

Appendix: Bluetooth LE

Content

Content	2
1. Duty Cycle	4
1.1 Test Result	4
1.1.1 Ant1	4
1.2 Test Graph	5
1.2.1 Ant1	5
2. Bandwidth	9
2.1 Test Result	9
2.1.1 OBW	9
2.1.2 6dB BW	9
2.2 Test Graph	10
2.2.1 OBW	10
2.2.2 6dB BW	14
3. Maximum Conducted Output Power	18
3.1 Test Result	18
3.1.1 Power	18
3.2 Test Graph	19
3.2.1 Power	19
4. Maximum Power Spectral Density	23
4.1 Test Result	23
4.1.1 PSD	23
4.2 Test Graph	24
4.2.1 PSD	24
5. Unwanted Emissions In Non-restricted Frequency Bands	28

5.1 Test Result 28

 5.1.1 Ref 28

 5.1.2 CSE 28

5.2 Test Graph 29

 5.2.1 Ref 29

 5.2.2 CSE 33

1. Duty Cycle

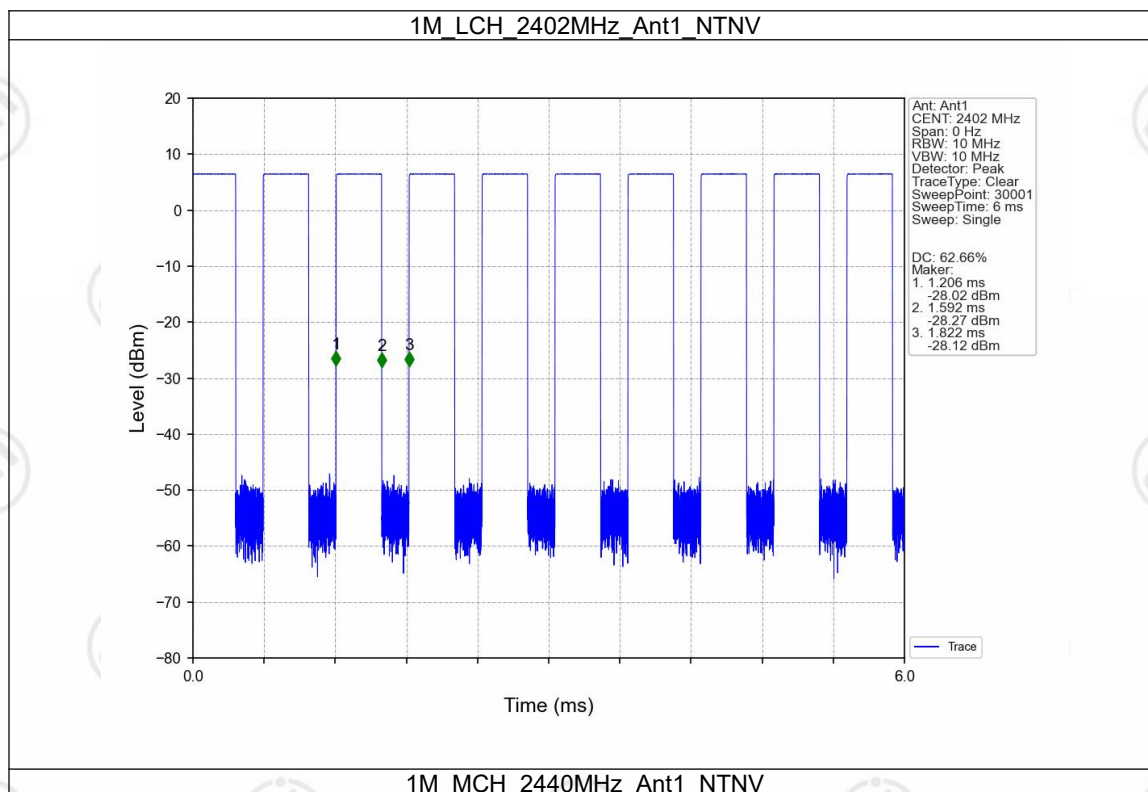
1.1 Test Result

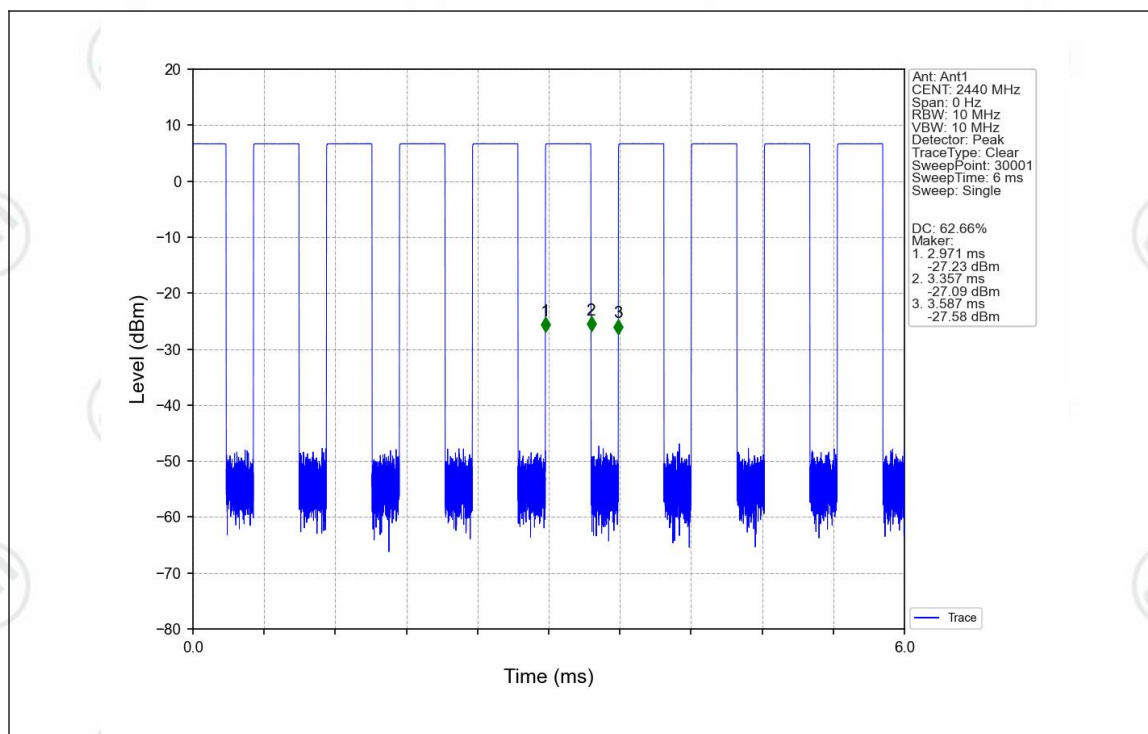
1.1.1 Ant1

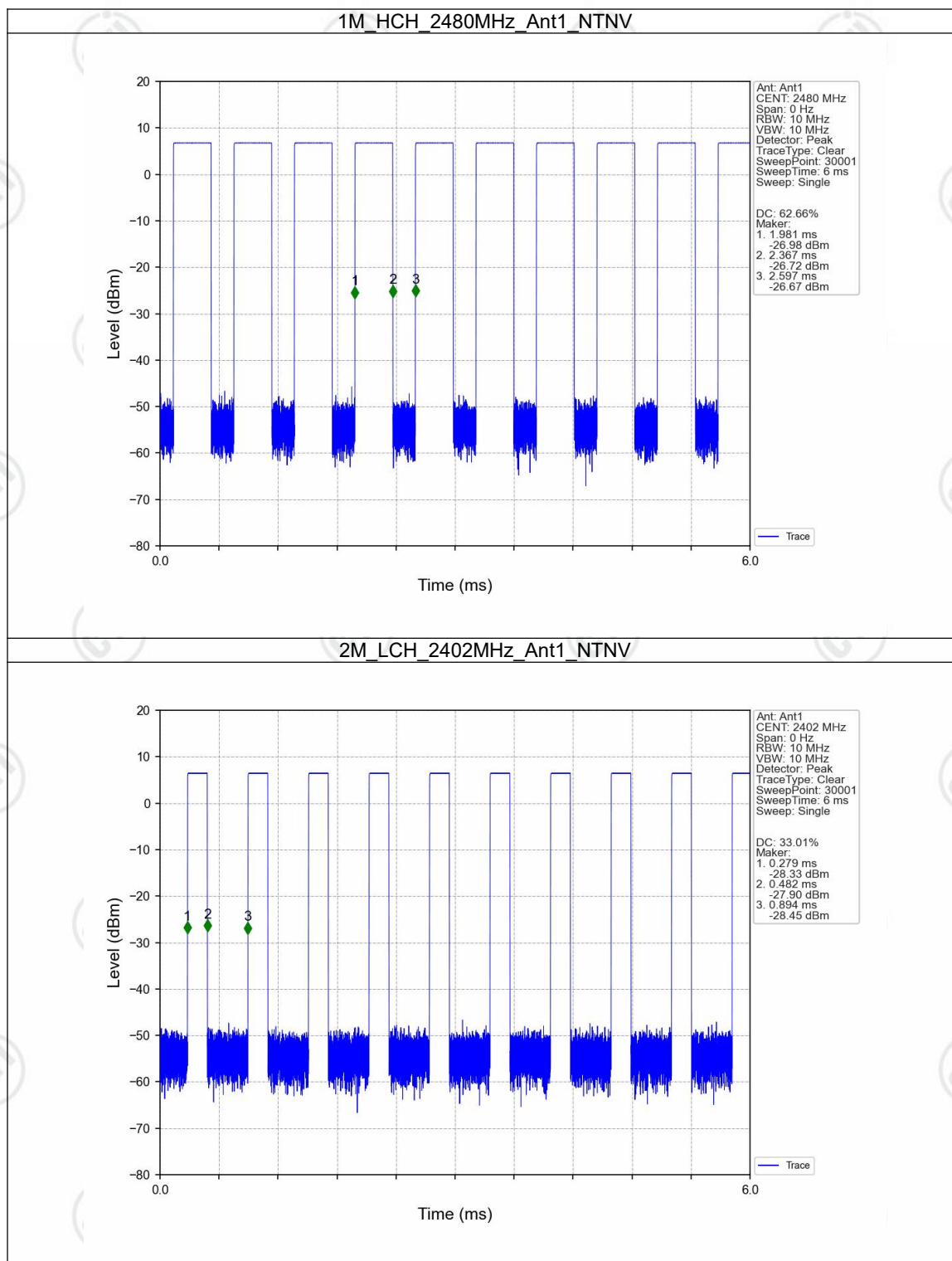
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	0.386	0.616	62.66	2.03	0.03
		2440	0.386	0.616	62.66	2.03	0.03
		2480	0.386	0.616	62.66	2.03	0.03
2M	SISO	2402	0.203	0.615	33.01	4.81	0.03
		2440	0.203	0.615	33.01	4.81	0.03
		2480	0.204	0.616	33.12	4.80	0.03

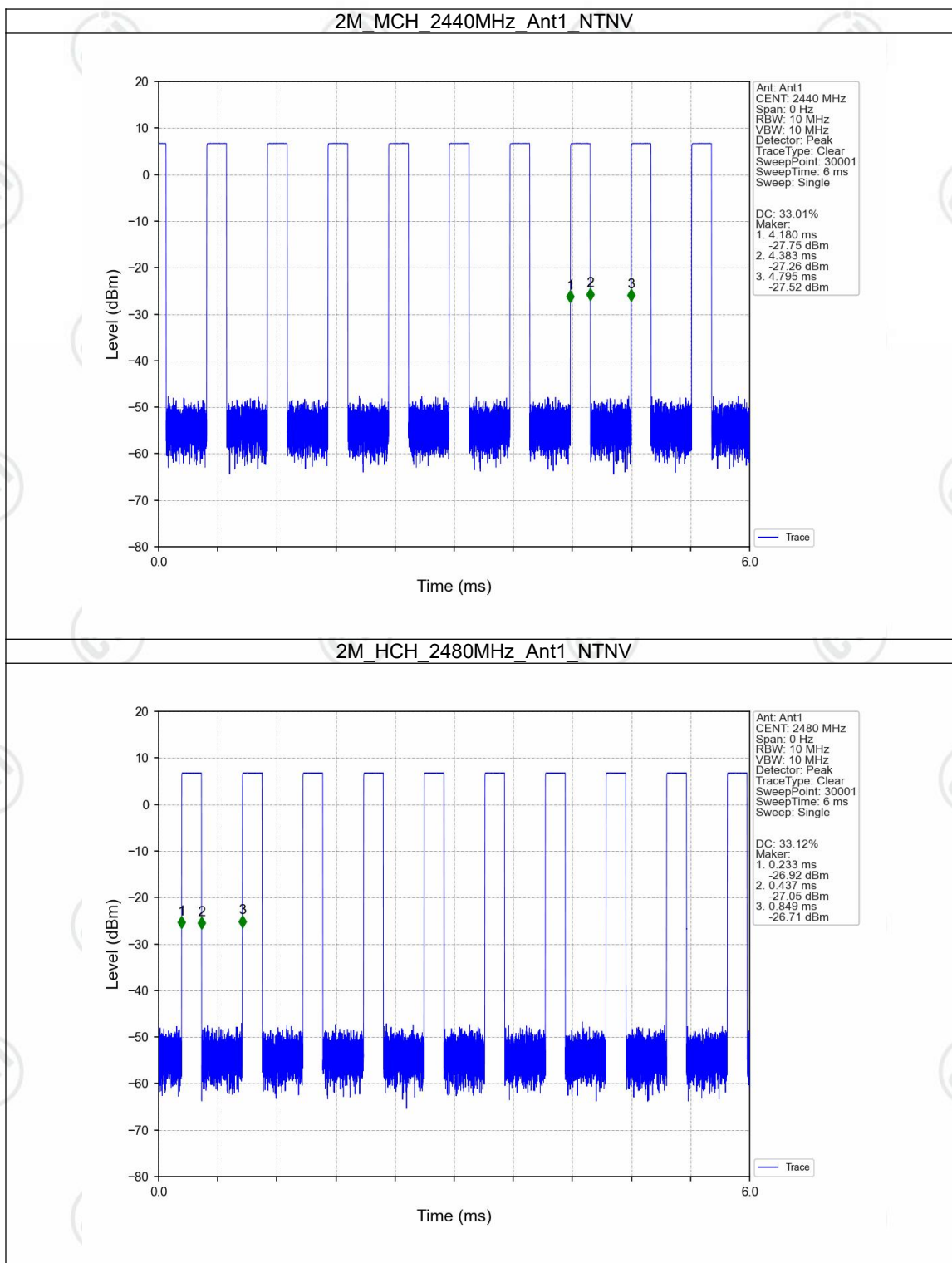
1.2 Test Graph

1.2.1 Ant1









2. Bandwidth

2.1 Test Result

2.1.1 OBW

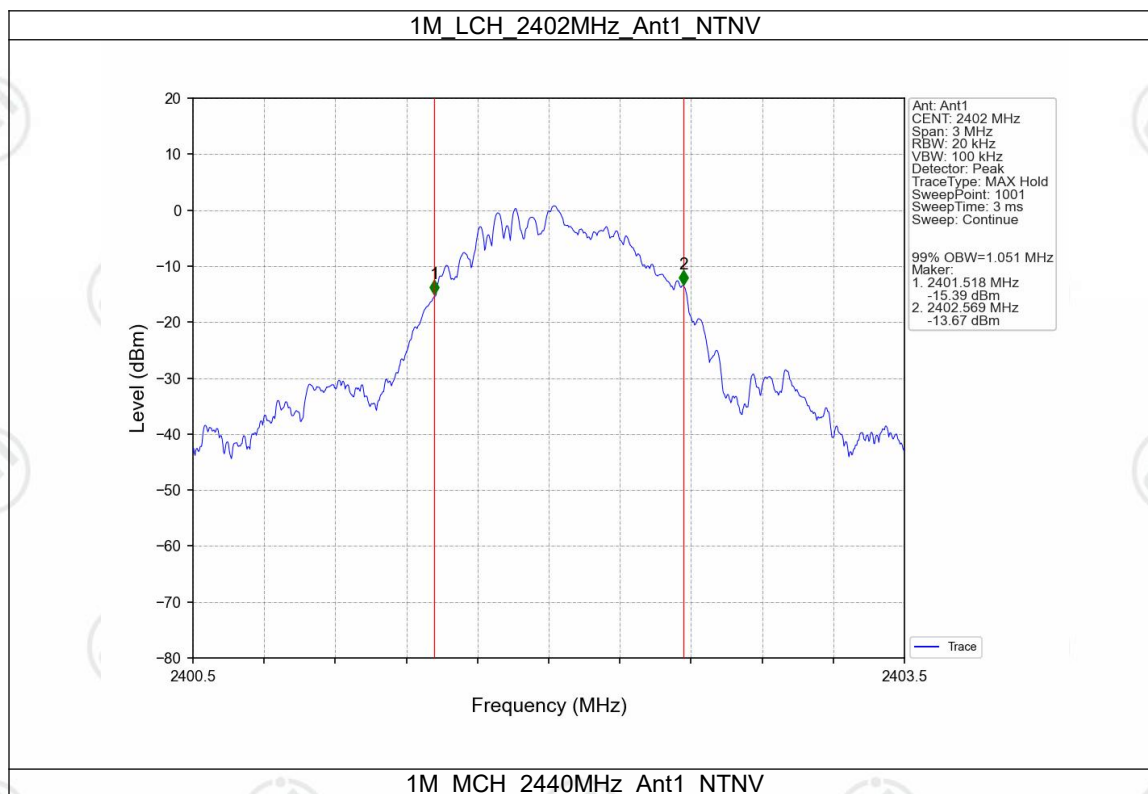
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	1.051	/	Pass
		2440	1	1.056	/	Pass
		2480	1	1.058	/	Pass
2M	SISO	2402	1	2.066	/	Pass
		2440	1	2.073	/	Pass
		2480	1	2.078	/	Pass

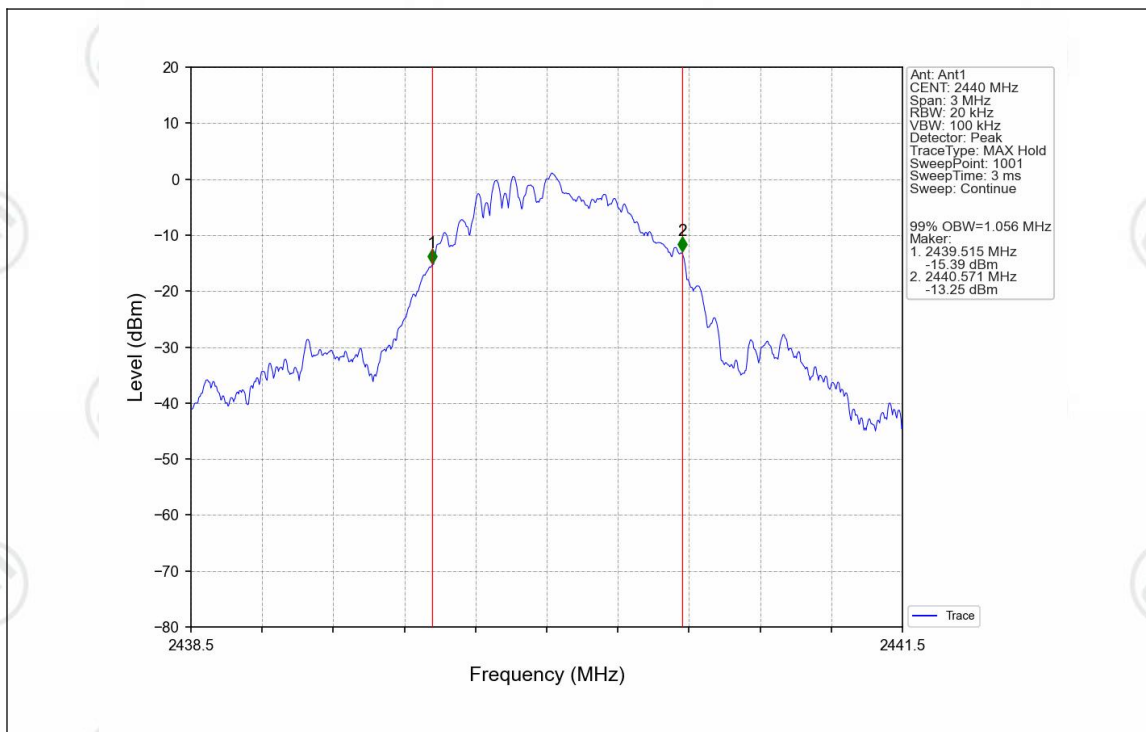
2.1.2 6dB BW

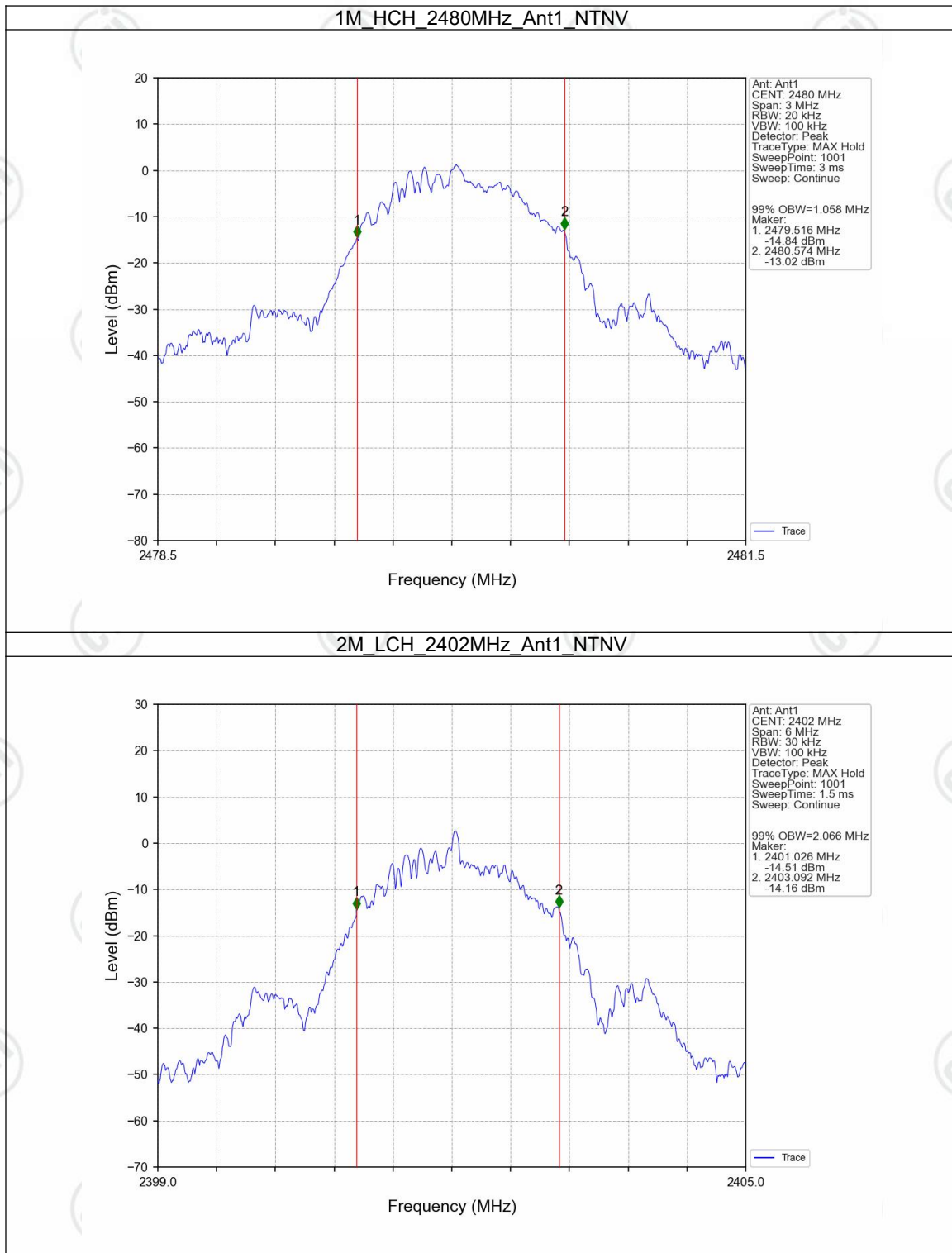
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.677	≥ 0.5	Pass
		2440	1	0.684	≥ 0.5	Pass
		2480	1	0.713	≥ 0.5	Pass
2M	SISO	2402	1	1.162	≥ 0.5	Pass
		2440	1	1.162	≥ 0.5	Pass
		2480	1	1.173	≥ 0.5	Pass

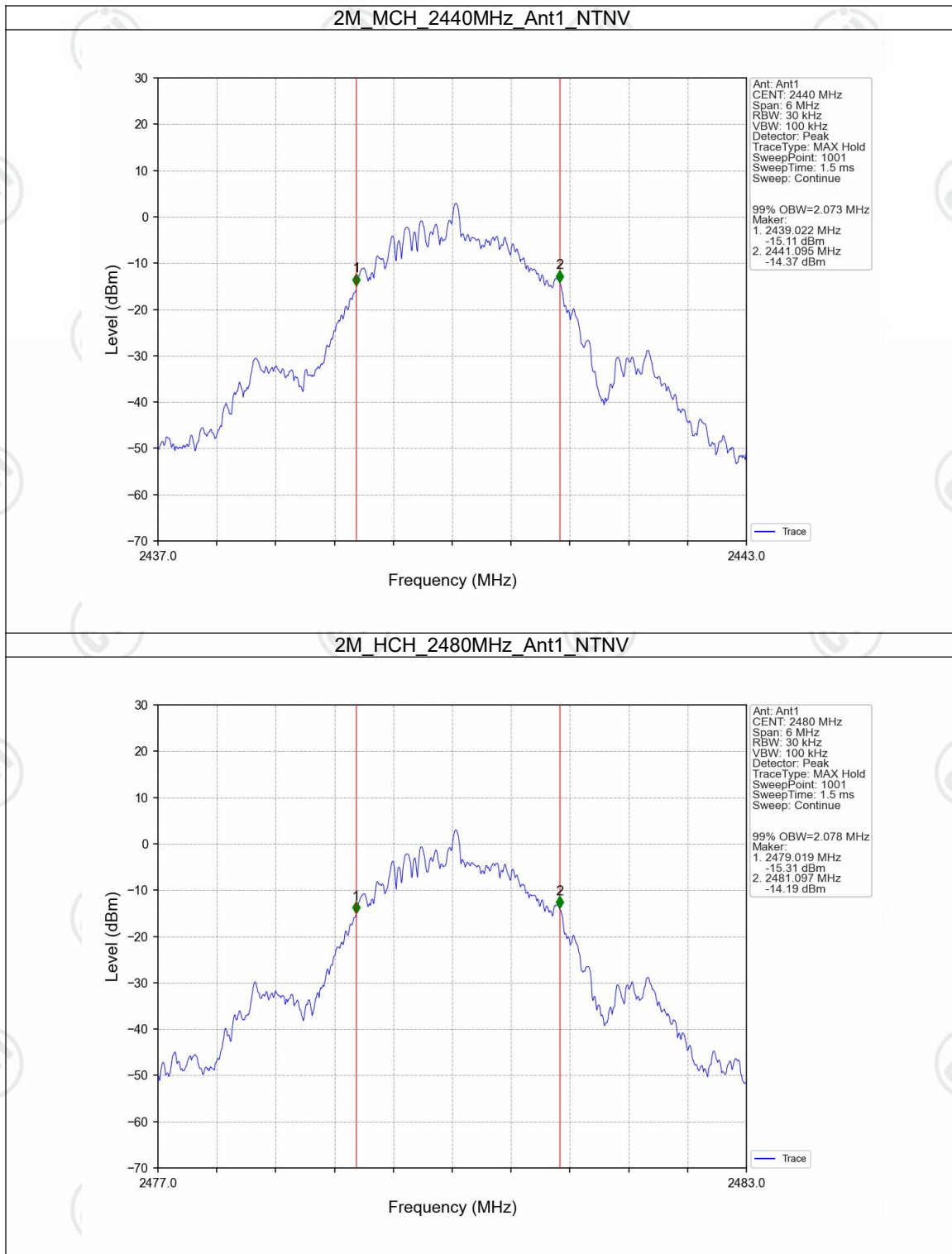
2.2 Test Graph

2.2.1 OBW

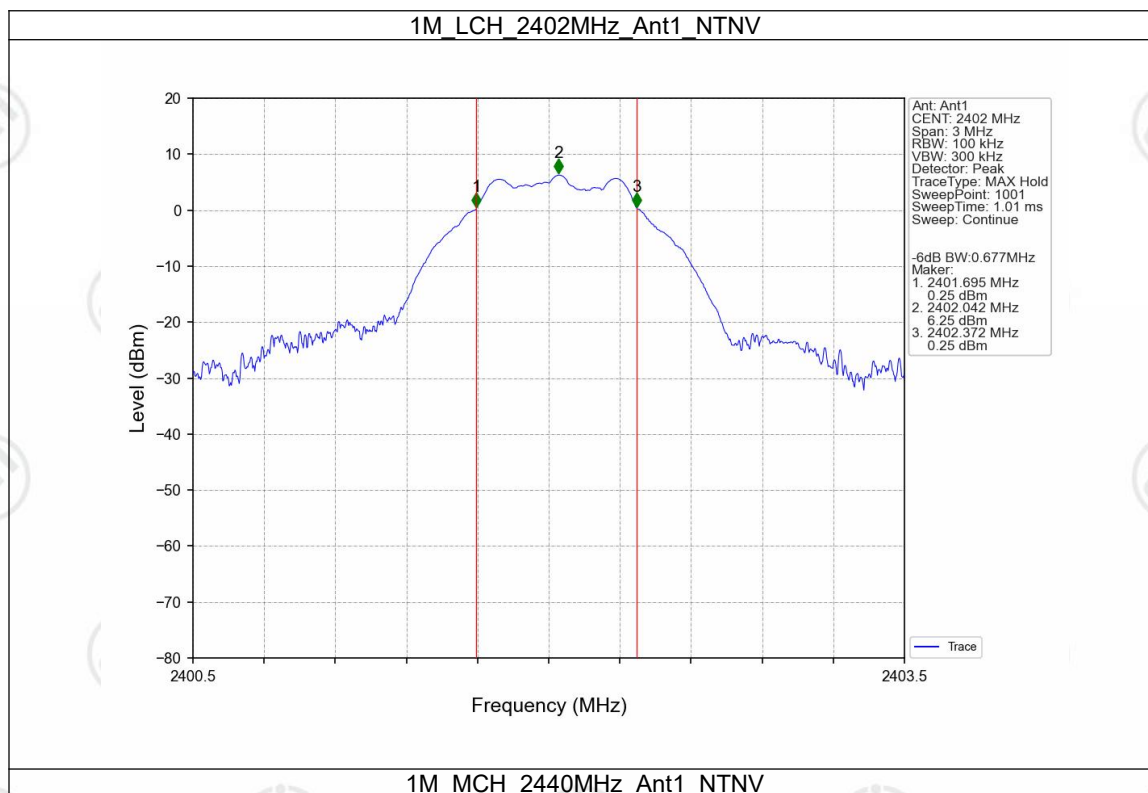


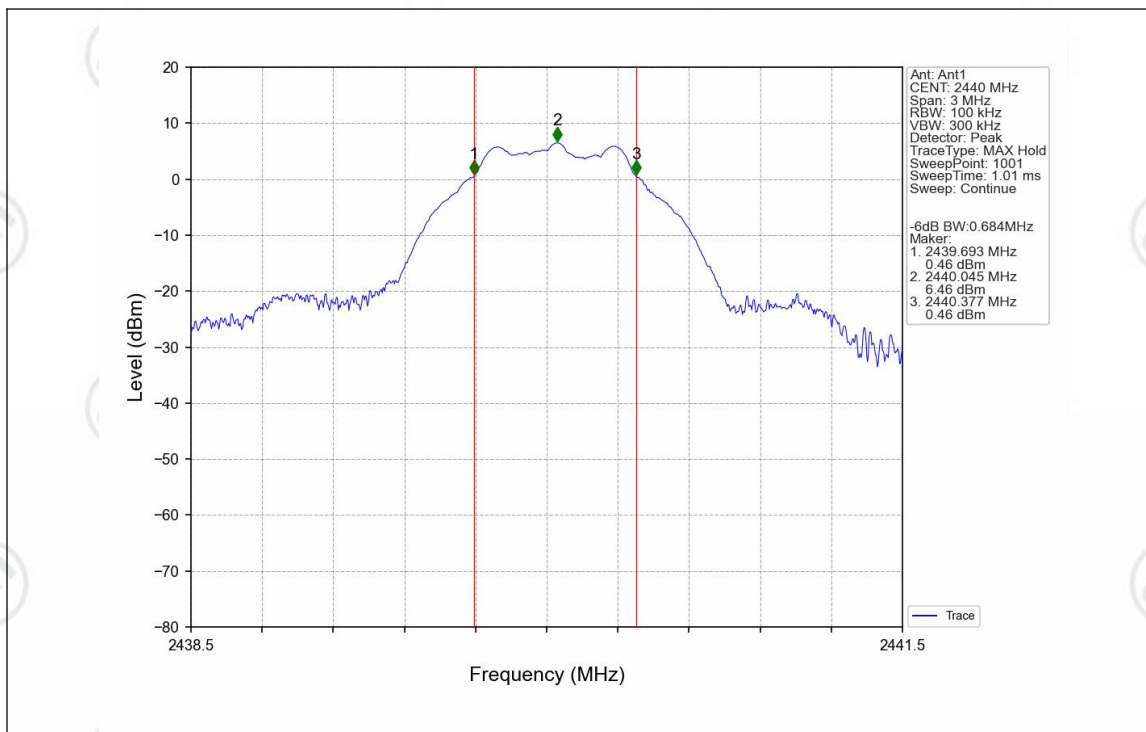


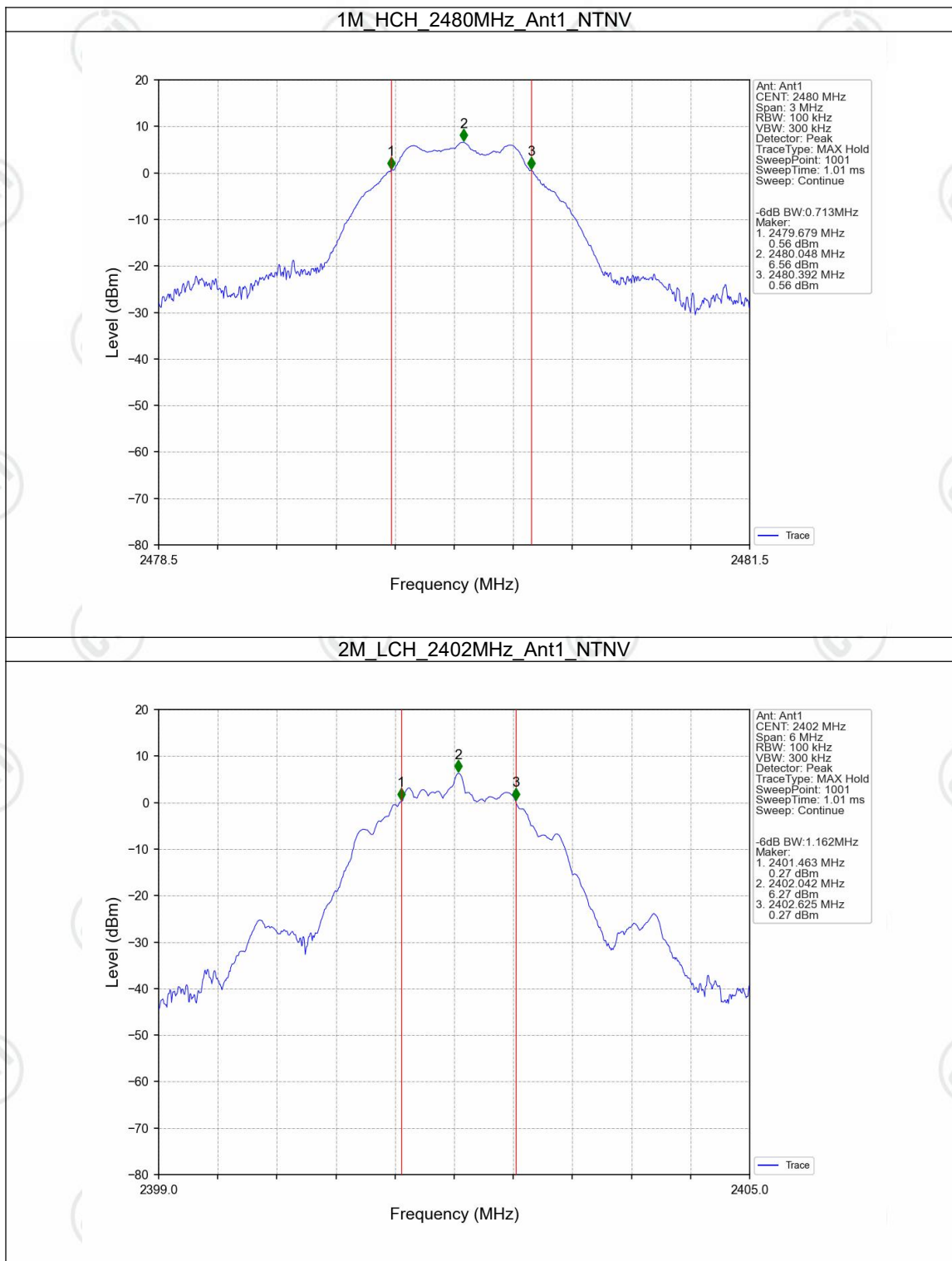


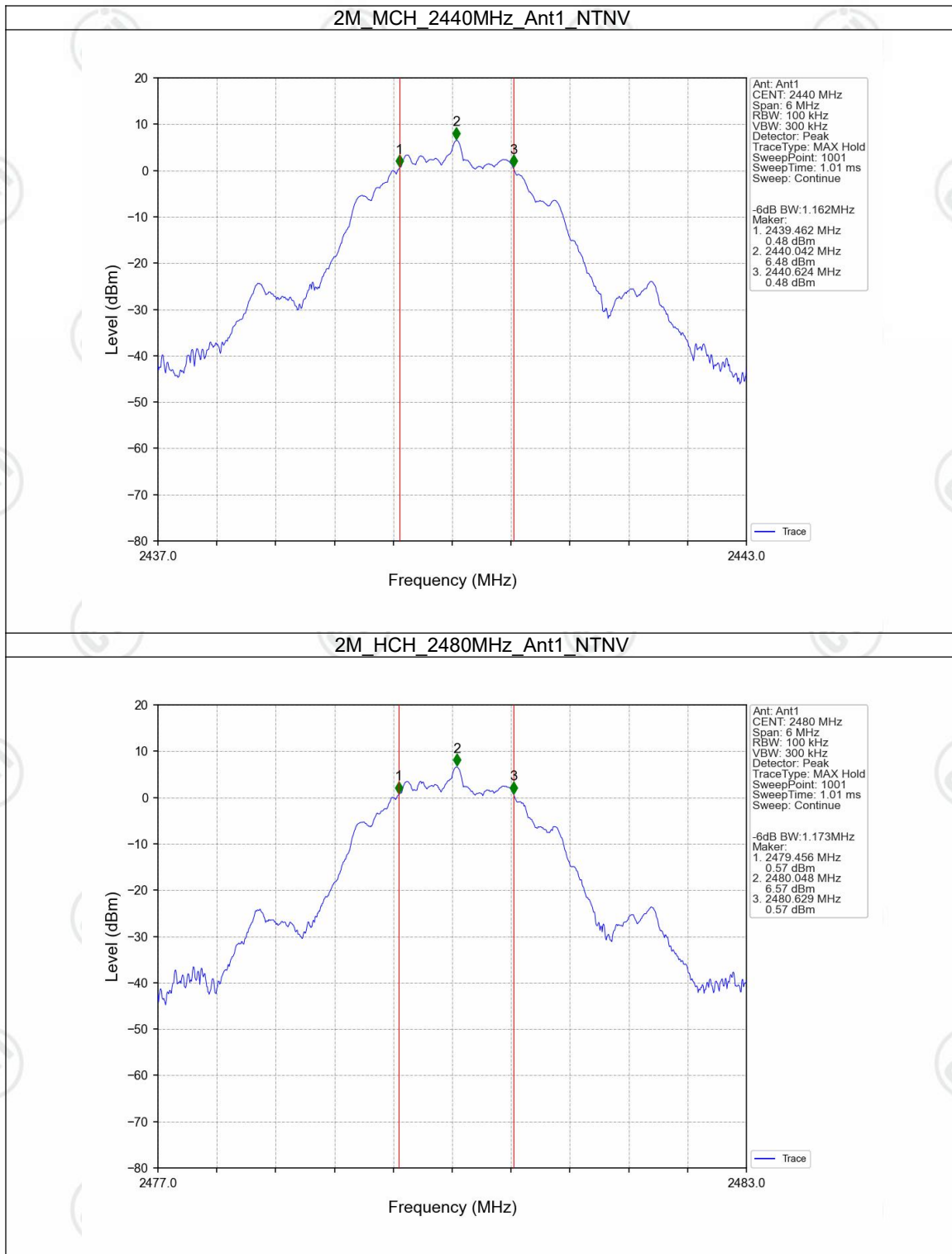


2.2.2 6dB BW









3. Maximum Conducted Output Power

3.1 Test Result

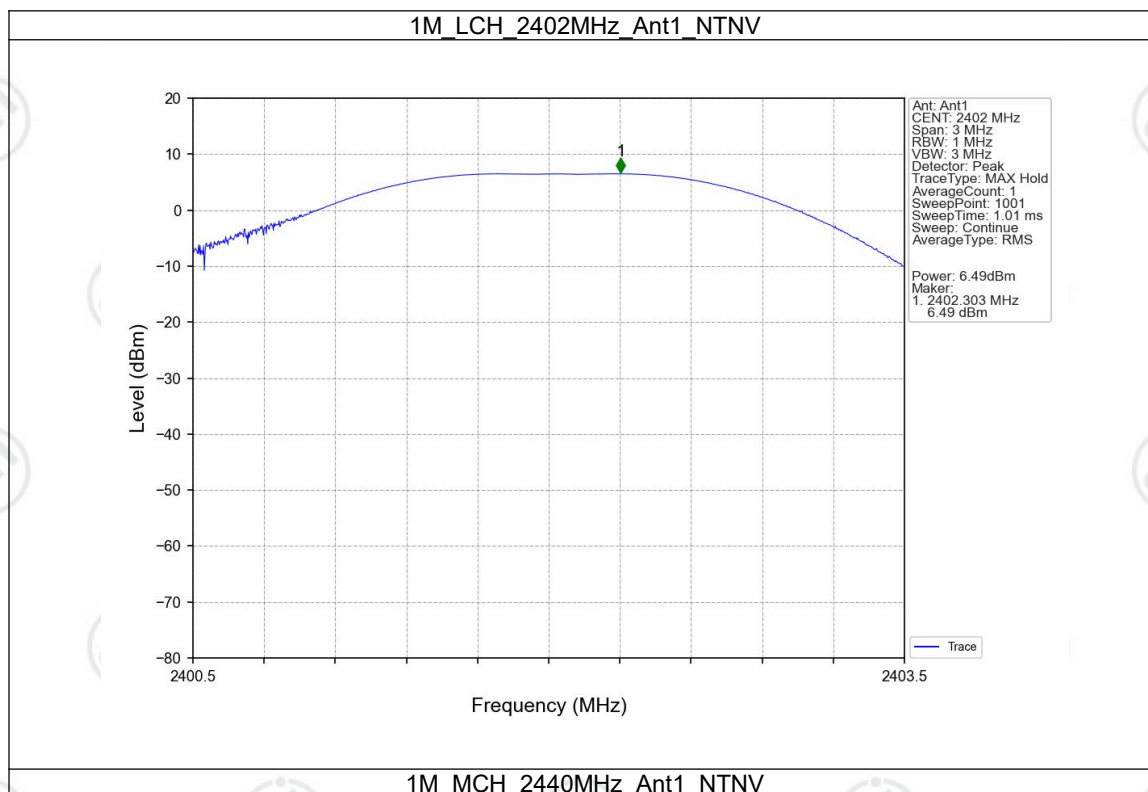
3.1.1 Power

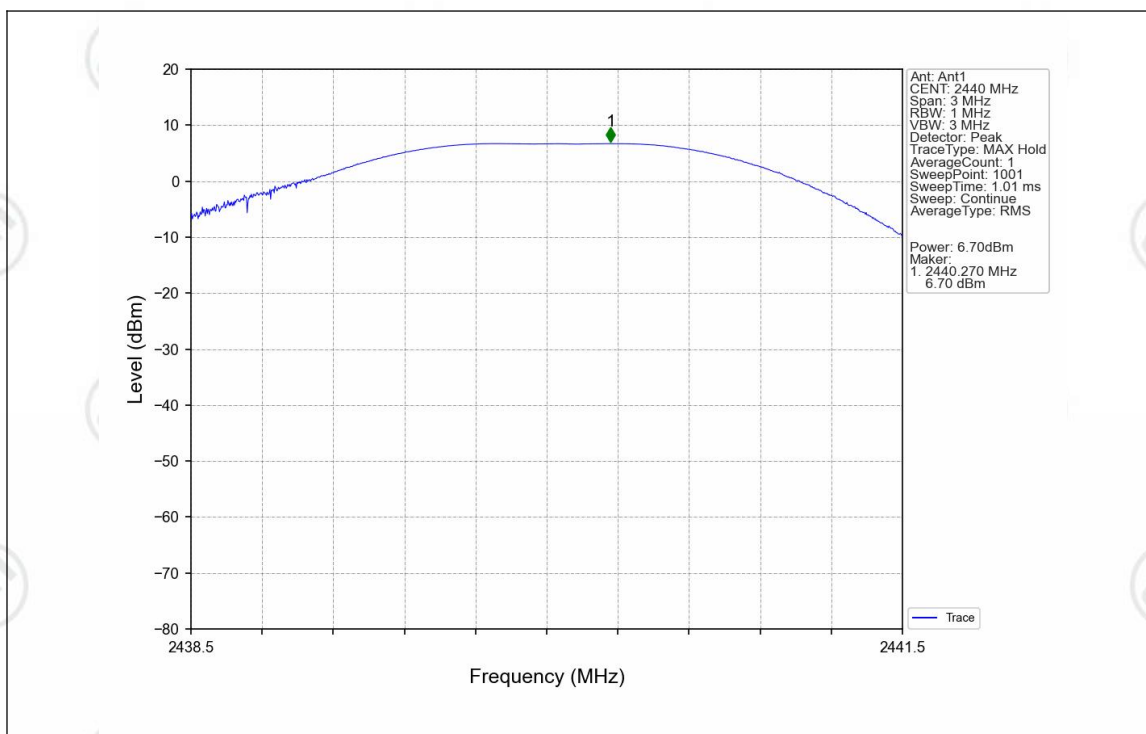
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	6.49	<=30	Pass
		2440	6.70	<=30	Pass
		2480	6.79	<=30	Pass
2M	SISO	2402	6.50	<=30	Pass
		2440	6.72	<=30	Pass
		2480	6.80	<=30	Pass

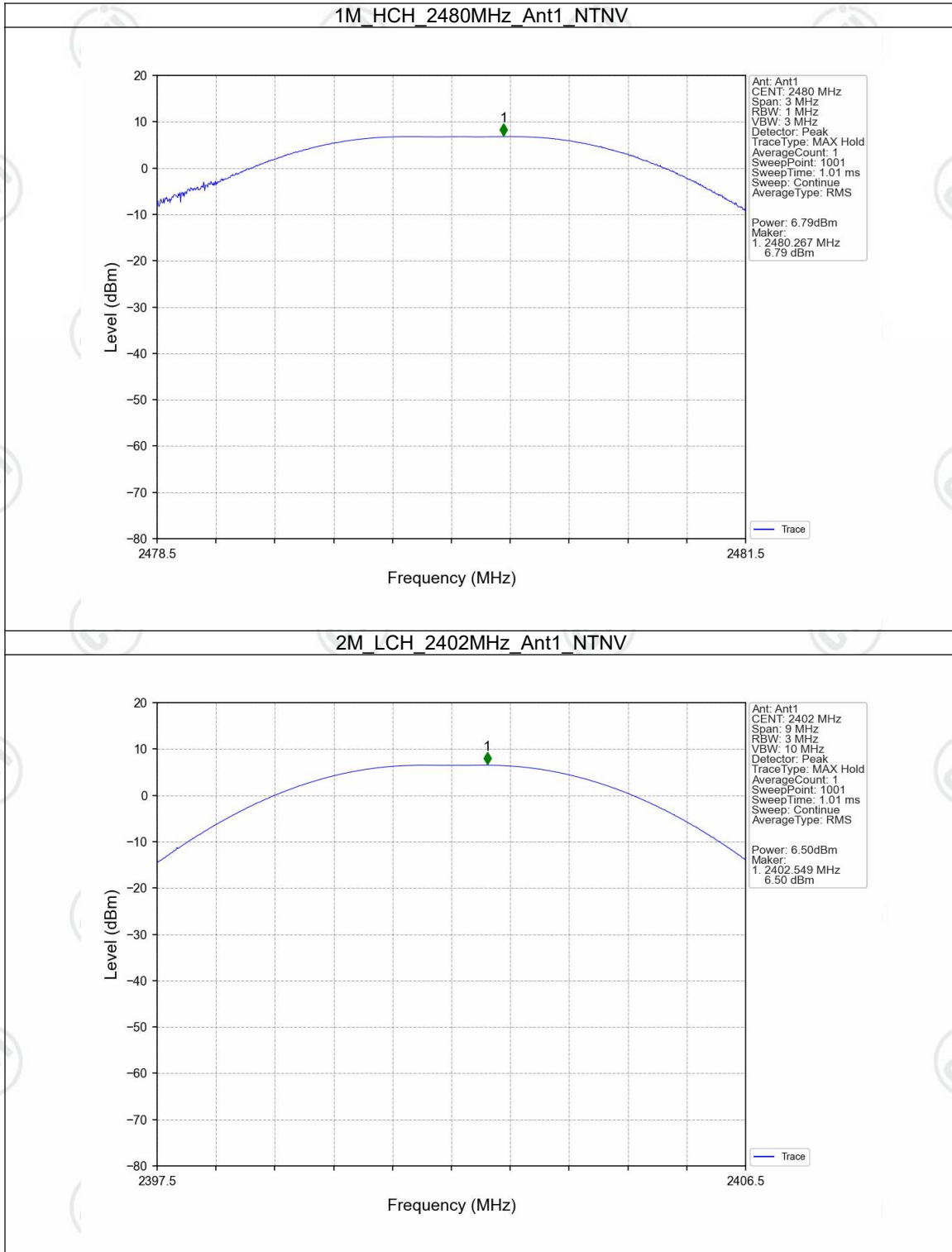
Note1: Antenna Gain: Ant1: 4.97dBi;

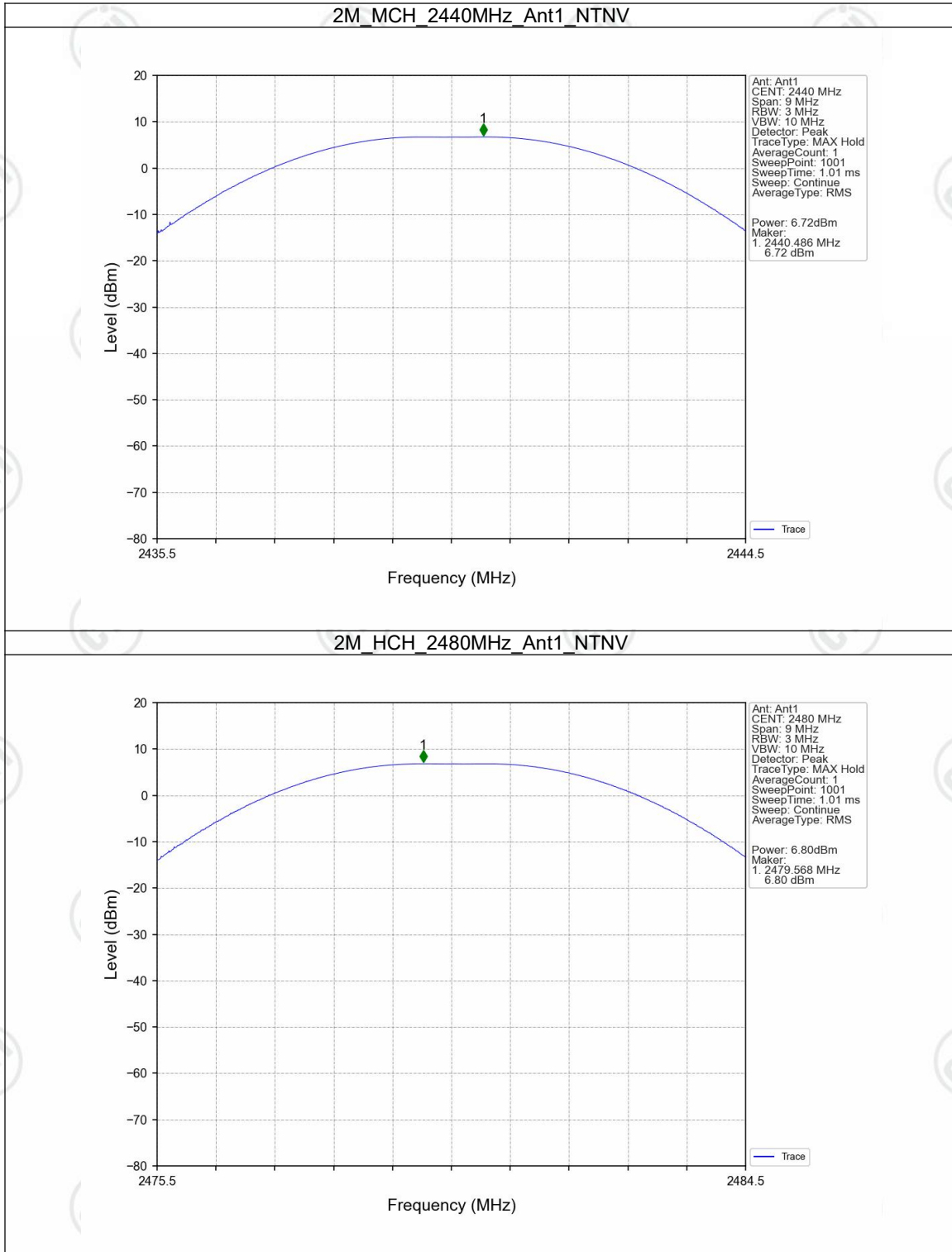
3.2 Test Graph

3.2.1 Power









4. Maximum Power Spectral Density

4.1 Test Result

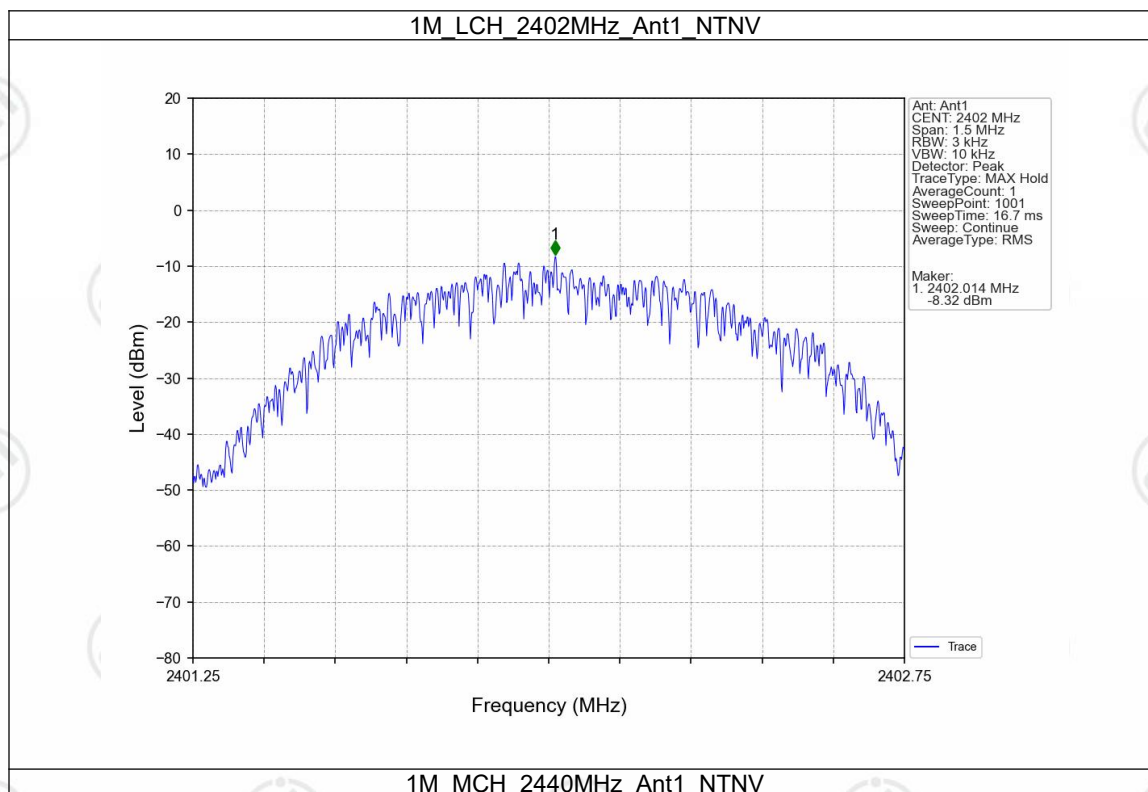
4.1.1 PSD

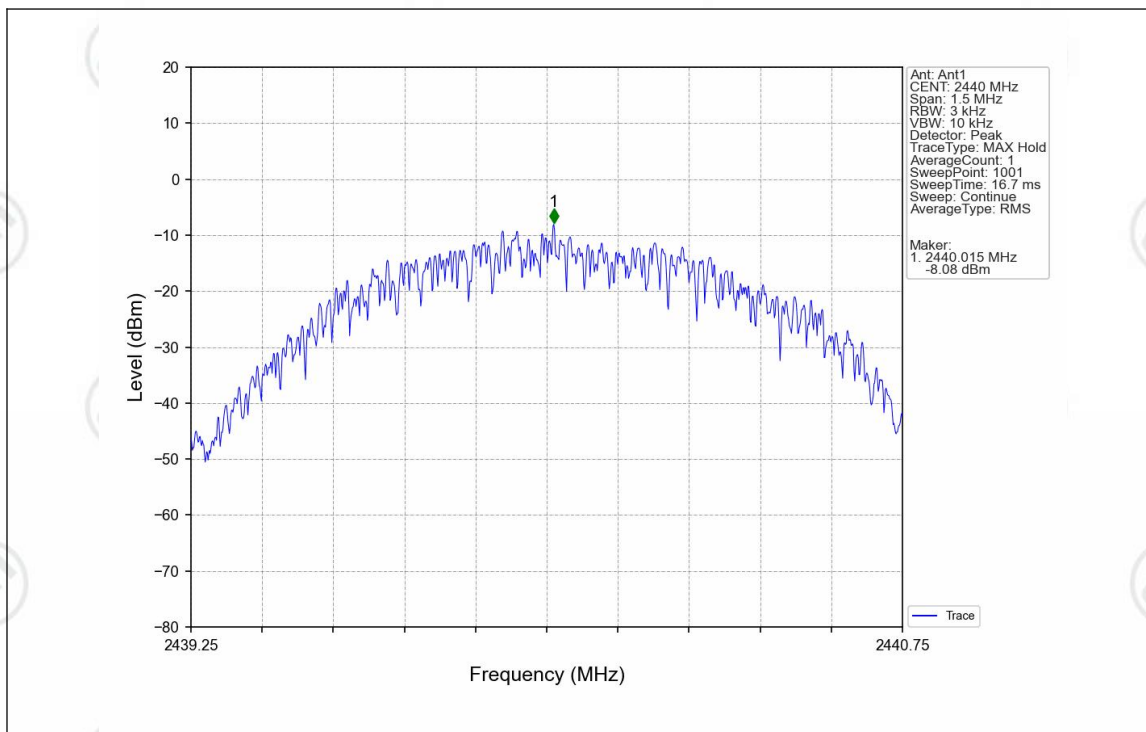
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit(dBm/3kHz)	
1M	SISO	2402	-8.32dBm/3kHz	<=8	Pass
		2440	-8.08dBm/3kHz	<=8	Pass
		2480	-7.87dBm/3kHz	<=8	Pass
2M	SISO	2402	-11.97dBm/3kHz	<=8	Pass
		2440	-11.76dBm/3kHz	<=8	Pass
		2480	-11.55dBm/3kHz	<=8	Pass

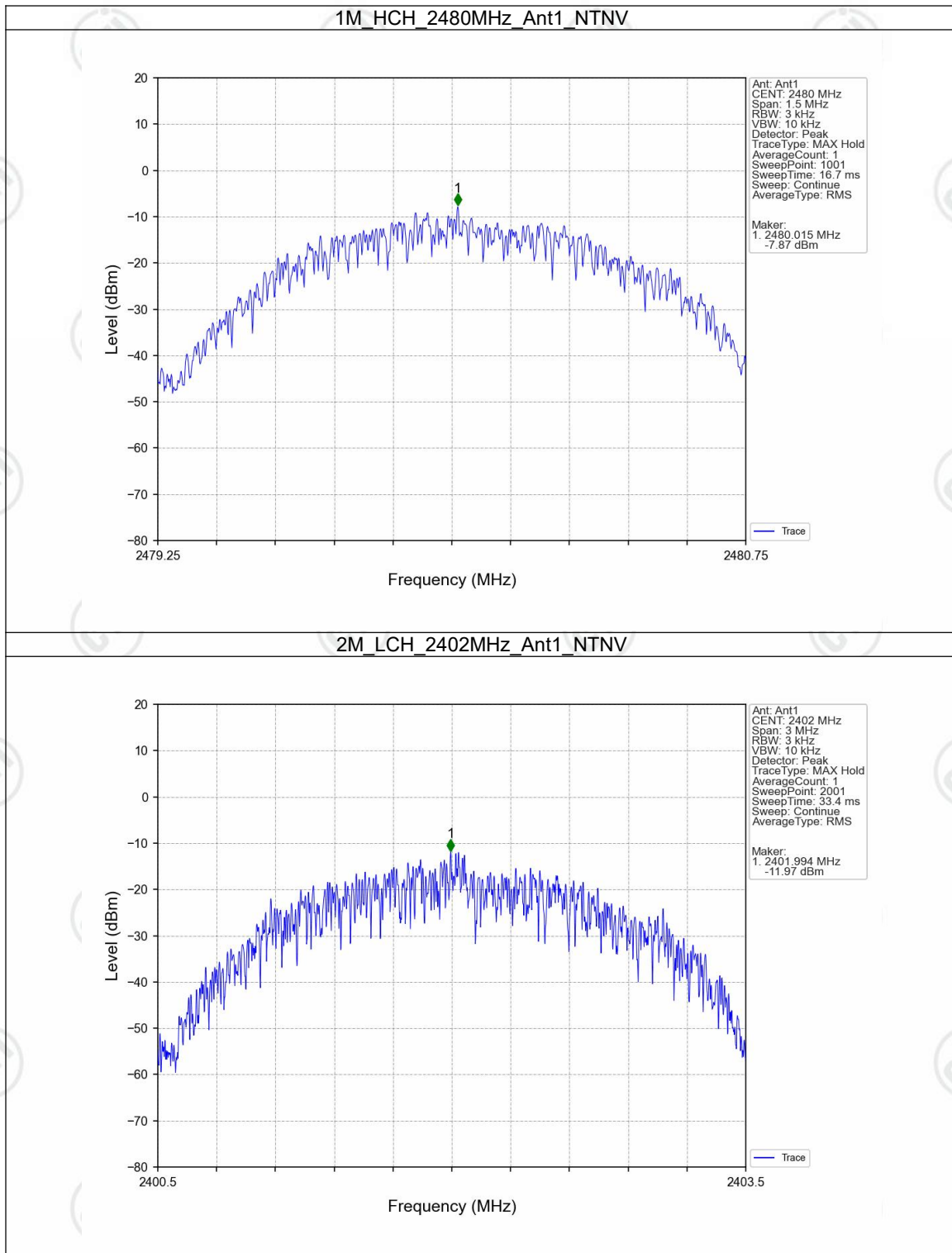
Note1: Antenna Gain: Ant1: 4.97dBi;

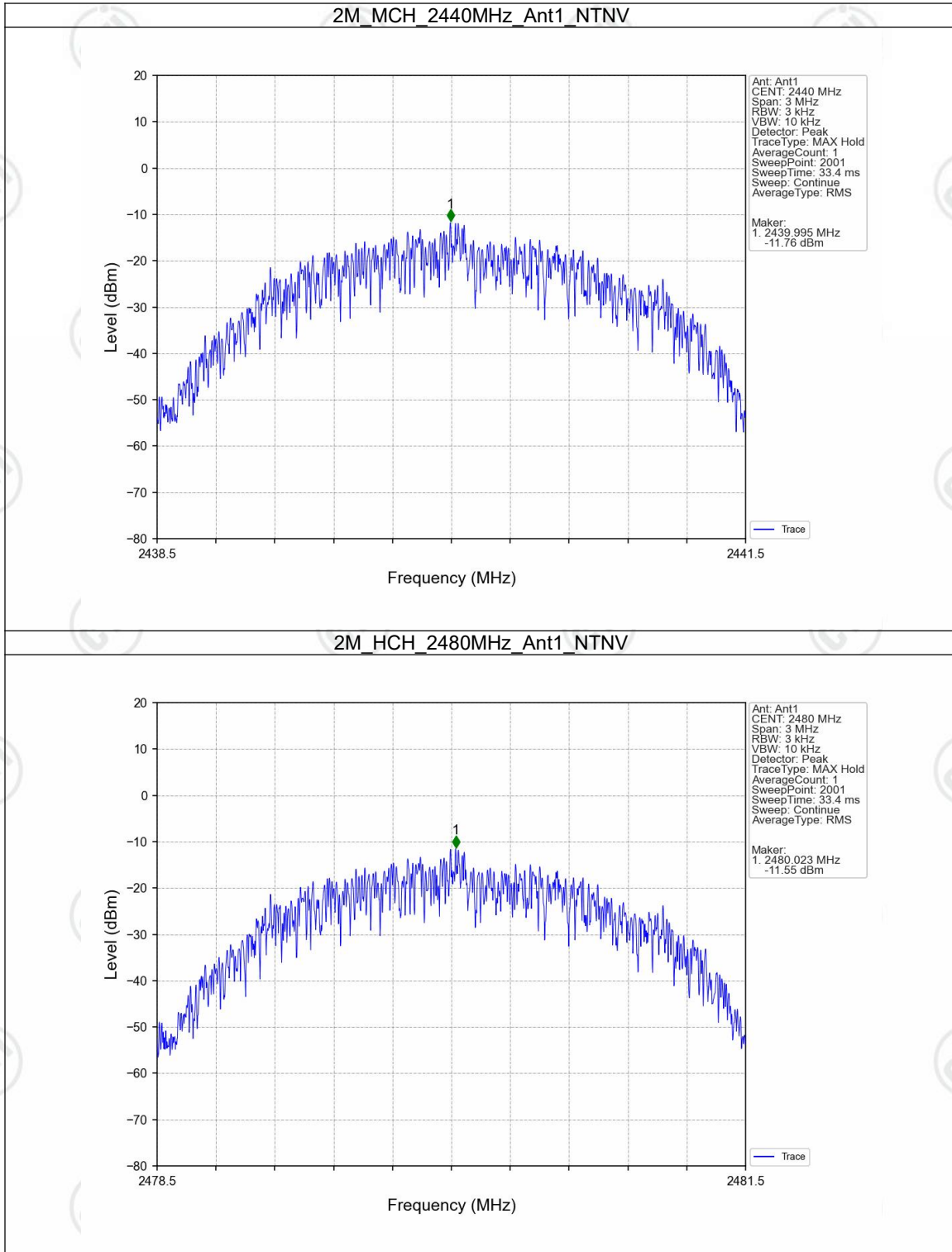
4.2 Test Graph

4.2.1 PSD









5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

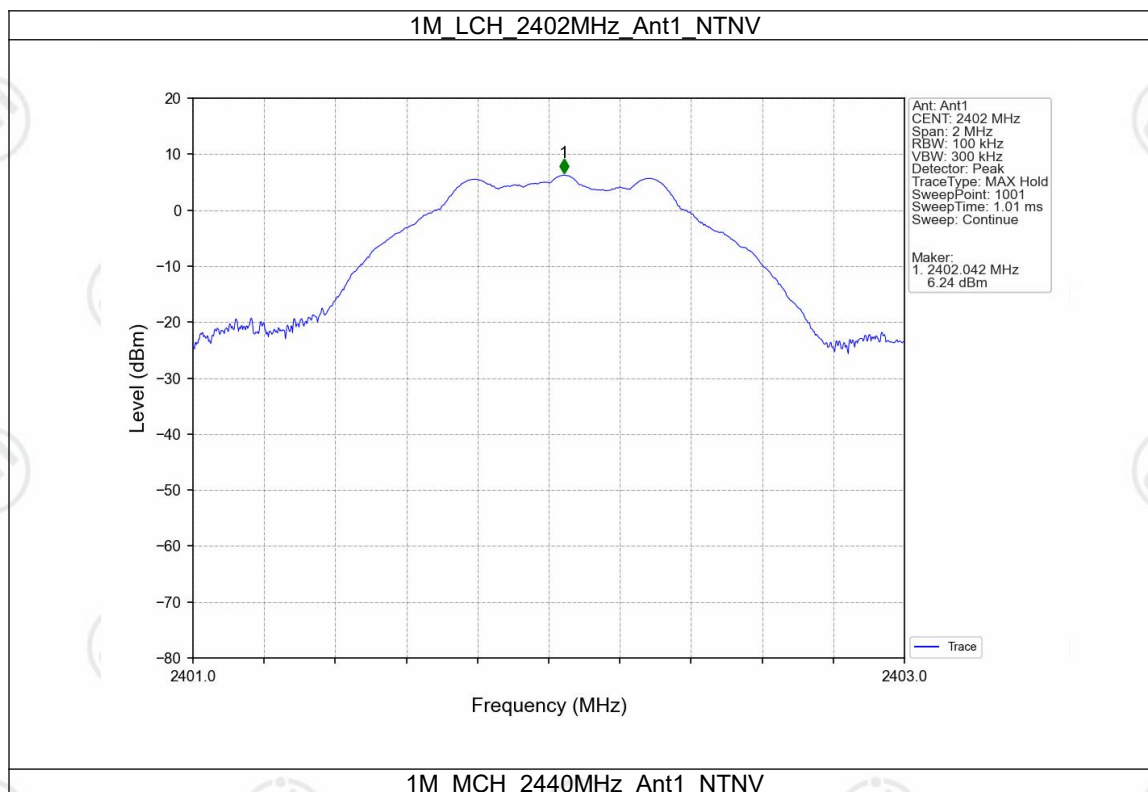
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	6.24
		2440	1	6.46
		2480	1	6.54
2M	SISO	2402	1	6.23
		2440	1	6.45
		2480	1	6.54

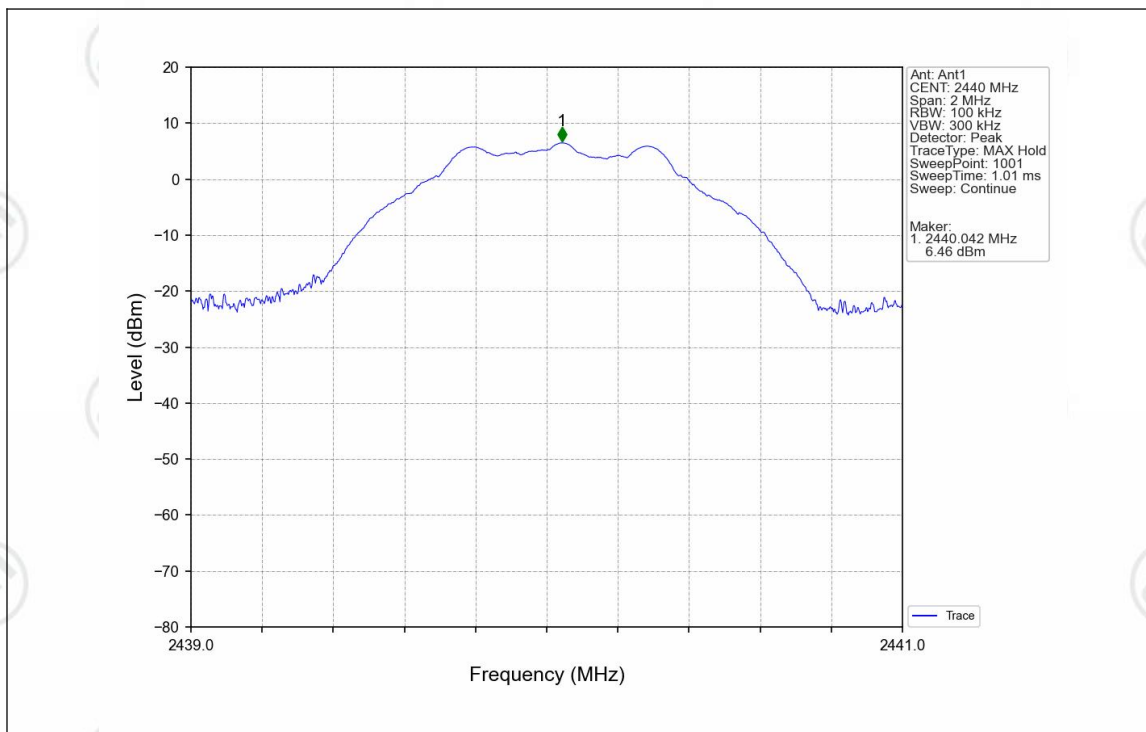
5.1.2 CSE

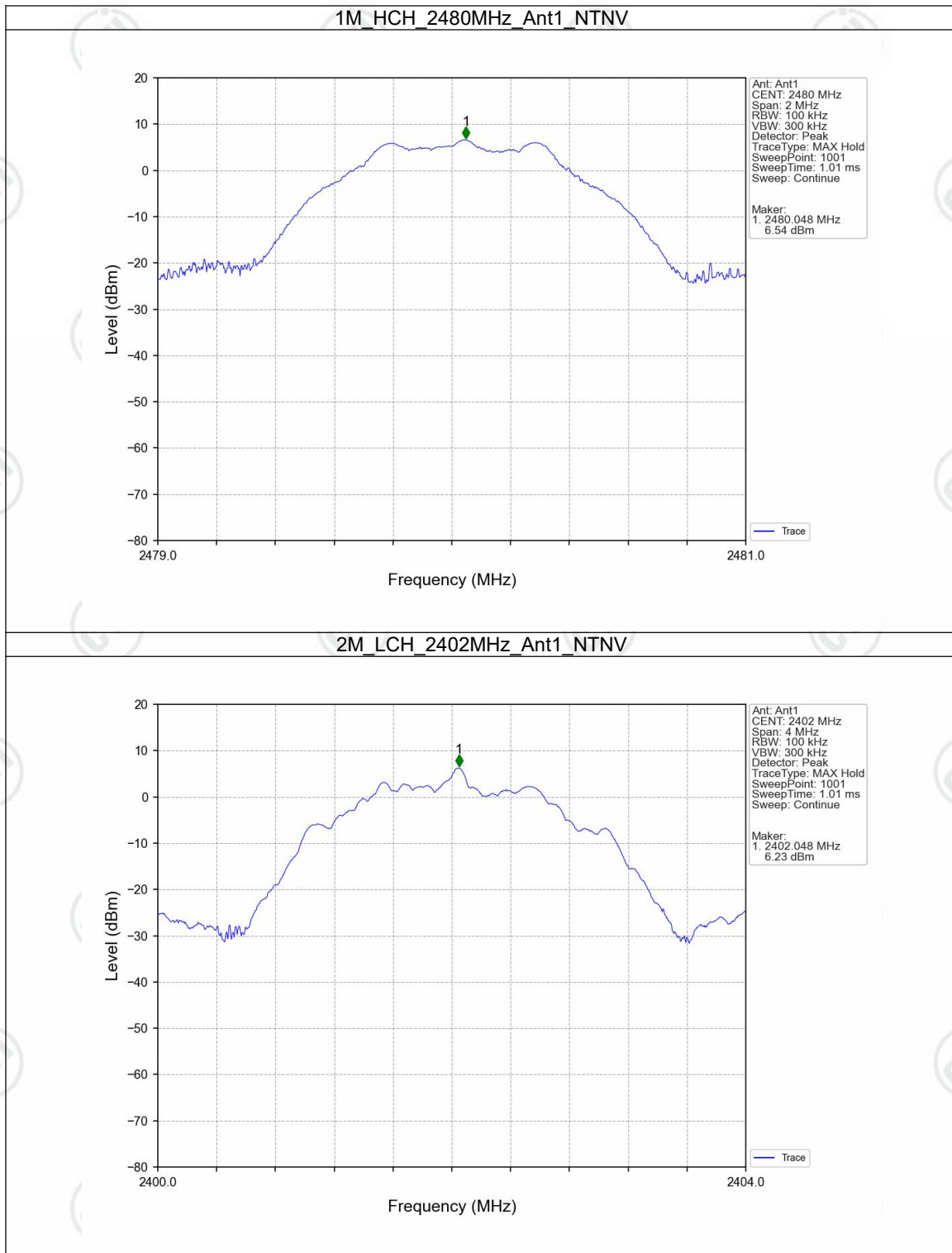
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	6.54	-13.46	Pass
		2440	1	6.54	-13.46	Pass
		2480	1	6.54	-13.46	Pass
2M	SISO	2402	1	6.54	-13.46	Pass
		2440	1	6.54	-13.46	Pass
		2480	1	6.54	-13.46	Pass

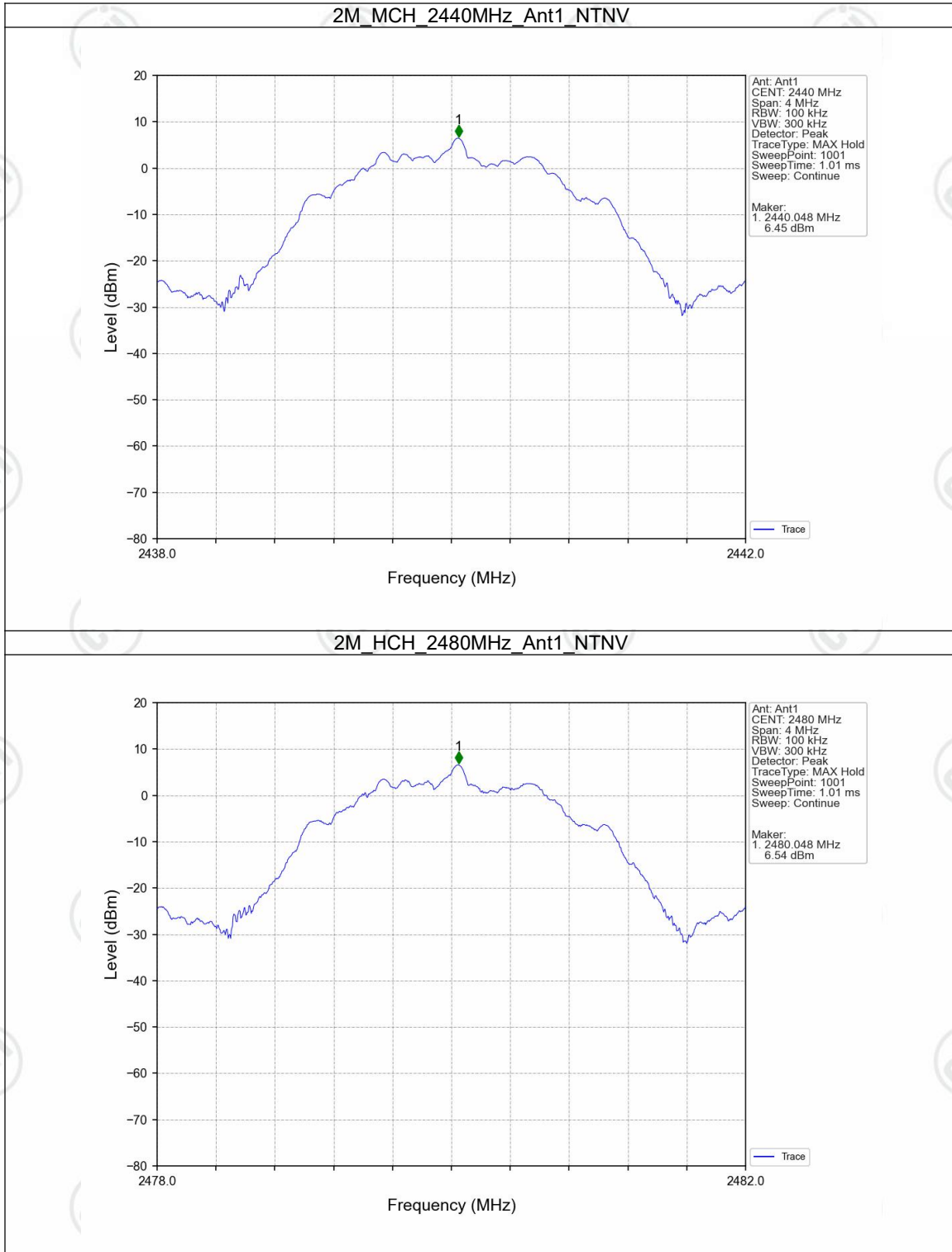
5.2 Test Graph

5.2.1 Ref

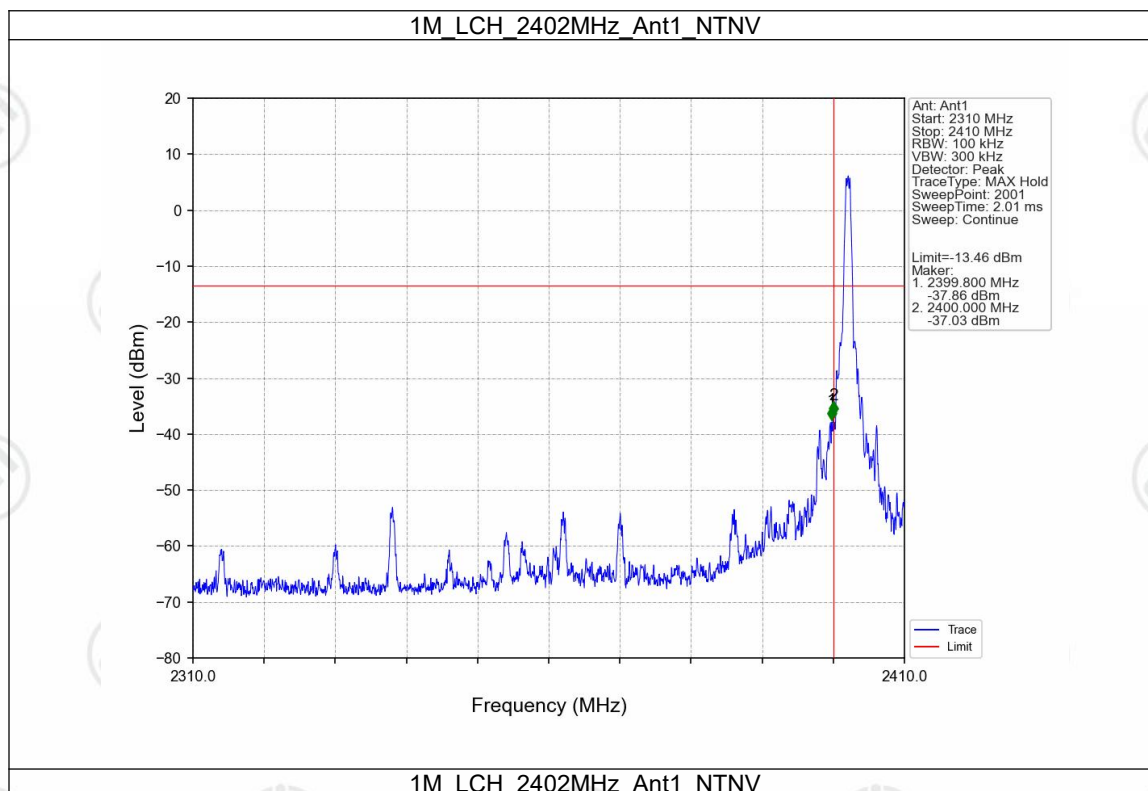


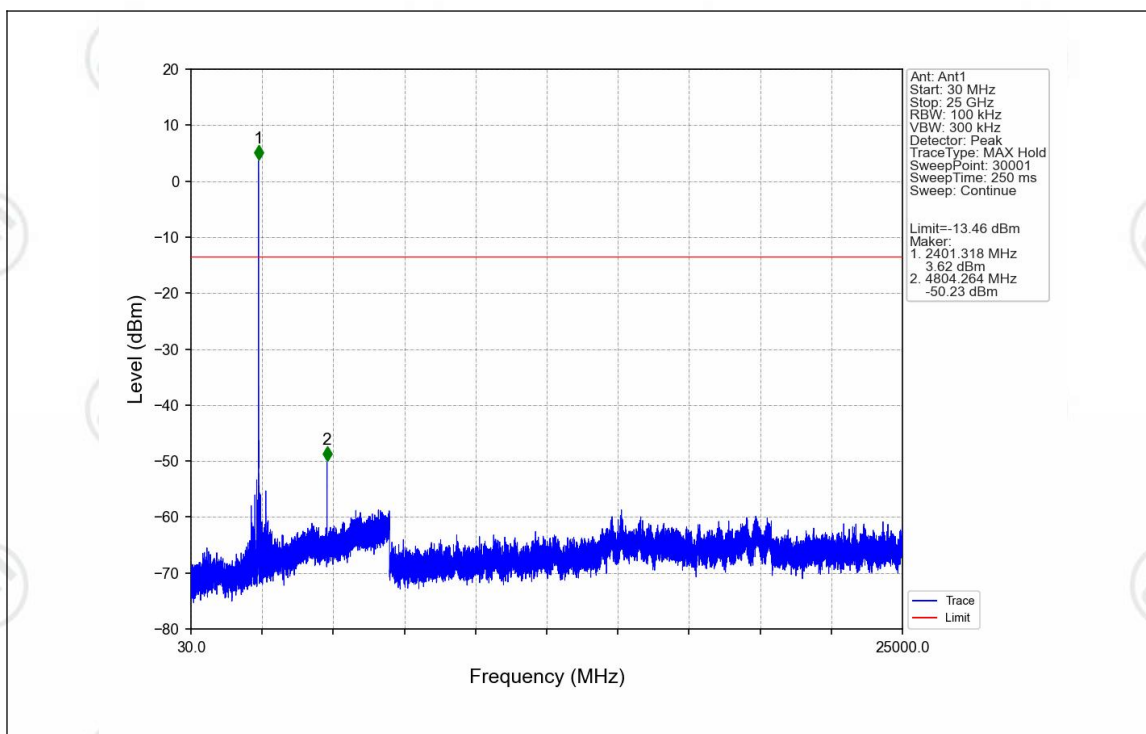


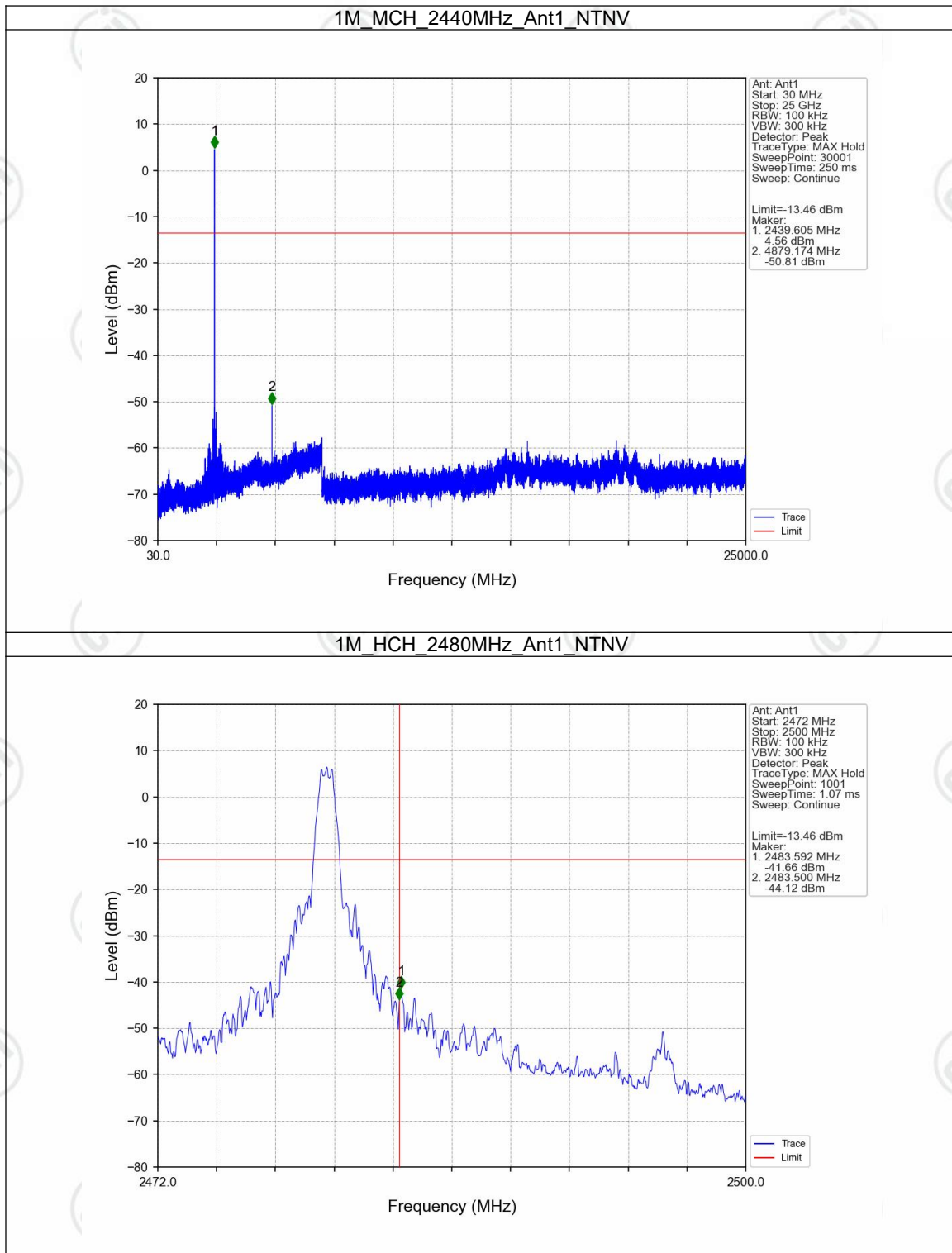


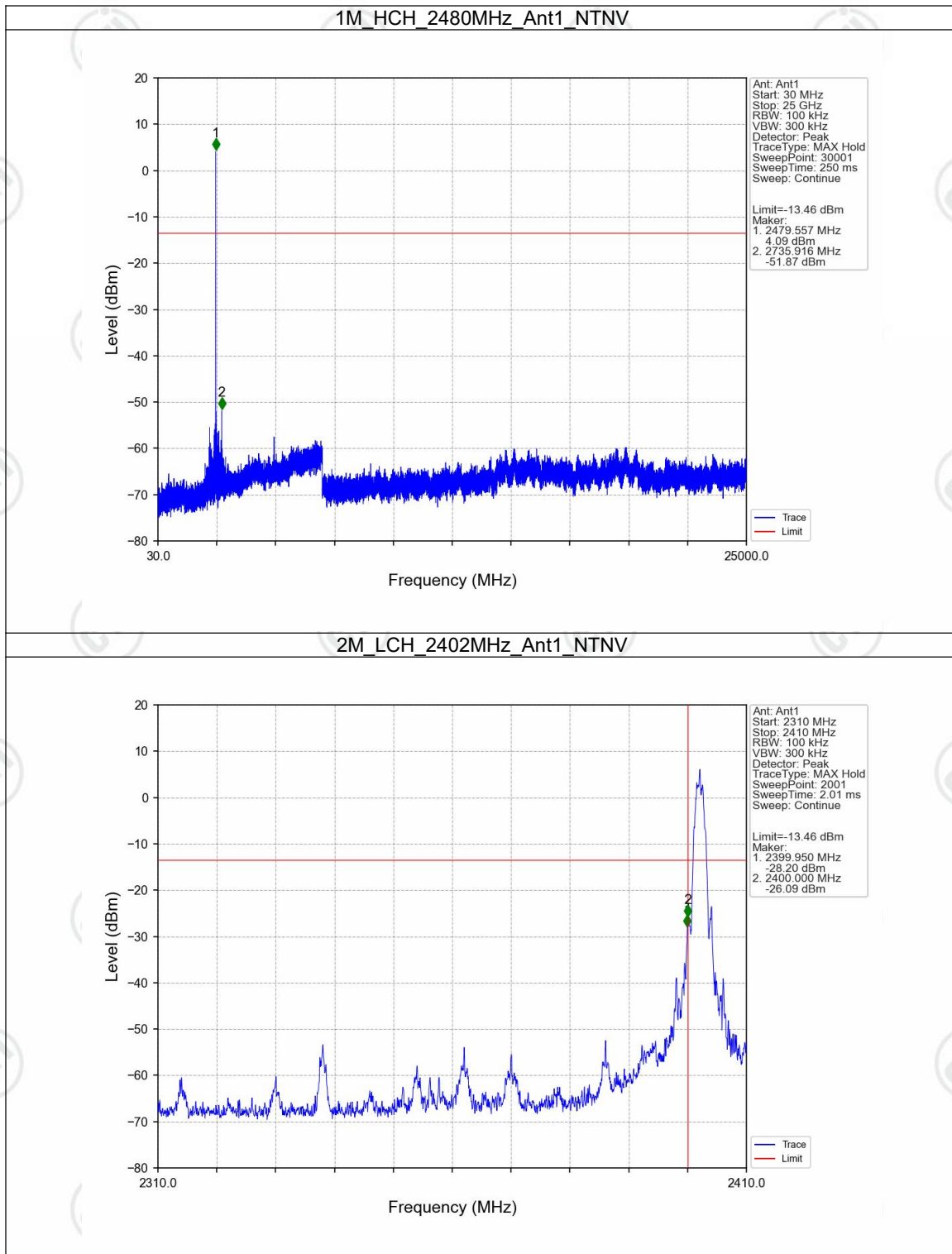


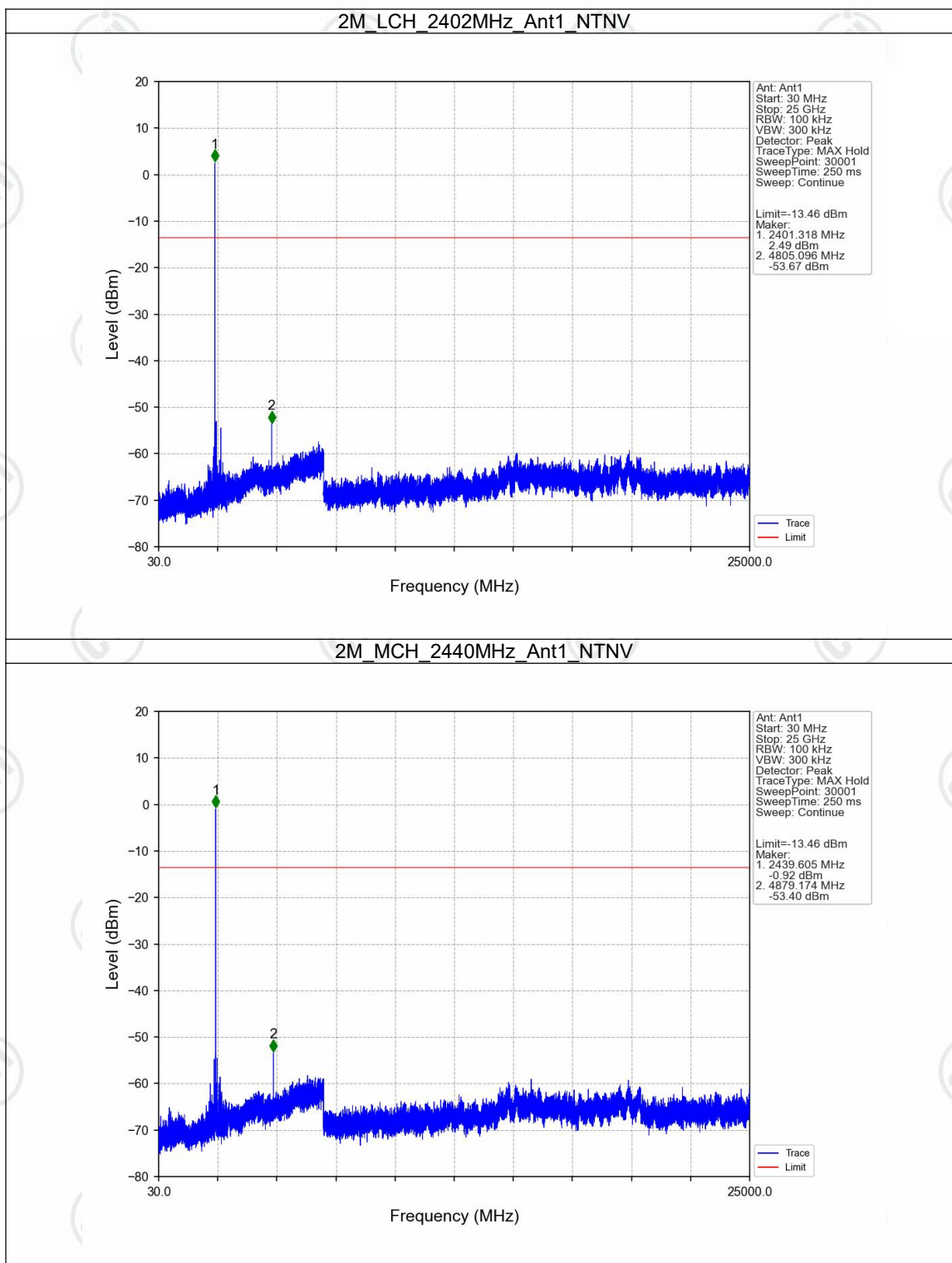
5.2.2 CSE

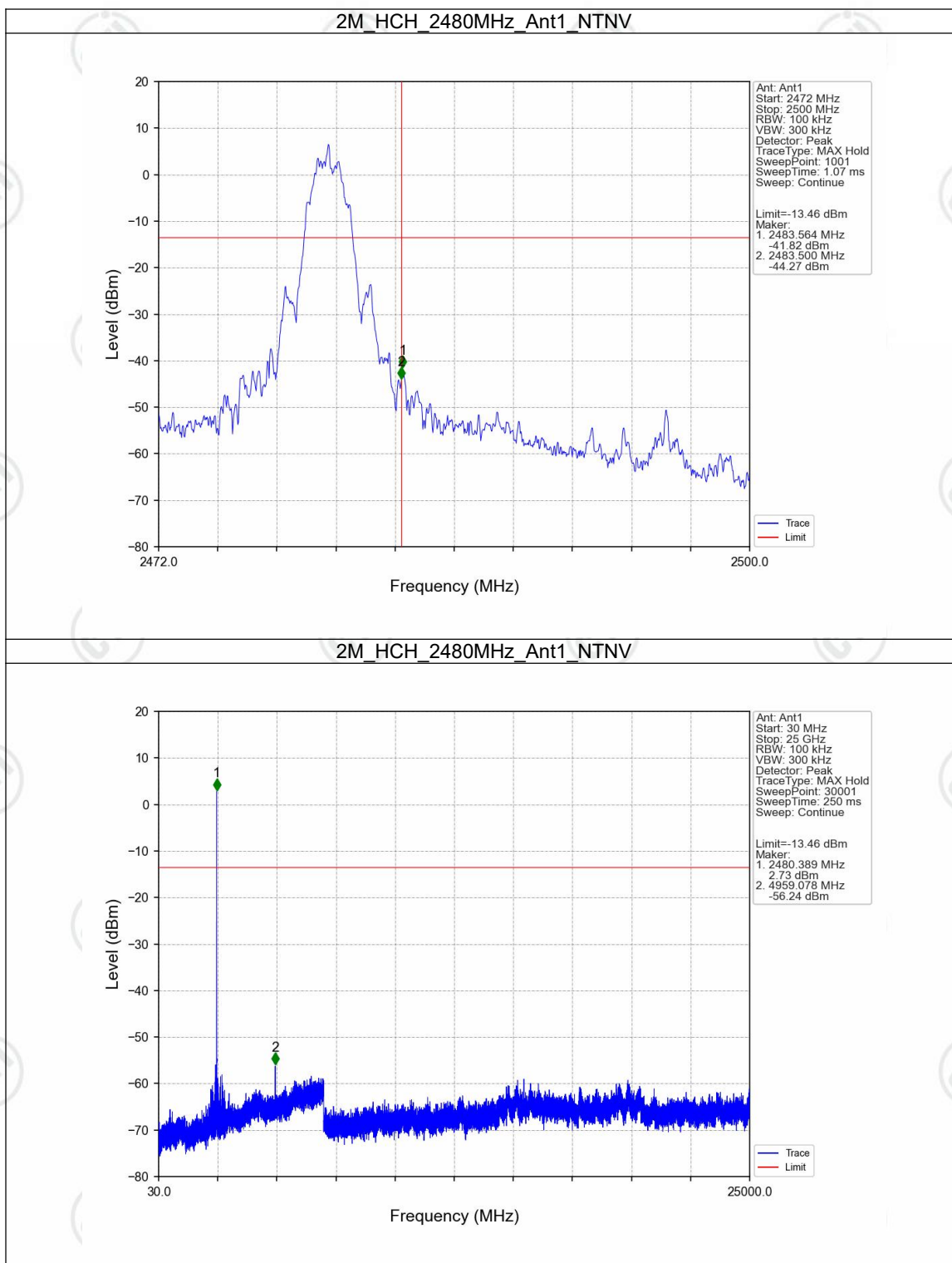












*** End of Report ***