

## Appendix C

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

Product Name: IP PHONE

Trade Mark: 

Test Model: UC507U

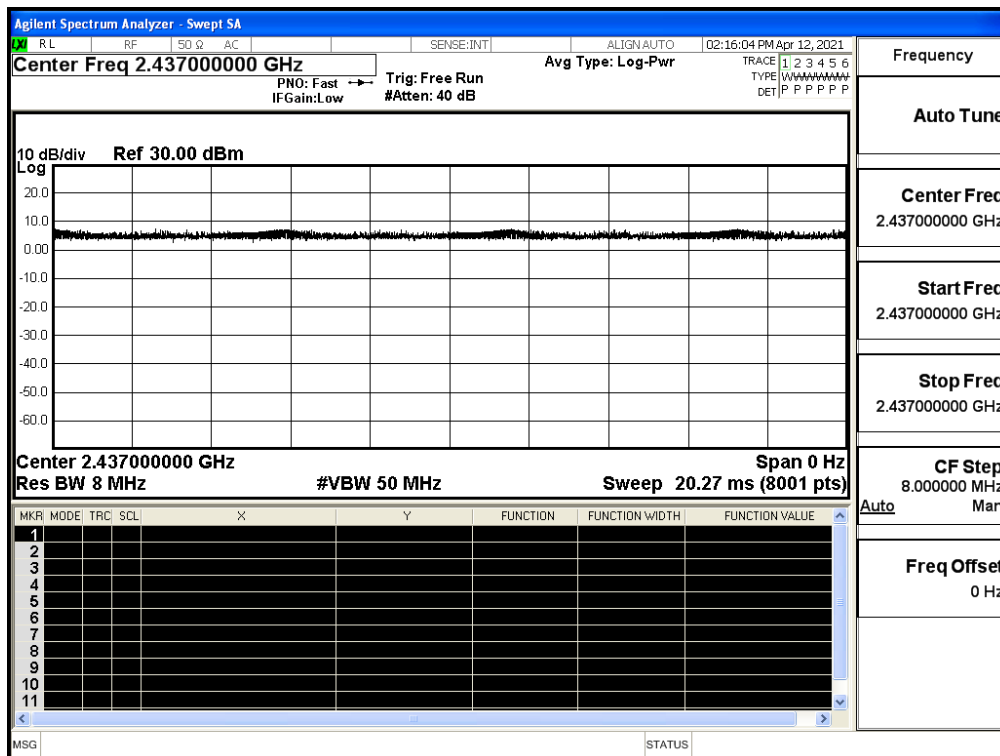
#### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 24.6 ° C  |
| Relative Humidity: | 54.1%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Li    |
| Supervised by:     | Li Huan   |

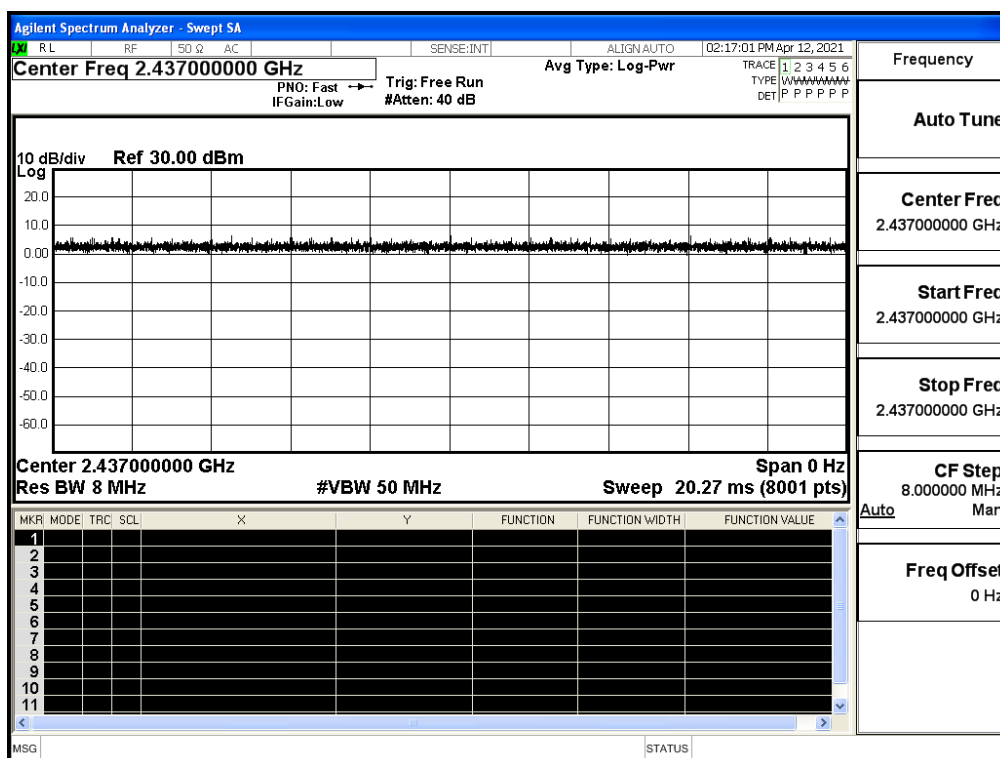
#### C.1 Duty Cycle

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

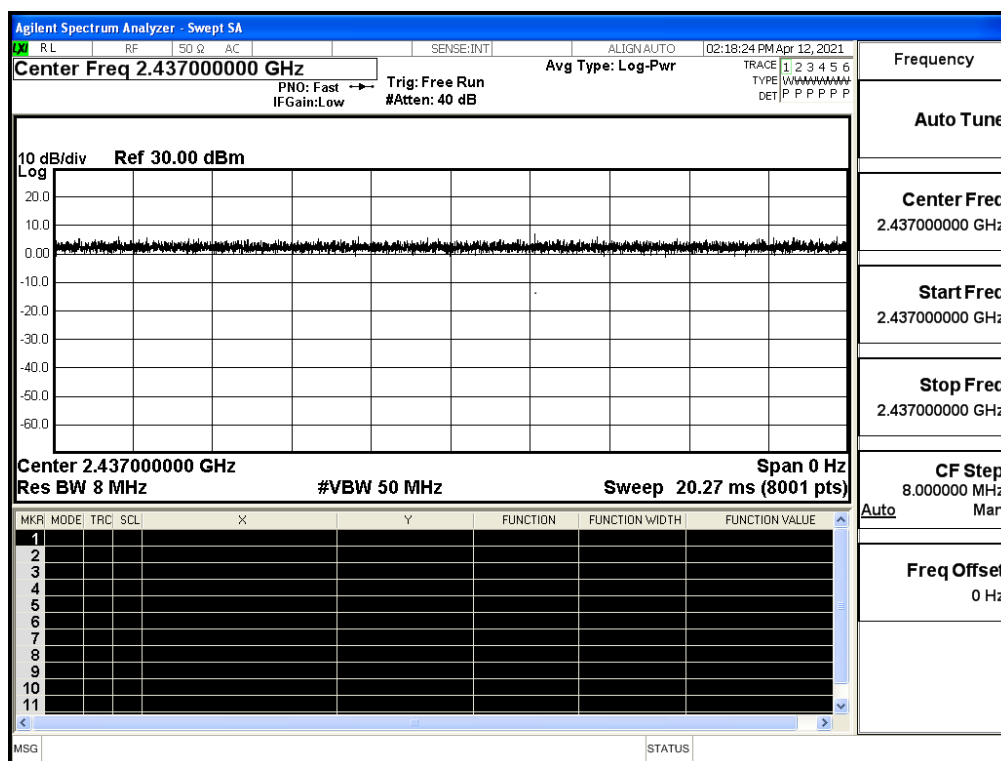
## Duty Cycle\_11B\_2437\_Ant1



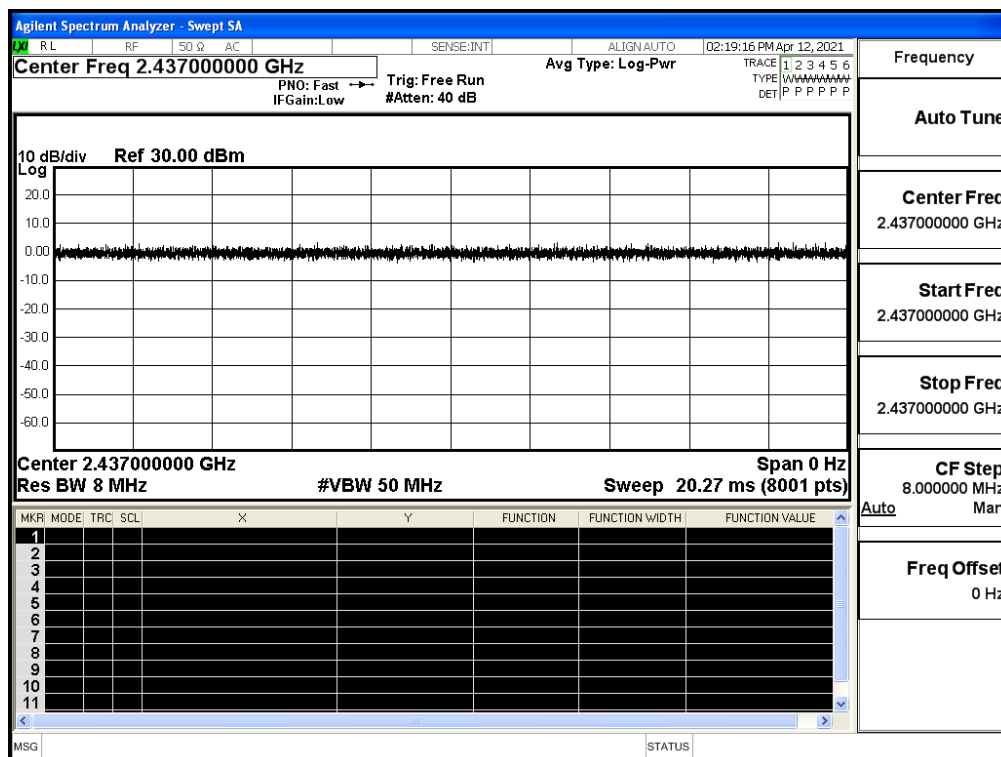
## Duty Cycle\_11G\_2437\_Ant1



## Duty Cycle\_11N20SISO\_2437\_Ant1



## Duty Cycle\_11N40SISO\_2437\_Ant1



**C.2 Maximum Conducted Output Power**

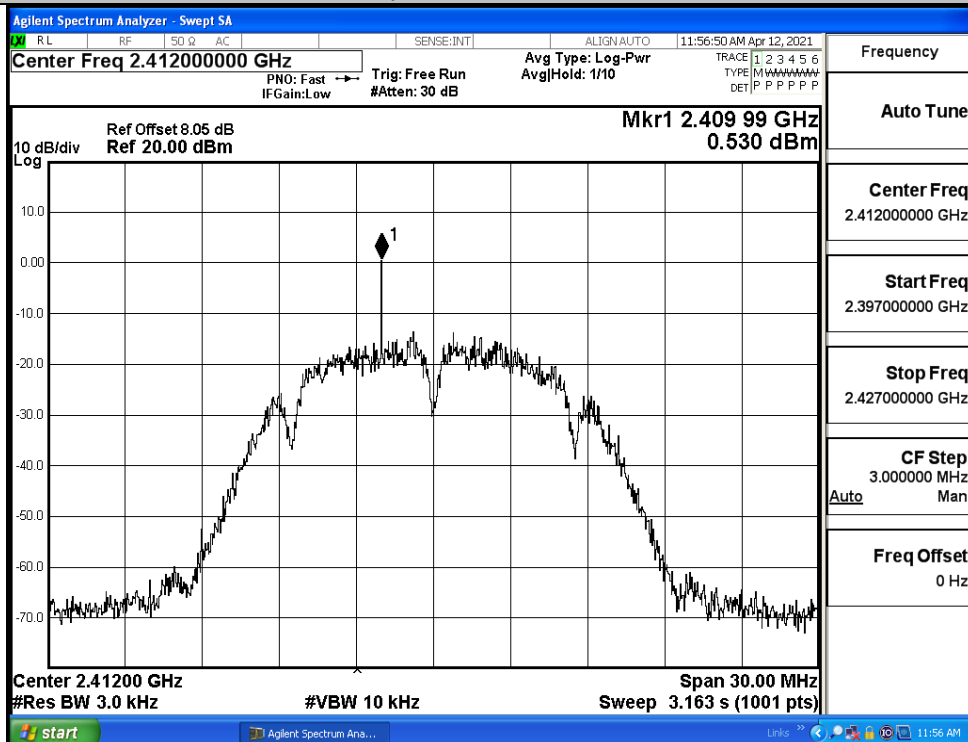
| Mode      | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B       | LCH     | 12.26            | 30          | PASS    |
|           | MCH     | 16.32            | 30          | PASS    |
|           | HCH     | 15.55            | 30          | PASS    |
| 11G       | LCH     | 12.92            | 30          | PASS    |
|           | MCH     | 13.91            | 30          | PASS    |
|           | HCH     | 12.95            | 30          | PASS    |
| 11N20SISO | LCH     | 13.53            | 30          | PASS    |
|           | MCH     | 13.97            | 30          | PASS    |
|           | HCH     | 13.1             | 30          | PASS    |
| 11N40SISO | LCH     | 13.87            | 30          | PASS    |
|           | MCH     | 14.02            | 30          | PASS    |
|           | HCH     | 13.93            | 30          | PASS    |

### C.3 Maximum Power Spectral Density

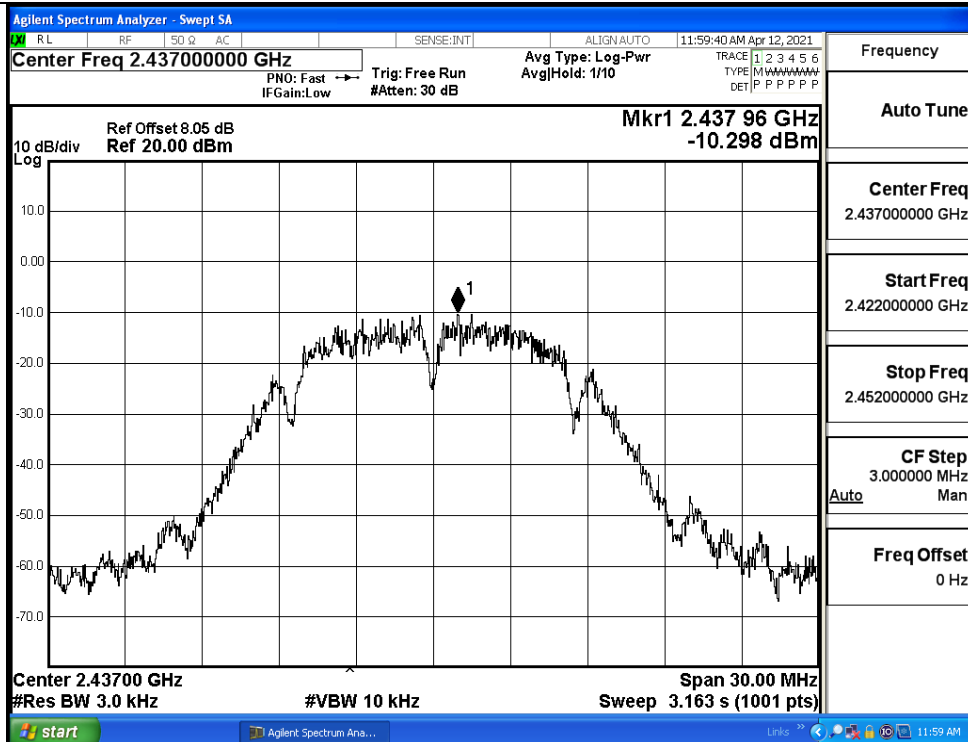
| Mode      | Channel | Meas.Level [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|-----------------------|------------------|---------|
| 11B       | LCH     | 0.530                 | 8                | PASS    |
|           | MCH     | -10.298               | 8                | PASS    |
|           | HCH     | -11.583               | 8                | PASS    |
| 11G       | LCH     | -20.346               | 8                | PASS    |
|           | MCH     | -19.768               | 8                | PASS    |
|           | HCH     | -20.192               | 8                | PASS    |
| 11N20SISO | LCH     | -21.005               | 8                | PASS    |
|           | MCH     | -19.981               | 8                | PASS    |
|           | HCH     | -20.511               | 8                | PASS    |
| 11N40SISO | LCH     | -24.357               | 8                | PASS    |
|           | MCH     | -22.861               | 8                | PASS    |
|           | HCH     | -21.988               | 8                | PASS    |

#### Test Graphs

11B/LCH



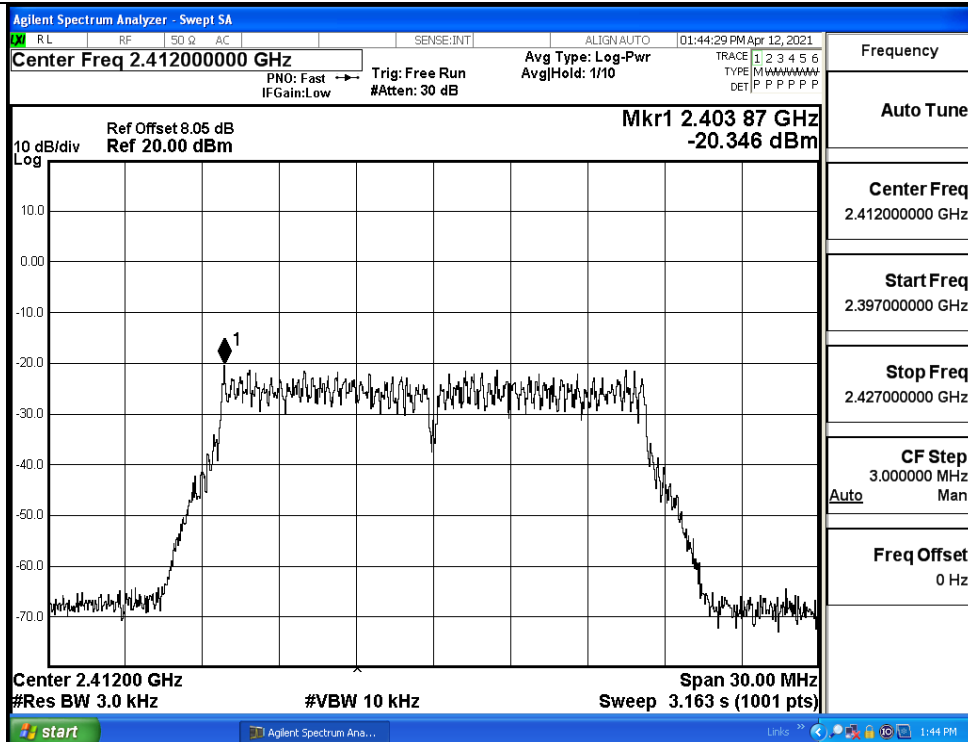
11B/MCH



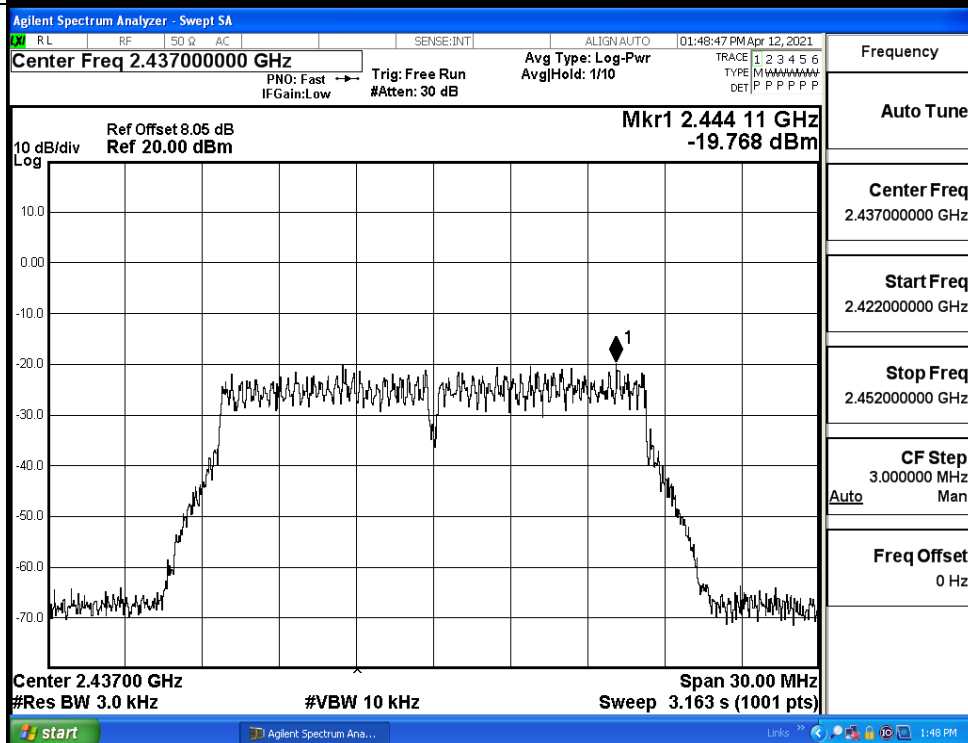
11B/HCH



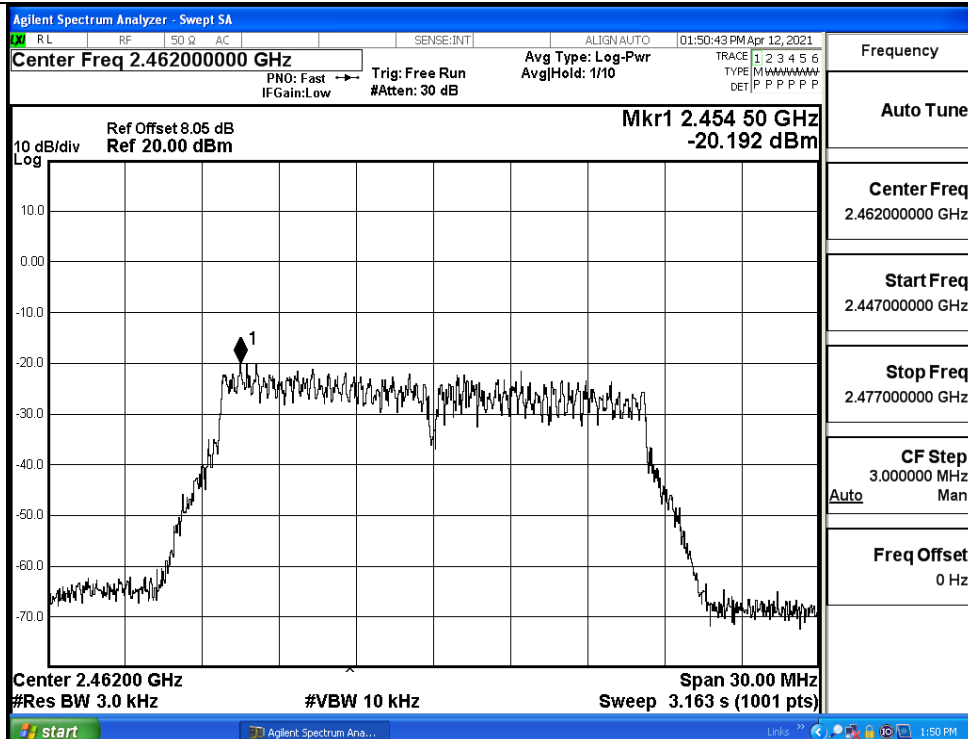
11G/LCH



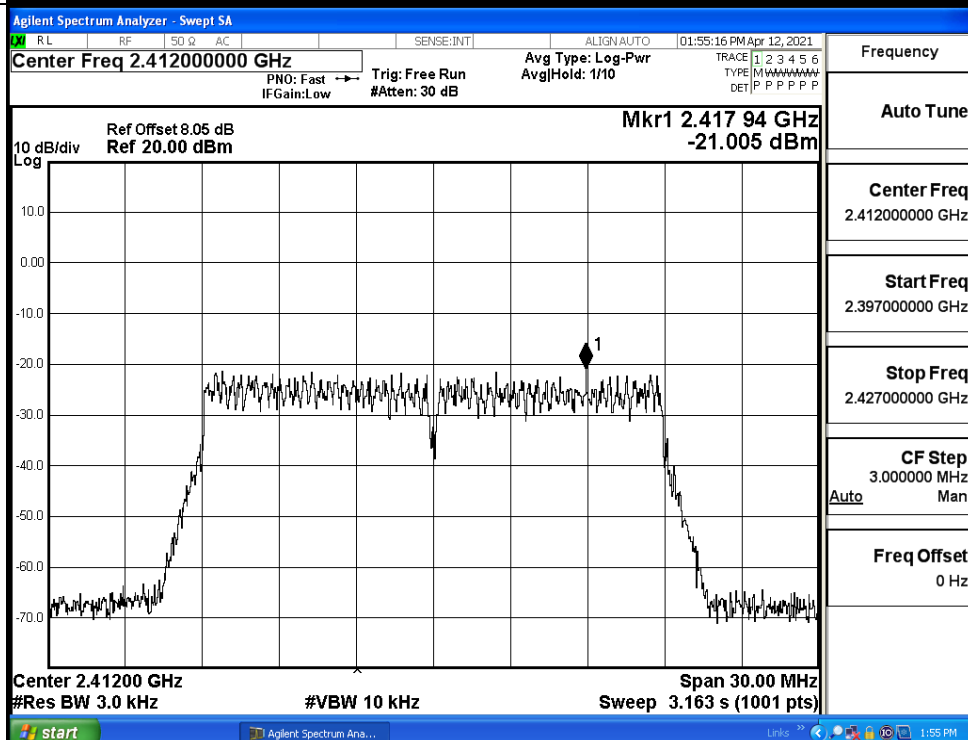
11G/MCH



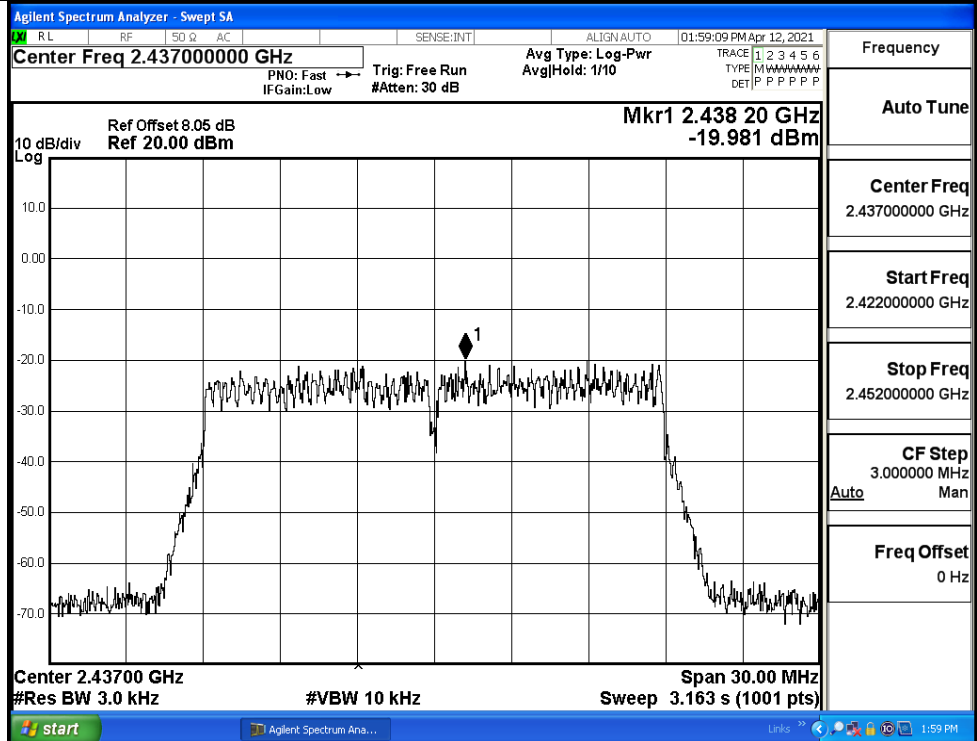
11G/HCH



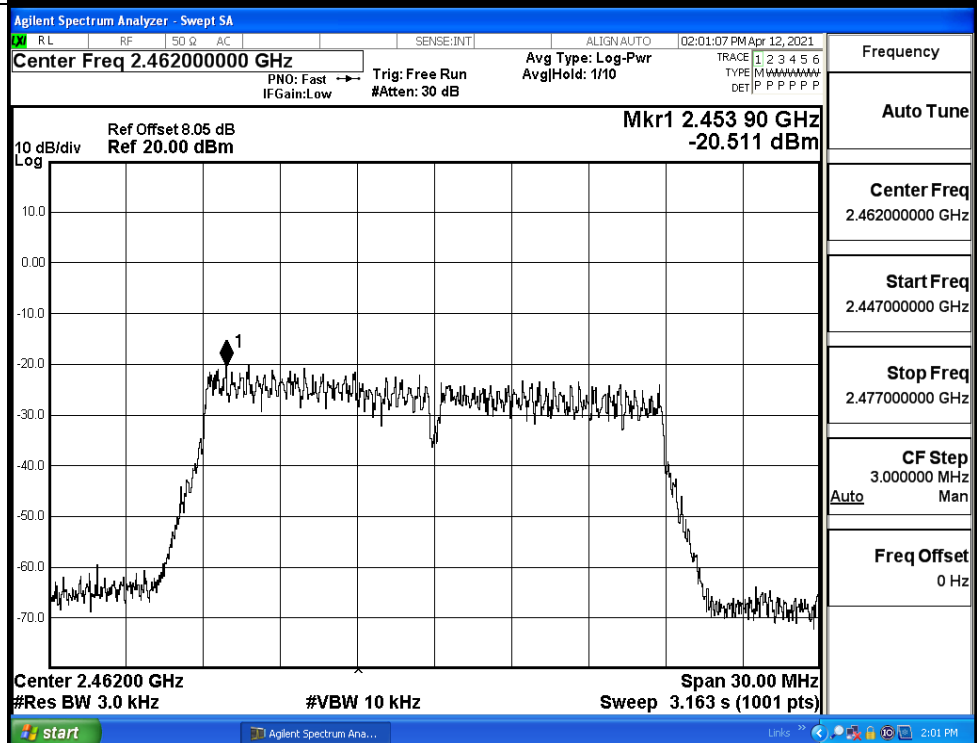
11N20SISO/LCH



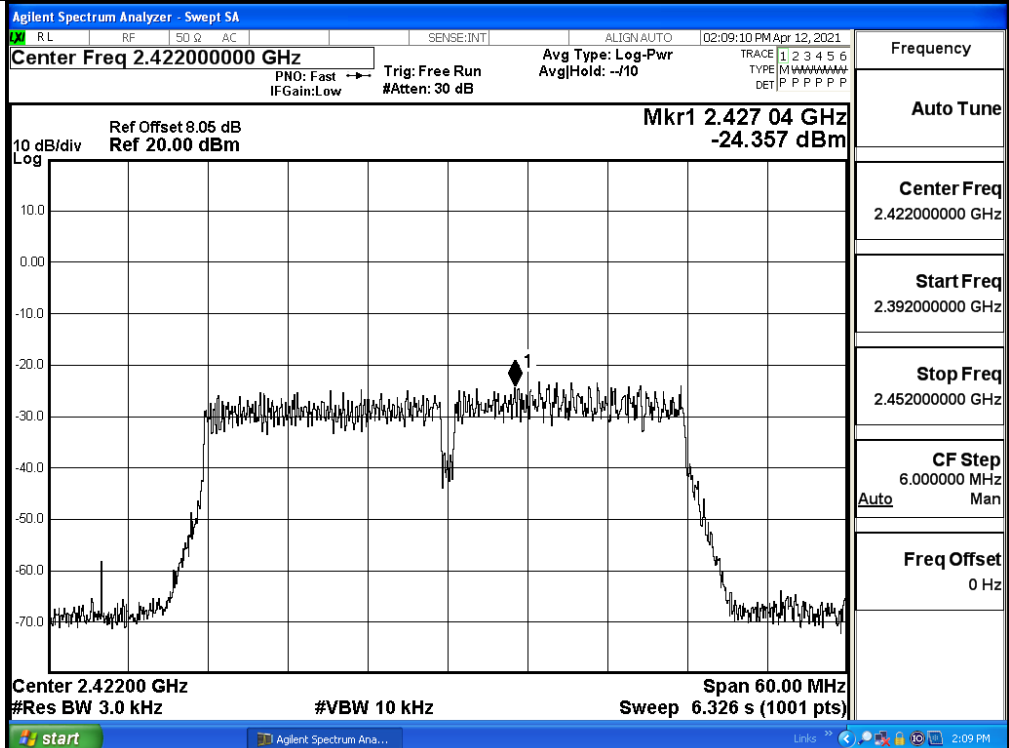
11N20SISO/MCH



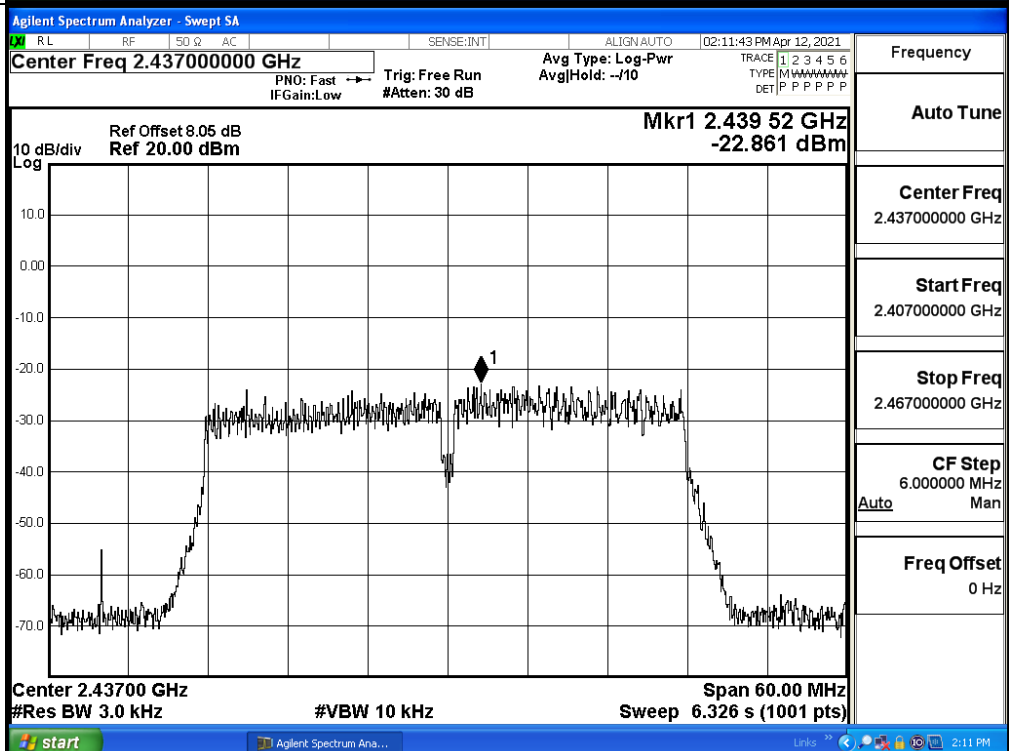
11N20SISO/HCH



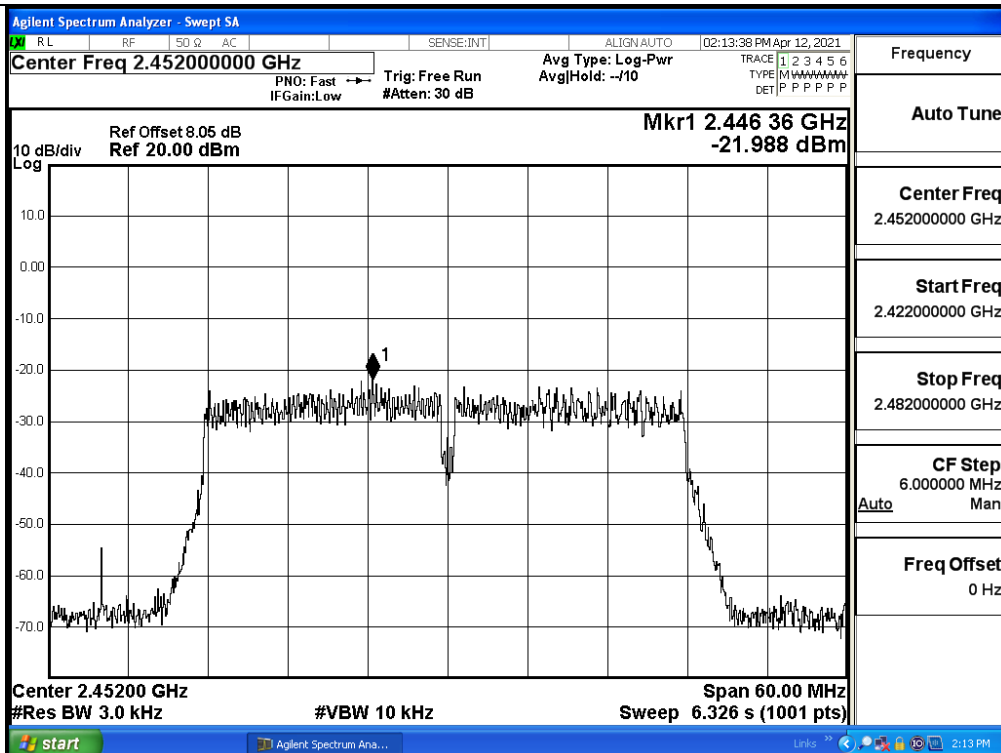
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

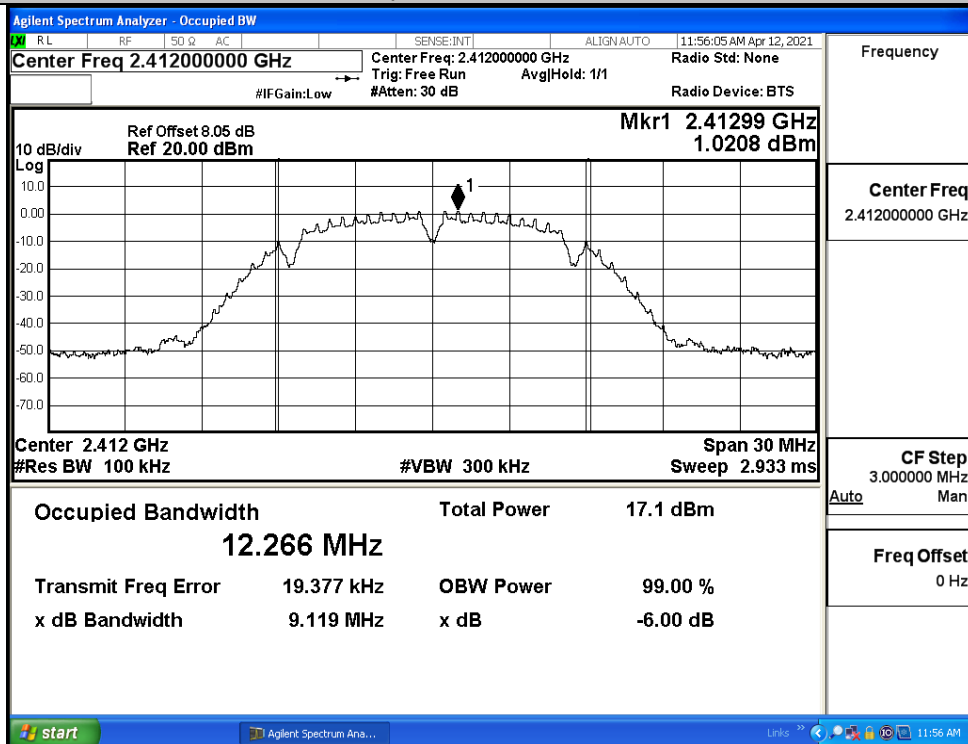


## C.4 6dB Bandwidth

| Mode      | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B       | LCH     | 9.119               | $\geq 0.5$  | PASS    |
|           | MCH     | 9.568               | $\geq 0.5$  | PASS    |
|           | HCH     | 9.555               | $\geq 0.5$  | PASS    |
| 11G       | LCH     | 15.17               | $\geq 0.5$  | PASS    |
|           | MCH     | 16.15               | $\geq 0.5$  | PASS    |
|           | HCH     | 15.80               | $\geq 0.5$  | PASS    |
| 11N20SISO | LCH     | 17.63               | $\geq 0.5$  | PASS    |
|           | MCH     | 17.34               | $\geq 0.5$  | PASS    |
|           | HCH     | 17.22               | $\geq 0.5$  | PASS    |
| 11N40SISO | LCH     | 35.80               | $\geq 0.5$  | PASS    |
|           | MCH     | 35.52               | $\geq 0.5$  | PASS    |
|           | HCH     | 35.35               | $\geq 0.5$  | PASS    |

## Test Graphs

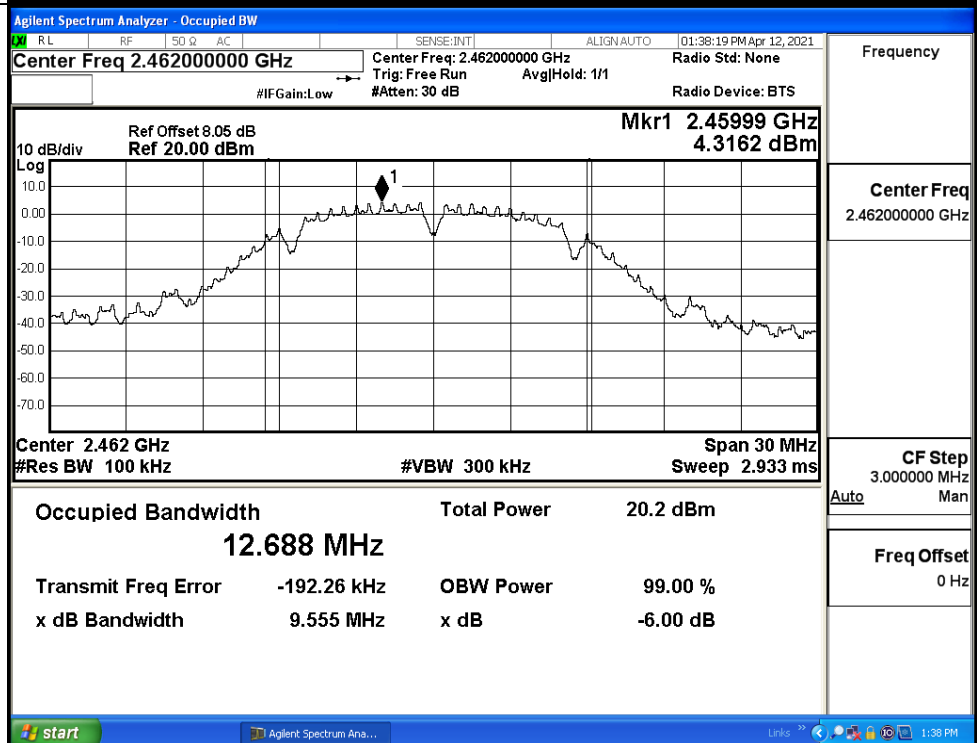
11B/LCH



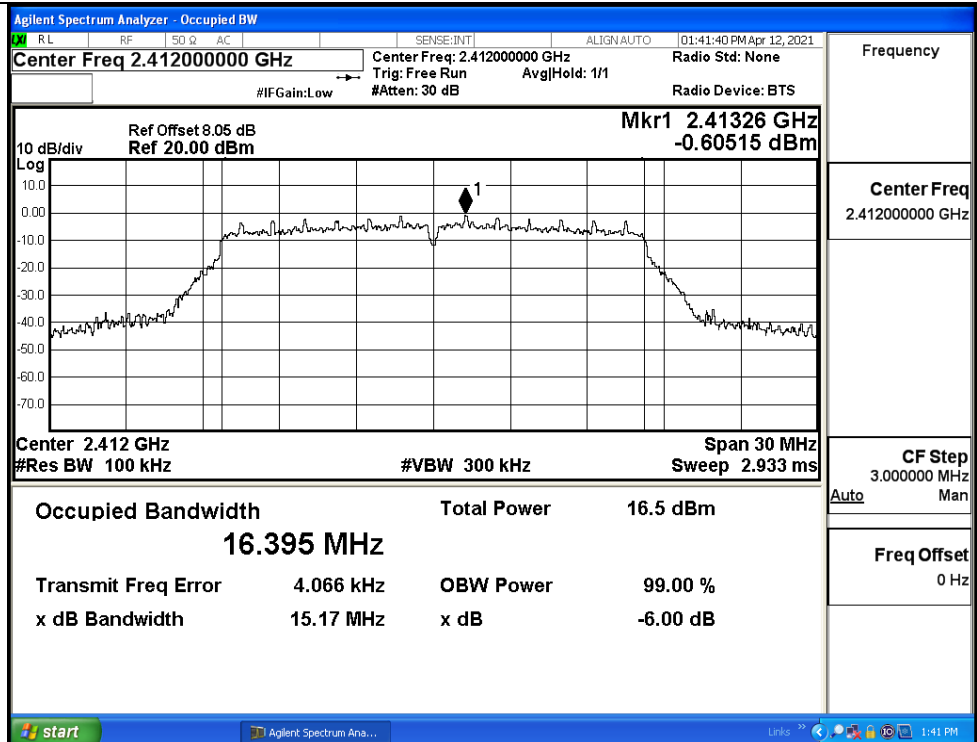
11B/MCH



11B/HCH



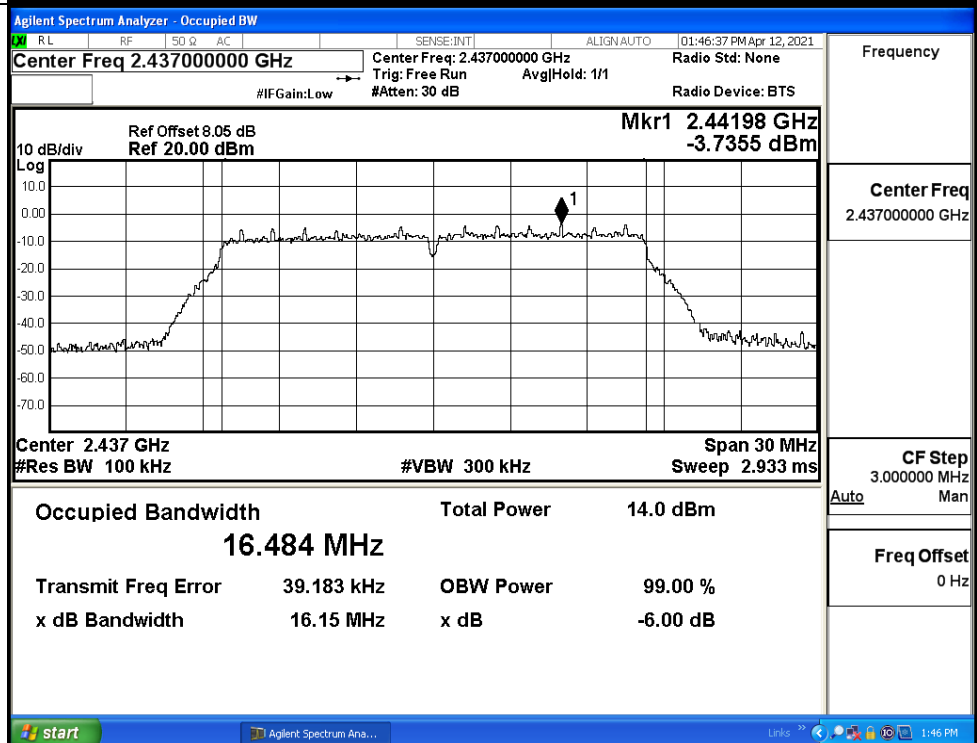
11G/LCH



Frequency

Center Freq  
2.412000000 GHzCF Step  
3.000000 MHz  
Auto ManFreq Offset  
0 Hz

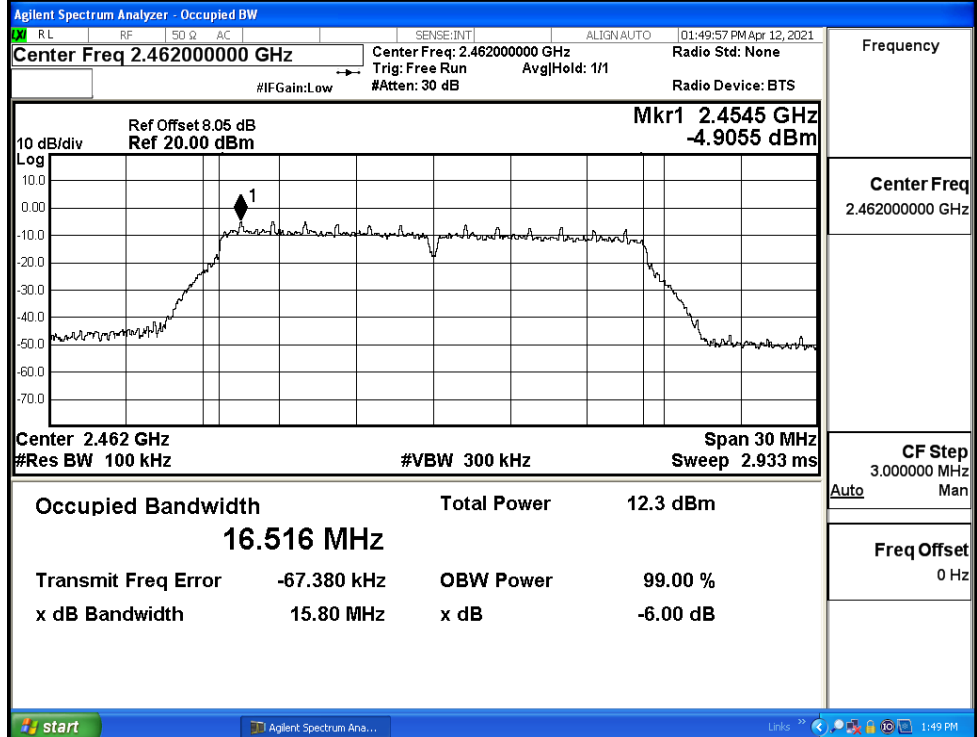
11G/MCH



Frequency

Center Freq  
2.437000000 GHzCF Step  
3.000000 MHz  
Auto ManFreq Offset  
0 Hz

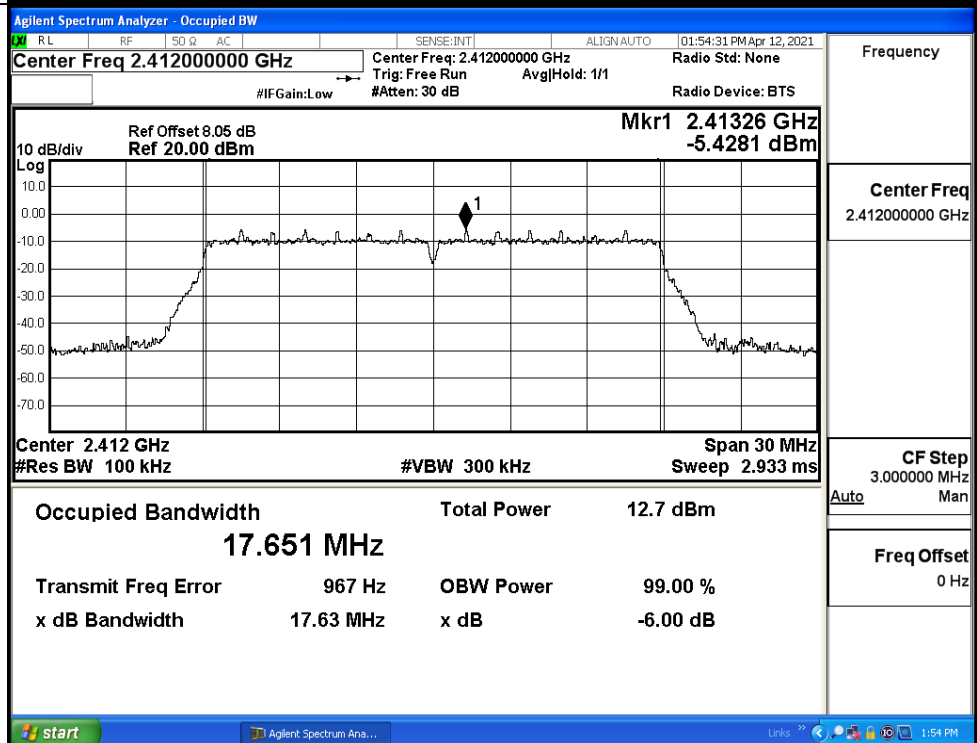
11G/HCH



Frequency

Center Freq  
2.46200000 GHzCF Step  
3.000000 MHz  
Auto ManFreq Offset  
0 Hz

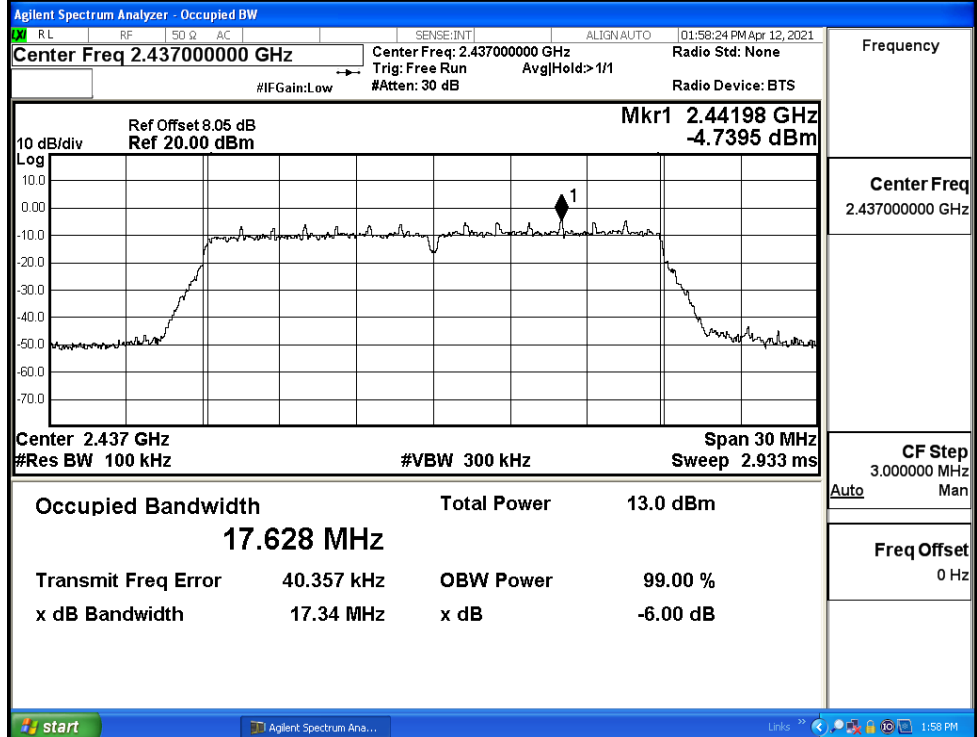
11N20SISO/LCH



Frequency

Center Freq  
2.41200000 GHzCF Step  
3.000000 MHz  
Auto ManFreq Offset  
0 Hz

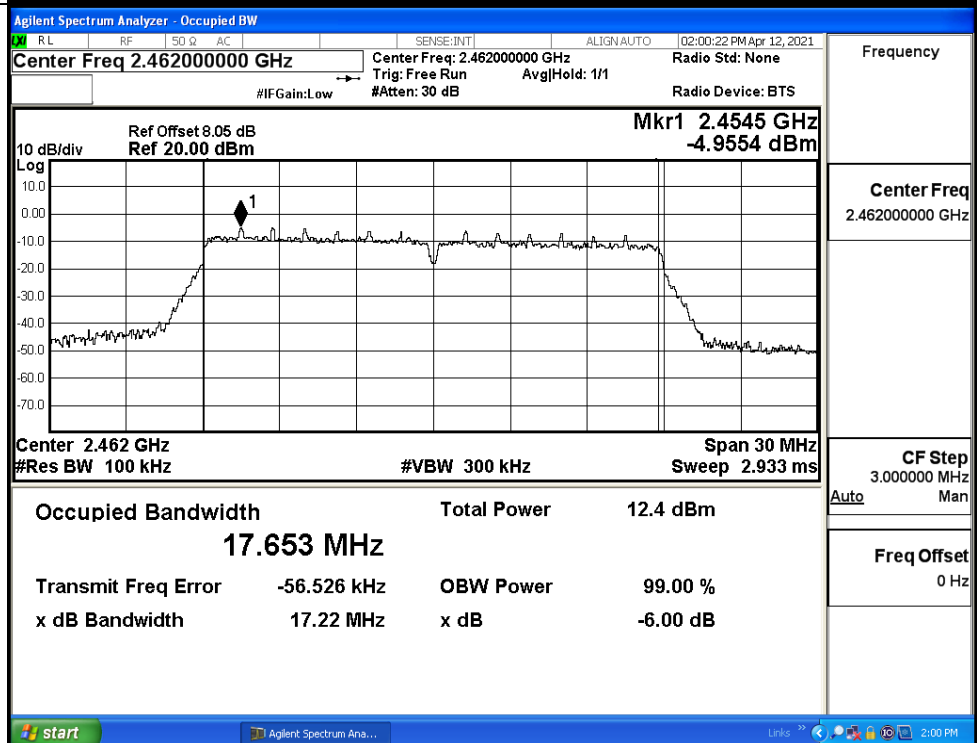
11N20SISO/MCH



Frequency

Center Freq  
2.437000000 GHzCF Step  
3.000000 MHz  
Auto ManFreq Offset  
0 Hz

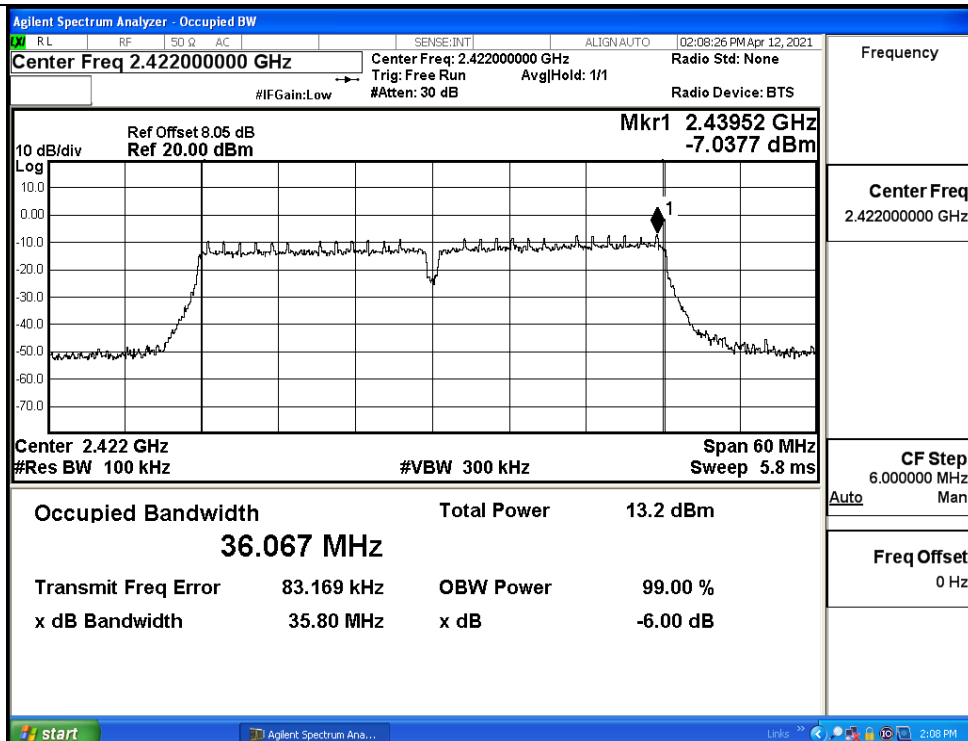
11N20SISO/HCH



Frequency

Center Freq  
2.462000000 GHzCF Step  
3.000000 MHz  
Auto ManFreq Offset  
0 Hz

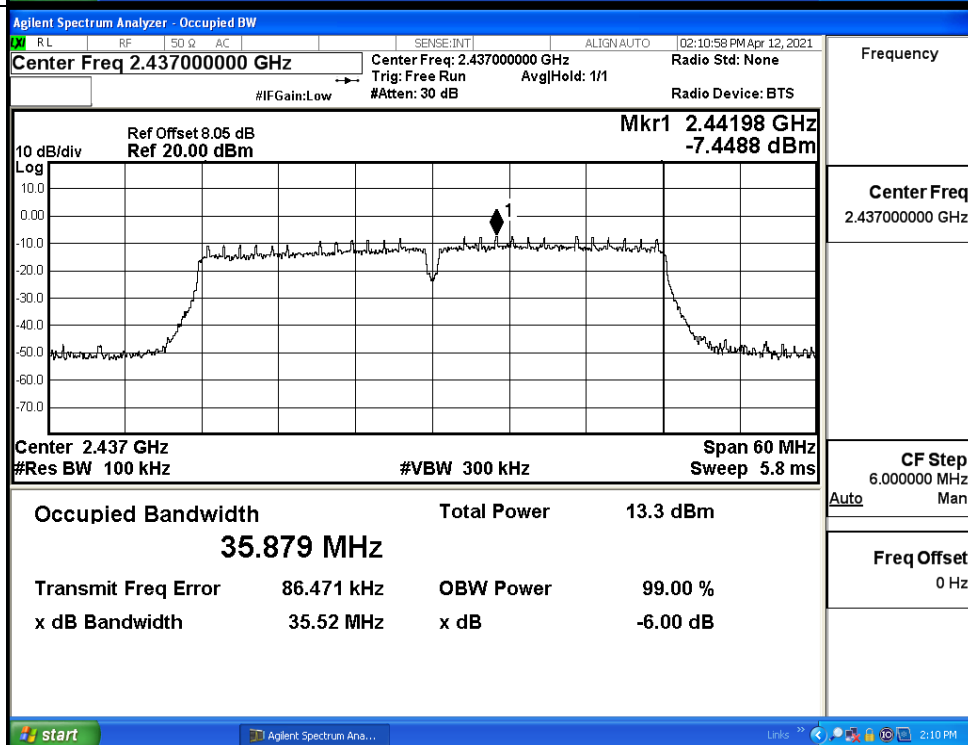
11N40SISO/LCH



Frequency

Center Freq  
2.422000000 GHzCF Step  
6.000000 MHz  
Auto ManFreq Offset  
0 Hz

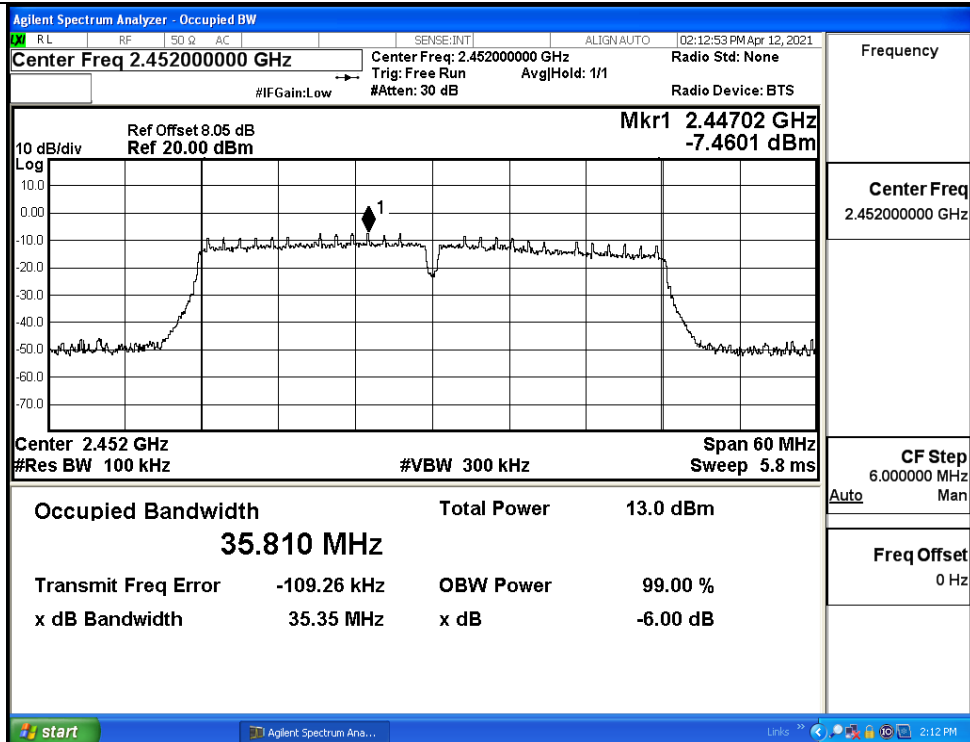
11N40SISO/MCH



Frequency

Center Freq  
2.437000000 GHzCF Step  
6.000000 MHz  
Auto ManFreq Offset  
0 Hz

11N40SISO/HCH

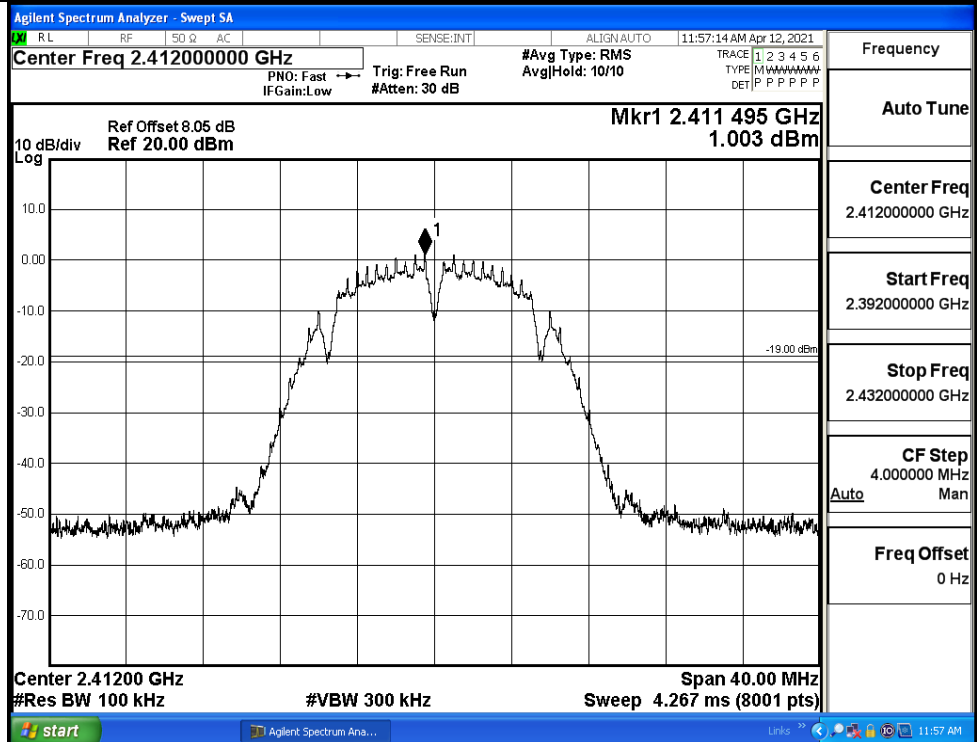


## C.5 RF Conducted Spurious Emissions

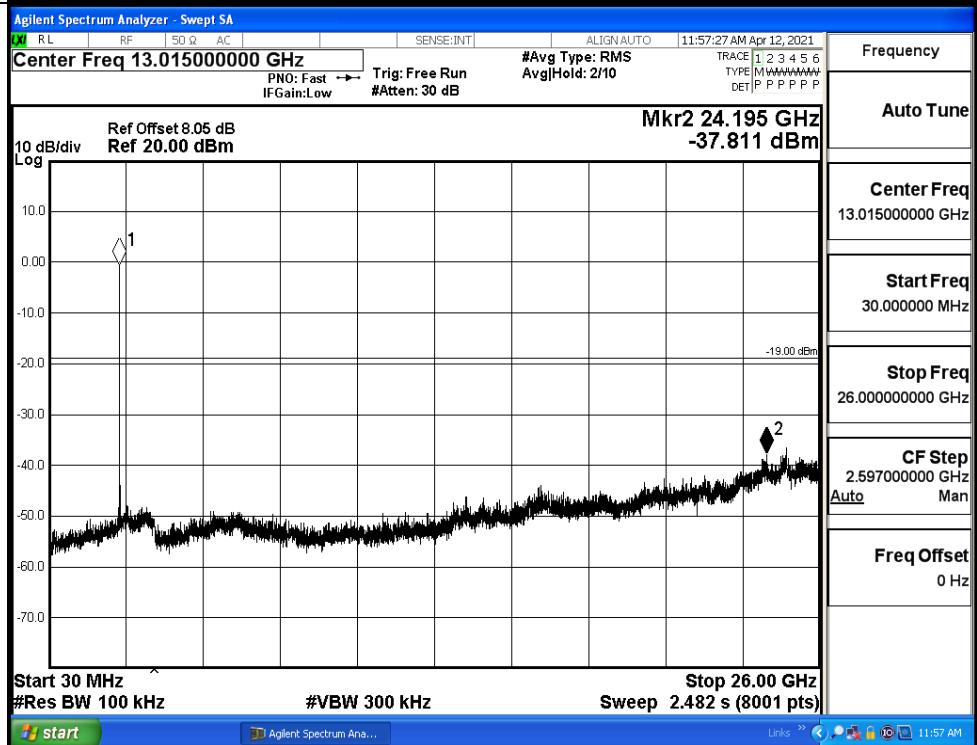
| Mode          | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B           | LCH     | 1.003      | -37.811          | -18.997     | PASS    |
|               | MCH     | 4.96       | -38.139          | -15.040     | PASS    |
|               | HCH     | 4.094      | -38.096          | -15.906     | PASS    |
| 11G           | LCH     | -6.165     | -37.695          | -26.165     | PASS    |
|               | MCH     | -4.84      | -38.242          | -24.840     | PASS    |
|               | HCH     | -4.948     | -37.569          | -24.948     | PASS    |
| 11N20<br>SISO | LCH     | -5.605     | -37.887          | -25.605     | PASS    |
|               | MCH     | -4.781     | -37.963          | -24.781     | PASS    |
|               | HCH     | -4.955     | -38.606          | -24.955     | PASS    |
| 11N40<br>SISO | LCH     | -7.454     | -38.086          | -27.454     | PASS    |
|               | MCH     | -7.593     | -38.390          | -27.593     | PASS    |
|               | HCH     | -7.304     | -38.285          | -27.304     | PASS    |

## 11B LCH Graphs

Pref/11B/LCH

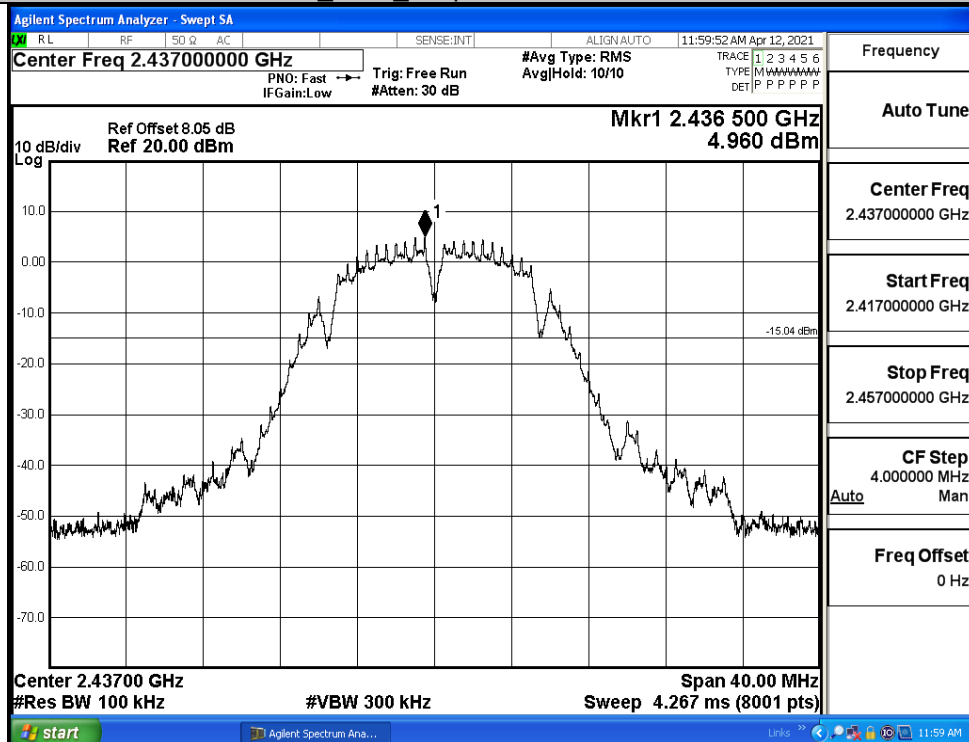


Puw/11B/LCH

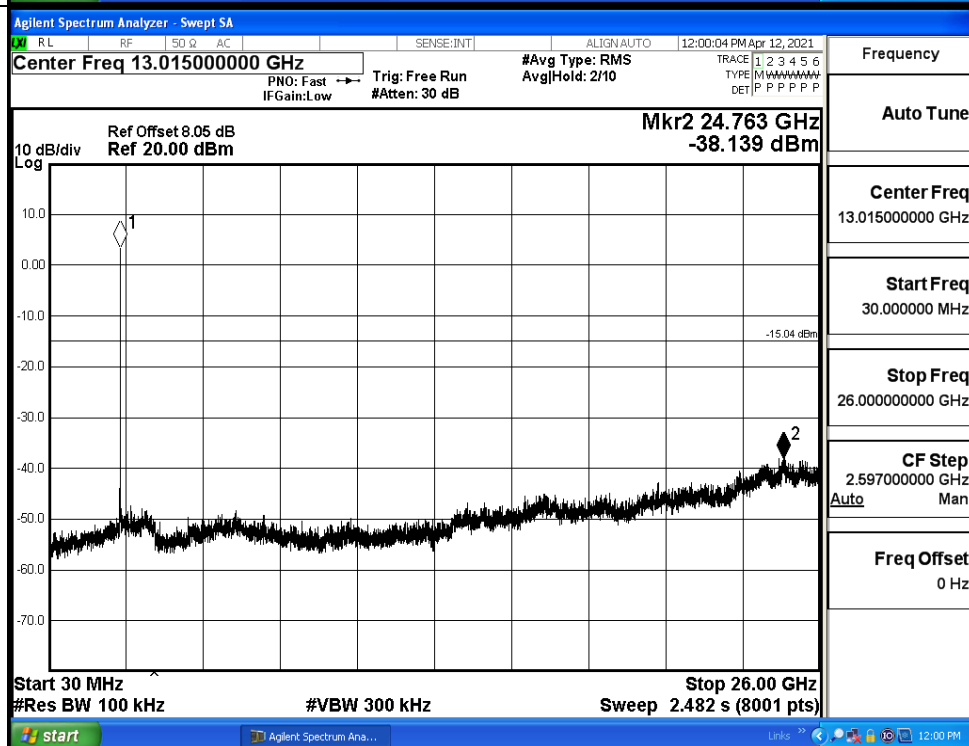


## 11B MCH Graphs

Pref/11B/MCH

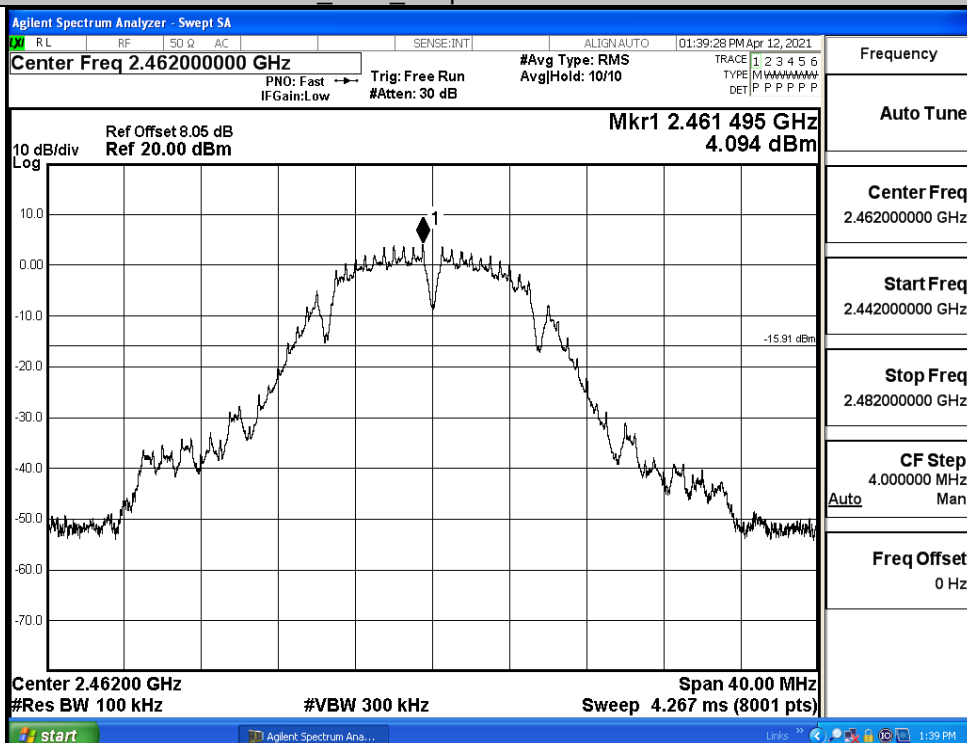


Puw/11B/MCH

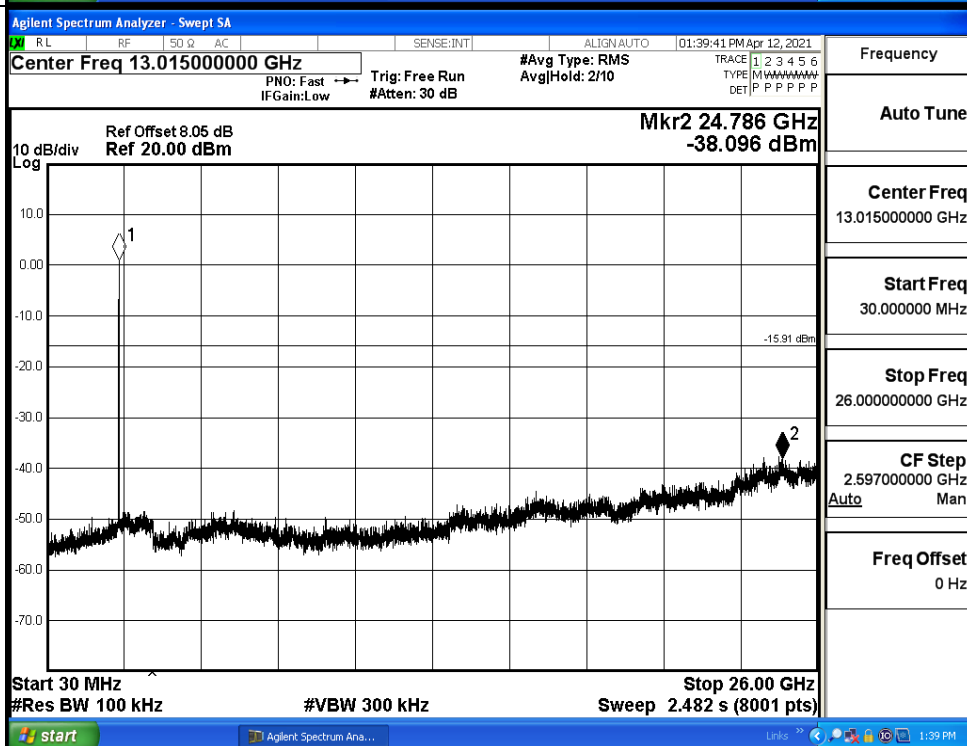


## 11B HCH Graphs

Pref/11B/HCH

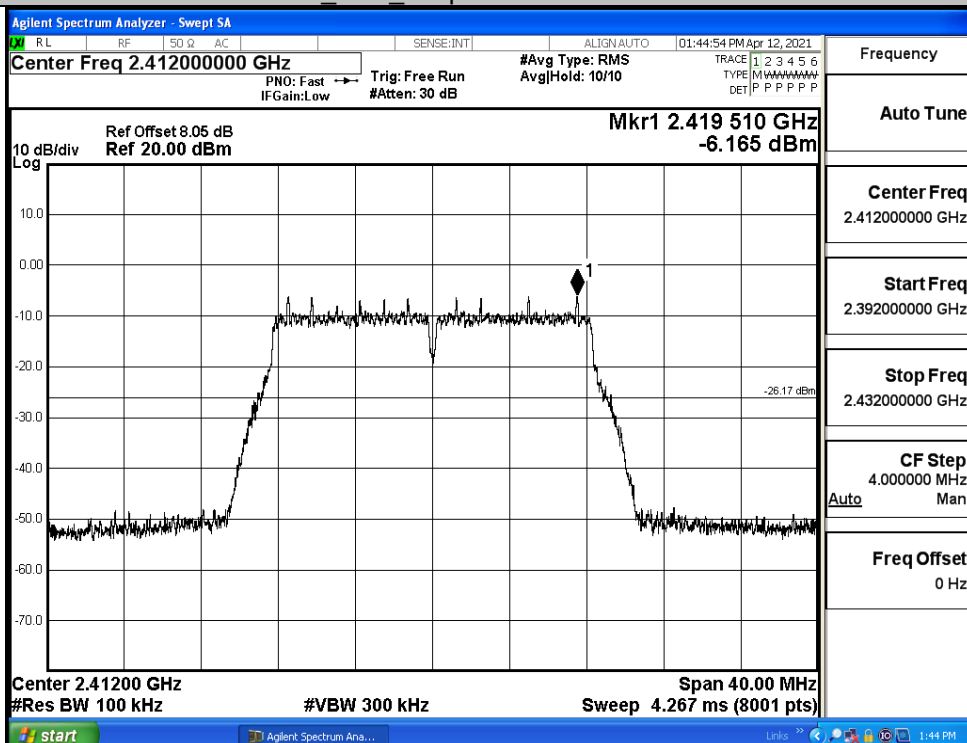


Puw/11B/HCH

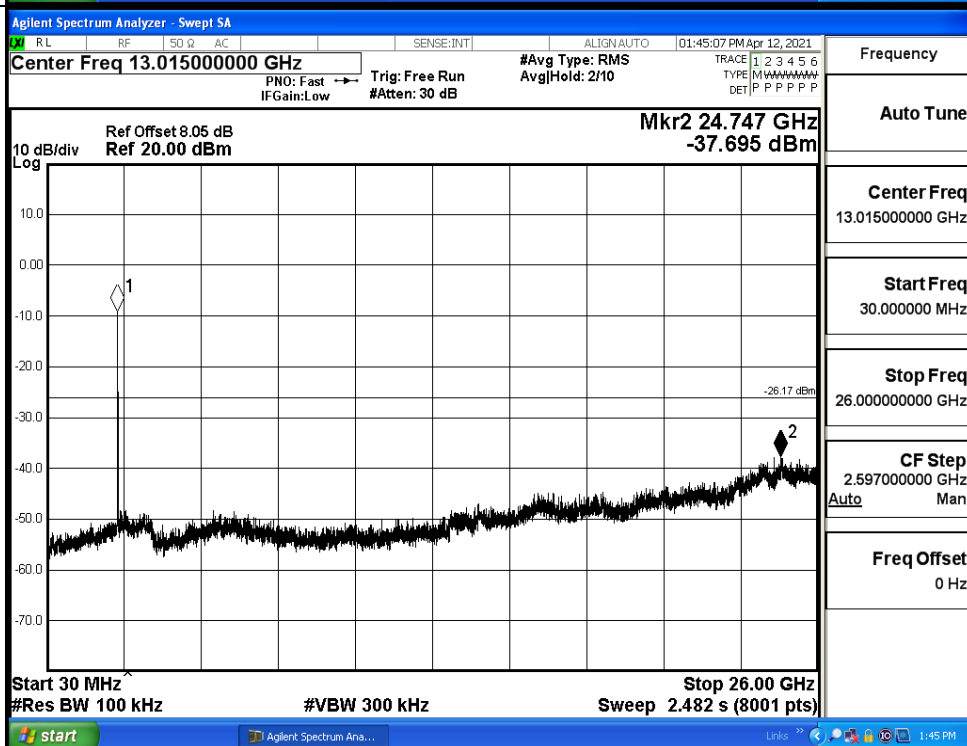


## 11G LCH Graphs

Pref/11G/LCH



Puw/11G/LCH



# 11G\_MCH\_Graphs

Pref/11G/MCH

Agilent Spectrum Analyzer - Swept SA

Center Freq 2.437000000 GHz

Mkr1 2.438 255 GHz -4.840 dBm

Span 40.00 MHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 4.267 ms (8001 pts)

Ref Offset 8.05 dB

Ref 20.00 dBm

10 dB/div

Log

Start 2.437000000 GHz

Stop 2.477000000 GHz

CF Step 4.000000 MHz

Freq Offset 0 Hz

Auto Tune

Center Freq 2.437000000 GHz

Start Freq 2.417000000 GHz

Stop Freq 2.457000000 GHz

CF Step 4.000000 MHz

Auto

Freq Offset 0 Hz

Puw/11G/MCH

Agilent Spectrum Analyzer - Swept SA

Center Freq 13.015000000 GHz

Mkr2 25.098 GHz -38.242 dBm

Span 26.00 GHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 2.482 s (8001 pts)

Ref Offset 8.05 dB

Ref 20.00 dBm

10 dB/div

Log

Start 30 MHz

Stop 26.00 GHz

CF Step 2.597000000 MHz

Freq Offset 0 Hz

Auto Tune

Center Freq 13.015000000 GHz

Start Freq 30.000000 MHz

Stop Freq 26.000000000 GHz

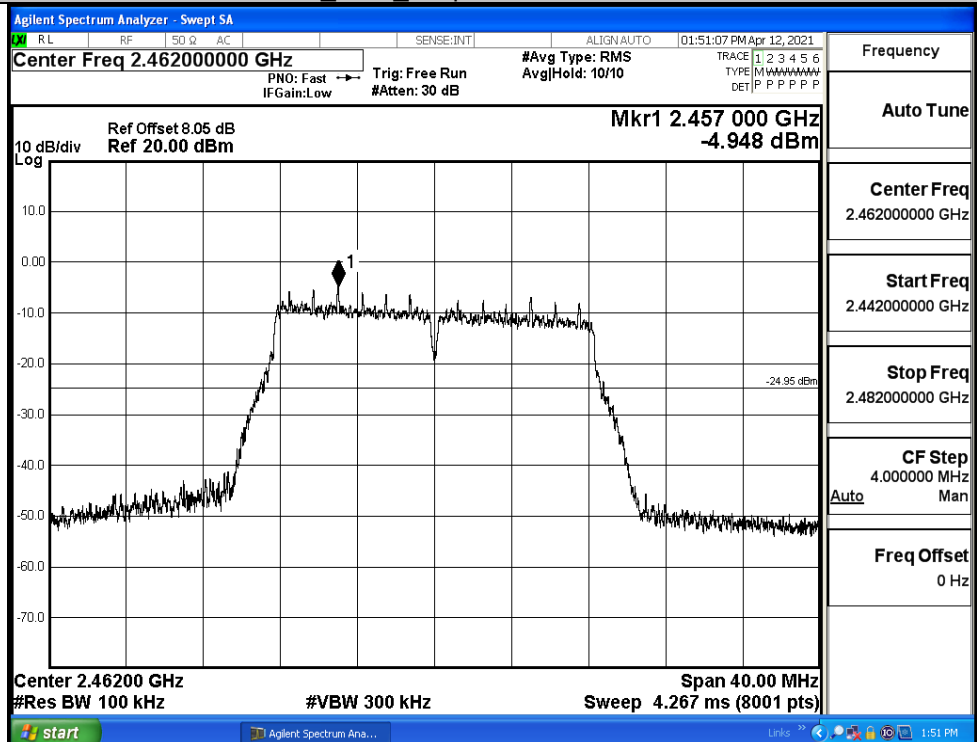
CF Step 2.597000000 MHz

Auto

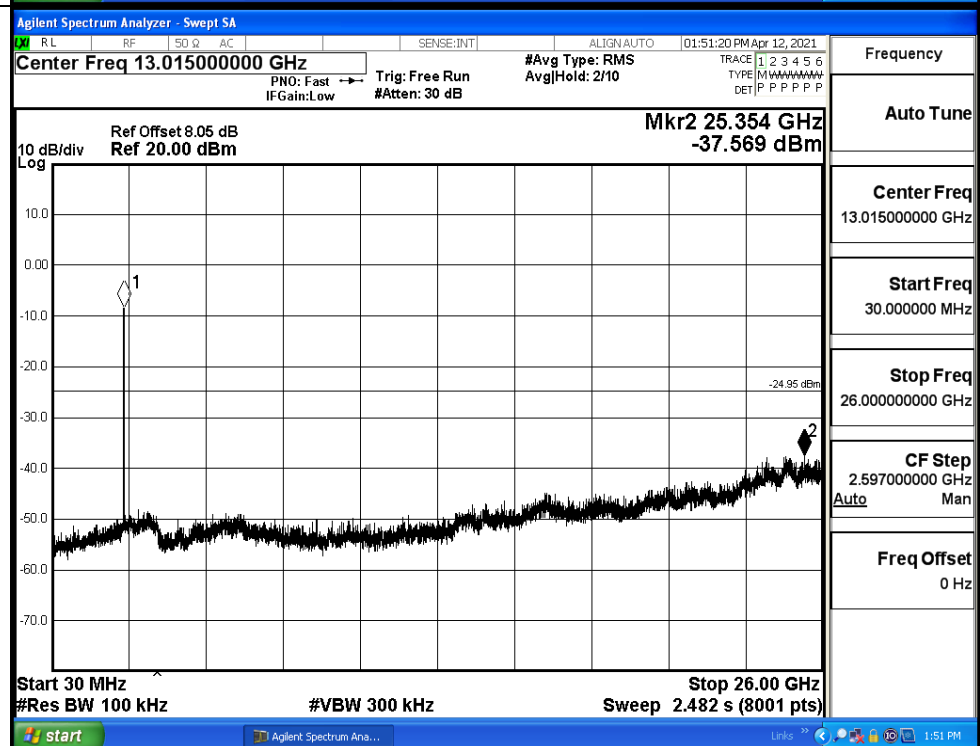
Freq Offset 0 Hz

## 11G HCH Graphs

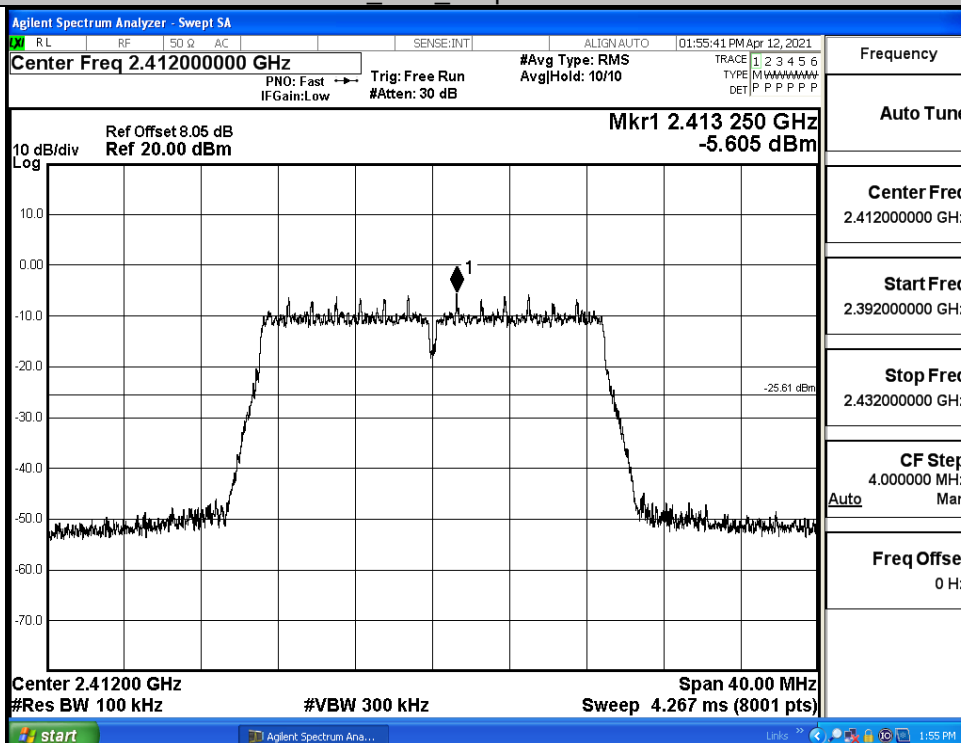
Pref/11G/HCH



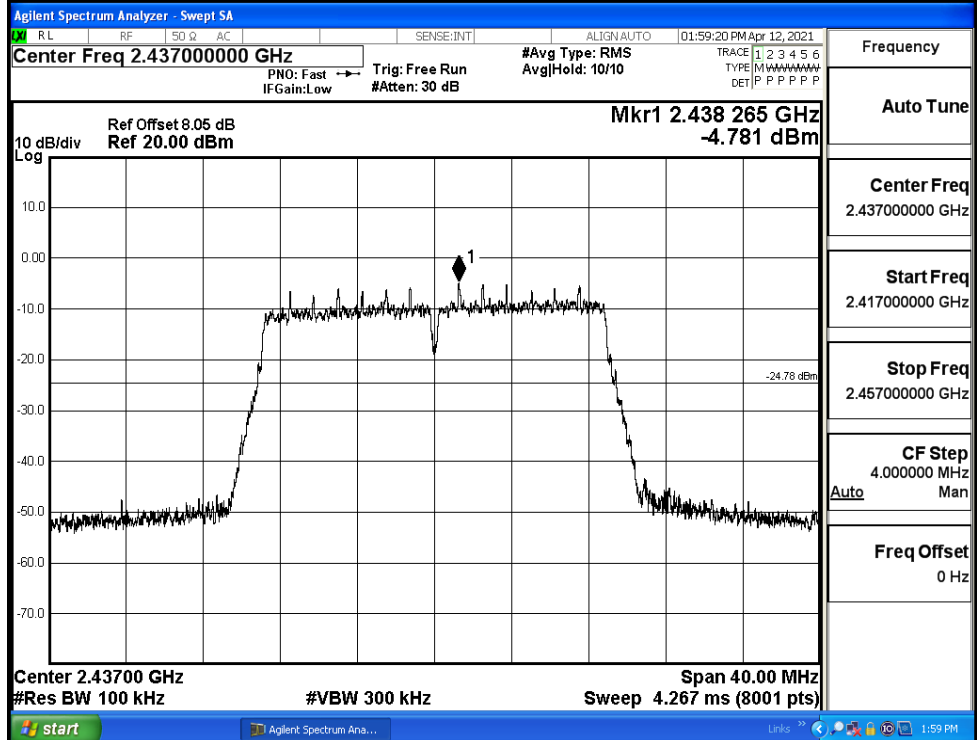
Puw/11G/HCH



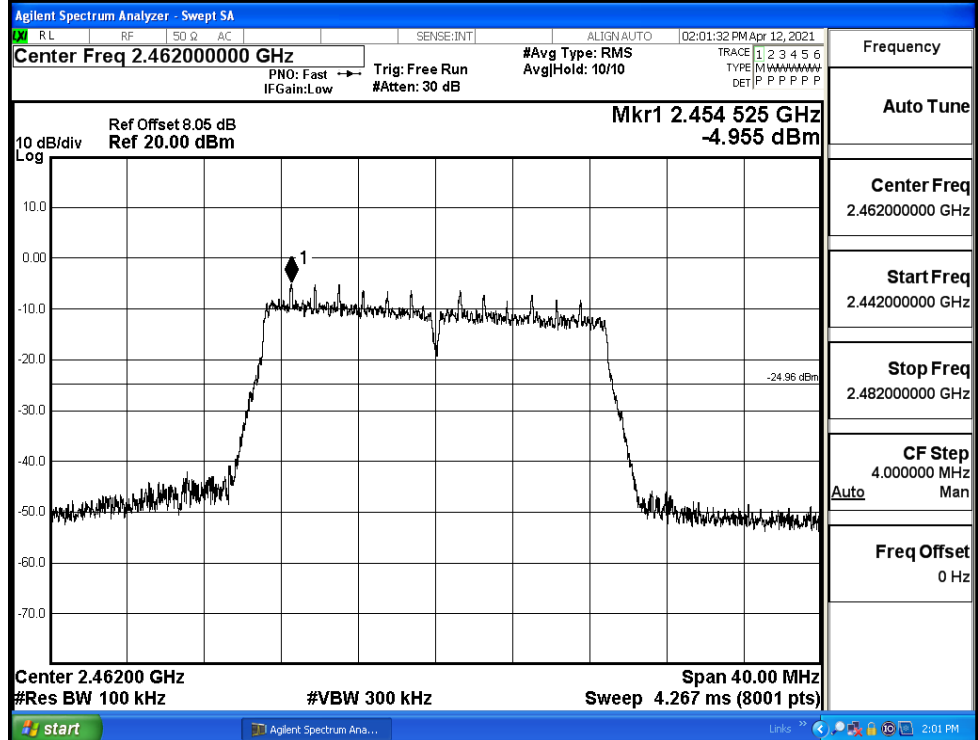
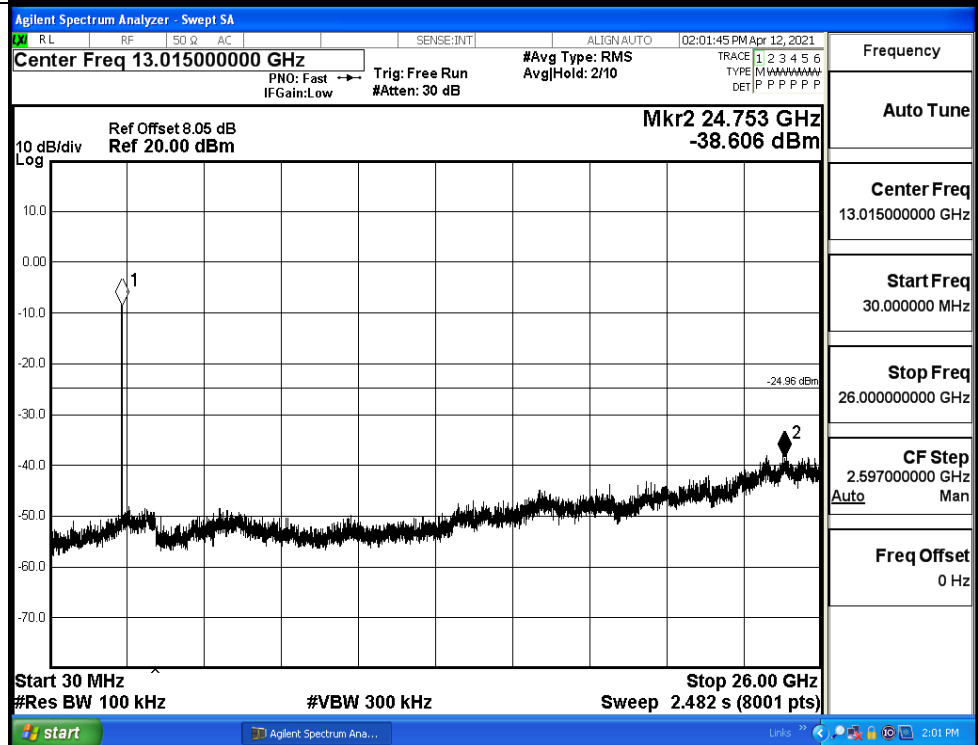
## 11N20SISO LCH Graphs

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

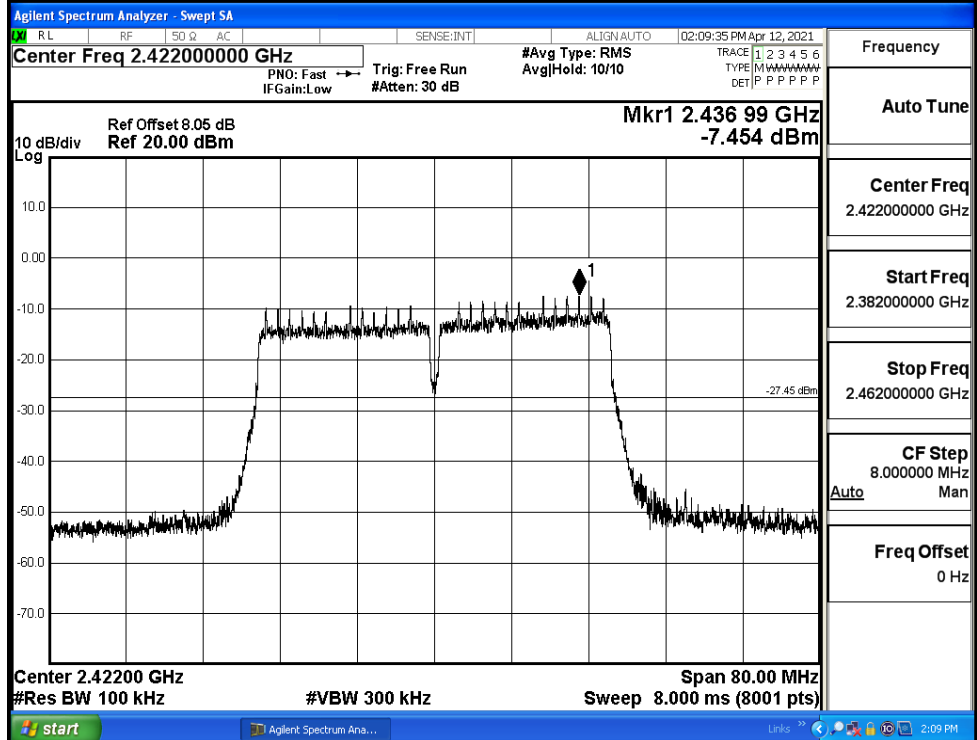
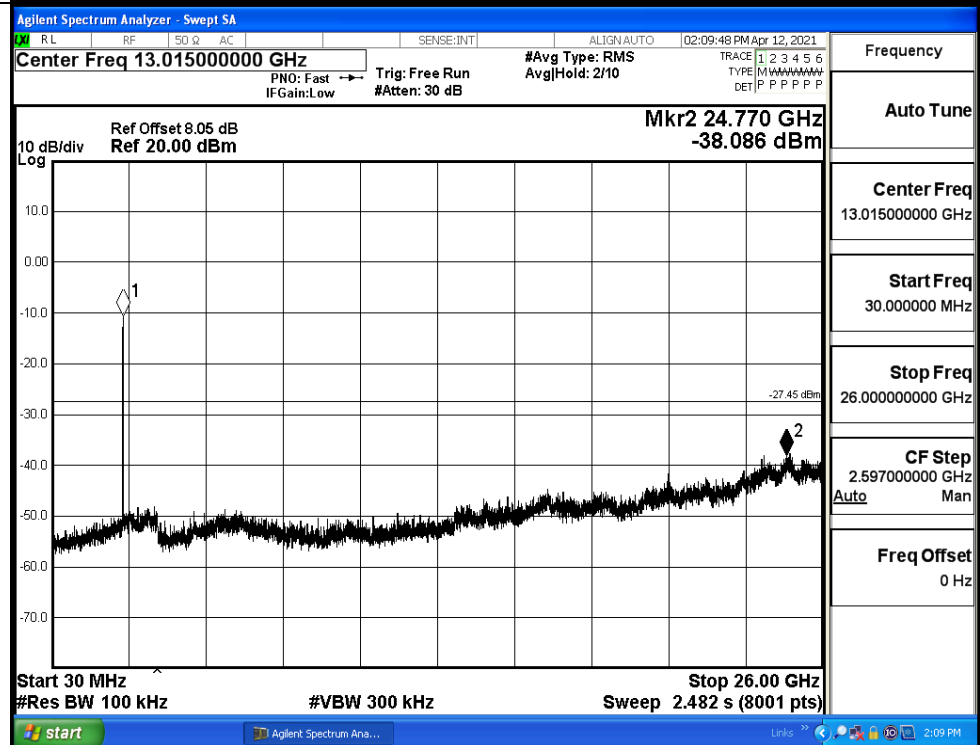
## 11N20SISO\_MCH\_Graphs

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

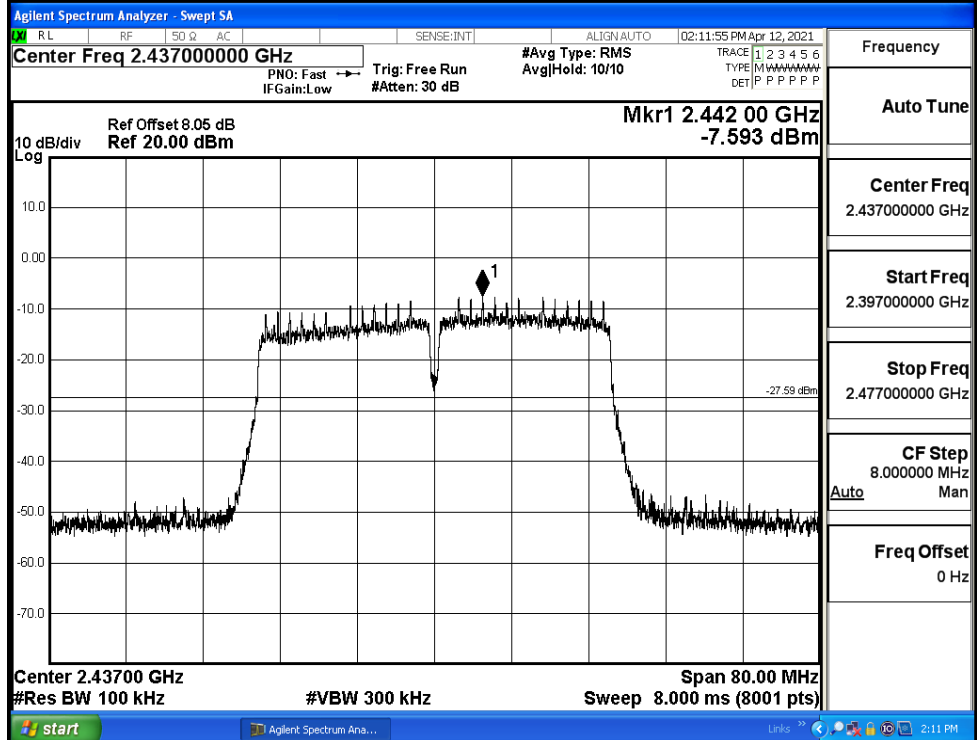
## 11N20SISO HCH Graphs

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

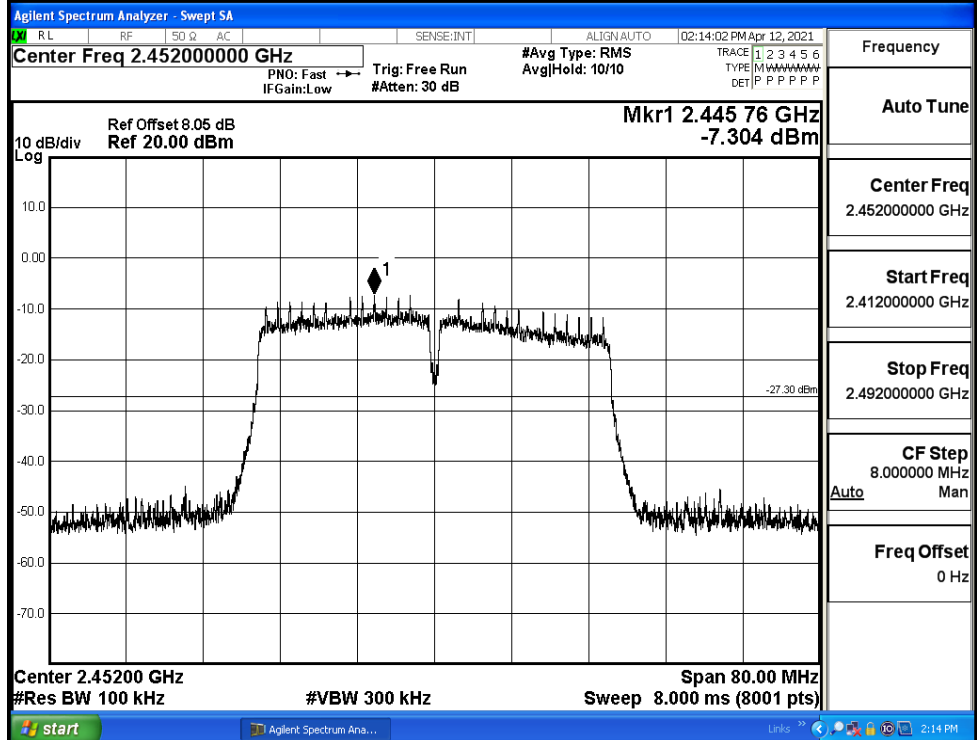
## 11N40SISO LCH Graphs

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

## 11N40SISO\_MCH\_Graphs

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

## 11N40SISO HCH Graphs

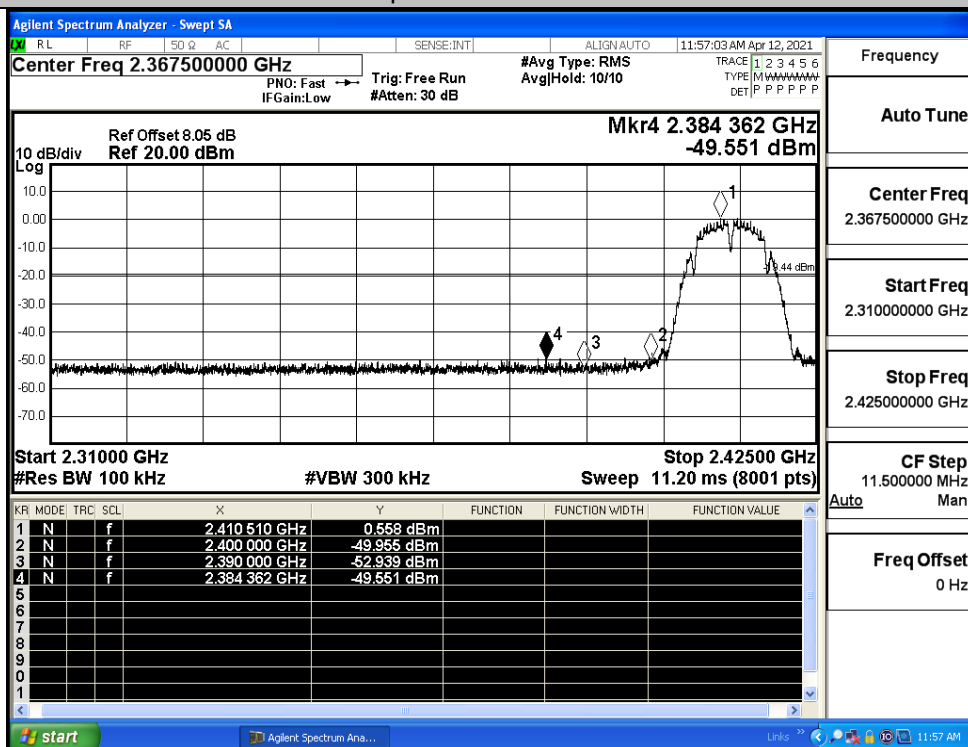
Pref/11N40  
SISO/HCHPuw/11N40  
SISO/HCH

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

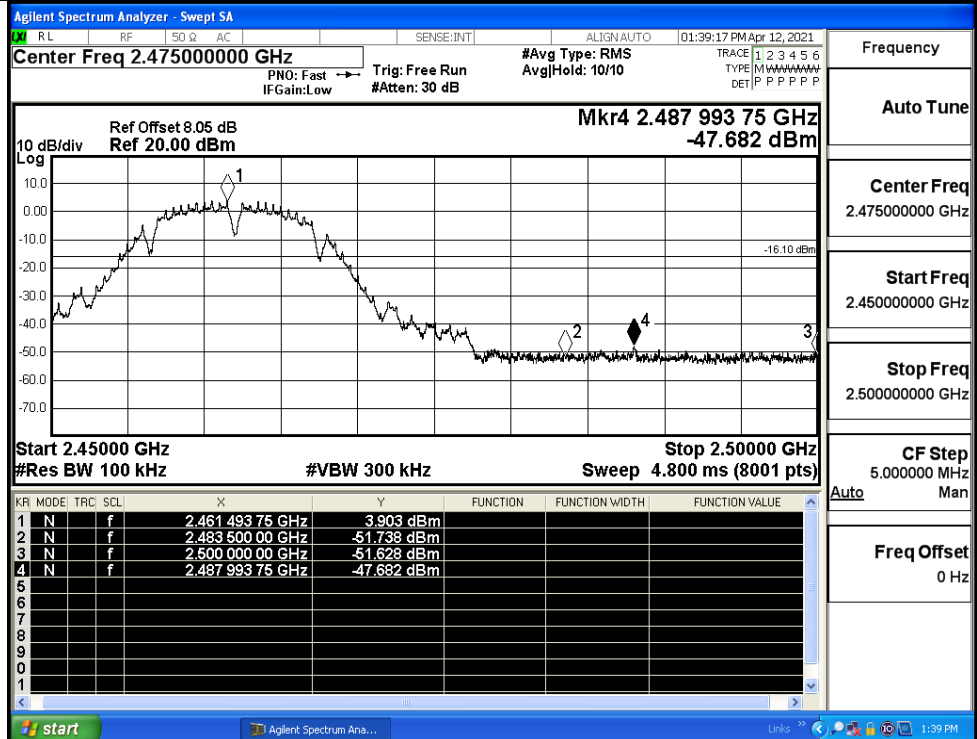
| Mode      | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B       | LCH     | 0.558              | -49.551                  | -19.44      | PASS    |
|           | HCH     | 3.903              | -47.682                  | -16.1       | PASS    |
| 11G       | LCH     | -5.952             | -49.882                  | -25.95      | PASS    |
|           | HCH     | -5.231             | -46.791                  | -25.23      | PASS    |
| 11N20SISO | LCH     | -5.839             | -50.083                  | -25.84      | PASS    |
|           | HCH     | -4.772             | -47.592                  | -24.77      | PASS    |
| 11N40SISO | LCH     | -7.276             | -48.148                  | -27.28      | PASS    |
|           | HCH     | -7.228             | -47.051                  | -27.23      | PASS    |

## Test Graphs

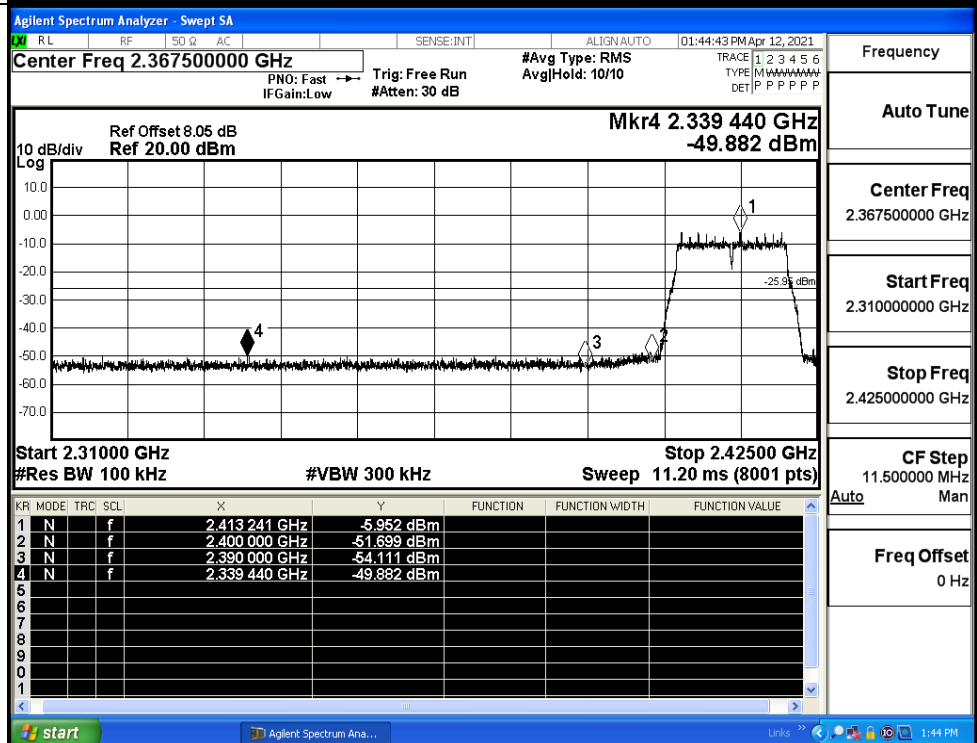
11B/LCH



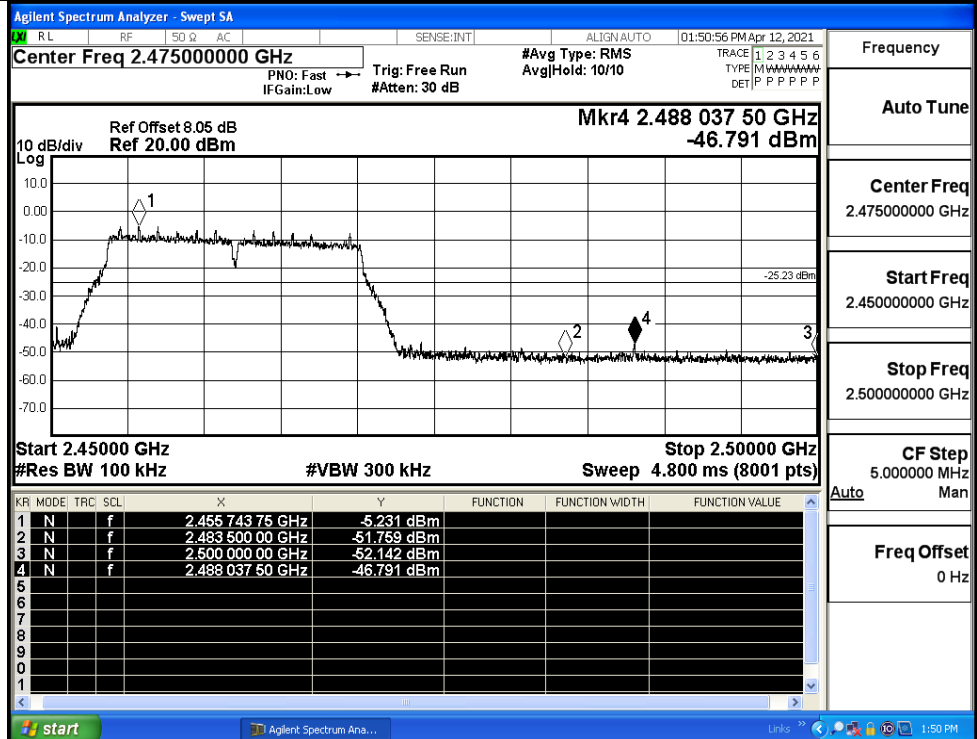
11B/HCH



11G/LCH



11G/HCH



Frequency

Auto Tune

Center Freq

2.475000000 GHz

Start Freq

2.450000000 GHz

Stop Freq

2.500000000 GHz

CF Step

5.000000 MHz

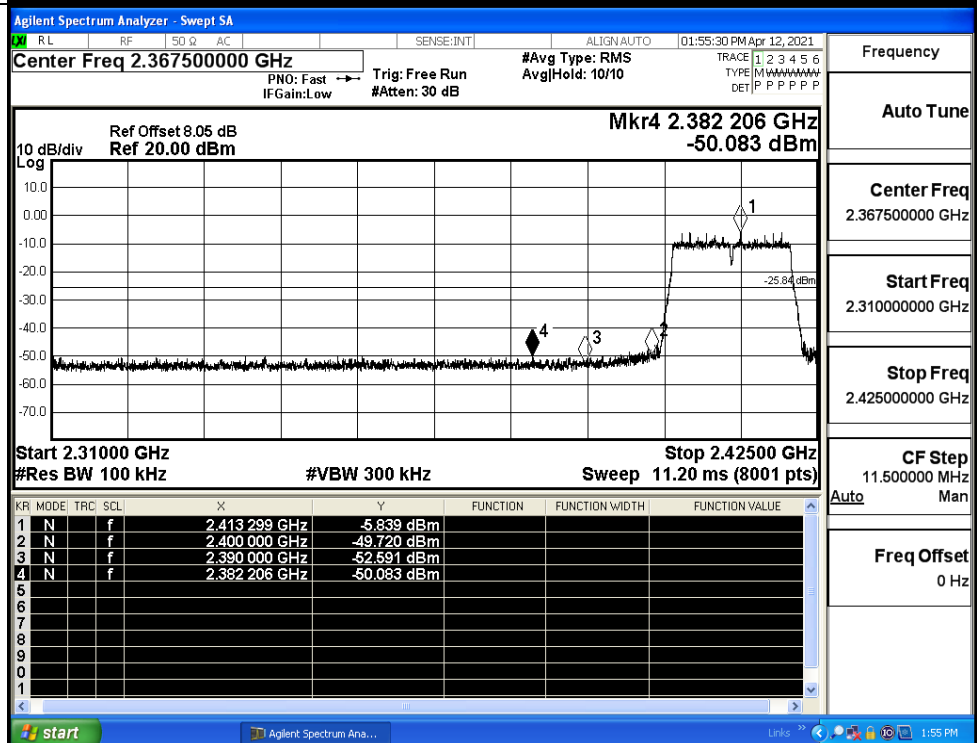
Auto

Man

Freq Offset

0 Hz

11N20SISO/LCH



Frequency

Auto Tune

Center Freq

2.367500000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.425000000 GHz

CF Step

11.500000 MHz

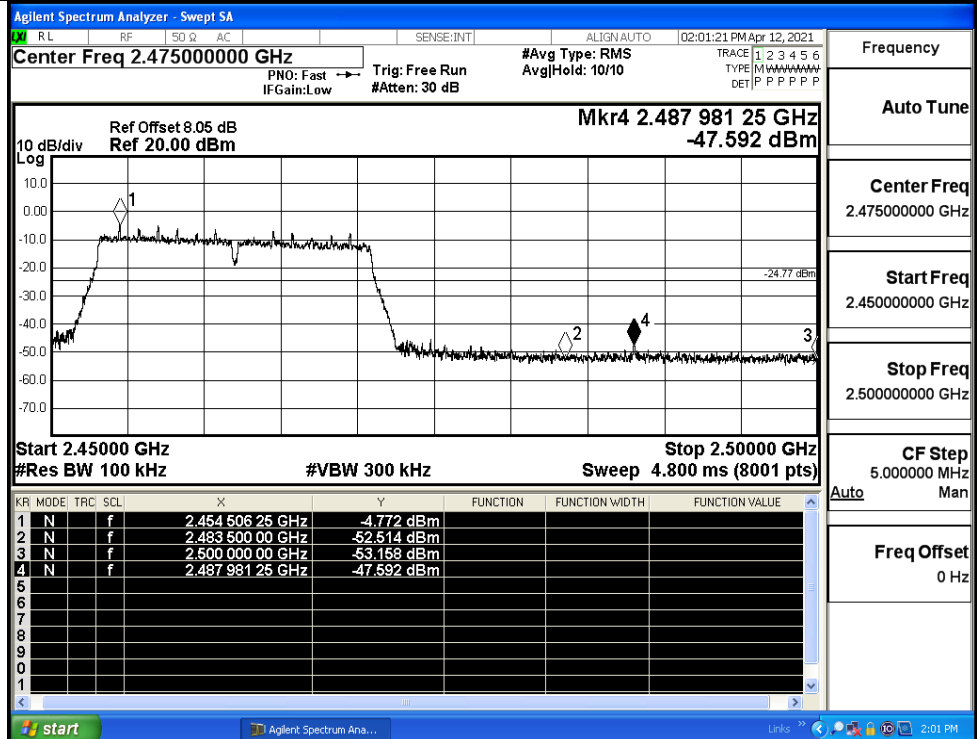
Auto

Man

Freq Offset

0 Hz

11N20SISO/HCH



Frequency

Auto Tune

Center Freq

2.475000000 GHz

Start Freq

2.450000000 GHz

Stop Freq

2.500000000 GHz

CF Step

5.000000 MHz

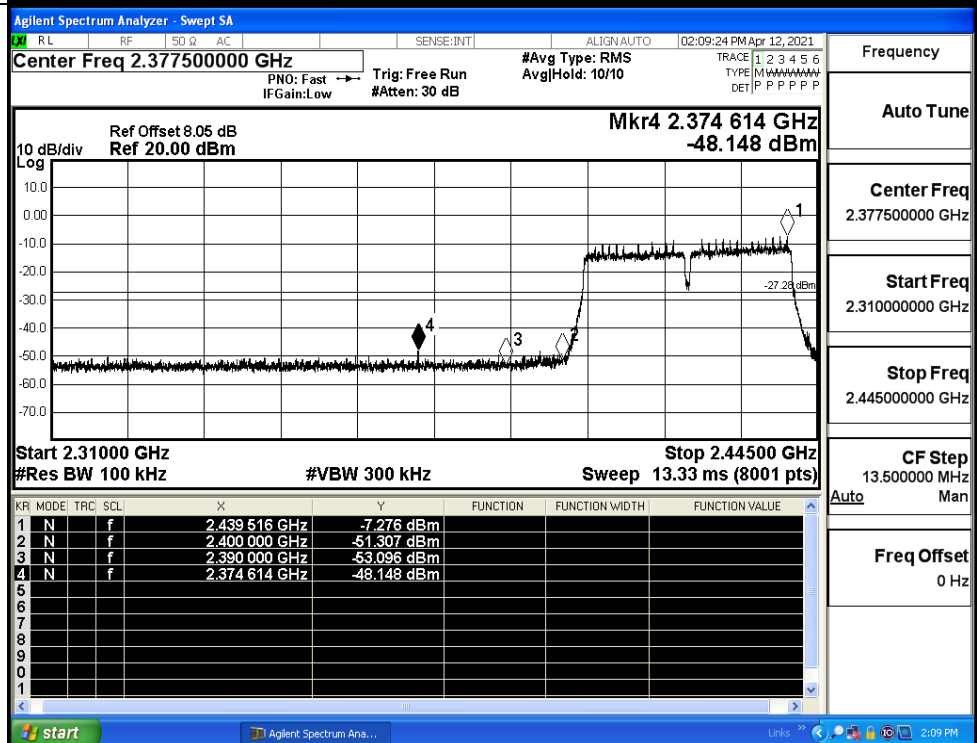
Auto

Man

Freq Offset

0 Hz

11N40SISO/LCH



Frequency

Auto Tune

Center Freq

2.377500000 GHz

Start Freq

2.310000000 GHz

Stop Freq

2.445000000 GHz

CF Step

13.500000 MHz

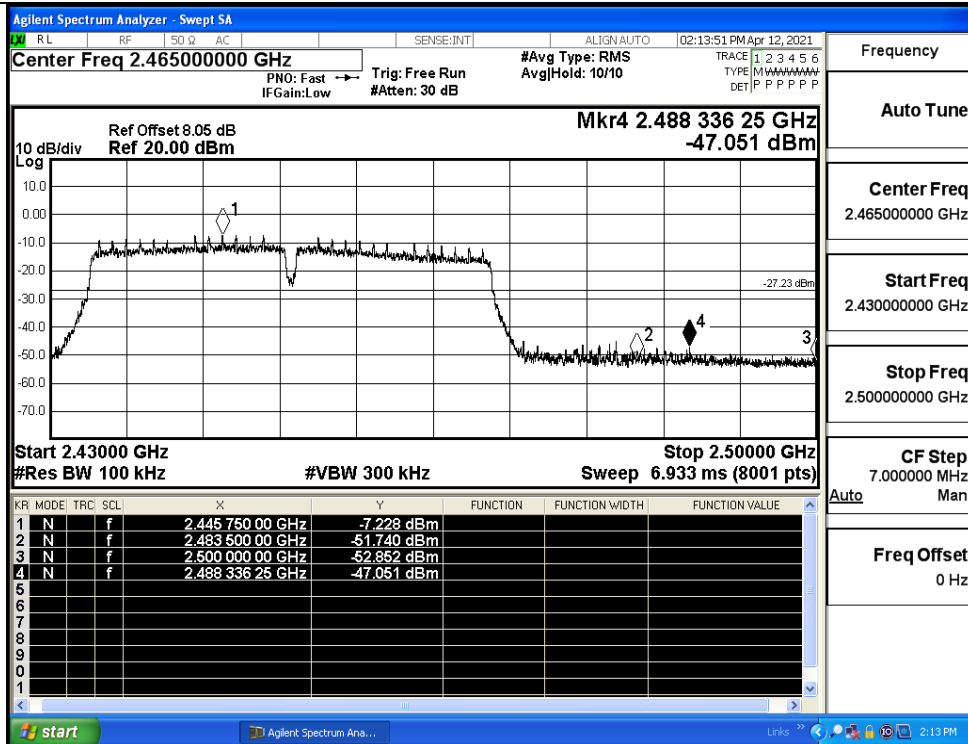
Auto

Man

Freq Offset

0 Hz

11N40SISO/HCH

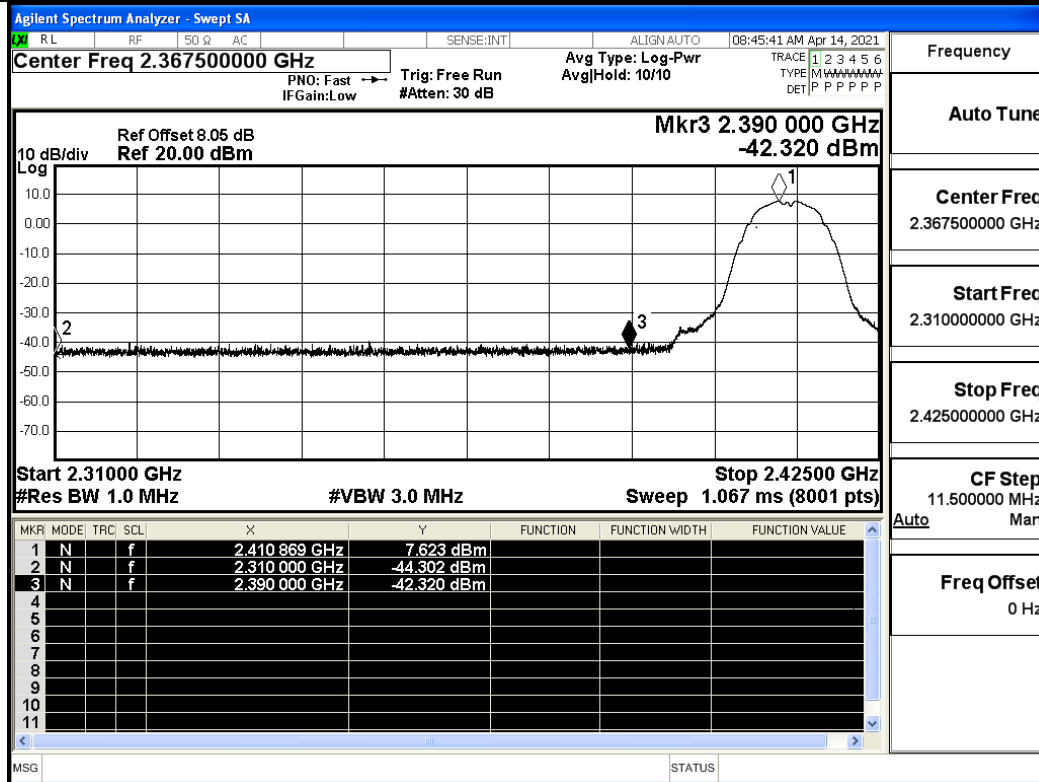


## C.7 Restrict-band band-edge measurements

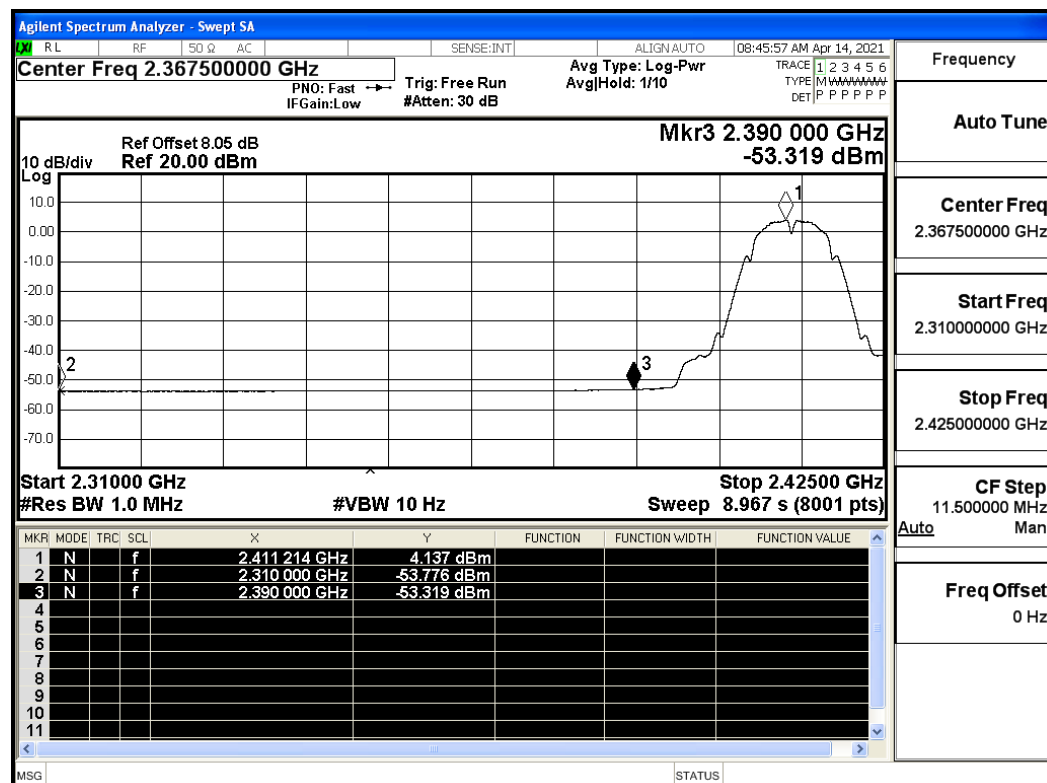
| Test Mode     | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---------------|--------------|------|--------|-------------|------|---------------|------------|----------|----------------|---------|
| 11B           | 2412         | Ant1 | 2310.0 | -44.30      | 4.2  | 0             | 55.13      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -53.78      | 4.2  | 0             | 45.65      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -42.32      | 4.2  | 0             | 57.11      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -53.32      | 4.2  | 0             | 46.11      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -41.01      | 4.2  | 0             | 58.42      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -51.35      | 4.2  | 0             | 48.08      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -41.33      | 4.2  | 0             | 58.10      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -52.68      | 4.2  | 0             | 46.75      | AV       | 54             | PASS    |
| 11G           | 2412         | Ant1 | 2310.0 | -43.24      | 4.2  | 0             | 56.19      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -53.64      | 4.2  | 0             | 45.79      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -42.08      | 4.2  | 0             | 57.35      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -52.96      | 4.2  | 0             | 46.47      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -38.11      | 4.2  | 0             | 61.32      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -51.67      | 4.2  | 0             | 47.76      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -42.31      | 4.2  | 0             | 57.12      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -52.68      | 4.2  | 0             | 46.75      | AV       | 54             | PASS    |
| 11N20<br>SISO | 2412         | Ant1 | 2310.0 | -42.73      | 4.2  | 0             | 56.70      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2310.0 | -53.66      | 4.2  | 0             | 45.77      | AV       | 54             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -43.07      | 4.2  | 0             | 56.36      | PEAK     | 74             | PASS    |
|               | 2412         | Ant1 | 2390.0 | -53.03      | 4.2  | 0             | 46.40      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -40.09      | 4.2  | 0             | 59.34      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2483.5 | -51.32      | 4.2  | 0             | 48.11      | AV       | 54             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -41.54      | 4.2  | 0             | 57.89      | PEAK     | 74             | PASS    |
|               | 2462         | Ant1 | 2500.0 | -52.69      | 4.2  | 0             | 46.74      | AV       | 54             | PASS    |
| 11N40<br>SISO | 2422         | Ant1 | 2310.0 | -44.04      | 4.2  | 0             | 55.39      | PEAK     | 74             | PASS    |
|               | 2422         | Ant1 | 2310.0 | -53.61      | 4.2  | 0             | 45.82      | AV       | 54             | PASS    |

|  |      |      |        |        |     |   |       |      |    |      |
|--|------|------|--------|--------|-----|---|-------|------|----|------|
|  | 2422 | Ant1 | 2390.0 | -41.65 | 4.2 | 0 | 57.78 | PEAK | 74 | PASS |
|  | 2422 | Ant1 | 2390.0 | -53.11 | 4.2 | 0 | 46.32 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2483.5 | -38.11 | 4.2 | 0 | 61.32 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2483.5 | -50.64 | 4.2 | 0 | 48.79 | AV   | 54 | PASS |
|  | 2452 | Ant1 | 2500.0 | -42.83 | 4.2 | 0 | 56.60 | PEAK | 74 | PASS |
|  | 2452 | Ant1 | 2500.0 | -52.64 | 4.2 | 0 | 46.79 | AV   | 54 | PASS |

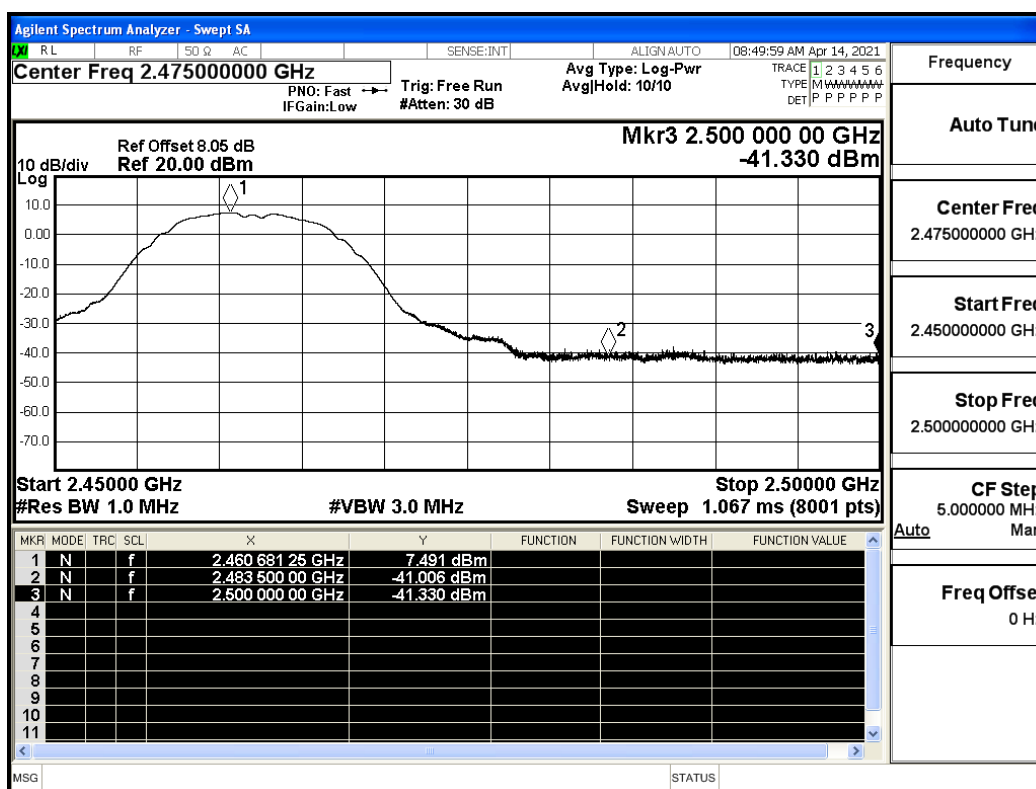
## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_PEAK



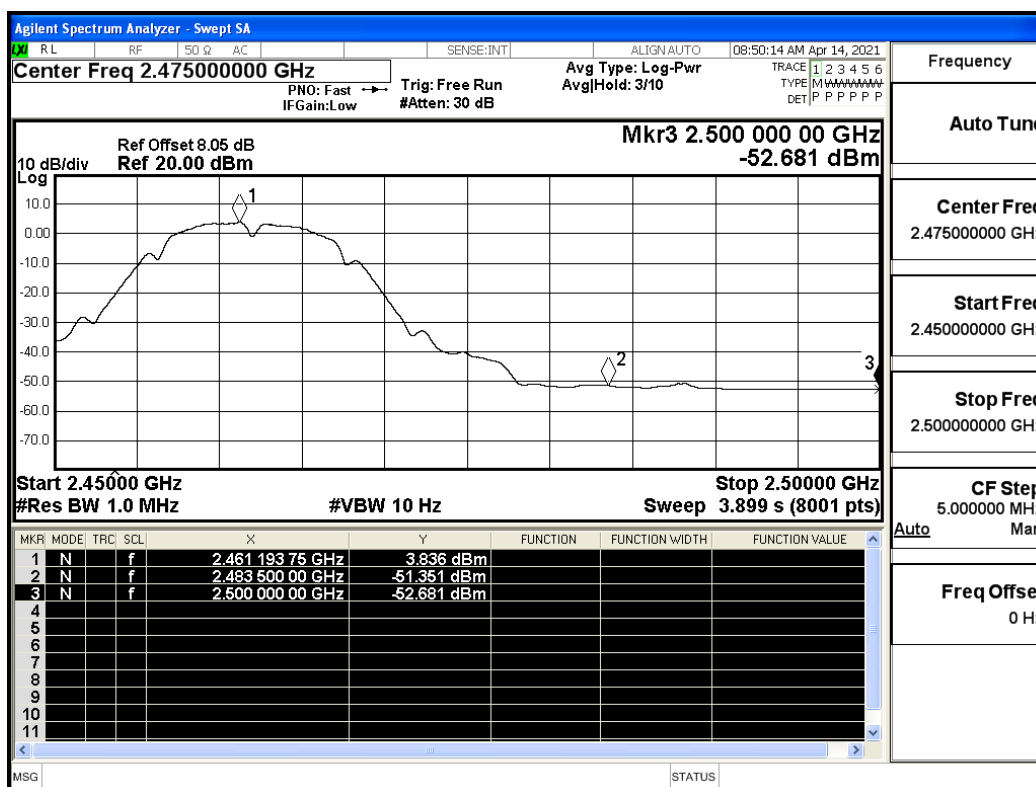
## Restrict-band band-edge measurements\_11B\_2412\_Ant1\_AV



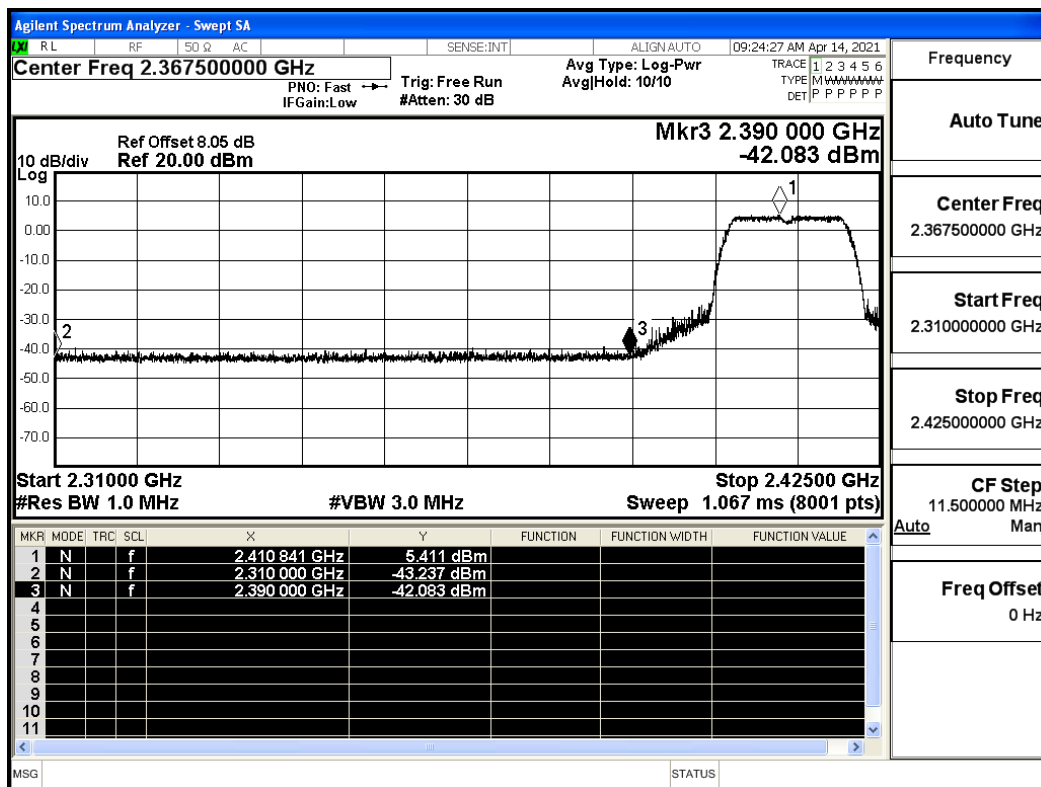
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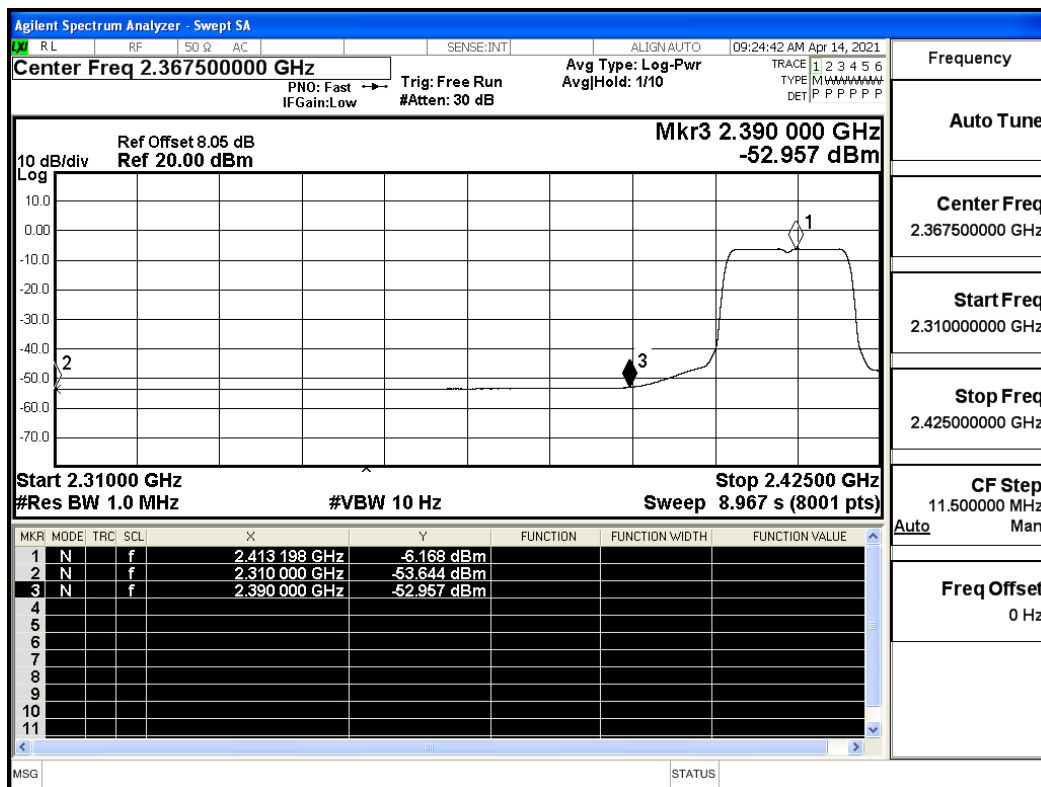
## Restrict-band band-edge measurements\_11B\_2462\_Ant1\_AV



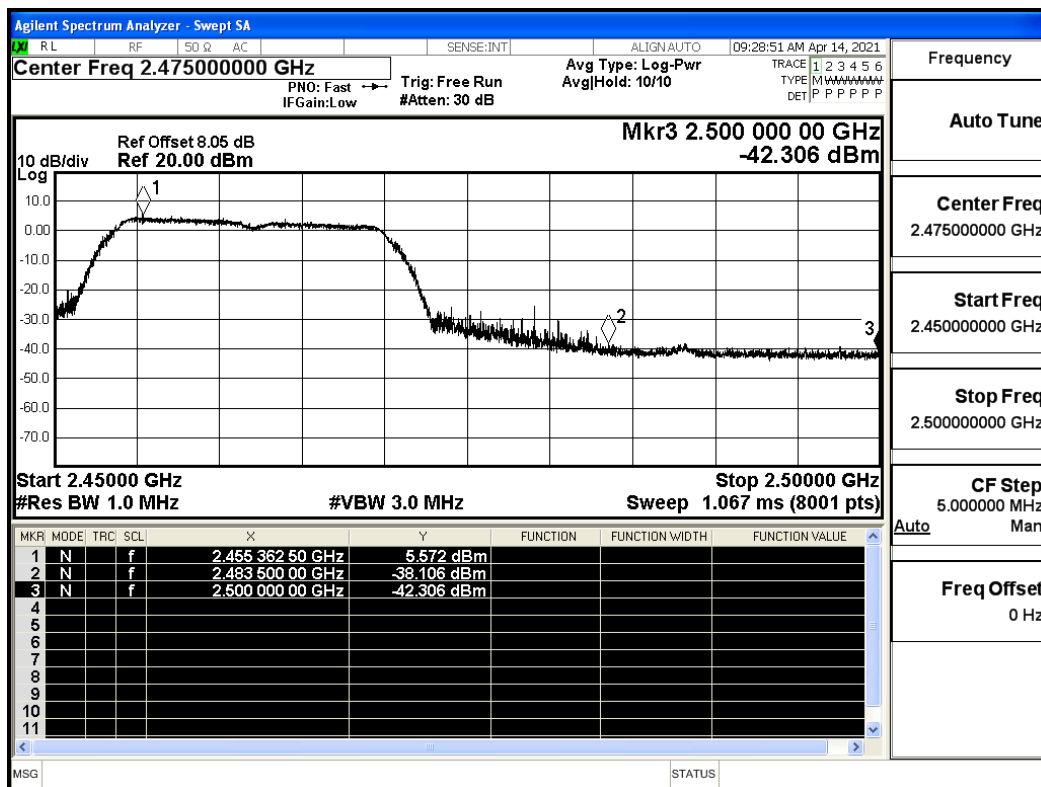
## Restrict-band band-edge measurements\_11G\_2412\_Ant1\_PEAK



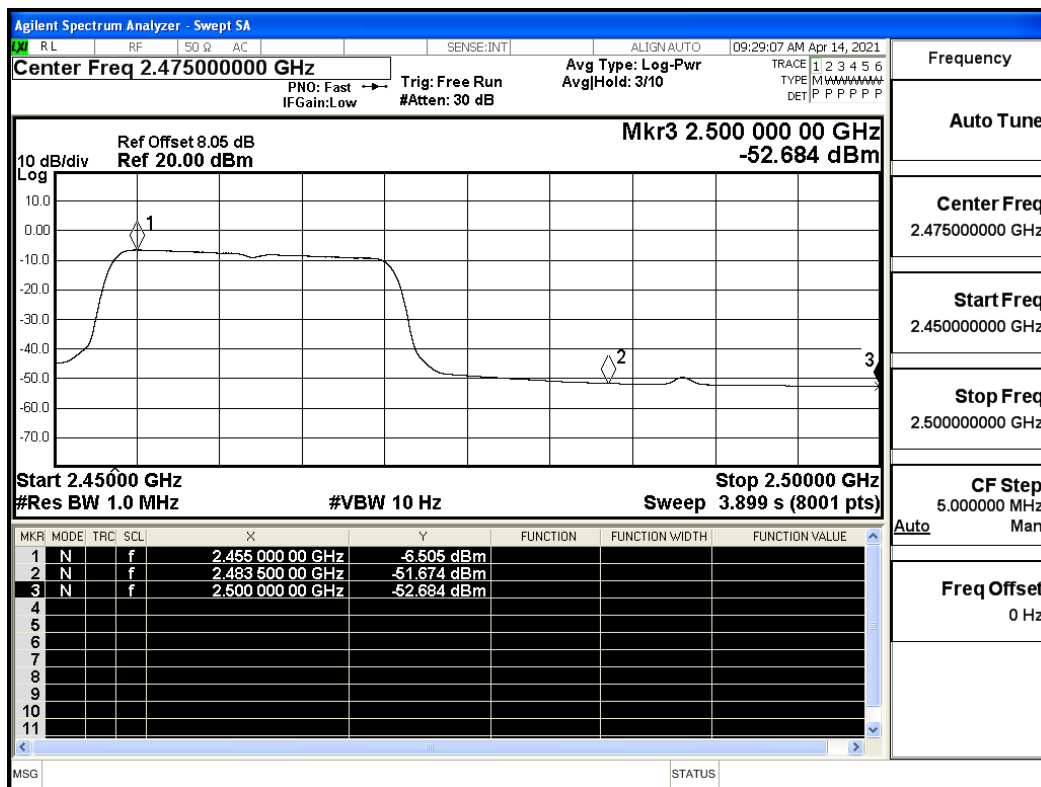
## Restrict-band band-edge measurements\_11G\_2412\_Ant1\_AV



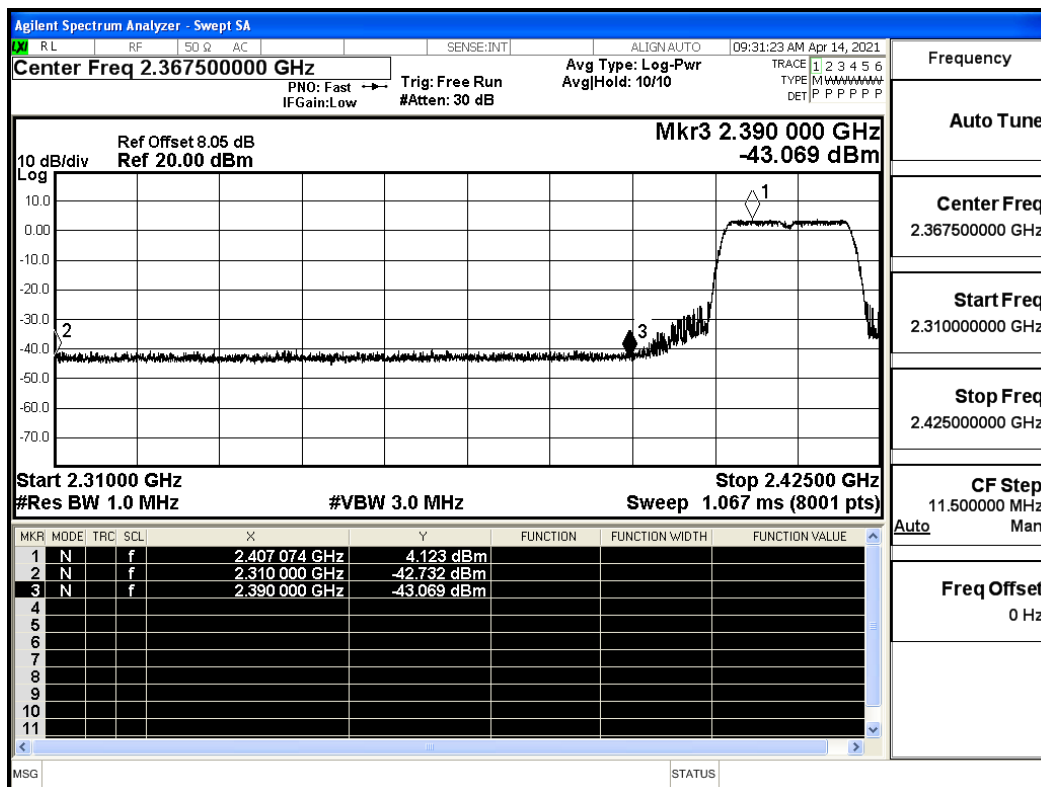
## Restrict-band band-edge measurements\_11G\_2462\_Ant1\_PEAK



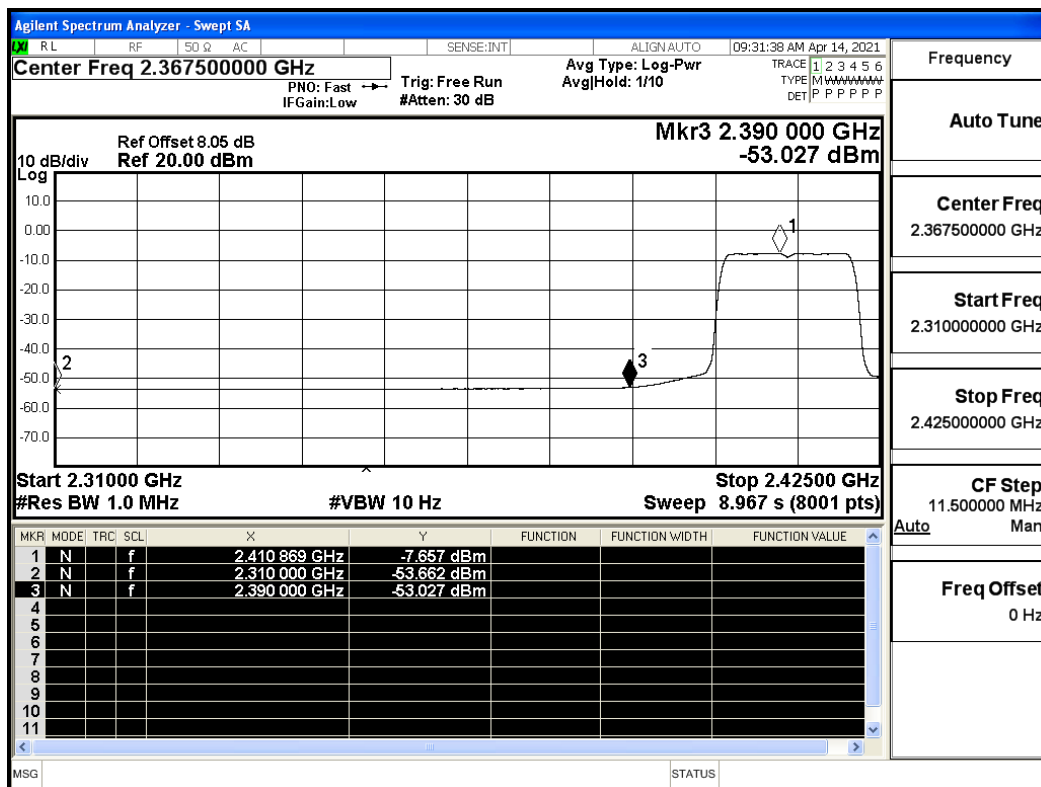
## Restrict-band band-edge measurements\_11G\_2462\_Ant1\_AV



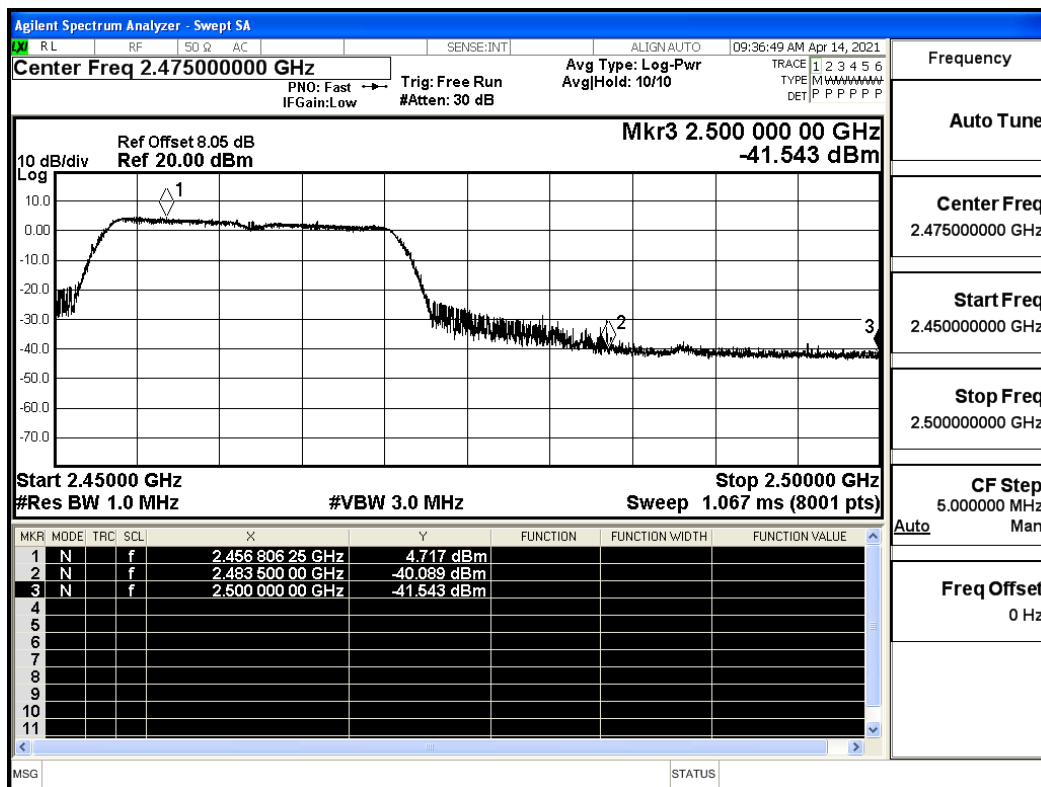
## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_PEAK



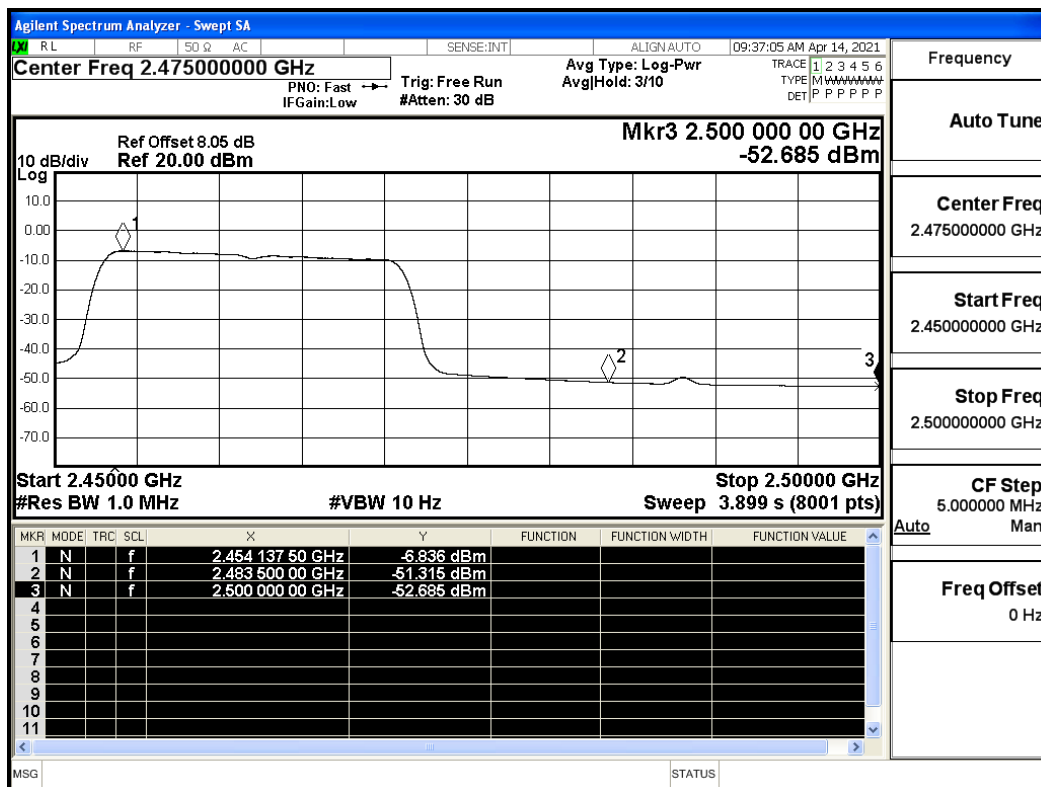
## Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_AV



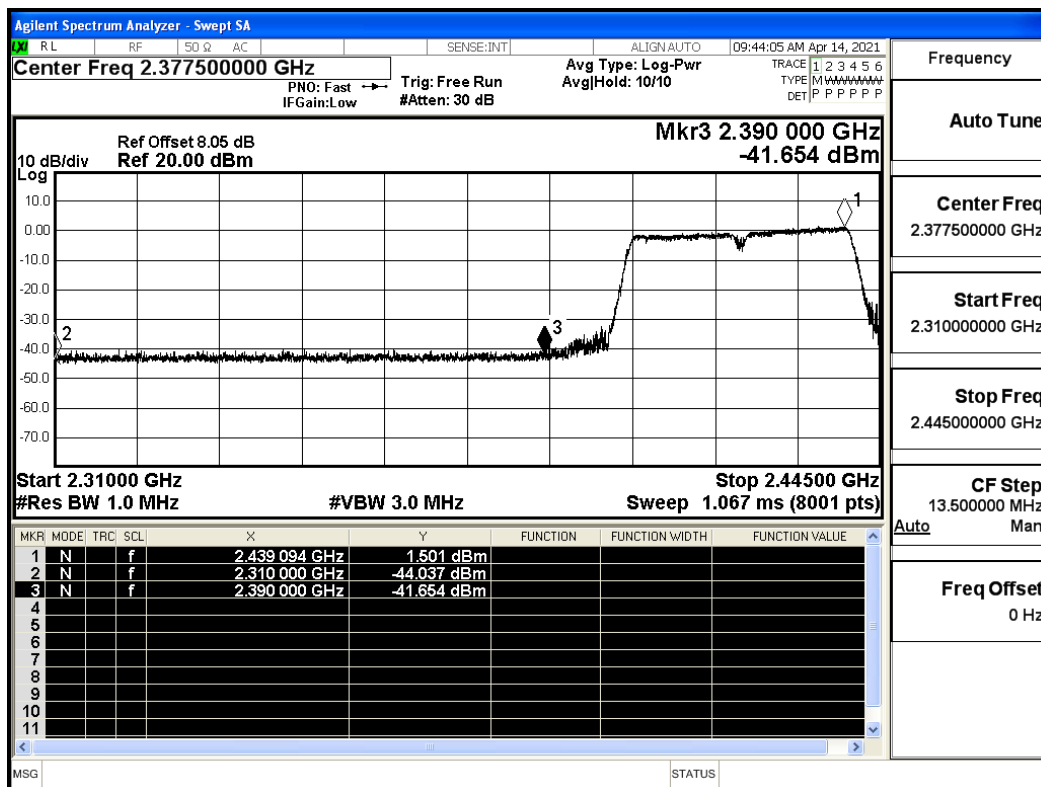
## Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_PEAK



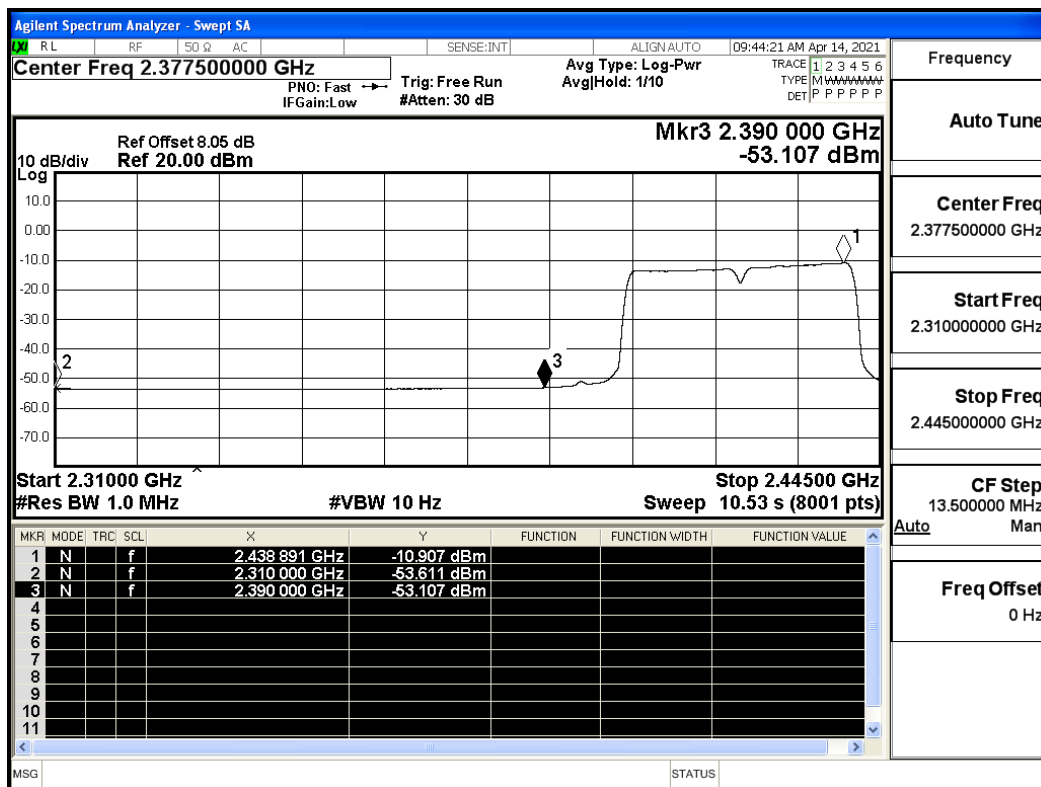
## Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_AV



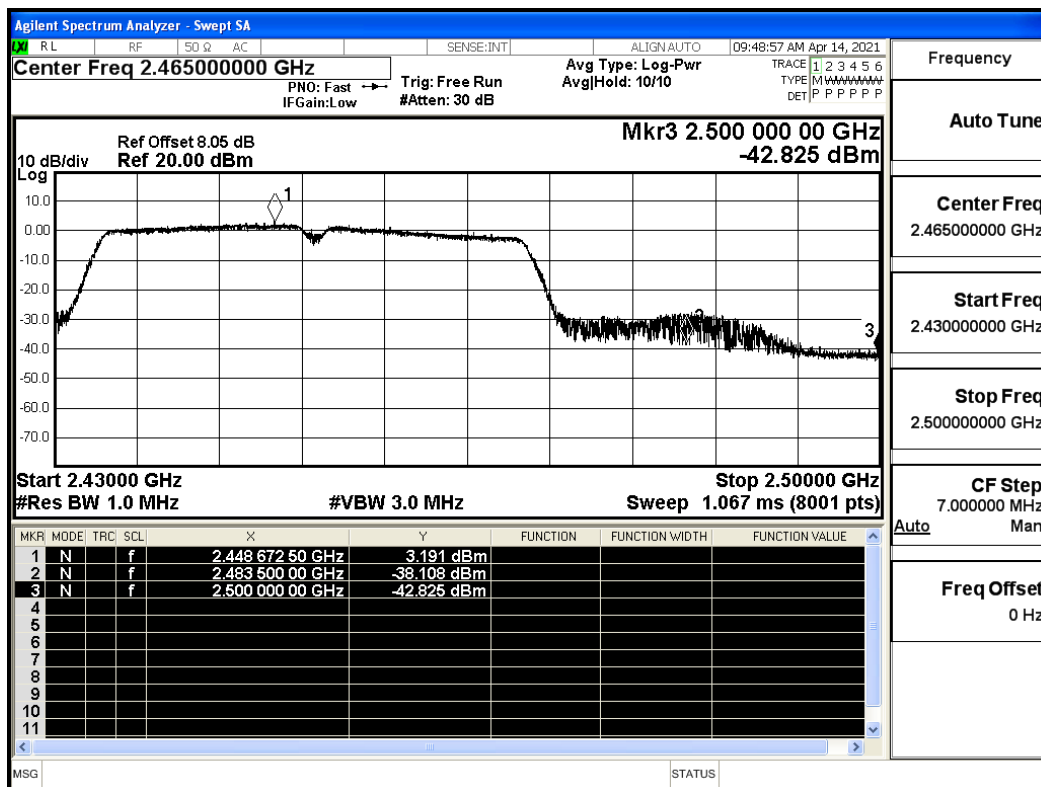
## Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_PEAK



## 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

