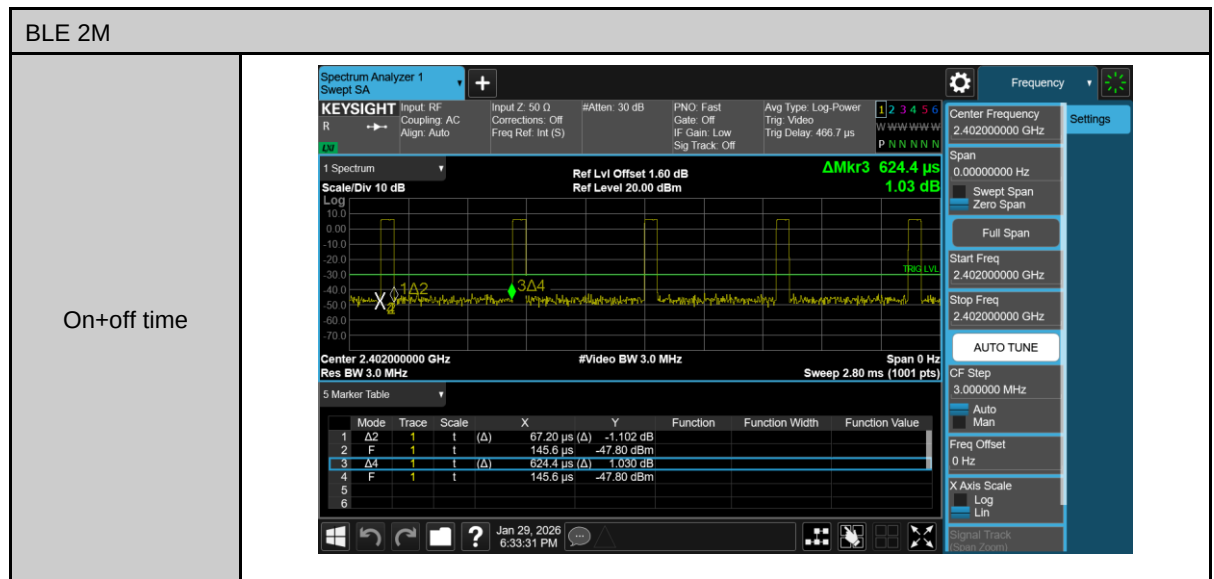
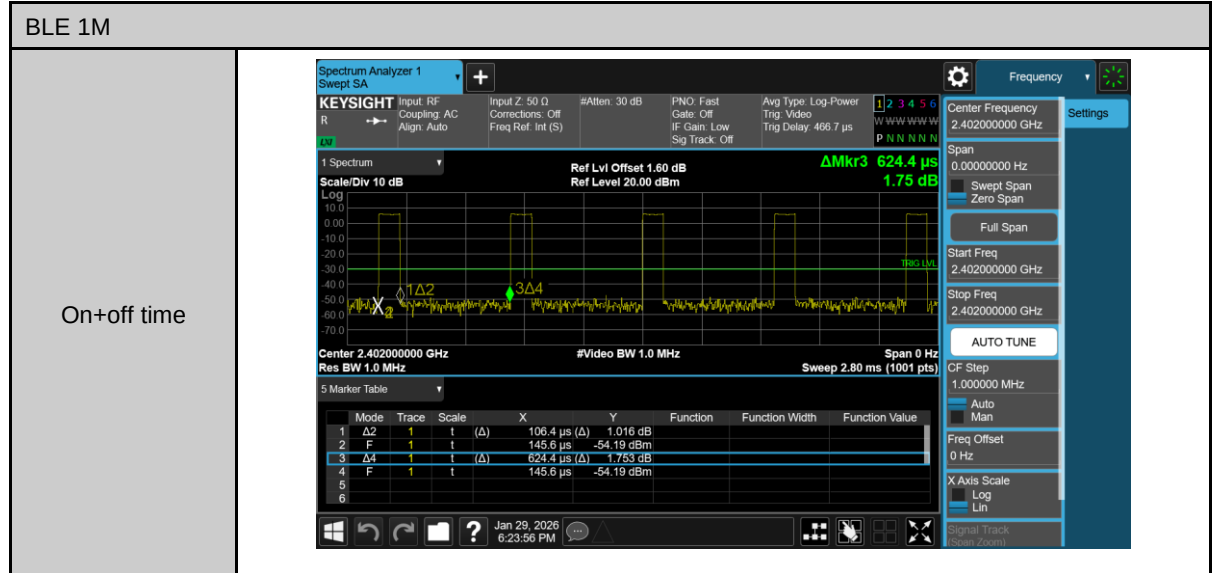
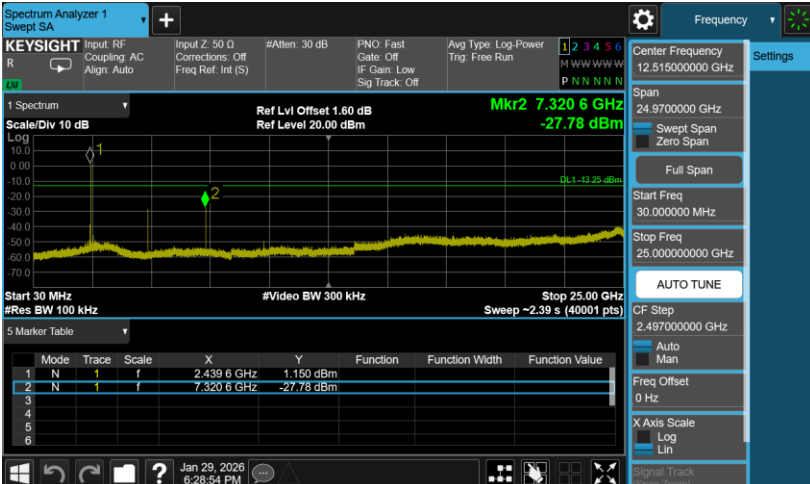
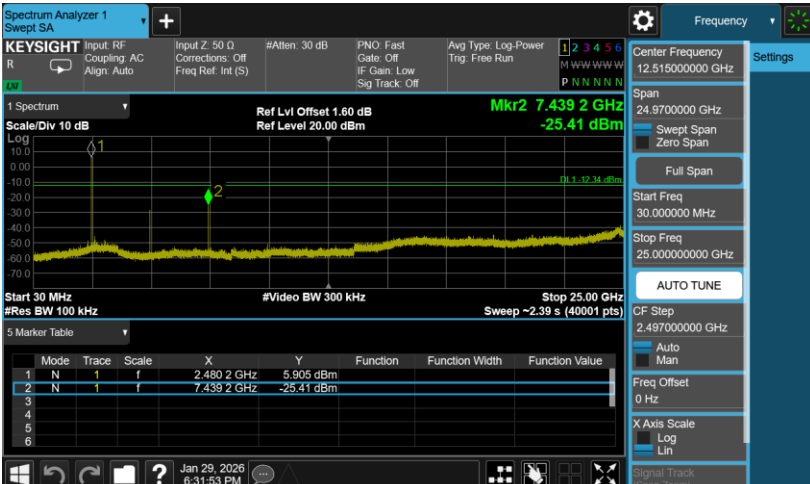


Appendix B. Test Plots

Duty cycle

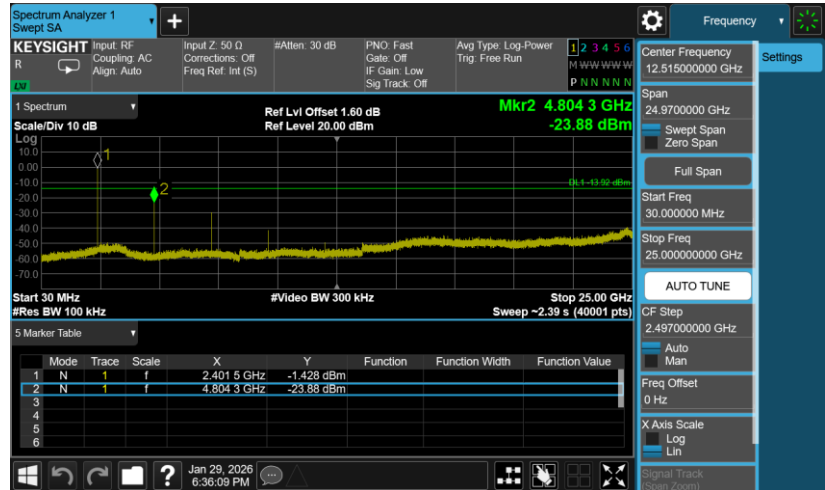


Out of Band Conducted Spurious Emission

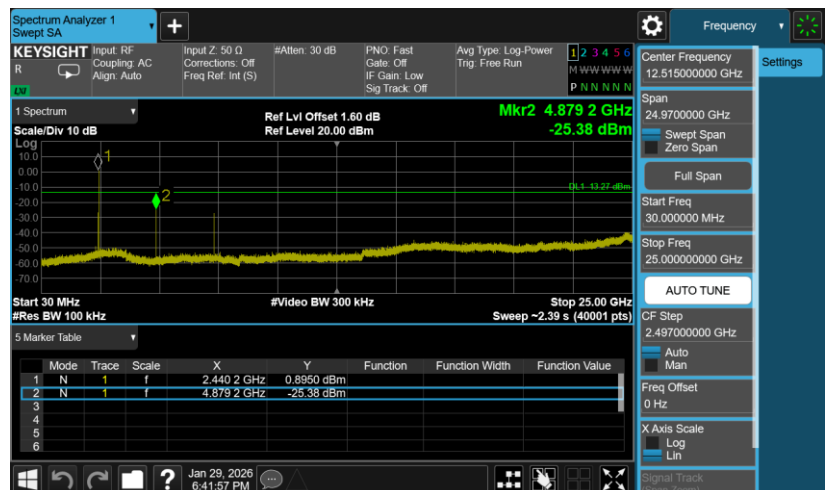
BLE 1M																																																																
Low ch	 Spectrum Analyzer 1 Sweep SA KEYSIGHT Input: RF Coupling: AC Align: Auto Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) #Atten: 30 dB PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Avg Type: Log-Power Trg: Free Run 1 2 3 4 5 6 M WWW WWW P N N N N N 1 Spectrum Scale/Div 10 dB Ref Lvl Offset 1.60 dB Ref Level 20.00 dBm Mkr2 4.803 6 GHz -24.12 dBm Start 30 MHz #Res BW 100 kHz #Video BW 300 kHz Stop 25.00 GHz Sweep ~2.39 s (40001 pts) 5 Marker Table <table><thead><tr><th></th><th>Mode</th><th>Trace</th><th>Scale</th><th>X</th><th>Y</th><th>Function</th><th>Function Width</th><th>Function Value</th></tr></thead><tbody><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>2.401 5 GHz</td><td>-3.431 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>4.803 6 GHz</td><td>-24.12 dBm</td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table> Jan 29, 2026 6:26:33 PM Center Frequency 12.51500000 GHz Settings Span 24.97000000 GHz Sweep Span Zero Span Full Span AUTO TUNE CF Step 2.497000000 GHz Auto Man Freq Offset 0 Hz X Axis Scale Log Lin Signal Track		Mode	Trace	Scale	X	Y	Function	Function Width	Function Value	1	N	1	f	2.401 5 GHz	-3.431 dBm				2	N	1	f	4.803 6 GHz	-24.12 dBm				3									4									5									6								
	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value																																																								
1	N	1	f	2.401 5 GHz	-3.431 dBm																																																											
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	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value																																																								
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High ch	 Spectrum Analyzer 1 Sweep SA KEYSIGHT Input: RF Coupling: AC Align: Auto Input Z: 50 Ω Corrections: Off Freq Ref: Int (S) #Atten: 30 dB PNO: Fast Gate: Off IF Gain: Low Sig Track: Off Avg Type: Log-Power Trg: Free Run 1 2 3 4 5 6 M WWW WWW P N N N N N 1 Spectrum Scale/Div 10 dB Ref Lvl Offset 1.60 dB Ref Level 20.00 dBm Mkr2 7.439 2 GHz -25.41 dBm Start 30 MHz #Res BW 100 kHz #Video BW 300 kHz Stop 25.00 GHz Sweep ~2.39 s (40001 pts) 5 Marker Table <table><thead><tr><th></th><th>Mode</th><th>Trace</th><th>Scale</th><th>X</th><th>Y</th><th>Function</th><th>Function Width</th><th>Function Value</th></tr></thead><tbody><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>2.480 2 GHz</td><td>5.905 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>7.439 2 GHz</td><td>-25.41 dBm</td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></tbody></table> Jan 29, 2026 6:31:53 PM Center Frequency 12.51500000 GHz Settings Span 24.97000000 GHz Sweep Span Zero Span Full Span AUTO TUNE CF Step 2.497000000 GHz Auto Man Freq Offset 0 Hz X Axis Scale Log Lin Signal Track		Mode	Trace	Scale	X	Y	Function	Function Width	Function Value	1	N	1	f	2.480 2 GHz	5.905 dBm				2	N	1	f	7.439 2 GHz	-25.41 dBm				3									4									5									6								
	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value																																																								
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2	N	1	f	7.439 2 GHz	-25.41 dBm																																																											
3																																																																
4																																																																
5																																																																
6																																																																

BLE 2M

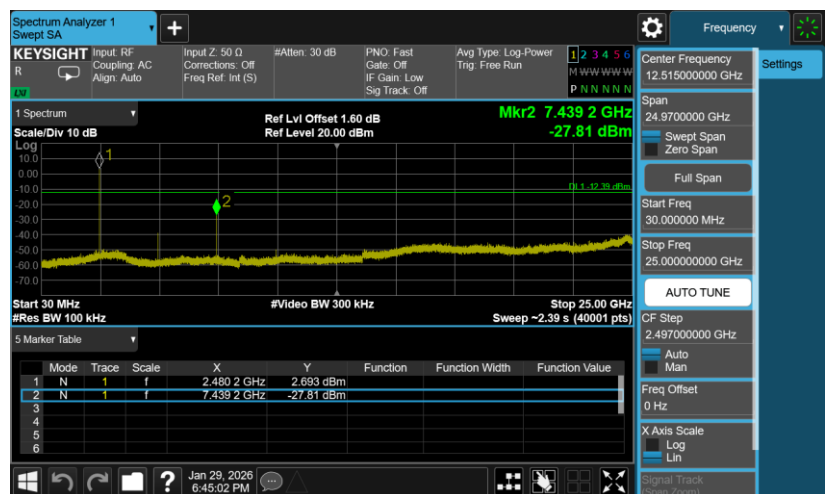
Low ch



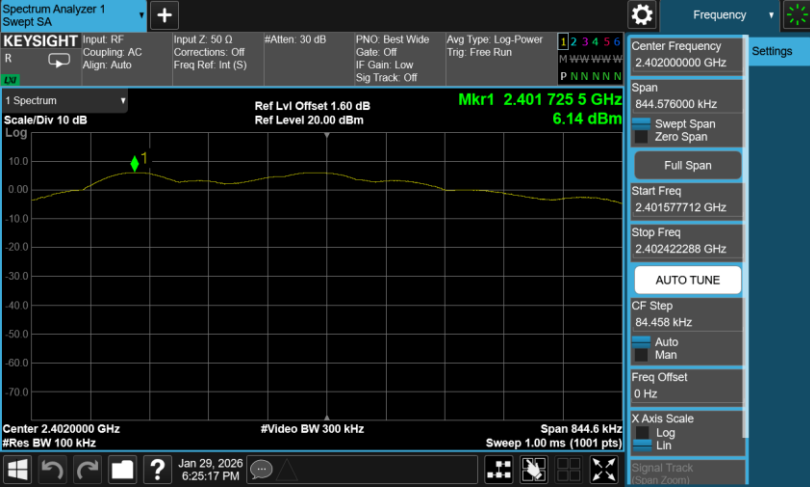
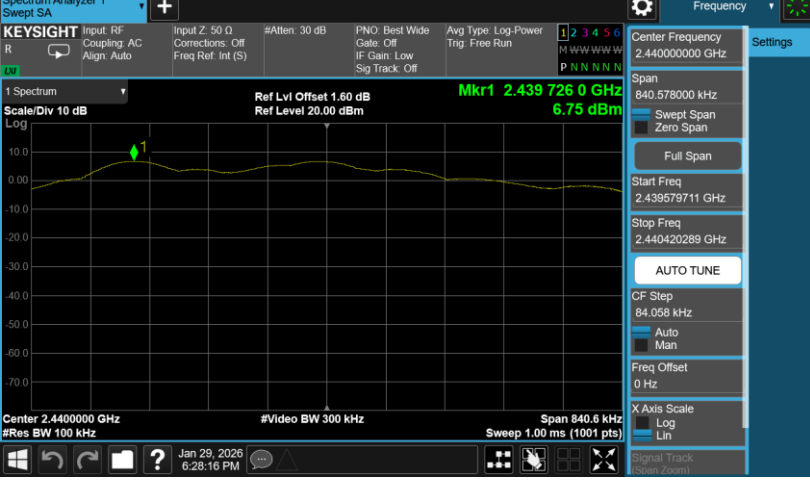
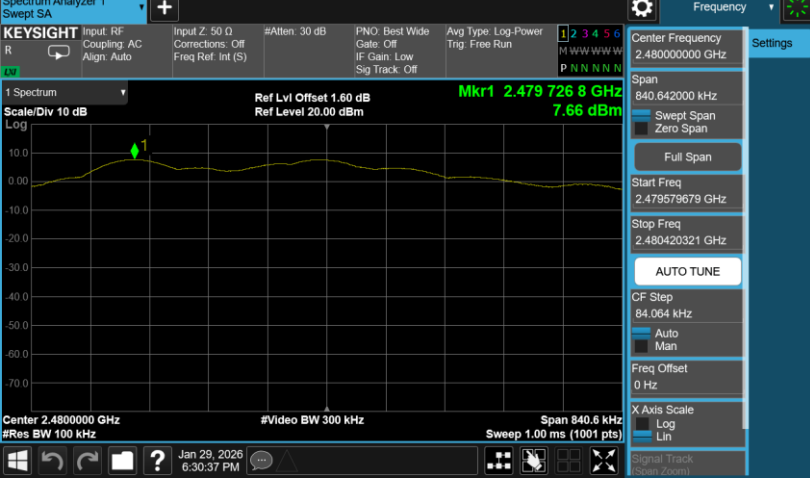
Mid ch

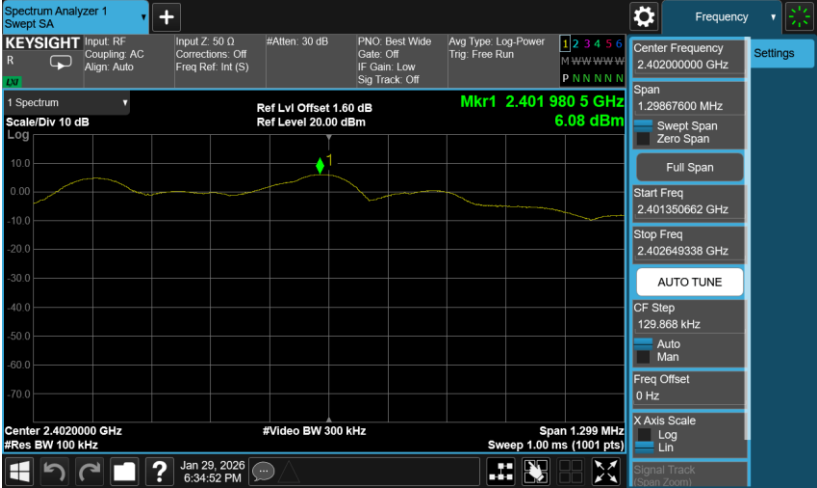


High ch



Reference level

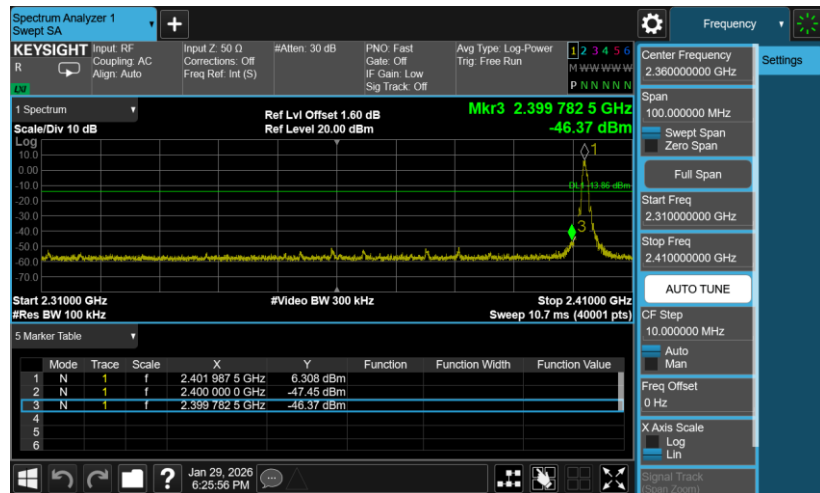
BLE 1M Low ch	
Mid ch	
High ch	

BLE 2M Low ch	
Mid ch	
High ch	

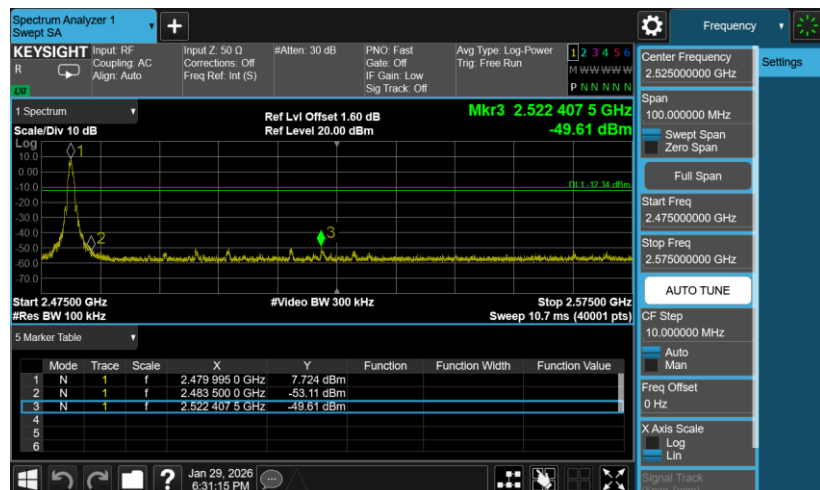
Conducted Band Edge

BLE 1M

Low ch

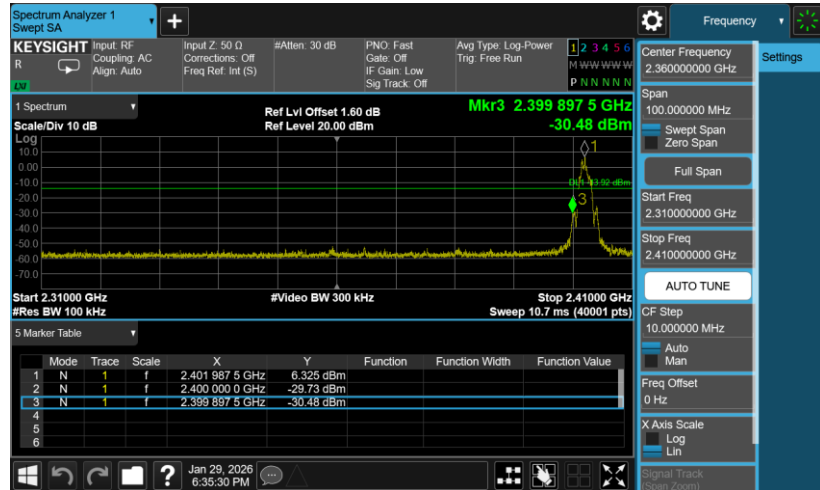


High ch

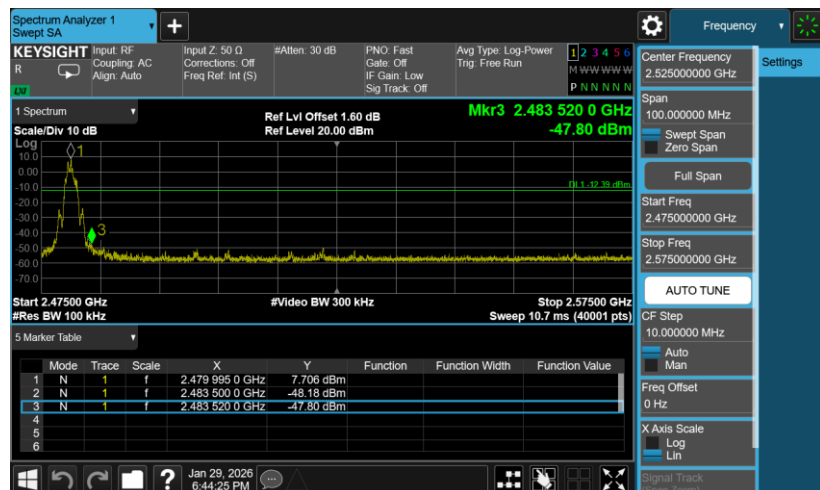


BLE 2M

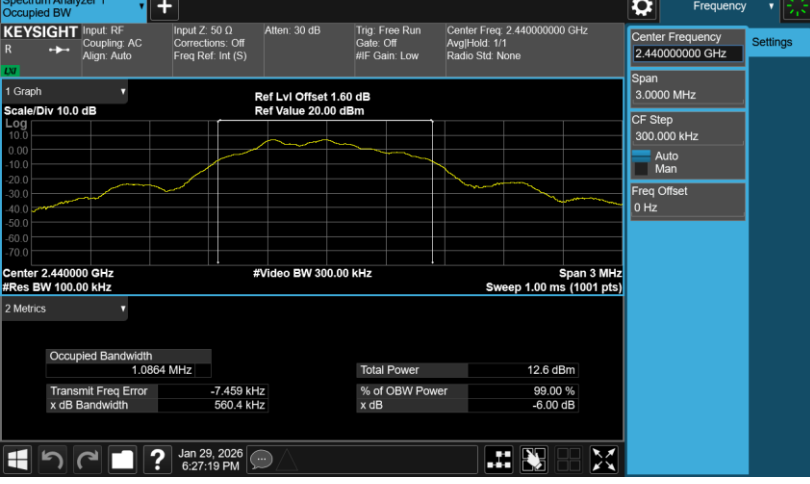
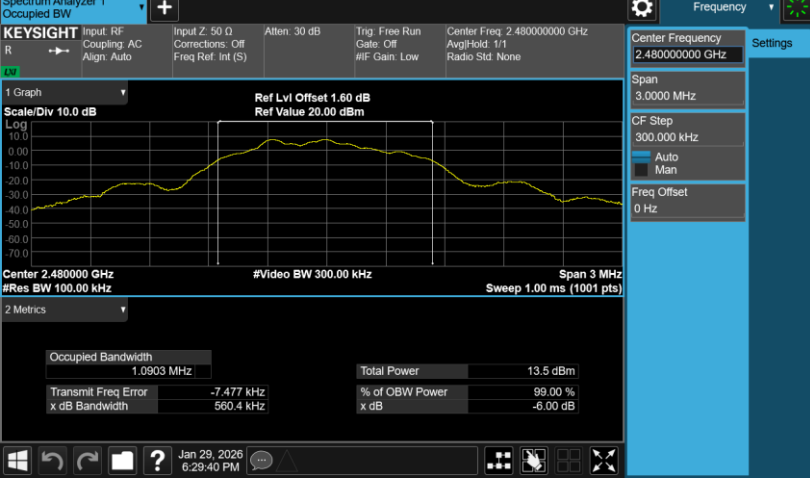
Low ch



High ch



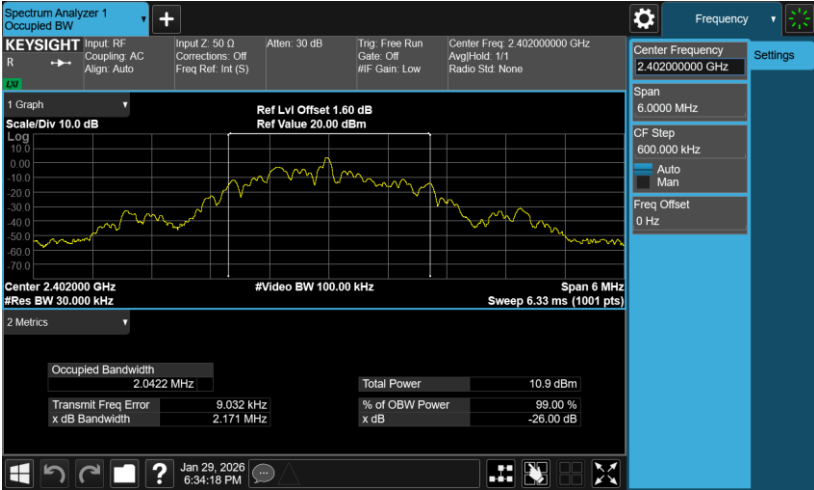
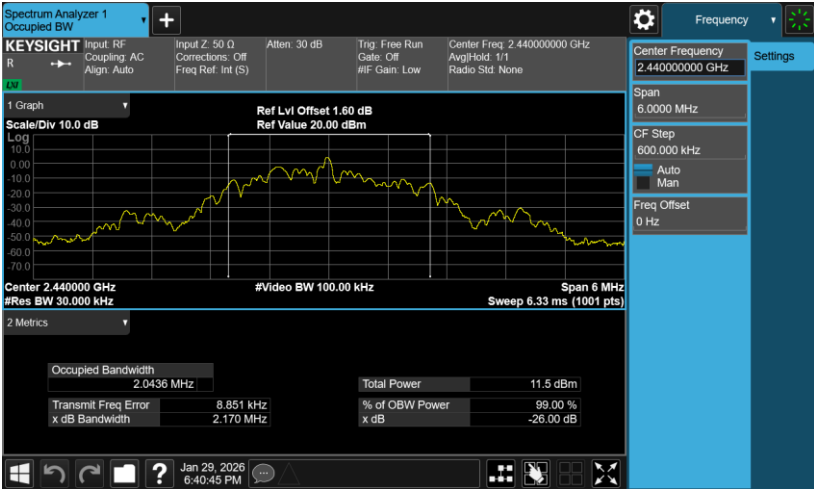
6 dB Bandwidth

BLE 1M Low ch	
Mid ch	
High ch	

BLE 2M Low ch	
Mid ch	
High ch	

99 % Occupied Bandwidth

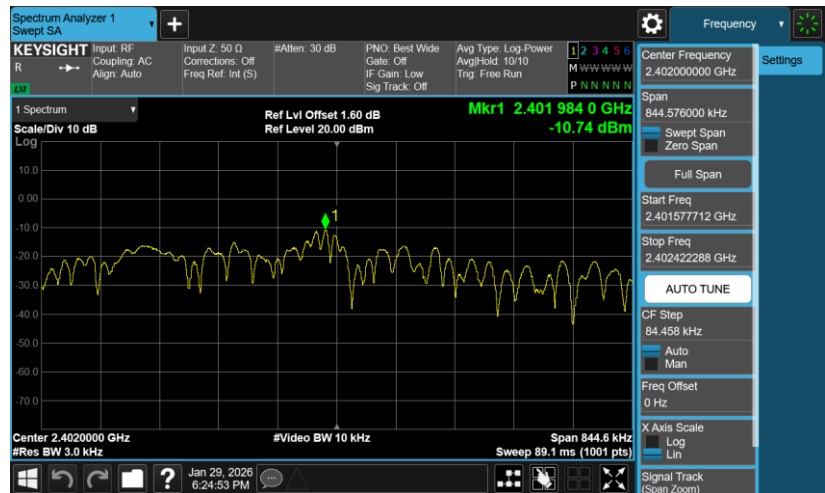
BLE 1M Low ch	 Center Frequency: 2.40200000 GHz Span: 3.0000 MHz CF Step: 300.000 kHz Freq Offset: 0 Hz Occupied Bandwidth: 1.0360 MHz Total Power: 11.8 dBm Transmit Freq Error: 272 Hz % of OBW Power: 99.00 %
Mid ch	 Center Frequency: 2.44000000 GHz Span: 3.0000 MHz CF Step: 300.000 kHz Freq Offset: 0 Hz Occupied Bandwidth: 1.0357 MHz Total Power: 12.5 dBm Transmit Freq Error: 465 Hz % of OBW Power: 99.00 %
High ch	 Center Frequency: 2.48000000 GHz Span: 3.0000 MHz CF Step: 300.000 kHz Freq Offset: 0 Hz Occupied Bandwidth: 1.0391 MHz Total Power: 13.4 dBm Transmit Freq Error: -501 Hz % of OBW Power: 99.00 %

BLE 2M													
Low ch	 Spectrum Analyzer 1 Occupied BW KEYSIGHT Input RF Coupling AC Align Auto Input Z 50 Ω Corrections Off Freq Ref Int (S) Atten 30 dB Trig Free Run Gate Off #IF Gain Low Center Freq 2.40200000 GHz Avg/Hold 1/1 Radio Std None 1 Graph Scale/Div 10.0 dB Log Ref Lvl Offset 1.60 dB Ref Value 20.00 dBm Center 2.402000 GHz #Res BW 30.000 kHz #Video BW 100.00 kHz Span 6 MHz Sweep 6.33 ms (1001 pts) 2 Metrics <table><tr><td>Occupied Bandwidth</td><td>2.0422 MHz</td><td>Total Power</td><td>10.9 dBm</td></tr><tr><td>Transmit Freq Error</td><td>9.032 kHz</td><td>% of OBW Power</td><td>99.00 %</td></tr><tr><td>x dB Bandwidth</td><td>2.171 MHz</td><td>x dB</td><td>-26.00 dB</td></tr></table> Jan 29, 2026 6:34:18 PM	Occupied Bandwidth	2.0422 MHz	Total Power	10.9 dBm	Transmit Freq Error	9.032 kHz	% of OBW Power	99.00 %	x dB Bandwidth	2.171 MHz	x dB	-26.00 dB
Occupied Bandwidth	2.0422 MHz	Total Power	10.9 dBm										
Transmit Freq Error	9.032 kHz	% of OBW Power	99.00 %										
x dB Bandwidth	2.171 MHz	x dB	-26.00 dB										
Mid ch	 Spectrum Analyzer 1 Occupied BW KEYSIGHT Input RF Coupling AC Align Auto Input Z 50 Ω Corrections Off Freq Ref Int (S) Atten 30 dB Trig Free Run Gate Off #IF Gain Low Center Freq 2.44000000 GHz Avg/Hold 1/1 Radio Std None 1 Graph Scale/Div 10.0 dB Log Ref Lvl Offset 1.60 dB Ref Value 20.00 dBm Center 2.440000 GHz #Res BW 30.000 kHz #Video BW 100.00 kHz Span 6 MHz Sweep 6.33 ms (1001 pts) 2 Metrics <table><tr><td>Occupied Bandwidth</td><td>2.0436 MHz</td><td>Total Power</td><td>11.5 dBm</td></tr><tr><td>Transmit Freq Error</td><td>8.851 kHz</td><td>% of OBW Power</td><td>99.00 %</td></tr><tr><td>x dB Bandwidth</td><td>2.170 MHz</td><td>x dB</td><td>-26.00 dB</td></tr></table> Jan 29, 2026 6:40:45 PM	Occupied Bandwidth	2.0436 MHz	Total Power	11.5 dBm	Transmit Freq Error	8.851 kHz	% of OBW Power	99.00 %	x dB Bandwidth	2.170 MHz	x dB	-26.00 dB
Occupied Bandwidth	2.0436 MHz	Total Power	11.5 dBm										
Transmit Freq Error	8.851 kHz	% of OBW Power	99.00 %										
x dB Bandwidth	2.170 MHz	x dB	-26.00 dB										
High ch	 Spectrum Analyzer 1 Occupied BW KEYSIGHT Input RF Coupling AC Align Auto Input Z 50 Ω Corrections Off Freq Ref Int (S) Atten 30 dB Trig Free Run Gate Off #IF Gain Low Center Freq 2.48000000 GHz Avg/Hold 1/1 Radio Std None 1 Graph Scale/Div 10.0 dB Log Ref Lvl Offset 1.60 dB Ref Value 20.00 dBm Center 2.480000 GHz #Res BW 30.000 kHz #Video BW 100.00 kHz Span 6 MHz Sweep 6.33 ms (1001 pts) 2 Metrics <table><tr><td>Occupied Bandwidth</td><td>2.0457 MHz</td><td>Total Power</td><td>12.4 dBm</td></tr><tr><td>Transmit Freq Error</td><td>8.994 kHz</td><td>% of OBW Power</td><td>99.00 %</td></tr><tr><td>x dB Bandwidth</td><td>2.172 MHz</td><td>x dB</td><td>-26.00 dB</td></tr></table> Jan 29, 2026 6:43:13 PM	Occupied Bandwidth	2.0457 MHz	Total Power	12.4 dBm	Transmit Freq Error	8.994 kHz	% of OBW Power	99.00 %	x dB Bandwidth	2.172 MHz	x dB	-26.00 dB
Occupied Bandwidth	2.0457 MHz	Total Power	12.4 dBm										
Transmit Freq Error	8.994 kHz	% of OBW Power	99.00 %										
x dB Bandwidth	2.172 MHz	x dB	-26.00 dB										

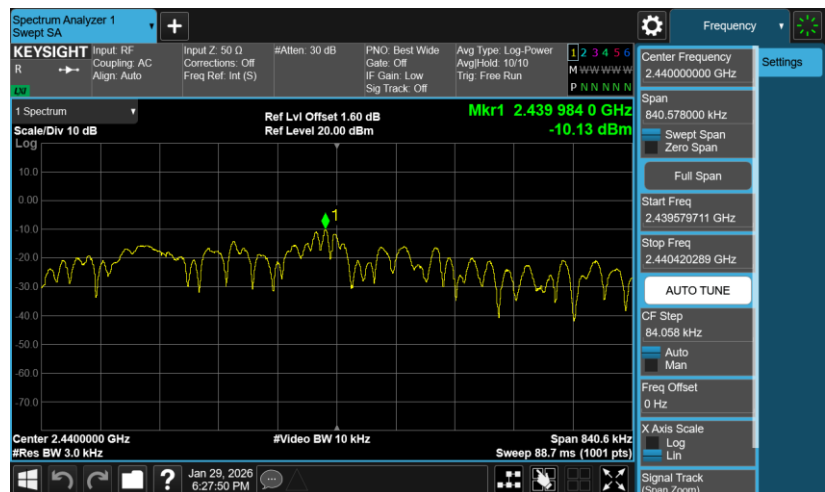
Power Density

BLE 1M

Low ch



Mid ch



High ch

