

# APPENDIX REPORT

Project No.	SHT2003046801EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT20030468003	Model No.	R40
Start test date	2020/5/15	Finish date	2020/5/21
Temperature	25°C	Humidity	50%
Test Engineer	JiongSheng.Feng	Auditor	<i>William.wang</i>

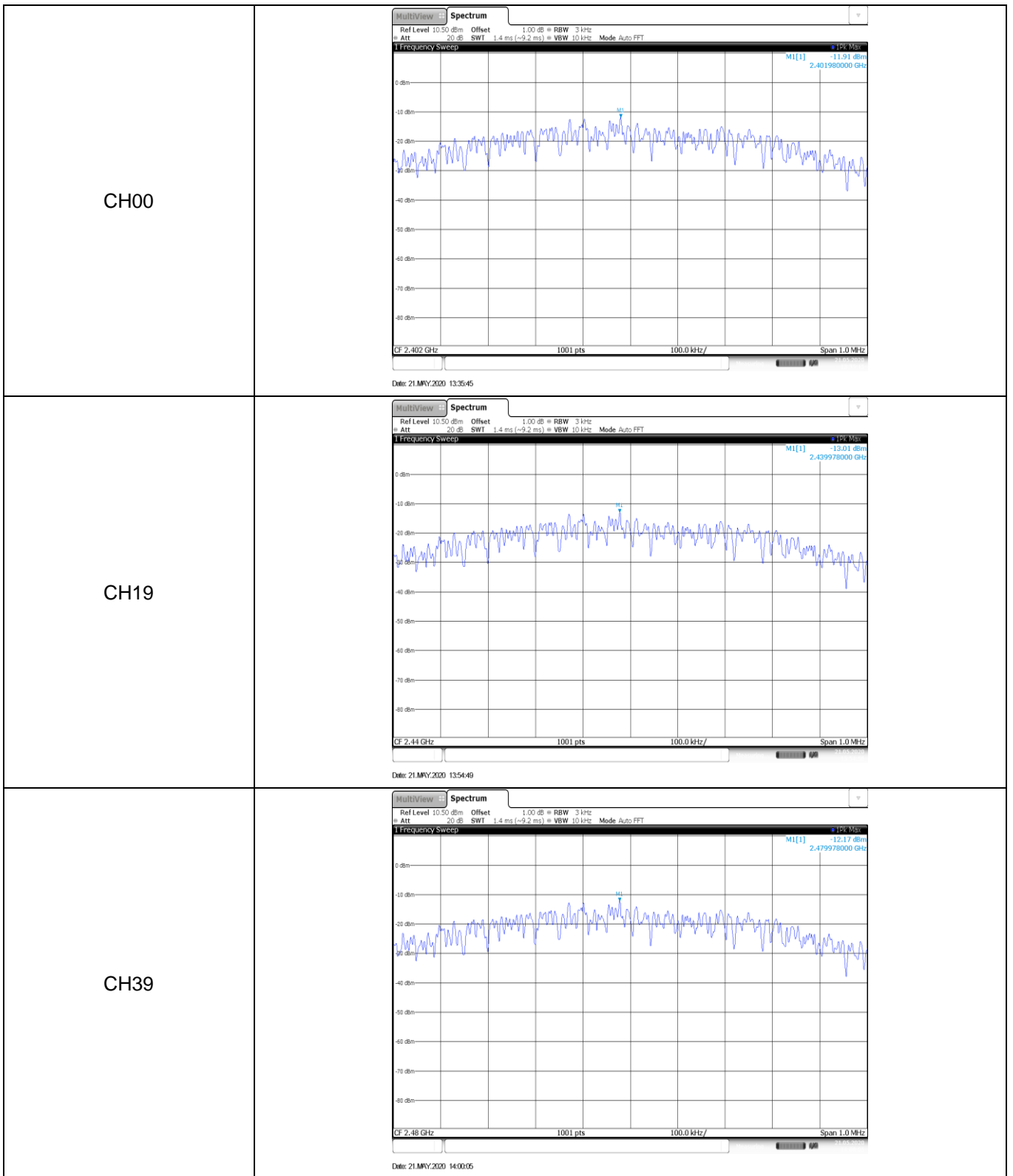
Appendix clause	Test item	Result
A	Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

**Appendix A: Peak Output Power**

Type	Channel	Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	3.03	3.01	≤30.00	Pass
	19	1.93	1.90		
	39	2.77	2.76		

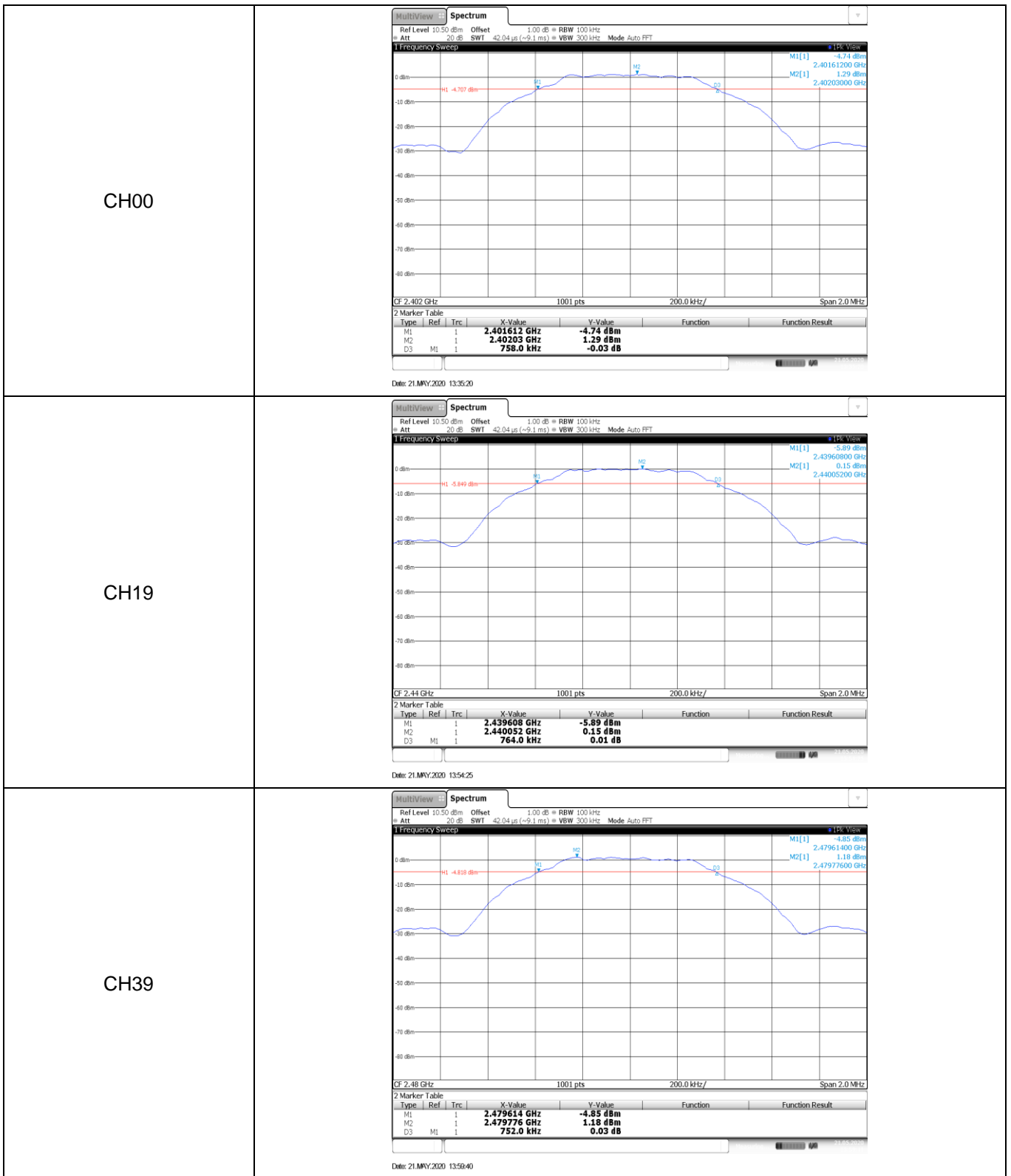
**Appendix B: Power Spectral Density**

Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-11.91	≤8.00	Pass
	19	-13.01		
	39	-12.17		



**Appendix C: 6dB bandwidth**

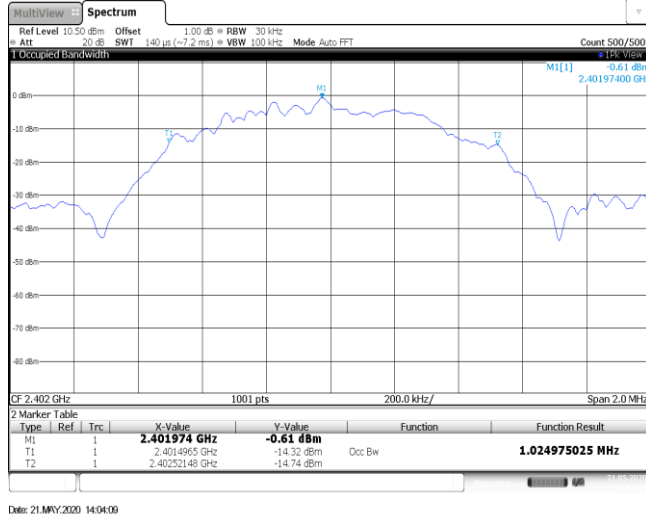
Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	758.00	≥500	Pass
	19	764.00		
	39	752.00		



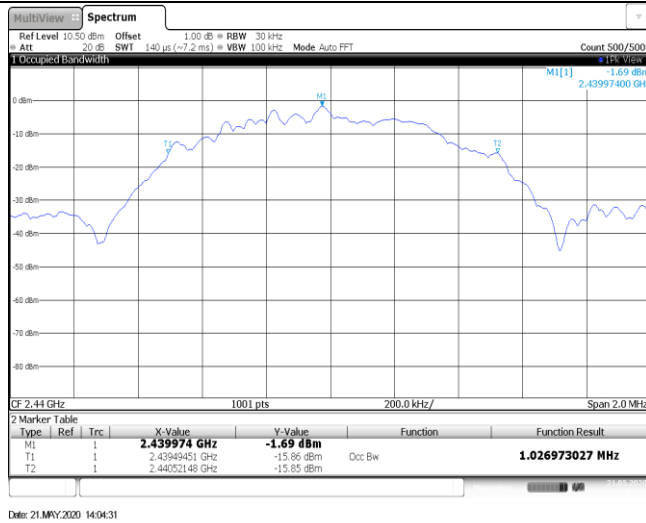
**Appendix D: 99% Occupied Bandwidth**

Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	1.02	-	Pass
	19	1.03		
	39	1.02		

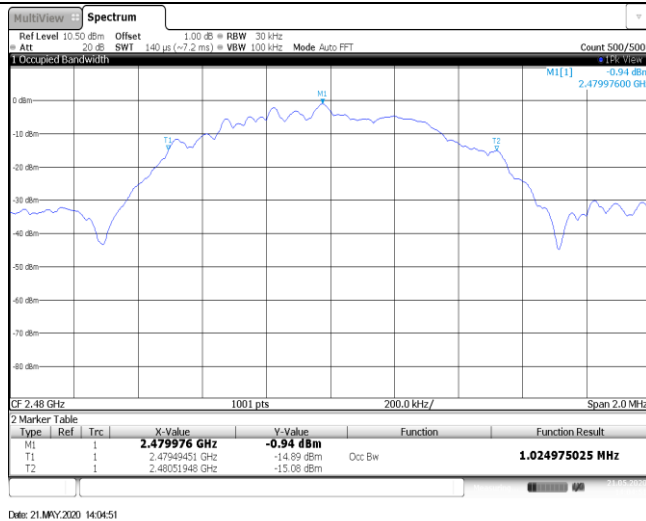
CH00



CH19



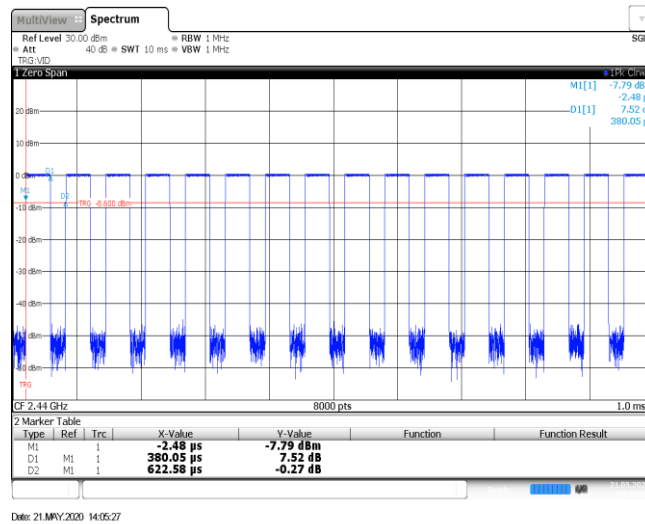
CH39



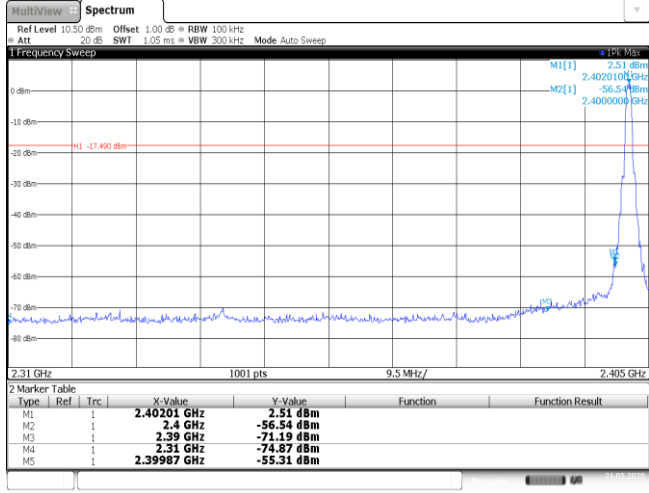
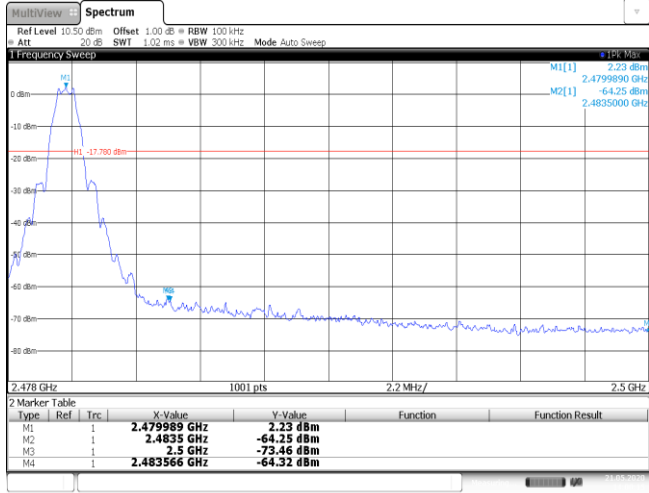


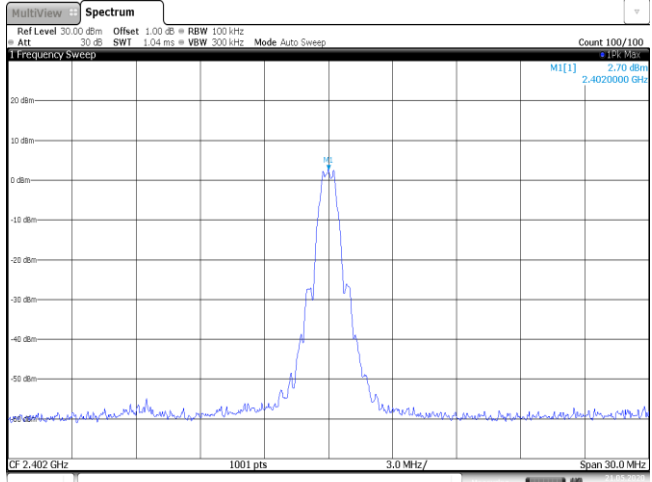
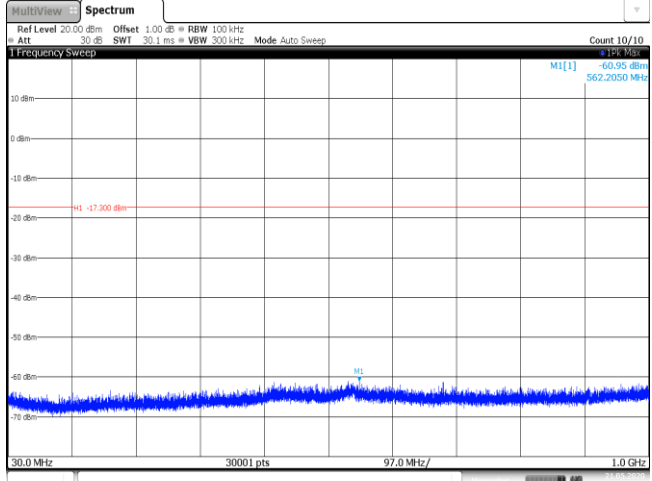
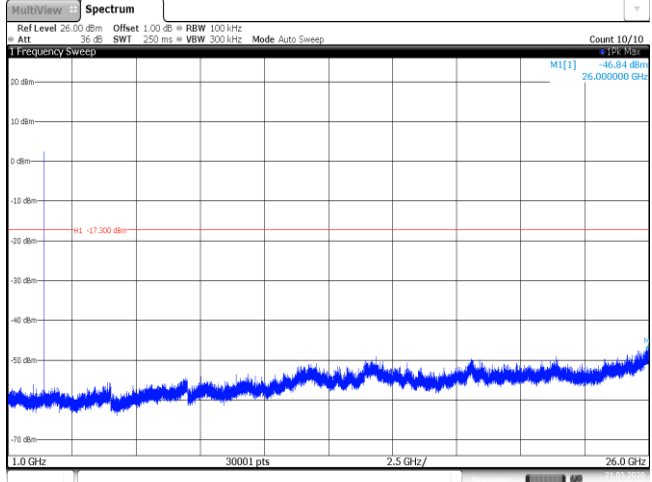
### Appendix E: Duty cycle

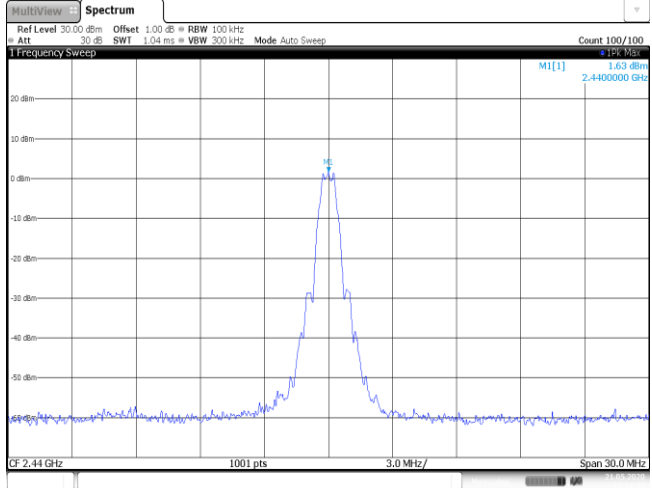
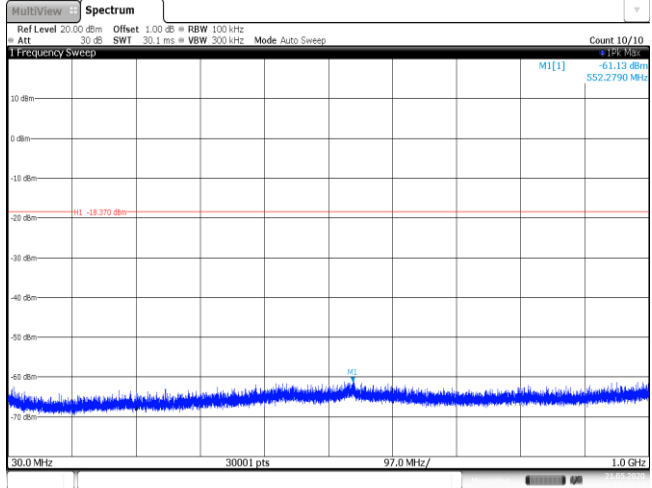
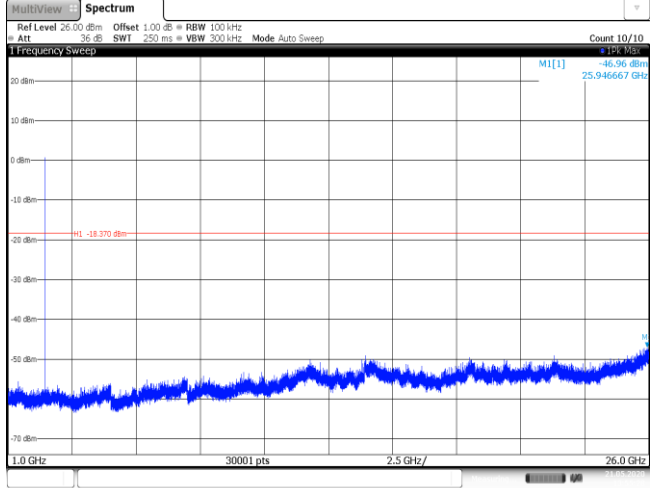
Test Frequency (MHz)	T <sub>on</sub> time for single burst (ms)	T <sub>period</sub> (ms)	Duty cycle	1/T <sub>on</sub> time (kHz)
2440	0.38	0.62	61.3%	2.6

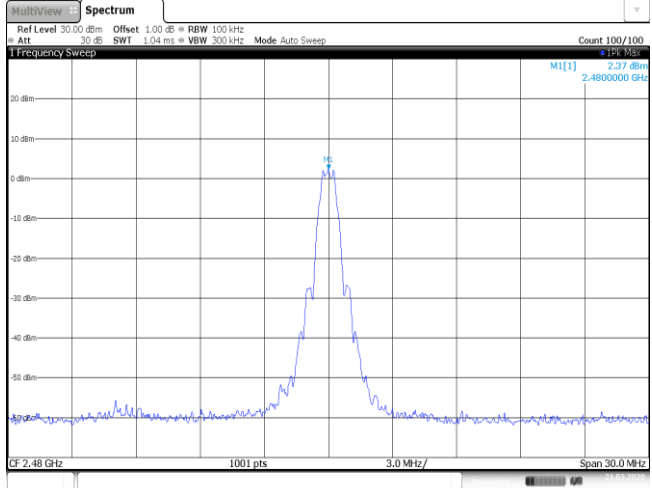
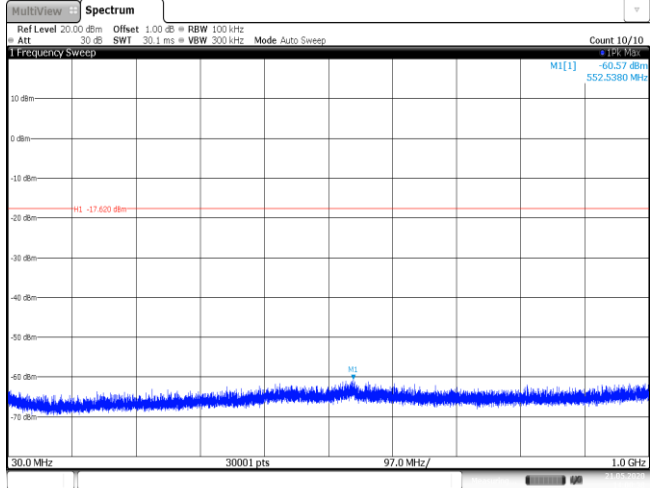
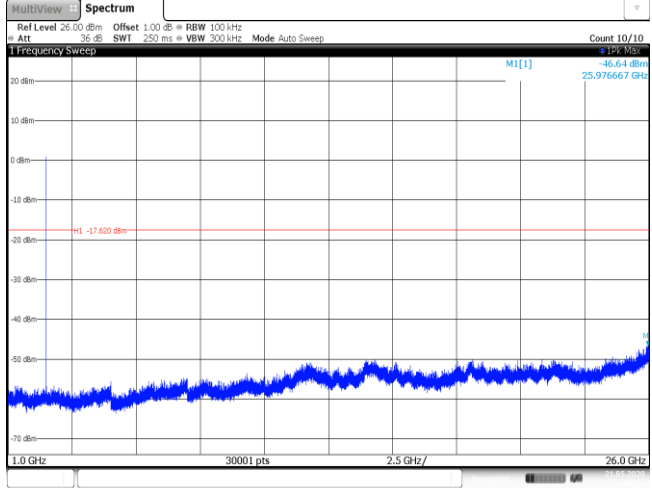


**Appendix F: Band edge and Spurious Emissions (conducted)**

Test Item:	Band edge																																										
<p>CH00</p>	 <p>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>2.51 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-56.54 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-71.19 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-74.87 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.39987 GHz</td> <td>-55.31 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 21.MAY.2020 13:35:55</p>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.40201 GHz	2.51 dBm			M2	1		2.4 GHz	-56.54 dBm			M3	1		2.39 GHz	-71.19 dBm			M4	1		2.31 GHz	-74.87 dBm			M5	1		2.39987 GHz	-55.31 dBm		
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Test Item:	SE
<p>CH00 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] 2.70 dBm 2.402000 GHz 20 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm CF 2.402 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 21.MAY.2020 13:38:06</p>
<p>CH00 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] -60.95 dBm 562.2050 MHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 21.MAY.2020 13:38:22</p>
<p>CH00 1GHz~26GHz</p>	 <p>Ref Level 26.00 dBm Offset 1.00 dB BW 100 kHz Att 36 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -46.84 dBm 26.000000 GHz 20 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 21.MAY.2020 13:38:38</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 1.63 dBm. The plot includes technical parameters: 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. The date is 21.MAY.2020 13:54:56.</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 -18.370 dBm. The noise floor is labeled 'M1[1]' with a value of -61.13 dBm at 552.2790 MHz. The plot includes technical parameters: 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. The date is 21.MAY.2020 13:55:12.</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 20 dBm. The x-axis ranges from 1.0 GHz to 26.0 GHz. A red horizontal line is drawn at -18.370 dBm. The noise floor is labeled 'M1[1]' with a value of -46.96 dBm at 25.946667 GHz. The plot includes technical parameters: 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. The date is 21.MAY.2020 13:55:29.</p>

<p>CH39 Reference level</p>	 <p>The spectrum plot shows a single sharp peak at 2.48 GHz. The y-axis represents power in dBm, ranging from -80 to 20. The x-axis represents frequency in MHz, with a span of 30.0 MHz centered at 2.48 GHz. The peak is labeled M1[1] with a value of 2.37 dBm. The plot includes technical parameters: 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. The date is 21.MAY.2020 14:00:22.</p>
<p>CH39 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 -17.600 dBm. A peak is labeled M1[1] with a value of -60.57 dBm at 552.5380 MHz. The plot includes technical parameters: 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. The date is 21.MAY.2020 14:00:38.</p>
<p>CH39 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 20 dBm. The x-axis ranges from 1.0 GHz to 26.0 GHz. A red horizontal line is drawn at -17.600 dBm. A peak is labeled M1[1] with a value of -46.64 dBm at 25.976667 GHz. The plot includes technical parameters: 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. The date is 21.MAY.2020 14:00:54.</p>

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