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Annex for 2.4G Wi-Fi

Test Report No.: CTL2607238021-WF02

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FCC ID: 2BXU2E130

1. Duty Cycle

1.1 Test Result

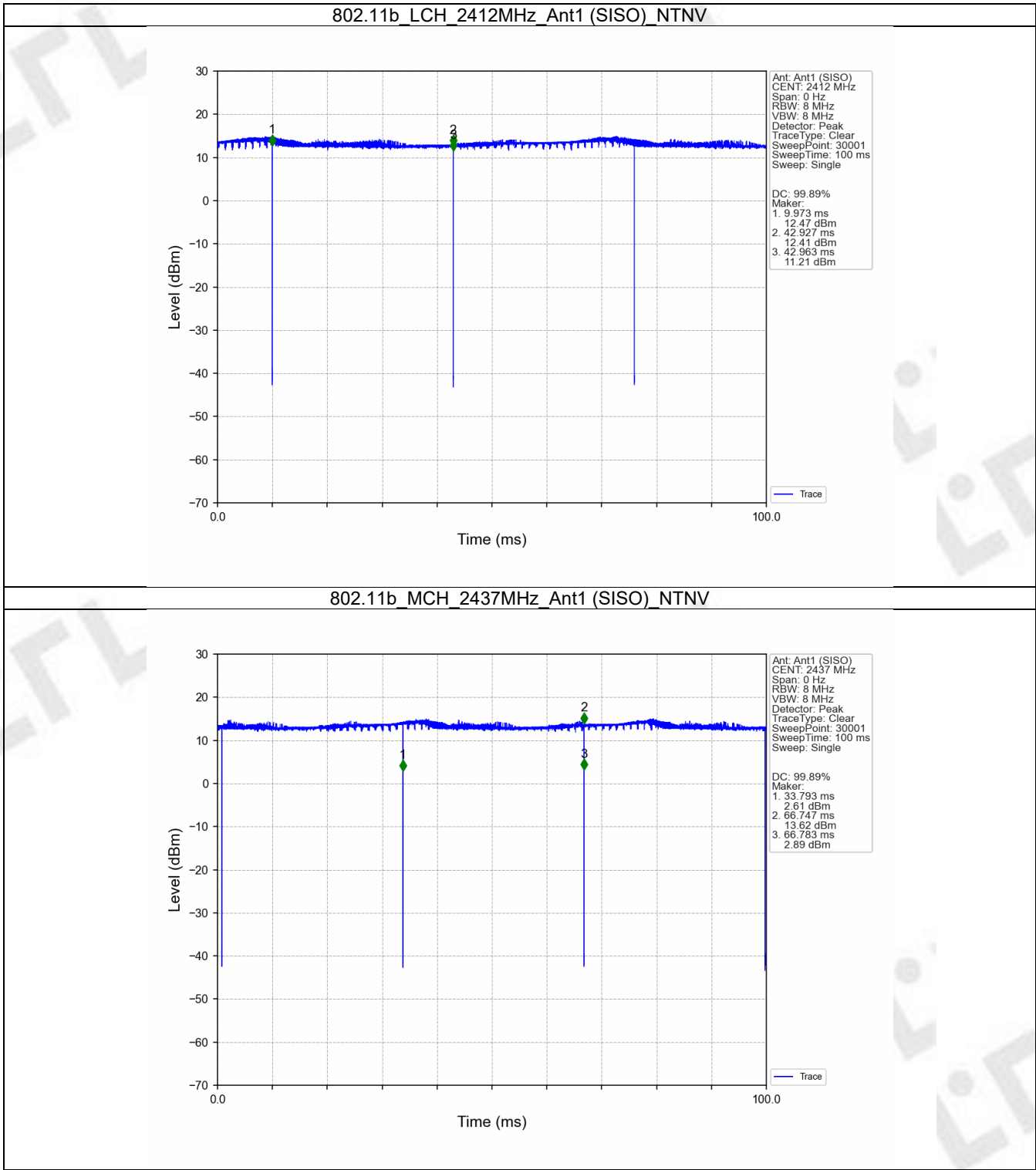
1.1.1 Ant1

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	32.954	32.990	99.89	0.00	0.02
		2437	32.954	32.990	99.89	0.00	0.03
		2462	32.953	32.990	99.89	0.00	0.03
802.11g	SISO	2412	5.482	5.519	99.33	0.03	0.04
		2437	5.484	5.518	99.38	0.03	0.00
		2462	5.484	5.518	99.38	0.03	0.00
802.11n (HT20)	SISO	2412	5.079	5.115	99.30	0.03	0.15
		2437	5.080	5.115	99.32	0.03	0.04
		2462	5.079	5.114	99.32	0.03	0.00
802.11n (HT40)	SISO	2422	2.469	2.503	98.64	0.06	0.00
		2437	2.469	2.504	98.60	0.06	0.03
		2452	2.469	2.503	98.64	0.06	0.03

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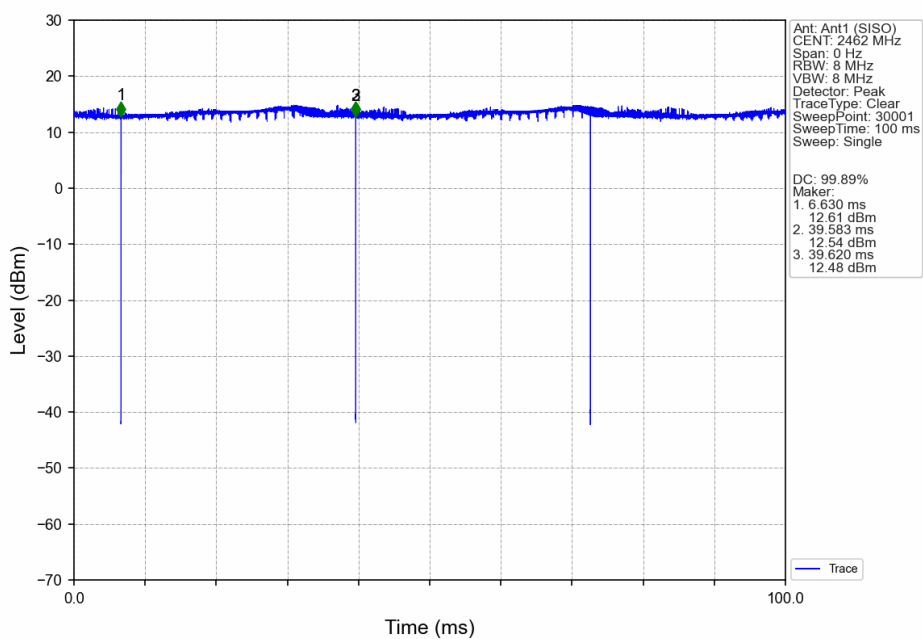
1.2 Test Graph

1.2.1 Ant1

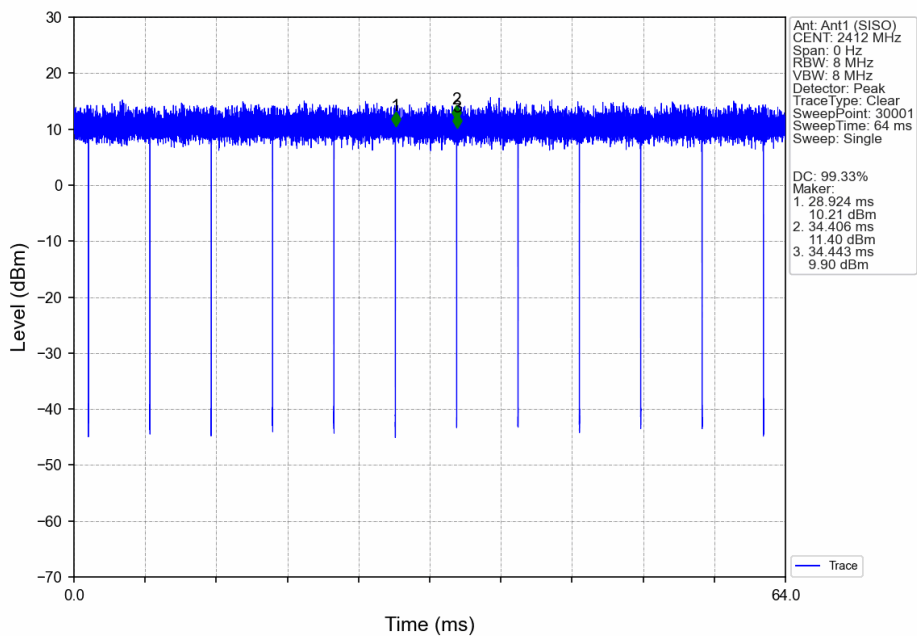


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802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

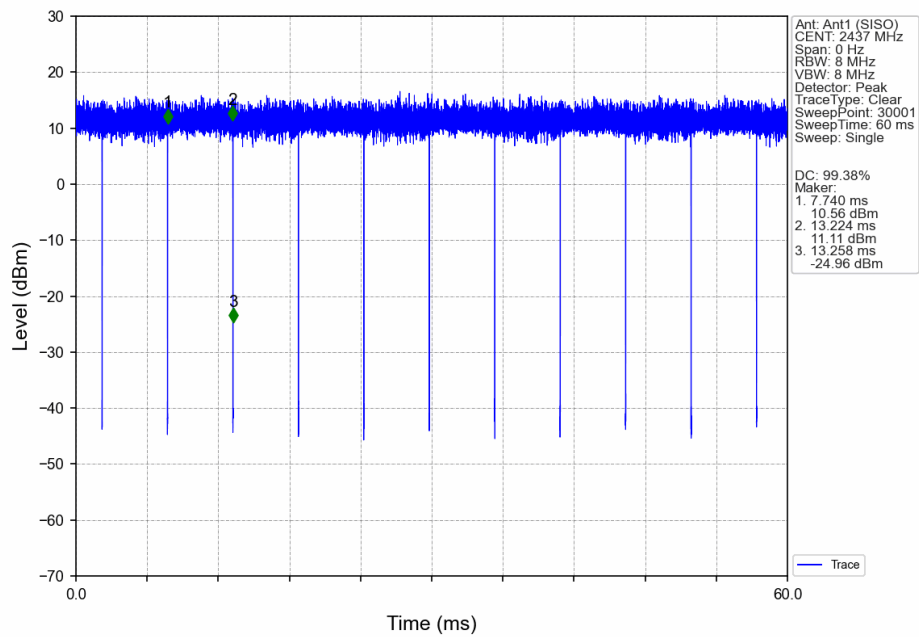


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

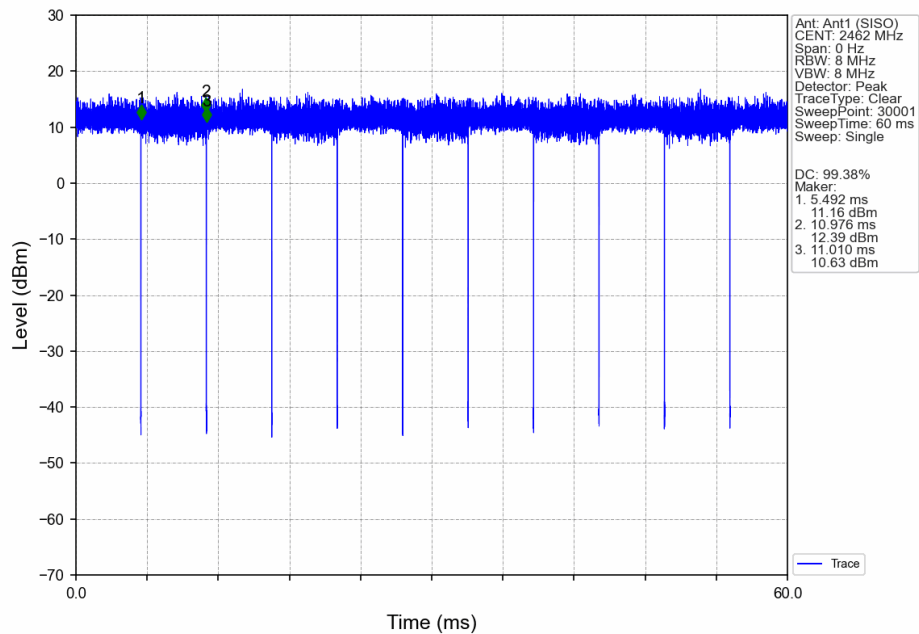


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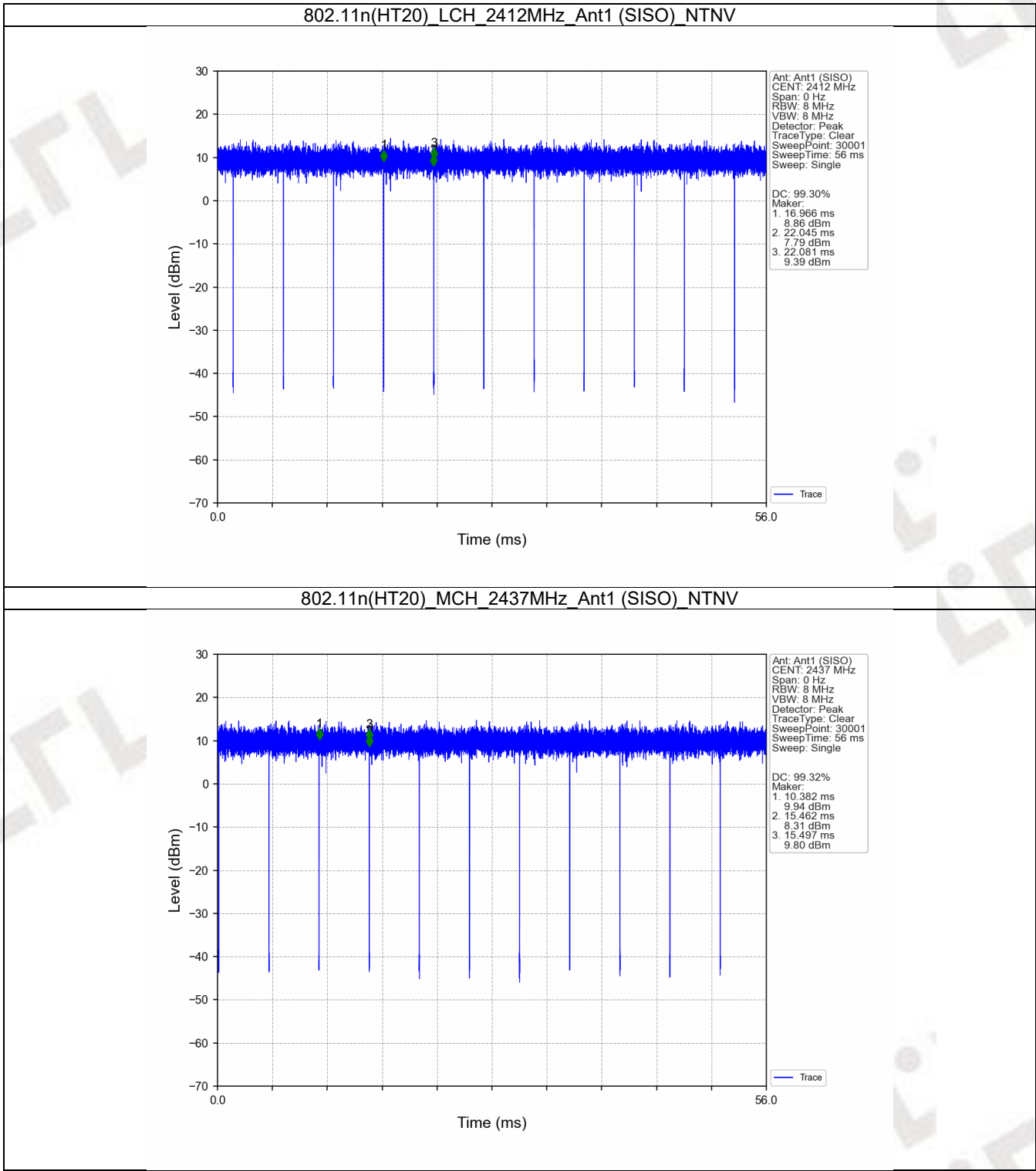
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



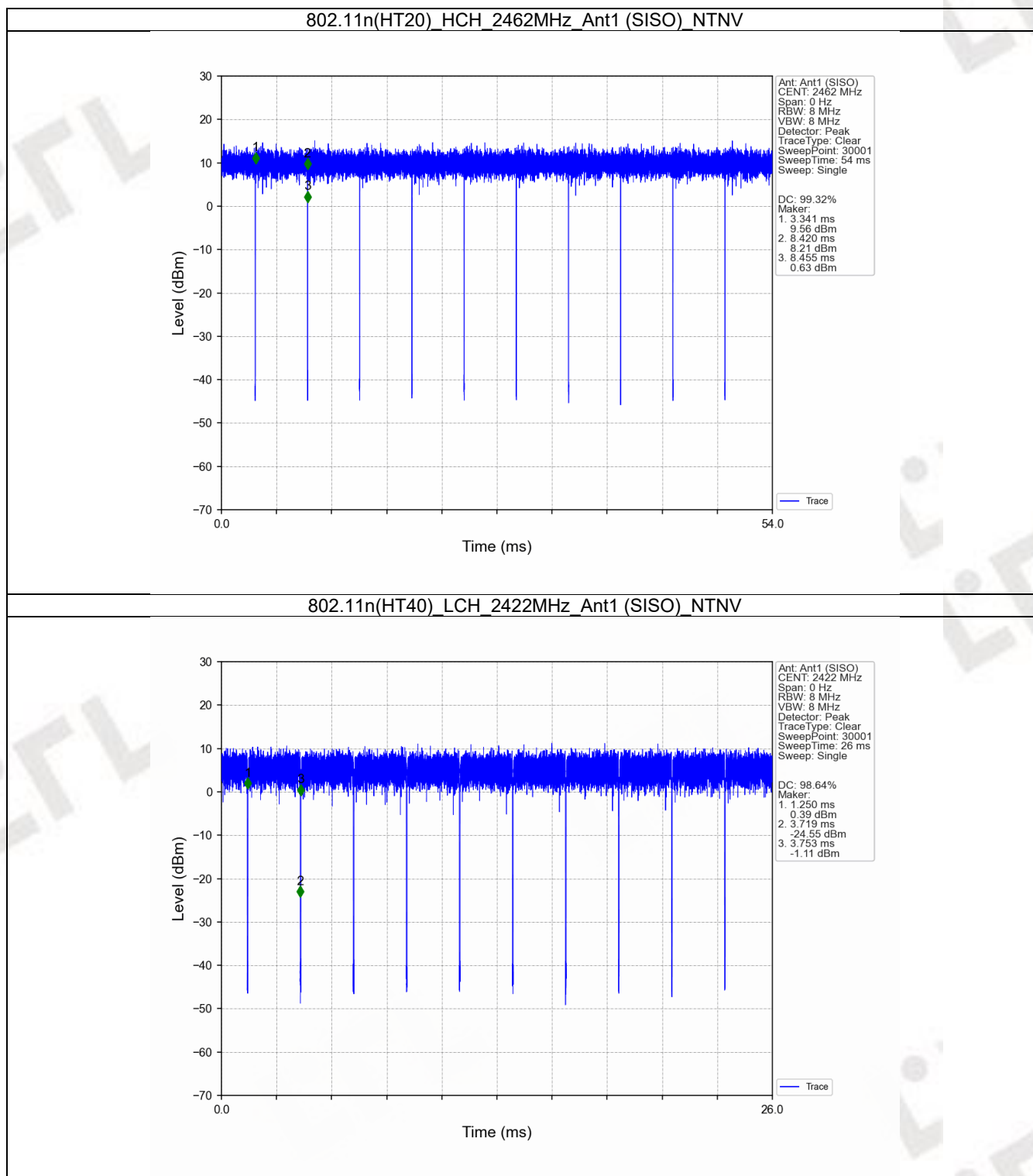
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



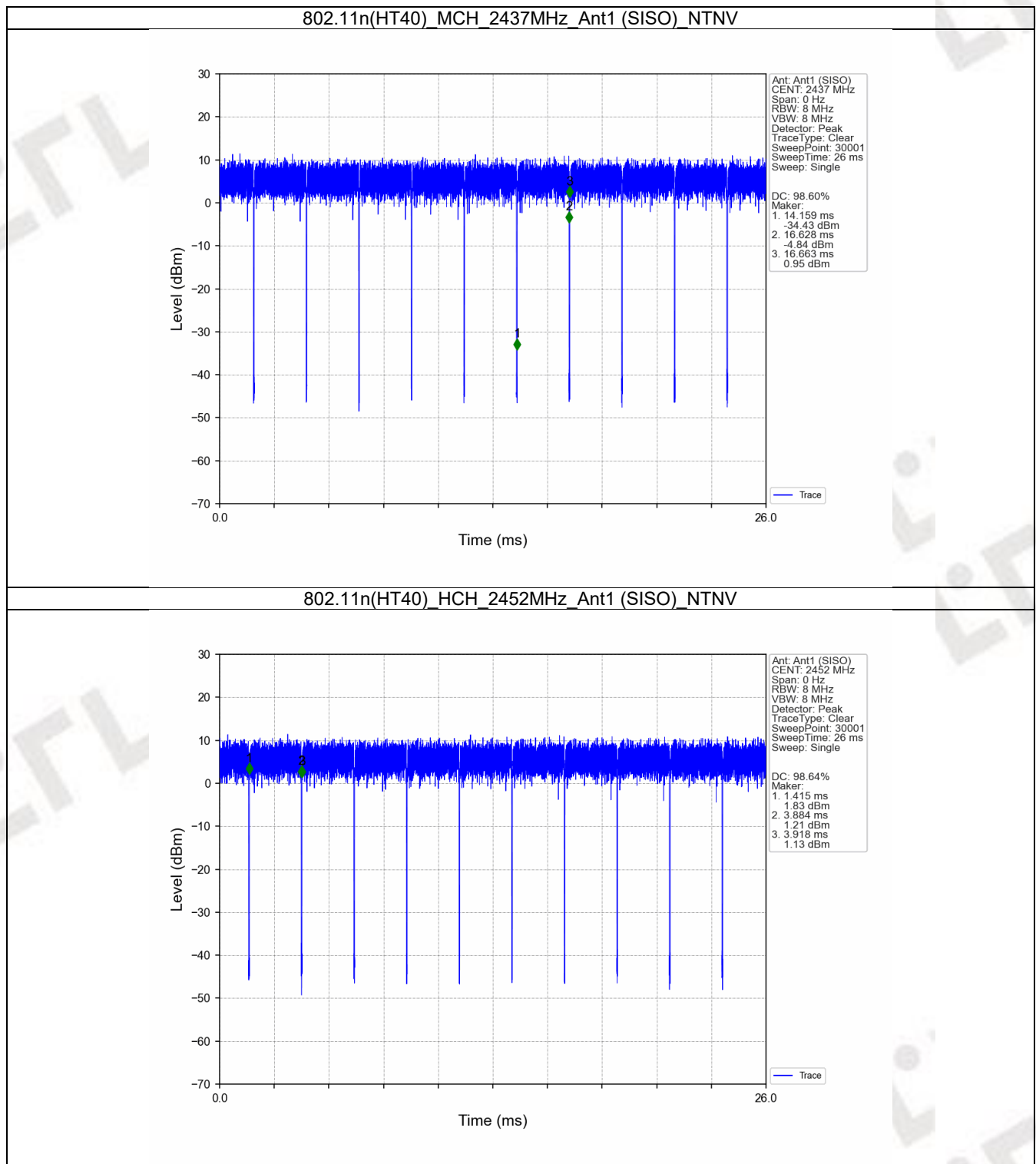
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2. Bandwidth

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	12.948	/	Pass
		2437	1	12.945	/	Pass
		2462	1	12.955	/	Pass
802.11g	SISO	2412	1	16.399	/	Pass
		2437	1	16.396	/	Pass
		2462	1	16.401	/	Pass
802.11n (HT20)	SISO	2412	1	17.310	/	Pass
		2437	1	17.301	/	Pass
		2462	1	17.299	/	Pass
802.11n (HT40)	SISO	2422	1	35.677	/	Pass
		2437	1	35.707	/	Pass
		2452	1	35.700	/	Pass

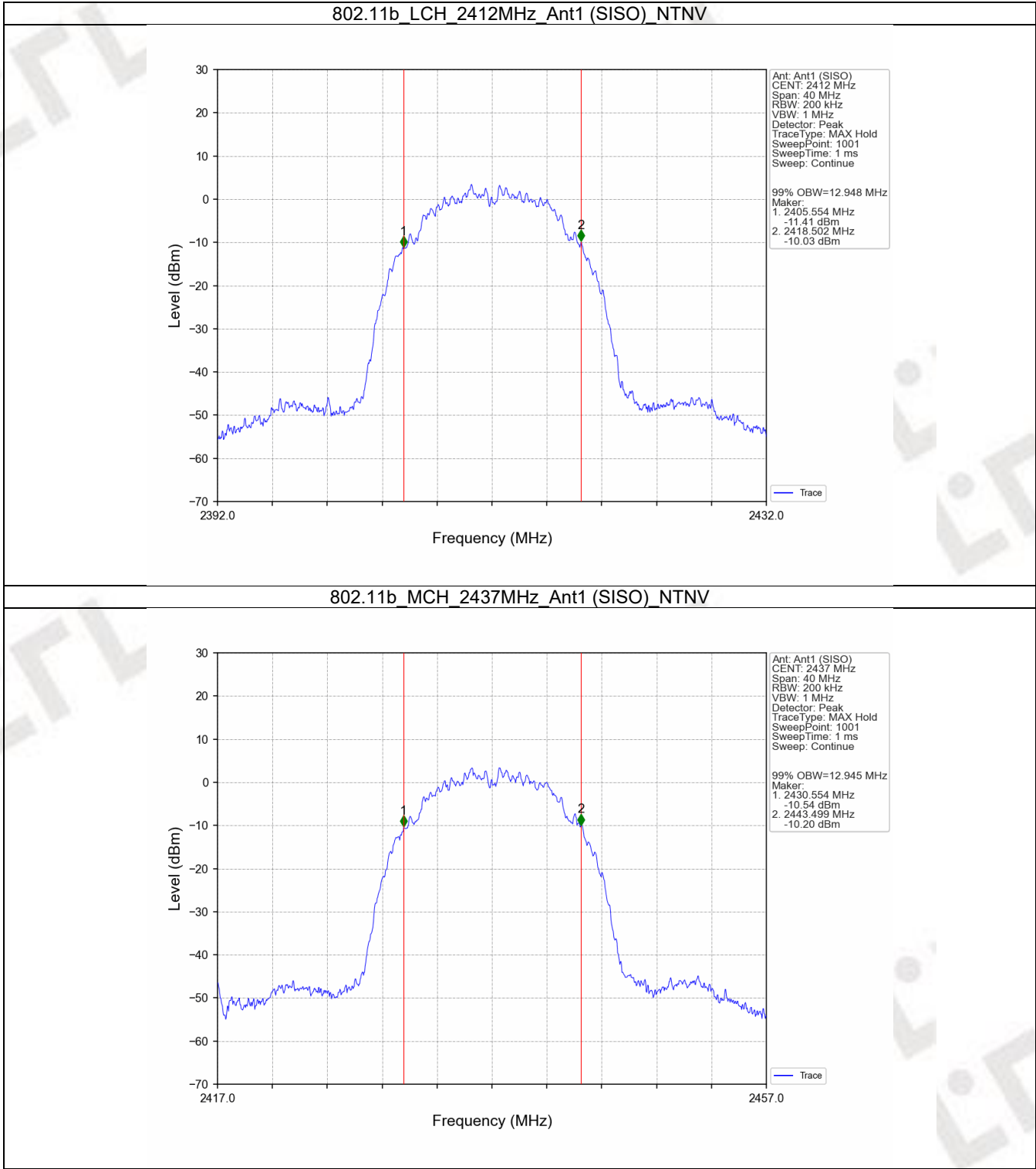
2.1.2 6dB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	9.248	≥ 0.5	Pass
		2437	1	9.127	≥ 0.5	Pass
		2462	1	9.105	≥ 0.5	Pass
802.11g	SISO	2412	1	16.423	≥ 0.5	Pass
		2437	1	16.415	≥ 0.5	Pass
		2462	1	16.417	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.294	≥ 0.5	Pass
		2437	1	17.297	≥ 0.5	Pass
		2462	1	17.319	≥ 0.5	Pass
802.11n (HT40)	SISO	2422	1	35.298	≥ 0.5	Pass
		2437	1	35.261	≥ 0.5	Pass
		2452	1	35.249	≥ 0.5	Pass

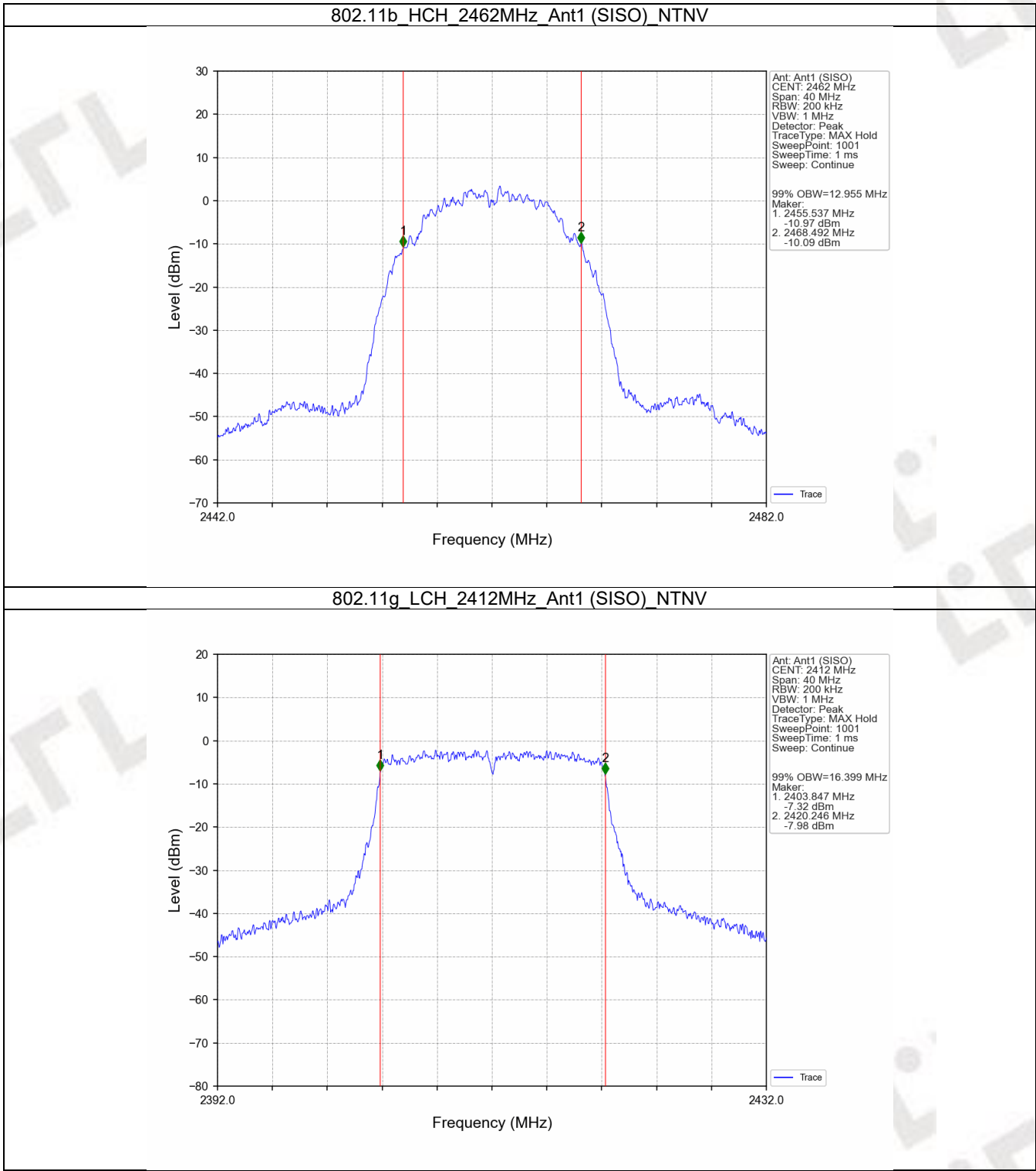
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2.2 Test Graph

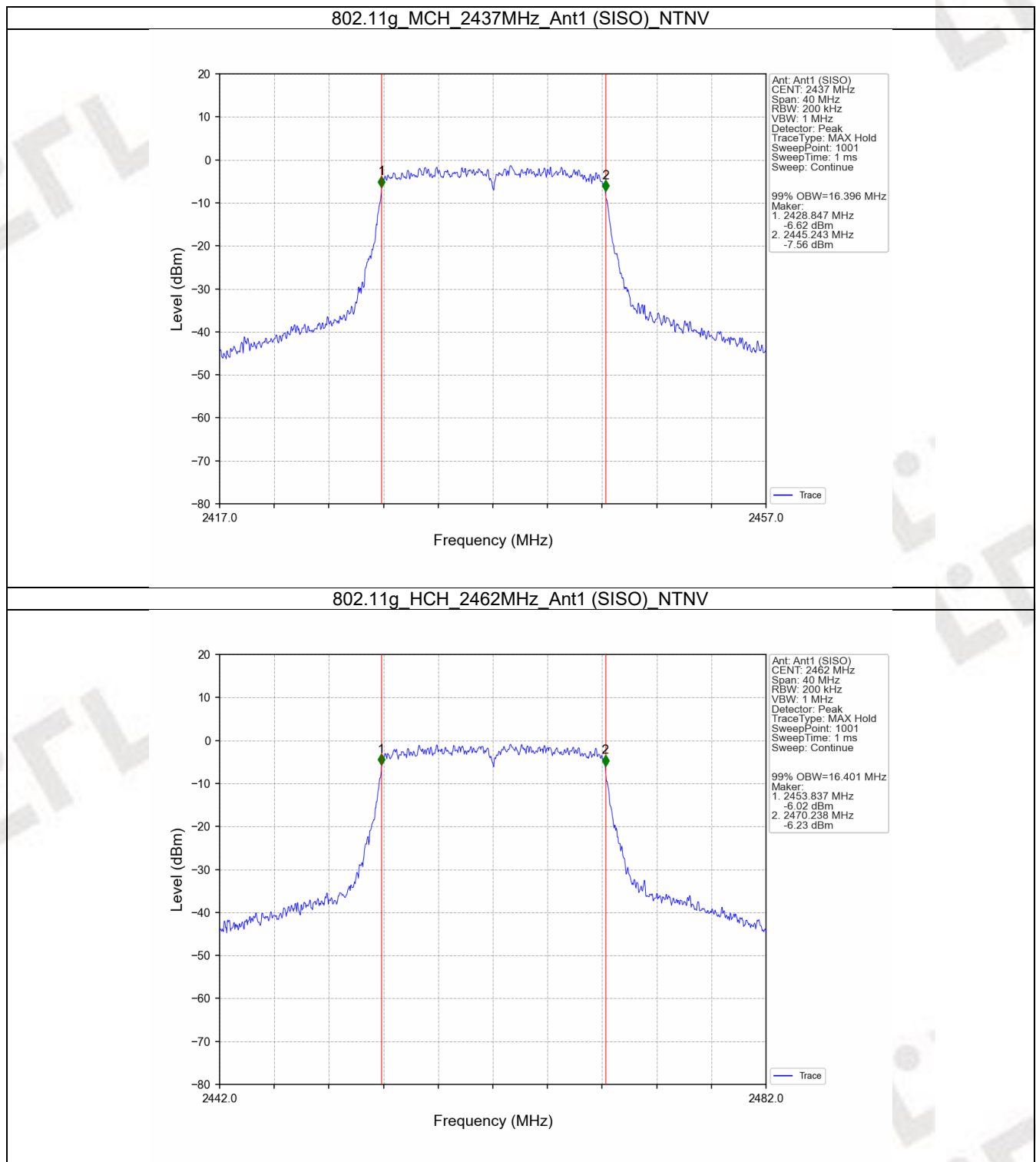
2.2.1 OBW



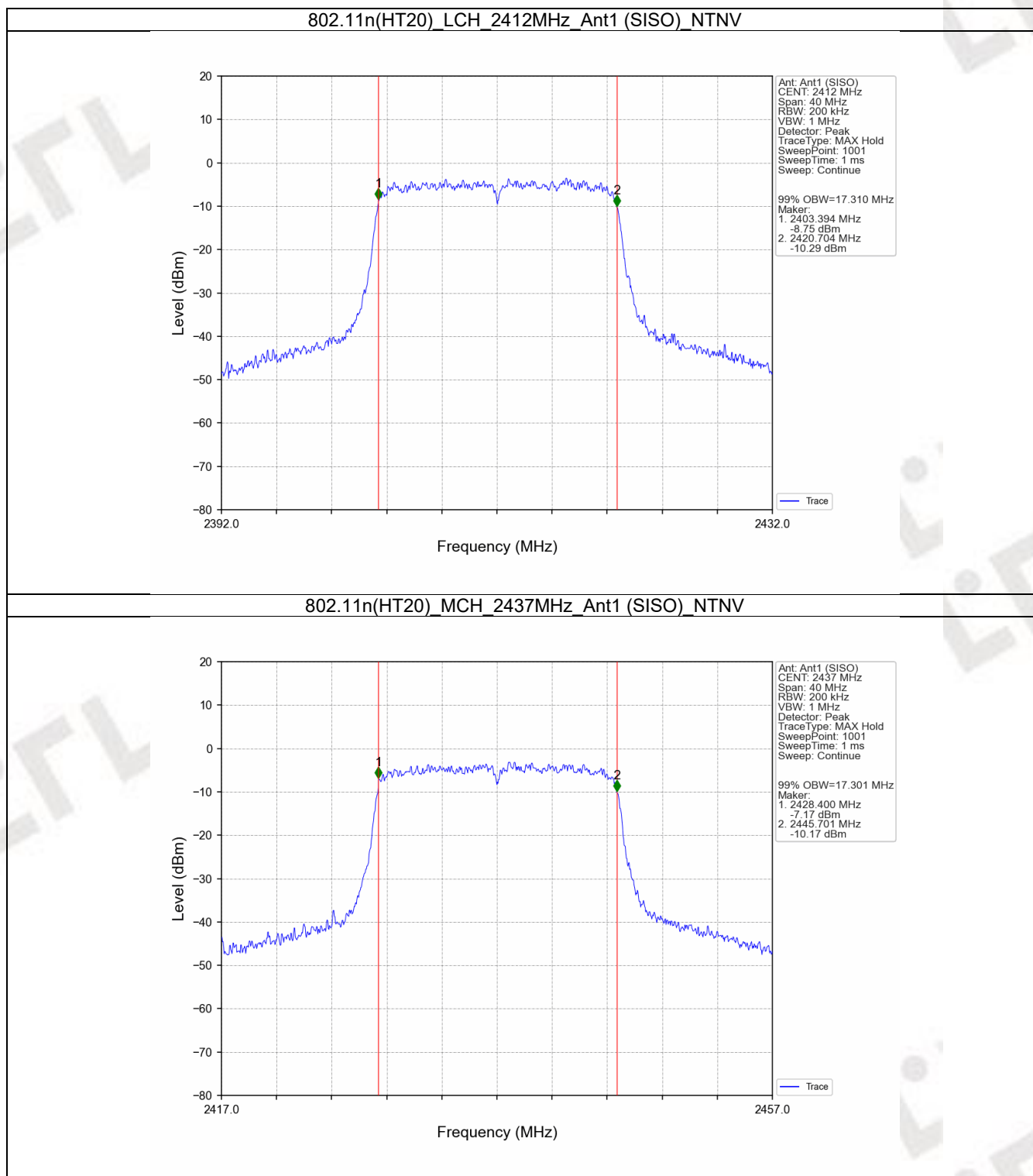
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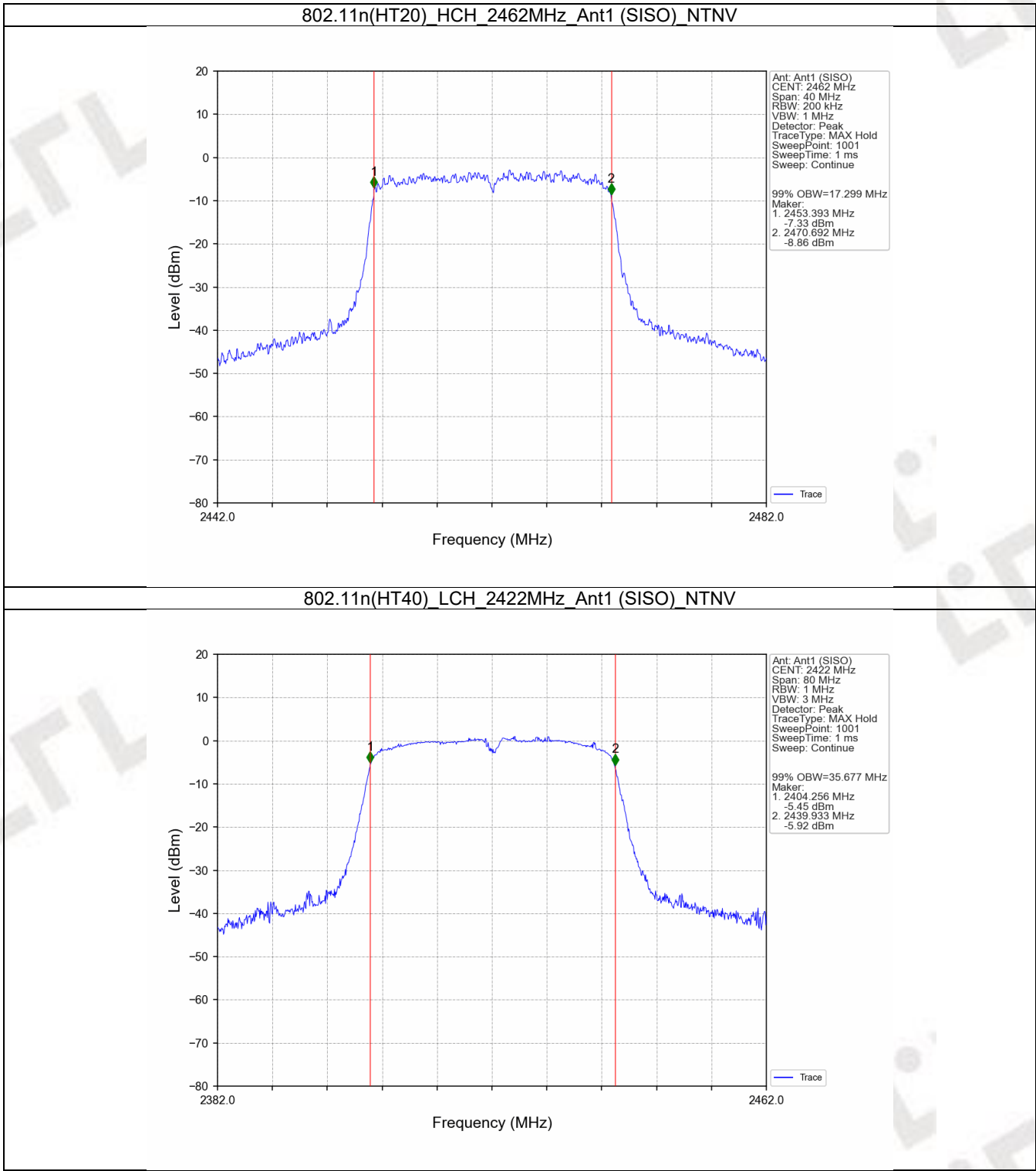
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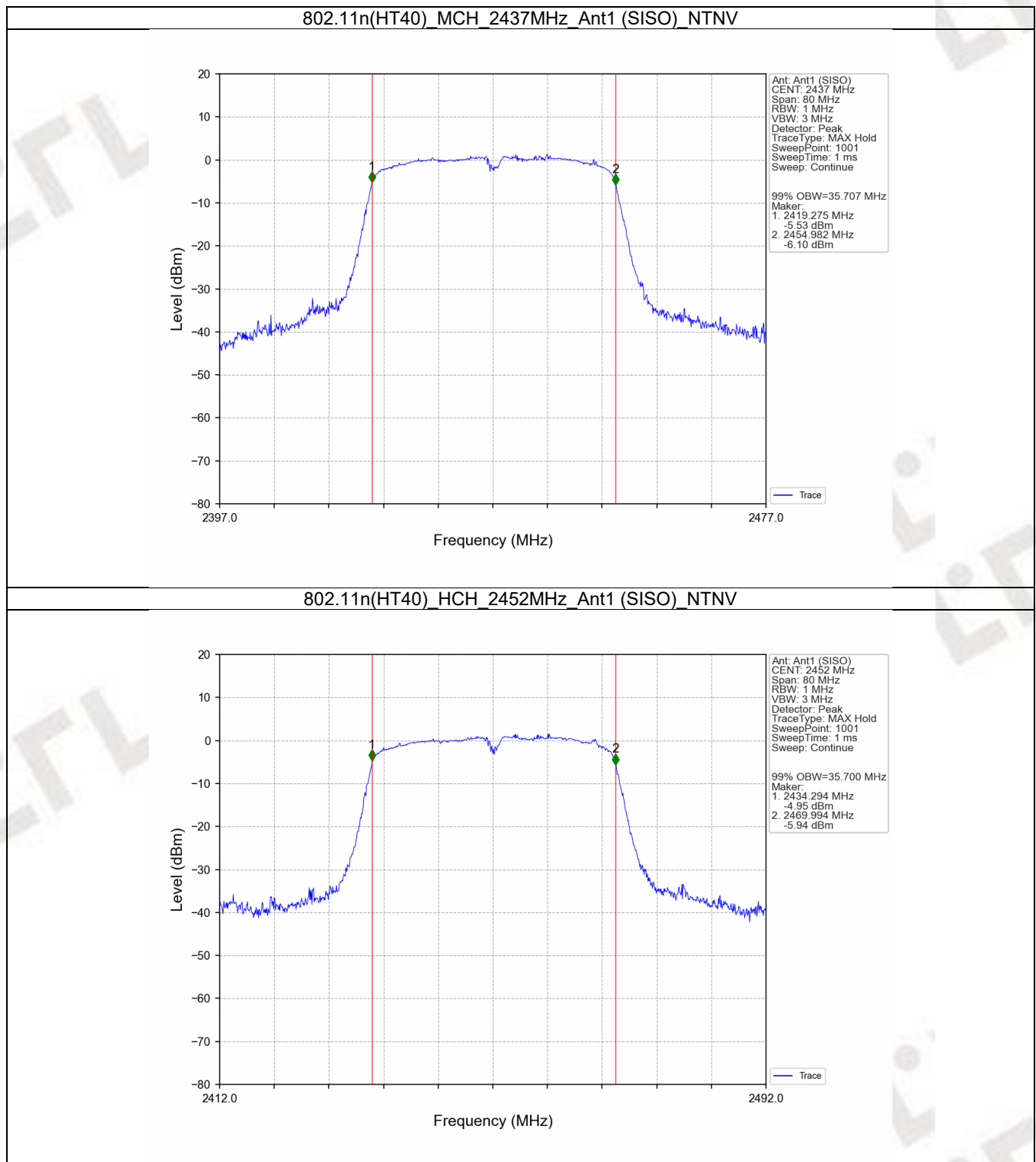
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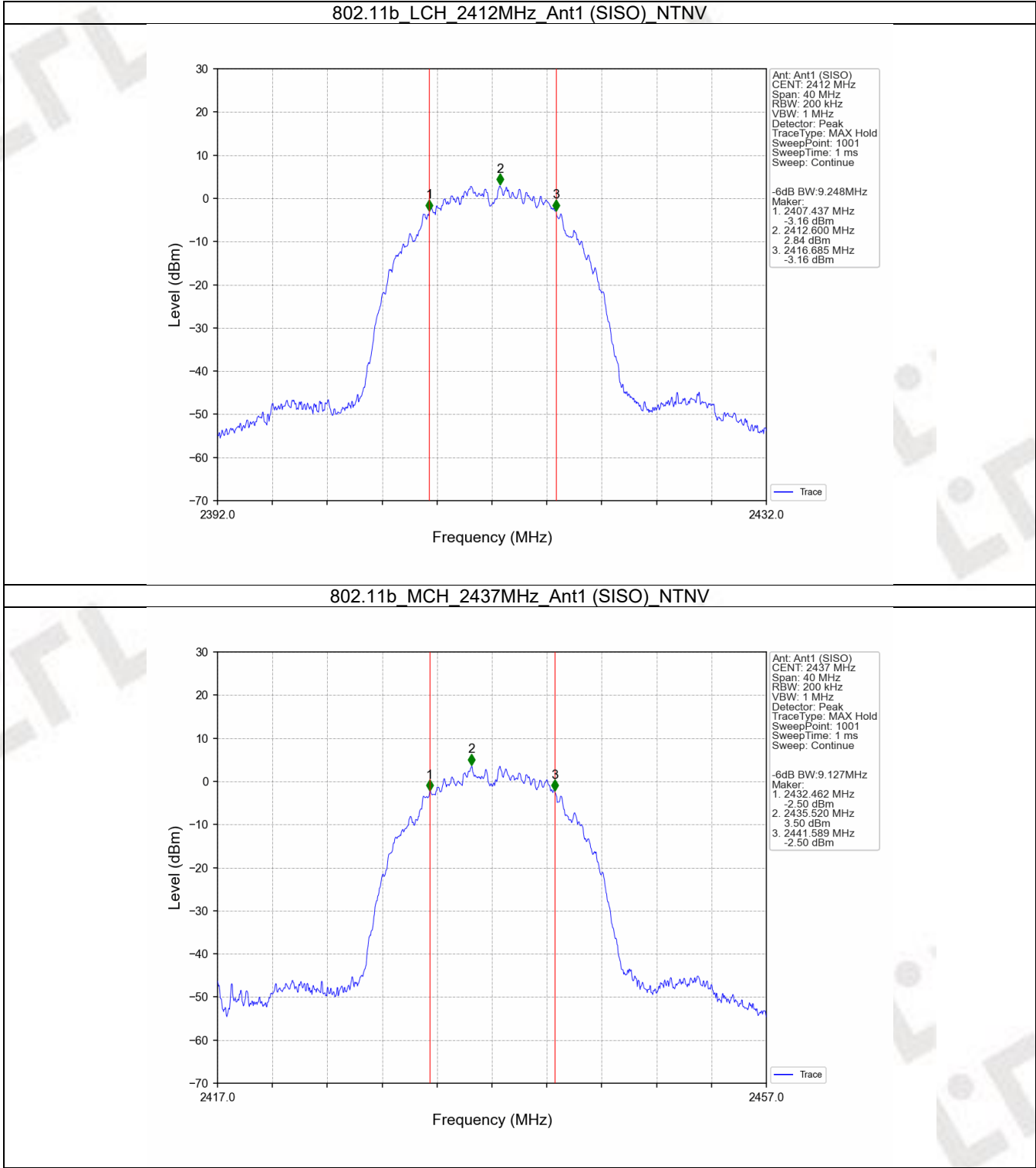


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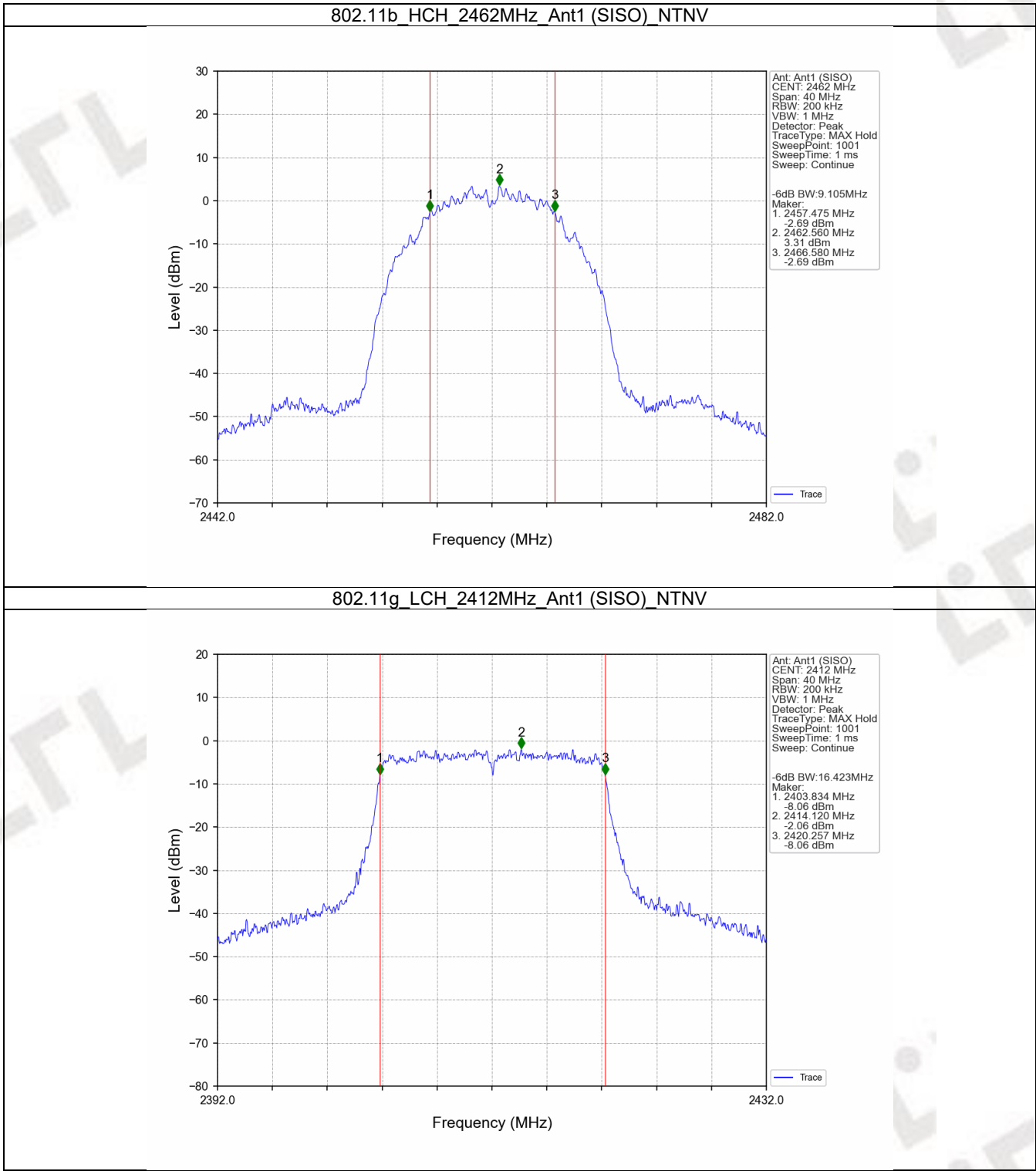


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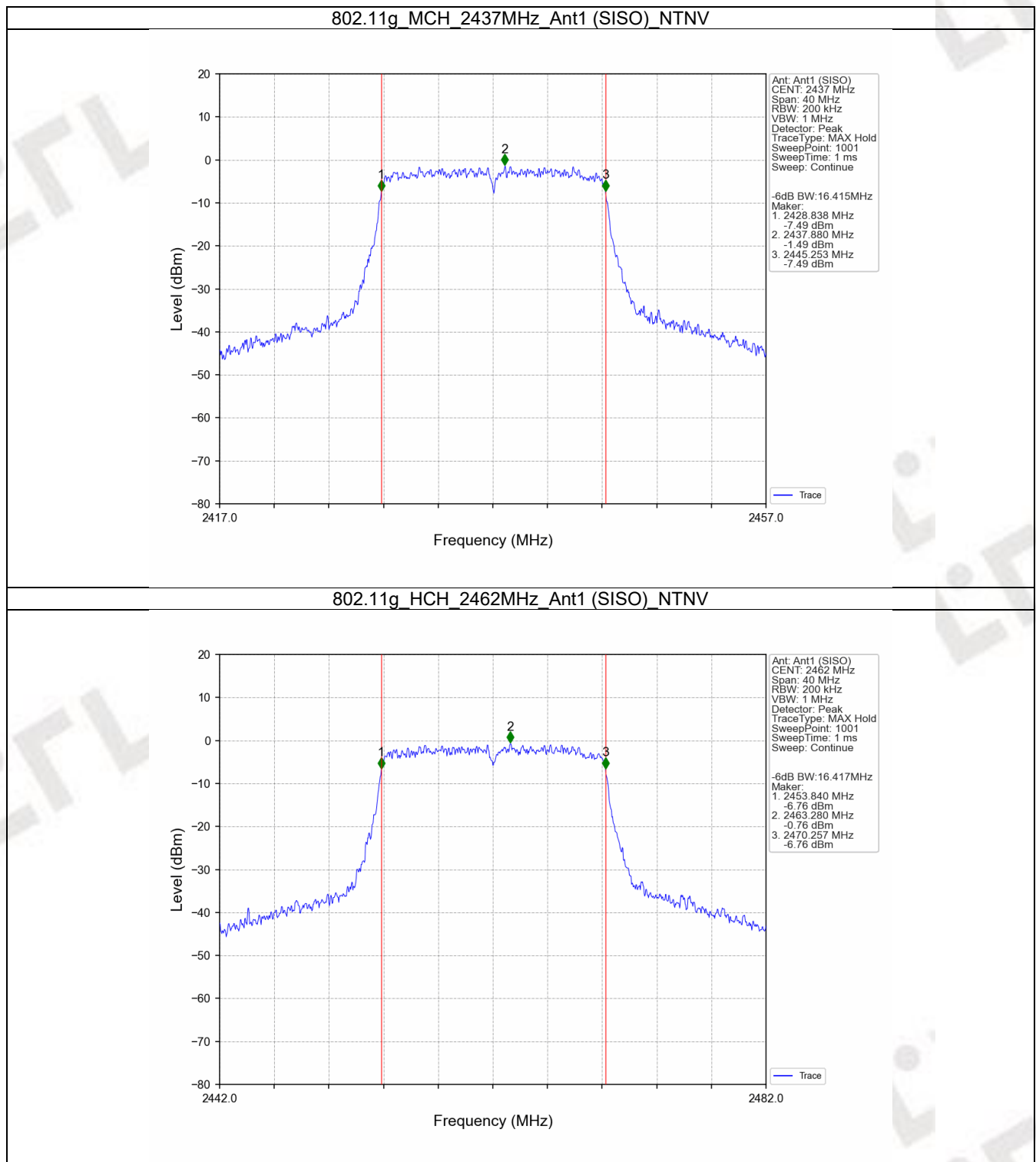
2.2.2 6dB BW



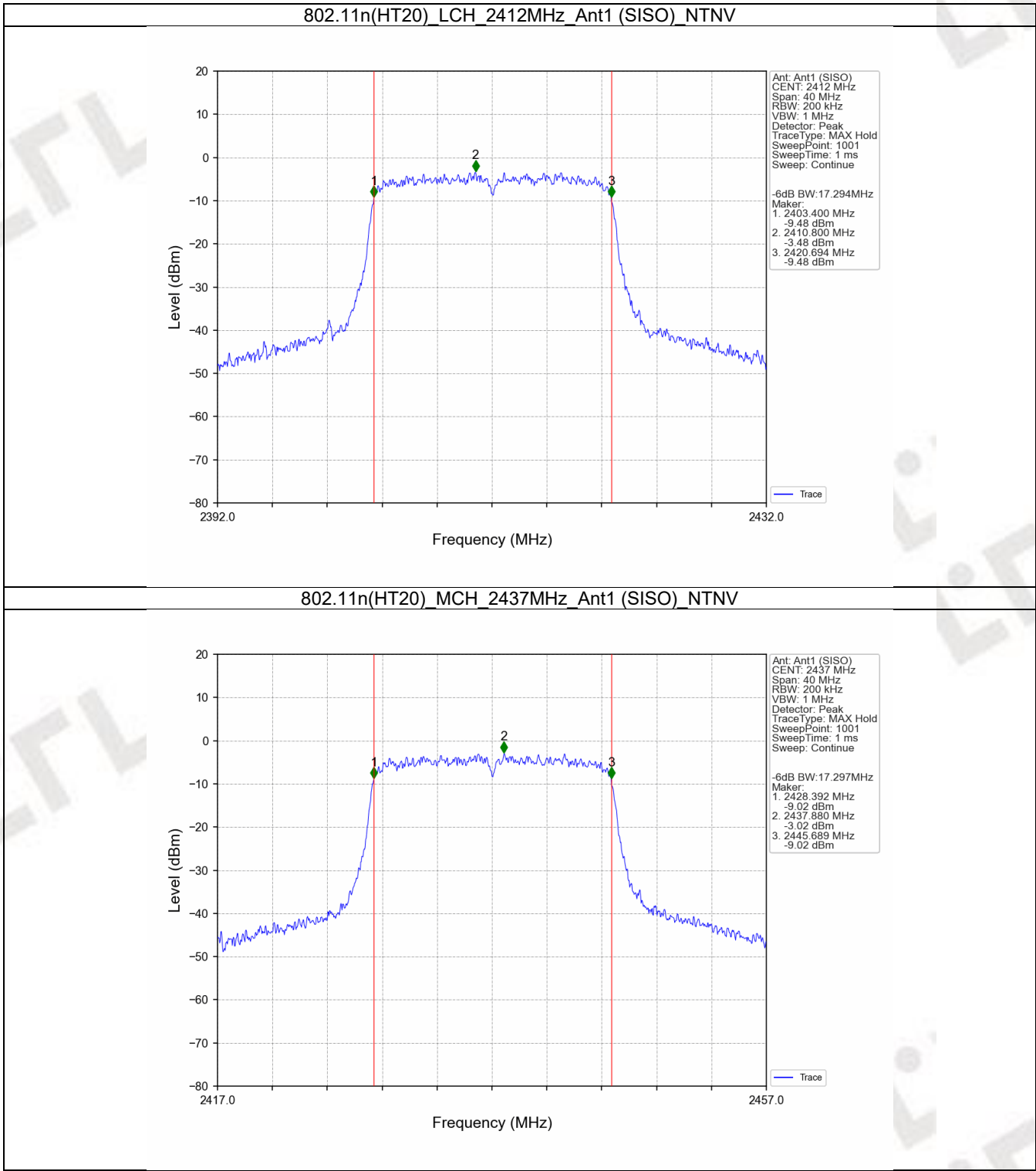
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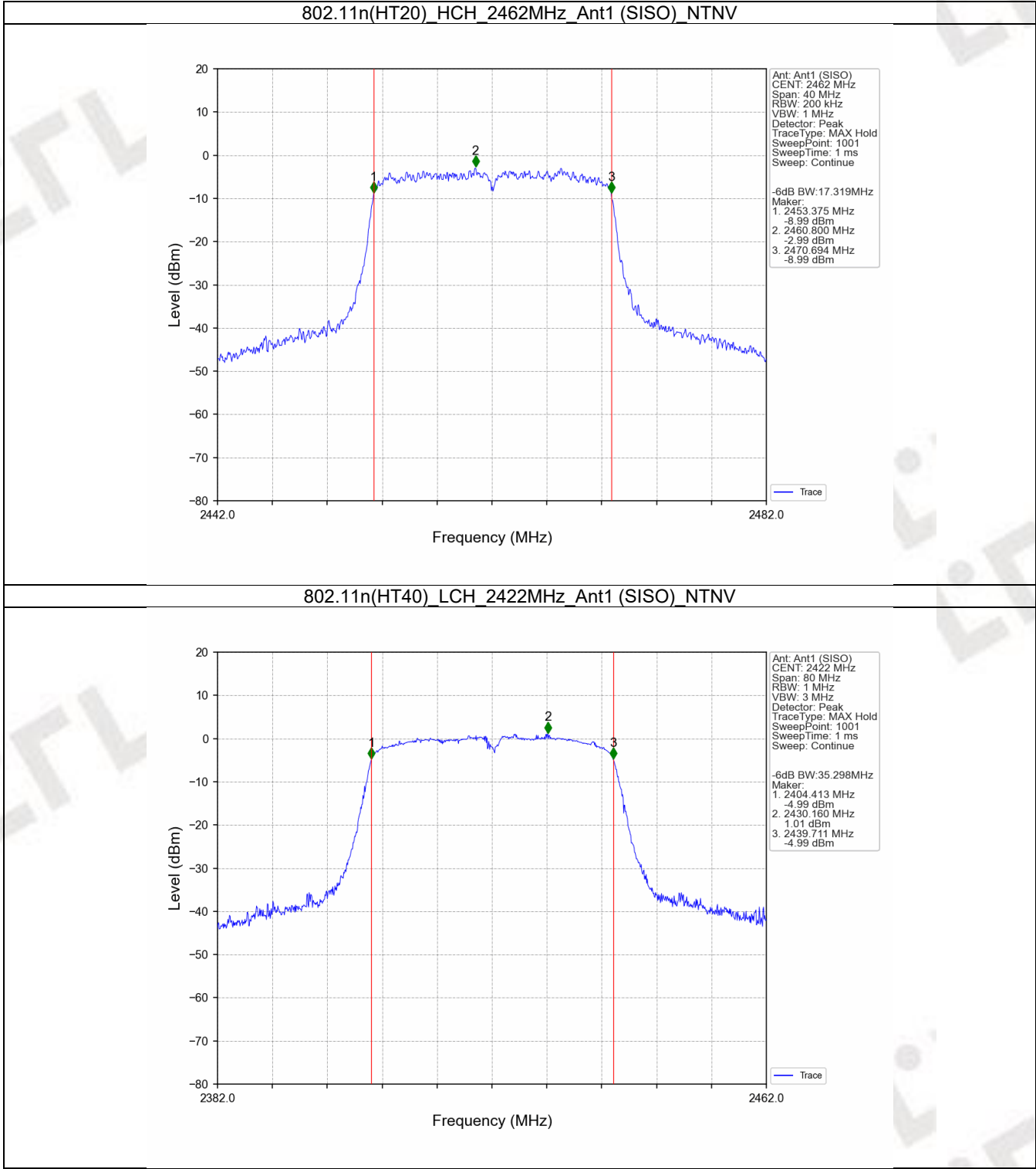
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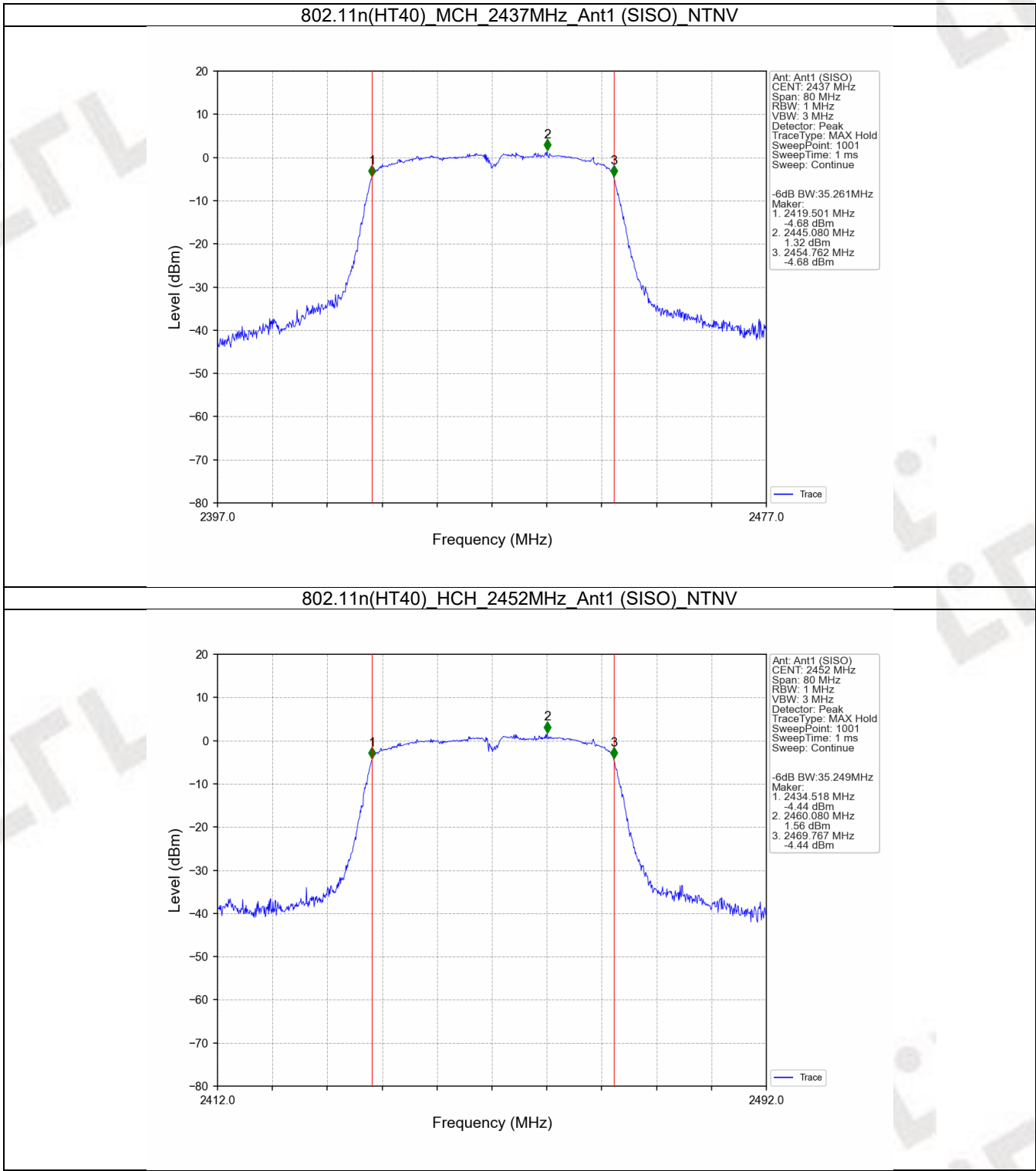
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FCC ID: 2BXU2E130



FCC ID: 2BXU2E130



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	15.21	<=30	Pass
		2437	15.43	<=30	Pass
		2462	15.34	<=30	Pass
802.11g	SISO	2412	15.83	<=30	Pass
		2437	16.35	<=30	Pass
		2462	17.27	<=30	Pass
802.11n (HT20)	SISO	2412	14.39	<=30	Pass
		2437	14.87	<=30	Pass
		2462	14.87	<=30	Pass
802.11n (HT40)	SISO	2422	14.54	<=30	Pass
		2437	14.81	<=30	Pass
		2452	14.95	<=30	Pass

Note1: Antenna Gain: Ant1: 0.50dBi;

FCC ID: 2BXU2E130

4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

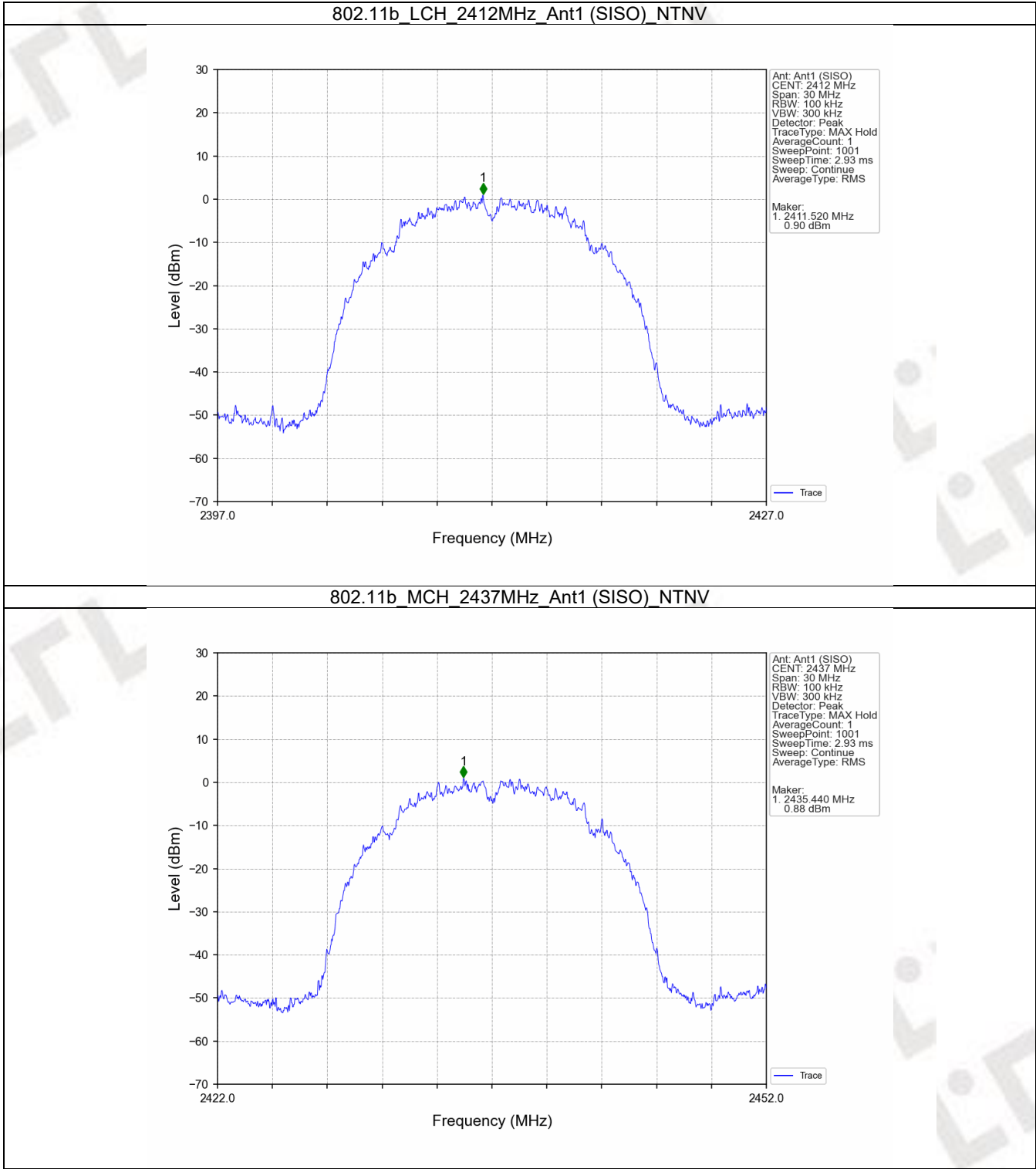
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit(dBm/3kHz)	
802.11b	SISO	2412	0.90dBm/100kHz	<=8	Pass
		2437	0.88dBm/100kHz	<=8	Pass
		2462	0.68dBm/100kHz	<=8	Pass
802.11g	SISO	2412	-2.54dBm/100kHz	<=8	Pass
		2437	-2.59dBm/100kHz	<=8	Pass
		2462	-1.80dBm/100kHz	<=8	Pass
802.11n (HT20)	SISO	2412	-4.03dBm/100kHz	<=8	Pass
		2437	-4.15dBm/100kHz	<=8	Pass
		2462	-3.81dBm/100kHz	<=8	Pass
802.11n (HT40)	SISO	2422	-6.95dBm/100kHz	<=8	Pass
		2437	-6.80dBm/100kHz	<=8	Pass
		2452	-6.99dBm/100kHz	<=8	Pass

Note1: Antenna Gain: Ant1: 0.50dBi;

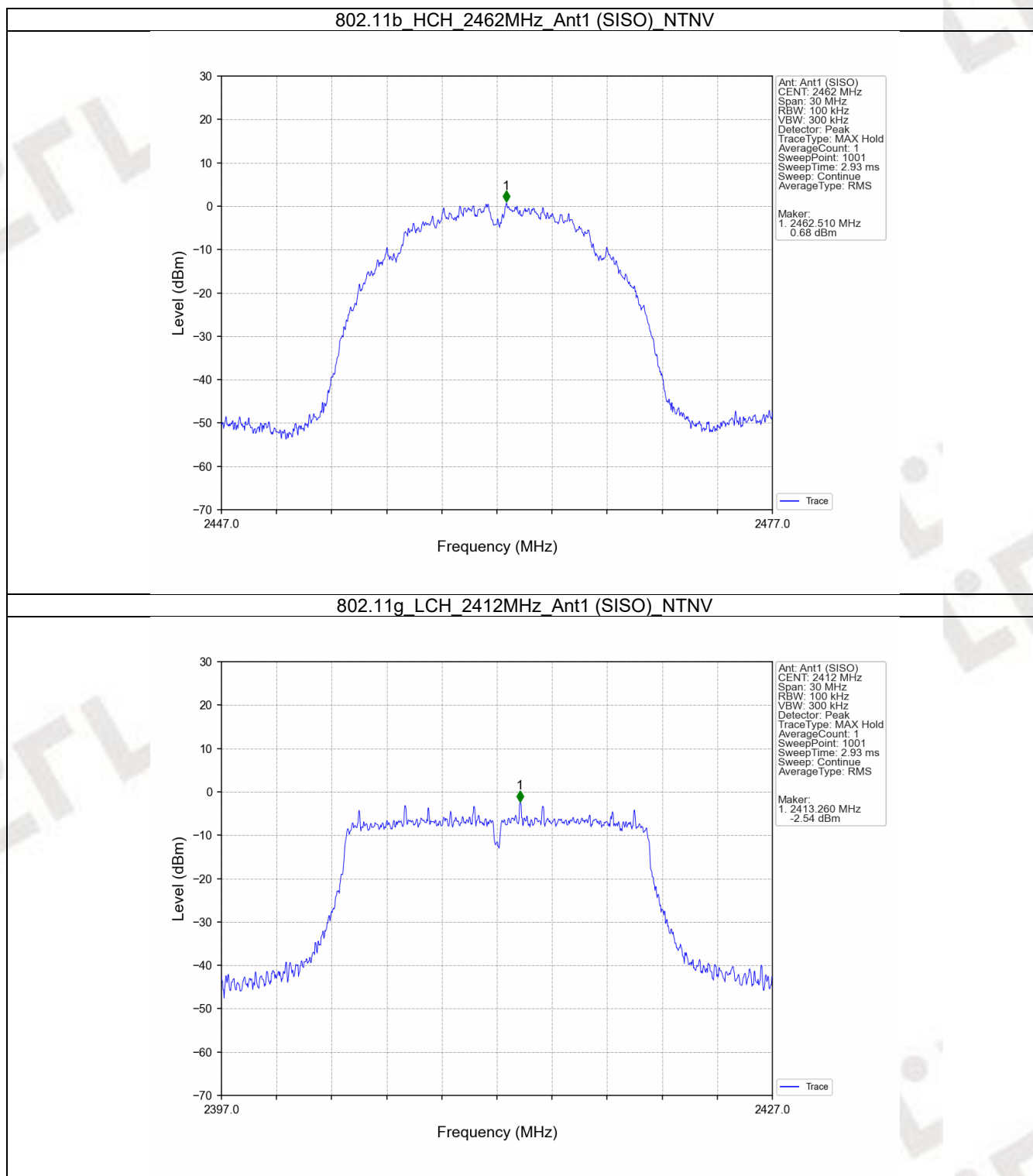
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4.2 Test Graph

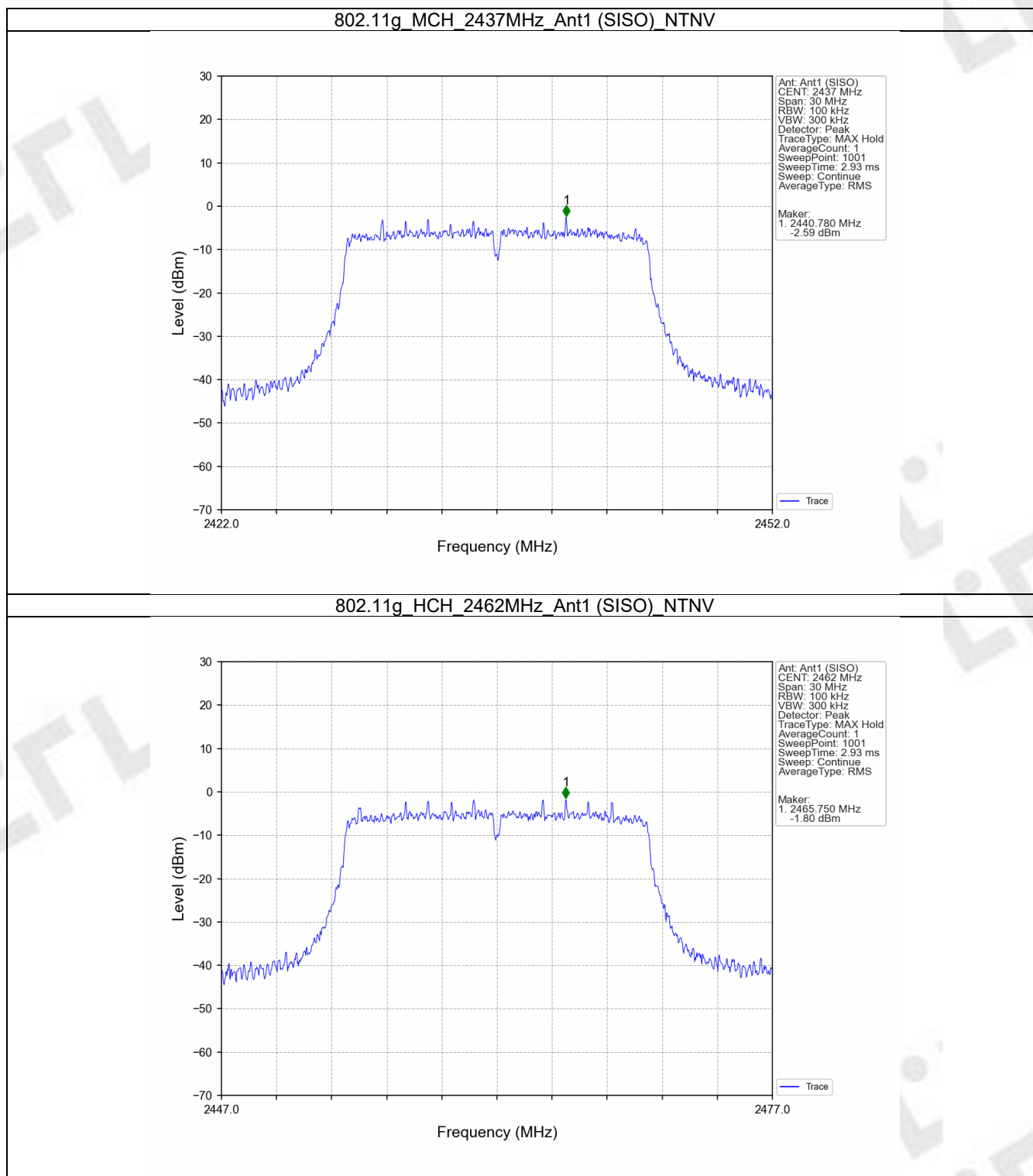
4.2.1 PSD



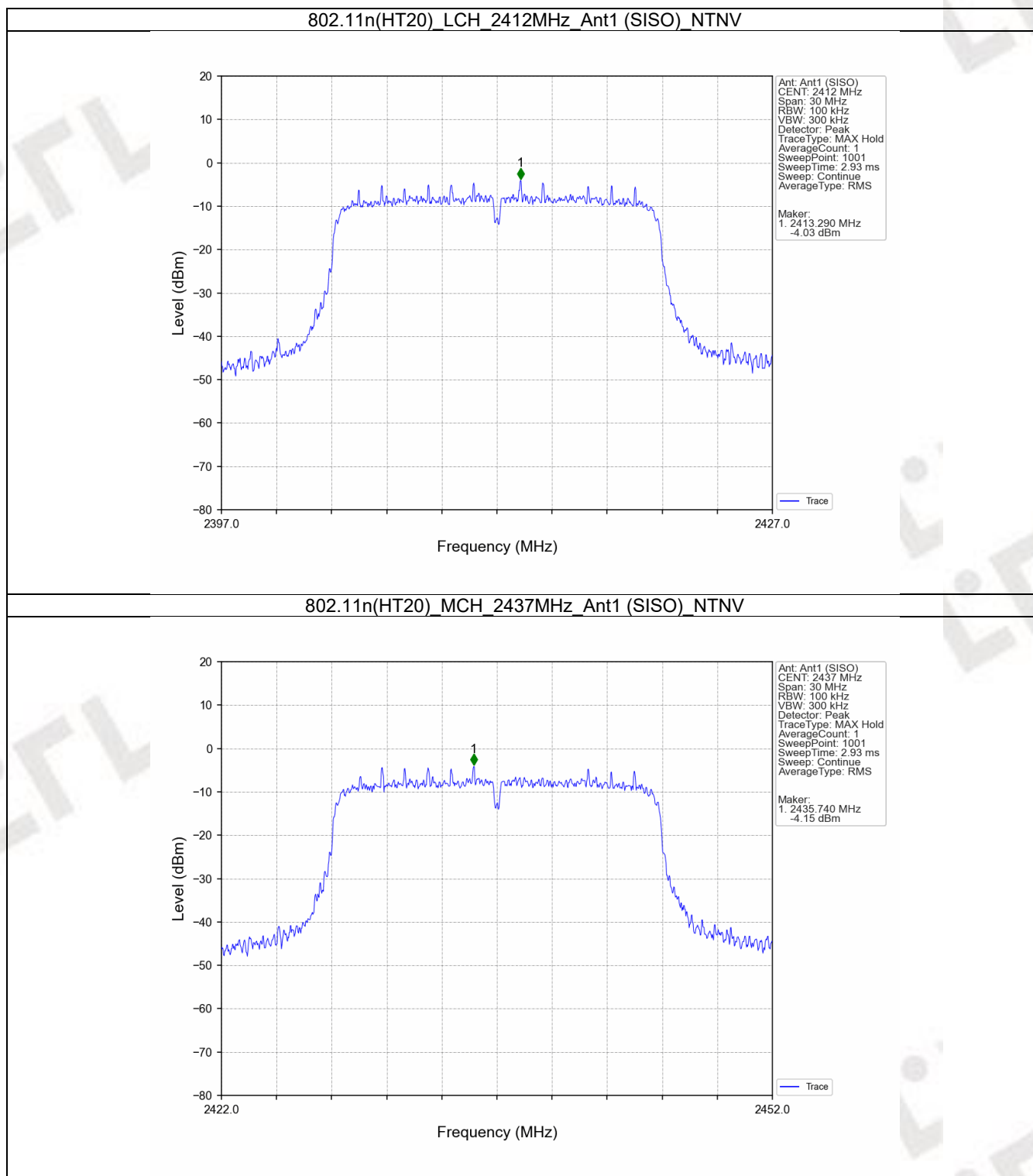
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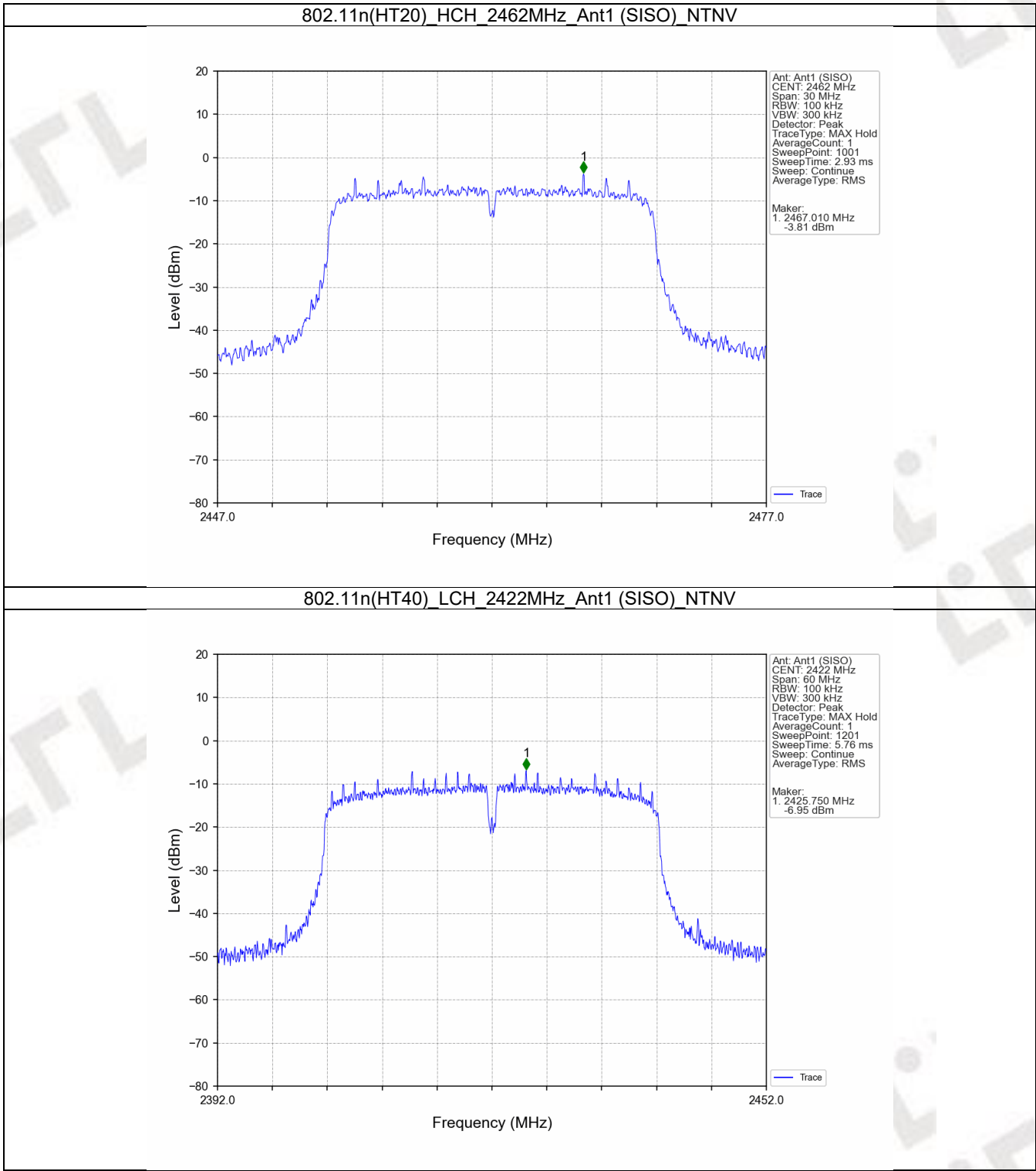
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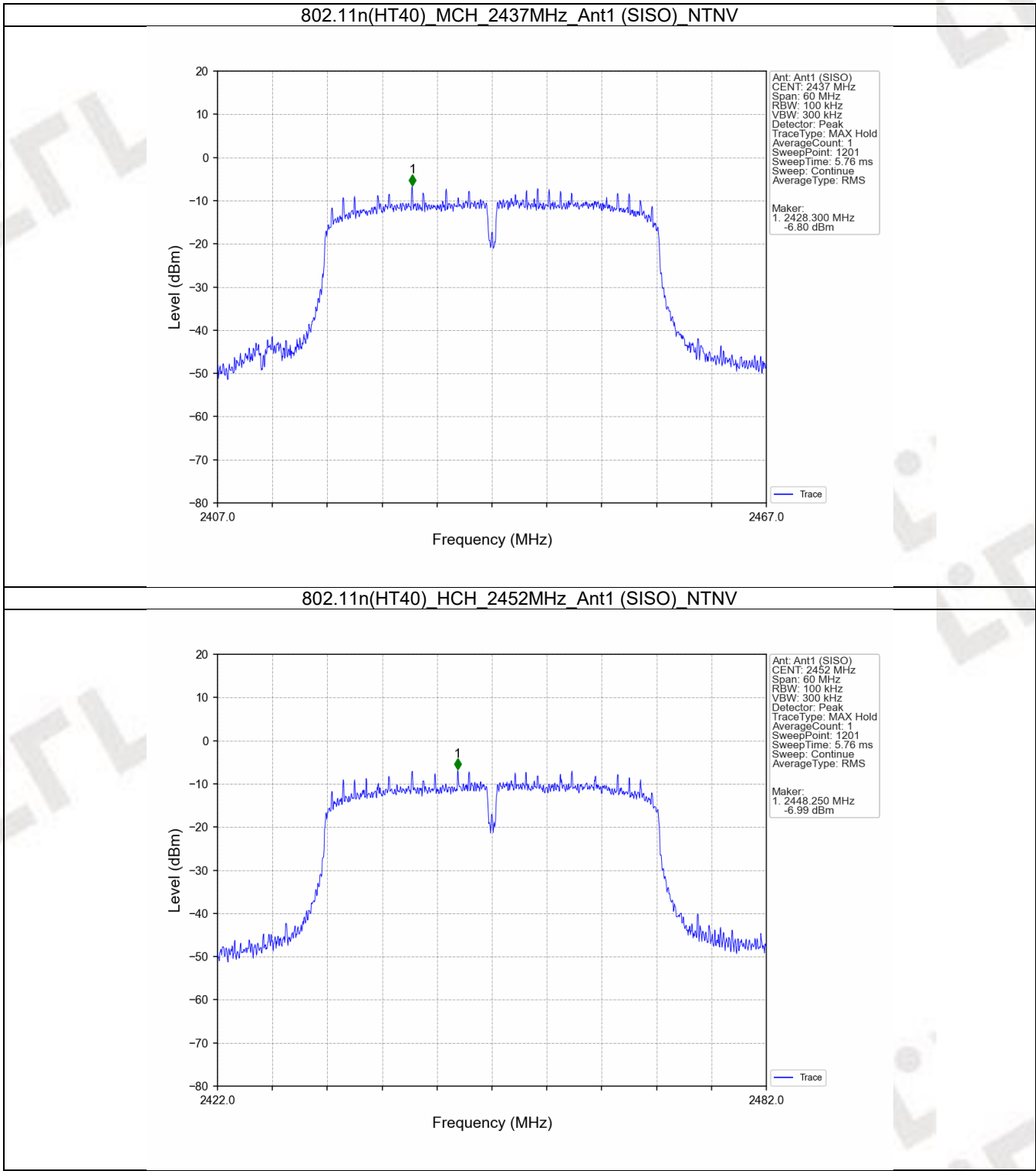
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FCC ID: 2BXU2E130



FCC ID: 2BXU2E130



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	1.22
		2437	1	0.64
		2462	1	1.11
802.11g	SISO	2412	1	-2.84
		2437	1	-1.84
		2462	1	-2.36
802.11n (HT20)	SISO	2412	1	-4.51
		2437	1	-4.09
		2462	1	-3.70
802.11n (HT40)	SISO	2422	1	-7.04
		2437	1	-6.57
		2452	1	-7.09

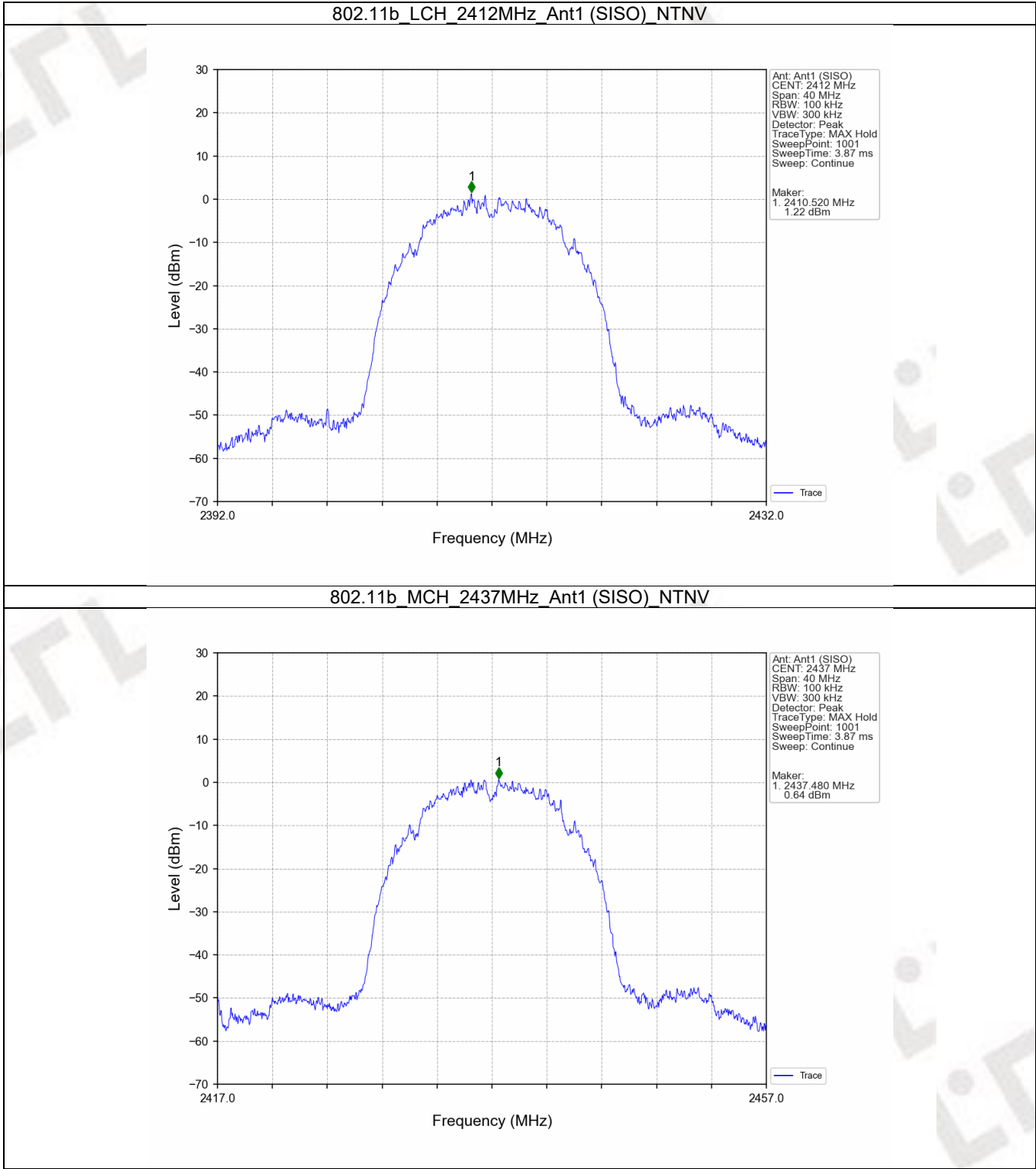
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	1.22	-18.78	Pass
		2437	1	0.64	-19.36	Pass
		2462	1	1.11	-18.89	Pass
802.11g	SISO	2412	1	-2.84	-22.84	Pass
		2437	1	-1.84	-21.84	Pass
		2462	1	-2.36	-22.36	Pass
802.11n (HT20)	SISO	2412	1	-4.51	-24.51	Pass
		2437	1	-4.09	-24.09	Pass
		2462	1	-3.70	-23.70	Pass
802.11n (HT40)	SISO	2422	1	-7.04	-27.04	Pass
		2437	1	-6.57	-26.57	Pass
		2452	1	-7.09	-27.09	Pass

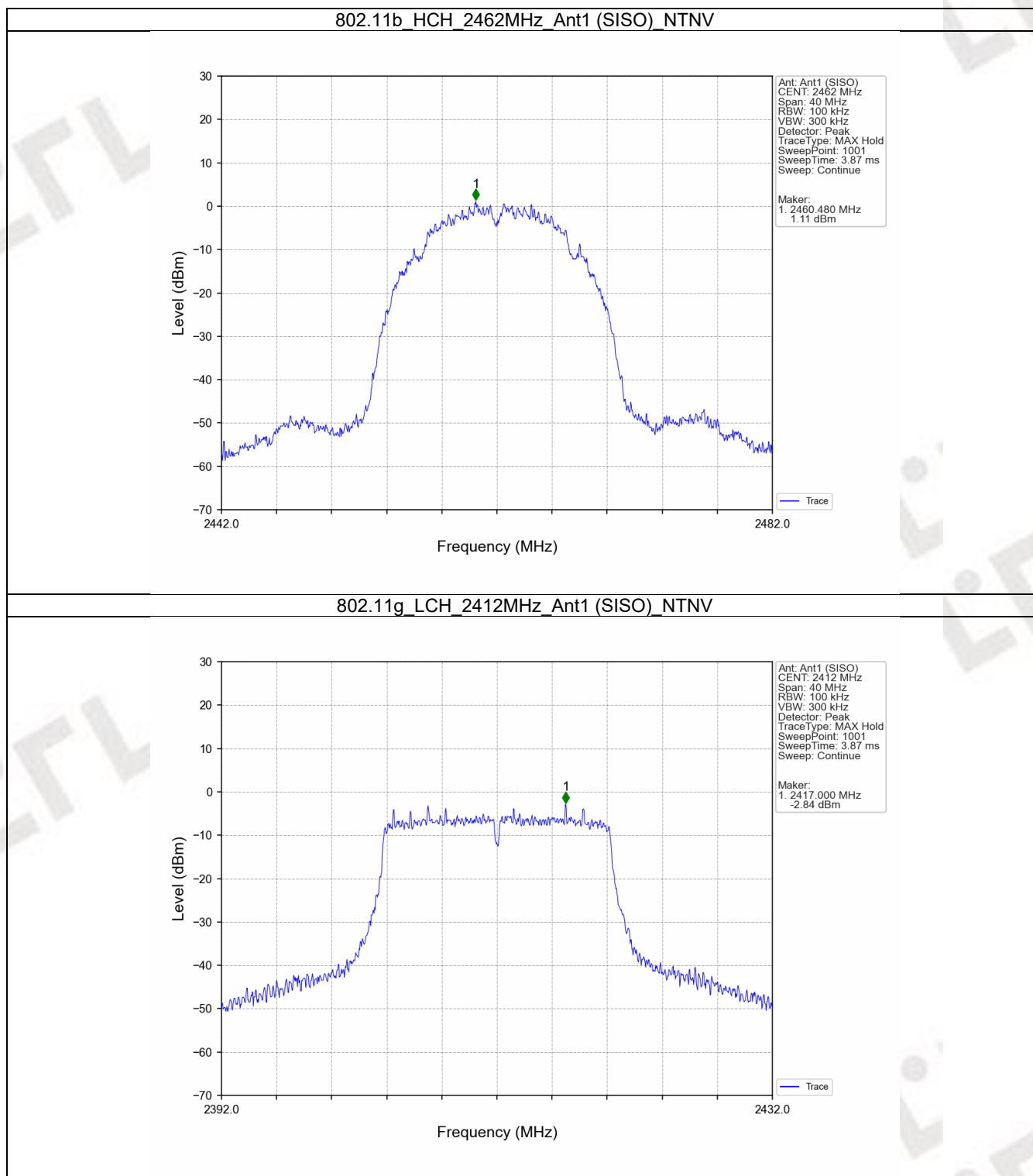
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5.2 Test Graph

5.2.1 Ref

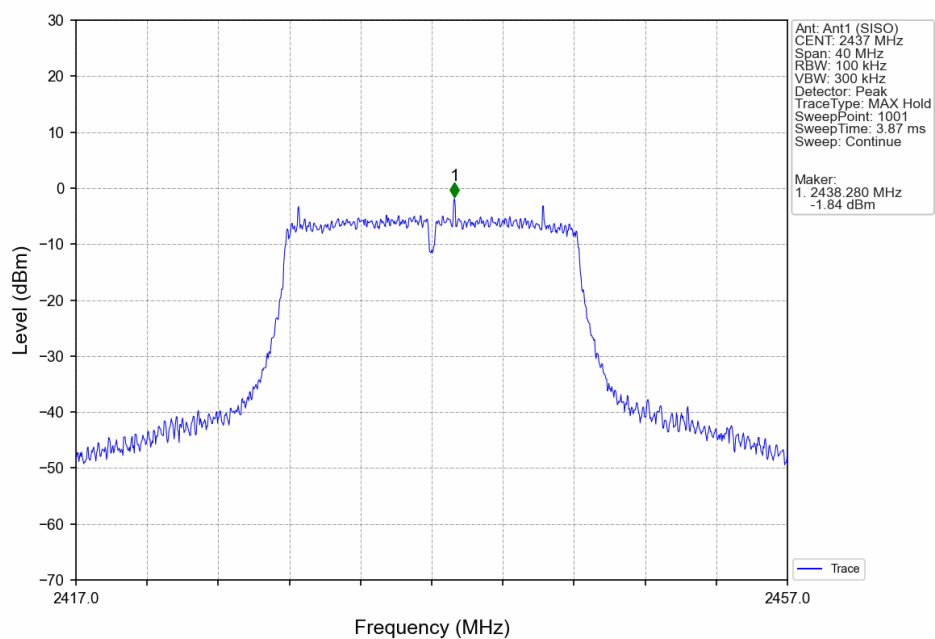


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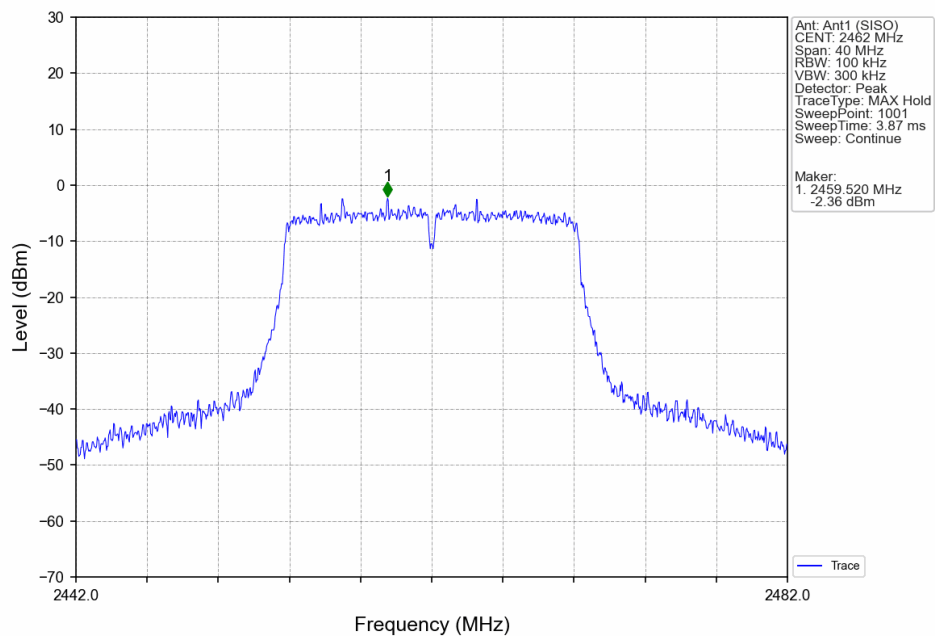


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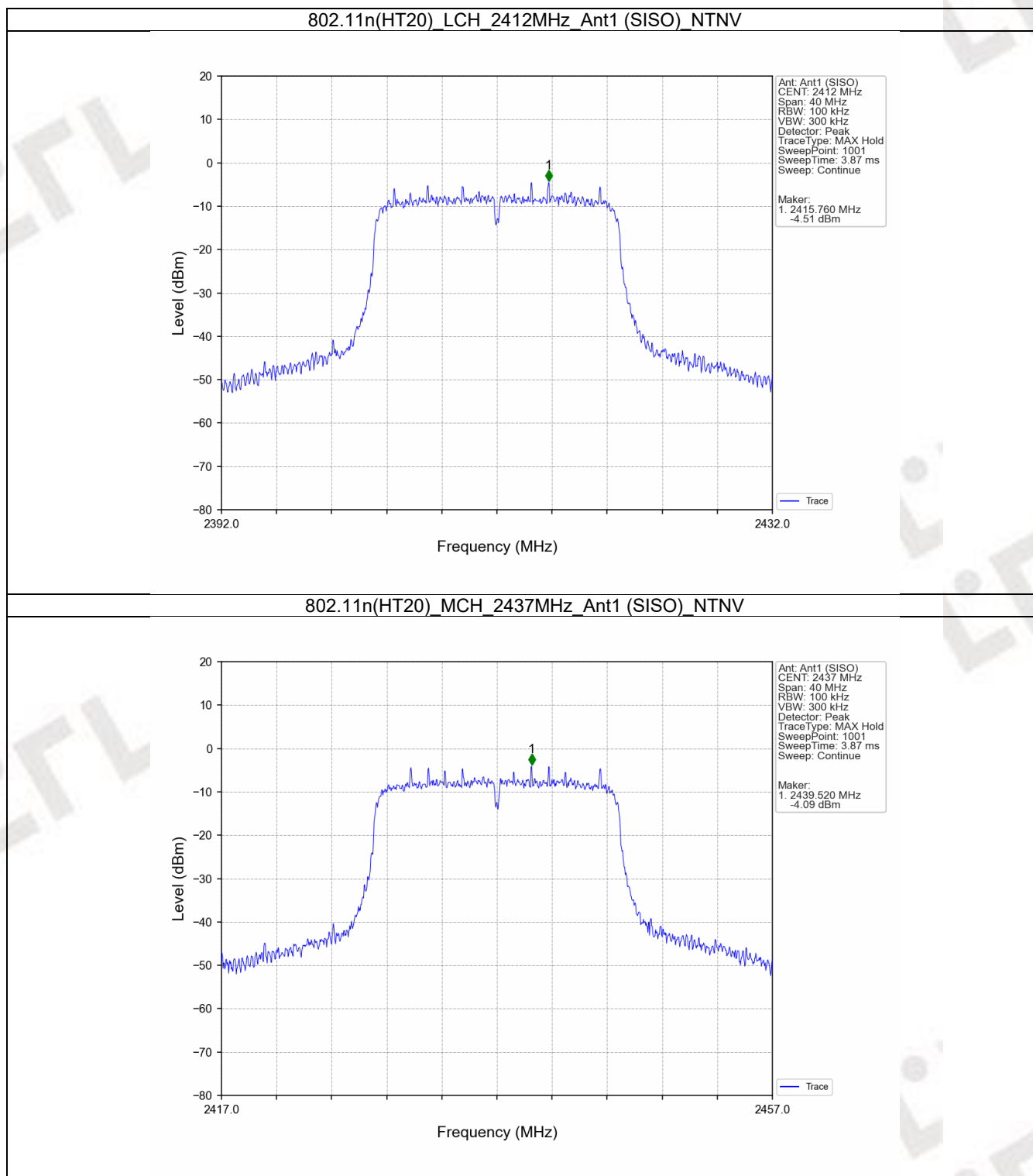
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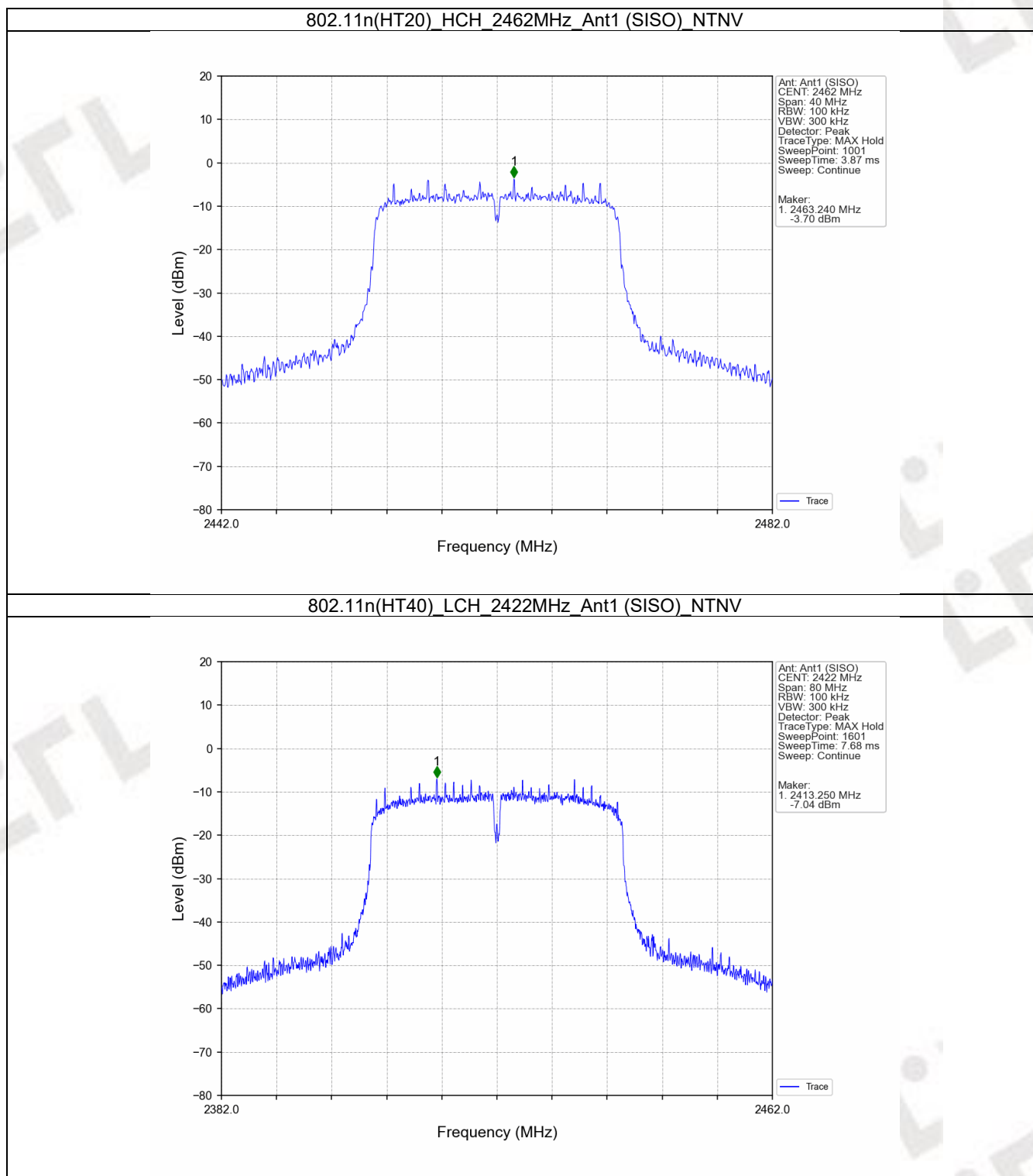
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



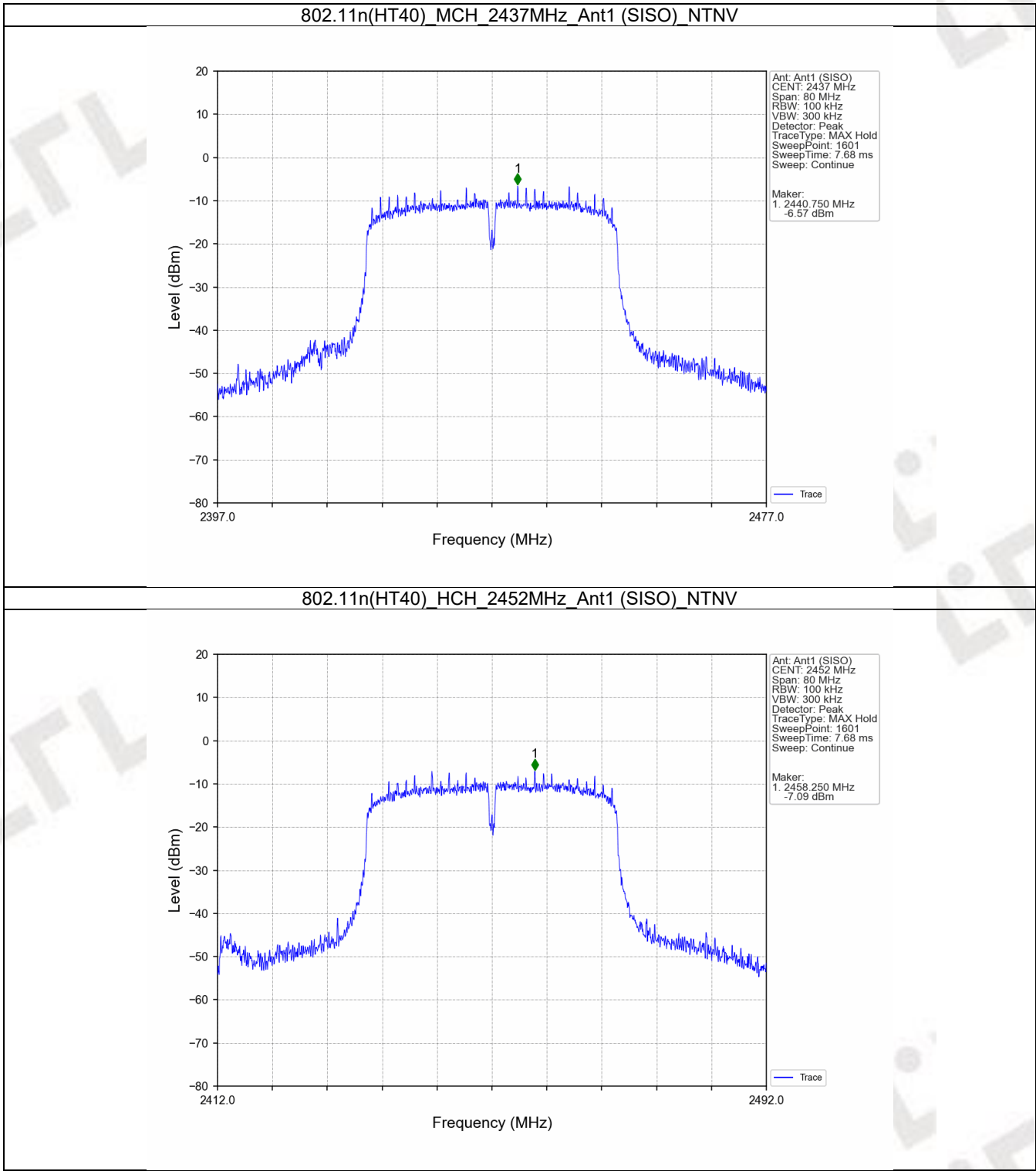
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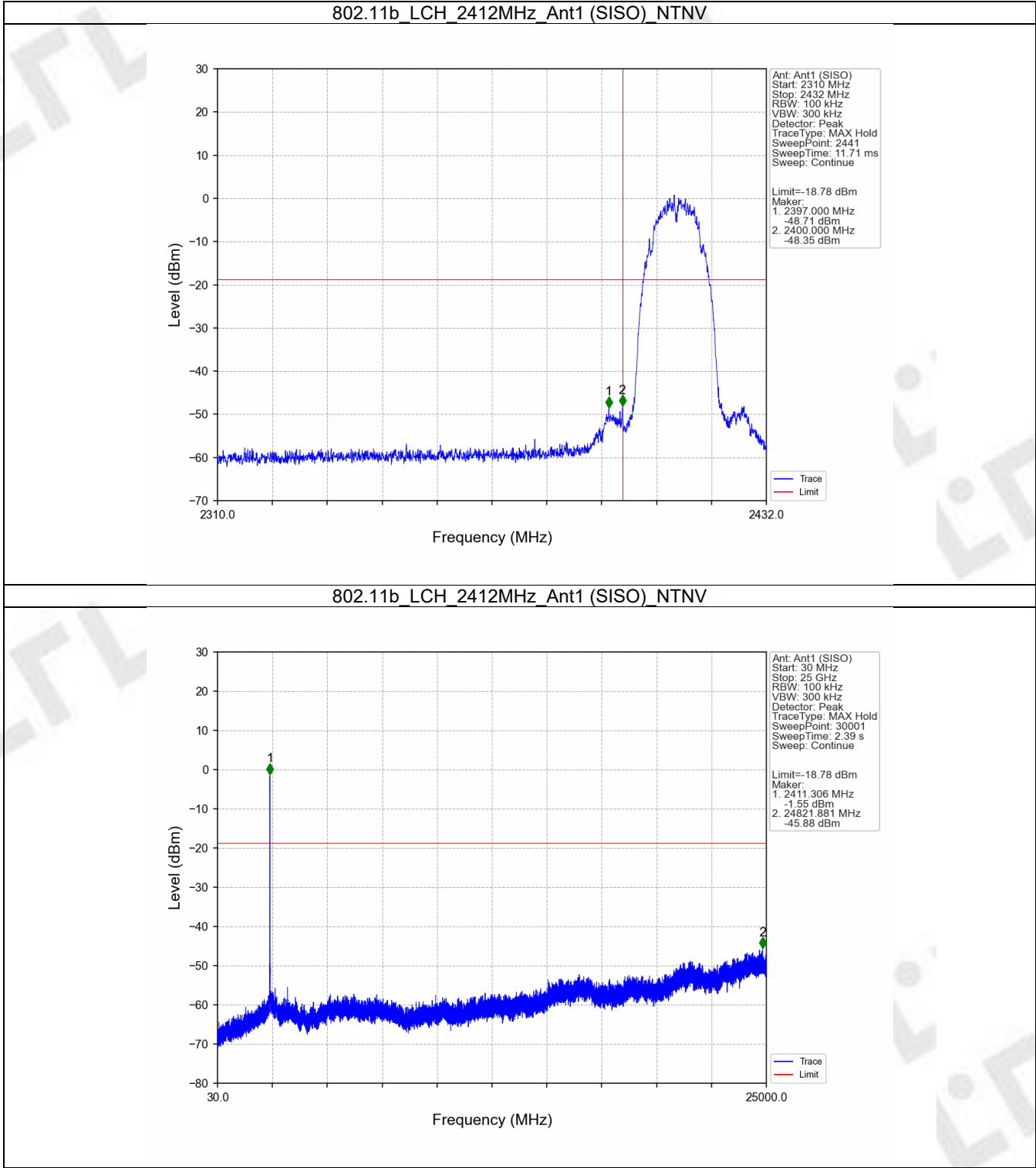


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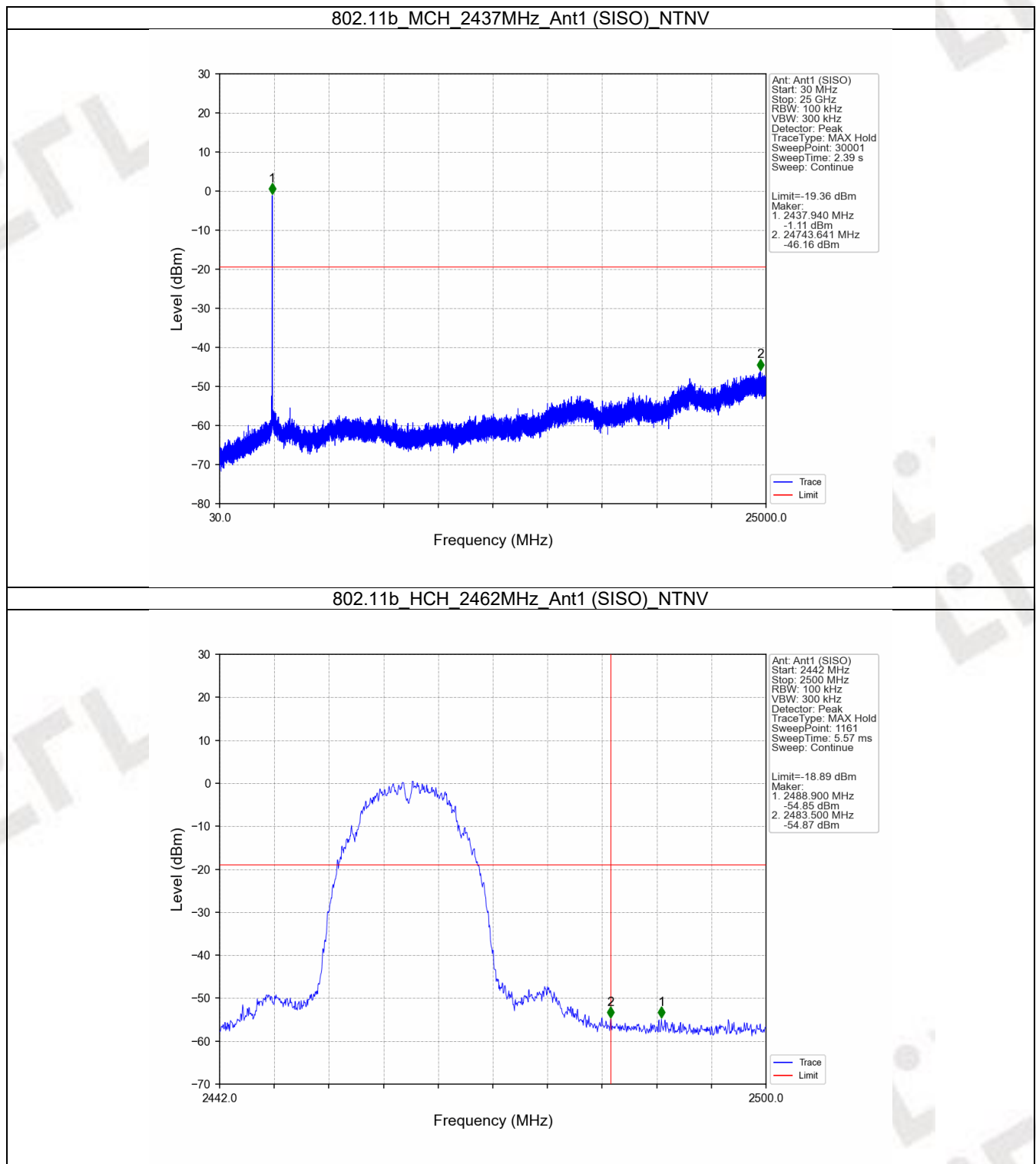


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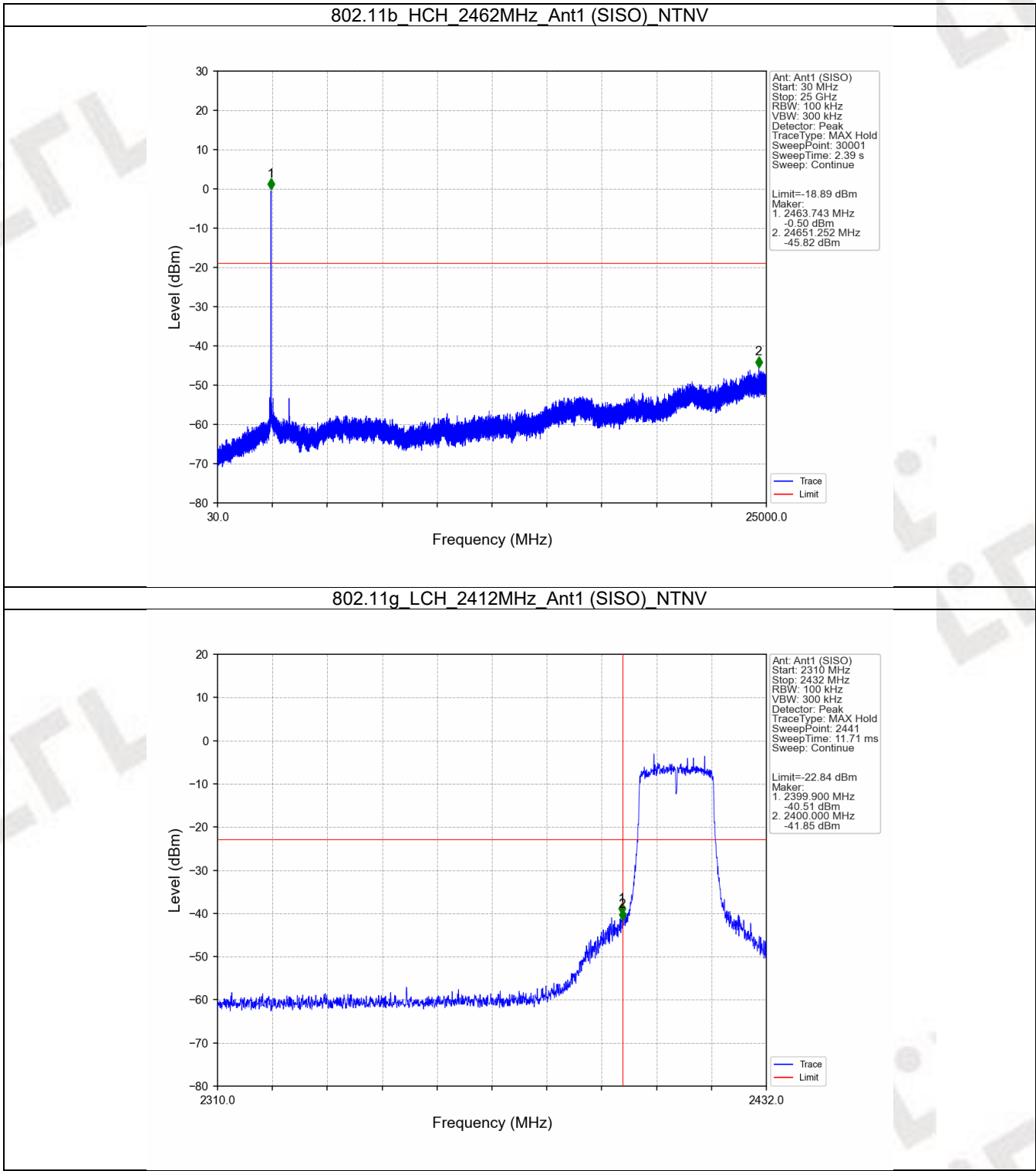
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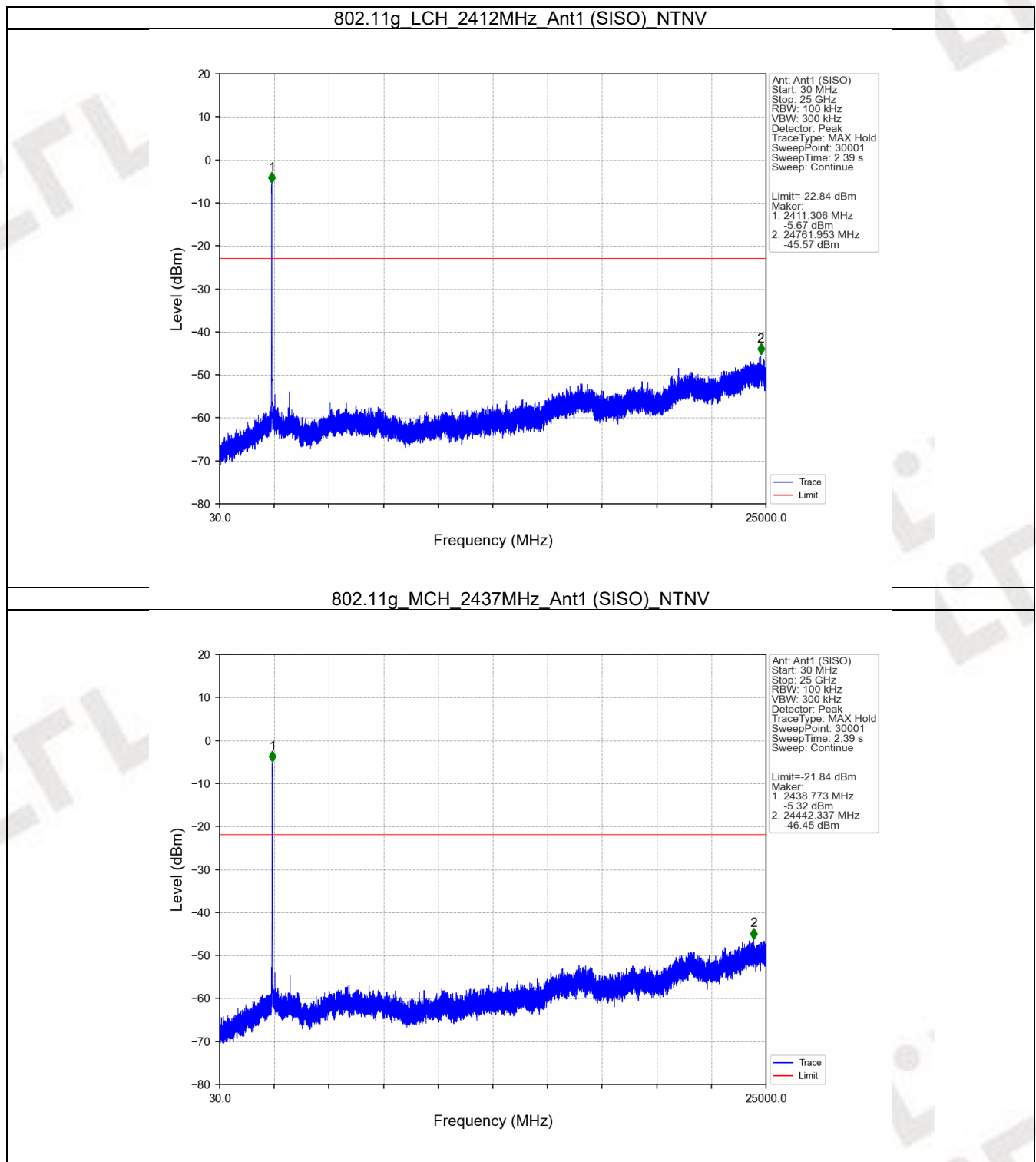
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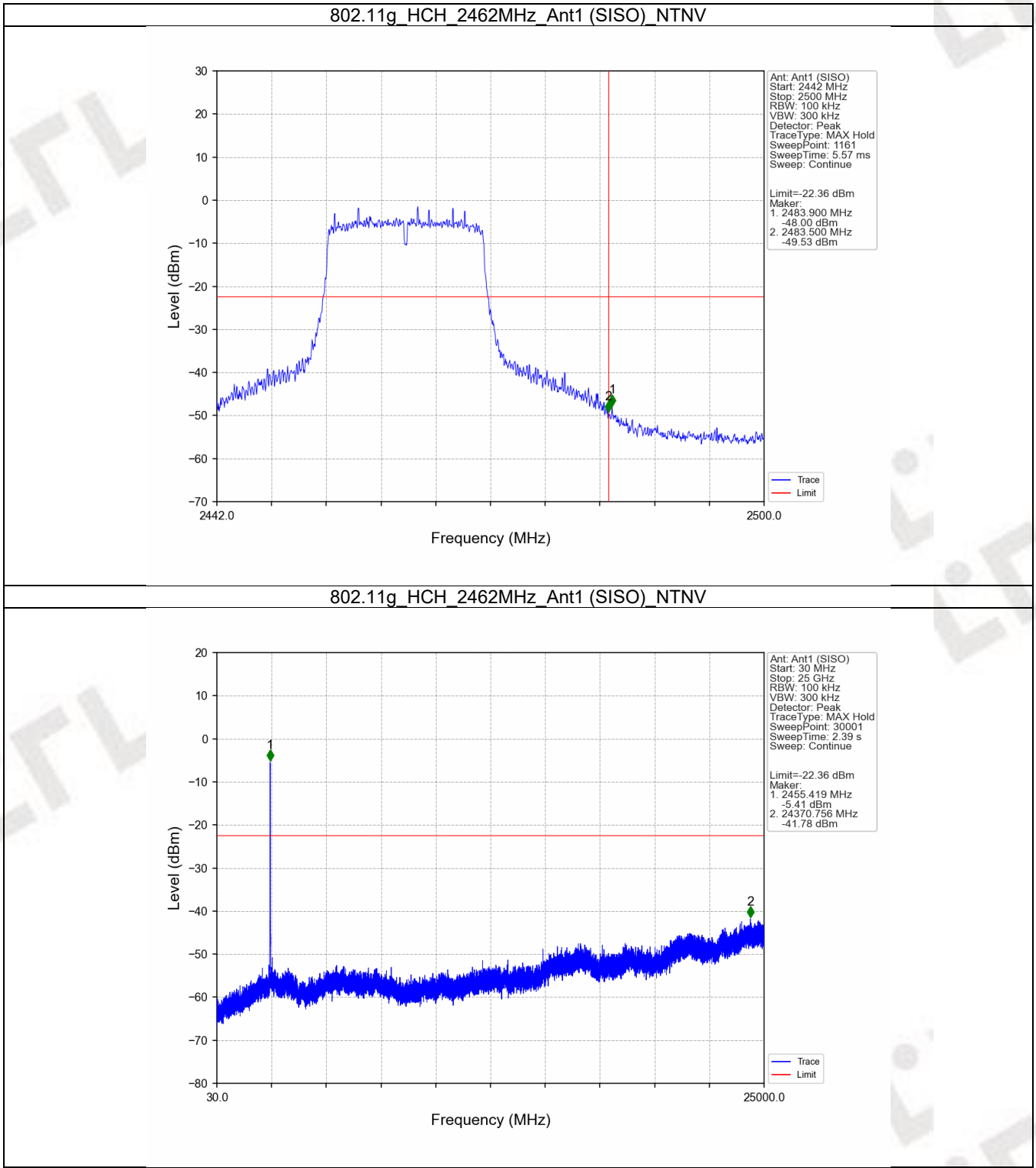
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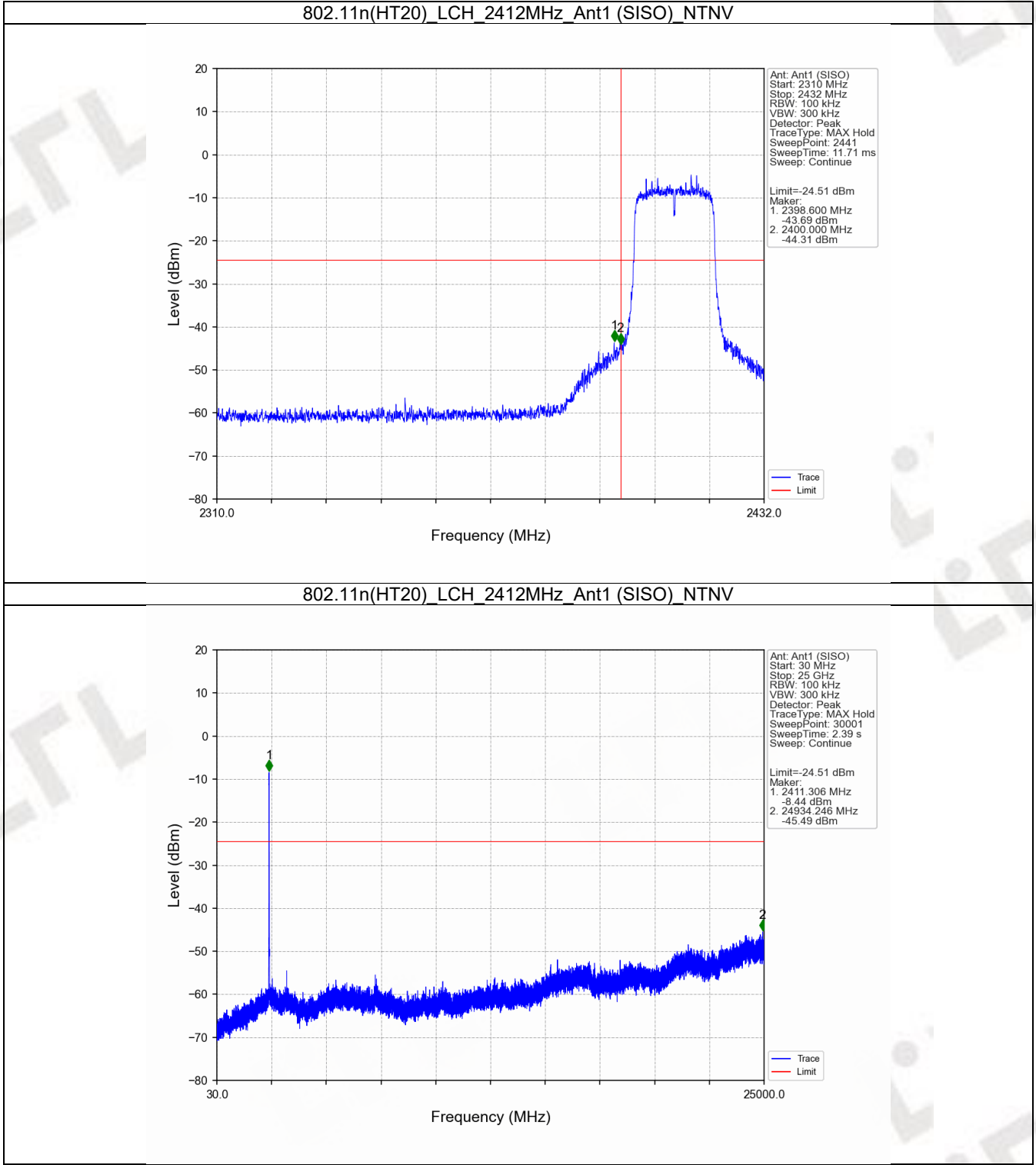
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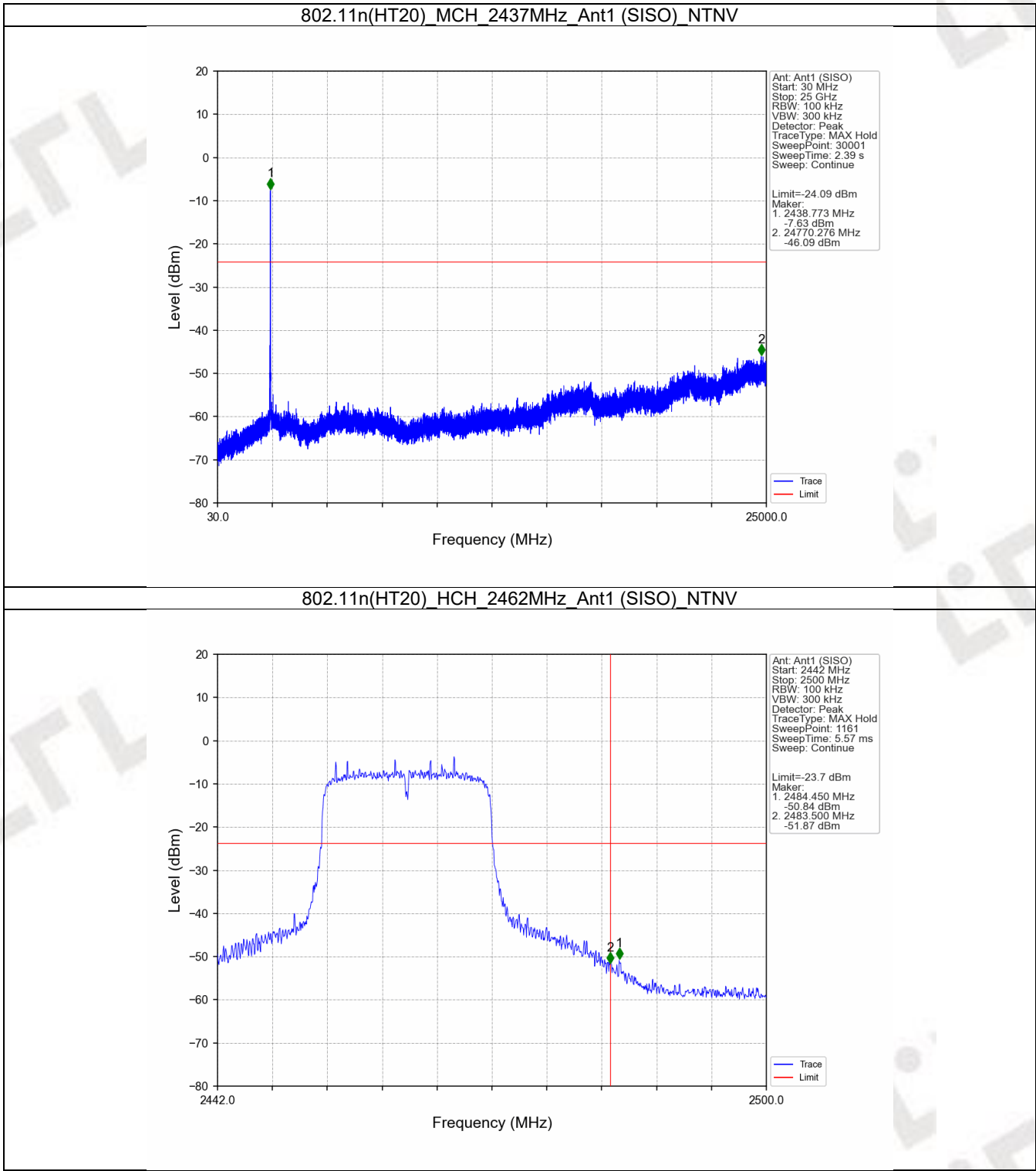
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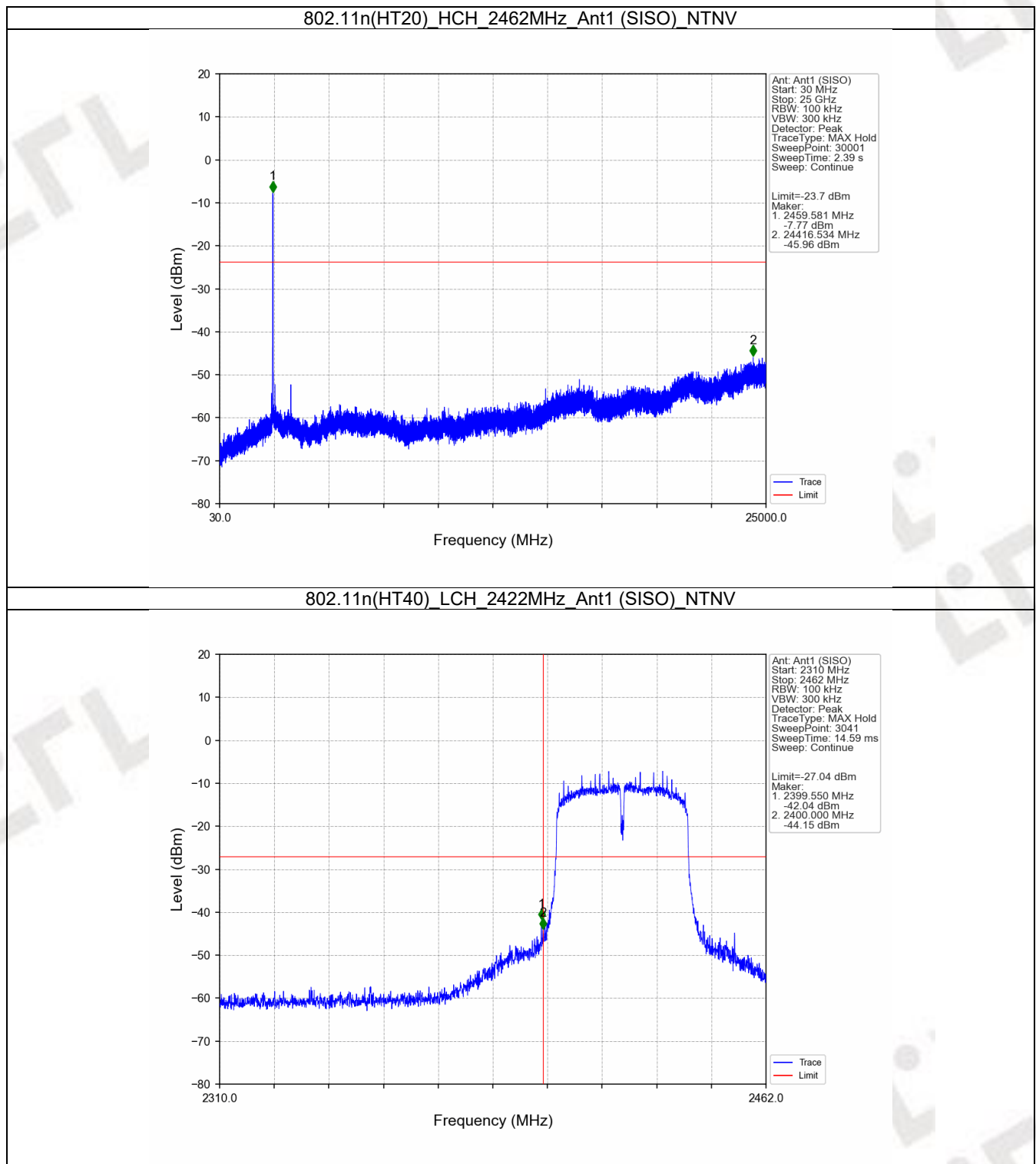
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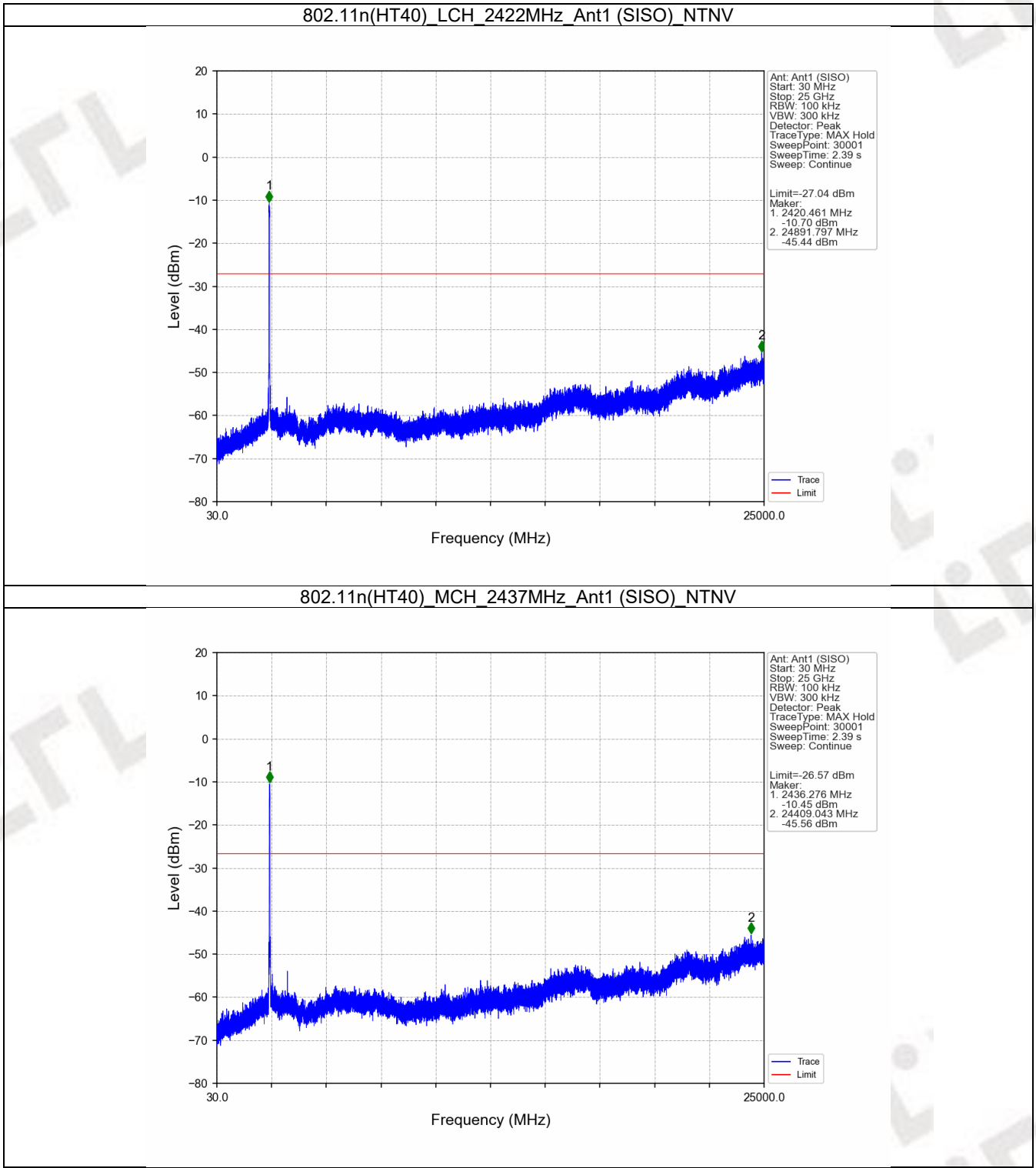
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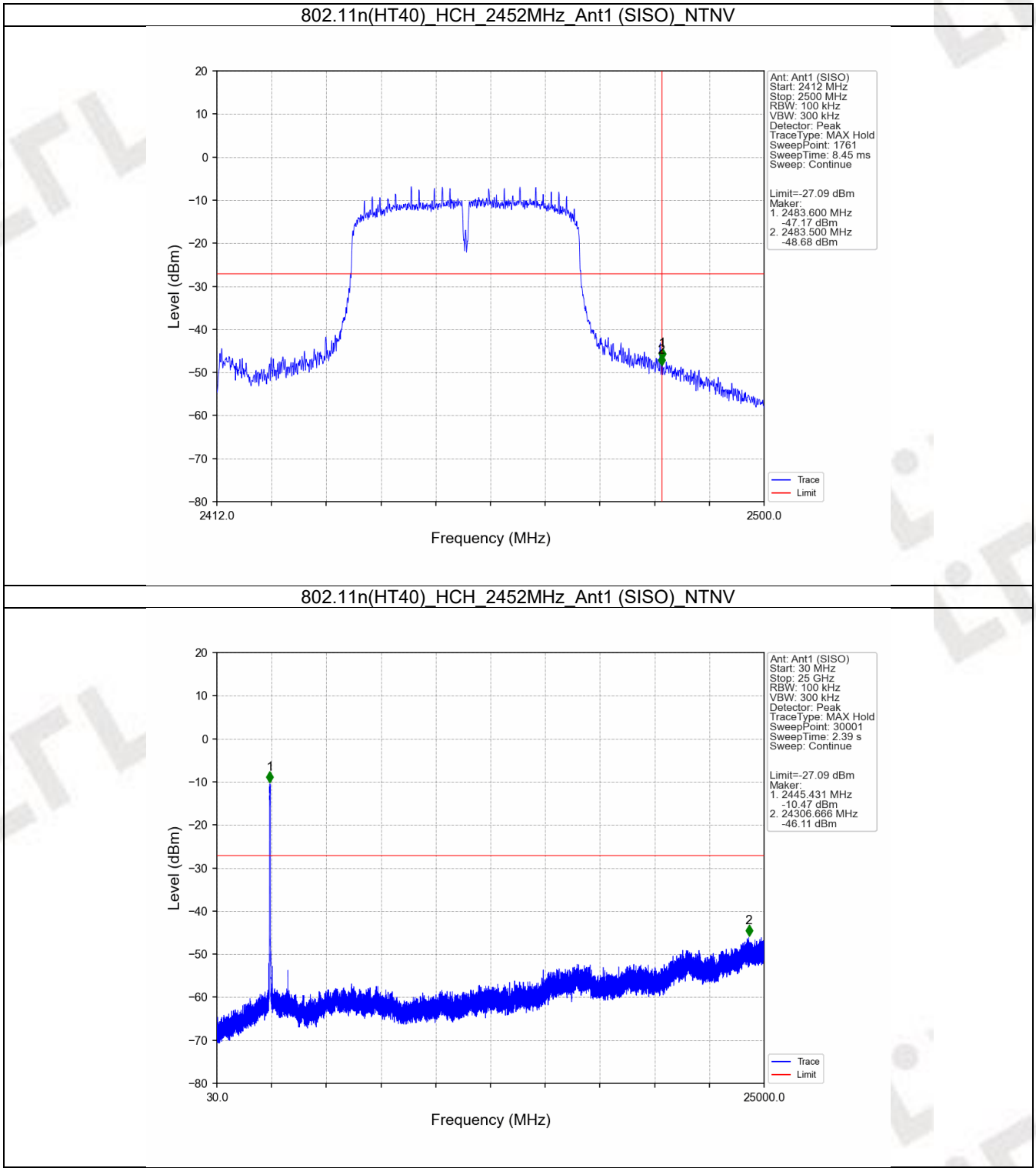
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FCC ID: 2BXU2E130



FCC ID: 2BXU2E130



6. Form731

6.1 Test Result

6.1.1 Form731

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
2412	2462	0.0533	17.27
2422	2452	0.0313	14.95