



Shenzhen CTL Testing Technology Co., Ltd.

Floor 1-A, Baisha Technology Park, No.3011, Shahexi Road, Nanshan District, Shenzhen, China 518055

Tel: +86-755-89486194 E-mail: ctl@ctl-lab.com

Annex for BLE

Test Report No.: CTL2411131011-WF02

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	6
2.1 Test Result	6
2.1.1 OBW	6
2.1.2 6dB BW	6
2.2 Test Graph	7
2.2.1 OBW	7
2.2.2 6dB BW	9
3. Maximum Conducted Output Power	11
3.1 Test Result	11
3.1.1 Power	11
3.2 Test Graph	12
3.2.1 Power	12
4. Maximum Power Spectral Density	14
4.1 Test Result	14

FCCID: 2BAS2-E41

4.1.1 PSD	14
4.2 Test Graph	15
4.2.1 PSD	15
5. Unwanted Emissions In Non-restricted Frequency Bands	17
5.1 Test Result	17
5.1.1 Ref	17
5.1.2 CSE	17
5.2 Test Graph	18
5.2.1 Ref	18
5.2.2 CSE	20

FCCID: 2BAS2-E41

1. Duty Cycle

1.1 Test Result

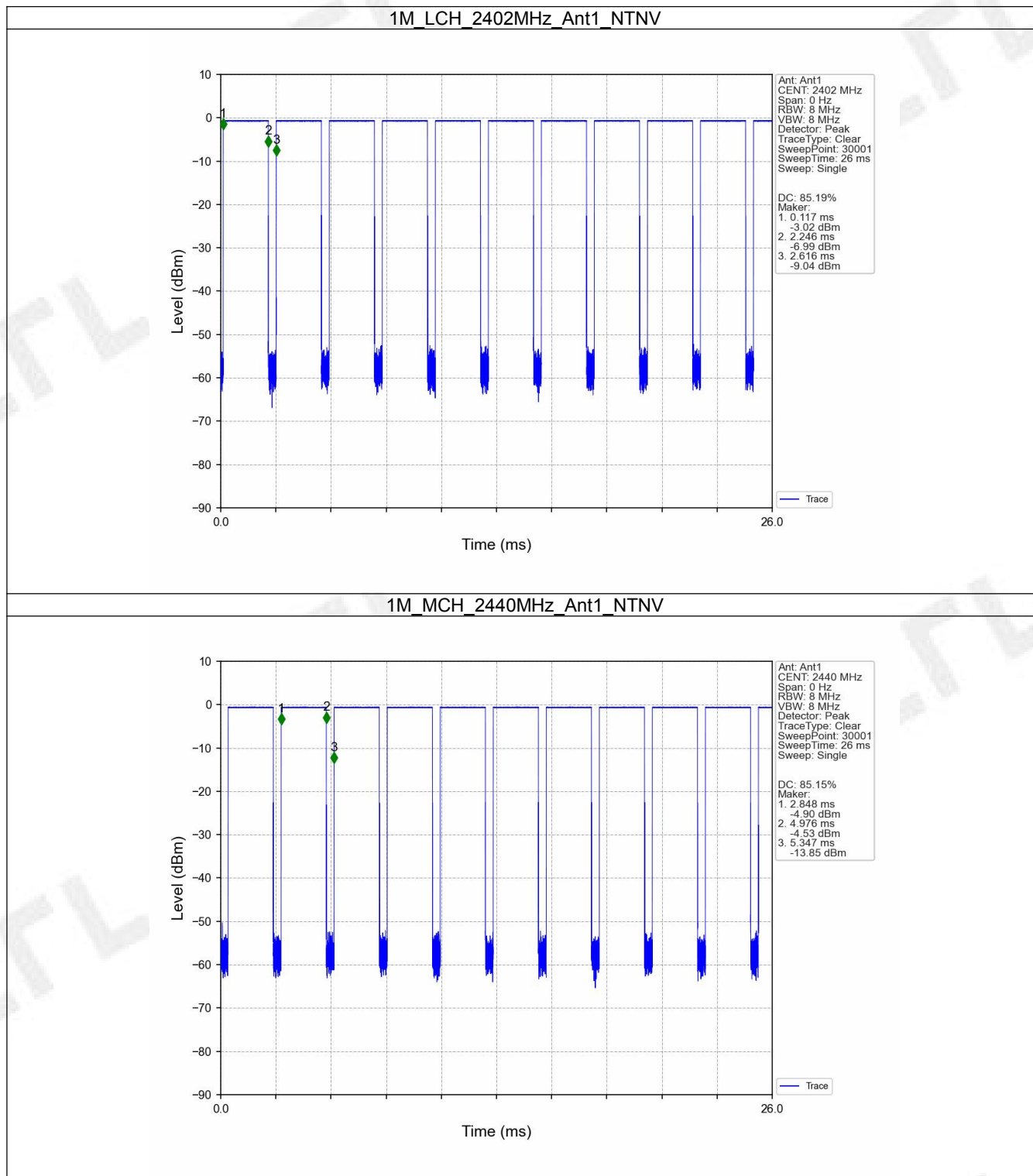
1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	2.129	2.499	85.19	0.70	0.01
		2440	2.128	2.499	85.15	0.70	0.01
		2480	2.129	2.500	85.16	0.70	0.01

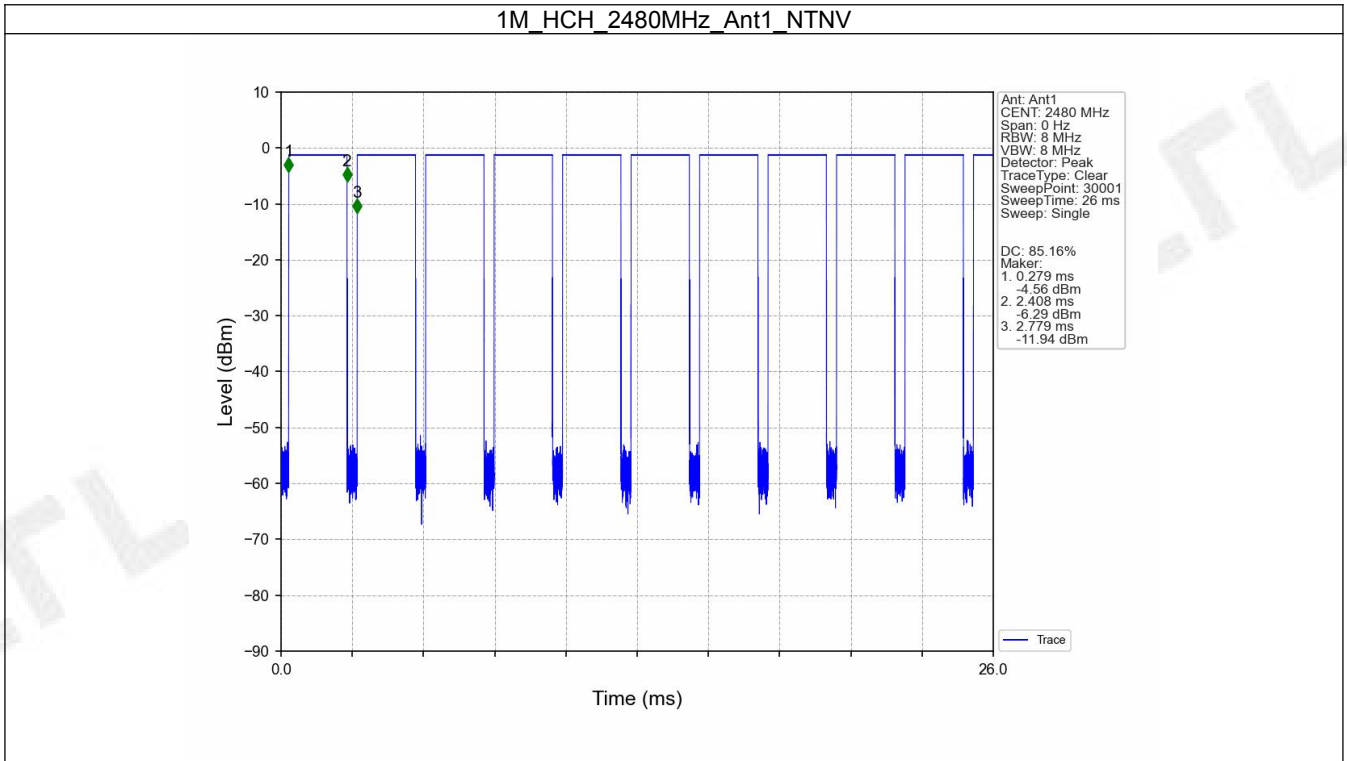
FCCID: 2BAS2-E41

1.2 Test Graph

1.2.1 Ant1



FCCID: 2BAS2-E41



FCCID: 2BAS2-E41

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	1.093	/	Pass
		2440	1	1.123	/	Pass
		2480	1	1.168	/	Pass

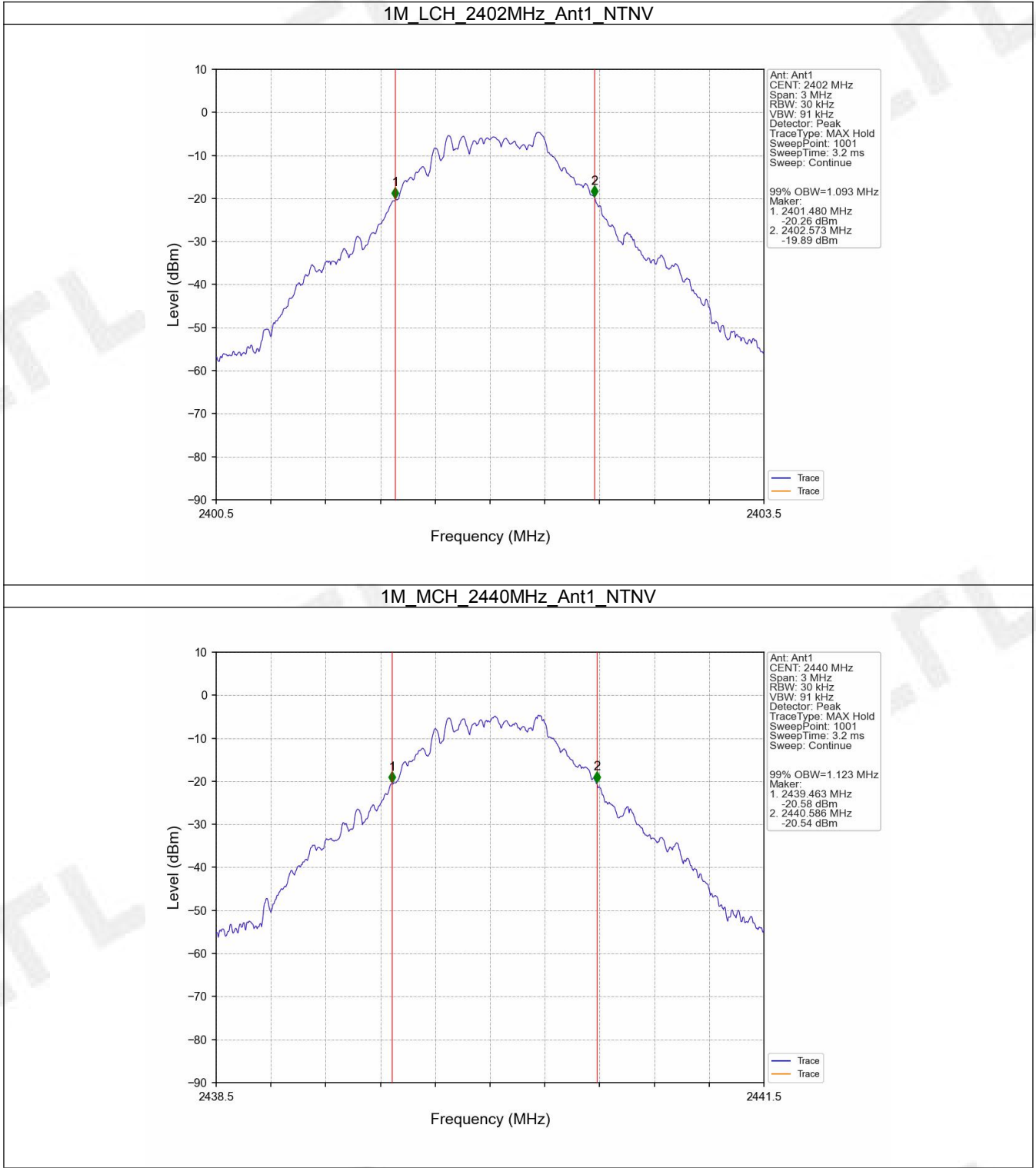
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.722	≥ 0.5	Pass
		2440	1	0.739	≥ 0.5	Pass
		2480	1	0.729	≥ 0.5	Pass

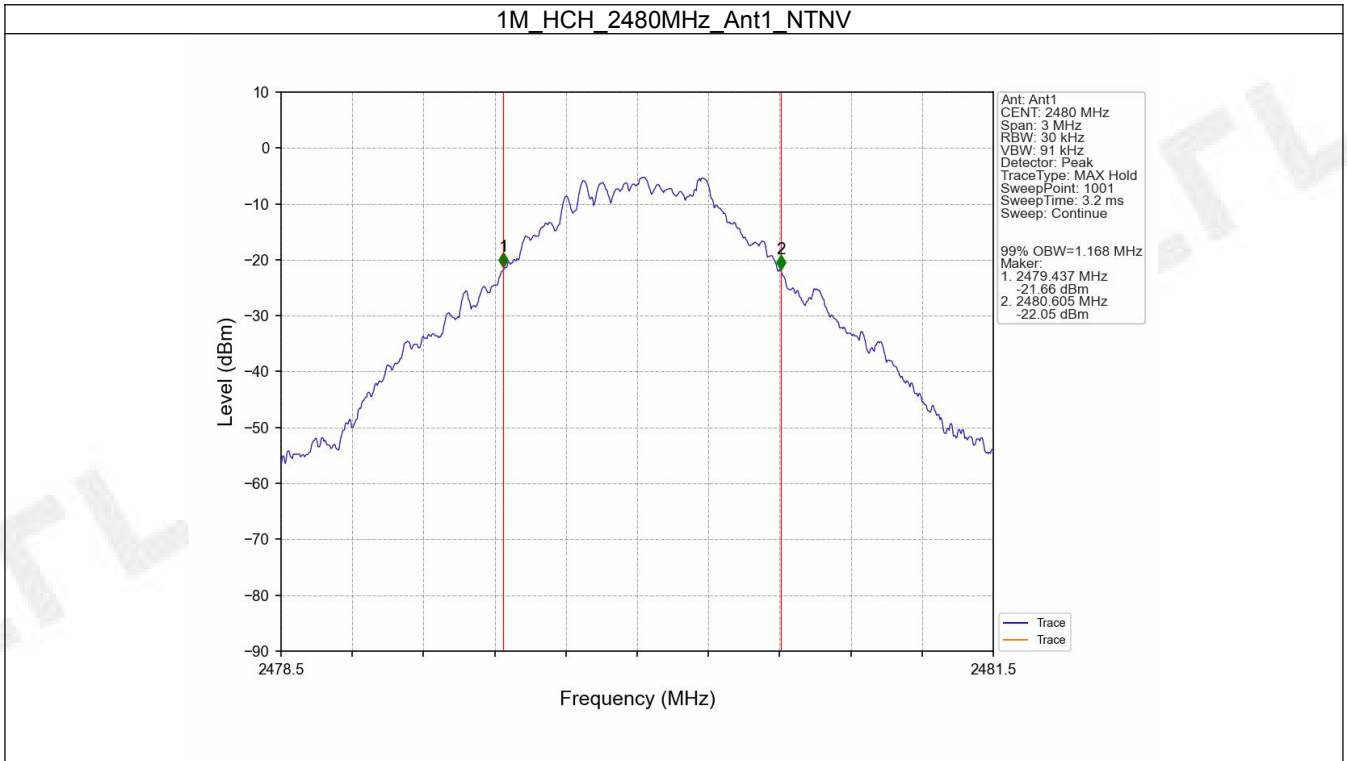
FCCID: 2BAS2-E41

2.2 Test Graph

2.2.1 OBW

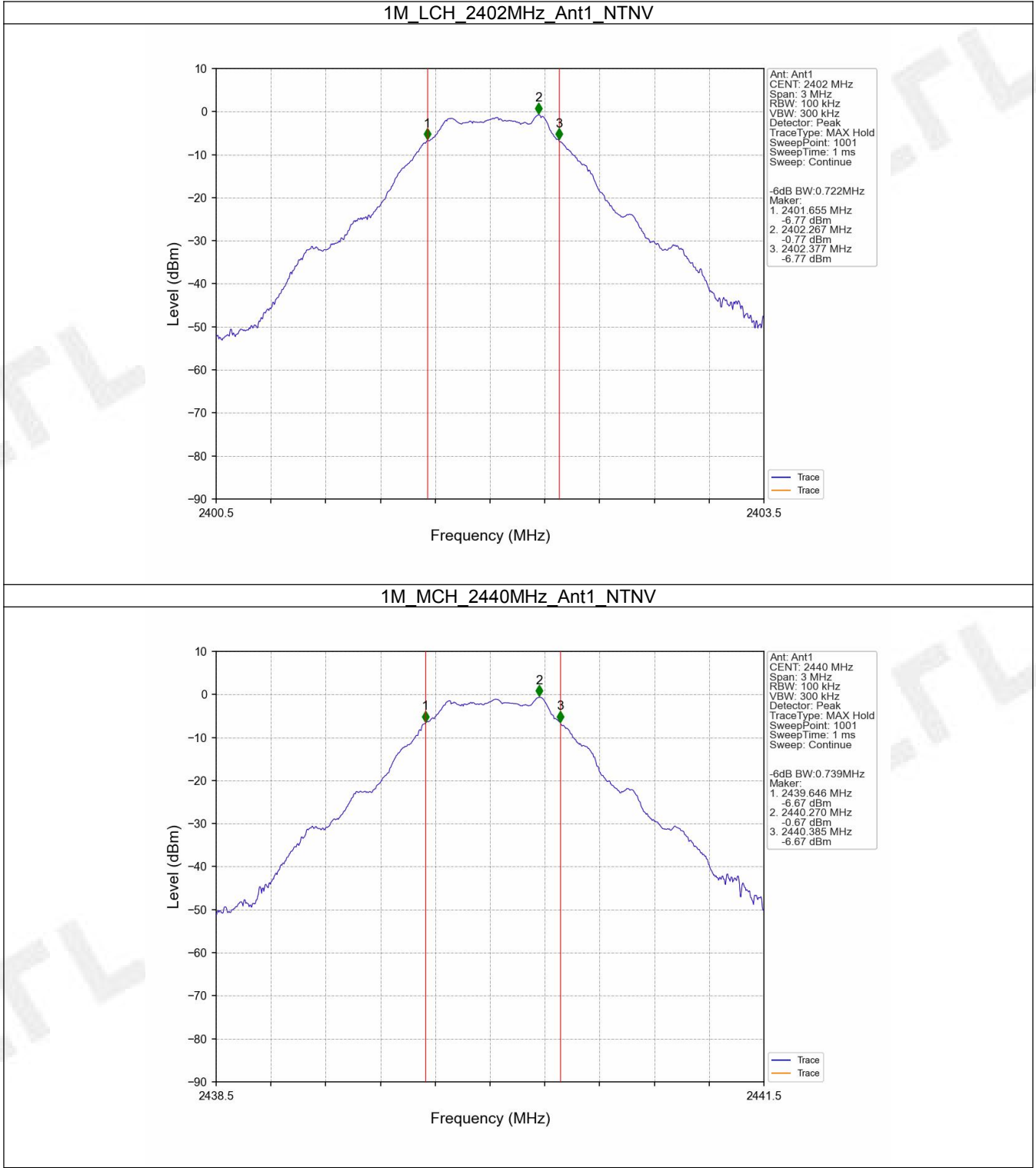


FCCID: 2BAS2-E41

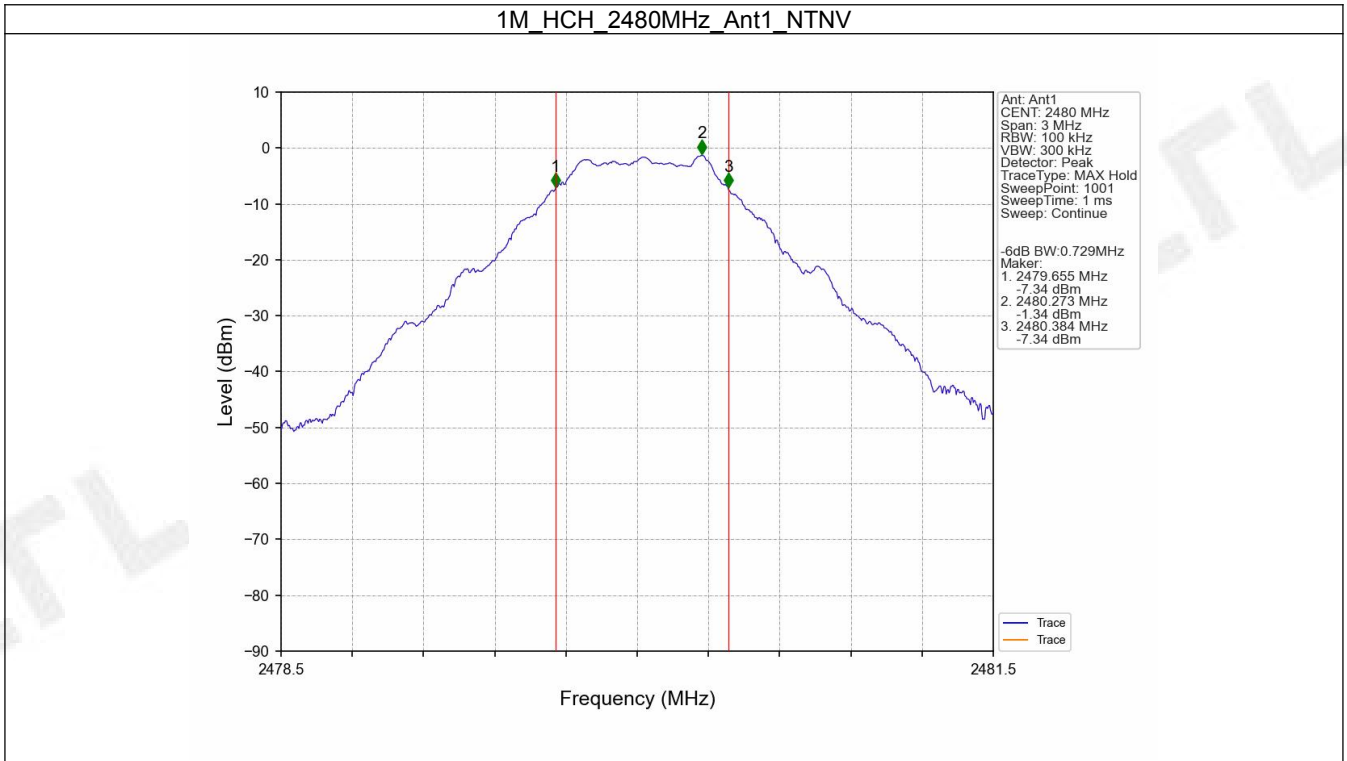


FCCID: 2BAS2-E41

2.2.2 6dB BW



FCCID: 2BAS2-E41



FCCID: 2BAS2-E41

3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

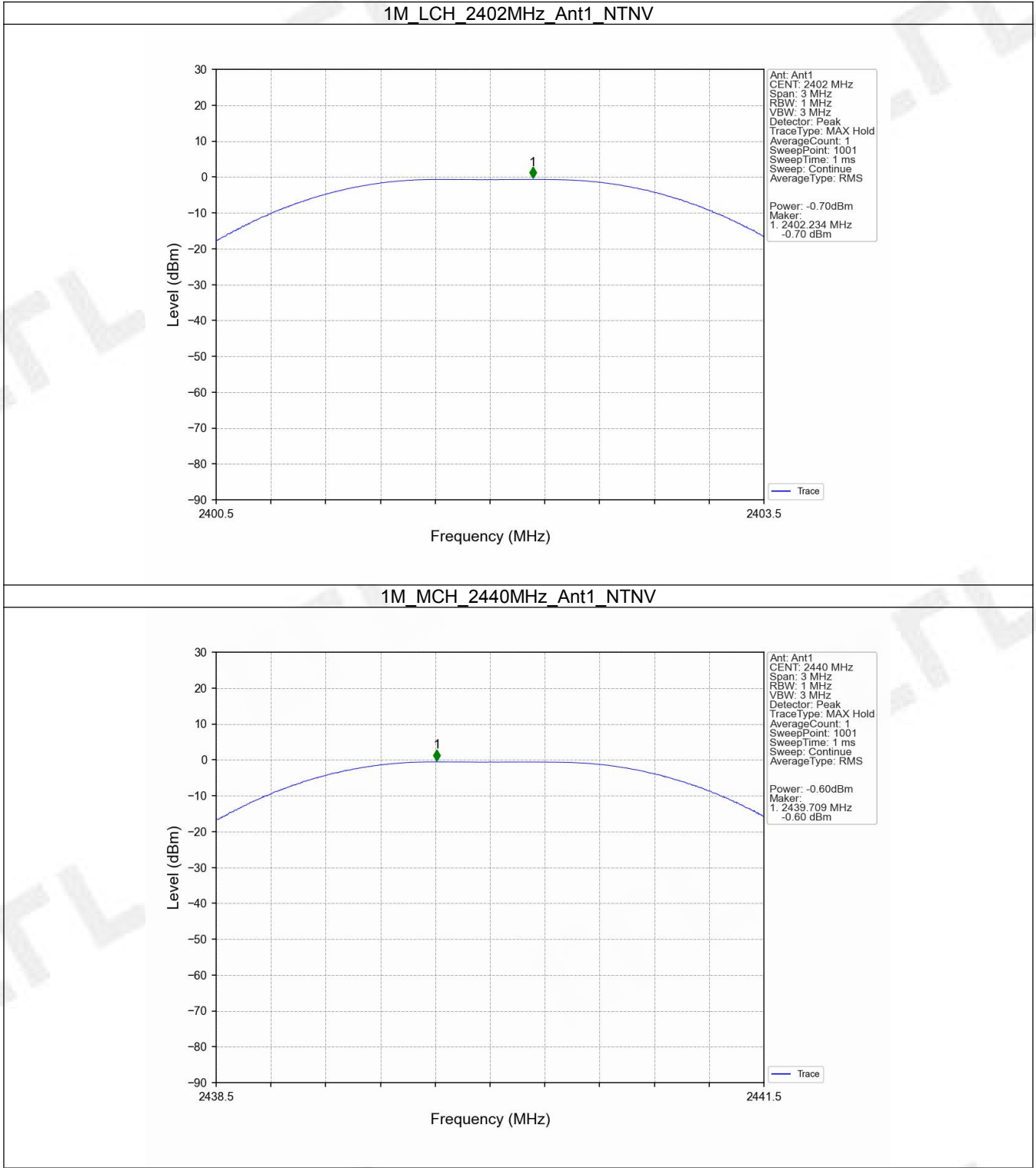
Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	-0.70	<=30	Pass
		2440	-0.60	<=30	Pass
		2480	-1.19	<=30	Pass

Note1: Antenna Gain: Ant1: 1.20dBi;

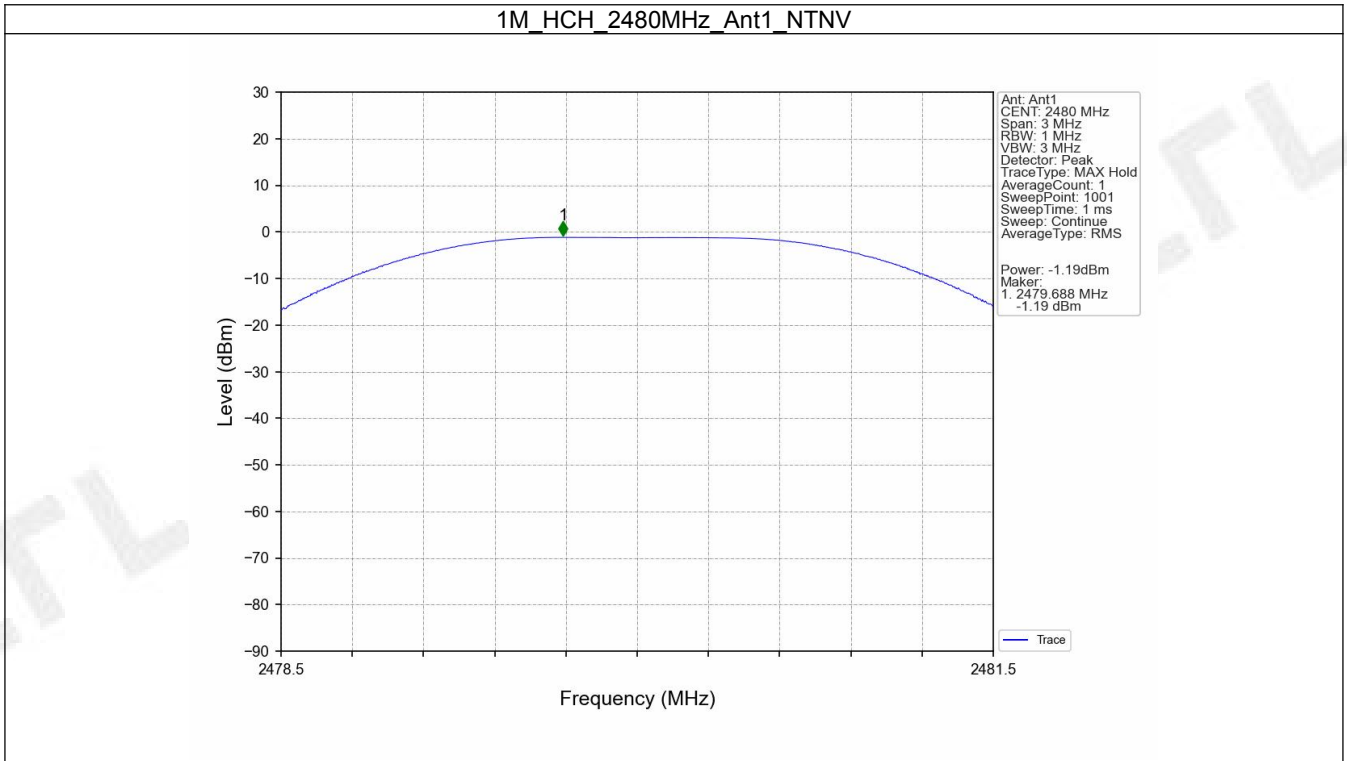
FCCID: 2BAS2-E41

3.2 Test Graph

3.2.1 Power



FCCID: 2BAS2-E41



FCCID: 2BAS2-E41

4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

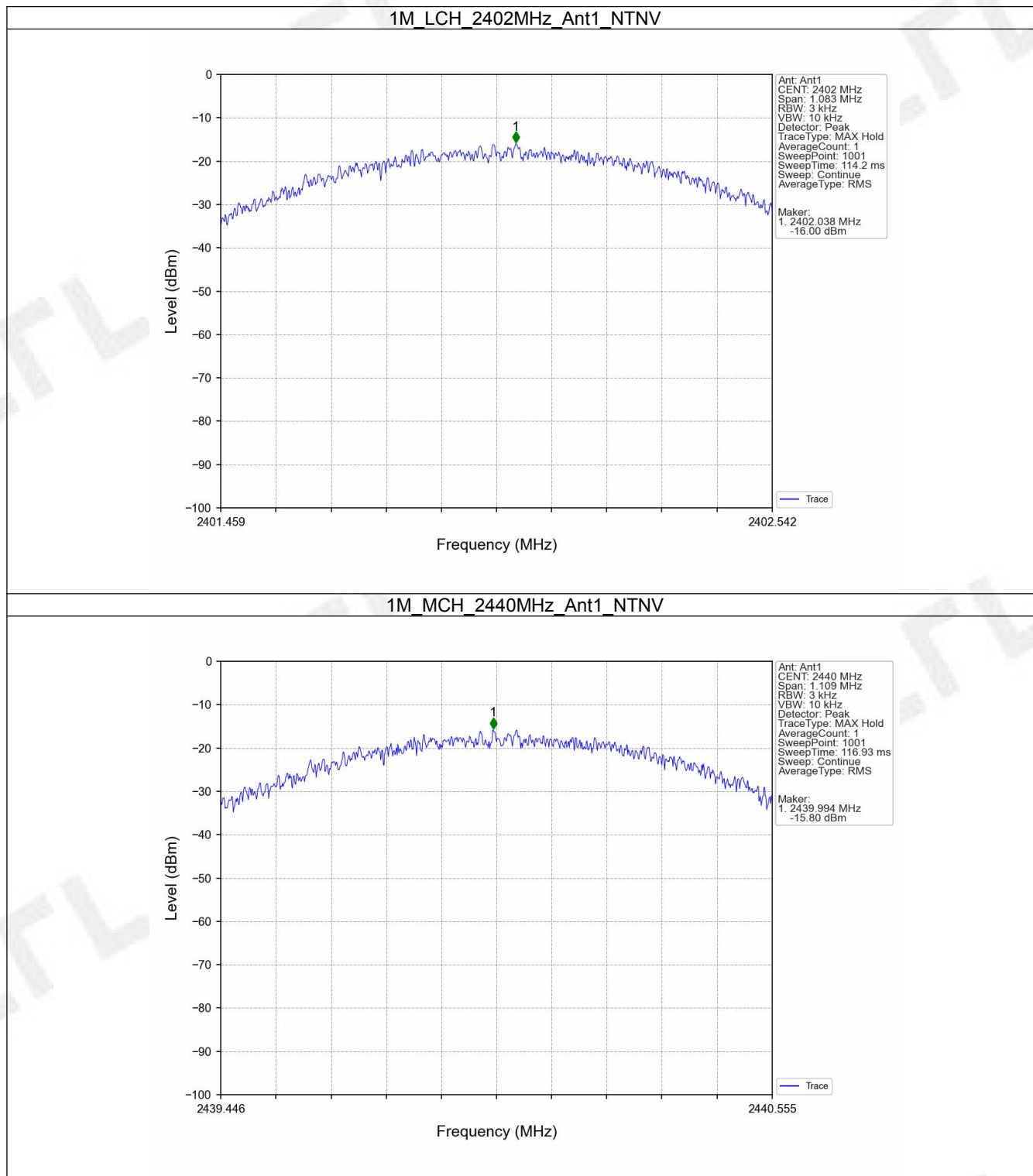
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
1M	SISO	2402	-16.00	<=8	Pass
		2440	-15.80	<=8	Pass
		2480	-16.46	<=8	Pass

Note1: Antenna Gain: Ant1: 1.20dBi;

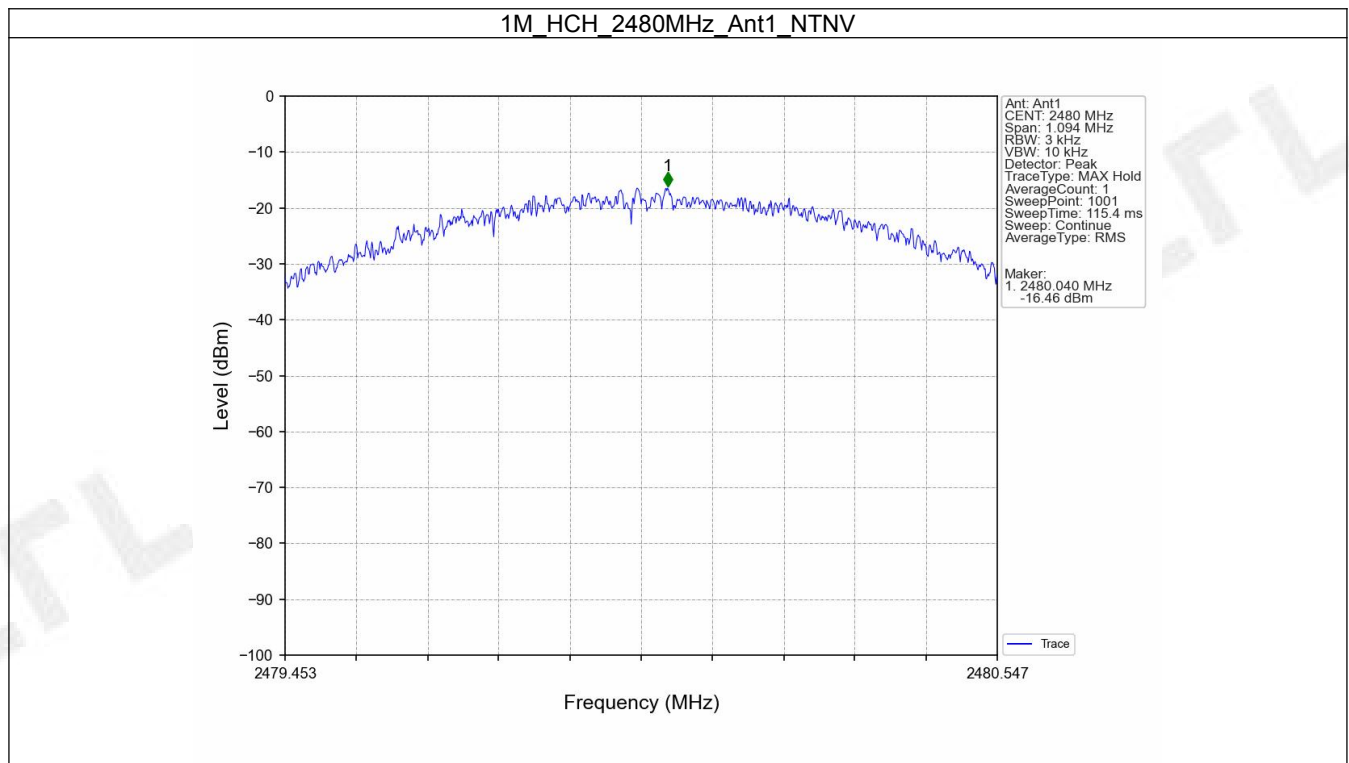
FCCID: 2BAS2-E41

4.2 Test Graph

4.2.1 PSD



FCCID: 2BAS2-E41



FCCID: 2BAS2-E41

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	-0.75
		2440	1	-0.69
		2480	1	-1.32
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.				

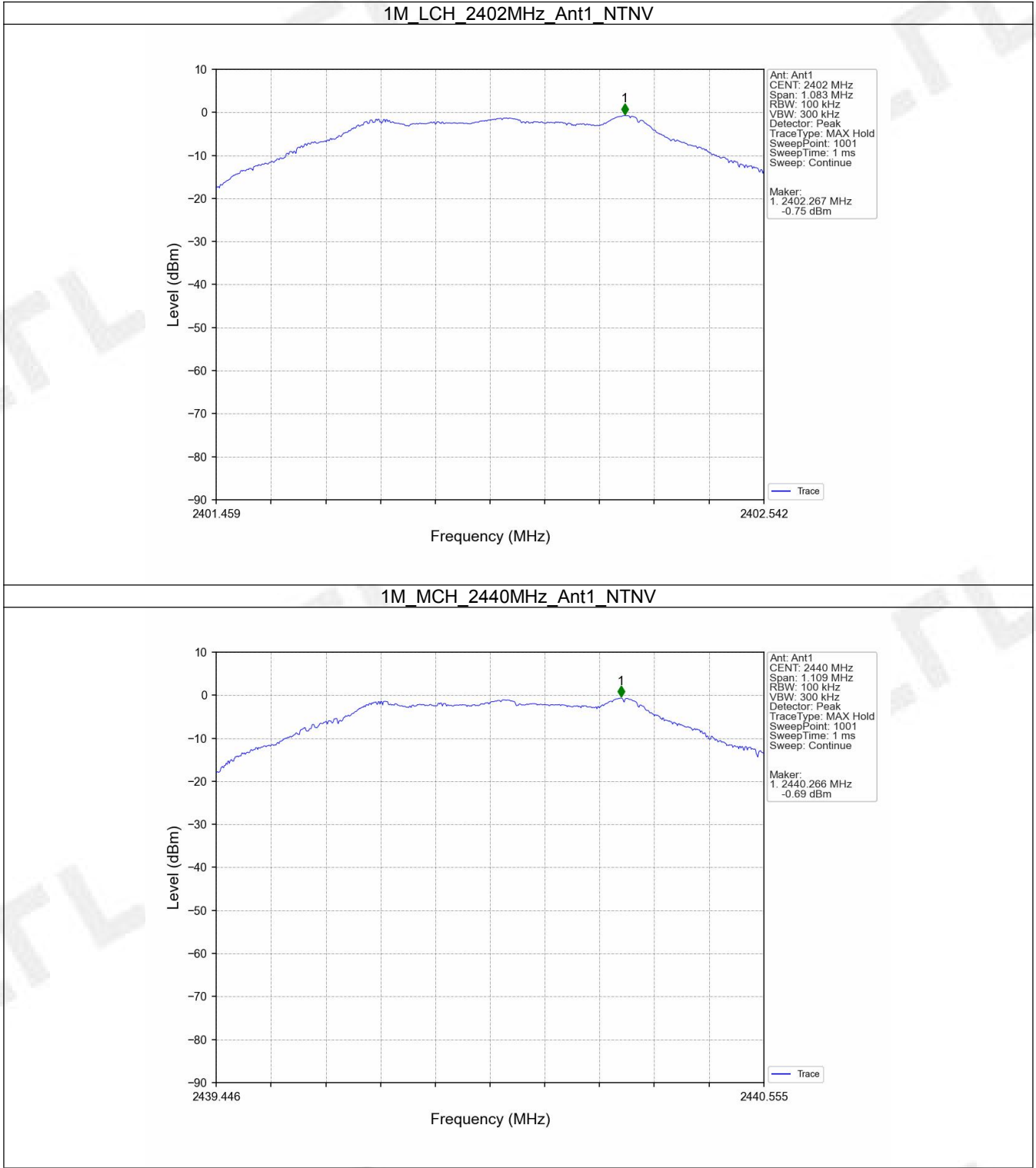
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	-0.69	-20.69	Pass
		2440	1	-0.69	-20.69	Pass
		2480	1	-0.69	-20.69	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.						

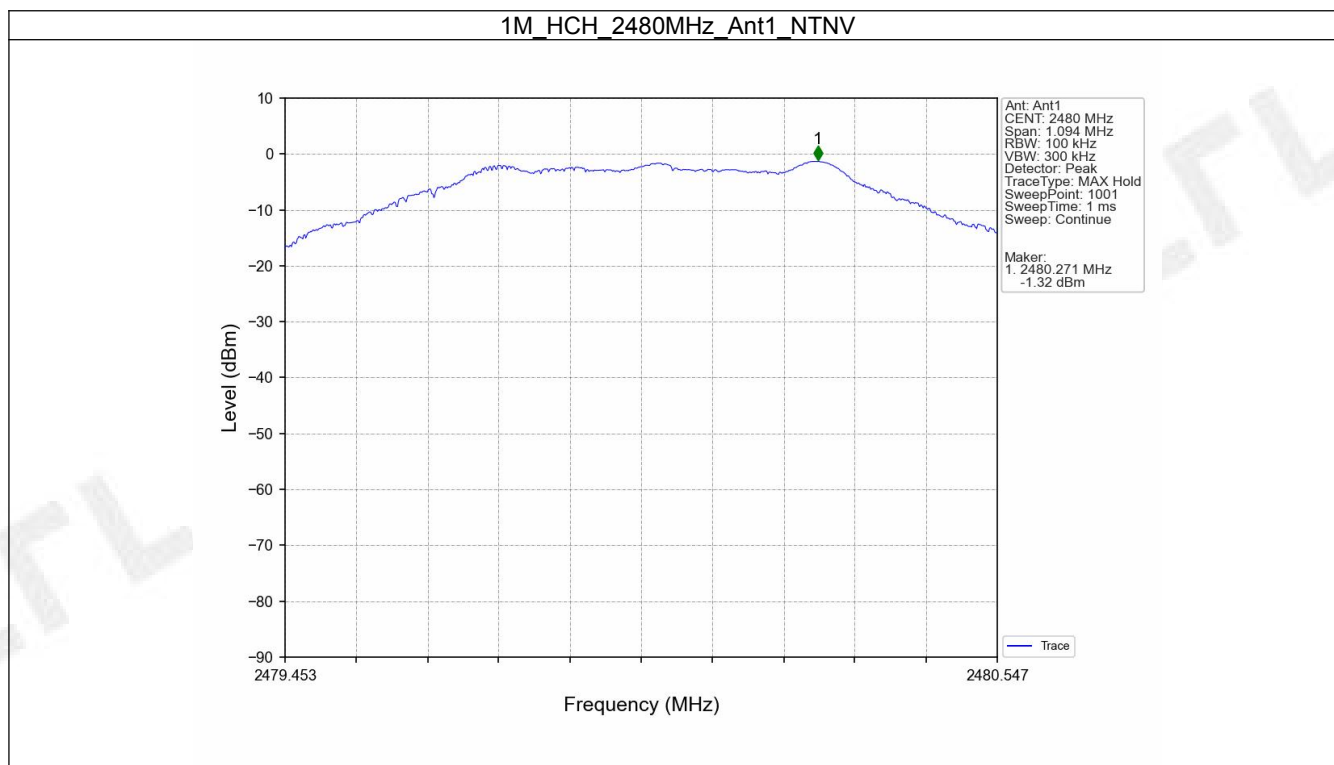
FCCID: 2BAS2-E41

5.2 Test Graph

5.2.1 Ref

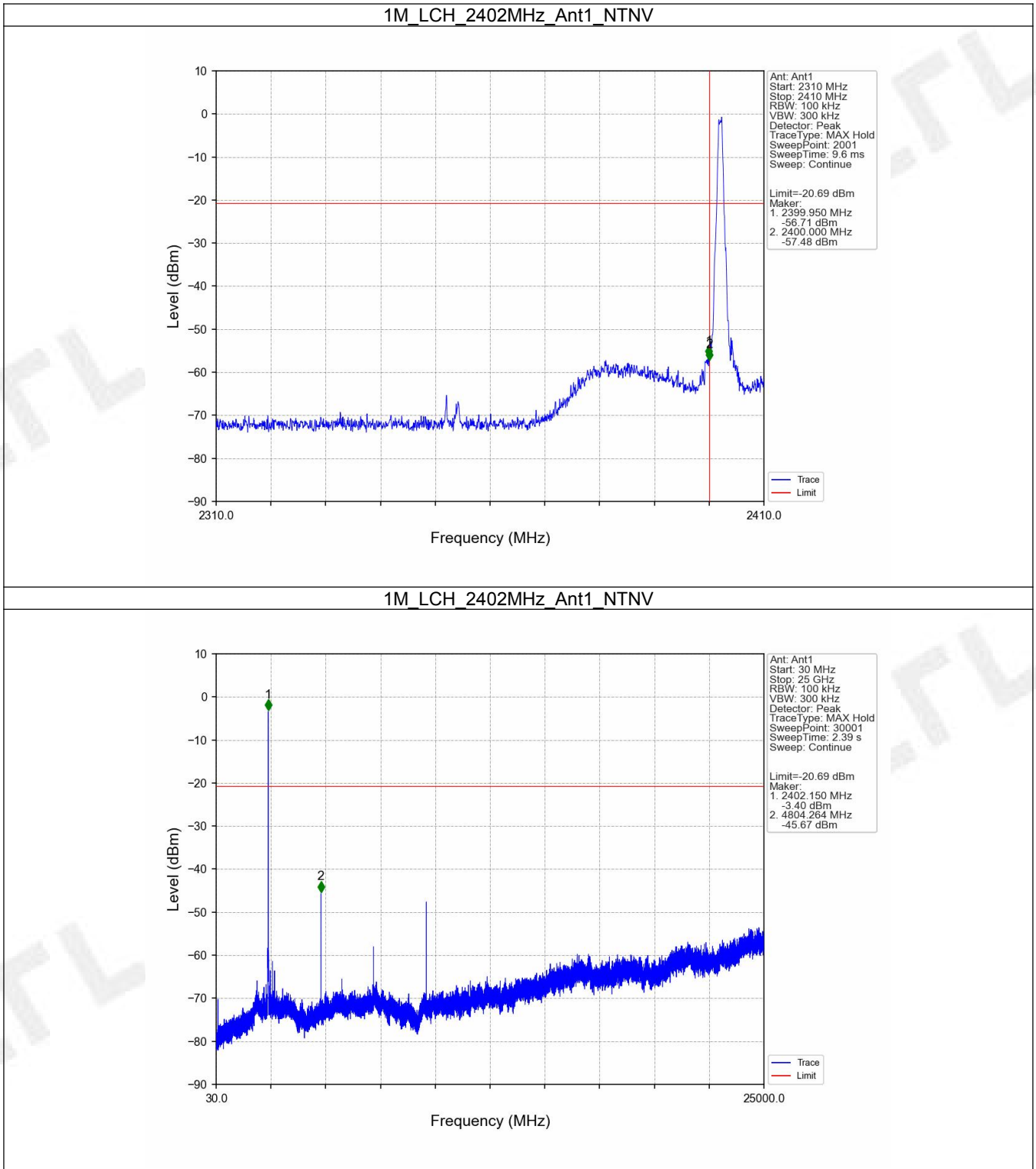


FCCID: 2BAS2-E41

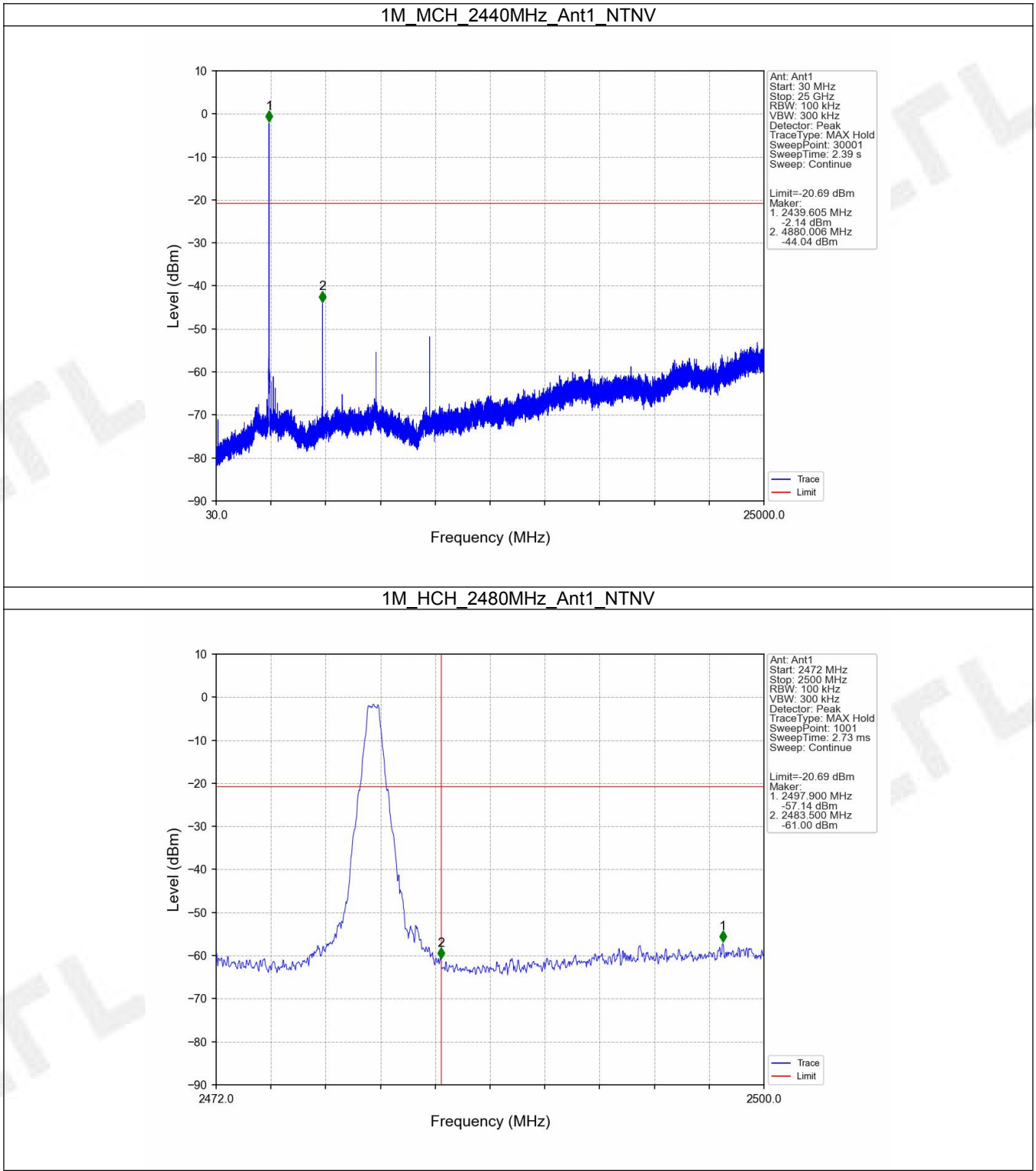


FCCID: 2BAS2-E41

5.2.2 CSE



FCCID: 2BAS2-E41



FCCID: 2BAS2-E41

