

# APPENDIX REPORT

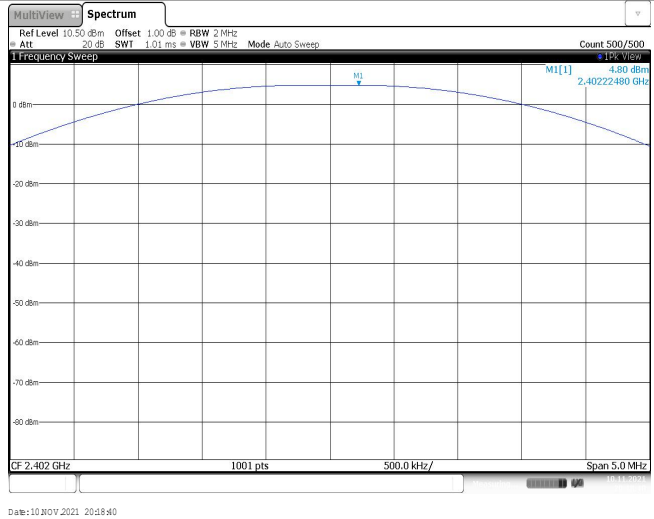
Project No.	SHT2111009101EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT21110091003	Model No.	R4
Start test date	2021-11-10	Finish date	2021-11-11
Temperature	24.7℃	Humidity	26%
Test Engineer	Weiyang Xiang	Auditor	Xiaodong Zheo

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

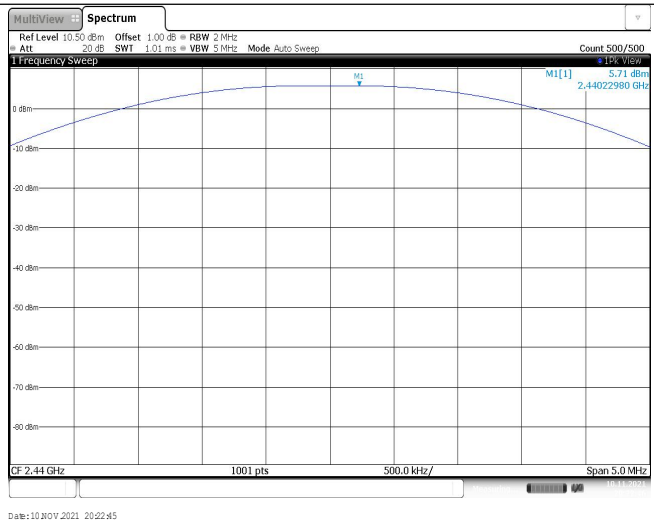
**Appendix A: Peak Output Power**

Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	4.80	4.71	≤ 30.00	Pass
	19	5.71	5.57		
	39	5.55	5.41		

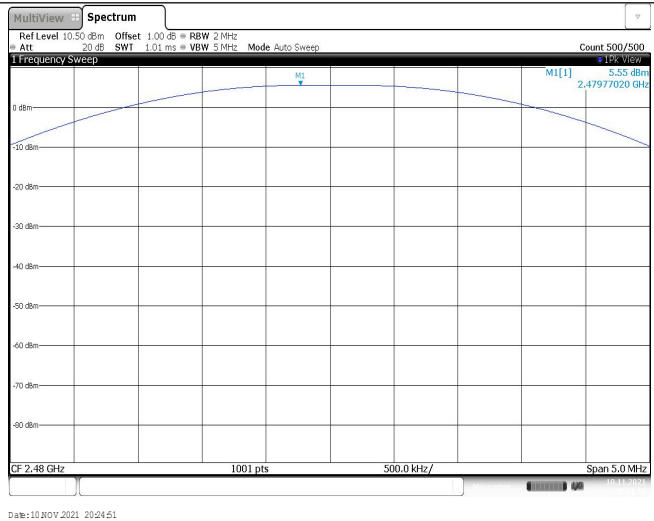
CH00



CH19

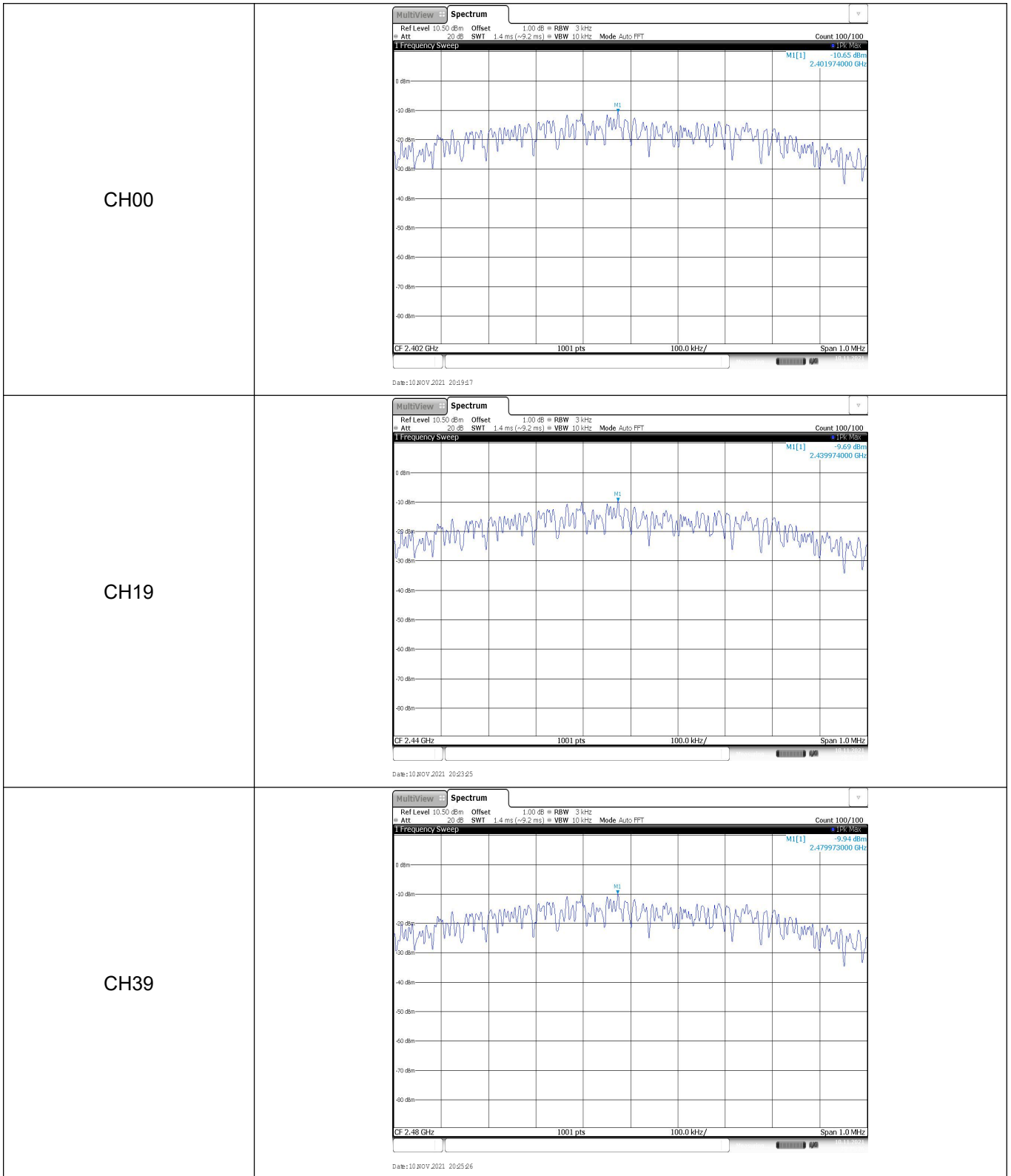


CH39



**Appendix B: Power Spectral Density**

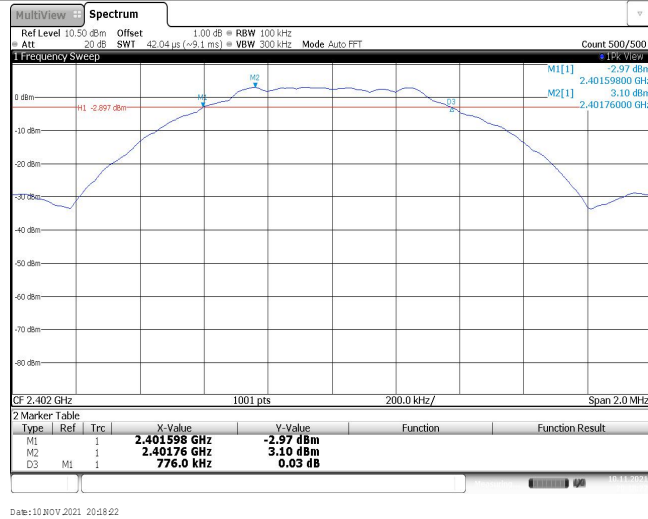
Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-10.65	≤8.00	Pass
	19	-9.69		
	39	-9.94		



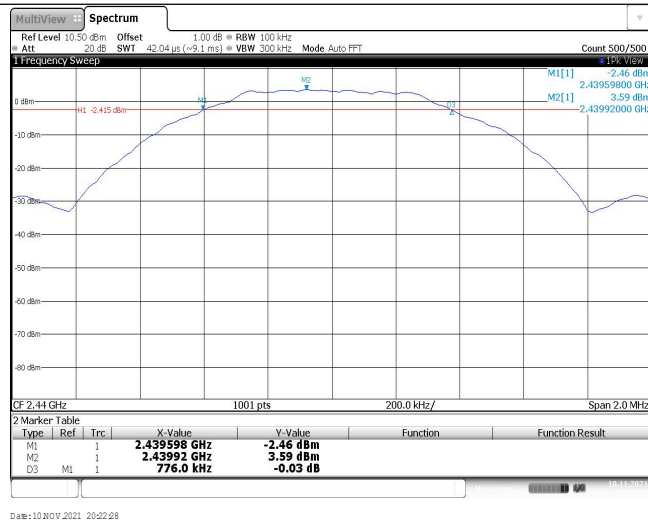
**Appendix C: 6dB bandwidth**

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	776.00	≥500	Pass
	19	776.00		
	39	772.00		

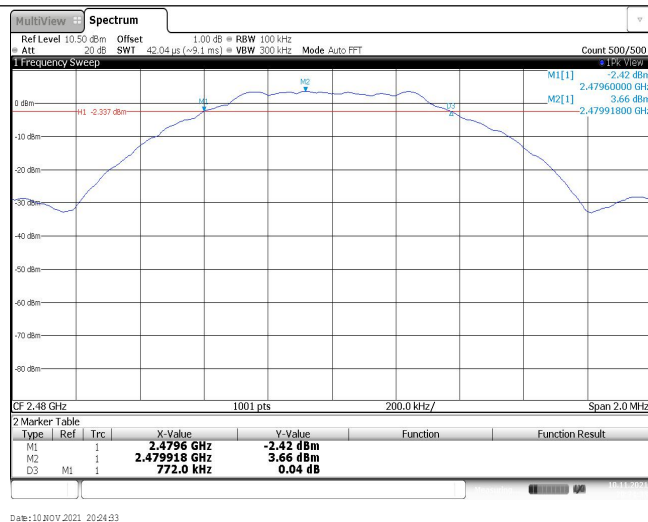
CH00



CH19



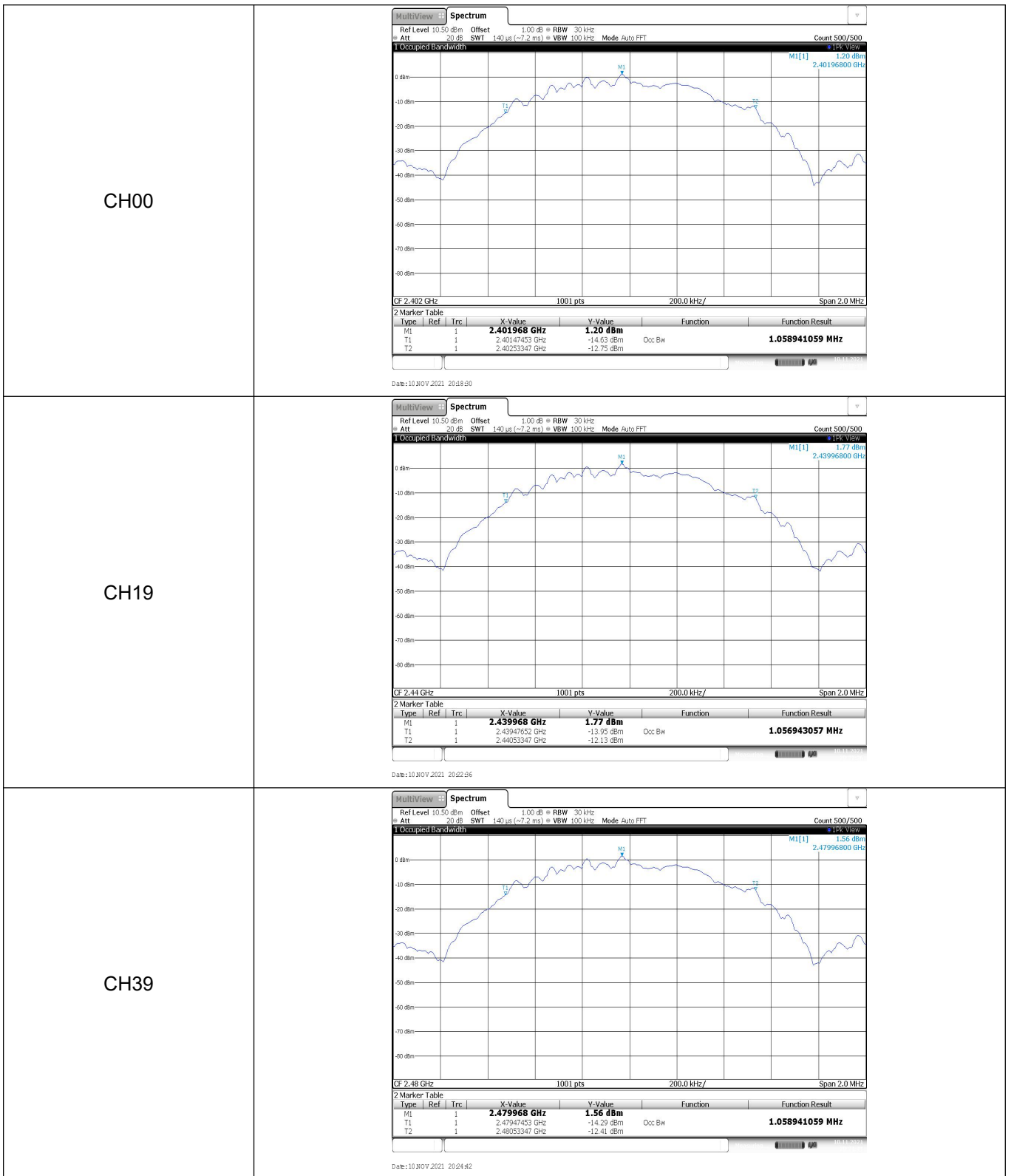
CH39



**Appendix D: 99% Occupied Bandwidth**

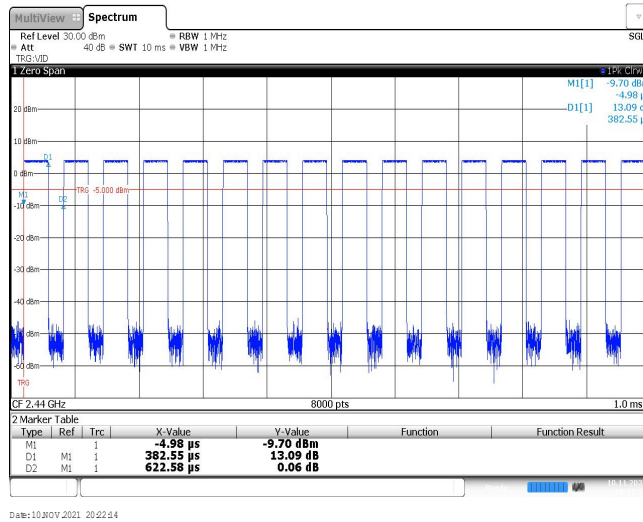
Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	1.06	-	Pass
	19	1.06		
	39	1.06		



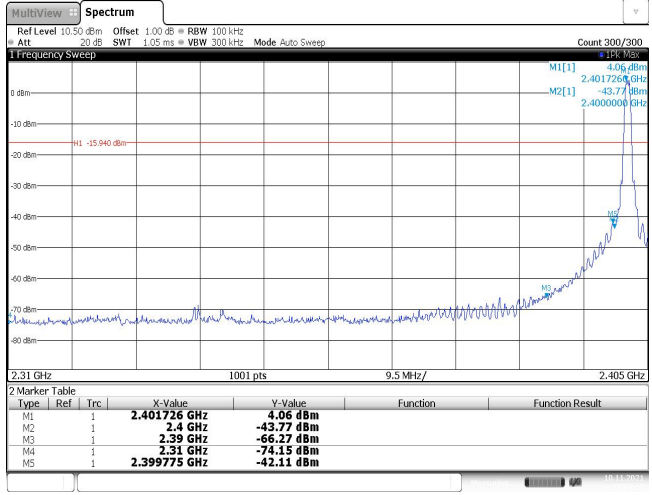
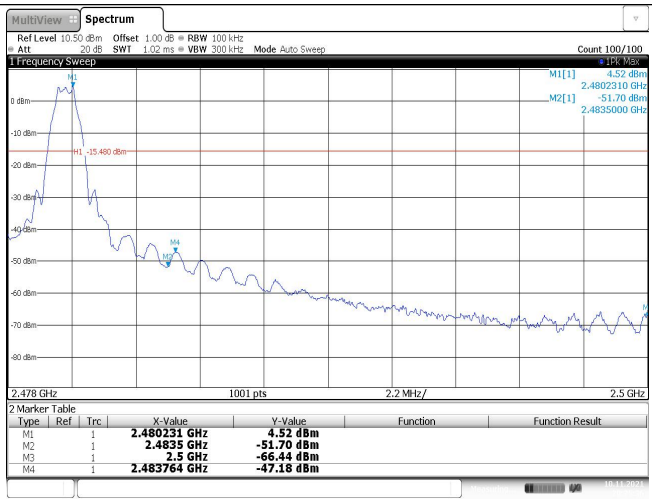


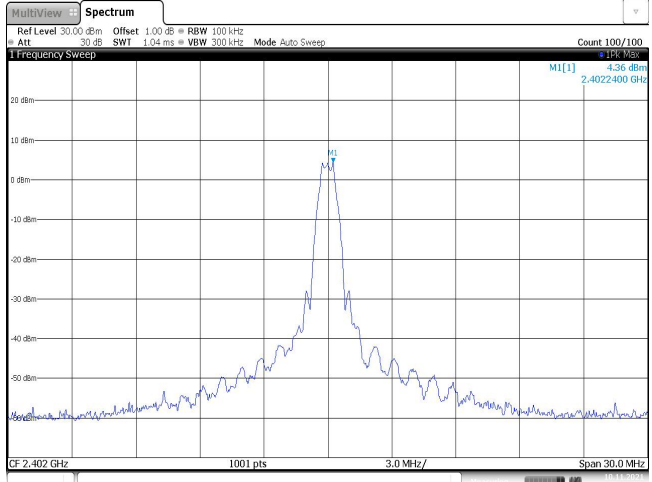
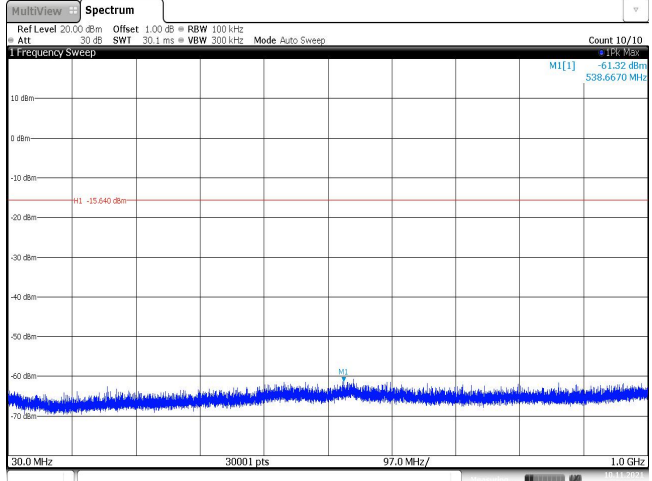
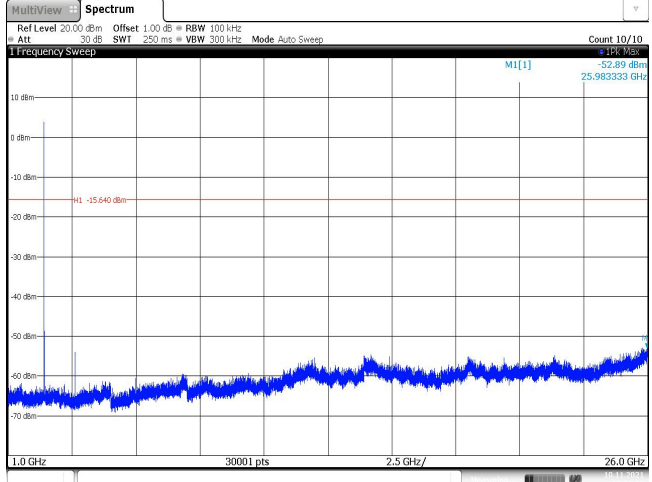
### Appendix E: Duty cycle

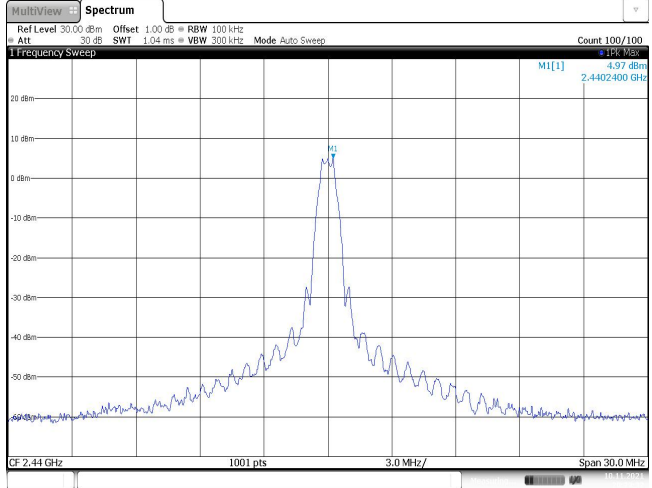
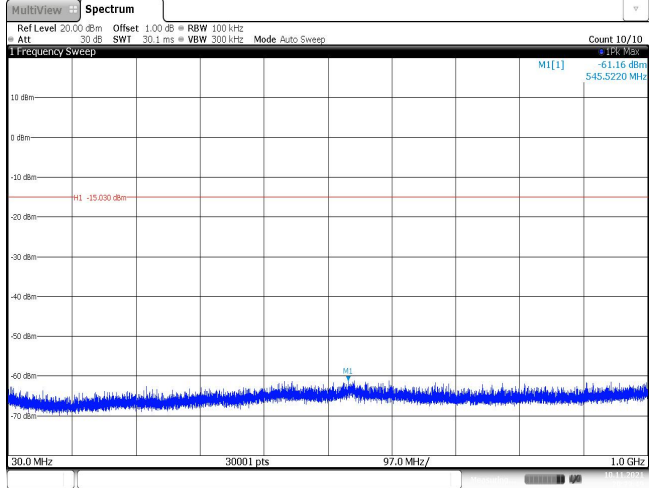
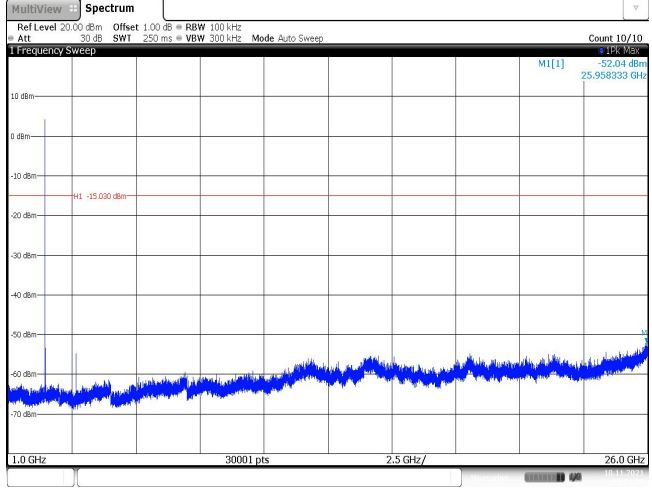
Test Frequency (MHz)	T <sub>on</sub> time for single burst (ms)	T <sub>period</sub> (ms)	Duty cycle	1/T <sub>on</sub> time (kHz)
2440	0.38	0.62	61.3%	2.6

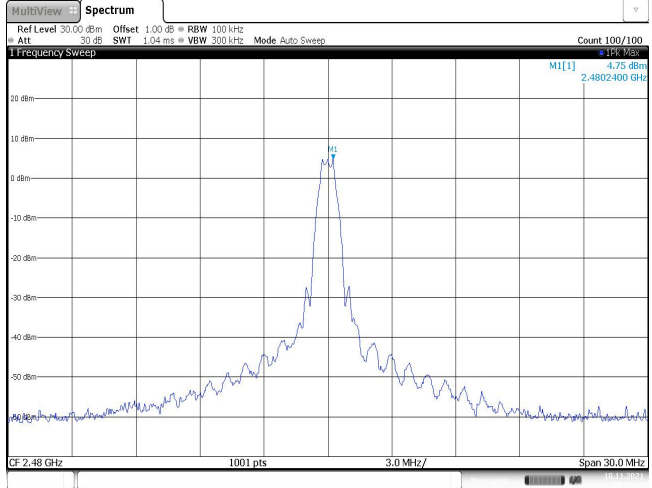
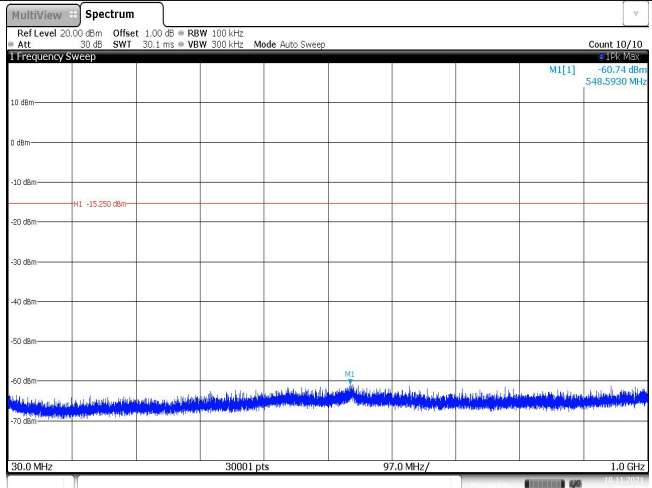
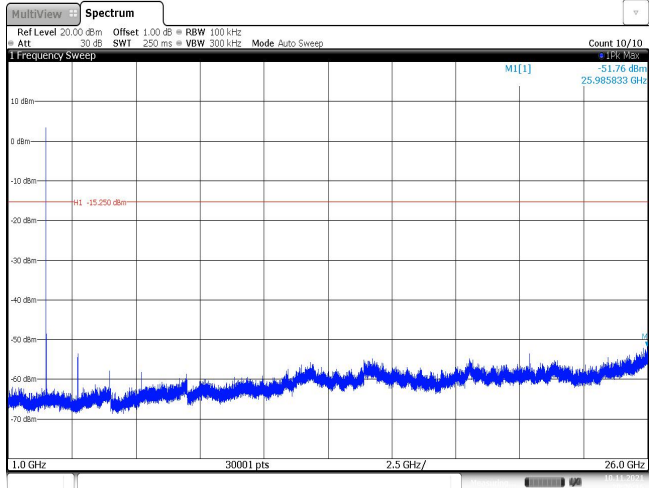


**Appendix F: Band edge and Spurious Emissions (conducted)**

Test Item:	Band edge																																										
<p>CH00</p>	 <p>MultiView Spectrum</p> <p>Ref Level 10.50 dBm Offset 1.00 dB BW 100 kHz Att -30 dB SWI 1.05 ms VBW 300 kHz Mode Auto Sweep Count 500/200</p> <p>1 Frequency Sweep</p> <p>M1[1] 4.06 dBm 2.401726 GHz M2[1] -43.77 dBm 2.4000000 GHz</p> <p>M1 -15.940 dBm</p> <p>2.31 GHz 1001 pts 9.5 MHz/ 2.405 GHz</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>2.401726 GHz</td> <td>4.06 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-43.77 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-66.27 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-74.15 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399775 GHz</td> <td>-42.11 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 10 NOV 2021 20:19:27</p>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.401726 GHz	4.06 dBm			M2	1		2.4 GHz	-43.77 dBm			M3	1		2.39 GHz	-66.27 dBm			M4	1		2.31 GHz	-74.15 dBm			M5	1		2.399775 GHz	-42.11 dBm		
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M5	1		2.399775 GHz	-42.11 dBm																																							
<p>CH39</p>	 <p>MultiView Spectrum</p> <p>Ref Level 10.50 dBm Offset 1.00 dB BW 100 kHz Att -30 dB SWI 1.02 ms VBW 300 kHz Mode Auto Sweep Count 100/100</p> <p>1 Frequency Sweep</p> <p>M1[1] 4.52 dBm 2.4802310 GHz M2[1] -51.70 dBm 2.4835000 GHz</p> <p>M1 -15.480 dBm</p> <p>2.478 GHz 1001 pts 2.2 MHz/ 2.5 GHz</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>2.480231 GHz</td> <td>4.52 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4835 GHz</td> <td>-51.70 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-66.44 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.483764 GHz</td> <td>-47.18 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 10 NOV 2021 20:25:57</p>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.480231 GHz	4.52 dBm			M2	1		2.4835 GHz	-51.70 dBm			M3	1		2.5 GHz	-66.44 dBm			M4	1		2.483764 GHz	-47.18 dBm									
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																					
M1	1		2.480231 GHz	4.52 dBm																																							
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M3	1		2.5 GHz	-66.44 dBm																																							
M4	1		2.483764 GHz	-47.18 dBm																																							

Test Item:	SE
<p>CH00 Reference level</p>	 <p>Date: 10 NOV 2021 20:21:03</p>
<p>CH00 30MHz~1000MHz</p>	 <p>Date: 10 NOV 2021 20:21:19</p>
<p>CH00 1GHz~26GHz</p>	 <p>Date: 10 NOV 2021 20:21:36</p>

<p>CH19 Reference level</p>	 <p>MultiView Spectrum              Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz              Att 30 dB SWF 1.04 ms VBW 300 kHz Mode Auto Sweep              Count 100/100              1 Frequency Sweep              M1[1] 4.97 dBm              2.4402400 GHz              CF 2.44 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz              Date: 10 NOV 2021 20:23:22</p>
<p>CH19 30MHz~1000MHz</p>	 <p>MultiView Spectrum              Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz              Att 30 dB SWF 30.1 ms VBW 300 kHz Mode Auto Sweep              Count 10/10              1 Frequency Sweep              M1[1] -61.16 dBm              545.5220 MHz              M1 -15.000 dBm              30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz              Date: 10 NOV 2021 20:23:49</p>
<p>CH19 1GHz~26GHz</p>	 <p>MultiView Spectrum              Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz              Att 30 dB SWF 250 ms VBW 300 kHz Mode Auto Sweep              Count 10/10              1 Frequency Sweep              M1[1] -52.04 dBm              25.958333 GHz              M1 -15.000 dBm              1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz              Date: 10 NOV 2021 20:24:05</p>

<p>CH39 Reference level</p>	 <p>Date: 10 NOV 2021 20:25:44</p>
<p>CH39 30MHz~1000MHz</p>	 <p>Date: 10 NOV 2021 20:26:00</p>
<p>CH39 1GHz~26GHz</p>	 <p>Date: 10 NOV 2021 20:26:16</p>

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