

APPENDIX REPORT

Project No.	SHT2503077501W	Radio Specification	Bluetooth BLE
Test sample No.	YPHT25030775009	Model No.	STEMO310
Start test date	2025-03-31	Finish date	2025-04-01
Temperature	21.3℃	Humidity	52%
Test Engineer	Xiangyu Wei	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

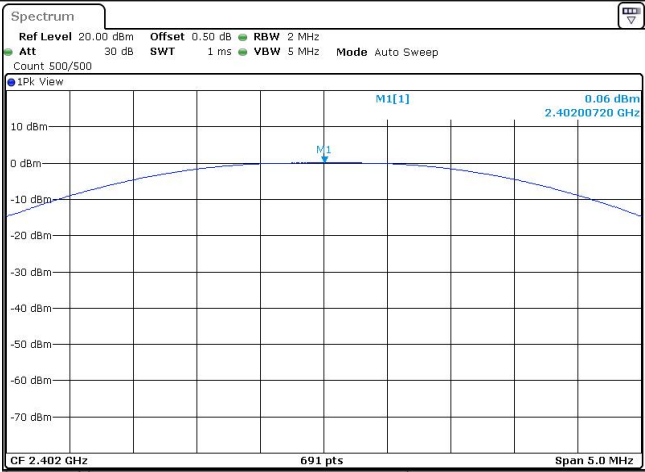
Appendix A: Peak Output Power

Test rate	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
1Mbps	00	0.06	-0.01	≤ 30.00	Pass
	19	-0.39	-0.43		
	39	-0.72	-0.78		
2Mbps	00	-0.12	-0.19	≤ 30.00	Pass
	19	-0.20	-0.26		
	39	-0.52	-0.63		

Test rate:

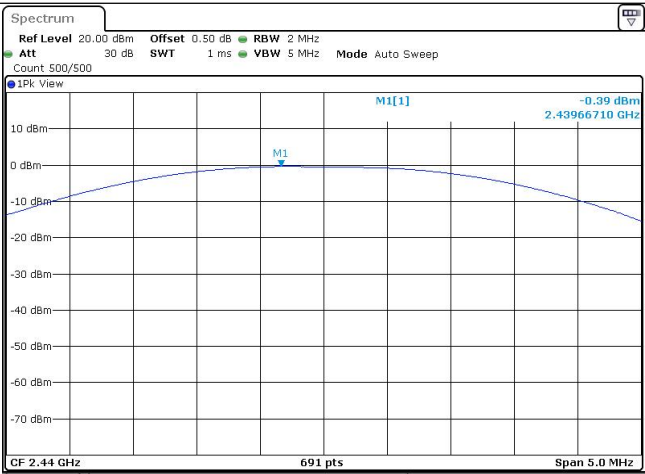
1Mbps

CH00



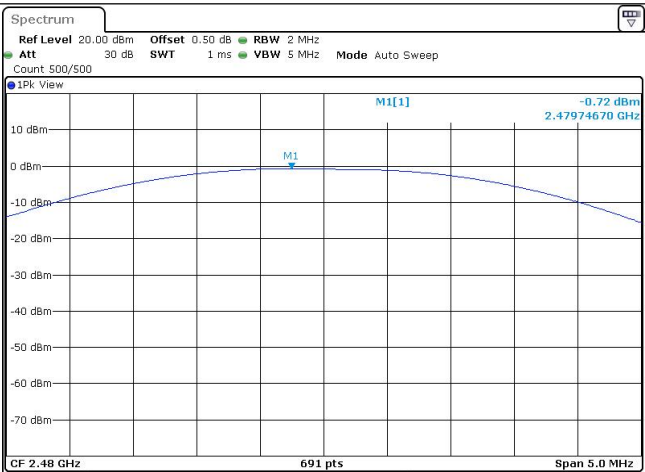
Date: 31 MAR 2025 14:17:43

CH19



Date: 31 MAR 2025 14:20:01

CH39

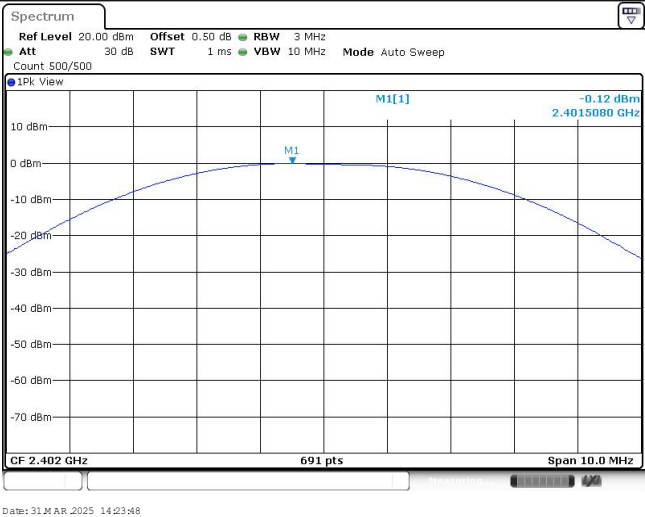


Date: 31 MAR 2025 14:21:48

Test rate:

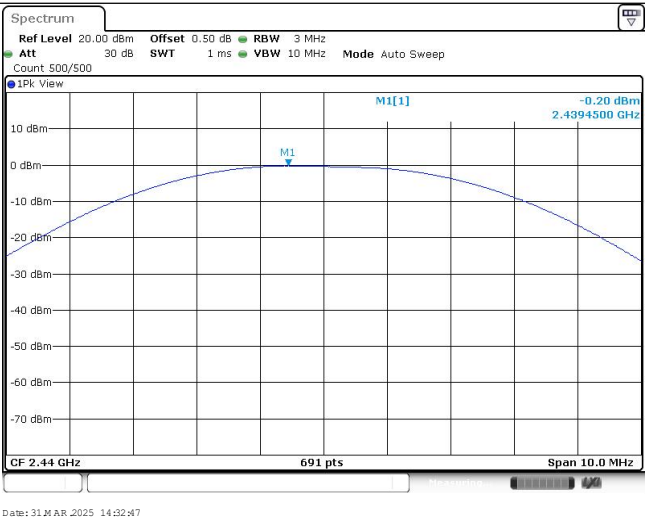
2Mbps

CH00



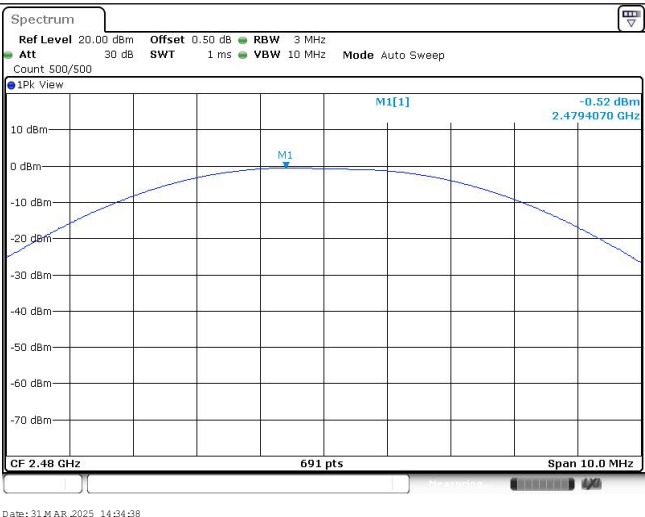
Date: 31 Mar 2025 14:23:48

CH19



Date: 31 Mar 2025 14:32:47

CH39



Date: 31 Mar 2025 14:34:38

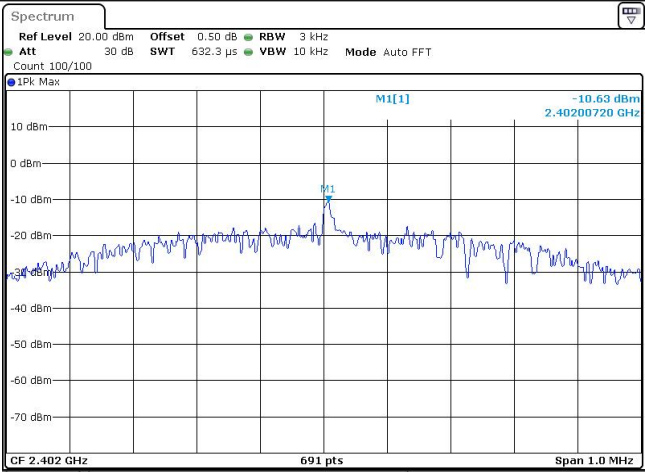
Appendix B: Power Spectral Density

Test rate	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
1Mbps	00	-10.63	≤8.00	Pass
	19	-11.85		
	39	-12.30		
2Mbps	00	-11.84	≤8.00	Pass
	19	-11.94		
	39	-12.36		

Test rate:

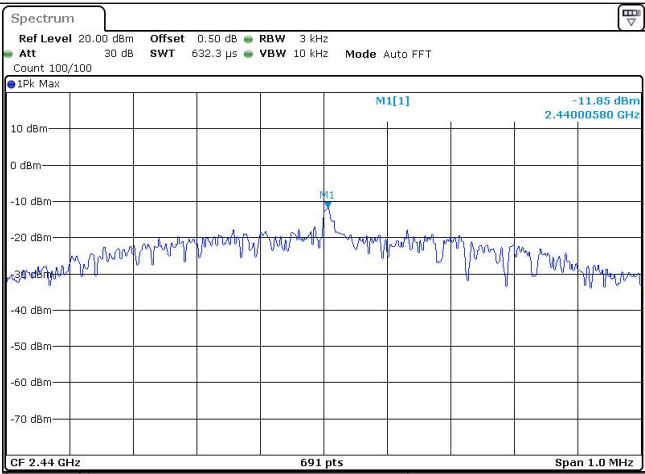
1Mbps

CH00



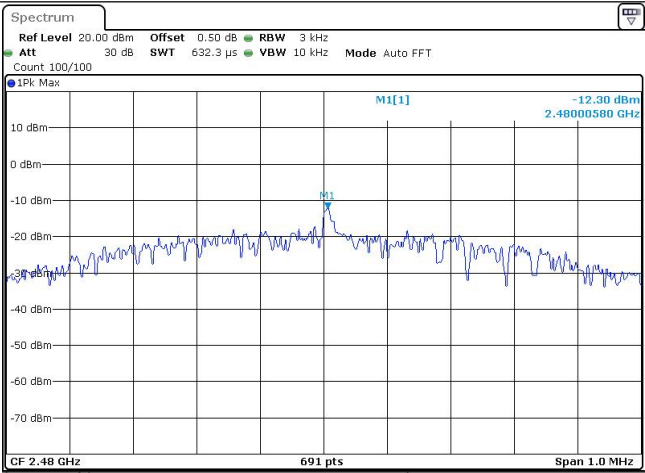
Date: 31 MAR 2025 14:17:58

CH19



Date: 31 MAR 2025 14:20:15

CH39

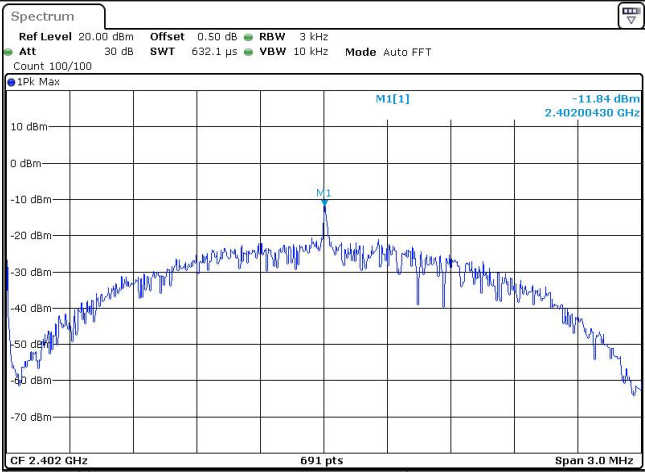


Date: 31 MAR 2025 14:22:02

Test rate:

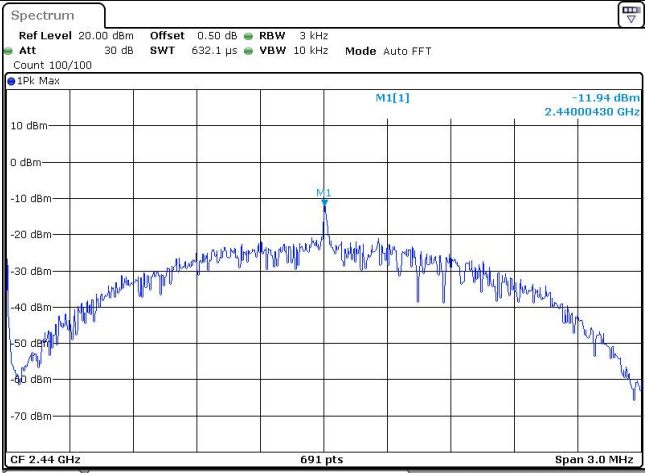
2Mbps

CH00



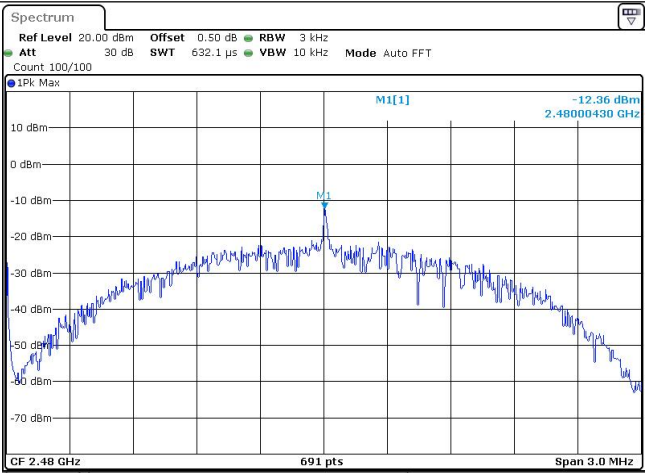
Date: 31 MAR 2025 14:24:02

CH19



Date: 31 MAR 2025 14:33:02

CH39



Date: 31 MAR 2025 14:34:52

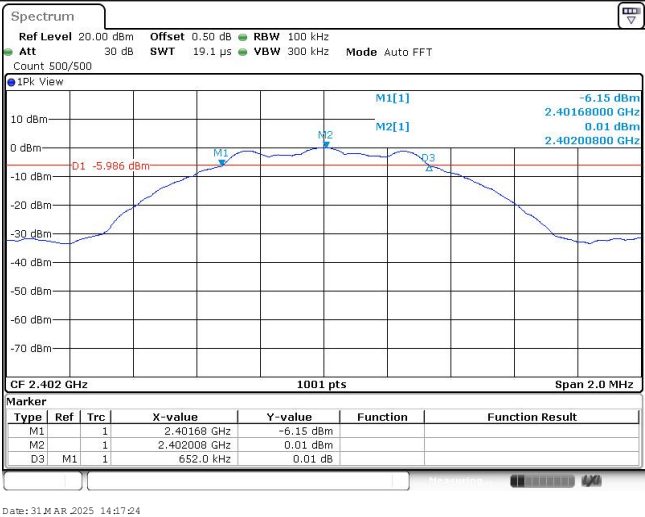
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
1Mbps	00	652.00	≥500	Pass
	19	662.00		
	39	666.00		
2Mbps	00	1160.00	≥500	Pass
	19	1155.00		
	39	1155.00		

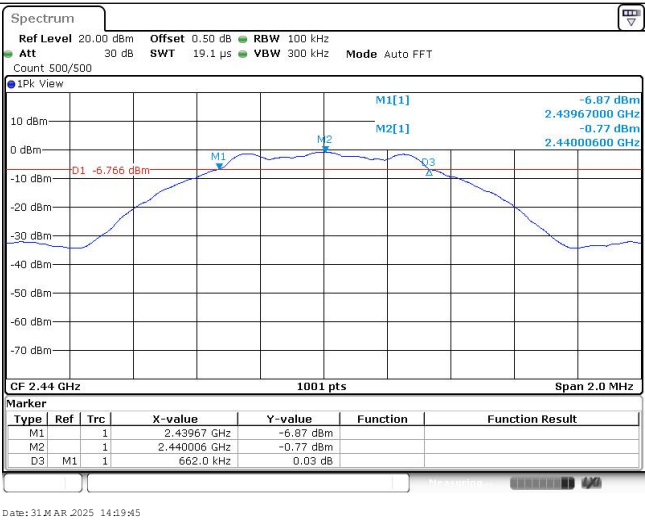
Test rate:

1Mbps

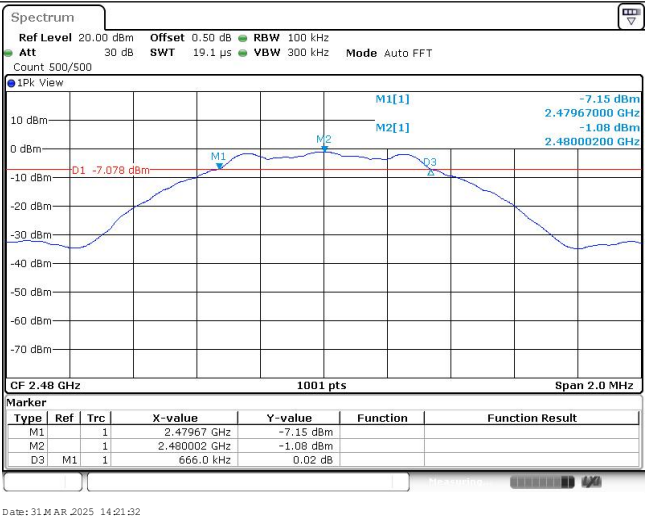
CH00



CH19



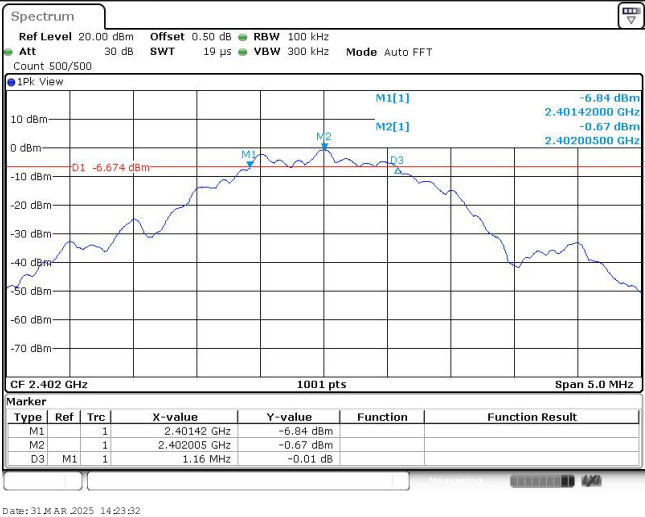
CH39



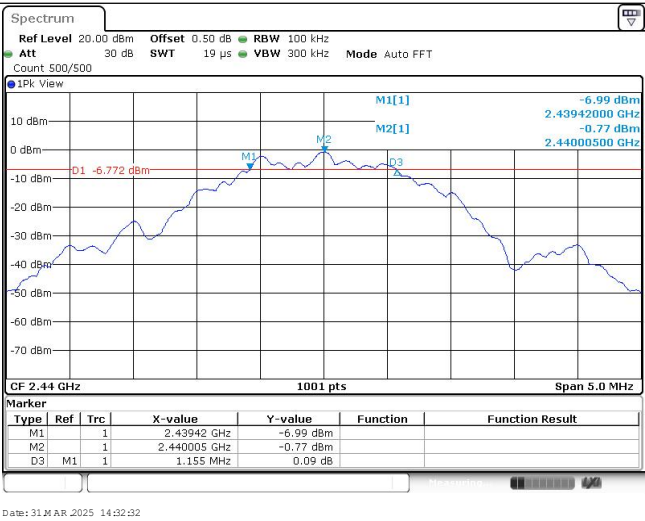
Test rate:

2Mbps

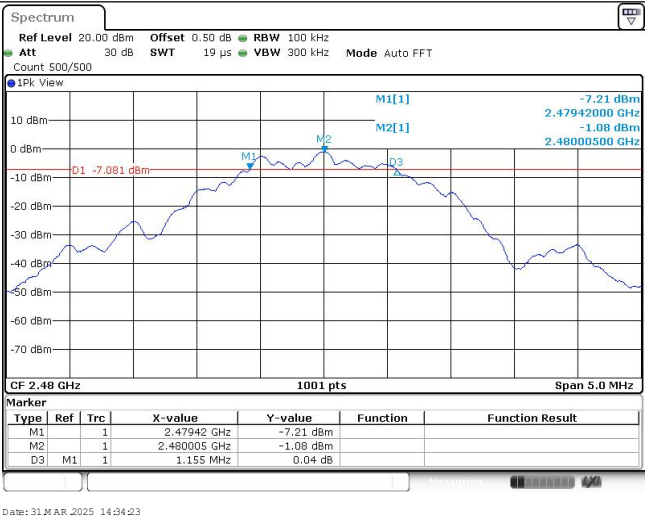
CH00



CH19



CH39



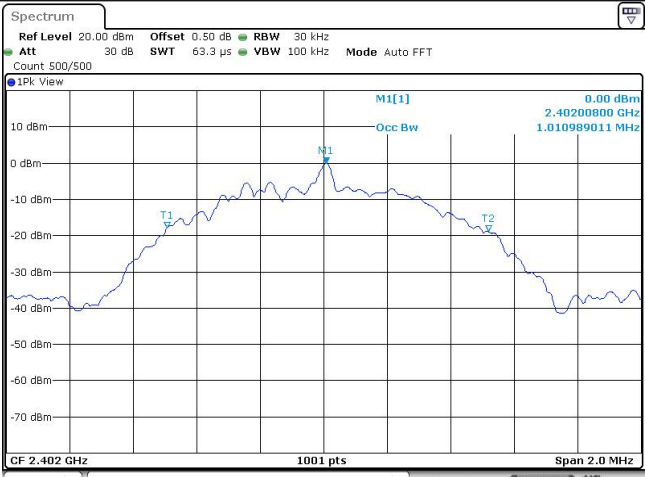
Appendix D: 99% Occupied Bandwidth

Test rate	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
1Mbps	00	1.01	-	Pass
	19	1.01		
	39	1.01		
2Mbps	00	2.03	-	Pass
	19	2.03		
	39	2.03		

Test rate:

1Mbps

CH00



Date: 31 Mar 2025 14:17:35

CH19



Date: 31 Mar 2025 14:19:52

CH39

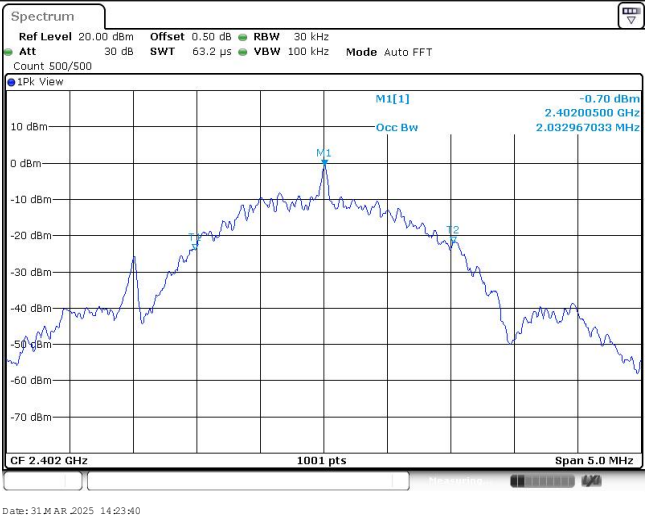


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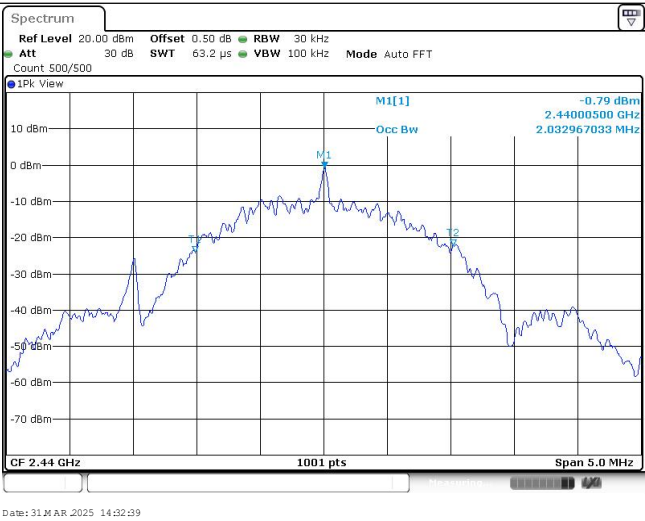
Test rate:

2Mbps

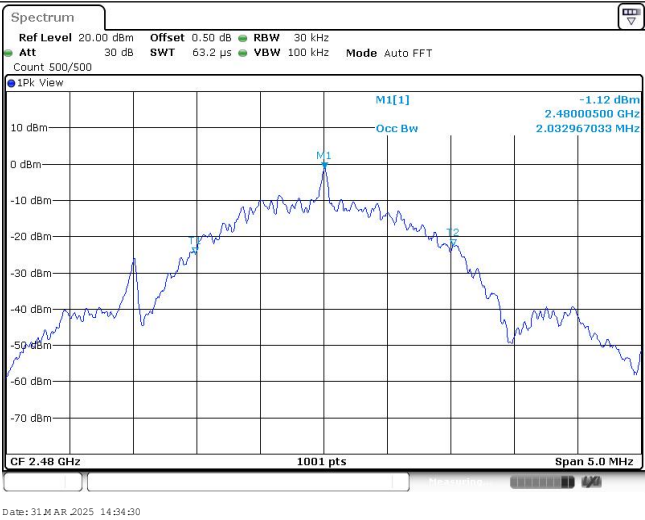
CH00



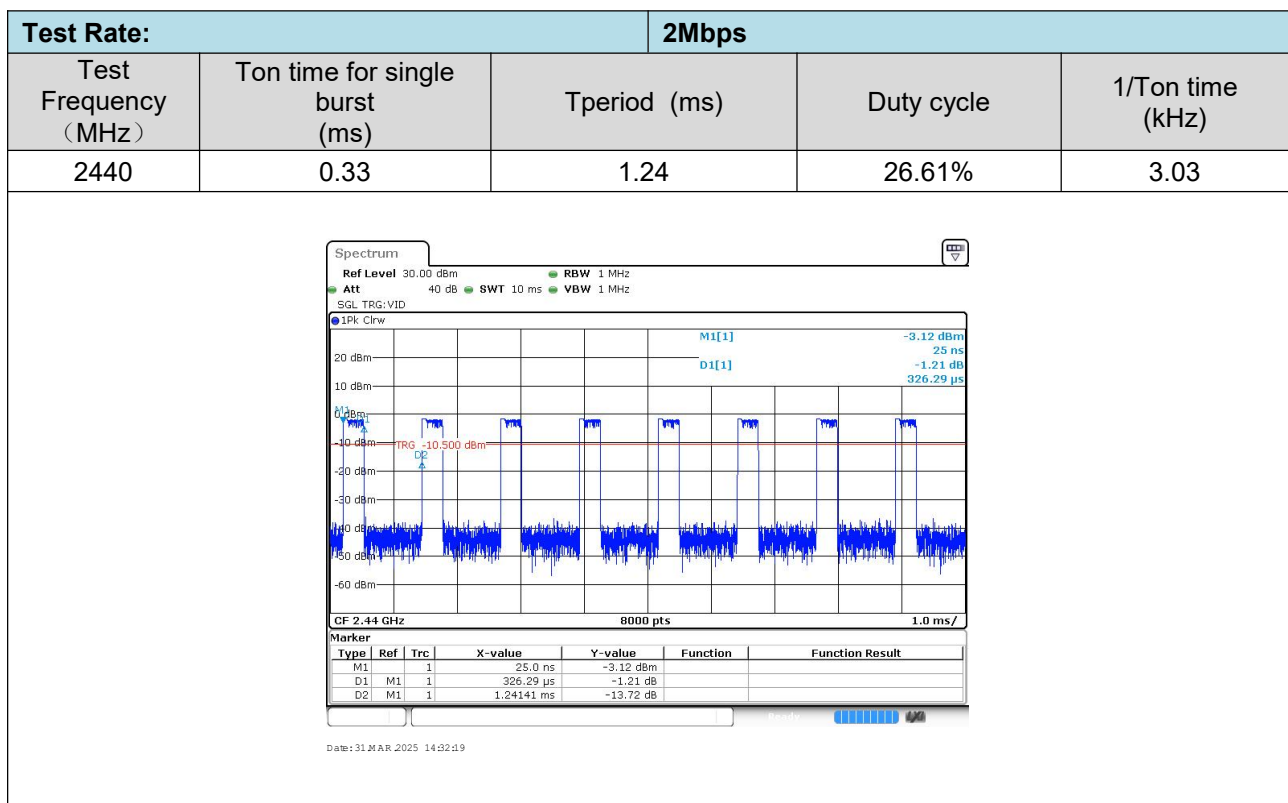
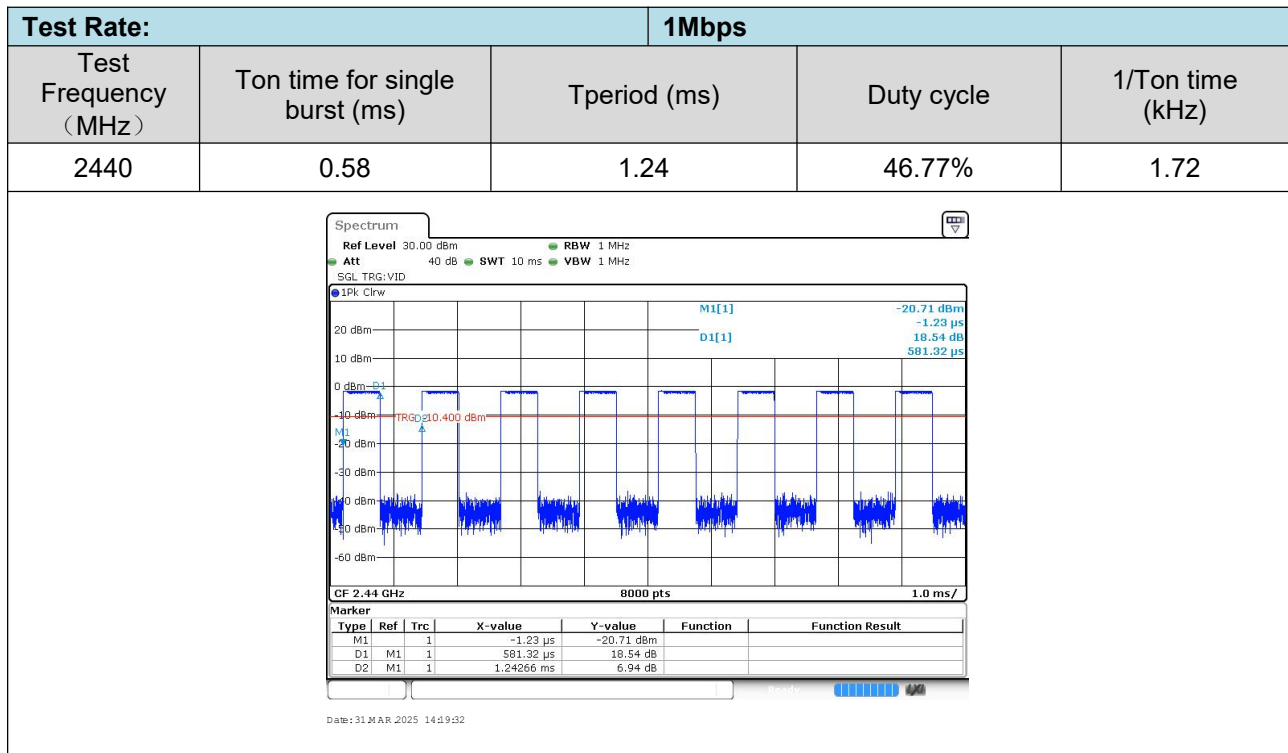
CH19



CH39

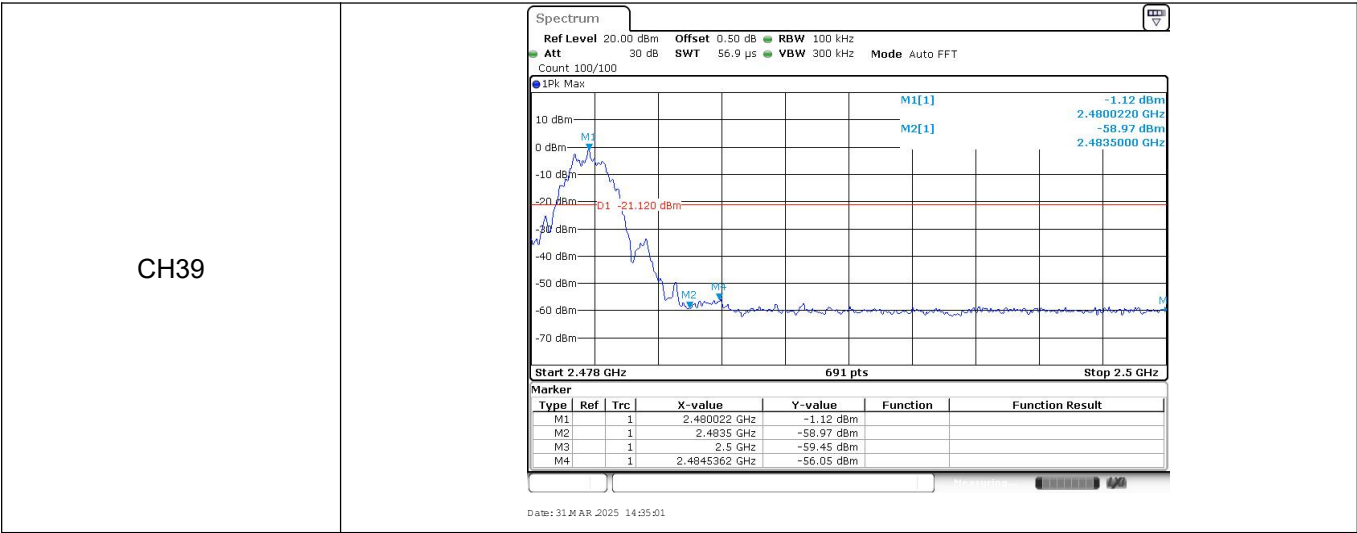


Appendix E: Duty cycle

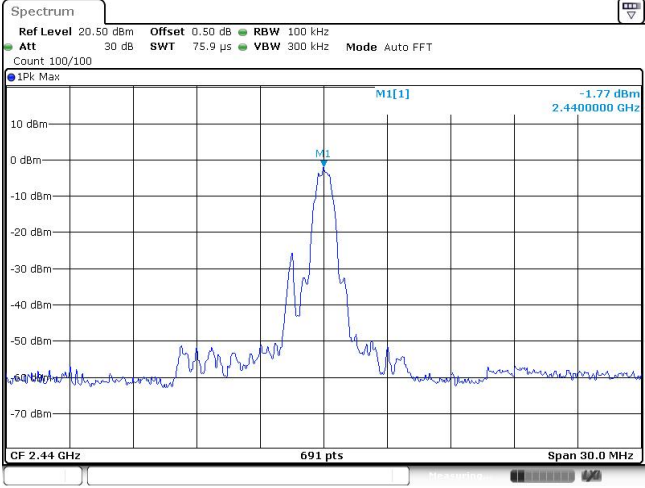
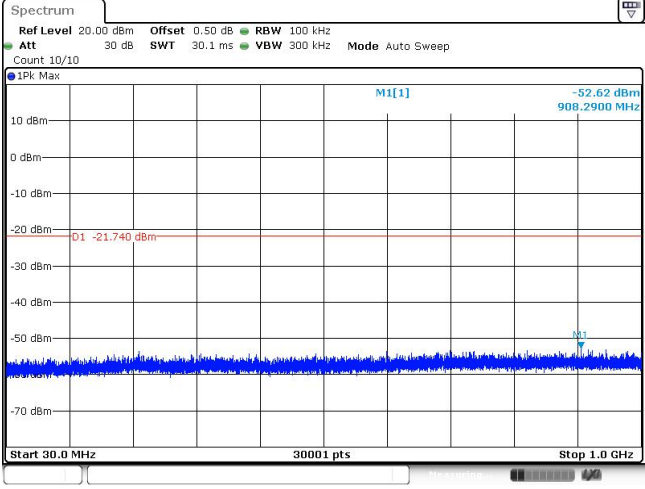
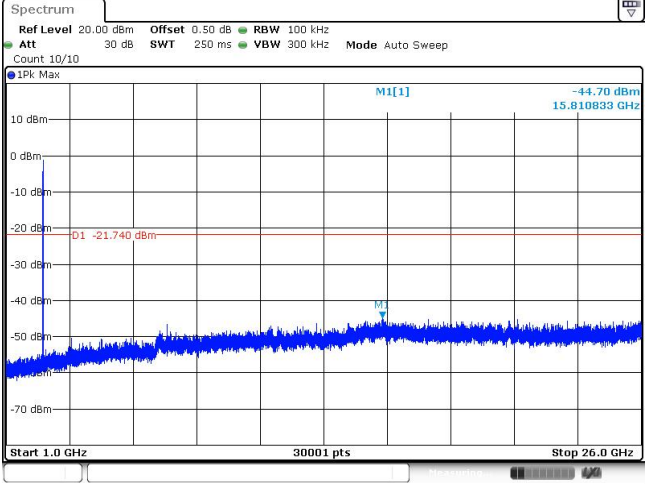


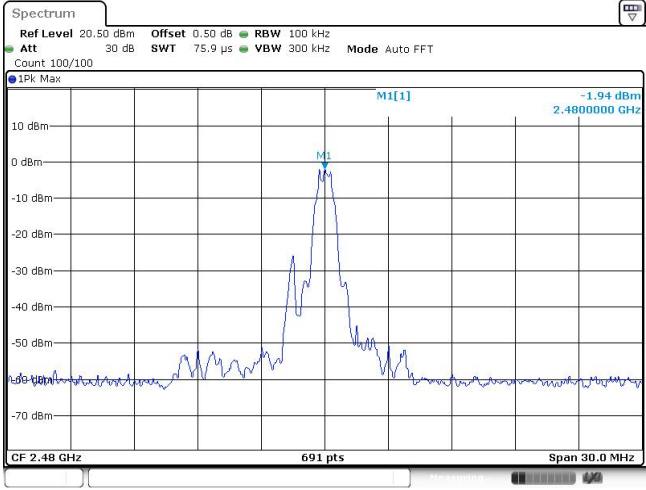
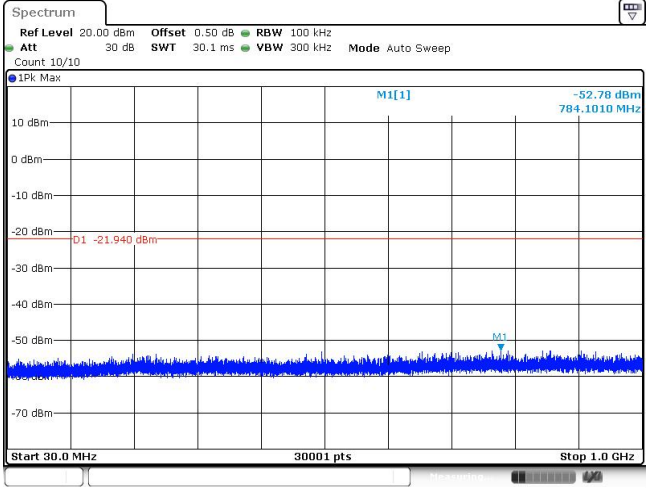
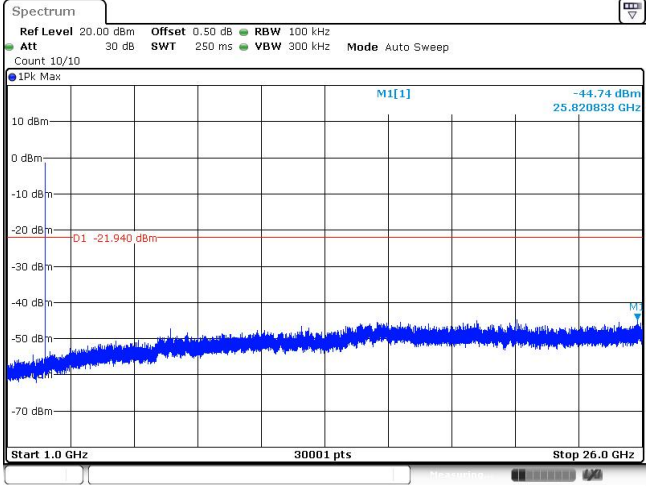
Appendix F: Band edge and Spurious Emissions (conducted)

Test Item:	Band edge	Test Rate:	1Mbps																																								
CH00	Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 100 kHz Att 30 dB SWT 1.1 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1Pk Max M1[1] M2[1] M3 M4 M5 -0.66 dBm 2.402040 GHz -50.74 dBm 2.400000 GHz -20.660 dBm 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>2.40204 GHz</td><td>-0.66 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-50.74 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-55.33 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-55.73 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.39963 GHz</td><td>-53.02 dBm</td><td></td><td></td></tr></tbody></table> Date: 31 MAR 2025 14:18:07	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.40204 GHz	-0.66 dBm			M2	1		2.4 GHz	-50.74 dBm			M3	1		2.39 GHz	-55.33 dBm			M4	1		2.31 GHz	-55.73 dBm			M5	1		2.39963 GHz	-53.02 dBm		
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M2	1		2.4 GHz	-50.74 dBm																																							
M3	1		2.39 GHz	-55.33 dBm																																							
M4	1		2.31 GHz	-55.73 dBm																																							
M5	1		2.39963 GHz	-53.02 dBm																																							
CH39	Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 100 kHz Att 30 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT Count 100/100 1Pk Max M1 M2[1] M3 M4 M5 -1.13 dBm 2.4799900 GHz -53.86 dBm 2.4835000 GHz -21.130 dBm 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>2.47999 GHz</td><td>-1.13 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-53.86 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-59.11 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.4837391 GHz</td><td>-51.65 dBm</td><td></td><td></td></tr></tbody></table> Date: 31 MAR 2025 14:22:11	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.47999 GHz	-1.13 dBm			M2	1		2.4835 GHz	-53.86 dBm			M3	1		2.5 GHz	-59.11 dBm			M4	1		2.4837391 GHz	-51.65 dBm									
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																					
M1	1		2.47999 GHz	-1.13 dBm																																							
M2	1		2.4835 GHz	-53.86 dBm																																							
M3	1		2.5 GHz	-59.11 dBm																																							
M4	1		2.4837391 GHz	-51.65 dBm																																							
Test Item:	Band edge	Test Rate:	2Mbps																																								
CH00	Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 100 kHz Att 30 dB SWT 1.1 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1Pk Max M1[1] M2[1] M3 M4 M5 -1.38 dBm 2.402040 GHz -33.69 dBm 2.400000 GHz -21.380 dBm 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>2.40204 GHz</td><td>-1.38 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-33.69 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-56.84 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-56.79 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399906 GHz</td><td>-40.59 dBm</td><td></td><td></td></tr></tbody></table> Date: 31 MAR 2025 14:24:11	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.40204 GHz	-1.38 dBm			M2	1		2.4 GHz	-33.69 dBm			M3	1		2.39 GHz	-56.84 dBm			M4	1		2.31 GHz	-56.79 dBm			M5	1		2.399906 GHz	-40.59 dBm		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																					
M1	1		2.40204 GHz	-1.38 dBm																																							
M2	1		2.4 GHz	-33.69 dBm																																							
M3	1		2.39 GHz	-56.84 dBm																																							
M4	1		2.31 GHz	-56.79 dBm																																							
M5	1		2.399906 GHz	-40.59 dBm																																							



Test Item:	SE	Test Rate:	1Mbps
CH00 Reference level	Spectrum Ref Level 20.50 dBm Att 30 dB Count 100/100 Offset 0.50 dB SWT 75.9 μs RBW 100 kHz VBW 300 kHz Mode Auto FFT 1Pk Max M1[1] -1.39 dBm 2.4020000 GHz M1 CF 2.402 GHz 691 pts Span 30.0 MHz Date: 31 Mar 2025 14:18:14		
CH00 30MHz~1000MHz	Spectrum Ref Level 20.00 dBm Att 30 dB Count 10/10 Offset 0.50 dB SWT 30.1 ms RBW 100 kHz VBW 300 kHz Mode Auto Sweep 1Pk Max M1[1] -52.67 dBm 804.2120 MHz -21.390 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 31 Mar 2025 14:18:29		
CH00 1GHz~26GHz	Spectrum Ref Level 20.00 dBm Att 30 dB Count 10/10 Offset 0.50 dB SWT 250 ms RBW 100 kHz VBW 300 kHz Mode Auto Sweep 1Pk Max M1[1] -44.40 dBm 25.757500 GHz -21.390 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 31 Mar 2025 14:18:45		

CH19 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 IPk Max M1[1] -1.77 dBm 2.440000 GHz CF 2.44 GHz 691 pts Span 30.0 MHz Date: 31 Mar 2025 14:20:20
CH19 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 IPk Max M1[1] -52.62 dBm 908.2900 MHz D1 -21.740 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 31 Mar 2025 14:20:35
CH19 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 IPk Max M1[1] -44.70 dBm 15.810839 GHz D1 -21.740 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 31 Mar 2025 14:20:50

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

Test Item:	SE	Test Rate:	2Mbps
CH00 Reference level	Spectrum Ref Level 20.50 dBm Att 30 dB Count 100/100 Offset 0.50 dB SWT 75.9 μs RBW 100 kHz VBW 300 kHz Mode Auto FFT 1Pk Max M1[1] -2.32 dBm 2.4015220 GHz 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm CF 2.402 GHz 691 pts Span 30.0 MHz Date: 31 MAR 2025 14:24:17		
CH00 30MHz~1000MHz	Spectrum Ref Level 20.00 dBm Att 30 dB Count 10/10 Offset 0.50 dB SWT 30.1 ms RBW 100 kHz VBW 300 kHz Mode Auto Sweep 1Pk Max M1[1] -52.59 dBm 849.6390 MHz -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm D1 -22.320 dBm M1 Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 31 MAR 2025 14:24:32		
CH00 1GHz~26GHz	Spectrum Ref Level 20.00 dBm Att 30 dB Count 10/10 Offset 0.50 dB SWT 250 ms RBW 100 kHz VBW 300 kHz Mode Auto Sweep 1Pk Max M1[1] -44.29 dBm 15.801667 GHz -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm D1 -22.320 dBm M1 Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 31 MAR 2025 14:24:47		

CH19 Reference level	
CH19 30MHz~1000MHz	
CH19 1GHz~26GHz	

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

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