# Appendix A

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

**Product Name: LCD separator**
**Trade Mark: ScreenTech**
**Test Model: FreezeTech V1.0**

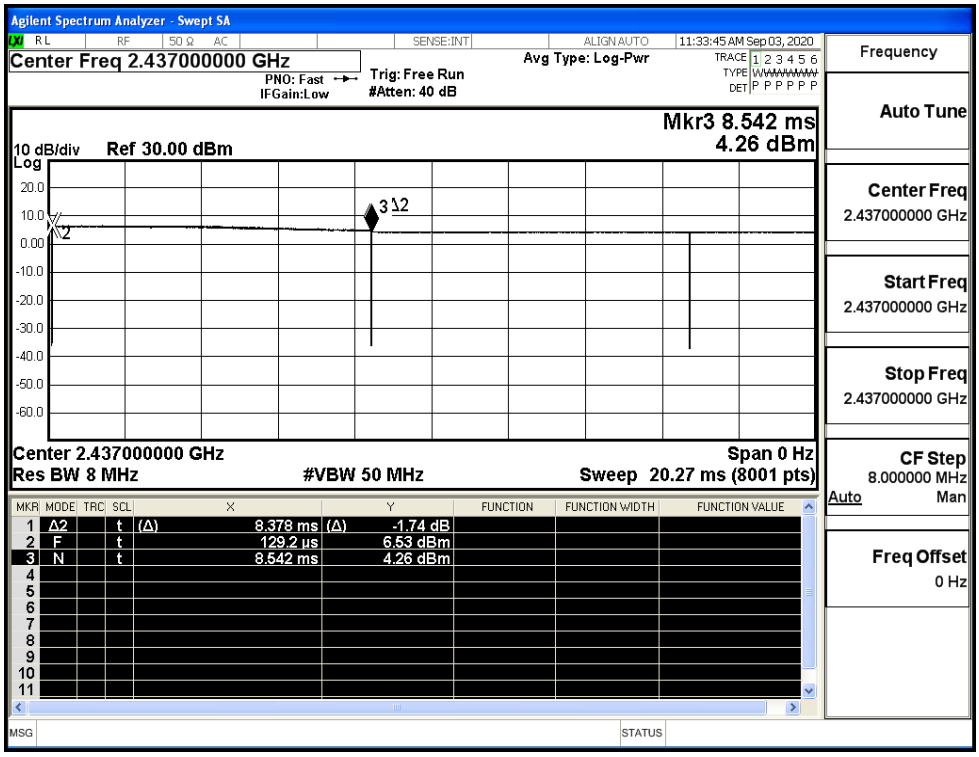
**Environmental Conditions**

| | |
|---|---|
| Temperature: | 23.2 ° C |
| Relative Humidity: | 54.5% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Jay Li |
| Supervised by: | Li Huan |

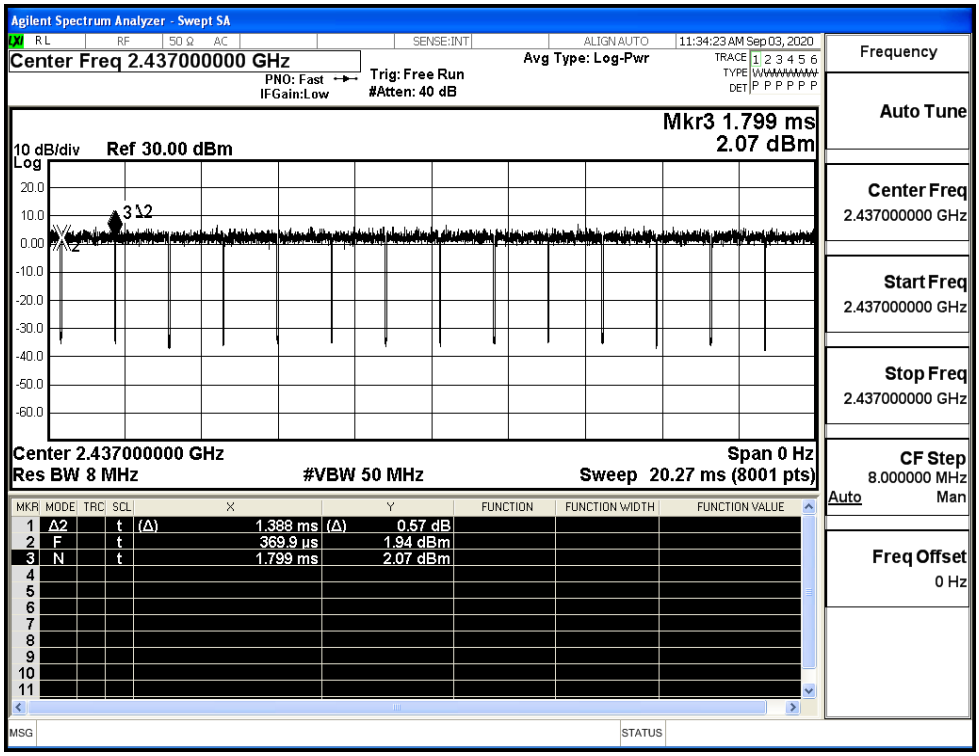
## A.1 Duty Cycle

| Test Mode | Test Channel | Ant | Duty Cycle[%] | Verdict |
|---|---|---|---|---|
| 11B | 2437 | Ant1 | 99.58 | PASS |
| 11G | 2437 | Ant1 | 98.16 | PASS |
| 11N20SISO | 2437 | Ant1 | 98.78 | PASS |

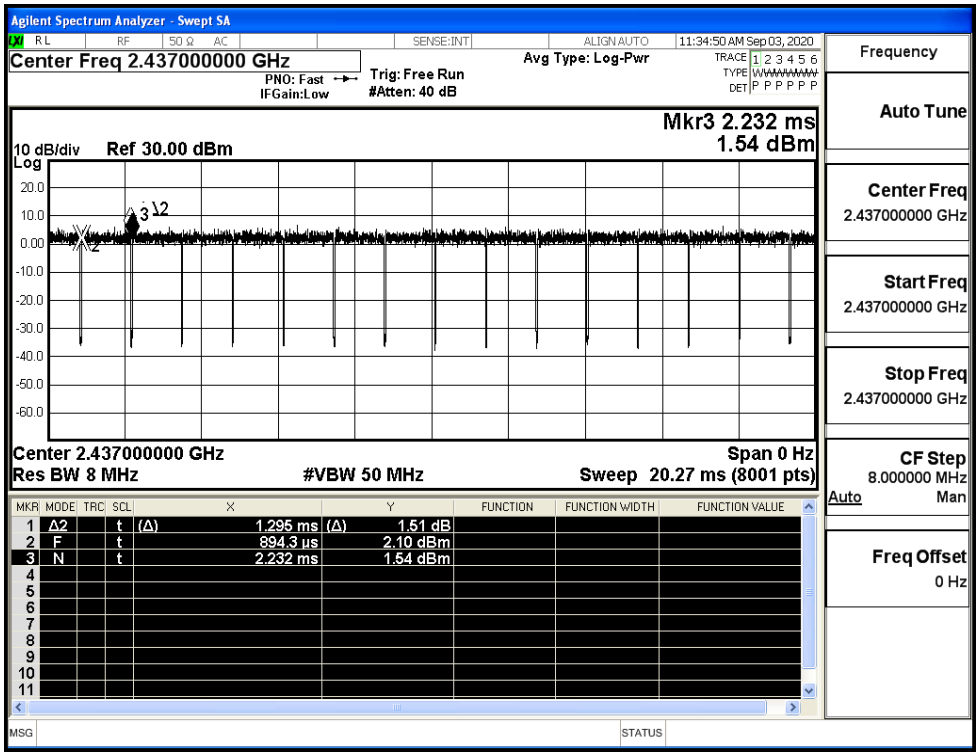
## Duty Cycle_11B_2437_Ant1




## Duty Cycle_11G_2437_Ant1

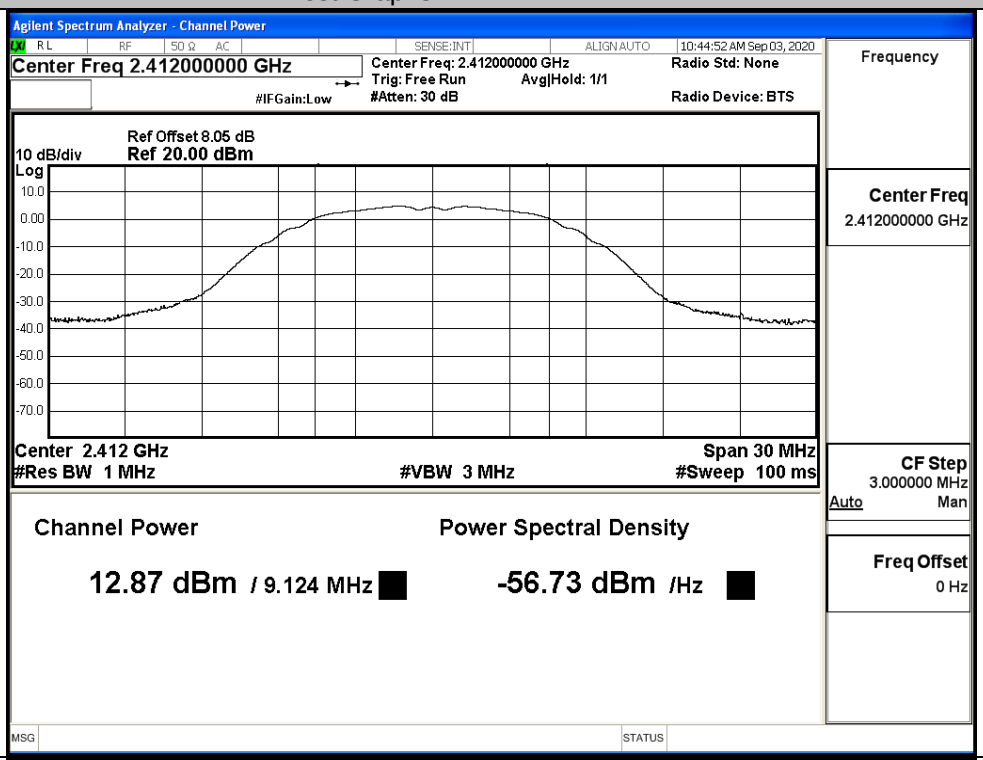
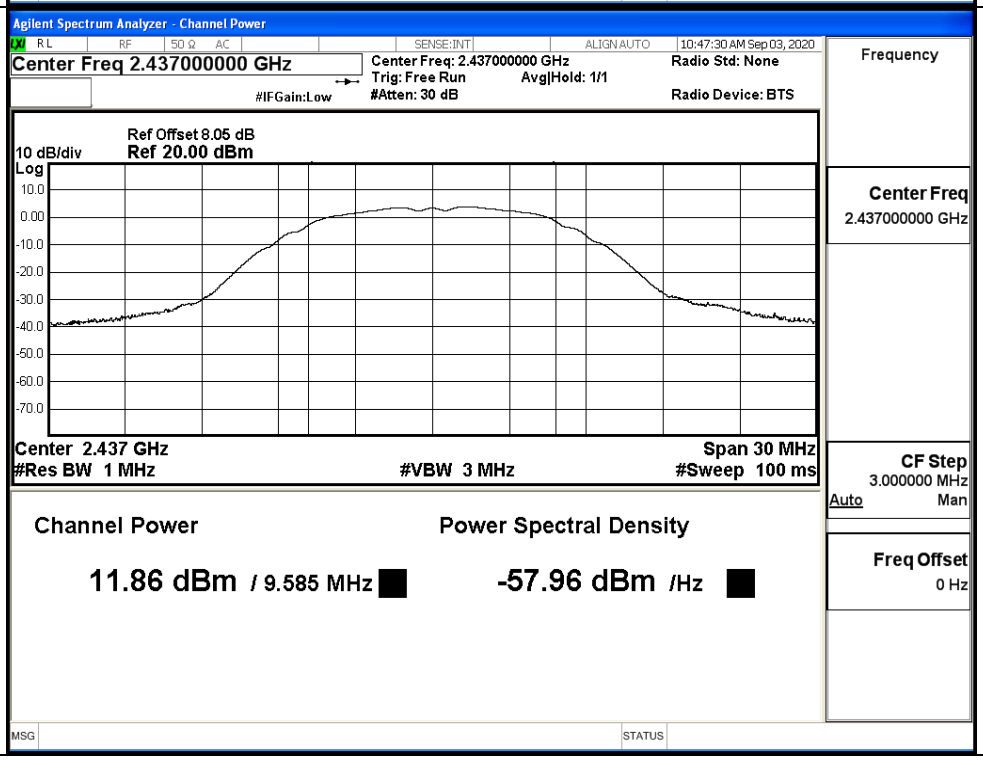


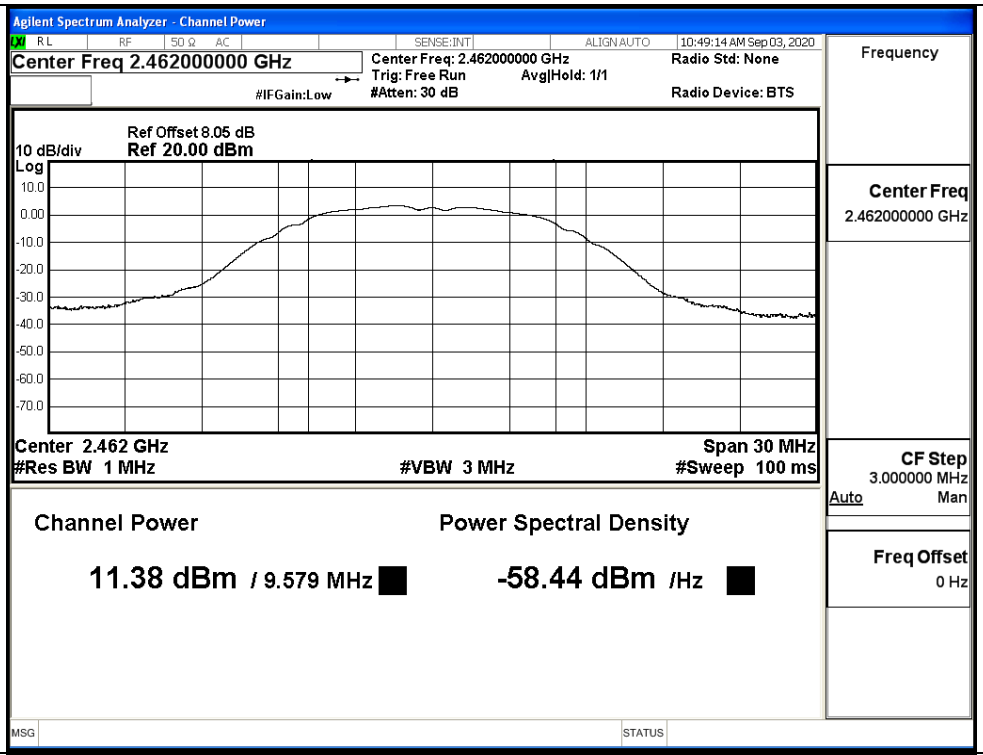
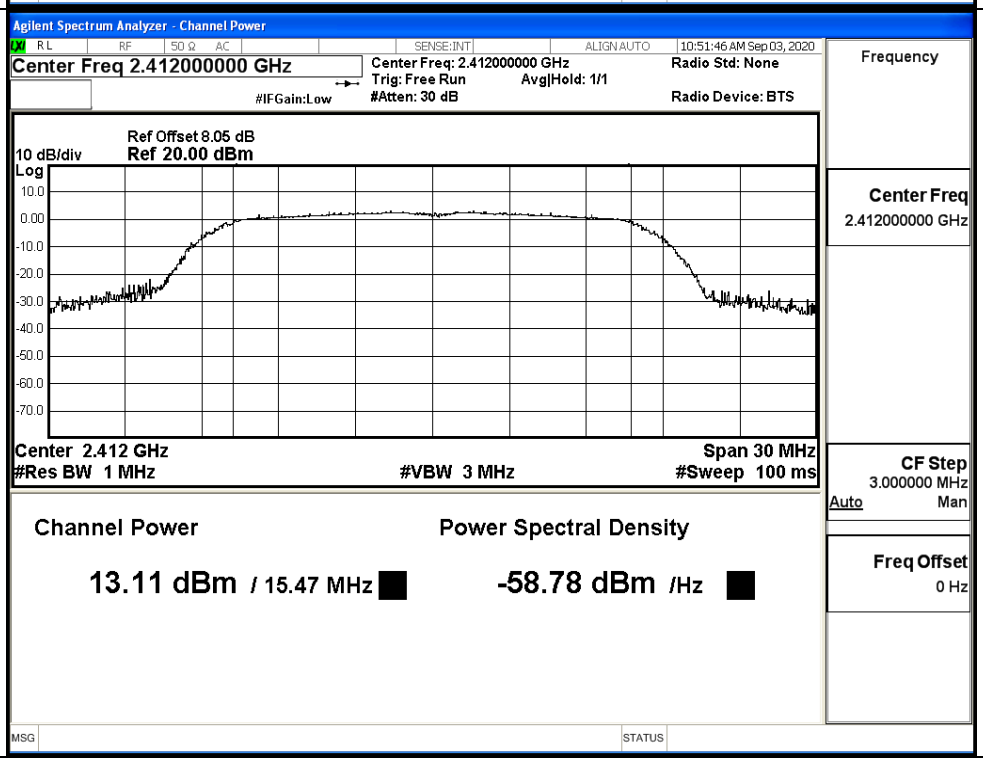
Duty Cycle_11N20SISO_2437_Ant1

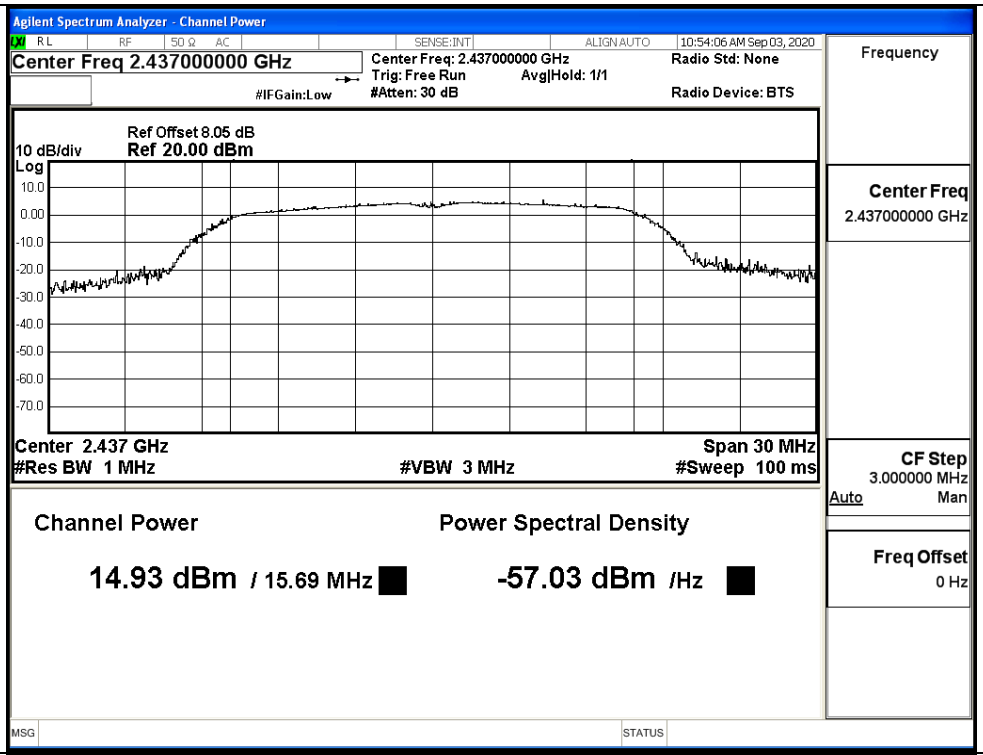
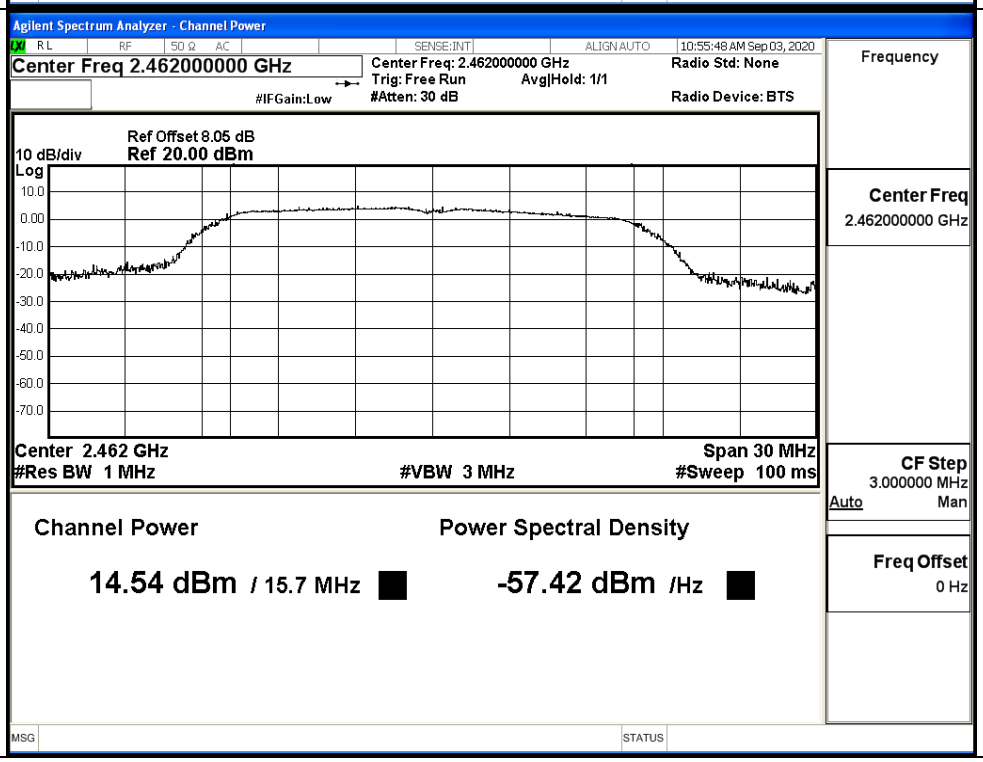


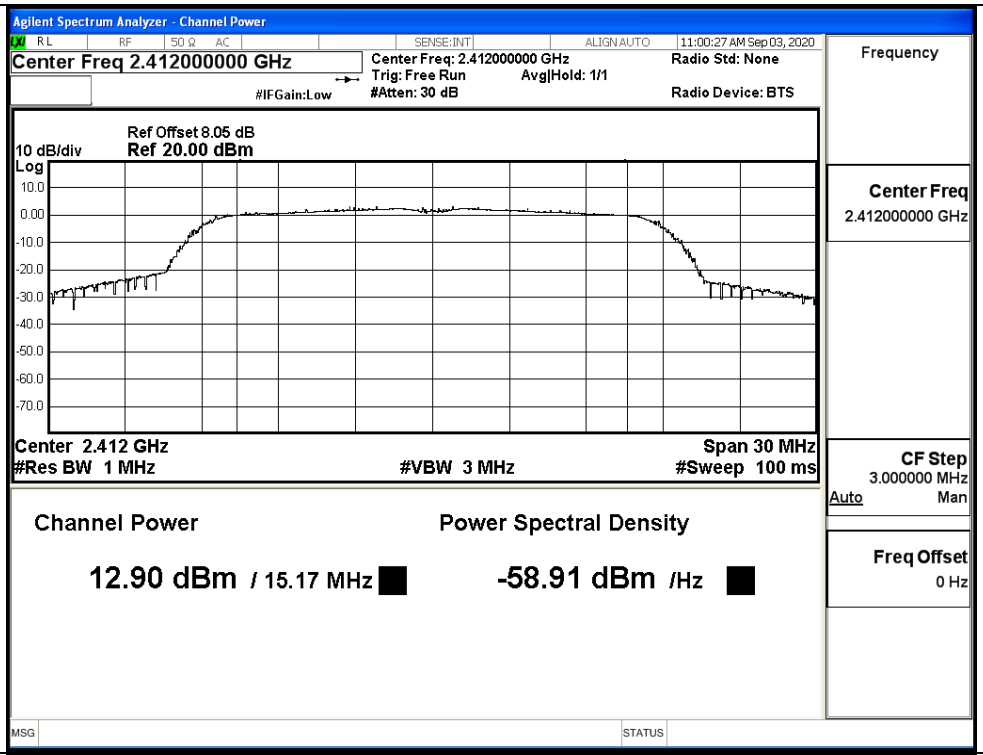
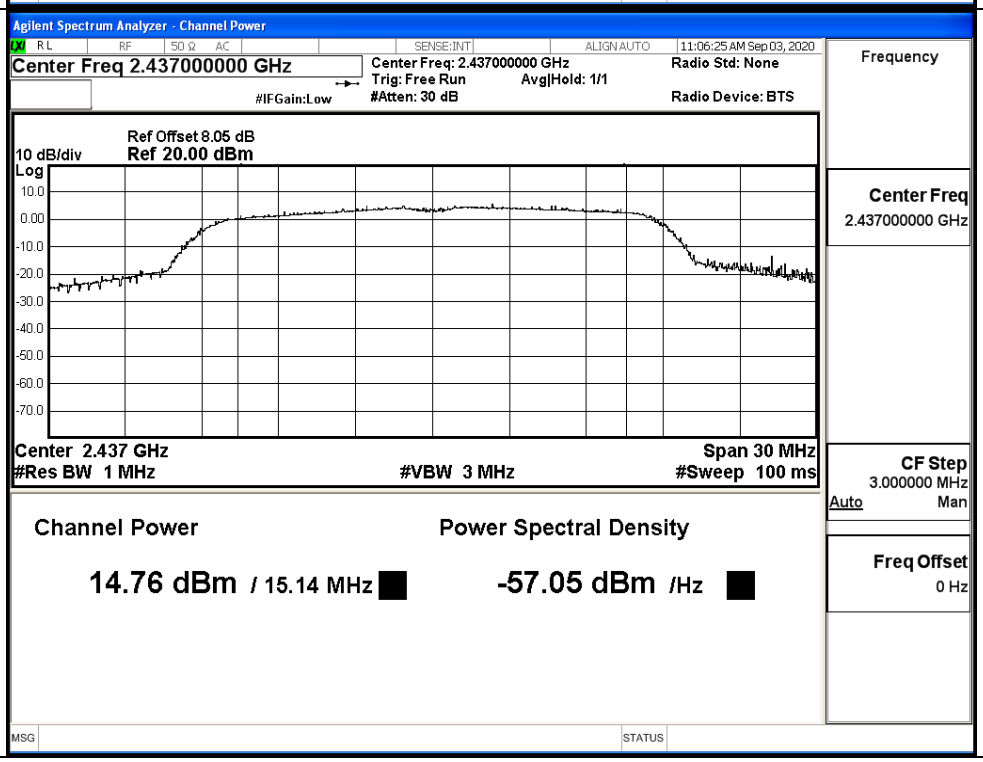
## A.2 Maximum Conducted Output Power

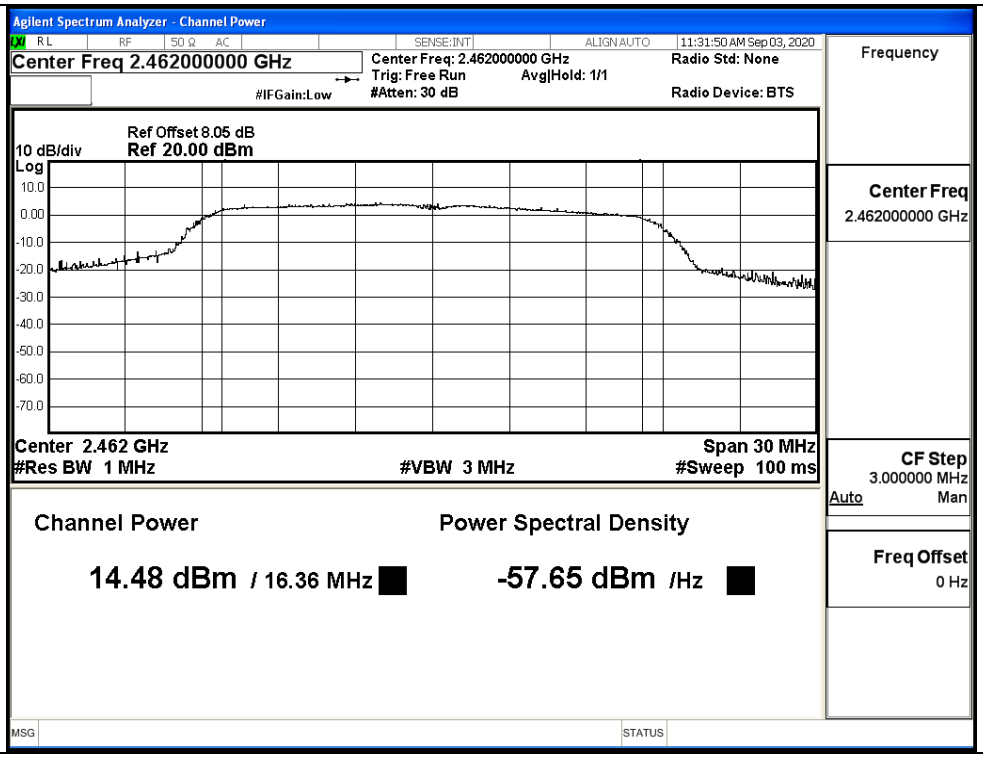
| Mode | Channel | Meas.Level [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|
| 11B | LCH | 12.87 | 30 | PASS |
| | MCH | 11.86 | 30 | PASS |
| | HCH | 11.38 | 30 | PASS |
| 11G | LCH | 13.11 | 30 | PASS |
| | MCH | 14.93 | 30 | PASS |
| | HCH | 14.54 | 30 | PASS |
| 11N20SISO | LCH | 12.9 | 30 | PASS |
| | MCH | 14.76 | 30 | PASS |
| | HCH | 14.48 | 30 | PASS |

| Test Graphs | | |
|---|---|---|
| 11B/LCH | |  |
| 11B/MCH | |  |

| | | |
|---|---|---|
| 11B/HCH | |  |
| 11G/LCH | |  |

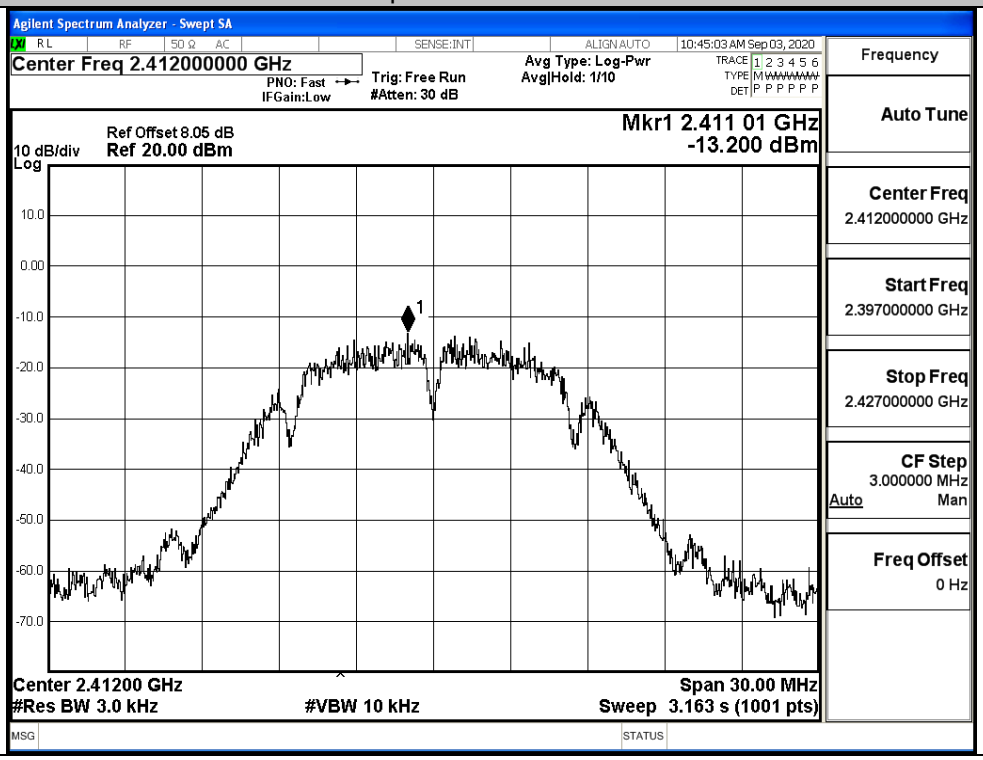
| | | |
|---|---|---|
| 11G/MCH | |  |
| 11G/HCH | |  |

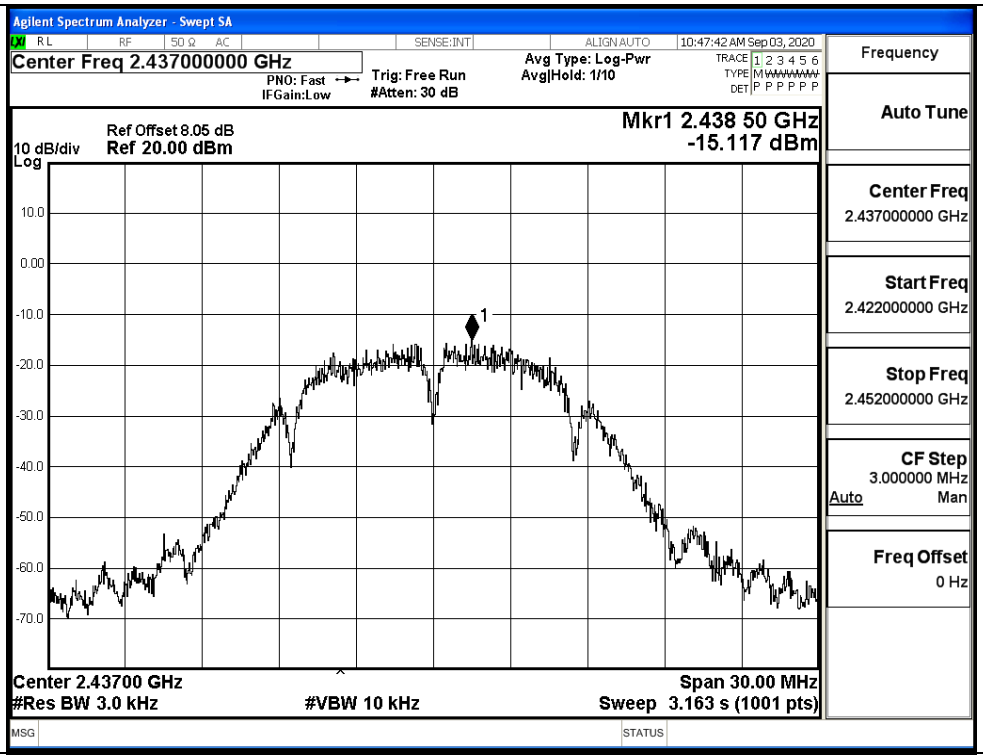
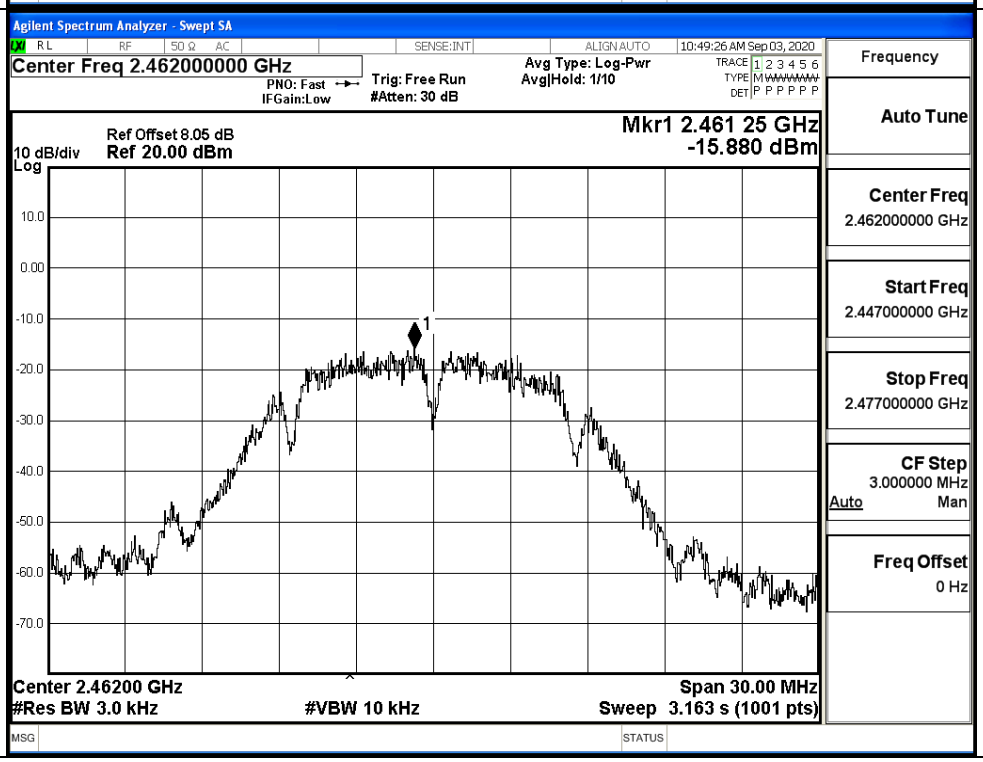
| | | |
|---|---|---|
| 11N20SISO/LCH | |  |
| 11N20SISO/MCH | |  |

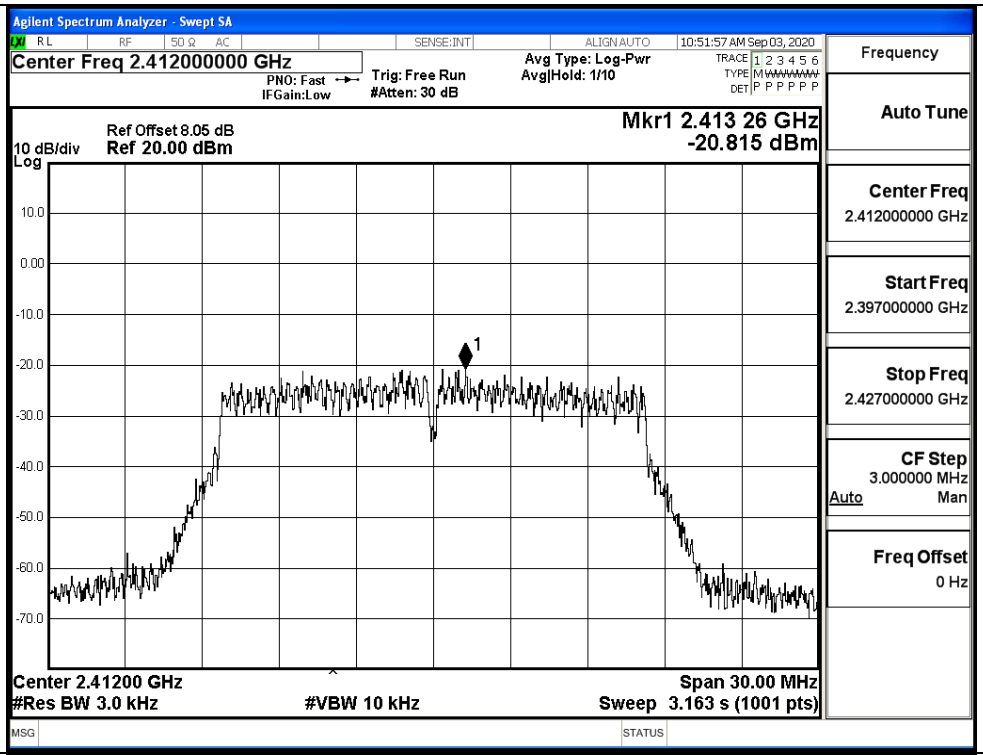
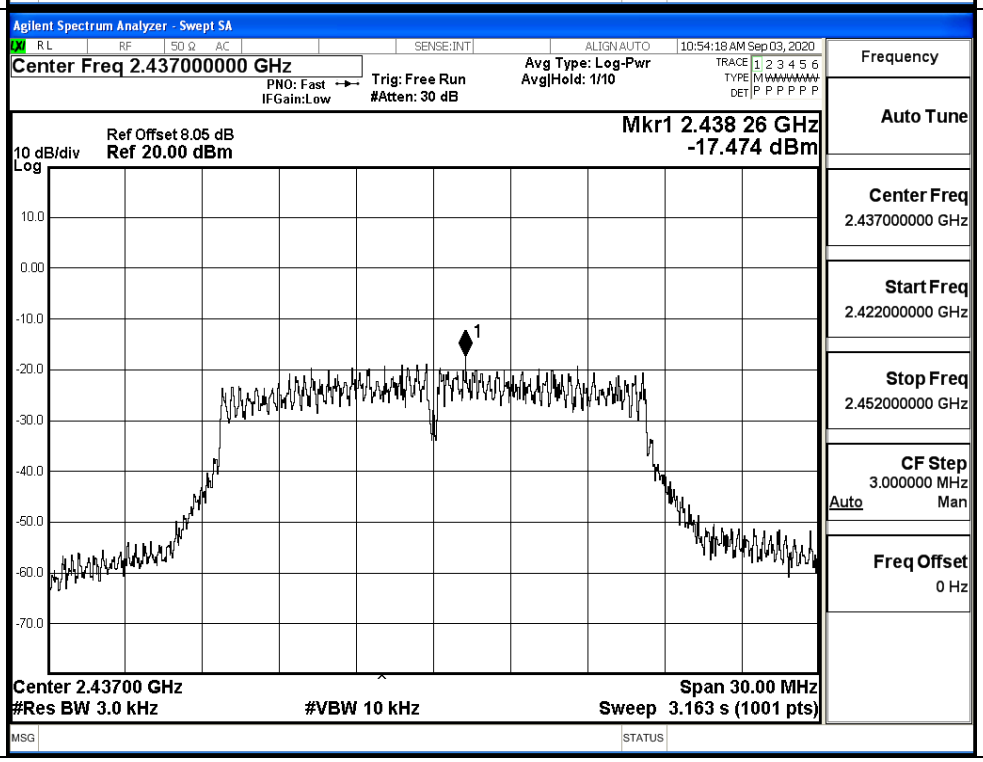
| | | |
|---|---|---|
| 11N20SISO/HCH | |  |

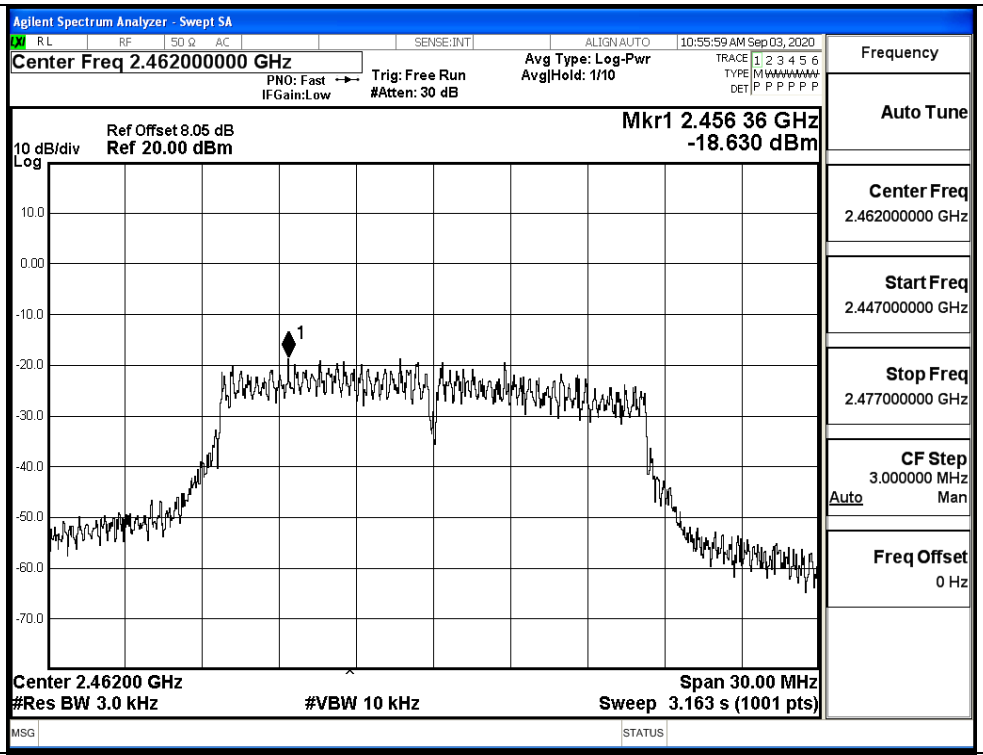
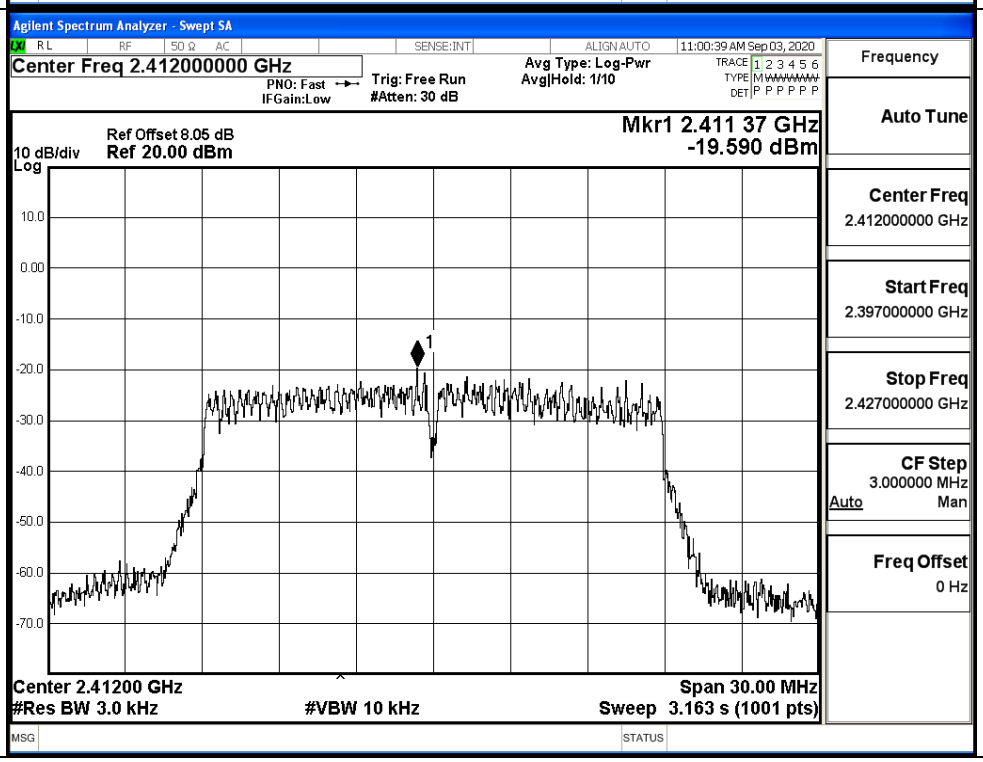
## A.3 Maximum Power Spectral Density

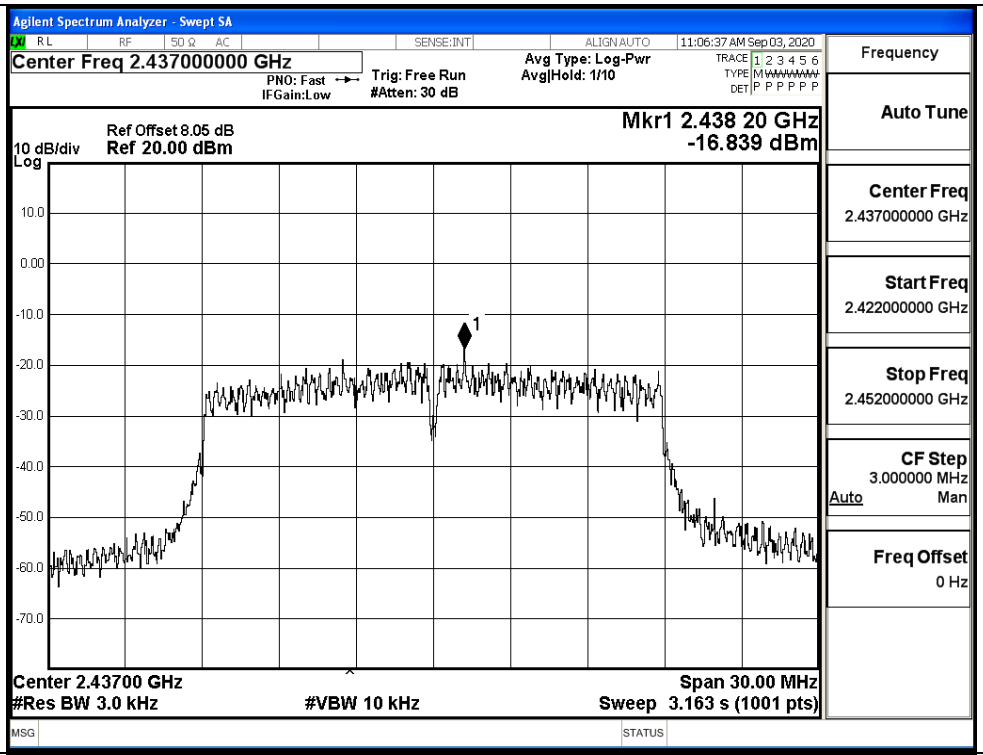
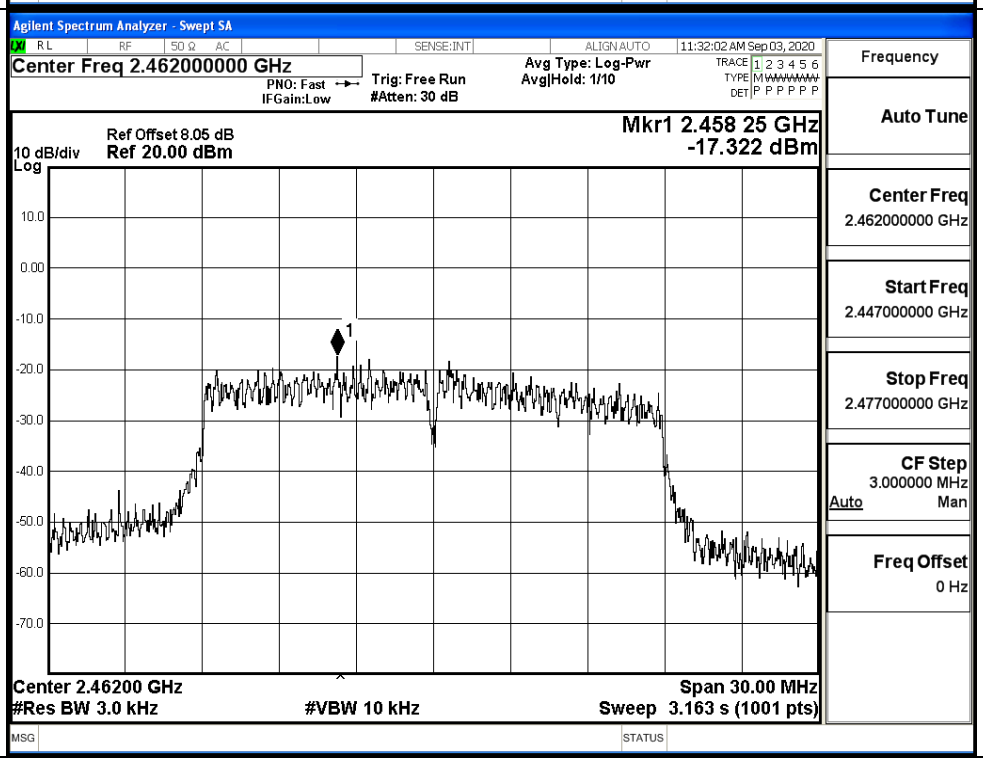
| Mode | Channel | Meas.Level [dBm/3KHz] | Limit [dBm/3KHz] | Verdict |
|---|---|---|---|---|
| 11B | LCH | -13.200 | 8 | PASS |
| | MCH | -15.117 | 8 | PASS |
| | HCH | -15.880 | 8 | PASS |
| 11G | LCH | -20.815 | 8 | PASS |
| | MCH | -17.474 | 8 | PASS |
| | HCH | -18.630 | 8 | PASS |
| 11N20SISO | LCH | -19.590 | 8 | PASS |
| | MCH | -16.839 | 8 | PASS |
| | HCH | -17.322 | 8 | PASS |

| Test Graphs | | |
|---|---|---|
| 11B/LCH | |  |

| | | |
|---|---|---|
| 11B/MCH | |  |
| 11B/HCH | |  |

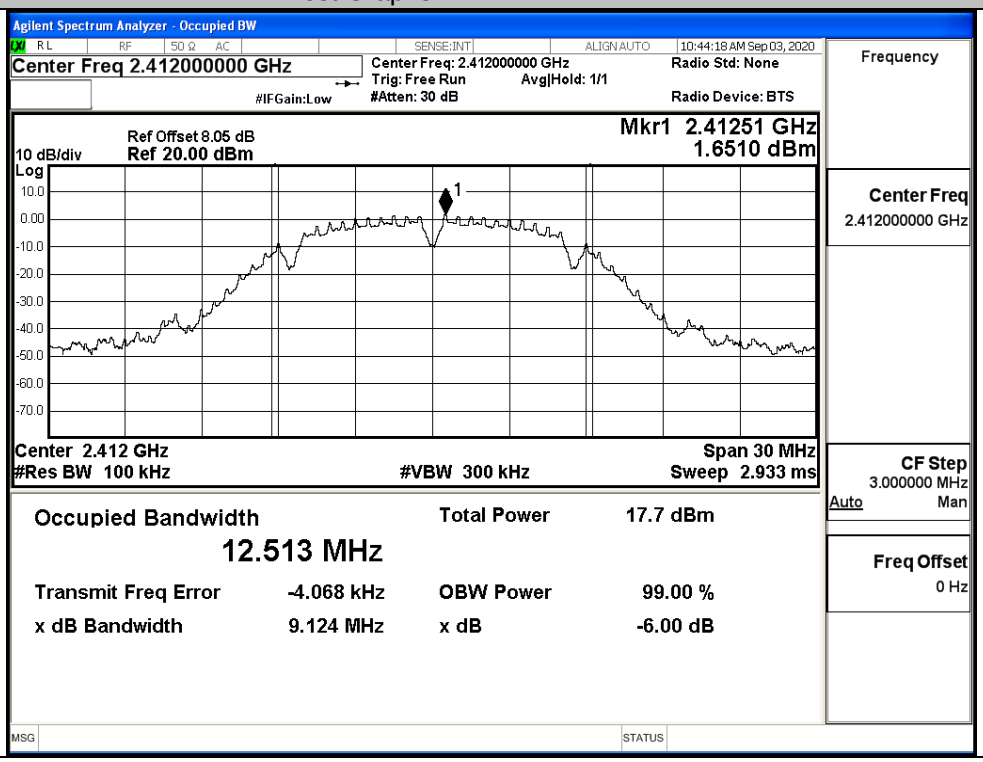
| | | |
|---|---|---|
| 11G/LCH | |  |
| 11G/MCH | |  |

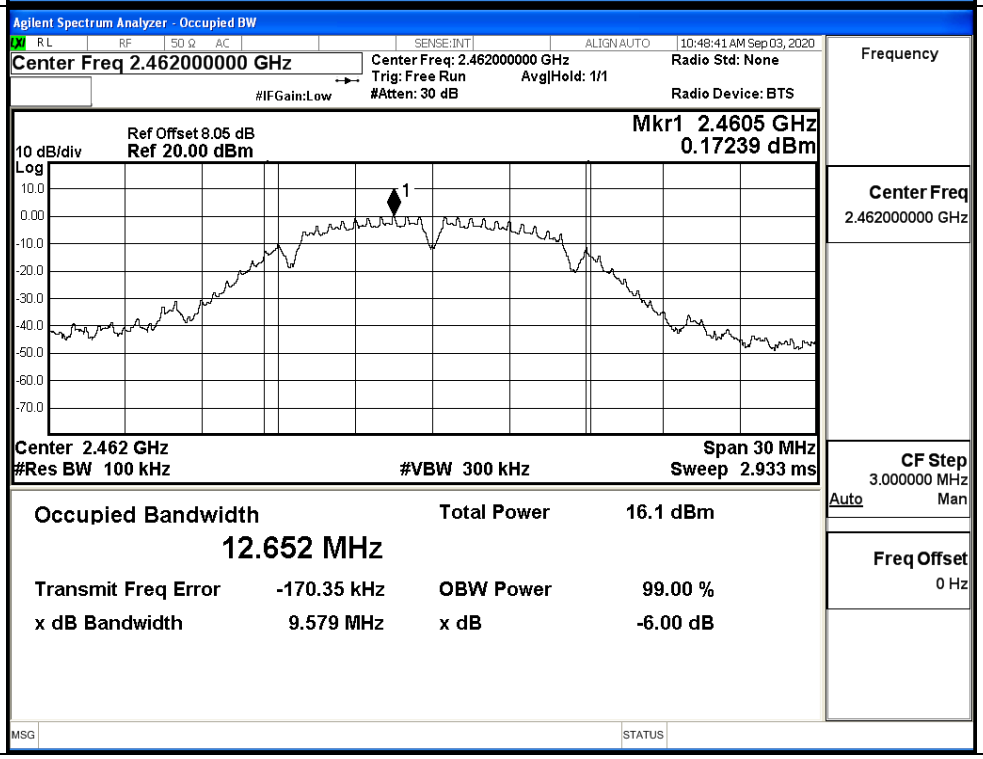
| | | |
|---|---|---|
| 11G/HCH |  | |
| 11N20SISO/LCH |  | |

| | | |
|---|---|---|
| 11N20SISO/MCH |  | |
| 11N20SISO/HCH |  | |

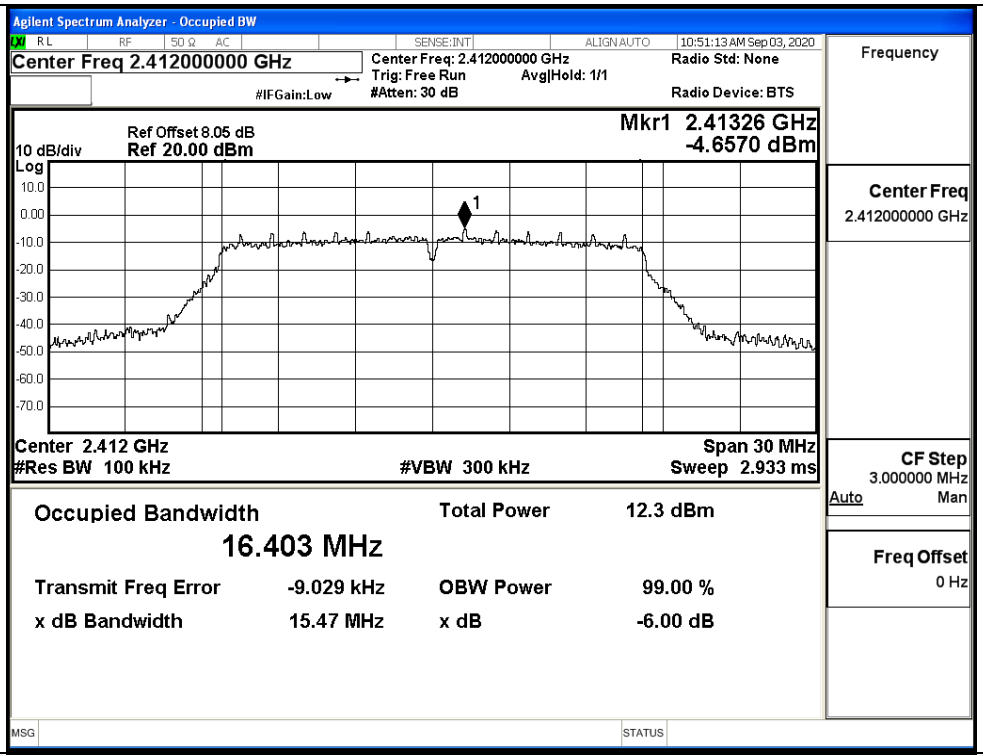
## A.4 6dB Bandwidth

| Mode | Channel | 6dB Bandwidth [MHz] | Limit [MHz] | Verdict |
|---|---|---|---|---|
| 11B | LCH | 9.124 | ⩾0.5 | PASS |
| | MCH | 9.585 | ⩾0.5 | PASS |
| | HCH | 9.579 | ⩾0.5 | PASS |
| 11G | LCH | 15.47 | ⩾0.5 | PASS |
| | MCH | 15.69 | ⩾0.5 | PASS |
| | HCH | 15.70 | ⩾0.5 | PASS |
| 11N20SISO | LCH | 15.17 | ⩾0.5 | PASS |
| | MCH | 15.14 | ⩾0.5 | PASS |
| | HCH | 16.36 | ⩾0.5 | PASS |

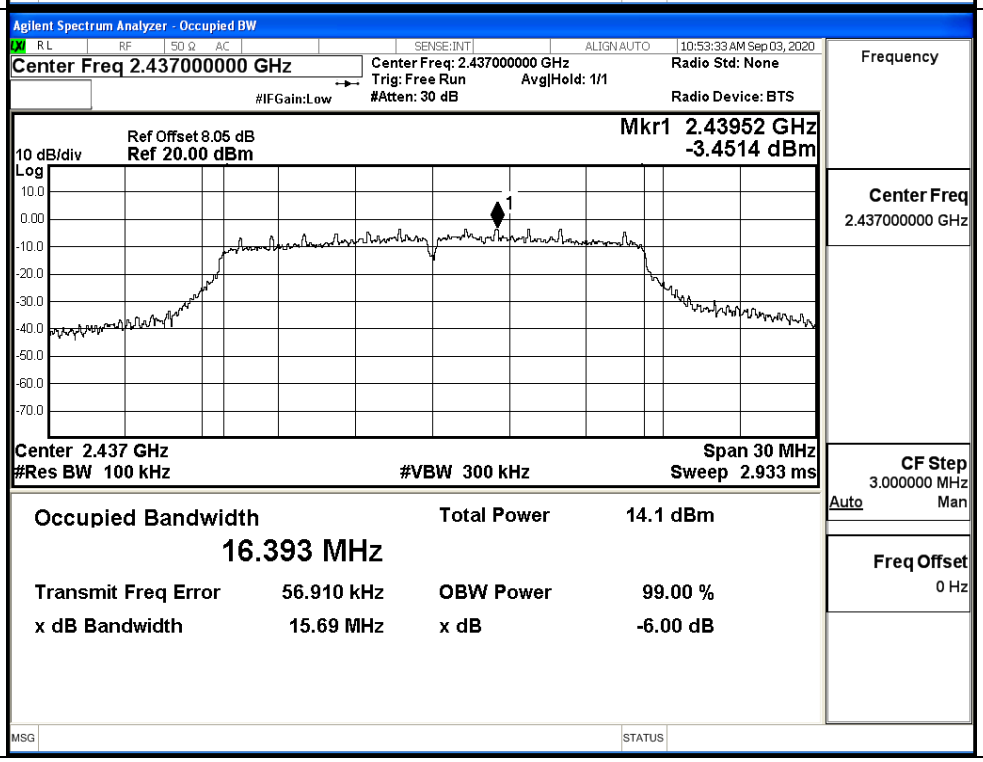
| Test Graphs | |
|---|---|
| 11B/LCH |  |

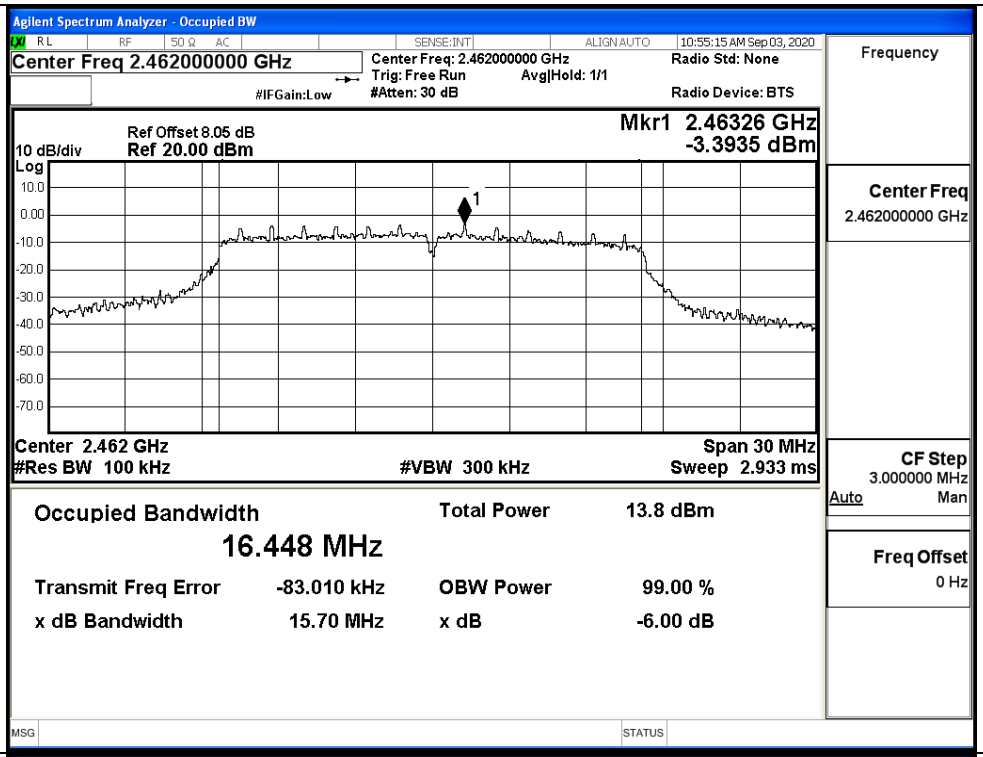
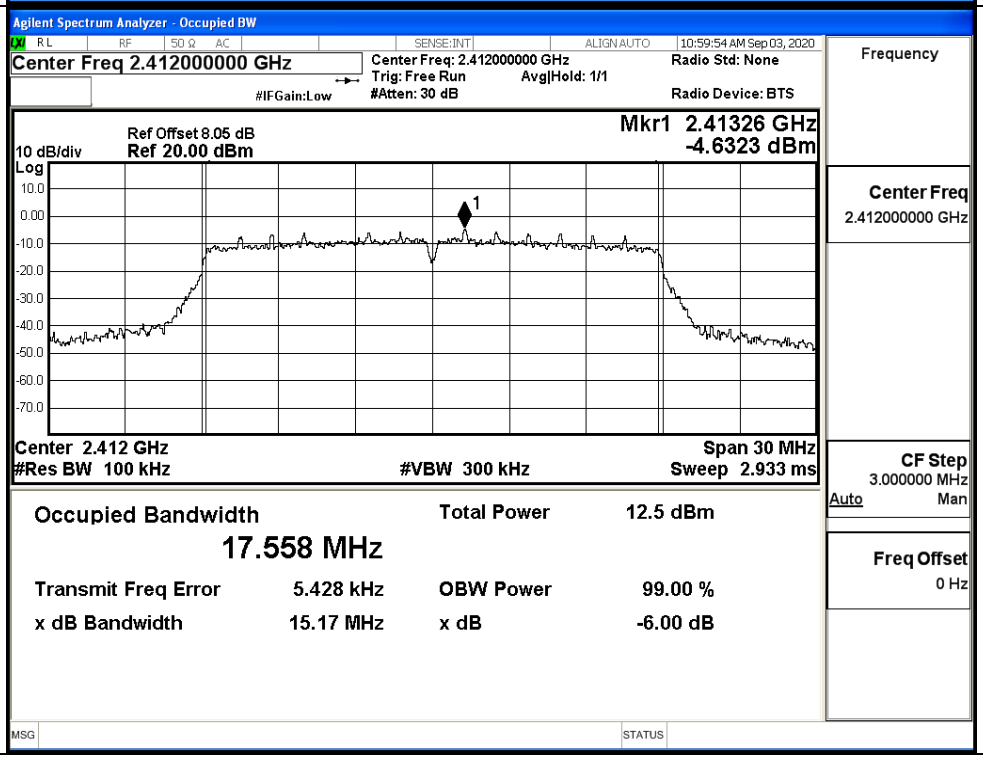
| | | |
|---|---|---|
| 11B/MCH | | |
| 11B/HCH |  | |

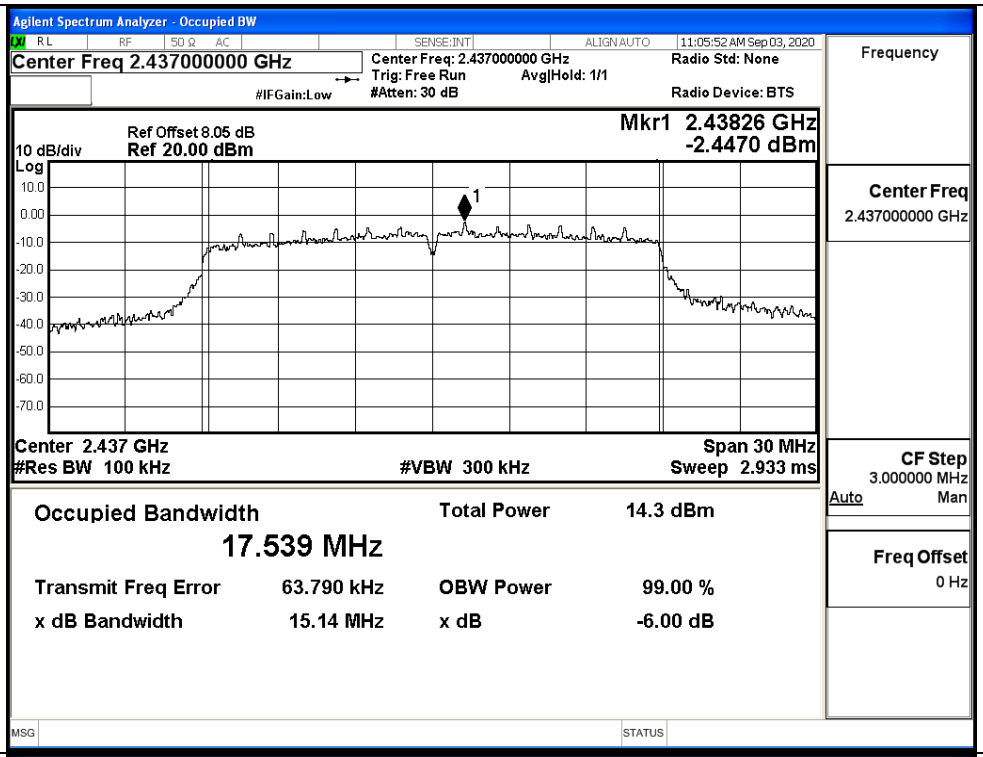
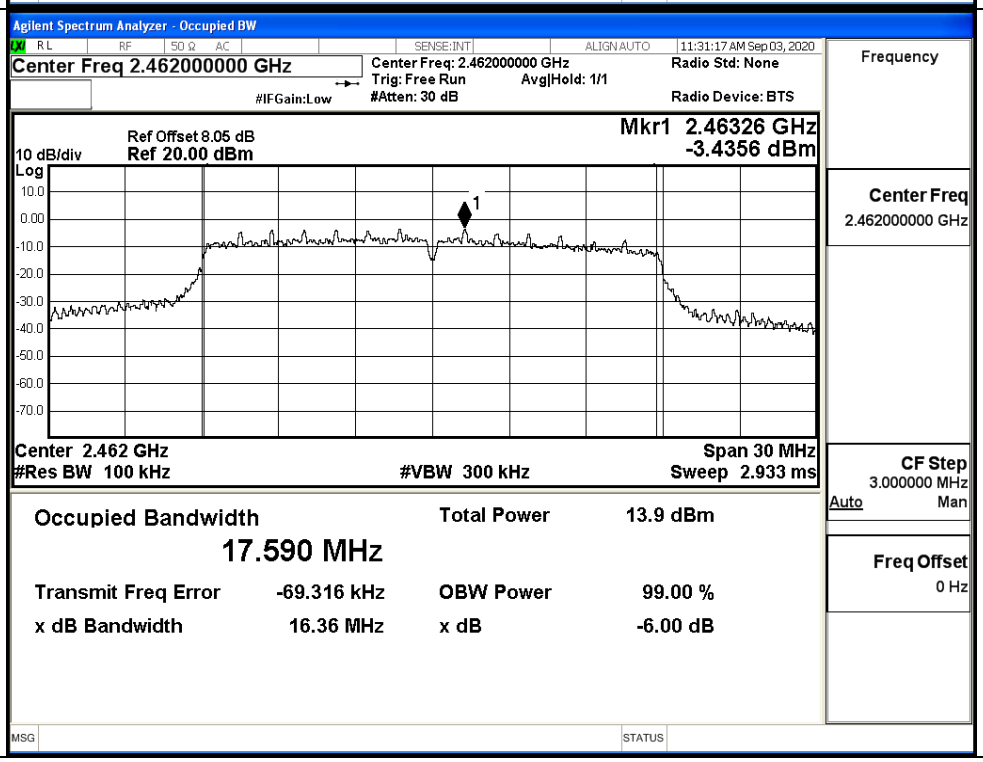
11G/LCH




11G/MCH

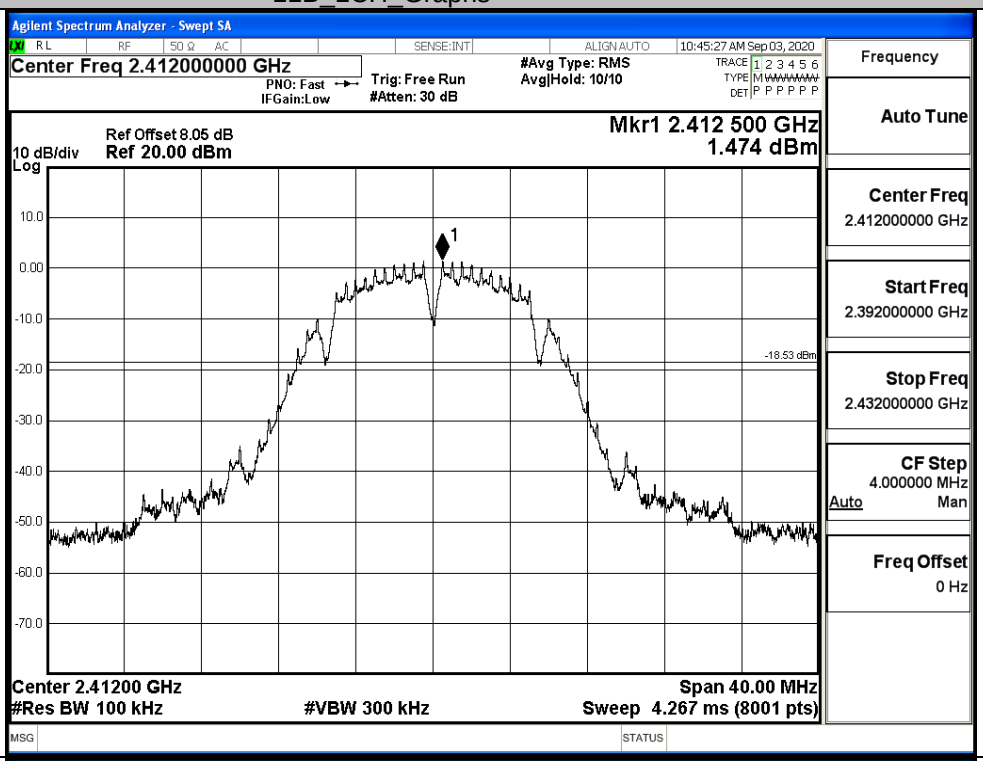
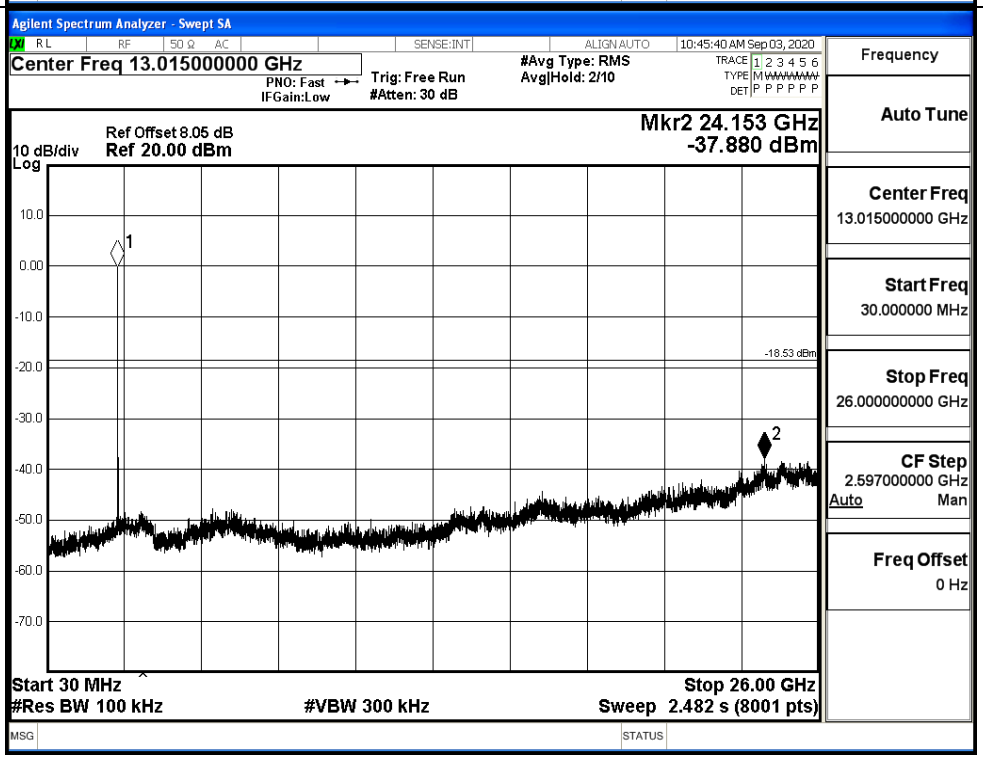


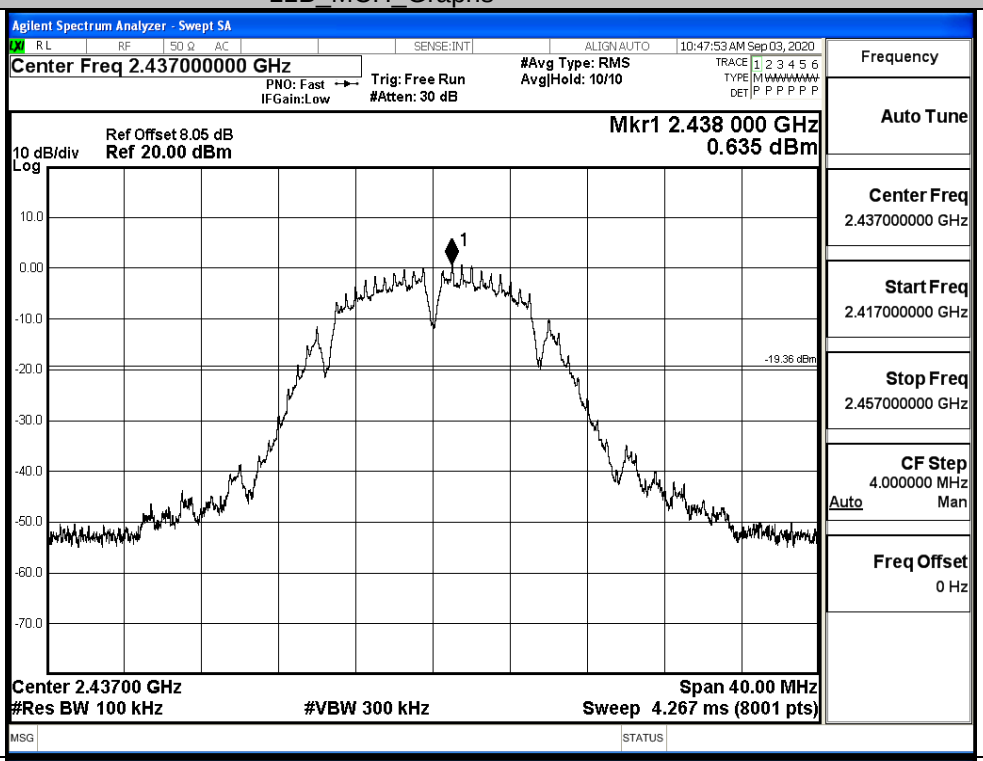
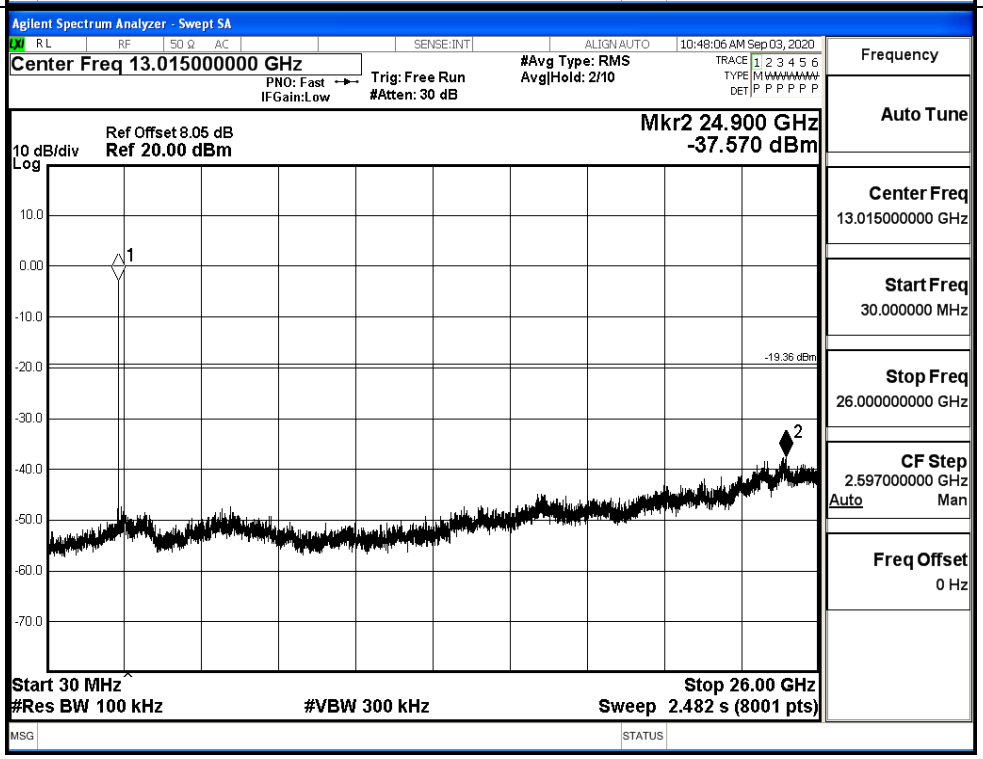
| | | |
|---|---|---|
| 11G/HCH |  | |
| 11N20SISO/LCH |  | |

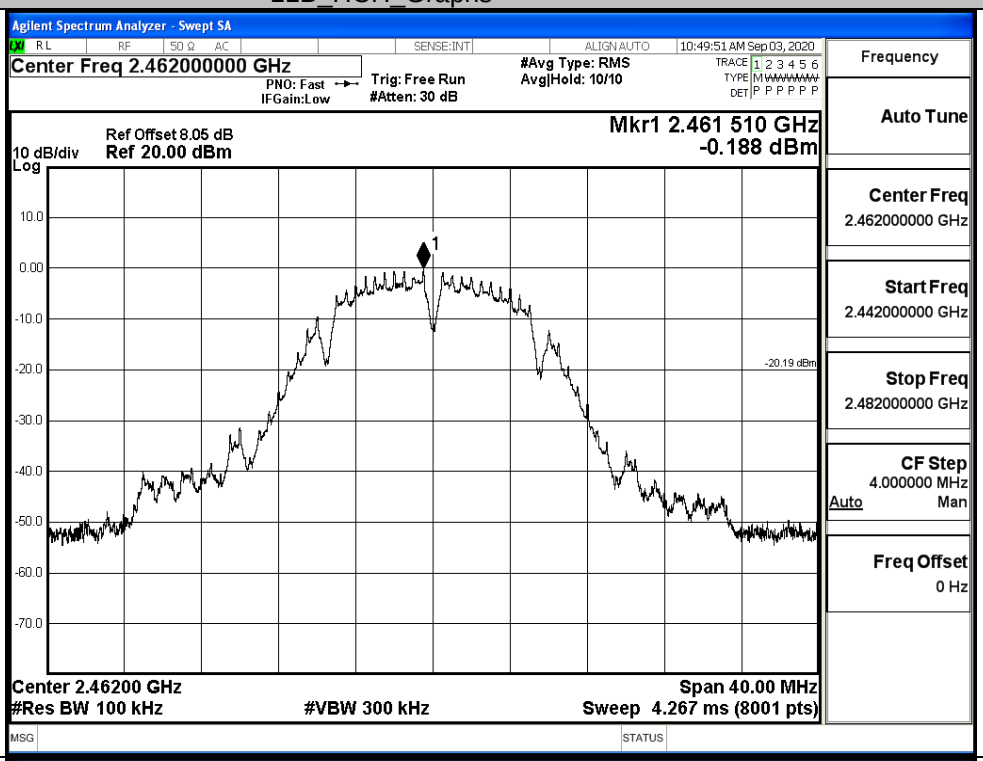
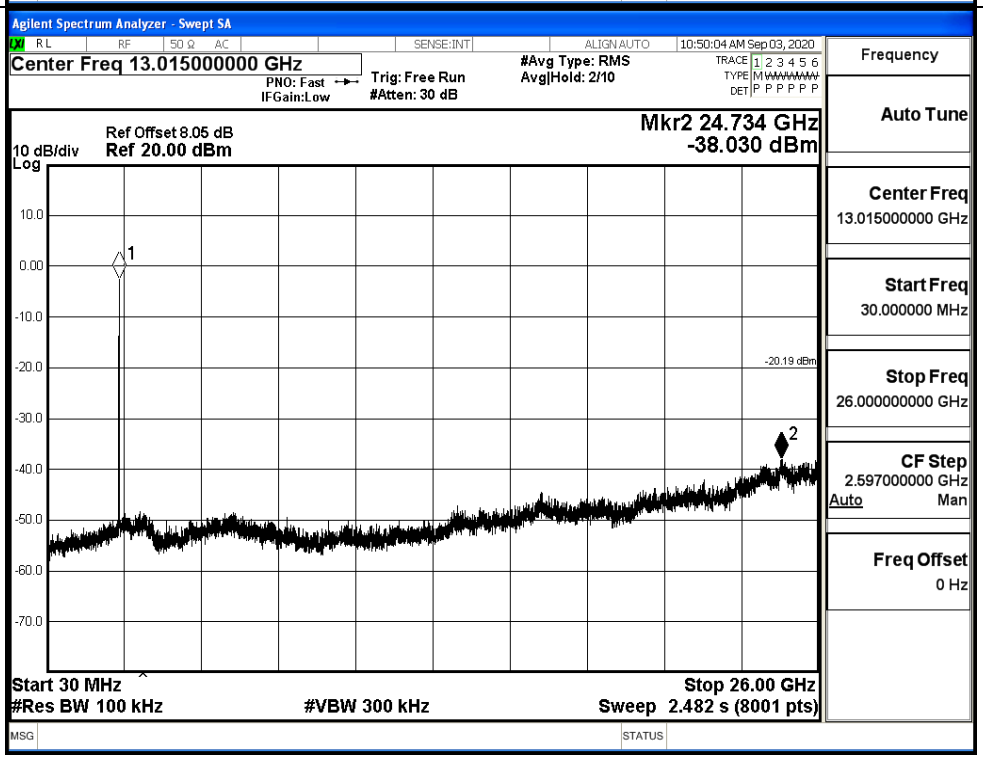
| | |
|---|---|
| 11N20SISO/MCH |  |
| 11N20SISO/HCH |  |

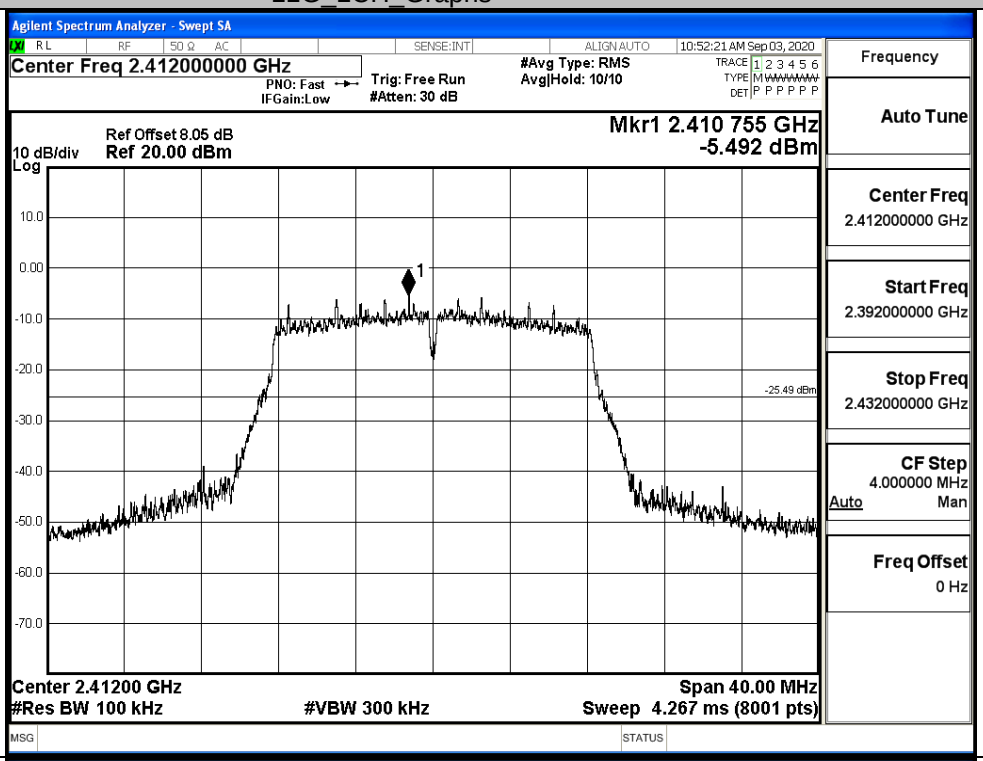
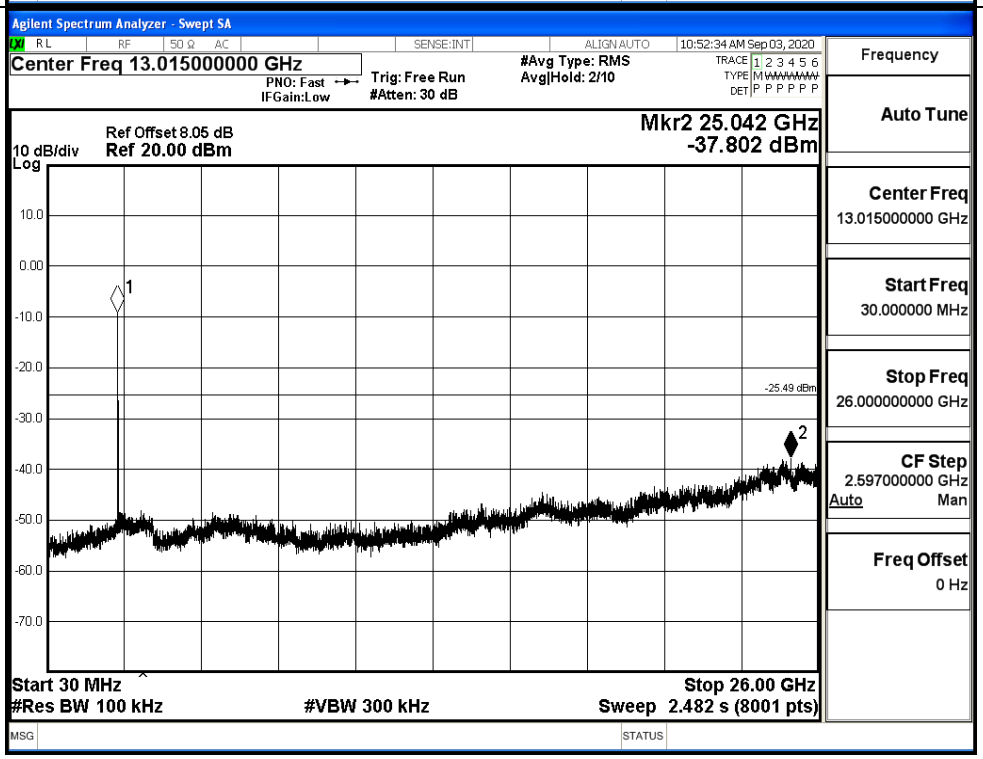
## A.5 RF Conducted Spurious Emissions

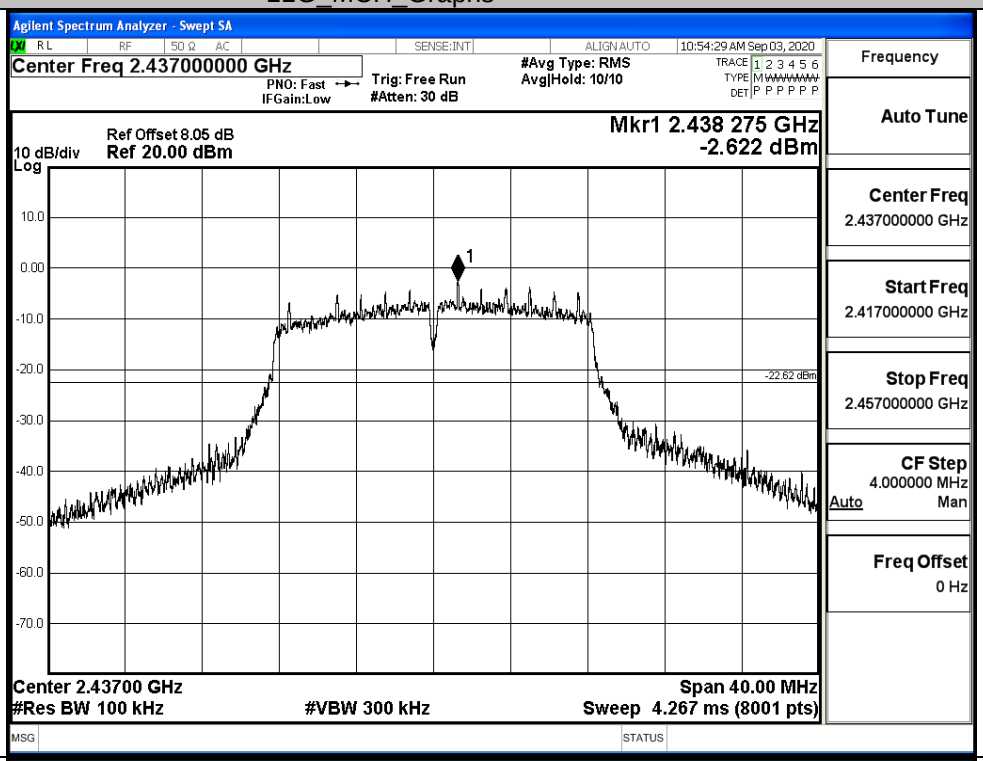
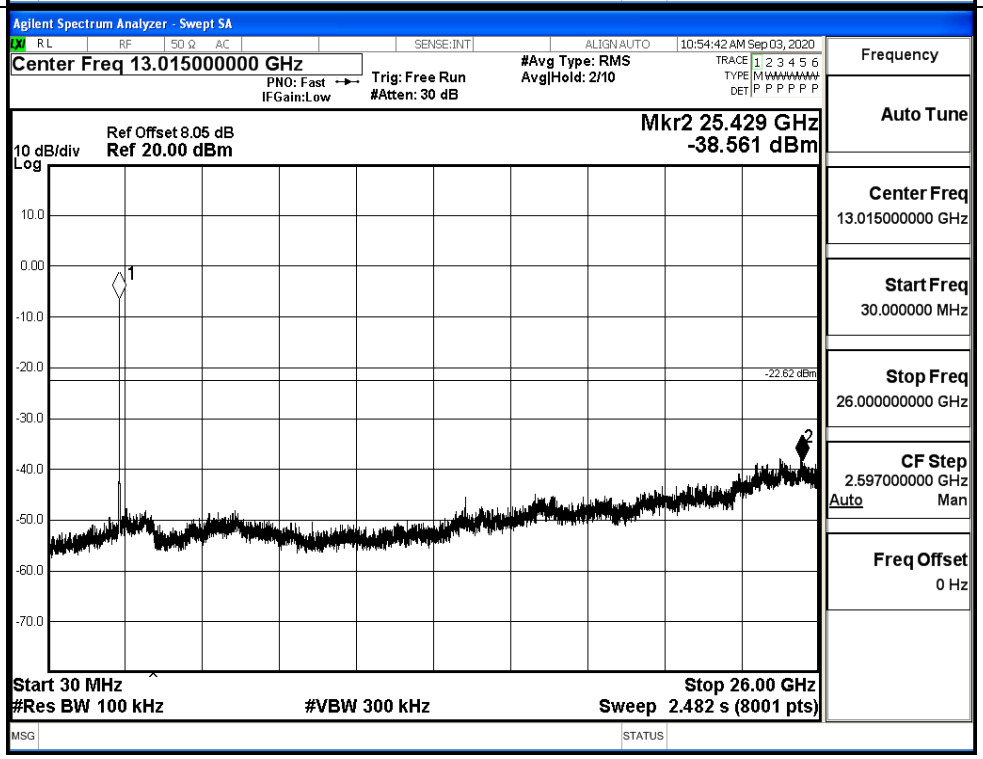
| Mode | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|
| 11B | LCH | 1.474 | -37.880 | -18.526 | PASS |
| | MCH | 0.635 | -37.570 | -19.365 | PASS |
| | HCH | -0.188 | -38.030 | -20.188 | PASS |
| 11G | LCH | -5.492 | -37.802 | -25.492 | PASS |
| | MCH | -2.622 | -38.561 | -22.622 | PASS |
| | HCH | -3.597 | -38.467 | -23.597 | PASS |
| 11N20 SISO | LCH | -4.795 | -38.130 | -24.795 | PASS |
| | MCH | -2.616 | -37.798 | -22.616 | PASS |
| | HCH | -4.157 | -37.595 | -24.157 | PASS |

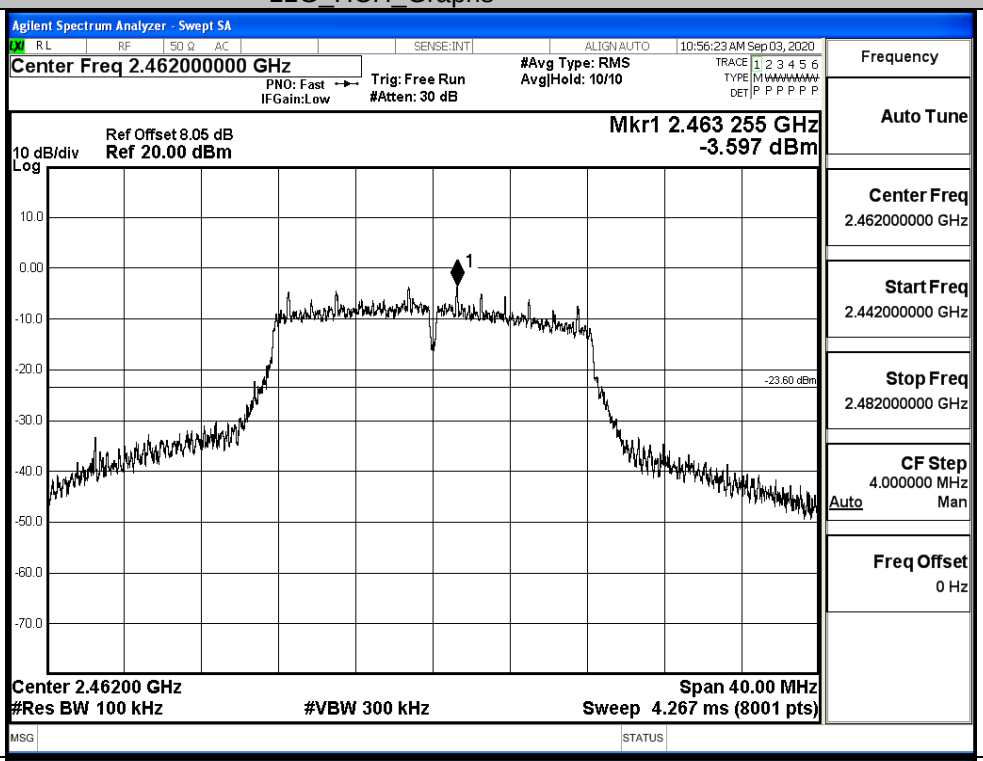
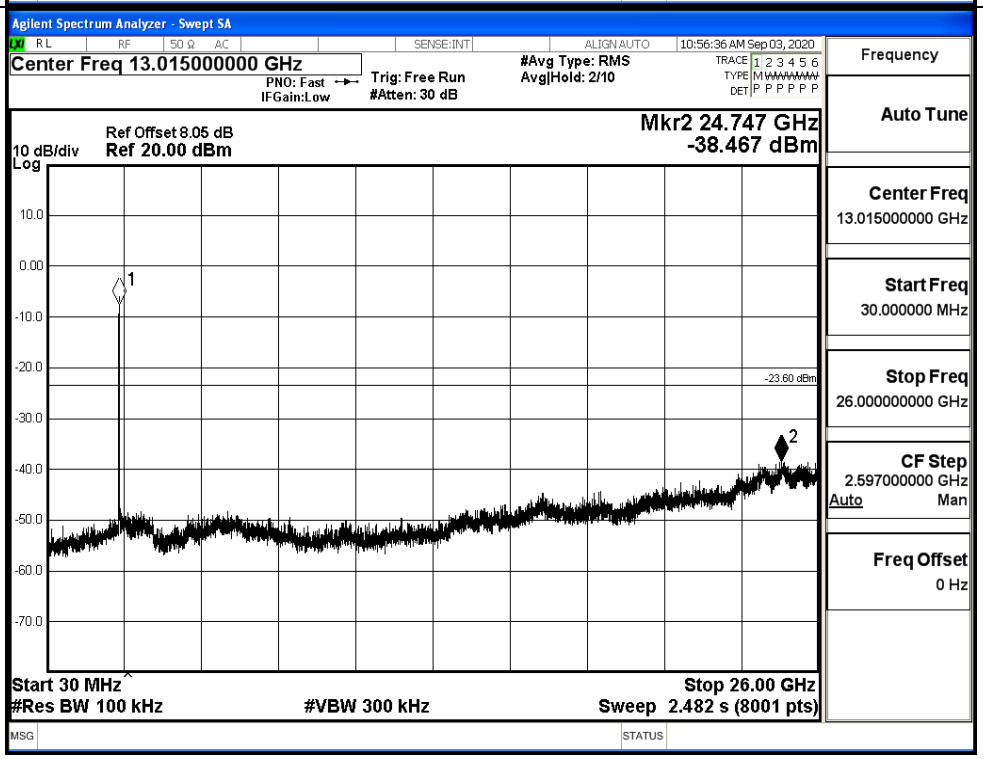
| 11B_LCH_Graphs | | |
|---|---|---|
| Pref/11B/LCH | |  |
| Puw/11B/LCH | |  |

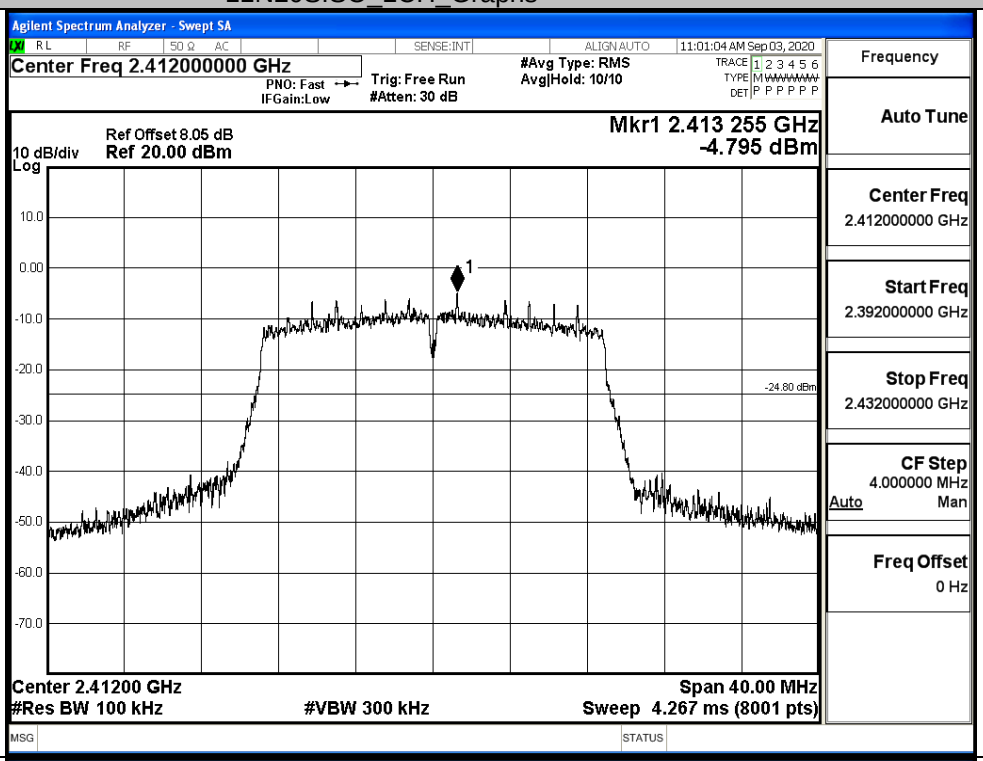
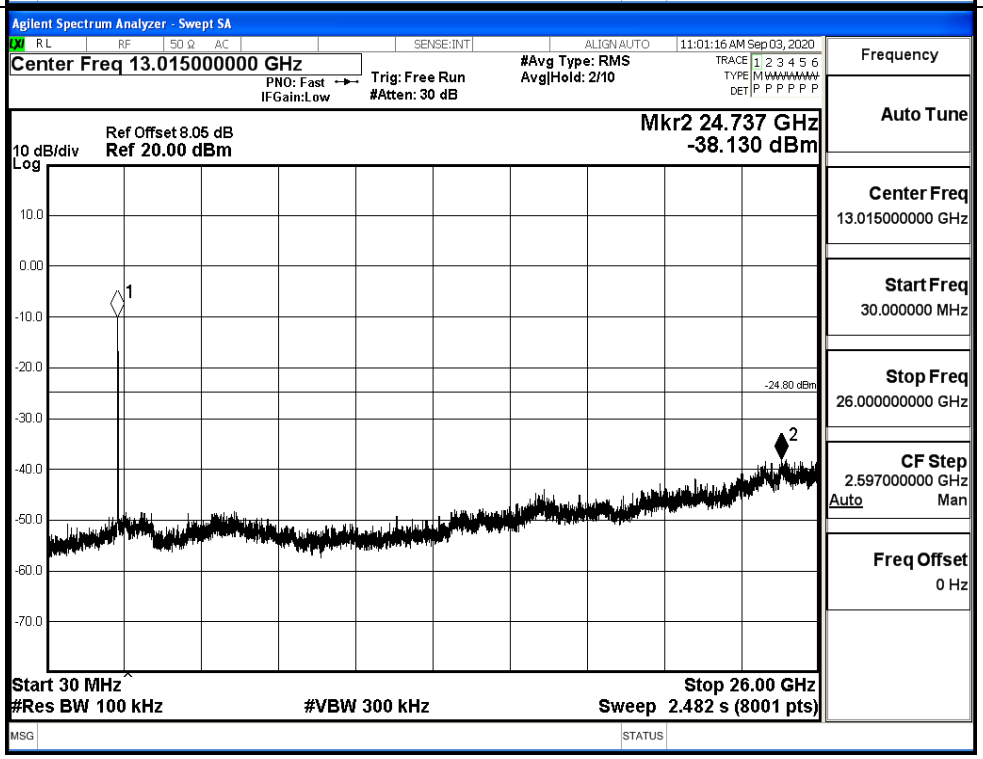
| 11B_MCH_Graphs | | |
|---|---|---|
| Pref/11B/MCH | |  |
| Puw/11B/MCH | |  |

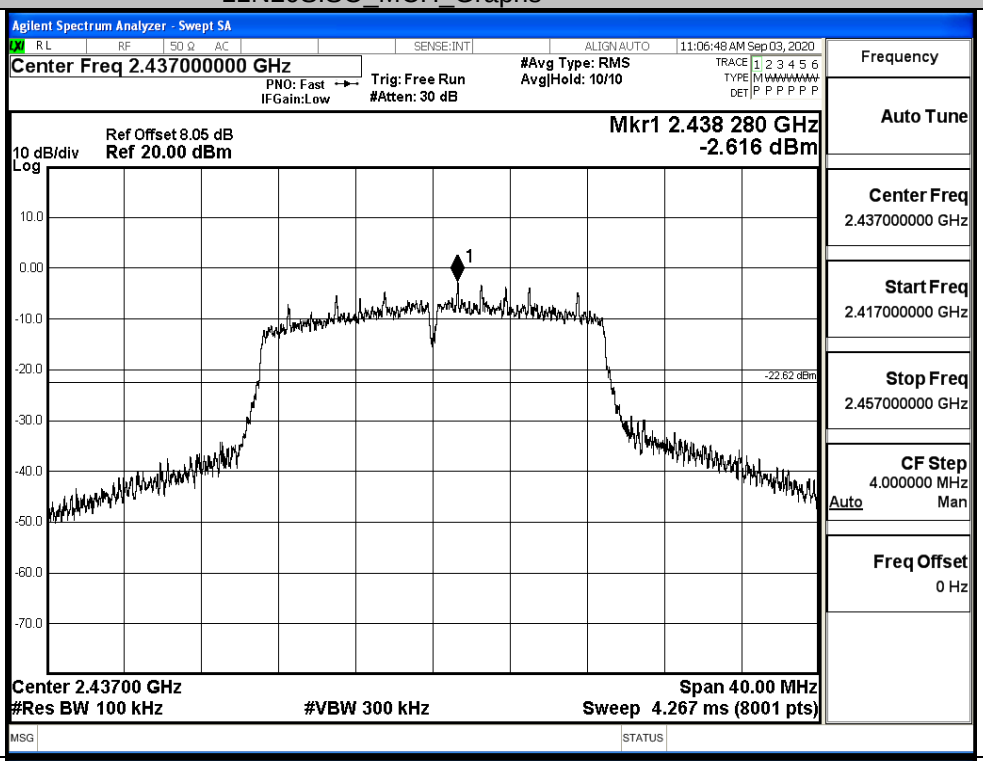
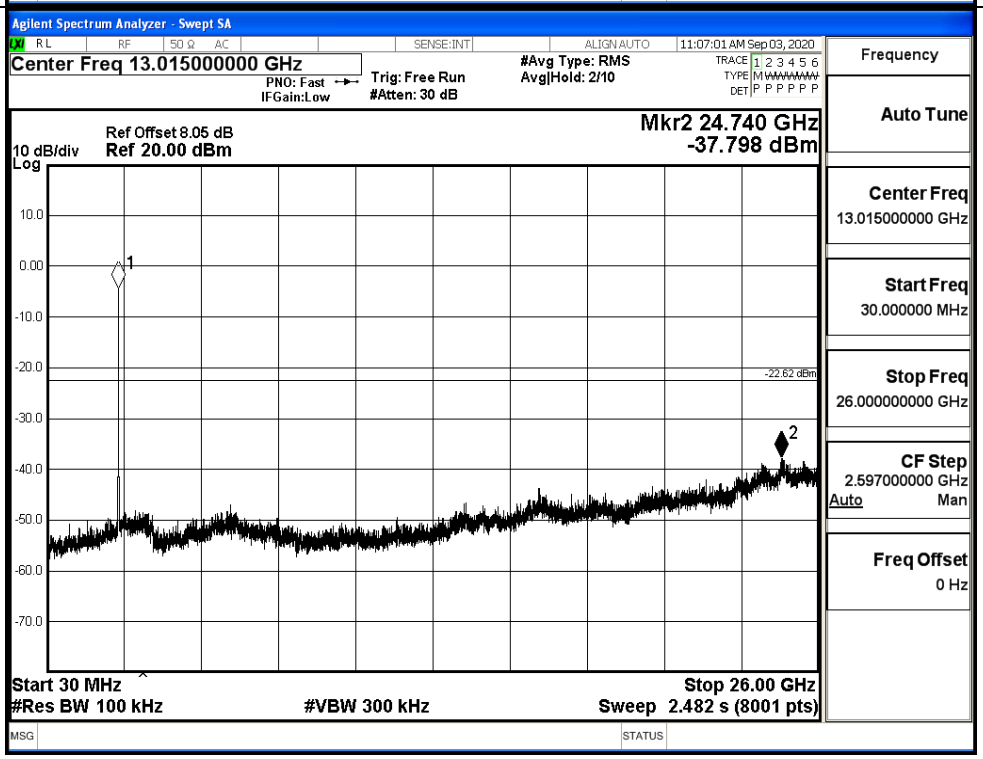
| 11B_HCH_Graphs | | |
|---|---|---|
| Pref/11B/HCH | |  |
| Puw/11B/HCH | |  |

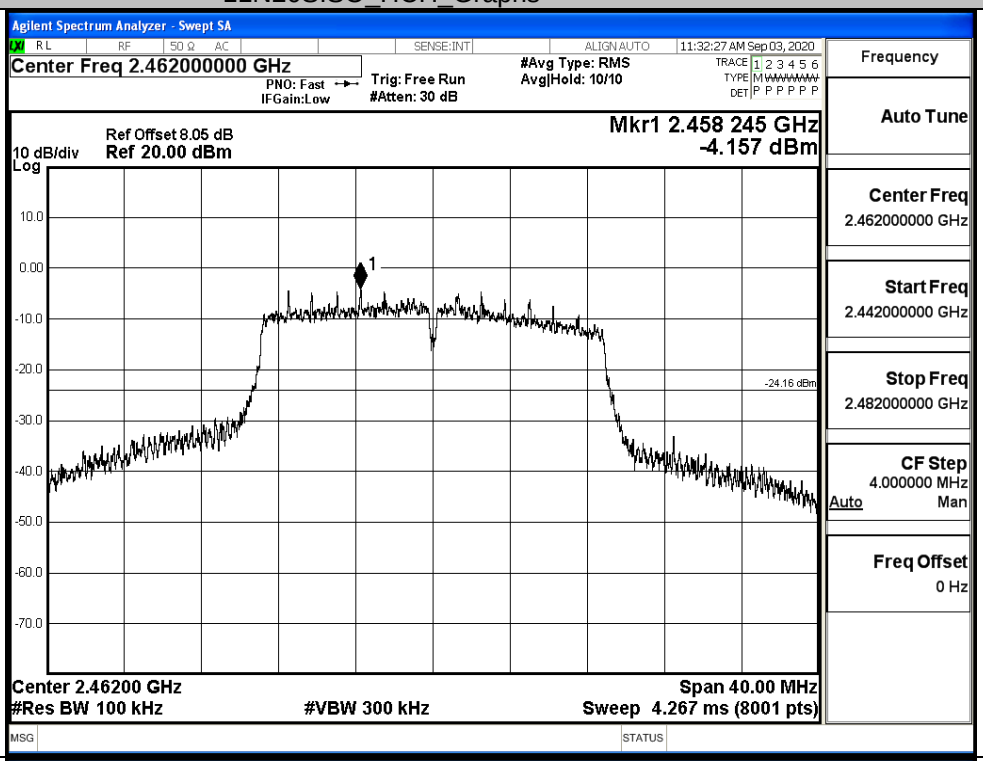
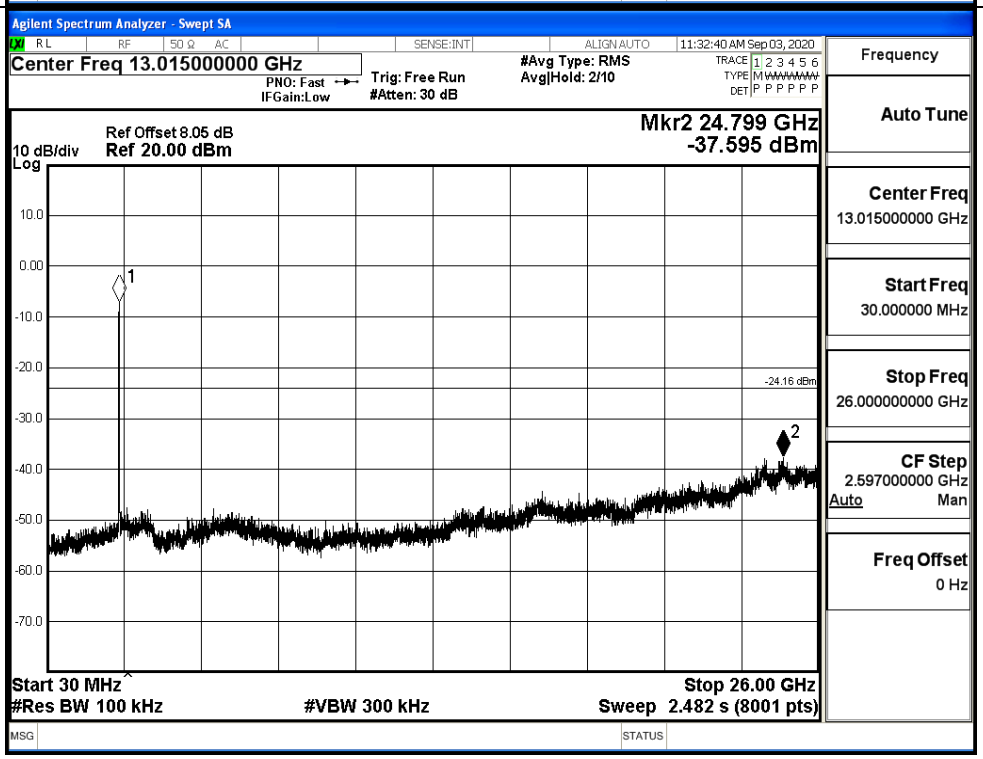
| 11G_LCH_Graphs | | |
|---|---|---|
| Pref/11G/LCH | |  |
| Puw/11G/LCH | |  |

| 11G_MCH_Graphs | |
|---|---|
| Pref/11G/MCH |  |
| Puw/11G/MCH |  |

| 11G_HCH_Graphs | | |
|---|---|---|
| Pref/11G/HCH | |  |
| Puw/11G/HCH | |  |

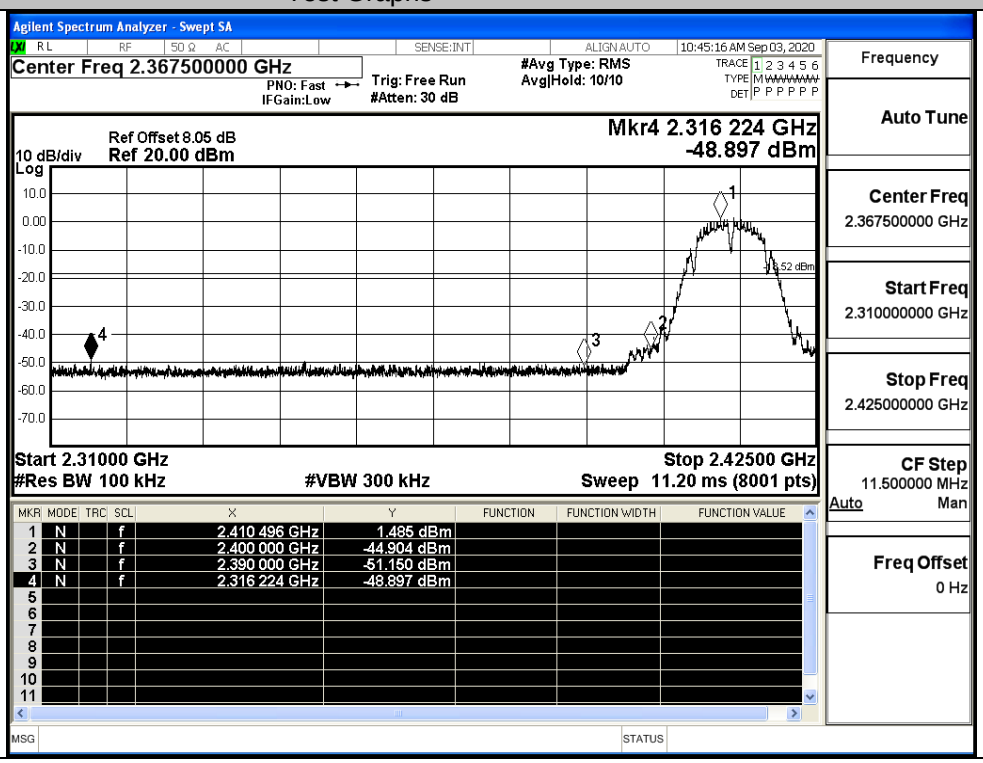
| 11N20SISO_LCH_Graphs | | |
|---|---|---|
| Pref/11N20SISO/LCH | |  |
| Puw/11N20SISO/LCH | |  |

| 11N20SISO_MCH_Graphs | |
|---|---|
| Pref/11N20 SISO/MCH |  |
| Puw/11N20 SISO/MCH |  |

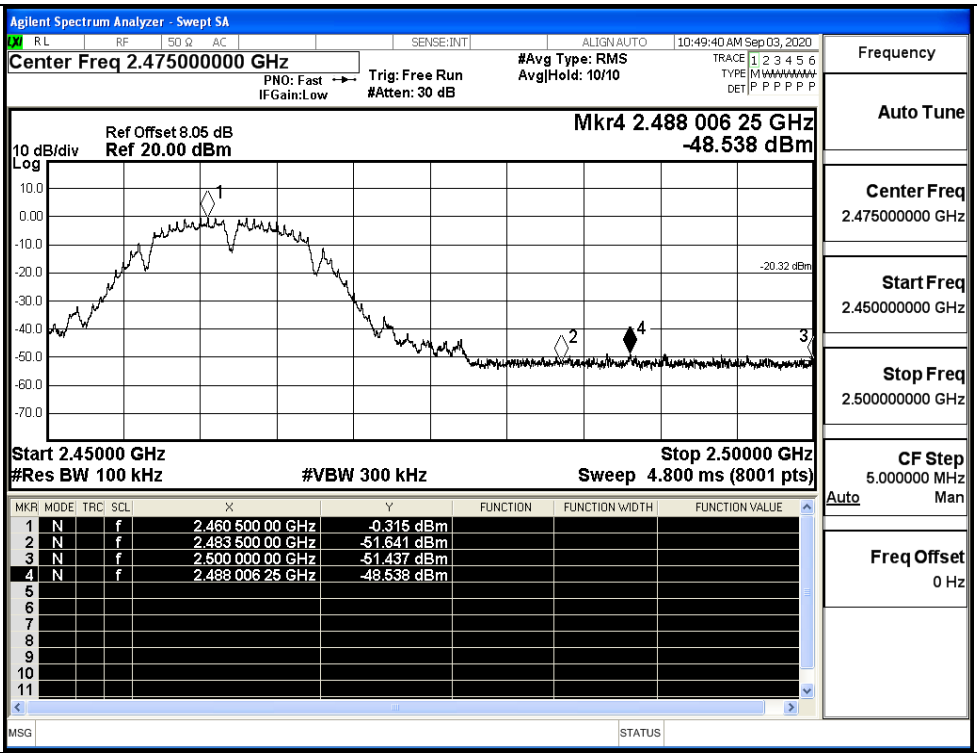
| 11N20SISO_HCH_Graphs | |
|---|---|
| Pref/11N20 SISO/HCH |  |
| Puw/11N20 SISO/HCH |  |

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

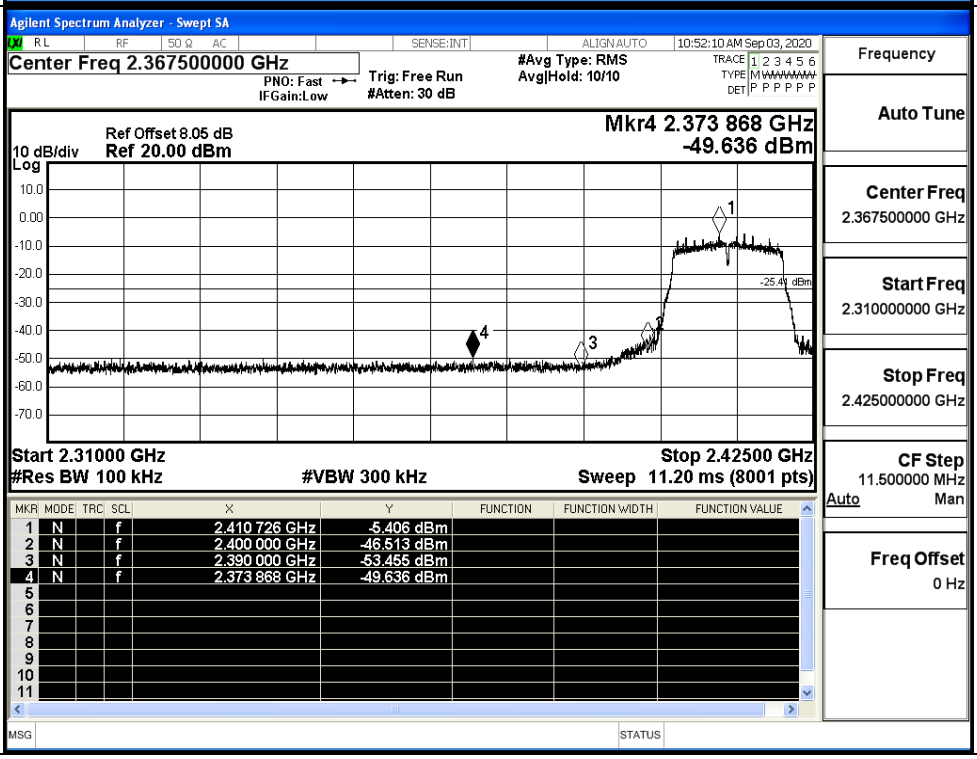
| Mode | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|---|---|---|---|---|---|
| 11B | LCH | 1.485 | -48.897 | -18.52 | PASS |
| | HCH | -0.315 | -48.538 | -20.32 | PASS |
| 11G | LCH | -5.406 | -49.636 | -25.41 | PASS |
| | HCH | -3.473 | -45.337 | -23.47 | PASS |
| 11N20SISO | LCH | -4.766 | -50.288 | -24.77 | PASS |
| | HCH | -3.482 | -45.486 | -23.48 | PASS |

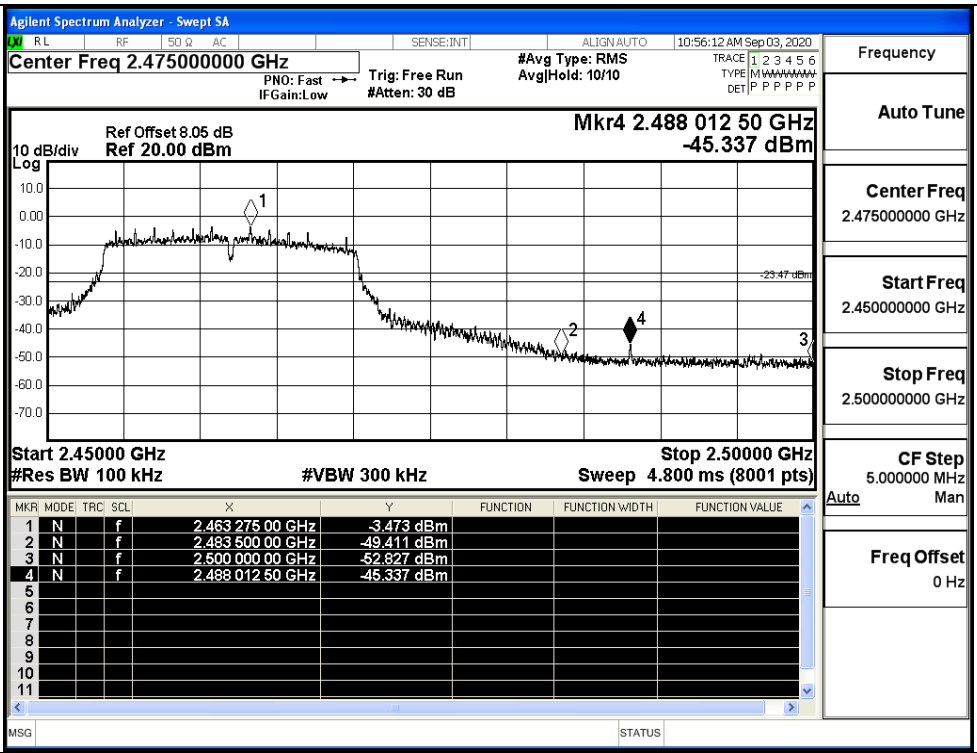
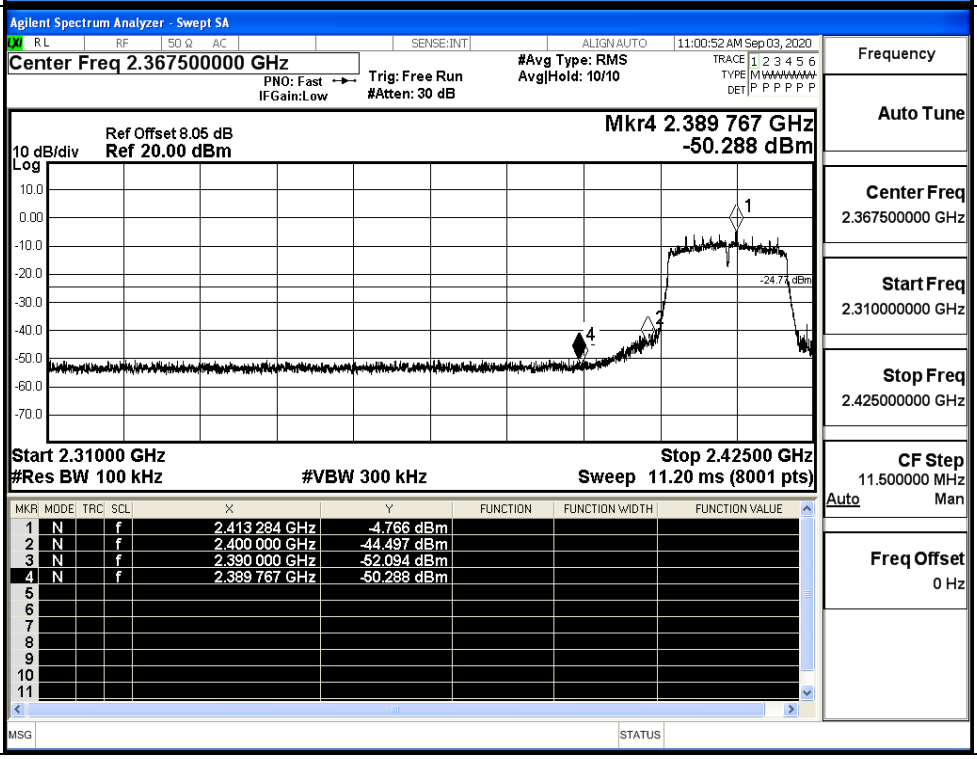
| Test Graphs | |
|---|---|
| 11B/LCH |  |

11B/HCH

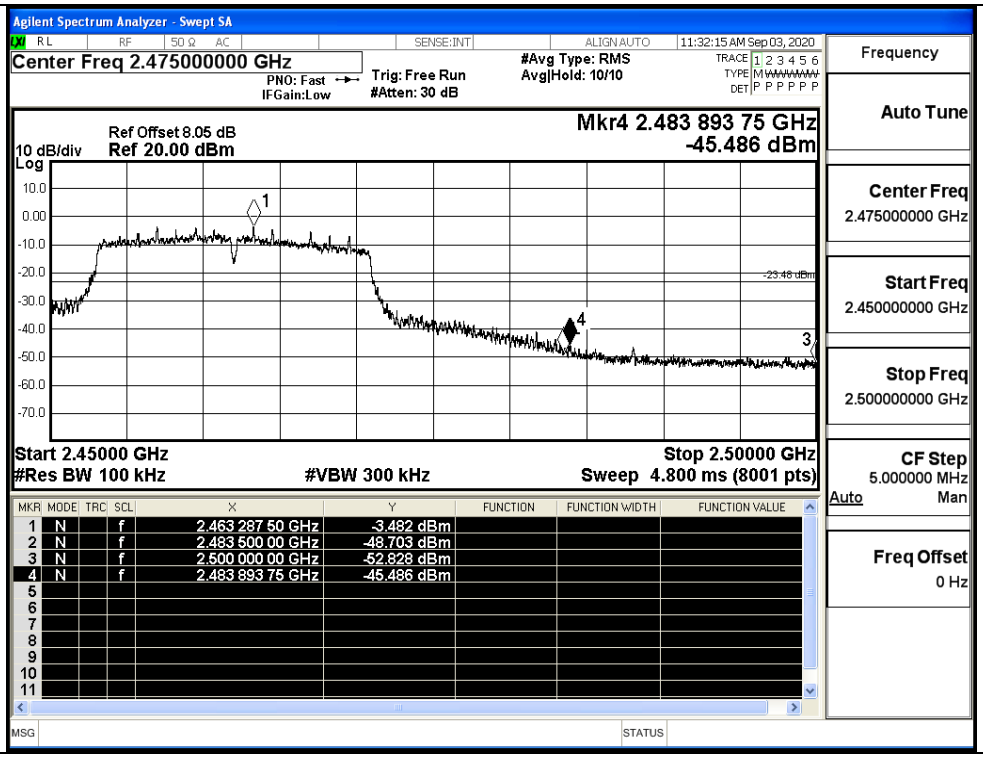



11G/LCH



| | | |
|---|---|---|
| 11G/HCH | |  |
| 11N20SISO/LCH | |  |

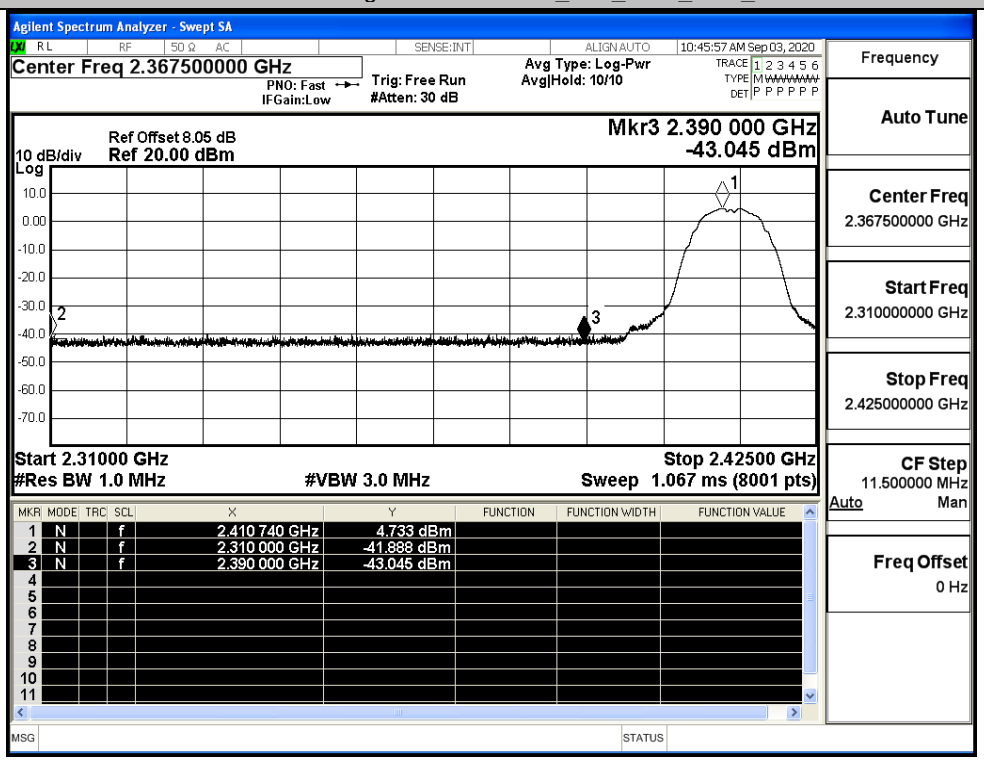
11N20SISO/HCH



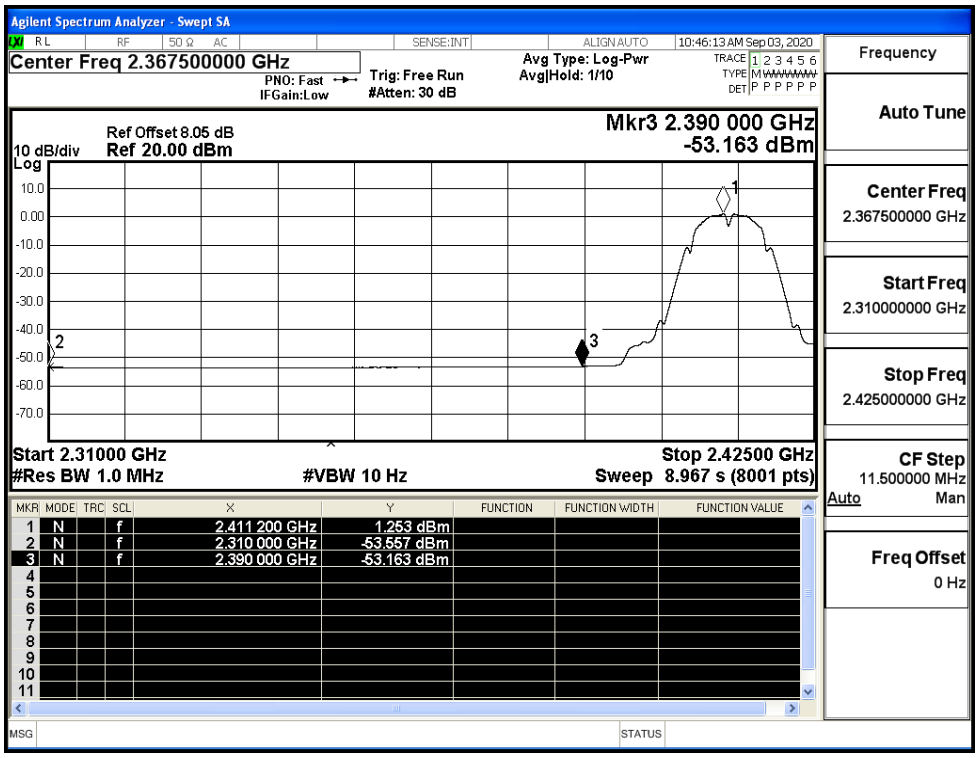
## A.7 Restrict-band band-edge measurements

| Test Mode | Test Channel | Ant | Freq. | Power [dBm] | Gain | Ground Factor | E [dBuV/m] | Detector | Limit [dBuV/m] | Verdict |
|---|---|---|---|---|---|---|---|---|---|---|
| 11B | 2412 | Ant1 | 2310.0 | -41.89 | 2.0 | 0 | 55.34 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2310.0 | -53.56 | 2.0 | 0 | 43.67 | AV | 54 | PASS |
| | 2412 | Ant1 | 2390.0 | -43.05 | 2.0 | 0 | 54.18 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2390.0 | -53.16 | 2.0 | 0 | 44.07 | AV | 54 | PASS |
| | 2462 | Ant1 | 2483.5 | -42.44 | 2.0 | 0 | 54.79 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2483.5 | -52.13 | 2.0 | 0 | 45.10 | AV | 54 | PASS |
| | 2462 | Ant1 | 2500.0 | -41.83 | 2.0 | 0 | 55.40 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2500.0 | -52.61 | 2.0 | 0 | 44.62 | AV | 54 | PASS |
| 11G | 2412 | Ant1 | 2310.0 | -43.01 | 2.0 | 0 | 54.22 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2310.0 | -53.59 | 2.0 | 0 | 43.64 | AV | 54 | PASS |
| | 2412 | Ant1 | 2390.0 | -43.50 | 2.0 | 0 | 53.73 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2390.0 | -53.09 | 2.0 | 0 | 44.14 | AV | 54 | PASS |
| | 2462 | Ant1 | 2483.5 | -37.39 | 2.0 | 0 | 59.84 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2483.5 | -50.24 | 2.0 | 0 | 46.99 | AV | 54 | PASS |
| | 2462 | Ant1 | 2500.0 | -41.72 | 2.0 | 0 | 55.51 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2500.0 | -52.57 | 2.0 | 0 | 44.66 | AV | 54 | PASS |
| 11N20 SISO | 2412 | Ant1 | 2310.0 | -42.70 | 2.0 | 0 | 54.53 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2310.0 | -53.57 | 2.0 | 0 | 43.66 | AV | 54 | PASS |
| | 2412 | Ant1 | 2390.0 | -41.23 | 2.0 | 0 | 56.00 | PEAK | 74 | PASS |
| | 2412 | Ant1 | 2390.0 | -53.03 | 2.0 | 0 | 44.20 | AV | 54 | PASS |
| | 2462 | Ant1 | 2483.5 | -34.90 | 2.0 | 0 | 62.33 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2483.5 | -49.07 | 2.0 | 0 | 48.16 | AV | 54 | PASS |
| | 2462 | Ant1 | 2500.0 | -41.17 | 2.0 | 0 | 56.06 | PEAK | 74 | PASS |
| | 2462 | Ant1 | 2500.0 | -52.60 | 2.0 | 0 | 44.63 | 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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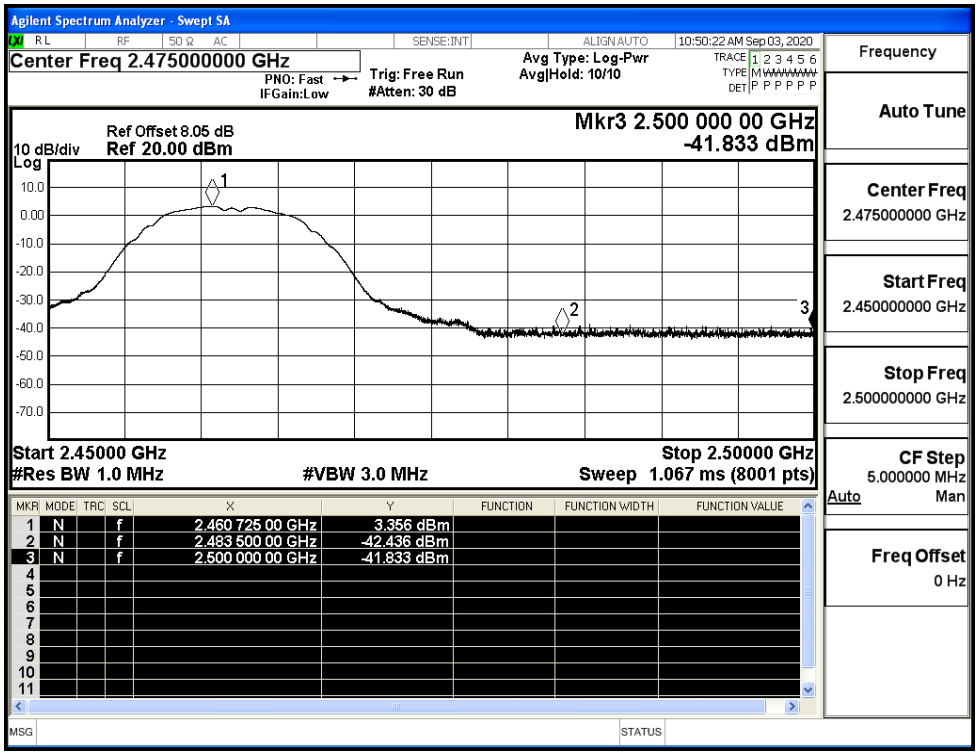


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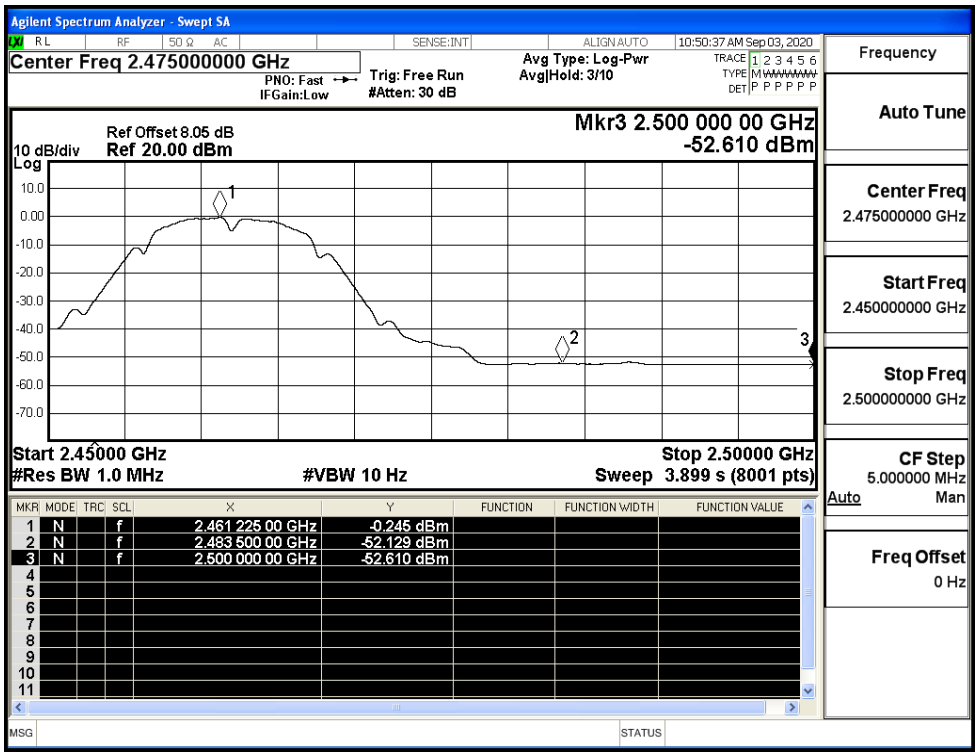

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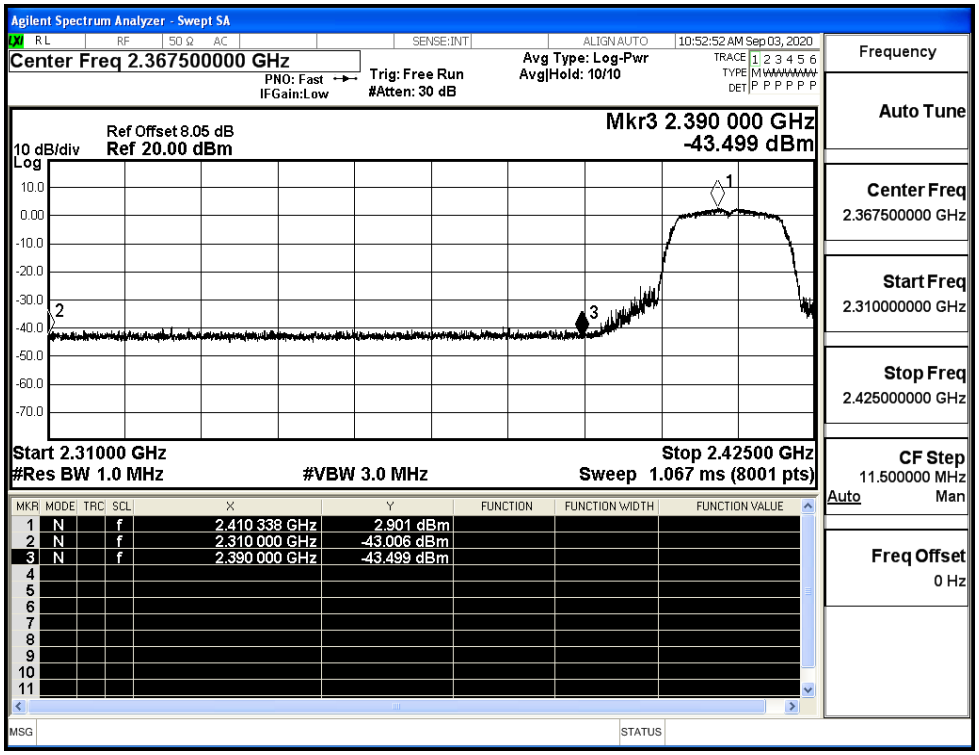


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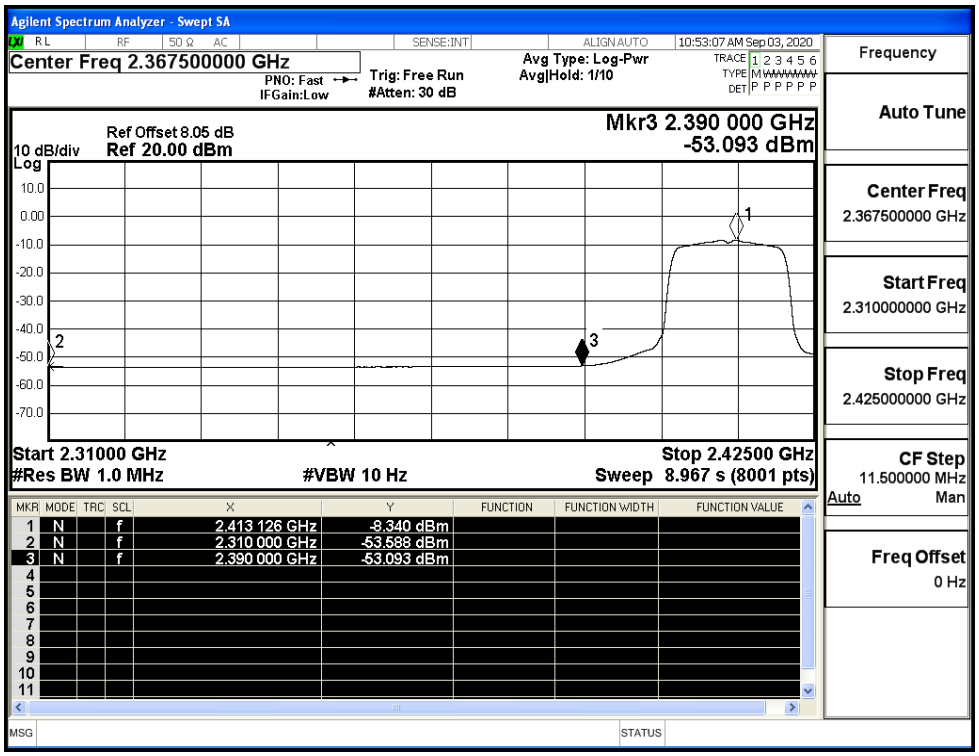
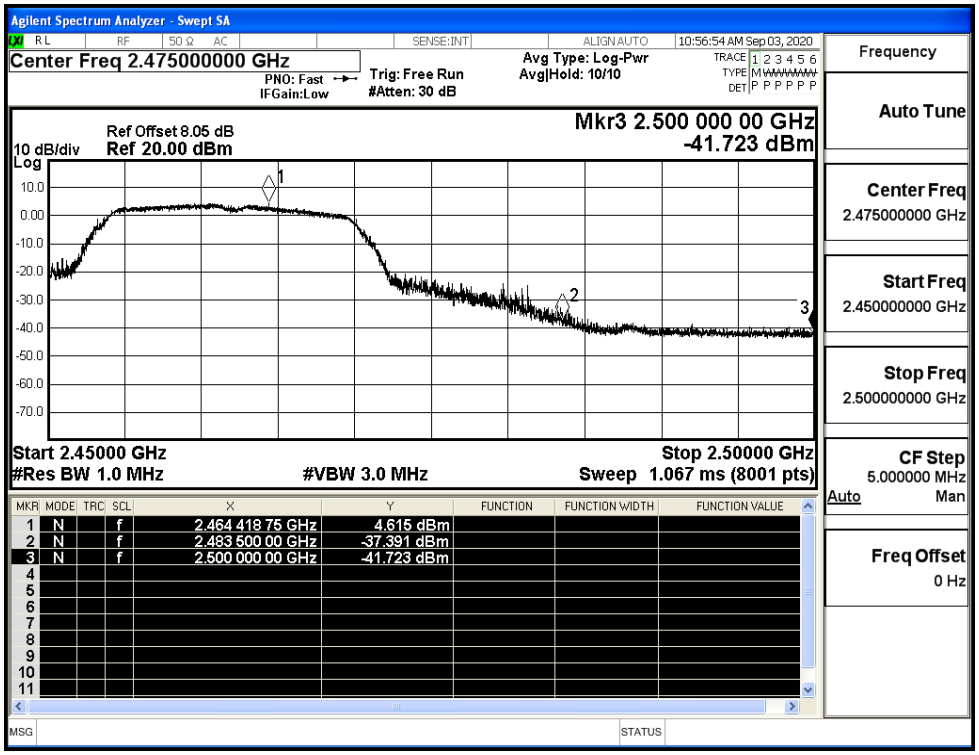
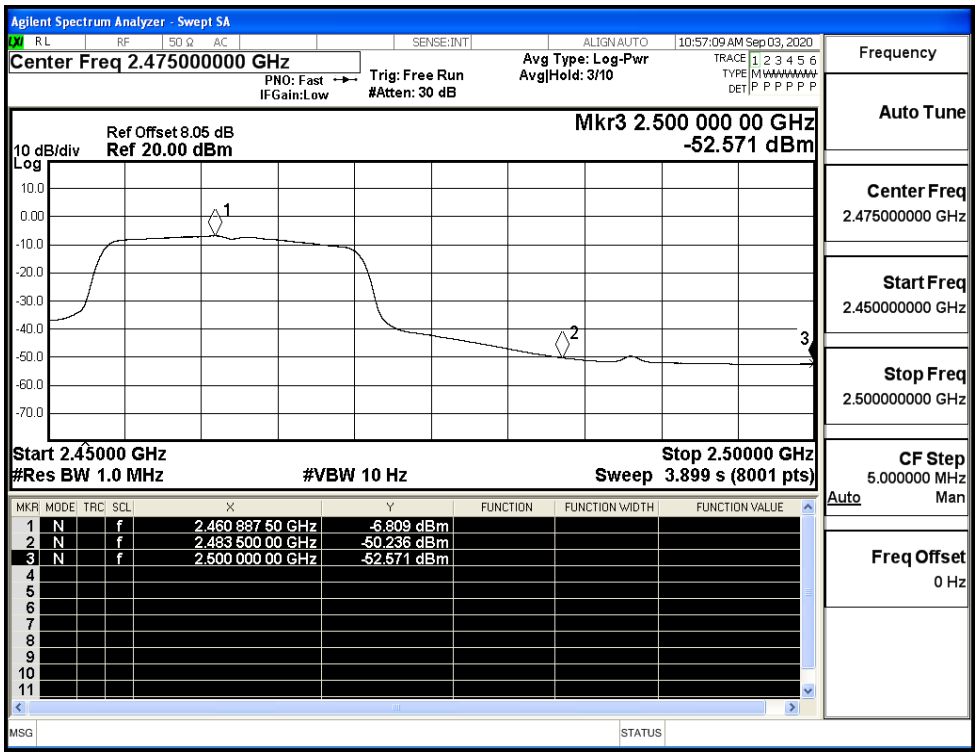


Restrict-band band-edge measurements_11G_2462_Ant1_PEAK




Restrict-band band-edge measurements_11G_2462_Ant1_AV



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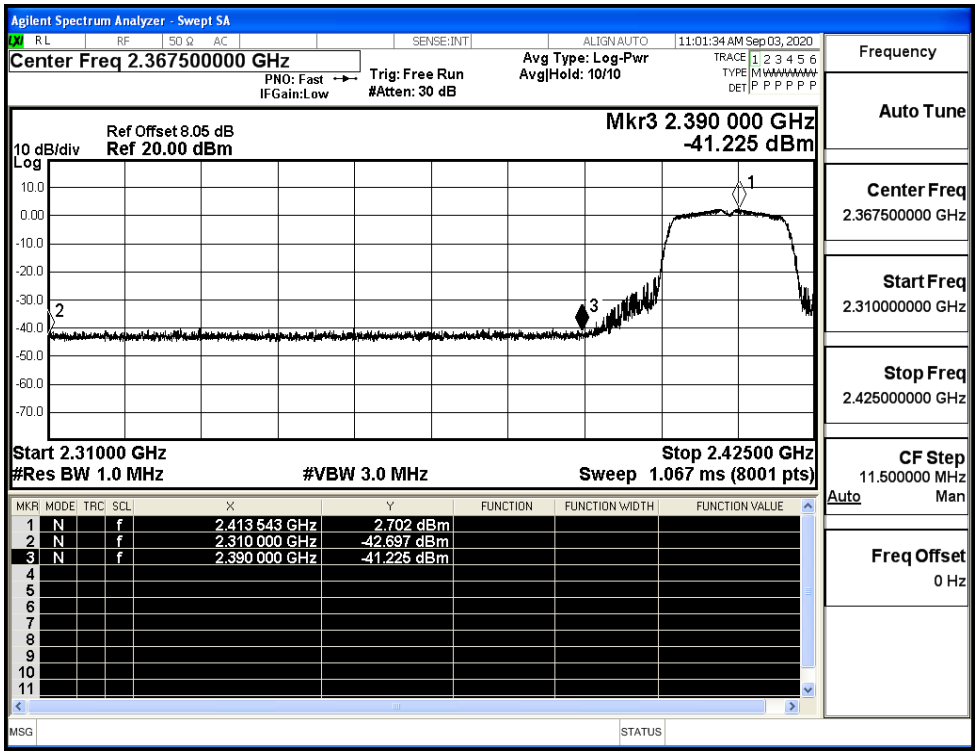


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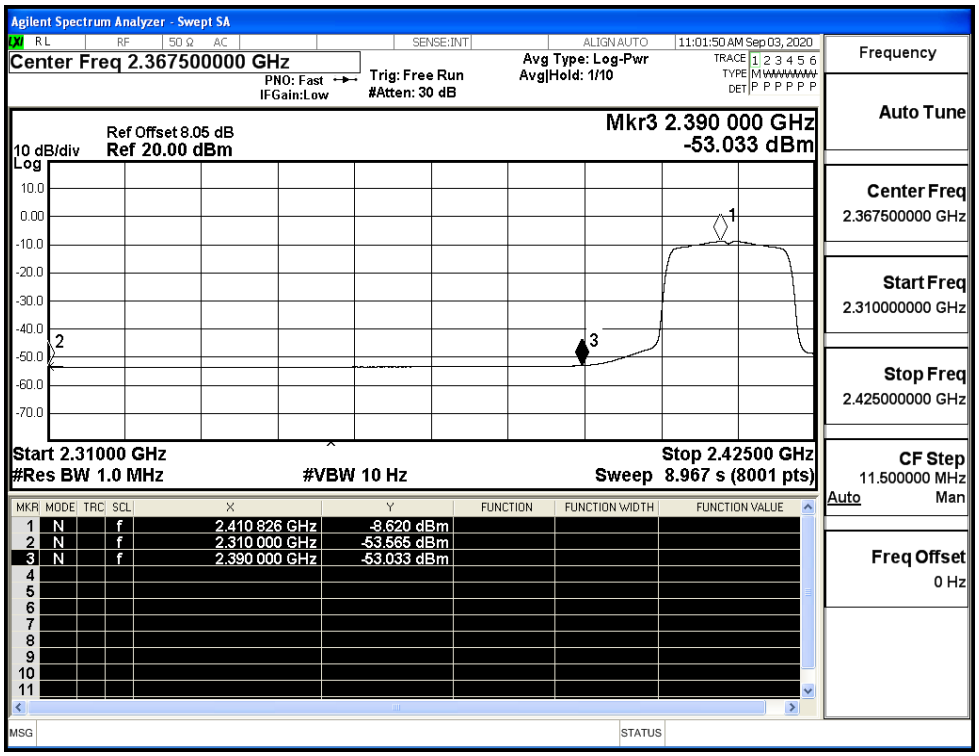

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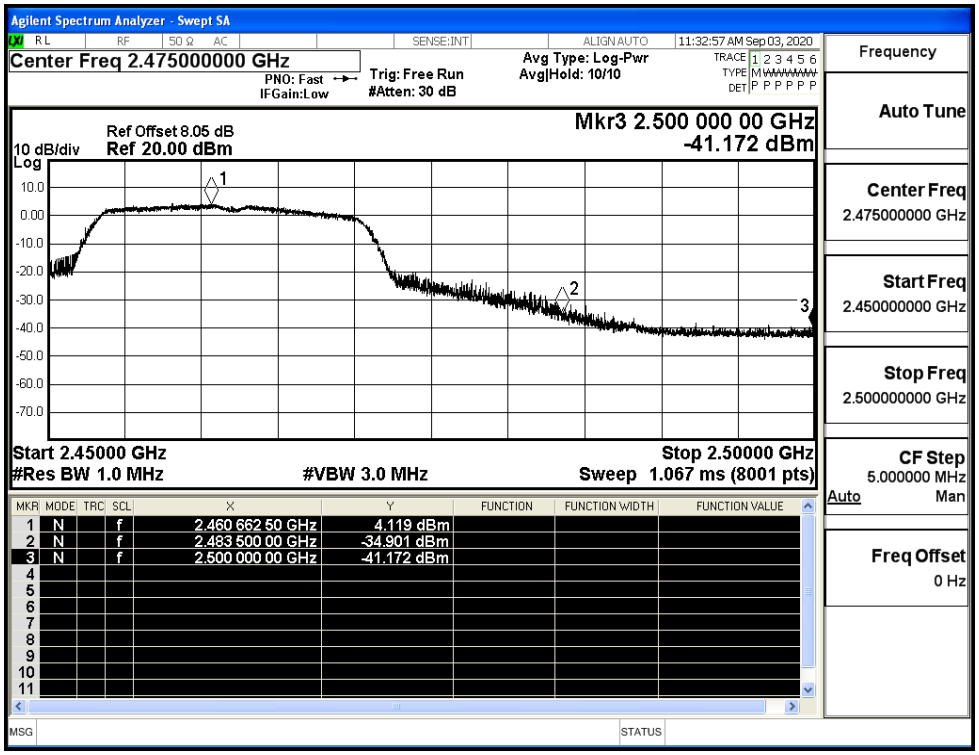

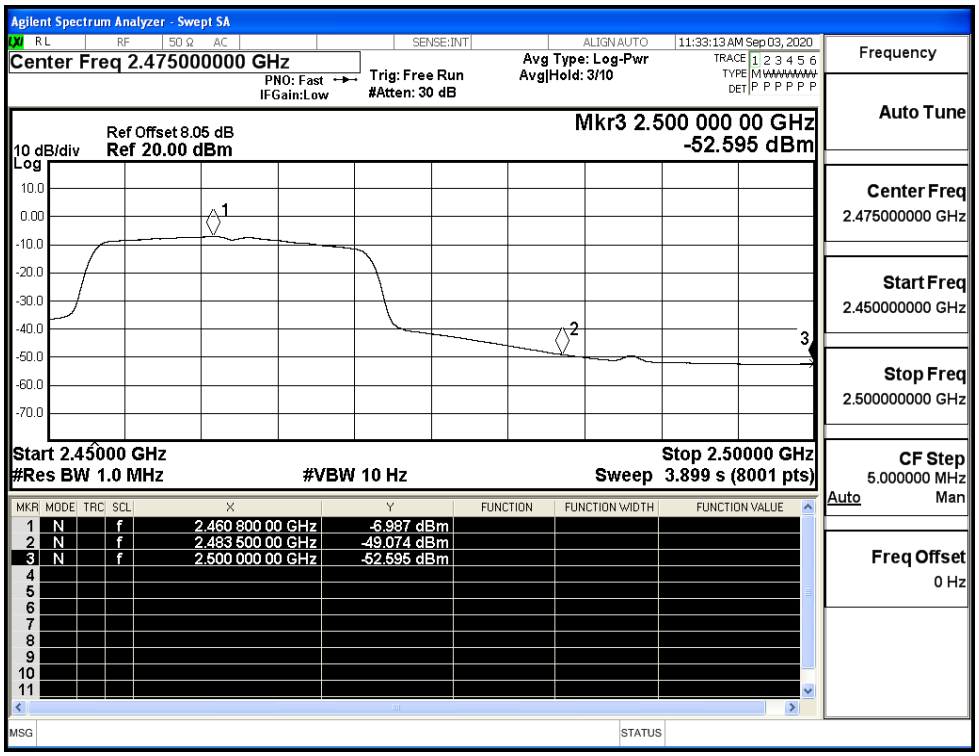
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