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Annex for Bluetooth Low Energy

Test Report No.: CTL2511245071-WF

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FCC ID: 2BSEJ-R20

1. Bandwidth

1.1 Test Result

1.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	1.060	/	Pass
		2440	1	1.062	/	Pass
		2480	1	1.070	/	Pass
2M	SISO	2402	1	2.093	/	Pass
		2440	1	2.097	/	Pass
		2480	1	2.097	/	Pass

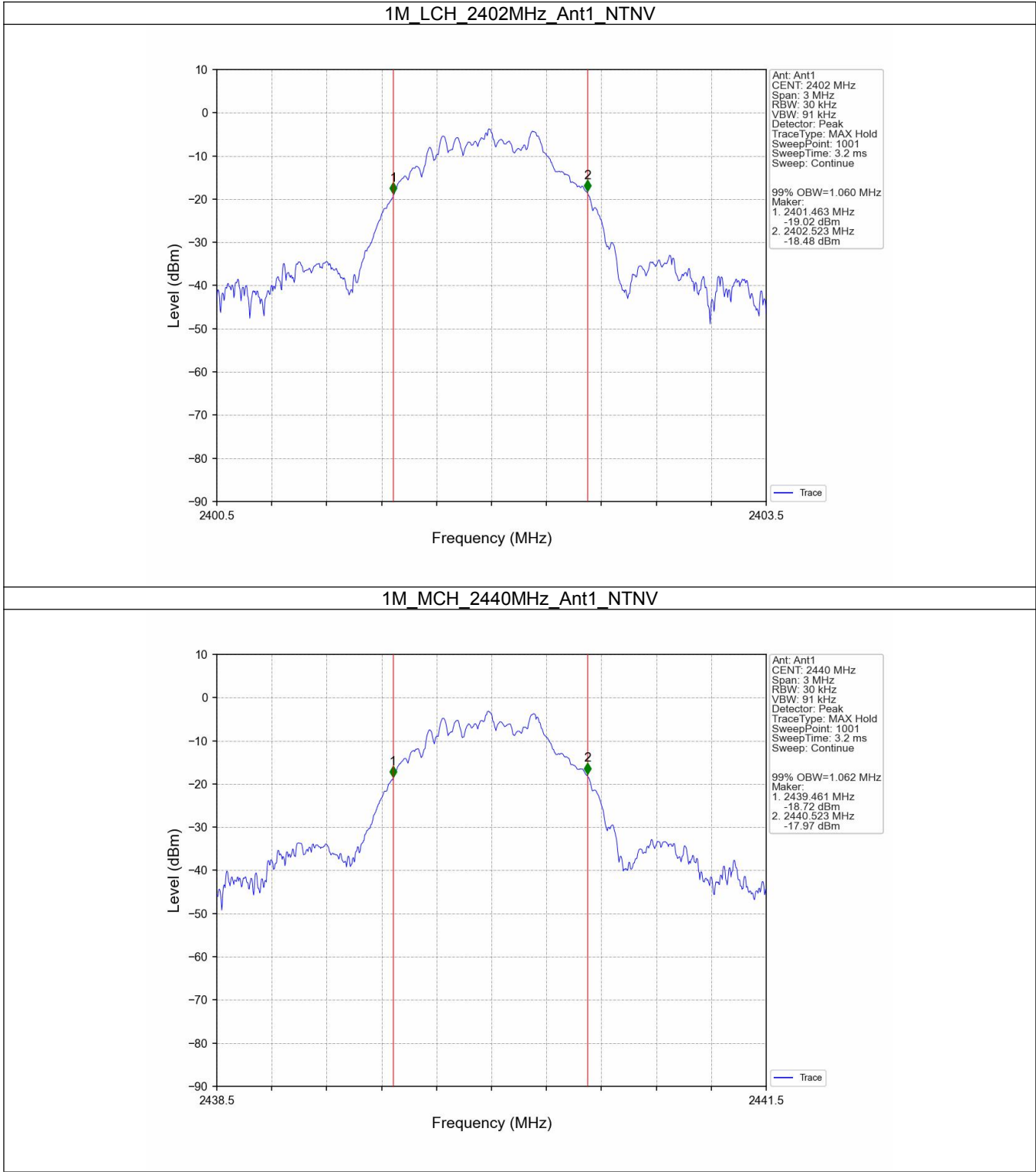
1.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.675	≥ 0.5	Pass
		2440	1	0.700	≥ 0.5	Pass
		2480	1	0.687	≥ 0.5	Pass
2M	SISO	2402	1	1.166	≥ 0.5	Pass
		2440	1	1.140	≥ 0.5	Pass
		2480	1	1.151	≥ 0.5	Pass

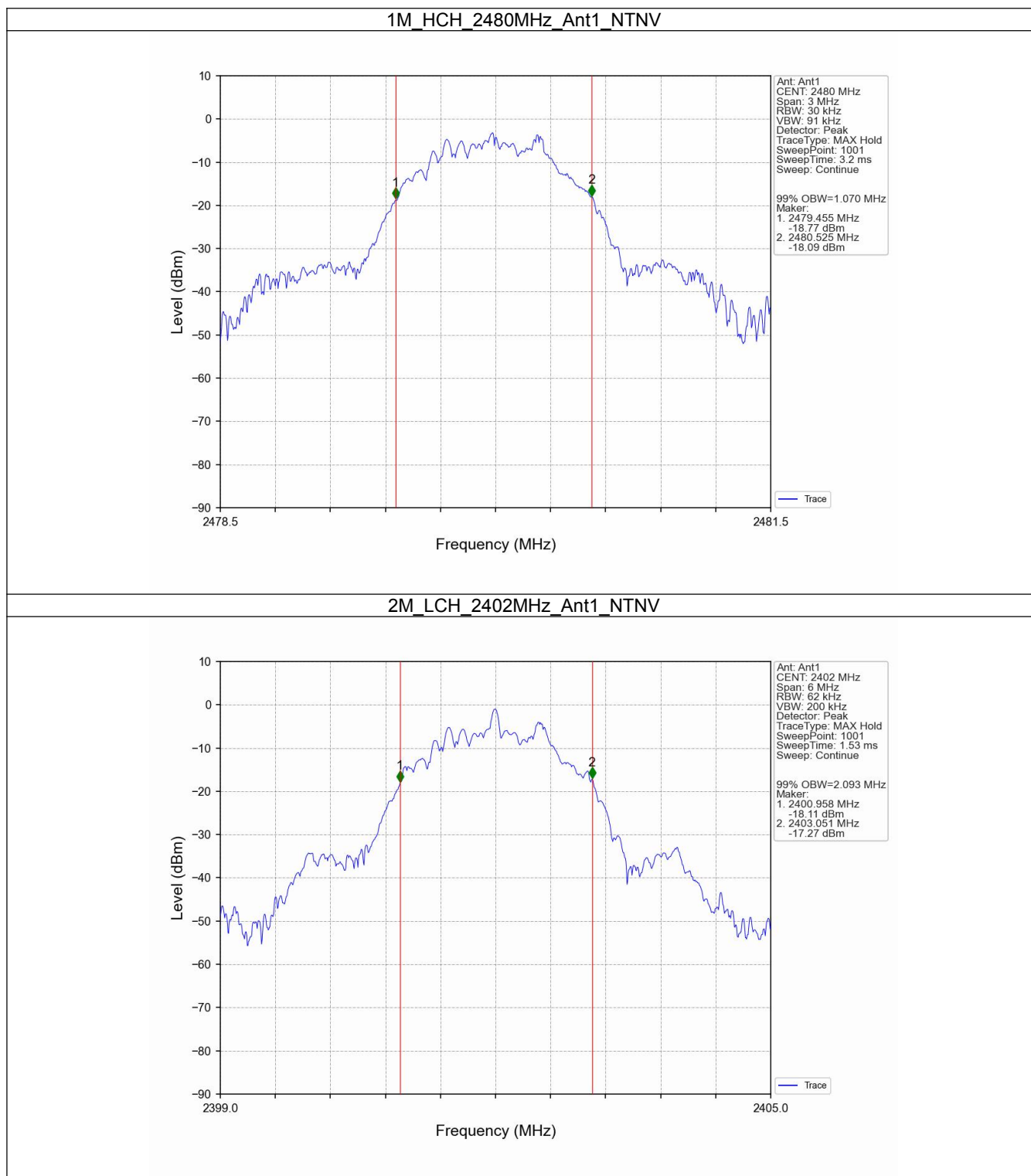
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1.2 Test Graph

1.2.1 OBW

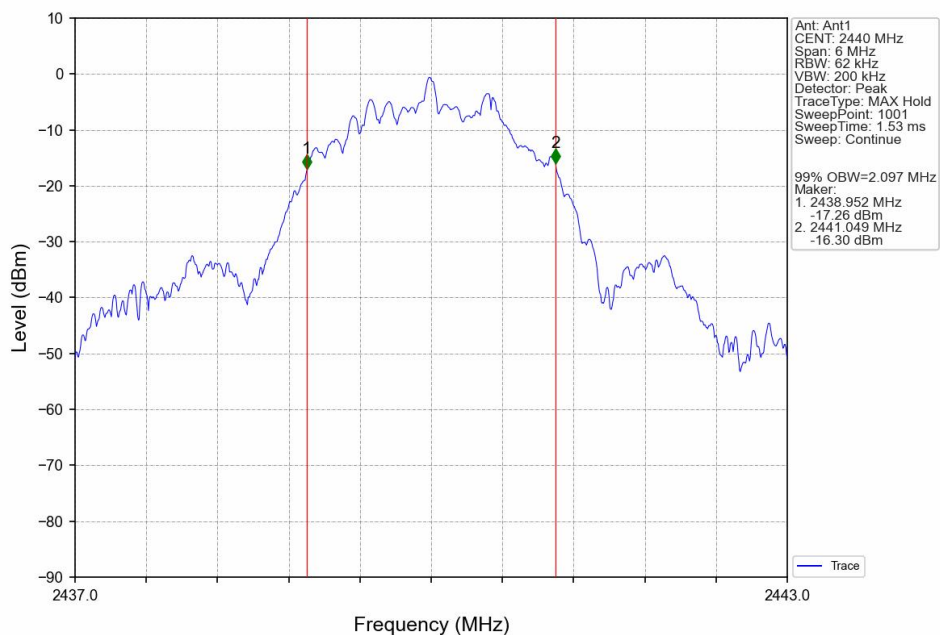


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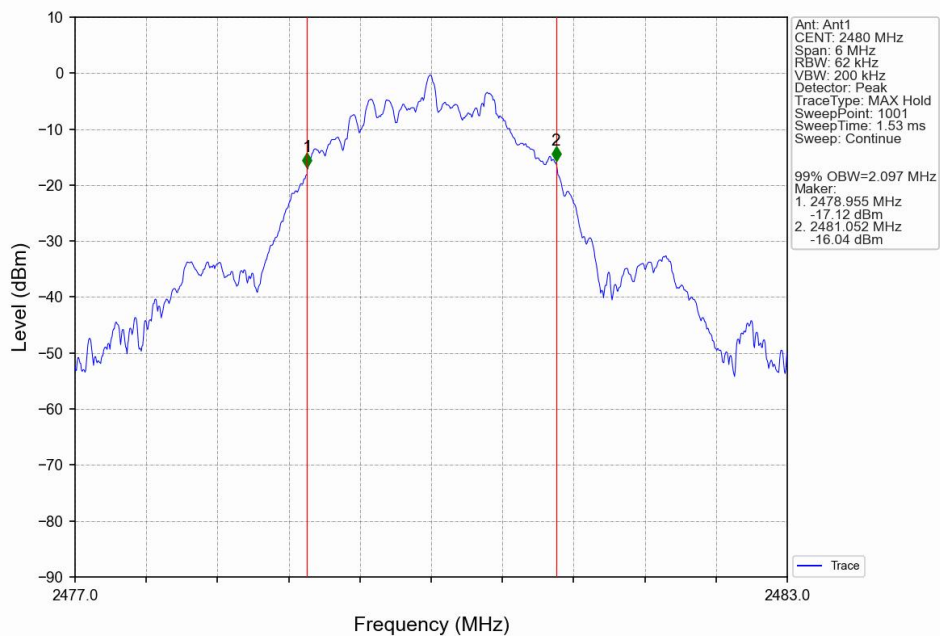


FCC ID: 2BSEJ-R20

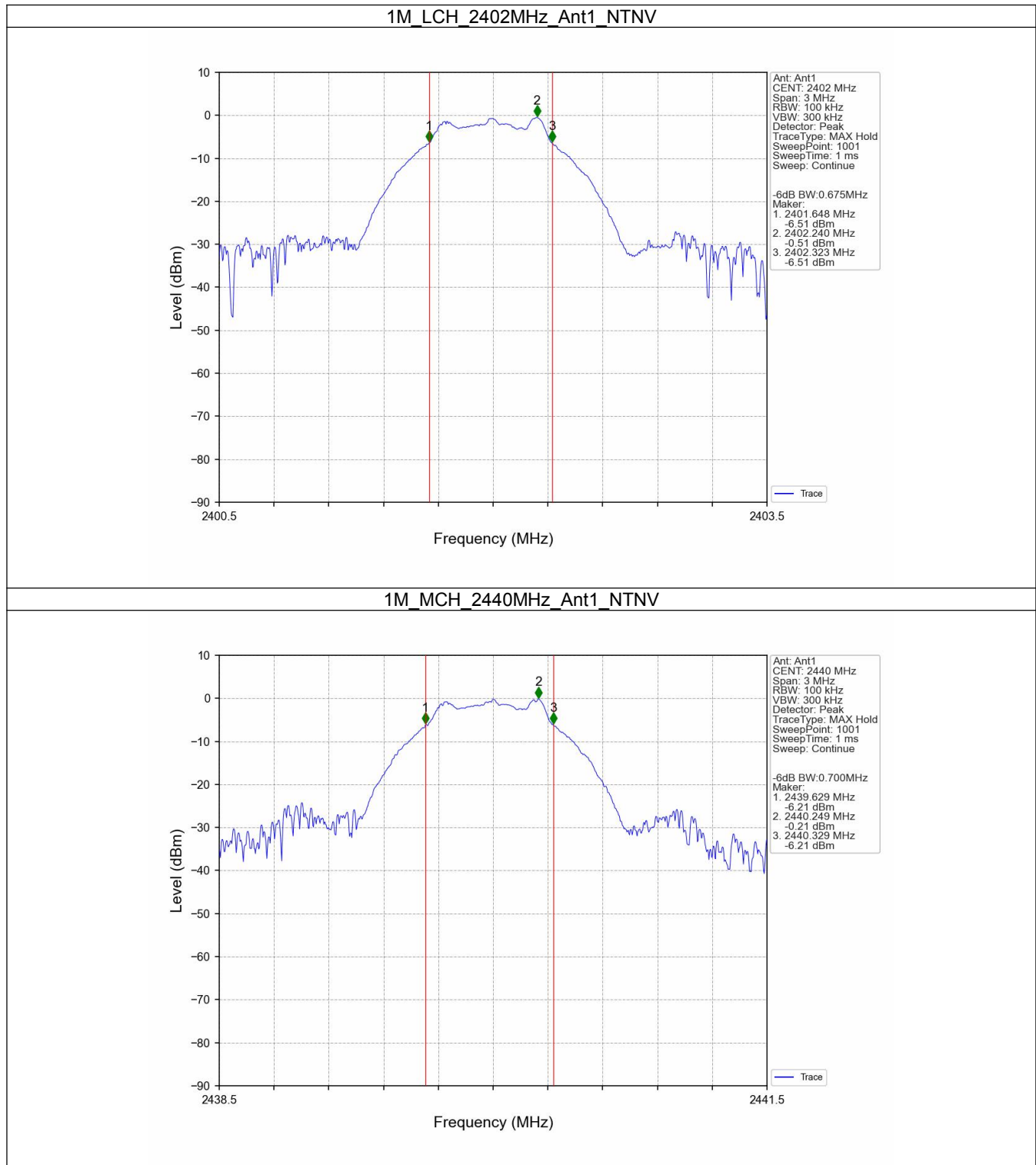
2M_MCH_2440MHz_Ant1_NTNV



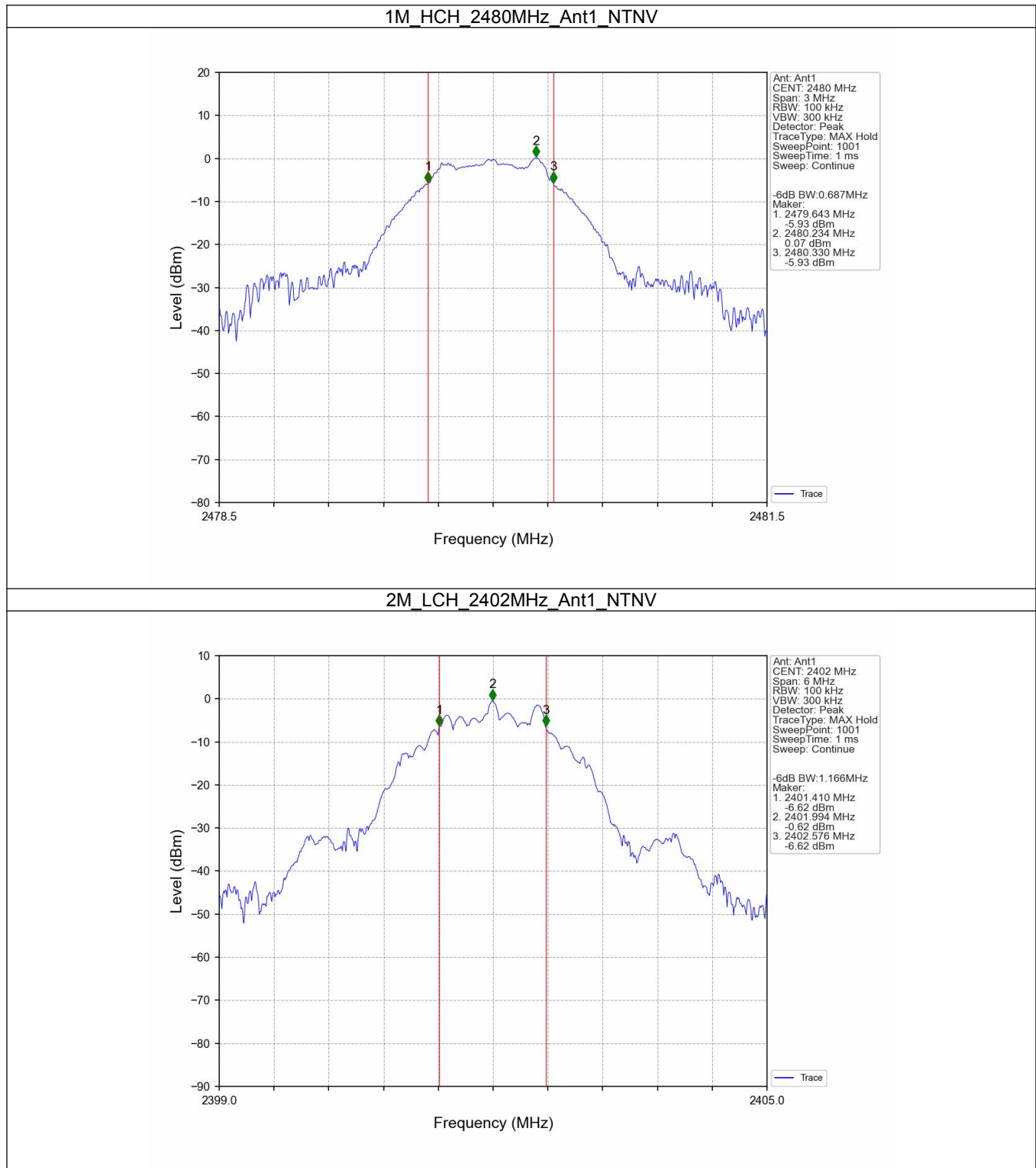
2M_HCH_2480MHz_Ant1_NTNV



FCC ID: 2BSEJ-R20

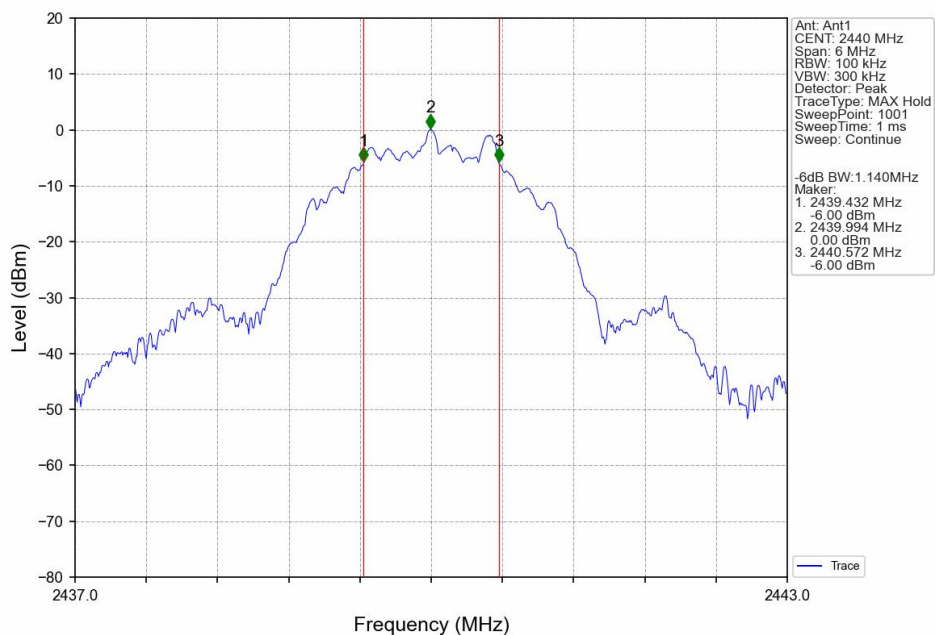
1.2.2 6dB BW

FCC ID: 2BSEJ-R20

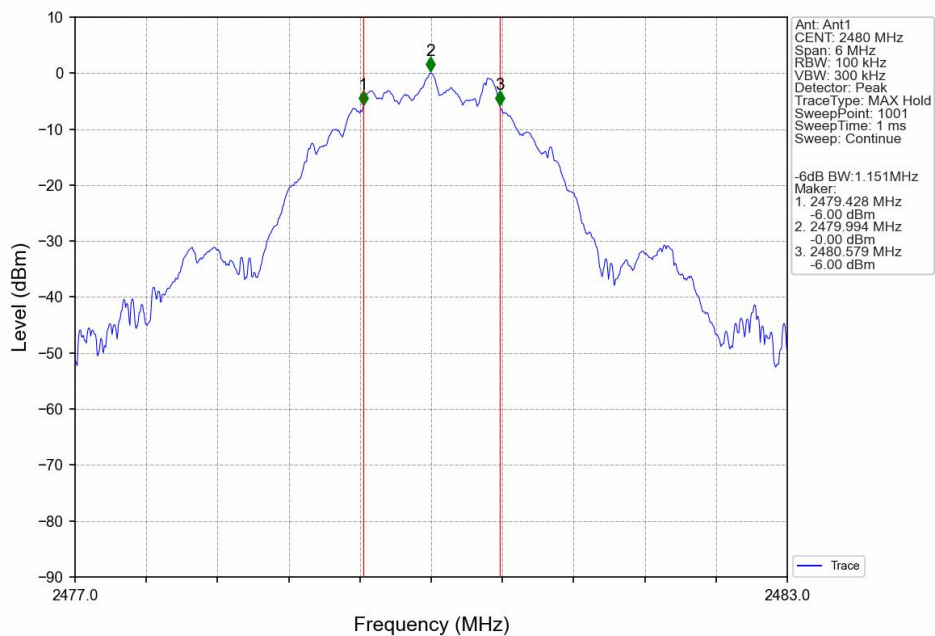


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2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



FCC ID: 2BSEJ-R20

2. Maximum Conducted Output Power

2.1 Test Result

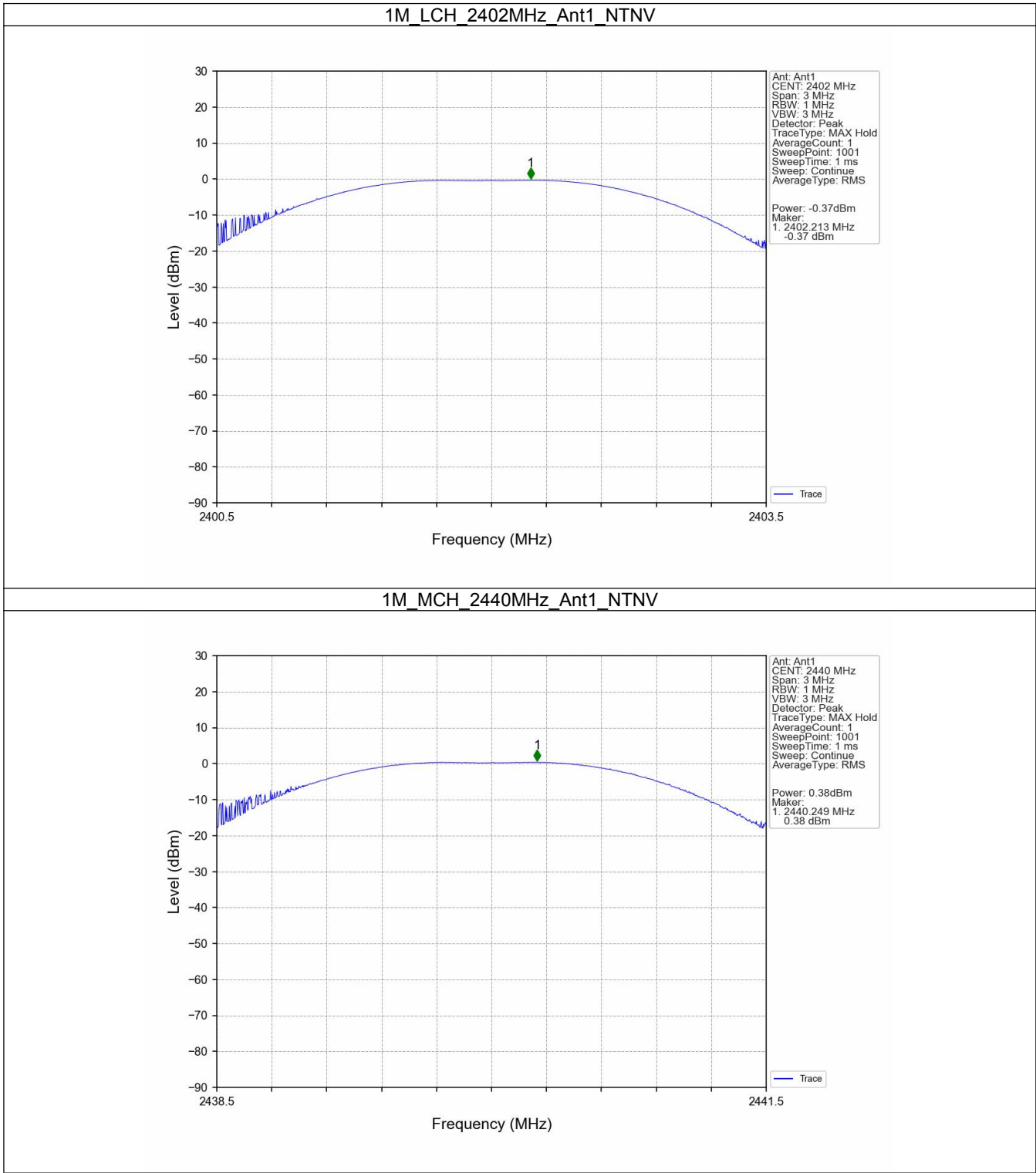
2.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	-0.37	<=30	Pass
		2440	0.38	<=30	Pass
		2480	0.23	<=30	Pass
2M	SISO	2402	-0.31	<=30	Pass
		2440	0.51	<=30	Pass
		2480	0.28	<=30	Pass
Note1: Antenna Gain: Ant1: -4.22dBi:					

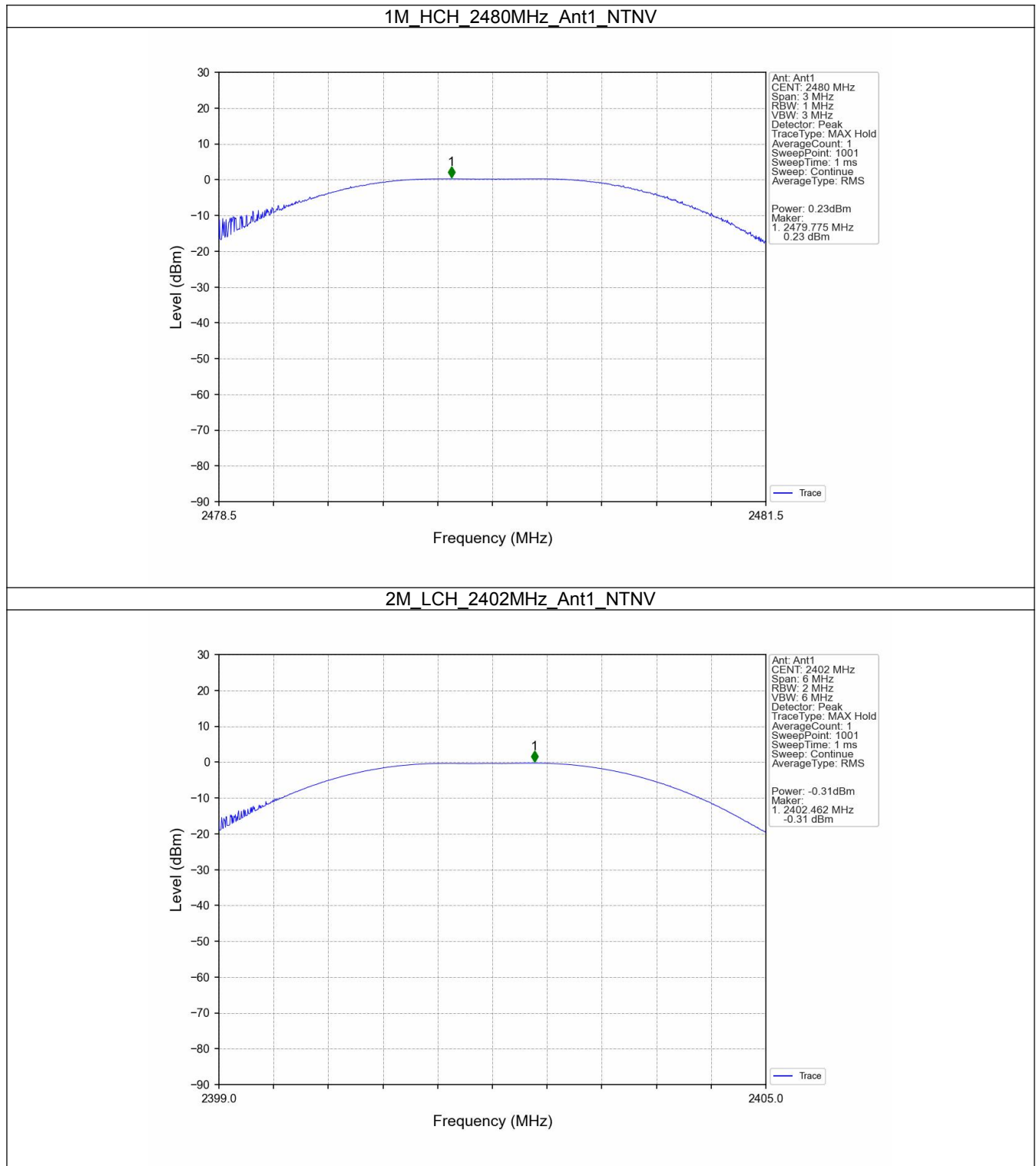
FCC ID: 2BSEJ-R20

2.2 Test Graph

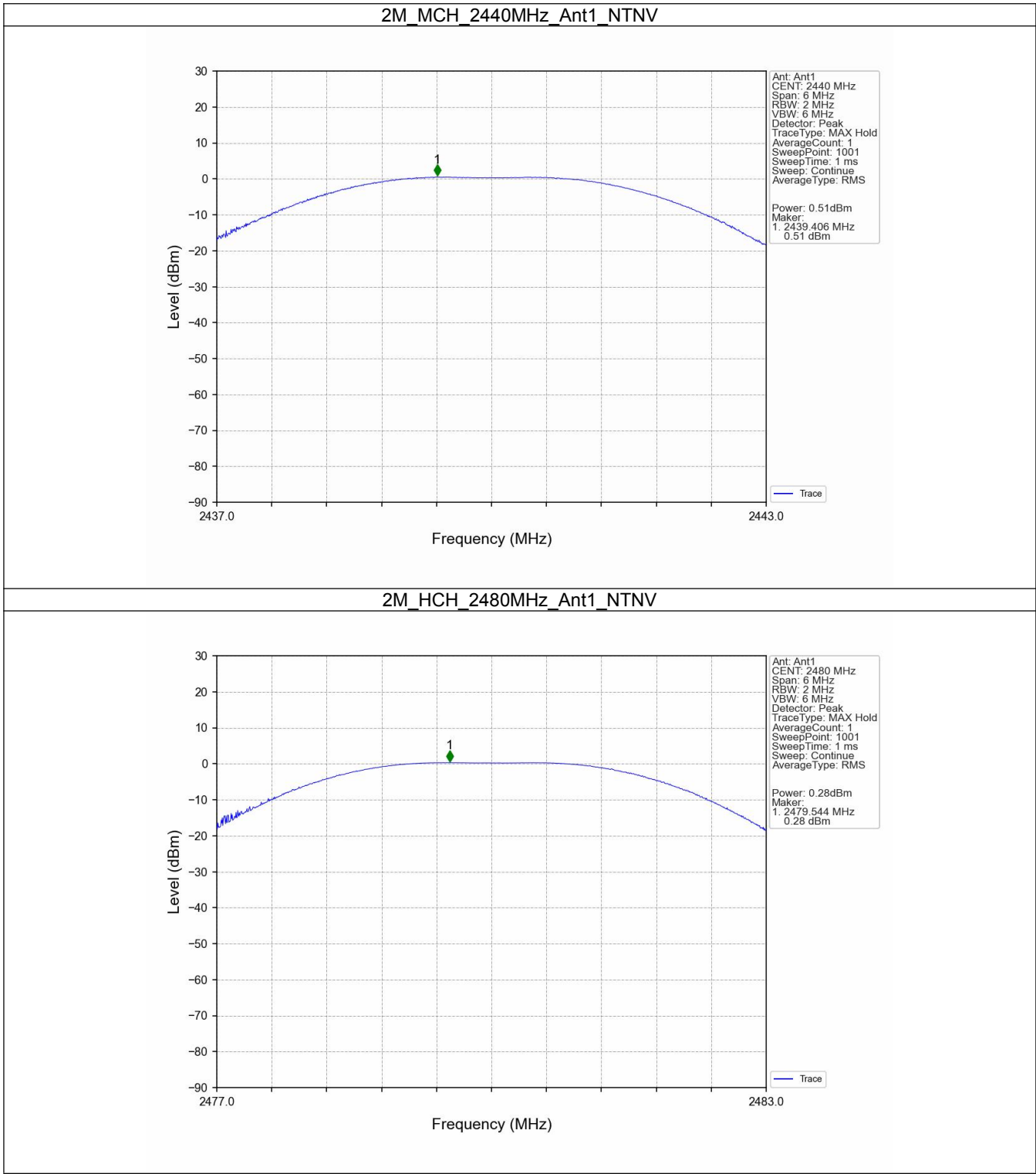
2.2.1 Power



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3. Maximum Power Spectral Density

3.1 Test Result

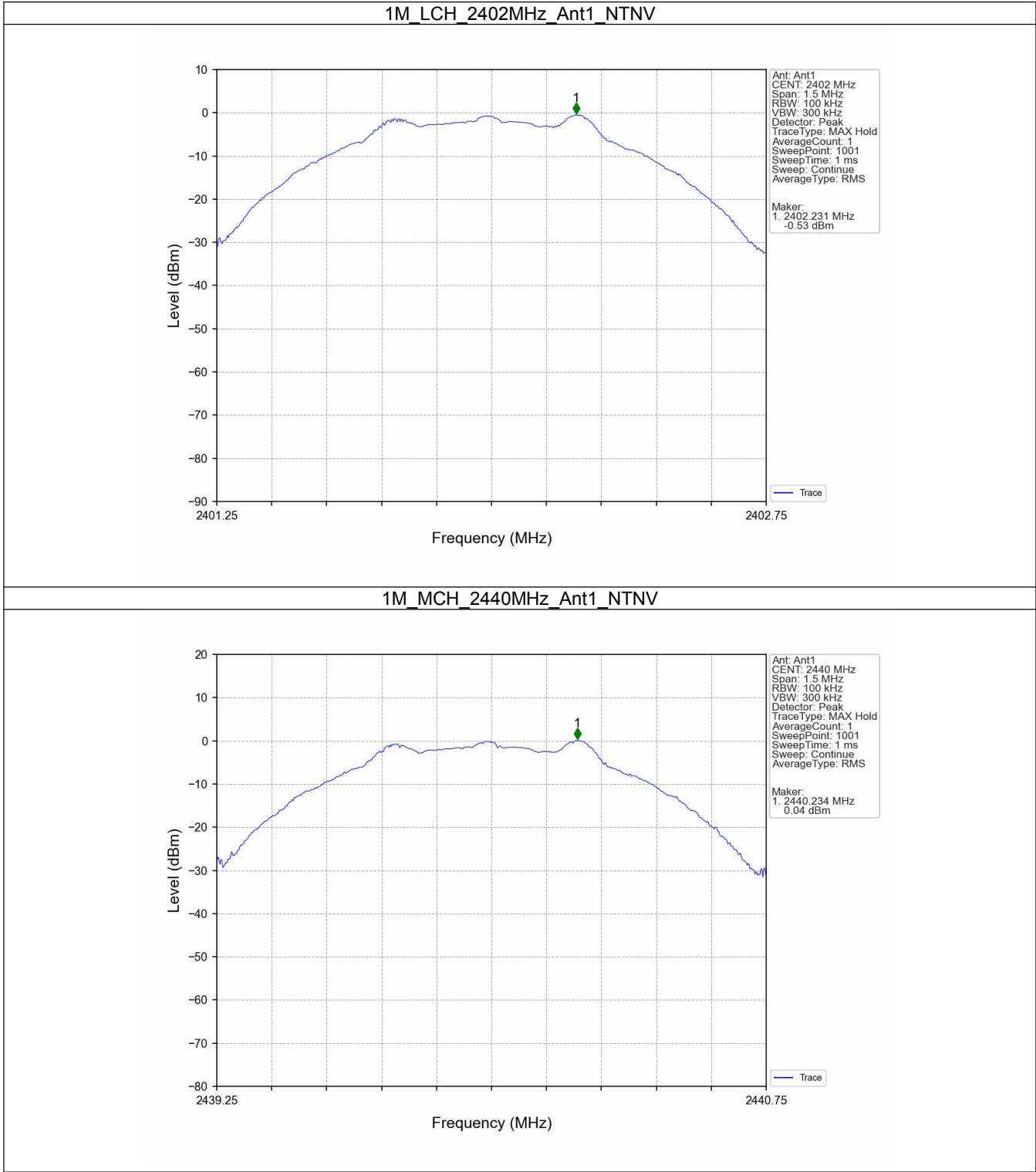
3.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	-0.53	<=8	Pass
		2440	0.04	<=8	Pass
		2480	0.04	<=8	Pass
2M	SISO	2402	-0.73	<=8	Pass
		2440	-0.16	<=8	Pass
		2480	-0.31	<=8	Pass
Note1: Antenna Gain: Ant1: -4.22dBi;					

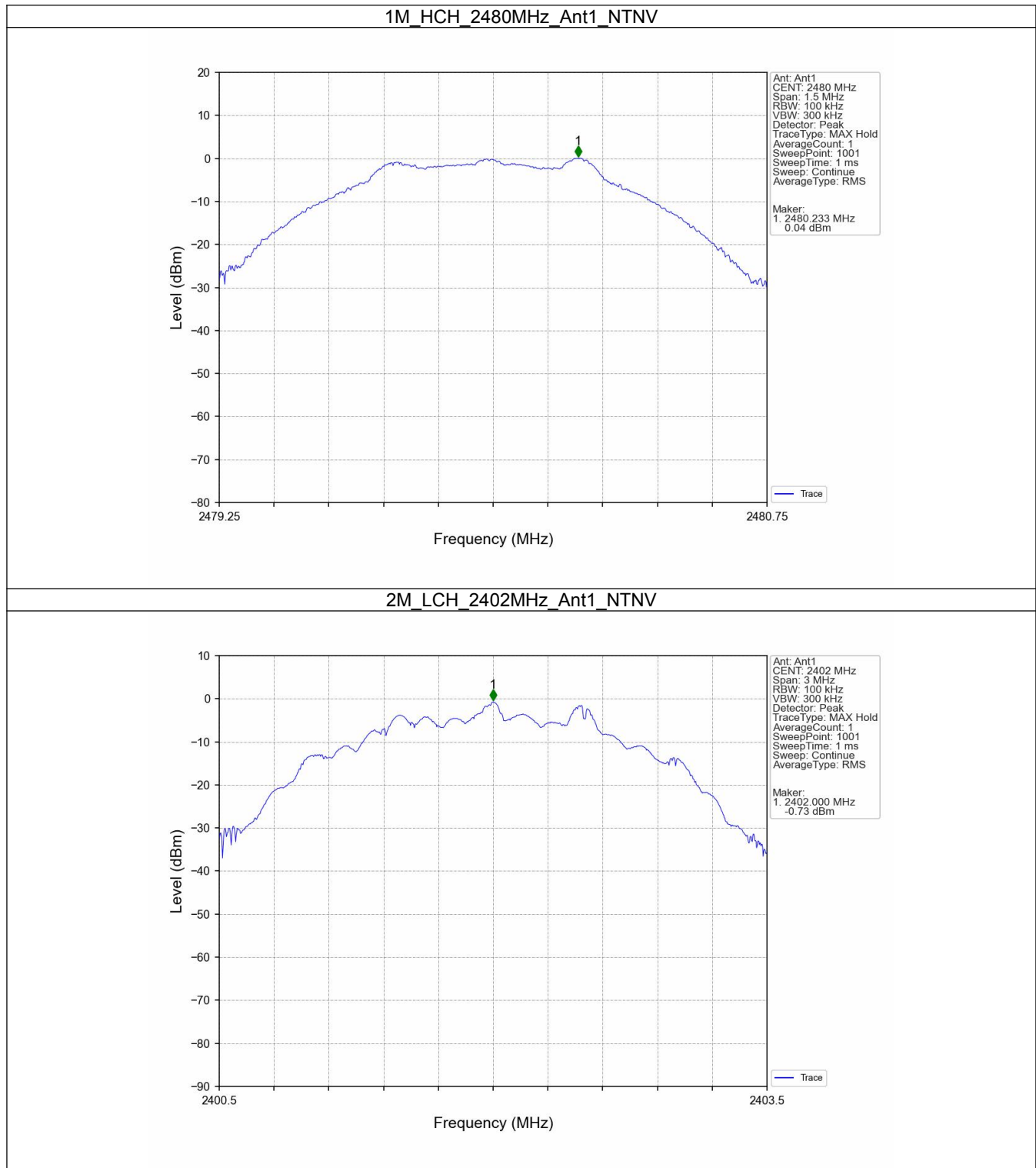
FCC ID: 2BSEJ-R20

3.2 Test Graph

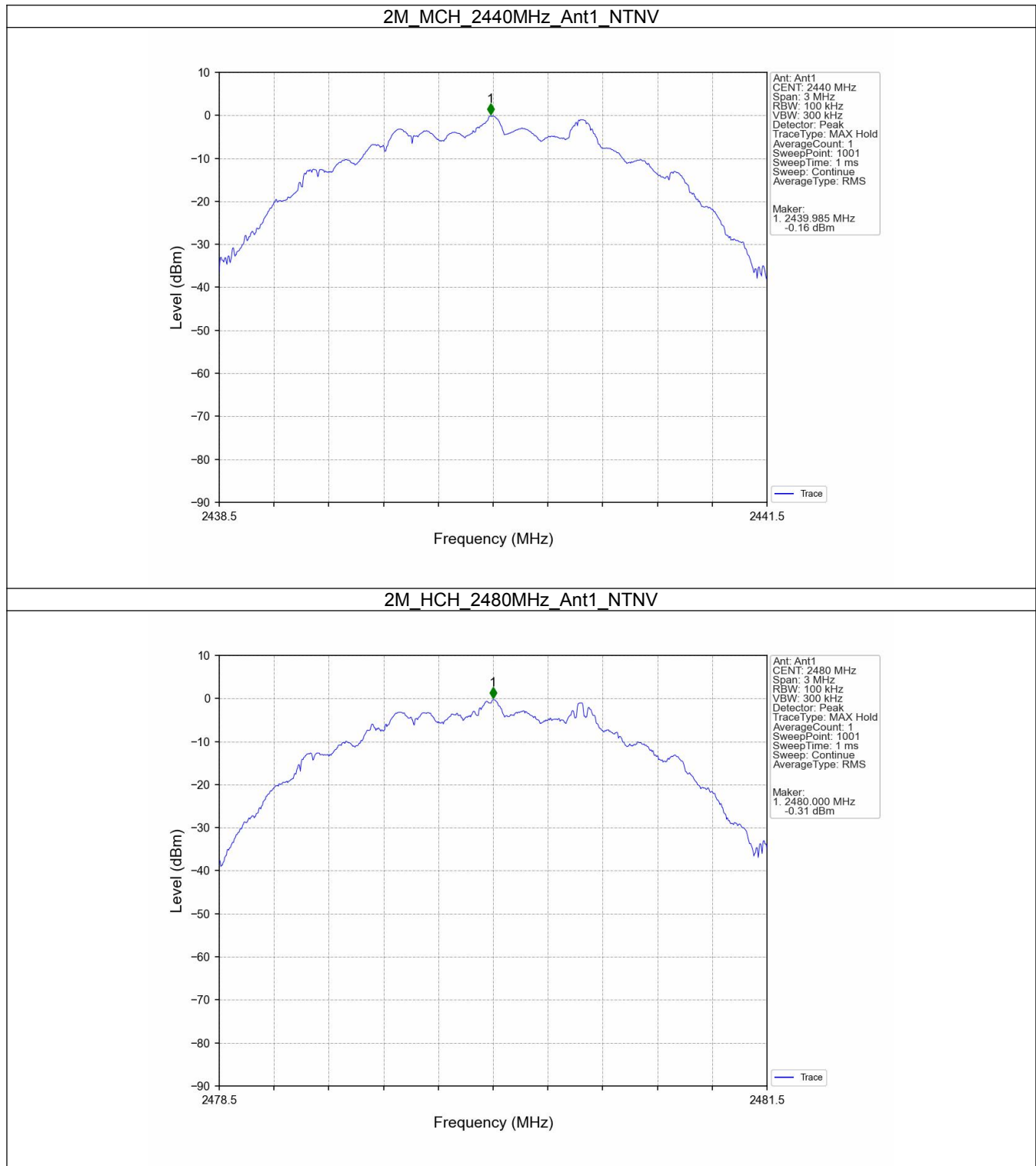
3.2.1 PSD



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4. Unwanted Emissions In Non-restricted Frequency Bands

4.1 Test Result

4.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	-0.53
		2440	1	0.04
		2480	1	0.04
2M	SISO	2402	1	-0.73
		2440	1	-0.13
		2480	1	-0.13

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.

4.1.2 CSE

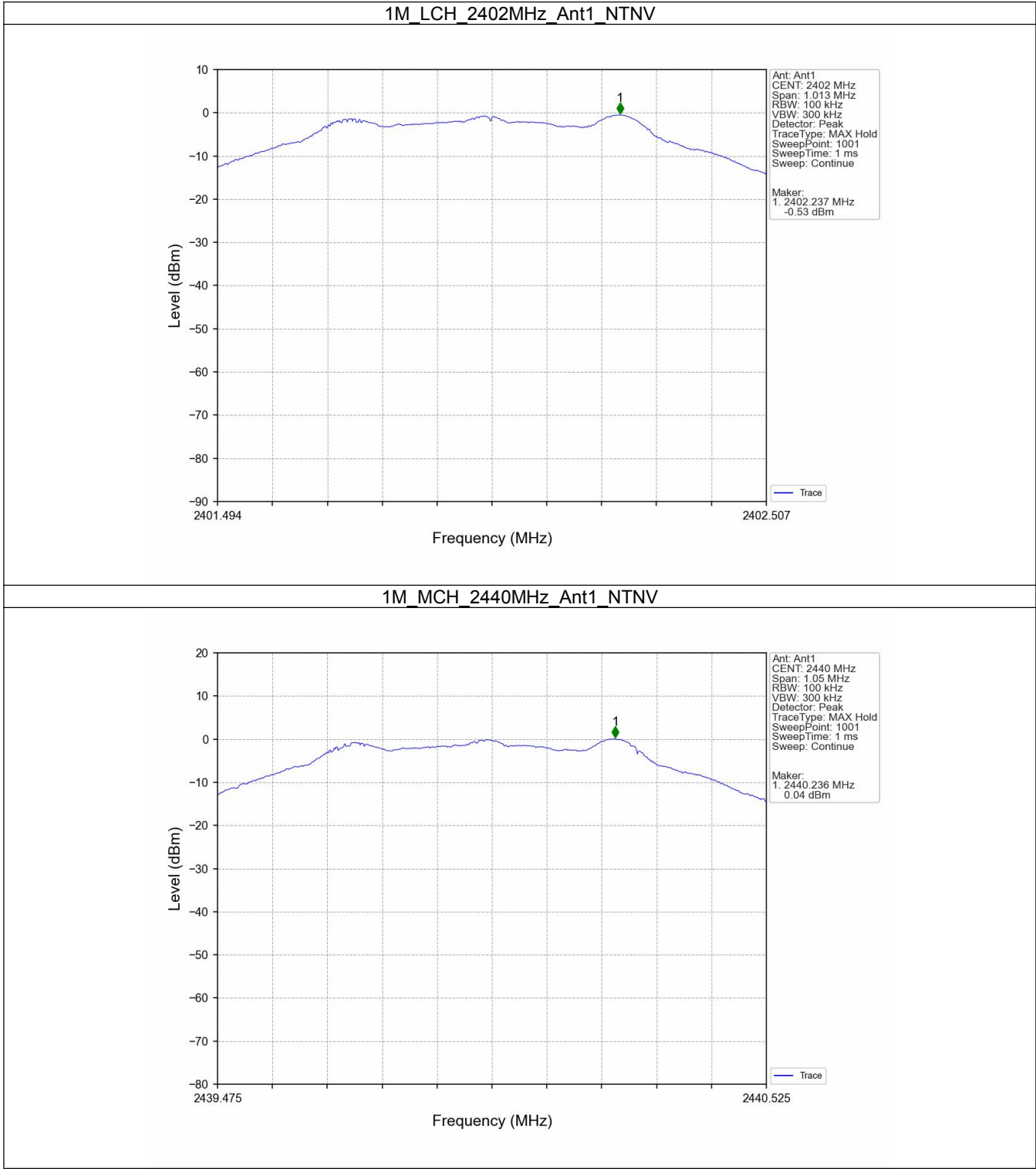
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	0.04	-19.96	Pass
		2440	1	0.04	-19.96	Pass
		2480	1	0.04	-19.96	Pass
2M	SISO	2402	1	-0.13	-20.13	Pass
		2440	1	-0.13	-20.13	Pass
		2480	1	-0.13	-20.13	Pass

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.

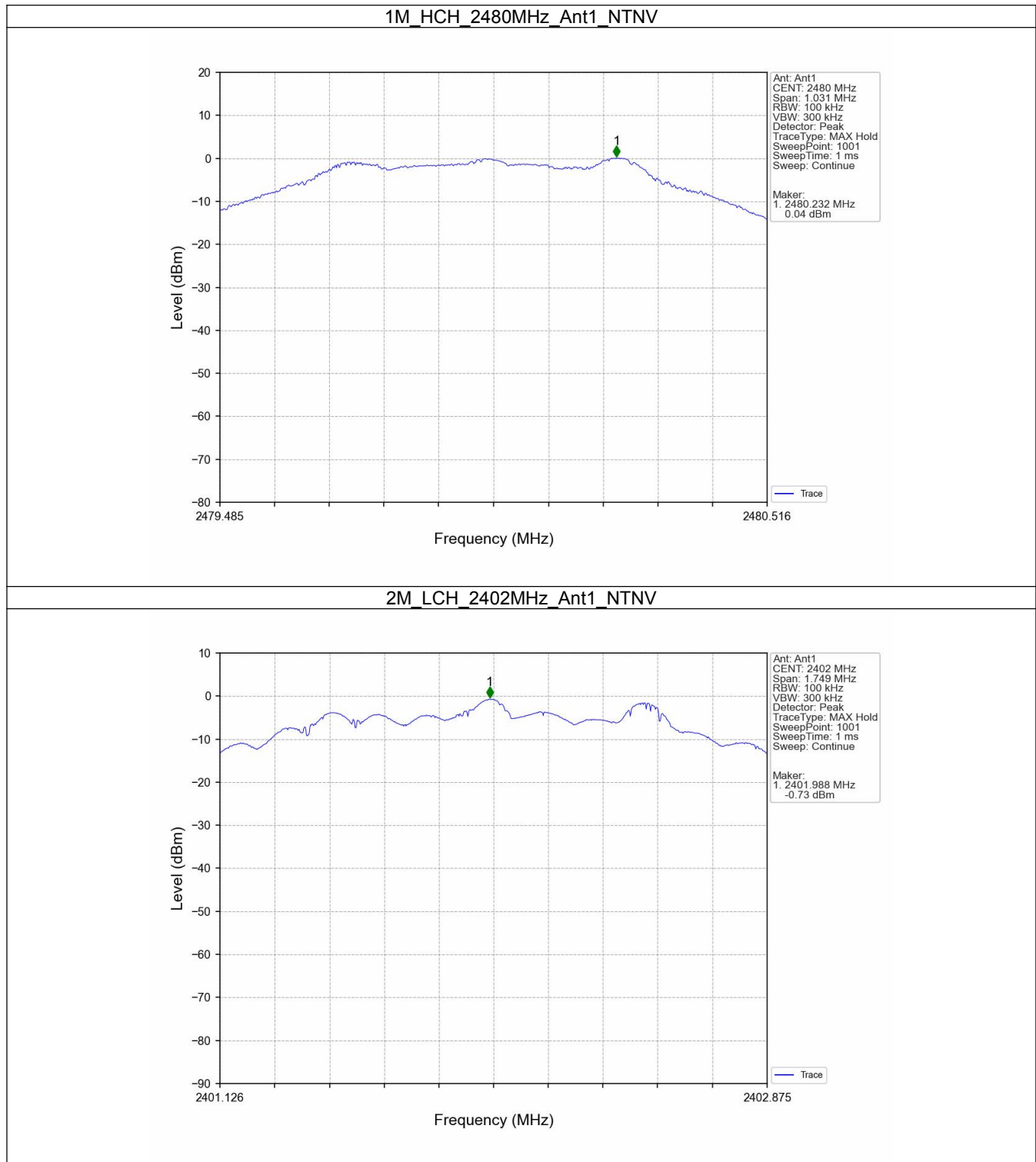
FCC ID: 2BSEJ-R20

4.2 Test Graph

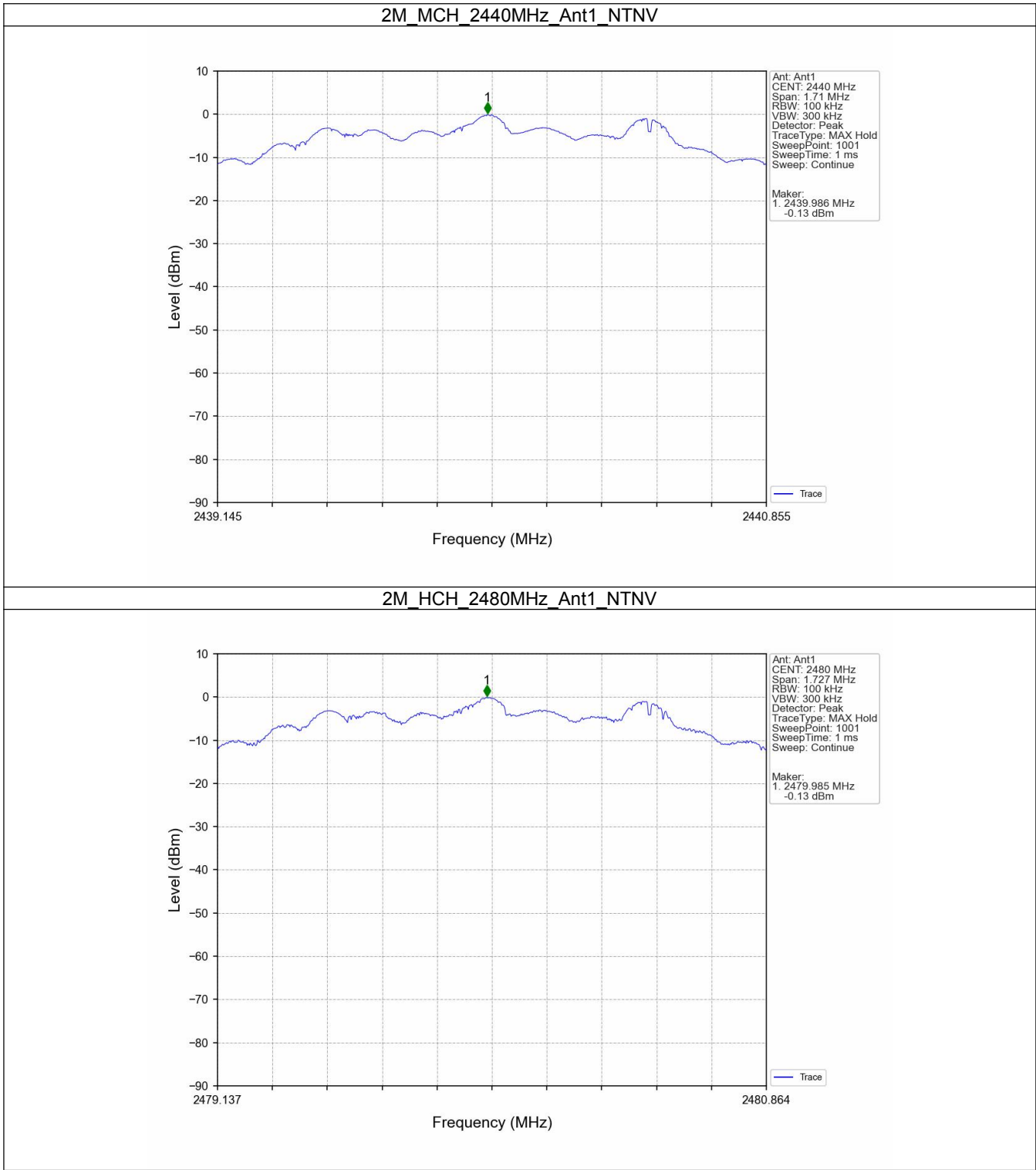
4.2.1 Ref



FCC ID: 2BSEJ-R20

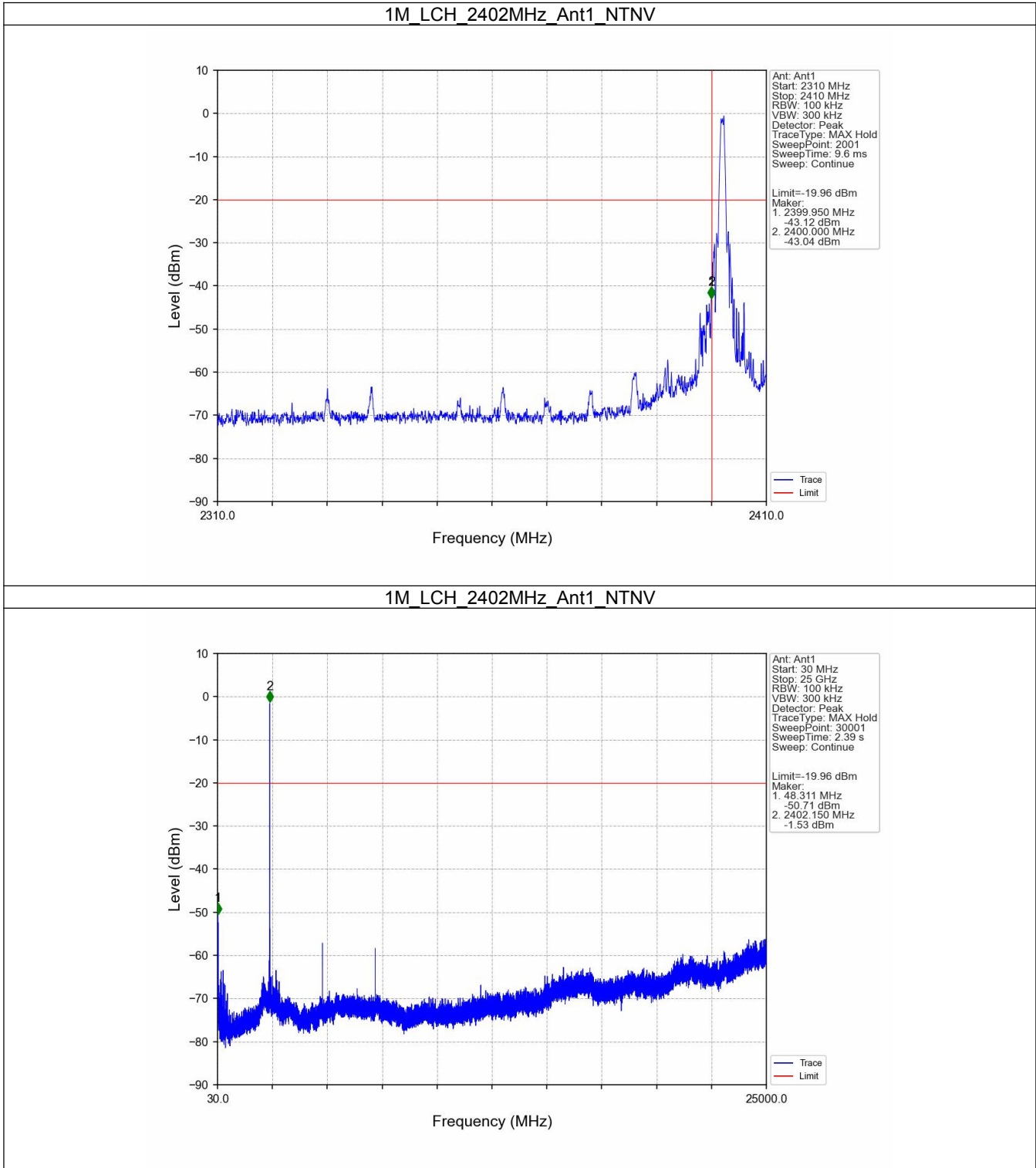


FCC ID: 2BSEJ-R20

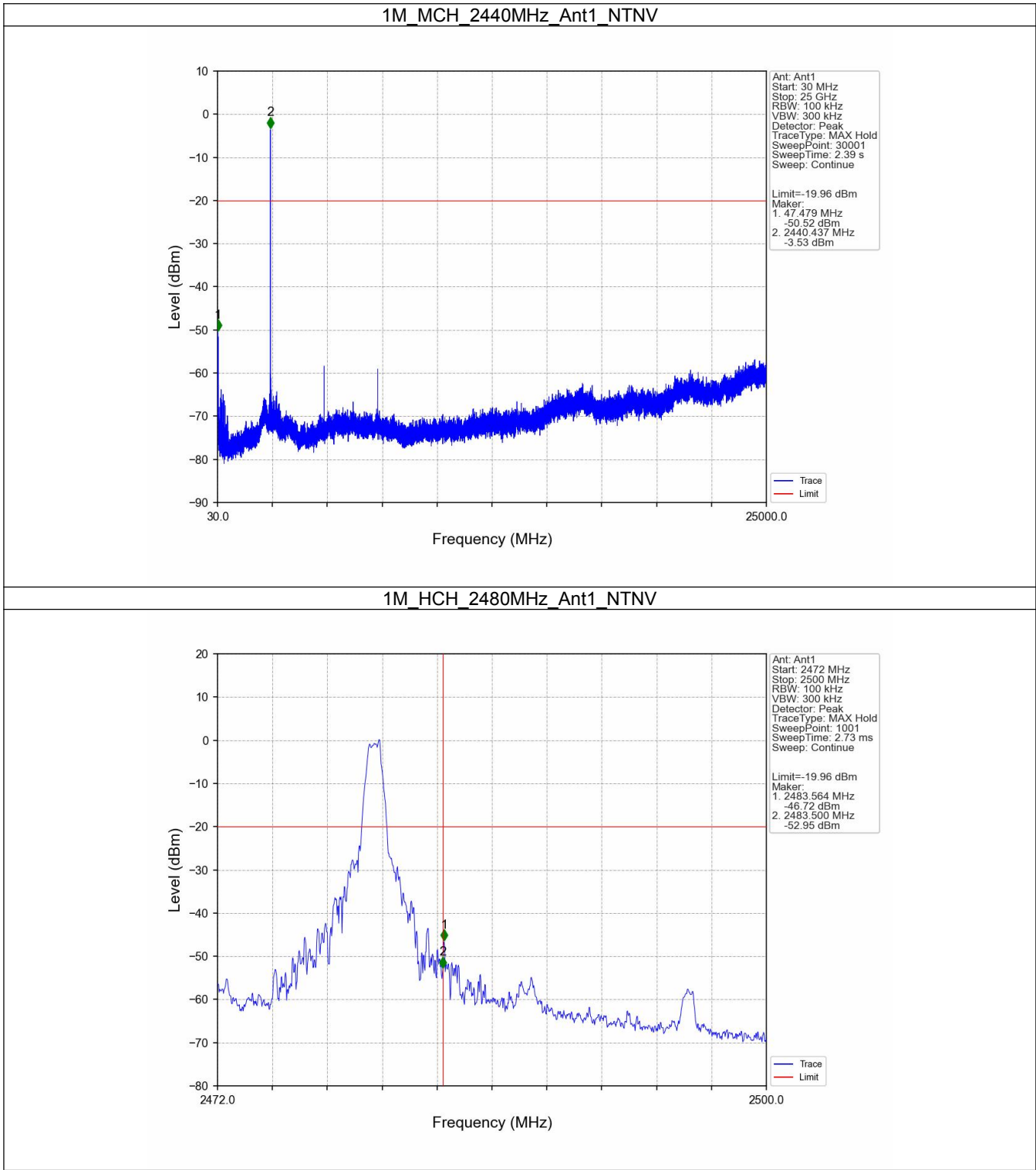


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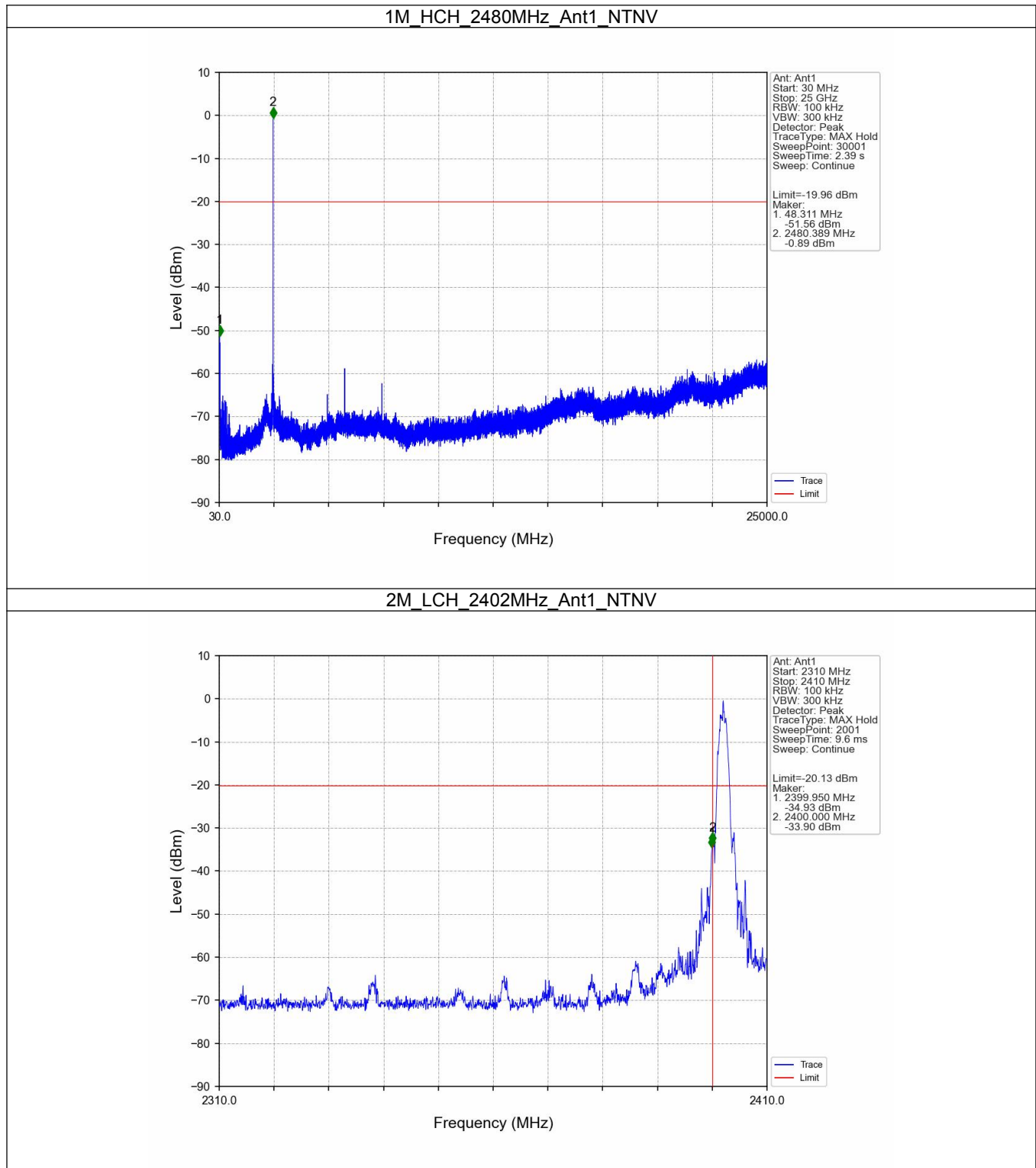
4.2.2 CSE



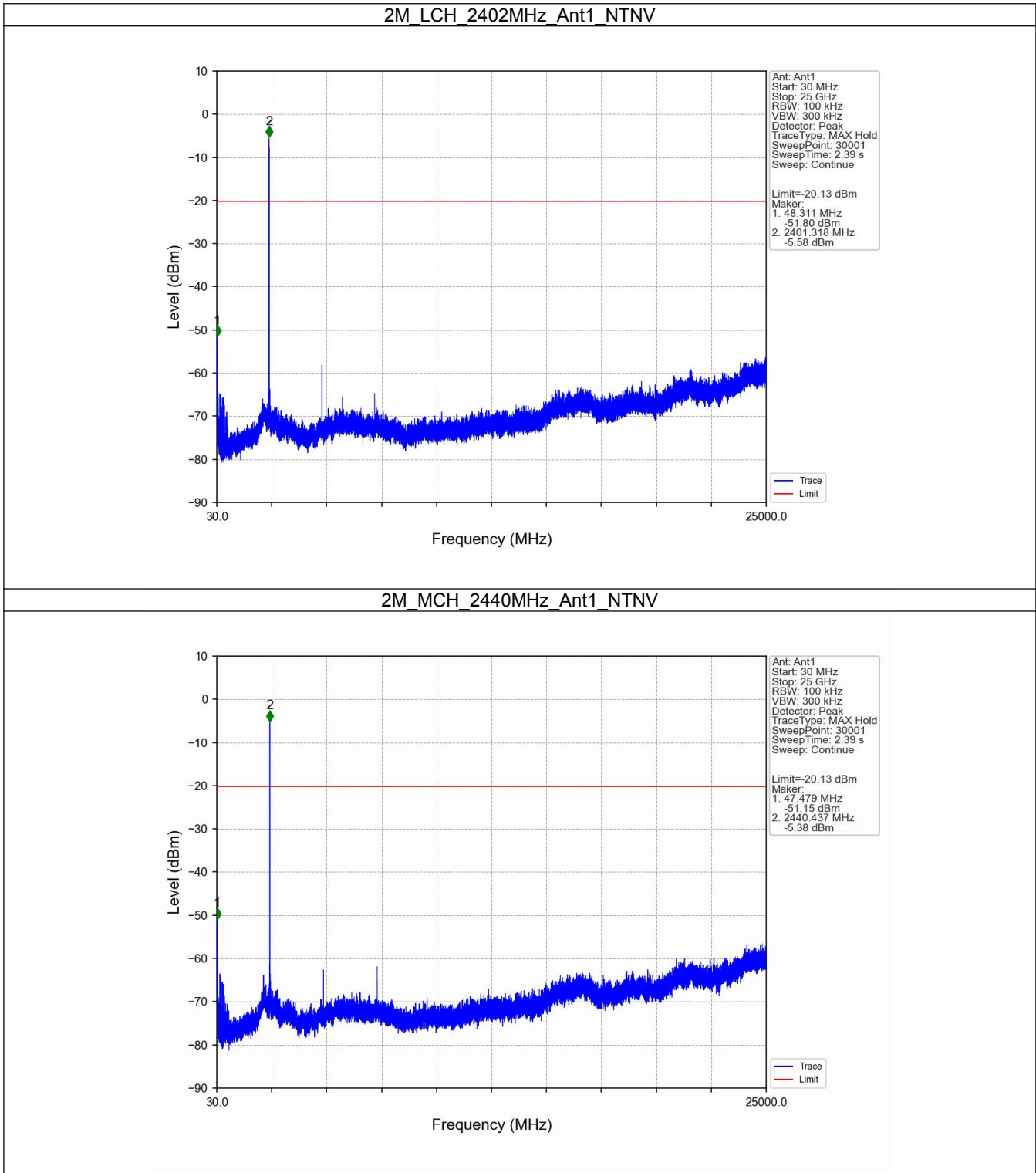
FCC ID: 2BSEJ-R20



FCC ID: 2BSEJ-R20

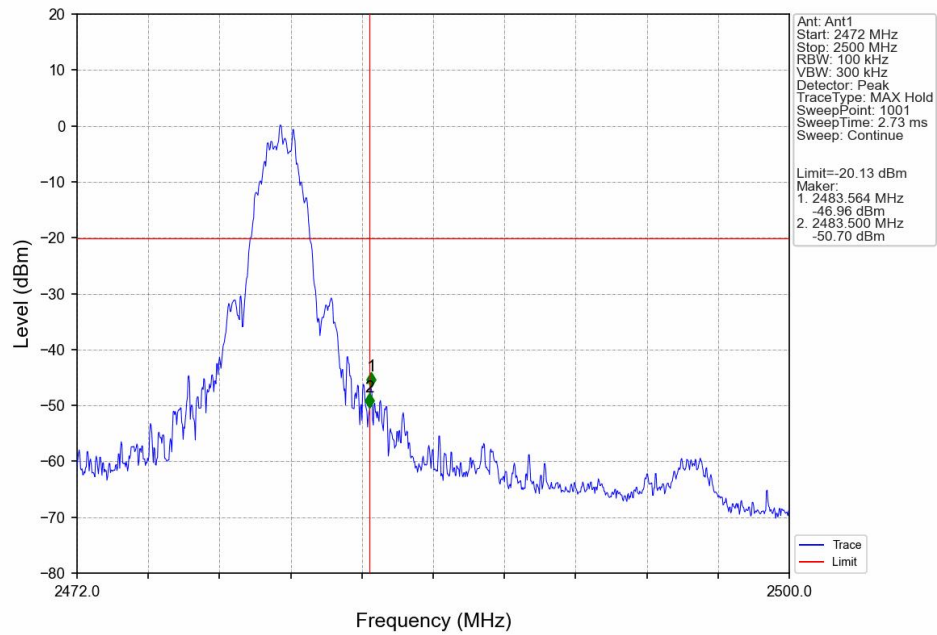


FCC ID: 2BSEJ-R20



FCC ID: 2BSEJ-R20

2M_HCH_2480MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV

