ANNEX D TEST DATA

For

Project No.:	8134EU012102W
Client:	POLYGEAR TECH
Product Description:	Wireless Keyboard
Model No.:	BTX5050
FCC ID:	2BDT7-BTX5050
Technology:	Bluetooth BLE
Test Engineer:	Mikey zhu
Test Date:	2023-11-27

Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Unwanted Emissions In Non-restricted Frequency Bands	Pass
Unwanted Emissions In Restricted Frequency Bands	Pass

1. Duty Cycle

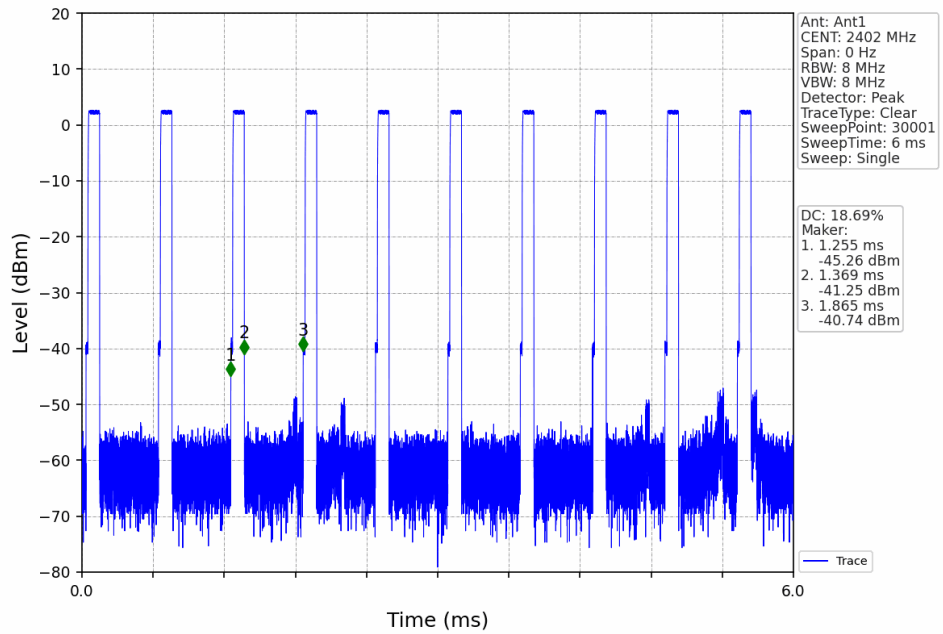
1.1 Ant1

1.1.1 Test Result

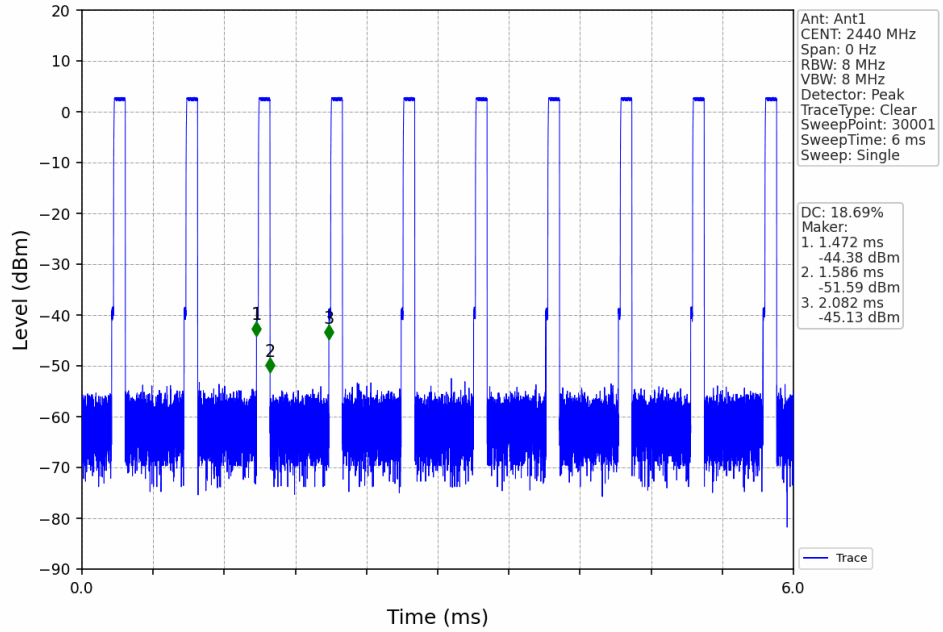
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	0.114	0.610	18.69	7.28	0.16
		2440	0.114	0.610	18.69	7.28	0.16
		2480	0.099	0.611	16.20	7.90	0.17

1.1.2 Test Graph

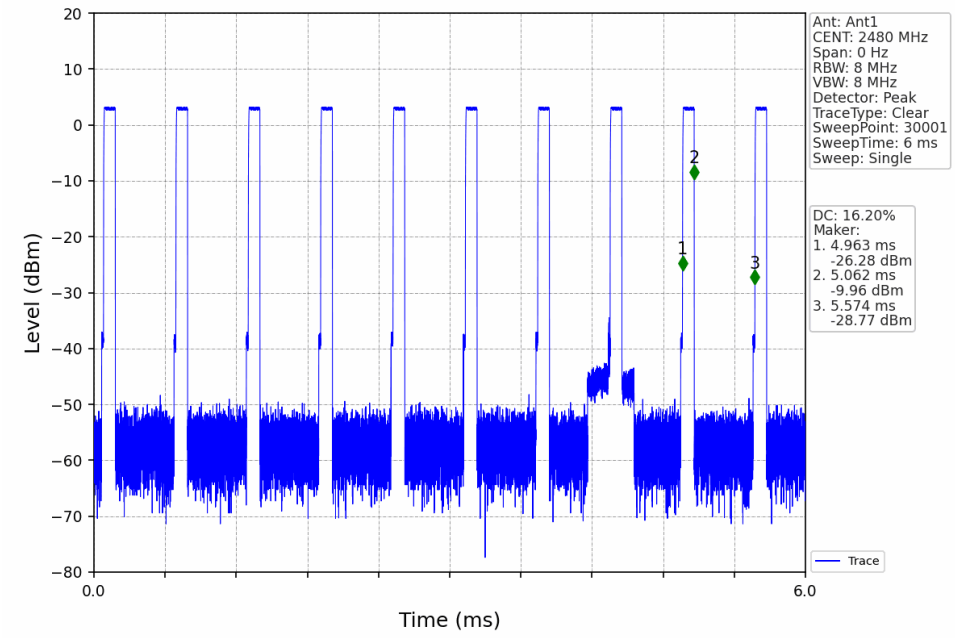
1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



2. Bandwidth

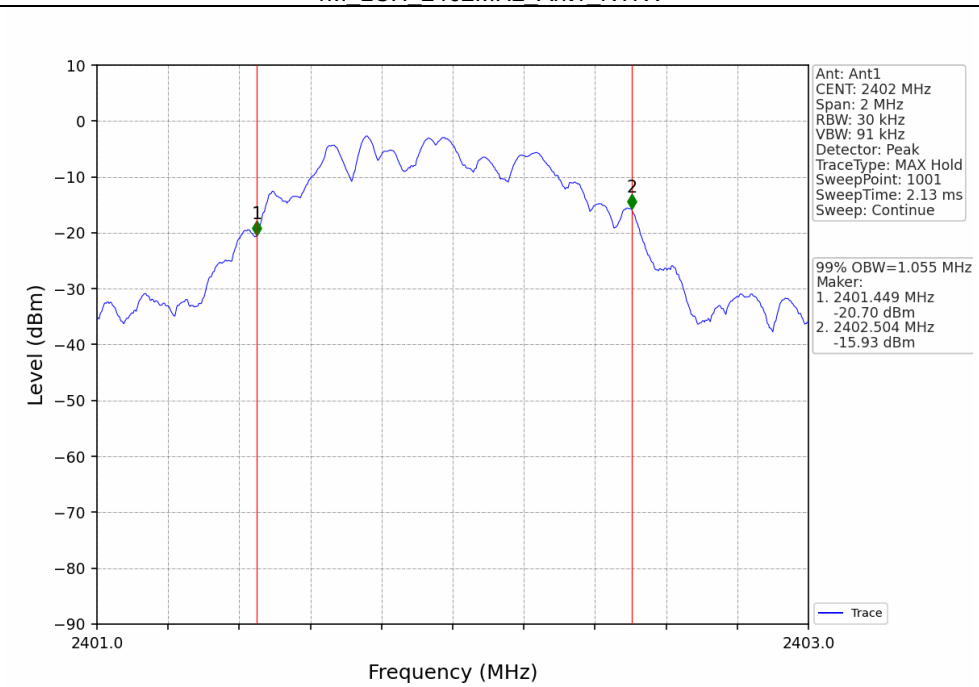
2.1 OBW

2.1.1 Test Result

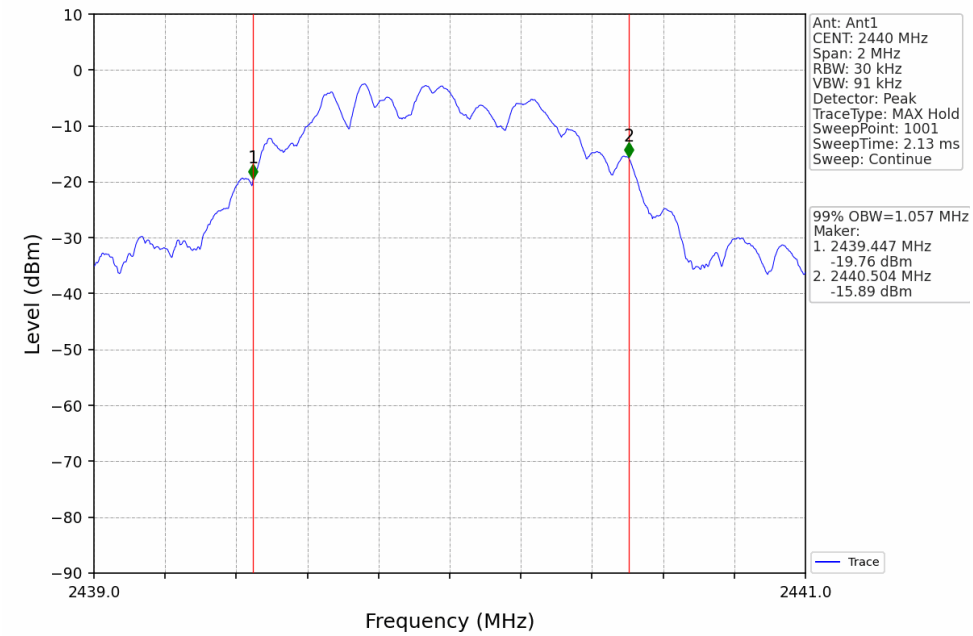
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz) Result	Verdict
1M	SISO	2402	1	1.055	Pass
		2440	1	1.057	Pass
		2480	1	1.071	Pass

2.1.2 Test Graph

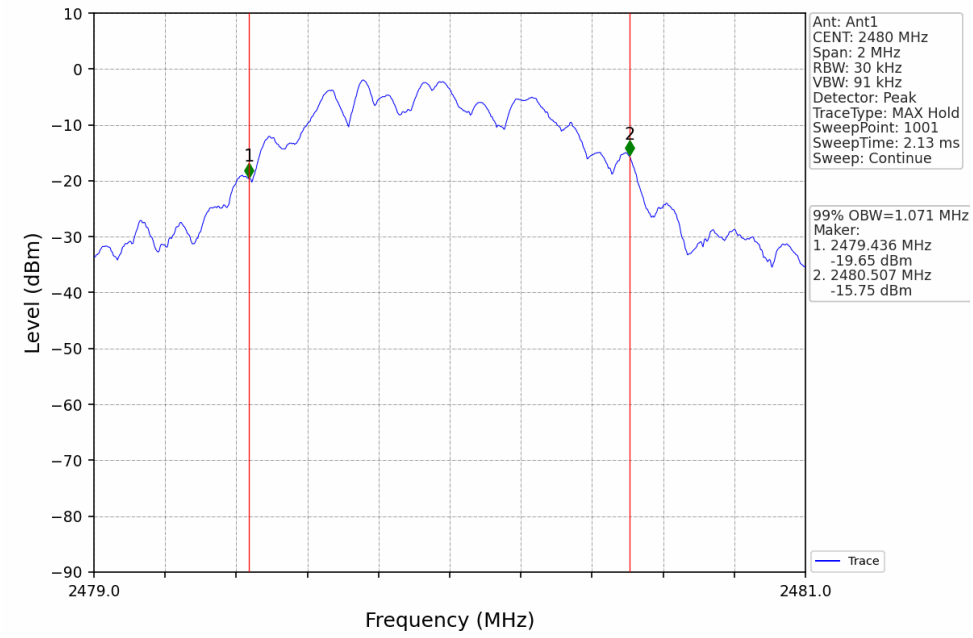
1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



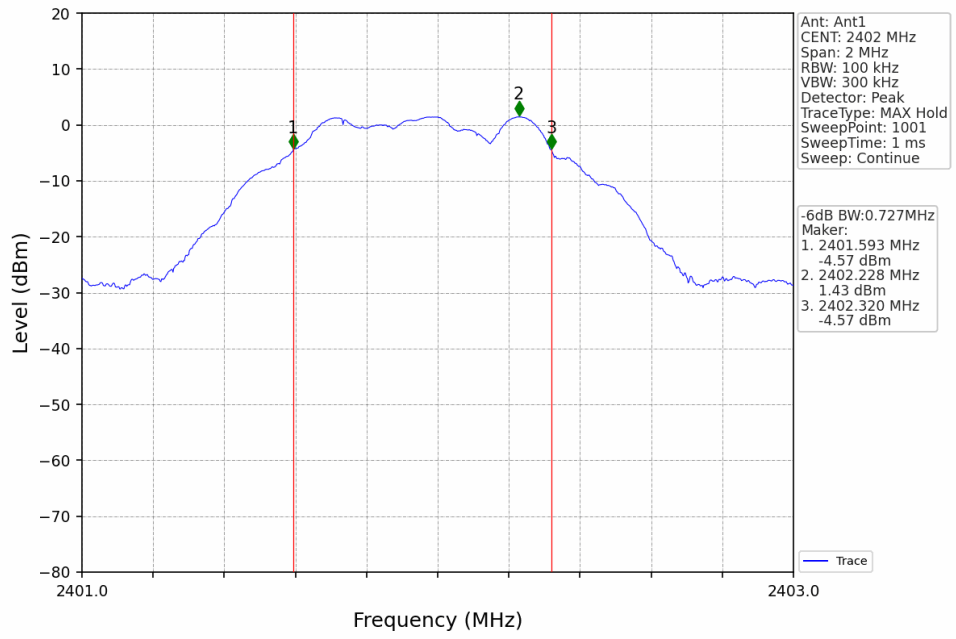
2.2 6dB BW

2.2.1 Test Result

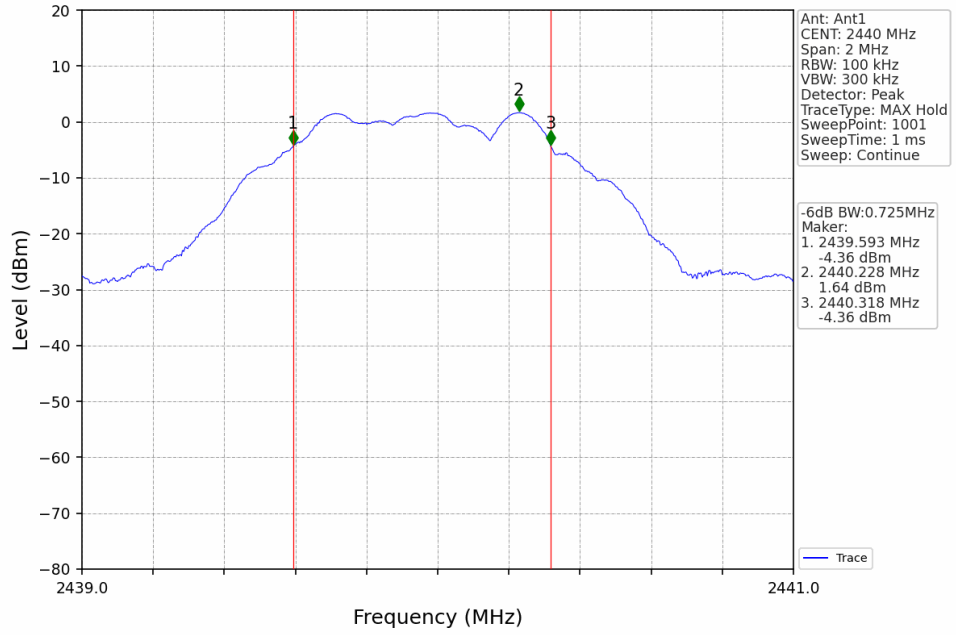
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.727	>=0.5	Pass
		2440	1	0.725	>=0.5	Pass
		2480	1	0.726	>=0.5	Pass

2.2.2 Test Graph

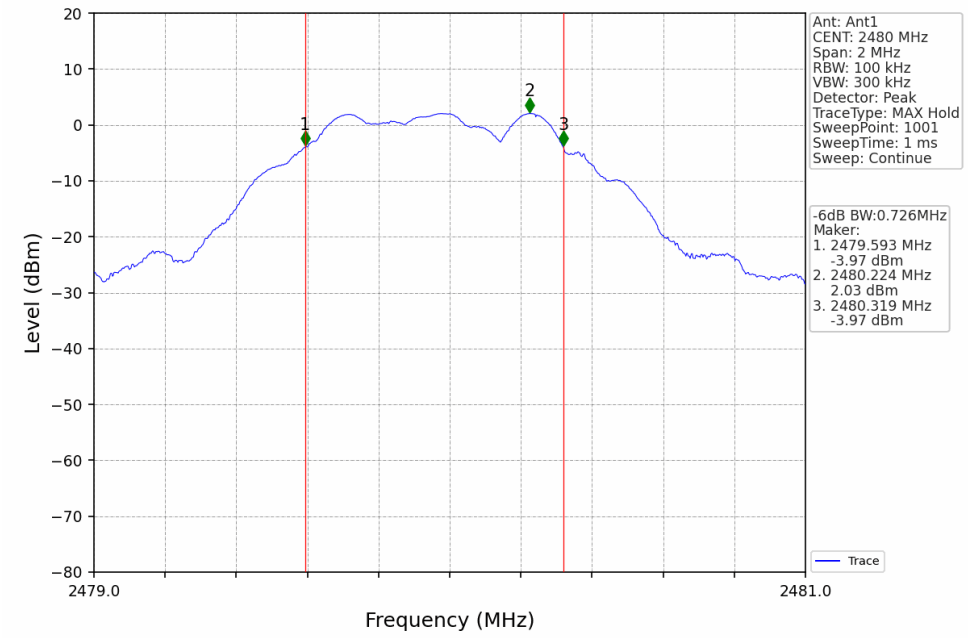
1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



3. Maximum Conducted Output Power

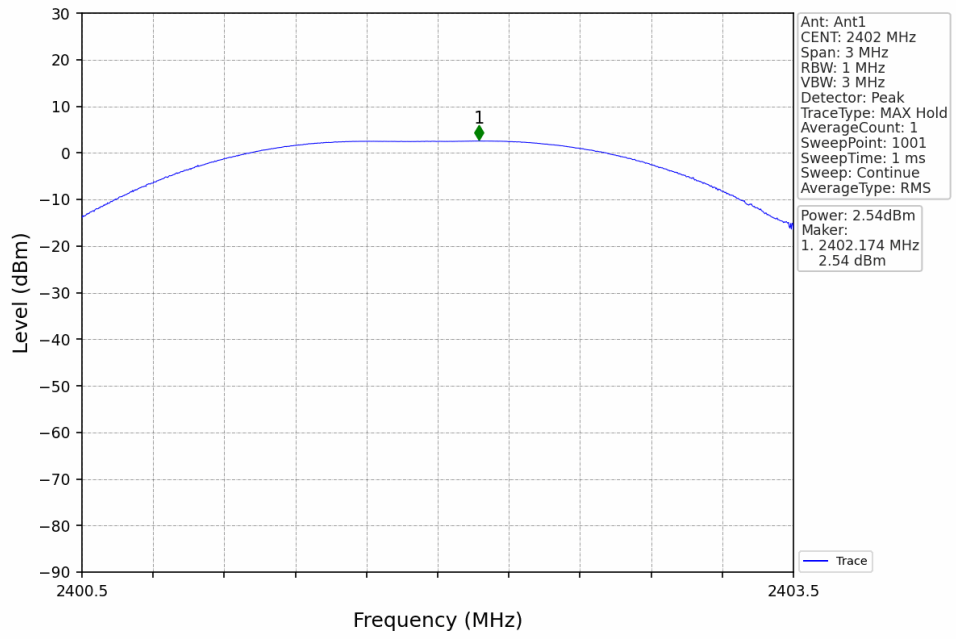
3.1 Power

3.1.1 Test Result

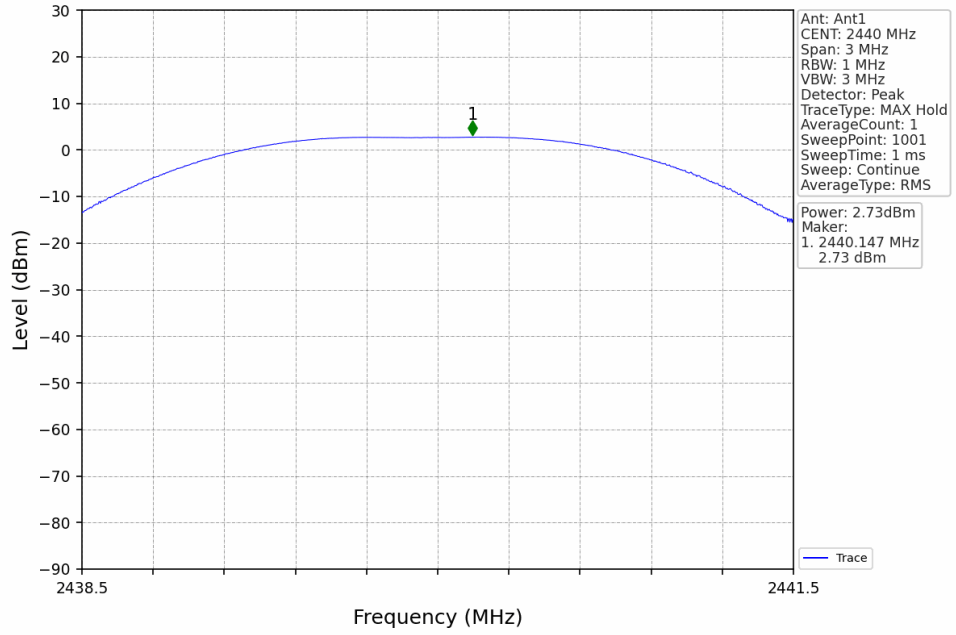
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	2.54	<=30	Pass
		2440	2.73	<=30	Pass
		2480	3.12	<=30	Pass

3.1.2 Test Graph

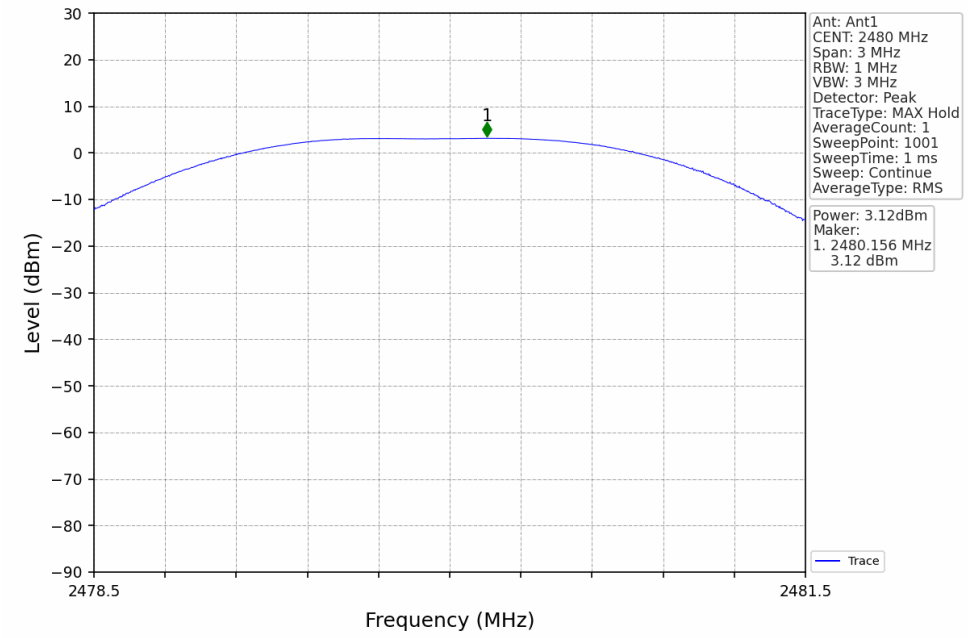
1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



4. Maximum Power Spectral Density

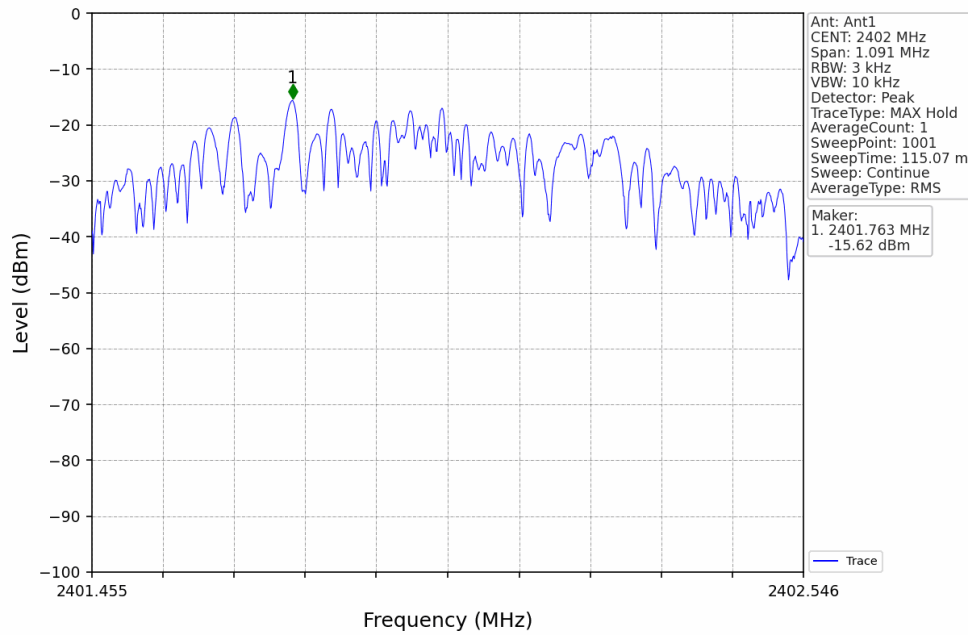
4.1 PSD

4.1.1 Test Result

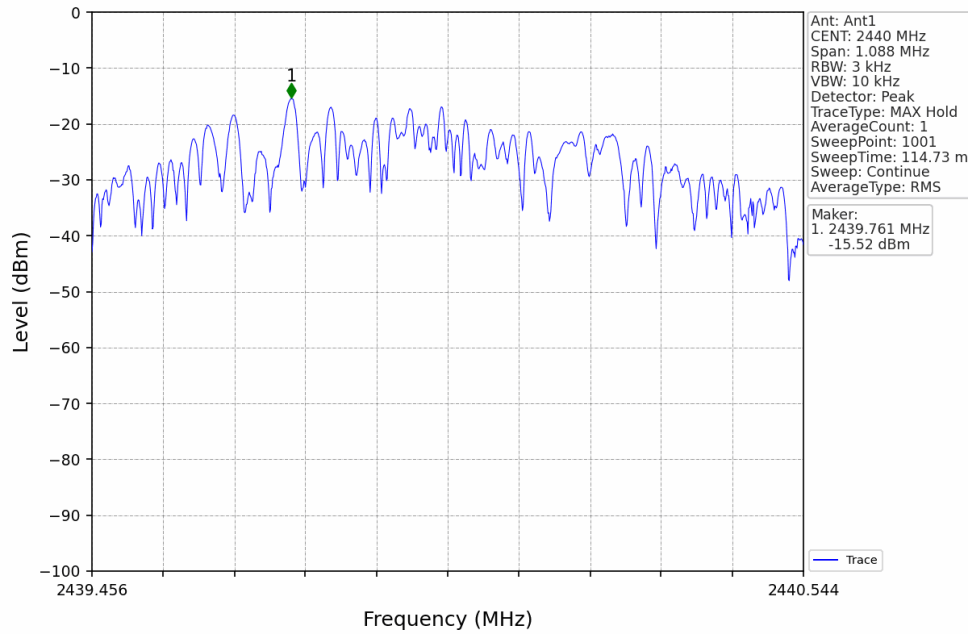
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-15.62	<=8	Pass
		2440	-15.52	<=8	Pass
		2480	-15.09	<=8	Pass

4.1.2 Test Graph

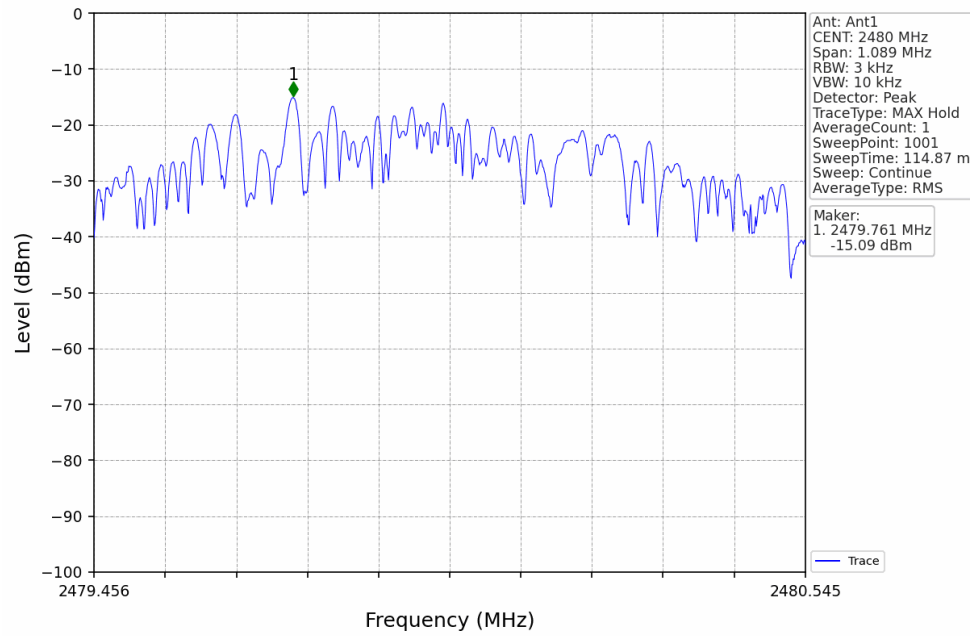
1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

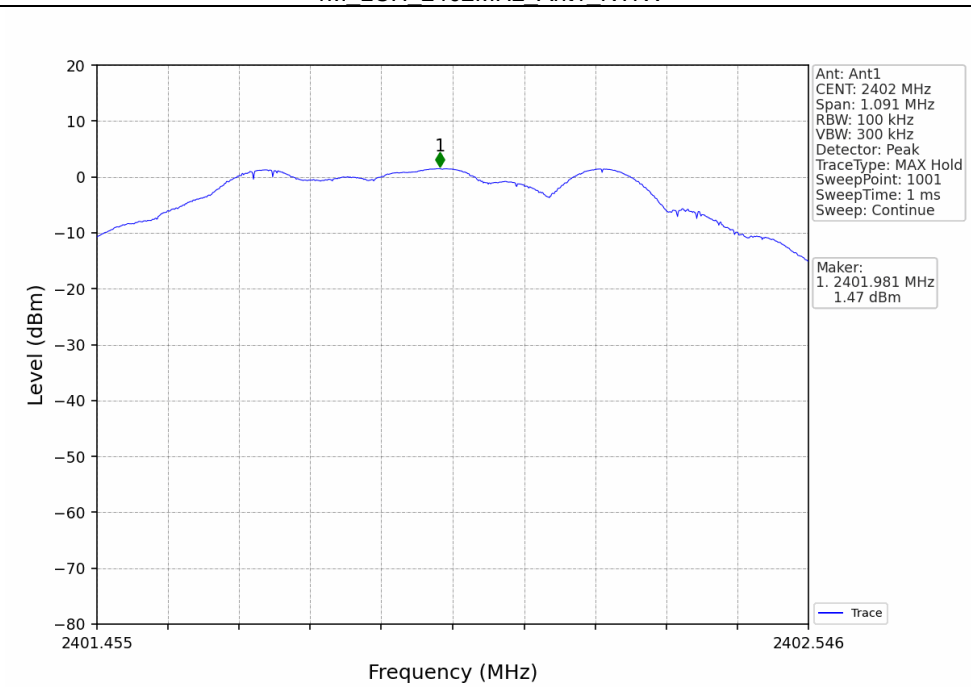
5.1 Ref

5.1.1 Test Result

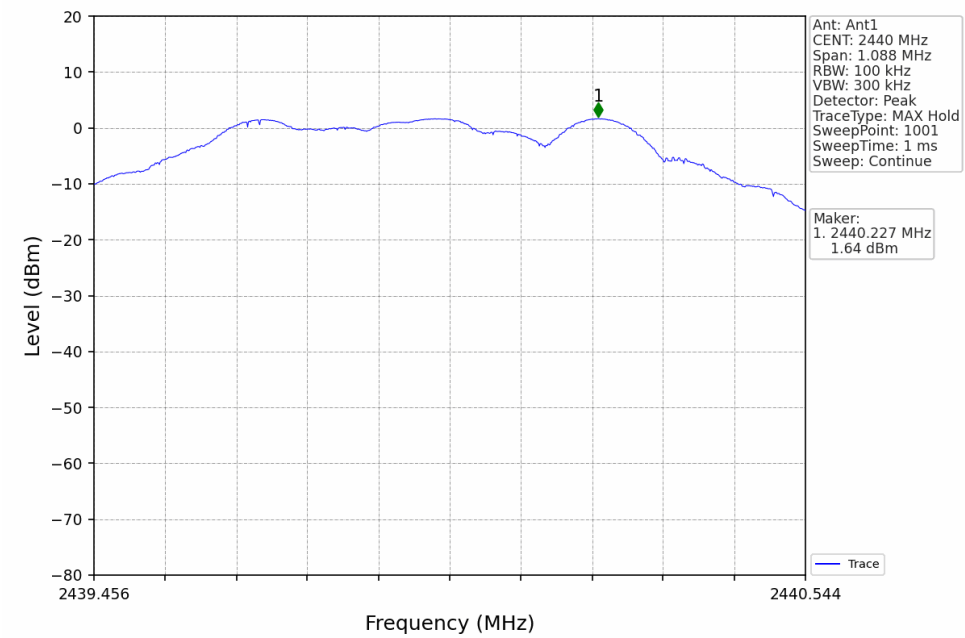
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	1.47
		2440	1	1.64
		2480	1	2.09
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.				

5.1.2 Test Graph

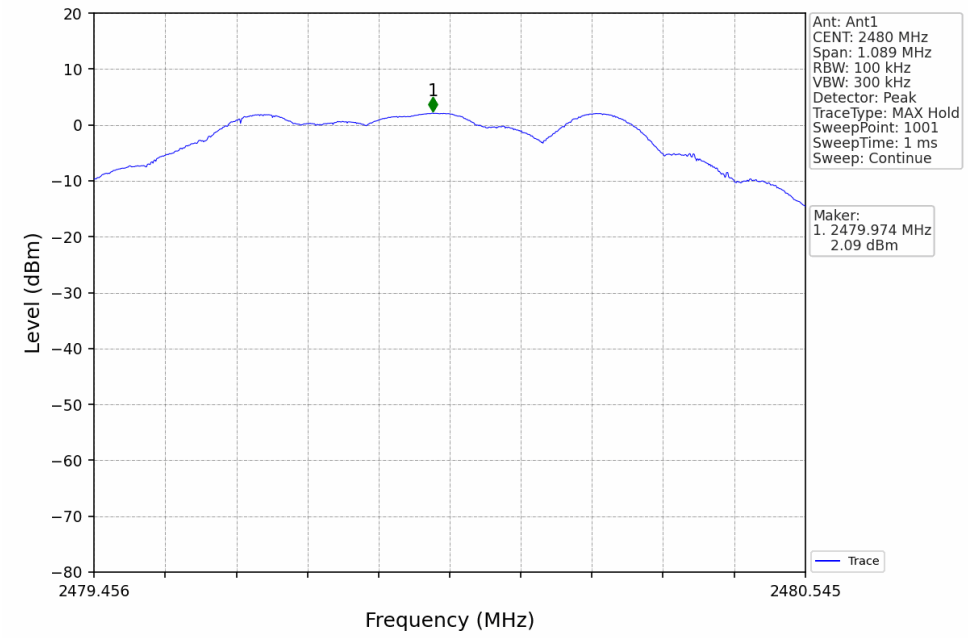
1M_LCH_2402MHz_Ant1_NTNV



1M_MCH_2440MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



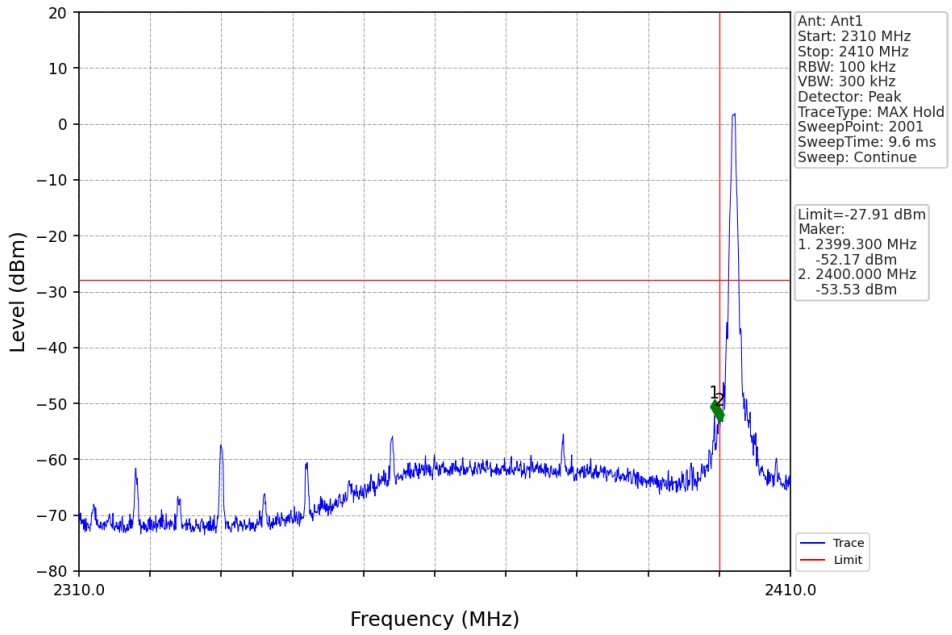
5.2 CSE

5.2.1 Test Result

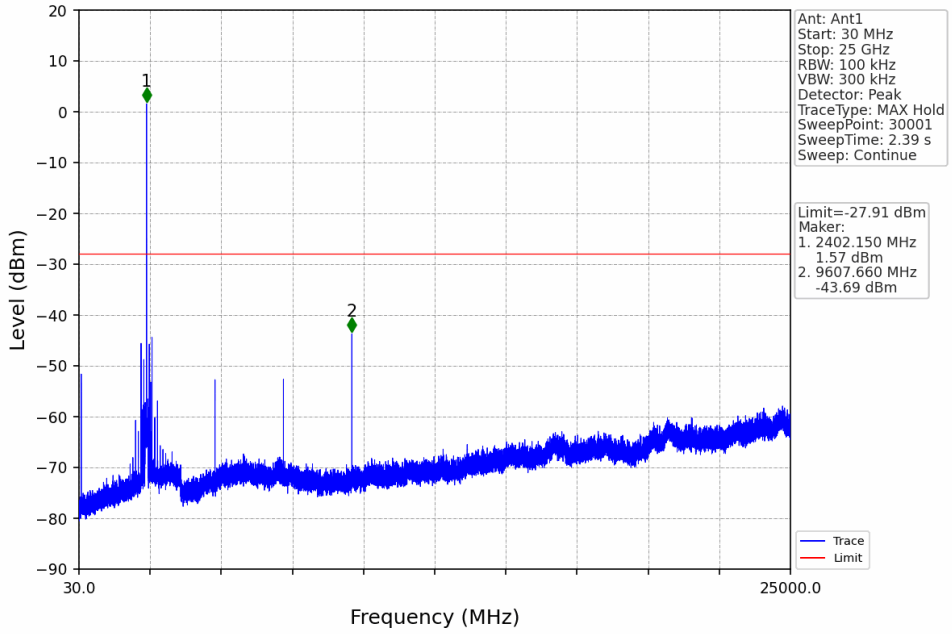
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	2.09	-27.91	Pass
		2440	1	2.09	-27.91	Pass
		2480	1	2.09	-27.91	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.						

5.2.2 Test Graph

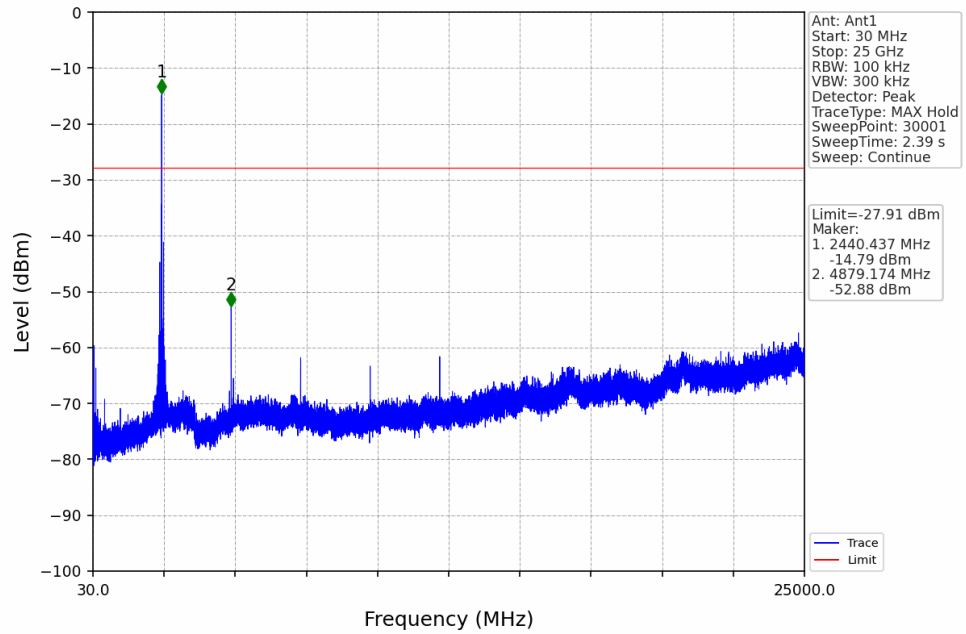
1M_LCH_2402MHz_Ant1_NTNV



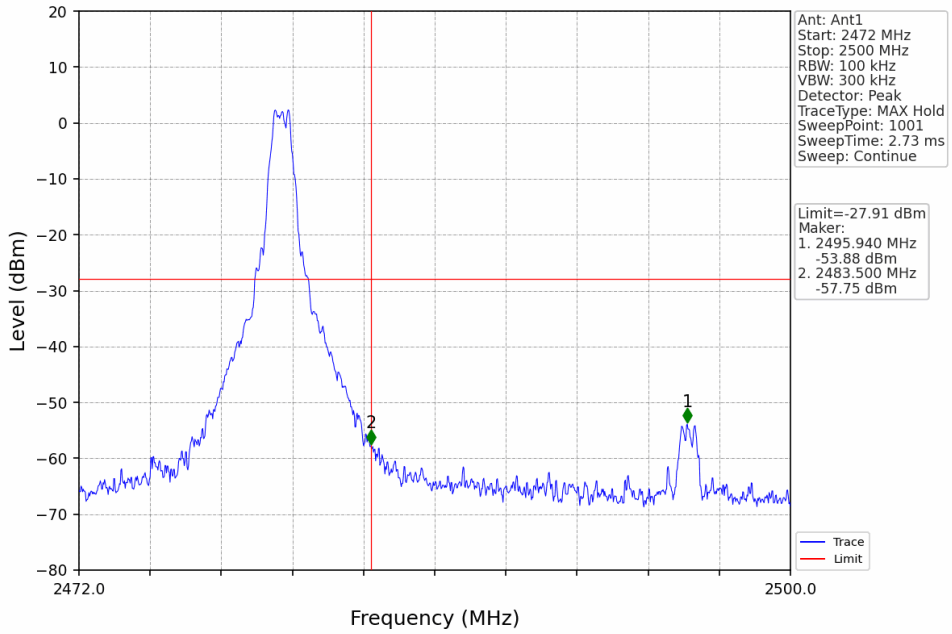
1M_LCH_2402MHz_Ant1_NTNV



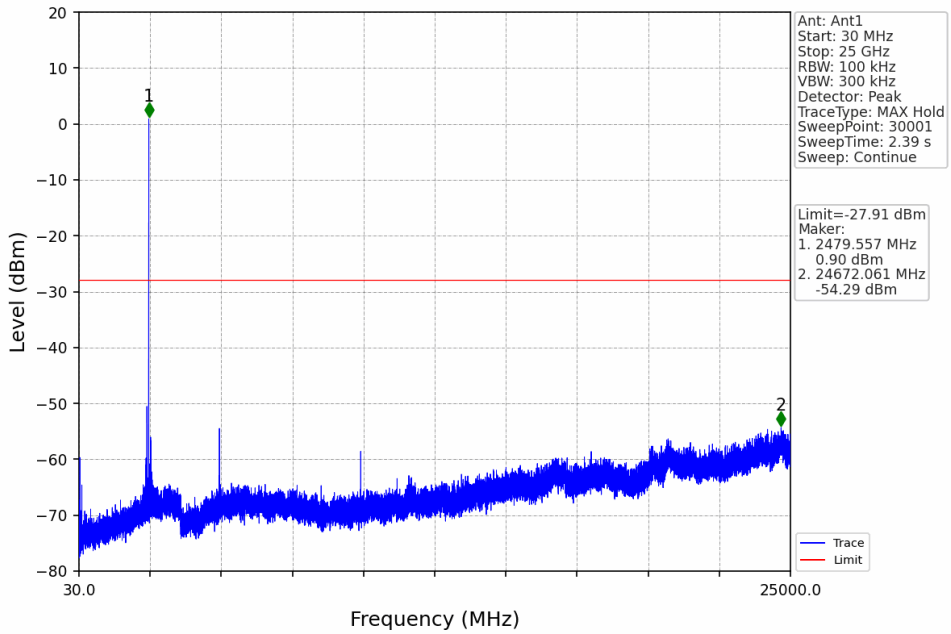
1M_MCH_2440MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



1M_HCH_2480MHz_Ant1_NTNV



6. Unwanted Emissions In Restricted Frequency Bands

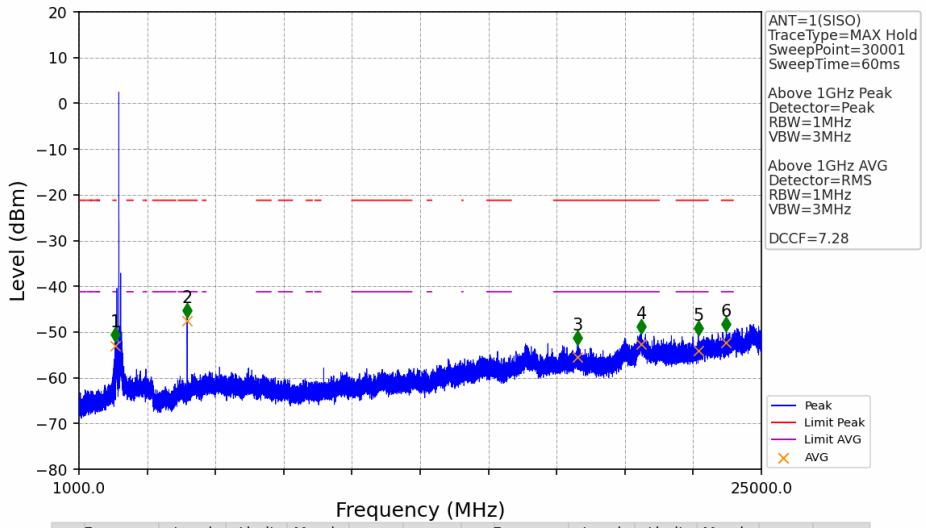
6.1 RSE

6.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Unwanted Emissions (dBm)		Verdict
				Result	Limit	
1M	SISO	2402	1	Refer To Test Graph		Pass
		2440	1	Refer To Test Graph		Pass
		2480	1	Refer To Test Graph		Pass

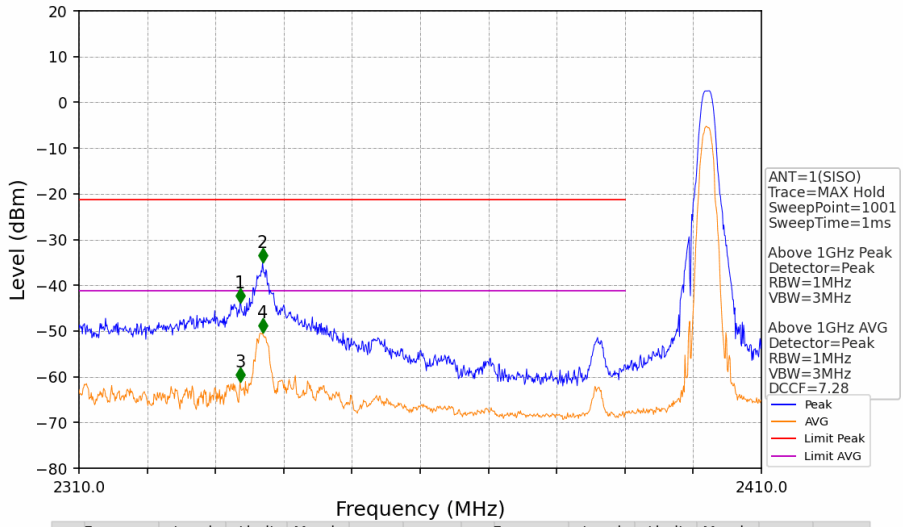
6.1.2 Test Graph

1M_LCH_2402MHz_Ant1_NTNV



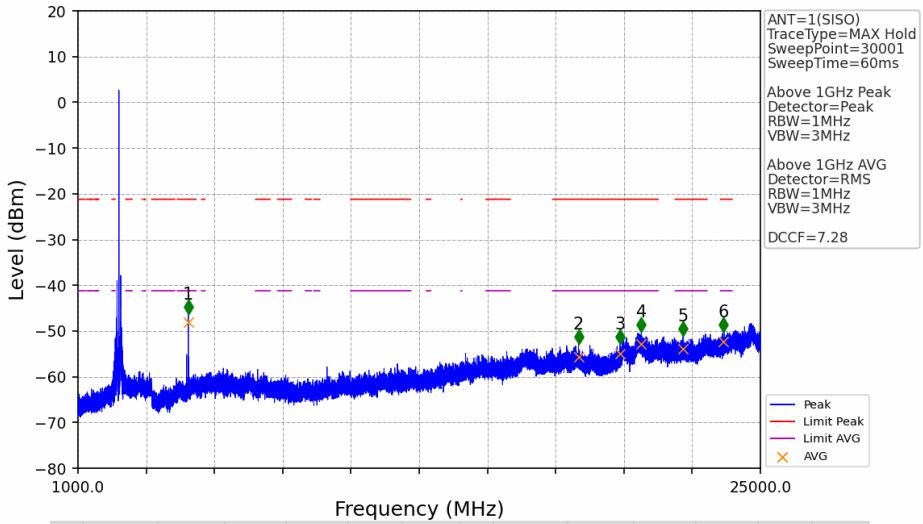
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2272	-52.13	-21.20	30.93	Pass	Peak	7	2272	-53.03	-41.20	11.83	Pass	AVG
2	4804	-46.84	-21.20	25.64	Pass	Peak	8	4804	-47.48	-41.20	6.28	Pass	AVG
3	18521.6	-52.91	-21.20	31.71	Pass	Peak	9	18521.6	-55.57	-41.20	14.37	Pass	AVG
4	20780	-50.42	-21.20	29.22	Pass	Peak	10	20780	-52.66	-41.20	11.46	Pass	AVG
5	22783.2	-50.69	-21.20	29.49	Pass	Peak	11	22783.2	-54.03	-41.20	12.83	Pass	AVG
6	23763.2	-49.81	-21.20	28.61	Pass	Peak	12	23763.2	-52.23	-41.20	11.03	Pass	AVG

1M_LCH_2402MHz_Ant1_NTNV



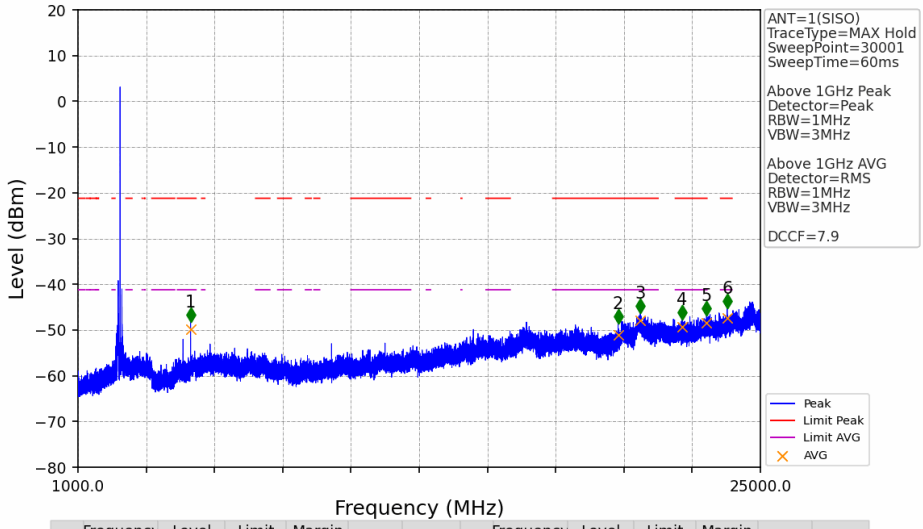
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2333.600	-43.80	-21.20	22.60	Pass	Peak	3	2333.600	/	-21.20	/	/	AVG
2	2336.900	-35.09	-21.20	13.89	Pass	Peak	4	2336.900	/	-21.20	/	/	AVG

1M_MCH_2440MHz_Ant1_NTNV



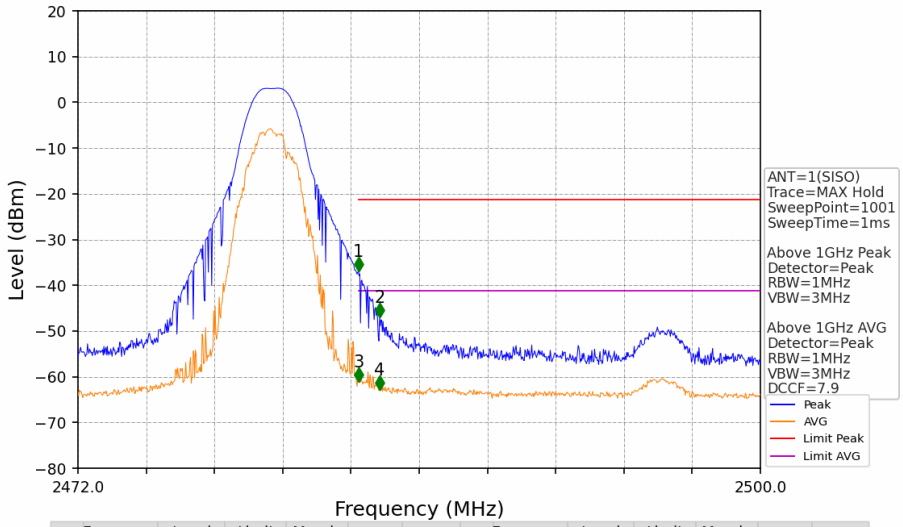
No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	4880.8	-46.32	-21.20	25.12	Pass	Peak	7	4880.8	-48.13	-41.20	6.93	Pass	AVG
2	18604	-52.90	-21.20	31.70	Pass	Peak	8	18604	-55.67	-41.20	14.47	Pass	AVG
3	20067.2	-52.84	-21.20	31.64	Pass	Peak	9	20067.2	-54.99	-41.20	13.79	Pass	AVG
4	20813.6	-50.22	-21.20	29.02	Pass	Peak	10	20813.6	-52.75	-41.20	11.55	Pass	AVG
5	22279.2	-51.15	-21.20	29.95	Pass	Peak	11	22279.2	-53.93	-41.20	12.73	Pass	AVG
6	23688.8	-50.23	-21.20	29.03	Pass	Peak	12	23688.8	-52.37	-41.20	11.17	Pass	AVG

1M_HCH_2480MHz_Ant1_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	4960	-48.27	-21.20	27.07	Pass	Peak	7	4960	-49.79	-41.20	8.59	Pass	AVG
2	19994.4	-48.56	-21.20	27.36	Pass	Peak	8	19994.4	-51.01	-41.20	9.81	Pass	AVG
3	20776.8	-46.38	-21.20	25.18	Pass	Peak	9	20776.8	-47.96	-41.20	6.76	Pass	AVG
4	22250.4	-47.69	-21.20	26.49	Pass	Peak	10	22250.4	-49.35	-41.20	8.15	Pass	AVG
5	23105.6	-46.86	-21.20	25.66	Pass	Peak	11	23105.6	-48.38	-41.20	7.18	Pass	AVG
6	23831.2	-45.31	-21.20	24.11	Pass	Peak	12	23831.2	-47.41	-41.20	6.21	Pass	AVG

1M_HCH_2480MHz_Ant1_NTNV



No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark	No	Frequency (MHz)	Level (dBm)	Limit (dBm)	Margin (dB)	Status	Remark
1	2483.508	-37.03	-21.20	15.83	Pass	Peak	3	2483.508	/	-21.20	/	/	AVG
2	2484.376	-47.01	-21.20	25.81	Pass	Peak	4	2484.376	/	-21.20	/	/	AVG

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