

Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Smart Bridge

Trade Mark: N/A

Test Model: ZJ-MHSB-A

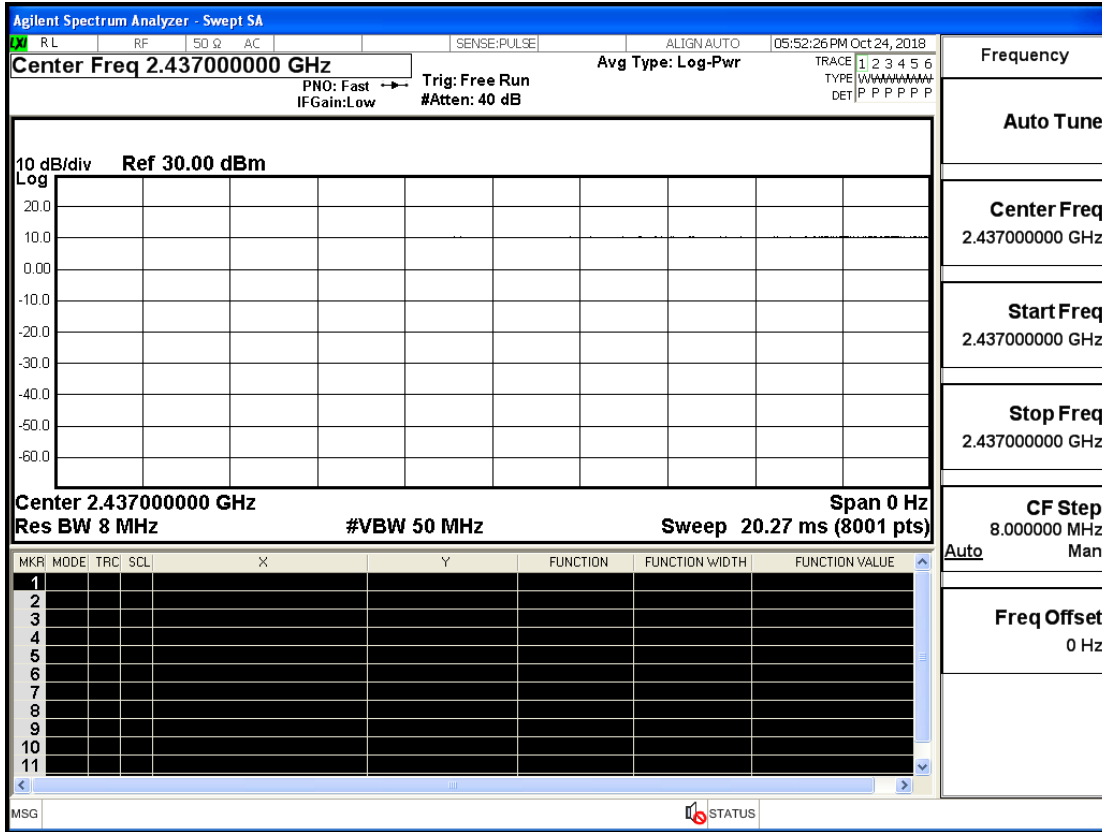
Environmental Conditions

| | |
|--------------------|-------------|
| Temperature: | 24.3 ° C |
| Relative Humidity: | 52.7% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Mina.Xu |
| Supervised by: | Jayden.Zhuo |

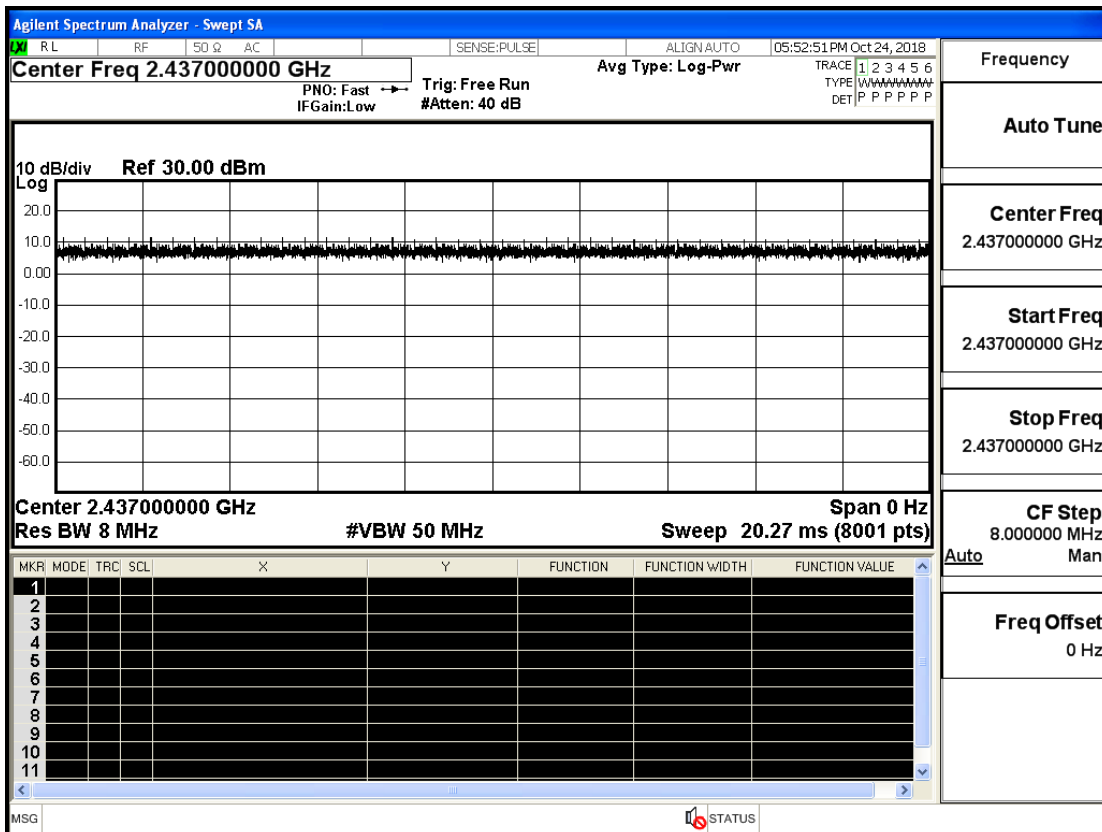
B.1 Duty Cycle

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

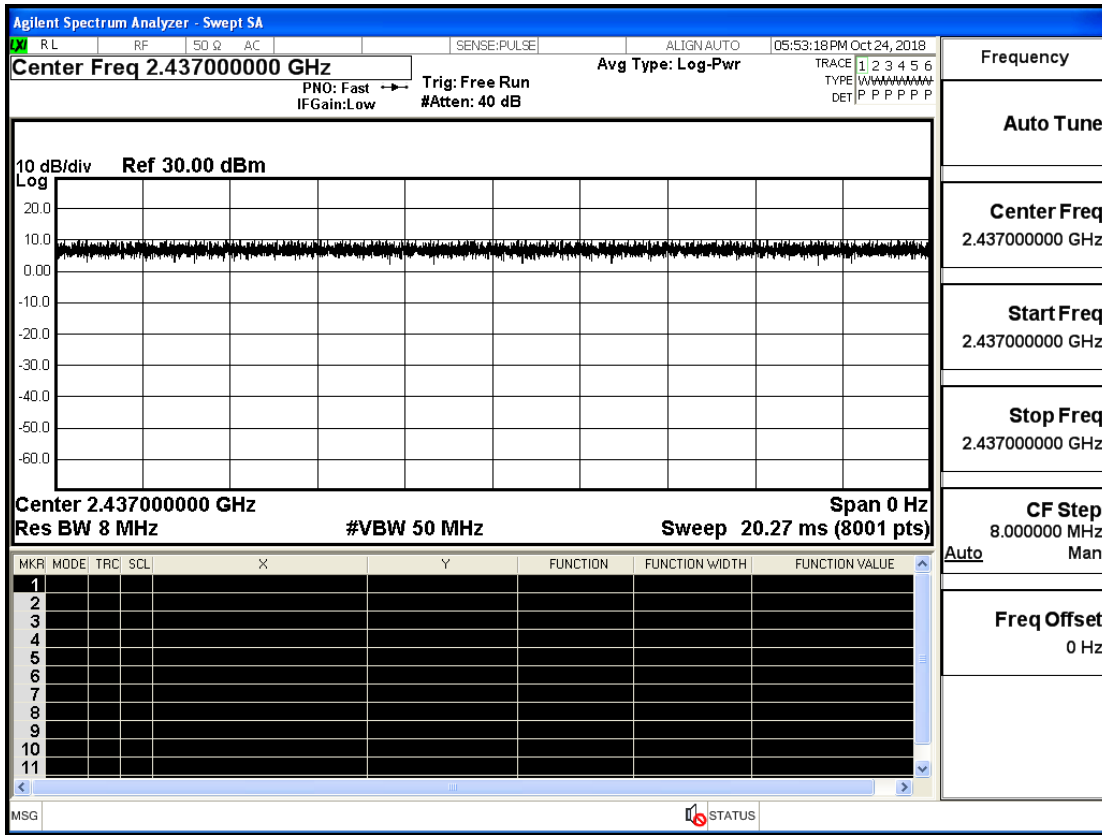
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1

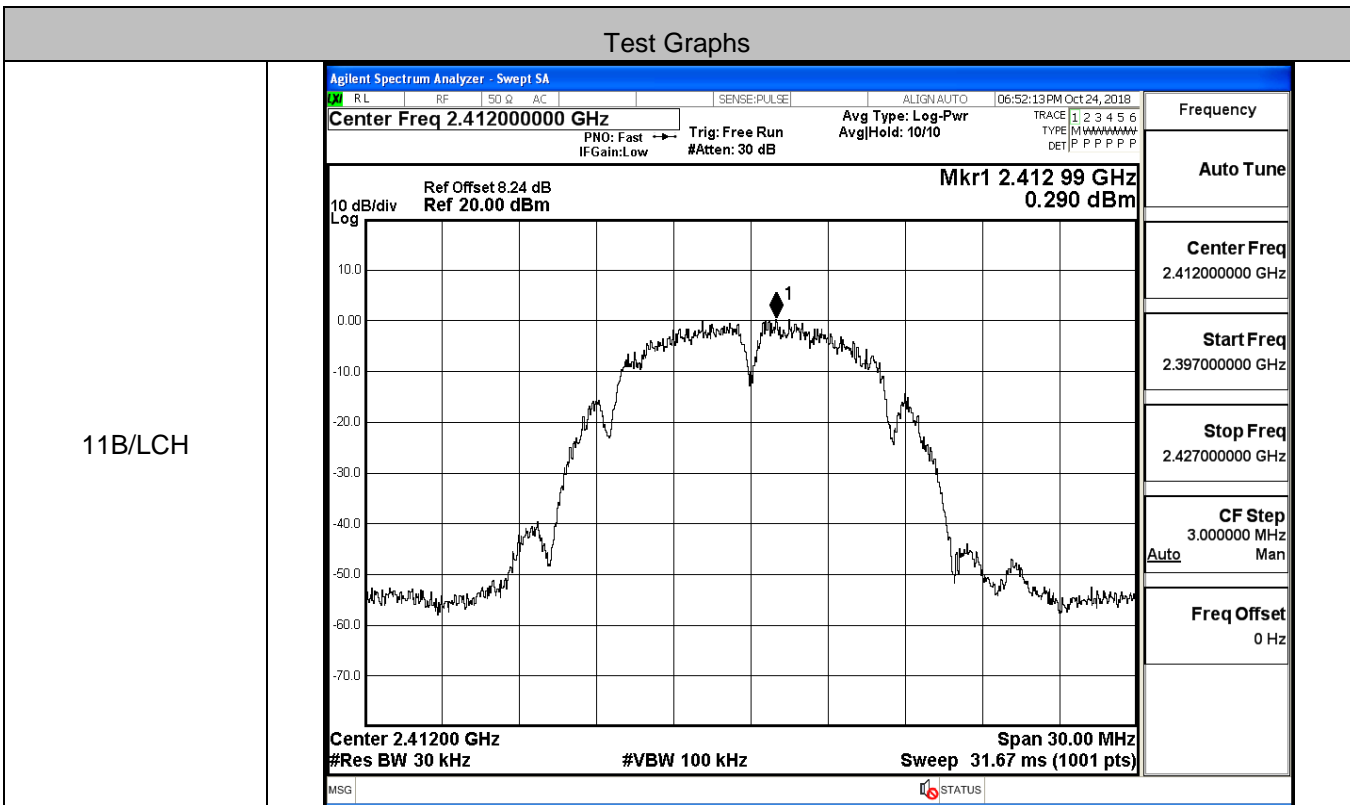


B.2 Maximum Conducted Output Power

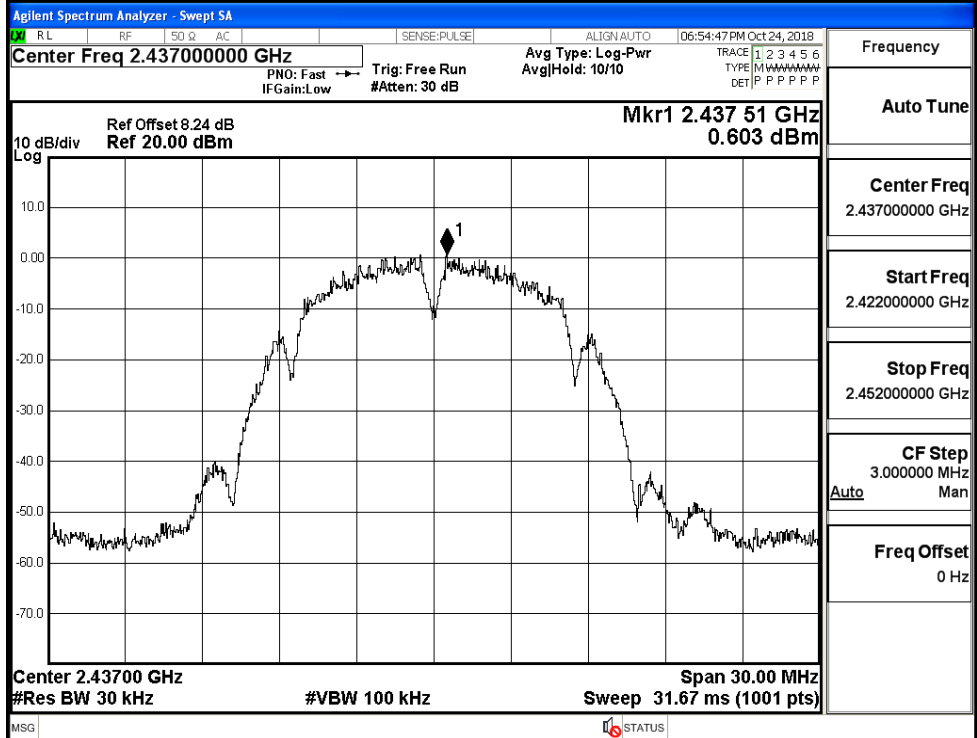
| Mode | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B | LCH | 15.69 | 30 | PASS |
| | MCH | 15.72 | 30 | PASS |
| | HCH | 16.12 | 30 | PASS |
| 11G | LCH | 15.58 | 30 | PASS |
| | MCH | 15.63 | 30 | PASS |
| | HCH | 16.21 | 30 | PASS |
| 11N20SISO | LCH | 15.07 | 30 | PASS |
| | MCH | 15.16 | 30 | PASS |
| | HCH | 15.47 | 30 | PASS |

B.3 Maximum Power Spectral Density

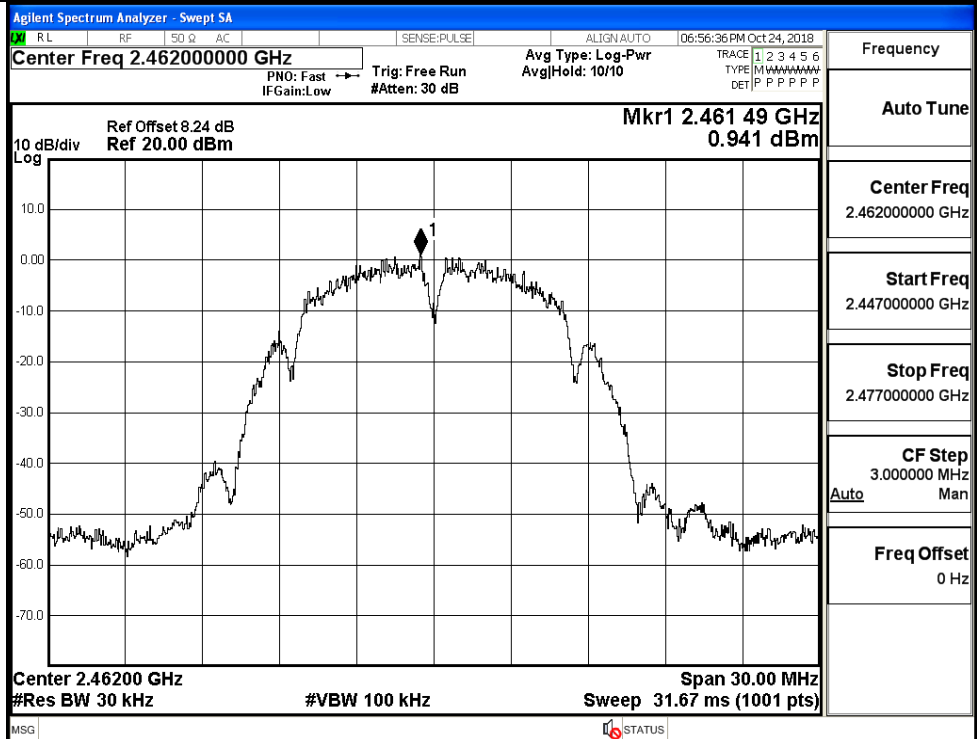
| Mode | Channel | Meas.Level [dBm/30KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|------------------------|------------------|---------|
| 11B | LCH | 0.290 | 8 | PASS |
| | MCH | 0.603 | 8 | PASS |
| | HCH | 0.941 | 8 | PASS |
| 11G | LCH | -4.019 | 8 | PASS |
| | MCH | -3.632 | 8 | PASS |
| | HCH | -7.844 | 8 | PASS |
| 11N20SISO | LCH | -7.771 | 8 | PASS |
| | MCH | -7.688 | 8 | PASS |
| | HCH | -7.474 | 8 | PASS |



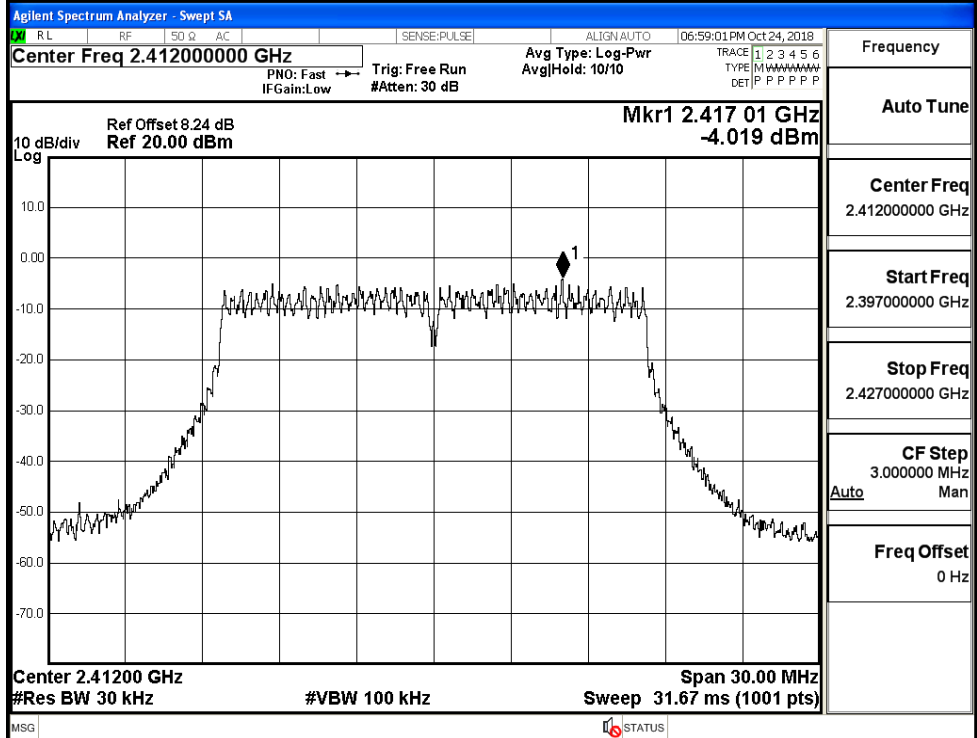
11B/MCH



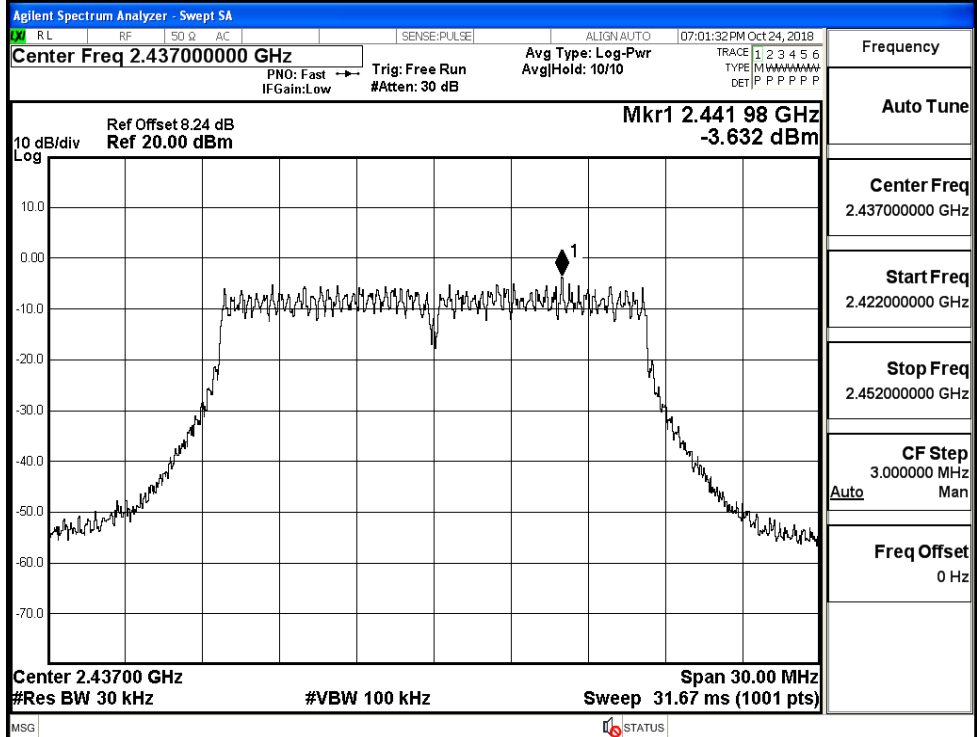
11B/HCH



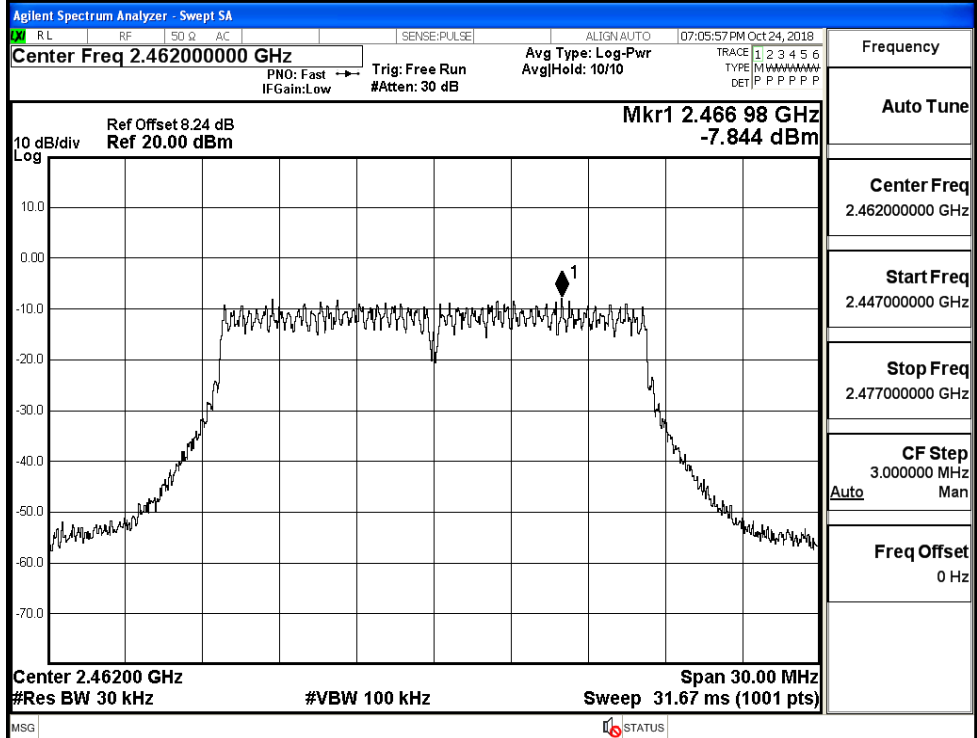
11G/LCH



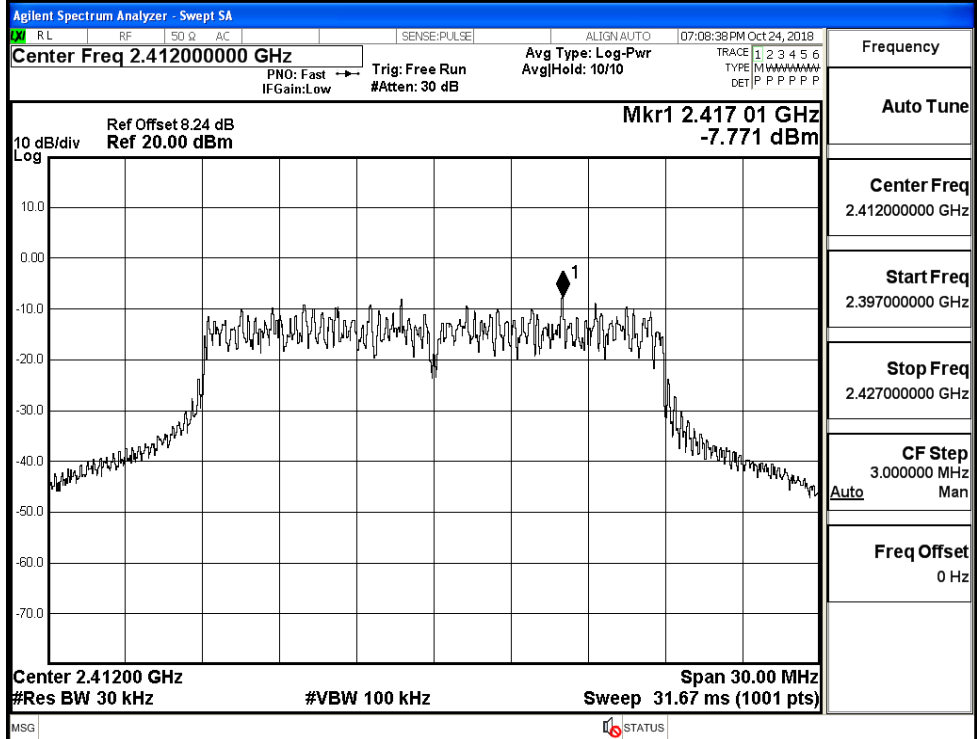
11G/MCH



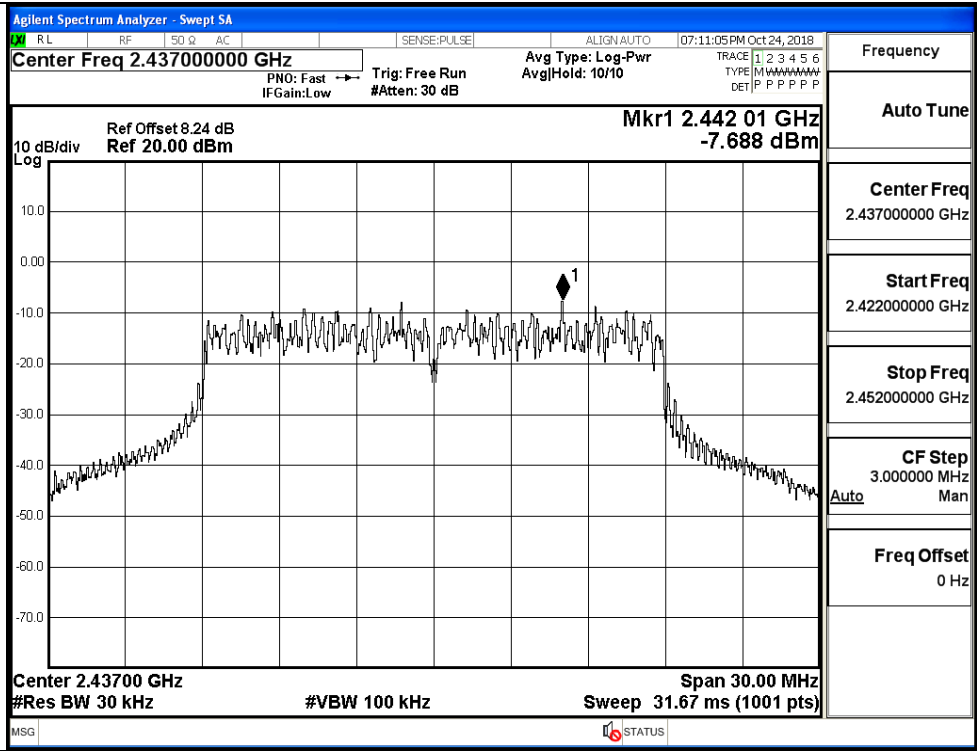
11G/HCH



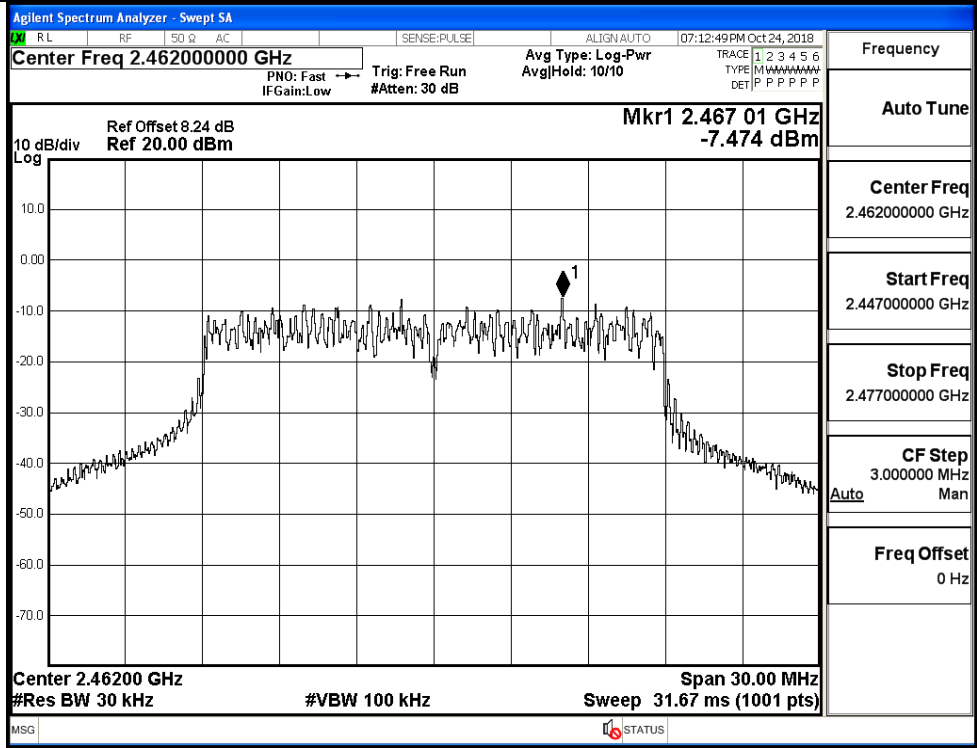
11N20SISO/LCH



11N20SISO/MCH

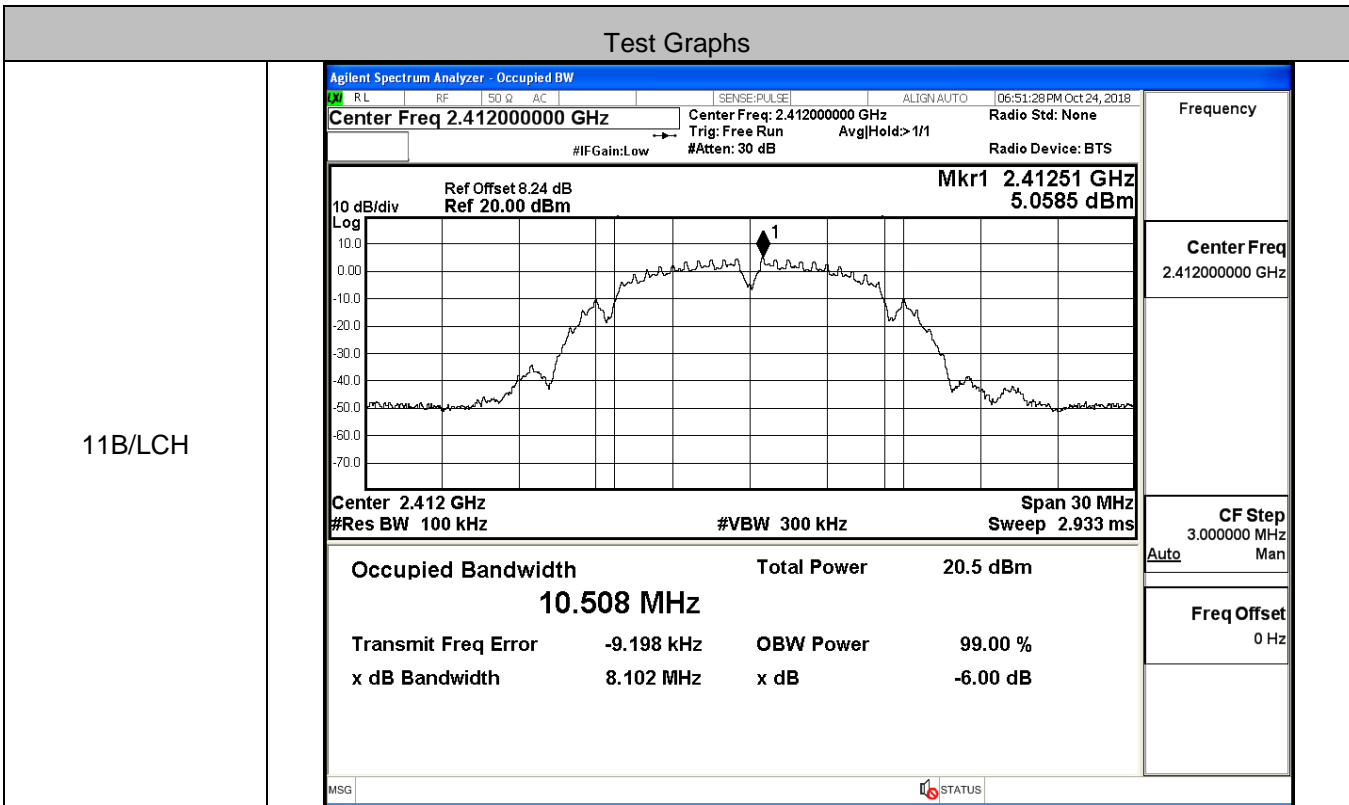


11N20SISO/HCH

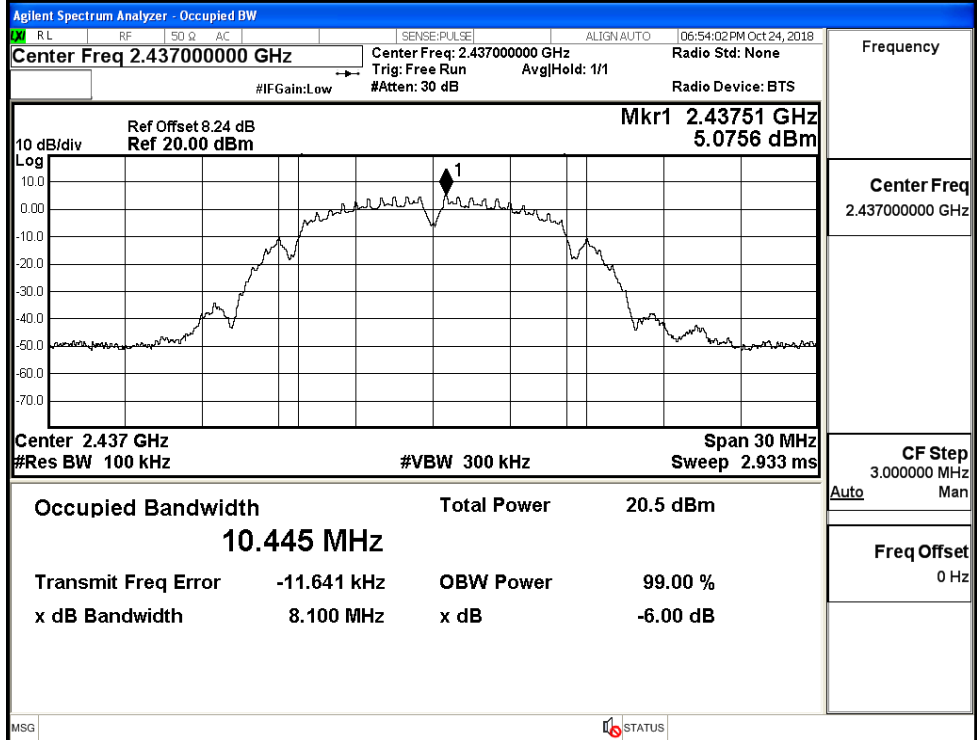


B.4 6dB Bandwidth

| Mode | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B | LCH | 8.102 | ≥0.5 | PASS |
| | MCH | 8.100 | ≥0.5 | PASS |
| | HCH | 8.587 | ≥0.5 | PASS |
| 11G | LCH | 16.35 | ≥0.5 | PASS |
| | MCH | 16.36 | ≥0.5 | PASS |
| | HCH | 16.36 | ≥0.5 | PASS |
| 11N20SISO | LCH | 17.32 | ≥0.5 | PASS |
| | MCH | 17.32 | ≥0.5 | PASS |
| | HCH | 17.32 | ≥0.5 | PASS |

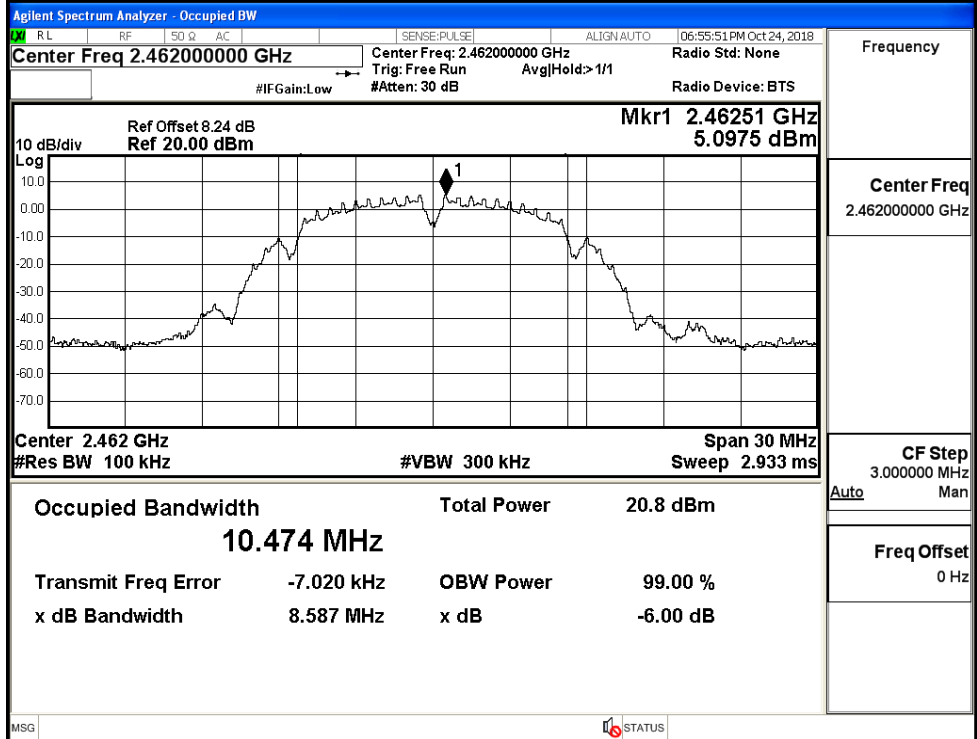


11B/MCH



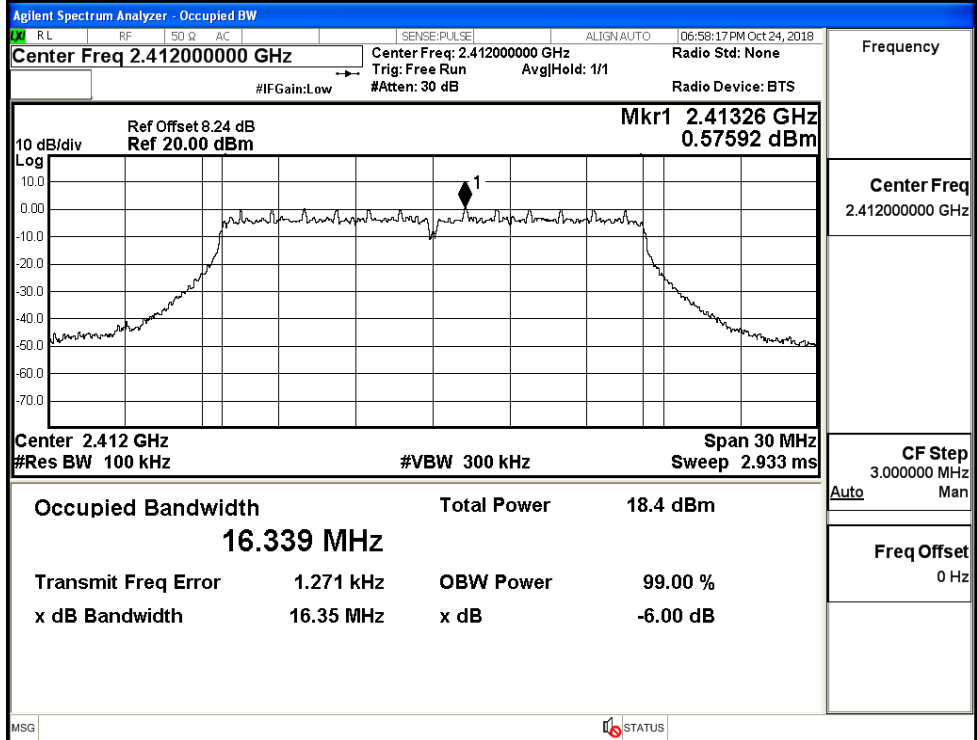
| | |
|-------------|----------------|
| Frequency | 2.43700000 GHz |
| Center Freq | 2.43700000 GHz |
| CF Step | 3.000000 MHz |
| Auto | Man |
| Freq Offset | 0 Hz |

11B/HCH



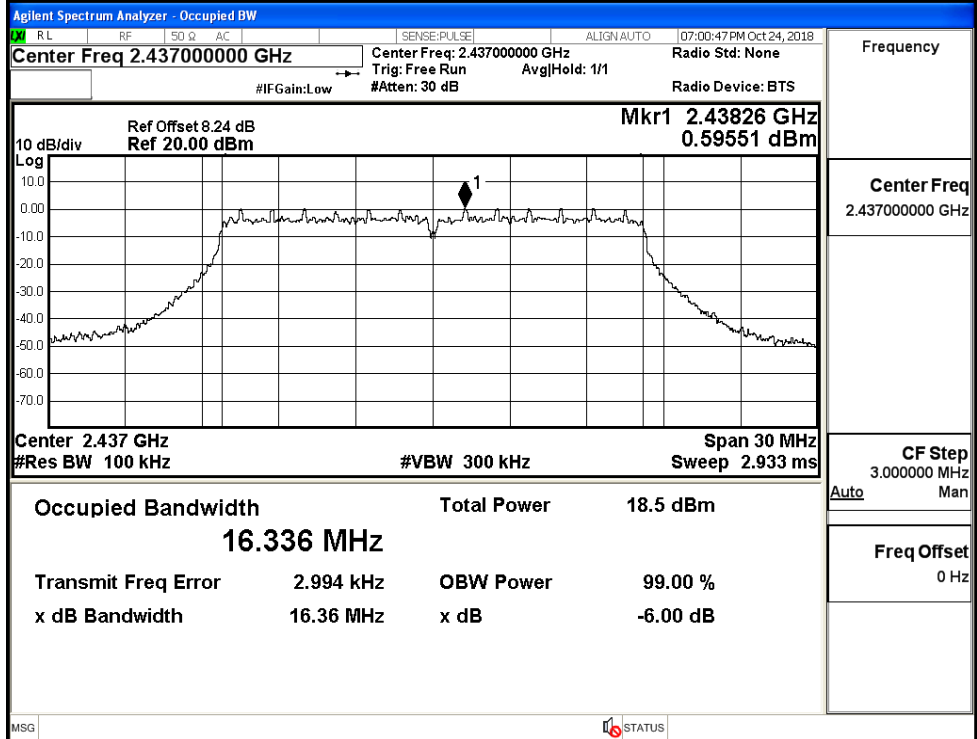
| | |
|-------------|----------------|
| Frequency | 2.46200000 GHz |
| Center Freq | 2.46200000 GHz |
| CF Step | 3.000000 MHz |
| Auto | Man |
| Freq Offset | 0 Hz |

11G/LCH



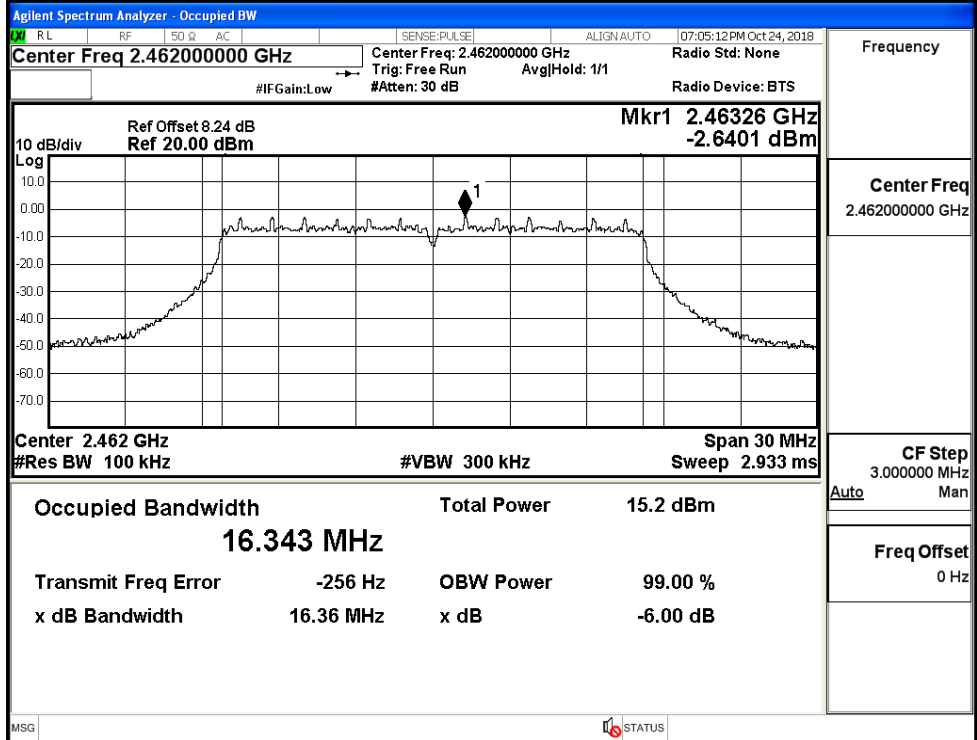
| | |
|-------------|----------------|
| Frequency | 2.41200000 GHz |
| Center Freq | 2.41200000 GHz |
| CF Step | 3.000000 MHz |
| Auto | Man |
| Freq Offset | 0 Hz |

11G/MCH

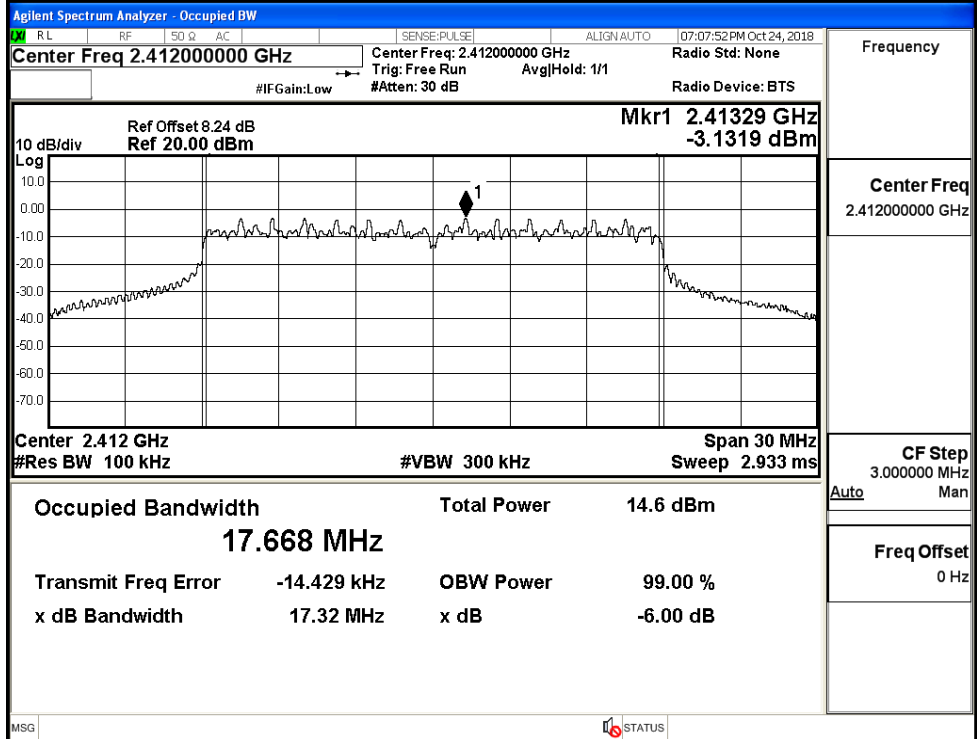


| | |
|-------------|----------------|
| Frequency | 2.43700000 GHz |
| Center Freq | 2.43700000 GHz |
| CF Step | 3.000000 MHz |
| Auto | Man |
| Freq Offset | 0 Hz |

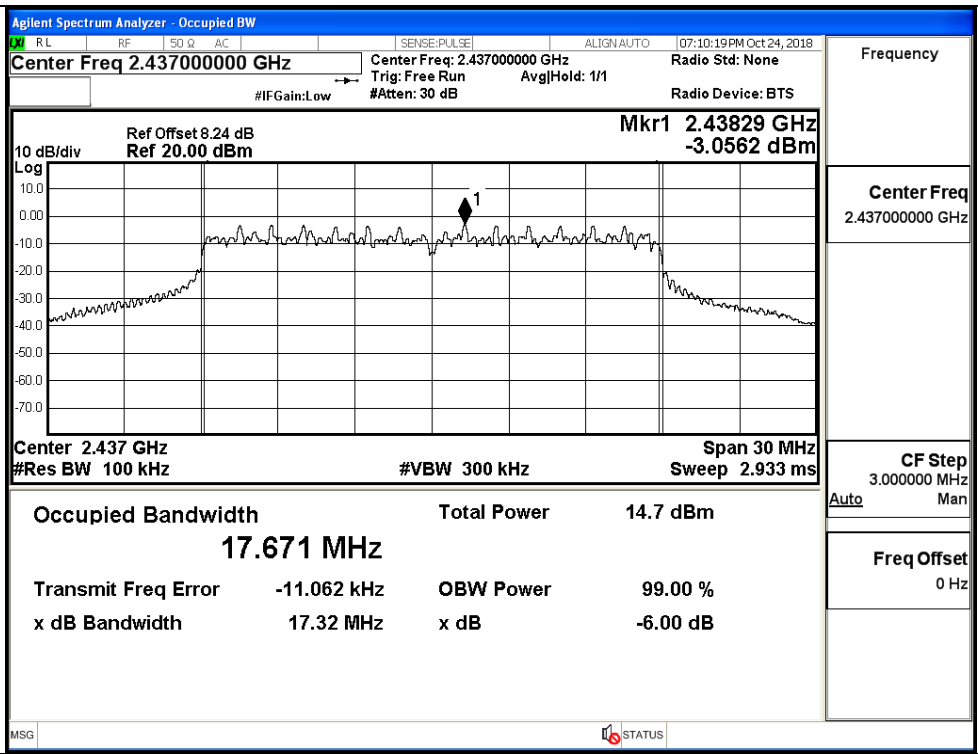
11G/HCH



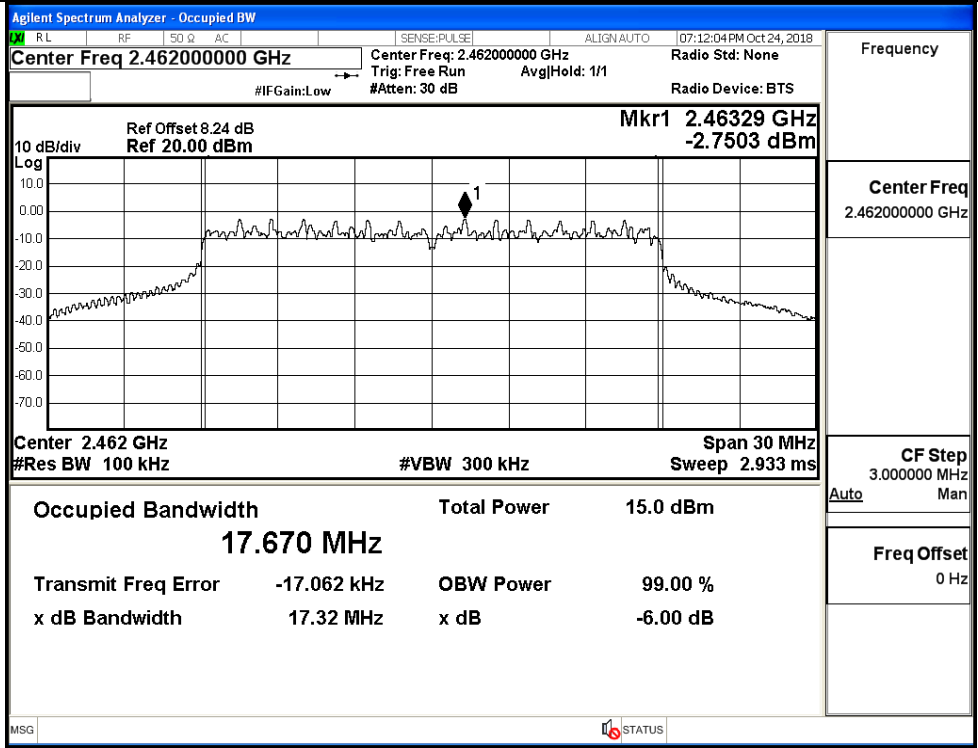
11N20SISO/LCH



11N20SISO/MCH



11N20SISO/HCH

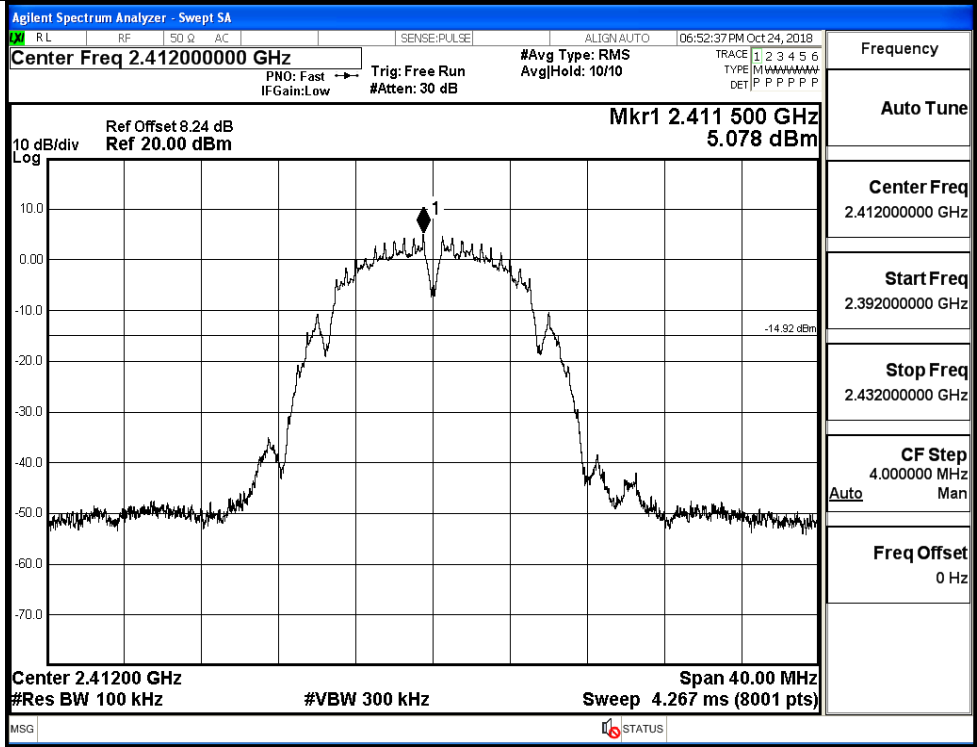


B.5 RF Conducted Spurious Emissions

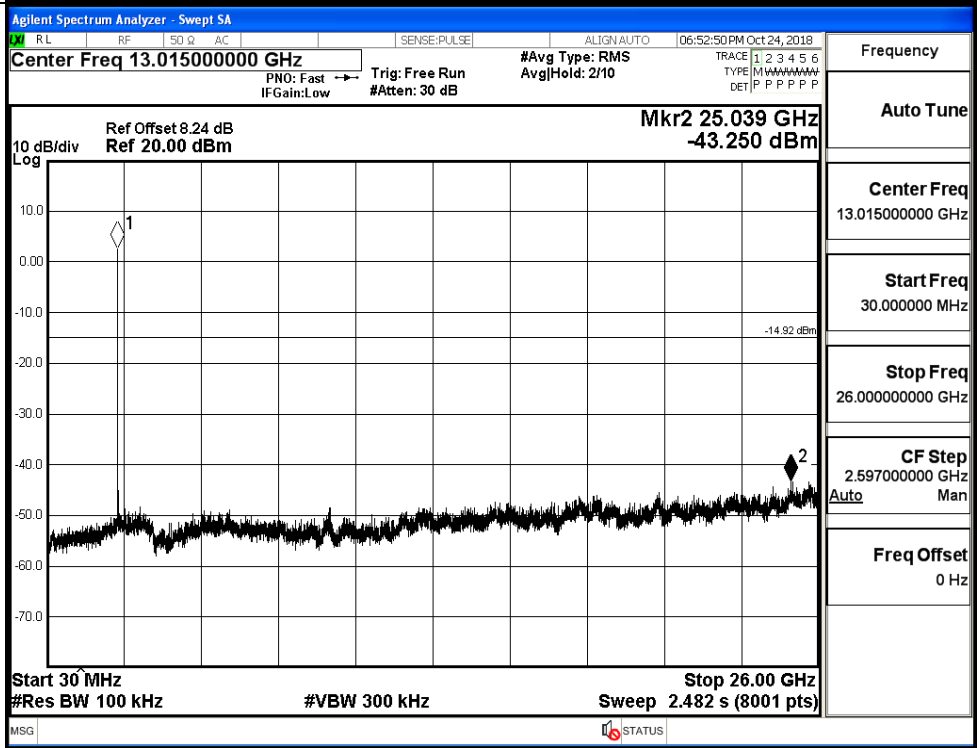
| Mode | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B | LCH | 5.078 | -43.250 | -14.922 | PASS |
| | MCH | 5.07 | -43.750 | -14.930 | PASS |
| | HCH | 5.36 | -43.778 | -14.640 | PASS |
| 11G | LCH | 0.172 | -43.921 | -19.828 | PASS |
| | MCH | 0.345 | -43.662 | -19.655 | PASS |
| | HCH | -2.681 | -43.176 | -22.681 | PASS |
| 11N20 SISO | LCH | -3.179 | -44.209 | -23.179 | PASS |
| | MCH | -3.173 | -44.027 | -23.173 | PASS |
| | HCH | -2.848 | -43.352 | -22.848 | PASS |

11B_LCH_Graphs

Pref/11B/LCH

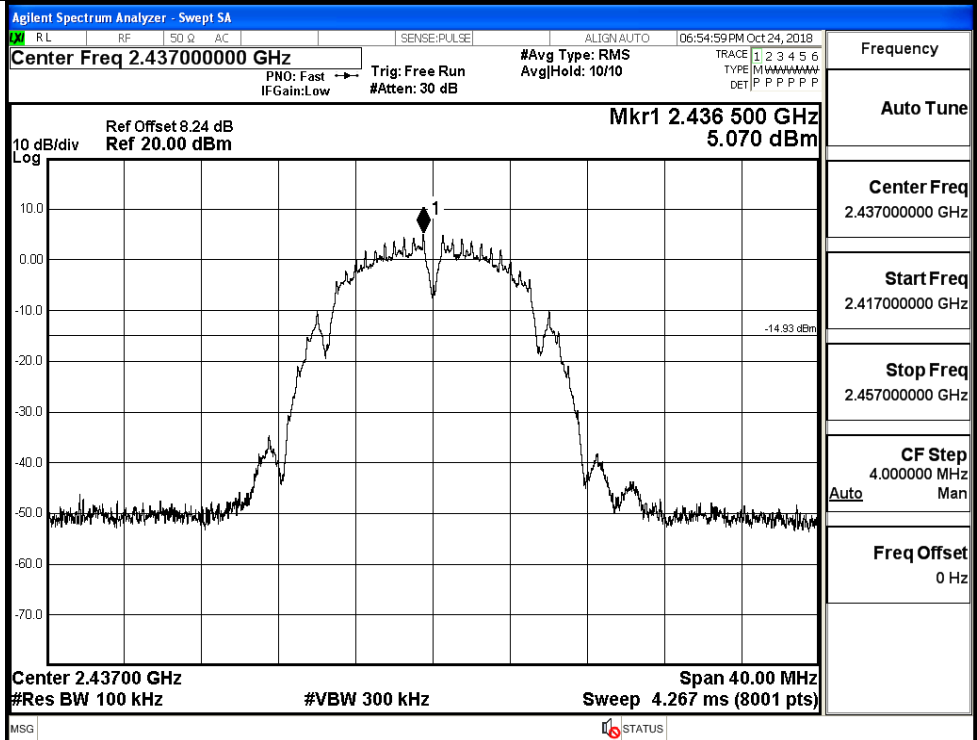


Puw/11B/LCH

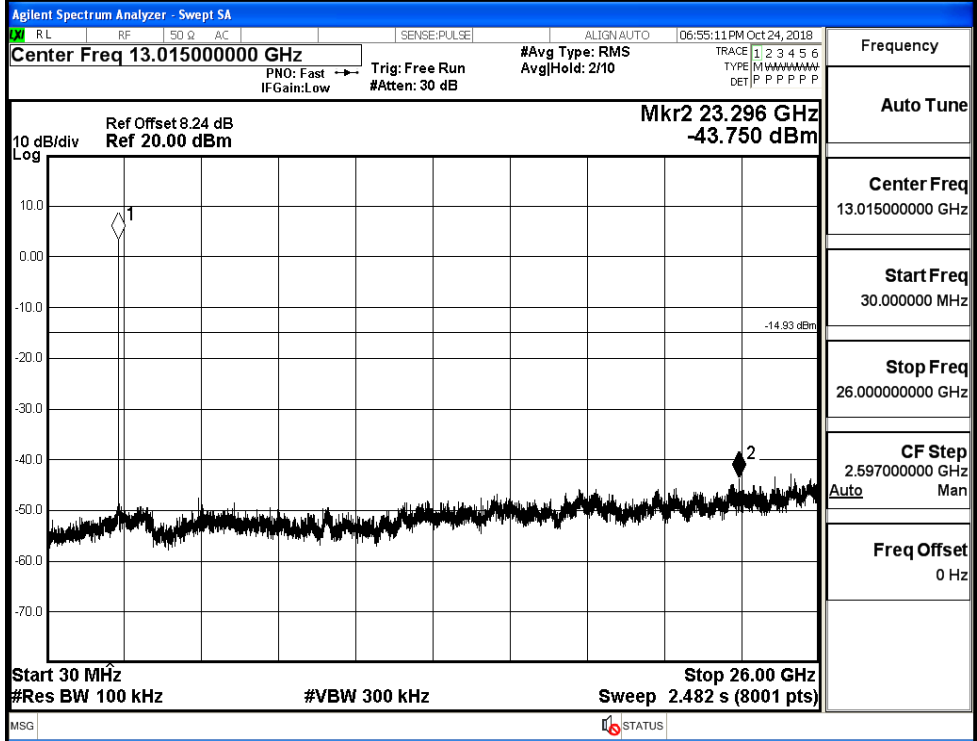


11B_MCH Graphs

Pref/11B/MCH

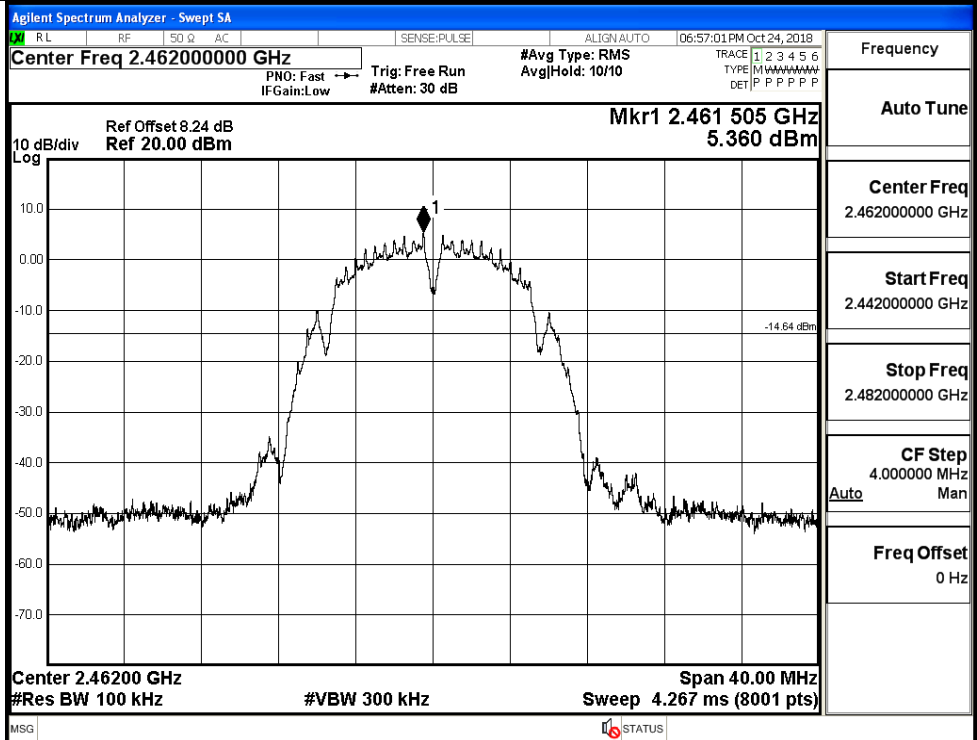


Puw/11B/MCH

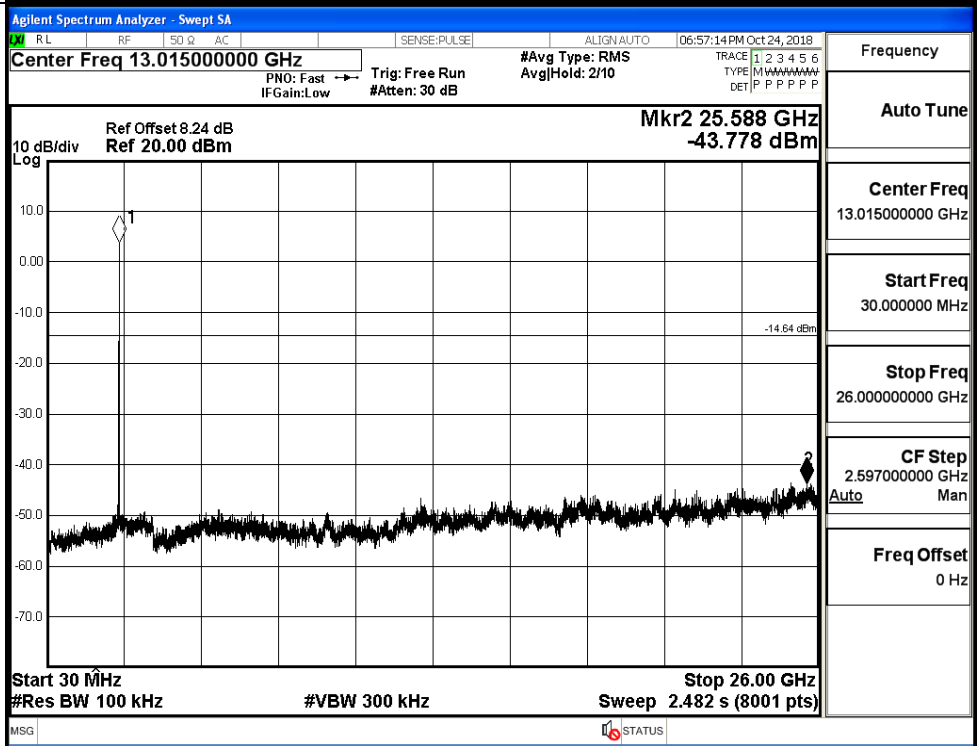


11B_HCH_Graphs

Pref/11B/HCH

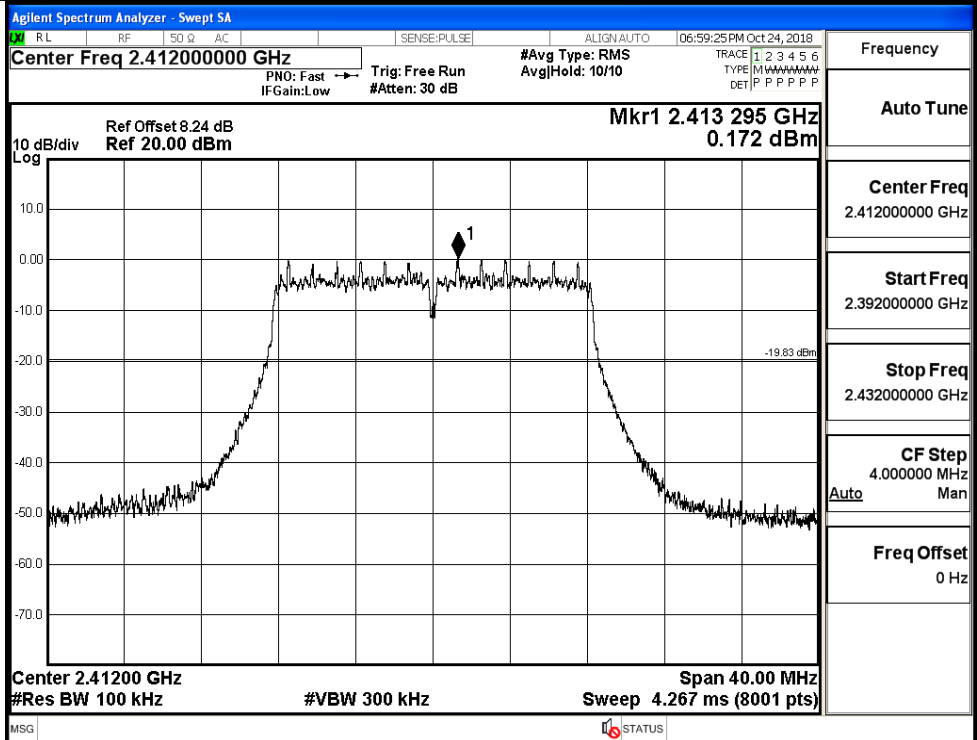


Puw/11B/HCH

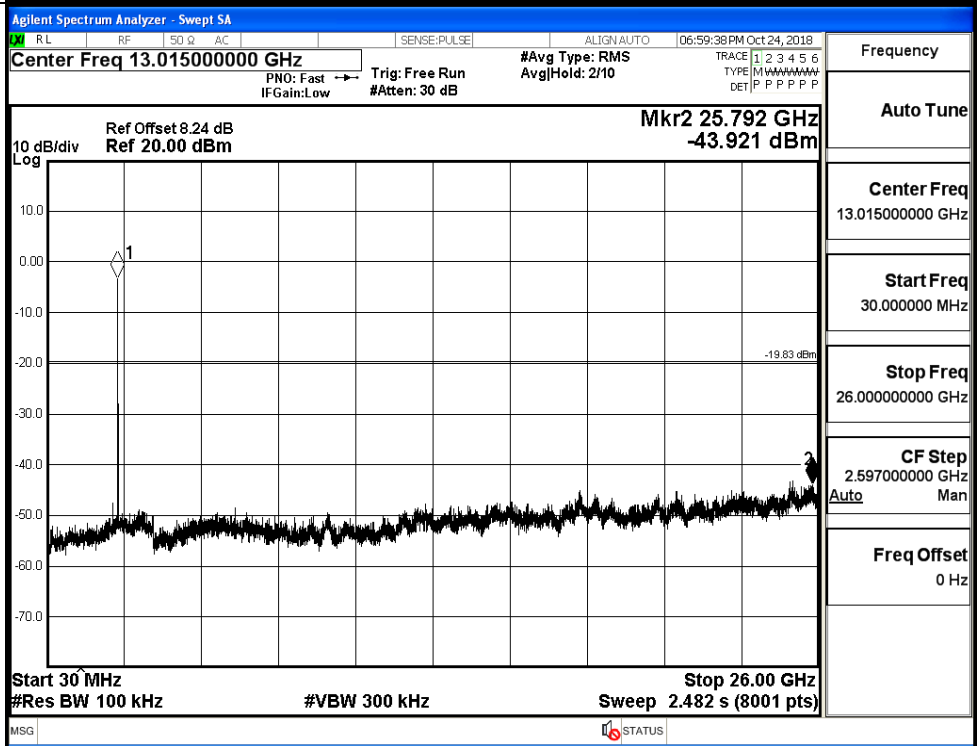


11G_LCH_Graphs

Pref/11G/LCH

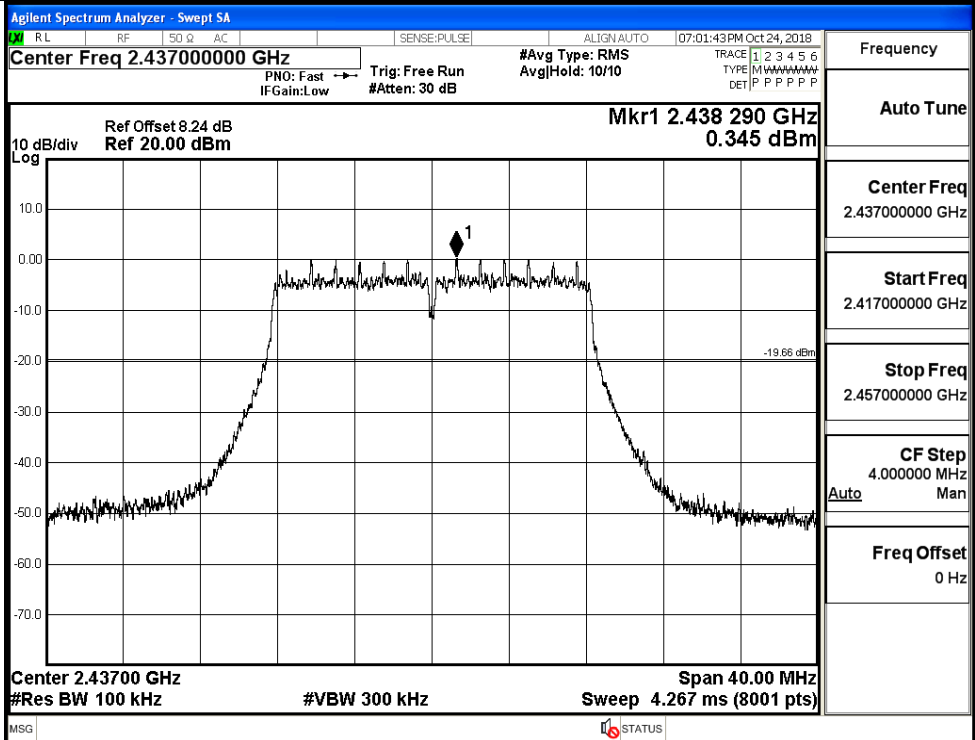


Puw/11G/LCH

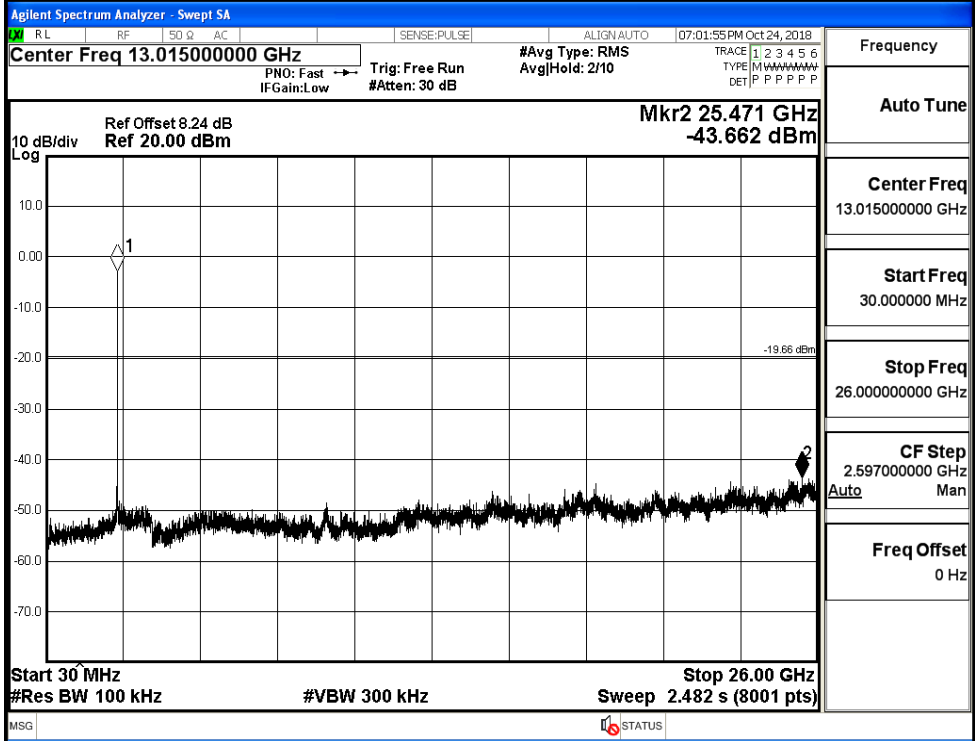


11G_MCH Graphs

Pref/11G/MCH



Puw/11G/MCH

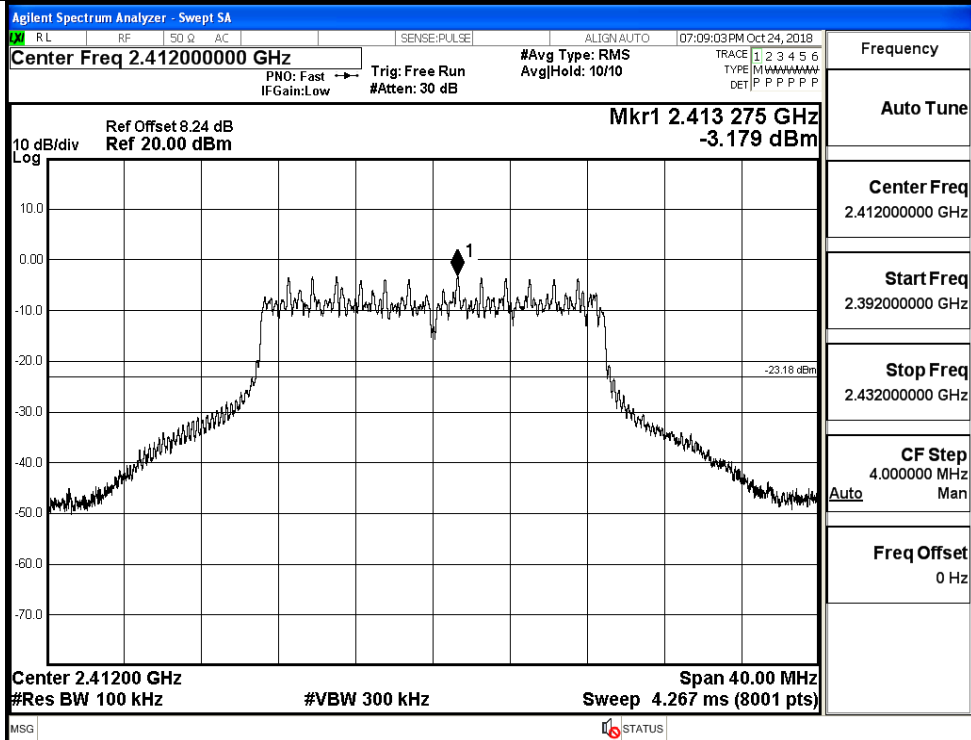


11G_HCH Graphs

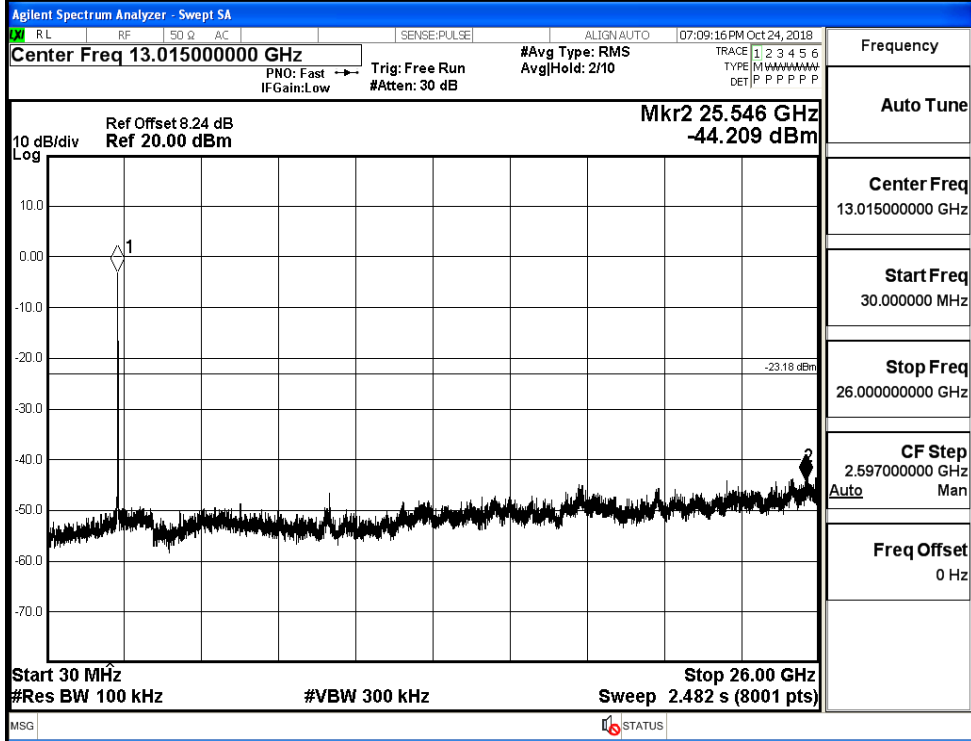
| | | |
|---------------------|--|---|
| <p>Pref/11G/HCH</p> | | <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.462000000 GHz</p> <p>Start Freq 2.442000000 GHz</p> <p>Stop Freq 2.482000000 GHz</p> <p>CF Step 4.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p> |
| <p>Puw/11G/HCH</p> | | <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 13.015000000 GHz</p> <p>Start Freq 30.000000 MHz</p> <p>Stop Freq 26.000000000 GHz</p> <p>CF Step 2.597000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p> |

11N20SISO LCH Graphs

Pref/11N20SIS
O/LCH

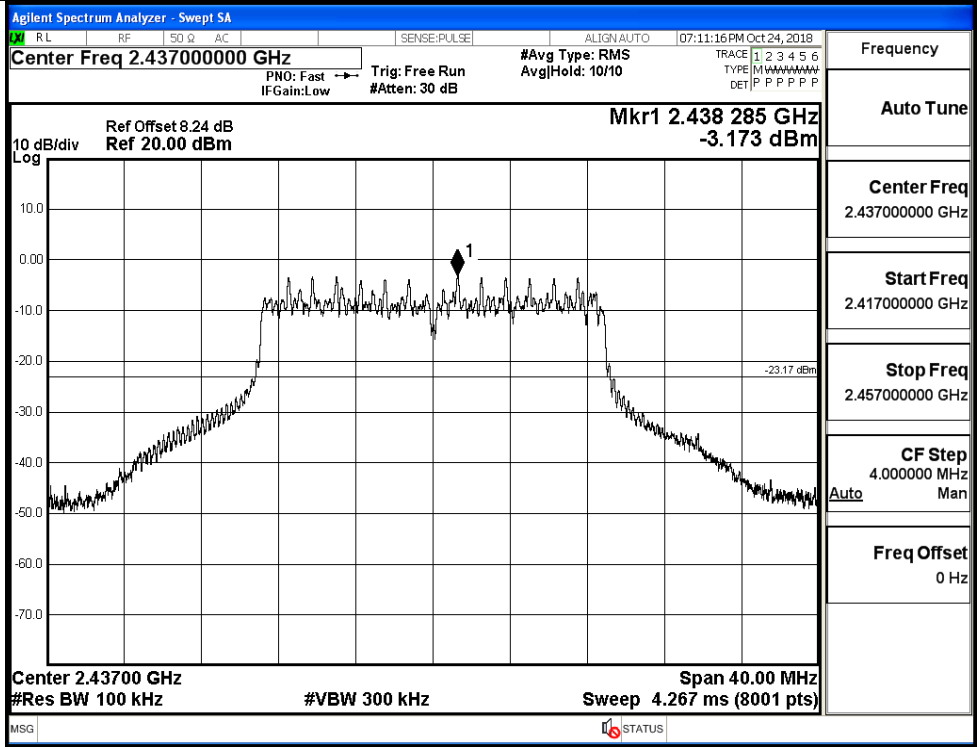


Puw/11N20
SISO/LCH

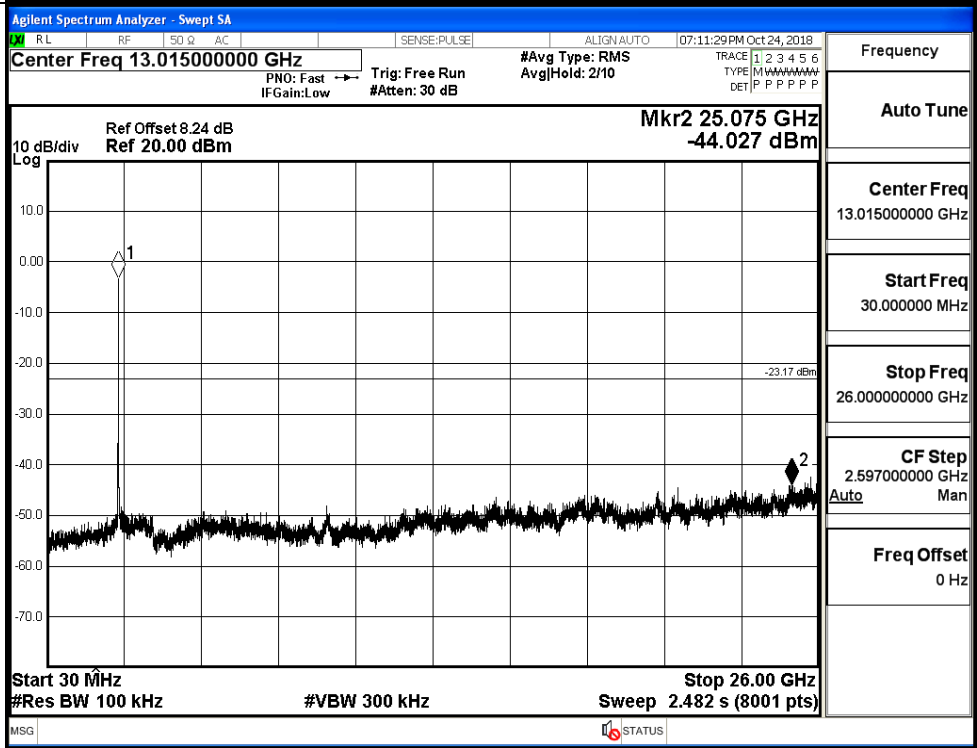


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

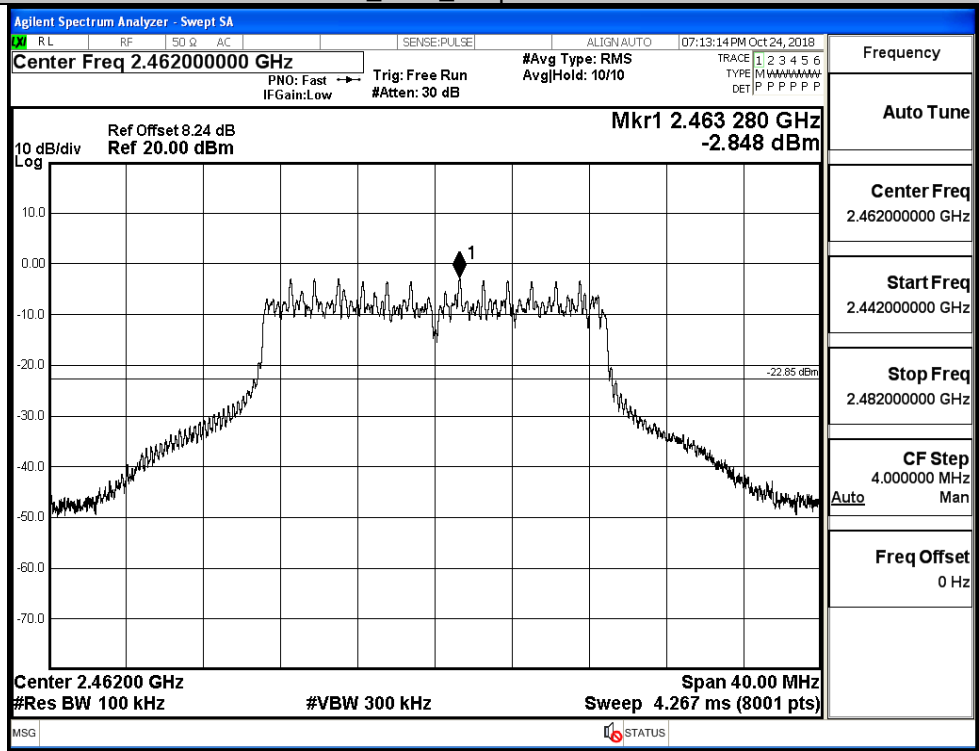


Puw/11N20
SISO/MCH

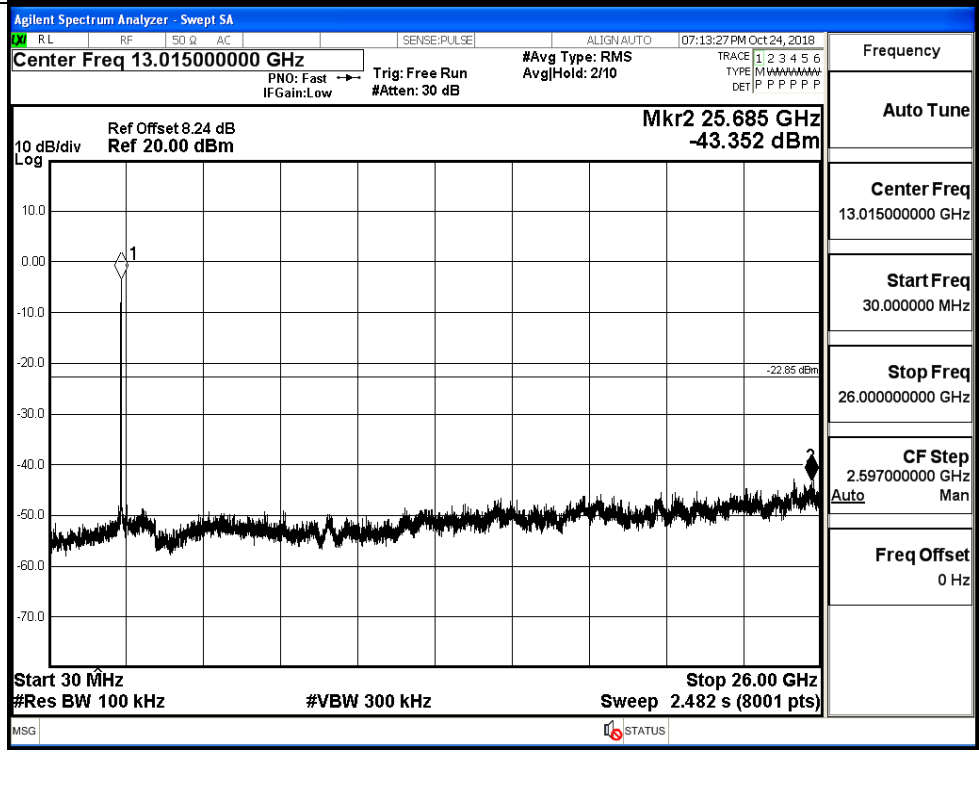


11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH

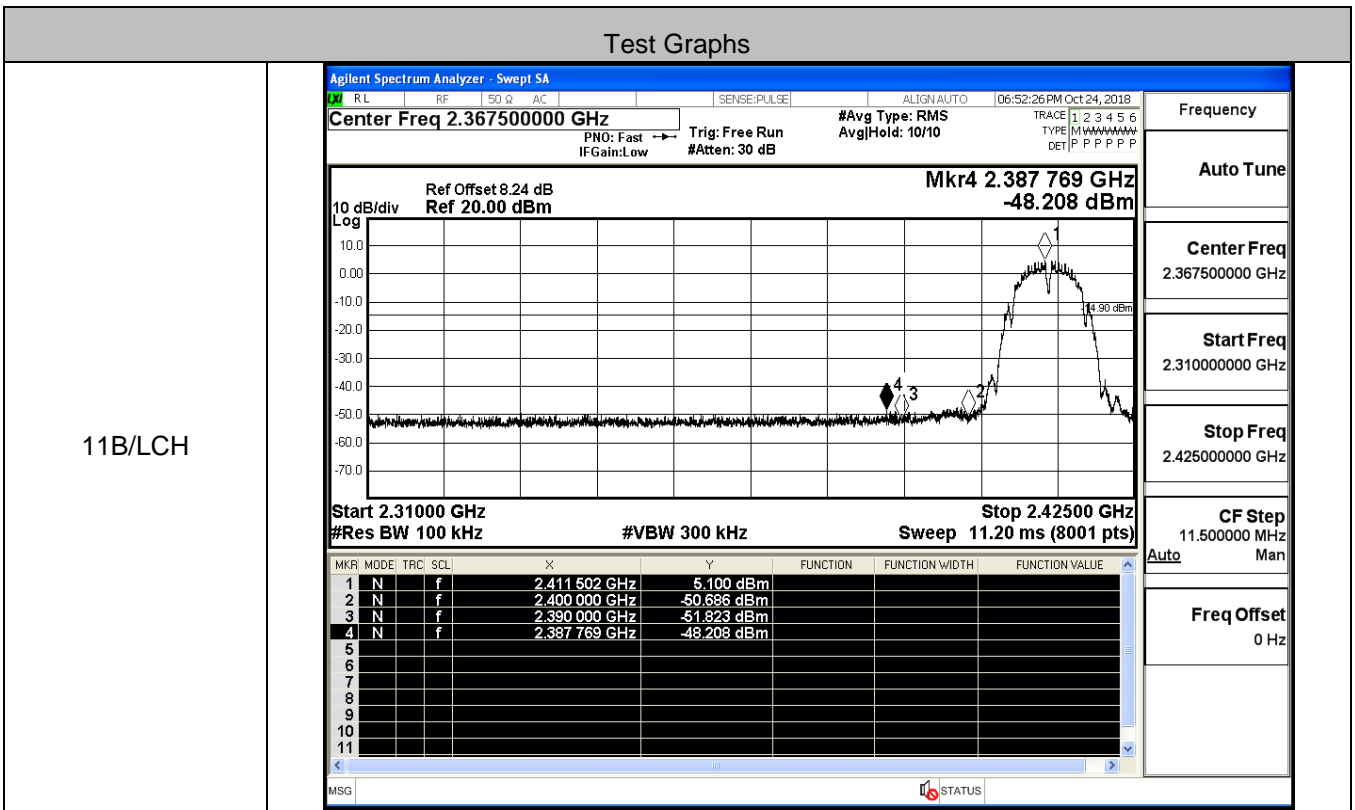


Puw/11N20
SISO/HCH

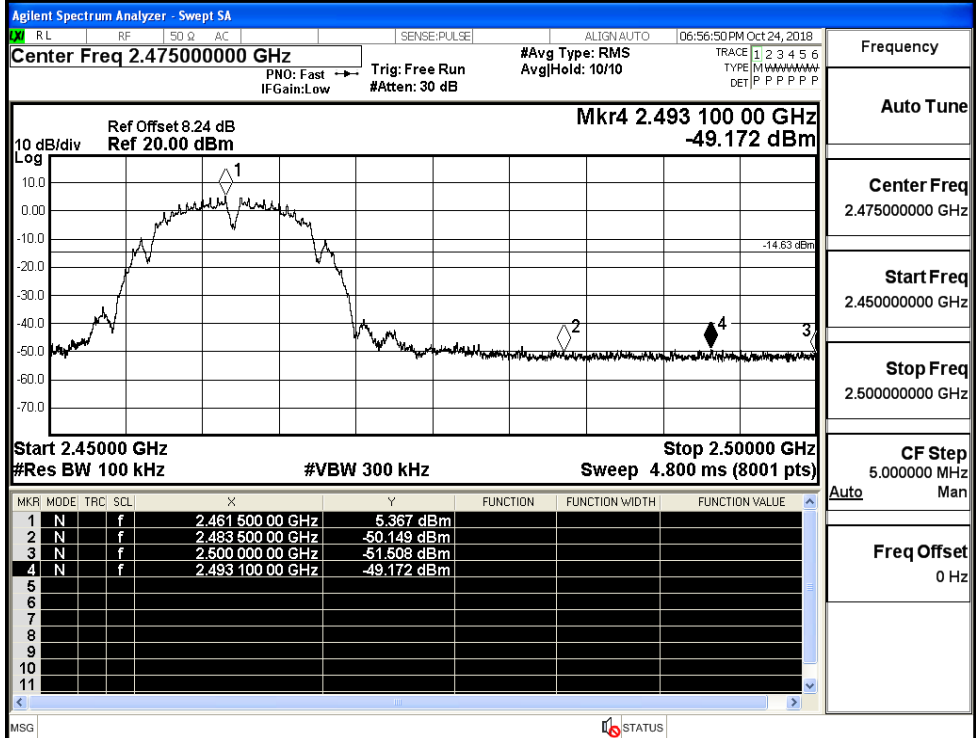


B.6 Band-edge for RF Conducted Emissions

| Mode | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B | LCH | 5.100 | -48.208 | -14.9 | PASS |
| | HCH | 5.367 | -49.172 | -14.63 | PASS |
| 11G | LCH | 0.576 | -48.921 | -19.42 | PASS |
| | HCH | -2.844 | -48.772 | -22.84 | PASS |
| 11N20SISO | LCH | -3.150 | -46.512 | -23.15 | PASS |
| | HCH | -2.751 | -45.204 | -22.75 | PASS |



11B/HCH



Frequency

Auto Tune

Center Freq
2.47500000 GHz

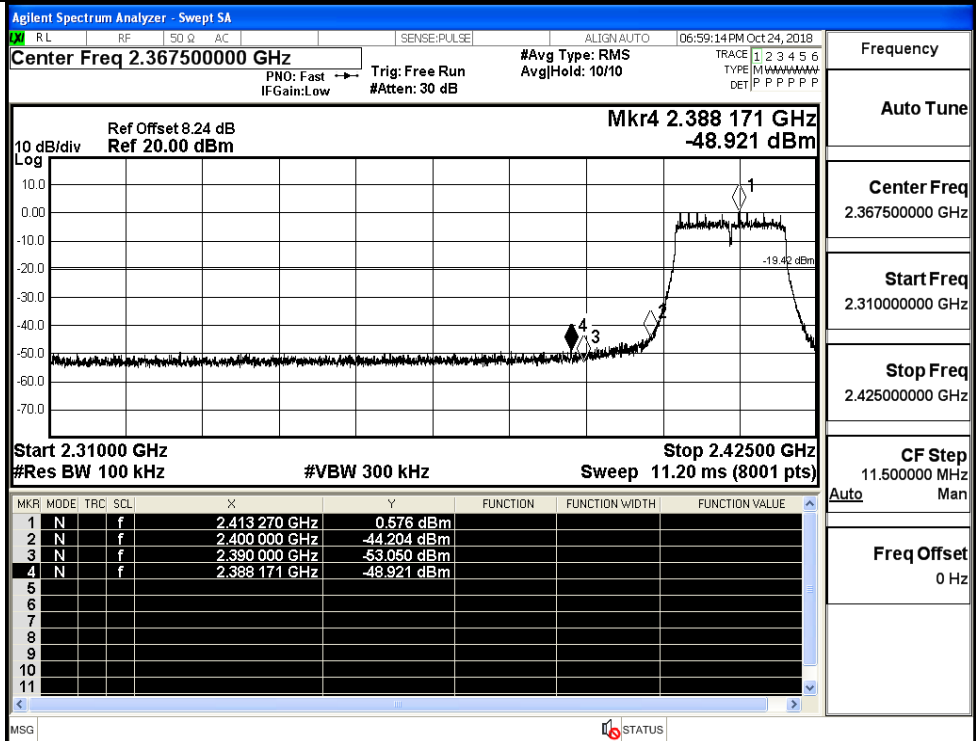
Start Freq
2.45000000 GHz

Stop Freq
2.50000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11G/LCH



Frequency

Auto Tune

Center Freq
2.36750000 GHz

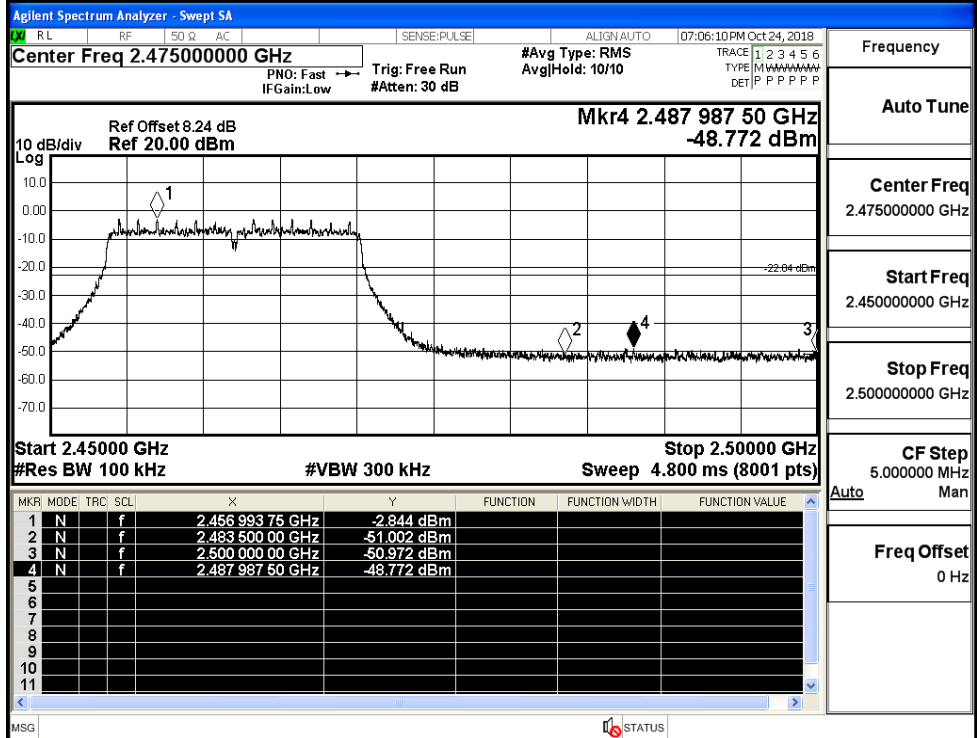
Start Freq
2.31000000 GHz

Stop Freq
2.42500000 GHz

CF Step
11.500000 MHz

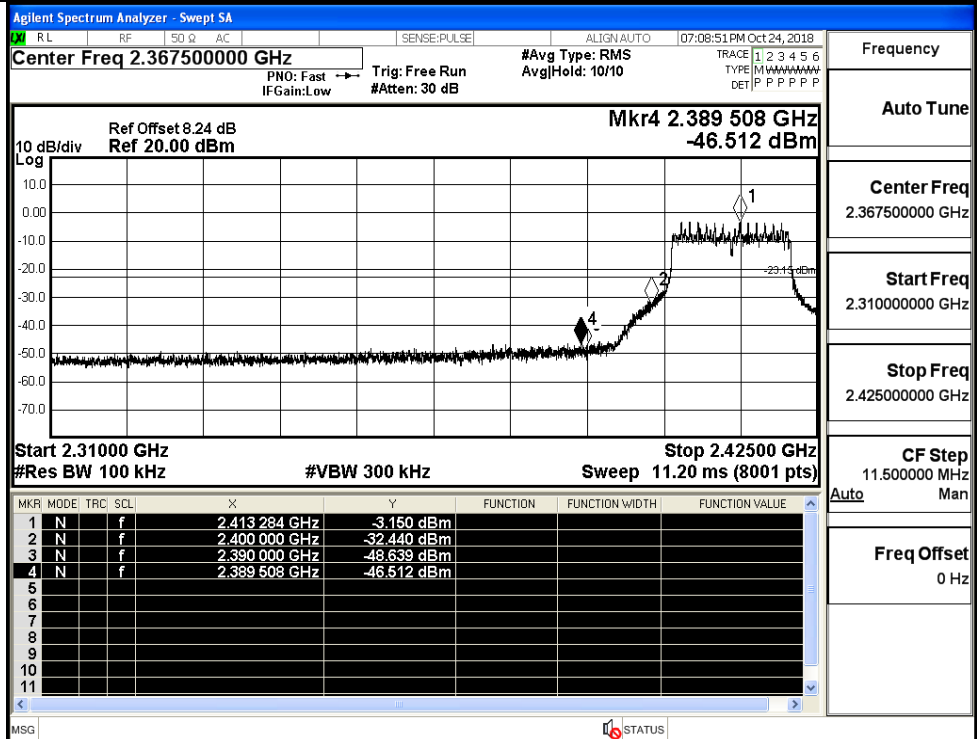
Freq Offset
0 Hz

11G/HCH



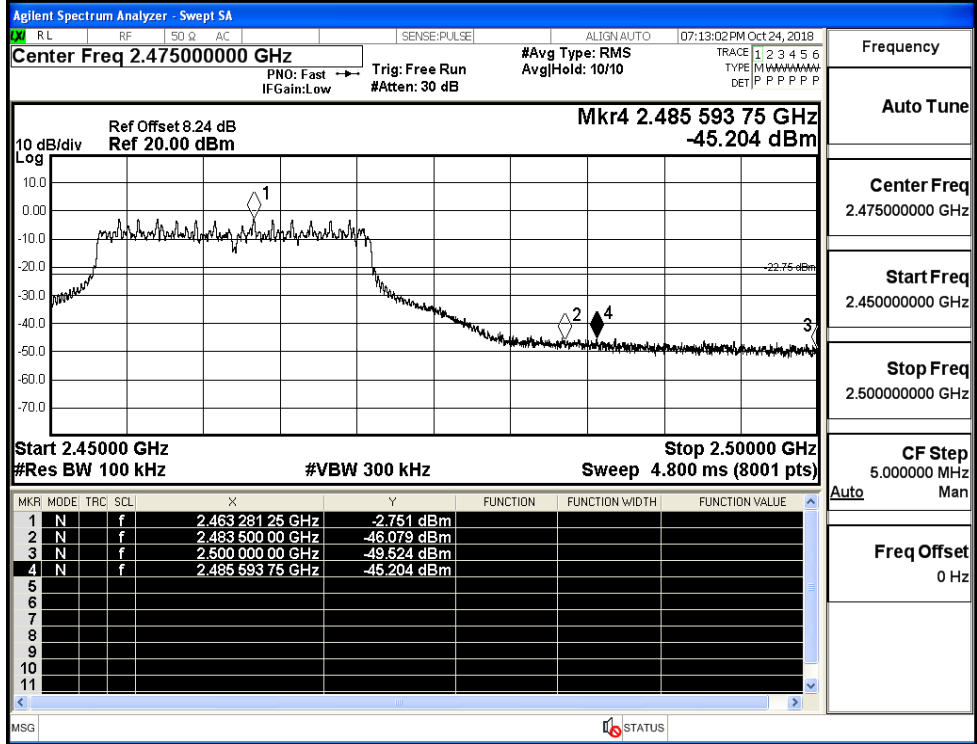
| |
|--------------------------------|
| Frequency |
| Auto Tune |
| Center Freq 2.475000000 GHz |
| Start Freq 2.450000000 GHz |
| Stop Freq 2.500000000 GHz |
| CF Step 5.000000 MHz |
| Auto |
| Freq Offset 0 Hz |

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 |
| Freq Offset 0 Hz |

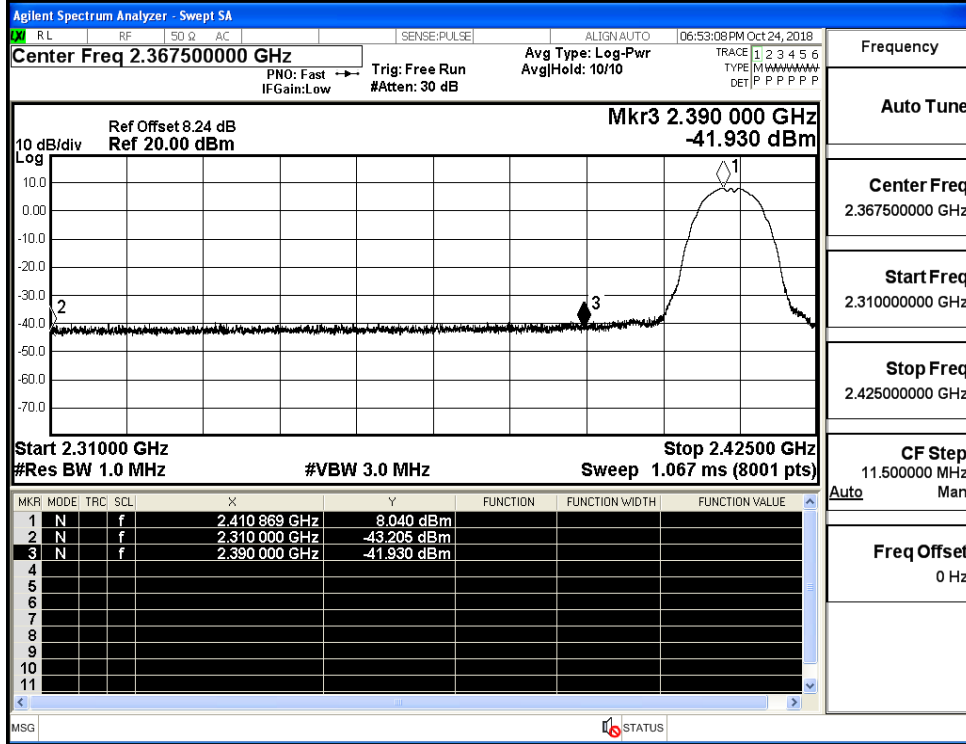
11N20SISO/HCH



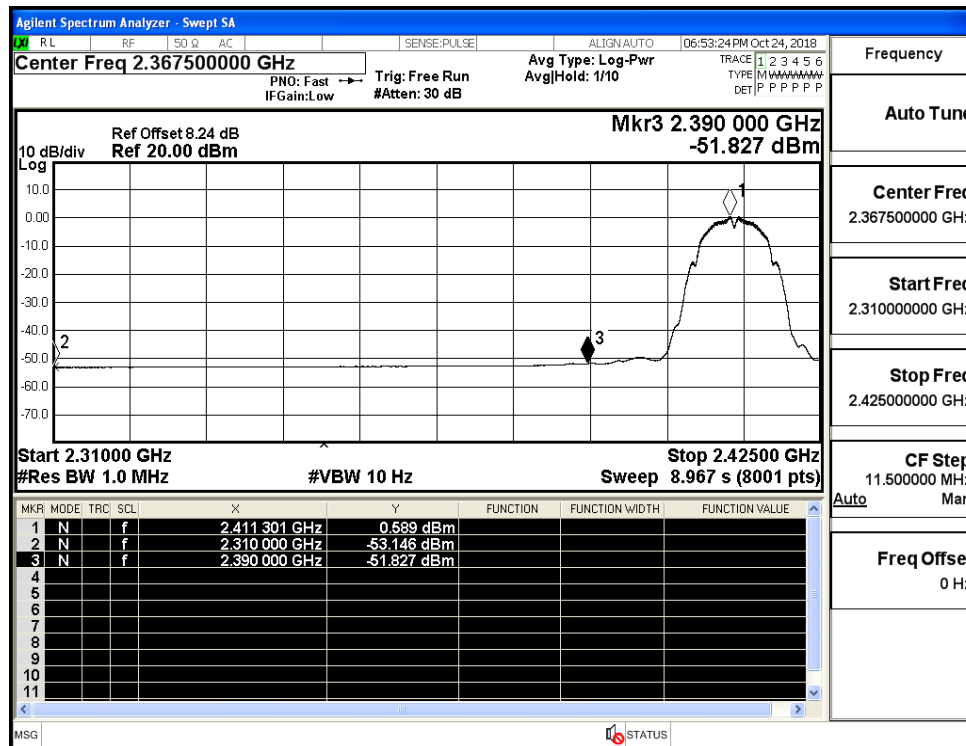
B.7 Restrict-band band-edge measurements

| 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 | -43.21 | 2.0 | 0 | 52.05 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2310.0 | -53.15 | 2.0 | 0 | 42.11 | AV | 54 | PASS |
| | 2412 | Ant1 | 2390.0 | -41.93 | 2.0 | 0 | 53.33 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2390.0 | -51.83 | 2.0 | 0 | 43.43 | AV | 54 | PASS |
| | 2462 | Ant1 | 2483.5 | -41.09 | 2.0 | 0 | 54.17 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2483.5 | -51.78 | 2.0 | 0 | 43.48 | AV | 54 | PASS |
| | 2462 | Ant1 | 2500.0 | -41.53 | 2.0 | 0 | 53.73 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2500.0 | -52.30 | 2.0 | 0 | 42.96 | AV | 54 | PASS |
| 11G | 2412 | Ant1 | 2310.0 | -40.62 | 2.0 | 0 | 54.64 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2310.0 | -53.18 | 2.0 | 0 | 42.08 | AV | 54 | PASS |
| | 2412 | Ant1 | 2390.0 | -39.82 | 2.0 | 0 | 55.44 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2390.0 | -51.37 | 2.0 | 0 | 43.89 | AV | 54 | PASS |
| | 2462 | Ant1 | 2483.5 | -41.28 | 2.0 | 0 | 53.98 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2483.5 | -52.02 | 2.0 | 0 | 43.23 | AV | 54 | PASS |
| | 2462 | Ant1 | 2500.0 | -41.28 | 2.0 | 0 | 53.98 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2500.0 | -52.29 | 2.0 | 0 | 42.97 | AV | 54 | PASS |
| 11N20 SISO | 2412 | Ant1 | 2310.0 | -42.91 | 2.0 | 0 | 52.35 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2310.0 | -53.13 | 2.0 | 0 | 42.13 | AV | 54 | PASS |
| | 2412 | Ant1 | 2390.0 | -30.78 | 2.0 | 0 | 64.48 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2390.0 | -51.53 | 2.0 | 0 | 43.73 | AV | 54 | PASS |
| | 2462 | Ant1 | 2483.5 | -30.05 | 2.0 | 0 | 65.21 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2483.5 | -51.30 | 2.0 | 0 | 43.95 | AV | 54 | PASS |
| | 2462 | Ant1 | 2500.0 | -32.96 | 2.0 | 0 | 62.30 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2500.0 | -52.19 | 2.0 | 0 | 43.07 | AV | 54 | PASS |

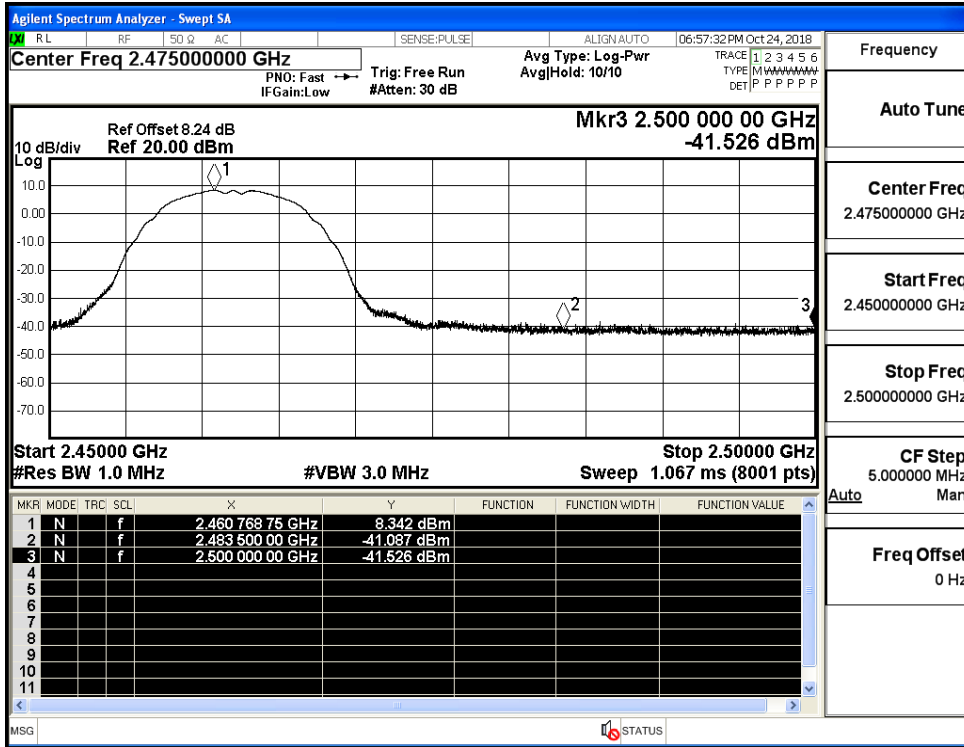
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



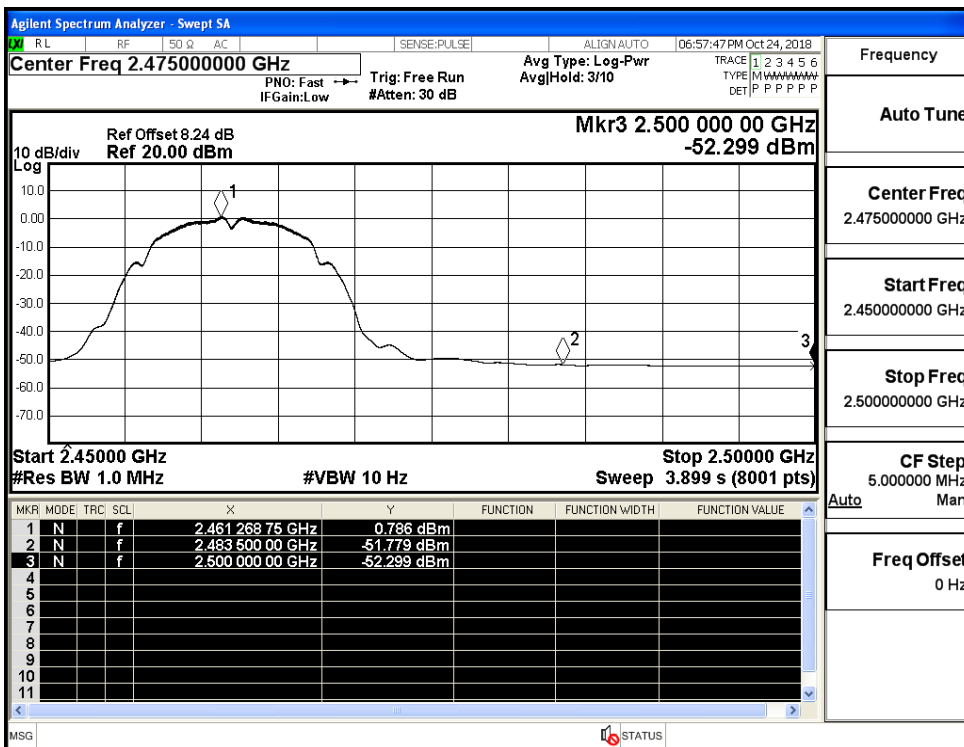
Restrict-band band-edge measurements_11B_2412_Ant1_AV



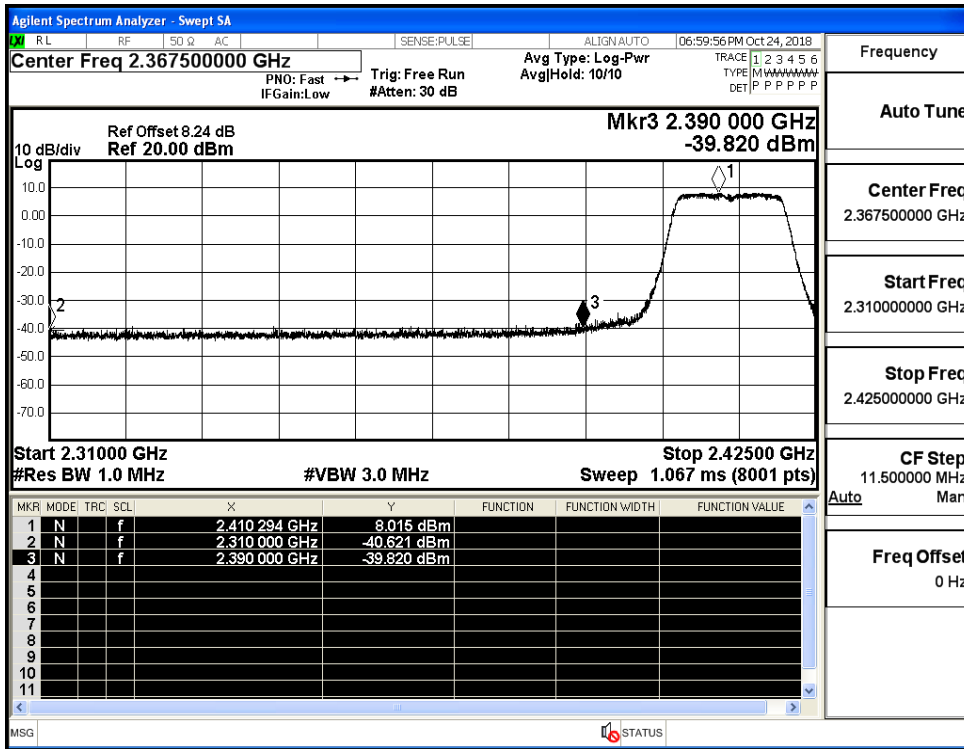
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



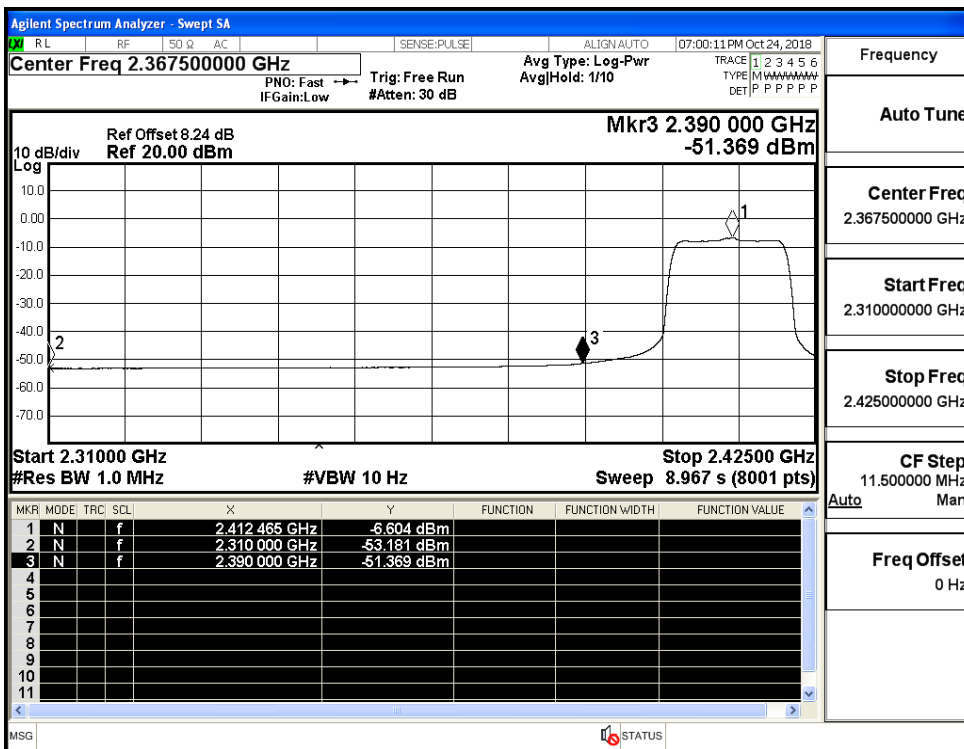
Restrict-band band-edge measurements_11B_2462_Ant1_AV



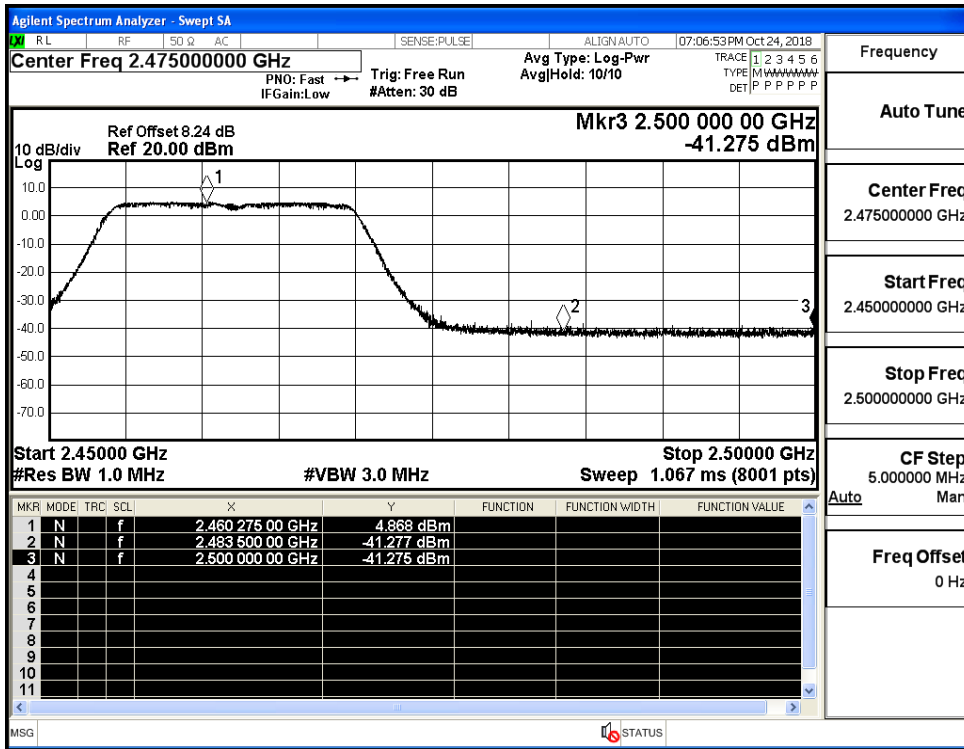
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



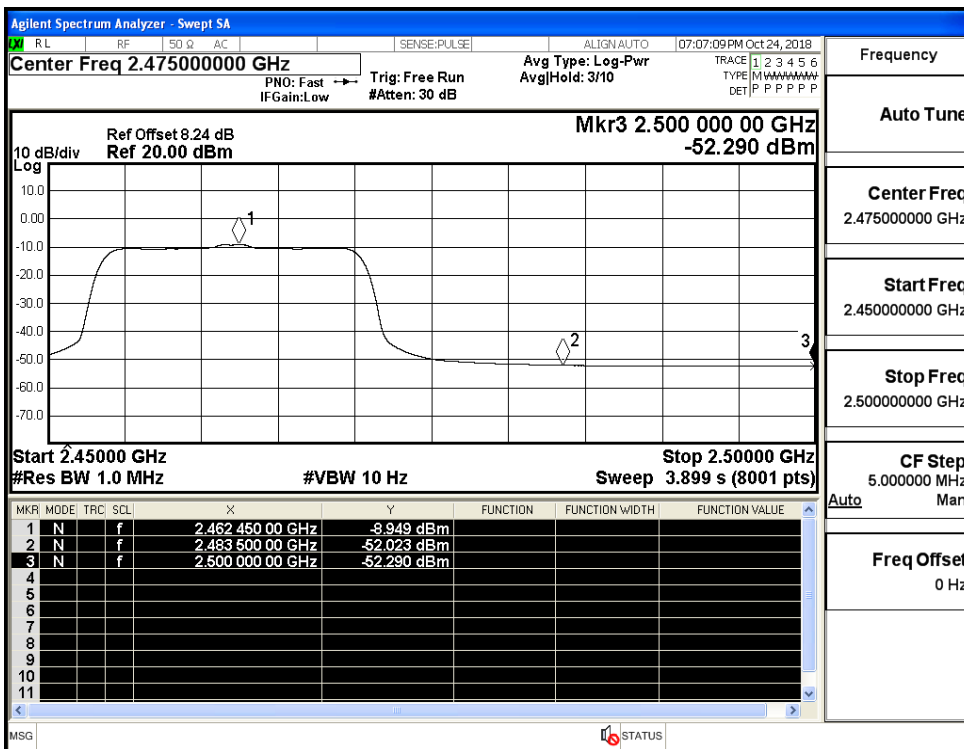
Restrict-band band-edge measurements_11G_2412_Ant1_AV



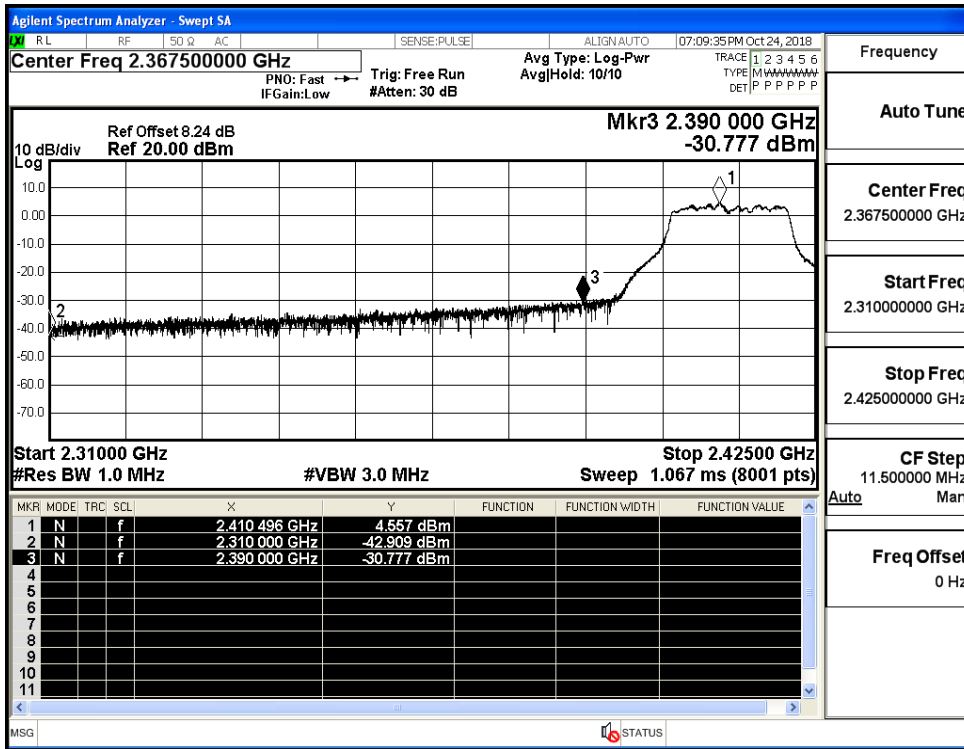
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



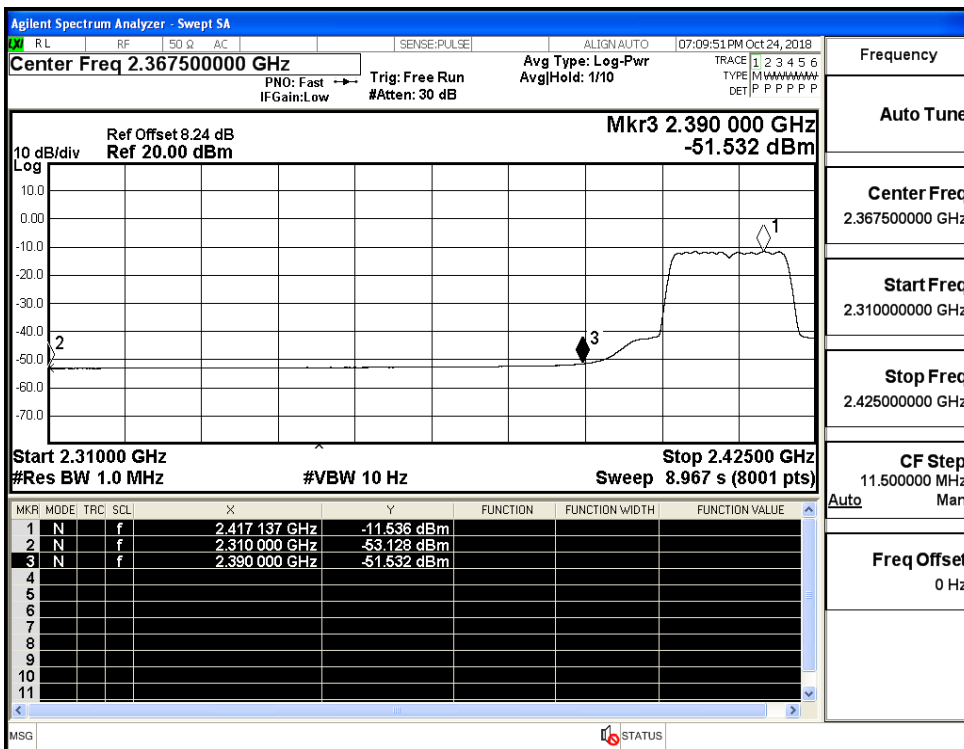
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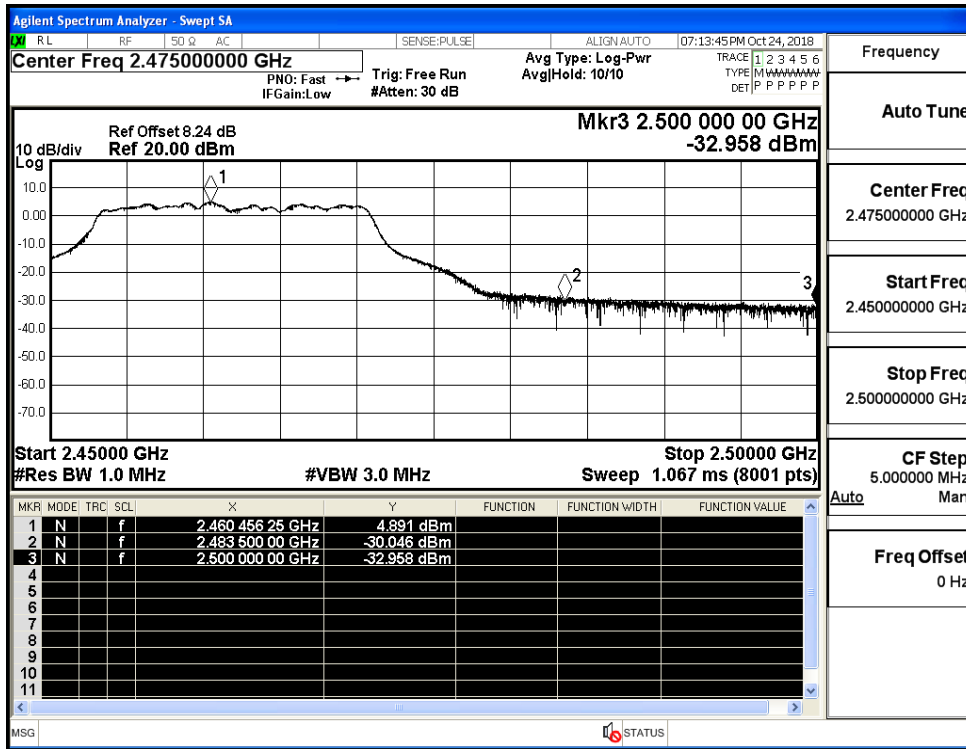
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



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

