

# APPENDIX REPORT

Project No.	SHT2109034502EW	Radio Specification	2.4GHz Device
Test sample No.	YPHT21090345003	Model No.	18100(5788-W)-Vehicle
Start test date	2021-09-28	Finish date	2021-09-28
Temperature	26.1℃	Humidity	33%
Test Engineer	Hailey Chen	Auditor	Xiaodong Zhao

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

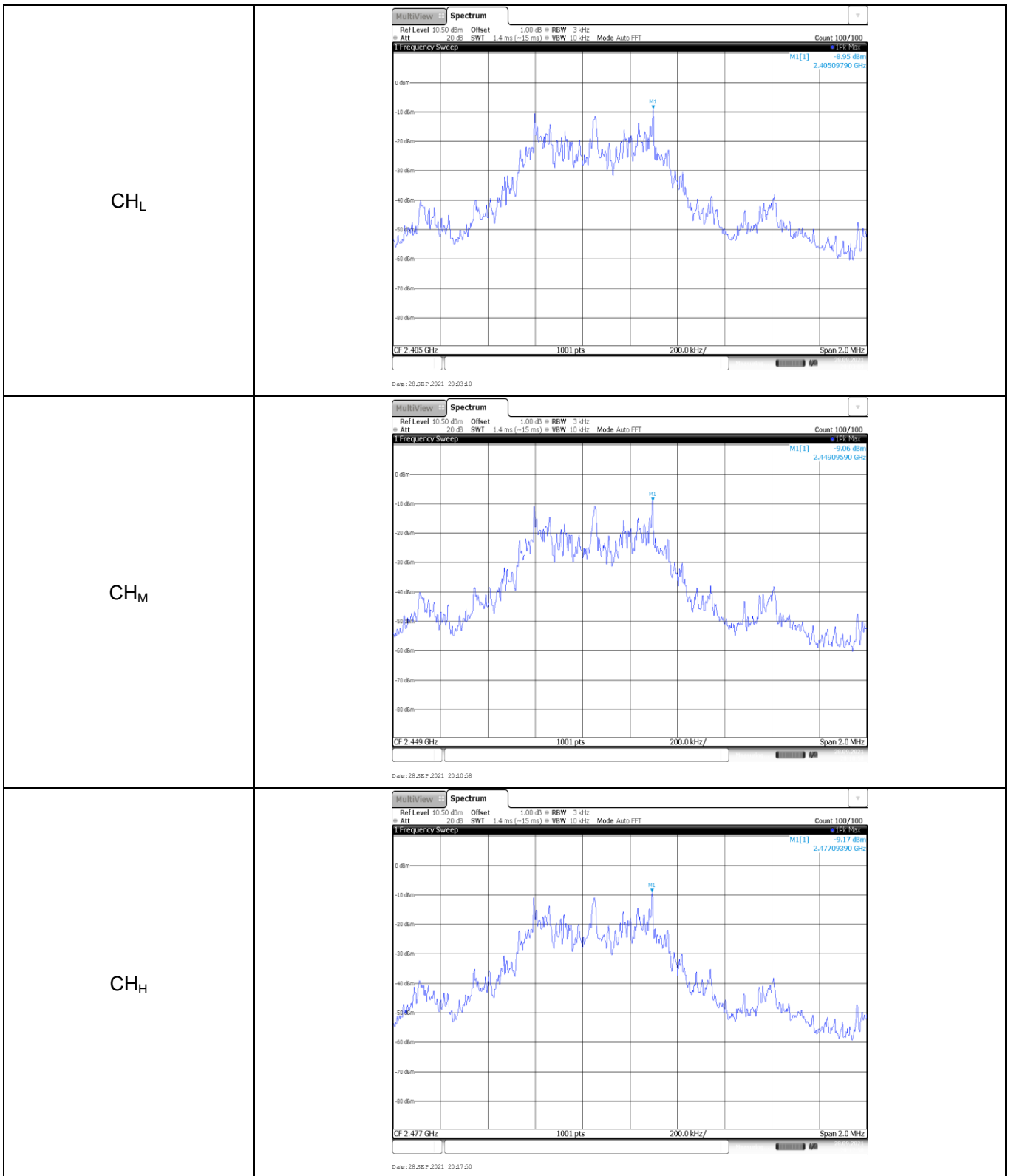
**Appendix A: Peak Output Power**

Channel	Peak Output power (dBm)	Limit (dBm)	Result
CH <sub>L</sub>	-0.87	≤ 30.00	Pass
CH <sub>M</sub>	-1.08		
CH <sub>H</sub>	-1.14		

<p>CH<sub>L</sub></p>	<p>Ref Level 10.50 dBm Offset 1.00 dB RBW 2 MHz          Att 20 dB SWI 1.01 ms VBW 5.0kHz Mode Auto Sweep          Count 500/500          M1[1] -0.87 dBm          2.40465030 GHz          CF 2.405 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz          Date: 29.SEP.2021 20:02:02</p>
<p>CH<sub>M</sub></p>	<p>Ref Level 10.50 dBm Offset 1.00 dB RBW 2 MHz          Att 20 dB SWI 1.01 ms VBW 5.0kHz Mode Auto Sweep          Count 500/500          M1[1] -1.08 dBm          2.44871530 GHz          CF 2.449 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz          Date: 29.SEP.2021 20:10:20</p>
<p>CH<sub>H</sub></p>	<p>Ref Level 10.50 dBm Offset 1.00 dB RBW 2 MHz          Att 20 dB SWI 1.01 ms VBW 5.0kHz Mode Auto Sweep          Count 500/500          M1[1] -1.14 dBm          2.47669530 GHz          CF 2.477 GHz 1001 pts 500.0 kHz/ Span 5.0 MHz          Date: 29.SEP.2021 20:16:03</p>

**Appendix B: Power Spectral Density**

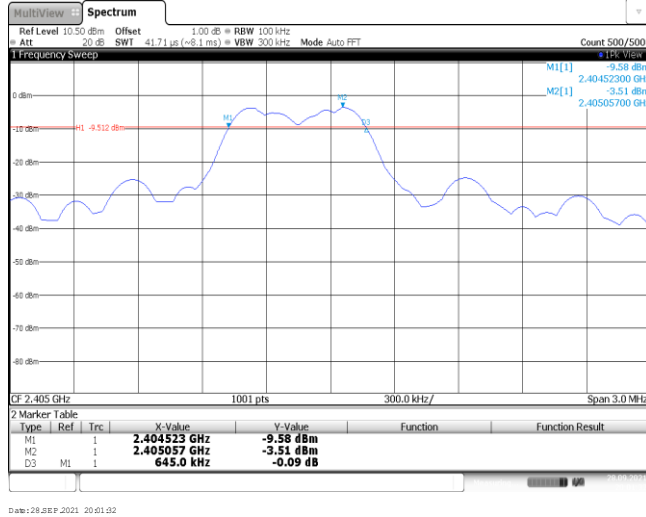
Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
CH <sub>L</sub>	-8.95	≤8.00	Pass
CH <sub>M</sub>	-9.06		
CH <sub>H</sub>	-9.17		



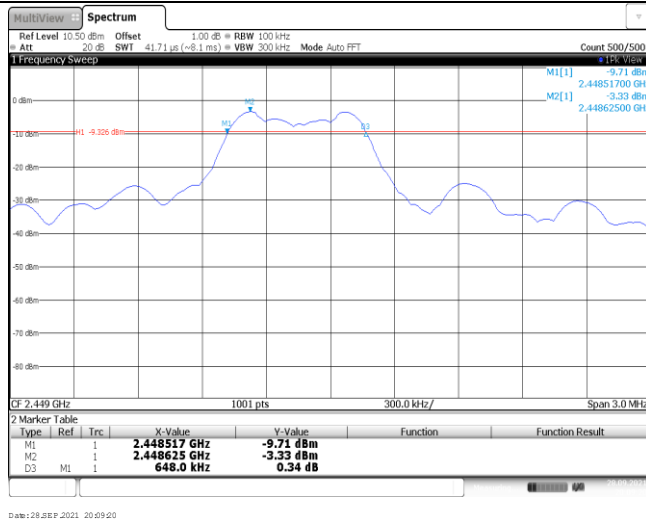
**Appendix C: 6dB bandwidth**

Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
CH <sub>L</sub>	645.00	≥500	Pass
CH <sub>M</sub>	648.00		
CH <sub>H</sub>	651.00		

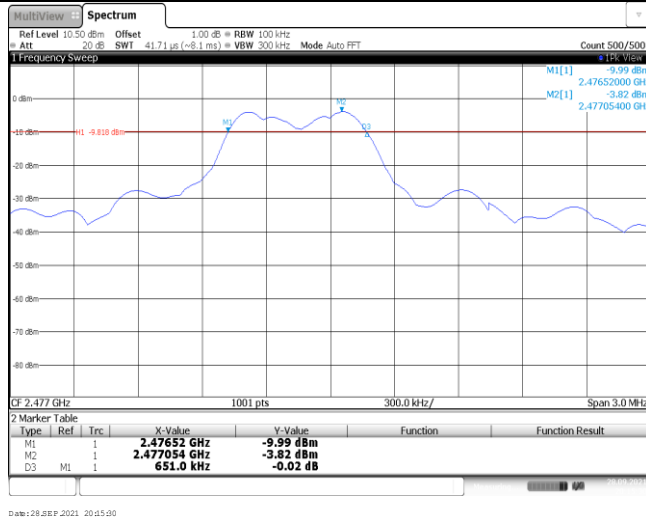
CH<sub>L</sub>



CH<sub>M</sub>



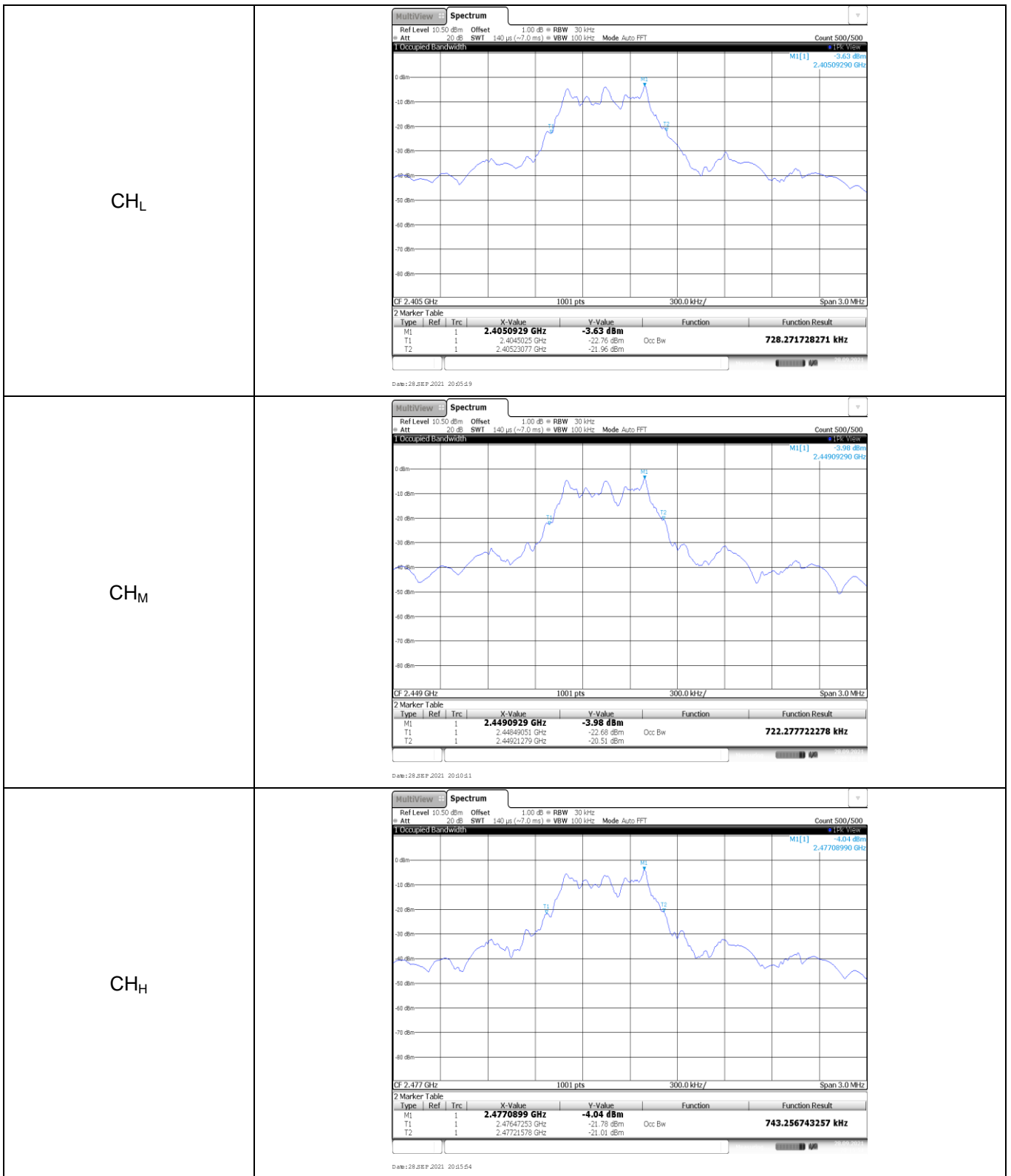
CH<sub>H</sub>



**Appendix D: 99% Occupied Bandwidth**

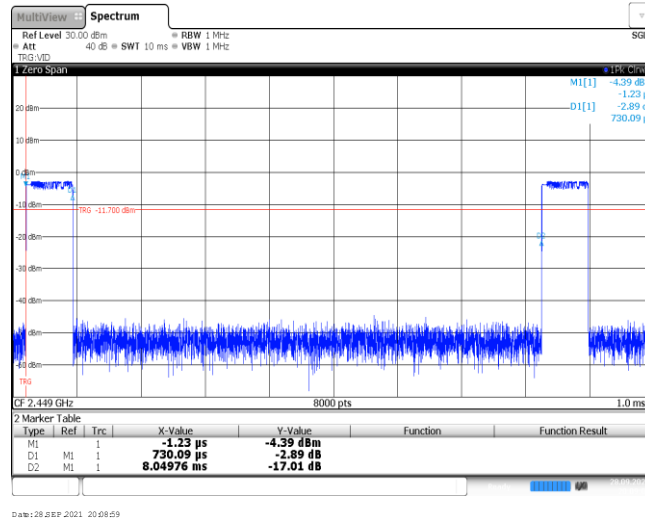
Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
CH <sub>L</sub>	0.73	-	Pass
CH <sub>M</sub>	0.72		
CH <sub>H</sub>	0.74		



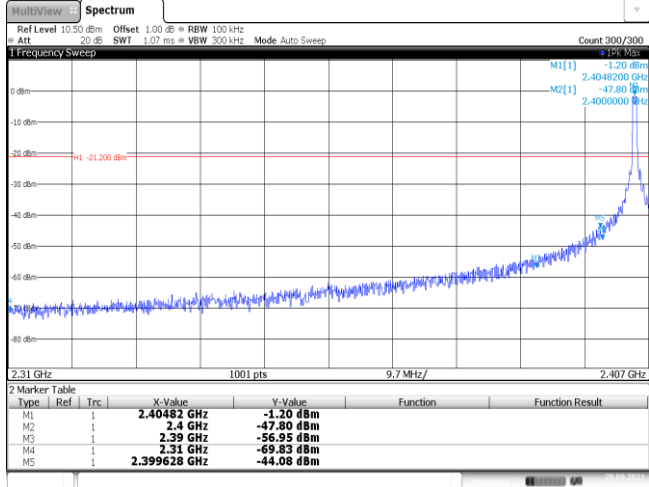
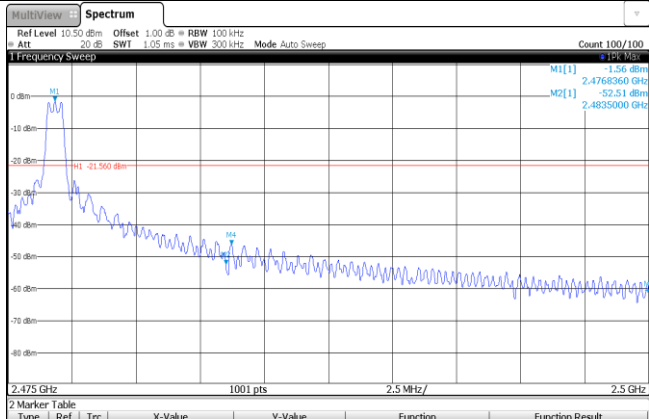


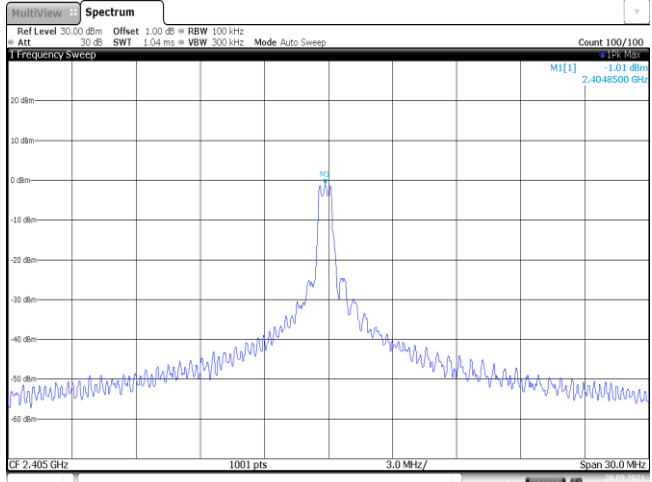
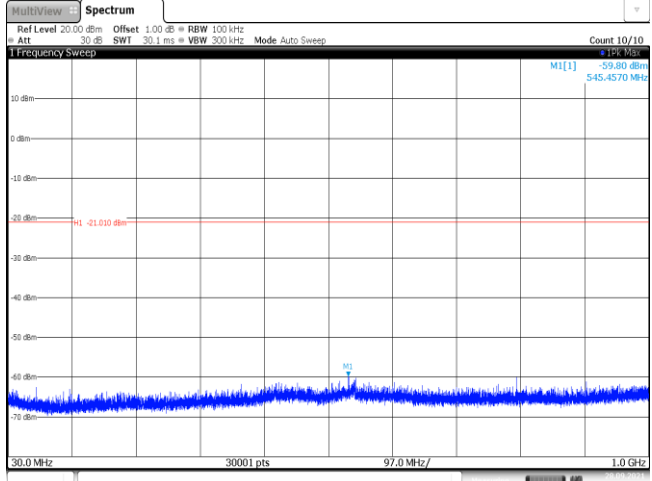
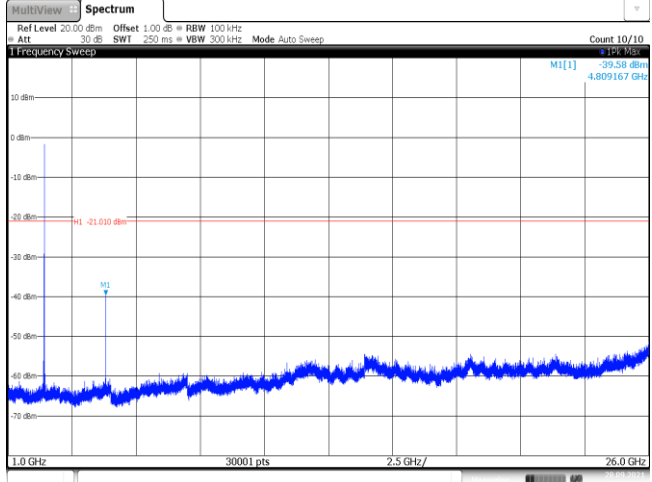
### Appendix E: Duty cycle

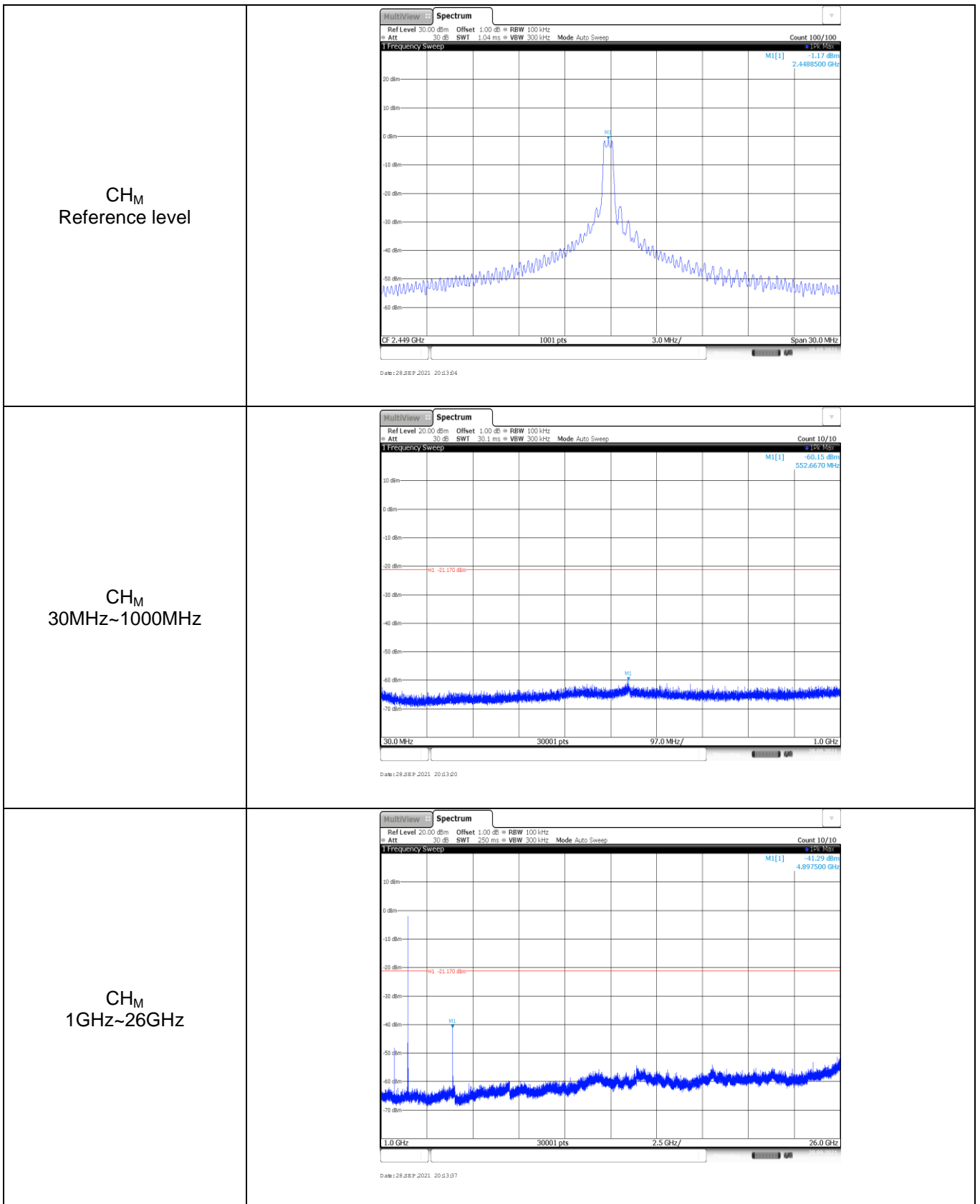
Test Frequency (MHz)	T <sub>on</sub> time for single burst (ms)	T <sub>period</sub> (ms)	Duty cycle	1/T <sub>on</sub> time (kHz)
2449	0.73	8.05	9.1%	1.4

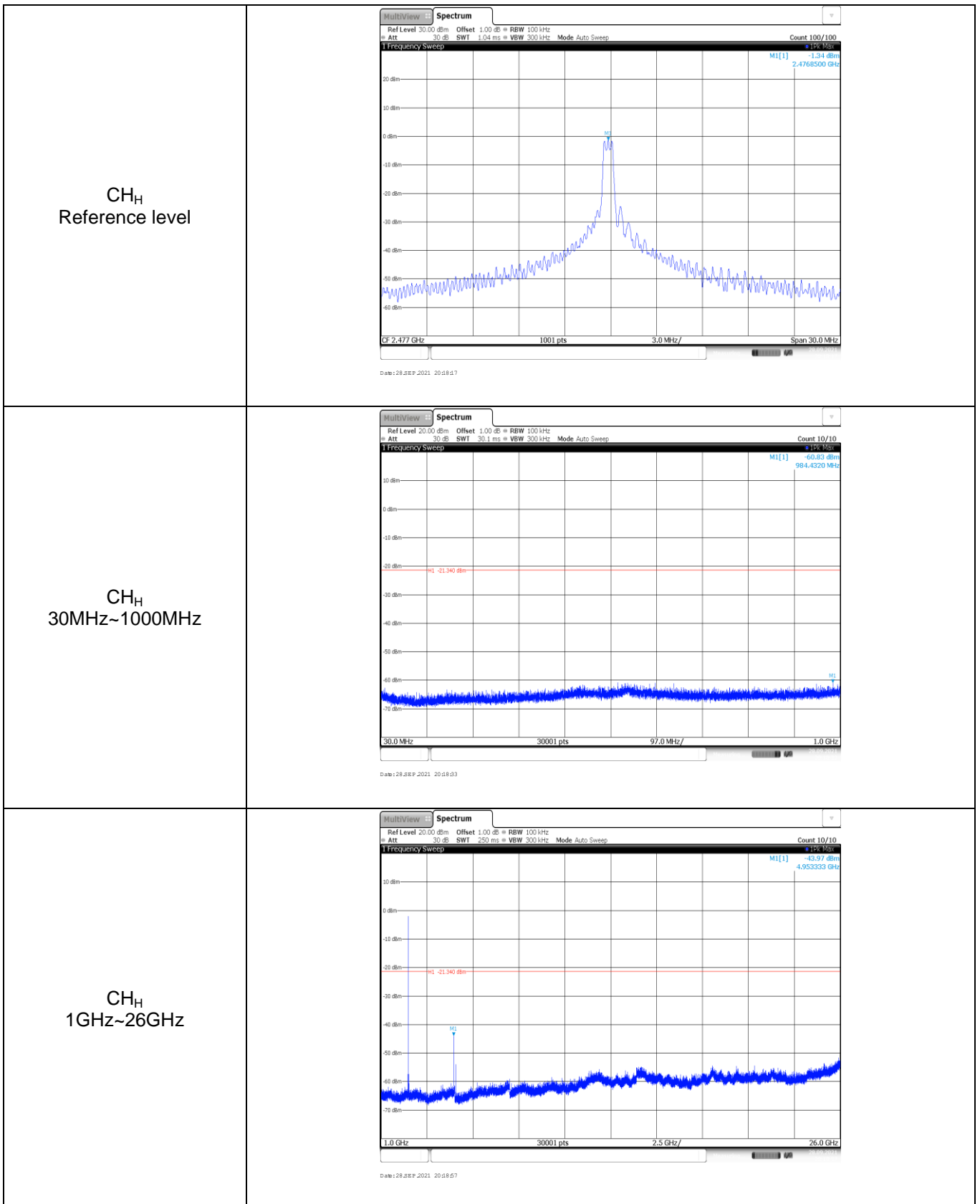


### Appendix F: Band edge and Spurious Emissions (conducted)

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>2.40482 GHz</td> <td>-1.20 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-47.80 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-56.95 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-69.83 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399628 GHz</td> <td>-44.08 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 28.SEP.2021 20:03:04</p>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.40482 GHz	-1.20 dBm			M2	1		2.4 GHz	-47.80 dBm			M3	1		2.39 GHz	-56.95 dBm			M4	1		2.31 GHz	-69.83 dBm			M5	1		2.399628 GHz	-44.08 dBm		
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Test Item:	SE
<p>CH<sub>L</sub> Reference level</p>	 <p>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 M1[1] 1.01 dBm 2.4048500 GHz CF 2.405 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 28 SEP 2021 20:06:21</p>
<p>CH<sub>L</sub> 30MHz~1000MHz</p>	 <p>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 M1[1] -59.80 dBm 545.4570 MHz H1 -21.010 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 28 SEP 2021 20:07:50</p>
<p>CH<sub>L</sub> 1GHz~26GHz</p>	 <p>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 M1[1] -59.58 dBm 4.809167 GHz H1 -21.010 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 28 SEP 2021 20:08:25</p>





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