

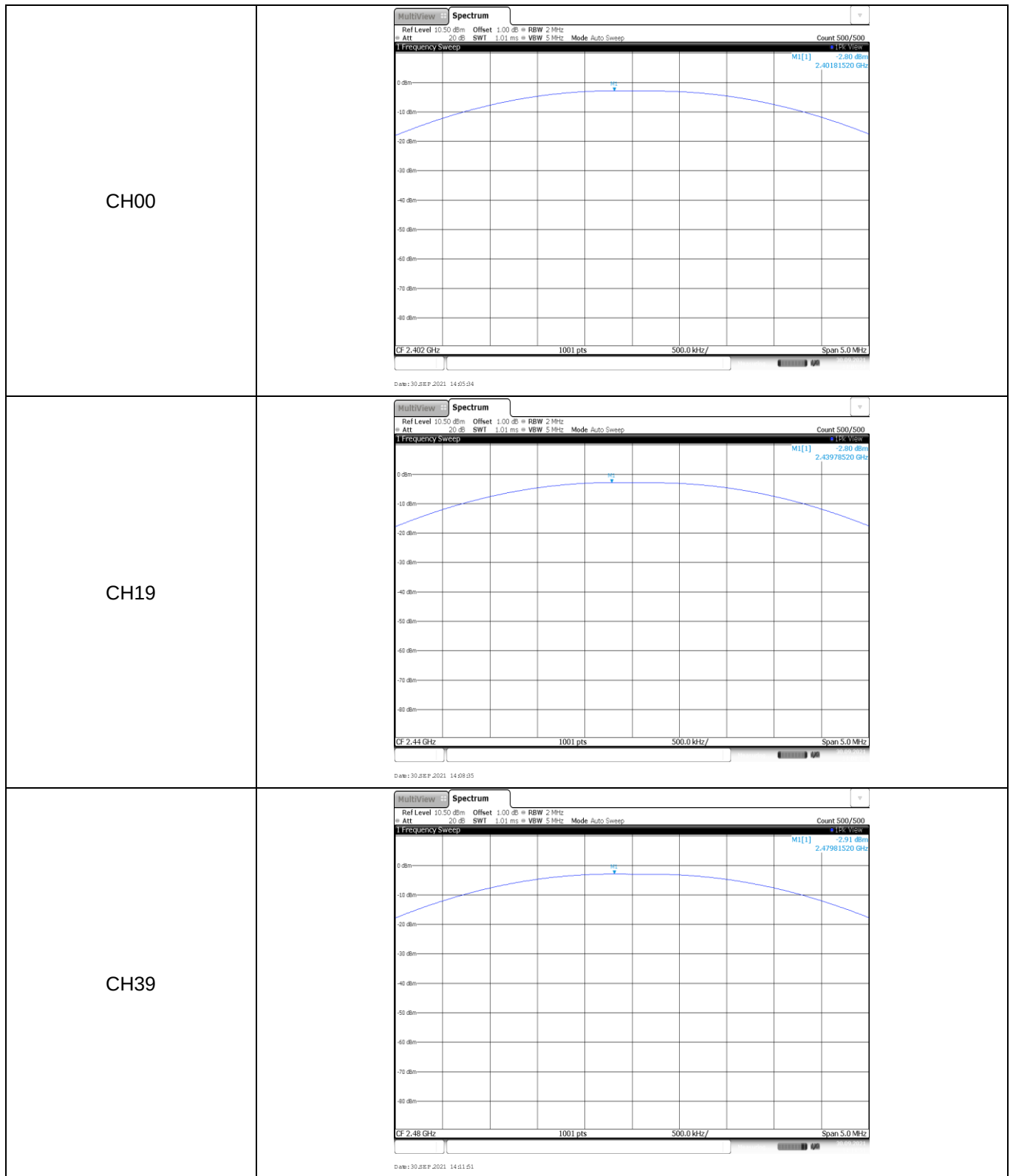
APPENDIX REPORT

Project No.	SHT2107126404EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT21071264002	Model No.	ePA-13B4
Start test date	2021-09-30	Finish date	2021-09-30
Temperature	26.2℃	Humidity	31%
Test Engineer	Xiaoqin Li	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

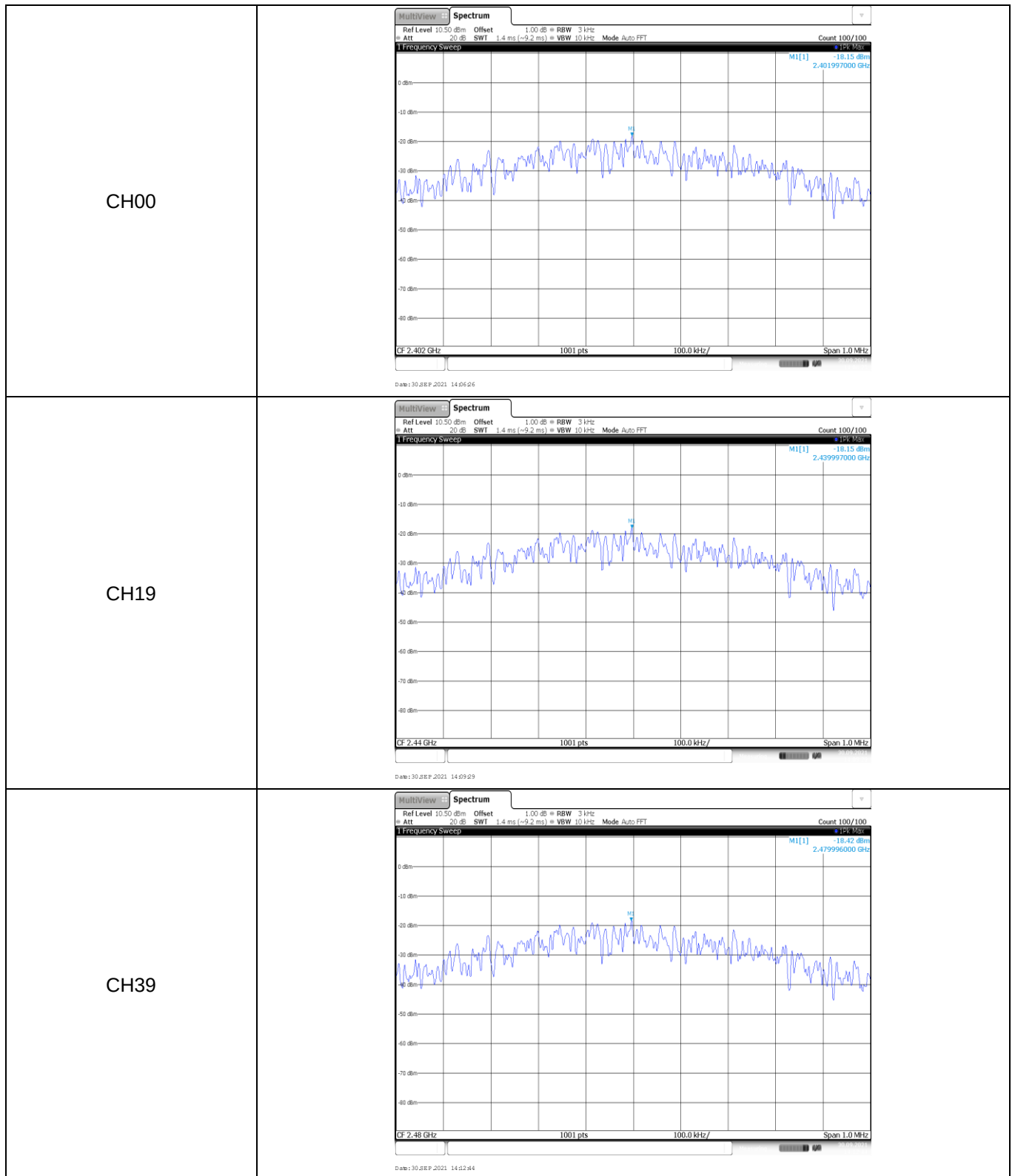
Appendix A: Peak Output Power

Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	-2.80	-6.40	≤ 30.00	Pass
	19	-2.80	-6.48		
	39	-2.91	-6.50		



Appendix B: Power Spectral Density

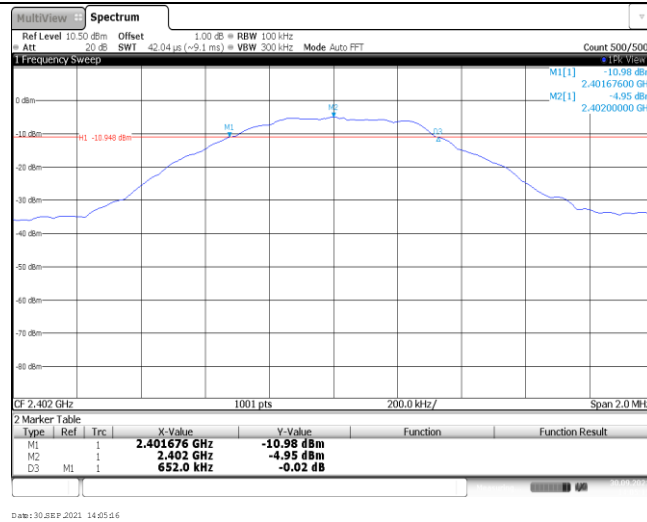
Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-18.15	≤8.00	Pass
	19	-18.15		
	39	-18.42		



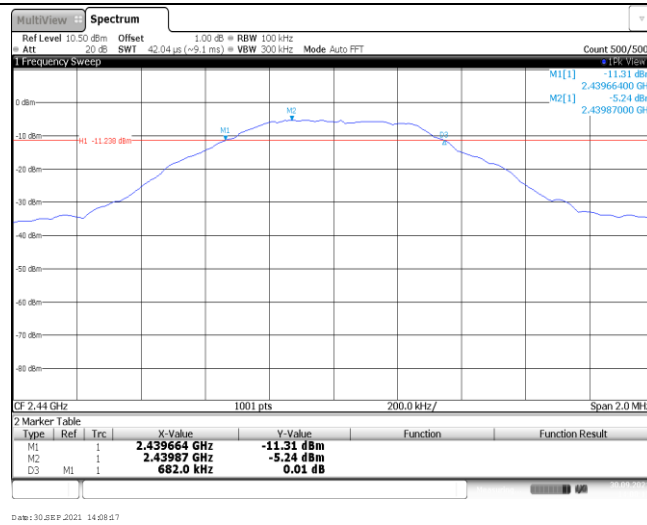
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	652.00	≥500	Pass
	19	682.00		
	39	674.00		

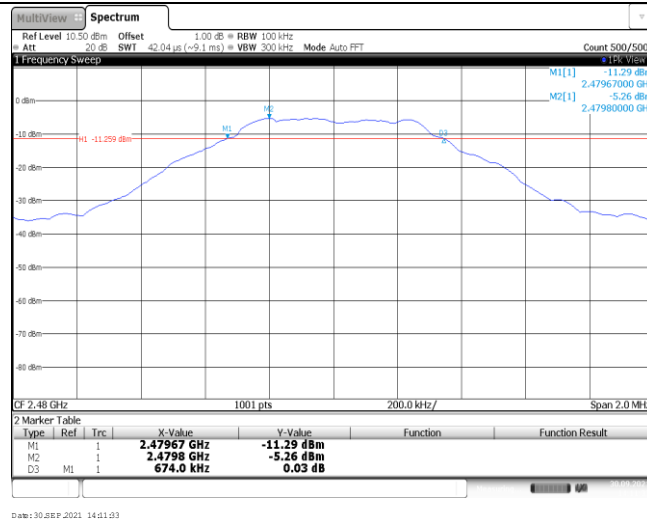
CH00



CH19



CH39



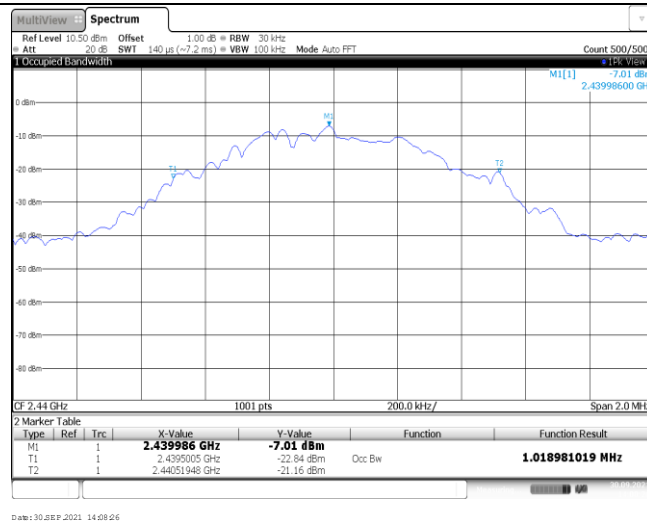
Appendix D: 99% Occupied Bandwidth

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

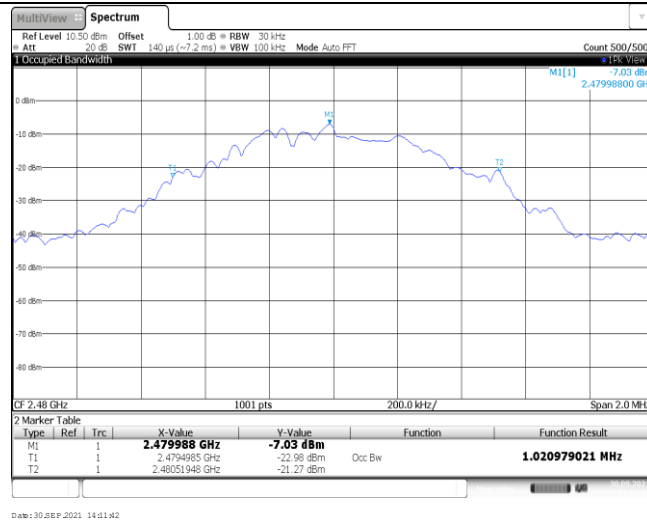
CH00



CH19

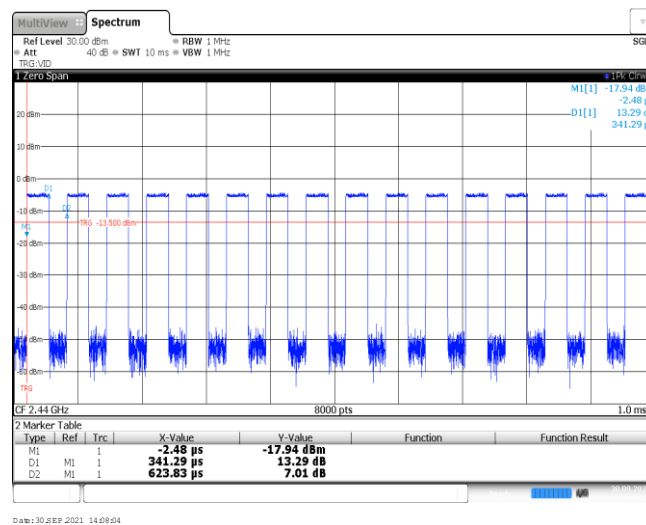


CH39



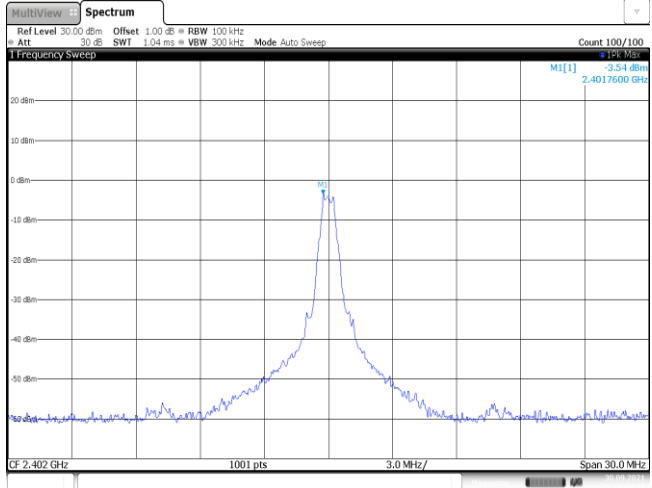
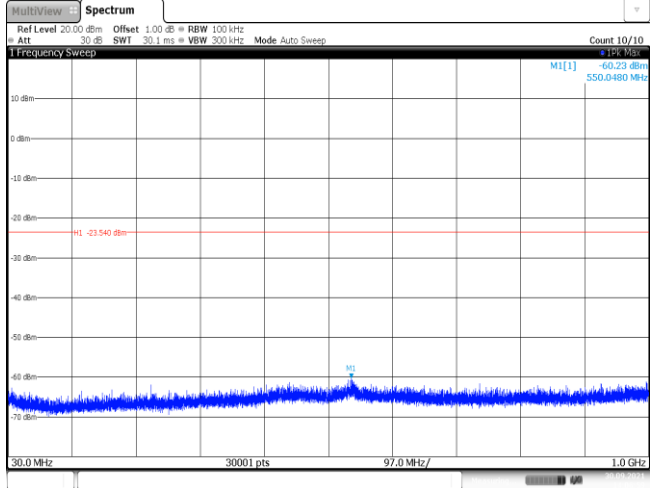
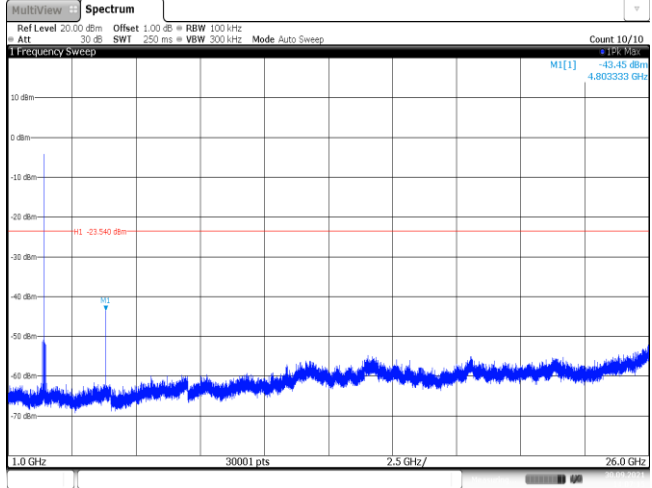
Appendix E: Duty cycle

Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
2440	0.34	0.62	54.8%	2.9

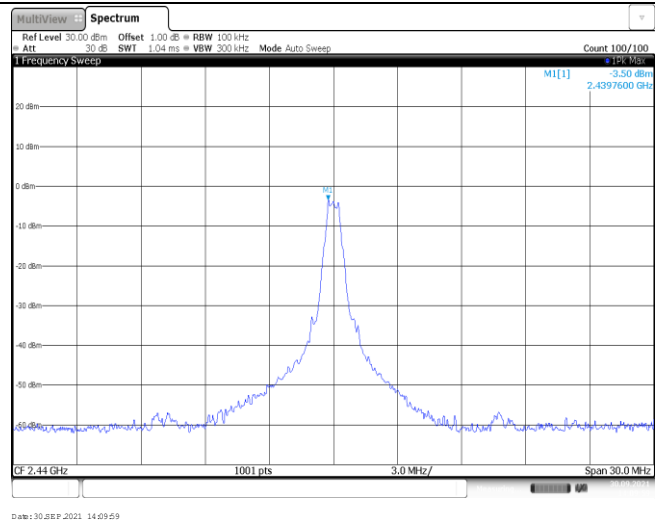


Appendix F: Band edge and Spurious Emissions (conducted)

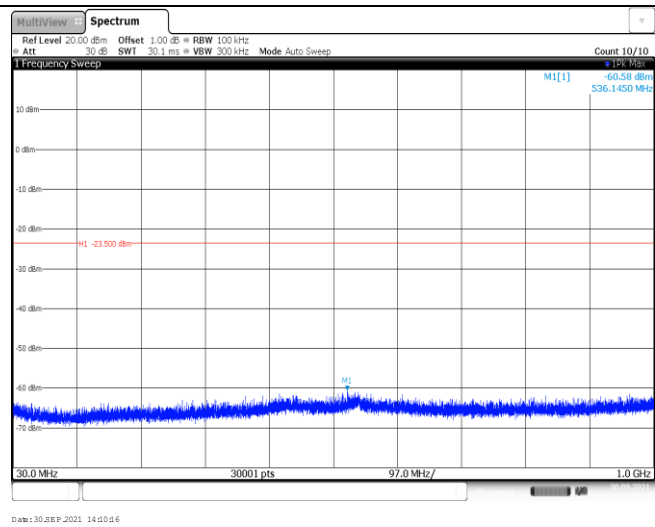
Test Item:	Band edge																																										
CH00	MultiView Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 1.05 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1 Frequency Sweep 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm 2.31 GHz 1001 pts 9.5 MHz/ 2.405 GHz M1 -3.81 dBm 2.4017260 GHz M2 -46.50 dBm 2.4000000 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>2.401726 GHz</td><td>-3.81 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-46.50 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-72.50 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-74.93 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399965 GHz</td><td>-46.14 dBm</td><td></td><td></td></tr></table> Date: 30.SEP.2021 14:06:06	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.401726 GHz	-3.81 dBm			M2	1		2.4 GHz	-46.50 dBm			M3	1		2.39 GHz	-72.50 dBm			M4	1		2.31 GHz	-74.93 dBm			M5	1		2.399965 GHz	-46.14 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 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm 2.478 GHz 1001 pts 2.2 MHz/ 2.5 GHz M1 -3.94 dBm 2.4797690 GHz M2 -55.25 dBm 2.4835000 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>2.479769 GHz</td><td>-3.94 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-55.25 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-73.51 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.483544 GHz</td><td>-55.05 dBm</td><td></td><td></td></tr></table> Date: 30.SEP.2021 14:12:04	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.479769 GHz	-3.94 dBm			M2	1		2.4835 GHz	-55.25 dBm			M3	1		2.5 GHz	-73.51 dBm			M4	1		2.483544 GHz	-55.05 dBm									
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M1	1		2.479769 GHz	-3.94 dBm																																							
M2	1		2.4835 GHz	-55.25 dBm																																							
M3	1		2.5 GHz	-73.51 dBm																																							
M4	1		2.483544 GHz	-55.05 dBm																																							

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] -3.54 dBm 2.4017600 GHz 20 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm 2.402 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 30 SEP 2021 14:06:43
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] -60.23 dBm 550.0480 MHz 20 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 30 SEP 2021 14:06:59
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] -43.45 dBm 4.803333 GHz 20 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 30 SEP 2021 14:07:16

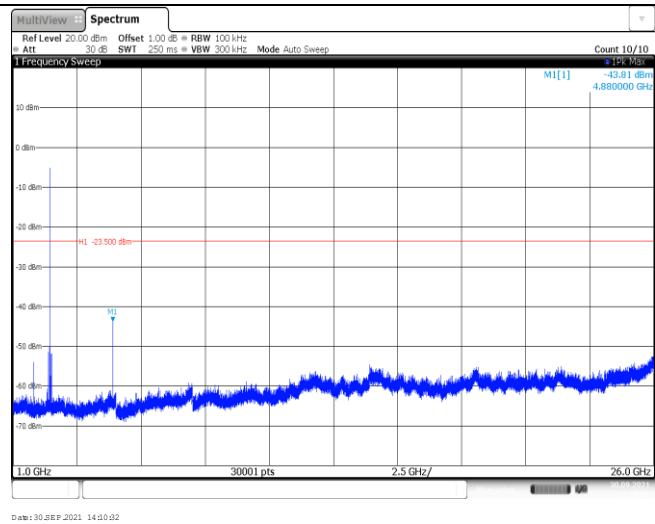
CH19
Reference level

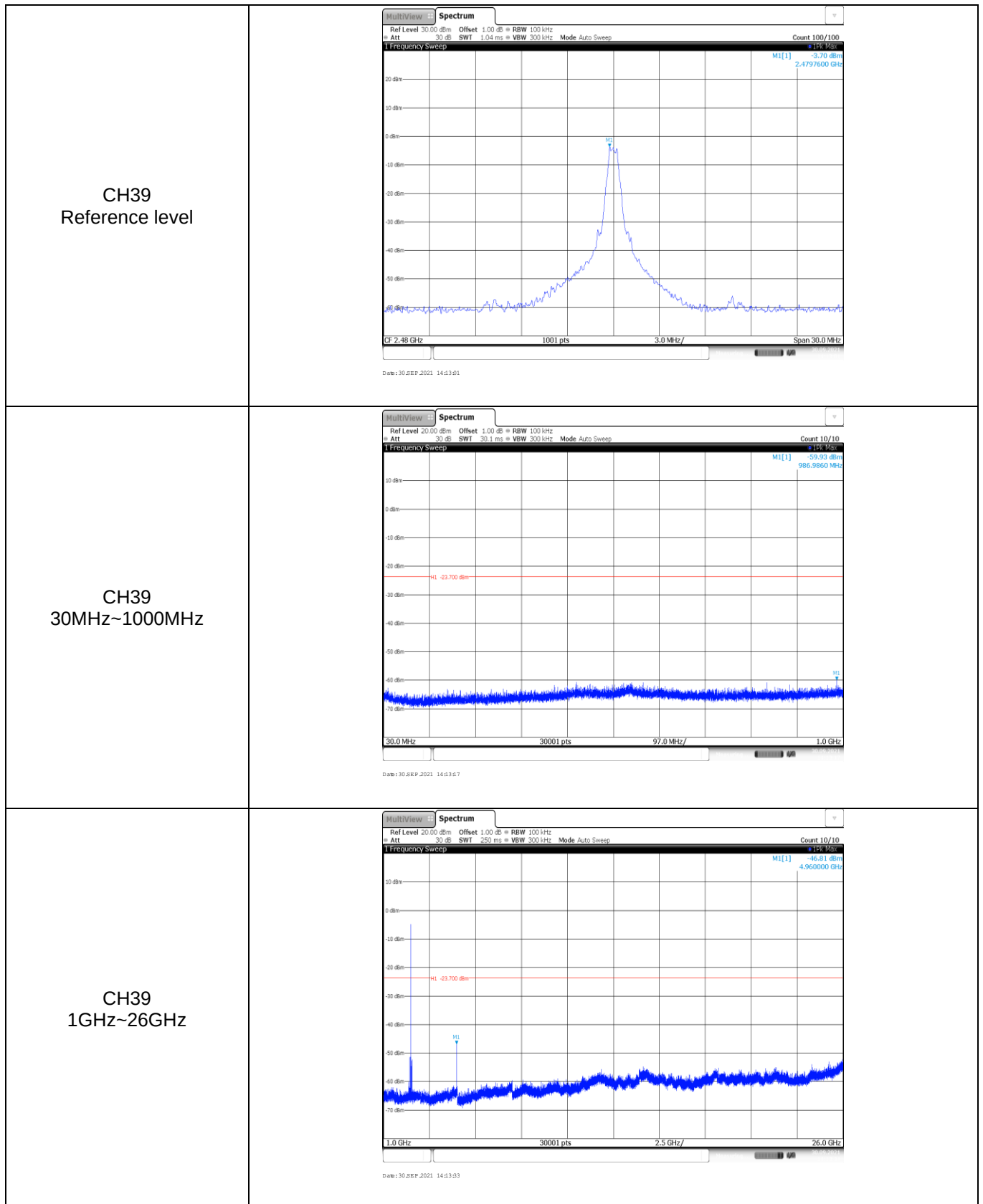


CH19
30MHz~1000MHz



CH19
1GHz~26GHz





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