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Annex for 2.4G Wi-Fi

Test Report No.: CTL2504222081-WF02

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FCC ID: 2BPUW-SOY-U

1. Duty Cycle

1.1 Test Result

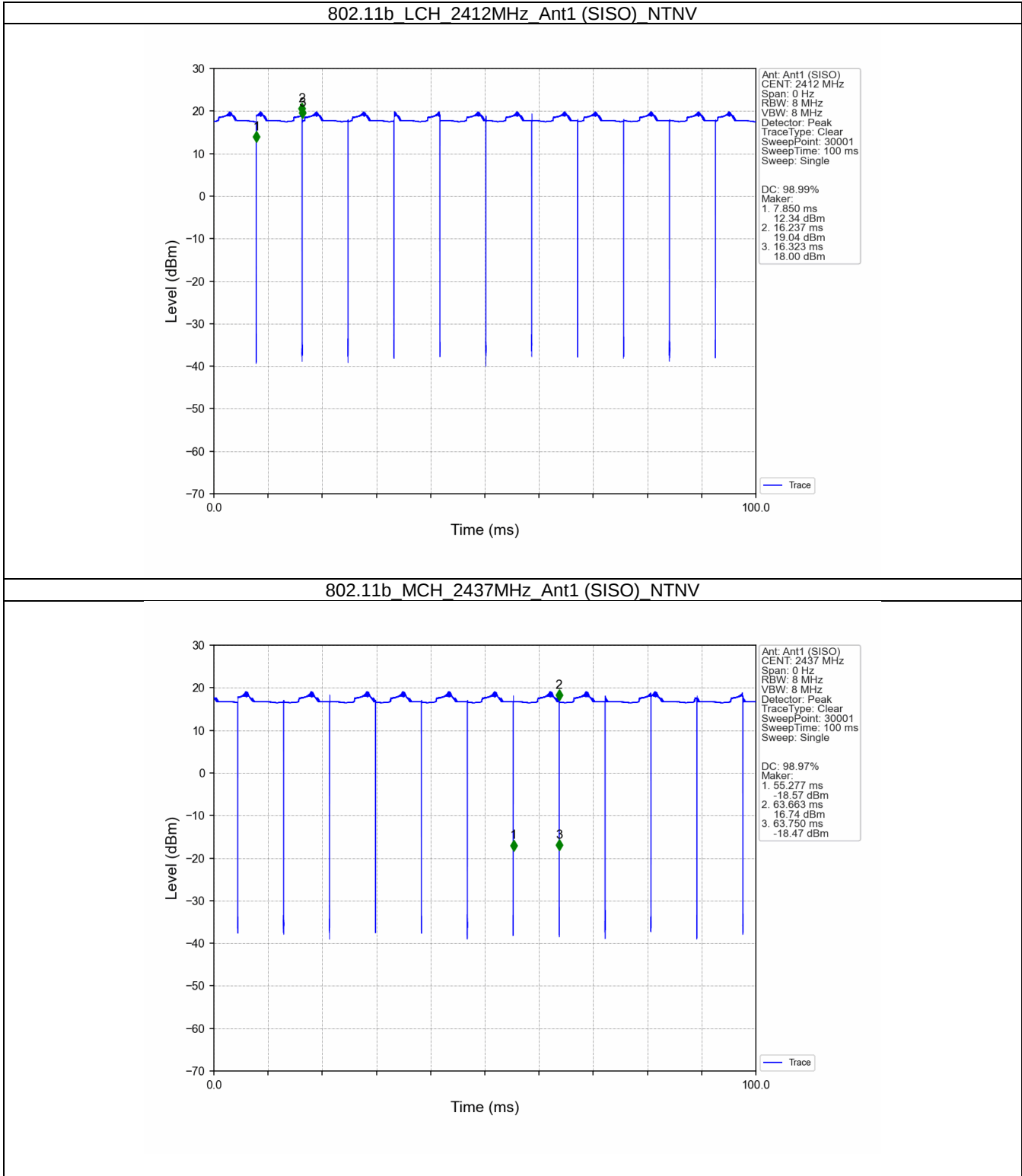
1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	8.387	8.473	98.99	0.04	0.04
		2437	8.386	8.473	98.97	0.04	0.04
		2462	8.386	8.473	98.97	0.04	0.04
802.11g	SISO	2412	1.394	1.409	98.94	0.05	0.00
		2437	1.394	1.409	98.94	0.05	0.03
		2462	1.394	1.409	98.94	0.05	0.00
802.11n (HT20)	SISO	2412	1.303	1.317	98.94	0.05	0.03
		2437	1.303	1.317	98.94	0.05	0.03
		2462	1.303	1.317	98.94	0.05	0.03

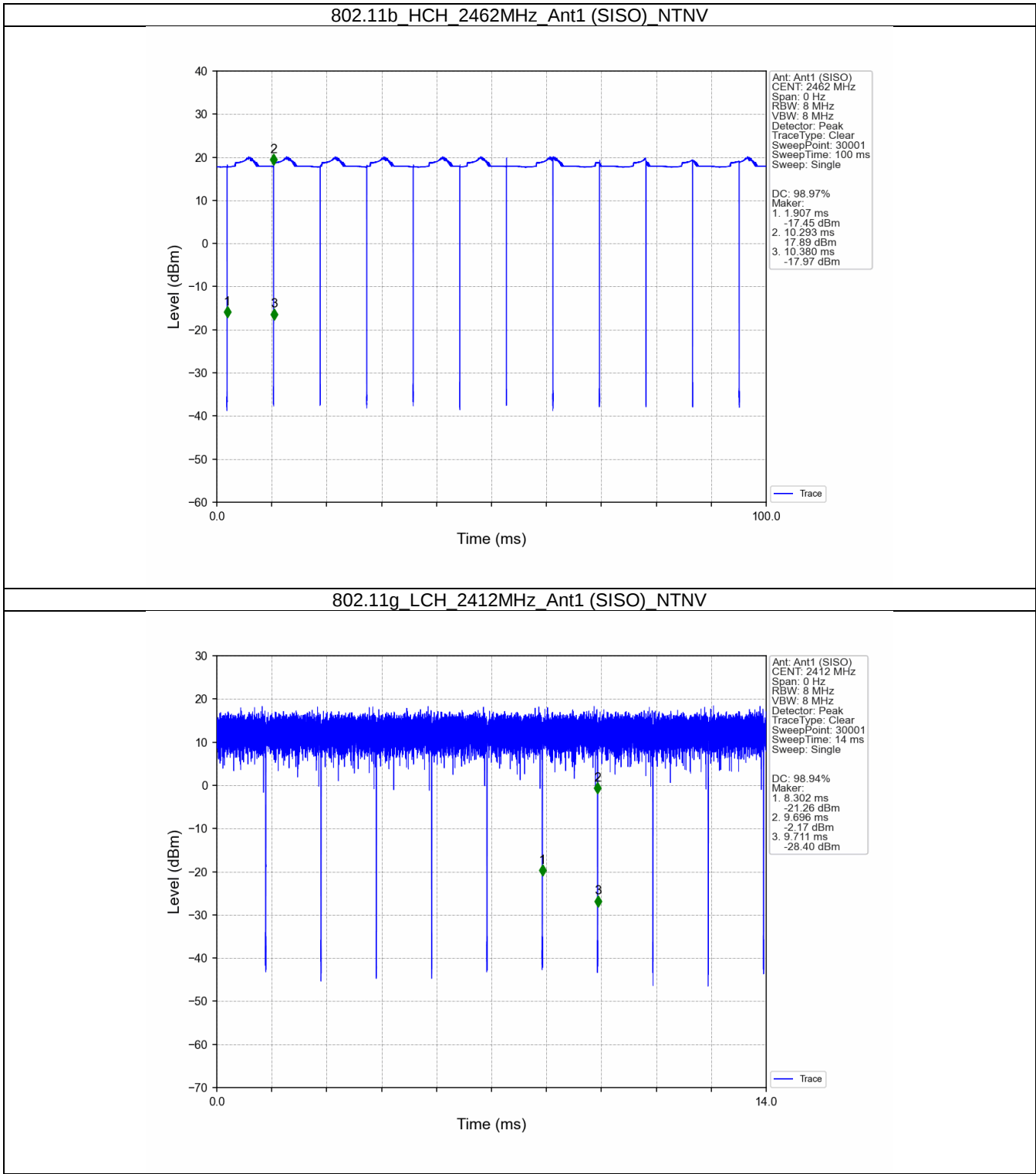
FCC ID: 2BPUW-SOY-U

1.2 Test Graph

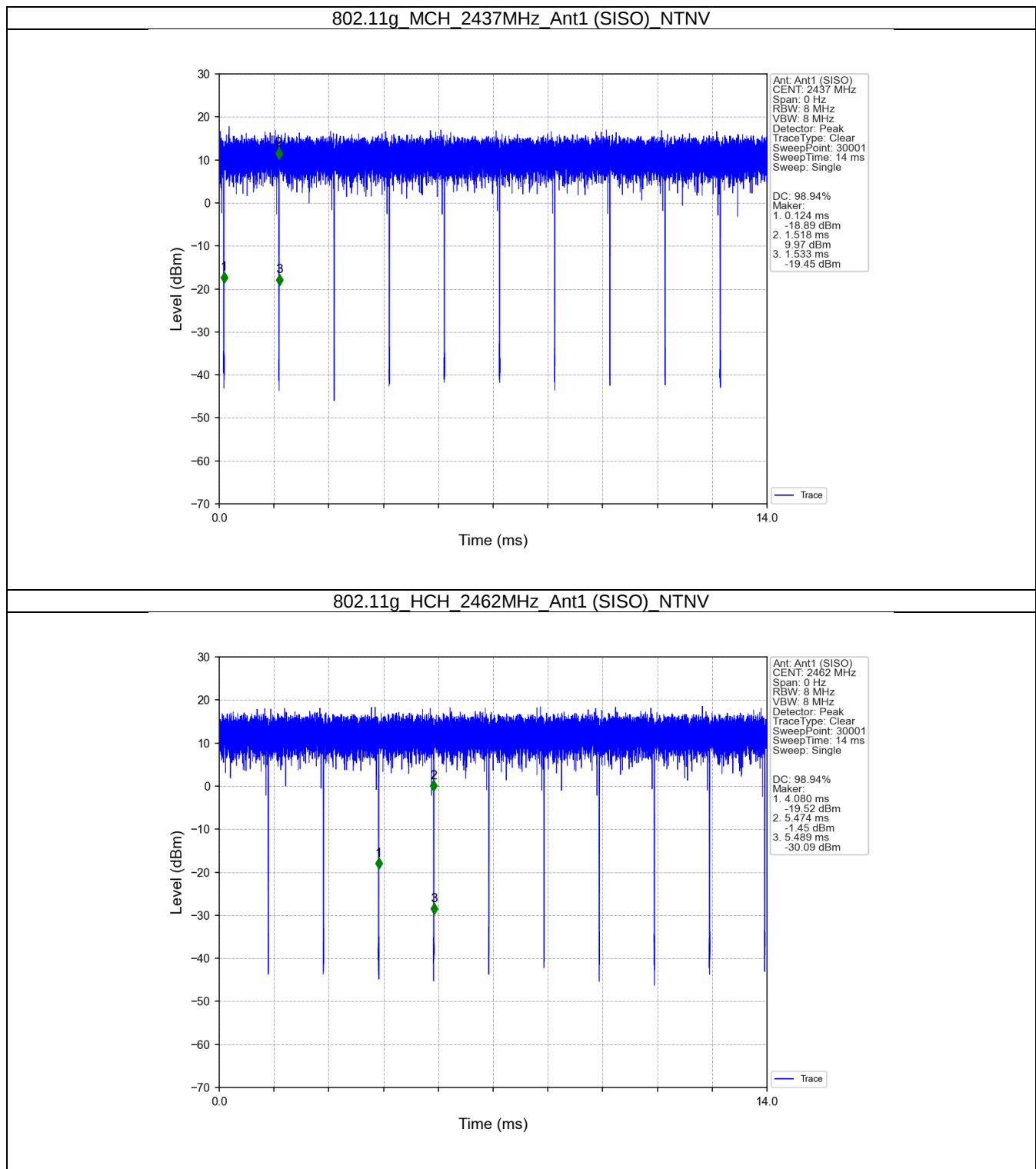
1.2.1 Ant1



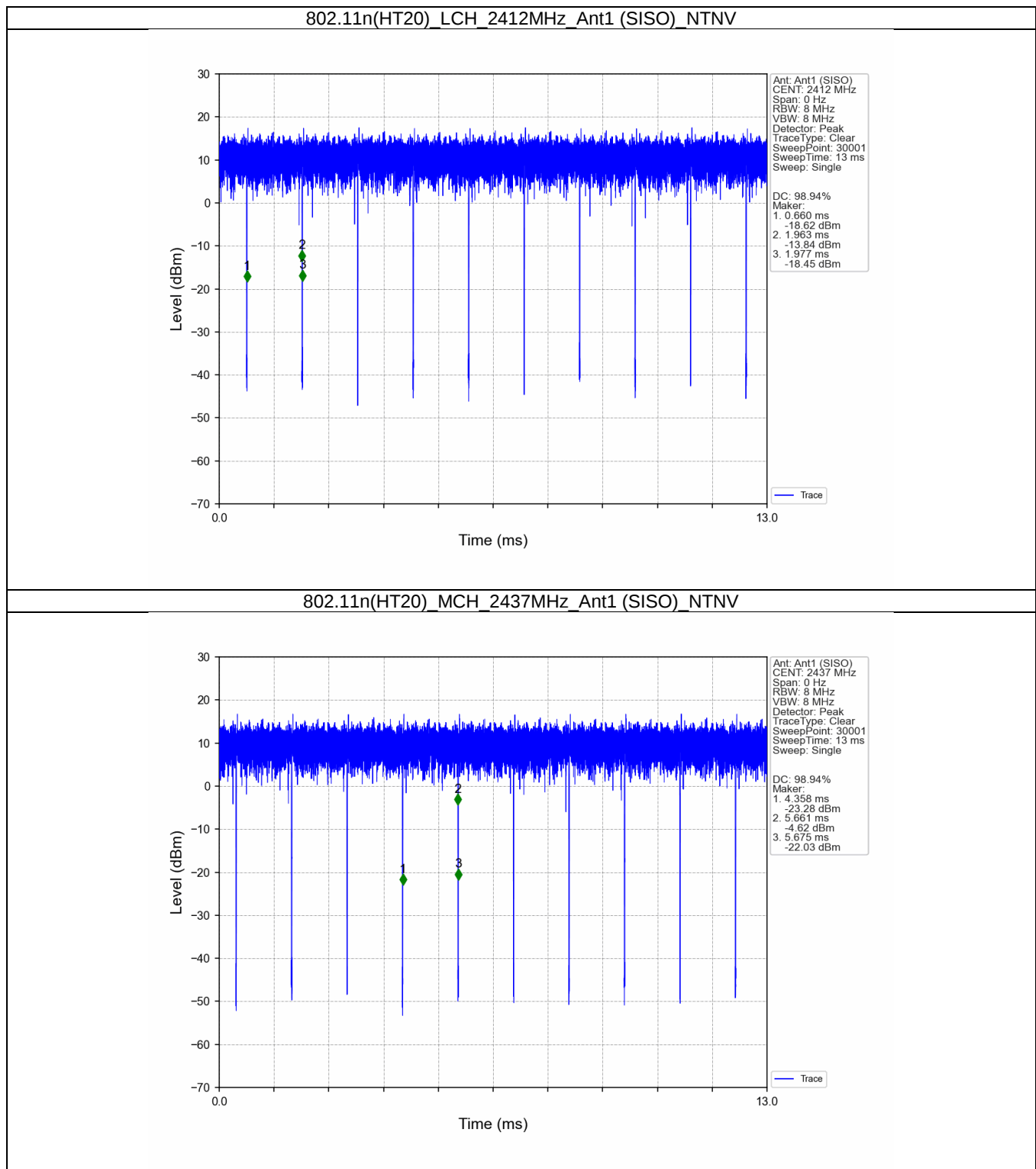
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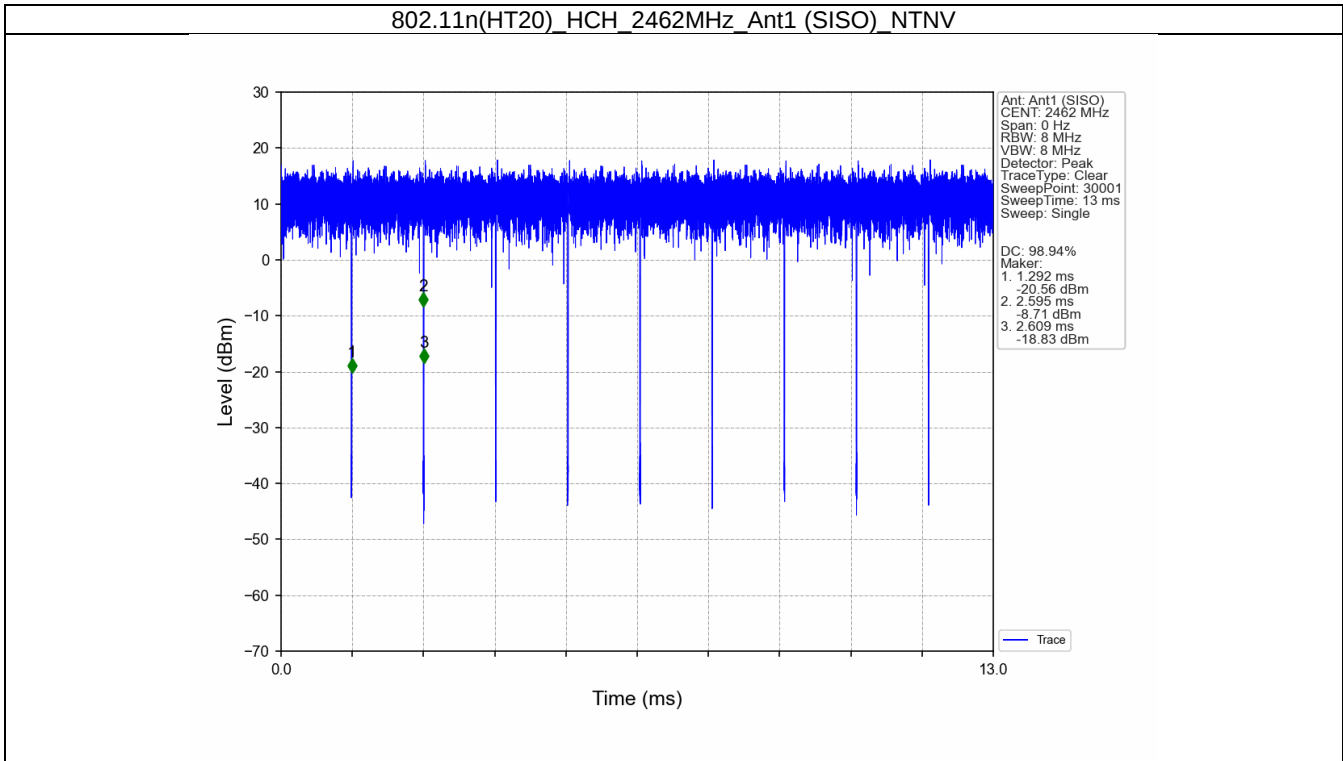
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2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	15.216	/	Pass
		2437	1	15.325	/	Pass
		2462	1	15.336	/	Pass
802.11g	SISO	2412	1	17.424	/	Pass
		2437	1	17.594	/	Pass
		2462	1	17.611	/	Pass
802.11n (HT20)	SISO	2412	1	18.445	/	Pass
		2437	1	18.541	/	Pass
		2462	1	18.460	/	Pass

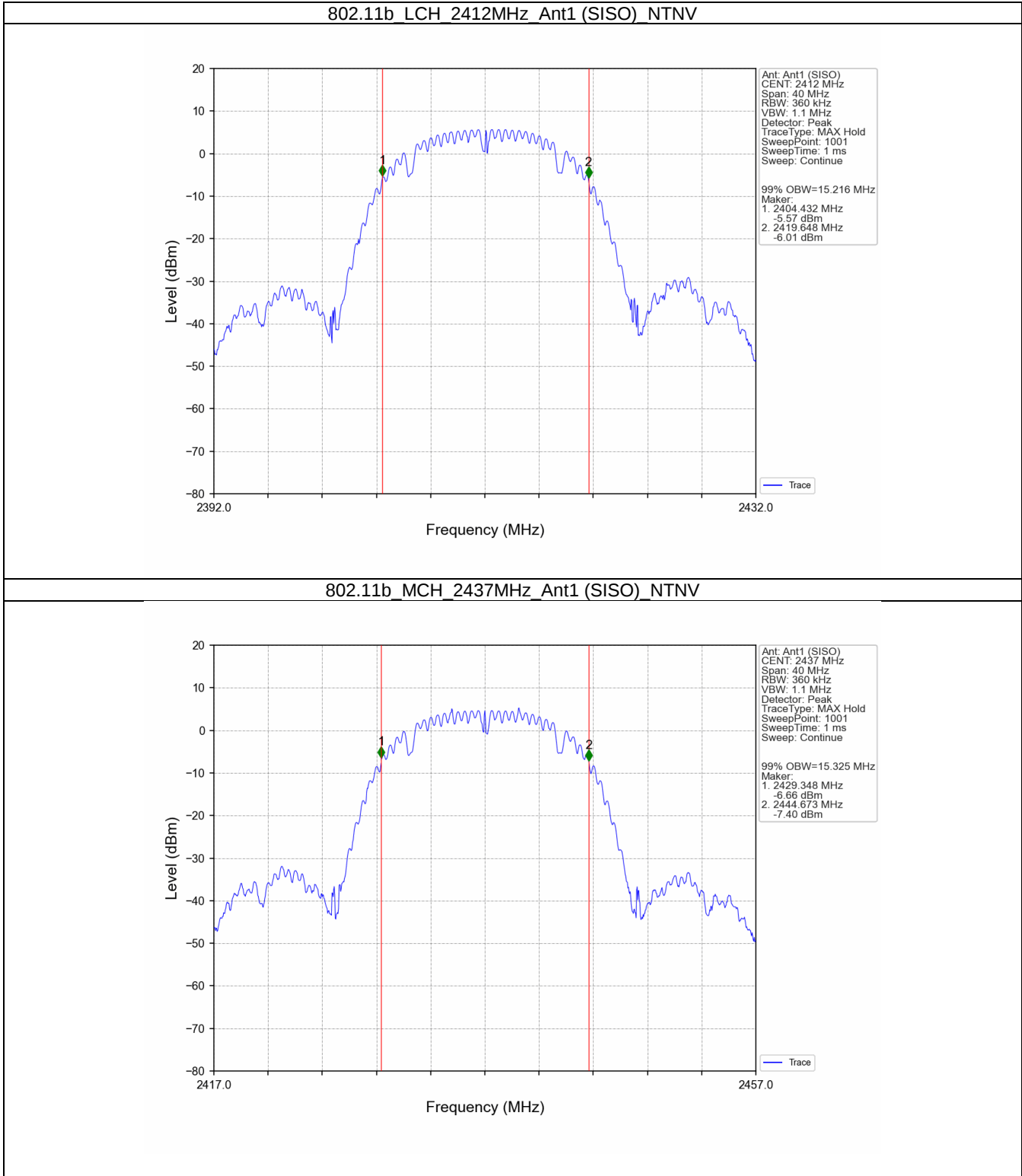
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	12.084	≥ 0.5	Pass
		2437	1	12.119	≥ 0.5	Pass
		2462	1	12.076	≥ 0.5	Pass
802.11g	SISO	2412	1	15.358	≥ 0.5	Pass
		2437	1	15.415	≥ 0.5	Pass
		2462	1	15.486	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	15.103	≥ 0.5	Pass
		2437	1	15.108	≥ 0.5	Pass
		2462	1	12.600	≥ 0.5	Pass

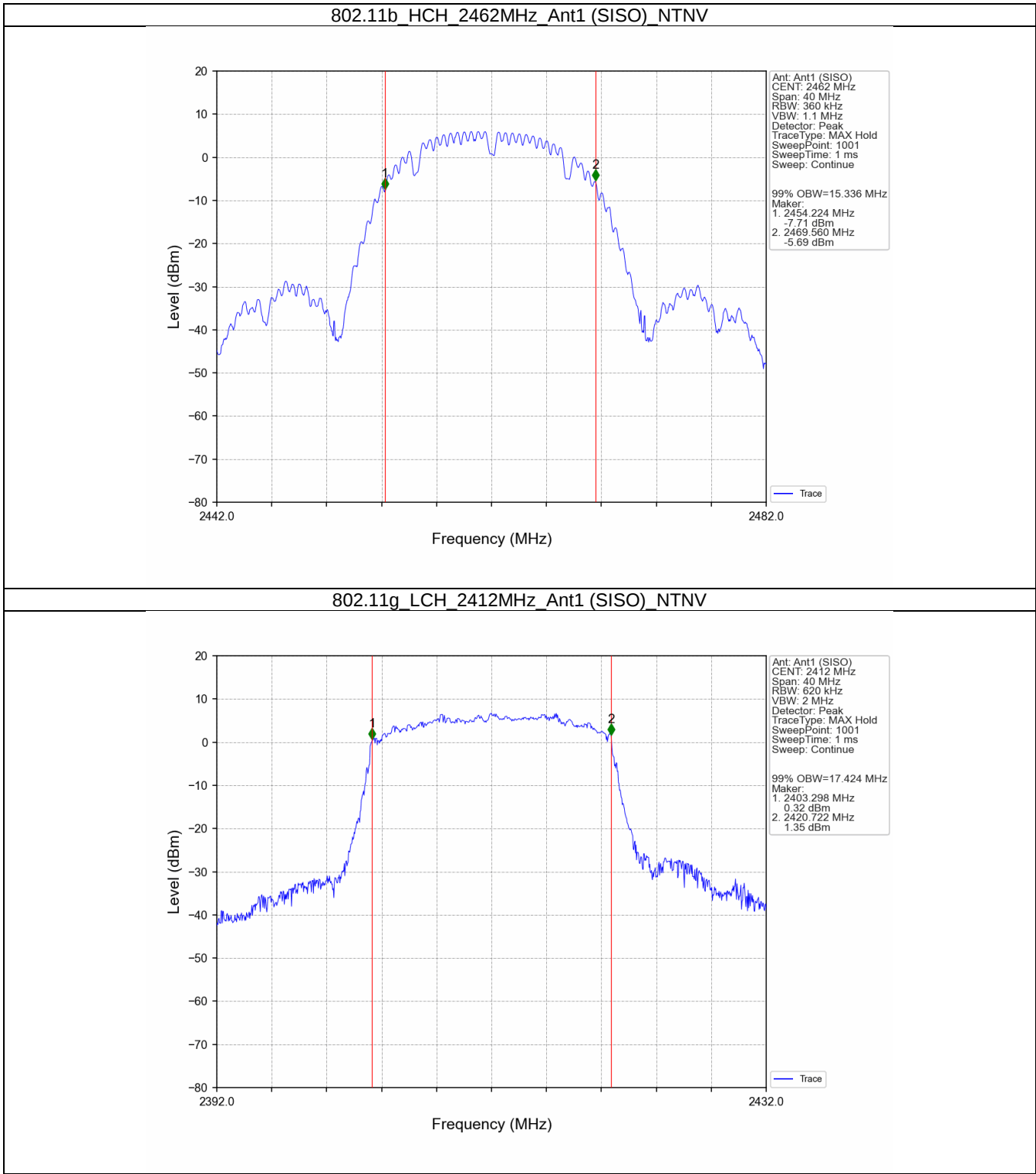
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2.2 Test Graph

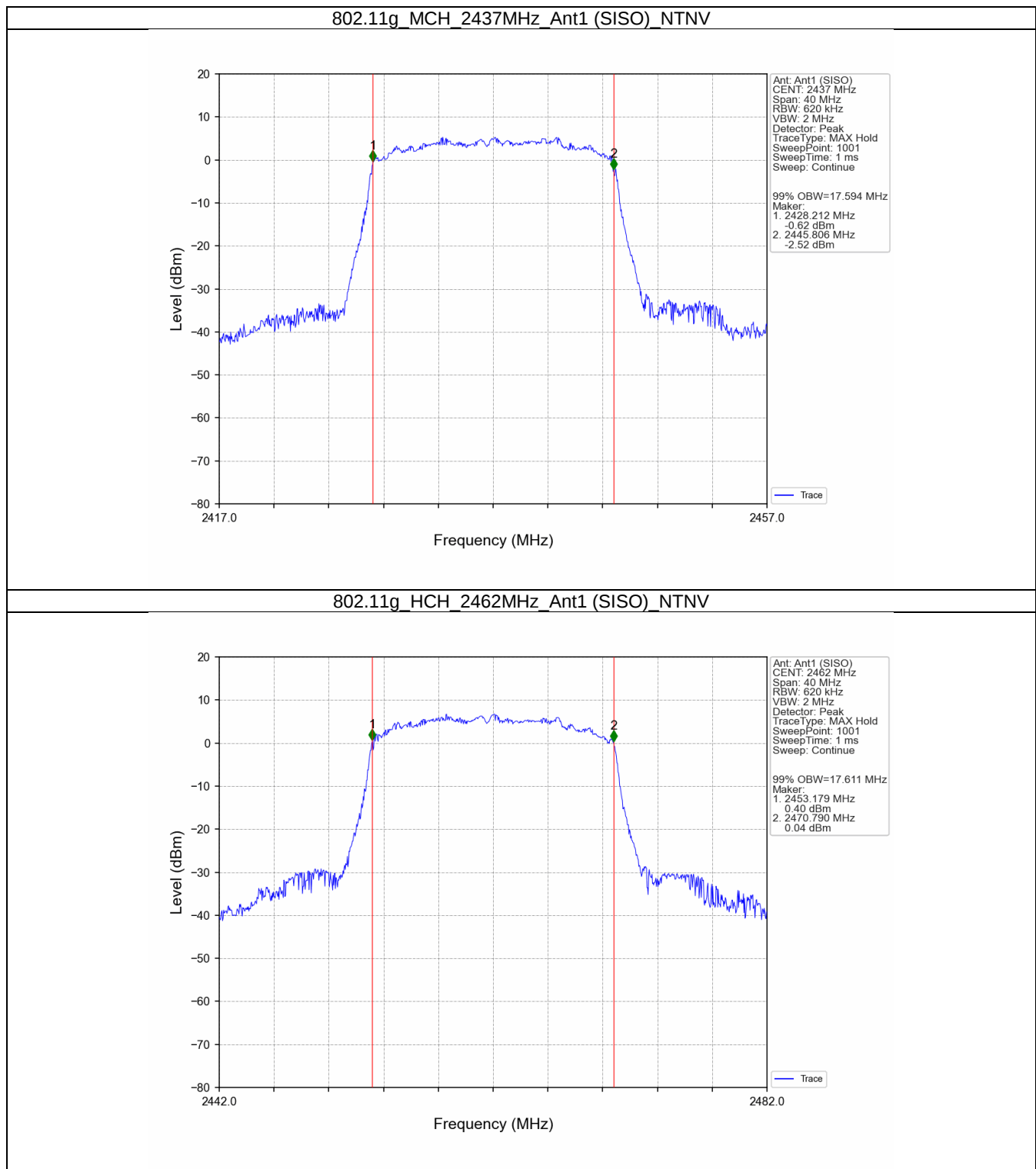
2.2.1 OBW



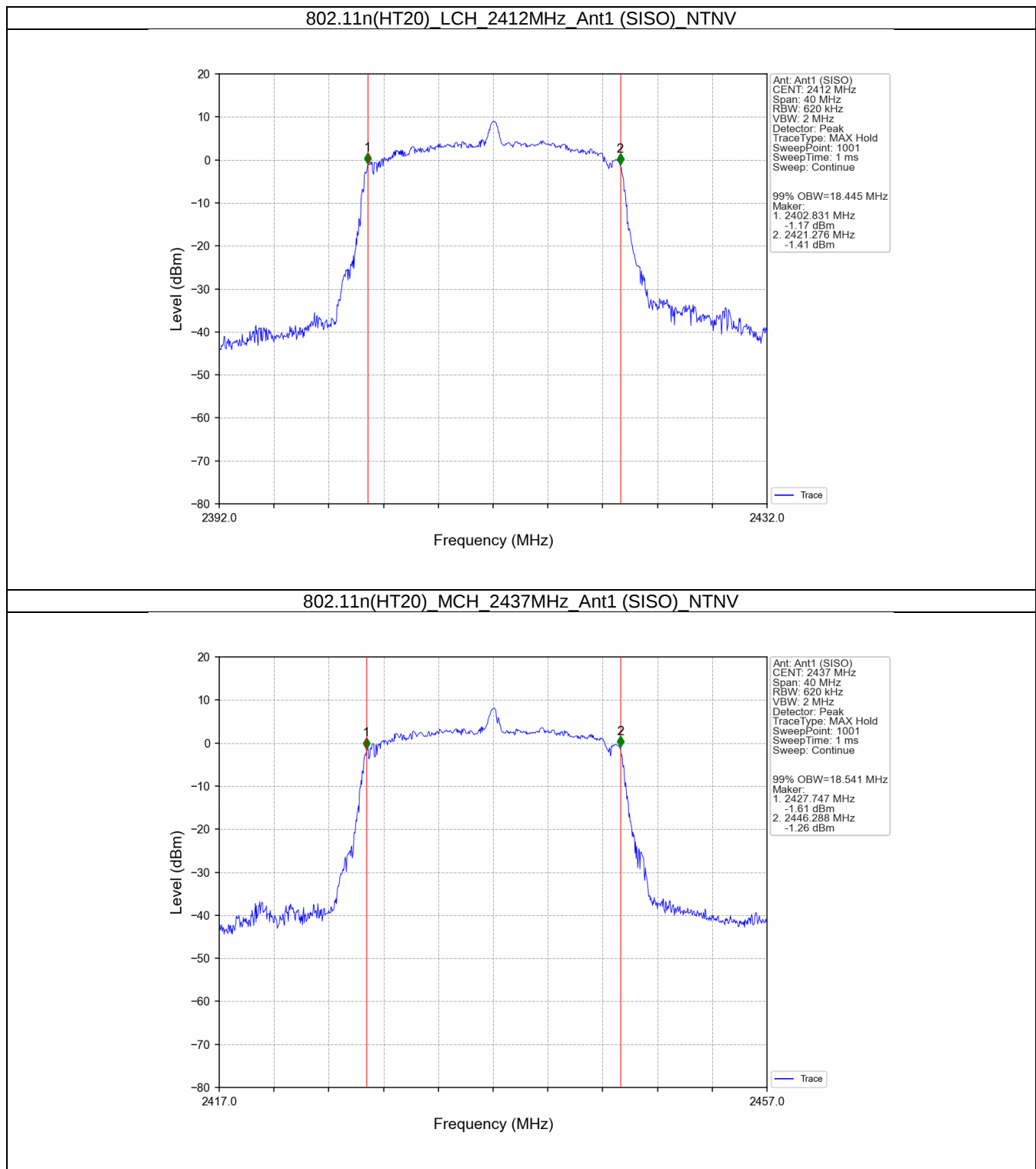
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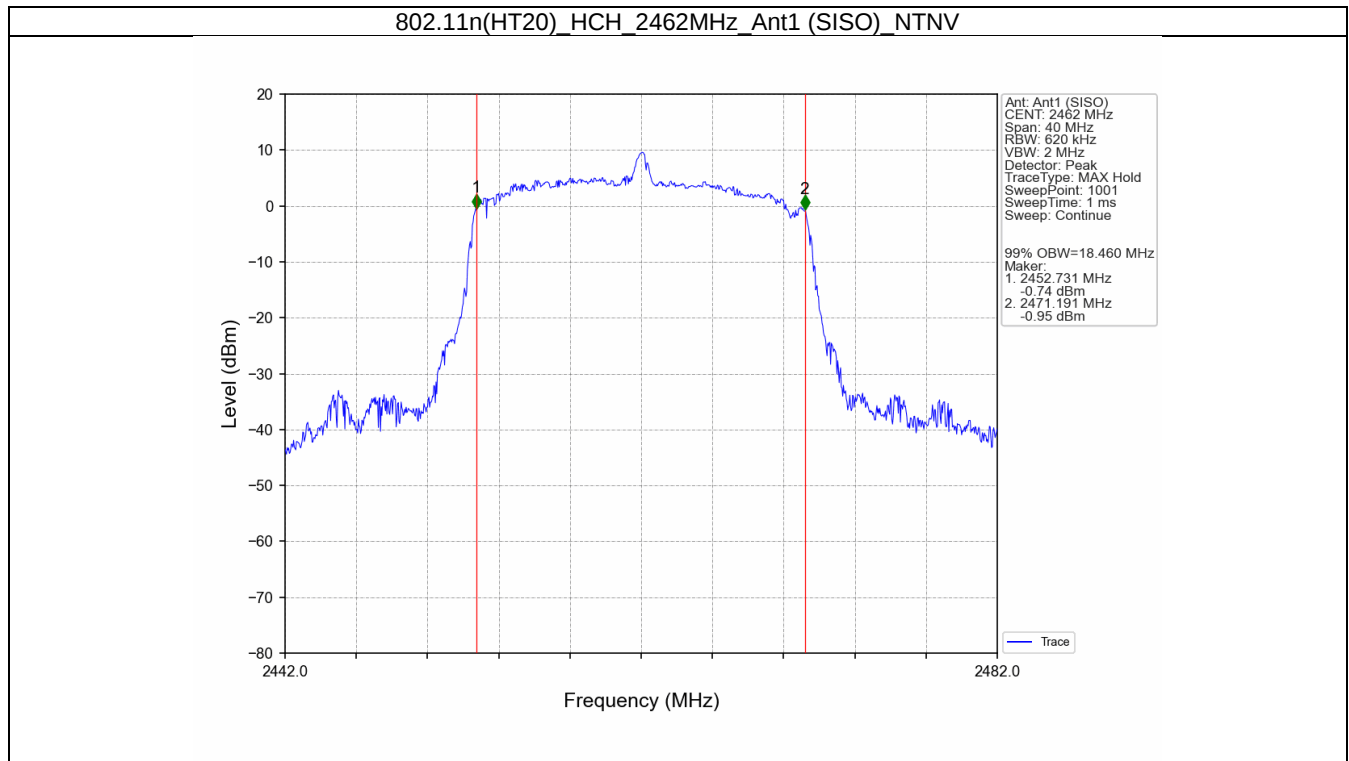
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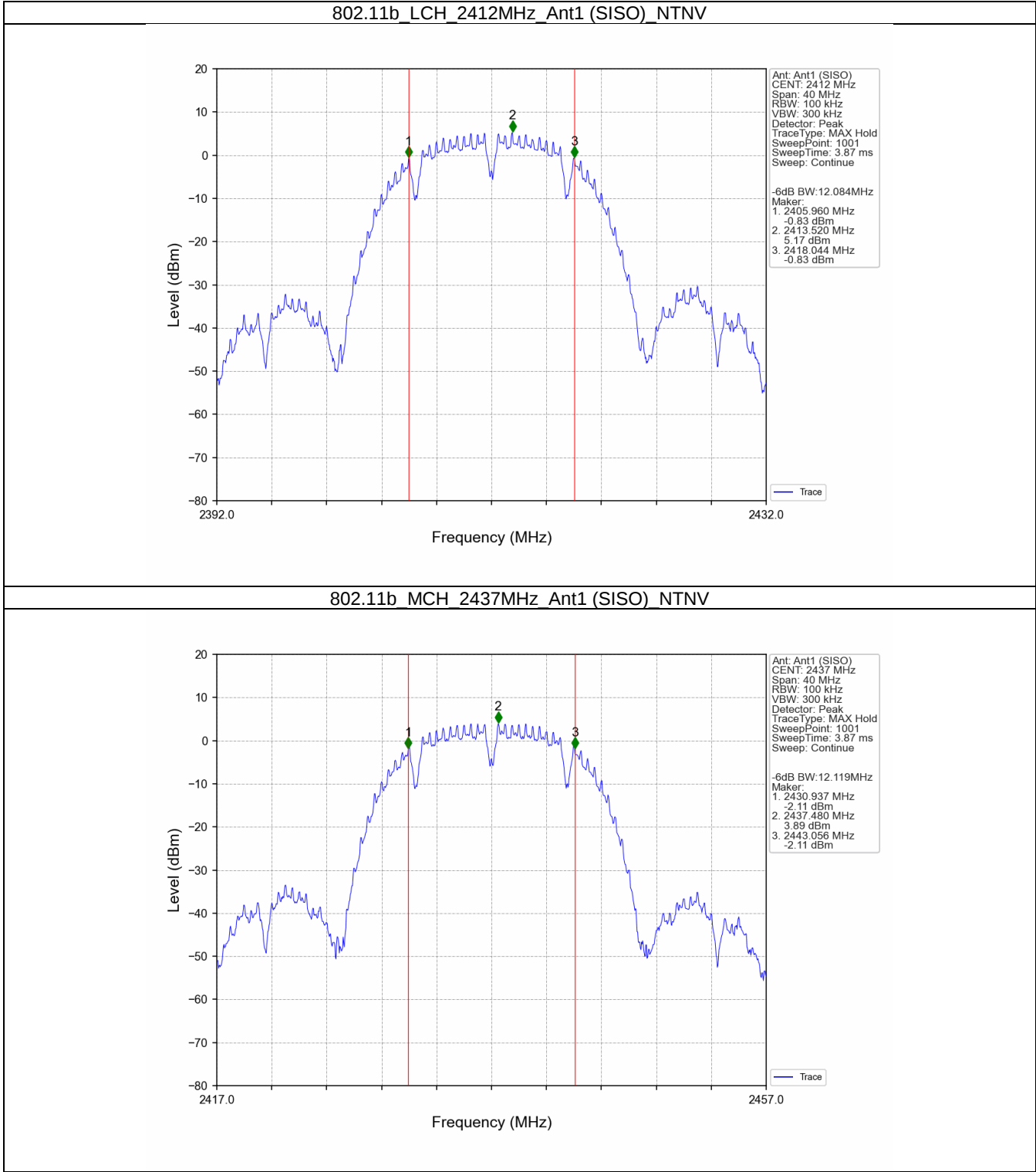


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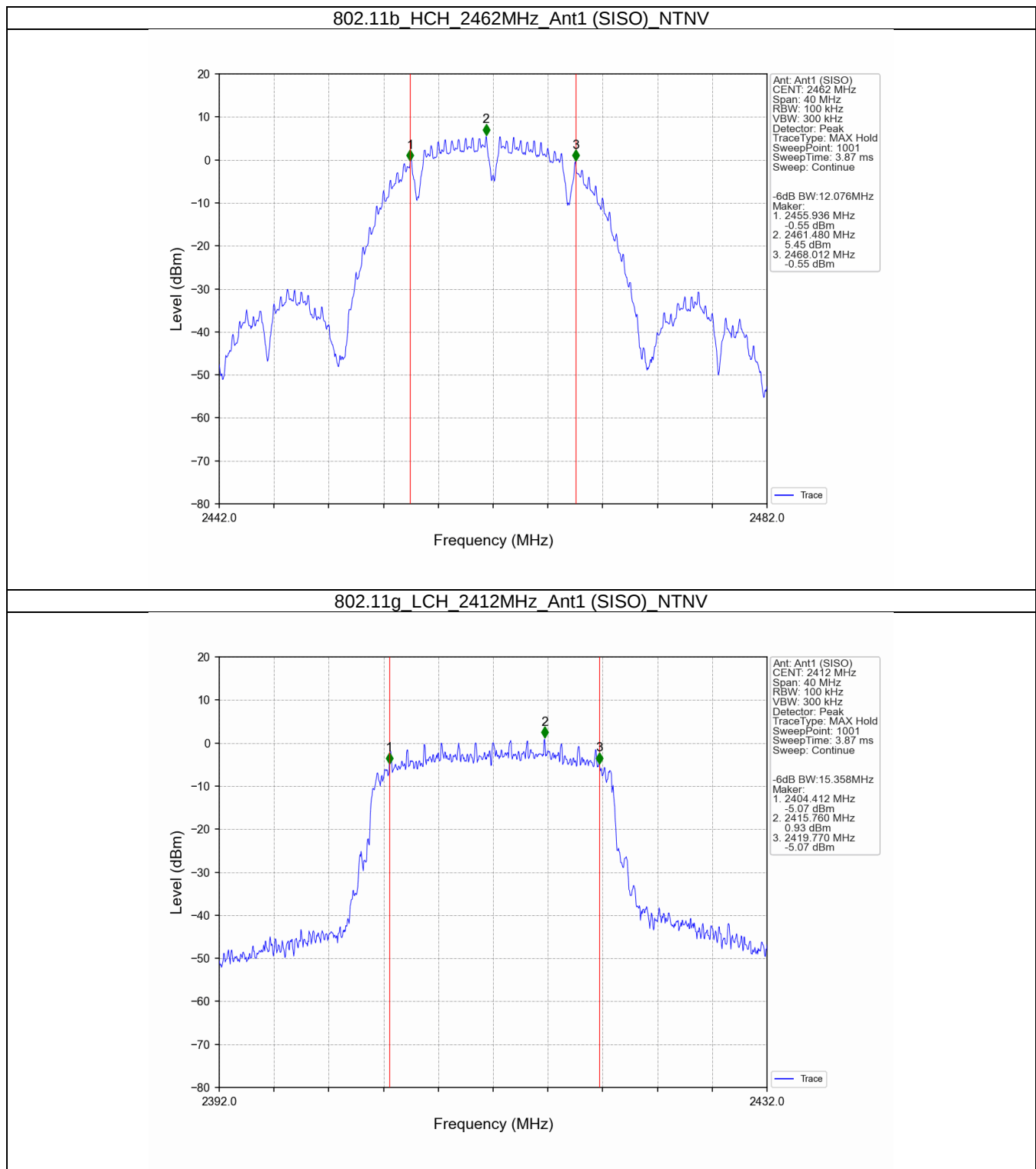


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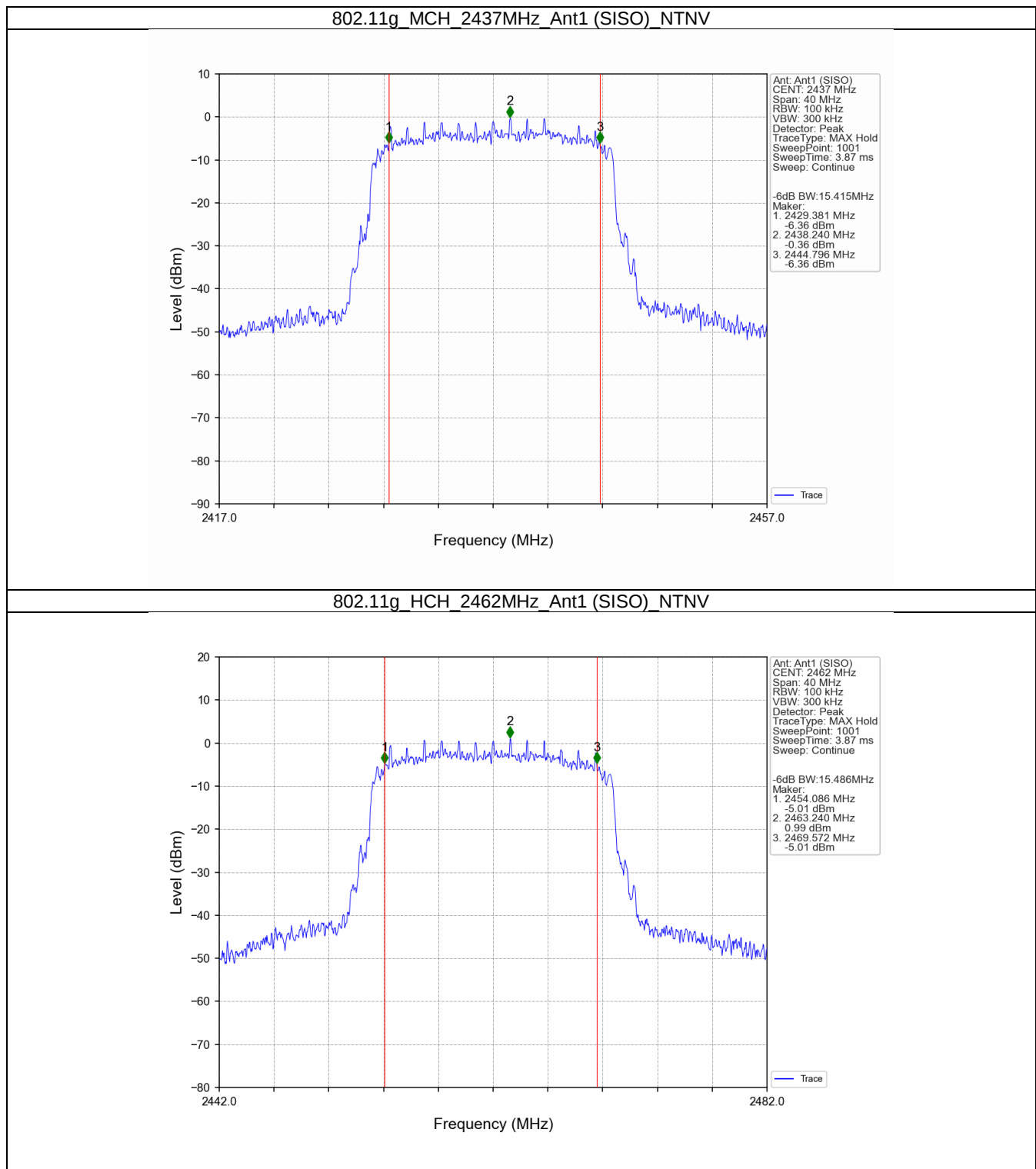
2.2.2 6dB BW



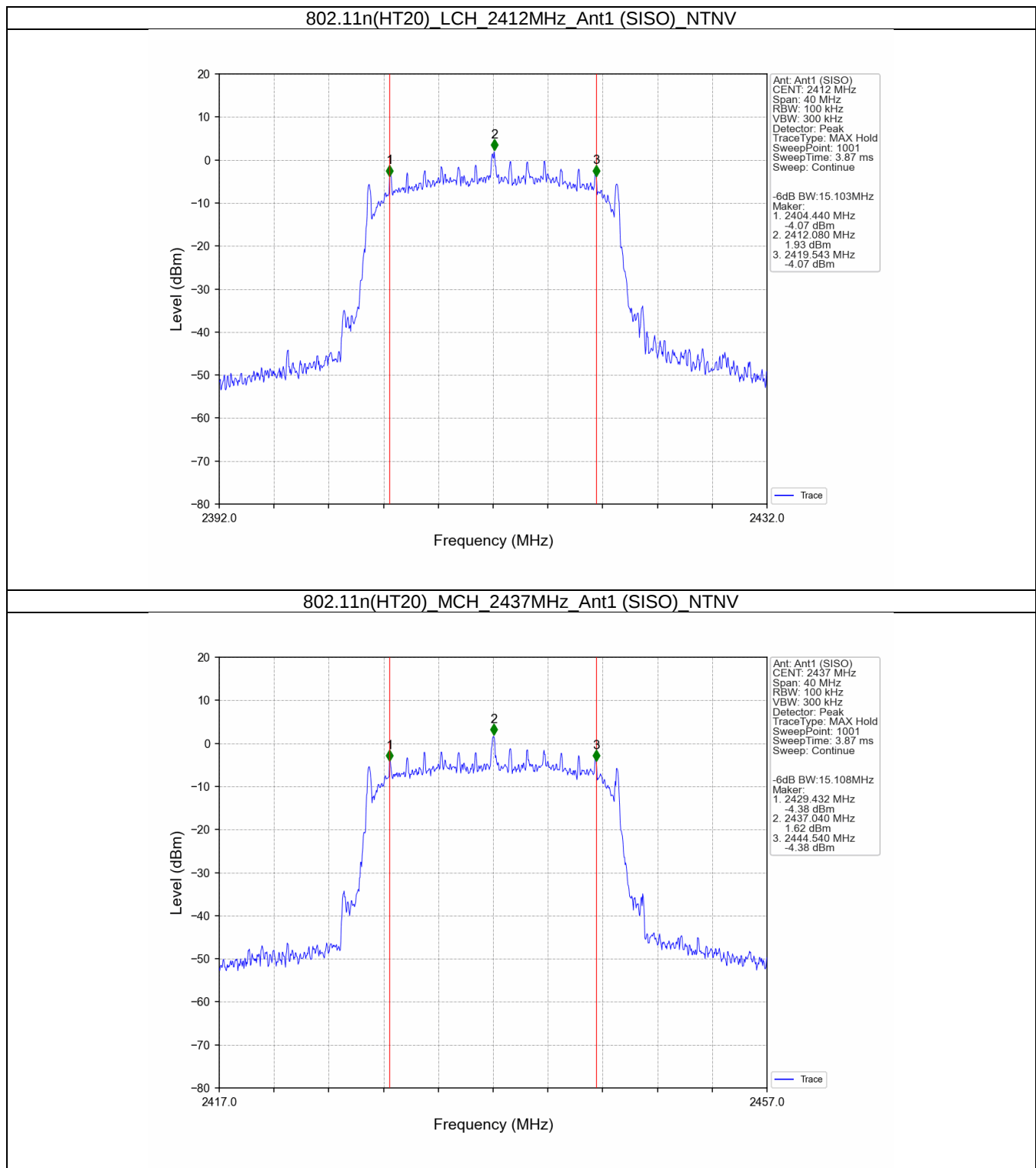
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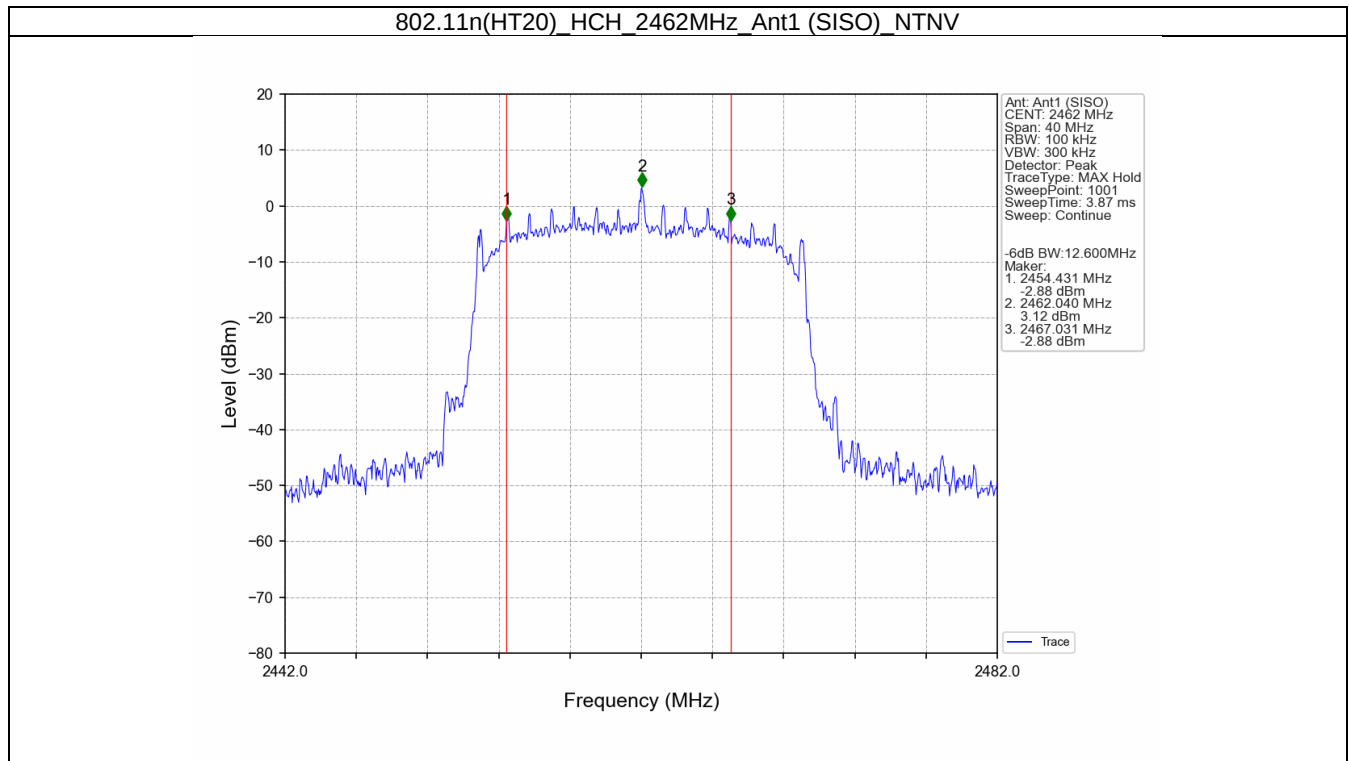
FCC ID: 2BPUW-SOY-U



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FCC ID: 2BPUW-SOY-U



FCC ID: 2BPUW-SOY-U

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	
802.11b	SISO	2412	17.92	<=30	Pass
		2437	16.91	<=30	Pass
		2462	18.20	<=30	Pass
802.11g	SISO	2412	19.22	<=30	Pass
		2437	18.12	<=30	Pass
		2462	19.37	<=30	Pass
802.11n (HT20)	SISO	2412	17.93	<=30	Pass
		2437	17.18	<=30	Pass
		2462	17.95	<=30	Pass
Note1: Antenna Gain: Ant1: -1.30dBi;					

FCC ID: 2BPUW-SOY-U

4. Maximum Power Spectral Density

4.1 Test Result

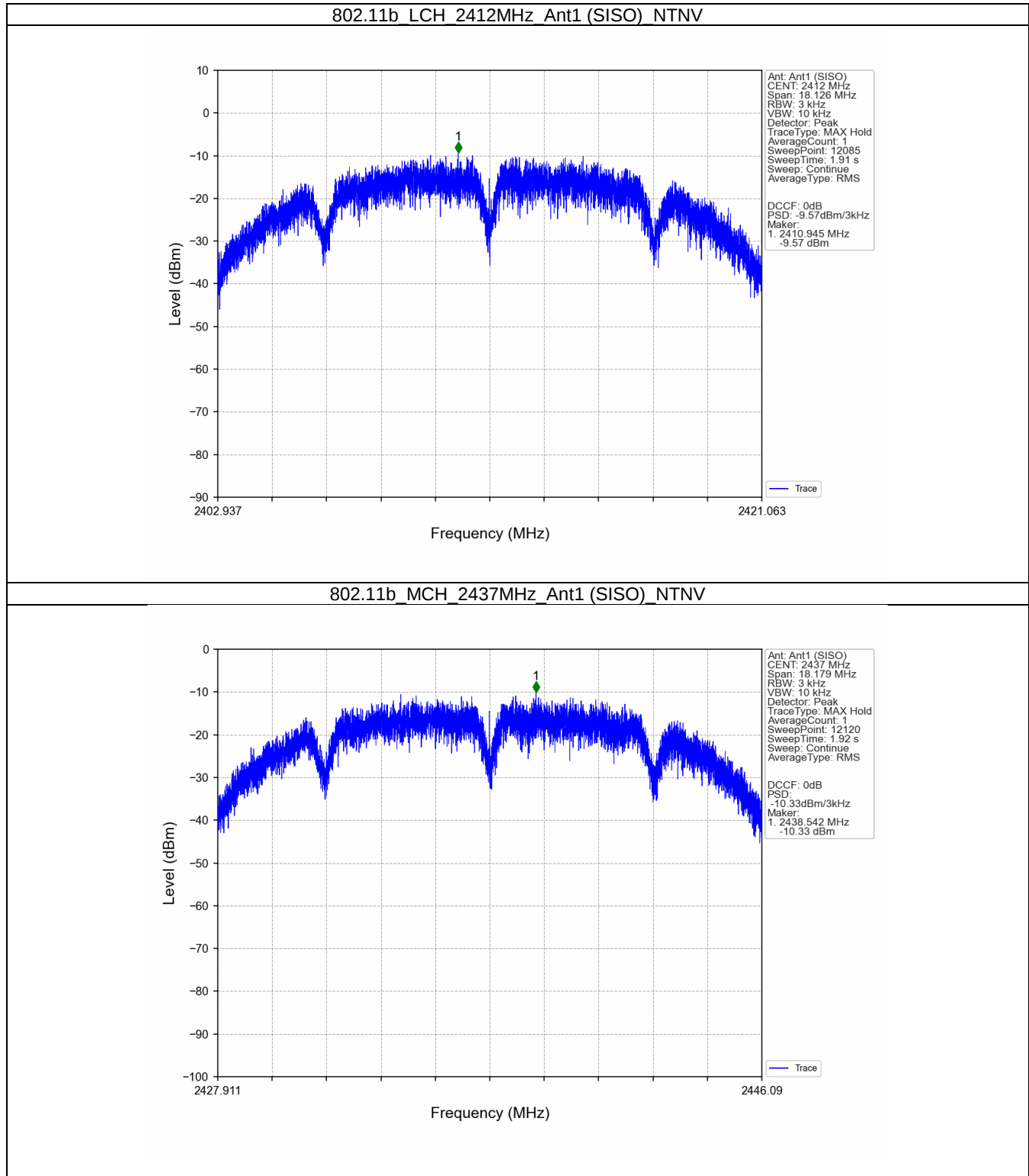
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-9.57	<=8	Pass
		2437	-10.33	<=8	Pass
		2462	-9.18	<=8	Pass
802.11g	SISO	2412	-13.62	<=8	Pass
		2437	-14.59	<=8	Pass
		2462	-12.85	<=8	Pass
802.11n (HT20)	SISO	2412	-13.74	<=8	Pass
		2437	-14.75	<=8	Pass
		2462	-14.41	<=8	Pass
Note1: Antenna Gain: Ant1: -1.30dBi;					

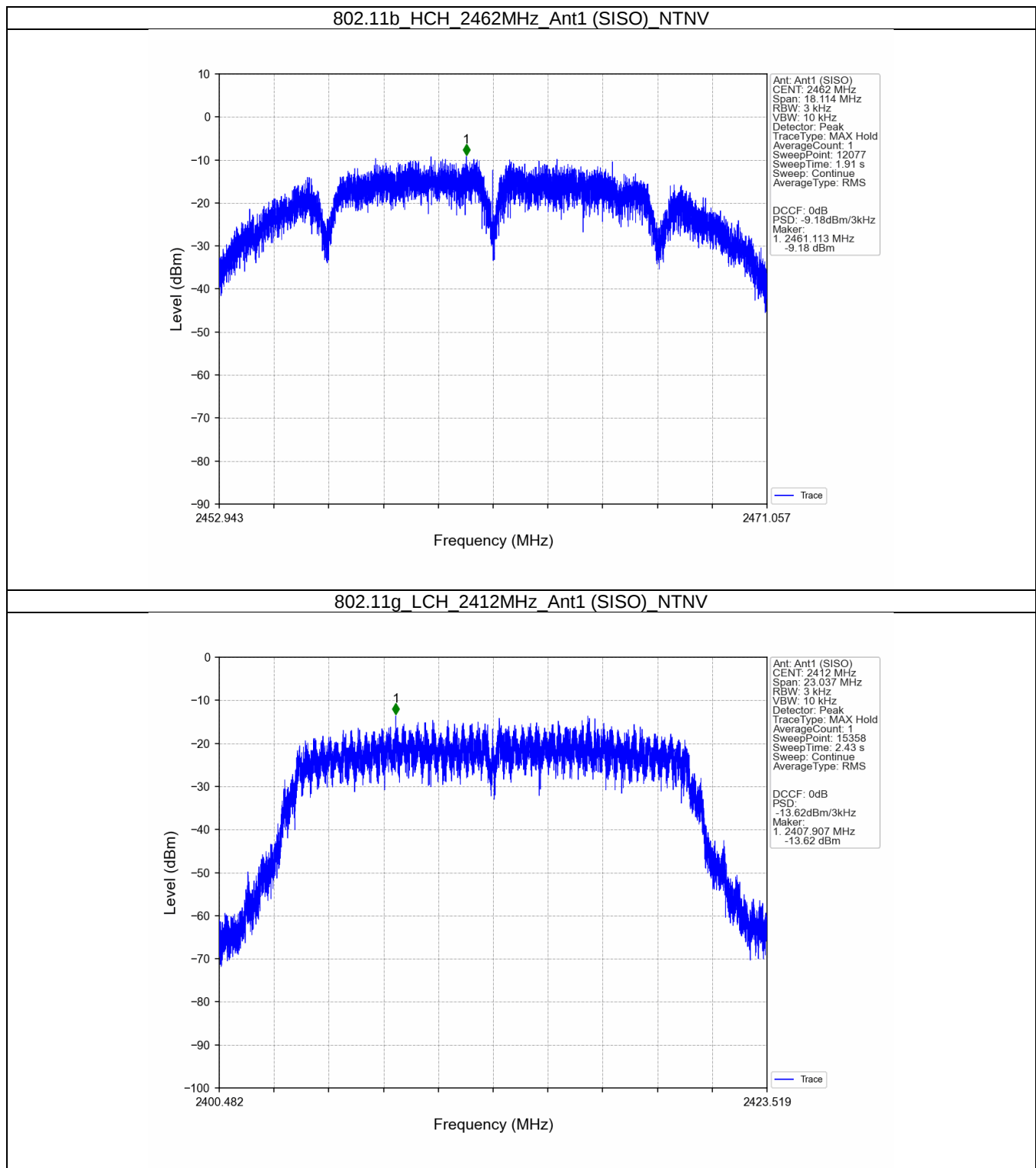
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4.2 Test Graph

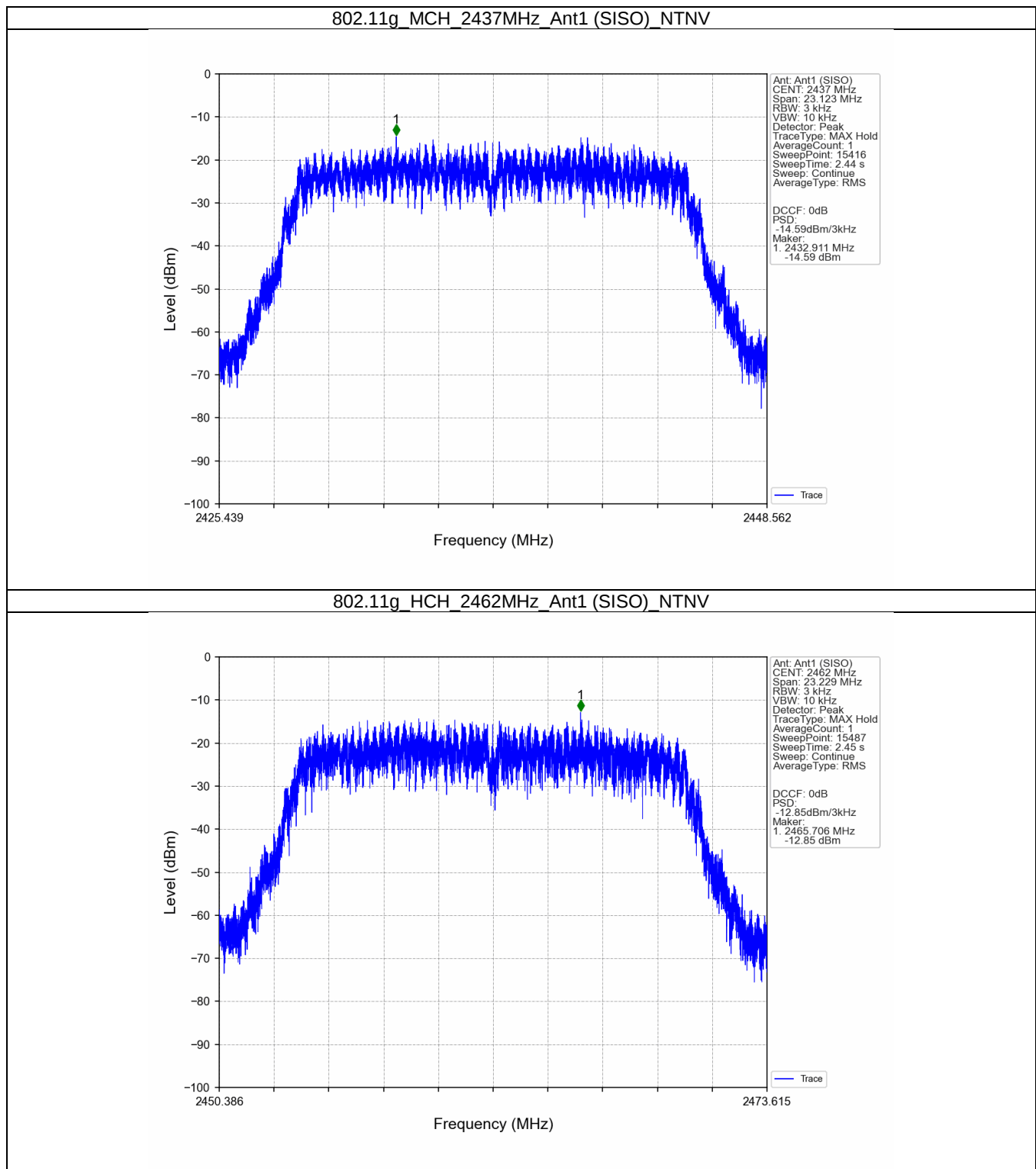
4.2.1 PSD



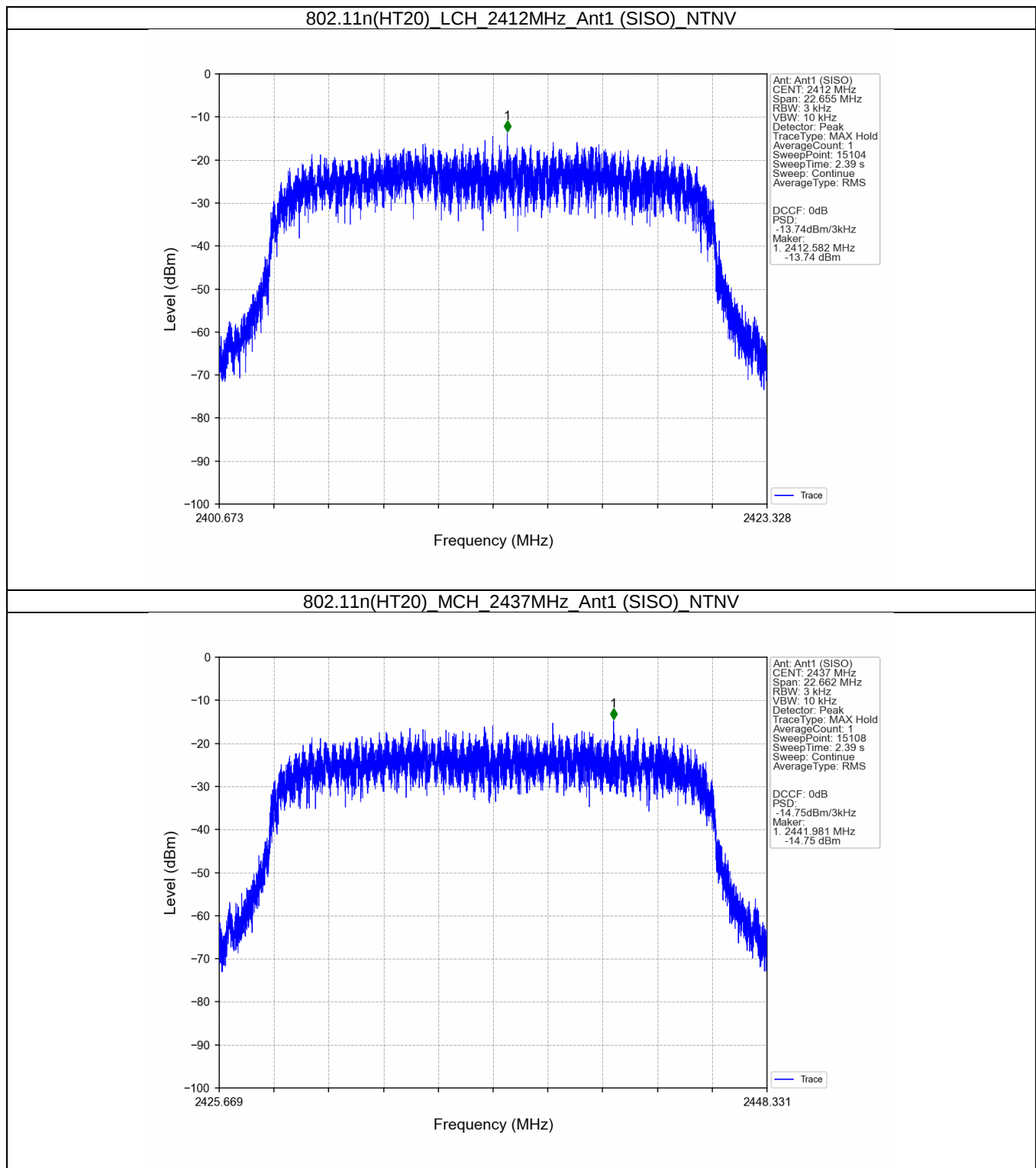
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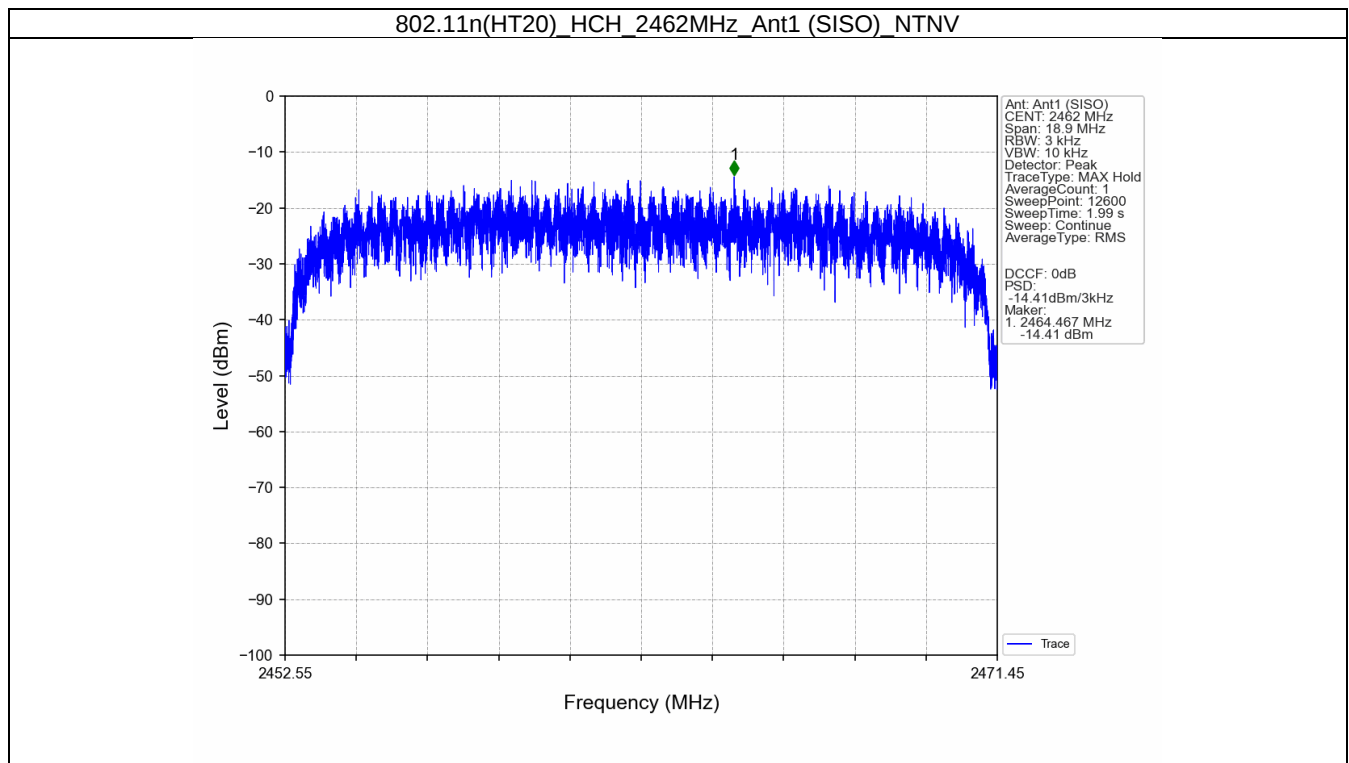
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FCC ID: 2BPUW-SOY-U



FCC ID: 2BPUW-SOY-U

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)
802.11b	SISO	2412	1	5.08
		2437	1	3.99
		2462	1	5.44
802.11g	SISO	2412	1	0.91
		2437	1	-0.46
		2462	1	0.91
802.11n (HT20)	SISO	2412	1	2.46
		2437	1	1.49
		2462	1	3.04

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

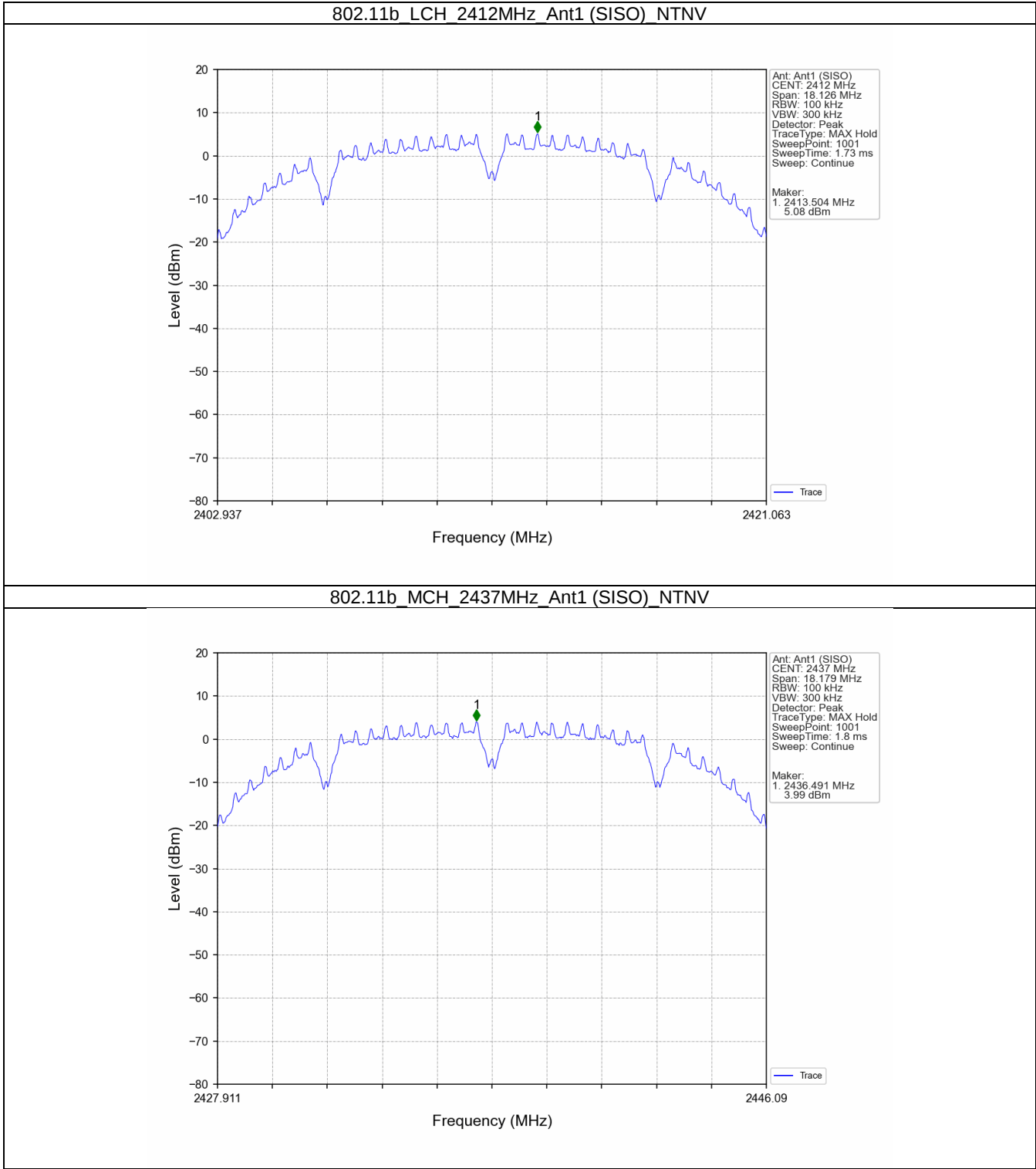
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	5.44	-14.56	Pass
		2437	1	5.44	-14.56	Pass
		2462	1	5.44	-14.56	Pass
802.11g	SISO	2412	1	0.91	-19.09	Pass
		2437	1	0.91	-19.09	Pass
		2462	1	0.91	-19.09	Pass
802.11n (HT20)	SISO	2412	1	3.04	-16.96	Pass
		2437	1	3.04	-16.96	Pass
		2462	1	3.04	-16.96	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.

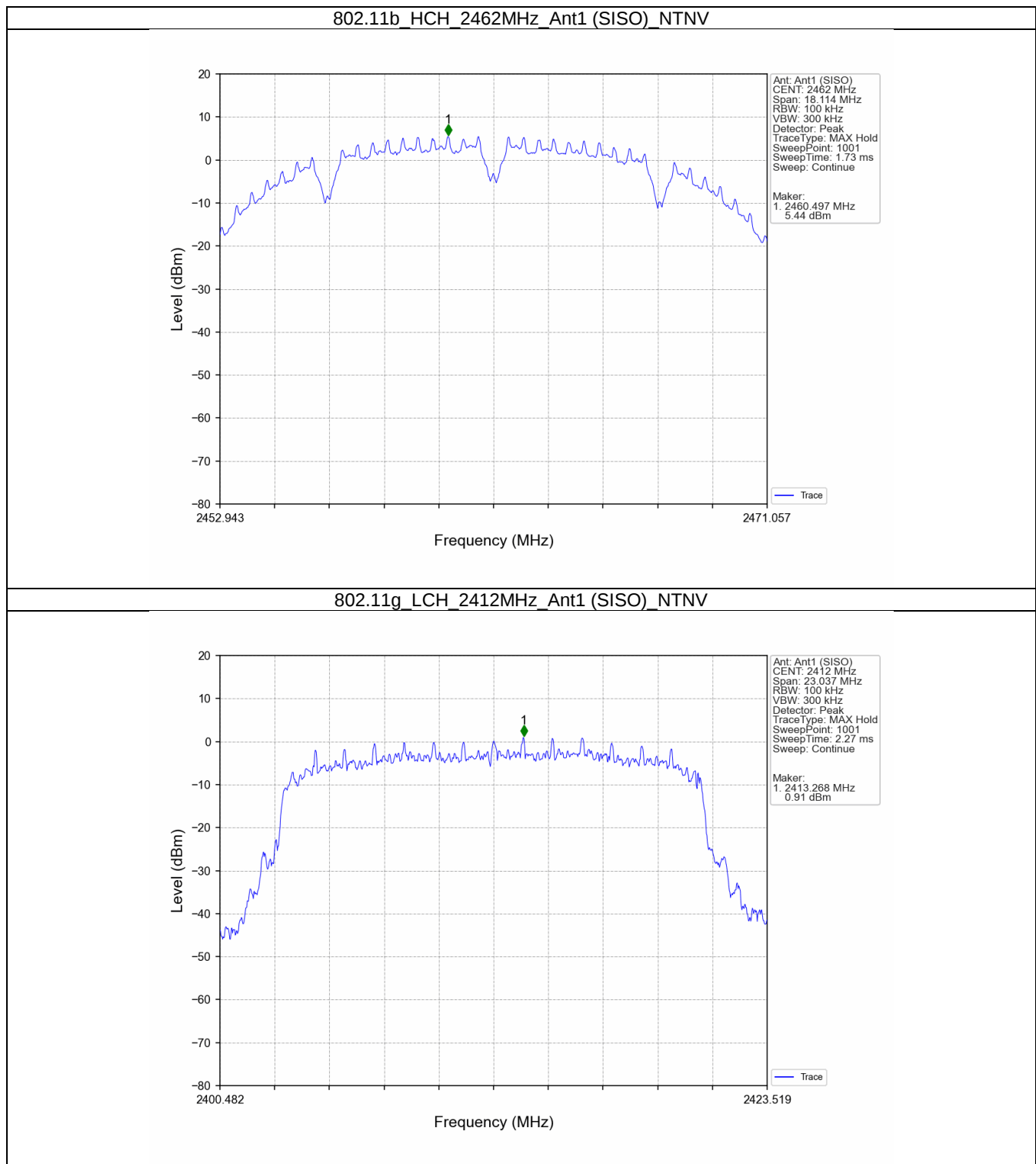
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5.2 Test Graph

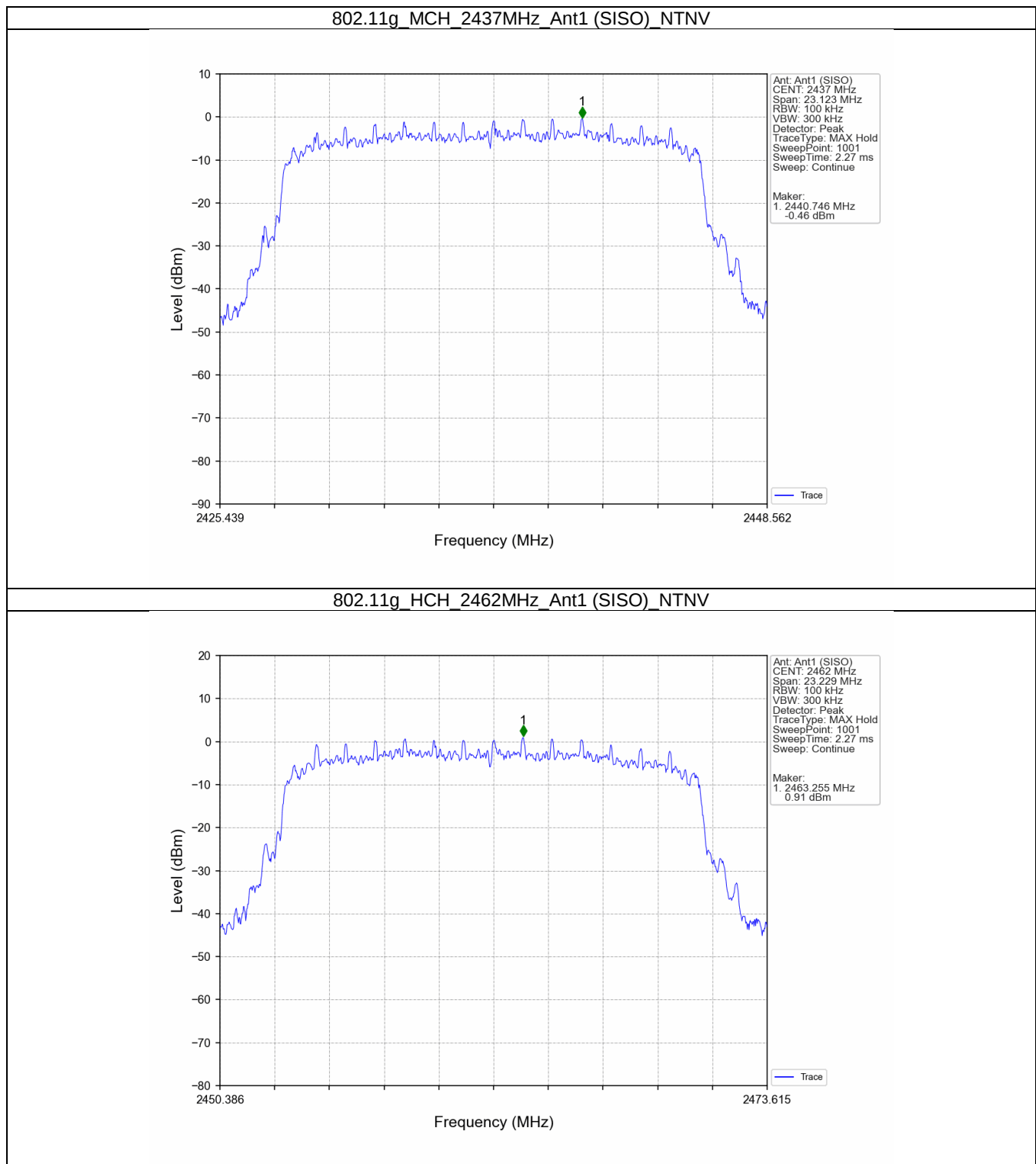
5.2.1 Ref



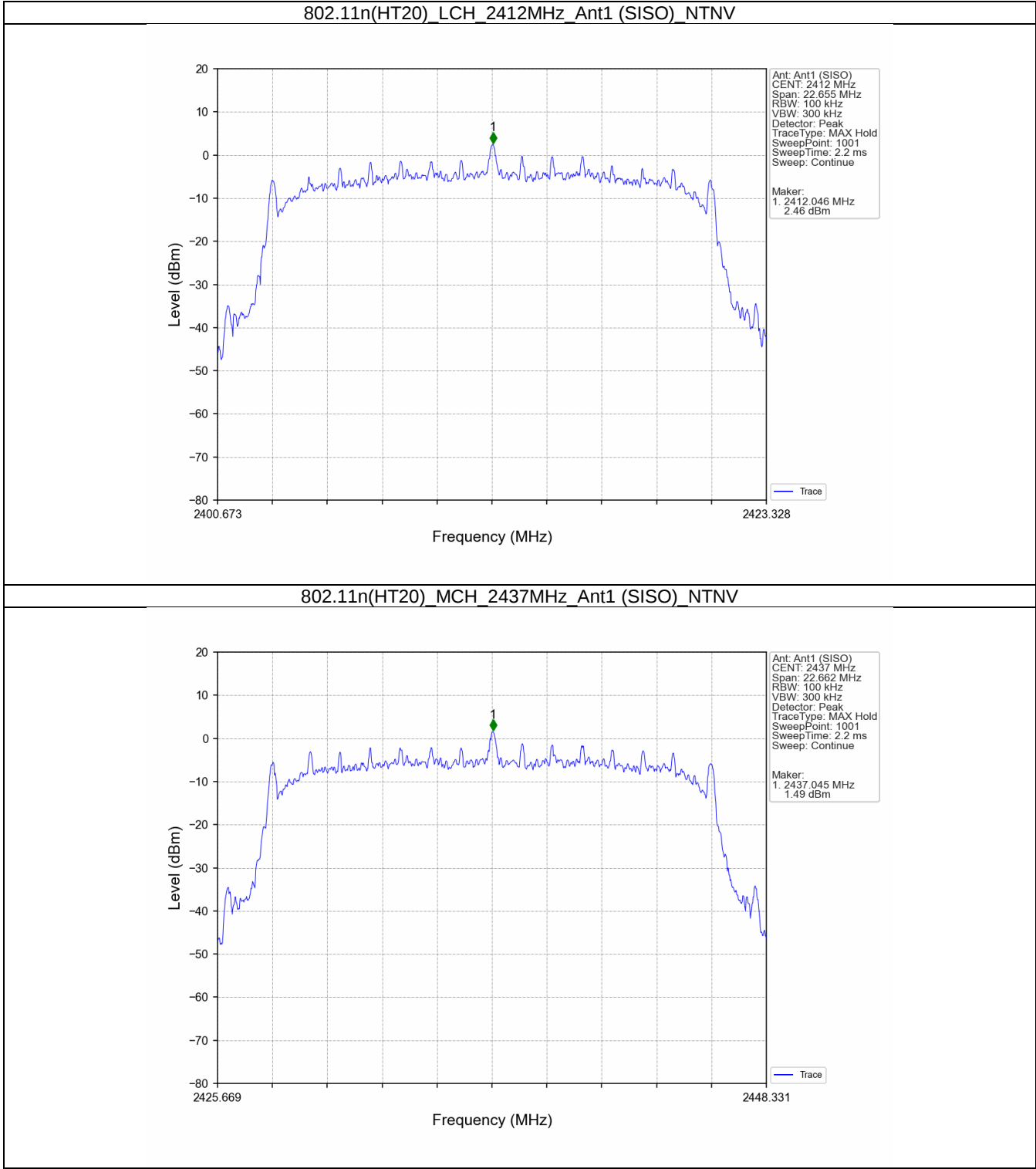
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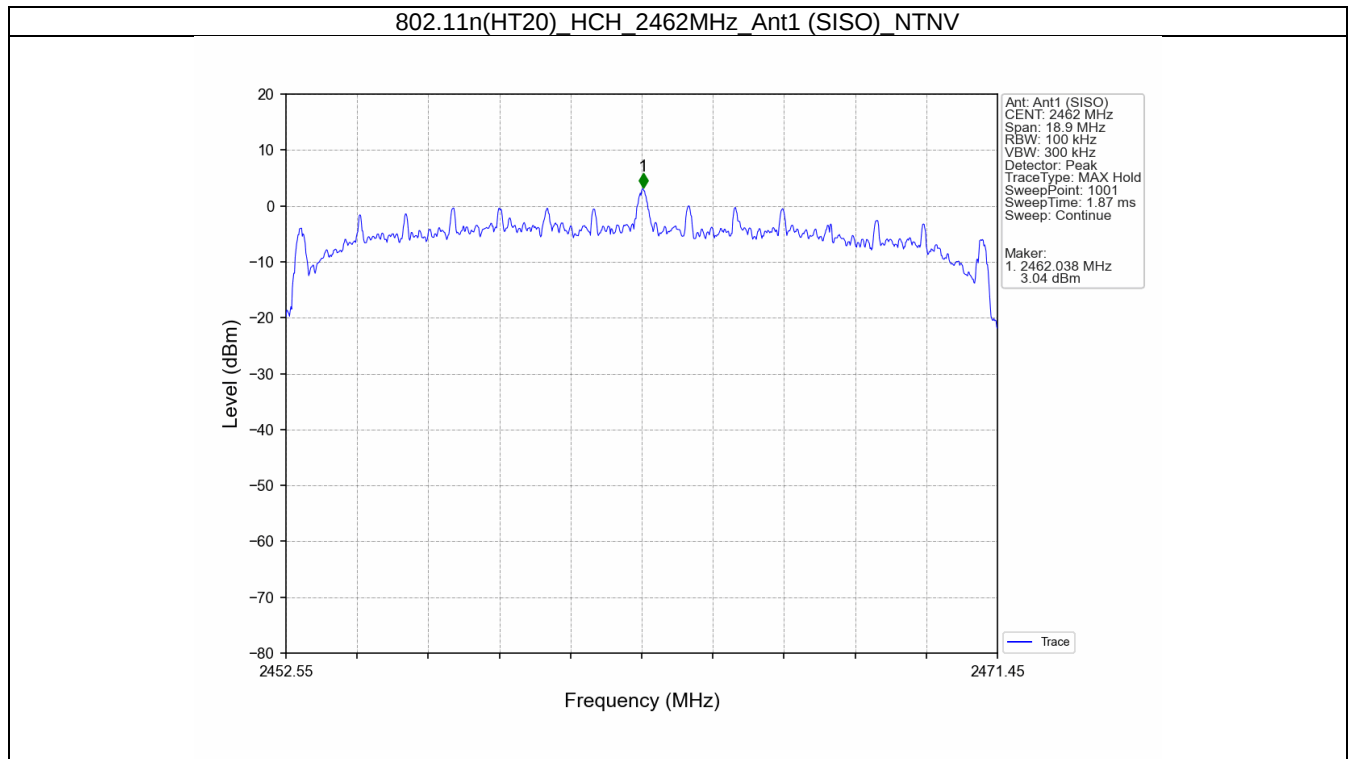
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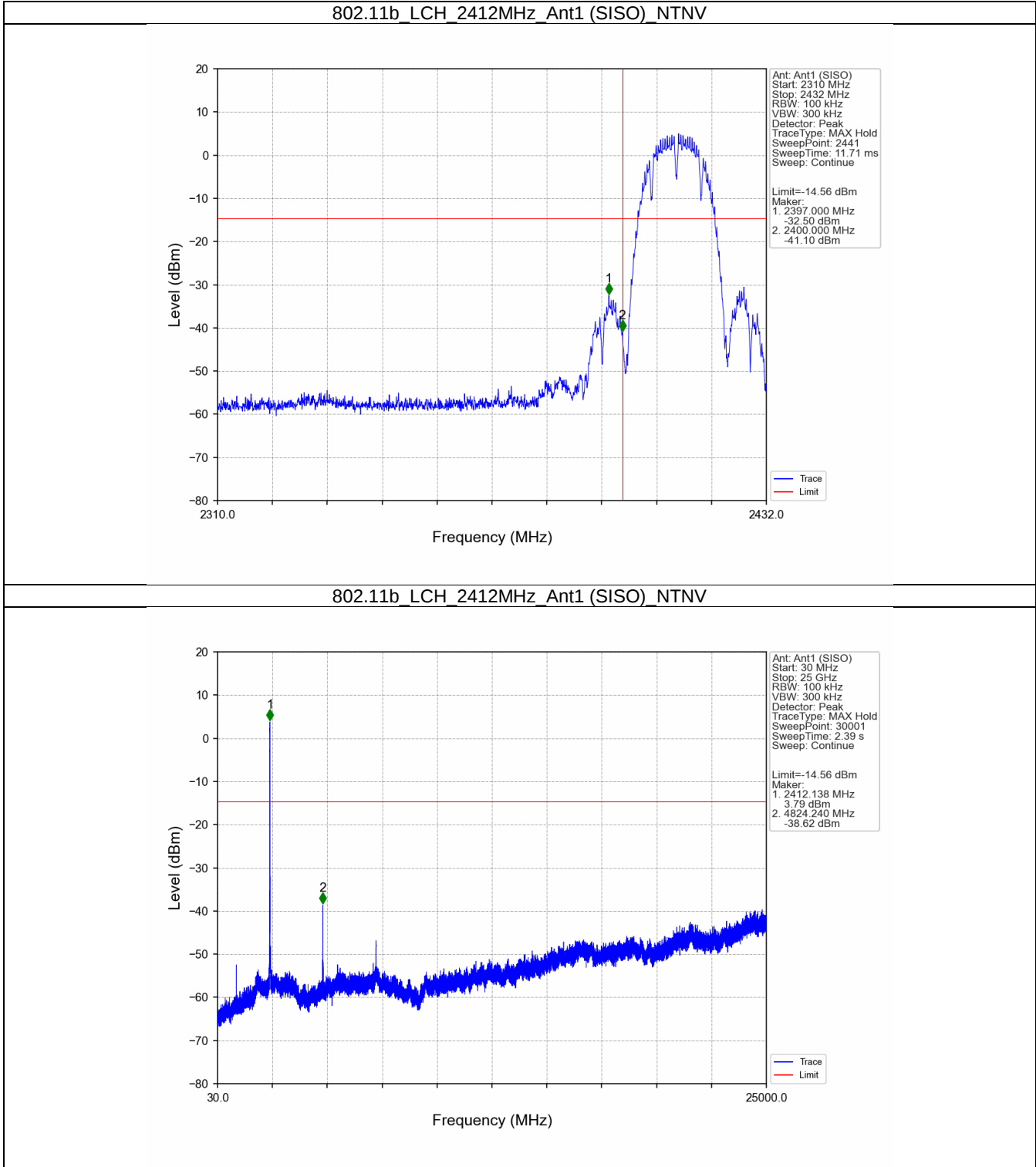


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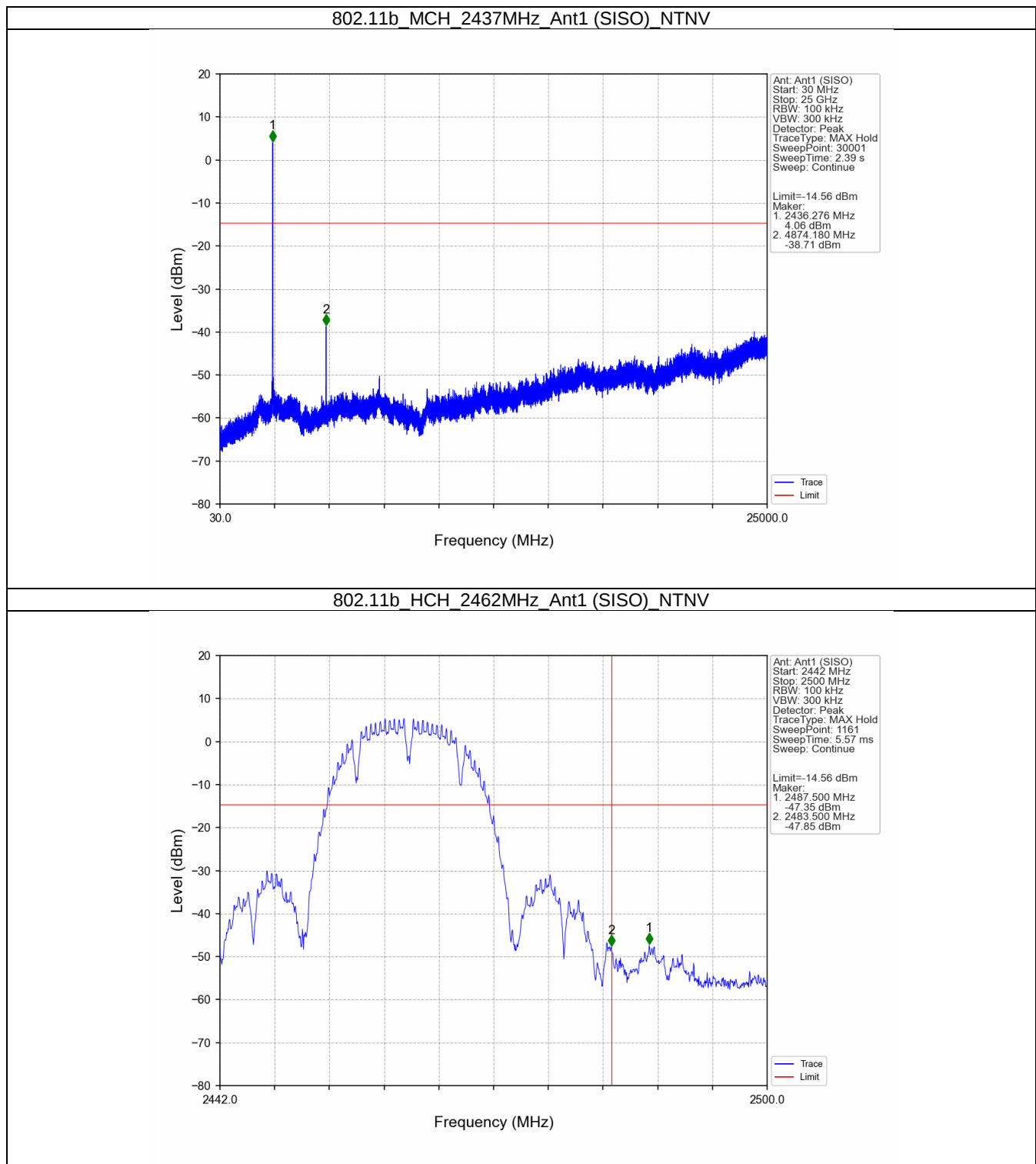


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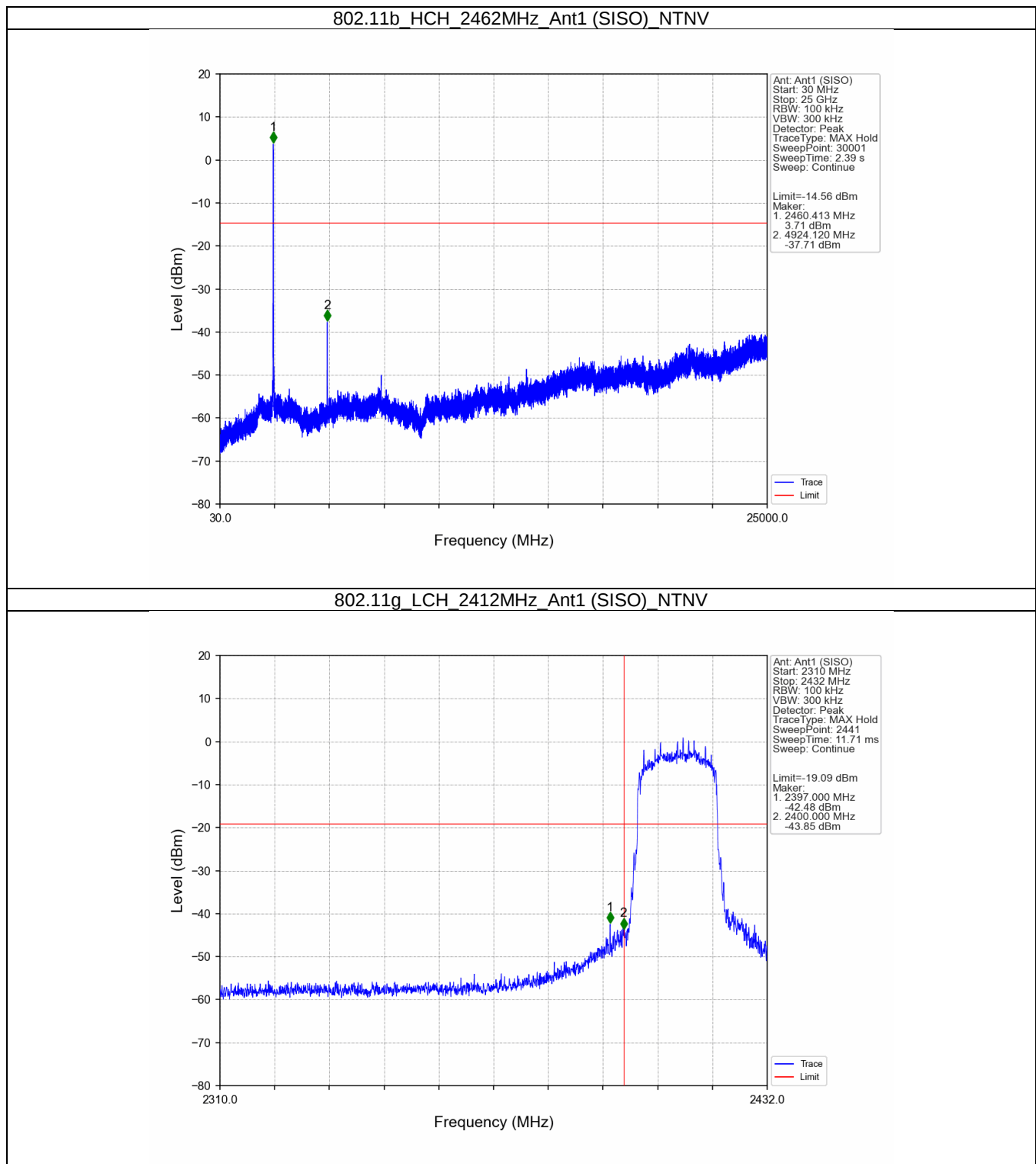
5.2.2 CSE



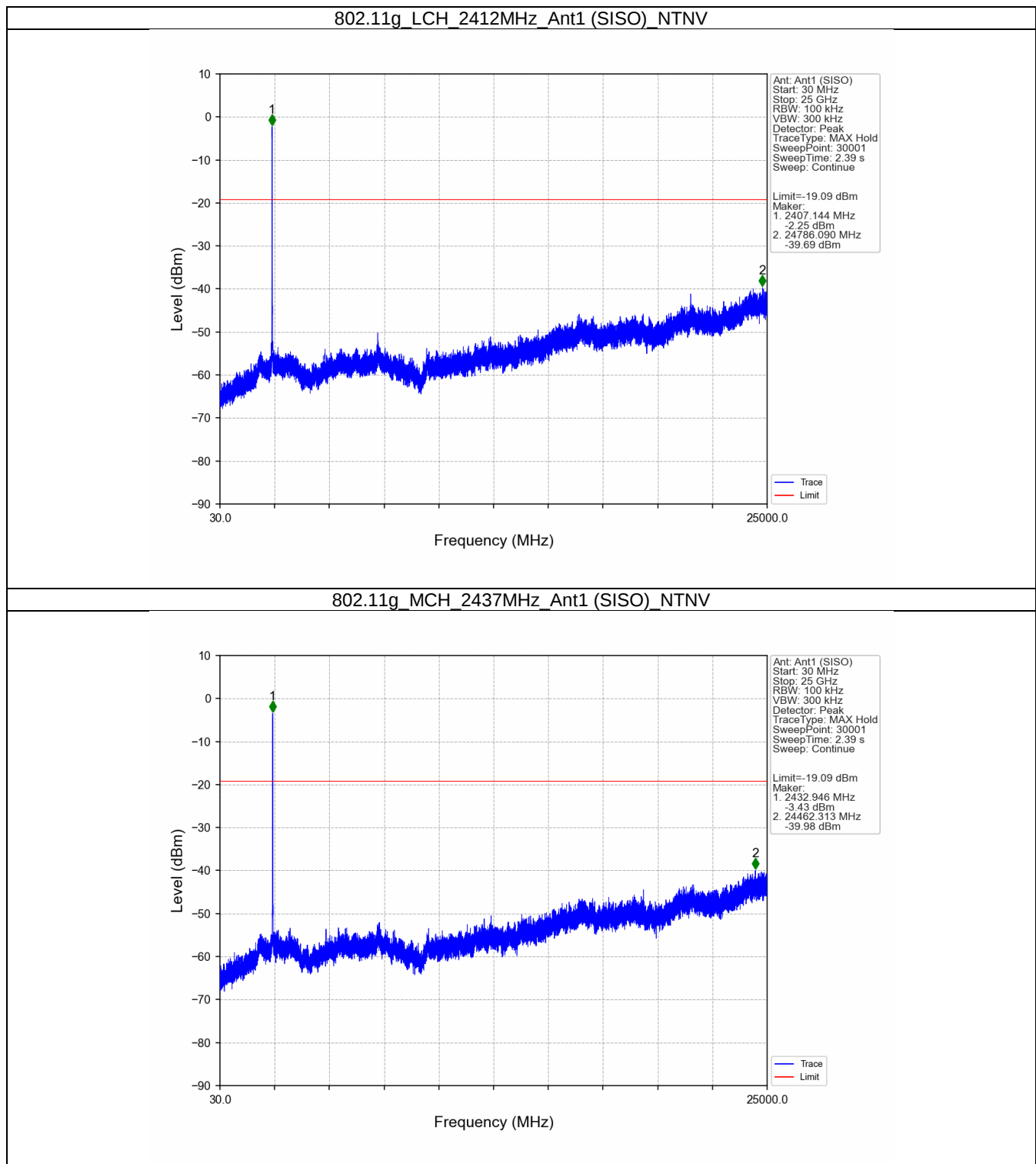
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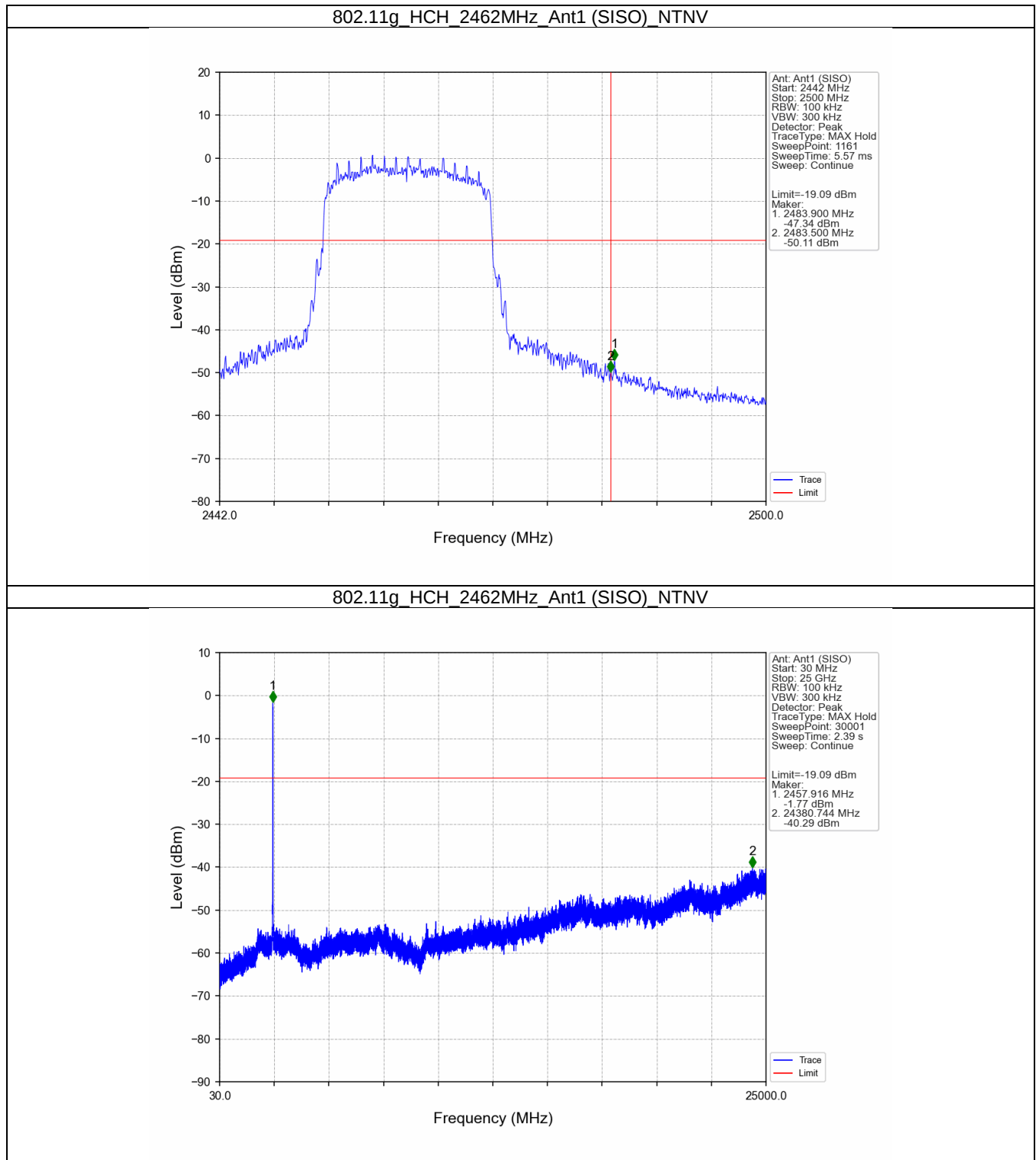
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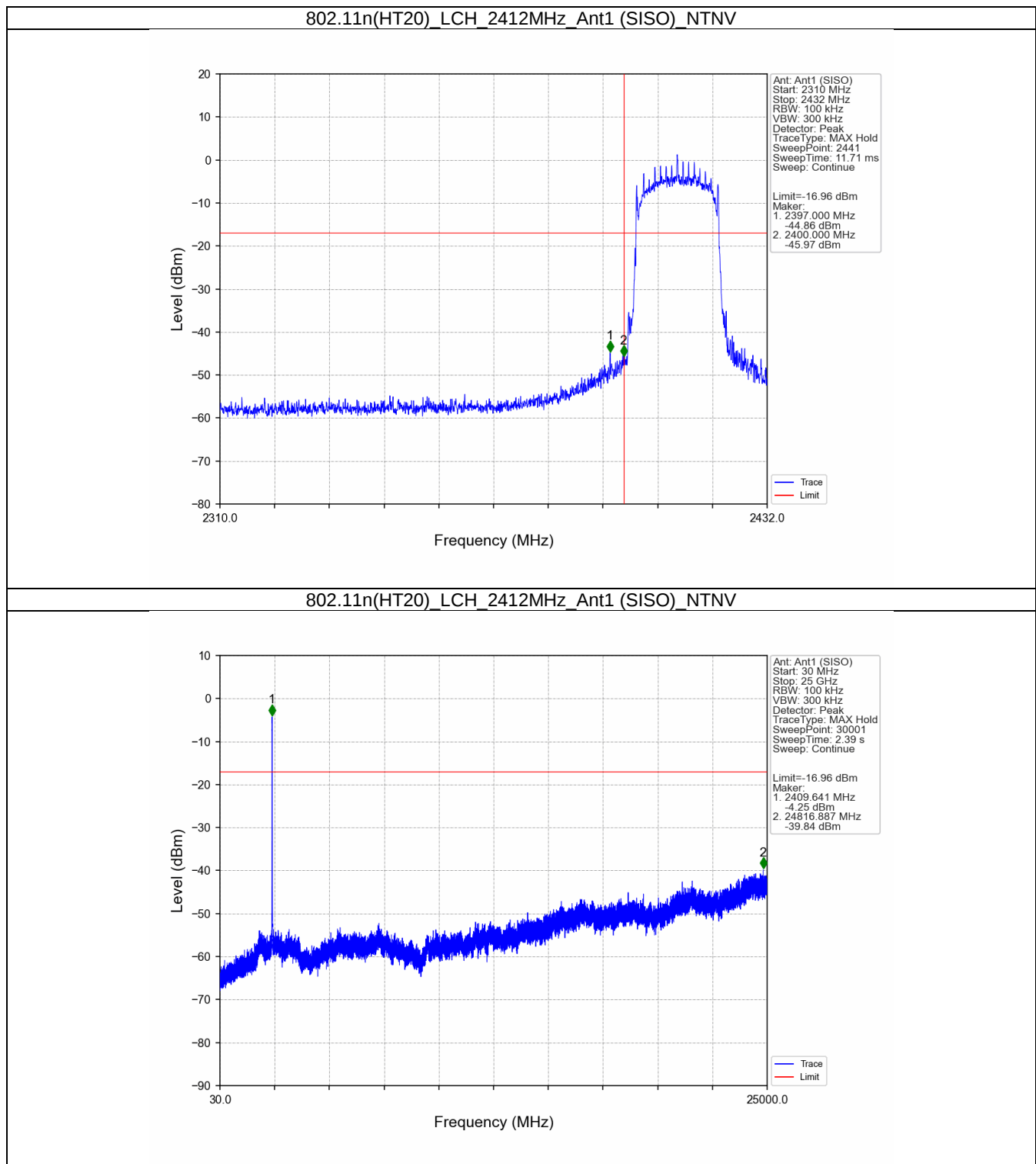
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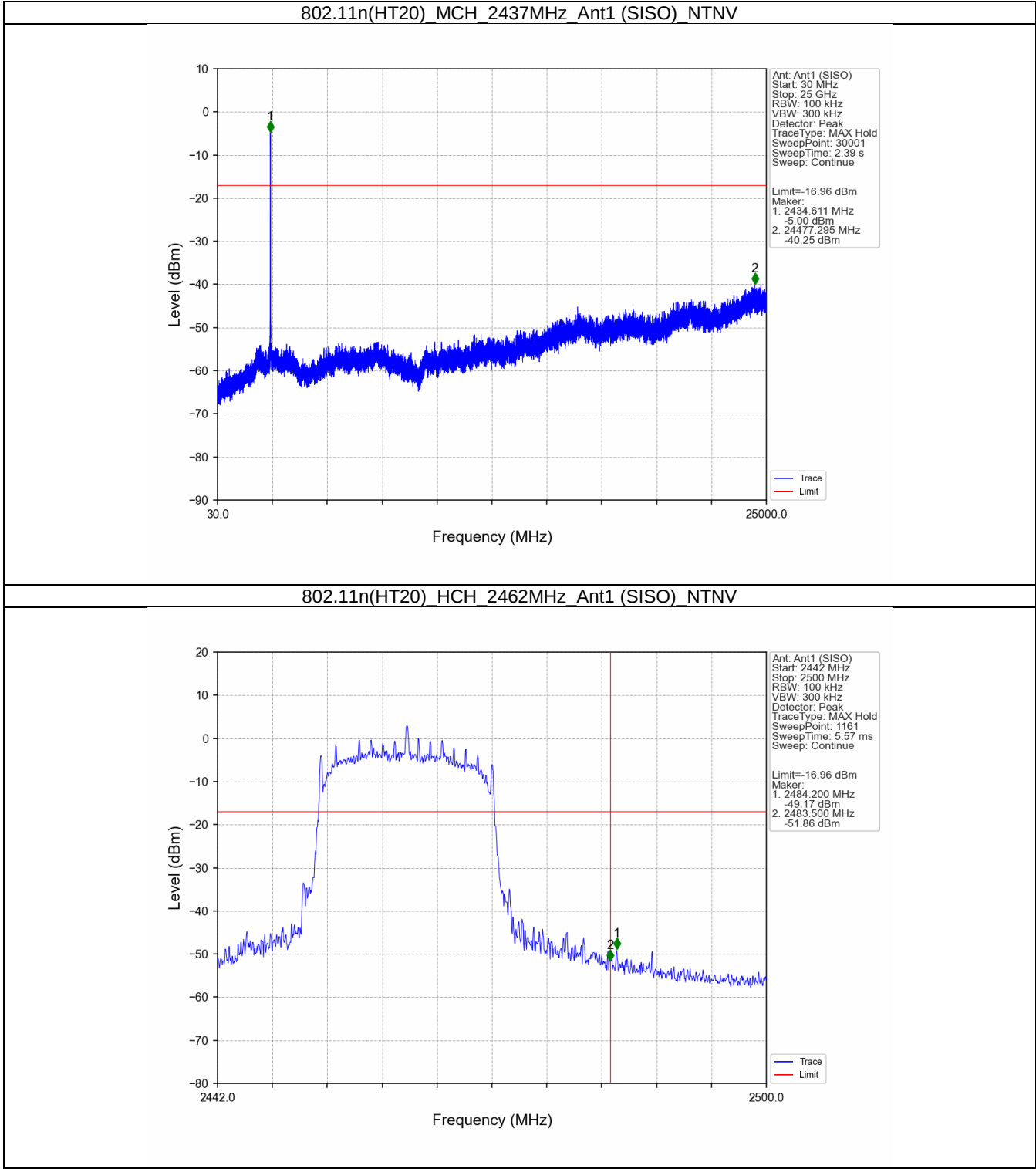
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FCC ID: 2BPUW-SOY-U



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