

Appendix B

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: 300 Mbps Wireless Broadband Router

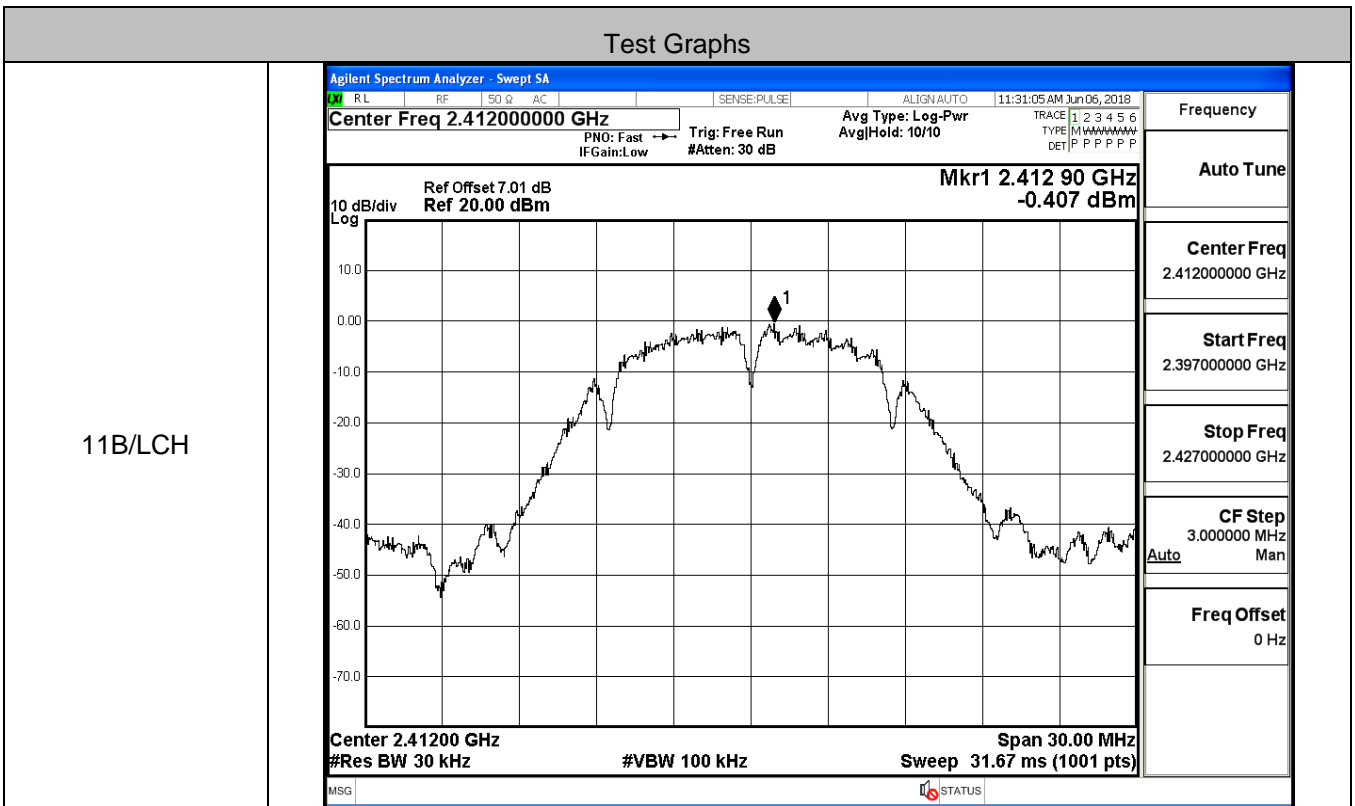
Trade Mark: Perfect

Test Model: PFTP-WR300

Environmental Conditions

| | |
|--------------------|-----------|
| Temperature: | 23.4 ° C |
| Relative Humidity: | 52.6% |
| ATM Pressure: | 100.0 kPa |
| Test Engineer: | Mina.xu |
| Supervised by: | Tom.Liu |

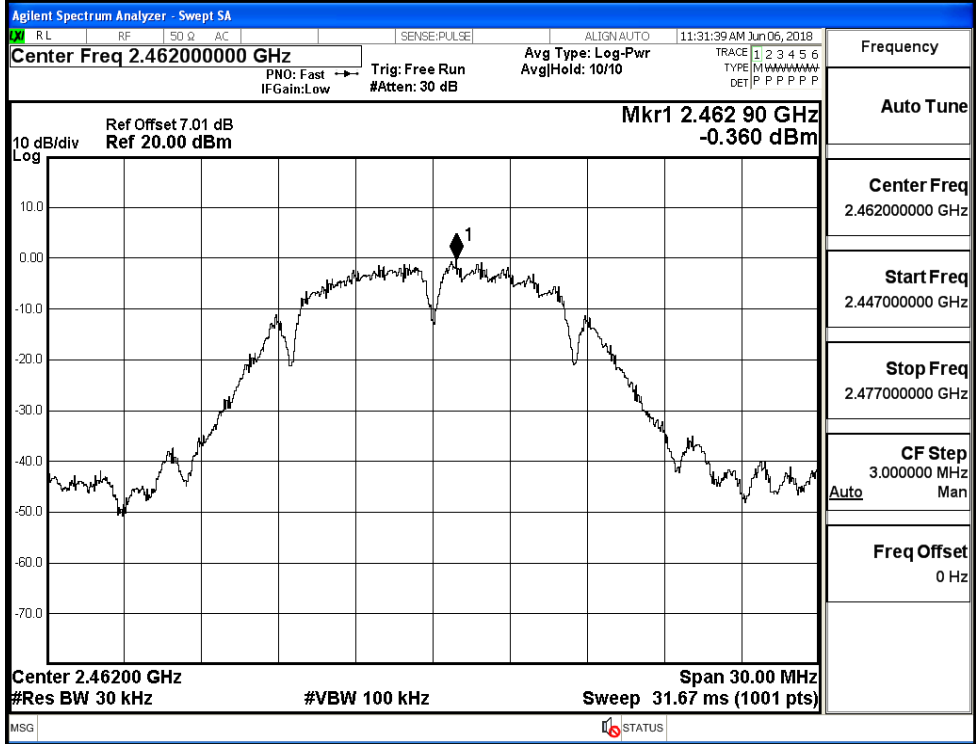
B.1 Maximum Power Spectral Density



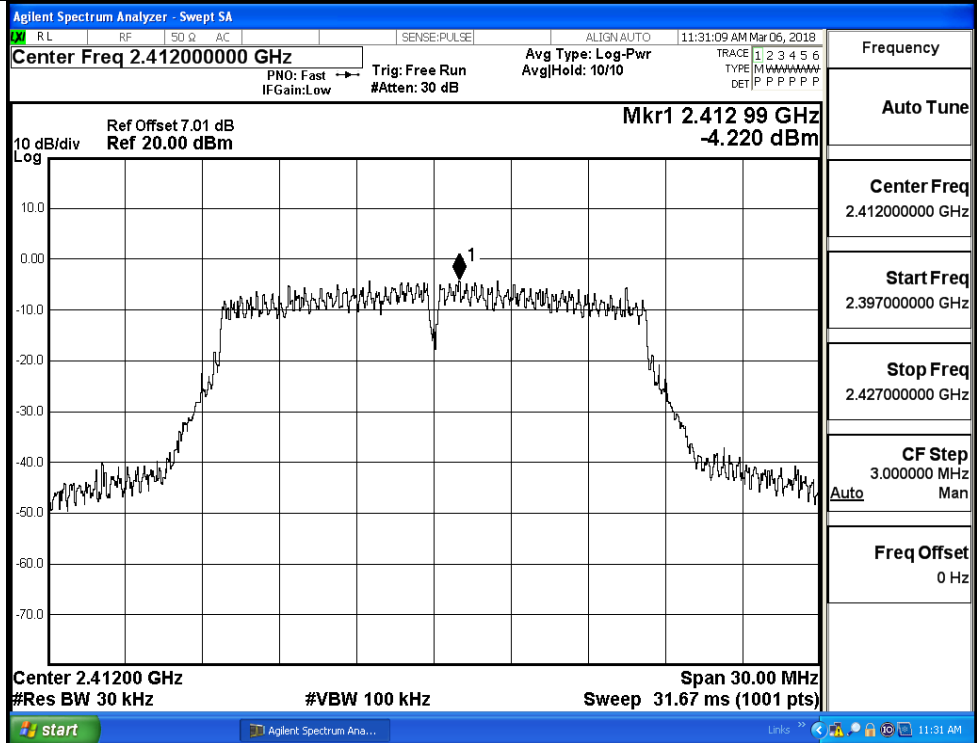
11B/MCH



11B/HCH

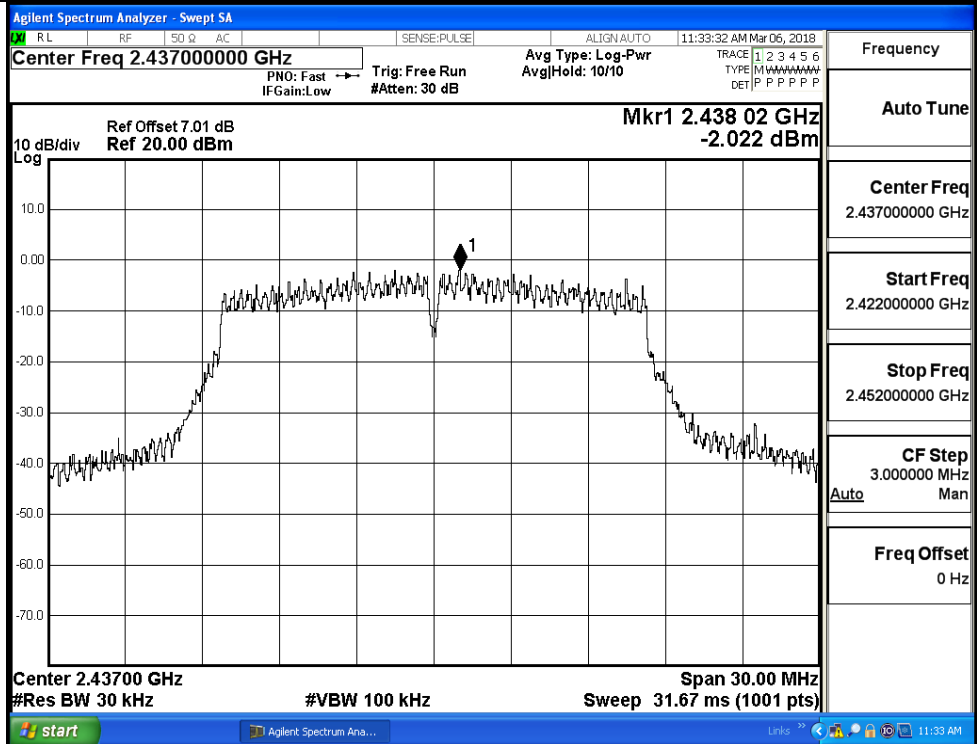


11G/LCH



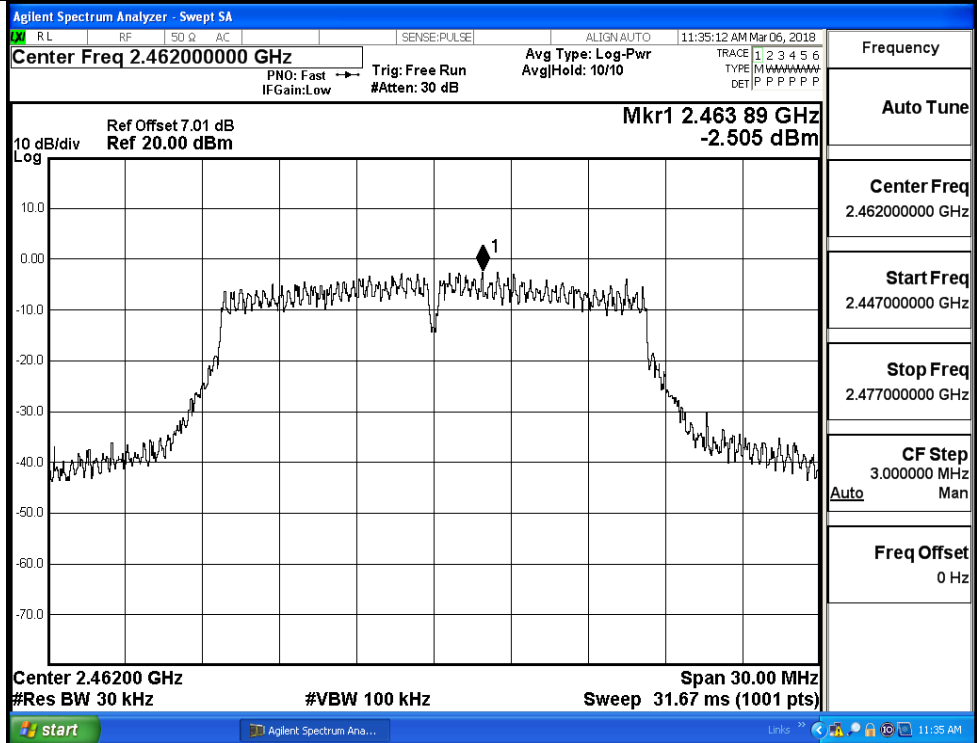
| | |
|-------------|--------------------------|
| Frequency | 2.41200000 GHz |
| Auto Tune | |
| Center Freq | 2.41200000 GHz |
| Start Freq | 2.397000000 GHz |
| Stop Freq | 2.427000000 GHz |
| CF Step | 3.000000 MHz Auto Man |
| Freq Offset | 0 Hz |

11G/MCH

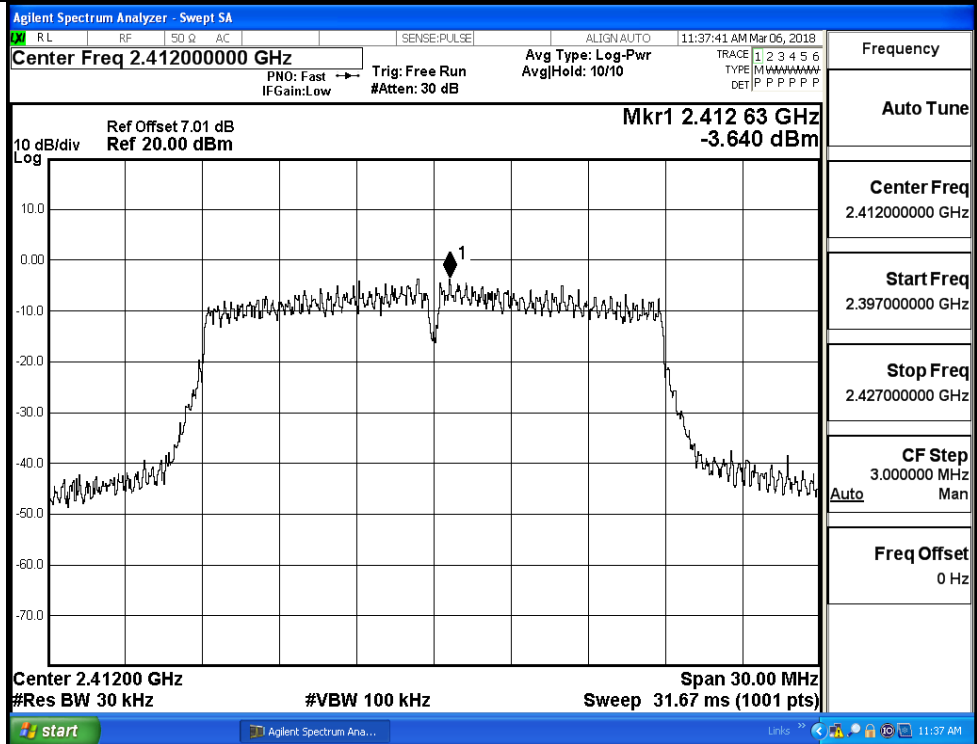


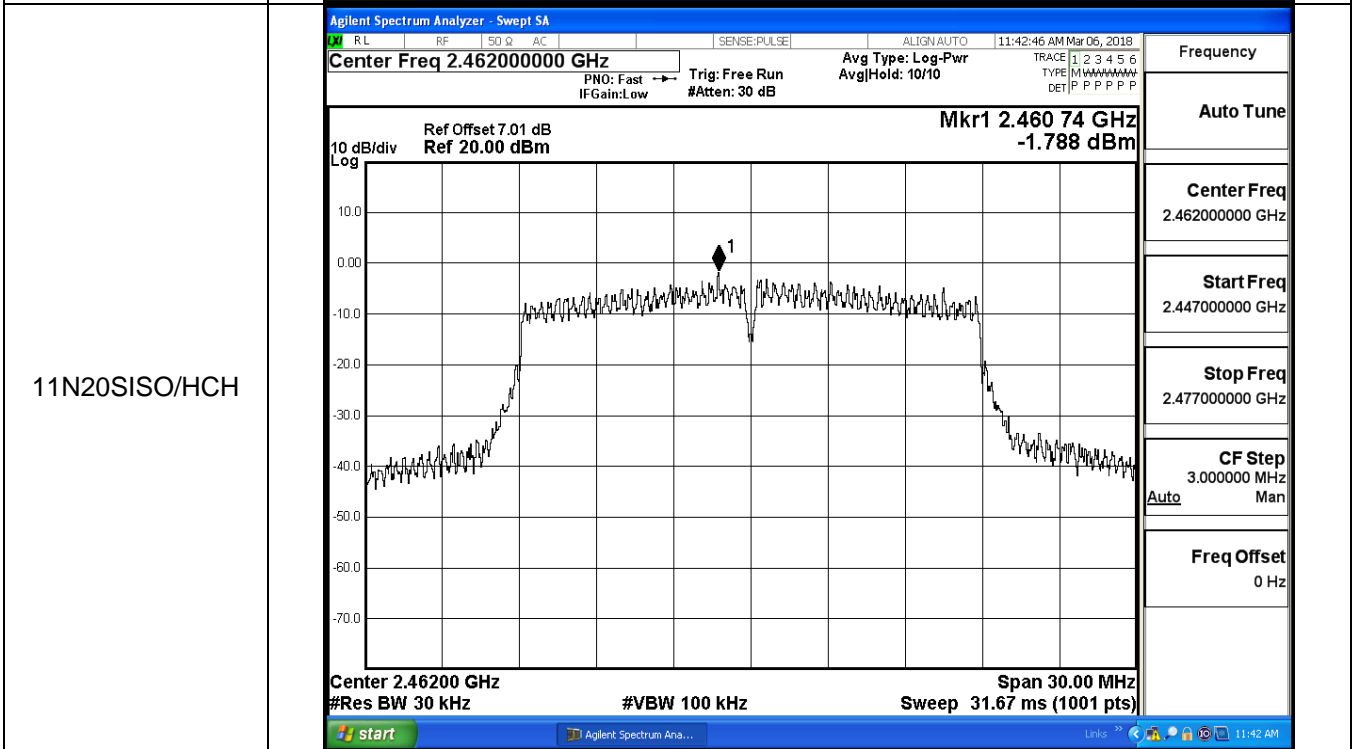
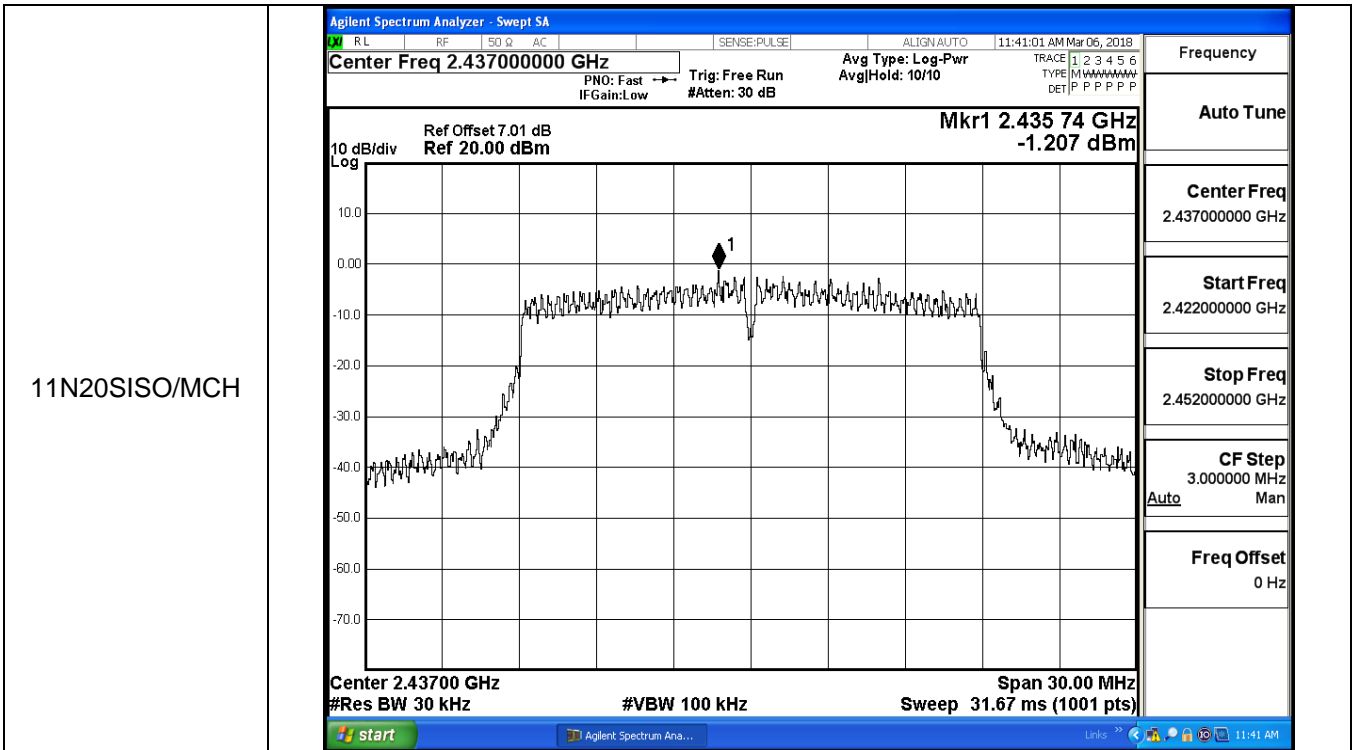
| | |
|-------------|--------------------------|
| Frequency | 2.43700000 GHz |
| Auto Tune | |
| Center Freq | 2.43700000 GHz |
| Start Freq | 2.422000000 GHz |
| Stop Freq | 2.452000000 GHz |
| CF Step | 3.000000 MHz Auto Man |
| Freq Offset | 0 Hz |

11G/HCH

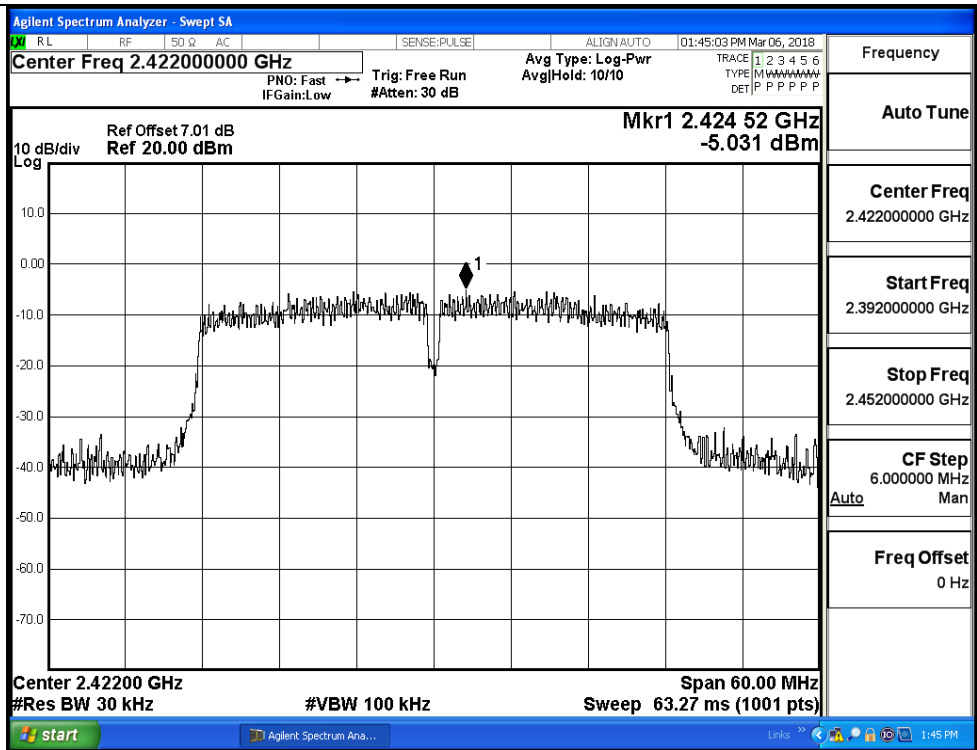


11N20SISO/LCH

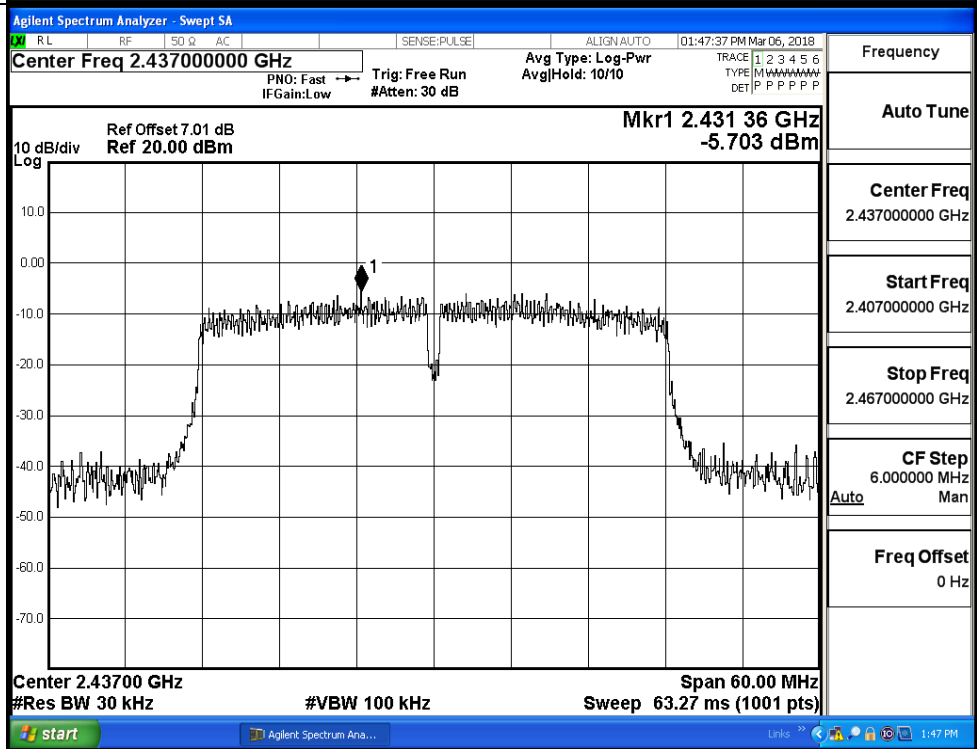


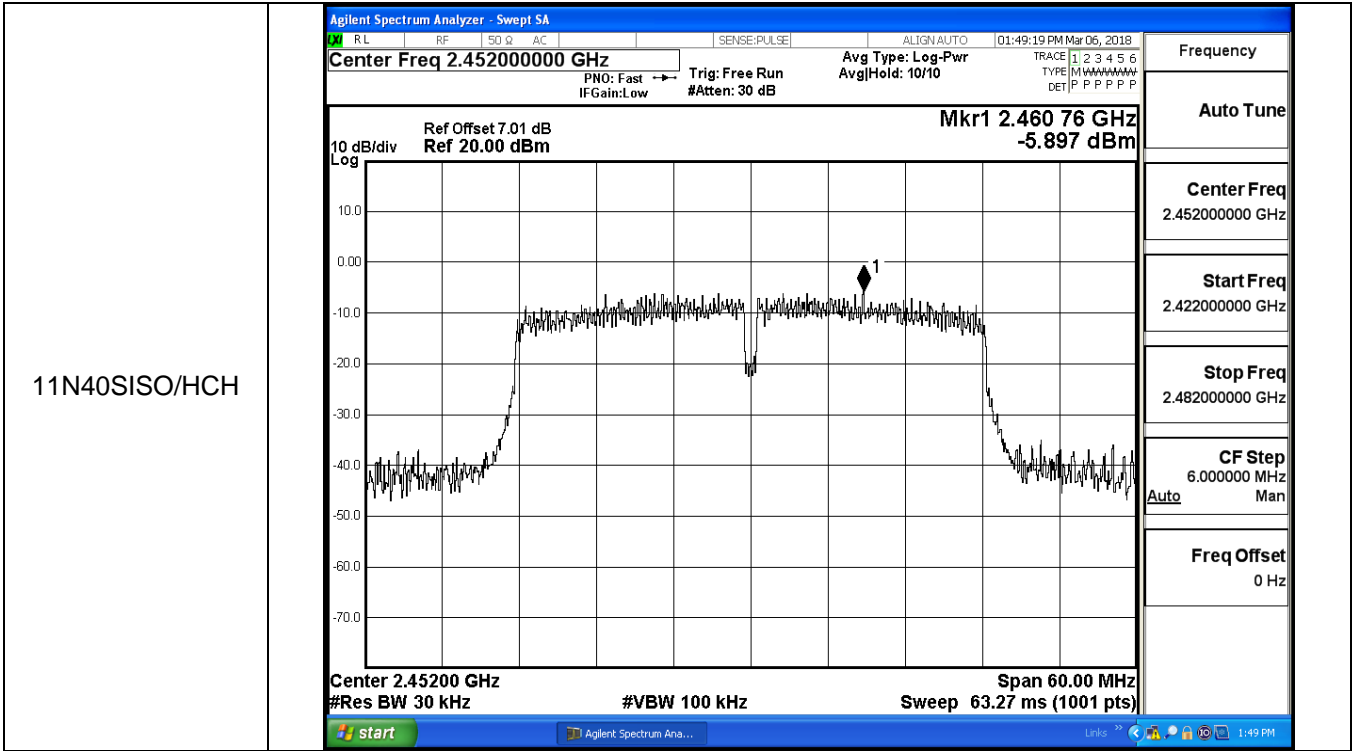


11N40SISO/LCH

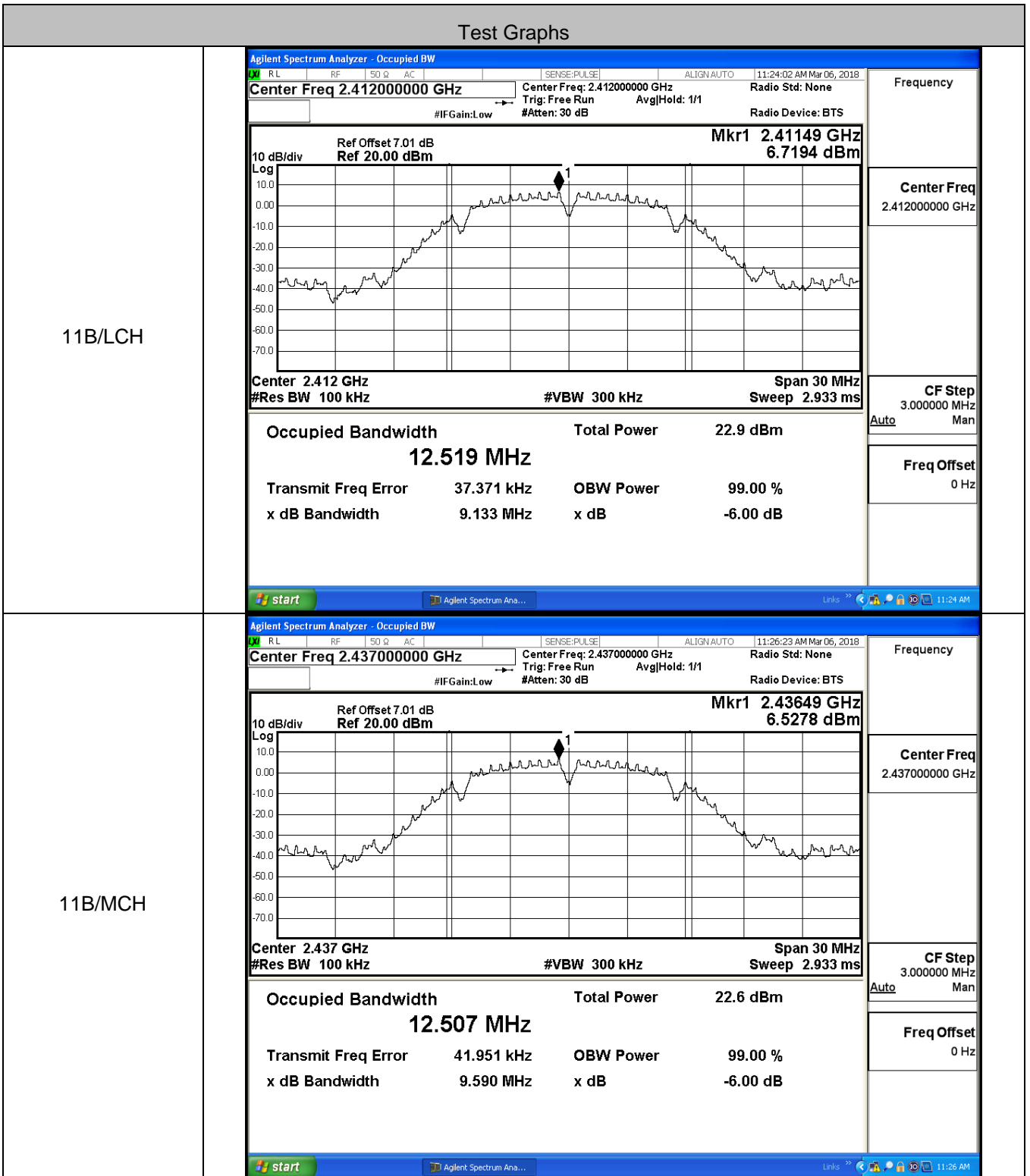


11N40SISO/MCH

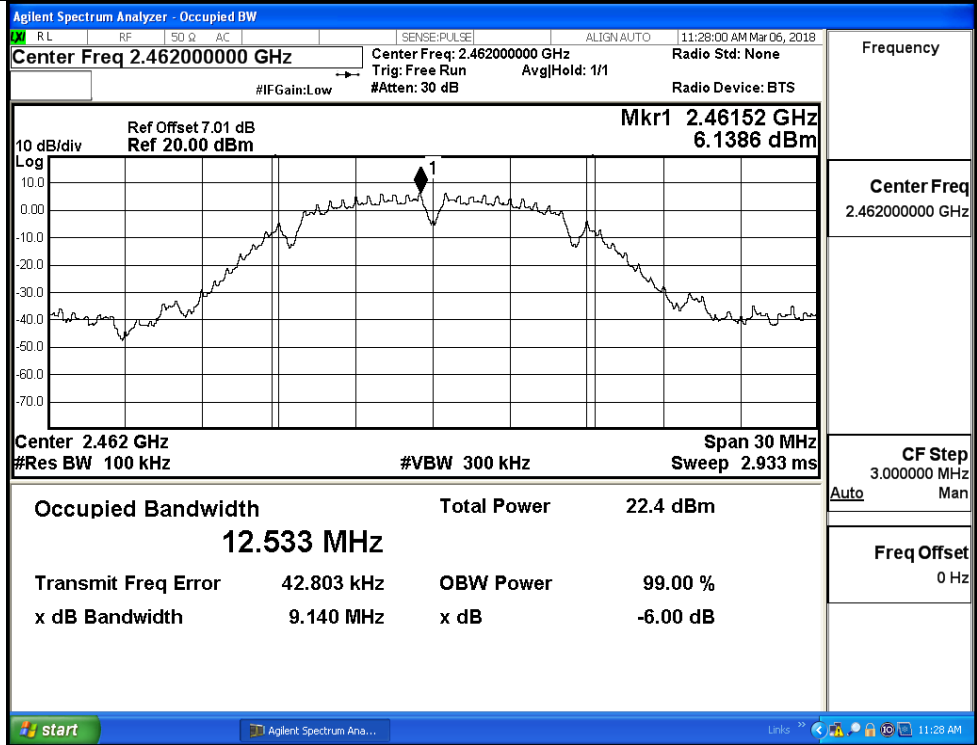




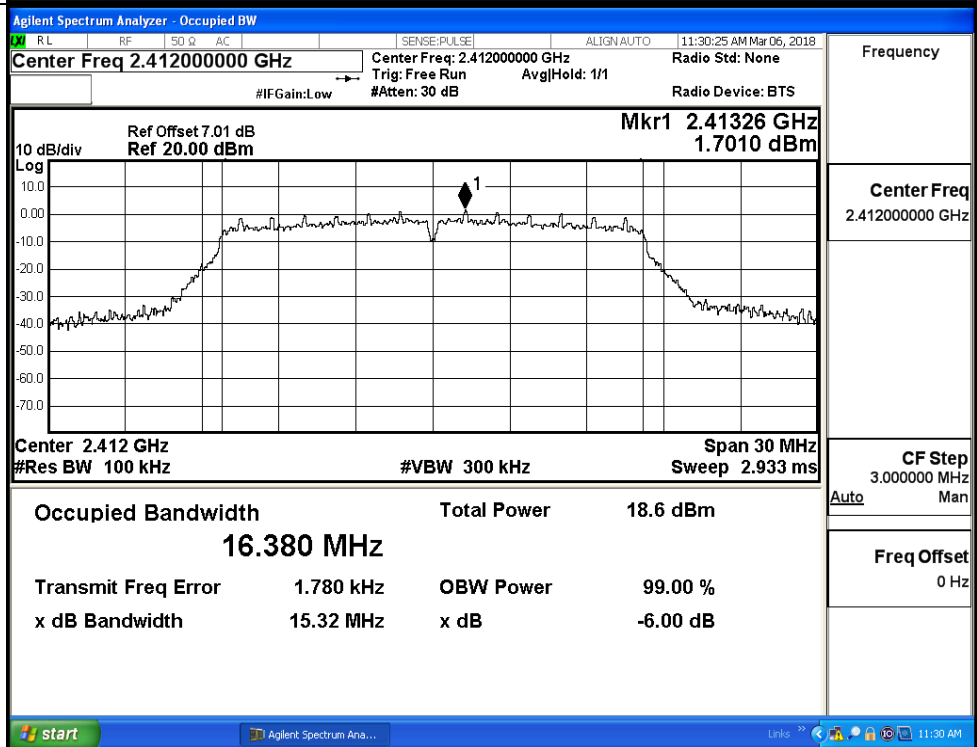
B.2 6dB Bandwidth



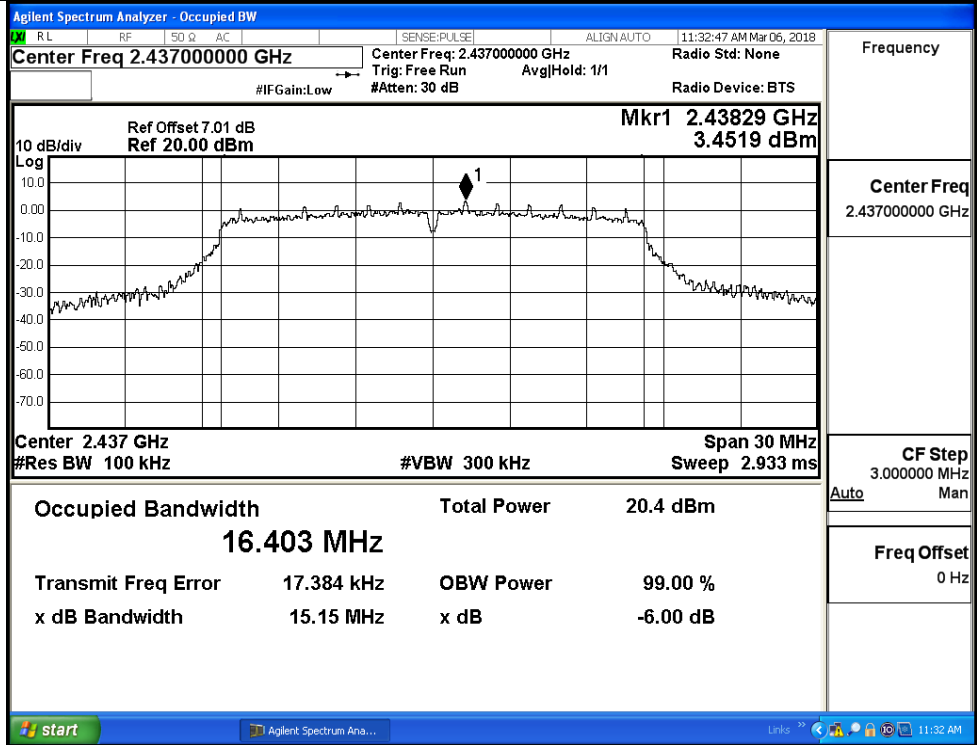
11B/HCH



11G/LCH

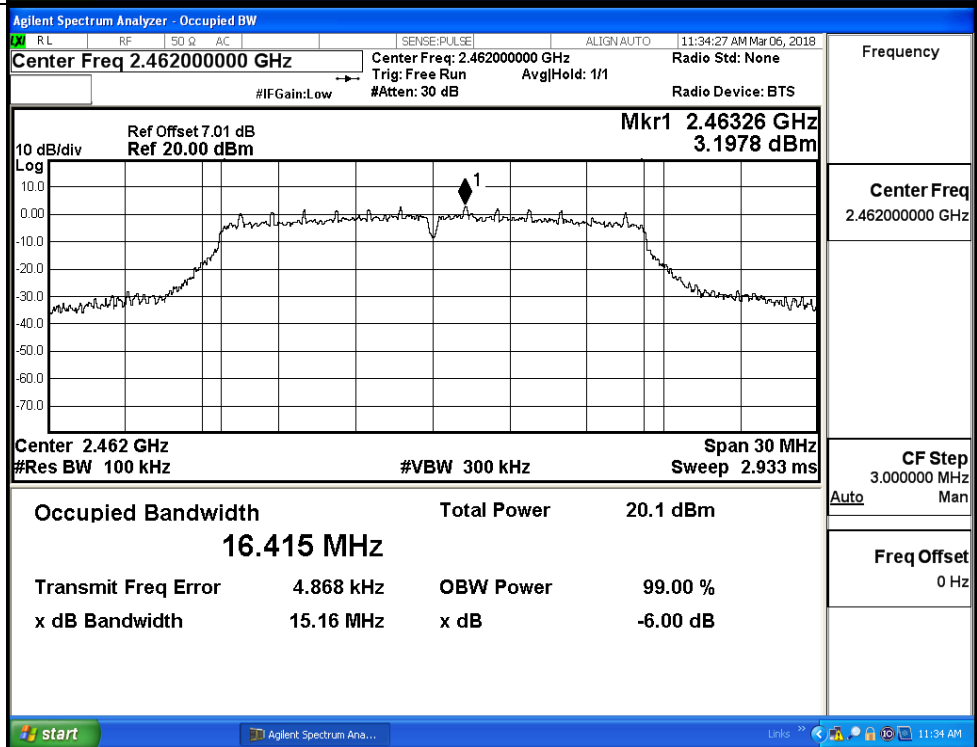


11G/MCH



Frequency
 Center Freq
 2.437000000 GHz
 CF Step
 3.000000 MHz
 Auto Man
 Freq Offset
 0 Hz

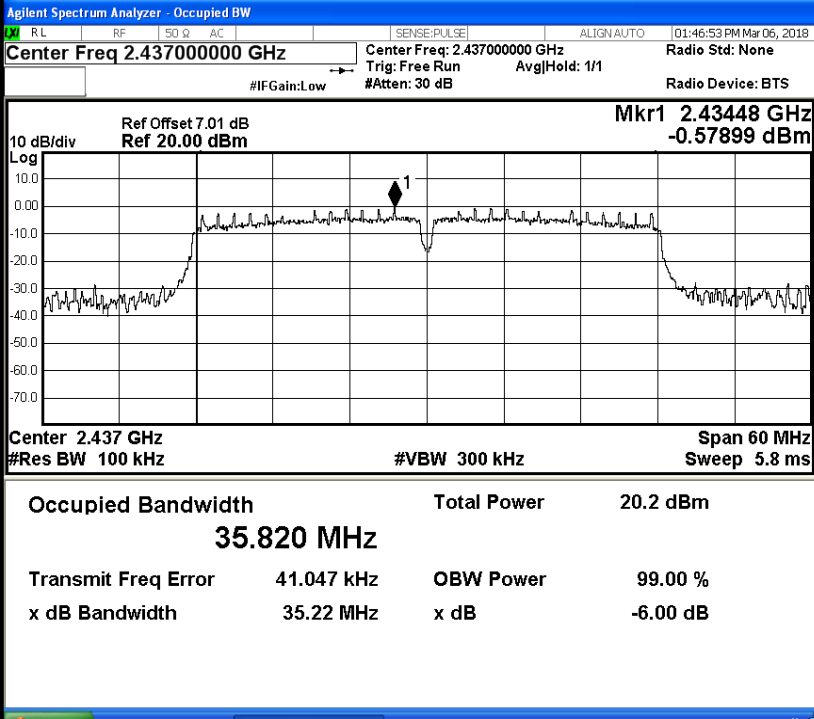
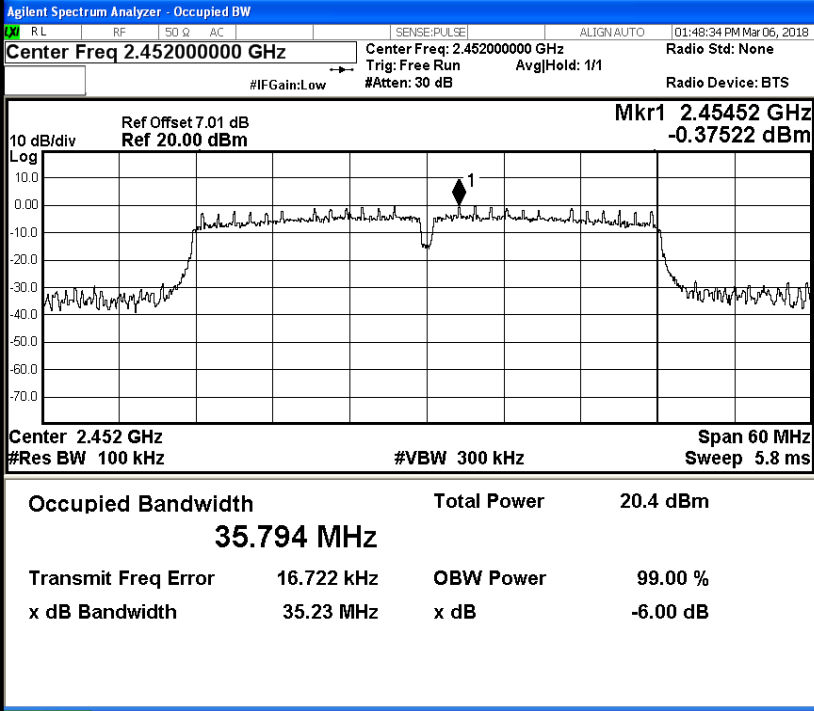
11G/HCH



Frequency
 Center Freq
 2.462000000 GHz
 CF Step
 3.000000 MHz
 Auto Man
 Freq Offset
 0 Hz

| | | |
|----------------------|--|--|
| <p>11N20SISO/LCH</p> | <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.41200000 GHz</p> <p>Occupied Bandwidth 17.541 MHz</p> <p>Total Power 18.7 dBm</p> <p>Mkr1 2.41326 GHz 1.6553 dBm</p> | <p>Frequency</p> <p>Center Freq 2.41200000 GHz</p> <p>CF Step 3.000000 MHz</p> <p>Freq Offset 0 Hz</p> |
| <p>11N20SISO/MCH</p> | <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Occupied Bandwidth 17.558 MHz</p> <p>Total Power 20.2 dBm</p> <p>Mkr1 2.43574 GHz 2.7202 dBm</p> | <p>Frequency</p> <p>Center Freq 2.43700000 GHz</p> <p>CF Step 3.000000 MHz</p> <p>Freq Offset 0 Hz</p> |

| | | |
|----------------------|--|---|
| <p>11N20SISO/HCH</p> | <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.46200000 GHz</p> <p>Center Freq: 2.46200000 GHz</p> <p>Mkr1 2.46329 GHz</p> <p>2.3334 dBm</p> <p>10 dB/div</p> <p>Ref Offset 7.01 dB</p> <p>Ref 20.00 dBm</p> <p>Center 2.462 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 30 MHz</p> <p>Sweep 2.933 ms</p> <p>Occupied Bandwidth 17.548 MHz</p> <p>Total Power 19.8 dBm</p> <p>Transmit Freq Error 10.387 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 15.47 MHz</p> <p>x dB -6.00 dB</p> | <p>Frequency</p> <p>Center Freq</p> <p>2.46200000 GHz</p> <p>CF Step</p> <p>3.000000 MHz</p> <p>Freq Offset</p> <p>0 Hz</p> |
| <p>11N40SISO/LCH</p> | <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.42200000 GHz</p> <p>Center Freq: 2.42200000 GHz</p> <p>Mkr1 2.42452 GHz</p> <p>0.18951 dBm</p> <p>10 dB/div</p> <p>Ref Offset 7.01 dB</p> <p>Ref 20.00 dBm</p> <p>Center 2.422 GHz</p> <p>#Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 60 MHz</p> <p>Sweep 5.8 ms</p> <p>Occupied Bandwidth 35.860 MHz</p> <p>Total Power 21.0 dBm</p> <p>Transmit Freq Error 20.491 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 35.23 MHz</p> <p>x dB -6.00 dB</p> | <p>Frequency</p> <p>Center Freq</p> <p>2.42200000 GHz</p> <p>CF Step</p> <p>6.000000 MHz</p> <p>Freq Offset</p> <p>0 Hz</p> |

| | | |
|----------------------|--|--|
| <p>11N40SISO/MCH</p> |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.43700000 GHz</p> <p>Mkr1 2.43448 GHz -0.57899 dBm</p> <p>Occupied Bandwidth 35.820 MHz</p> <p>Total Power 20.2 dBm</p> <p>Transmit Freq Error 41.047 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 35.22 MHz</p> <p>x dB -6.00 dB</p> | <p>Frequency</p> <p>Center Freq 2.43700000 GHz</p> <p>CF Step 6.000000 MHz</p> <p>Freq Offset 0 Hz</p> |
| <p>11N40SISO/HCH</p> |  <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.45200000 GHz</p> <p>Mkr1 2.45452 GHz -0.37522 dBm</p> <p>Occupied Bandwidth 35.794 MHz</p> <p>Total Power 20.4 dBm</p> <p>Transmit Freq Error 16.722 kHz</p> <p>OBW Power 99.00 %</p> <p>x dB Bandwidth 35.23 MHz</p> <p>x dB -6.00 dB</p> | <p>Frequency</p> <p>Center Freq 2.45200000 GHz</p> <p>CF Step 6.000000 MHz</p> <p>Freq Offset 0 Hz</p> |

B.3 RF Conducted Spurious Emissions

| Mode | Channel | Pref [dBm] | Max. Level [dBm] | Limit [dBm] | Verdict |
|---------------|---------|------------|------------------|-------------|---------|
| 11B | LCH | 6.666 | -39.677 | -13.334 | PASS |
| | MCH | 6.648 | -41.547 | -13.352 | PASS |
| | HCH | 6.354 | -44.379 | -13.646 | PASS |
| 11G | LCH | 1.343 | -44.645 | -18.657 | PASS |
| | MCH | 3.369 | -44.655 | -16.631 | PASS |
| | HCH | 2.613 | -44.607 | -17.387 | PASS |
| 11N20 SISO | LCH | 1.235 | -44.833 | -18.765 | PASS |
| | MCH | 3.197 | -44.633 | -16.803 | PASS |
| | HCH | 2.781 | -44.615 | -17.219 | PASS |
| 11N40 SISO | LCH | 0.333 | -45.259 | -19.667 | PASS |
| | MCH | -0.527 | -44.937 | -20.527 | PASS |
| | HCH | -0.359 | -44.543 | -20.359 | PASS |

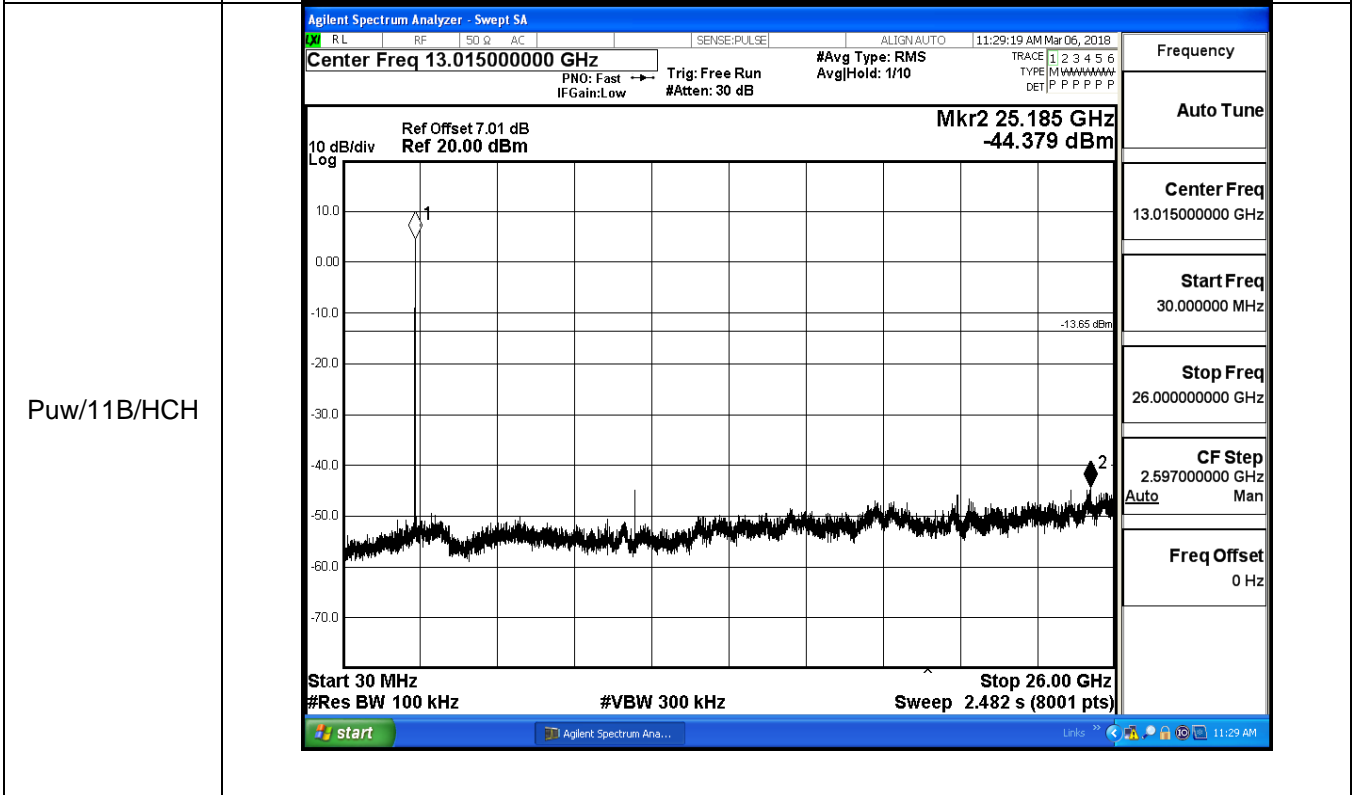
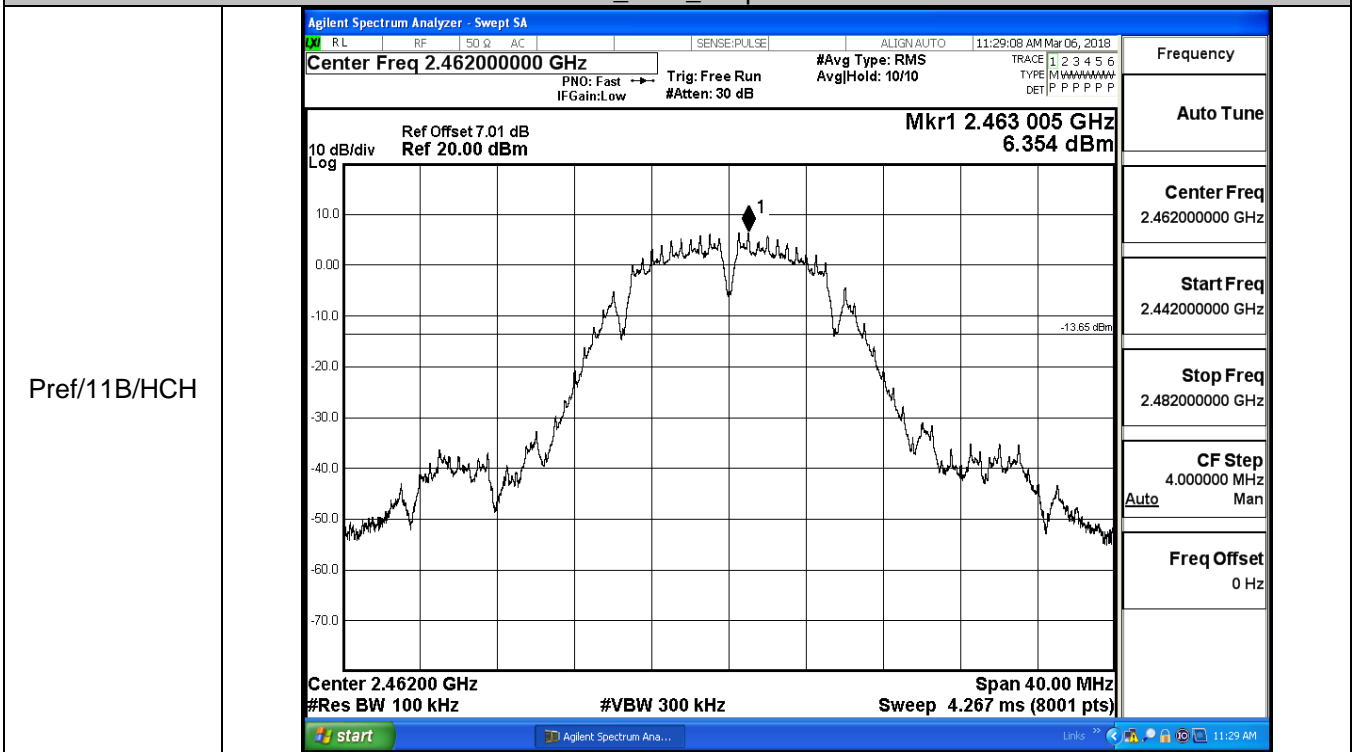
11B_LCH_Graphs

| | |
|---------------------|--|
| <p>Pref/11B/LCH</p> | <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.41200000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.411 500 GHz 6.666 dBm</p> <p>10 dB/div Log</p> <p>Center 2.41200 GHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Span 40.00 MHz Sweep 4.267 ms (8001 pts)</p> |
| <p>Puw/11B/LCH</p> | <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr2 9.649 GHz -39.677 dBm</p> <p>10 dB/div Log</p> <p>Start 30 MHz #Res BW 100 kHz</p> <p>#VBW 300 kHz</p> <p>Stop 26.00 GHz Sweep 2.482 s (8001 pts)</p> |

11B_MCH_Graphs

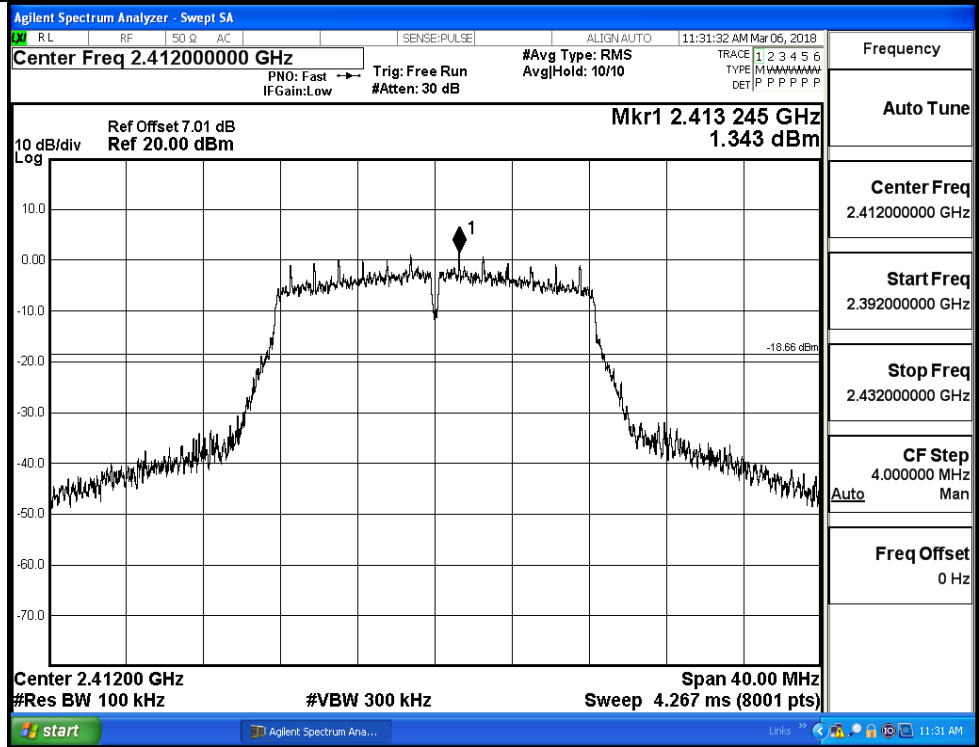
| | |
|---------------------|--|
| <p>Pref/11B/MCH</p> | <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.437000000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.437 505 GHz 6.648 dBm</p> <p>Center 2.43700 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 4.267 ms (8001 pts)</p> |
| <p>Puw/11B/MCH</p> | <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.015000000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr2 9.749 GHz -41.547 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.00 GHz Sweep 2.482 s (8001 pts)</p> |

11B_HCH_Graphs

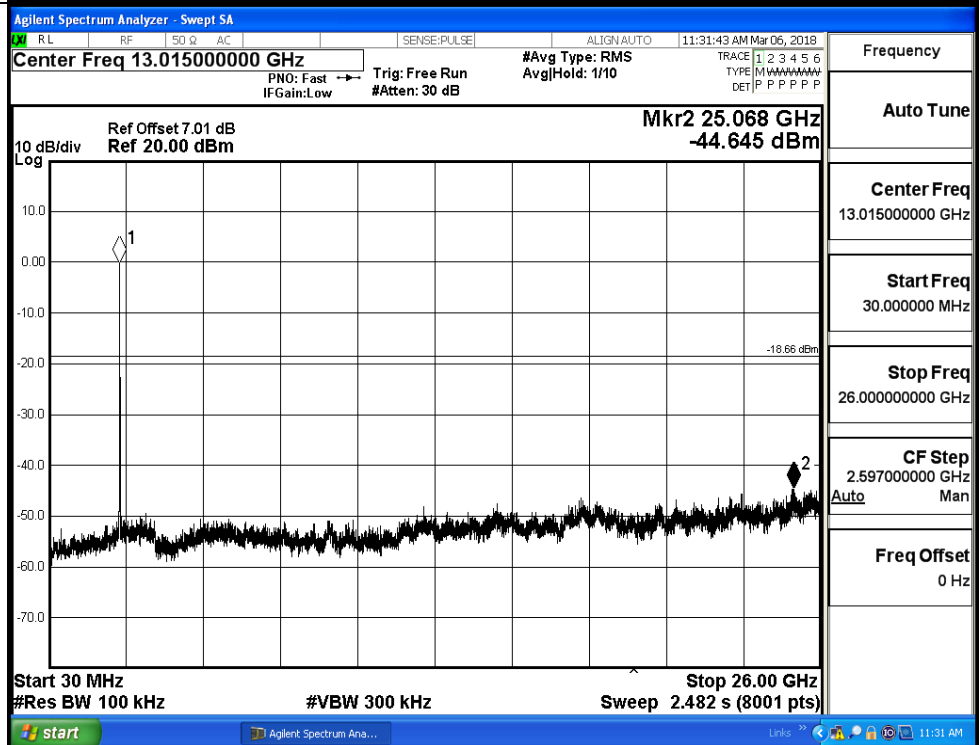


11G_LCH_Graphs

Pref/11G/LCH

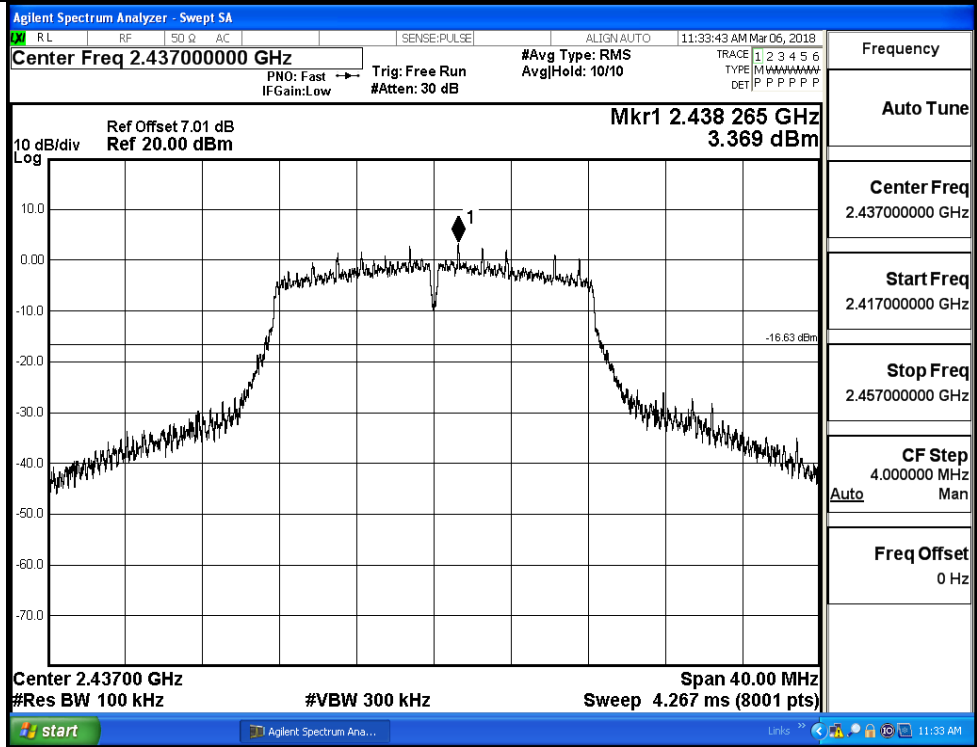


Puw/11G/LCH

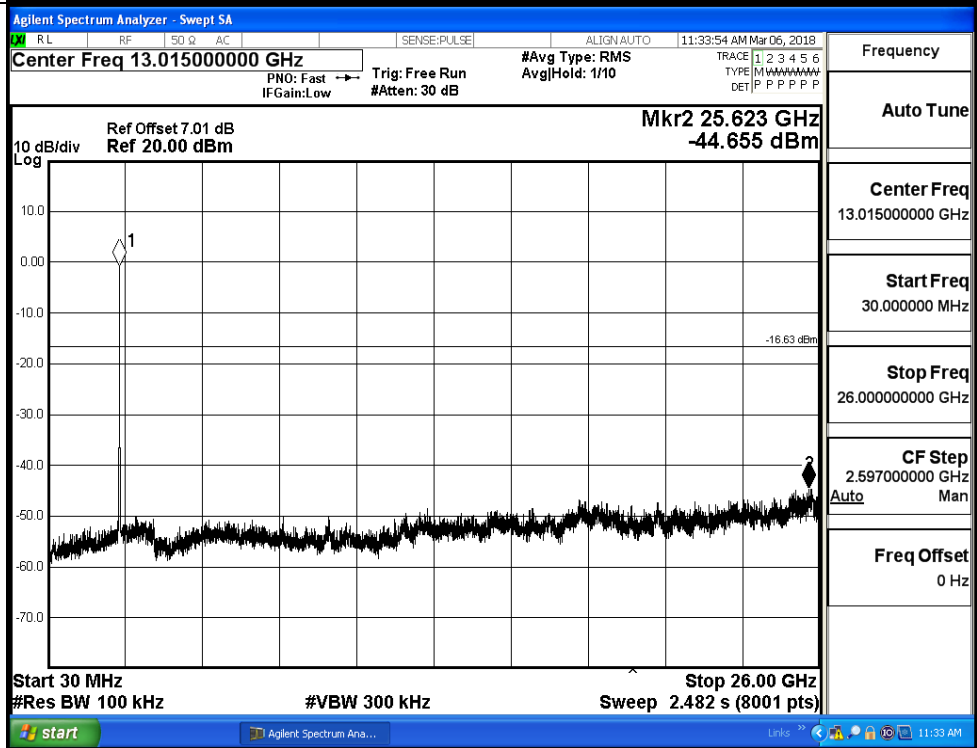


11G_MCH_Graphs

Pref/11G/MCH



Puw/11G/MCH

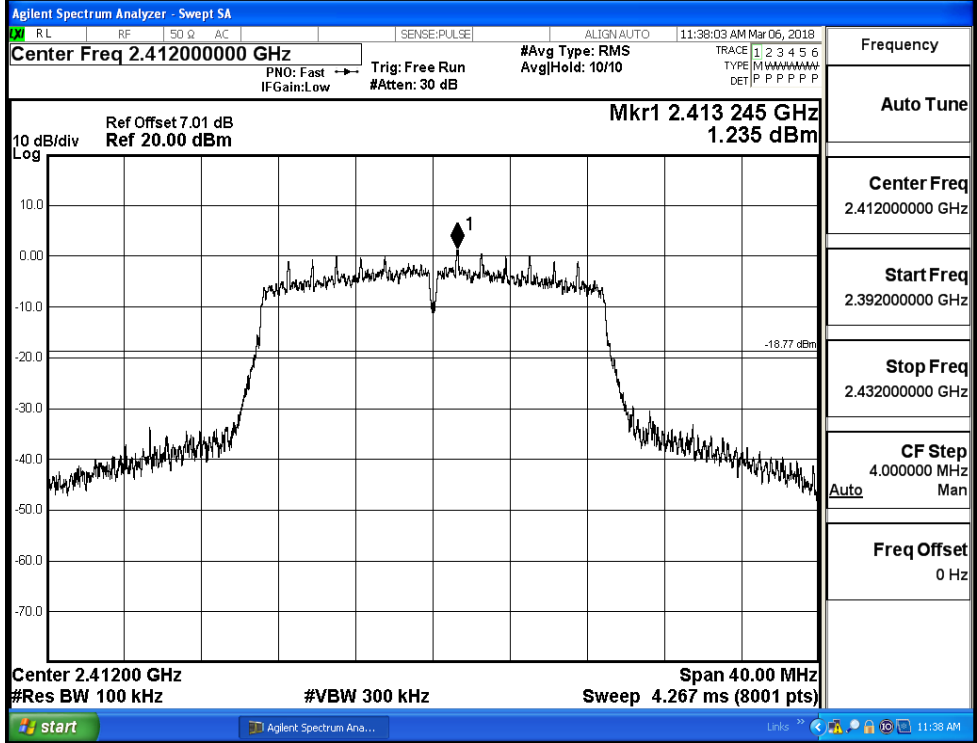


11G_HCH_Graphs

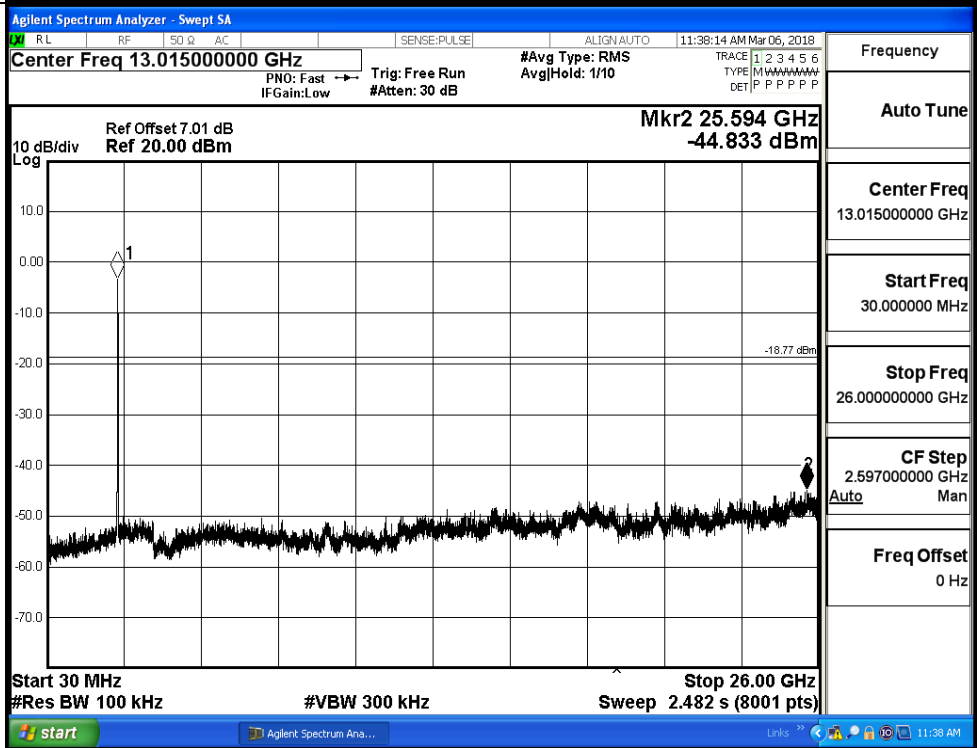
| | |
|---------------------|--|
| <p>Pref/11G/HCH</p> | <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.46200000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr1 2.460 740 GHz 2.613 dBm</p> <p>10 dB/div Log</p> <p>Center 2.46200 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 4.267 ms (8001 pts)</p> |
| <p>Puw/11G/HCH</p> | <p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 13.01500000 GHz</p> <p>Ref Offset 7.01 dB Ref 20.00 dBm</p> <p>Mkr2 25.653 GHz -44.607 dBm</p> <p>10 dB/div Log</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.00 GHz Sweep 2.482 s (8001 pts)</p> |

11N20SISO_LCH_Graphs

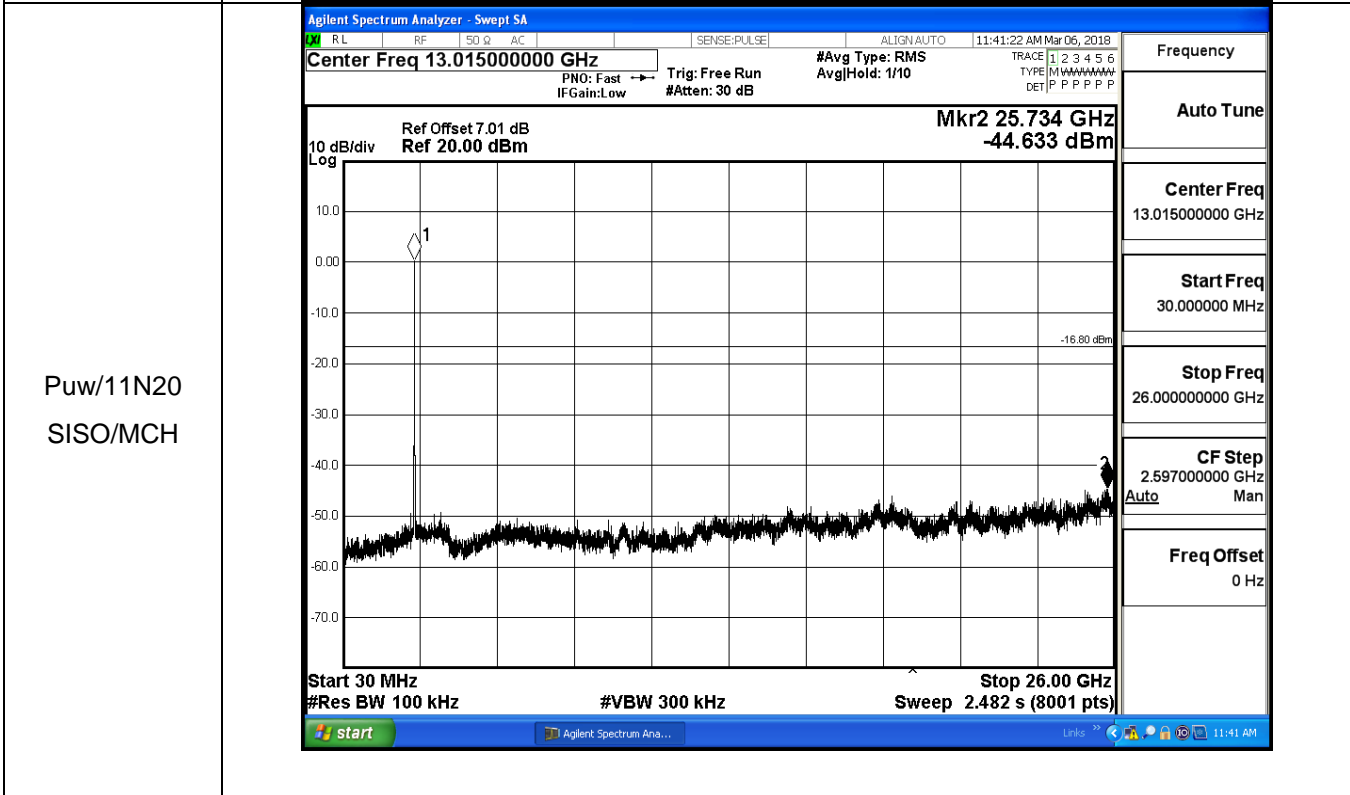
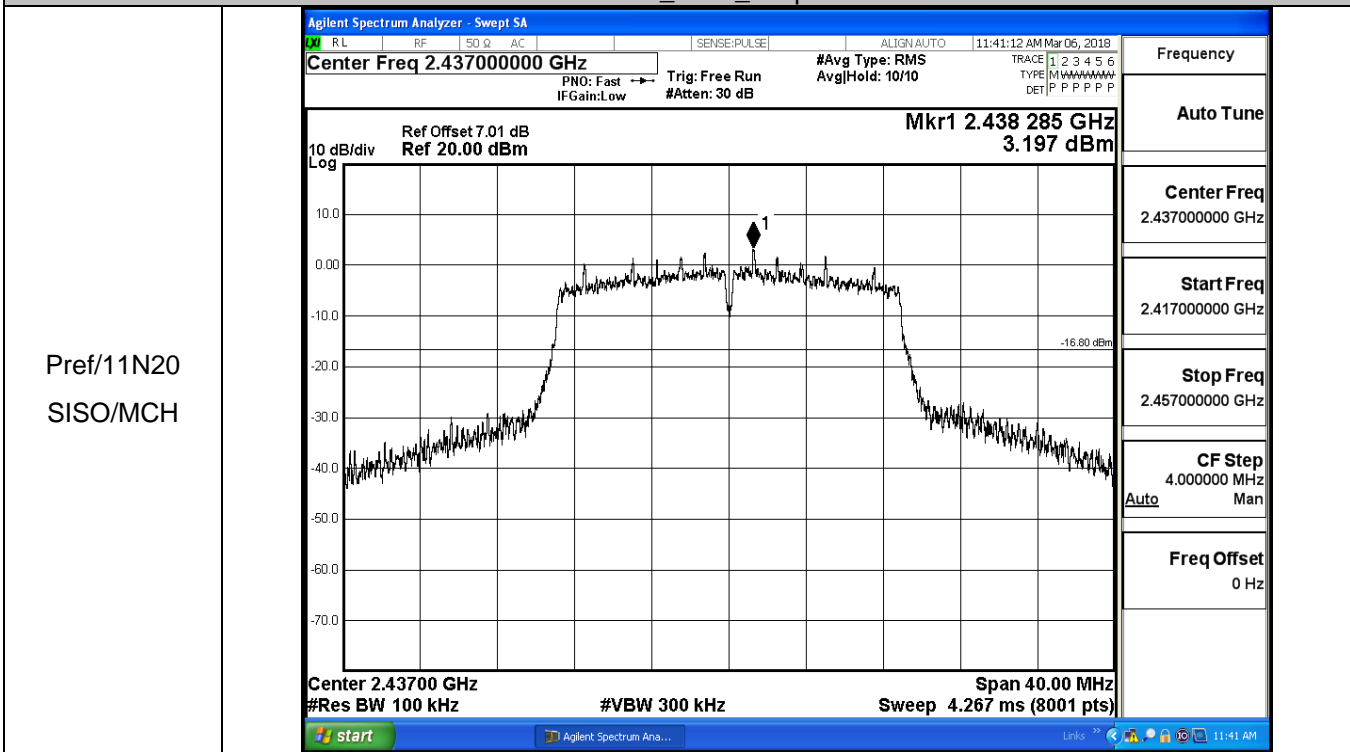
Pref/11N20SIS
O/LCH



Puw/11N20
SISO/LCH

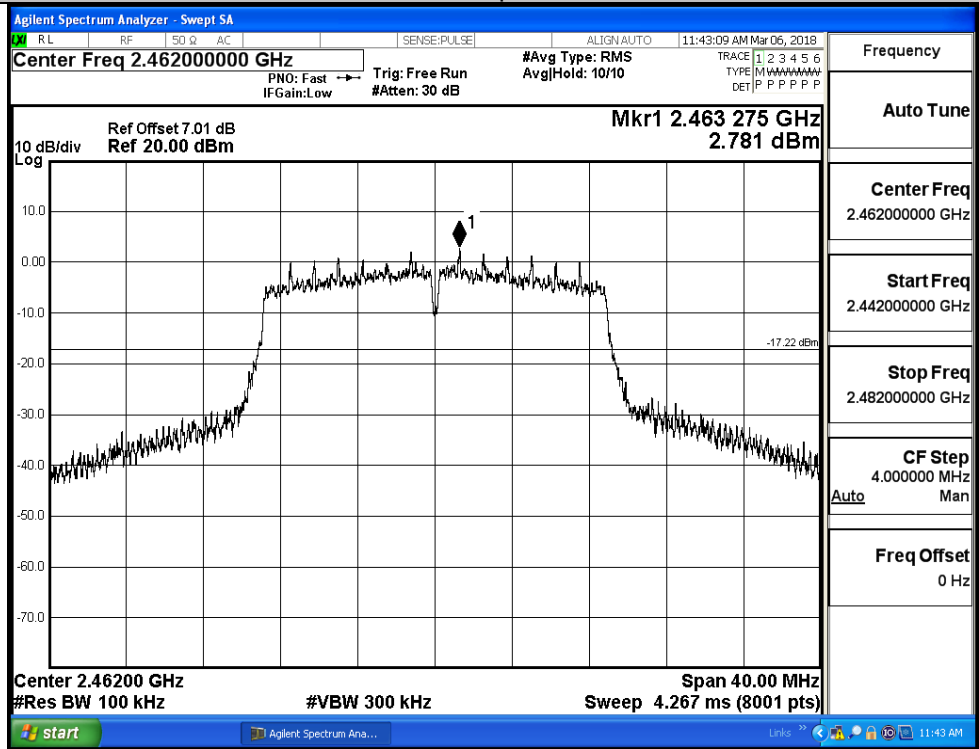


11N20SISO_MCH_Graphs

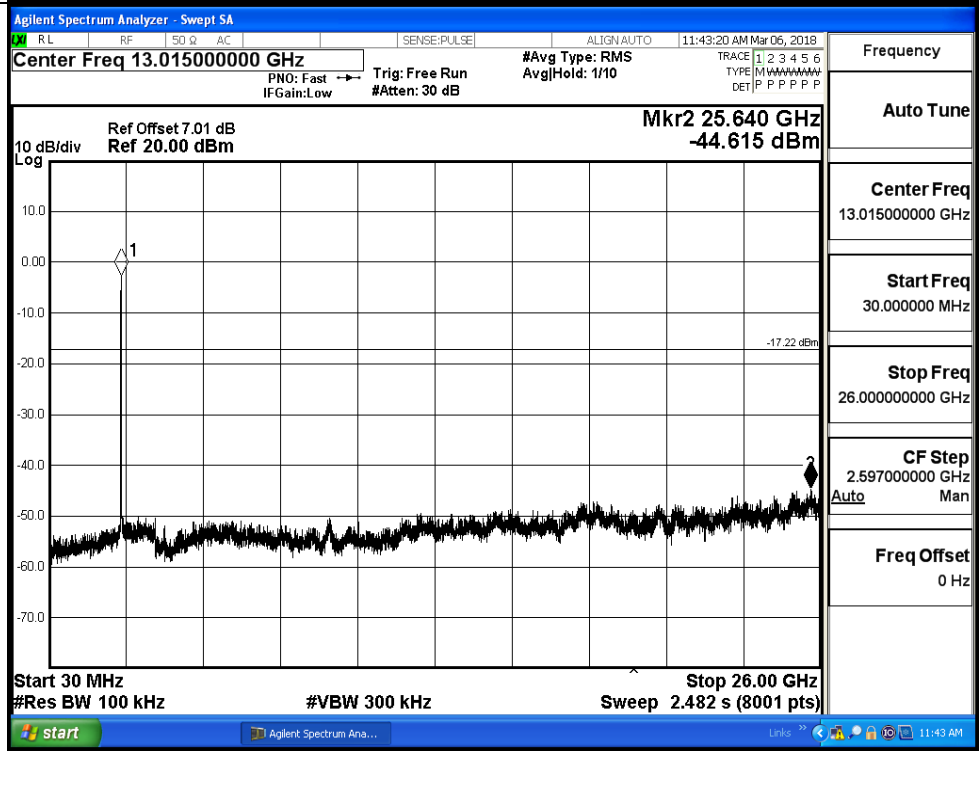


11N20SISO_HCH_Graphs

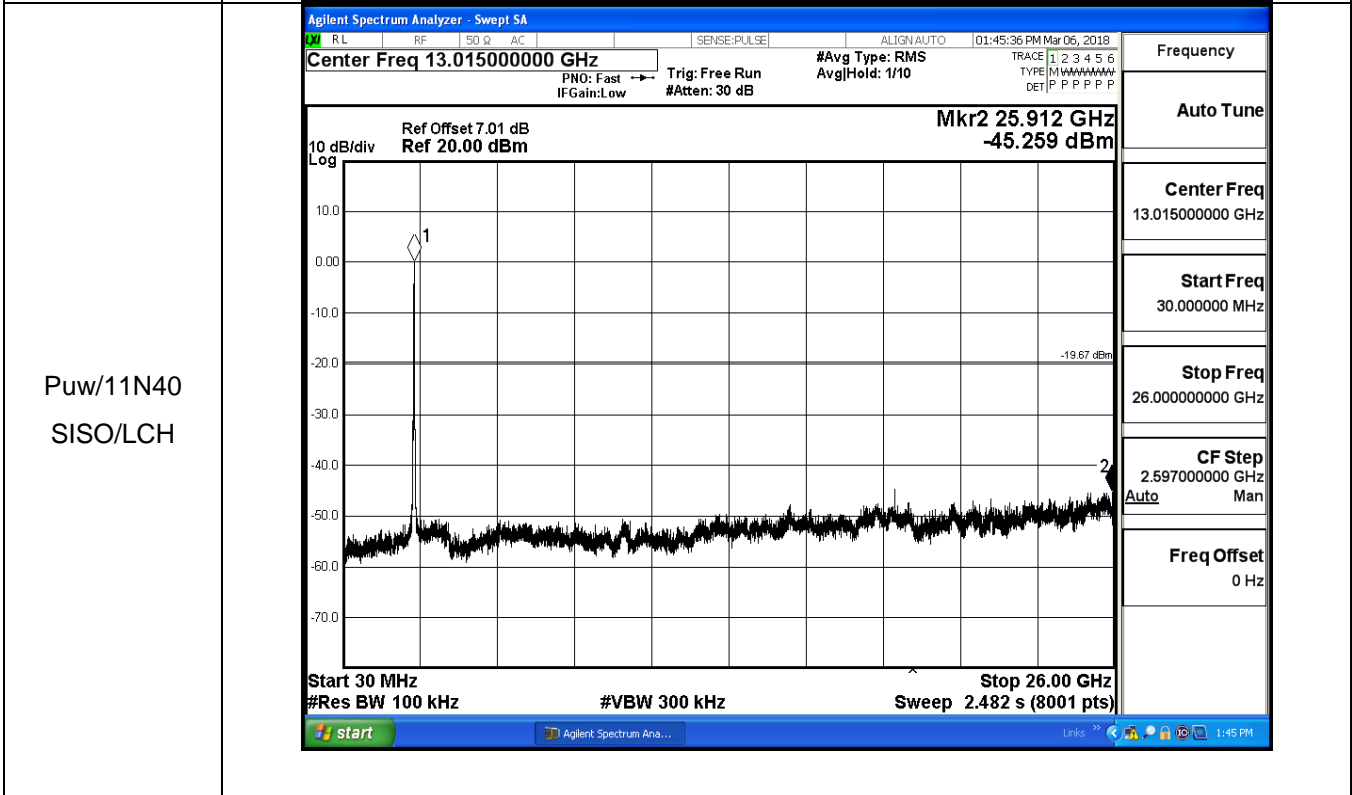
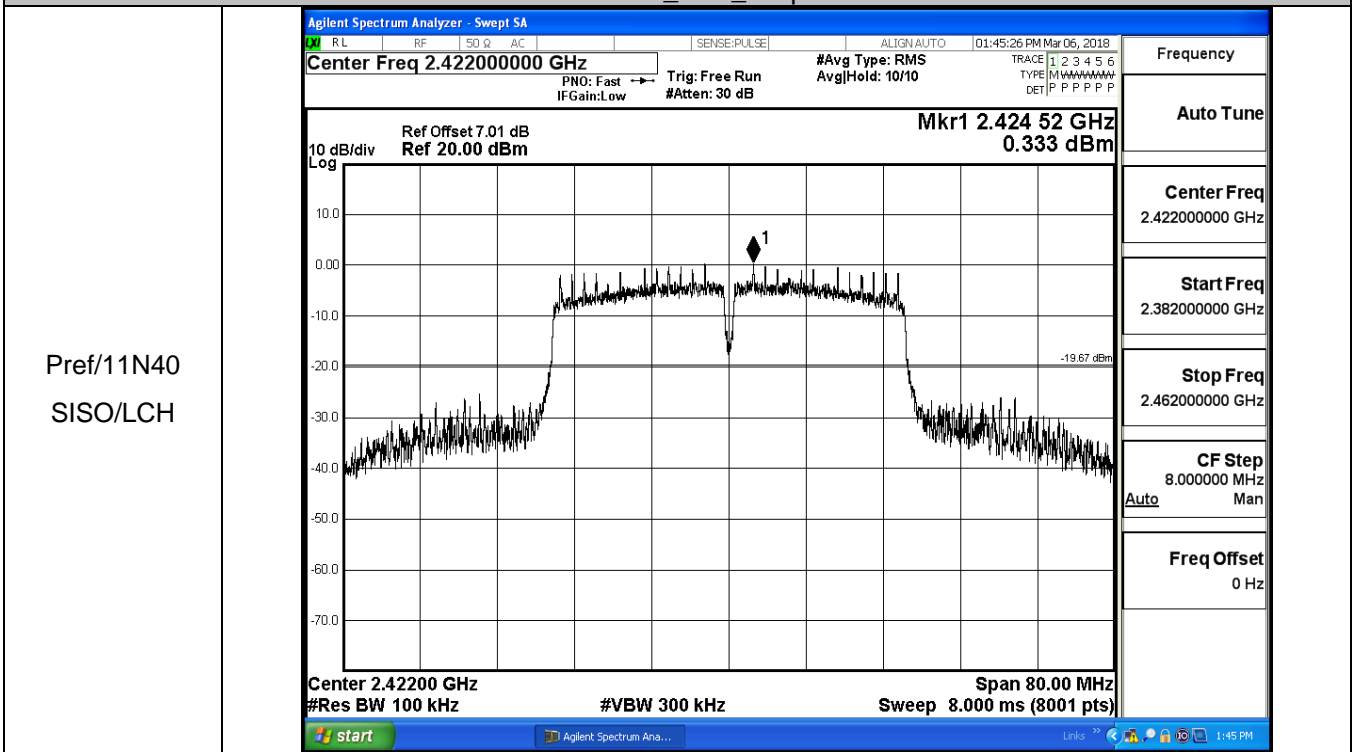
Pref/11N20
SISO/HCH



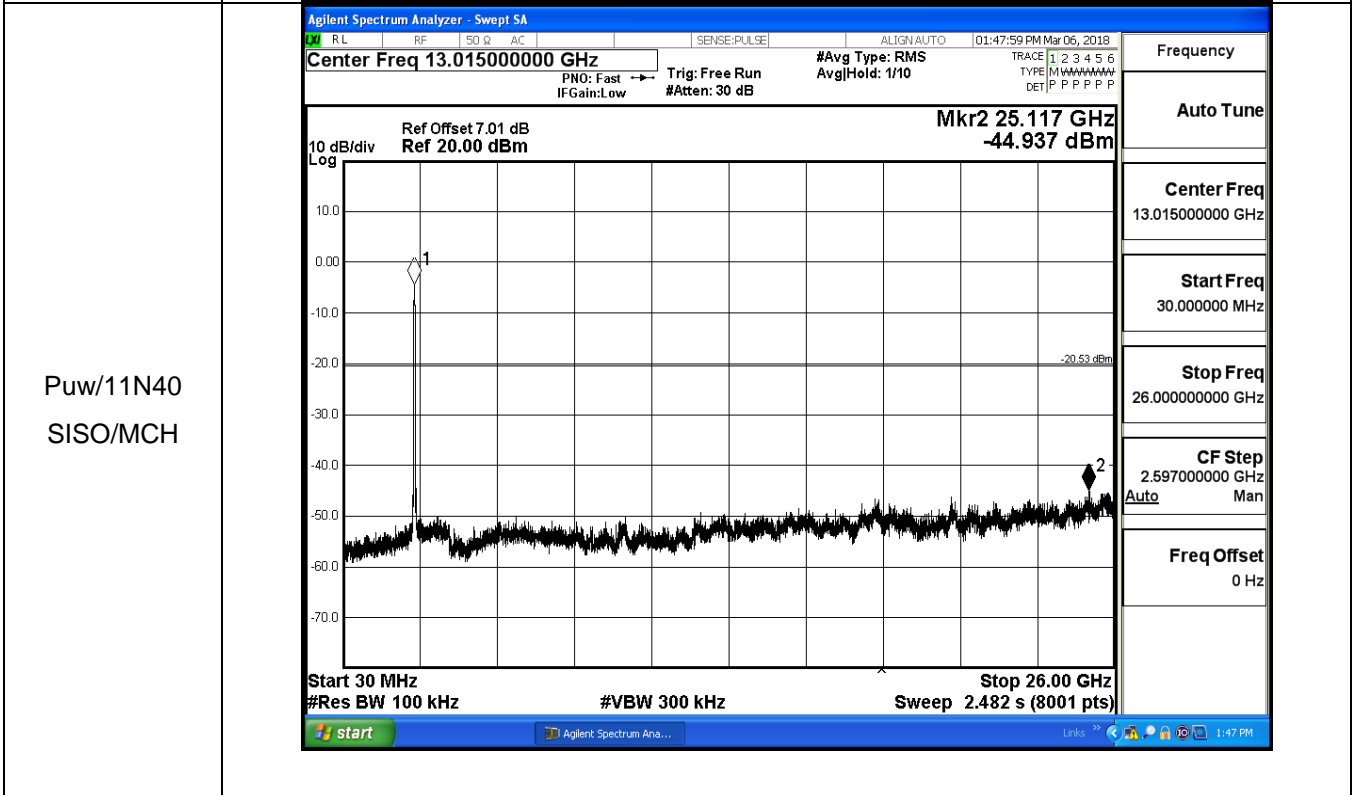
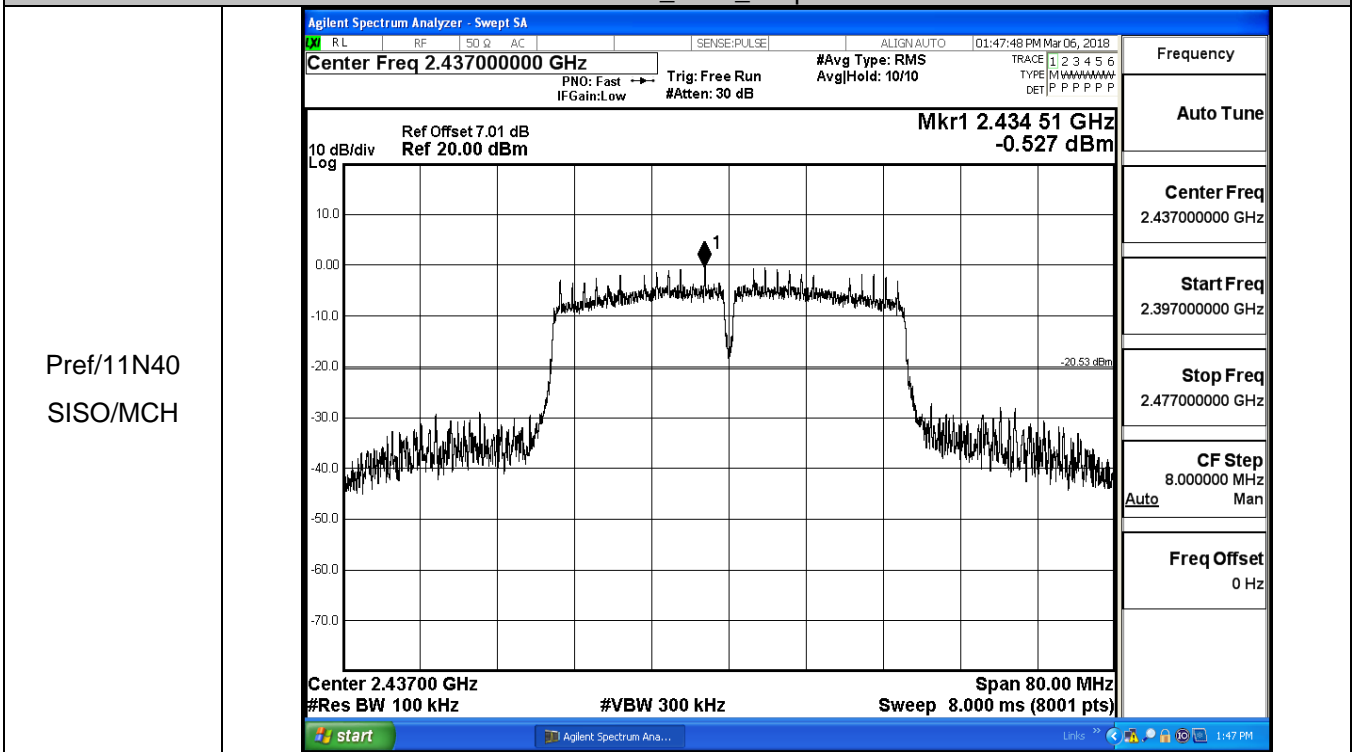
Puw/11N20
SISO/HCH



11N40SISO_LCH_Graphs

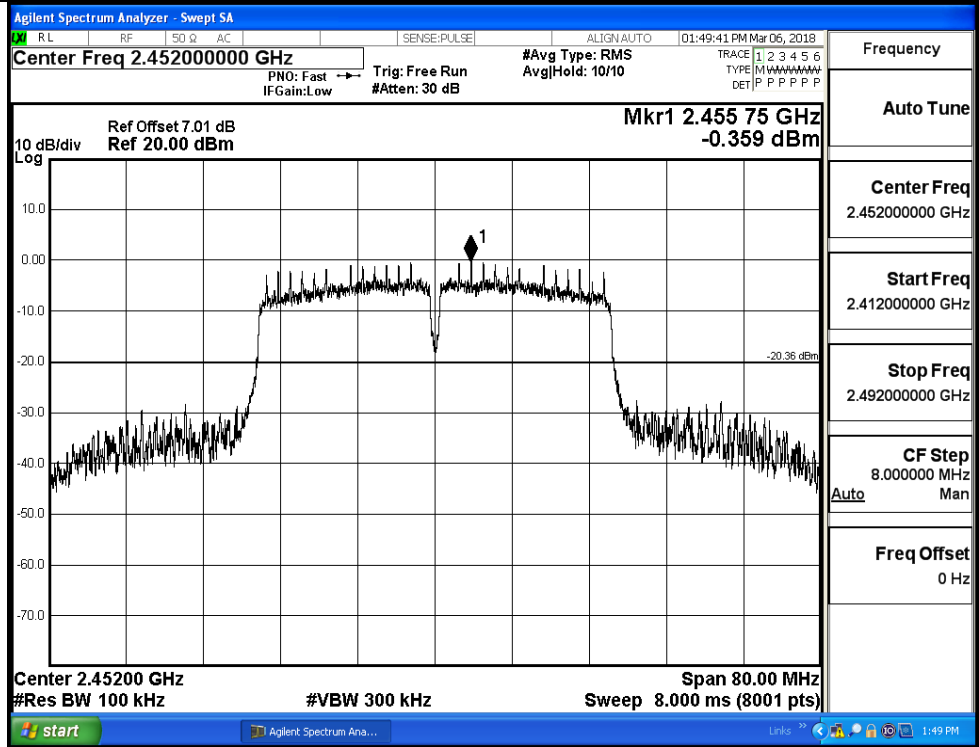


11N40SISO_MCH_Graphs

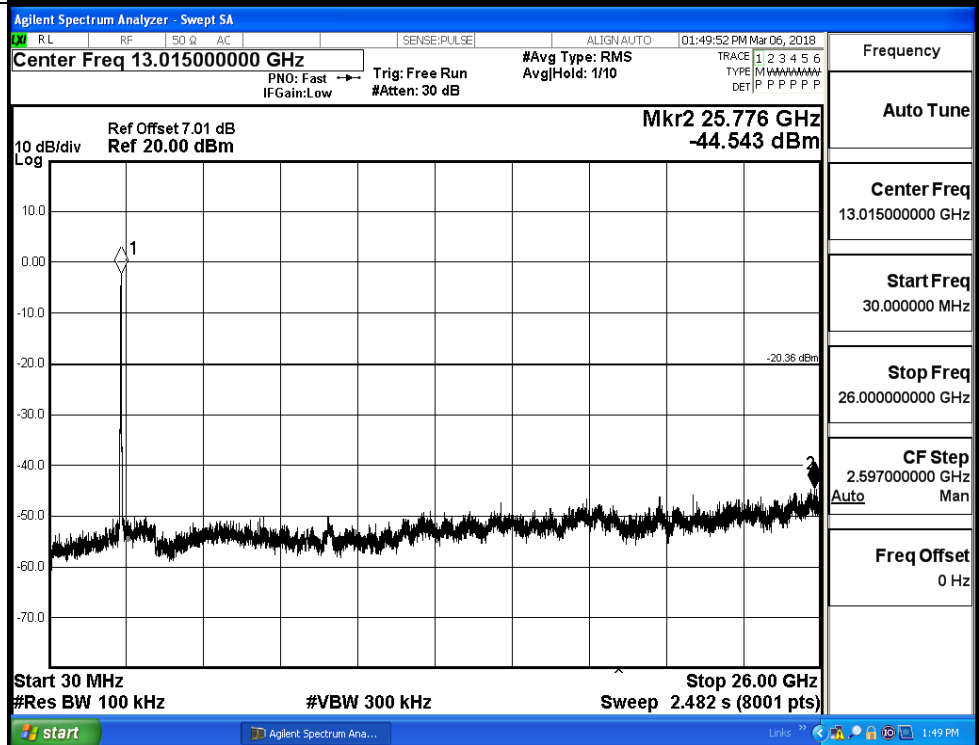


11N40SISO_HCH_Graphs

Pref/11N40
SISO/HCH

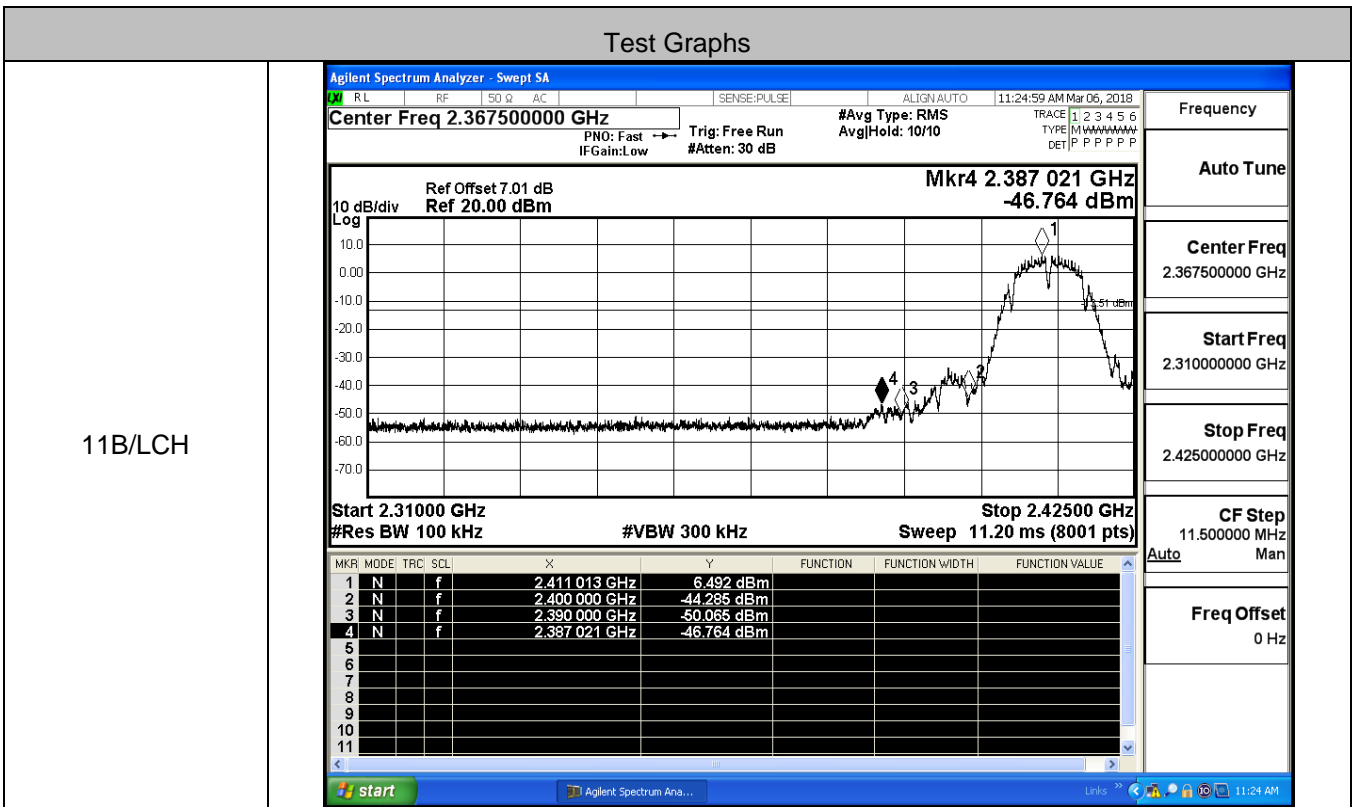


Puw/11N40
SISO/HCH

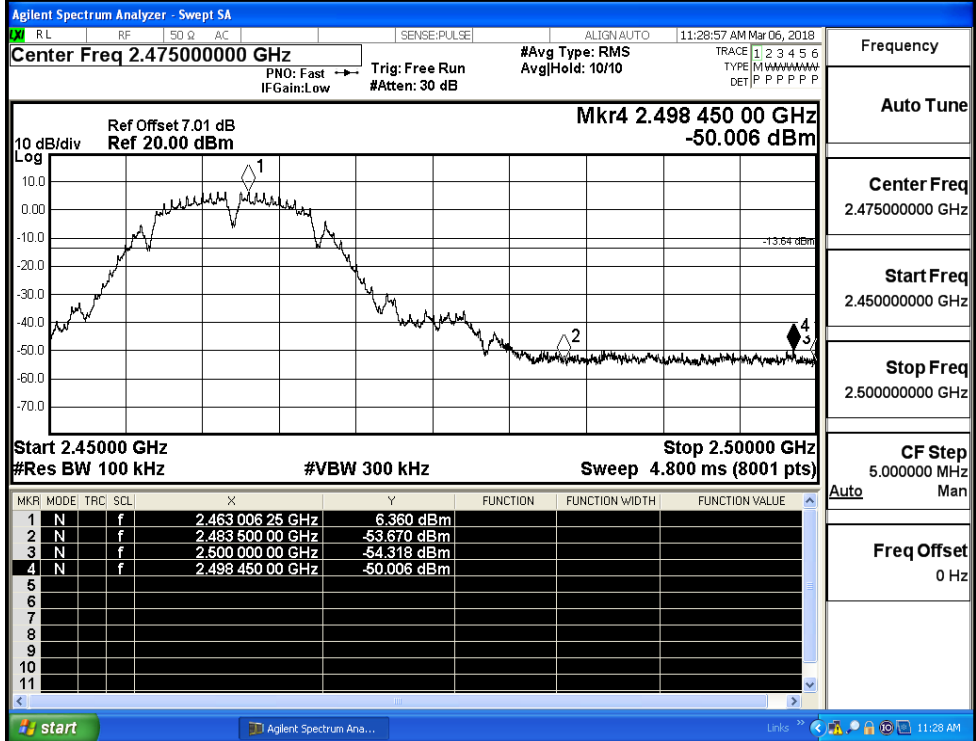


B.4 Band-edge for RF Conducted Emissions

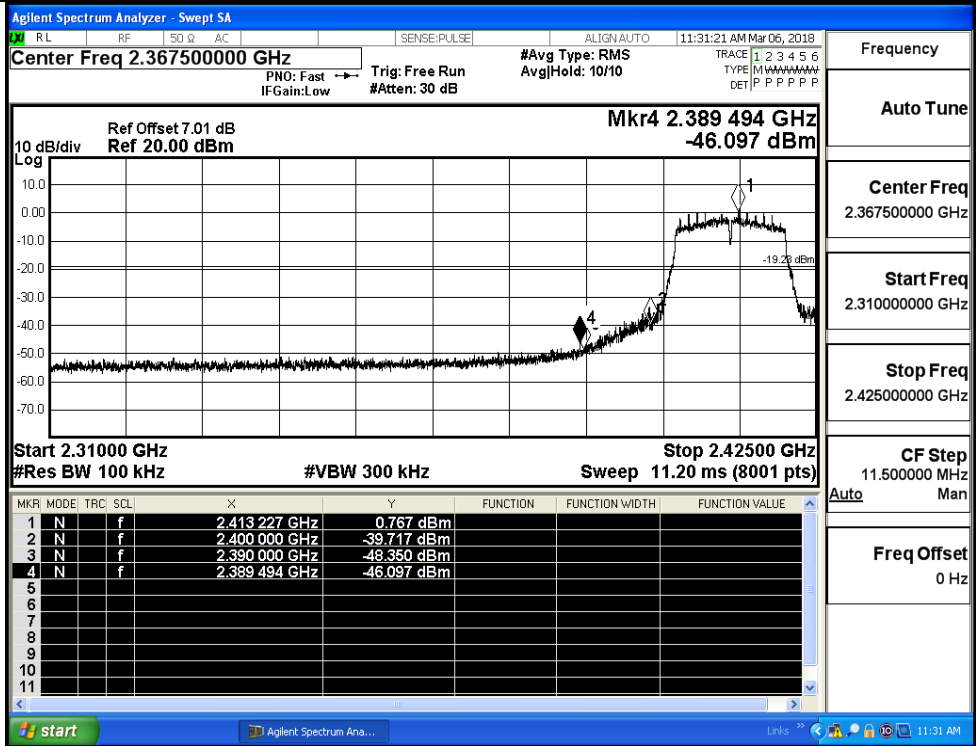
| Mode | Channel | Carrier Power[dBm] | Max.Spurious Level [dBm] | Limit [dBm] | Verdict |
|-----------|---------|--------------------|--------------------------|-------------|---------|
| 11B | LCH | 6.492 | -46.764 | -13.51 | PASS |
| | HCH | 6.360 | -50.006 | -13.64 | PASS |
| 11G | LCH | 0.767 | -46.097 | -19.23 | PASS |
| | HCH | 3.030 | -42.930 | -16.97 | PASS |
| 11N20SISO | LCH | 1.671 | -45.705 | -18.33 | PASS |
| | HCH | 2.024 | -41.697 | -17.98 | PASS |
| 11N40SISO | LCH | 0.349 | -30.482 | -19.65 | PASS |
| | HCH | -0.399 | -31.118 | -20.4 | PASS |



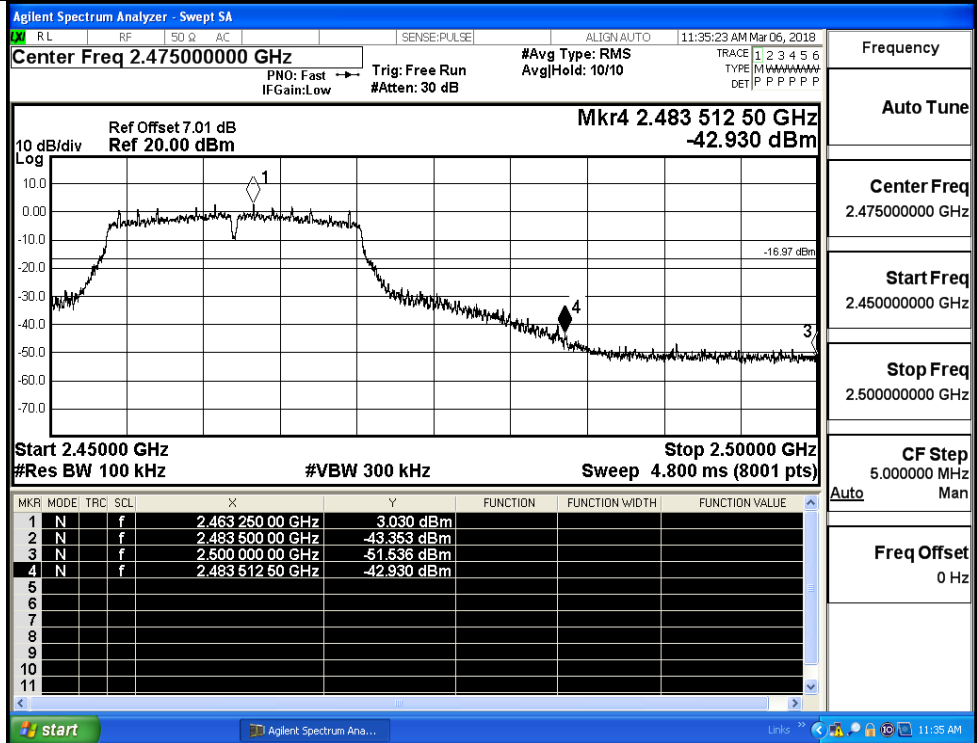
11B/HCH



11G/LCH

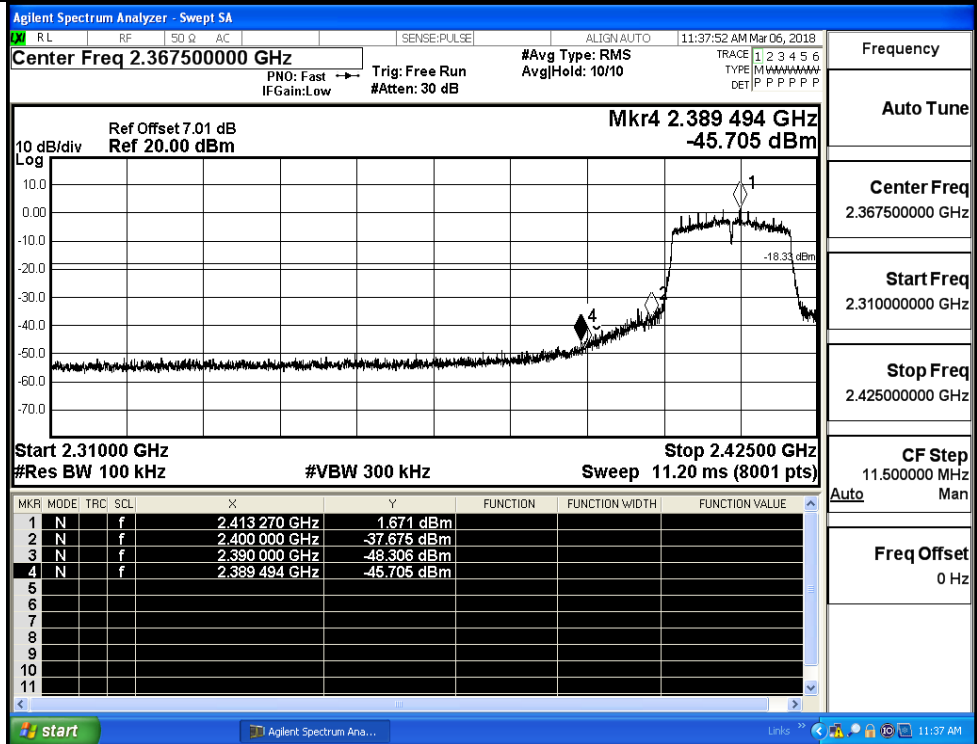


11G/HCH



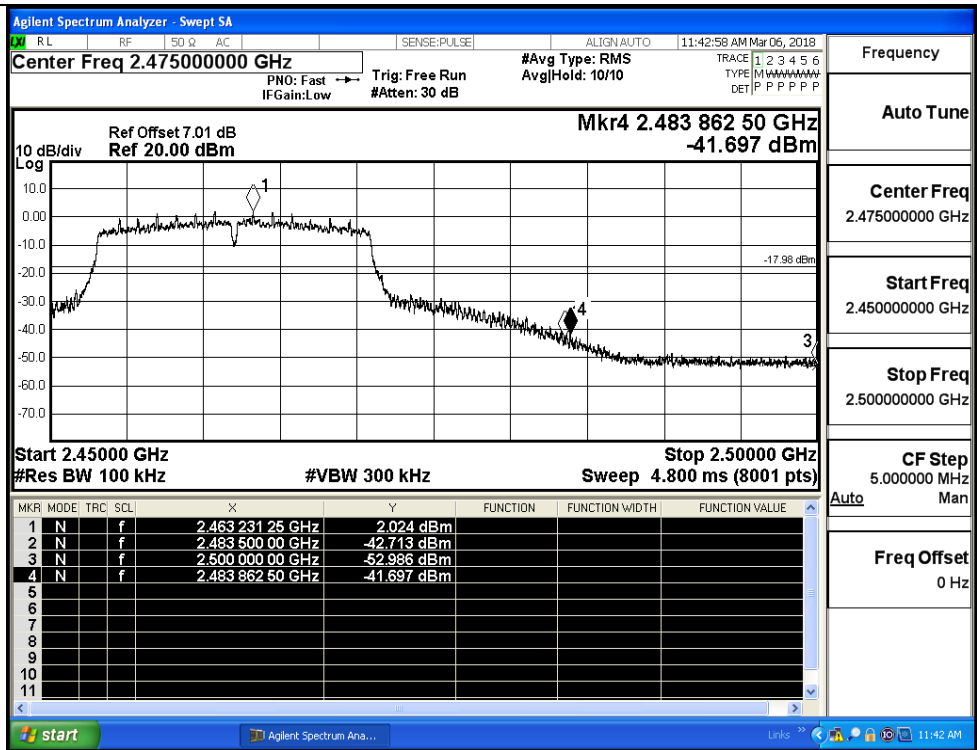
Frequency
Auto Tune
Center Freq
2.475000000 GHz
Start Freq
2.450000000 GHz
Stop Freq
2.500000000 GHz
CF Step
5.000000 MHz
Auto Man
Freq Offset
0 Hz

11N20SISO/LCH

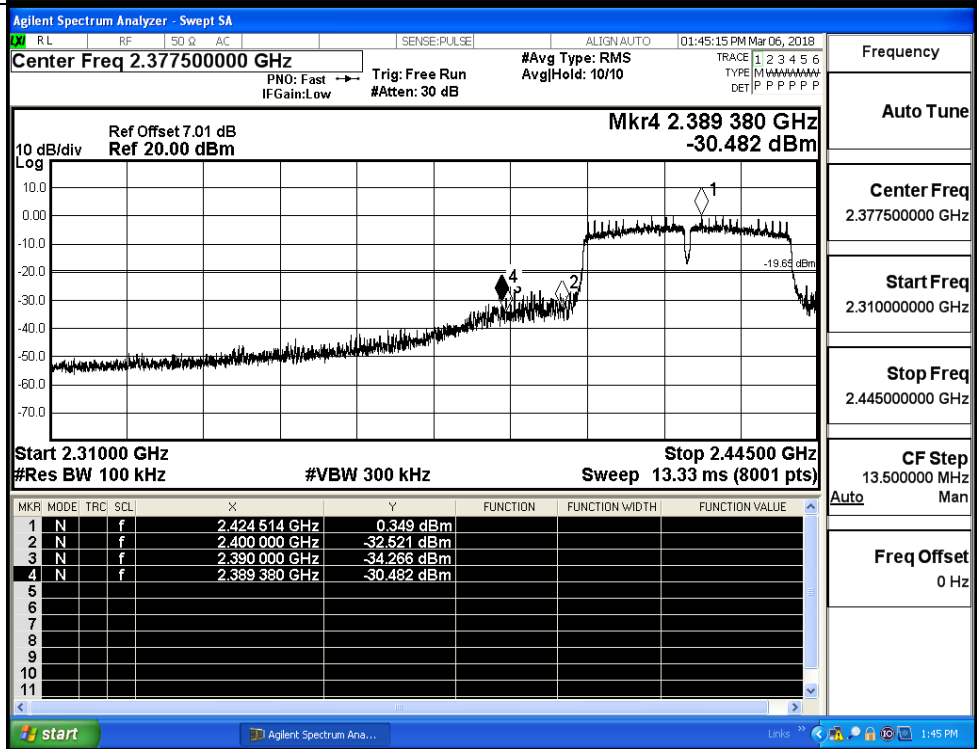


Frequency
Auto Tune
Center Freq
2.367500000 GHz
Start Freq
2.310000000 GHz
Stop Freq
2.425000000 GHz
CF Step
11.500000 MHz
Auto Man
Freq Offset
0 Hz

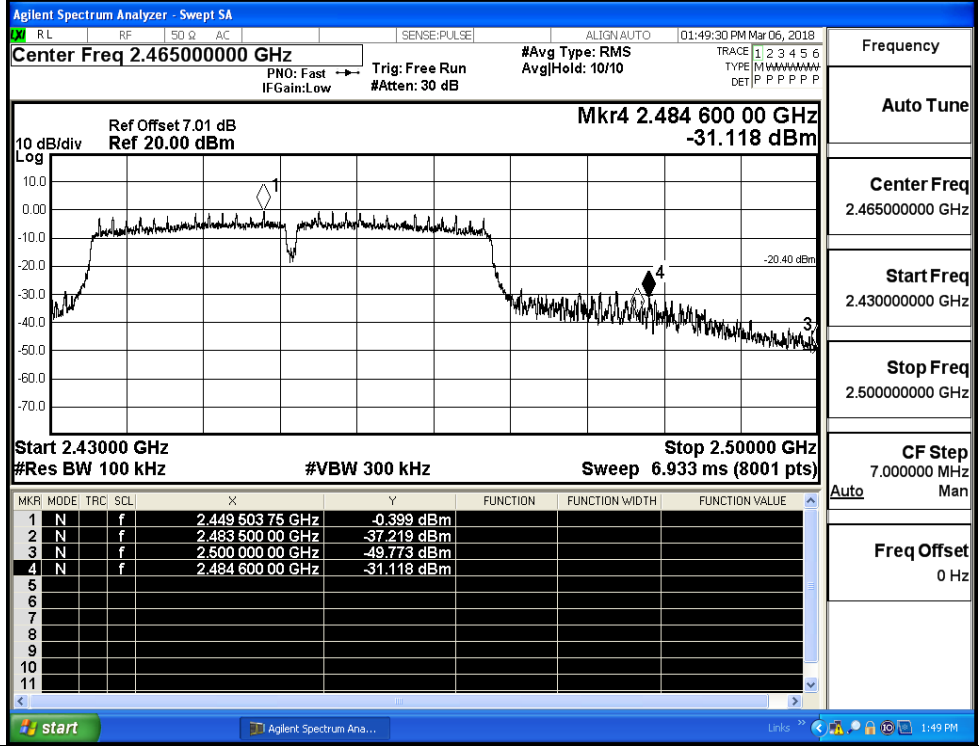
11N20SISO/HCH



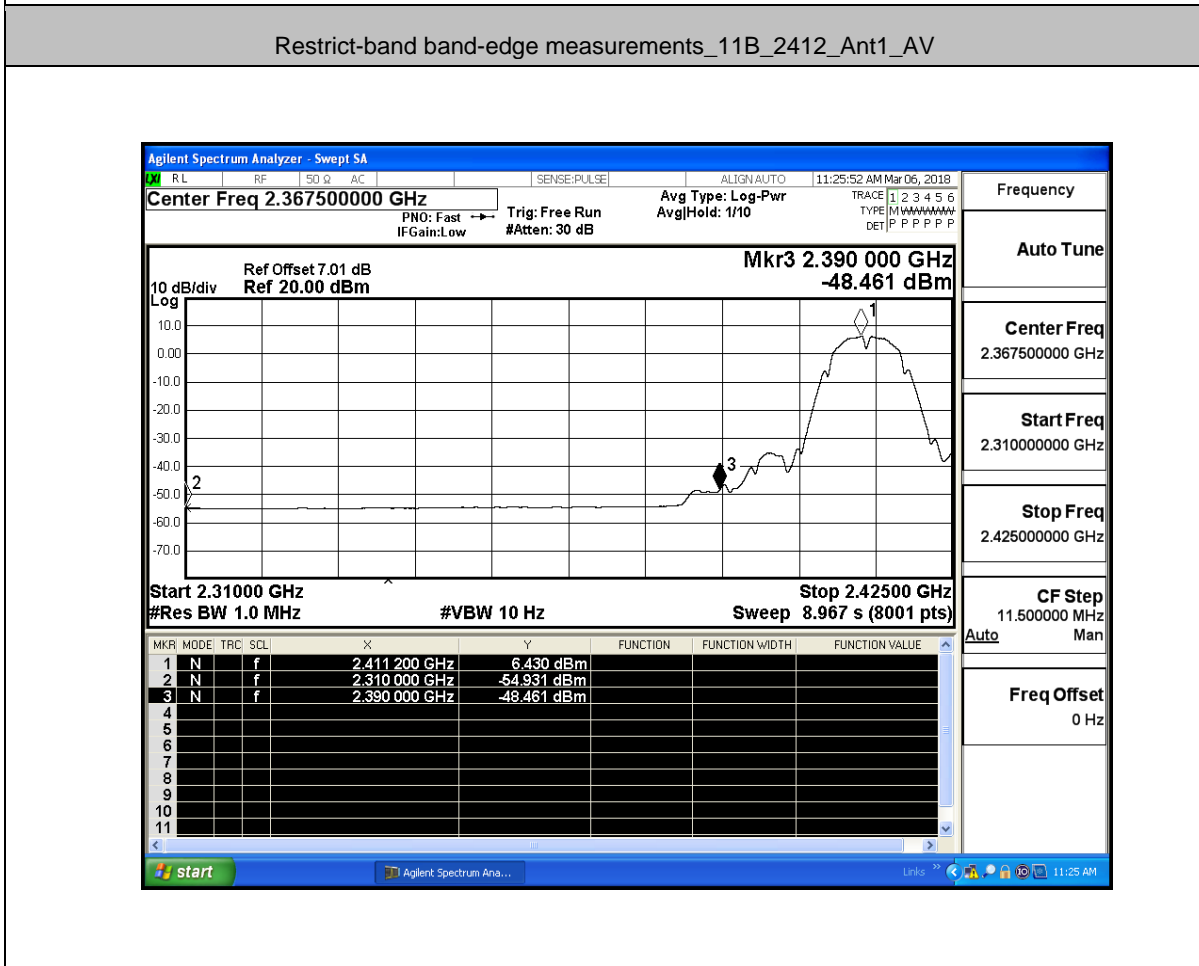
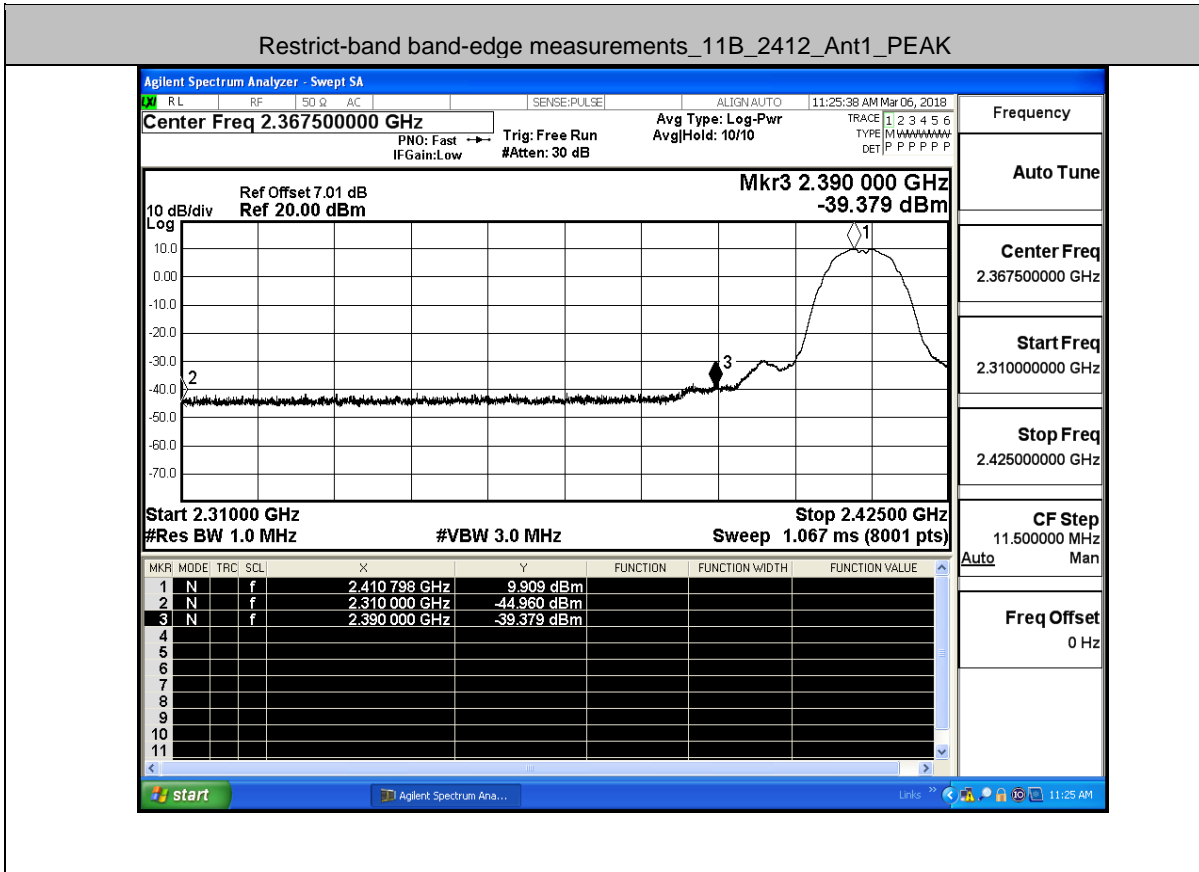
11N40SISO/LCH



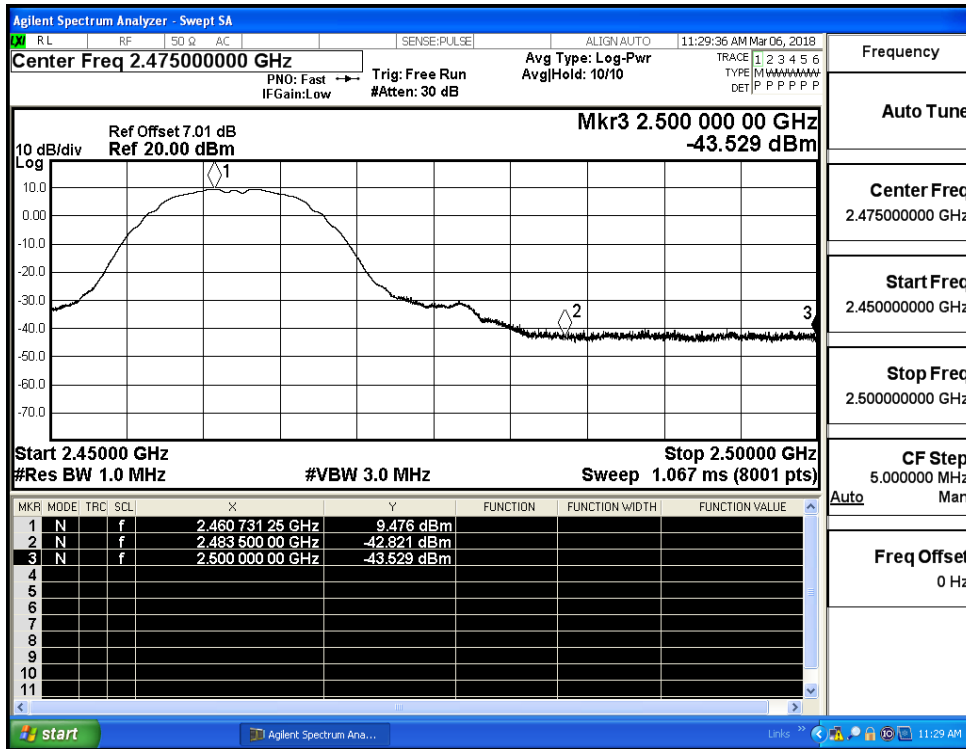
11N40SISO/HCH



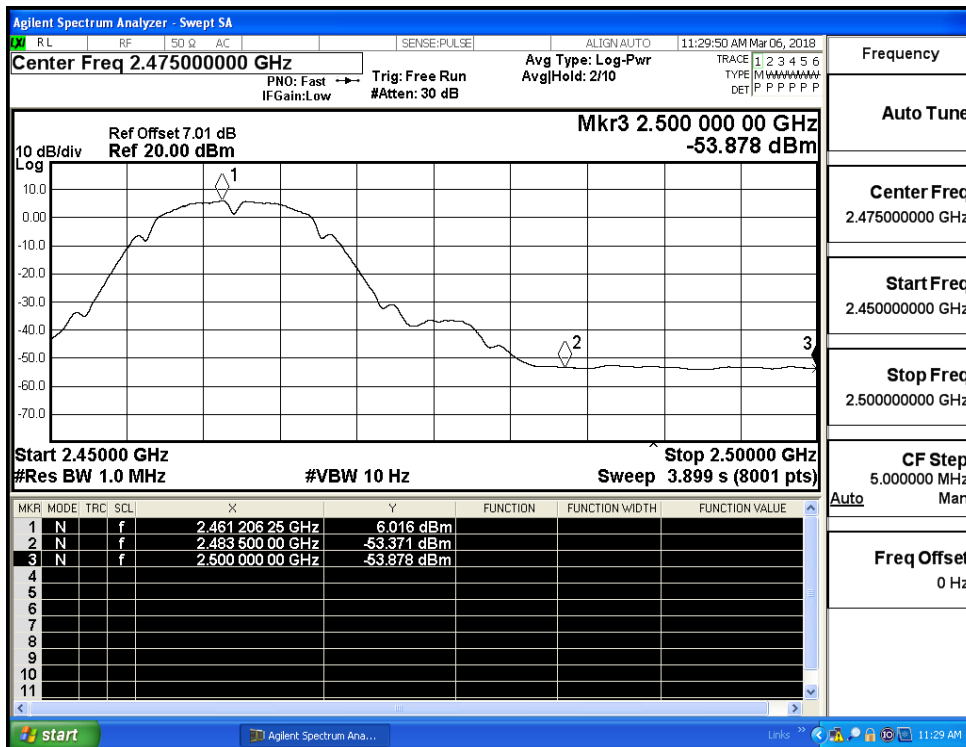
B.5 Restrict-band band-edge measurements



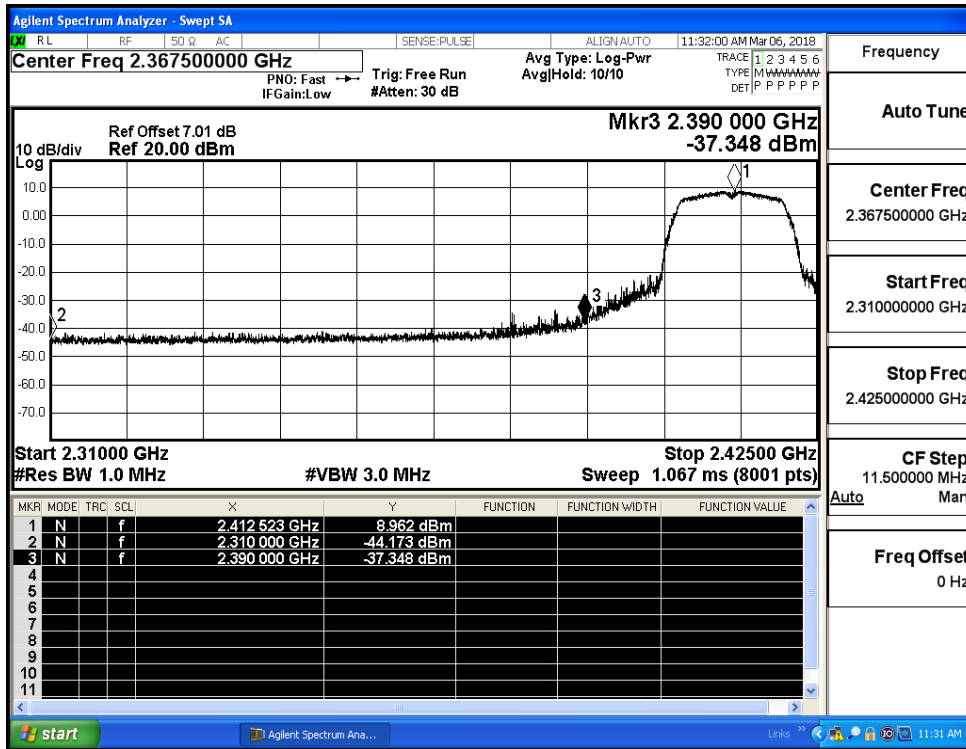
Restrict-band band-edge measurements_11B_2462_Ant1_PEAK



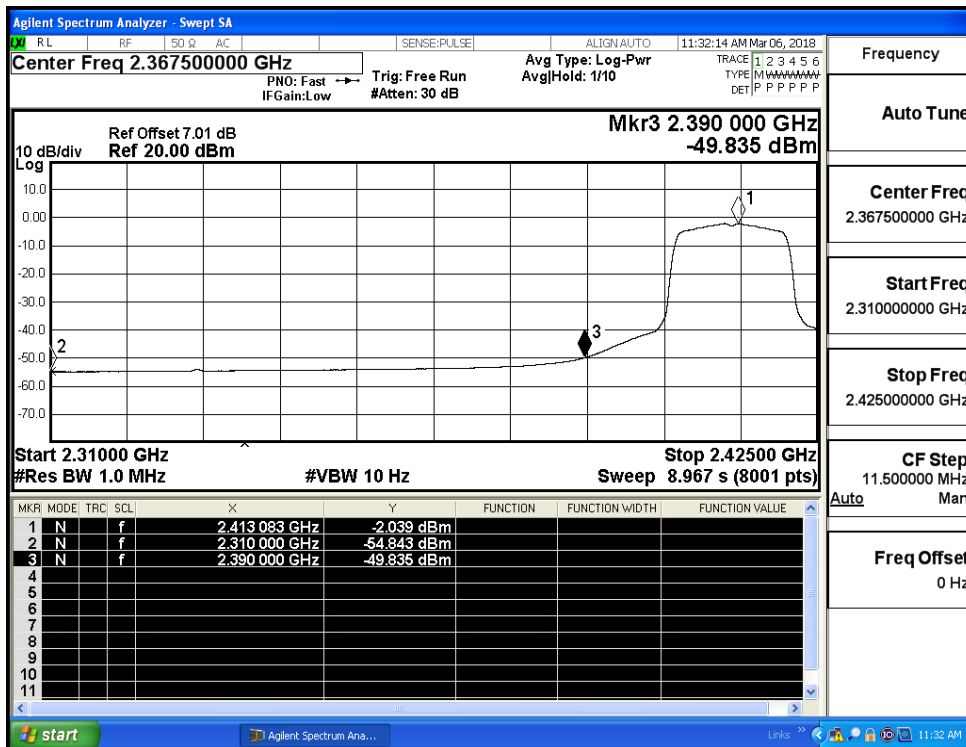
Restrict-band band-edge measurements_11B_2462_Ant1_AV



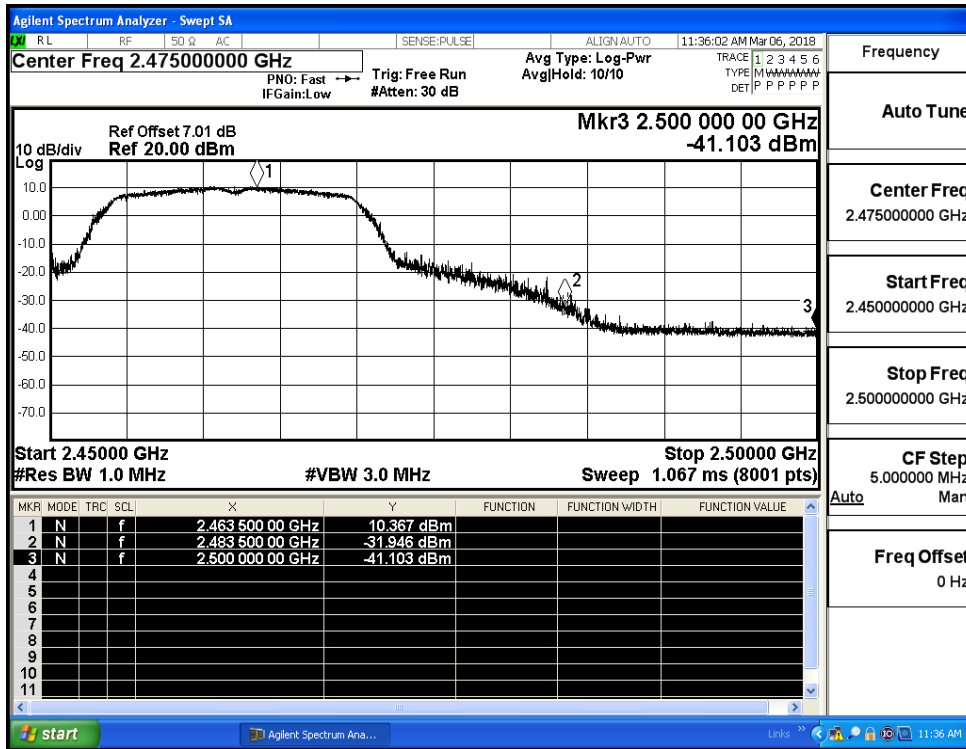
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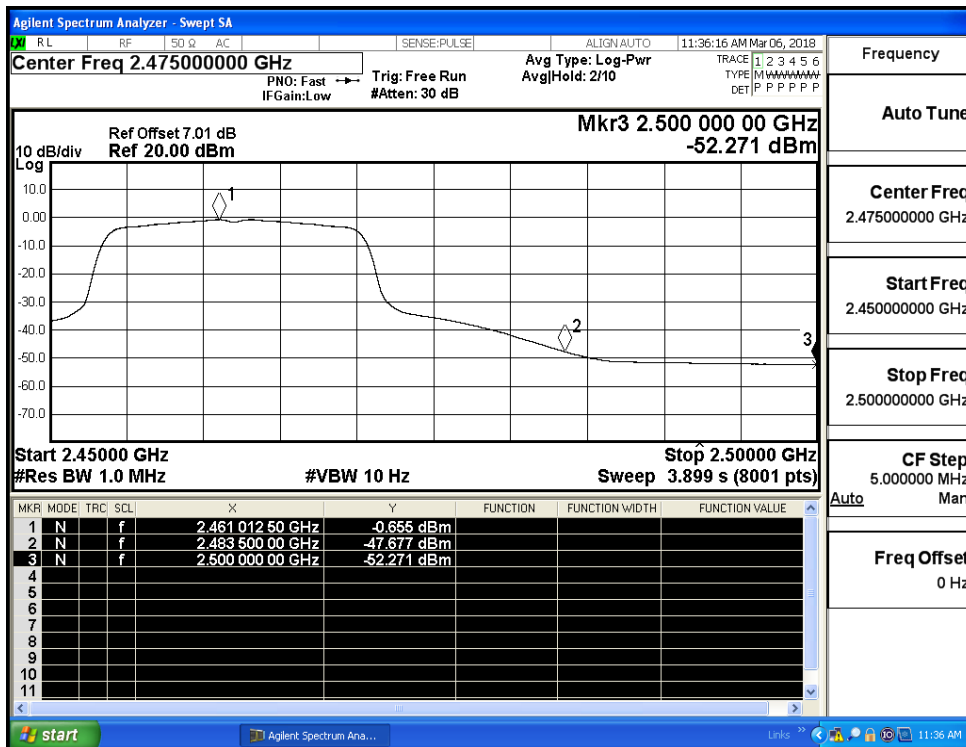
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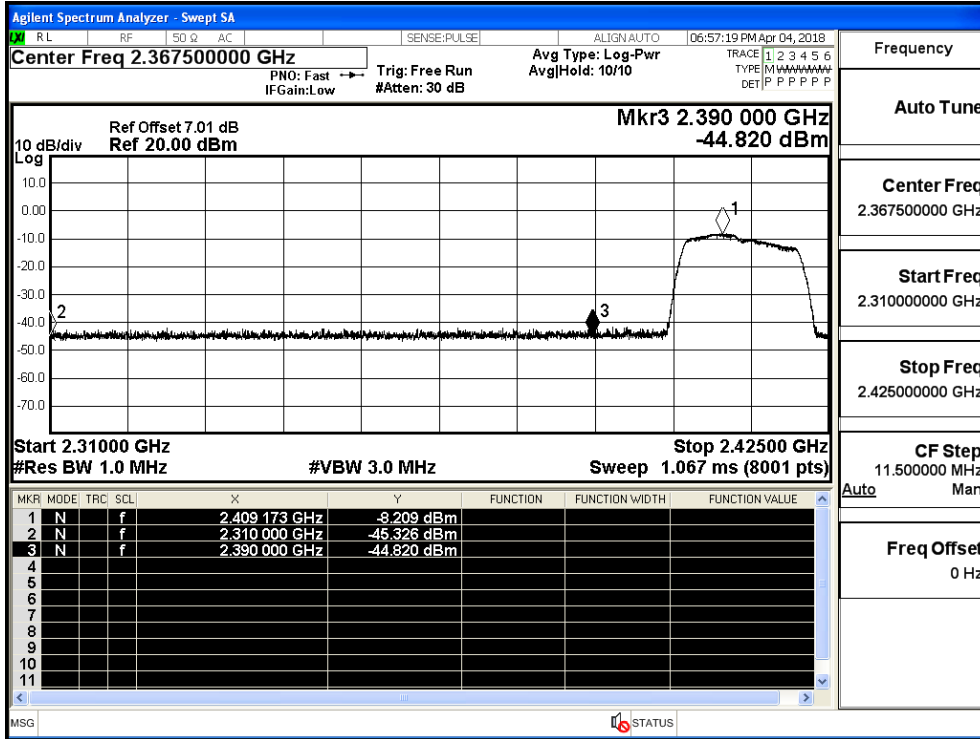
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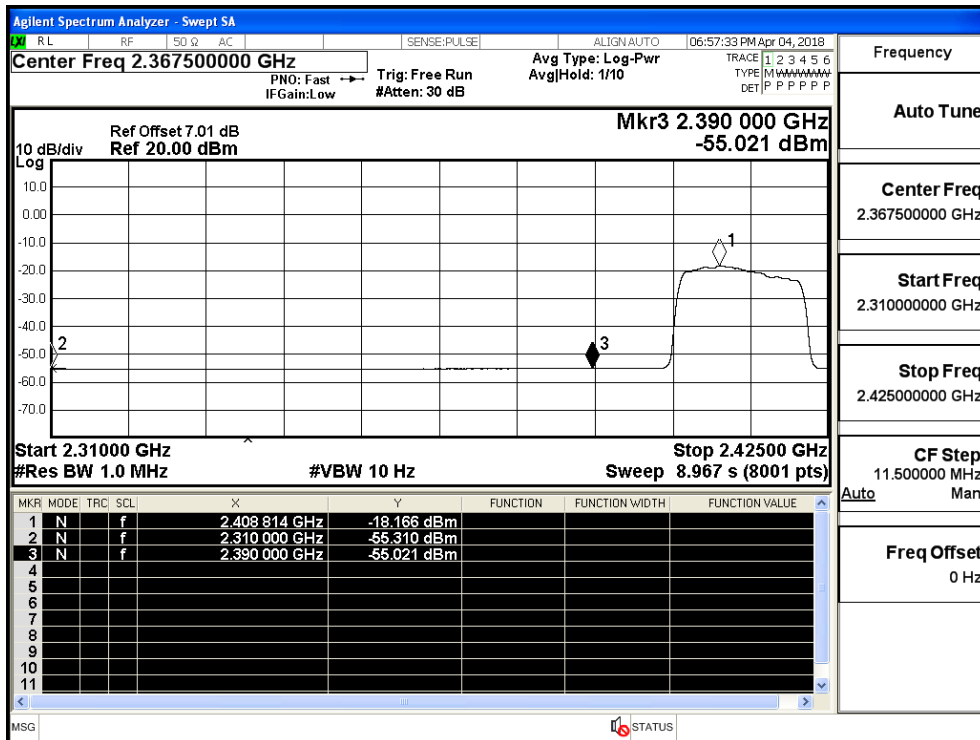
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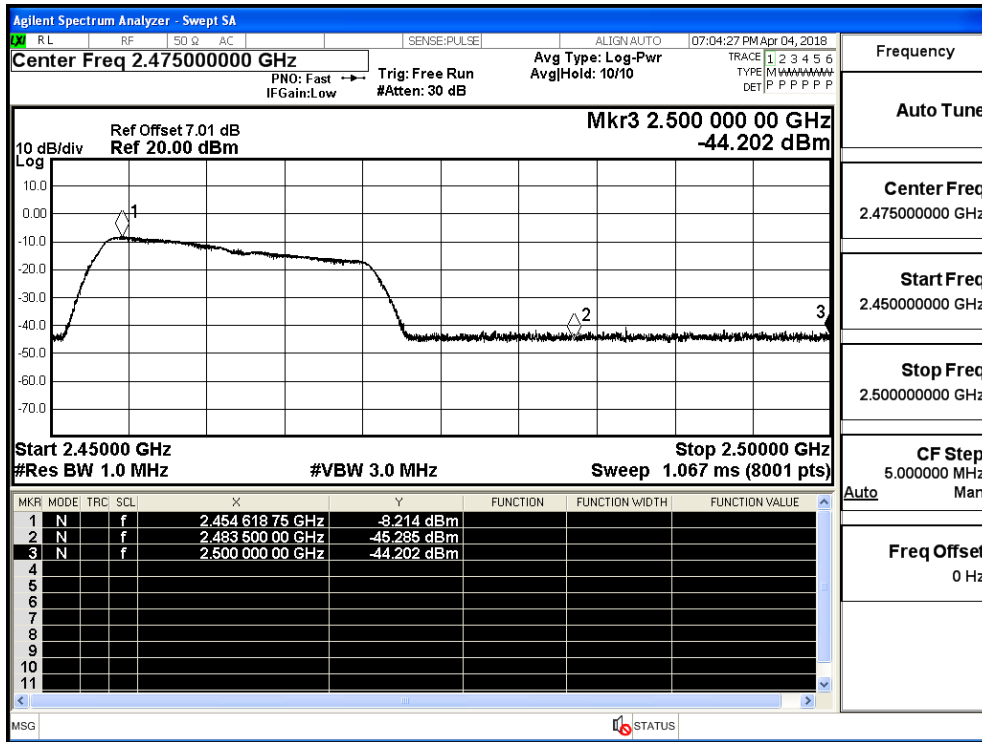
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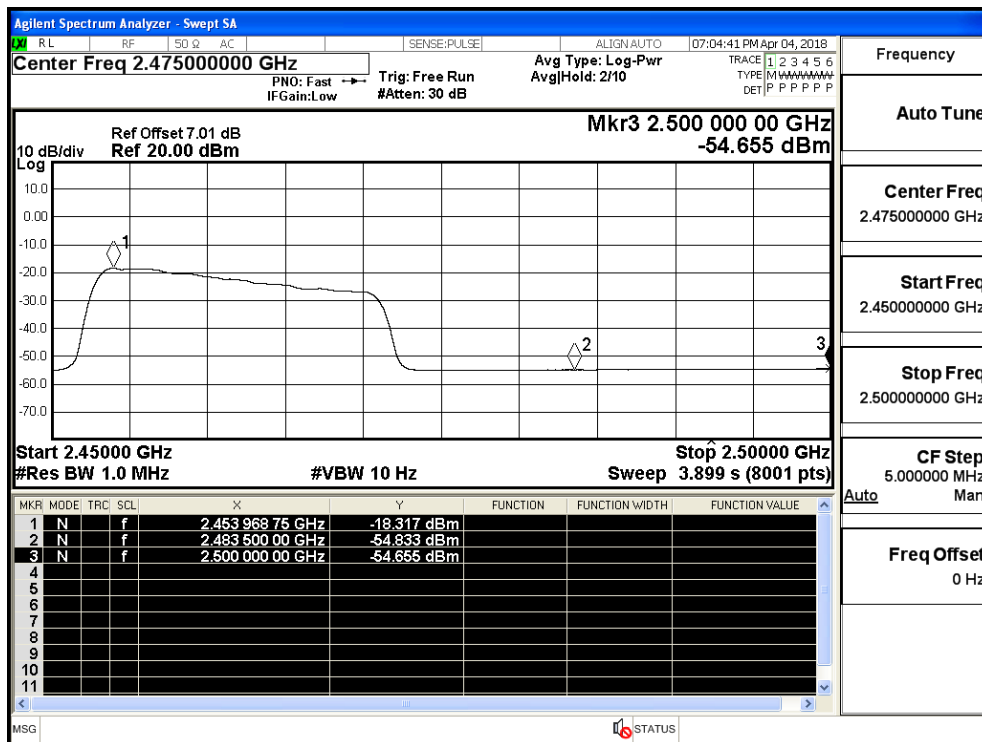
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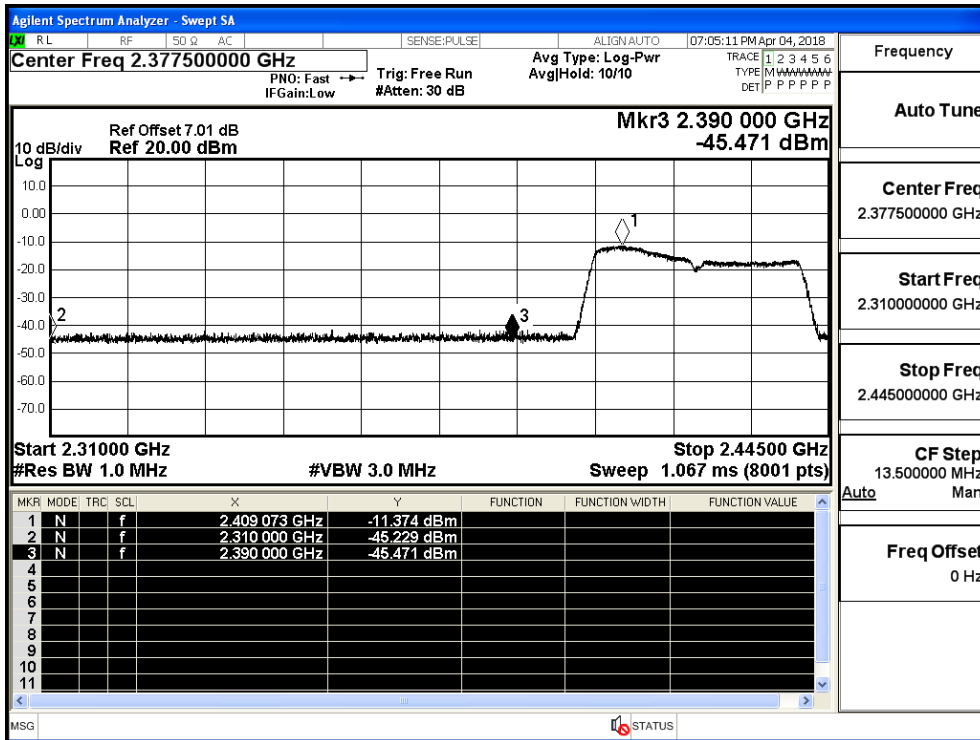
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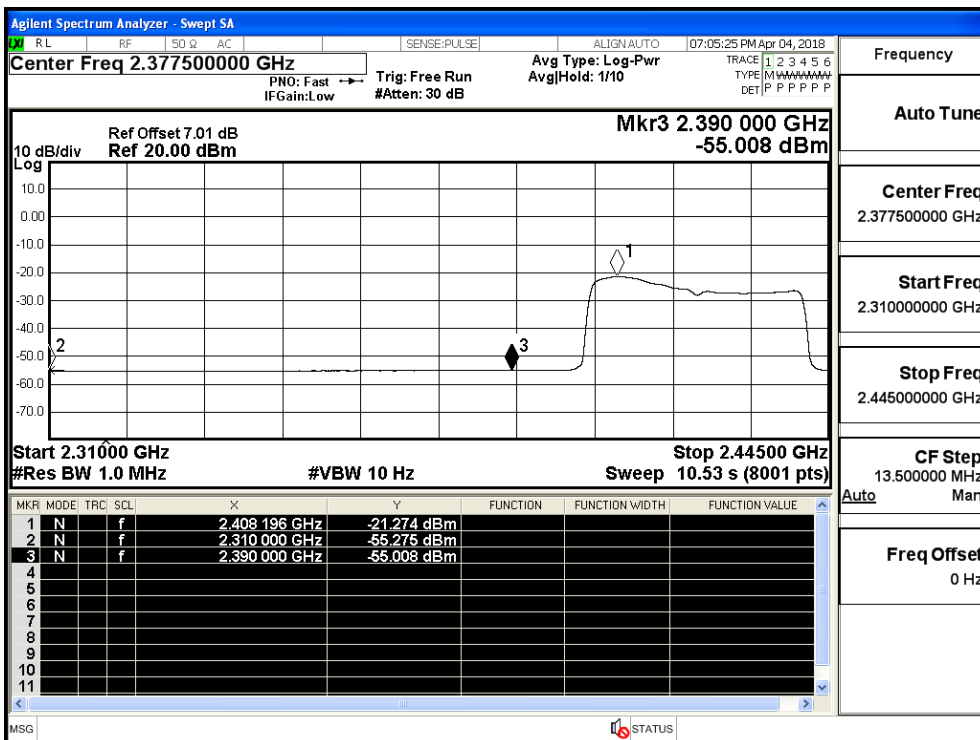
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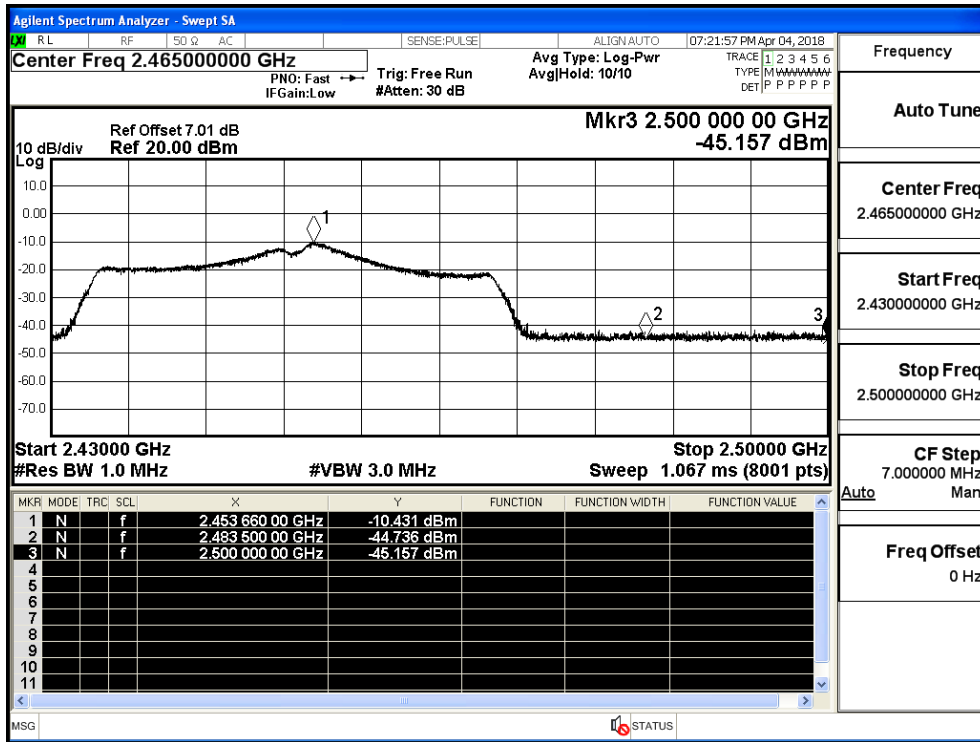
Restrict-band band-edge measurements_11N40SISO_2422_Ant1_PEAK



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

