

Appendix RF Test Data for WIFI 2.4G

Company: : Shenzhen Jintai Intelligent Co., LTD

EUT : Smart alarm clock

FCC ID: : 2BRDQ-X8

Model Number : X8

Report No. : HTT202507543F01

Reviewed By : Heber He

1. Duty Cycle

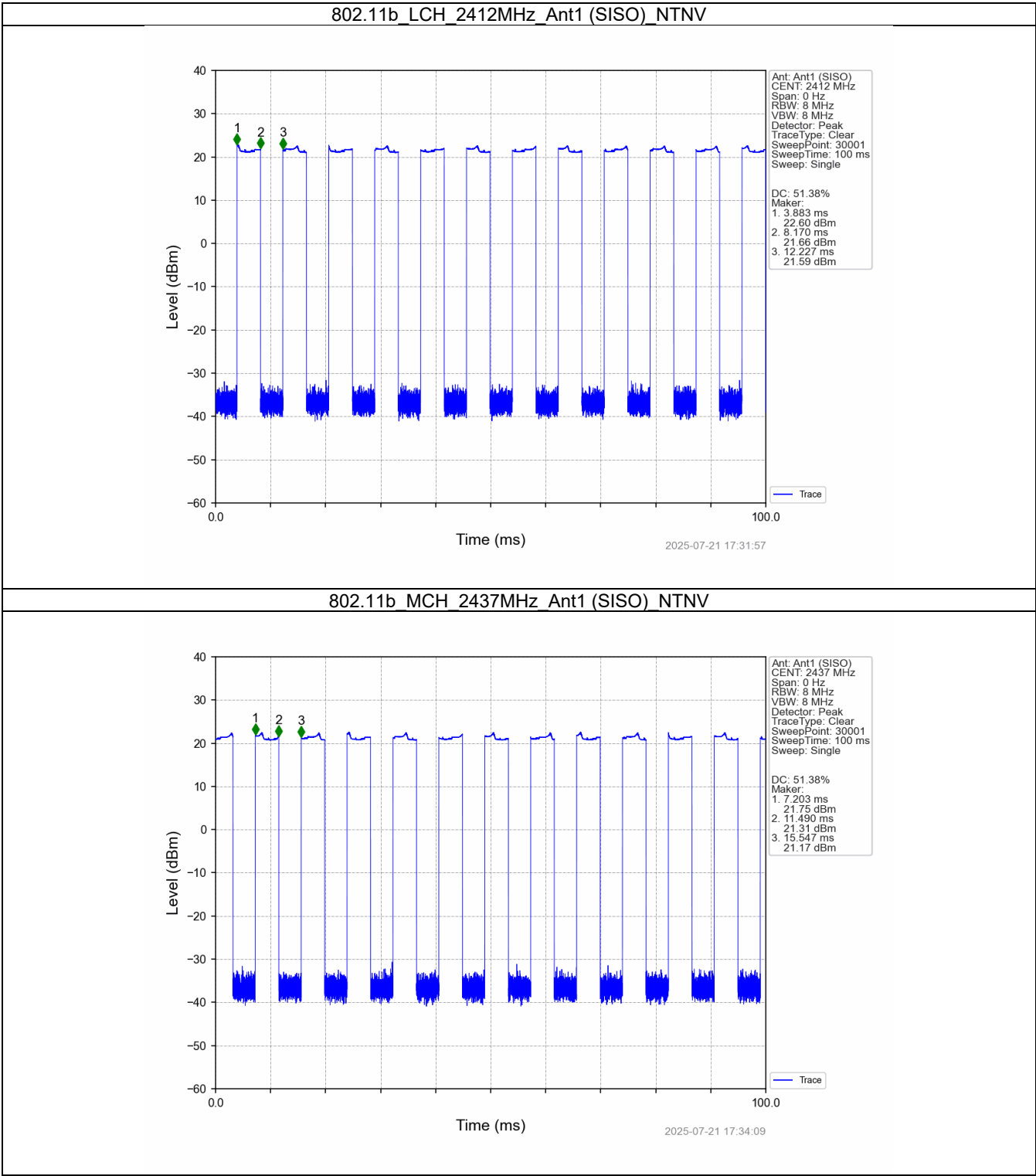
1.1 Test Result

1.1.1 Ant1

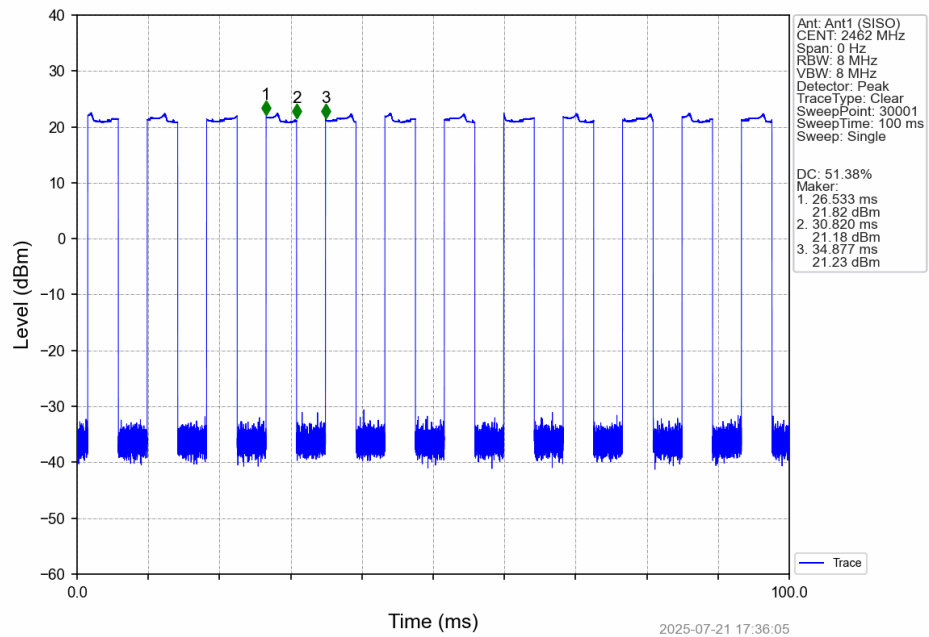
Ant1							
Mode	Tx Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	4.287	8.344	51.38	2.89	0.04
		2437	4.287	8.344	51.38	2.89	0.04
		2462	4.287	8.344	51.38	2.89	0.04
802.11g	SISO	2412	0.244	0.399	61.15	2.14	0.03
		2437	0.244	0.399	61.15	2.14	0.03
		2462	0.245	0.398	61.56	2.11	0.03
802.11n (HT20)	SISO	2412	0.544	1.199	45.37	3.43	0.03
		2437	0.545	1.199	45.45	3.42	0.03
		2462	0.546	1.308	41.74	3.79	3.77

1.2 Test Graph

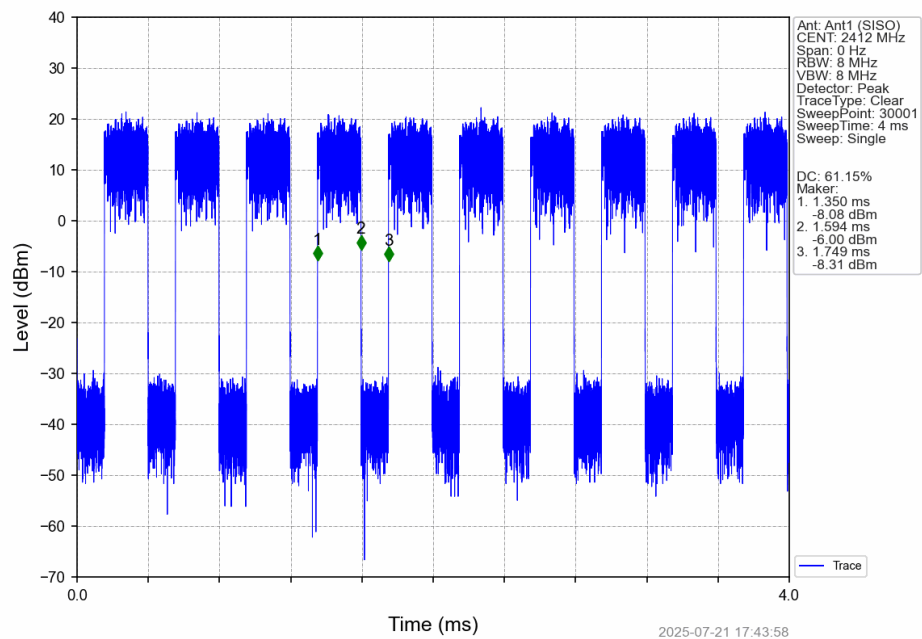
1.2.1 Ant1



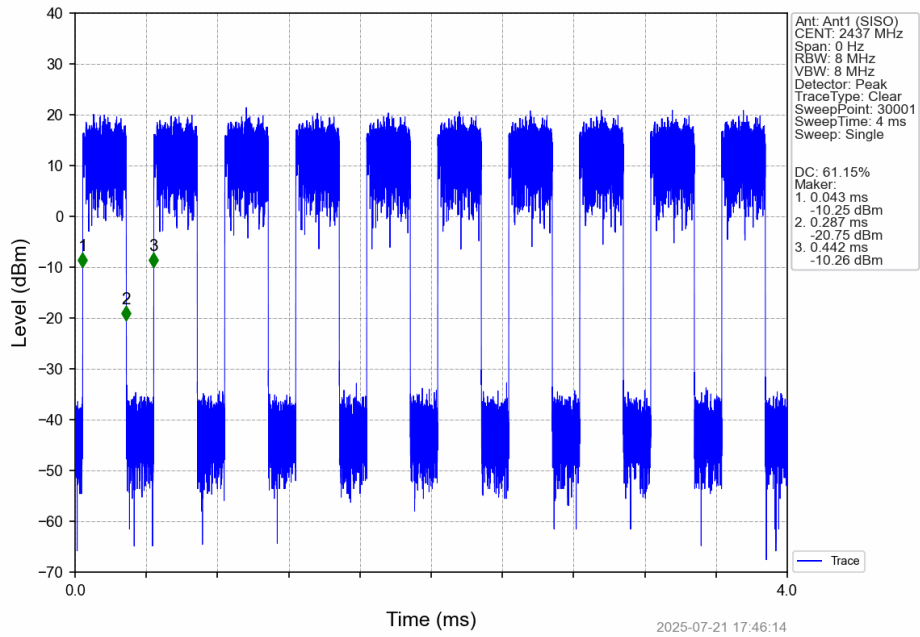
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



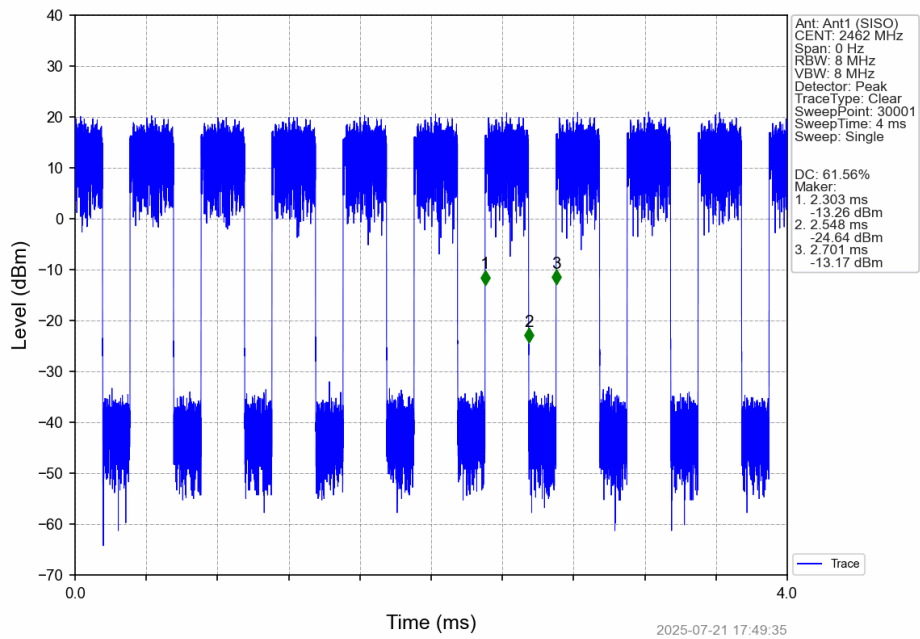
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



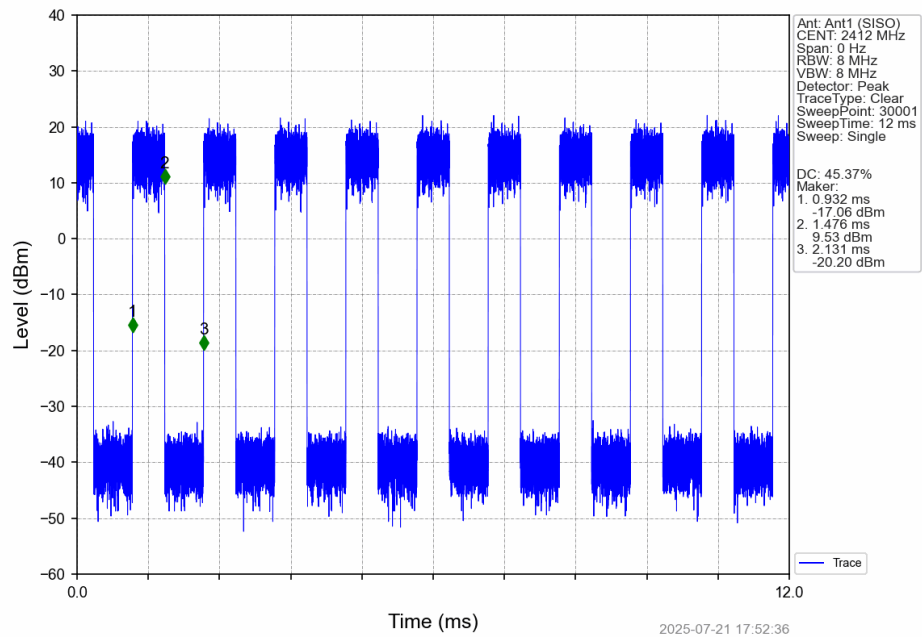
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



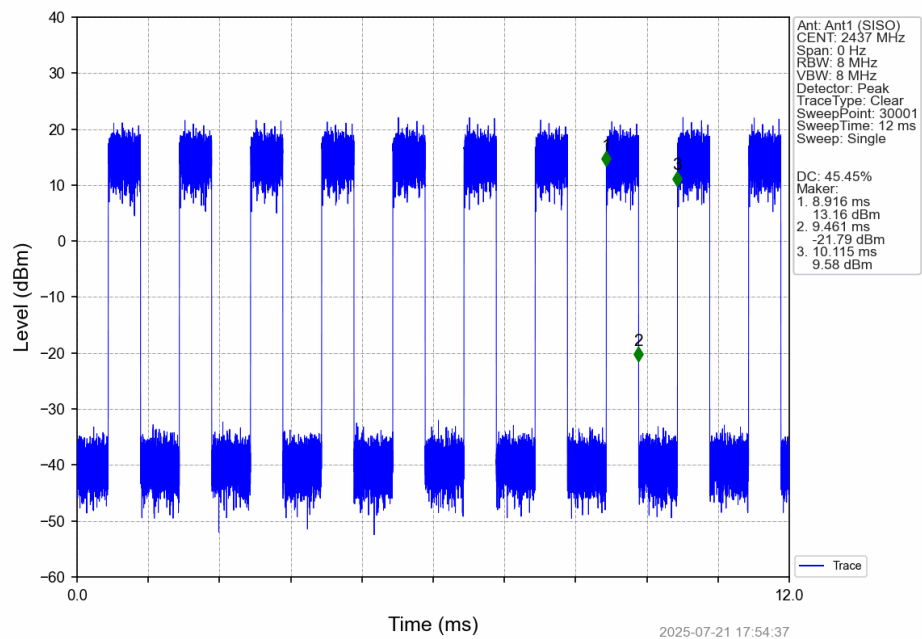
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



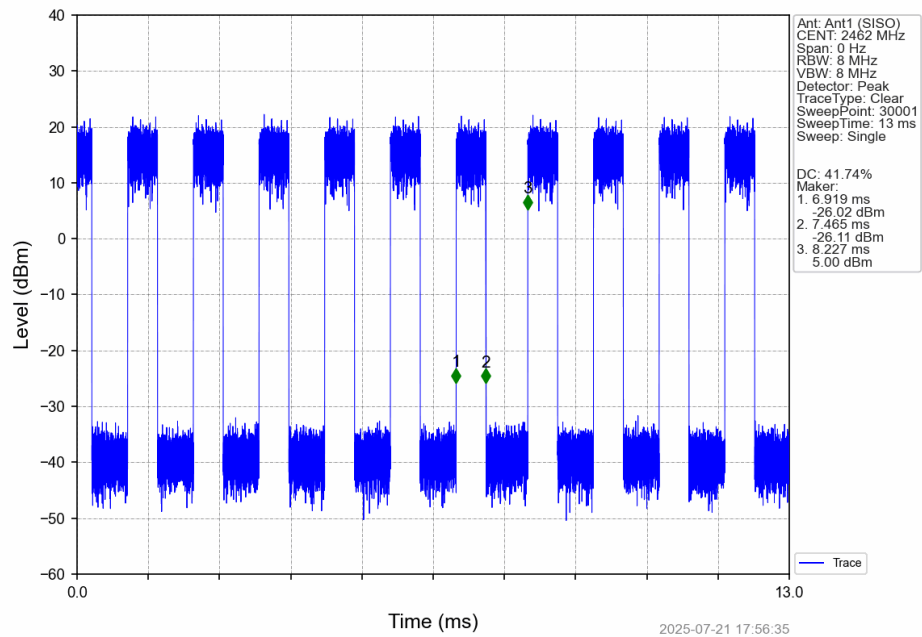
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

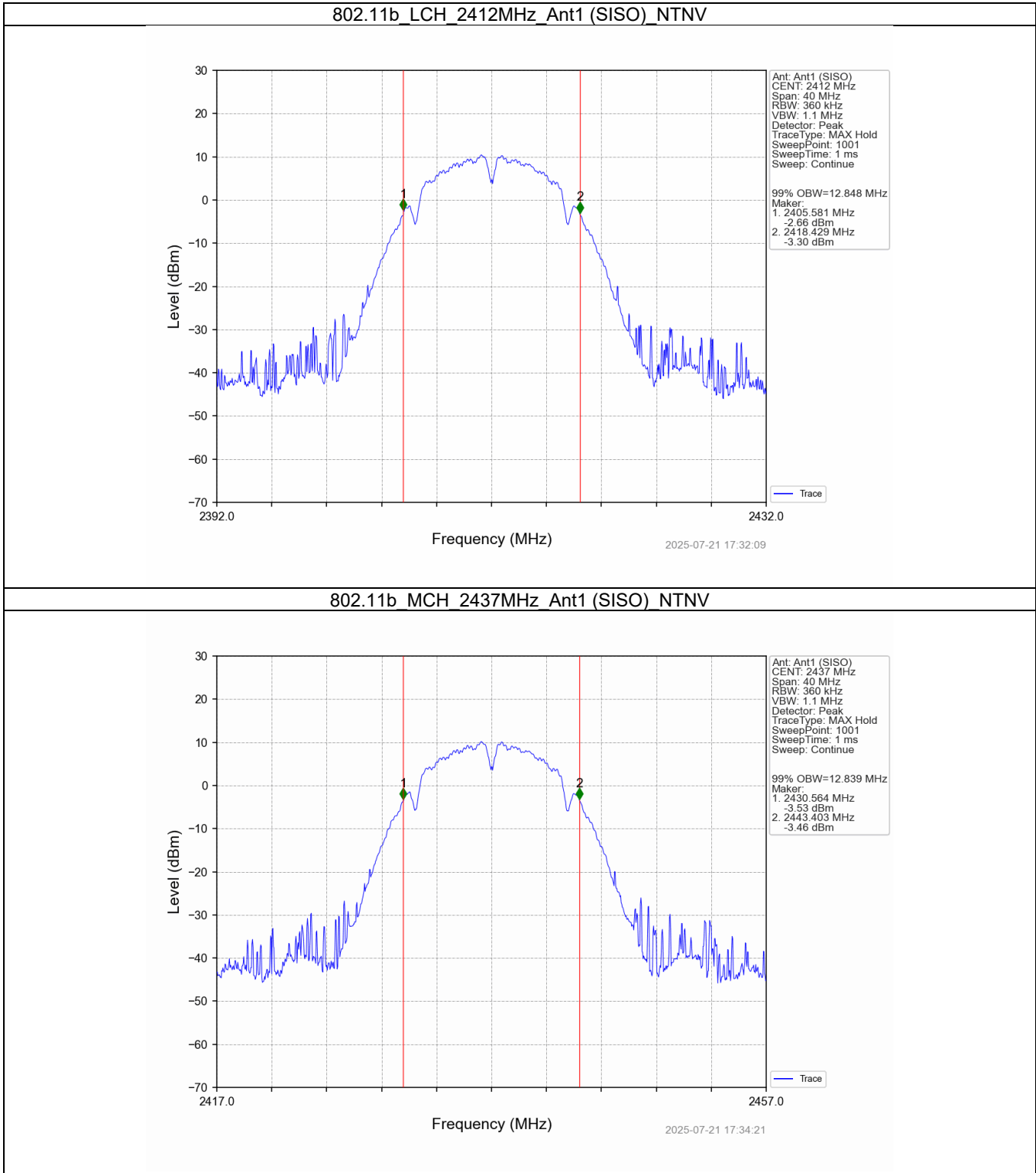
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	12.848	/	Pass
		2437	1	12.839	/	Pass
		2462	1	12.860	/	Pass
802.11g	SISO	2412	1	17.252	/	Pass
		2437	1	17.215	/	Pass
		2462	1	17.217	/	Pass
802.11n (HT20)	SISO	2412	1	18.194	/	Pass
		2437	1	18.194	/	Pass
		2462	1	18.173	/	Pass

2.1.2 6dB BW

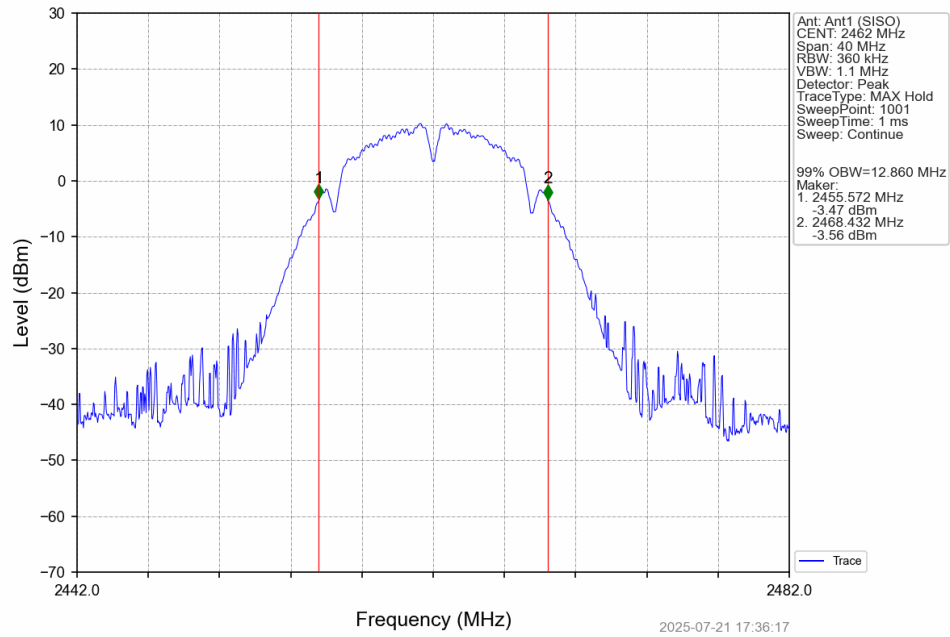
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.331	≥ 0.5	Pass
		2437	1	8.711	≥ 0.5	Pass
		2462	1	8.258	≥ 0.5	Pass
802.11g	SISO	2412	1	16.507	≥ 0.5	Pass
		2437	1	16.489	≥ 0.5	Pass
		2462	1	16.498	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.602	≥ 0.5	Pass
		2437	1	17.587	≥ 0.5	Pass
		2462	1	17.596	≥ 0.5	Pass

2.2 Test Graph

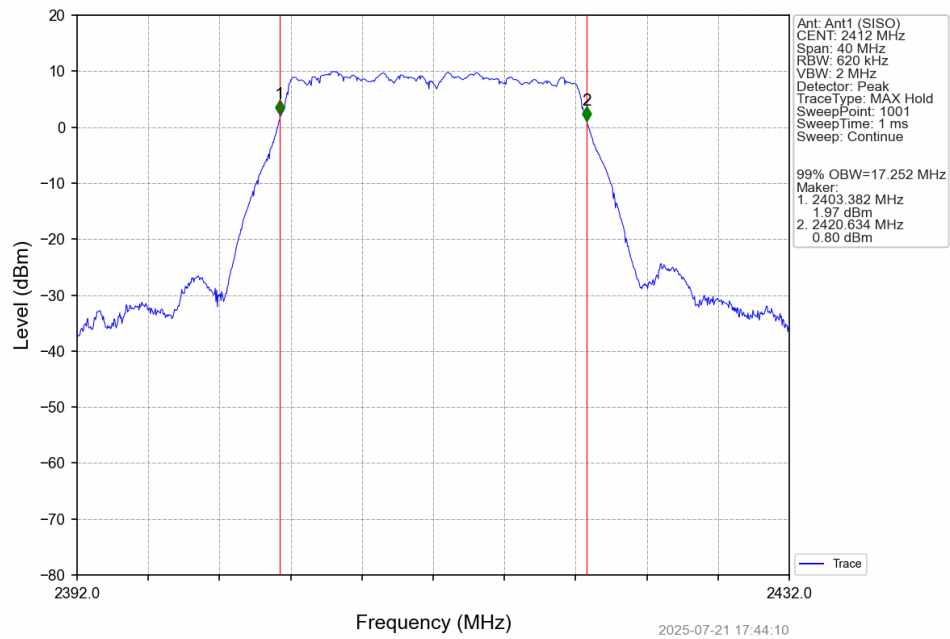
2.2.1 OBW



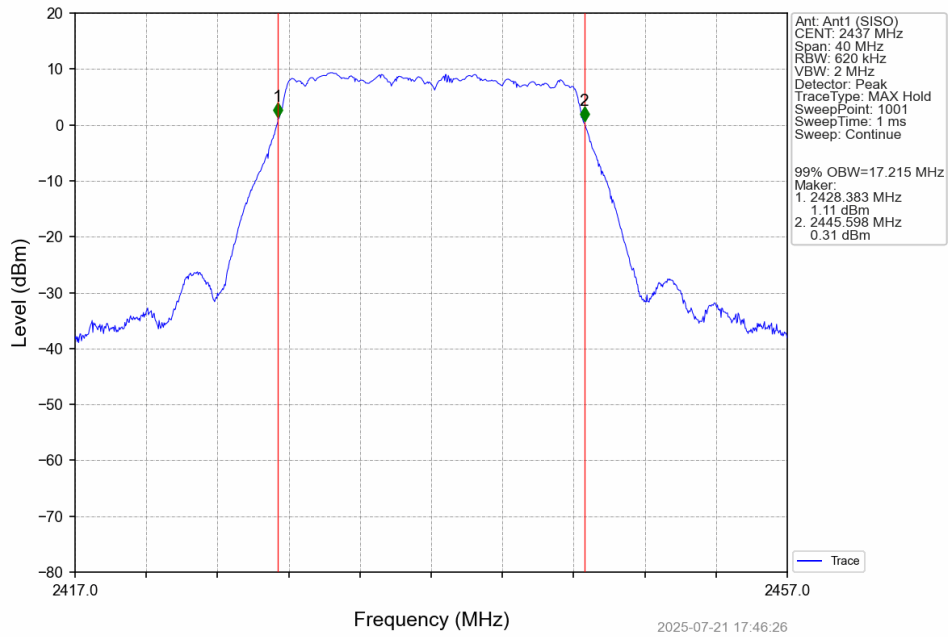
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



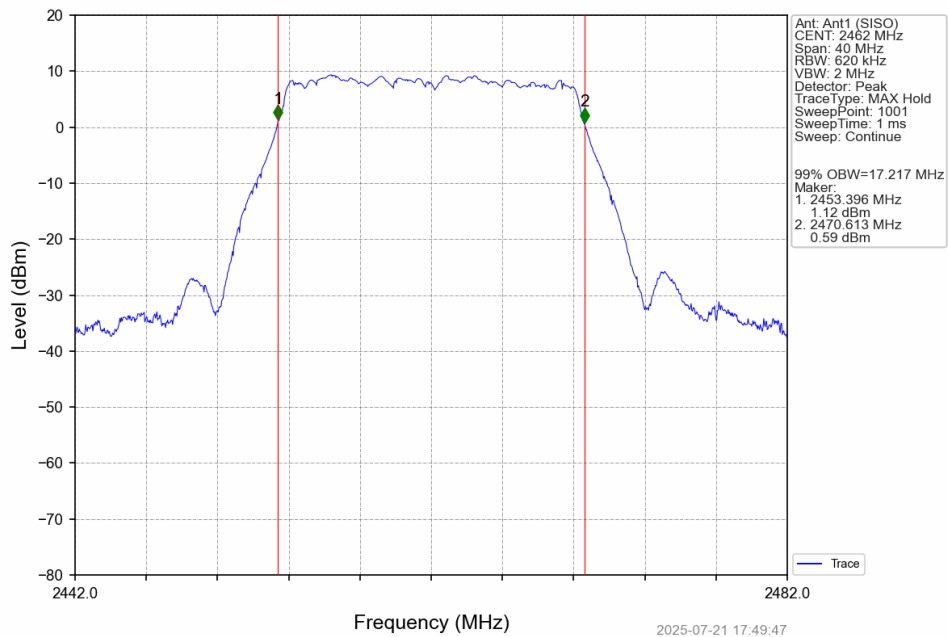
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



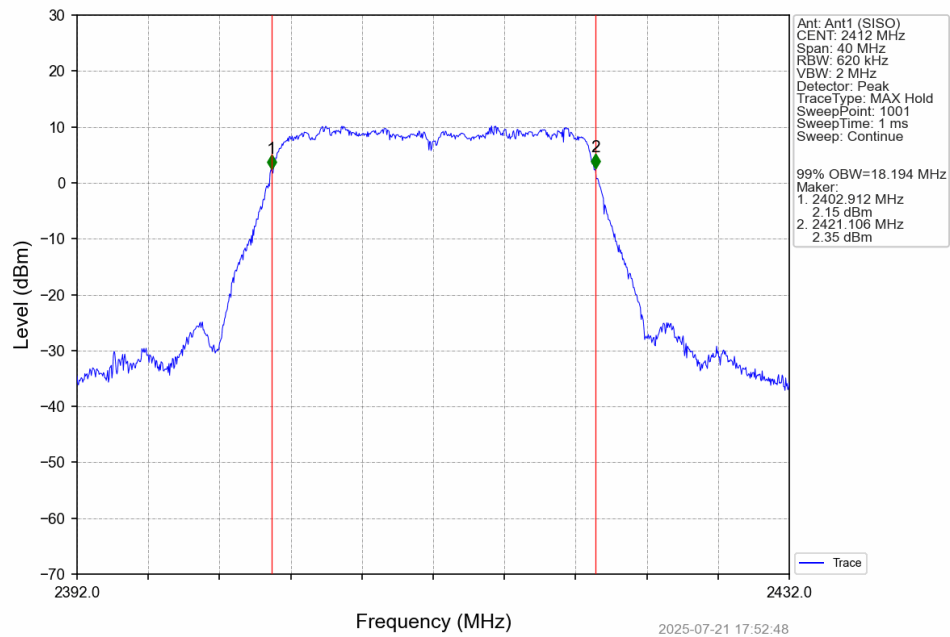
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



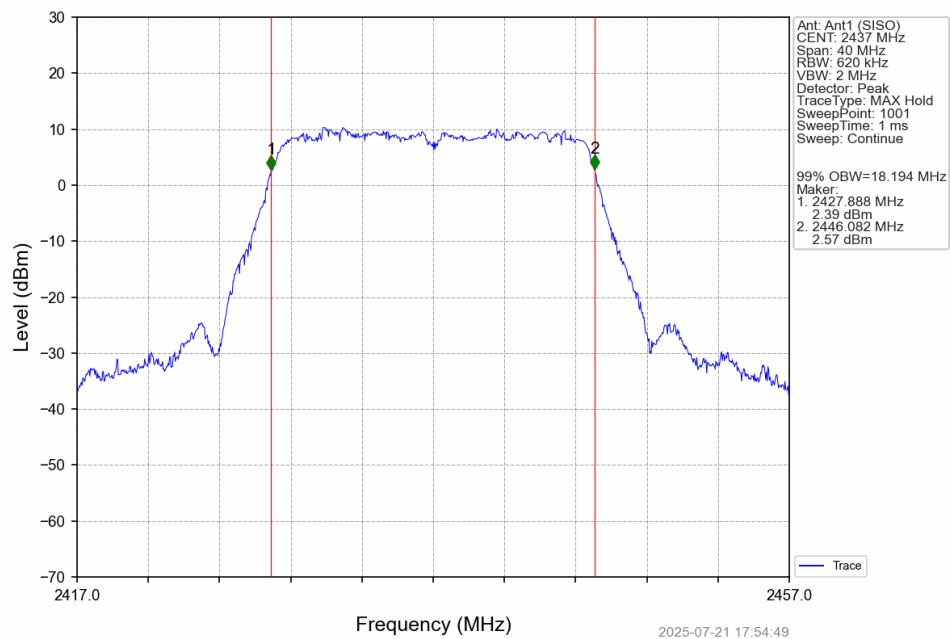
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



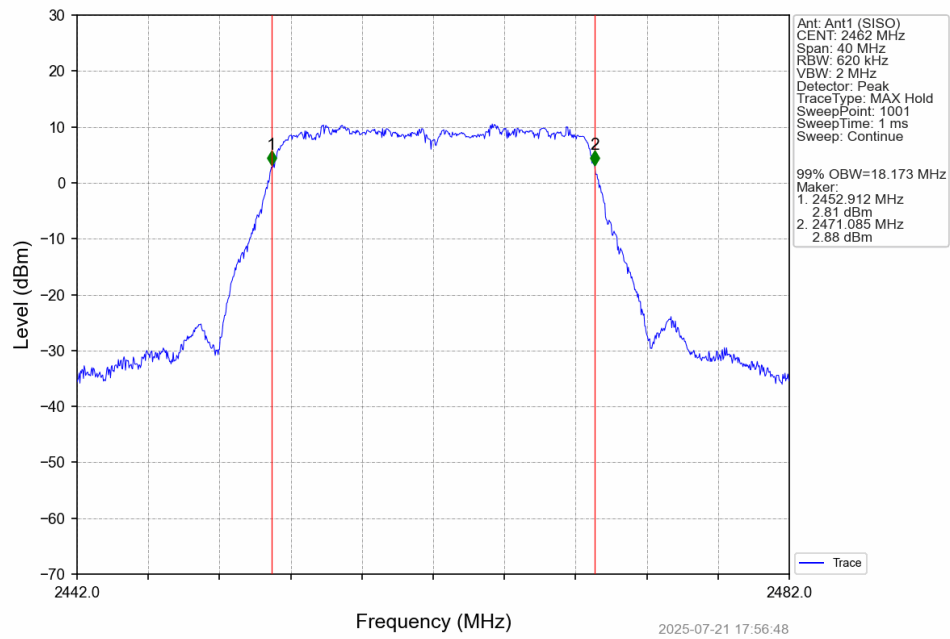
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



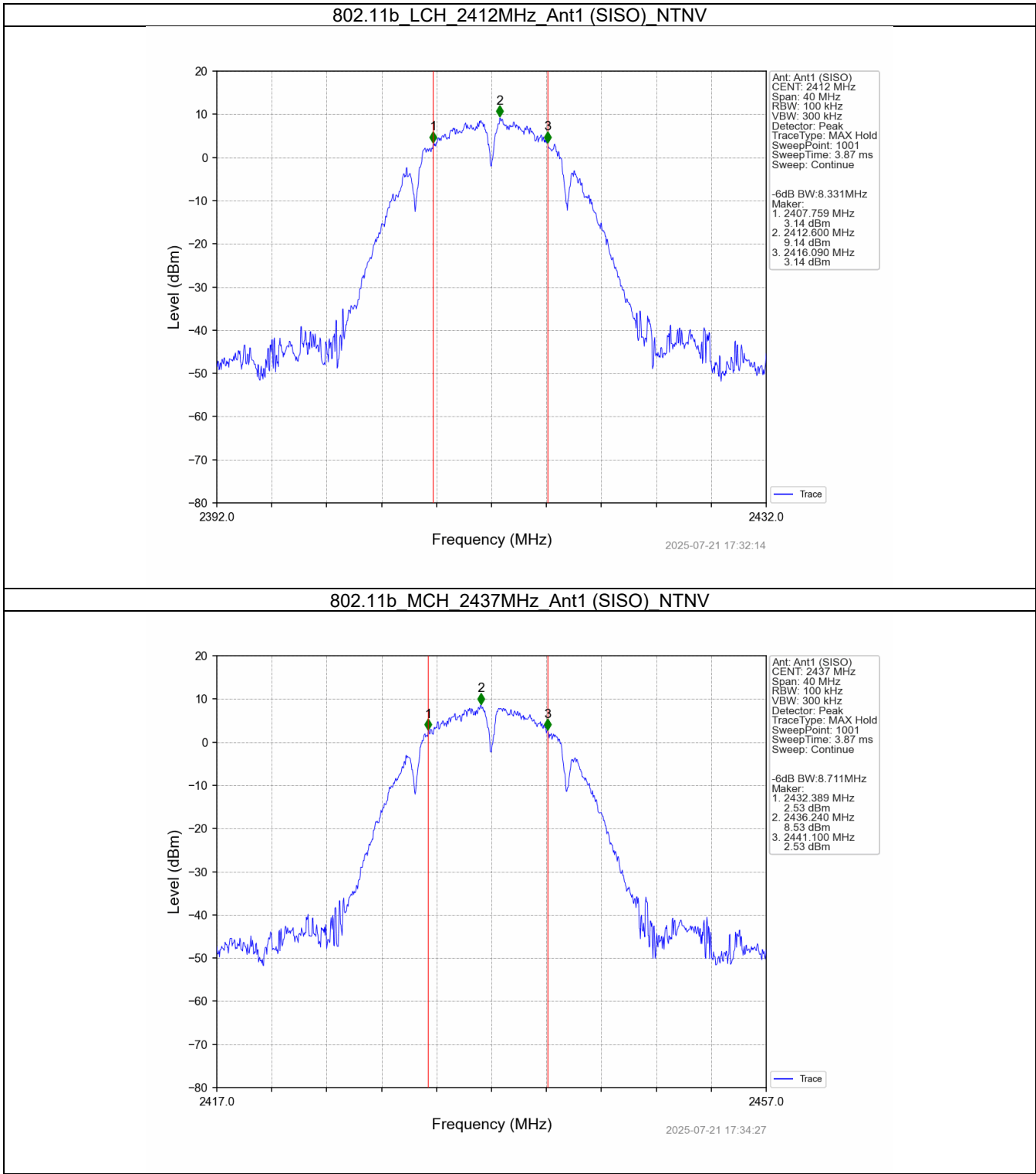
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



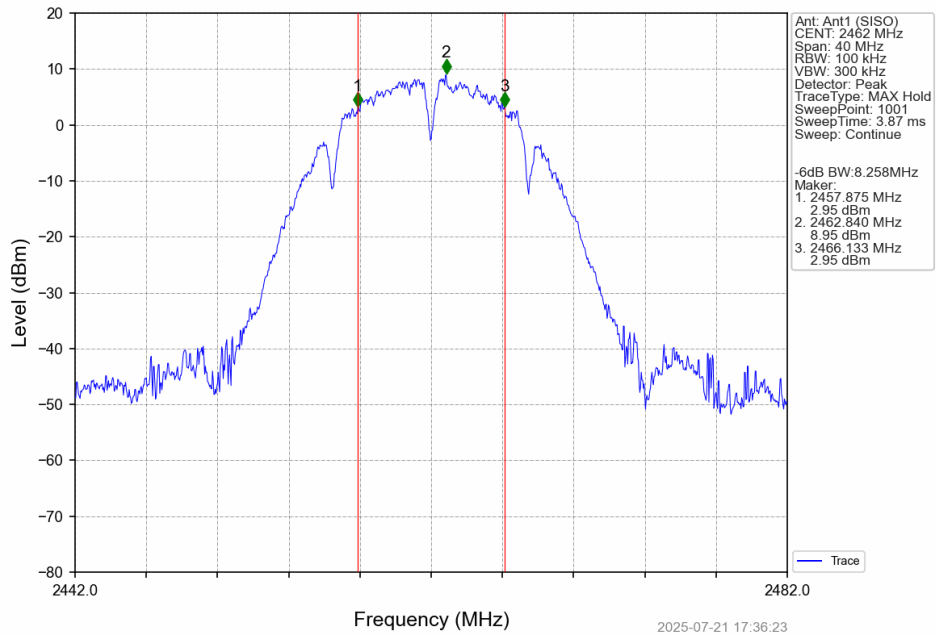
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



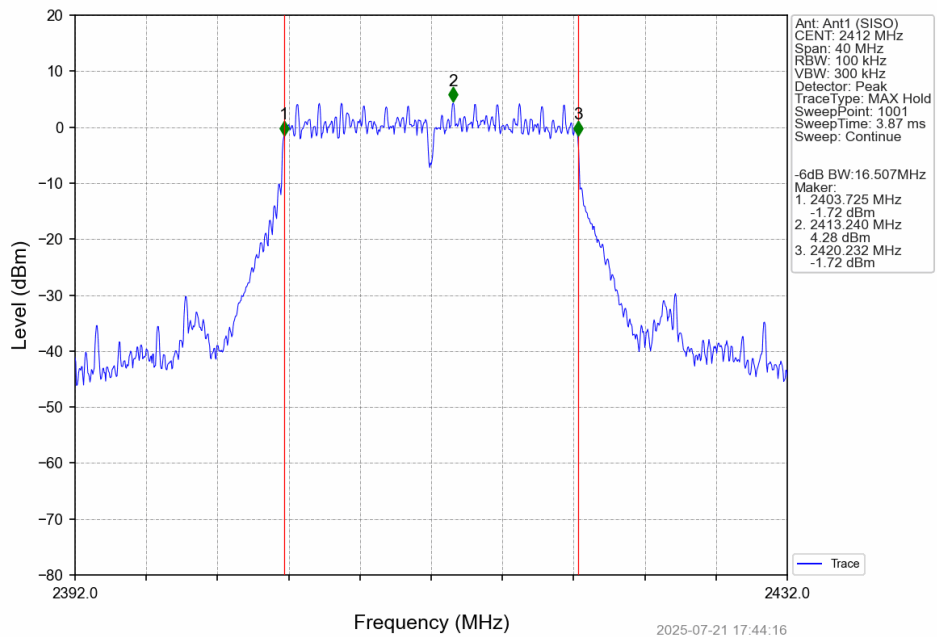
2.2.2 6dB BW



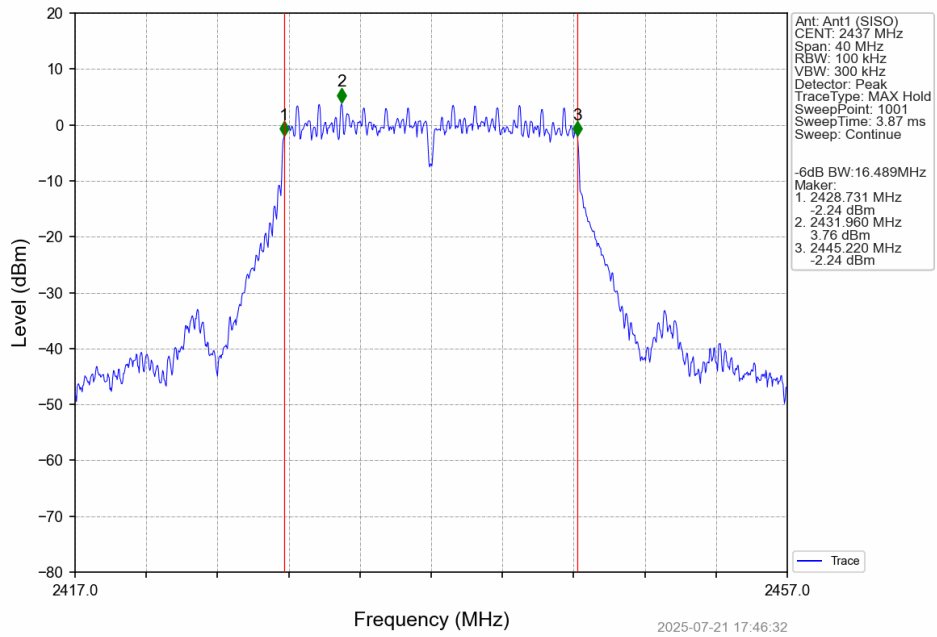
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



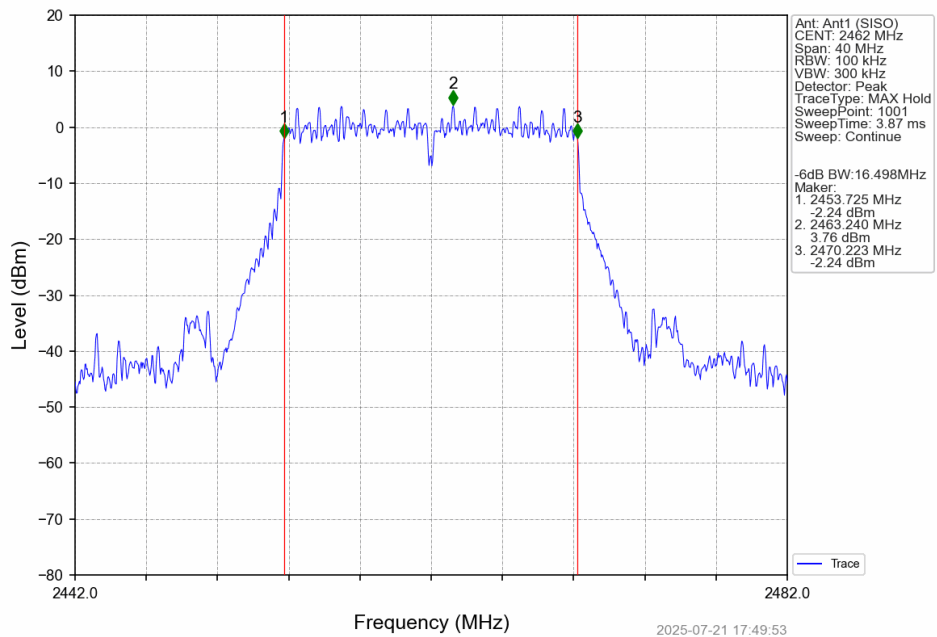
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



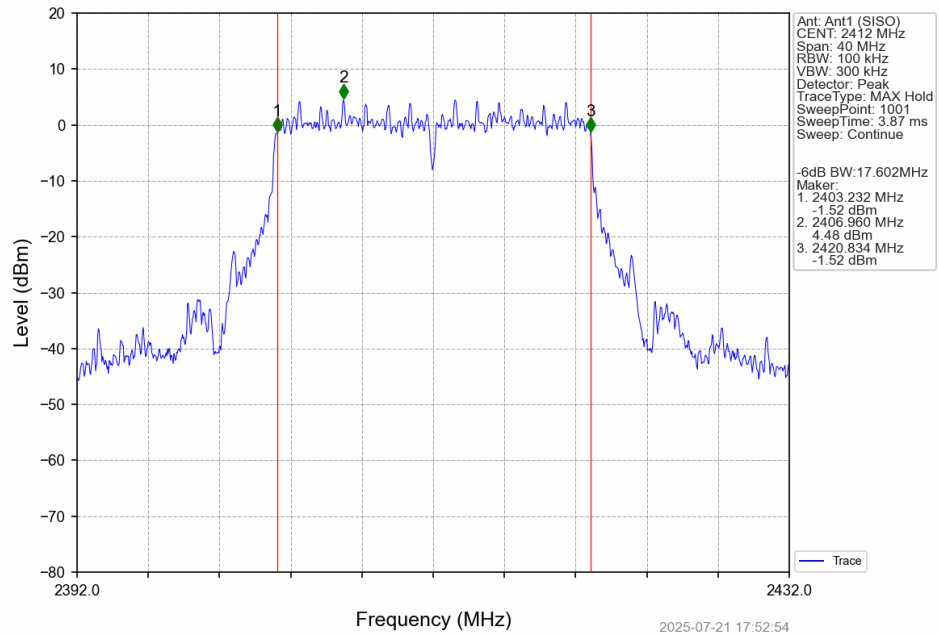
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



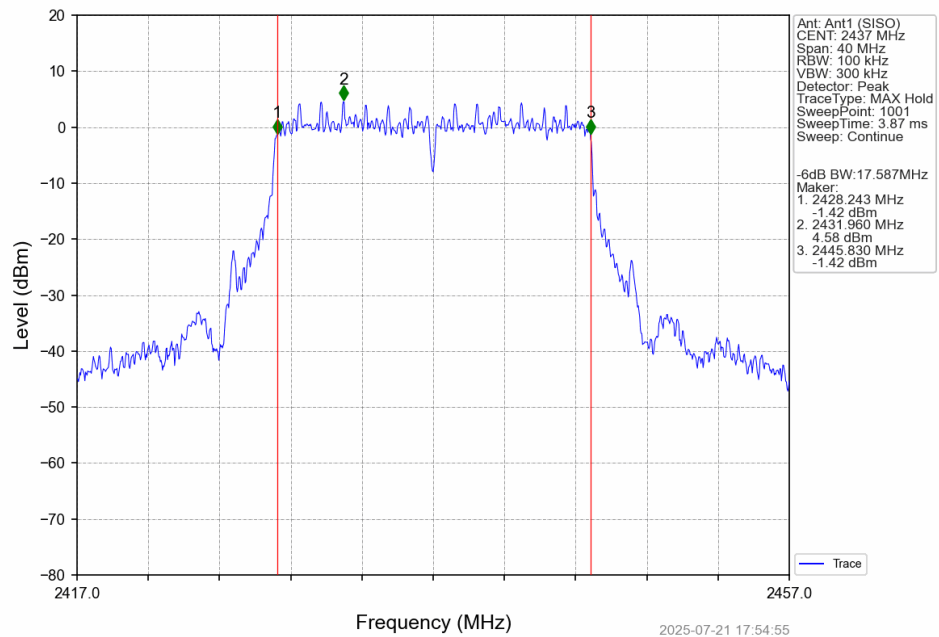
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



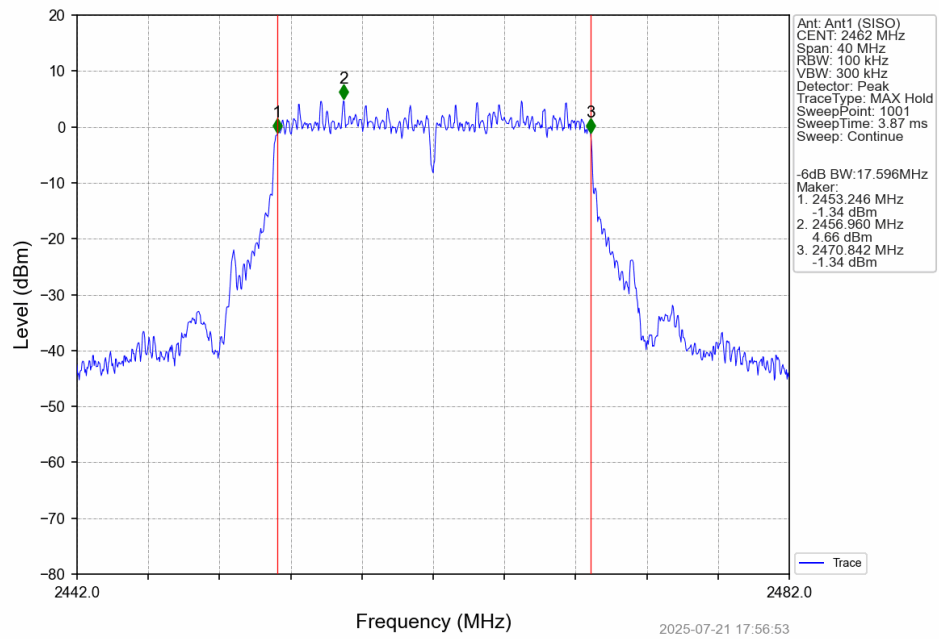
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



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	20.51	<=30	Pass
		2437	20.51	<=30	Pass
		2462	20.30	<=30	Pass
802.11g	SISO	2412	23.03	<=30	Pass
		2437	22.36	<=30	Pass
		2462	22.48	<=30	Pass
802.11n (HT20)	SISO	2412	23.34	<=30	Pass
		2437	23.35	<=30	Pass
		2462	23.54	<=30	Pass

4. Maximum Power Spectral Density

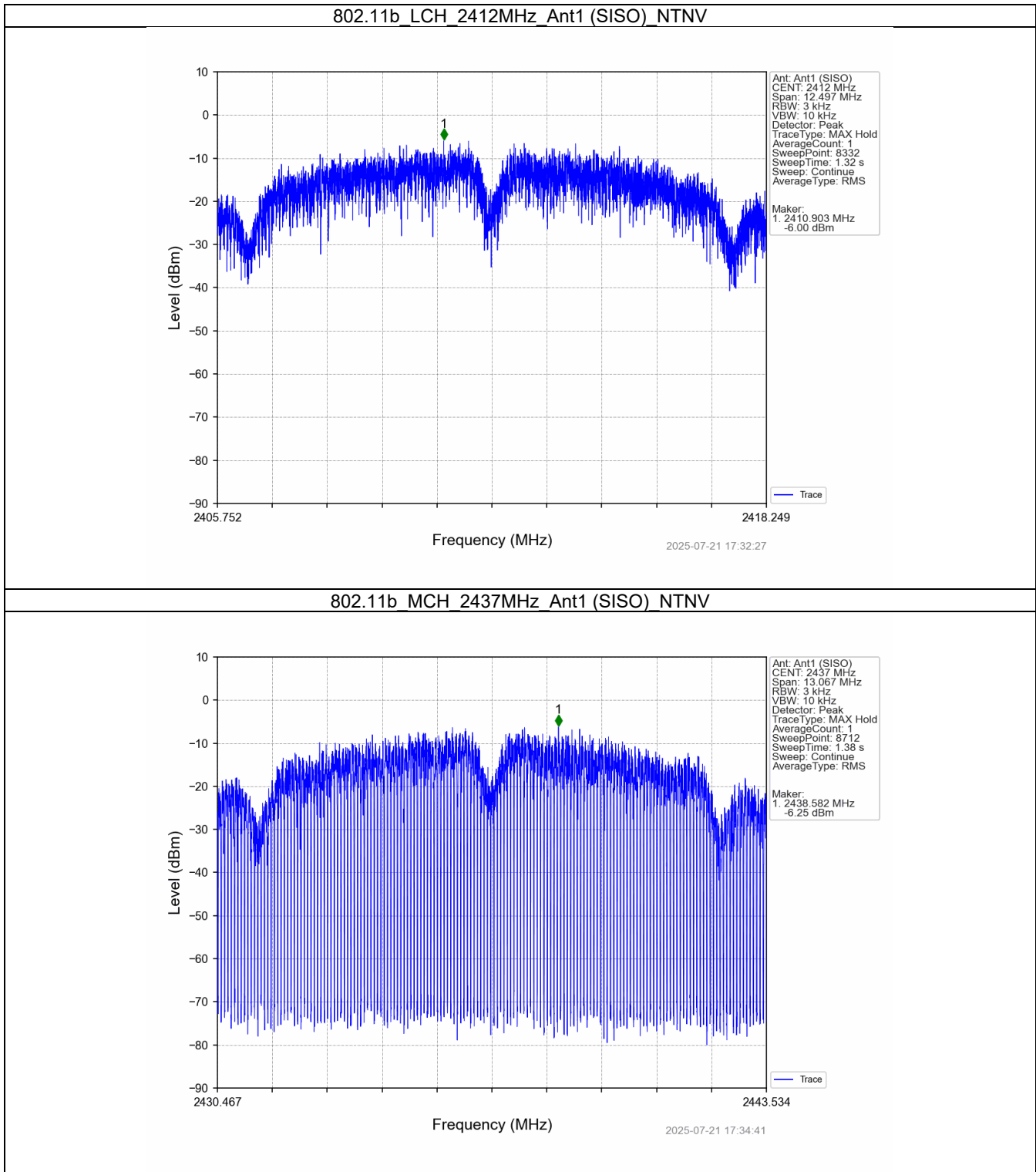
4.1 Test Result

4.1.1 PSD

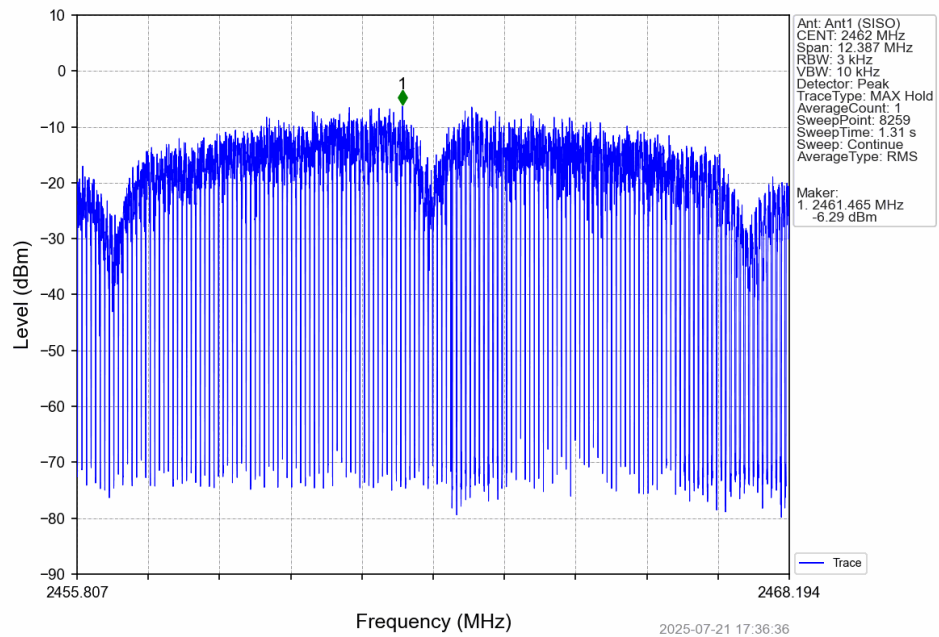
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-6.00	<=8	Pass
		2437	-6.25	<=8	Pass
		2462	-6.29	<=8	Pass
802.11g	SISO	2412	-10.82	<=8	Pass
		2437	-11.62	<=8	Pass
		2462	-11.34	<=8	Pass
802.11n (HT20)	SISO	2412	-10.42	<=8	Pass
		2437	-9.56	<=8	Pass
		2462	-11.00	<=8	Pass

4.2 Test Graph

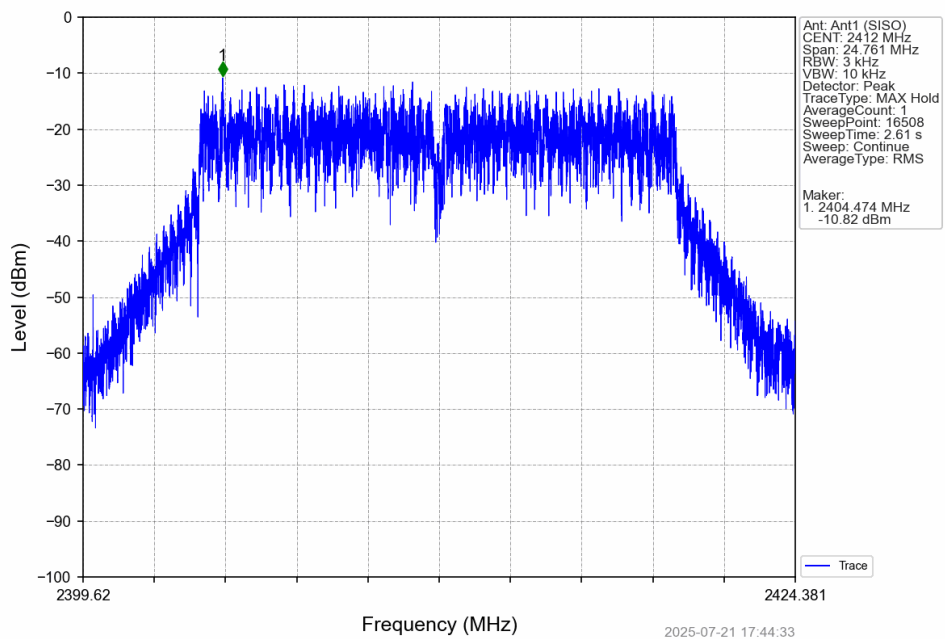
4.2.1 PSD



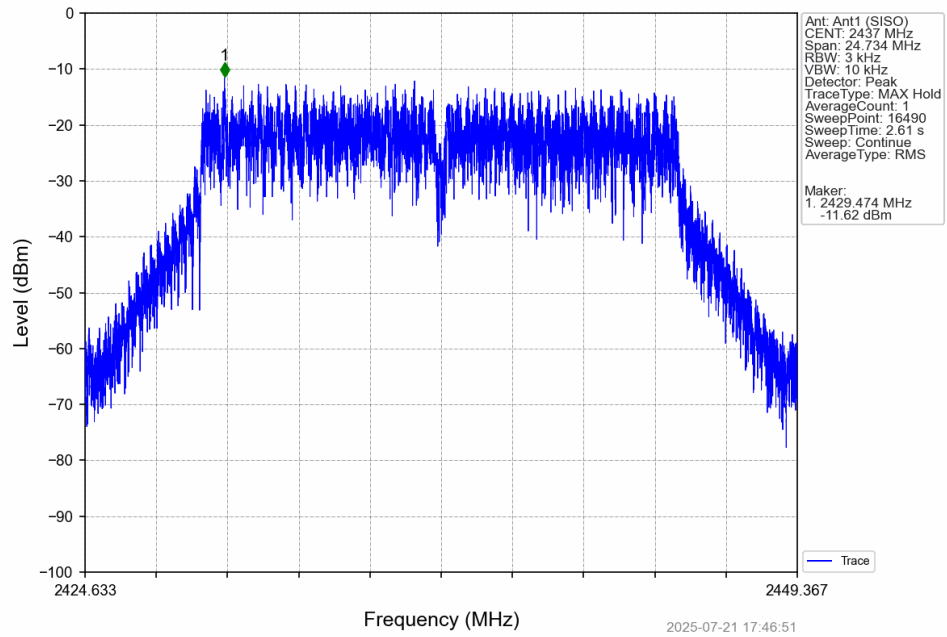
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



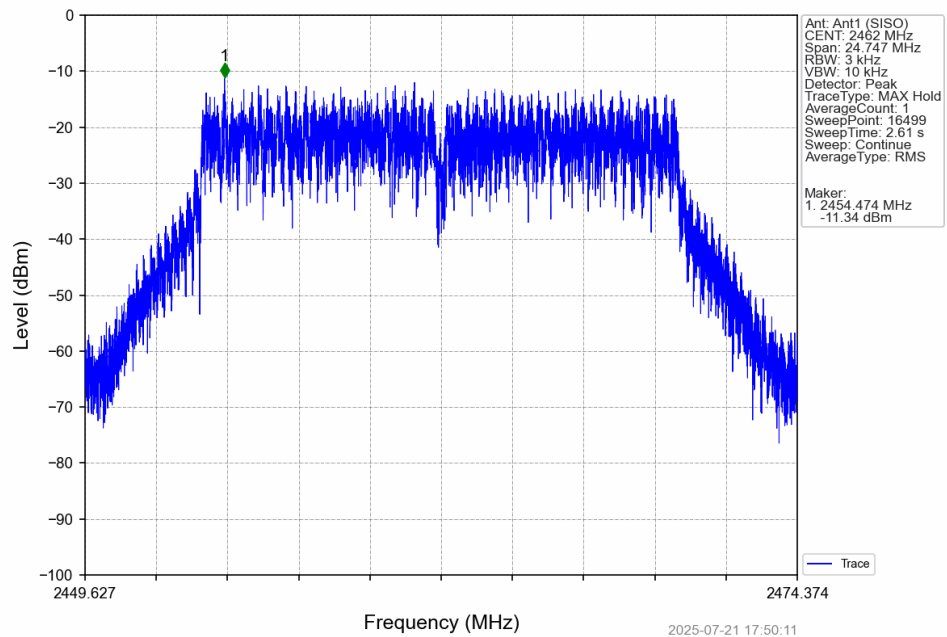
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



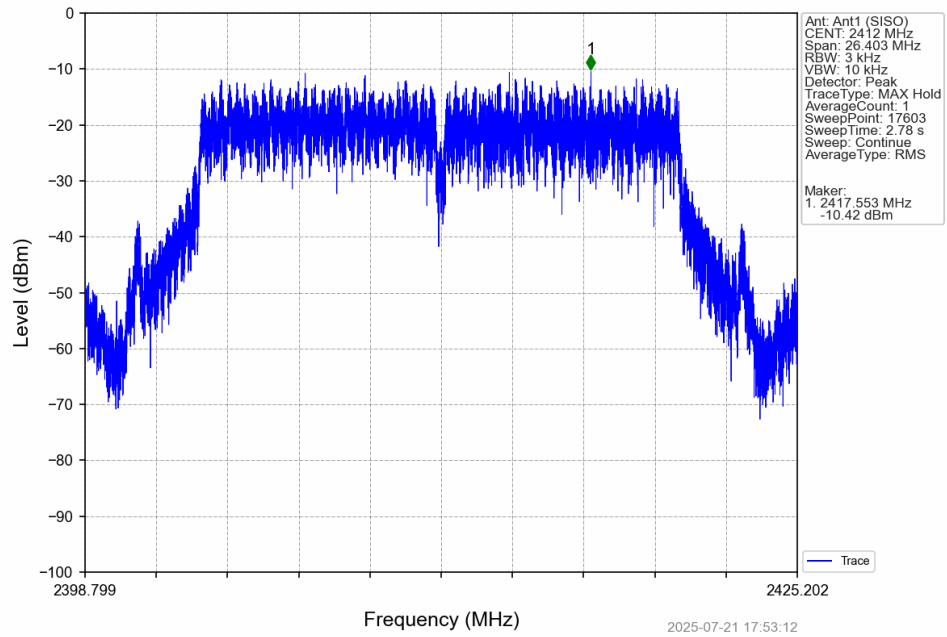
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



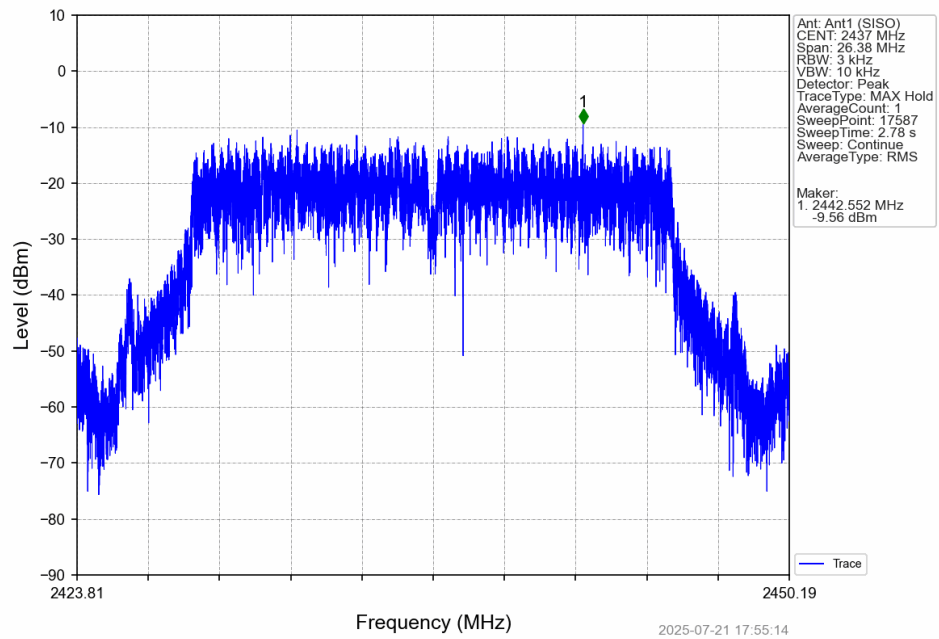
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



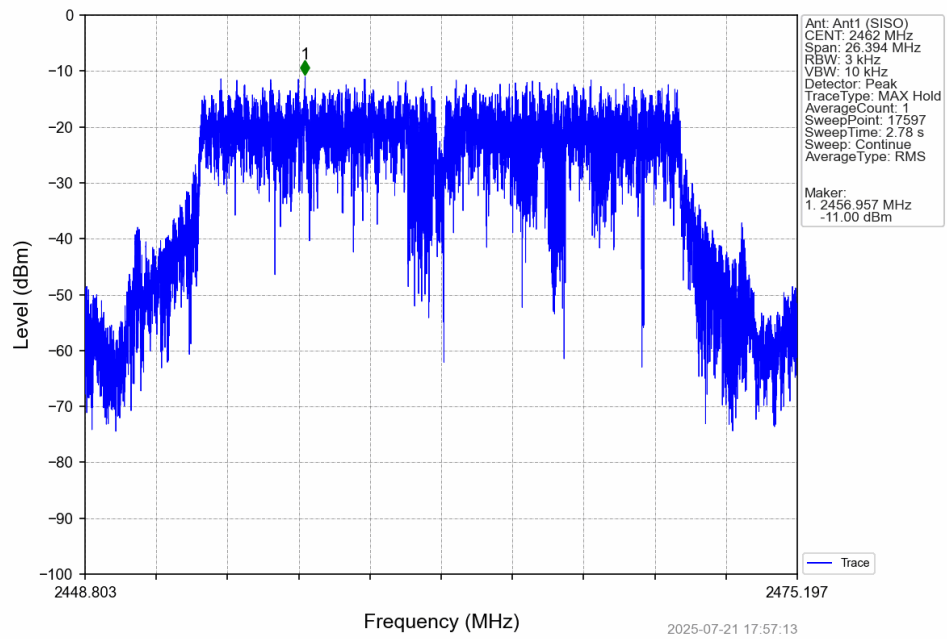
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

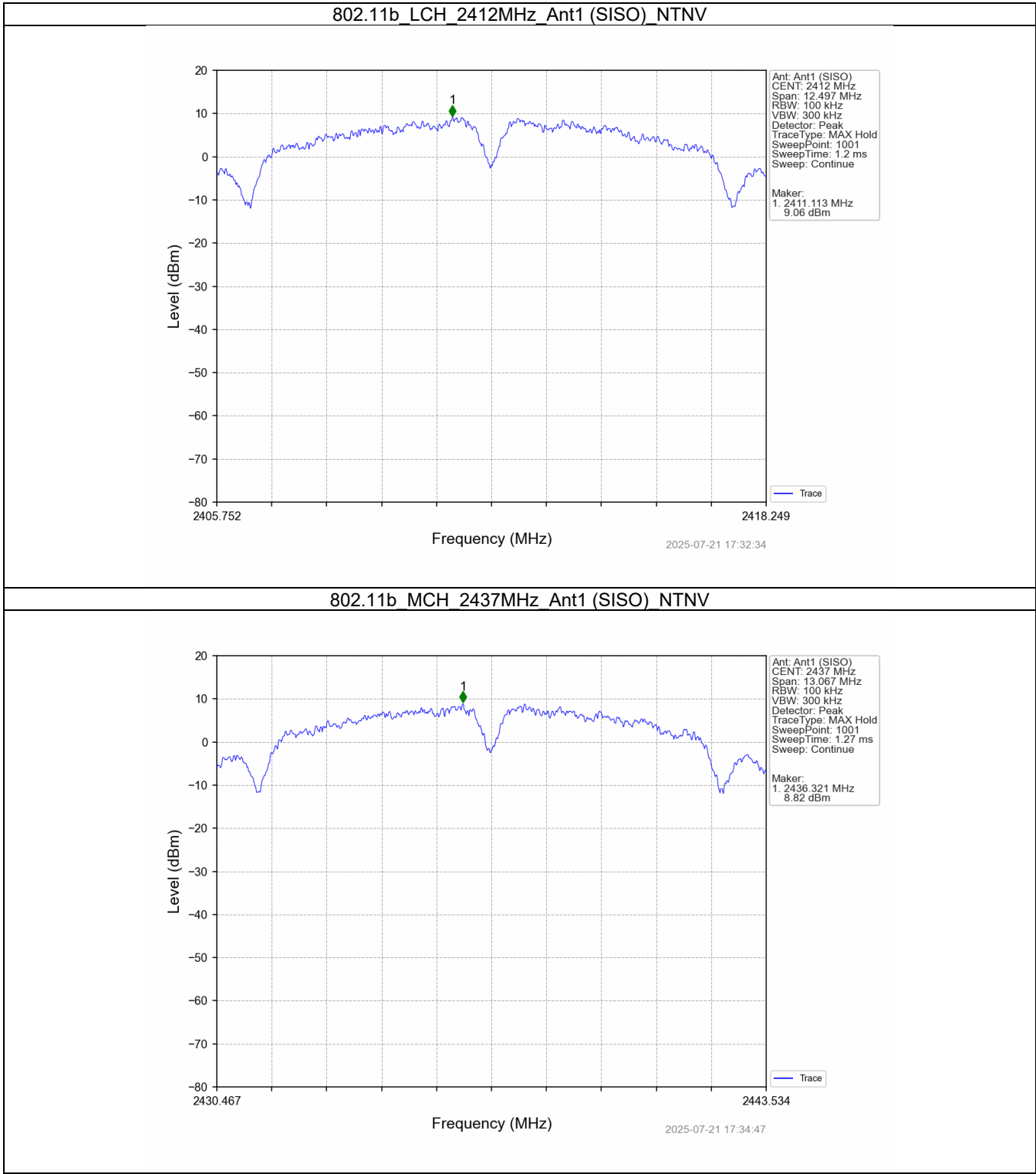
5.1.1 Ref

5.1.2 CSE

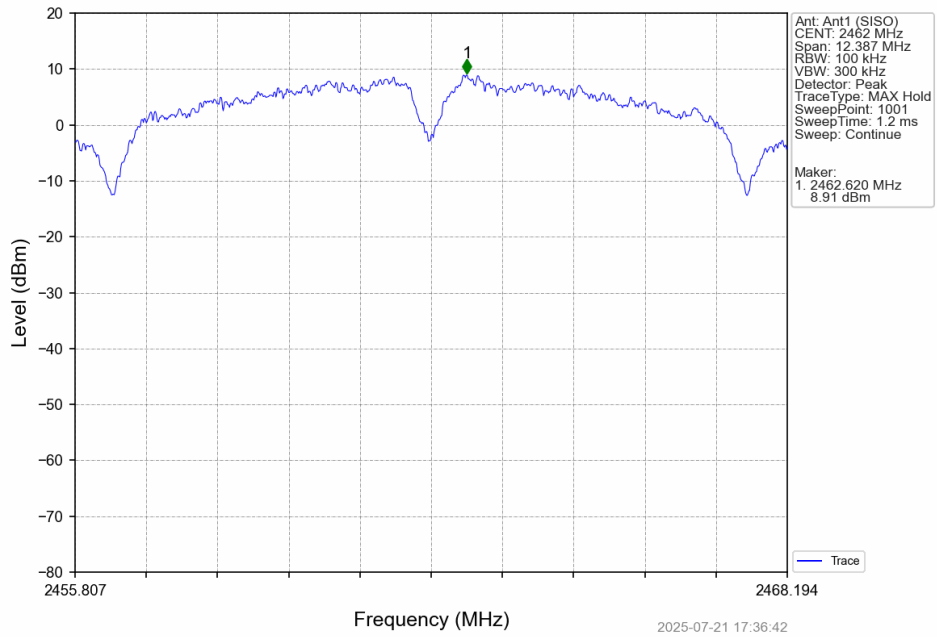
Mode	Tx Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	9.06	-10.94	Pass
		2437	1	9.06	-10.94	Pass
		2462	1	9.06	-10.94	Pass
802.11g	SISO	2412	1	4.25	-15.75	Pass
		2437	1	4.25	-15.75	Pass
		2462	1	4.25	-15.75	Pass
802.11n (HT20)	SISO	2412	1	4.63	-15.37	Pass
		2437	1	4.63	-15.37	Pass
		2462	1	4.63	-15.37	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.						

5.2 Test Graph

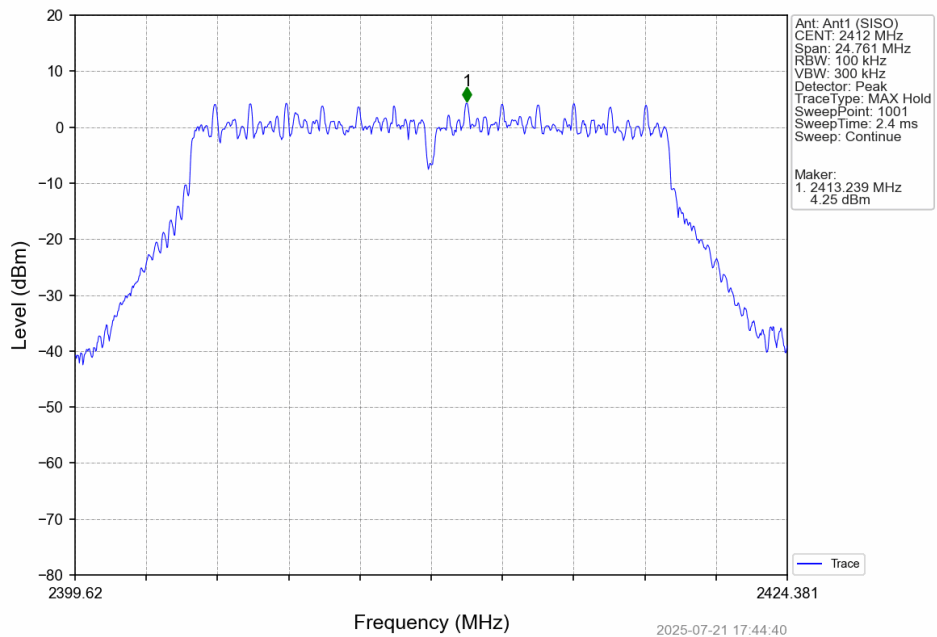
5.2.1 Ref



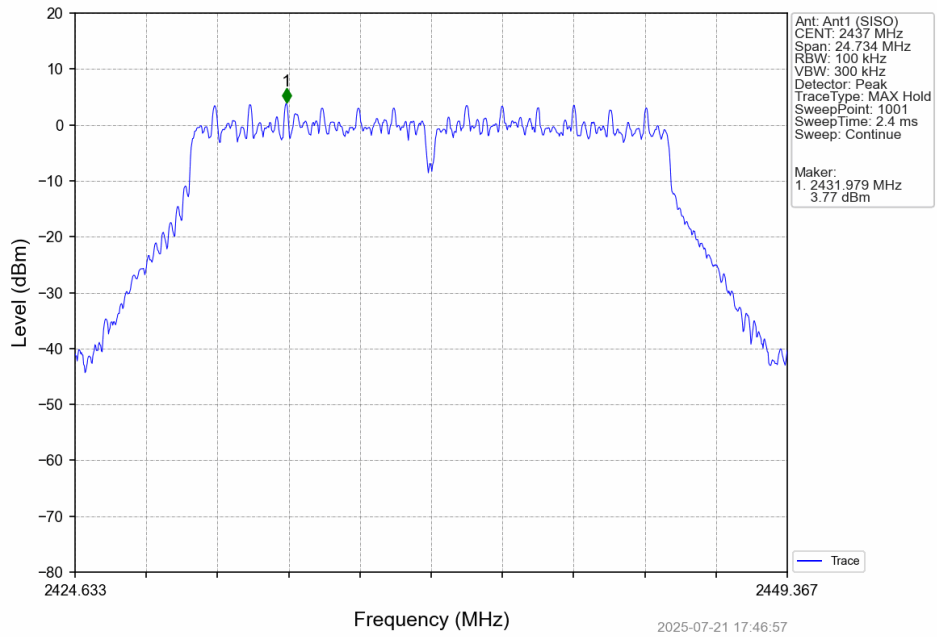
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



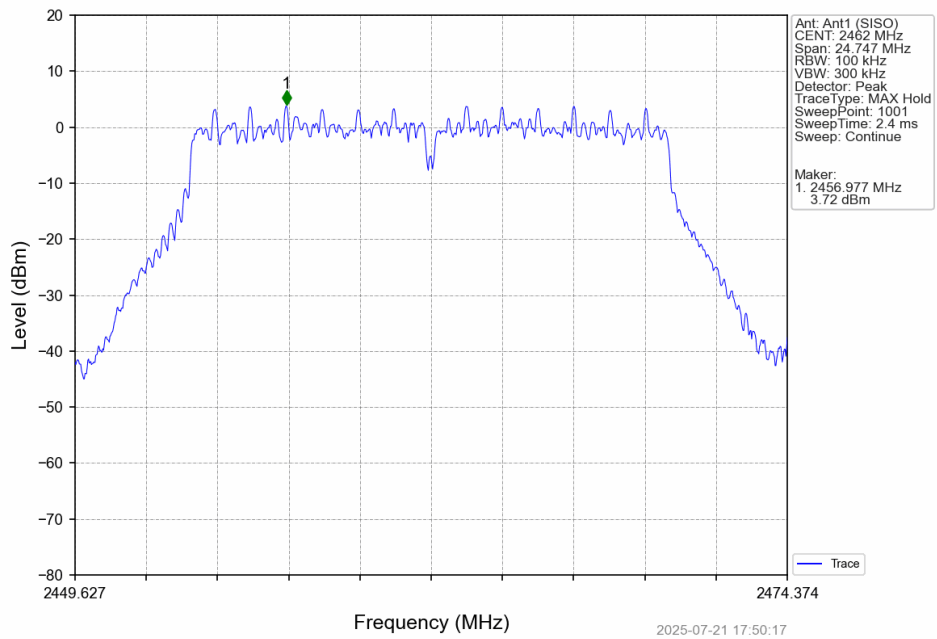
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



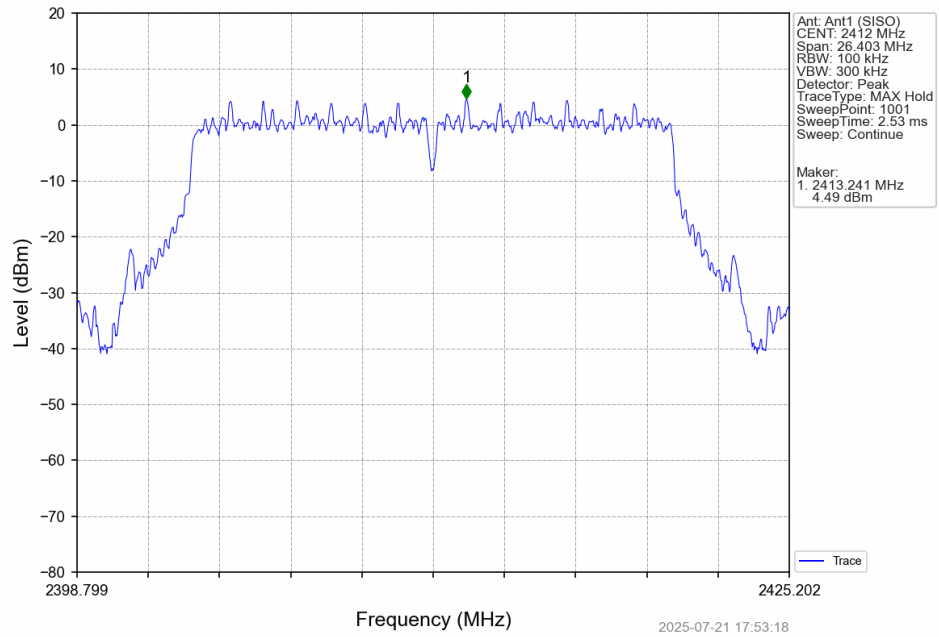
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



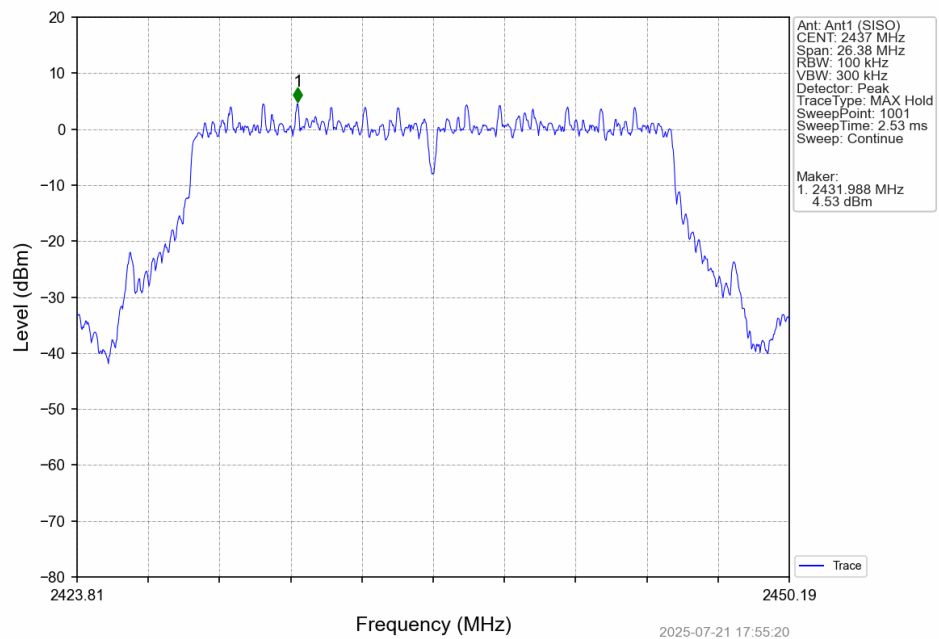
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



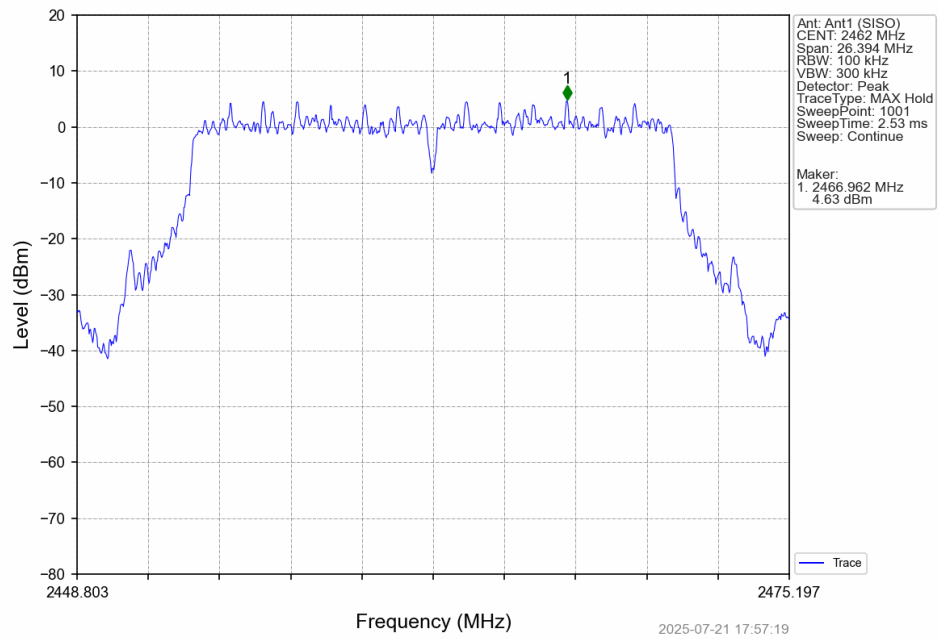
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



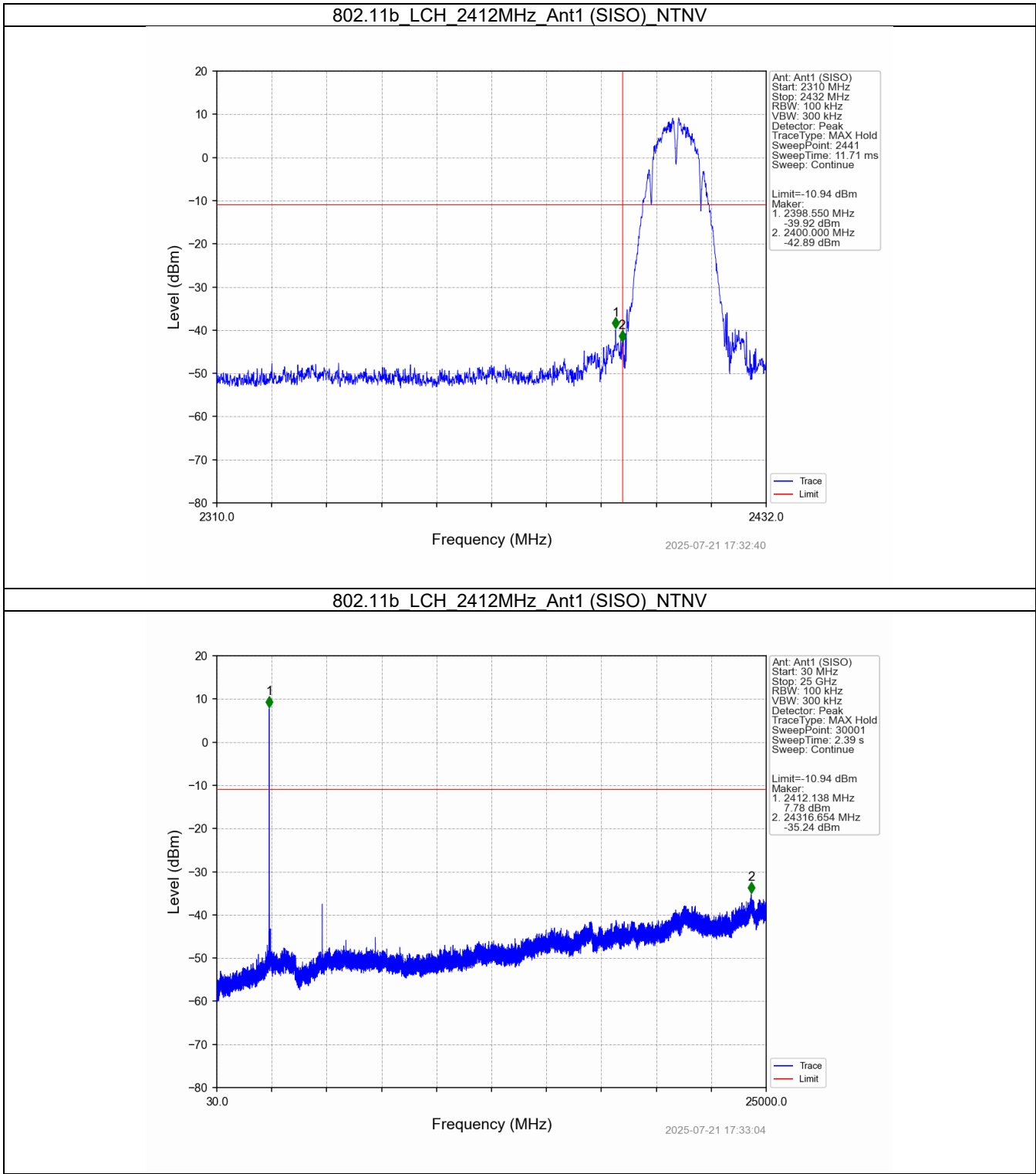
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



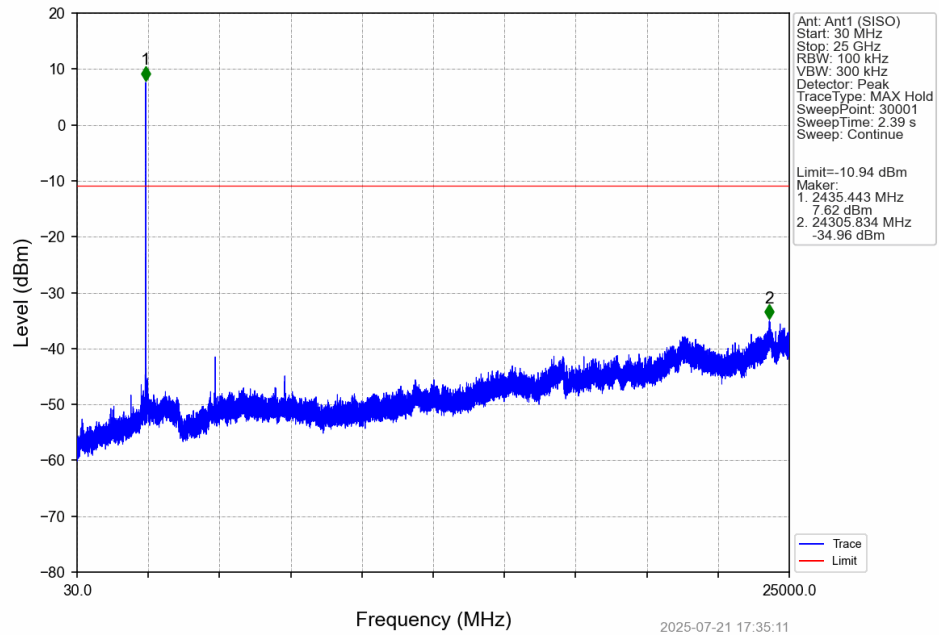
802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



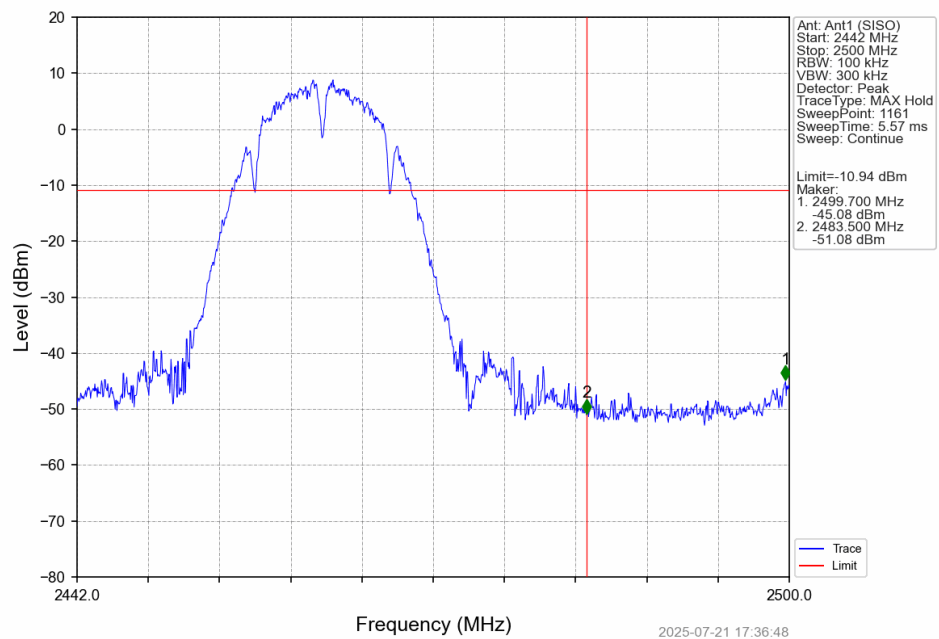
5.2.2 CSE



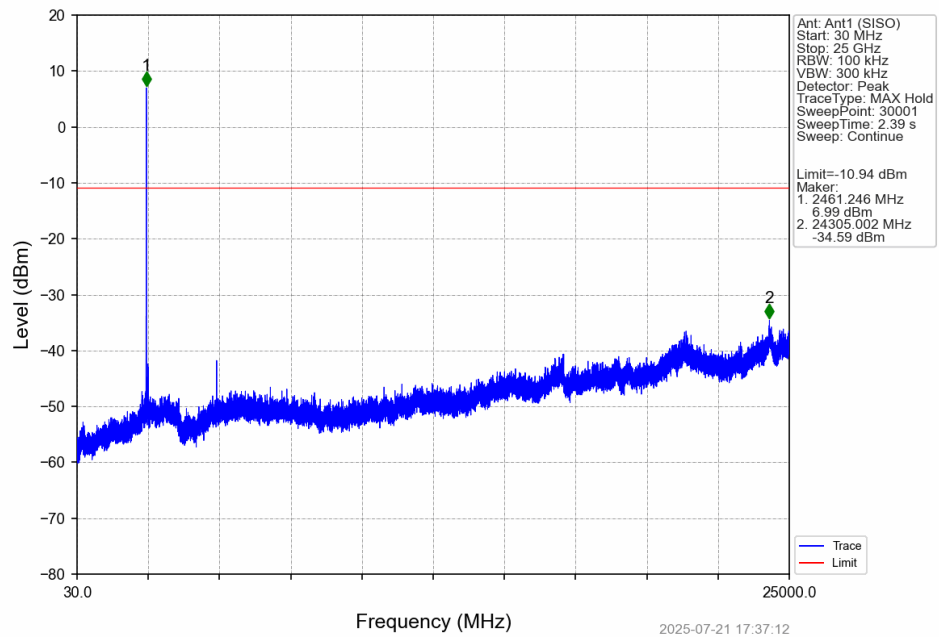
802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV



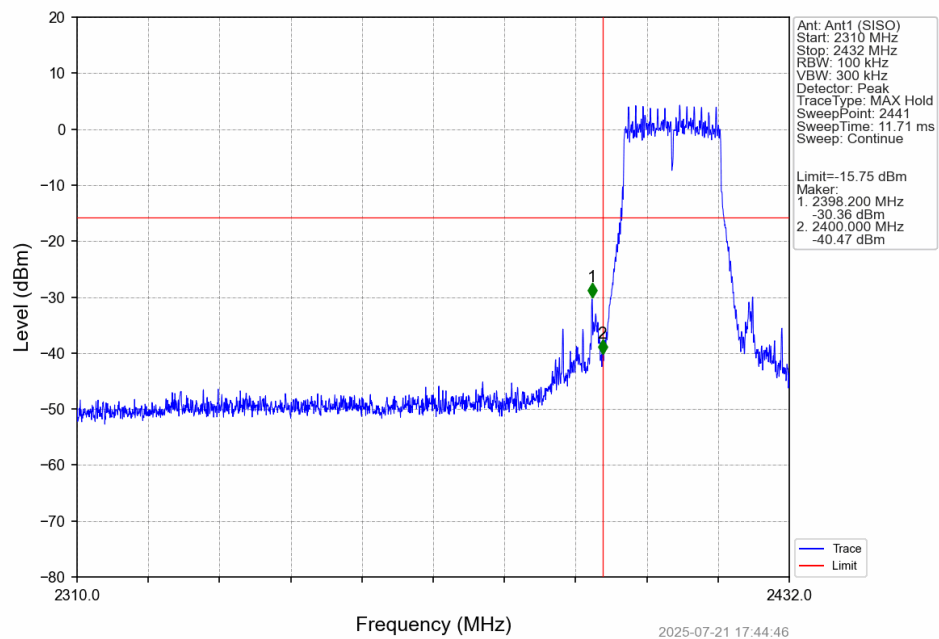
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



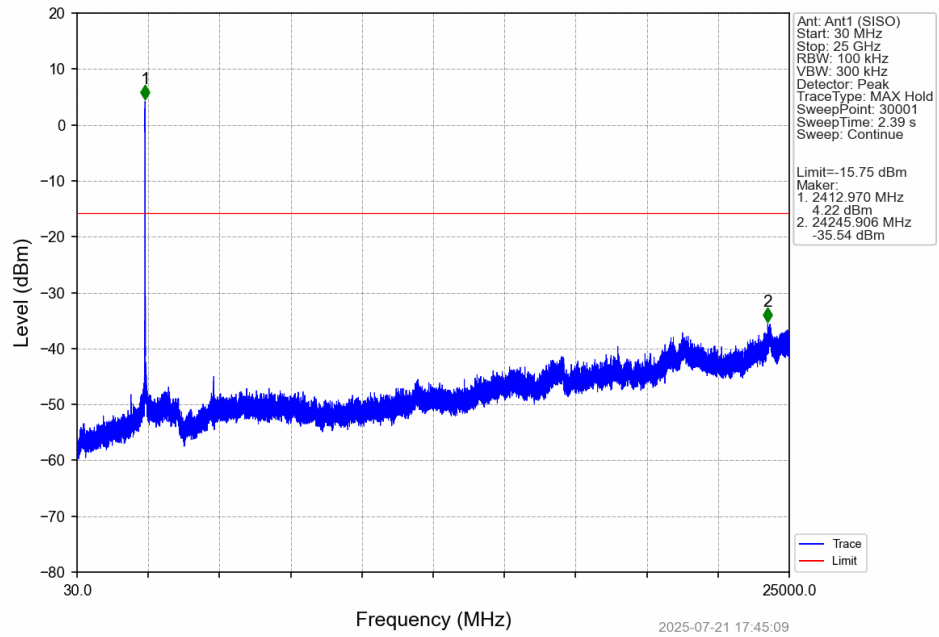
802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV



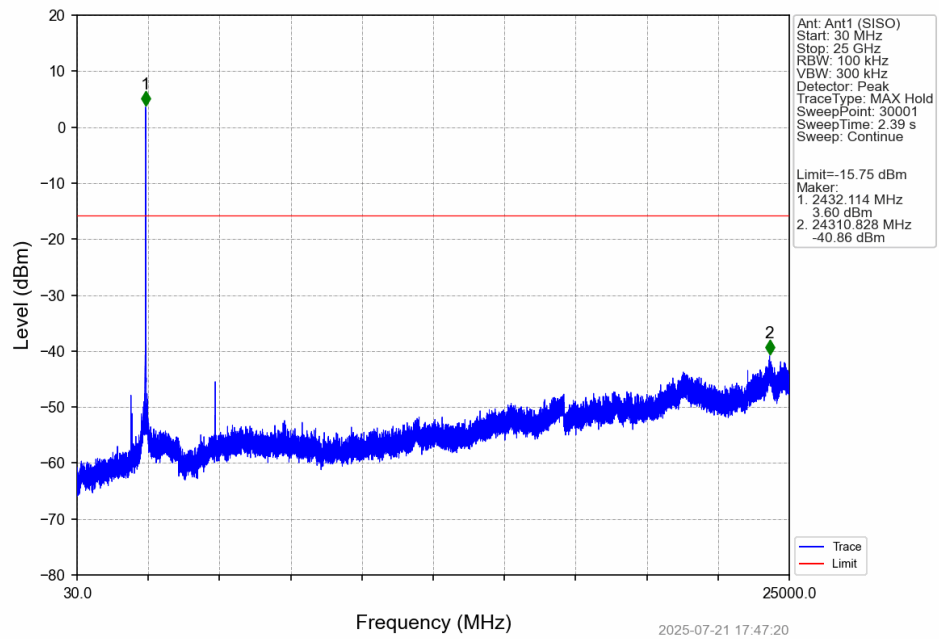
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



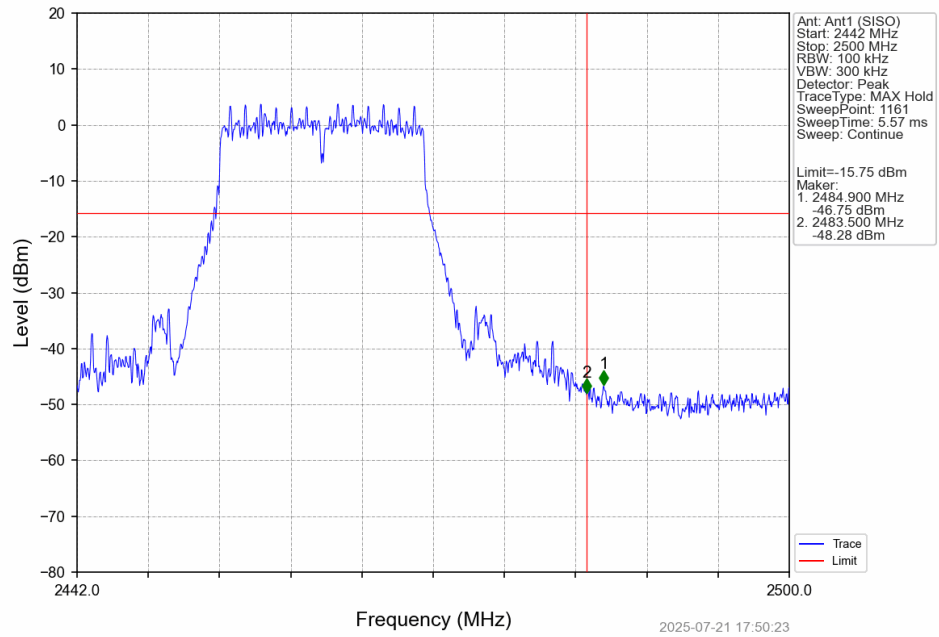
802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV



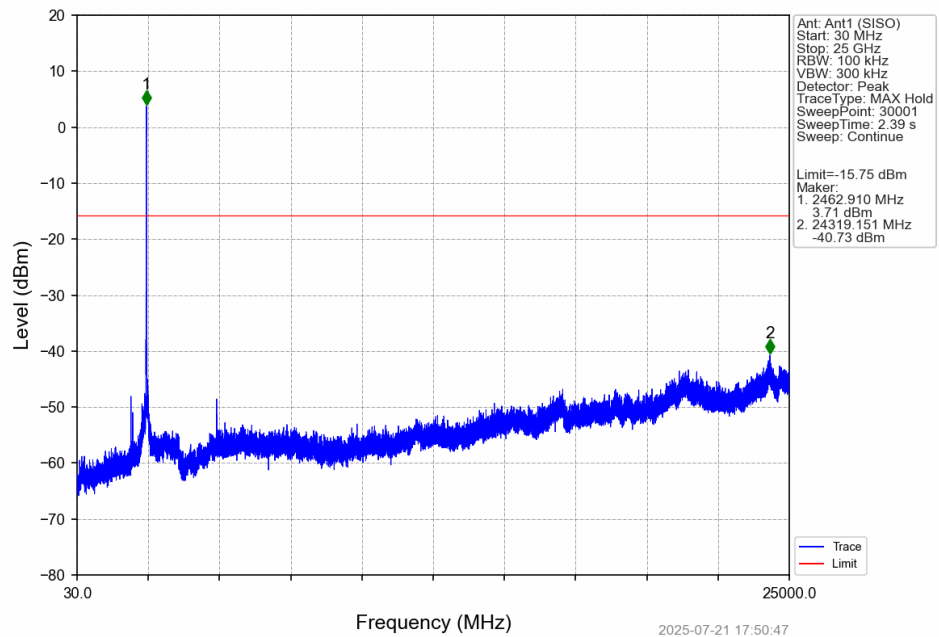
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



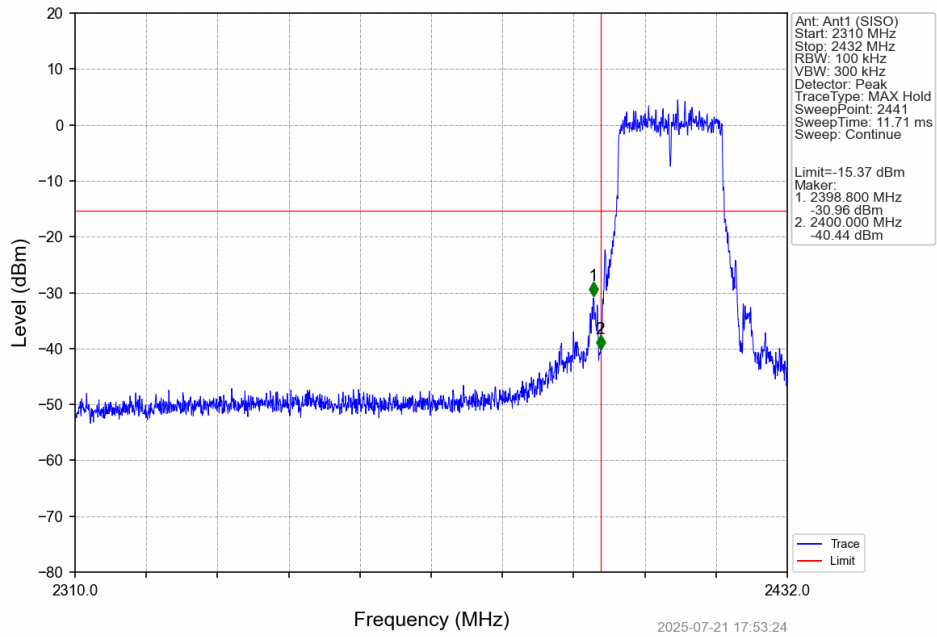
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



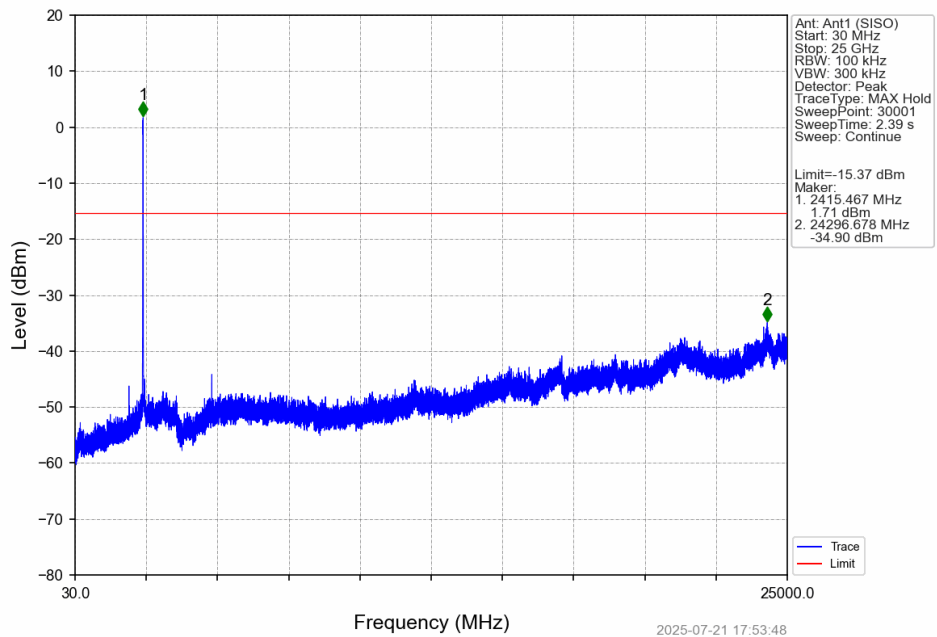
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



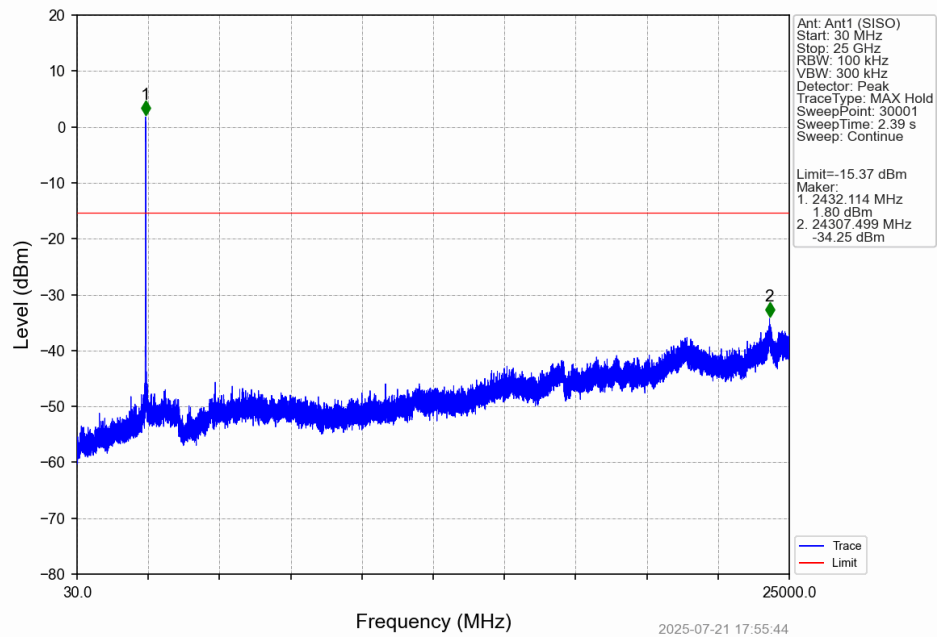
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



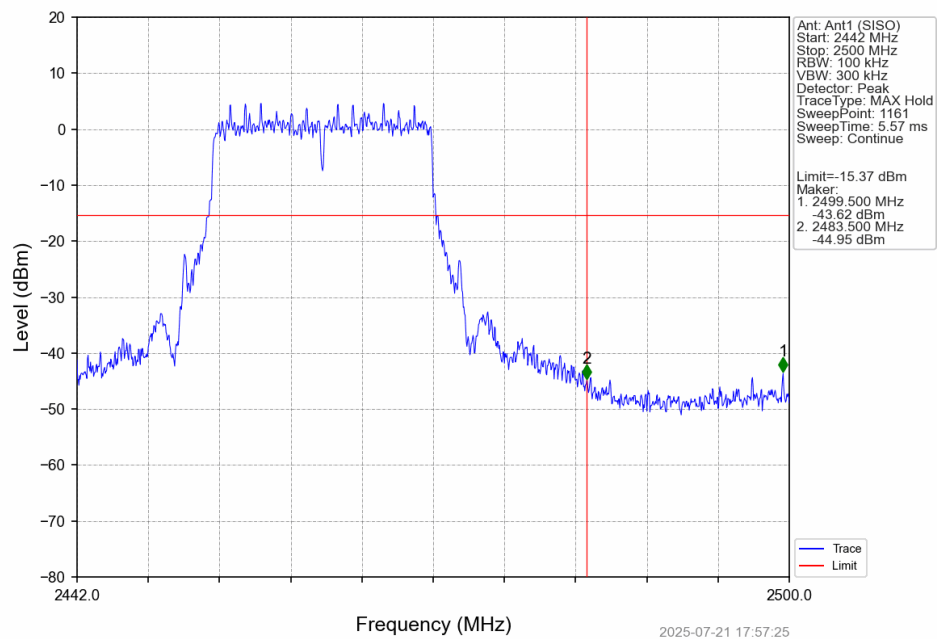
802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

