

Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Survey Camera

Trade Mark: MAPIR

Test Model: Survey3

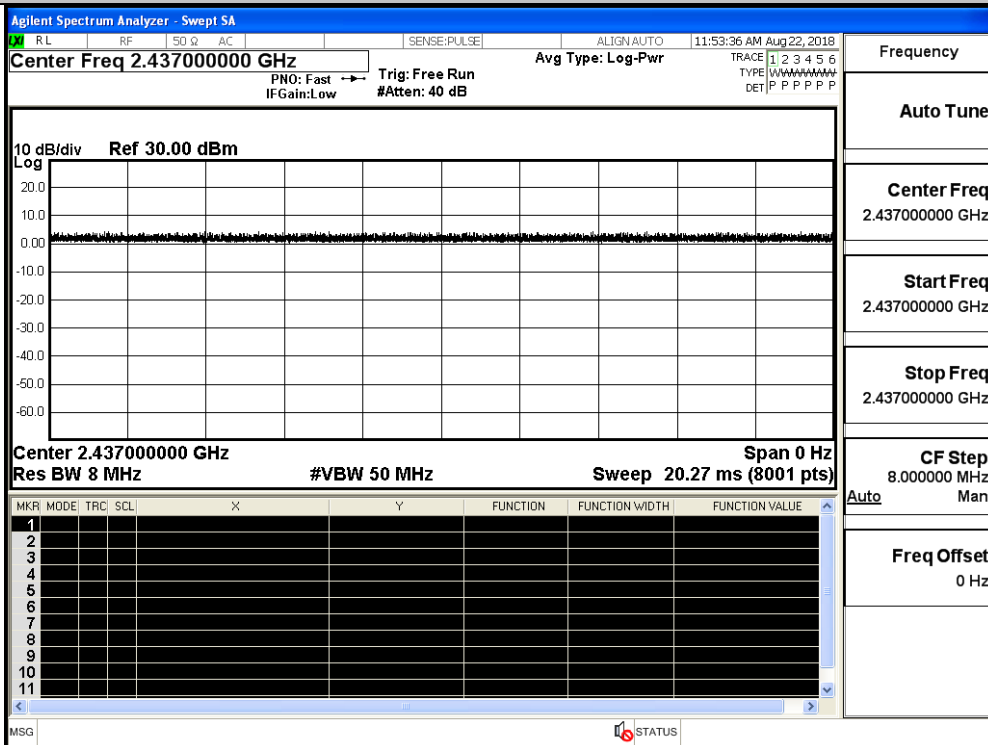
Environmental Conditions

| | |
|--------------------|-------------|
| Temperature: | 23.6 ° C |
| Relative Humidity: | 53.6% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Wilson.Hong |
| Supervised by: | Jayden.Zhuo |

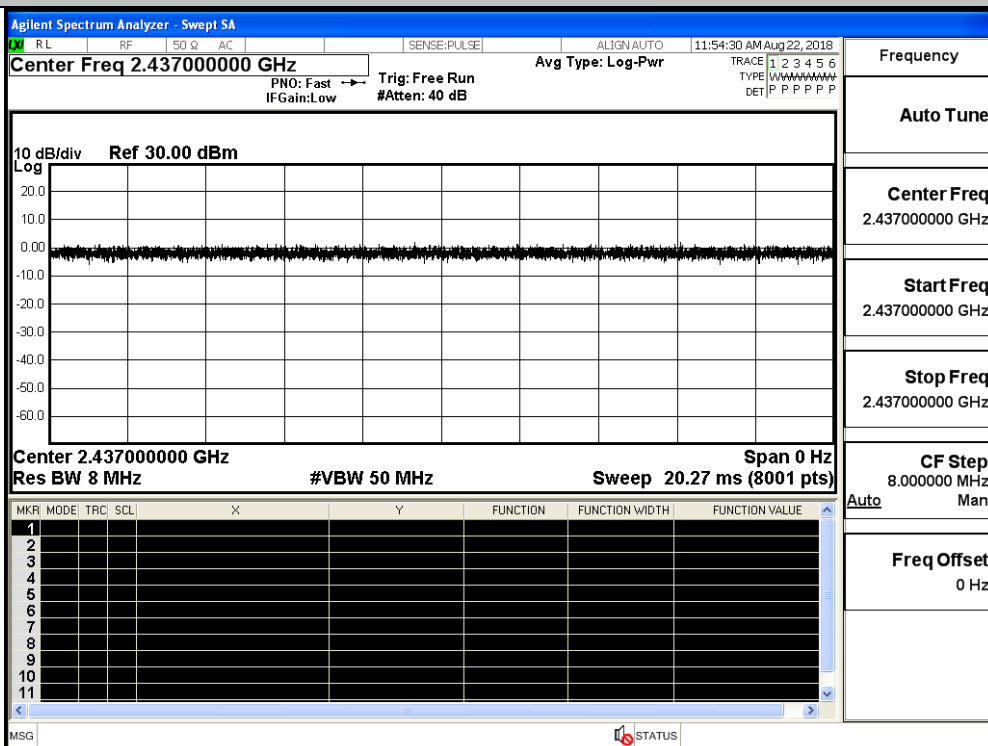
B.1 Duty Cycle

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

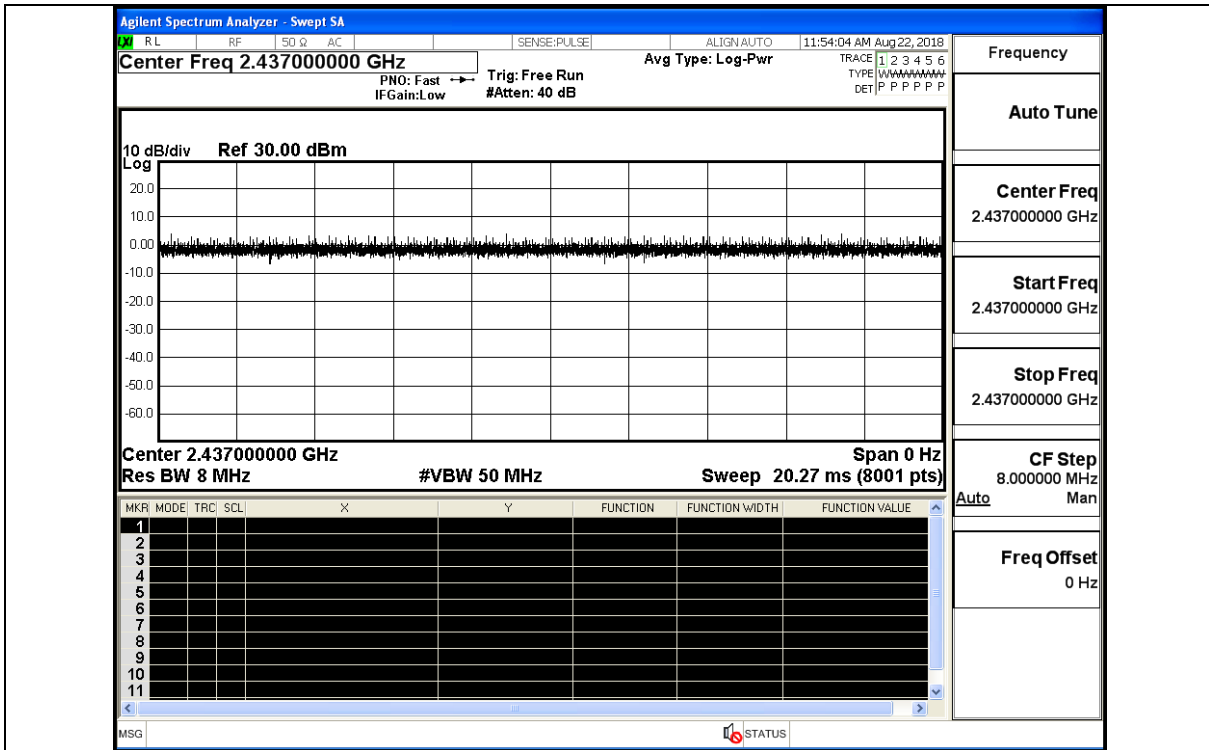
Duty Cycle_11B_2437_Ant1



Duty Cycle_11G_2437_Ant1



Duty Cycle_11N20SISO_2437_Ant1



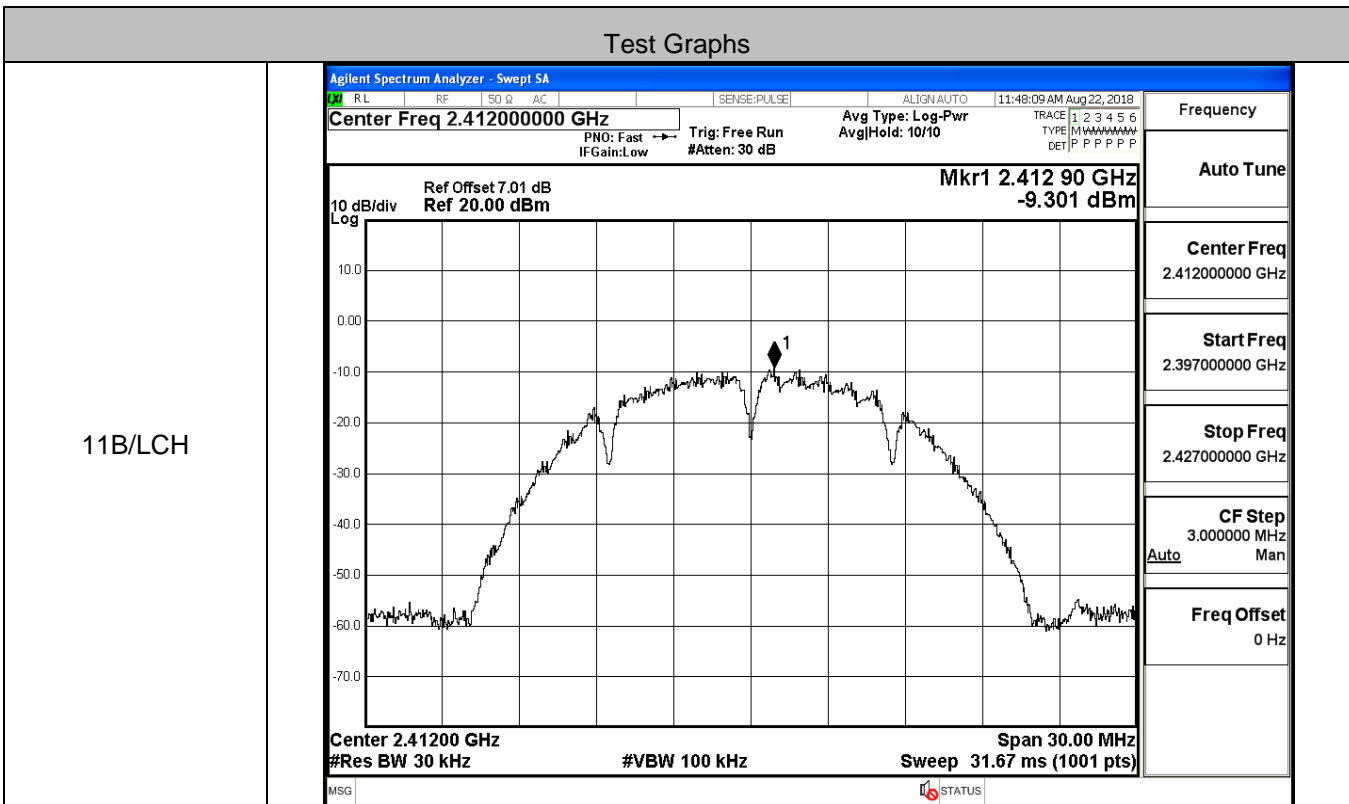
B.2 Maximum Peak Conducted Output Power

| Mode | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|------------------|-------------|---------|
| 11B | LCH | 10.97 | 30 | PASS |
| | MCH | 10.88 | 30 | PASS |
| | HCH | 10.53 | 30 | PASS |
| 11G | LCH | 12.29 | 30 | PASS |
| | MCH | 12.32 | 30 | PASS |
| | HCH | 13.08 | 30 | PASS |
| 11N20SISO | LCH | 14.02 | 30 | PASS |
| | MCH | 13.87 | 30 | PASS |
| | HCH | 14.33 | 30 | PASS |

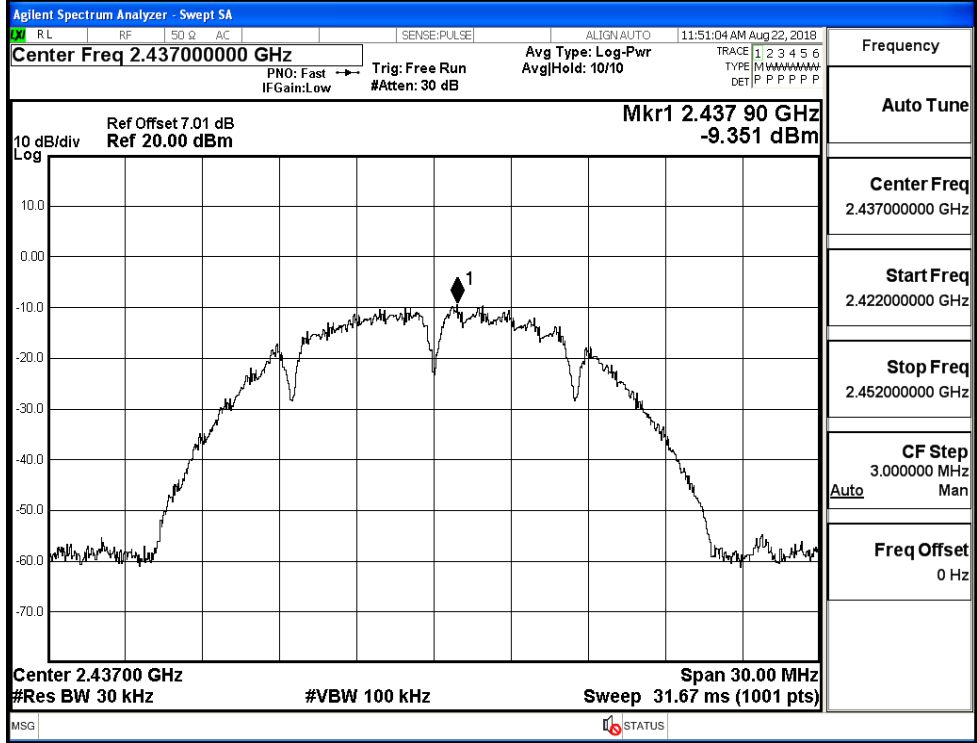
B.3 Maximum Power Spectral Density

| Mode | Channel | Meas.Level [dBm/30KHz] | Limit [dBm/3KHz] | Verdict |
|-----------|---------|------------------------|------------------|---------|
| 11B | LCH | -9.301 | 8 | PASS |
| | MCH | -9.351 | 8 | PASS |
| | HCH | -9.664 | 8 | PASS |
| 11G | LCH | -15.596 | 8 | PASS |
| | MCH | -15.929 | 8 | PASS |
| | HCH | -16.772 | 8 | PASS |
| 11N20SISO | LCH | -15.370 | 8 | PASS |
| | MCH | -15.479 | 8 | PASS |
| | HCH | -16.262 | 8 | PASS |

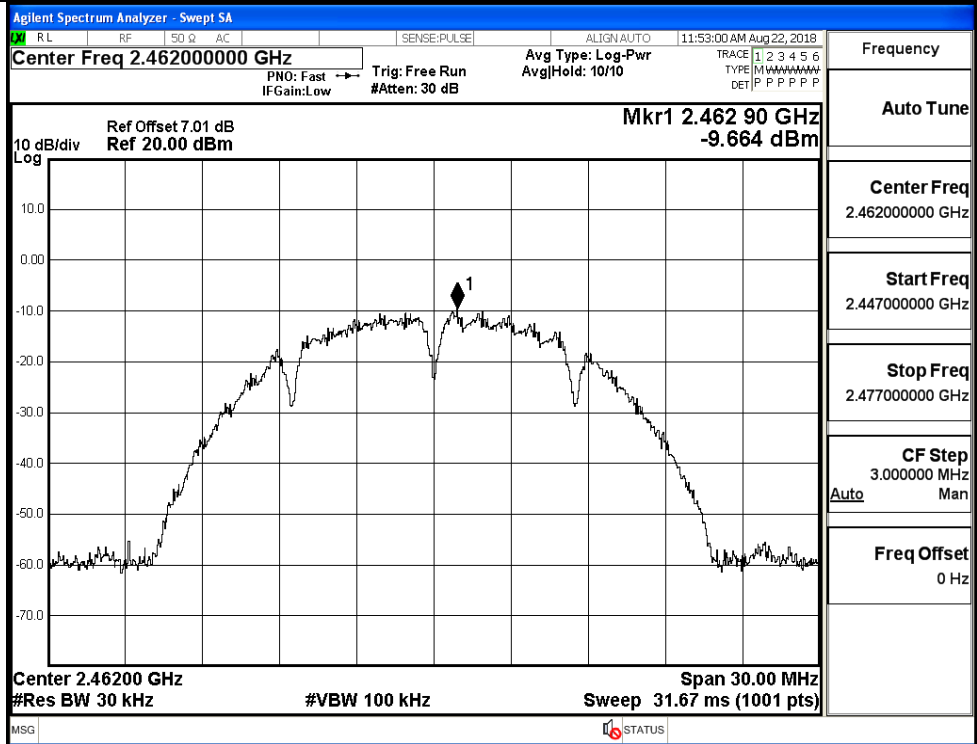
Test Graphs



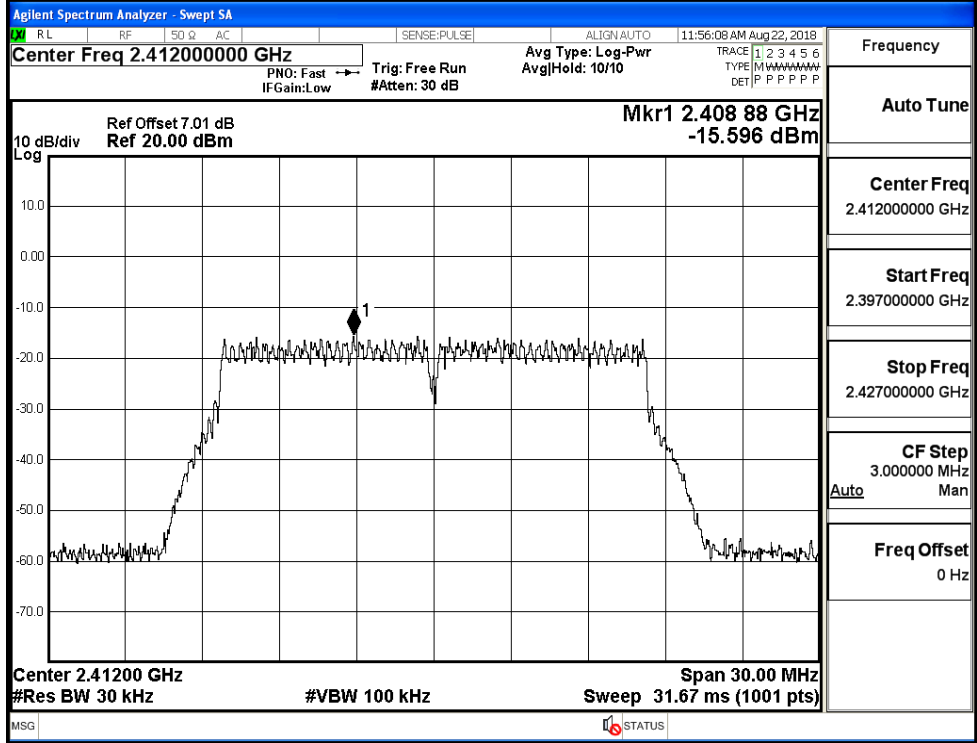
11B/MCH



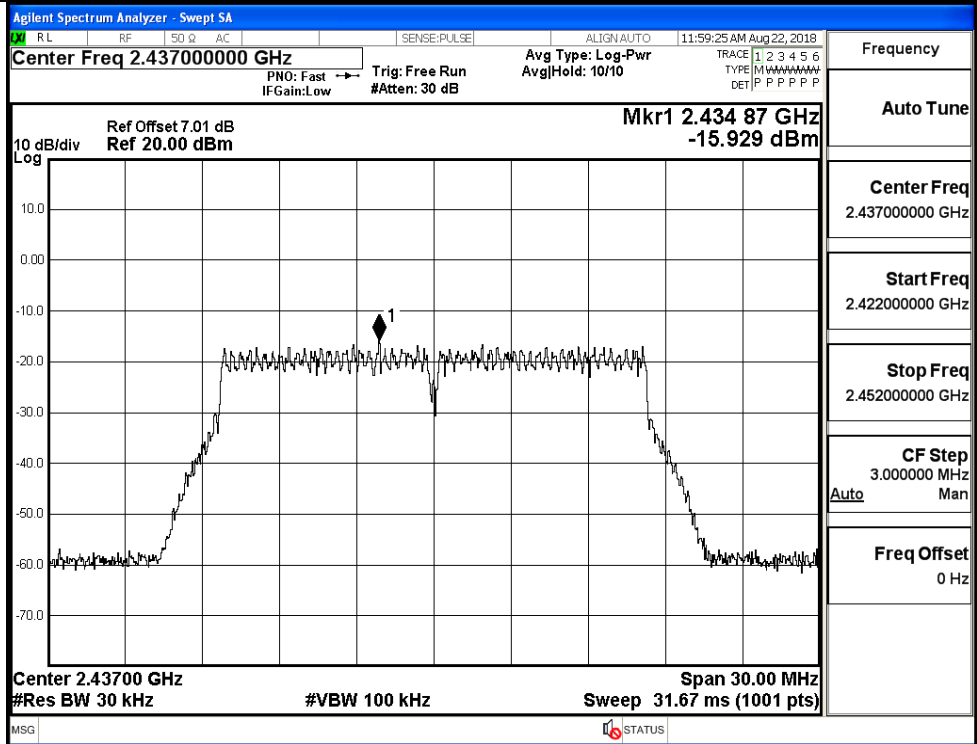
11B/HCH



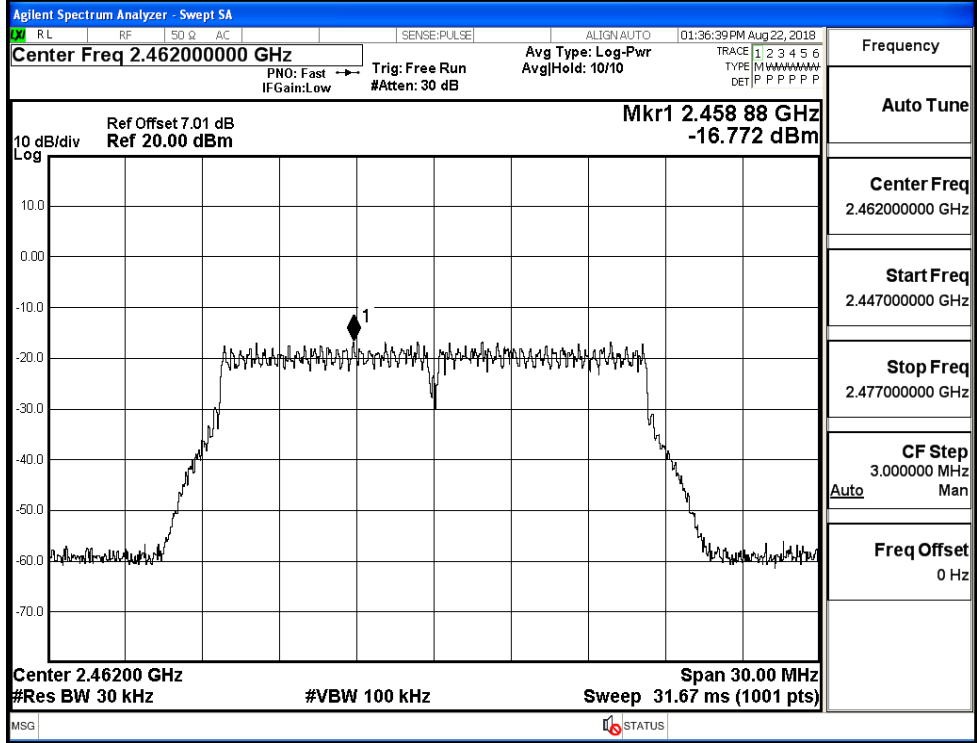
11G/LCH



11G/MCH

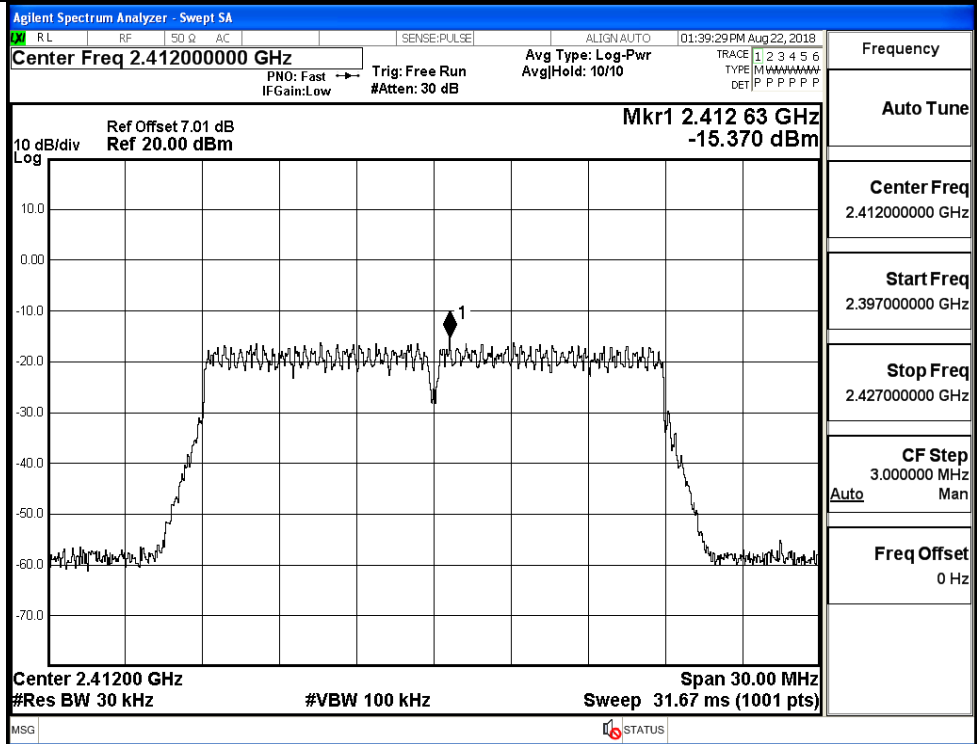


11G/HCH



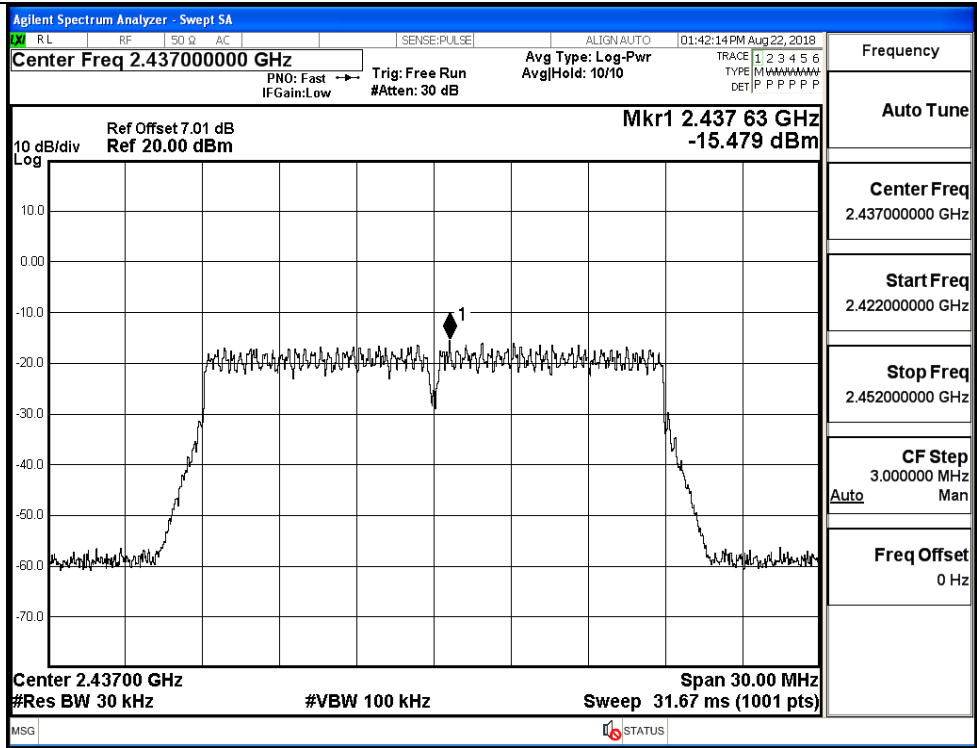
| |
|-------------------------------------|
| Frequency |
| Auto Tune |
| Center Freq 2.46200000 GHz |
| Start Freq 2.447000000 GHz |
| Stop Freq 2.477000000 GHz |
| CF Step 3.000000 MHz Auto Man |
| Freq Offset 0 Hz |

11N20SISO/LCH

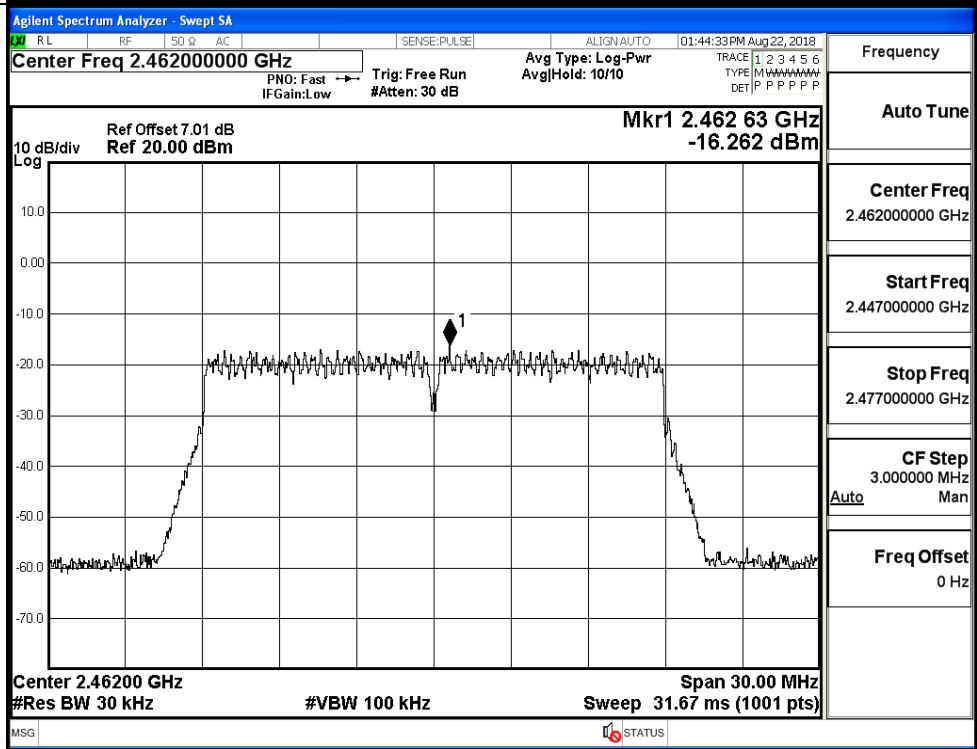


| |
|-------------------------------------|
| Frequency |
| Auto Tune |
| Center Freq 2.412000000 GHz |
| Start Freq 2.397000000 GHz |
| Stop Freq 2.427000000 GHz |
| CF Step 3.000000 MHz Auto Man |
| Freq Offset 0 Hz |

11N20SISO/MCH

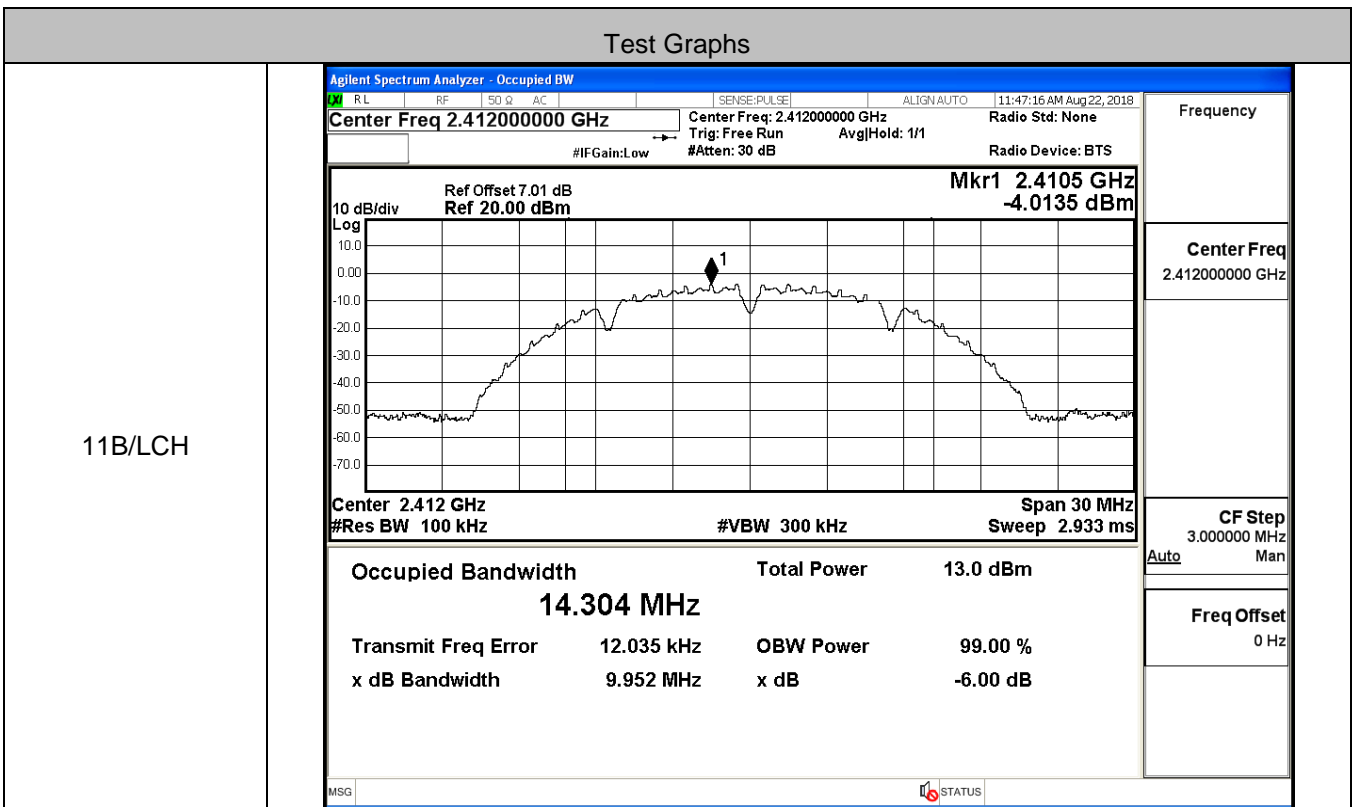


11N20SISO/HCH

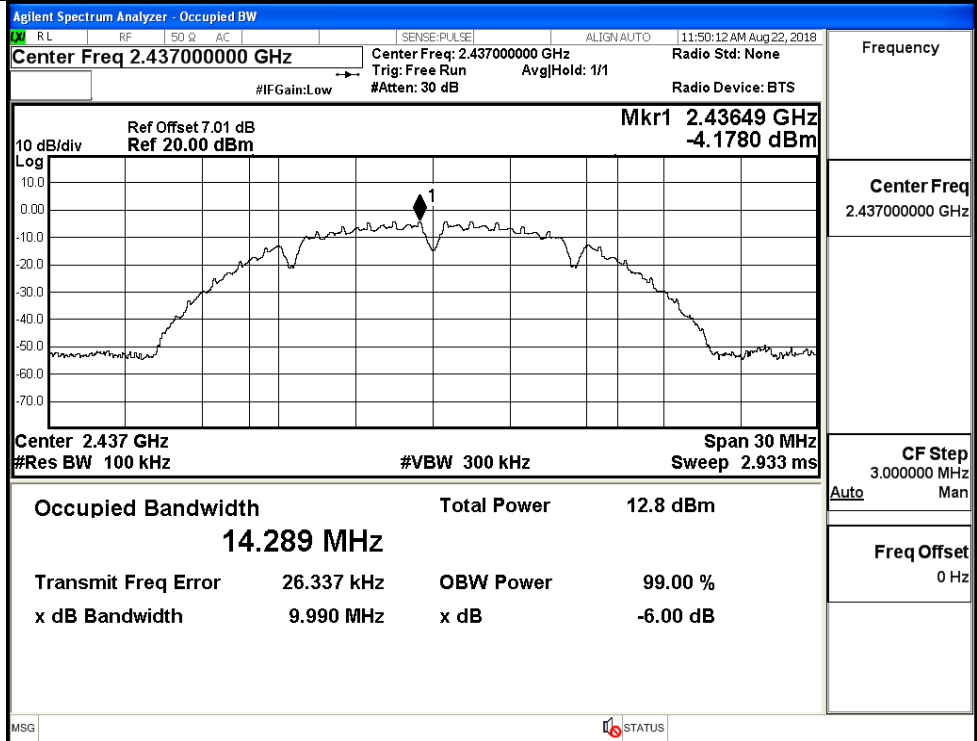


B.4 6dB Bandwidth

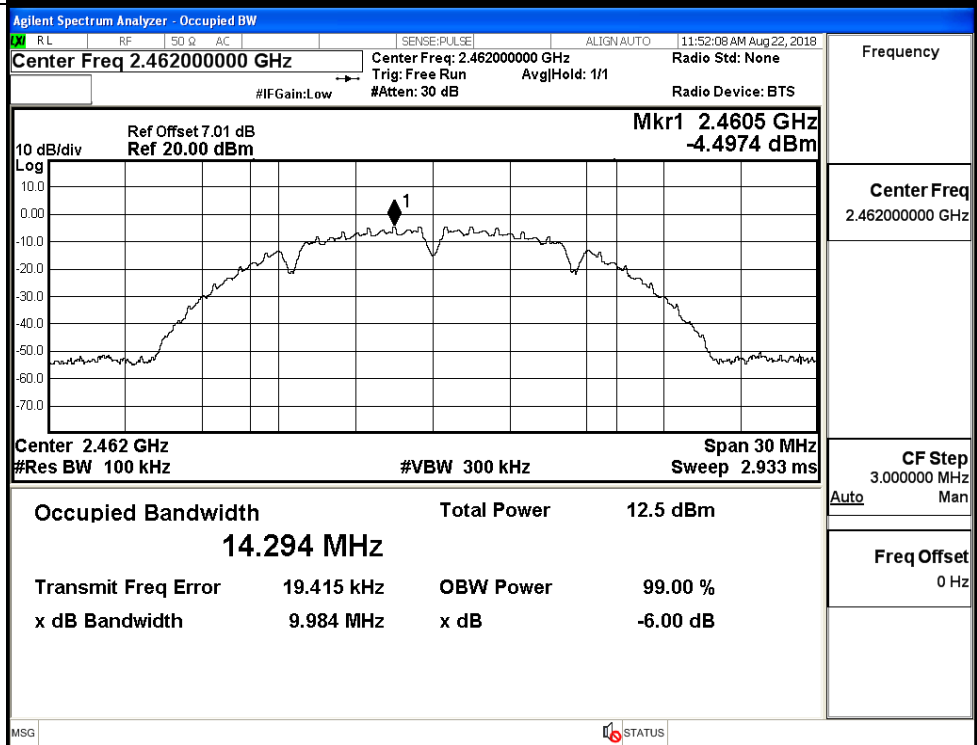
| Mode | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|-----------|---------|---------------------|-------------|---------|
| 11B | LCH | 9.952 | ≥0.5 | PASS |
| | MCH | 9.990 | ≥0.5 | PASS |
| | HCH | 9.984 | ≥0.5 | PASS |
| 11G | LCH | 16.61 | ≥0.5 | PASS |
| | MCH | 16.61 | ≥0.5 | PASS |
| | HCH | 16.61 | ≥0.5 | PASS |
| 11N20SISO | LCH | 17.82 | ≥0.5 | PASS |
| | MCH | 17.83 | ≥0.5 | PASS |
| | HCH | 17.83 | ≥0.5 | PASS |



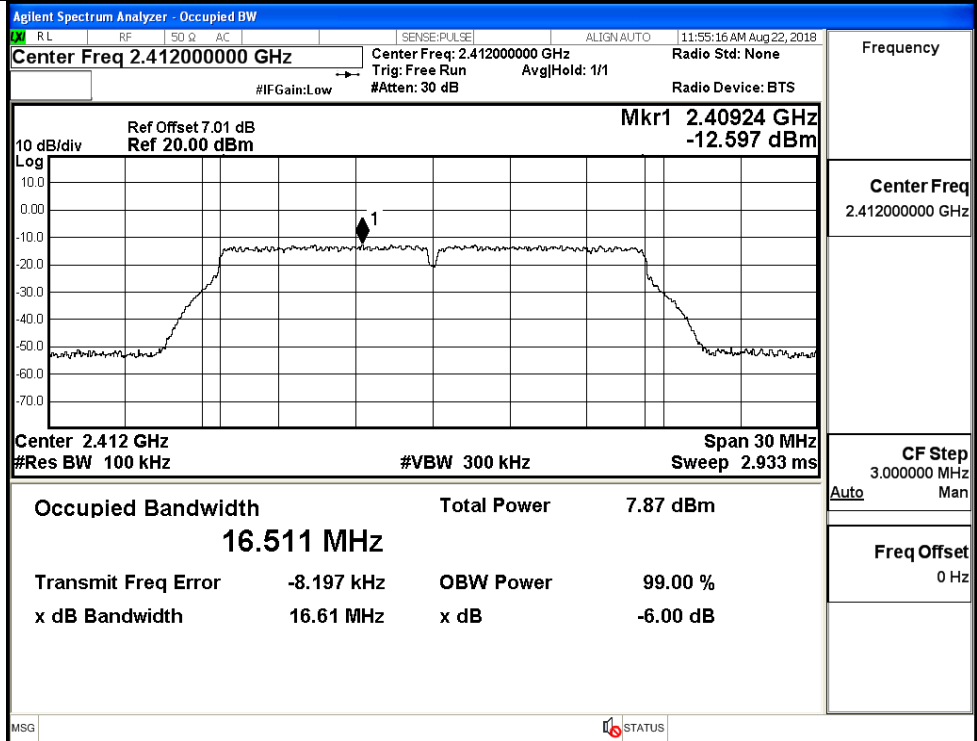
11B/MCH



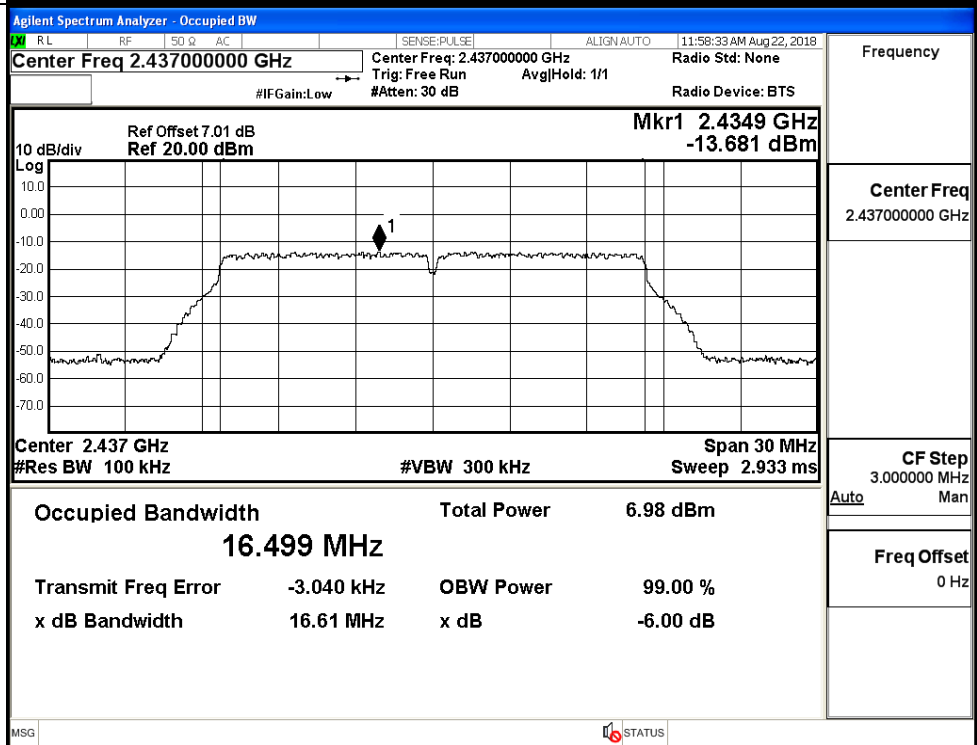
11B/HCH



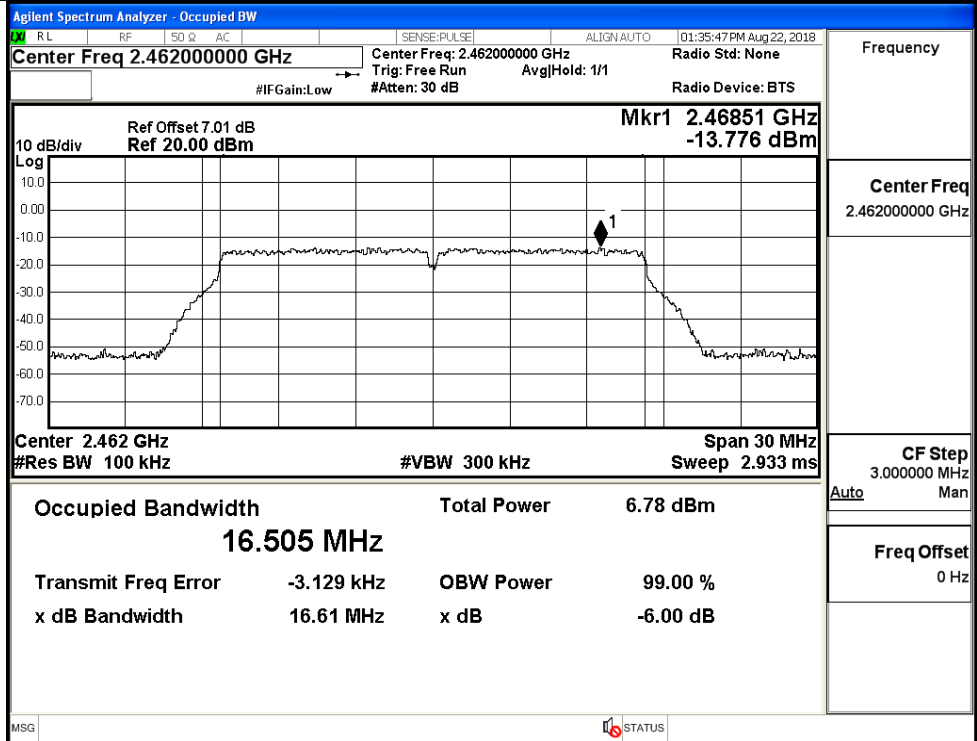
11G/LCH



11G/MCH

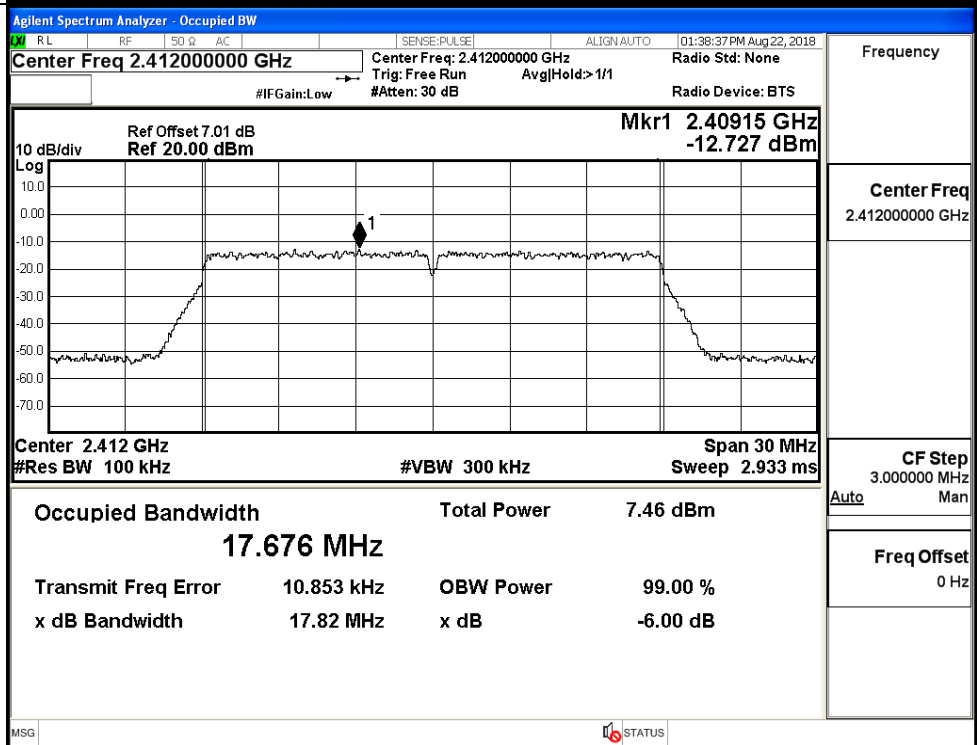


11G/HCH



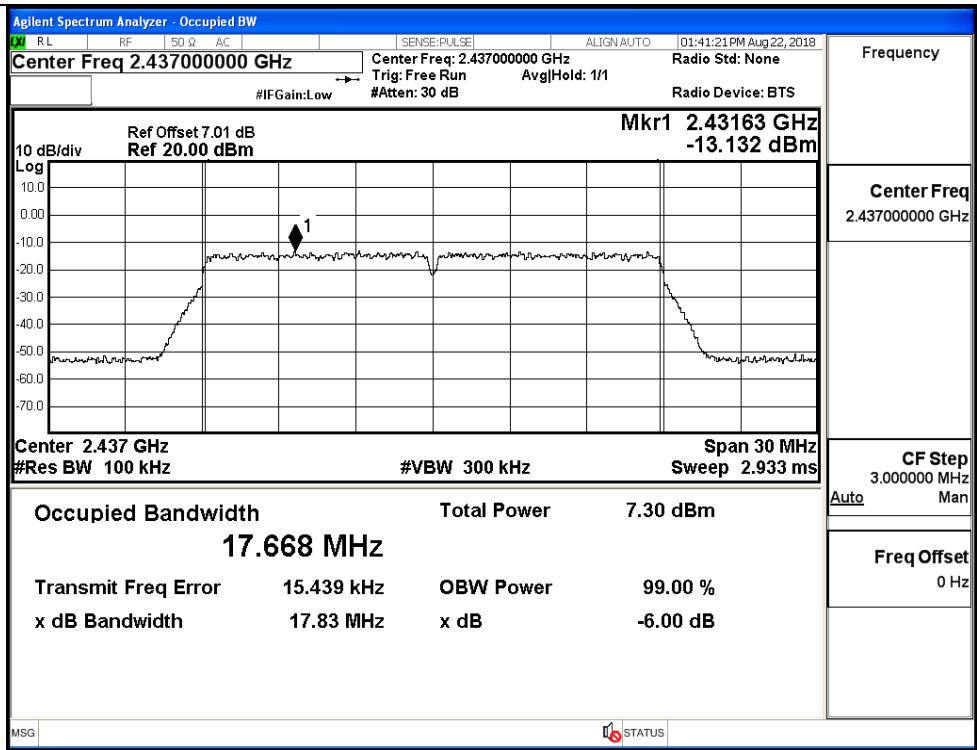
| | |
|-------------|----------------|
| Frequency | 2.46200000 GHz |
| Center Freq | 2.46200000 GHz |
| CF Step | 3.000000 MHz |
| Auto | Man |
| Freq Offset | 0 Hz |

11N20SISO/LCH

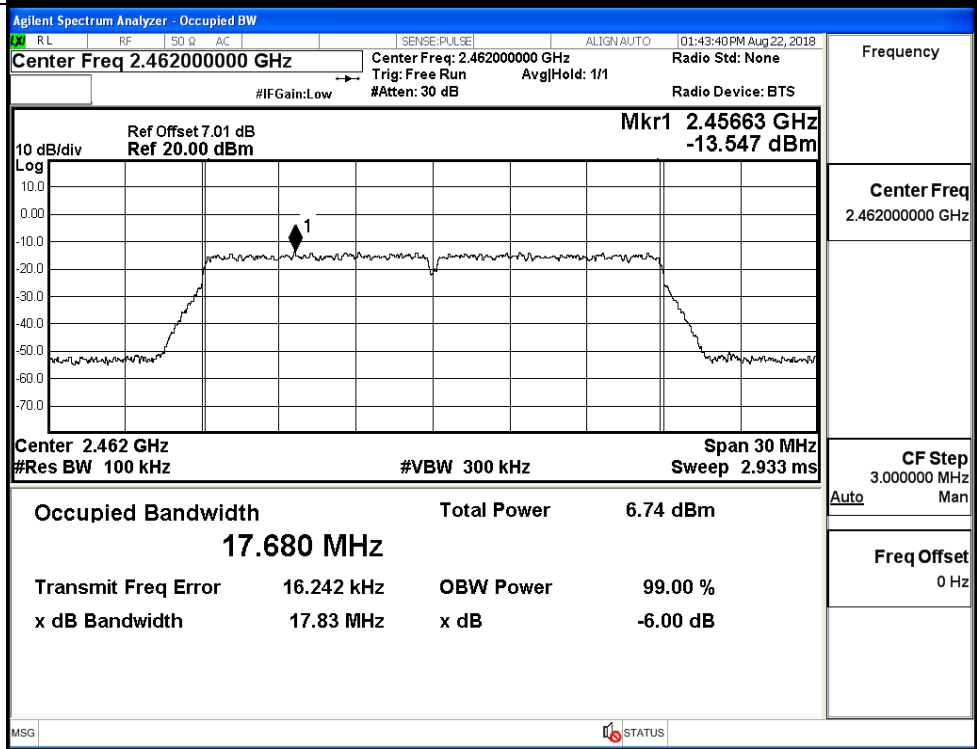


| | |
|-------------|----------------|
| Frequency | 2.41200000 GHz |
| Center Freq | 2.41200000 GHz |
| CF Step | 3.000000 MHz |
| Auto | Man |
| Freq Offset | 0 Hz |

11N20SISO/MCH



11N20SISO/HCH

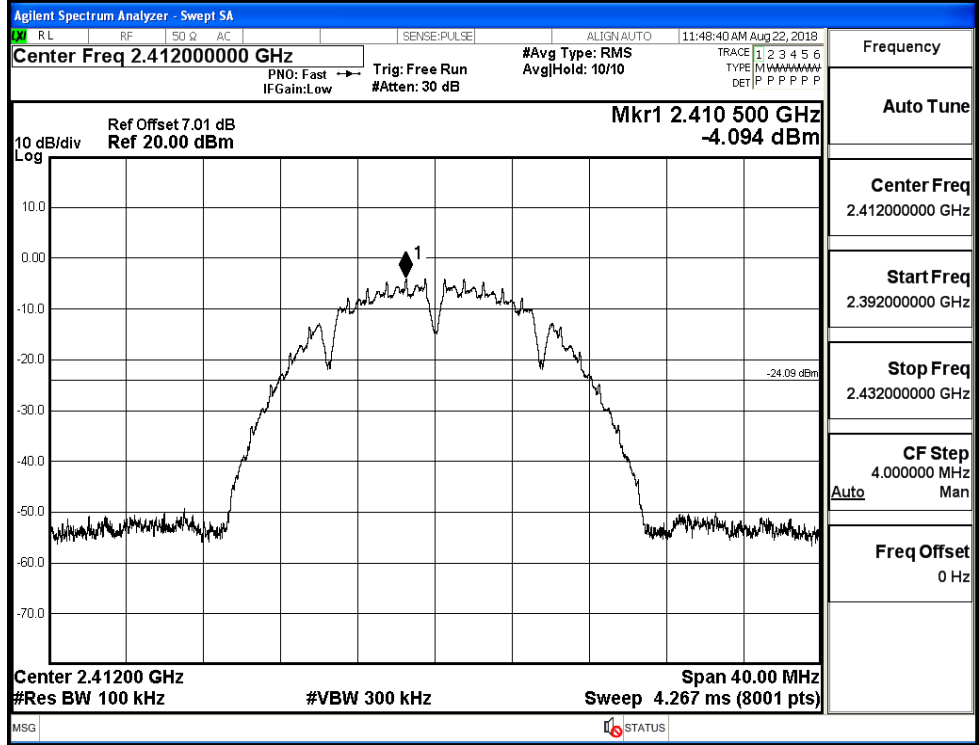


B.5 RF Conducted Spurious Emissions

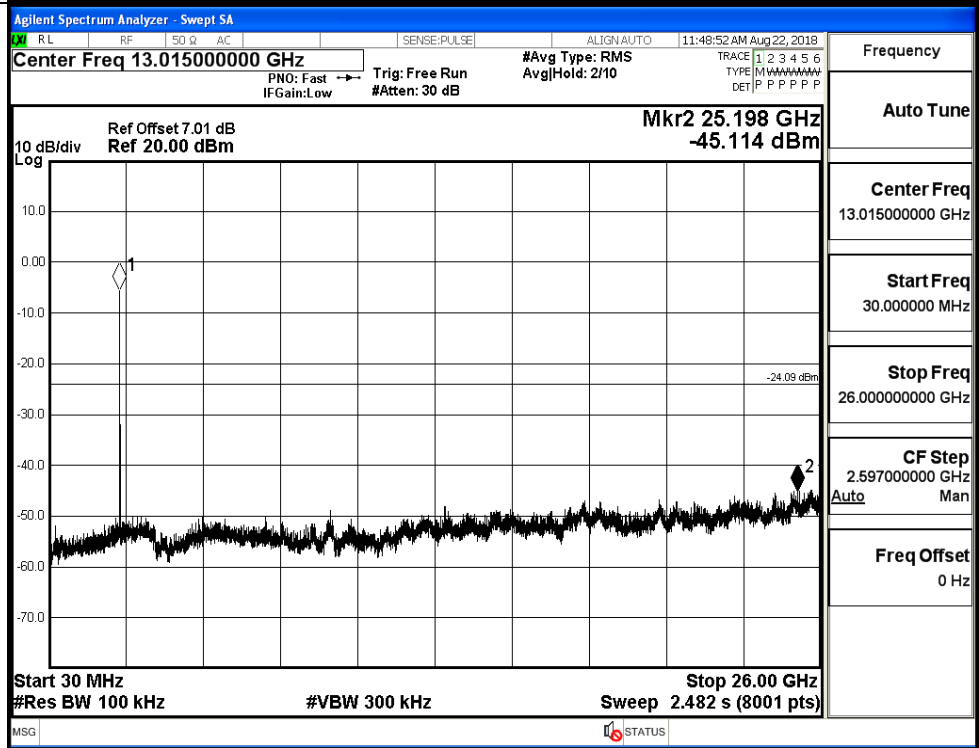
| Mode | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B | LCH | -4.094 | -45.114 | -24.094 | PASS |
| | MCH | -4.232 | -45.007 | -24.232 | PASS |
| | HCH | -4.563 | -45.248 | -24.563 | PASS |
| 11G | LCH | -12.562 | -45.023 | -32.562 | PASS |
| | MCH | -13.719 | -44.391 | -33.719 | PASS |
| | HCH | -13.925 | -44.867 | -33.925 | PASS |
| 11N20 SISO | LCH | -12.643 | -45.346 | -32.643 | PASS |
| | MCH | -13.138 | -45.504 | -33.138 | PASS |
| | HCH | -13.754 | -43.912 | -33.754 | PASS |

11B_LCH_Graphs

Pref/11B/LCH

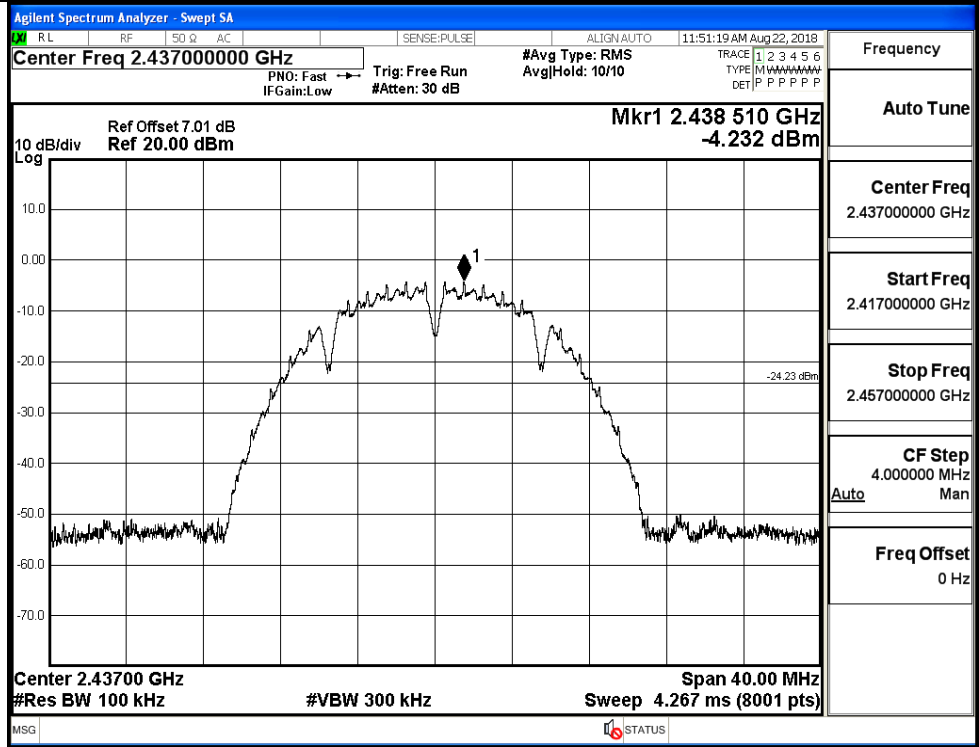


Puw/11B/LCH

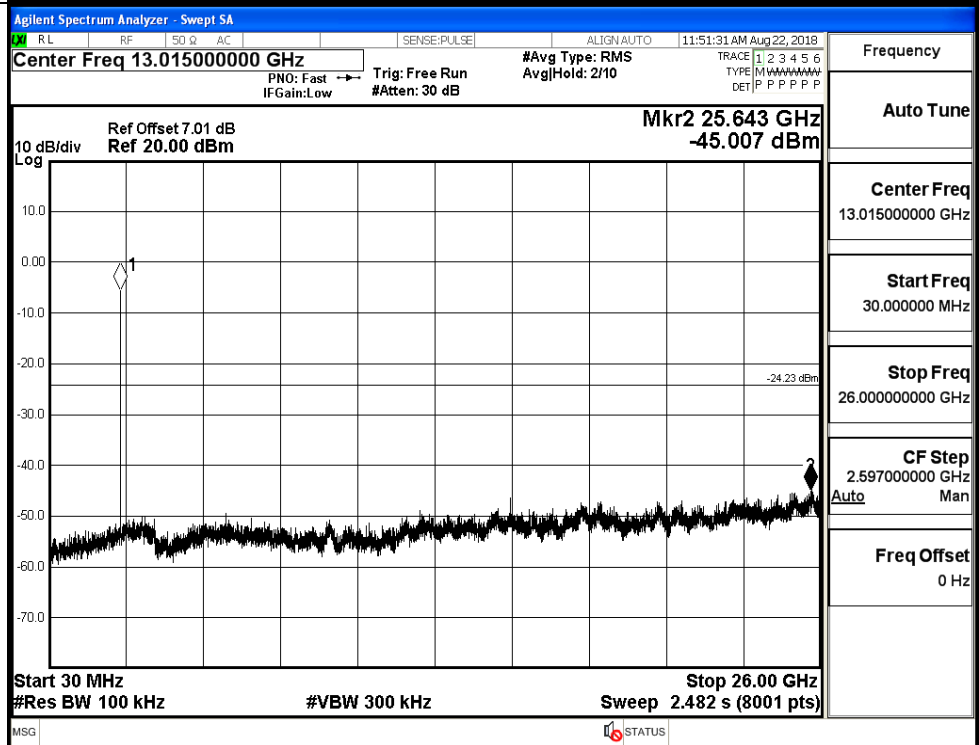


11B_MCH_Graphs

Pref/11B/MCH

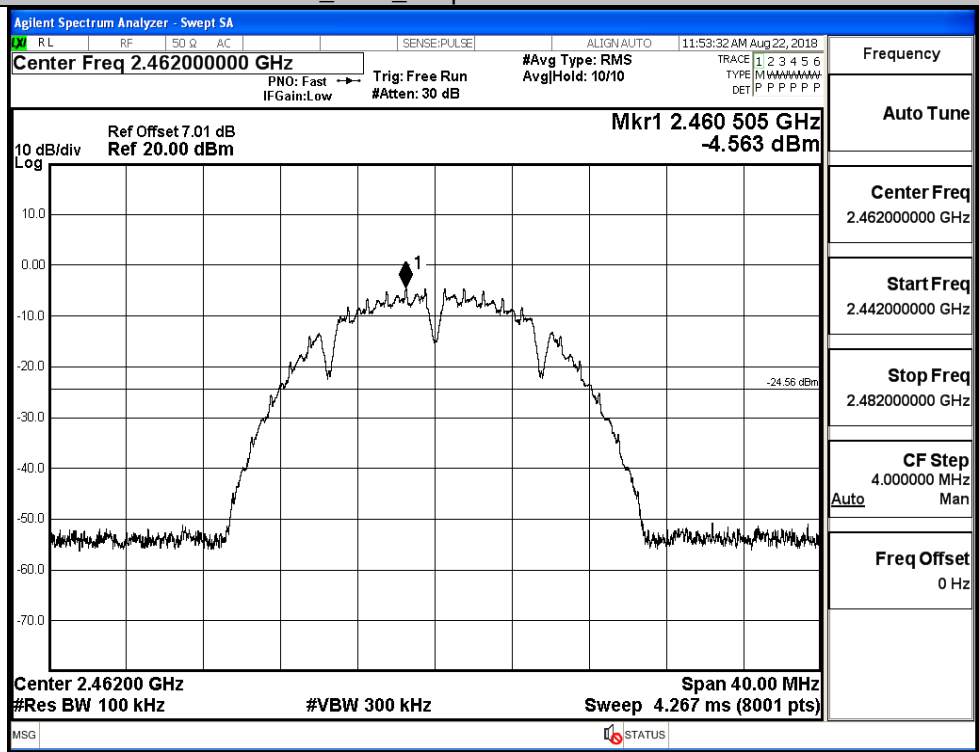


Puw/11B/MCH

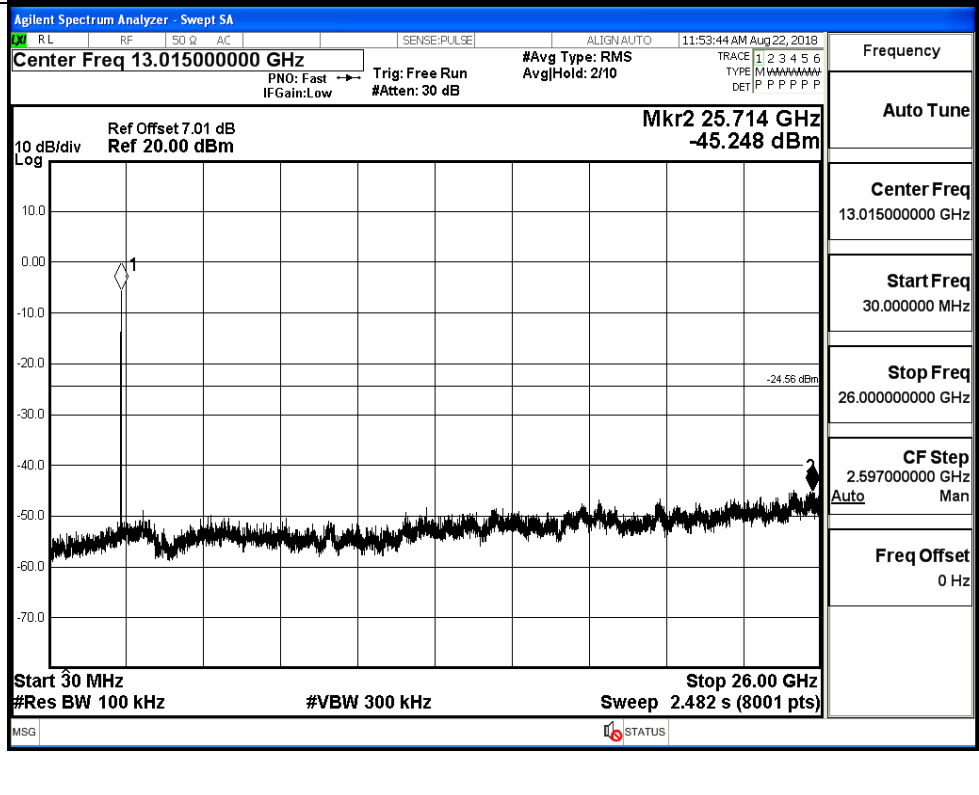


11B_HCH_Graphs

Pref/11B/HCH

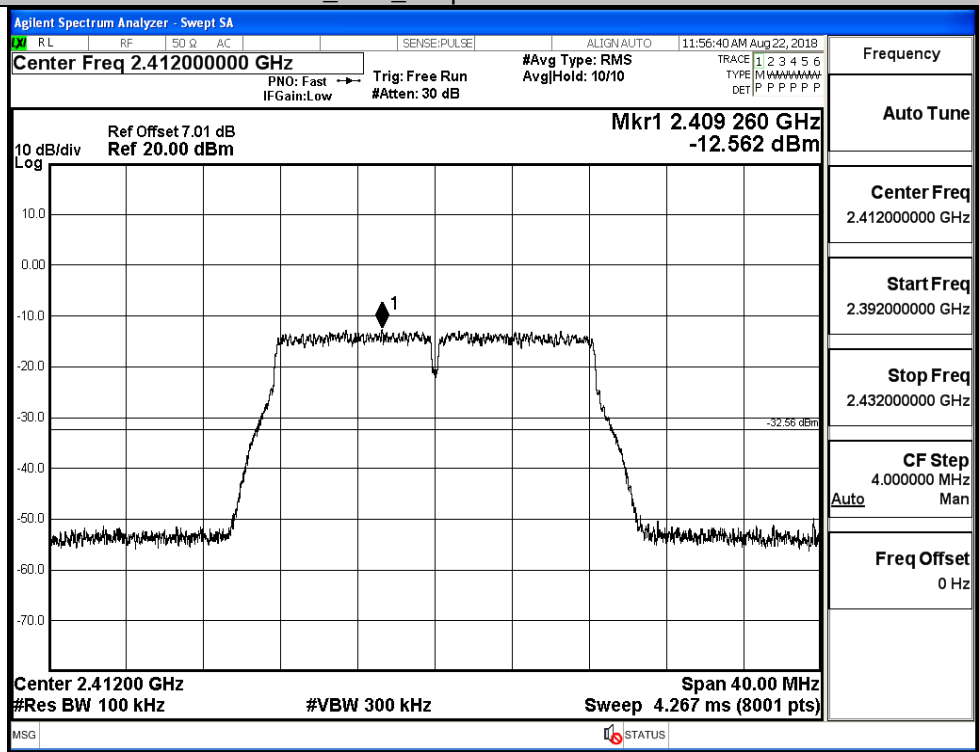


Puw/11B/HCH

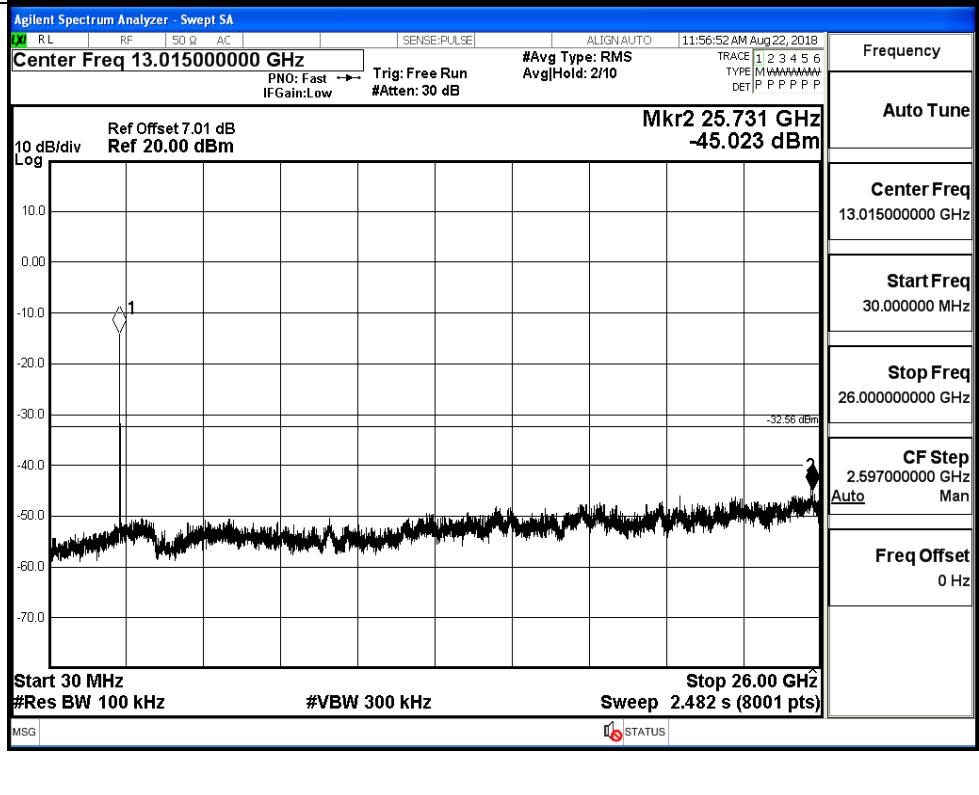


11G_LCH_Graphs

Pref/11G/LCH

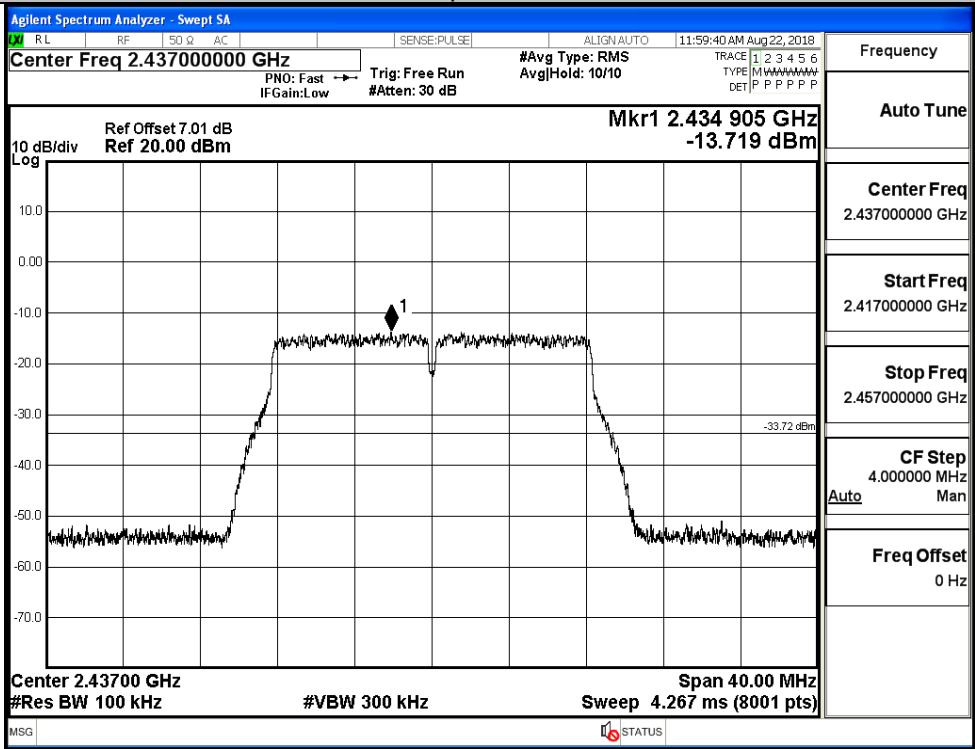


Puw/11G/LCH

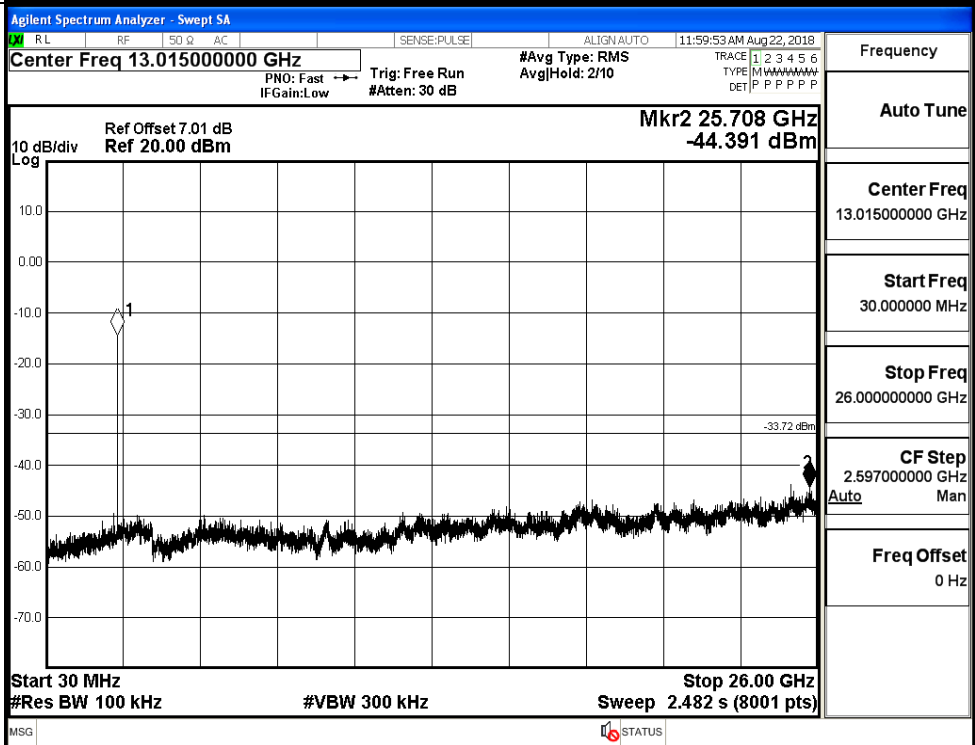


11G_MCH_Graphs

Pref/11G/MCH

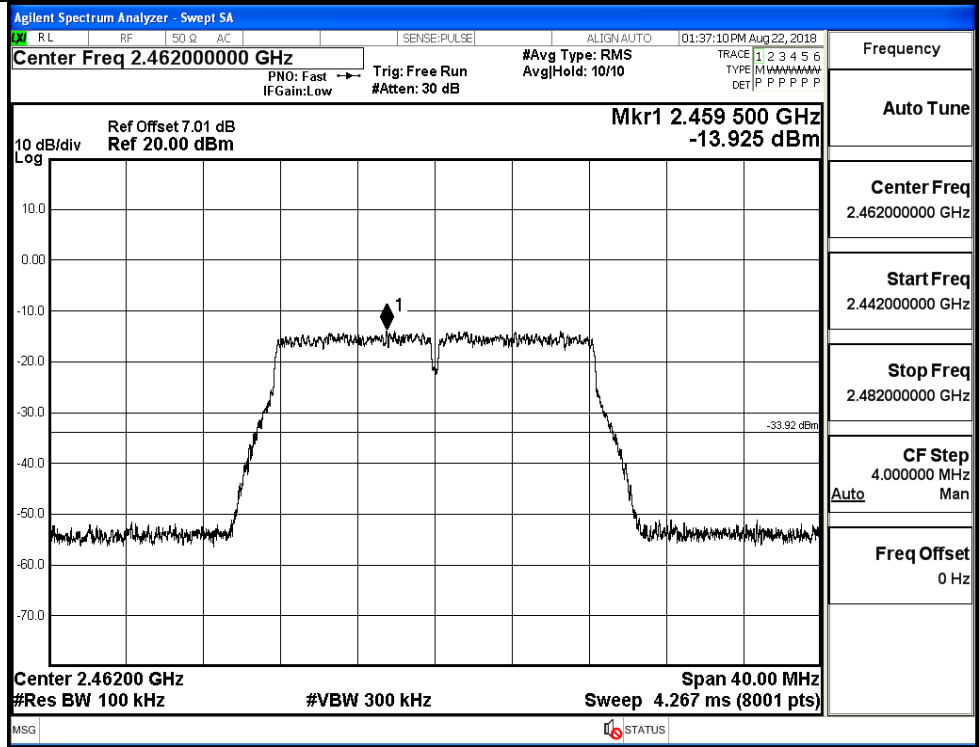


Puw/11G/MCH

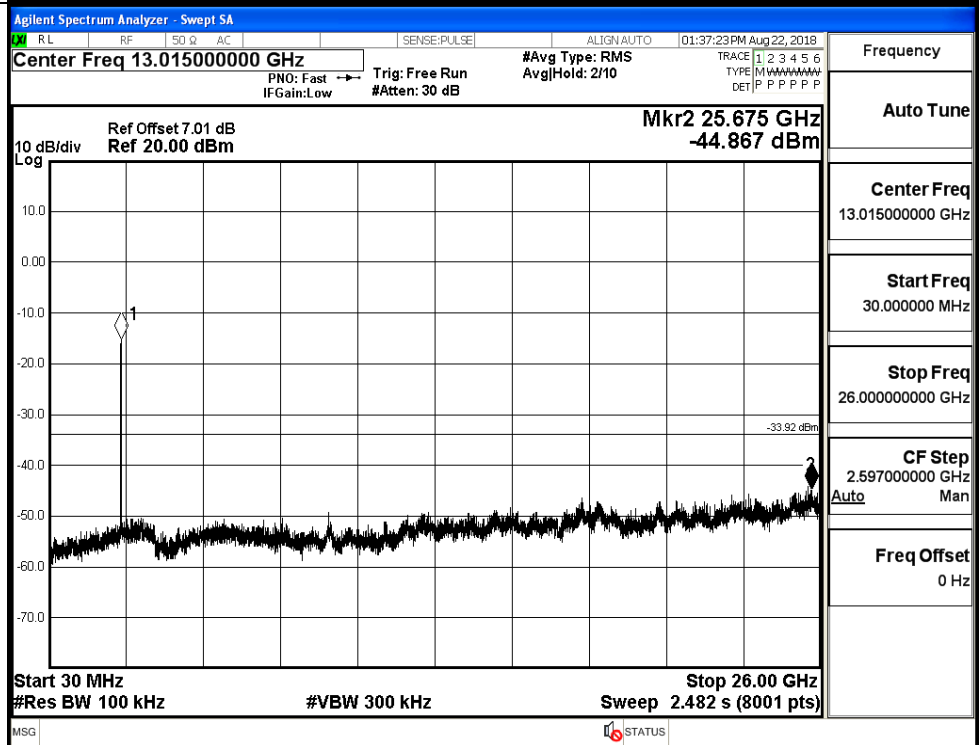


11G_HCH_Graphs

Pref/11G/HCH

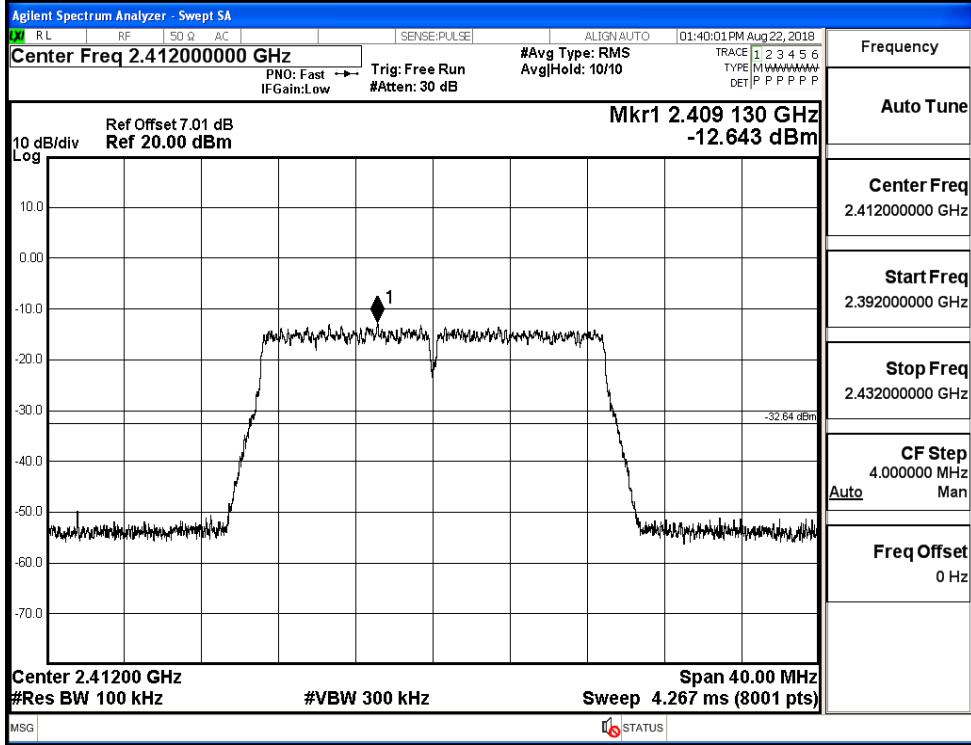


Puw/11G/HCH

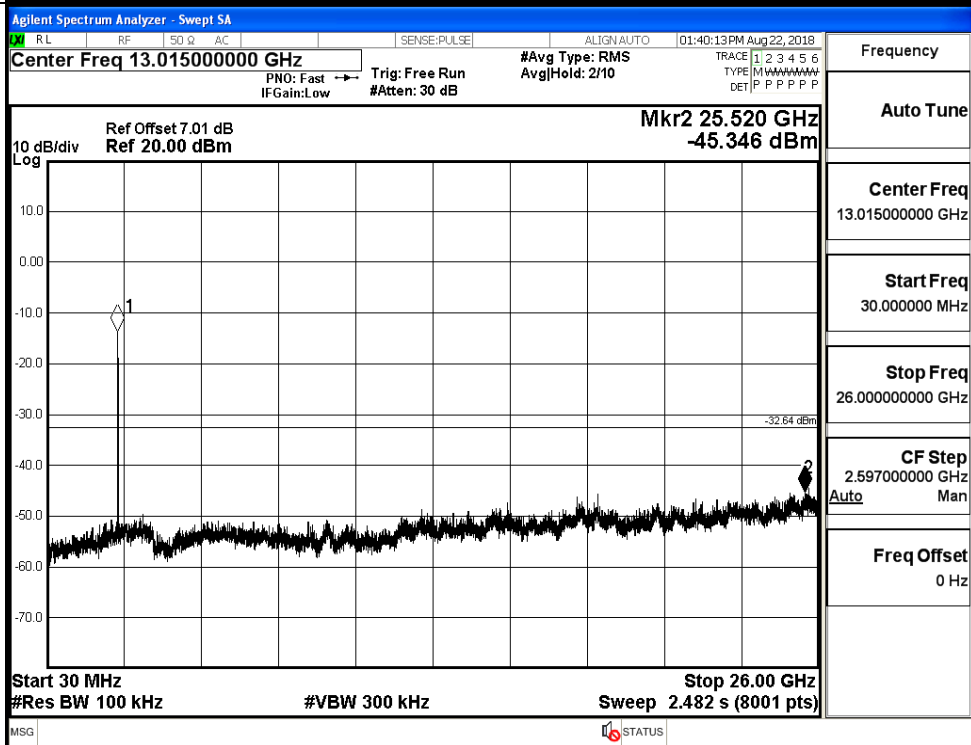


11N20SISO_LCH_Graphs

Pref/11N20SIS
O/LCH

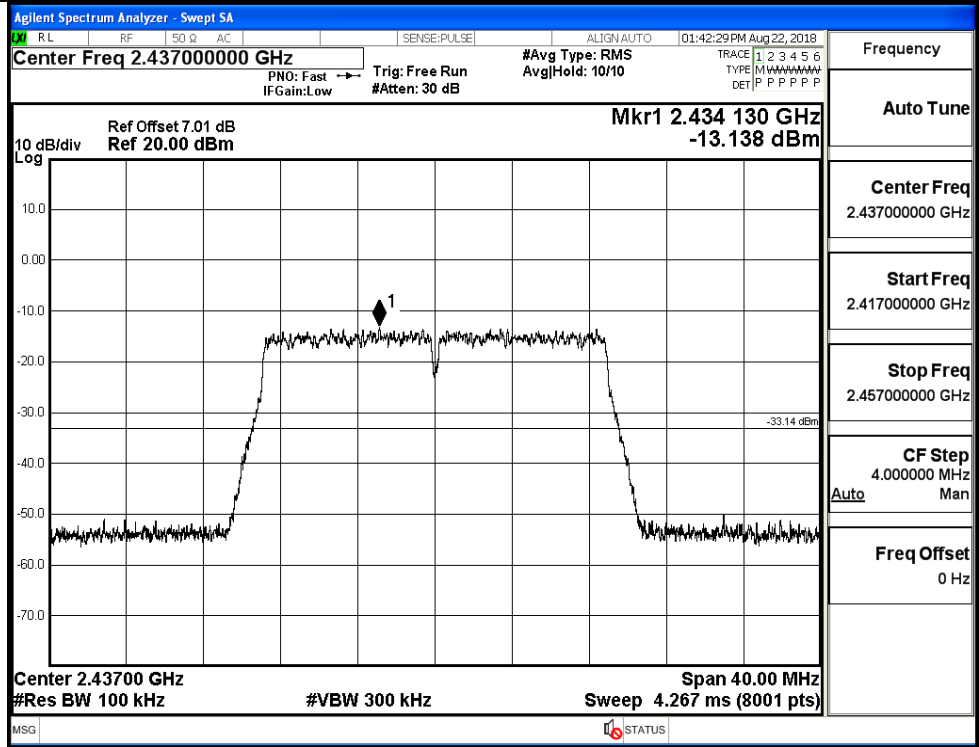


Puw/11N20
SISO/LCH

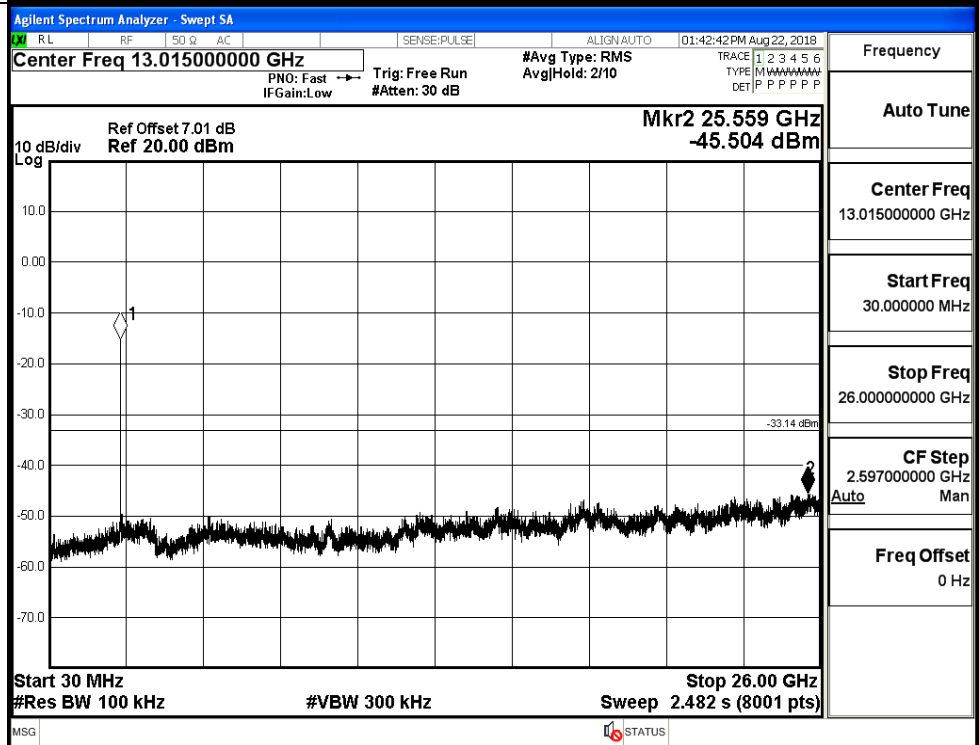


11N20SISO_MCH_Graphs

Pref/11N20
SISO/MCH

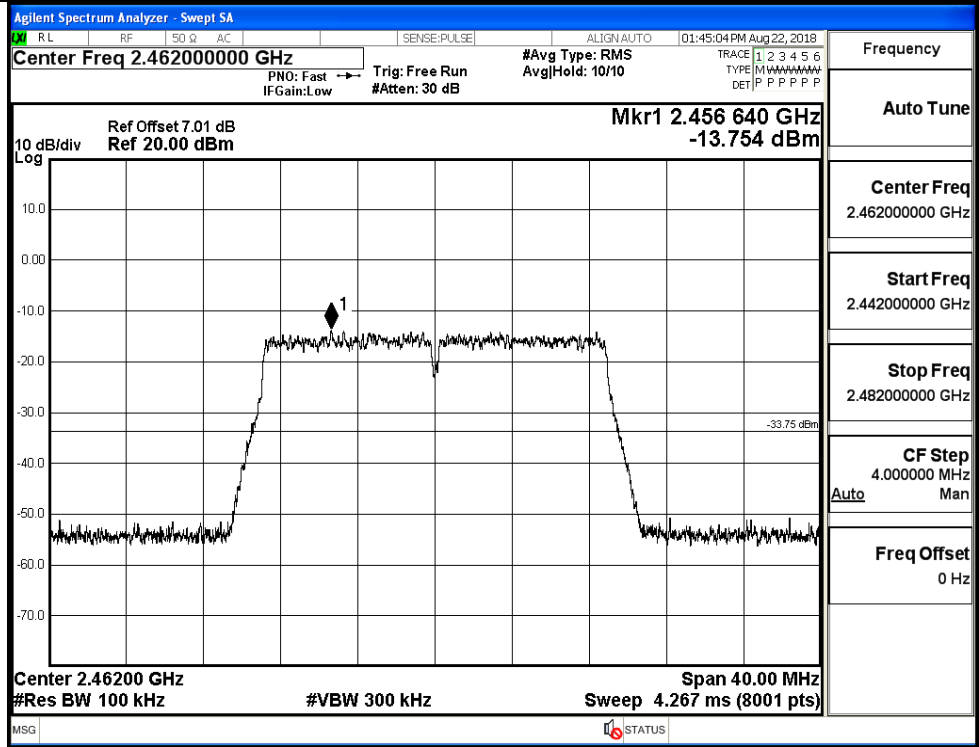


Puw/11N20
SISO/MCH

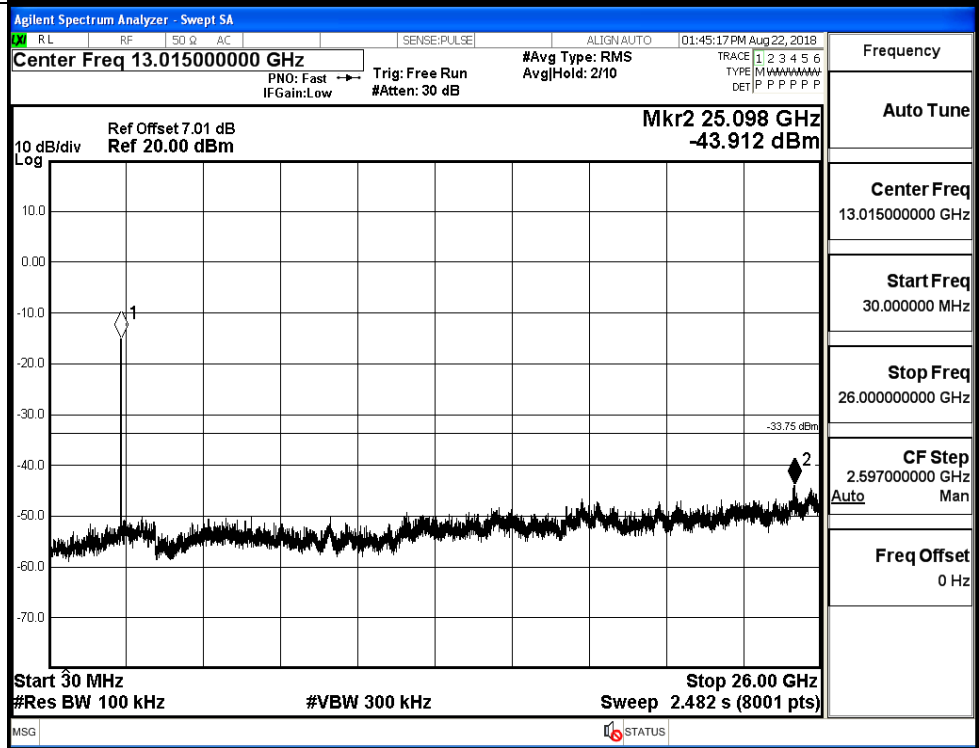


11N20SISO_HCH_Graphs

Pref/11N20
SISO/HCH



Puw/11N20
SISO/HCH

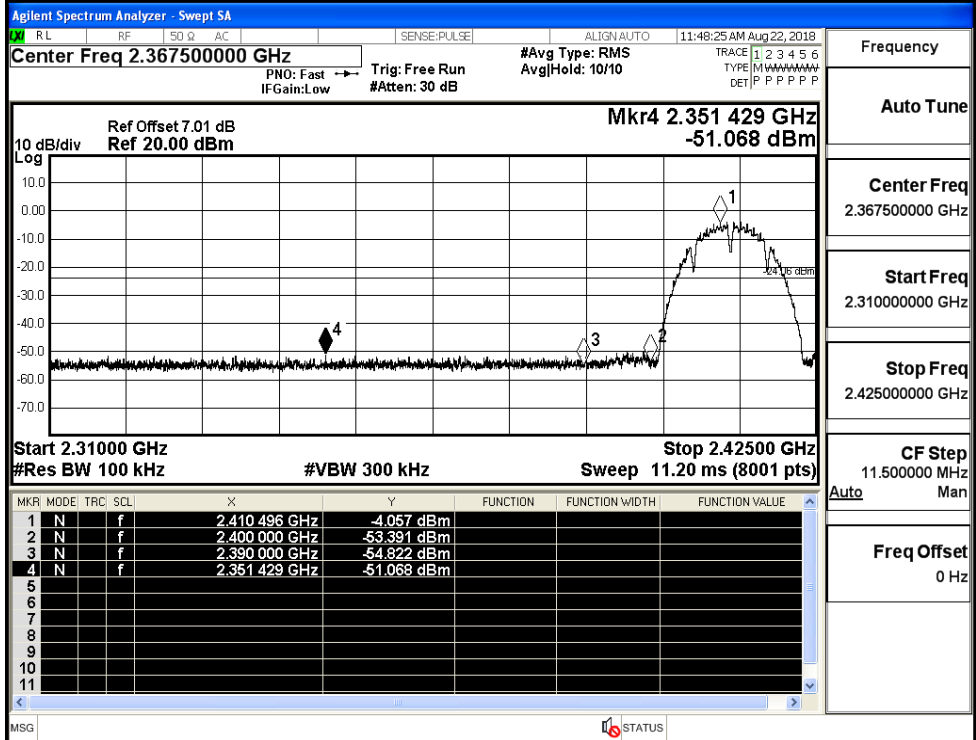


B.6 Band-edge for RF Conducted Emissions

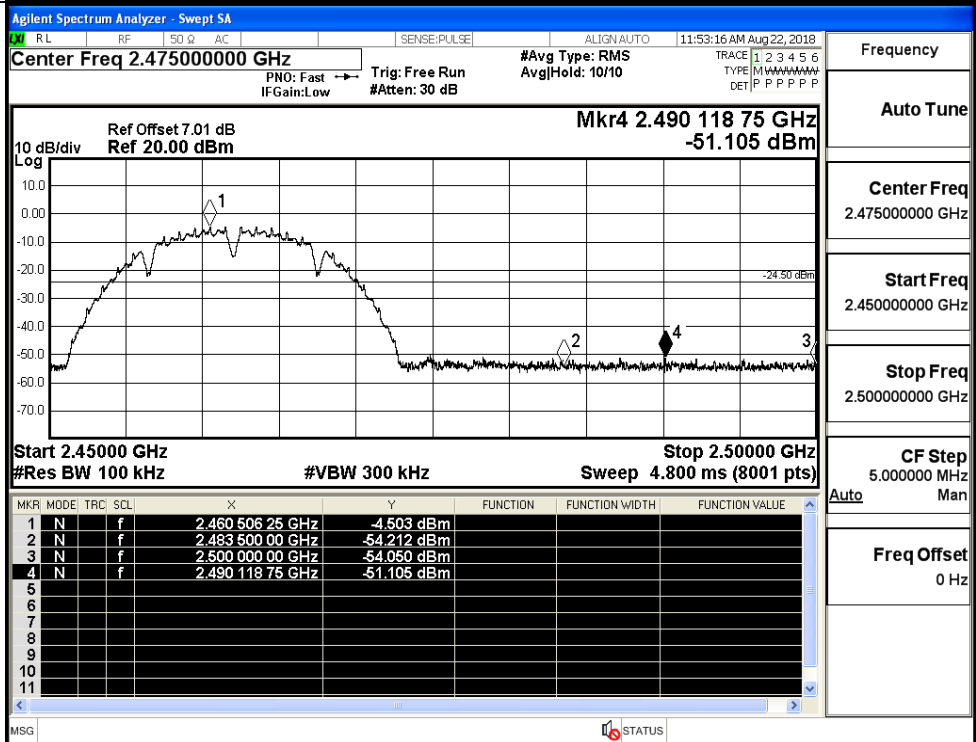
| Mode | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B | LCH | -4.057 | -51.068 | -24.06 | PASS |
| | HCH | -4.503 | -51.105 | -24.5 | PASS |
| 11G | LCH | -12.515 | -50.562 | -32.52 | PASS |
| | HCH | -13.873 | -50.644 | -33.87 | PASS |
| 11N20SISO | LCH | -12.690 | -51.368 | -32.69 | PASS |
| | HCH | -13.560 | -50.193 | -33.56 | PASS |

Test Graphs

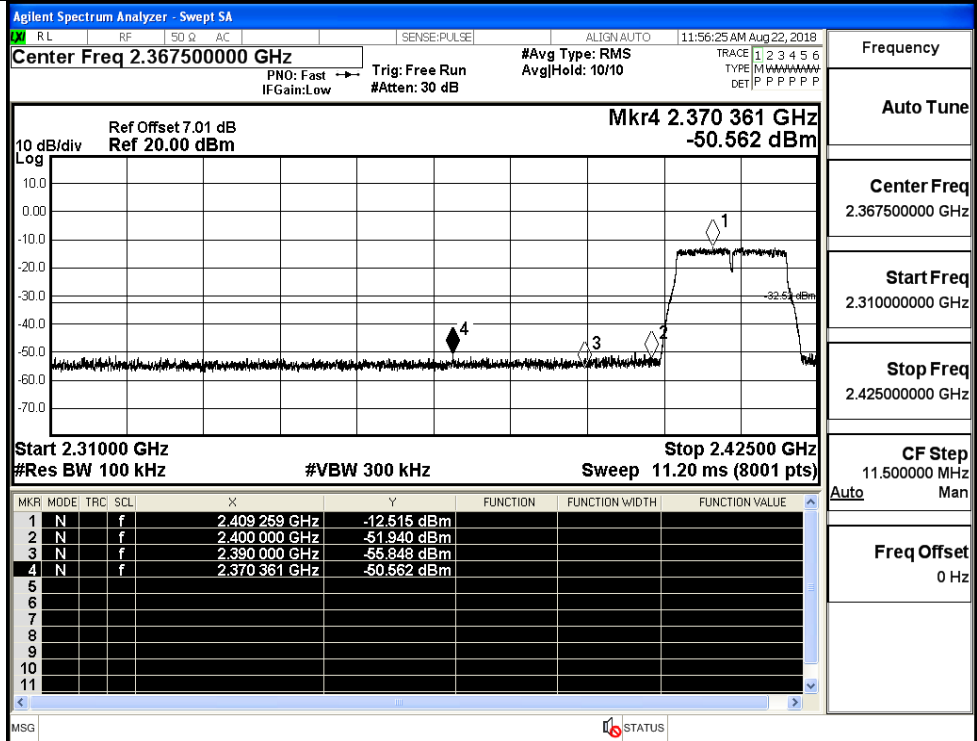
11B/LCH



11B/HCH



11G/LCH



Frequency

Auto Tune

Center Freq
2.36750000 GHz

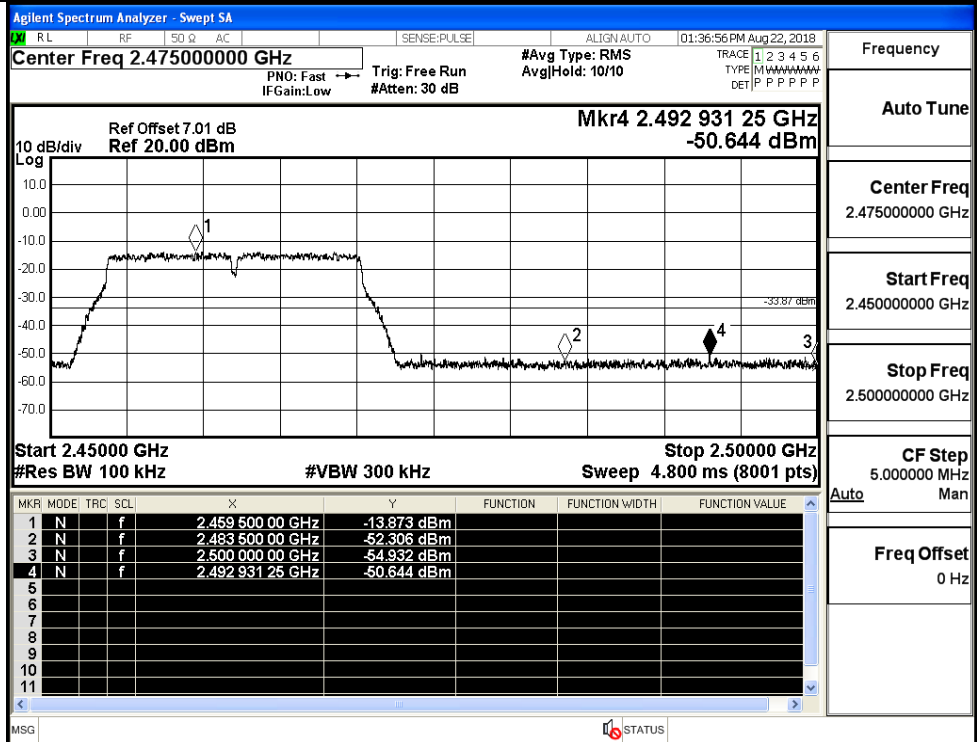
Start Freq
2.31000000 GHz

Stop Freq
2.42500000 GHz

CF Step
11.500000 MHz

Freq Offset
0 Hz

11G/HCH



Frequency

Auto Tune

Center Freq
2.47500000 GHz

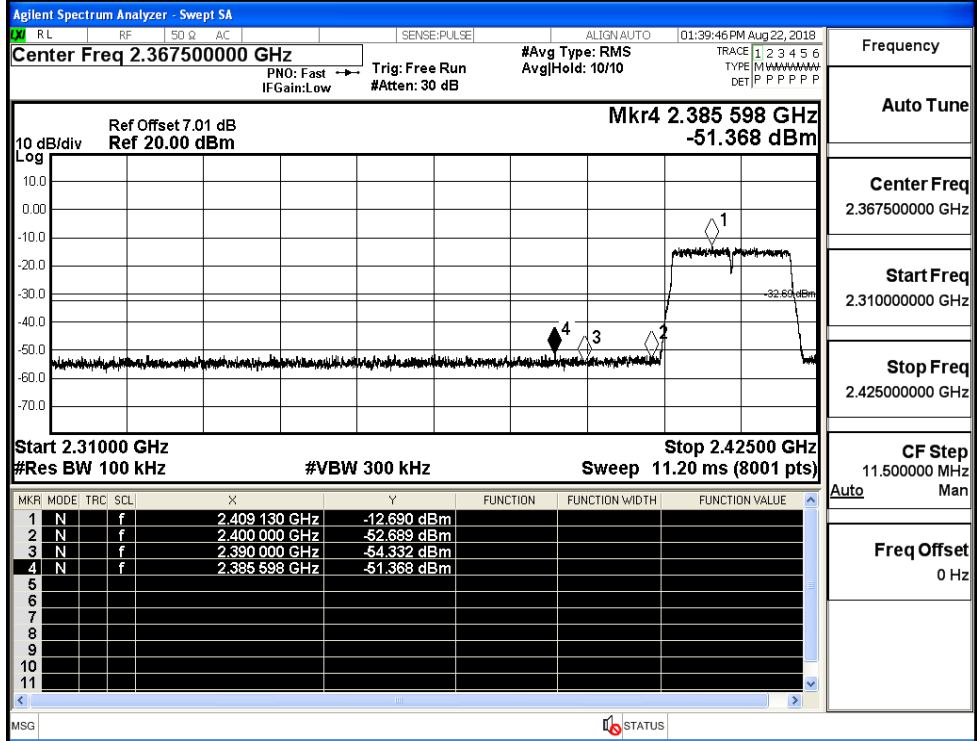
Start Freq
2.45000000 GHz

Stop Freq
2.50000000 GHz

CF Step
5.000000 MHz

Freq Offset
0 Hz

11N20SISO/LCH



Frequency

Auto Tune

Center Freq
2.36750000 GHz

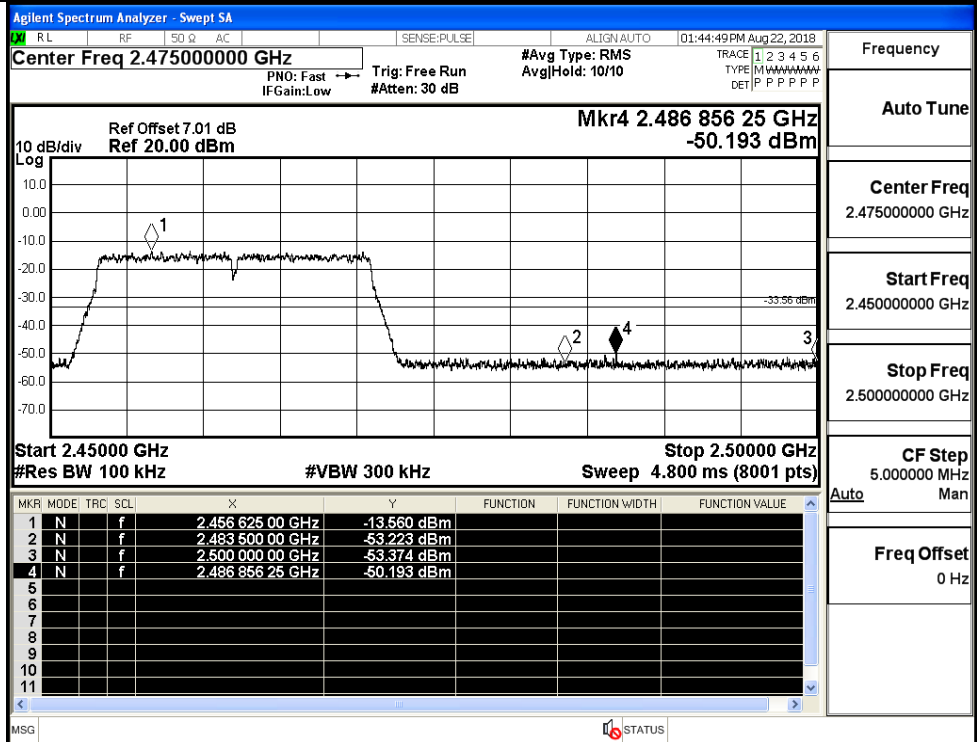
Start Freq
2.31000000 GHz

Stop Freq
2.42500000 GHz

CF Step
11.500000 MHz

Freq Offset
0 Hz

11N20SISO/HCH



Frequency

Auto Tune

Center Freq
2.47500000 GHz

Start Freq
2.45000000 GHz

Stop Freq
2.50000000 GHz

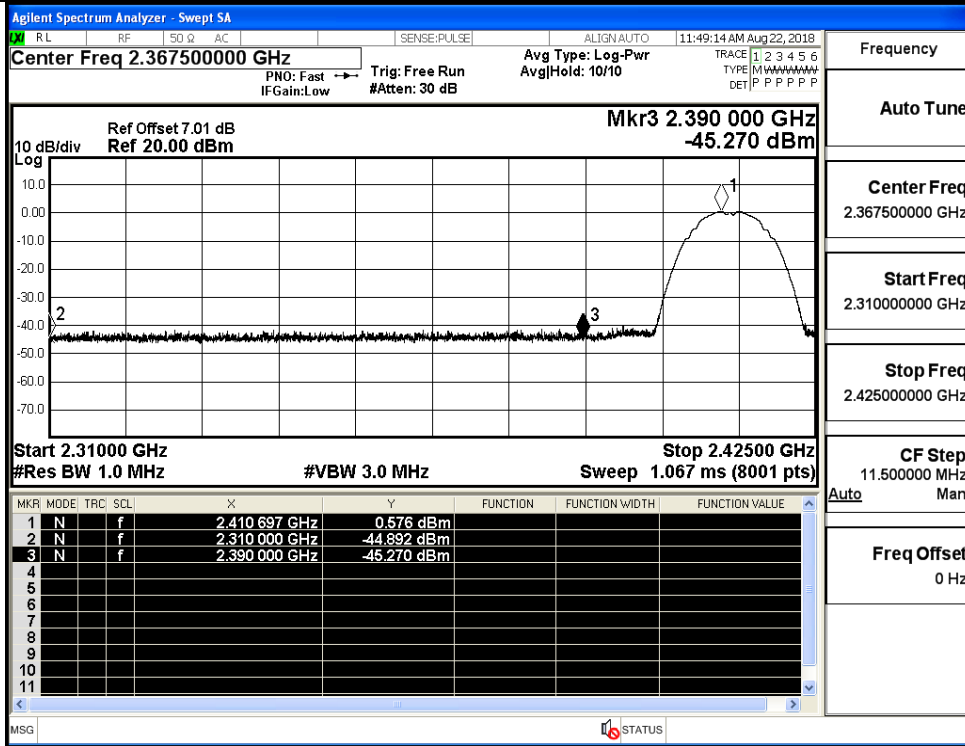
CF Step
5.000000 MHz

Freq Offset
0 Hz

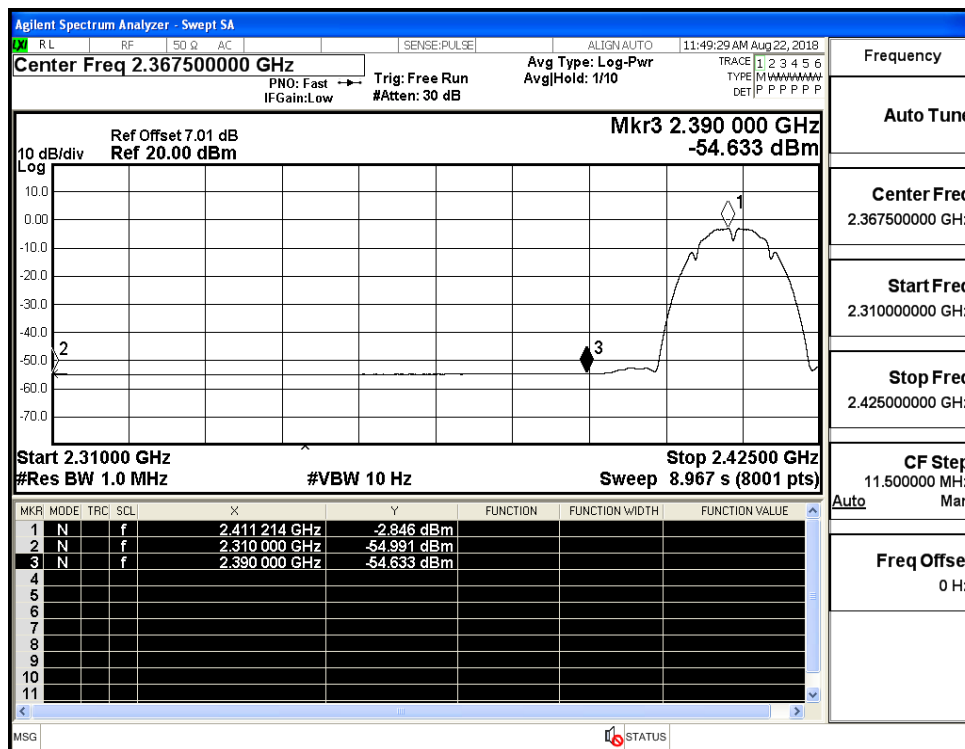
B.7 Restrict-band band-edge measurements

| 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 | -44.89 | 2.43 | 0 | 52.74 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2310.0 | -54.99 | 2.43 | 0 | 42.64 | AV | 54 | PASS |
| | 2412 | Ant1 | 2390.0 | -45.27 | 2.43 | 0 | 52.36 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2390.0 | -54.63 | 2.43 | 0 | 43.00 | AV | 54 | PASS |
| | 2462 | Ant1 | 2483.5 | -44.74 | 2.43 | 0 | 52.89 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2483.5 | -54.50 | 2.43 | 0 | 43.13 | AV | 54 | PASS |
| | 2462 | Ant1 | 2500.0 | -41.99 | 2.43 | 0 | 55.64 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2500.0 | -54.30 | 2.43 | 0 | 43.33 | AV | 54 | PASS |
| 11G | 2412 | Ant1 | 2310.0 | -44.15 | 2.43 | 0 | 53.48 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2310.0 | -55.00 | 2.43 | 0 | 42.63 | AV | 54 | PASS |
| | 2412 | Ant1 | 2390.0 | -44.08 | 2.43 | 0 | 53.55 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2390.0 | -54.35 | 2.43 | 0 | 43.28 | AV | 54 | PASS |
| | 2462 | Ant1 | 2483.5 | -43.61 | 2.43 | 0 | 54.02 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2483.5 | -54.30 | 2.43 | 0 | 43.33 | AV | 54 | PASS |
| | 2462 | Ant1 | 2500.0 | -43.14 | 2.43 | 0 | 54.49 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2500.0 | -54.18 | 2.43 | 0 | 43.45 | AV | 54 | PASS |
| 11N20 SISO | 2412 | Ant1 | 2310.0 | -45.73 | 2.43 | 0 | 51.90 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2310.0 | -54.97 | 2.43 | 0 | 42.66 | AV | 54 | PASS |
| | 2412 | Ant1 | 2390.0 | -43.11 | 2.43 | 0 | 54.52 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2390.0 | -54.32 | 2.43 | 0 | 43.31 | AV | 54 | PASS |
| | 2462 | Ant1 | 2483.5 | -45.14 | 2.43 | 0 | 52.49 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2483.5 | -54.27 | 2.43 | 0 | 43.36 | AV | 54 | PASS |
| | 2462 | Ant1 | 2500.0 | -44.03 | 2.43 | 0 | 53.60 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2500.0 | -54.18 | 2.43 | 0 | 43.45 | AV | 54 | PASS |

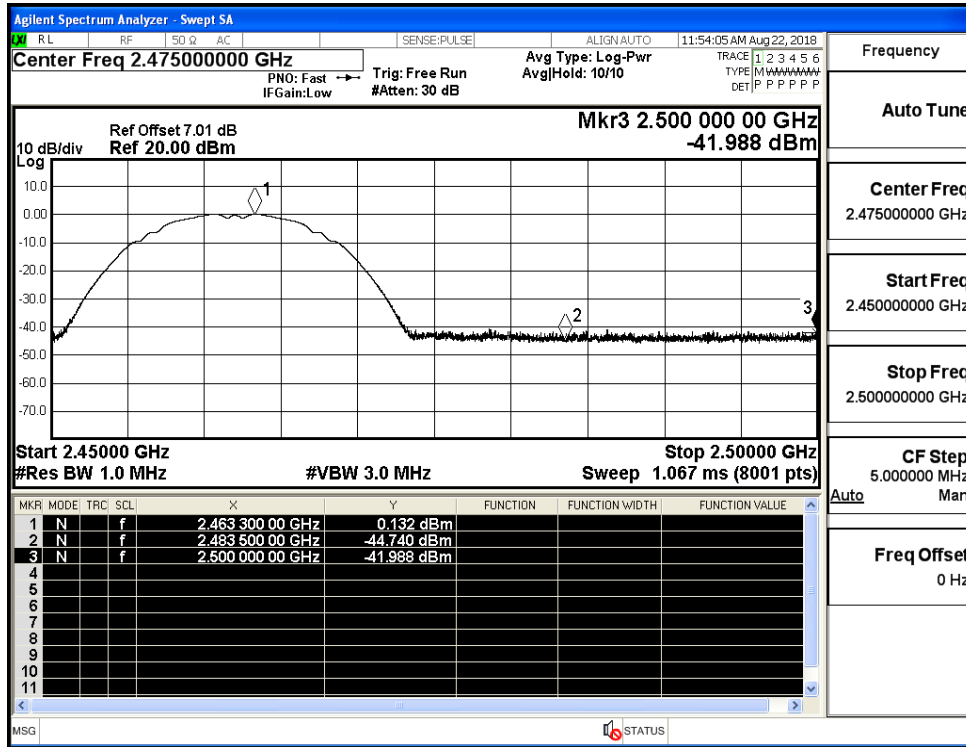
Restrict-band band-edge measurements_11B_2412_Ant1_PEAK



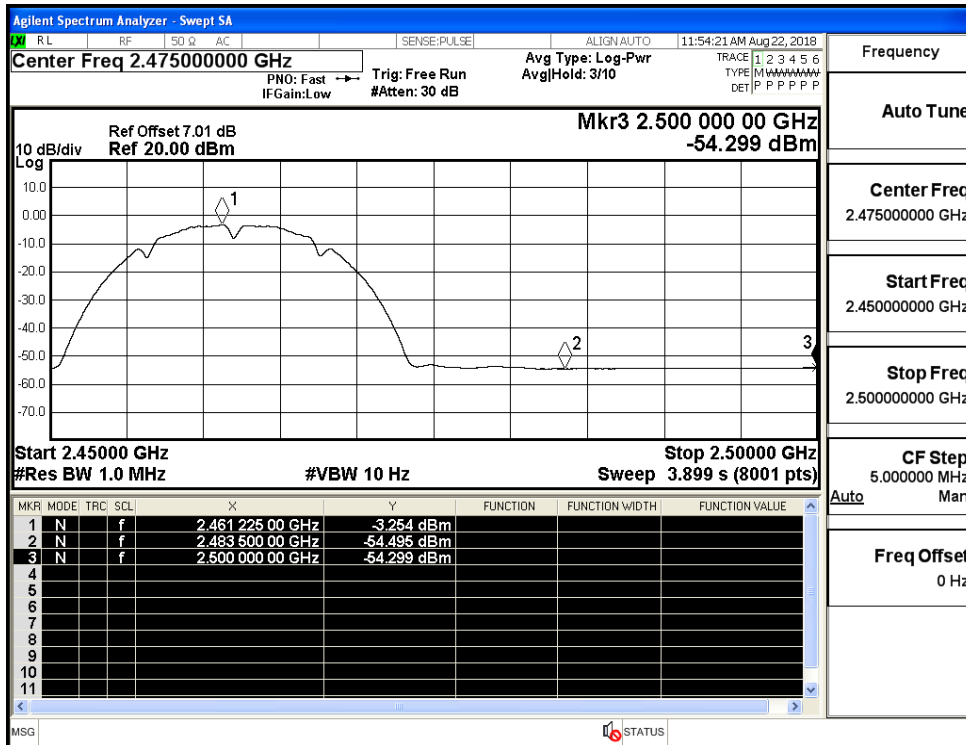
Restrict-band band-edge measurements_11B_2412_Ant1_AV



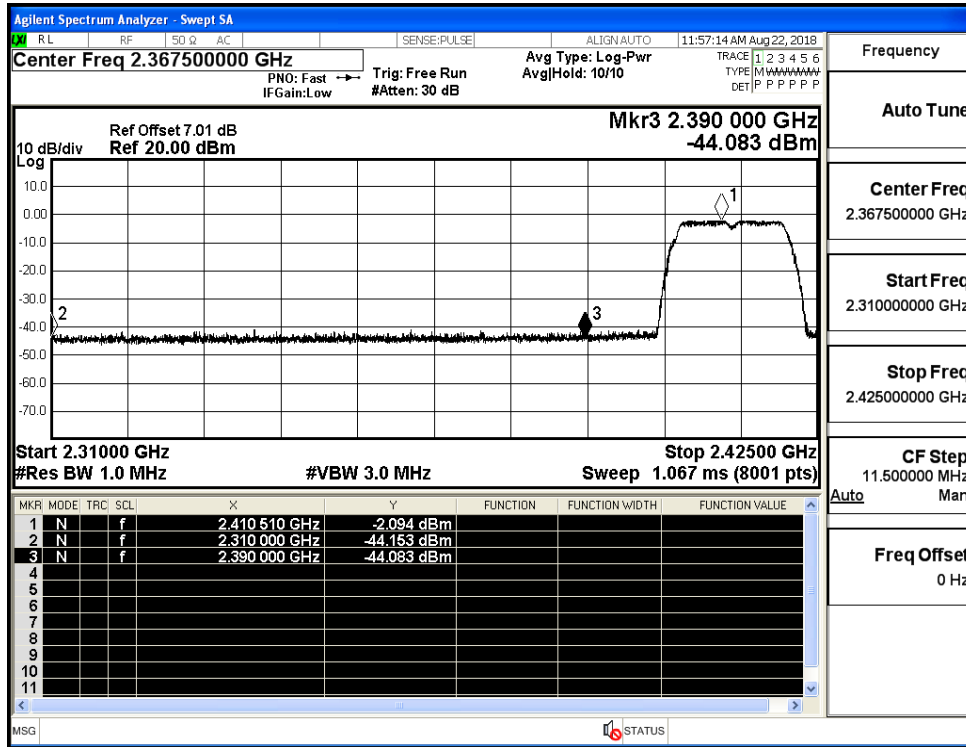
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



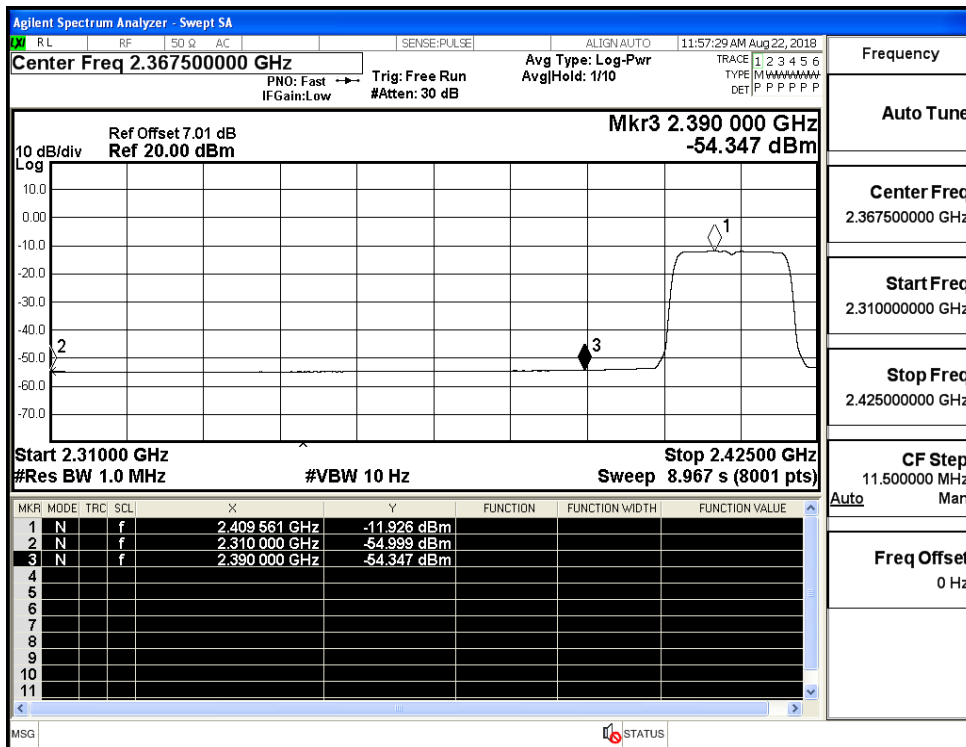
Restrict-band band-edge measurements_11B_2462_Ant1_AV



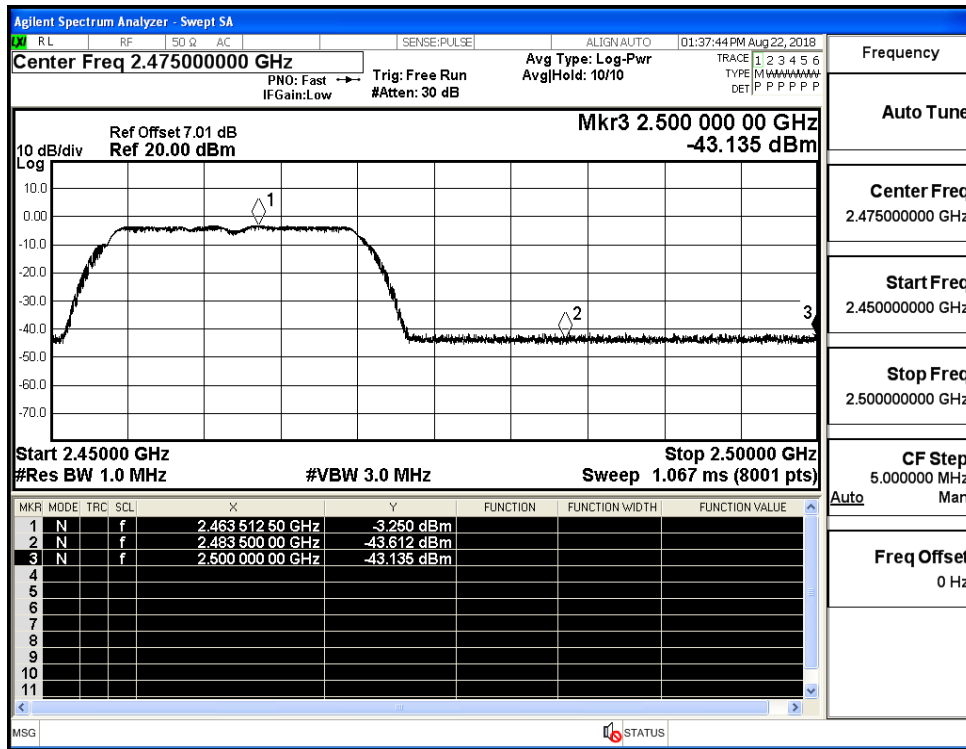
Restrict-band band-edge measurements_11G_2412_Ant1_PEAK



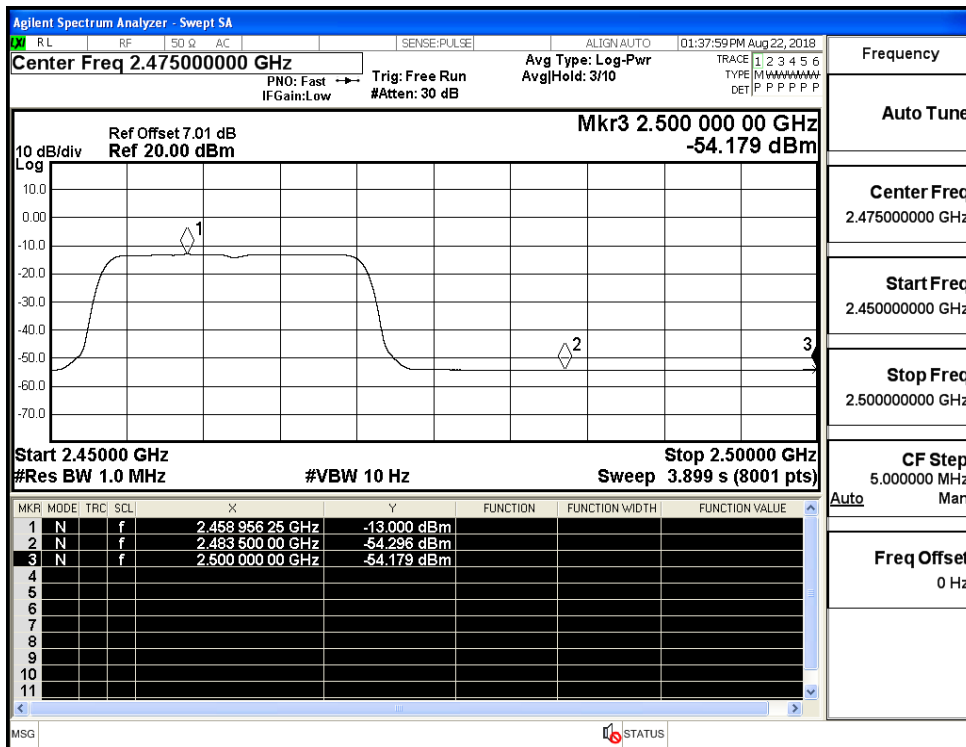
Restrict-band band-edge measurements_11G_2412_Ant1_AV



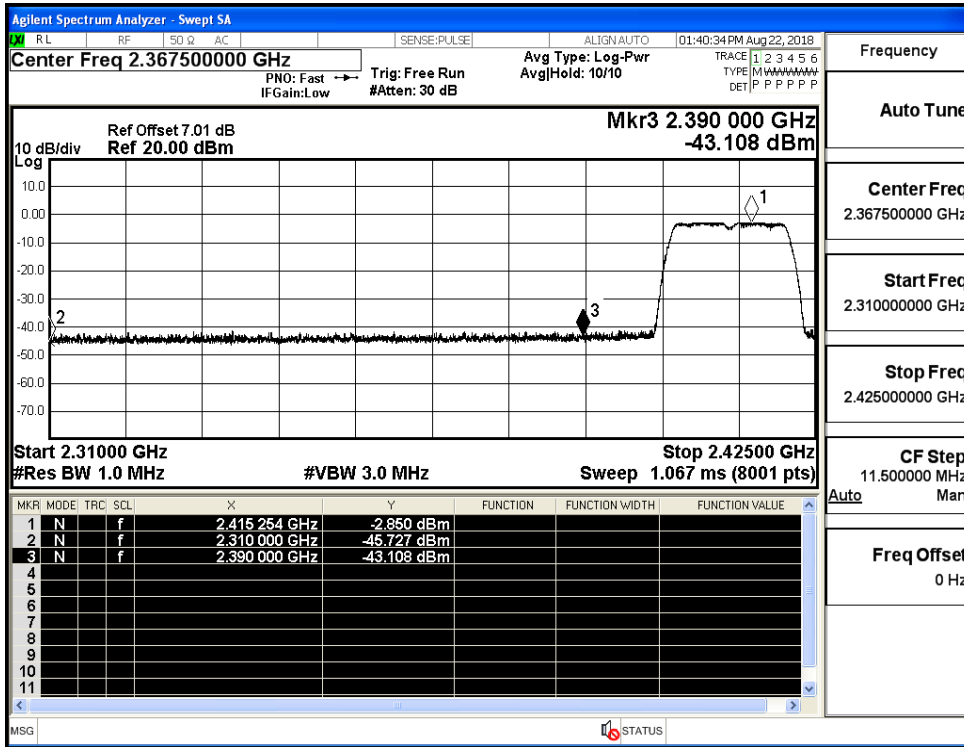
Restrict-band band-edge measurements_11G_2462_Ant1_PEAK



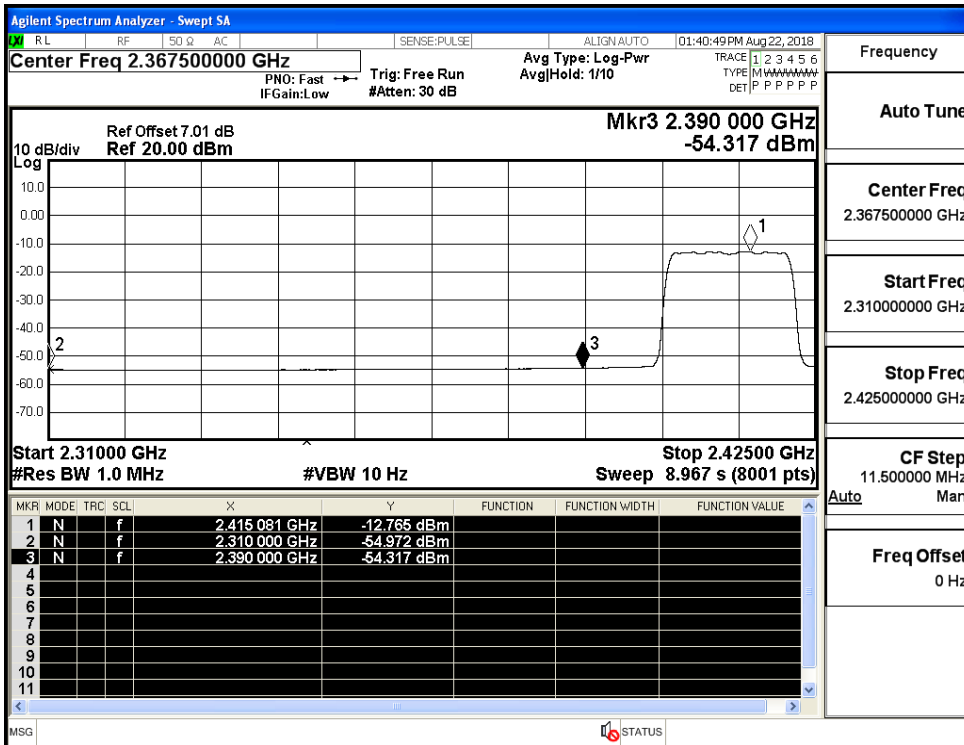
Restrict-band band-edge measurements_11G_2462_Ant1_AV



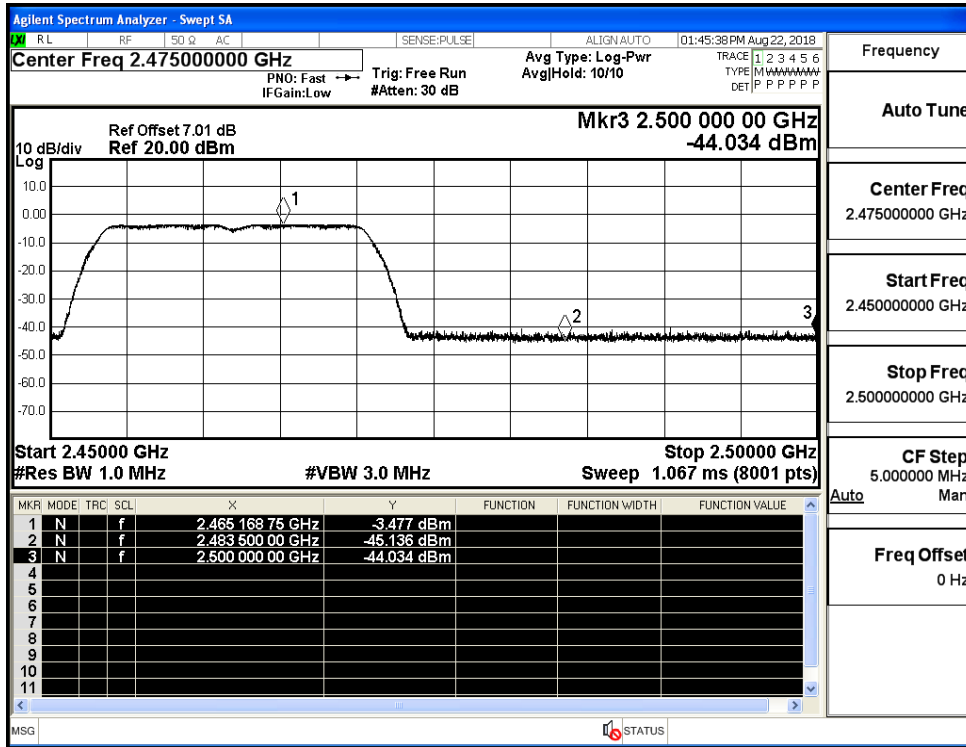
Restrict-band band-edge measurements_11N20SISO_2412_Ant1_PEAK



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

