

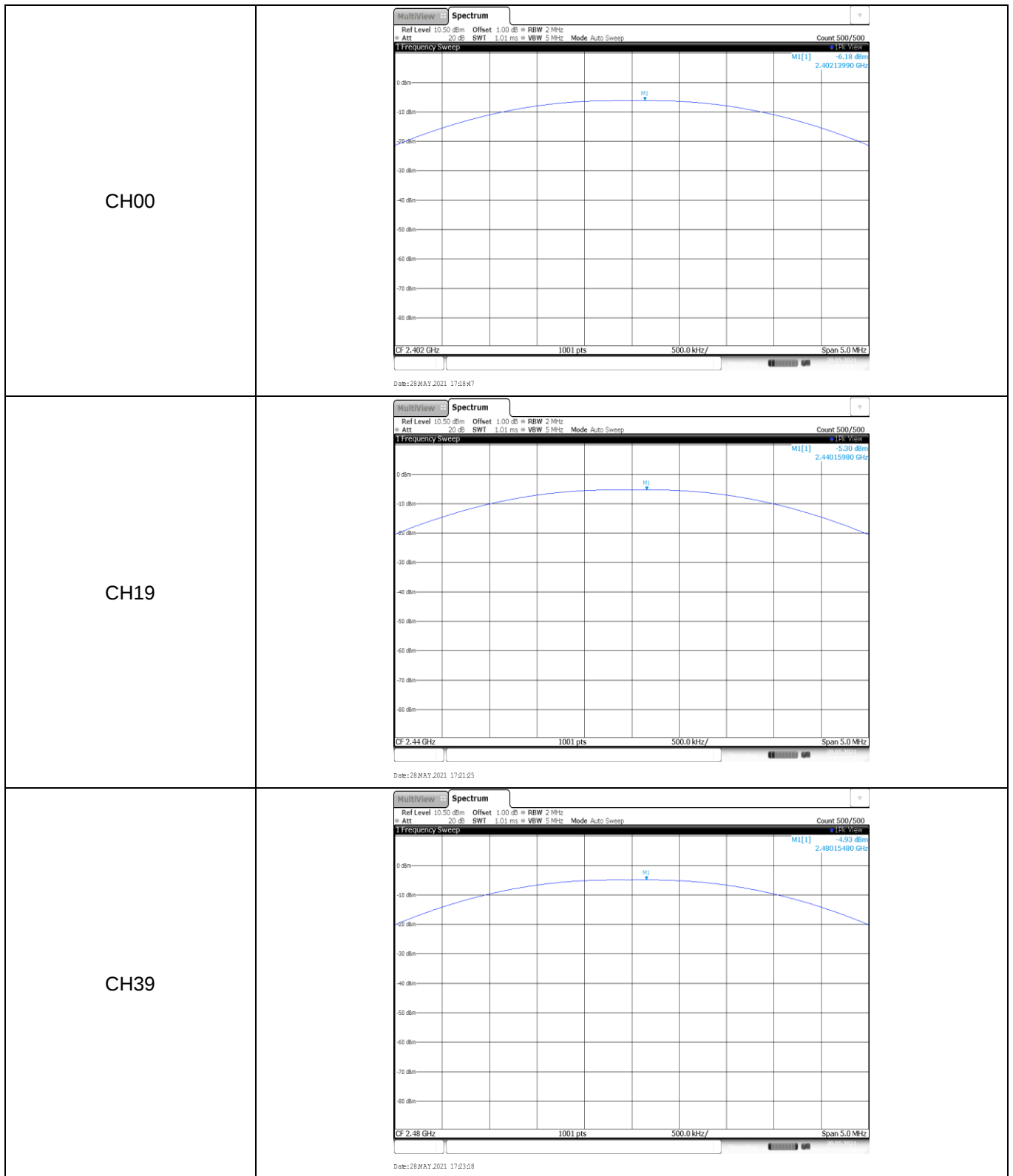
APPENDIX REPORT

Project No.	SHT2107079801EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT21040536002	Model No.	Star8vm
Start test date	2021-05-28	Finish date	2021-05-28
Temperature	25.5°C	Humidity	63%
Test Engineer	Qizhi Zhang	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

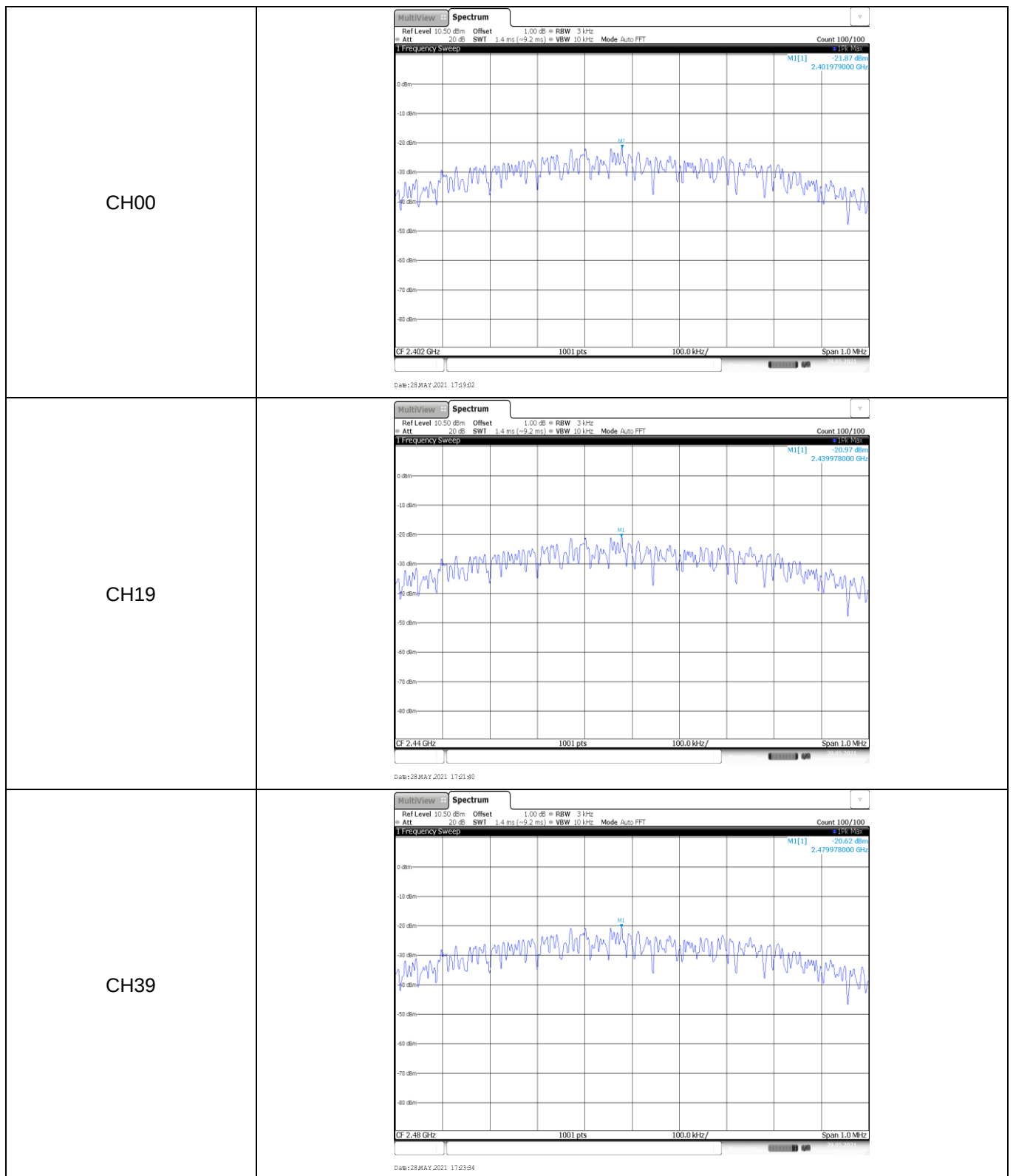
Appendix A: Peak Output Power

Type	Channel	Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	-6.18	-6.19	≤ 30.00	Pass
	19	-5.30	-5.32		
	39	-4.93	-4.94		



Appendix B: Power Spectral Density

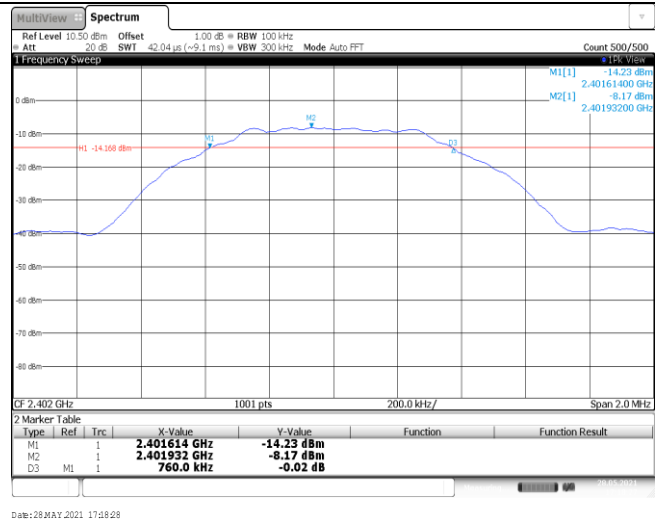
Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-21.87	≤8.00	Pass
	19	-20.97		
	39	-20.62		



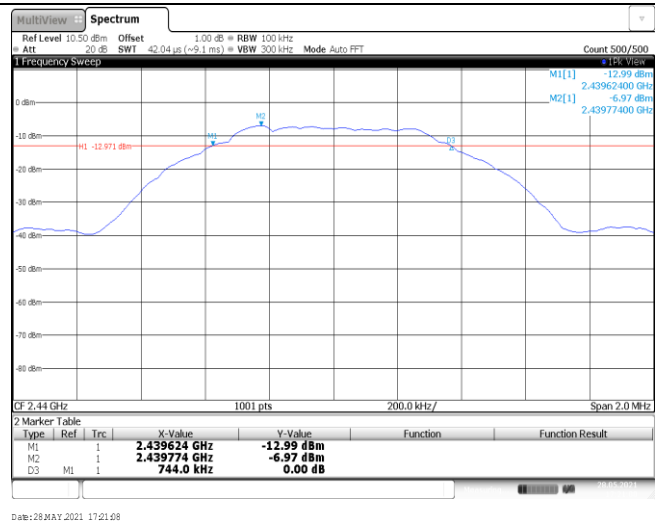
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	760.00	≥500	Pass
	19	744.00		
	39	756.00		

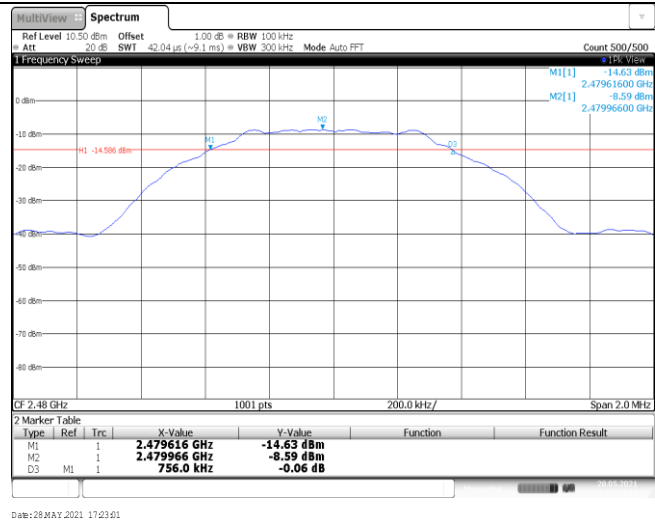
CH00



CH19



CH39



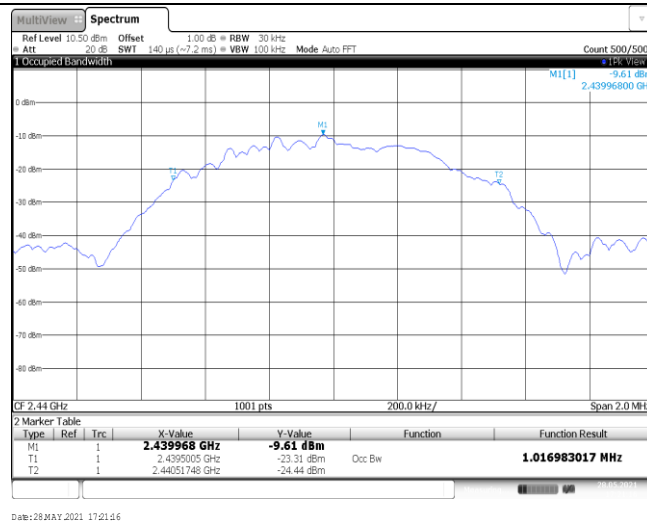
Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	1.01	-	Pass
	19	1.02		
	39	1.01		

CH00



CH19

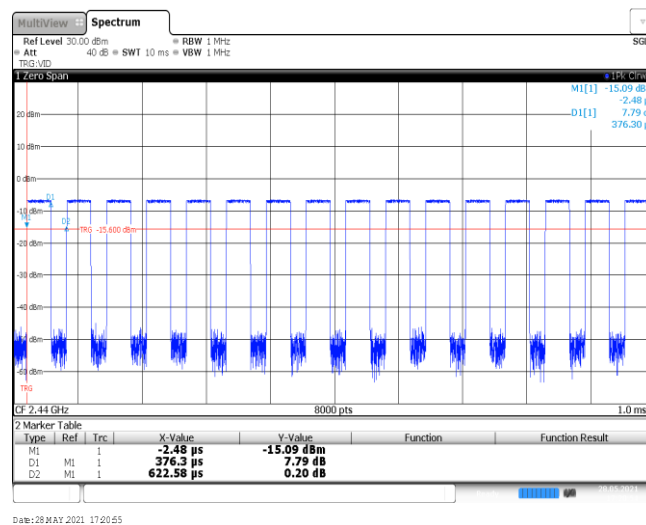


CH39



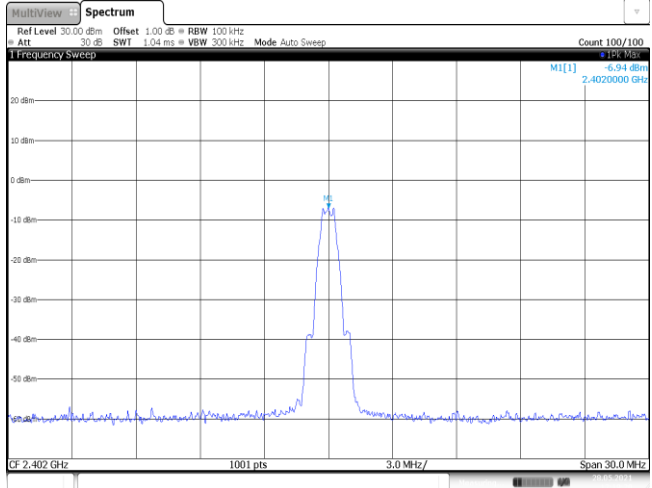
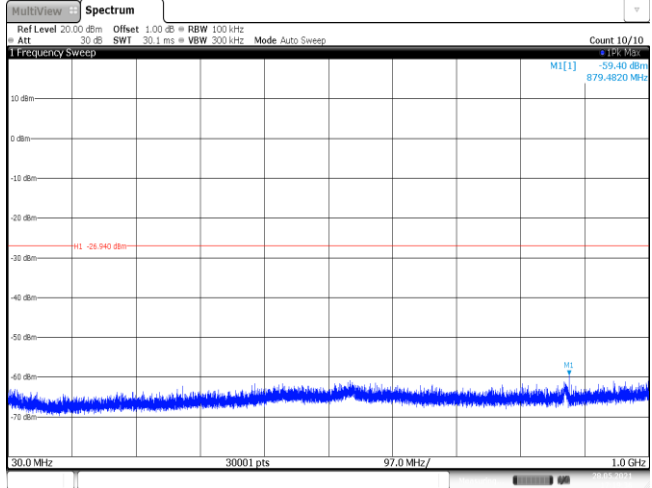
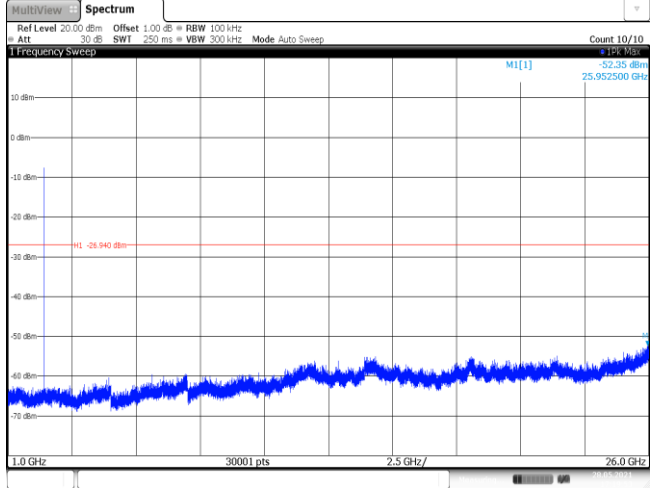
Appendix E: Duty cycle

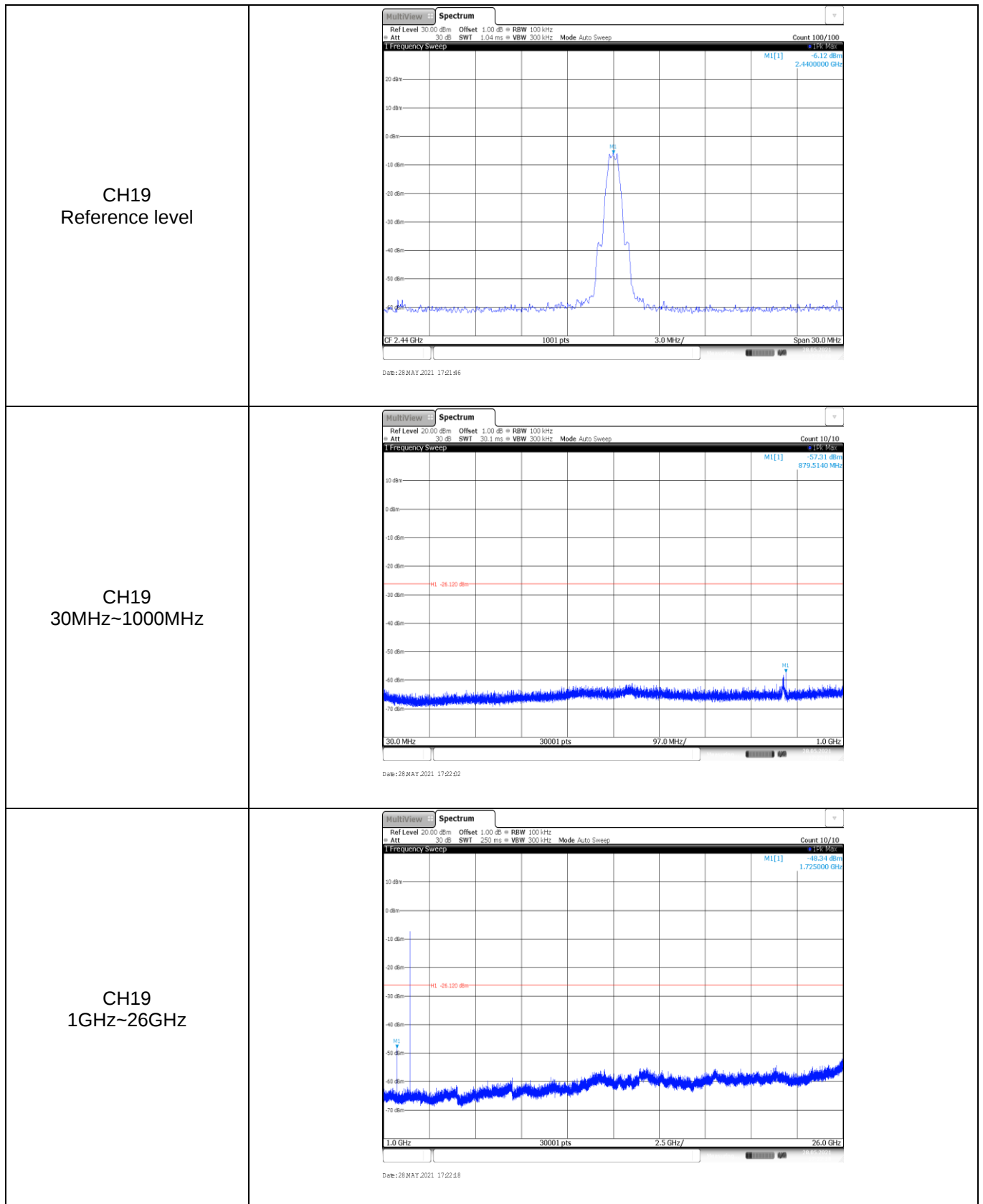
Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
2440	0.38	0.62	61.3%	2.6

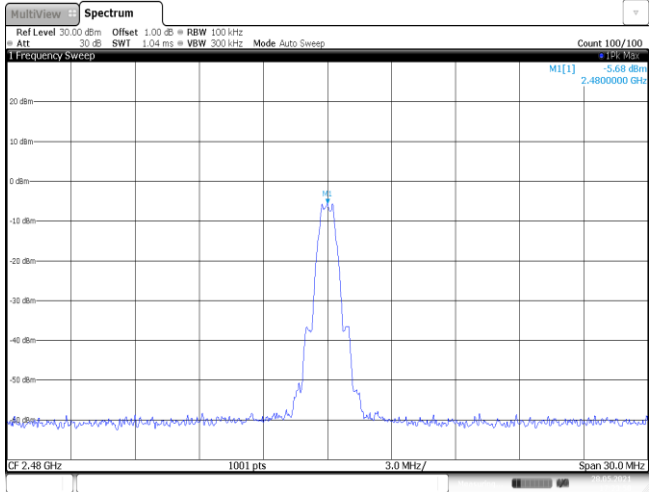
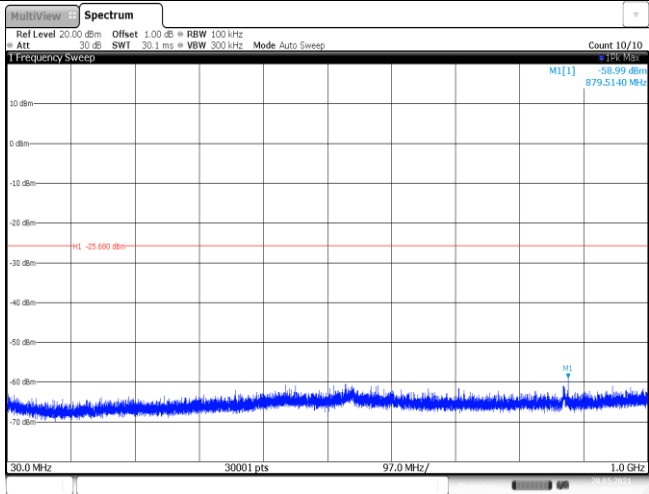
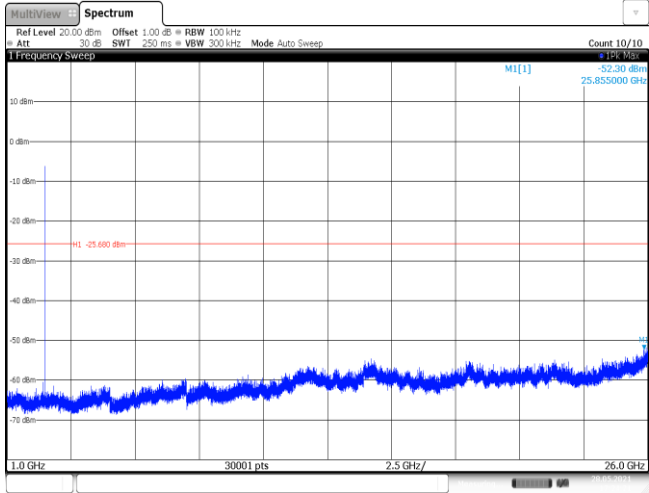


Appendix F: Band edge and Spurious Emissions (conducted)

Test Item:	Band edge																																										
CH00	MultiView Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 1.05 ms VBW 300 kHz Mode Auto Sweep Count 200/200 1 Frequency Sweep 10 dB 20 dB 30 dB 40 dB 50 dB 60 dB 70 dB 80 dB M1[1] -7.12 dBm 2.4020100 GHz M2[1] -64.80 dBm 2.4000000 GHz 2.31 GHz 1001 pts 9.5 MHz/ 2.405 GHz <table><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><tr><td>M1</td><td>1</td><td></td><td>2.40201 GHz</td><td>-7.12 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-64.80 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-72.25 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-73.90 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399775 GHz</td><td>-62.40 dBm</td><td></td><td></td></tr></table> Date: 28 MAY 2021 17:49:42	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.40201 GHz	-7.12 dBm			M2	1		2.4 GHz	-64.80 dBm			M3	1		2.39 GHz	-72.25 dBm			M4	1		2.31 GHz	-73.90 dBm			M5	1		2.399775 GHz	-62.40 dBm		
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CH39	MultiView Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 1.02 ms VBW 300 kHz Mode Auto Sweep Count 100/100 1 Frequency Sweep 0 dB 10 dB 20 dB 30 dB 40 dB 50 dB 60 dB 70 dB 80 dB M1[1] -5.92 dBm 2.4799890 GHz M2[1] -68.78 dBm 2.4835000 GHz 2.478 GHz 1001 pts 2.2 MHz/ 2.5 GHz <table><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><tr><td>M1</td><td>1</td><td></td><td>2.479989 GHz</td><td>-5.92 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-68.78 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-72.52 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.48427 GHz</td><td>-66.71 dBm</td><td></td><td></td></tr></table> Date: 28 MAY 2021 17:23:43	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.479989 GHz	-5.92 dBm			M2	1		2.4835 GHz	-68.78 dBm			M3	1		2.5 GHz	-72.52 dBm			M4	1		2.48427 GHz	-66.71 dBm									
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Test Item:	SE
CH00 Reference level	 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] 6.94 dBm 2.402000 GHz 2.402 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 28 MAY 2021 17:19:20
CH00 30MHz~1000MHz	 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] -59.40 dBm 879.4820 MHz 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 28 MAY 2021 17:19:36
CH00 1GHz~26GHz	 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] -52.35 dBm 25.952500 GHz 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 28 MAY 2021 17:19:52



CH39 Reference level	 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. The peak is labeled with a value of -5.68 dBm. The plot is titled 'Spectrum' and includes 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. The date is 28 MAY 2021 17:23:50.
CH39 30MHz~1000MHz	 The spectrum plot shows a noisy baseline across the 30 MHz to 1000 MHz range. The y-axis represents power in dBm, ranging from -70 to 10. The x-axis represents frequency in MHz, with a span of 97.0 MHz. A red horizontal line is drawn at -25.600 dBm. The plot is titled 'Spectrum' and includes 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. The date is 28 MAY 2021 17:24:06.
CH39 1GHz~26GHz	 The spectrum plot shows a noisy baseline across the 1 GHz to 26 GHz range. The y-axis represents power in dBm, ranging from -70 to 10. The x-axis represents frequency in GHz, with a span of 2.5 GHz. A red horizontal line is drawn at -25.600 dBm. The plot is titled 'Spectrum' and includes 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. The date is 28 MAY 2021 17:24:22.

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