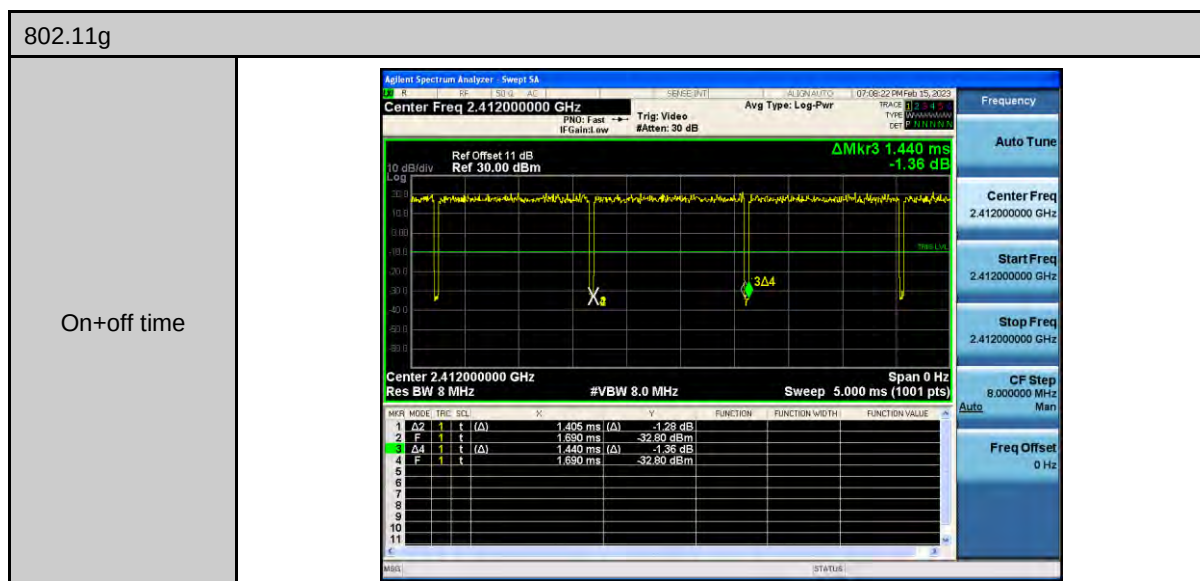
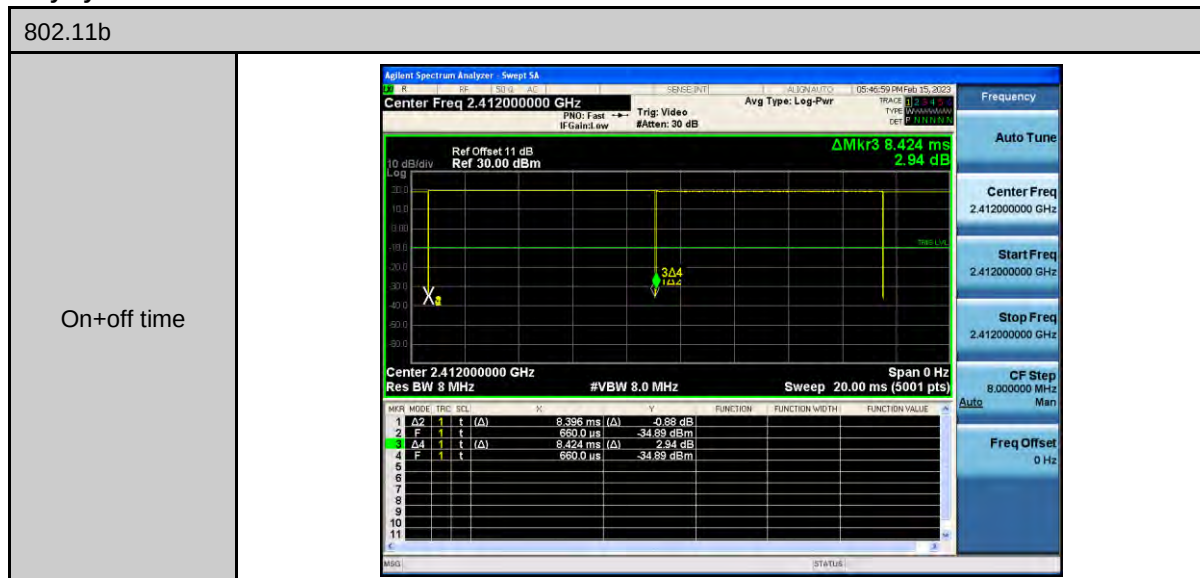


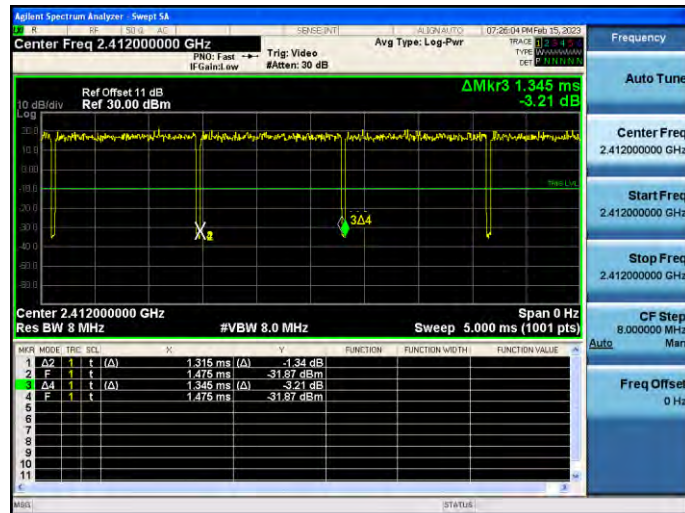
Appendix B. Test Plots

Duty cycle



802.11n HT20

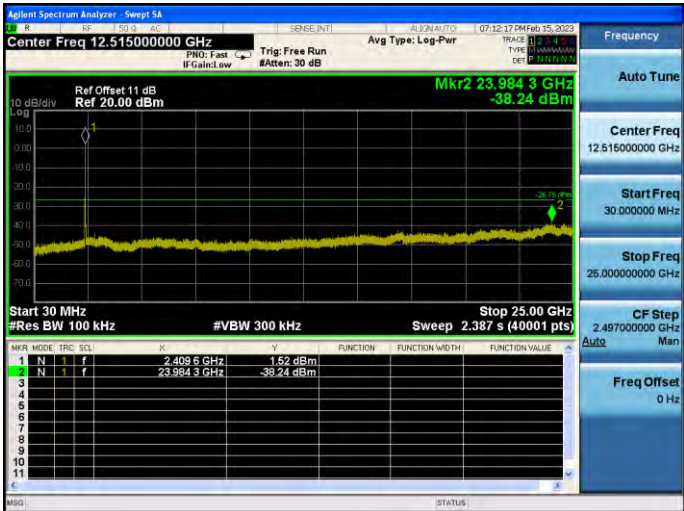
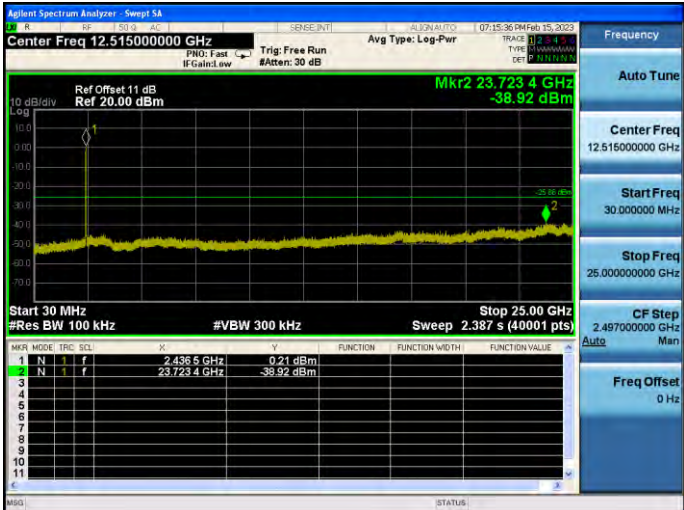
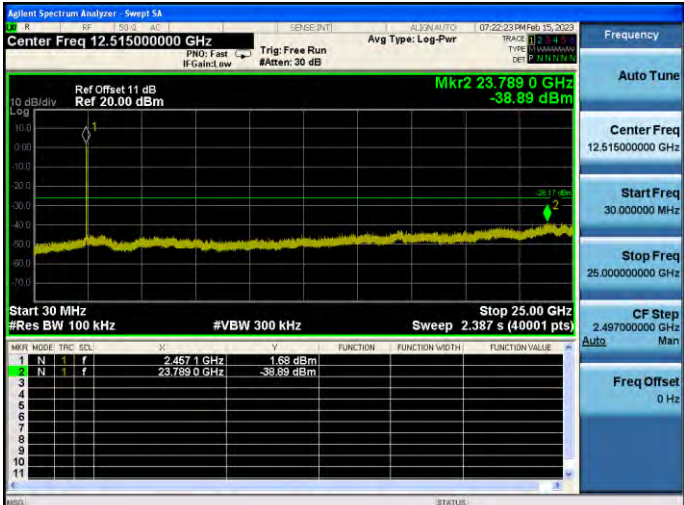
On+off time



Out of Band Conducted Spurious Emission

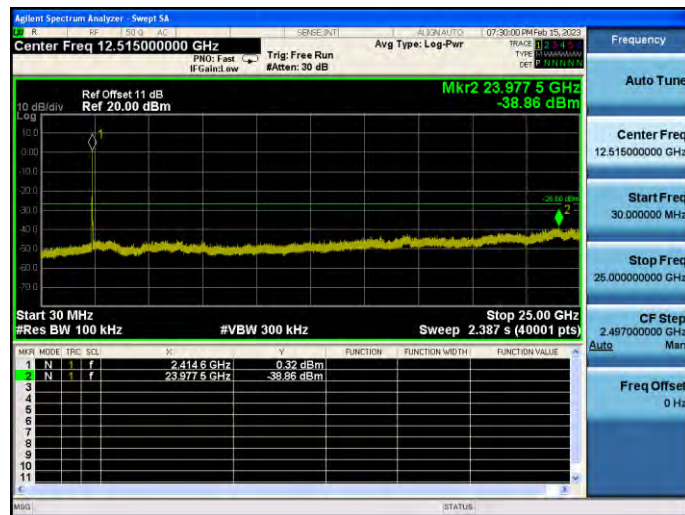
802.11b_ANT-0													
2412 MHz	Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 11 dB Ref 20.00 dBm Mkr2 23.835 1 GHz -37.66 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 25.00 GHz Sweep 2.387 s (40001 pts) <table><tr><th>Mkr</th><th>Mode</th><th>Freq</th><th>Power</th></tr><tr><td>1</td><td>N</td><td>2.4109 GHz</td><td>6.93 dBm</td></tr><tr><td>2</td><td>N</td><td>23.835 1 GHz</td><td>-37.66 dBm</td></tr></table> Frequency Auto Tune Center Freq 12.515000000 GHz Start Freq 30.000000 MHz Stop Freq 25.000000000 GHz CF Step 2.497000000 GHz Auto Man Freq Offset 0 Hz	Mkr	Mode	Freq	Power	1	N	2.4109 GHz	6.93 dBm	2	N	23.835 1 GHz	-37.66 dBm
Mkr	Mode	Freq	Power										
1	N	2.4109 GHz	6.93 dBm										
2	N	23.835 1 GHz	-37.66 dBm										
2437 MHz	Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 11 dB Ref 20.00 dBm Mkr2 23.777 1 GHz -38.52 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 25.00 GHz Sweep 2.387 s (40001 pts) <table><tr><th>Mkr</th><th>Mode</th><th>Freq</th><th>Power</th></tr><tr><td>1</td><td>N</td><td>2.4369 GHz</td><td>6.81 dBm</td></tr><tr><td>2</td><td>N</td><td>23.777 1 GHz</td><td>-38.52 dBm</td></tr></table> Frequency Auto Tune Center Freq 12.515000000 GHz Start Freq 30.000000 MHz Stop Freq 25.000000000 GHz CF Step 2.497000000 GHz Auto Man Freq Offset 0 Hz	Mkr	Mode	Freq	Power	1	N	2.4369 GHz	6.81 dBm	2	N	23.777 1 GHz	-38.52 dBm
Mkr	Mode	Freq	Power										
1	N	2.4369 GHz	6.81 dBm										
2	N	23.777 1 GHz	-38.52 dBm										
2462 MHz	Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 11 dB Ref 20.00 dBm Mkr2 23.926 3 GHz -38.68 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 25.00 GHz Sweep 2.387 s (40001 pts) <table><tr><th>Mkr</th><th>Mode</th><th>Freq</th><th>Power</th></tr><tr><td>1</td><td>N</td><td>2.4608 GHz</td><td>7.88 dBm</td></tr><tr><td>2</td><td>N</td><td>23.926 3 GHz</td><td>-38.68 dBm</td></tr></table> Frequency Auto Tune Center Freq 12.515000000 GHz Start Freq 30.000000 MHz Stop Freq 25.000000000 GHz CF Step 2.497000000 GHz Auto Man Freq Offset 0 Hz	Mkr	Mode	Freq	Power	1	N	2.4608 GHz	7.88 dBm	2	N	23.926 3 GHz	-38.68 dBm
Mkr	Mode	Freq	Power										
1	N	2.4608 GHz	7.88 dBm										
2	N	23.926 3 GHz	-38.68 dBm										

802.11g_ANT-0

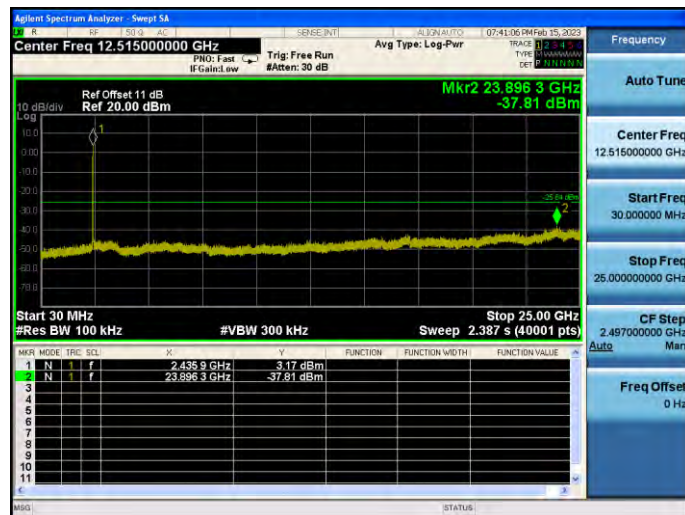
2412 MHz	
2437 MHz	
2462 MHz	

802.11n HT20_ANT-0

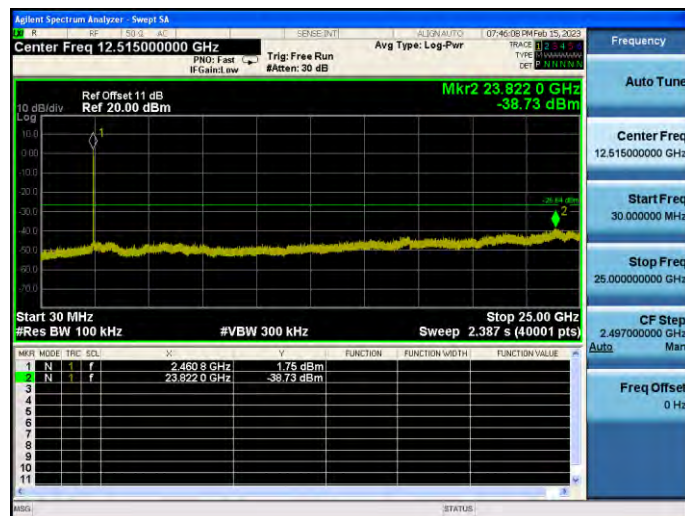
2412 MHz



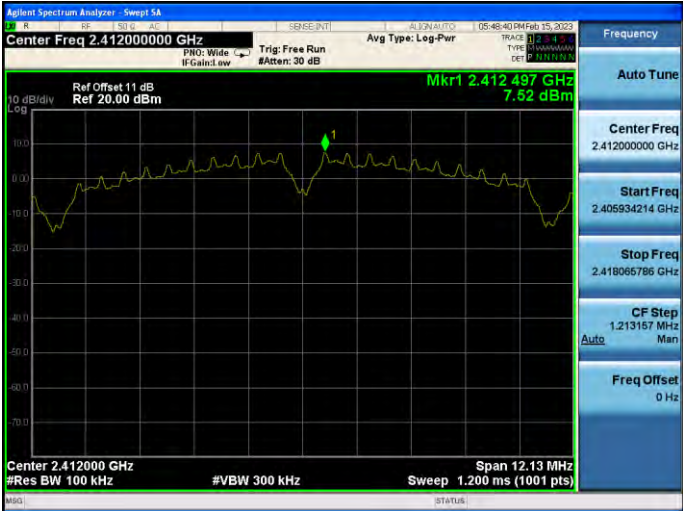
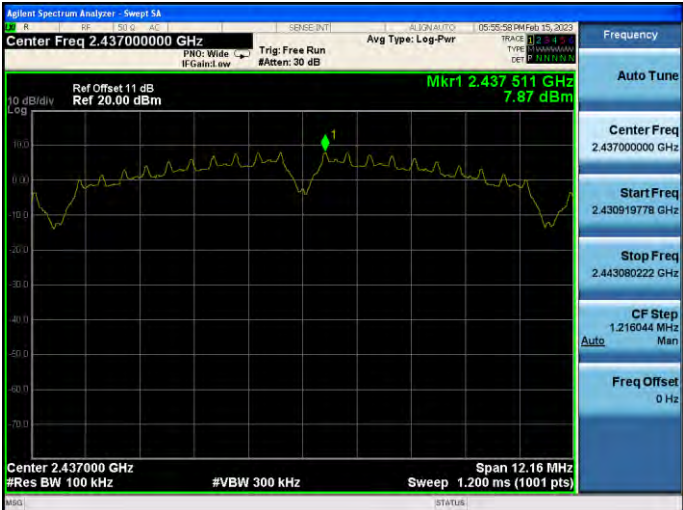
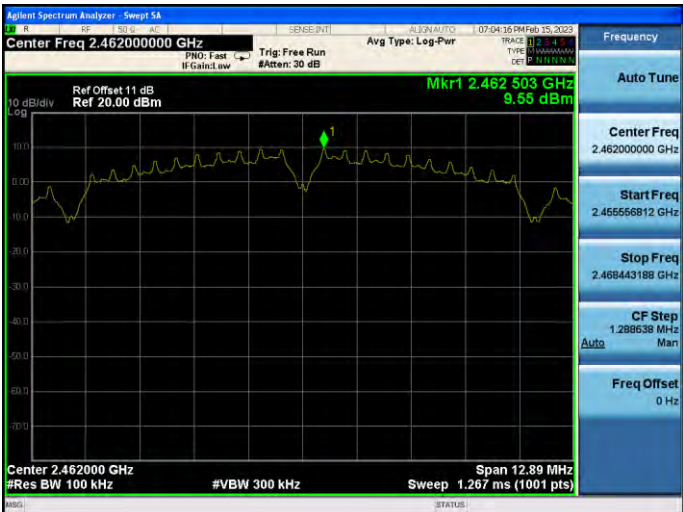
2437 MHz



2462 MHz



Reference level

802.11b_ANT-0	
2412 MHz	
2437 MHz	
2462 MHz	

802.11g_ANT-0

2412 MHz

2437 MHz

2462 MHz

802.11n HT20_ANT-0

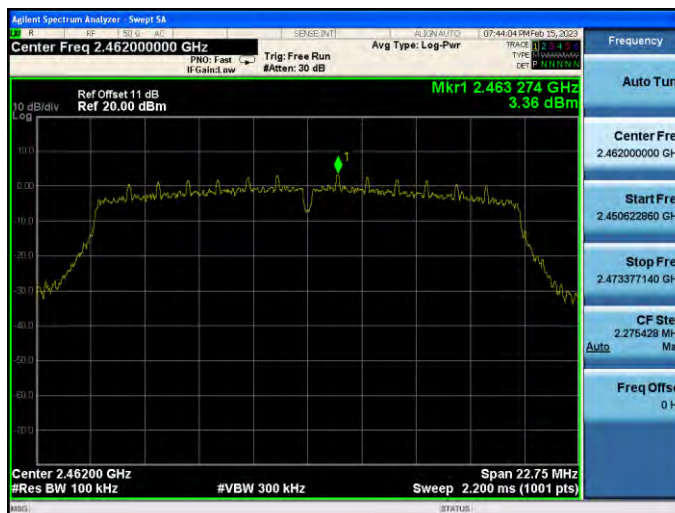
2412 MHz



2437 MHz



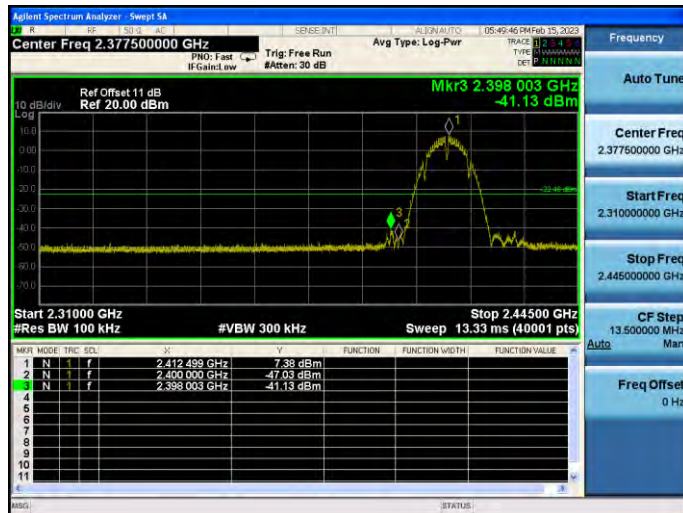
2462 MHz



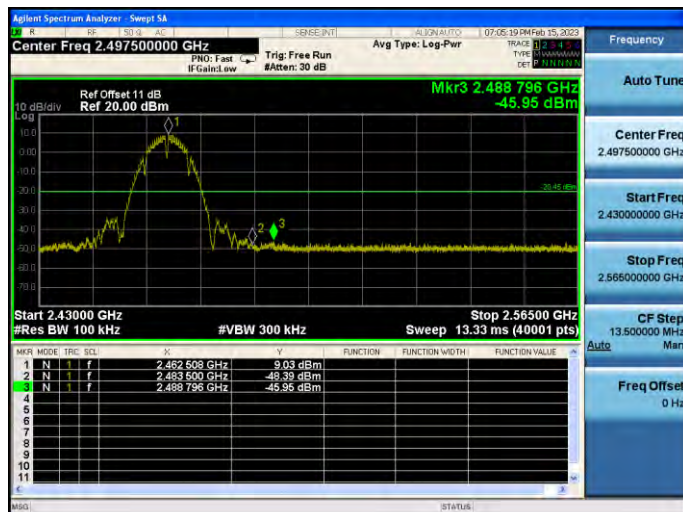
Conducted Band Edge

802.11b_ANT-0

2412 MHz

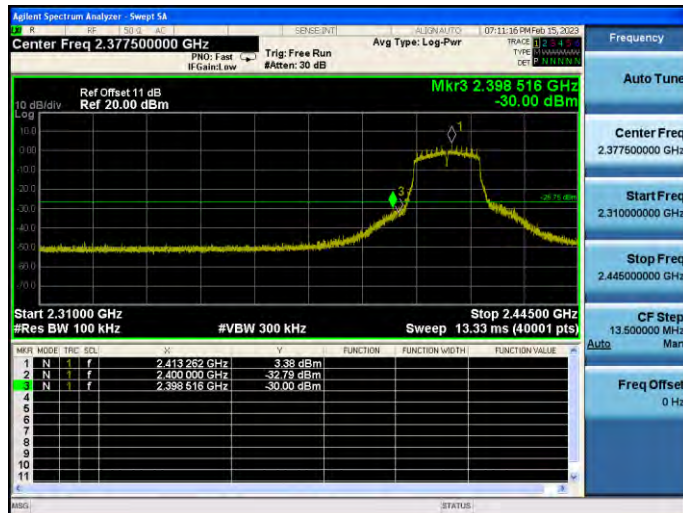


2462 MHz

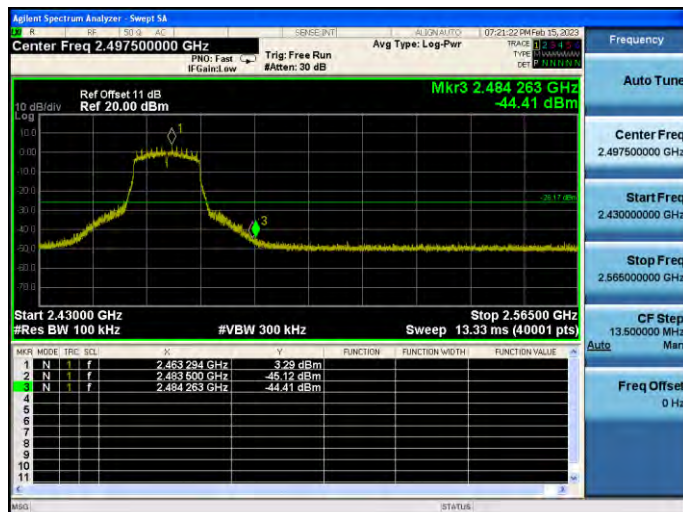


802.11g_ANT-0

2412 MHz

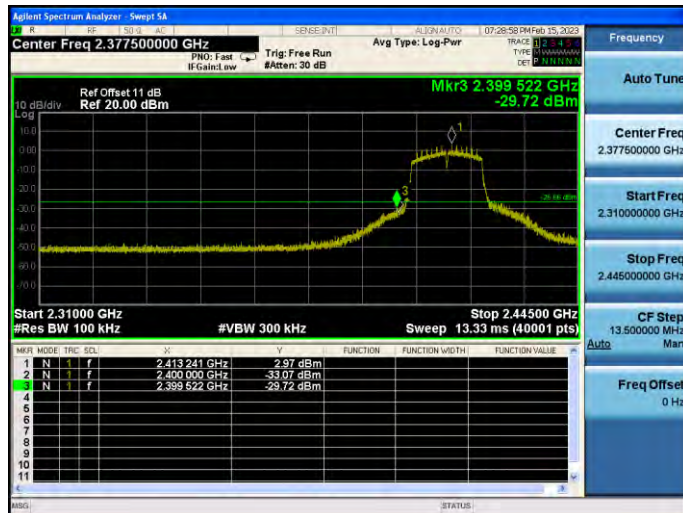


2462 MHz

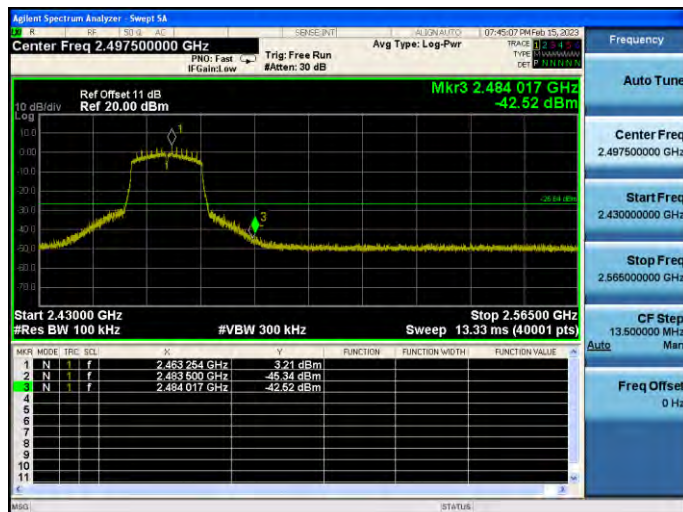


802.11n HT20_ANT-0

2412 MHz



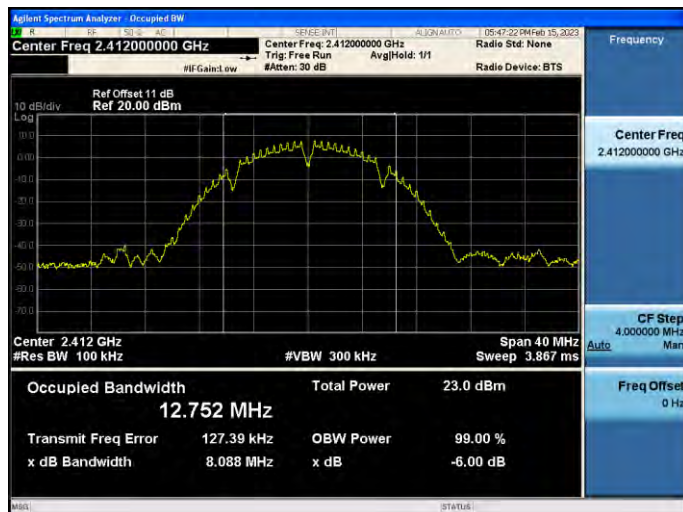
2462 MHz



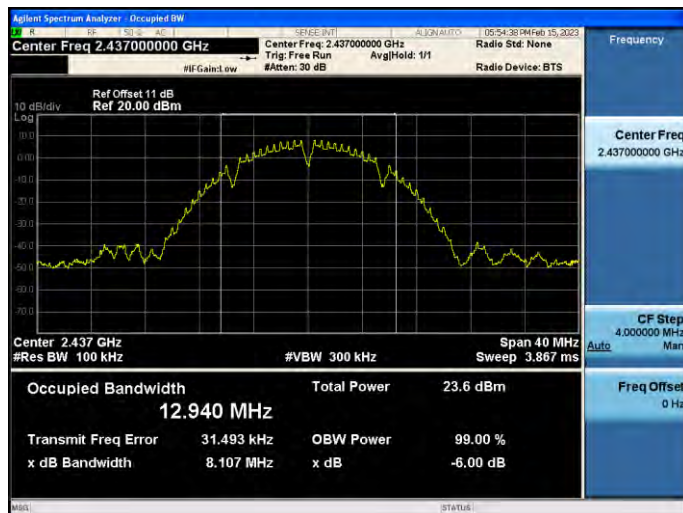
6 dB Bandwidth

802.11b_ANT-0

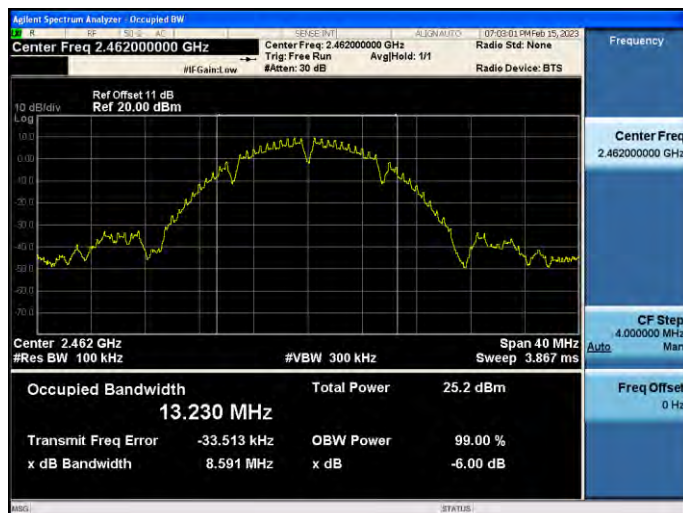
2412 MHz



2437 MHz

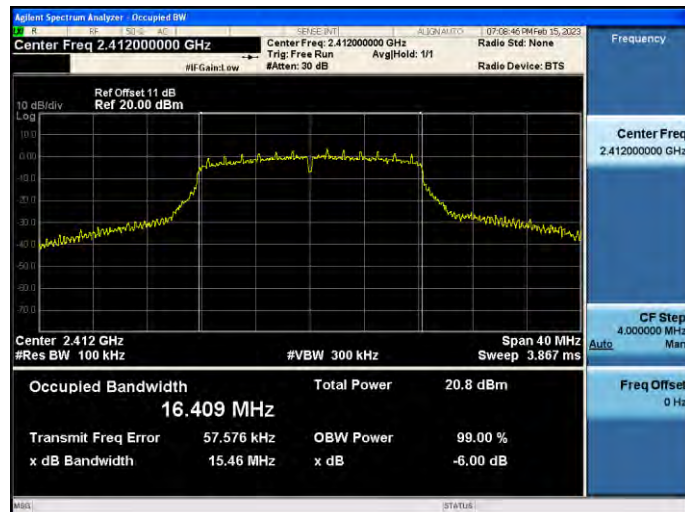


2462 MHz

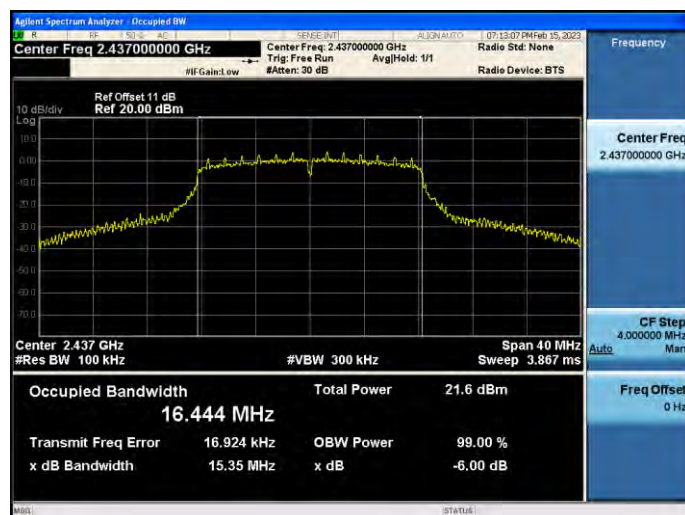


802.11g_ANT-0

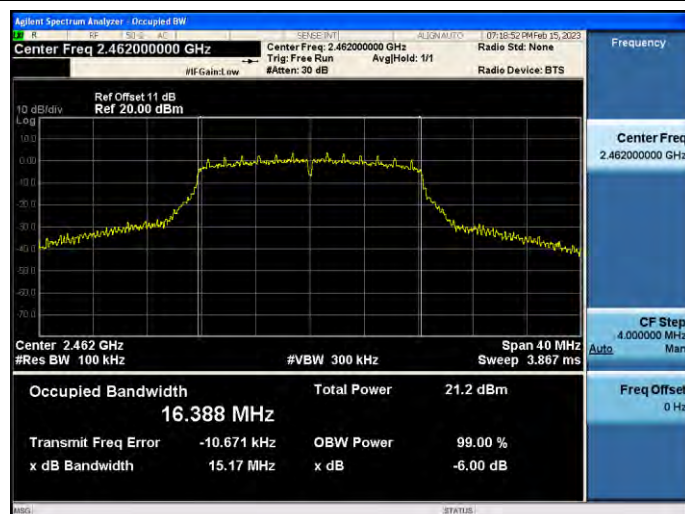
2412 MHz



2437 MHz

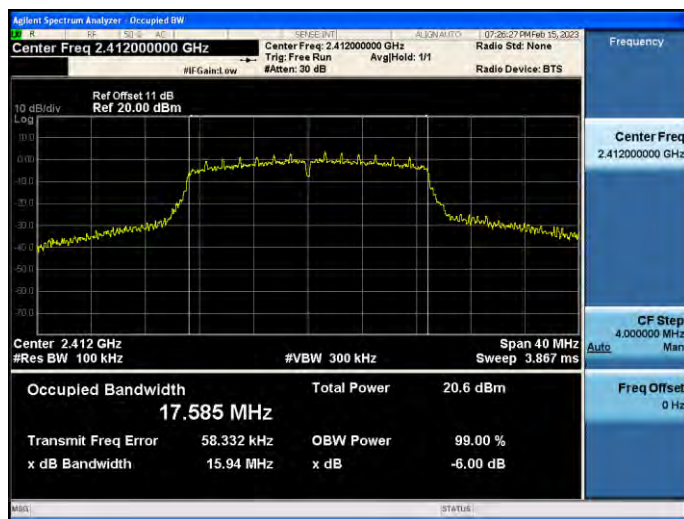


2462 MHz

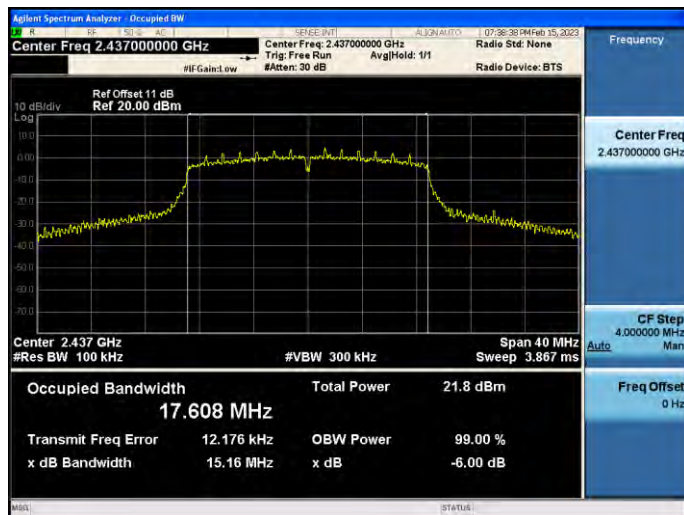


802.11n HT20_ANT-0

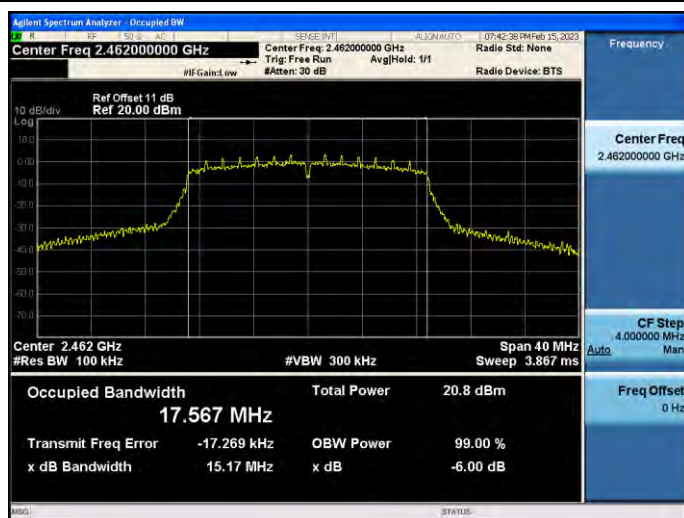
2412 MHz



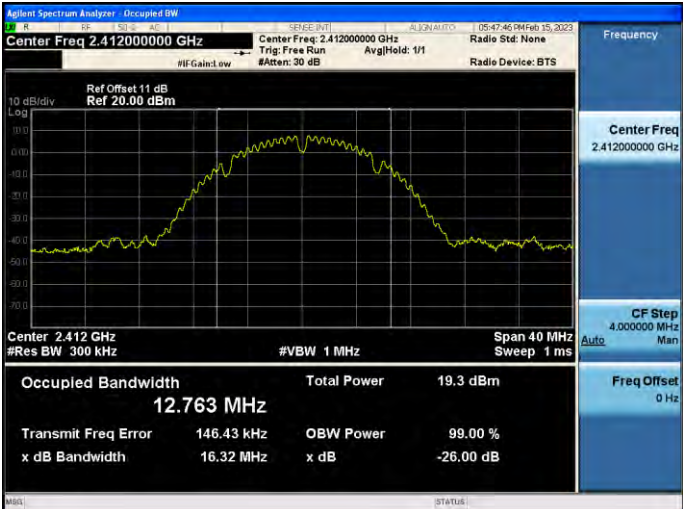
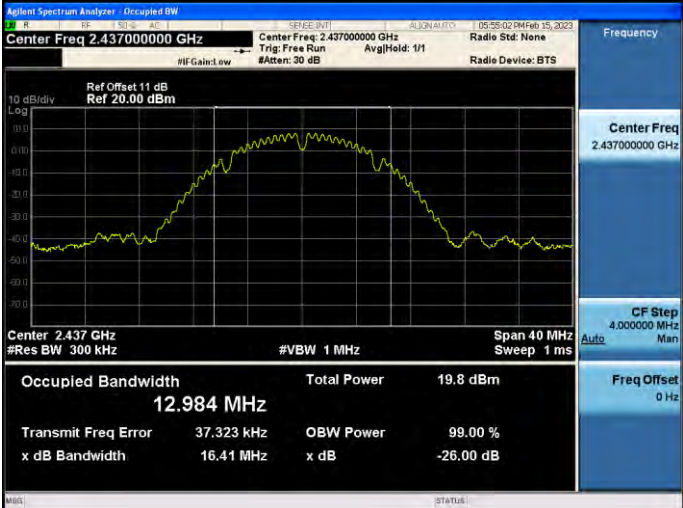
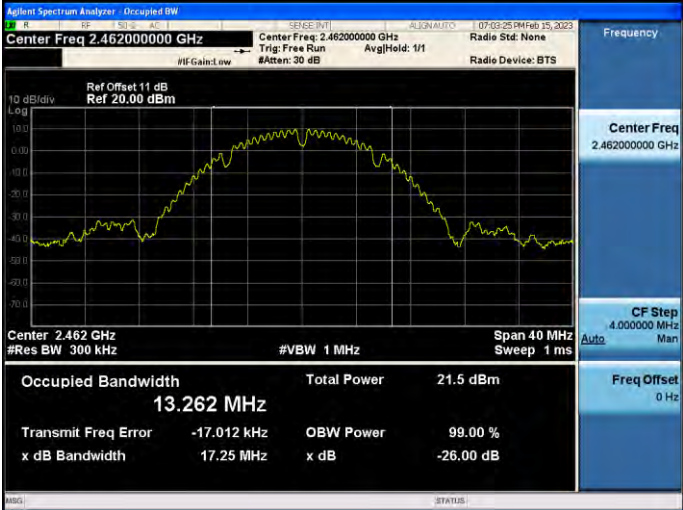
2437 MHz



2462 MHz



99% Occupied Bandwidth

802.11b_ANT-0 2412 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.412000000 GHz Center Freq: 2.412000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS Ref Offset 11 dB Ref 20.00 dBm 10 dB/div Log Center 2.412 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 12.763 MHz Total Power 19.3 dBm Transmit Freq Error 146.43 kHz OBW Power 99.00 % x dB Bandwidth 16.32 MHz x dB -26.00 dB Frequency Center Freq 2.412000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz STATUS
2437 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS Ref Offset 11 dB Ref 20.00 dBm 10 dB/div Log Center 2.437 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 12.984 MHz Total Power 19.8 dBm Transmit Freq Error 37.323 kHz OBW Power 99.00 % x dB Bandwidth 16.41 MHz x dB -26.00 dB Frequency Center Freq 2.437000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz STATUS
2462 MHz	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Device: BTS Ref Offset 11 dB Ref 20.00 dBm 10 dB/div Log Center 2.462 GHz #Res BW 300 kHz #VBW 1 MHz Span 40 MHz Sweep 1 ms Occupied Bandwidth 13.262 MHz Total Power 21.5 dBm Transmit Freq Error -17.012 kHz OBW Power 99.00 % x dB Bandwidth 17.25 MHz x dB -26.00 dB Frequency Center Freq 2.462000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz STATUS

802.11g_ANT-0

2412 MHz

Agilent Spectrum Analyzer - Occupied BW

Center Freq 2.41200000 GHz Center Freq: 2.412000000 GHz Radio Std: None
 Trig: Free Run AvgHld: 1/1
 #BW Gain: Low #Atten: 30 dB Radio Device: BTS

Ref Offset 11 dB
 Ref 20.00 dBm

10 dB/div
 Log

Center 2412 GHz Span 40 MHz
 #Res BW 300 kHz #VBW 1 MHz Sweep 1 ms

Occupied Bandwidth 16.859 MHz Total Power 20.7 dBm
 Transmit Freq Error 117.20 kHz OBW Power 99.00 %
 x dB Bandwidth 23.66 MHz x dB -26.00 dB

Frequency
 Center Freq 2.41200000 GHz
 CF Step 4.000000 MHz
 Auto Man
 Freq Offset 0 Hz

2437 MHz

Agilent Spectrum Analyzer - Occupied BW

Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None
 Trig: Free Run AvgHld: 1/1
 #BW Gain: Low #Atten: 30 dB Radio Device: BTS

Ref Offset 11 dB
 Ref 20.00 dBm

10 dB/div
 Log

Center 2437 GHz Span 40 MHz
 #Res BW 300 kHz #VBW 1 MHz Sweep 1 ms

Occupied Bandwidth 16.879 MHz Total Power 21.4 dBm
 Transmit Freq Error 31.236 kHz OBW Power 99.00 %
 x dB Bandwidth 20.70 MHz x dB -26.00 dB

Frequency
 Center Freq 2.437000000 GHz
 CF Step 4.000000 MHz
 Auto Man
 Freq Offset 0 Hz

2462 MHz

Agilent Spectrum Analyzer - Occupied BW

Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Radio Std: None
 Trig: Free Run AvgHld: 1/1
 #BW Gain: Low #Atten: 30 dB Radio Device: BTS

Ref Offset 11 dB
 Ref 20.00 dBm

10 dB/div
 Log

Center 2462 GHz Span 40 MHz
 #Res BW 300 kHz #VBW 1 MHz Sweep 1 ms

Occupied Bandwidth 16.782 MHz Total Power 21.1 dBm
 Transmit Freq Error -20.889 kHz OBW Power 99.00 %
 x dB Bandwidth 20.96 MHz x dB -26.00 dB

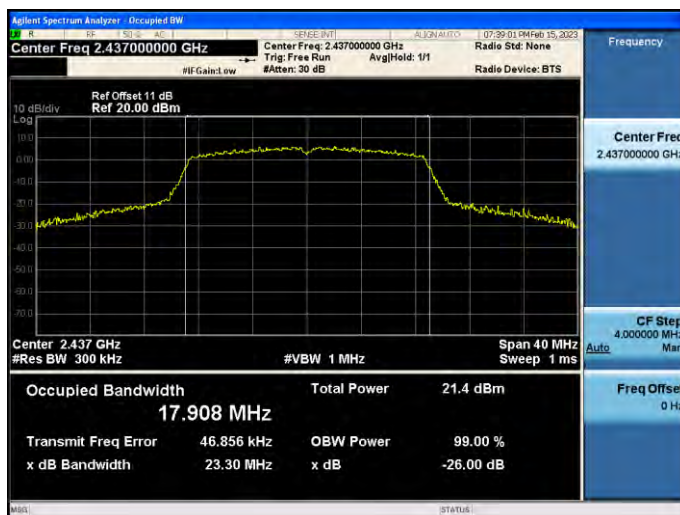
Frequency
 Center Freq 2.462000000 GHz
 CF Step 4.000000 MHz
 Auto Man
 Freq Offset 0 Hz

802.11n HT20_ANT-0

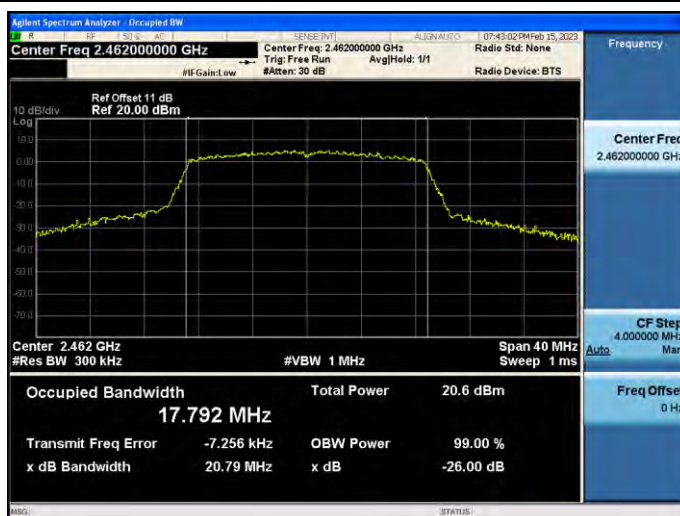
2412 MHz



2437 MHz

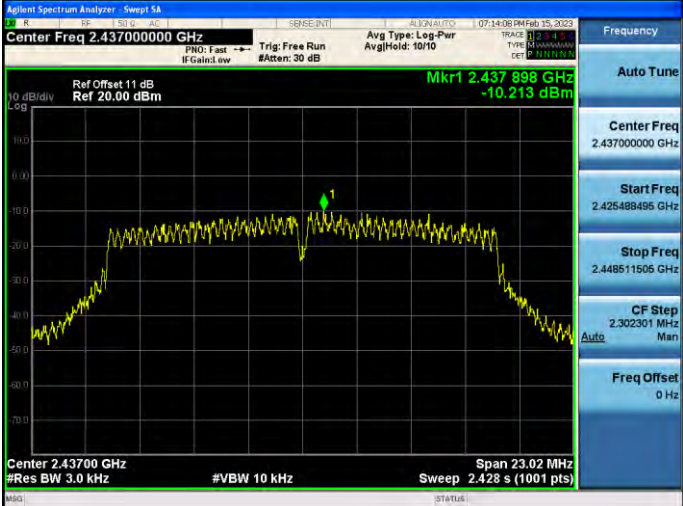
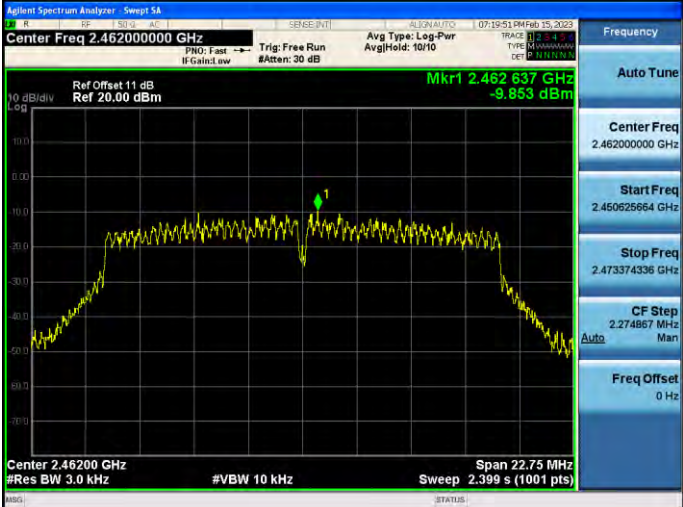


2462 MHz



Maximum Power Spectral Density

802.11b_ANT-0	
2412 MHz	
2437 MHz	
2462 MHz	

802.11g_ANT-0 2412 MHz	
2437 MHz	
2462 MHz	

802.11n HT20_ANT-0

2412 MHz



2437 MHz



2462 MHz

