



Shenzhen BANTEK Testing Co., Ltd.

Report No.: BTEK251014013A01E01-01

RF Test Report

For BTEK251014013A01E01

Project No.:	BTEK251014013A01E01-01
Product Description:	20.1°C, 55%, 102.5kPa
Test Engineer:	Zora
Test Date:	2025-10-27



Test Summary

Item	Result
Duty Cycle	Pass
Bandwidth	Pass
Maximum Conducted Output Power	Pass
Maximum Power Spectral Density	Pass
Unwanted Emissions In Non-restricted Frequency Bands	Pass



1. Duty Cycle

1.1 Test Result

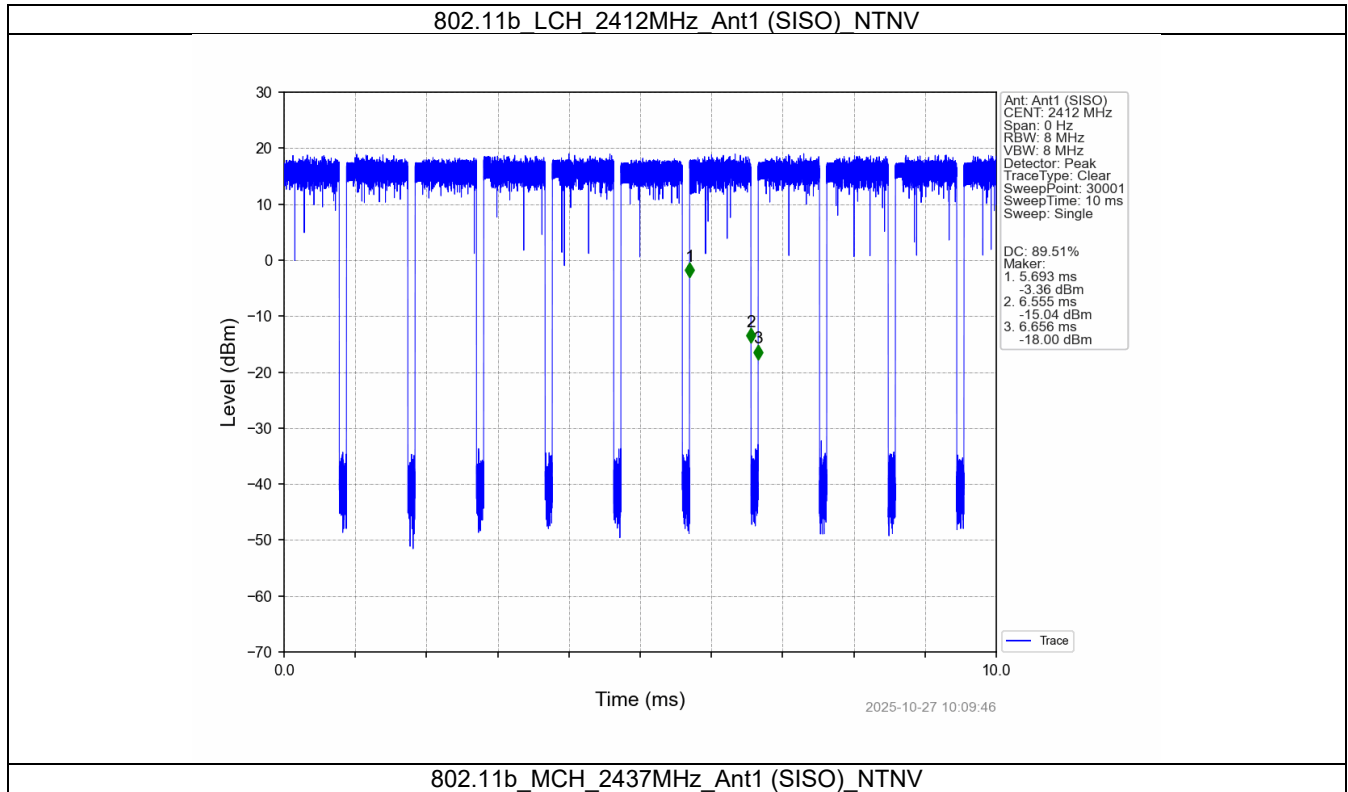
1.1.1 Ant1

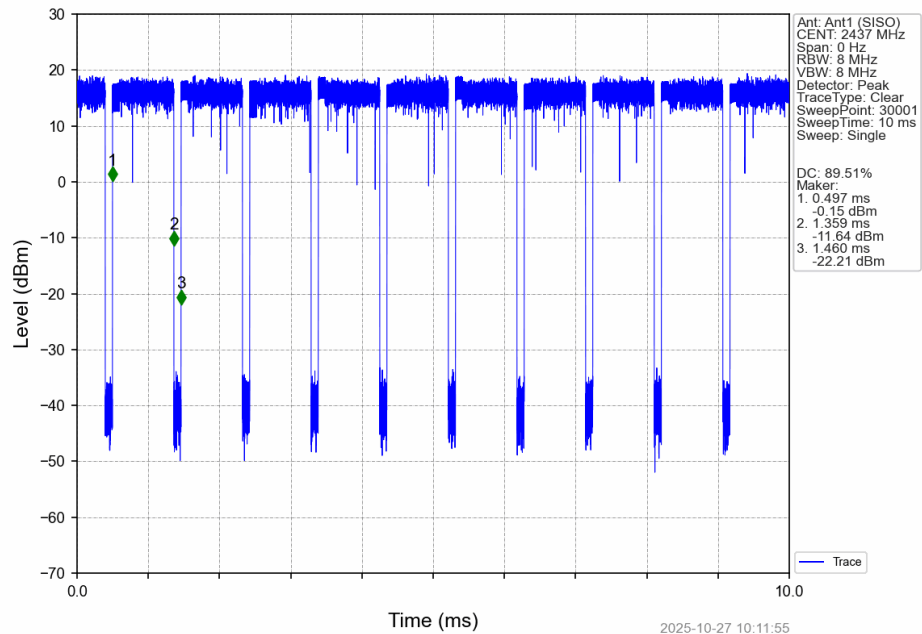
Ant1							
Mode	Tx Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11b	SISO	2412	0.862	0.963	89.51	0.48	0.04
		2437	0.862	0.963	89.51	0.48	0.03
		2462	0.862	0.963	89.51	0.48	0.10
802.11g	SISO	2412	0.185	0.289	64.01	1.94	0.09
		2437	0.181	0.289	62.63	2.03	0.08
		2462	0.181	0.289	62.63	2.03	0.09
802.11n (HT20)	SISO	2412	0.172	0.278	61.87	2.09	0.14
		2437	0.169	0.277	61.01	2.15	0.08
		2462	0.173	0.278	62.23	2.06	0.14



1.2 Test Graph

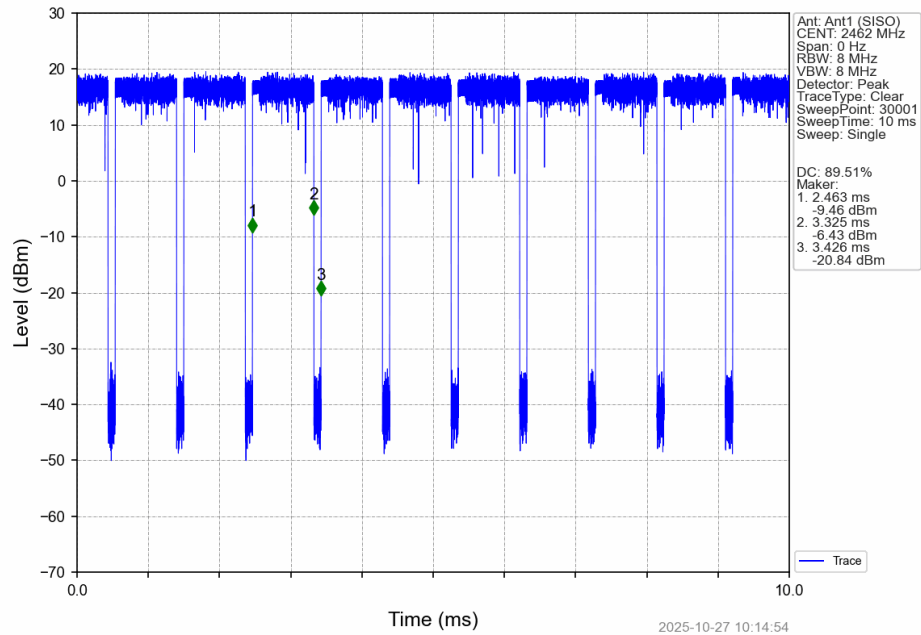
1.2.1 Ant1



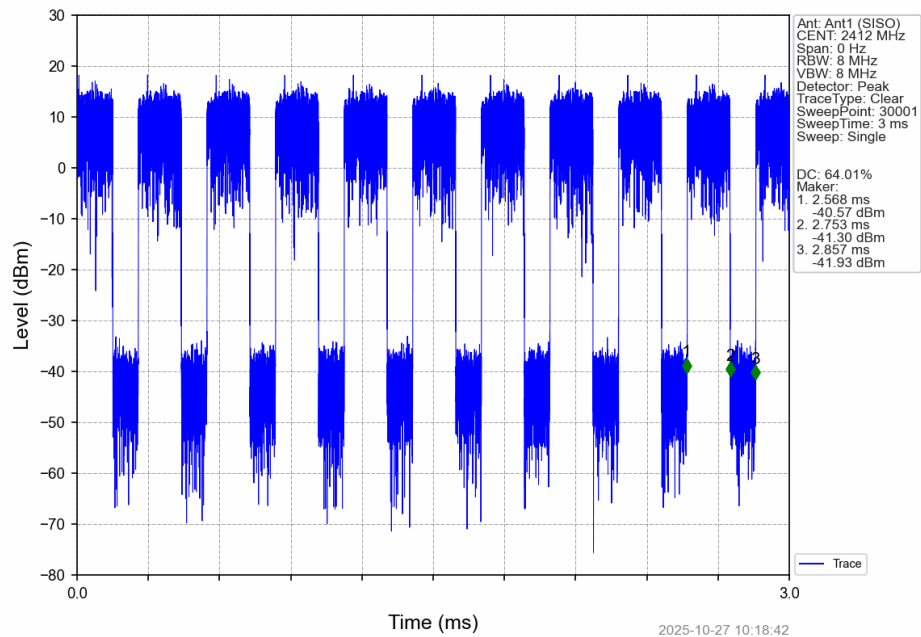




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

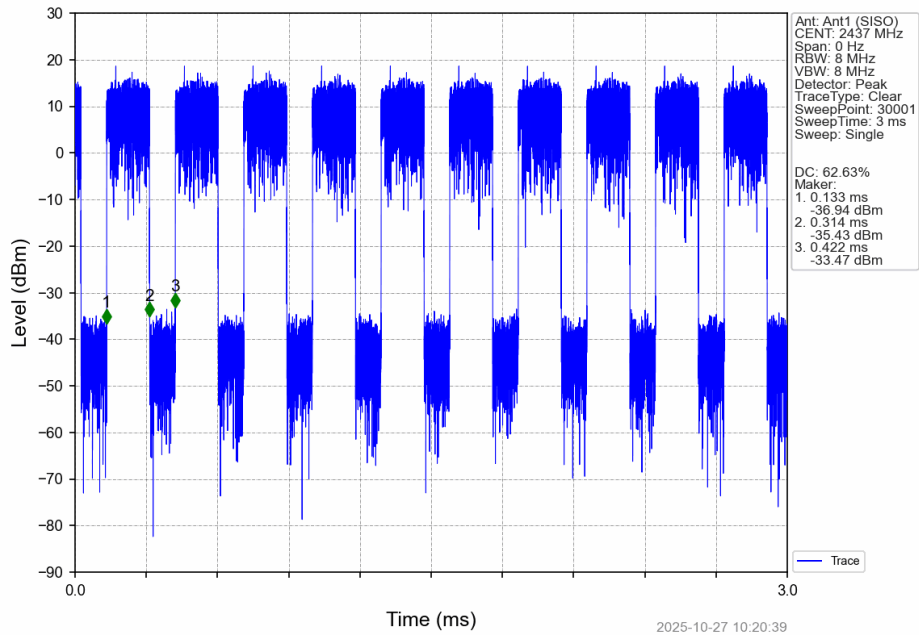


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

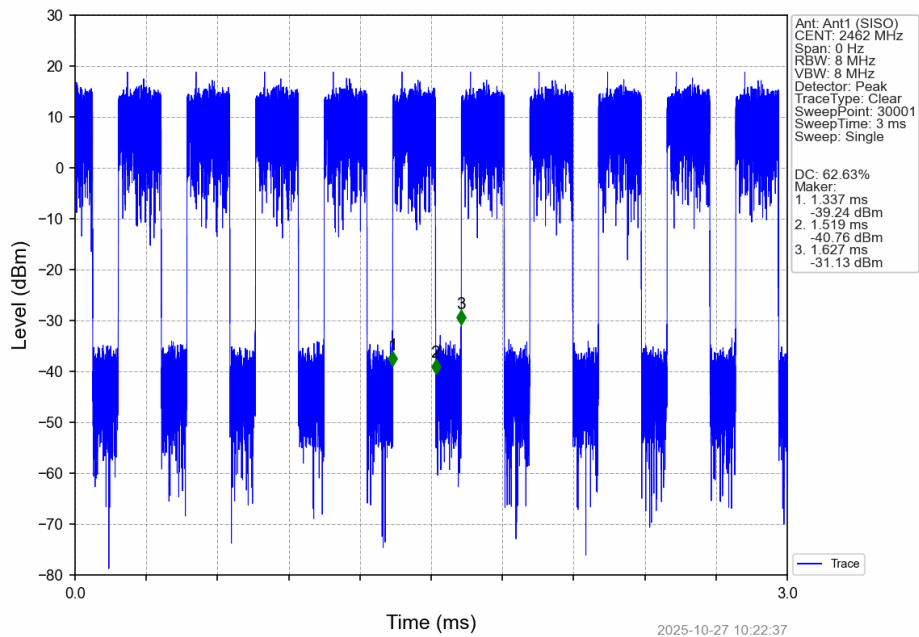




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

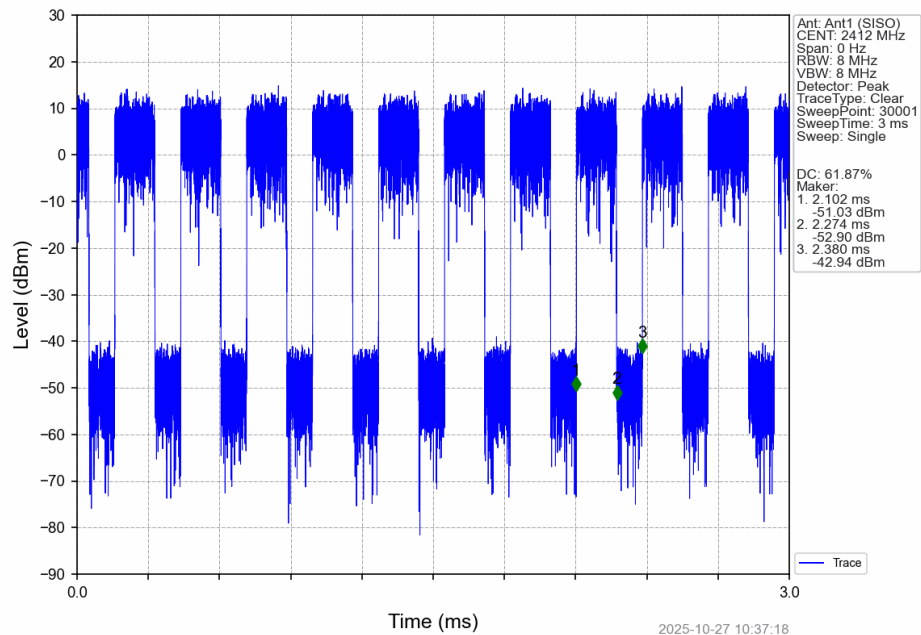


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

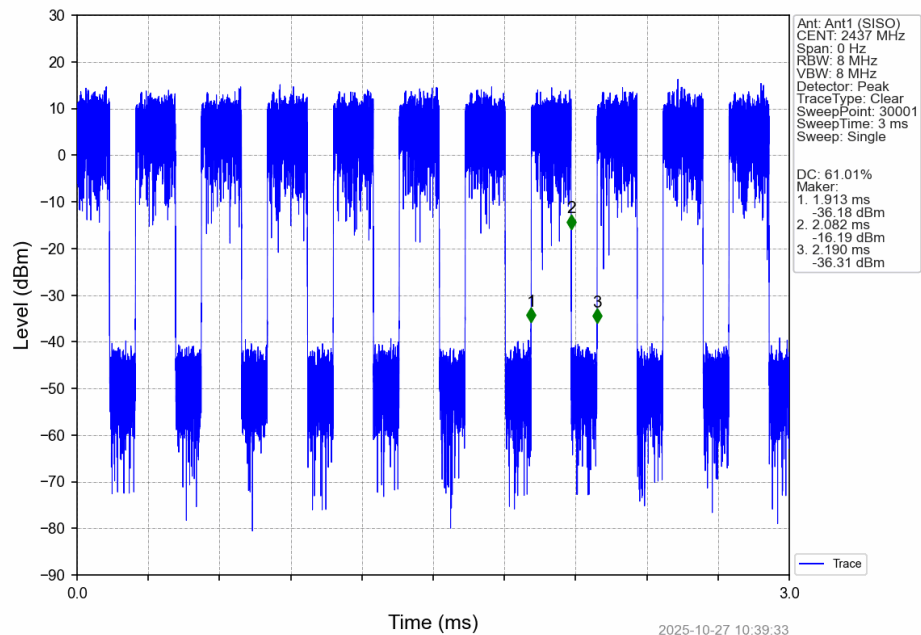


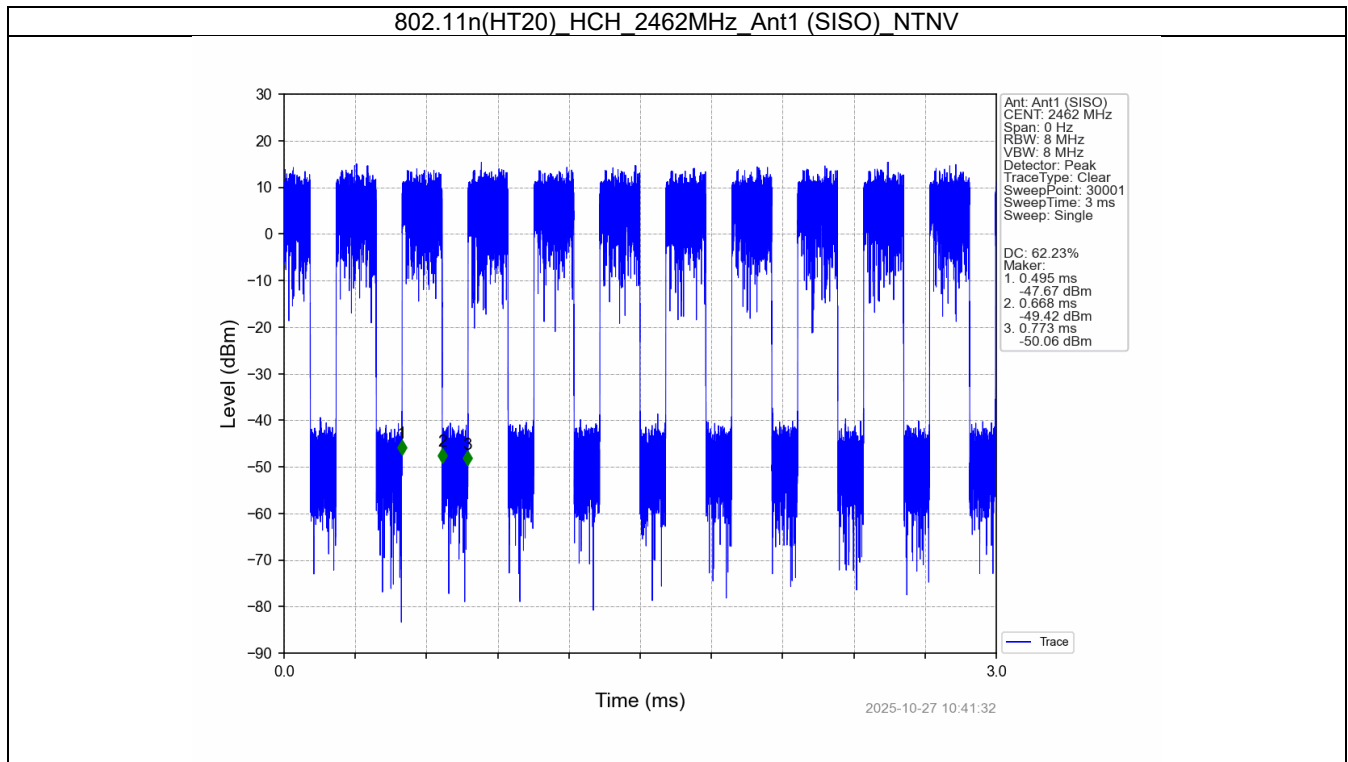


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV







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	12.374	/	Pass
		2437	1	12.475	/	Pass
		2462	1	12.370	/	Pass
802.11g	SISO	2412	1	17.206	/	Pass
		2437	1	17.277	/	Pass
		2462	1	17.331	/	Pass
802.11n (HT20)	SISO	2412	1	18.592	/	Pass
		2437	1	18.581	/	Pass
		2462	1	18.545	/	Pass

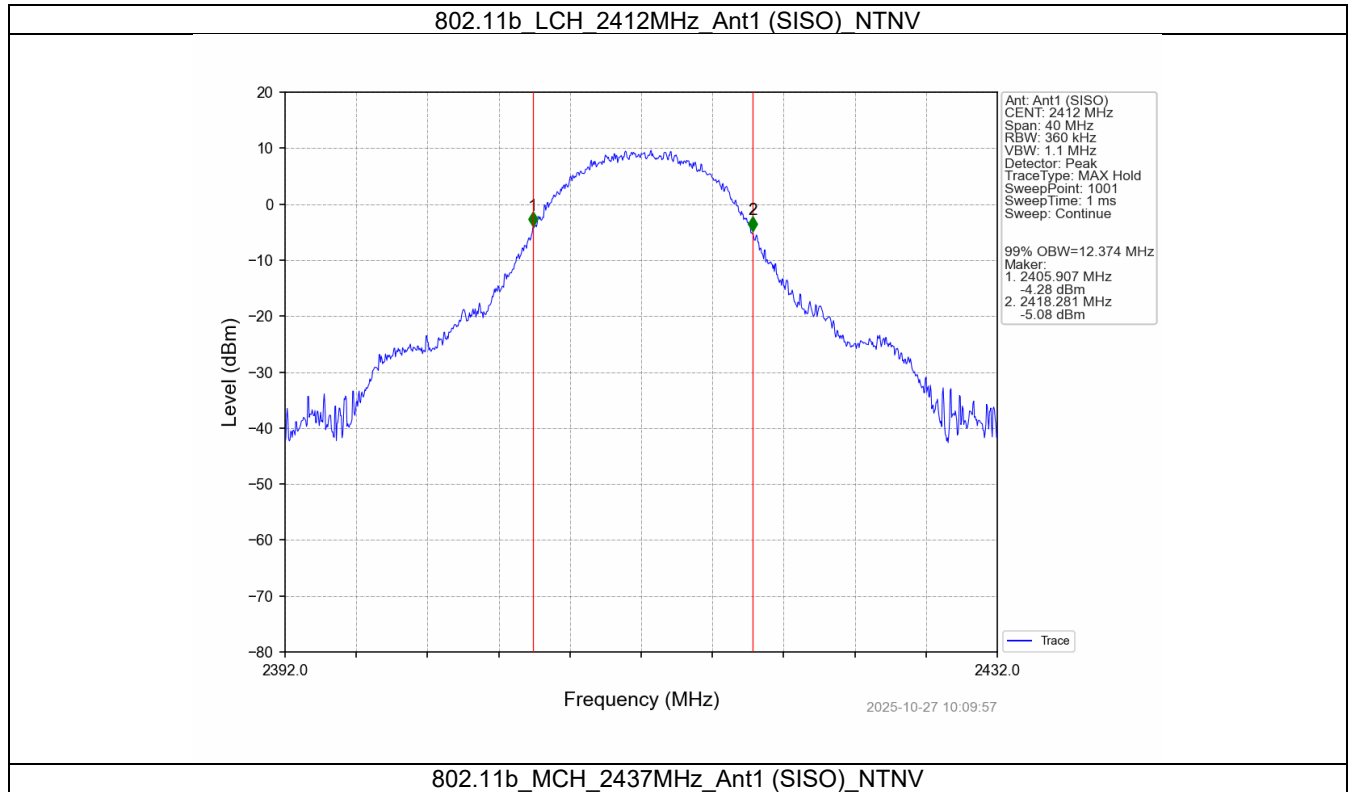
2.1.2 6dB BW

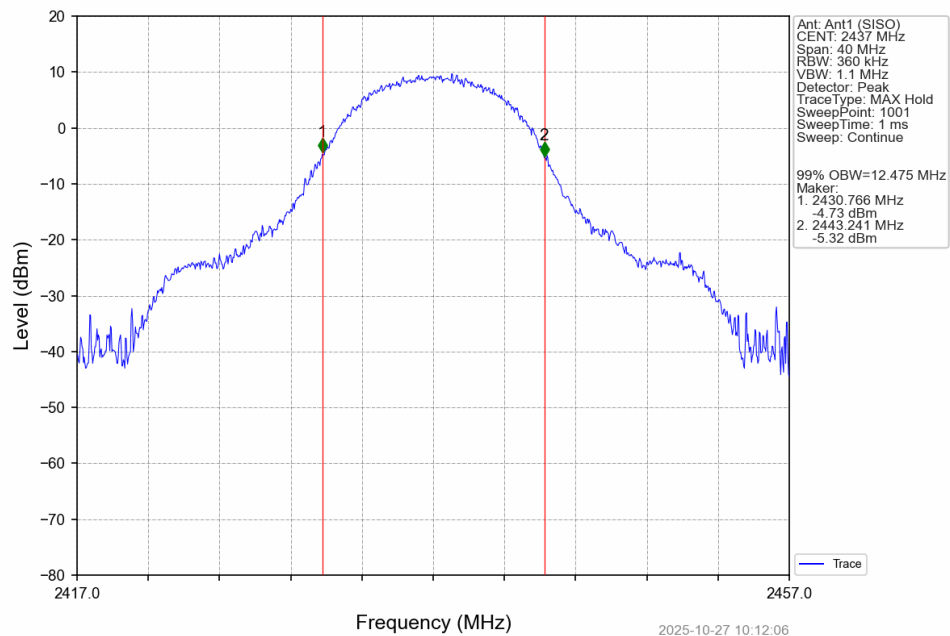
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11b	SISO	2412	1	8.337	≥ 0.5	Pass
		2437	1	9.293	≥ 0.5	Pass
		2462	1	8.721	≥ 0.5	Pass
802.11g	SISO	2412	1	16.404	≥ 0.5	Pass
		2437	1	16.413	≥ 0.5	Pass
		2462	1	16.409	≥ 0.5	Pass
802.11n (HT20)	SISO	2412	1	17.762	≥ 0.5	Pass
		2437	1	17.732	≥ 0.5	Pass
		2462	1	17.728	≥ 0.5	Pass



2.2 Test Graph

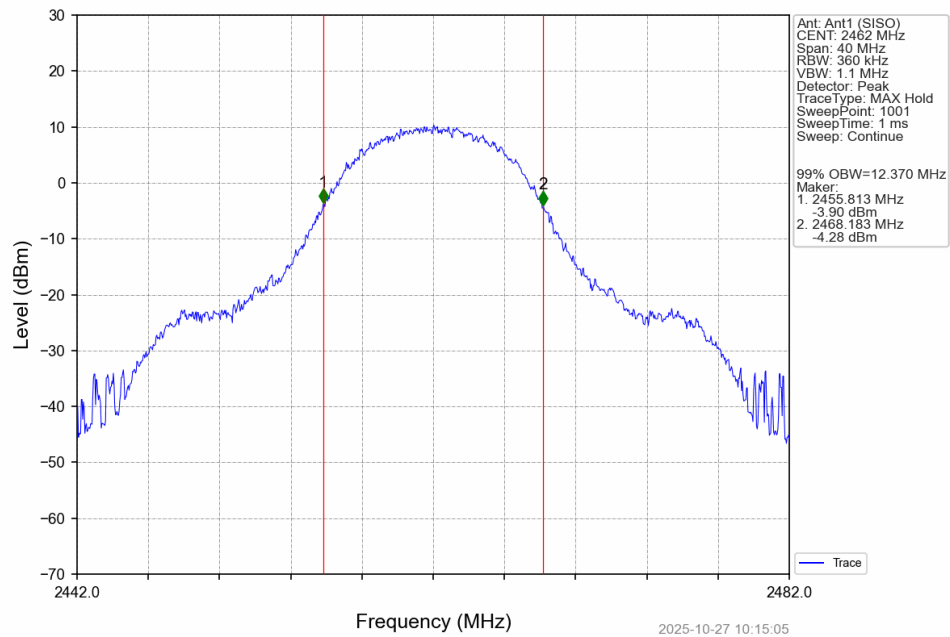
2.2.1 OBW



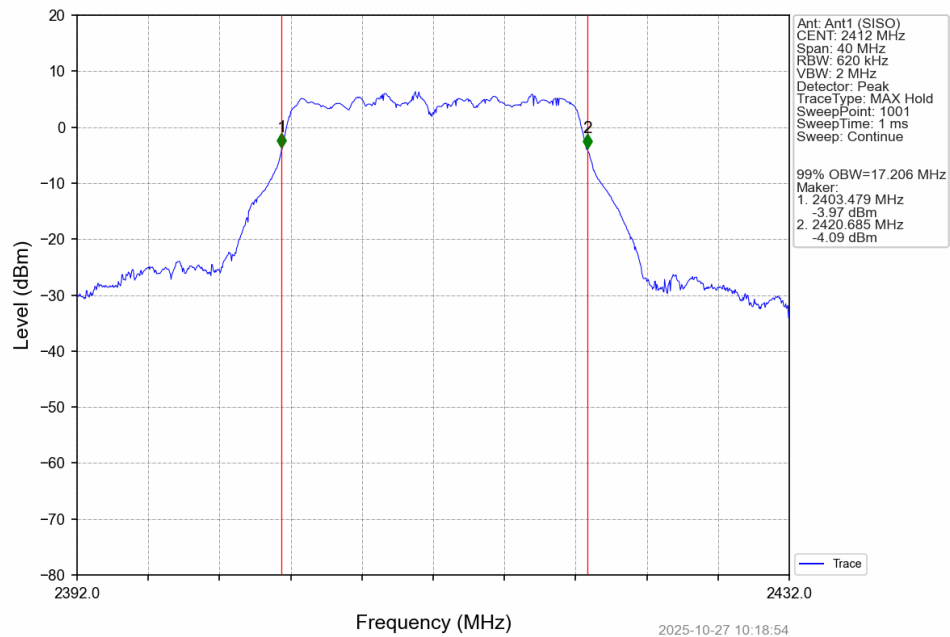




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

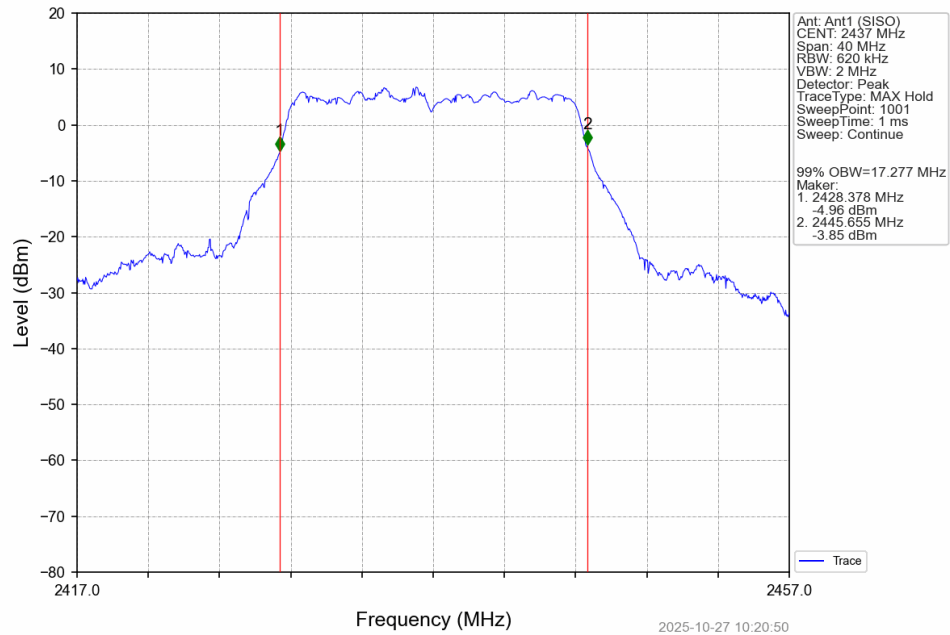


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

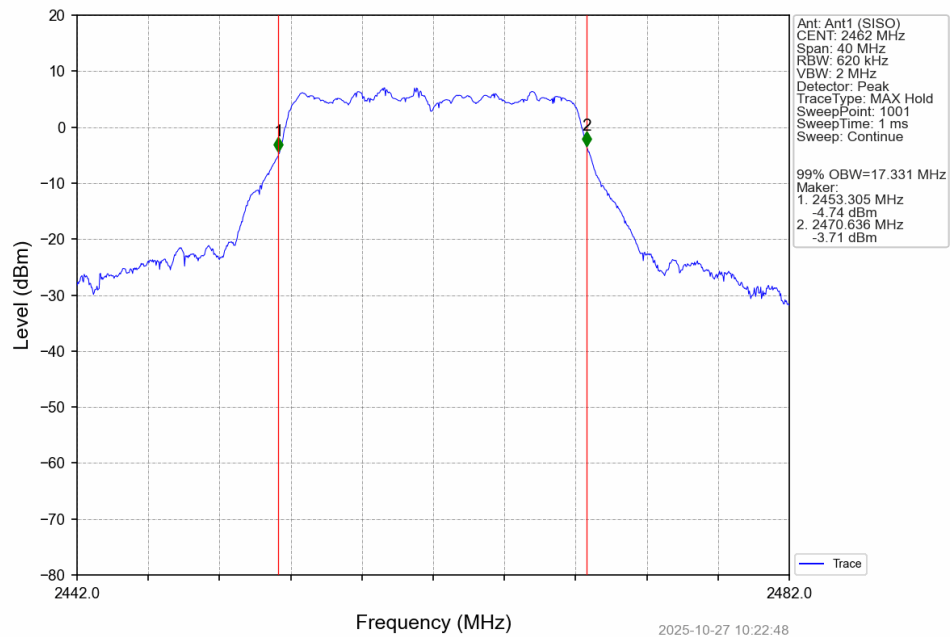




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

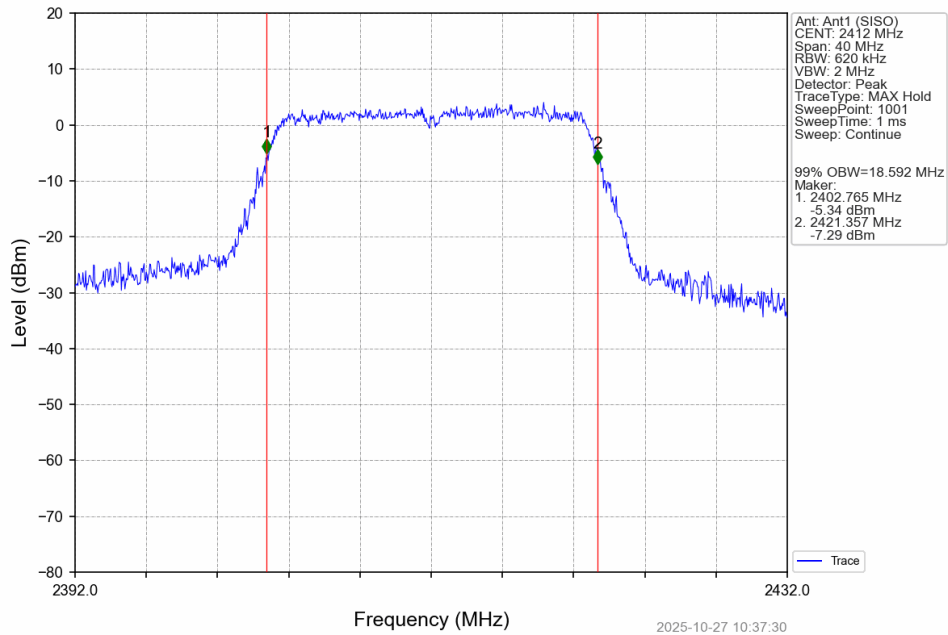


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

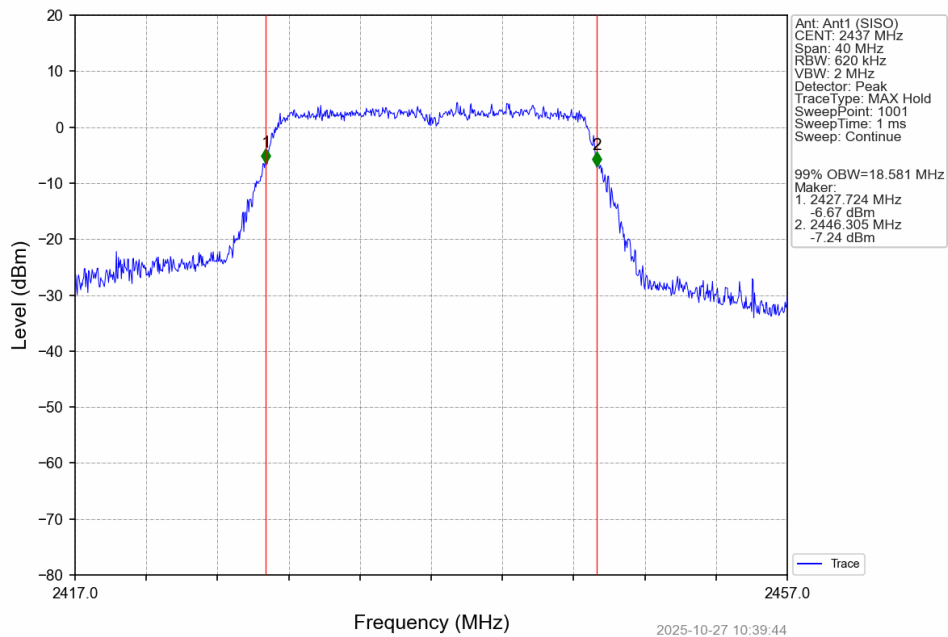


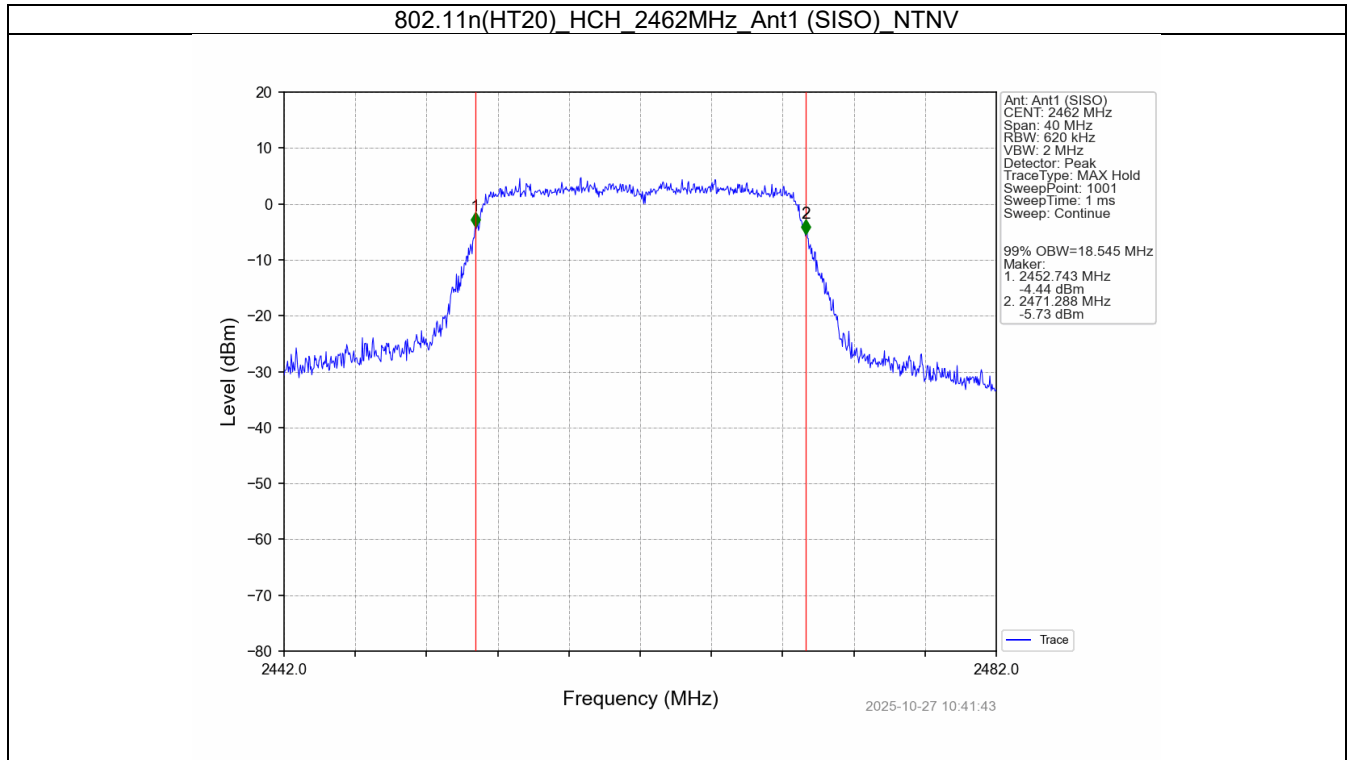


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



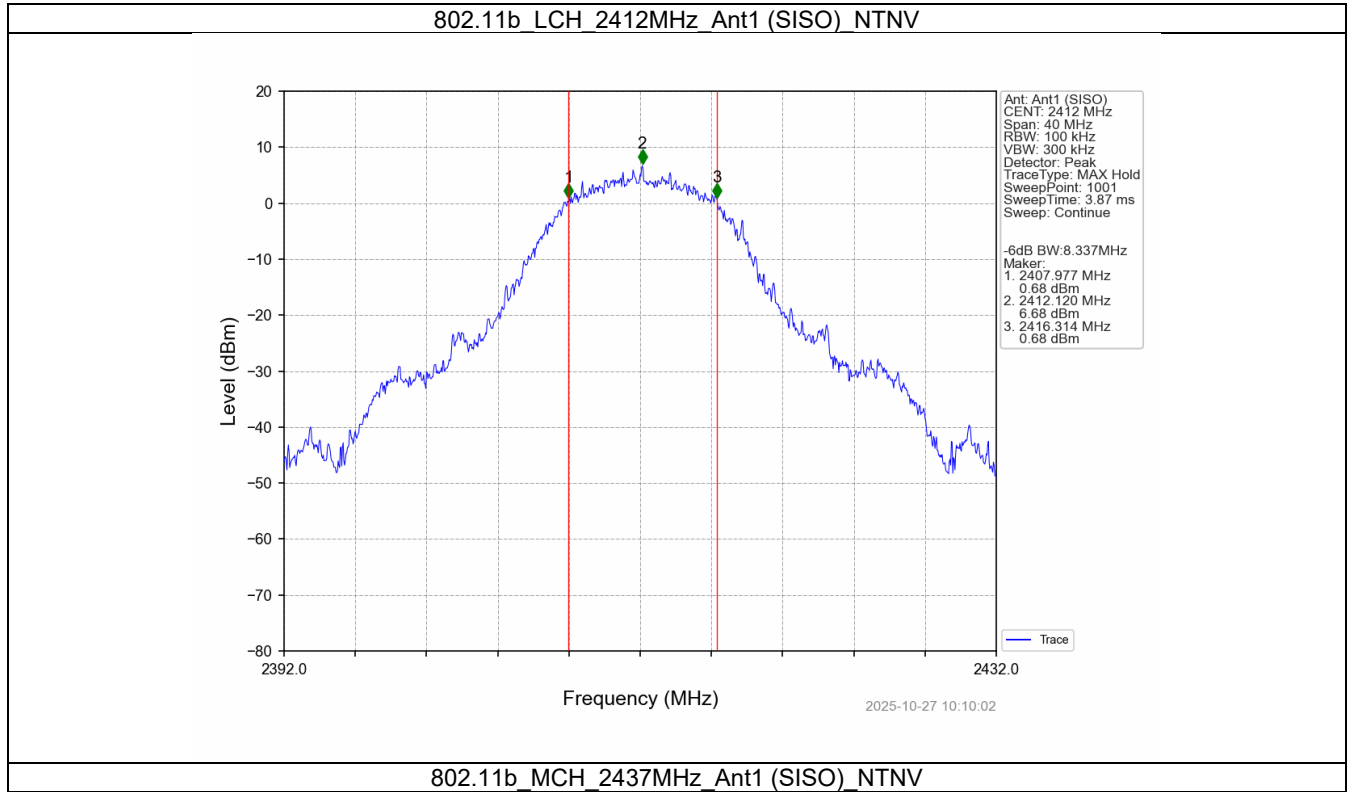
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

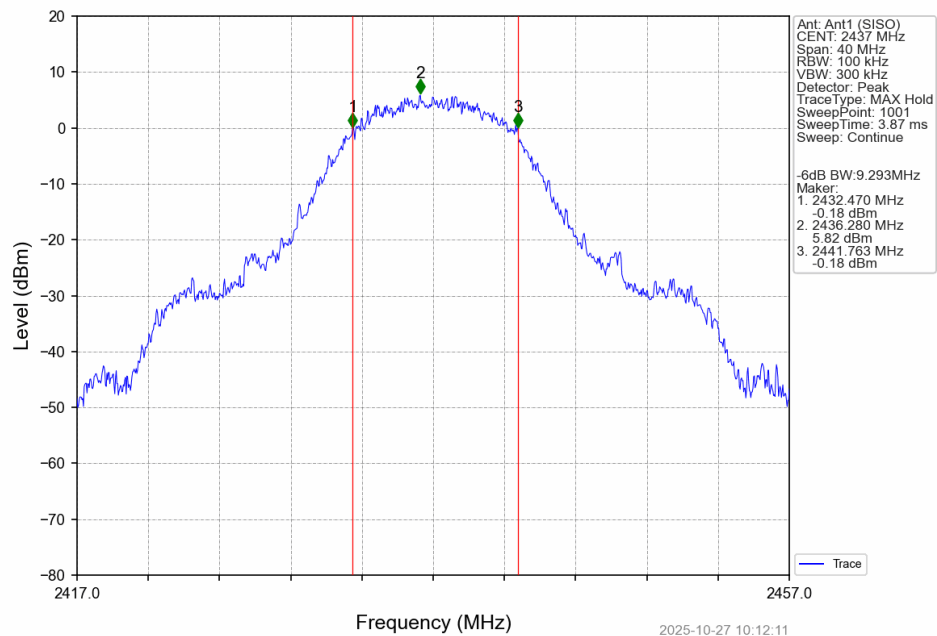






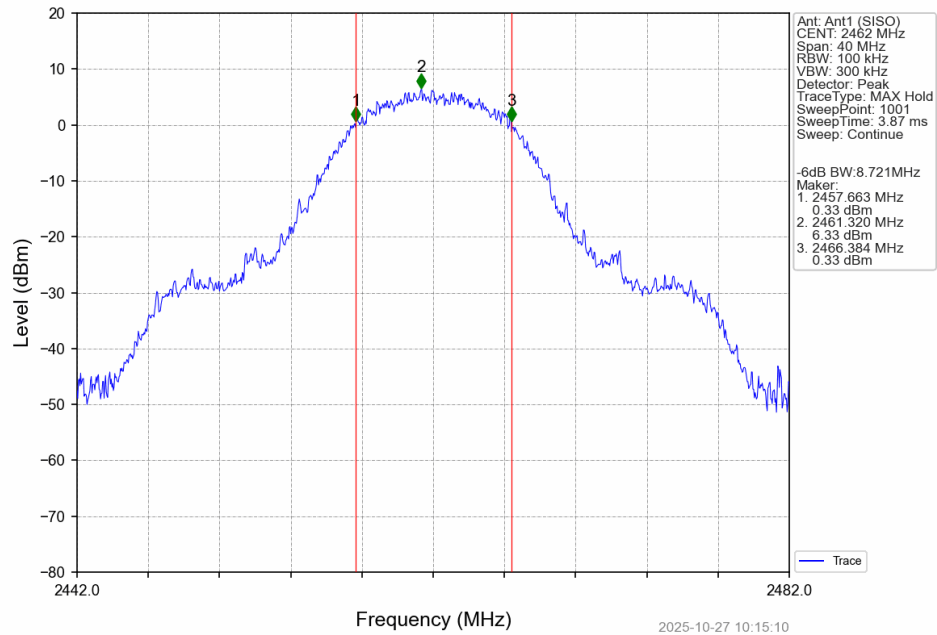
2.2.2 6dB BW



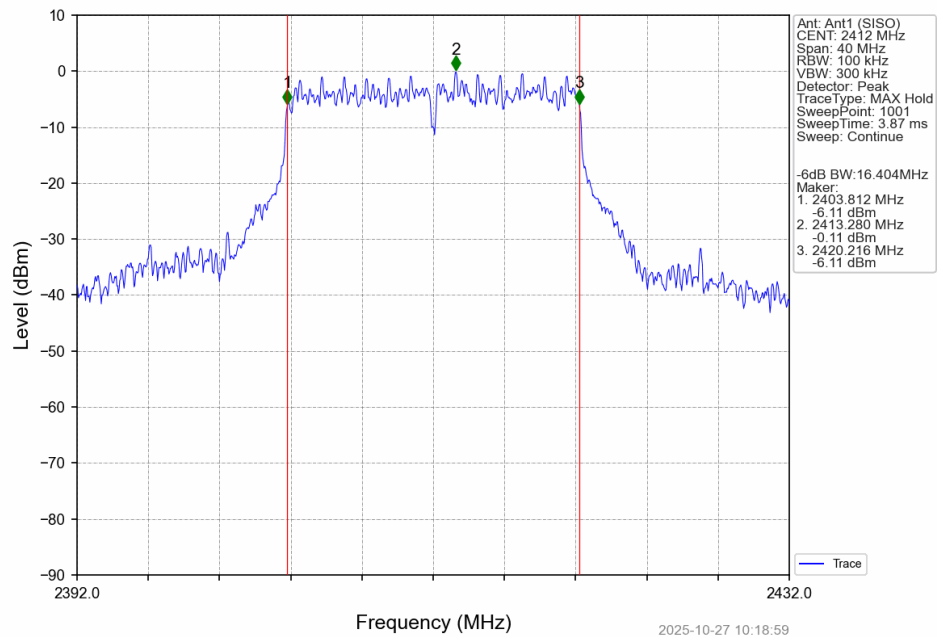




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

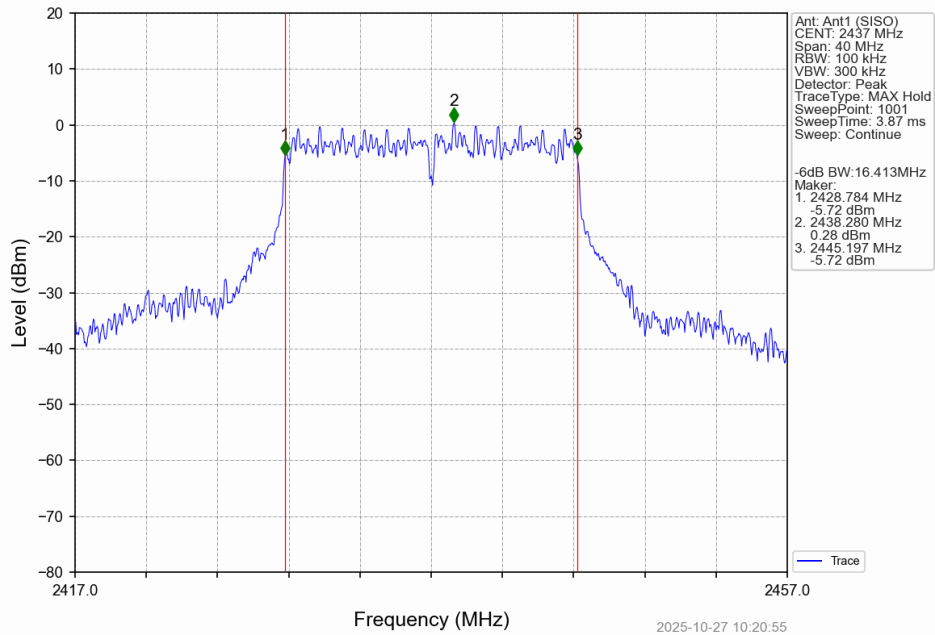


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

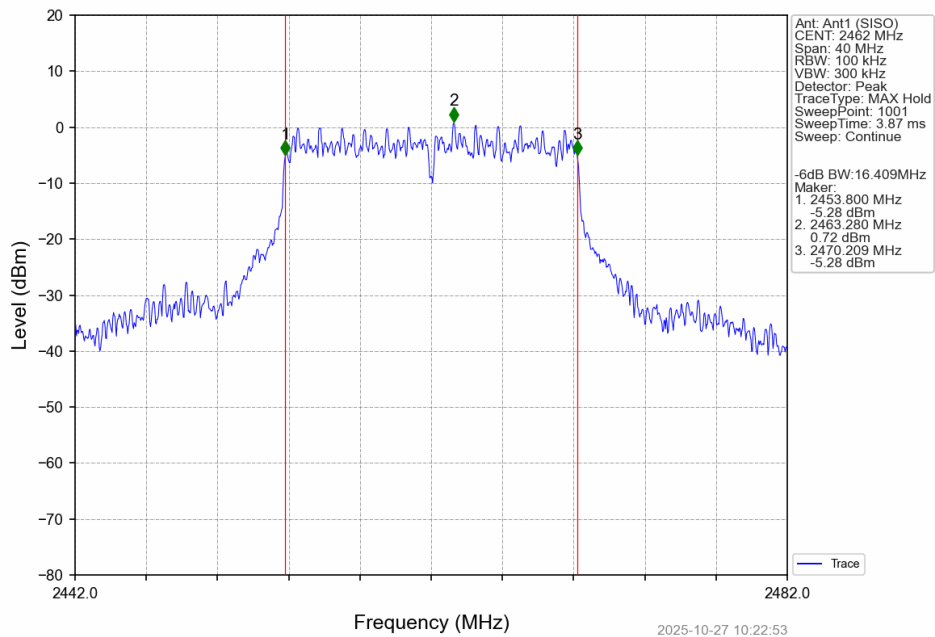




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

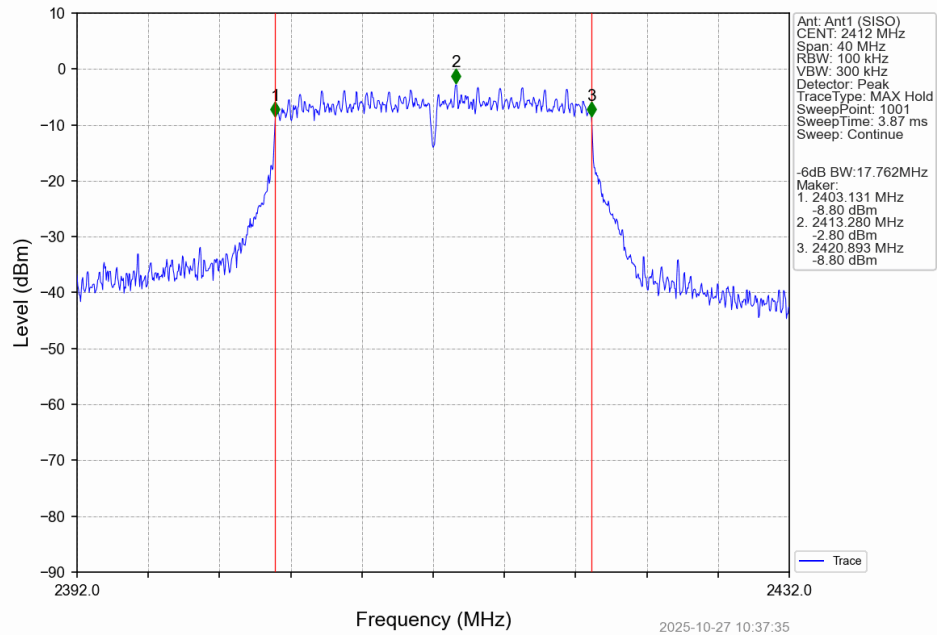


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

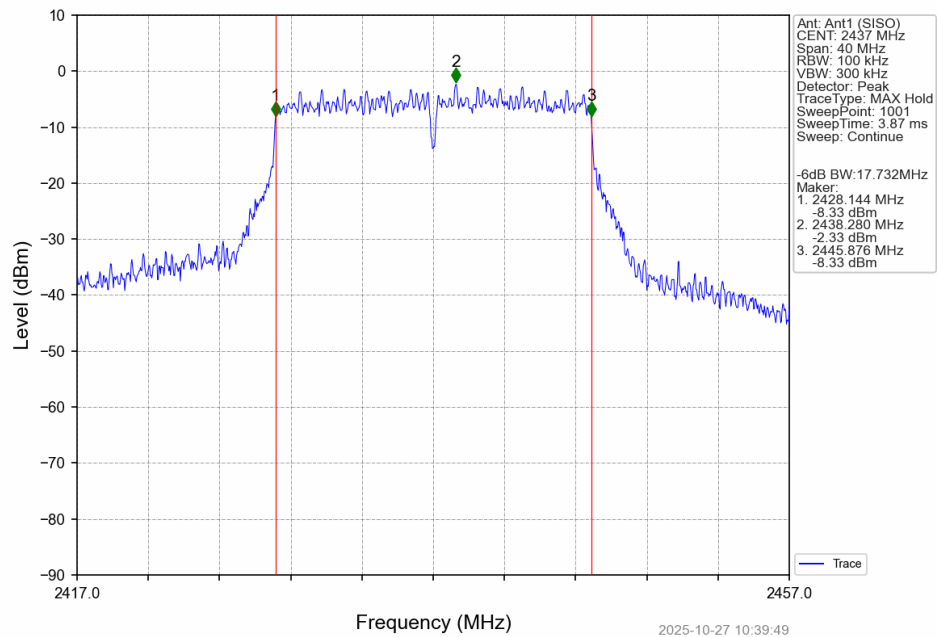


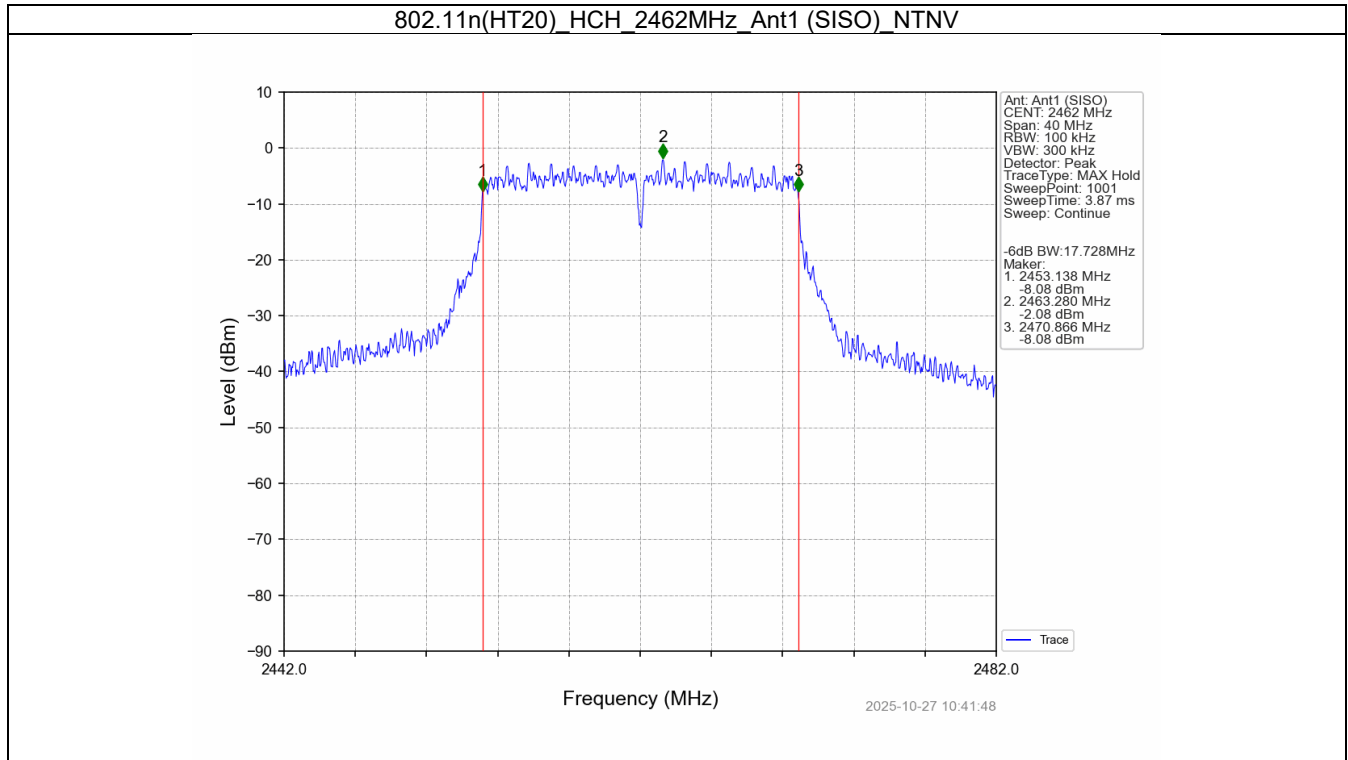


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV







3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

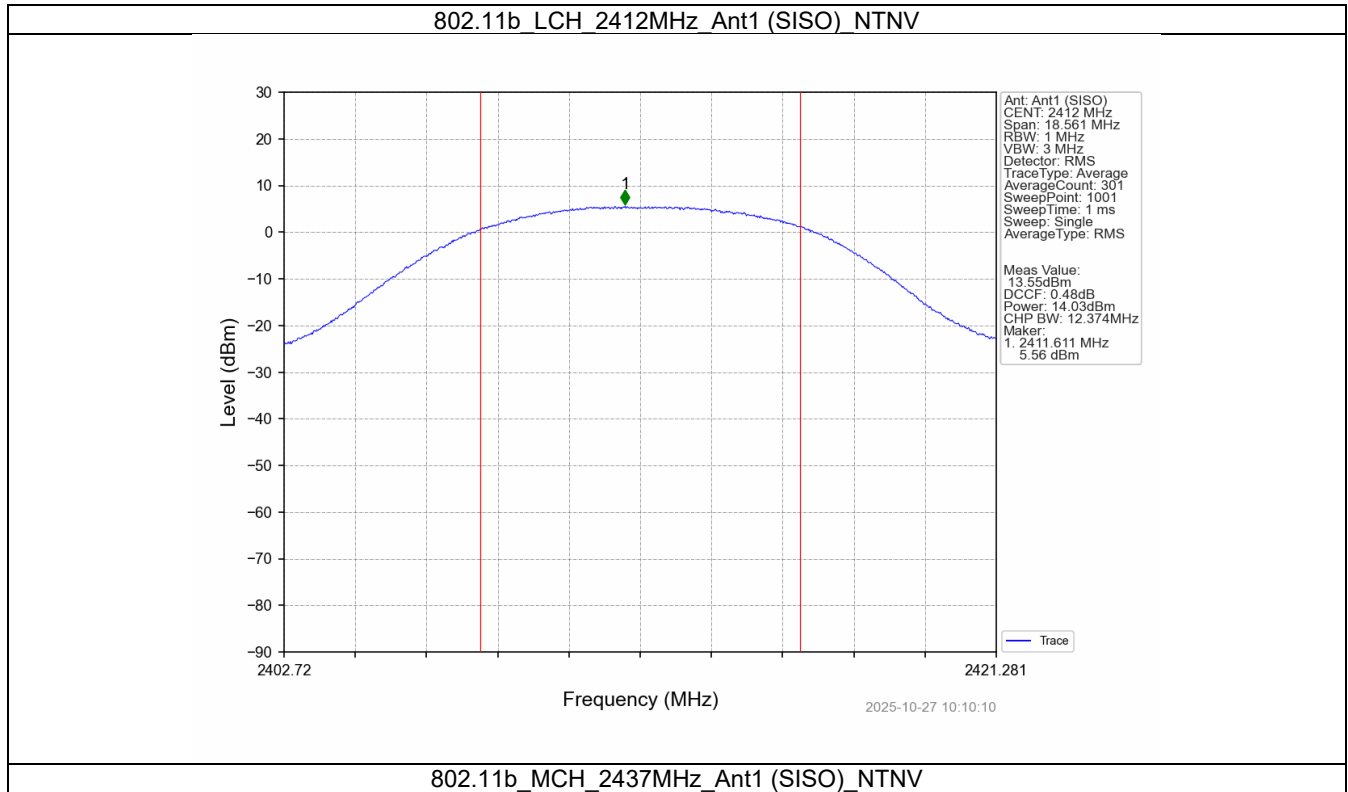
Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	14.03	<=30	Pass
		2437	14.29	<=30	Pass
		2462	14.66	<=30	Pass
802.11g	SISO	2412	11.02	<=30	Pass
		2437	11.57	<=30	Pass
		2462	11.84	<=30	Pass
802.11n (HT20)	SISO	2412	8.34	<=30	Pass
		2437	8.95	<=30	Pass
		2462	9.02	<=30	Pass

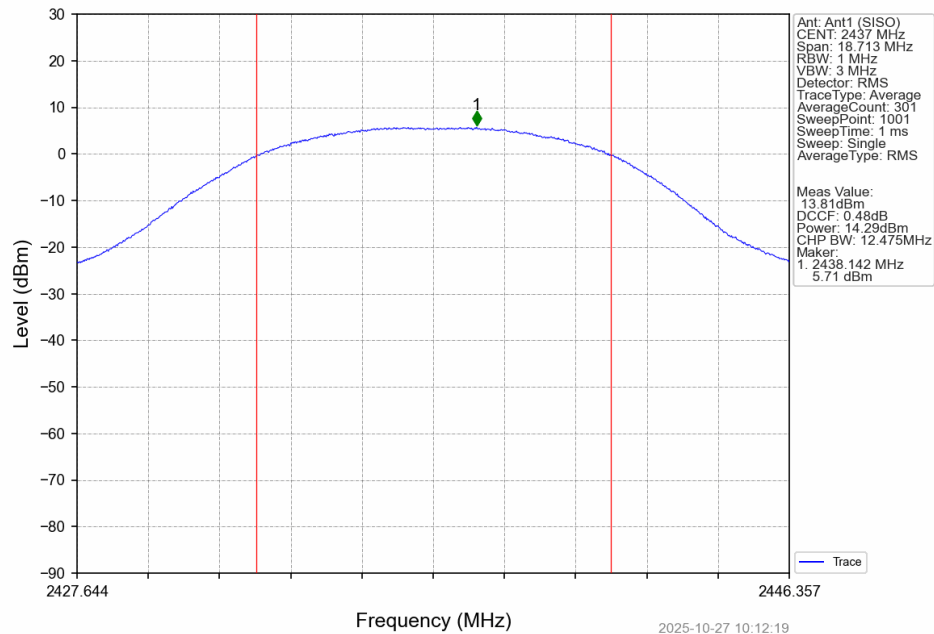
Note1: Antenna Gain: Ant1: 0.16dBi;



3.2 Test Graph

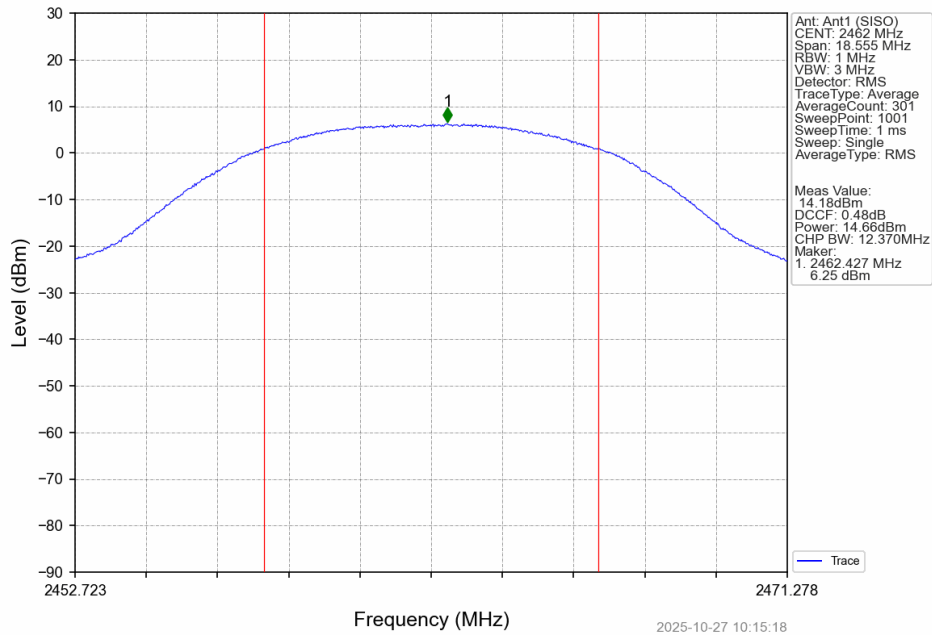
3.2.1 Power



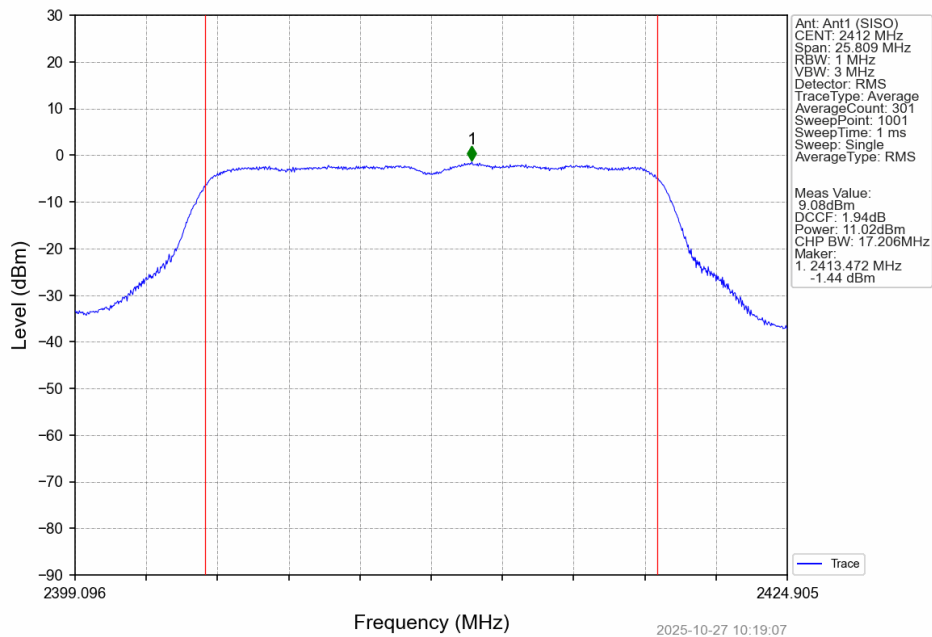




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

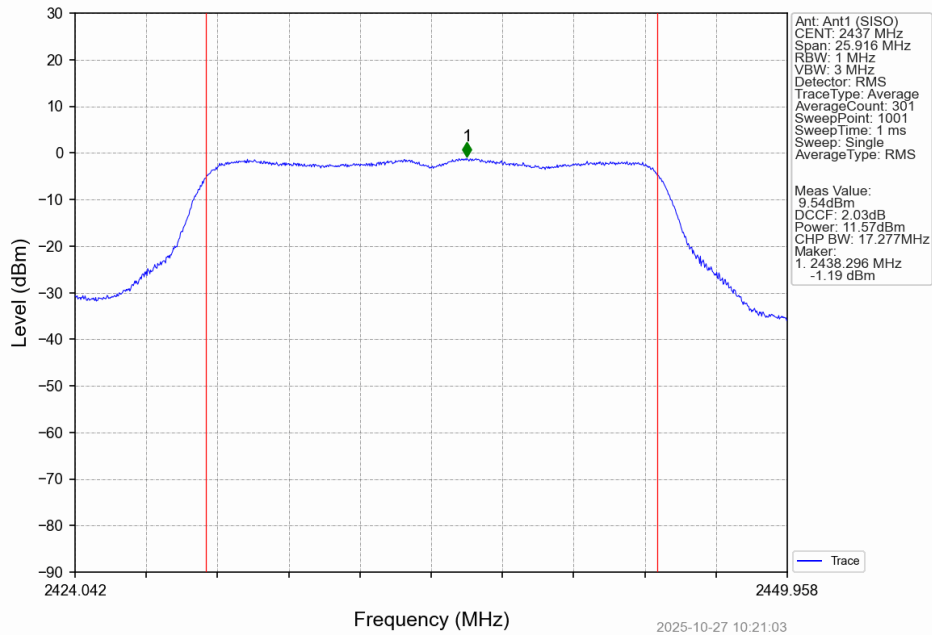


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

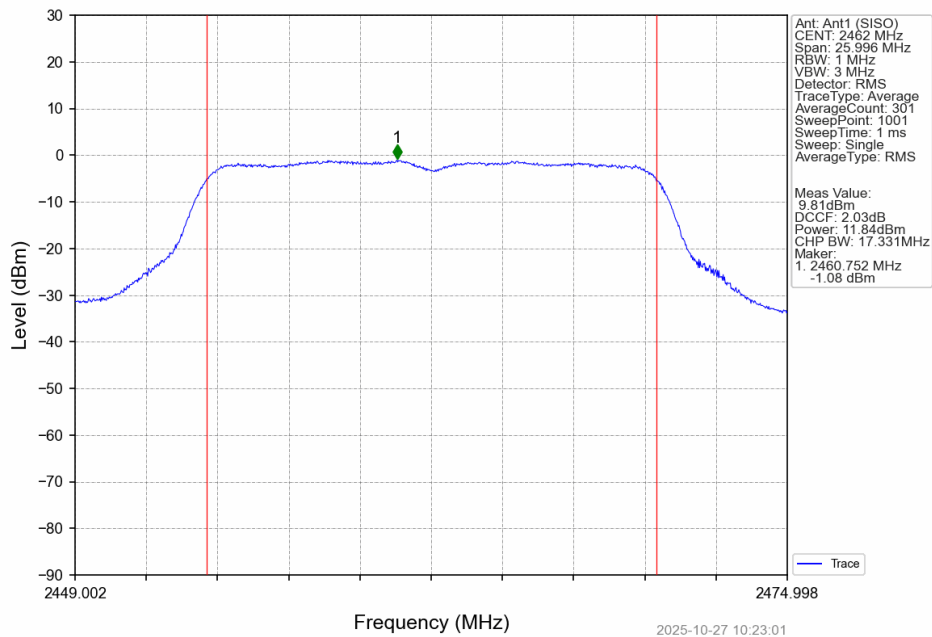




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

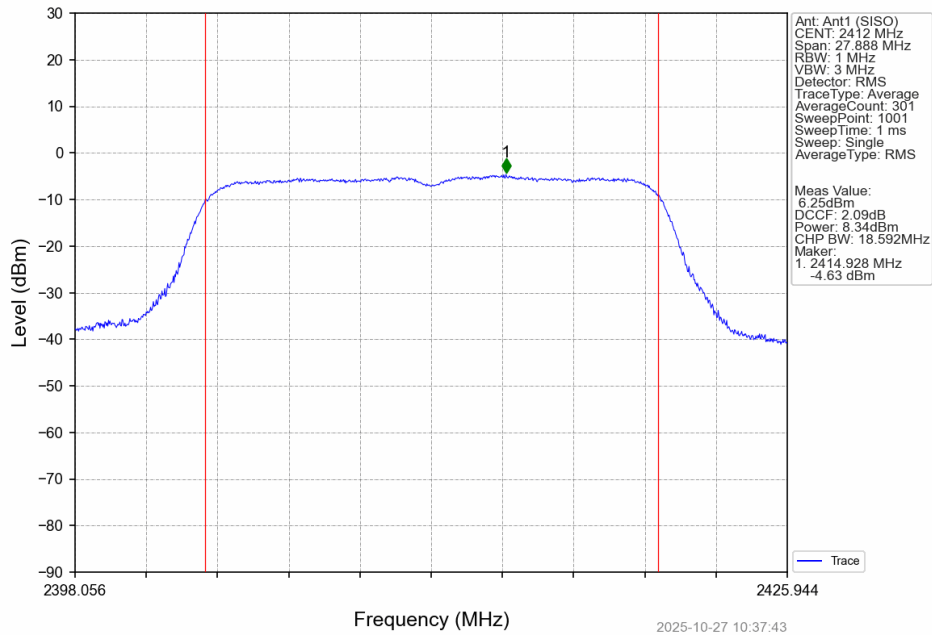


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

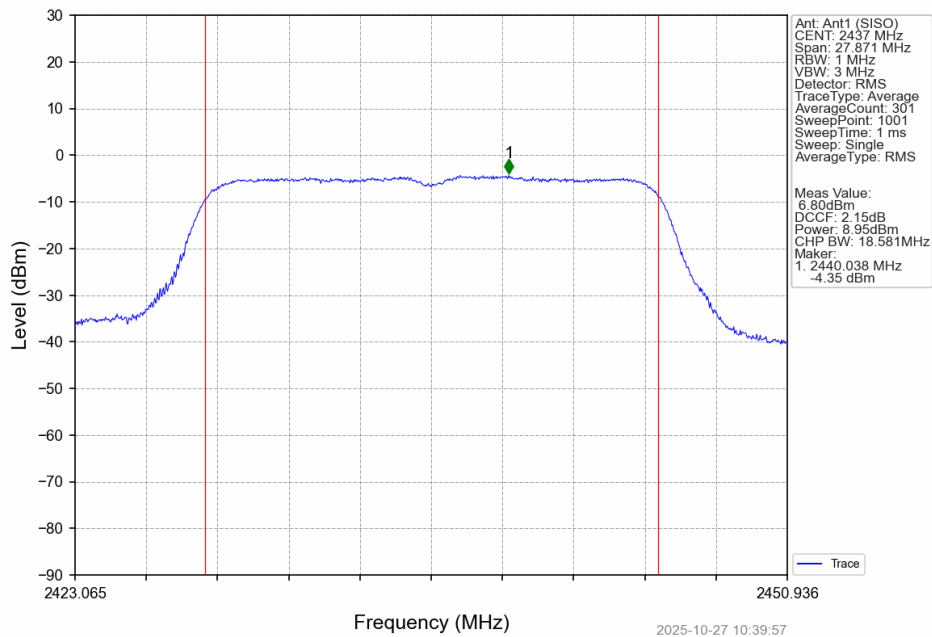


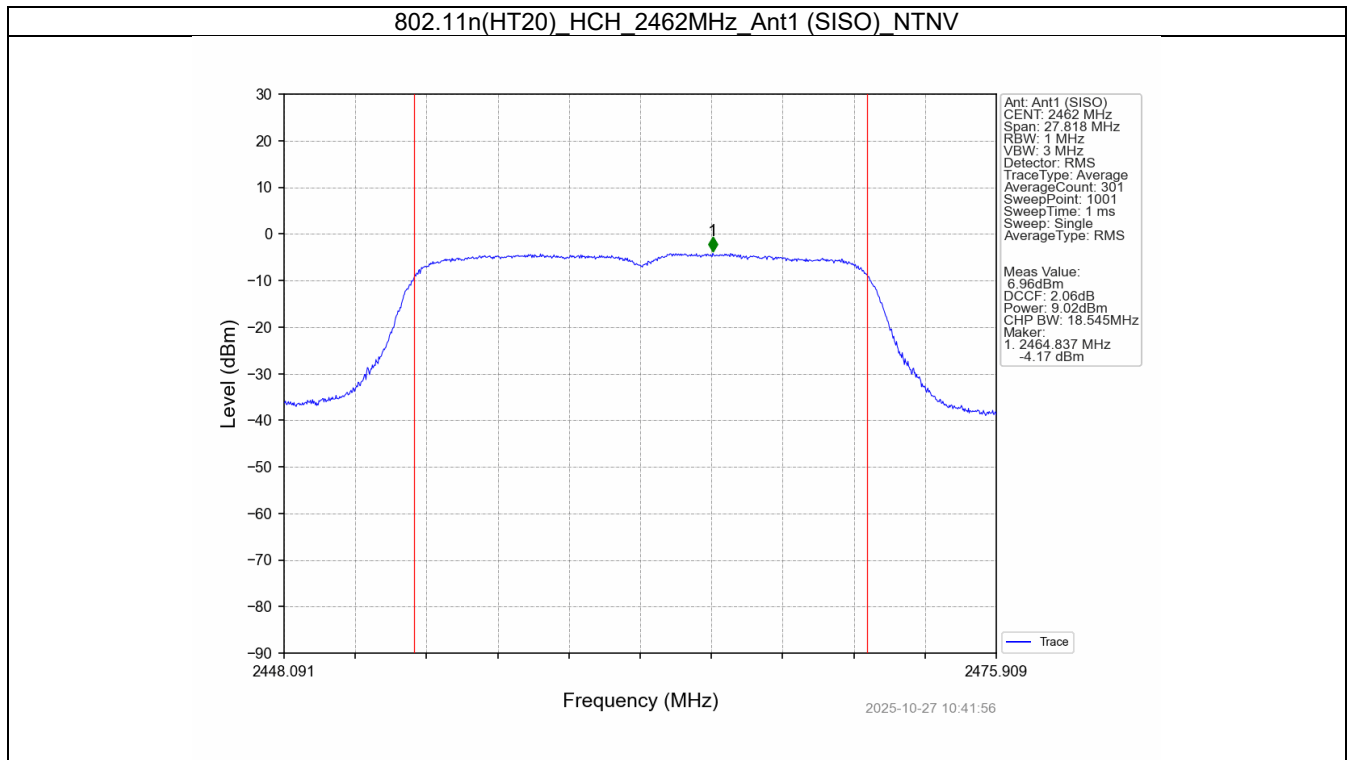


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV







4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

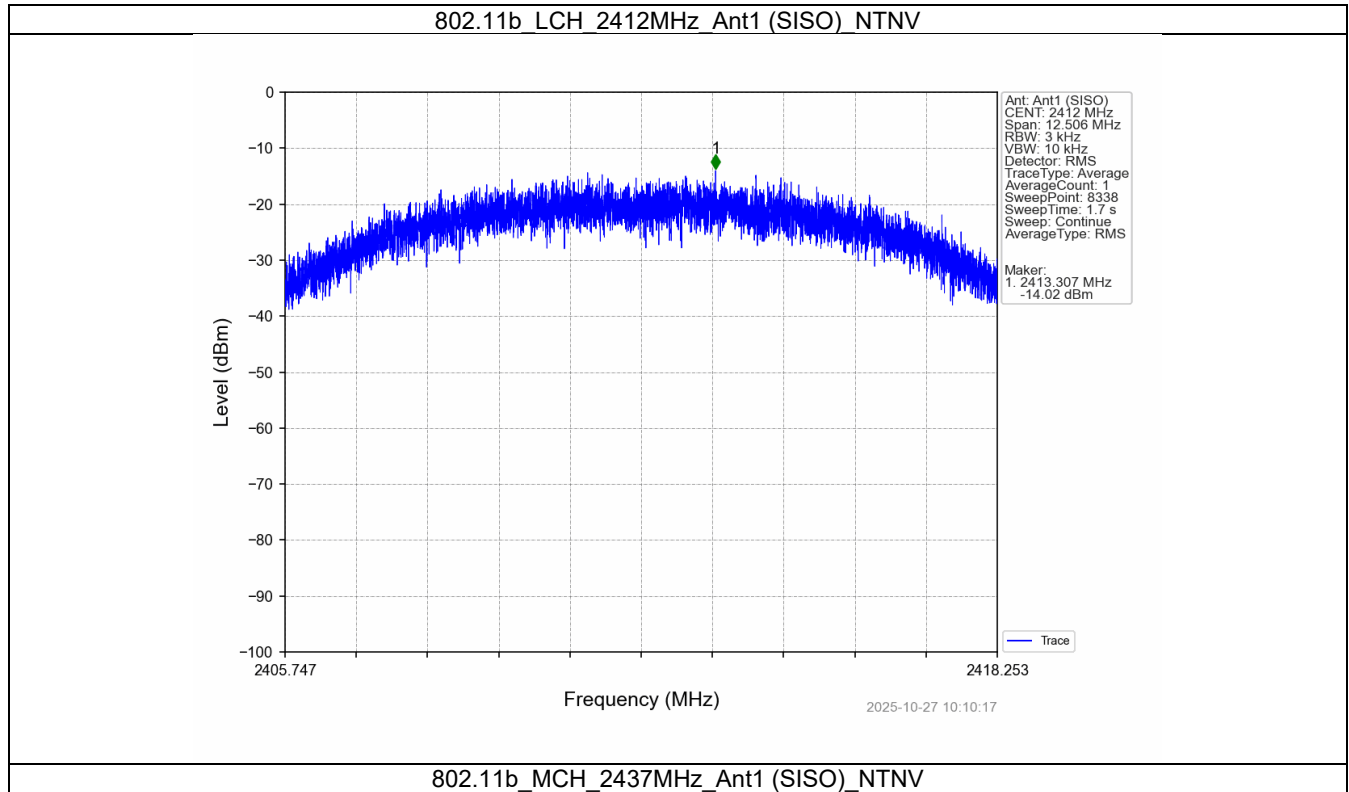
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit	
802.11b	SISO	2412	-14.02	≤ 8	Pass
		2437	-13.30	≤ 8	Pass
		2462	-13.69	≤ 8	Pass
802.11g	SISO	2412	-18.32	≤ 8	Pass
		2437	-18.26	≤ 8	Pass
		2462	-17.93	≤ 8	Pass
802.11n (HT20)	SISO	2412	-21.46	≤ 8	Pass
		2437	-21.93	≤ 8	Pass
		2462	-20.83	≤ 8	Pass

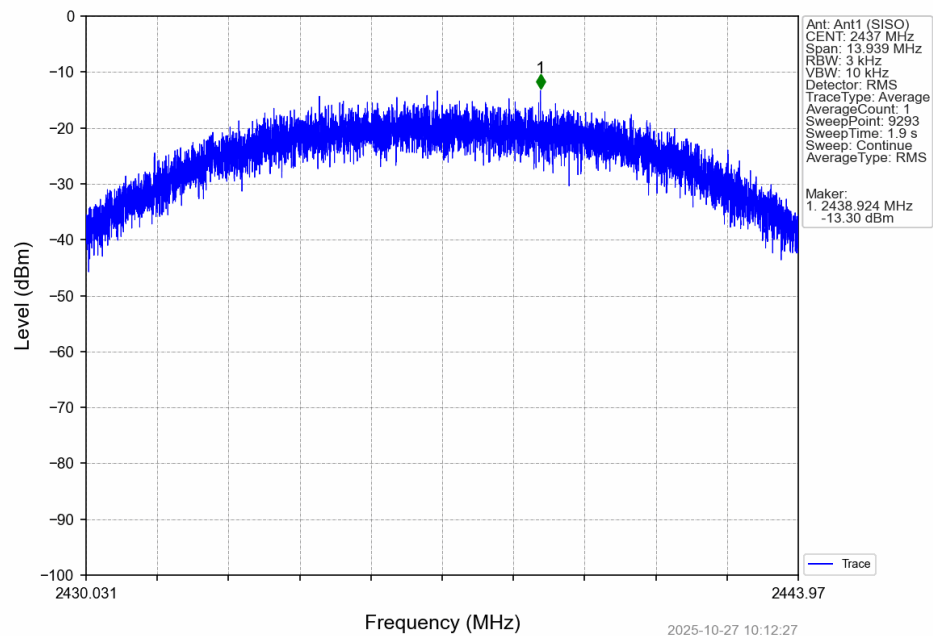
Note1: Antenna Gain: Ant1: 0.16dBi;



4.2 Test Graph

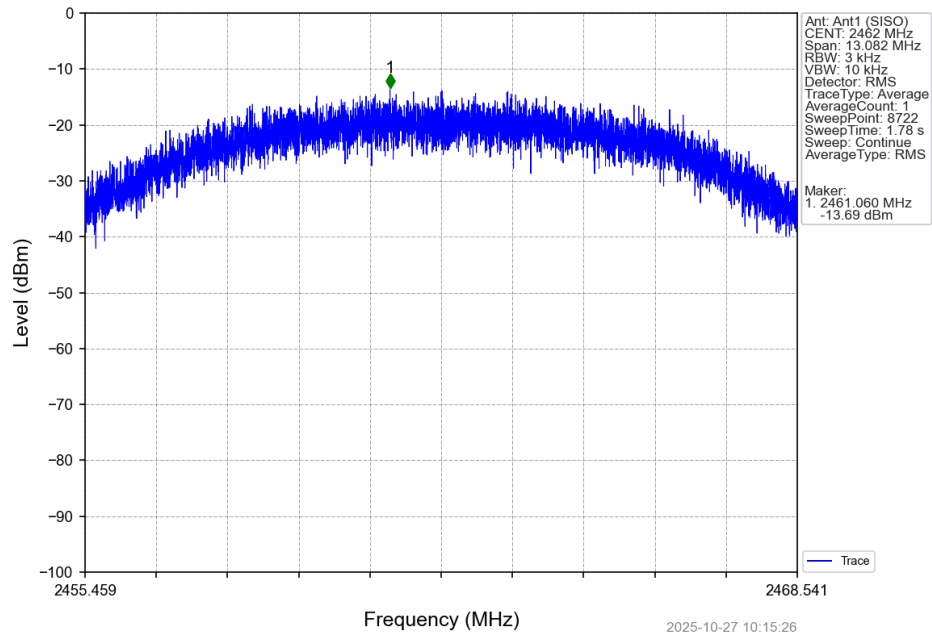
4.2.1 PSD



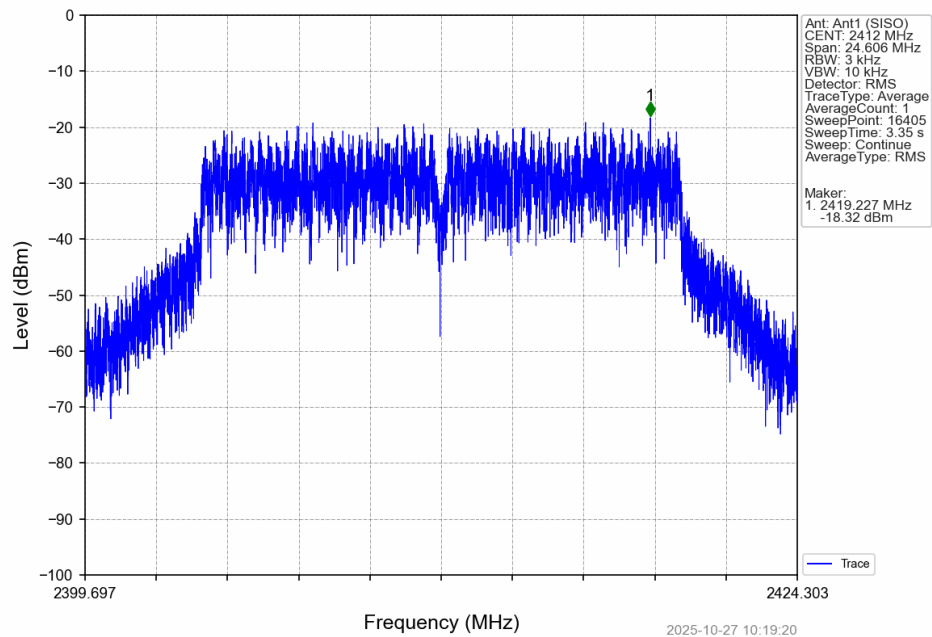




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

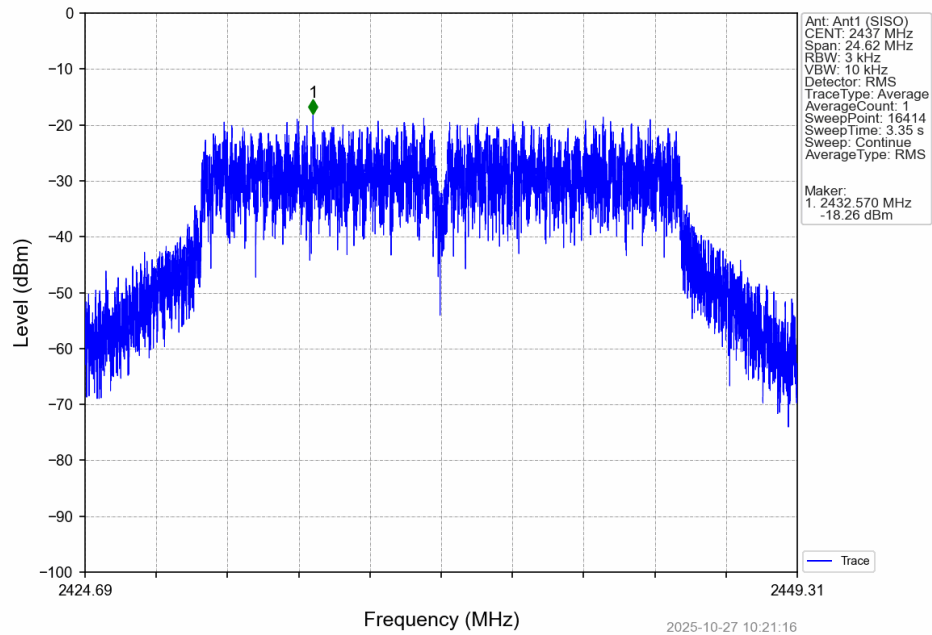


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

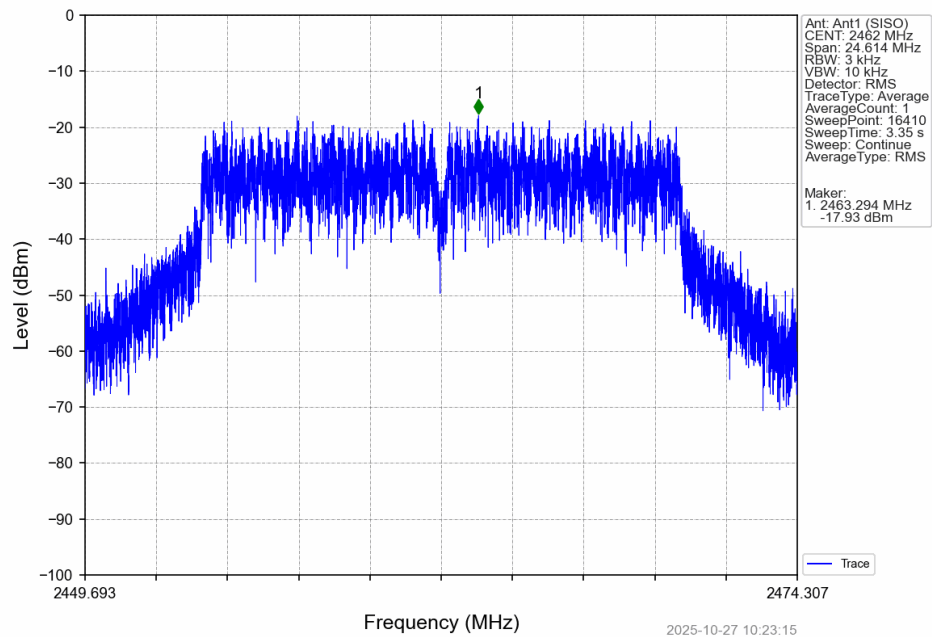




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

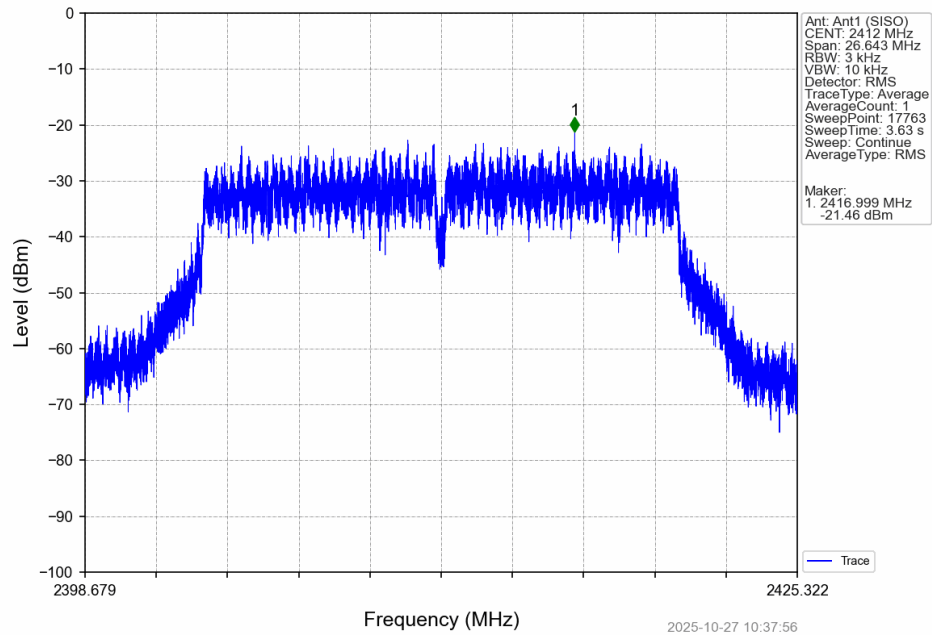


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

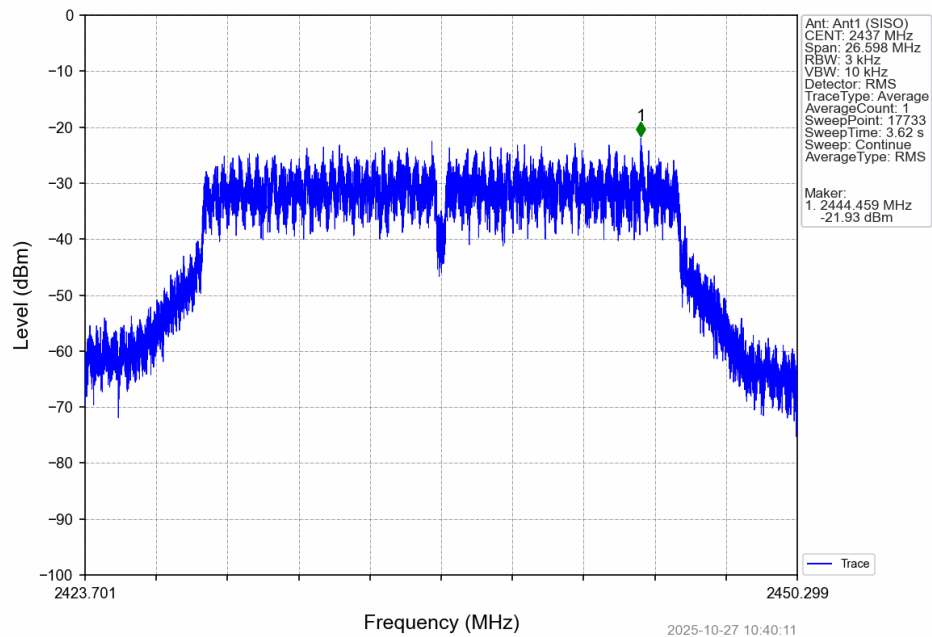


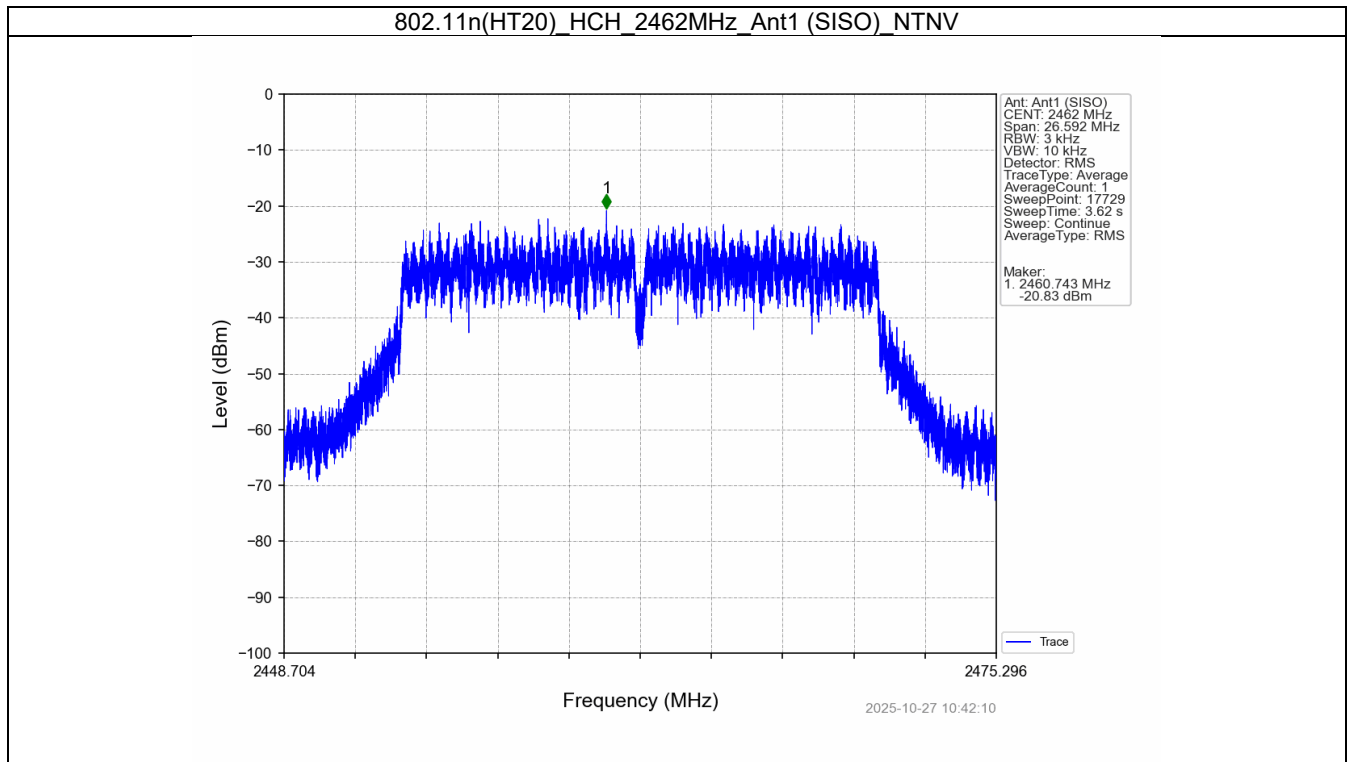


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV







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	5.84
		2437	1	6.26
		2462	1	7.21
802.11g	SISO	2412	1	-0.12
		2437	1	0.34
		2462	1	0.78
802.11n (HT20)	SISO	2412	1	-0.99
		2437	1	-2.39
		2462	1	-2.09

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

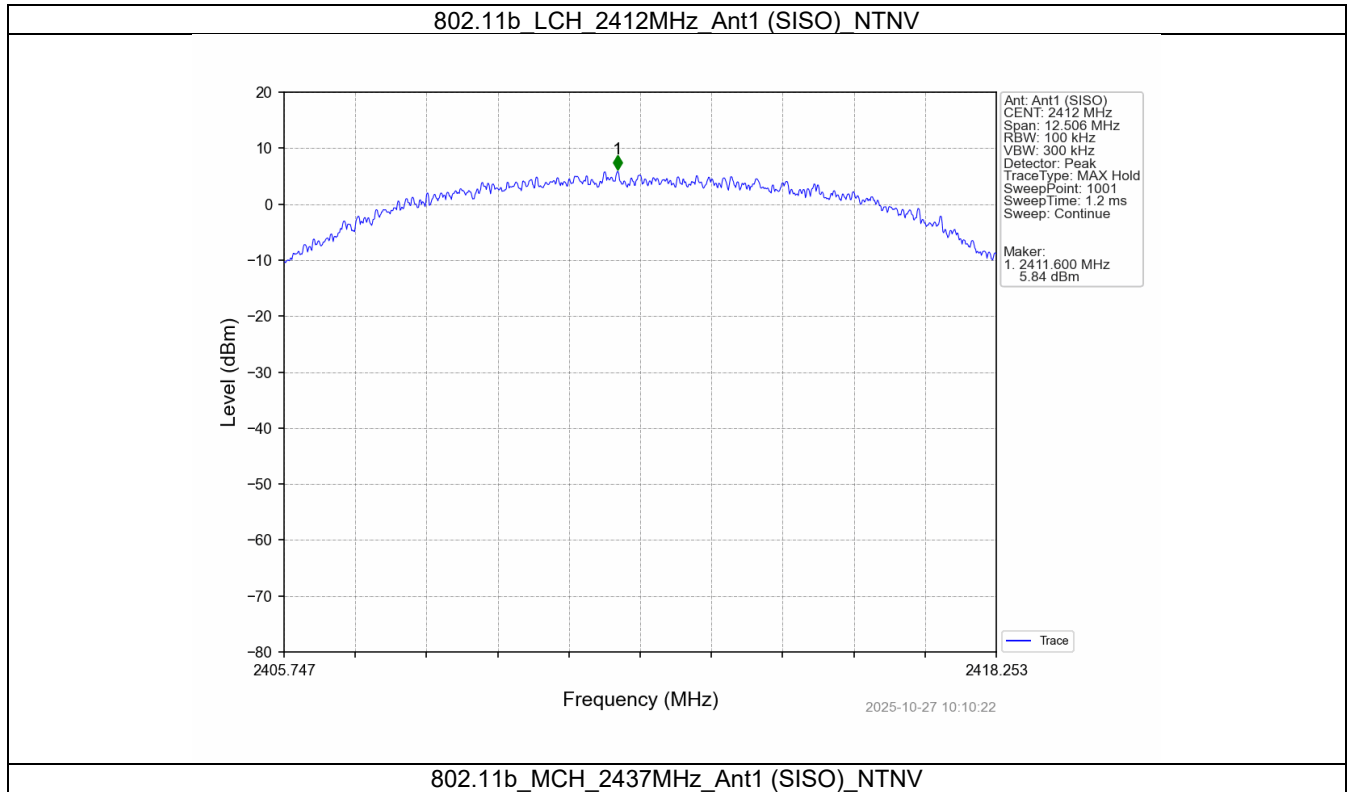
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11b	SISO	2412	1	5.84	-24.16	Pass
		2437	1	6.26	-23.74	Pass
		2462	1	7.21	-22.79	Pass
802.11g	SISO	2412	1	-0.12	-30.12	Pass
		2437	1	0.34	-29.66	Pass
		2462	1	0.78	-29.22	Pass
802.11n (HT20)	SISO	2412	1	-0.99	-30.99	Pass
		2437	1	-2.39	-32.39	Pass
		2462	1	-2.09	-32.09	Pass

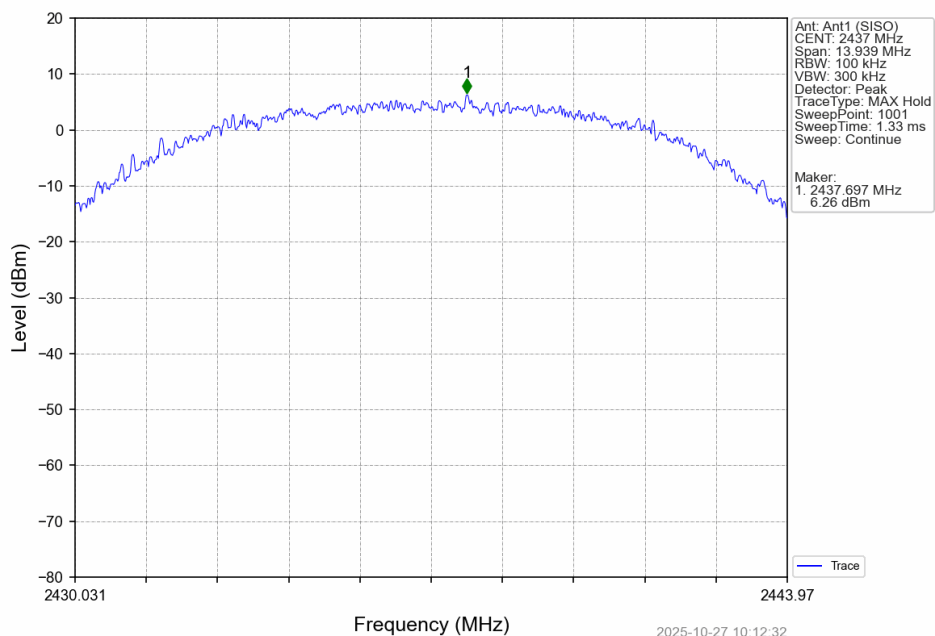
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



5.2 Test Graph

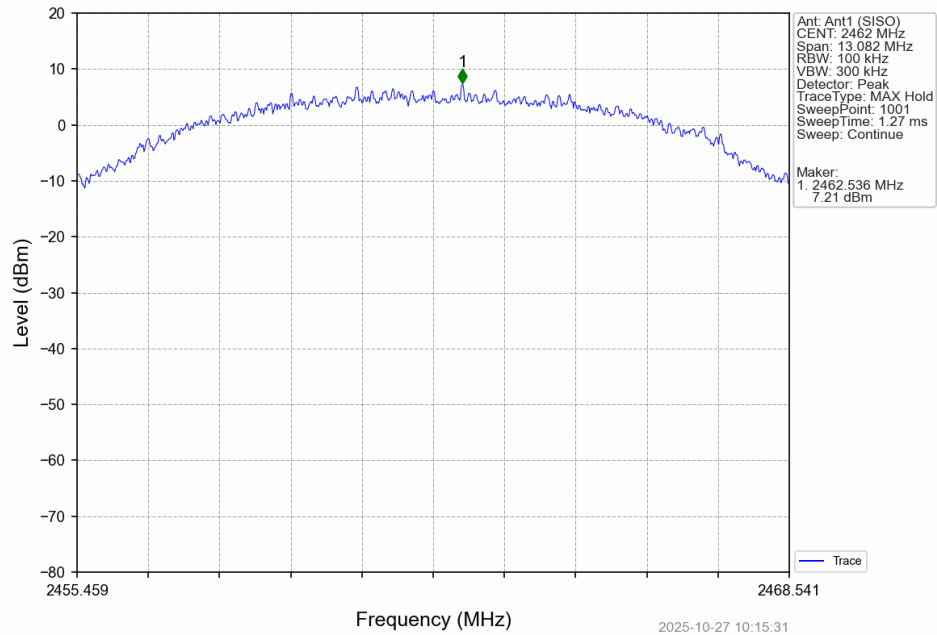
5.2.1 Ref



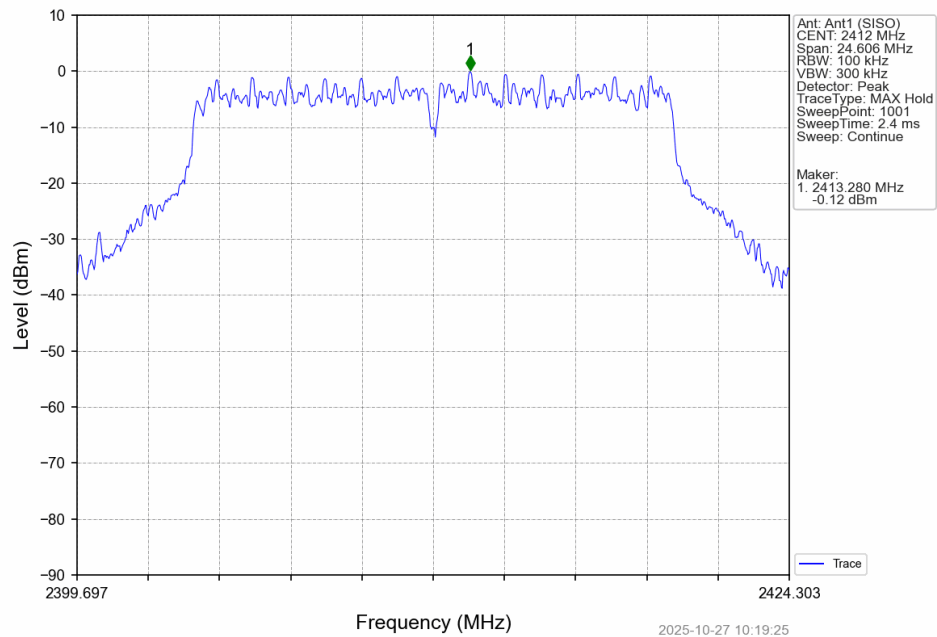




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

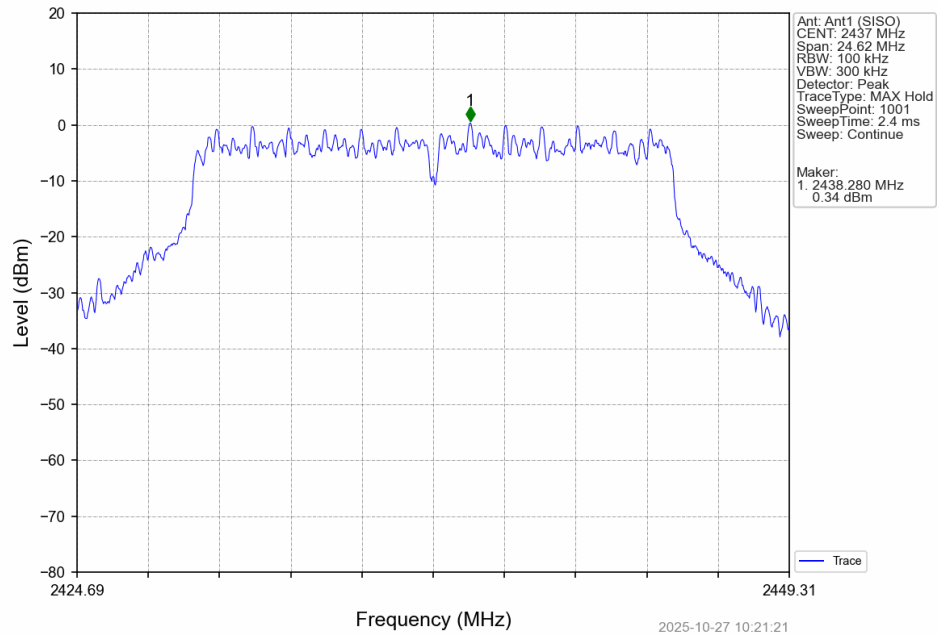


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

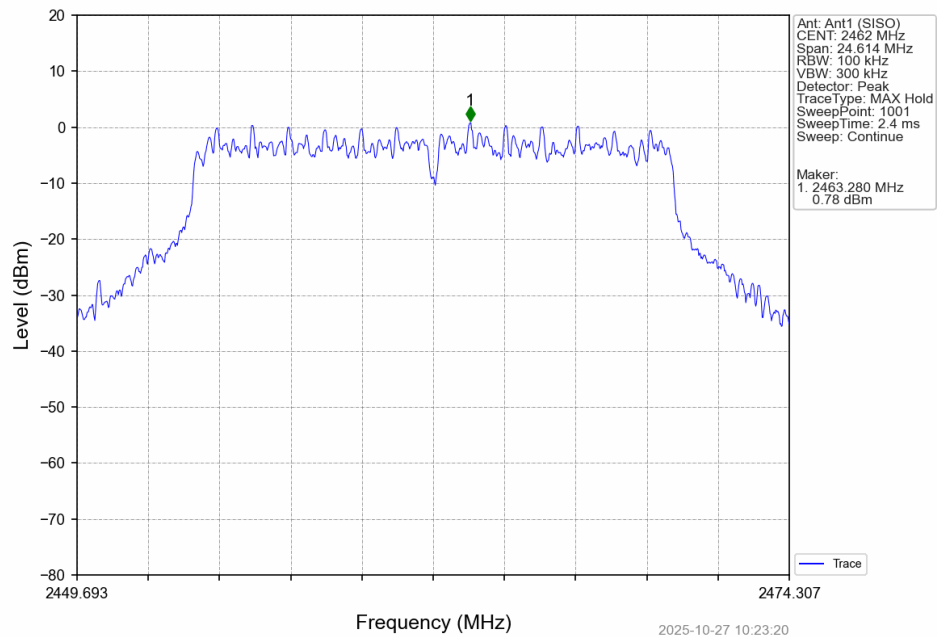




802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

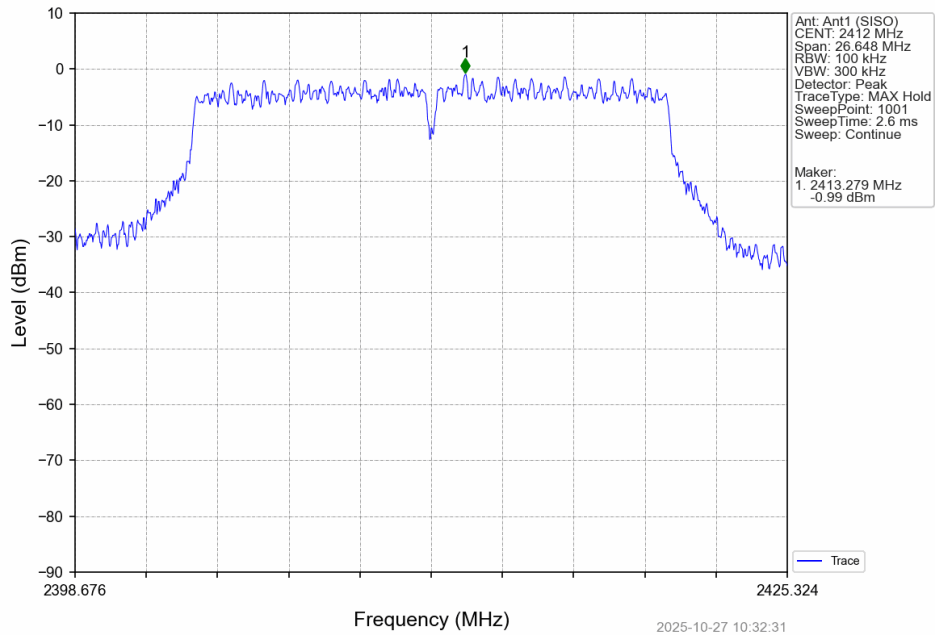


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

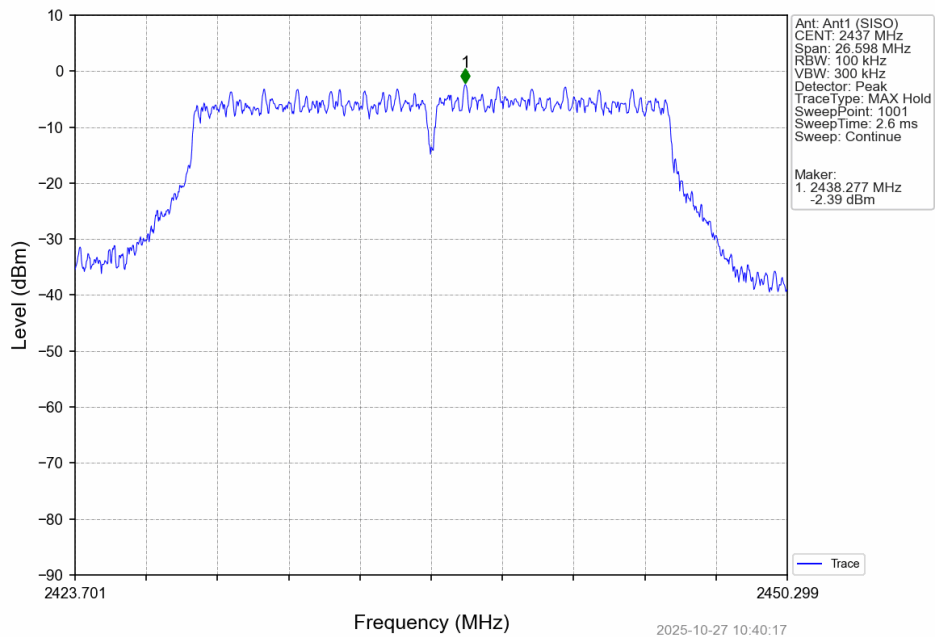


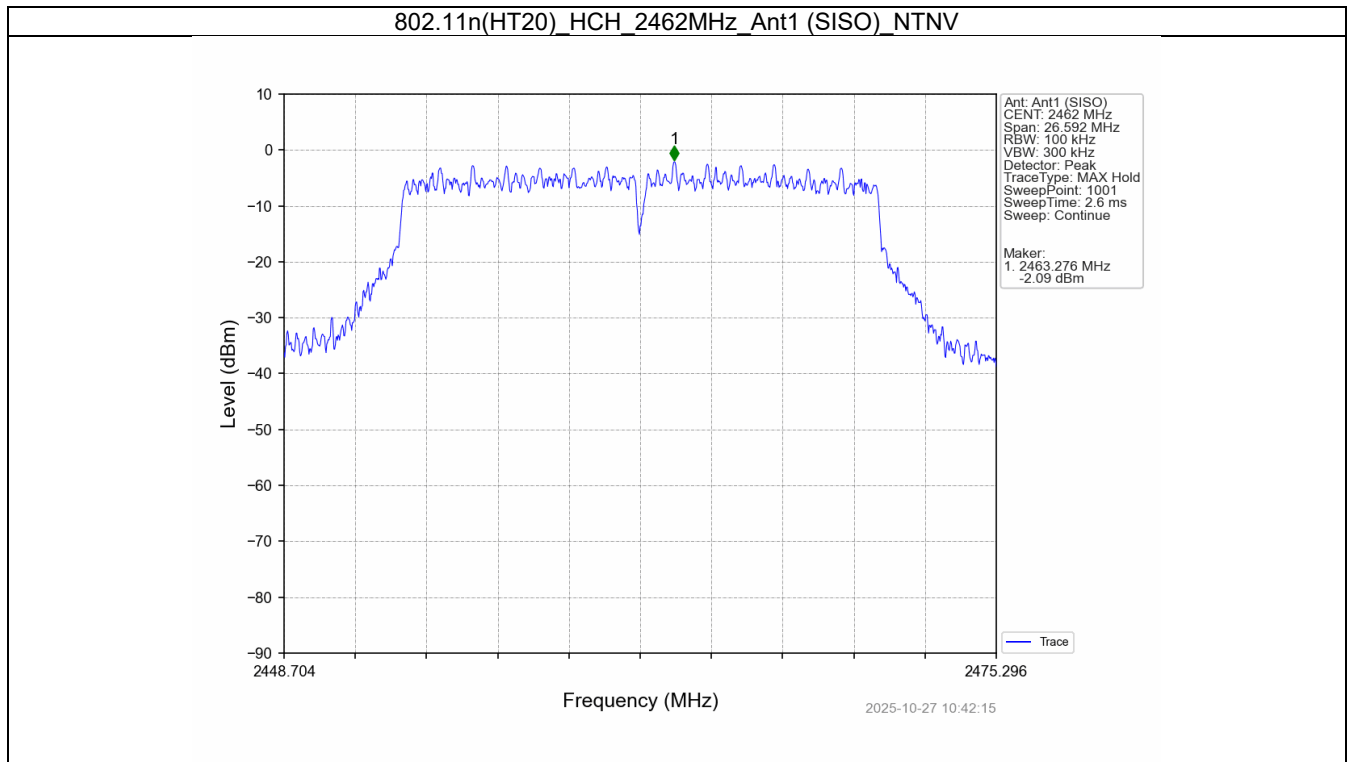


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV



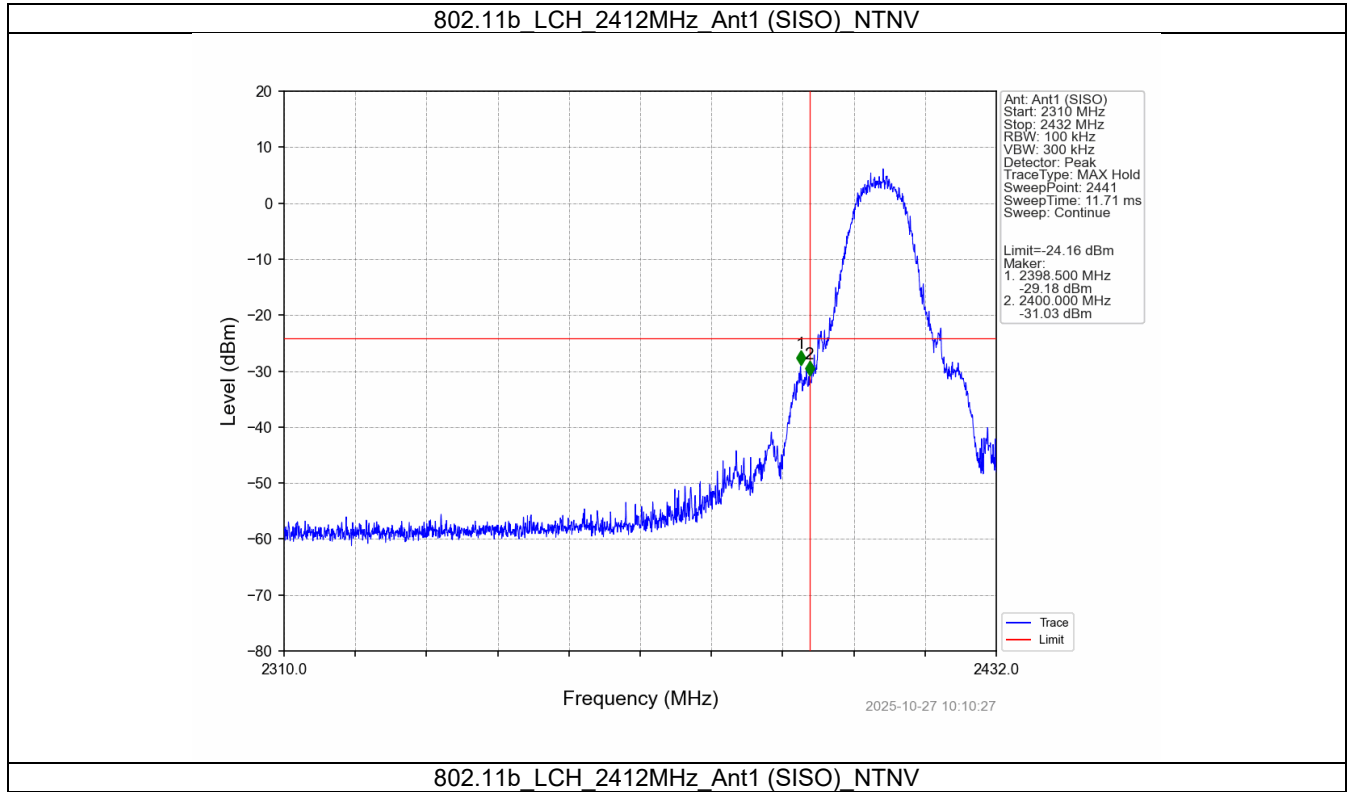
802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV

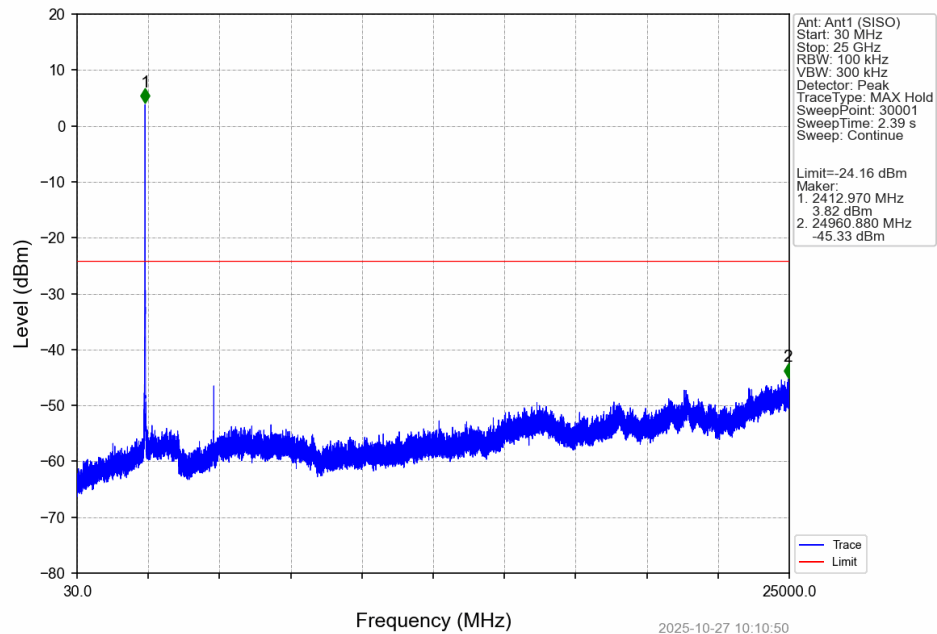






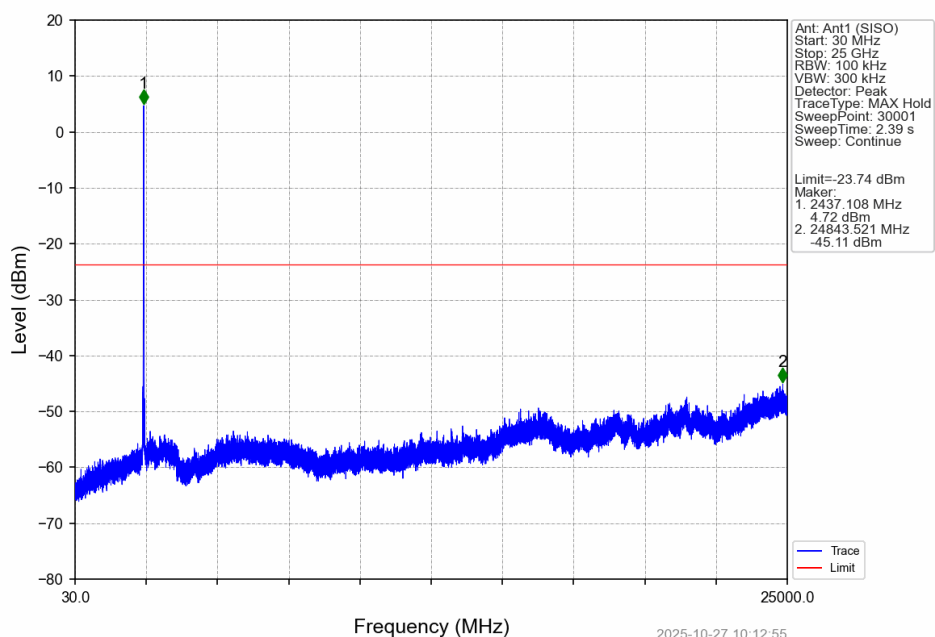
5.2.2 CSE



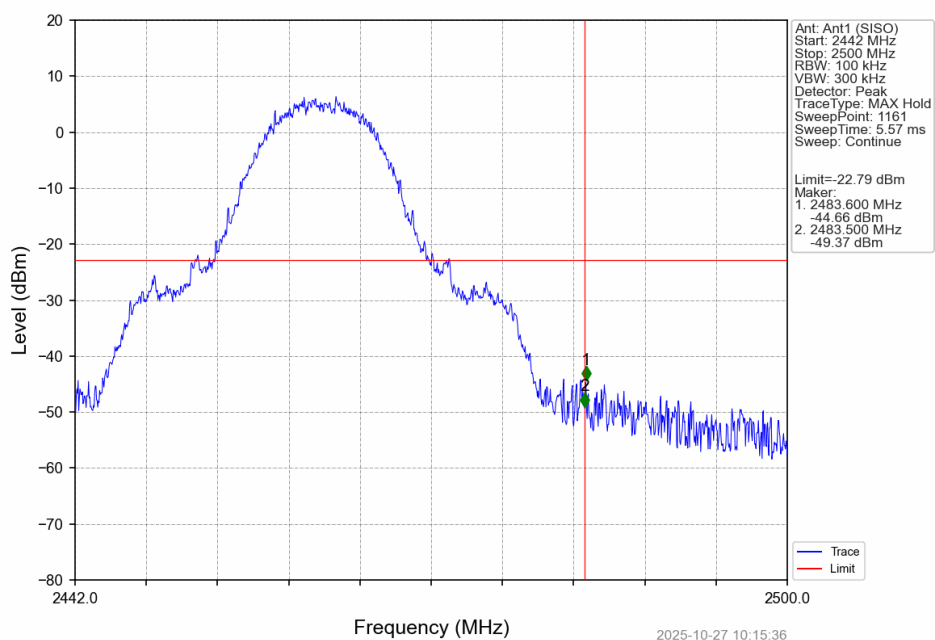




802.11b_MCH_2437MHz_Ant1 (SISO)_NTNV

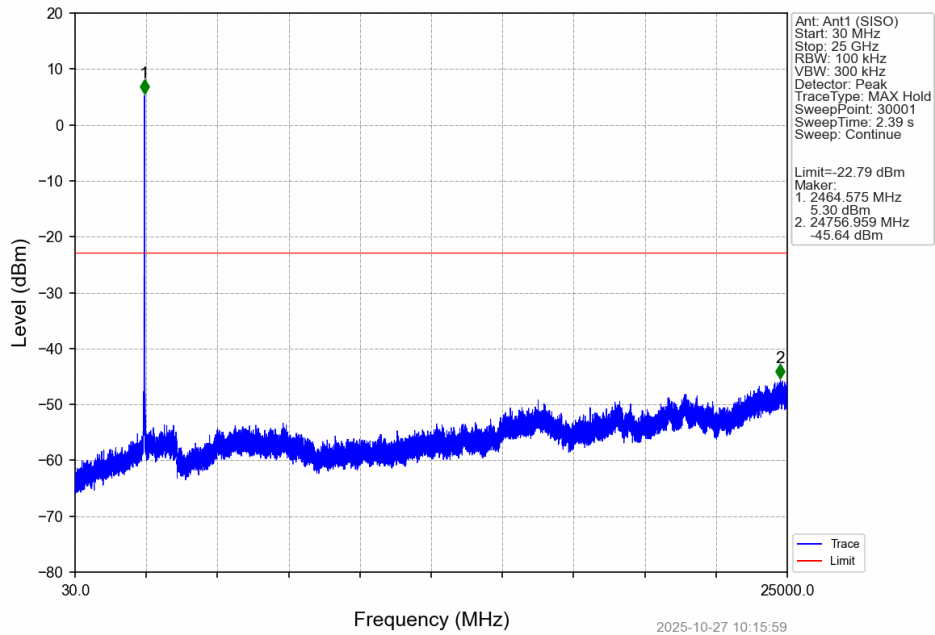


802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

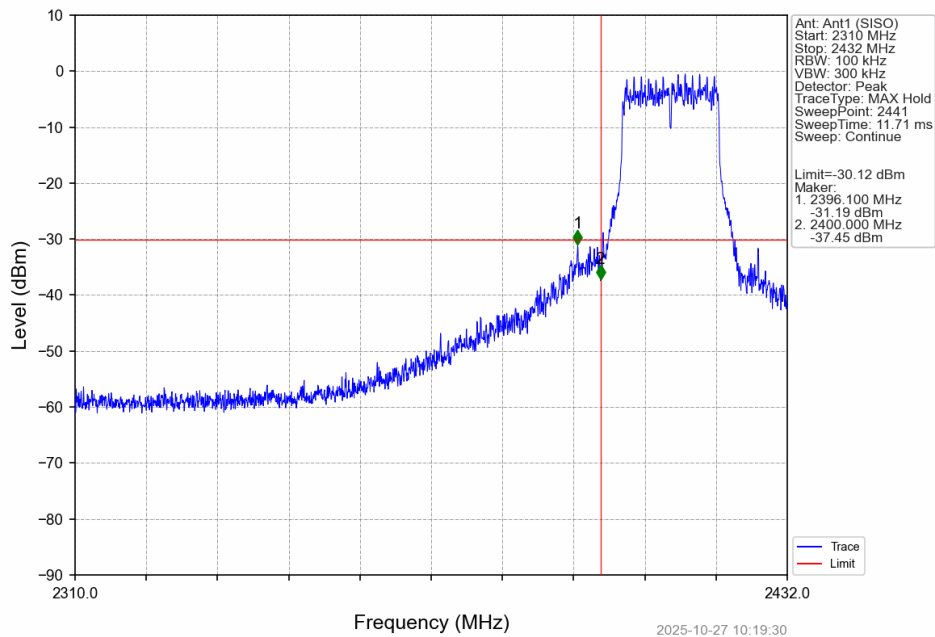




802.11b_HCH_2462MHz_Ant1 (SISO)_NTNV

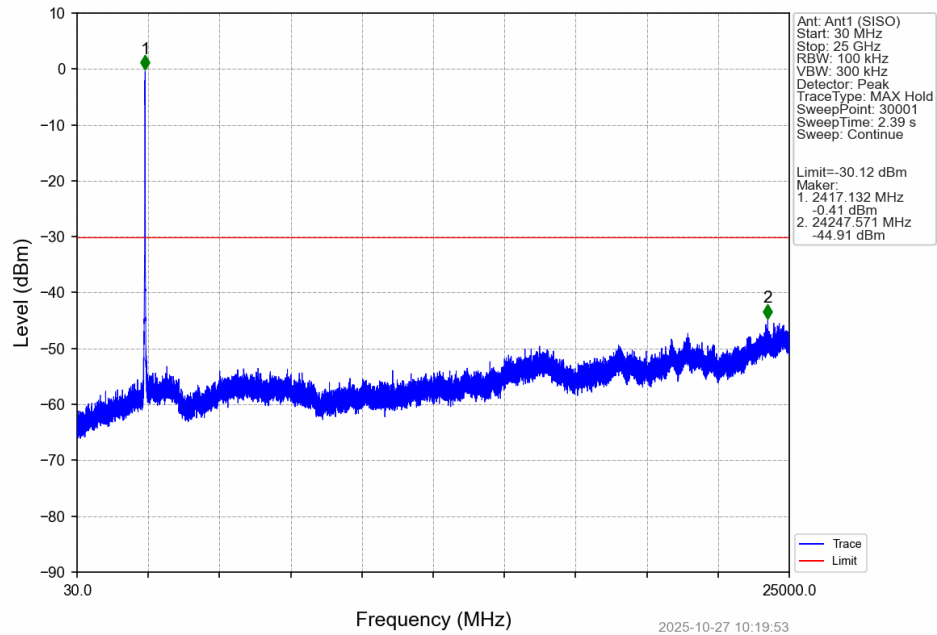


802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

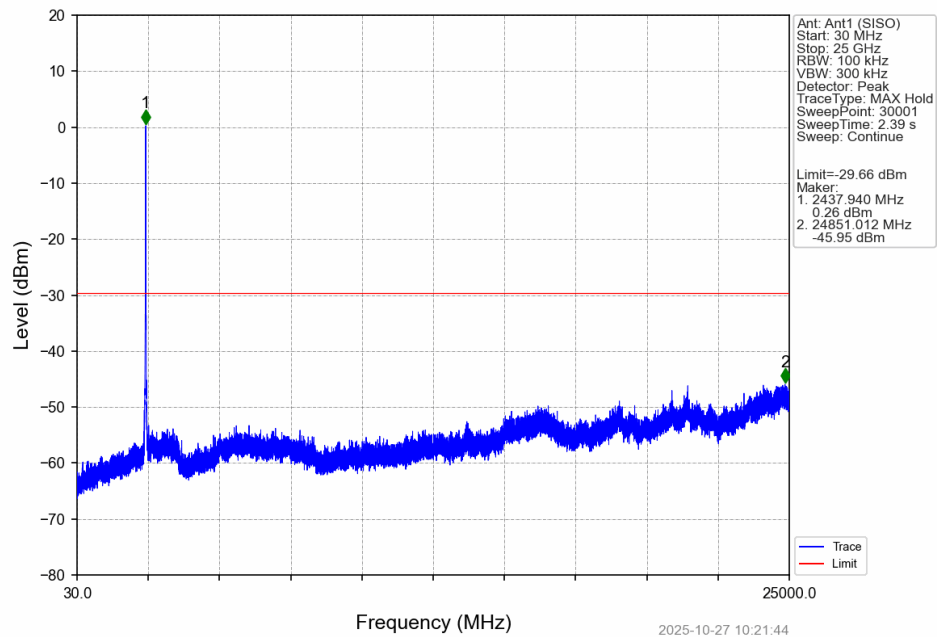




802.11g_LCH_2412MHz_Ant1 (SISO)_NTNV

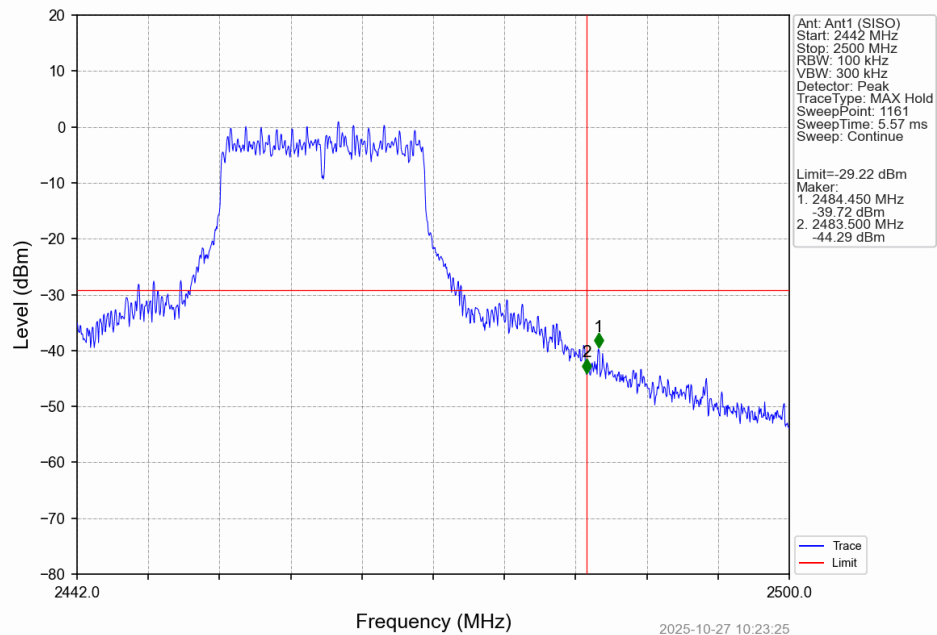


802.11g_MCH_2437MHz_Ant1 (SISO)_NTNV

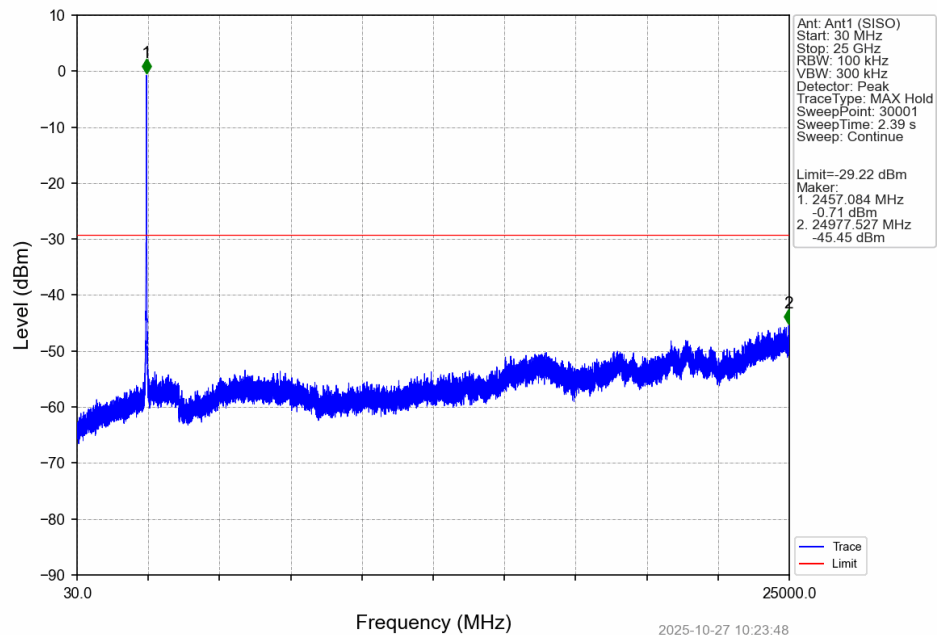




802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

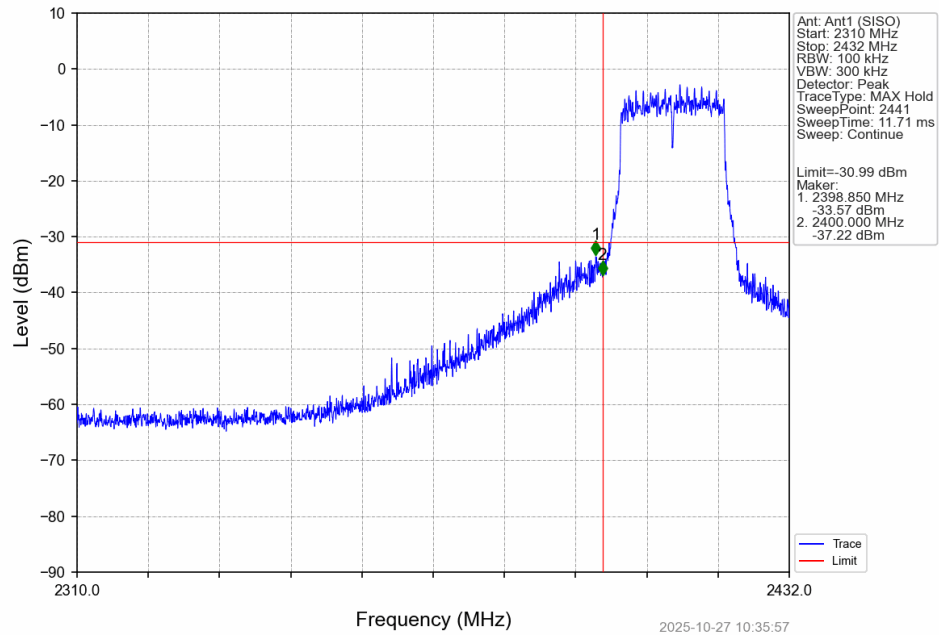


802.11g_HCH_2462MHz_Ant1 (SISO)_NTNV

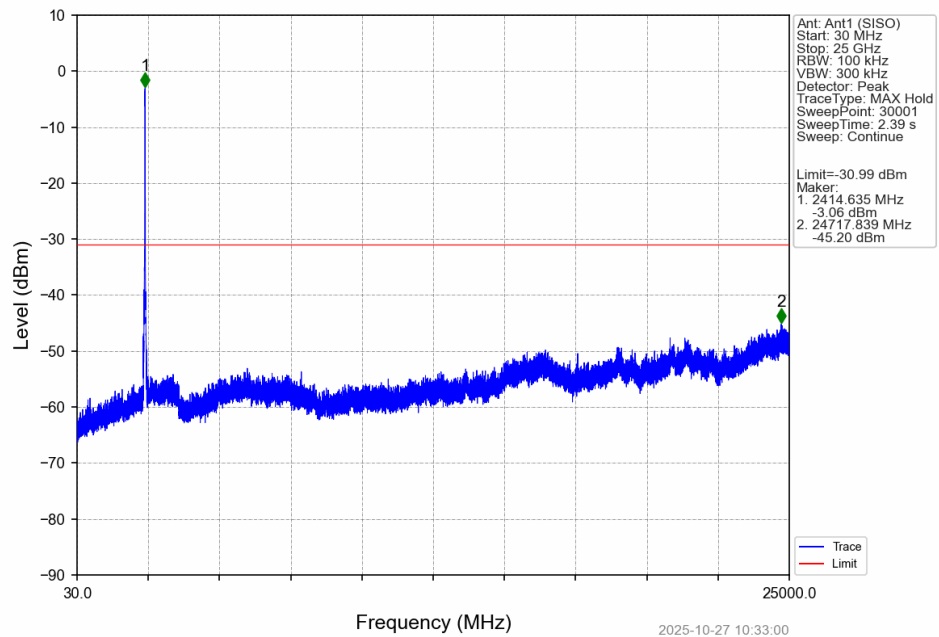




802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV

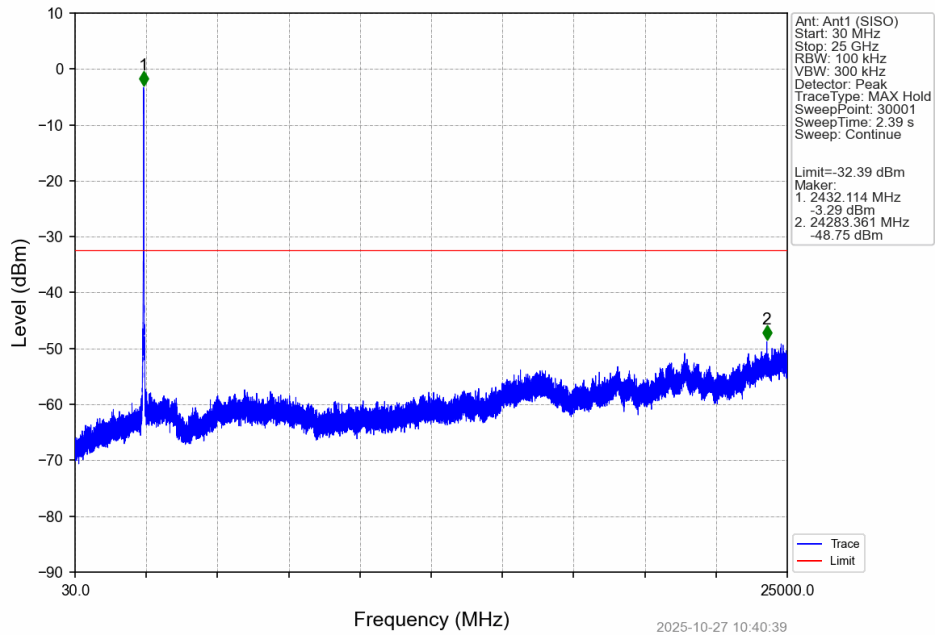


802.11n(HT20)_LCH_2412MHz_Ant1 (SISO)_NTNV





802.11n(HT20)_MCH_2437MHz_Ant1 (SISO)_NTNV



802.11n(HT20)_HCH_2462MHz_Ant1 (SISO)_NTNV

