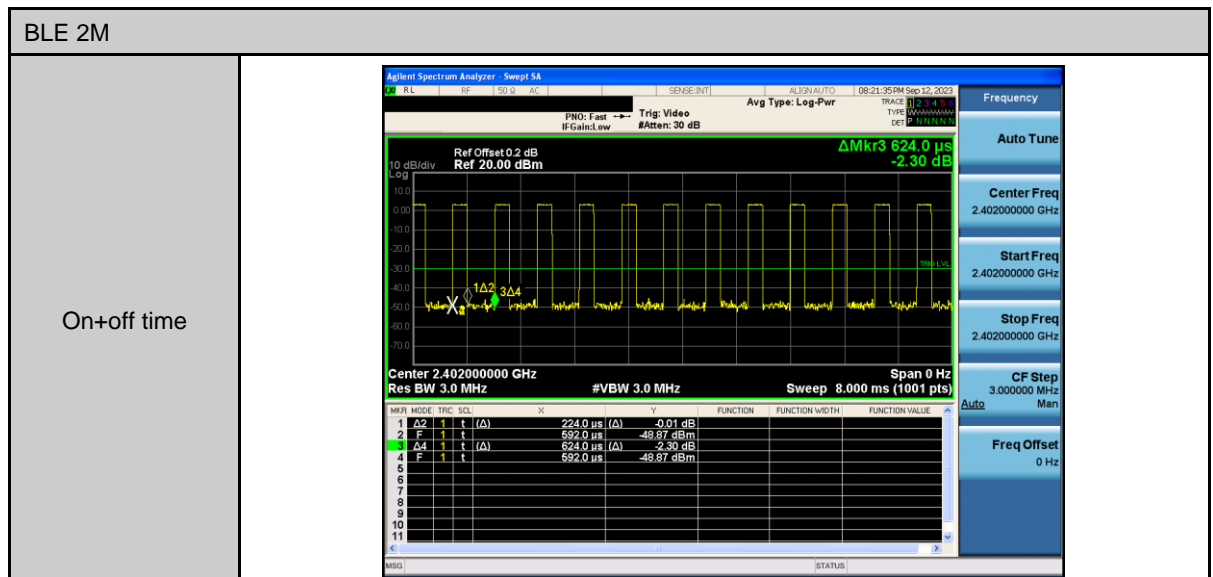
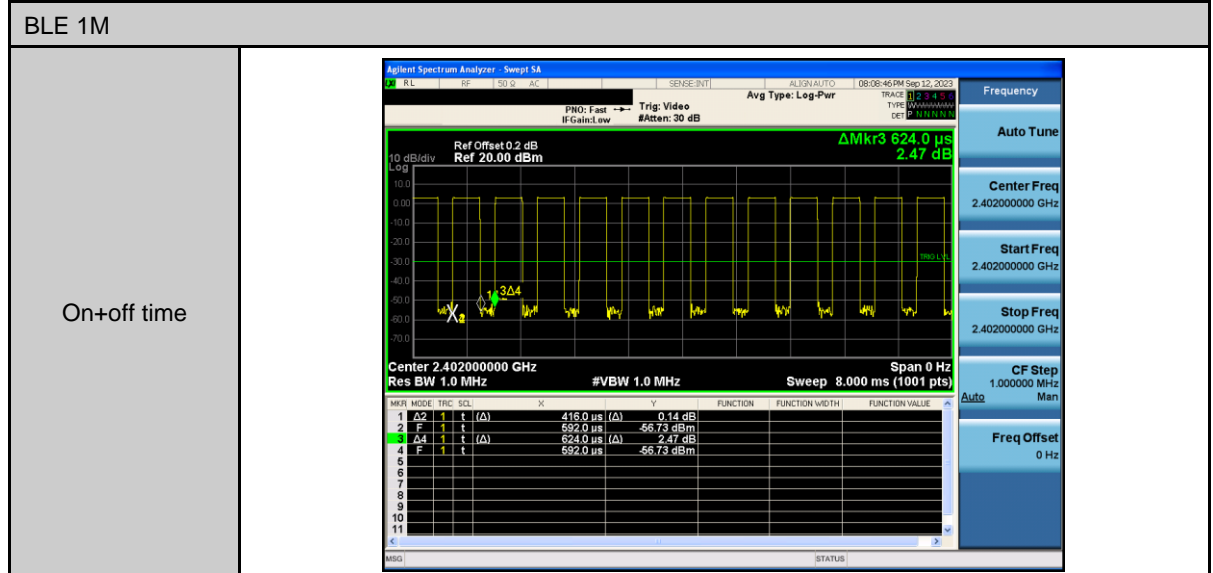


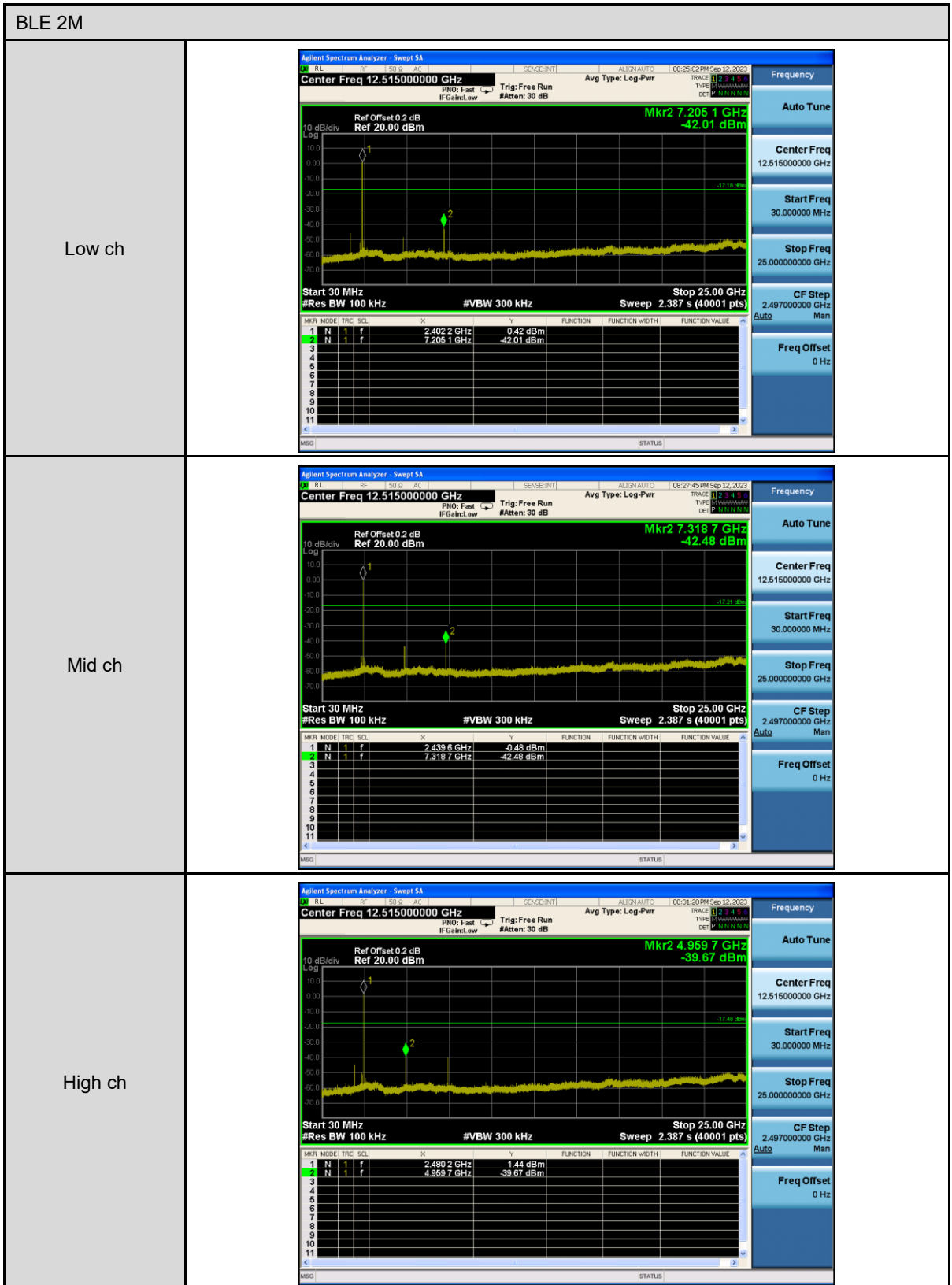
Appendix B. Test Plots

Duty cycle



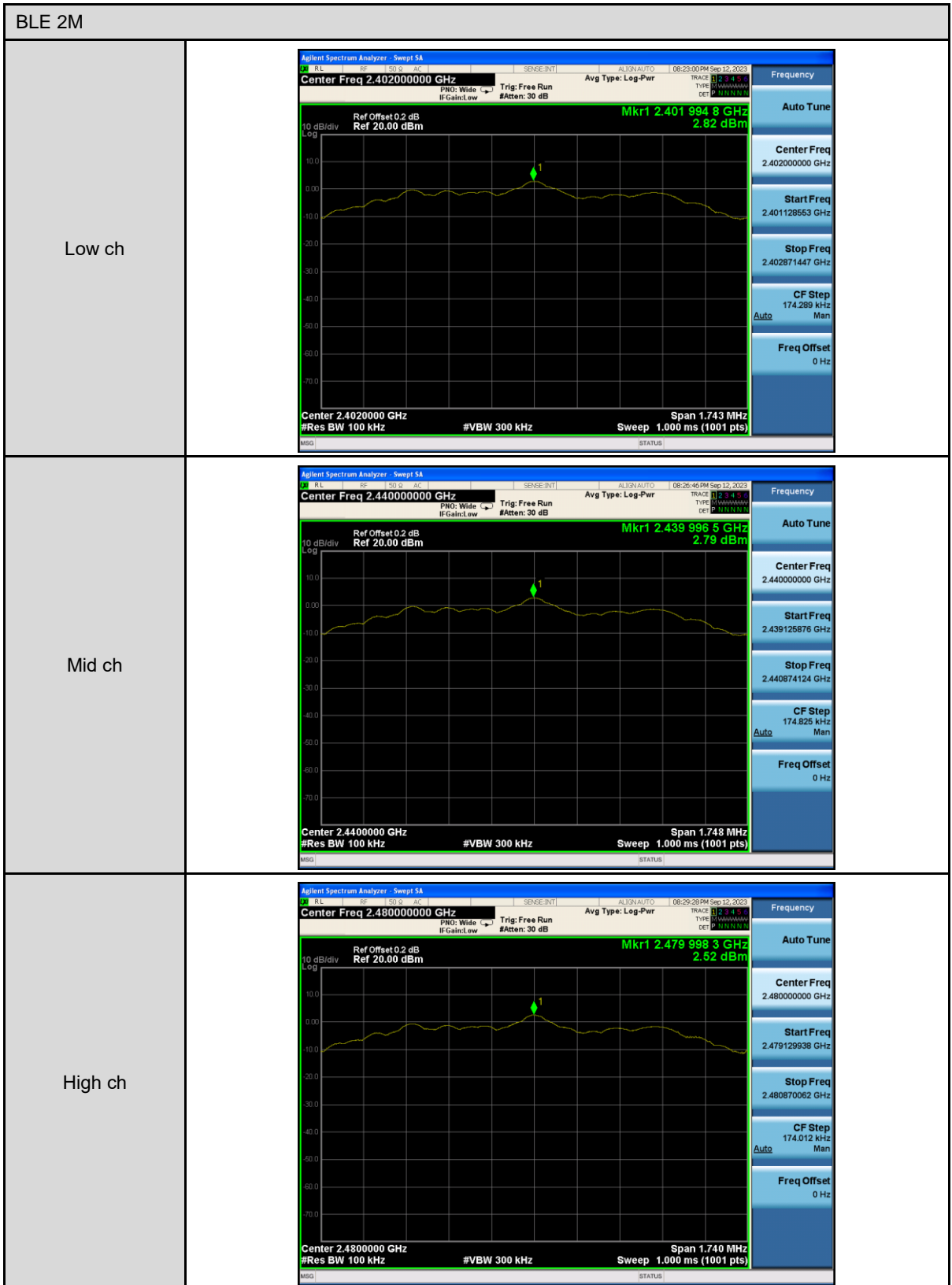
Out of Band Conducted Spurious Emission

BLE 1M																												
<p>Low ch</p>	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 12.515000000 GHz</p> <p>Ref Offset 0.2 dB Ref 20.00 dBm</p> <p>Mkr2 7.205 1 GHz -38.75 dBm</p> <p>Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.387 s (40001 pts)</p> <table border="1"> <thead> <tr> <th>MKR</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> </thead> <tbody> <tr> <td>1</td> <td>N</td> <td>1</td> <td>f</td> <td>2.402 2 GHz</td> <td>1.49 dBm</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>N</td> <td>1</td> <td>f</td> <td>7.205 1 GHz</td> <td>-38.75 dBm</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	2.402 2 GHz	1.49 dBm				2	N	1	f	7.205 1 GHz	-38.75 dBm			
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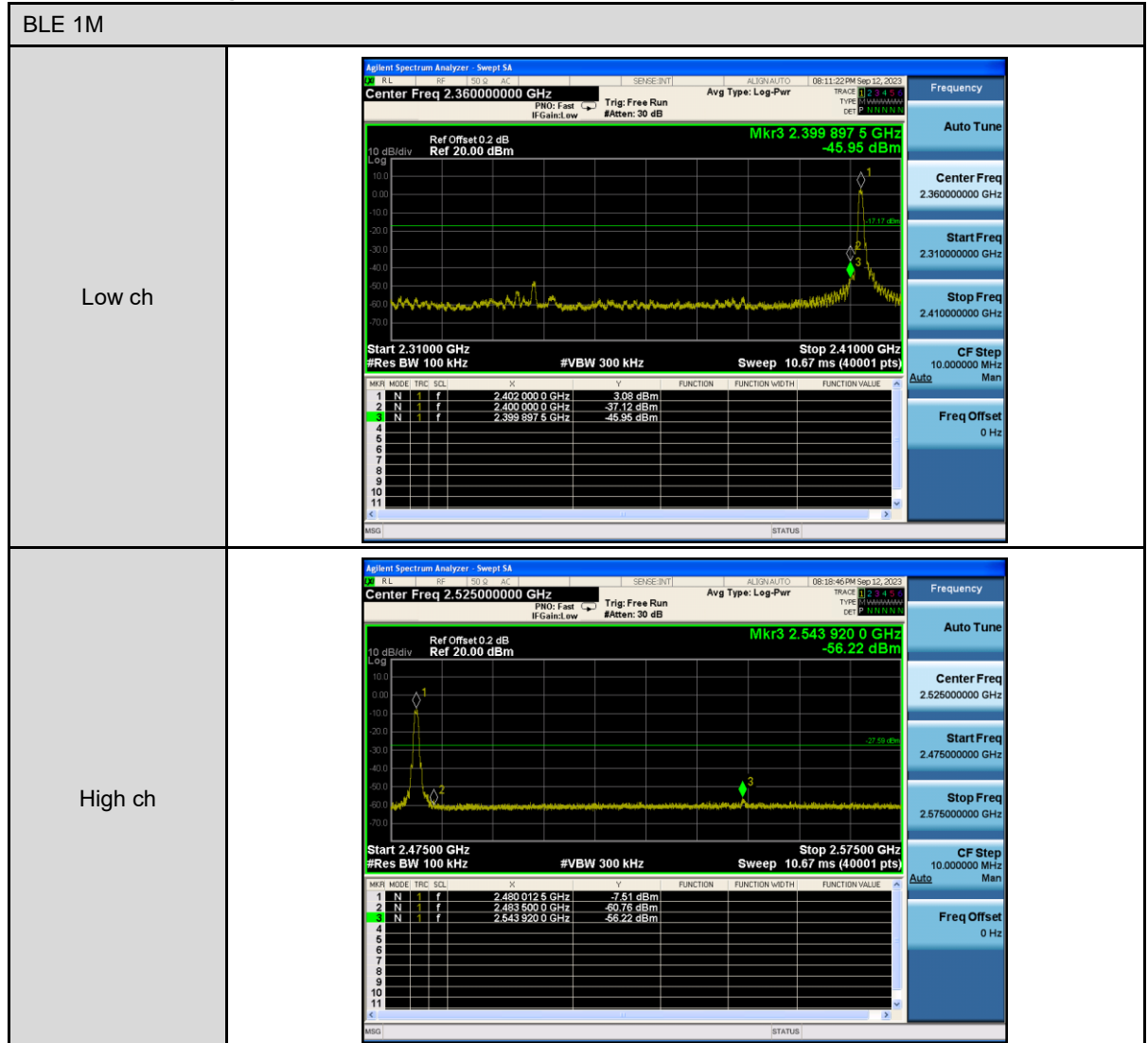


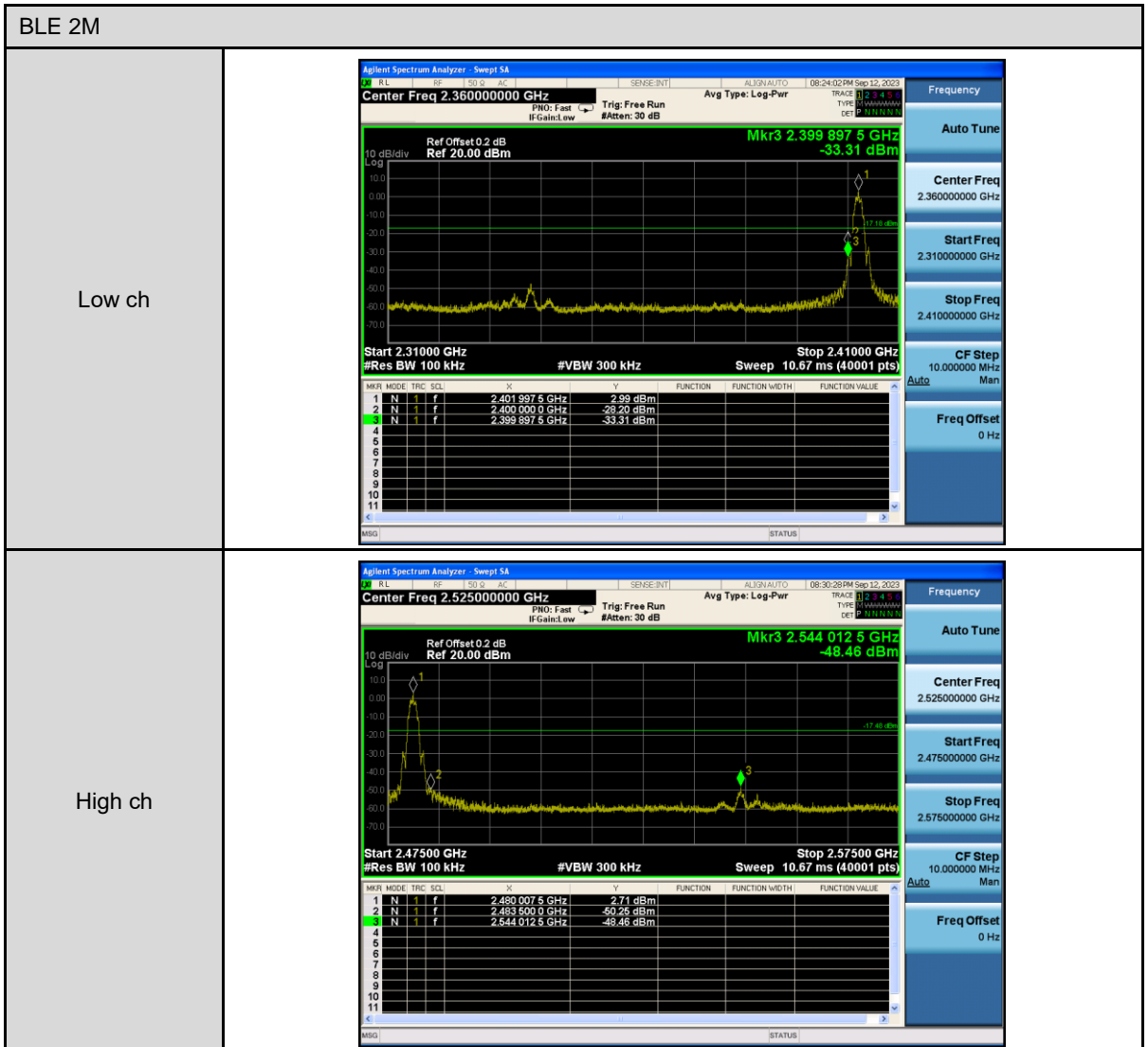
Reference level

BLE 1M	
Low ch	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.40200000 GHz Mkr1 2.401 998 9 CH2 2.83 dBm Center 2.4020000 GHz #Res BW 100 kHz #VBW 300 kHz Span 1.063 MHz Sweep 1.000 ms (1001 pts)</p>
Mid ch	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.44000000 GHz Mkr1 2.439 993 7 CH2 2.75 dBm Center 2.4400000 GHz #Res BW 100 kHz #VBW 300 kHz Span 1.051 MHz Sweep 1.000 ms (1001 pts)</p>
High ch	<p>Agilent Spectrum Analyzer - Swept SA Center Freq 2.48000000 GHz Mkr1 2.480 003 2 CH2 -7.59 dBm Center 2.4800000 GHz #Res BW 100 kHz #VBW 300 kHz Span 1.050 MHz Sweep 1.000 ms (1001 pts)</p>



Conducted Band Edge





6 dB Bandwidth

BLE 1M	
Low ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.402000000 GHz</p> <p>Ref Offset 0.2 dB Ref 20.00 dBm</p> <p>Occupied Bandwidth: 1.0728 MHz</p> <p>Total Power: 9.72 dBm</p> <p>Transmit Freq Error: 5.385 kHz</p> <p>x dB Bandwidth: 708.8 kHz</p>
Mid ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.440000000 GHz</p> <p>Ref Offset 0.2 dB Ref 20.00 dBm</p> <p>Occupied Bandwidth: 1.0765 MHz</p> <p>Total Power: 9.62 dBm</p> <p>Transmit Freq Error: 5.252 kHz</p> <p>x dB Bandwidth: 701.0 kHz</p>
High ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.480000000 GHz</p> <p>Ref Offset 0.2 dB Ref 20.00 dBm</p> <p>Occupied Bandwidth: 1.0766 MHz</p> <p>Total Power: -0.83 dBm</p> <p>Transmit Freq Error: 5.585 kHz</p> <p>x dB Bandwidth: 700.3 kHz</p>

99 % Occupied Bandwidth

BLE 1M	
Low ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.402000000 GHz</p> <p>Center Freq: 2.402000000 GHz</p> <p>Ref Offset: 0.2 dB, Ref: 20.00 dBm</p> <p>Occupied Bandwidth: 1.0569 MHz</p> <p>Total Power: 9.87 dBm</p> <p>Transmit Freq Error: 6.319 kHz</p> <p>OBW Power: 99.00 %</p>
Mid ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.440000000 GHz</p> <p>Center Freq: 2.440000000 GHz</p> <p>Ref Offset: 0.2 dB, Ref: 20.00 dBm</p> <p>Occupied Bandwidth: 1.0573 MHz</p> <p>Total Power: 9.77 dBm</p> <p>Transmit Freq Error: 6.225 kHz</p> <p>OBW Power: 99.00 %</p>
High ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.480000000 GHz</p> <p>Center Freq: 2.480000000 GHz</p> <p>Ref Offset: 0.2 dB, Ref: 20.00 dBm</p> <p>Occupied Bandwidth: 1.0581 MHz</p> <p>Total Power: -0.58 dBm</p> <p>Transmit Freq Error: 5.756 kHz</p> <p>OBW Power: 99.00 %</p>

BLE 2M	
Low ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.40200000 GHz</p> <p>Ref Offset 0.2 dB Ref 20.00 dBm</p> <p>Occupied Bandwidth: 2.0716 MHz</p> <p>Total Power: 9.43 dBm</p> <p>Transmit Freq Error: 23.267 kHz</p> <p>x dB Bandwidth: 2.449 MHz</p>
Mid ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.44000000 GHz</p> <p>Ref Offset 0.2 dB Ref 20.00 dBm</p> <p>Occupied Bandwidth: 2.0701 MHz</p> <p>Total Power: 9.39 dBm</p> <p>Transmit Freq Error: 25.015 kHz</p> <p>x dB Bandwidth: 2.440 MHz</p>
High ch	<p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq 2.48000000 GHz</p> <p>Ref Offset 0.2 dB Ref 20.00 dBm</p> <p>Occupied Bandwidth: 2.0767 MHz</p> <p>Total Power: 9.14 dBm</p> <p>Transmit Freq Error: 23.124 kHz</p> <p>x dB Bandwidth: 2.441 MHz</p>

Power Density

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

BLE 2M	
Low ch	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.40200000 GHz</p> <p>Mkr1 2.4019582 GHz -14.758 dBm</p> <p>Center 2.4020000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 183.3 ms (1001 pts)</p>
Mid ch	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.44000000 GHz</p> <p>Mkr1 2.4399598 GHz -15.104 dBm</p> <p>Center 2.4400000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 184.4 ms (1001 pts)</p>
High ch	<p>Agilent Spectrum Analyzer - Swept SA</p> <p>Center Freq 2.48000000 GHz</p> <p>Mkr1 2.4799861 GHz -15.120 dBm</p> <p>Center 2.4800000 GHz #Res BW 3.0 kHz #VBW 10 kHz Sweep 183.5 ms (1001 pts)</p>