

APPENDIX REPORT

Project No.	SHT2005099309EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT20050993037	Model No.	TE590P
Start test date	2020/7/10	Finish date	2020/7/16
Temperature	25°C	Humidity	50%
Test Engineer	Jess He	Auditor	Xiaodong Zheo

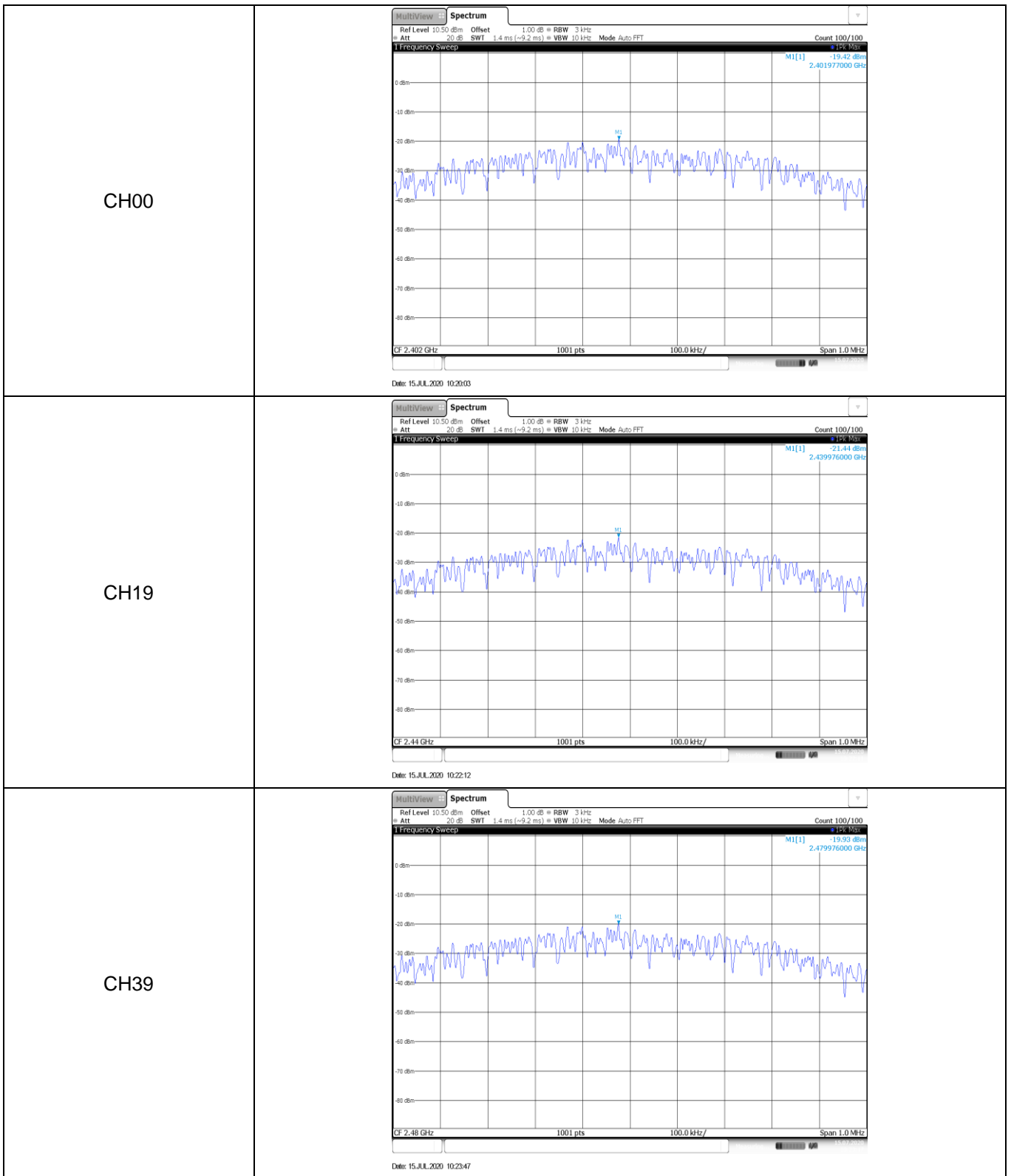
Appendix clause	Test item	Result
A	Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

Appendix A: Peak Output Power

Type	Channel	Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	-4.29	-5.14	≤ 30.00	Pass
	19	-6.36	-6.71		
	39	-4.82	-5.42		

Appendix B: Power Spectral Density

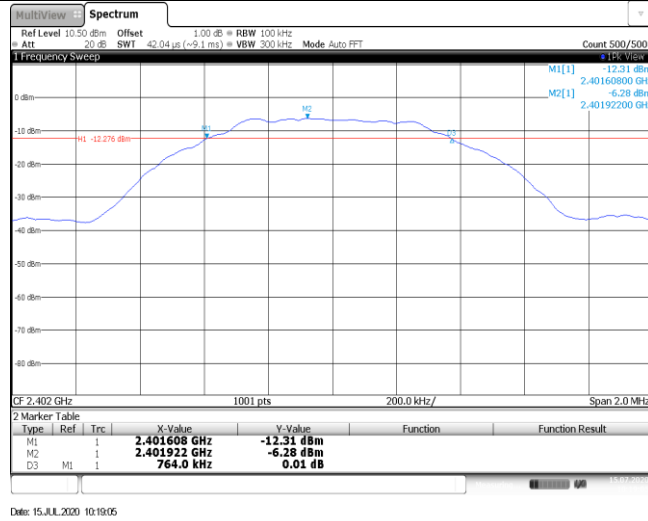
Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-19.42	≤8.00	Pass
	19	-21.44		
	39	-19.93		



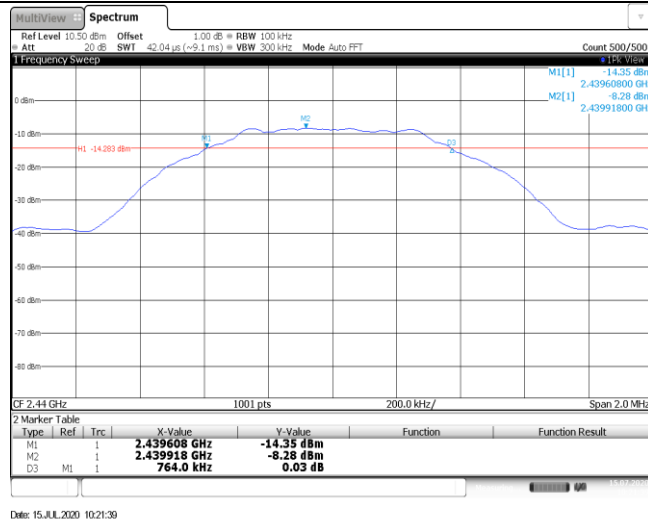
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	764.00	≥500	Pass
	19	764.00		
	39	764.00		

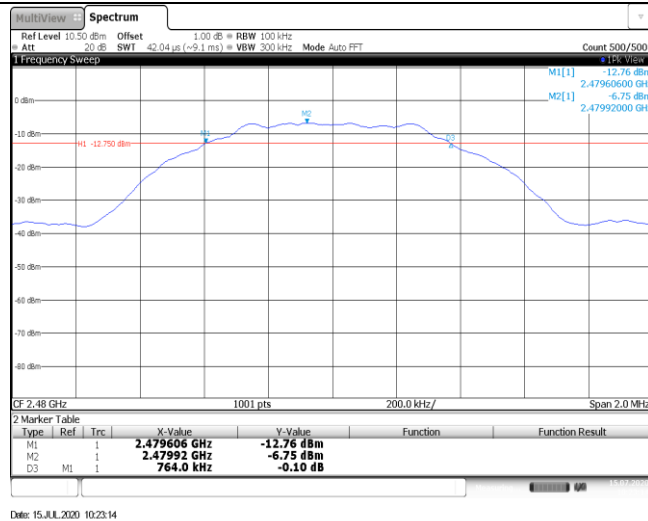
CH00



CH19



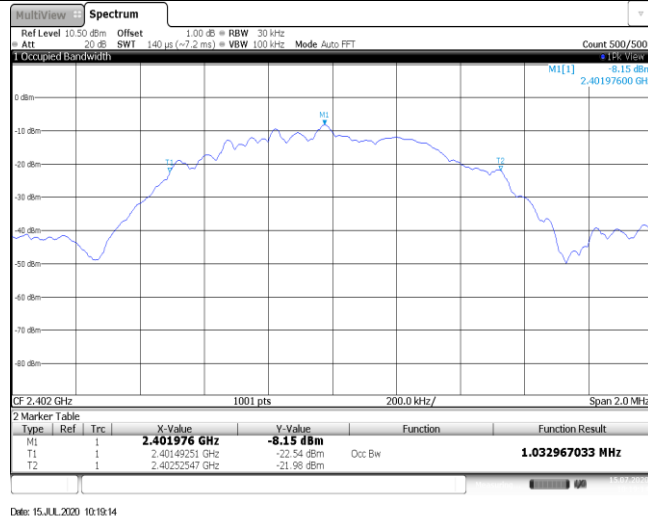
CH39



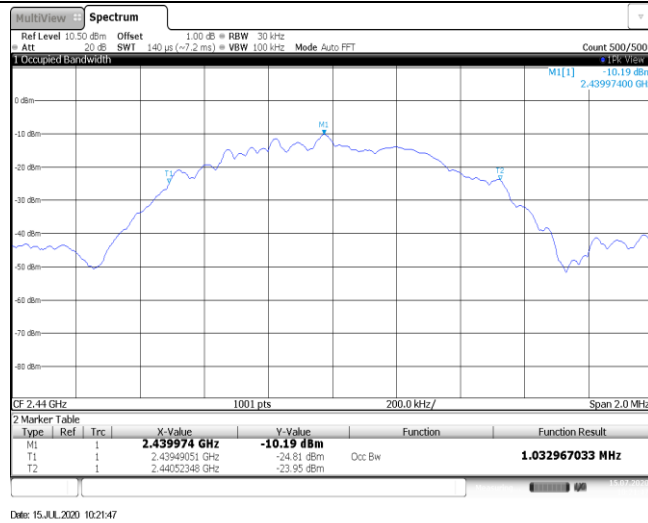
Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	1.03	-	Pass
	19	1.03		
	39	1.03		

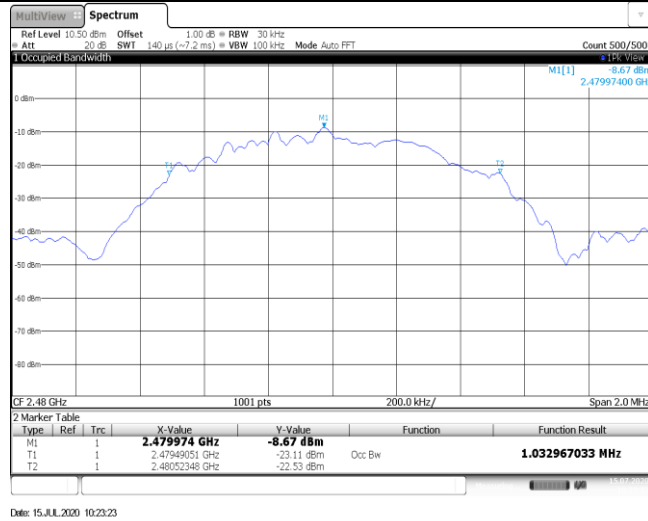
CH00



CH19

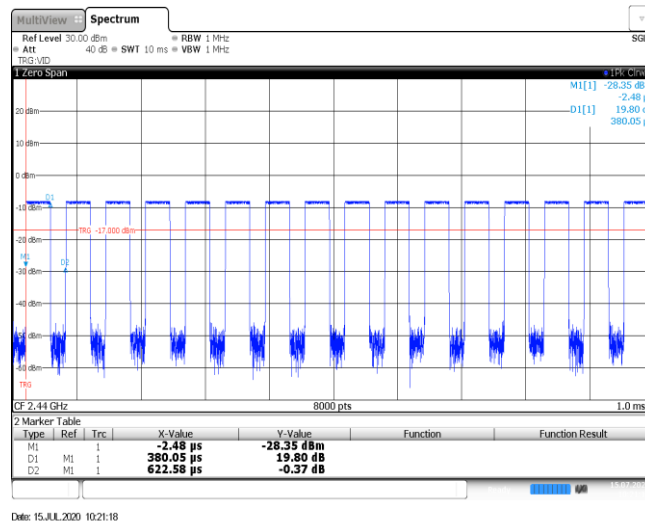


CH39

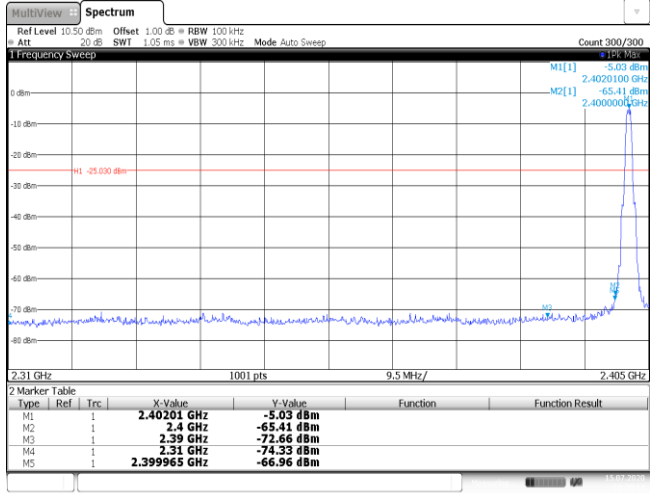
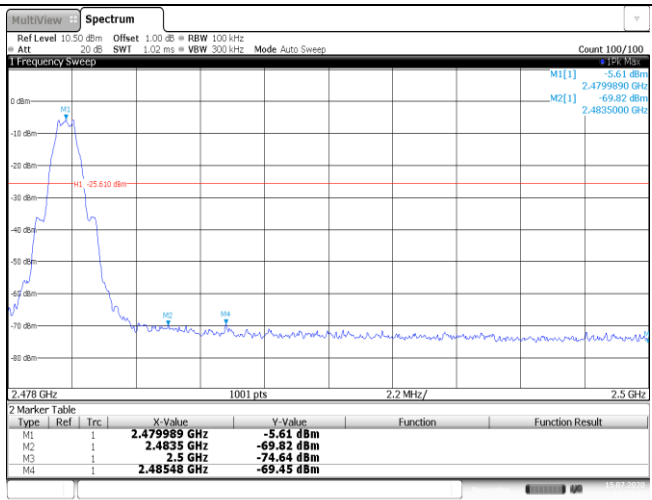


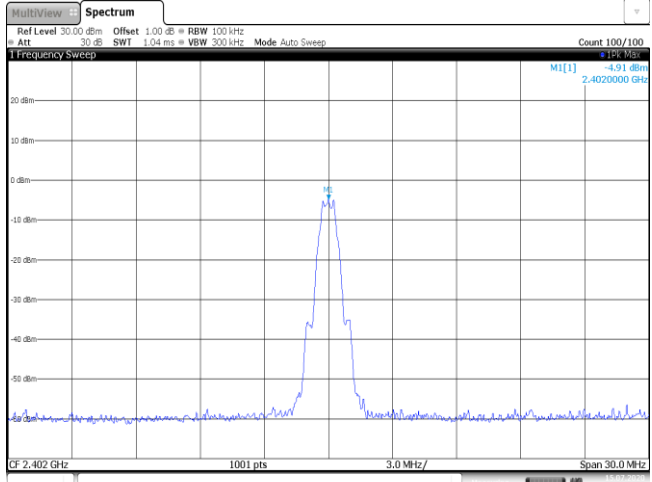
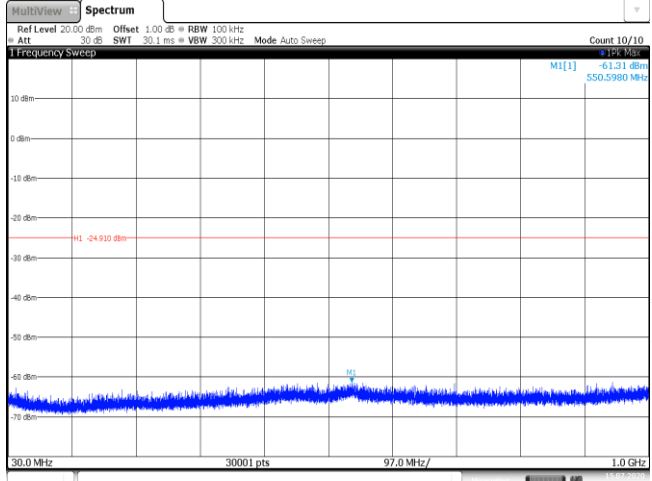
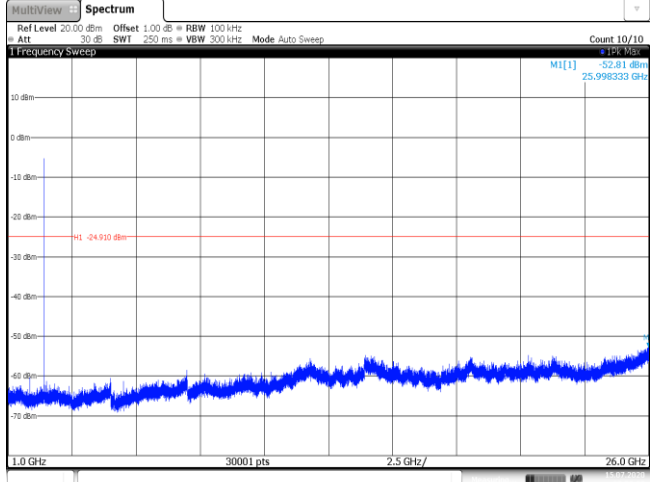
Appendix E: Duty cycle

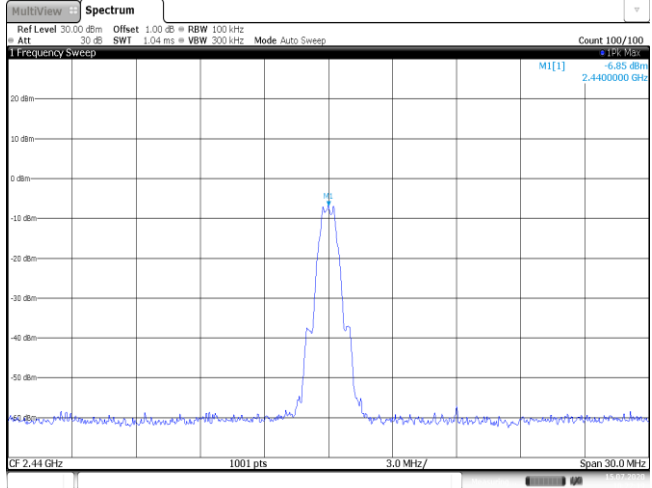
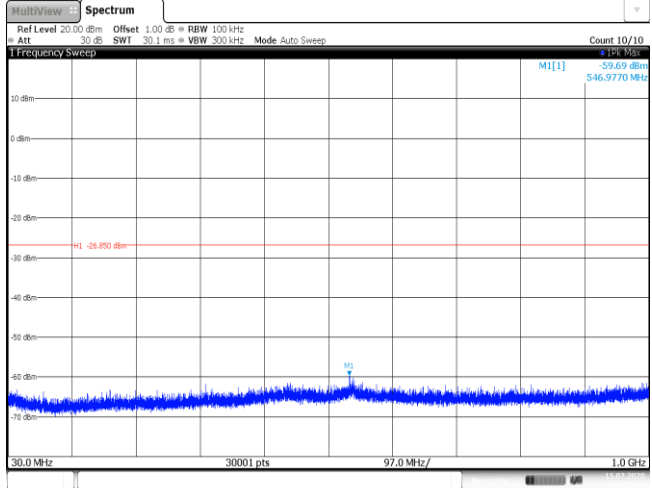
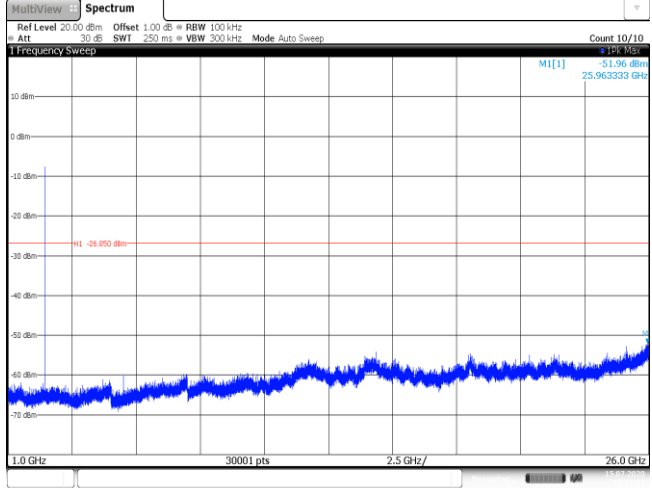
Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
2440	0.38	0.62	61.3%	2.6

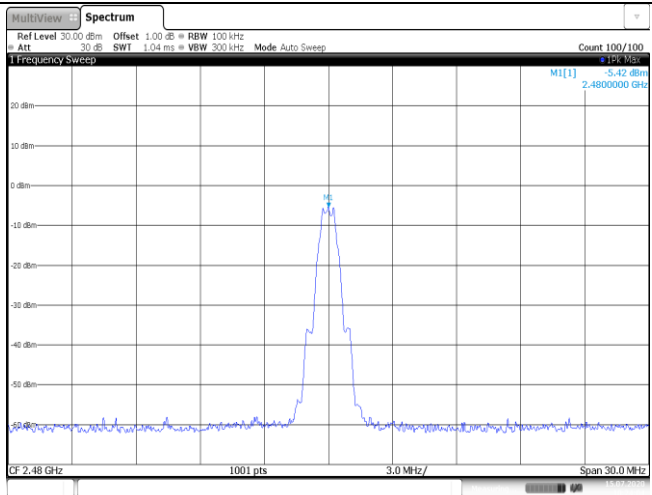
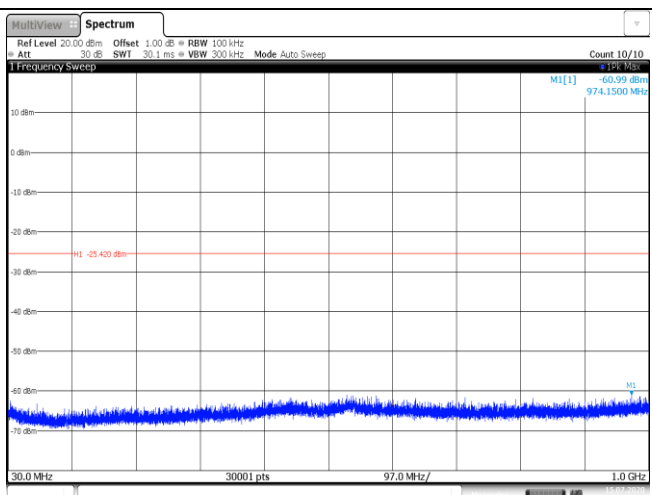
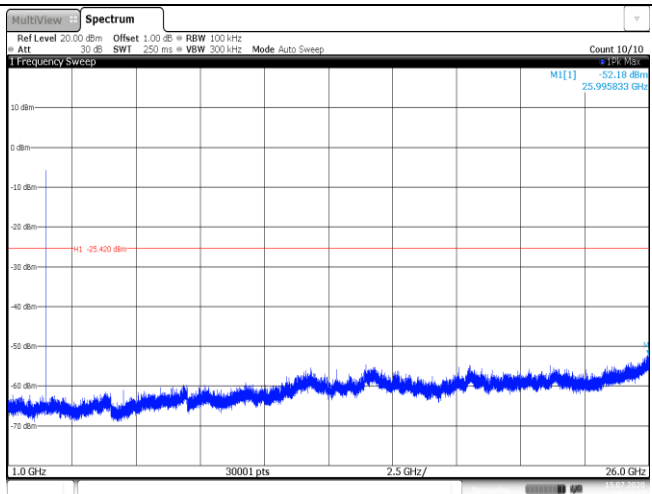


Appendix F: Band edge and Spurious Emissions (conducted)

Test Item:	Band edge																																										
<p style="text-align: center;">CH00</p>	 <p>2 Marker Table</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.40201 GHz</td> <td>-5.03 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-65.44 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-72.66 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-74.33 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399965 GHz</td> <td>-66.96 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 15 JUL 2020 10:20:13</p>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.40201 GHz	-5.03 dBm			M2	1		2.4 GHz	-65.44 dBm			M3	1		2.39 GHz	-72.66 dBm			M4	1		2.31 GHz	-74.33 dBm			M5	1		2.399965 GHz	-66.96 dBm		
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Test Item:	SE
<p>CH00 Reference level</p>	 <p>MultiView Spectrum Ref Level 30.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 1 Frequency Sweep M1[1] -4.91 dBm 2.4020000 GHz CF 2.402 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 15.JUL.2020 10:20:20</p>
<p>CH00 30MHz~1000MHz</p>	 <p>MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 1 Frequency Sweep M1[1] -61.31 dBm 550.5980 MHz H1 -24.910 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 15.JUL.2020 10:20:36</p>
<p>CH00 1GHz~26GHz</p>	 <p>MultiView Spectrum Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 1 Frequency Sweep M1[1] -52.81 dBm 25.996333 GHz H1 -24.910 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 15.JUL.2020 10:20:53</p>

<p>CH19 Reference level</p>	 <p>The spectrum plot shows a single sharp peak at 2.44 GHz. The y-axis represents power in dBm, ranging from -60 to 20. The x-axis represents frequency in MHz, with a span of 30.0 MHz. The peak is labeled M1[1] with a value of -6.85 dBm. The plot includes technical parameters: Ref Level 30.00 dBm, Offset 1.00 dB, RBW 100 kHz, Count 100/100, Att 30 dB, SWT 1.04 ms, VBW 300 kHz, Mode Auto Sweep. The date is 15 JUL 2020 10:22:18.</p>
<p>CH19 30MHz~1000MHz</p>	 <p>The spectrum plot shows a noise floor across the 30 MHz to 1000 MHz range. The y-axis ranges from -70 to 10 dBm. The x-axis ranges from 30.0 MHz to 1.0 GHz. A red horizontal line is drawn at -26.890 dBm. A peak is labeled M1[1] with a value of -59.69 dBm. The plot includes technical parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Count 10/10, Att 30 dB, SWT 30.1 ms, VBW 300 kHz, Mode Auto Sweep. The date is 15 JUL 2020 10:22:34.</p>
<p>CH19 1GHz~26GHz</p>	 <p>The spectrum plot shows a noise floor across the 1 GHz to 26 GHz range. The y-axis ranges from -70 to 10 dBm. The x-axis ranges from 1.0 GHz to 26.0 GHz. A red horizontal line is drawn at -26.890 dBm. A peak is labeled M1[1] with a value of -51.96 dBm. The plot includes technical parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Count 10/10, Att 30 dB, SWT 250 ms, VBW 300 kHz, Mode Auto Sweep. The date is 15 JUL 2020 10:22:51.</p>

<p>CH39 Reference level</p>	 <p>The plot shows a single sharp peak at 2.48 GHz. The y-axis is labeled from -50 dBm to 20 dBm. The x-axis is labeled from 2.48 GHz to 30.0 MHz. A peak marker 'M1[1]' is at -5.42 dBm. Parameters: Ref Level 30.00 dBm, Offset 1.00 dB, RBW 100 kHz, Count 100/100, Date: 15.JUL.2020 10:24:04.</p>
<p>CH39 30MHz~1000MHz</p>	 <p>The plot shows a noise floor across the 30 MHz to 1000 MHz range. The y-axis is labeled from -70 dBm to 10 dBm. The x-axis is labeled from 30.0 MHz to 1.0 GHz. A red horizontal line is at -25.400 dBm. A peak marker 'M1[1]' is at -60.99 dBm. Parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Count 10/10, Date: 15.JUL.2020 10:24:20.</p>
<p>CH39 1GHz~26GHz</p>	 <p>The plot shows a noise floor across the 1 GHz to 26 GHz range. The y-axis is labeled from -70 dBm to 10 dBm. The x-axis is labeled from 1.0 GHz to 26.0 GHz. A red horizontal line is at -25.400 dBm. A peak marker 'M1[1]' is at -52.18 dBm. Parameters: Ref Level 20.00 dBm, Offset 1.00 dB, RBW 100 kHz, Count 10/10, Date: 15.JUL.2020 10:24:36.</p>

-----End of Report-----