

# APPENDIX REPORT

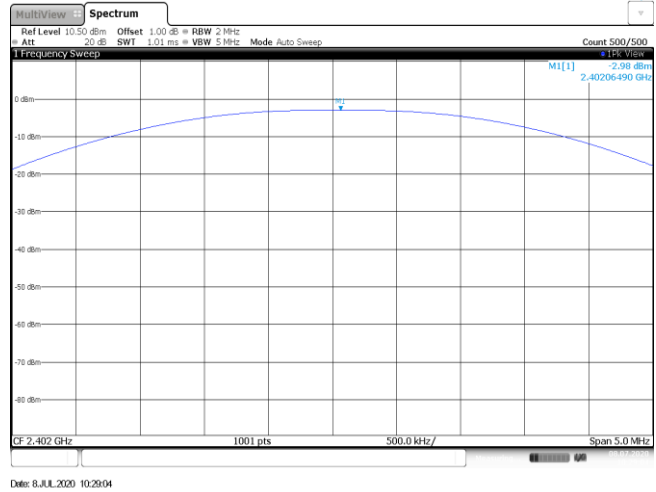
Project No.	SHT2006103901EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT20051039002	Model No.	CT9E78Q22N
Start test date	2020/7/8	Finish date	2020/7/8
Temperature	25°C	Humidity	50%
Test Engineer	Jiongsheng.Feng	Auditor	<i>William.wang</i>

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

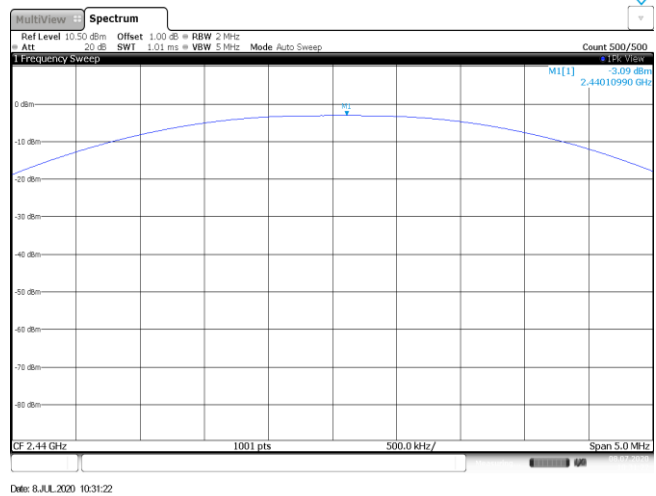
**Appendix A: Peak Output Power**

Type	Channel	Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	-2.98	-3.00	≤ 30.00	Pass
	19	-3.09	-3.11		
	39	-2.39	-2.40		

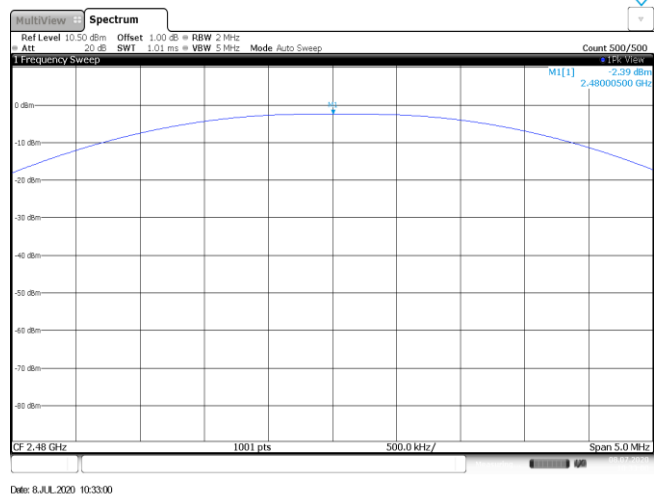
CH00



CH19



CH39



**Appendix B: Power Spectral Density**

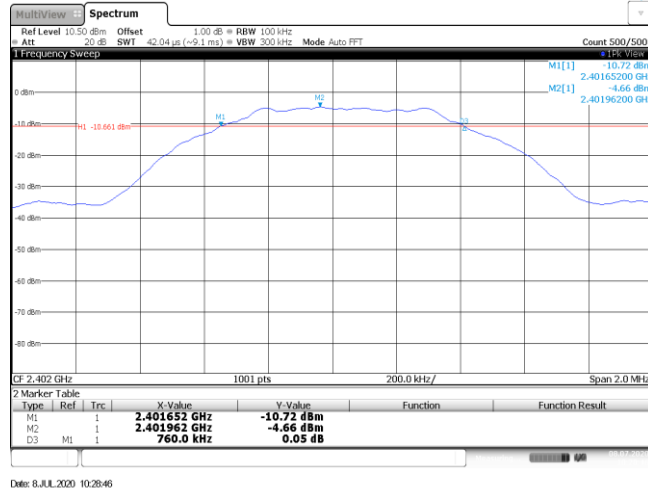
Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-18.20	≤8.00	Pass
	19	-17.76		
	39	-17.50		

<p>CH00</p>	<p>Date: 8.JUL.2020 10:29:19</p>
<p>CH19</p>	<p>Date: 8.JUL.2020 10:31:37</p>
<p>CH39</p>	<p>Date: 8.JUL.2020 10:33:15</p>

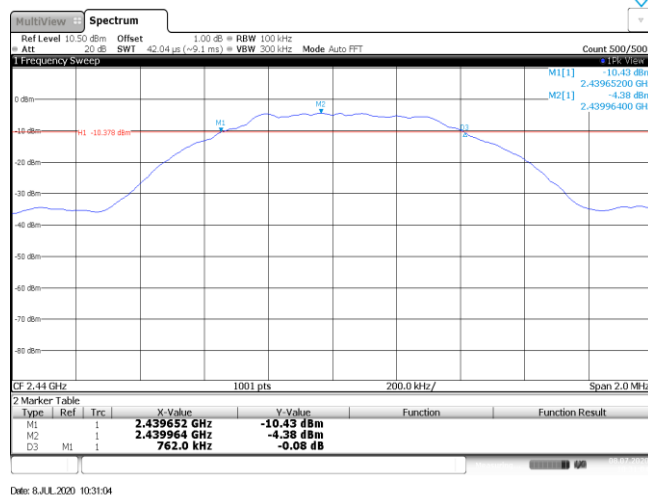
**Appendix C: 6dB bandwidth**

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	760.00	≥500	Pass
	19	762.00		
	39	762.00		

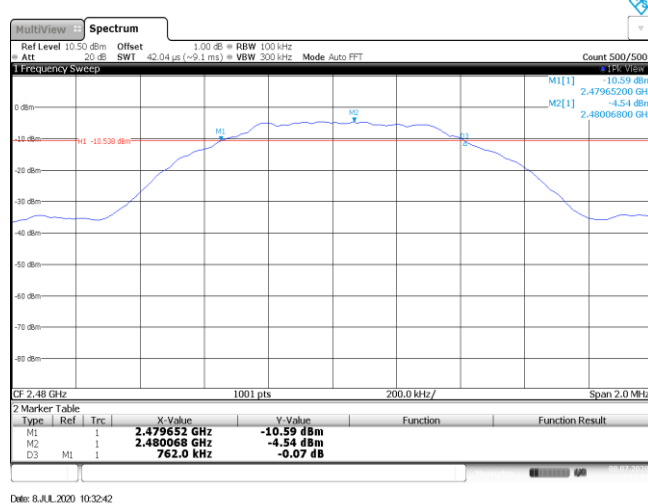
CH00



CH19



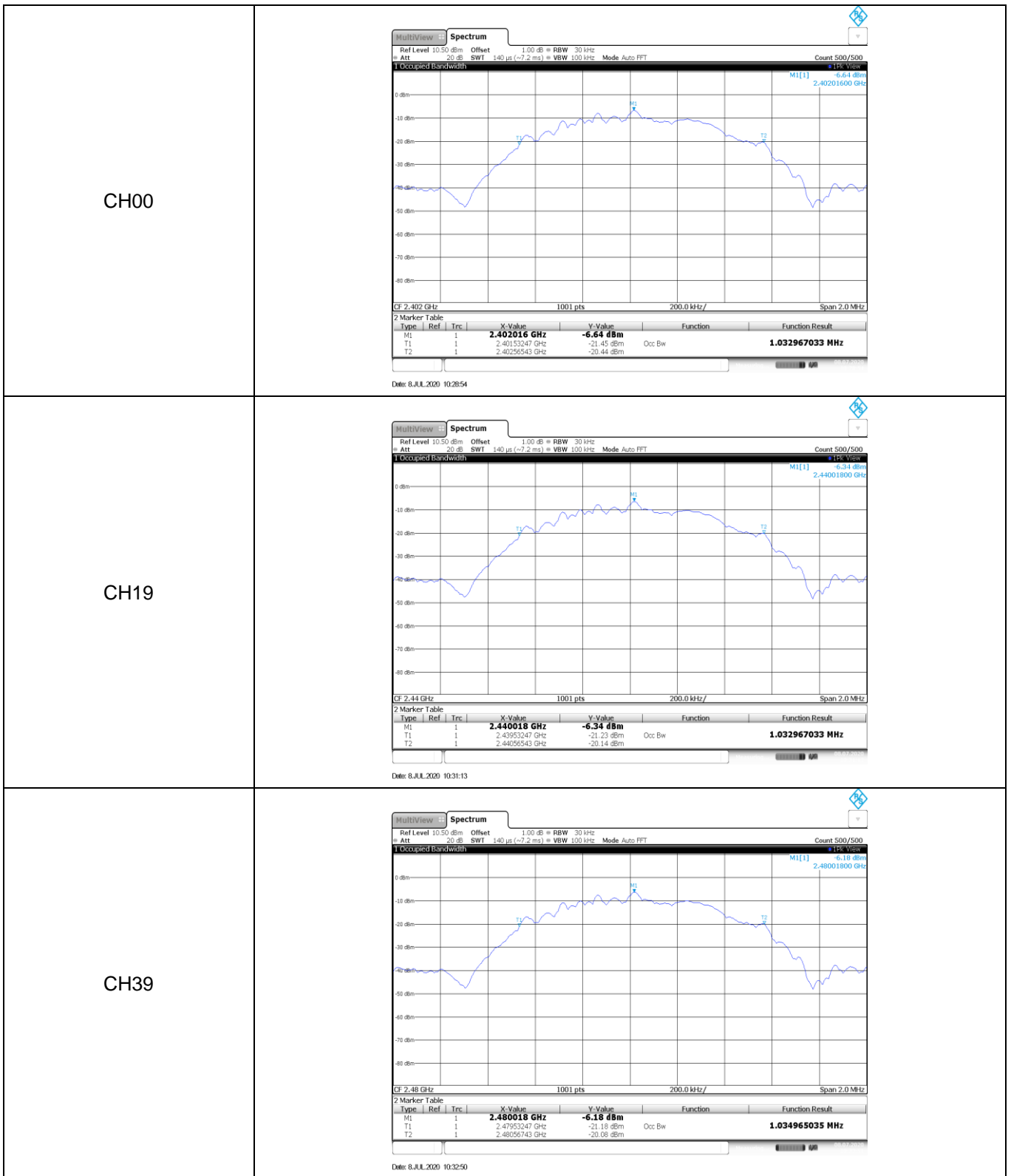
CH39



**Appendix D: 99% Occupied Bandwidth**

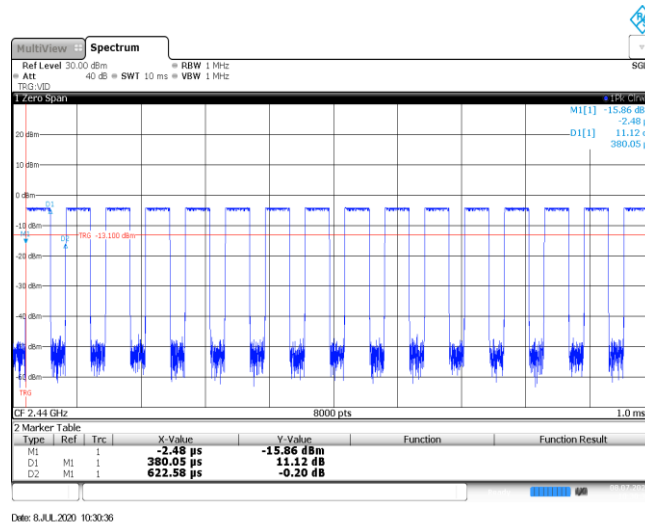
Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	1.03	-	Pass
	19	1.03		
	39	1.03		



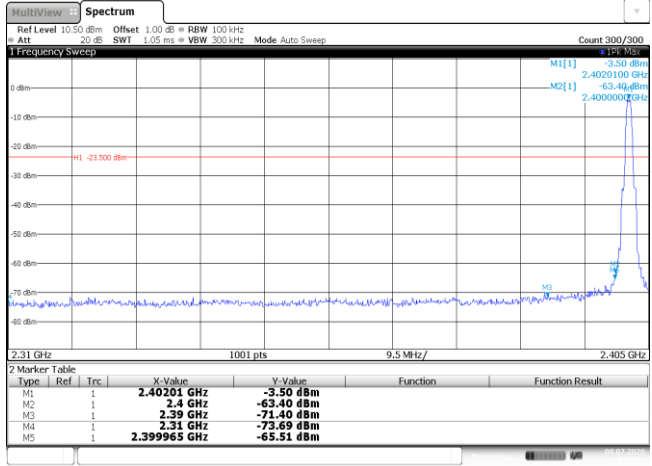
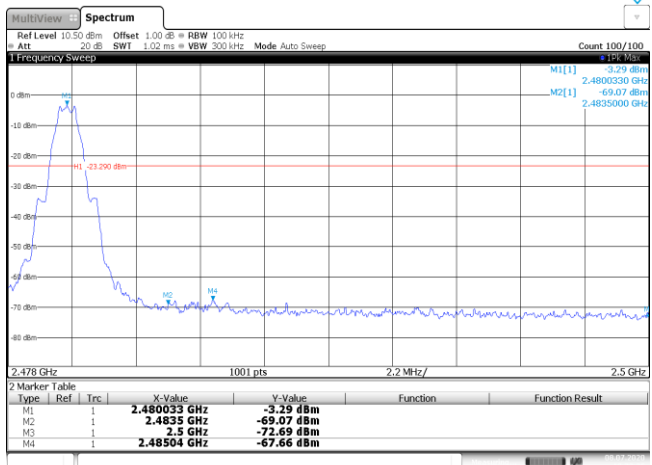


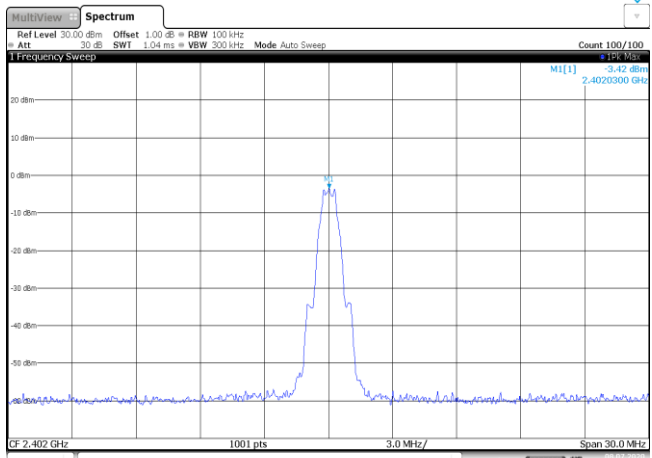
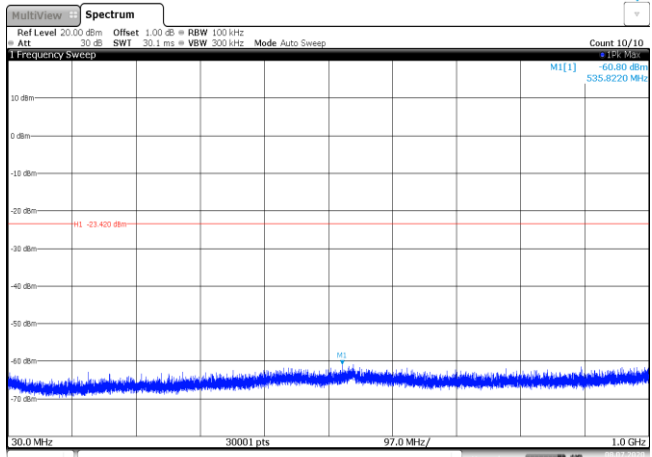
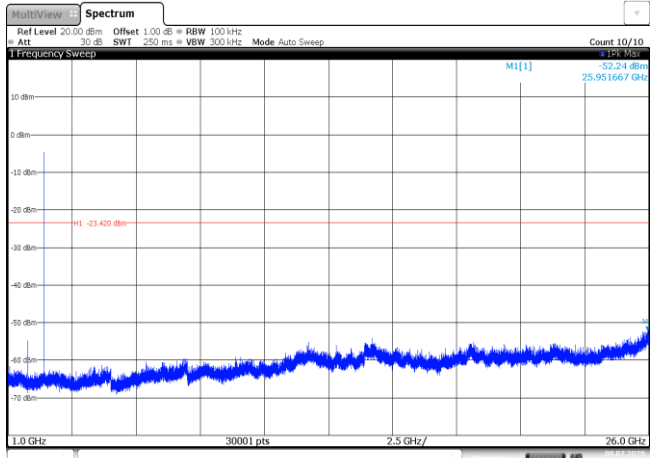
### Appendix E: Duty cycle

Test Frequency (MHz)	T <sub>on</sub> time for single burst (ms)	T <sub>period</sub> (ms)	Duty cycle	1/T <sub>on</sub> time (kHz)
2440	0.38	0.62	61.3%	2.6

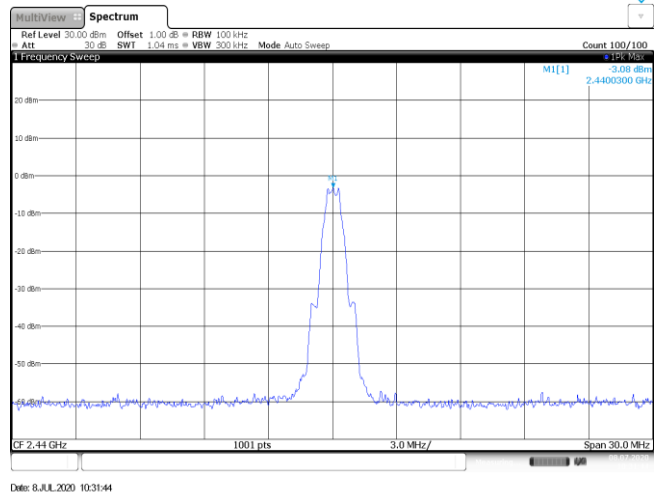


### Appendix F: Band edge and Spurious Emissions (conducted)

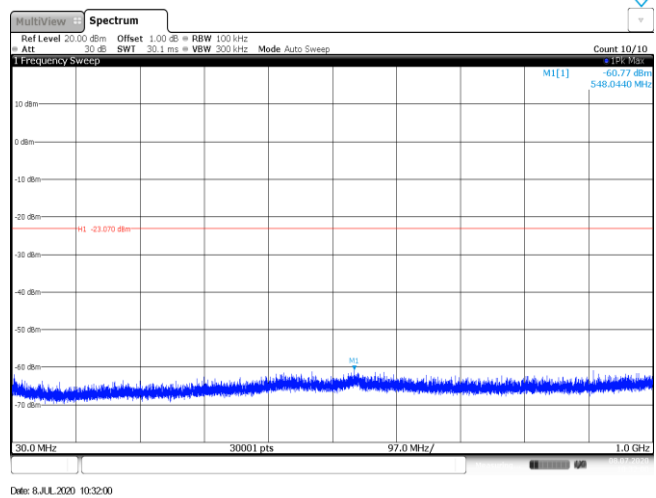
Test Item:	Band edge																																										
<p style="text-align: center;">CH00</p>	 <p><b>2 Marker Table</b></p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.40201 GHz</td> <td>-3.50 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-63.40 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-71.40 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.391 GHz</td> <td>-75.69 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399965 GHz</td> <td>-65.51 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 8.JUL.2020 10:29:29</p>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.40201 GHz	-3.50 dBm			M2	1		2.4 GHz	-63.40 dBm			M3	1		2.39 GHz	-71.40 dBm			M4	1		2.391 GHz	-75.69 dBm			M5	1		2.399965 GHz	-65.51 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																					
M1	1		2.40201 GHz	-3.50 dBm																																							
M2	1		2.4 GHz	-63.40 dBm																																							
M3	1		2.39 GHz	-71.40 dBm																																							
M4	1		2.391 GHz	-75.69 dBm																																							
M5	1		2.399965 GHz	-65.51 dBm																																							
<p style="text-align: center;">CH39</p>	 <p><b>2 Marker Table</b></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>2.480033 GHz</td> <td>-3.29 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4835 GHz</td> <td>-69.07 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-72.69 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.48504 GHz</td> <td>-67.66 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 8.JUL.2020 10:33:25</p>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		2.480033 GHz	-3.29 dBm			M2	1		2.4835 GHz	-69.07 dBm			M3	1		2.5 GHz	-72.69 dBm			M4	1		2.48504 GHz	-67.66 dBm									
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																																					
M1	1		2.480033 GHz	-3.29 dBm																																							
M2	1		2.4835 GHz	-69.07 dBm																																							
M3	1		2.5 GHz	-72.69 dBm																																							
M4	1		2.48504 GHz	-67.66 dBm																																							

Test Item:	SE
<p>CH00 Reference level</p>	 <p>Date: 8.JUL.2020 10:29:38</p>
<p>CH00 30MHz~1000MHz</p>	 <p>Date: 8.JUL.2020 10:29:54</p>
<p>CH00 1GHz~26GHz</p>	 <p>Date: 8.JUL.2020 10:30:10</p>

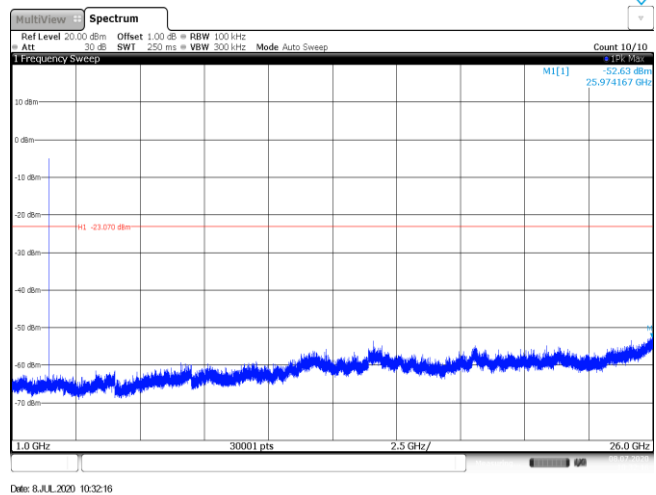
CH19  
Reference level



CH19  
30MHz~1000MHz



CH19  
1GHz~26GHz



<p>CH39 Reference level</p>	<p>MultiView Spectrum          Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz          Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep          Count 100/100          1 Frequency Sweep          M1[1] -3.87 dBm          2.4800000 GHz          CF 2.48 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz          Date: 8.JUL.2020 10:33:32</p>
<p>CH39 30MHz~1000MHz</p>	<p>MultiView Spectrum          Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz          Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep          Count 10/10          1 Frequency Sweep          M1[1] -59.73 dBm          554.2840 MHz          -23.850 dBm          30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz          Date: 8.JUL.2020 10:33:48</p>
<p>CH39 1GHz~26GHz</p>	<p>MultiView Spectrum          Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz          Att 30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep          Count 10/10          1 Frequency Sweep          M1[1] -51.72 dBm          25.986667 GHz          -23.850 dBm          1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz          Date: 8.JUL.2020 10:34:05</p>

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