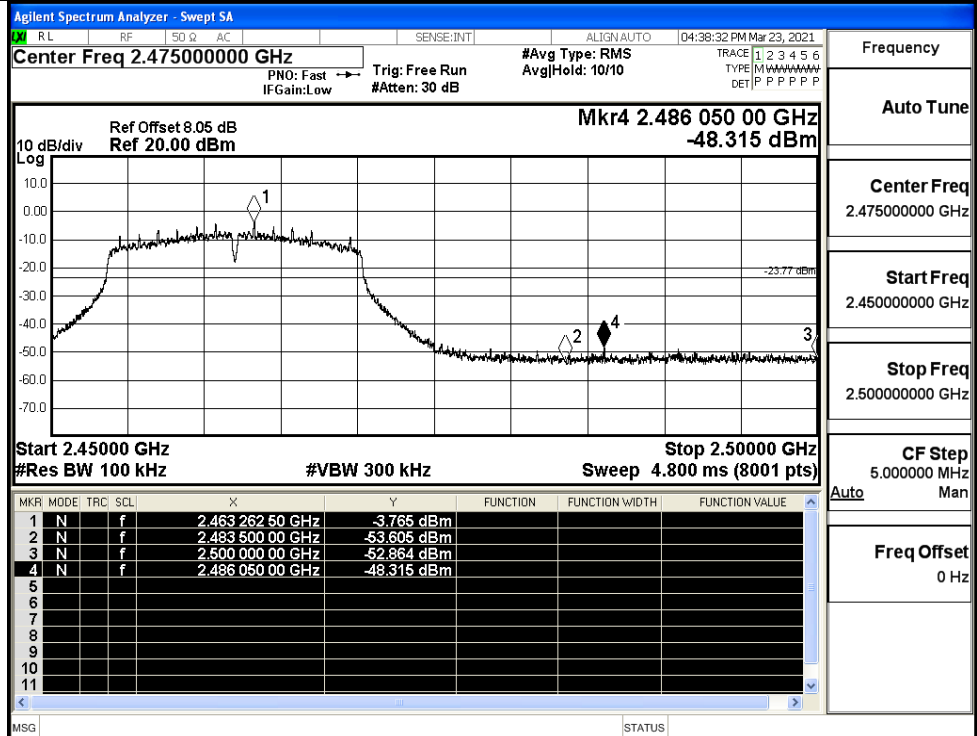
11B/HCH



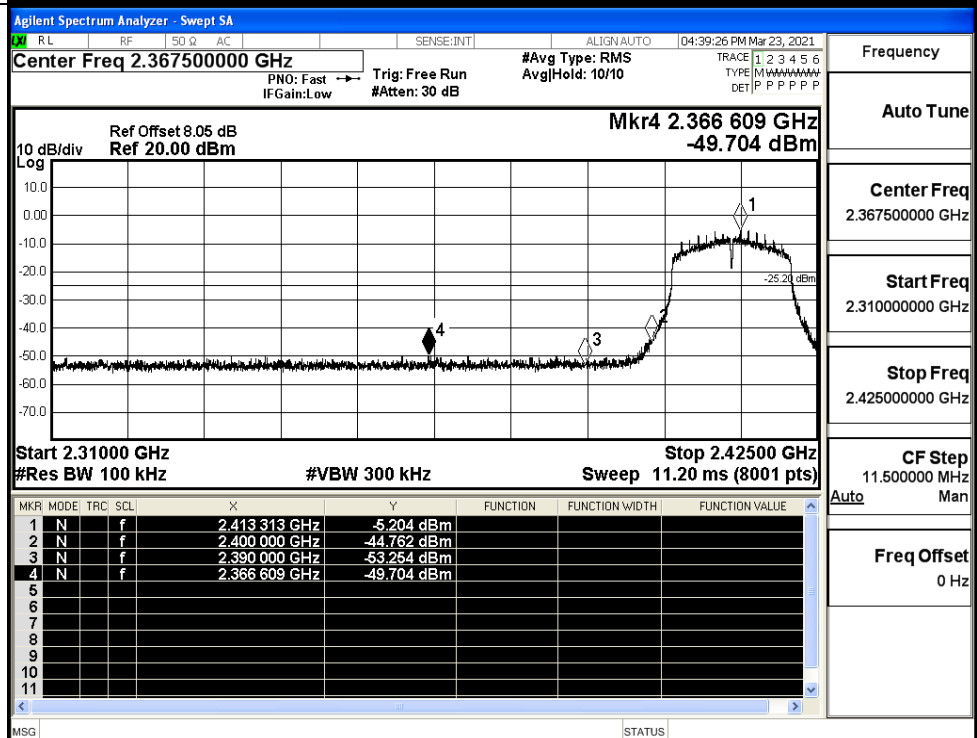
11G/LCH



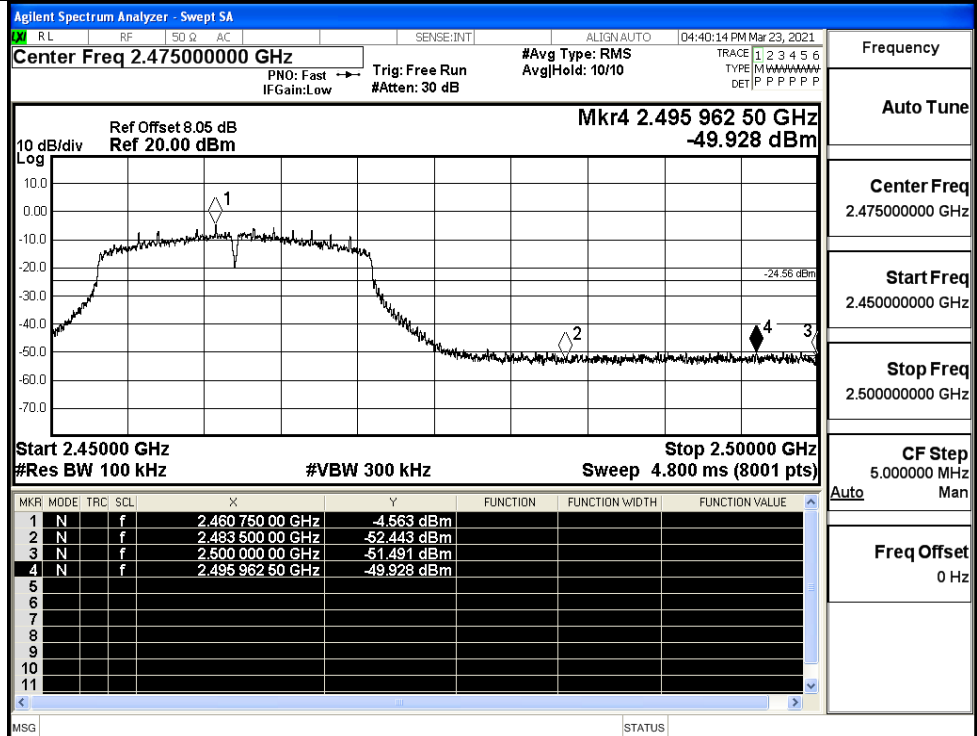
11G/HCH



11N20SISO/LCH



11N20SISO/HCH



Frequency

Auto Tune

Center Freq

2.475000000 GHz

Start Freq

2.450000000 GHz

Stop Freq

2.500000000 GHz

CF Step

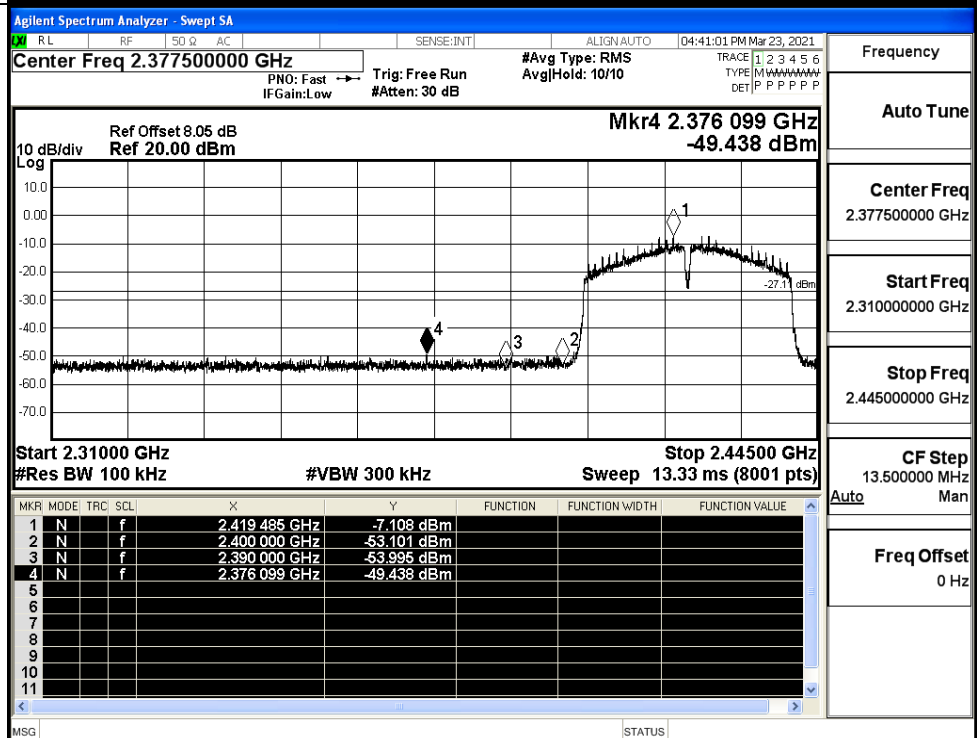
5.000000 MHz

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

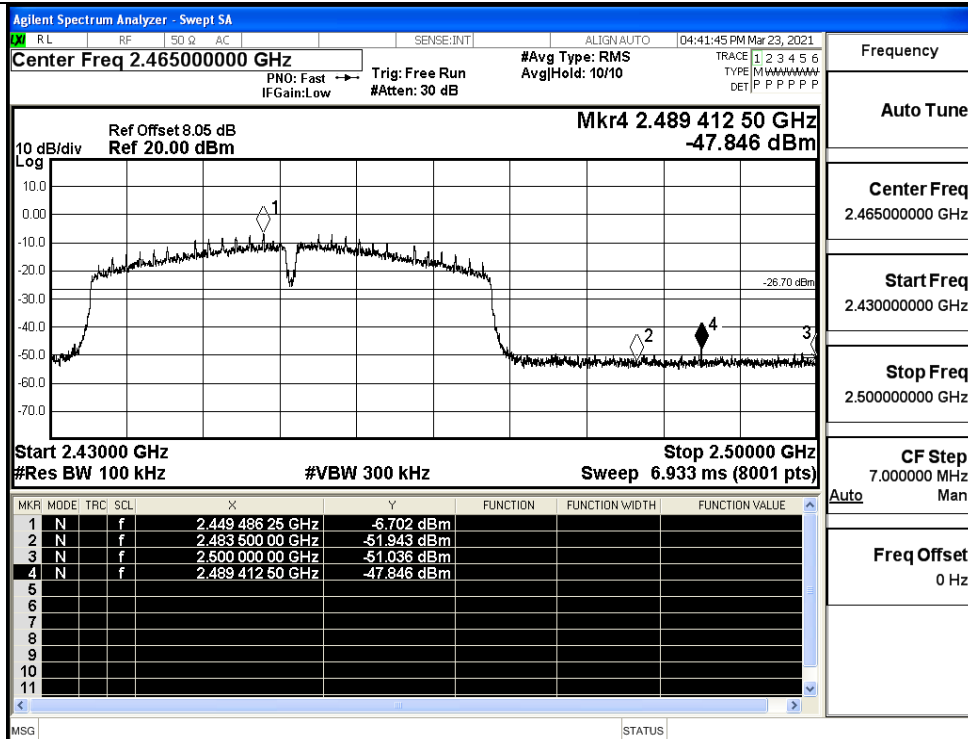
13.500000 MHz

Auto Man

Freq Offset

0 Hz

11N40SISO/HCH

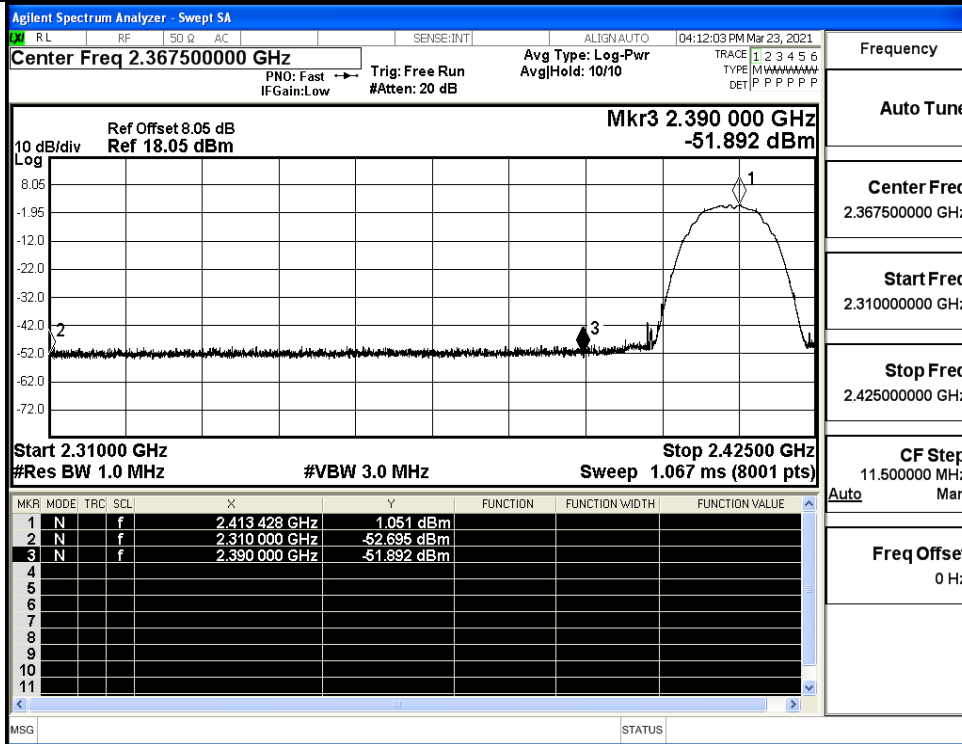


**A.7 Restrict-band band-edge measurements**

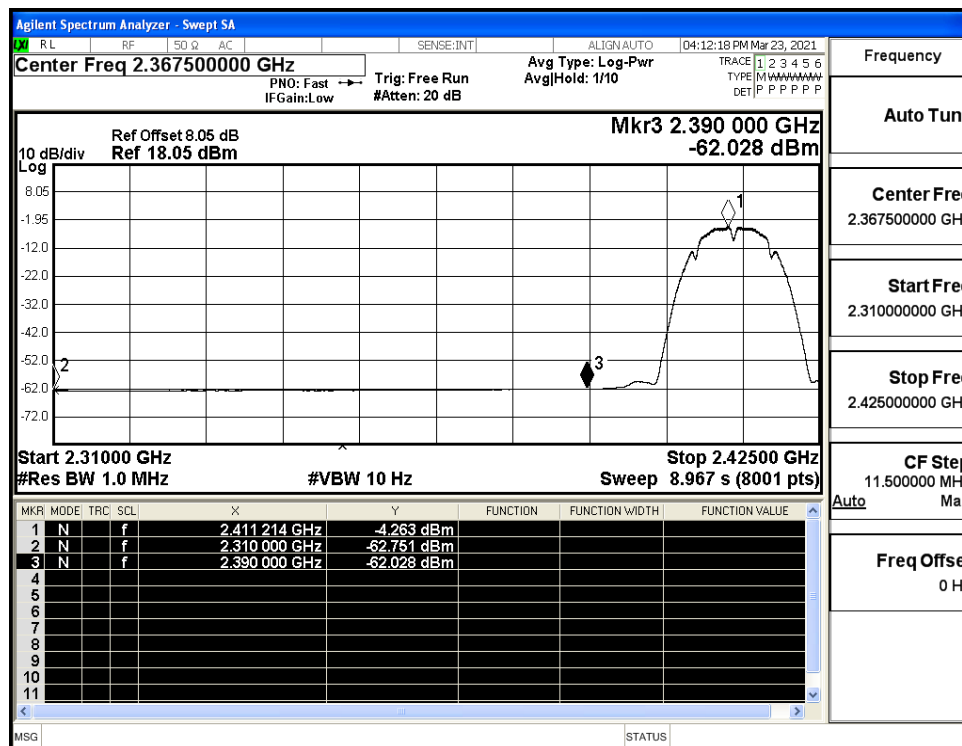
| Test Mode     | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|--------------|------|--------|-------------|------|---------------|------------|----------|----------------|---------|
| 11B           | 2412         | Ant1 | 2310.0 | -52.70      | 2.0  | 0             | 44.56      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -62.75      | 2.0  | 0             | 34.51      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -51.89      | 2.0  | 0             | 45.37      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -62.03      | 2.0  | 0             | 35.23      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -50.81      | 2.0  | 0             | 46.45      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -61.14      | 2.0  | 0             | 36.12      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -50.60      | 2.0  | 0             | 46.66      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -61.10      | 2.0  | 0             | 36.16      | AV       | 54             | PASS    |
| 11G           | 2412         | Ant1 | 2310.0 | -51.93      | 2.0  | 0             | 45.33      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -62.83      | 2.0  | 0             | 34.43      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -51.24      | 2.0  | 0             | 46.02      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -61.88      | 2.0  | 0             | 35.38      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -50.19      | 2.0  | 0             | 47.07      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -61.20      | 2.0  | 0             | 36.06      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -51.64      | 2.0  | 0             | 45.62      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -61.18      | 2.0  | 0             | 36.08      | AV       | 54             | PASS    |
| 11N20<br>SISO | 2412         | Ant1 | 2310.0 | -52.79      | 2.0  | 0             | 44.47      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -62.84      | 2.0  | 0             | 34.42      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -51.32      | 2.0  | 0             | 45.94      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -61.83      | 2.0  | 0             | 35.42      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -49.65      | 2.0  | 0             | 47.61      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -60.98      | 2.0  | 0             | 36.28      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -51.09      | 2.0  | 0             | 46.17      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -61.37      | 2.0  | 0             | 35.89      | AV       | 54             | PASS    |
| 11N40<br>SISO | 2422         | Ant1 | 2310.0 | -51.73      | 2.0  | 0             | 45.53      | PEAK     | 74             | PASS    |
|               | 2422         | Ant1 | 2310.0 | -62.96      | 2.0  | 0             | 34.29      | AV       | 54             | PASS    |
|               | 2422         | Ant1 | 2390.0 | -51.13      | 2.0  | 0             | 46.13      | PEAK     | 74             | PASS    |

|  |      |      |        |        |     |   |       |      |    |      |
|--|------|------|--------|--------|-----|---|-------|------|----|------|
|  | 2422 | Ant1 | 2390.0 | -61.48 | 2.0 | 0 | 35.78 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2483.5 | -49.93 | 2.0 | 0 | 47.33 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2483.5 | -60.75 | 2.0 | 0 | 36.51 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2500.0 | -51.32 | 2.0 | 0 | 45.94 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2500.0 | -61.58 | 2.0 | 0 | 35.68 | AV   | 54 | PASS |

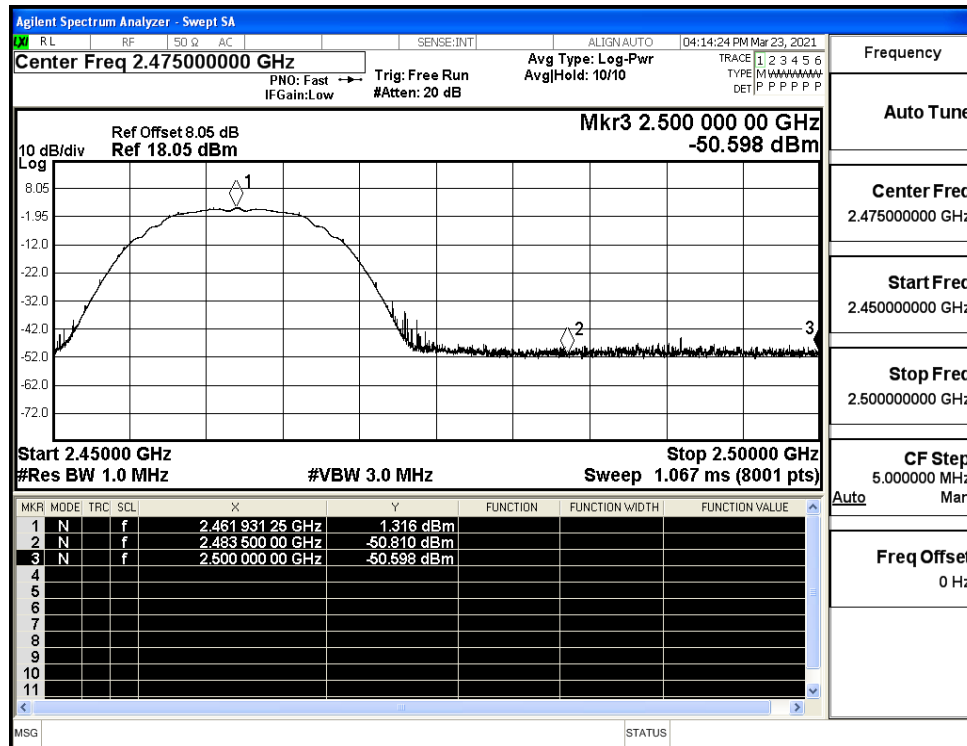
## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_PEAK



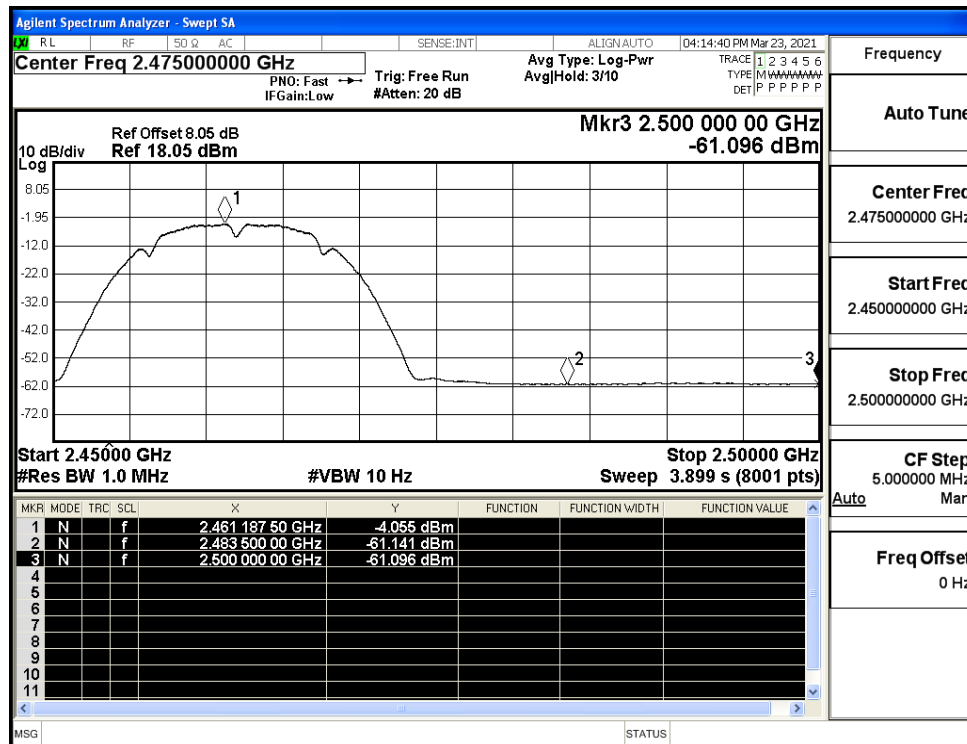
## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_AV



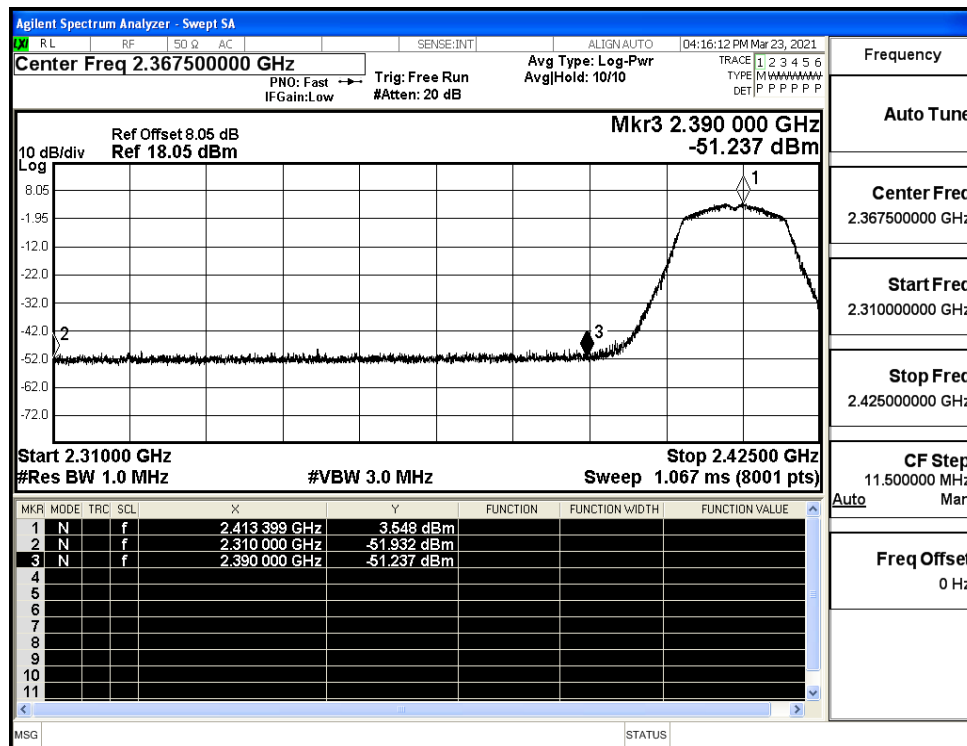
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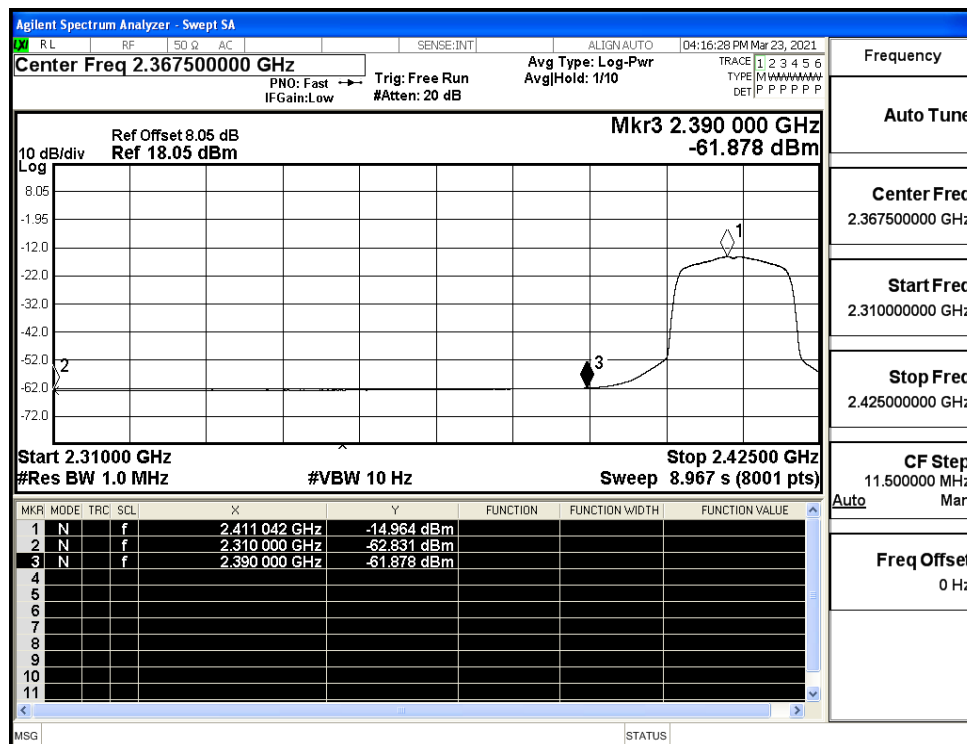
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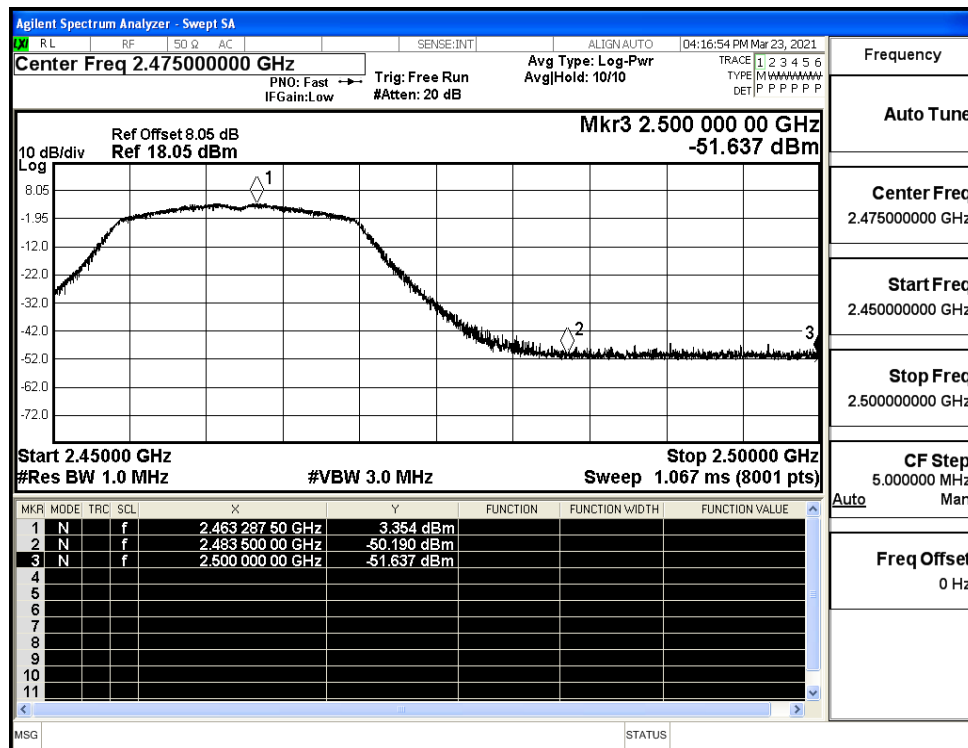
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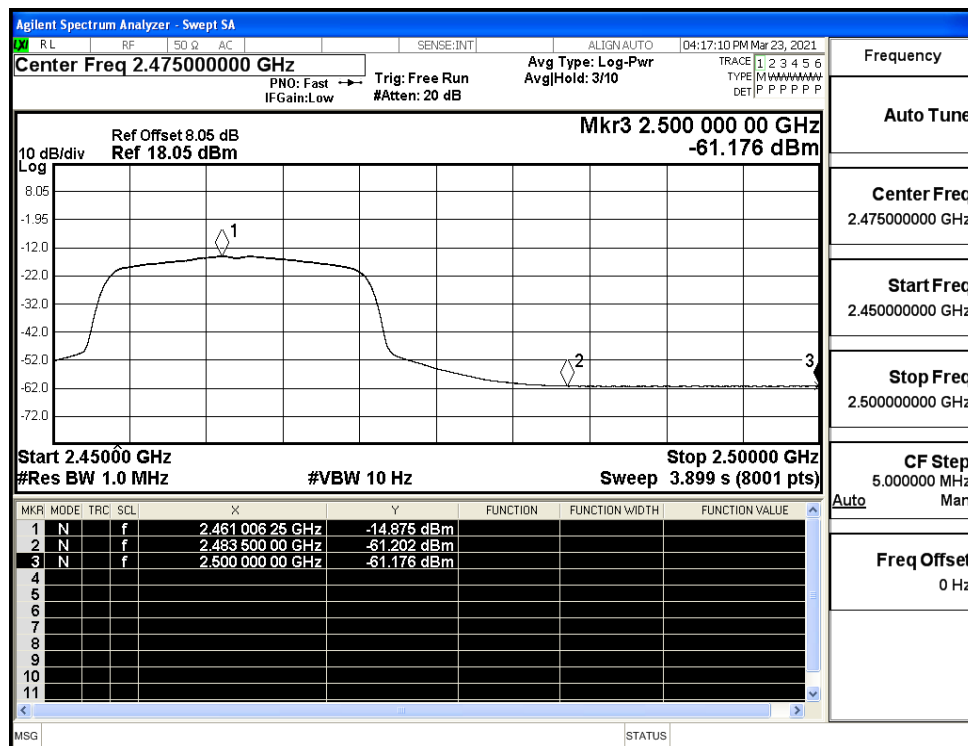
## Restrict-band band-edge measurements\_11G\_2412\_Ant1\_AV



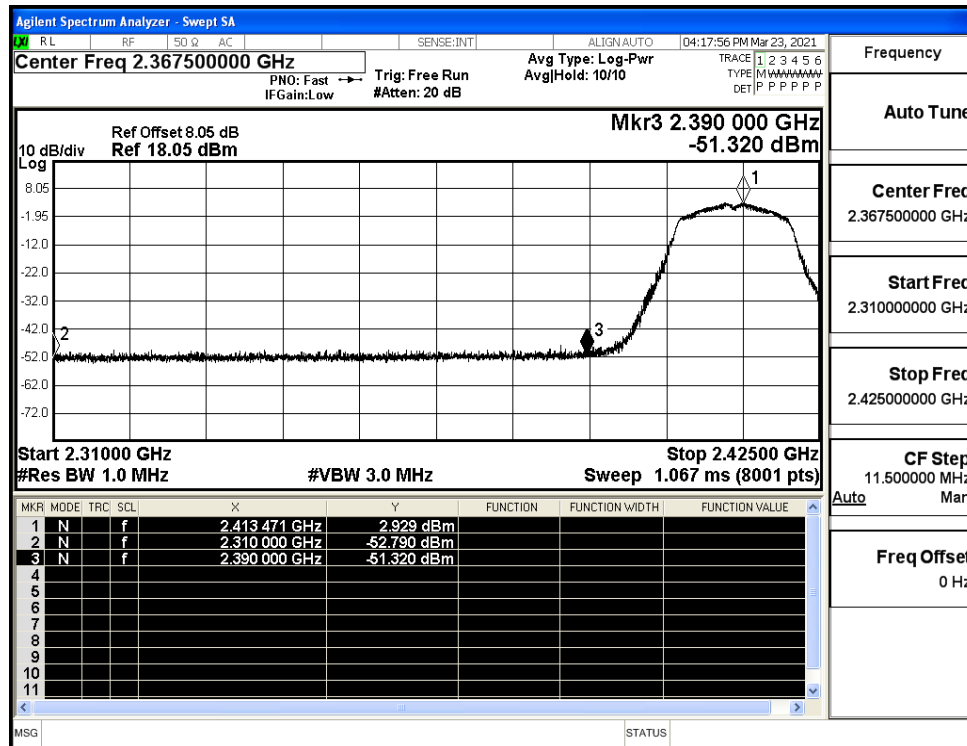
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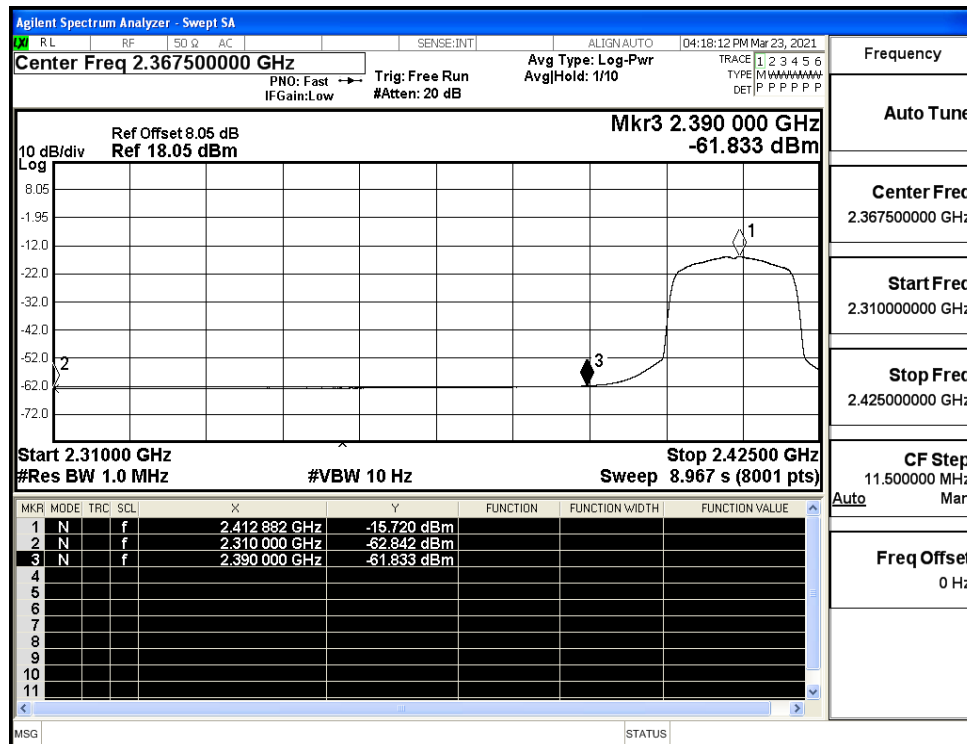
## Restrict-band band-edge measurements\_11G\_2462\_Ant1\_AV



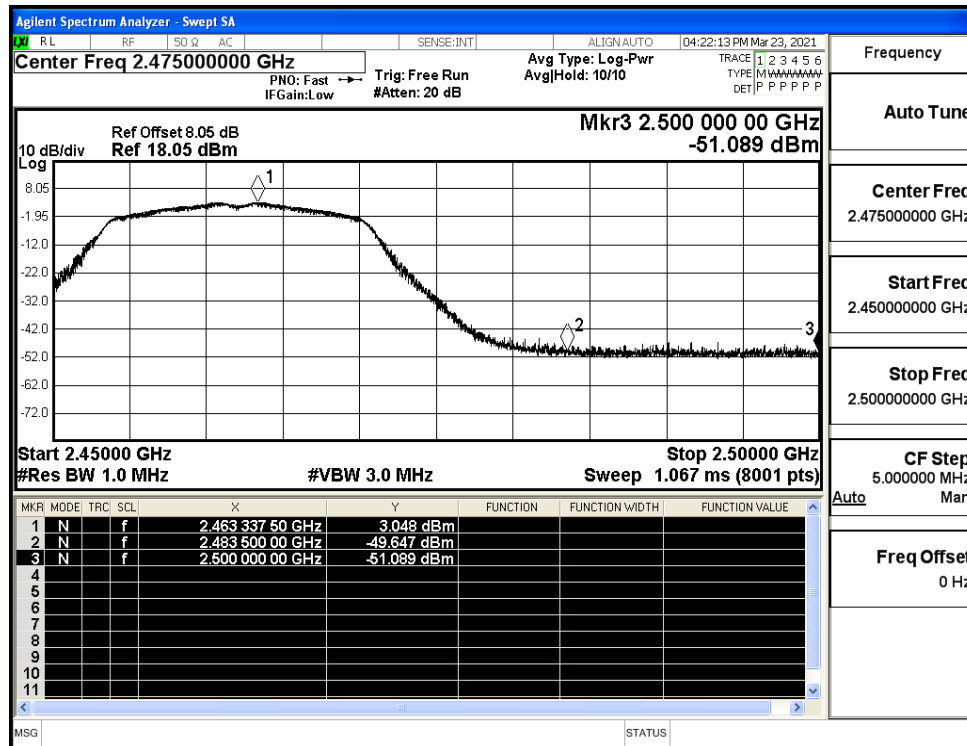
## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_PEAK



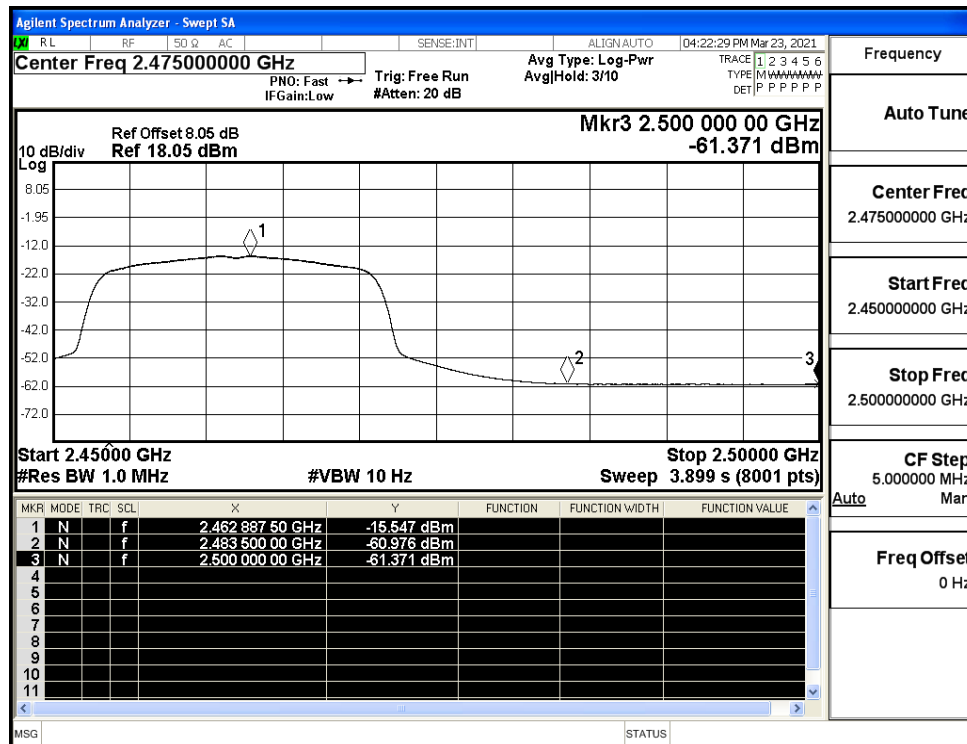
## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_AV



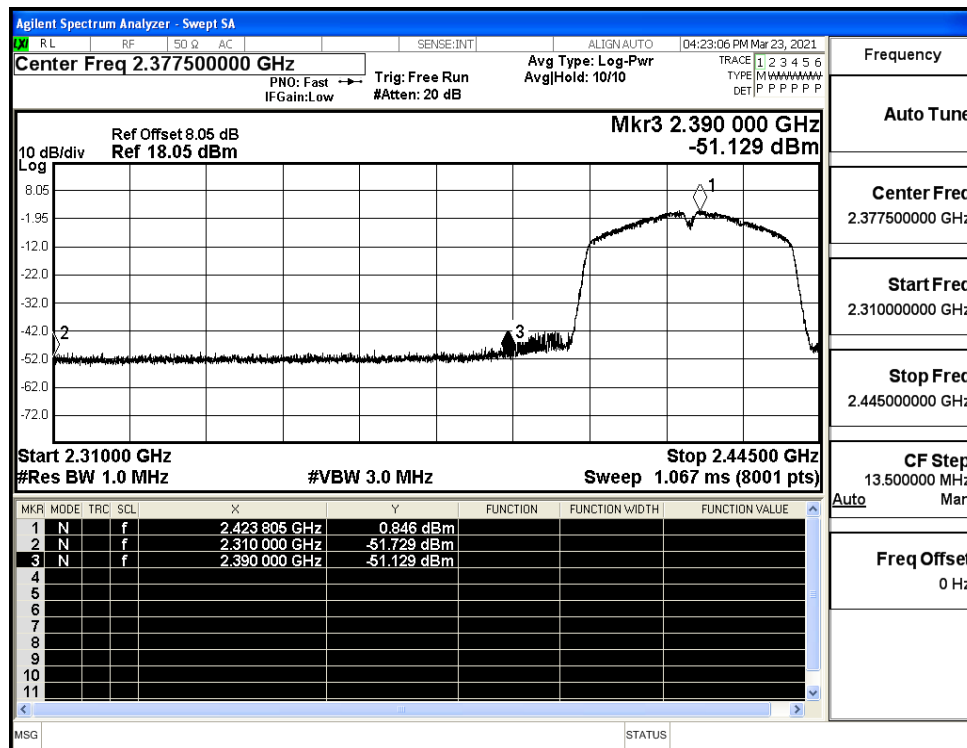
## Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_PEAK



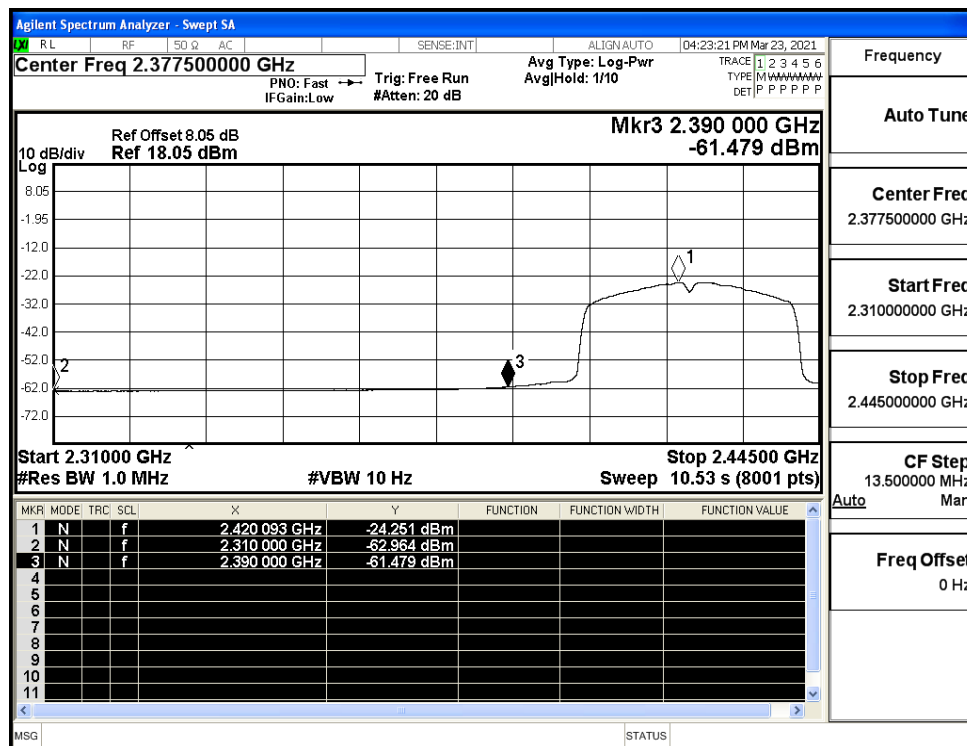
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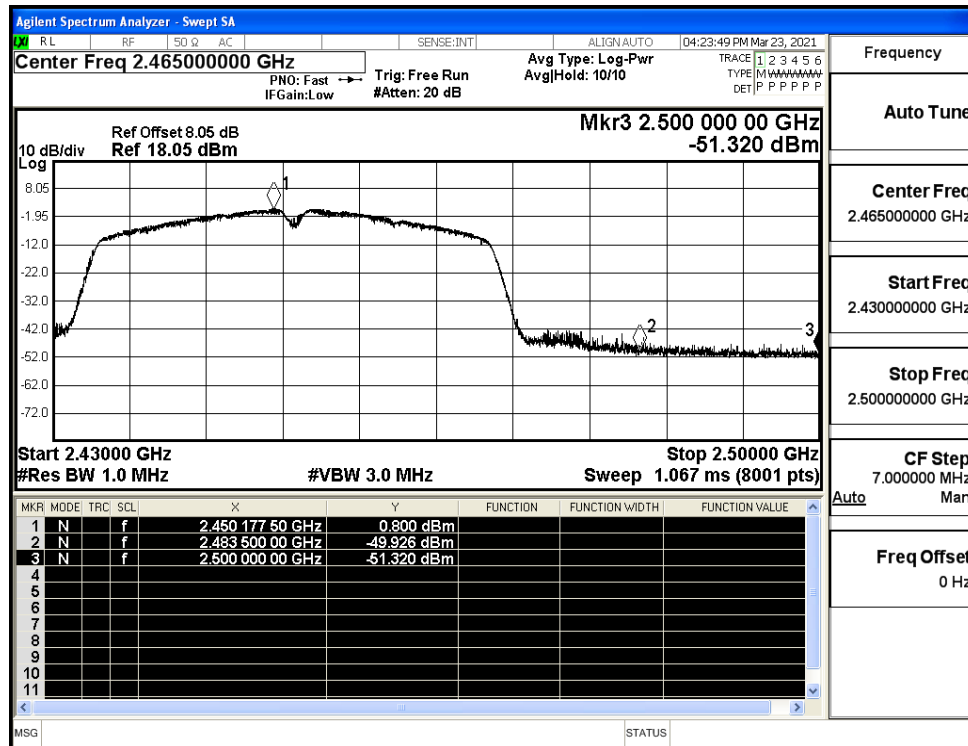
## Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_PEAK



## 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

