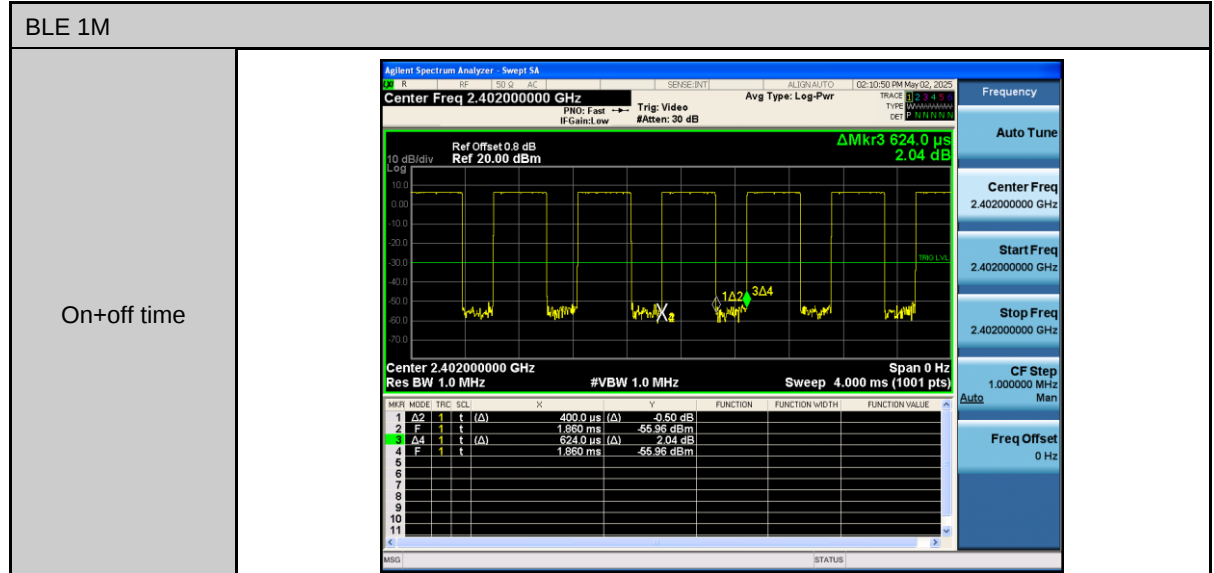
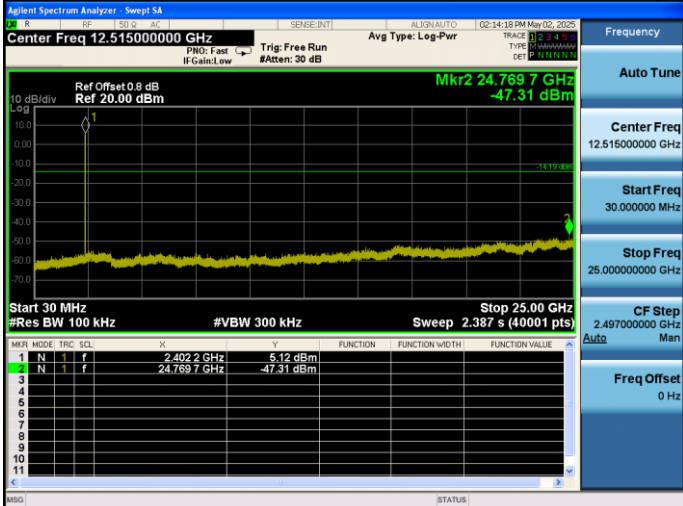
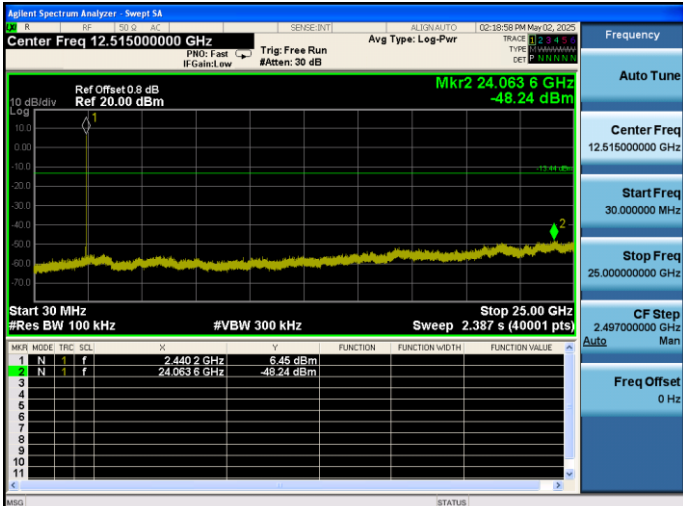
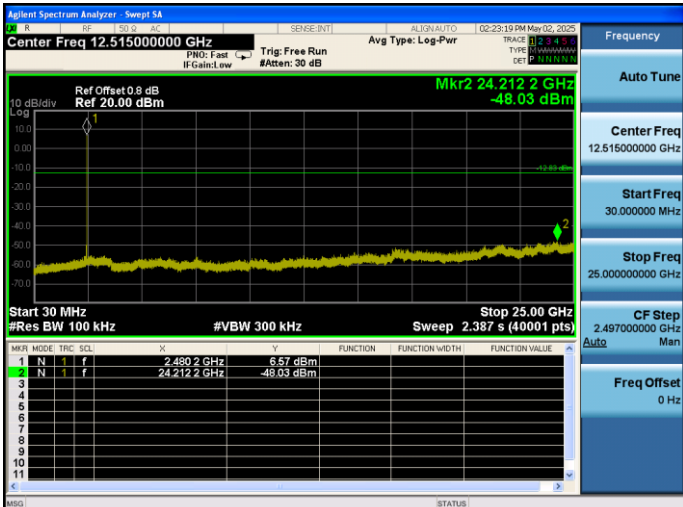


Appendix B. Test Plots

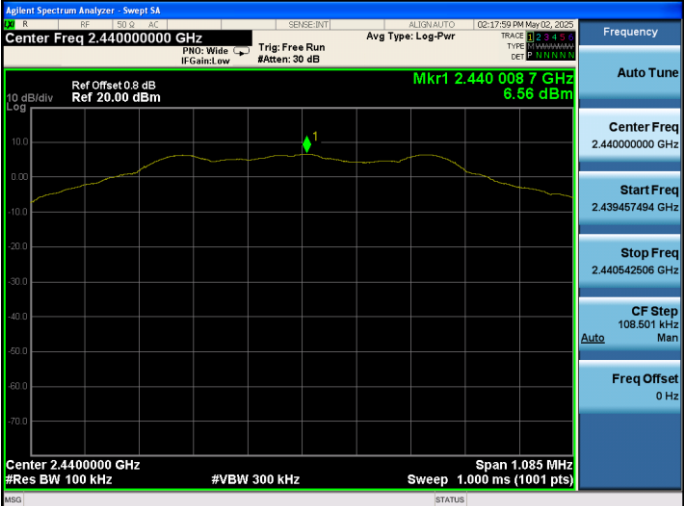
Duty cycle



Out of Band Conducted Spurious Emission

BLE 1M																												
Low ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr2 24.7697 GHz -47.31 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts) <table><tr><th>MNR</th><th>MODE</th><th>TRC</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>2.4022 GHz</td><td>5.12 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>24.7697 GHz</td><td>-47.31 dBm</td><td></td><td></td><td></td></tr></table>	MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.4022 GHz	5.12 dBm				2	N	1	f	24.7697 GHz	-47.31 dBm			
MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																				
1	N	1	f	2.4022 GHz	5.12 dBm																							
2	N	1	f	24.7697 GHz	-47.31 dBm																							
Mid ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr2 24.0636 GHz -48.24 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts) <table><tr><th>MNR</th><th>MODE</th><th>TRC</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>2.4402 GHz</td><td>6.45 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>24.0636 GHz</td><td>-48.24 dBm</td><td></td><td></td><td></td></tr></table>	MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.4402 GHz	6.45 dBm				2	N	1	f	24.0636 GHz	-48.24 dBm			
MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																				
1	N	1	f	2.4402 GHz	6.45 dBm																							
2	N	1	f	24.0636 GHz	-48.24 dBm																							
High ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 12.515000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr2 24.2122 GHz -48.03 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts) <table><tr><th>MNR</th><th>MODE</th><th>TRC</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>2.4802 GHz</td><td>6.57 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>24.2122 GHz</td><td>-48.03 dBm</td><td></td><td></td><td></td></tr></table>	MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.4802 GHz	6.57 dBm				2	N	1	f	24.2122 GHz	-48.03 dBm			
MNR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																				
1	N	1	f	2.4802 GHz	6.57 dBm																							
2	N	1	f	24.2122 GHz	-48.03 dBm																							

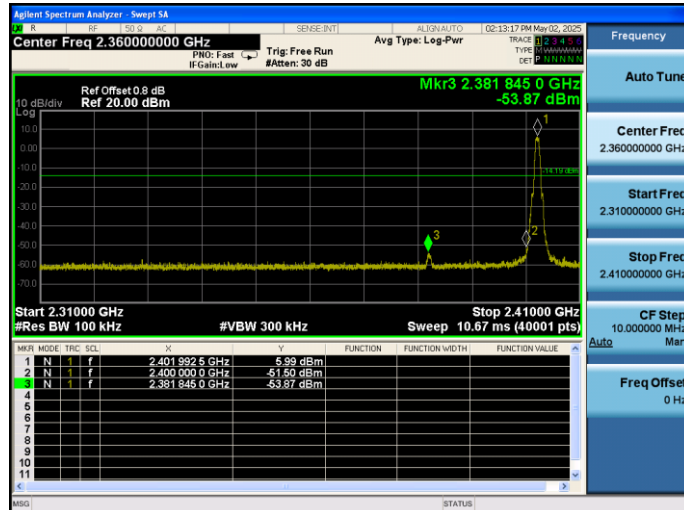
Reference level

BLE 1M Low ch	
Mid ch	
High ch	

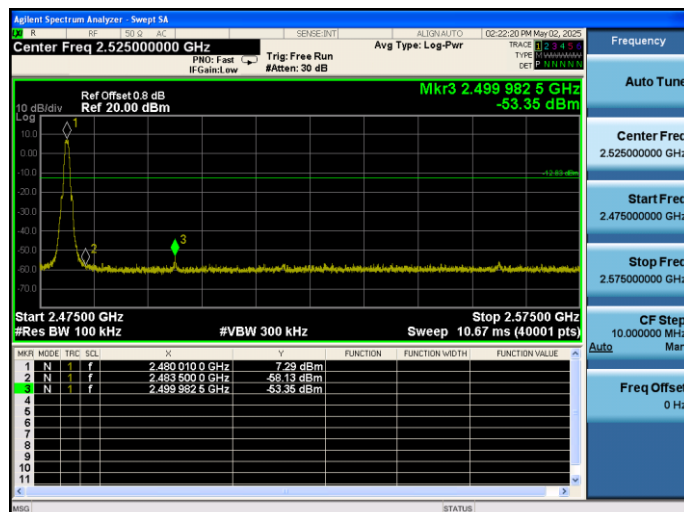
Conducted Band Edge

BLE 1M

Low ch



High ch



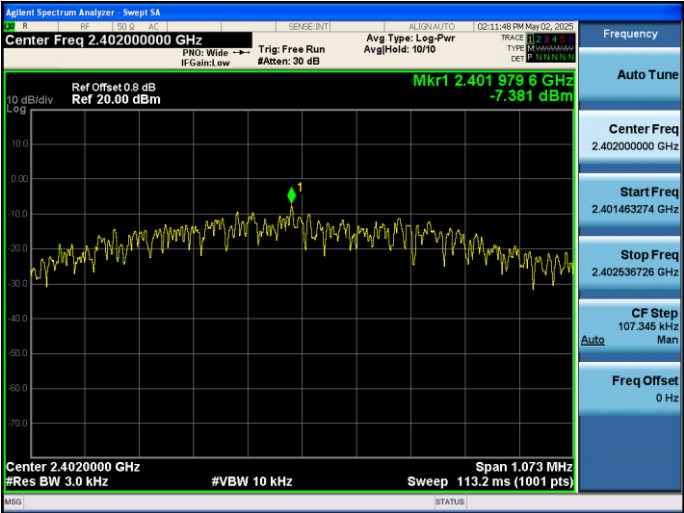
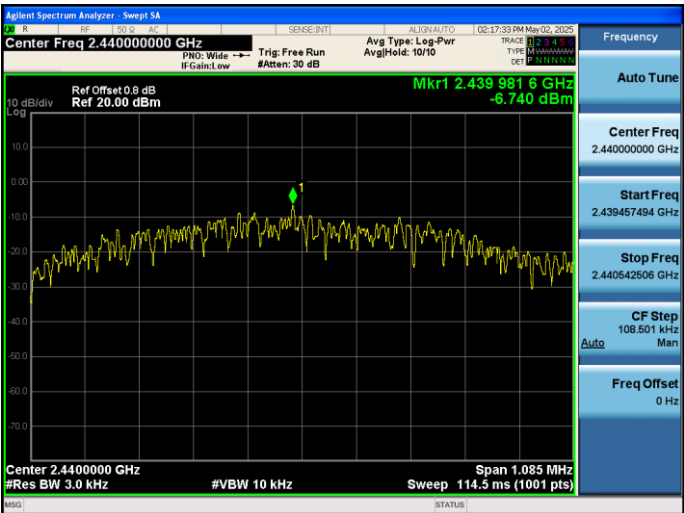
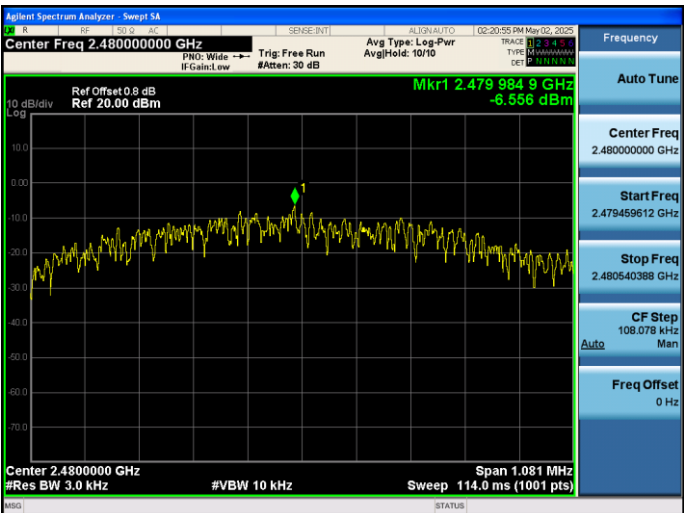
6 dB Bandwidth

BLE 1M	
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 1.0893 MHz Total Power 13.0 dBm Transmit Freq Error 4.330 kHz OBW Power 99.00 % x dB Bandwidth 715.6 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 1.0907 MHz Total Power 13.8 dBm Transmit Freq Error 7.083 kHz OBW Power 99.00 % x dB Bandwidth 723.3 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 1.0934 MHz Total Power 14.5 dBm Transmit Freq Error 9.291 kHz OBW Power 99.00 % x dB Bandwidth 720.5 kHz x dB -6.00 dB

99 % Occupied Bandwidth

BLE 1M	
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 #VBW 100 kHz Occupied Bandwidth 1.0648 MHz Total Power 13.3 dBm Transmit Freq Error 6.698 kHz OBW Power 99.00 % x dB Bandwidth 1.273 MHz x dB -26.00 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 30 kHz Span 3 MHz Sweep 3.2 ms #VBW 100 kHz Occupied Bandwidth 1.0659 MHz Total Power 14.1 dBm Transmit Freq Error 8.930 kHz OBW Power 99.00 % x dB Bandwidth 1.278 MHz x dB -26.00 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 30 kHz Span 3 MHz Sweep 3.2 ms #VBW 100 kHz Occupied Bandwidth 1.0679 MHz Total Power 14.7 dBm Transmit Freq Error 11.289 kHz OBW Power 99.00 % x dB Bandwidth 1.315 MHz x dB -26.00 dB

Power Density

BLE 1M	
Low ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.40200000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr1 2.401 979 6 GHz -7.381 dBm Center 2.4020000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 113.2 ms (1001 pts)
Mid ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.44000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr1 2.439 981 6 GHz -6.740 dBm Center 2.4400000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 114.5 ms (1001 pts)
High ch	 Agilent Spectrum Analyzer - Swept SA Center Freq 2.48000000 GHz Ref Offset 0.8 dB Ref 20.00 dBm Mkr1 2.479 984 9 GHz -6.556 dBm Center 2.4800000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 114.0 ms (1001 pts)