

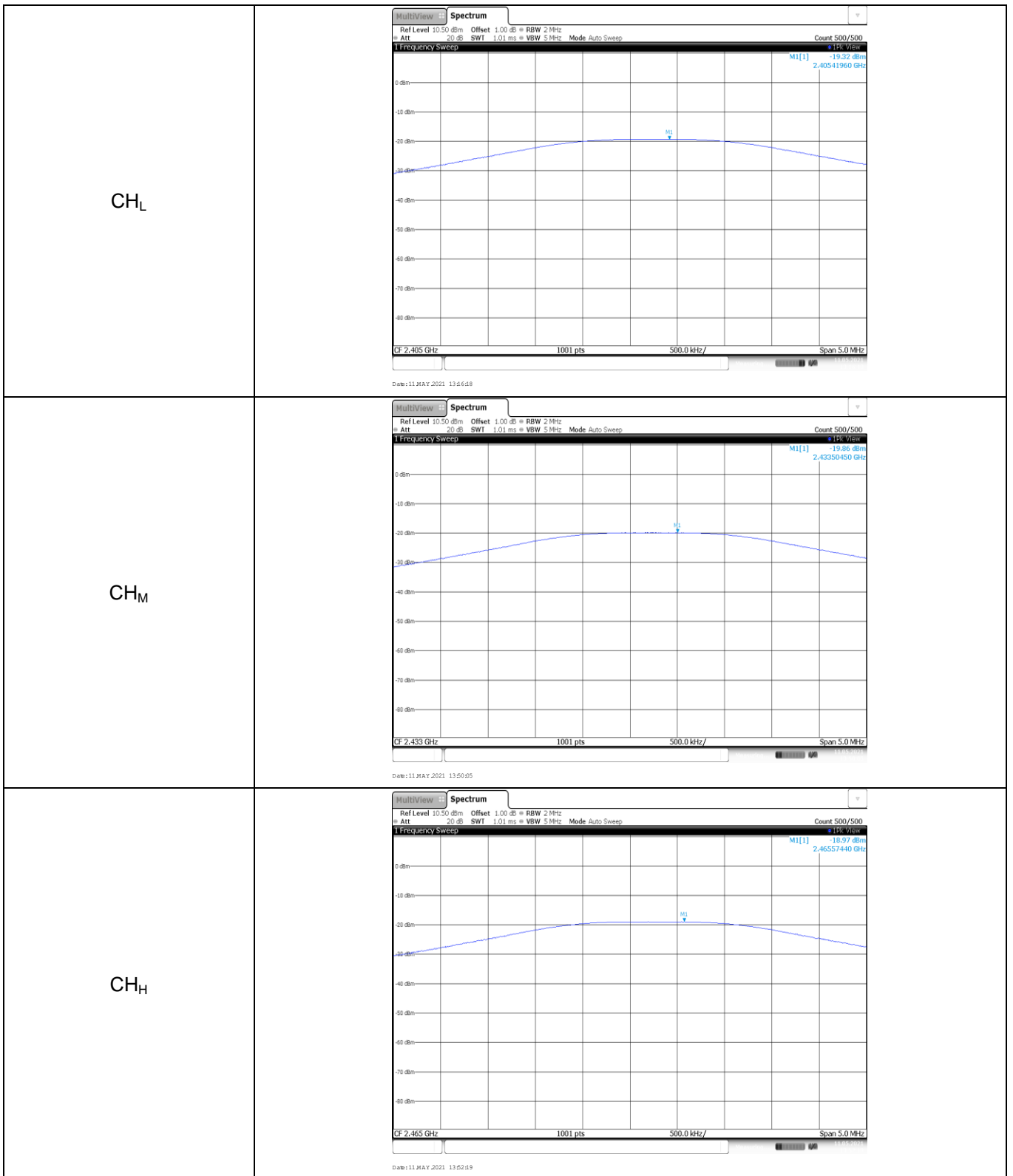
# APPENDIX REPORT

Project No.	SHT2104052302EW	Radio Specification	GFSK
Test sample No.	YPHT21040523005	Model No.	85810-Controller
Start test date	2021-05-11	Finish date	2021-05-11
Temperature	26.5°C	Humidity	56%
Test Engineer	Hailey Chen	Auditor	Xiaodong Zhu

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

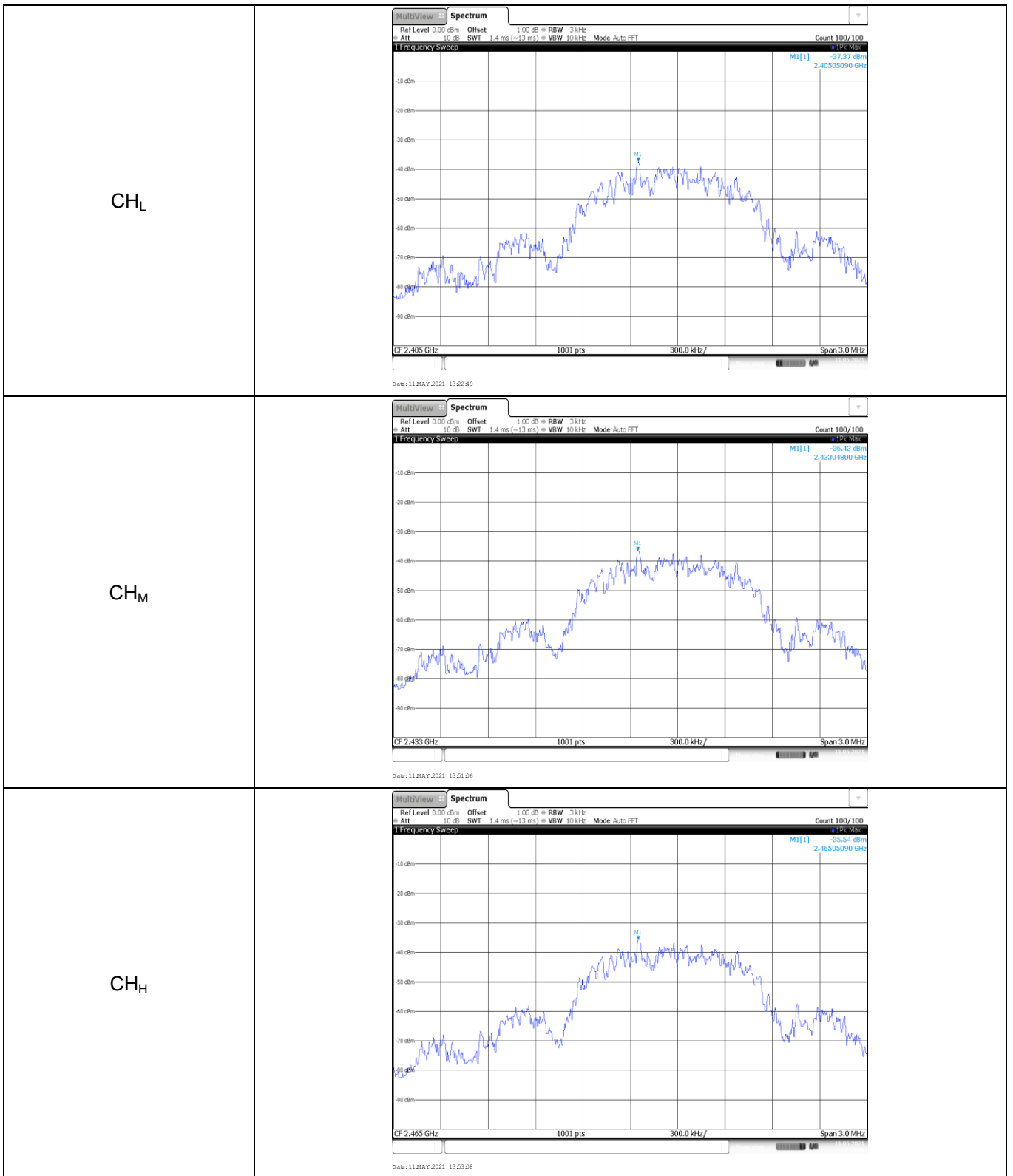
**Appendix A: Peak Output Power**

Type	Channel	Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
GFSK	CH <sub>L</sub>	-19.32	-19.38	≤ 30.00	Pass
	CH <sub>M</sub>	-19.86	-19.89		
	CH <sub>H</sub>	-18.97	-18.98		



**Appendix B: Power Spectral Density**

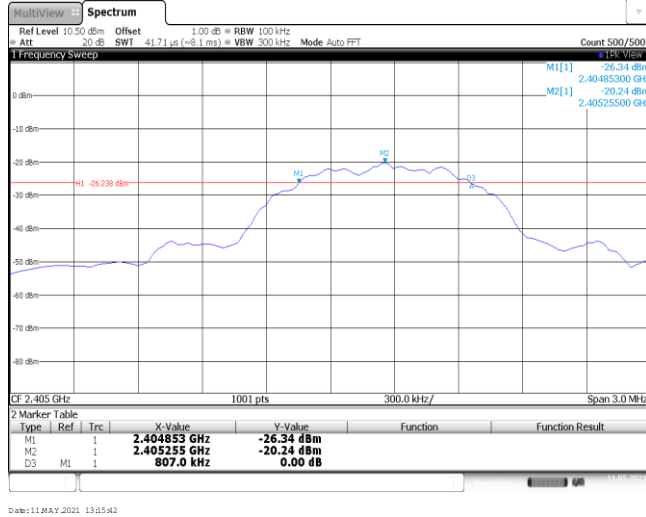
Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
GFSK	CH <sub>L</sub>	-37.37	≤8.00	Pass
	CH <sub>M</sub>	-36.43		
	CH <sub>H</sub>	-35.54		



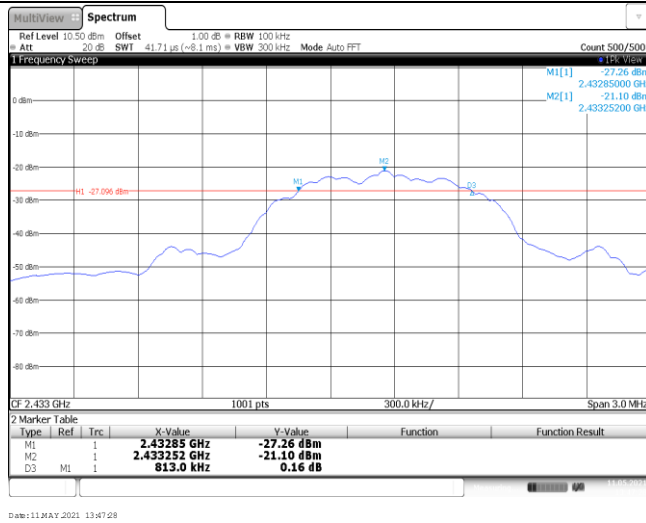
**Appendix C: 6dB bandwidth**

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
GFSK	CH <sub>L</sub>	807.00	≥500	Pass
	CH <sub>M</sub>	813.00		
	CH <sub>H</sub>	900.00		

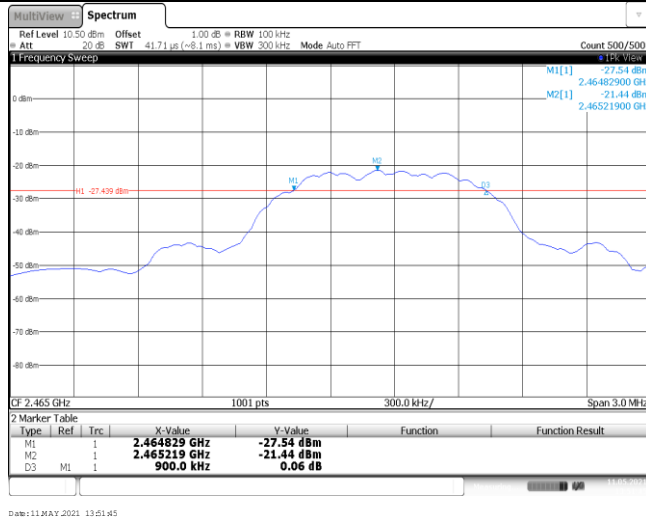
CH<sub>L</sub>



CH<sub>M</sub>



CH<sub>H</sub>

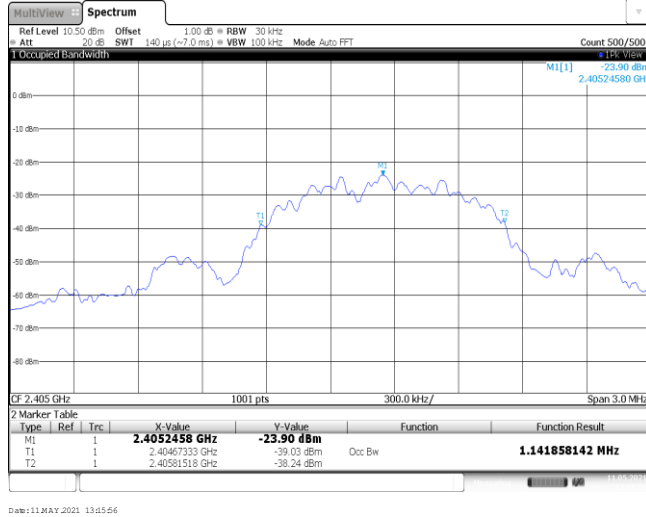


**Appendix D: 99% Occupied Bandwidth**

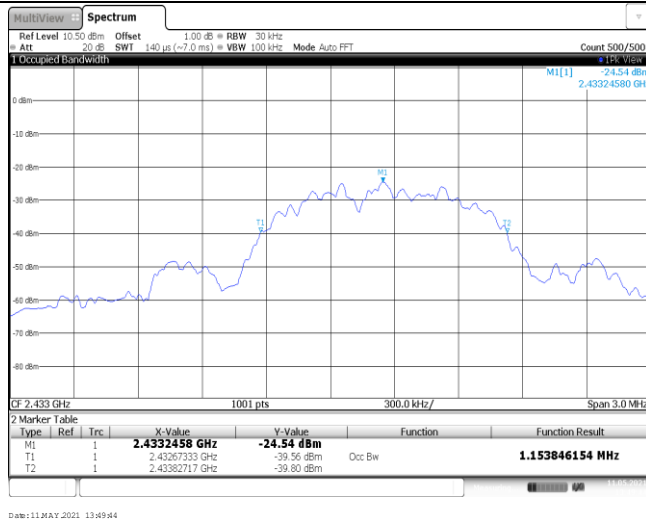
Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
GFSK	CH <sub>L</sub>	1.14	-	Pass
	CH <sub>M</sub>	1.15		
	CH <sub>H</sub>	1.17		



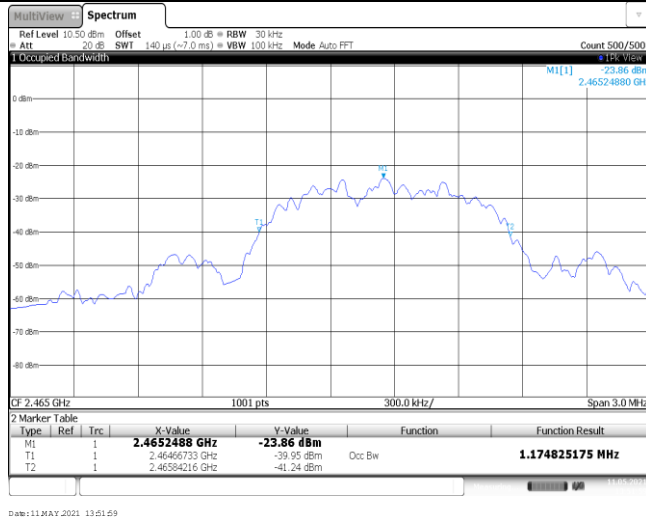
CH<sub>L</sub>



CH<sub>M</sub>

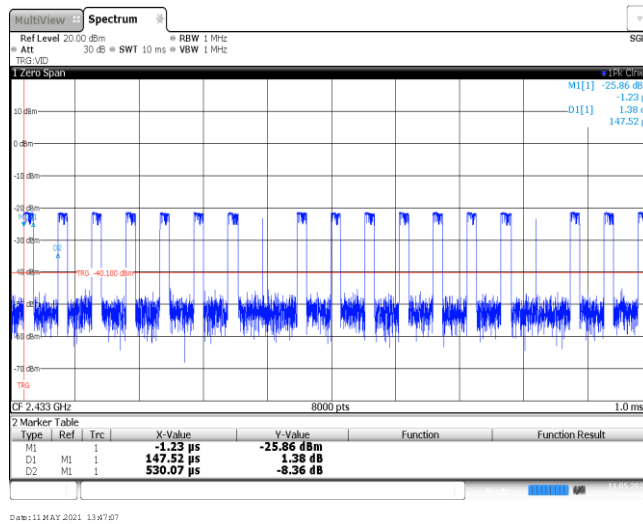


CH<sub>H</sub>

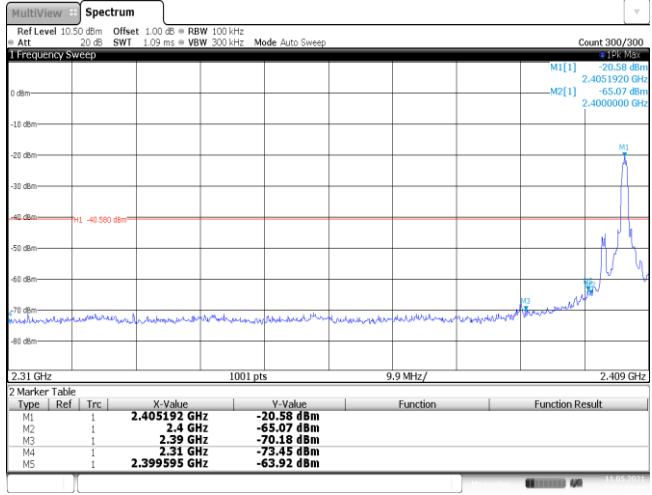
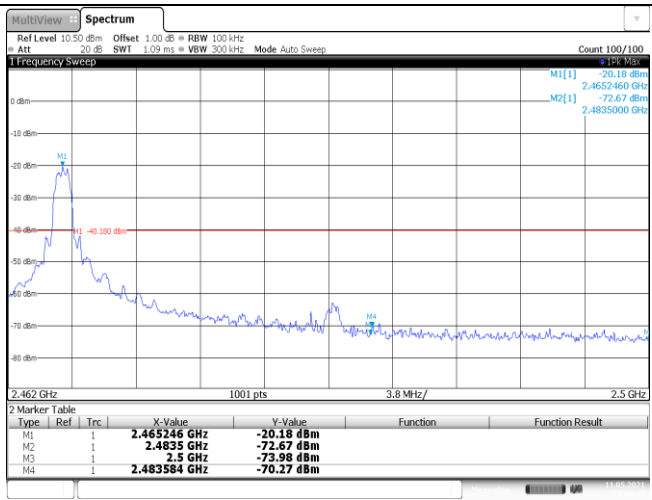


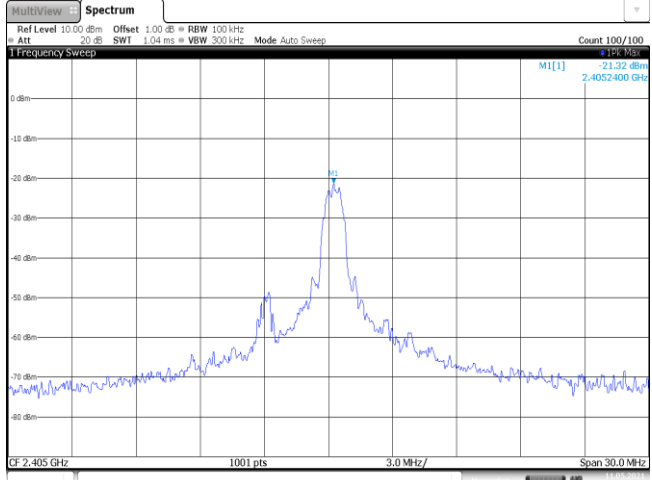
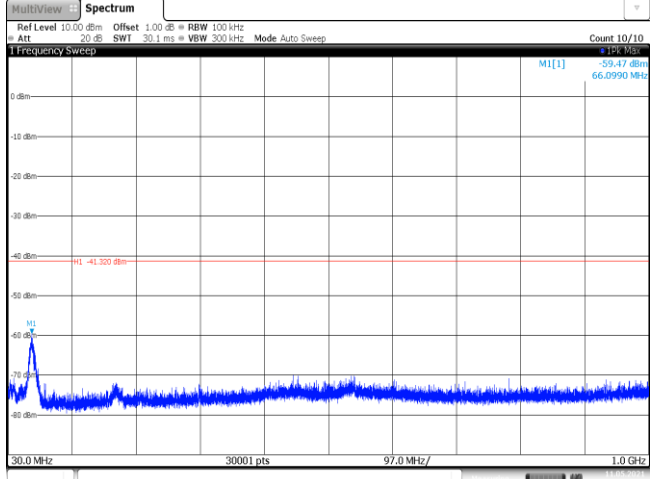
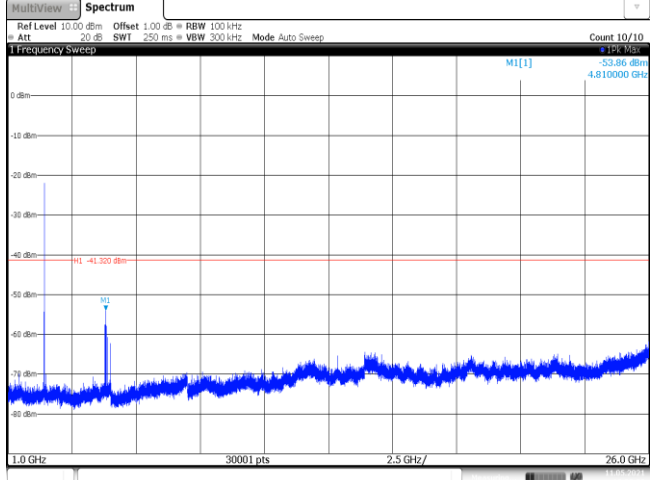
### Appendix E: Duty cycle

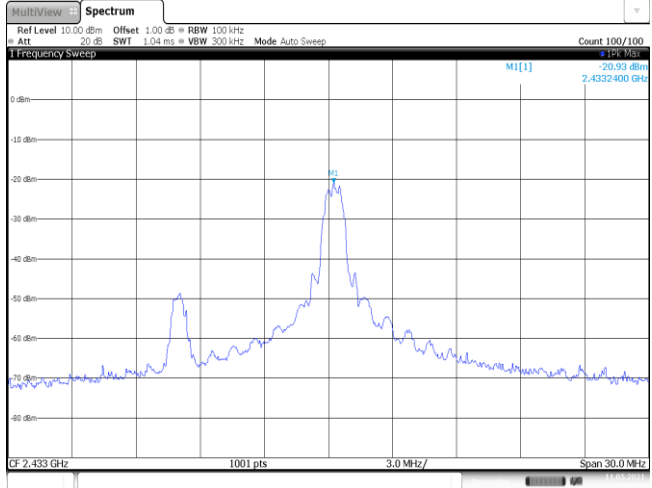
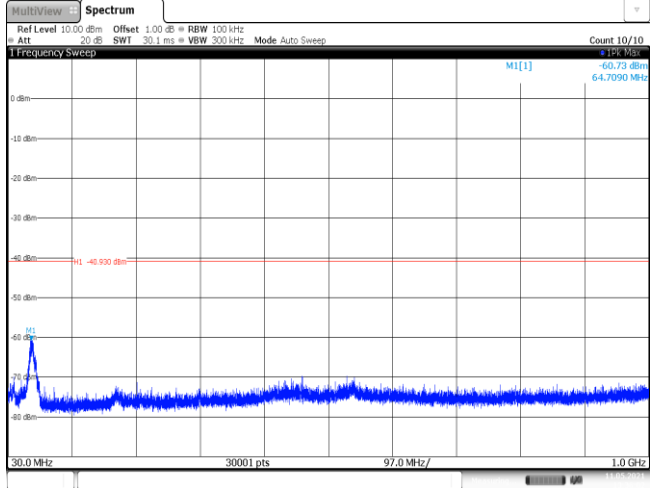
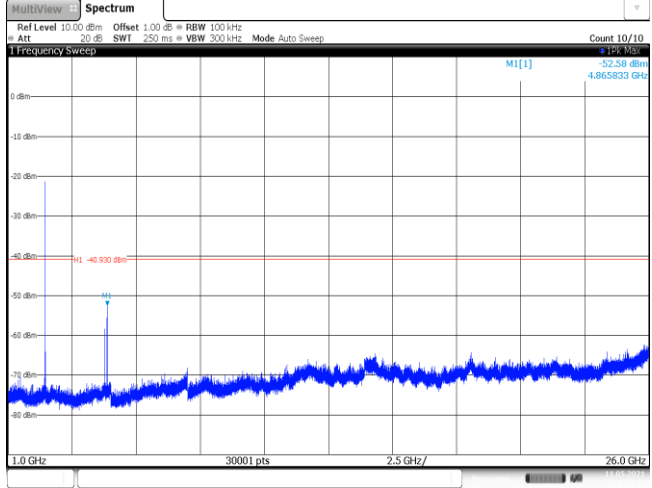
Test Frequency (MHz)	T <sub>on</sub> time for single burst (ms)	T <sub>period</sub> (ms)	Duty cycle	1/T <sub>on</sub> time (kHz)
2433	0.15	0.53	28.3%	6.7

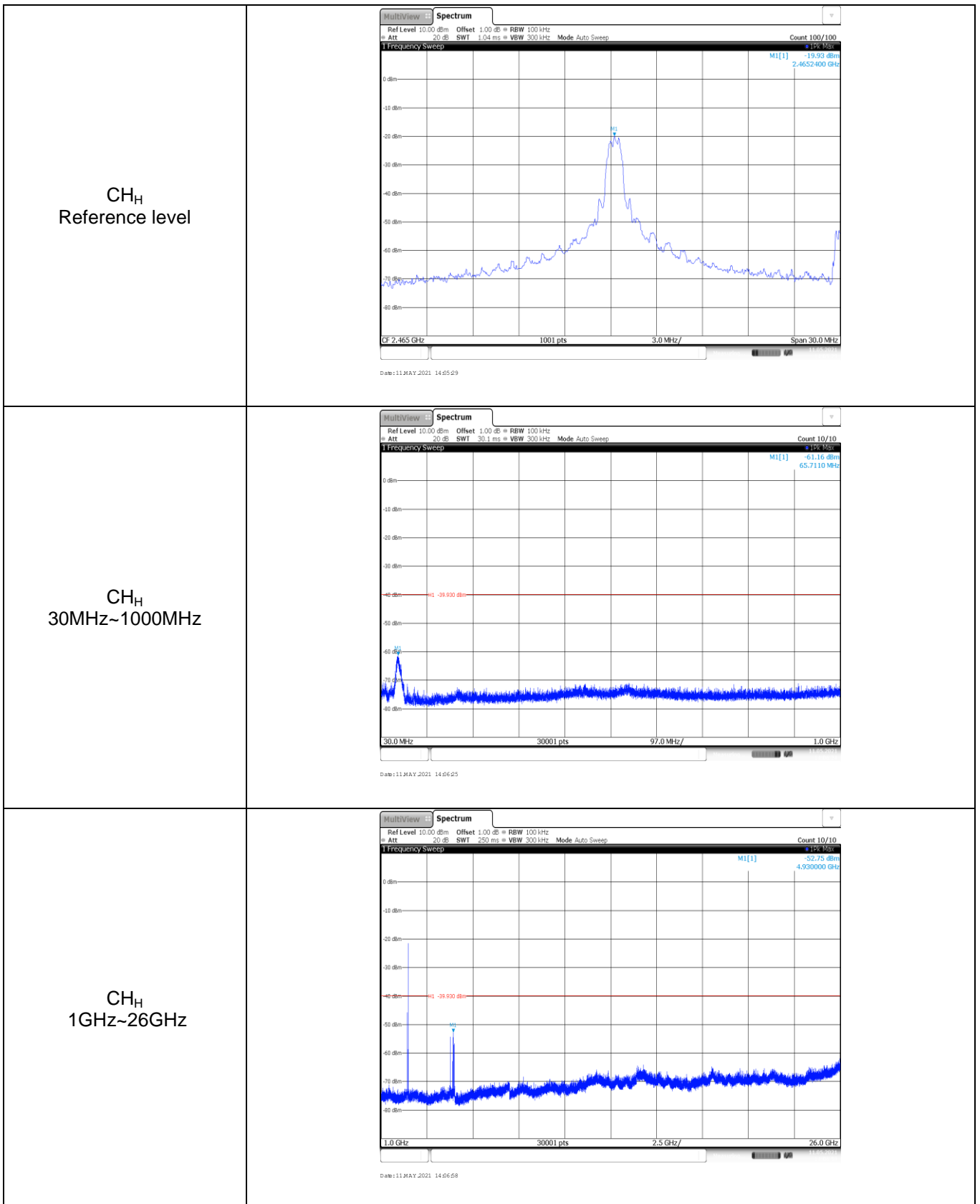


**Appendix F: Band edge and Spurious Emissions (conducted)**

Test Item:	Band edge																																										
<p>CH<sub>L</sub></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>2.405192 GHz</td> <td>-20.58 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-65.07 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-70.18 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-73.45 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399595 GHz</td> <td>-63.92 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 11 MAY 2021 13:58:40</p>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.405192 GHz	-20.58 dBm			M2	1		2.4 GHz	-65.07 dBm			M3	1		2.39 GHz	-70.18 dBm			M4	1		2.31 GHz	-73.45 dBm			M5	1		2.399595 GHz	-63.92 dBm		
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Test Item:	SE
<p>CH<sub>L</sub> Reference level</p>	 <p>Ref Level 10.00 dBm Offset 1.00 dB BW 100 kHz Att 20 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 M1[1] -21.32 dBm 2.4052400 GHz CF 2.405 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 11 MAY 2021 13:32:06</p>
<p>CH<sub>L</sub> 30MHz~1000MHz</p>	 <p>Ref Level 10.00 dBm Offset 1.00 dB BW 100 kHz Att 20 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -59.47 dBm 66.0990 MHz M1 -41.200 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 11 MAY 2021 13:32:41</p>
<p>CH<sub>L</sub> 1GHz~26GHz</p>	 <p>Ref Level 10.00 dBm Offset 1.00 dB BW 100 kHz Att 20 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -53.86 dBm 4.810000 GHz M1 -41.200 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 11 MAY 2021 13:33:22</p>

<p>CH<sub>M</sub> Reference level</p>	 <p>Ref Level 10.00 dBm Offset 1.00 dB BW 100 kHz Att -20.0 dB SWT 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 M1[1] -20.93 dBm 2.432400 GHz CF 2.433 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 11 MAY 2021 13:25:20</p>
<p>CH<sub>M</sub> 30MHz~1000MHz</p>	 <p>Ref Level 10.00 dBm Offset 1.00 dB BW 100 kHz Att -20.0 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -60.73 dBm 64.7090 MHz M1 -40.930 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 11 MAY 2021 13:26:02</p>
<p>CH<sub>M</sub> 1GHz~26GHz</p>	 <p>Ref Level 10.00 dBm Offset 1.00 dB BW 100 kHz Att -20.0 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -52.58 dBm 4.865833 GHz M1 -40.930 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 11 MAY 2021 13:26:27</p>



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