



## Appendix A

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

Product Name: Smart visual ear-clean Rod

Trade Mark: BEBIRD

Test Model: T15

#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 21.6° C   |
| Relative Humidity: | 52.7%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Carl Fu   |
| Supervised by:     | Li Huan   |

#### A.1 Duty Cycle

| Test Mode | Test Channel | Ant  | Duty Cycle[%] | Verdict |
|-----------|--------------|------|---------------|---------|
| 11B       | 2437         | Ant1 | 100.00        | PASS    |
| 11G       | 2437         | Ant1 | 100.00        | PASS    |
| 11N20SISO | 2437         | Ant1 | 100.00        | PASS    |
| 11N40SISO | 2437         | Ant1 | 100.00        | PASS    |



## A.2 Maximum Conducted Output Power

| Mode      | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B       | LCH     | 8.25             | 30          | PASS    |
|           | MCH     | 8.23             | 30          | PASS    |
|           | HCH     | 8.77             | 30          | PASS    |
| 11G       | LCH     | 8.42             | 30          | PASS    |
|           | MCH     | 8.41             | 30          | PASS    |
|           | HCH     | 8.69             | 30          | PASS    |
| 11N20SISO | LCH     | 8.82             | 30          | PASS    |
|           | MCH     | <b>8.92</b>      | 30          | PASS    |
|           | HCH     | 8.82             | 30          | PASS    |
| 11N40SISO | LCH     | 8.75             | 30          | PASS    |
|           | MCH     | 8.48             | 30          | PASS    |
|           | HCH     | 8.11             | 30          | PASS    |

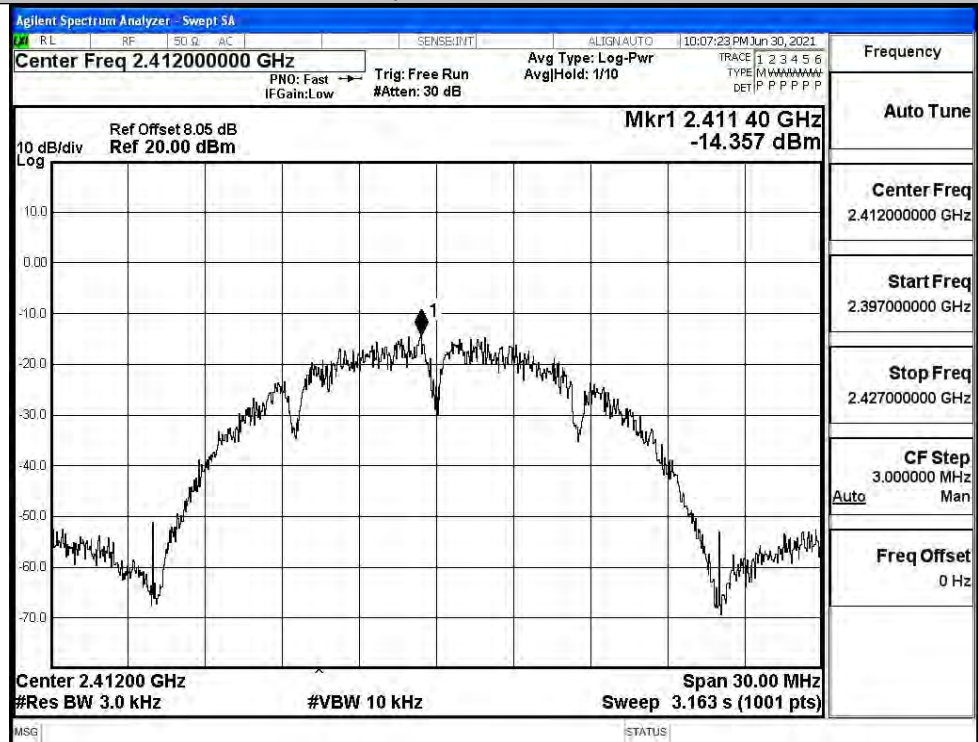


### A.3 Maximum Power Spectral Density

| Mode      | Channel | Meas.Level [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|-----------------------|------------------|---------|
| 11B       | LCH     | -14.357               | 8                | PASS    |
|           | MCH     | -12.472               | 8                | PASS    |
|           | HCH     | -12.655               | 8                | PASS    |
| 11G       | LCH     | -19.210               | 8                | PASS    |
|           | MCH     | -18.316               | 8                | PASS    |
|           | HCH     | -17.155               | 8                | PASS    |
| 11N20SISO | LCH     | -18.434               | 8                | PASS    |
|           | MCH     | -17.595               | 8                | PASS    |
|           | HCH     | -16.675               | 8                | PASS    |
| 11N40SISO | LCH     | -19.880               | 8                | PASS    |
|           | MCH     | -19.668               | 8                | PASS    |
|           | HCH     | -18.503               | 8                | PASS    |

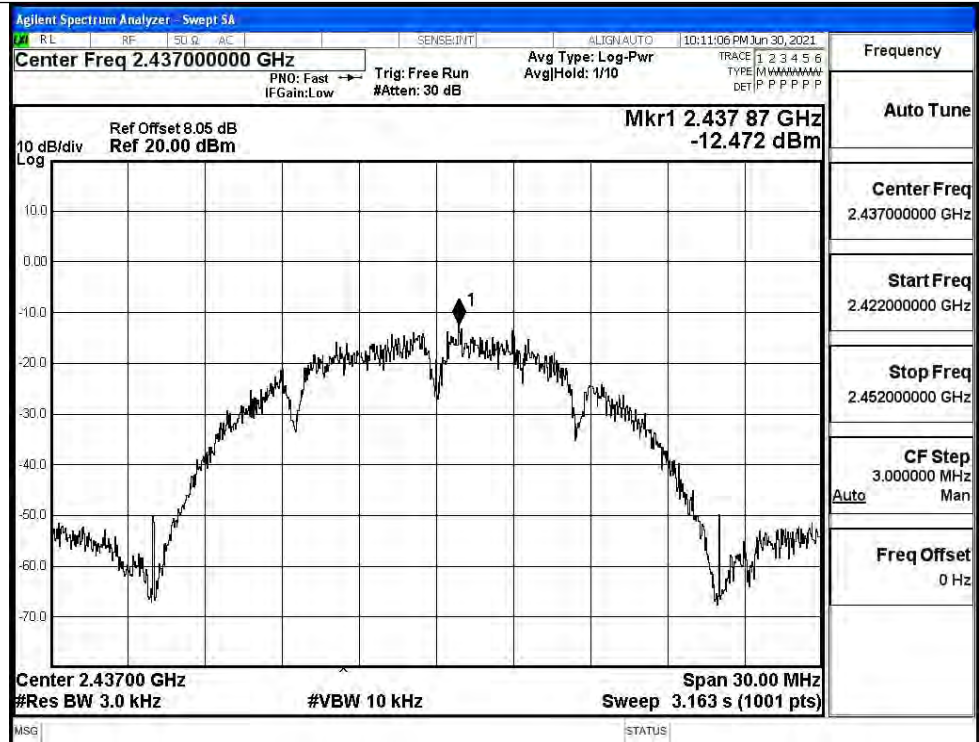
Test Graphs

11B/LCH

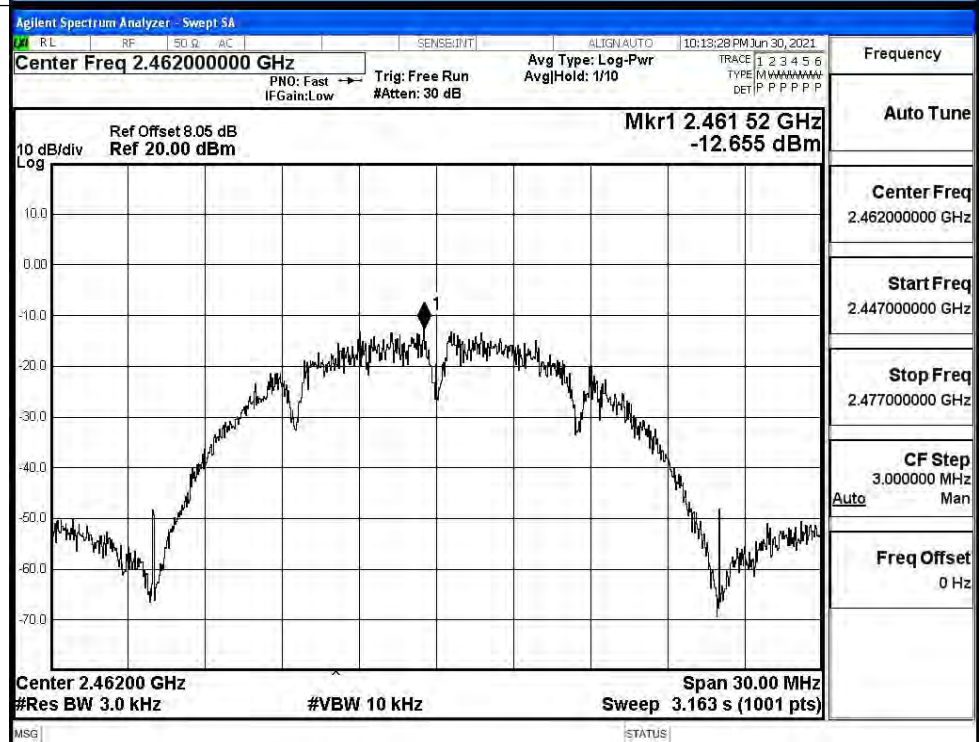




11B/MCH

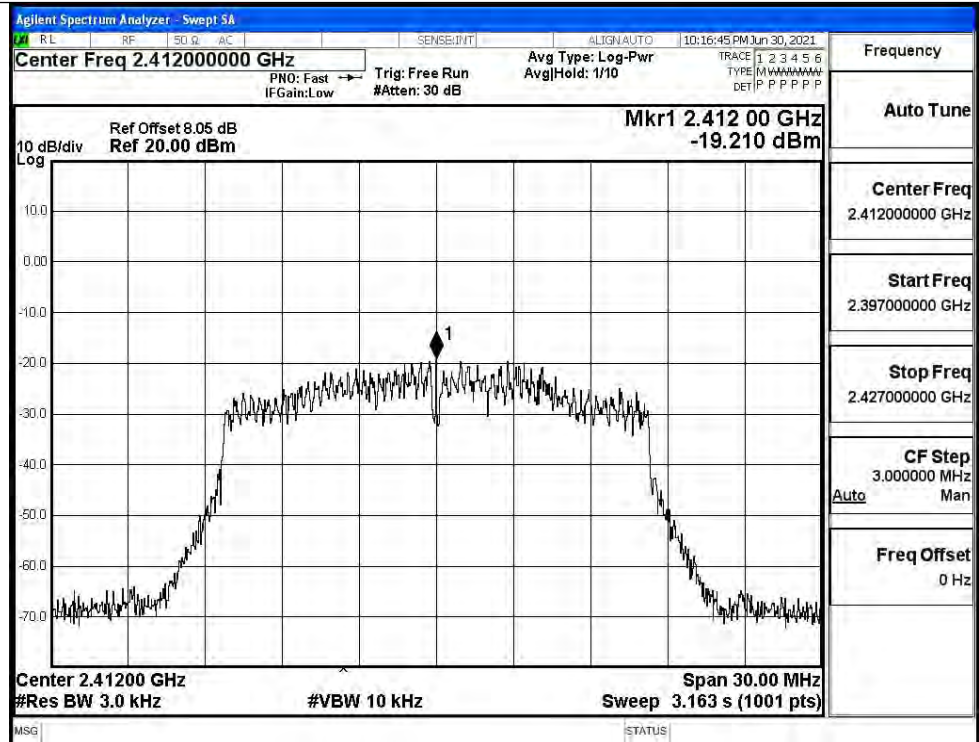


11B/HCH

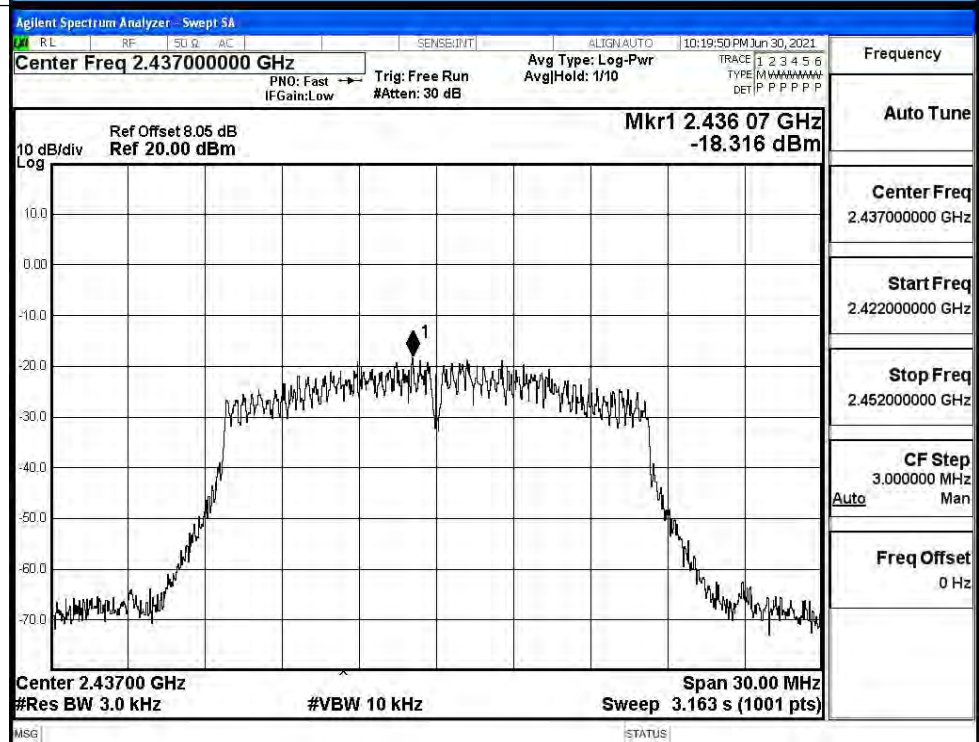




11G/LCH

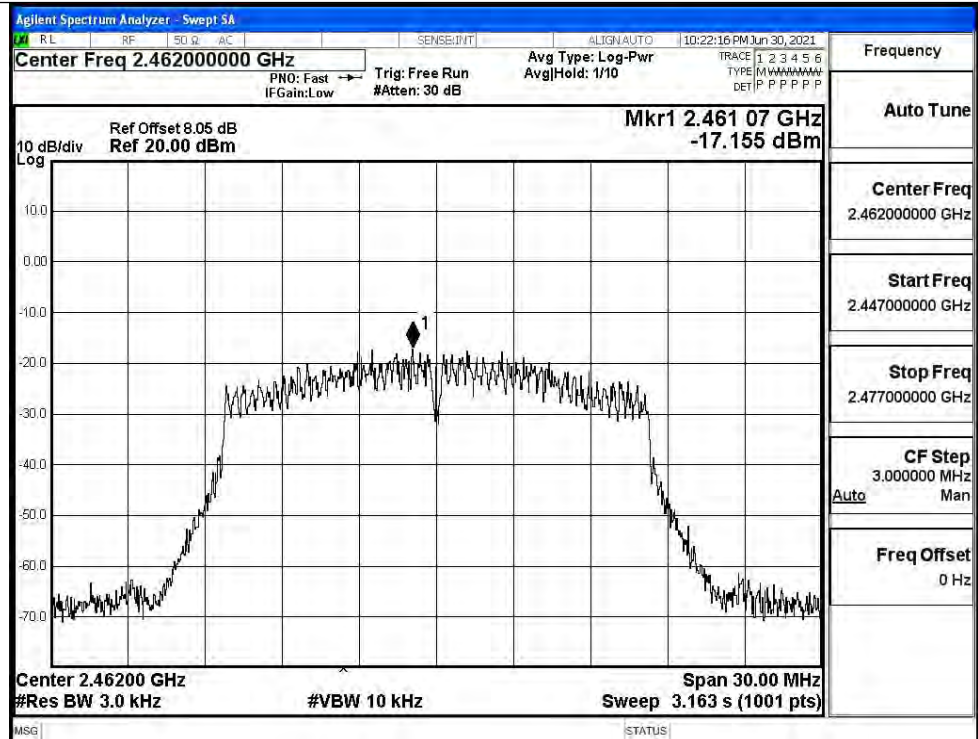


11G/MCH

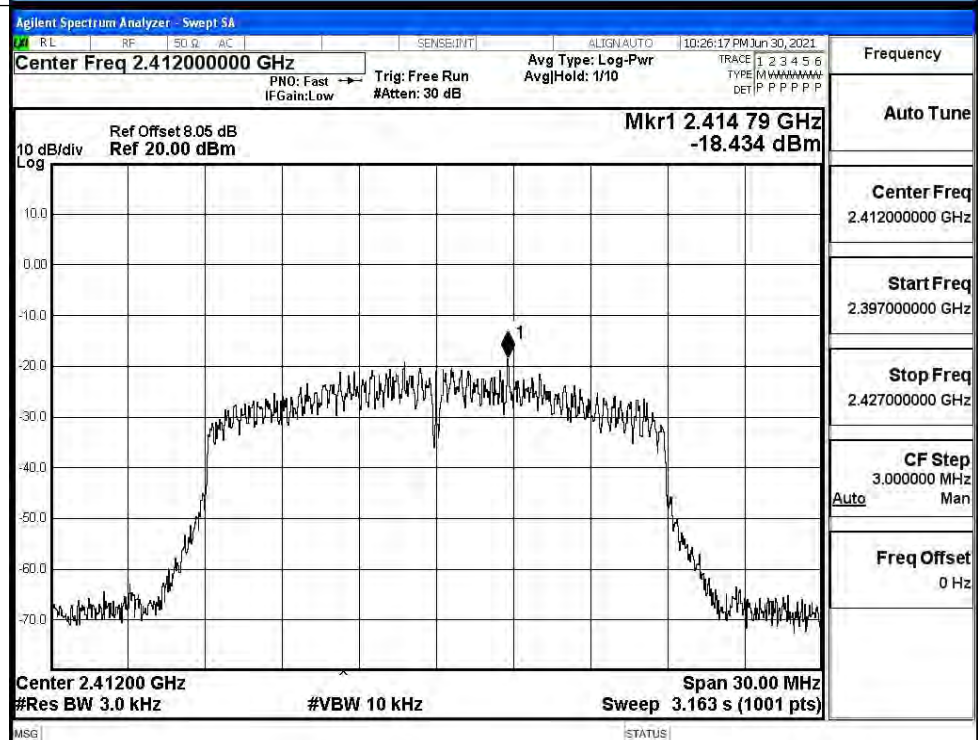




11G/HCH

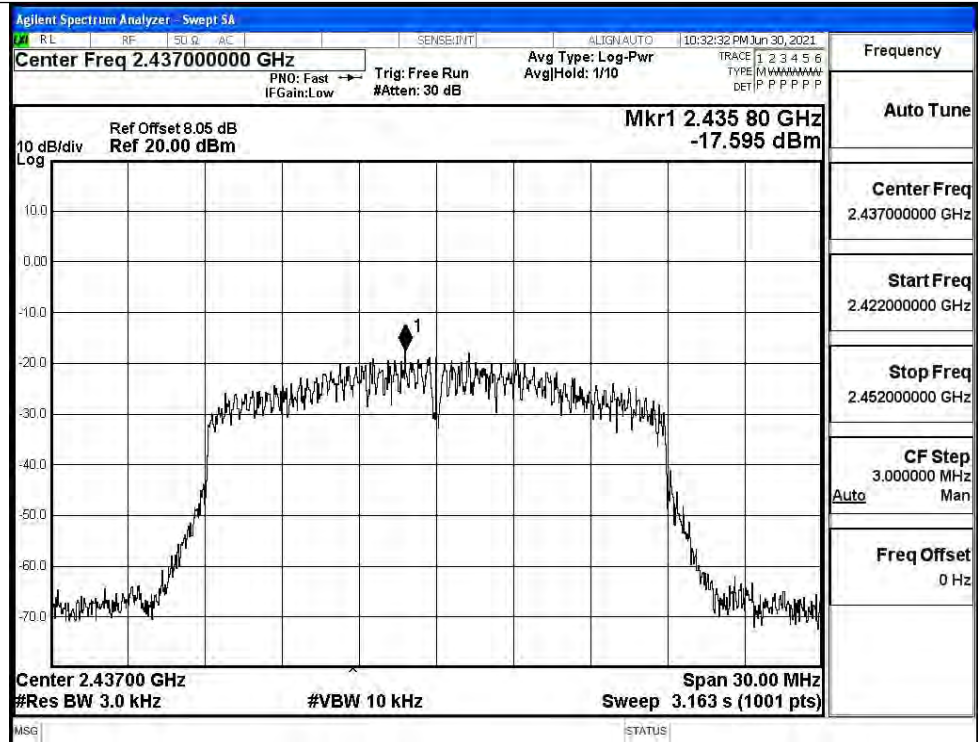


11N20SISO/LCH

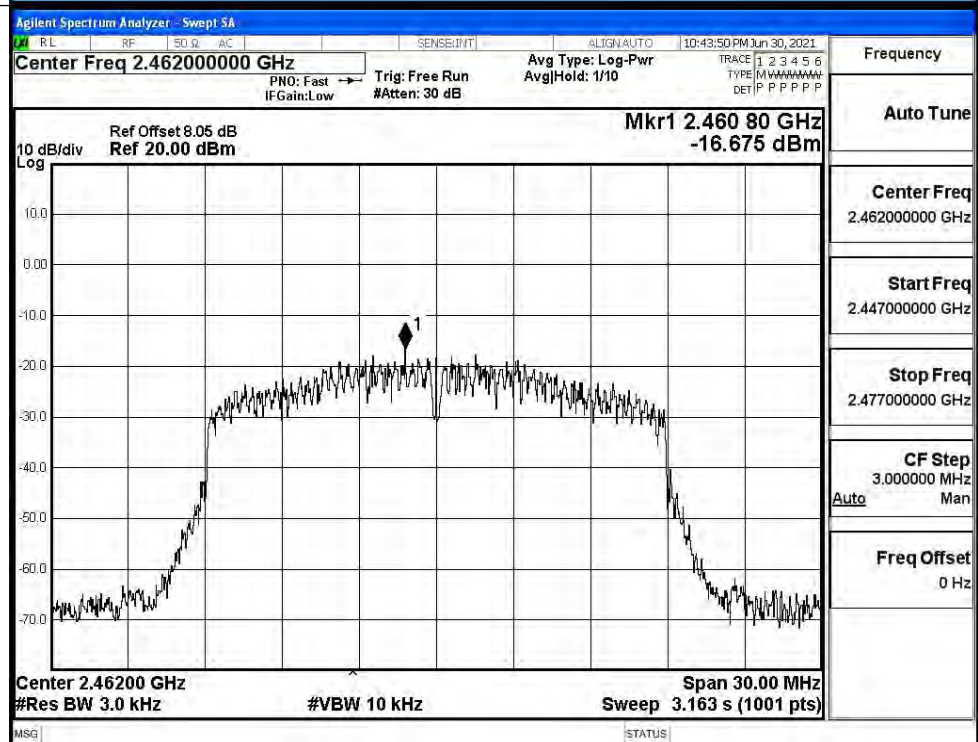




11N20SISO/MCH

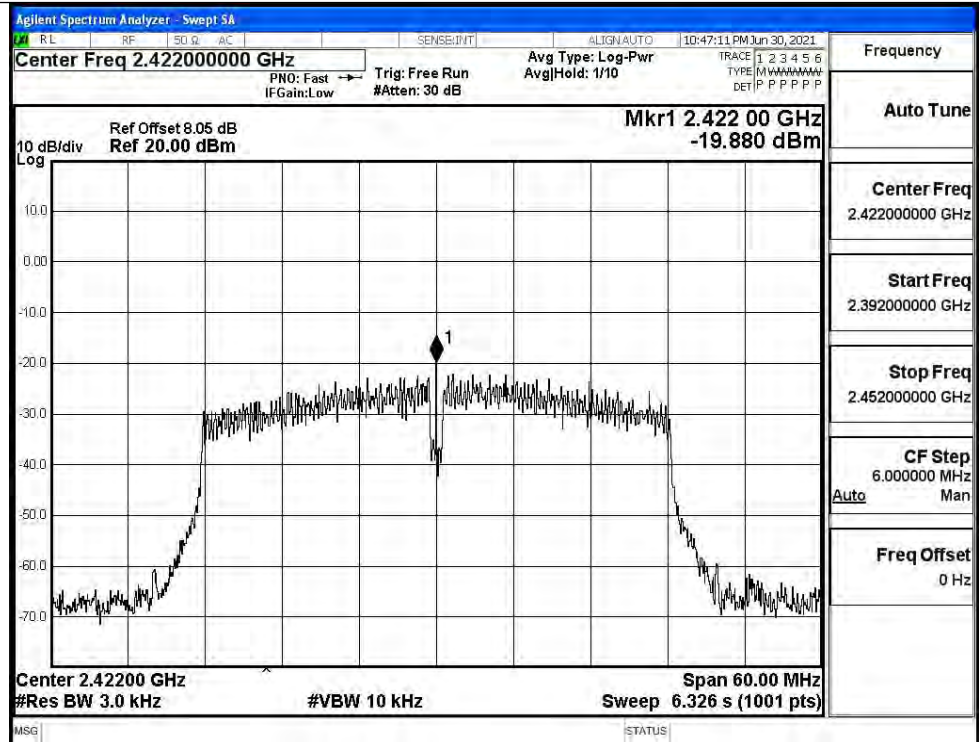


11N20SISO/HCH

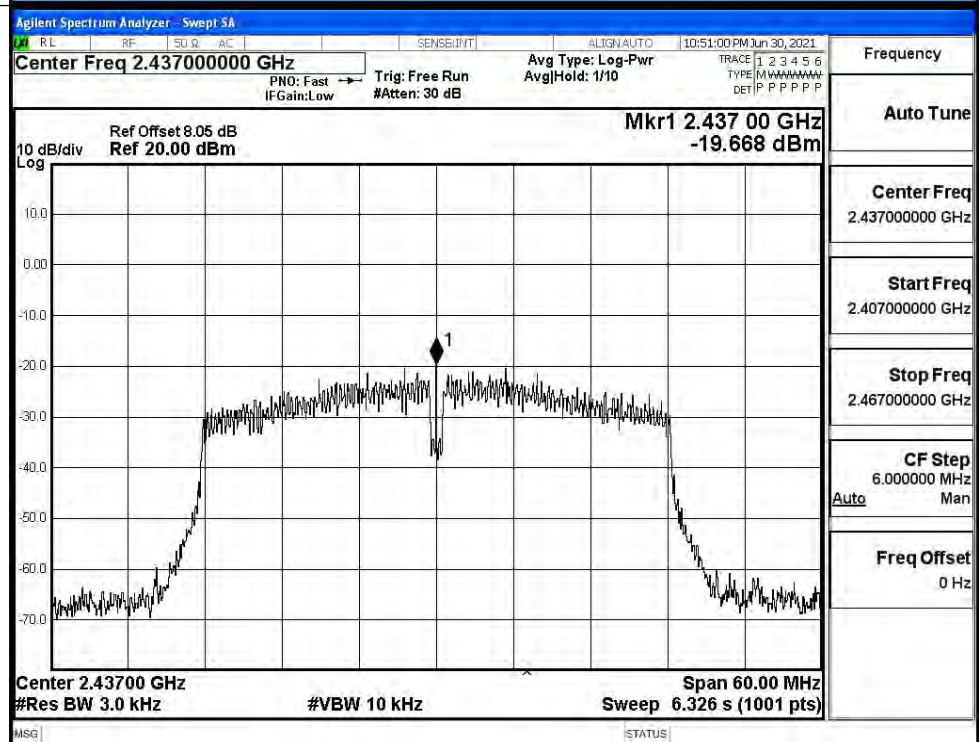




11N40SISO/LCH

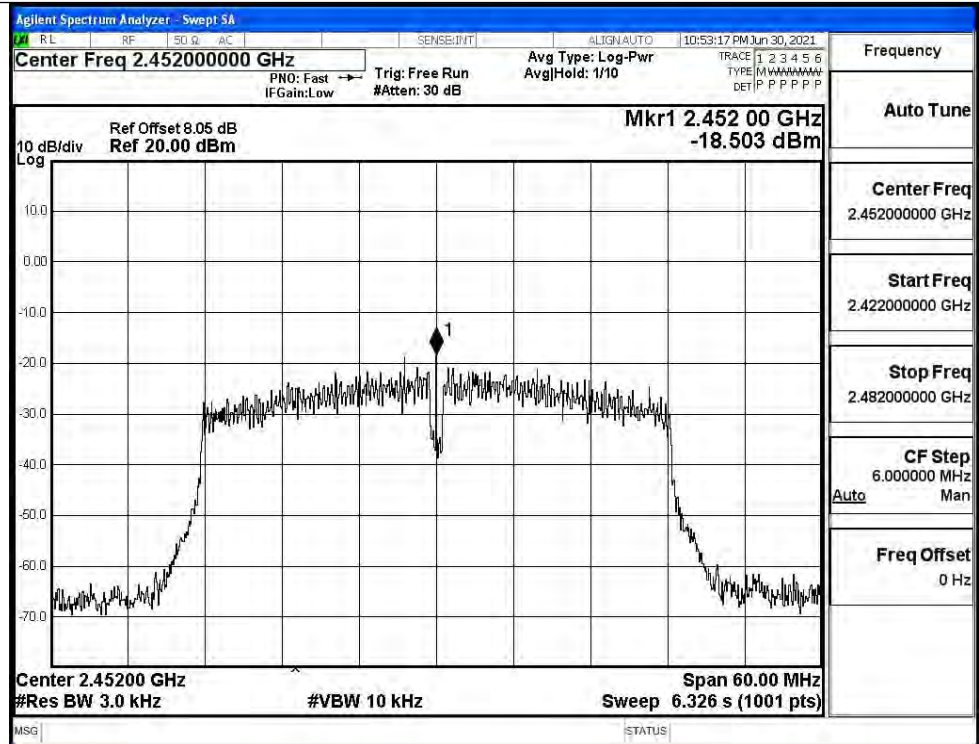


11N40SISO/MCH





11N40SISO/HCH



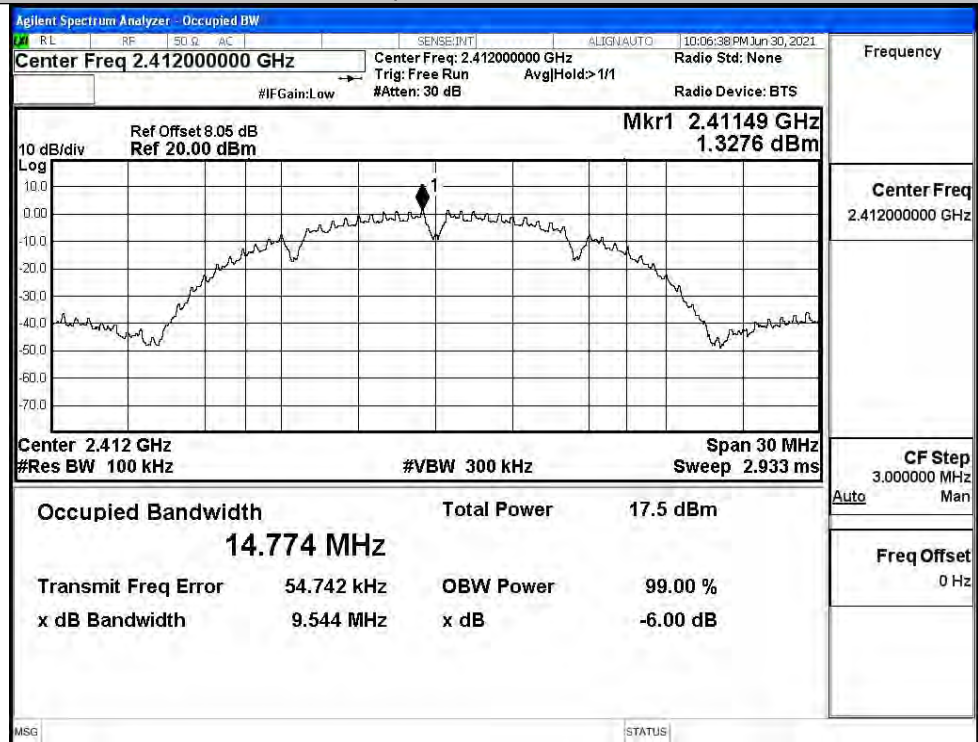


## A.4 6dB Bandwidth

| Mode      | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B       | LCH     | 9.544               | $\geq 0.5$  | PASS    |
|           | MCH     | 9.995               | $\geq 0.5$  | PASS    |
|           | HCH     | 9.112               | $\geq 0.5$  | PASS    |
| 11G       | LCH     | 14.99               | $\geq 0.5$  | PASS    |
|           | MCH     | 12.58               | $\geq 0.5$  | PASS    |
|           | HCH     | 15.04               | $\geq 0.5$  | PASS    |
| 11N20SISO | LCH     | 13.86               | $\geq 0.5$  | PASS    |
|           | MCH     | 12.58               | $\geq 0.5$  | PASS    |
|           | HCH     | 12.55               | $\geq 0.5$  | PASS    |
| 11N40SISO | LCH     | 33.86               | $\geq 0.5$  | PASS    |
|           | MCH     | 33.82               | $\geq 0.5$  | PASS    |
|           | HCH     | 33.86               | $\geq 0.5$  | PASS    |

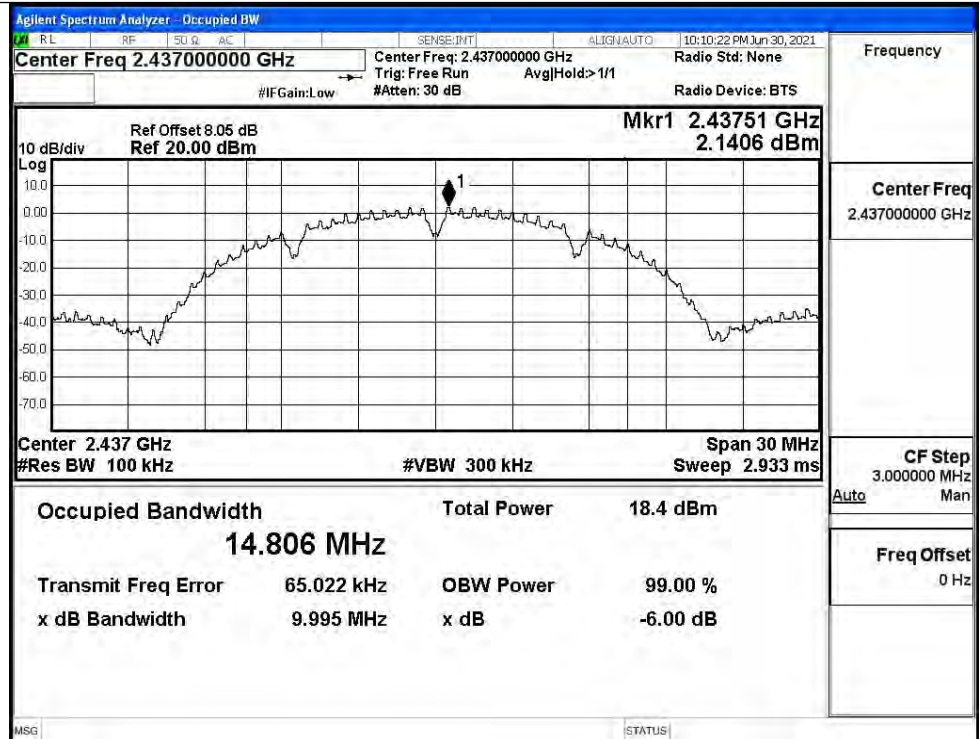
### Test Graphs

11B/LCH

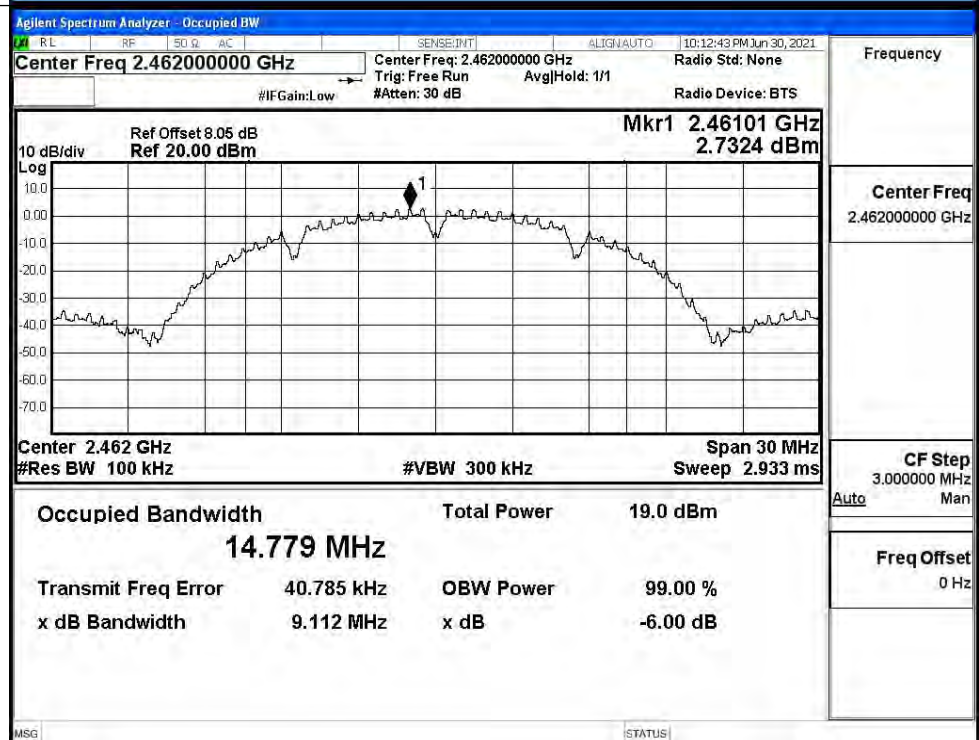




11B/MCH

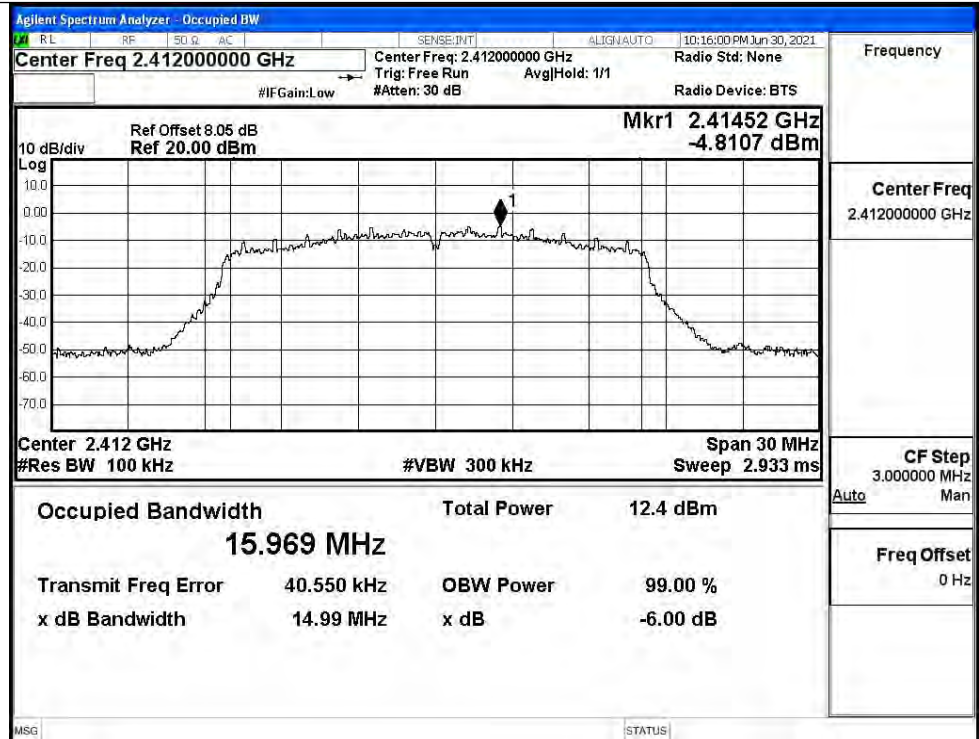


11B/HCH

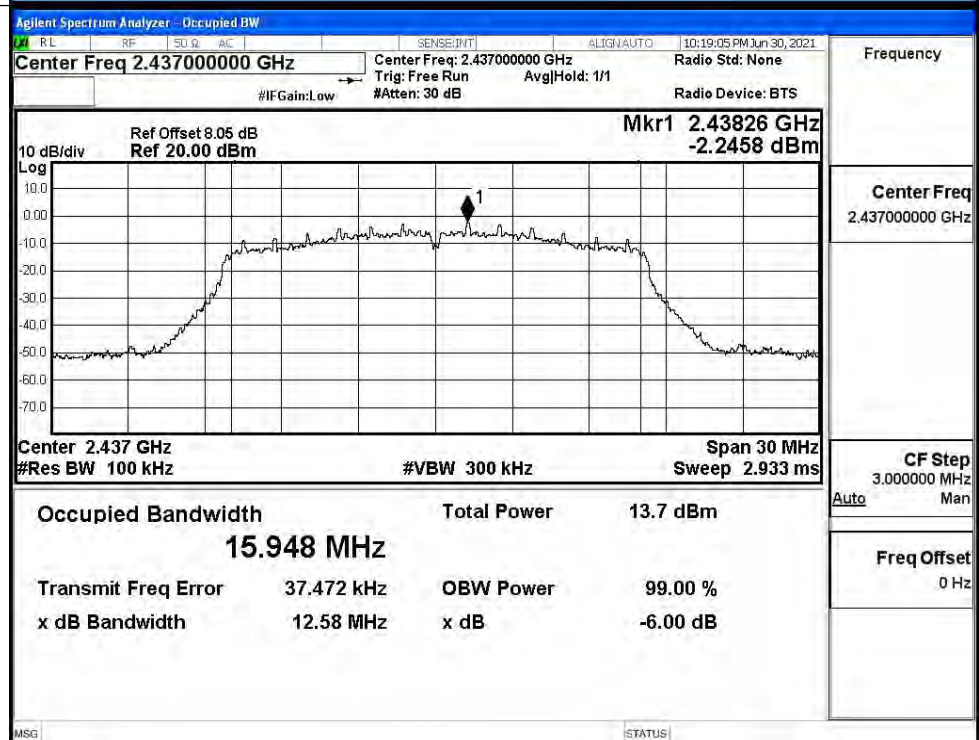




11G/LCH

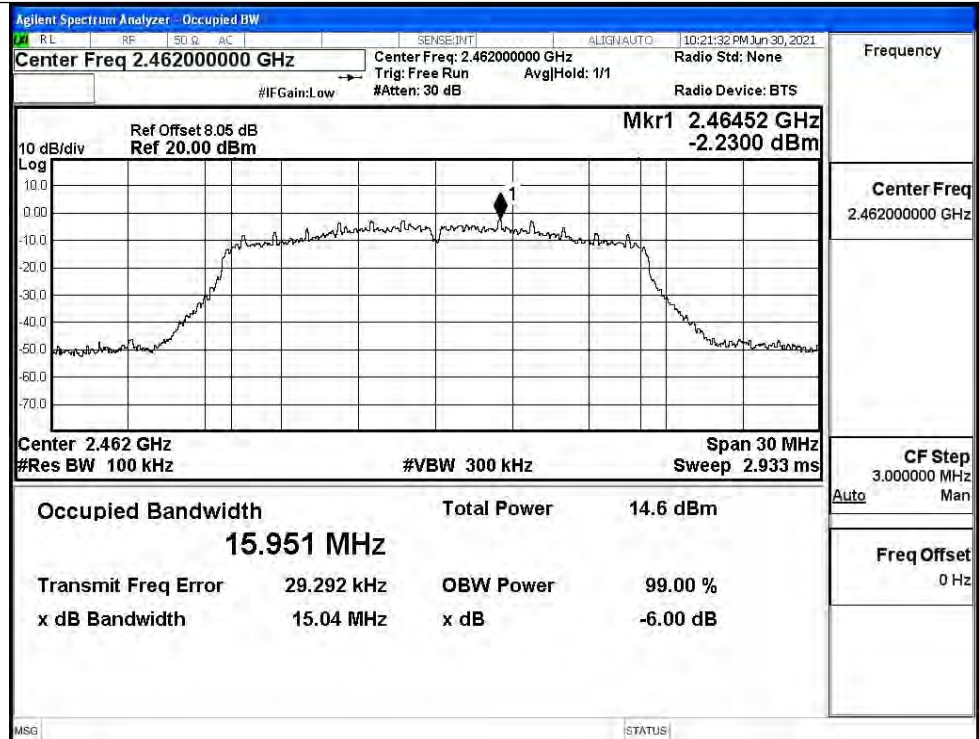


11G/MCH

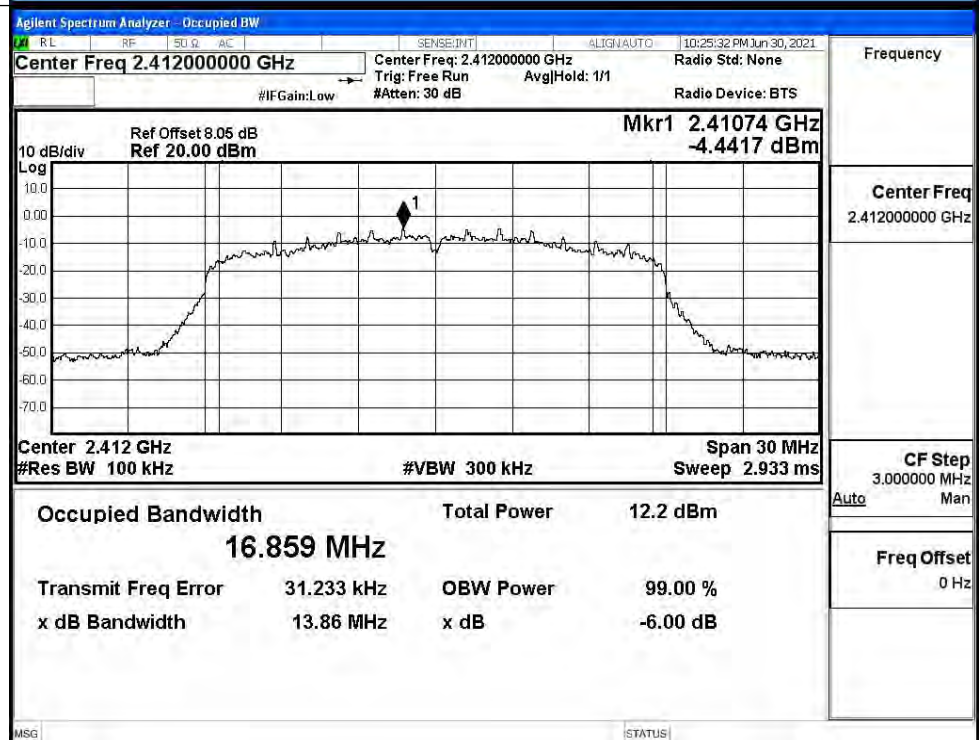




11G/HCH

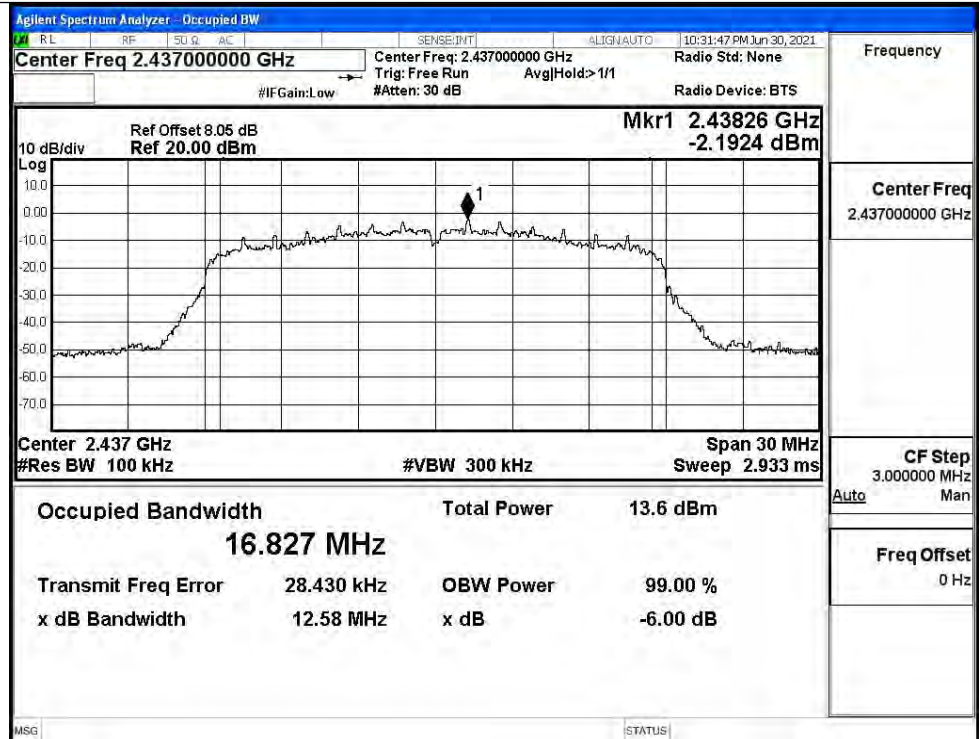


11N20SISO/LCH

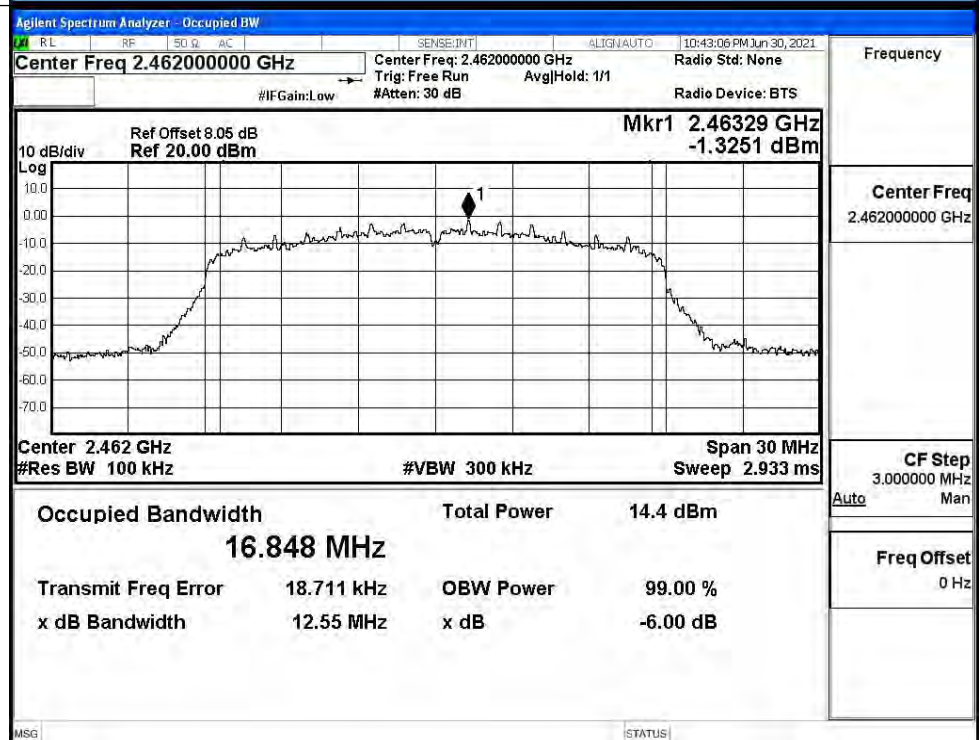




11N20SISO/MCH

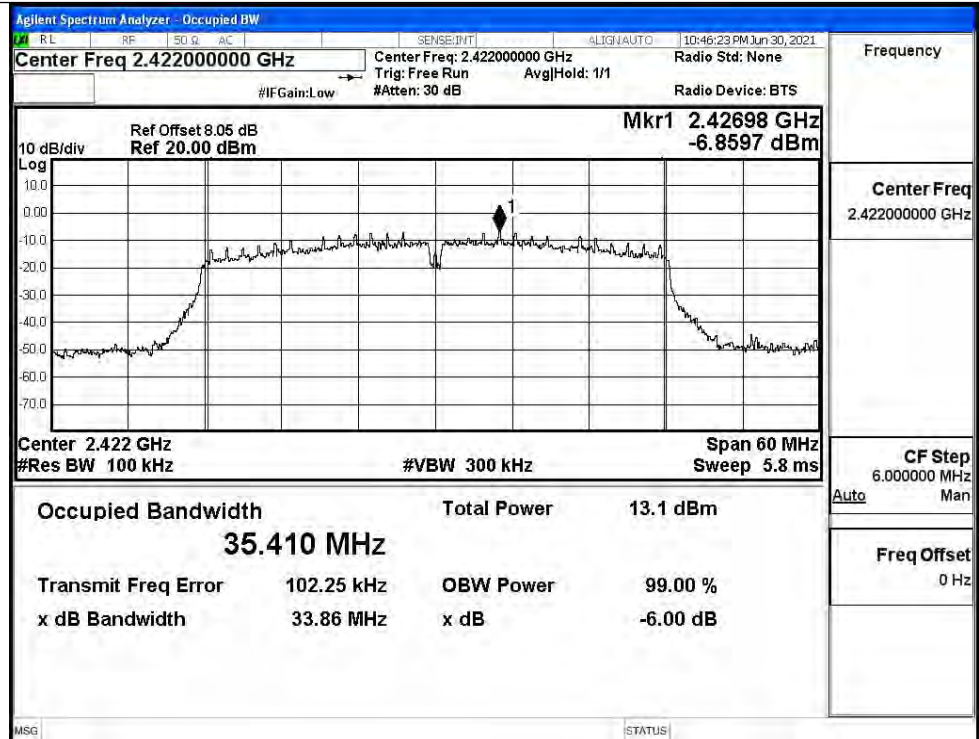


11N20SISO/HCH

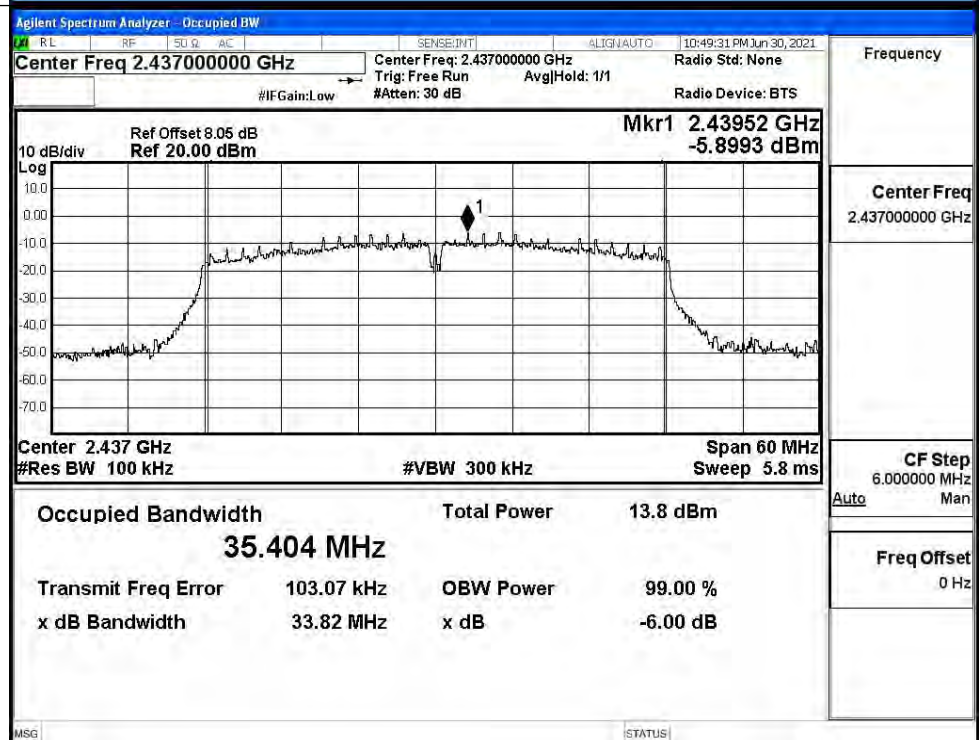


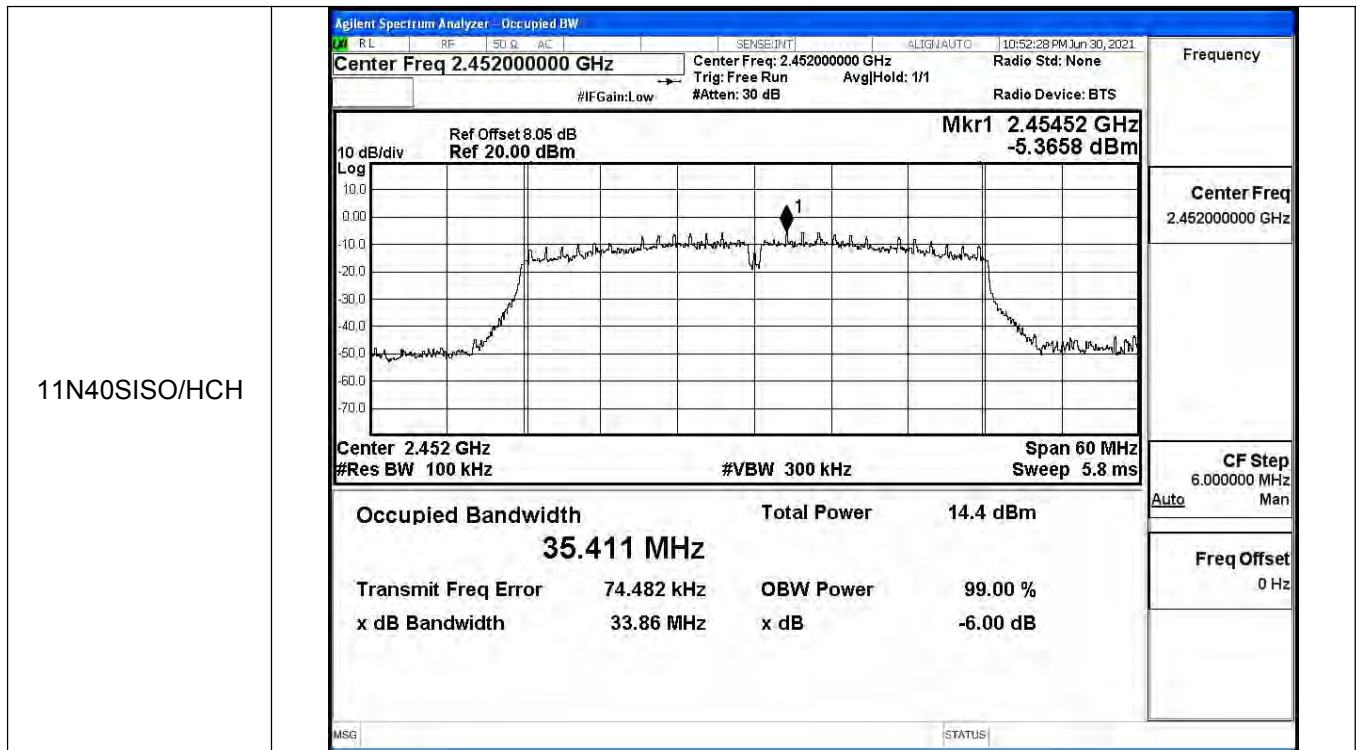


11N40SISO/LCH



11N40SISO/MCH







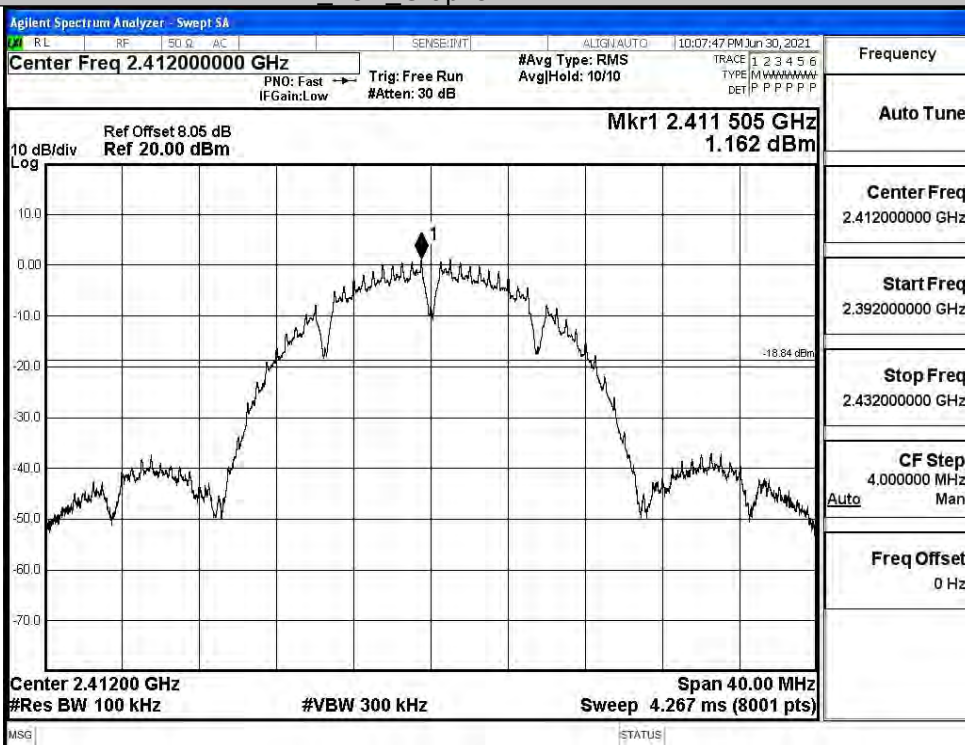
## A.5 RF Conducted Spurious Emissions

| Mode          | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B           | LCH     | 1.162      | -37.818          | -18.838     | PASS    |
|               | MCH     | 2.122      | -37.425          | -17.878     | PASS    |
|               | HCH     | 2.822      | -38.603          | -17.178     | PASS    |
| 11G           | LCH     | -3.547     | -37.375          | -23.547     | PASS    |
|               | MCH     | -2.317     | -37.903          | -22.317     | PASS    |
|               | HCH     | -2.16      | -37.833          | -22.160     | PASS    |
| 11N20<br>SISO | LCH     | -3.676     | -36.935          | -23.676     | PASS    |
|               | MCH     | -2.45      | -38.657          | -22.450     | PASS    |
|               | HCH     | -1.491     | -37.765          | -21.491     | PASS    |
| 11N40<br>SISO | LCH     | -6.925     | -38.261          | -26.925     | PASS    |
|               | MCH     | -6.311     | -38.892          | -26.311     | PASS    |
|               | HCH     | -5.74      | -37.623          | -25.740     | PASS    |

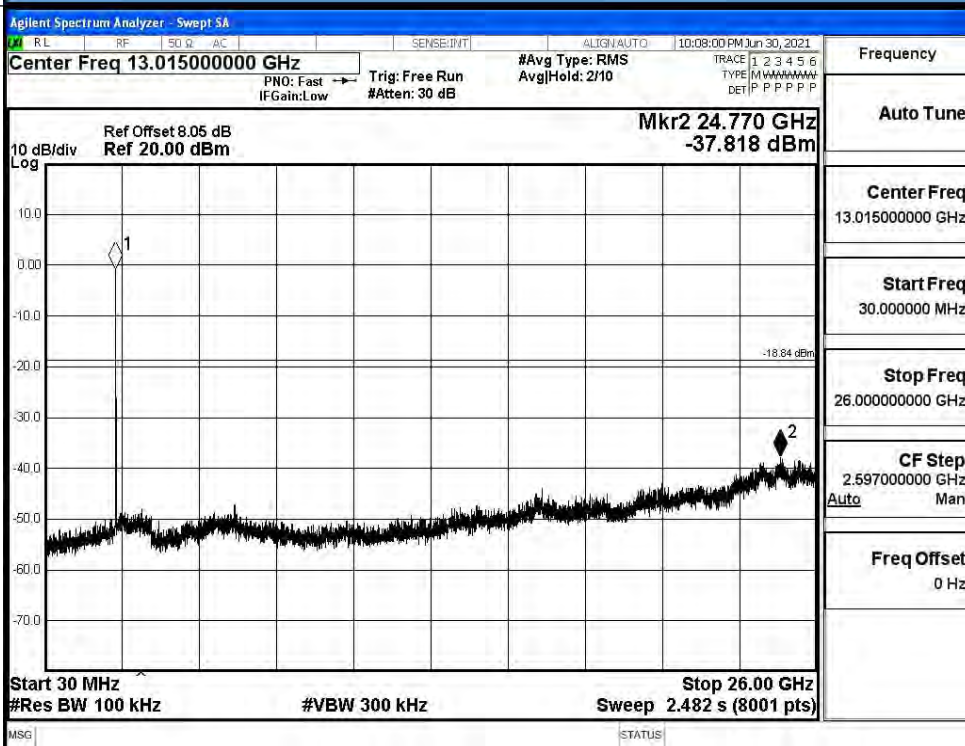


## 11B LCH Graphs

Pref/11B/LCH



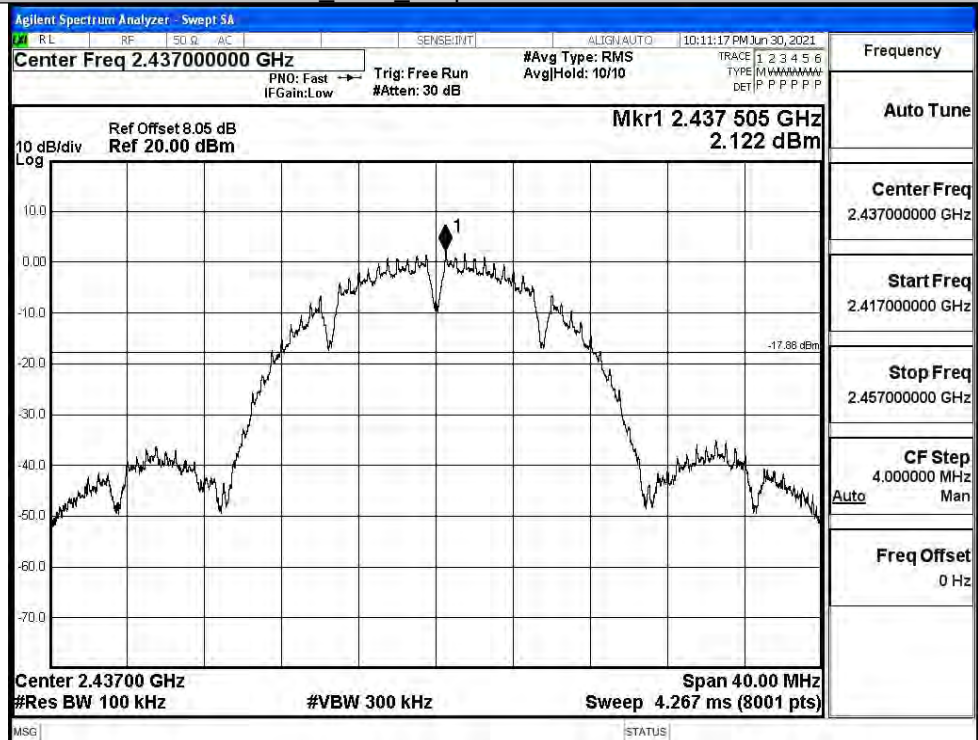
Puw/11B/LCH



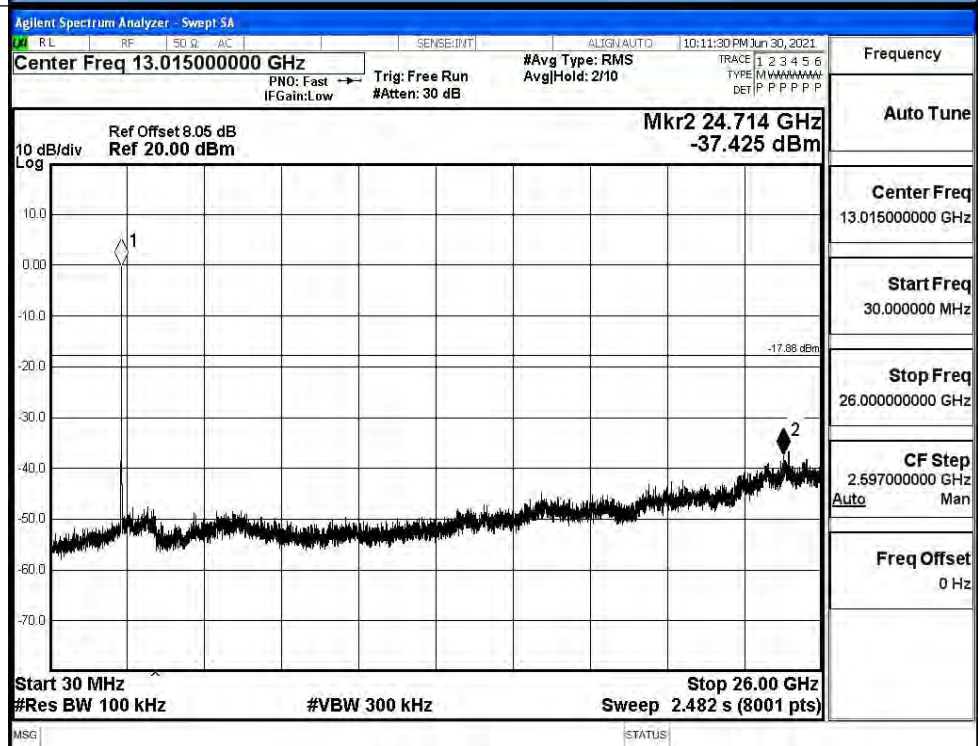


## 11B MCH Graphs

Pref/11B/MCH



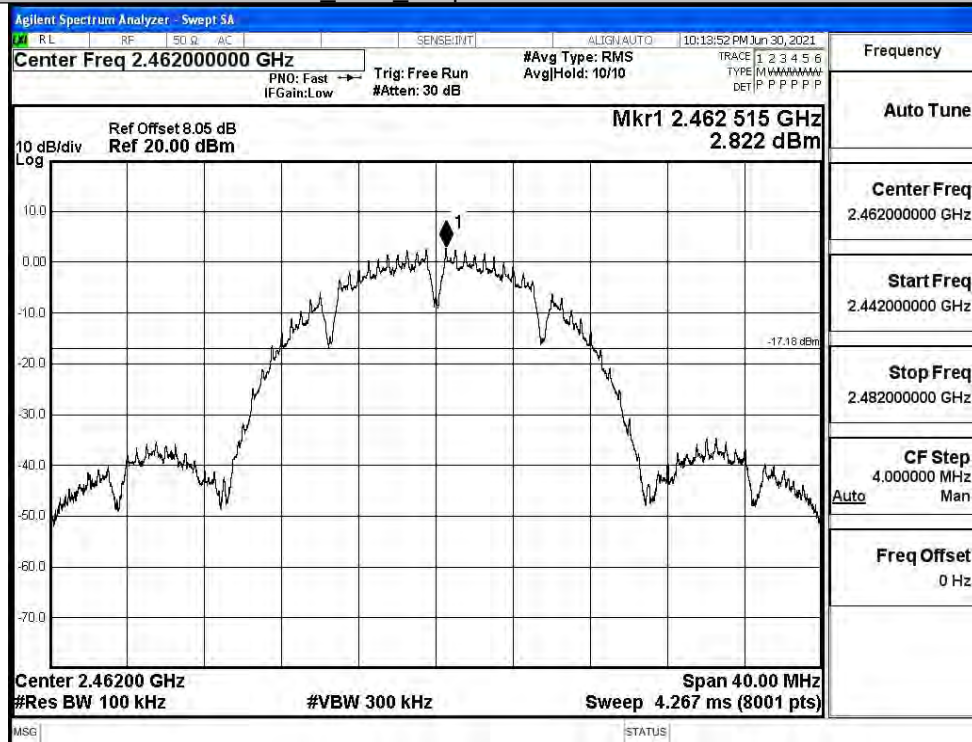
Puw/11B/MCH



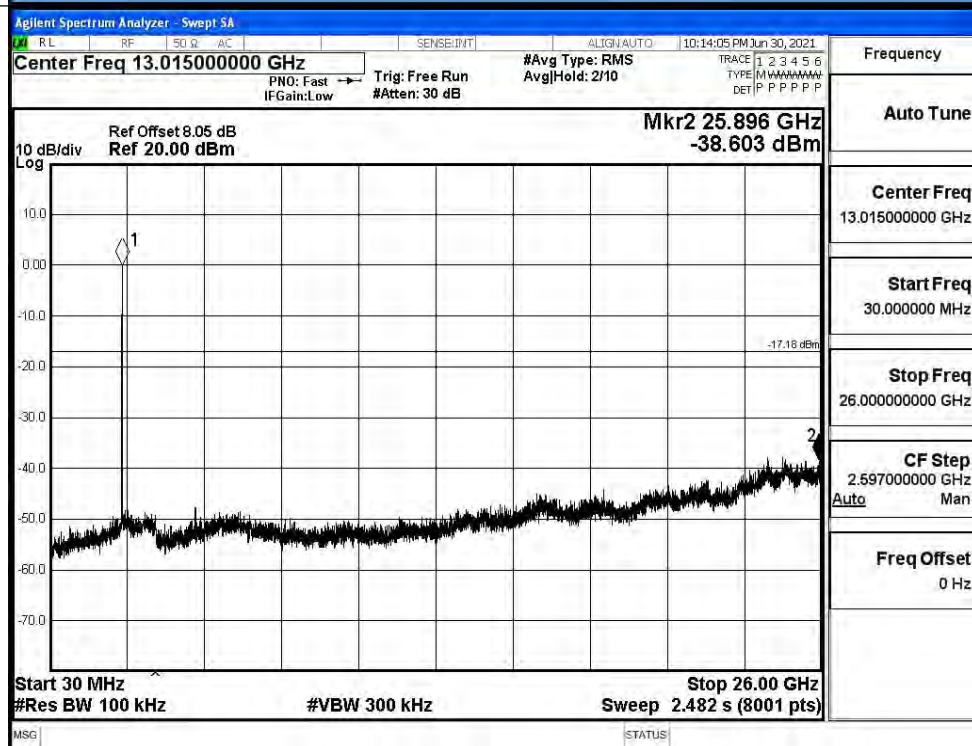


## 11B HCH Graphs

Pref/11B/HCH



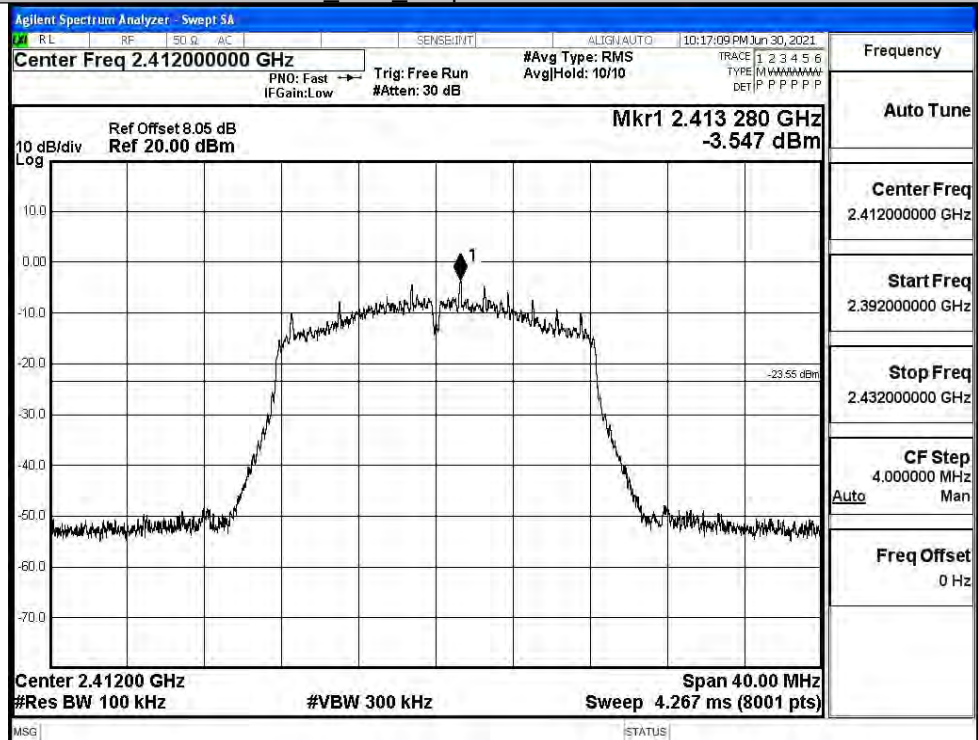
Puw/11B/HCH



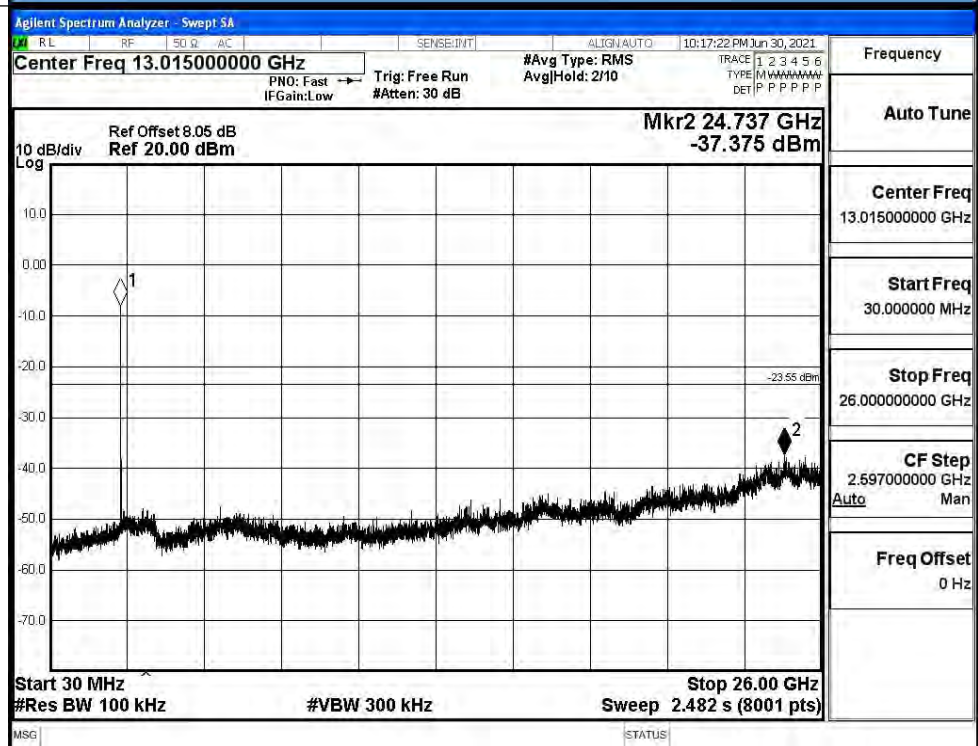


## 11G LCH Graphs

Pref/11G/LCH



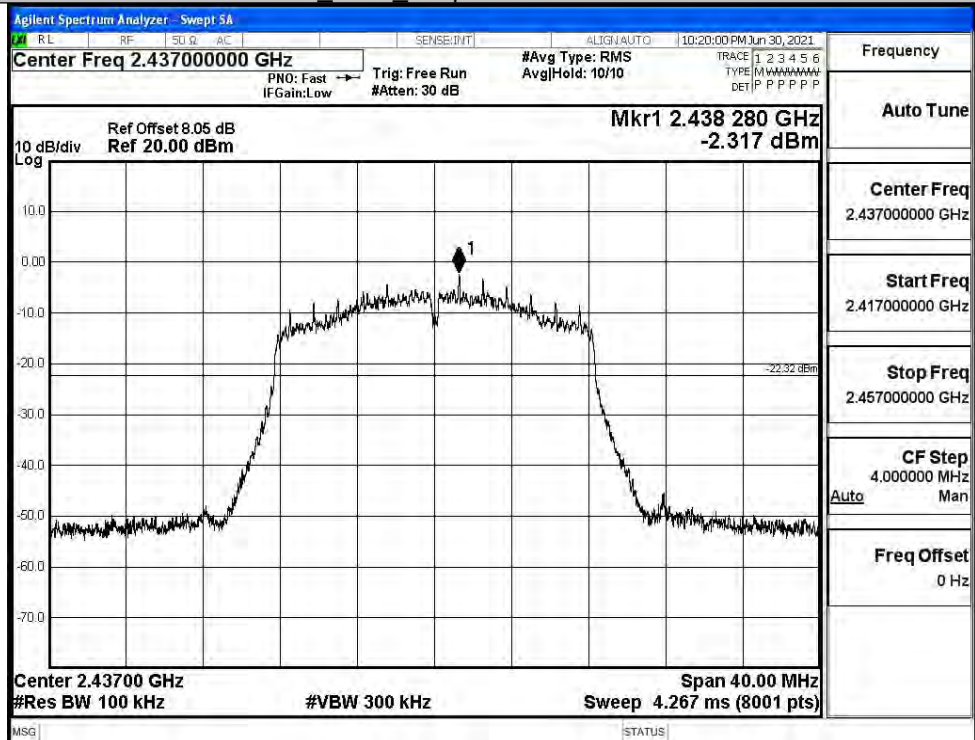
Puw/11G/LCH



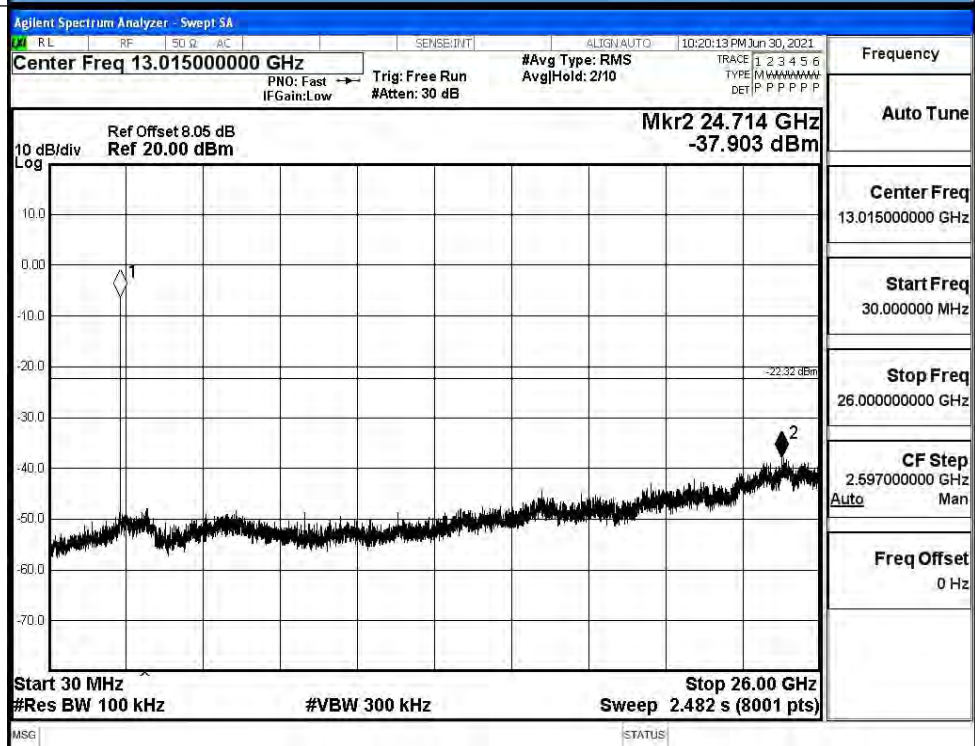


## 11G MCH Graphs

Pref/11G/MCH



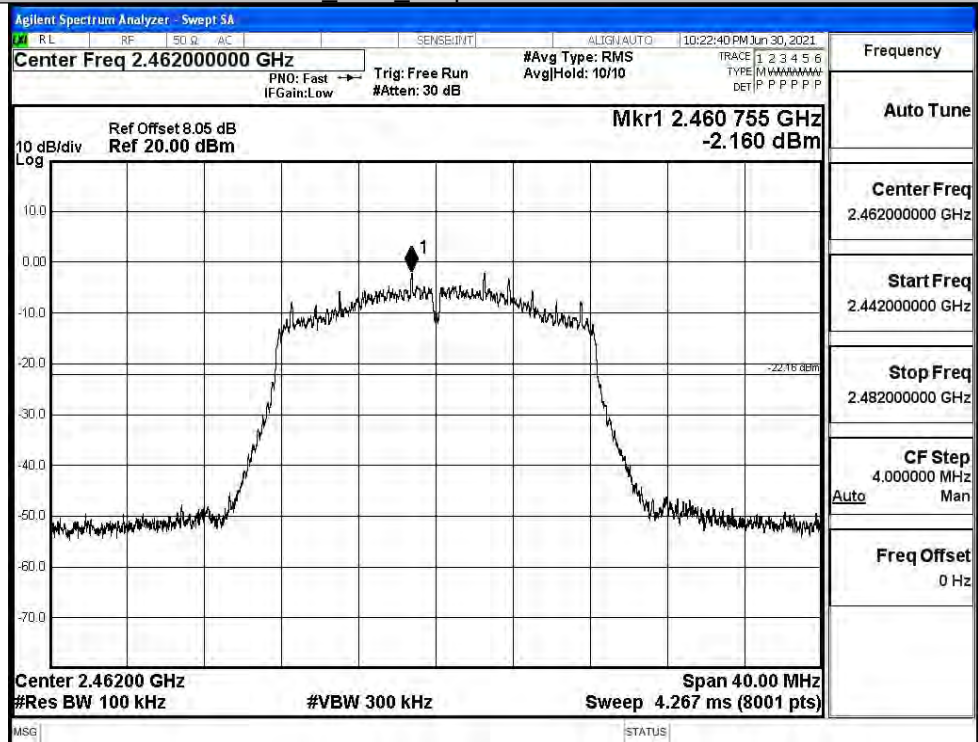
Puw/11G/MCH



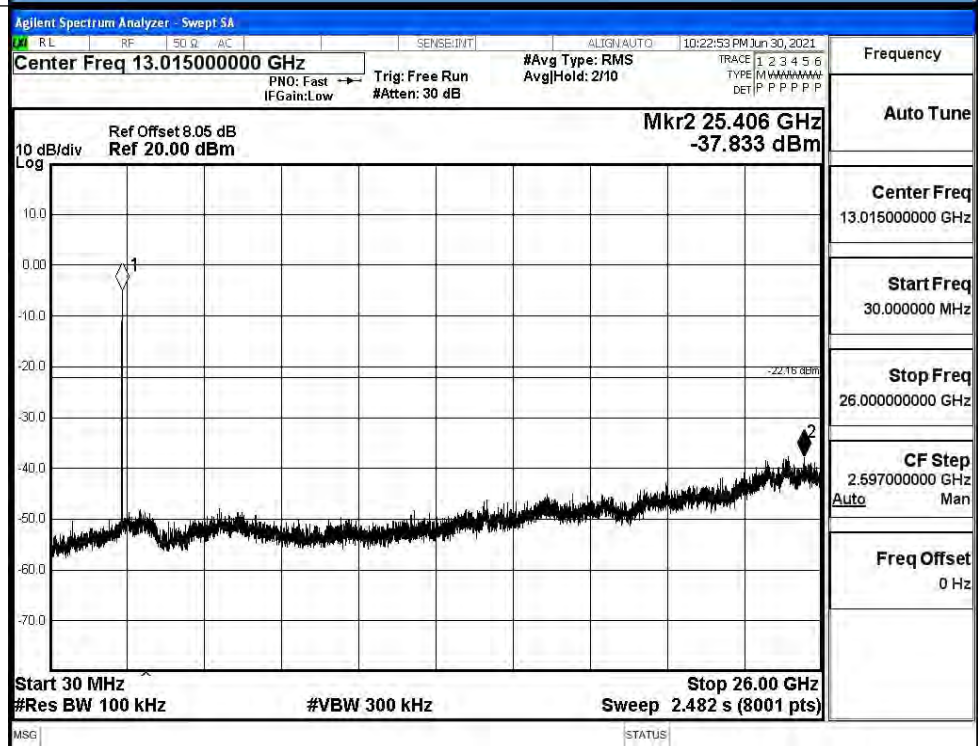


## 11G HCH Graphs

Pref/11G/HCH

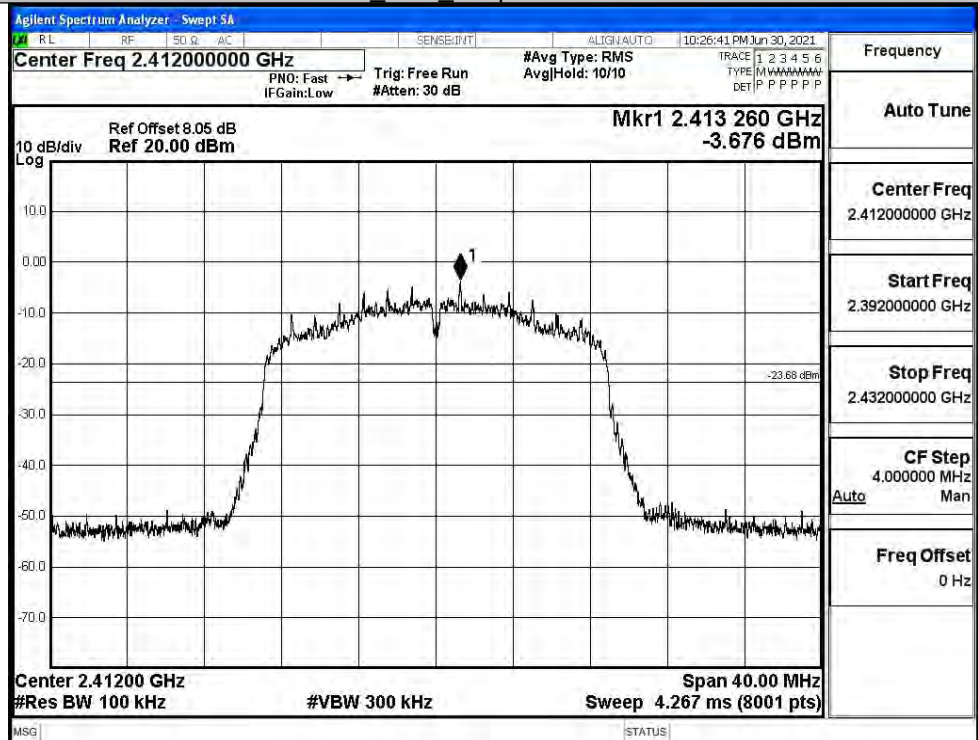
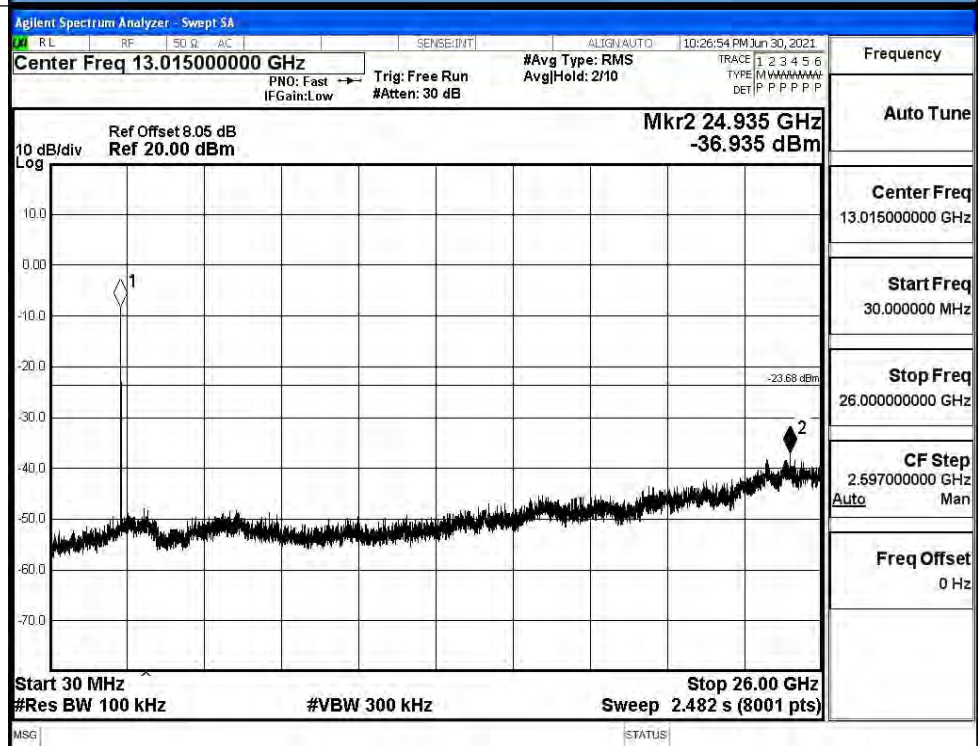


Puw/11G/HCH



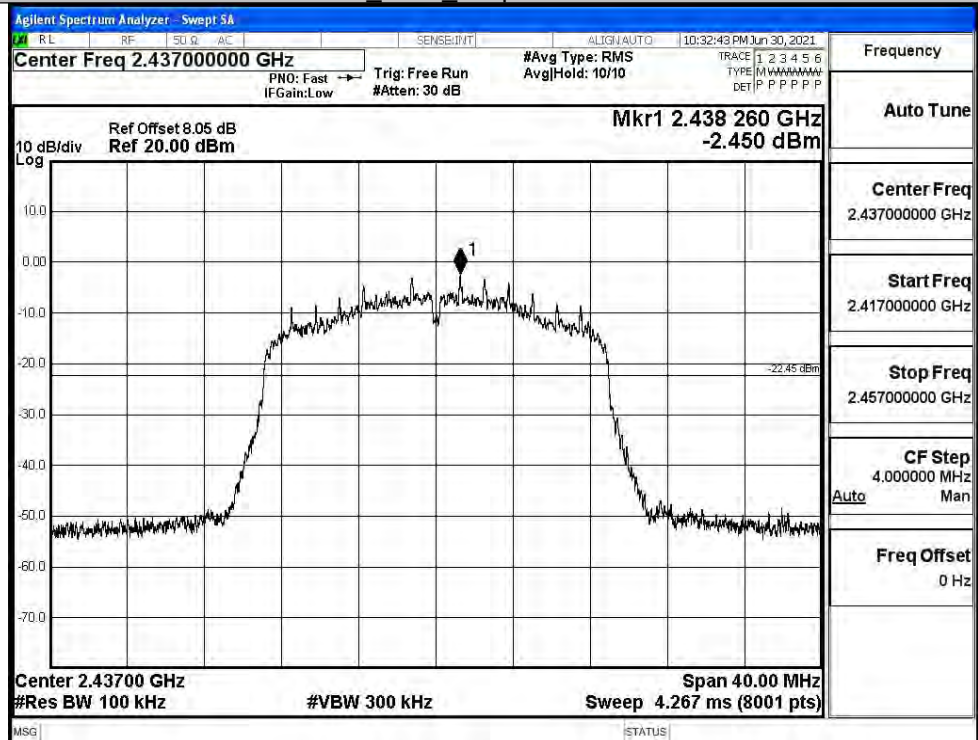
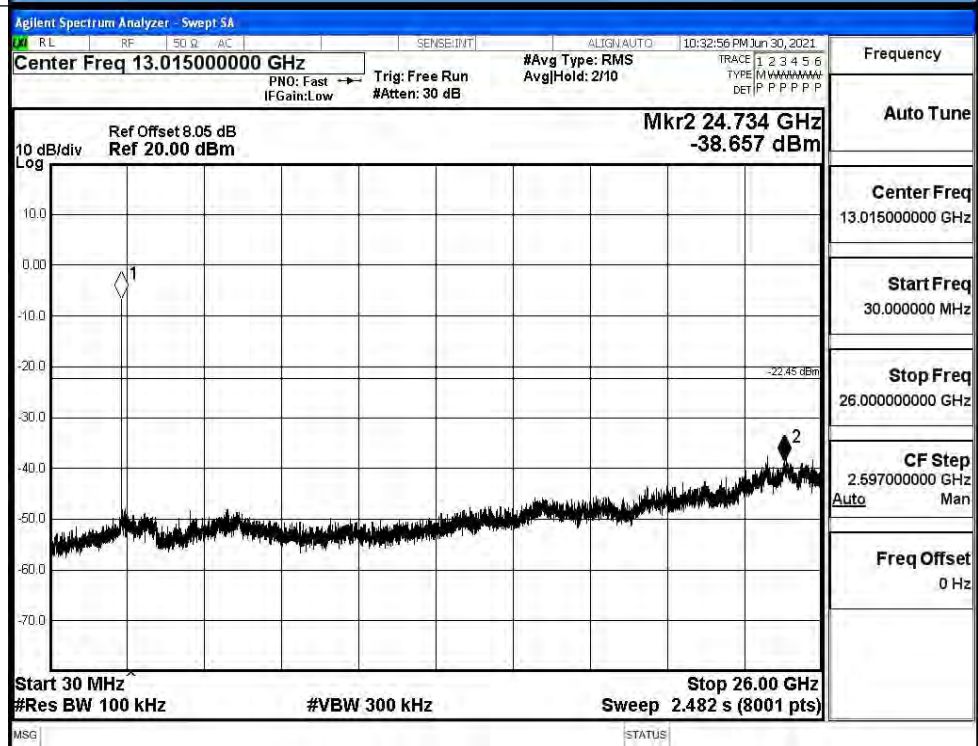


## 11N20SISO LCH Graphs

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

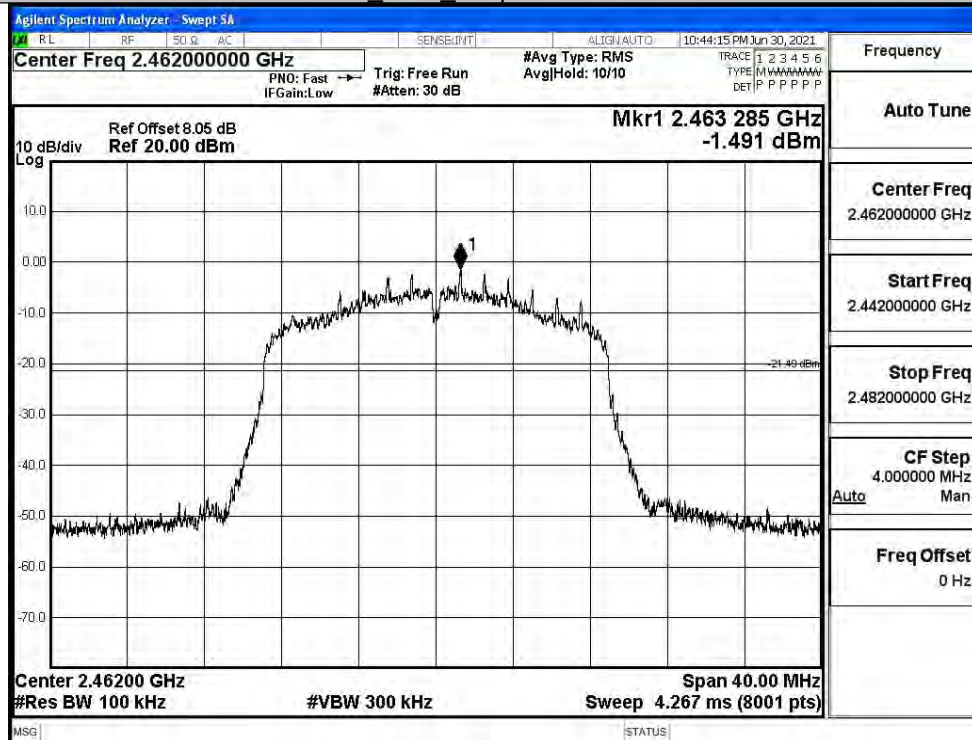
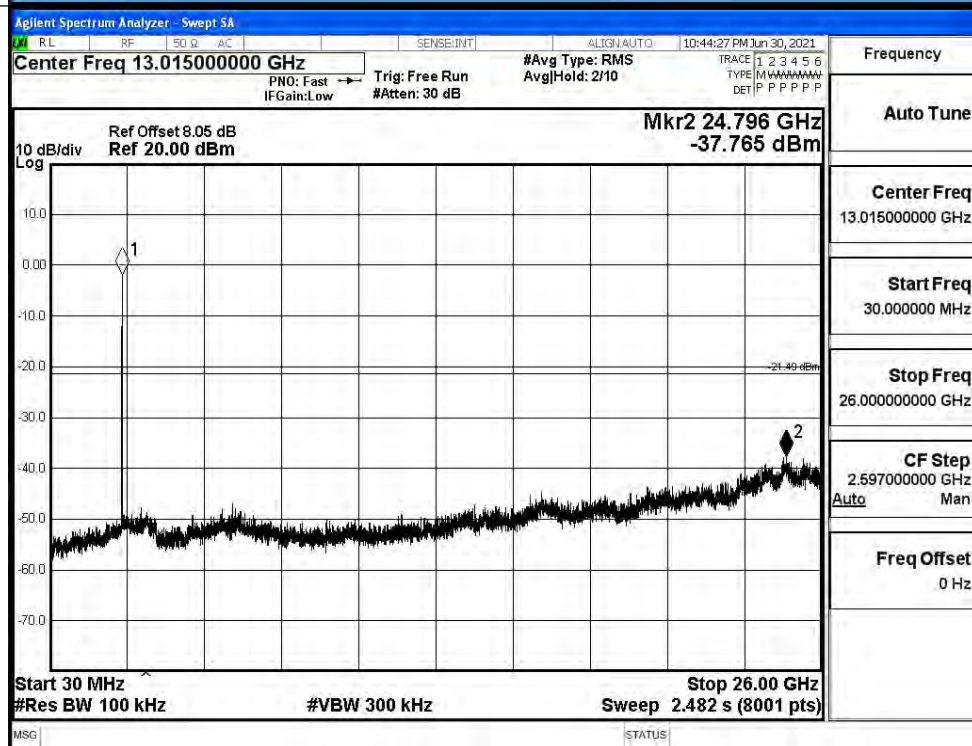


## 11N20SISO MCH\_Graphs

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

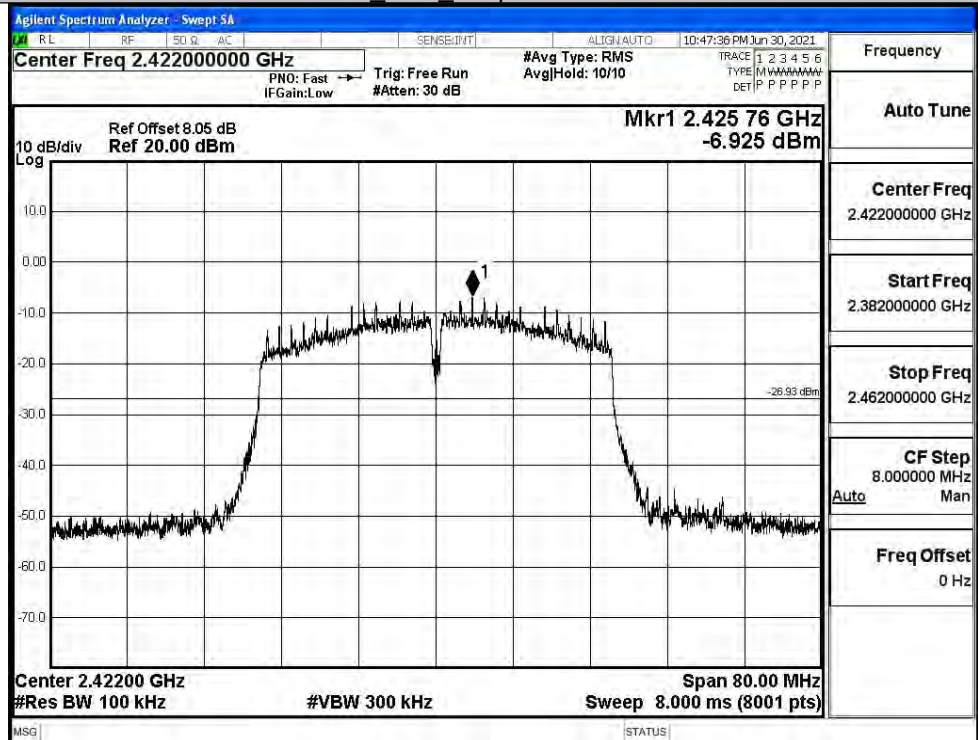
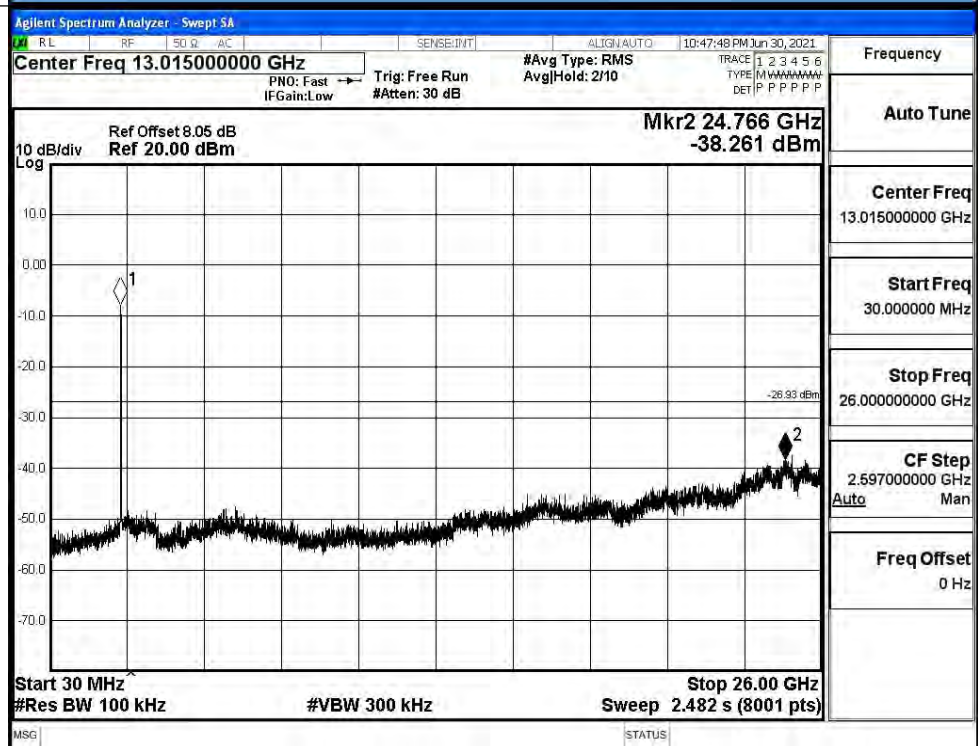


## 11N20SISO HCH Graphs

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

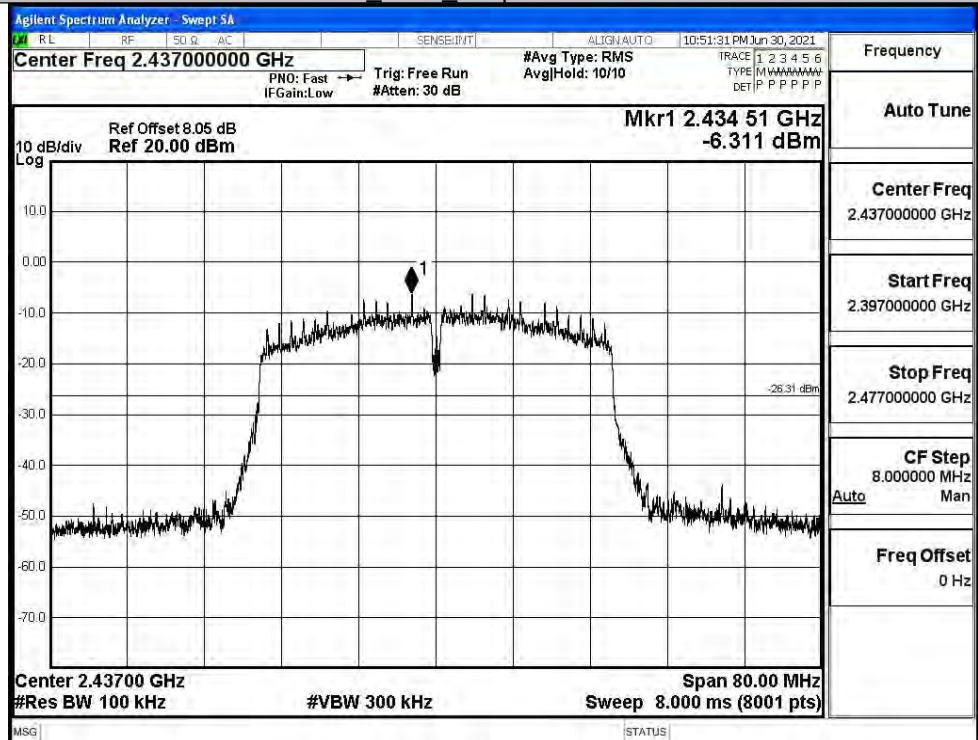
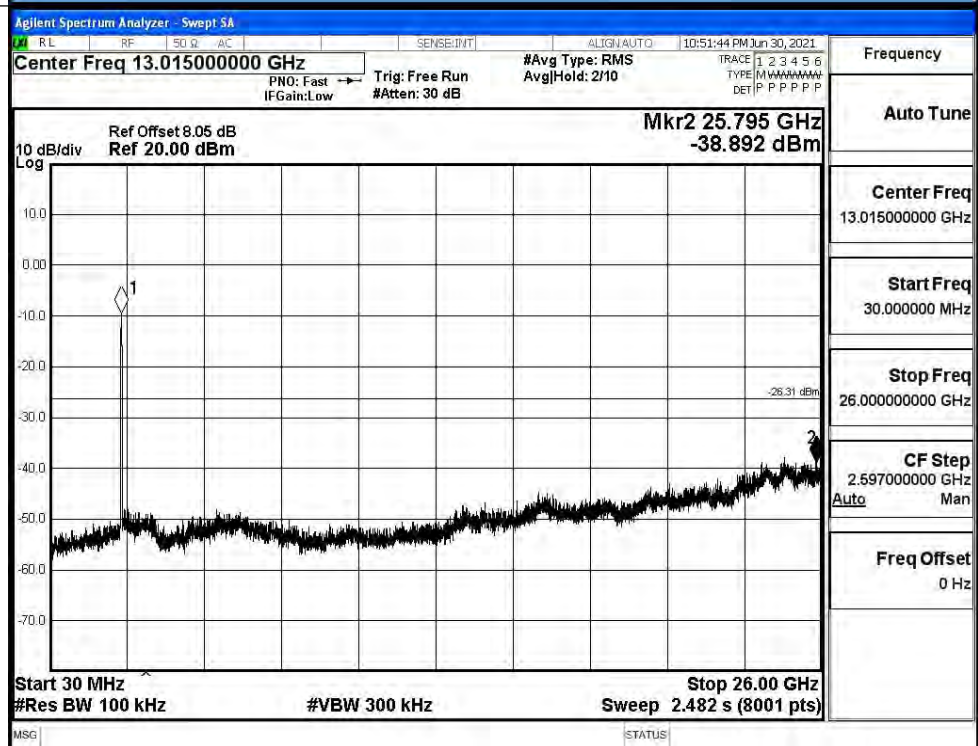


## 11N40SISO LCH Graphs

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

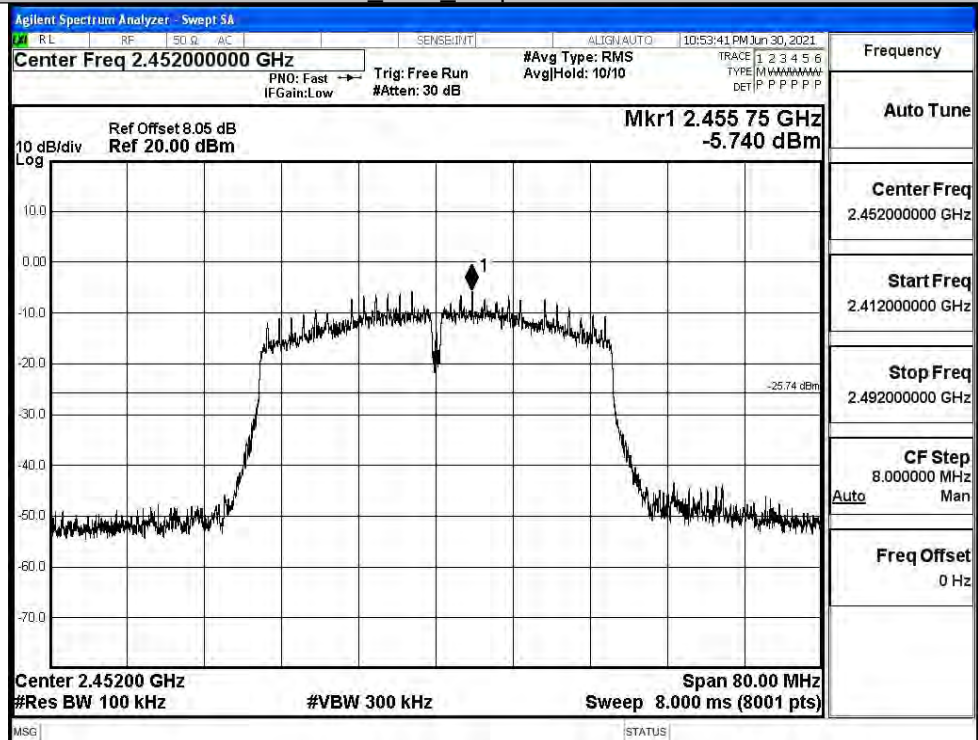
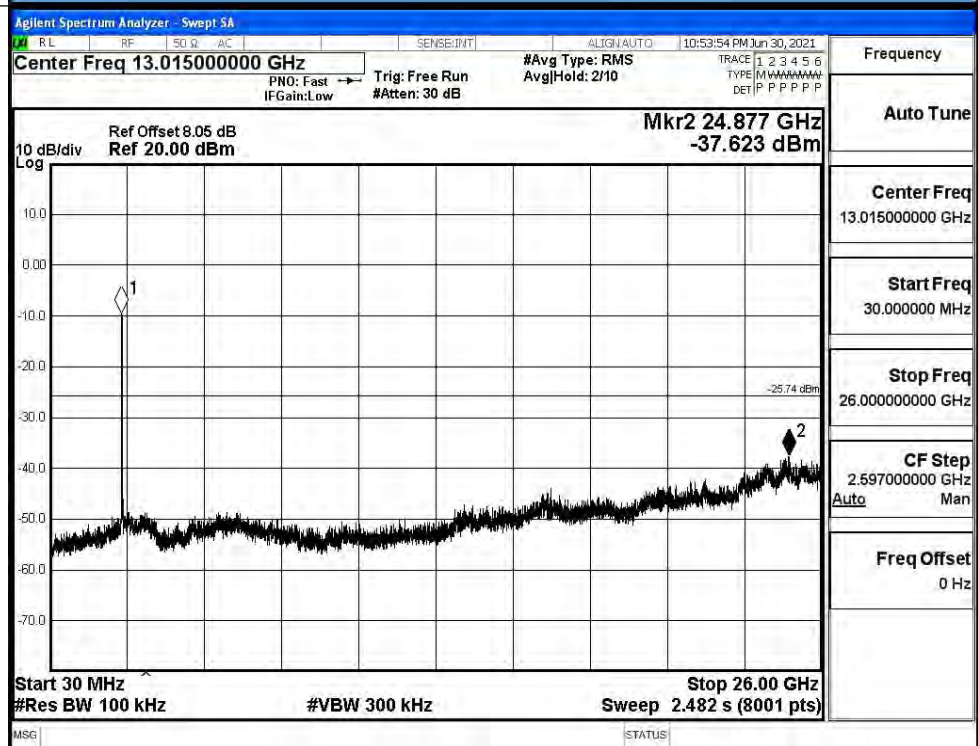


## 11N40SISO MCH\_Graphs

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

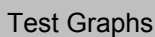


## 11N40SISO HCH Graphs

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

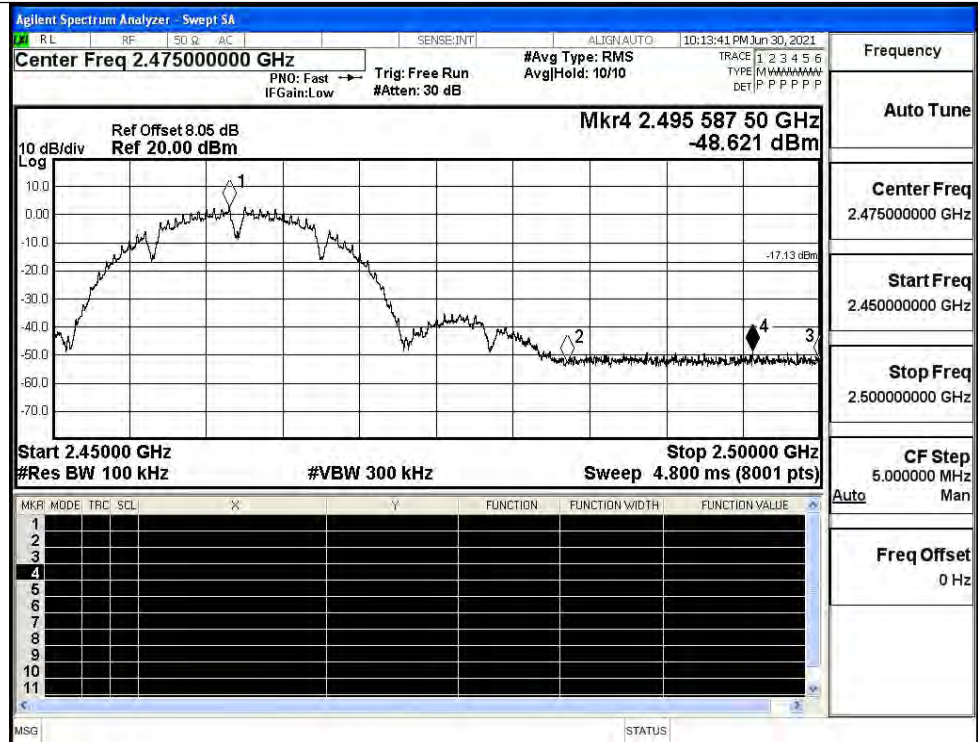


| Mode      | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B       | LCH     | 1.228              | -49.226                  | -18.77      | PASS    |
|           | HCH     | 2.866              | -48.621                  | -17.13      | PASS    |
| 11G       | LCH     | -3.884             | -49.210                  | -23.88      | PASS    |
|           | HCH     | -1.587             | -48.758                  | -21.59      | PASS    |
| 11N20SISO | LCH     | -4.481             | -49.214                  | -24.48      | PASS    |
|           | HCH     | -2.475             | -49.525                  | -22.48      | PASS    |
| 11N40SISO | LCH     | -6.839             | -49.644                  | -26.84      | PASS    |
|           | HCH     | -5.399             | -45.544                  | -25.4       | PASS    |

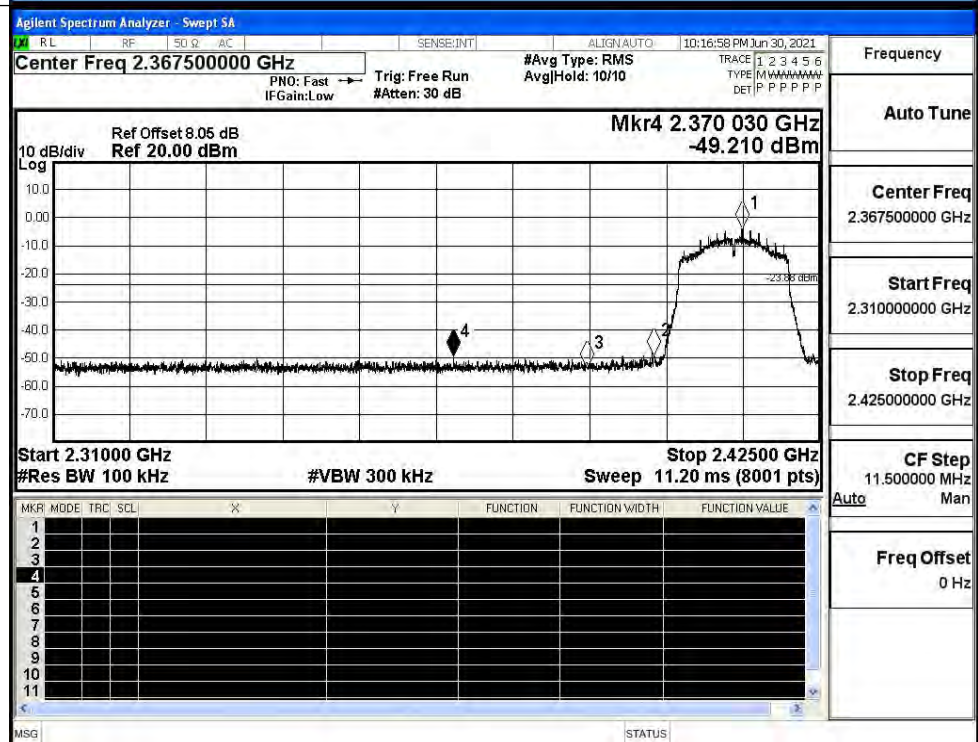




11B/HCH

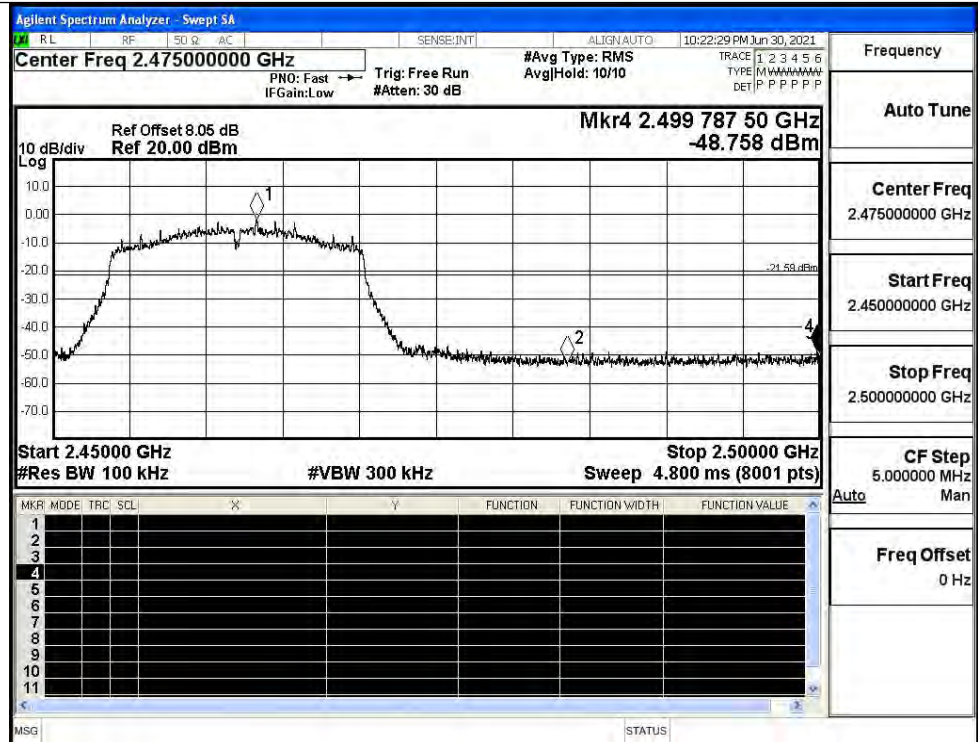


11G/LCH

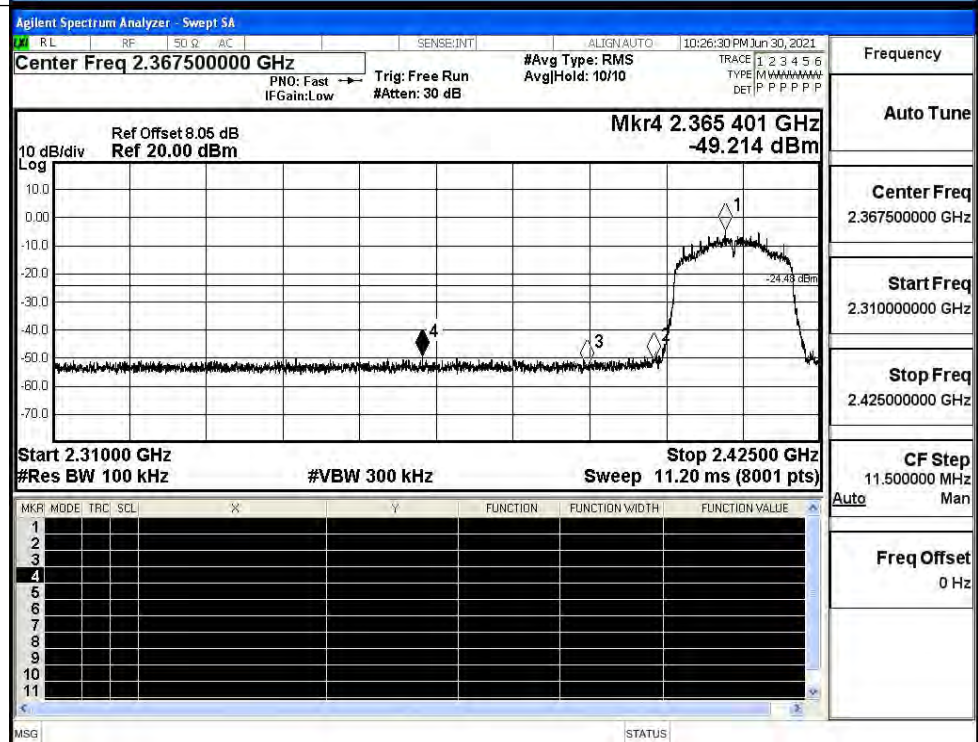




11G/HCH

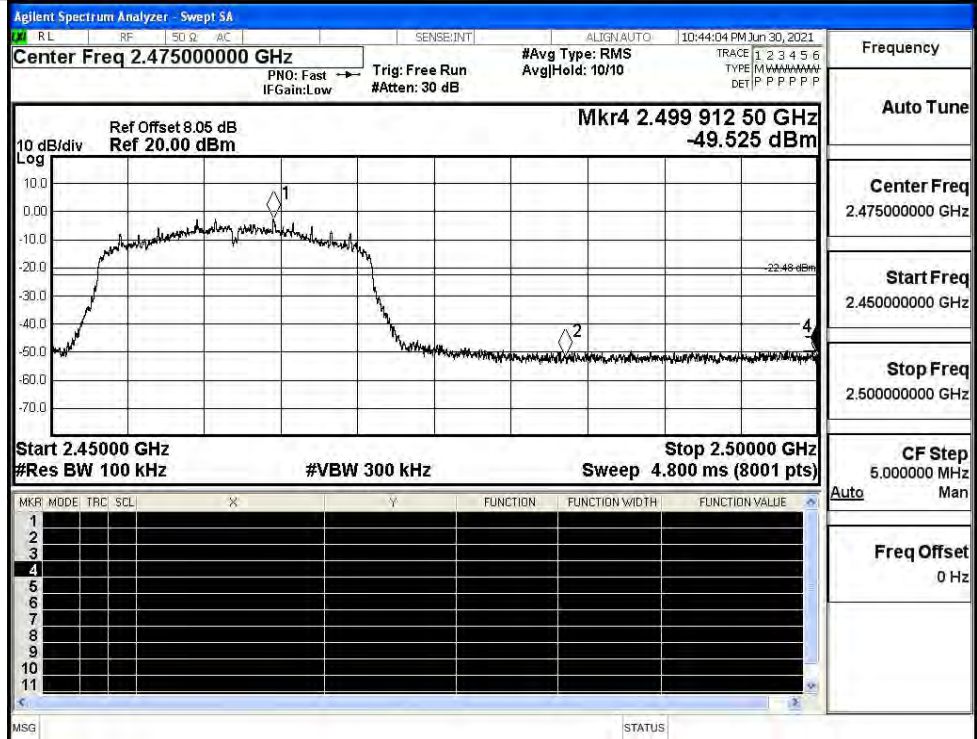


11N20SISO/LCH

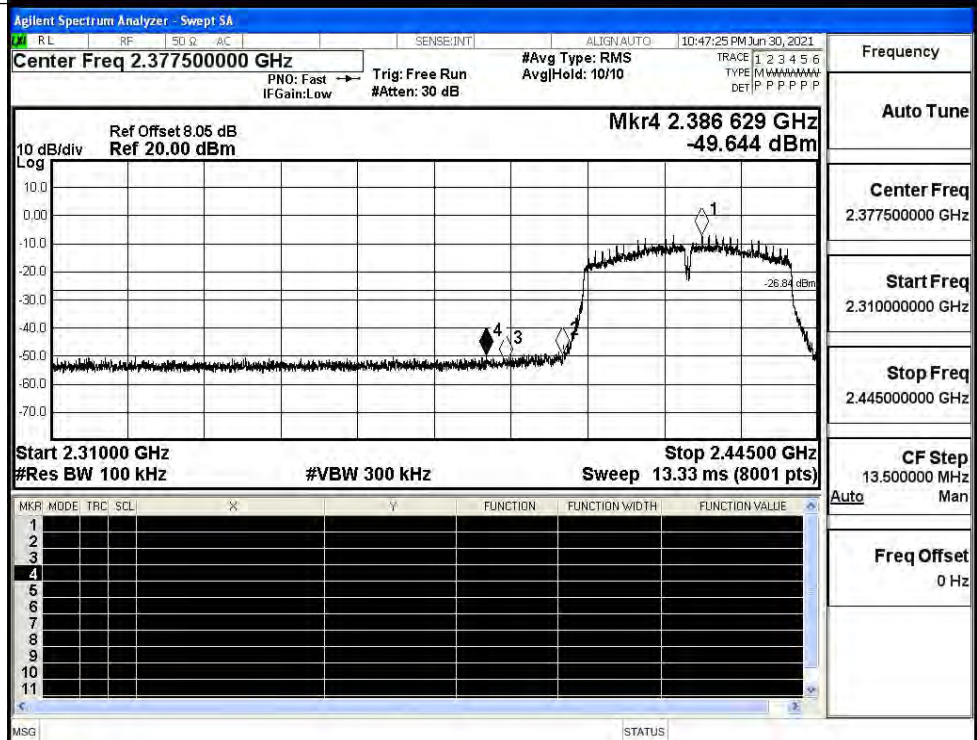




11N20SISO/HCH

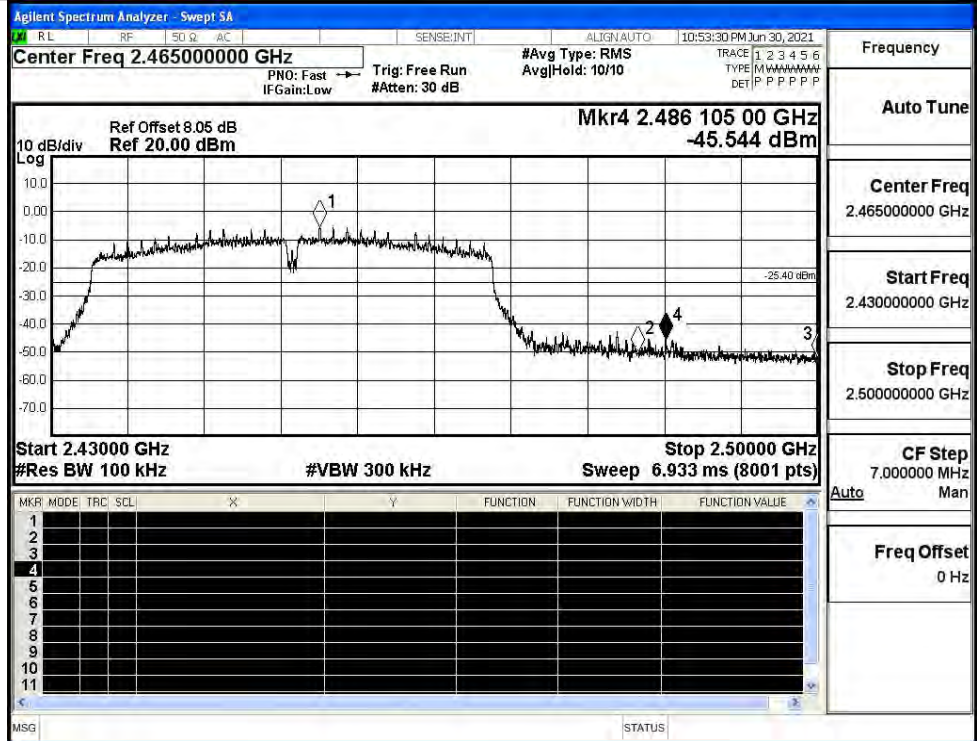


11N40SISO/LCH





11N40SISO/HCH





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

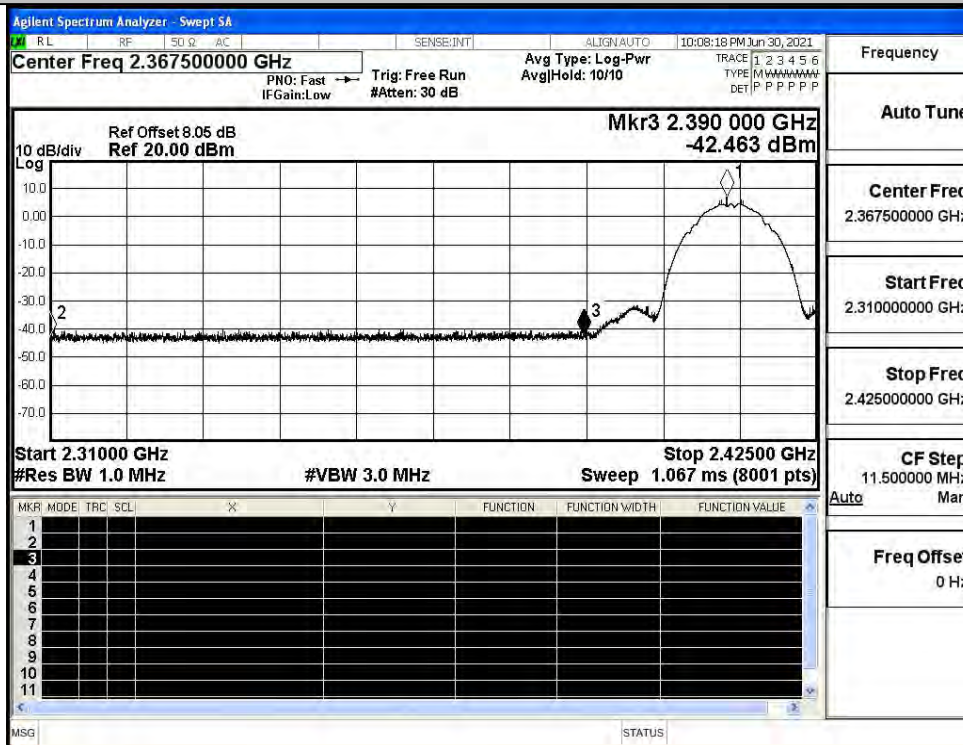
| Test Mode  | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|------------|--------------|------|--------|-------------|------|---------------|------------|----------|----------------|---------|
| 11B        | 2412         | Ant1 | 2310.0 | -43.35      | 2.0  | 0             | 53.88      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2310.0 | -53.63      | 2.0  | 0             | 43.60      | AV       | 54             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -42.46      | 2.0  | 0             | 54.77      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -52.98      | 2.0  | 0             | 44.25      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -41.14      | 2.0  | 0             | 56.09      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -52.36      | 2.0  | 0             | 44.87      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -42.29      | 2.0  | 0             | 54.94      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -52.23      | 2.0  | 0             | 45.00      | AV       | 54             | PASS    |
| 11G        | 2412         | Ant1 | 2310.0 | -44.17      | 2.0  | 0             | 53.06      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2310.0 | -53.61      | 2.0  | 0             | 43.62      | AV       | 54             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -42.45      | 2.0  | 0             | 54.78      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -53.14      | 2.0  | 0             | 44.09      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -42.00      | 2.0  | 0             | 55.23      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -52.43      | 2.0  | 0             | 44.80      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -41.43      | 2.0  | 0             | 55.80      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -52.09      | 2.0  | 0             | 45.14      | AV       | 54             | PASS    |
| 11N20 SISO | 2412         | Ant1 | 2310.0 | -43.45      | 2.0  | 0             | 53.78      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2310.0 | -53.63      | 2.0  | 0             | 43.60      | AV       | 54             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -41.42      | 2.0  | 0             | 55.81      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -53.12      | 2.0  | 0             | 44.11      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -40.88      | 2.0  | 0             | 56.35      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -52.43      | 2.0  | 0             | 44.80      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -41.86      | 2.0  | 0             | 55.37      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -52.13      | 2.0  | 0             | 45.10      | AV       | 54             | PASS    |
| 11N40 SISO | 2422         | Ant1 | 2310.0 | -42.30      | 2.0  | 0             | 54.93      | PEAK     | 74             | PASS    |
|            | 2422         | Ant1 | 2310.0 | -53.63      | 2.0  | 0             | 43.60      | AV       | 54             | PASS    |



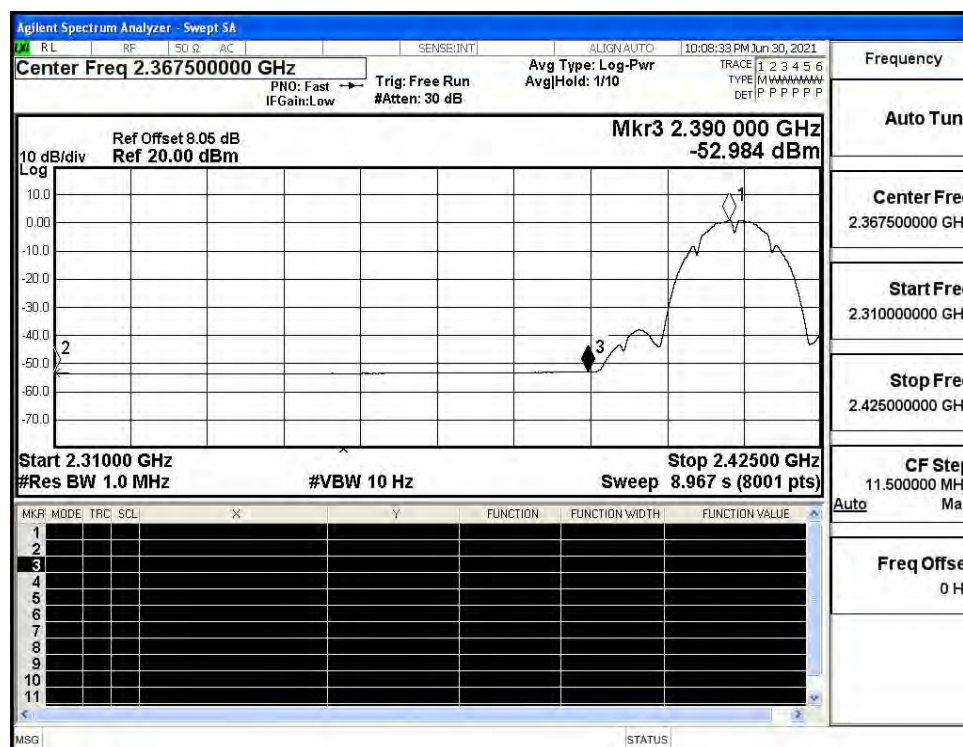
|  |      |      |        |        |     |   |       |      |    |      |
|--|------|------|--------|--------|-----|---|-------|------|----|------|
|  | 2422 | Ant1 | 2390.0 | -39.62 | 2.0 | 0 | 57.61 | PEAK | 74 | PASS |
|  | 2422 | Ant1 | 2390.0 | -52.39 | 2.0 | 0 | 44.84 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2483.5 | -38.07 | 2.0 | 0 | 59.16 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2483.5 | -50.40 | 2.0 | 0 | 46.83 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2500.0 | -41.88 | 2.0 | 0 | 55.35 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2500.0 | -52.10 | 2.0 | 0 | 45.13 | AV   | 54 | PASS |



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

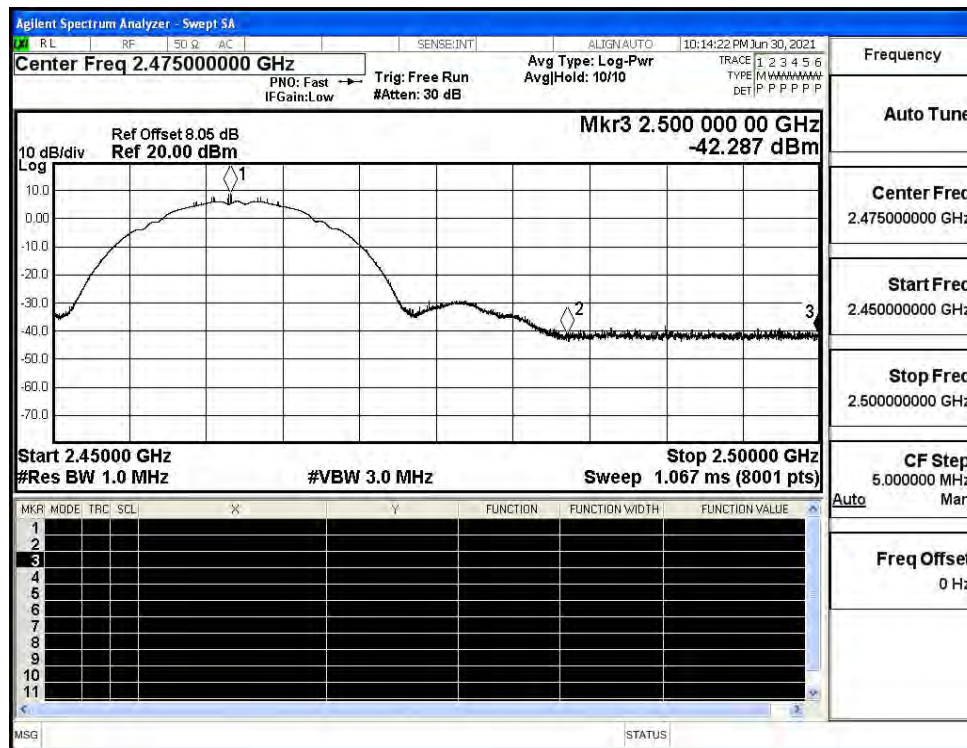


## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_AV

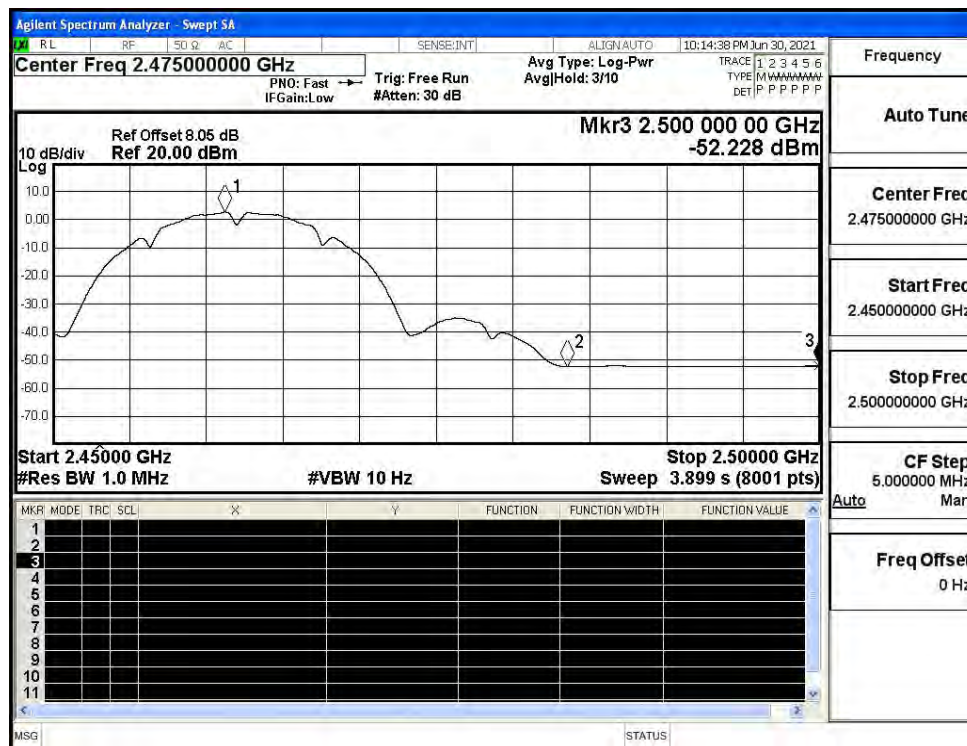




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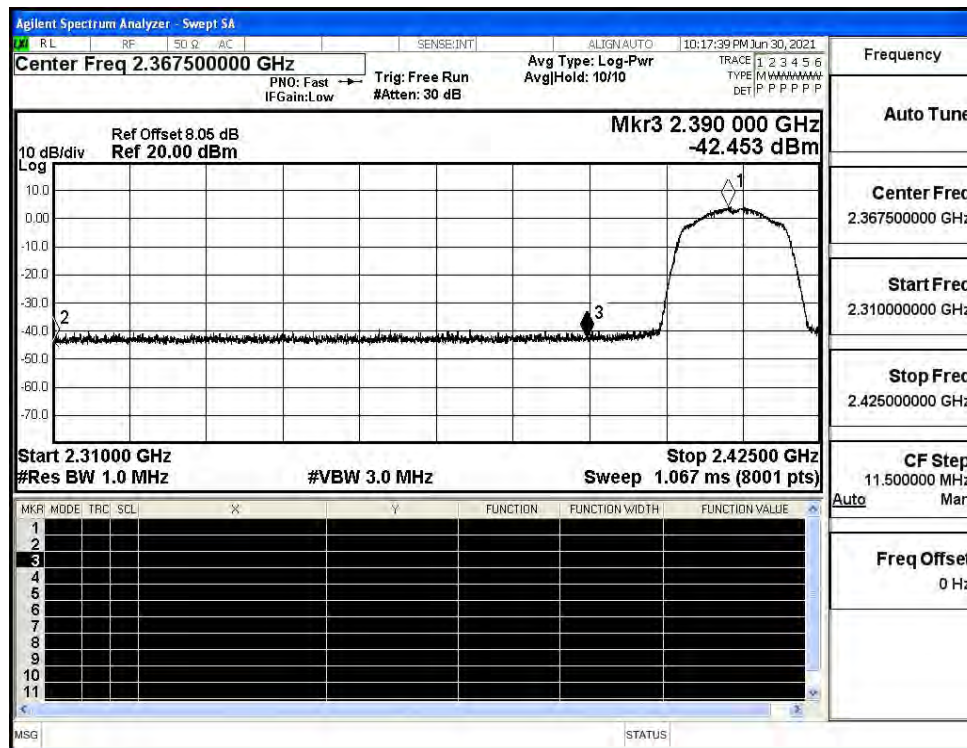


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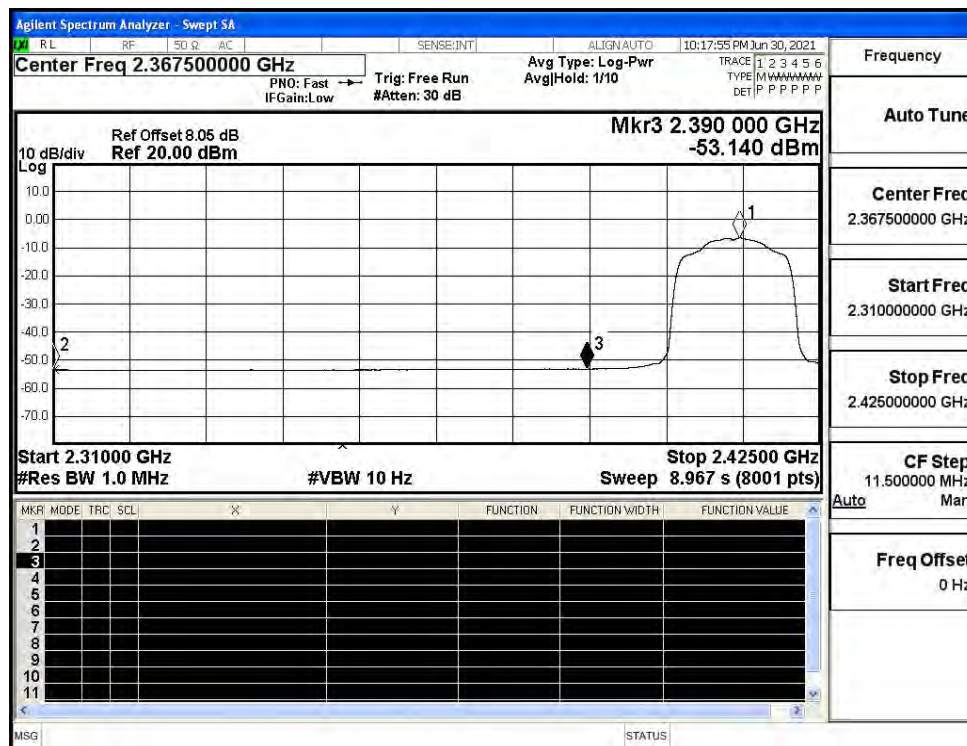




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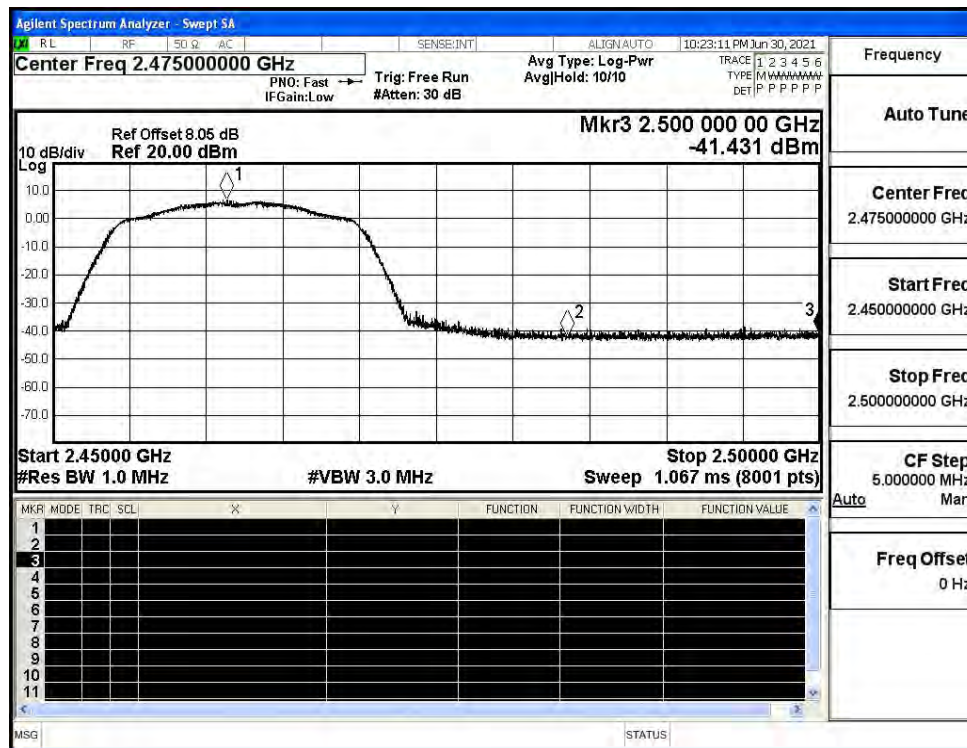


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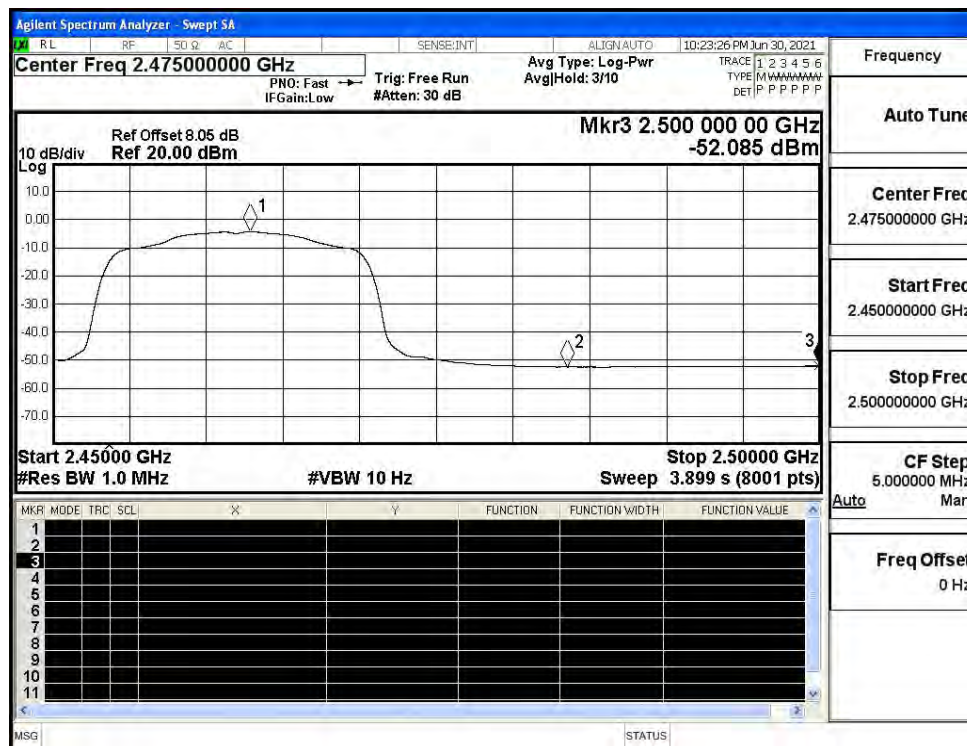




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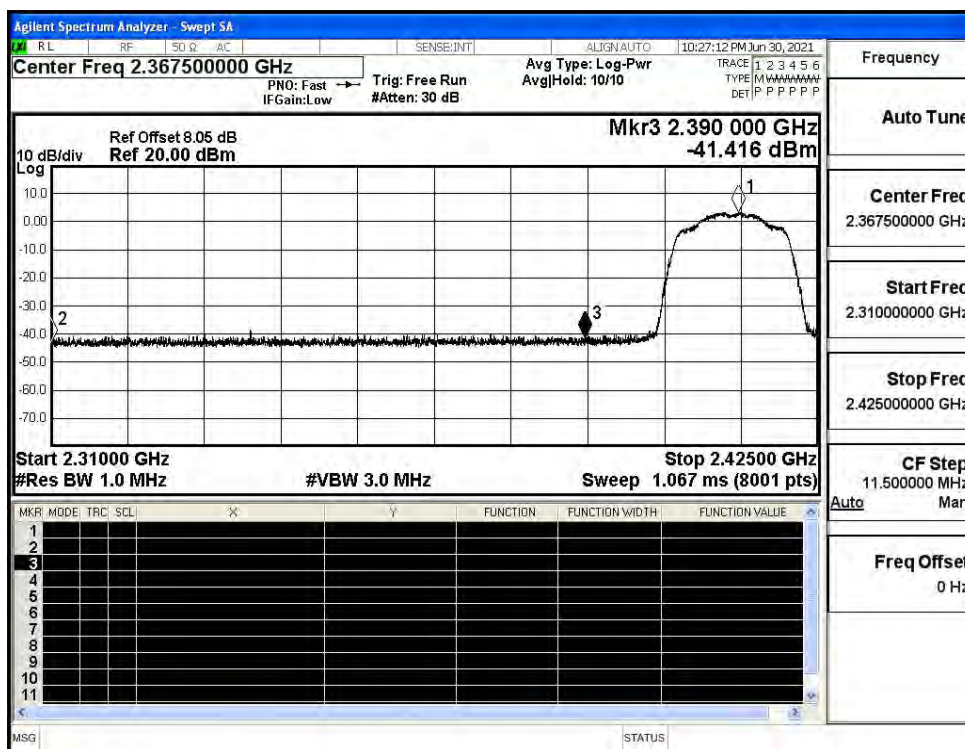


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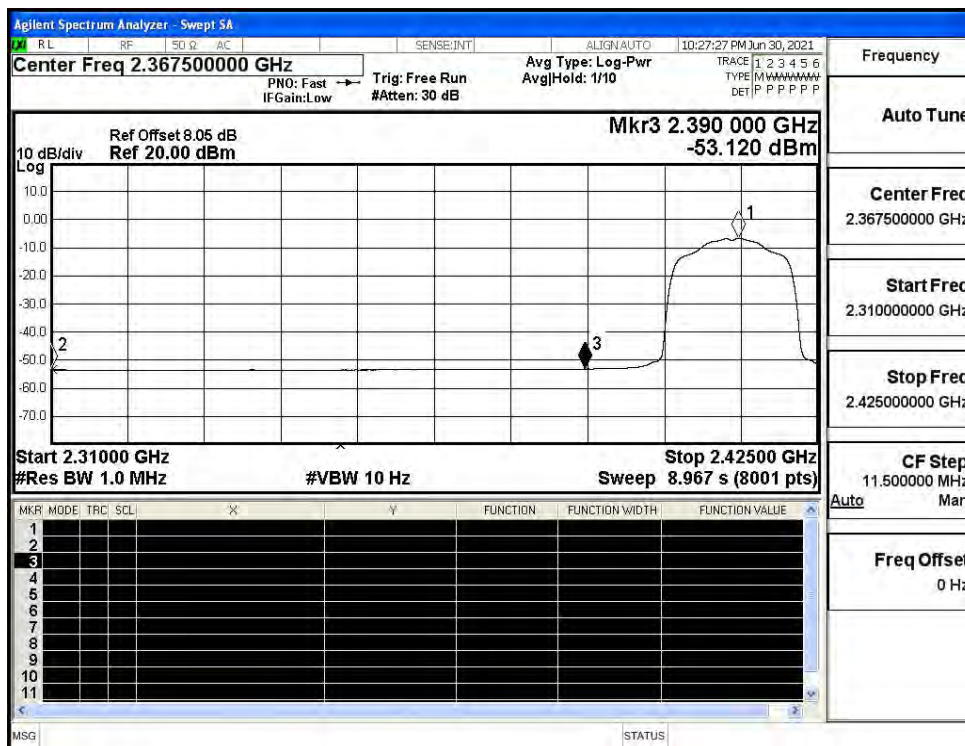




## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_PEAK

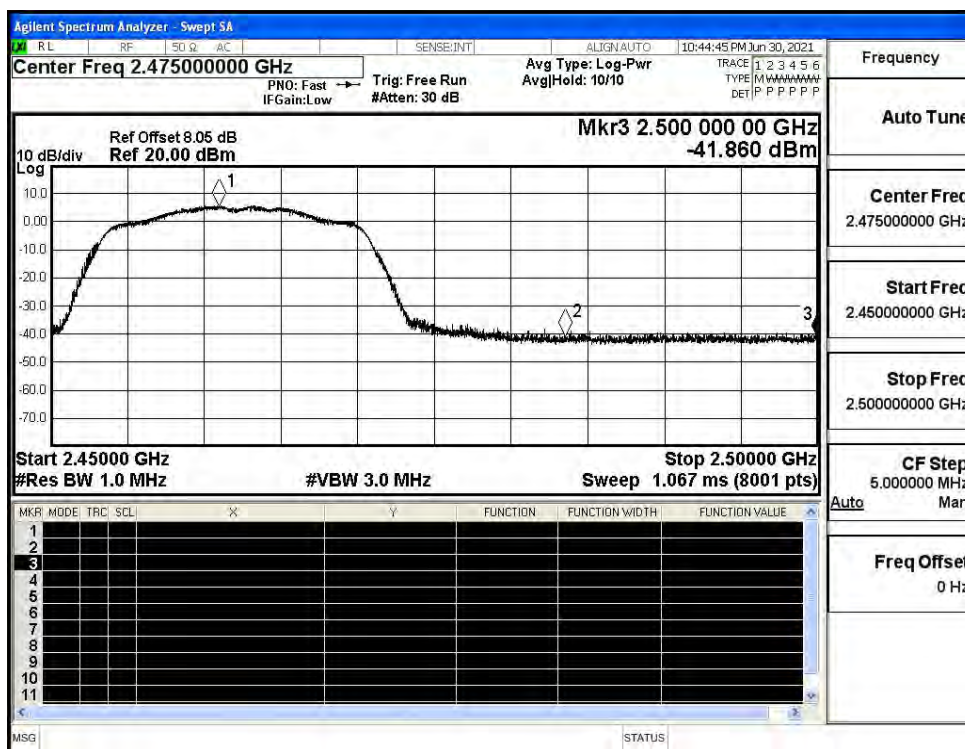


## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_AV

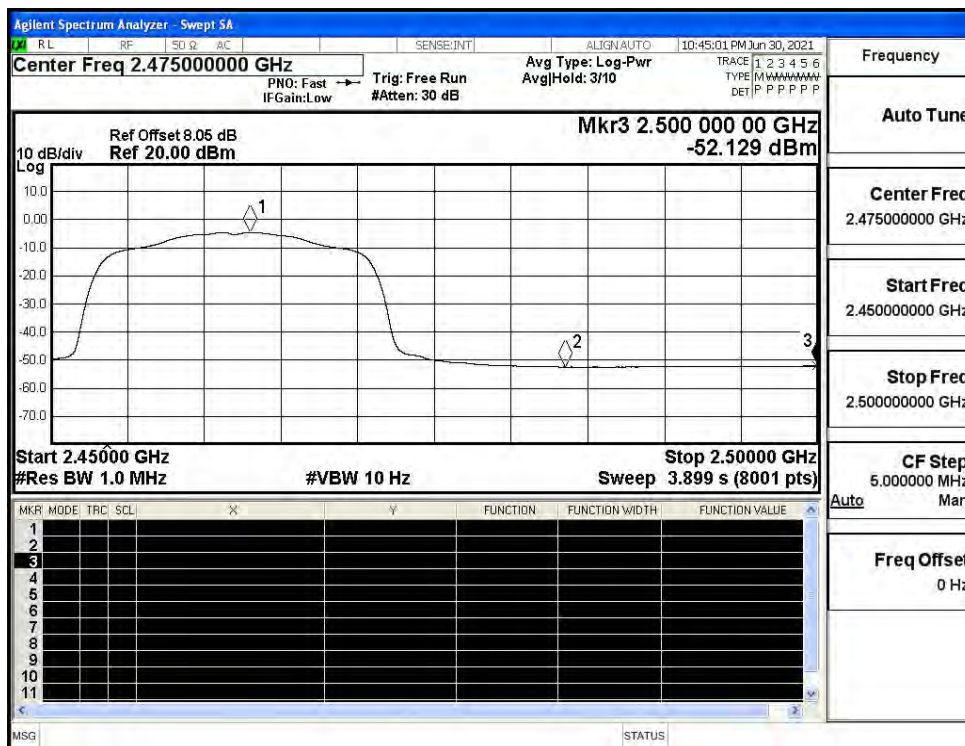




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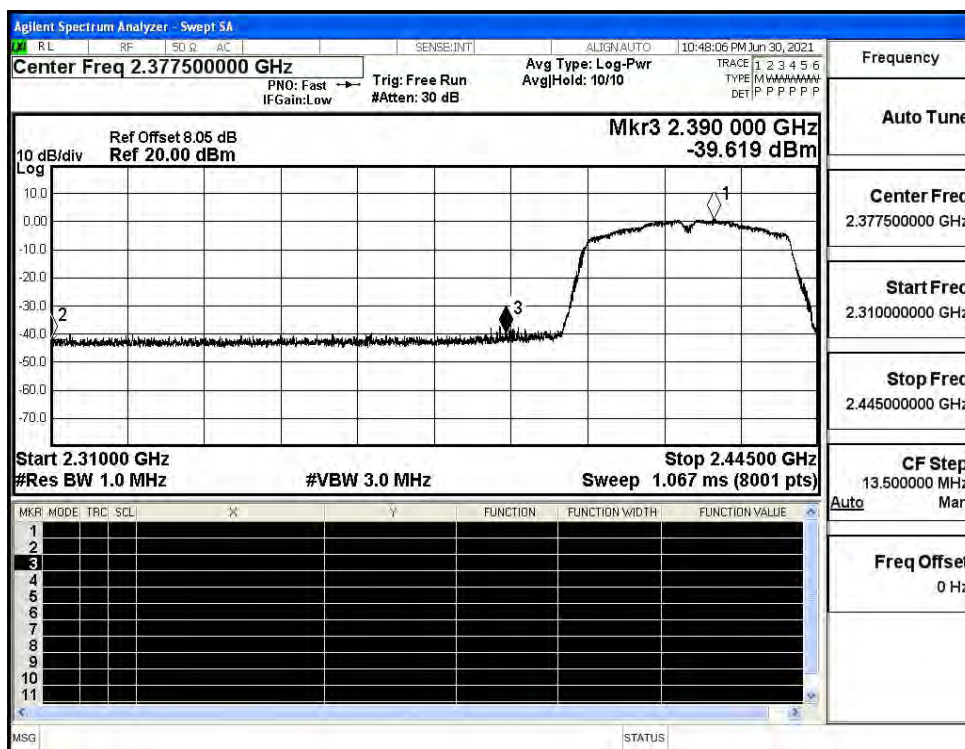


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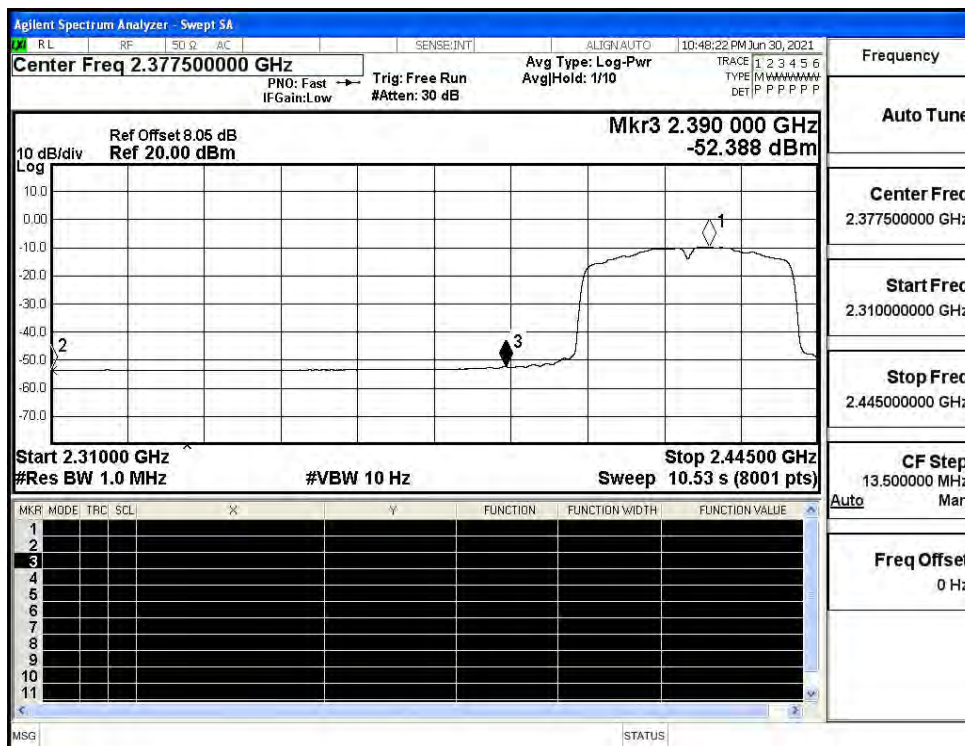




## Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_PEAK

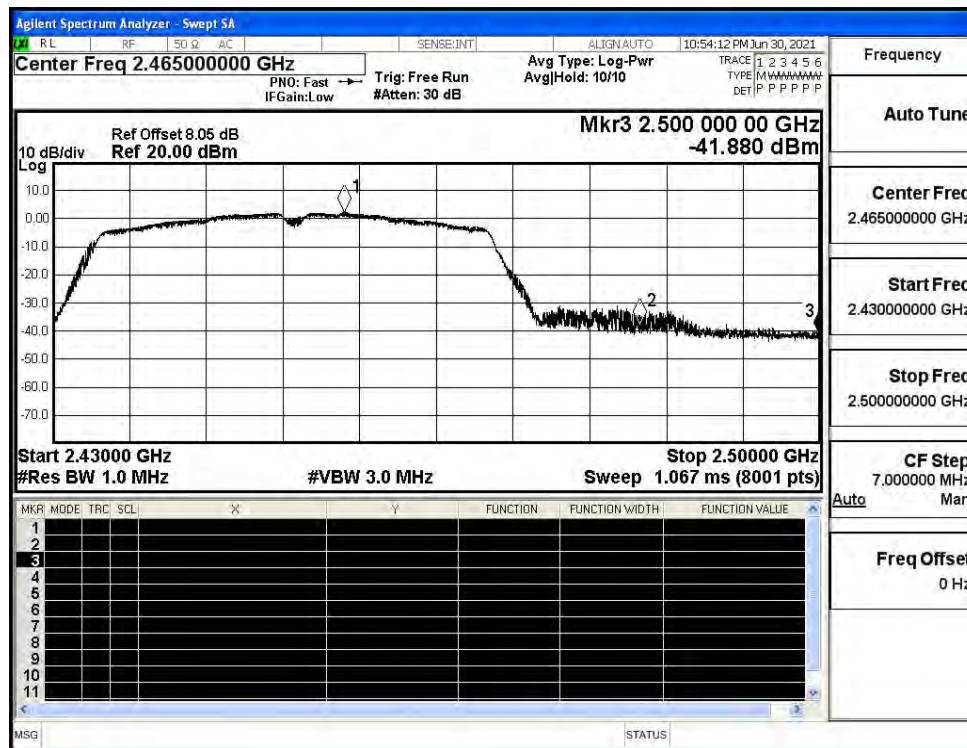


## Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_AV





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



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

