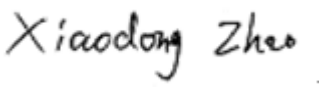
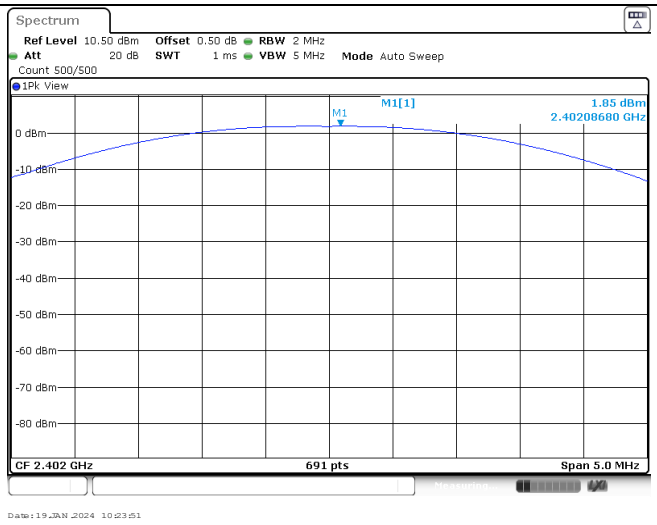
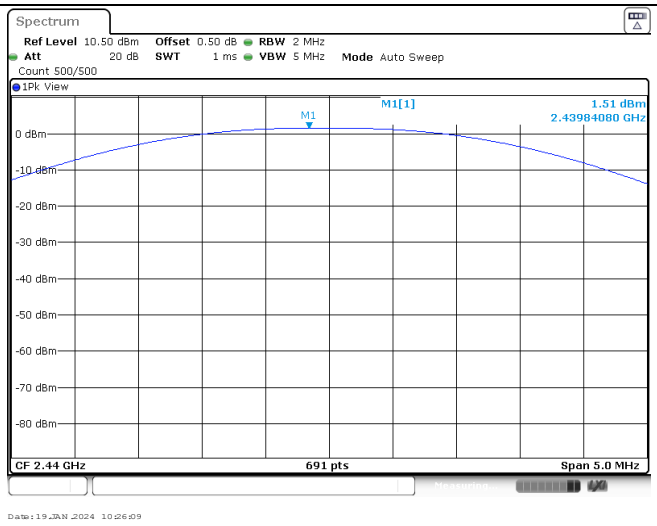
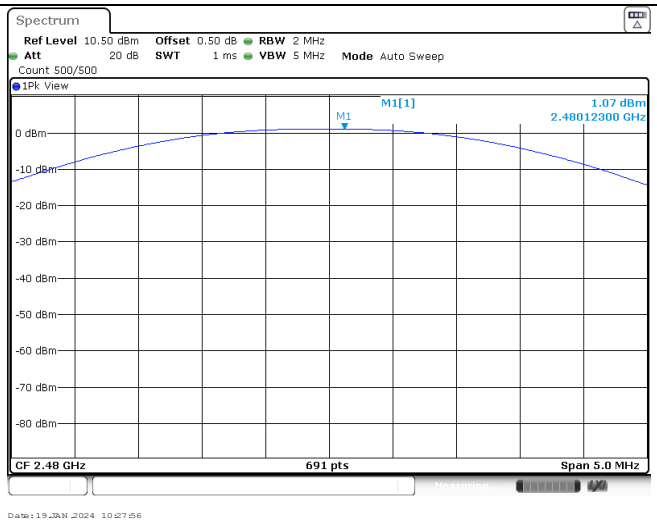
APPENDIX REPORT

Project No.	SHT2309037101EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT23090371001	Model No.	EQ-HW-TH-500-BK(T30)
Start test date	2024-01-19	Finish date	2024-01-19
Temperature	25.3℃	Humidity	51%
Test Engineer	Xiangyu Wei	Auditor	

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

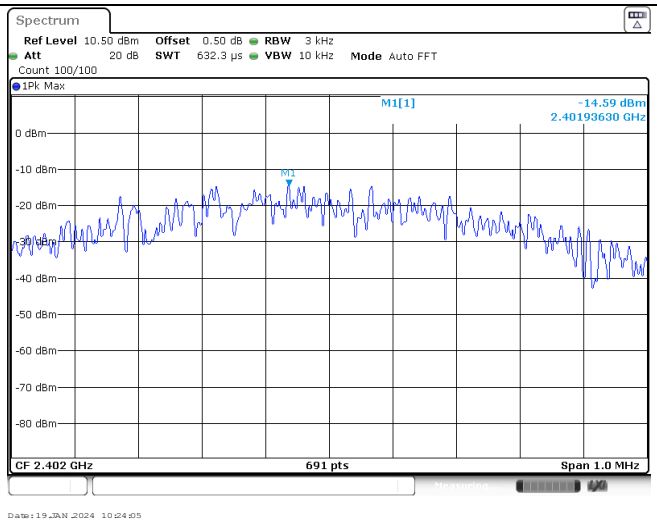
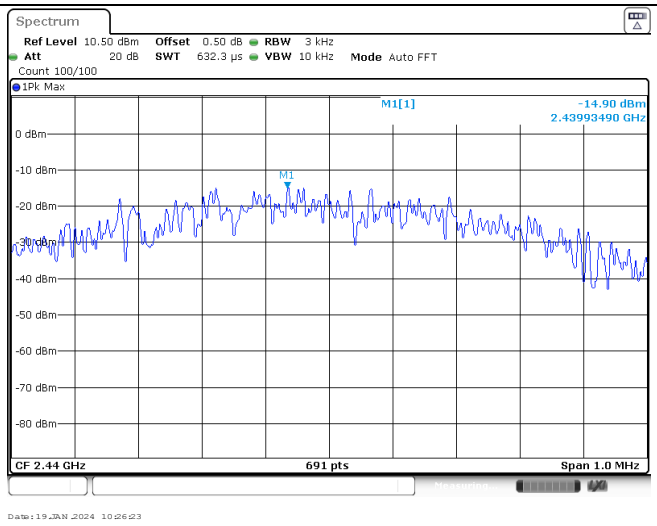
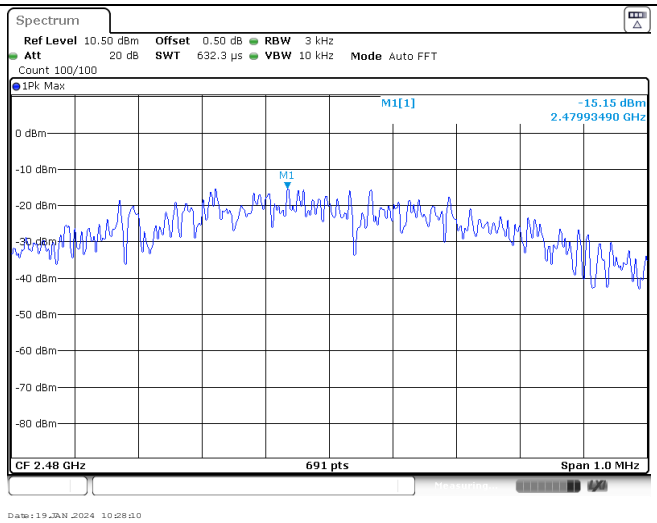
Appendix A：Peak Output Power

Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	CH_L	1.85	1.81	≤ 30.00	Pass
	CH_M	1.51	1.48		
	CH_H	1.07	1.05		

CH_L	 Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 2 MHz Att 20 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep Count 500/500 1Pk View M1[1] 1.85 dBm 2.40208680 GHz M1 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.402 GHz 691 pts Span 5.0 MHz Date: 19.JAN.2024 10:23:51
CH_M	 Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 2 MHz Att 20 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep Count 500/500 1Pk View M1[1] 1.51 dBm 2.43984080 GHz M1 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.44 GHz 691 pts Span 5.0 MHz Date: 19.JAN.2024 10:26:09
CH_H	 Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 2 MHz Att 20 dB SWT 1 ms VBW 5 MHz Mode Auto Sweep Count 500/500 1Pk View M1[1] 1.07 dBm 2.48012300 GHz M1 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.48 GHz 691 pts Span 5.0 MHz Date: 19.JAN.2024 10:27:56

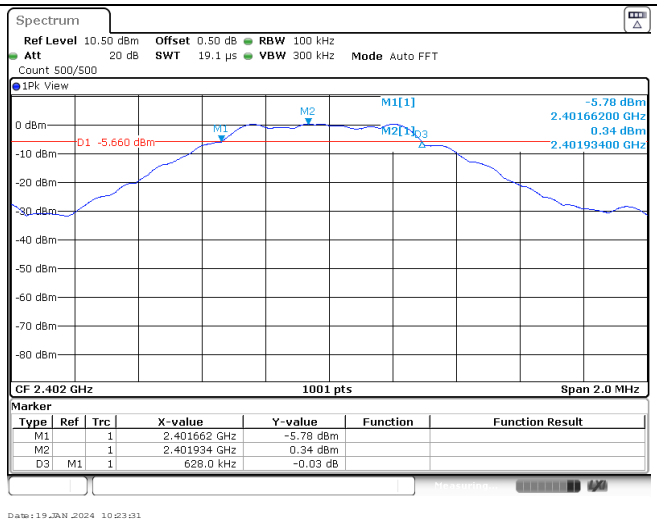
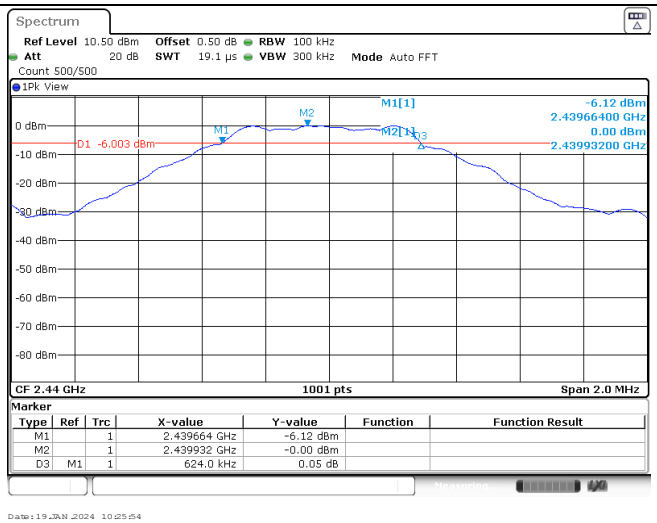
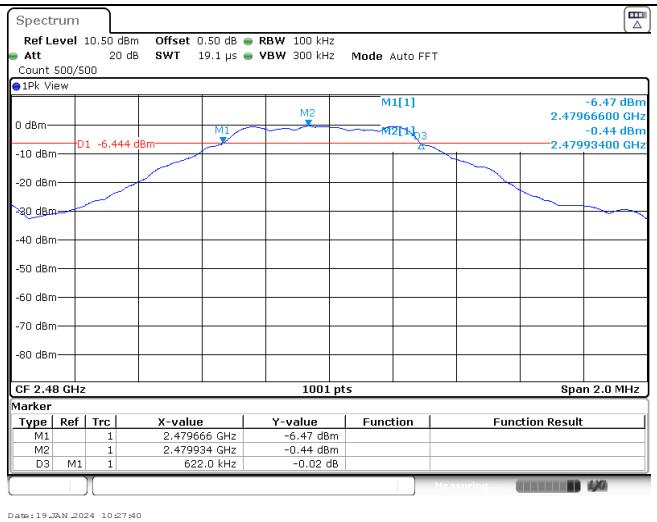
Appendix B：Power Spectral Density

Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	CH_L	-14.59	≤8.00	Pass
	CH_M	-14.90		
	CH_H	-15.15		

CH_L	 Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 3 kHz Att 20 dB SWT 632.3 µs VBW 10 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -14.59 dBm 2.40193630 GHz 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.402 GHz 691 pts Span 1.0 MHz Date: 19.JAN.2024 10:24:05
CH_M	 Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 3 kHz Att 20 dB SWT 632.3 µs VBW 10 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -14.90 dBm 2.43993490 GHz 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.44 GHz 691 pts Span 1.0 MHz Date: 19.JAN.2024 10:26:23
CH_H	 Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 3 kHz Att 20 dB SWT 632.3 µs VBW 10 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -15.15 dBm 2.47993490 GHz 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.48 GHz 691 pts Span 1.0 MHz Date: 19.JAN.2024 10:28:10

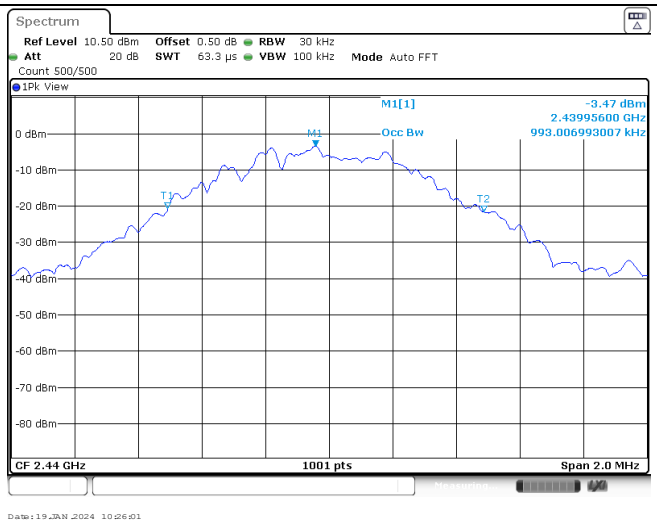
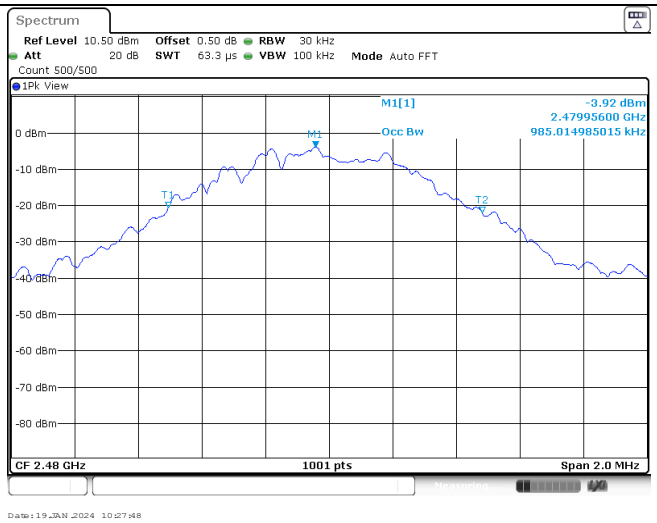
Appendix C：6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	CH_L	628.00	≥500	Pass
	CH_M	624.00		
	CH_H	622.00		

CH_L	 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 M1[1] -5.78 dBm 2.40166200 GHz M2[1] 0.34 dBm 2.40193400 GHz D1 -5.660 dBm CF 2.402 GHz 1001 pts Span 2.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 2.401662 GHz -5.78 dBm M2 1 2.401934 GHz 0.34 dBm D3 M1 1 628.0 kHz -0.03 dB
CH_M	 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 M1[1] -6.12 dBm 2.43966400 GHz M2[1] 0.00 dBm 2.43993200 GHz D1 -6.003 dBm CF 2.44 GHz 1001 pts Span 2.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 2.439664 GHz -6.12 dBm M2 1 2.439932 GHz -0.00 dBm D3 M1 1 624.0 kHz 0.05 dB
CH_H	 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 M1[1] -6.47 dBm 2.47966600 GHz M2[1] -0.44 dBm 2.47993400 GHz D1 -6.444 dBm CF 2.48 GHz 1001 pts Span 2.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 2.479666 GHz -6.47 dBm M2 1 2.479934 GHz -0.44 dBm D3 M1 1 622.0 kHz -0.02 dB

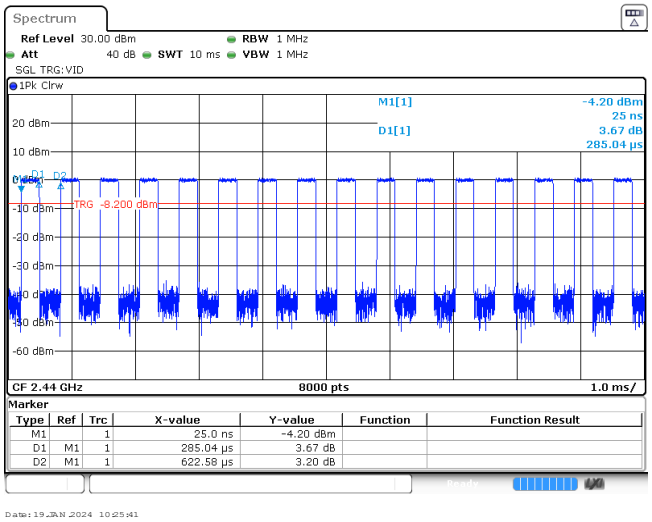
Appendix D：99% Occupied Bandwidth

Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	CH_L	1.00	-	Pass
	CH_M	0.99		
	CH_H	0.99		

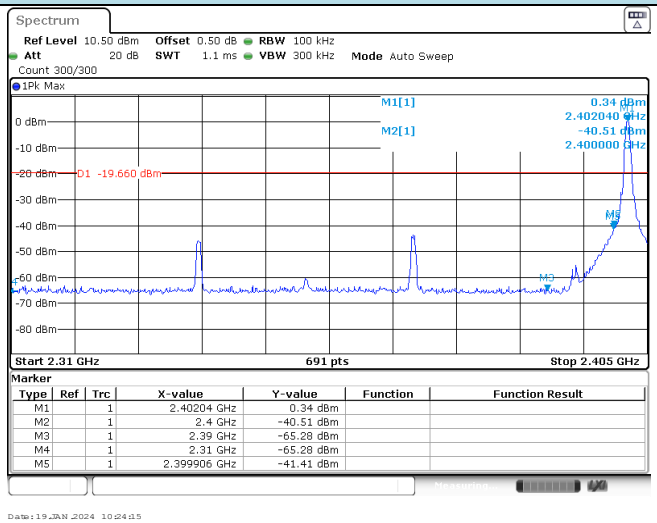
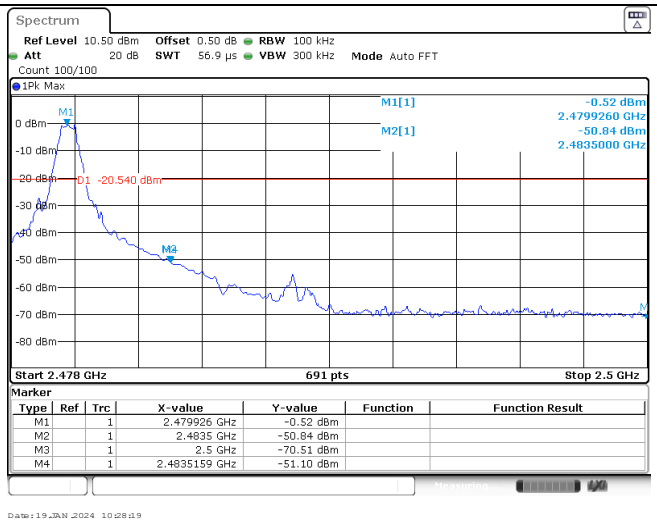
CH_L	 Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 30 kHz Att 20 dB SWT 63.3 µs VBW 100 kHz Mode Auto FFT Count 500/500 1Pk View M1[1] -3.12 dBm 2.40195600 GHz Occ Bw 1.000999001 MHz 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.402 GHz 1001 pts Span 2.0 MHz Date: 19.JAN.2024 10:23:43
CH_M	 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 1Pk View M1[1] -3.47 dBm 2.43995600 GHz Occ Bw 993.006993007 kHz 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.44 GHz 1001 pts Span 2.0 MHz Date: 19.JAN.2024 10:26:01
CH_H	 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 1Pk View M1[1] -3.92 dBm 2.47995600 GHz Occ Bw 985.014985015 kHz 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.48 GHz 1001 pts Span 2.0 MHz Date: 19.JAN.2024 10:27:48

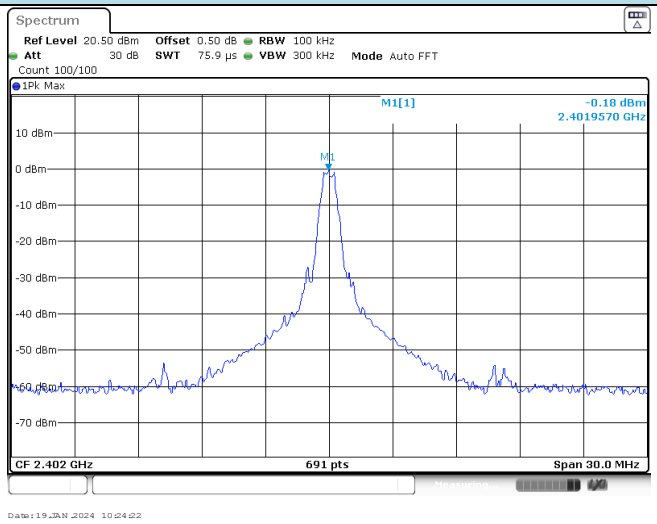
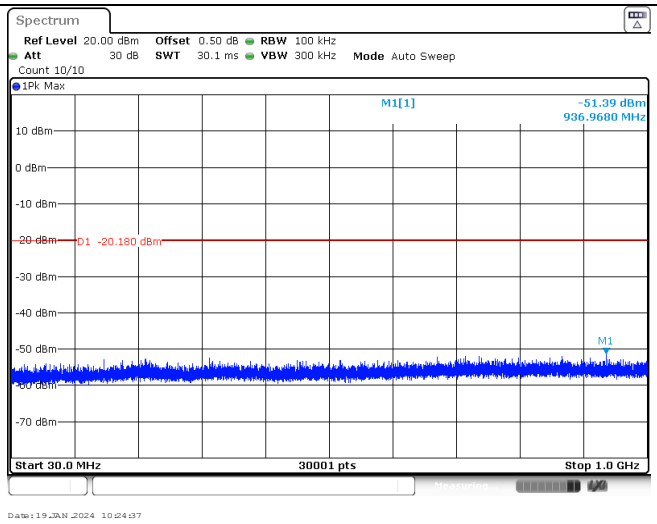
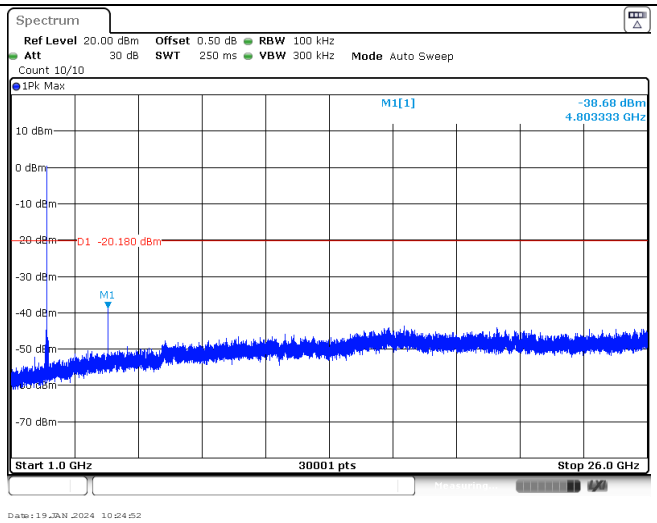
Appendix E：Duty cycle

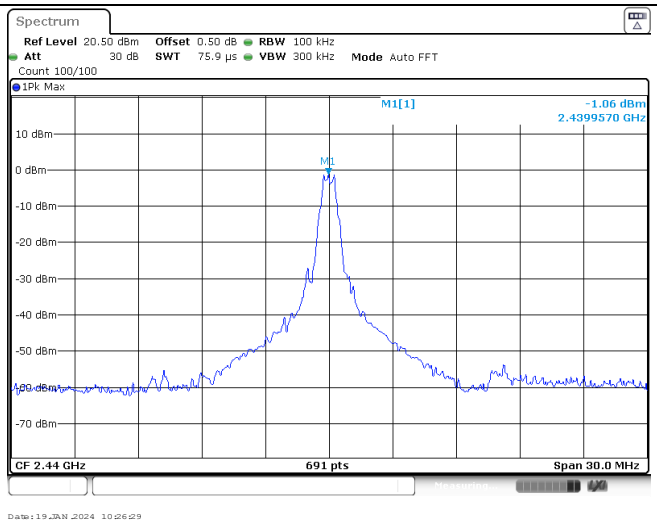
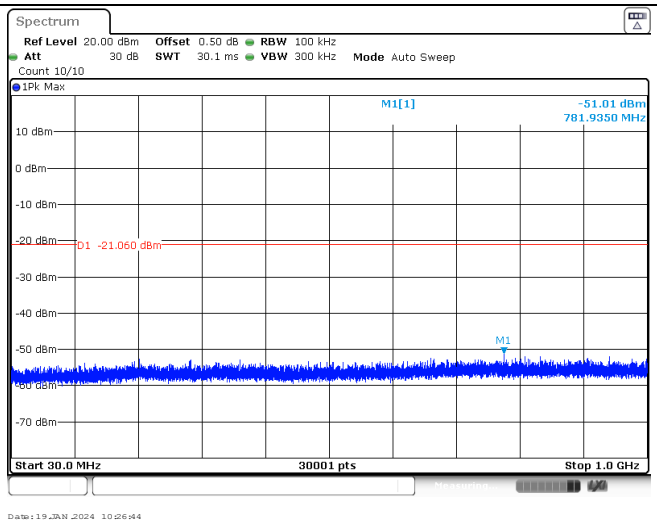
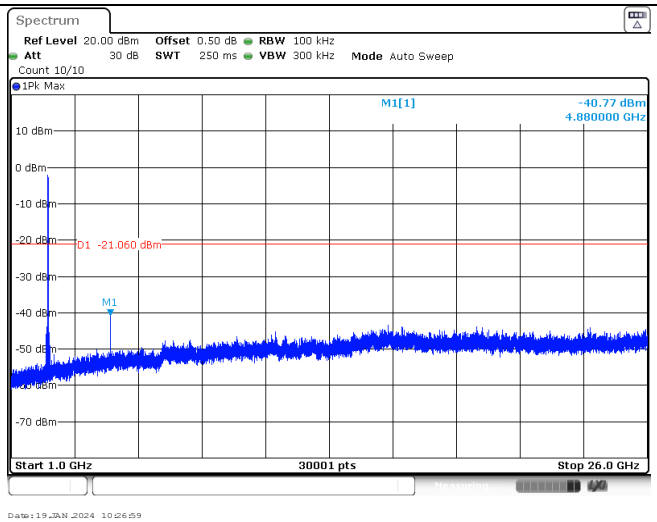
Test Frequency （MHz）	$T_{on\ time}$ for single burst (ms)	T_{period} (ms)	Duty cycle	$1/T_{on\ time}$ (kHz)
2440	0.29	0.62	46.77%	3.45

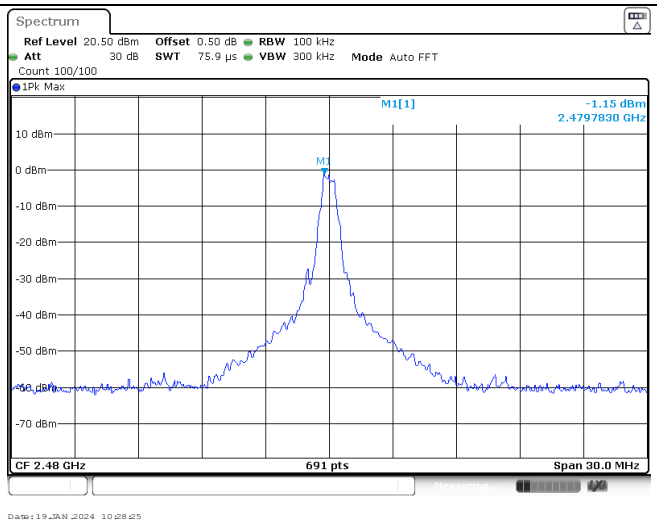
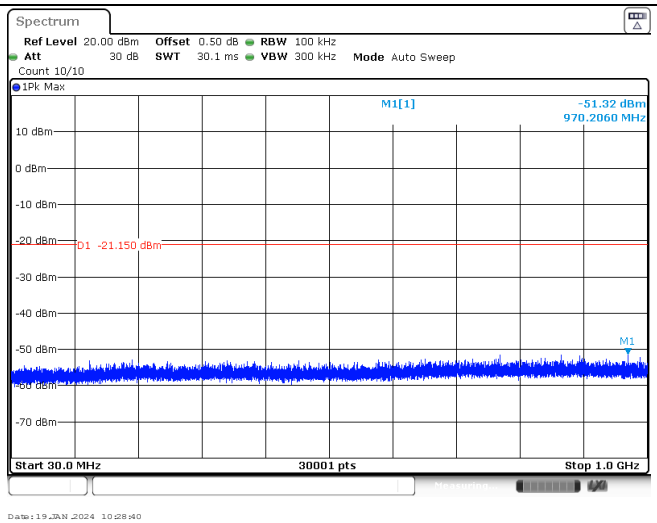
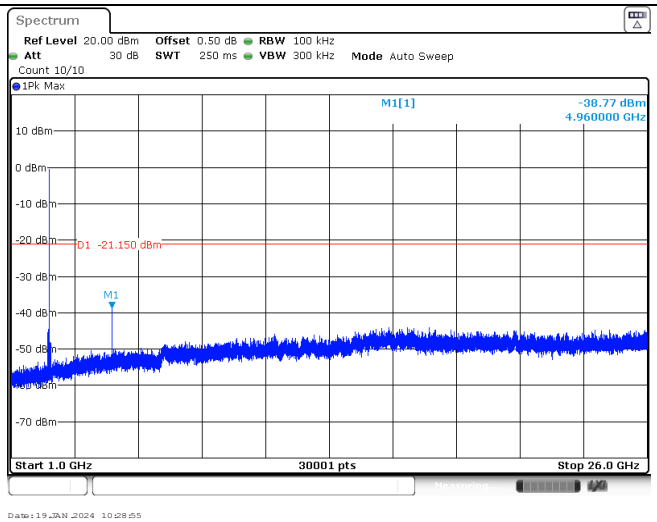


Appendix F：Band edge and Spurious Emissions (conducted)

Test Item:	Band edge
CH_L	
CH_H	

Test Item:	SE
CH_L Reference level	
CH_L 30MHz~1000MHz	
CH_L 1GHz~26GHz	

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

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

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