

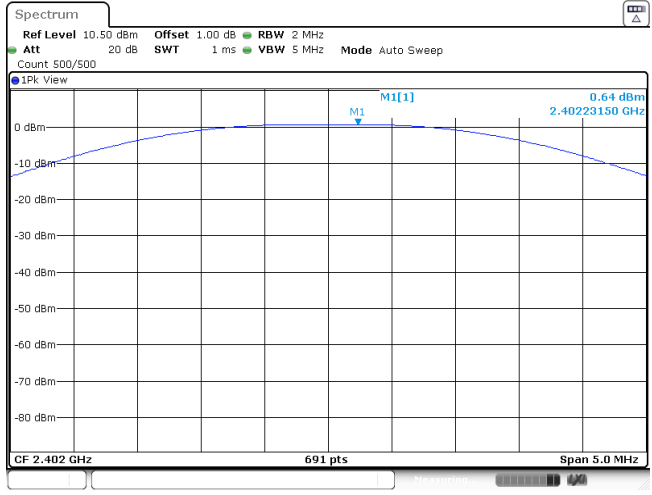
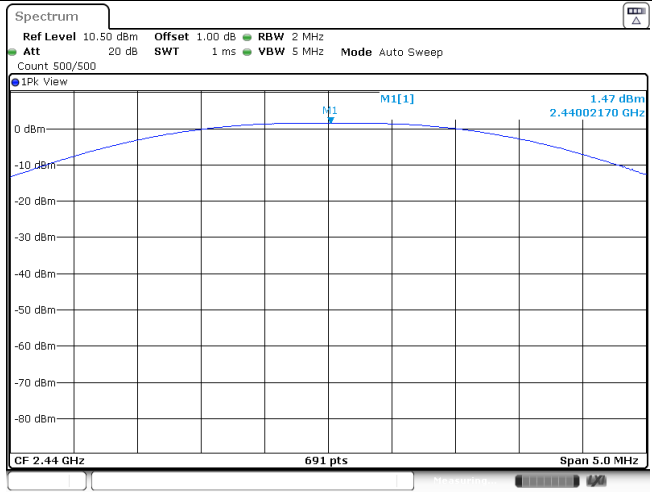
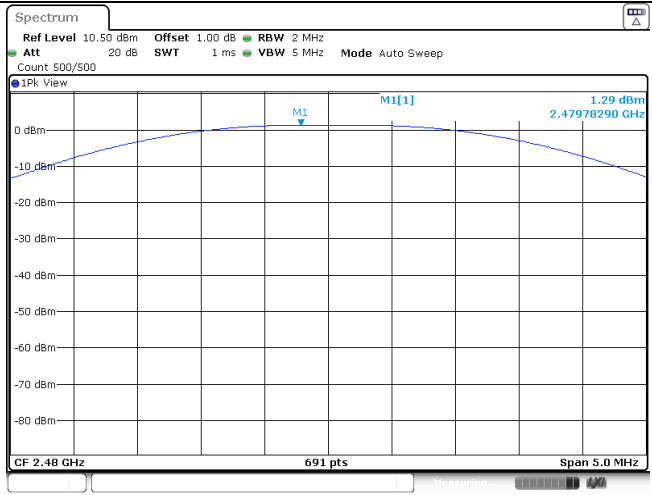
APPENDIX REPORT

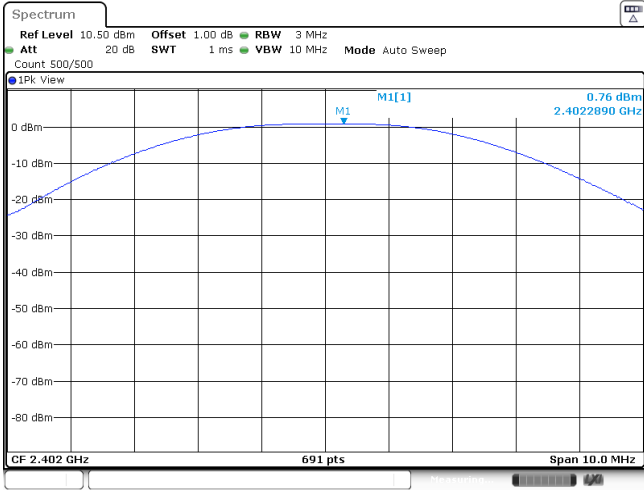
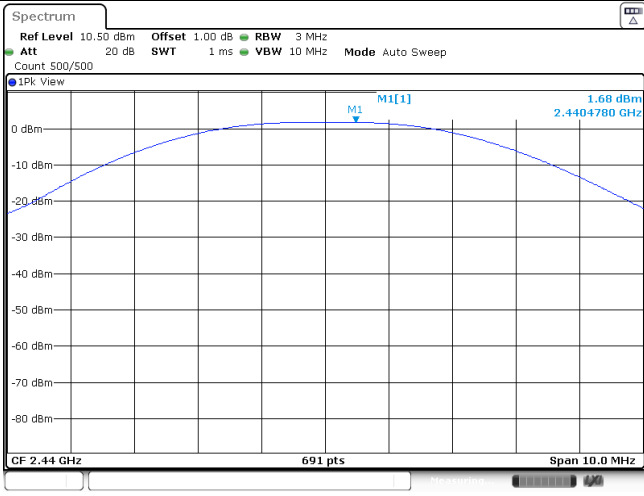
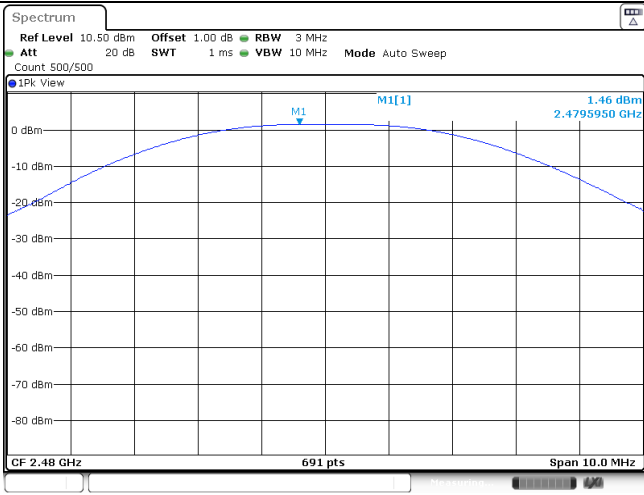
Project No.	SHT2208212702EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT22082127001	Model No.	AET-F342
Start test date	2022-12-22	Finish date	2022-12-22
Temperature	20.7℃	Humidity	20%
Test Engineer	Xiaoqin Li	Auditor	<i>Xiaodong Zheo</i>

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

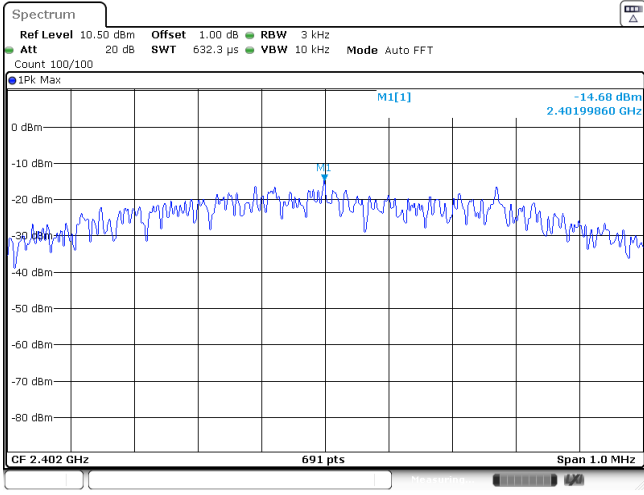
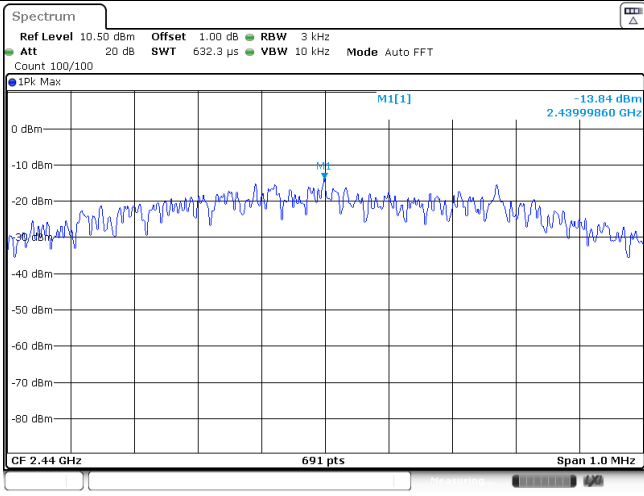
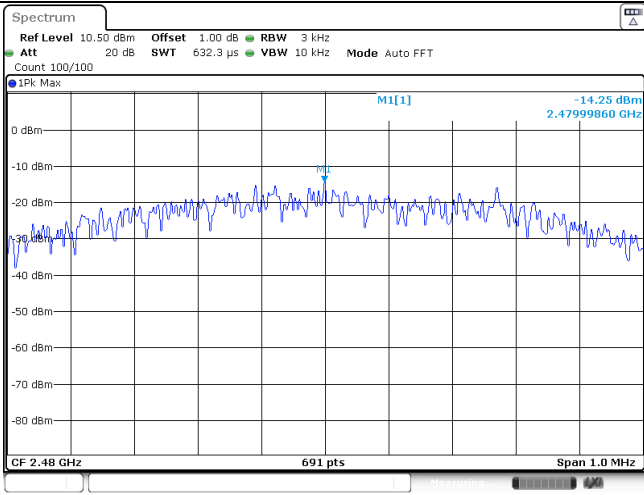
Test rate	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
1Mbps	00	0.64	0.61	≤ 30.00	Pass
	19	1.47	1.42		
	39	1.29	1.26		
2Mbps	00	0.76	0.54	≤ 30.00	Pass
	19	1.68	1.36		
	39	1.46	1.18		

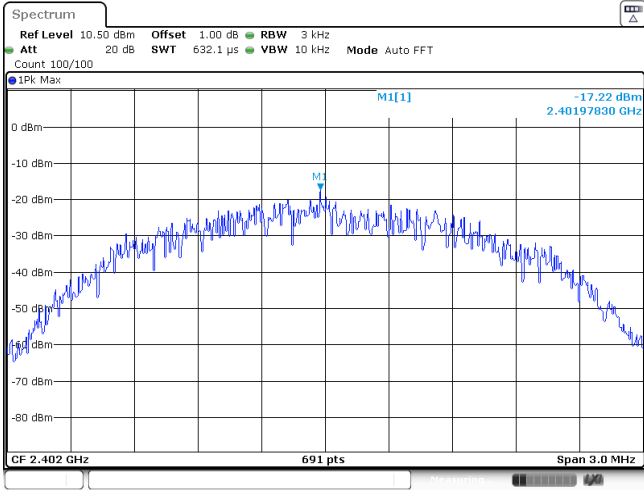
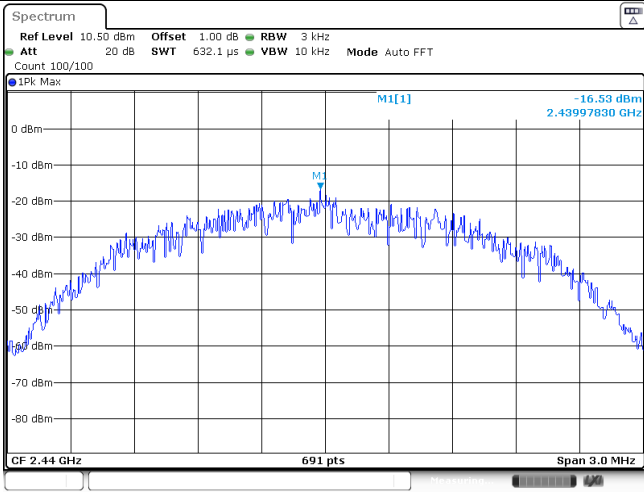
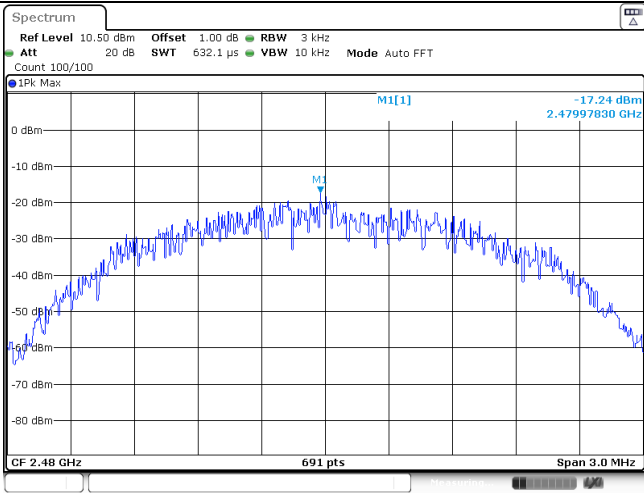
Test rate: 1Mbps	
CH00	 <p>Spectrum plot for CH00. The plot shows a peak at 2.40223150 GHz with a power of 0.64 dBm. The plot includes parameters: Ref Level 10.50 dBm, Att 20 dB, Offset 1.00 dB, RBW 2 MHz, Count 500/500, Mode Auto Sweep.</p>
CH19	 <p>Spectrum plot for CH19. The plot shows a peak at 2.44002170 GHz with a power of 1.47 dBm. The plot includes parameters: Ref Level 10.50 dBm, Att 20 dB, Offset 1.00 dB, RBW 2 MHz, Count 500/500, Mode Auto Sweep.</p>
CH39	 <p>Spectrum plot for CH39. The plot shows a peak at 2.47978290 GHz with a power of 1.29 dBm. The plot includes parameters: Ref Level 10.50 dBm, Att 20 dB, Offset 1.00 dB, RBW 2 MHz, Count 500/500, Mode Auto Sweep.</p>

Test rate: 2Mbps	
CH00	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 MHz Att 20 dB SWT 1 ms VBW 10 MHz Mode Auto Sweep Count 500/500 IPK View 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 10.0 MHz 0.76 dBm 2.4022890 GHz Date: 22 DEC 2022 13:01:54</p>
CH19	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 MHz Att 20 dB SWT 1 ms VBW 10 MHz Mode Auto Sweep Count 500/500 IPK View 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 10.0 MHz 1.68 dBm 2.404780 GHz Date: 22 DEC 2022 13:03:59</p>
CH39	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 MHz Att 20 dB SWT 1 ms VBW 10 MHz Mode Auto Sweep Count 500/500 IPK View 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 10.0 MHz 1.46 dBm 2.4795950 GHz Date: 22 DEC 2022 13:06:06</p>

Appendix B: Power Spectral Density

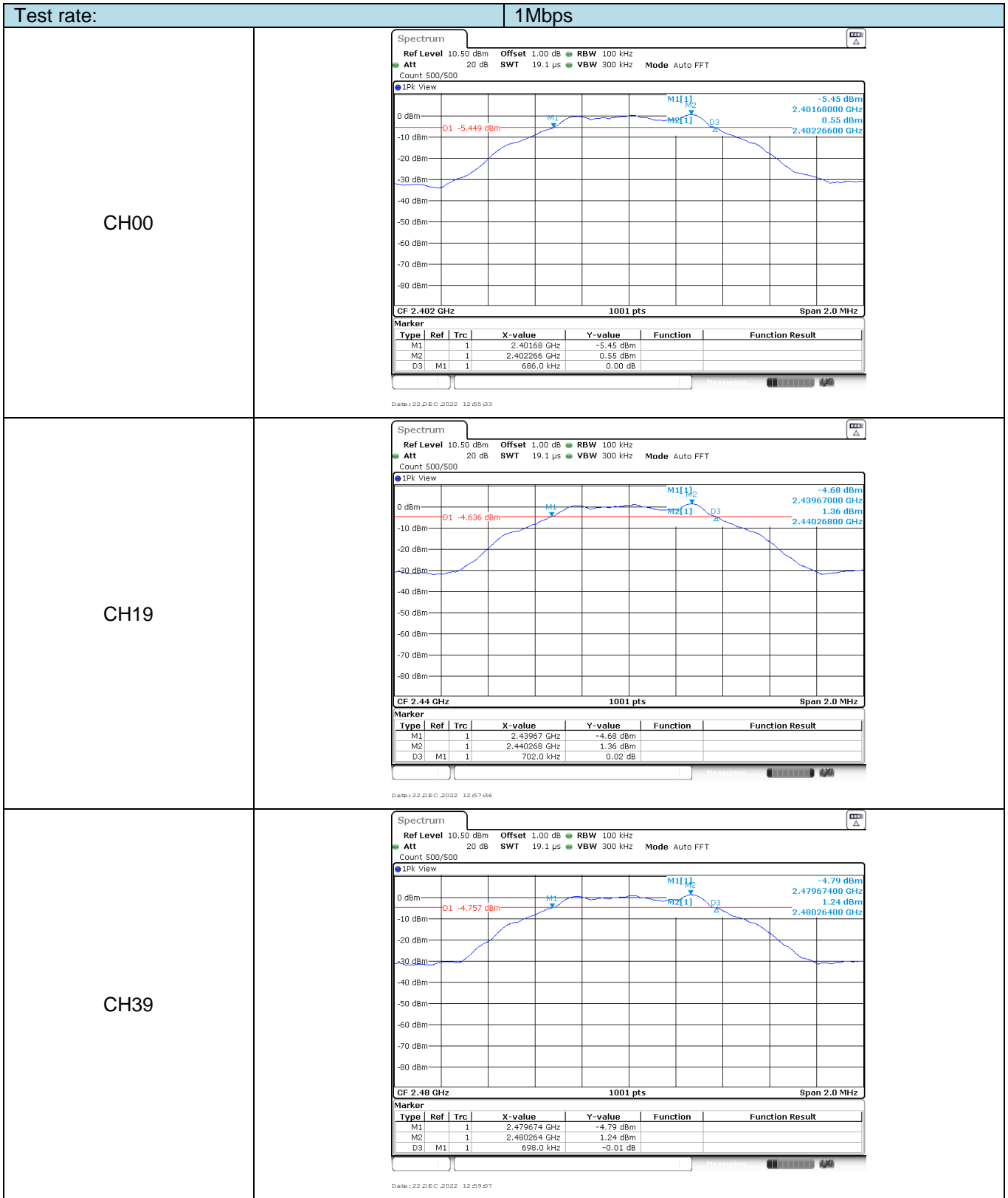
Test rate	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
1Mbps	00	-14.68	≤8.00	Pass
	19	-13.84		
	39	-14.25		
2Mbps	00	-17.22	≤8.00	Pass
	19	-16.53		
	39	-17.24		

Test rate: 1Mbps	
CH00	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 kHz Att 20 dB SWT 632.3 μs VBW 10 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] -14.68 dBm 2.40199860 GHz CF 2.402 GHz 691 pts Span 1.0 MHz Date: 22 DEC 2022 12:56:06</p>
CH19	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 kHz Att 20 dB SWT 632.3 μs VBW 10 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] -13.84 dBm 2.43999860 GHz CF 2.44 GHz 691 pts Span 1.0 MHz Date: 22 DEC 2022 12:58:06</p>
CH39	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 kHz Att 20 dB SWT 632.3 μs VBW 10 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] -14.25 dBm 2.47999860 GHz CF 2.48 GHz 691 pts Span 1.0 MHz Date: 22 DEC 2022 12:59:07</p>

Test rate: 2Mbps	
CH00	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 kHz Att 20 dB SWT 632.1 μs VBW 10 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] -17.22 dBm 2.40197830 GHz CF 2.402 GHz 691 pts Span 3.0 MHz Date: 22 DEC 2022 13:02:09</p>
CH19	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 kHz Att 20 dB SWT 632.1 μs VBW 10 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] -16.53 dBm 2.43997830 GHz CF 2.44 GHz 691 pts Span 3.0 MHz Date: 22 DEC 2022 13:04:14</p>
CH39	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 kHz Att 20 dB SWT 632.1 μs VBW 10 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] -17.24 dBm 2.47997830 GHz CF 2.48 GHz 691 pts Span 3.0 MHz Date: 22 DEC 2022 13:06:20</p>

Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
1Mbps	00	686.00	≥500	Pass
	19	702.00		
	39	698.00		
2Mbps	00	1185.00	≥500	Pass
	19	1175.00		
	39	1195.00		



Test rate:		2Mbps																												
CH00	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 19 μs VBW 300 kHz Mode Auto FFT Count 500/500</p> <p>IPK View</p> <p>CF 2.402 GHz 1001 pts Span 5.0 MHz</p> <table border="1"> <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></td> <td>1</td> <td>2.40143 GHz</td> <td>-6.00 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td></td> <td>1</td> <td>2.40202 GHz</td> <td>0.12 dBm</td> <td></td> <td></td> </tr> <tr> <td>D3</td> <td>M1</td> <td>1</td> <td>1.185 MHz</td> <td>0.09 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 22 DEC 2022 13:01:09</p>		Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1	2.40143 GHz	-6.00 dBm			M2		1	2.40202 GHz	0.12 dBm			D3	M1	1	1.185 MHz	0.09 dB		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																								
M1		1	2.40143 GHz	-6.00 dBm																										
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CH19	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 19 μs VBW 300 kHz Mode Auto FFT Count 500/500</p> <p>IPK View</p> <p>CF 2.44 GHz 1001 pts Span 5.0 MHz</p> <table border="1"> <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></td> <td>1</td> <td>2.43944 GHz</td> <td>-4.89 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td></td> <td>1</td> <td>2.44005 GHz</td> <td>1.13 dBm</td> <td></td> <td></td> </tr> <tr> <td>D3</td> <td>M1</td> <td>1</td> <td>1.175 MHz</td> <td>-0.05 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 22 DEC 2022 13:03:43</p>		Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1	2.43944 GHz	-4.89 dBm			M2		1	2.44005 GHz	1.13 dBm			D3	M1	1	1.175 MHz	-0.05 dB		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																								
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CH39	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 19 μs VBW 300 kHz Mode Auto FFT Count 500/500</p> <p>IPK View</p> <p>CF 2.48 GHz 1001 pts Span 5.0 MHz</p> <table border="1"> <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></td> <td>1</td> <td>2.479425 GHz</td> <td>-5.19 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td></td> <td>1</td> <td>2.480015 GHz</td> <td>0.81 dBm</td> <td></td> <td></td> </tr> <tr> <td>D3</td> <td>M1</td> <td>1</td> <td>1.195 MHz</td> <td>-0.04 dB</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 22 DEC 2022 13:05:50</p>		Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1		1	2.479425 GHz	-5.19 dBm			M2		1	2.480015 GHz	0.81 dBm			D3	M1	1	1.195 MHz	-0.04 dB		
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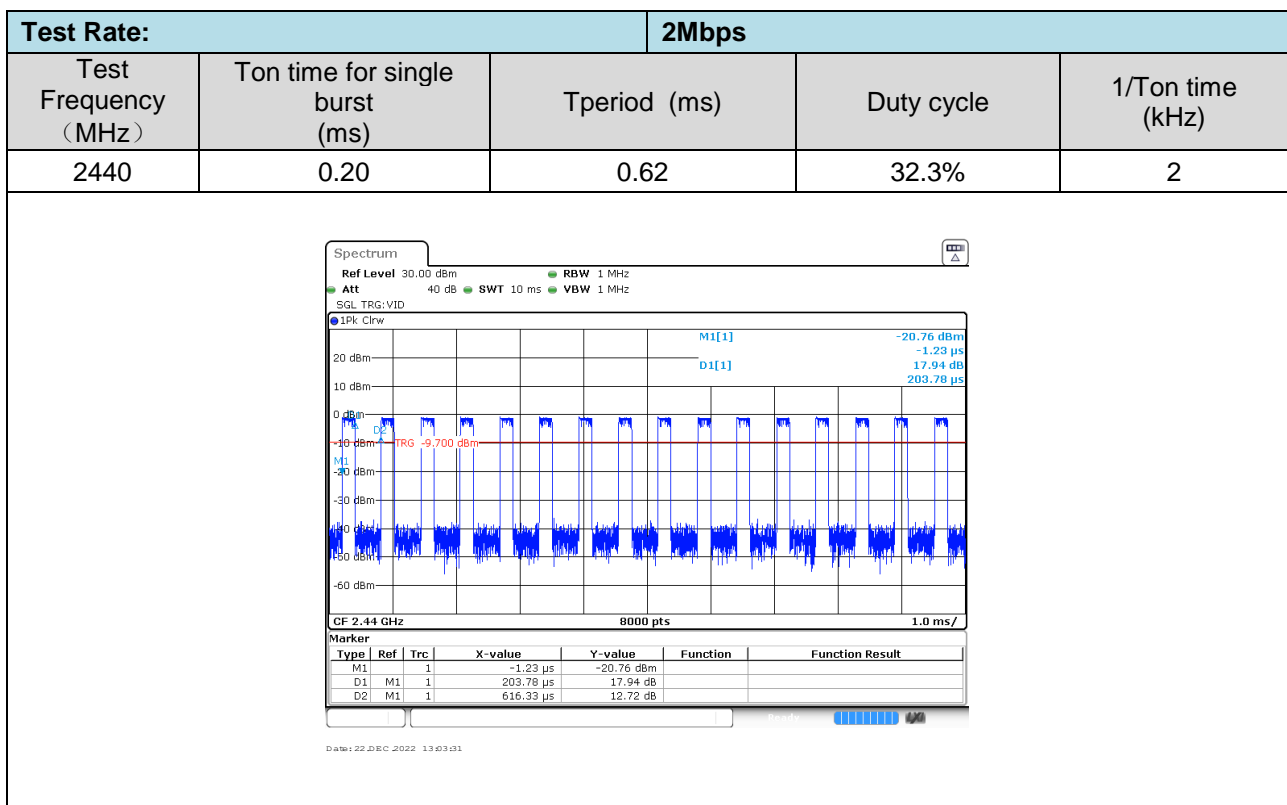
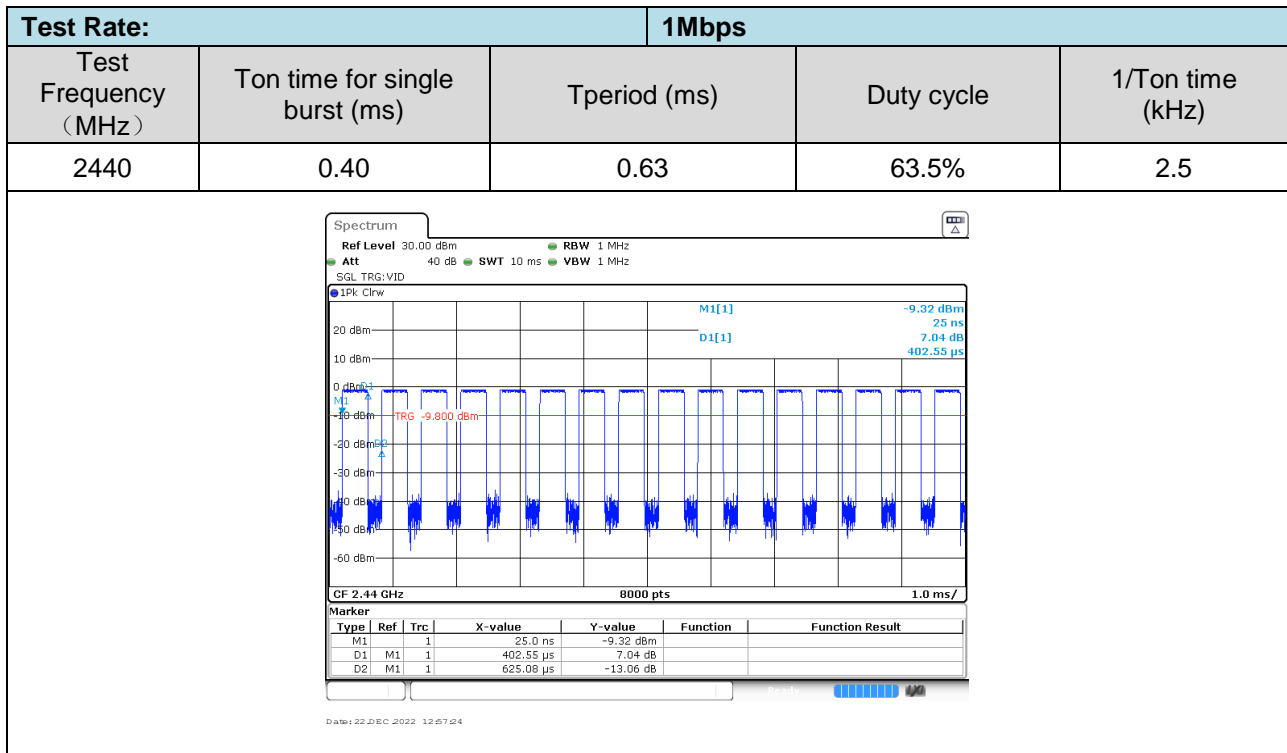
Appendix D: 99% Occupied Bandwidth

Test rate	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
1Mbps	00	1.02	-	Pass
	19	1.02		
	39	1.02		
2Mbps	00	2.06	-	Pass
	19	2.06		
	39	2.05		

Test rate: 1Mbps	
CH00	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPK View M1[1] -1.70 dBm 2.40200200 GHz 1.022977023 MHz Occ Bw T1 T2 CF 2.402 GHz 1001 pts Span 2.0 MHz Date: 22 DEC 2022 12:55:43</p>
CH19	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPK View M1[1] -1.03 dBm 2.44001000 GHz 1.024975025 MHz Occ Bw T1 T2 CF 2.44 GHz 1001 pts Span 2.0 MHz Date: 22 DEC 2022 12:57:44</p>
CH39	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPK View M1[1] -1.31 dBm 2.48001000 GHz 1.022977023 MHz Occ Bw T1 T2 CF 2.48 GHz 1001 pts Span 2.0 MHz Date: 22 DEC 2022 12:59:15</p>

Test rate: 2Mbps	
CH00	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPK View M1[1] -3.90 dBm 2.40199500 GHz 2.062937063 MHz Occ Bw T1 T2 CF 2.402 GHz 1001 pts Span 5.0 MHz Date: 22 DEC 2022 13:01:46</p>
CH19	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPK View M1[1] -3.02 dBm 2.44000500 GHz 2.057942058 MHz Occ Bw T1 T2 CF 2.44 GHz 1001 pts Span 5.0 MHz Date: 22 DEC 2022 13:03:51</p>
CH39	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.2 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPK View M1[1] -3.21 dBm 2.48001000 GHz 2.052947053 MHz Occ Bw T1 T2 CF 2.48 GHz 1001 pts Span 5.0 MHz Date: 22 DEC 2022 13:05:57</p>

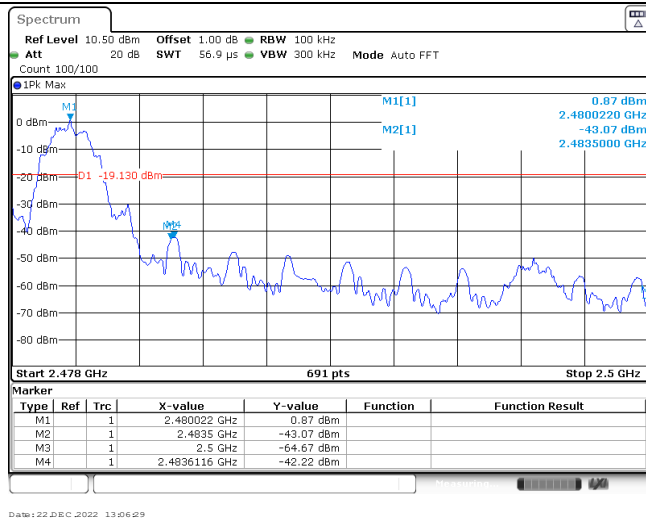
Appendix E: Duty cycle



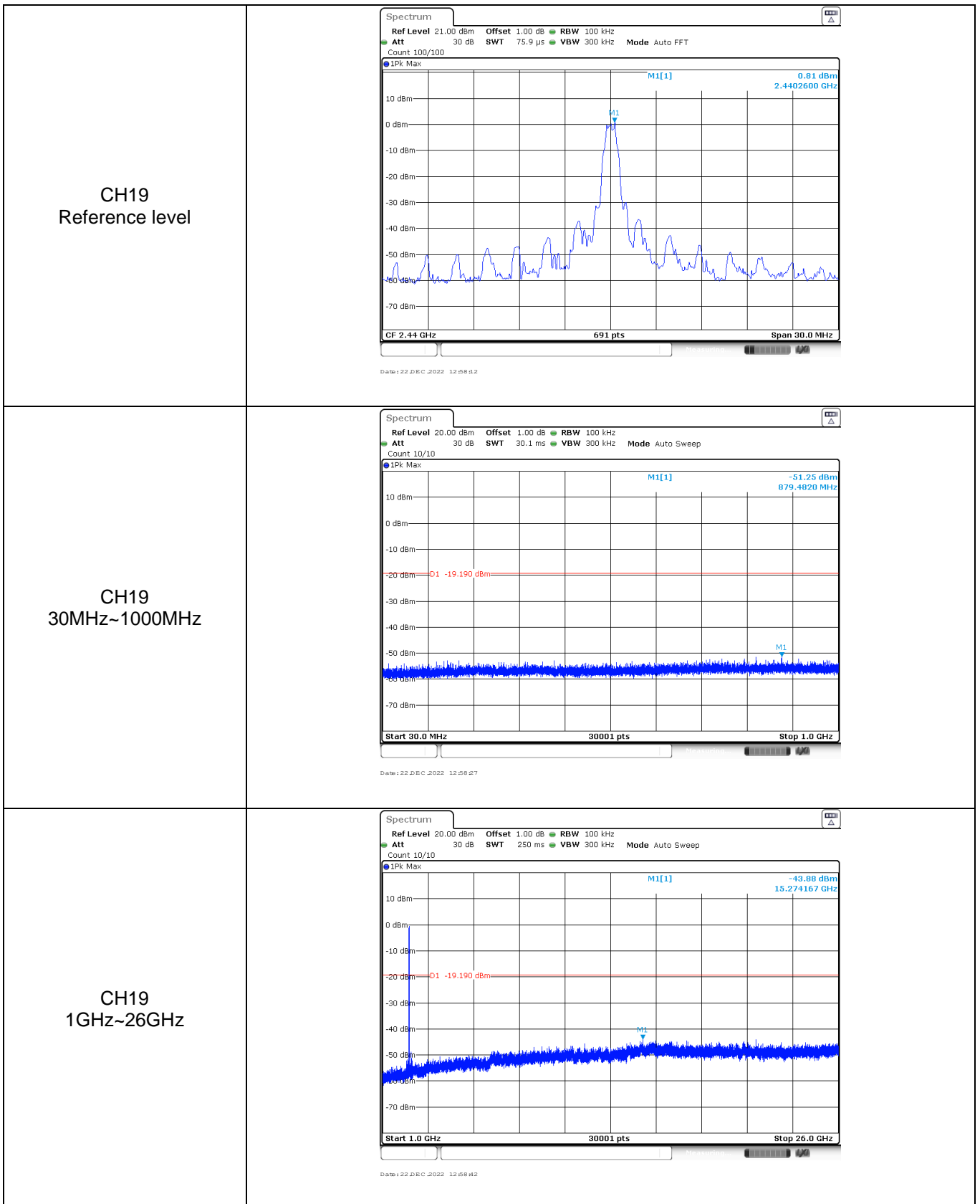
Appendix F: Band edge and Spurious Emissions (conducted)

Test Item:	Band edge	Test Rate:	1Mbps																																										
CH00	<p>Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 1.1 ms VBW 300 kHz Mode Auto Sweep Count 300/300</p> <p>1Pk Max</p> <p>M1[1] -1.23 dBm 2.402320 GHz M2[1] -39.98 dBm 2.400000 GHz</p> <p>D1 -21.230 dBm</p> <p>Start 2.31 GHz 691 pts Stop 2.405 GHz</p> <table border="1"> <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>2.40232 GHz</td> <td>-1.23 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-39.98 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-54.79 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-65.29 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399906 GHz</td> <td>-40.42 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 22 DEC 2022 12:56:15</p>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.40232 GHz	-1.23 dBm			M2	1		2.4 GHz	-39.98 dBm			M3	1		2.39 GHz	-54.79 dBm			M4	1		2.31 GHz	-65.29 dBm			M5	1		2.399906 GHz	-40.42 dBm		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1		2.40232 GHz	-1.23 dBm																																									
M2	1		2.4 GHz	-39.98 dBm																																									
M3	1		2.39 GHz	-54.79 dBm																																									
M4	1		2.31 GHz	-65.29 dBm																																									
M5	1		2.399906 GHz	-40.42 dBm																																									
CH39	<p>Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 56.9 µs VBW 300 kHz Mode Auto FFT Count 100/100</p> <p>1Pk Max</p> <p>M1[1] 1.11 dBm 2.480276 GHz M2[1] -54.91 dBm 2.483500 GHz</p> <p>D1 -18.890 dBm</p> <p>Start 2.478 GHz 691 pts Stop 2.5 GHz</p> <table border="1"> <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>2.480276 GHz</td> <td>1.11 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4835 GHz</td> <td>-54.91 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-57.99 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.483986 GHz</td> <td>-41.86 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 22 DEC 2022 12:59:46</p>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.480276 GHz	1.11 dBm			M2	1		2.4835 GHz	-54.91 dBm			M3	1		2.5 GHz	-57.99 dBm			M4	1		2.483986 GHz	-41.86 dBm									
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1		2.480276 GHz	1.11 dBm																																									
M2	1		2.4835 GHz	-54.91 dBm																																									
M3	1		2.5 GHz	-57.99 dBm																																									
M4	1		2.483986 GHz	-41.86 dBm																																									
Test Item:	Band edge	Test Rate:	2Mbps																																										
CH00	<p>Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 1.1 ms VBW 300 kHz Mode Auto Sweep Count 300/300</p> <p>1Pk Max</p> <p>M1[1] -1.29 dBm 2.402040 GHz M2[1] -35.35 dBm 2.400000 GHz</p> <p>D1 -21.340 dBm</p> <p>Start 2.31 GHz 691 pts Stop 2.405 GHz</p> <table border="1"> <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>-1.29 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-35.35 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-61.71 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-64.88 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.39963 GHz</td> <td>-39.47 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 22 DEC 2022 13:02:18</p>			Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.40204 GHz	-1.29 dBm			M2	1		2.4 GHz	-35.35 dBm			M3	1		2.39 GHz	-61.71 dBm			M4	1		2.31 GHz	-64.88 dBm			M5	1		2.39963 GHz	-39.47 dBm		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																							
M1	1		2.40204 GHz	-1.29 dBm																																									
M2	1		2.4 GHz	-35.35 dBm																																									
M3	1		2.39 GHz	-61.71 dBm																																									
M4	1		2.31 GHz	-64.88 dBm																																									
M5	1		2.39963 GHz	-39.47 dBm																																									

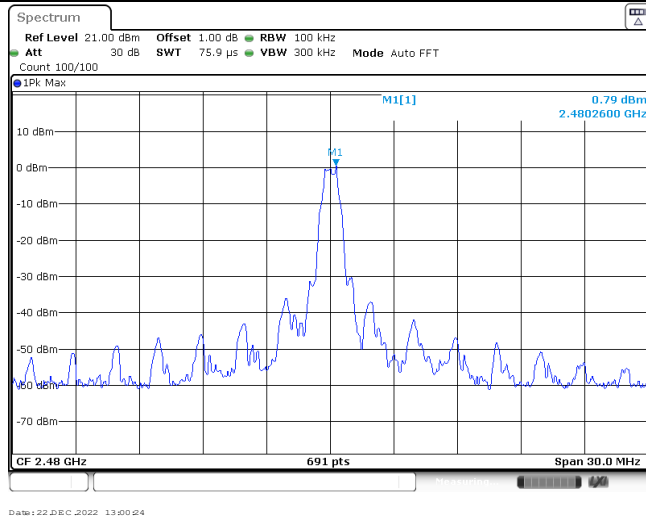
CH39



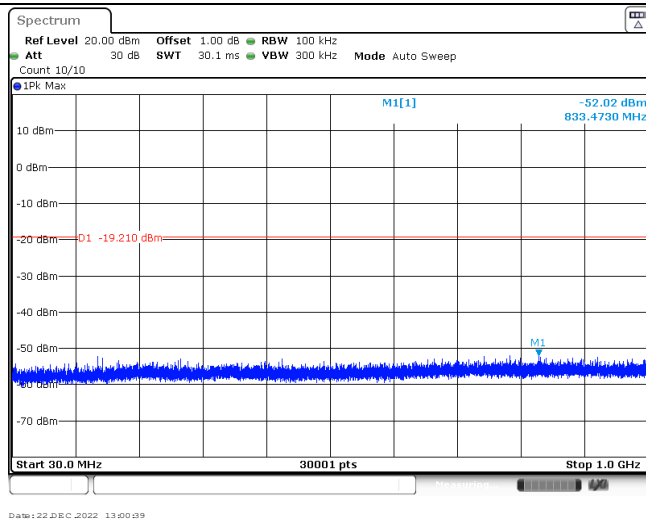
Test Item:	SE	Test Rate:	1Mbps
<p>CH00 Reference level</p>	<p>Spectrum</p> <p>Ref Level 21.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 75.9 μs VBW 300 kHz Mode Auto FFT Count 100/100</p> <p>1Pk Max: 0.20 dBm, 2.4022600 GHz</p> <p>CF 2.402 GHz 691 pts Span 30.0 MHz</p> <p>Date: 22 DEC 2022 12:56:23</p>		
<p>CH00 30MHz~1000MHz</p>	<p>Spectrum</p> <p>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10</p> <p>1Pk Max: -51.75 dBm, 159.9920 MHz</p> <p>Start 30.0 MHz 30001 pts Stop 1.0 GHz</p> <p>Date: 22 DEC 2022 12:56:38</p>		
<p>CH00 1GHz~26GHz</p>	<p>Spectrum</p> <p>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10</p> <p>1Pk Max: -43.99 dBm, 25.73333 GHz</p> <p>Start 1.0 GHz 30001 pts Stop 26.0 GHz</p> <p>Date: 22 DEC 2022 12:56:55</p>		



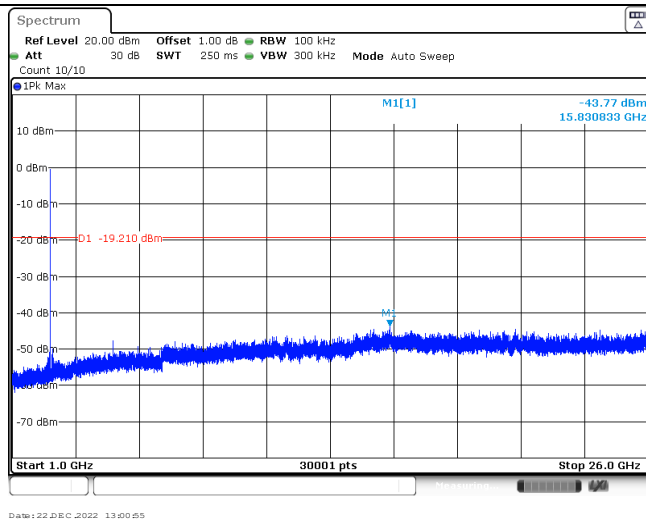
CH39
Reference level



CH39
30MHz~1000MHz

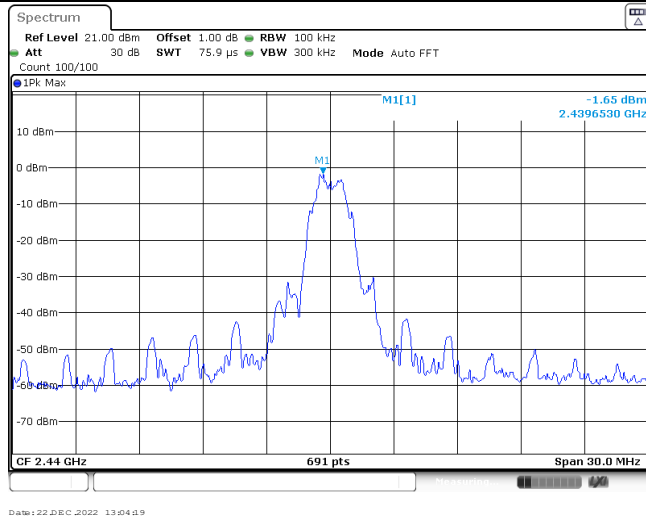


CH39
1GHz~26GHz

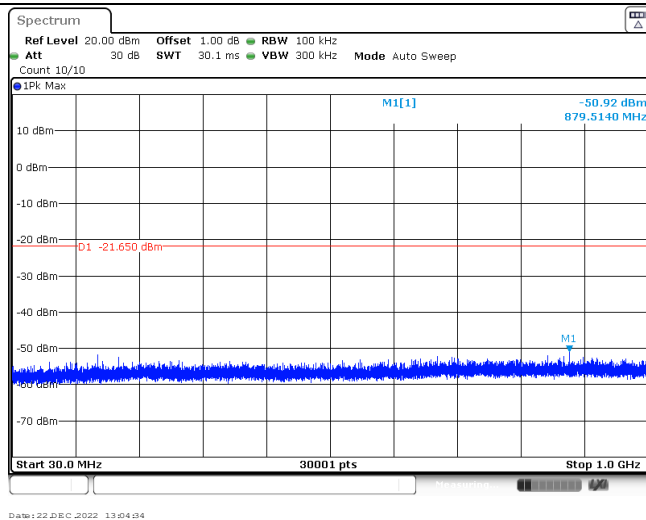


Test Item:	SE	Test Rate:	2Mbps
<p>CH00 Reference level</p>			
<p>CH00 30MHz~1000MHz</p>			
<p>CH00 1GHz~26GHz</p>			

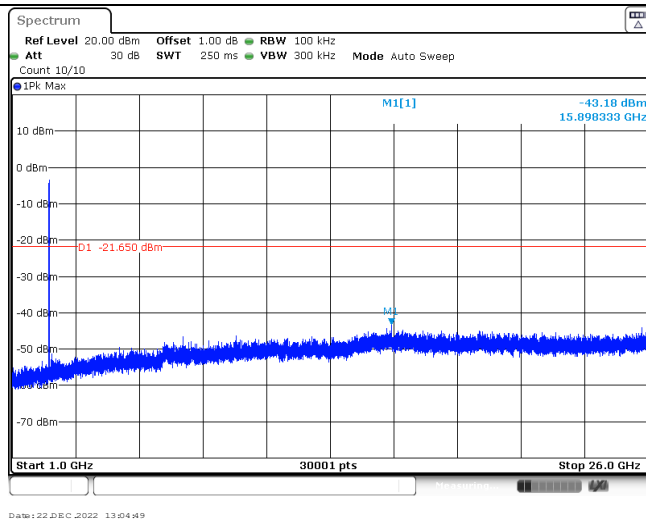
CH19
Reference level



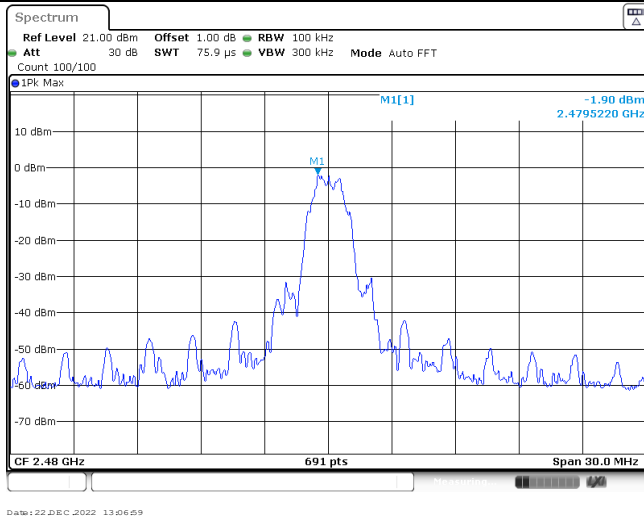
CH19
30MHz~1000MHz



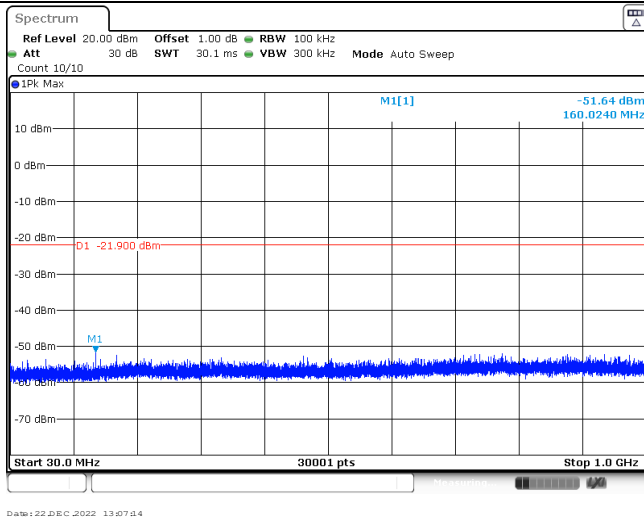
CH19
1GHz~26GHz



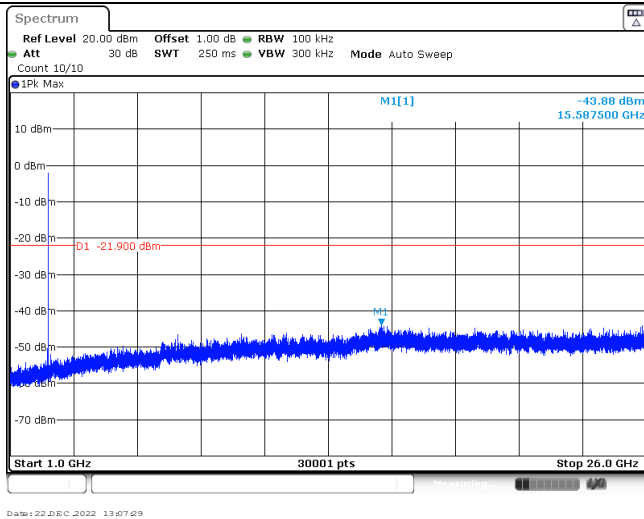
CH39
Reference level



CH39
30MHz~1000MHz



CH39
1GHz~26GHz



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