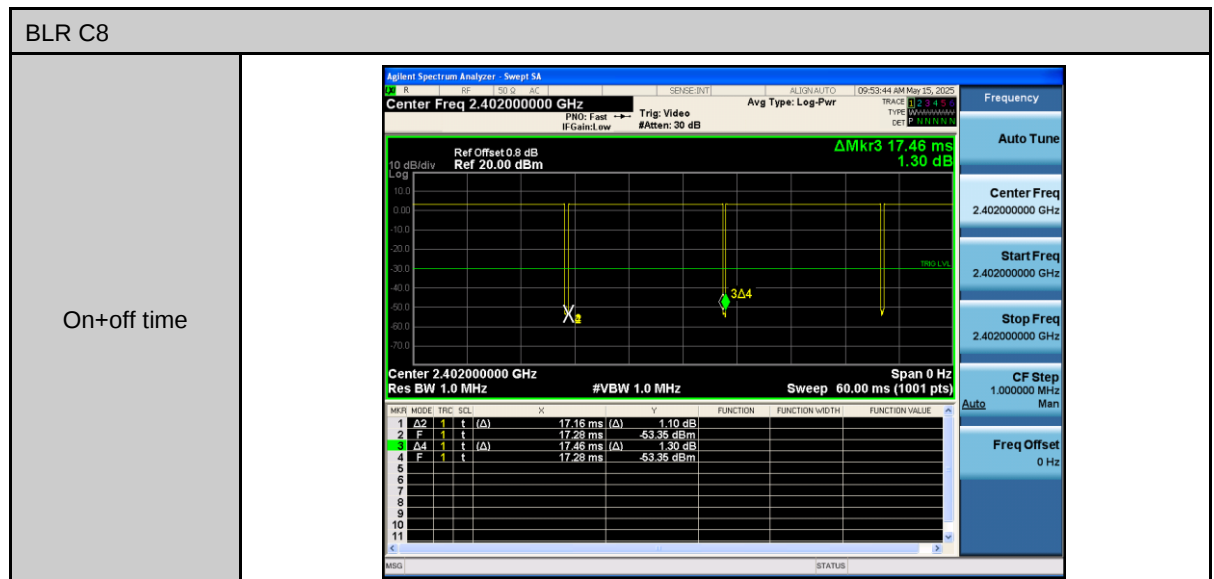
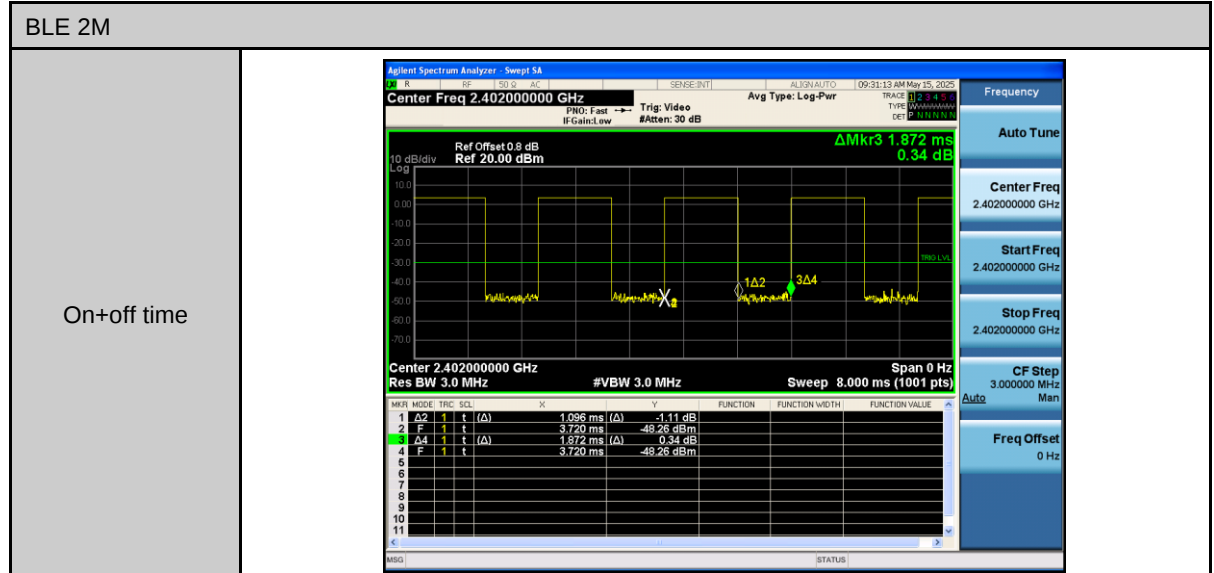
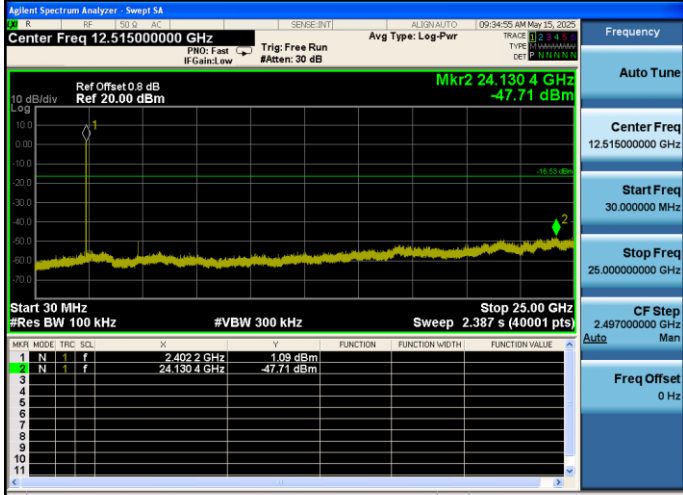
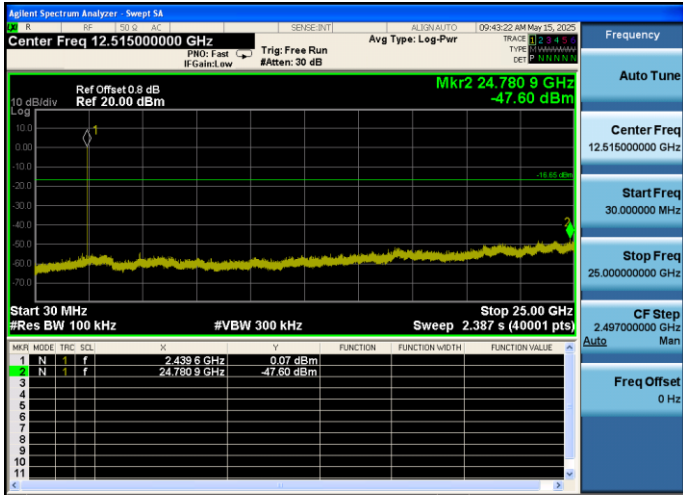
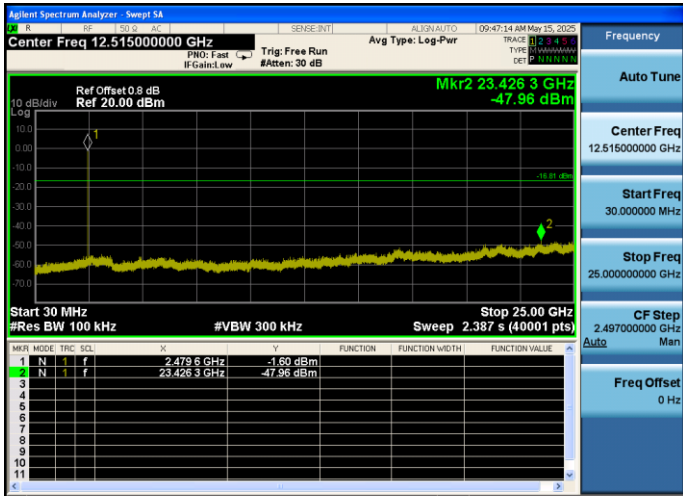


Appendix B. Test Plots

Duty cycle

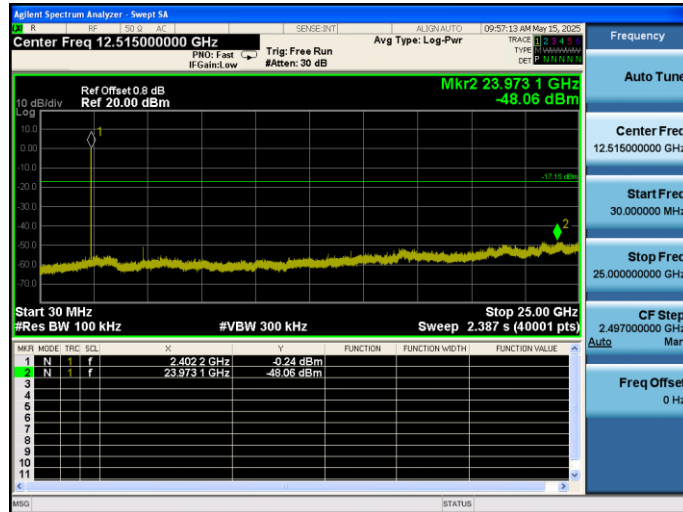


Out of Band Conducted Spurious Emission

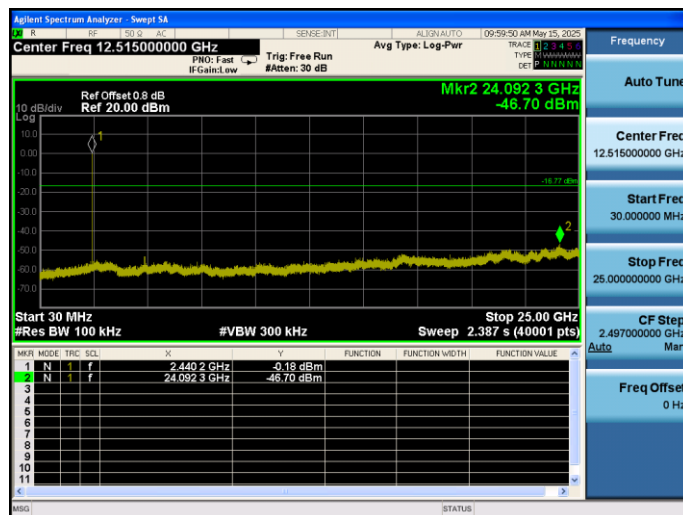
BLE 2M																												
Low ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr2 24.1304 GHz -47.71 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts) <table><tr><th>MKR</th><th>MODE</th><th>TRIG</th><th>SCL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>24.022 GHz</td><td>1.09 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>24.1304 GHz</td><td>-47.71 dBm</td><td></td><td></td><td></td></tr></table>	MKR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	24.022 GHz	1.09 dBm				2	N	1	f	24.1304 GHz	-47.71 dBm			
MKR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																				
1	N	1	f	24.022 GHz	1.09 dBm																							
2	N	1	f	24.1304 GHz	-47.71 dBm																							
Mid ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr2 24.7809 GHz -47.60 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts) <table><tr><th>MKR</th><th>MODE</th><th>TRIG</th><th>SCL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>24.4396 GHz</td><td>0.07 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>24.7809 GHz</td><td>-47.60 dBm</td><td></td><td></td><td></td></tr></table>	MKR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	24.4396 GHz	0.07 dBm				2	N	1	f	24.7809 GHz	-47.60 dBm			
MKR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																				
1	N	1	f	24.4396 GHz	0.07 dBm																							
2	N	1	f	24.7809 GHz	-47.60 dBm																							
High ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr2 23.4263 GHz -47.96 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts) <table><tr><th>MKR</th><th>MODE</th><th>TRIG</th><th>SCL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>24.4796 GHz</td><td>-1.60 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>23.4263 GHz</td><td>-47.96 dBm</td><td></td><td></td><td></td></tr></table>	MKR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	24.4796 GHz	-1.60 dBm				2	N	1	f	23.4263 GHz	-47.96 dBm			
MKR	MODE	TRIG	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																				
1	N	1	f	24.4796 GHz	-1.60 dBm																							
2	N	1	f	23.4263 GHz	-47.96 dBm																							

BLR C8

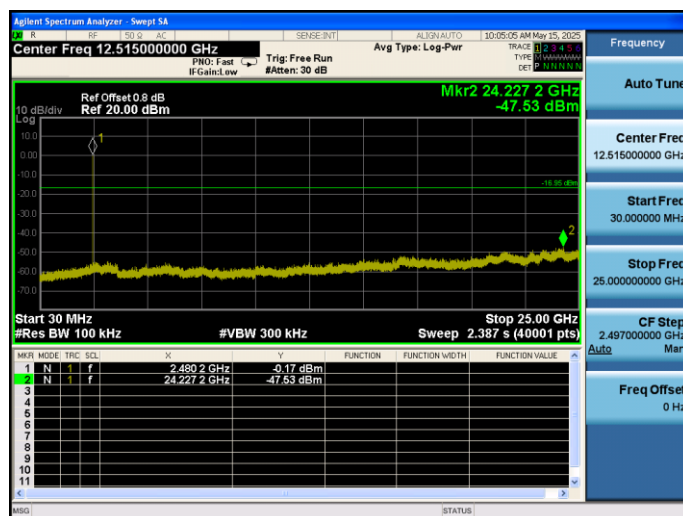
Low ch



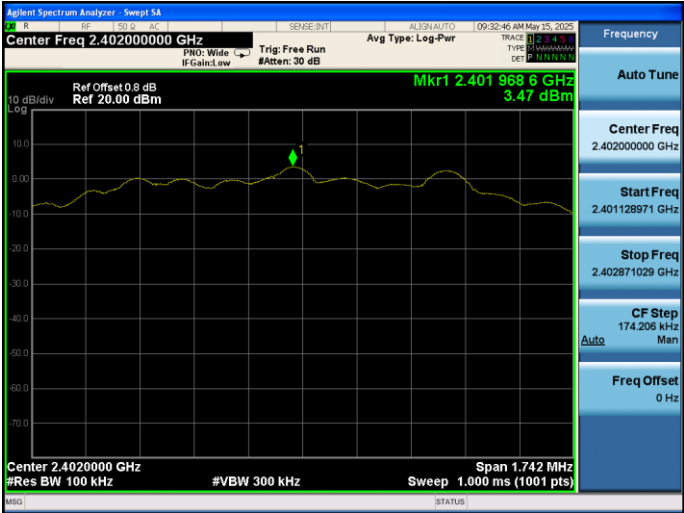
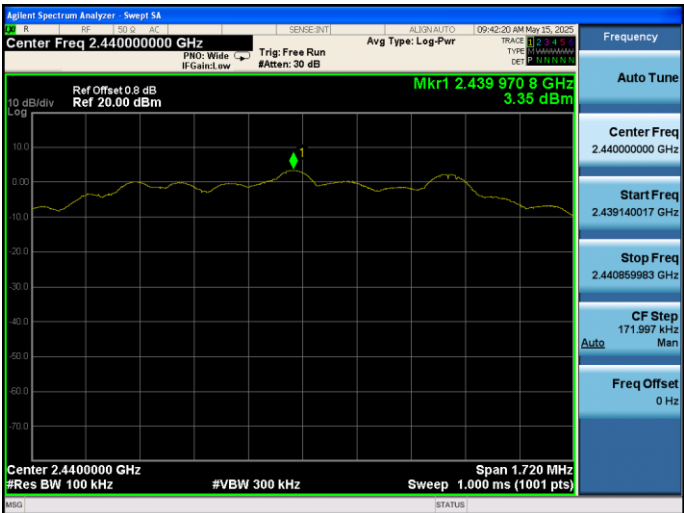
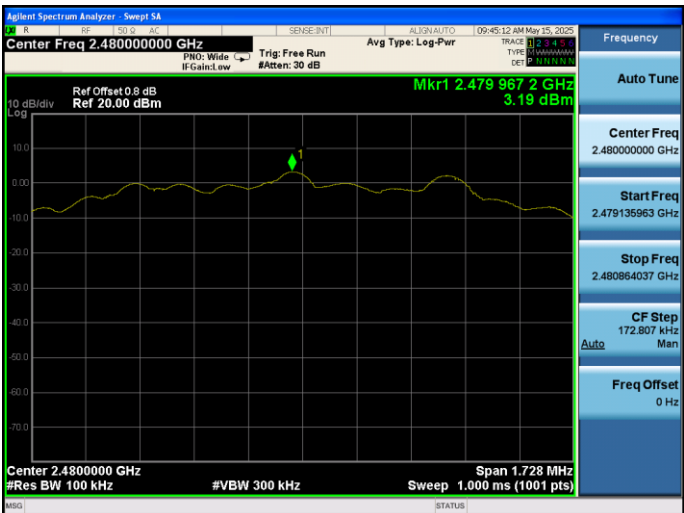
Mid ch



High ch

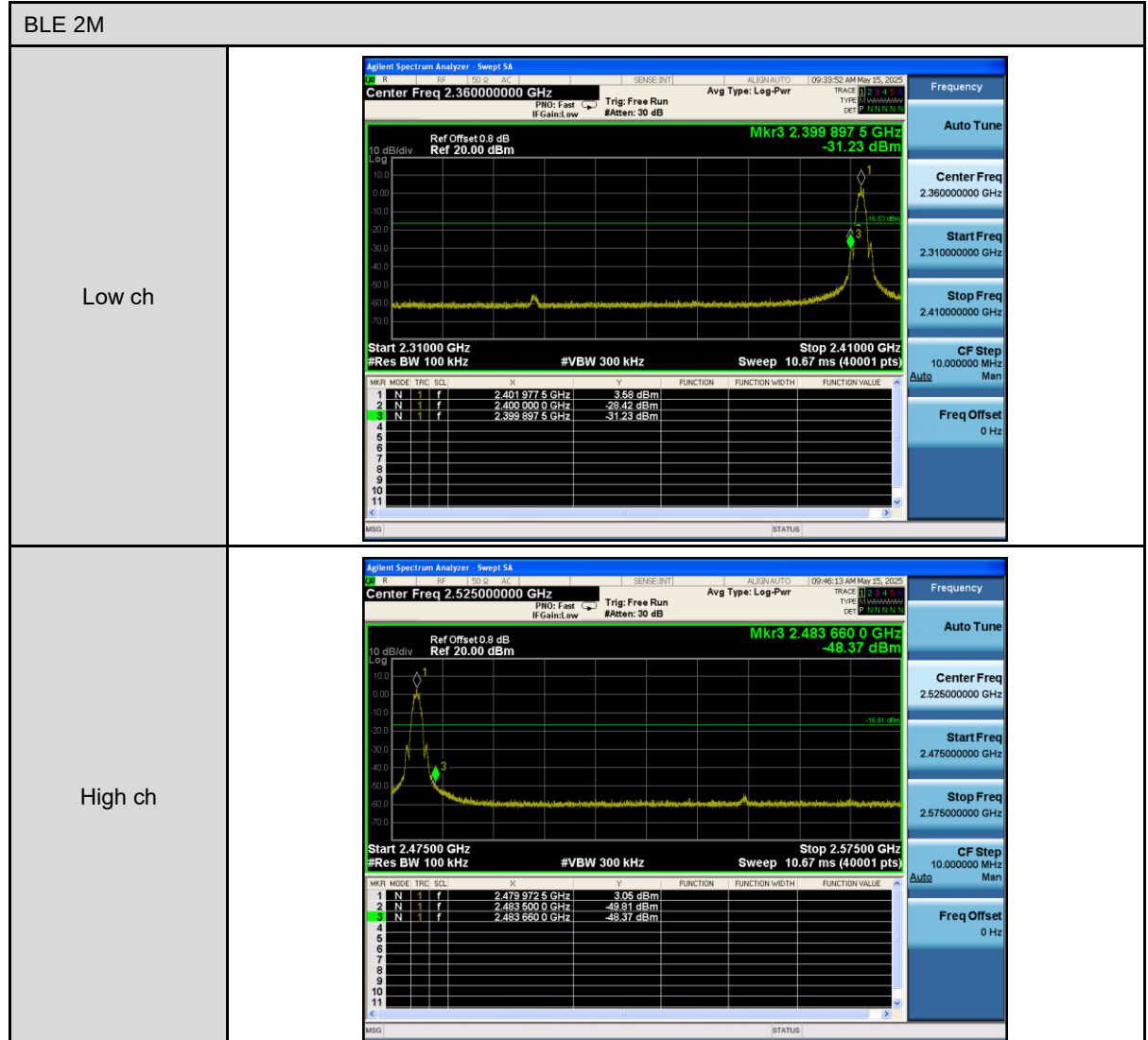


Reference level

BLE 2M Low ch	
Mid ch	
High ch	

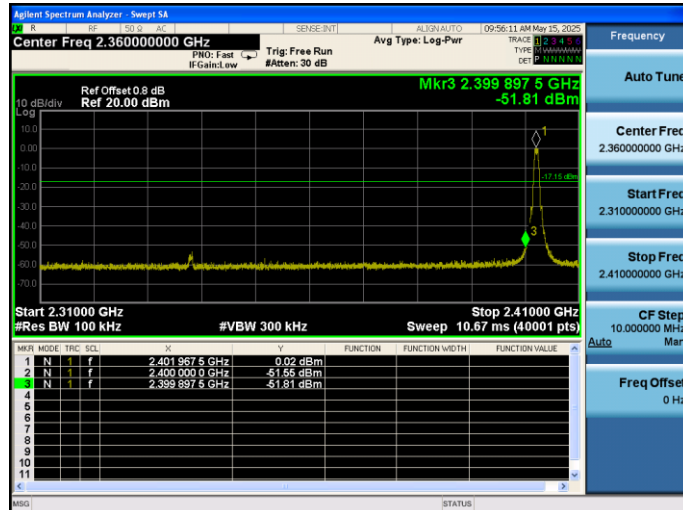
BLR C8	
Low ch	Agilent Spectrum Analyzer - Swept SA Center Freq 2.402000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr1 2.4019908 GHz 2.85 dBm Center 2.4020000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts) Span 918.7 kHz Frequency Auto Tune Center Freq 2.402000000 GHz Start Freq 2.401540634 GHz Stop Freq 2.402459366 GHz CF Step 91.873 kHz Man Freq Offset 0 Hz
Mid ch	Agilent Spectrum Analyzer - Swept SA Center Freq 2.440000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr1 2.4399625 GHz 3.23 dBm Center 2.4400000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts) Span 913.5 kHz Frequency Auto Tune Center Freq 2.440000000 GHz Start Freq 2.439543275 GHz Stop Freq 2.440456725 GHz CF Step 91.345 kHz Man Freq Offset 0 Hz
High ch	Agilent Spectrum Analyzer - Swept SA Center Freq 2.480000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr1 2.4799663 GHz 3.05 dBm Center 2.4800000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts) Span 910.5 kHz Frequency Auto Tune Center Freq 2.480000000 GHz Start Freq 2.479544740 GHz Stop Freq 2.480455260 GHz CF Step 91.062 kHz Man Freq Offset 0 Hz

Conducted Band Edge

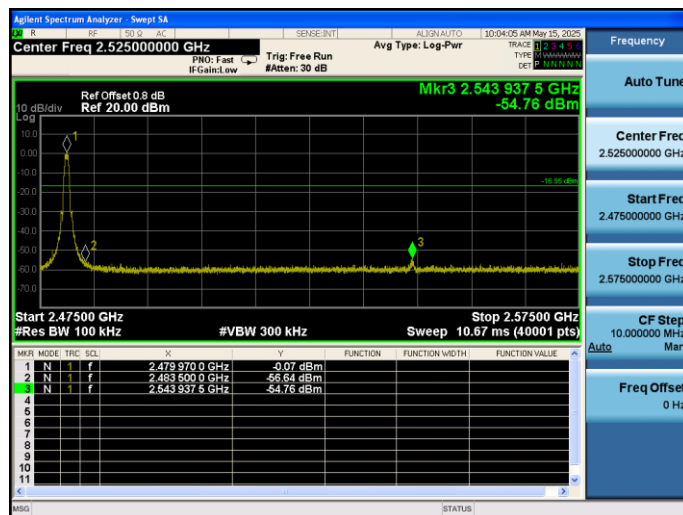


BLR C8

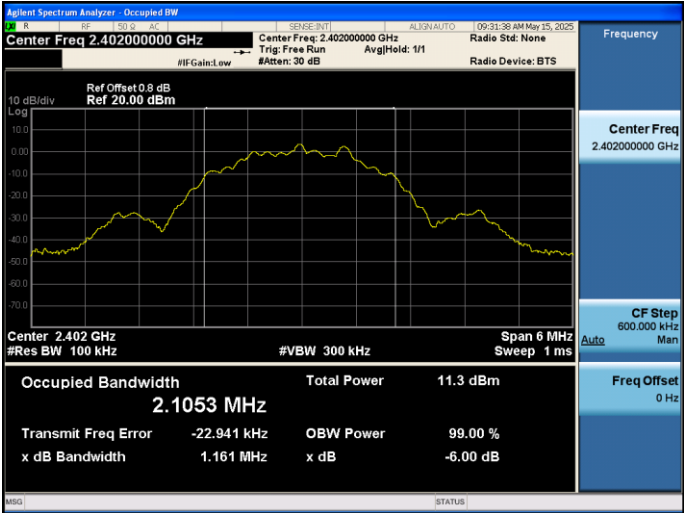
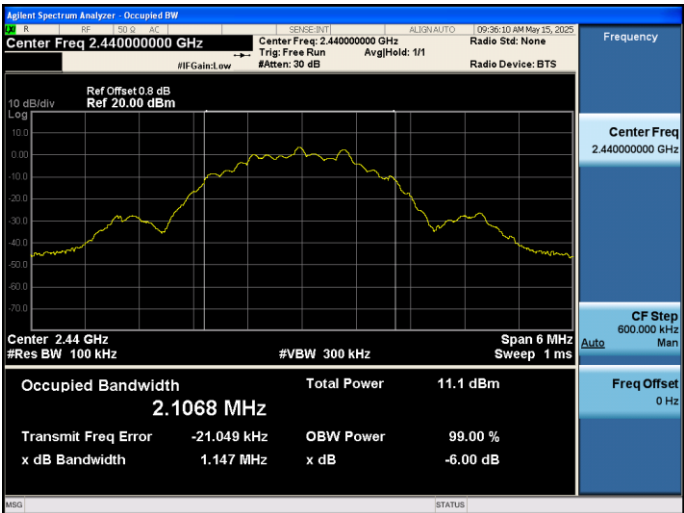
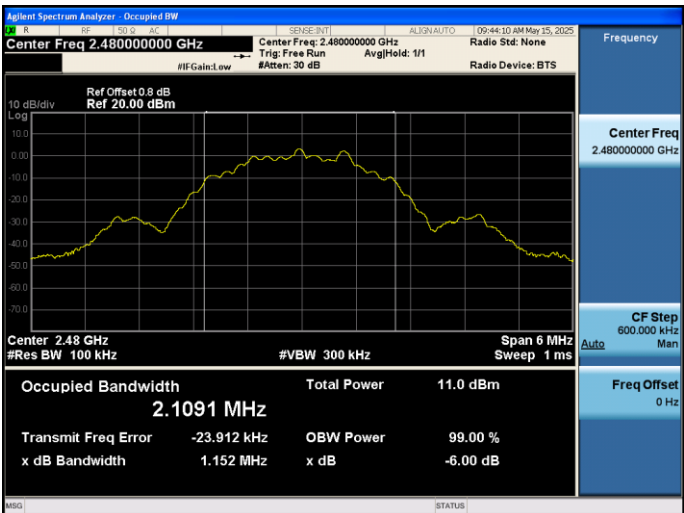
Low ch



High ch



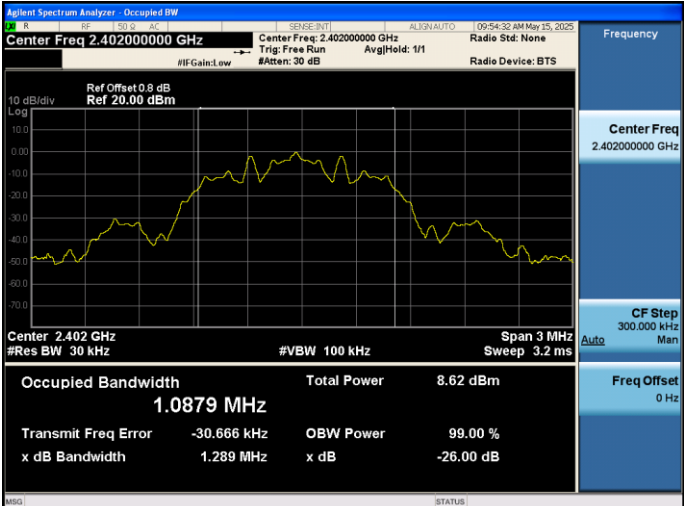
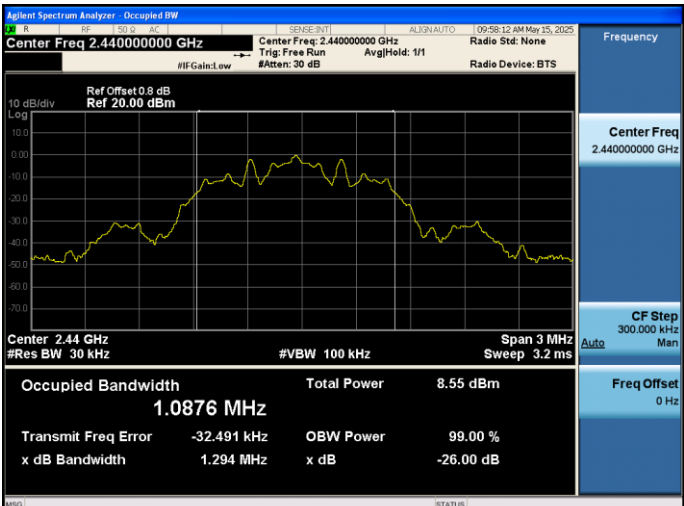
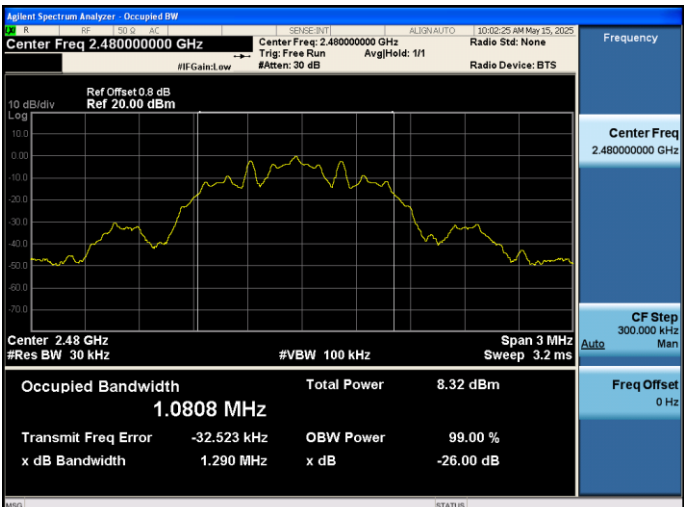
6 dB Bandwidth

BLE 2M	
Low ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.402000000 GHz Ref Offset: 0.8 dB, Ref: 20.00 dBm Occupied Bandwidth: 2.1053 MHz Total Power: 11.3 dBm Transmit Freq Error: -22.941 kHz x dB Bandwidth: 1.161 MHz OBW Power: 99.00 % x dB: -6.00 dB
Mid ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.440000000 GHz Ref Offset: 0.8 dB, Ref: 20.00 dBm Occupied Bandwidth: 2.1068 MHz Total Power: 11.1 dBm Transmit Freq Error: -21.049 kHz x dB Bandwidth: 1.147 MHz OBW Power: 99.00 % x dB: -6.00 dB
High ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.480000000 GHz Ref Offset: 0.8 dB, Ref: 20.00 dBm Occupied Bandwidth: 2.1091 MHz Total Power: 11.0 dBm Transmit Freq Error: -23.912 kHz x dB Bandwidth: 1.152 MHz OBW Power: 99.00 % x dB: -6.00 dB

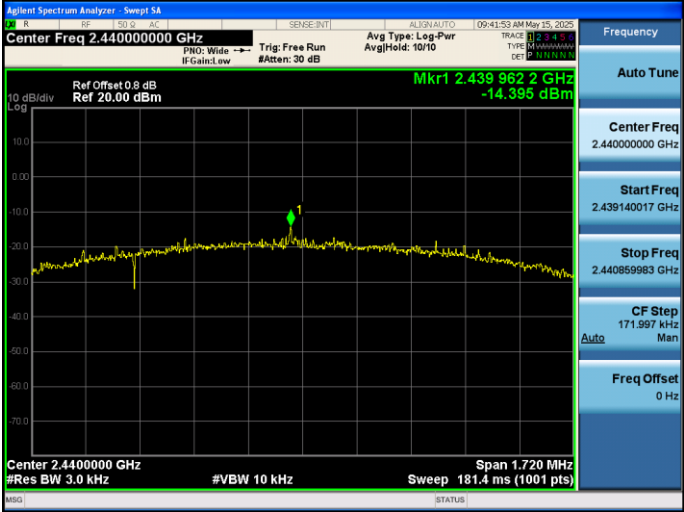
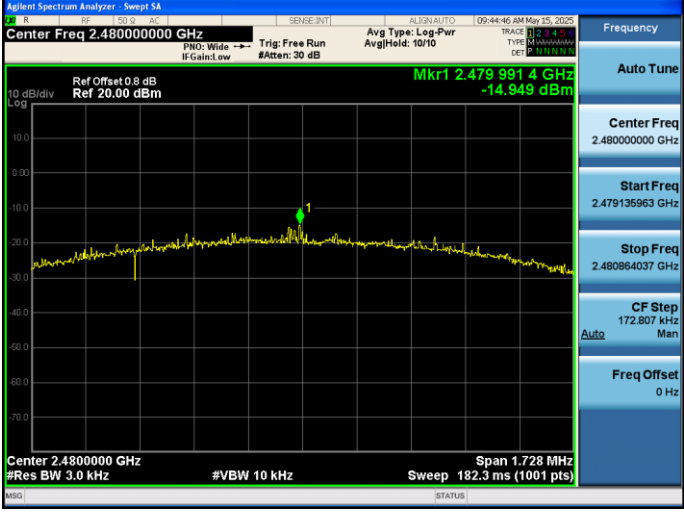
BLR C8	
Low ch	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.402000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Center 2.402 GHz #Res BW 100 kHz Occupied Bandwidth 1.0744 MHz Total Power 7.46 dBm Transmit Freq Error -29.099 kHz OBW Power 99.00 % x dB Bandwidth 612.5 kHz x dB -6.00 dB
Mid ch	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.440000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Center 2.44 GHz #Res BW 100 kHz Occupied Bandwidth 1.0789 MHz Total Power 7.43 dBm Transmit Freq Error -29.758 kHz OBW Power 99.00 % x dB Bandwidth 609.0 kHz x dB -6.00 dB
High ch	Agilent Spectrum Analyzer - Occupied BW Center Freq 2.480000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Center 2.48 GHz #Res BW 100 kHz Occupied Bandwidth 1.0734 MHz Total Power 7.11 dBm Transmit Freq Error -31.189 kHz OBW Power 99.00 % x dB Bandwidth 607.0 kHz x dB -6.00 dB

99 % Occupied Bandwidth

BLE 2M	
Low ch	Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.402000000 GHz Center Freq: 2.402000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset: 0.8 dB Ref: 20.00 dBm 10 dB/div Log Center: 2.402 GHz #Res BW: 30 kHz #VBW: 100 kHz Span: 6 MHz Sweep: 6.333 ms Occupied Bandwidth: 2.1028 MHz Total Power: 10.9 dBm Transmit Freq Error: -18.197 kHz OBW Power: 99.00 % x dB Bandwidth: 2.474 MHz x dB: -26.00 dB Frequency Center Freq: 2.402000000 GHz CF Step: 600.000 kHz Auto Freq Offset: 0 Hz
Mid ch	Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.440000000 GHz Center Freq: 2.440000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset: 0.8 dB Ref: 20.00 dBm 10 dB/div Log Center: 2.44 GHz #Res BW: 30 kHz #VBW: 100 kHz Span: 6 MHz Sweep: 6.333 ms Occupied Bandwidth: 2.1051 MHz Total Power: 10.7 dBm Transmit Freq Error: -19.448 kHz OBW Power: 99.00 % x dB Bandwidth: 2.475 MHz x dB: -26.00 dB Frequency Center Freq: 2.440000000 GHz CF Step: 600.000 kHz Auto Freq Offset: 0 Hz
High ch	Agilent Spectrum Analyzer - Occupied BW Center Freq: 2.480000000 GHz Center Freq: 2.480000000 GHz Trig: Free Run Avg/Hold: 1/1 Radio Std: None Radio Device: BTS Ref Offset: 0.8 dB Ref: 20.00 dBm 10 dB/div Log Center: 2.48 GHz #Res BW: 30 kHz #VBW: 100 kHz Span: 6 MHz Sweep: 6.333 ms Occupied Bandwidth: 2.1057 MHz Total Power: 10.6 dBm Transmit Freq Error: -19.474 kHz OBW Power: 99.00 % x dB Bandwidth: 2.474 MHz x dB: -26.00 dB Frequency Center Freq: 2.480000000 GHz CF Step: 600.000 kHz Auto Freq Offset: 0 Hz

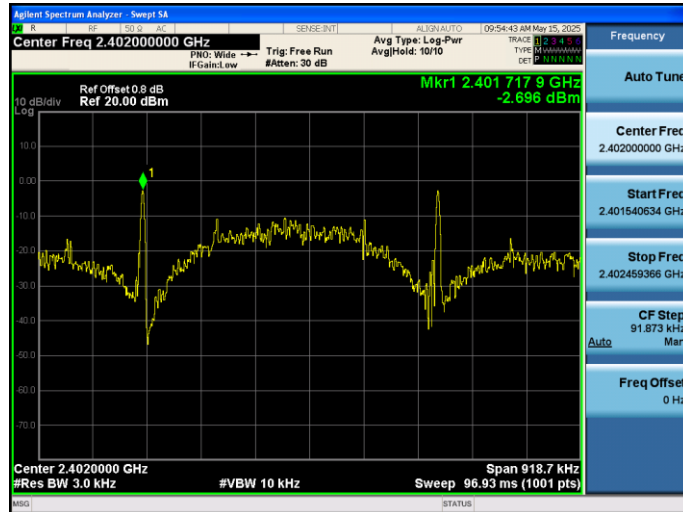
BLR C8 Low ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.402000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Center 2.402 GHz #Res BW 30 kHz Span 3 MHz Sweep 3.2 ms Occupied Bandwidth 1.0879 MHz Total Power 8.62 dBm Transmit Freq Error -30.666 kHz OBW Power 99.00 % x dB Bandwidth 1.289 MHz x dB -26.00 dB Frequency Center Freq 2.402000000 GHz CF Step 300.000 kHz Man Freq Offset 0 Hz
Mid ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.440000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Center 2.44 GHz #Res BW 30 kHz Span 3 MHz Sweep 3.2 ms Occupied Bandwidth 1.0876 MHz Total Power 8.55 dBm Transmit Freq Error -32.491 kHz OBW Power 99.00 % x dB Bandwidth 1.294 MHz x dB -26.00 dB Frequency Center Freq 2.440000000 GHz CF Step 300.000 kHz Man Freq Offset 0 Hz
High ch	 Agilent Spectrum Analyzer - Occupied BW Center Freq 2.480000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Center 2.48 GHz #Res BW 30 kHz Span 3 MHz Sweep 3.2 ms Occupied Bandwidth 1.0808 MHz Total Power 8.32 dBm Transmit Freq Error -32.523 kHz OBW Power 99.00 % x dB Bandwidth 1.290 MHz x dB -26.00 dB Frequency Center Freq 2.480000000 GHz CF Step 300.000 kHz Man Freq Offset 0 Hz

Power Density

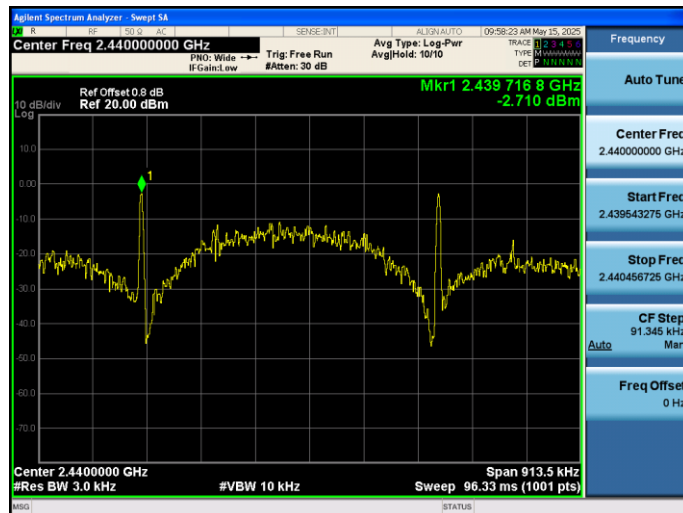
BLE 2M	
Low ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.402000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr1 2.4019617 GHz -14.123 dBm Center 2.4020000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 183.7 ms (1001 pts) Span 1.742 MHz Frequency Auto Tune Center Freq 2.402000000 GHz Start Freq 2.401128971 GHz Stop Freq 2.402871029 GHz CF Step 174.206 kHz Auto Man Freq Offset 0 Hz
Mid ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.440000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr1 2.4399622 GHz -14.395 dBm Center 2.4400000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 181.4 ms (1001 pts) Span 1.720 MHz Frequency Auto Tune Center Freq 2.440000000 GHz Start Freq 2.439140017 GHz Stop Freq 2.440859983 GHz CF Step 171.997 kHz Auto Man Freq Offset 0 Hz
High ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.480000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr1 2.4799914 GHz -14.949 dBm Center 2.4800000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 182.3 ms (1001 pts) Span 1.728 MHz Frequency Auto Tune Center Freq 2.480000000 GHz Start Freq 2.479135963 GHz Stop Freq 2.480864037 GHz CF Step 172.807 kHz Auto Man Freq Offset 0 Hz

BLR C8

Low ch



Mid ch



High ch

