



Annex for Bluetooth Low Energy

Test Report No.: CTL2502073011-WF

TABLE OF CONTENTS

1. Duty Cycle	3
1.1 Test Result	3
1.1.1 Ant1	3
1.2 Test Graph.....	4
1.2.1 Ant1	4
2. Bandwidth.....	7
2.1 Test Result	7
2.1.1 OBW	7
2.1.2 6dB BW	7
2.2 Test Graph.....	8
2.2.1 OBW	8
2.2.2 6dB BW	11
3. Maximum Conducted Output Power	14
3.1 Test Result	14
3.1.1 Power	14
3.2 Test Graph.....	15
3.2.1 Power	15
4. Maximum Power Spectral Density	18
4.1 Test Result	18
4.1.1 PSD	18



4.2 Test Graph.....	19
4.2.1 PSD.....	19
5. Unwanted Emissions In Non-restricted Frequency Bands.....	22
5.1 Test Result	22
5.1.1 Ref.....	22
5.1.2 CSE	22
5.2 Test Graph.....	23
5.2.1 Ref.....	23
5.2.2 CSE	26

FCCID: 2AOM3-P100

1. Duty Cycle

1.1 Test Result

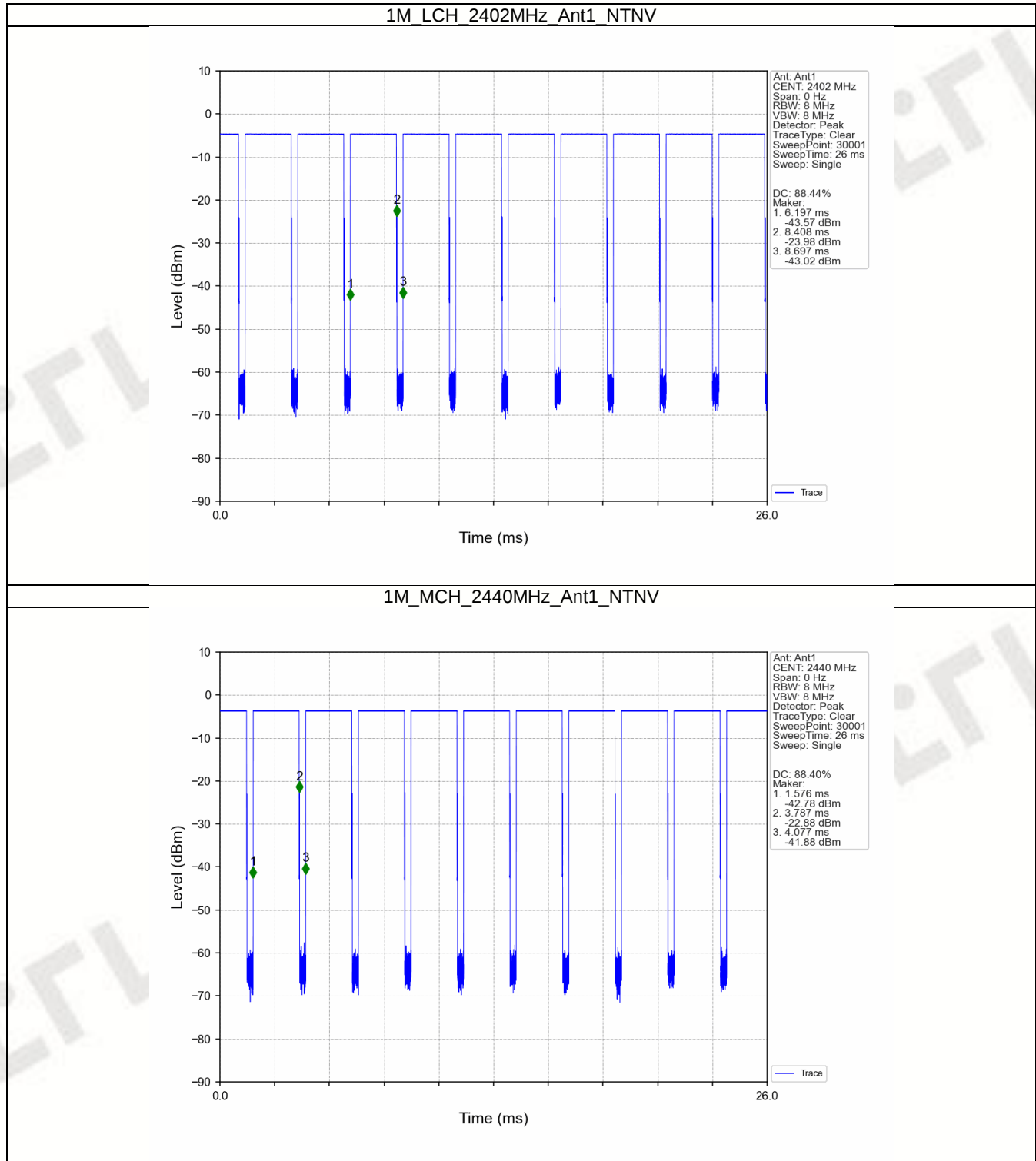
1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	2.211	2.500	88.44	0.53	0.03
		2440	2.211	2.501	88.40	0.54	0.03
		2480	2.211	2.500	88.44	0.53	0.03
2M	SISO	2402	1.154	2.500	46.16	3.36	0.02
		2440	1.154	2.499	46.18	3.36	0.02
		2480	1.156	2.501	46.22	3.35	0.02

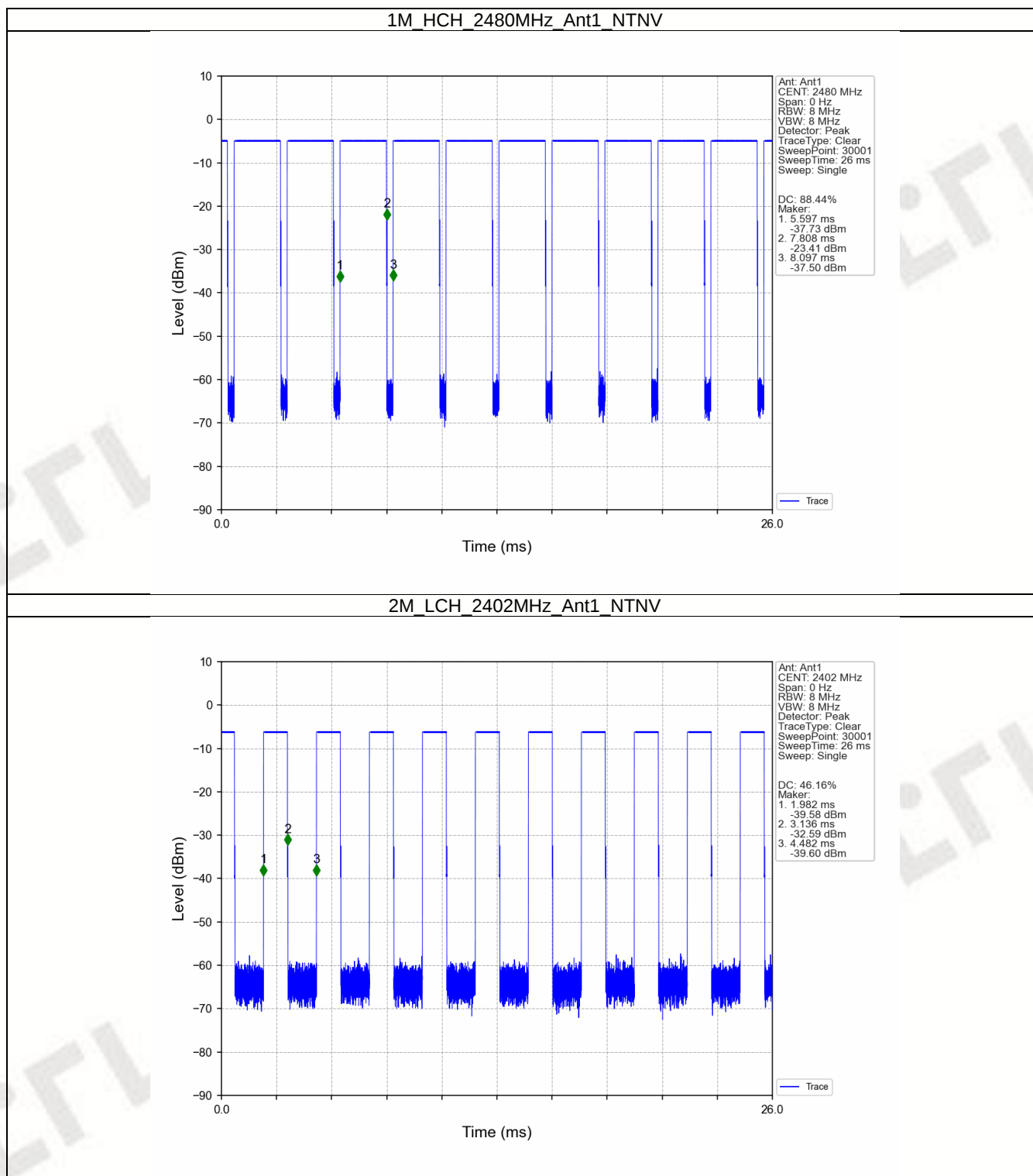
FCCID: 2AOM3-P100

1.2 Test Graph

1.2.1 Ant1

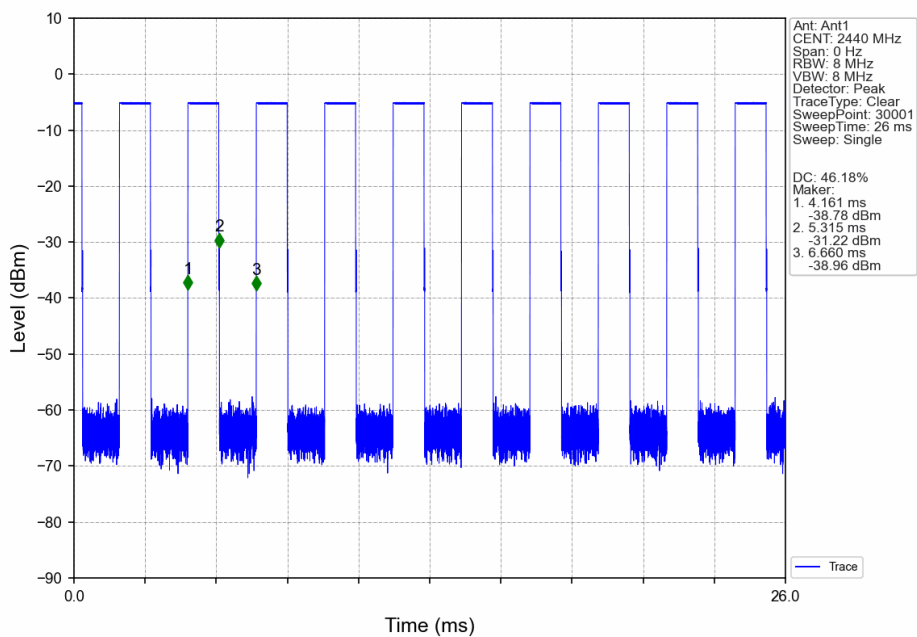


FCCID: 2AOM3-P100

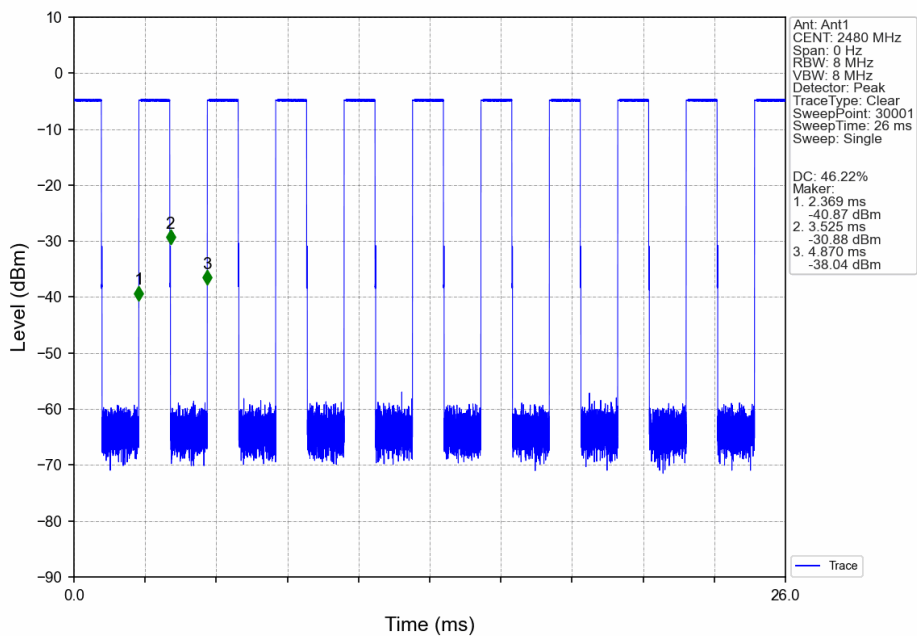


FCCID: 2AOM3-P100

2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



FCCID: 2AOM3-P100

2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	1.018	/	Pass
		2440	1	1.016	/	Pass
		2480	1	1.015	/	Pass
2M	SISO	2402	1	2.036	/	Pass
		2440	1	2.034	/	Pass
		2480	1	2.027	/	Pass

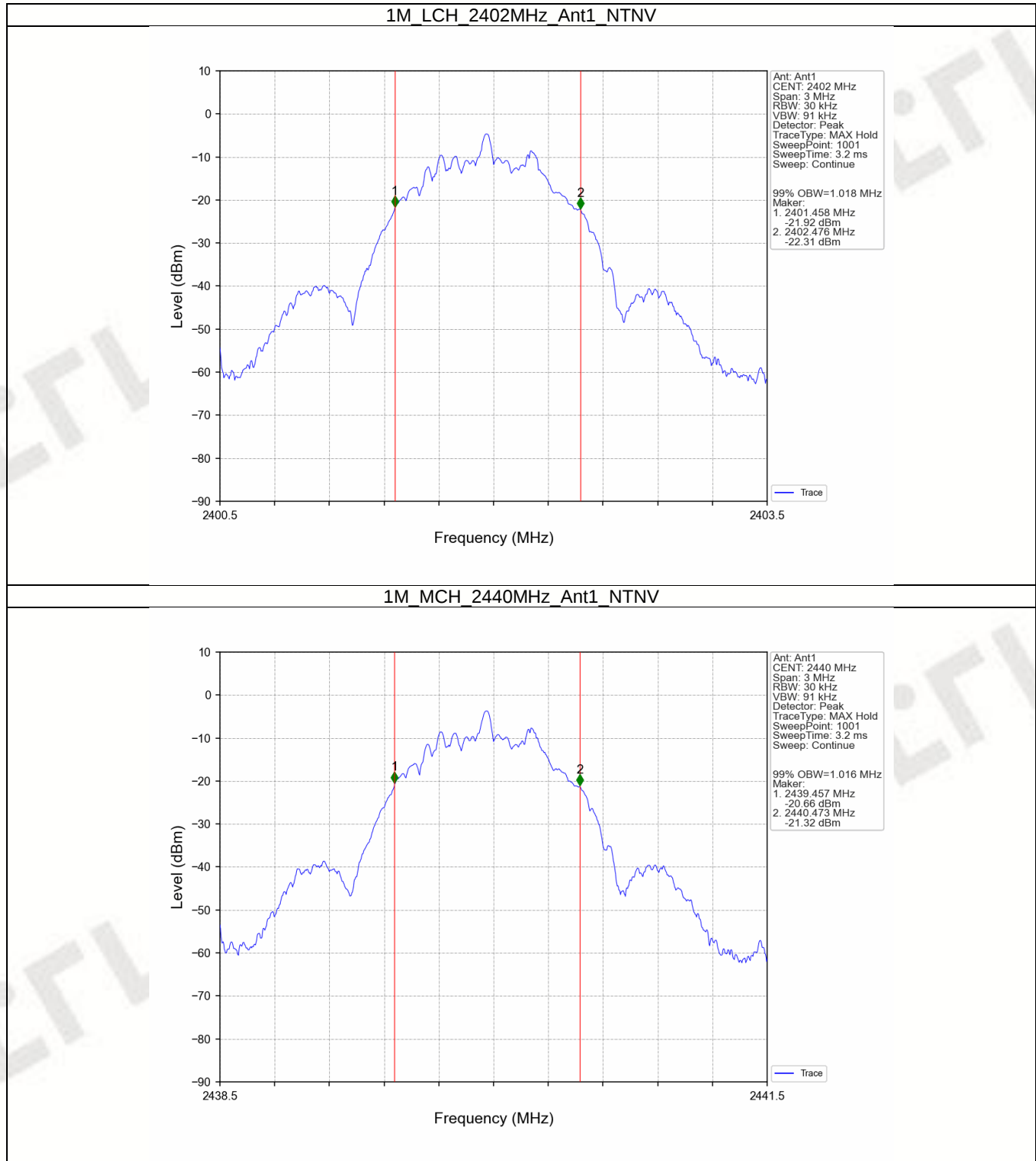
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.669	≥ 0.5	Pass
		2440	1	0.674	≥ 0.5	Pass
		2480	1	0.667	≥ 0.5	Pass
2M	SISO	2402	1	1.146	≥ 0.5	Pass
		2440	1	1.150	≥ 0.5	Pass
		2480	1	1.143	≥ 0.5	Pass

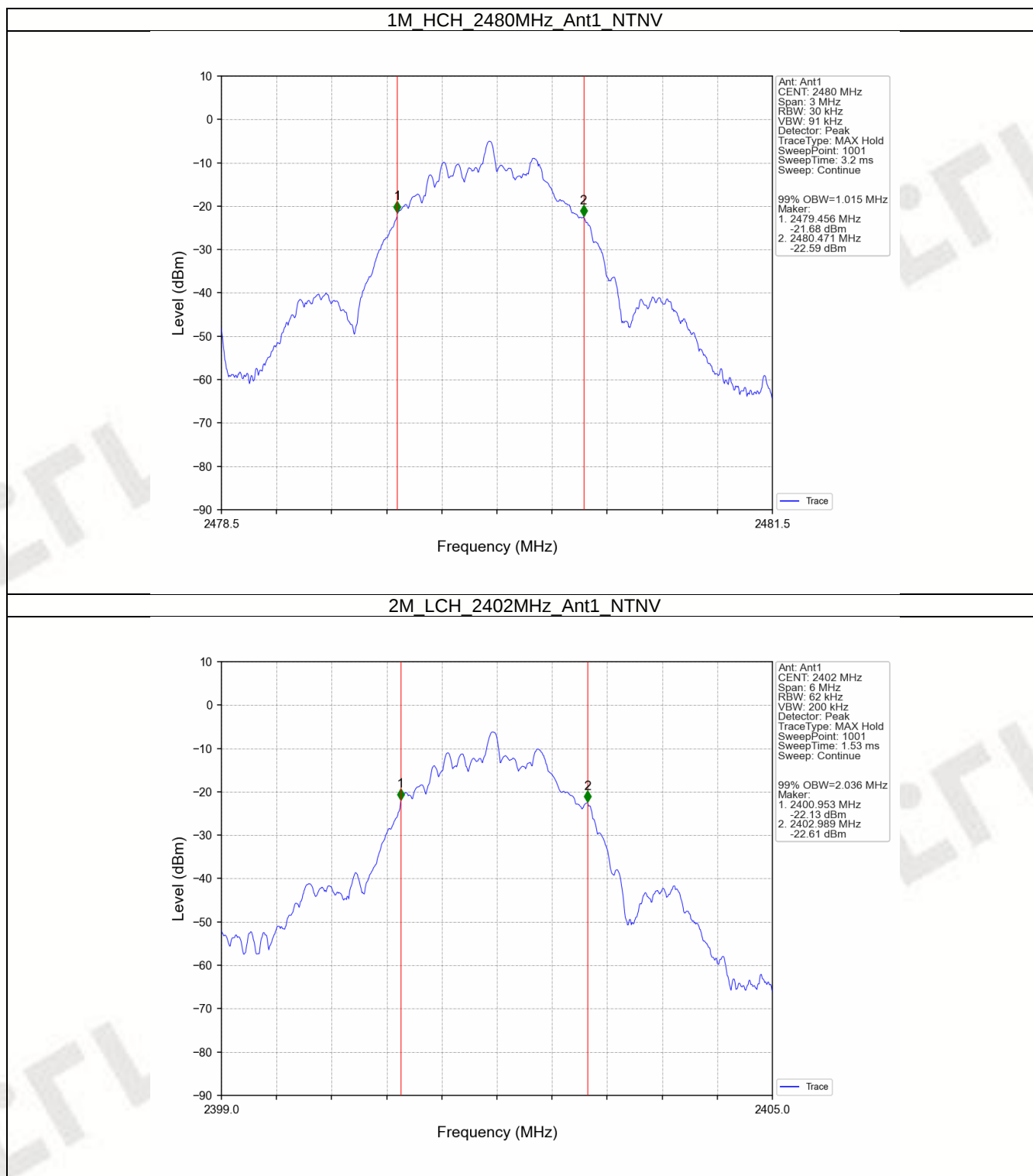
FCCID: 2AOM3-P100

2.2 Test Graph

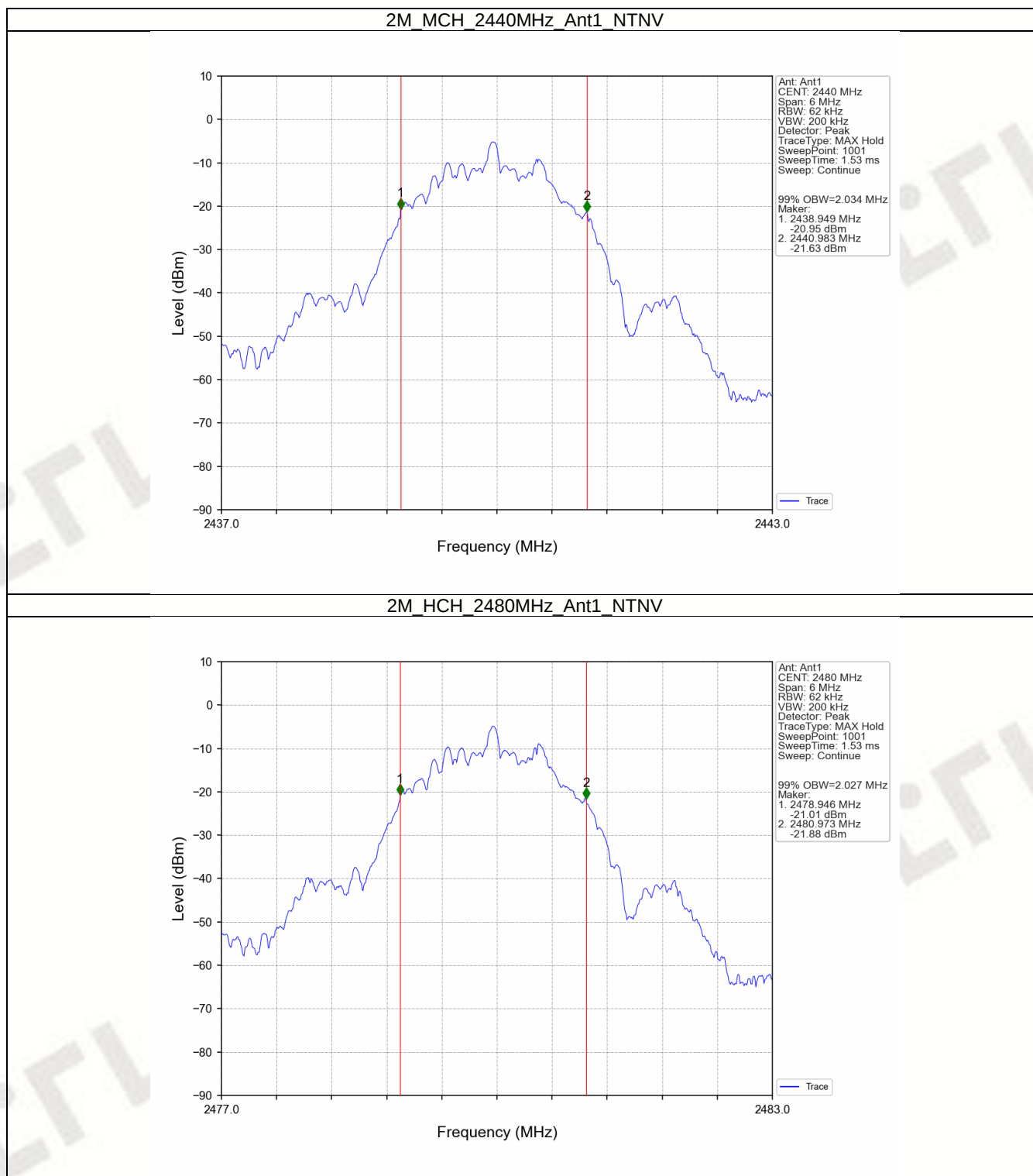
2.2.1 OBW



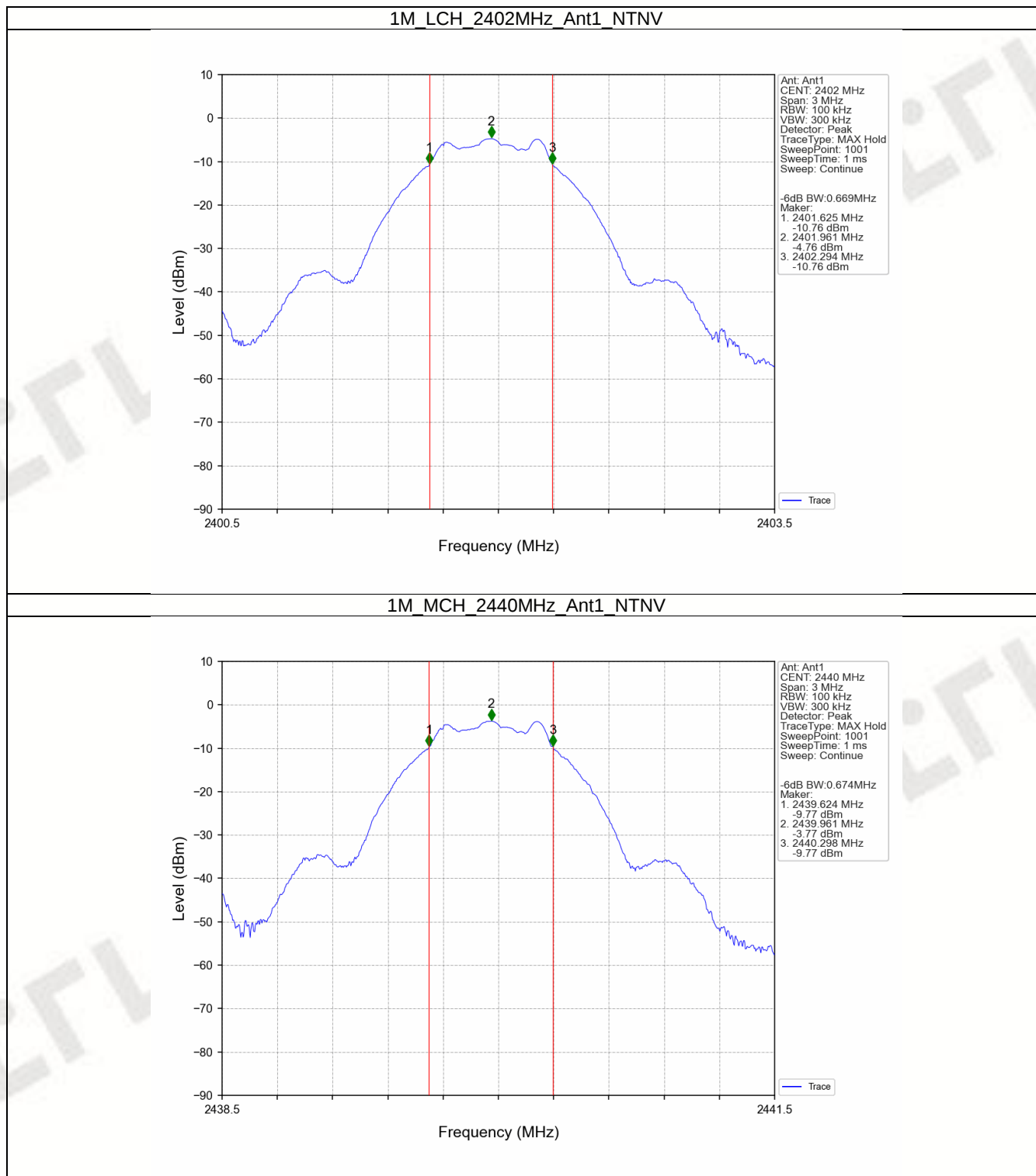
FCCID: 2AOM3-P100



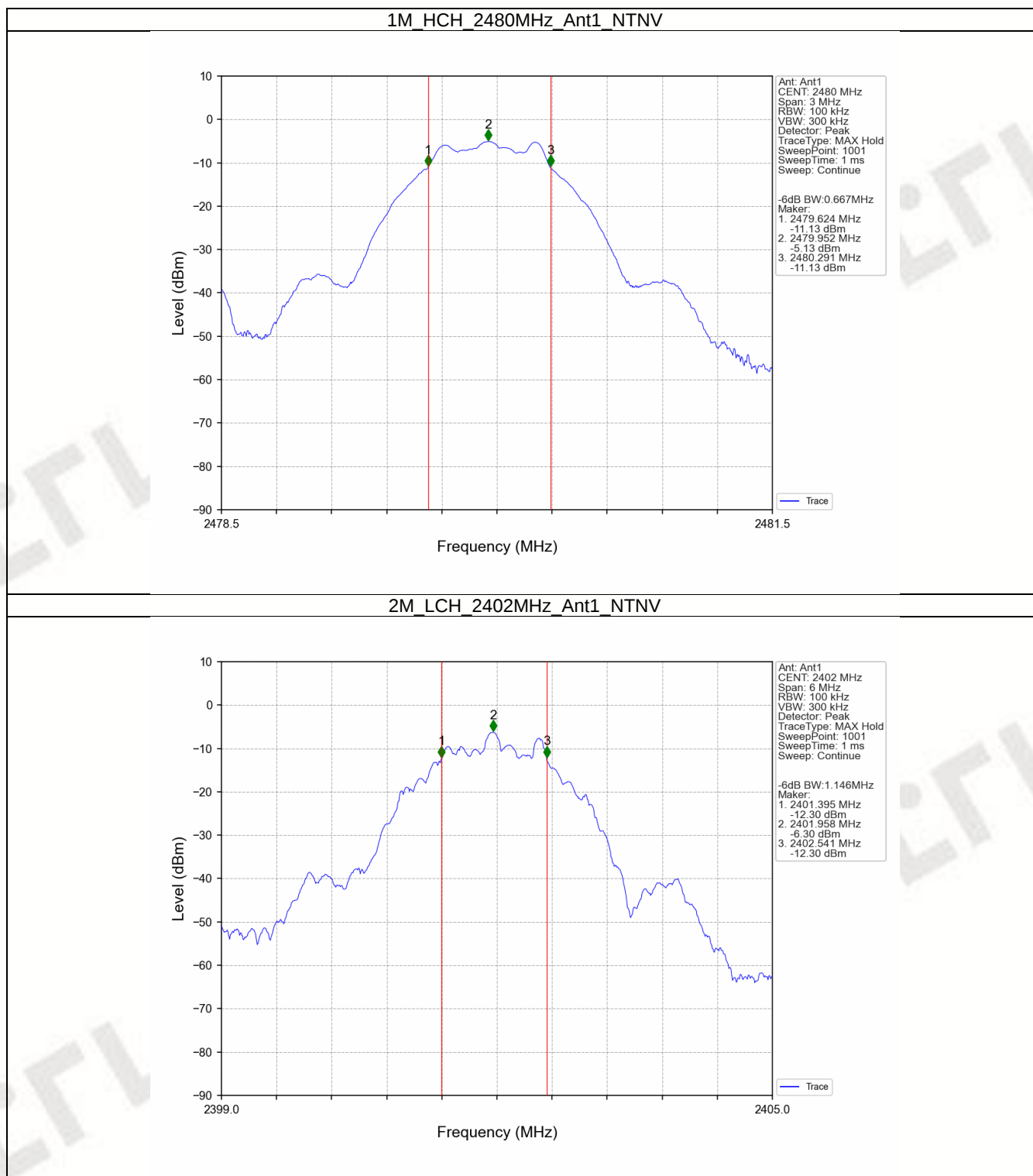
FCCID: 2AOM3-P100



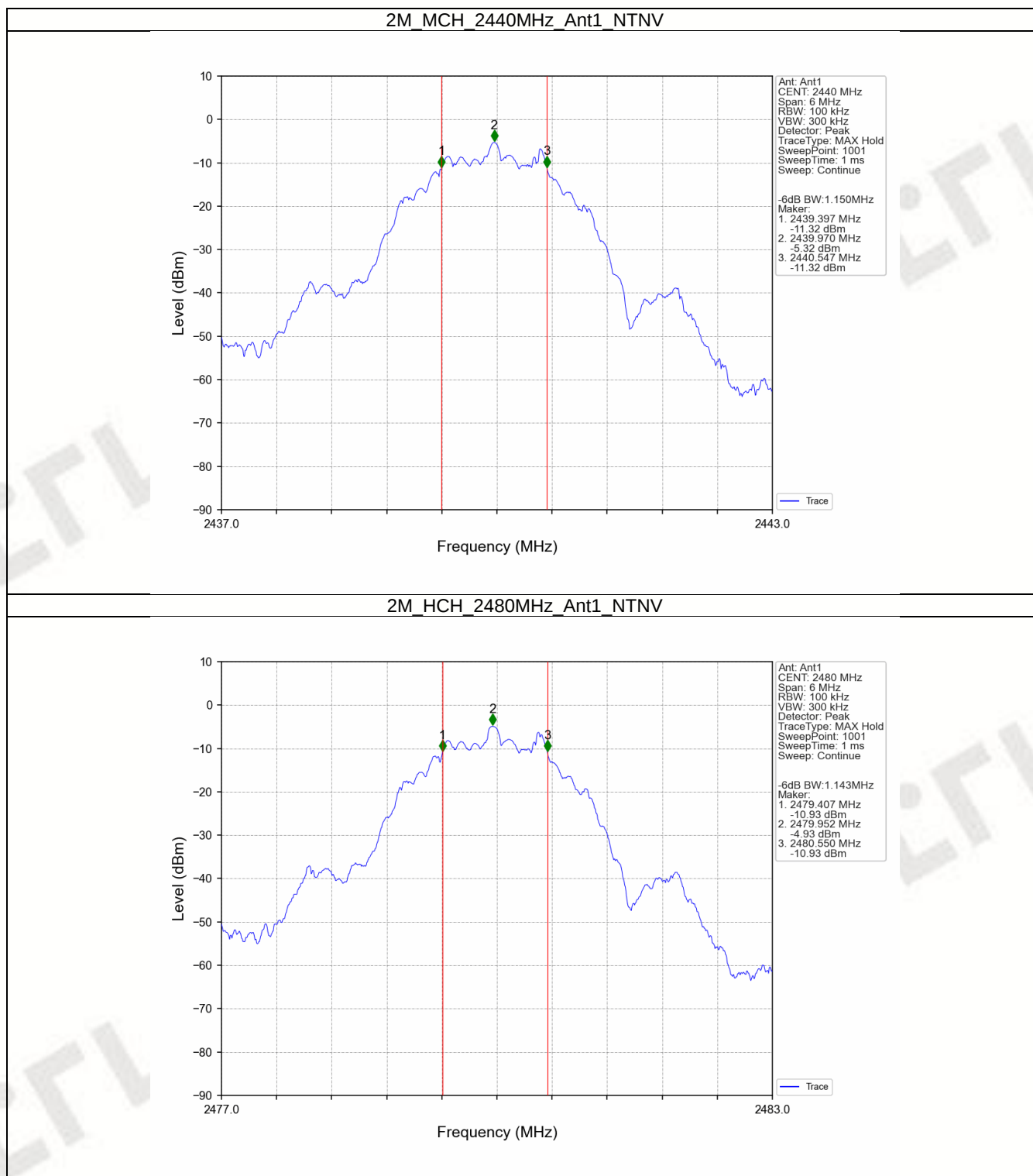
FCCID: 2AOM3-P100

2.2.2 6dB BW

FCCID: 2AOM3-P100



FCCID: 2AOM3-P100



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

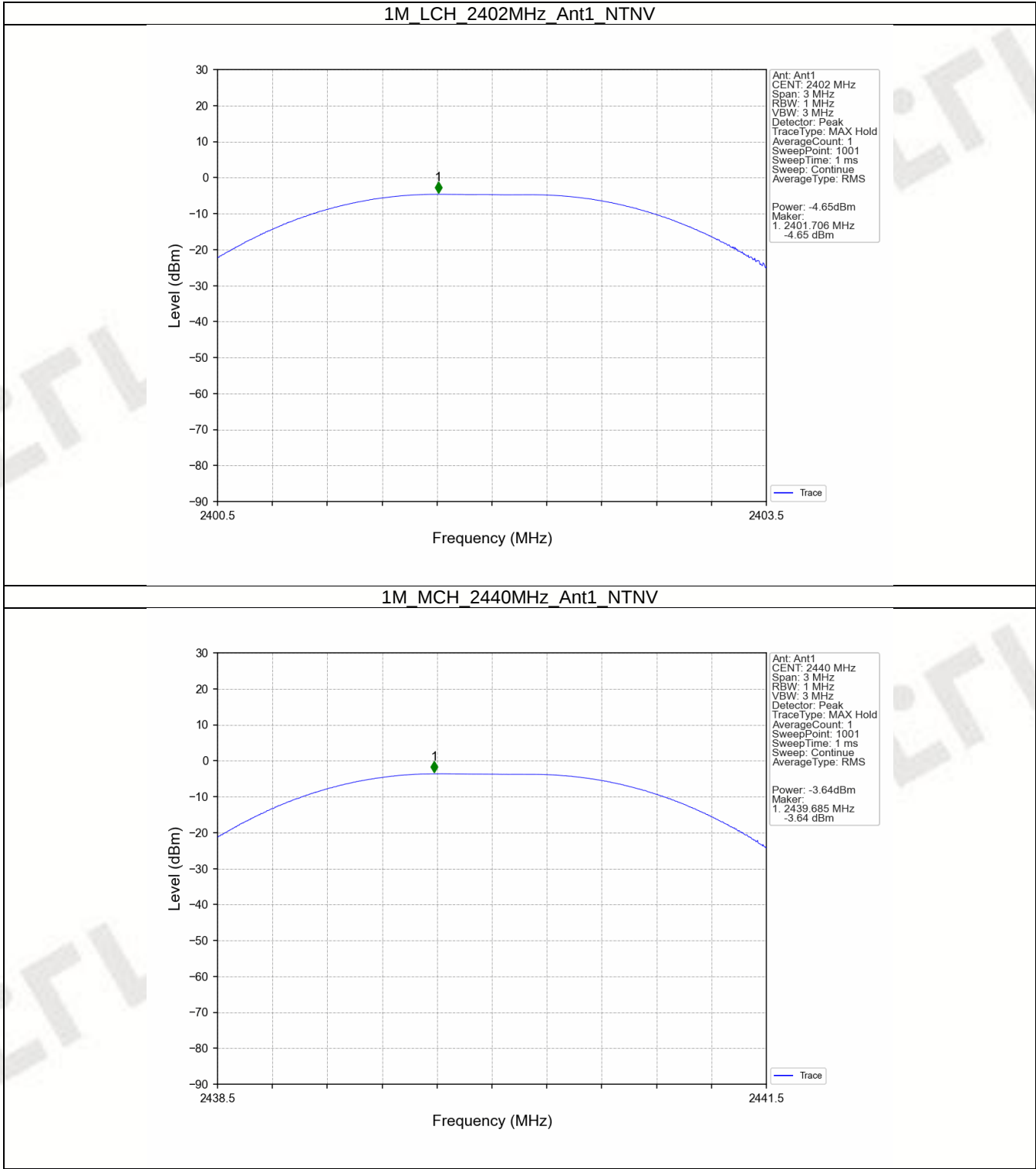
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	-4.65	<=30	Pass
		2440	-3.64	<=30	Pass
		2480	-4.96	<=30	Pass
2M	SISO	2402	-6.03	<=30	Pass
		2440	-4.97	<=30	Pass
		2480	-4.64	<=30	Pass

Note1: Antenna Gain: Ant1: 0.17dBi;

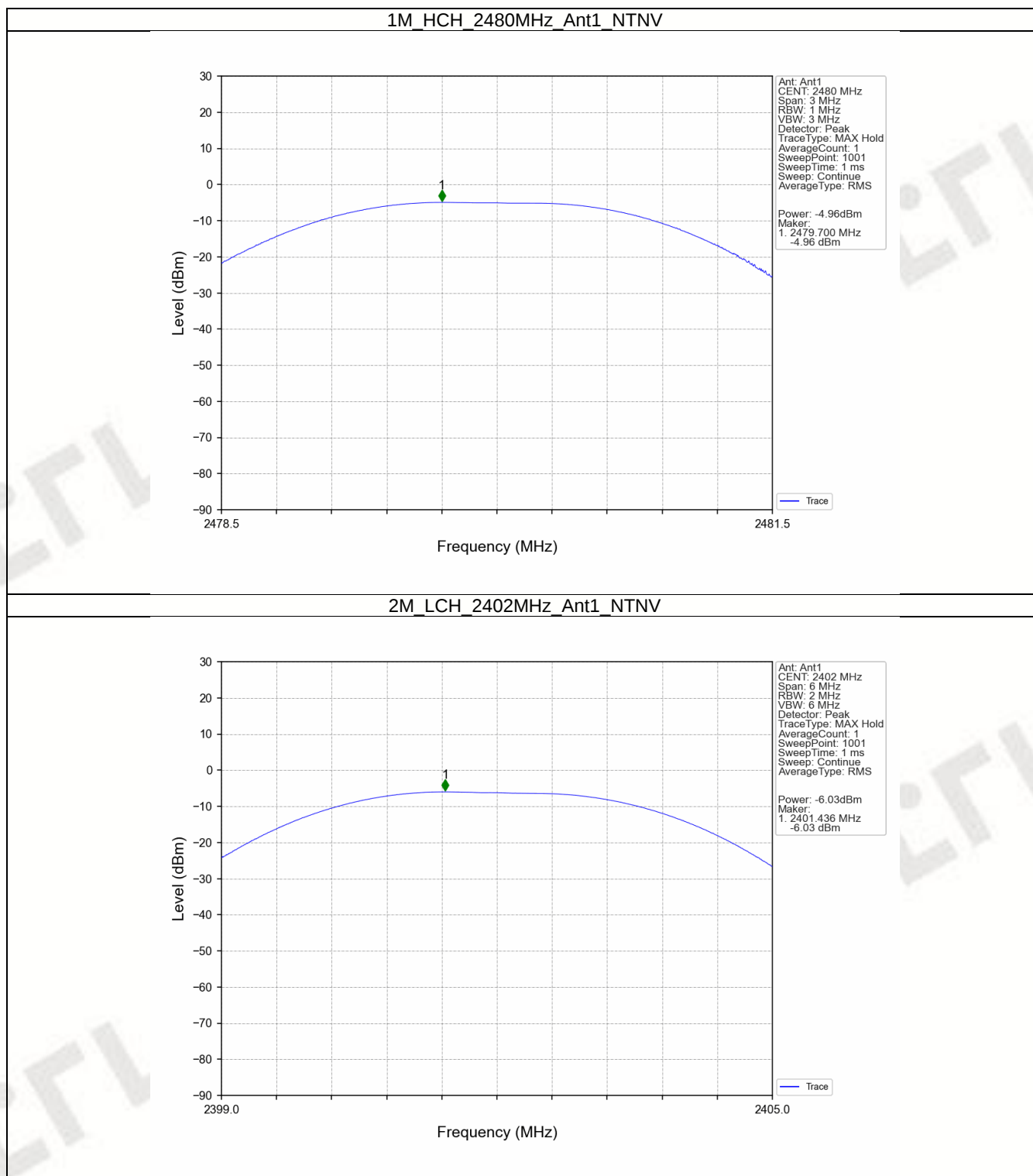
FCCID: 2AOM3-P100

3.2 Test Graph

3.2.1 Power

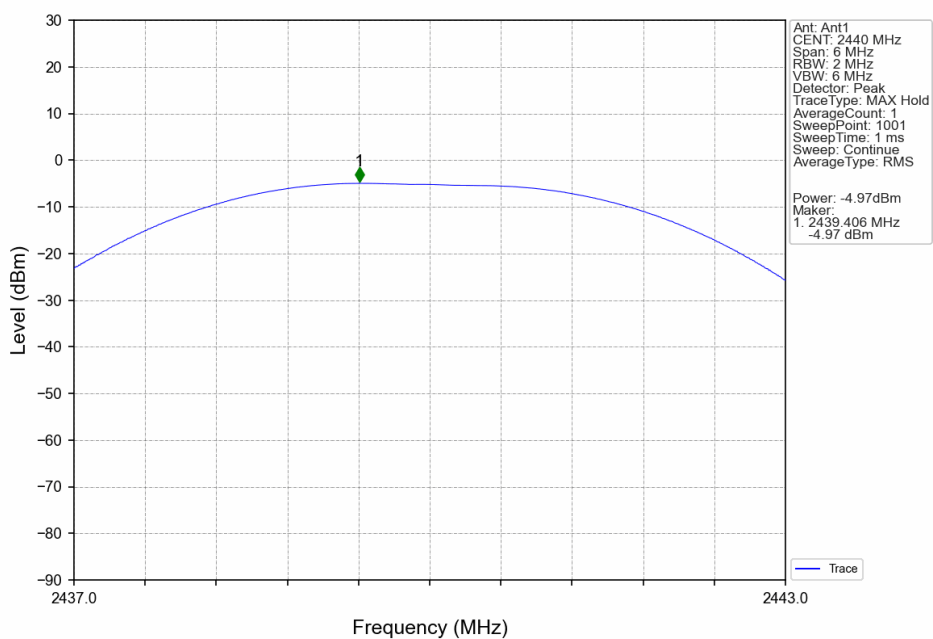


FCCID: 2AOM3-P100

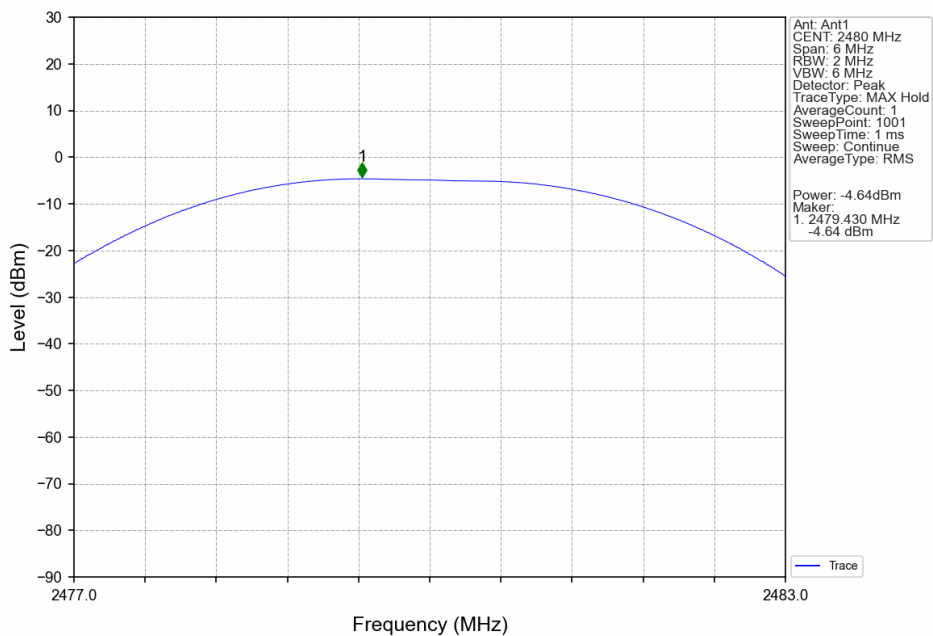


FCCID: 2AOM3-P100

2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

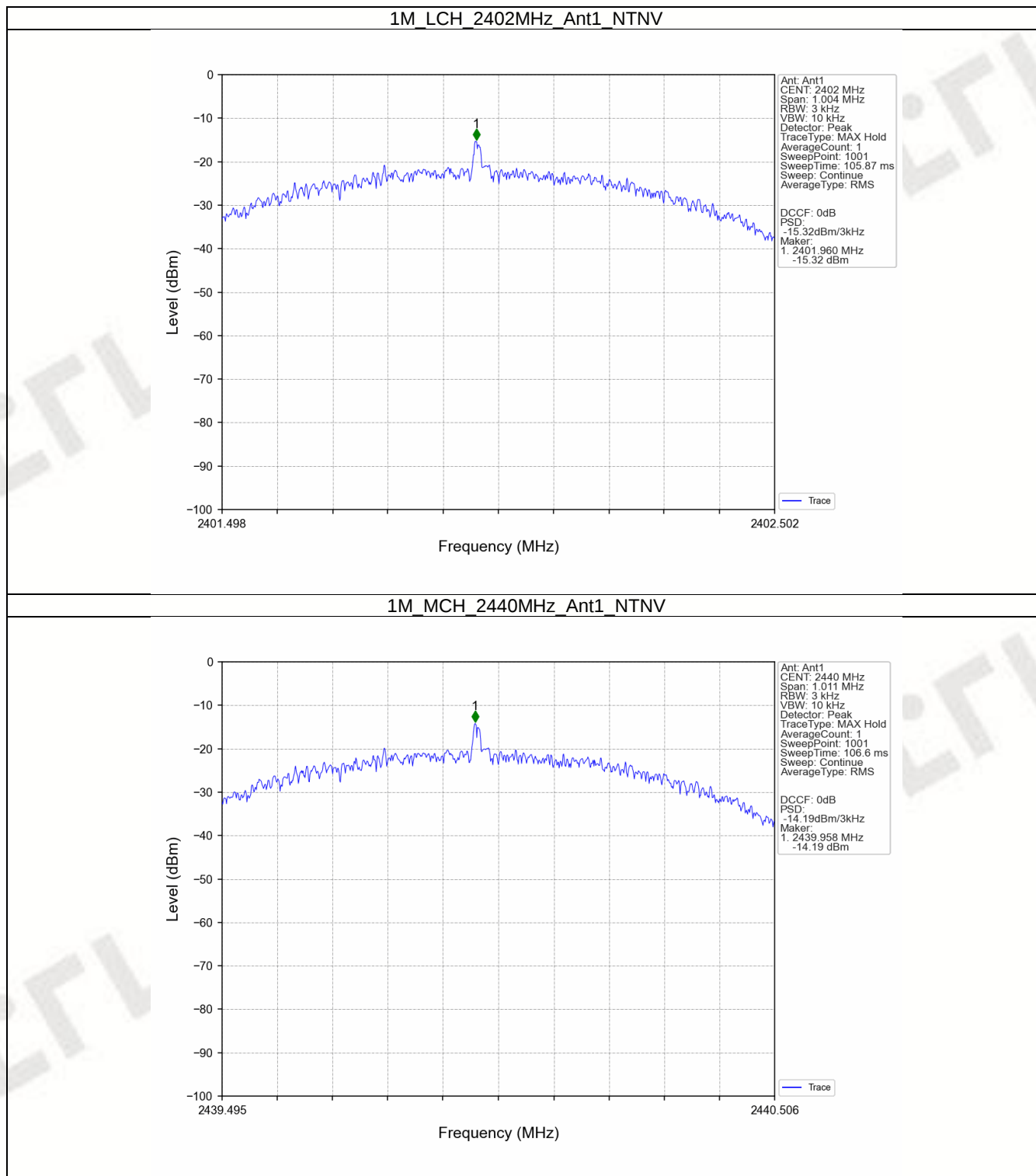
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-15.32	<=8	Pass
		2440	-14.19	<=8	Pass
		2480	-15.47	<=8	Pass
2M	SISO	2402	-17.64	<=8	Pass
		2440	-16.59	<=8	Pass
		2480	-16.19	<=8	Pass

Note1: Antenna Gain: Ant1: 0.17dBi;

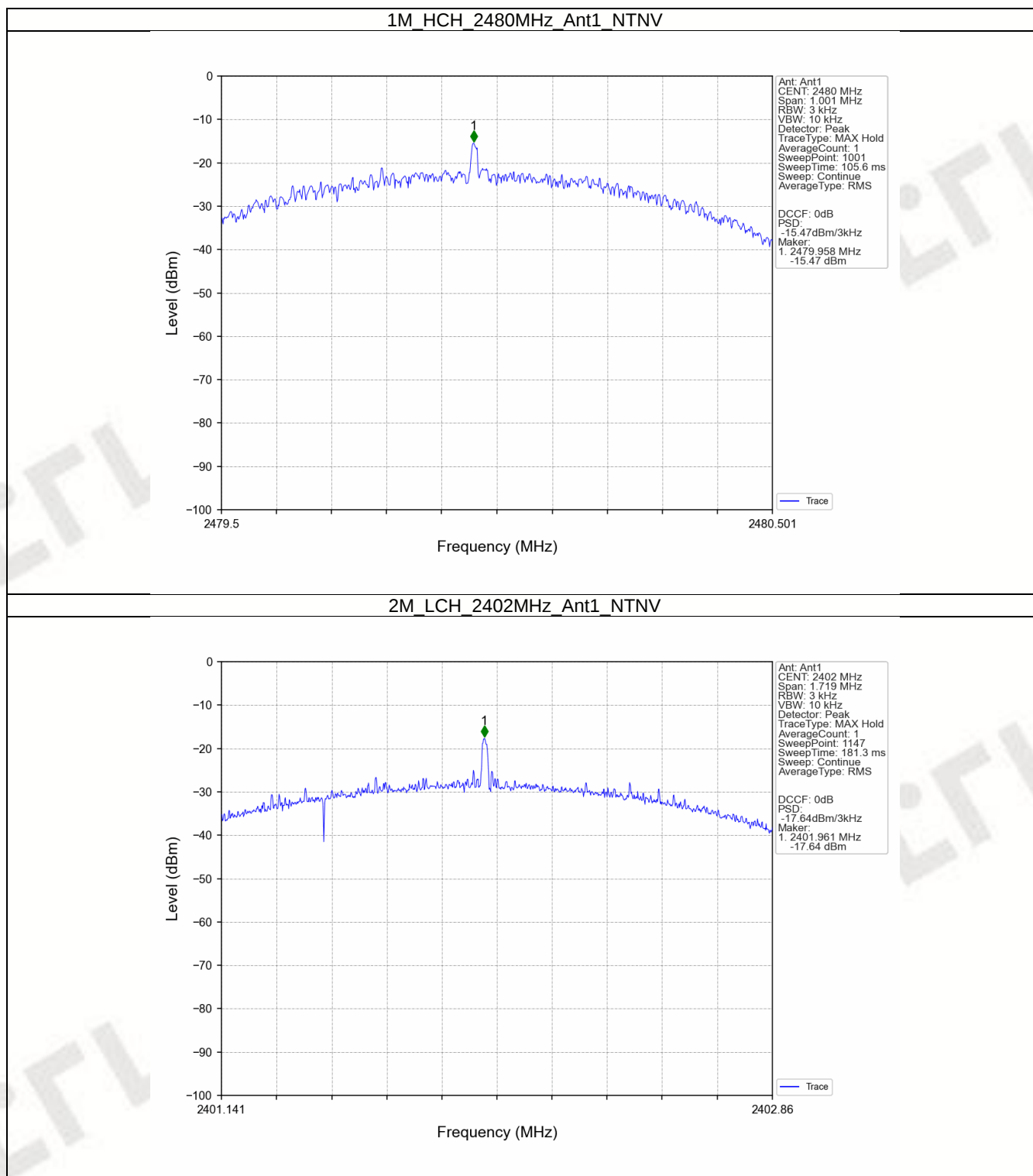
FCCID: 2AOM3-P100

4.2 Test Graph

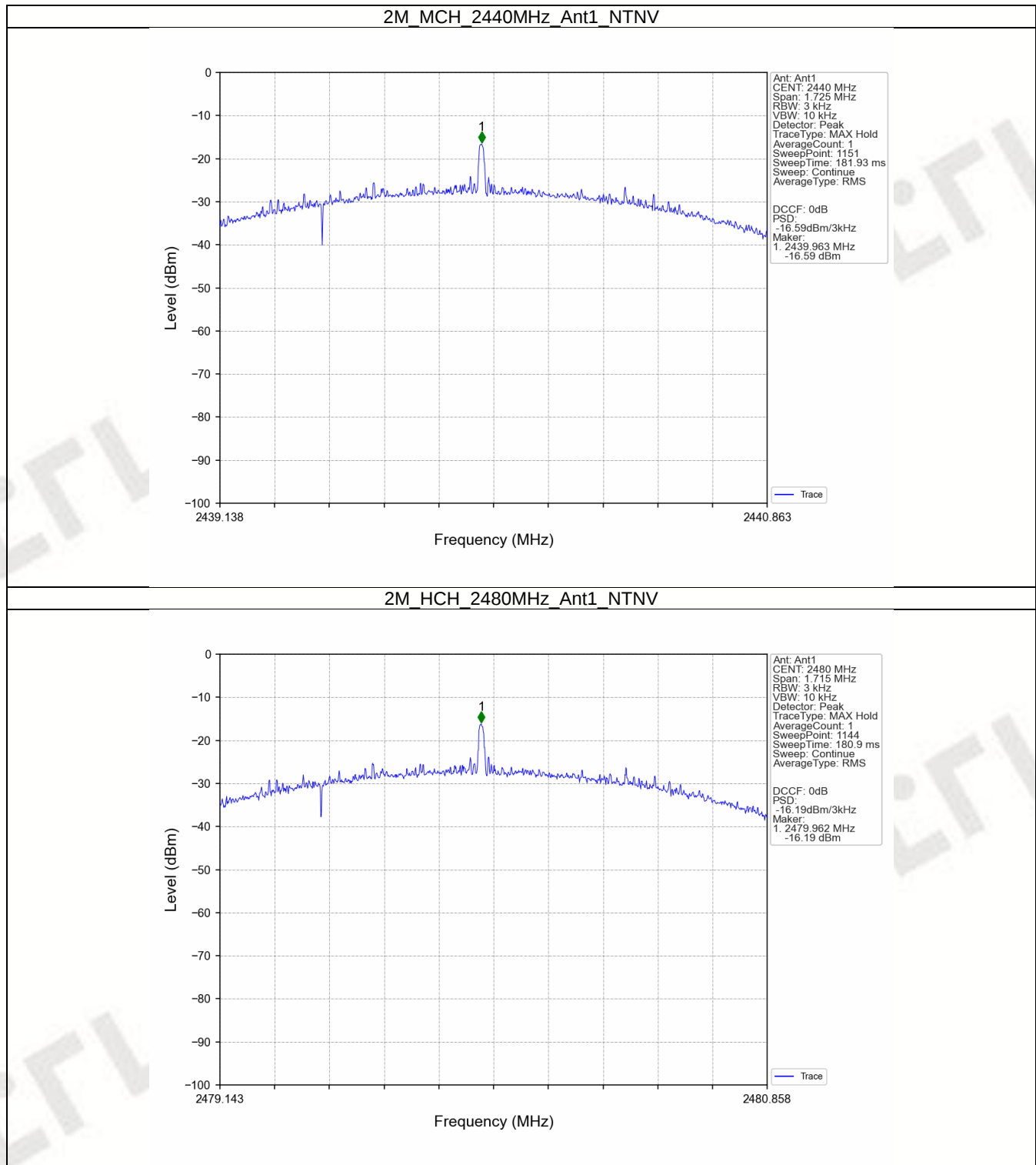
4.2.1 PSD



FCCID: 2AOM3-P100



FCCID: 2AOM3-P100



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	-4.79
		2440	1	-3.80
		2480	1	-5.17
2M	SISO	2402	1	-6.36
		2440	1	-5.35
		2480	1	-5.03

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.

5.1.2 CSE

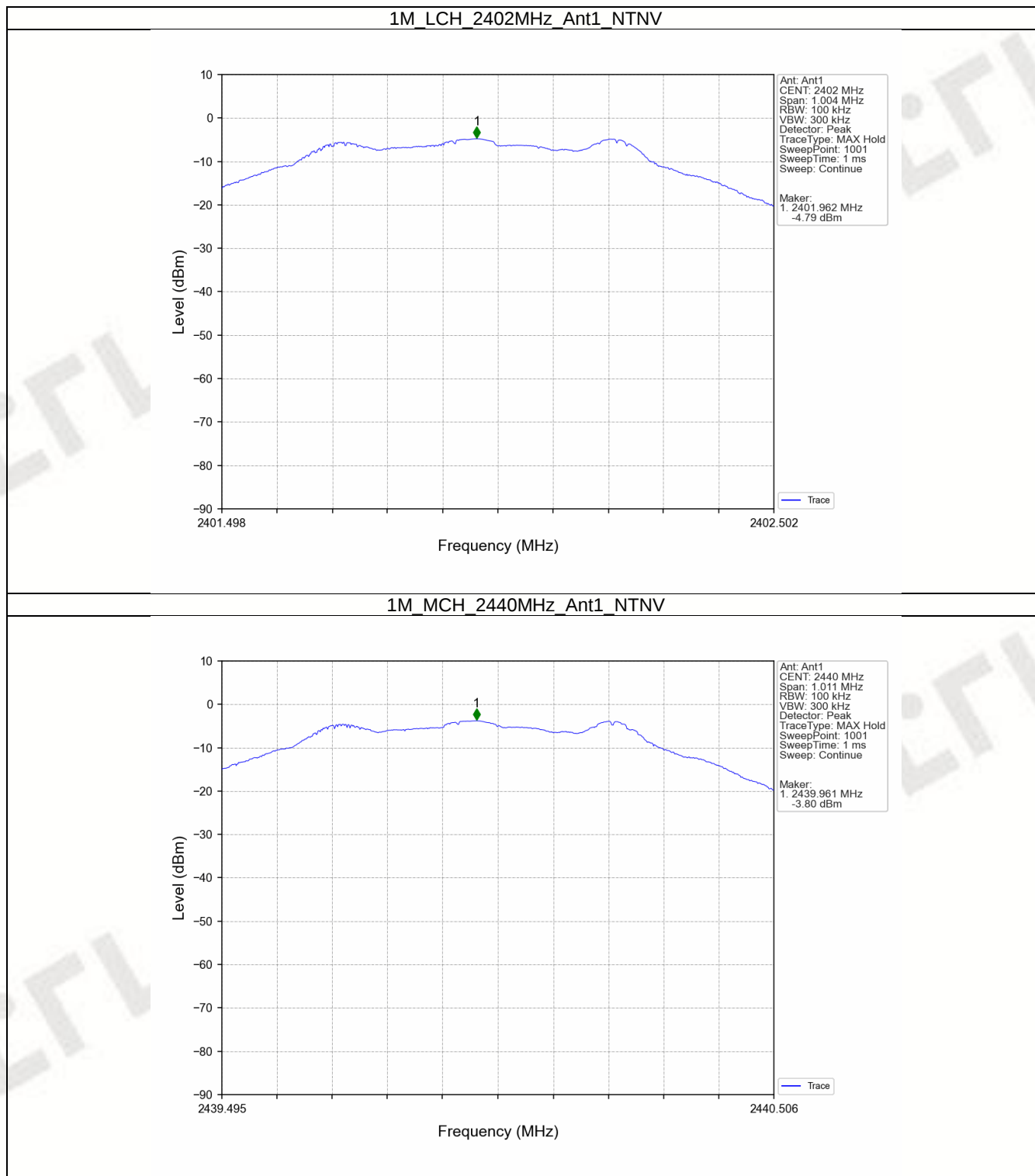
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	-3.80	-23.80	Pass
		2440	1	-3.80	-23.80	Pass
		2480	1	-3.80	-23.80	Pass
2M	SISO	2402	1	-5.03	-25.03	Pass
		2440	1	-5.03	-25.03	Pass
		2480	1	-5.03	-25.03	Pass

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.

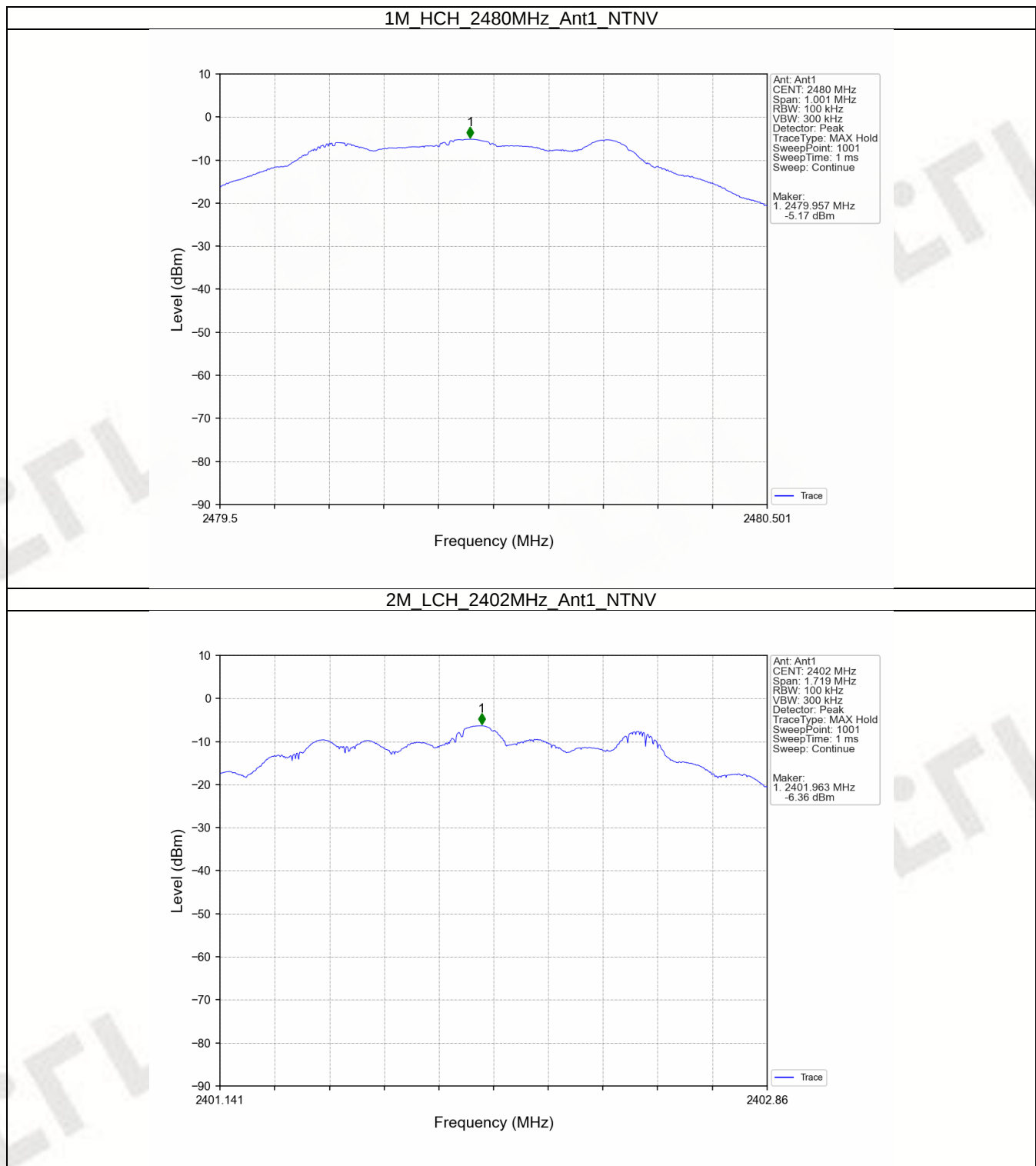
FCCID: 2AOM3-P100

5.2 Test Graph

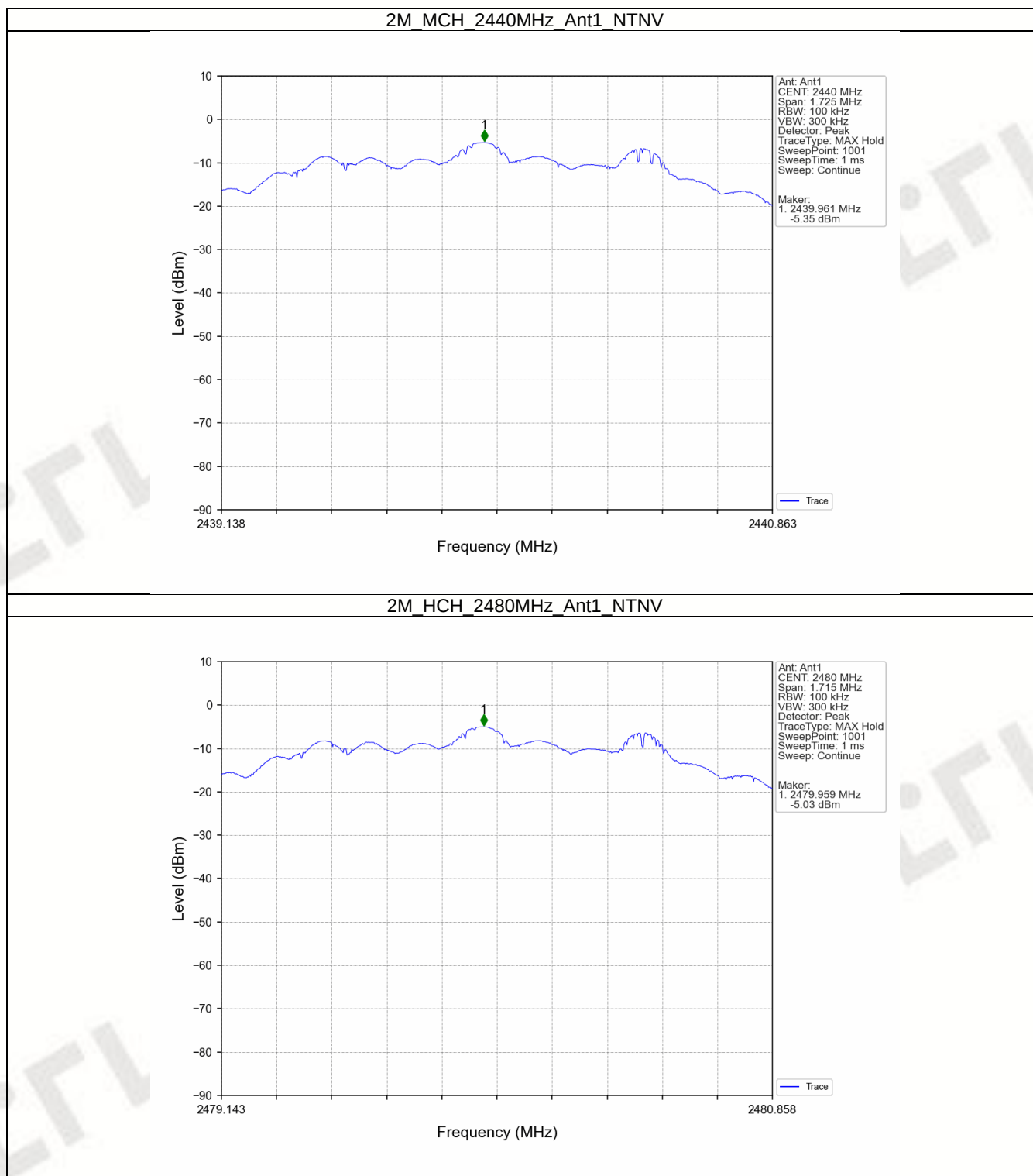
5.2.1 Ref



FCCID: 2AOM3-P100

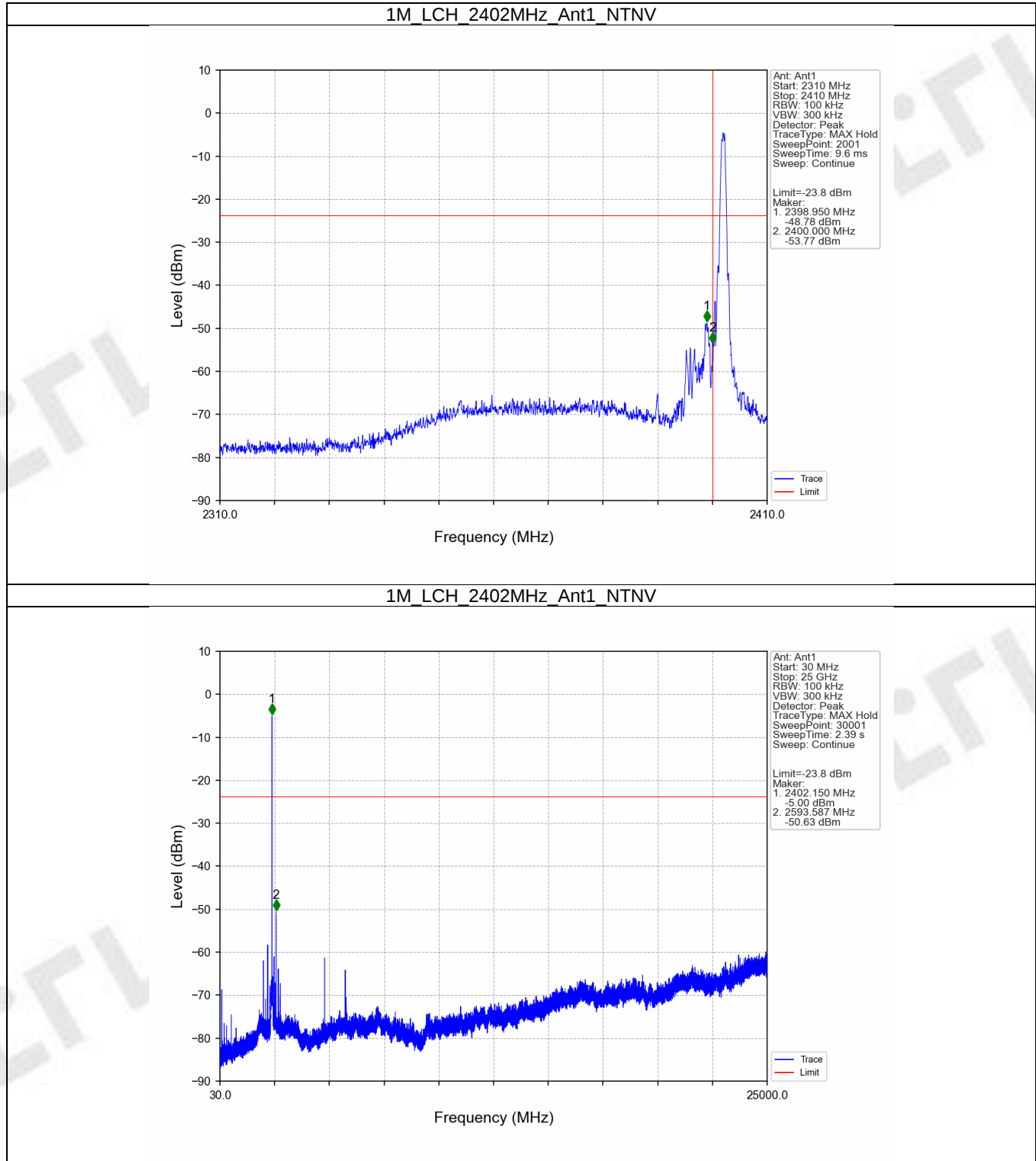


FCCID: 2AOM3-P100

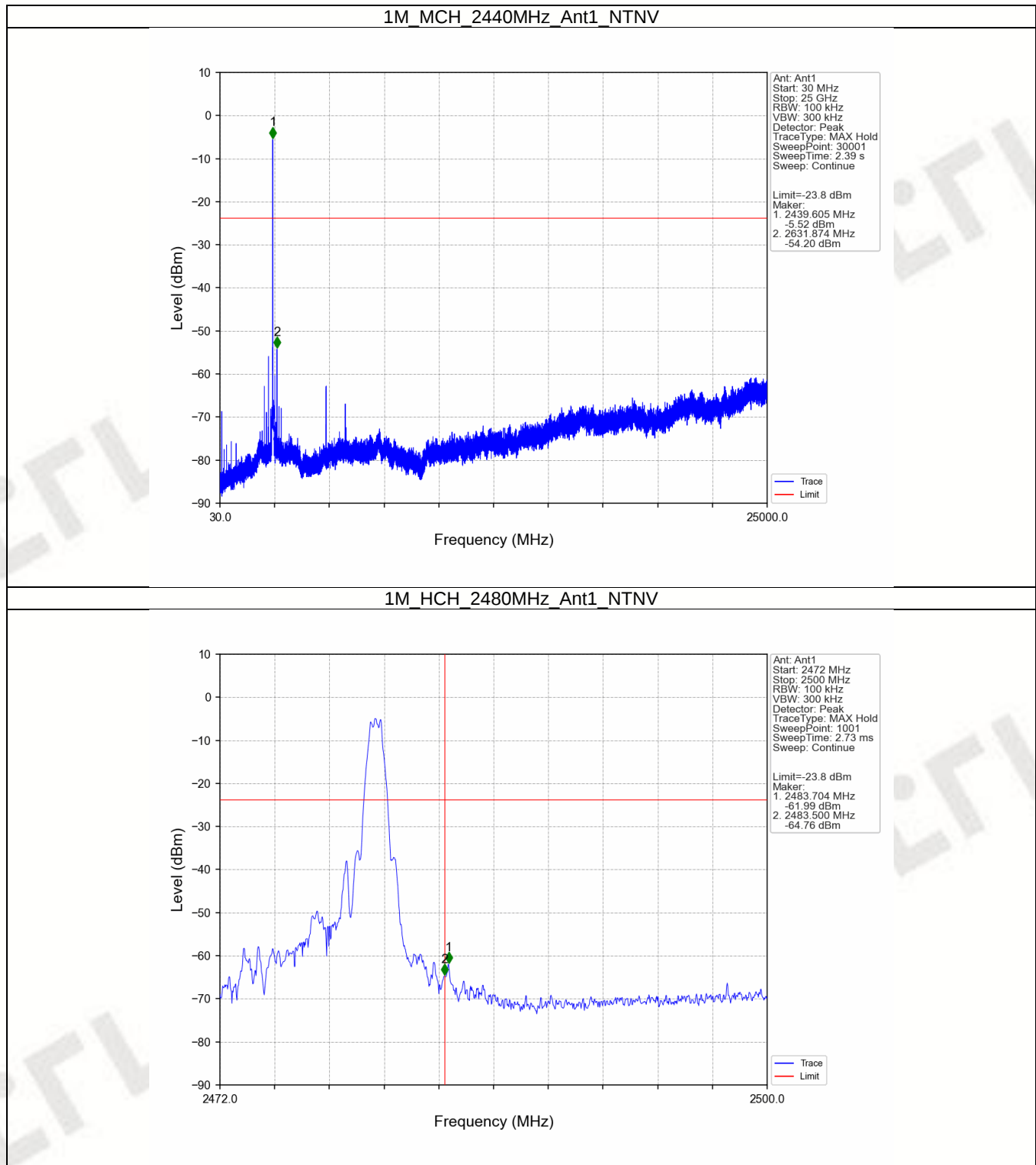


FCCID: 2AOM3-P100

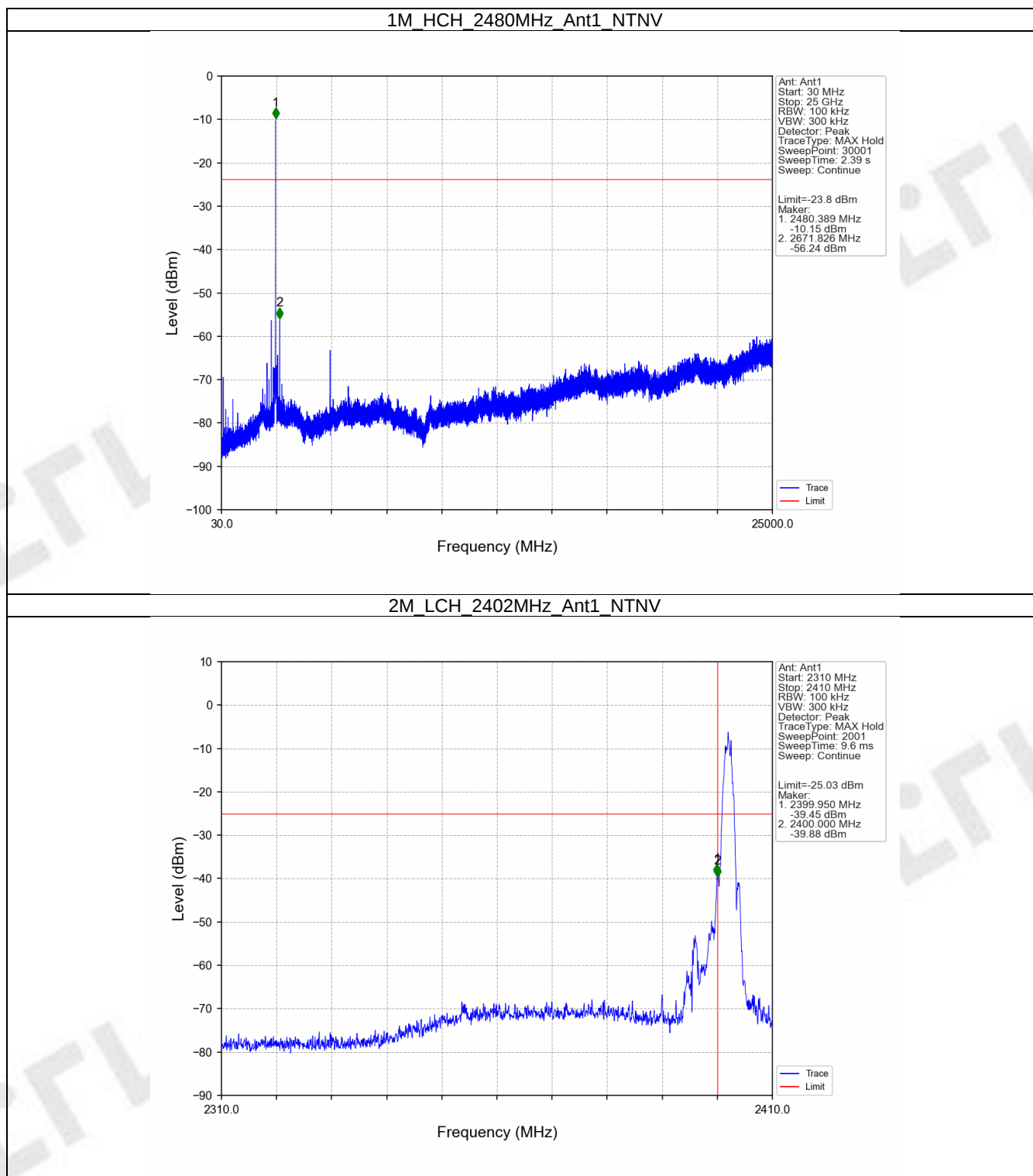
5.2.2 CSE



FCCID: 2AOM3-P100

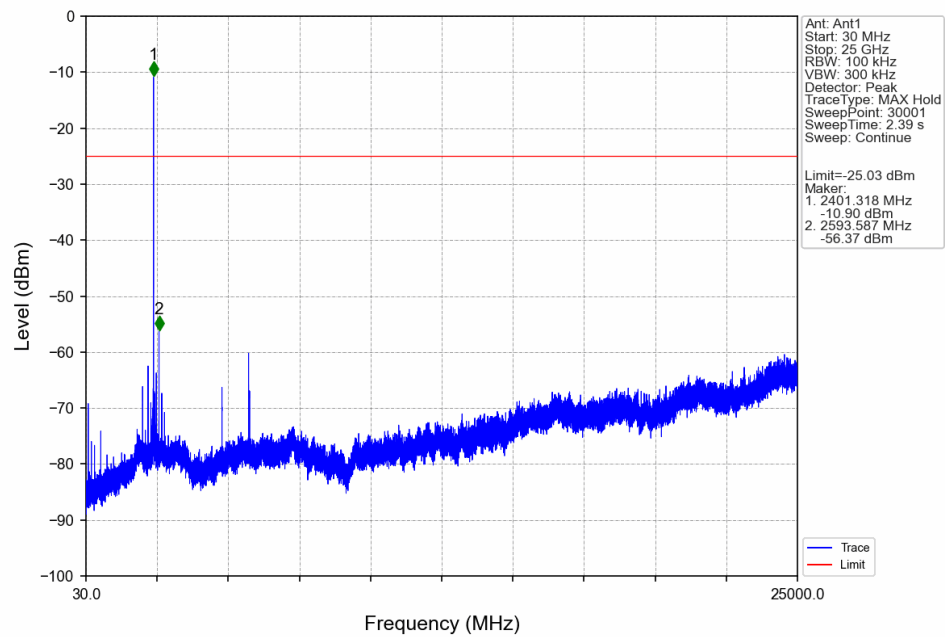


FCCID: 2AOM3-P100

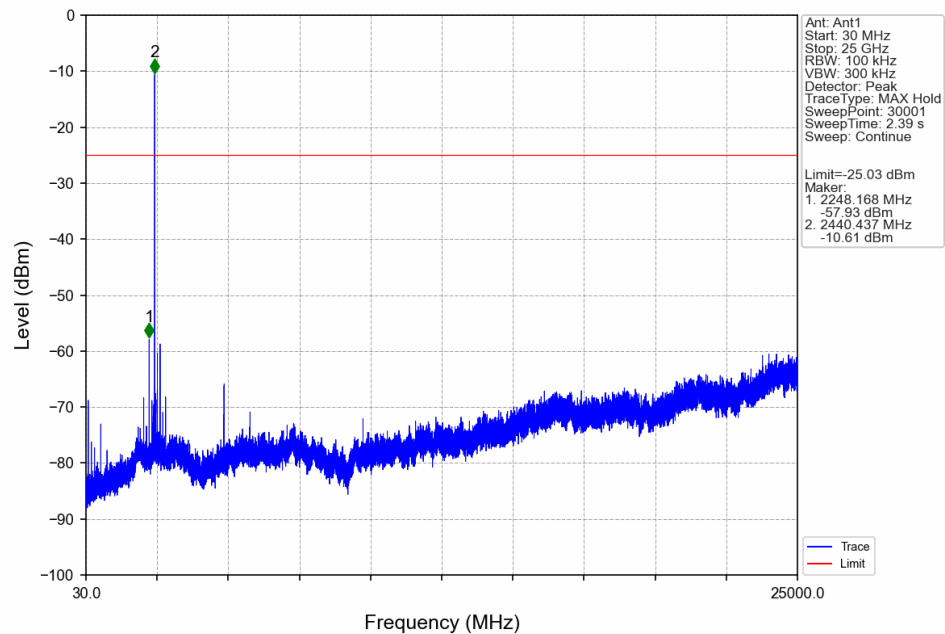


FCCID: 2AOM3-P100

2M_LCH_2402MHz_Ant1_NTNV

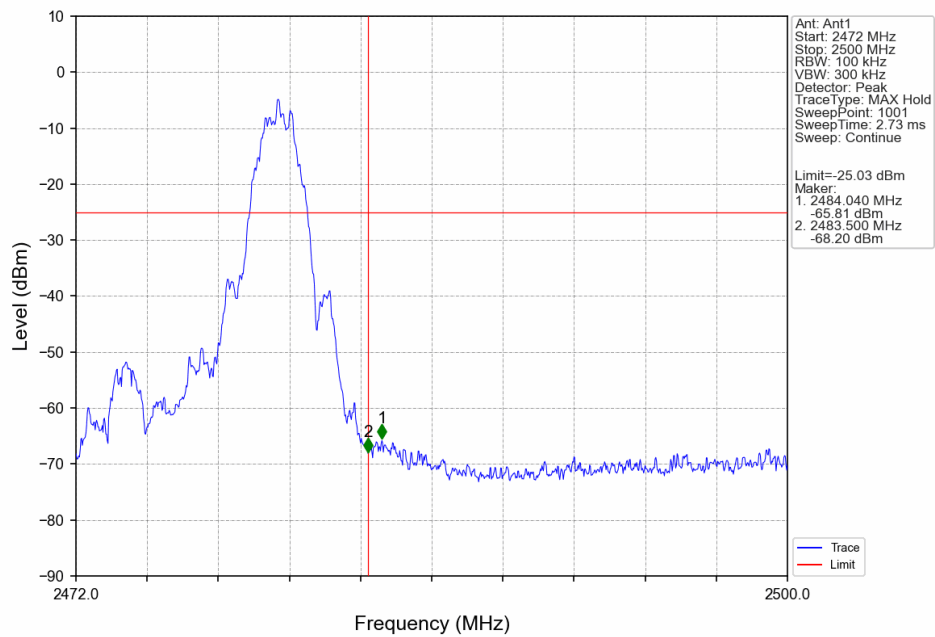


2M_MCH_2440MHz_Ant1_NTNV



FCCID: 2AOM3-P100

2M_HCH_2480MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV

