



## Appendix C

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

Product Name: Humidifier

Trade Mark: N/A

Test Model: IH555

#### Environmental Conditions

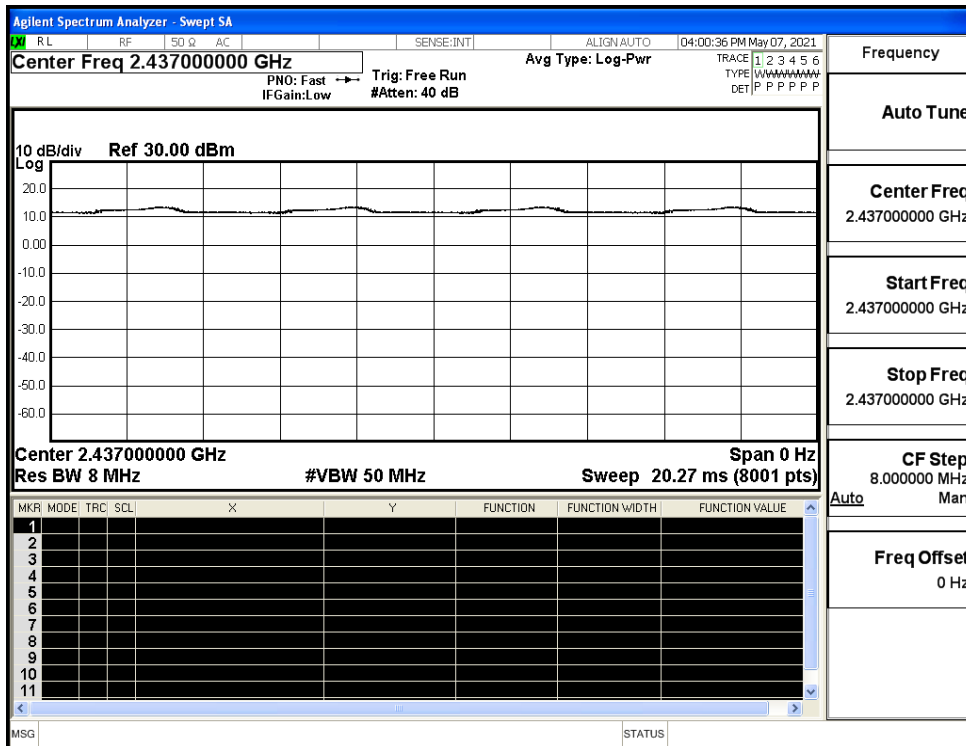
|                    |           |
|--------------------|-----------|
| Temperature:       | 22.5 ° C  |
| Relative Humidity: | 52.3%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Carl Fu   |
| Supervised by:     | Li Huan   |

#### A.1 Duty Cycle

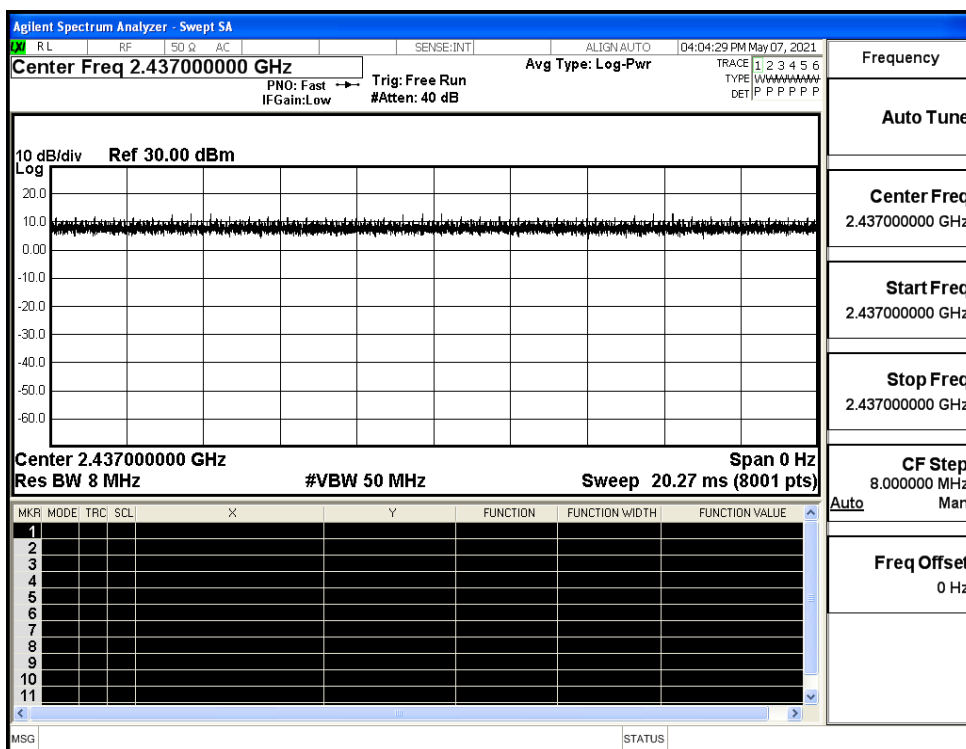
| Test Mode | Test Channel | Ant  | Duty Cycle[%] | Verdict |
|-----------|--------------|------|---------------|---------|
| 11B       | 2437         | Ant1 | 100           | PASS    |
| 11G       | 2437         | Ant1 | 100           | PASS    |
| 11N20SISO | 2437         | Ant1 | 100           | PASS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



## Duty Cycle\_11B\_2437\_Ant1

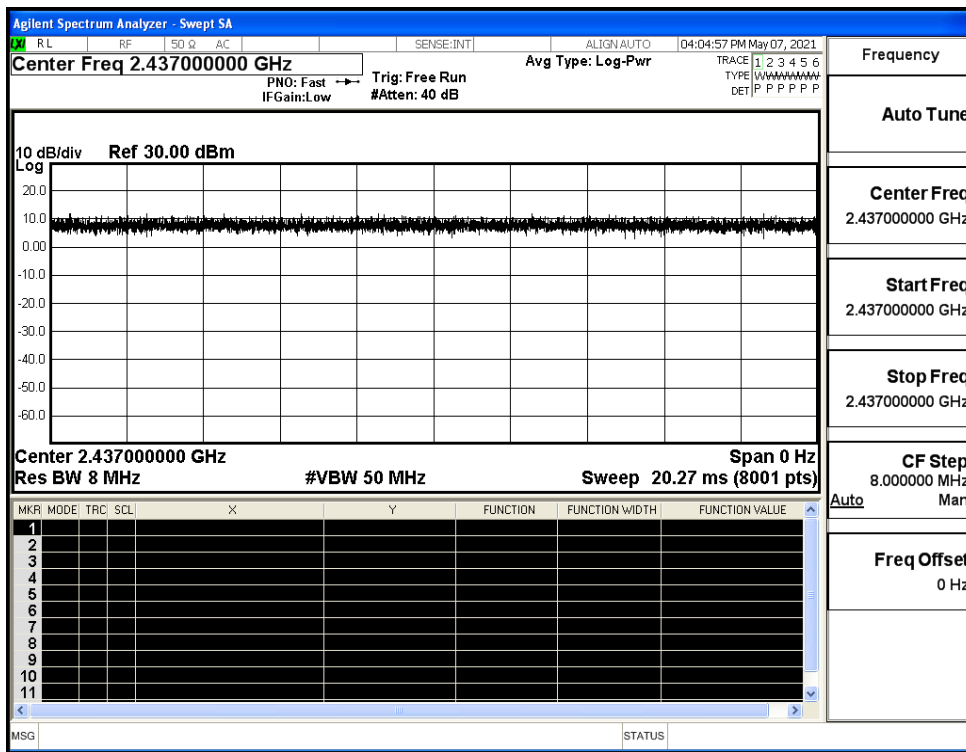


## Duty Cycle\_11G\_2437\_Ant1





## Duty Cycle\_11N20SISO\_2437\_Ant1





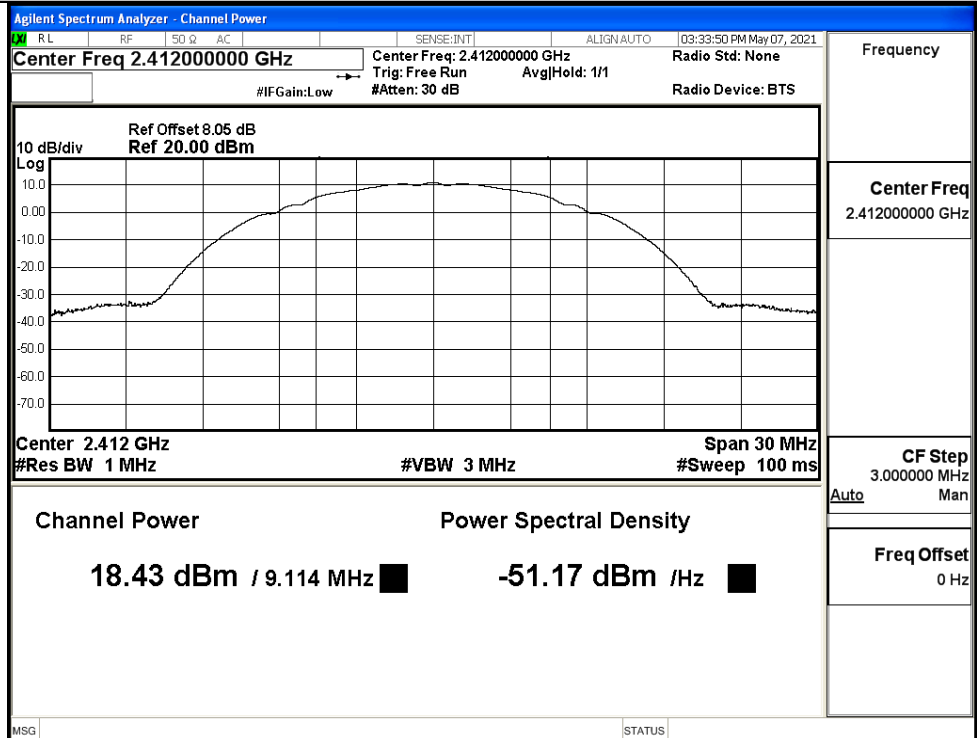
## A.2 Maximum Conducted Output Power

| Mode      | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B       | LCH     | 18.43            | 30          | PASS    |
|           | MCH     | 18.93            | 30          | PASS    |
|           | HCH     | 18.87            | 30          | PASS    |
| 11G       | LCH     | 19.98            | 30          | PASS    |
|           | MCH     | 20.58            | 30          | PASS    |
|           | HCH     | 20.55            | 30          | PASS    |
| 11N20SISO | LCH     | 20.11            | 30          | PASS    |
|           | MCH     | 20.64            | 30          | PASS    |
|           | HCH     | 20.63            | 30          | PASS    |

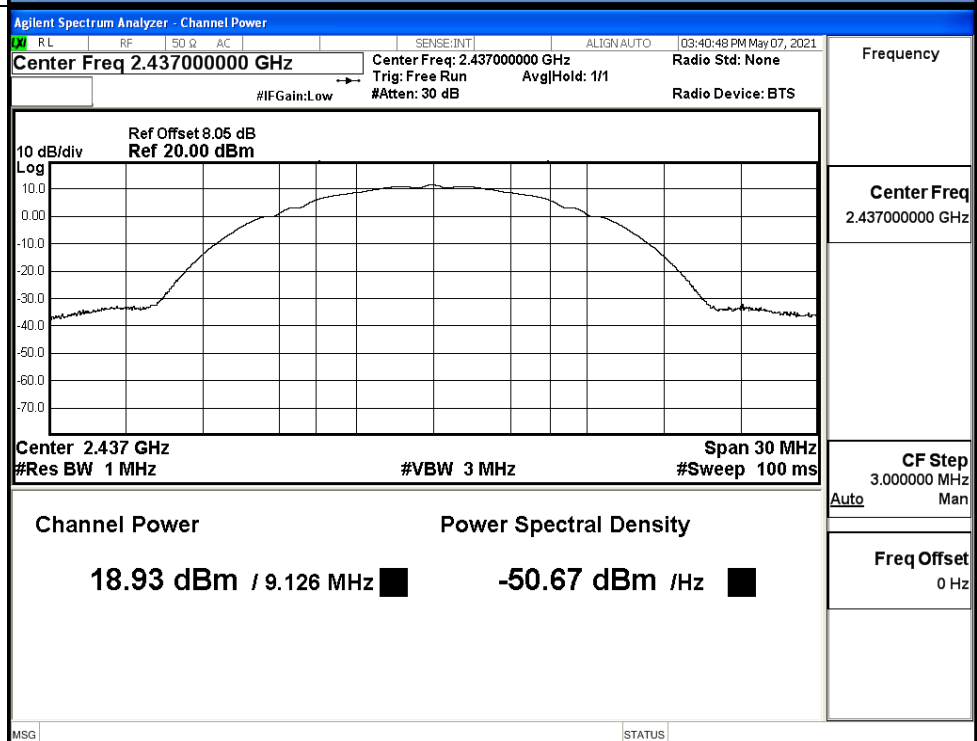


## Test Graphs

11B/LCH

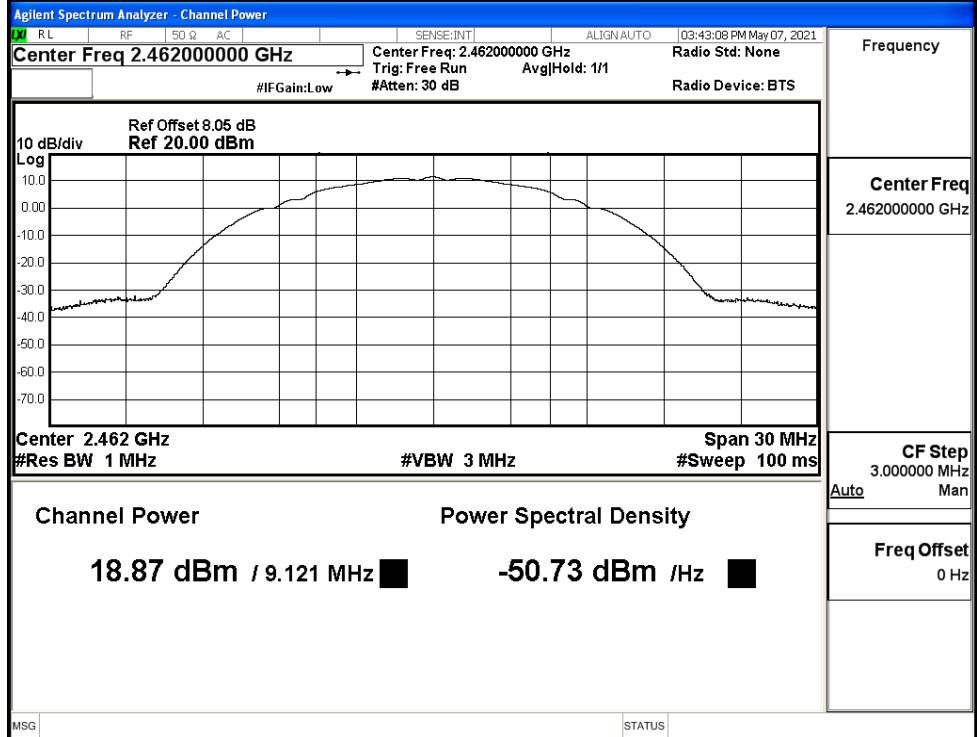


11B/MCH

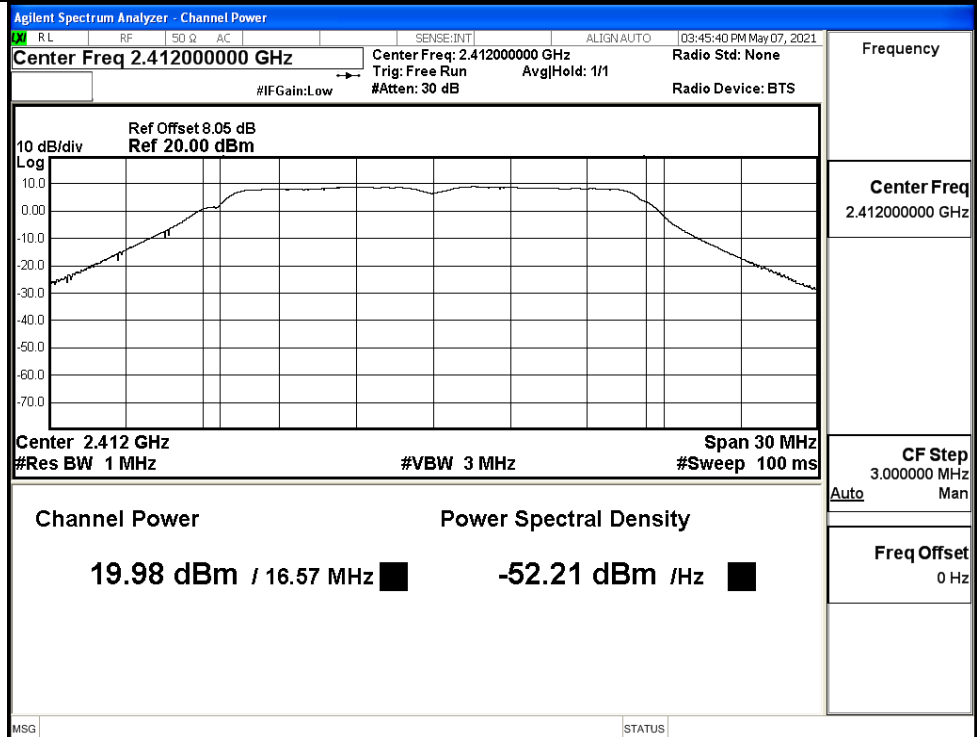




11B/HCH

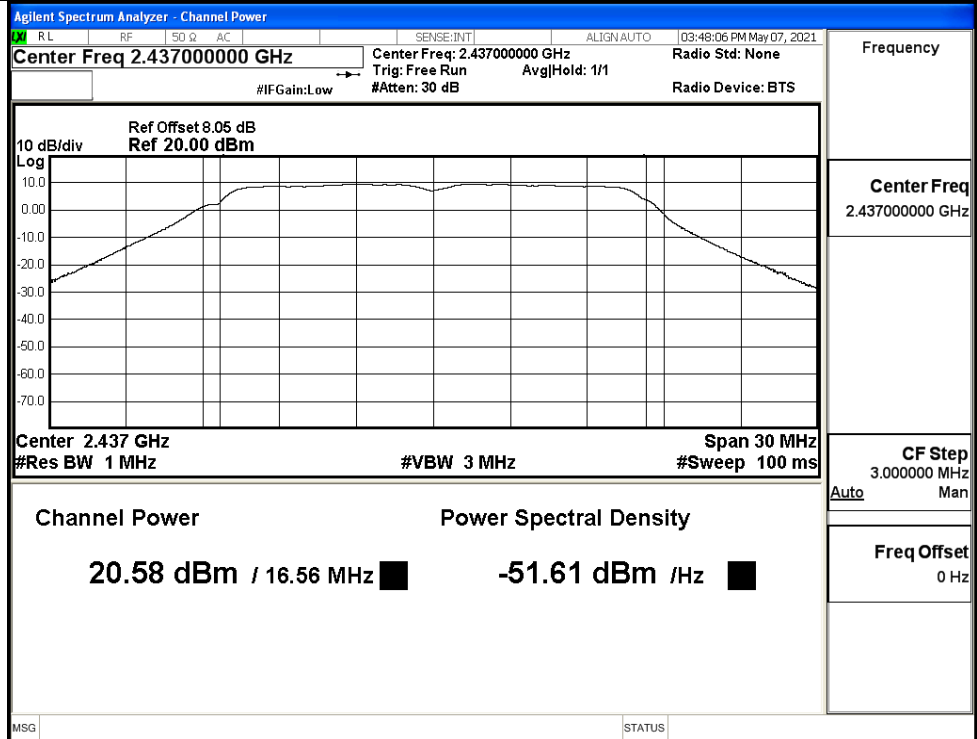


11G/LCH

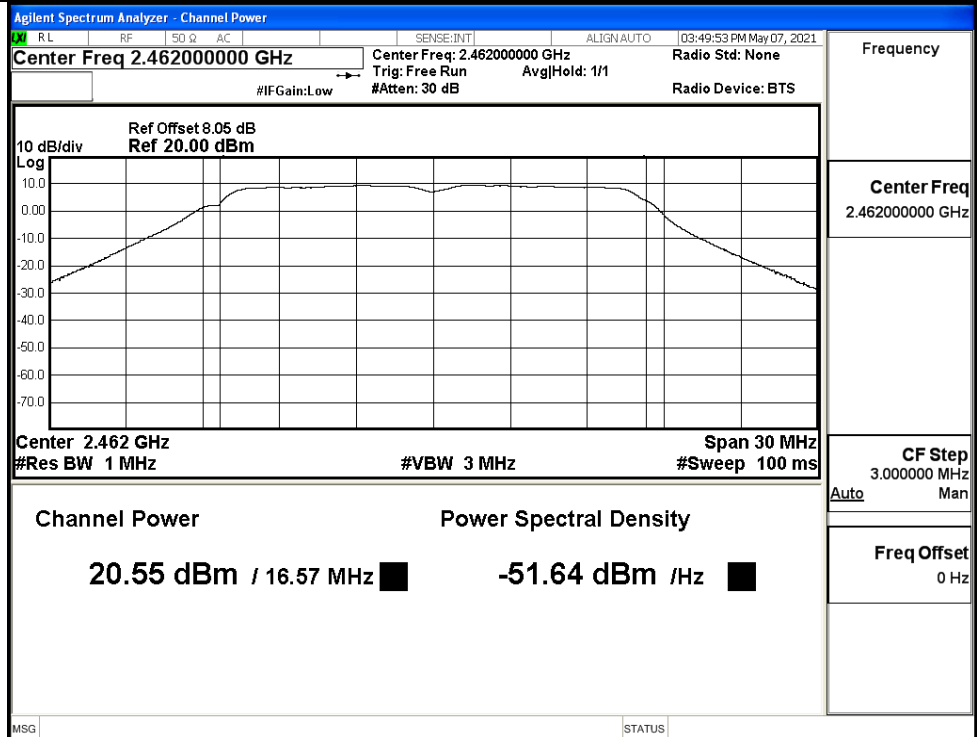




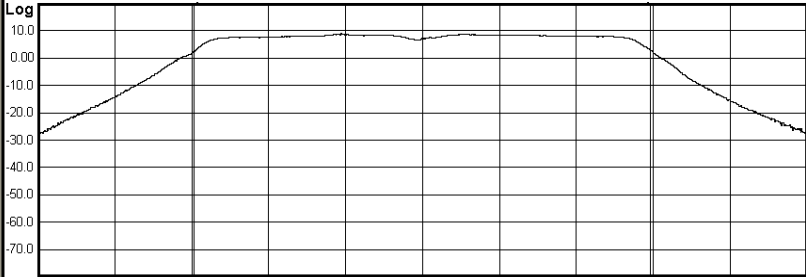
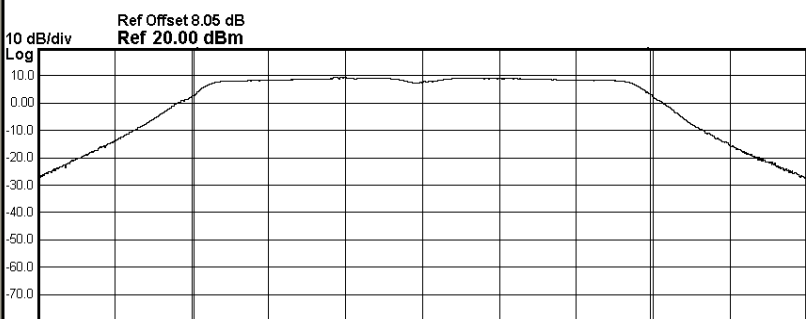
11G/MCH

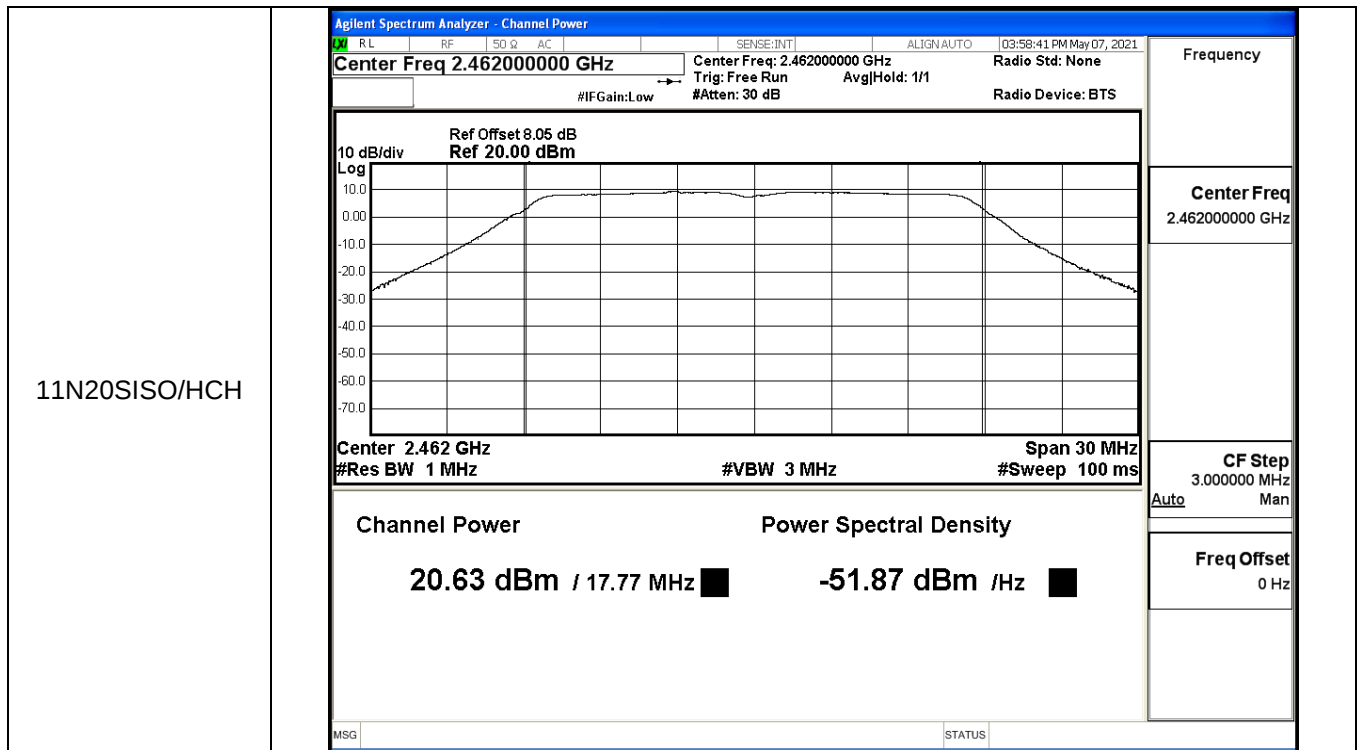


11G/HCH





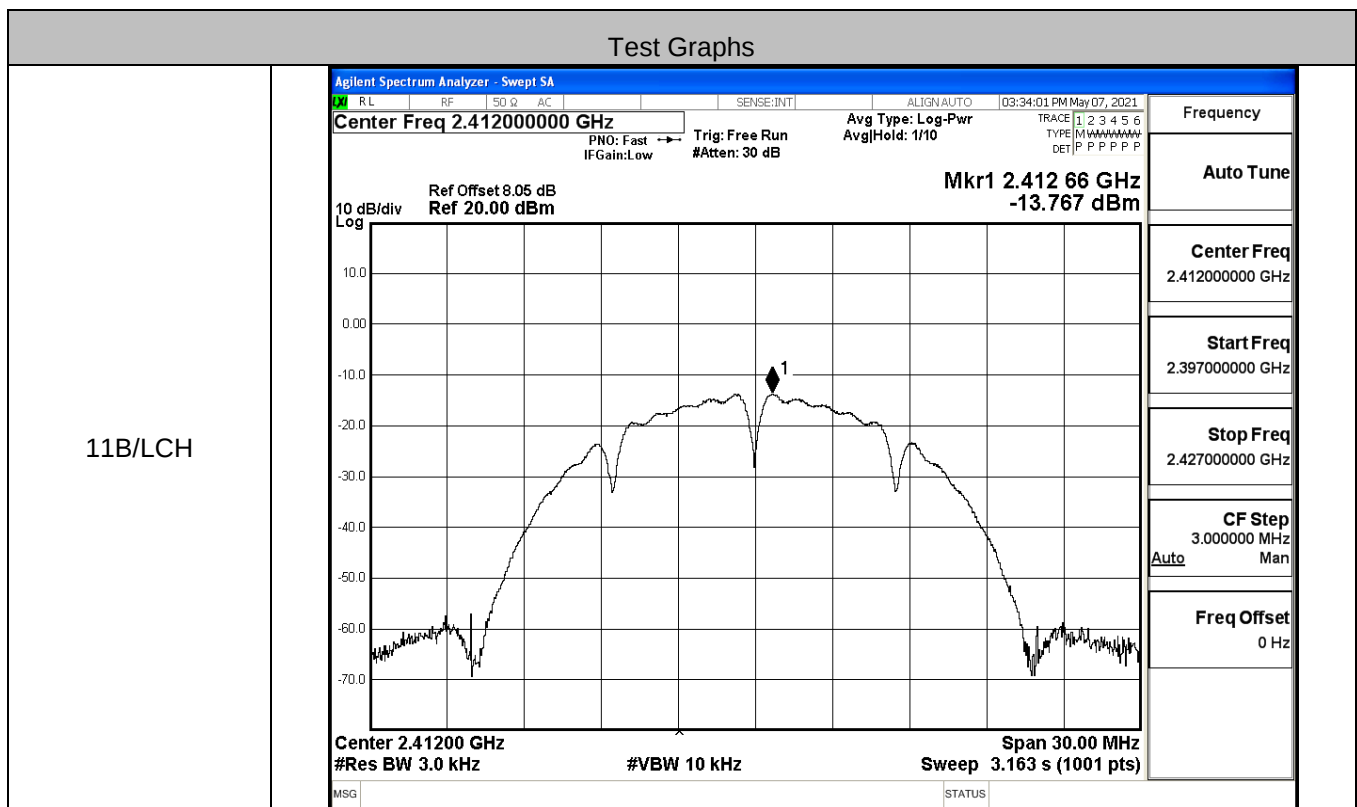
|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11N20SISO/LCH | <div><div>Agilent Spectrum Analyzer - Channel Power</div><div><div><div><div>RL</div><div>RF</div><div>50 <math>\Omega</math></div><div>AC</div></div><div><div>SENSE:INT</div><div>ALIGN: AUTO</div><div>03:52:27 PM May 07, 2021</div></div></div><div><div>Center Freq 2.412000000 GHz</div><div>Center Freq: 2.412000000 GHz<br/>Trig: Free Run<br/>#IFGain: Low<br/>#Atten: 30 dB</div><div>Radio Std: None<br/>Avg Hold: 1/1<br/>Radio Device: BTS</div></div><div><div>10 dB/div</div><div>Ref Offset 8.05 dB</div><div>Ref 20.00 dBm</div><div><div>Log</div></div><div><div>Center 2.412 GHz</div><div>#Res BW 1 MHz</div><div>#VBW 3 MHz</div><div>Span 30 MHz</div><div>#Sweep 100 ms</div></div><div><div>Channel Power</div><div>Power Spectral Density</div><div>20.11 dBm / 17.77 MHz</div><div>-52.39 dBm /Hz</div></div><div><div>MSG</div><div>STATUS</div></div></div></div><div><div>Frequency</div><div>Center Freq<br/>2.412000000 GHz</div><div>CF Step<br/>3.000000 MHz<br/>Auto Man</div><div>Freq Offset<br/>0 Hz</div></div></div>  |
| 11N20SISO/MCH | <div><div>Agilent Spectrum Analyzer - Channel Power</div><div><div><div><div>RL</div><div>RF</div><div>50 <math>\Omega</math></div><div>AC</div></div><div><div>SENSE:INT</div><div>ALIGN: AUTO</div><div>03:55:09 PM May 07, 2021</div></div></div><div><div>Center Freq 2.437000000 GHz</div><div>Center Freq: 2.437000000 GHz<br/>Trig: Free Run<br/>#IFGain: Low<br/>#Atten: 30 dB</div><div>Radio Std: None<br/>Avg Hold: 1/1<br/>Radio Device: BTS</div></div><div><div>10 dB/div</div><div>Ref Offset 8.05 dB</div><div>Ref 20.00 dBm</div><div><div>Log</div></div><div><div>Center 2.437 GHz</div><div>#Res BW 1 MHz</div><div>#VBW 3 MHz</div><div>Span 30 MHz</div><div>#Sweep 100 ms</div></div><div><div>Channel Power</div><div>Power Spectral Density</div><div>20.64 dBm / 17.73 MHz</div><div>-51.85 dBm /Hz</div></div><div><div>MSG</div><div>STATUS</div></div></div></div><div><div>Frequency</div><div>Center Freq<br/>2.437000000 GHz</div><div>CF Step<br/>3.000000 MHz<br/>Auto Man</div><div>Freq Offset<br/>0 Hz</div></div></div> |





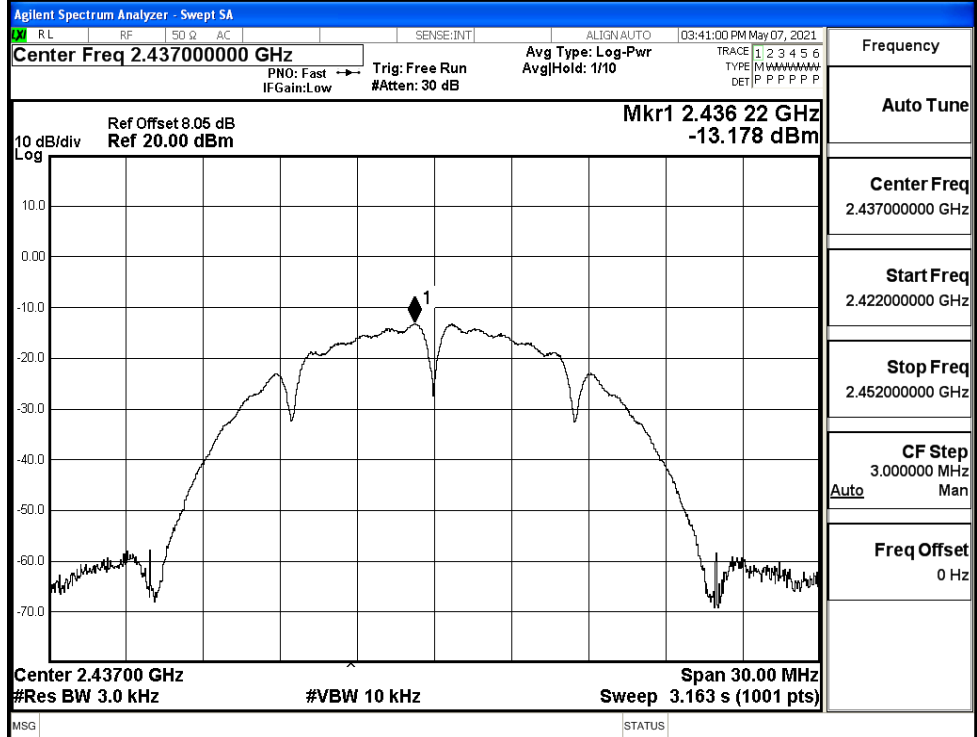
### A.3 Maximum Power Spectral Density

| Mode      | Channel | Meas.Level [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|-----------------------|------------------|---------|
| 11B       | LCH     | -13.767               | 8                | PASS    |
|           | MCH     | -13.178               | 8                | PASS    |
|           | HCH     | -13.351               | 8                | PASS    |
| 11G       | LCH     | -16.600               | 8                | PASS    |
|           | MCH     | -15.566               | 8                | PASS    |
|           | HCH     | -15.617               | 8                | PASS    |
| 11N20SISO | LCH     | -16.012               | 8                | PASS    |
|           | MCH     | -15.693               | 8                | PASS    |
|           | HCH     | -15.214               | 8                | PASS    |

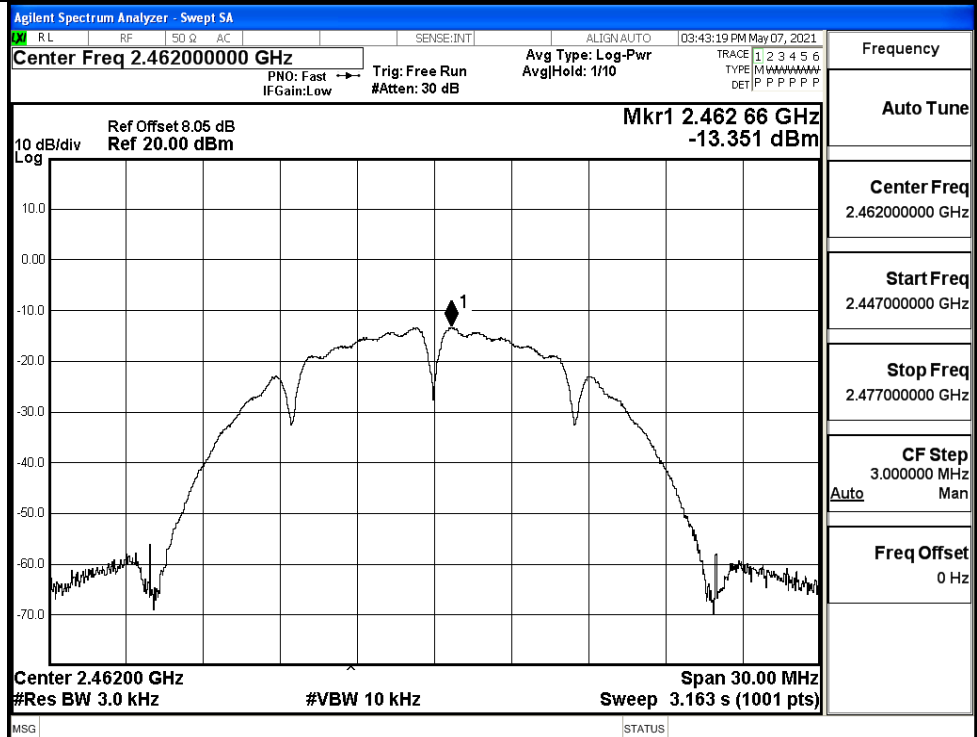




11B/MCH

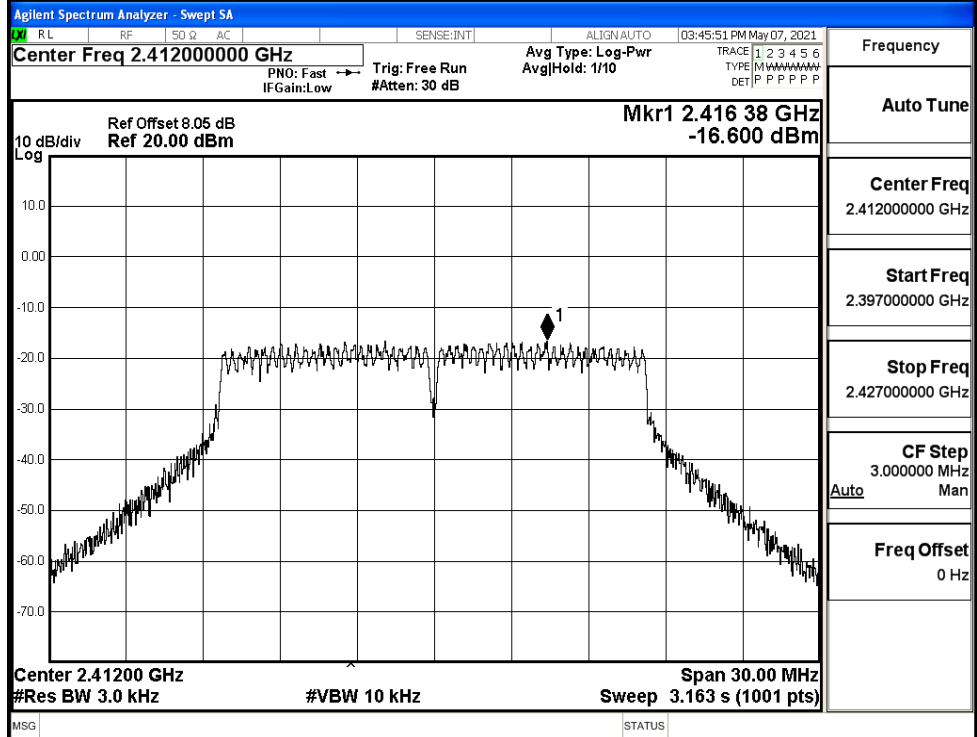


11B/HCH

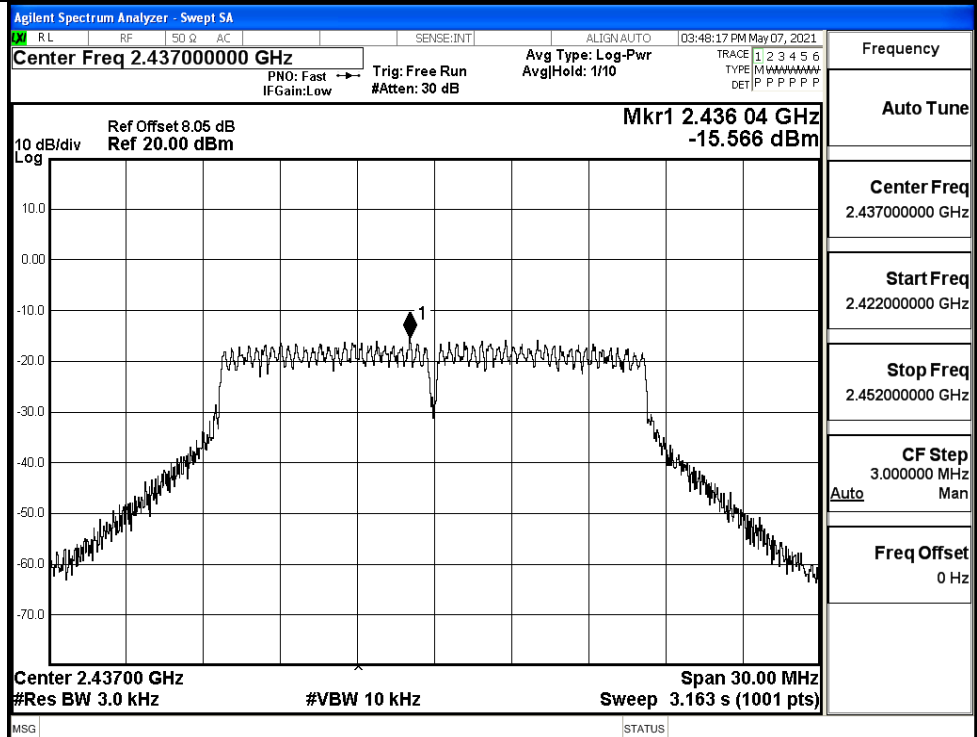




11G/LCH

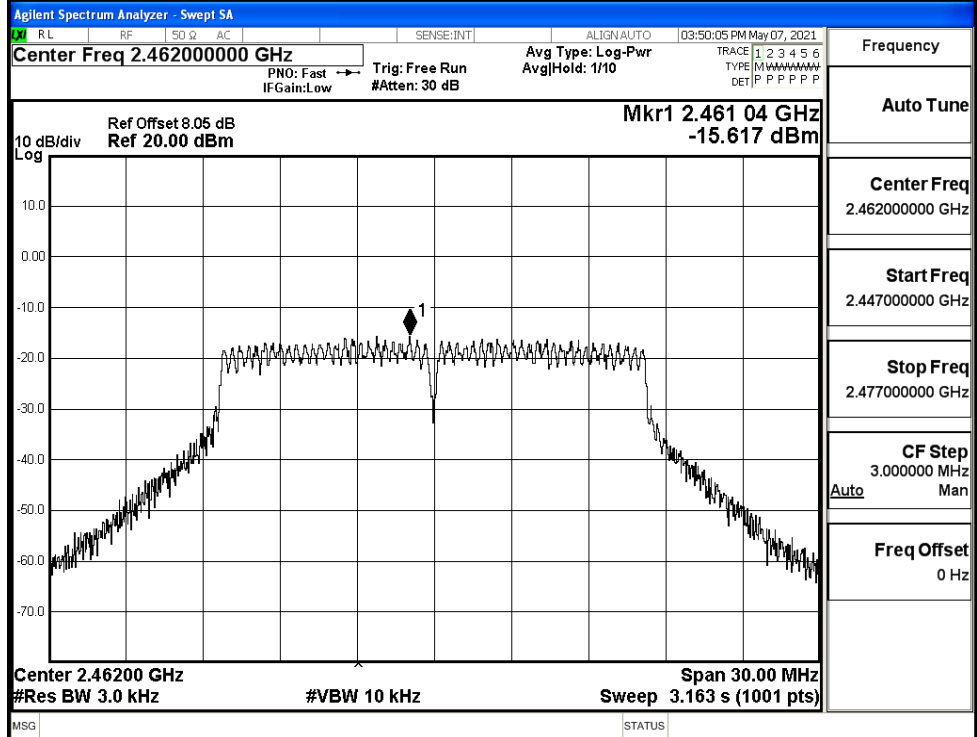


11G/MCH

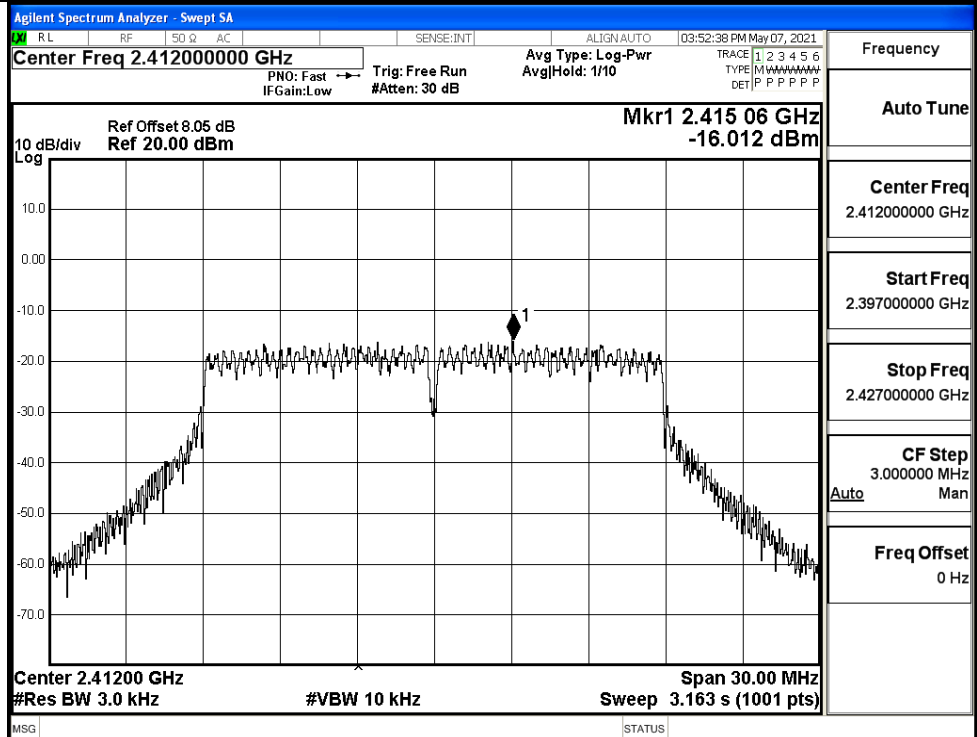




11G/HCH

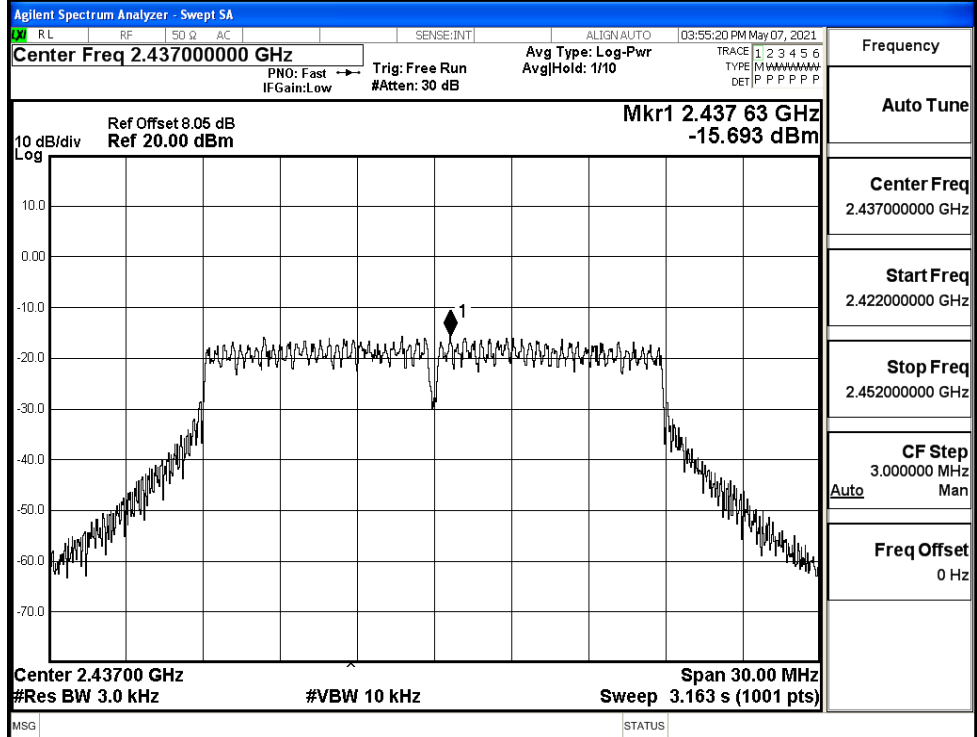


11N20SISO/LCH

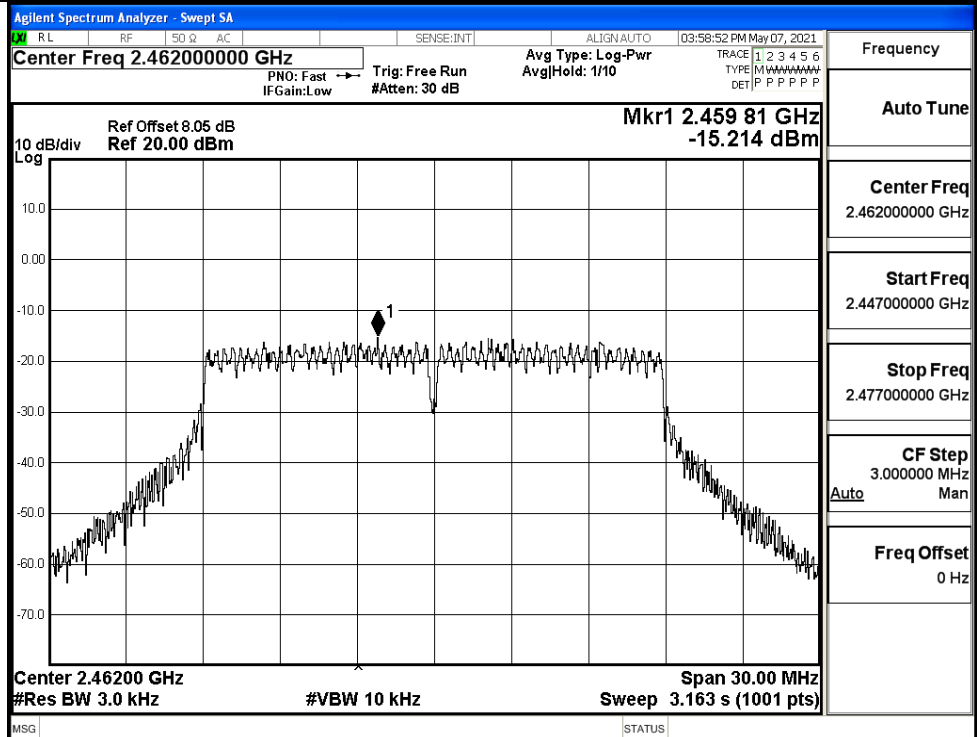




11N20SISO/MCH



11N20SISO/HCH



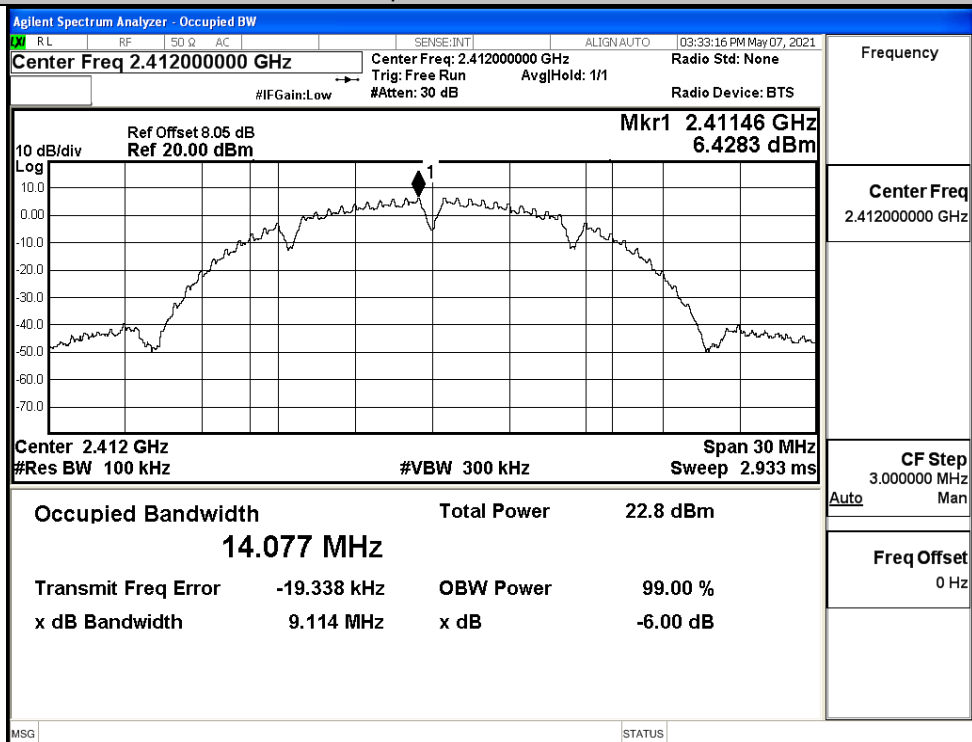


## A.4 6dB Bandwidth

| Mode      | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B       | LCH     | 9.114               | $\geq 0.5$  | PASS    |
|           | MCH     | 9.126               | $\geq 0.5$  | PASS    |
|           | HCH     | 9.121               | $\geq 0.5$  | PASS    |
| 11G       | LCH     | 16.57               | $\geq 0.5$  | PASS    |
|           | MCH     | 16.56               | $\geq 0.5$  | PASS    |
|           | HCH     | 16.57               | $\geq 0.5$  | PASS    |
| 11N20SISO | LCH     | 17.77               | $\geq 0.5$  | PASS    |
|           | MCH     | 17.73               | $\geq 0.5$  | PASS    |
|           | HCH     | 17.77               | $\geq 0.5$  | PASS    |

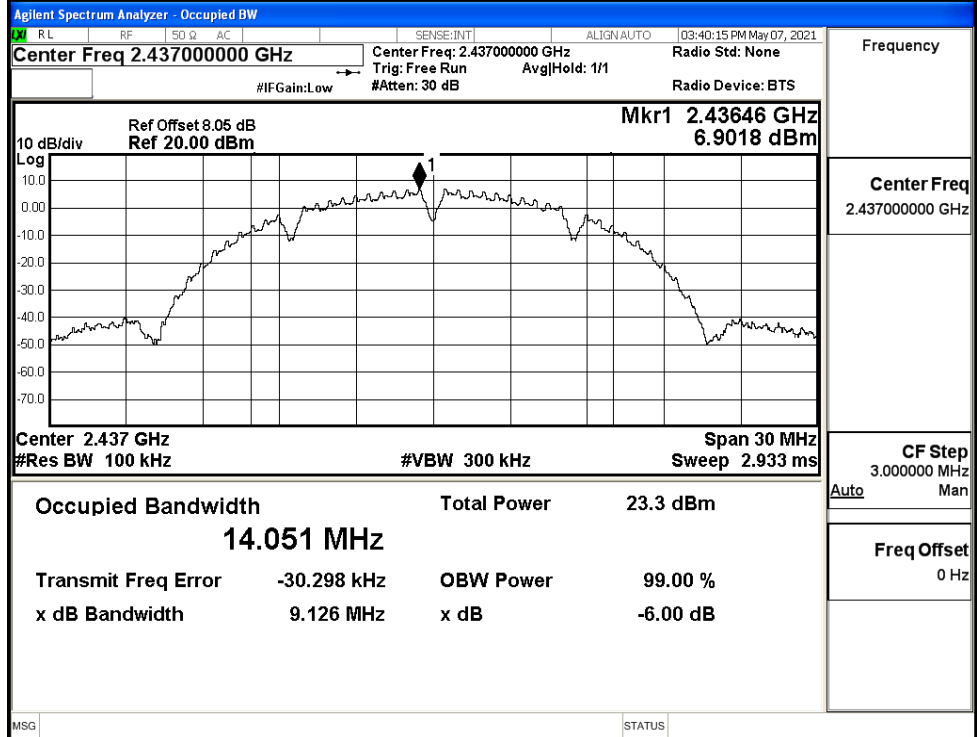
## Test Graphs

11B/LCH

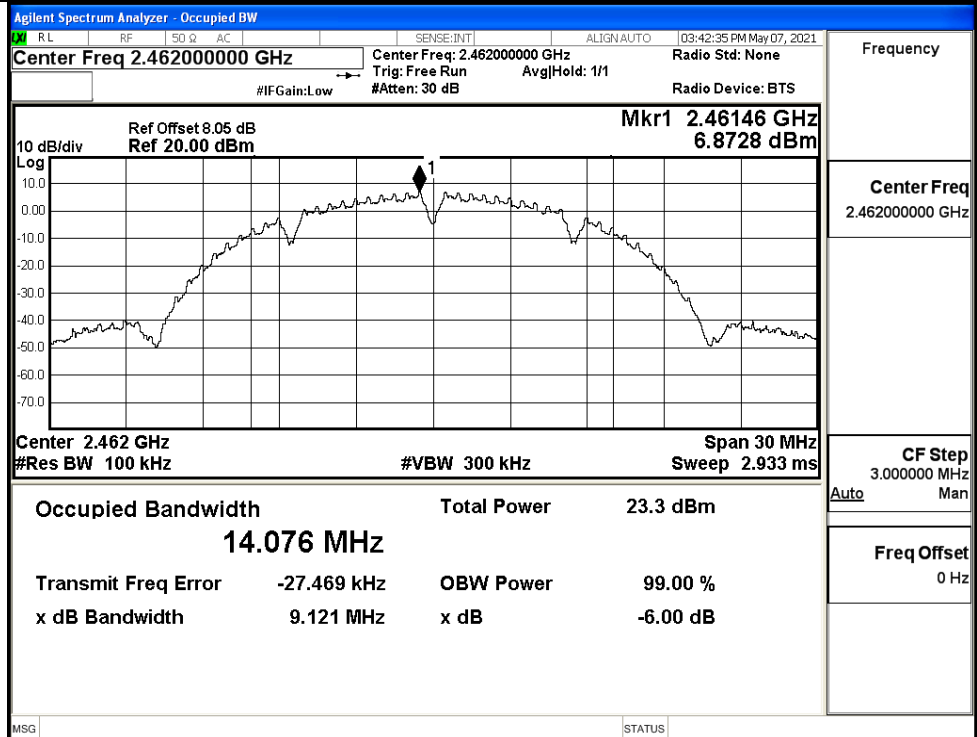




11B/MCH

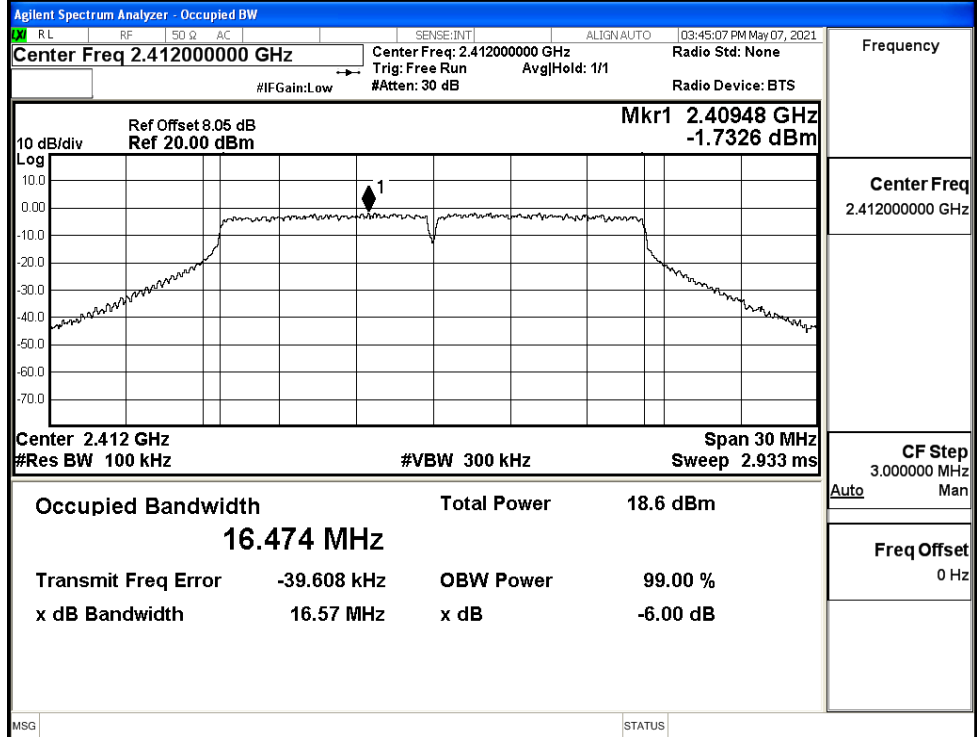


11B/HCH

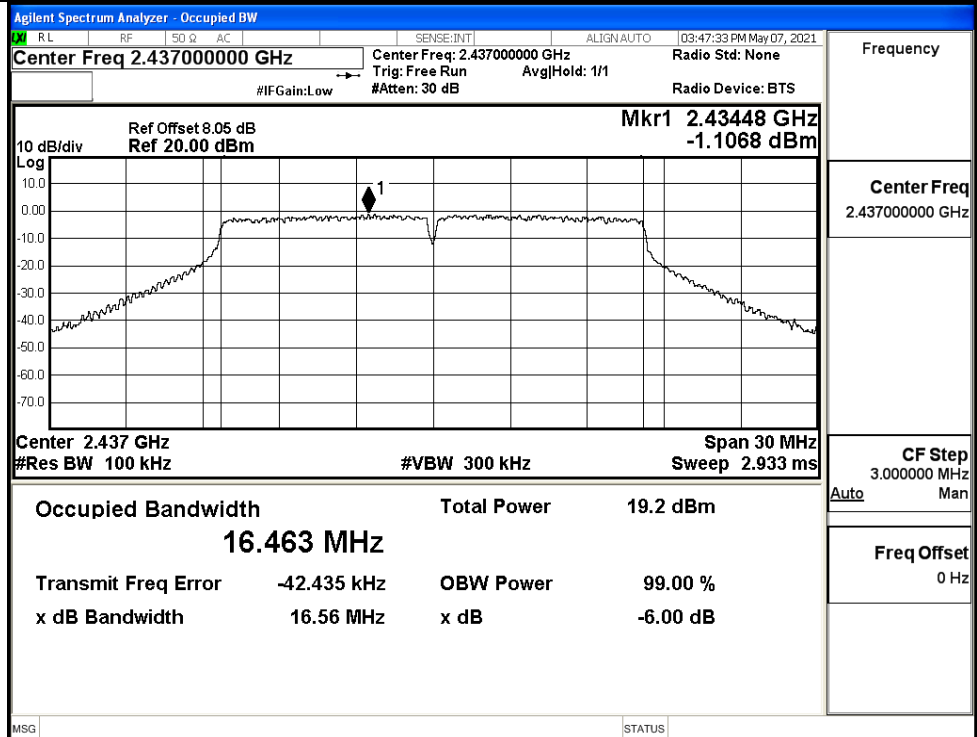




11G/LCH

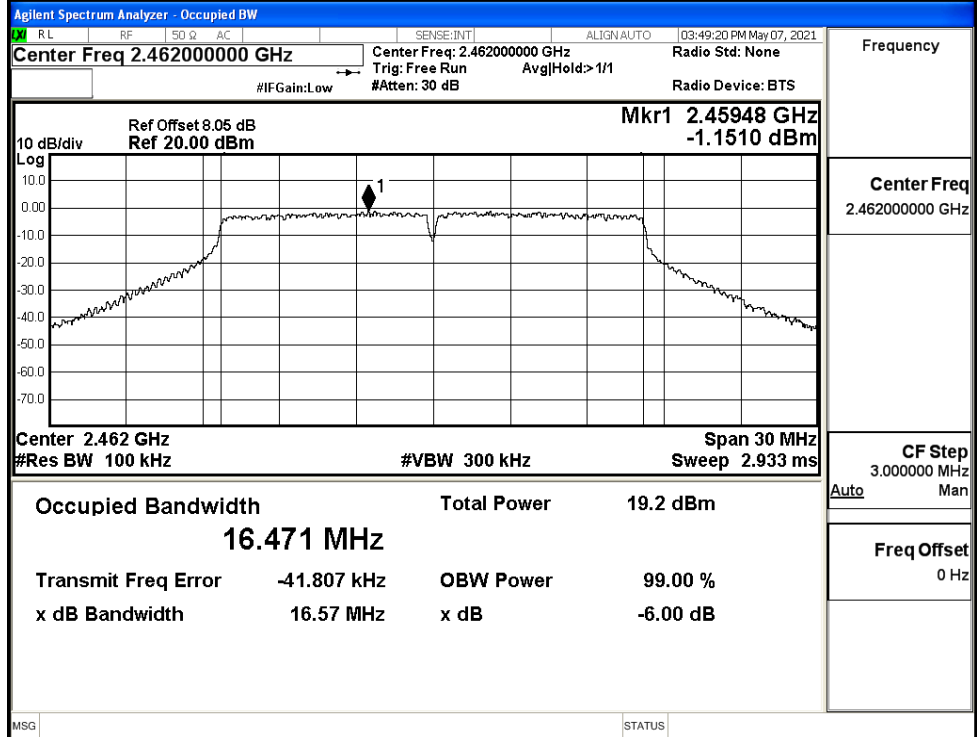


11G/MCH

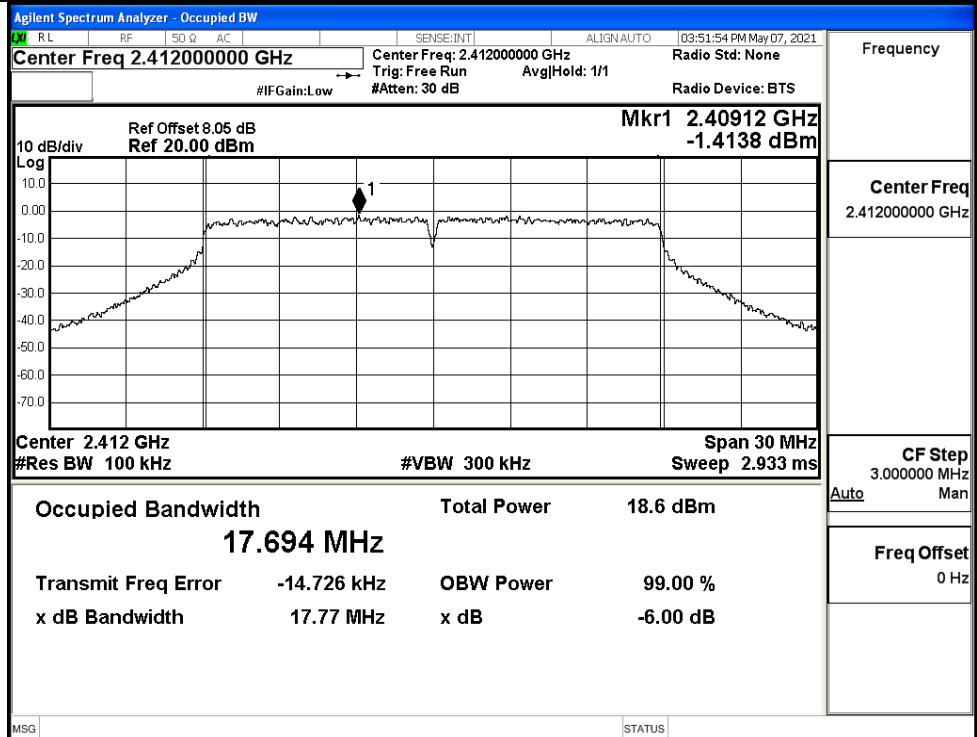




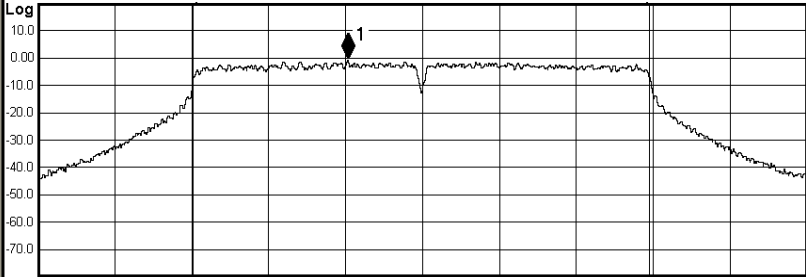
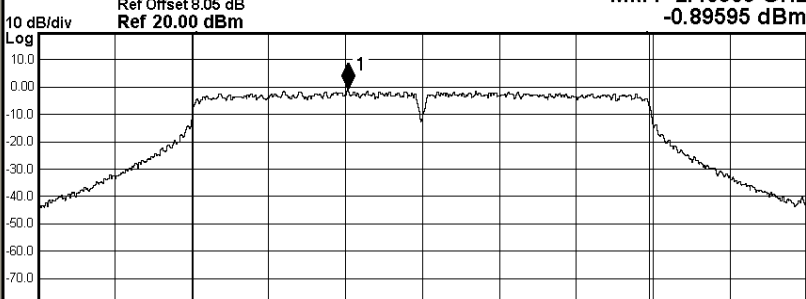
11G/HCH



11N20SISO/LCH



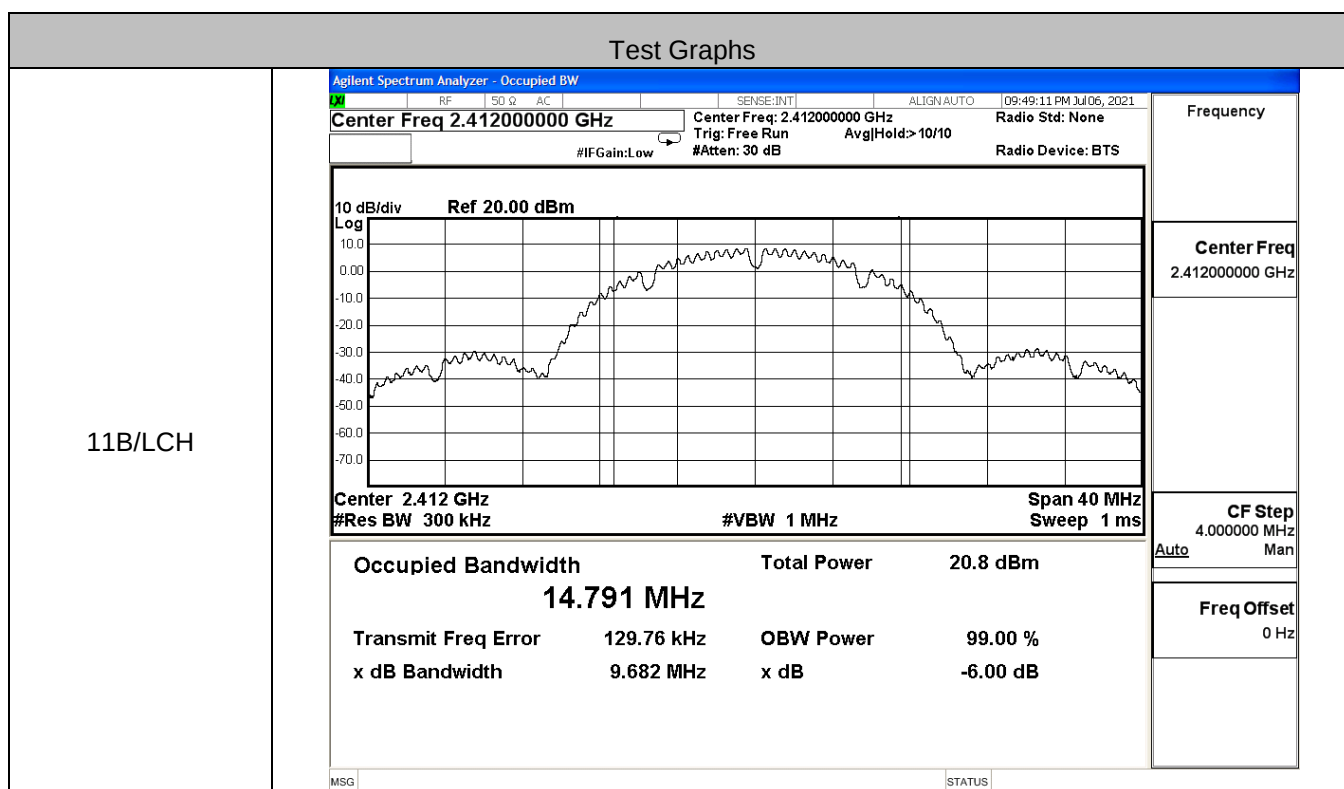


|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11N20SISO/MCH | <div><div>Agilent Spectrum Analyzer - Occupied BW</div><div><div><div><div>RL</div><div>RF</div><div>50 <math>\Omega</math></div><div>AC</div></div><div><div>SENSE:INT</div><div>ALIGN: AUTO</div><div>03:54:35 PM May 07, 2021</div></div></div><div><div>Center Freq 2.437000000 GHz</div><div>Center Freq: 2.437000000 GHz</div><div>Trig: Free Run</div><div>Avg/Hold: 1/1</div><div>Radio Std: None</div><div>#IF Gain: Low</div><div>#Atten: 30 dB</div><div>Radio Device: BTS</div></div><div><div>10 dB/div</div><div>Ref Offset 8.05 dB</div><div>Ref 20.00 dBm</div><div>Mkr1 2.43409 GHz</div><div>-0.72111 dBm</div><div>Log</div><div></div><div><div>Center 2.437 GHz</div><div>#Res BW 100 kHz</div><div>#VBW 300 kHz</div><div>Span 30 MHz</div><div>Sweep 2.933 ms</div></div><div><div>Occupied Bandwidth</div><div>Total Power</div><div>19.1 dBm</div><div>17.684 MHz</div><div>Transmit Freq Error</div><div>-19.729 kHz</div><div>OBW Power</div><div>99.00 %</div><div>x dB Bandwidth</div><div>17.73 MHz</div><div>x dB</div><div>-6.00 dB</div></div><div><div>MSG</div><div>STATUS</div></div></div><div><div>Frequency</div><div>Center Freq</div><div>2.437000000 GHz</div><div>CF Step</div><div>3.000000 MHz</div><div>Auto</div><div>Man</div><div>Freq Offset</div><div>0 Hz</div></div></div></div>   |
| 11N20SISO/HCH | <div><div>Agilent Spectrum Analyzer - Occupied BW</div><div><div><div><div>RL</div><div>RF</div><div>50 <math>\Omega</math></div><div>AC</div></div><div><div>SENSE:INT</div><div>ALIGN: AUTO</div><div>03:58:08 PM May 07, 2021</div></div></div><div><div>Center Freq 2.462000000 GHz</div><div>Center Freq: 2.462000000 GHz</div><div>Trig: Free Run</div><div>Avg/Hold: 1/1</div><div>Radio Std: None</div><div>#IF Gain: Low</div><div>#Atten: 30 dB</div><div>Radio Device: BTS</div></div><div><div>10 dB/div</div><div>Ref Offset 8.05 dB</div><div>Ref 20.00 dBm</div><div>Mkr1 2.45909 GHz</div><div>-0.89595 dBm</div><div>Log</div><div></div><div><div>Center 2.462 GHz</div><div>#Res BW 100 kHz</div><div>#VBW 300 kHz</div><div>Span 30 MHz</div><div>Sweep 2.933 ms</div></div><div><div>Occupied Bandwidth</div><div>Total Power</div><div>19.1 dBm</div><div>17.691 MHz</div><div>Transmit Freq Error</div><div>-21.451 kHz</div><div>OBW Power</div><div>99.00 %</div><div>x dB Bandwidth</div><div>17.77 MHz</div><div>x dB</div><div>-6.00 dB</div></div><div><div>MSG</div><div>STATUS</div></div></div><div><div>Frequency</div><div>Center Freq</div><div>2.462000000 GHz</div><div>CF Step</div><div>3.000000 MHz</div><div>Auto</div><div>Man</div><div>Freq Offset</div><div>0 Hz</div></div></div></div> |



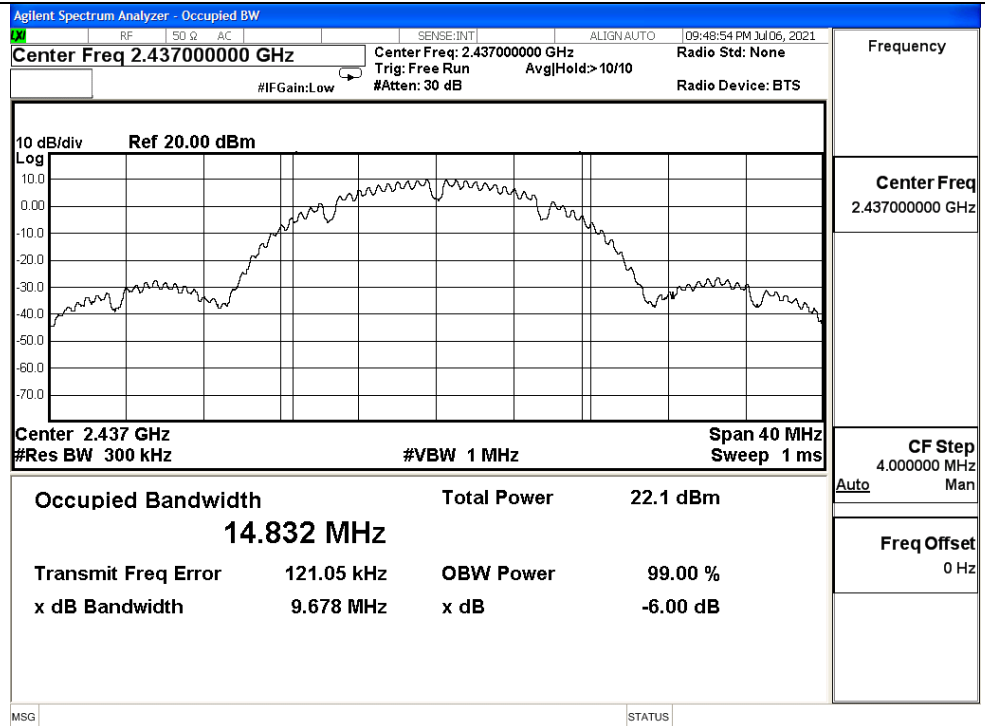
## A.5 Occupied Bandwidth

| Mode      | Channel | Occupied Bandwidth [MHz] |
|-----------|---------|--------------------------|
| 11B       | LCH     | 14.791                   |
|           | MCH     | 14.832                   |
|           | HCH     | 14.862                   |
| 11G       | LCH     | 16.024                   |
|           | MCH     | 16.007                   |
|           | HCH     | 16.028                   |
| 11N20SISO | LCH     | 16.869                   |
|           | MCH     | 16.871                   |
|           | HCH     | 16.868                   |

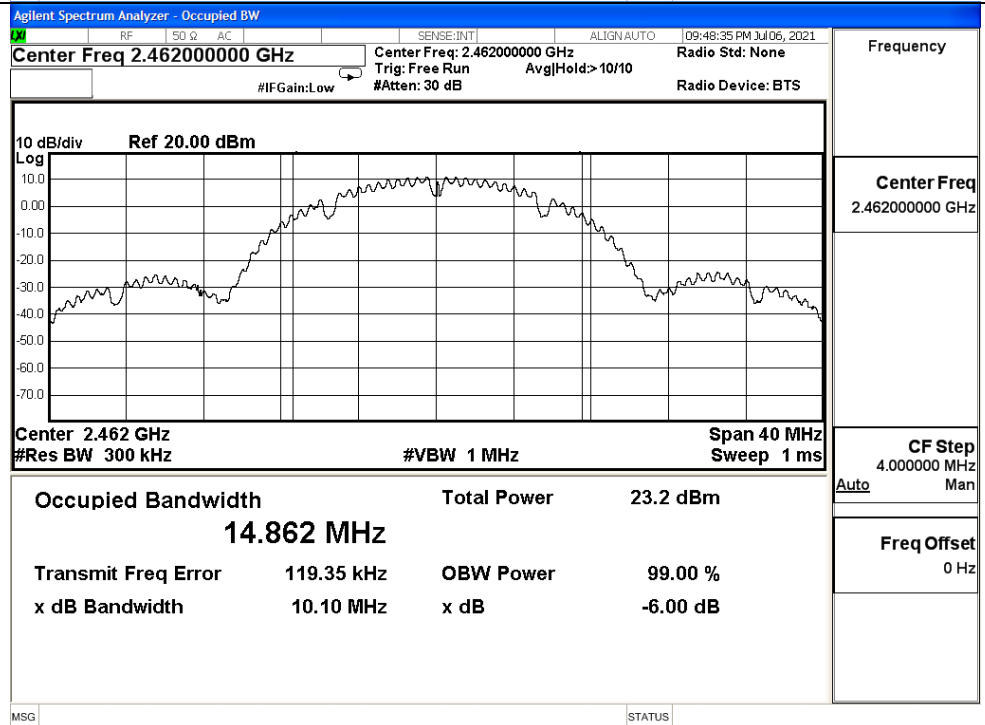




11B/MCH

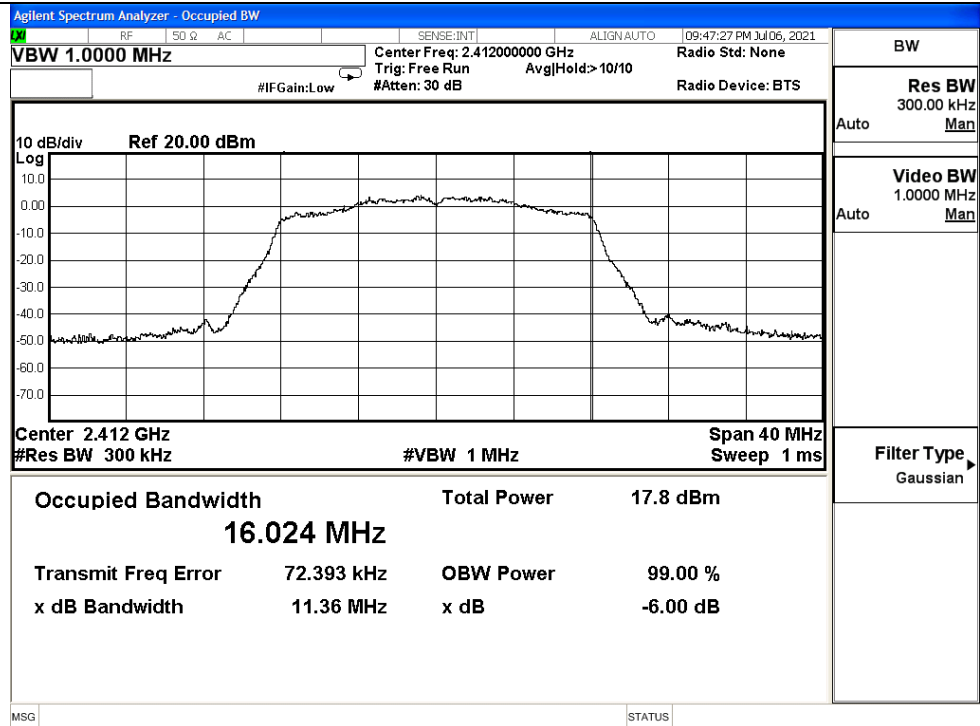


11B/HCH

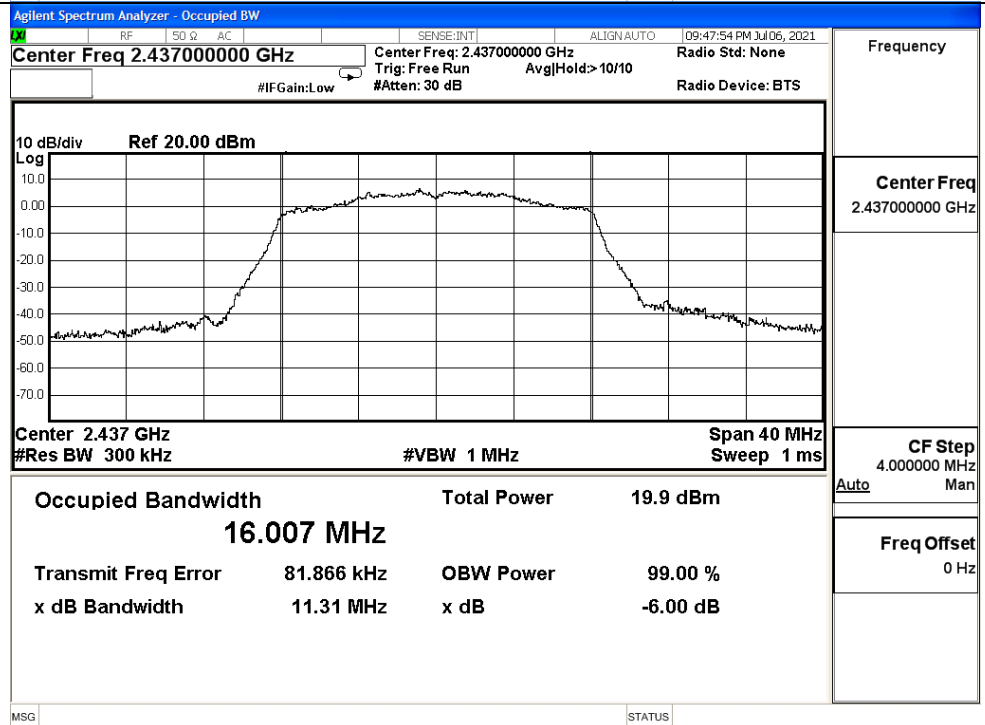




11G/LCH

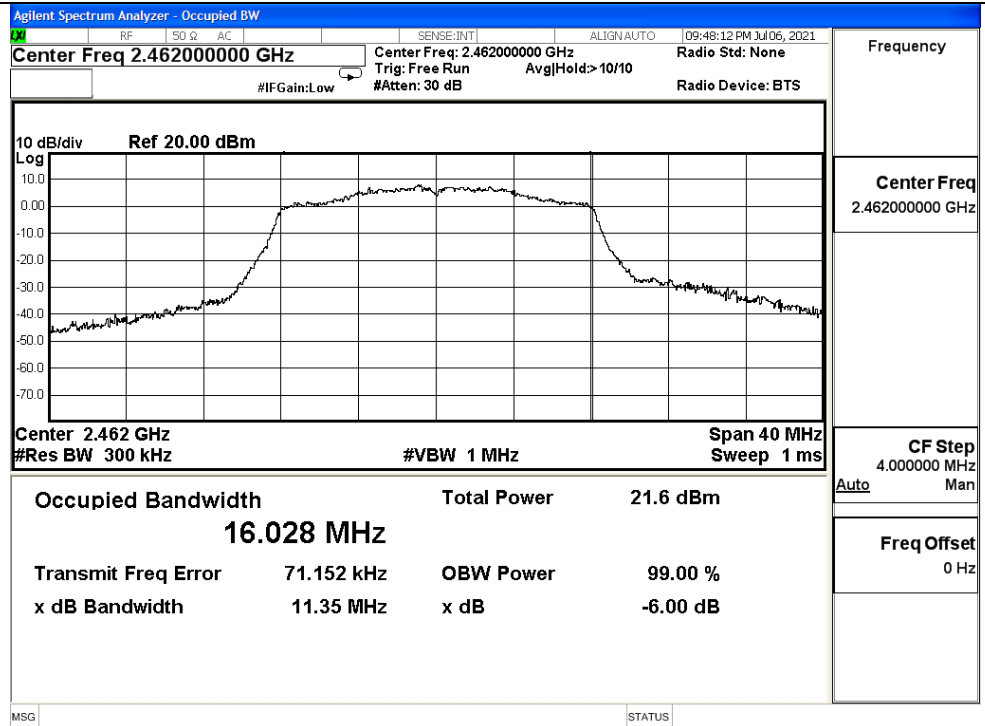


11G/MCH

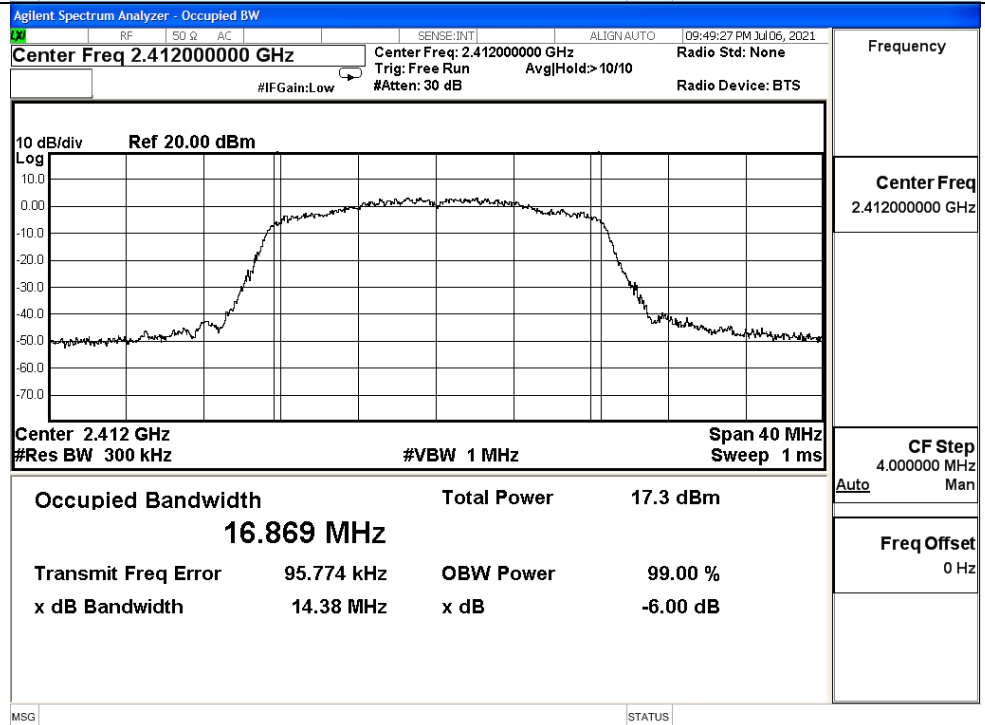


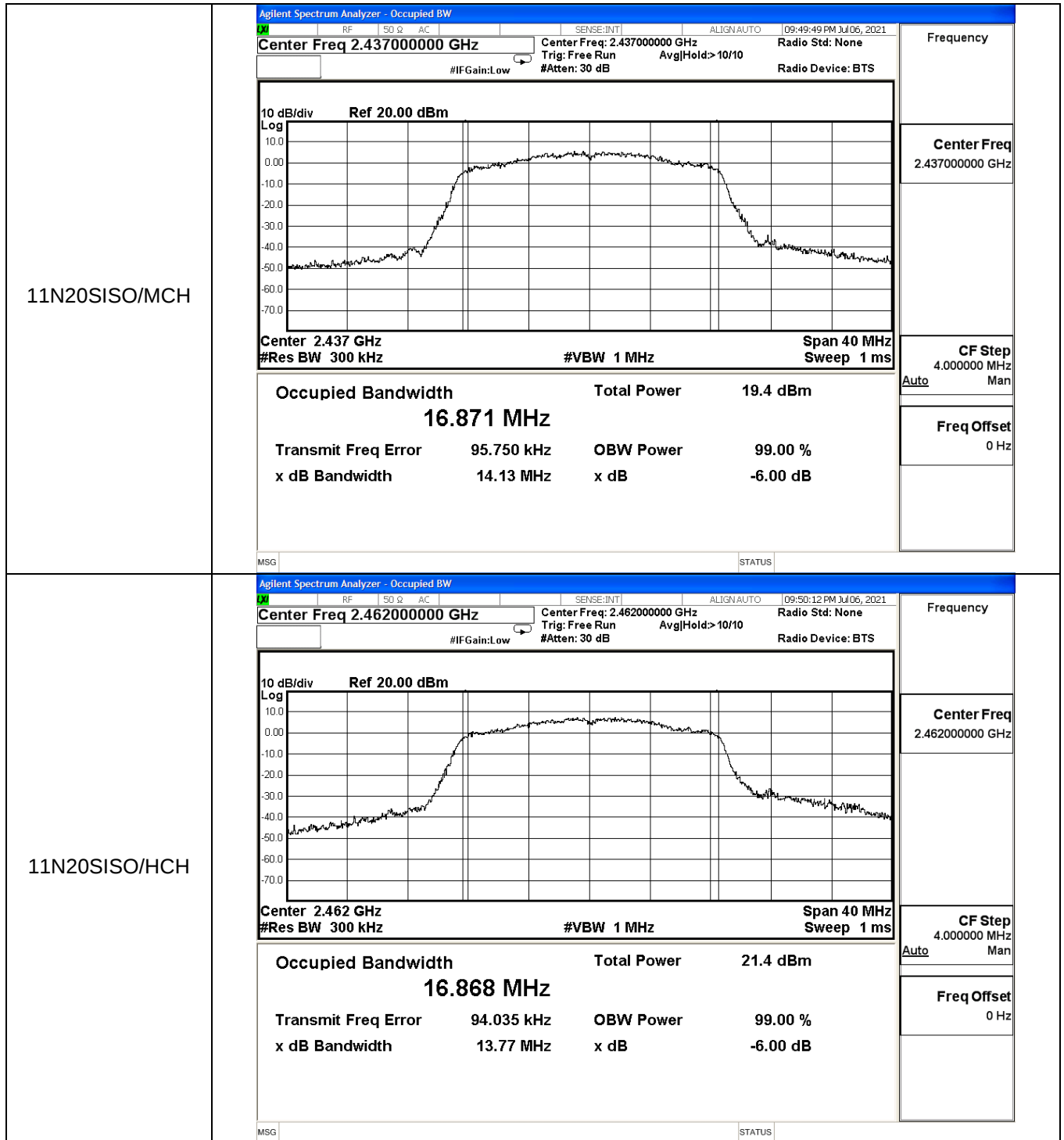


11G/HCH



11N20SISO/LCH







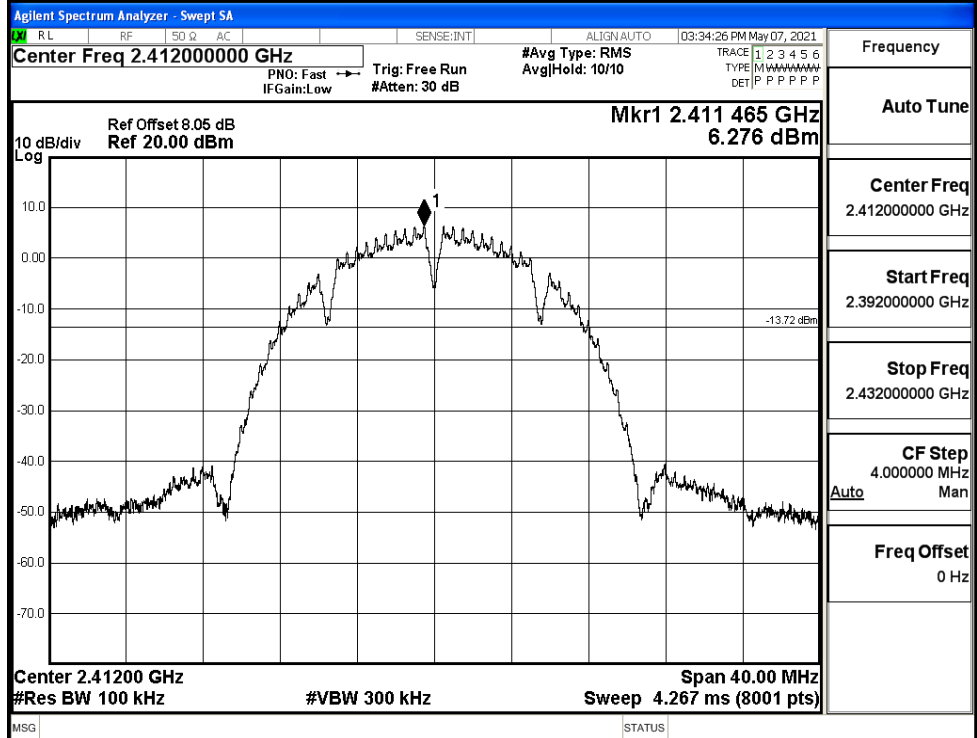
## A.6 RF Conducted Spurious Emissions

| Mode          | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B           | LCH     | 6.276      | -37.421          | -13.724     | PASS    |
|               | MCH     | 6.829      | -37.877          | -13.171     | PASS    |
|               | HCH     | 6.746      | -37.815          | -13.254     | PASS    |
| 11G           | LCH     | -1.912     | -37.332          | -21.912     | PASS    |
|               | MCH     | -1.35      | -38.504          | -21.350     | PASS    |
|               | HCH     | -1.444     | -38.207          | -21.444     | PASS    |
| 11N20<br>SISO | LCH     | -1.504     | -38.116          | -21.504     | PASS    |
|               | MCH     | -0.896     | -37.019          | -20.896     | PASS    |
|               | HCH     | -0.91      | -36.397          | -20.910     | PASS    |

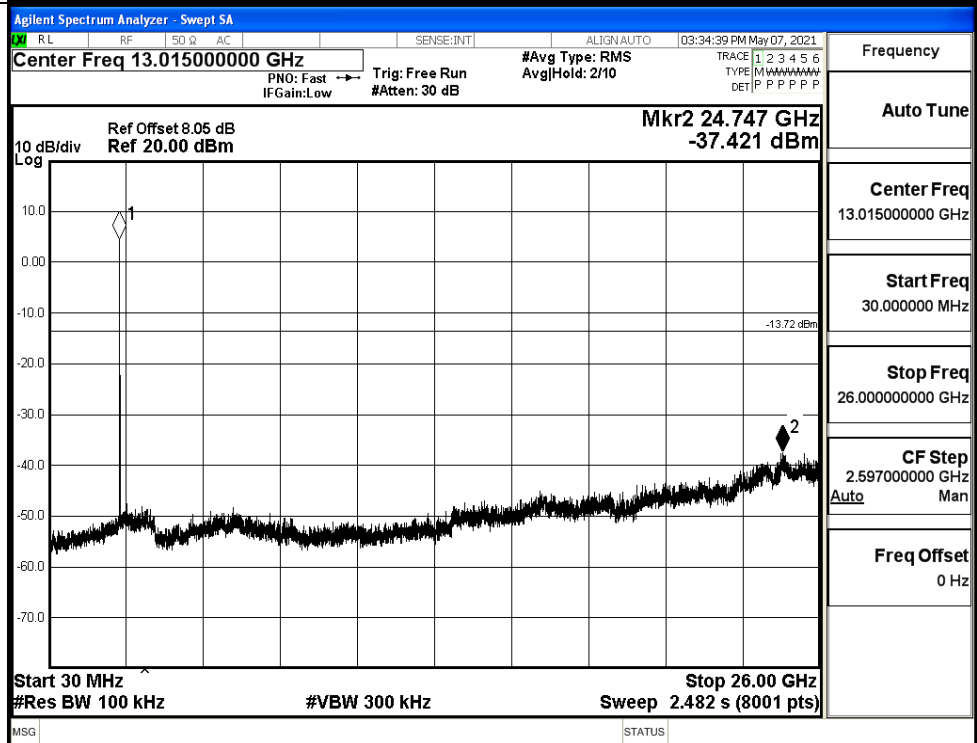


## 11B LCH Graphs

Pref/11B/LCH



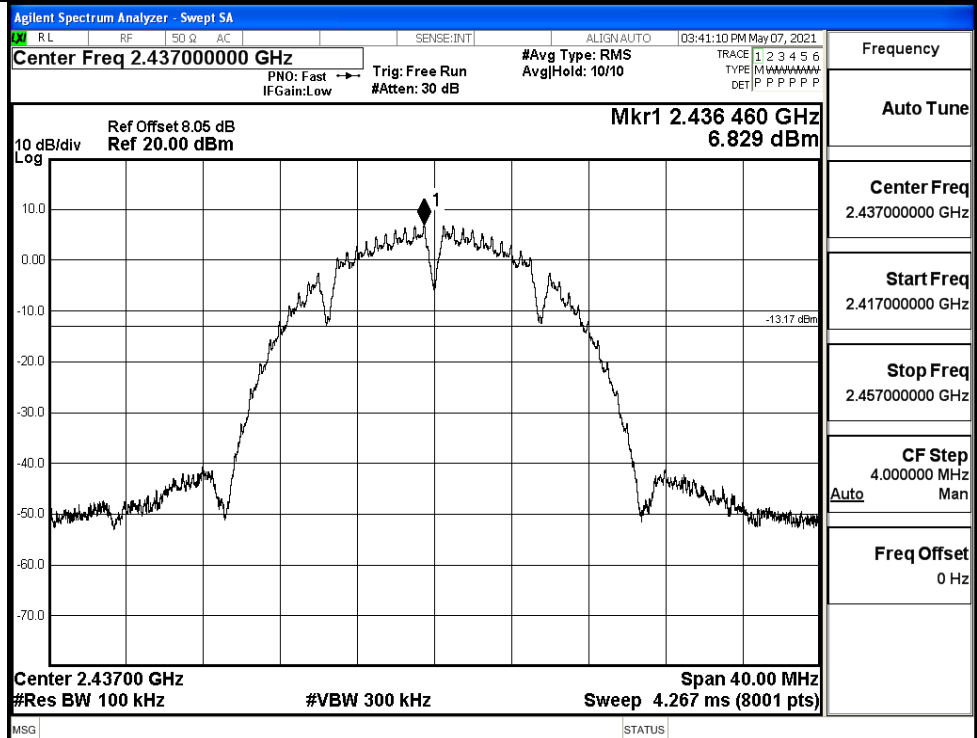
Puw/11B/LCH



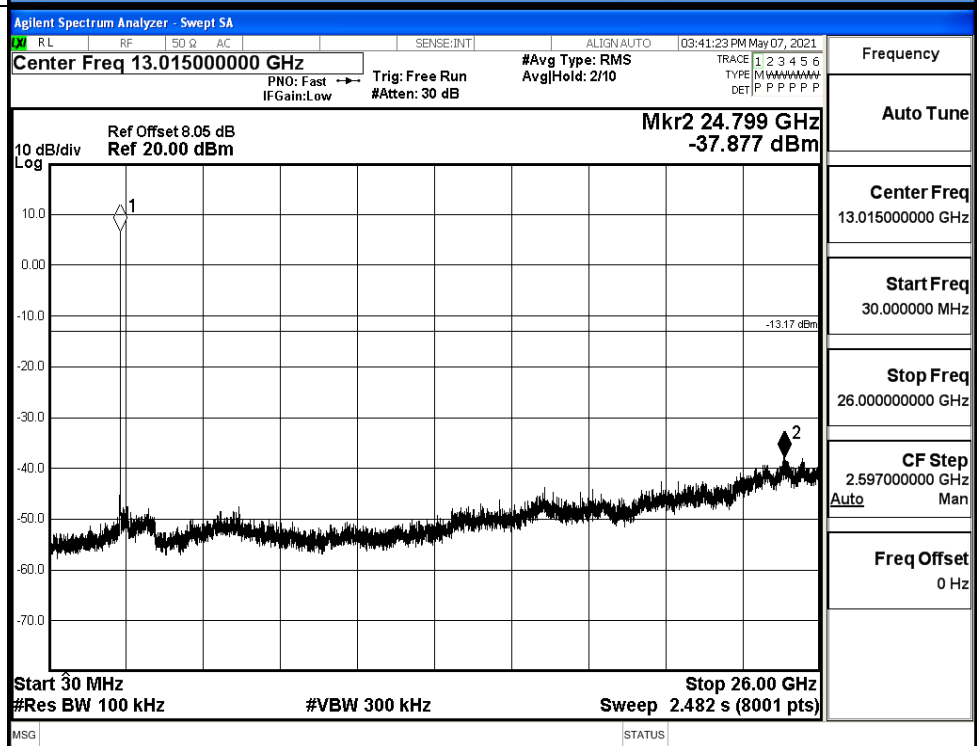


## 11B MCH Graphs

Pref/11B/MCH



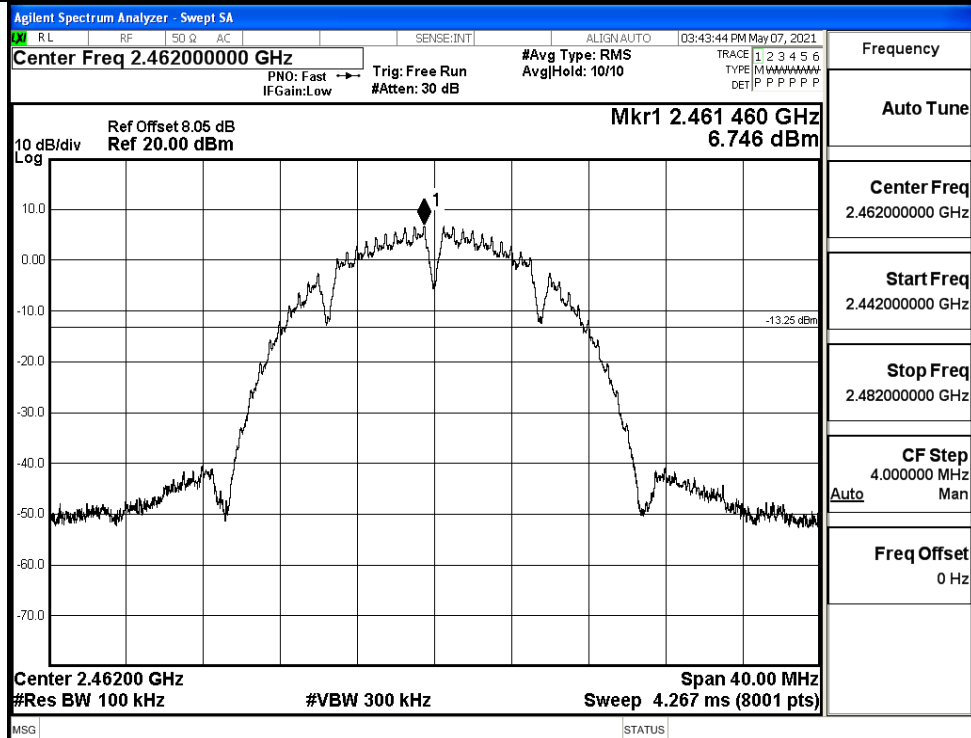
Puw/11B/MCH



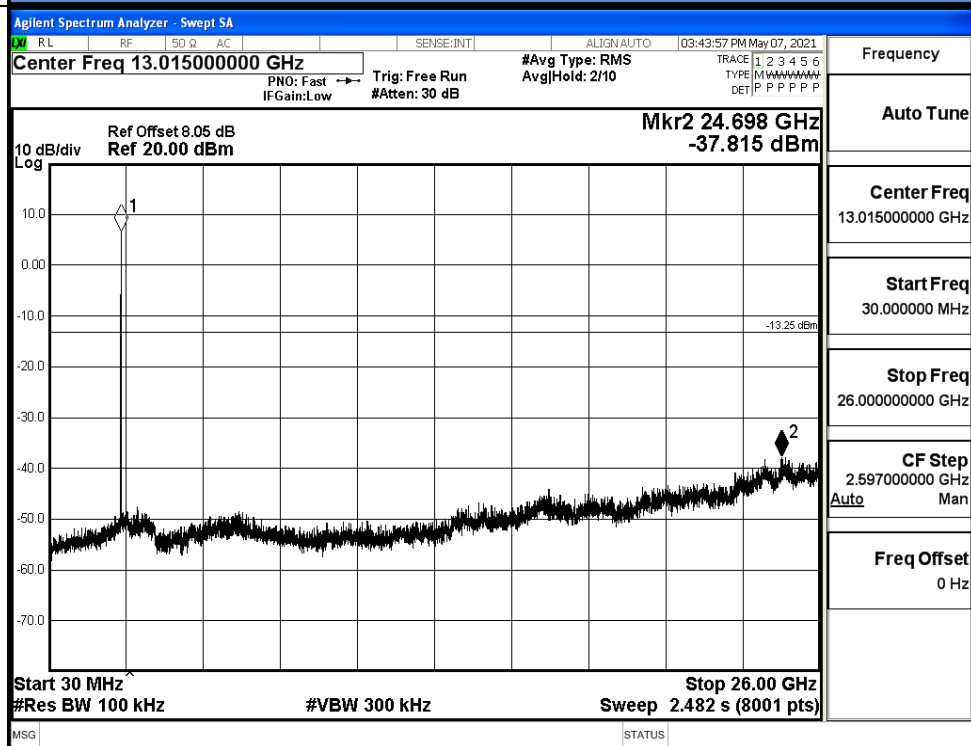


## 11B HCH Graphs

Pref/11B/HCH



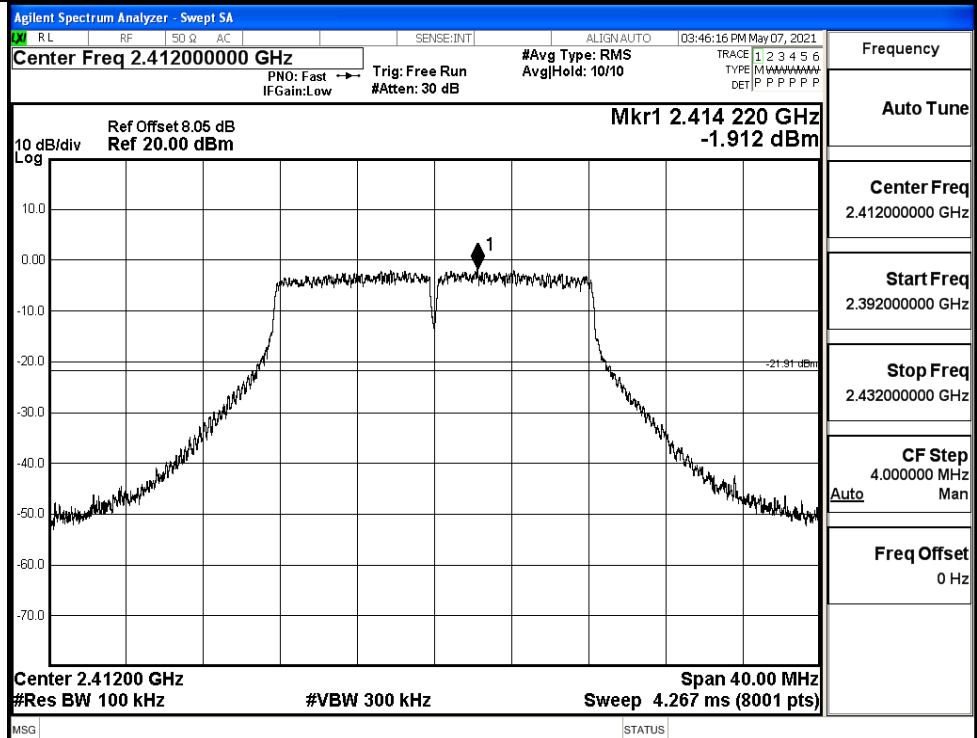
Puw/11B/HCH



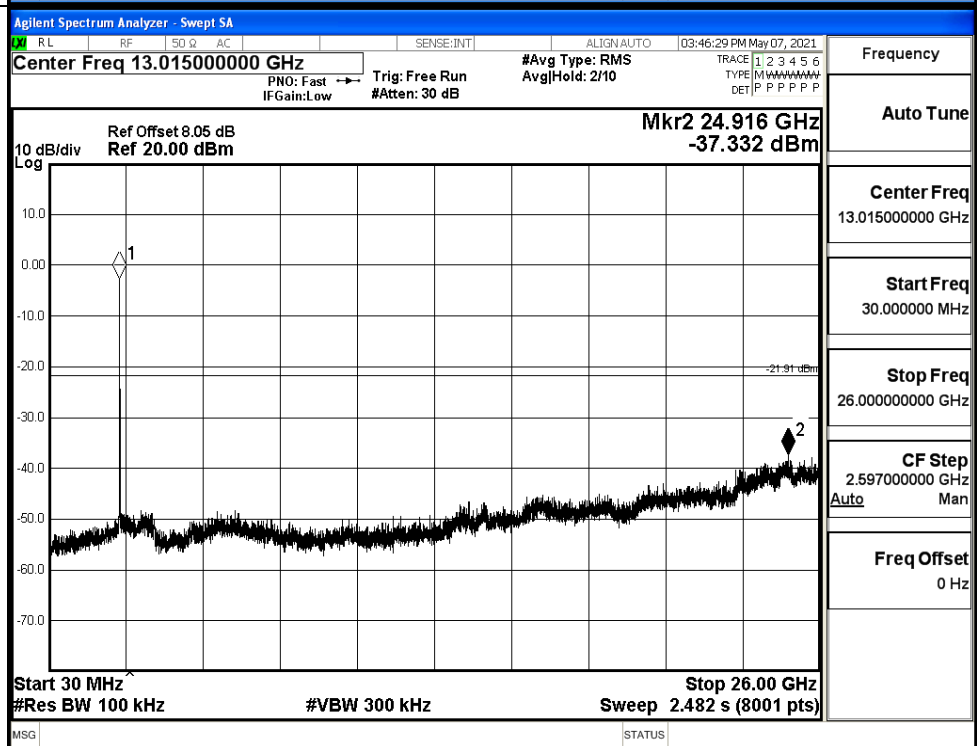


## 11G\_LCH\_Graphs

Pref/11G/LCH



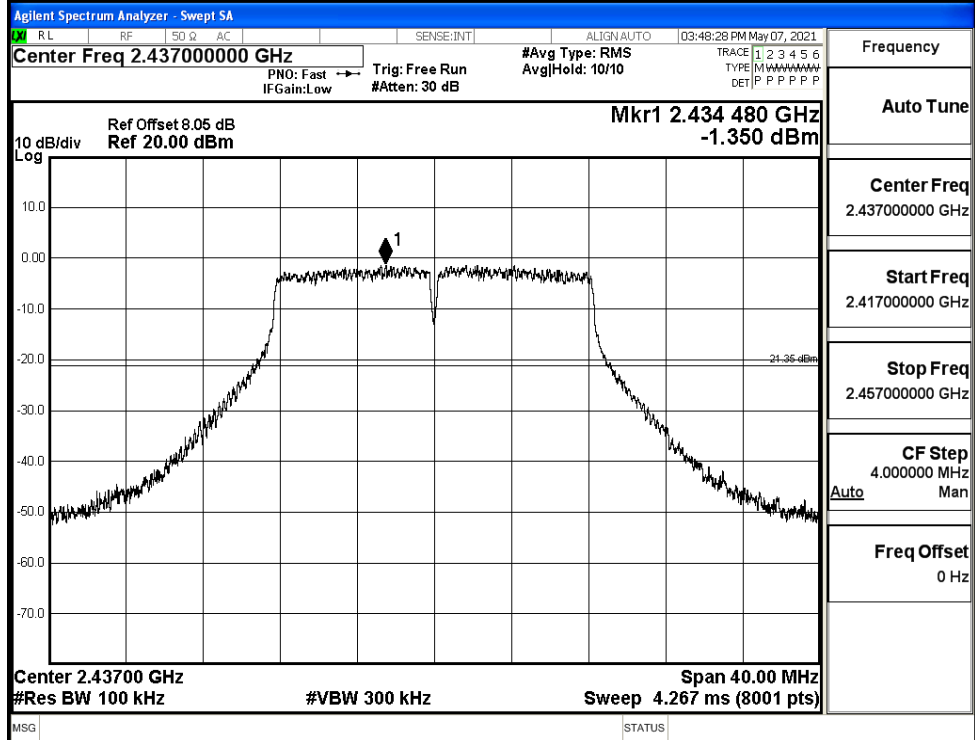
Puw/11G/LCH



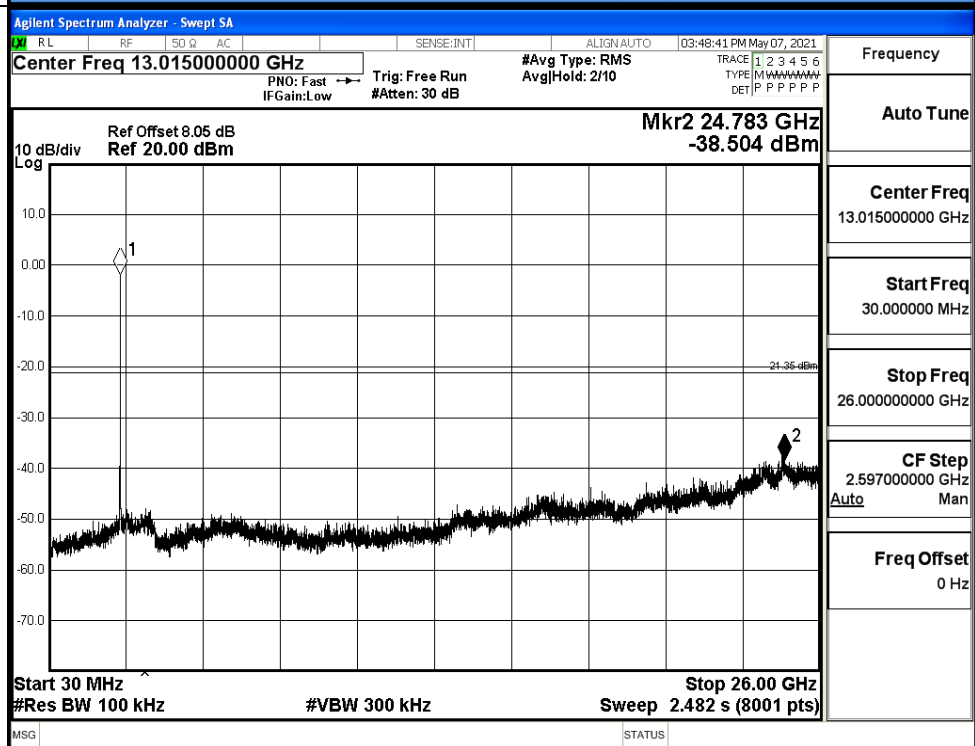


## 11G MCH Graphs

Pref/11G/MCH



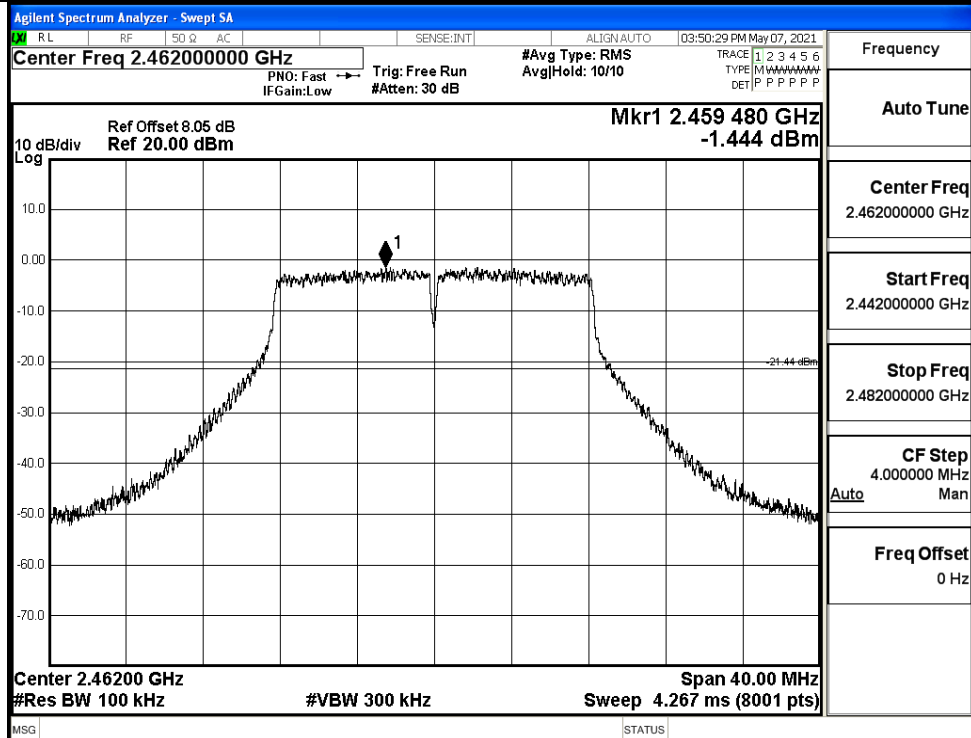
Puw/11G/MCH



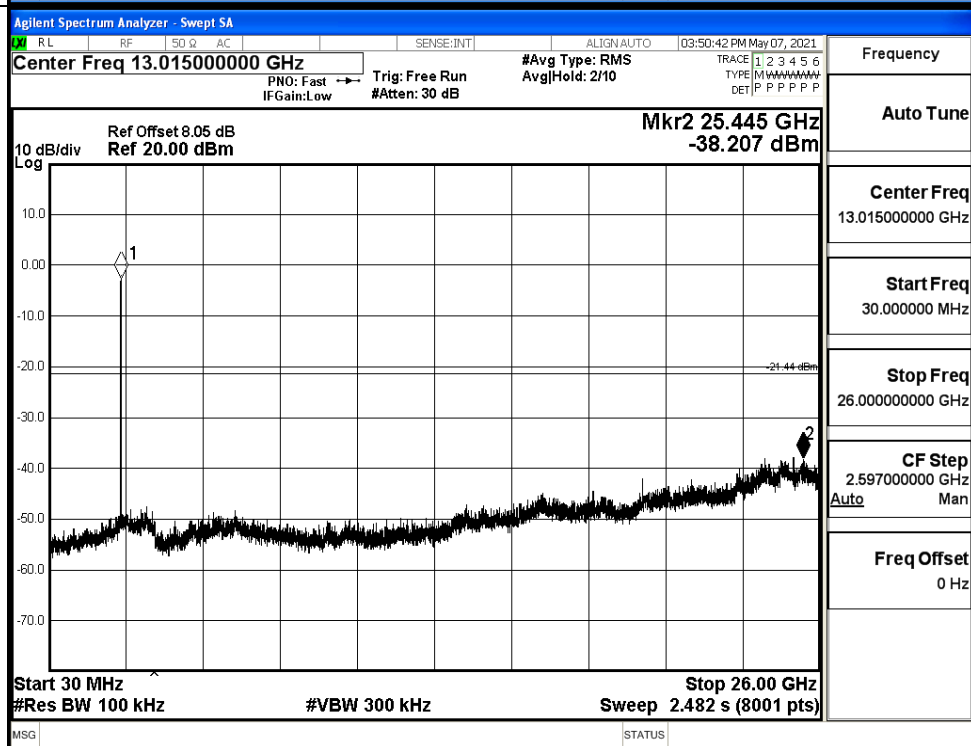


## 11G HCH Graphs

Pref/11G/HCH

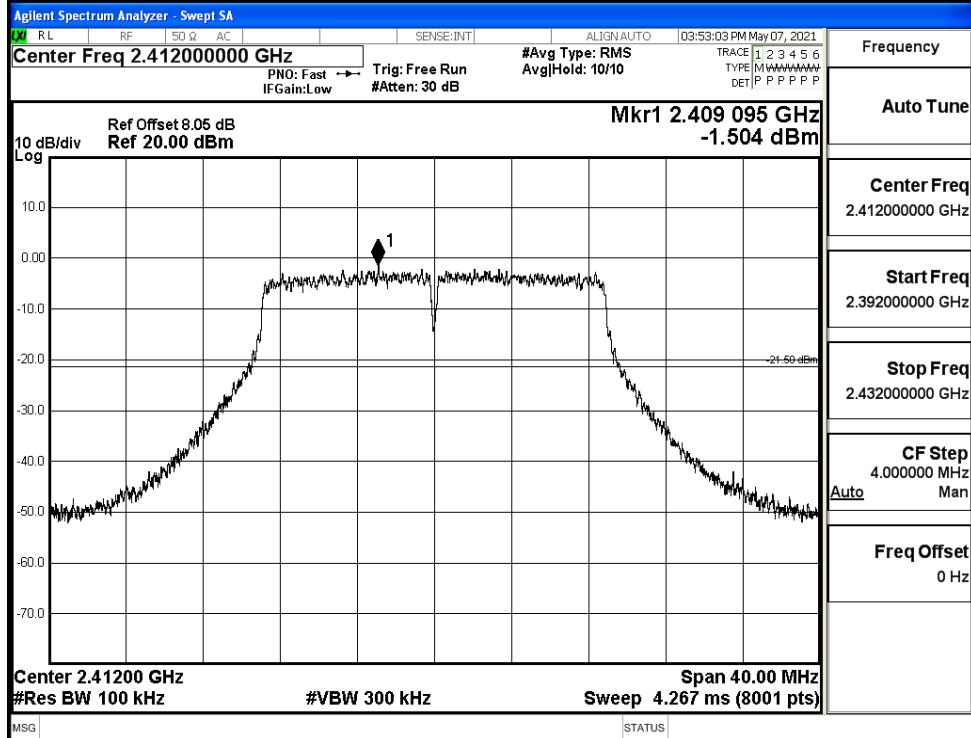
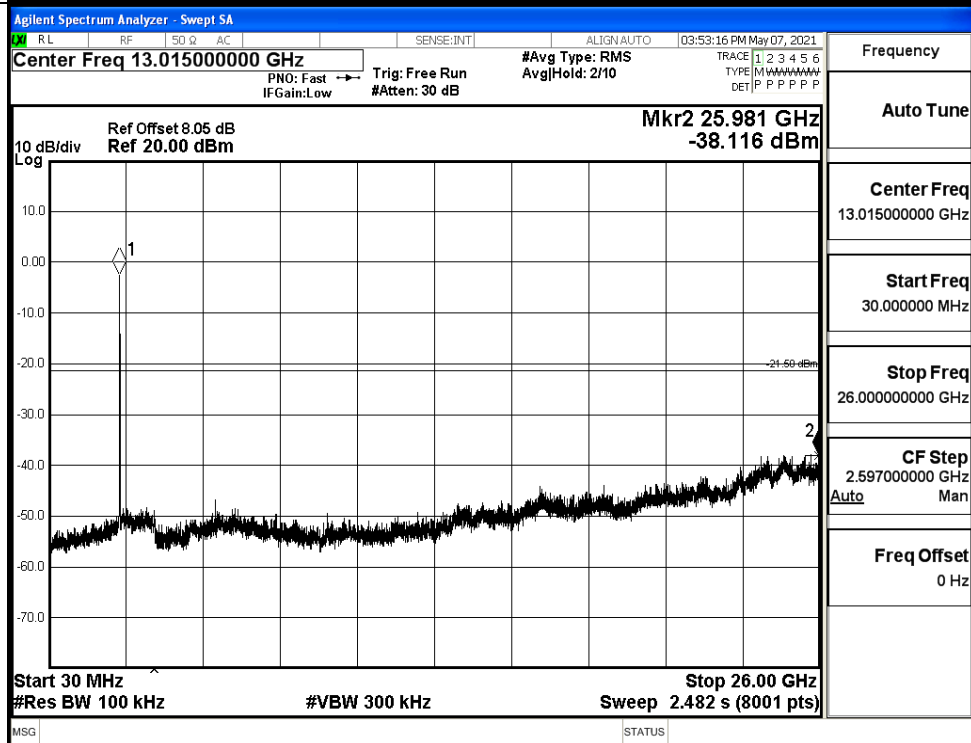


Puw/11G/HCH



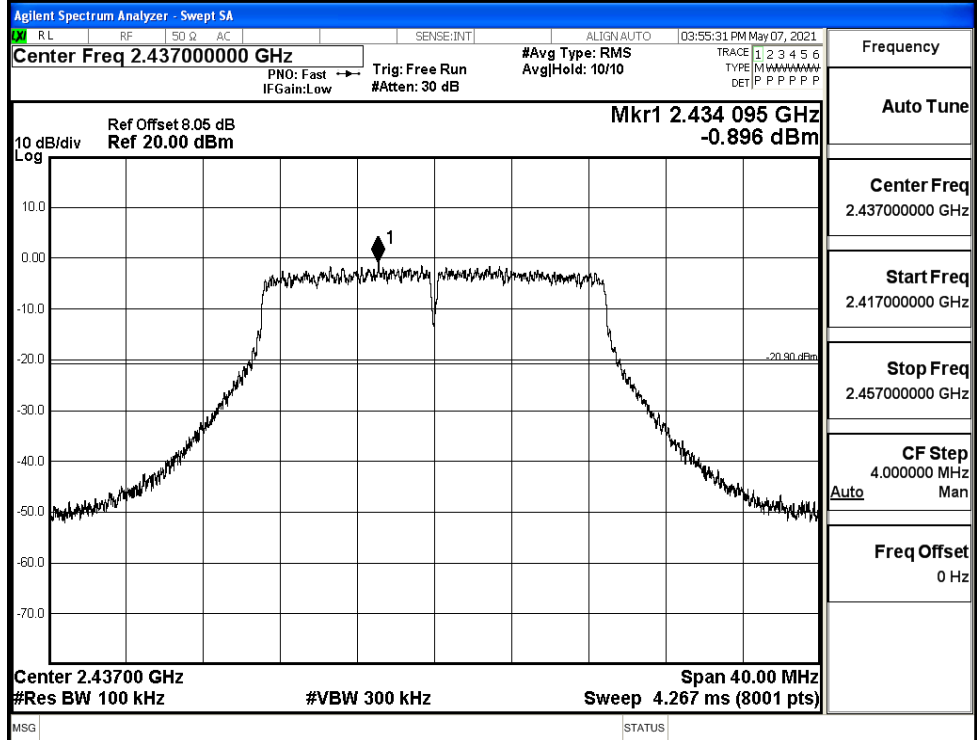
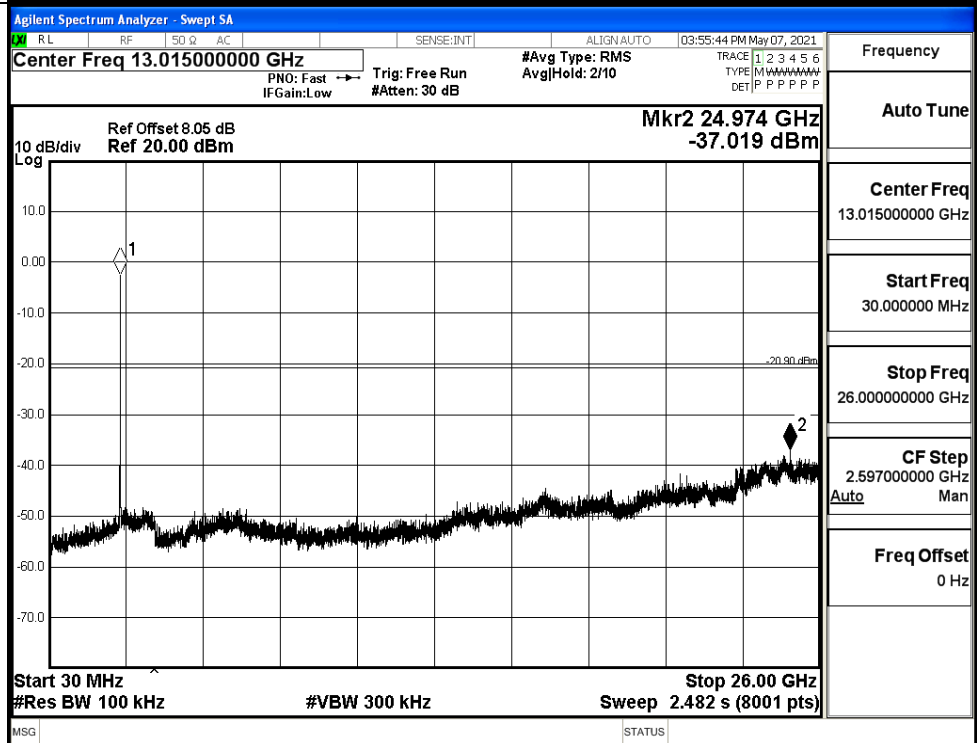


## 11N20SISO LCH Graphs

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

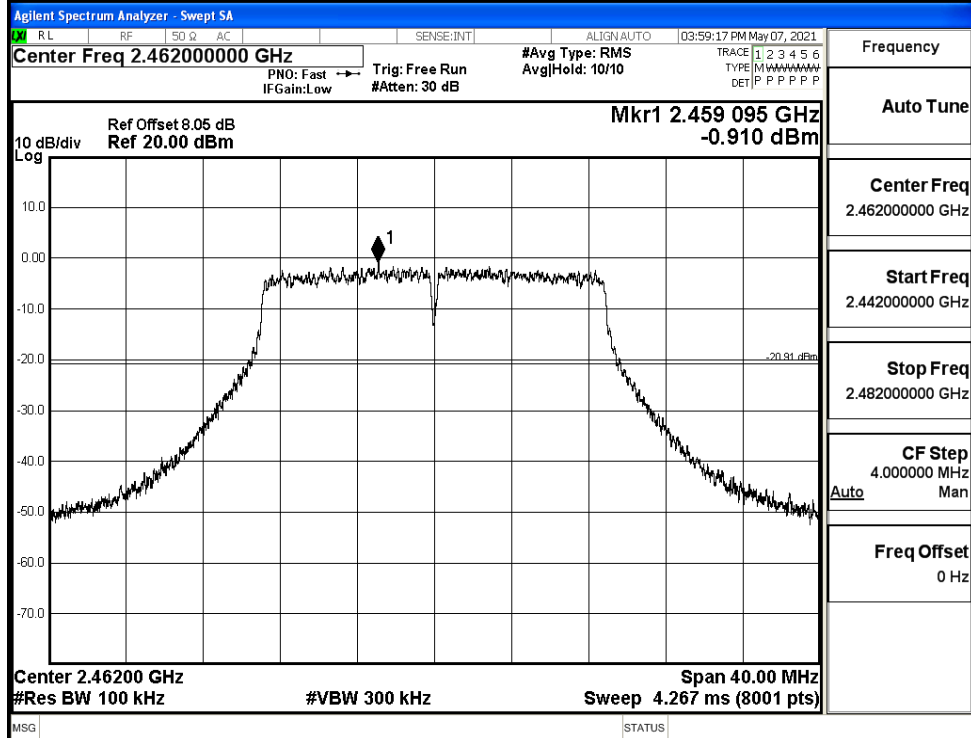
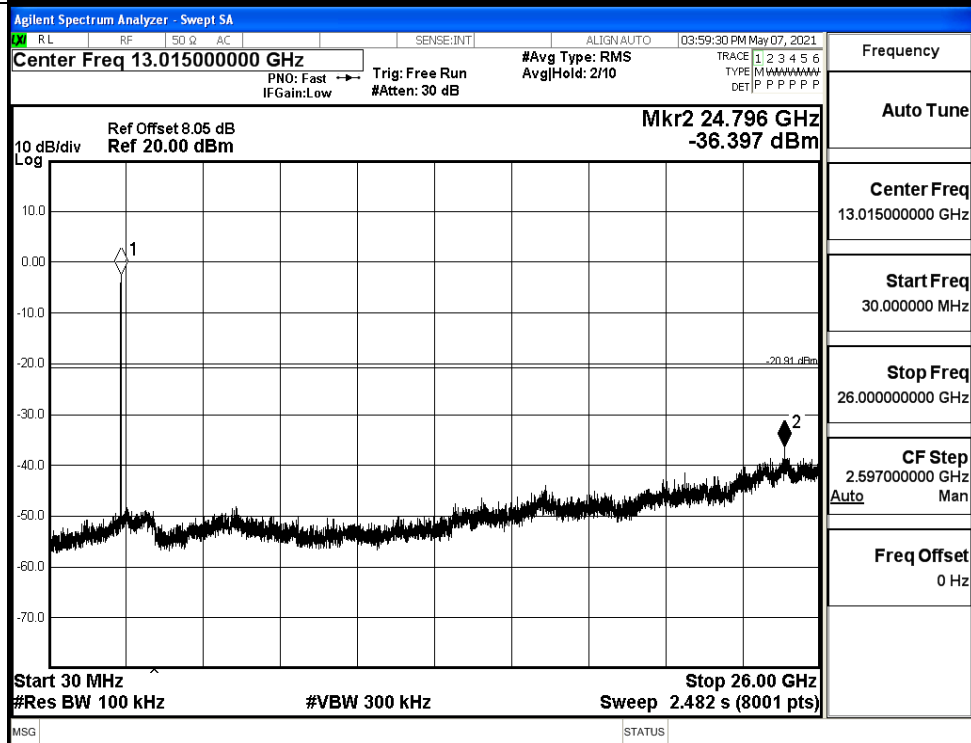


## 11N20SISO\_MCH\_Graphs

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



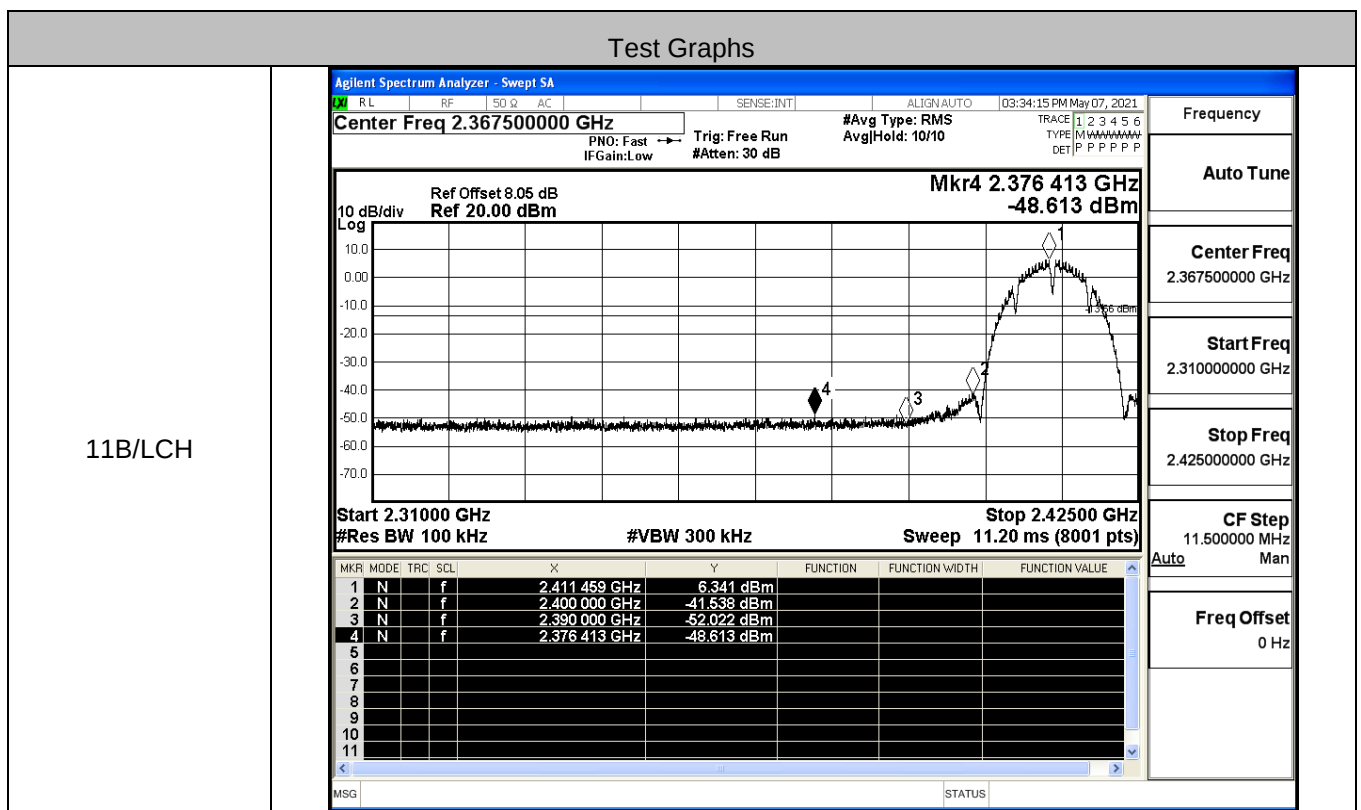
## 11N20SISO HCH Graphs

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



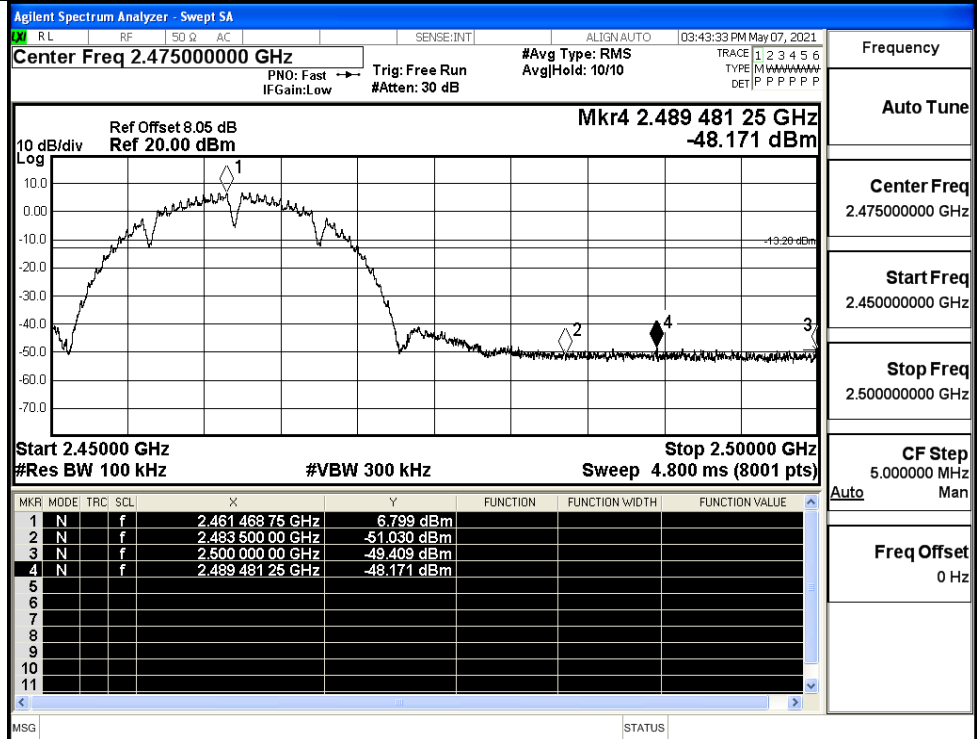
## A.7 Band-edge for RF Conducted Emissions

| Mode      | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B       | LCH     | 6.341              | -48.613                  | -13.66      | PASS    |
|           | HCH     | 6.799              | -48.171                  | -13.2       | PASS    |
| 11G       | LCH     | -1.875             | -48.556                  | -21.88      | PASS    |
|           | HCH     | -1.265             | -47.541                  | -21.27      | PASS    |
| 11N20SISO | LCH     | -1.475             | -48.701                  | -21.48      | PASS    |
|           | HCH     | -0.807             | -48.695                  | -20.81      | PASS    |

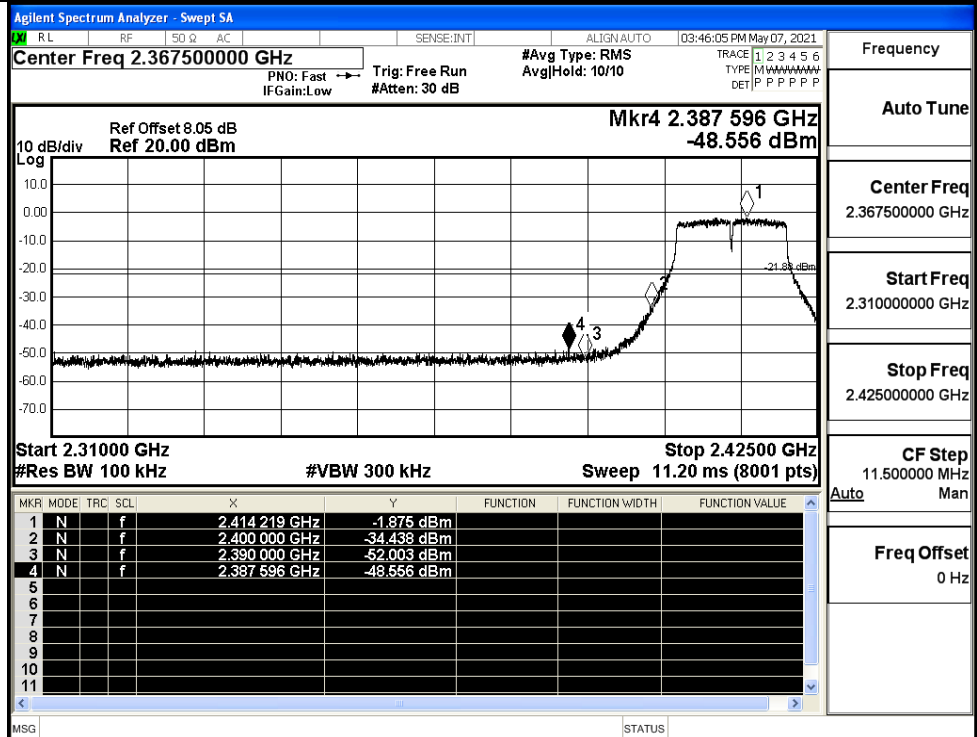




11B/HCH

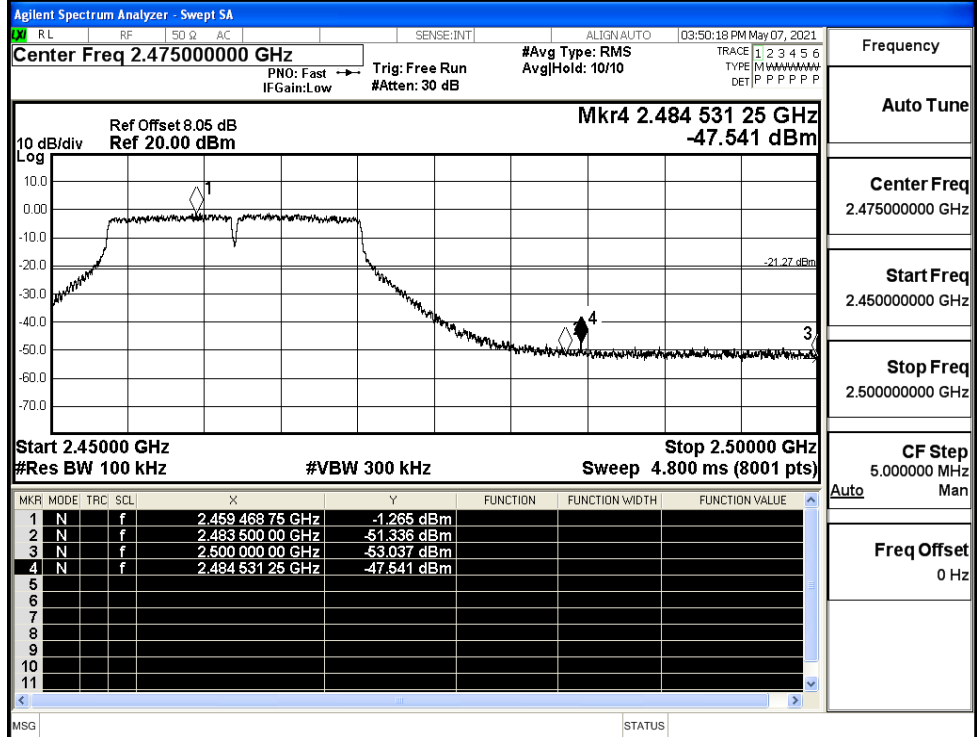


11G/LCH

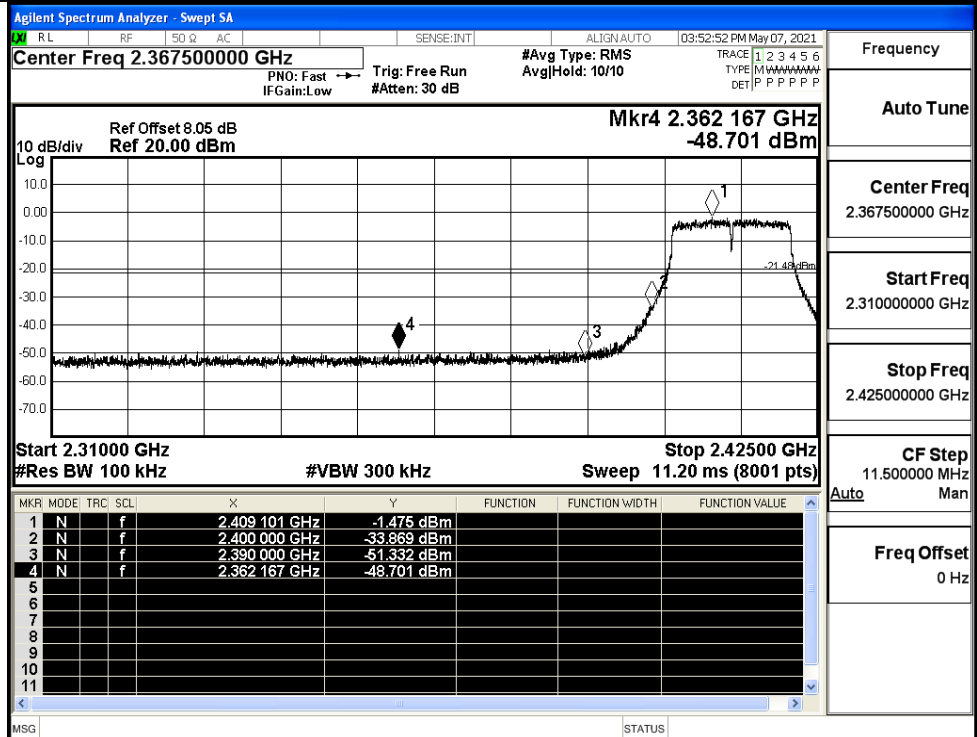




11G/HCH

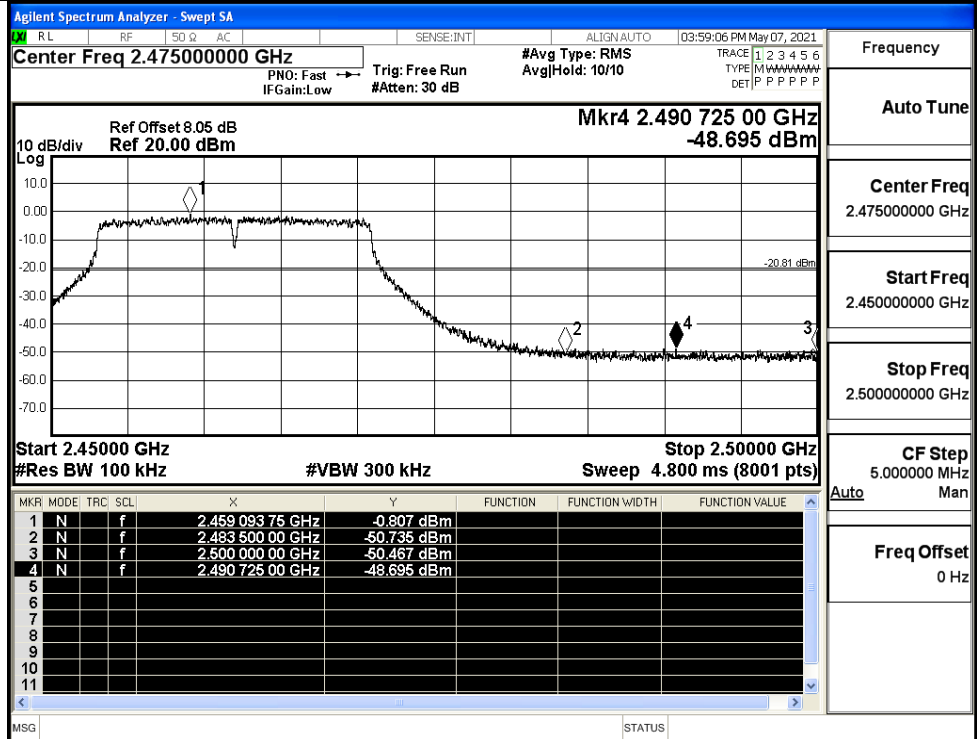


11N20SISO/LCH





11N20SISO/HCH

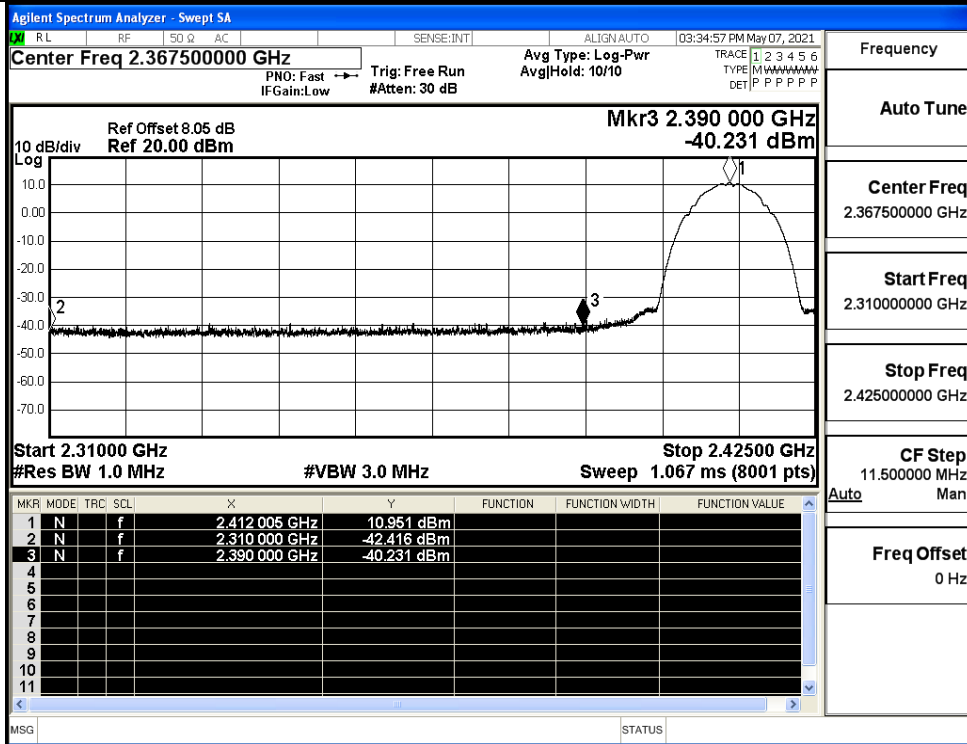


**A.8 Restrict-band band-edge measurements**

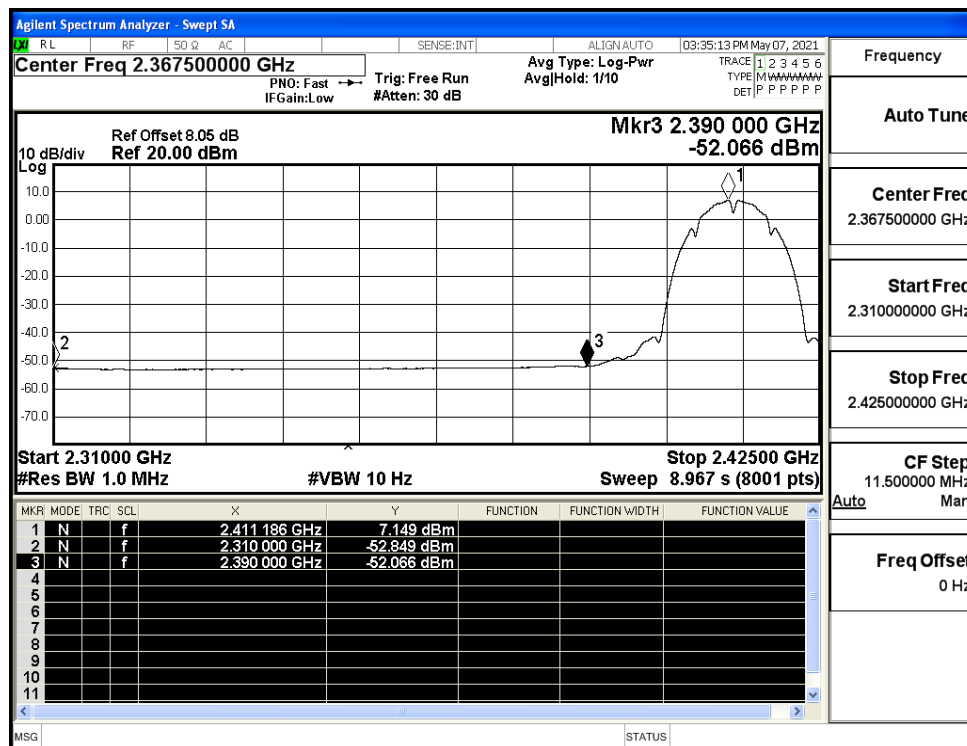
| Test Mode  | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|------------|--------------|------|--------|-------------|------|---------------|------------|----------|----------------|---------|
| 11B        | 2412         | Ant1 | 2310.0 | -42.42      | 2.0  | 0             | 54.84      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2310.0 | -52.85      | 2.0  | 0             | 44.41      | AV       | 54             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -40.23      | 2.0  | 0             | 57.03      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -52.07      | 2.0  | 0             | 45.19      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -41.21      | 2.0  | 0             | 56.05      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -51.61      | 2.0  | 0             | 45.65      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -41.43      | 2.0  | 0             | 55.83      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -51.86      | 2.0  | 0             | 45.4       | AV       | 54             | PASS    |
| 11G        | 2412         | Ant1 | 2310.0 | -42.26      | 2.0  | 0             | 55         | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2310.0 | -53.24      | 2.0  | 0             | 44.02      | AV       | 54             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -39.23      | 2.0  | 0             | 58.03      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -51.66      | 2.0  | 0             | 45.6       | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -40.99      | 2.0  | 0             | 56.27      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -51.04      | 2.0  | 0             | 46.22      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -41.88      | 2.0  | 0             | 55.38      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -51.93      | 2.0  | 0             | 45.33      | AV       | 54             | PASS    |
| 11N20 SISO | 2412         | Ant1 | 2310.0 | -42.50      | 2.0  | 0             | 54.76      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2310.0 | -53.23      | 2.0  | 0             | 44.03      | AV       | 54             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -40.77      | 2.0  | 0             | 56.49      | PEAK     | 74             | PASS    |
|            | 2412         | Ant1 | 2390.0 | -51.49      | 2.0  | 0             | 45.77      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -39.00      | 2.0  | 0             | 58.26      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2483.5 | -50.82      | 2.0  | 0             | 46.44      | AV       | 54             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -41.88      | 2.0  | 0             | 55.38      | PEAK     | 74             | PASS    |
|            | 2462         | Ant1 | 2500.0 | -51.92      | 2.0  | 0             | 45.34      | AV       | 54             | PASS    |



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

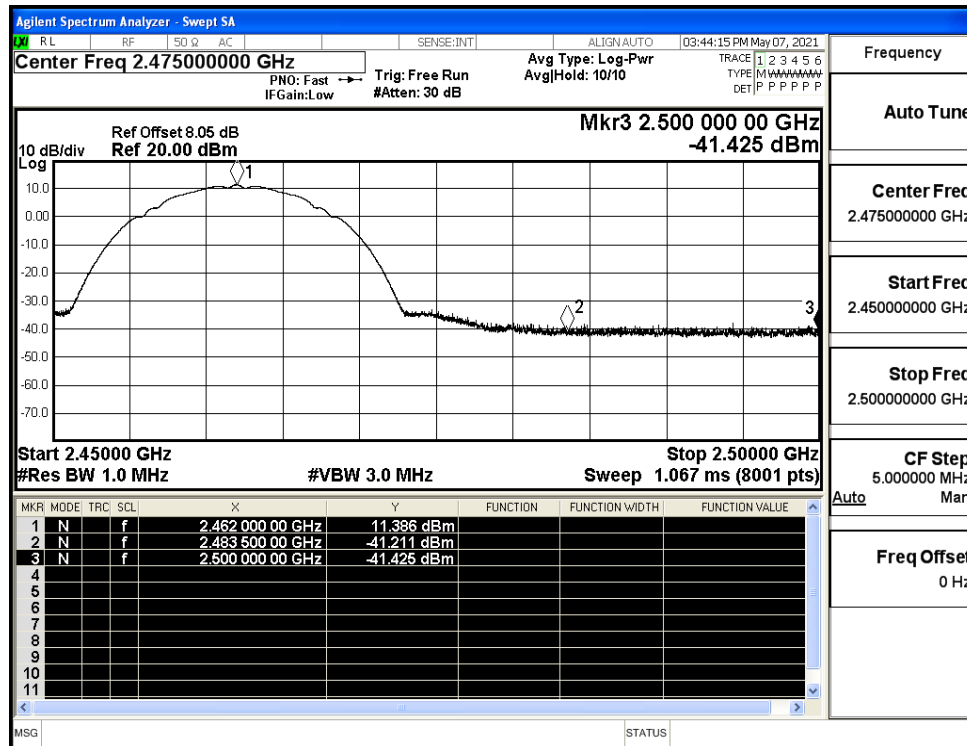


## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_AV

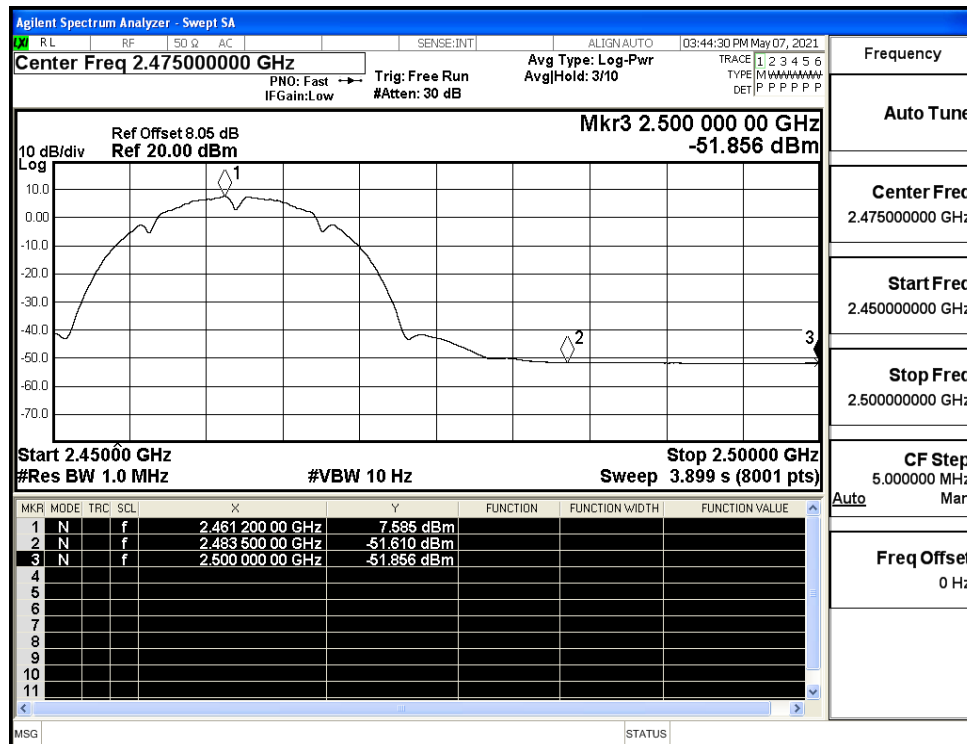




## Restrict-band band-edge measurements\_11B\_2462\_Ant1\_PEAK

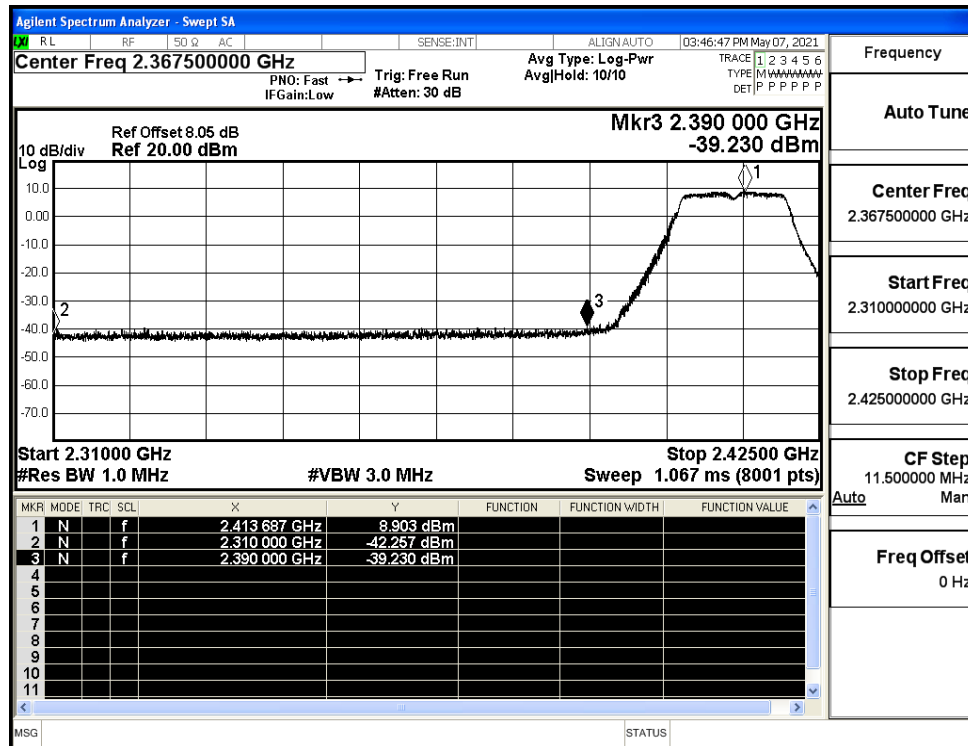


## Restrict-band band-edge measurements\_11B\_2462\_Ant1\_AV

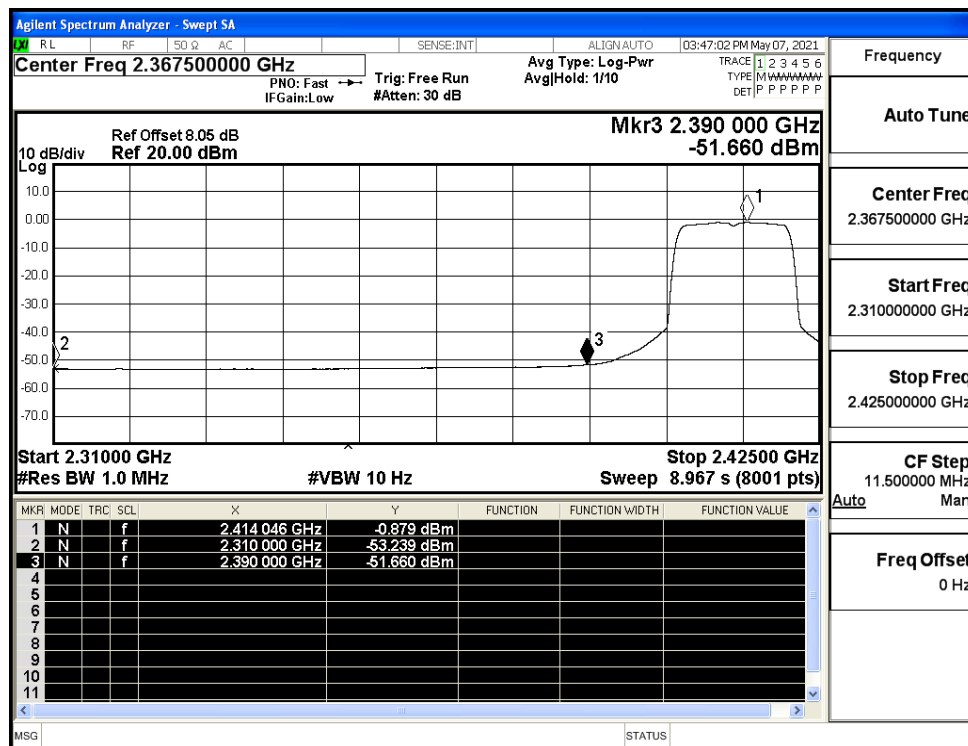




## Restrict-band band-edge measurements\_11G\_2412\_Ant1\_PEAK

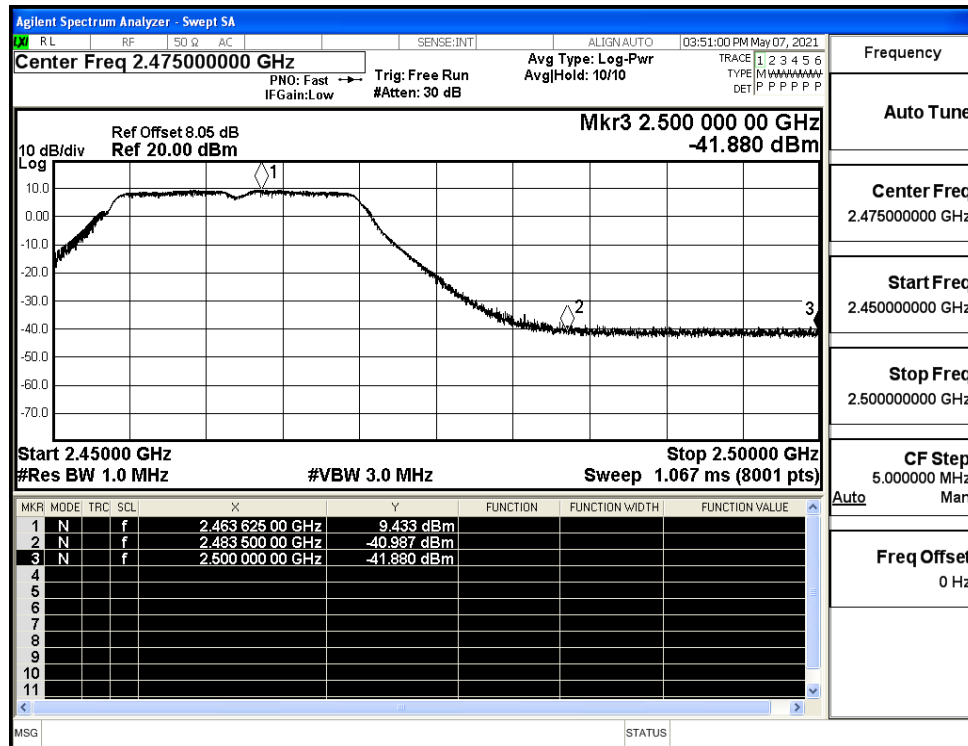


## Restrict-band band-edge measurements\_11G\_2412\_Ant1\_AV

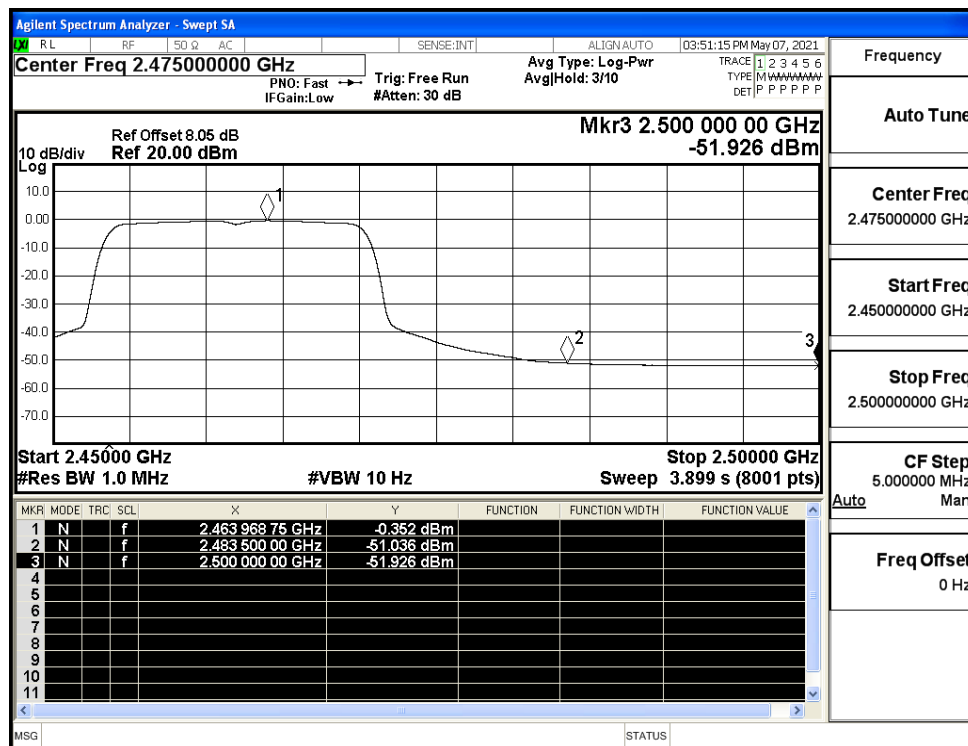




## Restrict-band band-edge measurements\_11G\_2462\_Ant1\_PEAK

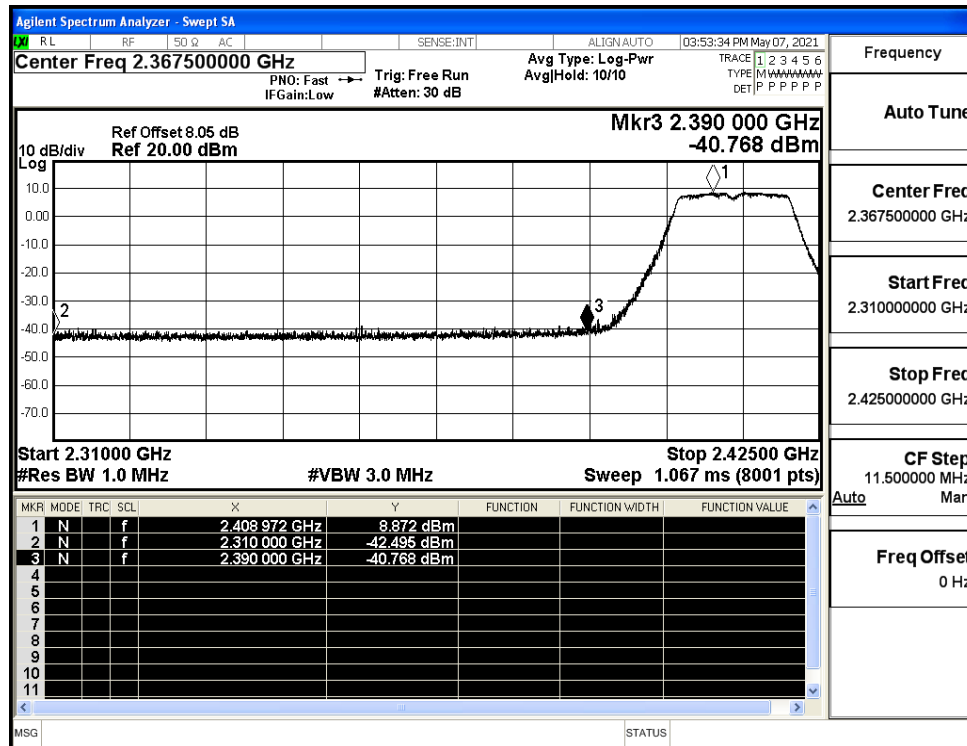


## Restrict-band band-edge measurements\_11G\_2462\_Ant1\_AV

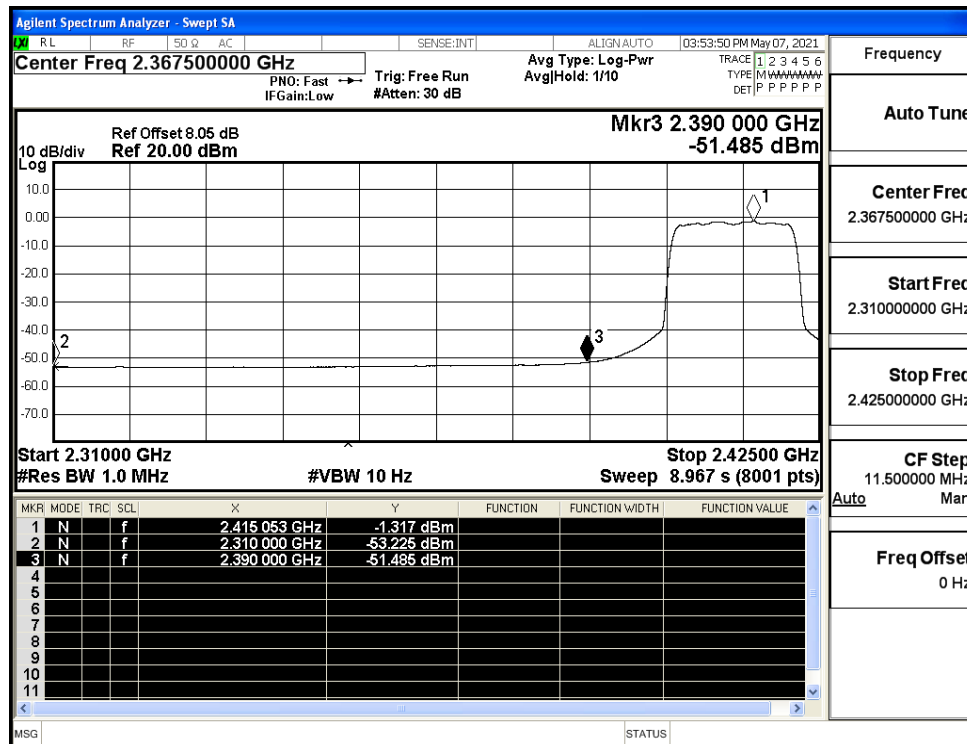




## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_PEAK

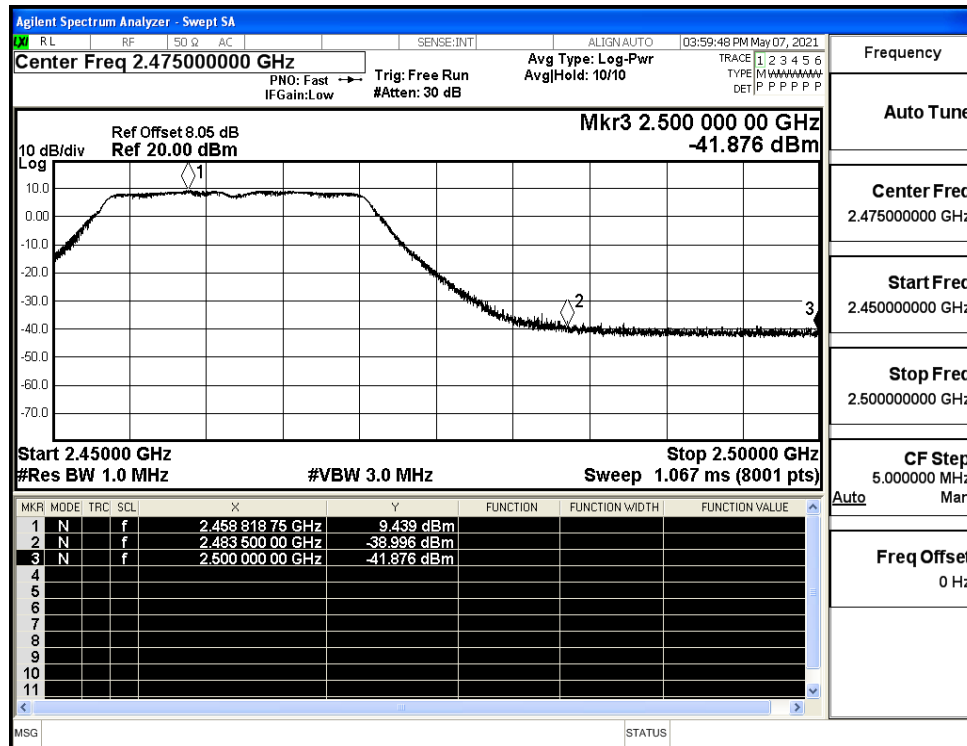


## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_AV





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



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

