

Test Data for BLE

Product Name: Grace Link Internet Radio Device

Test Model: GDI-WHAL01

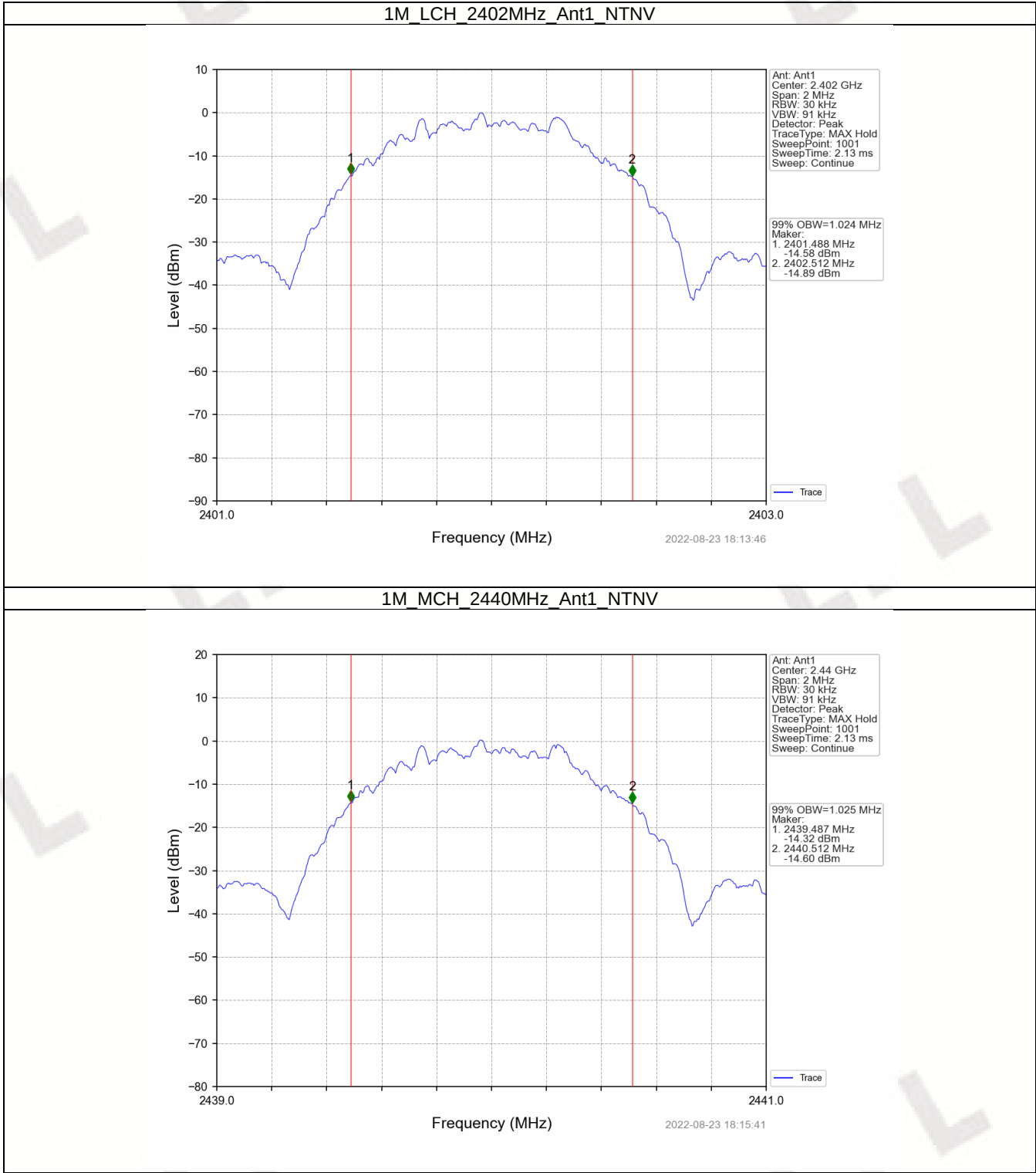
1. Bandwidth

1.1 OBW

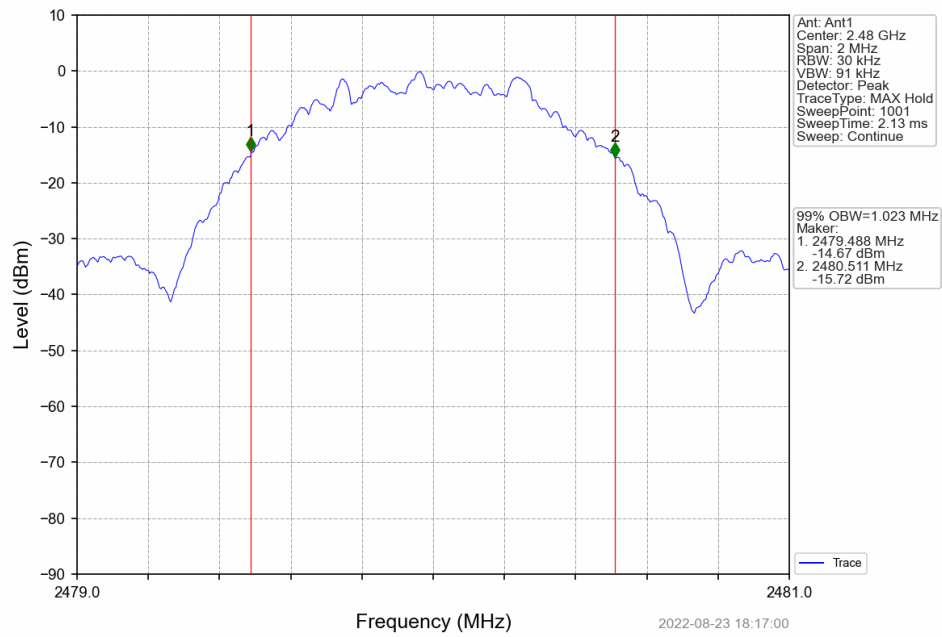
1.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)	Verdict
				Result	
1M	SISO	2402	1	1.024	Pass
		2440	1	1.025	Pass
		2480	1	1.023	Pass
2M	SISO	2402	1	2.048	Pass
		2440	1	2.053	Pass
		2480	1	2.052	Pass

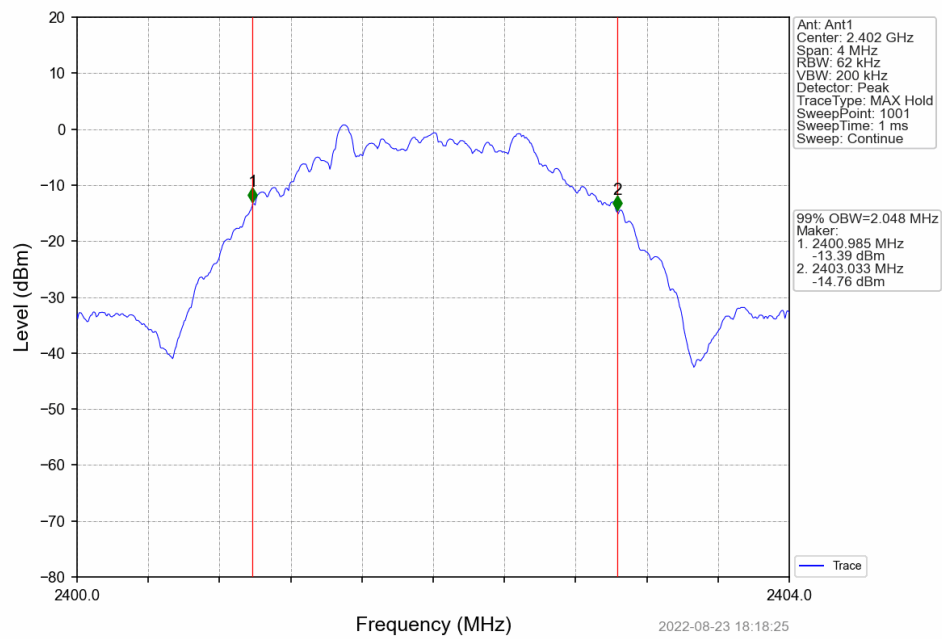
1.1.2 Test Graph

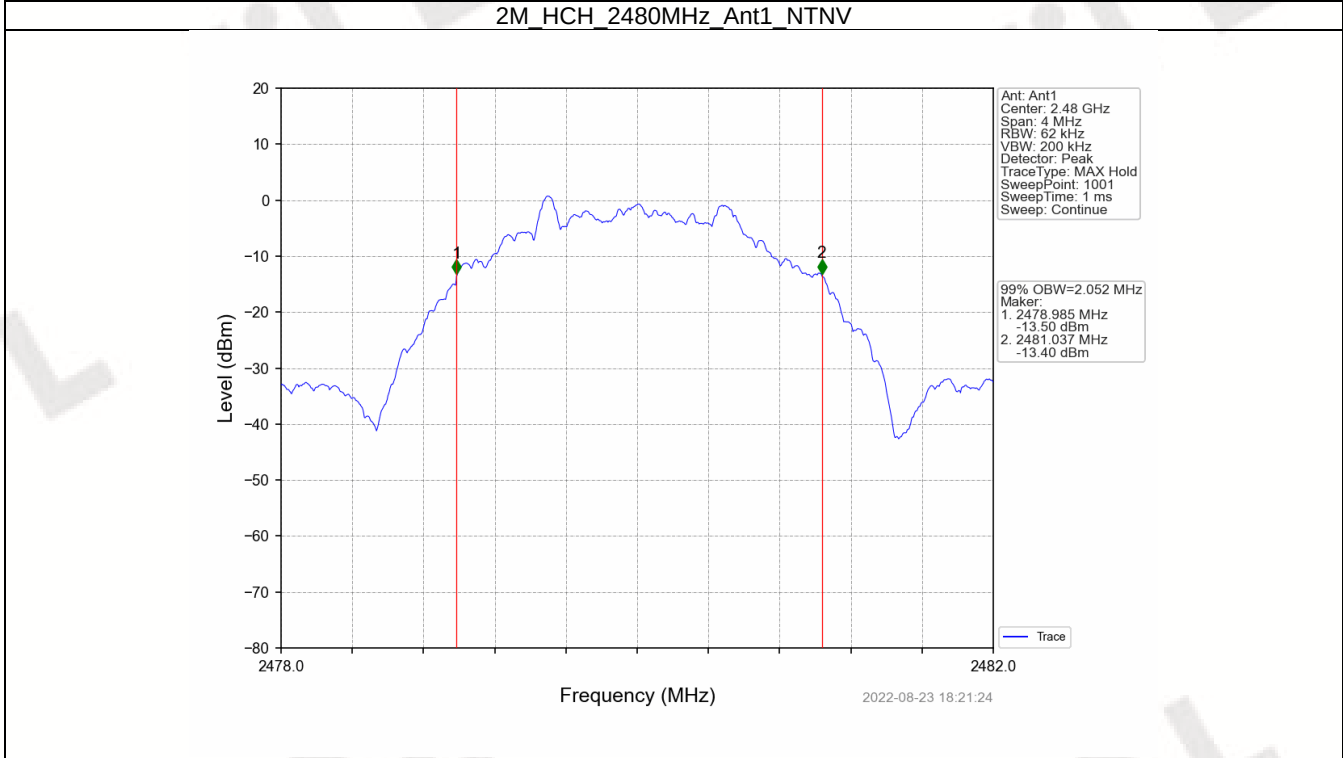
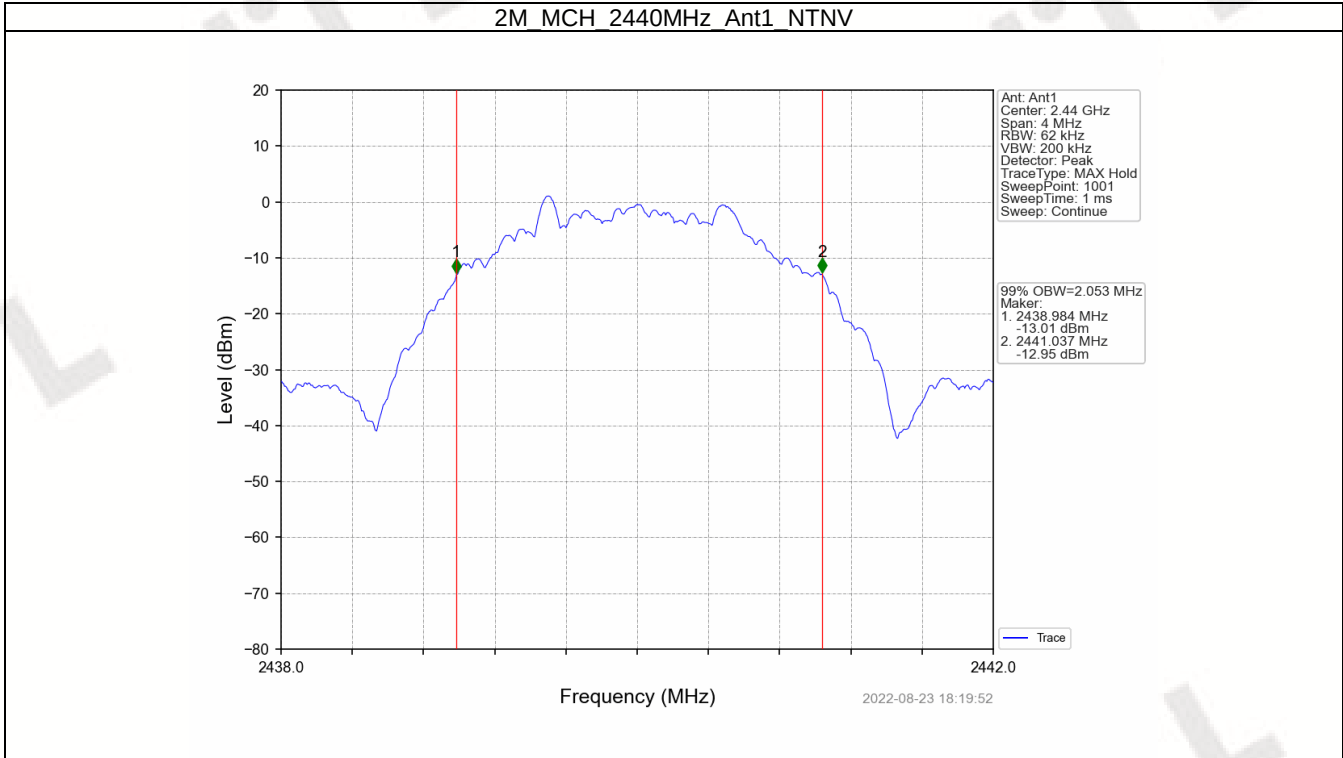


1M HCH 2480MHz Ant1 NTNV



2M LCH 2402MHz Ant1 NTNV



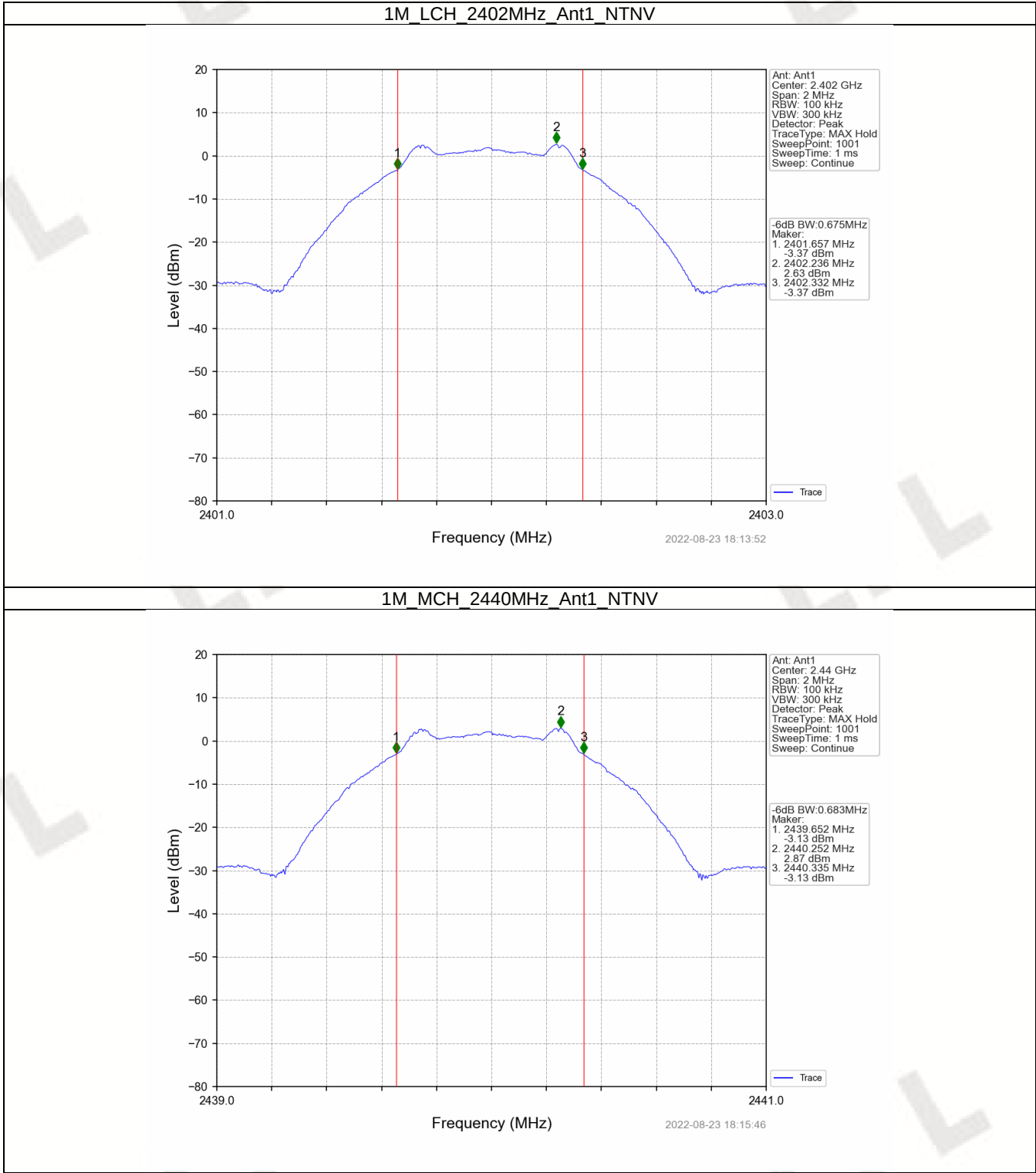


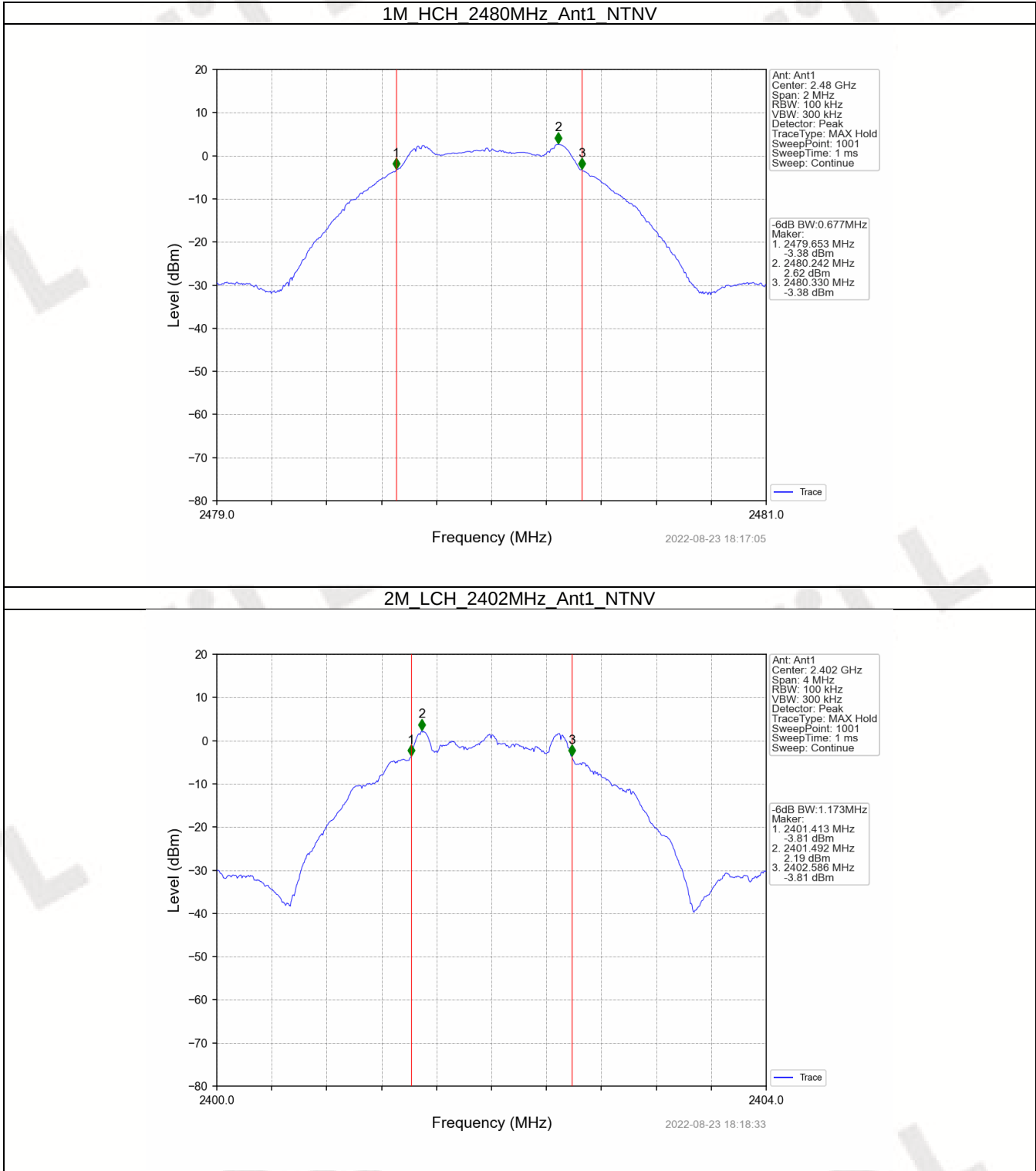
1.2 6dB BW

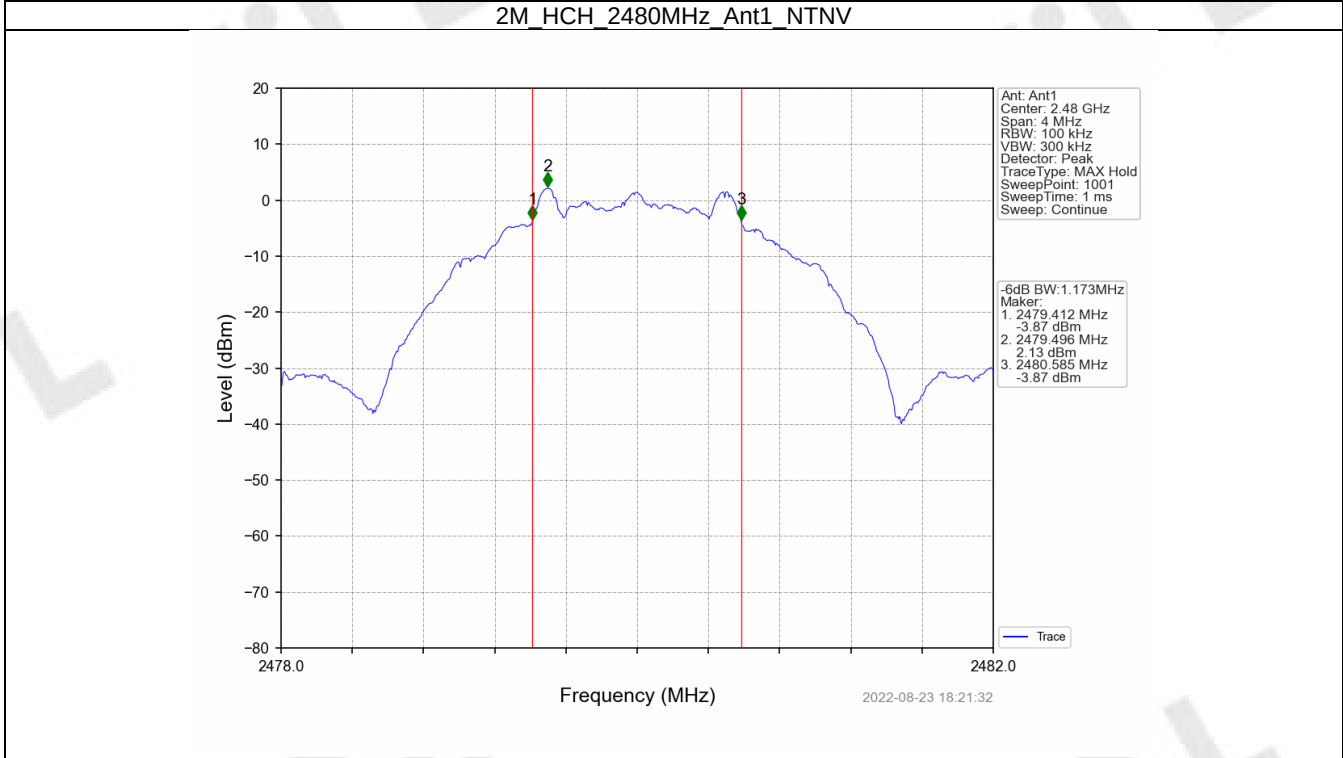
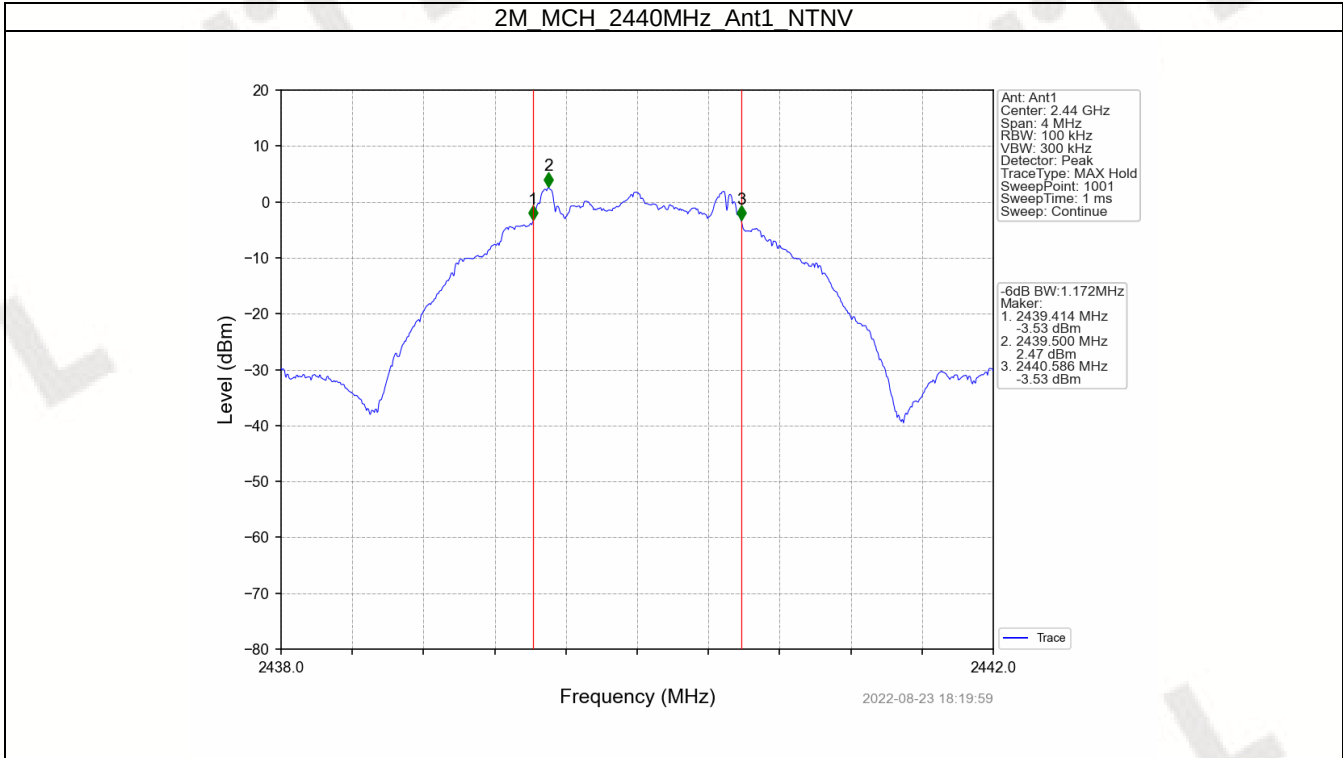
1.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.675	≥ 0.5	Pass
		2440	1	0.683	≥ 0.5	Pass
		2480	1	0.677	≥ 0.5	Pass
2M	SISO	2402	1	1.173	≥ 0.5	Pass
		2440	1	1.172	≥ 0.5	Pass
		2480	1	1.173	≥ 0.5	Pass

1.2.2 Test Graph







2. Maximum Conducted Output Power

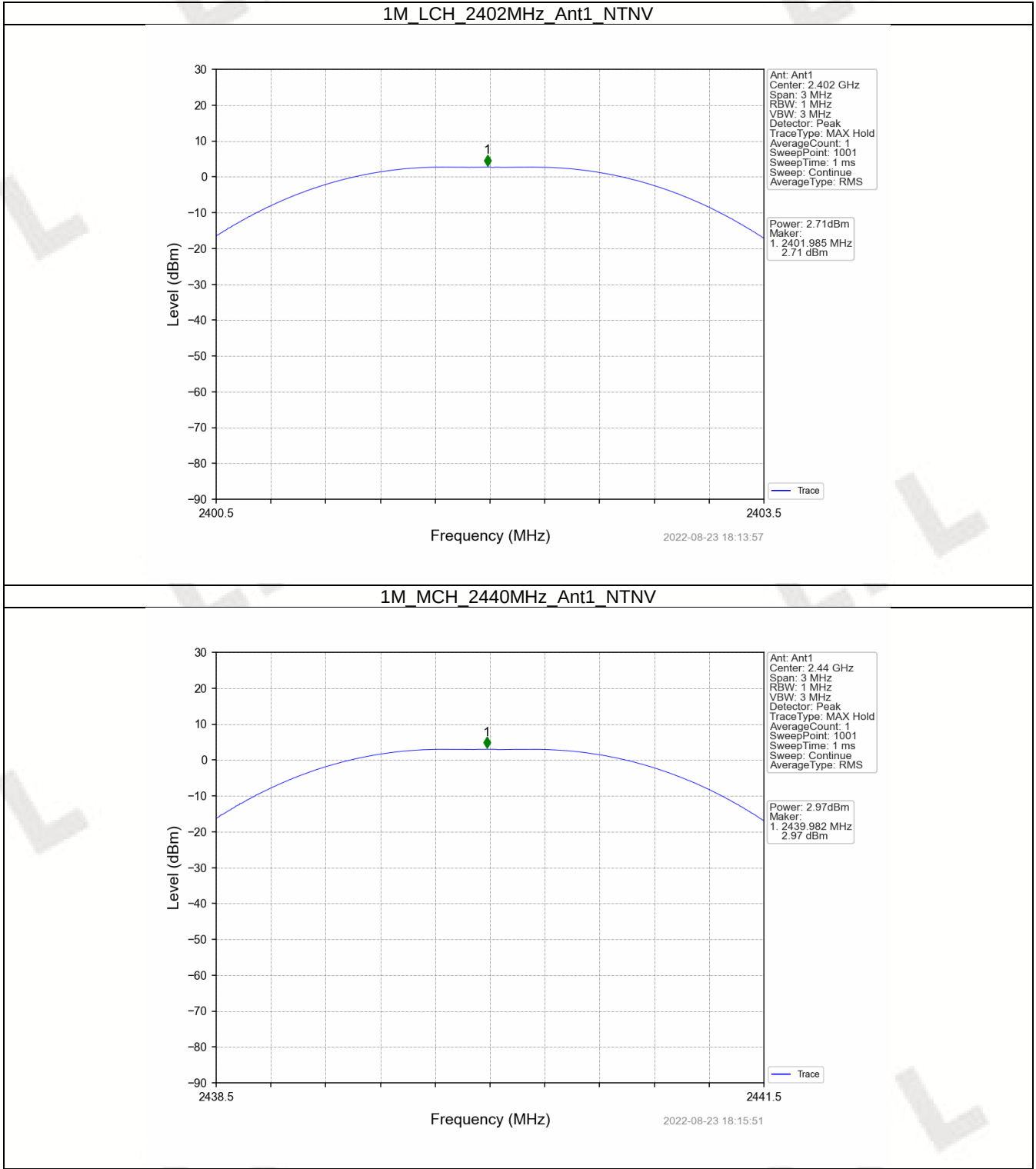
2.1 Power

2.1.1 Test Result

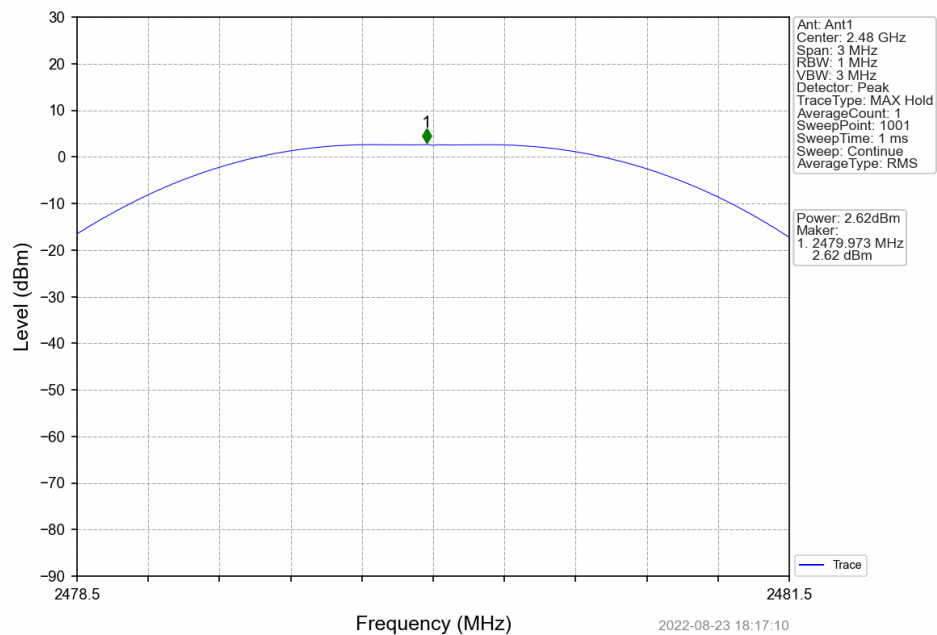
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	2.71	<=30	Pass
		2440	2.97	<=30	Pass
		2480	2.62	<=30	Pass
2M	SISO	2402	2.72	<=30	Pass
		2440	3.00	<=30	Pass
		2480	2.65	<=30	Pass

Note1: Antenna Gain: Ant1: 2.00dBi;

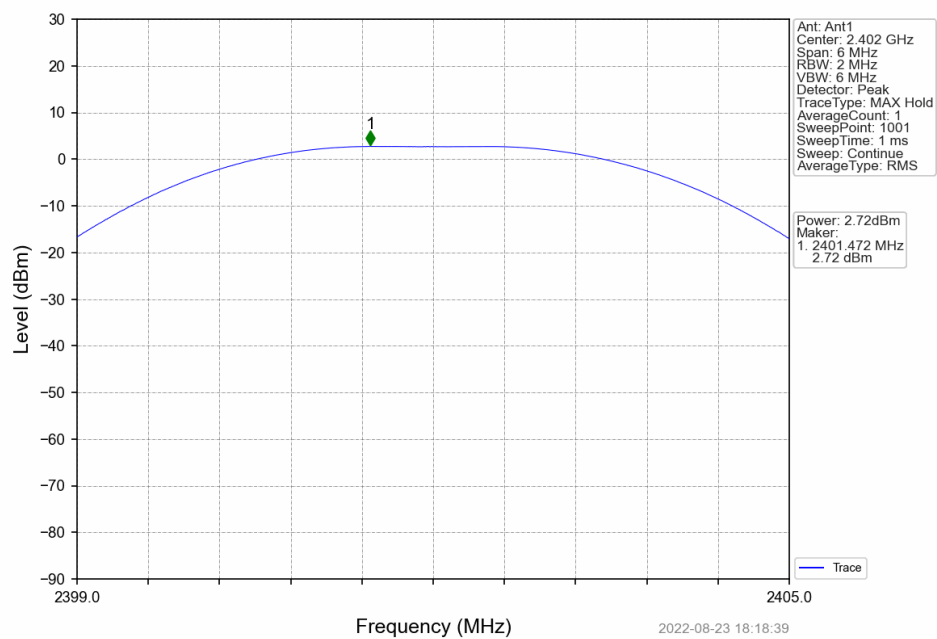
2.1.2 Test Graph

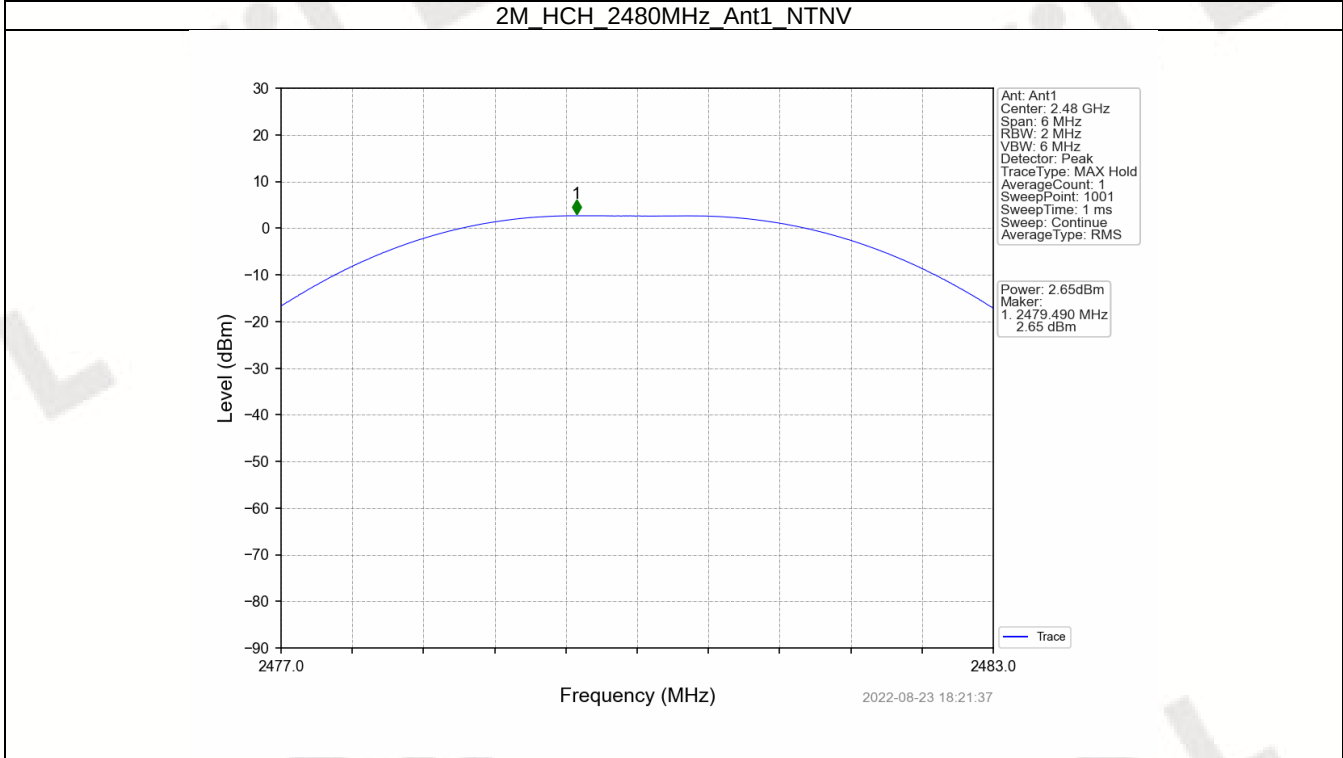
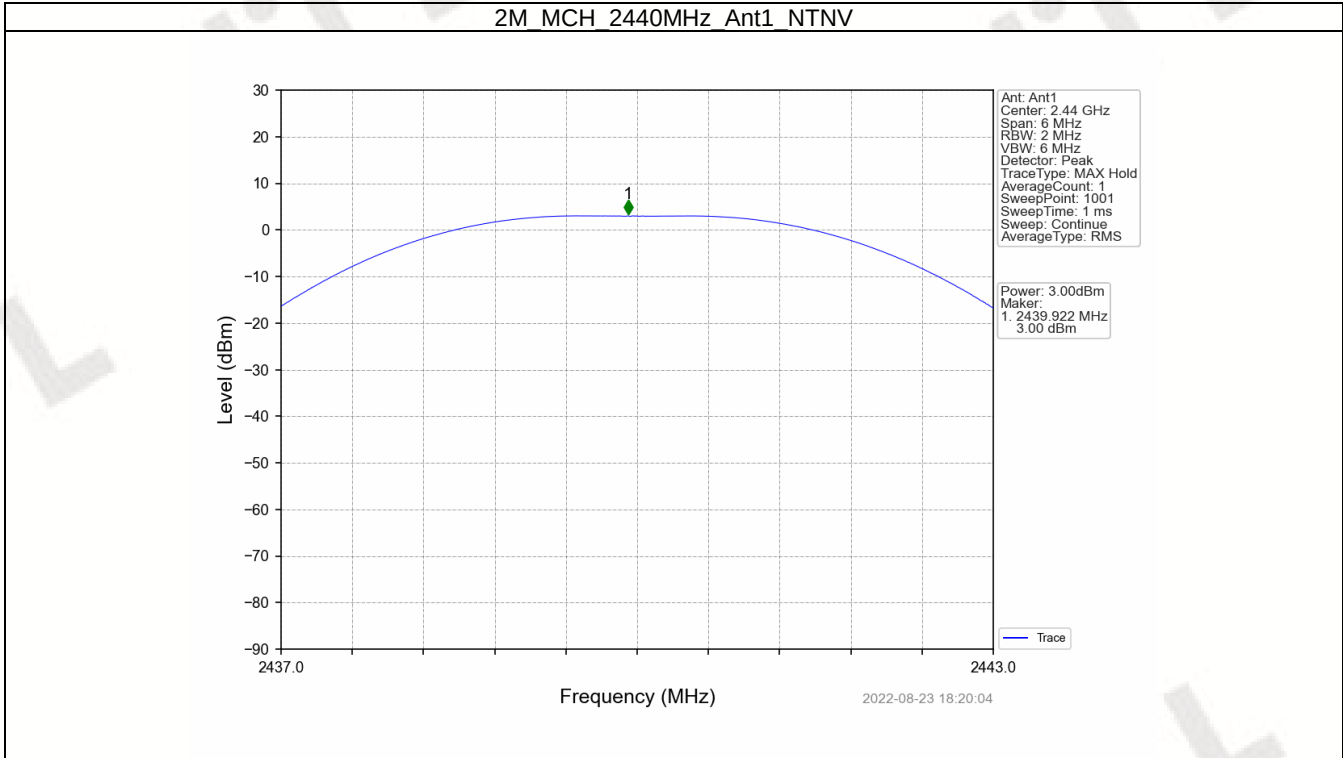


1M_HCH_2480MHz_Ant1_NTNV



2M_LCH_2402MHz_Ant1_NTNV





3. Maximum Power Spectral Density

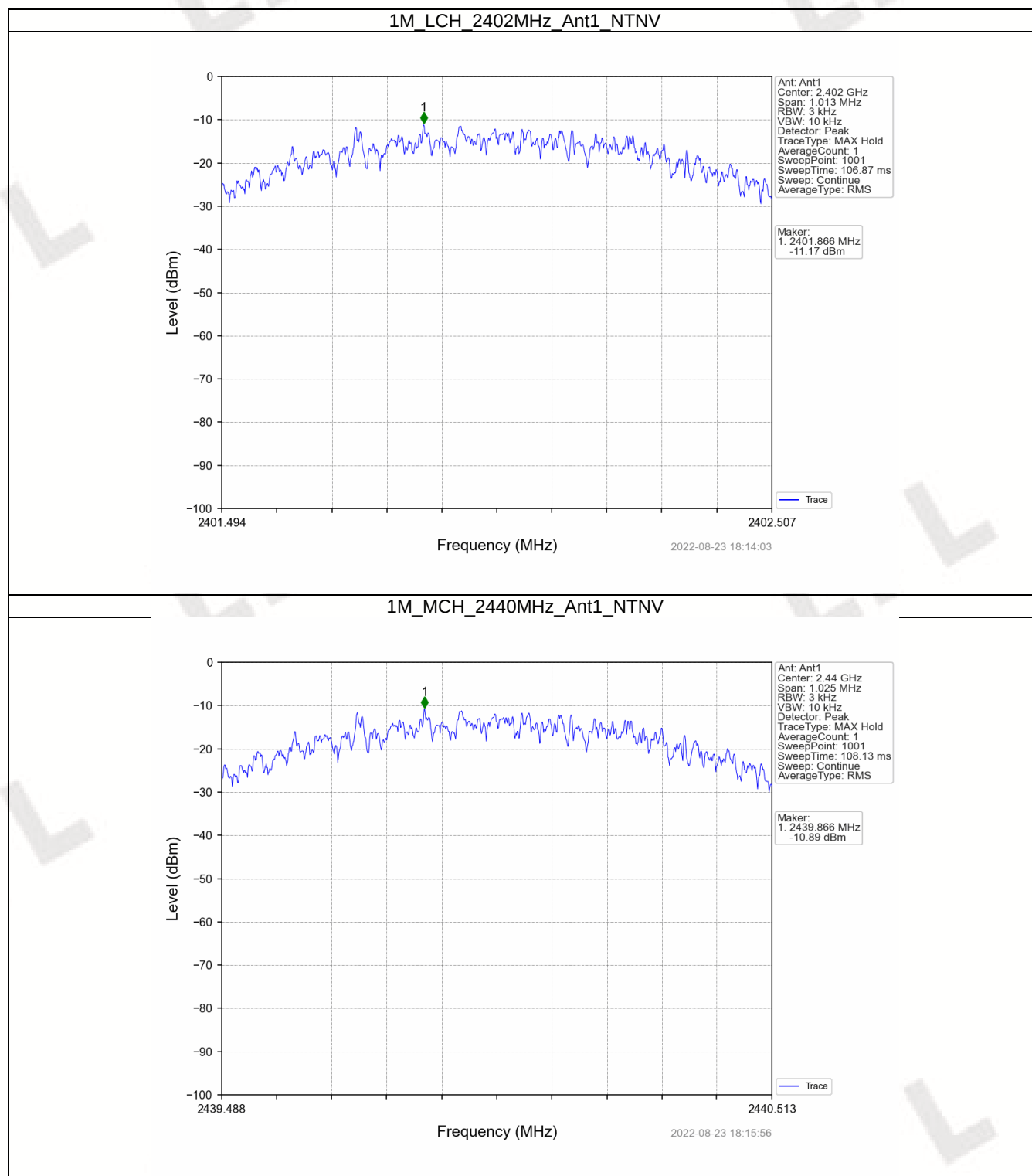
3.1 PSD

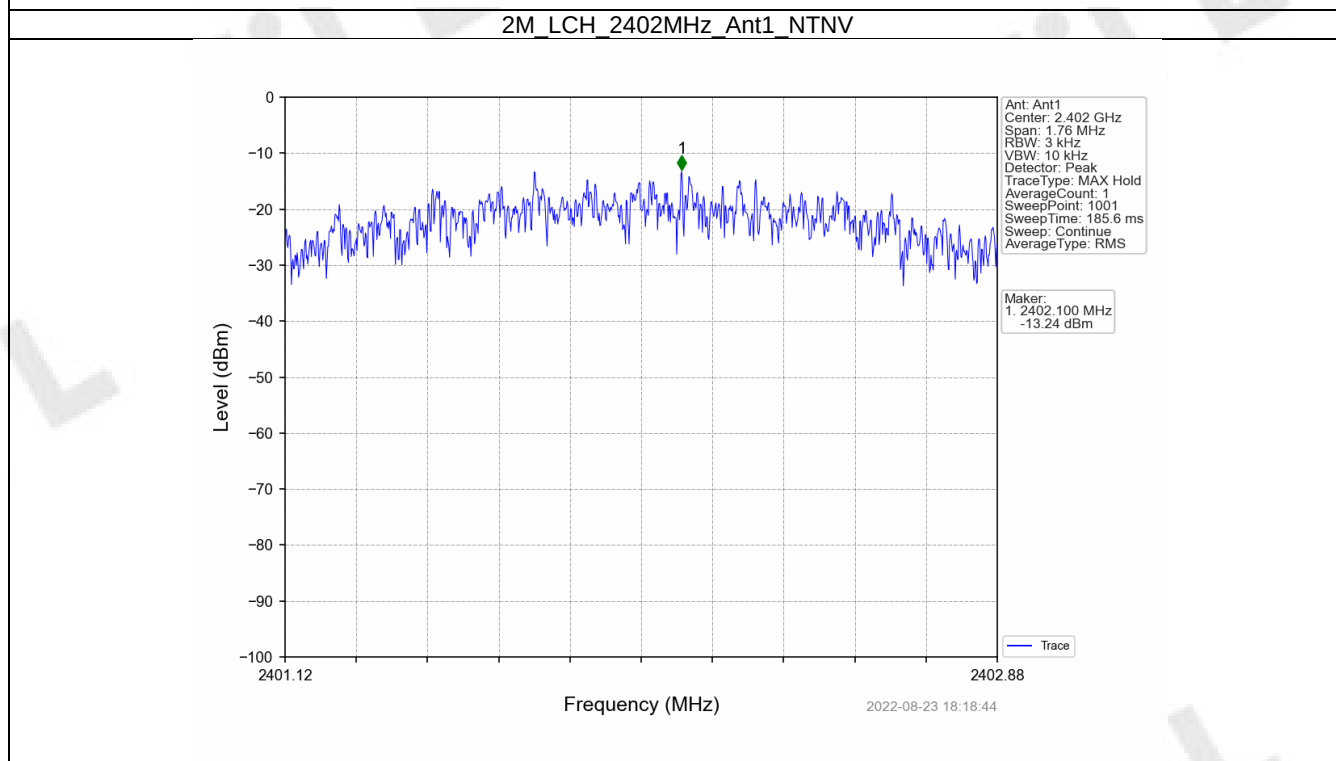
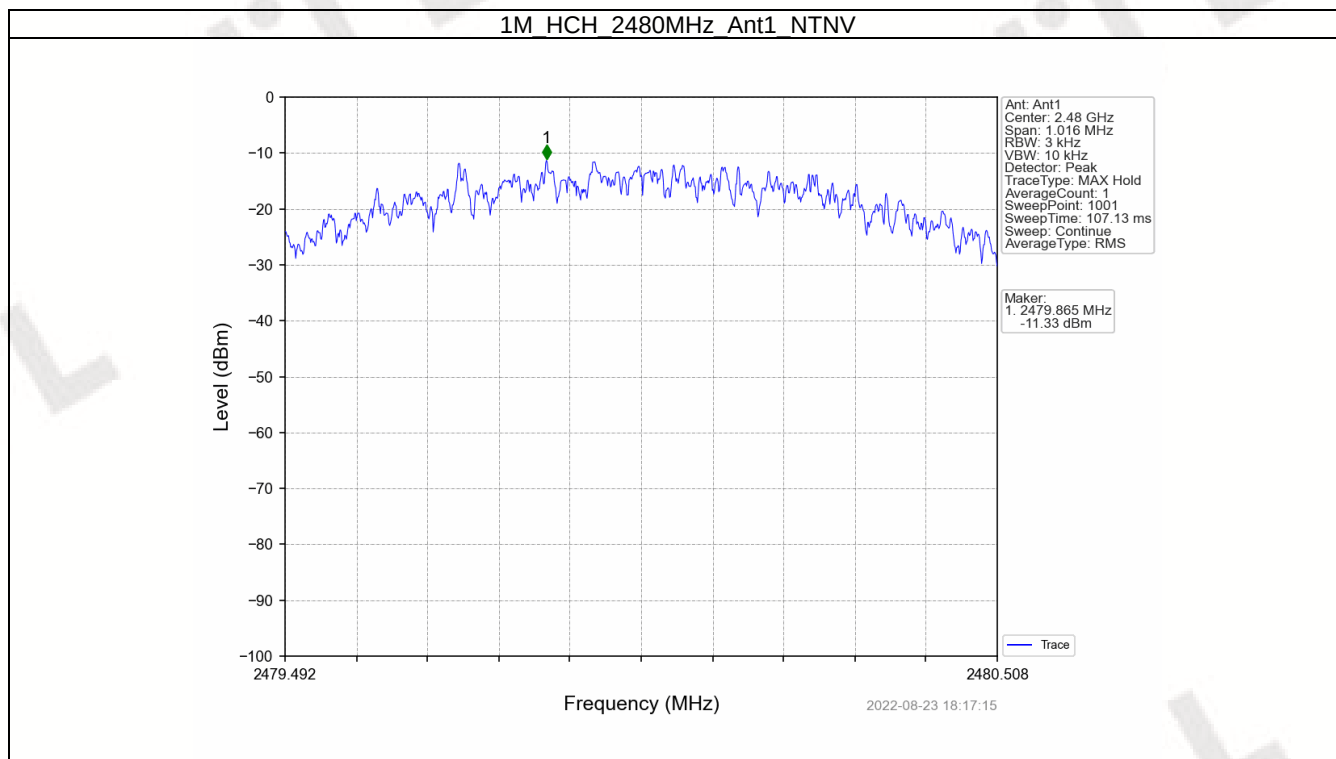
3.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-11.17	<=8	Pass
		2440	-10.89	<=8	Pass
		2480	-11.33	<=8	Pass
2M	SISO	2402	-13.24	<=8	Pass
		2440	-12.92	<=8	Pass
		2480	-13.17	<=8	Pass

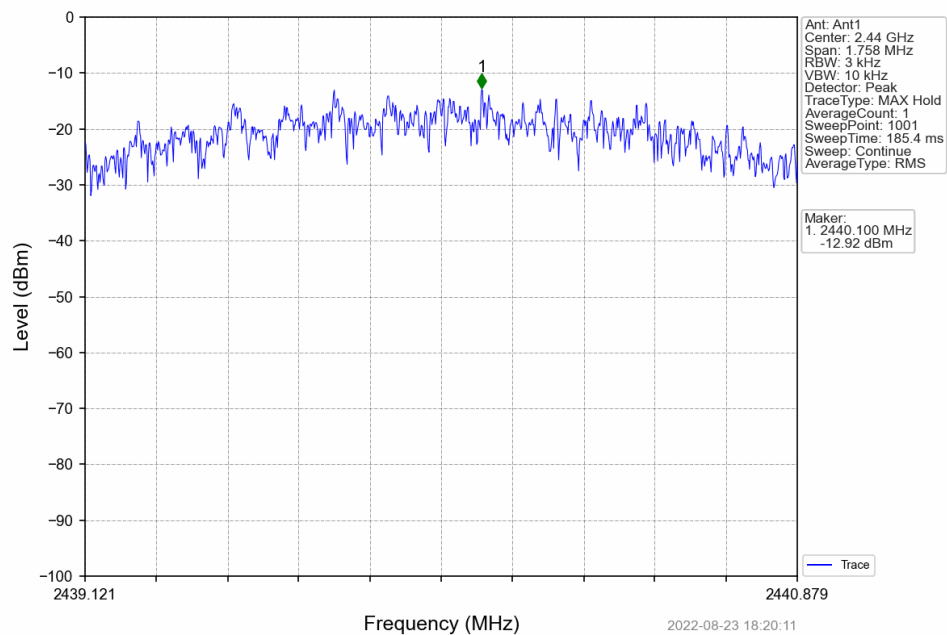
Note1: Antenna Gain: Ant1: 2.00dBi;

3.1.2 Test Graph

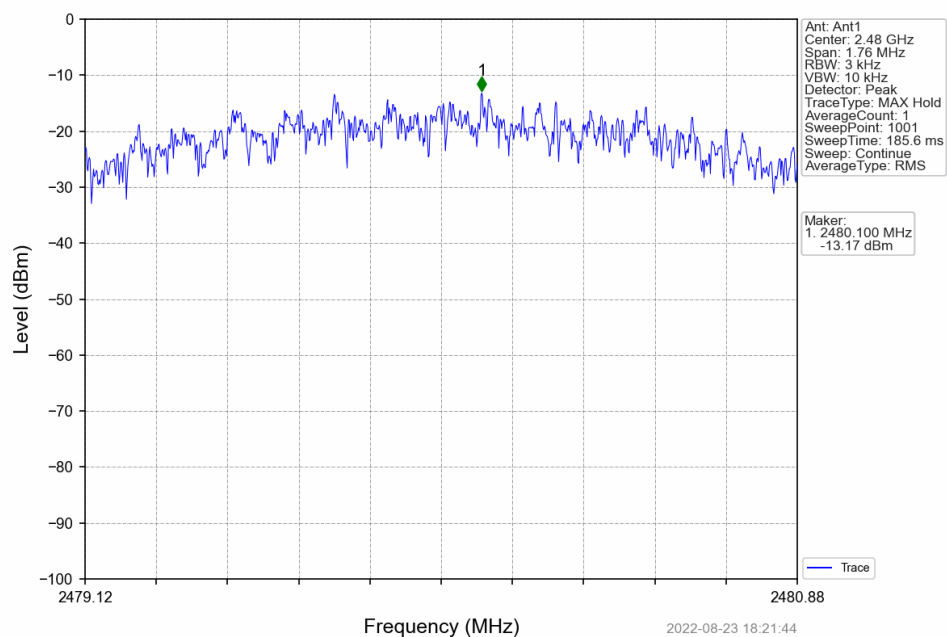




2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



4. Unwanted Emissions In Non-restricted Frequency Bands

4.1 Ref

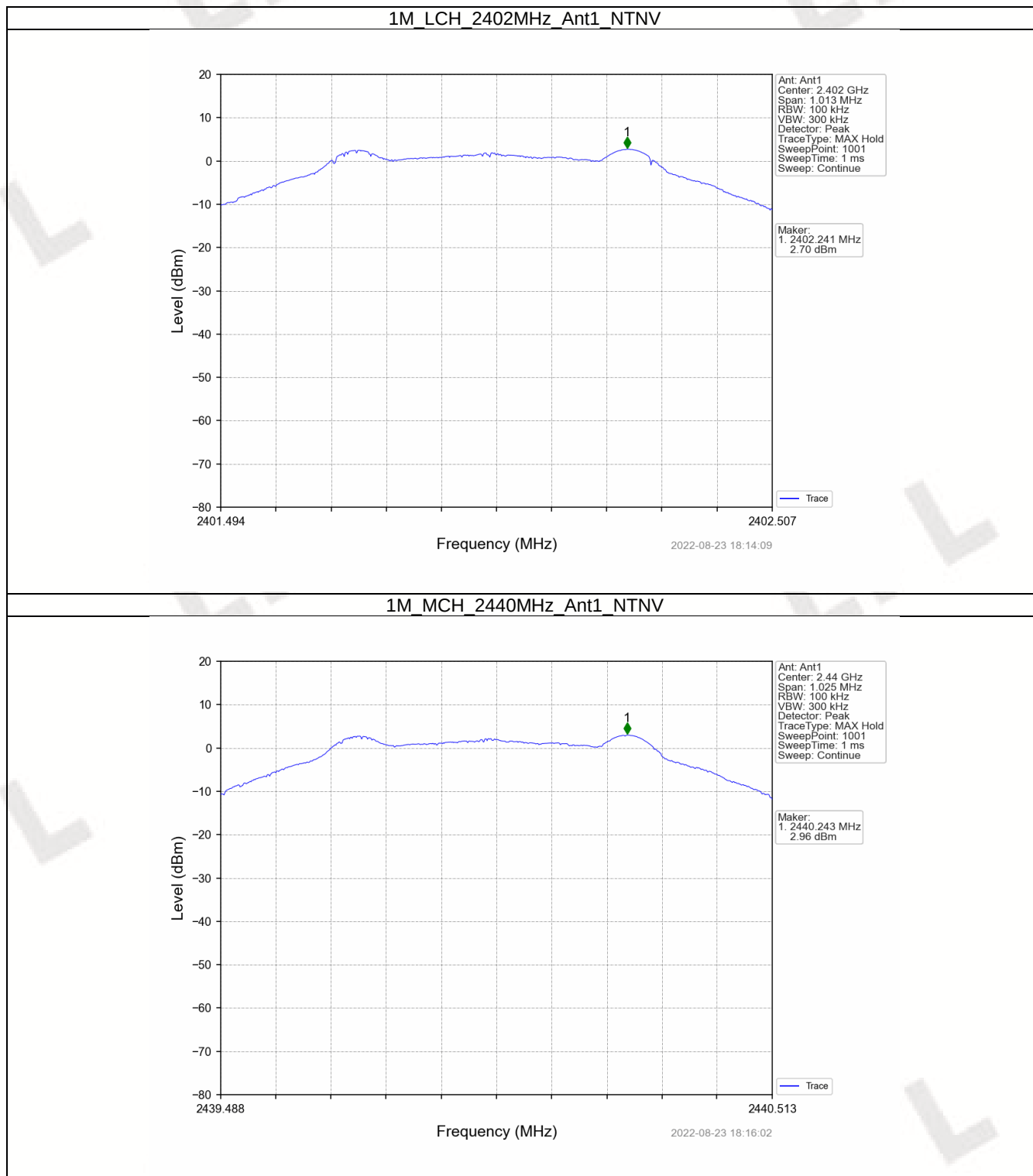
4.1.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	2.70
		2440	1	2.96
		2480	1	2.61
2M	SISO	2402	1	2.15
		2440	1	2.42
		2480	1	2.10

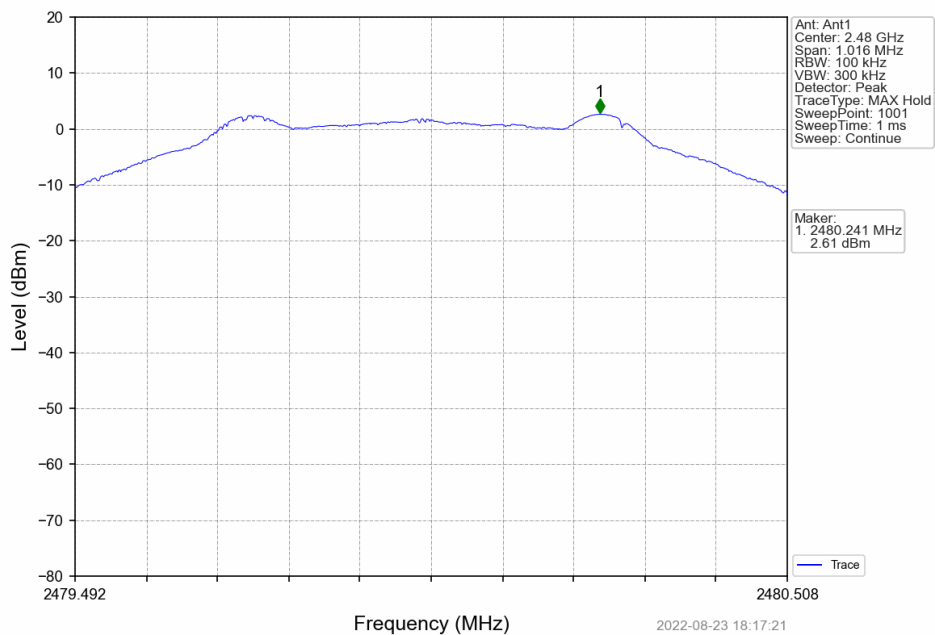
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

Note2: RBW = 1MHz was used during the pre-test. The final test will be performed at RBW=100kHz while the margin is less than 3dB.

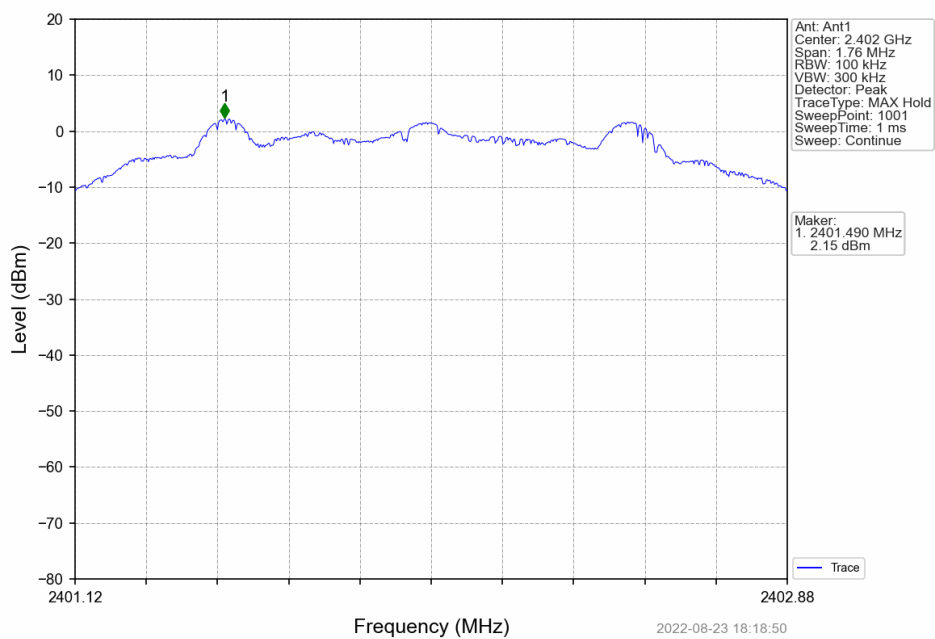
4.1.2 Test Graph



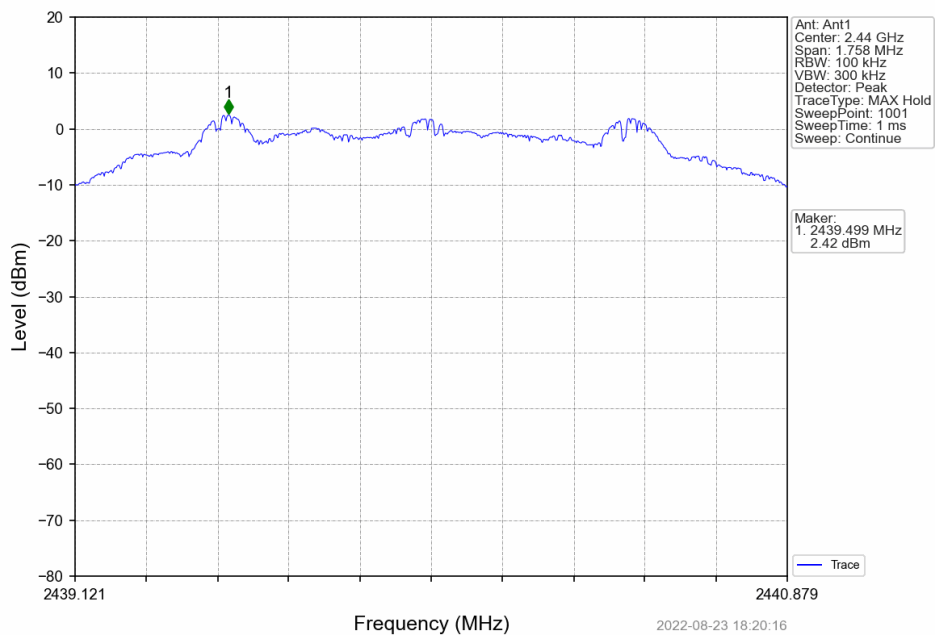
1M_HCH_2480MHz_Ant1_NTNV



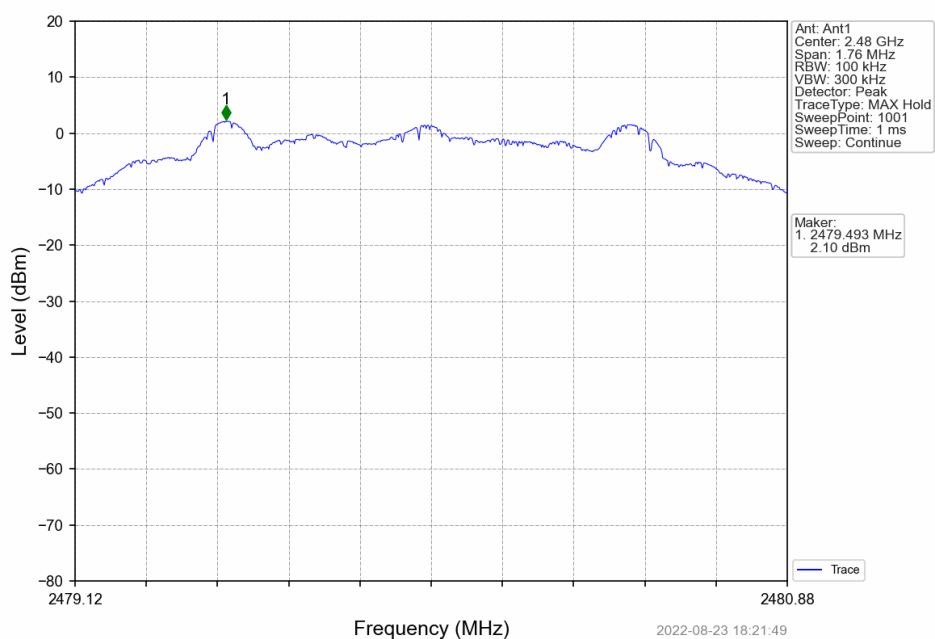
2M_LCH_2402MHz_Ant1_NTNV



2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



4.2 CSE

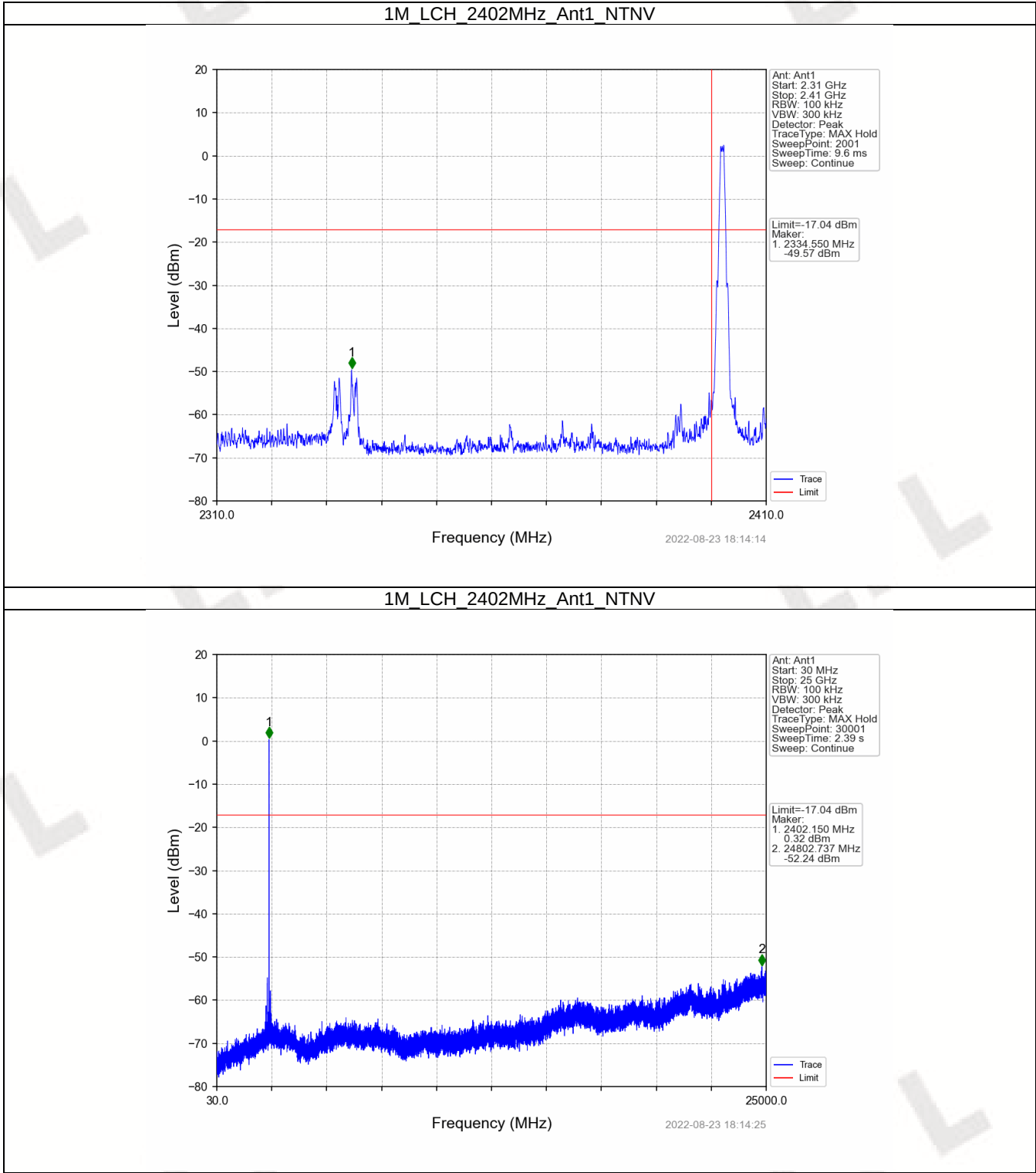
4.2.1 Test Result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	2.96	-17.04	Pass
		2440	1	2.96	-17.04	Pass
		2480	1	2.96	-17.04	Pass
2M	SISO	2402	1	2.42	-17.58	Pass
		2440	1	2.42	-17.58	Pass
		2480	1	2.42	-17.58	Pass

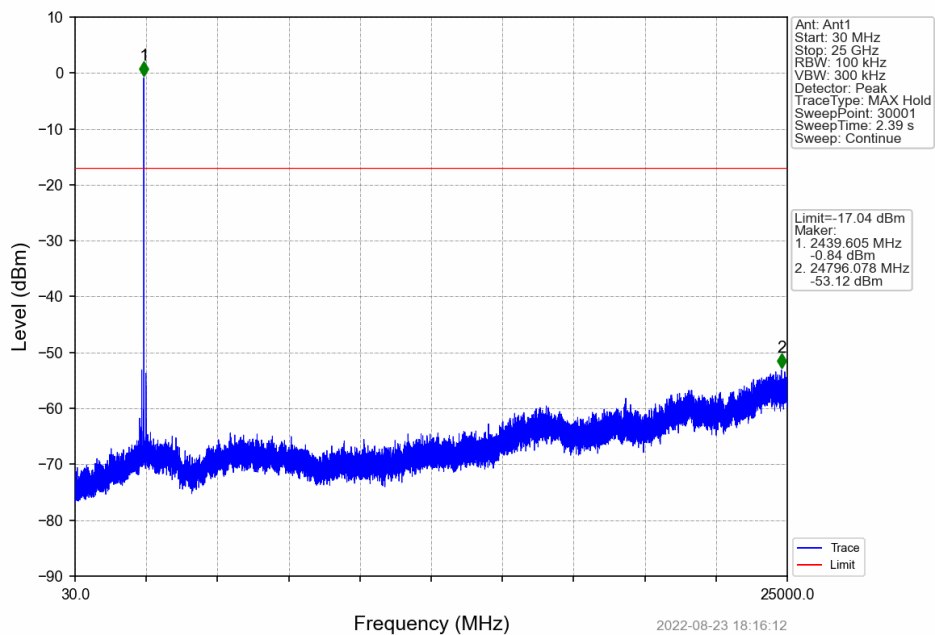
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.

Note2: RBW = 1MHz was used during the pre-test. The final test will be performed at RBW=100kHz while the margin is less than 3dB.

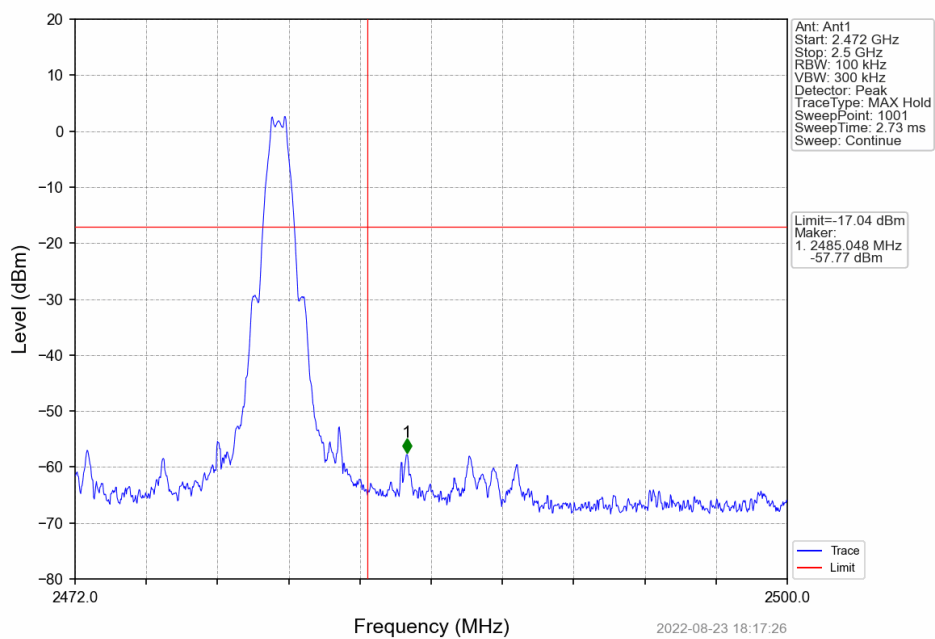
4.2.2 Test Graph

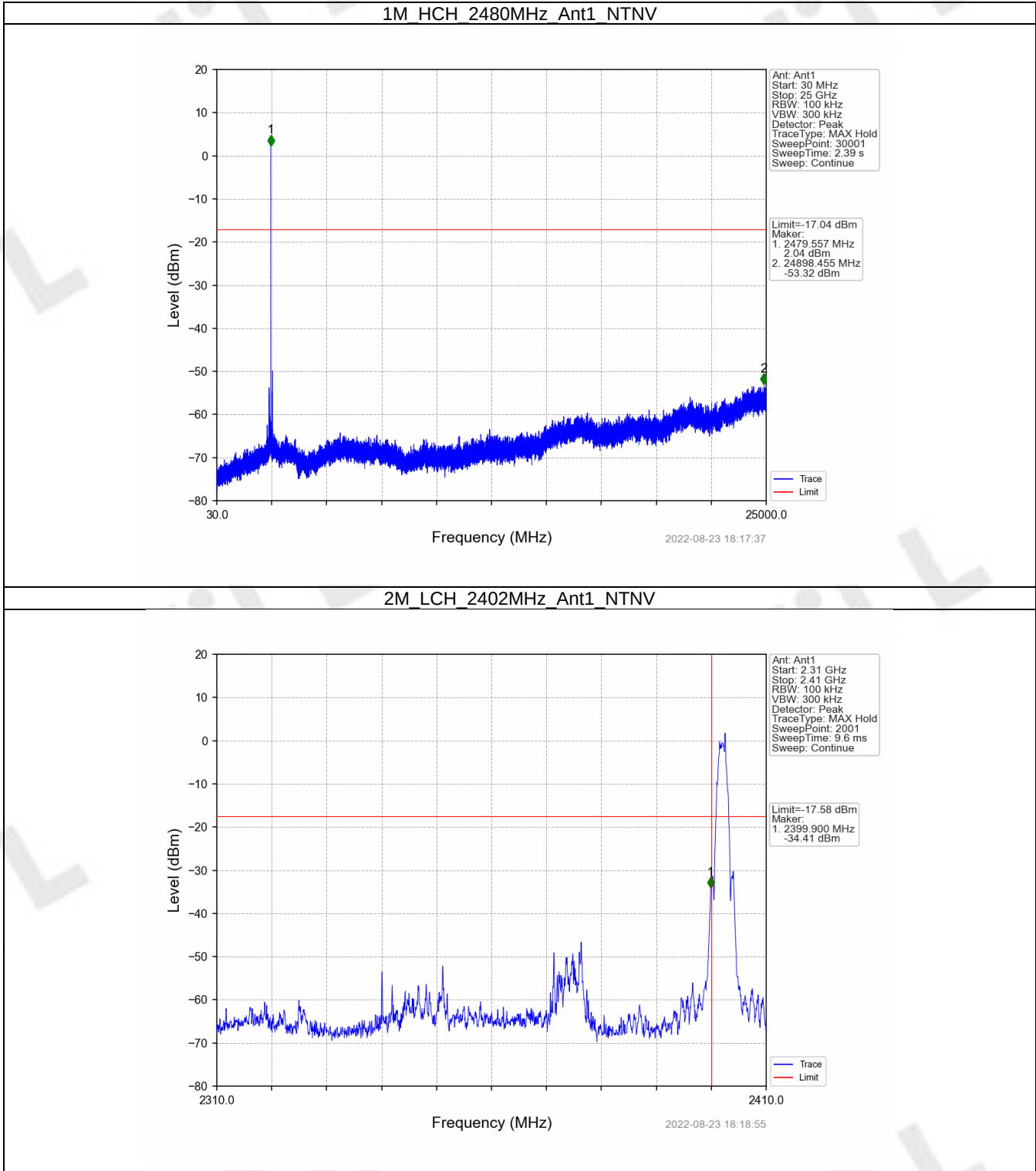


1M_MCH_2440MHz_Ant1_NTNV

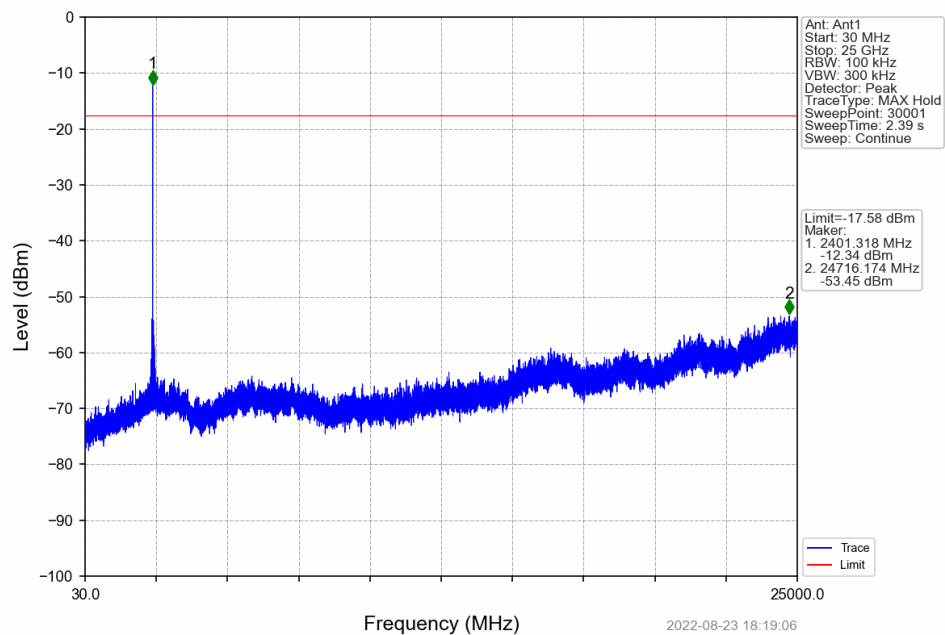


1M_HCH_2480MHz_Ant1_NTNV





2M LCH 2402MHz Ant1 NTN



2M_MCH_2440MHz_Ant1 NTN

