

## 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

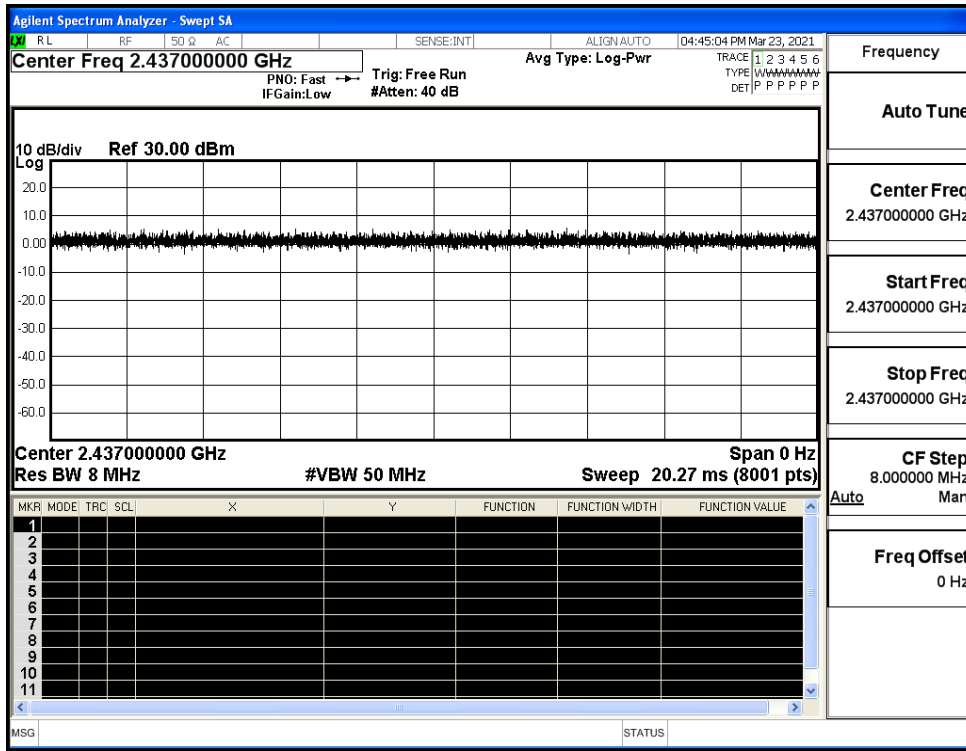
|                    |           |
|--------------------|-----------|
| Temperature:       | 25.7 ° C  |
| Relative Humidity: | 57.1%     |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Jay Li    |
| Supervised by:     | Li Huan   |

#### A.1 Duty Cycle

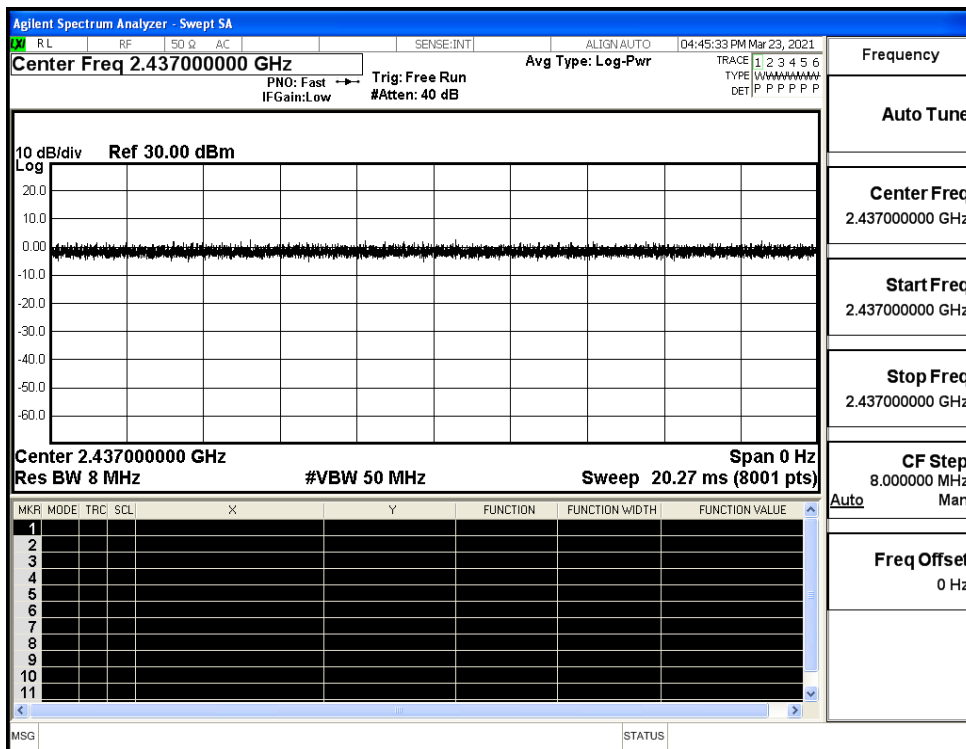
| Test Mode | Test Channel | Ant  | Duty Cycle[%] | Verdict |
|-----------|--------------|------|---------------|---------|
| 11B       | 2437         | Ant1 | 100           | PASS    |
| 11G       | 2437         | Ant1 | 100           | PASS    |
| 11N20SISO | 2437         | Ant1 | 100           | PASS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



Duty Cycle\_11N20SISO\_2437\_Ant1



Duty Cycle\_11N40SISO\_2437\_Ant1

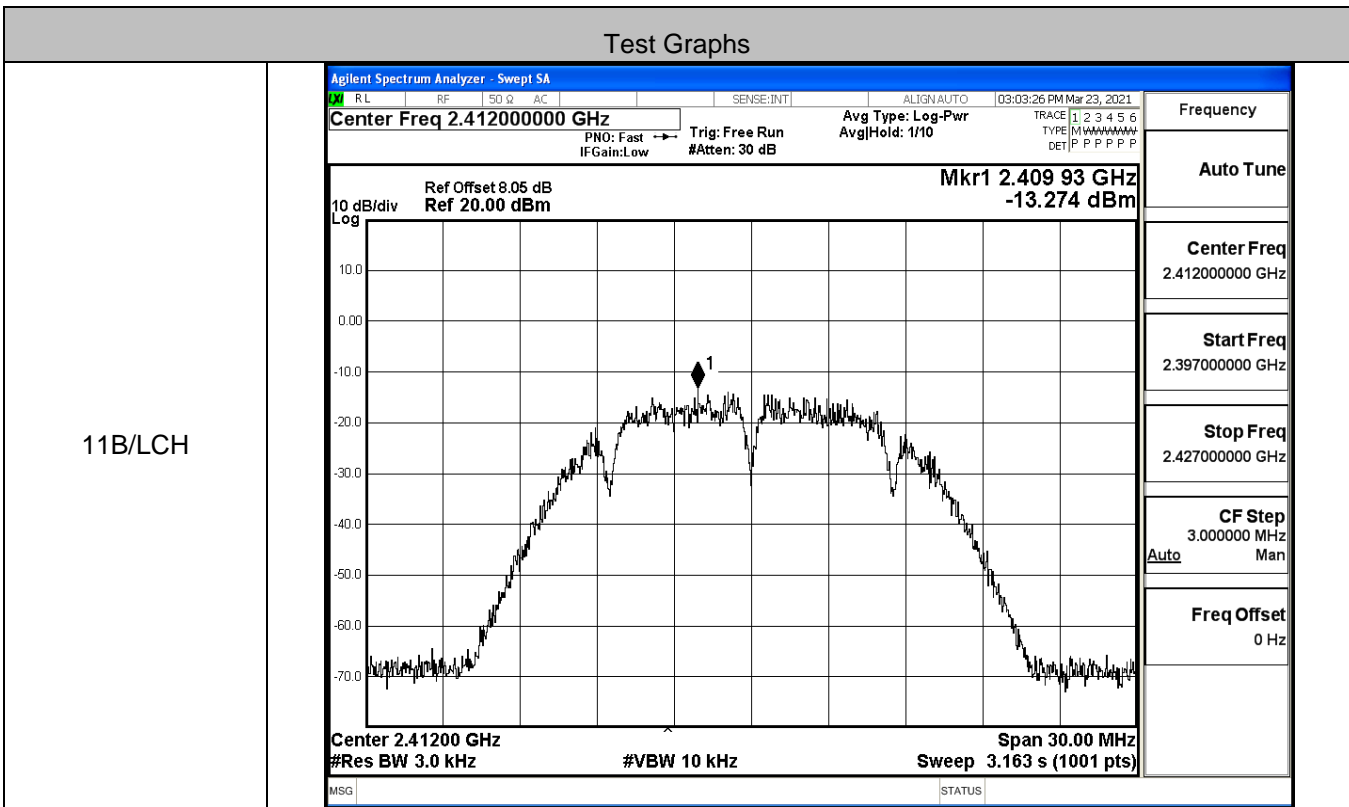


**A.2 Maximum Conducted Output Power**

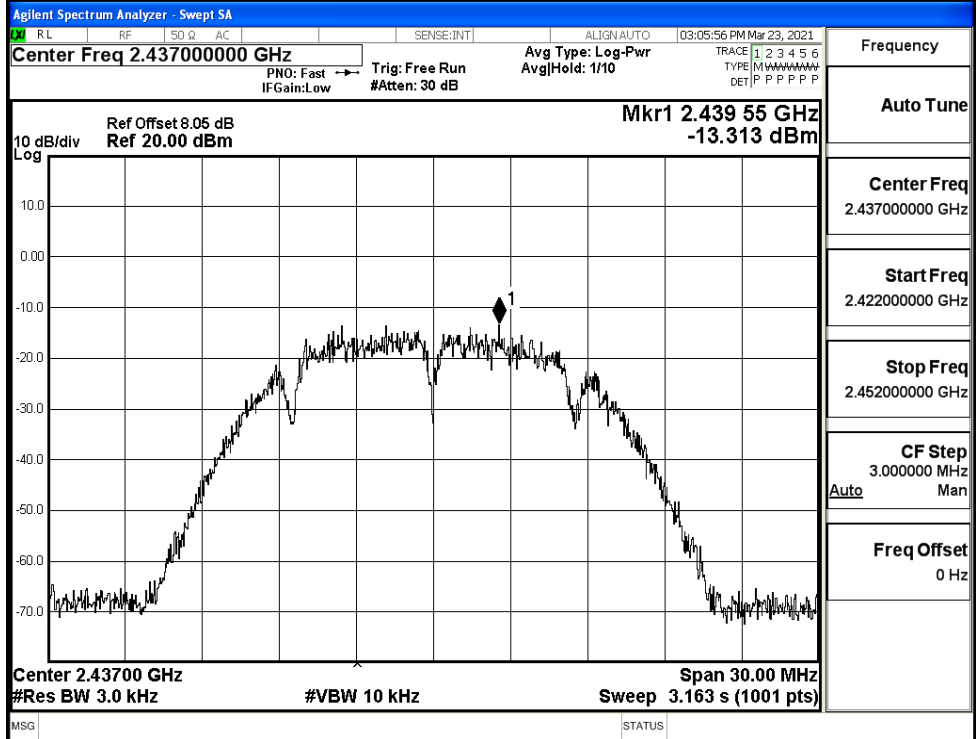
| Mode      | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B       | LCH     | 13.60            | 30          | PASS    |
|           | MCH     | 13.91            | 30          | PASS    |
|           | HCH     | 13.52            | 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

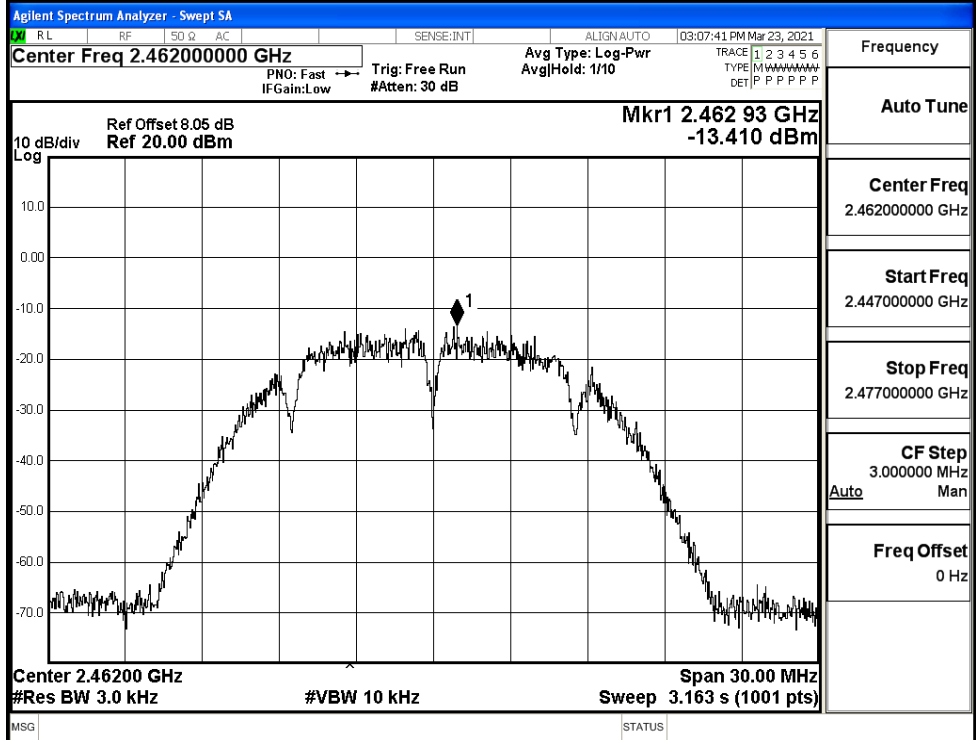
| Mode      | Channel | Meas.Level [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|-----------------------|------------------|---------|
| 11B       | LCH     | -13.274               | 8                | PASS    |
|           | MCH     | -13.313               | 8                | PASS    |
|           | 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    |



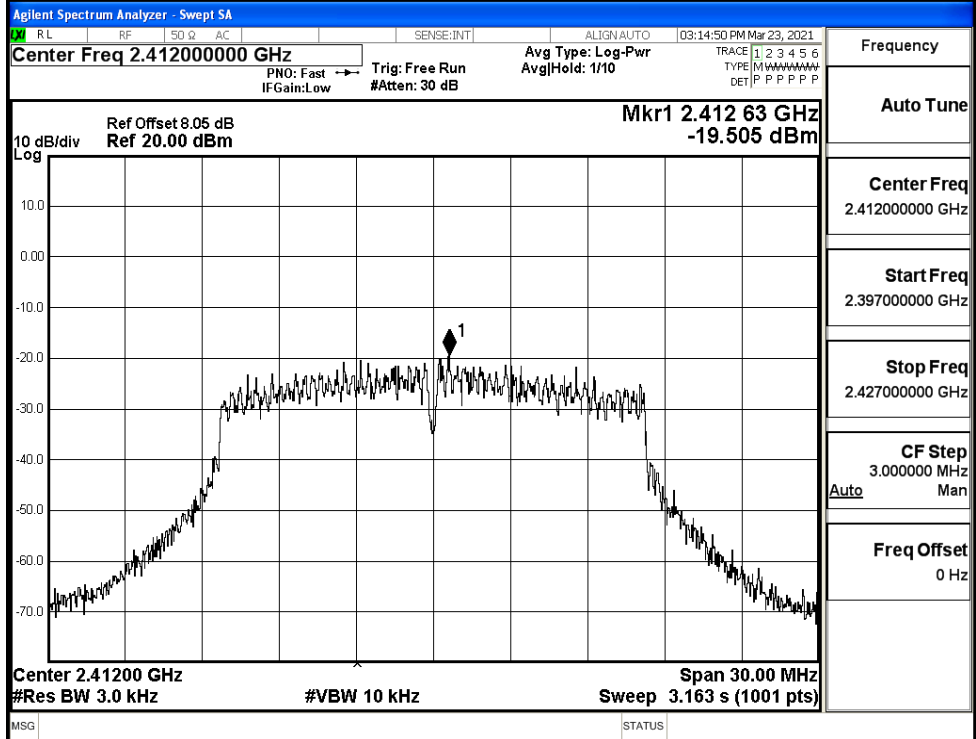
11B/MCH



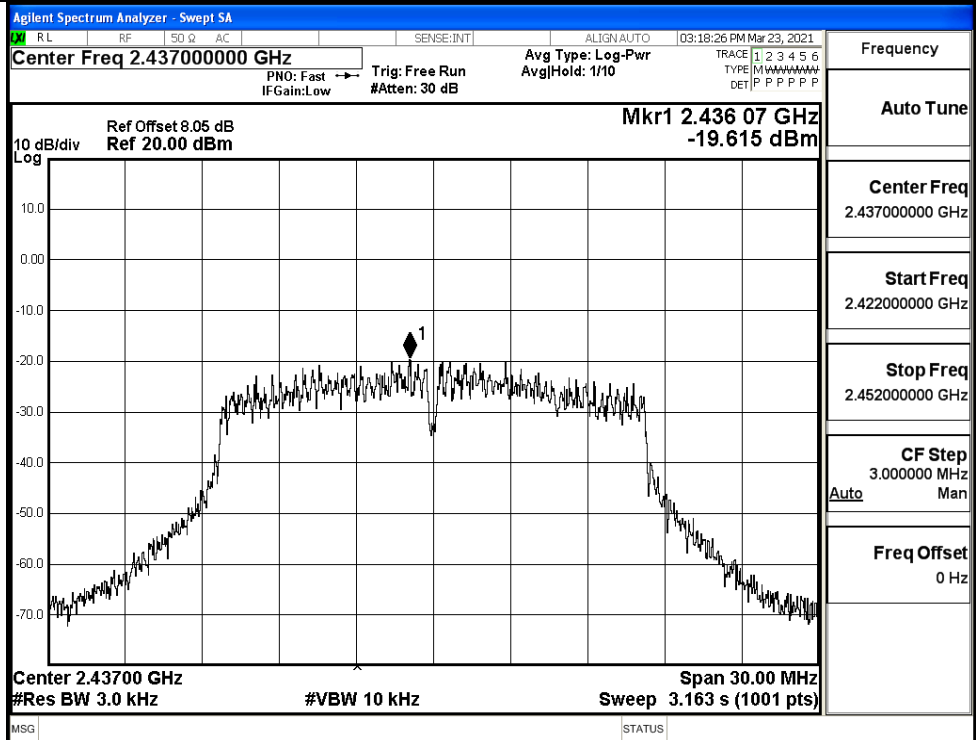
11B/HCH



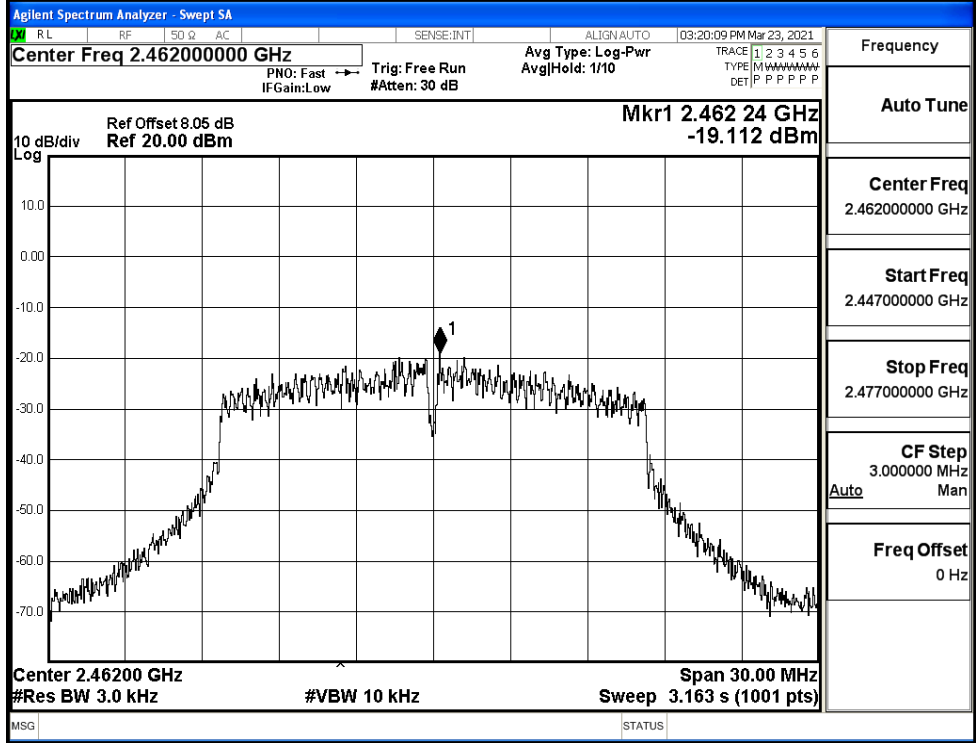
11G/LCH



11G/MCH

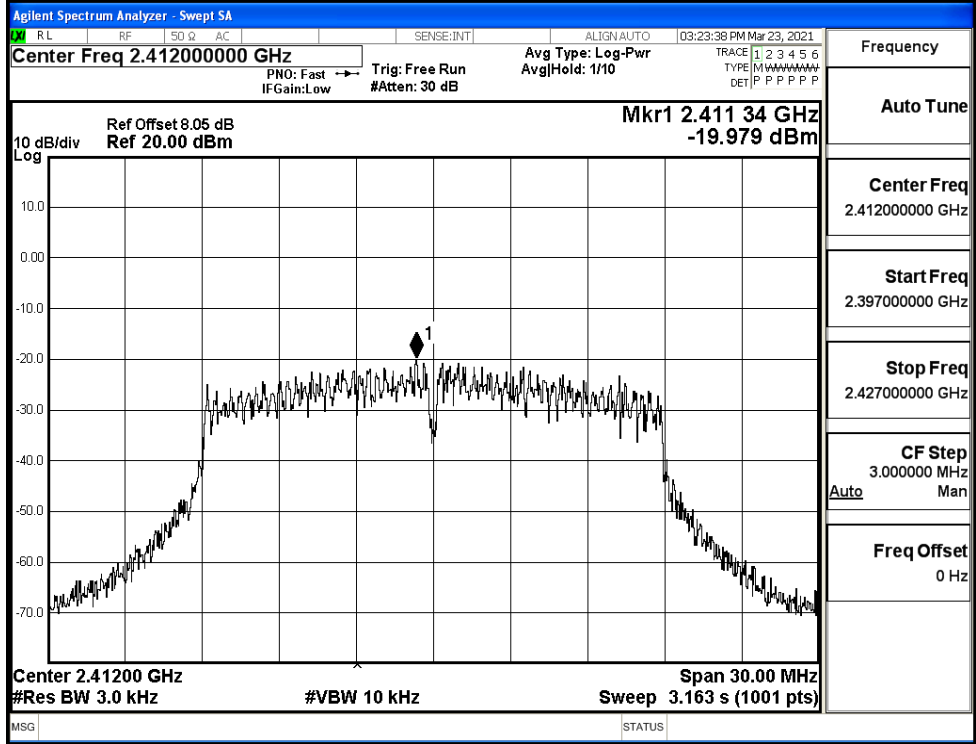


11G/HCH



|                                     |
|-------------------------------------|
| Frequency                           |
| Auto Tune                           |
| Center Freq<br>2.46200000 GHz       |
| Start Freq<br>2.447000000 GHz       |
| Stop Freq<br>2.477000000 GHz        |
| CF Step<br>3.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                 |

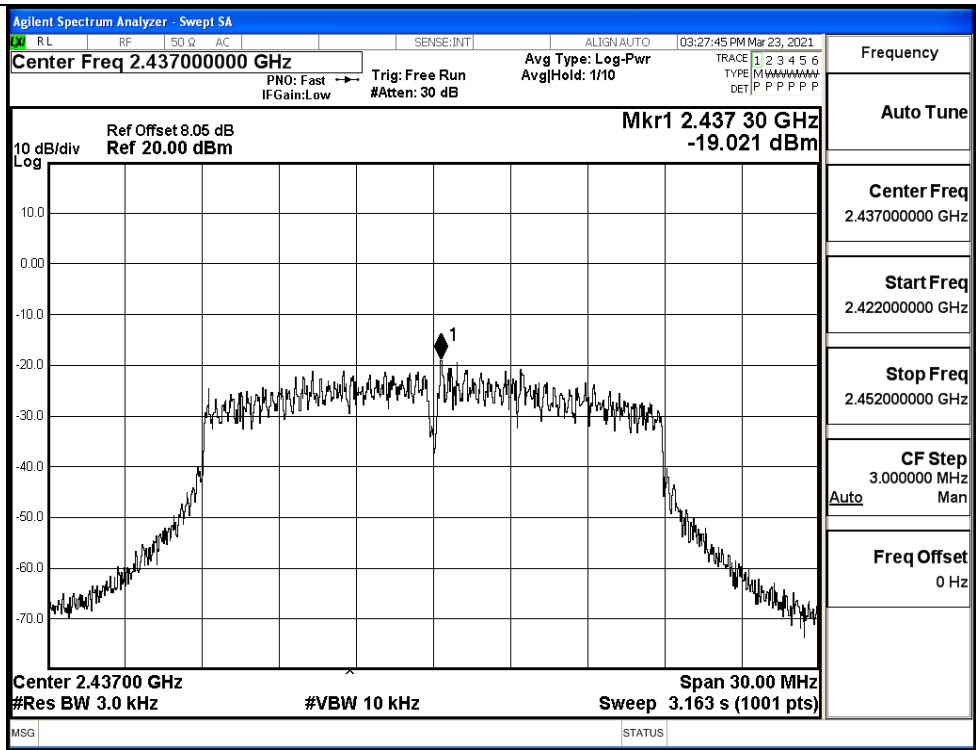
11N20SISO/LCH



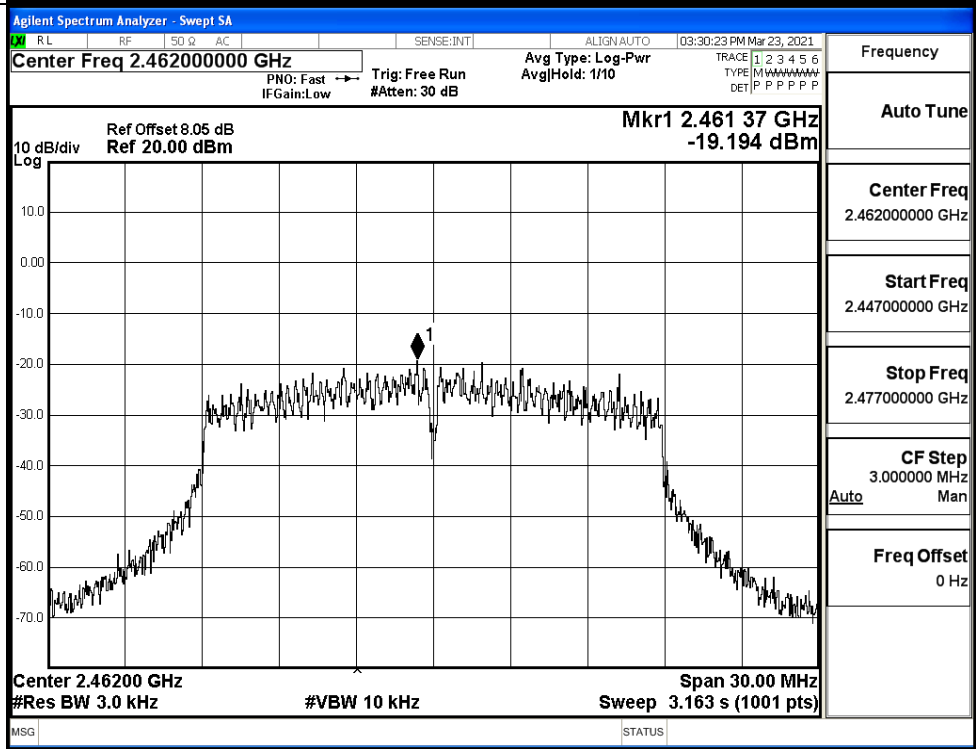
|                                     |
|-------------------------------------|
| Frequency                           |
| Auto Tune                           |
| Center Freq<br>2.412000000 GHz      |
| Start Freq<br>2.397000000 GHz       |
| Stop Freq<br>2.427000000 GHz        |
| CF Step<br>3.000000 MHz<br>Auto Man |
| Freq Offset<br>0 Hz                 |



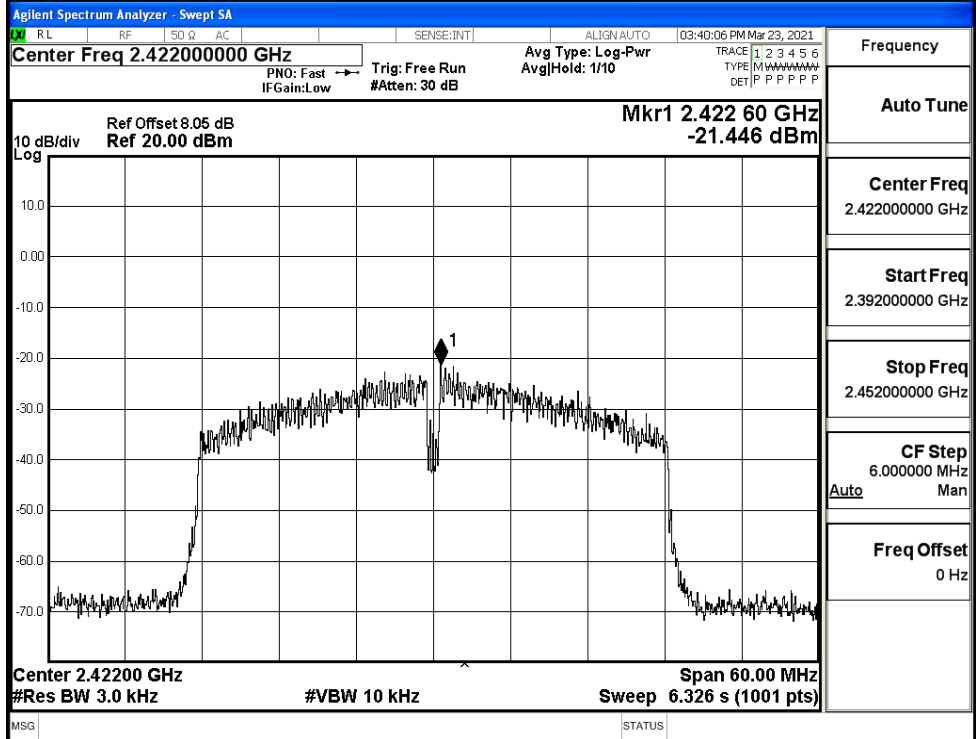
11N20SISO/MCH



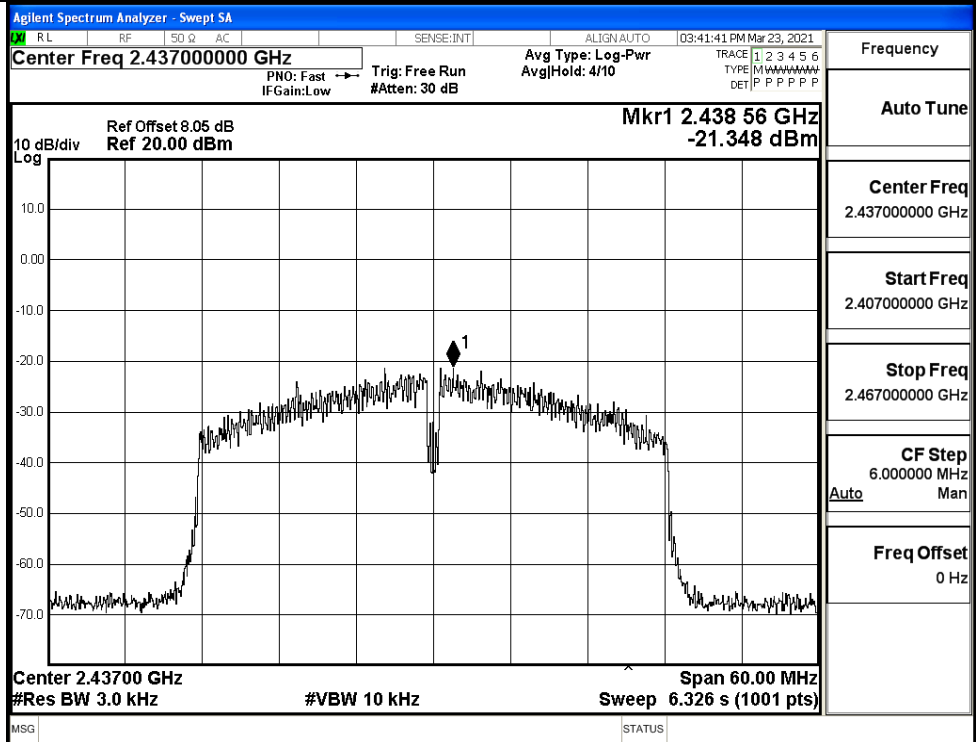
11N20SISO/HCH



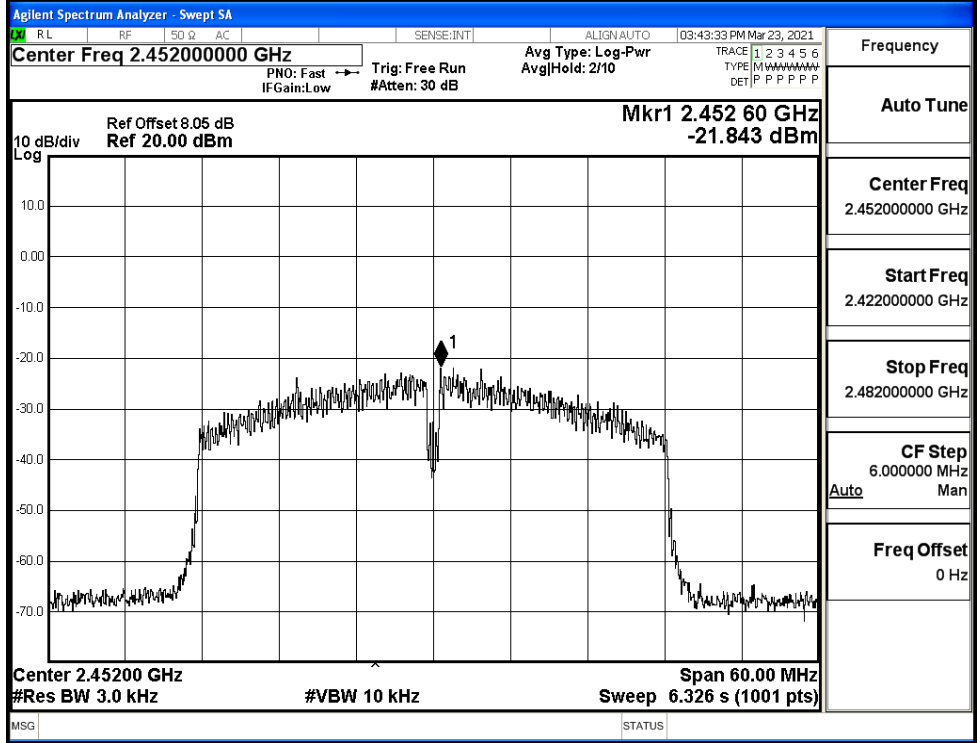
11N40SISO/LCH



11N40SISO/MCH

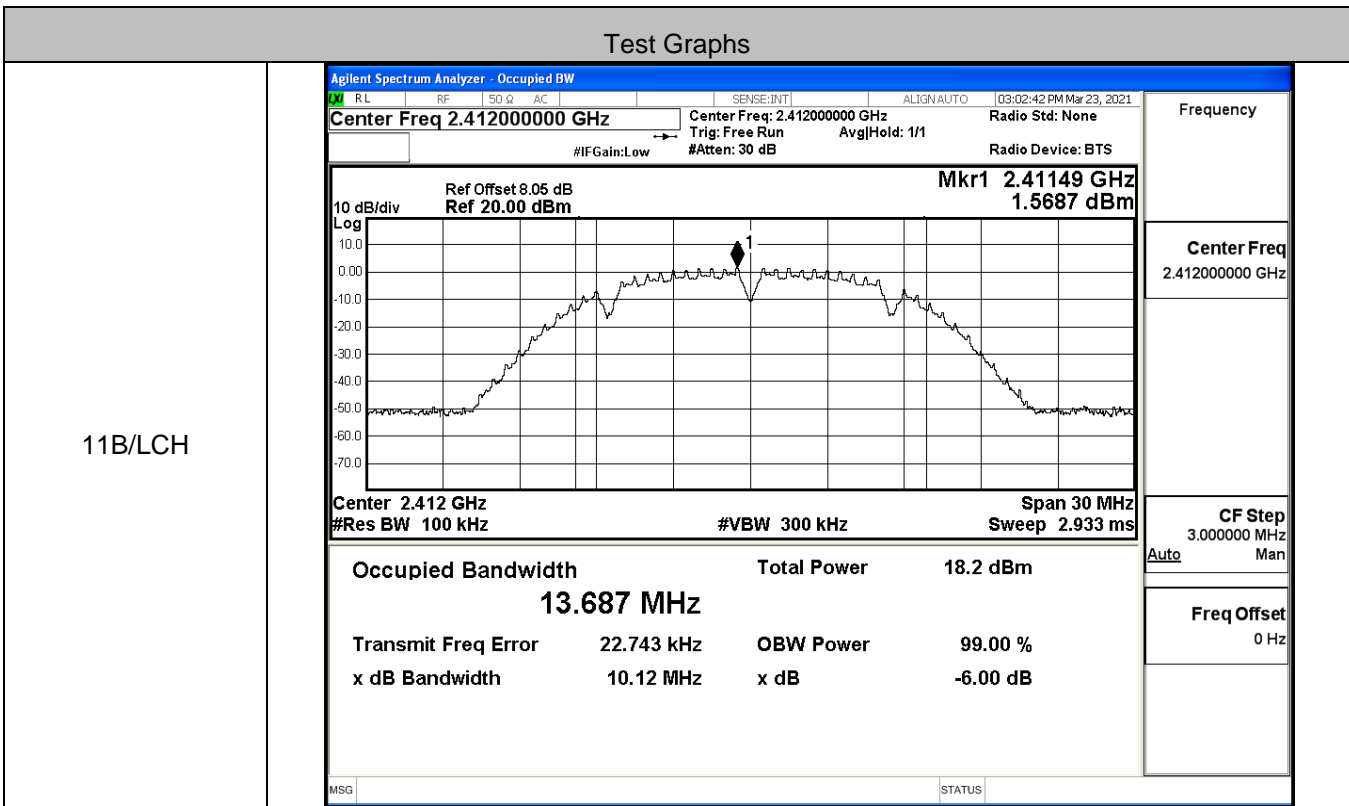


11N40SISO/HCH

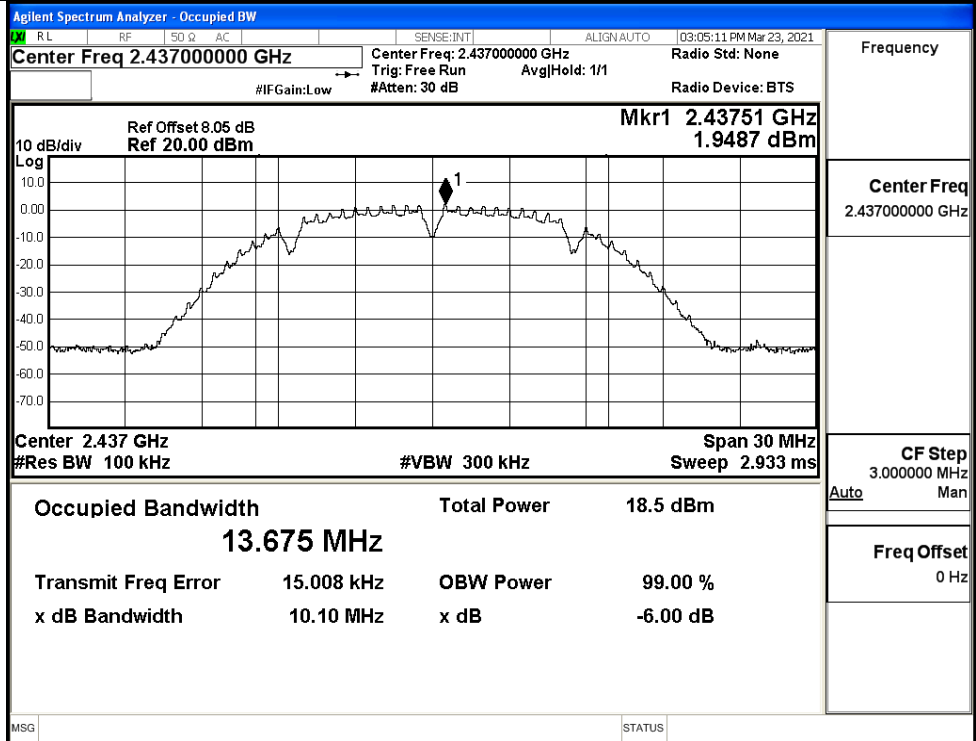


**A.4 6dB Bandwidth**

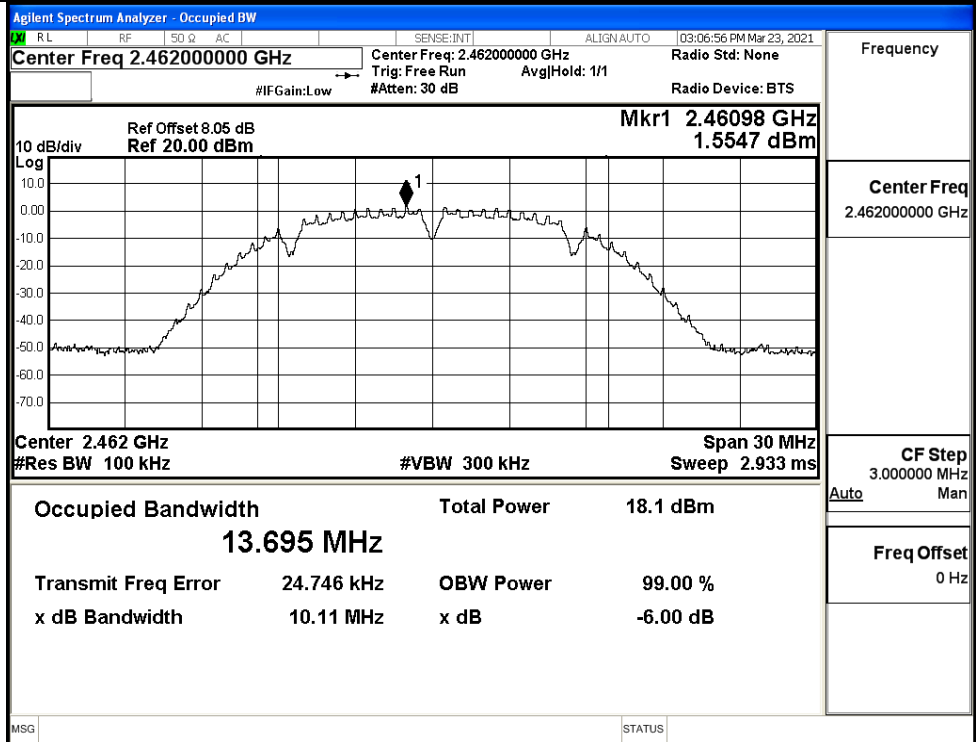
| Mode      | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B       | LCH     | 10.12               | ≥0.5        | PASS    |
|           | MCH     | 10.10               | ≥0.5        | PASS    |
|           | HCH   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



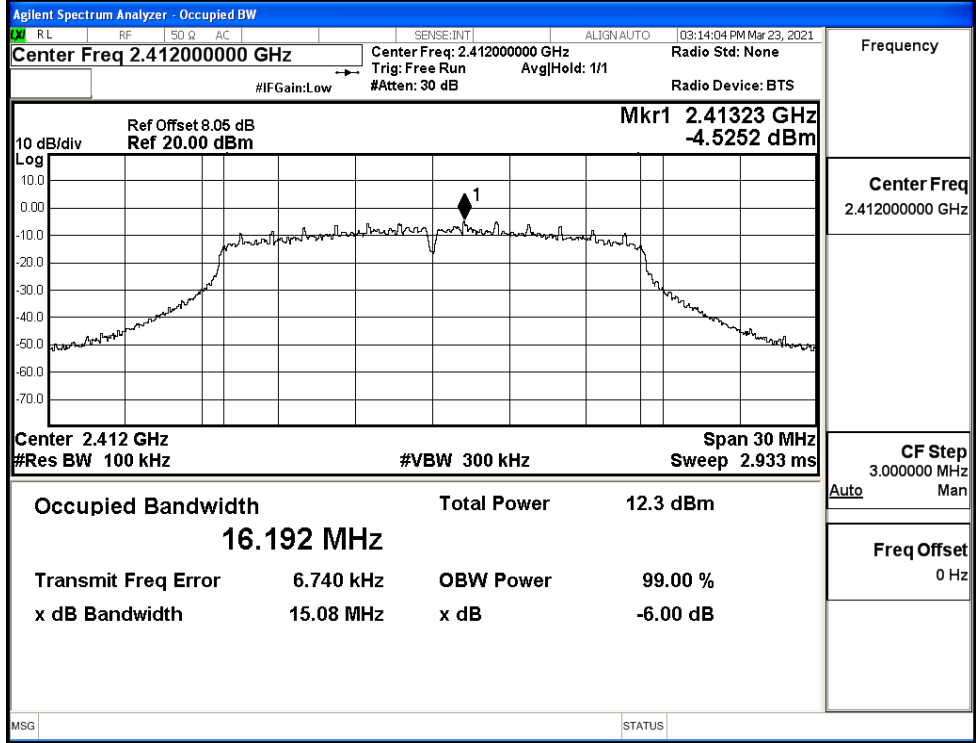
11B/MCH



11B/HCH

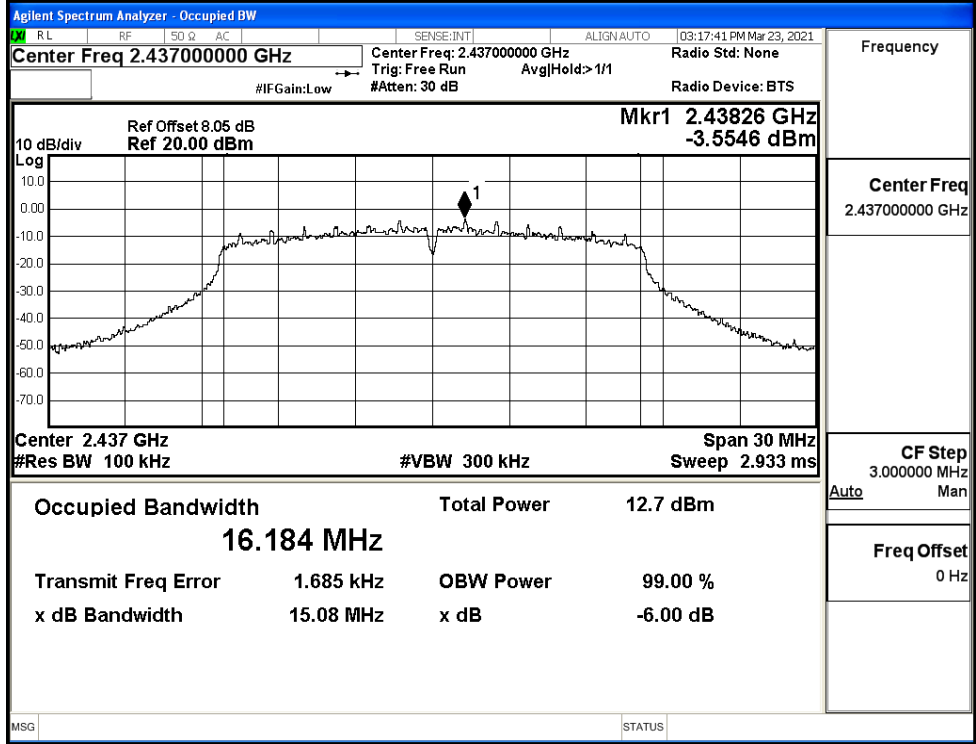


11G/LCH



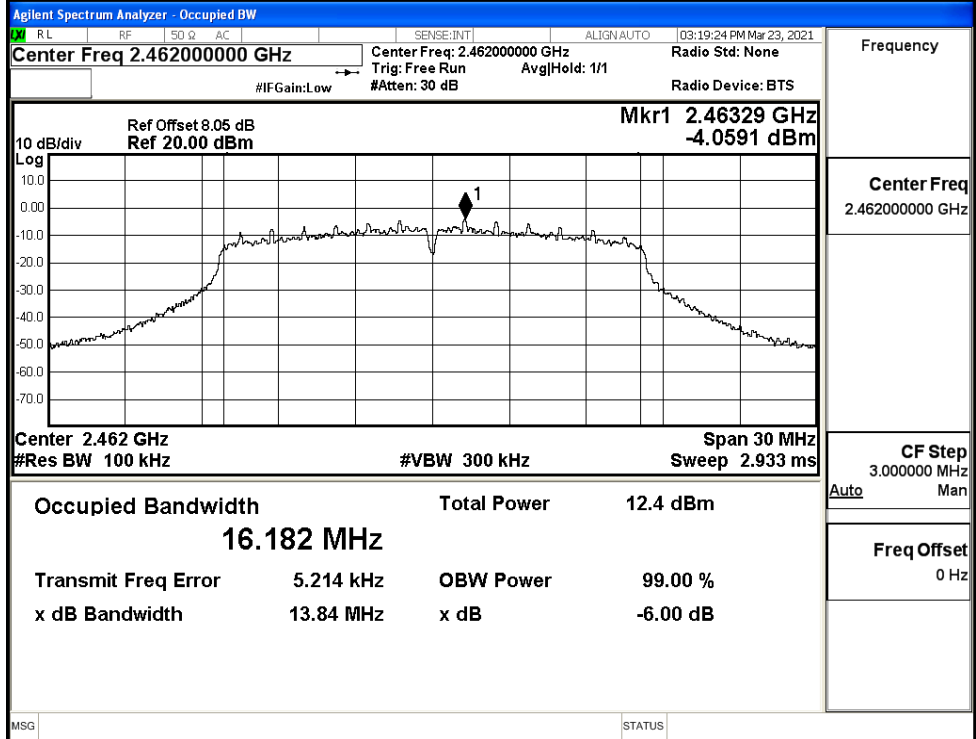
|             |                |
|-------------|----------------|
| Frequency   | 2.41200000 GHz |
| Center Freq | 2.41200000 GHz |
| CF Step     | 3.000000 MHz   |
| Auto        | Man            |
| Freq Offset | 0 Hz           |

11G/MCH



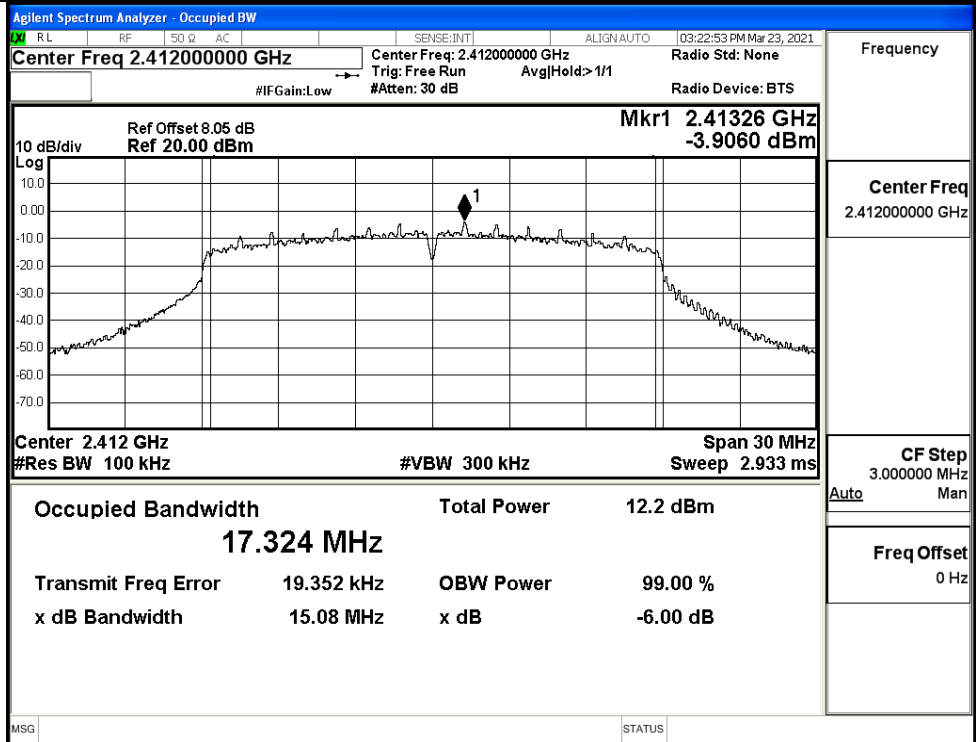
|             |                |
|-------------|----------------|
| Frequency   | 2.43700000 GHz |
| Center Freq | 2.43700000 GHz |
| CF Step     | 3.000000 MHz   |
| Auto        | Man            |
| Freq Offset | 0 Hz           |

11G/HCH



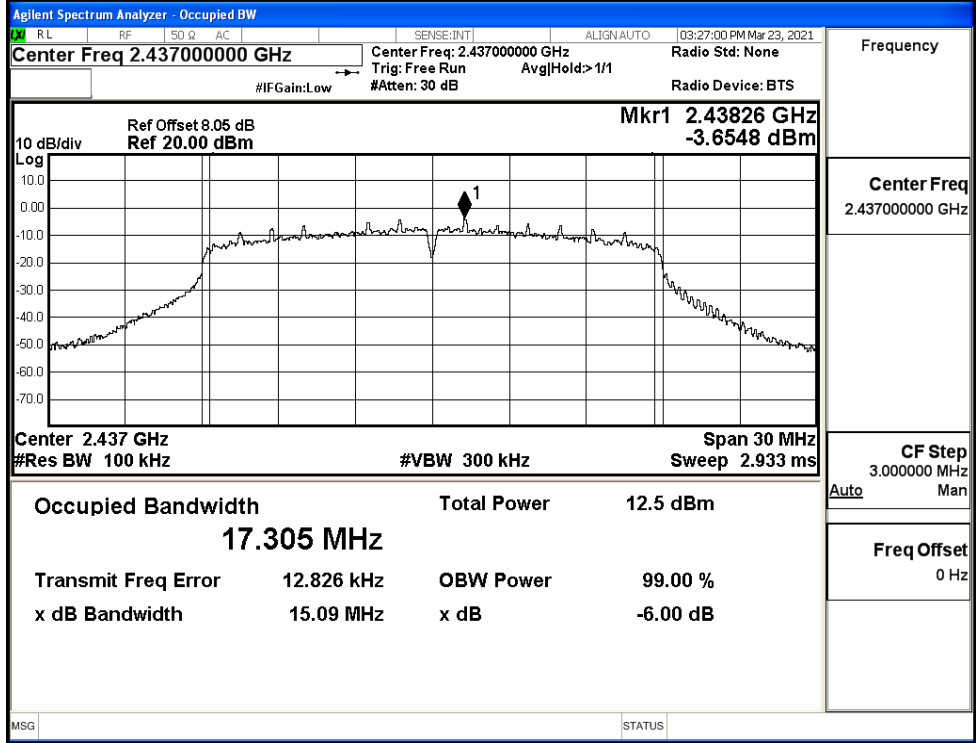
|             |                |
|-------------|----------------|
| Frequency   | 2.46200000 GHz |
| Center Freq | 2.46200000 GHz |
| CF Step     | 3.000000 MHz   |
| Auto        | Man            |
| Freq Offset | 0 Hz           |

11N20SISO/LCH

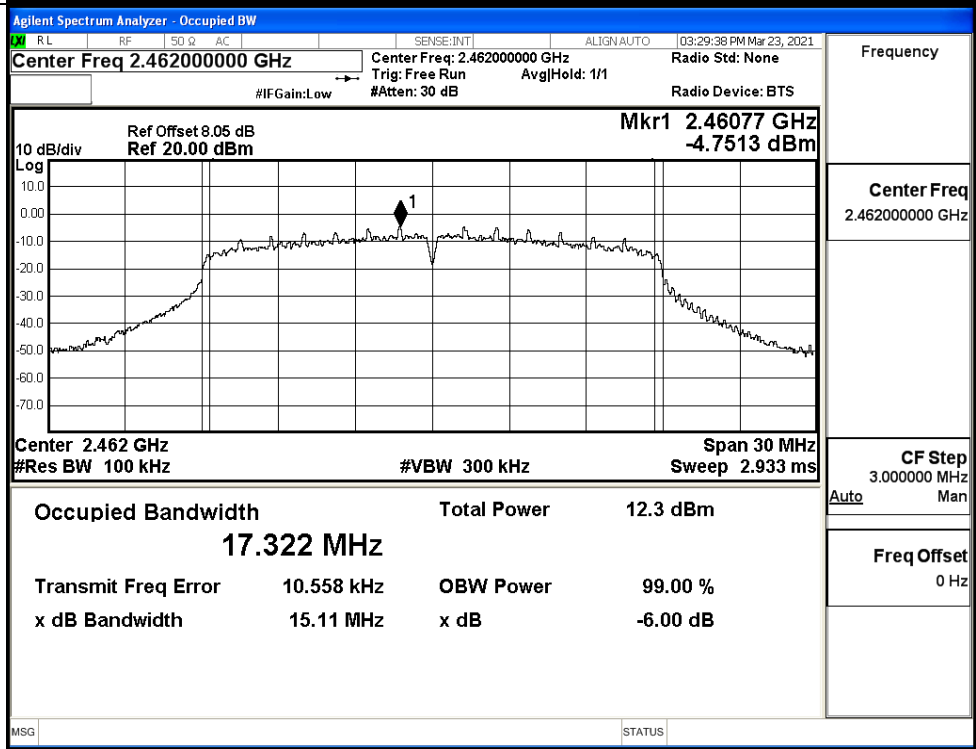


|             |                |
|-------------|----------------|
| Frequency   | 2.41200000 GHz |
| Center Freq | 2.41200000 GHz |
| CF Step     | 3.000000 MHz   |
| Auto        | Man            |
| Freq Offset | 0 Hz           |

11N20SISO/MCH

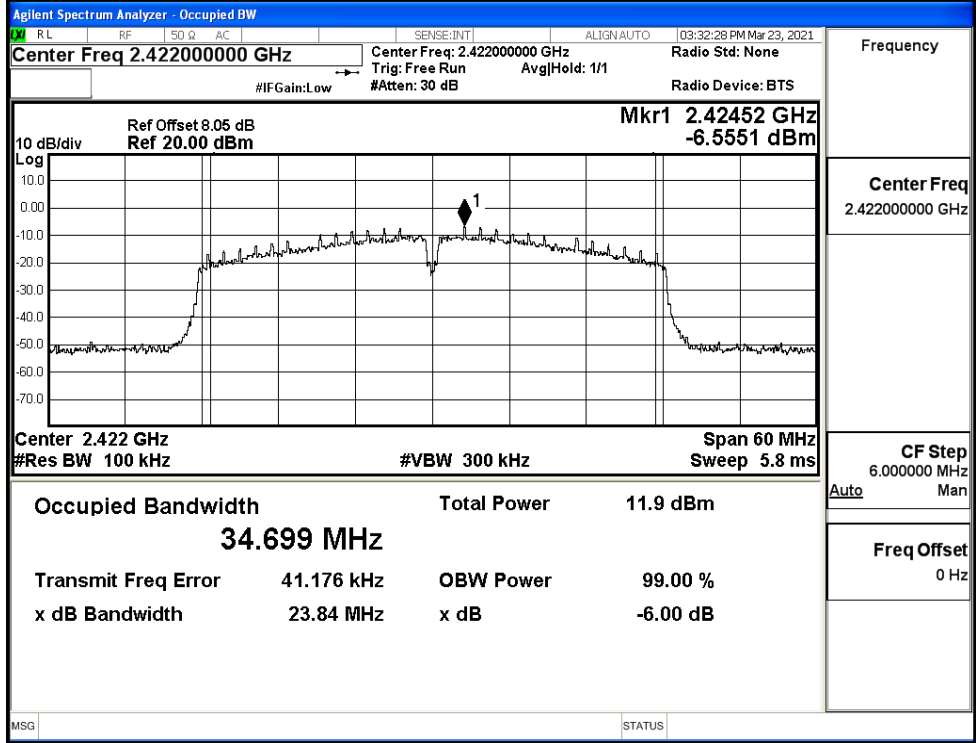


11N20SISO/HCH

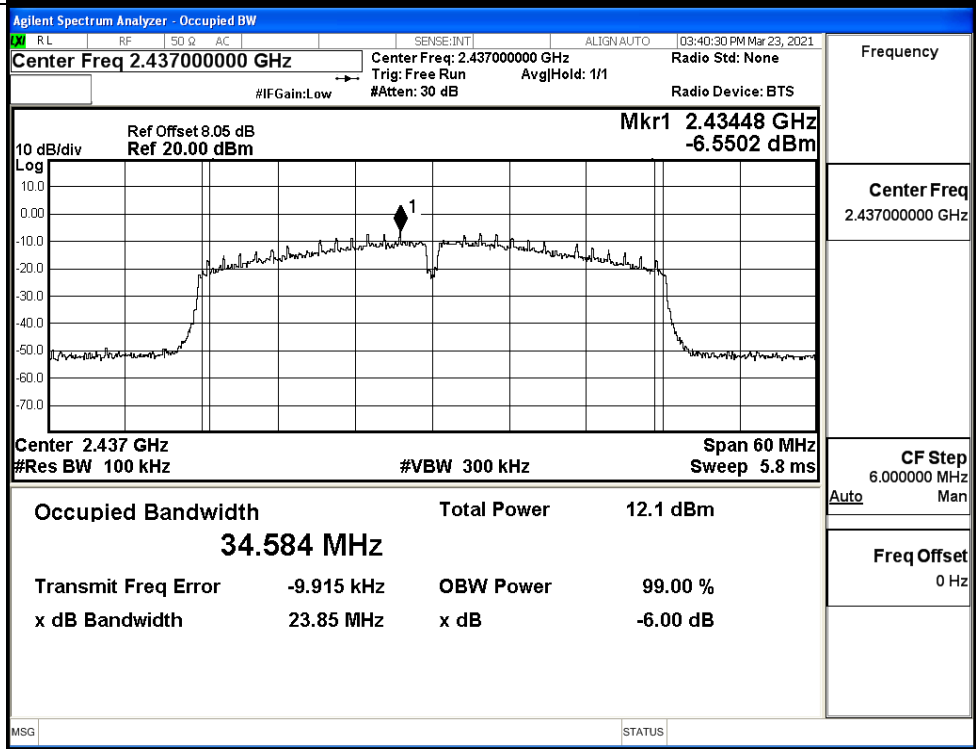




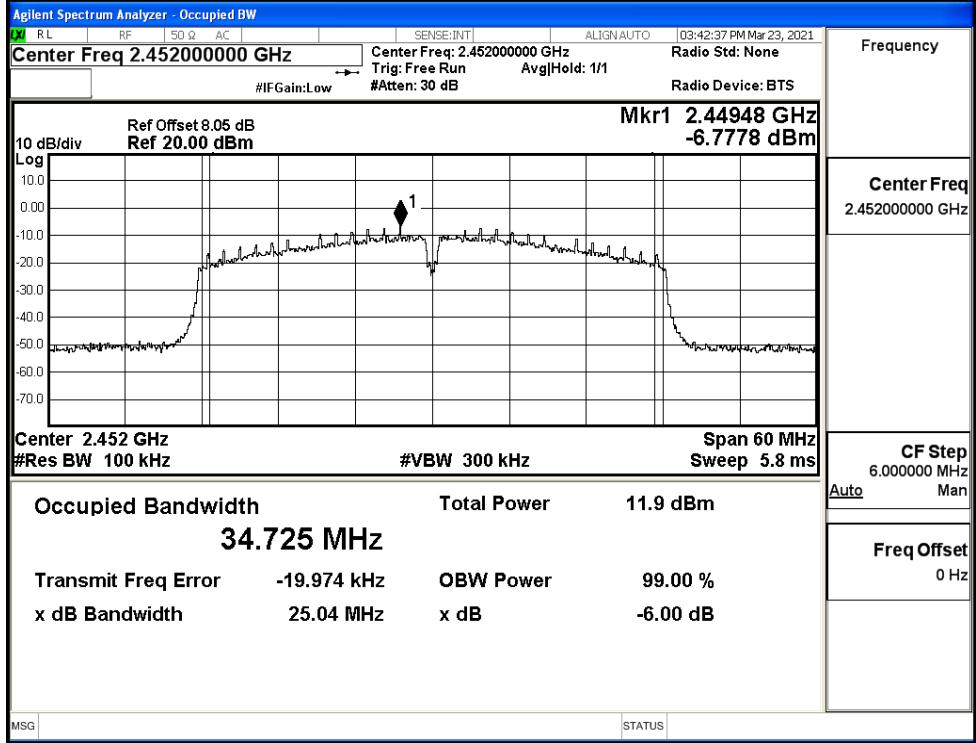
11N40SISO/LCH



11N40SISO/MCH



11N40SISO/HCH

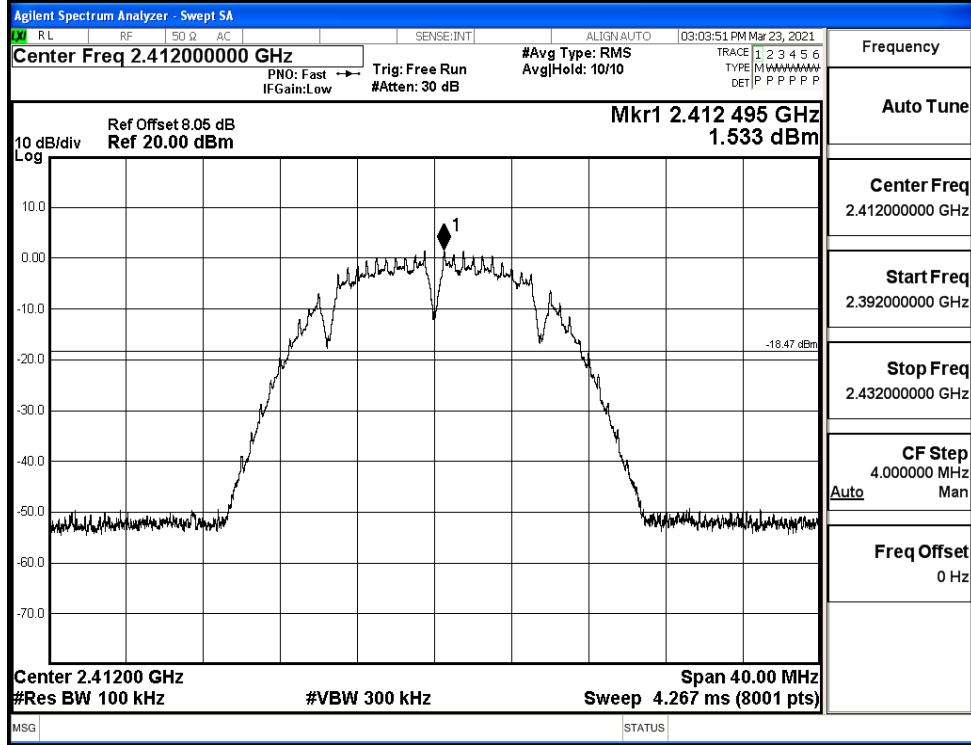


**A.5 RF Conducted Spurious Emissions**

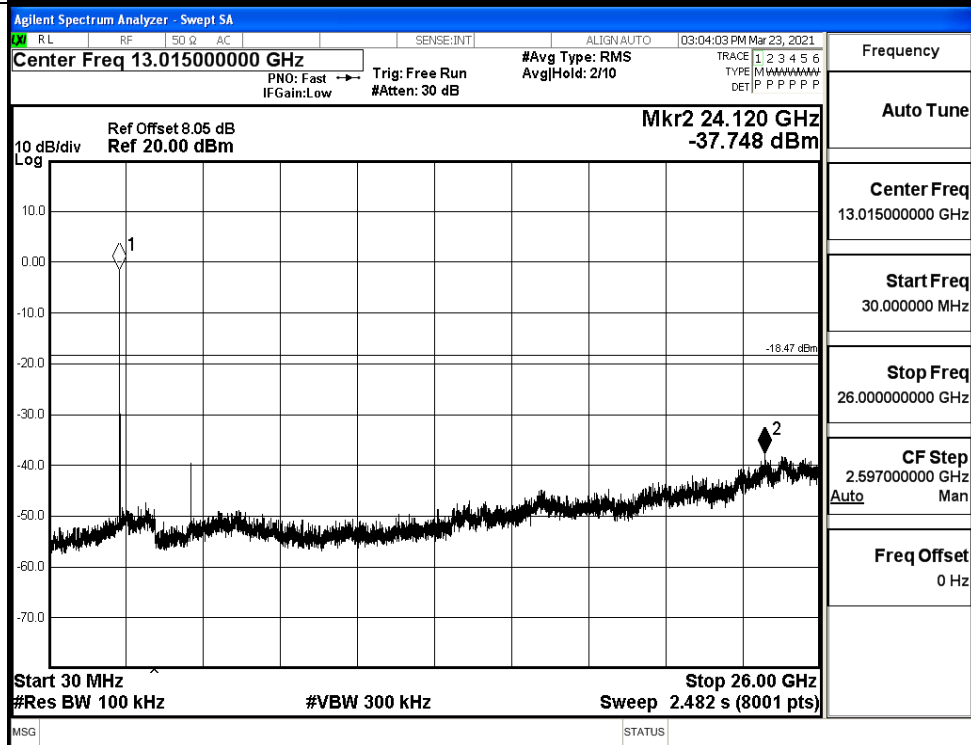
| Mode          | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B           | LCH     | 1.533      | -37.748          | -18.467     | PASS    |
|               | MCH     | 1.547      | -37.905          | -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

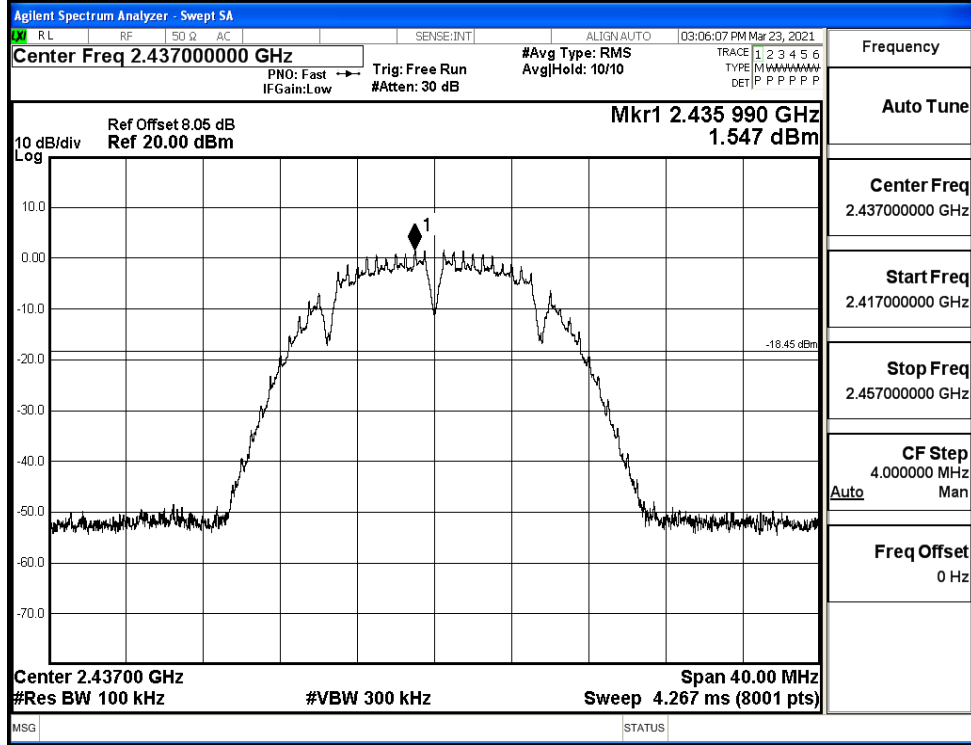


Puw/11B/LCH

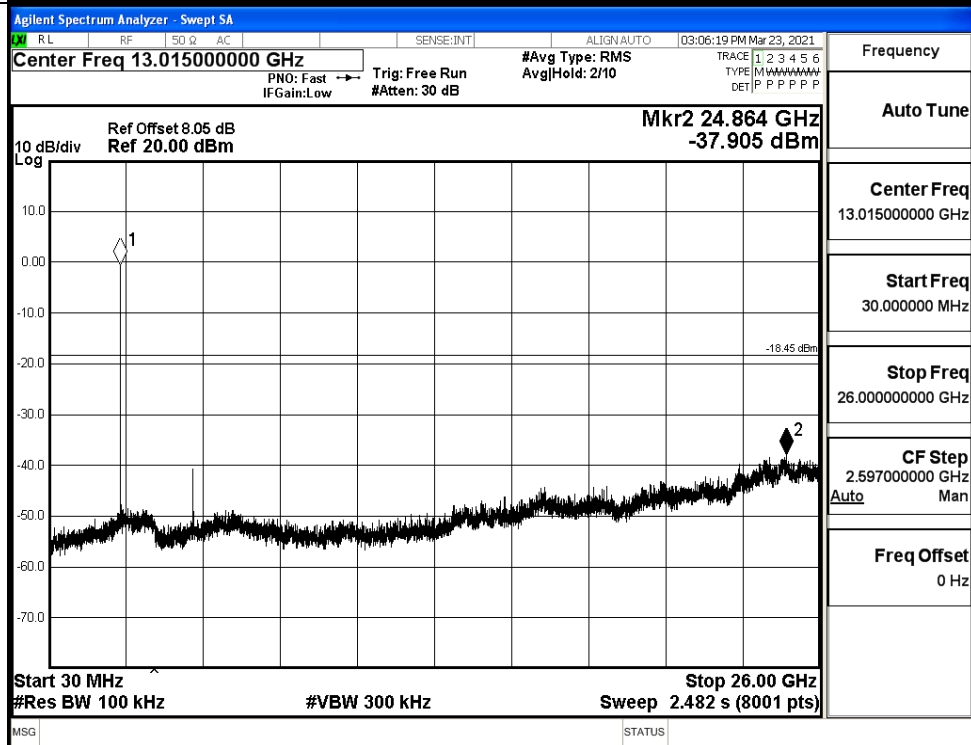


11B\_MCH\_Graphs

Pref/11B/MCH

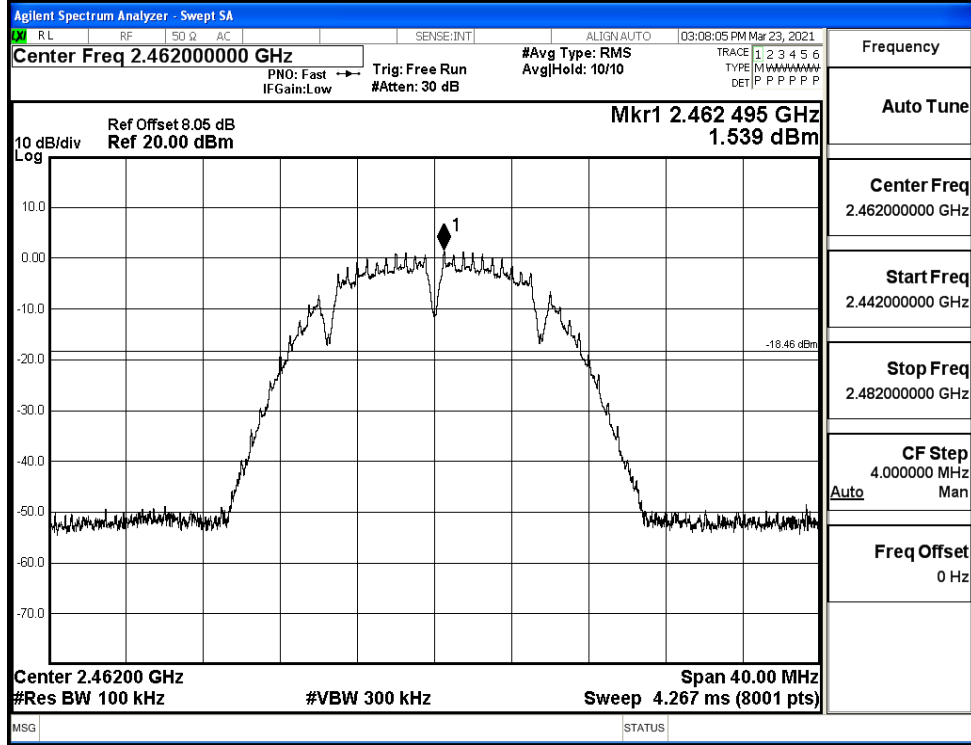


Puw/11B/MCH

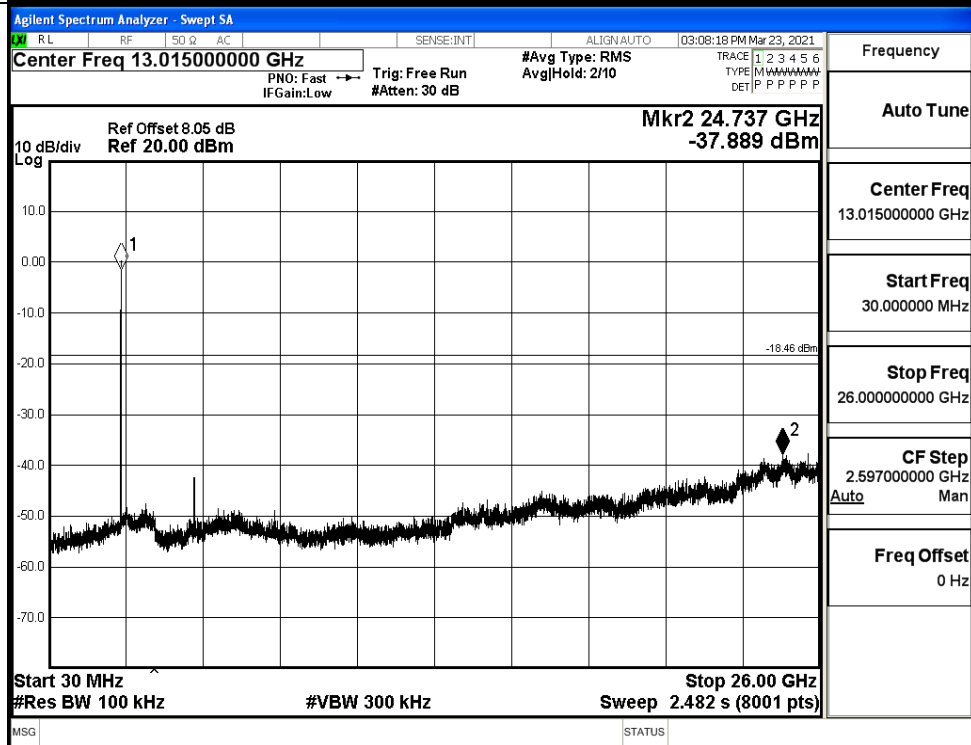


11B\_HCH\_Graphs

Pref/11B/HCH

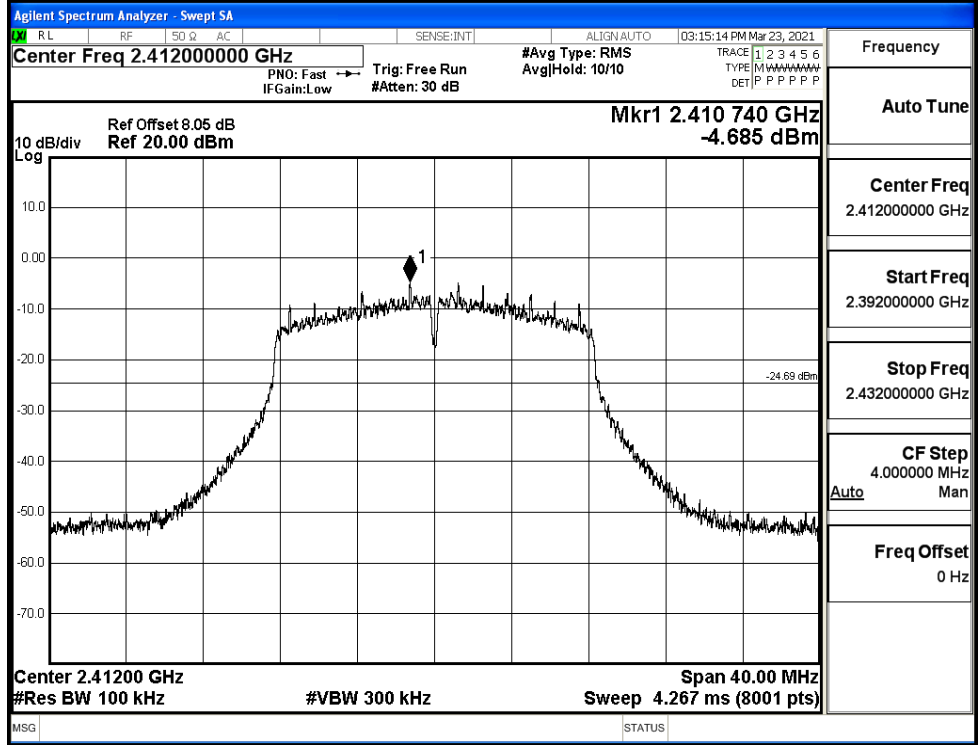


Puw/11B/HCH

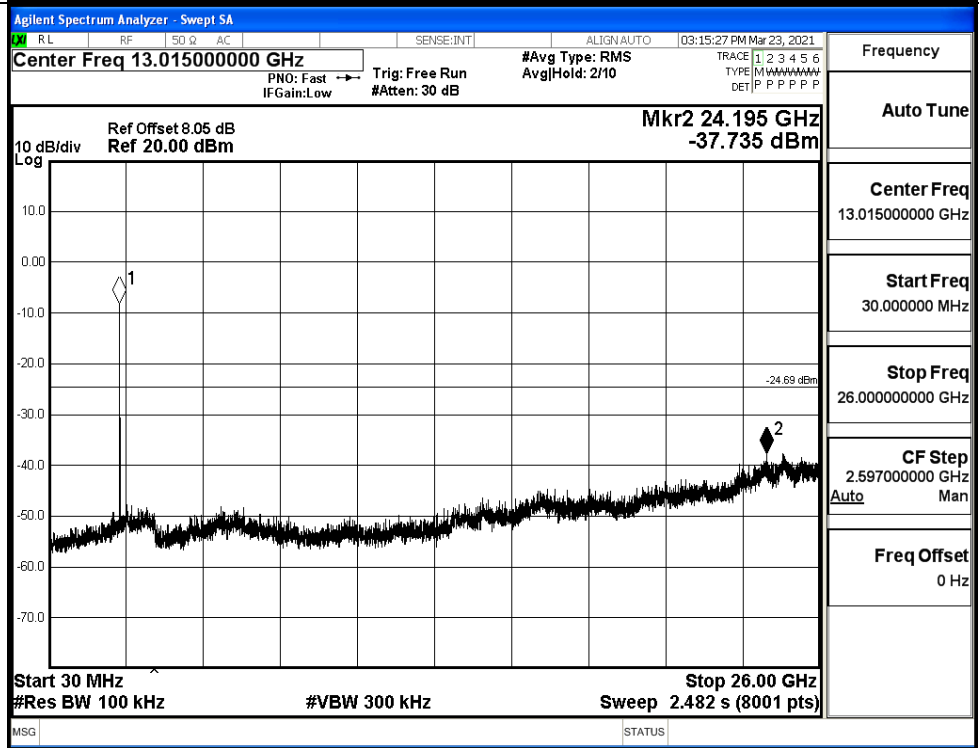


11G\_LCH\_Graphs

Pref/11G/LCH

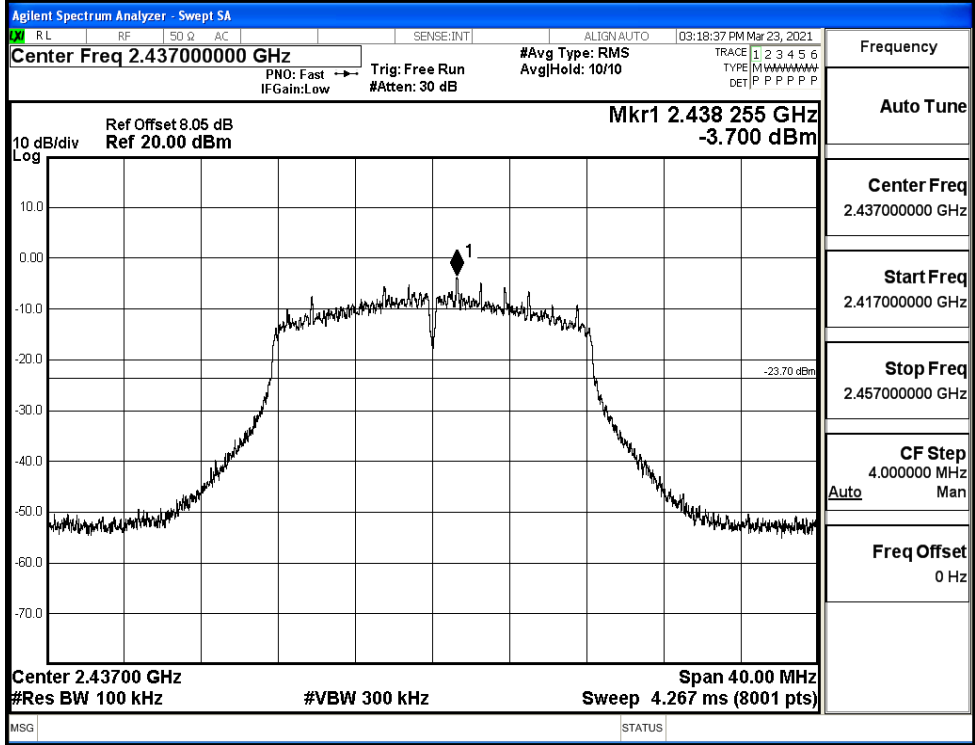


Puw/11G/LCH

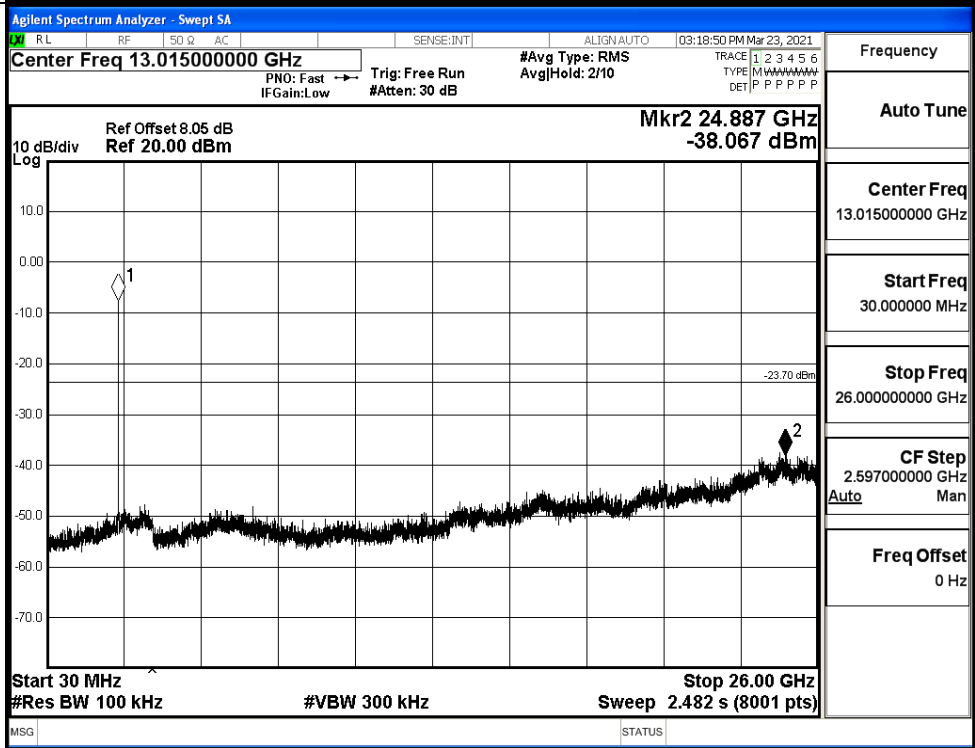


11G\_MCH\_Graphs

Pref/11G/MCH



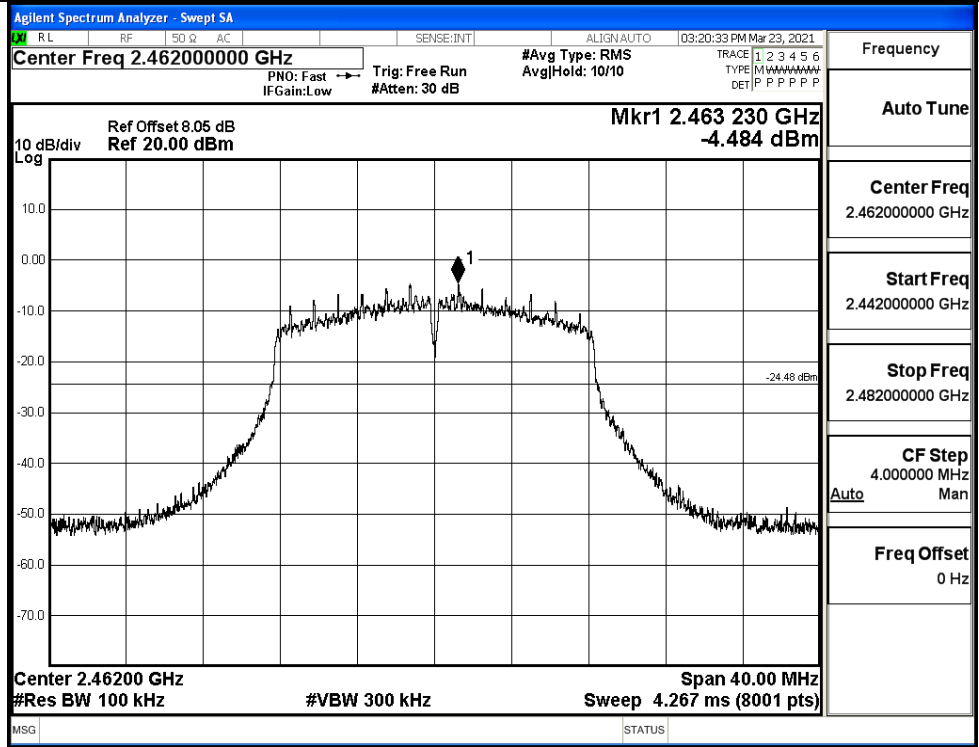
Puw/11G/MCH



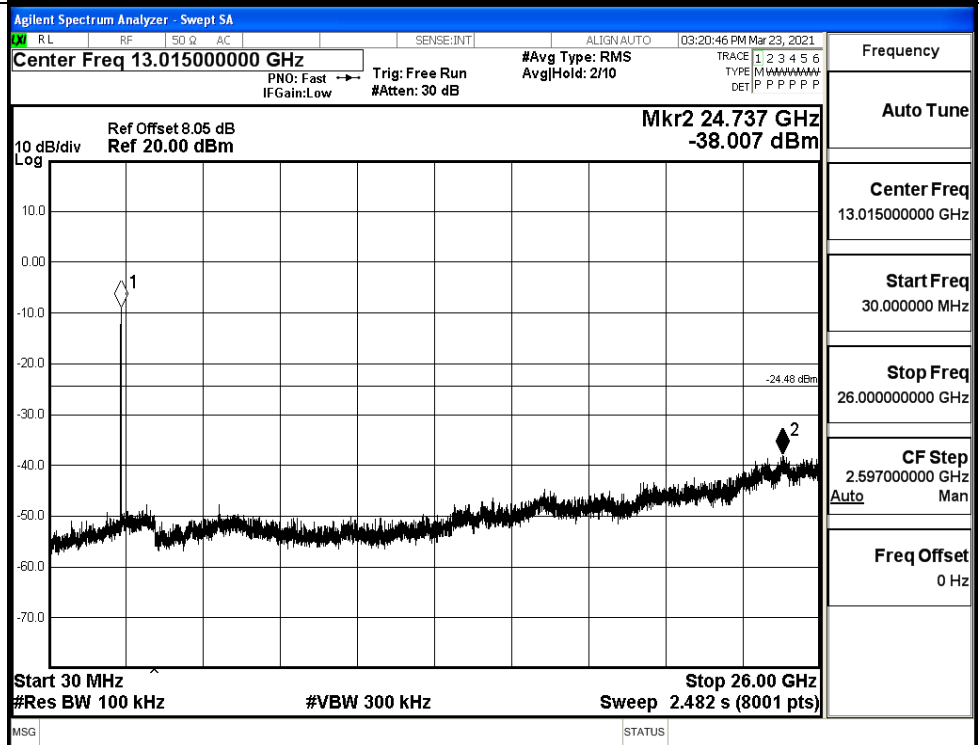


11G\_HCH\_Graphs

Pref/11G/HCH

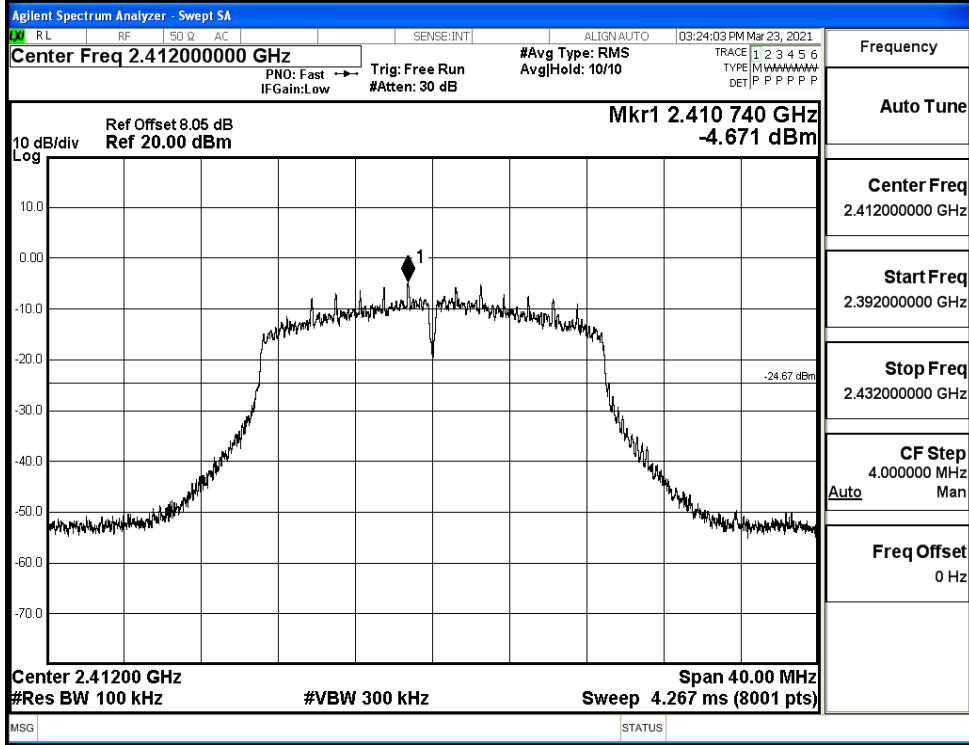


Puw/11G/HCH

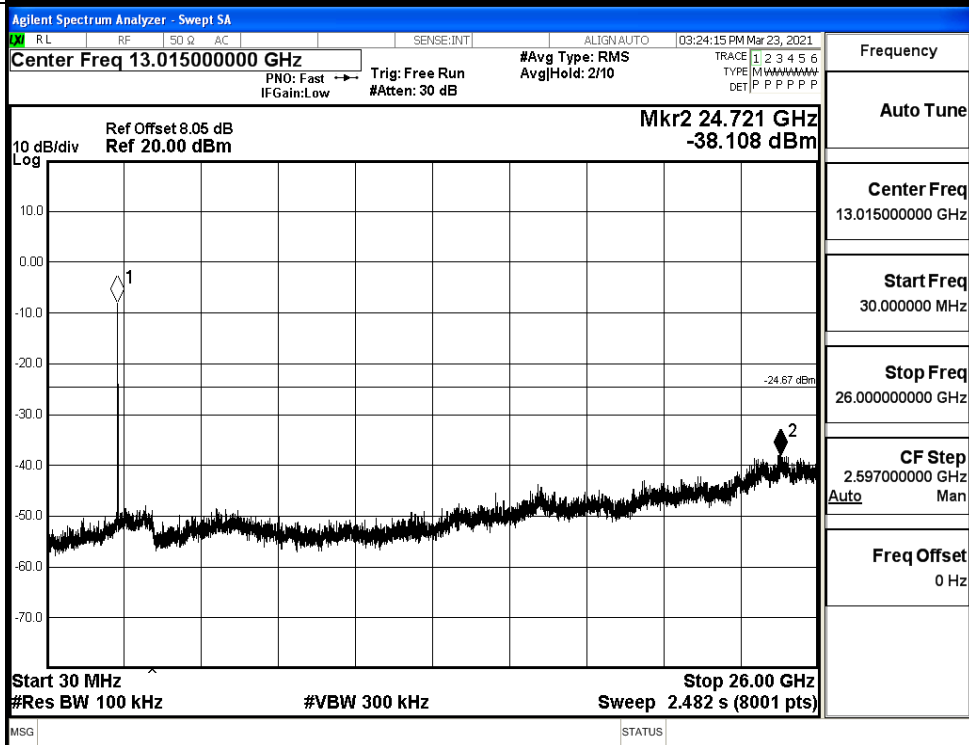


11N20SISO\_LCH\_Graphs

Pref/11N20SIS  
O/LCH

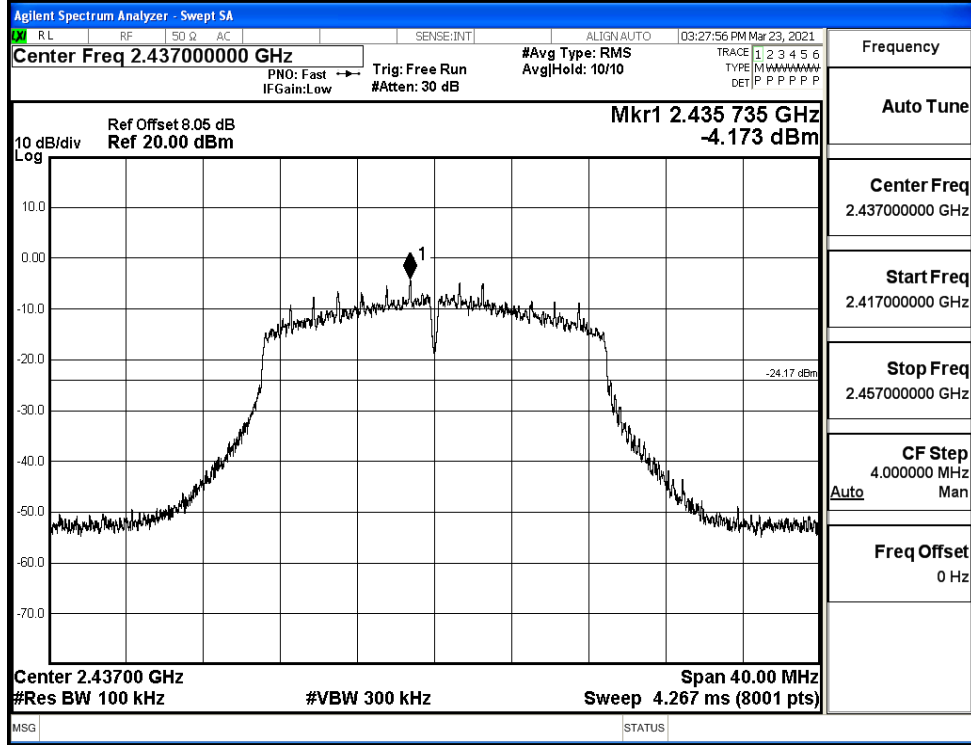


Puw/11N20  
SISO/LCH

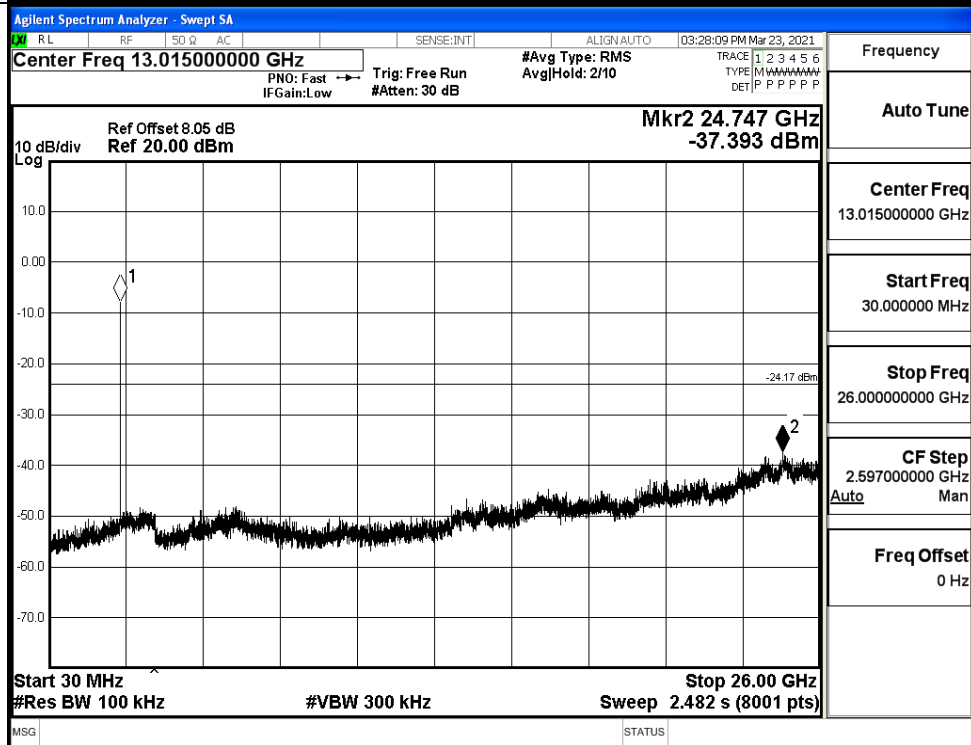


11N20SISO\_MCH\_Graphs

Pref/11N20  
SISO/MCH

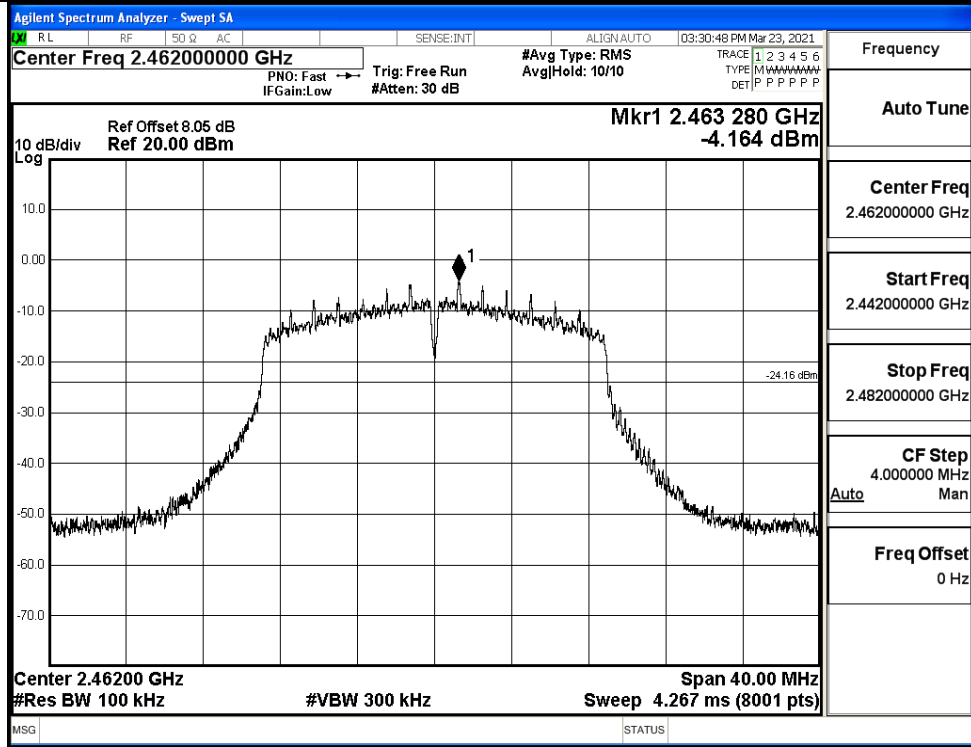


Puw/11N20  
SISO/MCH

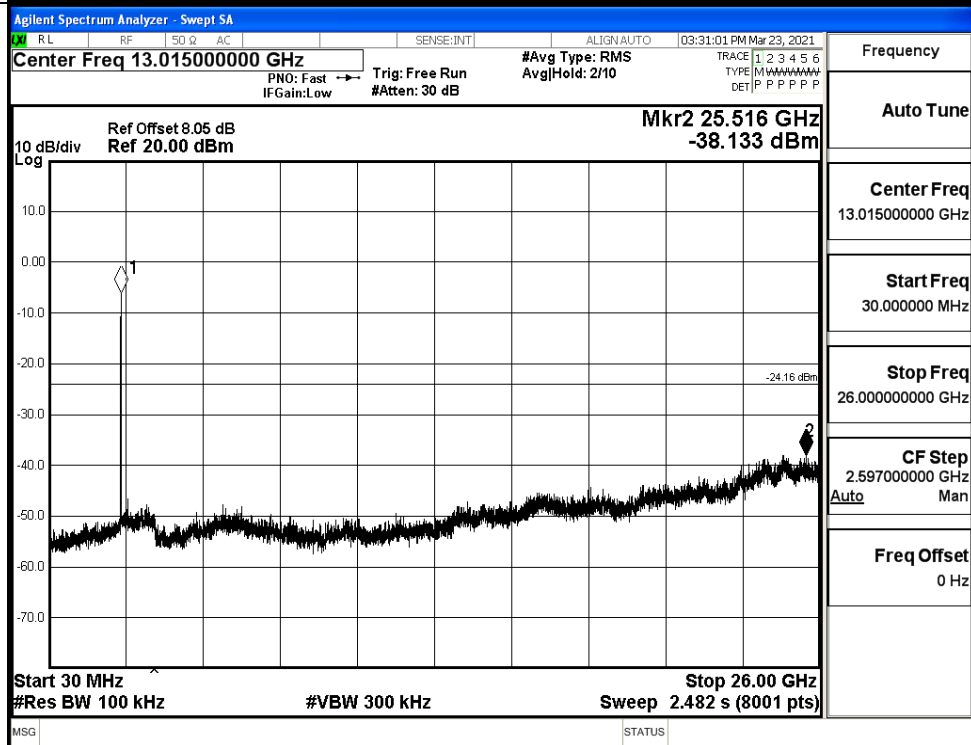


11N20SISO\_HCH\_Graphs

Pref/11N20  
SISO/HCH

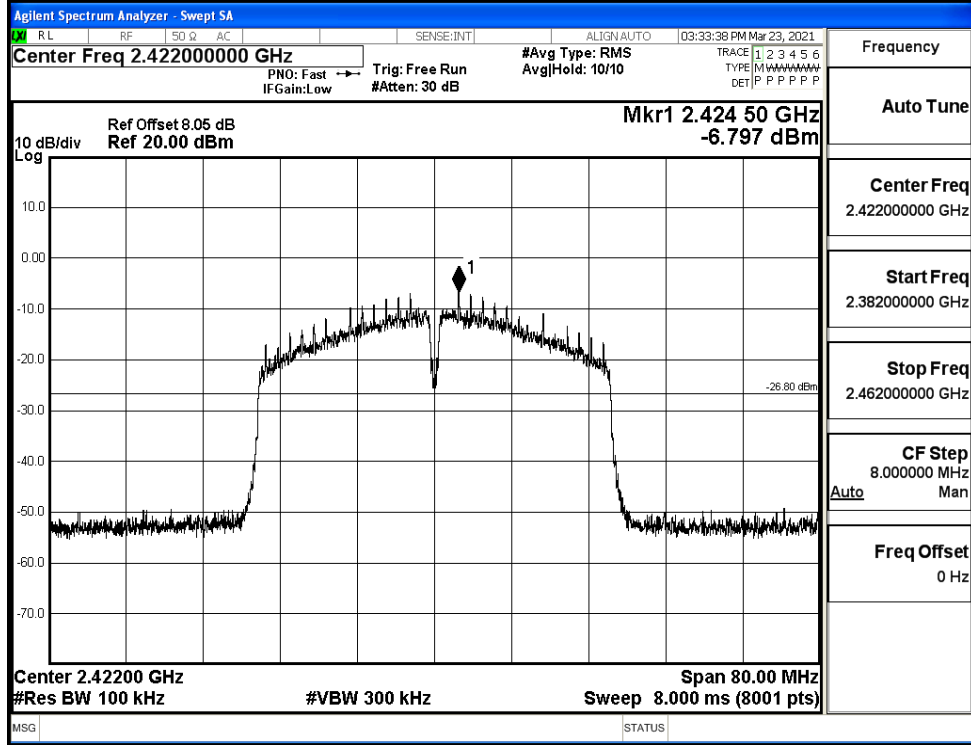


Puw/11N20  
SISO/HCH

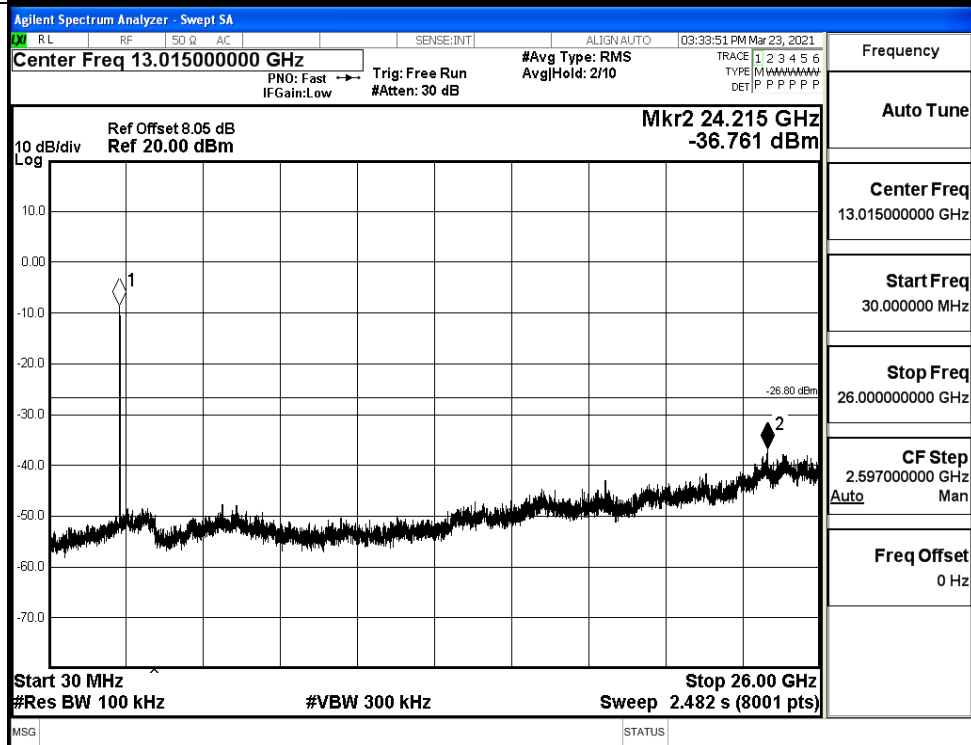


11N40SISO\_LCH\_Graphs

Pref/11N40  
SISO/LCH

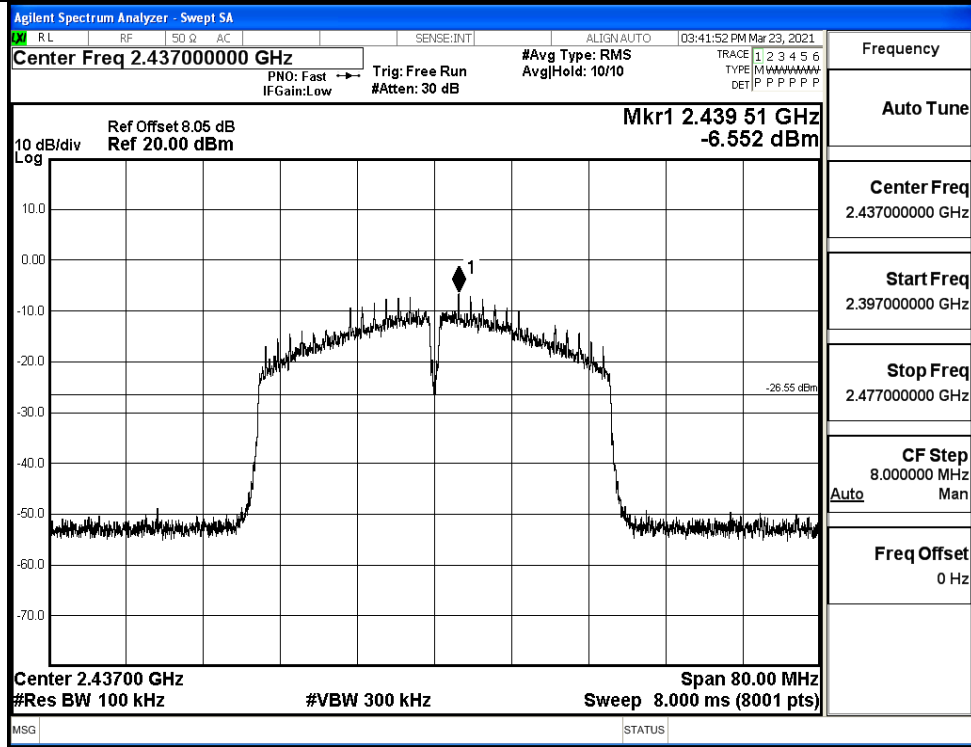


Puw/11N40  
SISO/LCH

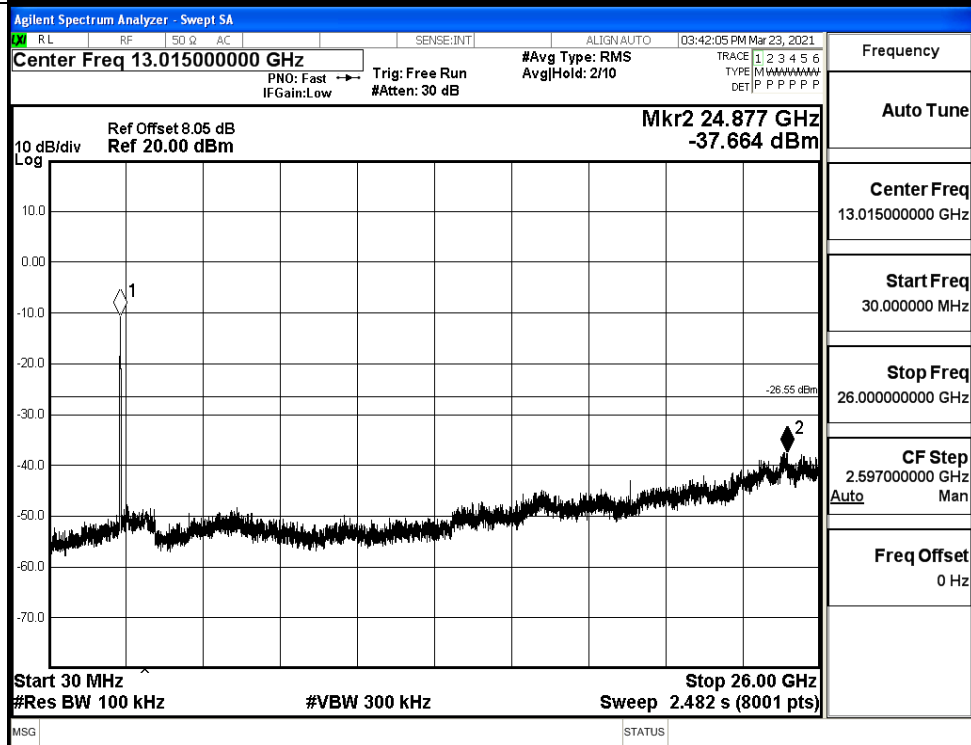


11N40SISO\_MCH\_Graphs

Pref/11N40  
SISO/MCH

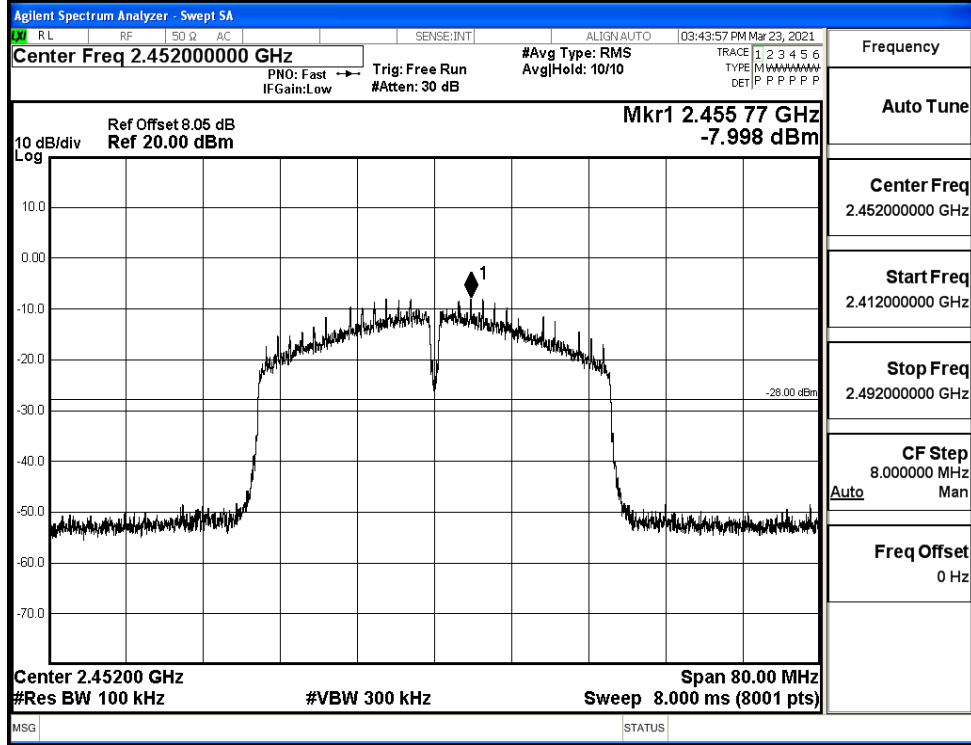


Puw/11N40  
SISO/MCH

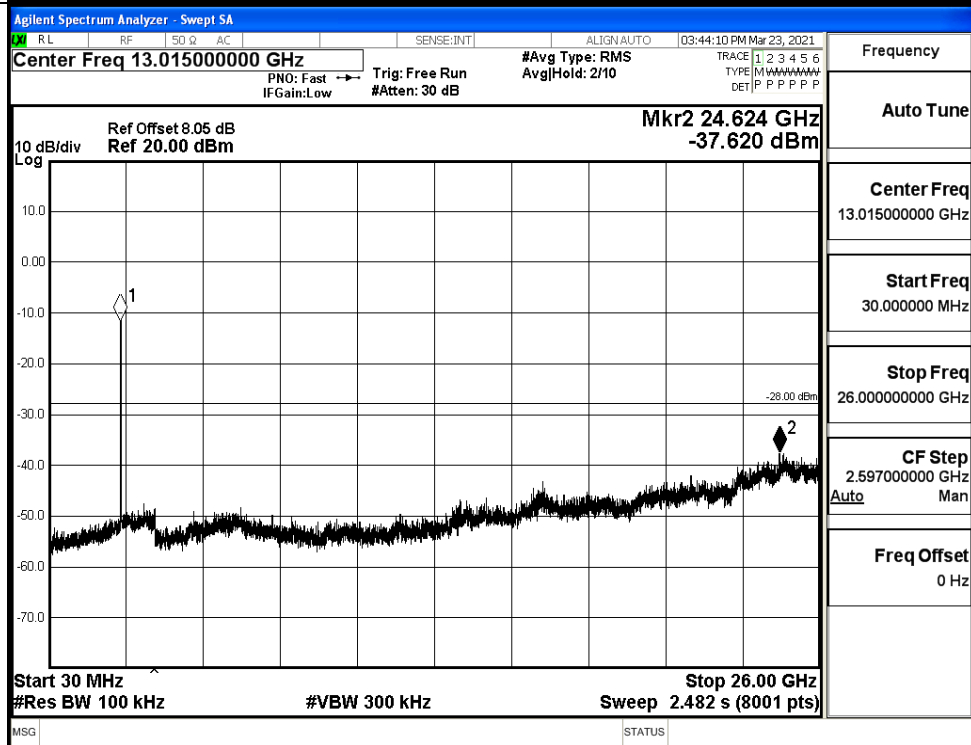


11N40SISO\_HCH\_Graphs

Pref/11N40  
SISO/HCH

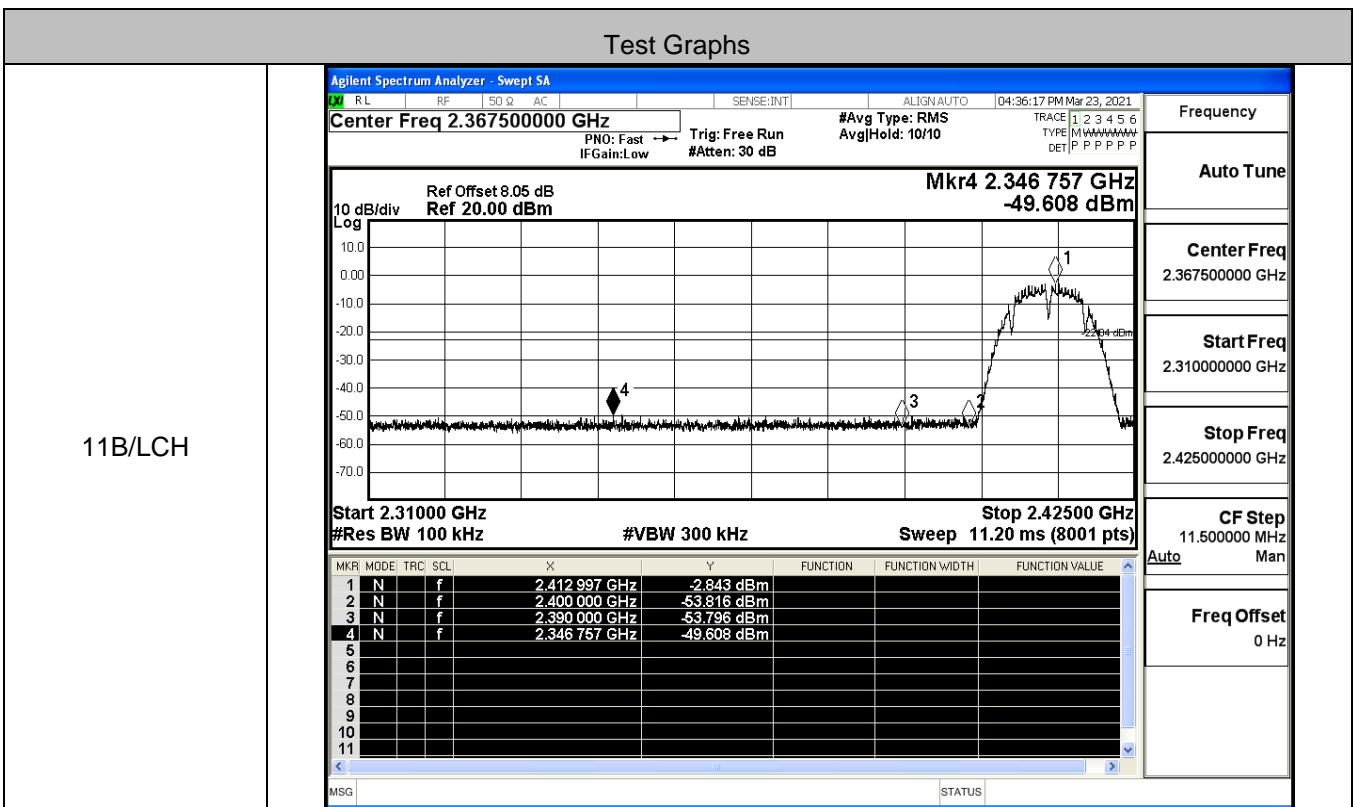


Puw/11N40  
SISO/HCH



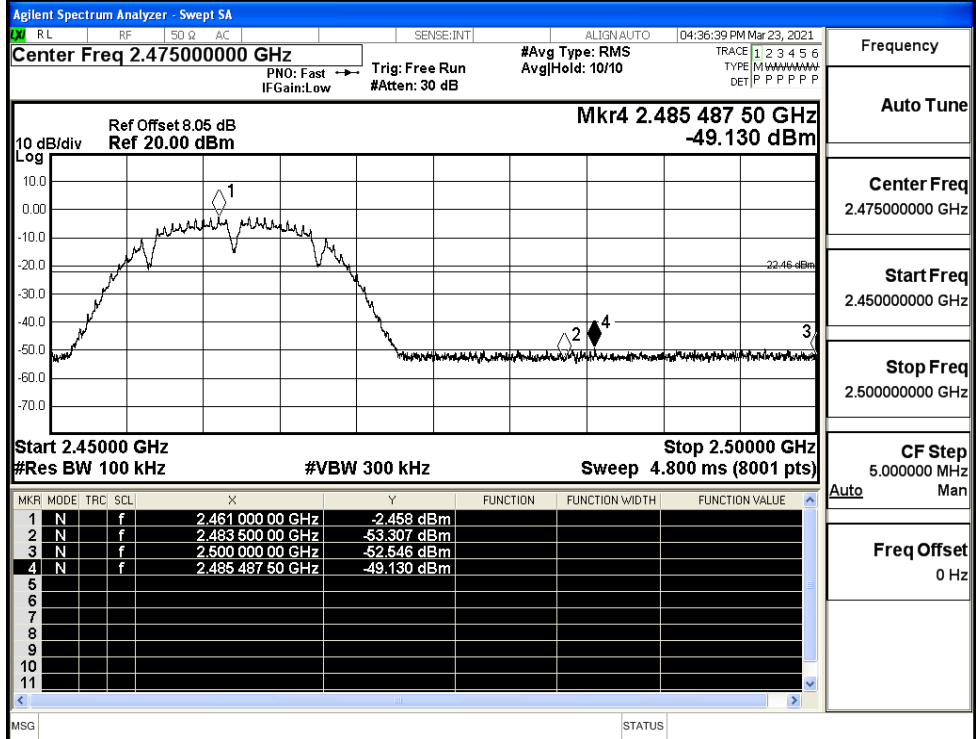
### A.6 Band-edge for RF Conducted Emissions

| 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    |

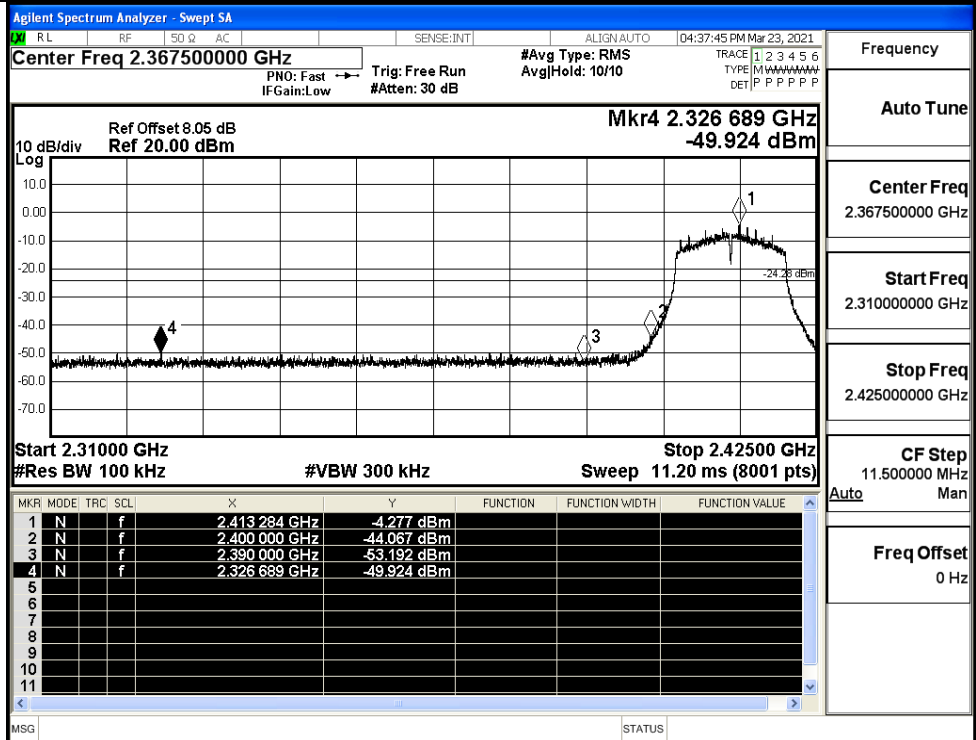




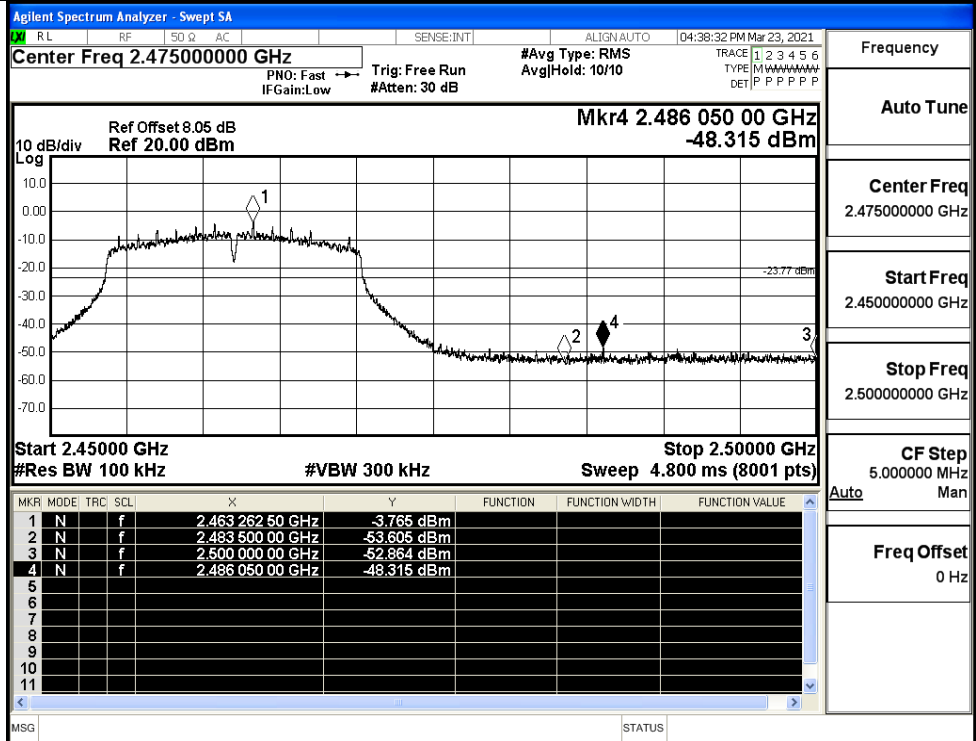
11B/HCH



11G/LCH

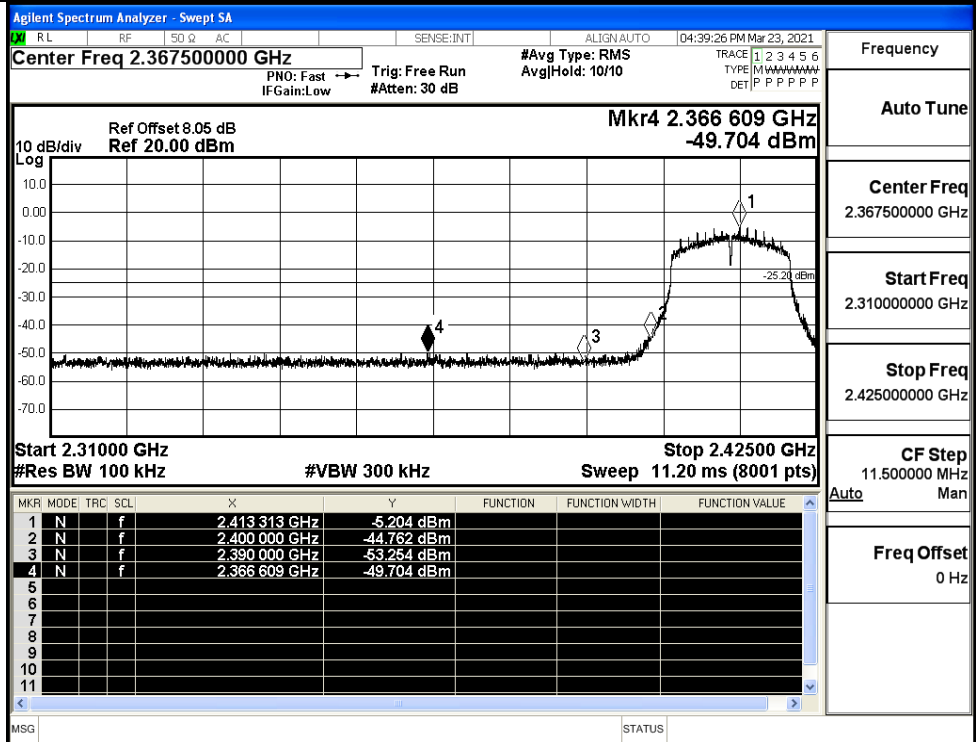


11G/HCH



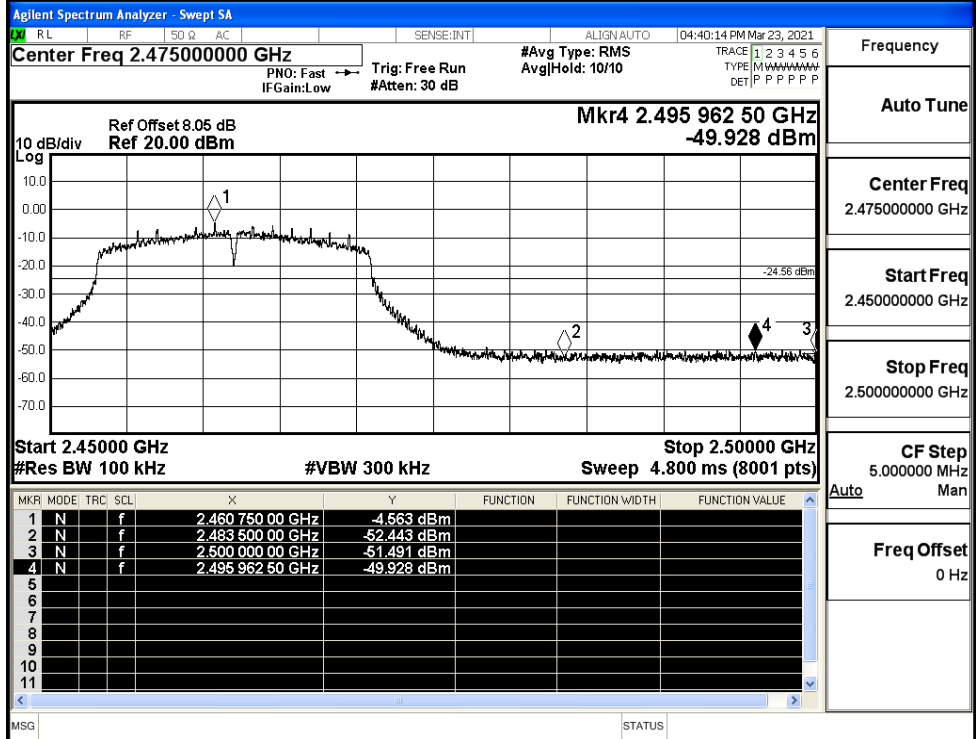
|             |                 |
|-------------|-----------------|
| Frequency   | 2.475000000 GHz |
| Auto Tune   |                 |
| Center Freq | 2.475000000 GHz |
| Start Freq  | 2.450000000 GHz |
| Stop Freq   | 2.500000000 GHz |
| CF Step     | 5.000000 MHz    |
| Freq Offset | 0 Hz            |

11N20SISO/LCH



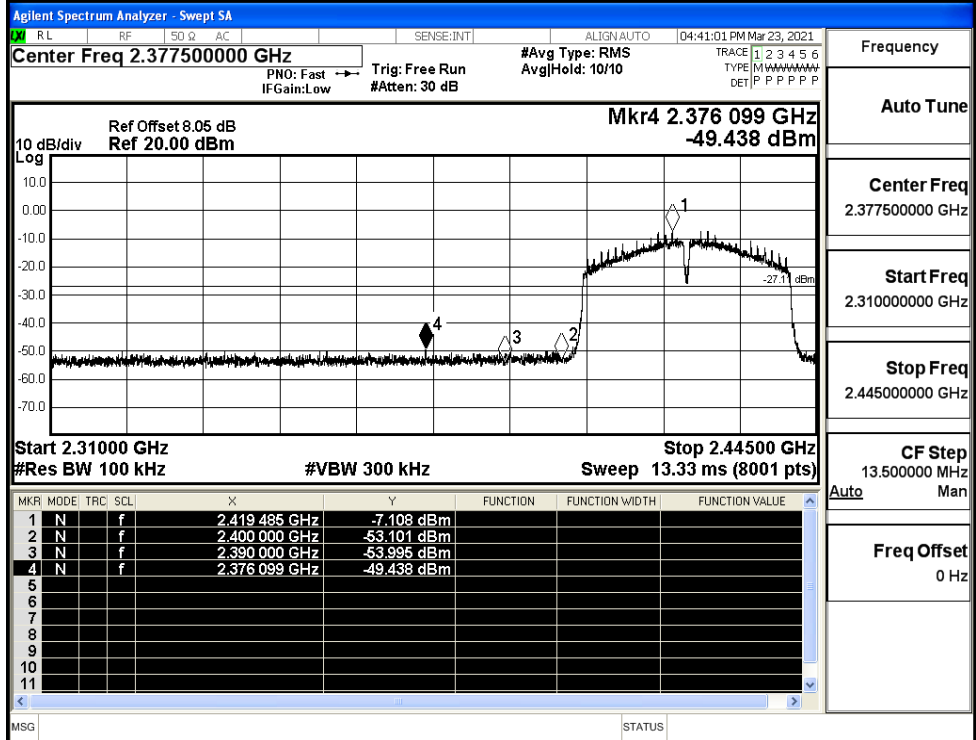
|             |                 |
|-------------|-----------------|
| Frequency   | 2.367500000 GHz |
| Auto Tune   |                 |
| Center Freq | 2.367500000 GHz |
| Start Freq  | 2.310000000 GHz |
| Stop Freq   | 2.425000000 GHz |
| CF Step     | 11.500000 MHz   |
| Freq Offset | 0 Hz            |

11N20SISO/HCH



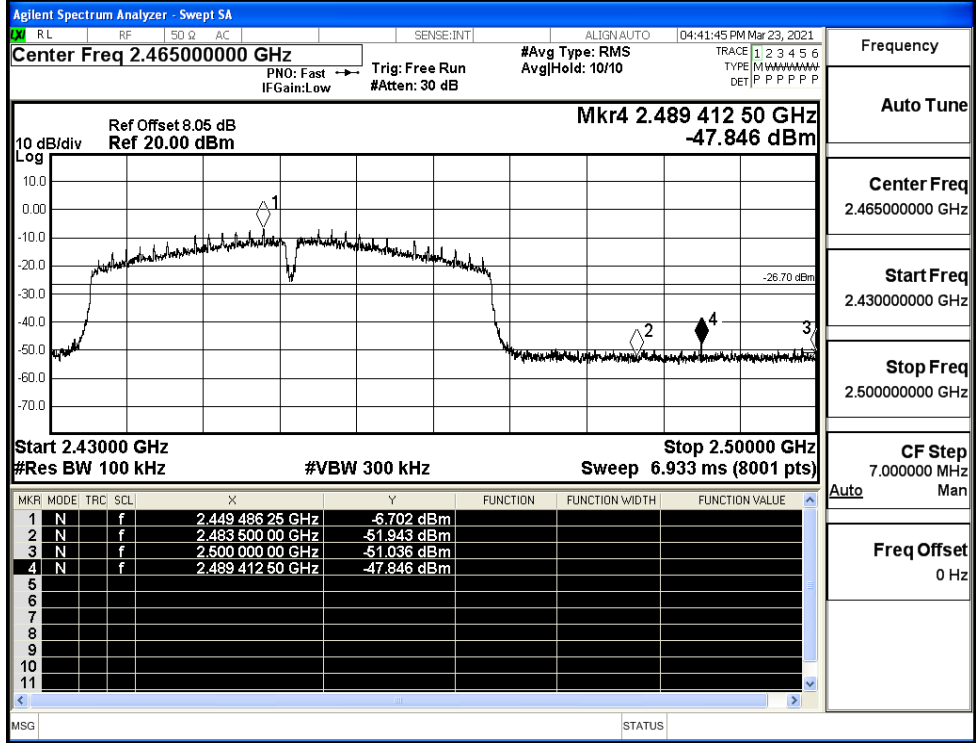
|             |                |
|-------------|----------------|
| Frequency   | 2.47500000 GHz |
| Auto Tune   |                |
| Center Freq | 2.47500000 GHz |
| Start Freq  | 2.45000000 GHz |
| Stop Freq   | 2.50000000 GHz |
| CF Step     | 5.000000 MHz   |
| Freq Offset | 0 Hz           |

11N40SISO/LCH



|             |                |
|-------------|----------------|
| Frequency   | 2.37750000 GHz |
| Auto Tune   |                |
| Center Freq | 2.37750000 GHz |
| Start Freq  | 2.31000000 GHz |
| Stop Freq   | 2.44500000 GHz |
| CF Step     | 13.500000 MHz  |
| Freq Offset | 0 Hz           |

11N40SISO/HCH

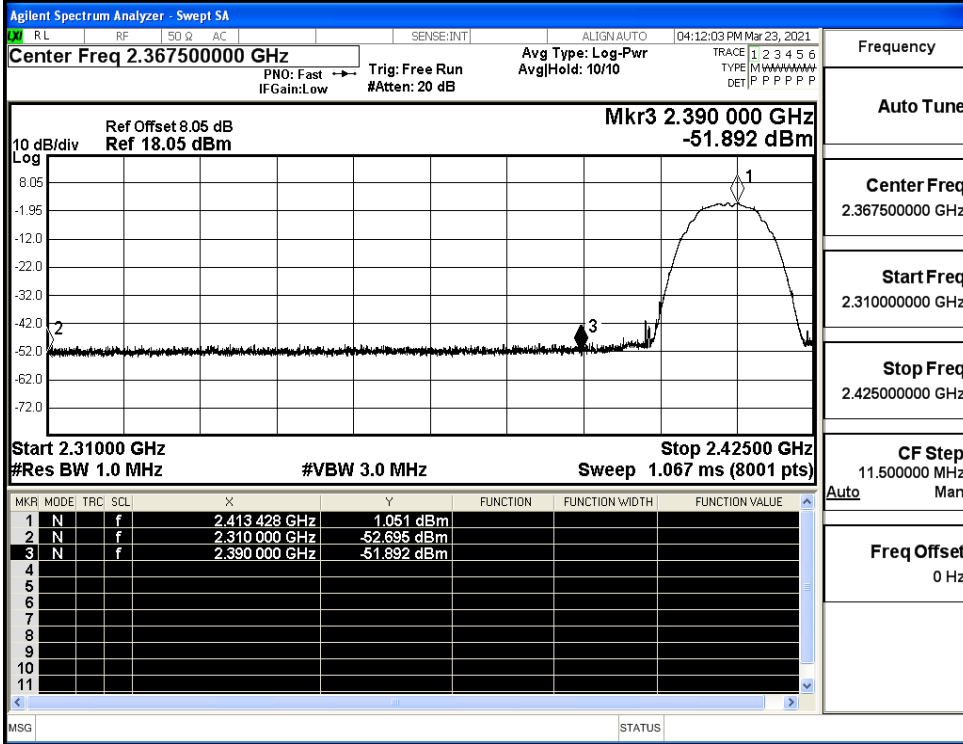


## A.7 Restrict-band band-edge measurements

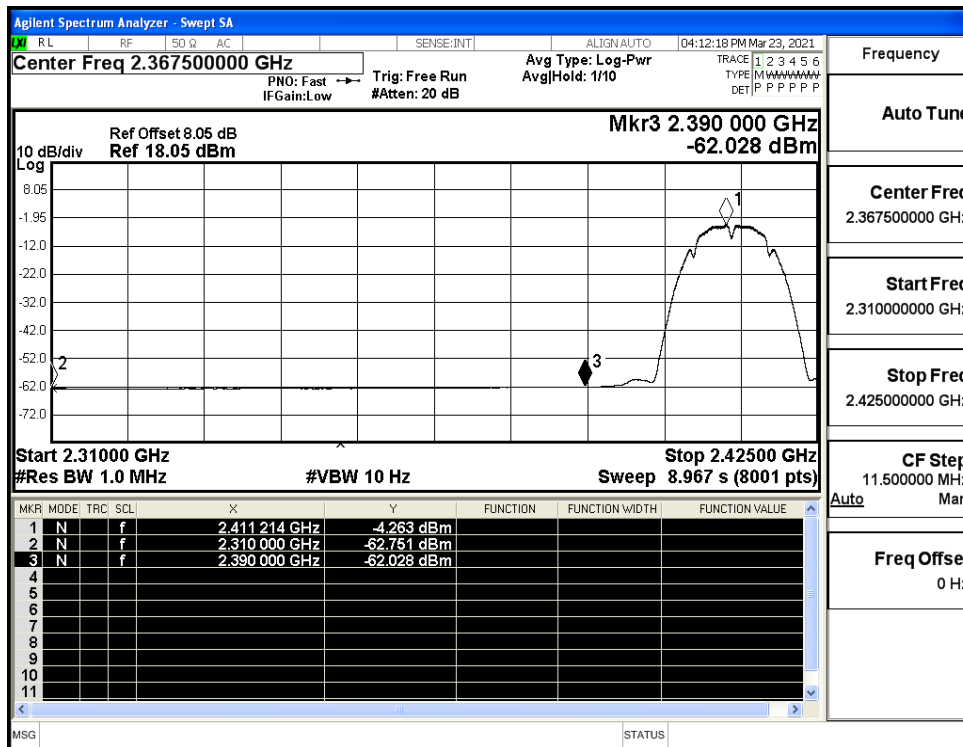
| Test Mode     | Test Channel | Ant  | Freq.  | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBu V/m] | Verdict |
|---------------|--------------|------|--------|-------------|------|---------------|------------|----------|-----------------|---------|
| 11B           | 2412         | 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 |

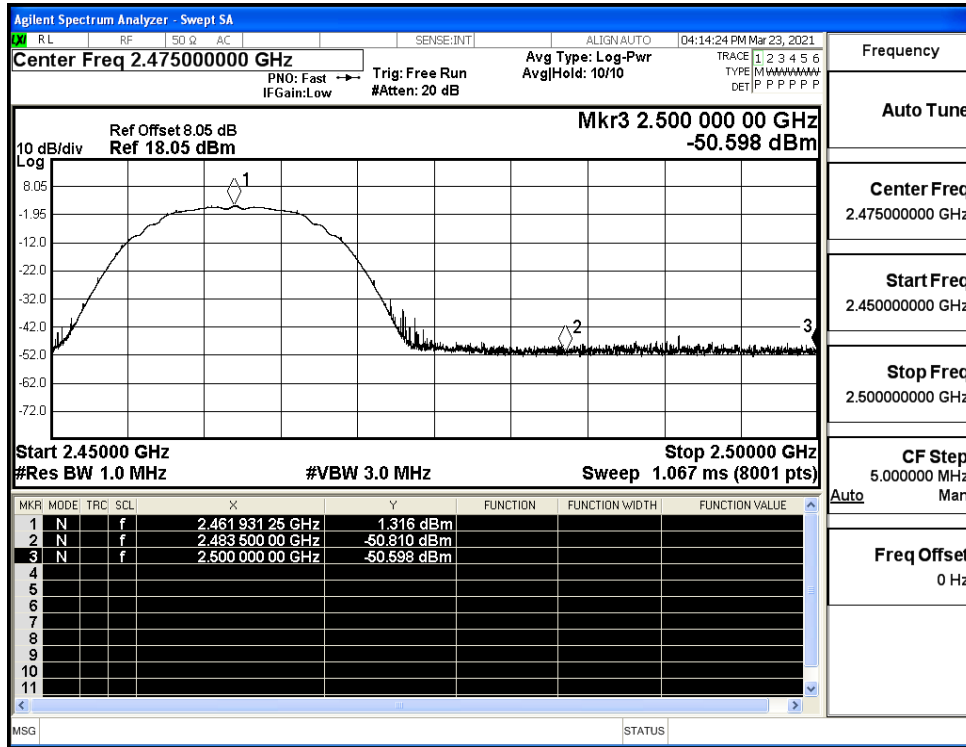
Restrict-band band-edge measurements\_11B\_2412\_Ant1\_PEAK



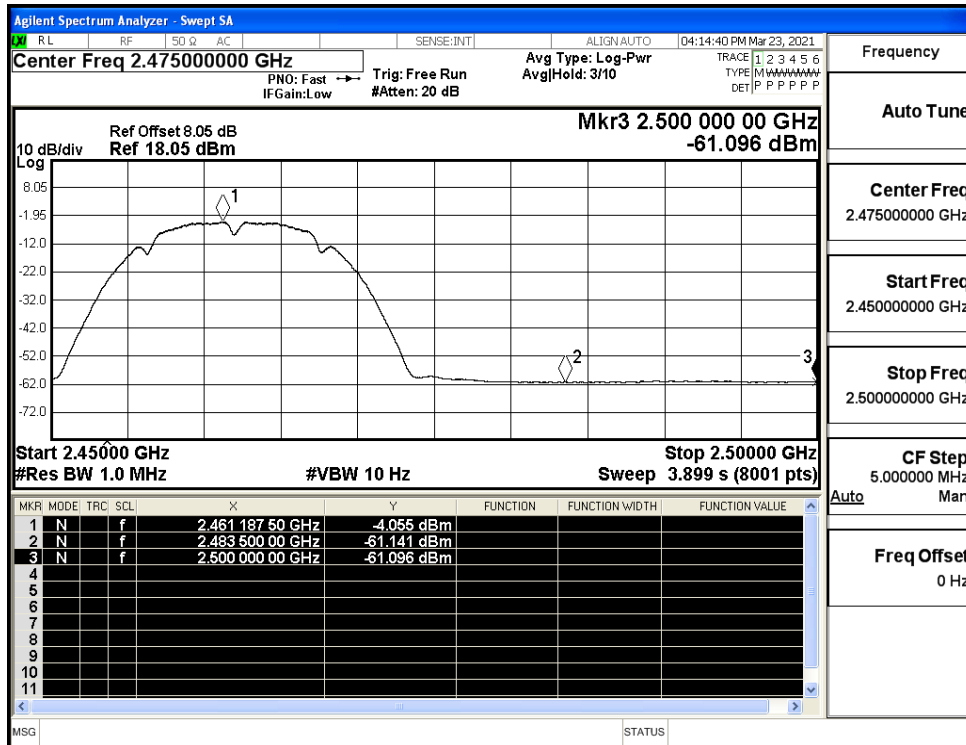
Restrict-band band-edge measurements\_11B\_2412\_Ant1\_AV



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

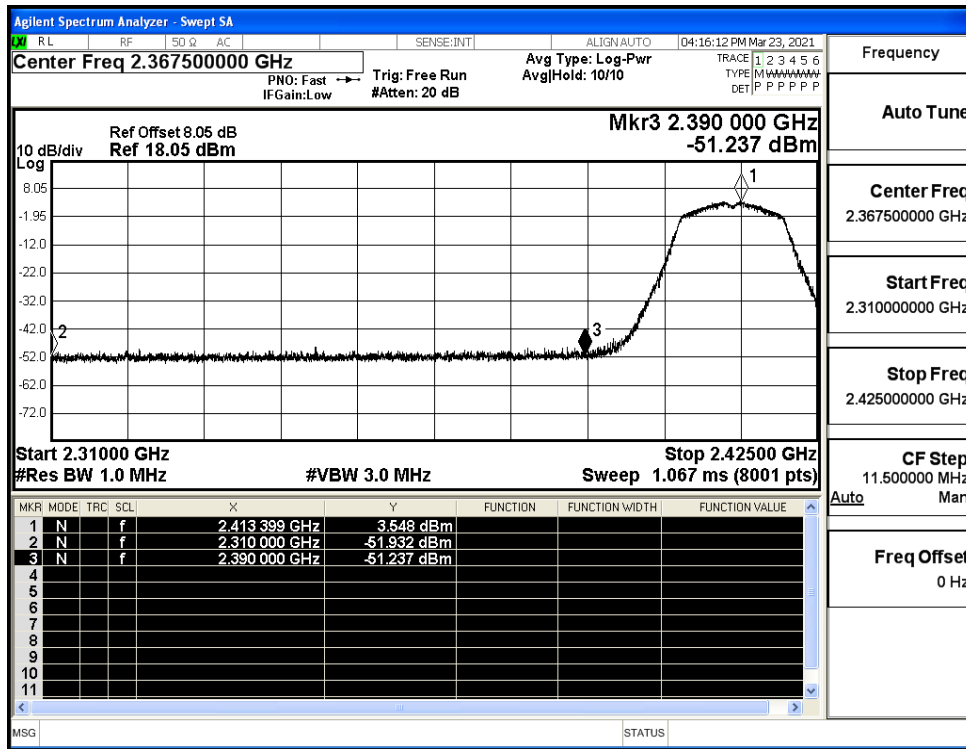


Restrict-band band-edge measurements\_11B\_2462\_Ant1\_AV

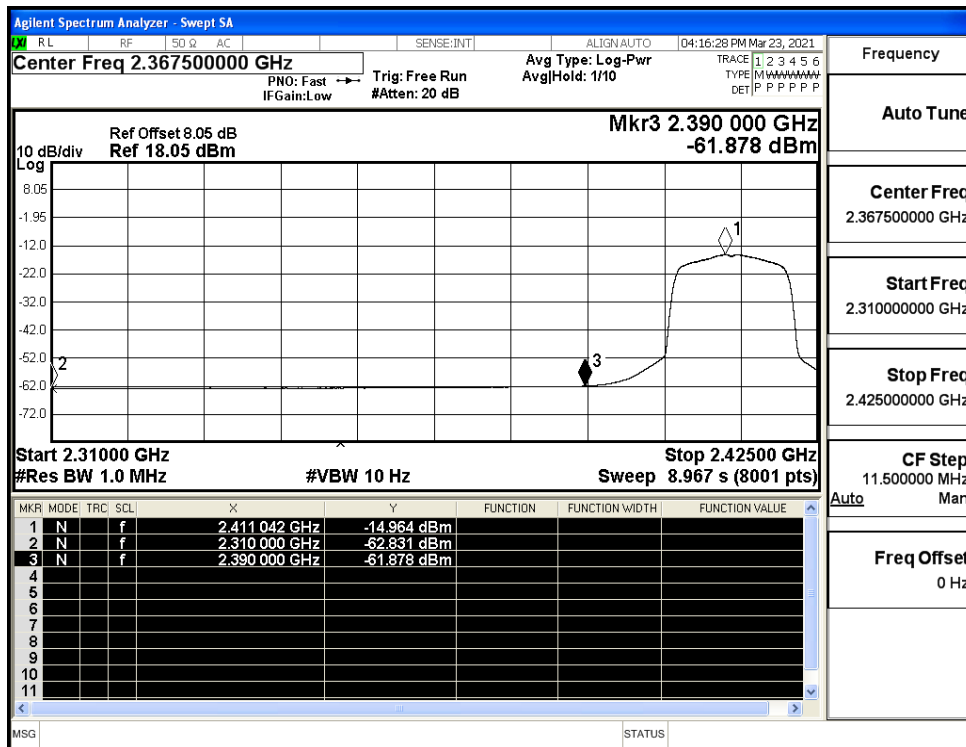




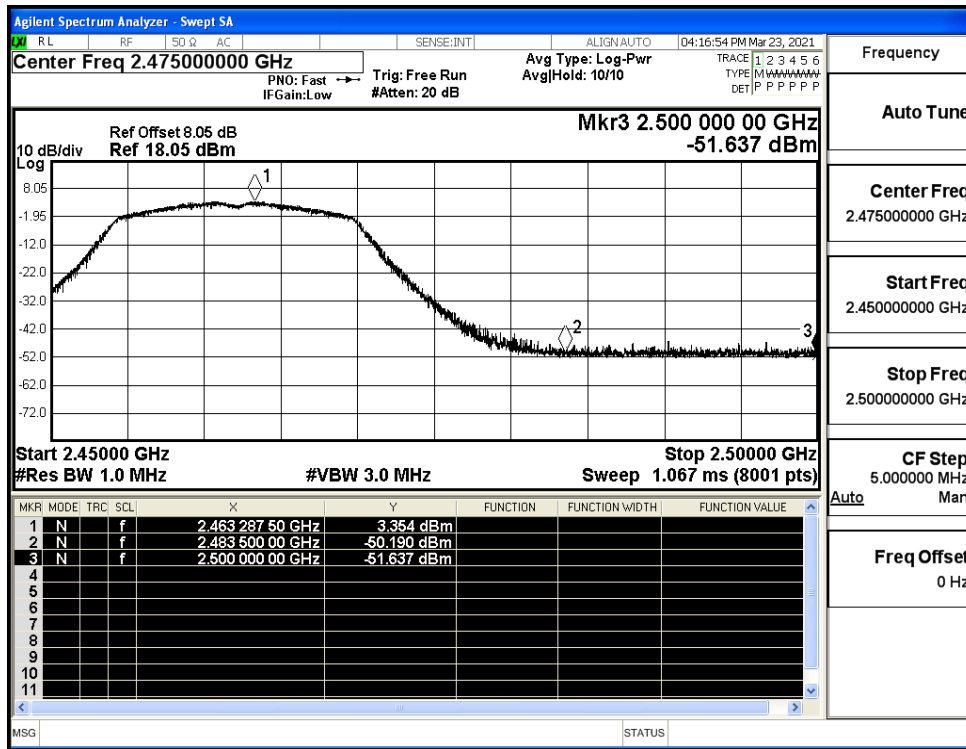
Restrict-band band-edge measurements\_11G\_2412\_Ant1\_PEAK



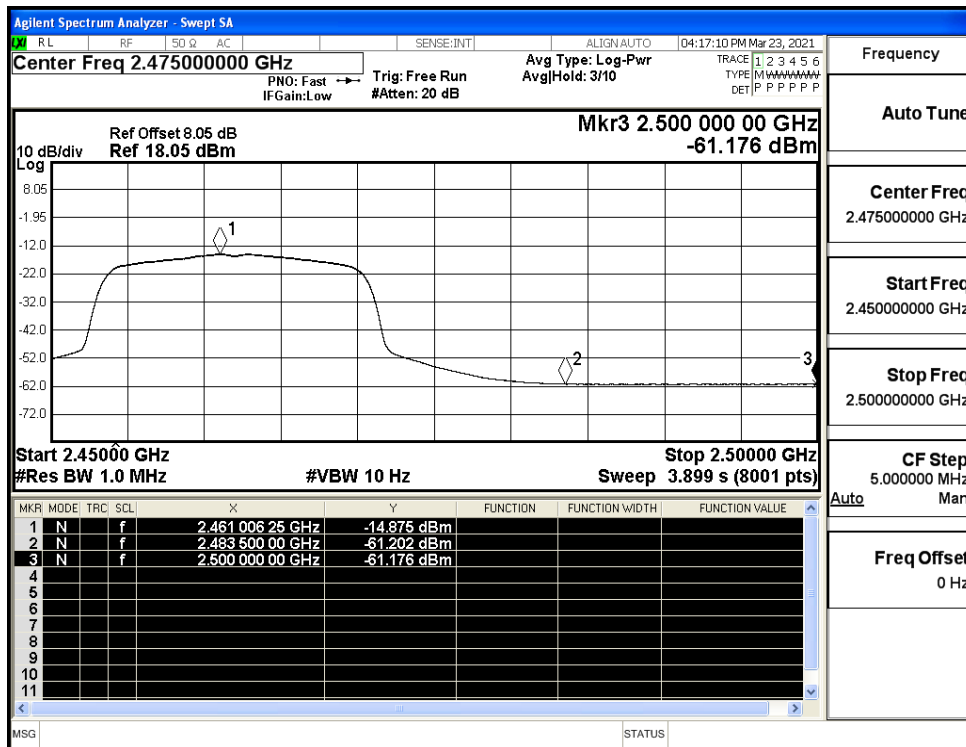
Restrict-band band-edge measurements\_11G\_2412\_Ant1\_AV



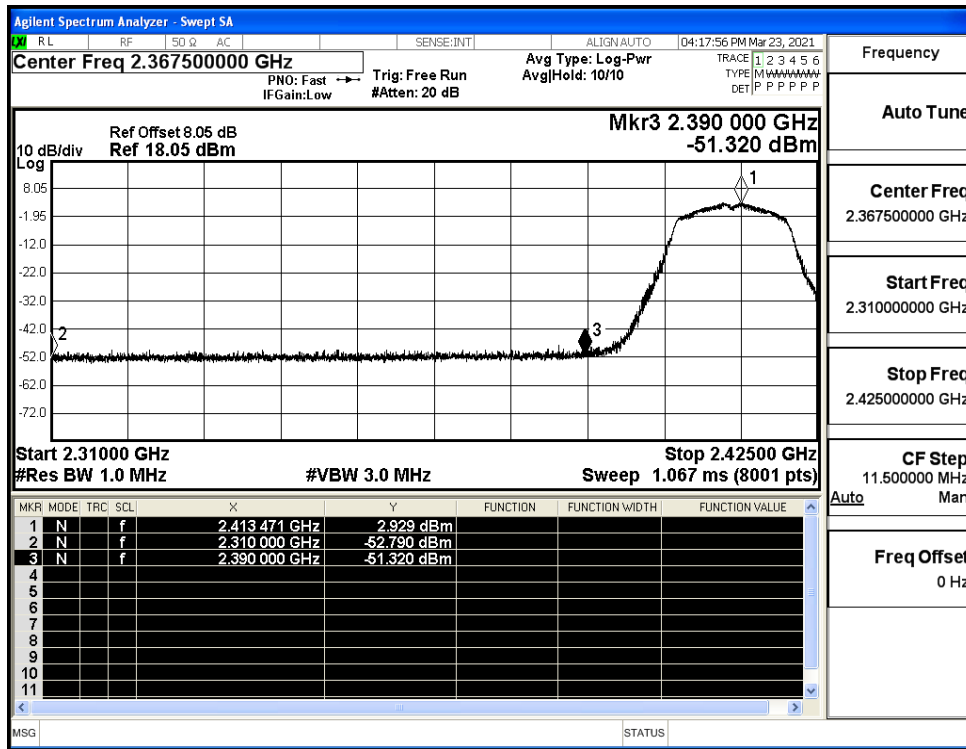
Restrict-band band-edge measurements\_11G\_2462\_Ant1\_PEAK



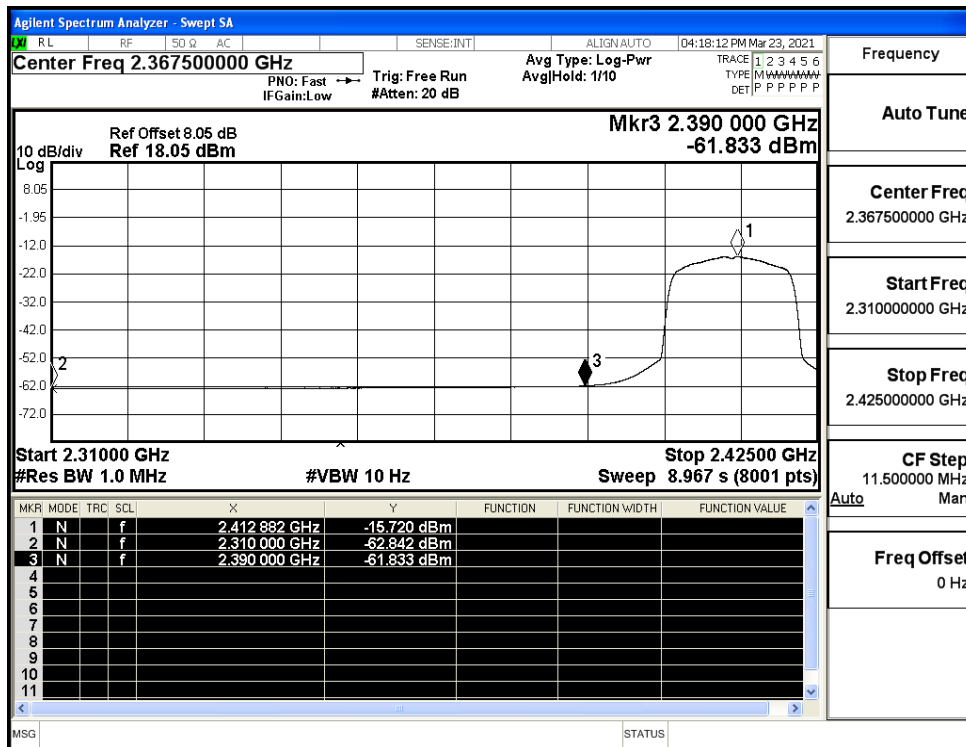
Restrict-band band-edge measurements\_11G\_2462\_Ant1\_AV



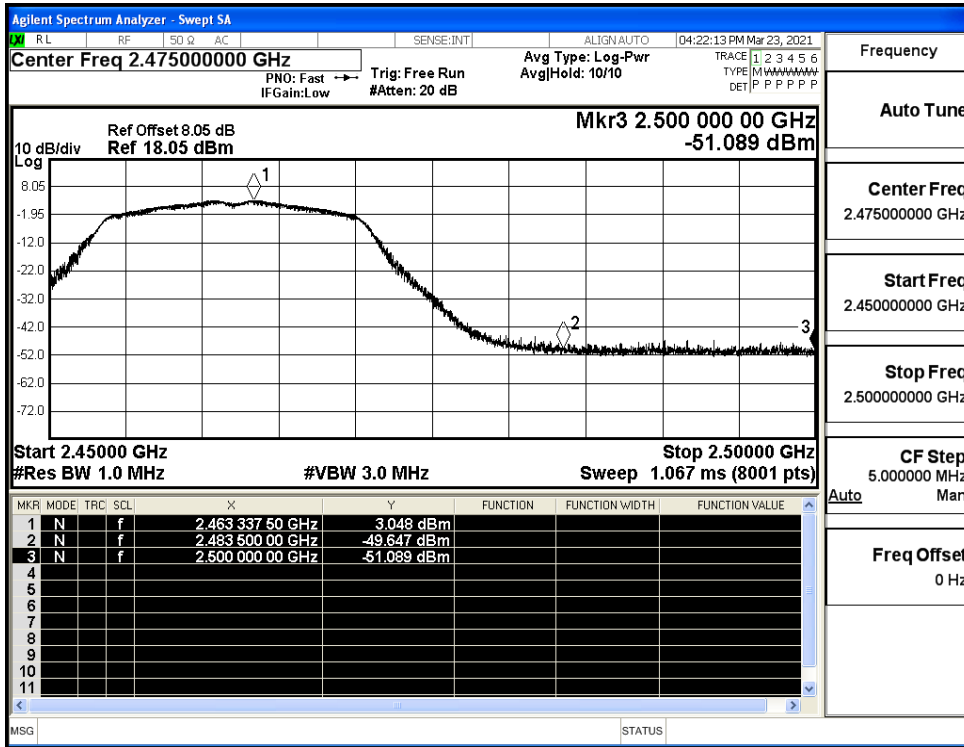
Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_PEAK



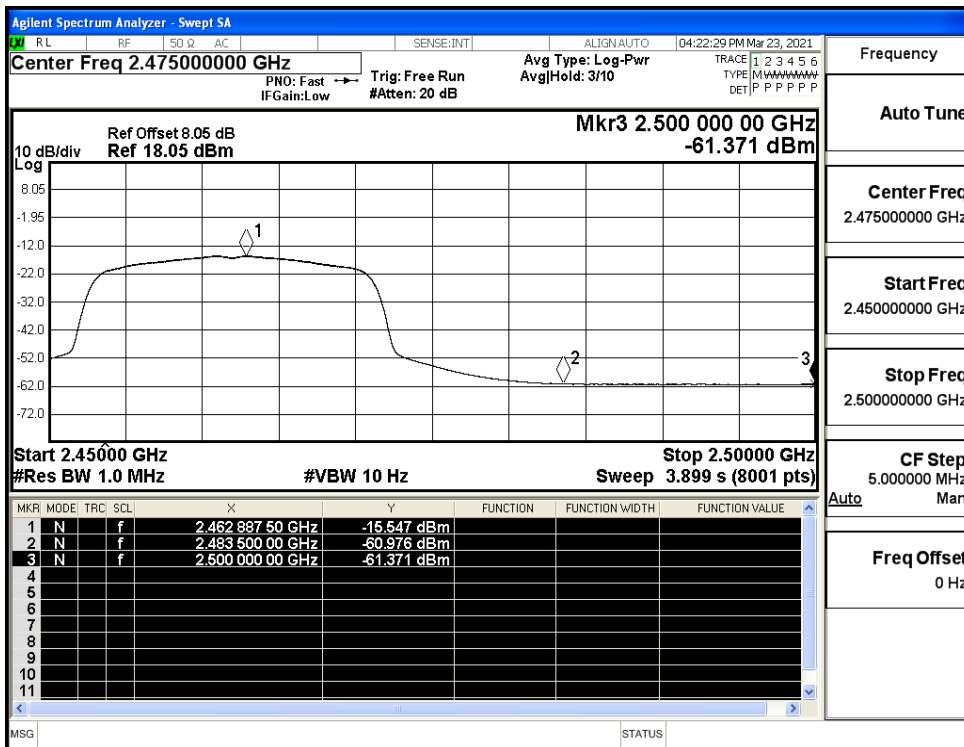
Restrict-band band-edge measurements\_11N20SISO\_2412\_Ant1\_AV



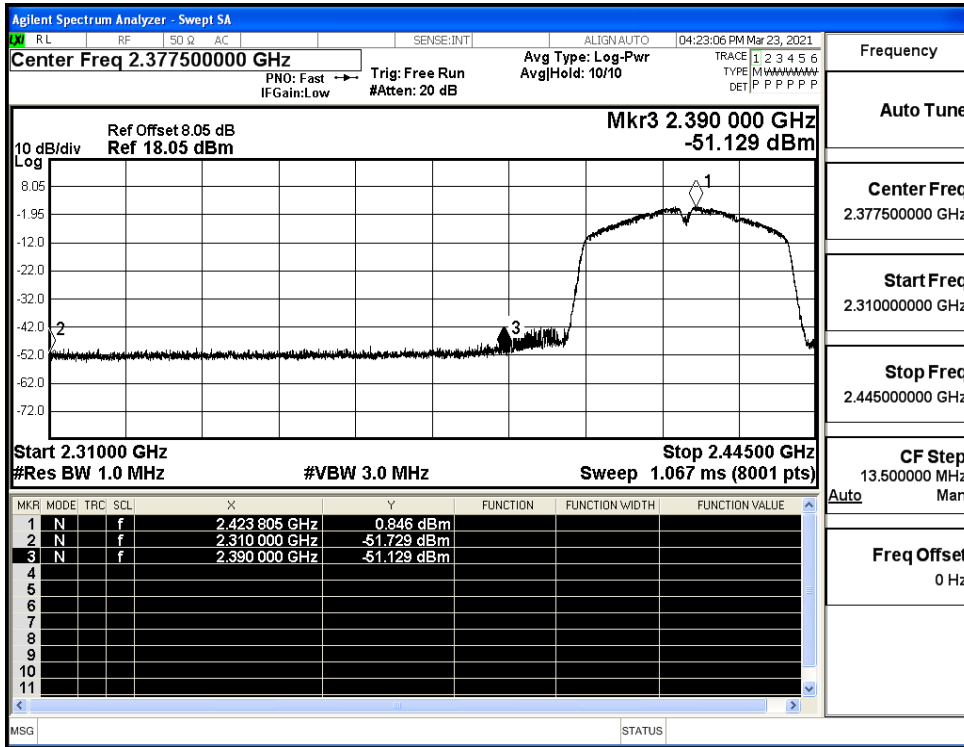
Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_PEAK



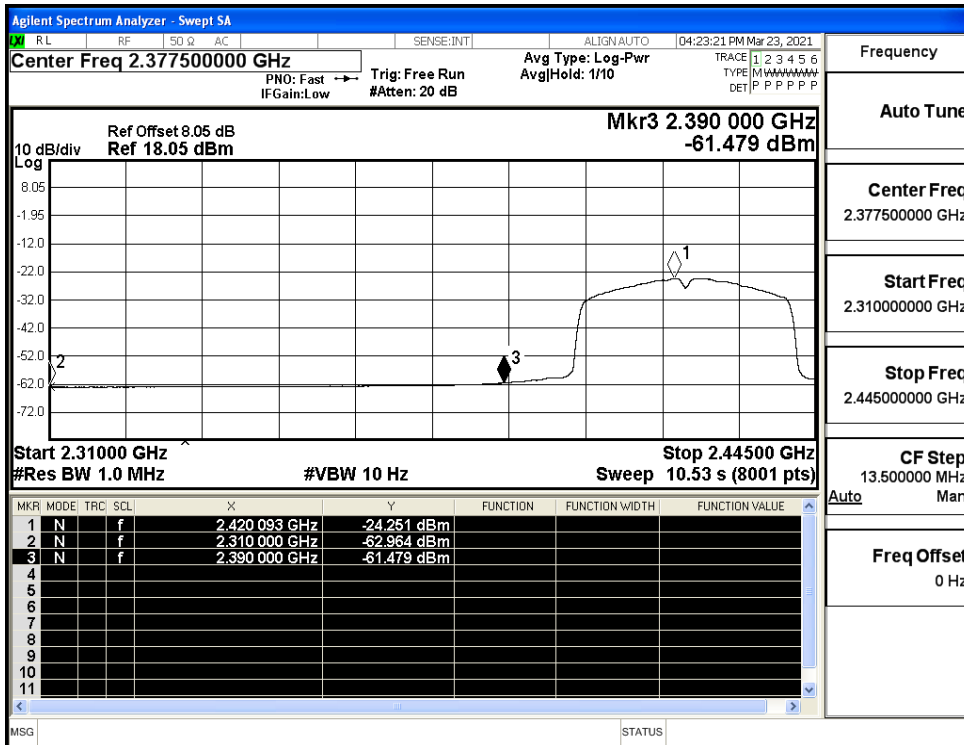
Restrict-band band-edge measurements\_11N20SISO\_2462\_Ant1\_AV



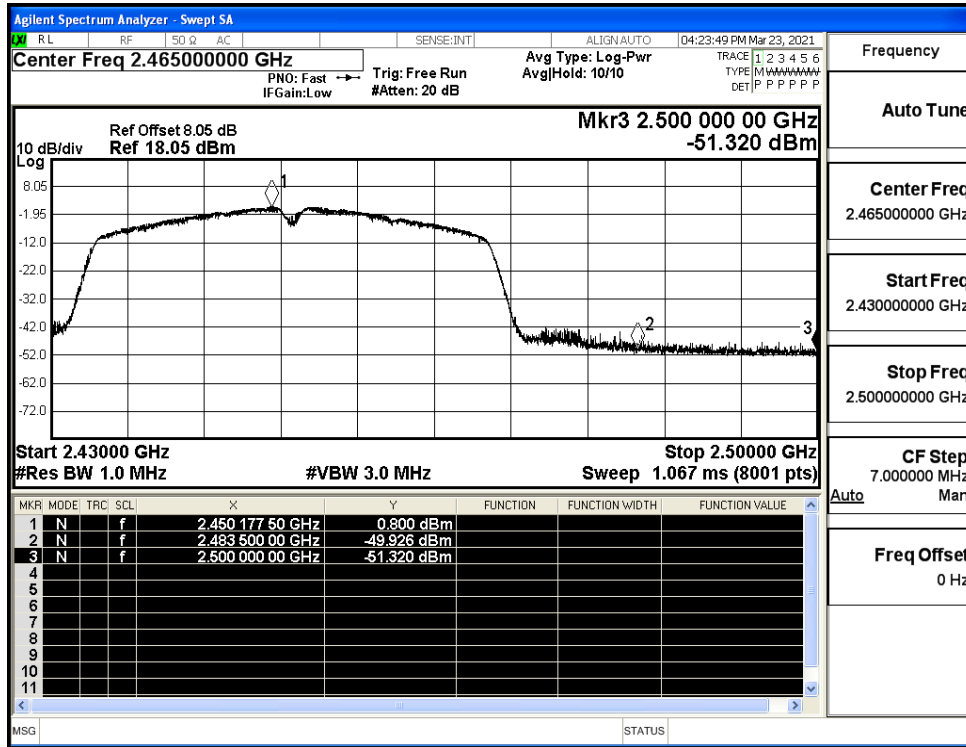
Restrict-band band-edge measurements\_11N40SISO\_2422\_Ant1\_PEAK



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

