

Appendix RF Test Data for 2.4GWIFI

Company: : Shenzhen Showtop Technology Co., Ltd.

EUT : advertising machine commercial intelligent terminal

FCC ID: : 2BD4M-AI65W

Model Number : AI65W

Report No. : HTT202510058F01

Reviewed By : Heber He

1. Duty Cycle

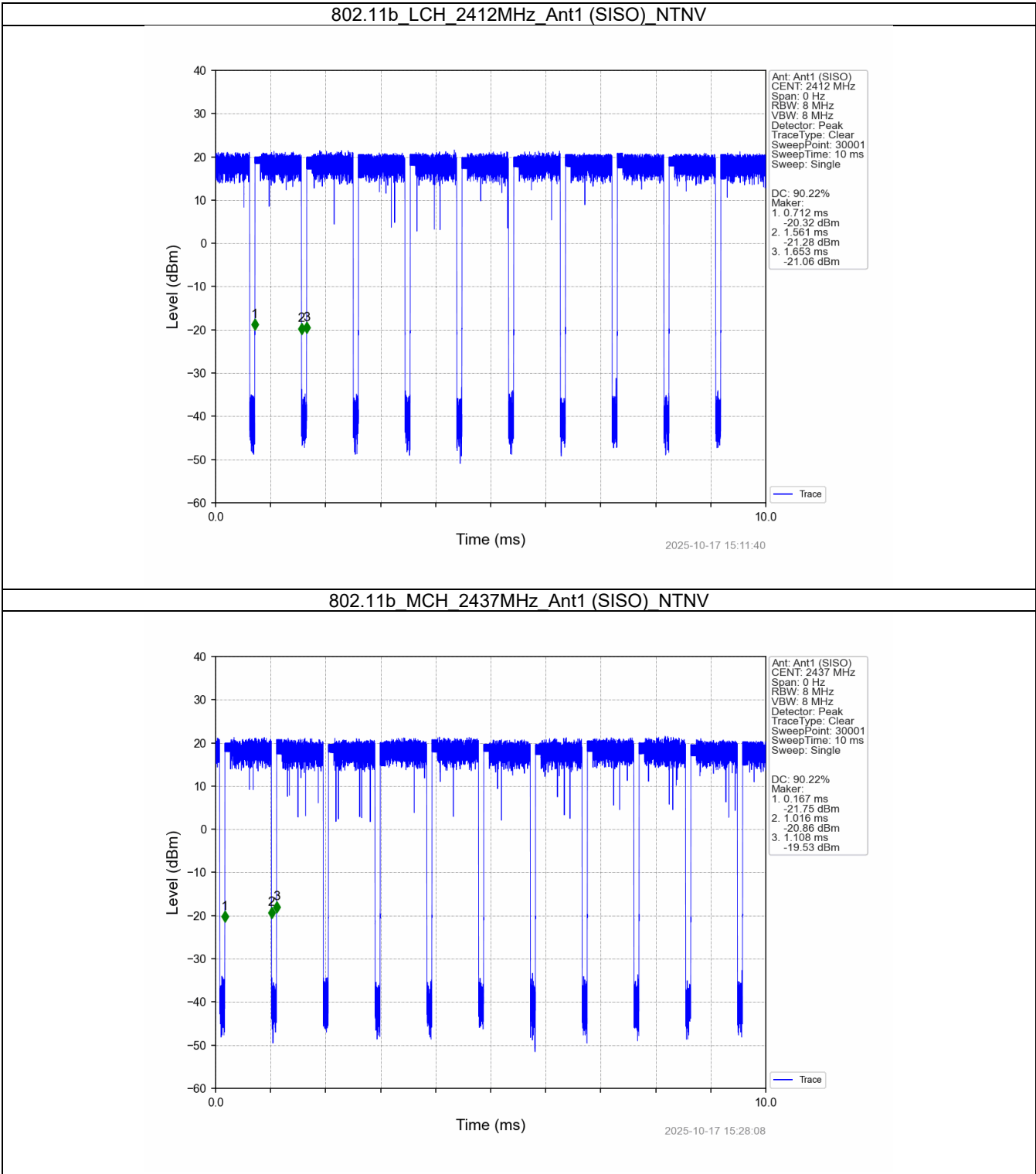
1.1 Test Result

1.1.1 Ant1

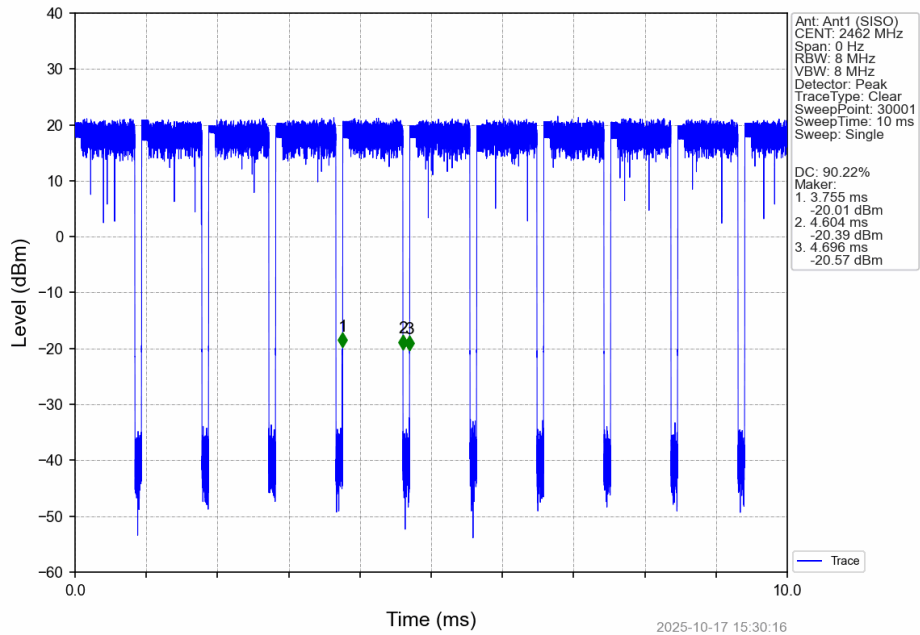
Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	0.849	0.941	90.22	0.45	0.04
		2437	0.849	0.941	90.22	0.45	0.04
		2462	0.849	0.941	90.22	0.45	0.04
802.11g	SISO	2412	0.177	0.276	64.13	1.93	0.12
		2437	0.177	0.276	64.13	1.93	0.09
		2462	0.177	0.276	64.13	1.93	0.07
802.11n (HT20)	SISO	2412	0.165	0.264	62.50	2.04	0.08
		2437	0.165	0.265	62.26	2.06	0.08
		2462	0.165	0.265	62.26	2.06	0.10

1.2 Test Graph

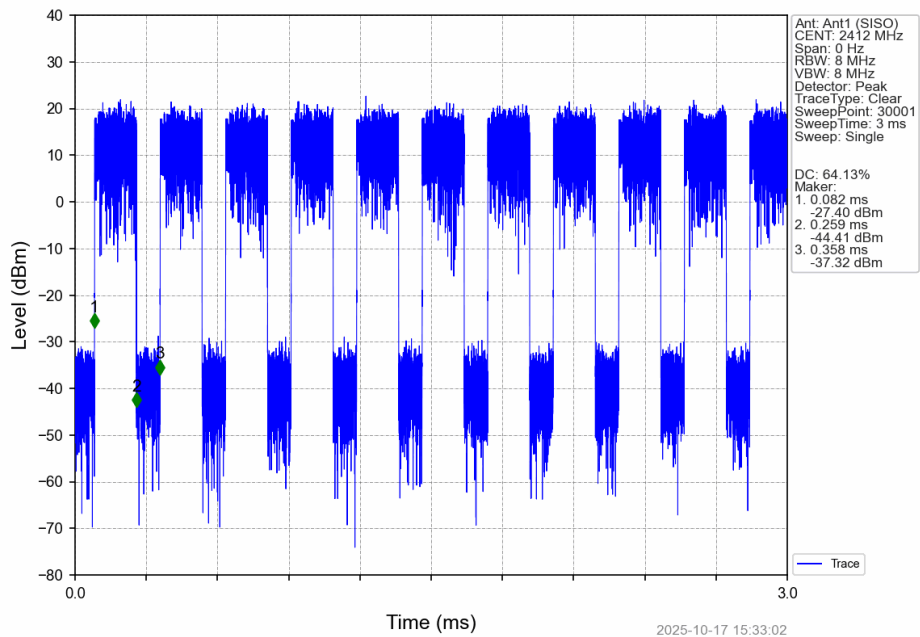
1.2.1 Ant1



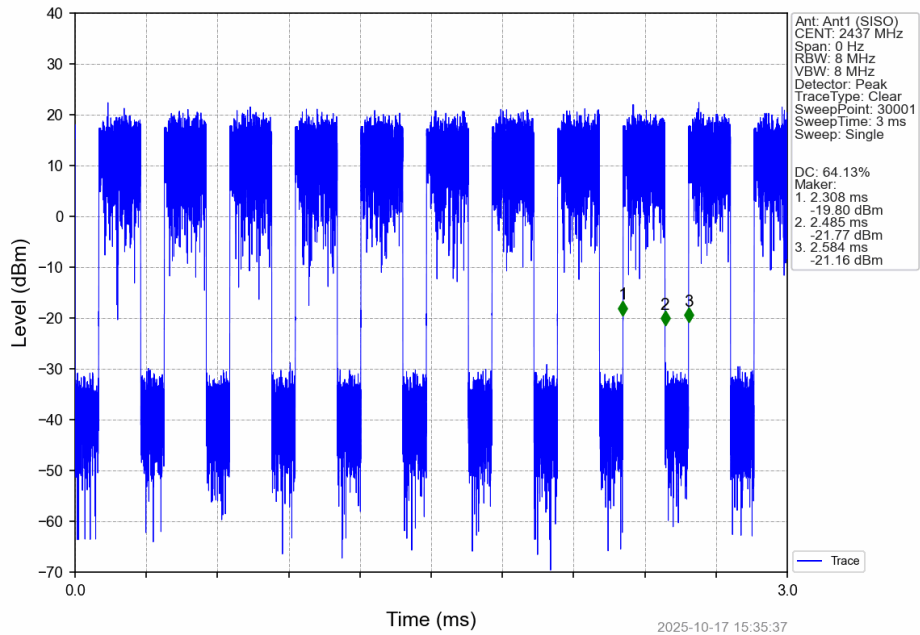
802.11b HCH 2462MHz Ant1 (SISO) NTN



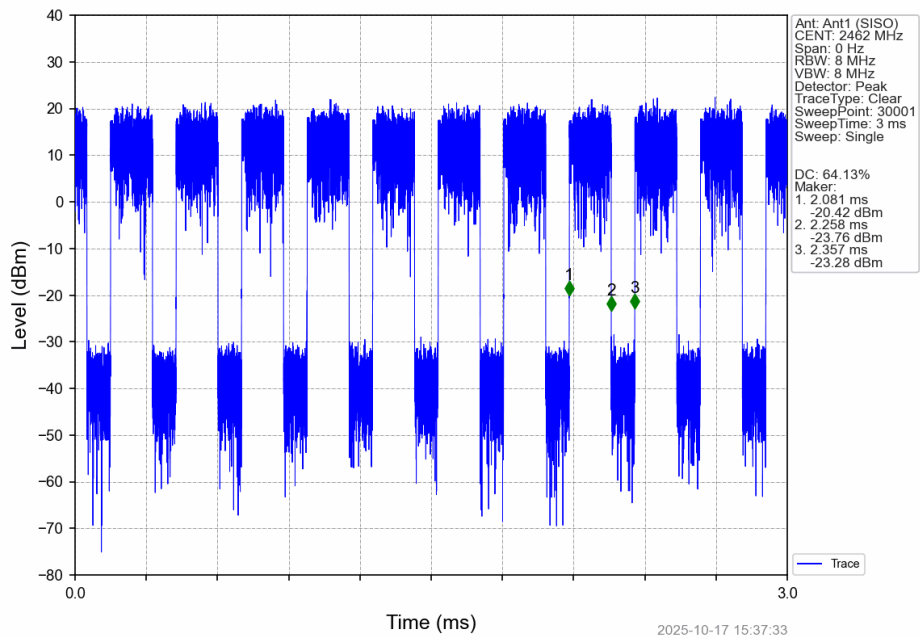
802.11g LCH 2412MHz Ant1 (SISO) NTN



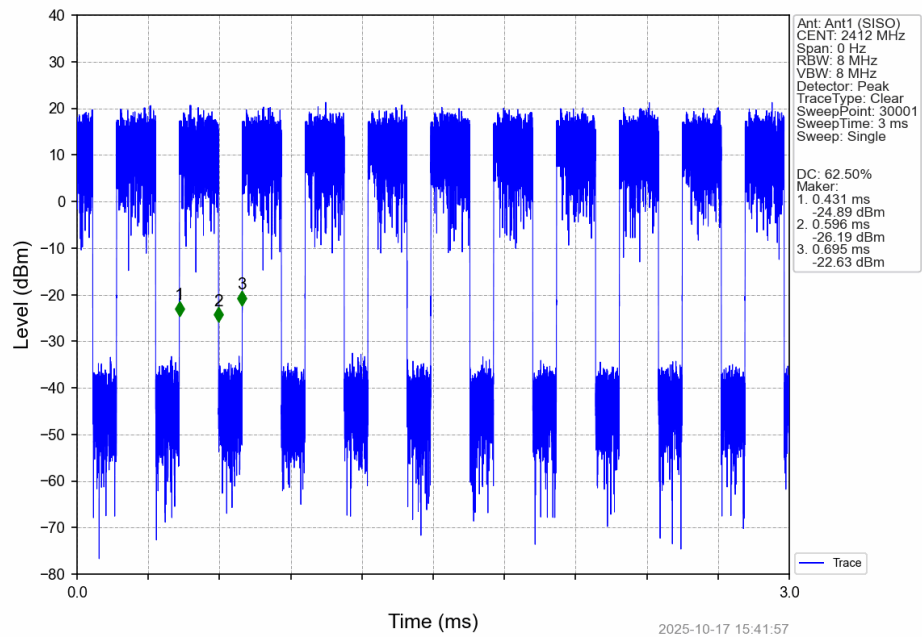
802.11g MCH 2437MHz Ant1 (SISO) NTN



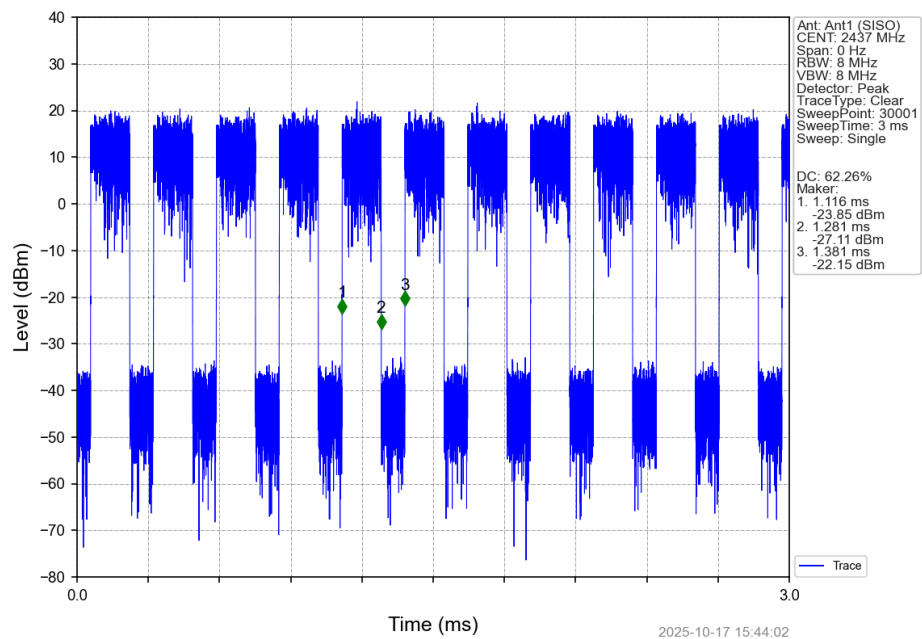
802.11g_HCH_2462MHz_Ant1 (SISO)_NTN



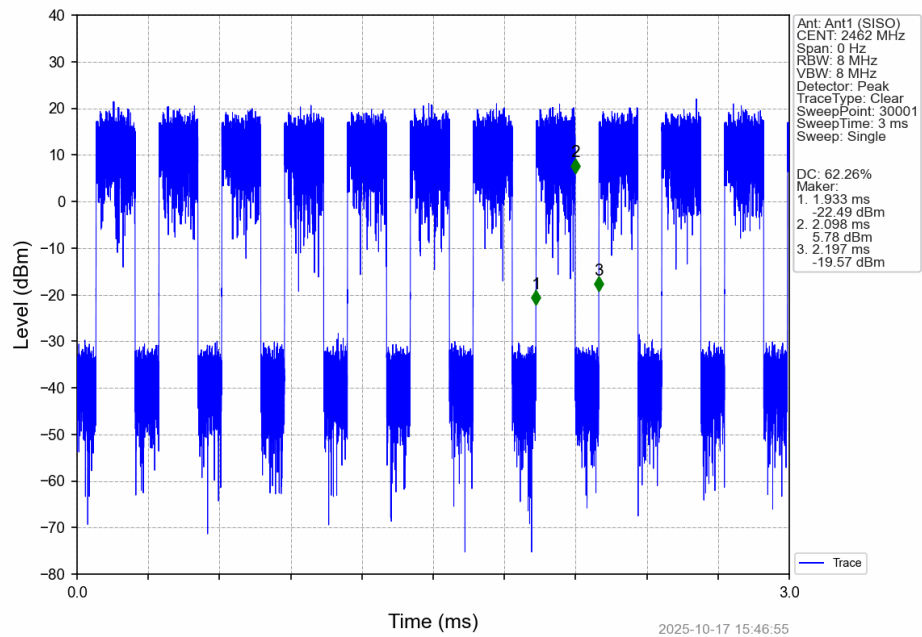
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTN



802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



2. Bandwidth

2.1 Test Result

2.1.1 OBW

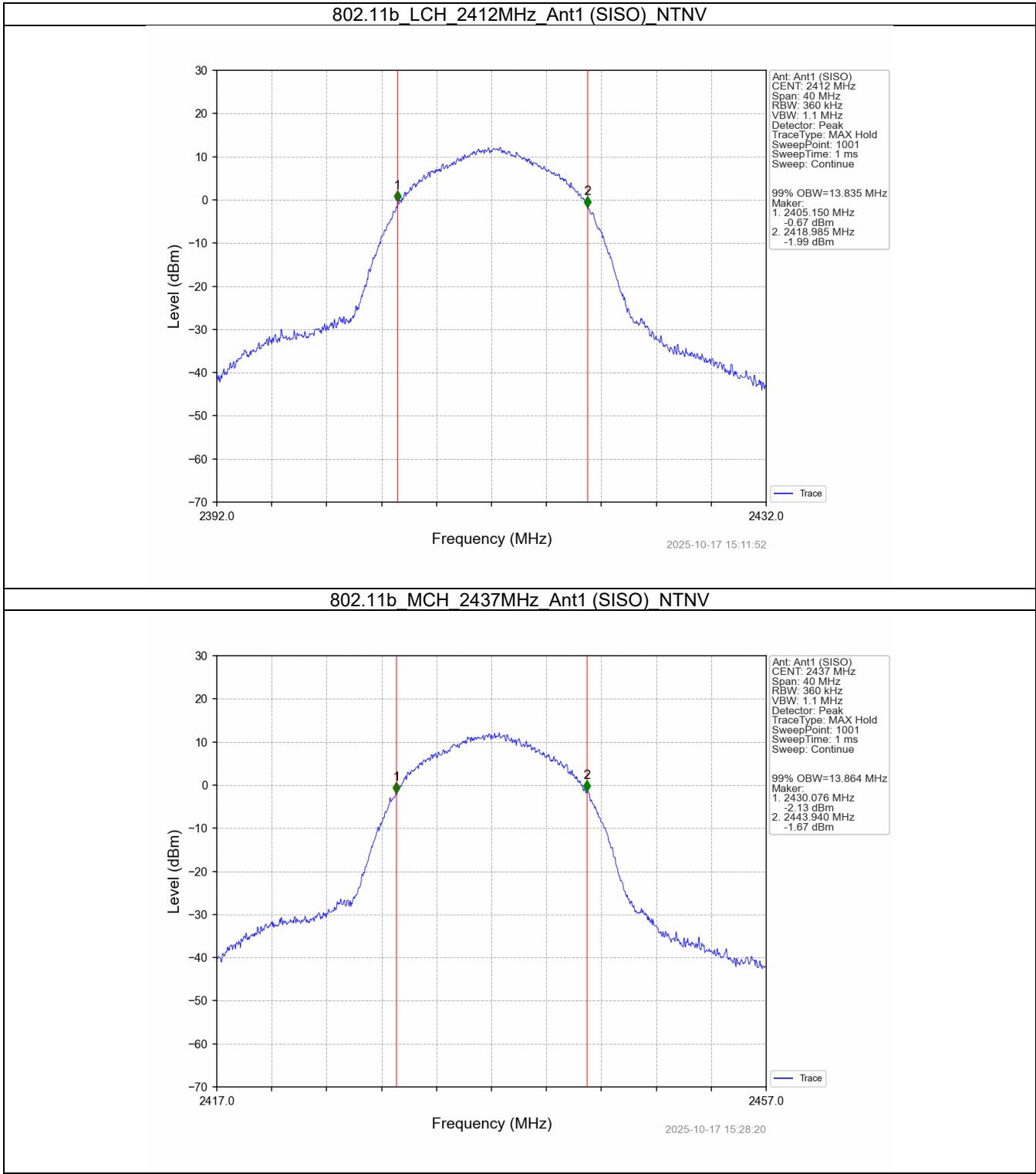
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	13.835	/	Pass
		2437	1	13.864	/	Pass
		2462	1	13.766	/	Pass
802.11g	SISO	2412	1	16.895	/	Pass
		2437	1	16.901	/	Pass
		2462	1	16.821	/	Pass
802.11n (HT20)	SISO	2412	1	17.936	/	Pass
		2437	1	17.913	/	Pass
		2462	1	17.826	/	Pass

2.1.2 6dB BW

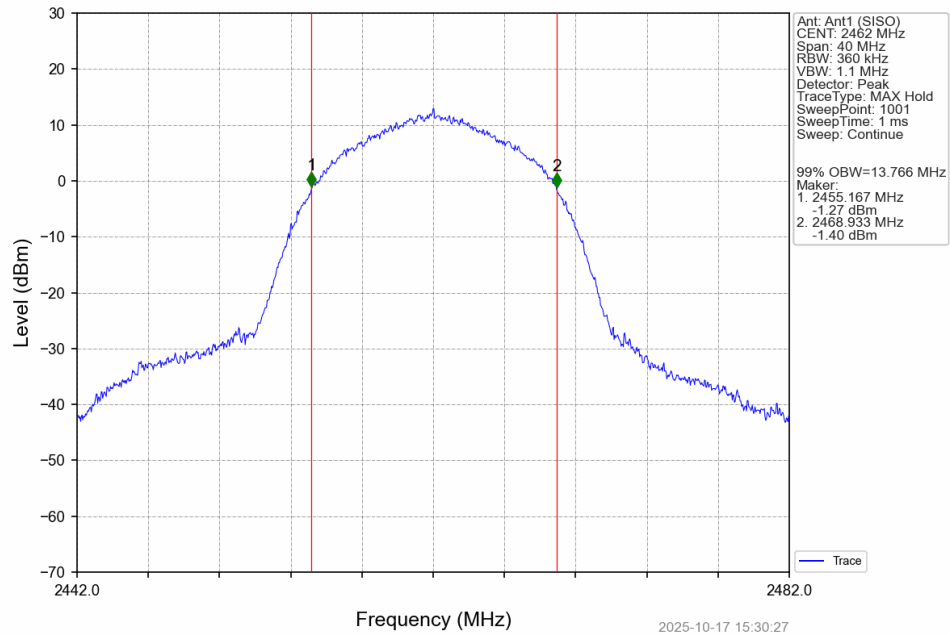
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.964	≥ 0.5	Pass
		2437	1	9.455	≥ 0.5	Pass
		2462	1	8.644	≥ 0.5	Pass
802.11g	SISO	2412	1	15.807	≥ 0.5	Pass
		2437	1	15.651	≥ 0.5	Pass
		2462	1	15.446	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	16.355	≥ 0.5	Pass
		2437	1	16.772	≥ 0.5	Pass
		2462	1	16.979	≥ 0.5	Pass

2.2 Test Graph

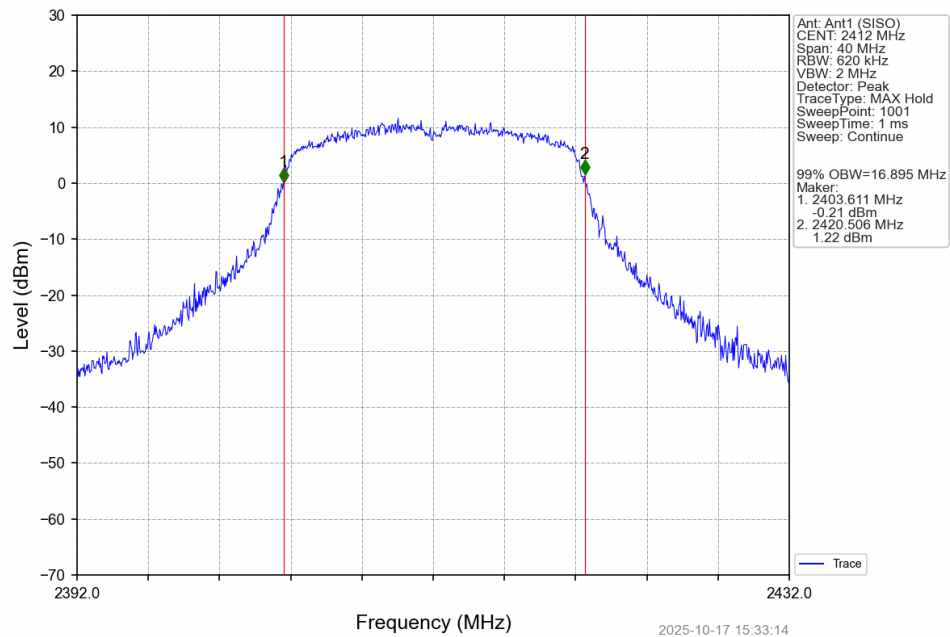
2.2.1 OBW



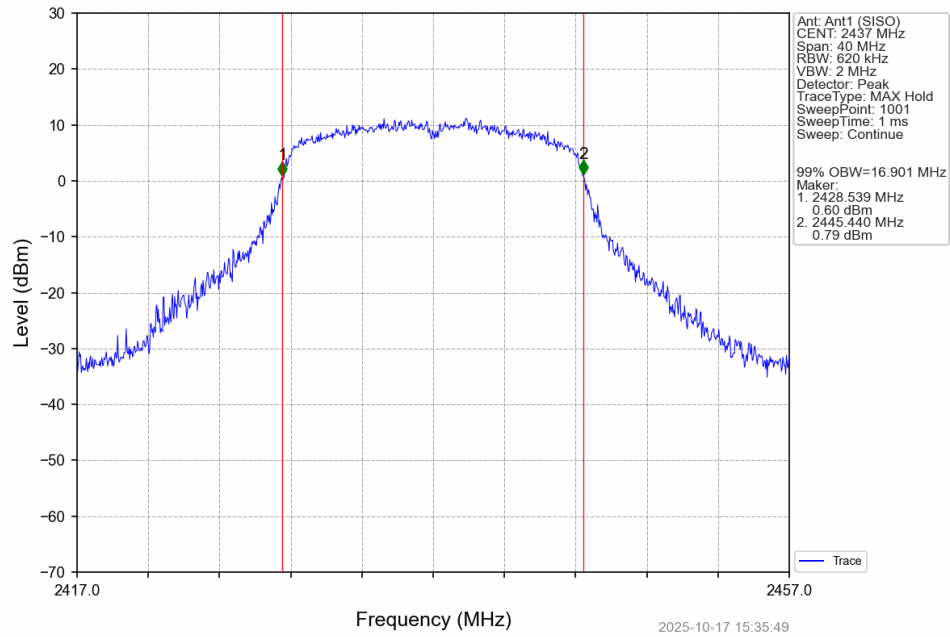
802.11b HCH 2462MHz Ant1 (SISO) NTN



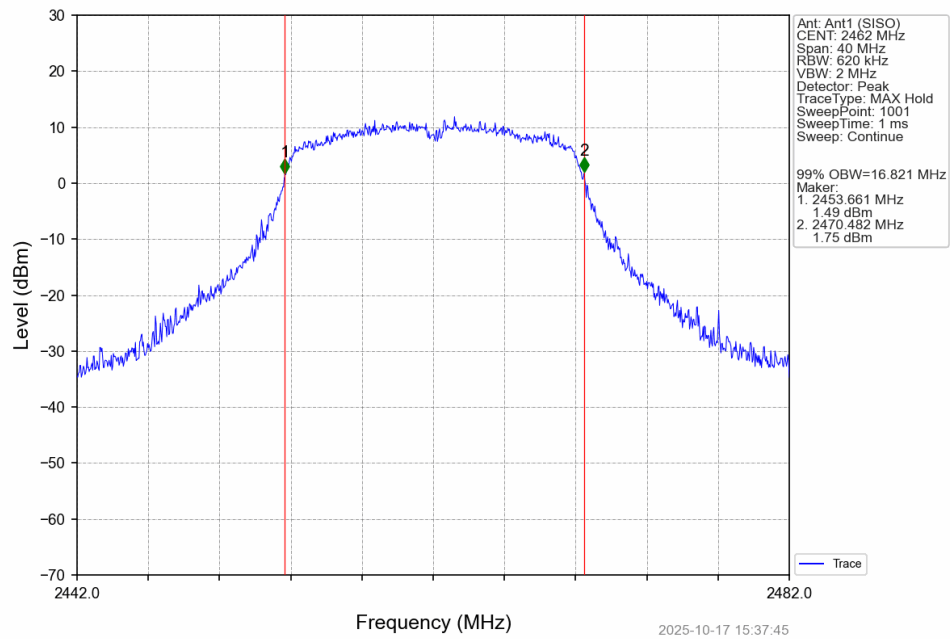
802.11g LCH 2412MHz Ant1 (SISO) NTN



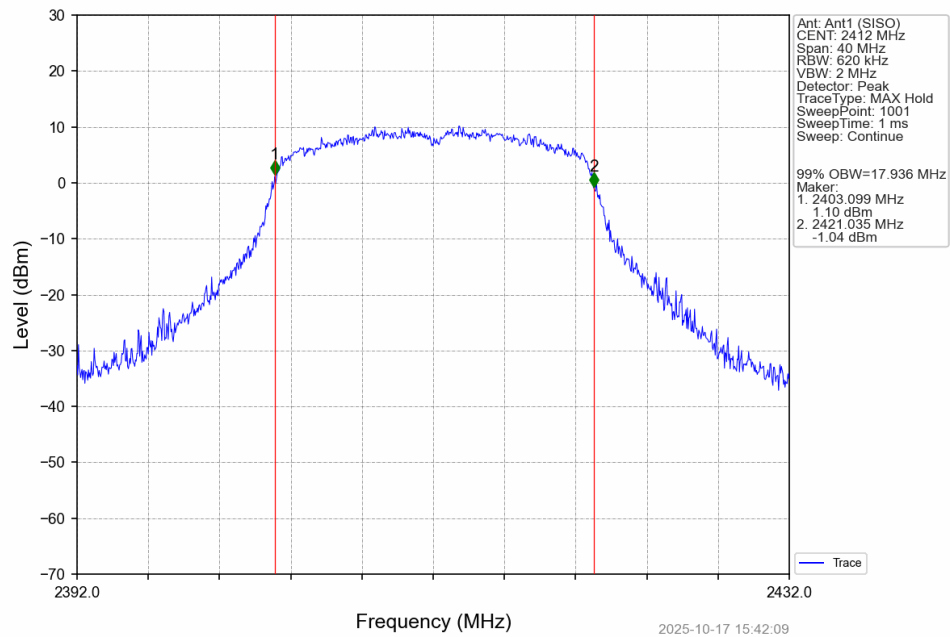
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



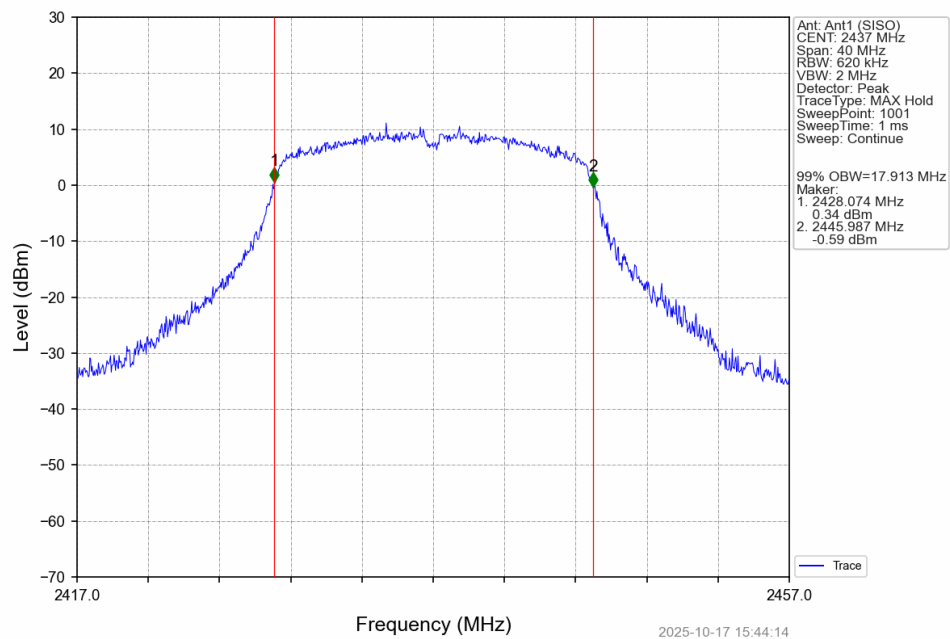
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



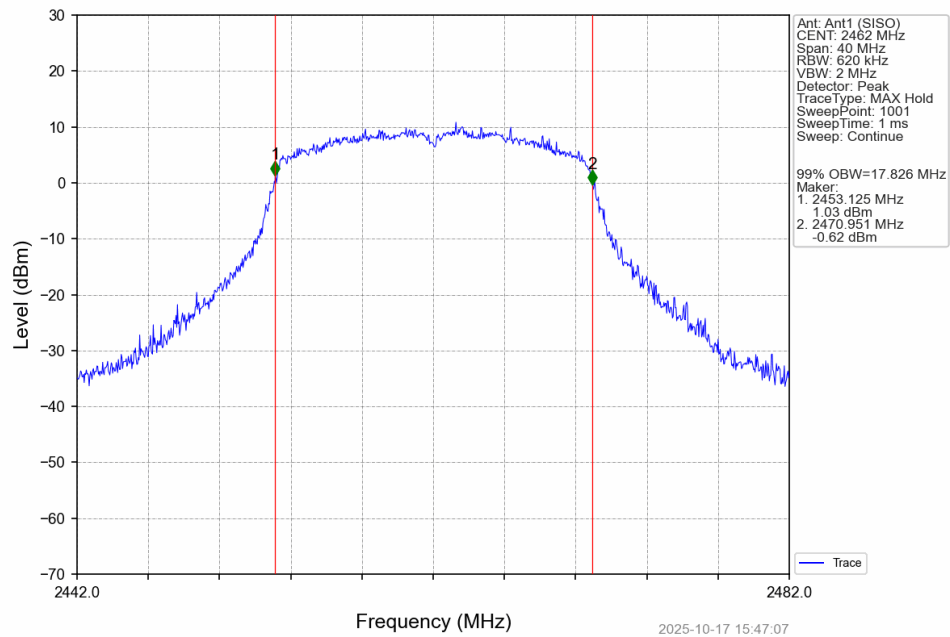
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



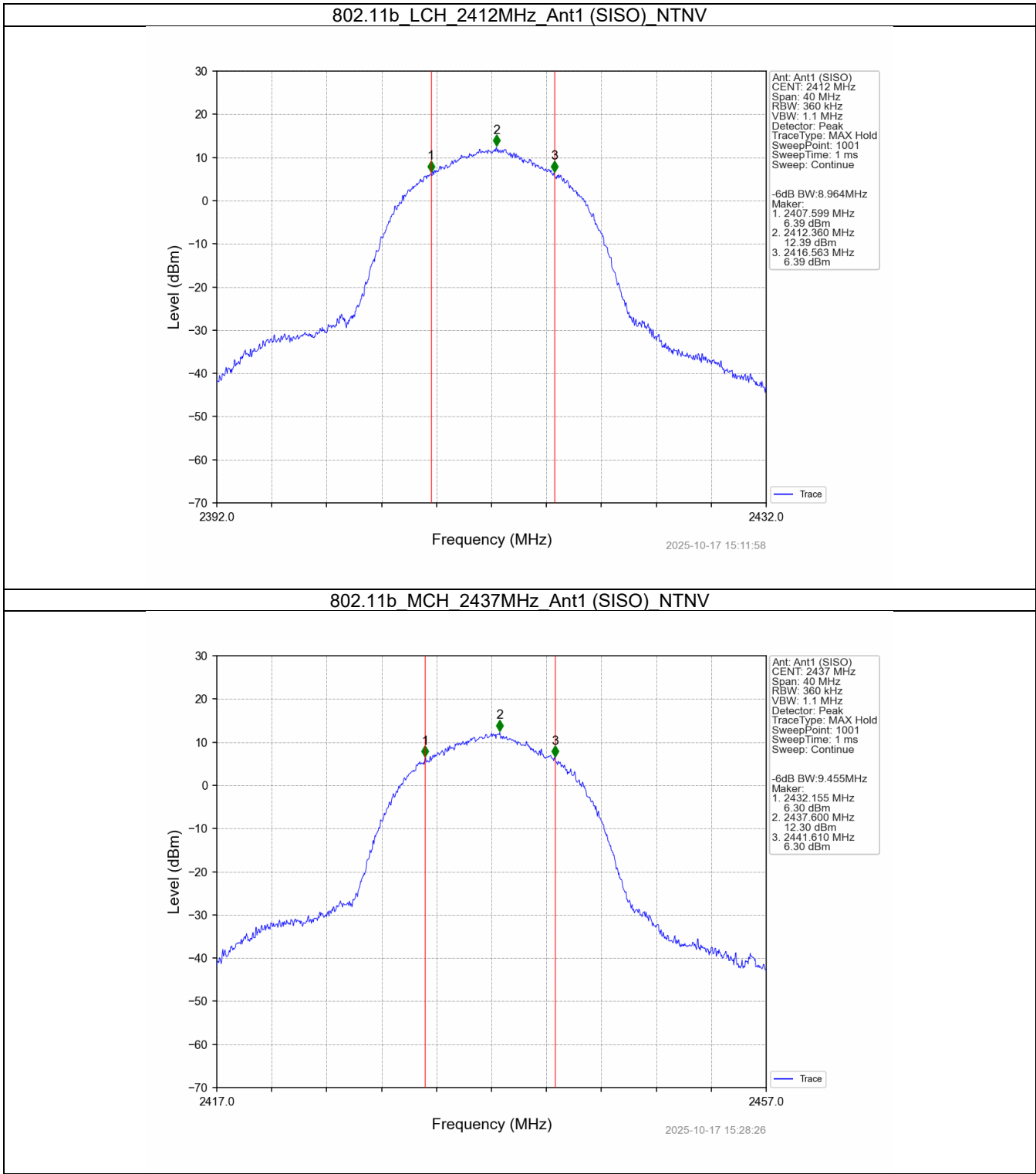
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



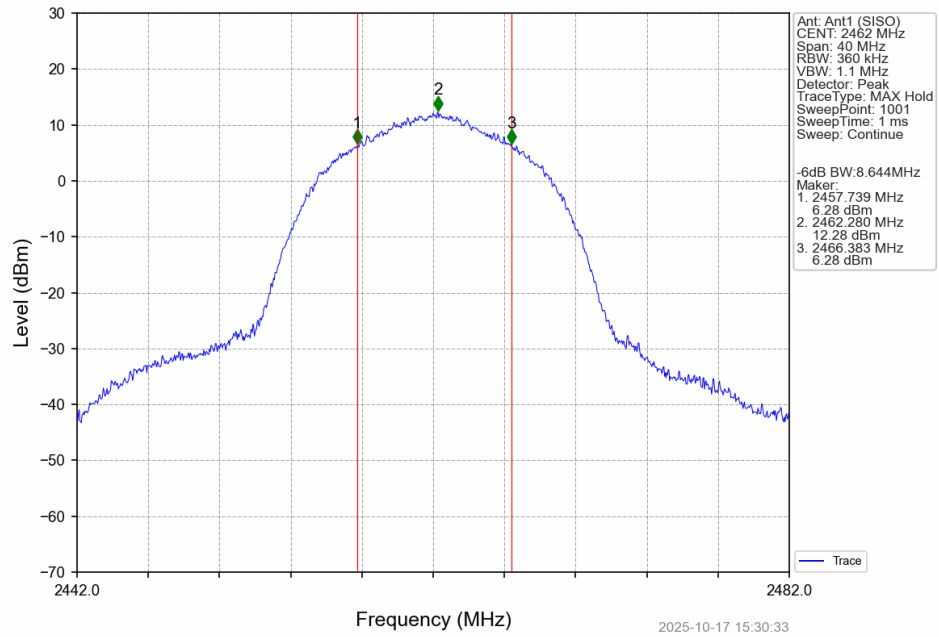
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV



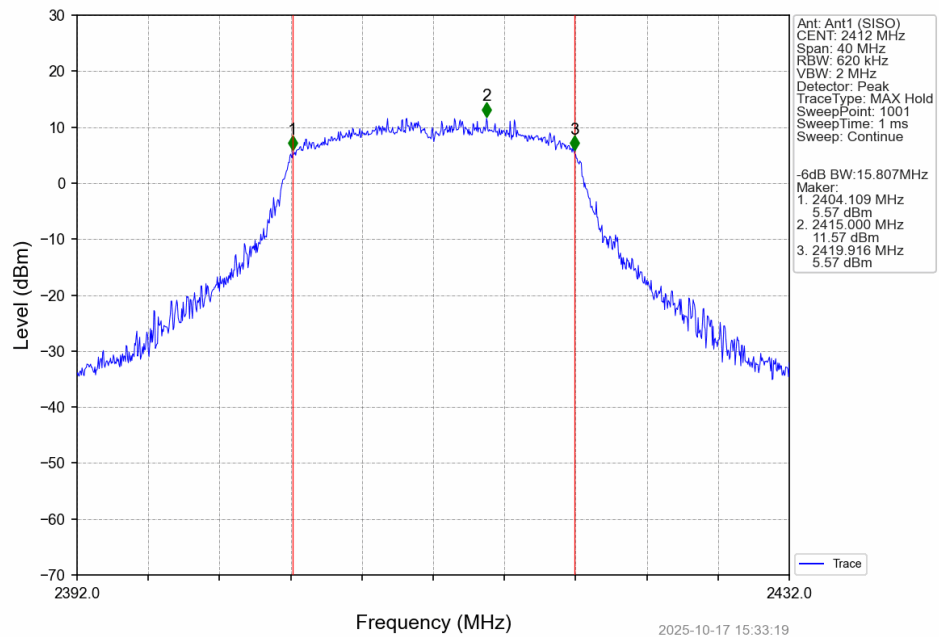
2.2.2 6dB BW



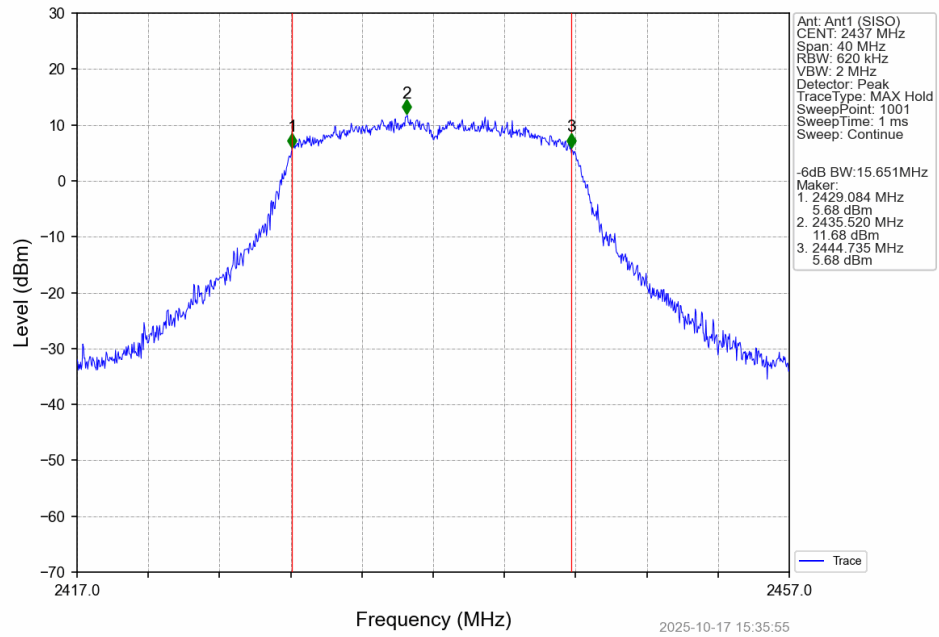
802.11b HCH 2462MHz Ant1 (SISO) NTN



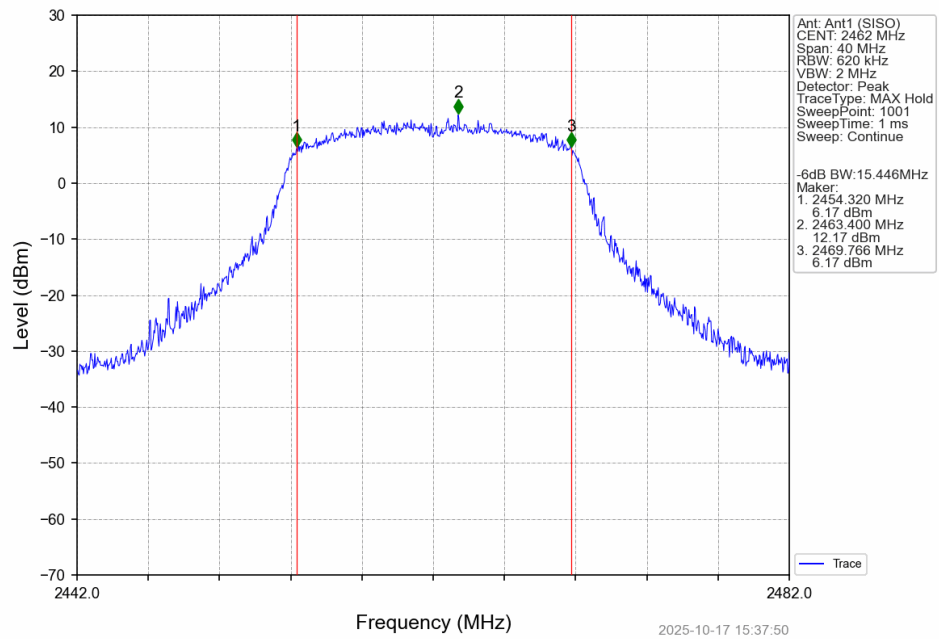
802.11g LCH 2412MHz Ant1 (SISO) NTN



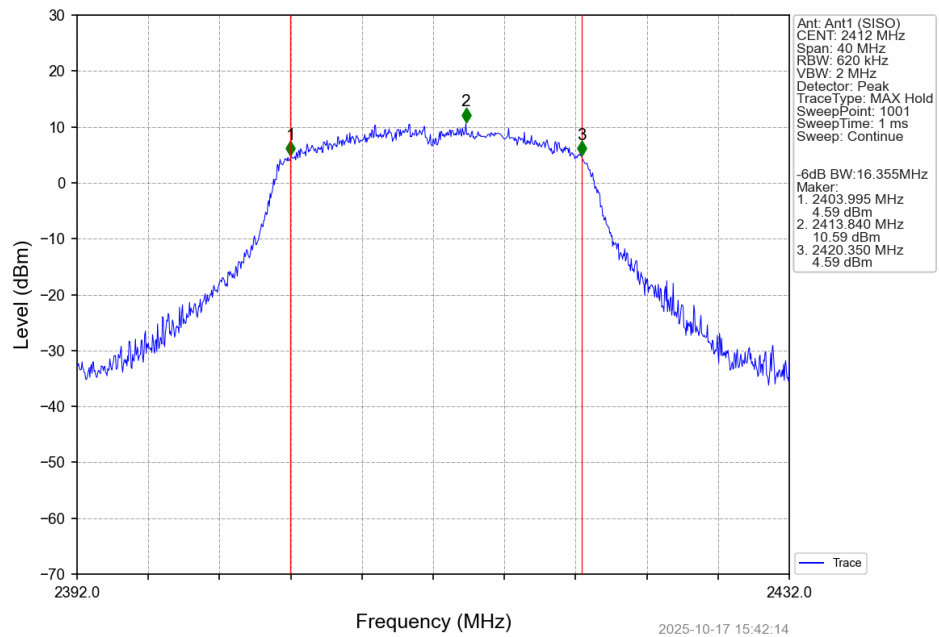
802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV



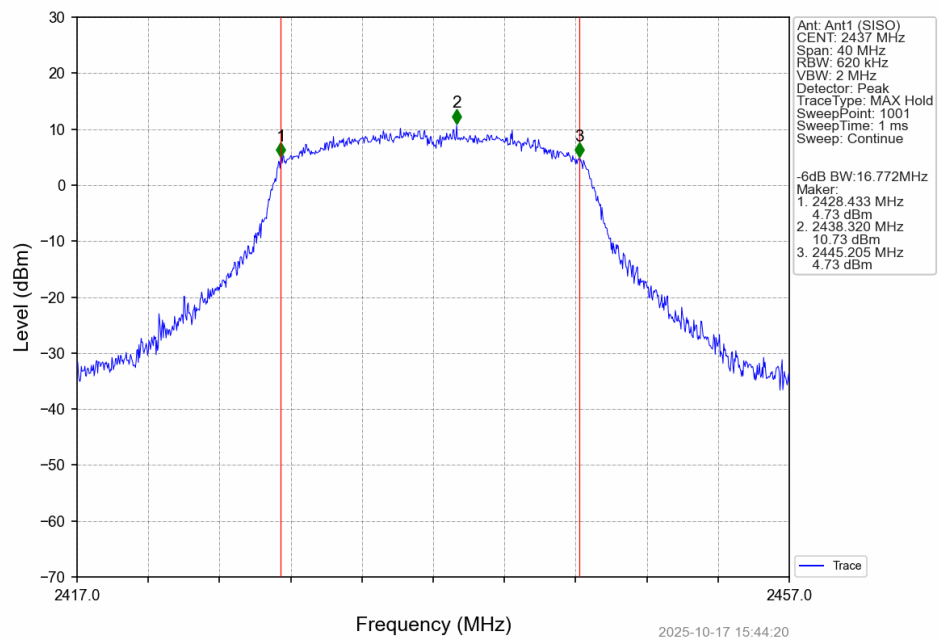
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



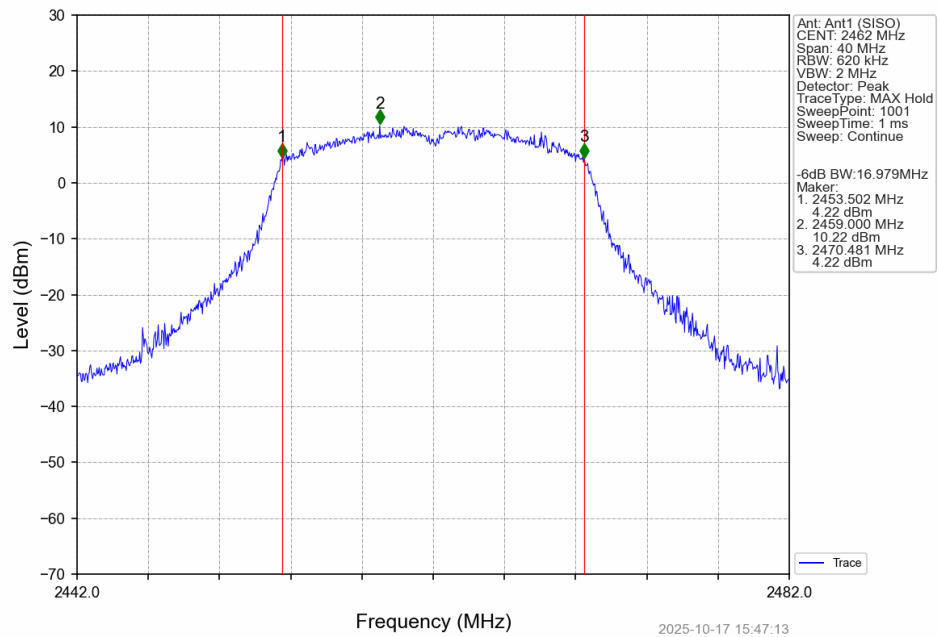
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTV



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	22.51	<=30	Pass
		2437	22.53	<=30	Pass
		2462	22.29	<=30	Pass
802.11g	SISO	2412	23.03	<=30	Pass
		2437	23.07	<=30	Pass
		2462	23.05	<=30	Pass
802.11n (HT20)	SISO	2412	22.14	<=30	Pass
		2437	22.06	<=30	Pass
		2462	22.17	<=30	Pass

4. Maximum Power Spectral Density

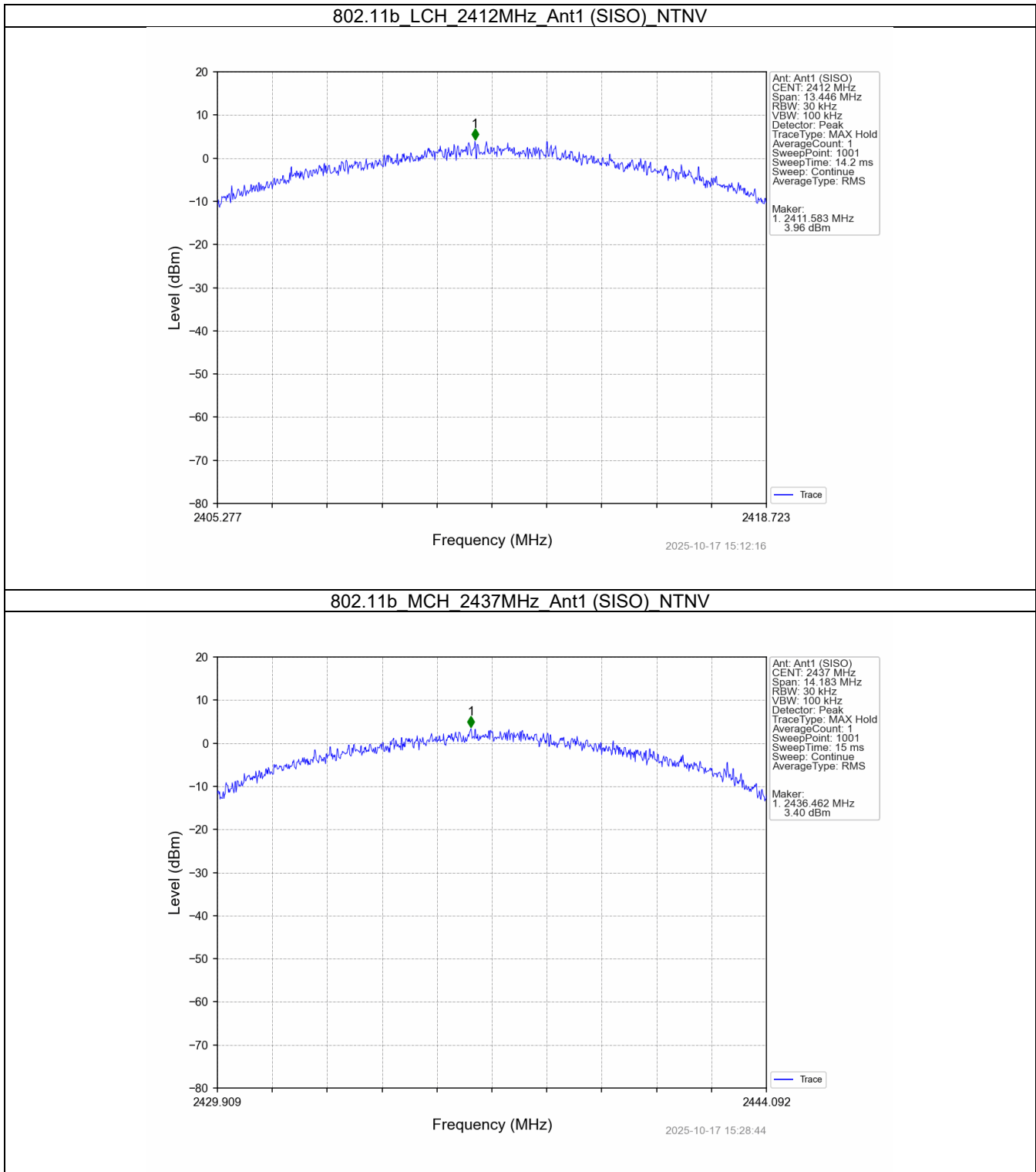
4.1 Test Result

4.1.1 PSD

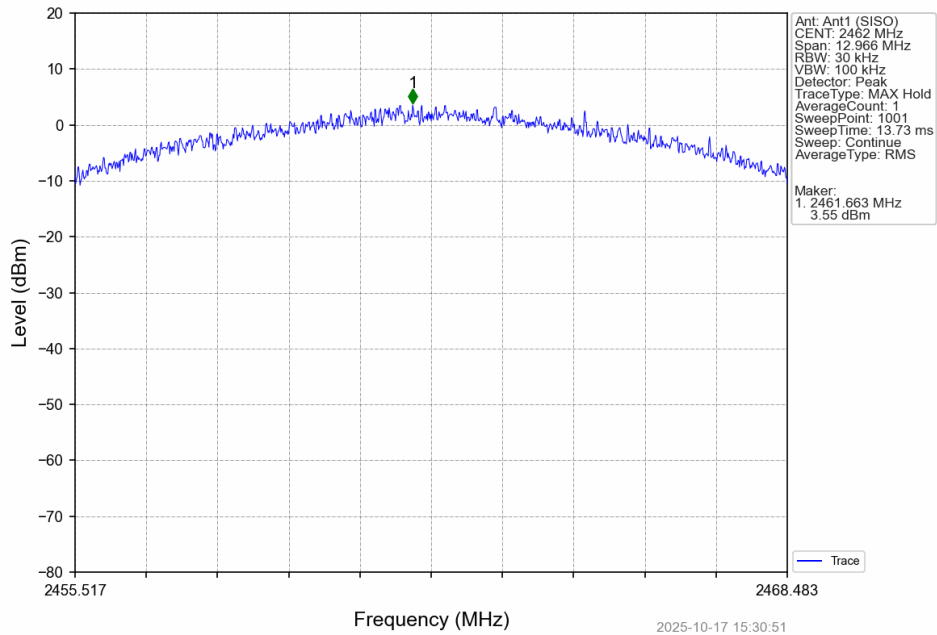
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	3.96	<=8	Pass
		2437	3.40	<=8	Pass
		2462	3.55	<=8	Pass
802.11g	SISO	2412	4.93	<=8	Pass
		2437	4.80	<=8	Pass
		2462	5.02	<=8	Pass
802.11n (HT20)	SISO	2412	4.33	<=8	Pass
		2437	4.00	<=8	Pass
		2462	4.21	<=8	Pass

4.2 Test Graph

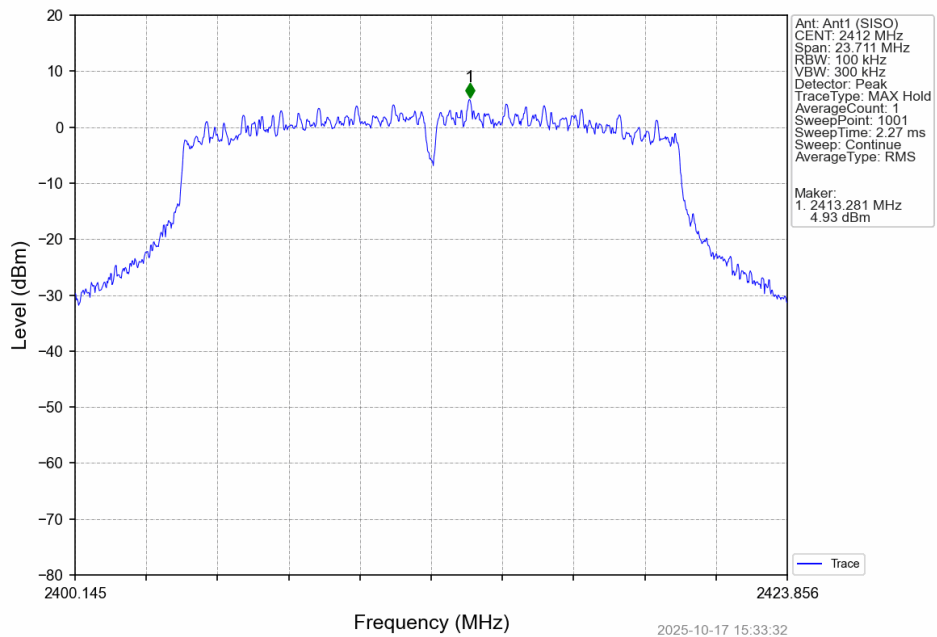
4.2.1 PSD



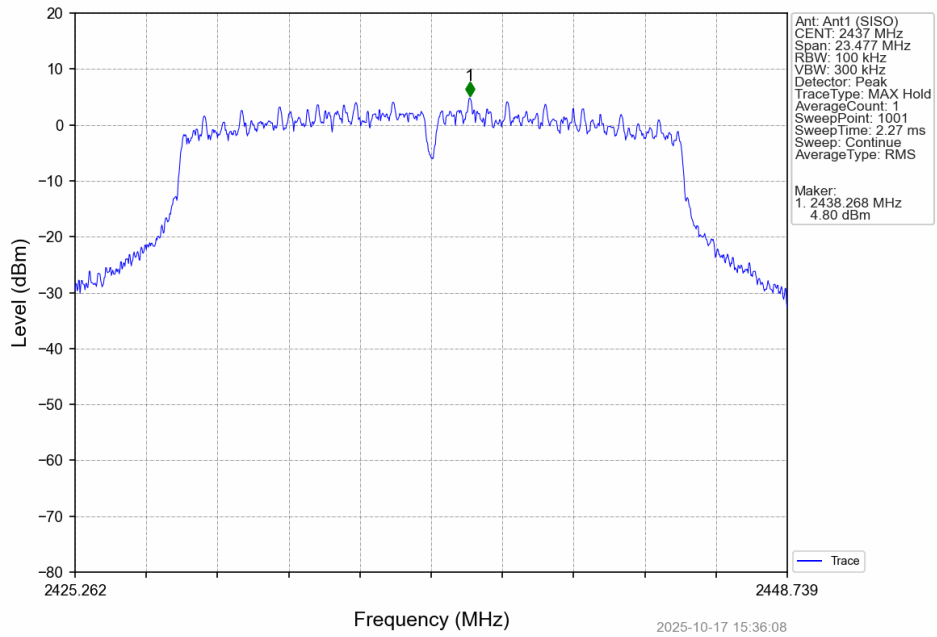
802.11b HCH 2462MHz Ant1 (SISO) NTN



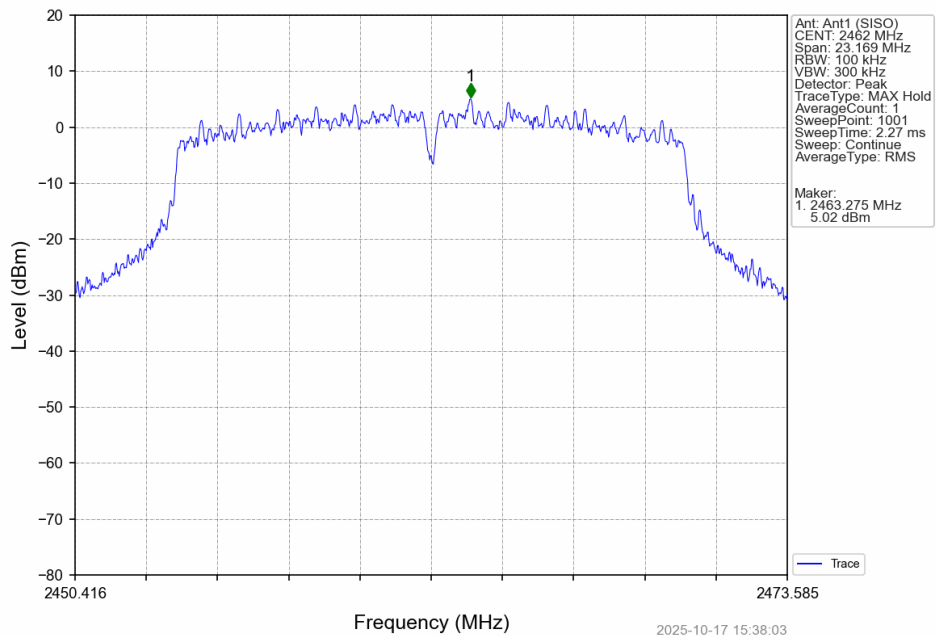
802.11g LCH 2412MHz Ant1 (SISO) NTN



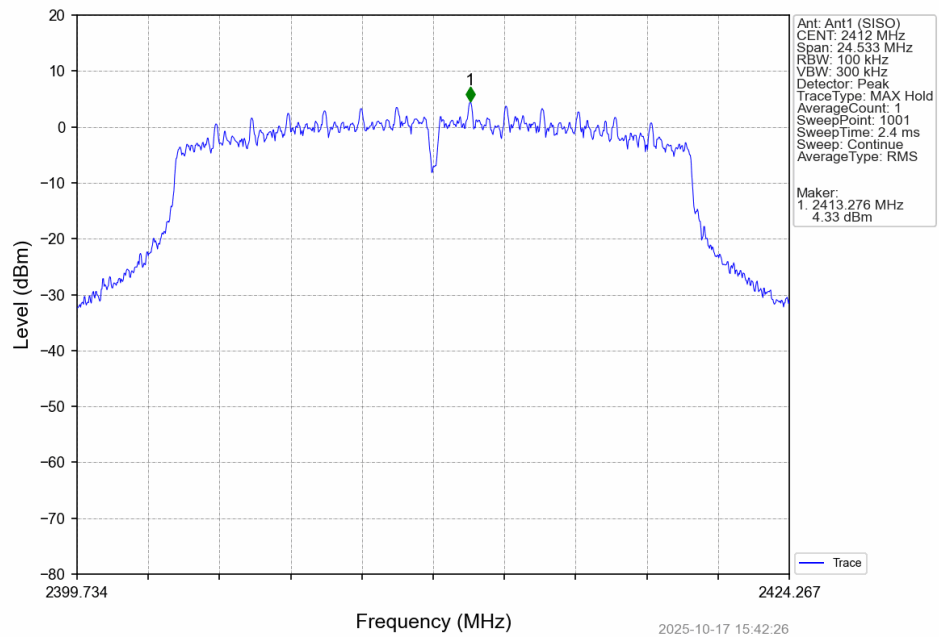
802.11g MCH 2437MHz Ant1 (SISO) NTN



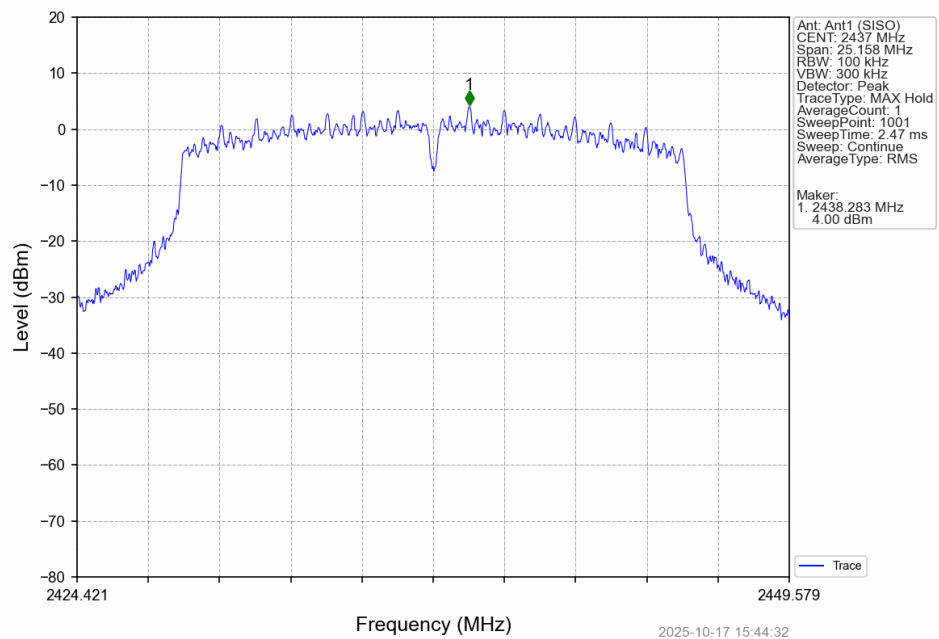
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



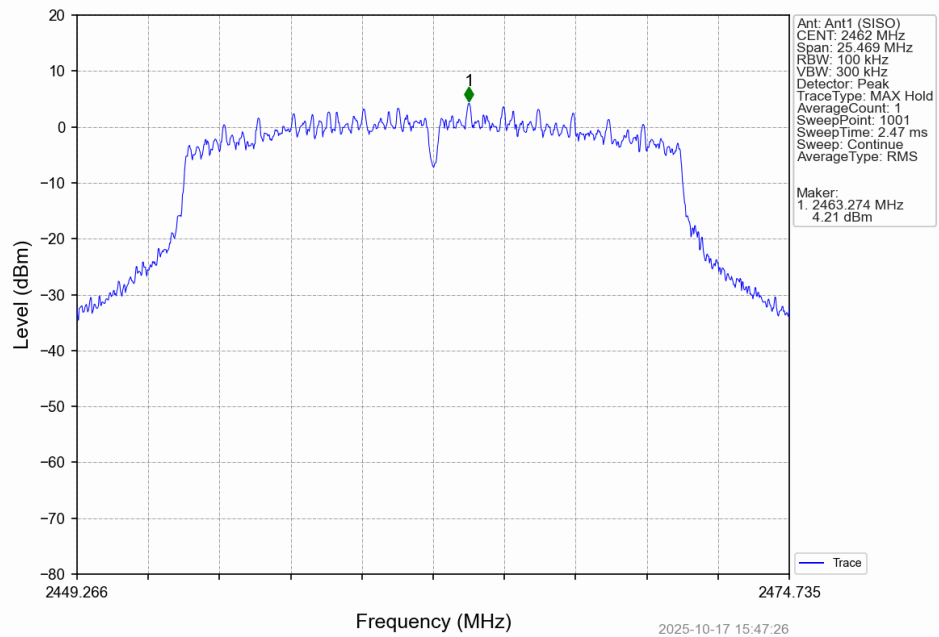
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTNV



802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTNV



802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTV



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	8.77
		2437	1	8.24
		2462	1	9.18
802.11g	SISO	2412	1	4.92
		2437	1	4.46
		2462	1	5.03
802.11n (HT20)	SISO	2412	1	4.44
		2437	1	3.98
		2462	1	4.23

Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

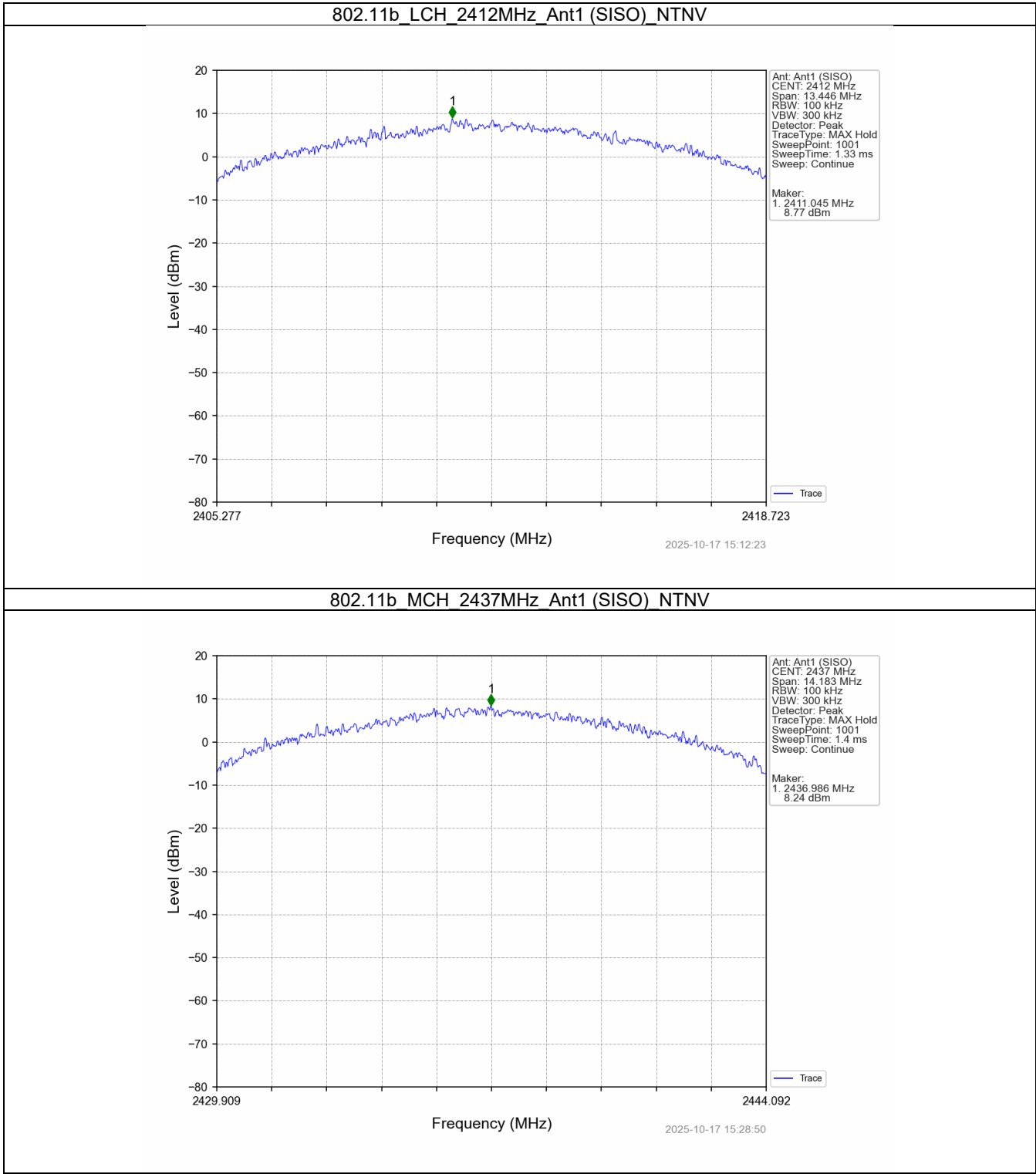
5.1.2 CSE

Mode	Tx Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	8.77	-11.23	Pass
		2437	1	8.24	-11.76	Pass
		2462	1	9.18	-10.82	Pass
802.11g	SISO	2412	1	4.92	-15.08	Pass
		2437	1	4.46	-15.54	Pass
		2462	1	5.03	-14.97	Pass
802.11n (HT20)	SISO	2412	1	4.44	-15.56	Pass
		2437	1	3.98	-16.02	Pass
		2462	1	4.23	-15.77	Pass

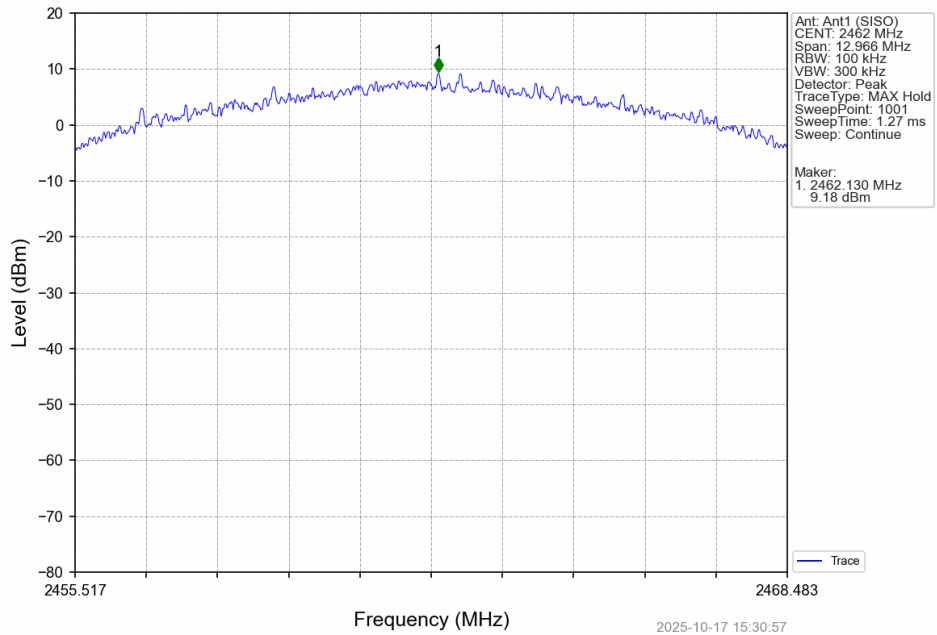
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.

5.2 Test Graph

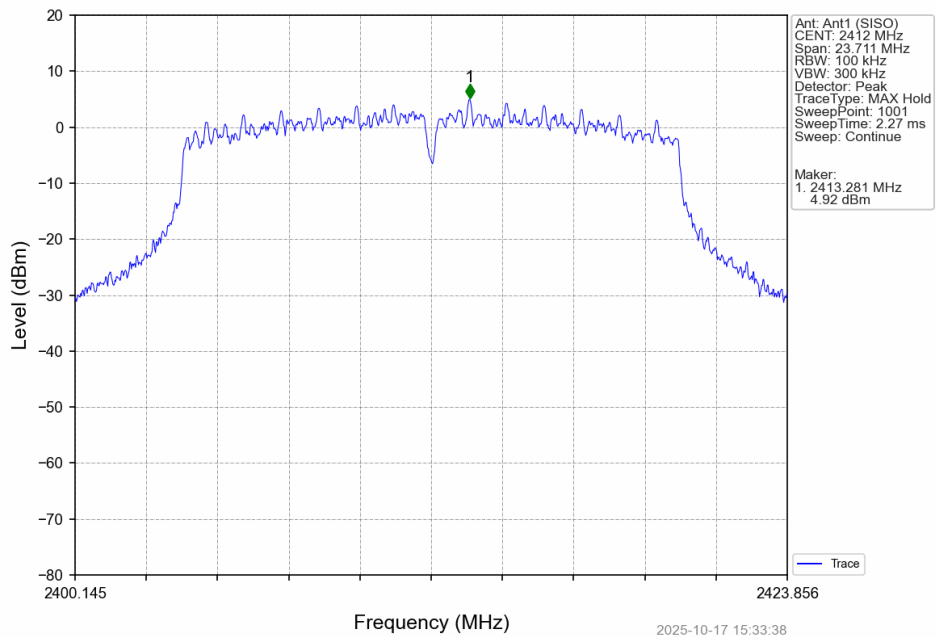
5.2.1 Ref



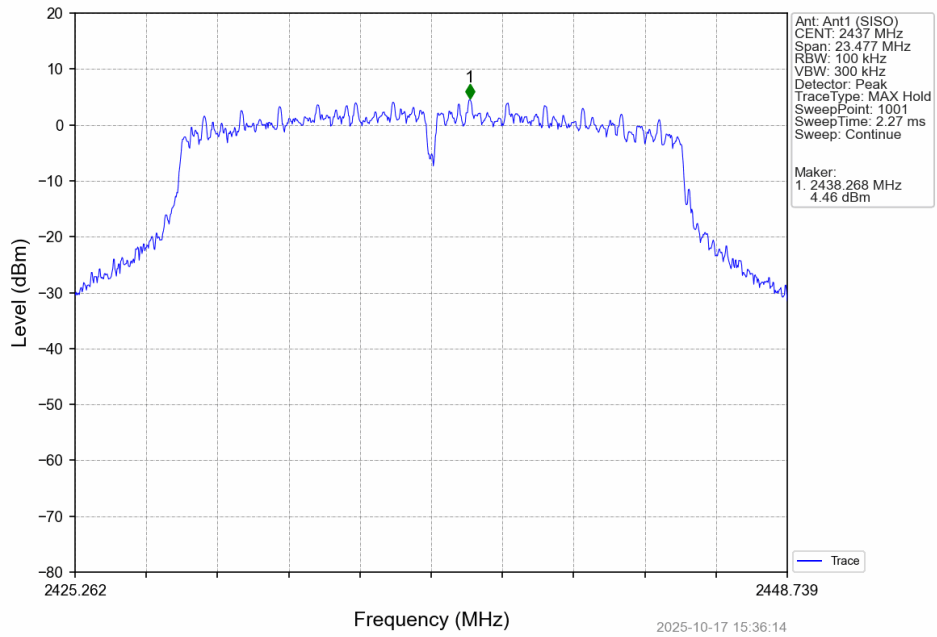
802.11b HCH 2462MHz Ant1 (SISO) NTN



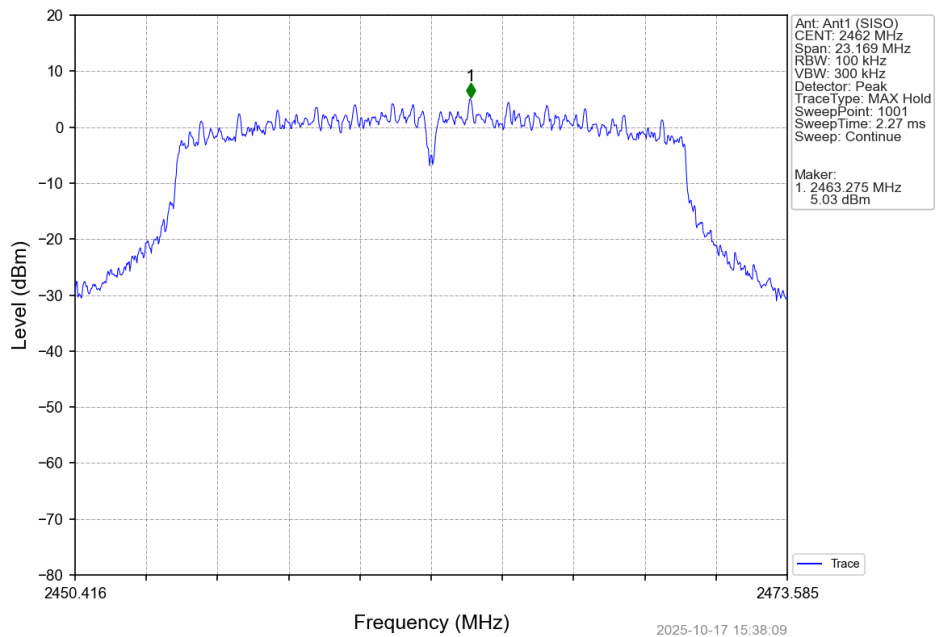
802.11g_LCH_2412MHz_Ant1 (SISO) NTN



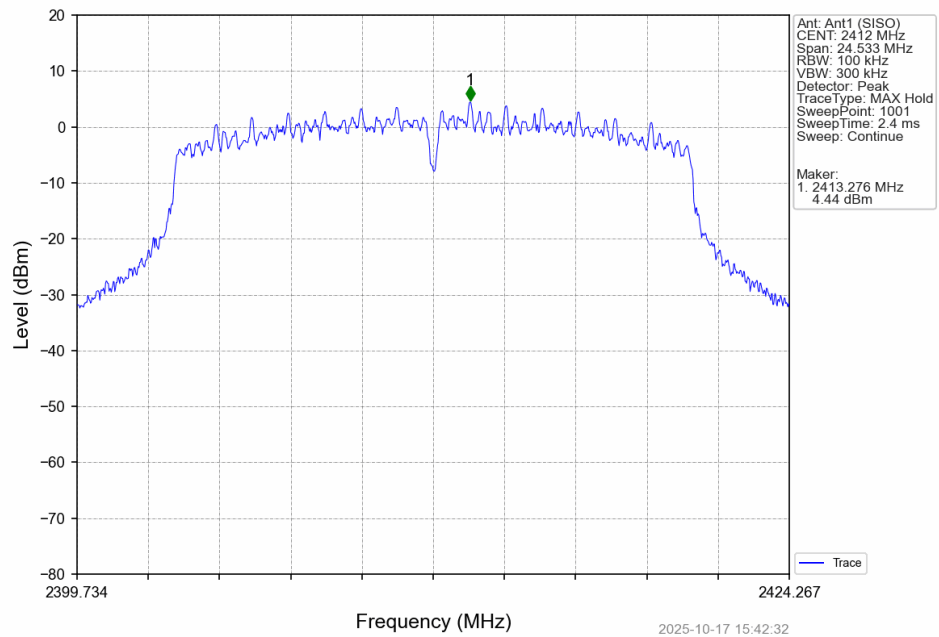
802.11g MCH 2437MHz Ant1 (SISO) NTN



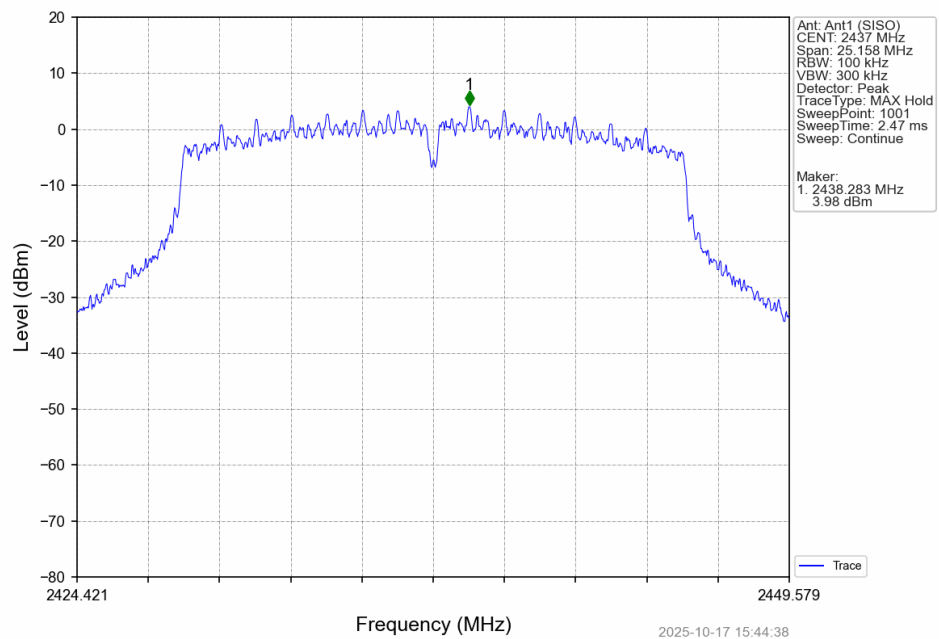
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



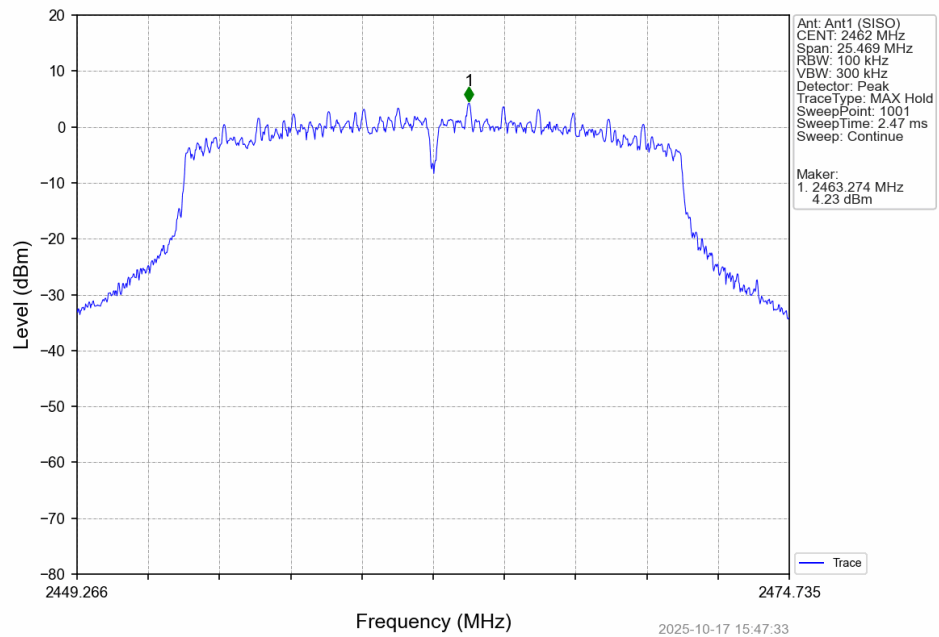
802.11n(HT20) LCH 2412MHz Ant1 (SISO) NTN



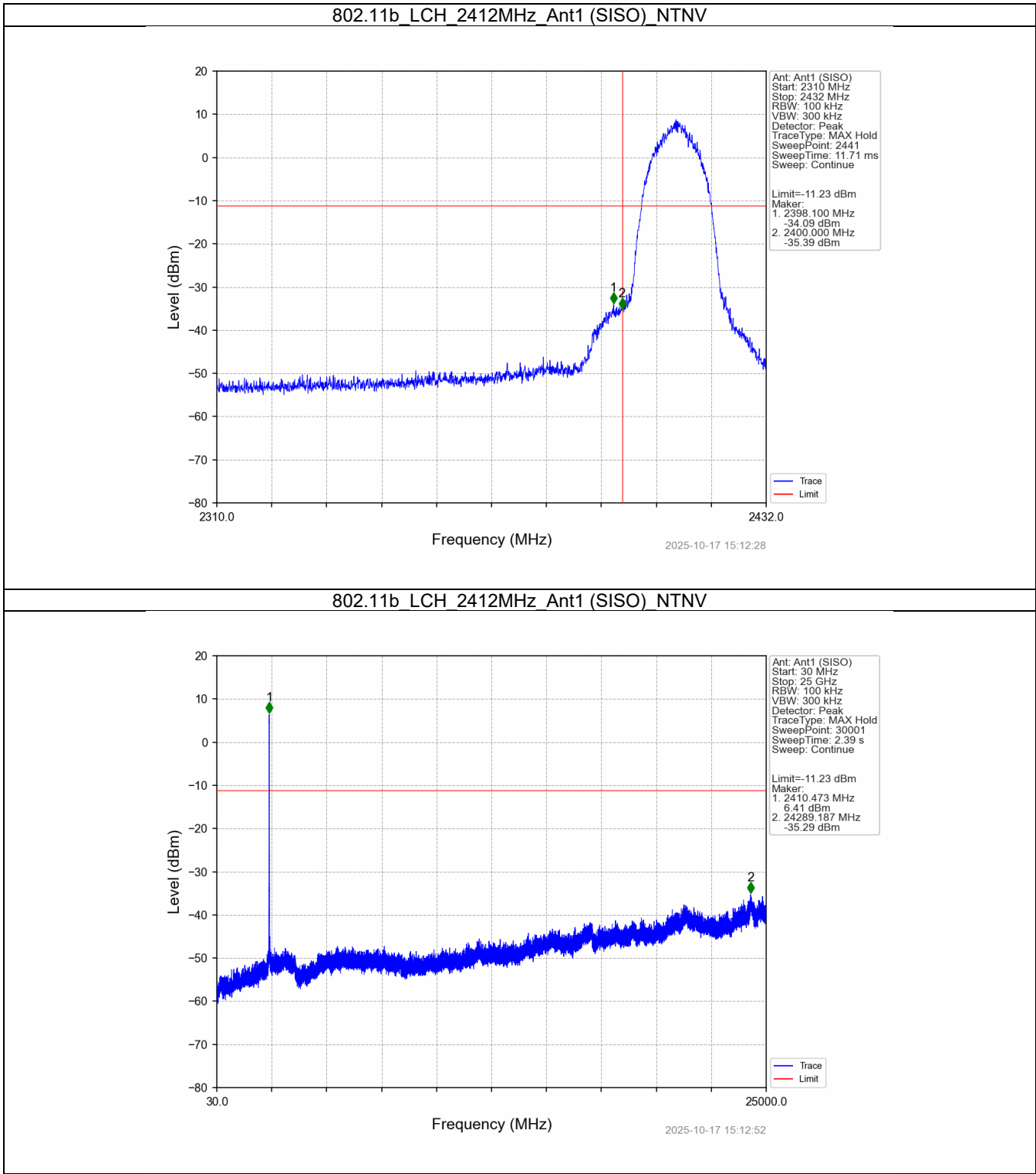
802.11n(HT20) MCH 2437MHz Ant1 (SISO) NTN



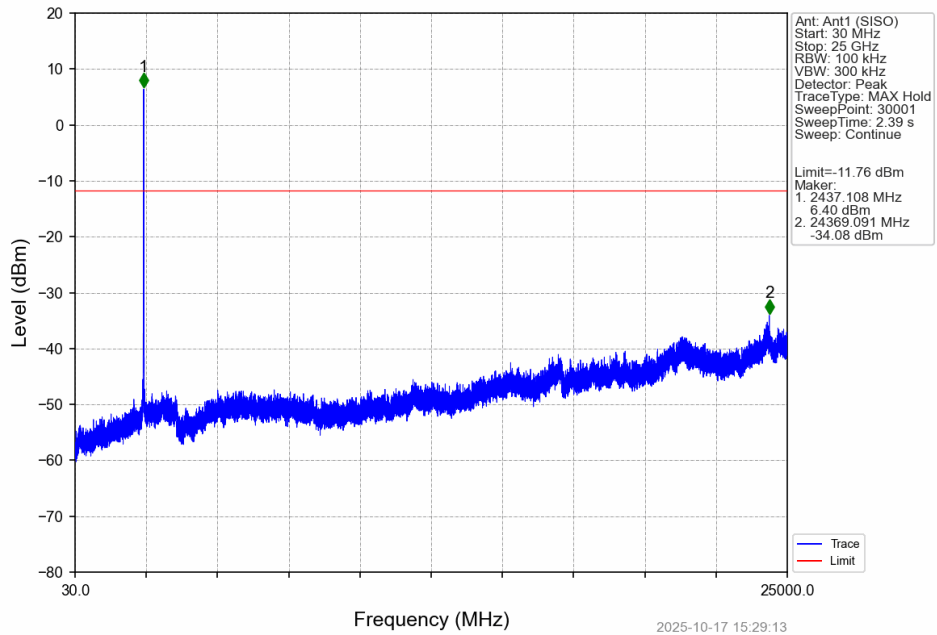
802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTV



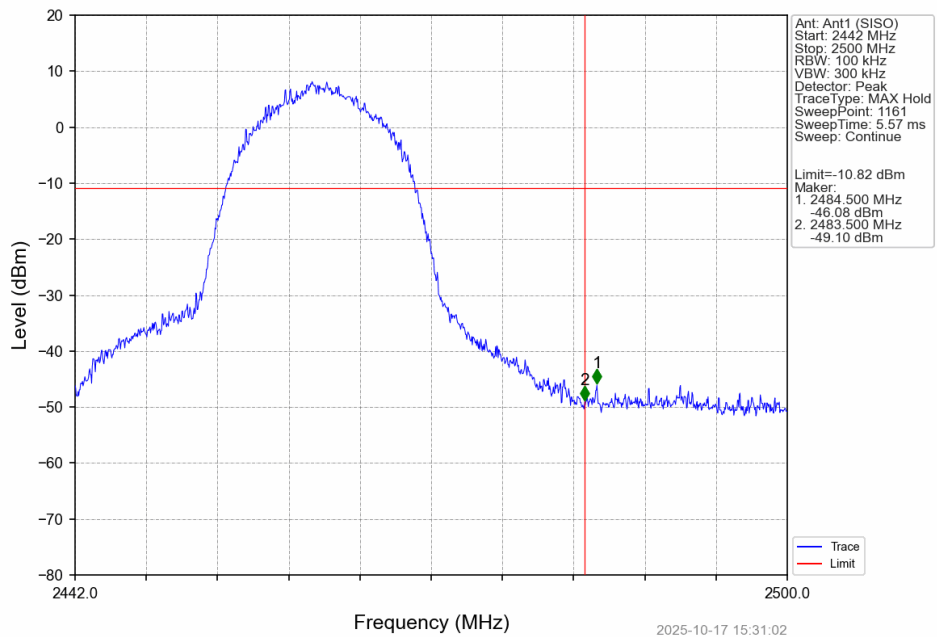
5.2.2 CSE



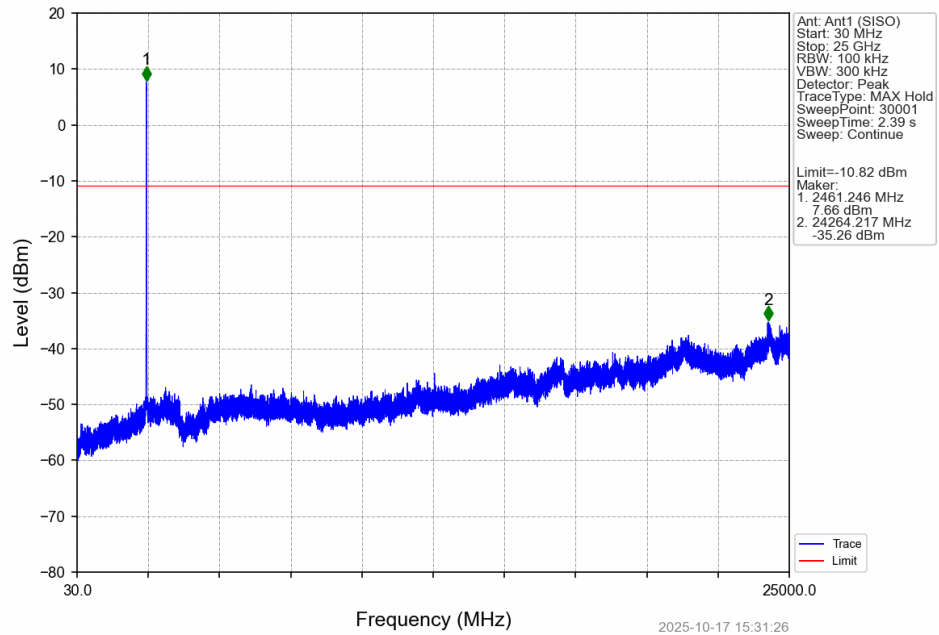
802.11b MCH 2437MHz Ant1 (SISO) NTN



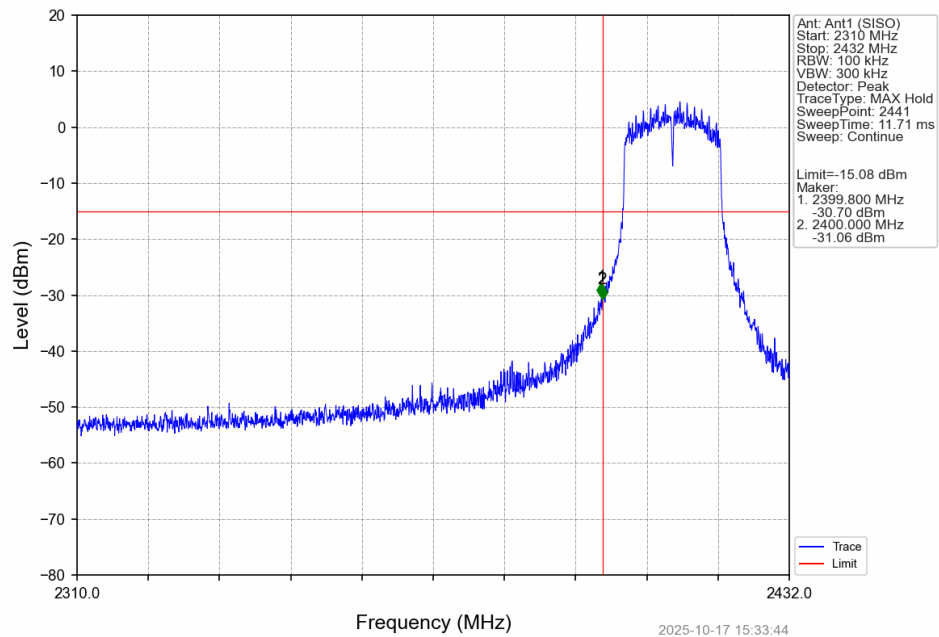
802.11b_HCH_2462MHz_Ant1 (SISO) NTN



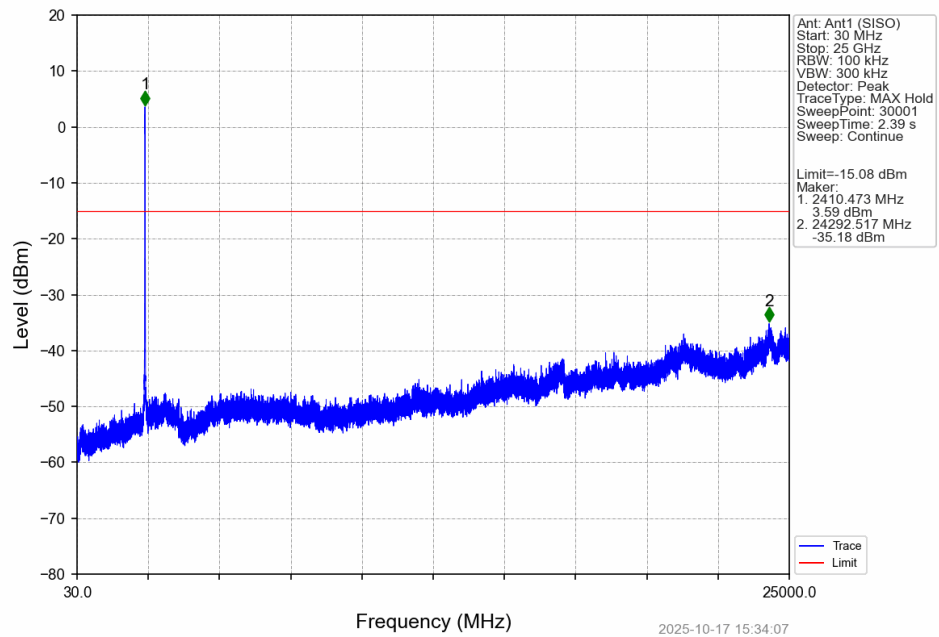
802.11b HCH 2462MHz Ant1 (SISO) NTN



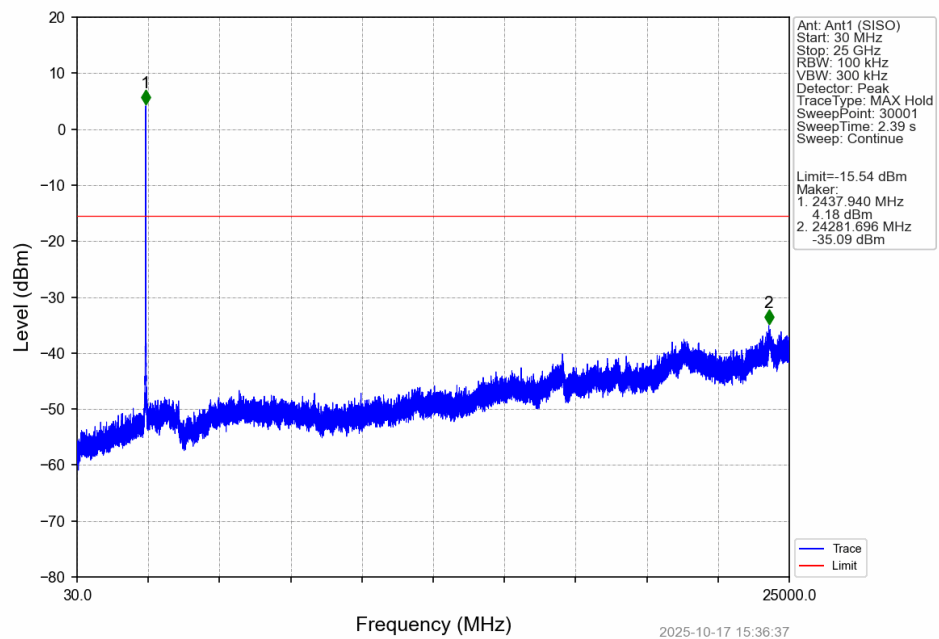
802.11g LCH 2412MHz Ant1 (SISO) NTN



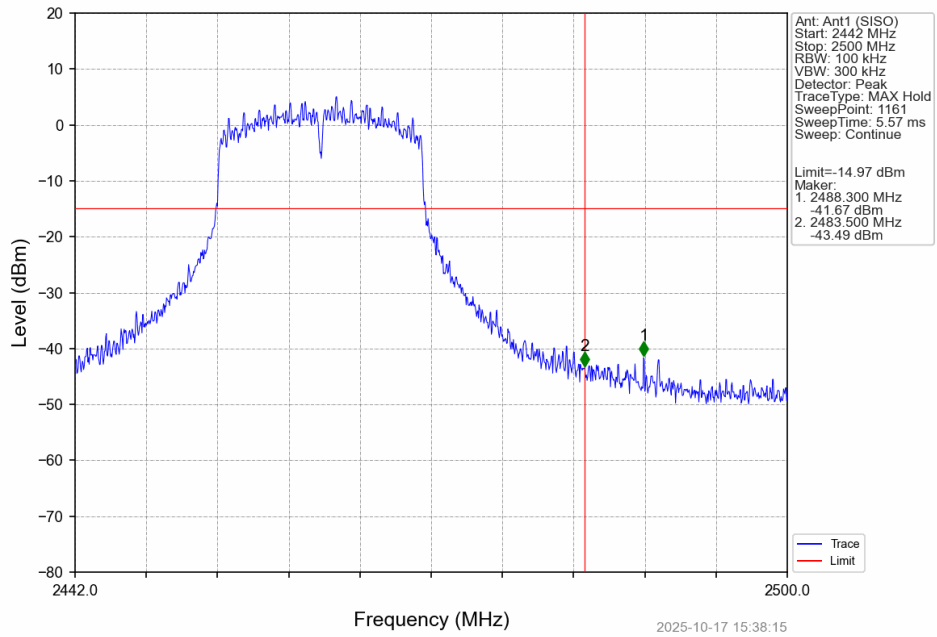
802.11g LCH 2412MHz Ant1 (SISO) NTN



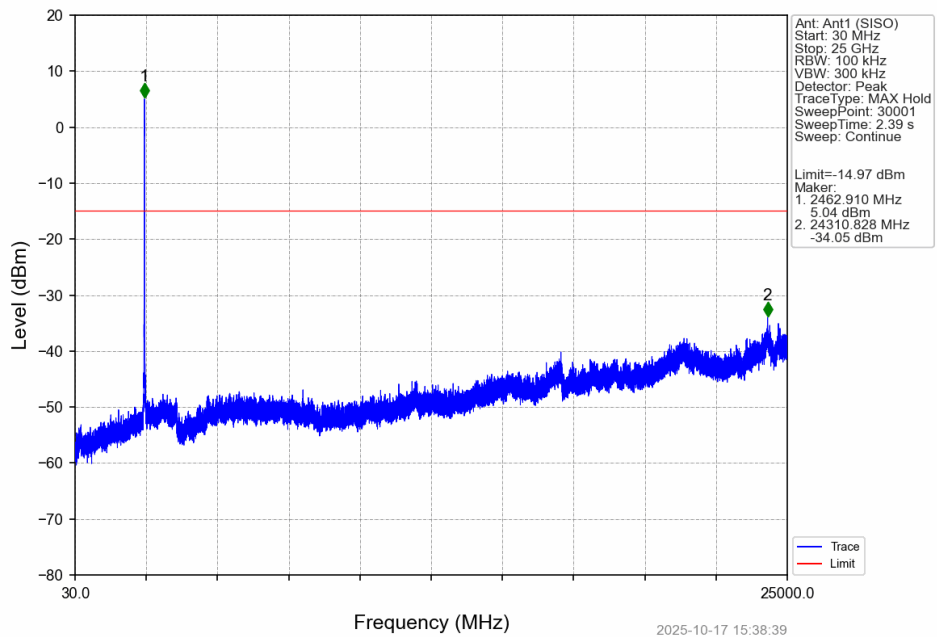
802.11g_MCH_2437MHz_Ant1 (SISO)_NTN



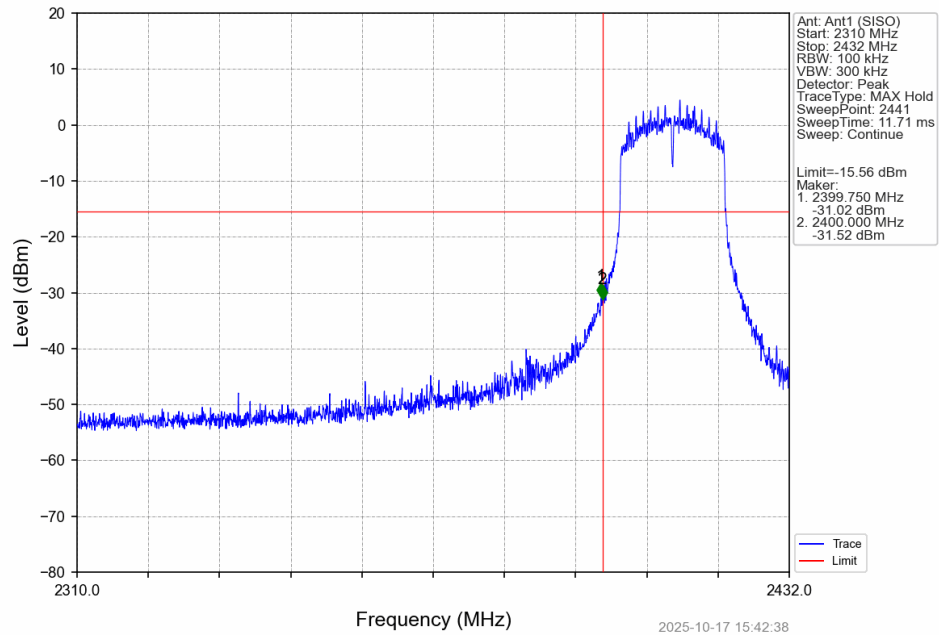
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



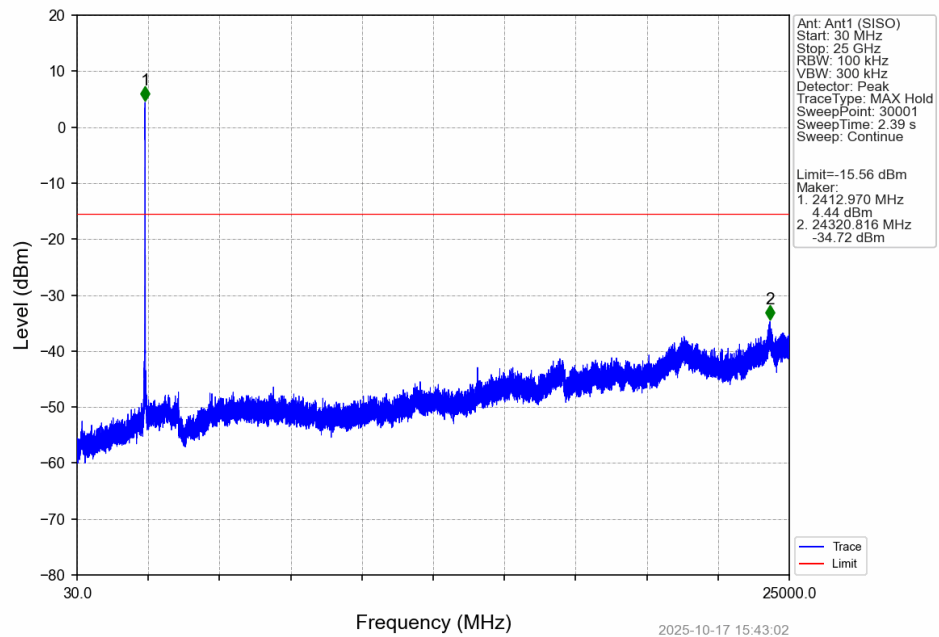
802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV



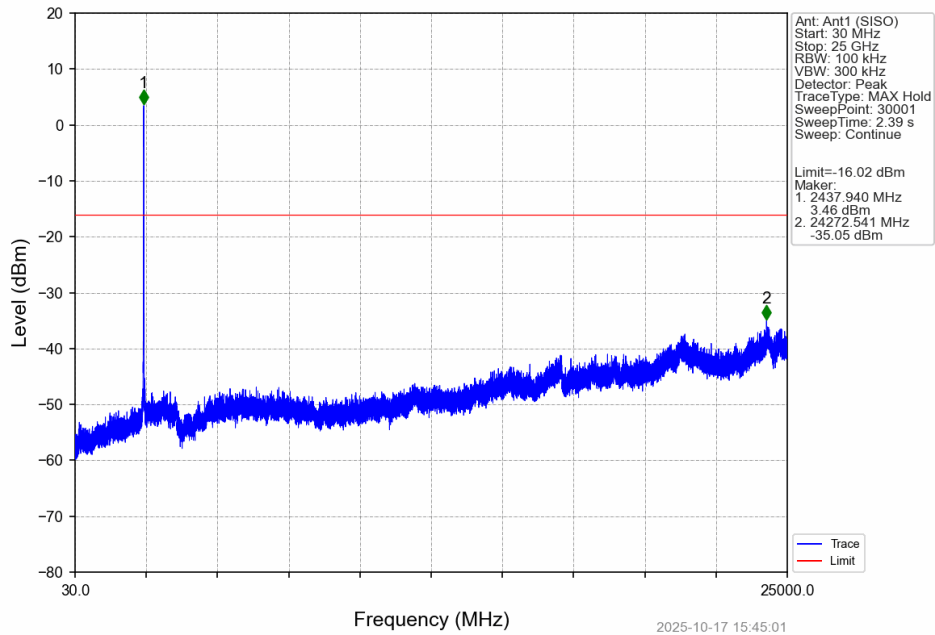
802.11n(HT20) LCH_2412MHz_Ant1 (SISO)_NTNV



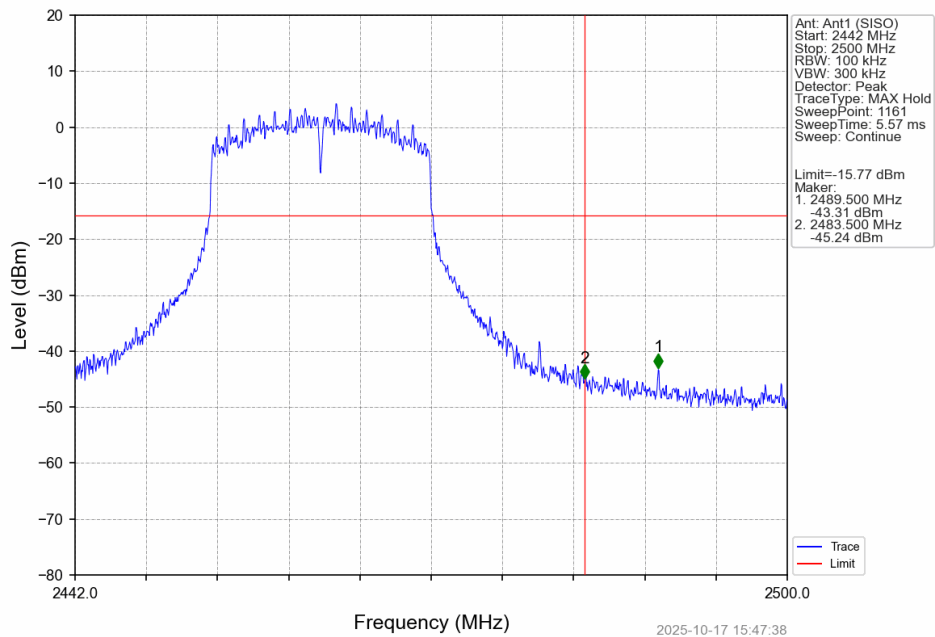
802.11n(HT20) LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20) MCH_2437MHz_Ant1 (SISO) NTN



802.11n(HT20) HCH_2462MHz_Ant1 (SISO) NTN



802.11n(HT20) HCH 2462MHz Ant1 (SISO) NTNV

