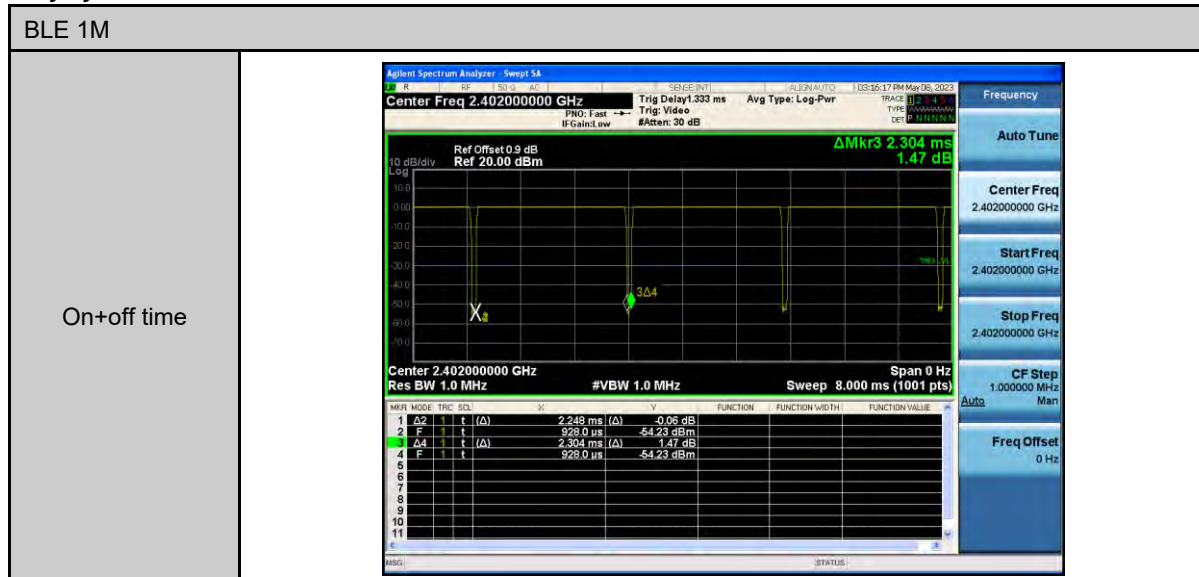


Appendix B. Test Plots

Duty cycle



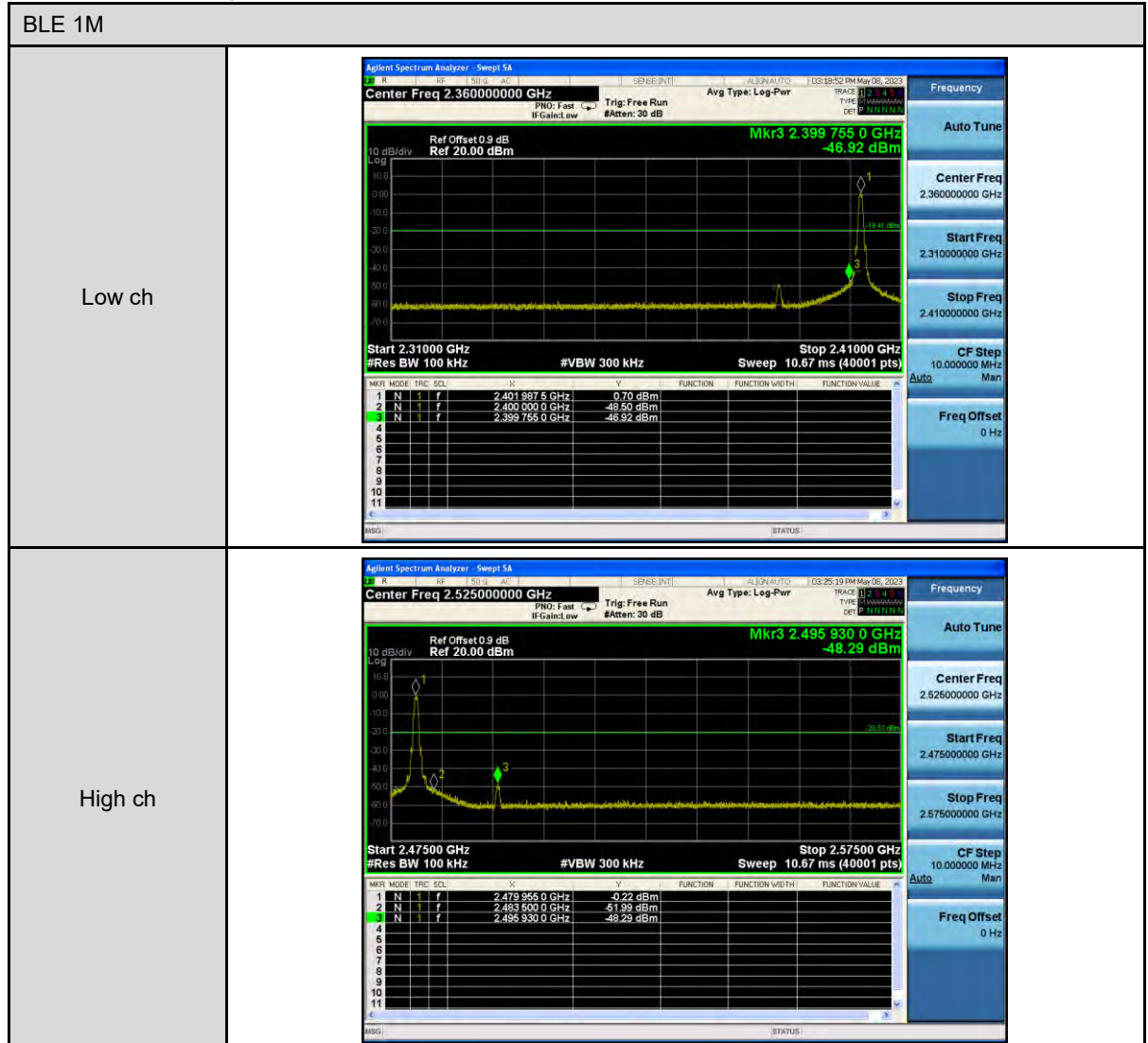
Out of Band Conducted Spurious Emission

BLE 1M																												
Low ch	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 12.515000000 GHz</p> <p>Mkr2 23.882 0 GHz -48.27 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 25.00 GHz Sweep 2.387 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MFR</th> <th>MODE</th> <th>TRC</th> <th>SQL</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>-1.33 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>23.882 0 GHz</td> <td>-48.27 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MFR	MODE	TRC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.401 5 GHz	-1.33 dBm				2	N	1	f	23.882 0 GHz	-48.27 dBm			
MFR	MODE	TRC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																				
1	N	1	f	2.401 5 GHz	-1.33 dBm																							
2	N	1	f	23.882 0 GHz	-48.27 dBm																							
Mid ch	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 12.515000000 GHz</p> <p>Mkr2 23.876 4 GHz -48.53 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 25.00 GHz Sweep 2.387 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MFR</th> <th>MODE</th> <th>TRC</th> <th>SQL</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>2.439 6 GHz</td> <td>-1.90 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>23.876 4 GHz</td> <td>-48.53 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MFR	MODE	TRC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.439 6 GHz	-1.90 dBm				2	N	1	f	23.876 4 GHz	-48.53 dBm			
MFR	MODE	TRC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																				
1	N	1	f	2.439 6 GHz	-1.90 dBm																							
2	N	1	f	23.876 4 GHz	-48.53 dBm																							
High ch	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 12.515000000 GHz</p> <p>Mkr2 24.099 2 GHz -48.65 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 25.00 GHz Sweep 2.387 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MFR</th> <th>MODE</th> <th>TRC</th> <th>SQL</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>-2.25 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>24.099 2 GHz</td> <td>-48.65 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MFR	MODE	TRC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.480 2 GHz	-2.25 dBm				2	N	1	f	24.099 2 GHz	-48.65 dBm			
MFR	MODE	TRC	SQL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																				
1	N	1	f	2.480 2 GHz	-2.25 dBm																							
2	N	1	f	24.099 2 GHz	-48.65 dBm																							

Reference level

BLE 1M	
Low ch	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.40200000 GHz Mkr1 2.4019914 CH2 0.59 dBm Span 1.034 MHz</p>
Mid ch	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.44000000 GHz Mkr1 2.4399816 CH2 -0.13 dBm Span 1.023 MHz</p>
High ch	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.48000000 GHz Mkr1 2.4799833 CH2 -0.53 dBm Span 1.041 MHz</p>

Conducted Band Edge



6 dB Bandwidth

BLE 1M	
Low ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz</p> <p>Ref Offset 0.9 dB Ref 20.00 dBm</p> <p>Center 2.402 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 1.0887 MHz</p> <p>Total Power 7.57 dBm</p> <p>Transmit Freq Error -17.544 kHz</p> <p>x dB Bandwidth 689.0 kHz</p>
Mid ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.44000000 GHz</p> <p>Ref Offset 0.9 dB Ref 20.00 dBm</p> <p>Center 2.44 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 1.0764 MHz</p> <p>Total Power 6.88 dBm</p> <p>Transmit Freq Error -18.133 kHz</p> <p>x dB Bandwidth 682.0 kHz</p>
High ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.48000000 GHz</p> <p>Ref Offset 0.9 dB Ref 20.00 dBm</p> <p>Center 2.48 GHz #Res BW 100 kHz</p> <p>Occupied Bandwidth 1.0952 MHz</p> <p>Total Power 6.49 dBm</p> <p>Transmit Freq Error -17.724 kHz</p> <p>x dB Bandwidth 693.9 kHz</p>

99 % Occupied Bandwidth

BLE 1M	
Low ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz</p> <p>Ref Offset 0.9 dB Ref 20.00 dBm</p> <p>Center 2.402 GHz #Res BW 30 kHz</p> <p>Occupied Bandwidth 1.0605 MHz</p> <p>Total Power 8.62 dBm</p> <p>OBW Power 99.00 %</p> <p>Transmit Freq Error -14.792 kHz</p> <p>x dB Bandwidth 1.260 MHz</p>
Mid ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.44000000 GHz</p> <p>Ref Offset 0.9 dB Ref 20.00 dBm</p> <p>Center 2.44 GHz #Res BW 30 kHz</p> <p>Occupied Bandwidth 1.0547 MHz</p> <p>Total Power 7.90 dBm</p> <p>OBW Power 99.00 %</p> <p>Transmit Freq Error -17.290 kHz</p> <p>x dB Bandwidth 1.255 MHz</p>
High ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.48000000 GHz</p> <p>Ref Offset 0.9 dB Ref 20.00 dBm</p> <p>Center 2.48 GHz #Res BW 30 kHz</p> <p>Occupied Bandwidth 1.0669 MHz</p> <p>Total Power 7.52 dBm</p> <p>OBW Power 99.00 %</p> <p>Transmit Freq Error -15.471 kHz</p> <p>x dB Bandwidth 1.260 MHz</p>

Power Density

BLE 1M	
<p>Low ch</p>	
<p>Mid ch</p>	
<p>High ch</p>	