

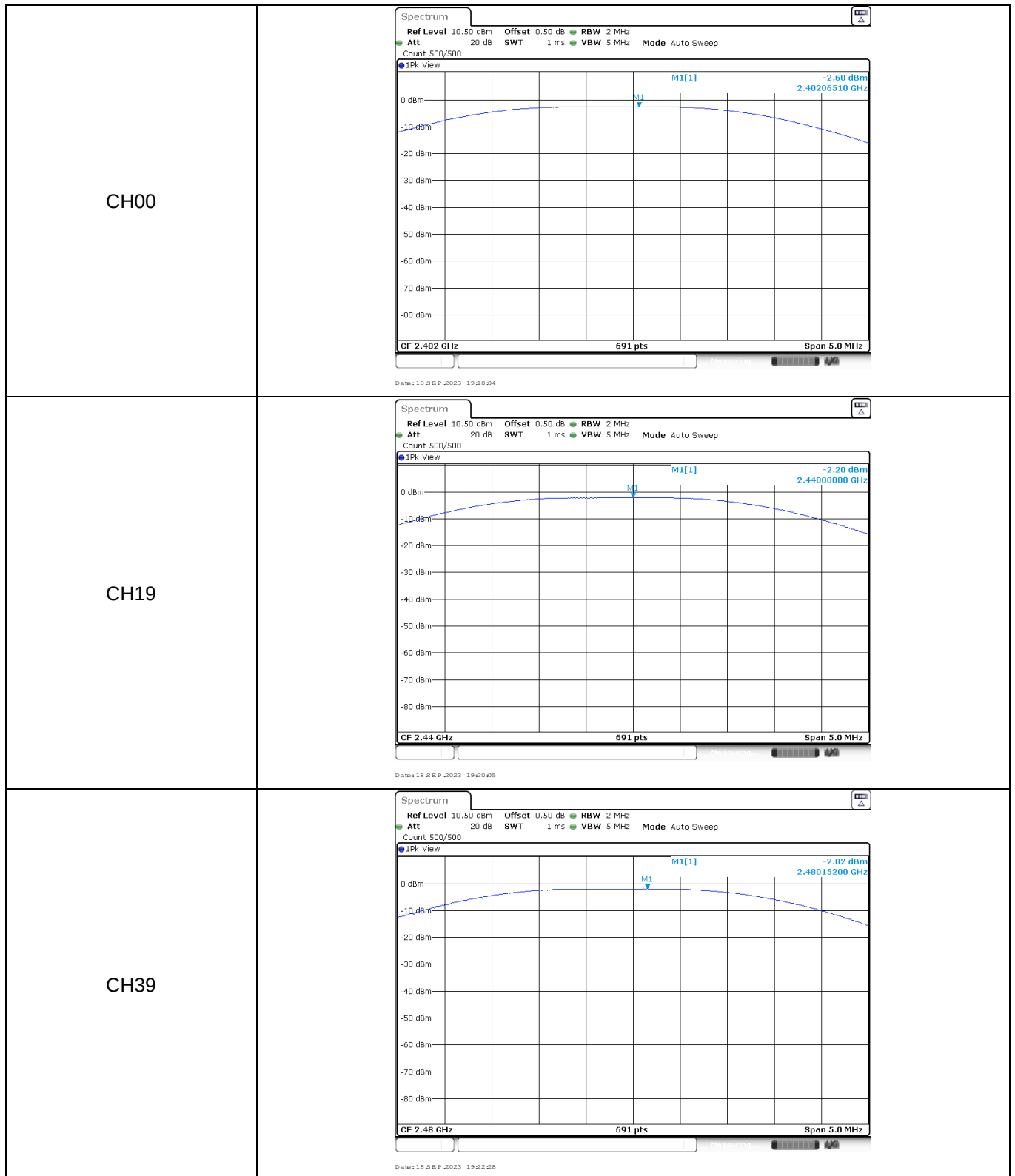
APPENDIX REPORT

Project No.	SHT2307072001EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT23070720001	Model No.	CF-100B
Start test date	2023/9/12	Finish date	2023/9/18
Temperature	23.7℃	Humidity	47%
Test Engineer	Casper 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

Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	-2.60	-2.61	≤ 30.00	Pass
	19	-2.20	-2.21		
	39	-2.02	-2.04		



Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-18.89	≤8.00	Pass
	19	-18.84		
	39	-18.91		

CH00	
CH19	
CH39	

Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	800.00	≥500	Pass
	19	808.00		
	39	822.00		

CH00	Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 100 kHz Att 20 dB SWT 19.1 μs VBW 300 kHz Mode Auto FFT Count 500/500 1Pk View 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm M1 M2 D3 M1[1] M2[1] -10.18 dBm -4.17 dBm 2.40161200 GHz 2.40176400 GHz CF 2.402 GHz 1001 pts Span 2.0 MHz Marker <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></td><td>1</td><td>2.401612 GHz</td><td>-10.18 dBm</td><td></td><td></td></tr><tr><td>M2</td><td></td><td>1</td><td>2.401764 GHz</td><td>-4.17 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>800.0 kHz</td><td>0.01 dB</td><td></td><td></td></tr></table> Date: 18 SEP 2023 19:17:28	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1	2.401612 GHz	-10.18 dBm			M2		1	2.401764 GHz	-4.17 dBm			D3	M1	1	800.0 kHz	0.01 dB		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																							
M1		1	2.401612 GHz	-10.18 dBm																									
M2		1	2.401764 GHz	-4.17 dBm																									
D3	M1	1	800.0 kHz	0.01 dB																									
CH19	Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 100 kHz Att 20 dB SWT 19.1 μs VBW 300 kHz Mode Auto FFT Count 500/500 1Pk View 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm M1 M2 D3 M1[1] M2[1] -9.80 dBm -3.74 dBm 2.43961000 GHz 2.43976200 GHz CF 2.44 GHz 1001 pts Span 2.0 MHz Marker <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></td><td>1</td><td>2.43961 GHz</td><td>-9.80 dBm</td><td></td><td></td></tr><tr><td>M2</td><td></td><td>1</td><td>2.439762 GHz</td><td>-3.74 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>808.0 kHz</td><td>0.01 dB</td><td></td><td></td></tr></table> Date: 18 SEP 2023 19:19:50	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1	2.43961 GHz	-9.80 dBm			M2		1	2.439762 GHz	-3.74 dBm			D3	M1	1	808.0 kHz	0.01 dB		
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M1		1	2.43961 GHz	-9.80 dBm																									
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CH39	Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 100 kHz Att 20 dB SWT 19.1 μs VBW 300 kHz Mode Auto FFT Count 500/500 1Pk View 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm M1 M2 D3 M1[1] M2[1] -9.67 dBm -3.59 dBm 2.47960600 GHz 2.47976800 GHz CF 2.48 GHz 1001 pts Span 2.0 MHz Marker <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></td><td>1</td><td>2.479606 GHz</td><td>-9.67 dBm</td><td></td><td></td></tr><tr><td>M2</td><td></td><td>1</td><td>2.479768 GHz</td><td>-3.59 dBm</td><td></td><td></td></tr><tr><td>D3</td><td>M1</td><td>1</td><td>822.0 kHz</td><td>0.07 dB</td><td></td><td></td></tr></table> Date: 18 SEP 2023 19:22:13	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1	2.479606 GHz	-9.67 dBm			M2		1	2.479768 GHz	-3.59 dBm			D3	M1	1	822.0 kHz	0.07 dB		
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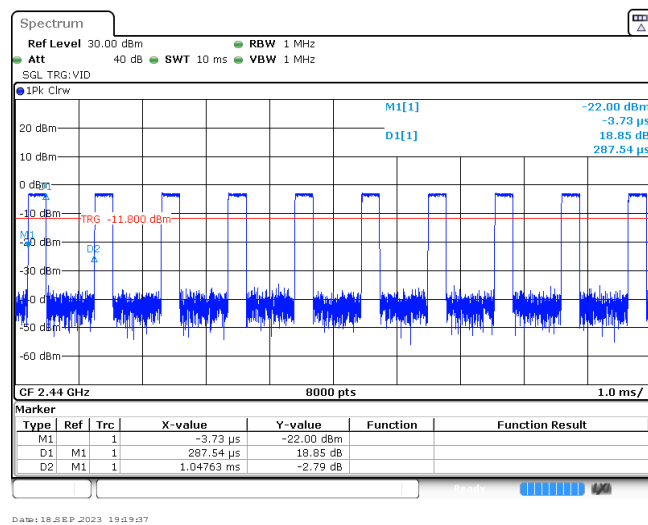
Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	1.32	-	Pass
	19	1.28		
	39	1.24		

CH00	Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPk View M1 M1[1] -7.46 dBm 2.40177220 GHz 1.320679321 MHz T1 T2 Occ Bw CF 2.402 GHz 1001 pts Span 2.0 MHz Date: 18 SEP 2023 19:17:36
CH19	Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPk View M1 M1[1] -7.10 dBm 2.43977020 GHz 1.280719281 MHz T1 T2 Occ Bw CF 2.44 GHz 1001 pts Span 2.0 MHz Date: 18 SEP 2023 19:19:57
CH39	Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPk View M1 M1[1] -6.85 dBm 2.47977420 GHz 1.234765235 MHz T1 T2 Occ Bw CF 2.48 GHz 1001 pts Span 2.0 MHz Date: 18 SEP 2023 19:22:00

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	0.29	1.05	0.28	3.45

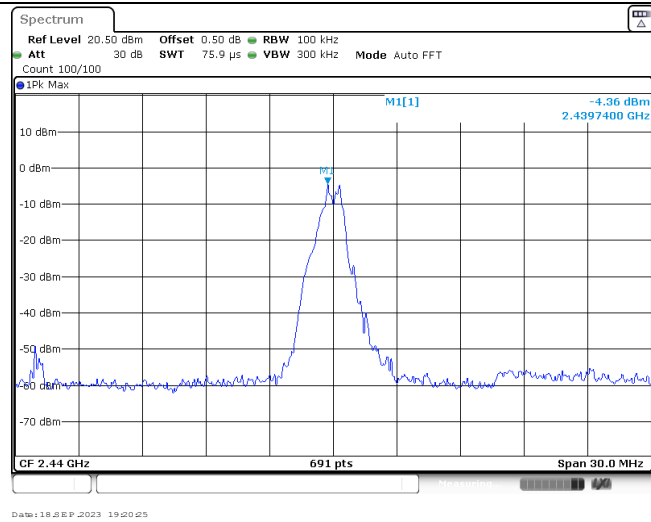


Appendix F: Band edge and Spurious Emissions (conducted)

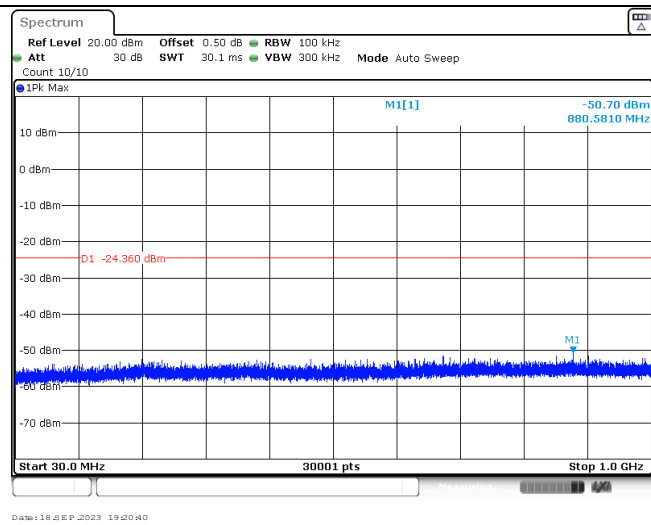
Test Item:	Band edge																																										
CH00	Spectrum Ref Level 10.50 dBm Att 20 dB Count 300/300 Offset 0.50 dB SWT 1.1 ms RBW 100 kHz VBW 300 kHz Mode Auto Sweep 1Pk Max 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm M1[1] M2[1] D1 -24.320 dBm M3 M4 M5 -4.32 dBm 2.402180 GHz -41.77 dBm 2.400000 GHz Start 2.31 GHz 691 pts Stop 2.405 GHz Marker <table><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>2.40218 GHz</td><td>-4.32 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-41.77 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-65.62 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-65.11 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399906 GHz</td><td>-47.98 dBm</td><td></td><td></td></tr></tbody></table> Date: 18 SEP 2023 19:18:27	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.40218 GHz	-4.32 dBm			M2	1		2.4 GHz	-41.77 dBm			M3	1		2.39 GHz	-65.62 dBm			M4	1		2.31 GHz	-65.11 dBm			M5	1		2.399906 GHz	-47.98 dBm		
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CH39	Spectrum Ref Level 10.50 dBm Att 20 dB Count 100/100 Offset 0.50 dB SWT 56.9 μs RBW 100 kHz VBW 300 kHz Mode Auto FFT 1Pk Max 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm M1 M2[1] D1 -23.590 dBm M3[4] -3.59 dBm 2.4797670 GHz -59.52 dBm 2.4835000 GHz Start 2.478 GHz 691 pts Stop 2.5 GHz Marker <table><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>2.479767 GHz</td><td>-3.59 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-59.52 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-68.85 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.4838029 GHz</td><td>-59.69 dBm</td><td></td><td></td></tr></tbody></table> Date: 18 SEP 2023 19:22:52	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.479767 GHz	-3.59 dBm			M2	1		2.4835 GHz	-59.52 dBm			M3	1		2.5 GHz	-68.85 dBm			M4	1		2.4838029 GHz	-59.69 dBm									
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M2	1		2.4835 GHz	-59.52 dBm																																							
M3	1		2.5 GHz	-68.85 dBm																																							
M4	1		2.4838029 GHz	-59.69 dBm																																							

Test Item:	SE
CH00 Reference level	Spectrum Ref Level 20.50 dBm Offset 0.50 dB RBW 100 kHz Att 30 dB SWT 75.9 μs VBW 300 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -5.15 dBm 2.4017400 GHz CF 2.402 GHz 691 pts Span 30.0 MHz Date: 18 SEP 2023 19:18:34
CH00 30MHz~1000MHz	Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 100 kHz Att 30 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 1Pk Max M1[1] -50.47 dBm 684.0010 MHz D1 -24.940 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 18 SEP 2023 19:18:49
CH00 1GHz~26GHz	Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 100 kHz Att 30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 1Pk Max M1[1] -37.63 dBm 7.206667 GHz D1 -24.940 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 18 SEP 2023 19:19:05

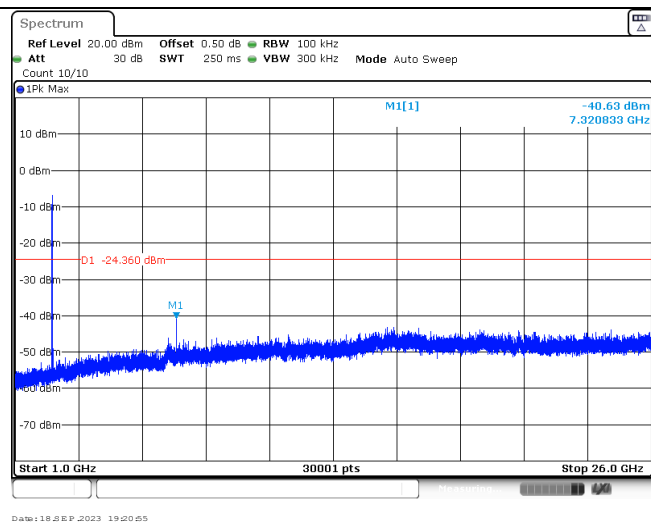
CH19
Reference level



CH19
30MHz~1000MHz



CH19
1GHz~26GHz



CH39 Reference level	
CH39 30MHz~1000MHz	
CH39 1GHz~26GHz	

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